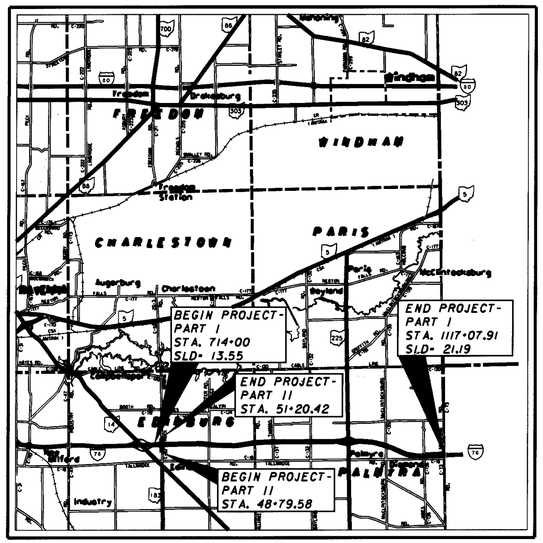

LATITUDE: 41°06'10" LONGITUDE: 81°04'27"

SCALE IN MILES

0 1 2 3 4

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN DESIGNATION

CURRENT ADT (2000)	23500
DESIGN YEAR ADT (2020)	30760
DESIGN HOURLY VOLUME (2020)	2922
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	3.9%
DESIGN SPEED	70mph
LEGAL SPEED	65mph

DESIGN FUNCTIONAL CLASSIFICATION - RURAL INTERSTATE

DESIGN EXCEPTIONS

DESIGN FEATURE	APPROVAL DATE	SHEET NOS.
GRADED SHOULDER WIDTH - MAINLINE	5-26-99	7 - 8
LANE WIDTH - RAMPS	5-26-99	9
VERTICAL STOPPING SIGHT DISTANCE	5-26-99	3
SUPERELEVATION: MAXIMUM RATE SUPERELEVATION AND RATE OF TRANSITION	5-26-99	2 - 3

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

PLAN PREPARED BY: District Four Production

ENGINEERS SEAL:

STATE OF OHIO
PAUL E. OLIVA
E-40612
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: Paul E. Oliva
DATE: 2/24/00

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

POR-76-13.55
PART 1
PORTAGE COUNTY
EDINBURG & PALMYRA TOWNSHIPS

FOR PART 2, SEE POR-76-13.62

INDEX OF SHEETS:

PROJECT DESCRIPTION

UPGRADING OF 7.64 MILES OF INTERSTATE ROUTE 76 BY RESURFACING, INCLUDING SLIDE REPAIR AND RESURFACING OF REST AREAS AND RAMPS.

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.

1997 SPECIFICATIONS

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

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: David R Dreggs
DATE 2/24/00 DISTRICT DEPUTY DIRECTOR

APPROVED: Gordon Proctor
DATE 3-8-00 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS

AS-1-81	9-15-94	GR-1.1M	10-21-97	MT-35.10M	1-30-95	RB-1-55	2-2-59		
		GR-1.2M	1-3-96	MT-35.11M	1-30-95				
BP-3.1M	10-28-94	GR-1.3M	11-30-94	MT-95.30M	4-25-94	RM-1.1M	4-29-99		
BP-4.1M	10-28-94	GR-2.1M	4-4-98	MT-98.12M	6-24-93	RM-4.3M	10-21-97		
BP-5.1M	10-28-94	GR-3.1M	10-21-97	MT-98.13M	6-24-93	RM-4.5M	10-21-97		
		GR-3.2M	10-21-97	MT-98.14M	6-24-93				
CB-3.3M	7-12-95	GR-4.1M	5-6-91	MT-98.15M	6-24-93	SD-1-69	6-12-69		
		GR-4.2M	10-21-97	MT-98.16M	6-24-93				
DM-1.1M	10-21-97	GR-6.1M	1-3-96	MT-98.17M	4-25-94	TC-41.10	8-29-84		
DM-4.3M	4-29-99	GR-6.2M	1-3-96	MT-98.18M	4-25-94	TC-41.20M	7-1-94		
DM-4.4M	4-29-99			MT-99.10M	11-14-86	TC-42.20	3-31-94		
		HW-2.2M	7-12-95	MT-99.20M	1-30-95	TC-52.10M	7-1-94		
EXJ-2-81	2-14-97			MT-101.60M	4-25-94	TC-52.20M	7-1-94		
EXJ-4-87	2-14-97	MC-11	8-1-78	MT-105.10M	4-25-94	TC-65.10M	11-1-95		
				MT-105.11M	4-25-94	TC-65.11M	11-1-95		
		MH-1.2M	9-6-95			TC-72.20M	9-1-93		

SUPPLEMENTAL SPECIFICATIONS

806	9-9-97	885	8-10-99
842	1-6-99	899	10-21-98
843	5-5-99	906	5-5-98
848	6-30-98	907	10-1-98
849	06-14-95	908	1-6-99
863	9-9-97	910	07-28-98
870	8-10-99	949	6-14-95
877	4-13-99		

SPECIAL PROVISIONS

WATERWAY PERMIT FOR:	POR-76-13.55
U.S. ARMY CORPS OF ENGINEERS PERMIT NUMBER:	NATIONWIDE PERMIT NO. 3 MAINTENANCE
DATE:	1-11-2000

FEDERAL PROJECT NO. TE21-G000 (225)
PID NO. 18375
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
POR-76-13.55
1/100

POR-76-13.55 P1 13.62 P2
000406
PID# 18375
DIST. 04
08-02-00

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BEGIN WORK - PART I
STA. 704+00
S.L.M.- 13.36

BEGIN PROJECT - PART I
STA. 714+00
S.L.M.- 13.55

END PROJECT- PART II
STA. 51+20.42

BEGIN PROJECT- PART II
STA. 48+79.58

℄ ROCK SPRING ROAD
STA. 717+56.62 ℄ I.R. 76

N 89°03'49" E

MATCH LINE 772+50

PC Sta. 761+32.84

CURVE DATA
CURVE #6
P.I. Sta - 768+06.75
Δ - 6° 43' 53" (RT)
Dc - 0° 30' 00"
R - 11,459.16'
T - 673.91'
L - 1,346.28'
E - 19.80'
** E (MAX)- .0156 (NDC-0.019)

MATCH LINE 772+50

℄ PORTER ROAD
STA 783+98.07 ℄ I.R. 76

PT Sta. 774+79.12

S 84°12'18" E

PC Sta. 801+75.32

CURVE DATA
CURVE #7
P.I. Sta - 814+28.60
Δ - 12° 28' 59" (LT)
Dc - 0° 30' 00"
R - 11,459.16'
T - 1,253.27'
L - 2,496.61'
E - 68.33'
** E (MAX) - 0.0156 (NDC-0.019)

RAMP A
RAMP B
RAMP C
RAMP D

PT Sta. 826+71.94

N 83°18'43" E

SILVER CREEK

STRUCTURE NO.
POR-76-15.78

MATCH LINE 835+00

MATCH LINE 835+00

℄ ALLIANCE ROAD
STA. 848+16.03 ℄ I.R. 76

N 83°18'43" E

PC Sta. 847+06.30

CURVE DATA:
CURVE #8
P.I. Sta - 853+84.31
Δ - 6° 46' 20" (RT)
Dc - 0° 30' 00"
R - 11,459.16'
T - 678.01'
L - 1,354.44'
E - 20.04'
** E (MAX) - 0.0156 (NDC - 0.019)

PT Sta. 860+60.74

℄ JOHN THOMAS ROAD
STA. 873+74.74 I.R. 76

S 89°54'57" E

MATCH LINE 897+50

MATCH LINE 897+50

℄ WILCOX-WAYLAND ROAD
STA. 926+57.07 ℄ I.R. 76

S 89°54'57" E

MATCH LINE 960+00

** SEE ORIGINAL CONSTRUCTION PLANS: POR-18-13.55 & POR-19.34/MAH-18-0.00

N

HORIZONTAL SCALE IN FEET
0 125 250 500

CALCULATED
CHECKED

SCHEMATIC PLAN

POR-76-13.55

2/100

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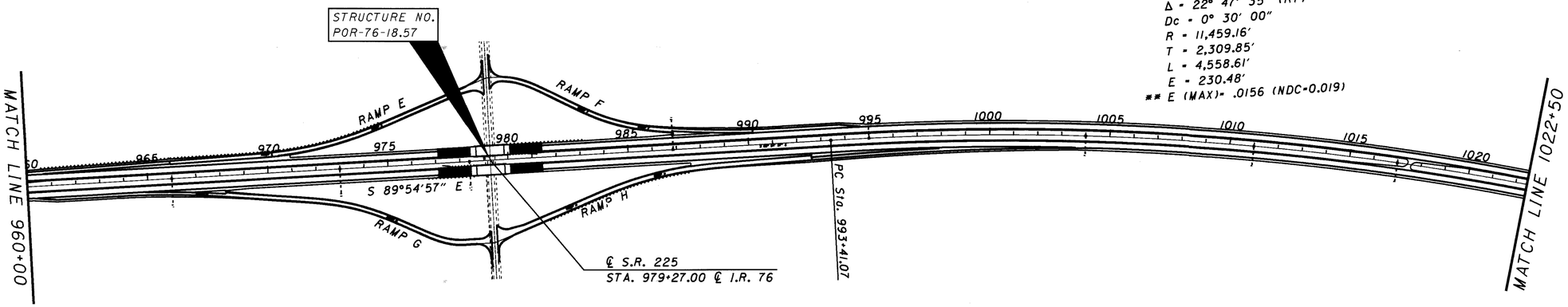
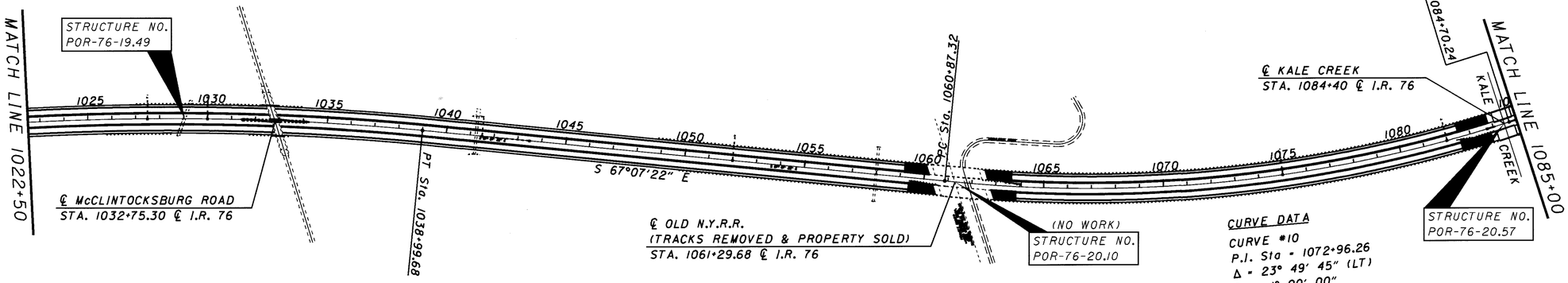


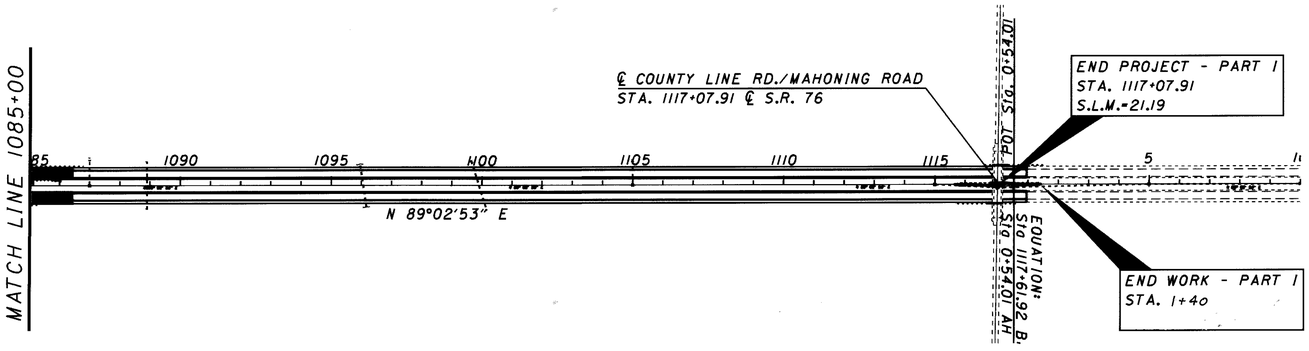
CURVE DATA

CURVE #9
P.I. Sta - 1016+50.92
Δ - 22° 47' 35" (RT)
Dc - 0° 30' 00"
R - 11,459.16'
T - 2,309.85'
L - 4,558.61'
E - 230.48'
** E (MAX)- .0156 (NDC-0.019)



CURVE DATA

CURVE #10
P.I. Sta - 1072+96.26
Δ - 23° 49' 45" (LT)
Dc - 1° 00' 00"
R - 5,729.58'
T - 1,208.94'
L - 2,382.92'
E - 126.15'
** E (MAX)- .0312 (NDC-0.036)
MINIMUM RATE OF TRANSITION- 203:1 (NDC- 250:1)



* CREST VERTICAL CURVE INFORMATION
ALL SAG AND CREST VERTICAL CURVES MEET S.S.D. OF 625' WITH THE EXCEPTION:

CREST VERTICAL CURVE: P.V.I. - 1061+25
L - 1600'
G_1 - +2.99%
G_2 - -2.99%
S.S.D. - 596.22' (N.D.C. - 625')
K - 267.56
V_o - 68 MPH

* SEE ORIGINAL CONSTRUCTION PLAN: POR-18-19.34/MAH-18-0.00
** SEE ORIGINAL CONSTRUCTION PLANS: POR-18-13.55 & POR-18-19.34/MAH-18-0.00

HORIZONTAL SCALE IN FEET
0 125 250 500

CALCULATED | CHECKED

SCHEMATIC PLAN

POR-76-13.55

3
100

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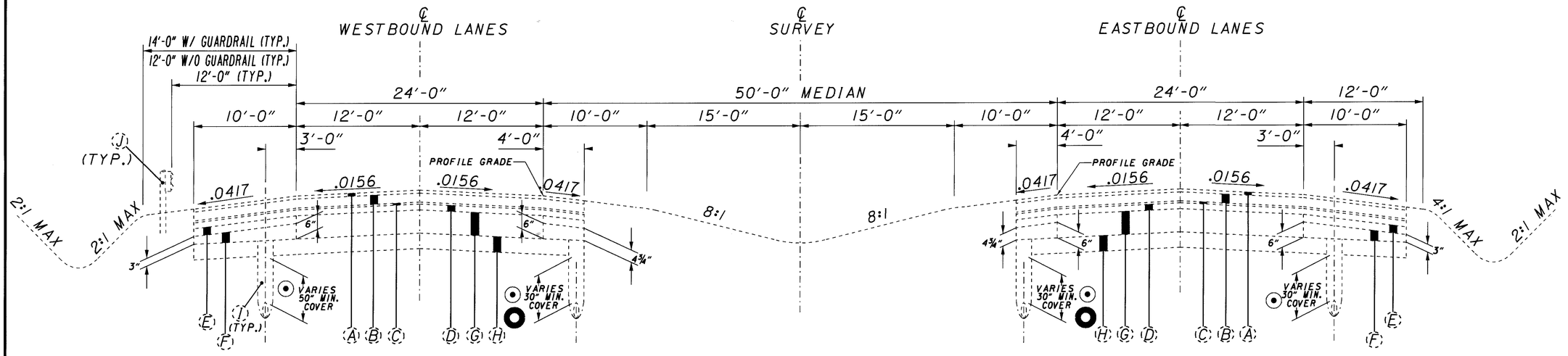
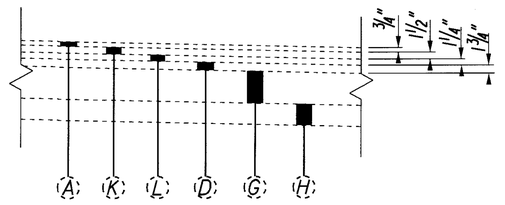


EXISTING NORMAL SECTION

■	STA. 714+00 TO STA. 760+50	= 4650 LIN.FT.	
	STA. 775+75 TO STA. 801+00	= 2525 LIN.FT.	
	STA. 827+50 TO STA. 831+12.62	= 362.62 LIN.FT.	
	STA. 831+12.62 TO STA. 833+03.78	BRIDGE NO. POR-18-1574 PLUS APPROACH SLABS	
	STA. 833+03.78 TO STA. 846+25	= 1321.22 LIN.FT.	
⊙	STA. 861+50 TO STA. 978+42.75	= 11692.75 LIN.FT.	
	STA. 978+42.75 TO STA. 980+11.25	BRIDGE NO. POR-18-1855 PLUS APPROACH SLABS	
	STA. 980+11.25 TO STA. 992+50	= 1238.75 LIN.FT.	
O	STA. 1039+75.68 TO STA. 1059+73.32	= 1997.64 LIN.FT.	
O	STA. 1085+84.25 TO STA. 1117+07.91	= 3123.66 LIN.FT.	
	TOTAL LENGTH	= 26,911.64 LIN.FT.	

■ NOTE: STA. 714+00 TO STA. 742+00

EXISTING PAVEMENT COMPOSITION VARIES: AS DETAILED BELOW



EXISTING LEGEND

(A) ¾" OPEN GRADED ASPHALT
(B) ITEM 846- 3" ASPHALT CONCRETE
(C) ITEM 404- ¼" ASPHALT CONCRETE
(D) ITEM 402- 1¾"ASPHALT CONCRETE
(E) 3" WATERPROOFED AGGREGATE BASE COURSE
(F) VARIES POROUS BASE COURSE (DEPTH AS INDICATED ON TYPICAL SECTION)
(G) 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
(H) 6" SUBBASE
(I) 6" UNDERDRAIN
(J) GUARDRAIL
(K) ITEM 846- 1½" ASPHALT CONCRETE
(L) ITEM 404 - 1¼" ASPHALT CONCRETE
(M) 13" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

⊙ STATIONS: 875+00 TO 884+00
910+00 TO 918+00
932+00 TO 938+00
] VARIES 12" MIN COVERAGE

O STATIONS: 1039+75.68 TO 1059+73.32
1085+84.25 TO 1117+07.91
] VARIES 30" MIN COVERAGE IN FILL
VARIES 50" MIN COVERAGE IN CUT

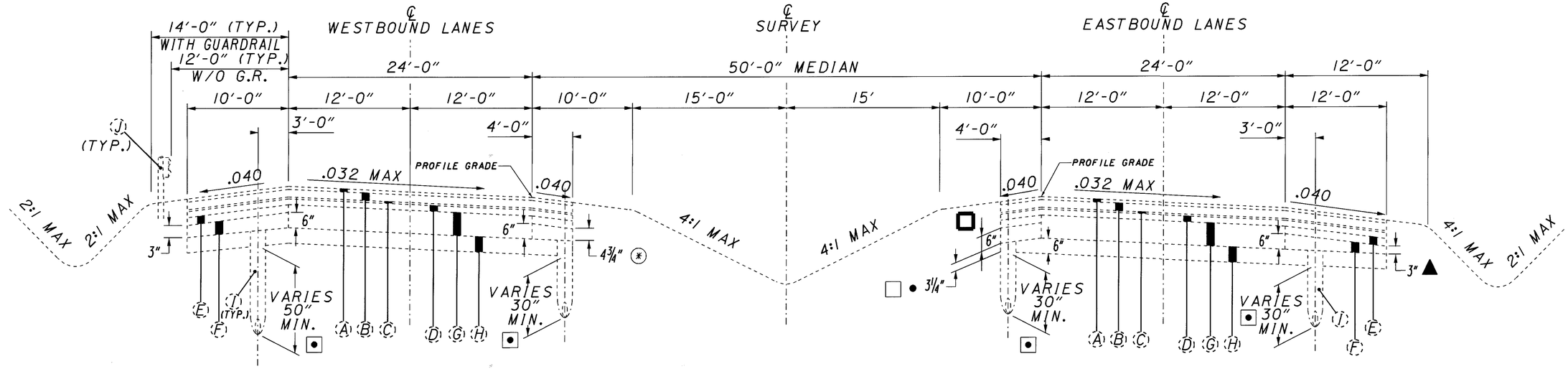
EXISTING TYPICAL SECTION

POR-76-13.55

4/100

05/10/99

SBENNETT/ROAD/POR/POR76/18375GYA.DGN



EXISTING SUPERELEVATED SECTION

	STA. 760+50 TO STA. 775+75		= 1525 LIN.FT.
⊙	STA. 801+00 TO STA. 827+50		= 2650 LIN.FT.
	STA. 846+25 TO STA. 861+50		= 1525 LIN.FT.
	STA 992+50 TO STA. 1020+00		= 2750 LIN.FT.
▲, ●, ⊛	STA. 1020+00 TO STA. 1039+75.68		= 1975.68 LIN.FT.
▲, ●, ⊛	STA. 1059+73.32 TO STA. 1060+28.30		= 54.98 LIN.FT.
	STA. 1060+28.30 TO STA. 1062+74.24	BRIDGE NO. POR-18-2010 PLUS APPROACH SLABS	
▲, ●, ⊛	STA. 1062+74.24 TO STA. 1083+75.25		= 2101.01 LIN.FT.
	STA. 1083+75.25 TO STA. 1085+04.75	BRIDGE NO. POR-18-2054 PLUS APPROACH SLABS	
▲, ●, ⊛	STA. 1085+04.75 TO 1085+84.24		= 79.49 LIN.FT.
	TOTAL LENGTH		= 12,661.16 LIN.FT.

⊛ DIMENSION EQUALS 6"
● DIMENSION EQUALS 3½"
▲ DIMENSION EQUALS 4⅞"
} SEE STATIONS AND DIMENSIOINS MARKED WITH SYMBOLS THIS SHEET.

⊙ STATIONS: 807+00 TO 812+00

■ 4¾"
□ 6"
⊡ 12" MIN. COVER

NOTE: FOR LEGEND SEE SHEET NO. 4

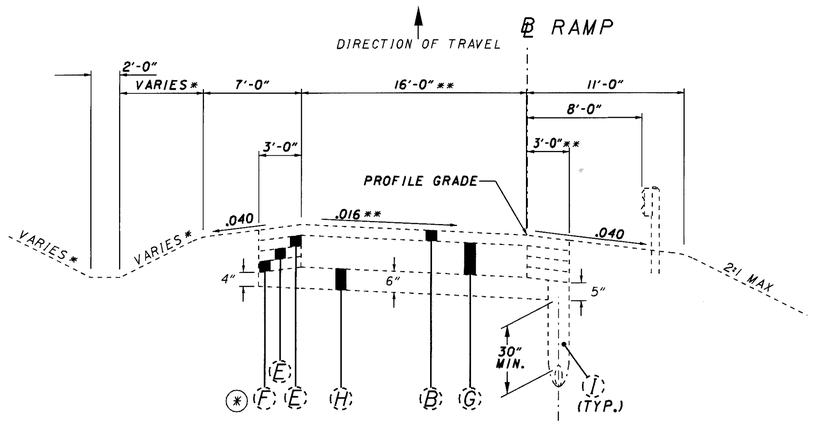
EXISTING TYPICAL SECTION

POR-76-13.55

5
100

05/06/99

SBENNETT/ROAD/POR/POR76/18375GYA.DGN



EXISTING NORMAL RAMP SECTION

ROADSIDE REST AREA

RAMP "A" (BEGIN RAMP A) STA. 0+00 TO STA. 2+50
STA 6+50 TO STA. 7+59.72 (END RAMP A)

RAMP "B" (BEGIN RAMP B) STA. 12+67.55 TO STA. 23+36.34
(END RAMP B)

RAMP "C" (BEGIN RAMP C) STA. 4+53.07 TO STA. 7+75

RAMP "D" (BEGIN RAMP D) STA. 16+00 TO STA. 17+00
STA. 21+25 TO STA. 23+67.48 (END RAMP D)

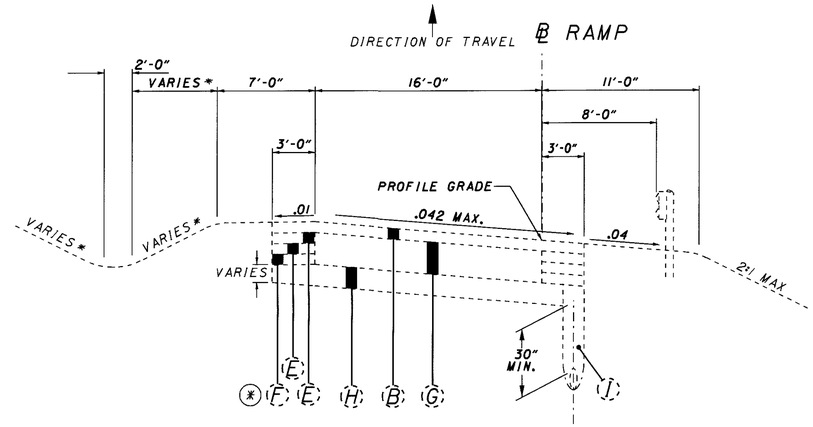
S.R. 225 INTERCHANGE

RAMP "E" STA. 0+00 TO STA. 2+99.91
STA. 9+68.82 TO STA. 13+60.82

RAMP "F" STA. 13+84.82 TO STA. 14+13.60
STA. 16+42.48 TO STA. 17+33.59
STA. 21+83.59 TO STA. 21+89.35

RAMP "G" STA. 4+53.07 TO STA. 7+32.44
STA. 12+22.29 TO STA. 13+13.64
STA. 15+33.49 TO STA. 15+90.89

RAMP "H" STA. 16+14.89 TO STA. 20+06.87
STA. 26+75.78 TO STA. 29+75.78



EXISTING SUPERELEVATED RAMP SECTION, S ≤ .042

ROADSIDE REST AREA

RAMP "A" STA. 2+50 TO STA. 6+50

RAMP "C" STA. 7+75 TO STA. 10+89.25 (END RAMP C)

RAMP "D" STA. 17+00 TO STA. 21+25

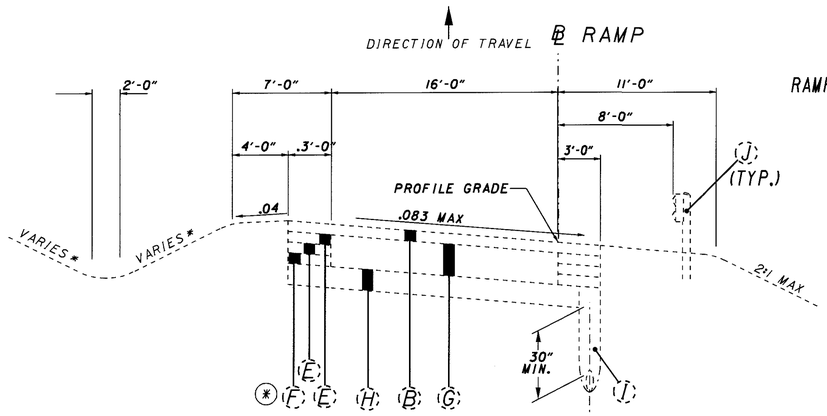
S.R. 225 INTERCHANGE

RAMP "E" STA. 2+99.91 TO STA. 4+13.10
STA. 8+63.49 TO STA. 9+68.82

RAMP "F" STA. 14+13.60 TO STA. 16+42.48
STA. 17+33.59 TO STA. 17+92.48
STA. 21+05.06 TO STA. 21+83.59

RAMP "G" STA. 7+32.44 TO STA. 8+30.15
STA. 11+42.77 TO STA. 12+22.29
STA. 13+13.64 TO STA. 13+89.20
STA. 14+72.71 TO STA. 15+33.49

RAMP "H" STA. 20+06.87 TO STA. 21+11.92
STA. 25+70.63 TO STA. 26+75.78



EXISTING SUPERELEVATED RAMP SECTION, S > .042

S.R. 225 INTERCHANGE

RAMP "E" STA. 4+13.10 TO STA. 8+63.49

RAMP "F" STA.17+92.48 TO STA. 21+05.06

RAMP "G" STA. 8+30.15 TO STA. 11+42.77
STA. 13+89.20 TO STA. 14+72.71

RAMP "H" STA. 21+11.92 TO STA. 25+70.63

Ⓐ 3" DIMENSION

* SEE X-SECTIONS, POR-18-13.55 ORG. CONSTRUCTION 1963.
** UNLESS OTHERWISE INDICATED ON DETAIL SHEET.

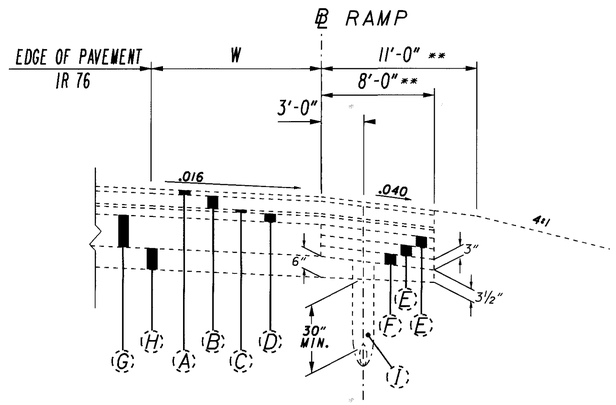
NOTE: FOR LEGEND SEE SHEET NO. 4.

EXISTING TYPICAL SECTION

POR-76-13.55

05/06/99

SBENNETT/ROAD/POR/POR76/18375GYA.DGN



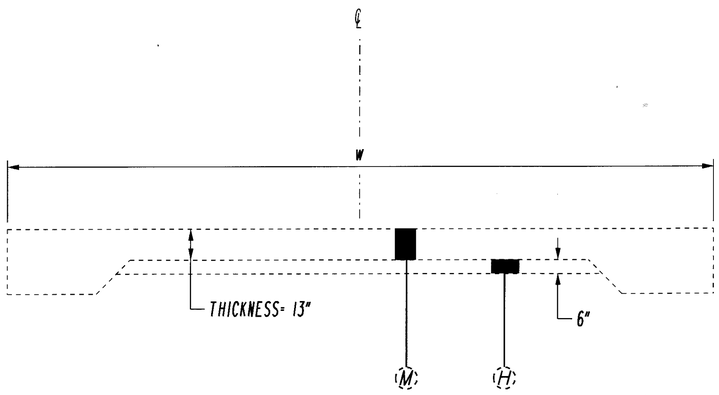
EXISTING SPEED CHANGE (LOW SIDE)

ROADSIDE REST AREA

		"W"
RAMP "A"	STA. 785+00 TO STA. 797+00(S.R. 76)	0 TO 25'-0"
RAMP "B"	STA. 23+36.34 TO STA. 28+92.37(RAMP "B")	39'-0" TO 12'-0"
	STA. 826+06.72 TO STA. 827+45.92(S.R. 76)	12'-0"
	STA. 827+45.92 TO STA. 828+45.92(S.R. 76)	12'-0" TO 0
RAMP "C"	STA. 792+23.64 TO STA. 793+23.64(S.R. 76)	0 TO 12'-0"
	STA. 793+23.64 TO STA. 795+68.91(S.R. 76)	12'-0"
	STA. 0+00 TO STA. 4+53.07(RAMP "C")	12'-0" TO 39'-0"

S.R. 225 INTERCHANGE

		"W"
RAMP "E"	STA. 953+94.42 TO STA. 965+94.42(S.R. 76)	0 TO 25'-0"
RAMP "F"	STA. 21+89.35 TO STA. 26+42.42(RAMP "F")	39'-0" TO 12'-0"
	STA. 991+44.38 TO STA. 993+89.65(S.R. 76)	12'-0"
	STA. 993+89.65 TO STA. 994+89.65(S.R. 76)	12'-0" TO 0
RAMP "G"	STA. 960+21.11 TO STA. 961+21.11(S.R. 76)	0 TO 12'-0"
	STA. 961+21.11 TO STA. 963+66.38(S.R. 76)	12'-0"
	STA. 0+00 TO STA. 4+53.07(RAMP "G")	12'-0" TO 39'-0"
RAMP "H"	STA. 992+59.58 TO STA. 1004+59.58(S.R. 76)	25'-0" TO 0

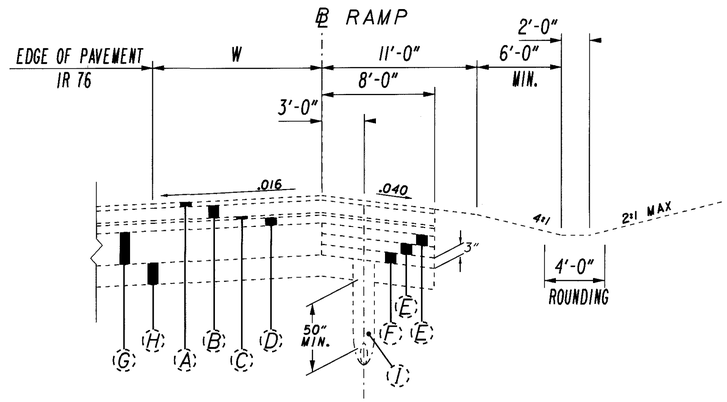


EXISTING APPROACH SLAB SECTION

SEE TABLE

STRUCTURE	APPROACH SLAB STATIONS	LENGTH	WIDTH W=
POR-76-15.78 L&R OVER SILVER CREEK	831+12.62 TO 831+37.62	25'-0"	24'-0"
	832+78.78 TO 833+03.78	25'-0"	24'-0"
POR-76-18.57 L&R OVER S.R. 225	978+42.75 TO 978+67.75	25'-0"	24'-0"
	979+86.25 TO 980+11.25	25'-0"	24'-0"
POR-76-20.10 L&R OVER N.Y.C. R.R.	1060+28.30 TO 1060+53.30	25'-0"	40'-0"
	1062+49.24 TO 1062+74.24	25'-0"	40'-0"
POR-76-20.57 L&R OVER KALE CREEK	1083+75.25 TO 1084+00.25	25'-0"	24'-0"
	1084+79.75 TO 1085+04.25	25'-0"	24'-0"

** UNLESS OTHERWISE INDICATED ON DETAIL SHEET



EXISTING SPEED CHANGE (HIGH SIDE)

		"W"
RAMP "D"	STA. 819+00 TO STA. 831+00 (S.R. 76)	25'-0" TO 0

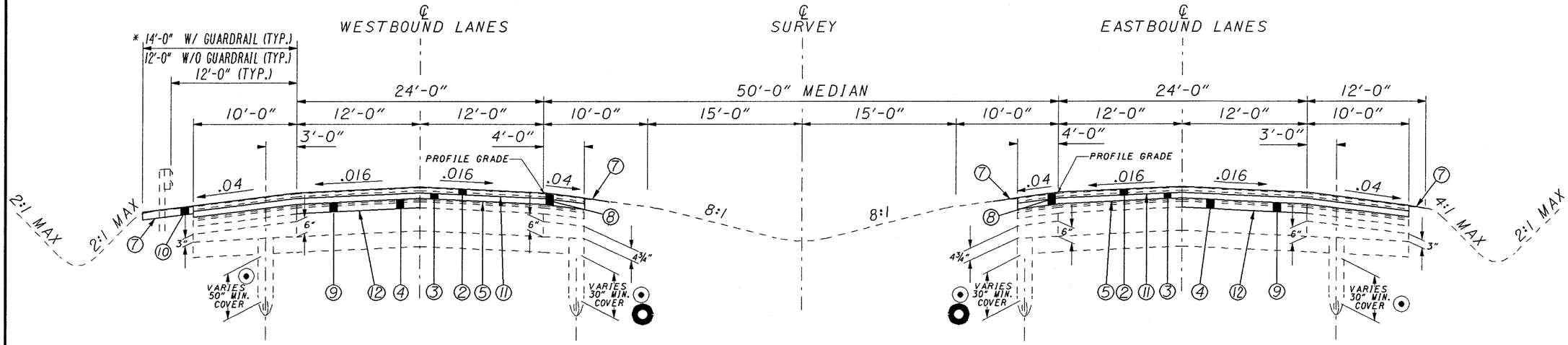
NOTE: FOR LEGEND SEE SHEET NO. 4.

EXISTING TYPICAL SECTION

POR-76-13.55

05/27/99

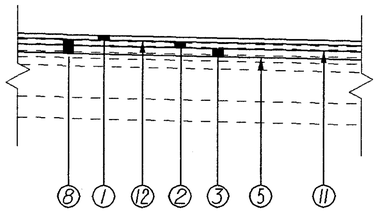
SBENNETT/ROAD/POR/POR76/I8375GYA.DGN



PROPOSED NORMAL SECTION

■	STA. 714+00 TO STA. 760+50	= 4650 LIN.FT.
	STA. 775+75 TO STA. 801+00	= 2525 LIN.FT.
	STA. 827+50 TO STA. 831+12.62	= 362.62 LIN.FT.
	STA. 831+12.62 TO STA. 833+03.78	BRIDGE NO. POR-18-1574 PLUS APPROACH SLABS
	STA. 833+03.78 TO STA. 846+25	= 1321.22 LIN.FT.
⊙ △	STA. 861+50 TO STA. 978+42.75	= 11692.75 LIN.FT.
	STA. 978+42.75 TO STA. 980+11.25	BRIDGE NO. POR-18-1855 PLUS APPROACH SLABS
	STA. 980+11.25 TO STA. 992+50	= 1238.75 LIN.FT.
8	STA. 1039+75.68 TO STA. 1059+73.32	= 1997.64 LIN.FT.
8	STA. 1085+84.25 TO STA. 1117+07.91	= 3123.66 LIN.FT.
	TOTAL LENGTH	= 26,911.64 LIN.FT.

■ NOTE: STA. 714+00 TO STA. 742+00
EXISTING PAVEMENT COMPOSITION VARIES: AS DETAILED BELOW
(SEE DETAIL ON SHT. 3 FOR EXISTING LEGEND & COMPOSITION)



PROPOSED LEGEND

② ITEM 858- 1½"ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN
③ ITEM 858- 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)
④ ITEM 301- 3" BITUMINOUS AGGREGATE BASE, PG 64-22
⑤ ITEM 407- TACK COAT
⑥ ITEM 611- REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN
⑦ ITEM 203- LINEAR GRADING (SEE GENERAL NOTE SHEET NO. 15)
⑧ ITEM 254- 2¾" PAVEMENT PLANING, BITUMINOUS
⑨ ITEM 254- 3" PAVEMENT PLANING, BITUMINOUS (MILL TO CONCRETE)
⑩ ITEM 448- 2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, UNDER GUARDRAIL, PG 64-22 (SEE GENERAL NOTE SHEET NO. 15)
⑪ ITEM 407- TACK COAT FOR INTERMEDIATE COURSE
⑫ ITEM 407- TACK COAT, 702.13

⊙ STATIONS: 875+00 TO 884+00, 910+00 TO 918+00, 932+00 TO 938+00 — VARIES 12" MIN COVERAGE

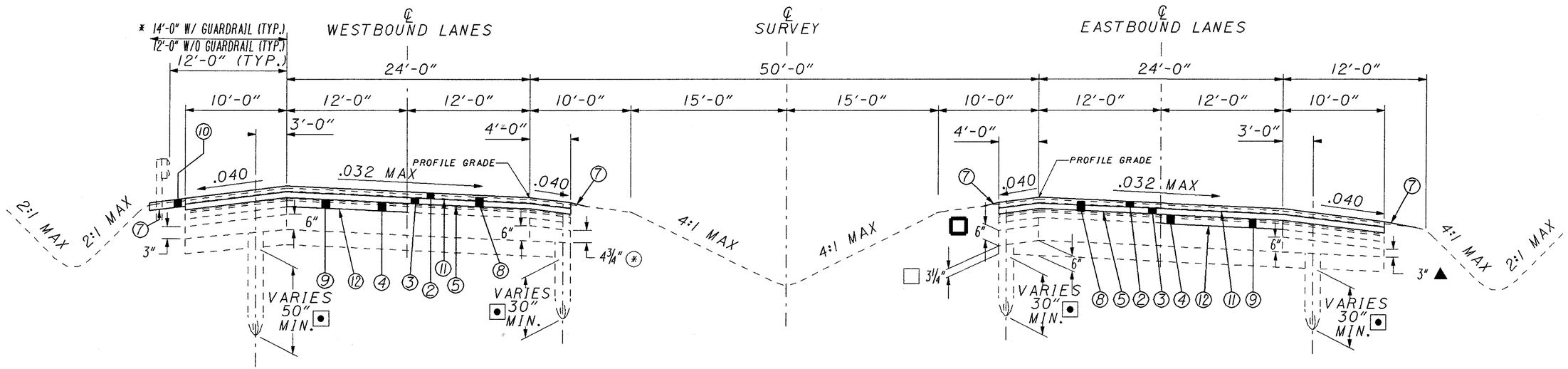
8 STATIONS: 1039+75.68 TO 1059+73.32, 1085+84.25 TO 1117+07.91 — VARIES 30" MIN COVERAGE IN FILL; VARIES 50" MIN COVERAGE IN CUT

△ STA 871+58.74 TO 875+90.74 ℄ IR 76
SEE PAVEMENT DETAIL SHT. 20A

* (NDC = 15') REQUIRES A DESIGN EXCEPTION

PROPOSED TYPICAL SECTION

POR-76-13.55



PROPOSED SUPERELEVATED SECTION

	STA. 760+50 TO STA. 775+75	= 1525 LIN.FT.
	STA. 801+00 TO STA. 827+50	= 2650 LIN.FT.
	STA. 846+25 TO STA. 861+50	= 1525 LIN.FT.
	STA. 992+50 TO STA. 1020+00	= 2750 LIN.FT.
▲,⊛	STA. 1020+00 TO STA. 1039+75.68	= 1975.68 LIN.FT.
▲,⊛	STA. 1059+73.32 TO STA. 1060+28.30	= 54.98 LIN.FT.
	STA. 1060+28.30 TO STA. 1062+74.24	BRIDGE NO. POR-18-2010 PLUS APPROACH SLABS
▲,⊛	STA. 1062+74.24 TO STA. 1083+75.25	= 2101.01 LIN.FT.
	STA. 1083+75.25 TO STA. 1085+04.75	BRIDGE NO. POR-18-2054 PLUS APPROACH SLABS
▲,⊛	STA. 1085+04.75 TO 1085+84.25	= 79.50 LIN.FT.
	TOTAL LENGTH	= 12,661.17 LIN.FT.

⊛ DIMENSION EQUALS 6"
▲ DIMENSION EQUALS 4 7/8"
} SEE STATIONS AND DIMENSIOINS MARKED WITH SYMBOLS THIS SHEET.

⊙ STATIONS: 807+00 TO 812+00

■ 4¾"
□ 6"
⊡ 12" MIN. COVER

NOTE: FOR LEGEND SEE SHEET NO. 8.

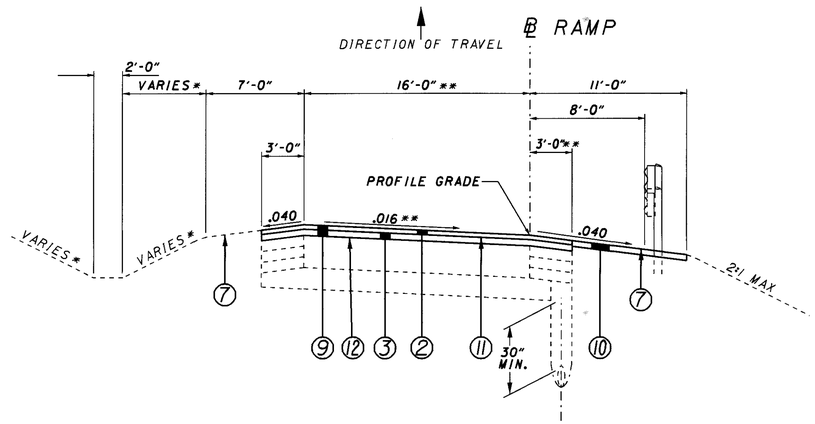
* (NDC = 15') REQUIRES A DESIGN EXCEPTION

05/10/99

PROPOSED TYPICAL SECTION

POR-76-13.55

9



PROPOSED NORMAL RAMP SECTION

ROADSIDE REST AREA

RAMP "A" (BEGIN RAMP A) STA. 0+00 TO STA. 2+50
STA 6+50 TO STA. 7+59.72 (END RAMP A)

RAMP "B" (BEGIN RAMP B) STA. 12+67.55 TO STA. 23+36.34 (END RAMP B)

RAMP "C" (BEGIN RAMP C) STA. 4+53.07 TO STA. 7+75

RAMP "D" (BEGIN RAMP D) STA. 16+00 TO STA. 17+00
STA. 21+25 TO STA. 23+67.48 (END RAMP D)

S.R. 225 INTERCHANGE

RAMP "E" STA. 0+00 TO STA. 2+99.91
STA. 9+68.82 TO STA. 13+30.82

RAMP "F" STA. 13+84.82 TO STA. 14+13.60
STA. 16+42.48 TO STA. 17+33.59
STA. 21+83.59 TO STA. 21+89.35

RAMP "G" STA. 4+53.07 TO STA. 7+32.44
STA. 12+22.29 TO STA. 13+13.64
STA. 15+33.49 TO STA. 15+90.89

RAMP "H" STA. 16+14.89 TO STA. 20+06.87
STA. 26+75.78 TO STA. 29+75.78

* SEE X-SECTIONS, POR-18-13.55 ORG. CONSTRUCTION 1963.

** UNLESS OTHERWISE INDICATED ON RAMP DETAIL SHEETS. (ALSO SEE POR-18-13.55 ORG. CONSTRUCTION 1963)

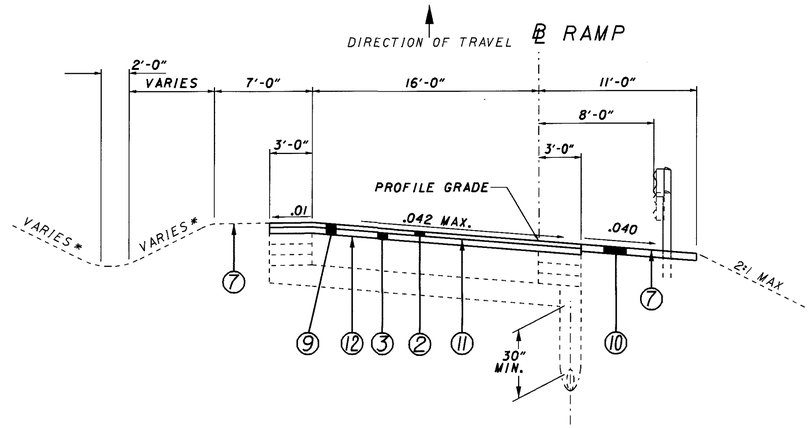
RAMP A 300' TRANSITION FROM 14'-16' (NDC = 16')
REQUIRES A DESIGN EXCEPTION

RAMP D 293.70' TRANSITION FROM 16'-14' (NDC = 16')
REQUIRES A DESIGN EXCEPTION

RAMP E 299.91' TRANSITION FROM 14'-16' (NDC = 16')
REQUIRES A DESIGN EXCEPTION

RAMP H 300' TRANSITION FROM 16'-14' (NDC = 16')
REQUIRES A DESIGN EXCEPTION

NOTE: FOR LEGEND SEE SHEET NO. 8.



PROPOSED SUPERELEVATED RAMP SECTION, S.E. < .042

ROADSIDE REST AREA

RAMP "A" STA. 2+50 TO STA. 6+50

RAMP "C" STA. 7+75 TO STA. 10+89.25 (END RAMP C)

RAMP "D" STA. 17+00 TO STA. 21+25

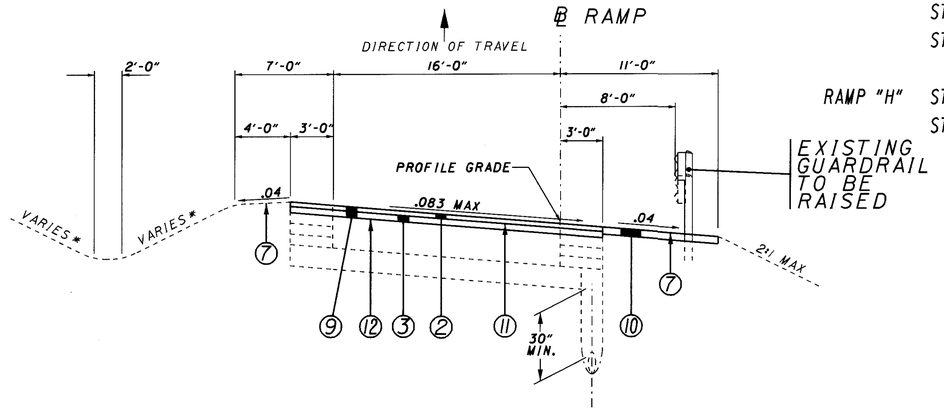
S.R. 225 INTERCHANGE

RAMP "E" STA. 2+99.91 TO STA. 4+13.10
STA. 8+63.49 TO STA. 9+68.82

RAMP "F" STA. 14+13.60 TO STA. 16+42.48
STA. 17+33.59 TO STA. 17+92.48
STA. 21+05.06 TO STA. 21+83.59

RAMP "G" STA. 7+32.44 TO STA. 8+30.15
STA. 11+42.77 TO STA. 12+22.29
STA. 13+13.64 TO STA. 13+89.20
STA. 14+72.71 TO STA. 15+33.49

RAMP "H" STA. 20+06.87 TO STA. 21+11.92
STA. 25+70.63 TO STA. 26+75.78



PROPOSED SUPERELEVATED RAMP SECTION, S.E. > .042

S.R. 225 INTERCHANGE

RAMP "E" STA. 4+13.10 TO STA. 8+63.49

RAMP "F" STA.17+92.48 TO STA. 21+05.06

RAMP "G" STA. 8+30.15 TO STA. 11+42.77
STA. 13+89.20 TO STA. 14+72.71

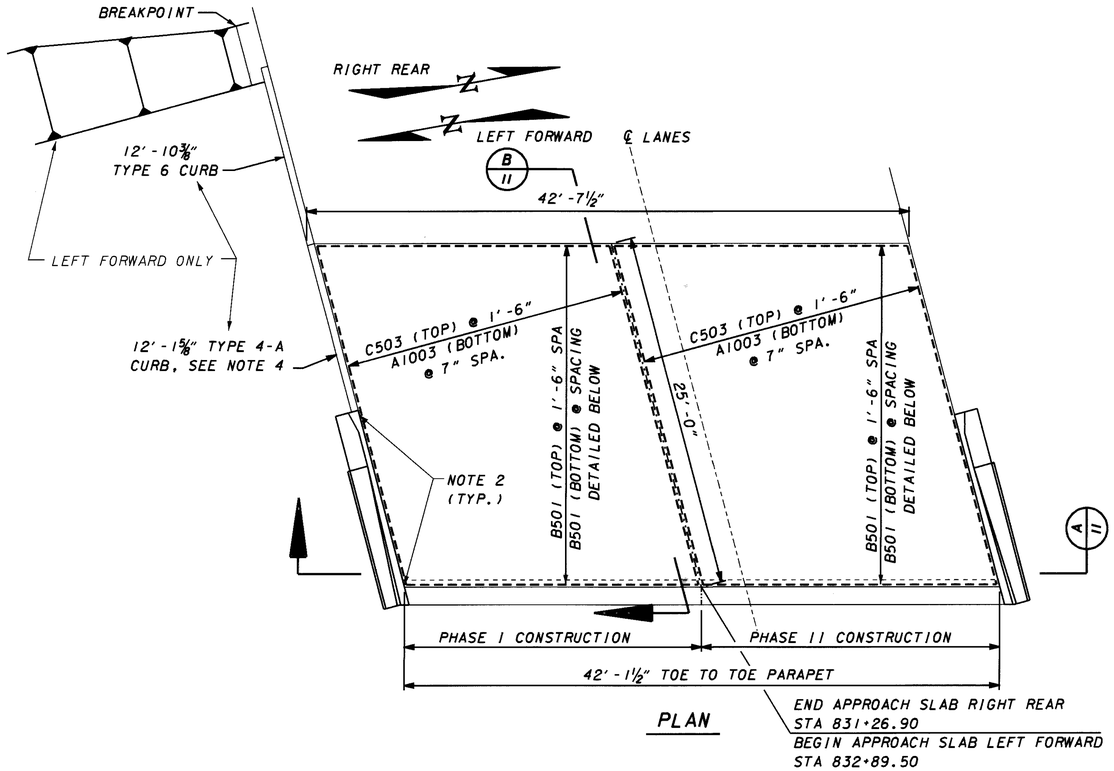
RAMP "H" STA. 21+11.92 TO STA. 25+70.63

PROPOSED TYPICAL SECTION

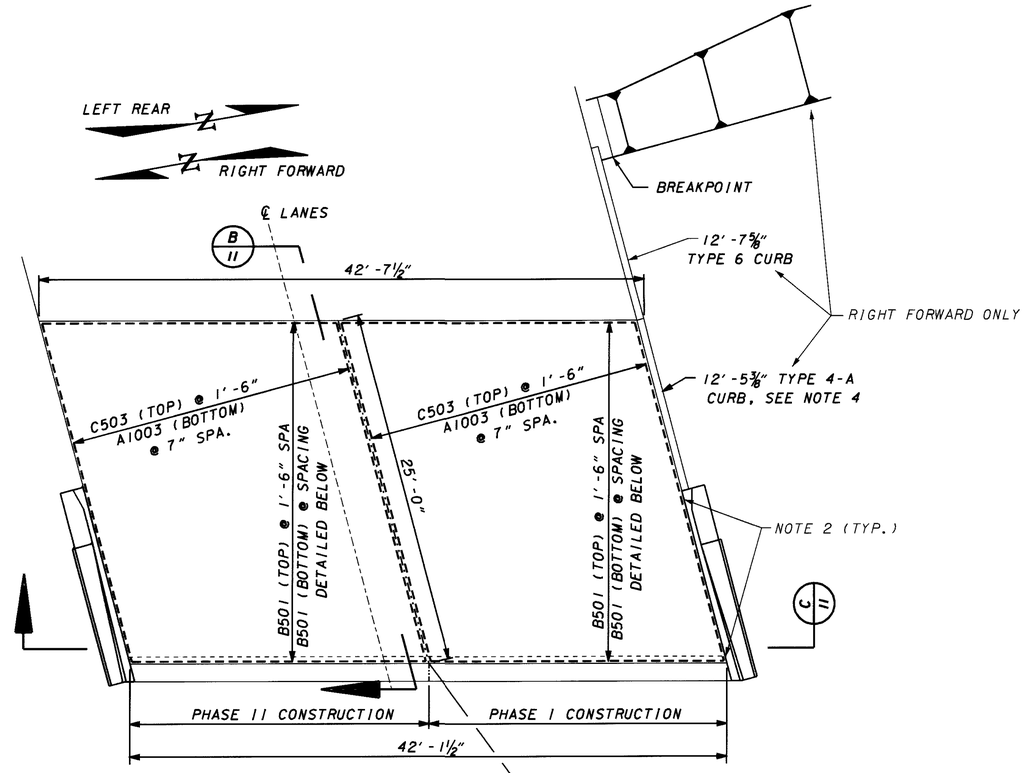
POR-76-13.55

05/27/99

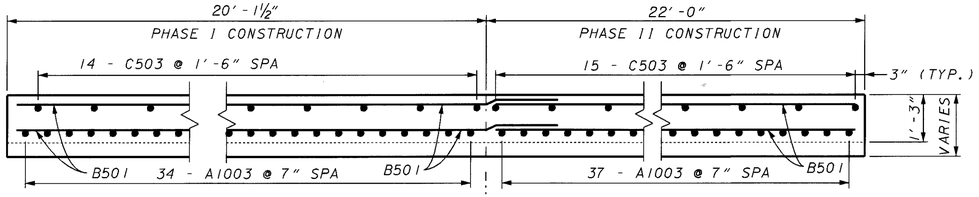
SBENNETT/ROAD/POR/POR76/18375GYA.DGN



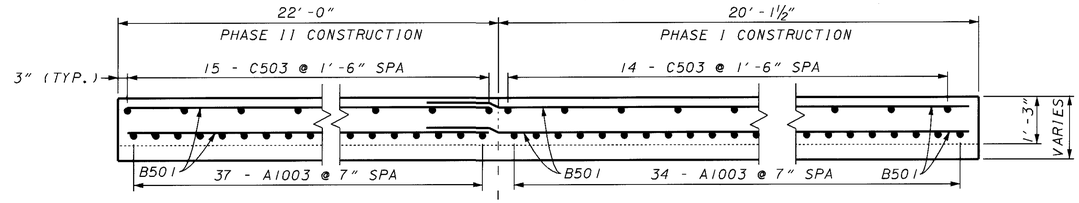
PLAN



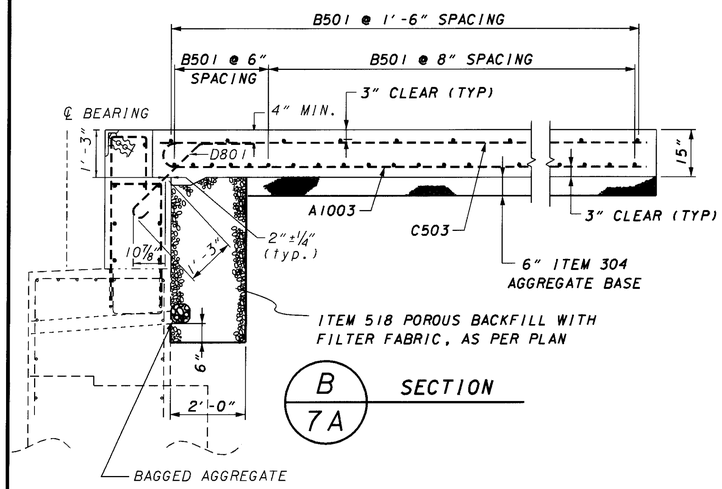
PLAN



A / 11 SECTION



C / 11 SECTION



B / 7A SECTION

MARK	NUMBER	LENGTH	TYPE
RIGHT BRIDGE - NOTE 3			
B501	228	21'-8"	STR
C503	58	24'-6"	STR
A1003	142	25'-11"	BENT
LEFT BRIDGE - NOTE 3			
B501	228	21'-8"	STR
C503	58	24'-6"	STR
A1003	142	25'-11"	BENT

NOTES:

1. A1003 AND C503 BARS SHALL BE PLACED PARALLEL TO THE ℄ ROADWAY EXCEPT AS NOTED ON THIS SHEET.
2. PREFORMED ELASTOMERIC JOINT SEALER AND TYPE 'A' WATERPROOFING PLACED AS PER STD DWG AS-1-81 SHEET 2/3.
3. COST OF REINFORCING IS TO BE INCLUDED IN ITEM 611 REINFORCED CONCRETE APPROACH SLAB.
4. TRANSITION FROM TYPE 4-A CURB TO TYPE 6 CURB IN 10 FT. SEE STD DWG'S DM 4.1M, BP 5.1M AND AS-1-81 FOR FURTHER DETAILS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

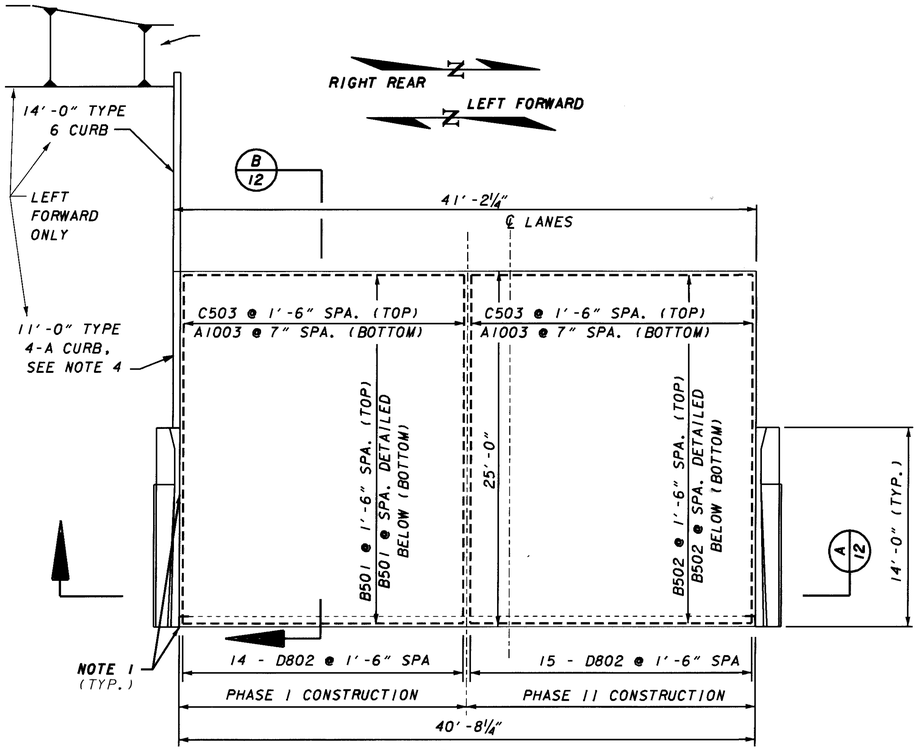
DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00 | CHECKED | REVISED | STRUCTURE FILE NUMBER 6702791 LEFT 6702821 RIGHT

APPROACH SLAB DETAILS

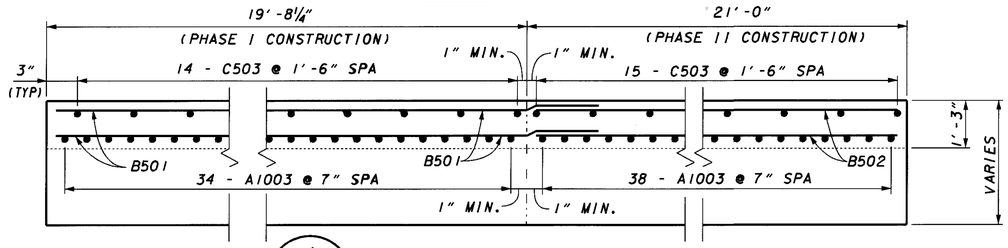
BRIDGE NO. POR-76-1578 L & R
OVER SILVER CREEK

POR-76-13.55

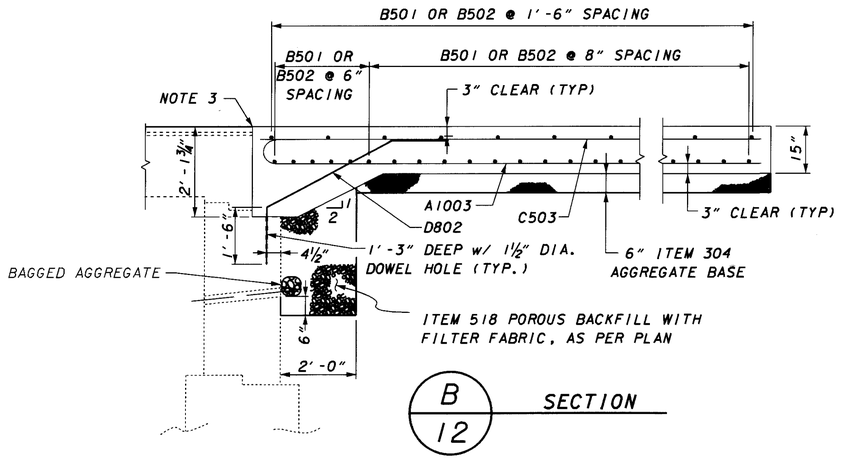
11/100



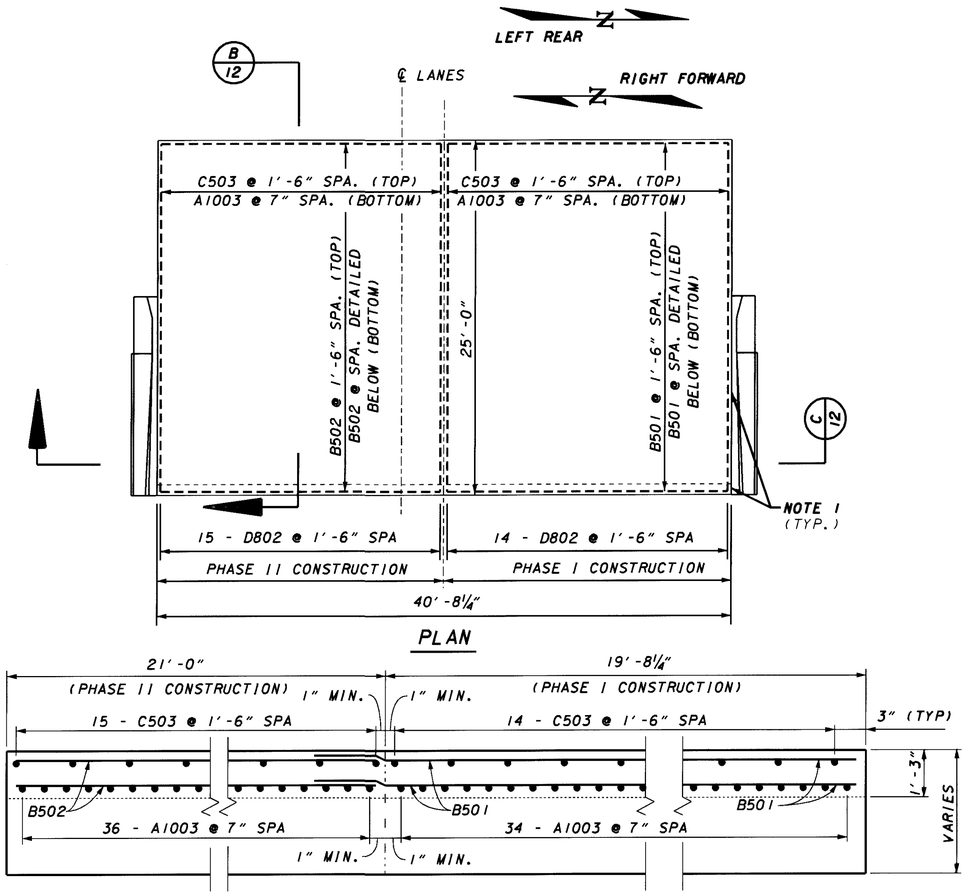
PLAN



A/12 SECTION



B/12 SECTION



PLAN

C/12 SECTION

MARK	NUMBER	LENGTH	TYPE
RIGHT BRIDGE - NOTE 2			
B501	114	21'-5"	STR
B502	114	20'-8"	STR
C503	58	24'-6"	STR
A1003	140	25'-11"	BENT
LEFT BRIDGE - NOTE 2			
B501	114	21'-5"	STR
B502	114	20'-8"	STR
C503	58	24'-6"	STR
A1003	140	25'-11"	BENT

NOTES:

1. PREFORMED ELASTOMERIC JOINT SEALER AND TYPE 'A' WATERPROOFING PLACED AS PER STD DWG AS-1-81 SHEET 2/3.
2. COST OF REINFORCING IS TO BE INCLUDED IN ITEM 611 REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN.
3. SEE SHEET 62/101 FOR INSTALLATION NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.
4. TRANSITION FROM TYPE 4-A CURB TO TYPE 6 CURB IN 10 FT. SEE STD DWG'S DM 4.1M, BP 5.1M AND AS-1-81 FOR FURTHER DETAILS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

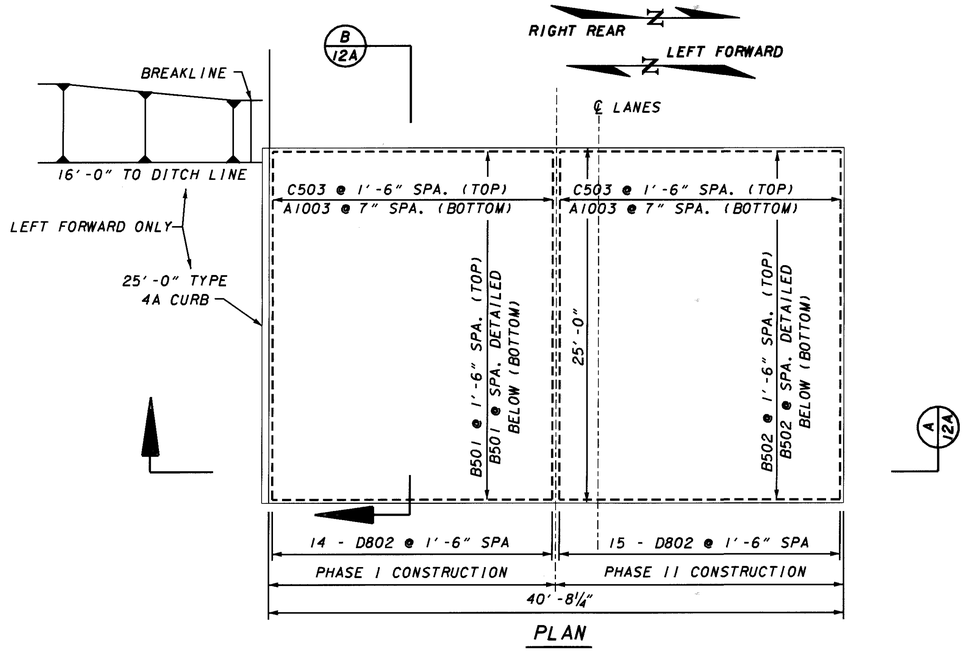
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	6702945 LEFT, 6703003 RIGHT

APPROACH SLAB DETAILS

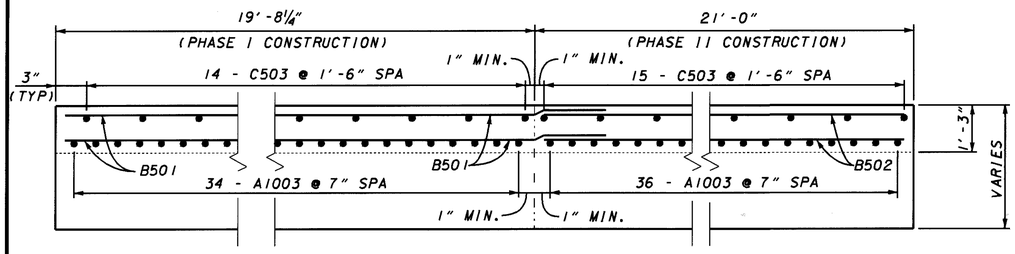
BRIDGE NO. POR-76-1857 L & R
OVER S. R. 225

POR-76-13.55

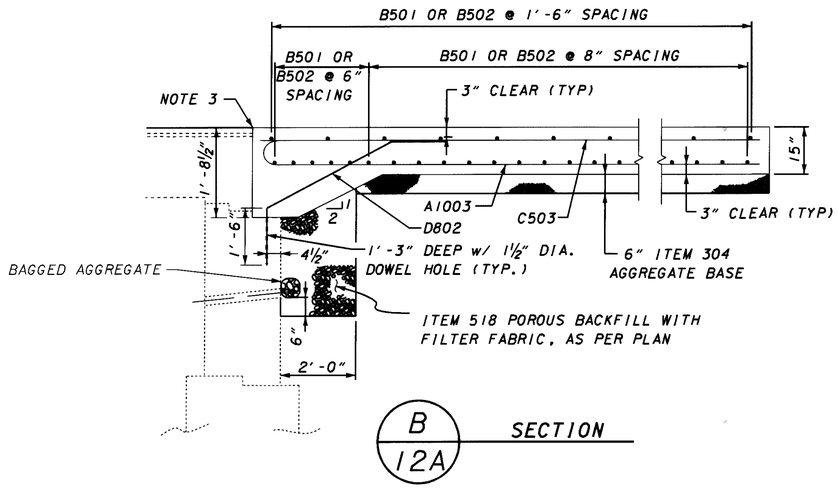
12/100



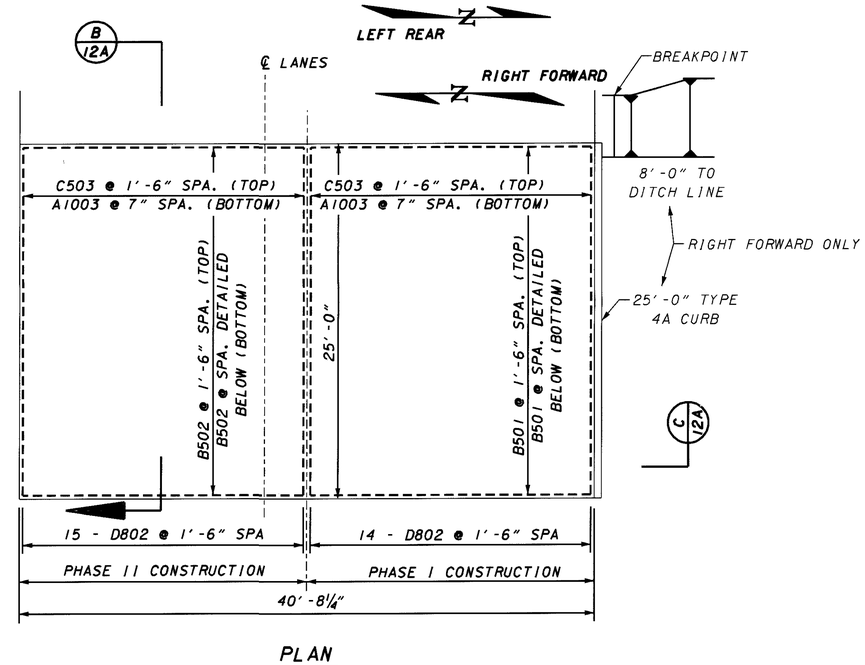
PLAN



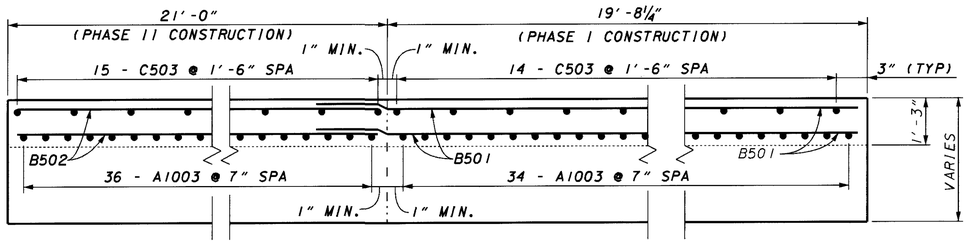
A 12A SECTION



B 12A SECTION



PLAN



C 12A SECTION

MARK	NUMBER	LENGTH	TYPE
RIGHT BRIDGE - NOTE 2			
B501	114	21'-5"	STR
B502	114	20'-8"	STR
C503	58	24'-6"	STR
A1003	140	25'-11"	BENT
LEFT BRIDGE - NOTE 2			
B501	114	21'-5"	STR
B502	114	20'-8"	STR
C503	58	24'-6"	STR
A1003	140	25'-11"	BENT

NOTES:

1. PREFORMED ELASTOMERIC JOINT SEALER AND TYPE 'A' WATERPROOFING PLACED AS PER STD DWG AS-1-81 SHEET 2/3.
2. COST OF REINFORCING IS TO BE INCLUDED IN ITEM 611 REINFORCED CONCRETE APPROACH SLAB, AS PER PLAN.
3. SEE SHEET 62/101 FOR INSTALLATION NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM.
4. TYPE 4-A CURB SHALL BE PLACED AS DETAILED ABOVE. SEE STD DWG'S DM 4.1M, BP 5.1M AND AS-1-81 FOR FURTHER DETAILS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED CET | DRAWN JEL | REVIEWED DLG 01/25/00 | DATE
CHECKED | REVISED | STRUCTURE FILE NUMBER 6703151 LEFT, 6703186 RIGHT

APPROACH SLAB DETAILS
BRIDGE NO. POR-76-2057 L & R
OVER KALE CREEK

POR-76-13.55

12A
100

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AMERITECH
50 W. BOWERY ST.
4TH FLOOR
AKRON,OHIO 44308
PHONE: 330-384-8057
CONTACT: JIM McLAUGHLIN

BELDEN & BLAKE
1748 SALTWELL RD.
DOVER, OHIO 44622
PHONE: 330-602-5551
CONTACT: RICK MATHESON

BP OIL PIPELINE COMPANY
4421 BRADLEY RD.
CLEVELAND, OHIO 44109
PHONE: 216-586-2080
CONTACT: MIKE DeBURGER

EAST OHIO GAS - AKRON
2100 EASTWOOD AVE.
AKRON, OHIO 44305
PHONE: 330-798-7104
CONTACT: GEORGE TURNER

FIRST ENERGY
1910 WEST MARKET
AKRON, OHIO 44313
PHONE: 330-742-8140
CONTACT: STEVE VANCHOFF

GREAT LAKES ENERGY
P.O. BOX 550
HARTVILLE, OHIO 44632-0550
PHONE: 330-877-6747
CONTACT: SUE BARCLAY

SPRINT
3801 ELM RD.
WARREN, OHIO 44483
PHONE: 330-841-1431
CONTACT: GREG BELLAY

STAR CABLE
4720 MAHONING AVE.
P.O. BOX 4898
YOUNGSTOWN, OHIO 44515
PHONE: 1-800-569-0200
CONTACT: TOM BEAT

EASTERN STATES OIL & GAS CO.
4188 ST. RT. 14
RAVENNA, OHIO 44266
PHONE: 330-325-1825
CONTACT: WADE POL

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

CONVERSION OF STANDARD CONSTRUCTION DRAWINGS

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

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. (PREVIOUS CONSTRUCTION PLANS, PROJECT NO. POR-18-13.55 AND POR-18-19.34 / MAH-18-0.00, SHOWING THE ORIGINAL ALIGNMENT AND PROFILE, ARE AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE). THE TOTAL PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS OF 3¾ INCHES FOR THE PASSING LANE AND 6¾ INCHES FOR THE DRIVING LANE AS SHOWN ON THE TYPICAL SECTIONS.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXTREME CARE SHALL BE TAKEN TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LONGITUDINAL JOINTS SHALL BE LAPPED AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

MONUMENTS

MONUMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS AS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON PLAN SHEETS.

CONNECTION 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 "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM 203 EMBANKMENT FOR MEDIAN GUARDRAIL AT BRIDGE AND MEDIAN GUARDRAIL AT PIERS

A QUANTITY FOR ITEM 203 EMBANKMENT IS SHOWN BELOW, THIS QUANTITY OF EMBANKMENT HAS BEEN PROVIDED FOR THE PURPOSE OF GRADING AREAS SURROUNDING PROPOSED GUARDRAIL AS PER STANDARD DRAWINGS MEDIAN GUARDRAIL AT BRIDGES 6.1M "DESIGN A", LOCATIONS ARE NOTED IN THE GUARDRAIL SUBSUMMARY AND ON PLAN SHEETS.

203, EMBANKMENT 2025 YD^2

ITEM 407 - TACK COAT AND ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

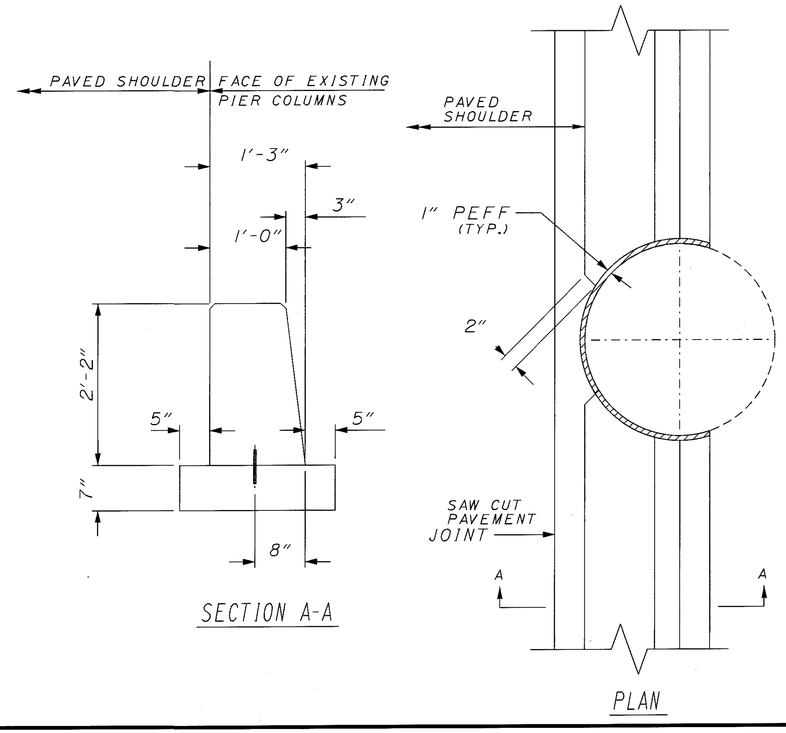
THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. FOR ESTIMATING PURPOSES ONLY, THE PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF:

407, TACK COAT 0.075 GAL. PER SQ. YARD

407, TACK COAT FOR INTERMEDIATE COURSE
0.075 GAL. PER SQ. YARD

ITEM 622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN

BARRIERS ALONG I-76 AT PIERS 1 AND 3 SHALL CONFORM TO STANDARD DRAWINGS RM-4.5M AND RM-4.3M EXCEPT AS NOTED HEREIN AND DETAILED BELOW. THE TRAFFIC-SIDE FACE SHALL BE VERTICAL THE FULL LENGTH OF THE BARRIER. BETWEEN THE EXISTING PIER COLUMNS THE BARRIER FACE SHALL BE ALIGNED FLUSH WITH THE FACE OF THE EXISTING COLUMNS. BEYOND THE LEADING EXTERIOR PIER COLUMN, BOTH FACES OF THE BARRIER SHALL BE TRANSITIONED TO MATCH THE SECTION SHOWN ON STANDARD RM-4.5M AT THE LOCATION OF THE BRIDGE TERMINAL ASSEMBLY CONNECTION. REINFORCING STEEL SHALL BE MODIFIED AS NECESSARY TO ACCOMODATE THE TRANSITION. PAYMENT FOR ITEM 622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN SHALL BE IN LIN.FT. FOR THE LENGTH SPECIFIED IN THE PLANS INCLUDING MATERIALS, LABOR AND REINFORCING STEEL REQUIRED TO CONSTRUCT THE BARRIER AS SHOWN.



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GENERAL NOTES

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ITEM 606 - IMPACT ATTENUATOR, TYPE I-98 [(UNIDIRECTIONAL OR BIDIRECTIONAL)]

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING IMPACT ATTENUATORS:

1) THE C-A-T MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE C-A-T SYSTEM IS CONSIDERED TO BE 31'-3" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS245M	CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS FOR USE AS A LONGITUDINAL MEDIAN BARRIER TERMINAL OR CRASH CUSHION ATTENUATOR	4/10/97	3/6/98
SS224M	C-A-T TRANSITION TO MEDIAN BARRIER GUARDRAIL PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98
SS226M	C-A-T TRANSITION TO VERTICAL WALL OR PIER PLAN, ELEVATION & SECTIONS	4/26/96	3/6/98

2) THE BRAKEMASTER MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., ONE EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE BRAKEMASTER SYSTEM IS CONSIDERED TO BE 32'-8" LONG. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
92-00-01	BRAKEMASTER GENERAL ASSEMBLY (UNIDIRECTIONAL SYSTEM)	3/6/97	3/6/98
92-00-81	BRAKEMASTER (UNIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
92-00-02	BRAKEMASTER GENERAL ASSEMBLY (BIDIRECTIONAL SYSTEM)	3/10/97	3/6/98
92-00-82	BRAKEMASTER (BIDIRECTIONAL) WITH FOUNDATION TUBES	2/9/98	3/6/98
920202 4-0000	ANCHOR ASSEMBLY, FOUNDATION TUBE, 6 1/2 FT., BRS	6/12/97	3/6/98

THE FACE OF THE TYPE I-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 36" X 12". PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE I-98 (UNIDIRECTIONAL OR BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 858 ASPHALT CONCRETE SURFACE COURSE, 12.5mm, TYPE B (446), AS PER PLAN

THE REQUIREMENTS OF 441 AND 446 & SS858 SHALL APPLY; DEVIATIONS FROM THESE ARE AS FOLLOWS:

THE COMBINATION OF NEW AGGREGATES, NEW ASPHALT BINDER AND RECLAIMED MATERIAL SHALL BE AS REQUIRED TO PRODUCE A COMPOSITION CONTAINING A MINIMUM OF 5.0% NEW ASPHALT BINDER. ANY PERCENTAGE OF RECLAIMED MATERIAL PROPOSED FOR USE SHALL BE INCLUDED IN THE MIX DESIGN PROCESS TO ESTABLISH THE JOB MIX FORMULA (JMF) IN ACCORDANCE WITH 858.03.

ONLY RECLAIMED PAVEMENT FROM THIS PROJECT WILL BE PERMITTED FOR USE IN THIS ITEM.

PAVEMENT REPAIR

THE FOLLOWING ESTIMATED PAVEMENT REPAIR QUANTITIES HAVE BEEN INCLUDED IN THE PLANS TO BE DIRECTED BY THE ENGINEER.

ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR.....1500 SQ.YD.
ITEM 255 FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS.....2000 SQ.YD.
ITEM 255 FULL DEPTH PAVEMENT SAWING.....200 LIN.FT.

STREAM CHANNEL EXCAVATION
THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE EXCAVATION AND HAULING OF MATERIAL FROM THE STREAM CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATIONS SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, CHANNEL CLEAN OUT, EXCAVATION FOR ROCK CHANNEL PROTECTION ND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS.

DEMOLITION DEBRIS
THE CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING THE STREAM. ANY MATERIAL THAT DOES FALL INTO THE STREAM SHALL BE REMOVED AS SOON AS POSSIBLE.

INSTREAM WORK
INSTREAM WORK WILL BE LIMITED WHERE PRACTICABLE AND ONLY CLEAN NON-ERODIBLE MATERIAL WILL BE USED FOR FORDS OR COFFERDAMS. THIS TEMPORARY PLACED MATERIAL WILL BE REMOVED AND THE STREAM BOTTOM RESTORED TO NEAR NATURAL CONDITIONS WHEN THE WORK IS COMPLETED.

ASBESTOS NOTIFICATION
AN ASBESTOS SURVEY OF THE ROCK SPRINGS ROAD BRIDGE OVER IR76 SCHEDULED FOR REHABILITATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

AKRON REGIONAL AIR QUALITY MANAGEMENT DISTRICT
146 S. HIGH ST. SUITE 904
AKRON, OHIO 44308
LYNN M. MALCOLM, ADMIN..
(330) 375-2480
FAX: (330) 375-2402

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF THE DEMOLITION OF THE BRIDGE. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.
INFORMATION REQUIRED ON THE FORM WILL INCLUDE:1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 705 OAKWOOD STREET, RAVENNA, OHIO, 44266.

BASIS FOR PAYMENT*-THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202-PORTIONS OF STRUCTURE REMOVED,OVER 20FT SPAN, AS PER PLAN.*

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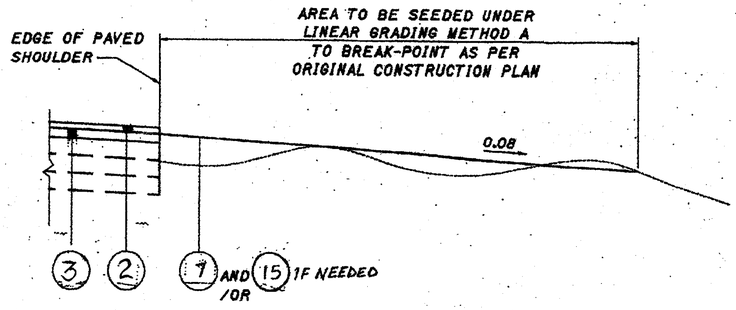
GENERAL NOTES

POR-76-13.55

METHOD A



LEGEND

(2) 858 ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN

(3) 858 ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)

(5) 407 TACK COAT

(7) 203 LINEAR GRADING, METHOD A

(13) 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG64-22, AS PER PLAN

(14) 203 LINEAR GRADING, METHOD C

(15) 203 EMBANKMENT, AS PER PLAN

ITEM 203 - EMBANKMENT, AS PER PLAN SHALL MEET THE SPECIFICATIONS OF ITEM 203 EXCEPT THAT GRANULAR MATERIAL AS PER 203.02 SHALL BE EXCLUDED. THE METHOD OF MEASUREMENT SHALL BE DESCRIBED IN SECTION 203.15(e). THIS ITEM IS PROVIDED IN CASE WINDROWED MATERIAL IS NOT AVAILABLE NOR SUFFICIENT. EMBANKMENT MAY BE OBTAINED FROM WITHIN THE EXISTING R/W AS APPROVED BY THE ENGINEER.

LINEAR GRADING - METHOD A

THIS WORK SHALL CONSIST OF REGRADING THE EXISTING SHOULDER IN NON-GUARDRAIL AREAS ON THE MAINLINE OUTSIDE AND INSIDE SHOULDERS AND ON BOTH INSIDE AND OUTSIDE SHOULDERS OF THE RAMPS AS INDICATED IN THE SKETCH. REGRADING WILL BE ACCOMPLISHED BY REMOVING EXCESS TURF BETWEEN THE EDGES OF THE PAVED SHOULDER AND THE BREAK-OVER POINT USING A SLOPE OF APPROXIMATELY 0.08. EXCESS MATERIAL SHALL BE WINDROWED ON THE SHOULDER AND REMOVED BY THE CONTRACTOR. ANY VOIDS OR IRREGULARITIES BETWEEN THE EDGE OF PAVED SHOULDER AND BREAK-OVER POINT SHALL BE FILLED AND ADEQUATELY COMPACTED USING EXCESS MATERIAL. EXISTING RUTTED AREAS CAUSED BY SURFACE EROSION SHALL BE SCARIFIED PRIOR TO FILLING. ITEM 203 - EMBANKMENT, AS PER PLAN SHALL BE PROVIDED WHERE WINDROWED MATERIAL IS NOT AVAILABLE. ADEQUATE QUANTITY SHALL BE PROVIDED TO COMPLETE THE TYPICAL SECTION AS SHOWN. AFTER GRADING OPERATION IS COMPLETED THE DISTURBED AREA SHALL BE SEEDED AND MULCHED AS PER . ALL COMPACTION SHALL BE AS PER ITEM 203.

THE METHOD OF MEASUREMENT SHALL BE STATIONS MEASURED SEPARATELY FOR EACH SIDE OF EACH DIRECTIONAL LANE AND SHALL INCLUDE ALL WORK REQUIRED AS DESCRIBED ABOVE INCLUDING THE NECESSARY SEEDING.

THERE MAY BE AREAS WHERE LINEAR GRADING MAY NOT BE REQUIRED IN THE FIELD. THE ENGINEER SHALL DETERMINE THESE LOCATIONS AND APPROPRIATE DEDUCTION MADE AS A RESULT OF THIS FIELD INVESTIGATION.

THE COST OF THE ABOVE OPERATION, EXCEPT FOR ITEM 203 EMBANKMENT, AS PER PLAN, SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 203 - LINEAR GRADING, METHOD A

203
LINEAR GRADING
METHOD A

EB RIGHT			WB RIGHT		
714+00 -	716+10	210	714+00 -	717+40	340
717+70 -	782+50	6480	719+00 -	783+80	6480
784+20 -	800+20	1600	785+00 -	801+20	1570
800+20 -	814+60	1440	801+20 -	820+40	1920
814+60 -	826+60	1200	820+40 -	828+00	760
834+70 -	846+80	1210	835+60 -	848+00	1240
848+30 -	866+00	1770	849+60 -	873+60	2400
874+00 -	924+60	5060	875+20 -	926+40	5120
976+70 -	968+00	4130	928+00 -	960+50	3250
968+00 -	976+60	860	971+00 -	978+50	750
980+00 -	987+50	750	983+20 -	986+80	360
987+50 -	1025+80	3830	986+80 -	1027+00	4020
1028+50 -	1031+70	320	1034+00 -	1048+80	1480
1033+40 -	1049+80	1640	1086+80 -	1116+90	3010
1085+20 -	1115+70	3050			
EB MEDIAN			WB MEDIAN		
714+00 -	830+00	11600	714+00 -	831+30	11730
833+00 -	977+50	14450	834+20 -	978+60	14440
980+00 -	1059+50	7950	981+80 -	1060+00	7900
1062+00 -	1083+00	2100	1063+20 -	1084+00	2080
1085+00 -	1+00	1107	1086+10 -	1+00	1007
	TOTAL	70757		TOTAL	69857

70757 + 69857 = 140614 LIN FT

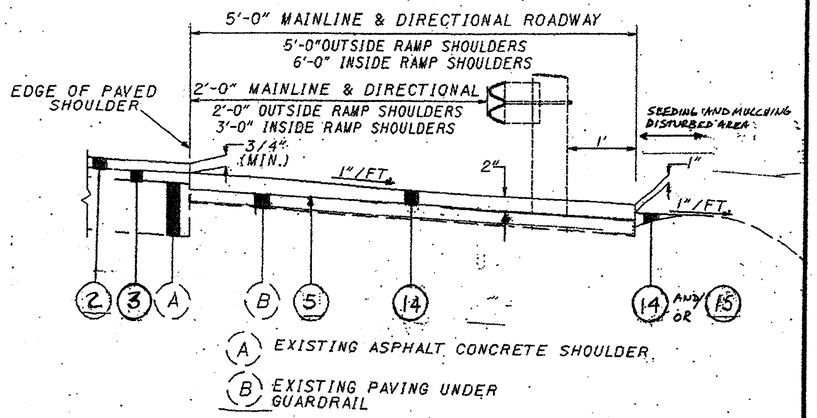
= 1406 STATIONS

ESTIMATED QUANTITIES

ITEM 203 LINEAR GRADING, METHOD A 1406 STA.

ITEM 203 EMBANKMENT, AS PER PLAN = 500 C.Y.

METHOD C



LINEAR GRADING- METHOD C.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL. PG64-22

THIS ITEM OF WORK SHALL CONSIST OF RESURFACING THE EXISTING OUTSIDE AND INSIDE SHOULDER BETWEEN THE PAVED SHOULDER AND BREAKPOINT OF THE SHOULDER IN AREAS WHERE PAVING UNDER GUARDRAIL EXISTS. THE THICKNESS TO BE PLACED IS ASSUMED TO VARY FROM 1" TO 3", WITH THE INTENT THAT THE FINAL SURFACE SHALL SLOPE DOWN AND AWAY FROM THE PAVED BERM. AFTER THE GRADING OPERATION IS COMPLETED THE DISTURBED AREA SHALL BE SEEDED AND MULCHED AS PER AND INCLUDED IN THIS LINEAR GRADING ITEM FOR PAYMENT.

203
LINEAR GRADING
METHOD C

EB RIGHT		LIN. FT.	WB RIGHT		LIN. FT.
716+10 -	717+20	110	717+90 -	719+00	110
782+50 -	783+70	120	784+30 -	785+50	120
826+60 -	831+20	460	828+00 -	831+40	340
833+00 -	834+70	170	833+30 -	835+60	230
846+80 -	847+90	110	848+60 -	849+60	100
866+00 -	873+30	4030	874+10 -	875+20	110
924+60 -	926+20	160	927+00 -	928+00	100
976+60 -	978+40	180	960+50 -	5+00 RAMP E	1050
1025+80 -	1028+50	3270	980+10 -	983+20	310
1031+70 -	1032+60	90	1027+00 -	1032+20	520
1049+80 -	1060+50	1070	1033+00 -	1034+00	100
1062+70 -	1084+00	2130	1048+80 -	1060+00	1120
1115+70 -	1116+70	100	1062+20 -	1084+00	2180
			1085+00 -	1086+80	180
			1117+50 -	1+00	110
EB MEDIAN			WB MEDIAN		
830+00 -	831+20	120	833+20 -	834+20	100
977+50 -	978+40	90	980+00 -	981+00	100
1059+50 -	1060+30	80	1062+20 -	1063+20	100
1083+00 -	1084+00	100	1085+10 -	1086+10	100
	TOTAL	12390		TOTAL	7080

12390 + 7080 = 19470 LIN FT

= 195 STATIONS

ESTIMATED QUANTITIES

ITEM 203 LINEAR GRADING, METHOD C 195 STA.

ITEM 407 TACK COAT 800 GAL

ITEM 203 EMBANKMENT, AS PER PLAN 100 C.Y.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE. TYPE 1, (UNDER GUARDRAIL), PG64-22 602 C.Y.

CALCULATED ST CHECKED

LINEAR GRADING METHOD A, C

1 PDR-76-1355

15 100

ITEM 614 - MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS IN ACCCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

A MINIMUM OF ONE ELEVEN FOOT LANE IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING I-76 PAVEMENT WHILE WORK IS ACTIVELY BEING PERFORMED.

RAMP TRAFFIC SHALL BE MAINTAINED AT ALL TIMES.

THE USE OF THE EXISTING MAINLINE I-76 SHOULDERS TO MAINTAIN TRAFFIC IS PROHIBITED EXCEPT AS SPECIFICALLY NOTED IN THESE PLANS. SHOULD THE EXISTING SHOULDER AREAS BECOME DAMAGED OR DESTROYED DUE TO THE CONTRACTOR'S NEGLIGENCE OR FAILURE TO PROVIDE ADEQUATE SIGNS, BARRICADES, CONES, FLAGGERS OR OTHER TRAFFIC CONTROL DEVICES, THE RESTORATION OF THE SHOULDERS WILL BE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE WORK ZONES THAT ALTERNATELY CLOSE BOTH THE PASSING LANE AND THE DRIVING LANE UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS TWO (2) MILES.

CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT ARE IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE HALF-HOUR BEFORE SUNRISE. ALL NIGHTTIME LANE RESTRICTIONS SHALL REQUIRE DRUMS OR BARRICADES.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.

PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE WIDTH AND LANES SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED AS DIRECTED BY THE ENGINEER.

ADDITIONAL MAINTENANCE OF TRAFFIC NOTES AND REQUIREMENTS FOR WORK ON ROCK SPRINGS ROAD ARE ADDRESSED IN PART 2 OF THESE PLANS.

LANE CLOSURE LENGTH AND DURATION

THE PROJECT IS TO BE CONSTRUCTED IN TWO (2) STAGES, WESTERN AND EASTERN PARTS. LENGTH OF WORK ZONE (ONE LANE CONDITION) SHALL BE LIMITED TO A MAXIMUM OF FOUR (4) MILES. ALL WORK (PER STAGE) REQUIRING LANE RESTRICTIONS OR CLOSURES, EXCLUDING STR. 1578LR, SHALL BE COMPLETED WITHIN THIRTY (30) CONSECUTIVE DAYS. STR. 1578 SHALL BE COMPLETED WITHIN SIXTY (60) DAYS. FAILURE BY THE CONTRACTOR TO MEET THESE REQUIREMENTS SHALL RESULT IN LIQUIDATED DAMAGES BEING ASSESSED THE CONTRACTOR IN THE AMOUNT OF $2000 PER DAY.

LENGTH AND DURATION OF LANE CLOSURE AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

LANE CLOSURE RESTRICTIONS

LANE CLOSURES SHALL NOT BE PERMITTED ON I-76 DURING THE HOURS OF 6 AM TO 6 PM, MONDAY THROUGH FRIDAY, DURING PLACEMENT OF INTERMEDIATE OR SURFACE COURSES, PLACEMENT OF FINAL MARKINGS, OR FOR SHOULDER REPLACEMENT AT STRUCTURES. THE CONTRACTOR SHALL RESTORE TRAFFIC TO TWO TWELVE FOOT LANES IN EACH DIRECTION ON THE EXISTING PAVEMENT DURING THESE PERIODS.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT OF $1000 PER HOUR OR PORTION THEREOF THAT A LANE REMAINS CLOSED TO TRAFFIC.

HOLIDAY RESTRICTIONS

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

EASTER MOTHER'S DAY
MEMORIAL DAY FOURTH OF JULY LABOR DAY

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY	TIMES ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THRU 12:00N MONDAY
MONDAY	12:00N FRIDAY THRU 12:00N TUESDAY
TUESDAY	12:00N MONDAY THRU 12:00N WEDNESDAY
WEDNESDAY	12:00N TUESDAY THRU 12:00N THURSDAY
THURSDAY	12:00N WEDNESDAY THRU 12:00N MONDAY
FRIDAY	12:00N THURSDAY THRU 12:00N MONDAY
SATURDAY	12:00N FRIDAY THRU 12:00N MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN THE AMOUNT OF $5000 PER DAY OR PORTION THEREOF.

ADVANCE NOTICE TO PAVE

THE CONTRACTOR SHALL, 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, SUBMIT TO THE DISTRICT CONSTRUCTION ENGINEER FOR APPROVAL A DETAILED SCHEDULE ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

CONTRACTORS' 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 AMBER FLASHING LIGHT. PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY: OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE L/A, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE CONTRACTOR'S APPROVED STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER/ SUPERVISOR HAS BEEN GRANTED.

LANE WIDTH RESTRICTION NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE ODOT PUBLIC INFORMATION OFFICE EIGHTEEN (18) DAYS PRIOR TO THE RESTRICTION. (330)-297-0801 EXT 211.

614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE CURRENT EDITION, LATEST REVISION OF THE OHIO MANUAL OF UNIFORM TRAFFIC DEVICES (OMUTCD), THE CONTRACTOR SHALL PROVIDE THE SERVICE OF LAW ENFORCEMENT OFFICERS (LEO) WITH AN OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS, AT THE ENGINEER'S REQUEST, FOR THE PURPOSE OF CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

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

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

THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

INFORMATION REGARDING ARRANGEMENTS AND PAYMENTS BY THE CONTRACTOR FOR THE LEO MAY BE OBTAINED BY CONTACTING:

THE OHIO HIGHWAY PATROL
1970 WEST BROAD STREET
COLUMBUS, OHIO 43223,
TELEPHONE: 614-466-2660.

IF AFTER CONTACTING THE OHIO HIGHWAY PATROL, IT IS DETERMINED THAT THEY CANNOT SUPPLY THE LEO, THEN AN AUTHORIZED MUNICIPAL OR COUNTY POLICE OFFICER EQUIPPED WITH A MARKED AND FLASHER-LIGHT EQUIPPED OFFICIAL POLICE OR PATROL CAR SHALL BE PROVIDED.

LEO'S WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR 80 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

A QUANTITY OF 100 CU YDS OF 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC SHALL BE PROVIDED FOR USE IN MAINTAINING PAVEMENT, SHOULDERS AND OTHER LOCATIONS AS DIRECTED BY THE ENGINEER. (SS 921 OR HPM MAY BE USED AS AN ALTERNATE MATERIAL WHEN 448 IS NOT AVAILABLE).

614 - PORTABLE CHANGABLE MESSAGE SIGN, AS PER PLAN

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A DIESEL POWERED CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. EACH SIGN SHALL BE EITHER A WINK-O-MATIC GENERATION 3, 4, 6, 10 OR 12, AMERICAN SIGNAL CO. CMS-T3000, AN ADDCO DIGI-DOT SIGN, A TELE-SPOT SENTINAL SIGN OR AN APPROVED EQUAL.

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

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

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION MEETING. THE SIGN SHALL HAVE TWO DIFFERENT MEMORIES (PROM AND RAM) AND CAPABILITY TO STORE UP TO 99 MESSAGES IN EACH MEMORY. SIGN MESSAGES SHALL BE LEGIBLE FROM 650 FT MINIMUM. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. IN ORDER TO CONVEY A MAXIMUM OF INFORMATION AT A SINGLE GLANCE, ONLY THREE LINE PRESENTATION FORMATS WITH A MAXIMUM OF SIX MESSAGE PHASES WILL BE PERMITTED. NORMALLY, ONLY A MAXIMUM OF THREE MESSAGE PHASES SHOULD BE EMPLOYED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK. THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03(C). THE CONTRACTOR SHALL, PRIOR ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID PER SIGN-MONTH OF ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN, AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. A QUANTITY OF TWO PCMS SHALL BE PROVIDED FOR USE ON I-76. A ESTIMATED QUANTITY OF 6 SIGN-MONTHS OF ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

CALCULATED K.J.G. CHECKED L.A.J.

MAINTENANCE OF TRAFFIC

POR-76-15.13

16 100

TRAFFIC CONTROL INSPECTOR

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 BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL, OR A QUALIFIED REPRESENTATIVE, SHALL ALSO BE AVAILABLE ON AN AROUND-THE-CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND TELEPHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRECONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES AS LONG AS IMMEDIATE ATTENTION IS GIVEN TO TRAFFIC CONTROL. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR 614 - MAINTAINING TRAFFIC.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL BE ADVISED THAT OTHER PROJECTS MAY BE ONGOING IN AREAS IMMEDIATELY ADJACENT TO AND WITHIN THE PROJECT LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL SCHEDULE HIS WORK SO AS TO CAUSE A MINIMUM OF DELAY OR CONFLICT WITH THE OTHER PROJECT(S). IN ACCORDANCE WITH 105.07, THE CONTRACTOR SHALL ARRANGE WITH THE OTHER CONTRACTORS A MUTUALLY ACCEPTABLE WORK SCHEDULE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL RECEIVE DAILY APPROVAL FROM THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. ANY CONFLICT BETWEEN CONTRACTORS INVOLVING WORK SCHEDULES, WORK AREA OR COOPERATION SHALL BE RESOLVED BY THE ENGINEER. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS INCLUDED WITHIN THIS PROJECT.

614 - TEMPORARY PAVEMENT MARKINGS

IN ADDITION TO THE REQUIREMENTS OF 614.10, WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE, WITH TEMPORARY OR PERMANENT MARKINGS, ALL LANE AND EDGE LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY FOR THIS WORK:

ITEM 614 - TEMPORARY LANE LINE, CLASS I	8 MILE
ITEM 614 - TEMPORARY LANE LINE, CLASS II	16 MILE
ITEM 614 - TEMPORARY EDGE LINE, CLASS I	60 MILE

614 - WORK ZONE MARKING SIGNS

A QUANTITY OF ITEM 614 WORK ZONE MARKING SIGN HAS BEEN INCLUDED IN THE PLANS. THIS QUANTITY SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING SIGNS: OW-62 (BUMP), OW-167 (NO EDGE LINES), OW-171 (UNEVEN LANES SYMBOL).

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY FOR THE MAINTENANCE OF TRAFFIC ON THIS PROJECT:

ITEM 614 - WORK ZONE MARKING SIGN	30 EACH

301 - BITUMINOUS AGGREGATE BASE, PG64-22

A QUANTITY OF 245 CU YDS OF ITEM 301 - BITUMINOUS AGGREGATE BASE, AS PER PLAN, SHALL BE PROVIDED FOR USE IN REPAIRING PAVEMENT SHOULDERS AS DESCRIBED BELOW. THE UNIT BID PRICE SHALL INCLUDE ALL COSTS FOR THE EXCAVATION AND REMOVAL OF THE EXISTING SHOULDER.

THE OUTSIDE SHOULDER (10 FEET WIDE) AND THE INSIDE SHOULDER (4 FEET WIDE) FROM 660 FEET BEFORE TO 150 FEET AFTER STRUCTURE NO. 76-1578 SHALL BE REMOVED AND REPLACED WITH A 7 INCH THICK COURSE OF ITEM 301 - BITUMINOUS AGGREGATE BASE, AS PER PLAN, BEFORE ANY LANE RESTRICTIONS ARE PERMITTED AT THE STRUCTURE.

OPEN TRENCHES

LENGTHS OF SHOULDER REPLACEMENT SHALL BE COMPLETED TO MATCH THE EXISTING PAVEMENT ELEVATION BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN AFTER WORKING HOURS. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED SHOULDER REPLACEMENT SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

622 - PORTABLE CONCRETE BARRIER, 32"
622 - PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED

AN ESTIMATED QUANTITY OF 560 LIN FT OF ITEM 622 - PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED, AND AN ESTIMATED QUANTITY OF 1760 LIN FT OF ITEM 622 - PORTABLE CONCRETE BARRIER, 32", HAVE BEEN PROVIDED FOR THIS PROJECT. THE BARRIER SHALL BE PLACED AS PER MT-95.40M. BRIDGE MOUNTED BARRIER SHALL NOT BE ANCHORED TO THE DECK.

614 - BARRIER REFLECTOR, TYPE B
614 - OBJECT MARKER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO THE APPROPRIATE PROPOSAL NOTE AND ITEM 626 EXCEPT THAT THE SPACING SHALL BE 25 FEET. AN ESTIMATED QUANTITY OF 74 EACH OF ITEM 614 - BARRIER REFLECTOR, TYPE B, AND 74 EACH OF ITEM 614 - OBJECT MARKERS, HAVE BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY.

ITEM SPECIAL- REPLACEMENT DRUM

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

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR "ITEM SPECIAL-REPLACEMENT DRUM" AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 50 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

STOPPAGE OF MAINLINE TRAFFIC

ANY TIME TRAFFIC MUST BE COMPLETELY STOPPED ON A FREEWAY OR INTERSTATE, IT SHALL BE DONE IN THE FOLLOWING MANNER: THE COMPLETE TRAFFIC STOPPAGE ON ALL LANES OF ANY DIRECTIONAL ROADWAY SHALL BE NO MORE THAN 10 MINUTES IN ANY ONE CONSECUTIVE 30 MINUTE PERIOD.

A MINIMUM OF TWO (2) LAW ENFORCEMENT OFFICERS (LEO) WITH PATROL CARS SHALL BE USED TO PACE MOTORISTS TO A STOP. THERE SHALL BE ONE LEO FOR EACH LANE ON THE FREEWAY.

AFTER TRAFFIC HAS BEEN SLOWED, ONE (1) PATROL CAR SHALL TRAVEL ALONG THE ROADWAY SHOULDER 500 FEET BEHIND THE BACKUP OF STOPPED VEHICLES. WHERE STOPPAGE OCCURS IN THE VICINITY OF FREEWAY ENTRANCES, THE CONTRACTOR SHALL PLACE FLAGGERS ON THE RAMPS TO STOP TRAFFIC. PATROL CARS SHALL HAVE FLASHING BEACONS TO PROVIDE ADEQUATE VISIBILITY TO APPROACHING MOTORISTS.

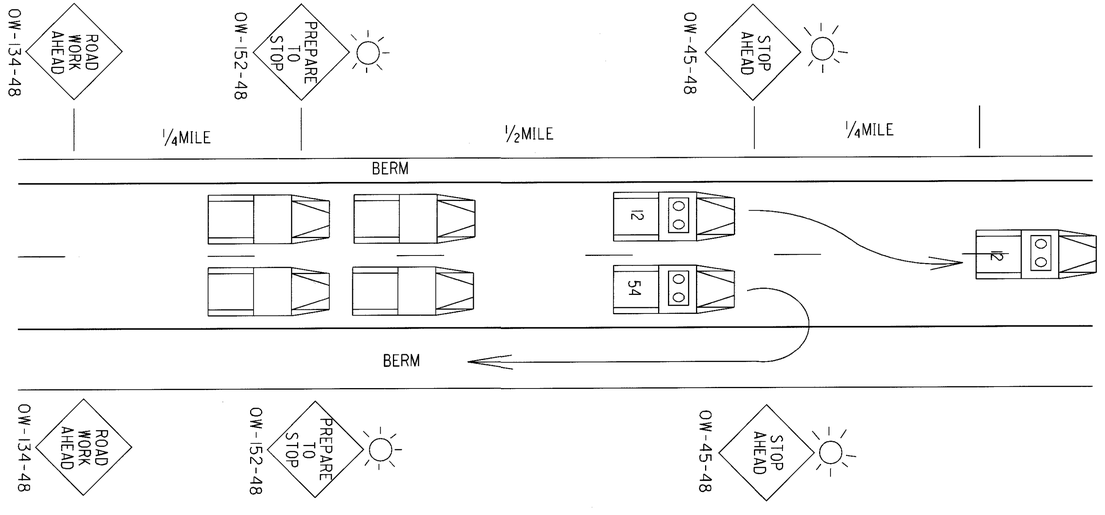
WHEN THE ENGINEER DEEMS APPROPRIATE , THE CONTRACTOR SHALL ERECT AND MAINTAIN "ROAD WORK AHEAD" (OW-134), "PREPARE TO STOP" (OW-152), AND "STOP AHEAD" (OW-45) SIGNS WITH TWO (2) FLASHING TWELVE INCH TRAFFIC SIGNAL HEADS IN ACCORDANCE WITH 632.05. THESE SIGNS SHALL BE ILLUMINATED DURING NIGHT OPERATIONS AND SHALL BE 48 INCH BY 48 INCH SIGNS. PATROL CARS AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH THE DETAIL BELOW. FLARES MAY BE SUBSTITUTED FOR THE FLASHING 12 INCH SIGNAL HEADS. THERE SHALL BE TWO (2) FLARES AT EACH SIGN ON BOTH SIDES OF THE ROADWAY. THE FLARES SHALL BE REPLACED IF THEY BURN OUT.

A PORTABLE CHANGEABLE MESSAGE SIGN, TYPE TO BE ON ODOT'S PREAPPROVED LIST, SHALL BE PLACED 1.5 TO 2 MILES IN ADVANCE OF THE CLOSURE OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE ODOT PUBLIC INFORMATION OFFICE, 330-297-0801 EXT-211, THREE (3) DAYS PRIOR TO ANY MAINLINE TRAFFIC STOPPAGE.

METHOD OF PAYMENT

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614 - MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.



SUGGESTED SEQUENCE OF CONSTRUCTION

1: MAINTAIN ONE 11' LANE ON DRIVING LANE.
PAVEMENT PLANING PASSING LANE -- 2-3/4"
PLACE TEMP EDGE LINES (W&Y)
2: MAINTAIN ONE 11' LANE ON PASSING LANE.
a) PAVEMENT PLANING DRIVING LANE -- 5-3/4"
PAVEMENT PLANING OUTSIDE BERM -- 2-3/4"
b) JOINT REPAIRS DRIVING LANE
c) PLACE 301 COURSE ON DRIVING LANE -- 3"
PLACE TEMP EDGE LINE (W) AND TEMP LANE LINE
3. MAINTAIN ONE 11' LANE ON DRIVING LANE
JOINT REPAIRS PASSING LANE AS DIRECTED BY ENGINEER
4. RESTORE TRAFFIC TO TWO 12' LANES.
PLACE INTERMEDIATE COURSE FULL WIDTH
PLACE TEMP LANE AND EDGE LINES (W&Y)
5: PLACE SURFACE COURSE FULL WIDTH
PLACE TEMP LANE LINE AND EDGE LINES (W&Y)
6: PLACE RUBBERIZED SURFACE COURSE
PLACE FINAL PAVEMENT MARKINGS.

STRUCTURE WORK IS TO BE PERFORMED CONCURRENTLY WITH ROADWAY REPAIRS AND PAVING OPERATIONS.

ALTERNATE MAINTENANCE OF TRAFFIC PLANS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ODOT DISTRICT CONSTRUCTION ENGINEER.

CALCULATED KJG CHECKED LAJ

MAINTENANCE OF TRAFFIC

POR-76-15.13

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified herein, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.

2. While the need for certain advisory signing is noted herein, it is not intended that this be indicative of all signing that may be required to advise or warn motorist, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.

3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown herein may be required.

4. The drop-off treatment selected for use at any given location shall be appropriate for the prevailing conditions at the site.

5. Where concrete barrier is specified, it shall be in accordance with Standard Construction Drawing MC - 9.2 and Item 622.

6. When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.

7. When OW-151 (Low Shoulder) signs or OW-171 (Uneven Lanes symbol), OWP-171 (uneven lane plaque), and OC-53 (Maintain Present Lane) signs are required, they shall be placed 750' in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the drop-off condition extends more than one-half mile, additional signs shall be erected at intervals of a maximum of one mile.

8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, the Optional Wedge Treatment shall be provided.

9. Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10', drums may be placed on the opposite level from that of traffic provided the drop-off depth does not exceed 5" and approval is granted by the Project Engineer.

10. Pavement Repairs (or similar work):

a. Lengths greater than 60 feet - utilize appropriate treatment from Condition I.

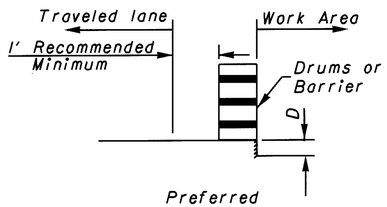
b. Lengths of 60 feet or less - repairs shall be affected in accordance with Item 255.08. Drums may be used as a separator adjacent to the traveled lane.

CONDITION I

1. These treatments are to be used for resurfacing, pavement planing excavation, etc., between, beside or within traveled lanes.

Distance From Traveled Lane	D (in)	Treatment
1FT-12FT	< 1½	Erect OW-171, AND OWP-171.
1FT-12FT	1½-3	1. Lane closure utilizing drums* as shown below. (use only on 3 or more lanes) - or - 2. Optional Wedge Treatment.
1FT-12FT	3 - 5	Lane closure utilizing drums as shown below
1FT-12FT	5 - 12	Lane closure utilizing portable concrete barrier as shown below.
>12FT-20FT	12 - 24	Lane closure utilizing drums as shown below
>12FT-20FT	>24	Lane closure utilizing portable concrete barrier as shown below.

*Cones may be used for daytime only conditions.



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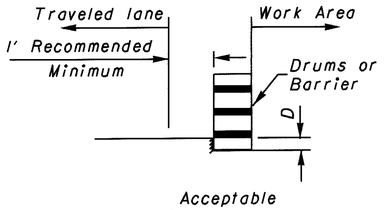
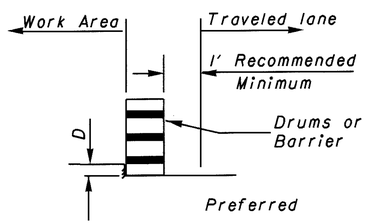


Acceptable (see note #9)



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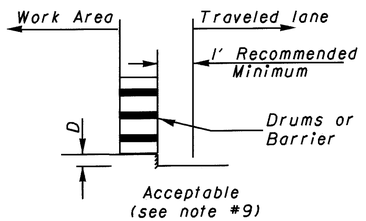


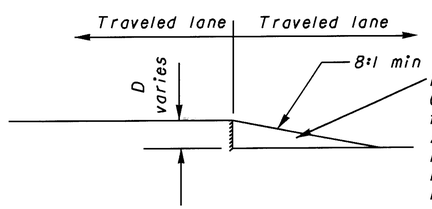
Acceptable (see note #9)

OPTIONAL WEDGE TREATMENT

(MILLING OR RESURFACING)

1. This treatment may be used when permitted for Condition I only.

2. OW-171, OWP-171, and OC-53 signs required.



Firm and unyielding material (to be removed prior to placing the abutting pavement course) All labor, equipment, materials, and incidentals to provide and subsequently remove the pavement wedge shall be included and paid under the lump sum bid for Item 614- Maintaining Traffic

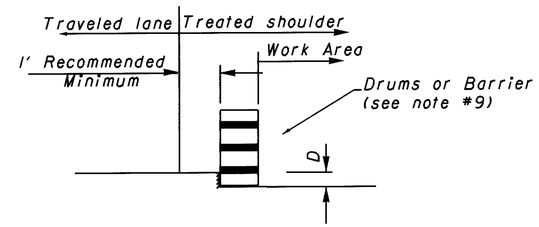
CONDITION II

DROPOFFS WITHIN GRADED SHOULDER AREA
[except for linear grading areas]

The treatments indicated below are for use in conjunction with resurfacing, planing, or excavation within the graded shoulder area.

Distance From Traveled Lane	D (in)	Treatment
1FT-12FT	< 1½	1.) If edgelines are present, no treatment necessary. or 2.) Erect OW-171, OWP-171, and OC-53 signs
1FT-12FT	1½- 5	1) If min. lane widths* requirements can be met, maintain lanes utilizing drums as shown below. - or - 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums. (use only on 3 or more lanes) - or - 3) Optional shoulder treatment
>12FT-30FT	<- 24	Shoulder closure utilizing drums as shown below
>12FT-30FT	>24	Shoulder closure utilizing portable concrete barrier as shown below.

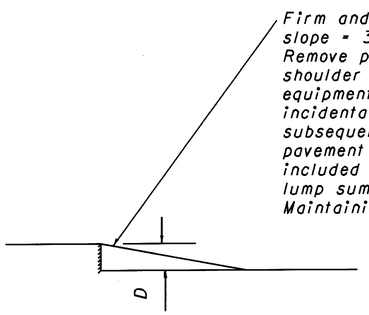
*Minimum lane widths shall be 10' unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

1. This treatment shall not be used within a bituminous shoulder where a hot longitudinal joint per 401.15 is required.

2. OW-151 signs required.



Firm and unyielding material slope = 3:1 or flatter. Remove prior to placing the shoulder course. All labor, equipment, materials and incidentals to provide and subsequently remove the pavement wedge shall be included and paid under the lump sum bid for item 614 - Maintaining Traffic.

DROPOFFS IN WORK ZONES

POR-76-15.13

REVISED 4/27/99
I:\D4STD\TRAFFIC\MOT\DROPOFF.DGN

GENERAL SUMMARY

13	14	15	16	17	20	41	42	43	44	56	ITEM	ITEM EXT	TOTAL	UNITS	DESCRIPTION	AS PER PLAN REF. SHEET
															ROADWAY	
					800						202	22900	800	SQ. YD.	APPROACH SLAB REMOVED	
								8			202	35500	8	LIN FT	PIPE REMOVED FOR REUSE, 24" AND UNDER	
								16			202	35600	16	LIN FT	PIPE REMOVED FOR REUSE, OVER 24"	
						3367	2007				202	38000	5374	LIN FT	GUARDRAIL REMOVED	
						408	397				202	38300	805	LIN FT	GUARDRAIL REMOVED BARRIER DESIGN	
									1295		202	54100	1295	EACH	RAISED PAVEMENT MARKER REMOVED FOR STORAGE	
					58					3336	203	12000	3394	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	
2025										5485	203	20000	7510	CU. YD.	EMBANKMENT	
		600									203	20001	600	CU. YD.	EMBANKMENT, AS PER PLAN	15
		1406									203	60200	1406	STATION	LINEAR GRADING METHOD A	15
		195									203	60300	195	STATION	LINEAR GRADING METHOD C	15
								3			604	40000	3	EACH	MONUMENT ASSEMBLY REMOVED AND RESET	
						675	400				606	13000	1075	LIN FT	GUARDRAIL, TYPE 5	
							500				606	15500	500	LIN FT	GUARDRAIL, BARRIER DESIGN, TYPE 5	
						10	4				606	26500	14	EACH	ANCHOR ASSEMBLY, TYPE T	
						12	13				606	35000	25	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
						2	2				606	35100	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
						12	10				606	60010	22	EACH	IMPACT ATTENUATOR, TYPE I-98, (BIDIRECTIONAL)	
						354	188				622	10160	542	LIN FT	CONCRETE BARRIER, SINGLE SLOPE TYPE D AS PER PLAN	53
						48	40				626	00100	88	EACH	BARRIER REFLECTOR, TYPE A	
						24	12				626	00200	36	EACH	BARRIER REFLECTOR, TYPE B	
															EROSION CONTROL	
										4298	659	10000	4298	SQ.YD.	SEEDING AND MULCHING	
										0.5	659	20000	0.5	TON	COMMERCIAL FERTILIZER	
										1.0	659	30000	1	TON	AGRICULTURAL LIMING	
															DRAINAGE	
								1.08			602	20000	1.08	CU. YD.	CONCRETE MASONRY	
								34			603	06100	34	LIN FT	15" CONDUIT, TYPE C, 706.02	
								16			603	96500	16	LIN FT	CONDUIT RECONSTRUCTED, 706.02, 42"	
								8			603	96500	24	LIN FT	CONDUIT RECONSTRUCTED, 706.02, 12"	
								1			604	02800	1	EACH	CATCH BASIN, NO. 8	
								1			604	09000	2	EACH	CATCH BASIN ADJUSTED TO GRADE	
															PAVEMENT	
	1500										251	01000	1500	SQ. YD.	PARTIAL DEPTH PAVEMENT REPAIR	
					479504						254	01000	479504	SQ.YD.	PAVEMENT PLANING BITUMINOUS	
	2000										255	10100	2000	SQ. YD.	FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS FS	
	200										255	20000	200	LIN FT	FULL DEPTH PAVEMENT SAWING	
					8794						301	46000	8794	CU. YD.	BITUMINOUS AGGREGATE BASE, PG64-22	
		800			34885						407	10000	35885	GALLON	TACK COAT	
					7915						407	13900	7915	GALLON	TACK COAT, 702.13	
					18308						407	14000	18308	GALLON	TACK COAT FOR INTERMEDIATE COURSE	
		602									448	46061	602	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PG64-22 (UNDER GUARDRAIL)	
					1355						611	25000	1355	SQ. YD.	REINFORCED CONCRETE APPROACH SLAB, T=15"	
					15653						858	10051	15653	CU. YD.	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B (446), AS PER PLAN	14
					17736						858	10150	17736	CU. YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE B (446)	
															TRAFFIC CONTROL	
									868		621	00201	868	EACH	RAISED PAVEMENT MARKER, INSTALLATION ONLY, AS PER PLAN	44
								33.78			644	00100	33.78	MILE	EDGE LINE	
								15.61			644	00200	15.61	MILE	LANE LINE	
								4960			644	00400	4960	LIN FT	CHANNELIZING LINE	
								132			644	00500	132	LIN FT	STOP LINE	
								2052			644	00700	2052	LIN FT	TRANSVERSE LINE	
								1564			644	01200	1564	LIN FT	PARKING LOT STALL MARKING	
															MAINTENANCE OF TRAFFIC	
				245							301	46000	245	CU. YD.	BITUMINOUS AGGREGATE BASE, PG64-22	17
			80								614	11100	80	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	
				30							614	12460	30	EACH	WORK ZONE MARKING SIGN	
				50							SPECIAL	614E12800	50	EACH	REPLACEMENT DRUM	17
				74							614	13300	74	EACH	BARRIER REFLECTOR, TYPE B	
											614	13000	100	CU. YD.	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	
				74							614	13350	74	EACH	OBJECT MARKER	
			6								614	18601	6	SIGN-MONTH	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	16
				8							614	20000	8	MILE	TEMPORARY LANE LINE, CLASS I	
				16							614	20400	16	MILE	TEMPORARY LANE LINE, CLASS II	
				60							614	22000	60	MILE	TEMPORARY EDGE LINE, CLASS I	
				580							622	40020	580	LIN FT	PORTABLE CONCRETE BARRIER, 32"	
				1760							622	40040	1760	LIN FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED	

ITEM	ITEM EXT	TOTAL	UNITS	DESCRIPTION
				FOR STRUCTURE POR-76-1578L ESTIMATED QUANTITIES SEE SHEET 63
				FOR STRUCTURE POR-76-1578R ESTIMATED QUANTITIES SEE SHEET 64
				FOR STRUCTURE POR-76-1867L ESTIMATED QUANTITIES SEE SHEET 77
				FOR STRUCTURE POR-76-1867R ESTIMATED QUANTITIES SEE SHEET 77
				FOR STRUCTURE POR-76-1949 ESTIMATED QUANTITIES SEE SHEET 82
				FOR STRUCTURE POR-76-2067L ESTIMATED QUANTITIES SEE SHEET 84
				FOR STRUCTURE POR-76-2067R ESTIMATED QUANTITIES SEE SHEET 84
				FOR PART 2 GENERAL SUMMARY SEE SHEET 4 (PART 2)
				FOR PART 2 STRUCTURE ESTIMATED QUANTITIES SEE SHEET 16 (PART 2)
614	11000	LUMP		MAINTAINING TRAFFIC
623	10000	LUMP		CONSTRUCTION LAYOUT STAKES
624	10000	LUMP		MOBILIZATION
806	16020	12	MONTH	FIELD OFFICE TYPE C

CALCULATED ST
CHECKED

GENERAL SUMMARY

POR-76-13.55

19/100

CALCULATIONS

AREA 1
MAINLINE

STA 714+00 - STA 831+12.62	=	11712.62 LIN.FT.
STA 833+03.78 - STA 978+42.75	=	14538.97 LIN.FT.
STA 980+11.25 - STA 1060+28.30	=	8017.05 LIN.FT.
STA 1062+74.24 - STA 1083+75.25		2101.01 LIN.FT.
STA 1085+04.25 - STA 1117+07.91	=	3203.66 LIN.FT.
	TOTAL	39573.31 LIN.FT.

39573.31 x (4+12+12+10) x 2 = 3007572 SQ. FT.

RAMP TRANSITION AND GORE AREAS BY COMPUTER

		AREA
RAMP A	STA 786+00 TO STA 801+20	22990.65 SQ. FT.
RAMP B	RAMP STA 23+36.34 TO STA 828+45.92	9585.86 SQ. FT.
RAMP C	STA 792+23.64 TO RAMP STA 4+53.07	11282.41 SQ. FT.
RAMP D	RAMP STA 19+30 TO STA 830+00	21645.78 SQ. FT.
RAMP E	STA 953+94.42 TO RAMP STA 4+99.91	25287.36 SQ. FT.
RAMP F	RAMP STA 21+89.35 TO 994+19.65	12599.49 SQ. FT.
RAMP G	STA 960+21.11 TO RAMP STA 4+63	11440.51 SQ. FT.
RAMP H	RAMP STA 24+75.78 TO STA 1004+59.58	28284.43 SQ. FT.
	TOTAL	143116.5 SQ. FT.

AREA 1 = 3007571.56 + 143116) x 1/9 = 350076 SQ. YD.

AREA 2
RAMPS AREAS BY COMPUTER

RAMP A	7524.19 SQ.FT
RAMP B	23823.53 SQ.FT
RAMP C	14593.75 SQ.FT
RAMP D	7198.86 SQ.FT
RAMP E	21164.53 SQ.FT
RAMP F	19296.49 SQ.FT
RAMP G	27489.75 SQ.FT
RAMP H	23606.37 SQ.FT
TOTAL	144697.47 SQ.FT

AREA 2 = 144697.47 x 1/9 = 16077 SQ.YD.

AREA 3
DRIVING LANE - MAINLINE
MAINLINE LENGTH 39573.3 LIN. FT.
39573.31 x 12 x2 x 1/9 105529 SQ.YD.

AREA 4
REST AREAS AREAS BY COMPUTER

AREA LEFT	35422 SQ. FT.	
AREA RIGHT	34979 SQ. FT.	
TOTAL	70401 x 1/9=	7822 SQ.YD.
CROSSOVERS	(3) x 567 SQ.YD	1701 SQ.YD.
TOTAL 7822 + 1701 =	9523 SQ.YD	

ITEM 858 - 1½" ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE B(446), AS PER PLAN

AREA 1 + AREA 2 + AREA 4
(350076 + 16077 + 9523) x 1.50 x 1/36 =

15653 CU.YD.

ITEM 858 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE B(446)

AREA 1 + AREA 2
(350076 + 16077) x 1.75x 1/36 =
DEDUCT TRANSITIONS AT BRIDGES 30
DEDUCT TRANSITIONS AT RAMPS 33
17736 CU.YD.

ITEM - 254 - 3" PAVEMENT PLANING, BITUMINOUS AREA 2+AREA 3+REST AREAS
16077 + 105529 + 7822
= 129428 SQ. YD.

ITEM - 254 - 2 3/4" PAVEMENT PLANING, BITUMINOUS

AREA 1 350076 SQ.YD.

ITEM - 301 - 3" BITUMINOUS AGGREGATE BASE, PG64-22

AREA 3 105529 x 3 x 1/36 = 8794 CU. YD.

ITEM - 407 - TACK COAT 702.13
AREA 3
105529 x 0.075 = 7915 GAL

ITEM - 407 - TACK COAT FOR INTERMEDIATE COURSE
AREA 1 + AREA 2
(350076 + 16077) x 0.05 = 18308 GAL

ITEM - 407 - TACK COAT
AREA 4 +(AREA 1 - AREA 3) = 9523 + 350076 - 105529
= 465128 x 0.075 34885 GAL

ITEM - 202 - APPROACH SLAB REMOVED
ITEM - 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION
ITEM - 611 - APPROACH SLAB
STRUCTURES LISTED ON SHEET 11.

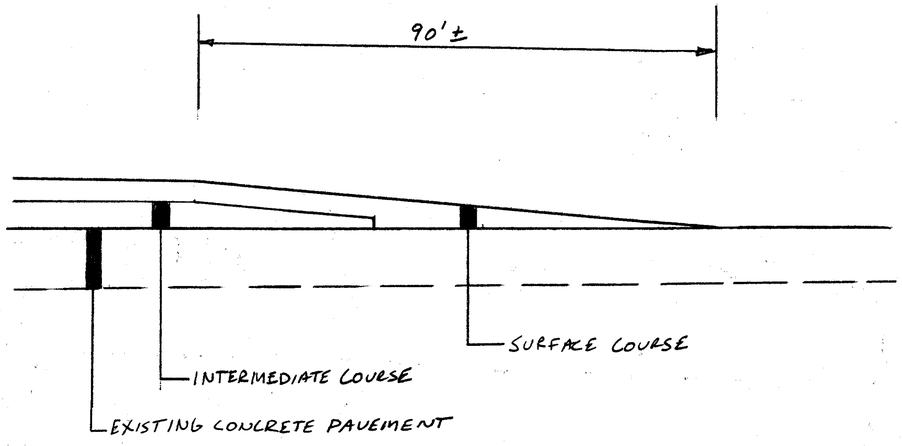
APPROACH SLAB REMOVAL - (3) x (4) x 25 x 24 x 1/9 800 SY
EXCAVATION - (3) x (40.66-24) x 25 x 15/12 x 1/27 58 CY
PROPOSED APPROACH SLAB- (3) x (4) x 25 x 40.66 x 1/9 = 1355 SY

CALCULATED ST CHECKED

CALCULATIONS

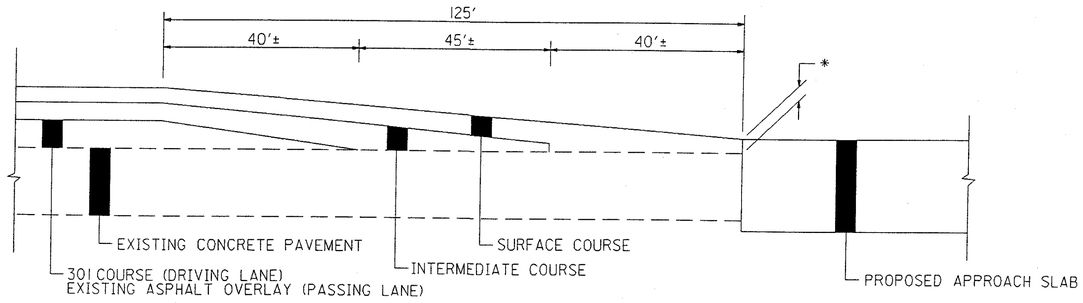
POR-76-13.55

20/100



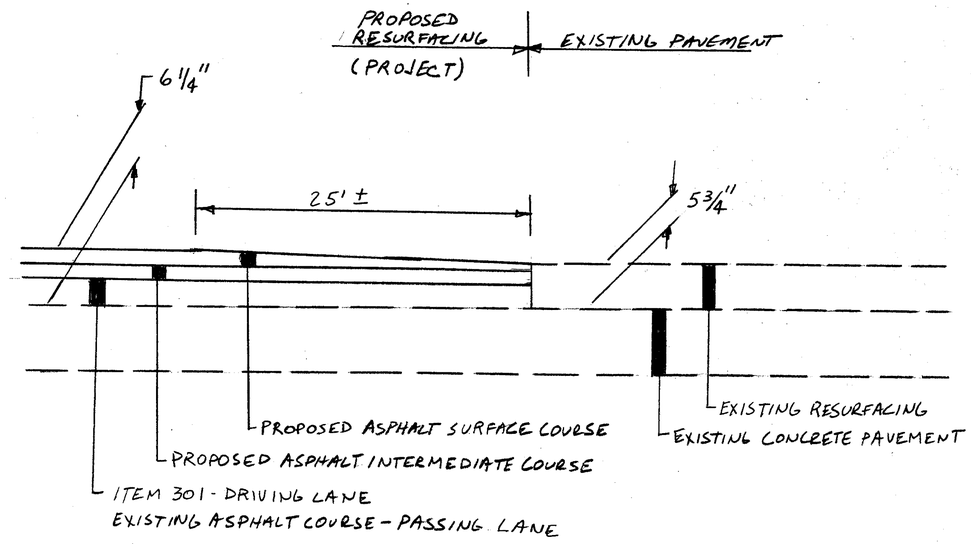
TYPICAL RAMP FEATHER

TAPER EDGE TYPE SEE STD. CONST. DWG BP-3.1M FOR ADDITIONAL DETAILS



* 1¼" STR. NOS. 1857, 2057
1½" STR. NOS. 1578

TYPICAL FEATHER AT BRIDGES



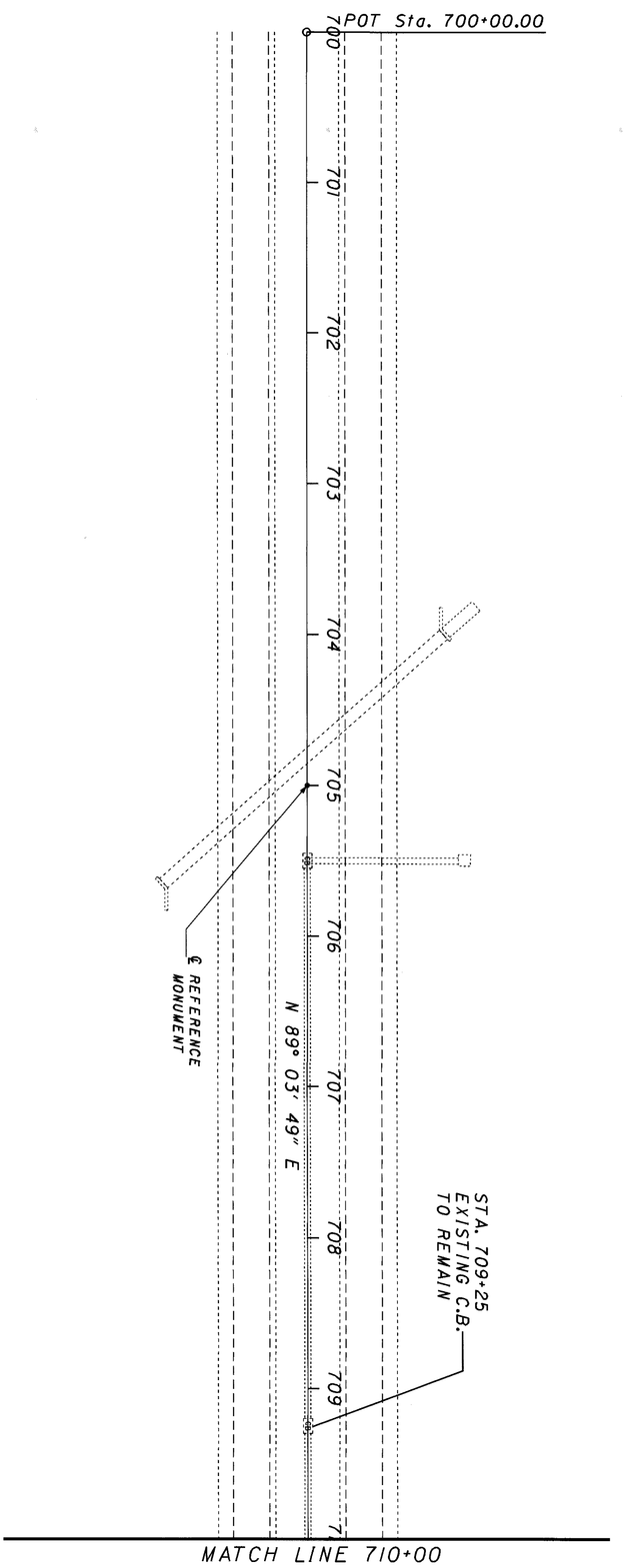
PAVING TRANSITION AT BEGIN/END PROJECT

CALCULATED ST CHECKED

PAVEMENT DETAILS

POR-76-13.55

20A
100



POR-76-13.55

PLAN - MAINLINE
STA. 700+00 TO 710+00

CALCULATED
CHECKED

0
HORIZONTAL SCALE IN FEET

N

BENCHMARK:
ELEV. 1149.14' TOP OF CONCRETE MONUMENT AT STA. 716+00

- SEE PAVEMENT DETAILS SHEET 20A.

BEGIN PROJECT
BEGIN WORK
STA 714+00
S.L.M.= 13.55

ROCK SPRING RD.

MATCH LINE 710+00

MATCH LINE 722+50

89°18'30"

PROPOSED C.B. NO.8 STA.719+25

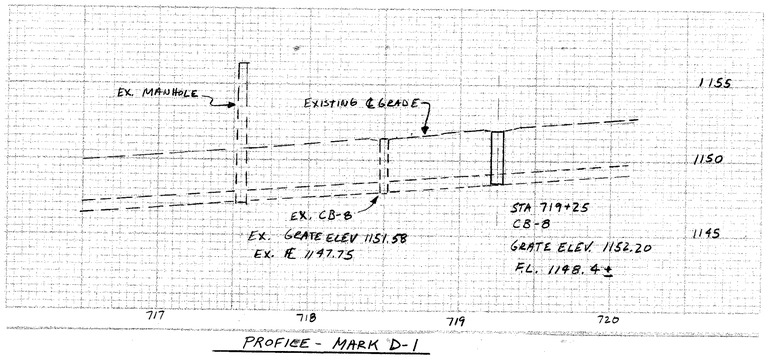
N 89° 03' 49" E

℄ REFERENCE MONUMENT

SEE PROFILE DETAIL

STA 717+56.62 ℄ I.R. 76
STA 50+00 ℄ ROCK SPRING ROAD

STRUCTURE NUMBER	MIN. VERTICAL CLEARANCE
POR-76-1359	16.5' REQUIRED-16'



PROFILE - MARK D-1

MATCH LINE 722+50

MATCH LINE 735+00

N 89° 03' 49" E

℄ REFERENCE MONUMENT

SEE PART II FOR WORK TO ROCK SPRING RD.
SEE SHEETS 52 FOR GUARDRAIL AND CONCRETE BARRIER DETAILS
SEE SHEET 41 FOR GUARDRAIL SUBSUMMARY
SEE SHEET 43 FOR DRAINAGE SUBSUMMARY

HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

PLAN - MAINLINE
STA. 710+00 TO STA. 735+00

POR-76-13.55

22
100

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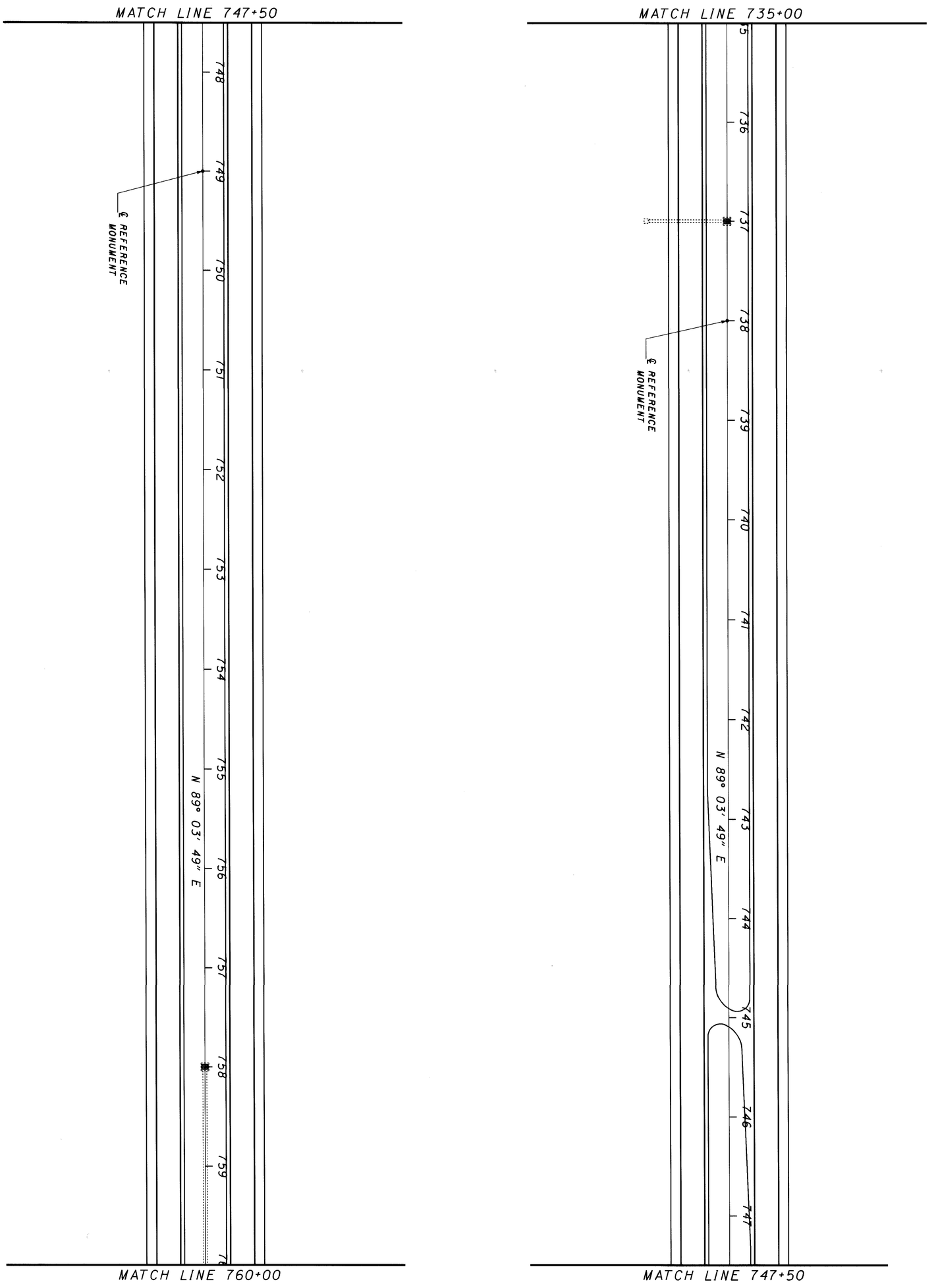
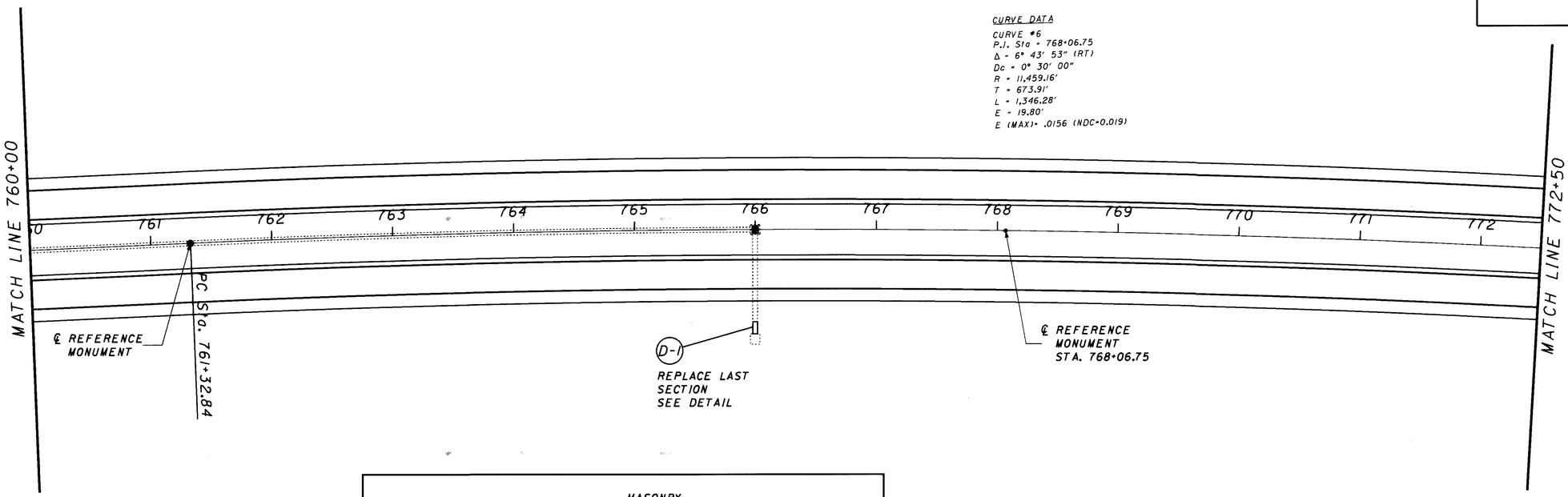
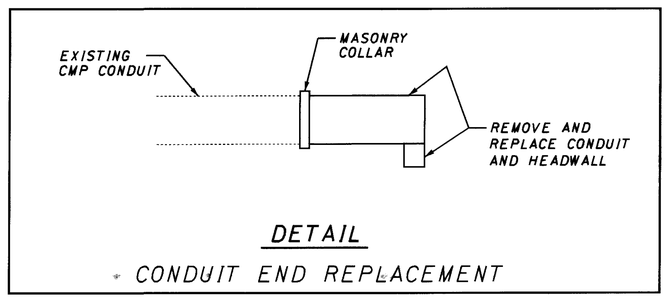


23 / 100	POR-76-13.55	PLAN - MAINLINE STA. 735+00 TO STA. 760+00	CALCULATED CHECKED	0 HORIZONTAL SCALE IN FEET

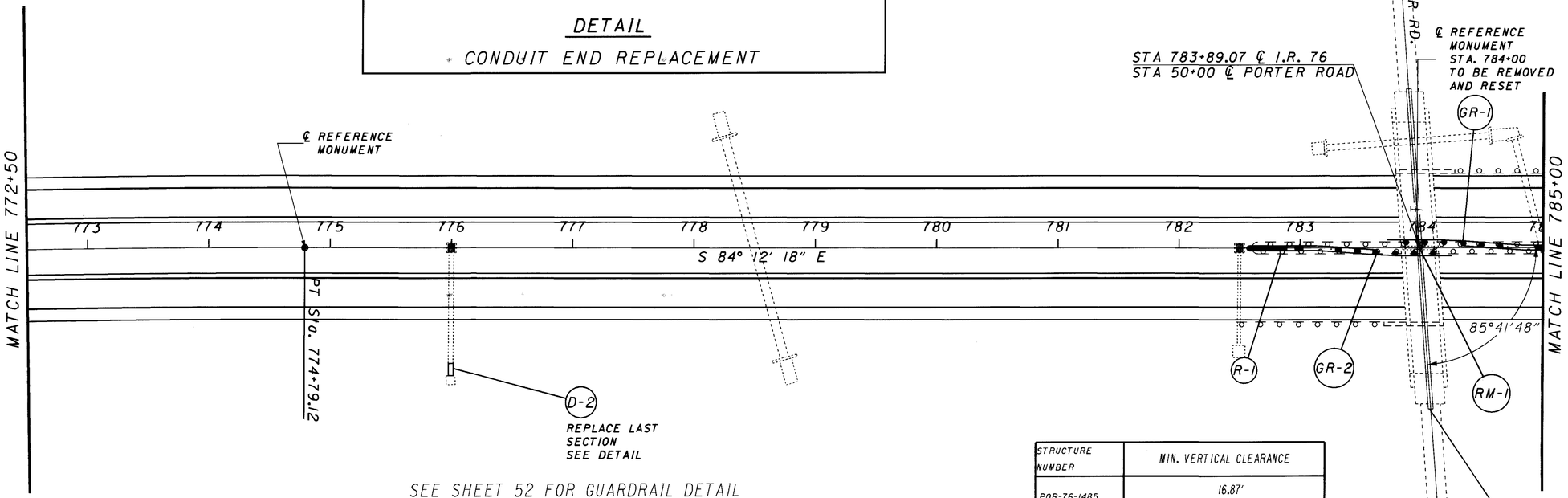
BENCHMARK:
ELEV. 1146.96' TOP OF CONCRETE MONUMENT AT STA. 784+00

CURVE DATA
CURVE #6
P.I. Sta = 768+06.75
Δ = 6° 43' 53" (RT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 673.91'
L = 1,346.28'
E = 19.80'
E (MAX)= .0156 (NDC+0.019)





DETAIL
CONDUIT END REPLACEMENT



STRUCTURE NUMBER	MIN. VERTICAL CLEARANCE
POR-76-1485	16.87' REQUIRED=16'

SEE SHEET 52 FOR GUARDRAIL DETAIL
SEE SHEET 41 FOR GUARDRAIL SUBSUMMARY
SEE SHEET 43 FOR DRAINAGE SUBSUMMARY

N

HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

PLAN - MAINLINE
STA. 760+00 TO STA. 785+00

POR-76-13.55

24
100

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BENCHMARK:
ELEV. 1135.03' TOP OF CONCRETE MONUMENT AT STA. 794+00

2" EASTERN STATE OIL & GAS, INC. GAS LINE
(INSIDE 12" CASING - 36" BELOW DITCH)

MATCH LINE 785+00

MATCH LINE 797+50

℄ REFERENCE MONUMENT

POT Sta. 0+00.00

PC Sta. 0+00.00

S 84° 12' 18" E

RAMP A
P.I. Sta = 4+83.87
D = 13° 43' 11" (LT)
Dc = 3° 45' 00"
R = 1,527.89'
T = 183.81'
L = 365.86'
E = 11.02'

PC Sta. 3+00.06

PT Sta. 6+65.92

POT Sta. 8+11.20

S 85° 23' 55" E

N 80° 52' 48" E

EXISTING CURB TO REMAIN

CURVE DATA
CURVE #7
P.I. Sta = 814+28.60
Δ = 12° 28' 59" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 1,253.27'
L = 2,496.61'
E = 68.33'
E (MAX) = 0.0156 (NDC=0.019)

REST AREA

PC Sta. 801+75.32

MATCH LINE 797+50

MATCH LINE 810+00

S 84° 12' 18" E

RAMP C
P.I. Sta = 3+34.18
D = 10° 00' 00" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 334.18'
L = 666.67'
E = 14.59'

℄ REFERENCE MONUMENT

TS Sta. 7+16.78

SC Sta. 9+16.78

CS Sta. 10+88.88

POT Sta. 13+48.81

EXISTING CURB TO REMAIN

S 74° 12' 18" E

PT Sta. 6+66.67

RAMP C
P.I. Sta = 9+47.44
D = 13° 36' 18" (LT)
Dc = 5° 00' 00"
R = 1,145.92'
Dc = 8° 36' 18" (LT)
Lc = 172.10'
Es = 8.87'

S 87° 49' 04" E

S 87° 4

REST AREA

SEE SHEET 43 FOR DRAINAGE SUBSUMMARY

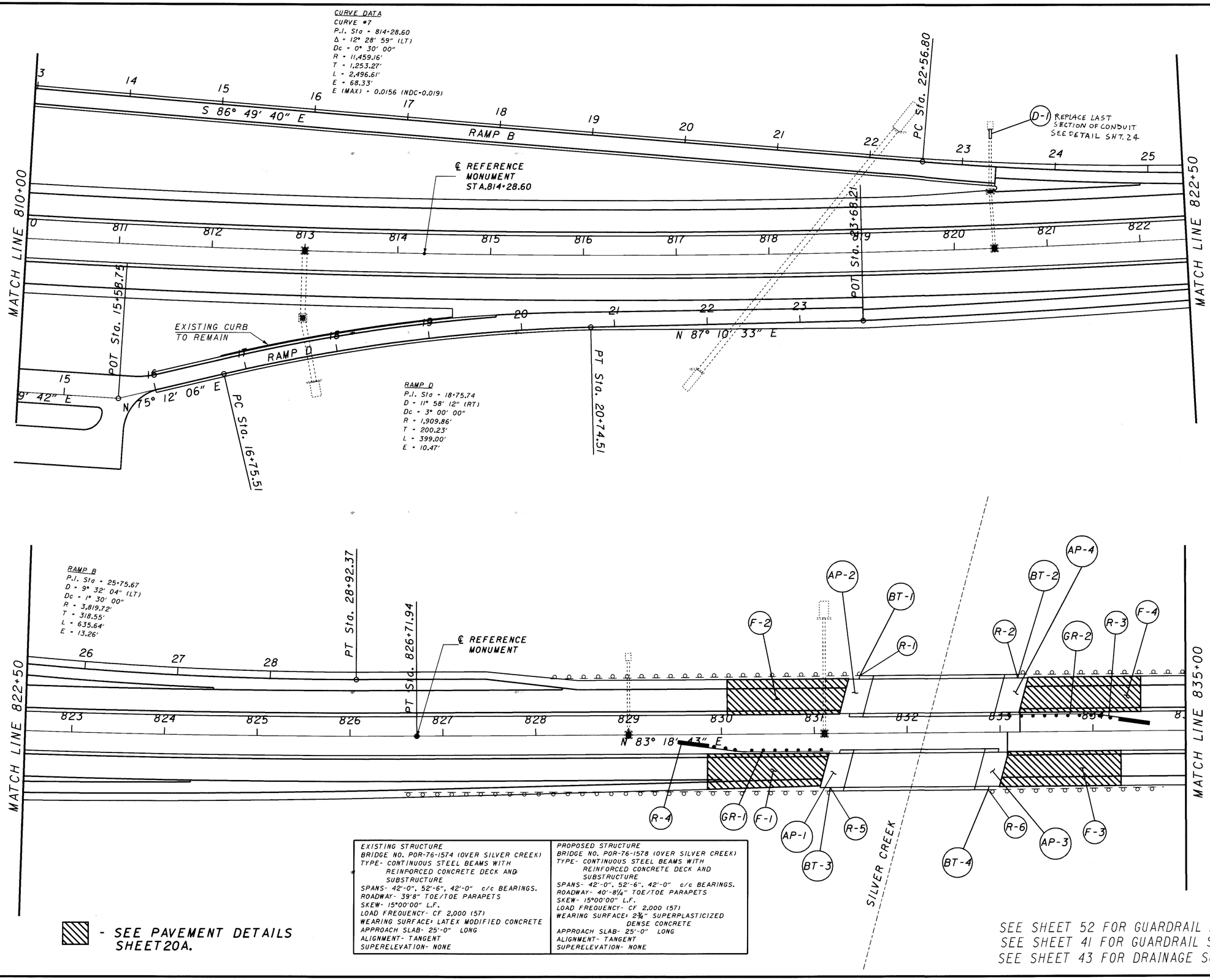
HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

PLAN - MAINLINE
STA. 785+00 TO STA. 810+00

POR-76-13.55

25
100



HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

PLAN - MAINLINE
STA. 810+00 TO 835+00

POR-76-13.55

26
100

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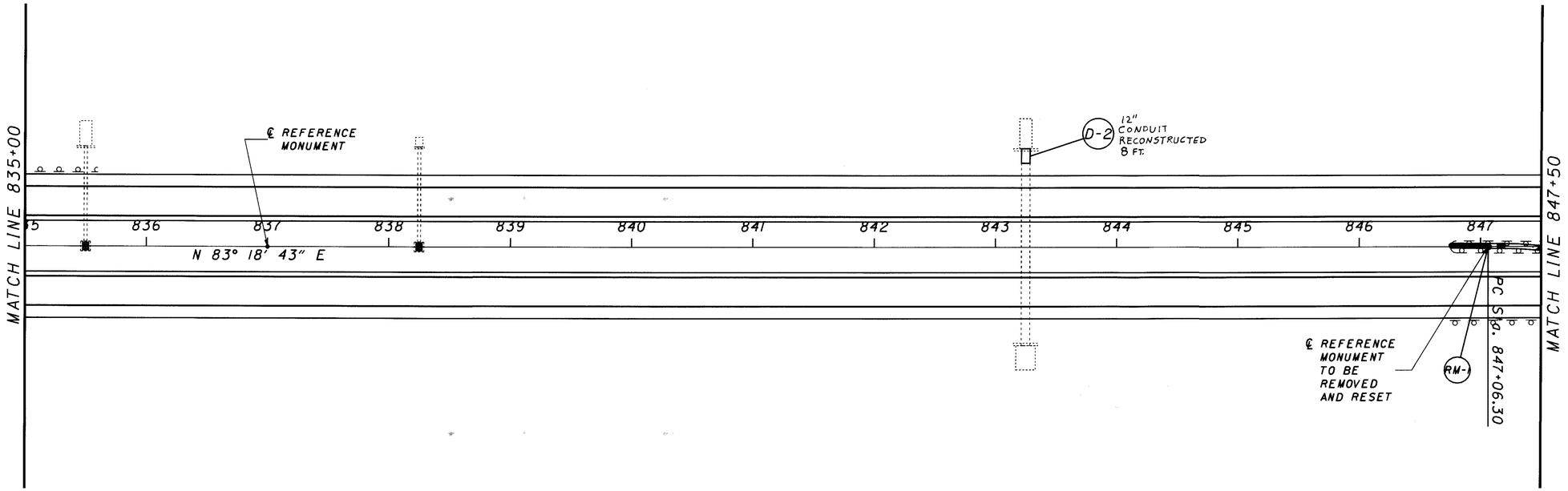
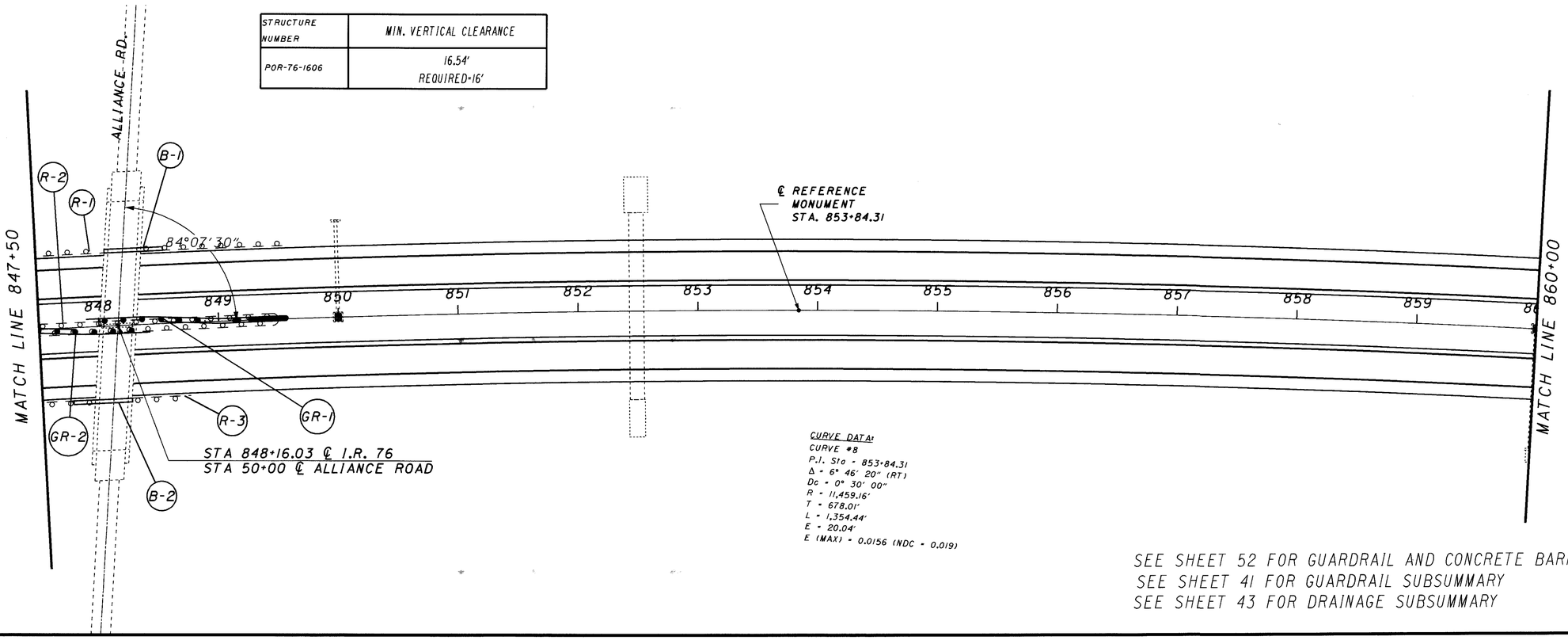


STRUCTURE NUMBER	MIN. VERTICAL CLEARANCE
POR-76-1606	16.54' REQUIRED-16'



CURVE DATA:
CURVE #8
P.I. Sta - 853+84.31
Δ - 6° 46' 20" (RT.)
Dc - 0° 30' 00"
R - 11,459.16'
T - 678.01'
L - 1,354.44'
E - 20.04'
E (MAX) - 0.0156 (NDC - 0.019)

SEE SHEET 52 FOR GUARDRAIL AND CONCRETE BARRIER DETAILS
SEE SHEET 41 FOR GUARDRAIL SUBSUMMARY
SEE SHEET 43 FOR DRAINAGE SUBSUMMARY

HORIZONTAL SCALE IN FEET
0

CALCULATED | CHECKED

PLAN - MAINLINE
STA. 835+00 STA. 860+00

POR-76-13.55

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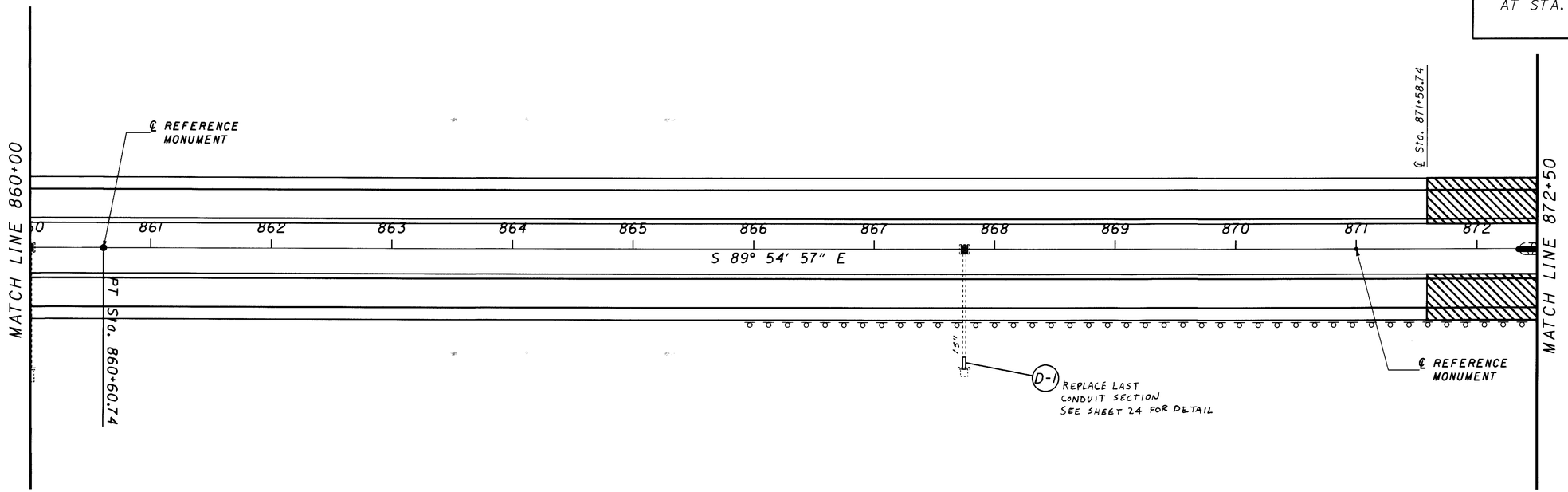
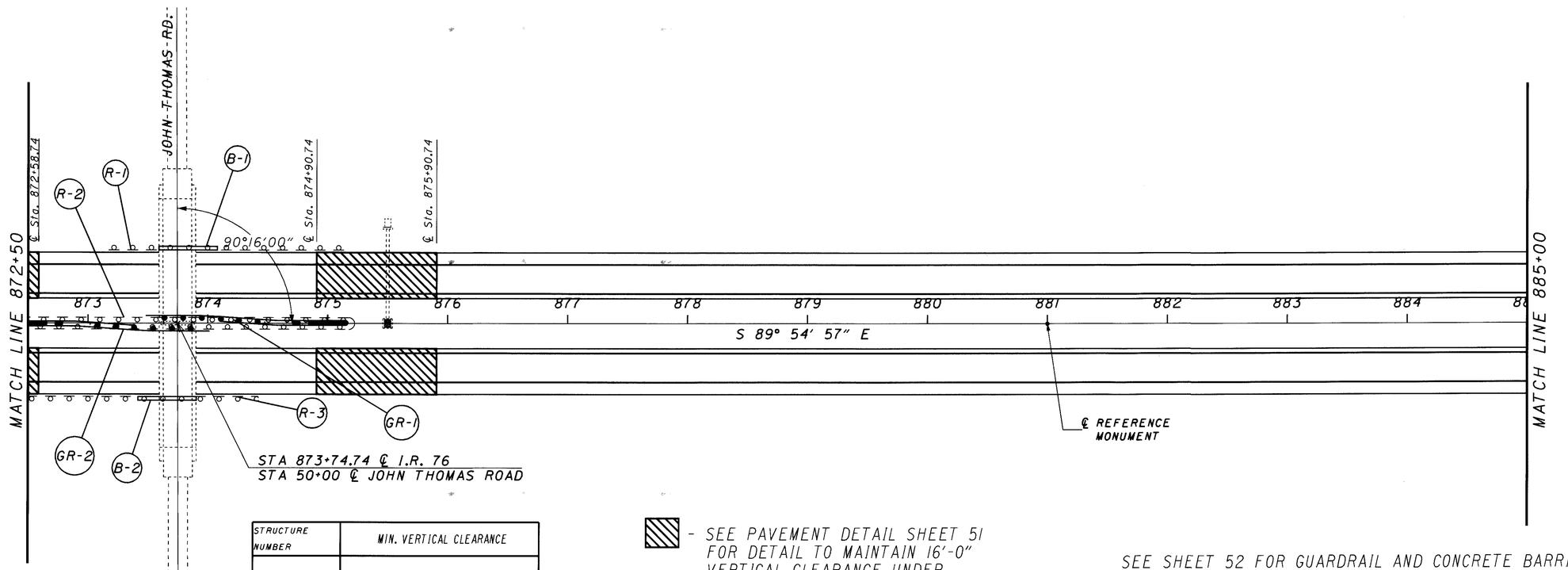
BENCHMARK:
ELEV. 1117.53' TOP OF CONCRETE MONUMENT AT STA. 881+00





STRUCTURE NUMBER	MIN. VERTICAL CLEARANCE
POR-76-1655	16.00'

▨ - SEE PAVEMENT DETAIL SHEET 51 FOR DETAIL TO MAINTAIN 16'-0" VERTICAL CLEARANCE UNDER JOHN THOMAS RD.

SEE SHEET 52 FOR GUARDRAIL AND CONCRETE BARRIER DETAILS
SEE SHEET 41 FOR GUARDRAIL SUBSUMMARY
SEE SHEET 43 FOR DRAINAGE SUBSUMMARY

HORIZONTAL SCALE IN FEET
0

CALCULATED | CHECKED

PLAN - MAINLINE
STA. 860+00 TO STA. 885+00

POR-76-13.55

28
100

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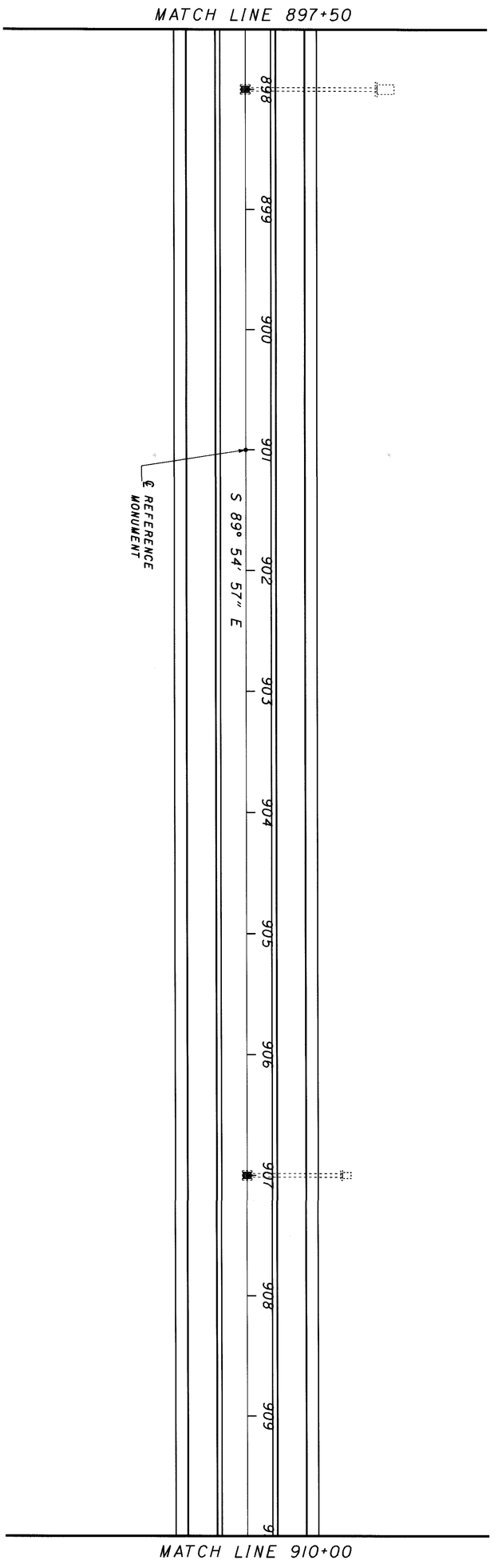
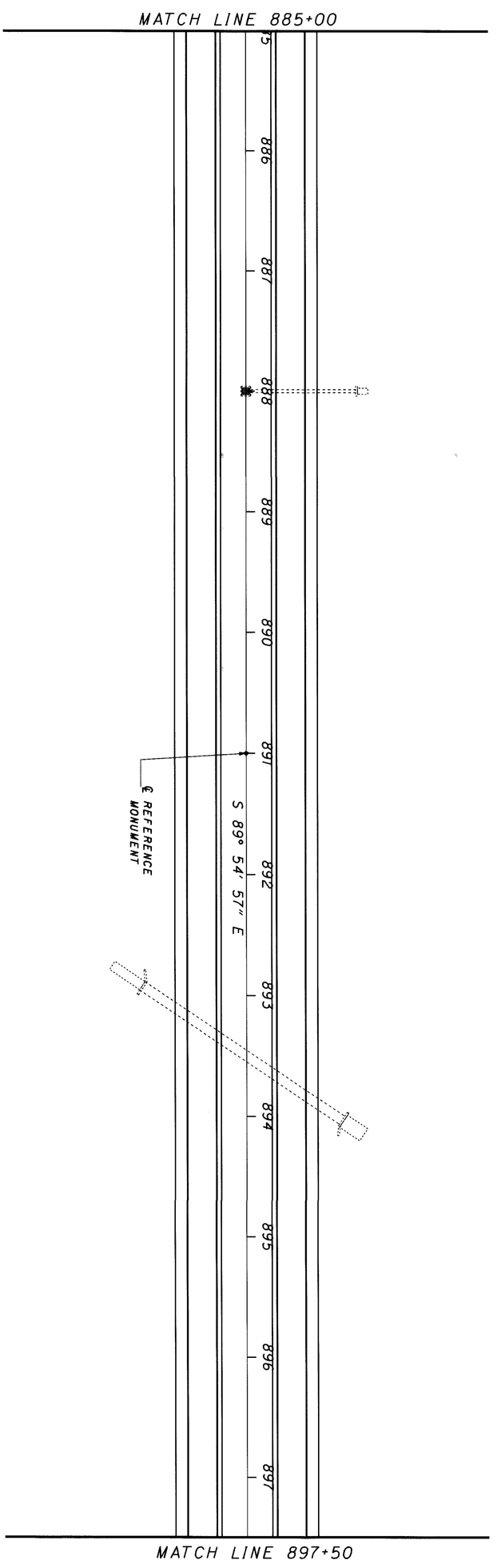
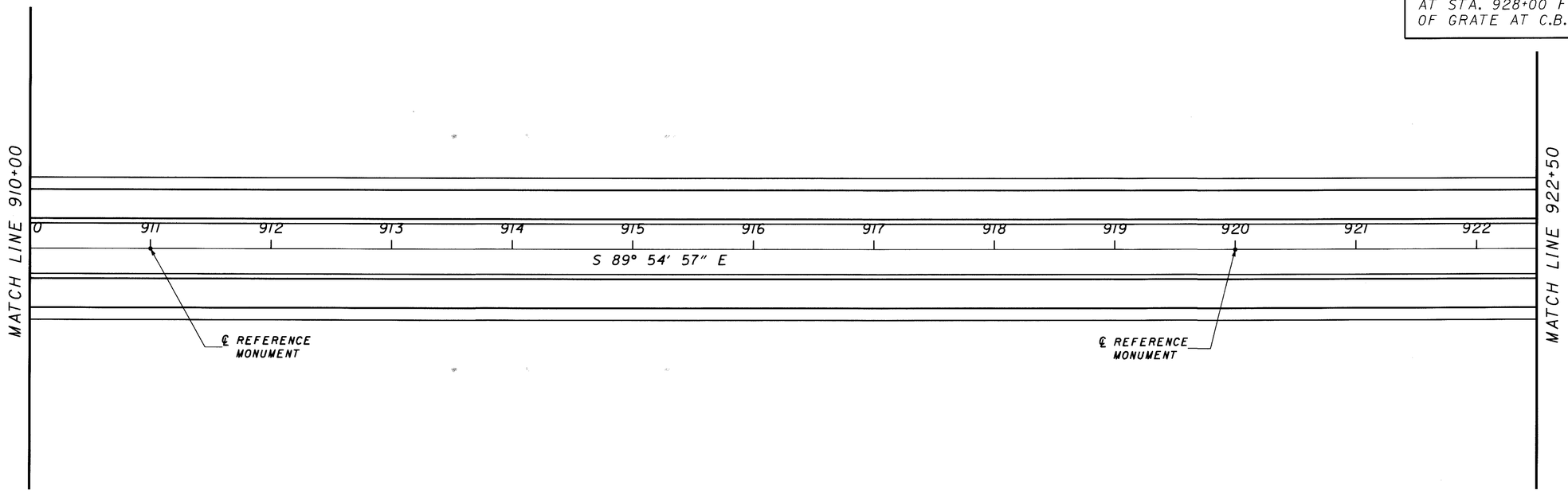
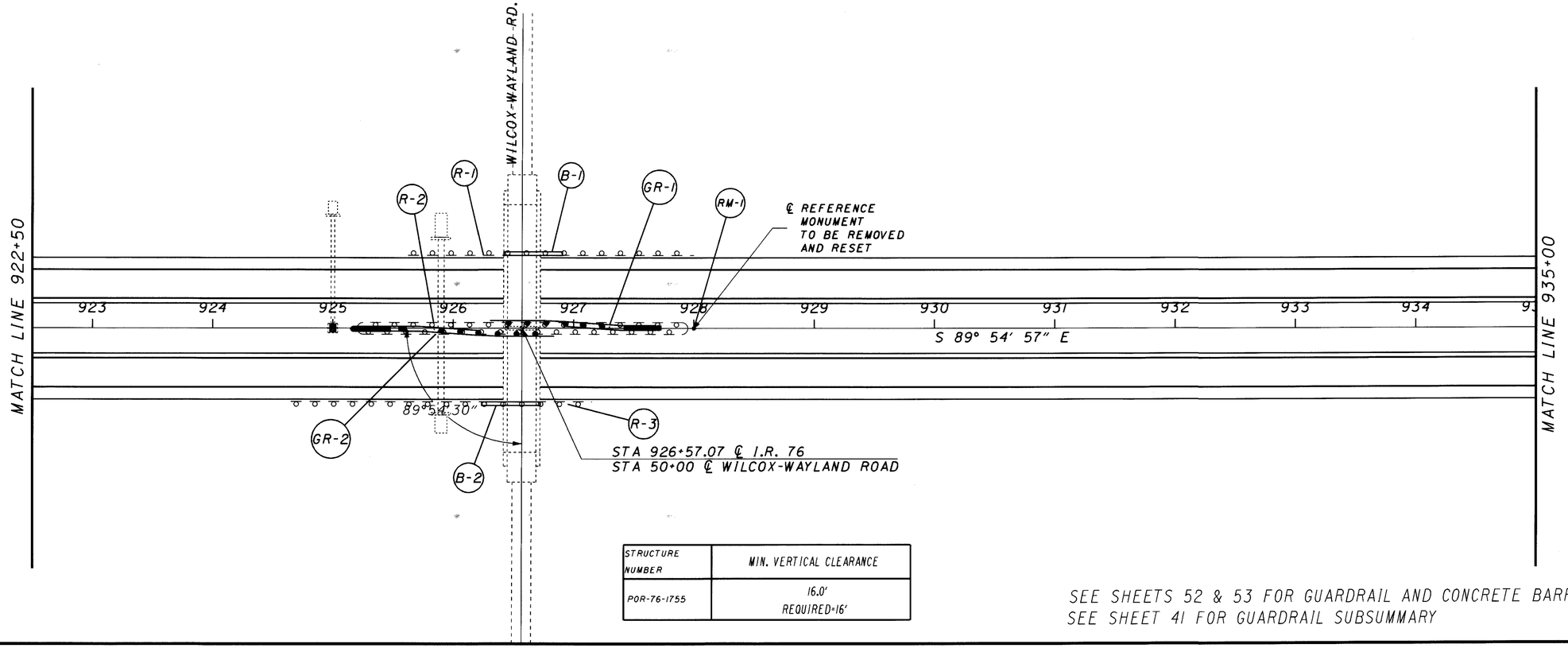

MATCH LINE 897+50
℄ REFERENCE MONUMENT
S 89° 54' 57" E
898
899
900
901
902
903
904
905
906
907
908
909
910
MATCH LINE 910+00


MATCH LINE 885+00
885
886
887
888
889
890
891
892
893
894
895
896
897
℄ REFERENCE MONUMENT
S 89° 54' 57" E
MATCH LINE 897+50

BENCHMARK:
ELEV. 1134.58' TOP OF
CONCRETE MONUMENT
AT STA. 928+00 FROM TOP
OF GRATE AT C.B. AT 1038+99.68





STRUCTURE NUMBER	MIN. VERTICAL CLEARANCE
POR-76-1755	16.0' REQUIRED=16'

SEE SHEETS 52 & 53 FOR GUARDRAIL AND CONCRETE BARRIER DETAILS
SEE SHEET 41 FOR GUARDRAIL SUBSUMMARY

HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

PLAN - MAINLINE
STA. 910+00 TO STA. 935+00

POR-76-13.55

30
100

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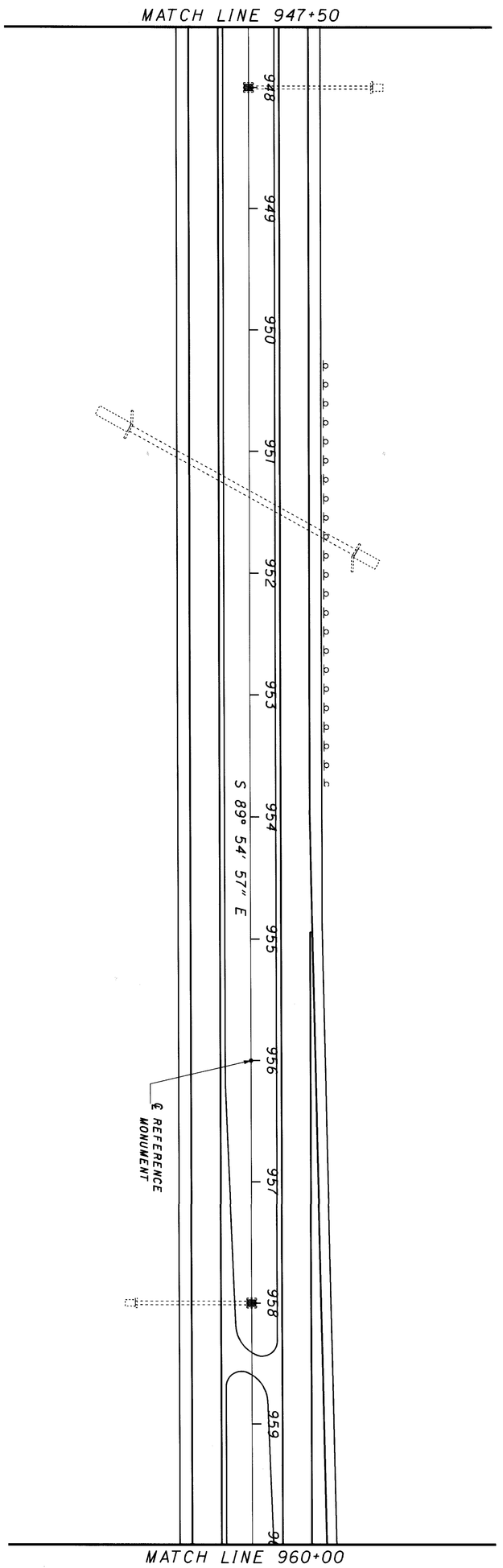

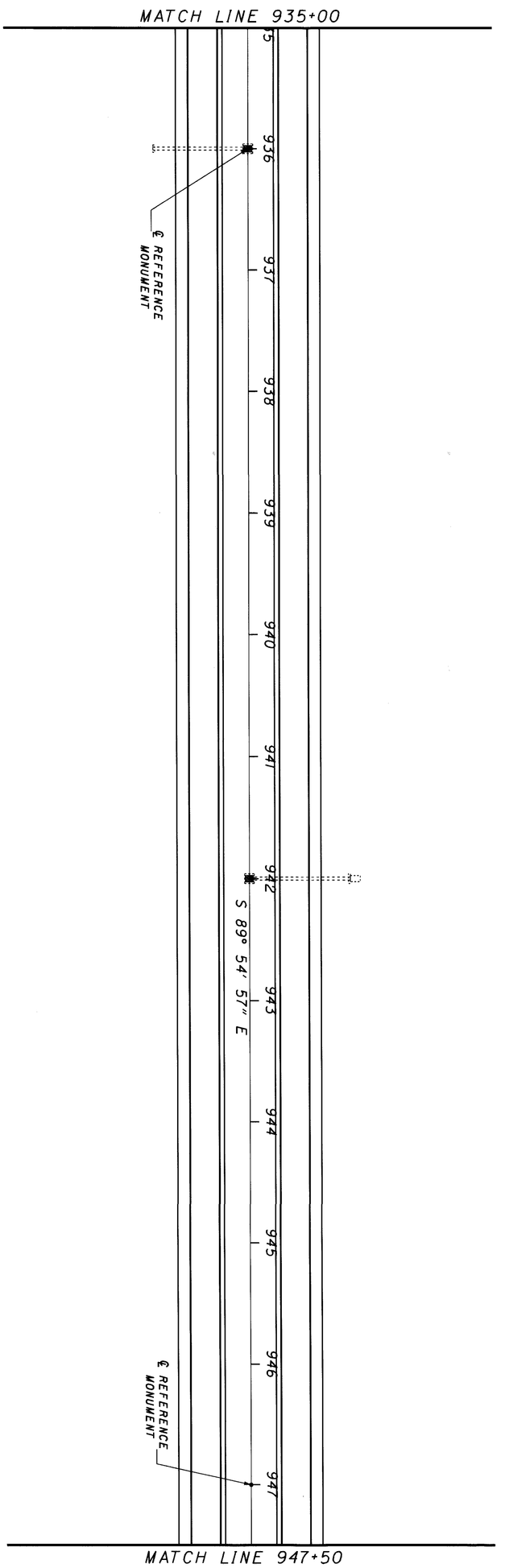

POR-76-13.55

PLAN - MAINLINE
STA. 935+00 TO 960+00

CALCULATED
CHECKED

0
HORIZONTAL SCALE IN FEET

N

- SEE PAVEMENT DETAILS SHEET 20A.

MATCH LINE 960+00

POT Sta. 0+00.00

℄ REFERENCE MONUMENT

TS Sta. 2+99.91

SC Sta. 4+99.91

RAMP E

RAMP E
P.I. Sta = 6+36.21
D = 18° 45' 23" (LT)
Dc = 4° 00' 00"
R = 1,432.39'
Ls = 200.00'
Theta = 4° 00' 00"
LT = 133.37'
ST = 66.70'
x = 199.90'
y = 4.65'
k = 99.98'
p = 1.16'
Dc = 10° 45' 23" (LT)
Lc = 268.91'
Ts = 336.75'
Es = 20.58'

961 962 963 964 965 966 967 968 969 970 971 972

S 89° 54' 57" E

MATCH LINE 972+50

PC Sta. 0+00.00

RAMP G

PT Sta. 4+66.97

TS Sta. 7+32.44

RAMP G
P.I. Sta = 2+33.62
D = 7° 00' 00" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 233.62'
L = 466.66'
E = 7.14'

CS Sta. 7+68.82

ST Sta.

RAMP E

EXISTING STRUCTURE
BRIDGE NO. POR-76-1857 (OVER S.R. 225)
TYPE- CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS- 36'-0", 45'-0", 36'-0" c/c BEARINGS.
ROADWAY- 40'-8¼" TOE/TOE PARAPETS
SKEW- NONE
LOAD FREQUENCY- CF 2,000 (57)
APPROACH SLAB- 25'-0" LONG AS-1-54
ALIGNMENT- TANGENT
SUPERELEVATION- NONE
WEARING SURFACE- 1¼" ASPHALT CONCRETE

S.R. 225

PROPOSED STRUCTURE
BRIDGE NO. POR-76-1857 (OVER S.R. 225)
TYPE- CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS- 36'-0", 45'-0", 36'-0" c/c BEARINGS.
ROADWAY- 40'-8¼" TOE/TOE PARAPETS
SKEW- NONE
LOAD FREQUENCY- CF 2,000 (57)
APPROACH SLAB- 25'-0" LONG
ALIGNMENT- TANGENT
SUPERELEVATION- NONE
WEARING SURFACE- 2½" SUPERPLASTICIZED DENSE CONCRETE

RAMP F
P.I. Sta = 20+73.73
D = 6° 36' 13" (LT)
Dc = 7° 30' 00"
R = 763.94'
Dc = 7° 45' 53" (LT)
Lc = 103.53'
Es = 46.02'

SC Sta. 18+8

RAMP F

CS

BT-2 F-6 AP-6 AP-8 R-1 BT-1 R-2 F-8

973 974 975 976 977 978 979 980 981 982 983 984

MATCH LINE 972+50

S 89° 54' 57" E

℄ REFERENCE MONUMENT

GR-1 R-3 F-5 R-4 89°57'00" AP-5 AP-7 F-7 GR-2

℄ REFERENCE MONUMENT

MATCH LINE 985+00

STRUCTURE NUMBER	PROPOSED MIN. VERTICAL CLEARANCE
POR-76-1857 (L&R)	14.92' REQUIRED=14.5'

SC Sta. 9+

CS Sta. 10

RAMP G

TS Sta. 12+68.99

14+18.99

14+78.74

16+02.89

RAMP H

SEE SHEETS 41 & 42 FOR GUARDRAIL SUBSUMMARY

HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

PLAN - MAINLINE
STA. 960+00 TO STA. 985+00

POR-76-13.55

32
100

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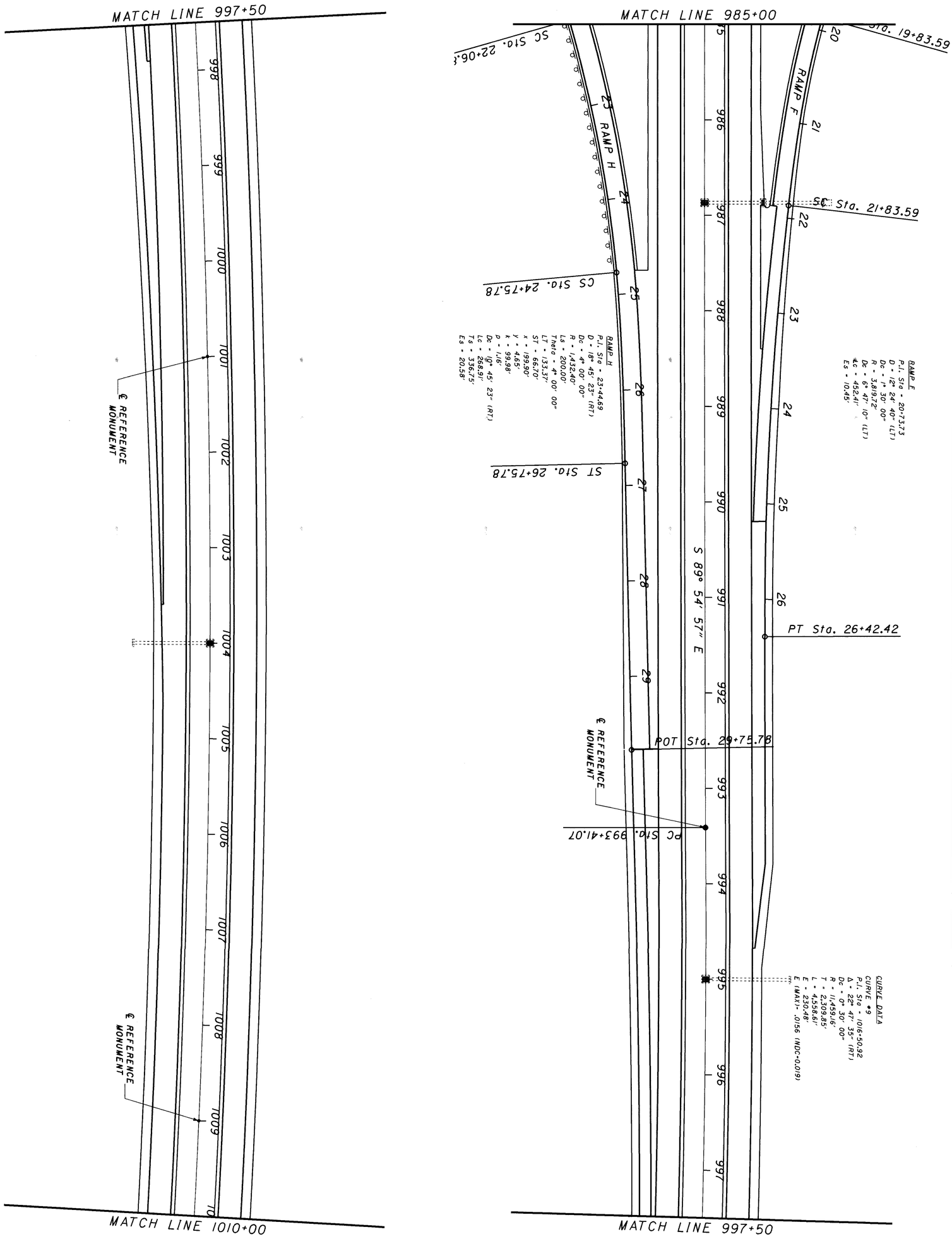

33/100	POR-76-13.55	PLAN - MAINLINE STA. 985+00 TO STA. 1010+00	CALCULATED CHECKED	0 HORIZONTAL SCALE IN FEET

BENCHMARK:
ELEV. 1175.87' TOP OF CONCRETE MONUMENT AT STA. 1038+99.68 FROM TOP OF C.B. GRATE AT STA. 1030+00

CURVE DATA
CURVE #9
P.I. Sta = 1016+50.92
Δ = 22° 47' 35" (RT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 2,309.85'
L = 4,558.61'
E = 230.48'
E (MAX)= .0156 (NDC=0.019)

MATCH LINE 1010+00

1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020 1021 1022

℄ REFERENCE MONUMENT

MATCH LINE 1022+50

EXISTING STRUCTURE
BRIDGE NO. POR-76-1949 (OVER BRANCH OF KALE CREEK)
TYPE- 10' x 8' REINFORCED BOX CULVERT
SPAN- 10' F/F 10' SIDEWALLS
HEIGHT- 8'
LENGTH- 149'
SKEW- 19°00'00" R.F. TO LOC. TANGENT
SLOPE- 0.423%
OPENING REQUIRED- 80sq ft²
OPENING PROVIDED- 80sq ft²

MATCH LINE 1022+50

1022 1023 1024 1025 1026 1027 1028 1029 1030 1031 1032 1033 1034 1035

McCLINTOCKSBURG ROAD

R-1 R-2 B-1 GR-1 109°53'30"

℄ REFERENCE MONUMENT

GR-2 R-3 B-2

STA 1032+75.30 ℄ I.R. 76
STA 49+84.00 ℄ McCLINTOCKSBURG ROAD

MATCH LINE 1035+00

SEE SHEET 42 FOR GUARDRAIL SUBSUMMARY
SEE SHEETS 52 & 53 FOR GUARDRAIL AND CONCRETE BARRIER DETAILS

STRUCTURE NUMBER	MIN. VERTICAL CLEARANCE
POR-76-19.56	16.42' REQUIRED=16'

HORIZONTAL SCALE IN FEET
0

CALCULATED | CHECKED

PLAN - MAINLINE
STA. 1010+00 TO STA. 1035+00

POR-76-13.55

34
100

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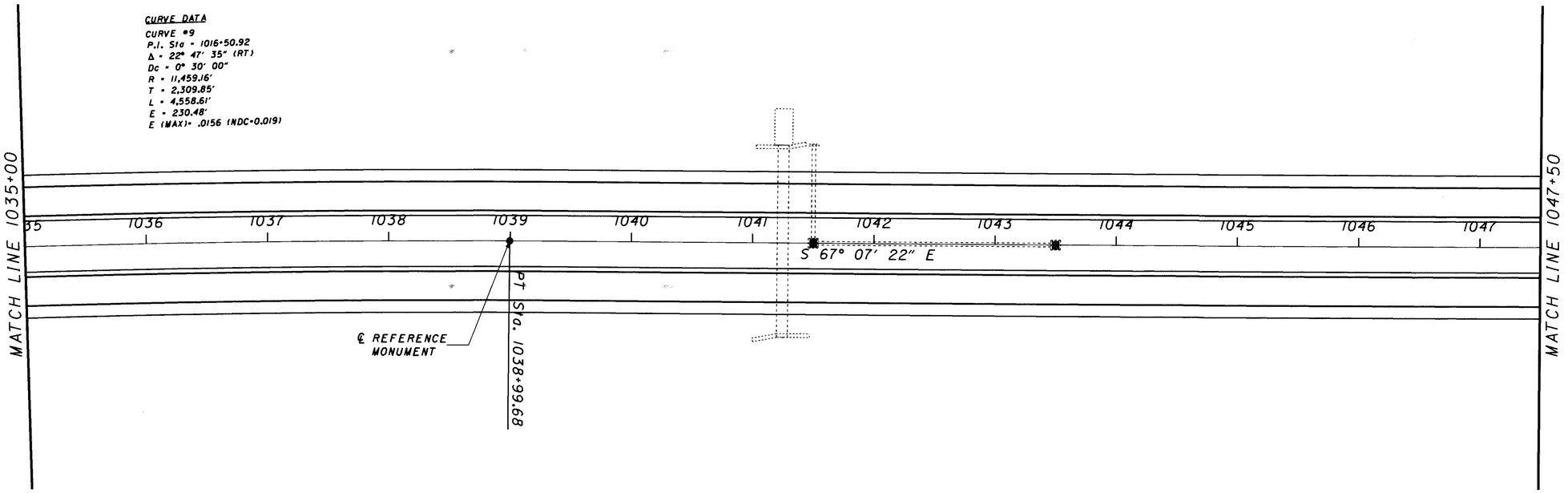

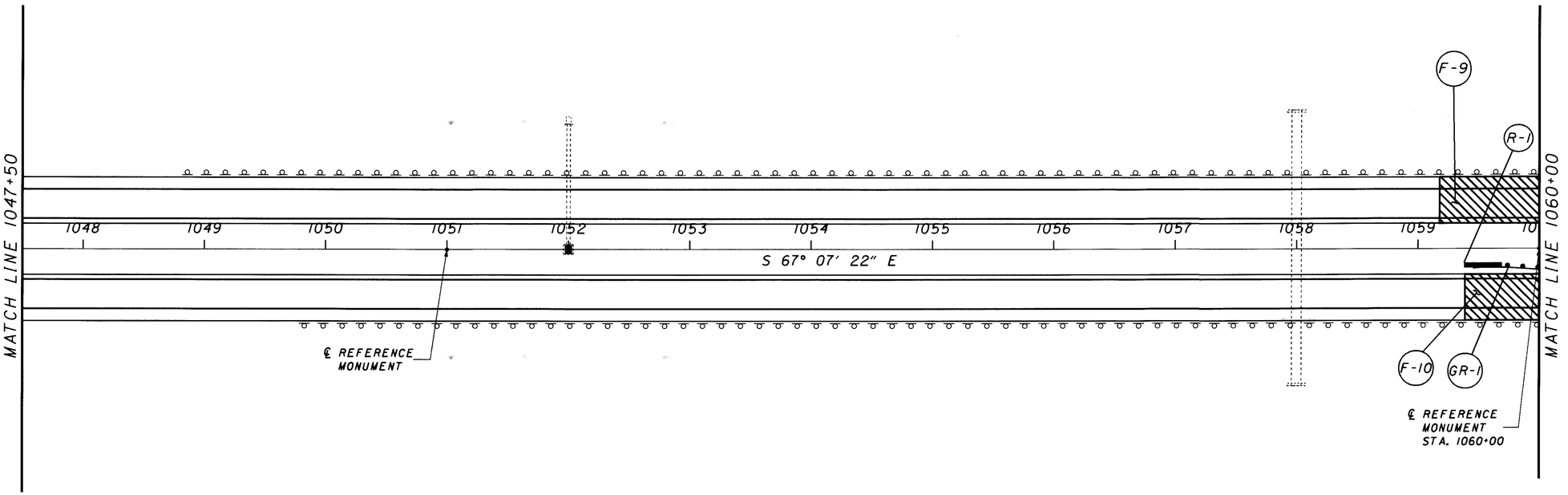

- SEE PAVEMENT DETAILS SHEET 20A.

SEE SHEET 42 FOR GUARDRAIL SUBSUMMARY

HORIZONTAL SCALE IN FEET
0

CALCULATED
CHECKED

PLAN - MAINLINE
STA. 1035+00 TO STA. 1060+00

POR-76-13.55

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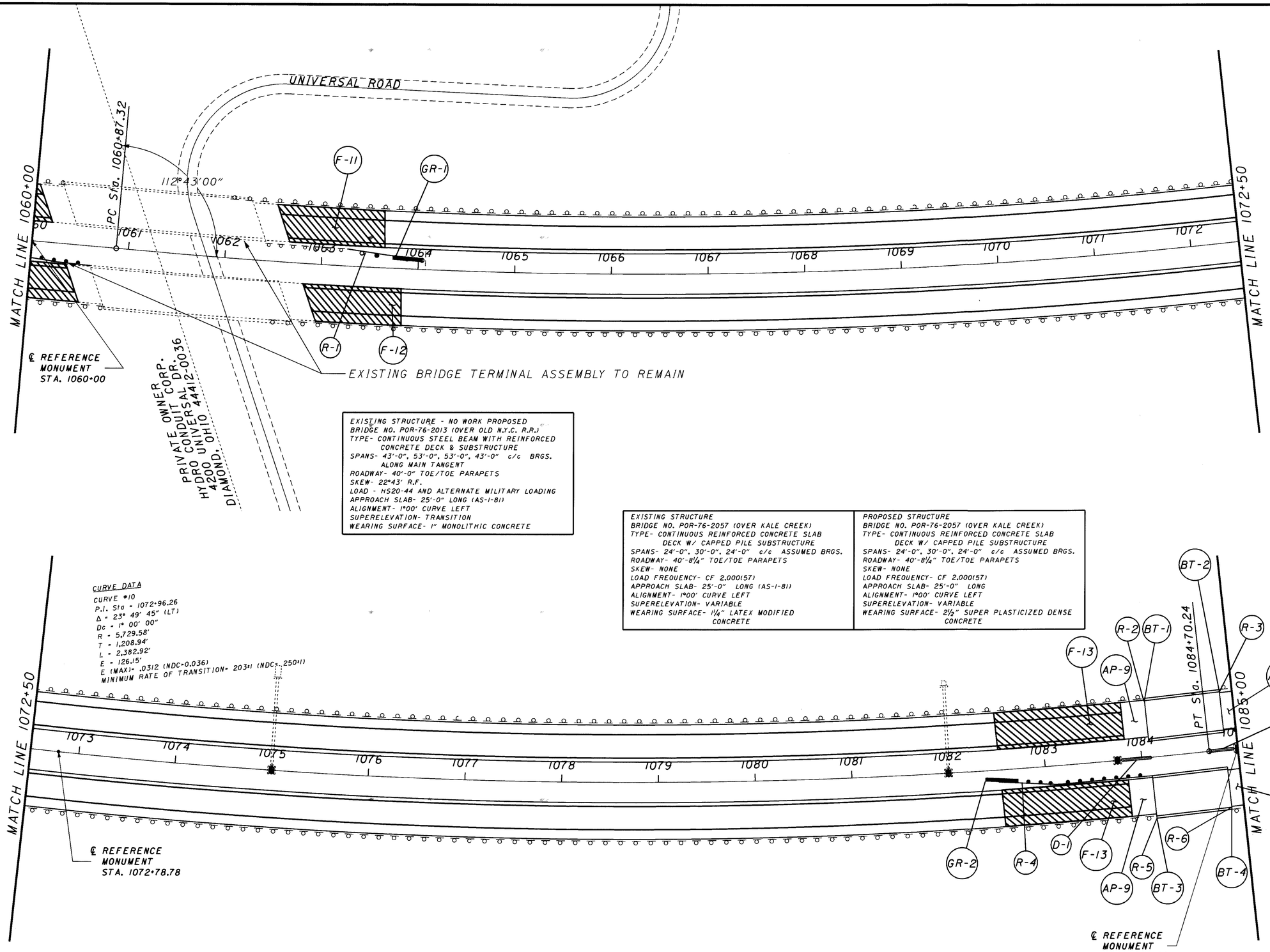


EXISTING STRUCTURE - NO WORK PROPOSED
BRIDGE NO. POR-76-2013 (OVER OLD N.Y.C. R.R.)
TYPE- CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK & SUBSTRUCTURE
SPANS- 43'-0", 53'-0", 53'-0", 43'-0" c/c BRGS. ALONG MAIN TANGENT
ROADWAY- 40'-0" TOE/TOE PARAPETS
SKEW- 22°43' R.F.
LOAD - HS20-44 AND ALTERNATE MILITARY LOADING
APPROACH SLAB- 25'-0" LONG (AS-1-81)
ALIGNMENT- 1°00' CURVE LEFT
SUPERELEVATION- TRANSITION
WEARING SURFACE- 1" MONOLITHIC CONCRETE

EXISTING STRUCTURE	PROPOSED STRUCTURE
BRIDGE NO. POR-76-2057 (OVER KALE CREEK)	BRIDGE NO. POR-76-2057 (OVER KALE CREEK)
TYPE- CONTINUOUS REINFORCED CONCRETE SLAB DECK W/ CAPPED PILE SUBSTRUCTURE	TYPE- CONTINUOUS REINFORCED CONCRETE SLAB DECK W/ CAPPED PILE SUBSTRUCTURE
SPANS- 24'-0", 30'-0", 24'-0" c/c ASSUMED BRGS.	SPANS- 24'-0", 30'-0", 24'-0" c/c ASSUMED BRGS.
ROADWAY- 40'-8¼" TOE/TOE PARAPETS	ROADWAY- 40'-8¼" TOE/TOE PARAPETS
SKEW- NONE	SKEW- NONE
LOAD FREQUENCY- CF 2.000(57)	LOAD FREQUENCY- CF 2.000(57)
APPROACH SLAB- 25'-0" LONG (AS-1-81)	APPROACH SLAB- 25'-0" LONG
ALIGNMENT- 1°00' CURVE LEFT	ALIGNMENT- 1°00' CURVE LEFT
SUPERELEVATION- VARIABLE	SUPERELEVATION- VARIABLE
WEARING SURFACE- 1¼" LATEX MODIFIED CONCRETE	WEARING SURFACE- 2½" SUPER PLASTICIZED DENSE CONCRETE

CURVE DATA
CURVE #10
P.I. Sta = 1072+96.26
Δ = 23° 49' 45" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 1,208.94'
L = 2,382.92'
E = 126.15'
E (MAX)= .0312 (NDC=0.036)
MINIMUM RATE OF TRANSITION= 203+1 (NDC= 250+1)

▨ - SEE PAVEMENT DETAILS SHEET 20A.

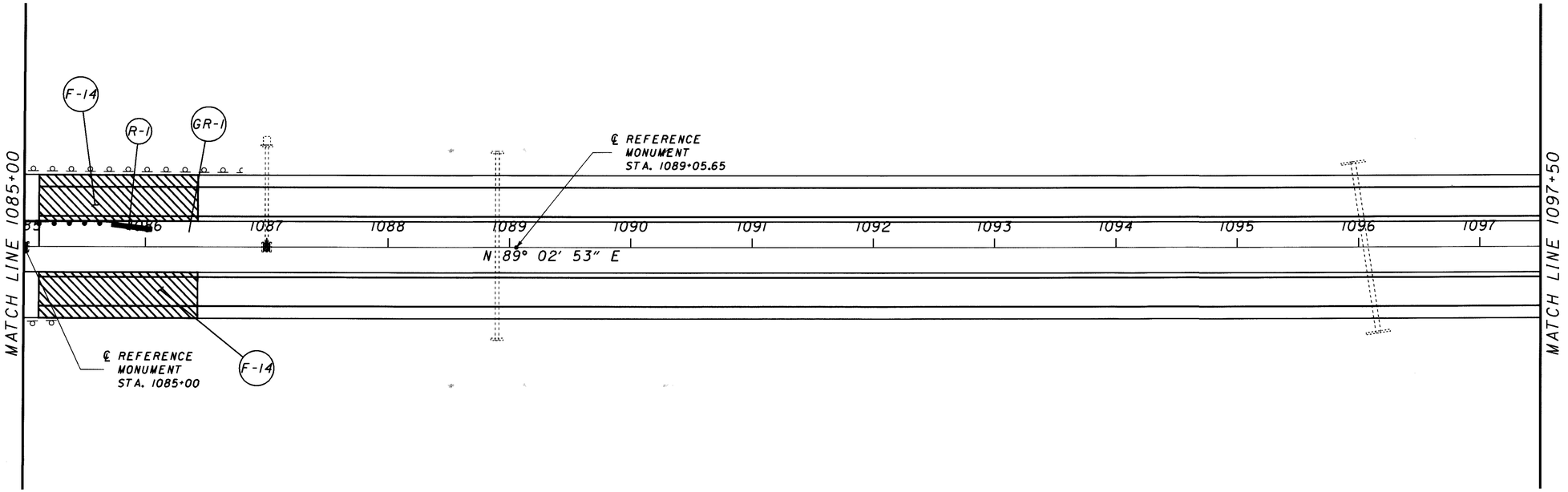
SEE SHEET 42 FOR GUARDRAIL SUBSUMMARY
SEE SHEET 43 FOR DRAINAGE SUBSUMMARY

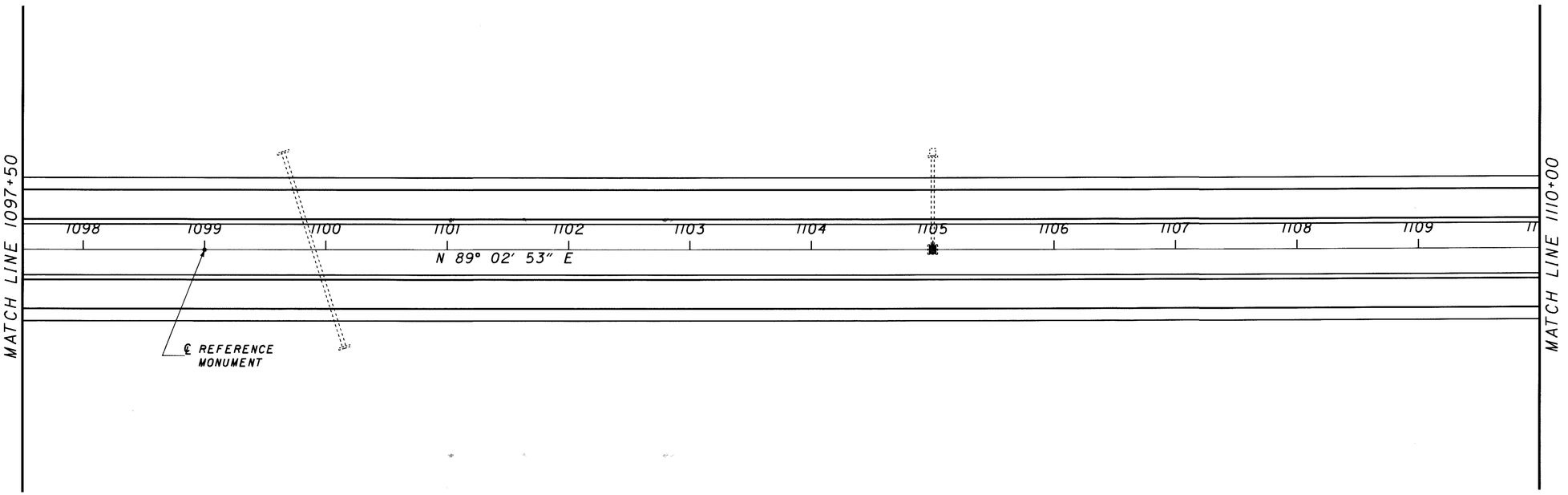
HORIZONTAL SCALE IN FEET
0

CALCULATED | CHECKED

PLAN - MAINLINE
STA. 1060+00 TO STA. 1085+00

POR-76-13.55





SEE SHEET 42 FOR GUARDRAIL DETAIL

HORIZONTAL SCALE IN FEET

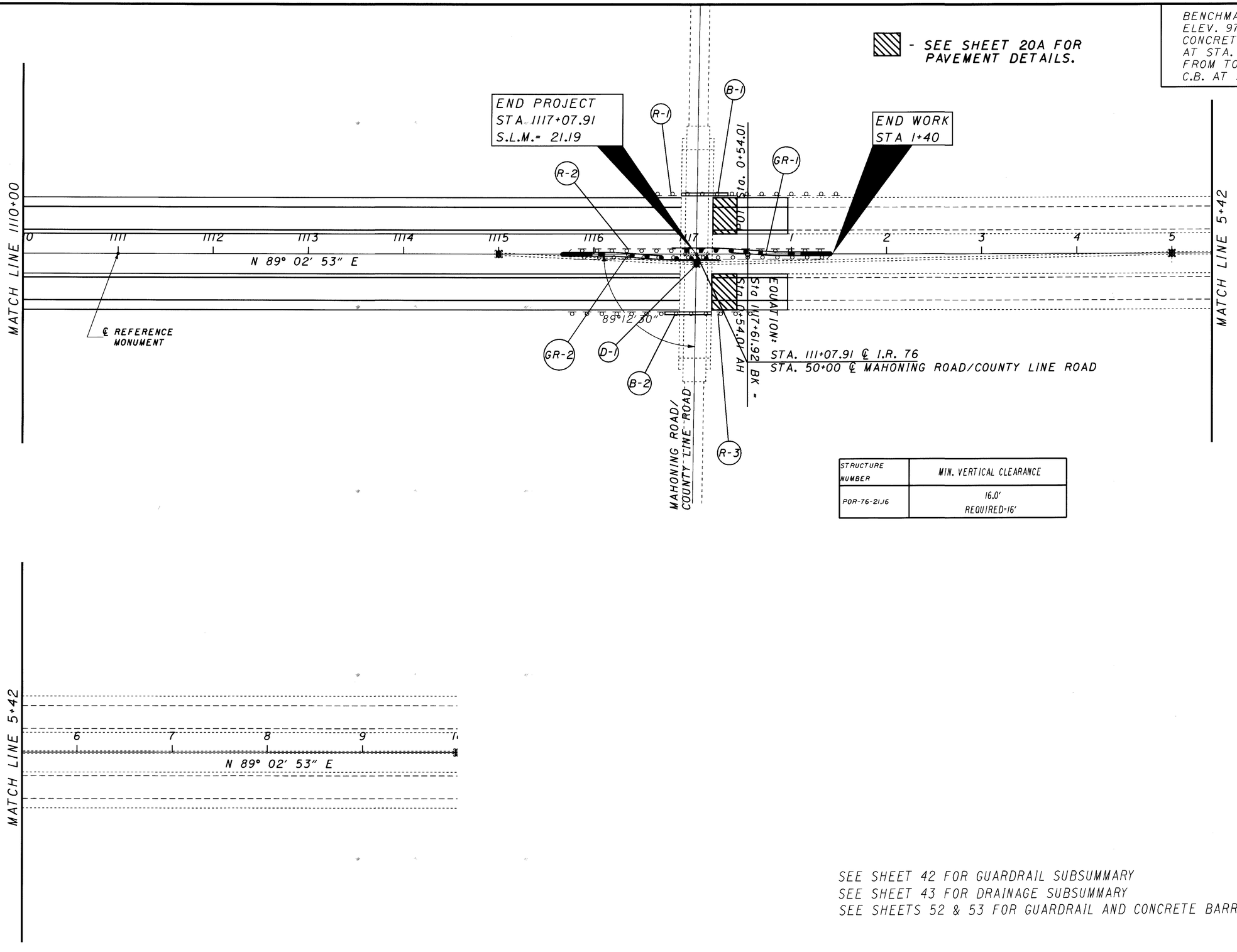
CALCULATED

CHECKED

PLAN - MAINLINE
STA. 1085+00 TO STA. 1110+00

POR-76-13.55

37
108



SEE SHEET 42 FOR GUARDRAIL SUBSUMMARY
SEE SHEET 43 FOR DRAINAGE SUBSUMMARY
SEE SHEETS 52 & 53 FOR GUARDRAIL AND CONCRETE BARRIER DETAILS

HORIZONTAL SCALE IN FEET
CALCULATED
CHECKED

PLAN - MAINLINE
STA. 1110+00 TO STA. 10+00

POR-76-13.55

38
100

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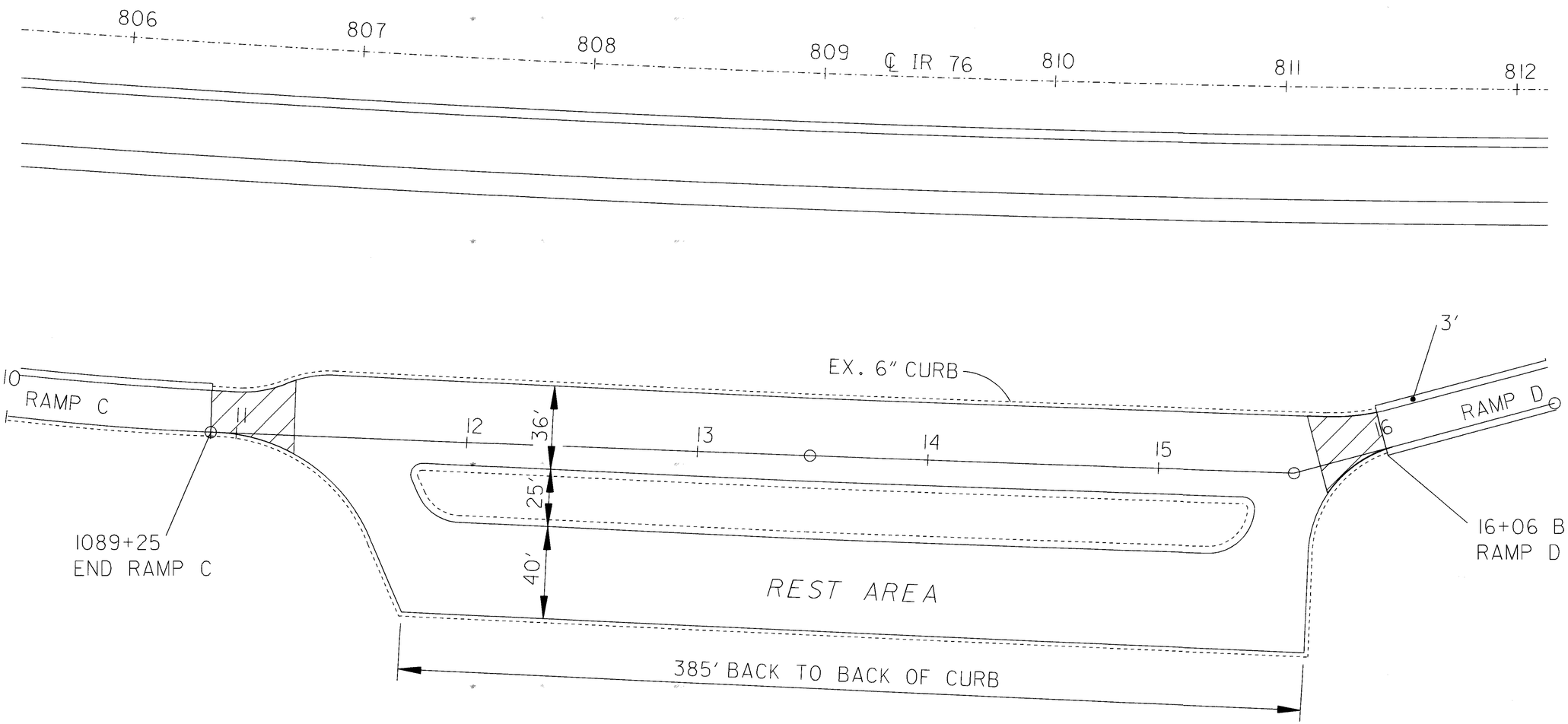

SEE PAVEMENT DETAIL SHEET 20A.

HORIZONTAL SCALE IN FEET

CALCULATED ALP CHECKED

PLAN - REST AREA (EAST BOUND IR 76)

POR-76-13.55

39
180

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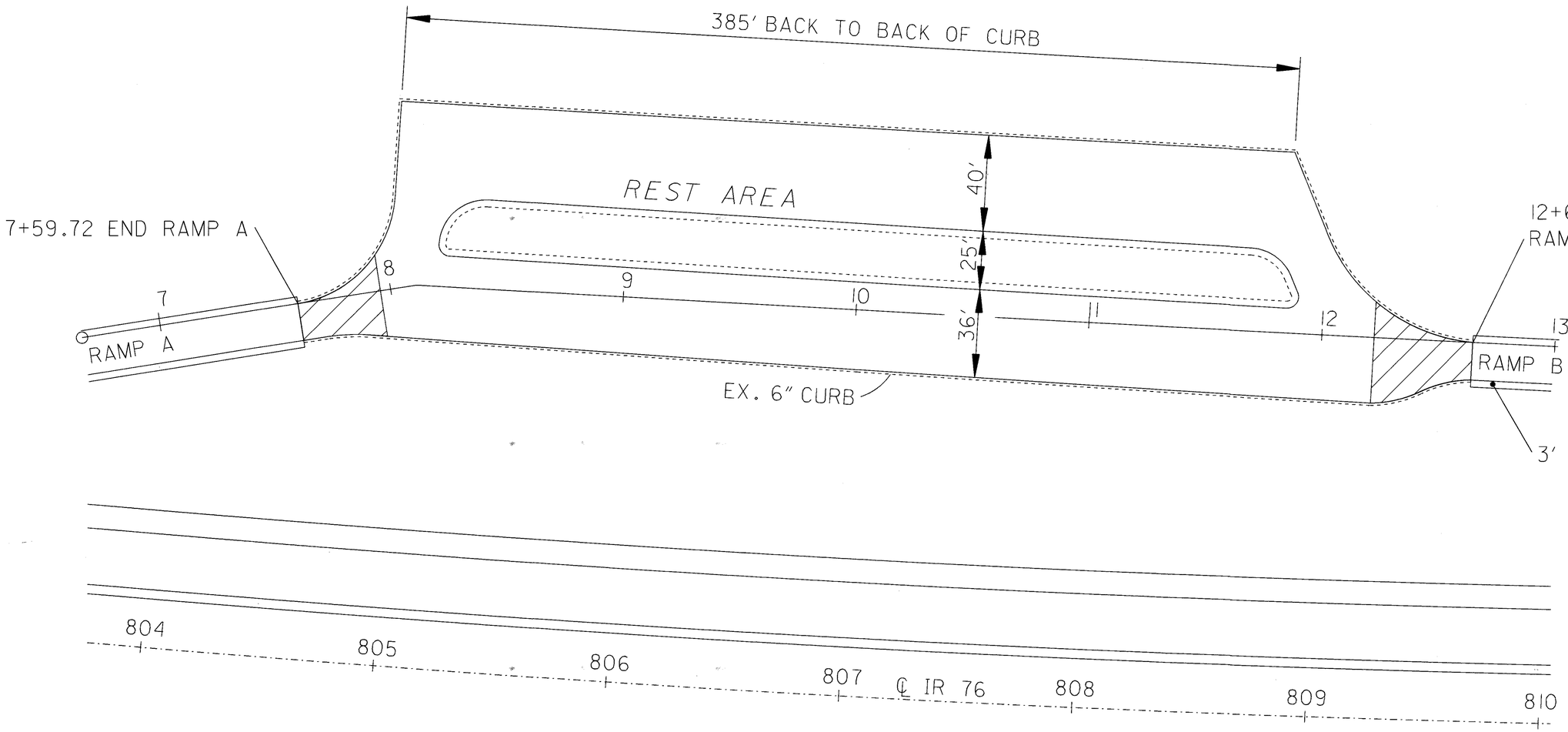

SEE PAVEMENT DETAIL SHEET 20A.

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N

HORIZONTAL SCALE IN FEET

CALCULATED ALP CHECKED

PLAN - REST AREA (WEST BOUND IR 76)

POR-76-13.55

REF NO.	SHEET NO.	STATION TO STATION	SIDE	202 GUARDRAIL REMOVED FT	202 GUARDRAIL REMOVED, BARRIER DESIGN FT	606 GUARDRAIL, TYPE 5 FT	606 GUARDRAIL, BARRIER DESIGN, TYPE 5 FT	606 ANCHOR ASSEMBLY, TYPE T EA	606 BRIDGE TERMINAL ASSEMBLY, TYPE I EA	606 BRIDGE TERMINAL ASSEMBLY, TYPE II EA	606 IMPACT ATTENUATOR, TYPE I-98, BIDIRECTIONAL EA	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN FT	626 BARRIER REFLECTOR, TYPE A EA	626 BARRIER REFLECTOR, TYPE B EA
R-1	22	716+88.50 TO 718+12.92	LT	124.42										
R-2	22	716+21.25 TO 718+96.25	MED	414	68									
R-3	22	717+00.32 TO 718+23.50	RT	123.18										
GR-1	22	717+27.95 TO 718+85.62	MED/LT			62.5	50	1			1		3	
GR-2	22	716+27.62 TO 717+85.29	MED/RT			62.5	50	1			1		3	
B-1	22	717+42.68 TO 718+12.92	LT						1			47.24	1	3
B-2	22	717+00.42 TO 717+70.56	RT						1			47.24	1	3
R-1	24	782+60.00 TO 785+35.00	MED	414	68									
GR-1	24	783+71.36 TO 785+29.03	MED/LT			62.5	50	1			1		3	
GR-2	24	782+67.10 TO 784+24.78	MED/RT			62.5	50	1			1		3	
R-1	26	831+30.04 TO 831+44.54	LT	14.5										
R-2	26	833+04.65 TO 833+30.66	LT	26.01										
R-3	26	832+93.30 TO 834+61.50	MED/LT	109.20										
R-4	26	829+54.50 TO 831+17.81	MED/RT	104.31										
R-5	26	830+84.45 TO 831+10.46	RT	26.01										
R-6	26	832+73.13 TO 832+87.63	RT	14.5										
BT-1	26	831+30.58 TO 831+45.08	LT							1			1	
BT-2	26	833+03.66 TO 833+30.66	LT						1				1	
BT-3	26	830+84.45 TO 831+11.45	RT						1				1	
BT-4	26	832+72.61 TO 832+87.11	RT							1			1	
GR-1	26	832+92.76 TO 834+27.43	MED/RT			25	50		1		1		3	
GR-2	26	829+87.68 TO 831+22.35	MED/LT			25	50		1		1		3	
R-1	27	847+56.50 TO 848+75.89	LT	119.39										
R-2	27	846+75.00 TO 849+50.00	MED	414	68									
R-3	27	847+56.17 TO 848+75.50	RT	118.33										
GR-1	27	847+89.30 TO 849+46.97	MED/LT			62.5	50	1			1		3	
GR-2	27	846+85.09 TO 848+42.76	MED/RT			62.5	50	1			1		3	
B-1	27	848+09.53 TO 848+75.89	LT						1			43.36	1	3
B-2	27	847+56.17 TO 848+22.53	RT						1			43.36	1	3
R-1	28	873+17.00 TO 874+28.02	LT	111.02										
R-2	28	872+35.00 TO 875+22.50	MED	439	68									
R-3	28	873+21.46 TO 874+42.50	RT	121.04										
GR-1	28	873+48.08 TO 875+05.75	MED/LT			62.5	50	1			1		3	
GR-2	28	872+43.73 TO 874+01.40	MED/RT			62.5	50	1			1		3	
B-1	28	873+61.80 TO 874+28.02	LT						1			43.22	1	3
B-2	28	873+21.46 TO 873+87.68	RT						1			43.22	1	3
R-1	30	925+62.50 TO 927+10.82	LT	148.32										
R-2	30	925+20.00 TO 927+95.00	MED	414	68									
R-3	30	926+03.32 TO 927+15.00	RT	111.68										
GR-1	30	926+30.41 TO 927+88.08	MED/LT			62.5	50	1			1		3	
GR-2	30	925+26.06 TO 926+83.73	MED/RT			62.5	50	1			1		3	
B-1	30	926+44.60 TO 927+10.82	LT						1			43.22	1	3
B-2	30	926+03.32 TO 926+69.54	RT						1			43.22	1	3
TOTALS CARRIED TO GENERAL SUMMARY				3366.91	340	675	600	10	12	2	12	354.08	48	24

CALCULATED ALP
CHECKED

GUARDRAIL SUBSUMMARY

POR-76-13.55

TONY 05/21/99

I:USERS TPEREZ POR 7613.55GS.DGN

REF NO.	SHEET NO.	STATION TO STATION	SIDE	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED, BARRIER DESIGN	606 GUARDRAIL, TYPE 5	606 GUARDRAIL, BARRIER DESIGN, TYPE 5	606 ANCHOR ASSEMBLY, TYPE T	606 BRIDGE TERMINAL ASSEMBLY, TYPE I	606 BRIDGE TERMINAL ASSEMBLY, TYPE II	606 IMPACT ATTENUATOR, TYPE I-98, BIDIRECTIONAL	622 CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	626 BARRIER REFLECTOR, TYPE A	626 BARRIER REFLECTOR, TYPE B
				FT	FT	FT	FT	EA	EA	EA	EA	FT	EA	EA
R-1	32	979+90.21 TO 980+09.30	LT	19.09										
R-2	32	979+90.13 TO 981+60.50	MED/LT	111.37	59									
R-3	32	976+95.50 TO 978+61.65	MED/RT	107.15	59									
R-4	32	978+30.70 TO 978+61.62	RT	30.92										
BT-1	32	979+82.30 TO 980+09.30	LT						1				1	
BT-2	32	978+30.70 TO 978+57.70	RT						1				1	
GR-1	32	977+23.06 TO 978+57.73	MED/RT			25	50		1		1		3	
GR-2	32	979+82.27 TO 981+16.94	MED/LT			25	50		1		1		3	
R-1	34	1031+98.25 TO 1033+05.57	LT	107.32										
R-2	34	1031+41.00 TO 1034+00.00	MED	414	68									
R-3	34	1032+45.03 TO 1033+48.00	RT	102.97										
GR-1	34	1032+48.54 TO 1034+06.21	MED/LT			62.5	50	1			1		3	
GR-2	34	1031+44.39 TO 1033+02.06	MED/RT			62.5	50	1			1		3	
B-1	34	1031+98.25 TO 1033+05.57	LT						2			61.32	1	3
B-2	34	1032+45.03 TO 1033+11.45	RT						1			43.32	1	3
R-1	35	1059+38.95 TO 1060+38.85	MED/RT	99.9	12.5									
GR-1	35	1059+31.18 TO 1060+38.85	MED/RT			25	50				1		3	
R-1	36	1062+64.22 TO 1063+64.12	MED/LT	99.9	12.5									
R-2	36	1083+87.75 TO 1084+02.25	LT	14.5										
R-3	36	1084+77.75 TO 1085+02.75	LT	25										
R-4	36	1082+37.50 TO 1084+02.25	MED/RT	105.75	59									
R-5	36	1083+77.25 TO 1084+02.25	RT	25										
R-6	36	1084+77.75 TO 1084+92.25	RT	14.5										
GR-1	36	1062+64.22 TO 1063+71.89	MED/LT			25	50				1		3	
GR-2	36	1082+69.58 TO 1084+04.25	MED/RT			25	50		1		1		3	
BT-1	36	1083+89.25 TO 1084+04.25	LT							1			1	
BT-2	36	1084+75.75 TO 1085+02.75	LT						1				1	
BT-3	36	1083+77.25 TO 1084+04.25	RT						1				1	
BT-4	36	1084+75.75 TO 1084+90.25	RT							1			1	
R-1	37	1084+77.75 TO 1086+41.50	MED/LT	104.75	59									
GR-1	37	1084+75.75 TO 1086+10.42	MED/LT			25	50		1		1		3	
R-1	38	1116+62.50 TO 0+52.01	LT	97.42										
R-2	38	1115+73.25 TO 1+40.37	MED	414	68									
R-3	38	1116+55.91 TO 0+61.50	RT	113.5										
GR-1	38	1116+81.91 TO 1+31.67	MED/LT			62.5	50	1			1		3	
GR-2	38	1115+76.24 TO 0+26.00	MED/RT			62.5	50	1			1		3	
B-1	38	1116+95.02 TO 0+29.01	LT						1			41.9	1	3
B-2	38	1116+78.91 TO 0+12.90	RT						1			41.9	1	3
GR-1	38	4+50 TO 5+50 (RAMP E)		100		100								
TOTALS CARRIED TO GENERAL SUMMARY				2197	397	500	500	4	13	2	10	188.44	40	12

CALCULATED ALP CHECKED

GUARDRAIL SUBSUMMARY

POR-76-13.55

REF NO.	SHEET NO.	STATION TO STATION	SIDE	202 PIPE REMOVED FOR REUSE, 24" AND UNDER LIN FT	202 PIPE REMOVED FOR REUSE, OVER 24" LIN FT	602 CONCRETE MASONRY CU YD	603 CONDUIT RECONSTRUCTED, 706.02, 12" LIN FT	603 CONDUIT RECONSTRUCTED, 706.02, 42" LIN FT	603 15" CONDUIT, TYPE C, 706.02 LIN FT	604 CATCH BASIN ADJUSTED TO GRADE EA	604 CATCH BASIN, NO. 8 EA	604 MONUMENT ASSEMBLY REMOVED AND RESET EA
D-1	22	719+25	MED								1	
D-1	24	766+00	RT			0.27			10			
D-2	24	776+00	RT			0.27			8			
RM-1	24	784+00	MED									1
D-1	26	820+50	LT			0.27			8			
D-2	27	843+25	LT	8			8					
RM-1	27	847+06.30	MED									1
D-1	28	867+75	RT			0.27			8			
RM-1	30	928+00	MED									1
D-1	36	1083+75 TO 1084+10	MED		8			8				
D-2	36	1084+70 TO 1085+00	MED		8			8				
D-1	38	1117+07.91	MED							1		
		TOTALS CARRIED TO GENERAL SUMMARY		8	16	1.08	8	16	34	1	1	3

CALCULATED ALP
CHECKED

ROADWAY DRAINAGE SUBSUMMARY

POR-76-13.55

RAISED PAVEMENT MARKER, INSTALLATION ONLY, AS PER PLAN

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

THE CONTRACTOR WILL BE INFORMED AT THE PRE-CONSTRUCTION CONFERENCE AS TO THE LOCATION OF THE DEPARTMENT SUPPLIED MATERIALS. WHEN SPECIFIED, ADDITIONAL RPM MATERIAL WILL BE STORED WITHIN THE DISTRICT FOR USE ON THIS PROJECT. THE CONTRACTOR SHALL PICKUP DEPARTMENT SUPPLIED MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. AN AUTHORIZATION FOR PICK UP FORM IS FURNISHED IN SUPPLEMENTAL SPECIFICATION 1082, DATED 1-6-98. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND/OR THE PARTIES LISTED ON THE AUTHORIZATION FORM (DEPENDENT ON THE STORAGE LOCATIONS OF THE MATERIALS) IN WRITING AT LEAST FIVE (5) WORKING DAYS PRIOR TO PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE MATERIALS SHALL BE STORED WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED OR WERE NOT RETURNED TO THE DEPARTMENT.

LOADING OF MATERIALS SUPPLIED BY THE DEPARTMENT AT THE RECYCLER'S WAREHOUSE SHALL BE DONE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 1082.

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

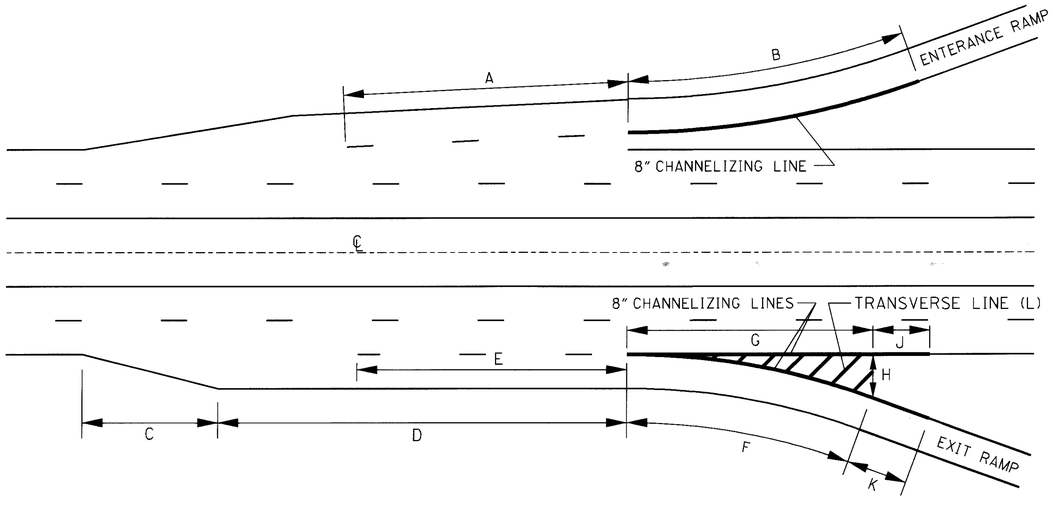
RPM CASTINGS SUPPLIED BY THE DEPARTMENT WILL BE OF THE 'CONVENTIONAL' DESIGN.

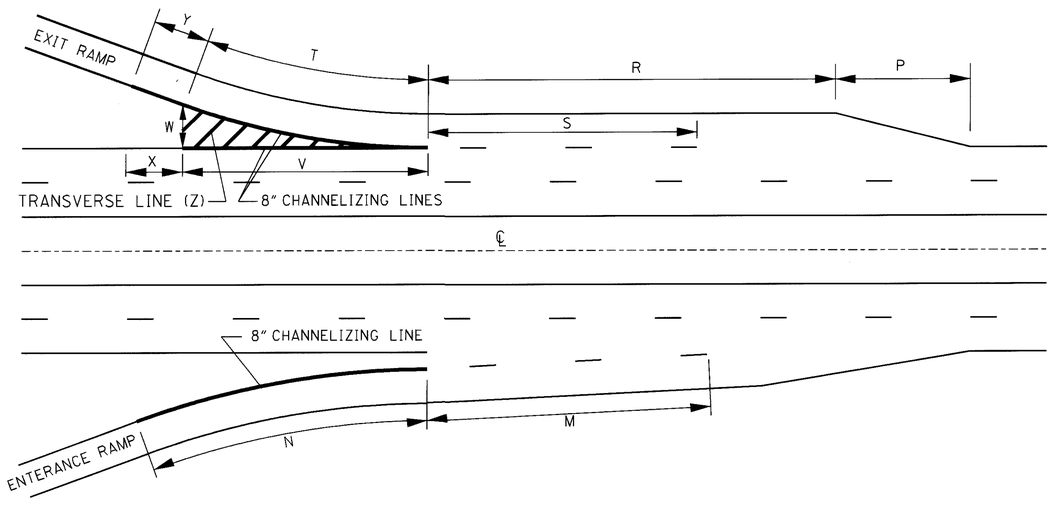
PAVEMENT MARKINGS, AS PER PLAN

IN LIEU OF THE REQUIREMENTS OF 642.03. THE APPLICATION RATES OF 614.10 SHALL BE USED IN PLACING PERMANENT PAVEMENT MARKINGS.

LOCATION	644								621			202
	LANE LINE	EDGE LINE (YELLOW)	EDGE LINE (WHITE)	STOP LINE	CHANNELIZING LINE	TRANSVERSE LINE	PARKING LOT STALL MARKING	HANDICAP SYMBOL MARKING	RAISED PAVEMENT MARKER, INSTALLATION ONLY, AS PER PLAN: ONE-WAY WHITE	WHITE/RED	YELLOW/RED	REMOVAL OF RAISED PAVEMENT MARKER FOR STORAGE
	LIN FT							EACH	EACH			EACH
704+00 to 1117+08 EB I-76	40308	40308	40308						336			504
704+00 to 1117+08 WB I-76	40308	40308	40308						336			504
EB DECEL LANE R/A										17		39
EB EXIT RAMP R/A		606	606								9	
EB ENTR RAMP R/A		800	1014								6	
EB ACCEL LANE R/A										6		28
WB DECEL LANE R/A										15		44
WB EXIT RAMP R/A		1466	1466								14	
WB ENTR RAMP R/A		725	1005								10	
WB ACCEL LANE R/A										8		32
EB R/A PARKING					700	157	782	4				
WB R/A PARKING					700	240	782	4				
EB DECEL LANE SR-225										17		46
EB EXIT RAMP SR-225		1073	1073	62							14	
EB ENTR RAMP SR-225		1367	1545								12	
EB ACCEL LANE R/A										5		24
WB DECEL LANE SR-225										15		37
WB EXIT RAMP SR-225		739	739	70							11	
WB ENTR RAMP SR-225		1366	1517								12	
WB ACCEL LANE R/A										5		37
TOTALS CARRIED TO GENERAL SUMMARY:		88758	89581									
		33.78 MI		132			1564	8	672	88	88	1295
									868			

REFERENCE	REST AREA				SR-225				ITEM 644		
	LANE LINE	CHANNELIZING LINE	TRANSVERSE LINE	DIMENSION	LANE LINE	CHANNELIZING LINE	TRANSVERSE LINE	DIMENSION	LANE LINE	CHANNELIZING LINE	TRANSVERSE LINE
	LIN FT				LIN FT				LIN FT		
A	280				280				560		
B		280				151				431	
C				127				130			
D				372				346			
E	200				160				360		
F		338				340				678	
G		338				340				678	
H				28				23			
J		16				75				91	
K						75					
L			443				379				822
M	280				240				520		
N		214				178				392	
P				100				100			
R				326				406			
S	163				203				366		
T		314				278				592	
V		314				278				592	
W				27				26			
X						53				53	
Y						53				53	
Z			536				297				833
SUB-TOTALS FROM TABLE AT LEFT:									80616	1400	397
TOTALS CARRIED TO GENERAL SUMMARY:									82422	4960	2052
									15.61 MI		



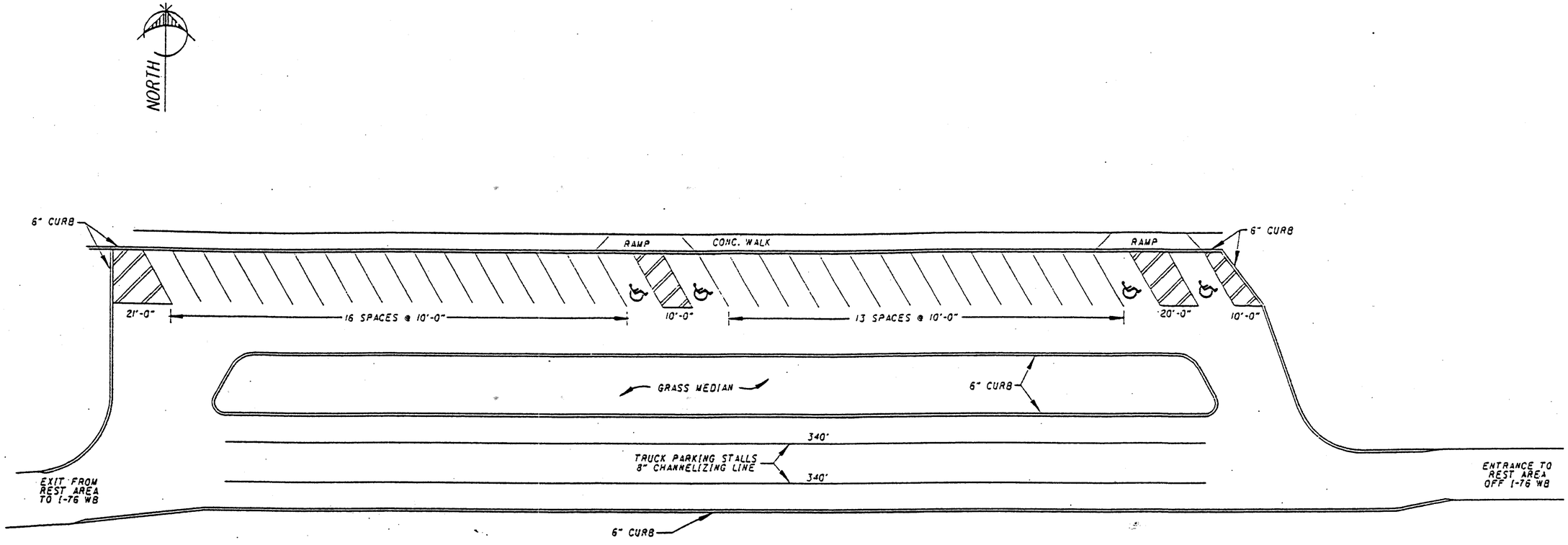


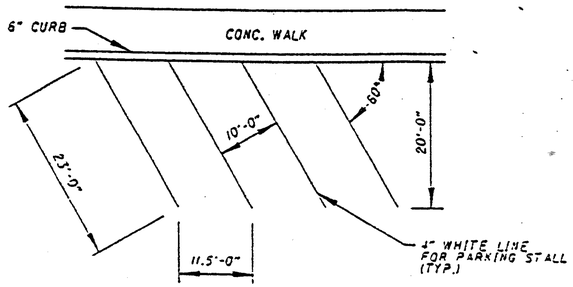
CALCULATED KJG
CHECKED LAJ

TRAFFIC CONTROL

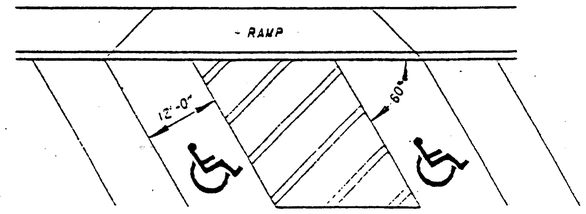
POR-76-13.55

PAVEMENT MARKING





TYP. PARKING STALL
PAVEMENT MARKING
NO SCALE



TYP. HANDICAP PARKING
STALL PAVEMENT MARKING
NO SCALE

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF TRANSPORTATION

REST AREA
I-76 WESTBOUND

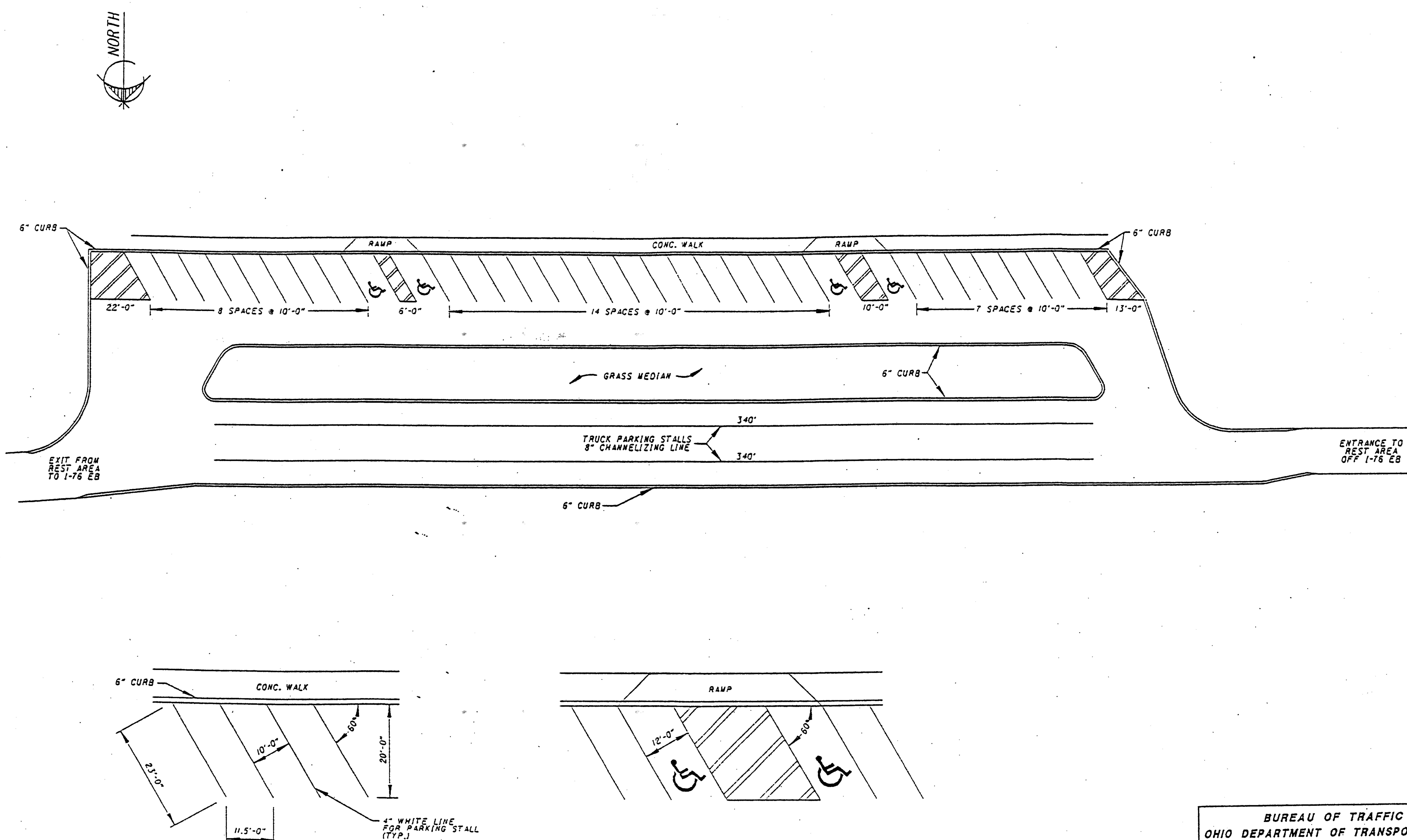
DISTRICT 4 COUNTY POR 1"= 40'

APPROVED	DATE	DRAWN	REVIEWED
APPROVED	DATE	TF 1-20-99	
APPROVED	DATE	REDRAWN	

(ENGINEER OF TRAFFIC)

POR-76-13.55

sbennett@D04CD126 - 18375gyb.m - Friday February 18 2000 09:11:58 AM EST



TYP. PARKING STALL PAVEMENT MARKING
NO SCALE

TYP. HANDICAP PARKING STALL PAVEMENT MARKING
NO SCALE

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BUREAU OF TRAFFIC
OHIO DEPARTMENT OF TRANSPORTATION

REST AREA
I-76 EASTBOUND

DISTRICT 4	COUNTY POR		
APPROVED	DATE	DRAWN TF 3-29-99	REVIEWED
APPROVED	DATE	REDRAWN	
APPROVED	DATE		

PAVEMENT MARKING

POR-76-13.55

46/100

STA. 785+00
BEGIN TAPER

1200' TAPER
RATE OF CONVERGENCE WITH WESTBOUND LANES - 0.02083 FT/FT

Sta. 0+00.00 RAMP A = 74' LT
Sta. 797+00 ℄ SR 76

100' TRANSITION
PAVED BERM 10' TO 8'

STA. 786+00

STA. 791+72

8' PAVED BERM

8' PAVED BERM

MATCH LINE 0+00

785 786 787 791 792 796

RAMP A
P.I. Sta = 4+83.87
D = 13° 43' 11" (LT)
Dc = 3° 45' 00"
R = 1,527.89'
T = 183.81'
L = 365.86'
E = 11.02'

REST AREA

POT Sta. 8+11.20

PT Sta. 6+65.92

N 80° 52' 48" E

Sta. 0+00.00 RAMP A = 74' LT
Sta. 797+00 ℄ SR 76

PC Sta. 3+00.06 RAMP A = 80.25' LT
Sta. 800+00 ℄ SR 76

300' TRANSITION
PAVEMENT 14' TO 16' ; PAVED BERM 8' TO 3'

100' TRANSITION
PAVEMENT 16' TO 18'

50' TRANSITION
PAVED BERM 2' TO 3'

RAMP A

S 85° 23' 55" E

PC Sta. 801+75.12

MATCH LINE 0+00

796 797 798 799 800 801 802 803 804 805 806 807

S 84° 12' 18" E

PC Sta. 0+00.00 RAMP C = 61' RT.
STA. 795+68.91 ℄ SR 76

8' PAVED BERM

STA. 1+25

STA. 2+53.07

STA. 4+53.07

STA. 5+53.07

300' TRANSITION
PAVED BERM - 3' TO 8'

100' TRANSITION
PAVEMENT 18' TO 16'

RAMP C

TS Sta. 7+16.78

SC Sta. 9+16.78

CS Sta. 10+88.88

PT Sta. 6+66.67

S 74° 12' 18" E

N 87° 49' 04" E

RAMP C
P.I. Sta = 3+34.18
D = 10° 00' 00" (RT)
Dc = 1° 30' 00"
R = 3,819.72'
T = 334.18'
L = 666.67'
E = 14.59'

RAMP C
P.I. Sta = 9+47.44
D = 13° 36' 18" (LT)
Dc = 5° 00' 00"
R = 1,145.92'
Dc = 8° 36' 18" (LT)
Lc = 172.10'
Es = 8.87'

792 793 794 795

10' PAVED BERM

8' PAVED BERM

STA. 792+23.64

100' TAPER
PAVED BERM 10' TO 8'

STA. 793+23.64

MATCH LINE 0+00

PC Sta. 0+00.00

RAMP REST AREA

35'-0"

1¼"

EXISTING ASPHALT

- TRANSITION DETAIL

FOR LEGEND SEE SHEET .

HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

RAMP DETAILS
ROADSIDE REST AREA - RAMPS A AND C DETAILS

POR-76-13.55

47
100

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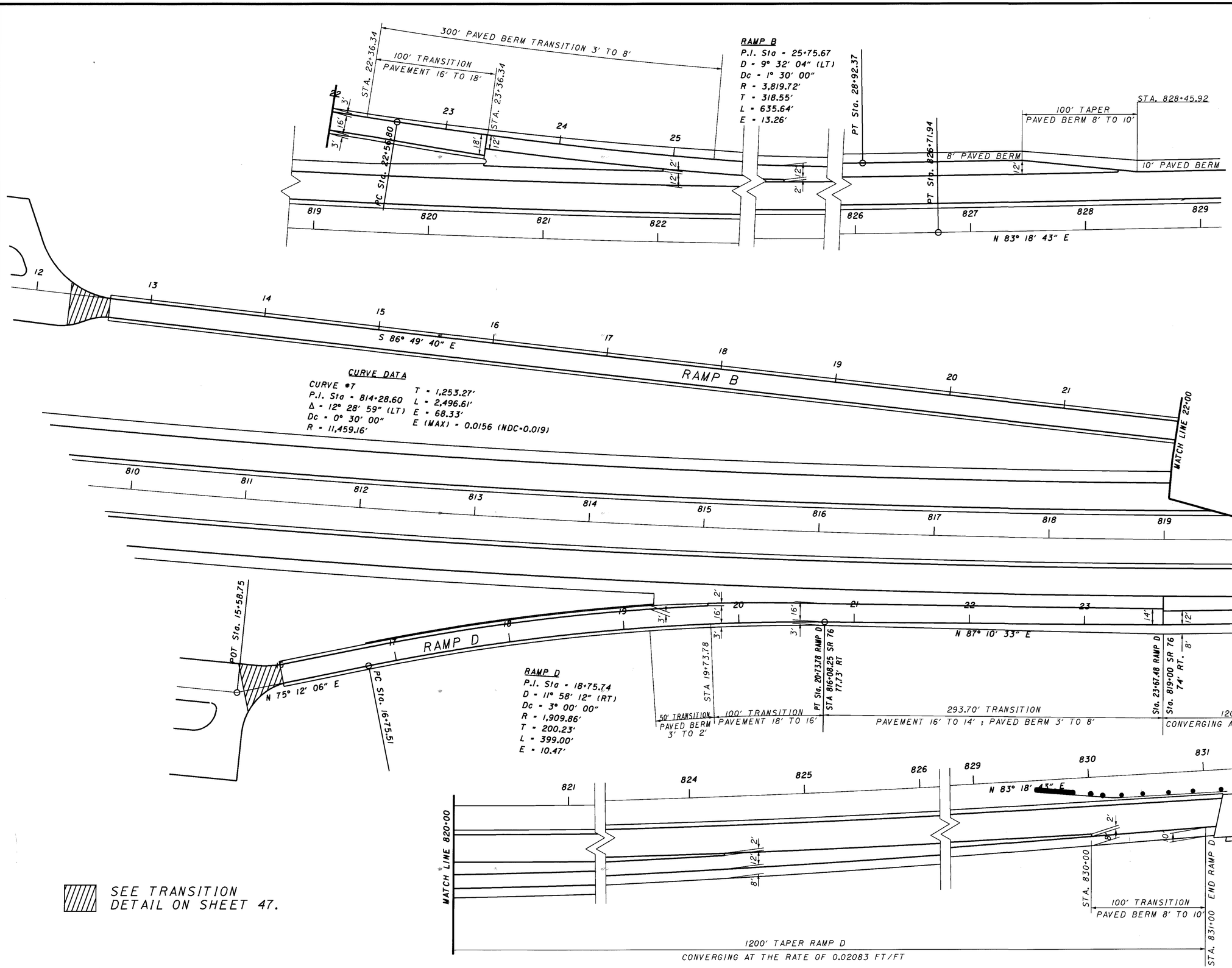

SEE TRANSITION DETAIL ON SHEET 47.

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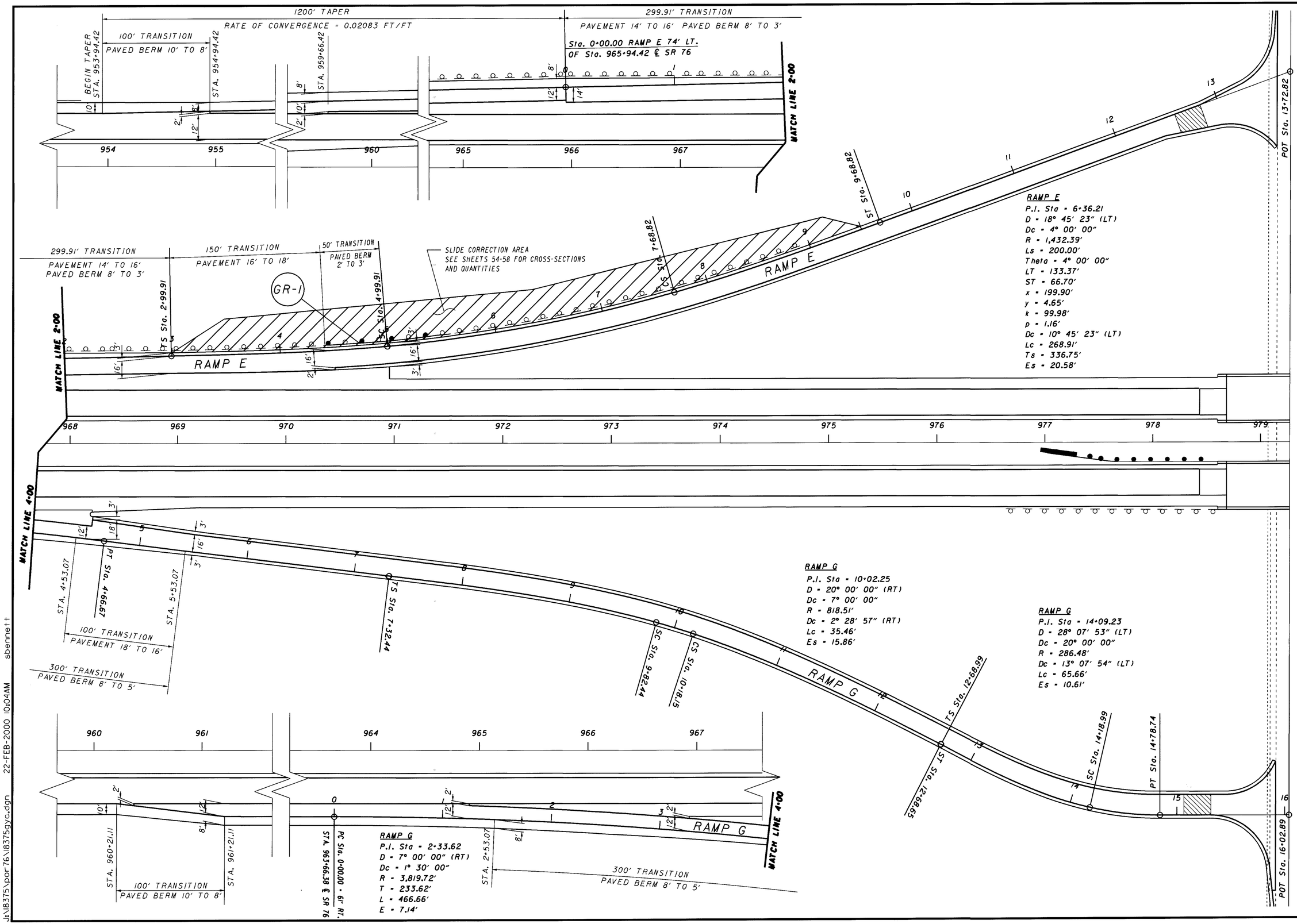
HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

RAMP DETAILS
ROADSIDE REST AREA - RAMPS B AND D DETAILS

POR-76-13.55



HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

RAMP DETAILS
S.R. 225 - RAMPS E AND G DETAILS

POR-76-13.55

49/100

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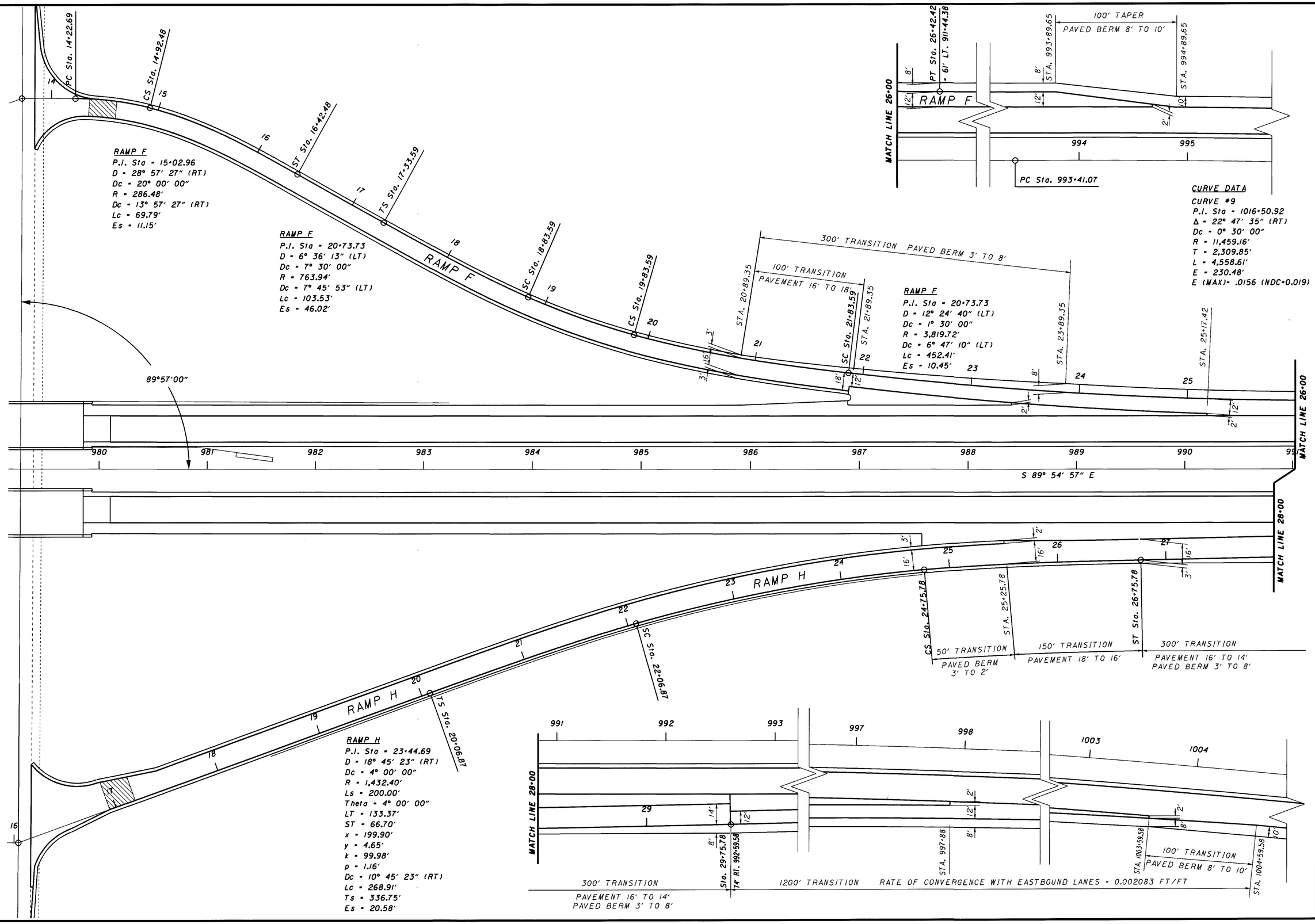

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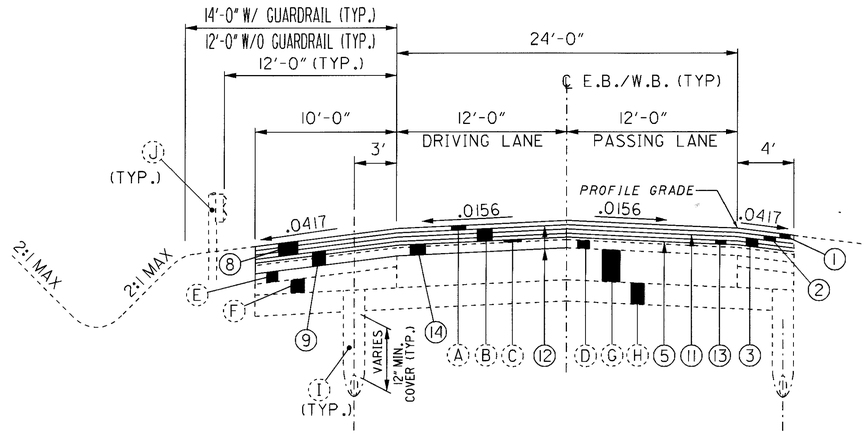
PAVEMENT DETAILS TO MAINTAIN 16' - 0" VERTICAL CLEARANCE UNDER JOHN THOMAS RD.



PROPOSED NORMAL TYPICAL SECTION

(SEE SHT. 4 FOR EXISTING TYPICAL SECTION)

STA. 871+58.74 TO STA 875+90 ℄ IR 76

Ⓐ - Ⓜ SEE LEGEND SHEET 4

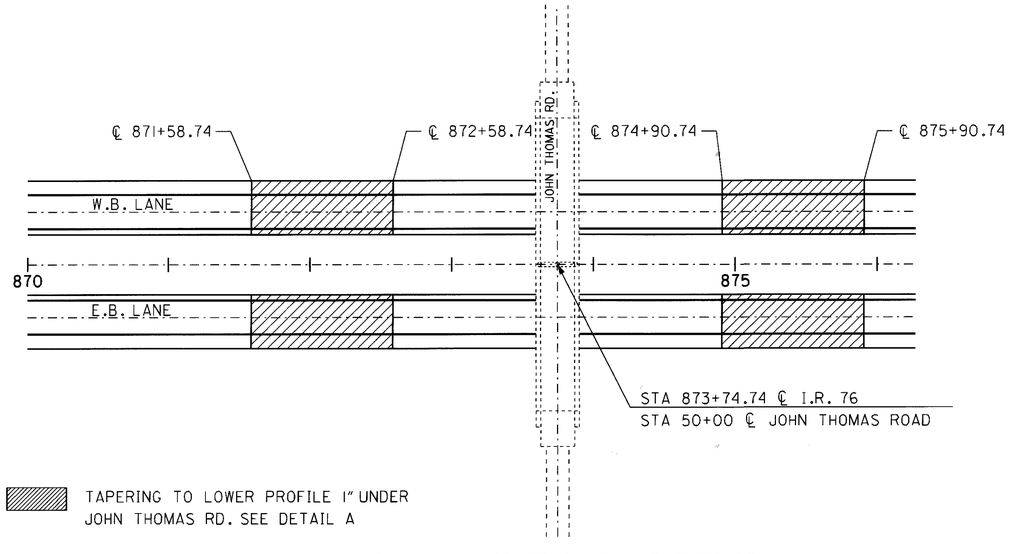
① - ⑫ SEE LEGEND SHEET 8

⑬ ITEM 254 - * VARIES PAVEMENT PLANING
(PASSING LANE AND PASSING LANE SHOULDER ONLY)

⑭ ITEM 301 - ** VARIES BITUMINOUS AGGREGATE BASE
PG-64-22 (DRIVING LANE AND DRIVING LANE SHOULDER ONLY)

* TAPER 0" TO 1" FROM ℄ STA. 871+58.74 TO ℄ STA. 872+58.74
1" FROM ℄ STA. 872+58.74 TO ℄ STA. 874+90.74
TAPER 1" TO 0" FROM ℄ STA. 874+90.74 TO ℄ STA. 875+90.74

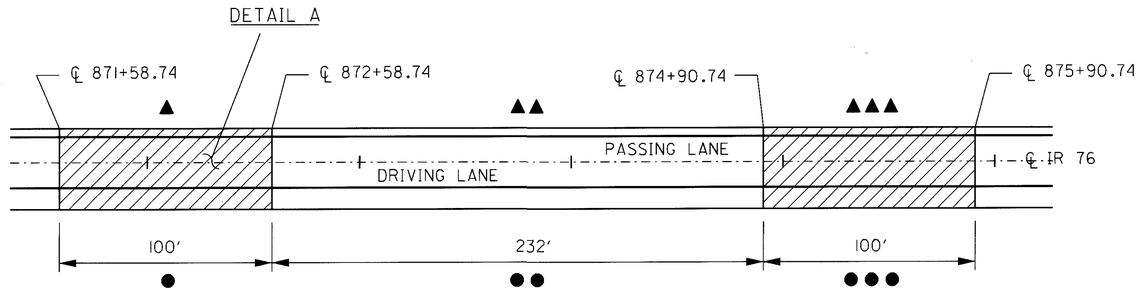
** TAPER 3" TO 2" FROM ℄ STA. 871+58.74 TO ℄ STA. 872+58.74
2" FROM ℄ STA. 872+58.74 TO ℄ STA. 874+90.74
TAPER 2" TO 3" FROM ℄ STA. 874+90.74 TO ℄ STA. 875+90.74



TAPERING TO LOWER PROFILE 1" UNDER JOHN THOMAS RD. SEE DETAIL A

PLAN VIEW IR 76 & JOHN THOMAS RD.

DETAIL A (E.B. & W.B. TYP) - METHOD TO LOWER PROFILE 1" UNDER JOHN THOMAS RD. OTHER PAVEMENT TREATMENTS ARE SHOWN ON TYPICAL SECTION THIS SHEET.



DRIVING LANE

● ITEM 254 3" PAVEMENT PLANING
DRIVING LANE AND DRIVING LANE
SHOULDER ONLY. (SEE TYP. SEC. ITEM ⑨)

ITEM 301 3"-2" BITUMINOUS
AGGREGATE BASE PG-64-22
DRIVING LANE AND DRIVING
LANE SHOULDER ONLY (SEE
TYPICAL SECTION ITEM ⑭)

●● ITEM 254 3" PAVEMENT PLANING
DRIVING LANE AND DRIVING LANE
SHOULDER ONLY. (SEE TYP. SEC. ITEM ⑨)

ITEM 301 2" BITUMINOUS
AGGREGATE BASE PG-64-22
DRIVING LANE AND DRIVING
LANE SHOULDER ONLY (SEE
TYPICAL SECTION ITEM ⑭)

●●● ITEM 254 3" PAVEMENT PLANING
DRIVING LANE AND DRIVING LANE
SHOULDER ONLY. (SEE TYP. SEC. ITEM ⑨)

ITEM 301 2"-3" BITUMINOUS
AGGREGATE BASE PG-64-22
DRIVING LANE AND DRIVING
LANE SHOULDER ONLY (SEE
TYPICAL SECTION ITEM ⑭)

PASSING LANE

▲ ITEM 254 0" - 1" PAVEMENT PLANING
PASSING LANE AND PASSING LANE
SHOULDER ONLY (SEE TYPICAL SEC. ITEM ⑬)

▲▲ ITEM 254 1" PAVEMENT PLANING
PASSING LANE AND PASSING LANE
SHOULDER ONLY (SEE TYPICAL SEC. ITEM ⑬)

▲▲▲ ITEM 254 1" - 0" PAVEMENT PLANING
PASSING LANE AND PASSING LANE
SHOULDER ONLY (SEE TYPICAL SEC. ITEM ⑬)

PAVEMENT DETAILS

POR-76-13.55

51
100

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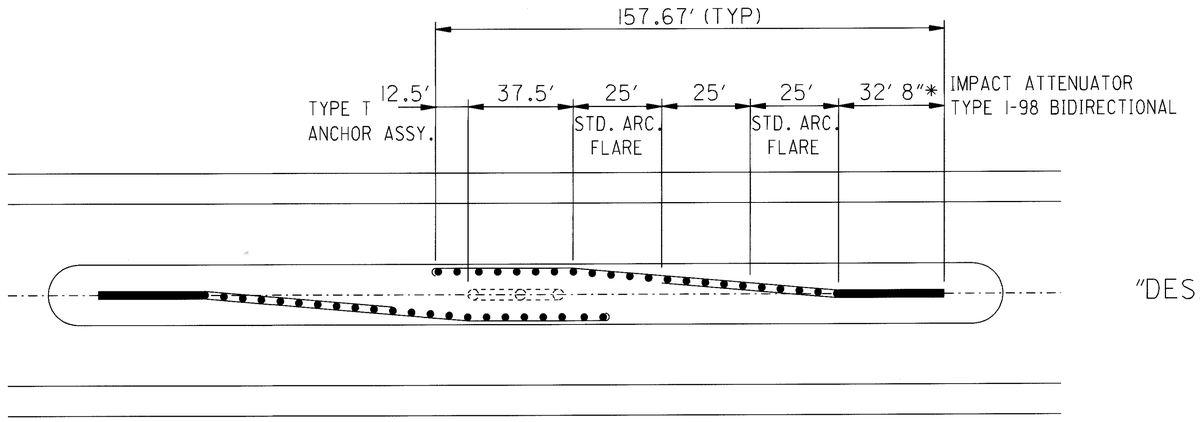
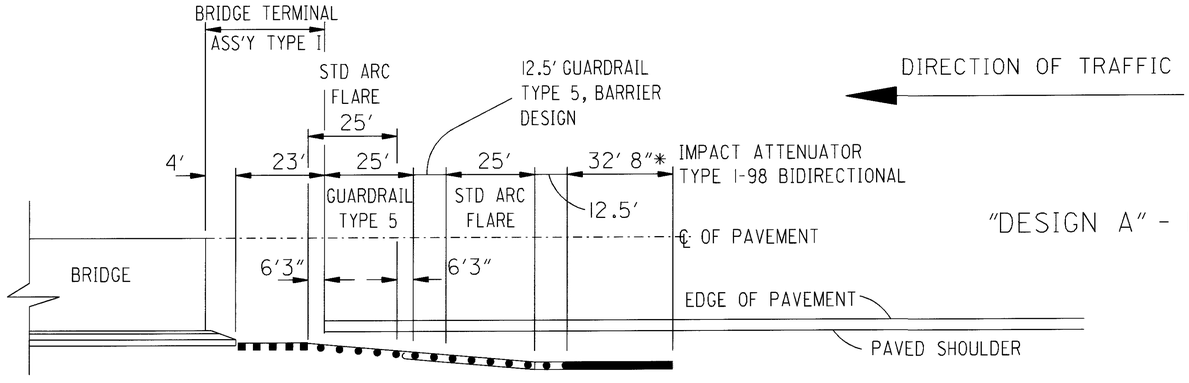
DETAIL FOR MEDIAN GUARDRAIL AT PIERS:

MEDIAN GUARDRAIL ALONG I-76 AT PIERS SHALL CONFORM TO STANDARD DRAWINGS GR-6.2M DESIGN A AND GR-5.1M EXCEPT AS NOTED AND DEATILED BELOW.



"DESIGN A" - NARROW MEDIAN

* TO SIMPLIFY THE DETERMINATION OF PLAN QUANTITIES, ALL CALCULATIONS ARE BASED ON VALUES FOR THE BRAKE MASTER. HOWEVER, THIS IS NOT A SPECIFICATION FOR THE USE OF THE BRAKE MASTER. SEE GENERAL NOTE FOR ITEM 606 IMPACT ATTENUATOR, TYPE I-98 (UNIDIRECTIONAL OR BIDIRECTIONAL) SHEET 13.



"DESIGN A" - NARROW MEDIAN

DETAIL FOR MEDIAN GUARDRAIL AT BRIDGES

MEDIAN GUARDRAIL ALONG I-76 AT BRIDGES SHALL CONFORM TO STANDARD DRAWINGS GR-6.1M DESIGN A AND GR-5.1M EXCEPT AS NOTED AND DEATILED ABOVE.

CALCULATED ALP
CHECKED

GUARDRAIL DETAILS

POR-76-13.55

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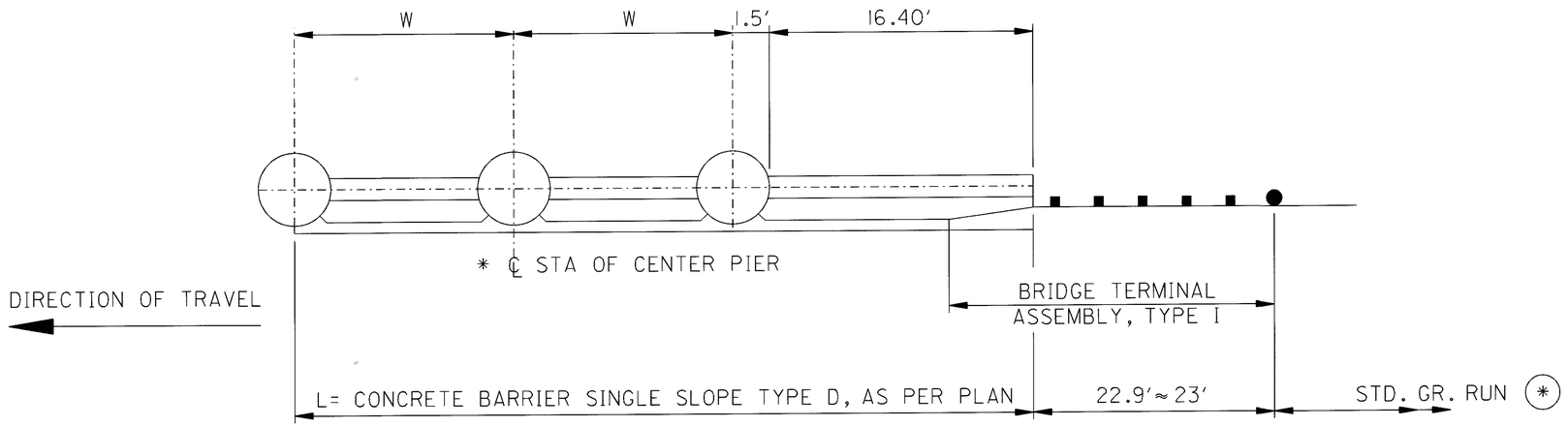
DETAIL FOR CONCRETE BARRIER SINGLE SLOPE, TYPE D, AS PER PLAN AT PIERS:

CONCRETE BARRIERS TYPE D ALONG I-76 AT OUTER PIER SETS SHALL CONFORM TO STANDARD DRAWINGS RM 4.3M AND 4.5M EXCEPT AS NOTED IN THE GENERAL NOTE PROVIDED ON SHEET 13, AND EXCEPT AS DETAILED BELOW:



* ℄ STA OF CENTER PIER

ROCK SPRING RD. OVERHEAD W= 14.67'
STA 717+57.35 LT. L= 47.24'
STA 717+55.89 RT. L= 47.24'

ALLIANCE RD. OVERHEAD W= 12.73'
STA 848+22.26 LT. L= 43.36'
STA 848+09.80 RT. L= 43.36'

JOHN THOMAS RD. OVERHEAD W= 12.66'
STA 873+74.46 LT. L= 43.22'
STA 873+75.02 RT. L= 43.22'

WILCOX WAYLAND RD. OVERHEAD W= 12.66'
STA 926+57.26 LT. L= 43.22'
STA 926+56.88 RT. L= 43.22'

McCLINTOCKSBURG RD. OVERHEAD W= 12.76'
▲ STA 1032+51.91 LT. L= 61.32'
STA 1032+98.69 RT. L= 43.32'

COUNTY LINE RD./ MAHONING RD. W= 12.0'
STA 1117+07.02 LT L= 41.90'
STA 0+00.90 (MAH CO.) RT L= 41.90'

NOTE: SEE GUARDRAIL SUB-SUMMARY SHEET 41 FOR LOCATIONS OF CONCRETE BARRIERS AND BRIDGE TERMINAL ASSEMBLIES.

▲ FOR THIS SECTION OF PROPOSED CONCRETE BARRIER THERE IS A CONNECTION TO TRAILING GUARDRAIL (SEE STD DWG RM-4.5M)

CALCULATED ALP
CHECKED

CONCRETE BARRIER DETAILS

POR-76-13.55

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SEEDING END WIDTH FT	SEEDING SQ. YDS.	STATION	END AREA CUT SF	END AREA FILL SF	VOLUME CUT CY	VOLUME FILL CY
	389					
69		4+00.000	172	274		
					312	494
	389					
71		3+50.000	165	259		
					153	240
	197					
		3+00.000	0	0		
		BEGIN EARTHWORK STA. 3+00				
	975	SHEET TOTAL			465	734

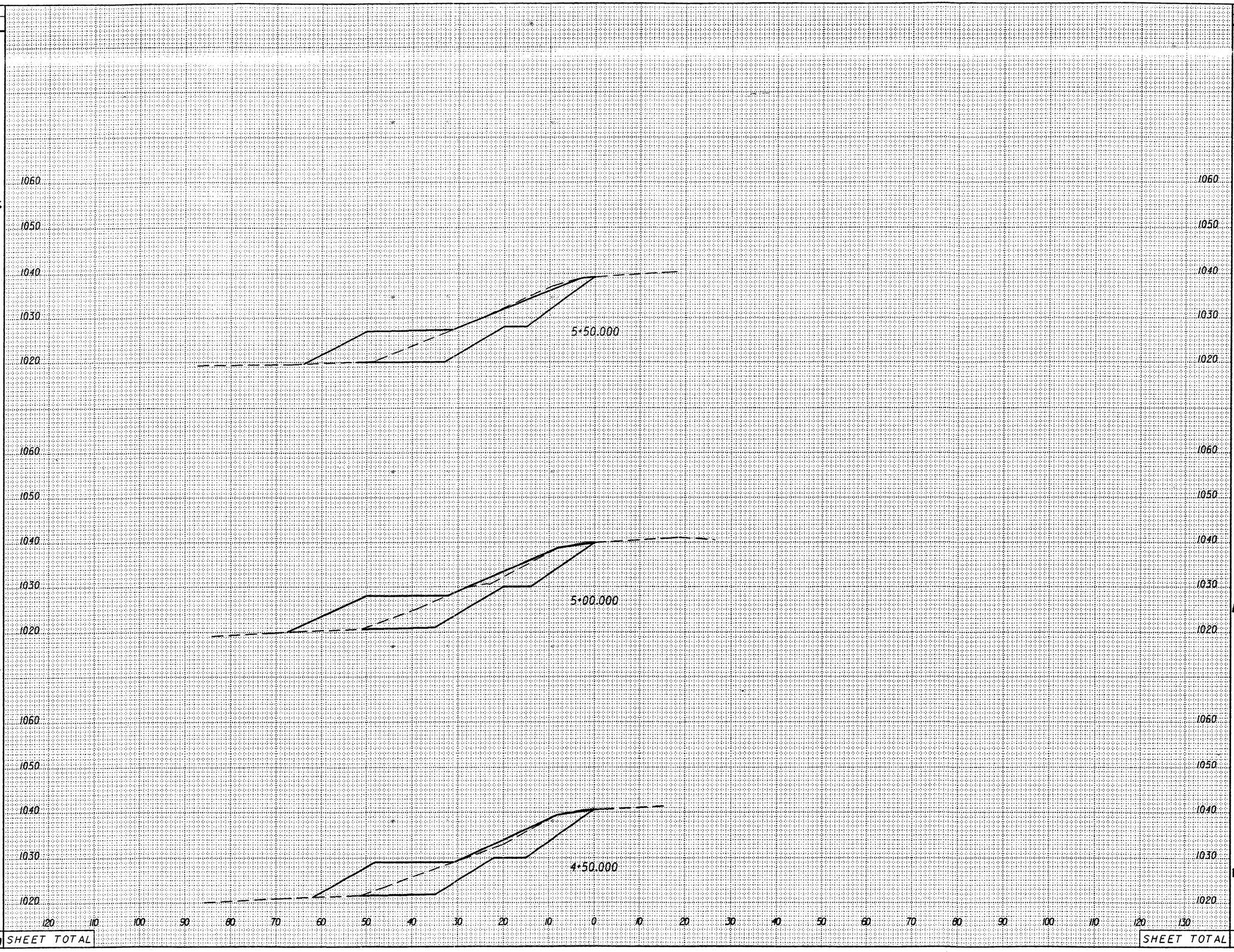
CALCULATED SB
CHECKED ST

CROSS SECTIONS

POR-76-13.55

54
100

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	405				
73		205	323		
	414			355	582
76		178	306		
	408			329	543
71		177	280		
				323	513
	1227 SHEET TOTAL			1007	1638



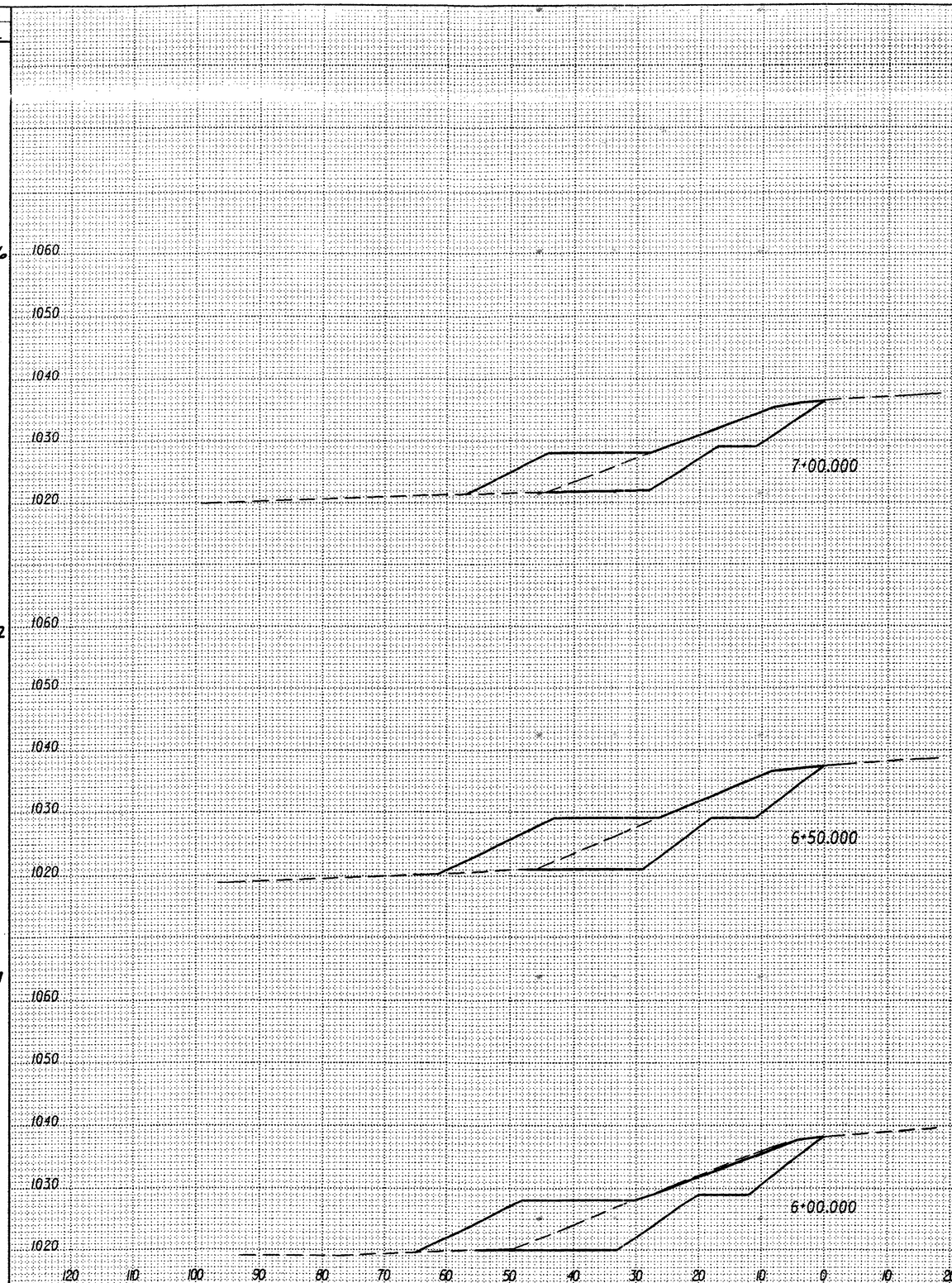
CALCULATED SB
CHECKED SF

CROSS SECTIONS

POR-76-13.55

58
100

SEEDING END WIDTH	SEEDING SQ. YDS.	
	336	
64		
	372	
78		
	397	
73		
	1105	SHEET TOTAL



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
155	246			
		319	520	
190	316			
		362	597	
201	329			
		376	604	
		1057	1721	SHEET TOTAL

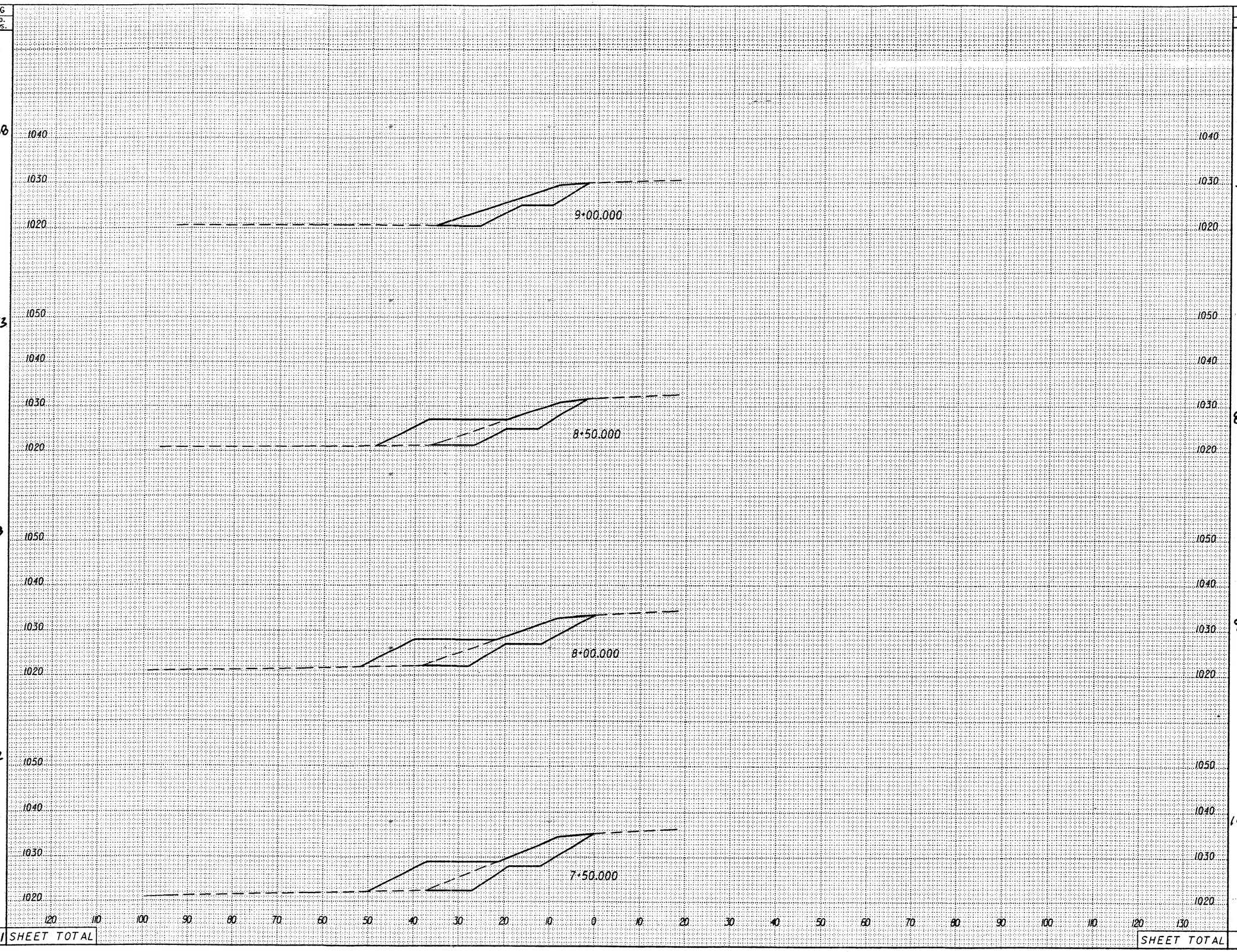
CALCULATED SB
CHECKED ST

CROSS SECTIONS

POR-76-13.55

56/100

SEEDING END WIDTH	SEEDING SQ. YDS.	
	108	
39		
	253	
52		
	308	
59		
	322	
57		
	991	SHEET TOTAL



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
74	74		
		144	222
82	166		
		167	331
98	192		
		187	360
104	197		
		240	410
SHEET TOTAL		738	1323

CALCULATED

CHECKED

CROSS SECTIONS

POR-76-13.55

57
100

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED

SUMMARY ALL SHEETS

SHEET	SEEDING	EXCAVATION	EMBANKMENT
	SY	CY	CY
54	975	465	734
55	1227	1007	1638
56	1105	1057	1721
57	991	738	1323
58	0	69	69
TOTAL	4298	3336	5485

0	0			
0	0	69	69	
0	SHEET TOTAL	SHEET TOTAL	69	69

CROSS SECTIONS

POR-76-13.55

58
100

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81 9-15-94
EXJ-4-87 2-14-97

AND TO SUPPLEMENTAL SPECIFICATIONS:

830	10-21-98	863	9-9-97
842	1-6-99	885	8-10-99
843	5-5-98	899	10-21-98
848	6-30-98	910	7-28-98

DESIGN SPECIFICATIONS:

THIS STRUCTURE MODIFICATION CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, AND THE OHIO SUPPLEMENT TO THESE SPECIFICATIONS.

DESIGN LOADING:

ORIGINAL: CF 2000 (57)

DESIGN DATA:

CONCRETE, CLASS S - COMPRESSIVE STRENGTH 4500 P.S.I. (SUPERSTRUCTURE)
CONCRETE, CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)
REINFORCING STEEL - ASTM A615, A616 OR A617-GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.
STRUCTURAL STEEL - ASTM A36 - YIELD STRENGTH 36,000 P.S.I.

CONSTRUCTION AND MATERIAL SPECIFICATIONS:

STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, DATED JANUARY 1, 1997.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES 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 513.02/863.07.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID 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 611 REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN:

THE REINFORCING STEEL FOR THE APPROACH SLABS OF THIS STRUCTURE SHALL BE EPOXY COATED IN CONFORMANCE WITH 509.

APPROACH SLAB SEATS SHALL BE RECONSTRUCTED AS DETAILED IN PLANS FOR EACH STRUCTURE.

CURB SHALL BE INTEGRAL TO THE APPROACH SLAB AS NOTED OR DETAILED IN THE PLANS.

MATERIALS, LABOR AND INSTALLATION SHALL BE INCLUDED WITH APPROACH SLABS FOR PAYMENT.

ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR:

THIS ITEM SHALL BE USED TO REPAIR DISINTERGRATED CONCRETE SURFACES ON STRUCTURE NOS. POR-76-1857 L&R AND POR-76-2057 L&R AS DIRECTED BY THE ENGINEER AFTER FIELD EXAMINATION. FINAL EXPOSED SURFACES SHALL HAVE A SMOOTH FINISH AND SHALL MATCH AS NEARLY AS PRACTICABLE THE SURROUNDING CONCRETE. ALL EXISTING REINFORCING STEEL SHALL HAVE AT LEAST 1 (ONE) INCH COVER AFTER PATCHING HAS BEEN COMPLETED.

THE ESTIMATED QUANTITIES GIVEN ON SHEETS 19/42 AND 26/42 FOR THIS ITEM HAVE BEEN INCREASED BY 10% TO ALLOW FOR ADDITIONAL DETERIORATION WHICH HAS OCCURED DURING THE TIME BETWEEN THE ORIGINAL INSPECTION AND THE SUBSEQUENT INSPECTIONS PERFORMED BY O.D.O.T. PROJECT ENGINEER.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS AND SUPPLEMENTAL SPECIFICATION FOR: ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.

ITEM 516 LAMINATED ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND A STEEL LOAD PLATE, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL THE WORK AND MATERIALS NECESSARY TO FABRICATE AND INSTALL THE BEARINGS AS PER DETAILS ON THE PLANS FOR STRUCTURE POR-76-1578 L&R.

THE FABRICATION SHALL CONSIST OF A LAMINATED ELASTOMERIC BEARING VULCANIZED BONDED TO A TOP STEEL LOAD PLATE. AFTER VULCANIZATION THE TOP LOAD PLATE SHALL BE WELDED TO THE BOTTOM BEAM FLANGE.

ALL STEEL SHALL BE ASTM A36 AND SHALL MEET THE REQUIREMENTS OF 513 AND 863.

PAYMENT FOR THE ABOVE SHALL BE AT THE UNIT BID PRICE PER EACH FOR ITEM 516 LAMINATED ELASTOMERIC BEARING WITH 4 INTERNAL LAMINATES AS DETAILED IN THE PLANS AND A STEEL LOAD PLATE, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN PLACE.

REINFORCING STEEL:

FIELD BENDING, WHEN SPECIFIED IN PLANS, AND CUTTING OF ANY NEW OR EXISTING REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ITEM 509 AND SHALL BE INCLUDED IN THE BASE UNIT PRICE FOR THE RESPECTIVE 842 ITEMS.

ANY EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND WHICH ARE DEEMED UNUSABLE BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW STEEL AT THE CONTRACTOR'S EXPENSE. ANY REINFORCING STEEL DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION OR THE INABILITY TO BE INCORPORATED INTO THE WORK SHALL BE REPLACED WITH NEW STEEL. THE COST OF ANY NEW STEEL BECAUSE OF NO FAULT OF THE CONTRACTOR SHALL BE INCLUDED IN THE RESPECTIVE 519 AND 842 ITEMS.

ITEM SPECIAL - PILE ENCASEMENT (BR. NO. POR-76-2057 L&R):

ALL PILES FOR THE CAPPED PILE PIERS SHALL BE BE ENCASED IN CLASS S OR CLASS C CONCRETE (499.03) AND SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATIONS 842 AND 899, EXCEPT AS MODOFIED HEREIN. THE REQUIRED SLUMP IS 6 INCHES, PLUS OR MINUS 0.50. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.50. IF CONCRETE IS PLACED UNDER WATER, THE REQUIREMENTS OF ADDING 10 PERCENT MORE CEMENT TO THE CONCRETE SHALL BE WAIVED. THE CONCRETE SHALL BE PLACED WITHIN A FORM THAT CONSISTS OF POLYTHYLENE PIPE (707.33), OR PVC PIPE (707.42). THE ENCASEMENT SHALL EXTEND FROM 3 FEET BELOW THE FINISHED GROUND SURFACE UP TO THE CONCRETE PIER CAP AND SHALL BE POSITIONED SO THAT AT LEAST 3 INCHES OF CONCRETE COVER IS PROVIDED AROUND THE EXTERIOR OF THE PILE.

ALL PILE SURFACES SHALL BE CLEAN OF DIRT, RUST OR ANY OTHER MATERIALS, BEFORE ENCASEMENT. CLEANING SHALL BE DONE BY STIFF FIBER WIRE BRUSHES, SCRAPERS OR OTHER HAND OR POWER TOOLS. IF HEAVY RUST IS OBSERVED, PILES SHALL BE CLEANED BY ABRASIVE BLASTING. ALL AREAS TO BE BLAST CLEANED SHALL BE BLASTED TO Sa 2 FINISH ACCORDING TO ASTM D 2200 OR SSPC-SP10.

THE LENGTH OF PILE ENCASEMENT SHALL BE MEASURED IN FEET ALONG THE LENGTH OF THE PILE. THIS ITEM INCLUDES ALL WORK AND MATERIALS NECESSARY TO FURNISH THE REQUIRED ENCASEMENT. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT OF PILE ENCASEMENT APPROVED IN PLACE.

ITEM 518 POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE REMOVAL AND DISPOSAL OF THE EXISTING POROUS BACKFILL, AND THE INSTALLATION OF FILTER FABRIC, BAGGED AGGREGATE AND THE PLACING OF POROUS BACKFILL, AS DETAILED IN THE PLANS.

POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO ONE FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS. TWO CUBIC FEET OF BAGGED NO. 3 AGGREGATE SHALL BE PLACED AT EACH WEEPHOLE.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF ITEM 518. PAYMENT FOR THE ABOVE WORK, INCLUDING EXCAVATION, POROUS BACKFILL, FILTER FABRIC, BAGGED AGGREGATE, AND ALL INCIDENTALS SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 518 POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN.

ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN:

PATCHING SHALL BE DONE IN ACCORDANCE WITH ITEM 519 TO REPAIR AREAS AS DETAILED IN THE PLANS. CLASS S CONCRETE SHALL BE USED AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATIONS 899 AND 842. ANY REINFORCEMENT IN THE REPAIR AREA WHICH CANNOT BE REUSED BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW REBAR (EPOXY COATED) OR WIRE MESH MEETING THE REQUIREMENTS OF 709.14 OF CMS.

ALL SURFACES TO BE PATCHED AND THE EXPOSED REINFORCING STEEL WITHIN SHALL BE THOROUGHLY CLEANED BY ABRASIVE BLASTING PRIOR TO THE CLEANING SPECIFIED BY 519.04. CLEANING SHALL PRECEDE APPLICATION OF THE PATCHING MATERIAL OR ERECTION OF THE FORMS BY NOT MORE THAN 24 HOURS.

ALL COST INCLUDING INCIDENTALS AND NEW REINFORCEMENT SHALL BE INCLUDED IN THE UNIT BID ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN.

ITEM SPECIAL STRUCTURE MISC.: CONCRETE BONDING AGENT:

A CONCRETE BONDING AGENT SHALL BE APPLIED TO AREAS WHERE NEW CONCRETE IS PLACED ON OLD CONCRETE. THESE AREAS SHALL INCLUDE BACKWALL REPLACEMENT, PARAPET TRANSITON REPLACEMENT, AS WELL AS 519 CONCRETE PATCH AREAS. THE CONCRETE BONDING AGENT SHALL BE APPLIED TO THE EXISTING PREPARED SURFACE AREAS. THE BONDING AGENT SHALL BE APPLIED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND SHALL MEET THE REQUIREMENTS OF ASTM C-881. THE BONDING AGENT SHALL BE SUPPLIED BY ONE OF THE FOLLOWING OR EQUAL APPROVED BY ODOT:

NITOBOND 881-12:
FOSROC INC.
150 CARLEY COURT
GEORGETOWN, KY 40324

CONCRESIVE LIQUID LPL
MASTER BUILDERS, INC.
23700 CHAGRIN BLVD.
CLEVELAND, OHIO 44122-5554

SIKADUR 32, HI-MOD LPL
SIKA CORP.
ADMIXTURE DIVISION
1682 MARION WILLIAMSPORT RD. E.
MARION, OH. 43302

ALL COST INCLUDING INCIDENTALS A SHALL BE INCLUDED IN THE UNIT BID ITEM SPECIAL STRUCTURE, MISC.: CONCRETE BONDING AGENT.

FINISHED OVERLAY SURFACE:

PORTIONS OF THE ORIGINAL PLANS HAVE BEEN ELECTRONICALLY SCANNED AND INCORPORATED INTO THE CONSTRUCTION DRAWINGS. THEY ARE TO BE USED IN ASSISTING THE CONTRACTOR AND ENGINEER IN DETERMINING RELATIVE CHANGES IN ELEVATION AMONG DIFFERENT POINTS ON THE BRIDGE DECK SURFACE.

THE FINISHED SURFACE OF THE CONCRETE OVERLAY SHALL BE CONSTRUCTED PARALLEL TO THE ORIGINALLY DESIGNED DECK SURFACE.

THE NET PARALLEL INCREASE IN HEIGHT SHALL BE ESTABLISHED FOR EACH BRIDGE BASED ON THE OVERLAY THICKNESS. SEE SHEET NO. 4/42 FOR BRIDGE NO. POR-76-1578 L&R, SHEET NO. 18/42 FOR BRIDGE NO. POR-76 1857 L&R, AND SHEET NO. 25/42 FOR BRIDGE NO. POR-76-2057 L&R TO ESTABLISH THE OVERLAY THICKNESS AND PARALLEL INCREASE IN HEIGHT FOR EACH BRIDGE.

TO DETERMINE THE FINISHED OVERLAY SURFACE, THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS OF ALL CROWNS, BREAK POINT LINES, AND GUTTER LINES AT EACH CENTERLINE OF BEARING ON THE BRIDGE STRUCTURE. THESE FIELD MEASURED ELEVATIONS SHALL BE COMPARED TO THE ORIGINAL PLANS TO ADJUST, IF NECESSARY, FOR AS- BUILT CONDITIONS OR PREVIOUSLY CONSTRUCTED OVERLAYS. AT LEAST 5 DAYS PRIOR TO THE INTENDED POUR, THE CONTRACTOR SHALL PROVIDE, TO THE ENGINEER FOR REVIEW AND ACCEPTANCE, A SET OF ELEVATIONS BASED ON THE COMBINED INFORMATION OF THE ORIGINAL PLANS, THE FIELD VERIFIED ELEVATIONS AND THE PROPOSED OVERLAY THICKNESS.

FEATHERING OF APPOACH PAVEMENTS SHALL BE CONSTRUCTED AS SHOWN ON ROADWAY DRAWING 51A/101 AND TERMINATE AT THE APPROACH SLABS.

PAYMENT FOR THE FIELD SURVEY SHALL BE INCLUDED WITH CONSTRUCTION LAYOUT STAKES, AS PER PLAN.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00
CHECKED | REVISED | STRUCTURE FILE NUMBER VARIOUS

BRIDGE GENERAL NOTES

POR-76-13.55

1/42

59/100

ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS WORK SHALL CONSIST OF THE REMOVAL OF PORTIONS OF THE EXISTING BACKWALLS DOWN TO THE BEAM SEATS, PORTIONS OF WINGWALLS, PORTIONS OF ABUTMENTS AT DECK SLAB SEAT, PARAPET TRANSITIONS, END DAM ARMOR, END CROSS FRAMES AND OTHER ITEMS AS DETAILED OR NOTED IN THE PLANS.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1" DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. THE EXISTING REINFORCING STEEL WHERE REQUIRED IN THE PLANS SHALL BE LEFT IN PLACE. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACE AND EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THE JOINT SURFACE AND EXPOSED REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DUST, OR OTHER FOREIGN MATERIAL BY USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. CONCRETE BONDING SURFACES SHALL BE WET WITHOUT FREE WATER AS CONCRETE IS PLACED.

SUBSTRUCTURE CONCRETE: REMOVAL SHALL BE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18-INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18-INCH LIMIT, A HAMMER HEAVIER THAN 35 POUNDS, BUT NOT TO EXCEED 90 POUNDS, MAY BE USED AT THE APPROVAL OF THE ENGINEER. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CARE SHALL BE TAKEN DURING REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. CONCRETE MAY BE REMOVED BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS.

THIS WORK WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE BID, WHICH PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE WORK IN CONFORMANCE WITH THESE REQUIREMENTS, WITH PERTINET PROVISIONS OF 202, AND TO THE SATISFACTION OF THE ENGINEER.

ITEM SPECIAL JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE AND/OR REPOSITION THE EXISTING STRUCTURE TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE PROJECT PLANS. THREE (3) SETS OF JACKING PLANS, WHICH INCLUDE THE INFORMATION DESCRIBED IN THIS NOTE, SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL IN AT LEAST THIRTY (30) DAYS OR AS DESCRIBED IN 501.06 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS BEFORE ACTUAL WORK IS TO BEGIN. ALL SUPPORT PLANS, PROCEDURES, AND CALCULATIONS SHALL BE PREPARED AND STAMPED BY A REGISTERED ENGINEER. JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSIS OF STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR'S SELECTION JACKING POINTS.
3. A DRAWING SHOWING THE PHYSICAL AND DIMENSIONAL POSITION OF THE JACKS WITH RESPECT TO THE STRUCTURE INCLUDING CLEARANCES AND CENTER OF LIFT.
4. A SCHEMATIC LAYOUT OF JACKS, CHECK VALVES, PUMPS WITH 3 WAY RETRACTOR VALVE, PRESSURE GAGES, FLOW CONTROL VALVES, ETC. IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. ALL JACKS FOR EACH ABUTMENT OR PIER SHALL BE CONNECTED TOGETHER. ALL JACKS AT EACH ABUTMENT OR PIER SHALL BE THE SAME SIZE.
5. ANALYSIS AND CALCULATIONS OF THE STRESSES INDUCED OR CREATED IN THE STRUCTURE AND ANY TEMPORARY OR PERMANENT SUPPORTS. DESIGN CALCULATIONS FOR ANY TEMPORARY OR PERMANENT SUPPORTS.
6. PHYSICAL DIMENSIONS, MATERIALS, AND FABRICATION DETAILS OF ANY TEMPORARY OR PERMANENT SUPPORTS. HORIZONTAL AND VERTICAL MOVEMENT RESTRAINT SHALL BE PROVIDED.
7. A STEP BY STEP PROCEDURE DETAILING ALL STEPS IN THE JACKING OPERATION.
8. METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS WILL NOT BE PERMITTED.

THE ENTIRE SYSTEM INCLUDING JACKS SHALL HAVE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.

FOR LIFTS GREATER THAN 1", JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.

JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.

JACKS ALONE SHALL NOT BE USED TO SUPPORT LOADS EXCEPT DURING THE ACTUAL JACKING OPERATION. TEMPORARY SUPPORTS, BLOCKING OR OTHER METHODS APPROVED BY THE DIRECTOR SHALL BE USED.

SINGLE ACTING RAMS WITH NO OTHER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.

SPARE EQUIPMENT SHALL BE AVAILABLE ON SITE FOR THE REQUIRED STRUCTURE RAISING TO PROCEED IN THE EVENT OF BREAKDOWN. A LIST OF SPARE EQUIPMENT SHALL BE PROVIDED TO THE ENGINEER.

AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY.

MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT SUBSTRUCTURE UNITS SHALL BE 1" OR LESS; MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT BEARINGS SHALL BE 1/4" OR LESS.

IF, DURING THE JACKING OPERATIONS DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, THE JACKING OPERATION SHALL IMMEDIATELY CEASE AND APPROVED SUPPORTS SHALL BE INSTALLED. THE CONTRACTOR SHALL THEN ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. COST OF THIS CORRECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT THE BRIDGE BEARINGS ARE FULLY SEATED BETWEEN ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUITABLE MEANS OF REPAIR, SUBJECT TO THE APPROVAL OF THE ENGINEER, WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

THE JACKING OPERATION SHALL BE DIRECTED BY A PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR. FAILURE TO HAVE A PROFESSIONAL ENGINEER PRESENT SHALL BE CAUSE FOR CEASING JACKING OPERATIONS.

PAYMENT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN AND SHALL INCLUDE ALL NECESSARY TOOLS, LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THIS ITEM OF WORK.

ITEM 842 CLASS S CONCRETE SUPERSTRUCTURE, AS PER PLAN (BR. NO. POR-76-2057 L&R):

THIS ITEM SHALL CONSIST OF CONSTRUCTING NEW PARAPET TRANSITIONS, AS DETAILED THROUGHOUT THE PLANS.

ALL REINFORCING STEEL AS SHOWN IN THE PARAPET TRANSITION DETAILS SHALL BE IN ACCORDANCE WITH ITEM 509 AND SHALL BE EPOXY COATED, GRADE 60.

ALL DOWEL HOLES SHALL USE NON-SHRINK, NON-METALLIC EPOXY GROUT AND SHALL CONFORM TO ITEM 510 AND SECTION 705.20 OF THE CMS.

PAYMENT FOR LABOR, MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 842 CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN.

ITEM 842 CLASS C CONCRETE ABUTMENT, AS PER PLAN (BR. NO. POR-76-1578 L&R):

THIS ITEM SHALL CONSIST OF CONSTRUCTING NEW BACKWALLS, PARAPET TRANSITIONS AND CURTAIN WALLS, AS DETAILED IN THE PLANS.

CLASS C CONCRETE SHALL BE IN ACCORDANCE WITH ITEM 499 OF CMS, AND SUPPLEMENTAL SPECIFICATIONS 842 AND 899.

TYPE 2 WATERPROOFING SHALL BE PLACED AT BACKWALL CONSTRUCTION JOINT. TYPE 2 WATERPROOFING SHALL MEET REQUIREMENTS OF 512.01 THRU 512.04 AND 512.08 OF THE CMS. WATERPROOFING SHALL BE 3 FEET WIDE AND SHALL EXTEND UP TO THE BOTTOM OF THE DECK AND DOWN TO 1 FOOT BELOW THE BEAM SEAT.

ALL DOWEL HOLES SHALL USE NON-SHRINK, NON-METALIC EPOXY GROUT AND SHALL CONFORM TO ITEM 510 AND 705.20 OF THE CMS. THE DRILLING OF DOWEL HOLES AND THE PLACING OF THE GROUT SHALL BE INCLUDED IN THE CORRESPONDING BASE UNIT PRICE FOR THE RESPECTIVE 842 ITEMS FOR PAYMENT.

ALL REINFORCING STEEL AS SHOWN IN THE PARAPET DETAILS SHALL BE IN ACCORDANCE WITH ITEM 509 AND SHALL BE EPOXY COATED, GRADE 60.

PAYMENT FOR LABOR, MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 842 CLASS C CONCRETE, ABUTMENT, AS PER PLAN.

ITEM 863 STRUCTURAL STEEL MEMBERS MISCELLANEOUS FABRICATION, AS PER PLAN (BR. NO. POR-76-1578 L&R):

ALL SECTIONS OF SS 863 APPLY EXCEPT AS REVISED HEREIN. THE ENGINEER IS RESPONSIBLE FOR ENSURING ANY FABRICATED STEEL SUPPLIED UNDER THIS BID ITEM IS ACCEPTABLE. THE REQUIREMENTS FOR SUBMITTAL OF SHOP DRAWINGS TO THE OFFICE OF STRUCTURAL ENGINEERING IS WAIVED. THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH SHOP DRAWINGS STAMPED BY A PROFESSIONAL ENGINEER AND DATED, AS PER 863.08, PRIOR TO ANY INCORPORATION OF FABRICATED STEEL AT THE PROJECT. THE ENGINEER SHALL ASSURE THE SUBMITTED DRAWINGS MATCH THE FABRICATED STEEL DELIVERED BEFORE THE STEEL IS INCORPORATED INTO THE WORK. IF THE ENGINEER IS SATISFIED THE CONTRACTOR SHALL SUPPLY A COPY SET, STAMPED AND DATED AS PER 863.08, TO THE OFFICE OF STRUCTURAL ENGINEERING FOR RECORD PURPOSES. SS 863'S REQUIRED TEST DATA SUBMITTAL TO THE OFFICE OF STRUCTURAL ENGINEERING IS WAIVED, BUT THE CONTRACTOR'S WRITTEN ACCEPTANCE OF THE MATERIAL TEST REPORTS SHALL BE FURNISHED TO BOTH THE ENGINEER AND THE OFFICE OF STRUCTURAL ENGINEERING PRIOR TO INSTALLATION OF ANY STEEL.

AT OR BEFORE THE PREFABRICATION MEETING THE ENGINEER MAY CHOOSE TO REQUEST ASSISTANCE FROM THE OFFICE OF STRUCTURAL ENGINEERING IN WHATEVER CAPACITY IS REQUIRED.

STEEL MEMBERS INCLUDED IN THIS ITEM INCLUDE THE END CROSSFRAMES, LOAD PLATES AT ABUTMENTS AND PIERS, AND ANY MISCELLANEOUS ITEMS.

ITEM 601 ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER, AS PER PLAN (NO FABRIC FILTER REQUIRED) (BR. NOS. POR-76-1949 AND POR-76-2057 L&R):

AFTER ALL MAJOR REHABILITATION WORK HAS BEEN COMPLETED, EXISTING EMBANKMENT SURFACES SHALL BE RESTORED TO A UNIFORMED PLANE SURFACE WITH TYPE C ROCK CHANNEL PROTECTION. THIS WORK SHALL ALSO INCLUDE THE FILL OF AND/OR REGRADING ANY DEPRESSIONS IN THE ABUTMENT SLOPE AND STREAM BED AREA AT THE STRUCTURE SITE FOR THIS ITEM. THE QUANTITIY CALCULATED TO BE RESTORED IS ON 50% IS BASED ON OF THE TOTAL ROCK CHANNEL PROTECTION AT BOTH STRUCTURES FOR BR.NO. POR-76-2057 L&R, AND AT THE OUTLET OF STRUCTURE NO.1949. PAYMENT SHALL BE THE ACTUAL AREA RESTORED AFTER CONSTRUCTION IS COMLPLETED AS DIRECTED BY THE ENGINEER/SUPERVISOR.

ROCK CHANNEL PROTECTION, TYPE C SHALL BE IN ACCORDANCE WITH 601.07 AND 601.08 OF THE CMS.

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN (BR. NO. POR-76-1578 L&R AND BR. NO. POR-76-1857 L&R)

AFTER ALL MAJOR REHABILITATION WORK HAS BEEN COMPLETED, EXISTING EMBANKMENT SURFACES SHALL BE RESTORED TO A UNIFORMED PLANE SURFACE WITH CRUSHED AGGREGATE SLOPE PROTECTION. THIS WORK SHALL ALSO INCLUDE THE FILL OF ANY DEPRESSIONS AND/OR REGRADING IN THE ABUTMENT SLOPE AREA WITHIN THE WORK LIMITS FOR THIS ITEM AS DETAILED IN THE PLANS.

THE QUANTITY CALCULATED TO BE RESTORED IS BASED THE FOLLOWING PERCENTAGE OF TOTAL AREA:

50 % BR.NO. POR-76-1578 LEFT & RIGHT
20 % BR.NO. POR-76-1857 LEFT & RIGHT

PAYMENT SHALL BE THE ACTUAL AREA RESTORED AFTER CONSTRUCTION IS COMPLETED AS APPROVED BY THE ENGINEER/SUPERVISOR.

CRUSHED AGGREGATE SLOPE PROTECTION SHALL BE IN ACCORDANCE WITH 601.05 OF THE CMS. ALL COSTS SHALL BE THE ACTUAL COST OF THE WORK PERFORMED FOR THE UNIT BID PRICE FOR ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00
CHECKED | REVISED | STRUCTURE FILE NUMBER VARIOUS

BRIDGE GENERAL NOTES

POR-76-13.55

2/42

60/100

STRUCTURAL GENERAL NOTES AND DETAILS FOR POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

ITEM SPECIAL - POLYMER-MODIFIED ASPHALT EXPANSION JOINT SYSTEM

THIS ITEM WILL BE USED TO SEAL THE EXPANSION/CONTRACTION JOINTS AS PER THESE DETAILS AND THE MANUFACTURER'S REQUIREMENTS USING A POLYMER-MODIFIED ASPHALT SYSTEM. THE PRIME CONTRACTOR WILL OBTAIN THE SERVICES OF ONE OF THE FOLLOWING APPROVED APPLICATORS WHO WILL FURNISH AND INSTALL THE NEW BRIDGE EXPANSION JOINT SYSTEM AFTER ALL PAVING ON THE AFFECTED BRIDGE(S) HAS BEEN COMPLETED.

D.S. BROWN COMPANY
P.O. BOX 158
300 E. CHERRY STREET
N. BALTIMORE, OH 45872-0158
TEL: (419) 257-3561

LINEAR DYNAMICS, INC.
RD #2 BOX 311
MUNCY, PA 17756
TEL: (717) 546-6041

INFASTRUCTURE SYSTEMS, INC.
830 E. HIGGINS ROAD
SUITE 111M
CHICAGO, IL 60173-4792
TEL: (708) 706-9230

HARRIS SPECIALTY CHEMICALS, INC.
10245 CENTURION PARKWAY, N.
JACKSONVILLE, FL 32256
TEL: (904) 996-6000

MATERIALS:

BRIDGING PLATE:

MILD STEEL 1/8" OR 1/4" THICK PLATE, 8" WIDE OR 18 GAUGE ALUMINUM, 8" WIDE.

BINDER:

TYPE:	POLYMER MODIFIED ASPHALT
SOFTENING POINT:	180 DEGREES F. MIN.
FLOW:	3 mm. MAX. AT 140 DEGREES F.
PENETRATION:	9 mm. MAX. AT 77 DEGREES F. 1 mm. MIN AT 0 DEGREES F. ASTM D 3407
DUCTILITY:	40 cm. MIN. ASTM D 113
RESILIENCE:	60% MIN. AT 77 DEGREES F.
TENSILE ADHESION:	700% MIN.
SPECIFIC GRAVITY:	1.10 * 0.05
POURING TEMP:	350 - 390 DEGREES F.

AGGREGATE:

TYPE:	CRUSHED, DOUBLE WASHED, AND DRIED GRANITE OR BASALT
GRADATION	THE GRADATION OF THE AGGREGATE VARIES BY MANUFACTURER AND WILL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS FOR THE SYSTEM BEING USED ON THIS PROJECT.

BACKER ROD:

THE BACKER SHALL BE A CLOSED CELL FOAM EXPANSION JOINT FILLER CAPABLE OF WITHSTANDING THE PLACEMENT TEMPERATURE OF THE POLYMER MODIFIED ASPHALT.

NOTE: PRIOR TO PLACEMENT OF ANY PORTION OF THE JOINT SYSTEM, THE PROJECT ENGINEER MUST HAVE CERTIFIED TEST DATA MEETING ALL THE MINIMUM REQUIREMENTS OF ALL THE MATERIALS OF THE JOINT SYSTEM.

INSTALLATION PROCEDURES:

SAWING AND SURFACE PREPARATION:

AFTER ALL PAVING OPERATIONS ARE COMPLETE, THE OVERLAY IS TO BE TRANSVERSELY SAW CUT FULL DEPTH NO LESS THAN TWO INCHES DEEP (20" CENTERED OVER JOINT OPENING, UNLESS OTHERWISE NOTED). REMOVE ALL MATERIAL, INCLUDING WATER-PROOFING MATERIAL, BETWEEN SAW CUTS. THOROUGHLY CLEAN AND DRY EXPOSED CONCRETE, STEEL, AND CUT SURFACES USING COMPRESSED AIR AND A HOT COMPRESSED AIR (HCA) LANCE. THE LANCE MUST PRODUCE A FLAME RETARDED AIR STREAM TEMPERATURE OF 3000 DEGREES F. AT A VELOCITY OF 3,000 FEET PER SECOND WITH 15 PSIG CHAMBER PRESSURE. IF THERE IS AN INTERRUPTION DUE TO WEATHER OR OTHER CAUSES, THE OPERATION WILL BE REPEATED WITH THE HCA LANCE IMMEDIATELY BEFORE THE BINDER COAT OPERATION. ALSO, 6 INCHES OF THE ROAD SURFACE ON EITHER SIDE OF THE JOINT WILL BE DRIED SO THAT A SUITABLE SURFACE FOR BITUMEN ADHESION IS OBTAINED.

SEALING OF EXPANSION JOINT: (CONCRETE SLAB)

THE EXPANSION JOINT GAP IS TO BE SEALED AND A BRIDGING PLATE CENTERED ALONG IT. A VERY NARROW GAP WILL BE SEALED BY POURING HOT BINDER INTO THE GAP. GAPS OF 1/8" OR MORE WILL FIRST BE FILLED WITH AN APPROPRIATELY SIZED BACKER ROD. THE BACKER ROD WILL BE INSTALLED SO THAT IT IS BETWEEN 1/8" AND 1-1/8" BELOW THE TOP OF THE EXISTING GAP. THE GAP WILL THEN BE FILLED WITH BINDER.

BOND BREAKER:

SPREAD BINDER OVER SURFACE AREA WHERE THE METAL BRIDGING PLATE WILL BE PLACED. CENTER THE BRIDGING PLATE OVER THE EXISTING JOINT AND BED INTO THE HOT BINDER. BUTT JOINT THE BRIDGING PLATES TO ACCOMODATE THE ENTIRE JOINT LENGTH. SPIKE HOLES WILL BE DRILLED AT 1 FOOT INTERVALS ALONG THE LONGITUDINAL CENTERLINE OF THE PLATES. SECURE BRIDGING PLATE WITH NAILS OR SPIKES. SEAL BUTT JOINTS WITH HOT BINDER AND ALLOW BINDER TO SETUP BEFORE NEXT OPERATION. WHEN ALUMINUM BRIDGING PLATES ARE USED, ONLY THE BINDER IS REQUIRED TO SECURE THE INDIVIDUAL PLATES.

BINDER COAT:

SEAL ALL PREPARED, EXPOSED SURFACES OF THE JOINT WITH BINDER. POUR THE HOT BINDER OVER THE FLOOR AREA OF THE JOINT AND SPREAD TO COAT ALL EXPOSED SURFACES. THE BINDER WILL BE A MINIMUM OF 1/32" THICK ON THE BOTTOM OF THE JOINT CAVITY, WITH POOLS OF GREATER THICKNESS WHERE SURFACE IRREGULARITIES EXIST. THE BINDER APPLICATION TEMPERATURE WILL BE BETWEEN 350 AND 390 DEGREES F. THE BINDER WILL NOT BE ALLOWED TO BE HEATED ABOVE 410 DEGREES F. NOR ALLOWED TO EXCEED 390 DEGREES F. FOR MORE THAN 1 HOUR. A DOUBLE JACKETED OIL MELTER WILL BE USED TO HEAT THE BINDER. THE MELTER WILL BE EQUIPPED WITH A CONTINUOUS AGITATION SYSTEM, TEMPERATURE CONTROLS, AND A CALIBRATED THERMOMETER. ALSO A SYSTEM FOR ACCURATELY MEASURING THE WEIGHTS OF THE BINDER AND THE AGGREGATE WILL BE REQUIRED.

BUILD-UP OF JOINT LAYERS:

AGGREGATE PREPARATION:

HEAT THE AGGREGATE TO A TEMPERATURE OF 275 TO 325 DEGREES F., WITH A SUITABLE ROTATING DRUM WITH ATTACHED HEAT SOURCE OR A HOT COMPRESSED AIR LANCE, TO REMOVE DUST AND MOISTURE.

AGGREGATE PROPORTION AND LAYER THICKNESS:

MIX THE AGGREGATE WITH THE BINDER SUCH THAT THE MINIMUM AGGREGATE CONTENT BY WEIGHT WILL BE 68%. THE HEATED AGGREGATE AND BINDER WILL BE COMBINED IN LAYERS, UNLESS PATENTED INSTALLATION REQUIRES DIFFERENTLY, NOT LESS THAN 3/4 OF AN INCH NOR EXCEEDING 2-1/2 INCHES. THE THICKNESS OF EACH LAYER CAN BE VARIED WITHIN THESE LIMITS, TO ACHIEVE THE REQUIRED JOINT THICKNESS (MIN. 2 INCHES). THE OBJECTIVE IS TO COAT EACH STONE AND FILL THE VOIDS WHILE AVOIDING AN EXCESS OF BINDER. THIS WILL ACHIEVE THE MAXIMUM CONTENT OF STONE CONSISTENT WITH ALL STONES BEING COATED WITH BINDER. RAKE THE MIXTURE TO MIX AND LEVEL.

THE TOP LAYER THICKNESS WILL VARY BETWEEN 1/2 INCH AND ONE (1) INCH. IN PREPARING THE TOP LAYER, THE RATIO OF AGGREGATE TO BINDER WILL BE APPROXIMATELY 6:1 BY WEIGHT. OVERFILL THE TOP LAYER AND COMPACT TO THE LEVEL OF THE ADJACENT SURFACES USING A ROLLER OR VIBRATORY PLATE COMPACTOR. IMMEDIATELY AFTER COMPLETION OF THE COMPACTION, POUR SUFFICIENT BINDER OVER THE JOINT TO FILL THE SURFACE VOIDS AND COAT THE SURFACE STONE. DUST THE FINISHED JOINT WITH A FINE, DRY AGGREGATE TO PREVENT TACKINESS.

MAINTENANCE OF TRAFFIC:

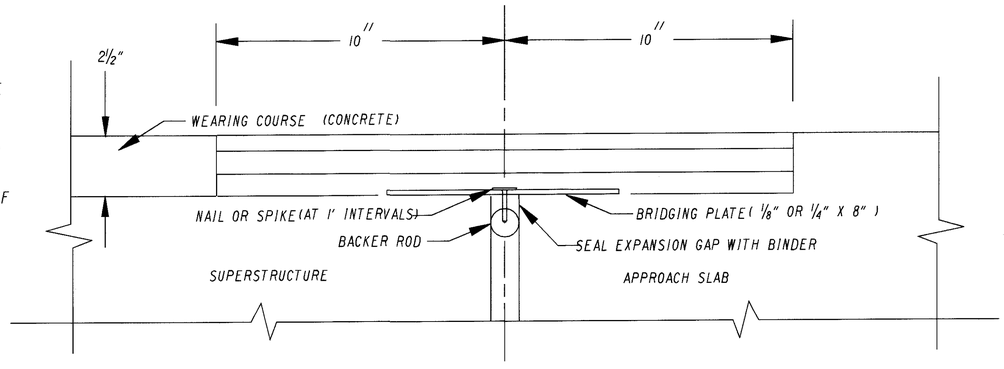
IF NECESSARY TO FACILITATE TRAFFIC MAINTENANCE, THE JOINT WILL BE INSTALLED IN TWO (2) HALF-WIDTH PHASES. DURING PHASE 1 APPROXIMATELY HALF OF THE TOTAL JOINT WILL BE INSTALLED. DURING PHASE 2, A MINIMUM OF TWO (2) INCHES OF THE PHASE 1 JOINT WILL BE REMOVED, AT OR NEAR THE CENTERLINE, WITH THE REMAINDER OF THE JOINT INSTALLED. IN ALL CASES, OPERATIONS WILL BE SCHEDULED SO THAT ALL LANES CAN BE OPEN TO TRAFFIC DURING ALL NON-WORKING HOURS.

TESTING:

CERTIFICATION WILL BE SUPPLIED FOR EACH PROJECT SHOWING BINDER COMPLIANCE WITH REQUIRED PROPERTIES. A ONE QUART SAMPLE OF BINDER WILL BE RETRIEVED FROM EACH BRIDGE FOR FURTHER TESTING BY THE O.D.O.T TESTING LABORATORY.

PAYMENT:

PAYMENT FOR ALL THE ABOVE WILL BE AT THE UNIT PRICE BID PER LINEAR FOOT OF SEALED JOINT IN PLACE FOR ITEM SPECIAL 516 31300, POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM (2½ INCHES THICK). THIS WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.



CONCRETE SLAB JOINT

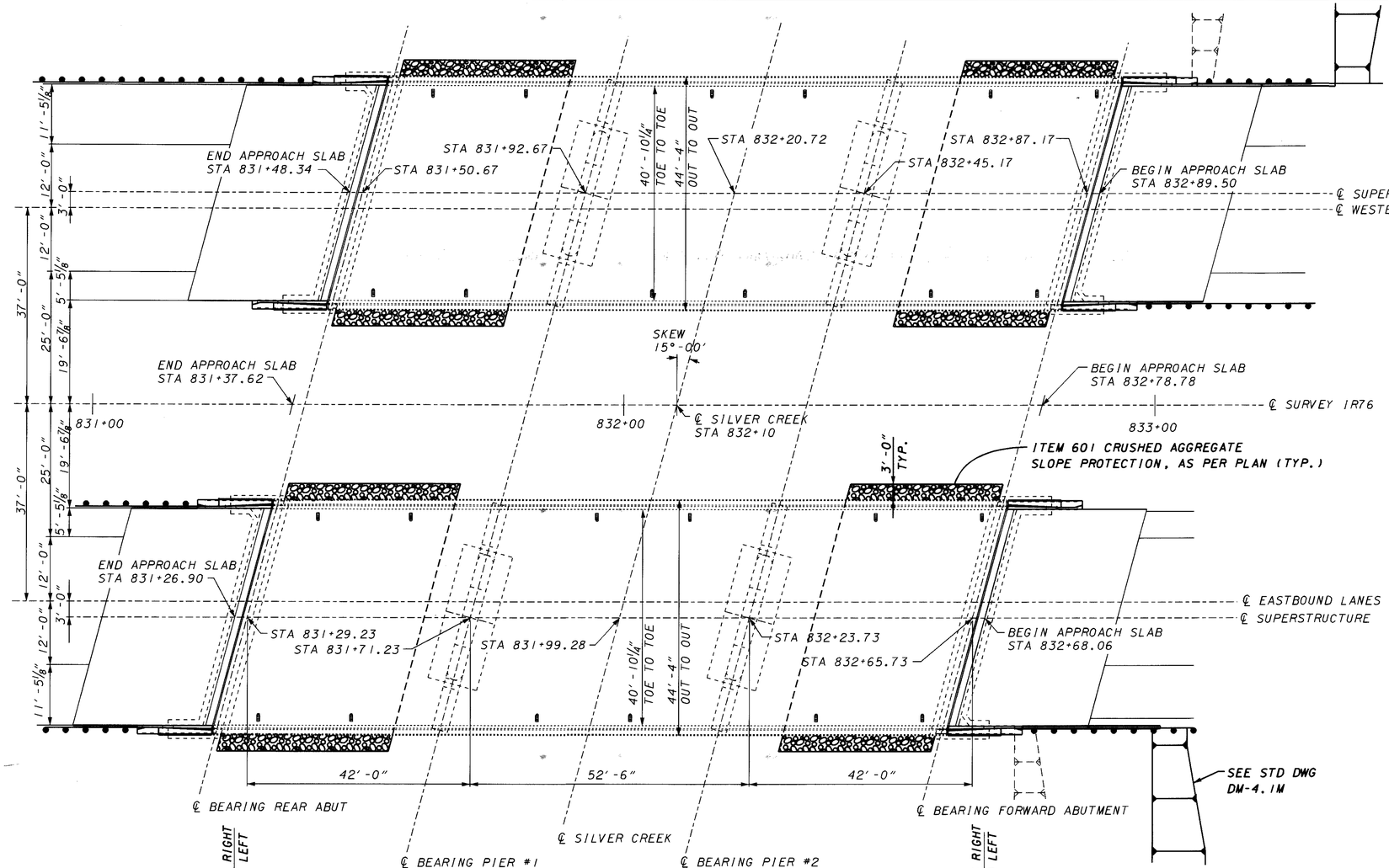
CALCULATED | CHECKED CET
DATE REVISED 10-28-96
DESIGNED MAM | DRAWN MAM

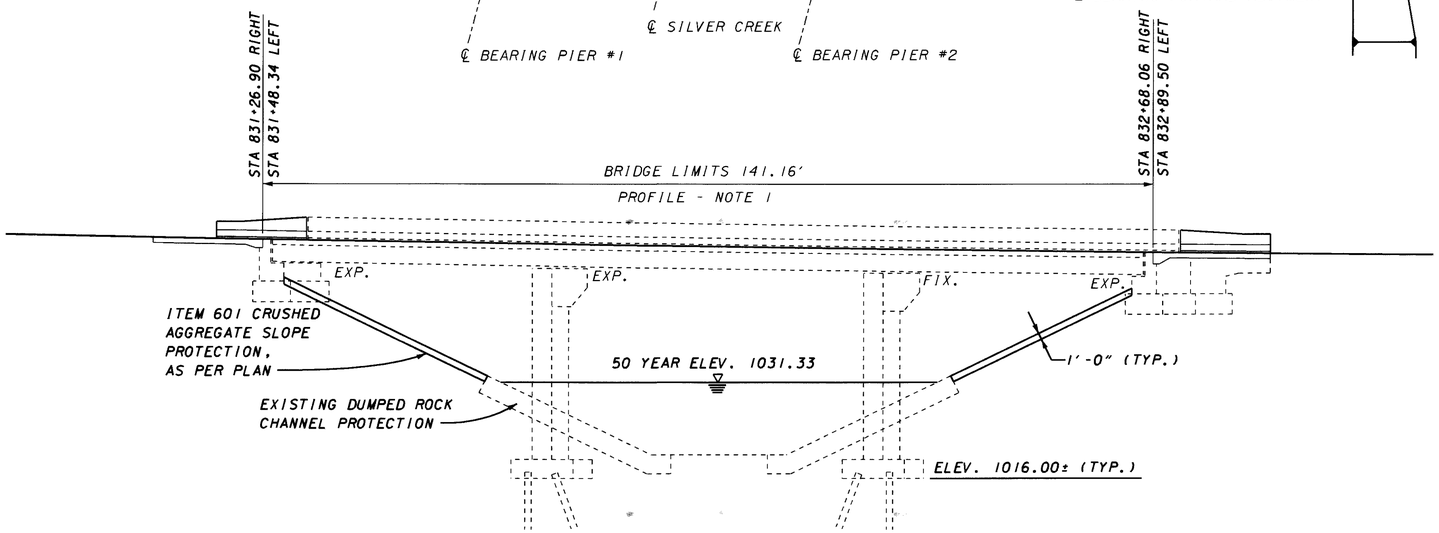
POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM

POR-76-13.55

3/42

61/100





SECTION THROUGH ℄

(RIGHT STRUCTURE SHOWN)

BENCH MARK

T.B.M. - TOP OF CONCRETE MONUMENT
STA 847+06.30 ℄ I-76
ELEV. 1057.70

NOTES:

1. THE NET PARALLEL INCREASE IN HEIGHT MEASURED AT THE END DAMS FROM THE PROPOSED 2¾" OVERLAY IS 1½". THIS NET INCREASE HAS BEEN CALCULATED BY ACCOUNTING FOR ALL PREVIOUSLY PLACED OVERLAYS (IF ANY) AND MAY BE ASSUMED TO PROVIDE A PARALLEL SURFACE WITHOUT ELEVATION CONTROL ONLY AT THE END DAMS.
2. SEE SHEETS 32/42 TO 35/42 FOR ORIGINAL CONSTRUCTION INFORMATION.

PROPOSED WORK

BRIDGE NO. POR-76-1578 LEFT & RIGHT
- REMOVE TOP 1¼" OF EXISTING LATEX MODIFIED CONCRETE.
- REMOVE OVERALL DECK THICKNESS OF 1" BY HYDRODEMOLITION. (TOTAL REMOVAL 2¼")
- QUANTITIES FOR VARIABLE DEPTH REPAIRS OF SUPERSTRUCTURE.
- OVERLAY BRIDGE DECK WITH 2¾" SUPERPLASTICIZED DENSE CONCRETE.
- REMOVE AND REPLACE POROUS BACKFILL WITH FILTER FABRIC.
- MODIFY EXPANSION JOINTS WITH STRIP SEALS.
- REPAIR EXISTING ABUTMENTS WITH ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.
- PAINT EXISTING STRUCTURAL STEEL WITH SYSTEM OZEU.
- RETROFIT EXISTING WINGWALLS WITH 40" TRANSITION WINGWALL PARAPETS.
- SEALING CONCRETE SURFACES (EPOXY) AT PARAPETS, BACKWALLS (1 FACE) AND WINGWALLS.
- REPLACE EXISTING BACKWALLS TO BEAM SEAT.
- REPAIR EXISTING SLOPE PROTECTION WITH ITEM 601 AGGREGATE SLOPE PROTECTION, AS PER PLAN.
- REPLACE BOTH APPROACH SLABS WITH REINFORCED CONCRETE APPROACH SLABS (T=15").

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.
SPANS: 42' - 52'-6" - 42' c/c BEARINGS
ROADWAY: 40'-10¼" toe/toe PARAPETS
SKEW: 15°00'00" LEFT FORWARD
LOADING: CF 2000 (57)
WEARING SURFACE: LATEX MODIFIED CONCRETE
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
STRUCTURAL FILE NUMBER: 6702791 LEFT
6702821 RIGHT

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00

CHECKED | REVISED | STRUCTURE FILE NUMBER 6702791 LEFT 6702821 RIGHT

GENERAL PLAN AND ELEVATION

BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

POR-76-13.55

4/42

62/100

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
				POR-76-1578 LEFT (SFN-6702791)					
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/42
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING	LUMP				
SPECIAL	51267504	355	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY) *		355			
SPECIAL	51267510	371	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	109		262		
516	11211	87.67	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN *			87.67		14/42, 15/42
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		
516	44001	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), (7"x11"x1¼")	12				1/42, 16/42
				BEARING PAD, 8"x1'-0½"x1¼" LOAD PLATE), AS PER PLAN *					
518	12901	12	EACH	SCUPPER LENGTHENING, AS PER PLAN			12		9/42
518	21201	22.7	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	22.7				1/42
SPECIAL	53000600	250	SQ FT	STRUCTURE, MISC.: CONCRETE BONDING AGENT	237		13		1/42
601	20001	75	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN				75	2/42
842	45701	33.5	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	33.5				2/42
843	50000	25	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	25				
848	10200	633	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2¾" THICK)			633		
848	20000	633	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			633		
848	30200	17	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			17		
848	50000	21	SQ YD	HAND CHIPPING			21		
848	50100	LUMP		TEST SLAB				LUMP	
848	50200	1	CU YD	FULL-DEPTH REPAIR			1		
848	50320	633	SQ YD	EXISTING CONCRETE OVERLAY REMOVED			633		
848	50340	300	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			300		
863	10201	1200	POUND	STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION, AS PER PLAN *			1200		2/42
885	10000	LUMP		SURFACE PREPARATION OF EXISTING STEEL WITH WARRANTY			LUMP		
885	11000	LUMP		FIELD PAINTING OF EXISTING STEEL, PRIME COAT, WITH WARRANTY			LUMP		
885	12000	LUMP		FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, WITH WARRANTY			LUMP		
885	13000	LUMP		FIELD PAINTING OF EXISTING STEEL, FINISH COAT, WITH WARRANTY			LUMP		

* - SEE PROPOSAL NOTE

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	6702791

BRIDGE ESTIMATED QUANTITIES
BRIDGE NO. POR-76-1578 LEFT
OVER SILVER CREEK

POR-76-13.55

5/42

63/100

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
				POR-76-1578 RIGHT (SFN-6702821)					
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/42
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING	LUMP				
SPECIAL	51267504	359	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY) *		359			
SPECIAL	51267510	371	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	68		262	41	
516	11211	87.67	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN *			87.67		14/42, 15/42
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		
516	44001	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), (7"x11"x1¼"	12				1/42, 16/42
				BEARING PAD, 8"x1'-0½"x1¼" LOAD PLATE), AS PER PLAN *					
518	12901	12	EACH	SCUPPER LENGTHENING, AS PER PLAN			12		9/42
518	21201	22.7	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	22.7				1/42
SPECIAL	53000600	250	SQ FT	STRUCTURE, MISC.: CONCRETE BONDING AGENT	237		13		1/42
601	20001	75	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN				75	2/42
842	45701	33.5	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	33.5				2/42
843	50000	25	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	25				
848	10200	633	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2¾" THICK)			633		
848	20000	633	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			633		
848	30200	17	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			17		
848	50000	63	SQ YD	HAND CHIPPING			633		
848	50100	LUMP		TEST SLAB				LUMP	
848	50200	1	CU YD	FULL-DEPTH REPAIR			1		
848	50320	633	SQ YD	EXISTING CONCRETE OVERLAY REMOVED			633		
848	50340	300	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			300		
863	10201	1200	POUND	STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION, AS PER PLAN *			1200		2/42
885	10000	LUMP		SURFACE PREPARATION OF EXISTING STEEL WITH WARRANTY			LUMP		
885	11000	LUMP		FIELD PAINTING OF EXISTING STEEL, PRIME COAT, WITH WARRANTY			LUMP		
885	12000	LUMP		FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, WITH WARRANTY			LUMP		
885	13000	LUMP		FIELD PAINTING OF EXISTING STEEL, FINISH COAT, WITH WARRANTY			LUMP		

* - SEE PROPOSAL NOTE

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

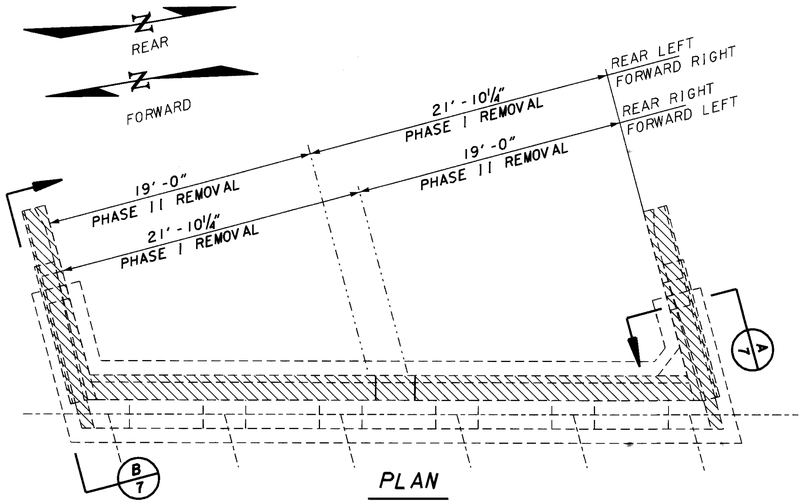
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	6702821

BRIDGE ESTIMATED QUANTITIES
BRIDGE NO. POR-76-1578 RIGHT
OVER SILVER CREEK

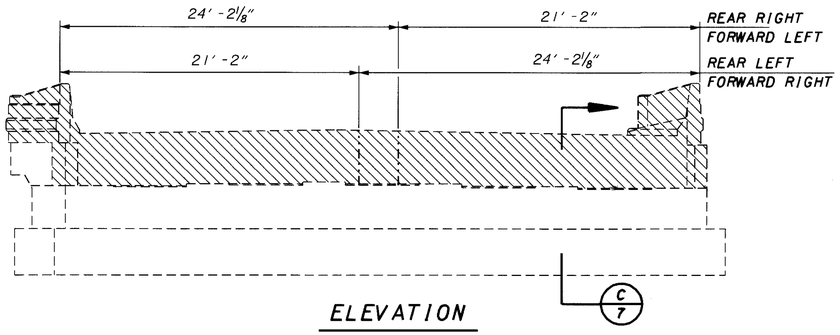
POR-76-13.55

6/42

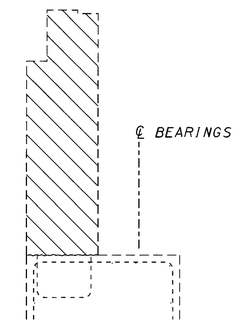
64/100



PLAN

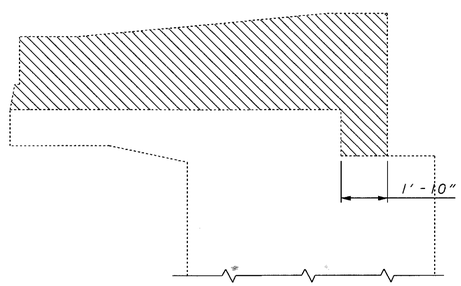


ELEVATION



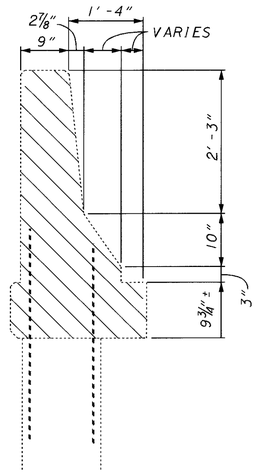
C/7 SECTION

SEE NOTES 1 AND 2



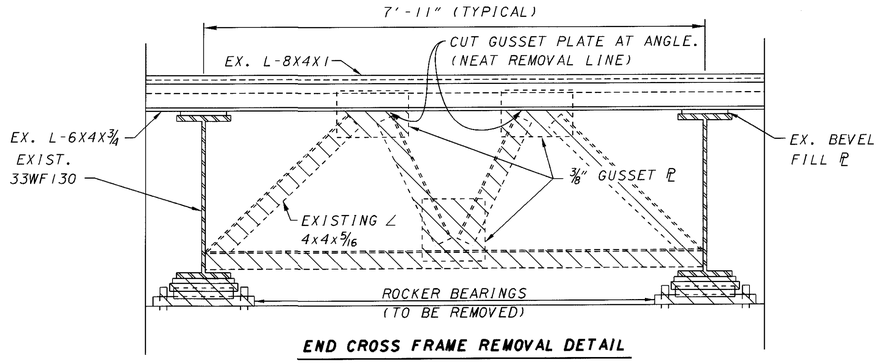
B/7 ELEVATION

SEE NOTES 1 AND 2



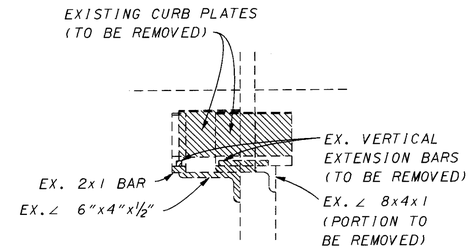
A/7 SECTION

SEE NOTES 1 AND 2



END CROSS FRAME REMOVAL DETAIL

MEMBERS TO BE REPLACED ARE SHOWN ON SHEET 17/42. PAYMENT IS INCLUDED WITH ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.



END DAM REMOVAL DETAIL

THE EXISTING VERTICAL EXTENSION BARS SHALL BE REMOVED AND THE REMAINING 8x4x1 ANGLE TRIMMED AND GROUND FLUSH TO PROVIDE A SMOOTH SURFACE FOR THE INSTALLATION OF THE PROPOSED VERTICAL EXTRUSIONS. PAYMENT FOR THIS WORK SHALL BE MADE AT THE PRICE BID LUMP FOR ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 202 - PORTION OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

NOTES:

1. ALL REINFORCING STEEL IS NOT SHOWN.
2. CUT EXISTING STEEL AT REMOVAL LINE AT BACKWALL AND WINGWALLS.
3. THE EXISTING VERTICAL EXTENSION BARS SHALL BE REMOVED AND THE CURB PLATES SHALL BE REMOVED. THE REMAINING 8x4x1 ANGLE SHALL BE TRIMMED AND GROUND FLUSH TO PROVIDE A SMOOTH SURFACE FOR THE INSTALLATION OF THE PROPOSED VERTICAL EXTRUSIONS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

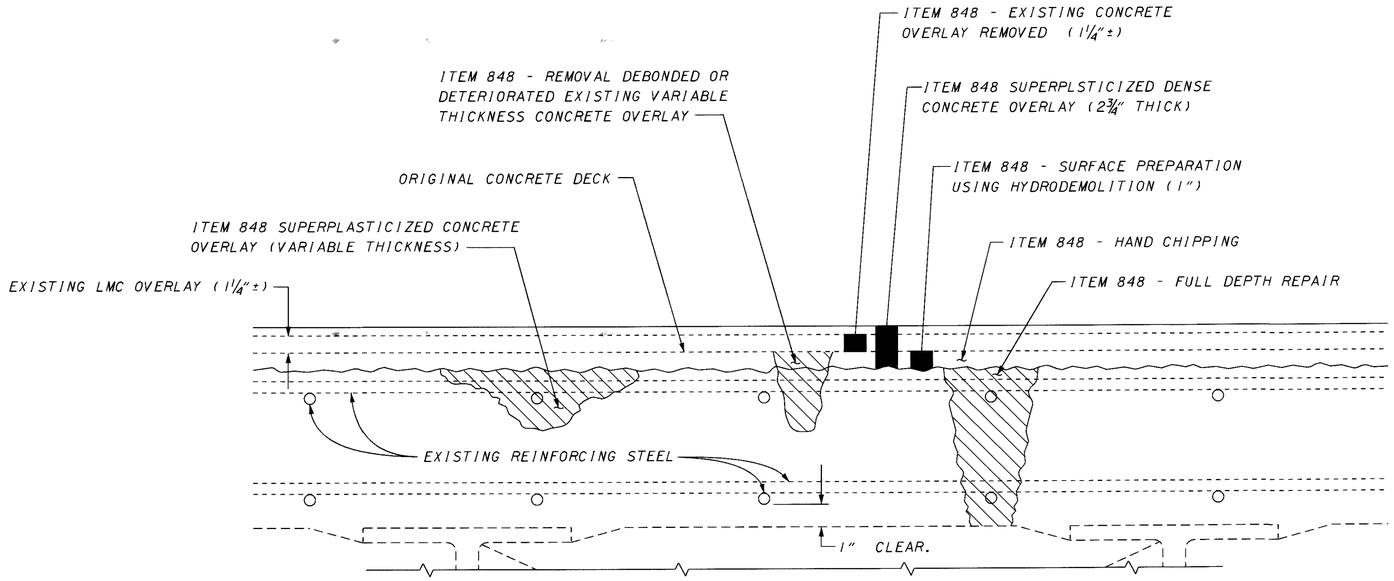
DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00
CHECKED | REVISED | STRUCTURE FILE NUMBER 6702791 LEFT 6702821 RIGHT

REMOVAL DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

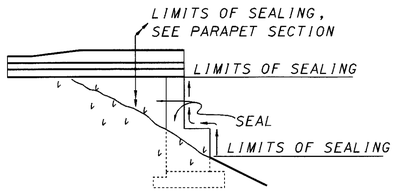
POR-76-13.55

7/42

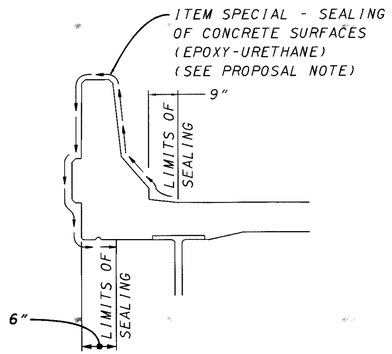
65/100



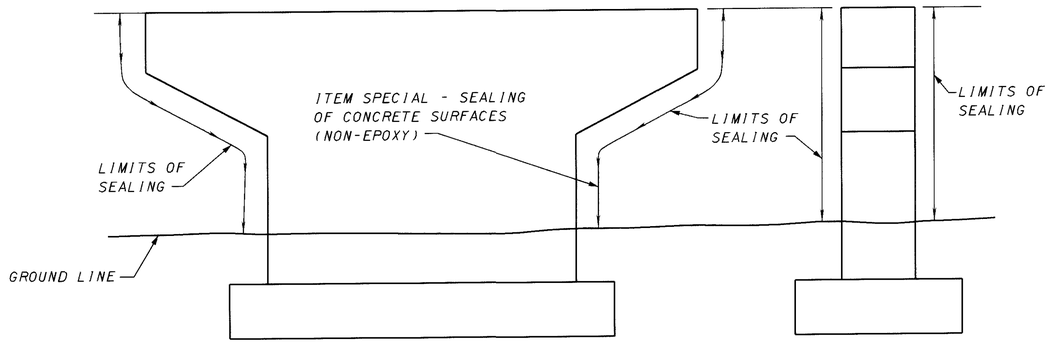
SUPERPLASTCIZED DENSE CONCRETE OVERLAY



WINGWALL ELEVATION



PARAPET SECTION



PIER ELEVATIONS

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

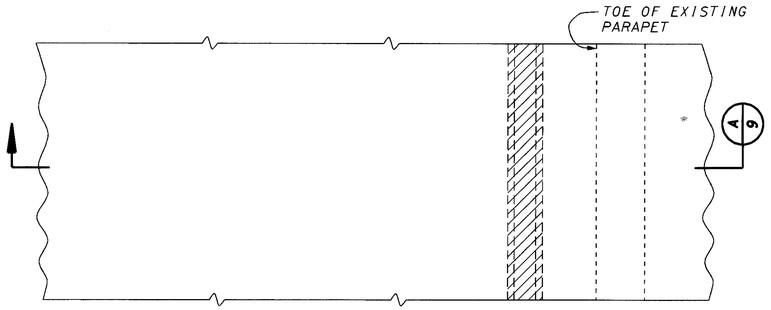
DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00
CHECKED | REVISED | STRUCTURE FILE NUMBER 6702971 LEFT 6702982 RIGHT

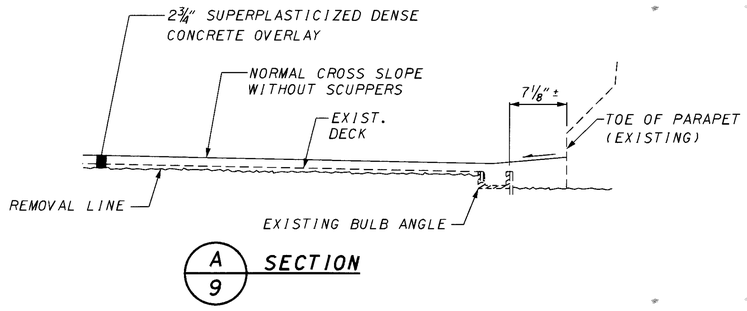
SUPERSTRUCTURE DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

POR-76-13.55

8/42

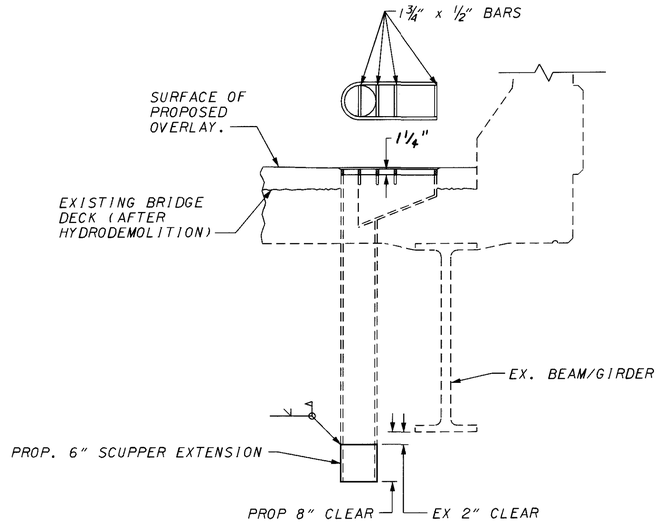
66/100



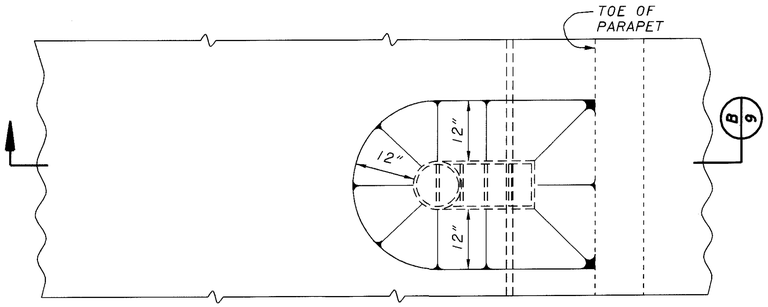


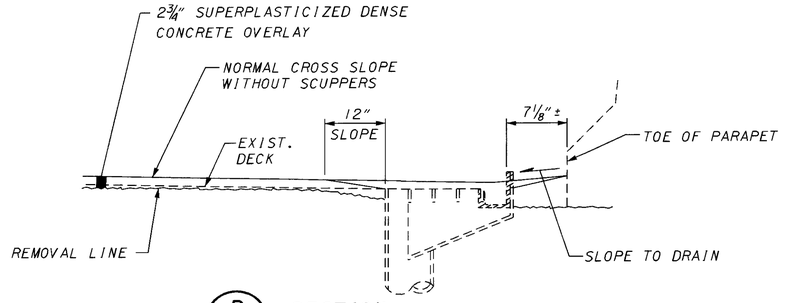
A/9 SECTION

IF ANY OF THE EXISTING BULB ANGLE IS ENCOUNTERED DURING THE DECK REMOVAL OPERATIONS, THE BULB ANGLE SHALL BE REMOVED. THE COST OF REMOVAL SHALL BE INCIDENTAL TO AND INCLUDED IN THE LUMP SUM PRICE OF ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.



SCUPPER EXTENSION DETAIL





B/9 SECTION

DETAIL AT SCUPPERS

PRIOR TO PLACEMENT OF THE SUPERPLASTICIZED DENSE CONCRETE OVERLAY THE CONTRACTOR SHALL ADD BY WELDING, THE VERTICAL EXTENSIONS. THE EXISTING SURFACE WHICH WILL TAKE THE WELD SHALL BE SANDBLASTED TO AN ASTM SA-1 FINISH. THE EXPOSED SURFACES SHALL BE PAINTED WITH ITEM 885. ALL EXISTING SCUPPERS ARE TO BE EXTENDED TO A MINIMUM OF 8" BELOW THE EXISTING BEAM FLANGE. ALL SCUPPERS ARE TO BE INSPECTED TO INSURE THAT THE EXISTING SCUPPER OUTLET PIPE IS NOT CORRODED OR UNABLE TO ADHERE TO A WELD. IF ANY SCUPPER OUTLET PIPE SECTION IS DEEMED UNACCEPTABLE BY THE ENGINEER, IT SHALL BE CUT DOWN TO THE SECTION THAT WILL ADHERE A WELD. ALL COSTS, INCLUDING INCIDENTALS AND REMOVAL OF BAD SECTIONS SHALL BE INCLUDED IN THE UNIT BID COST OF ITEM 518 SCUPPER LENGTHENING, AS PER PLAN.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

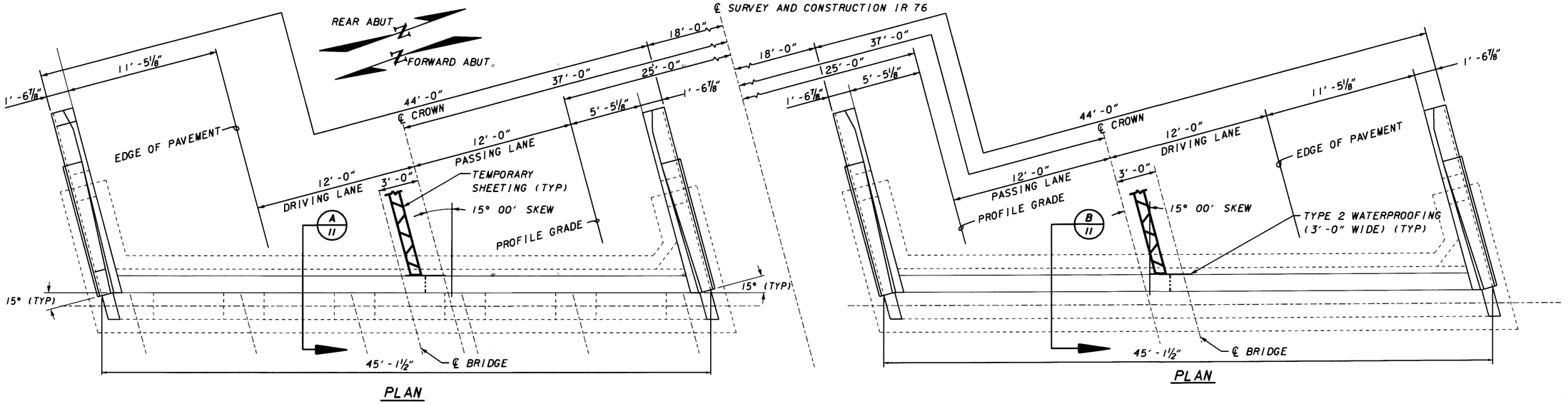
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	6702791 LEFT, 6702821 RIGHT

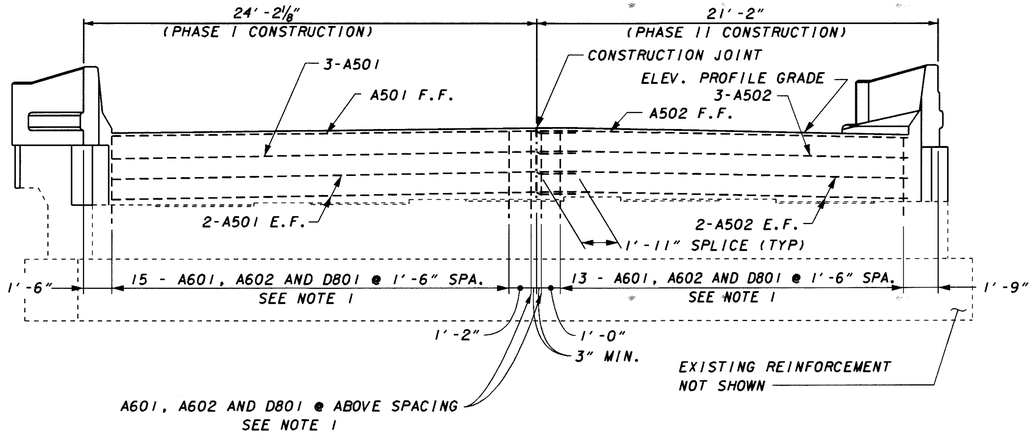
SUPERSTRUCTURE DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

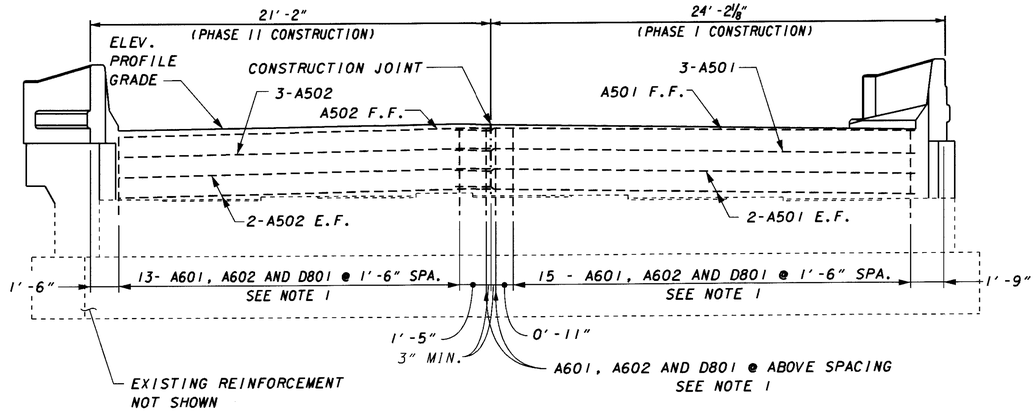
POR-76-13.55

9/42

67/100







NOTES:

1. 1'-0" DOWEL HOLES @ ABOVE SPACING USING NON-SHRINK NON-METALIC GROUT
2. THE EXISTING BEAM SEAT AND ABUTMENT TO REMAIN SHALL BE SOUNDED BY THE ENGINEER/SUPERVISOR. ANY AREAS IN NEED OF REPAIR SHALL BE MARKED FOR REPAIRS AND PAID FOR USING ITEM 843 PATCHING CONCRETE STRUCTURES USING TROWELABLE MORTAR.
3. ELEVATION POINT IS GIVEN AT TOP OF CONCRETE AT END DAM ARMOR.
4. SEE SHEET 11742 FOR SECTION DETAILS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

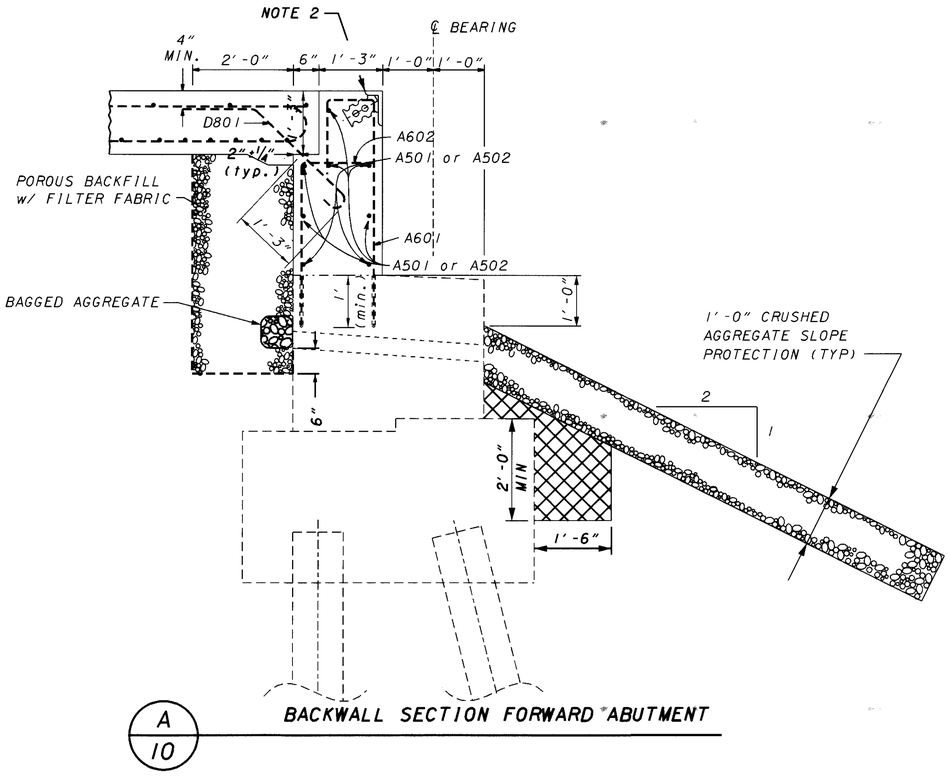
DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00
CHECKED | REVISED | STRUCTURE FILE NUMBER 6702791 LEFT 6702821 RIGHT

ABUTMENT DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

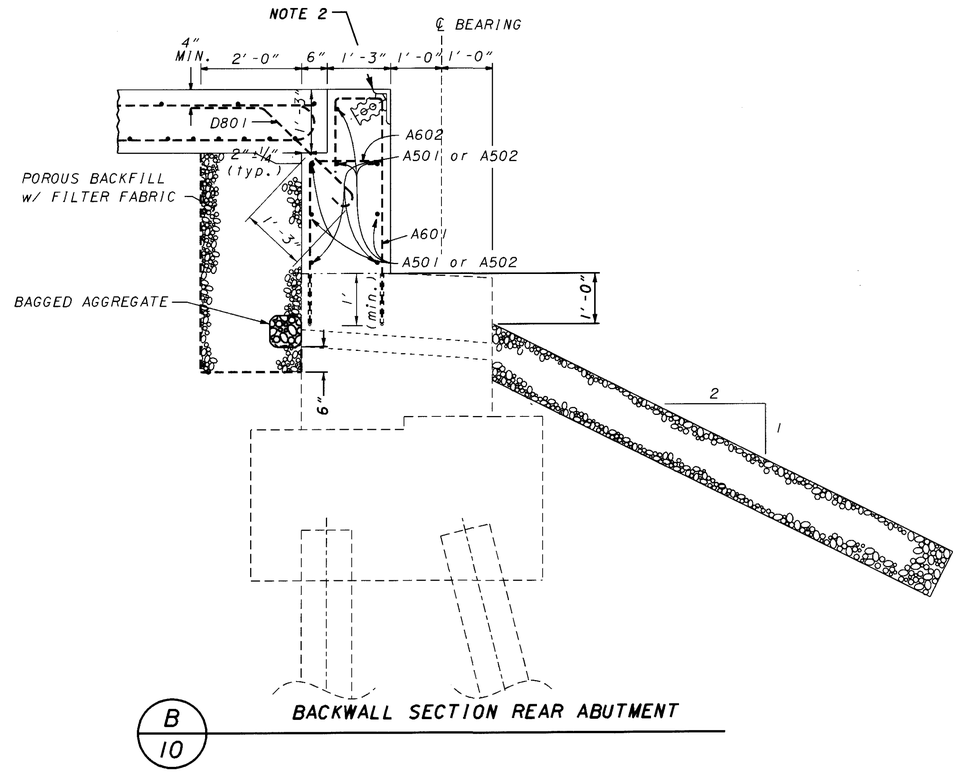
POR-76-13.55

10/42

68/100



A/10 BACKWALL SECTION FORWARD ABUTMENT



B/10 BACKWALL SECTION REAR ABUTMENT

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

NOTES:

1. ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN:

   THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO REPAIR THE EXISTING SLOPE PROTECTION AT THE LOCATIONS SHOWN IN THE PLANS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL COSTS TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD FOR ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

2. ELEVATION POINT IS GIVEN AT TOP OF CONCRETE AT END DAM ARMOR.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

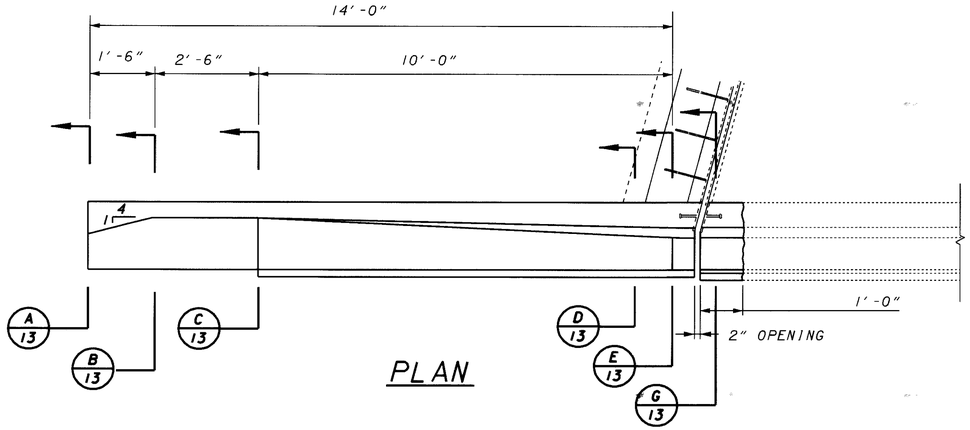
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6702791 LEFT	
		6702821 RIGHT	

ABUTMENT DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

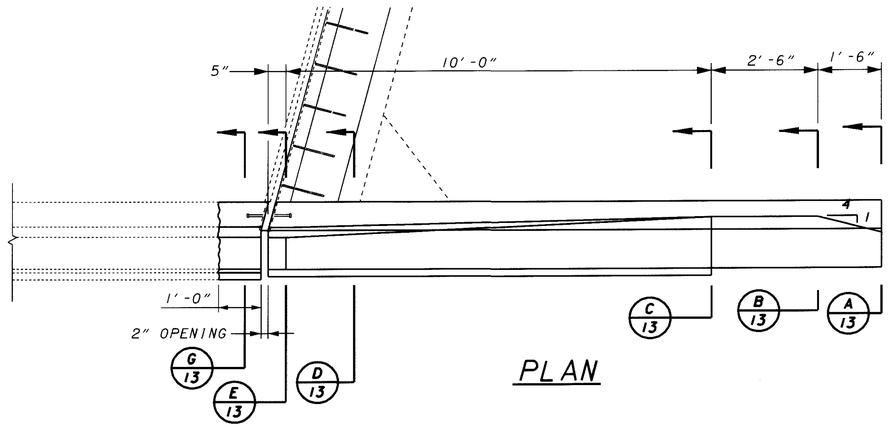
POR-76-13.55

11/42

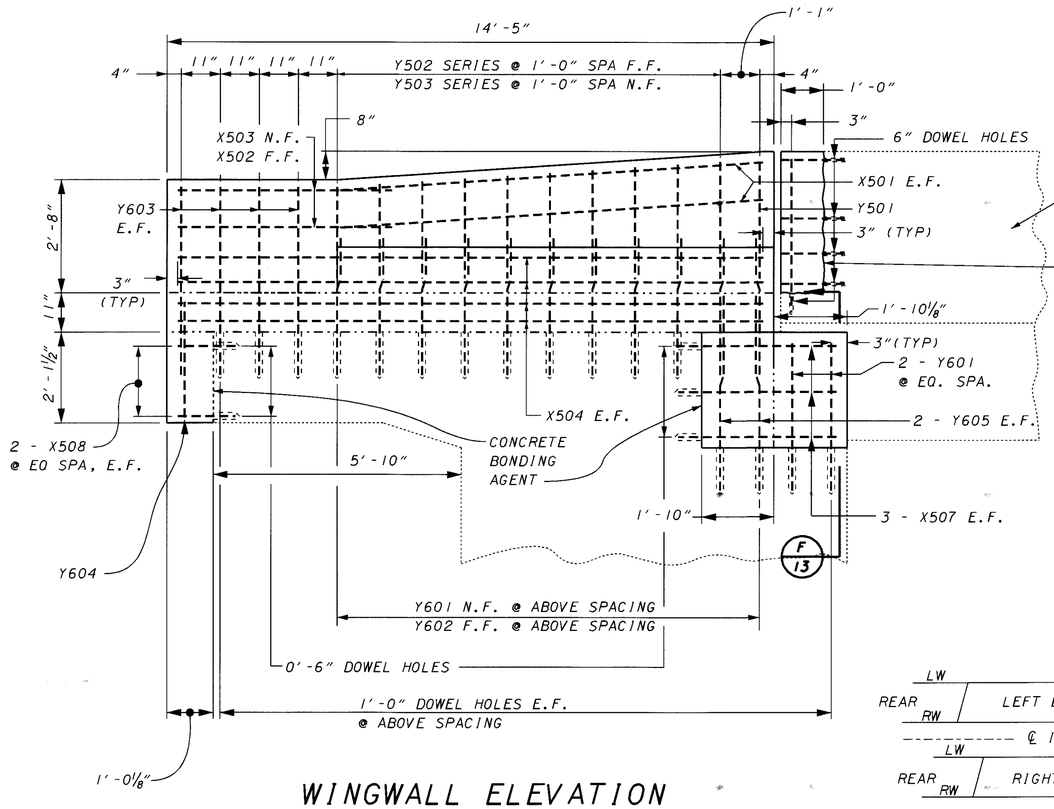
69/100



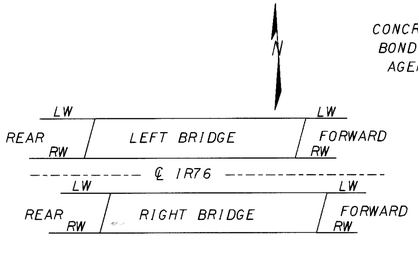
PLAN



PLAN



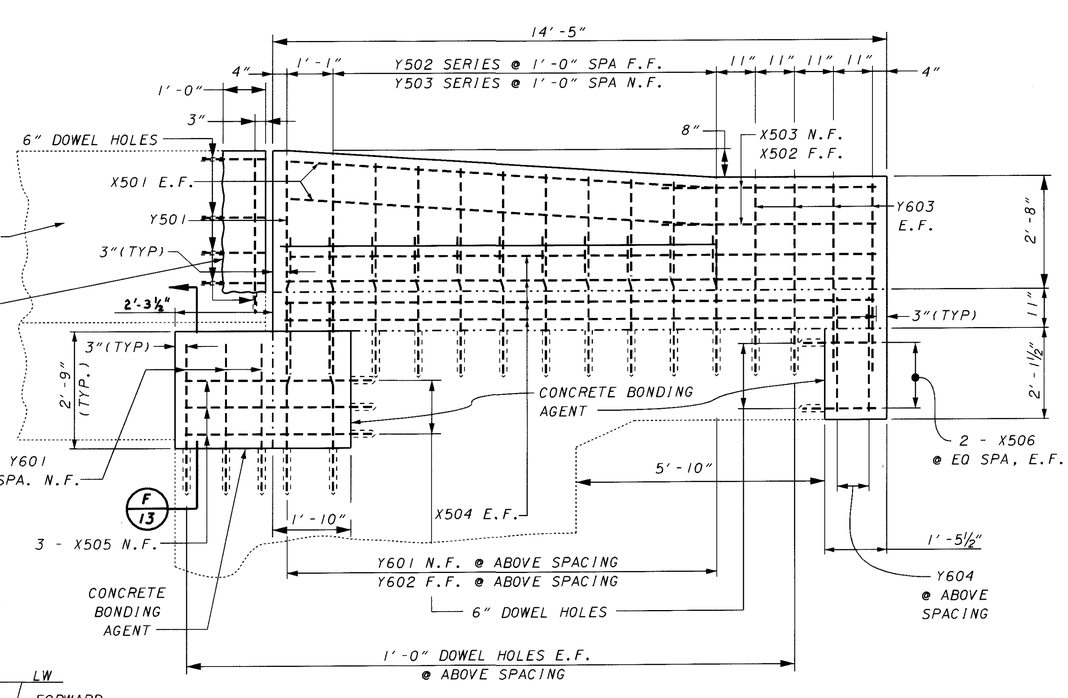
WINGWALL ELEVATION



LEGEND:

RW = RIGHT WINGWALL
LW = LEFT WINGWALL
TYP. = TYPICAL
N.S. = NEAR SIDE
F.S. = FAR SIDE
E.F. = EACH FACE

	REAR	FORWARD
LEFT BRIDGE	RW	LW
RIGHT BRIDGE	RW	LW



WINGWALL ELEVATION

	REAR	FORWARD
LEFT BRIDGE	LW	RW
RIGHT BRIDGE	LW	RW

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

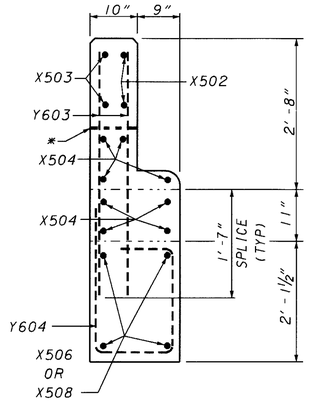
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6702791 LEFT 6702821 RIGHT	

ABUTMENT DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

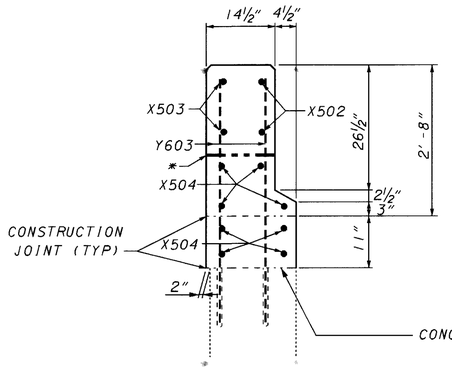
POR-76-13.55

12/42

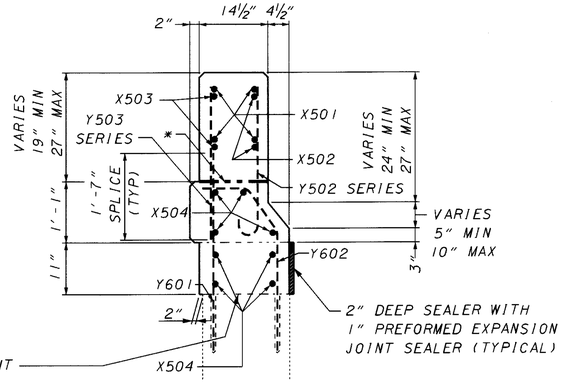
70/100



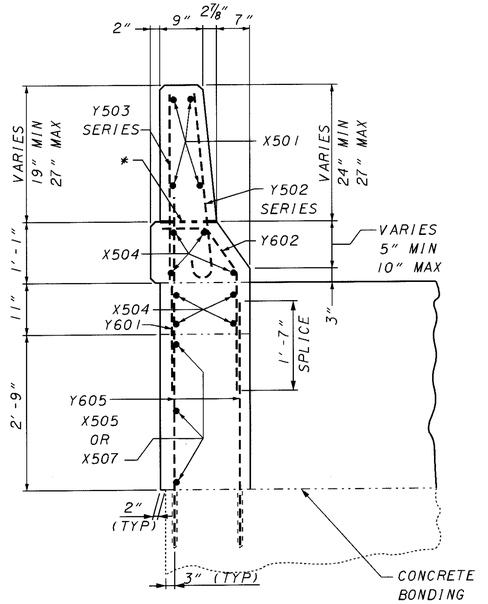
SECTION A-A



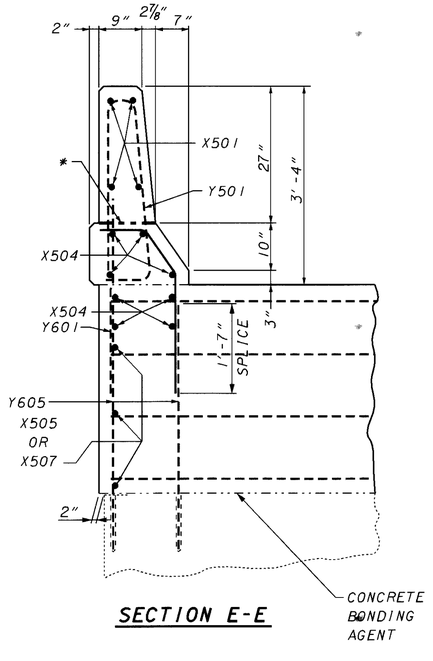
SECTION B-B



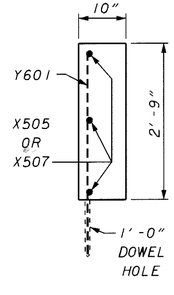
SECTION C-C



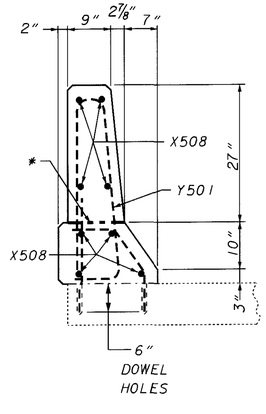
SECTION D-D



SECTION E-E



SECTION F-F



SECTION G-G

* - OPTIONAL CONSTRUCTION JOINT

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

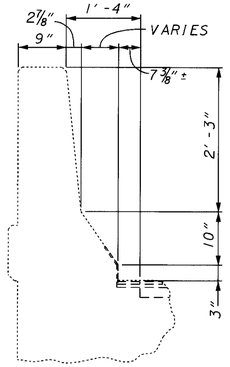
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6702791 LEFT 6702821 RIGHT	

ABUTMENT DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

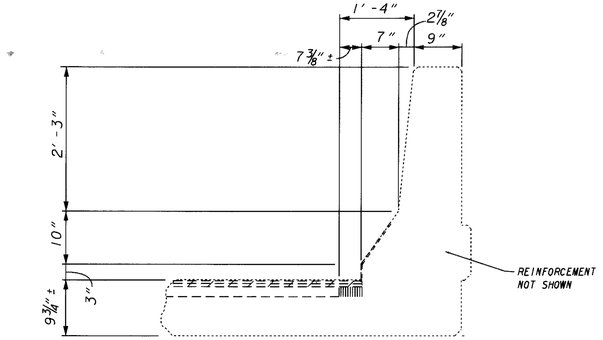
POR-76-13.55

13/42

71/100

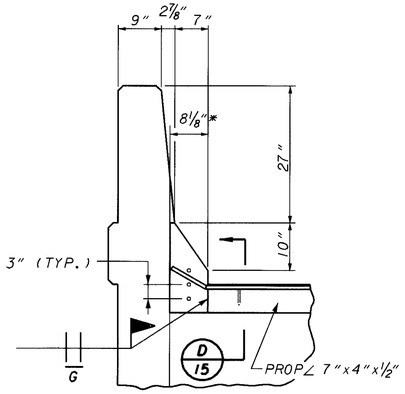


EXISTING SECTION A-A



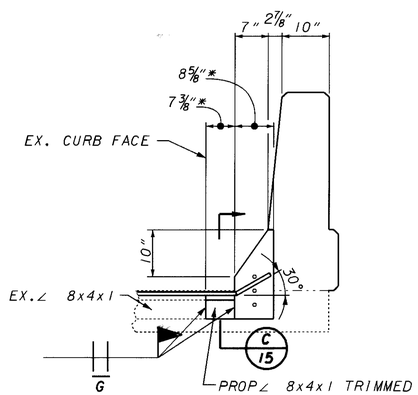
EXISTING SECTION B-B

THIS AREA OF THE EXISTING CONCRETE DECK SHALL BE REMOVED TO ALLOW FOR THE PLACEMENT OF THE STRIP SEAL ARMOR AND PLATE. ALL COSTS, LABOR AND INCIDENTALS INCLUDING THE CLASS S CONCRETE, AS PER PLAN SHALL BE INCLUDED IN THE UNIT BID PRICE OF ITEM 516 STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.



PROPOSED SECTION A1-A1

(SEAL NOT SHOWN)
* - MEASURED ALONG SKEW

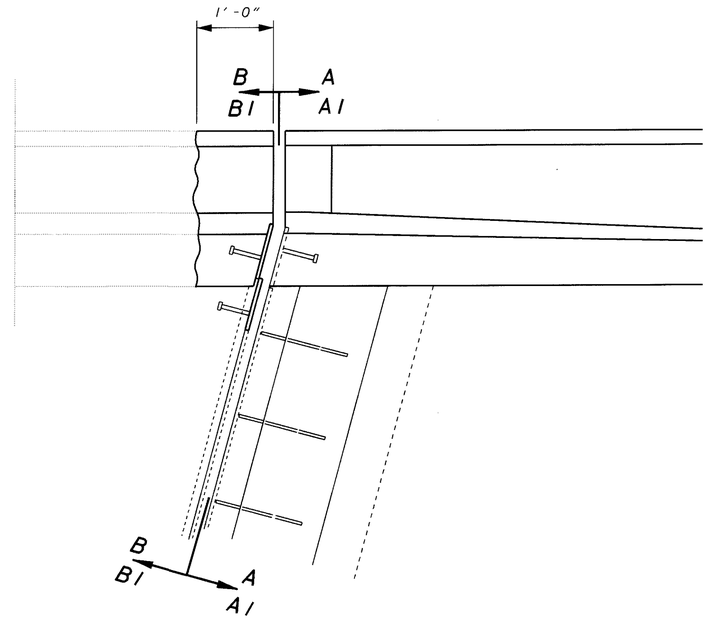


PROPOSED SECTION B1-B1

(SEAL NOT SHOWN)
* - MEASURED ALONG SKEW

THE FOLLOWING QUANTITIES FOR ITEM 516 STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN HAVE BEEN CARRIED TO THE ESTIMATED QUANTITIES:

87.67 LIN. FT. BR. No. POR-76-1578 LEFT
87.67 LIN. FT. BR. No. POR-76-1578 RIGHT



NOTES:

1. ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

   THIS ITEM SHALL INCLUDE ALL WORK REQUIRED TO REMOVE THE EXISTING VERTICAL EXTENSIONS, WHICH INCLUDES REMOVAL OF THE EXISTING JOINT MATERIAL, STEEL BARS AND INCIDENTALS. IT SHALL ALSO INCLUDE REMOVAL OF THE EXISTING WELDS. REMOVAL SHALL BE PER ITEM 202.

   THIS ITEM SHALL ALSO INCLUDE ALL WORK REQUIRED TO TRIM EXISTING STEEL WHERE NECESSARY, REMOVE EXISTING JOINT MATERIAL AND STEEL PLATES OR BARS, PROVIDE NEW STEEL PLATES AND EXTRUSIONS, CLASS S CONCRETE, REINFORCING, DOWELS, AND CONTINUOUS NEOPRENE STRIP SEAL, AS INDICATED IN THE PLANS. THIS ITEM SHALL CONFORM TO ITEM 516 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND STANDARD DRAWING EXJ-4-87 EXEPT AS NOTED HEREIN. THE STEEL EXTRUSIONS SHALL BE LOW PROFILE EXTRUSIONS 1 1/2" THICK (D.S. BROWN CO. OR WATSON-BOWMAN & ACME OR APPROVED EQUAL.)

   THE STEEL EXTRUSION SHALL BE PROVIDED IN MAXIMUM LENGTH POSSIBLE TO ALLOW FOR TRAFFIC MAINTENANCE AND SHALL BE WELDED TOGETHER TO FORM A WATERTIGHT JOINT. THE NEOPRENE STRIP SEAL SHALL BE ONE PIECE. NO FIELD VULCANIZATION SHALL BE ALLOWED. THE SEAL SHALL NOT BE INSTALLED UNTILL ALL OTHER WORK IS COMPLETE UPON THE STRUCTURE.

   THE PROPOSED STEEL EXTRUSIONS, CURB PLATES AND DECK PLATES SHALL BE METALIZED AS SPECIFIED IN STANDARD DRAWING EXJ-4-87. AREAS THAT ARE DAMAGED BY WELDING SHALL BE REPAIRED WITH ZINC RICH PAINT.

   THE APPROVAL OF AN ALTERNATIVE SEAL DESIGN AND THE ISSUANCE OF REVISED PROJECT PLANS SHALL BE BASED ON THE UNDERSTANDING THAT SUCH PROJECT MODIFICATIONS WILL BE DONE WITHOUT COST TO THE STATE.

   PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN, AND SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED HEREIN.

2. REINFORCEMENT IS NOT SHOWN.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

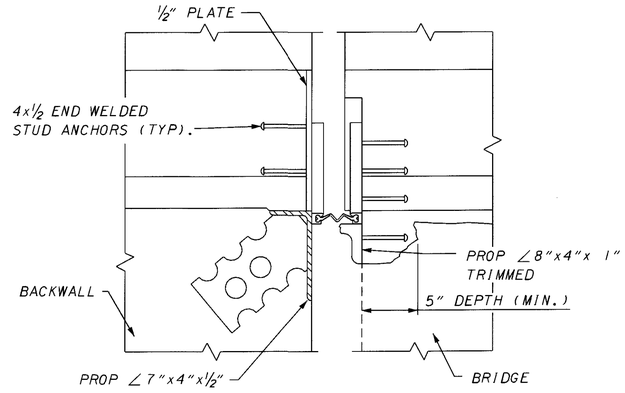
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRIP SEAL DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

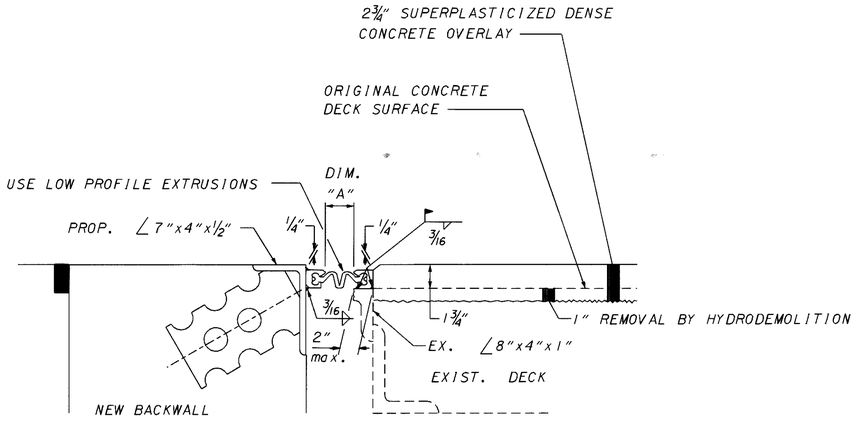
POR-76-13.55

14/42

72/100



D / 14 PROPOSED SECTION



C / 14 PROPOSED SECTION

DIMENSION "A" TABLE			
Br. No. 1578 LEFT		Br. No. 1578 RIGHT	
TEMPERATURE	DIMENSION "A"	TEMPERATURE	DIMENSION "A"
30°F	1 5/8"	30°F	1 5/8"
40°F	1 5/8"	40°F	1 5/8"
50°F	1½"	50°F	1½"
60°F	1½"	60°F	1½"
70°F	1 3/8"	70°F	1 3/8"
80°F	1 3/8"	80°F	1 3/8"
90°F	1 3/8"	90°F	1 3/8"

SEAL MOVEMENT RATINGS SHALL BE AS FOLLOWS:
Br. No. 1578 LEFT AND RIGHT - NOMINAL 3" STRIP SEAL GLAND.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	

STRIP SEAL DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

POR-76-13.55

15/42

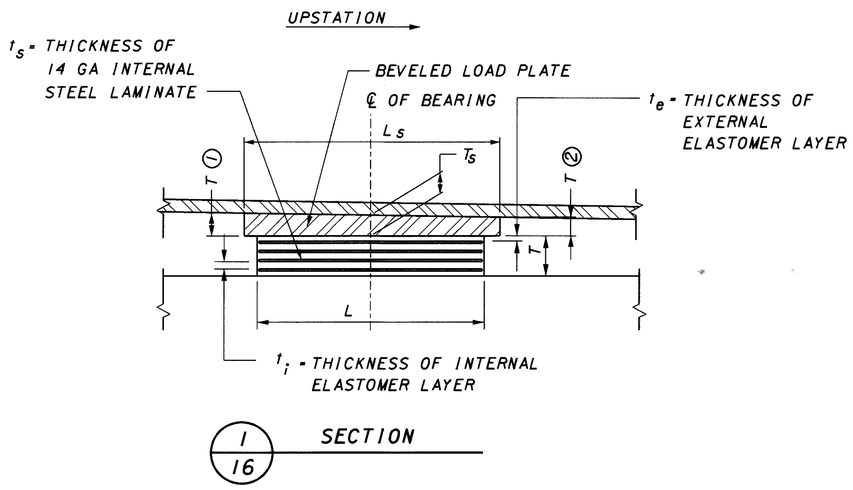
73/100

BEARING PAD DATA

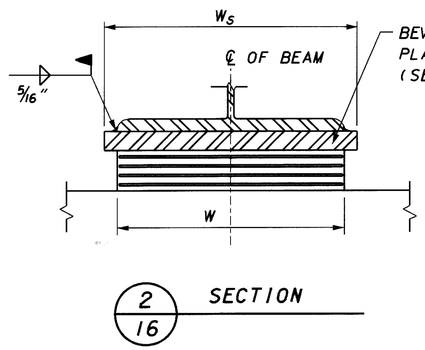
MARK	TYPE	OVERALL DIMENSIONS			LAMINATE DIMENSIONS AND NUMBER						DESIGN LOADS (KIPS)			NO. REQ'D	DURO-METER	STEEL LOAD PLATE					REMARKS
		LENGTH-L	WIDTH-W	THICKNESS-T	NO.	t_e	NO.	t_i	NO.	t_s	DEAD LOAD	LIVE LOAD	TOTAL LOAD			L_s	W_s	T_s	T (1)	T (2)	
REAR & FWD ABUT	EXP.	7"	11"	1¼"	2	0.15"	3	0.22"	4	0.0747"	27.3	42.6	69.9	12	50	8"	1'-0½"	1¼"	1⅜"	1⅛"	

NOTES:

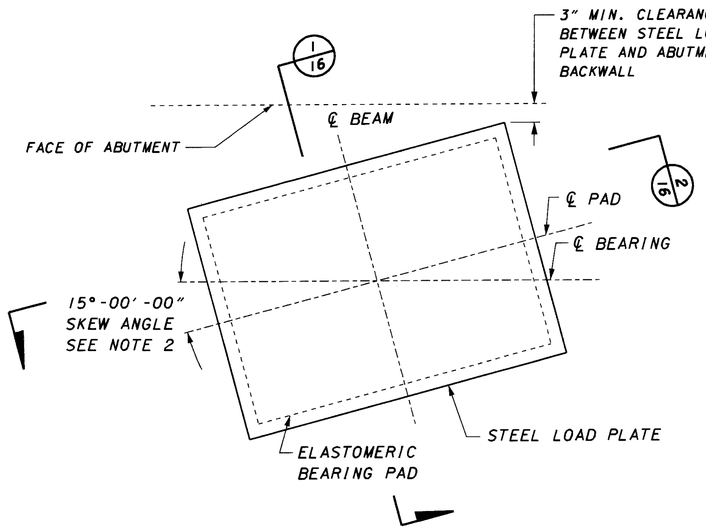
1. WELDING SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
2. SKEW ANGLE SHOWN IS TYPICAL FOR ALL BEAMS. THE SKEW ANGLE IS 15°-00'-00".
3. ANCHOR RODS AT EXISTING ABUTMENT BEARINGS SHALL BE REMOVED DOWN TO BEAM SEAT AND EPOXY GROUTED IN PLACE.
4. THE COST OF ANCHOR ROD REMOVAL AND EPOXY GROUT ANCHOR BARS FOR REAR AND FORWARD BEARING PADS SHALL BE INCLUDED IN THE COST TO INSTALL THE BEARING PADS UNDER ITEM 516 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN.
5. LOAD PLATES SHALL BE PAINTED WITH ITEM 885 AND IS CONSIDERED INCIDENTAL TO WORK OF ITEM 885 FIELD PAINTING.
6. BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 80 °F OR LOWER THAN 40 °F AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE-SIXTH OF THE BEARING HEIGHT AT 60 °F ±10 °F, THE BEAMS OR GIRDERS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60 °F ±10 °F.
7. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND ARTICLES 18.2.1 THRU 18.2.8 OF SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION OF THE AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS CORRESPONDING TO DESIGN METHOD A. TESTING SHALL BE INCLUDED IN THE UNIT BID FOR THE BEARINGS, EACH.



1/16 SECTION



2/16 SECTION



EXPANSION BEARING AT ABUTMENTS

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OH 10

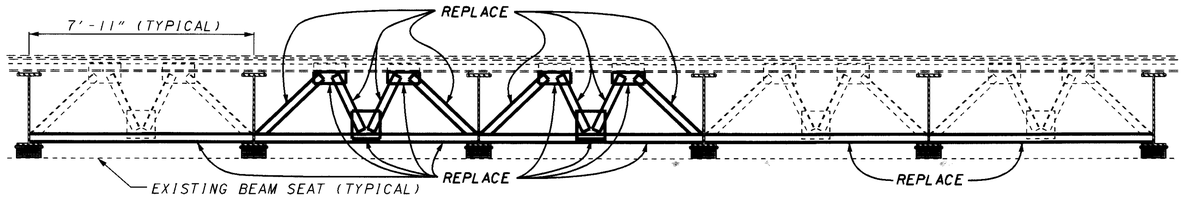
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
	- -	6702791 LEFT 6702882 RIGHT	

BEARING DETAILS
BRIDGE NO. POR-76-1578 L & R
OVER SILVER CREEK

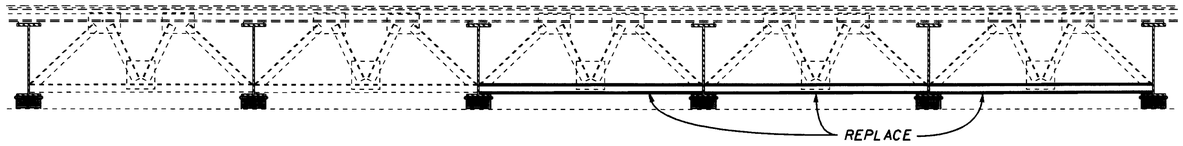
POR-76-13.55

16/42

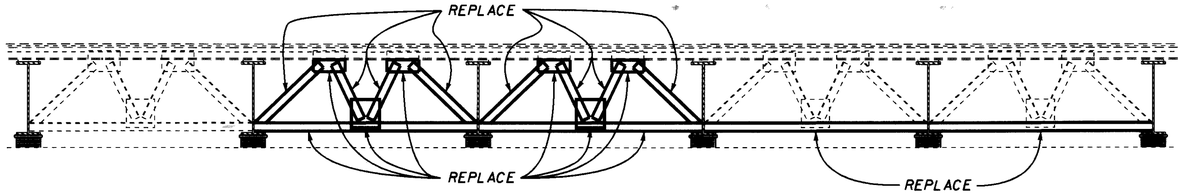
74/100



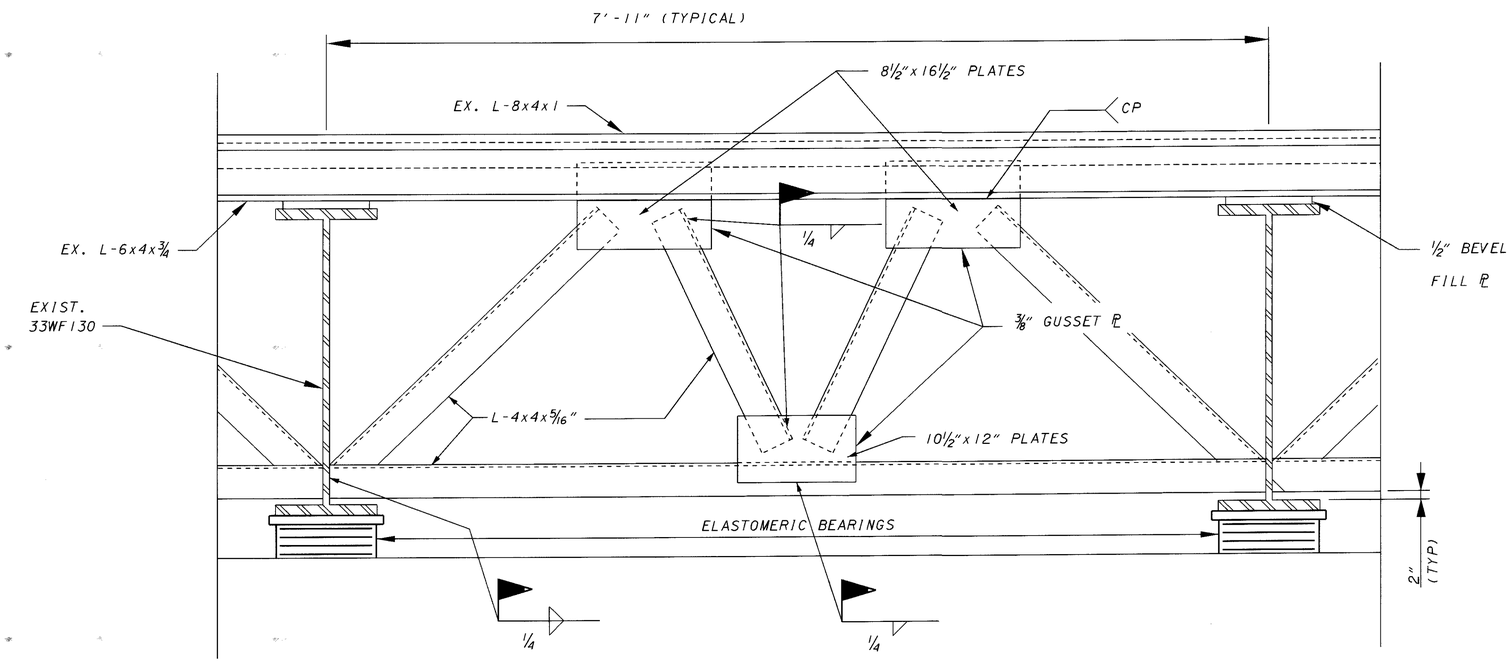
FORWARD LEFT ABUTMENT (LOOKING WEST)



REAR LEFT ABUTMENT (LOOKING EAST)



REAR RIGHT ABUTMENT (LOOKING EAST)



END CROSS FRAME REPLACEMENT DETAIL

NOTES:

1. FOR ADDITIONAL WELDING INFORMATION SEE STD DWG EXJ-4-87.
2. WELDS SHOWN ARE TYPICAL FOR END CROSSFRAME REPLACEMENT LOCATIONS.

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

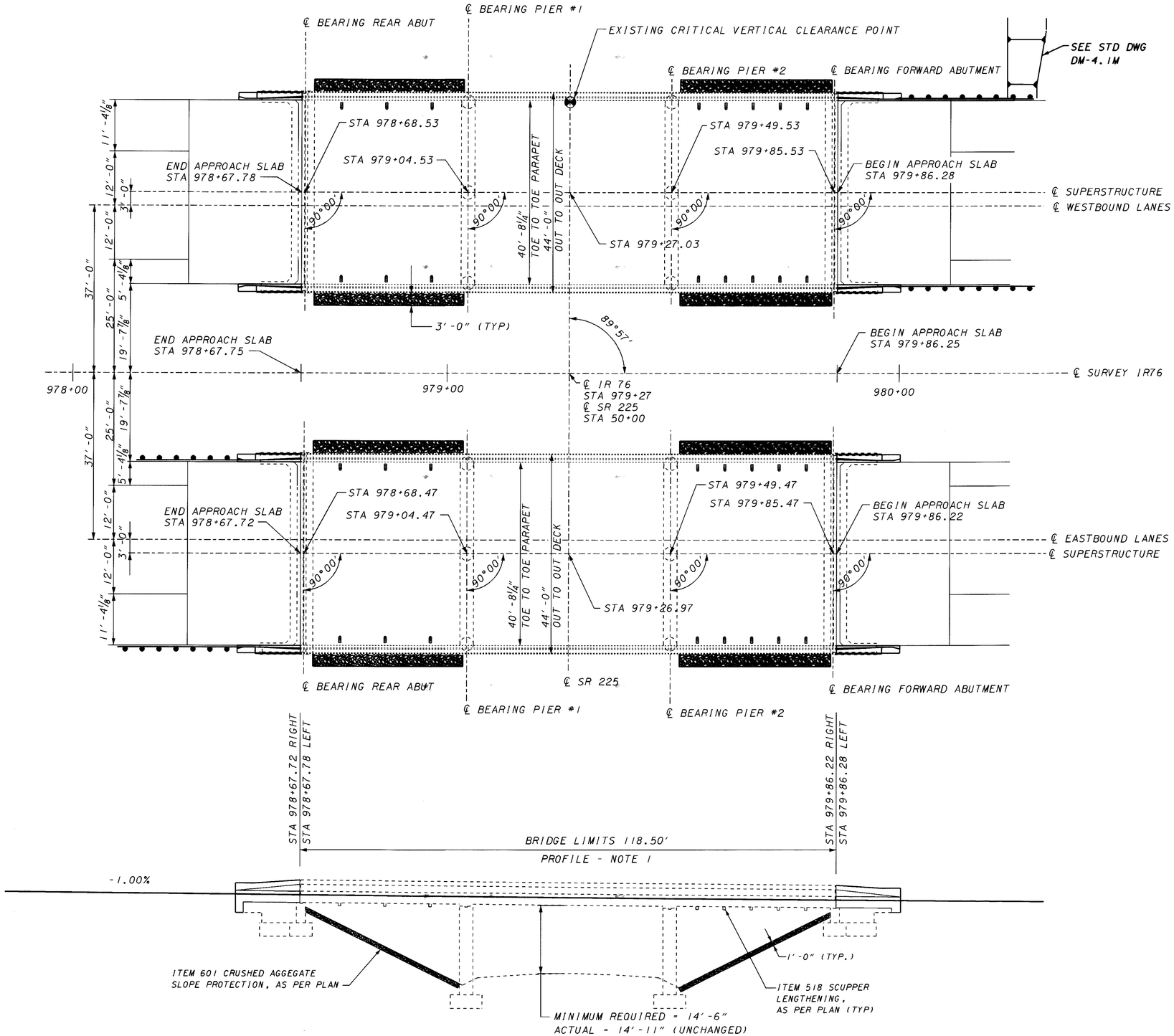
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	

MISCELLANEOUS DETAILS
BRIDGE NO. POR-76-1578 L&R
OVER SILVER CREEK

POR-76-13.55

17/42

75/100



N

NOTES:

1. THE NET PARALLEL INCREASE IN HEIGHT MEASURED AT THE BRIDGE LIMITS FROM THE PROPOSED 2½" OVERLAY IS 1¼". THIS NET INCREASE HAS BEEN CALCULATED BY ACCOUNTING FOR ALL PREVIOUSLY PLACED OVERLAYS (IF ANY) AND MAY BE ASSUMED TO PROVIDE A PARALLEL SURFACE WITHOUT ELEVATION CONTROL ONLY AT THE BRIDGE LIMITS.
2. SEE SHEETS 36/42 TO 38/42 FOR ORIGINAL CONSTRUCTION INFORMATION.

PROPOSED WORK

BRIDGE No. POR-76-1857 LEFT & RIGHT
- REMOVE TOP 1¼" OF EXISTING LATEX MODIFIED CONCRETE.
- REMOVE OVERALL DECK THICKNESS OF 1" BY HYDRODEMOILITION.
- QUANTITIES FOR VARIABLE AND FULL DEPTH REPAIRS OF SUPERSTRUCTURE.
- OVERLAY BRIDGE DECK WITH 2½" SUPERPLASTICIZED DENSE CONCRETE.
- REMOVE AND REPLACE POROUS BACKFILL WITH FILTER FABRIC
- PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.
- REPLACE BOTH APPROACH SLABS WITH REINFORCED CONCRETE APPROACH SLABS (T=15")
- REPAIR EXISTING ABUTMENT AND DECK CORNERS USING ITEM 519 PATCHING CONCRETE STRUCTURE, AS PER PLAN.
- RETROFIT EXISTING WINGWALLS WITH 40" TRANSITION WINGWALL PARAPETS.
- SEALING CONCRETE SURFACES (EPOXY) AT PARAPETS, BACKWALLS(1 FACE), WINGWALLS PIERS, AND PIER CAPS.

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURE.
SPANS: 36' - 45' - 36' c/c BEARINGS
ROADWAY: 40'-8¼" toe/toe PARAPETS
SKEW: NONE
LOAD FREQUENCY: CF 2000 (57)
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: TANGENT
SUPERELEVATION: NONE
WEARING SURFACE: LATEX MODIFIED CONCRETE
STRUCTURAL FILE NUMBER: 6702945 LEFT
6703003 RIGHT

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6702945 LEFT 6703003 RIGHT	

GENERAL PLAN AND ELEVATION
BRIDGE NO. POR-76-1857 L&R
OVER SR 225

POR-76-13.55

18/42

76/100

ESTIMATED QUANTITIES									SEE SHEET
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	
				POR-76-1857 L (SFN-6702945)					
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/42
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING				LUMP	
SPECIAL	51267510	375	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *		85	262	28	
SPECIAL	51631300	82	LIN FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			82		3/42
518	12901	16	EACH	SCUPPER, LENGTHENING, AS PER PLAN			16		21/42
518	21201	10	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	10				1/42
519	11101	15	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	6.6		8.4		1/42
SPECIAL	53000600	85	SQ FT	STRUCTURE, MISC.: CONCRETE BONDING AGENT	78		7		1/42
601	20001	200	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN				200	2/42
842	45701	14.4	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	14.4				2/42
843	50000	15	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	8		7		
848	10200	531	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			531		
848	20000	531	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			531		
848	30200	16	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			16		
848	50000	29	SQ YD	HAND CHIPPING			29		
848	50100	LUMP		TEST SLAB					
848	50300	531	SQ YD	WEARING COURSE REMOVED, ASPHALT			531		
848	50320	531	SQ YD	EXISTING CONCRETE OVERLAY REMOVED			531		
848	50340	295	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			295		

ESTIMATED QUANTITIES									SEE SHEET
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	
				POR-76-1857 R (SFN-6703003)					
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/42
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING				LUMP	
SPECIAL	51267510	384	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *		94	262	28	
SPECIAL	51631300	82	LIN FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			82		3/42
518	12901	16	EACH	SCUPPER, LENGTHENING, AS PER PLAN			16		21/42
518	21201	10	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	10				1/42
519	11101	10	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	5.6		4.4		1/42
SPECIAL	53000600	85	SQ FT	STRUCTURE, MISC.: CONCRETE BONDING AGENT	78		7		1/42
601	20001	200	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN				200	2/42
842	45701	14.4	CU YD	CLASS C CONCRETE, ABUTMENT, AS PER PLAN	14.4				2/42
843	50000	10	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	3		7		
848	10200	531	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			531		
848	20000	531	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			531		
848	30200	16	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			16		
848	50000	29	SQ YD	HAND CHIPPING			29		
848	50100	LUMP		TEST SLAB					
848	50300	531	SQ YD	WEARING COURSE REMOVED, ASPHALT			531		
848	50320	531	SQ YD	EXISTING CONCRETE OVERLAY REMOVED			531		
848	50340	295	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			295		

* - SEE PROPOSAL NOTE

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVISED	DATE
CET	JEL	DLG	01/25/00

CHECKED

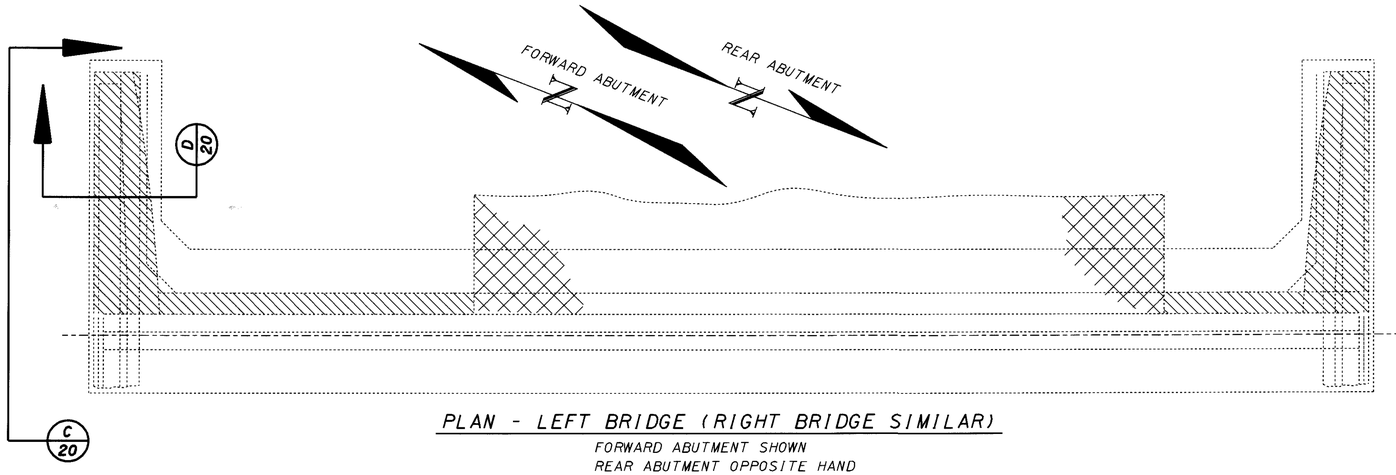
REVISED

STRUCTURE FILE NUMBER
6702945 LEFT
6703003 RIGHT

BRIDGE ESTIMATED QUANTITIES

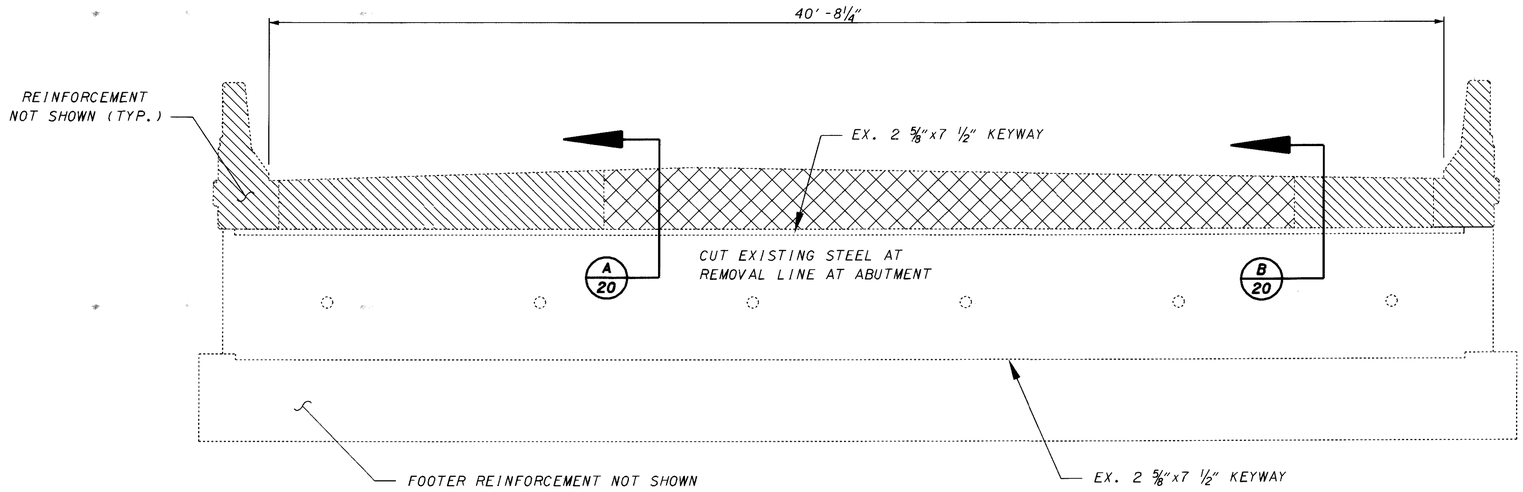
BRIDGE NO. POR-76-1857 L&R
OVER S.R. 225

POR-76-13.55



PLAN - LEFT BRIDGE (RIGHT BRIDGE SIMILAR)

FORWARD ABUTMENT SHOWN
REAR ABUTMENT OPPOSITE HAND

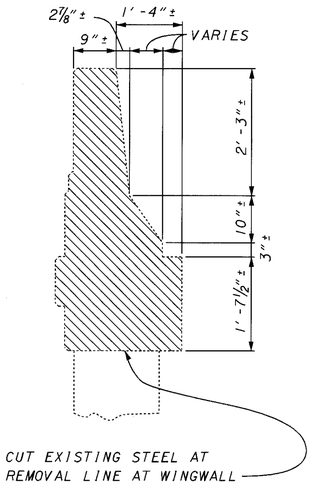


ELEVATION - LEFT BRIDGE (RIGHT BRIDGE SIMILAR)

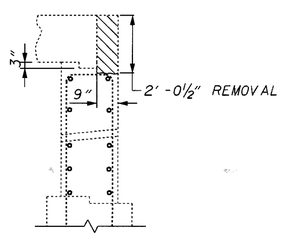
FORWARD ABUTMENT SHOWN
REAR ABUTMENT OPPOSITE HAND

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

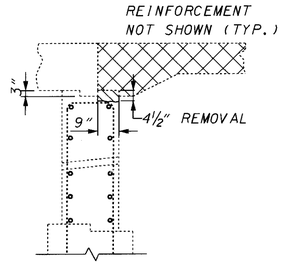
ITEM 202 - APPROACH SLAB REMOVED (ROADWAY)



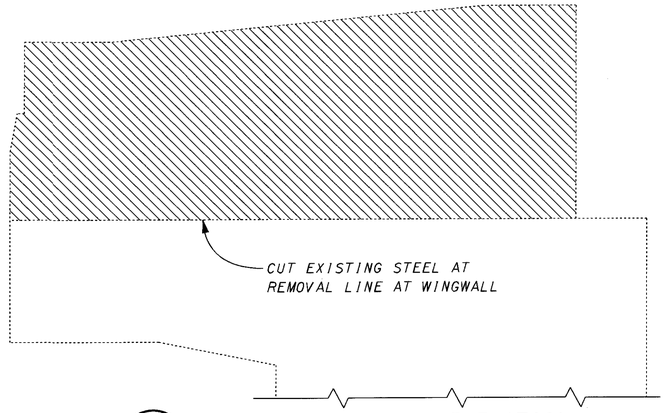
D 20 EXISTING WINGWALL SECTION



B 20 EXISTING BACKWALL SECTION AT SHOULDER (TYP.)



A 20 EXISTING BACKWALL SECTION AT APPROACH SLAB



C 20 EXISTING WINGWALL ELEVATION

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

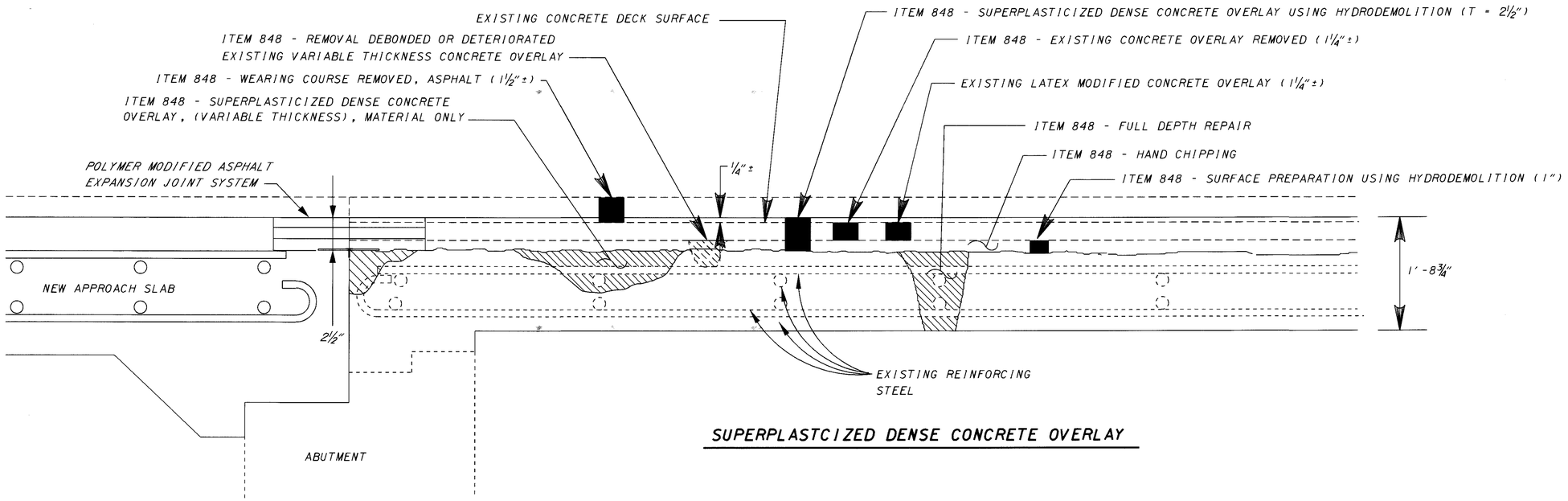
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6702945 LEFT 6703003 RIGHT	

REMOVAL DETAILS
BRIDGE NO. POR-76-1857 L&R
OVER STATE ROUTE 225

POR-76-13.55

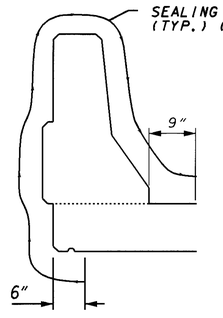
20/42

78
100

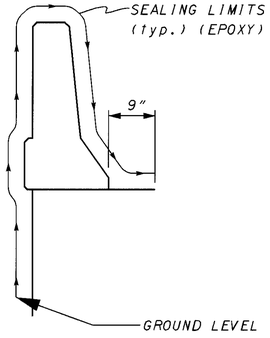


SUPERPLASTCIZED DENSE CONCRETE OVERLAY

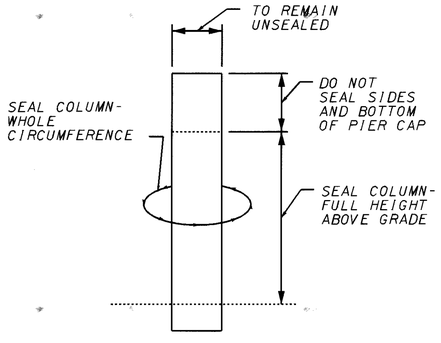
TYPICAL SEALING LIMITS



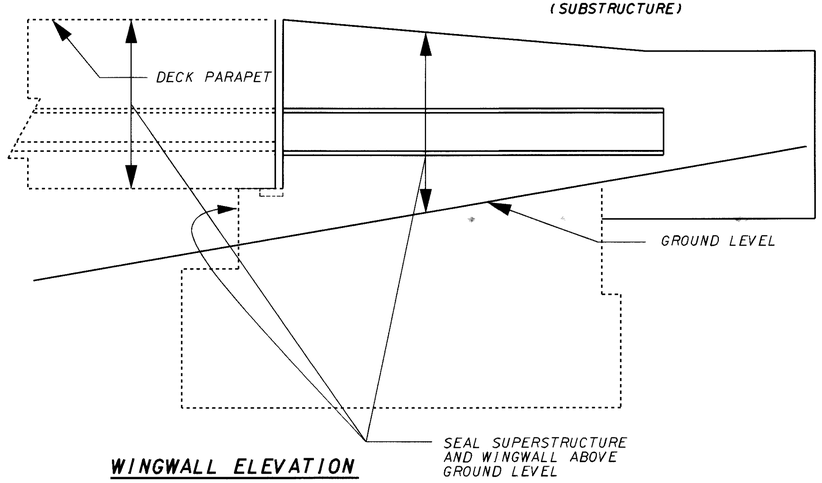
PARAPET DETAIL



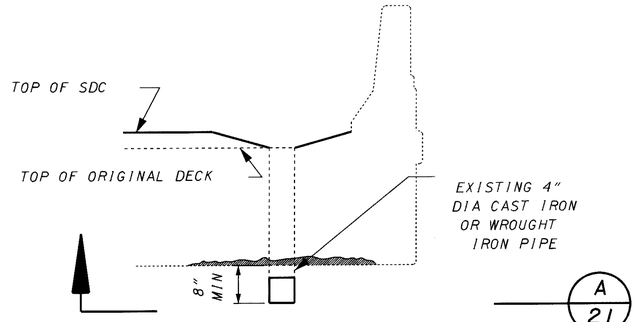
WINGWALL DETAIL



PIER DETAIL
(SUBSTRUCTURE)



WINGWALL ELEVATION

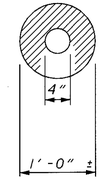


A / 21

SCUPPER LENGTHENING DETAIL

ITEM 518 - SCUPPER, LENGTHENING, AS PER PLAN:

THIS ITEM SHALL CONSIST OF ABRASIVE BLASTING OF THE EXISTING SCUPPERS TO SA-1. THE PROJECT ENGINEER WILL DETERMINE HOW MUCH OF THE ORIGINAL SCUPPER IS TO BE REMOVED (IF NECESSARY). SUFFICIENT DECK CONCRETE SHALL BE REMOVED TO ALLOW WELDING. THE SCUPPER SHALL BE EXTENDED TO AT LEAST 8" BELOW THE BOTTOM OF THE DECK. THE EXTENDED SCUPPER SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT. ALL OF THE ABOVE ITEMS ARE INCLUDED IN ITEM 518 - SCUPPER, LENGTHENING, AS PER PLAN. THE CONCRETE SHALL BE PATCHED AND PAID FOR UNDER ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR AS SPECIFIED IN THE SUPPLEMENTAL SPECIFICATION.



A / 21 PATCH AREA AROUND SCUPPERS

ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

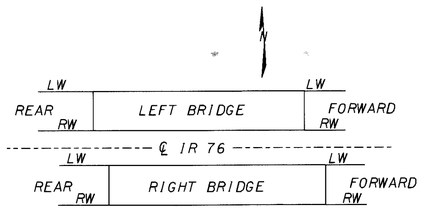
DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00
CHECKED | REVISED | STRUCTURE FILE NUMBER 6702045 LEFT, 6702003 RIGHT

SUPERSTRUCTURE DETAILS
BRIDGE NO. POR-76-1857 L&R
OVER SR 225

POR-76-13.55

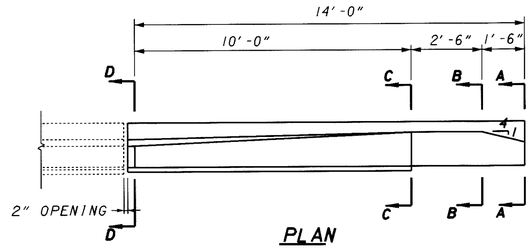
21/42

79/100

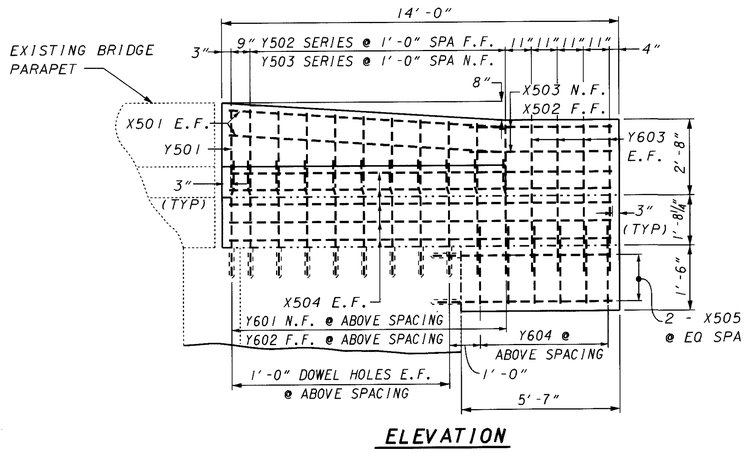


LEGEND:

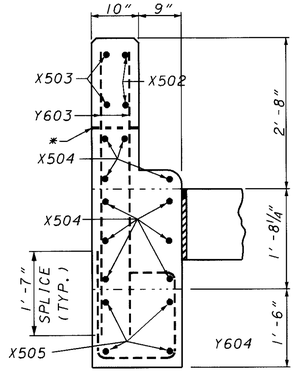
N.S. = NEAR SIDE
F.S. = FAR SIDE
E.F. = EACH FACE
LW = LEFT WINGWALL
RW = RIGHT WINGWALL
TYP = TYPICAL
EQ SPA = EQUAL SPACE
MIN = MINIMUM
MAX = MAXIMUM



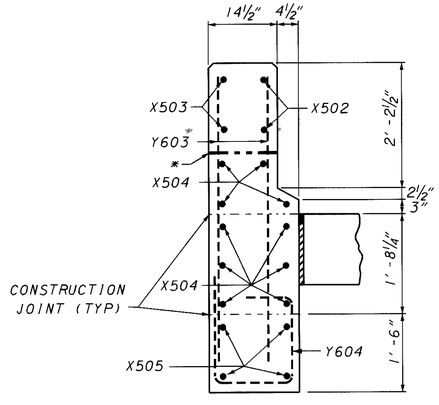
PLAN



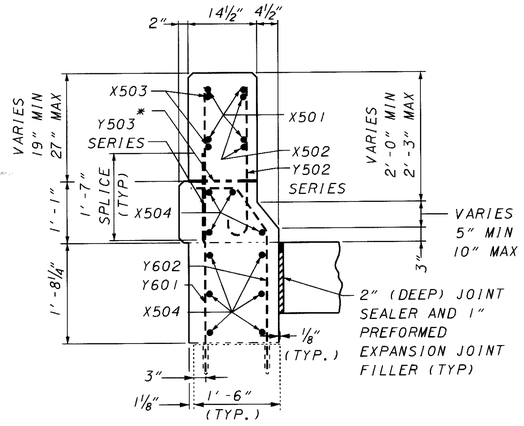
ELEVATION



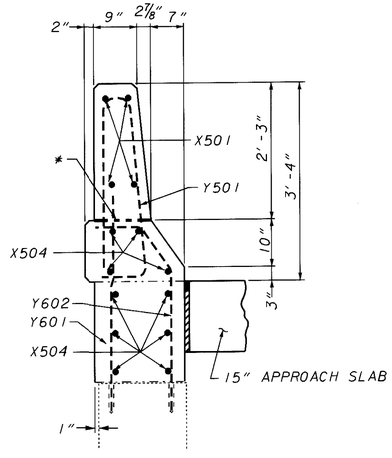
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

* - PERMISSIBLE CONSTRUCTION JOINT

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

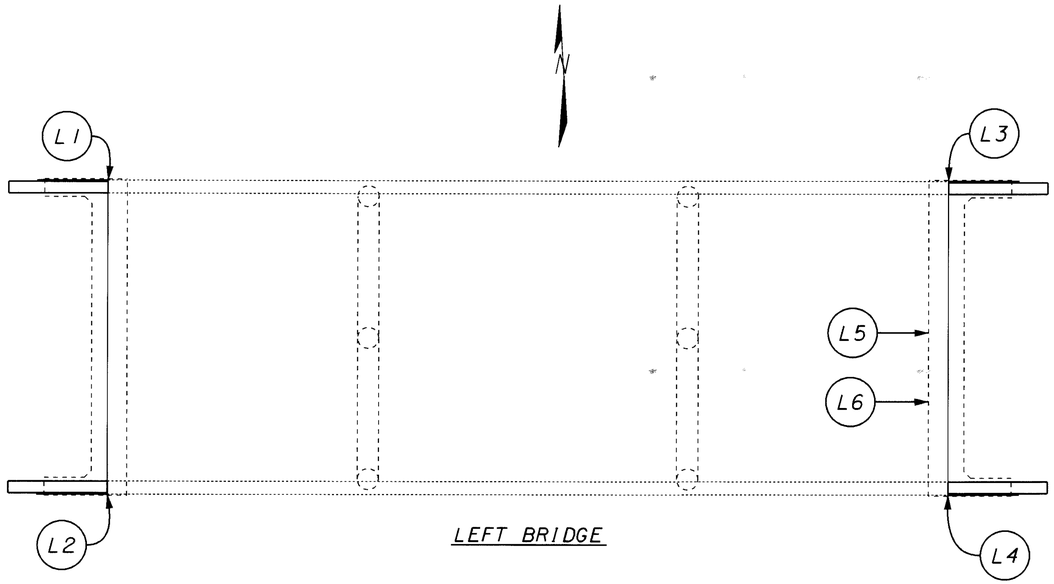
DESIGNED CET | DRAWN JEL | REVIEWED DLG | DATE 01/25/00 | CHECKED | REVISED | STRUCTURE FILE NUMBER 6702945 LEFT, 6703003 RIGHT

ABUTMENT DETAILS
BRIDGE NO. POR-76-1857 L&R
OVER STATE ROUTE 225

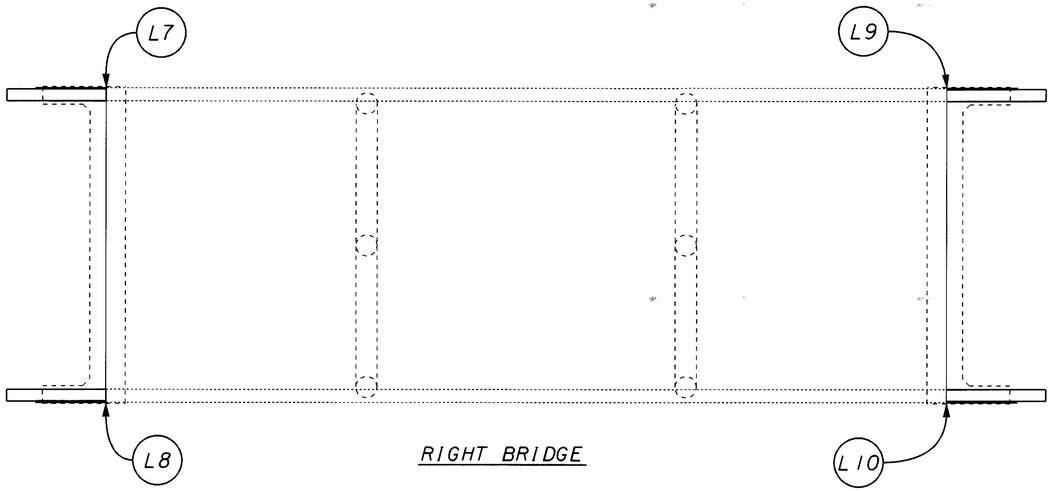
POR-76-13.55

22/42

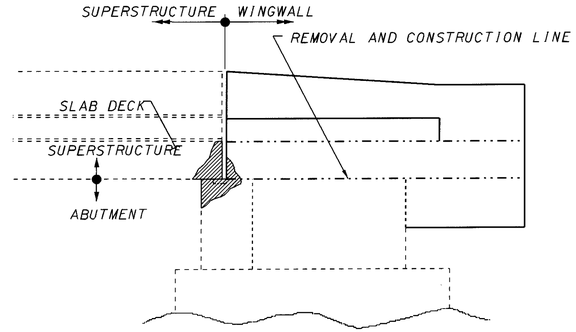
80/100



LEFT BRIDGE

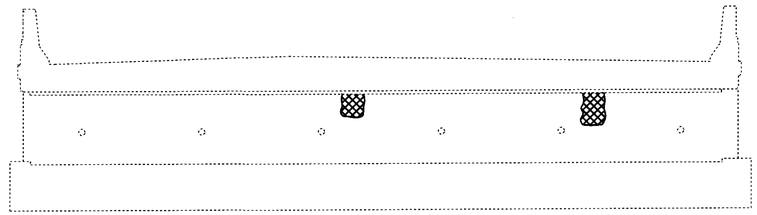


RIGHT BRIDGE



TYPICAL PATCHING ELEVATION

ITEM 519 PATCHING CONCRETE STRUCTURE, AS PER PLAN



REAR LEFT ABUTMENT

ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

LEFT BRIDGE						
LOC	ITEM	AREA	SUPER-STRUCTURE	ABUTMENT	WINGWALL	REMARKS
L1	519	2.2	1.3'x1.7'			NOTE 1 & 2
L2	519	4.1	1.5'x1.5'	1.4'x1.33'		NOTE 1 & 2
L3	519	3.7	1.0'x1.7'	1.33'x1.5'		NOTE 1 & 2
L4	519	3.0	0.8'x1.5'	0.8'x1.5'	0.8'x0.75'	NOTE 1 & 2
L5	843	1.0		1'x1'		
L6	843	1.0		1'x1'		
TOTAL - 519 = 13.0 SQ FT						NOTE 4
TOTAL - 843 = 2.0 SQ FT						NOTE 4

RIGHT BRIDGE						
LOC	ITEM	AREA	SUPER-STRUCTURE	ABUTMENT	WINGWALL	REMARKS
L7	519	3.0	2.0'x1.5'			NOTE 1, 2 & 3
L8	519	1.4	1.3'x0.5'	1.5'x0.5'		NOTE 1, 2 & 3
L9	519	1.6		0.8'x1.7'		NOTE 1 & 2
L10	519	2.6		1.7'x1.5'		NOTE 1 & 2
TOTAL - 519 = 8.6 SQ FT						NOTE 4

NOTES:

1. THE ELEVATION ABOVE DEPICTS THE GENERAL LOCATION OF THE AREA TO BE PATCHED. THESE AREAS SHALL BE SOUNDED AND ANY UNSOUND CONCRETE OR REINFORCEMENT THAT IS DEEMED UNUSABLE SHALL BE REMOVED.
2. ALL PATCH AREAS SHALL BE A MINIMUM OF 3" IN DEPTH.
3. THE AREA IDENTIFIED ABOVE SHALL BE REPAIRED USING THE ABOVE ITEM 519 AS WELL AS 1 SQUARE FOOT OF THE CORNER OF THE DECK.
4. THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE ESTIMATED QUANTITIES:
   - LEFT BRIDGE:
     - ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN — 15 SQ FT
     - ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR — 5 SQ FT
   - RIGHT BRIDGE:
     - ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN — 10 SQ FT

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

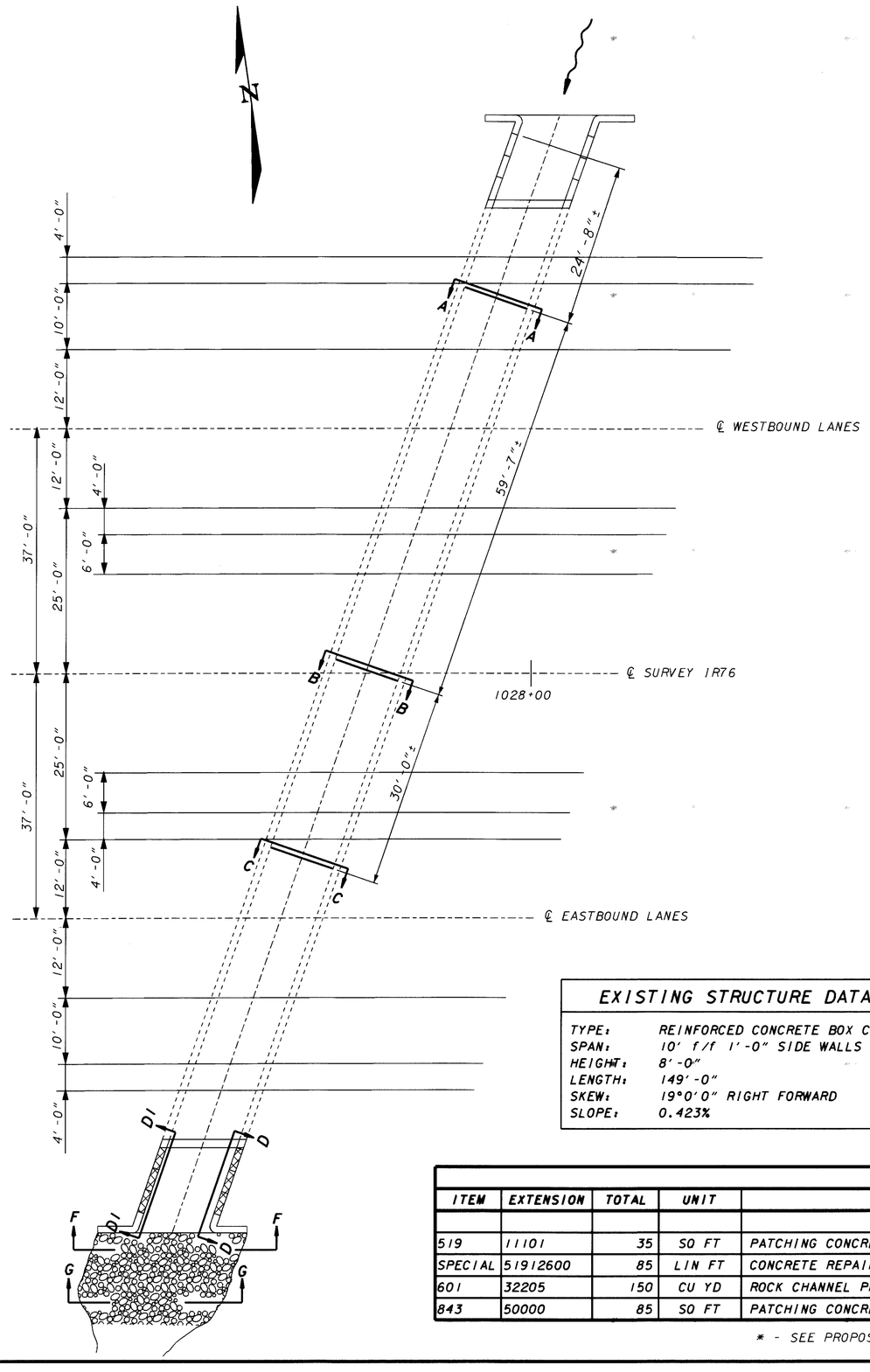
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	6302945 6703003

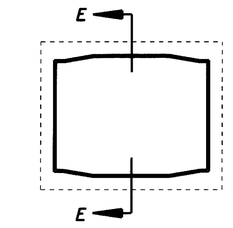
PATCHING DETAILS
BRIDGE NO. POR-76-1857 L&R
OVER S. R. 225

POR-76-13.55

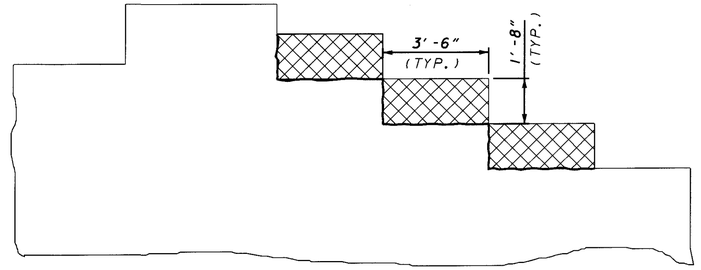
23/42

81/100



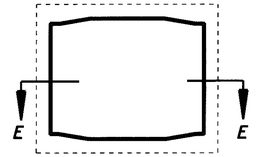


SECTION A-A

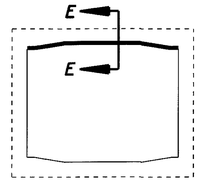


SECTION D-D (SECTION D1-D1 SIMILAR)

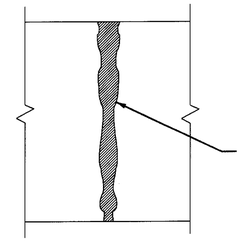
PATCHING USING ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN



SECTION B-B



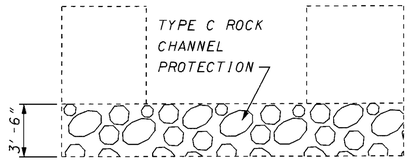
SECTION C-C



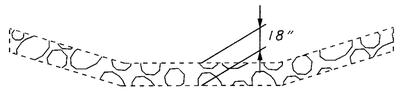
CRACK SECTION E-E

EXISTING STRUCTURE DATA

TYPE:	REINFORCED CONCRETE BOX CULVERT
SPAN:	10' f/f 1'-0" SIDE WALLS
HEIGHT:	8'-0"
LENGTH:	149'-0"
SKEW:	19°0'0" RIGHT FORWARD
SLOPE:	0.423%



SECTION F-F



SECTION G-G

ITEM SPECIAL CONCRETE REPAIR BY EPOXY INJECTION

ALL CRACKS AS DETAILED ON THIS SHEET AND THAT ARE CONSIDERED UNSOUND CONCRETE SHALL BE REPAIRED BY EPOXY INJECTION WITH A TWO COMPONENT RESIN AS DESCRIBED IN THE PROPOSAL NOTE. THE CONTRACTOR SHALL SUBMIT A PLAN FOR ANY INUNDATED CRACK REPAIRS TO THE ENGINEER/SUPERVISOR FOR APPROVAL. THE COST OF ALL WORK, INCLUDING SURFACE PREPARATION AS PER THE MANUFACTURER'S SPECIFICATIONS AND INCIDENTALS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM SPECIAL CONCRETE REPAIR BY EPOXY INJECTION.

ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

A CONTINGENCY QUANTITY OF 85 SQUARE FEET OF ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR HAS BEEN CARRIED TO THE ESTIMATED QUANTITIES. A 1 FOOT PATH (MINIMUM 6" CENTERED ON EACH SIDE OF THE CRACK) SHALL BE SOUNDED AT ALL CRACKS ENCOUNTERED. ANY UNSOUND MATERIAL SHALL BE REMOVED AND REPAIRED USING ITEM 843. PAYMENT SHALL BE THE ACTUAL SQUARE FEET OF UNSOUND CONCRETE REMOVED AND REPAIRED AS APPROVED BY THE ENGINEER/SUPERVISOR.

ALL CRACKS SHALL REPAIRED AS DESCRIBED IN ITEM SPECIAL CONCRETE REPAIR BY EPOXY INJECTION.

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	GEN.	SEE SHEET
519	11101	35	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35	1/42
SPECIAL	51912600	85	LIN FT	CONCRETE REPAIR BY EPOXY INJECTION *	85	
601	32205	150	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER, AS PER PLAN (NO FABRIC FILTER REQUIRED)	150	2/42
843	50000	85	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	85	

* - SEE PROPOSAL NOTE

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703038	

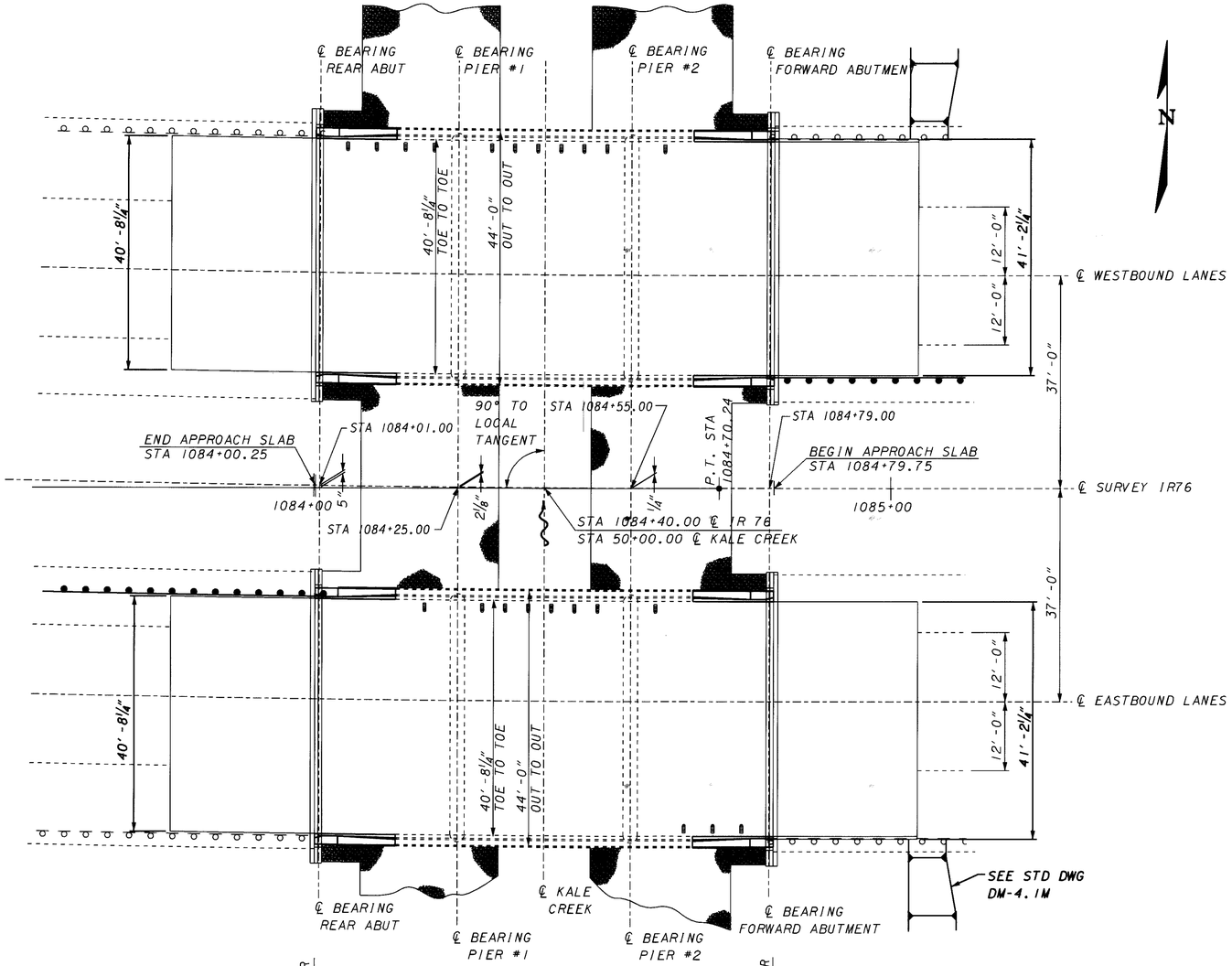
CULVERT REPAIR DETAILS

BRIDGE NO. POR-76-1949
OVER BRANCH OF KALE CREEK

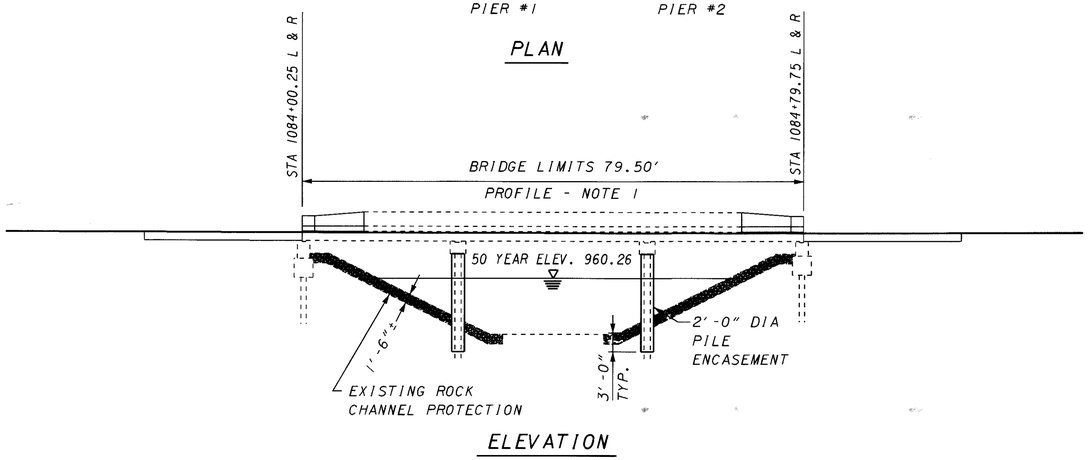
POR-76-13.55

24/42

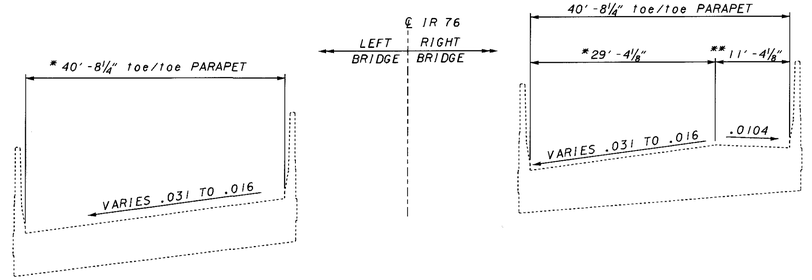
82/100



PLAN



ELEVATION



* - CROSS SLOPE VARIES FROM .031 AT STA 1084+00 TO .016 AT STA 1084+70

** - CROSS SLOPE IS .0104

TRANSVERSE DETAIL

NOTES:

1. THE NET PARALLEL INCREASE IN HEIGHT MEASURED AT THE BRIDGE LIMITS FROM THE PROPOSED 2½" OVERLAY IS 1¼". THIS NET INCREASE HAS BEEN CALCULATED BY ACCOUNTING FOR ALL PREVIOUSLY PLACED OVERLAYS (IF ANY) AND MAY BE ASSUMED TO PROVIDE A PARALLEL SURFACE WITHOUT ELEVATION CONTROL ONLY AT THE BRIDGE LIMITS.

2. SEE SHEETS 39/42 TO 42/42 FOR ORIGINAL CONSTRUCTION INFORMATION.

PROPOSED WORK

BRIDGE No. POR-76-2057 LEFT & RIGHT
- ENCASE EXISTING STEEL PIERS IN CONCRETE.
- REMOVE TOP 1¼" OF EXISTING LATEX MODIFIED CONCRETE.
- REMOVE OVERALL DECK THICKNESS OF 1" BY HYDRODEMOILITION.
- QUANTITIES FOR VARIABLE DEPTH REPAIRS OF SUPERSTRUCTURE.
- PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR.
- OVERLAY BRIDGE DECK WITH 2½" SUPERPLASTICIZED DENSE CONCRETE.
- REMOVE AND REPLACE POROUS BACKFILL WITH FILTER FABRIC.
- REPLACE BOTH APPROACH SLABS WITH REINFORCED CONCRETE APPROACH SLABS (T-15")
- RETROFIT EXISTING PARAPET TRANSITIONS WITH 40" TRANSITION PARAPETS.
- SEALING CONCRETE SURFACES (EPOXY) AT PARAPETS AND BACKWALLS (1 FACE).
- RESTORE ROCK CHANNEL PROTECTION WITH ROCK CHANNEL PROTECTION, TYPE C.

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB DECK WITH CAPPED PILE SUBSTRUCTURE.
SPANS: 24' - 30' - 24' c/c BEARINGS
ROADWAY: 40'-8¼" toe/toe PARAPETS
SKEW: NONE
LOAD FREQUENCY: CF 2000 (57) ADEQUATE FOR ASSHO ALTERNATE LOADING
APPROACH SLABS: 25'-0" LONG (AS-1-54)
ALIGNMENT: 1°-00' CURVE LEFT
SUPERELEVATION: VARIABLE
WEARING SURFACE: LATEX MODIFIED CONCRETE
SLOPE PROTECTION: DUMPED ROCK
STRUCTURAL FILE NUMBER: 6703151 LEFT
6703186 RIGHT

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6703151 LEFT 6703186 RIGHT	

GENERAL PLAN AND ELEVATION
BRIDGE NO. POR-76-2057 L&R
OVER KALE CREEK

POR-76-13.55

25/42

83/100

ESTIMATED QUANTITIES									SEE SHEET
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	
				POR-76-2057 L (SFN-6703151)					
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/42
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING		LUMP			
SPECIAL	50771200	224	LIN FT	PILE ENCASEMENT		224			1/42
SPECIAL	51267510	130	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *			130		
SPECIAL	51631300	82	LIN FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			82		3/42
518	12901	11	EACH	SCUPPER, LENGTHENING, AS PER PLAN			11		28/42
SPECIAL	53000600	150	SQ FT	STRUCTURE, MISC.: CONCRETE BONDING AGENT			150		1/42
601	32205	125	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER, AS PER PLAN (NO FABRIC FILTER REQUIRED)				125	2/42
842	34401	7.3	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN			7.3		2/42
843	50000	45	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR			45		
848	10200	357	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			357		
848	20000	357	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			357		
848	30200	10.6	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			10.6		
848	50000	19	SQ YD	HAND CHIPPING			19		
848	50100	LUMP		TEST SLAB					
848	50320	357	SQ YD	EXISTING CONCRETE OVERLAY REMOVED			357		
848	50340	45	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			45		

ESTIMATED QUANTITIES									SEE SHEET
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	
				POR-76-2057 R (SFN-6703186)					
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	2/42
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING		LUMP			
SPECIAL	50771200	224	LIN FT	PILE ENCASEMENT		224			1/42
SPECIAL	51267510	130	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *			130		
SPECIAL	51631300	82	LIN FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM			82		3/42
518	12901	14	EACH	SCUPPER, LENGTHENING, AS PER PLAN			11		28/42
SPECIAL	53000600	135	SQ FT	STRUCTURE, MISC.: CONCRETE BONDING AGENT			135		1/42
601	32205	125	CU YD	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER, AS PER PLAN (NO FABRIC FILTER REQUIRED)				125	2/42
842	34401	7.3	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN			7.3		2/42
843	50000	30	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR			30		
848	10200	357	SQ YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (2½" THICK)			357		
848	20000	357	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION			357		
848	30200	10.2	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			10.2		
848	50000	36	SQ YD	HAND CHIPPING			36		
848	50100	LUMP		TEST SLAB					
848	50320	357	SQ YD	EXISTING CONCRETE OVERLAY REMOVED			357		
848	50340	45	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			45		

* - SEE PROPOSAL NOTE

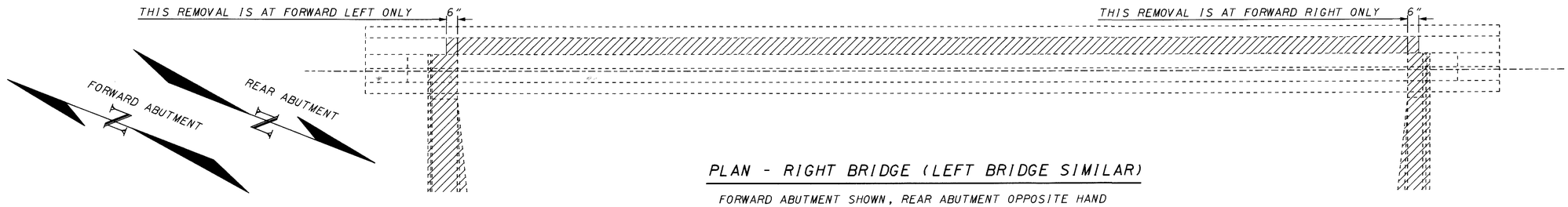
DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703151 LEFT 6703186 RIGHT	

BRIDGE ESTIMATED QUANTITIES

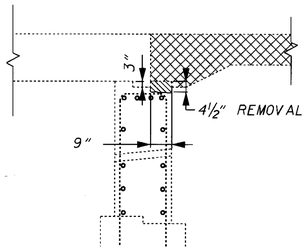
BRIDGE NO. POR-76-2057 L&R
OVER KALE CREEK

POR-76-13.55

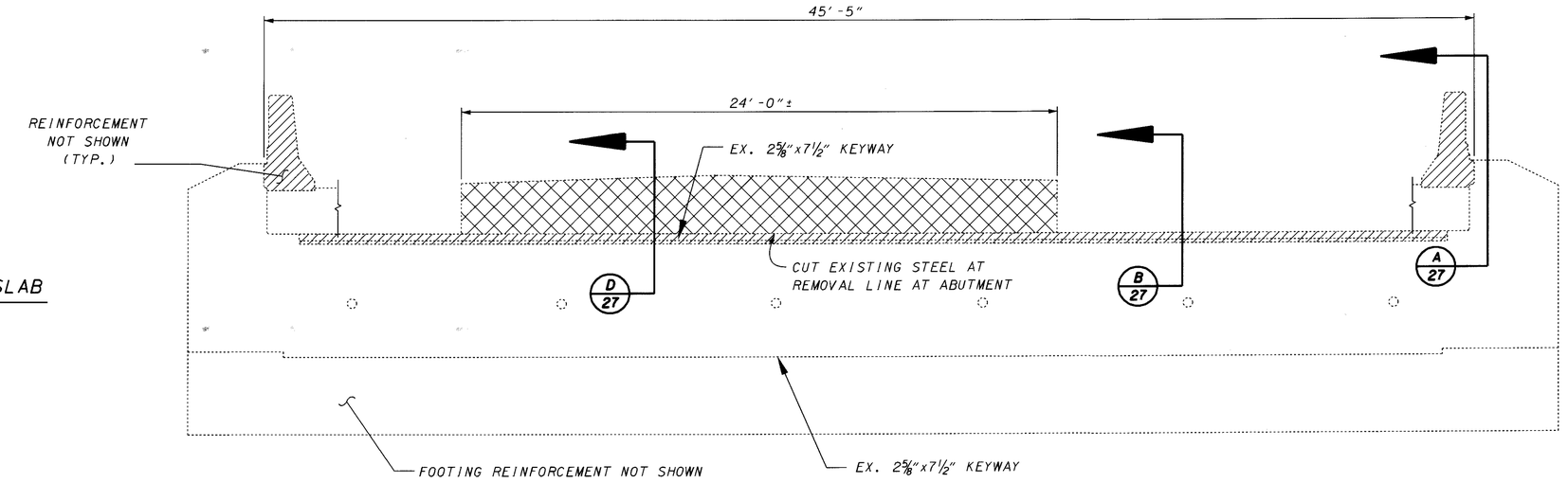


PLAN - RIGHT BRIDGE (LEFT BRIDGE SIMILAR)

FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND
NOTE: APPROACH SLAB AND DECK NOT SHOWN.

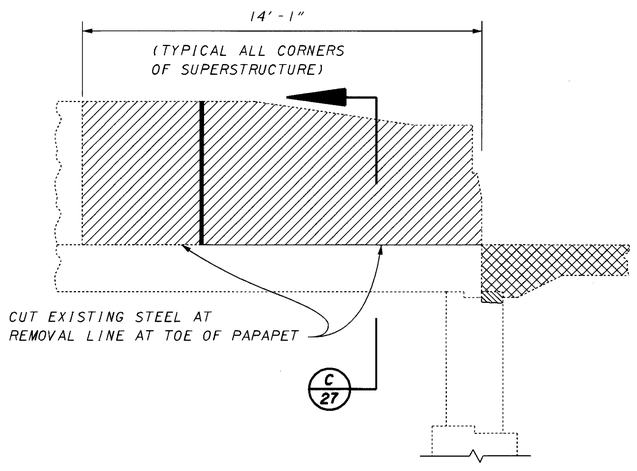


D/27 ABUTMENT REMOVAL AT APPROACH SLAB



ELEVATION - RIGHT BRIDGE (LEFT BRIDGE SIMILAR)

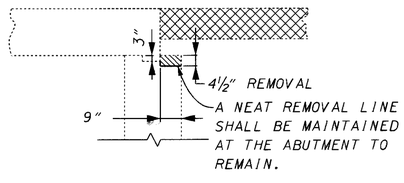
FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND



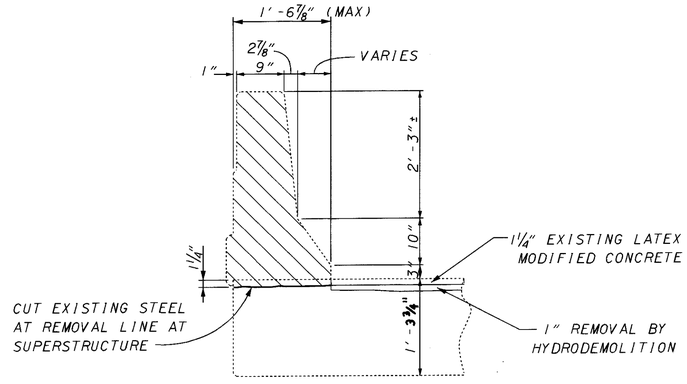
A/27 PARAPET TRANSITION REMOVAL

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

ITEM 202 - APPROACH SLAB REMOVED (ROADWAY) AND ITEM 203 - EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION (ROADWAY)



B/27 ABUTMENT REMOVAL AT SHOULDERS



C/27 TRANSITION REMOVAL AT SUPERSTRUCTURE

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

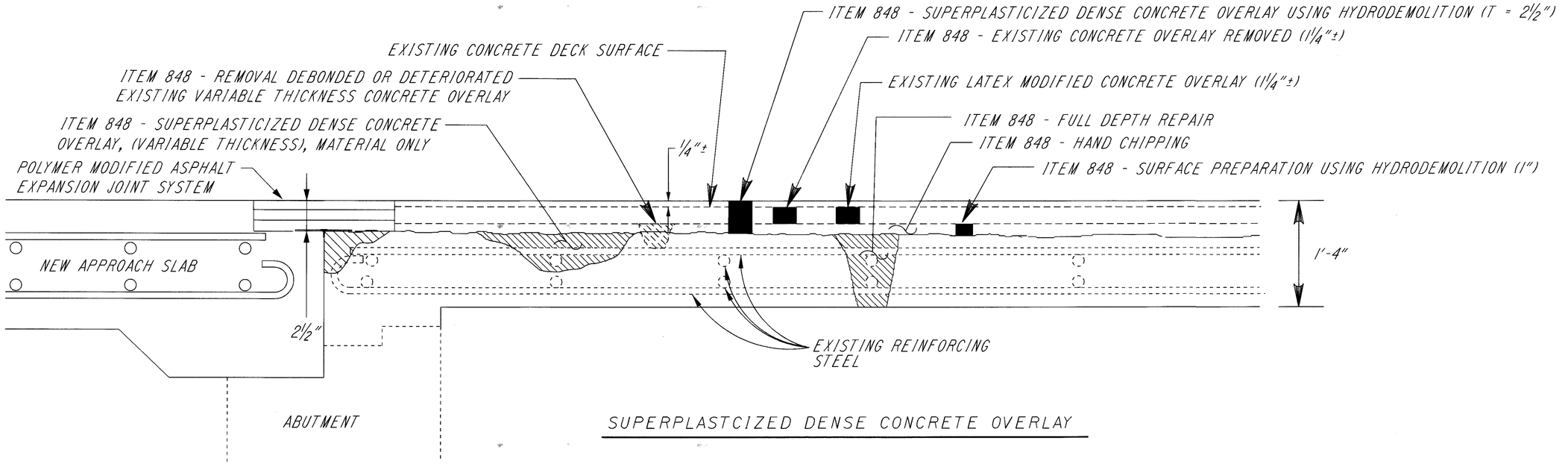
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703151 LEFT 6703186 RIGHT	

REMOVAL DETAILS
BRIDGE NO. POR-76-2057 L&R
OVER KALE CREEK

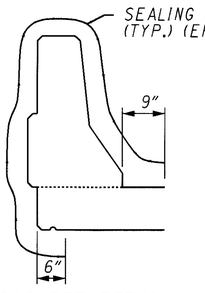
POR-76-13.55

27/42

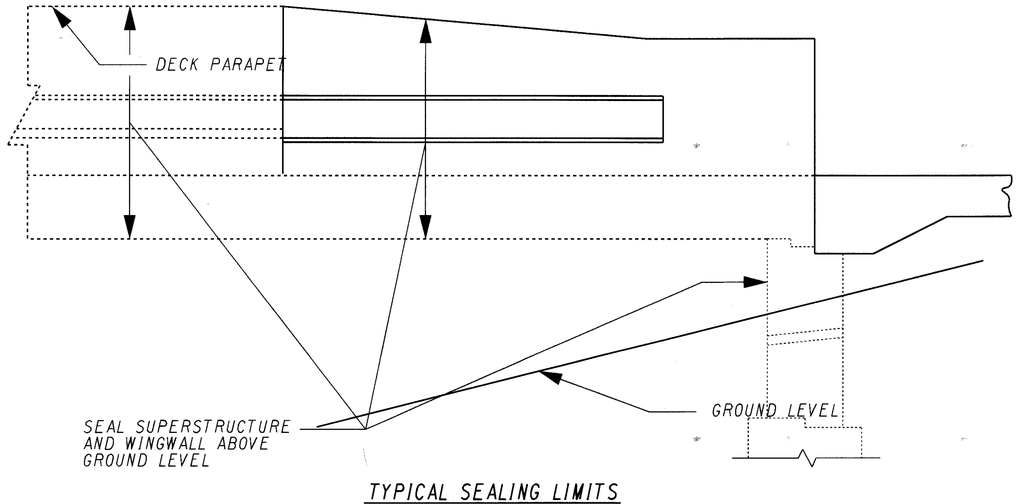
85/100



SUPERPLASTCIZED DENSE CONCRETE OVERLAY



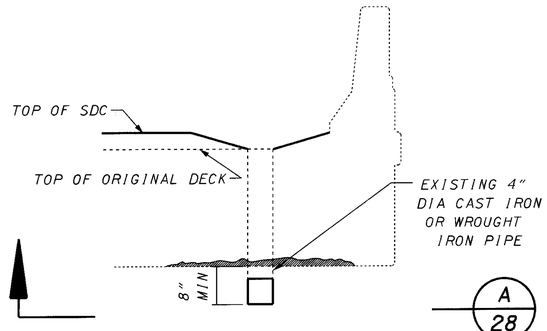
PARAPET DETAIL



TYPICAL SEALING LIMITS

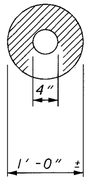
ITEM 518 - SCUPPER, LENGTHENING, AS PER PLAN:

THIS ITEM SHALL CONSIST OF ABRASIVE BLASTING OF THE EXISTING SCUPPERS TO SA-1. THE PROJECT ENGINEER WILL DETERMINE HOW MUCH OF THE ORIGINAL SCUPPER IS TO BE REMOVED (IF NECESSARY). SUFFICIENT DECK CONCRETE SHALL BE REMOVED TO ALLOW WELDING. THE SCUPPER SHALL BE EXTENDED TO AT LEAST 8" BELOW THE BOTTOM OF THE DECK. THE EXTENDED SCUPPER SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT. ALL OF THE ABOVE ITEMS ARE INCLUDED IN ITEM 518 - SCUPPER, LENGTHENING, AS PER PLAN. THE CONCRETE SHALL BE PATCHED AND PAID FOR UNDER ITEM 843 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR AS SPECIFIED IN THE SUPPLEMENTAL SPECIFICATION.



A / 28

SCUPPER LENGTHENING DETAIL



A / 28 PATCH AREA AROUND SCUPPERS

ITEM 843 PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		6703151 LEFT, 6703146 RIGHT	

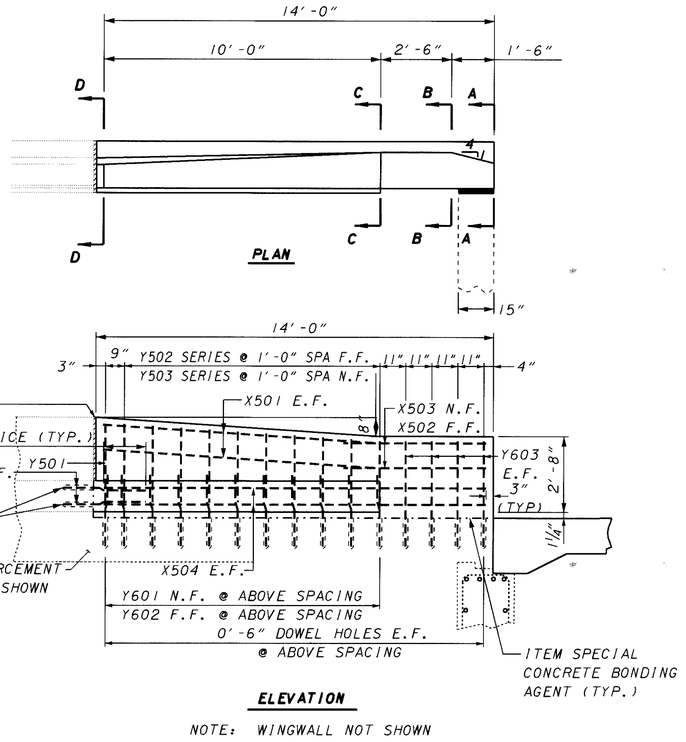
SUPERSTRUCTURE DETAILS

BRIDGE NO. POR-76-2057 L&R
OVER KALE CREEK

POR-76-13.55

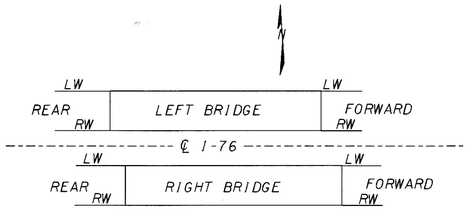
28/42

86/100



ELEVATION

NOTE: WINGWALL NOT SHOWN



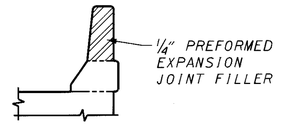
LEGEND:

N.S. = NEAR SIDE
F.S. = FAR SIDE
E.F. = EACH FACE
LW = LEFT WINGWALL
RW = RIGHT WINGWALL
TYP = TYPICAL
EQ SPA = EQUAL SPACE
MIN = MINIMUM
MAX = MAXIMUM
PEJF = PREFORMED EXPANSION JOINT FILLER

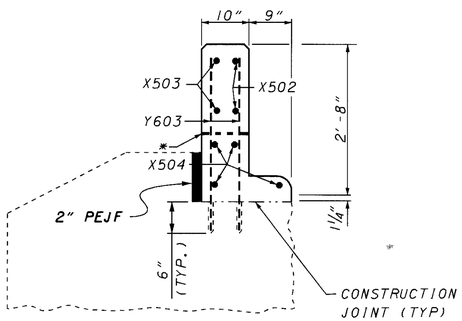
PREFORMED EXPANSION JOINT FILLER IN THE PARAPET DEFLECTION JOINT MAY BE EITHER ¼" GRAY SPONGE RUBBER OR ¼" GRAY CELLULAR POLYVINYL CHLORIDE (PVC) SPONGE. SPONGE RUBBER FILLER SHALL CONFORM TO AASHTO M-153, TYPE I, DENSITY OF PVC SPONGE NOT LESS THAN 20 LBS. PER CU.FT.

CONCRETE PARAPET SHALL BE PLACED BY USE OF BULKHEADS. THE CLOSING SECTION SHALL BE PLACED AFTER THE BULKHEADS HAVE BEEN REMOVED AND AFTER THE EXPANSION JOINT FILLER HAS BEEN PLACED. EXPOSED EDGES OF THE FILLER SHALL BE FLUSH WITH THE SURFACE OF THE CONCRETE AND SHALL BE FREE OF MORTAR.

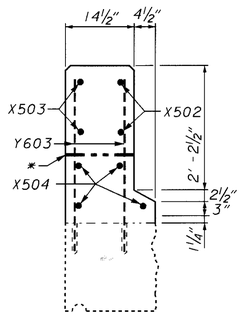
PAYMENT SHALL INCLUDE ALL WORK NECESSARY TO INSTALL THE CONCRETE PARAPET TRANSITIONS, INCLUDING THE CLASS S CONCRETE, ¼" PREFORMED EXPANSION JOINT FILLER, AND REINFORCING STEEL. THE WORK SHALL BE PAID FOR UNDER ITEM 842 CLASS S CONCRETE, AS PER PLAN.



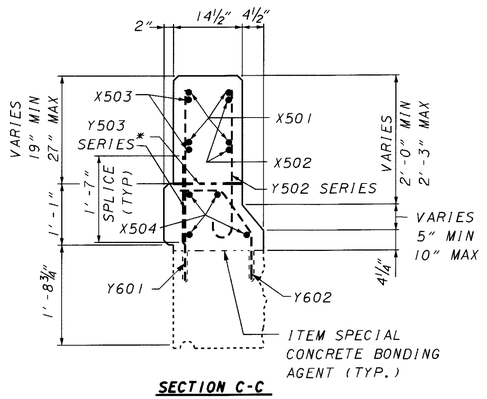
DETAIL A
(section through deflection joint)



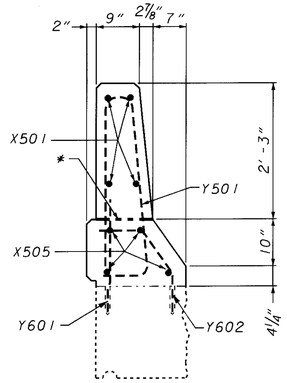
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

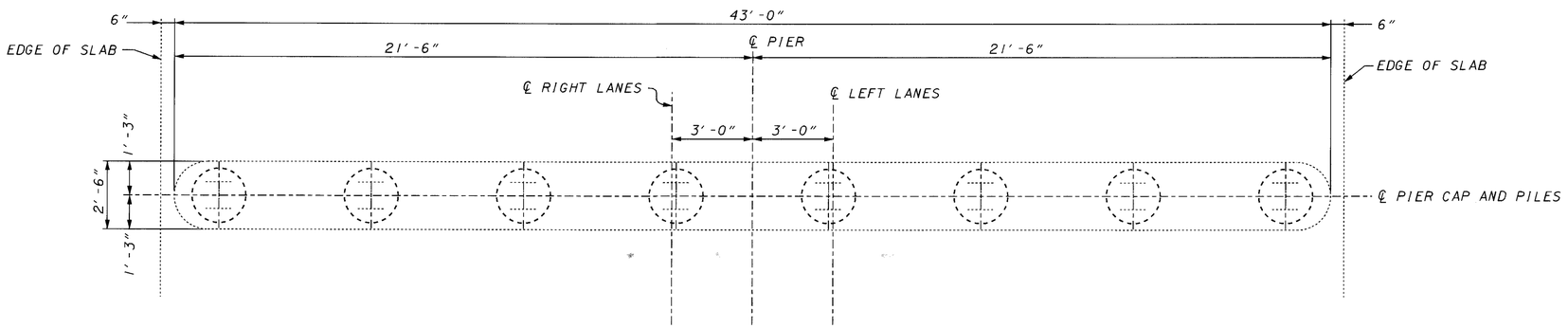
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6703151 LEFT 6703186 RIGHT	

ABUTMENT DETAILS
BRIDGE NO. POR-76-2057
OVER KALE CREEK

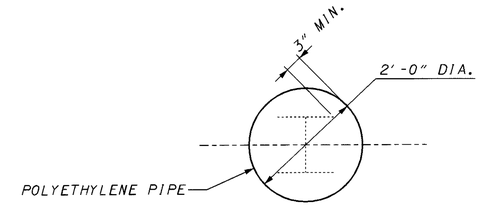
POR-76-13.55

29/42

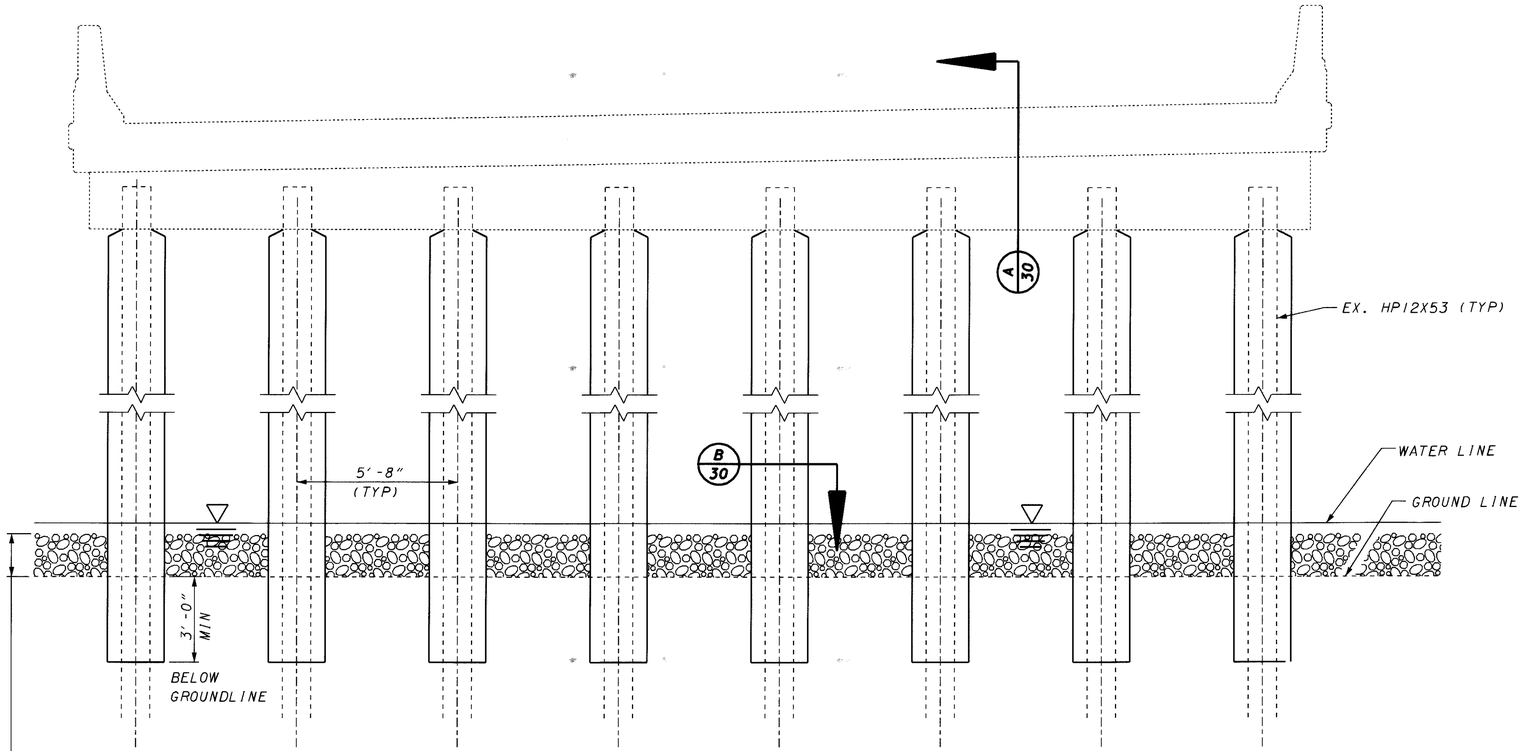
87/100



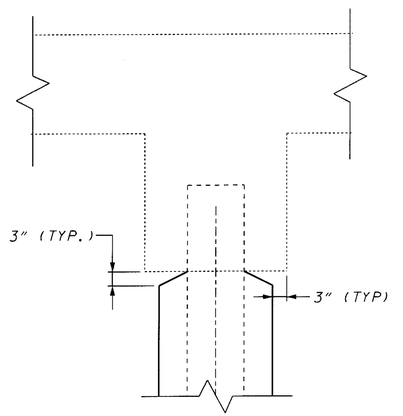
PLAN



B / 30 PIER SECTION (TYP)



ELEVATION



A / 30 PIER CAP SECTION (TYP)

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER	6703115 LEFT 6703186 RIGHT

PIER DETAILS
BRIDGE NO. POR-76-2057 L&R
OVER KALE CREEK

POR-76-13.55

30/42

88/100

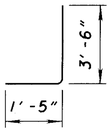
MARK	NUMBER REAR	NUMBER FWD	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	DIMENSIONS INC.
STRUCTURE POR-76-2057 LEFT (SFN# 6702791)								
SUPERSTRUCTURE								
X501	8	8	16	10'-4"	172	STR		
X502	4	4	8	5'-8"	47	B25		
X503	4	4	8	5'-8"	47	STR		
X504	16	16	32	13'-11"	464	STR		
X505	3	3	6	4'-4"	27	STR		
X506	4	4	8	1'-6"	13	STR		
X507	3	3	6	3'-11"	25	STR		
X508	20	20	40	1'-3"	52	STR		
Y501	4	4	8	6'-11"	58	B23		
Y502 SERIES	20	20	40	3'-0" TO 3'-9"	141	B16		7/8"
Y503 SERIES	20	20	40	2'-5" TO 3'-2"	116	STR		7/8"
Y601	27	27	54	3'-6"	284	STR		
Y602	22	22	44	4'-3"	281	B13	1'-2"	
Y603	16	16	32	4'-8"	224	STR		
Y604	3	3	6	6'-2"	56	B7	2'-6 1/2"	
Y605	8	8	16	4'-4"	104	STR		
ABUTMENT								
A501	8	8	16	24'-10"	414	STR		
A502	8	8	16	20'-8"	345	STR		
A601	28	28	56	6'-7"	554	B2		
A602	28	28	56	4'-9"	400	B1		
D801	29	29	58	5'-0"	774	B18	2'-8"	
TOTAL WEIGHT					4598			
STRUCTURE POR-76-1578 RIGHT (SFN# 6702821)								
SUPERSTRUCTURE								
X501	8	8	16	10'-4"	172	STR		
X502	4	4	8	5'-8"	47	B25		
X503	4	4	8	5'-8"	47	STR		
X504	16	16	32	13'-11"	464	STR		
X505	3	3	6	4'-4"	27	STR		
X506	4	4	8	1'-6"	13	STR		
X507	3	3	6	3'-11"	25	STR		
X508	20	20	40	1'-3"	52	STR		
Y501	4	4	8	6'-11"	58	B23		
Y502 SERIES	20	20	40	3'-0" TO 3'-9"	141	B16		7/8"
Y503 SERIES	20	20	40	2'-5" TO 3'-2"	113	STR		7/8"
Y601	27	27	54	3'-6"	284	STR		
Y602	22	22	44	4'-3"	281	B13	1'-2"	
Y603	16	16	32	4'-8"	224	STR		
Y604	3	3	6	6'-2"	56	B7	2'-6 1/2"	
Y605	8	8	16	4'-4"	104	STR		
ABUTMENT								
A501	8	8	16	24'-10"	414	STR		
A502	8	8	16	20'-8"	345	STR		
A601	28	28	56	6'-7"	554	B2		
A602	28	28	56	4'-9"	400	B1		
D801	29	29	58	5'-0"	774	B18	2'-8"	
TOTAL WEIGHT					4598			

MARK	NUMBER REAR	NUMBER FWD	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	DIMENSIONS INC.
STRUCTURE POR-76-1857 LEFT (SFN# 6702945)								
WINGWALL								
X501	8	8	16	10'-0"	167	STR		
X502	4	4	8	5'-8"	47	B25		
X503	4	4	8	5'-8"	47	STR		
X504	20	20	40	13'-6"	563	STR		
X505	8	8	16	6'-4"	106	STR		
Y501	2	2	4	6'-11"	29	B23		
Y502 SERIES	20	20	40	3'-0" TO 3'-9"	141	B16		7/8"
Y503 SERIES	20	20	40	2'-5" TO 3'-2"	113	STR		7/8"
Y601	18	18	36	4'-4"	234	STR		
Y602	18	18	36	4'-2"	225	B13	2'-10"	
Y603	16	16	32	5'-5"	260	STR		
Y604	12	12	24	5'-1"	183	B7	1'-11"	
ABUTMENT								
D802	29	29	58	5'-11"	916	B31	3'-1"	
TOTAL WEIGHT					3031			
STRUCTURE POR-76-1857 RIGHT (SFN# 6703003)								
WINGWALL								
X501	8	8	16	10'-0"	167	STR		
X502	4	4	8	5'-8"	47	B25		
X503	4	4	8	5'-8"	47	STR		
X504	20	20	40	13'-6"	563	STR		
X505	8	8	16	6'-4"	106	STR		
Y501	2	2	4	6'-11"	29	B23		
Y502 SERIES	20	20	40	3'-0" TO 3'-9"	141	B16		7/8"
Y503 SERIES	20	20	40	2'-5" TO 3'-2"	113	STR		7/8"
Y601	18	18	36	4'-4"	234	STR		
Y602	18	18	36	4'-2"	225	B13	2'-10"	
Y603	16	16	32	5'-5"	260	STR		
Y604	12	12	24	5'-1"	183	B7	1'-11"	
ABUTMENT								
D802	29	29	58	5'-11"	916	B31	3'-1"	
TOTAL WEIGHT					3031			

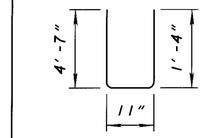
MARK	NUMBER REAR	NUMBER FWD	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	DIMENSIONS INC.
STRUCTURE POR-76-2057 LEFT (SFN# 6703151)								
SUPERSTRUCTURE								
X501	8	8	16	10'-0"	167	STR		
X502	4	4	8	5'-8"	47	B25		
X503	4	4	8	5'-8"	47	STR		
X504	20	20	40	13'-8"	570	STR		
X505	8	8	16	2'-2"	36	STR		
Y501	2	2	4	6'-11"	29	B23		
Y502 SERIES	20	20	40	3'-0" TO 3'-9"	141	B16		7/8"
Y503 SERIES	20	20	40	2'-5" TO 3'-2"	113	STR		7/8"
Y601	22	22	44	4'-4"	286	STR		
Y602	22	22	44	2'-1"	138	B13	0'-8"	
Y603	8	8	16	3'-3"	78	STR		
ABUTMENT								
D802	29	29	58	5'-6"	852	B31	2'-7 3/4"	
TOTAL WEIGHT					2504			
STRUCTURE POR-76-2057 RIGHT (SFN# 6703186)								
SUPERSTRUCTURE								
X501	8	8	16	10'-0"	167	STR		
X502	4	4	8	5'-8"	47	B25		
X503	4	4	8	5'-8"	47	STR		
X504	20	20	40	13'-8"	570	STR		
X505	8	8	16	2'-2"	36	STR		
Y501	2	2	4	6'-11"	29	B23		
Y502 SERIES	20	20	40	3'-0" TO 3'-9"	141	B16		7/8"
Y503 SERIES	20	20	40	2'-5" TO 3'-2"	113	STR		7/8"
Y601	22	22	44	4'-4"	286	STR		
Y602	22	22	44	2'-1"	138	B13	0'-8"	
Y603	8	8	16	3'-3"	78	STR		
ABUTMENT								
D802	29	29	58	5'-6"	852	B31	2'-7 3/4"	
TOTAL WEIGHT					2504			

NOTES:

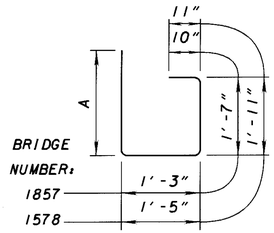
1. ALL REINFORCING STEEL SHALL BE EPOXY COATED GRADE 60.
2. ALL DIMENSIONS ARE OUT TO OUT.
3. REFER TO CMS SECTIONS 106.03, 700, 709.01 THRU 709.13 AND 509.08 FOR SPECIFICATIONS AND SAMPLING.



TYPE-1



TYPE-2



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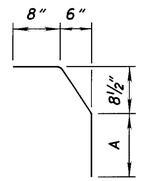

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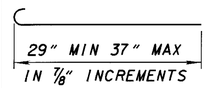

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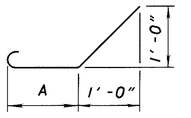
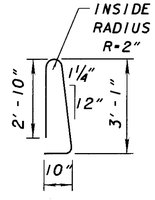
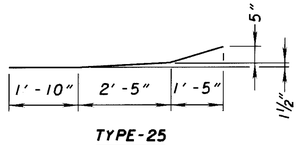


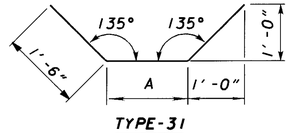
TYPE-18



TYPE-23



TYPE-25



TYPE-31

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION OHIO
705 OAKWOOD STREET, RAVENNA, OHIO

REVIEWED DLG DATE 01/25/00 STRUCTURE FILE NUMBER VARIOUS
DRAWN JEL REVISED -
DESIGNED CET CHECKED

REINFORCING SCHEDULE

POR-76-13.55

31/42

89/100

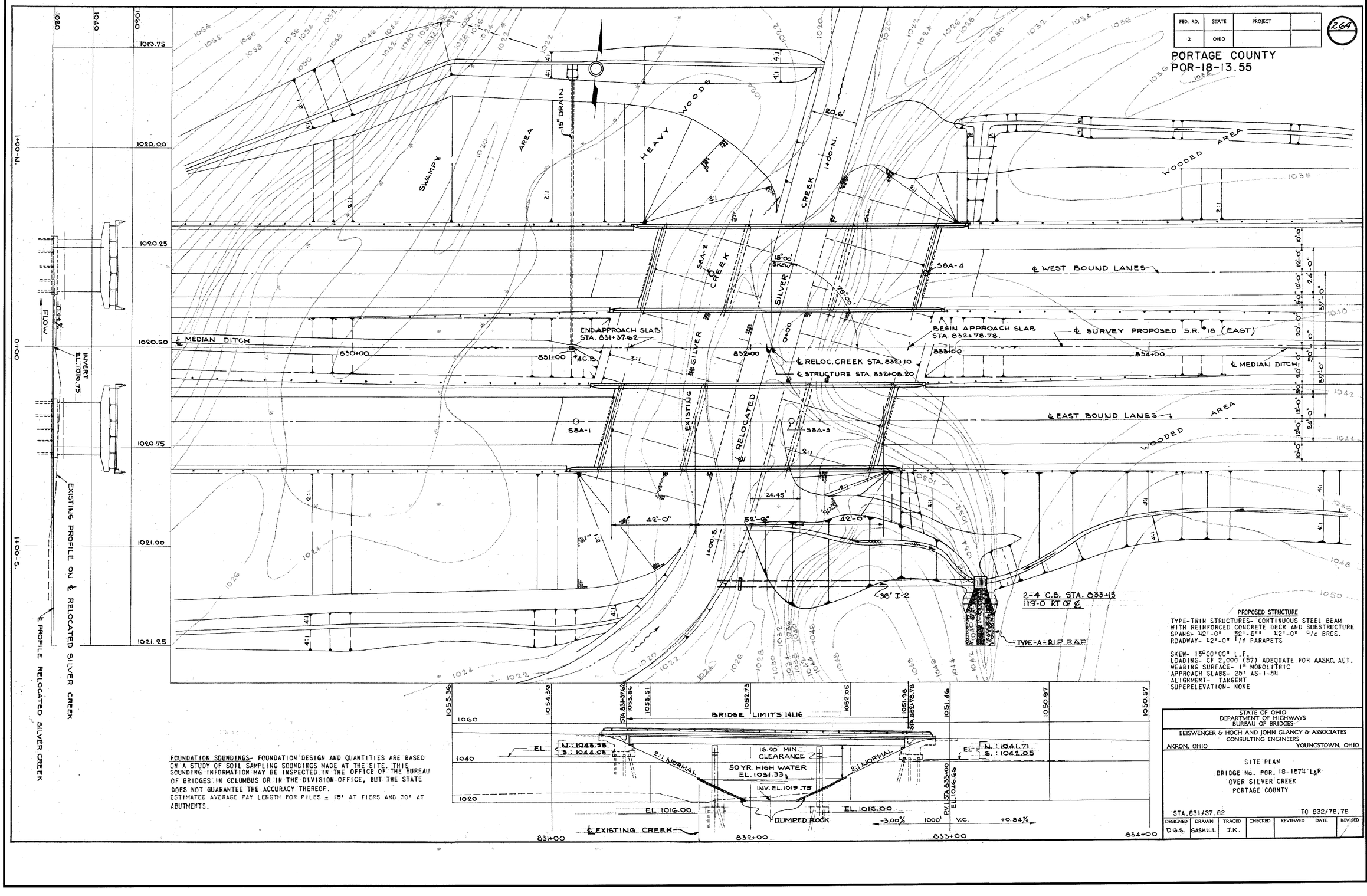
FULL SCALE 1"=1'-0"

I:/USERS/JLIDDLE/DESKTOP/POR/PORTG/ REINF.DGN JEL 12-02-98

FED. RD.	STATE	PROJECT	
2	OHIO		

264

PORTAGE COUNTY
POR-18-13.55



PROPOSED STRUCTURE
TYPE-TWIN STRUCTURES- CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS- 42'-0" 52'-6" 42'-0" ℄/c BRGS.
ROADWAY- 42'-0" f/f PARAPETS

SKEW- 15°00'00" L.F.
LOADING- CF 2,000 (57) ADEQUATE FOR AASHO ALT.
WEARING SURFACE- 1" MONOLITHIC
APPROACH SLABS- 25' AS-1-54
ALIGNMENT- TANGENT
SUPERELEVATION- NONE

FOUNDATION SOUNDINGS- FOUNDATION DESIGN AND QUANTITIES ARE BASED ON A STUDY OF SOIL SAMPLING SOUNDINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE OF THE BUREAU OF BRIDGES IN COLUMBUS OR IN THE DIVISION OFFICE, BUT THE STATE DOES NOT GUARANTEE THE ACCURACY THEREOF.
ESTIMATED AVERAGE PAY LENGTH FOR PILES = 15' AT PIERS AND 30' AT ABUTMENTS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH AND JOHN GLANCY & ASSOCIATES
CONSULTING ENGINEERS
AKRON, OHIO YOUNGSTOWN, OHIO

SITE PLAN
BRIDGE No. POR. 18-157½ L&R
OVER SILVER CREEK
PORTAGE COUNTY

STA. 831+37.62 TO 832+78.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
D.G.S.	GASKILL	J.K.				

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6702319 LEFT 6702320 RIGHT	

ORIGINAL SITE PLAN
BRIDGE NO. POR-76-157B L&R
ORIGINAL PLAN SHEET 264/323 (NOT TO SCALE)

POR-76-13.55

32/42

90/100

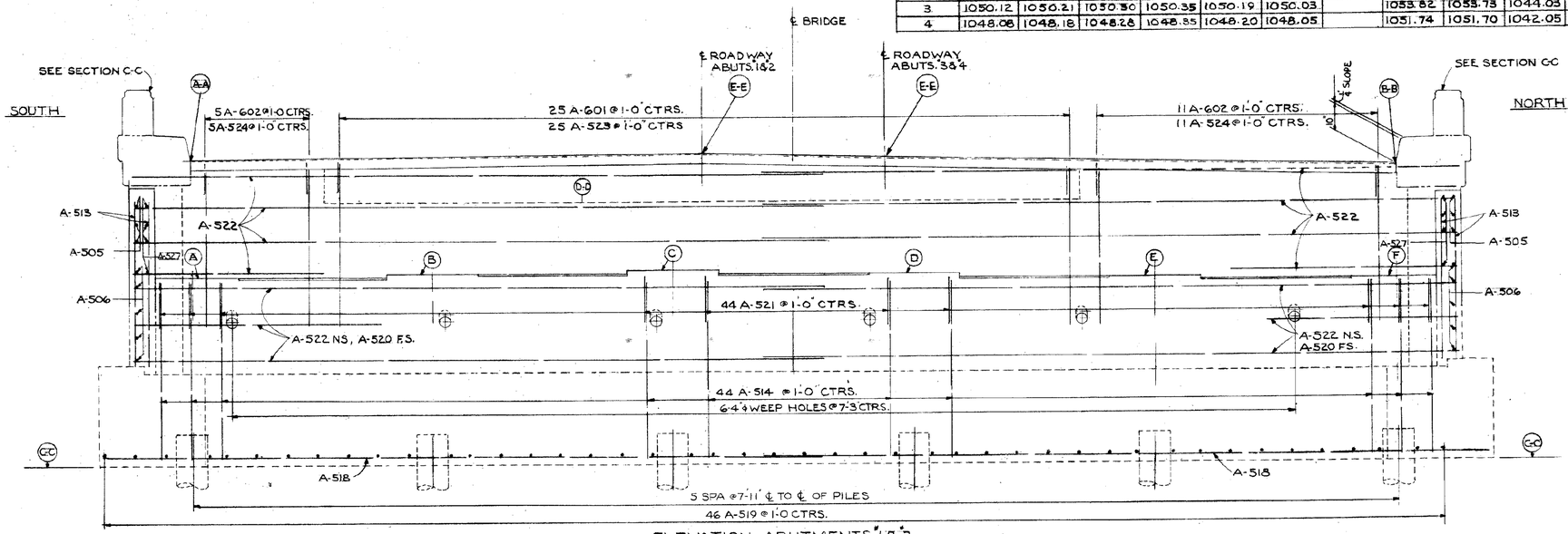
FED. RD.	STATE	PROJECT	
2	OHIO		

267

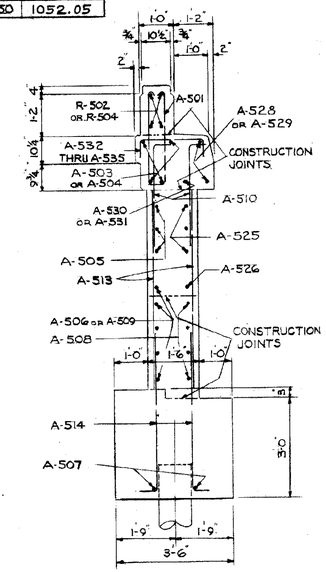
PORTAGE COUNTY
POR-18-13.55

ELEVATIONS

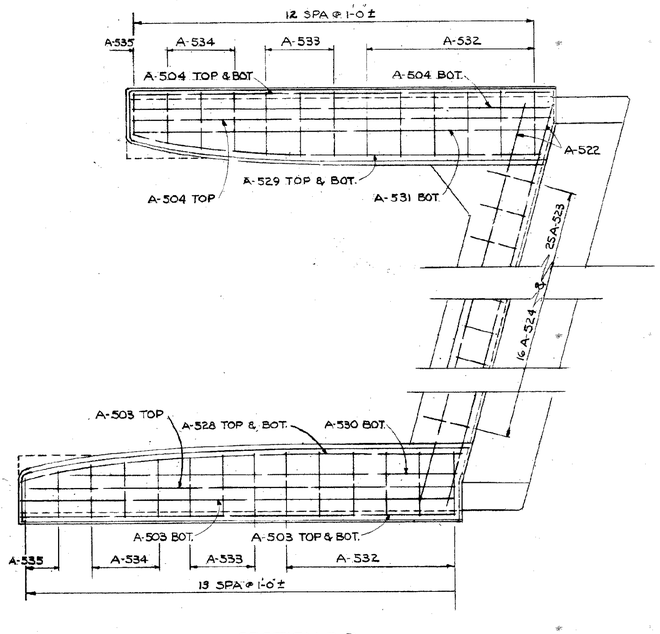
ABUTMENT	A	B	C	D	E	F	A-A	B-B	C-C	D-D	E-E
1	1049.85	1049.94	1050.02	1049.89	1049.74	1049.58	1053.55	1053.27	1043.58	1052.15	1053.72
2	1047.92	1048.02	1048.12	1048.00	1047.86	1047.71	1051.58	1051.36	1041.71	1050.23	1051.78
3	1050.12	1050.21	1050.30	1050.35	1050.19	1050.03	1053.82	1053.73	1044.03	1052.52	1054.09
4	1048.08	1048.18	1048.28	1048.35	1048.20	1048.05	1051.74	1051.70	1042.05	1050.50	1052.05



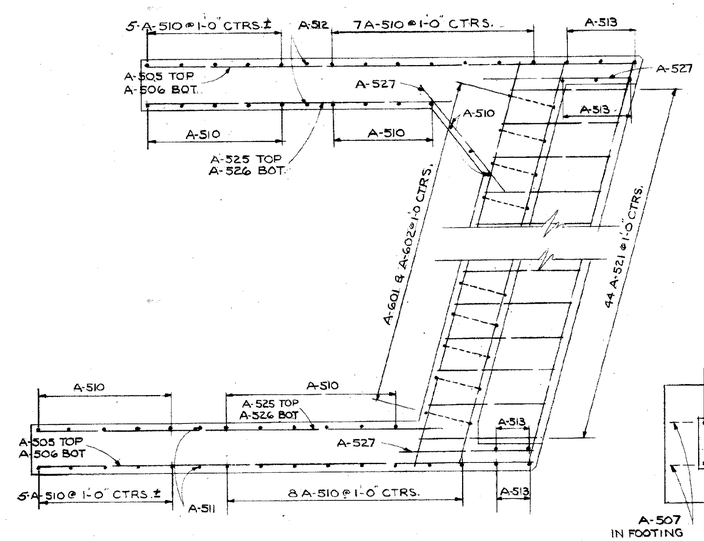
ELEVATION ABUTMENTS 1 & 3
REFLECTED ELEVATION ABUTMENTS 2 & 4



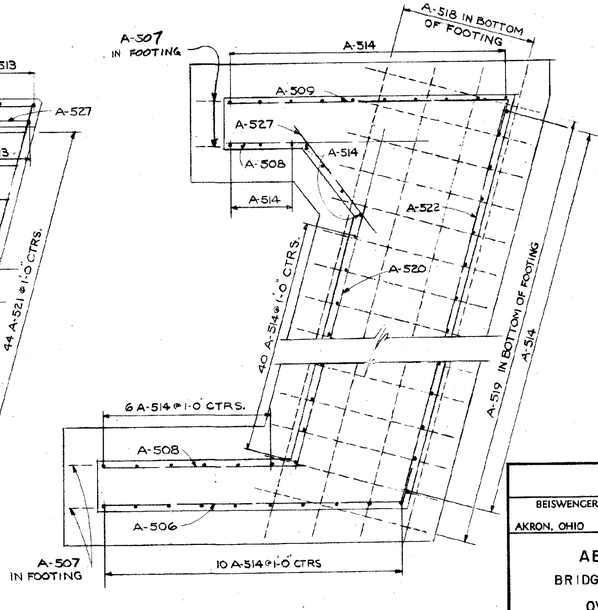
SECTION C-C



SECTION D-D



SECTION E-E



SECTION F-F

POROUS BACKFILL SHALL EXTEND UPWARD TO THE APPROACH SLAB AND TO THE SURFACE OF THE EARTH SHOULDERS FOR FULL LENGTH OF ABUTMENT AND WINGWALLS. EXCAVATION THEREFOR, IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE ABUTMENT, SHALL BE CONSIDERED AS PAID FOR IN THE PAID PRICE PER CU. YD. PAID FOR POROUS BACKFILL.

EMBANKMENT: 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 ABUT'S. AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUT'S.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENCER & HOCH AND JOHN GLANCY & ASSOCIATES
CONSULTING ENGINEERS
AKRON, OHIO YOUNGSTOWN, OHIO

ABUTMENT DETAILS
BRIDGE NO. POR-18-1574 L & R
OVER SILVER CREEK
STA. 831+37.62 TO 832+78.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	JLH					

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6702379 LEFT 6702382 RIGHT	

ORIGINAL ABUTMENT DETAILS
BRIDGE NO. POR-76-1578 L&R
ORIGINAL PLAN SHEET 267/323 (NOT TO SCALE)

POR-76-13.55

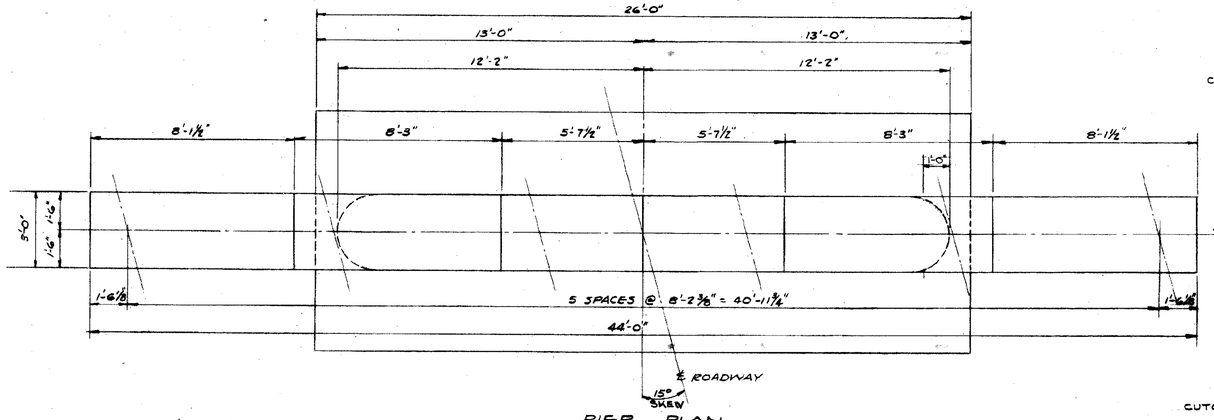
33/42

91/100

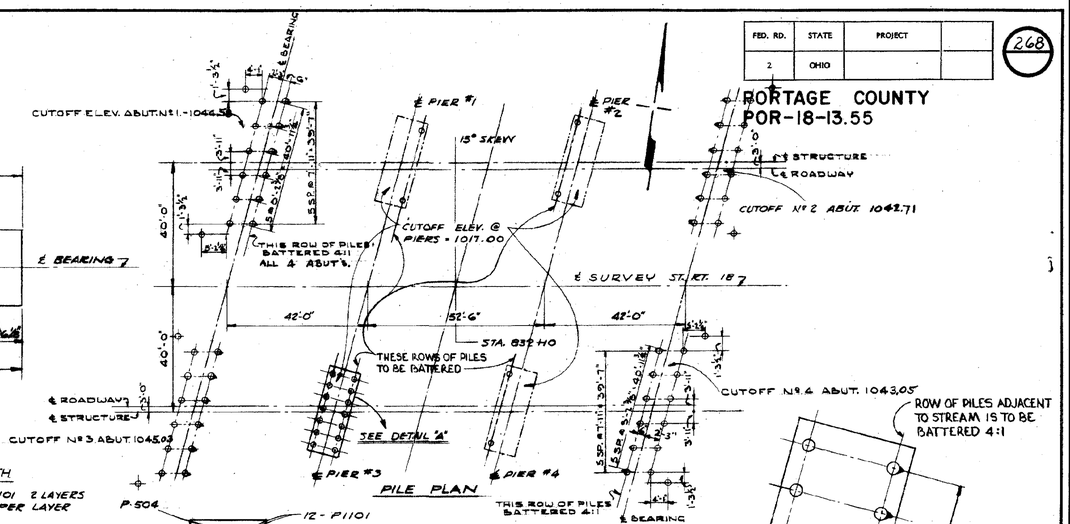
FED. RD.	STATE	PROJECT	
2	OHIO		

268

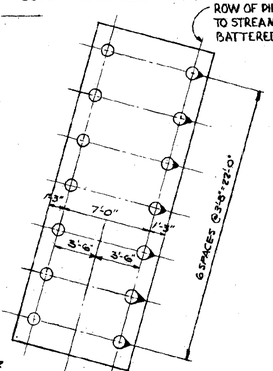
PORTAGE COUNTY
POR-18-13.55



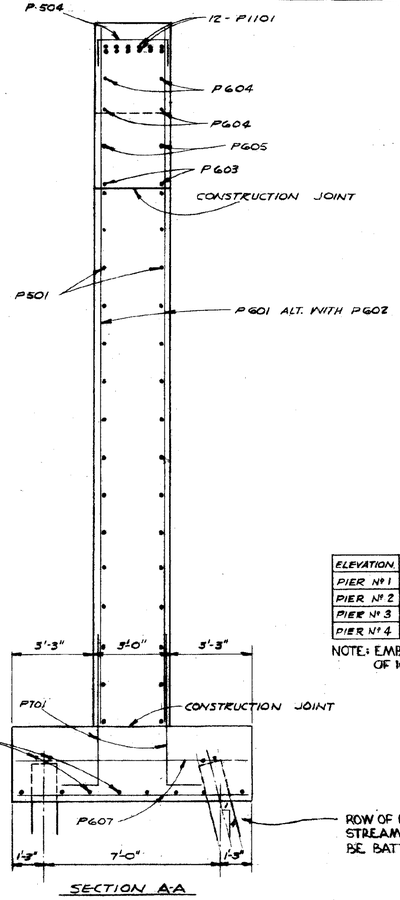
PIER PLAN



PILE PLAN



DETAIL 'A'

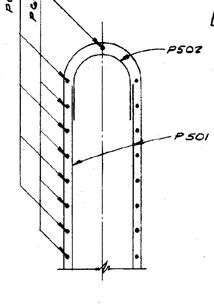


ELEVATION

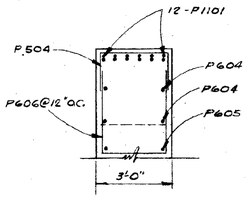
NOTES:
1. ALL REINFORCING STEEL SHALL BE 2" CLEAR FROM FACE OF CONCRETE EXCEPT AS SHOWN.
2. ALL PILES 12" DIA. CAST-IN-PLACE CONCRETE, DRIVEN TO 40 TON MINIMUM BEARING CAPACITY.

SECTION A-A

ROW OF PILES ADJACENT TO STREAM IN EACH PIER IS TO BE BATTERED AS SHOWN



SECTION C-C



SECTION B-B

ELEVATION	A	B	C	D	E	F	G
PIER Nº 1	1049.12	1049.21	1049.30	1049.17	1049.02	1048.86	1016.00
PIER Nº 2	1048.46	1048.56	1048.65	1048.53	1048.38	1048.23	1016.00
PIER Nº 3	1049.35	1049.44	1049.53	1049.59	1049.43	1049.28	1016.00
PIER Nº 4	1048.66	1048.75	1048.85	1048.91	1048.76	1048.61	1016.00

NOTE: EMBANKMENT SHALL BE PLACED TO MIN. ELEVATION OF 1040' FOR A MINIMUM OF 100' BACK FROM THE PIERS BEFORE ANY WORK SHALL BE DONE ON THE PIERS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH AND JOHN GLANCY & ASSOCIATES
CONSULTING ENGINEERS
AKRON, OHIO — YOUNGSTOWN, OHIO

PIER DETAILS

BRIDGE NO. POR-18-1574 L & R
OVER SILVER CREEK
STA. 831+37.62 TO 832+78.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	Hoskins					

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6702791 LEFT 6702821 RIGHT	

ORIGINAL PIER DETAILS
BRIDGE NO. POR-76-1578 L&R 268/323 (NOT TO SCALE)
ORIGINAL PLAN SHEET

POR-76-13.55

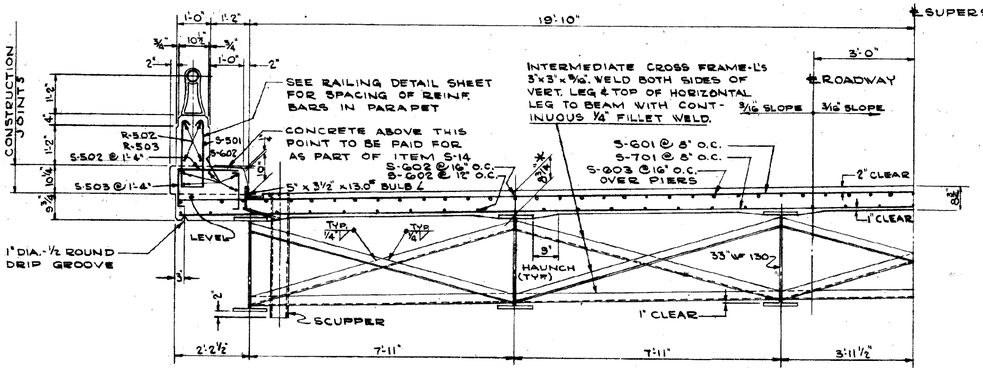
34/42

92/100

FED. RD.	STATE	PROJECT	
2	OHIO		

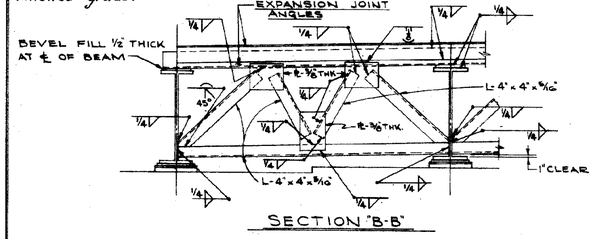
269

PORTAGE COUNTY
POR-18-13.55

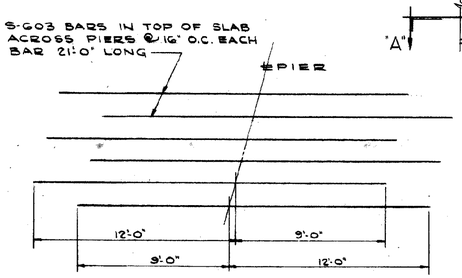


TRANSVERSE SECTION

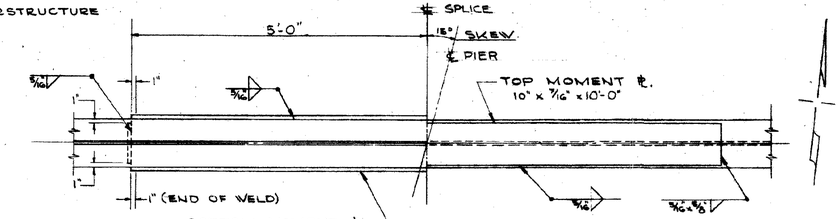
*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.



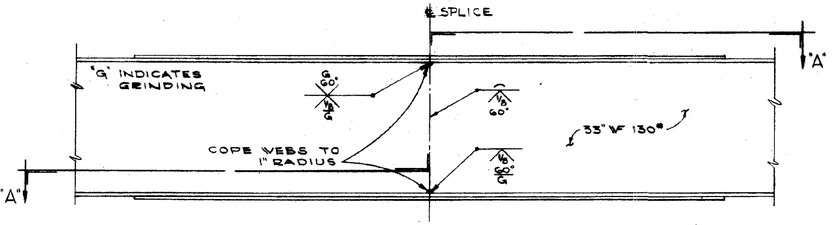
SECTION "B-B"



BAR STAGGERING DETAIL OVER PIERS



SECTION "A-A"



ELEVATION
BEAM SPLICE DETAILS

DEFLECTION & CAMBER				
	OUTSIDE BEAMS		INSIDE BEAMS	
	END SPANS	MIDDLE SPANS	END SPANS	MIDDLE SPANS
DEFLECTION DUE TO WEIGHT OF STEEL	0.00	0.05	0.00	0.05
DEFLECTION DUE TO REMAINING DEAD LOAD	0.15	0.30	0.10	0.20
CONVEXITY REQ'D FOR VERTICAL CURVE	0.10	0.15	0.10	0.15
SUM OF DEFLECTION AND CONVEXITY	0.25	0.50	0.20	0.40
REQUIRED CAMBER	0	0	0	0

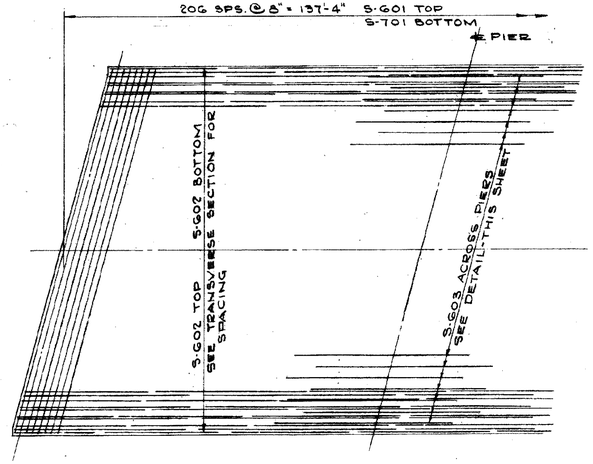
A. CONCRETE DECK PLACING:
IN ORDER TO FACILITATE WATER CURING OF THE CONCRETE OF THE DECK SLAB, THE PLACING OF CONCRETE SHALL PROGRESS UPGRADE. THE SLAB MAY BE PLACED IN SECTIONS BETWEEN TRANSVERSE CONSTRUCTION JOINTS WHICH ARE NORMAL TO CENTERLINE OF BRIDGE AND ARE LOCATED NEAR THE CENTER OF ANY SPAN.

B. SLAB THICKNESS SHOWN INCLUDES 1" OF MONOLITHIC WEARING SURFACE.

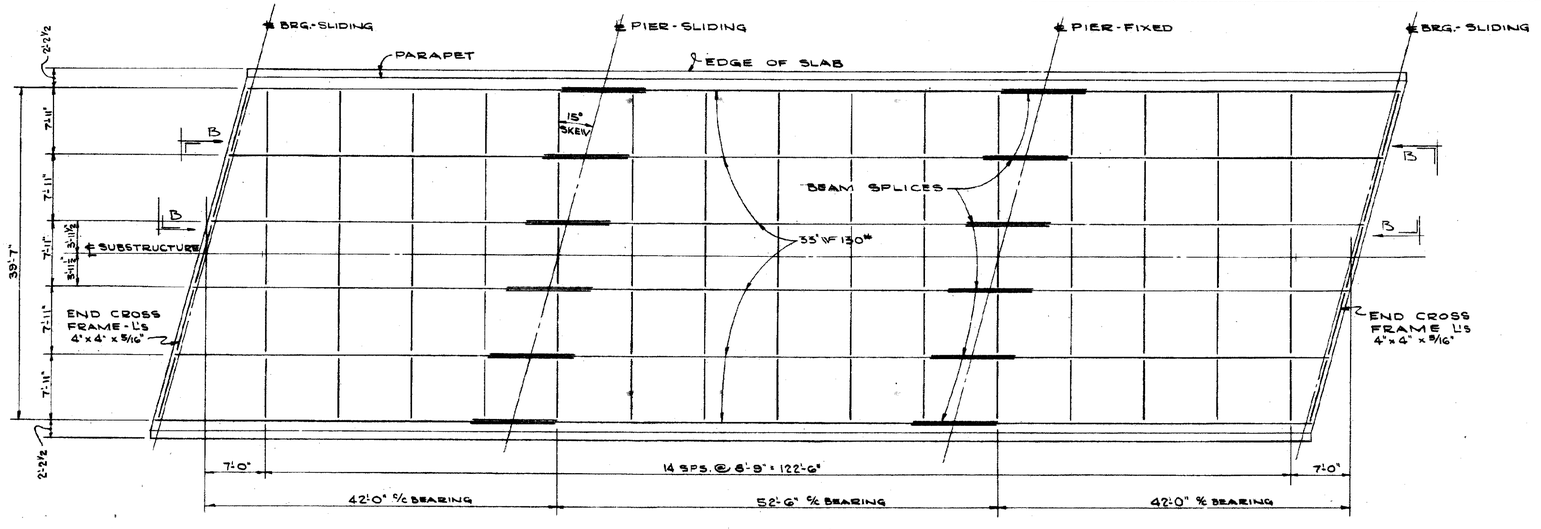
C. WELDING PROCEDURE:
1. LIFT ENDS OF BEAMS AT NORTH & SOUTH ABUTMENTS - 1/2"
2. BUTT WELD BEAM FLANGES & WEB AT PIERS USING THE FOLLOWING SEQUENCE: MAKE ONE PASS ON EACH FLANGE, THEN ONE ON WEB. REPEAT UNTIL WELDS ARE COMPLETED
3. WELD TOP & BOTTOM FLANGE MOMENT PLATES AT PIERS.
4. LOWER BEAM ENDS INTO PLACE AT ABUTMENTS

D. WELDING OF STRUCTURAL STEEL SHALL BE CLASS 'A' EXCEPT AS OTHERWISE SHOWN. ANY WELDS SHOWN AS FIELD WELDS MAY, AT THE OPTION OF THE CONTRACTOR, BE MADE IN THE SHOP.

DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3 inches per foot. Payment for deck slab concrete shall be based on the 9" width.



PARTIAL SLAB REINFORCING PLAN



FRAMING PLAN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH AND JOHN CLANCY & ASSOCIATES
CONSULTING ENGINEERS
AKRON, OHIO — YOUNGSTOWN, OHIO

FRAMING PLAN & SUPERSTRUCTURE
BRIDGE NO. POR-18-1574 I. & R.
OVER SILVER CREEK
STA. 831+37.62 TO 832+78.78

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	J.R.J.					

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

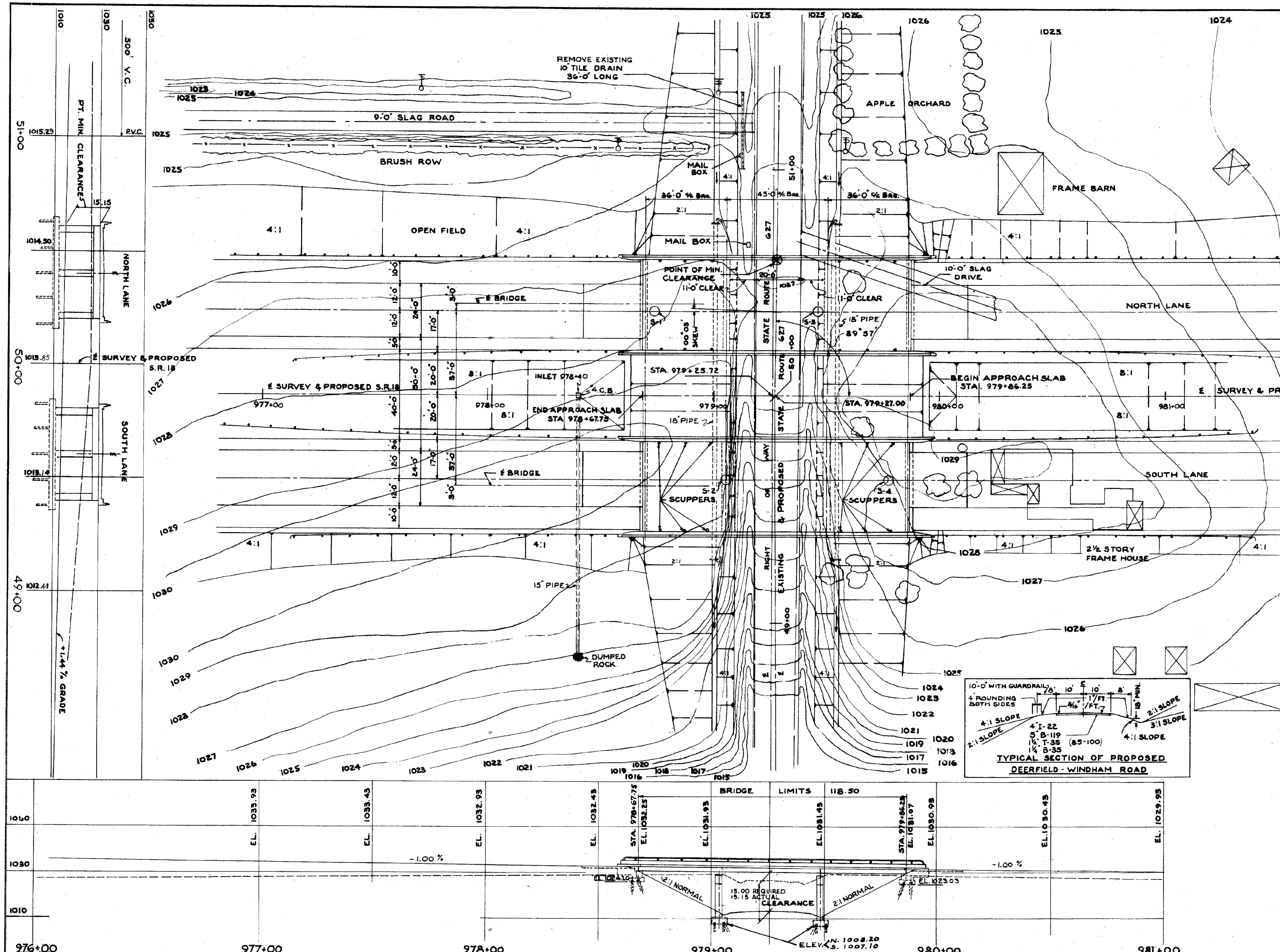
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 6702791 LEFT 6702821 RIGHT	

ORIGINAL SUPERSTRUCTURE DETAILS
BRIDGE NO. POR-76-1578 L&R
ORIGINAL PLAN SHEET 269/323 (NOT TO SCALE)

POR-76-13.55

35/42

93/100



FOUNDATION SOUNDINGS: FOUNDATION DESIGN AND FOUNDATION QUANTITIES ARE BASED ON A STUDY OF SOIL SAMPLING SOUNDINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE OF THE BUREAU OF BRIDGES IN COLUMBUS OR IN THE DIVISION OFFICE, BUT THE STATE DOES NOT GUARANTEE THE ACCURACY THEREOF.

ESTIMATED AVERAGE PAY LENGTH FOR PILES 12 FEET AT PIERS AND 30 FEET AT ABUTMENTS.

PROPOSED STRUCTURE

TYPE- CONTINUOUS REINFORCED CONCRETE SLAB BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS- 36', 45', 36' C. TO C. BEARINGS TWIN STRUCTURES
ROADWAY- 42' f/f PARAPET
SKEW- NONE
LOAD FREQUENCY- CF2,000(57) ADEQUATE FOR A.A.S.C.H.O. ALTERNATE LOADING
APPROACH SLAB- 25' AS-1-54
ALIGNMENT- TANGENT
SUPERELEVATION- NONE
TRAFFIC- 468 A.D.T. (1975)
WEARING SURFACE- 1" MONOLITHIC

FED. RD.	STATE	PROJECT
2	OHIO	

PORTAGE COUNTY
POR-18-13.55

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH AND JOHN GLANCY & ASSOCIATES
CONSULTING ENGINEERS
AKRON, OHIO — YOUNGSTOWN, OHIO

SITE PLAN

BRIDGE NO. POR-18-1855 L & R
OVER STATE ROUTE 627

STA. 978+67.75 TO STA. 979+86.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT FOUR PRODUCTION, 705 OAKWOOD STREET, RAVENNA, OHIO

REVIEWED DLG — DATE 01/25/00
STRUCTURE FILE NUMBER 6702945 LEFT, 6703003 RIGHT
DRAWN JEL — REVISED
DESIGNED CET — CHECKED

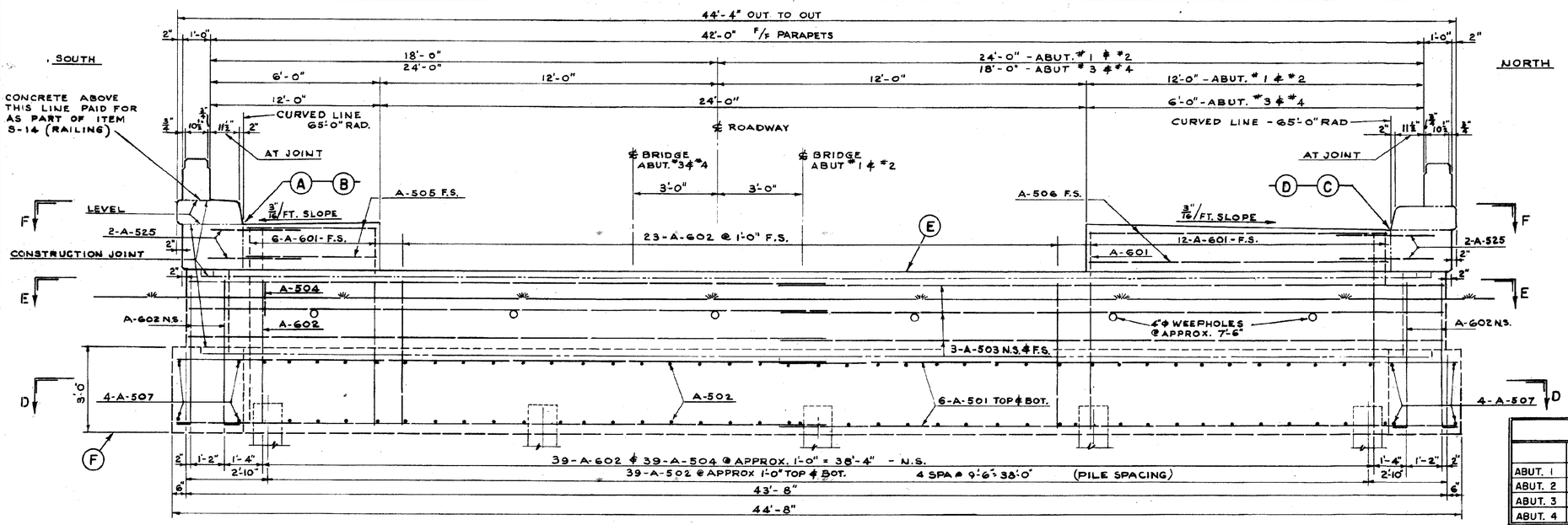
ORIGINAL SITE PLAN
BRIDGE NO. POR-76-1857
ORIGINAL PLAN SHEET 292/323 (NOT TO SCALE)

POR-76-13.55

FED. RD.	STATE	PROJECT	
2	OHIO		

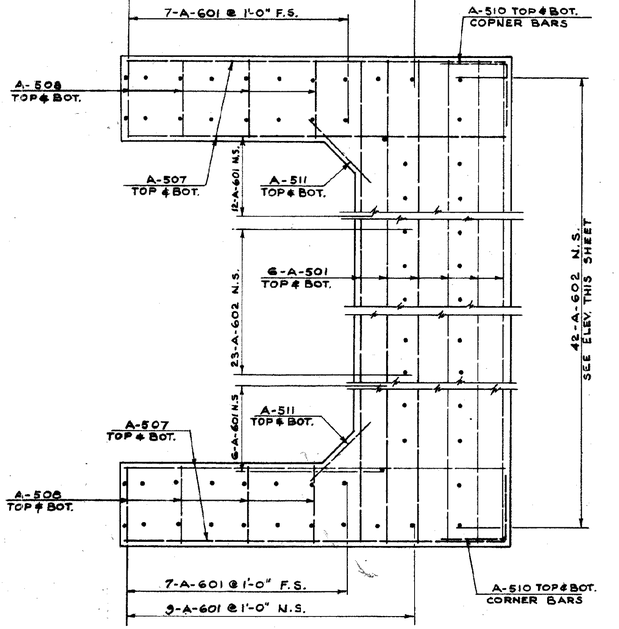
296

PORTAGE COUNTY
POR-18-13.55

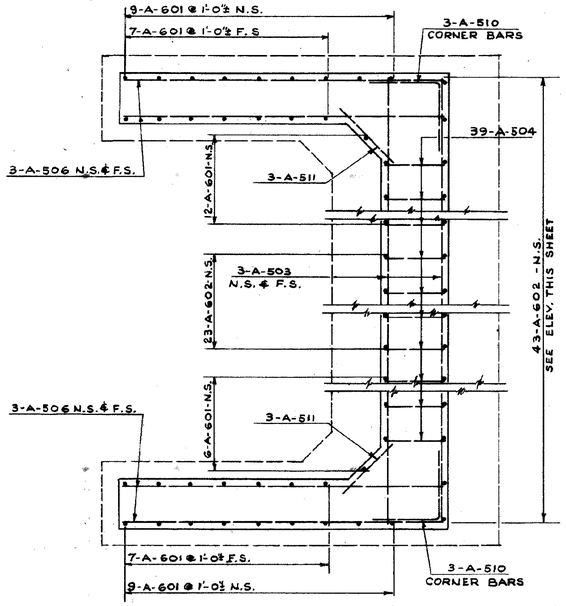


ELEVATION OF ABUTMENT NO.1 & NO.3
REFLECTED ELEVATION OF ABUTMENT NO.2 & NO.4

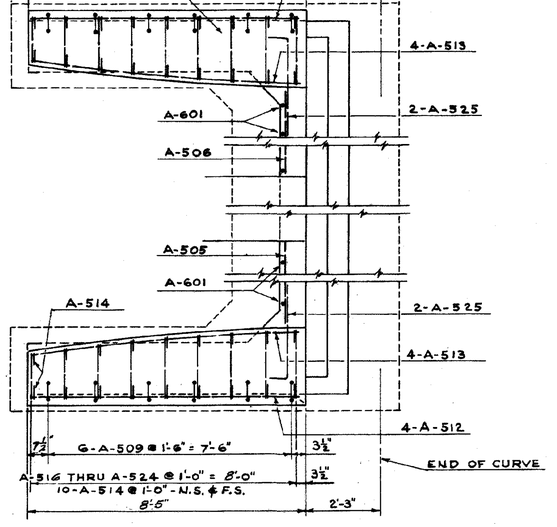
ELEVATION SCHEDULE						
	A	B	C	D	E	F
ABUT. 1	1032.18	1032.27	1032.08	1032.17	1030.45	1024.20
ABUT. 2	1031.00	1030.91	1030.90	1030.81	1029.28	1023.03
ABUT. 3	1032.08	1032.17	1032.18	1032.27	1030.45	1024.20
ABUT. 4	1030.90	1030.81	1031.00	1030.91	1029.28	1023.03



SECTION D-D



SECTION E-E



SECTION F-F

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH AND JOHN GLANCY & ASSOCIATES
CONSULTING ENGINEERS
AKRON, OHIO YOUNGSTOWN, OHIO

ABUTMENT DETAILS
BRIDGE NO. POR-18-1855 L & R
OVER STATE ROUTE 627
STA. 978+67.75 TO STA. 979+86.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00

CHECKED
REVISED
STRUCTURE FILE NUMBER
6702043 LEFT
6702053 RIGHT

ORIGINAL ABUTMENT DETAILS
BRIDGE NO. POR-76-1857 L&R
ORIGINAL PLAN SHEET 296/323 (NOT TO SCALE)

POR-76-13.55

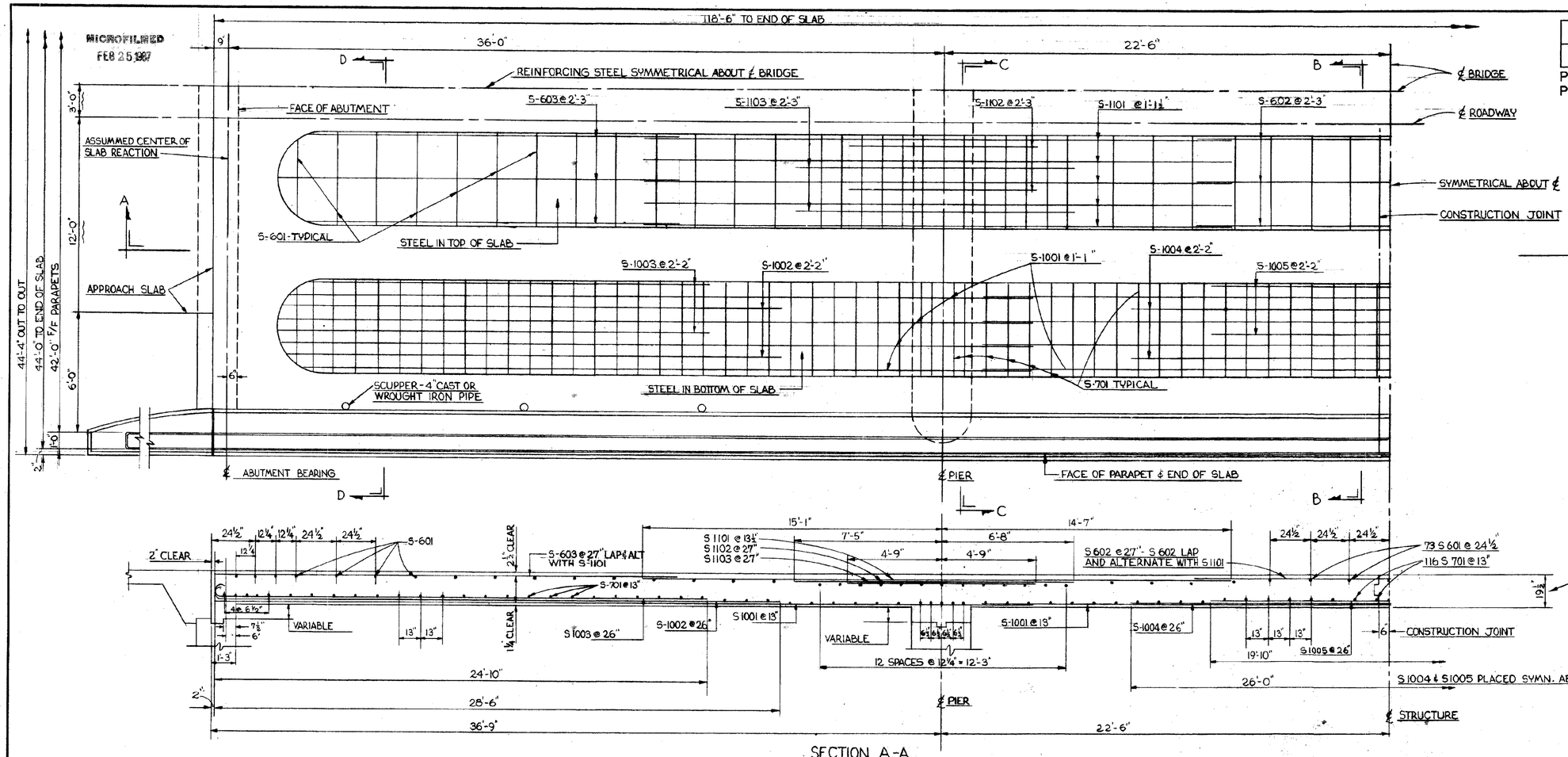
37/42

95/100

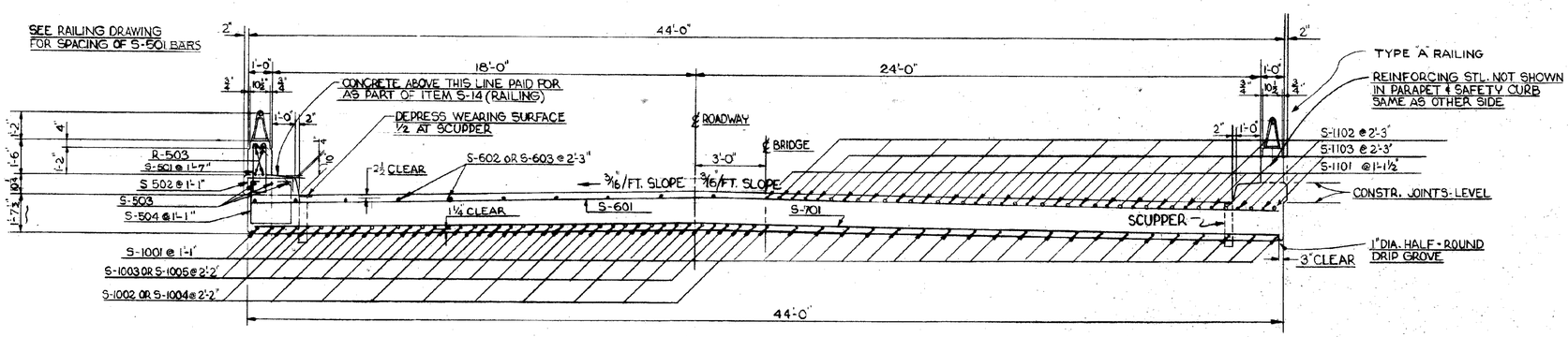
FED. RD.	STATE	PROJECT	
2	OHIO		

297

PORTAGE COUNTY
POR-18-13.55



SECTION A-A



SECTION B-B & D-D TYPICAL SECTION SECTION C-C

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH AND JOHN GLANCY & ASSOCIATES
CONSULTING ENGINEERS
AKRON, OHIO YOUNGSTOWN, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. POR-18-1855 L & R
OVER STATE ROUTE 627

STA. 978+87.75 TO STA. 979+86.25

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	SANDERS					

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

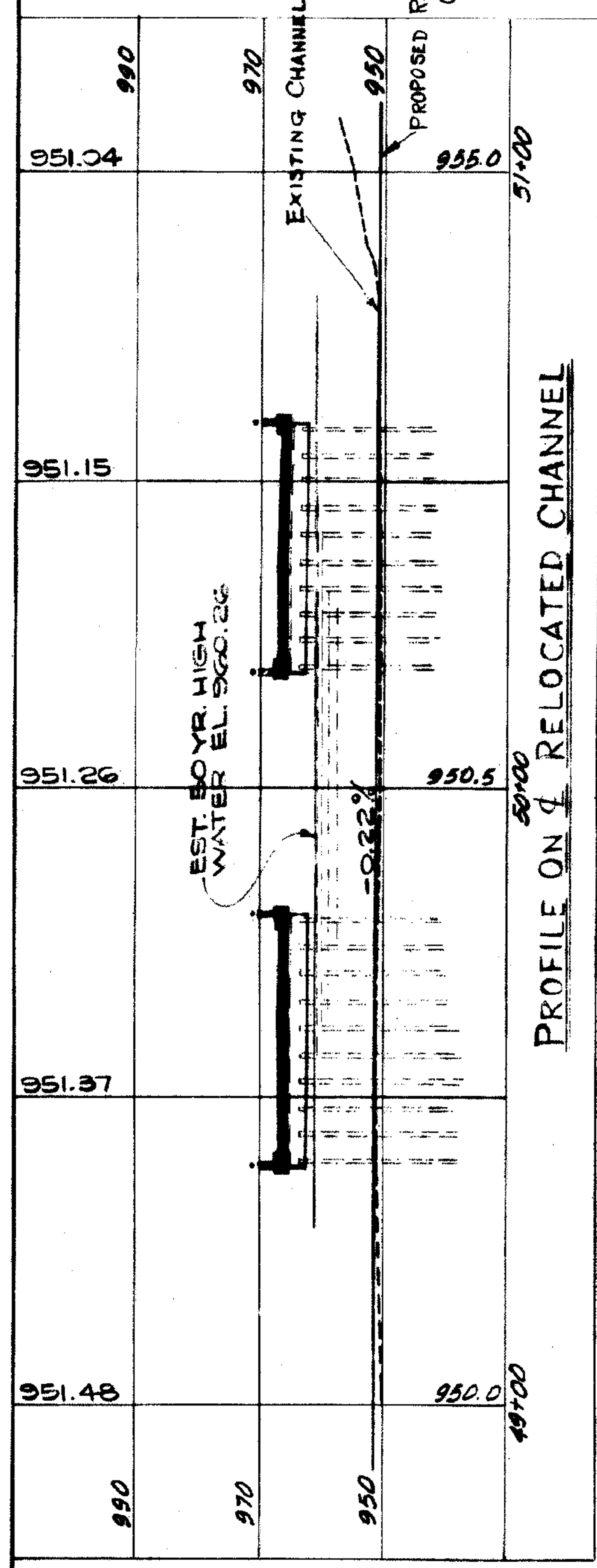
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED	REVISED	STRUCTURE FILE NUMBER 9708245 LEFT 9708263 RIGHT	

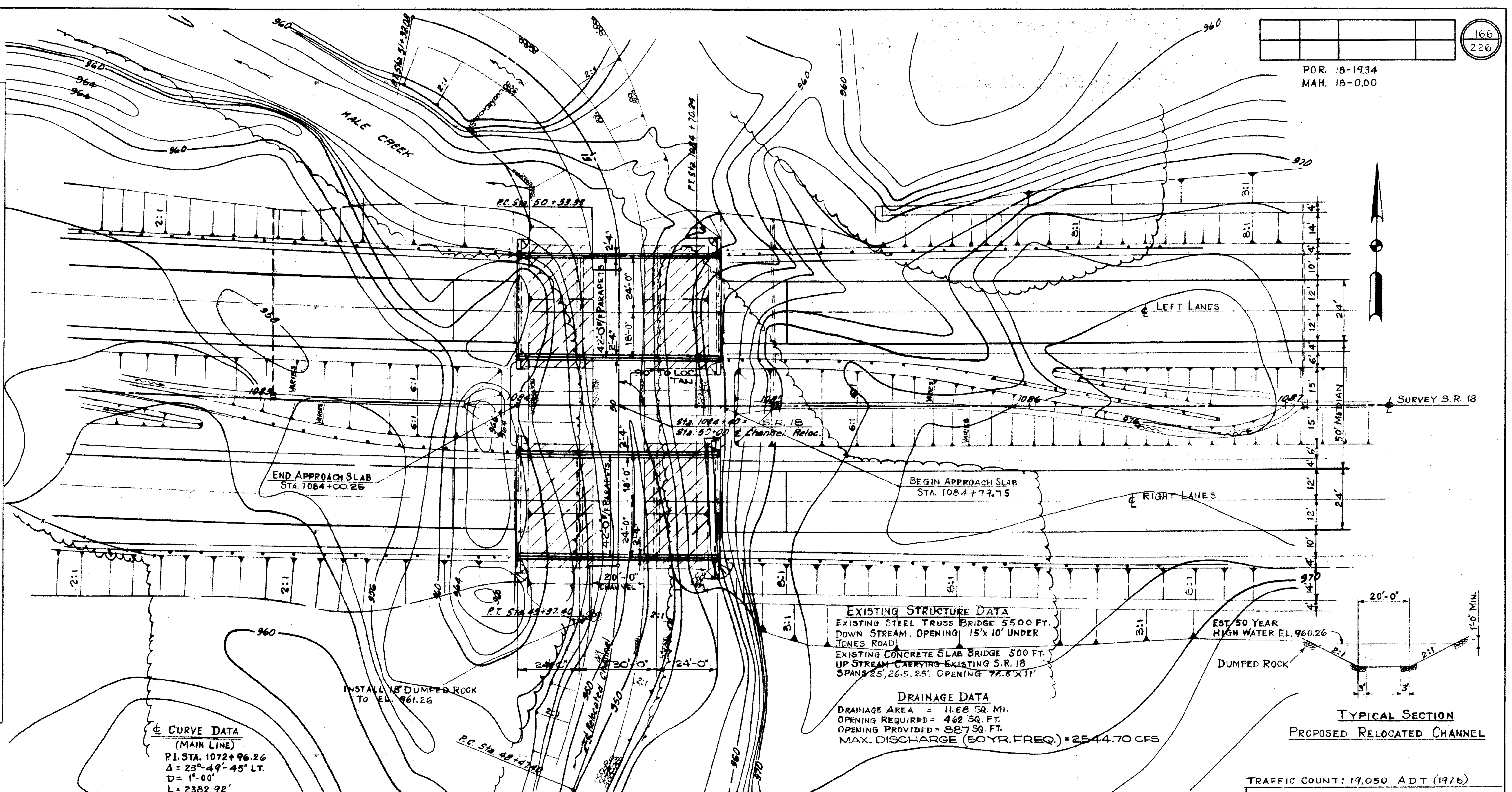
ORIGINAL SUPERSTRUCTURE DETAILS
BRIDGE NO. POR-76-1857 L&R
ORIGINAL PLAN SHEET 297/323 (NOT TO SCALE)

POR-76-13.55

38/42

96/100





EXISTING STRUCTURE DATA

EXISTING STEEL TRUSS BRIDGE 55.00 FT. DOWN STREAM. OPENING 15'x 10' UNDER JONES ROAD.
EXISTING CONCRETE SLAB BRIDGE 50.0 FT. UP STREAM CARRYING EXISTING S.R. 18 SPANS 25', 26.5, 25'. OPENING 76.5'x 11'

DRAINAGE DATA

DRAINAGE AREA = 11.68 SQ. MI.
OPENING REQUIRED = 462 SQ. FT.
OPENING PROVIDED = 887 SQ. FT.
MAX. DISCHARGE (50 YR. FREQ.) = 2544.70 CFS

TYPICAL SECTION
PROPOSED RELOCATED CHANNEL

CURVE DATA
(RELOCATED CHANNEL)

P.I. STA. 51+36.50
Δ = 79°-30' LT.
D = 57°-17'-45"
L = 138.75
T = 83.17
E = 20.24
R = 100.00'

P.I. STA. 48+92.99
Δ = 22°-30' LT.
D = 25°
L = 90.00'
T = 45.54'
E = 4.49'
R = 229.18'

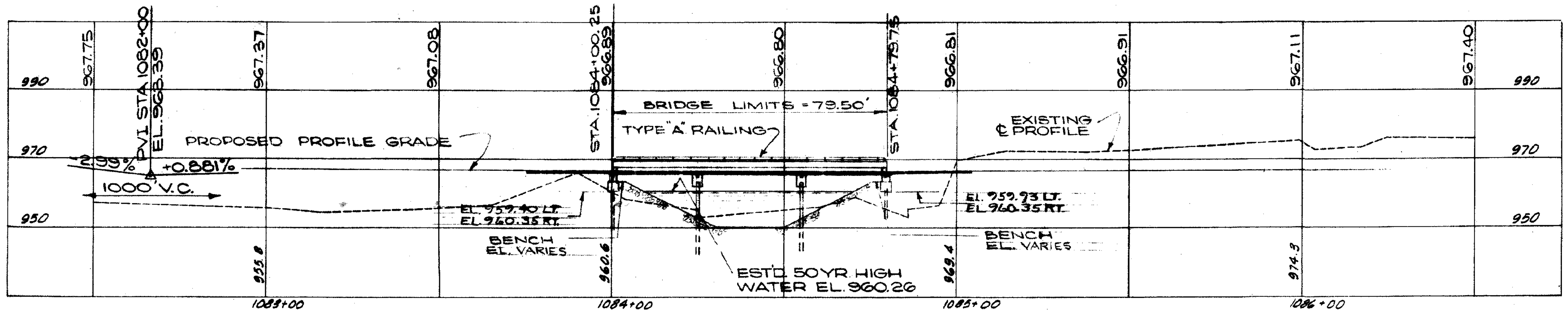
℄ CURVE DATA
(MAIN LINE)

P.I. STA. 1072+96.26
Δ = 23°-49'-45" LT.
D = 1°-00'
L = 2382.92'
T = 1208.94'
E = 126.15'
R = 5729.58

TRAFFIC COUNT: 19,050 ADT (1975)

PROPOSED STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB DECK WITH CAPPED PILE SUBSTRUCTURE
SPANS: 24'-0", 30'-0", 24'-0" ℄/℄ ASSUMED BEARINGS
ROADWAY: 42'-0" F/F PARAPETS
SKEW: 0°-00'-00"
LOAD FREQUENCY: CF=2000(57) ADEQUATE FOR ASSHO ALTERNATE LOADING
APPROACH SLABS: 25' LONG (AS-1-54)
ALIGNMENT: 1°-00' CURVE LEFT.
SUPERELEVATION: VARIABLE.
WEARING SURFACE: 1" MONOLITHIC
SLOPE PROTECTION: DUMPED ROCK



AVERAGE EST'D. PAY LENGTH FOR PILES:
ABUT. NO. 1 — 32'
ABUT. NO. 2 — 41'
PIERS — 35'

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

SITE PLAN
BRIDGE NO. POR-18-2054 L&R
OVER KALE CREEK
PORTAGE COUNTY
STA. 1084+40.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ETD	MTT			RDH	3/13/64	

166/226

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

REVIEWED	DATE
DLG	01/25/00

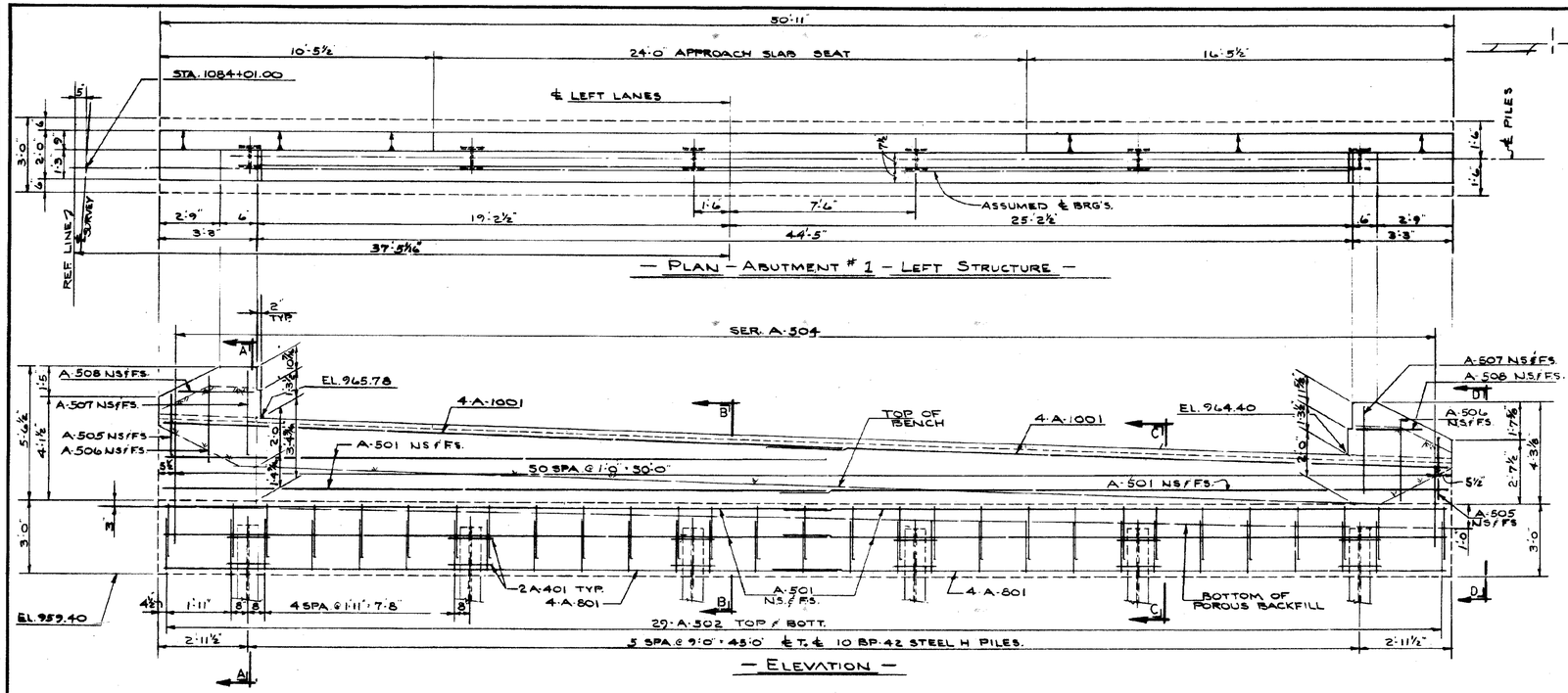
STRUCTURE FILE NUMBER
6703151 LEFT
6703186 RIGHT

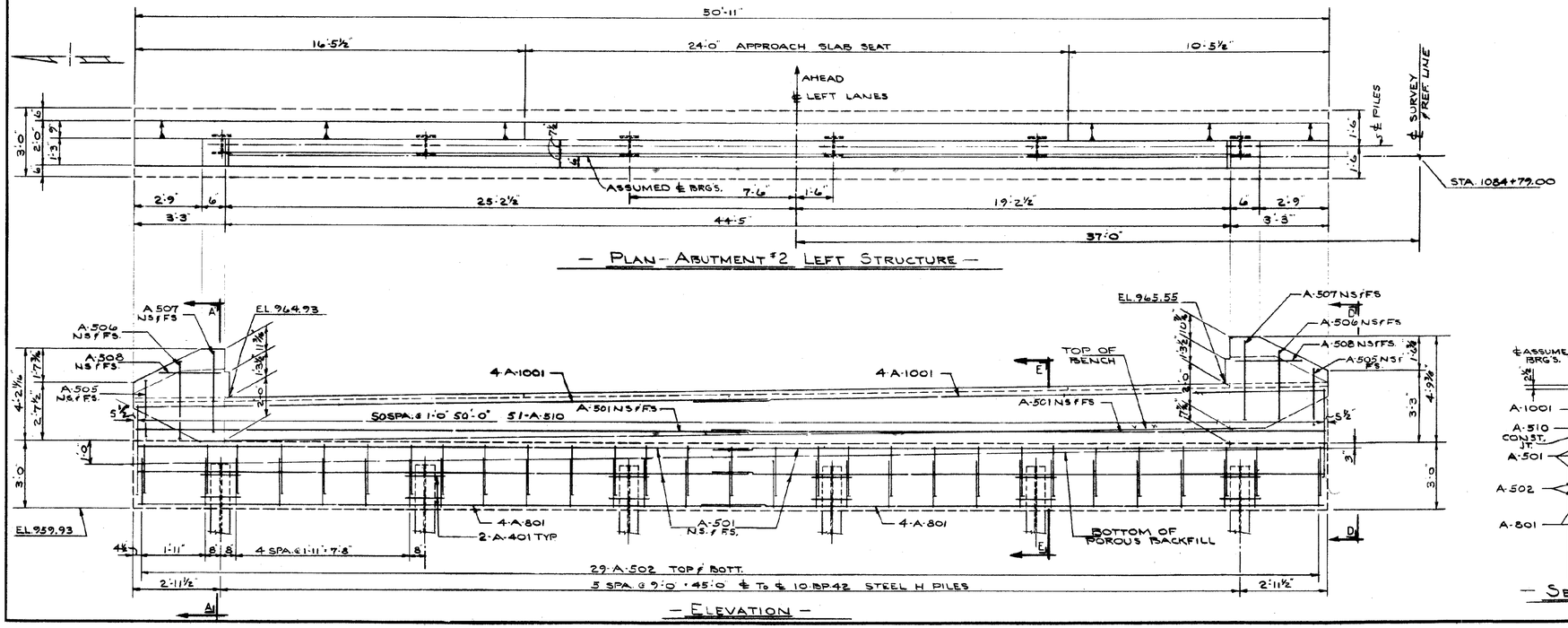
DESIGNED CET | DRAWN JEL | CHECKED | REVISED

ORIGINAL SITE PLAN
BRIDGE NO. POR-76-2057 L&R
ORIGINAL PLAN SHEET 166/226 (NOT TO SCALE)

POR-76-13.55

39/42





FED. RD.	STATE	PROJECT	
2	OHIO		

168
226

POR.-18-19.34
MAH.-18-0.00

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED		REVISED	STRUCTURE FILE NUMBER 6703.15 RIGHT 6703.16 LEFT

ORIGINAL ABUTMENT DETAILS
BRIDGE NO. POR-76-2057 L&R
ORIGINAL PLAN SHEET 168/226 (NOT TO SCALE)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

ABUTMENT #1&2 LEFT
BRIDGE NO. POR.-18-2054 L.& R.
OVER KALE CREEK
PORTAGE COUNTY
STA. 1084+40.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.T.O.	J.N.P.		J.W. 11/16/99	R.D.H.	3/24/99	

POR-76-13.55

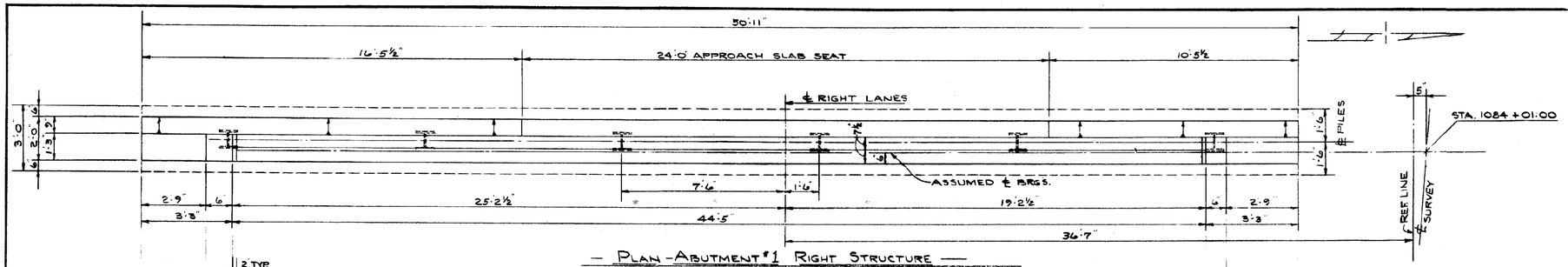
40/42

98
100

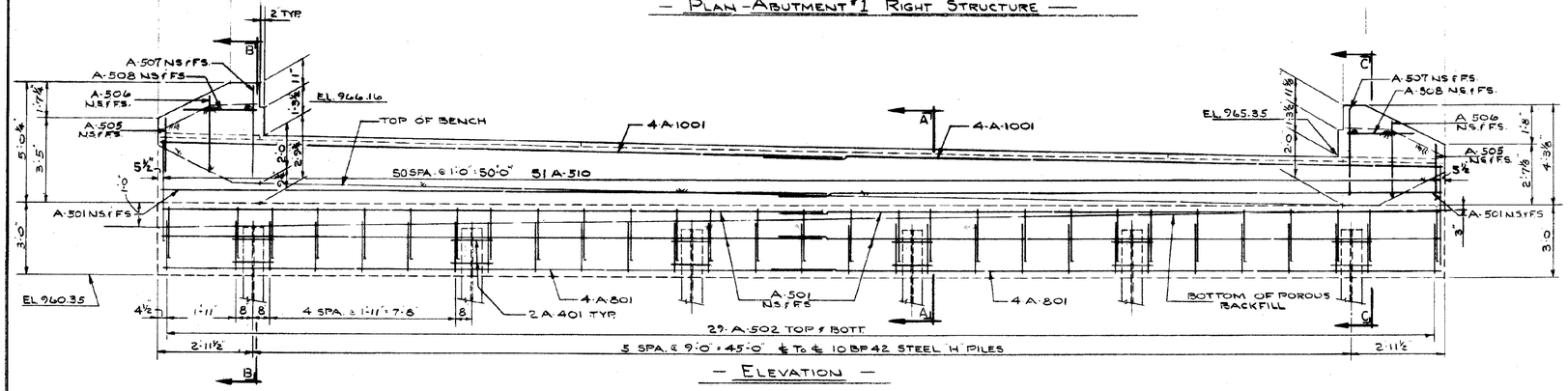
FED. RD.	STATE	PROJECT	
2	OHIO		

169/226

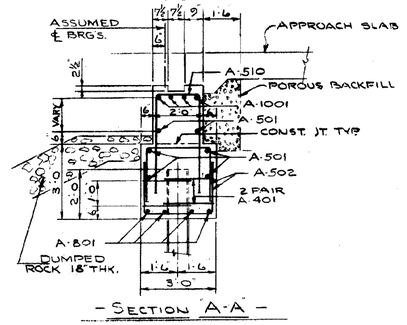
POR-18-19.34
MAH.-18-0.00



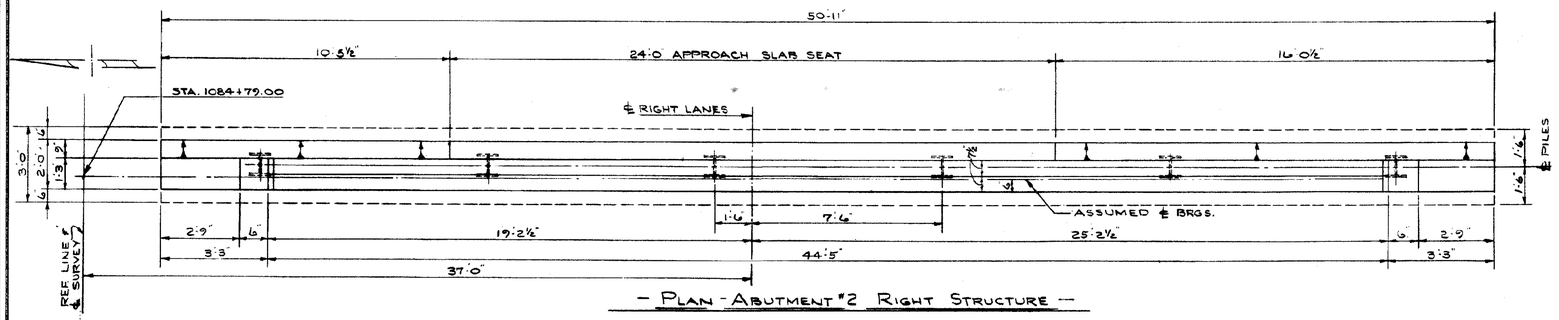
— PLAN - ABUTMENT #1 RIGHT STRUCTURE —



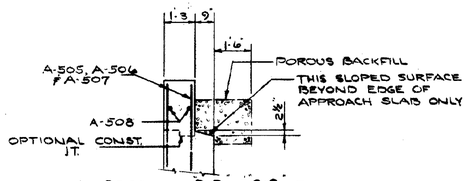
— ELEVATION —



— SECTION A-A —

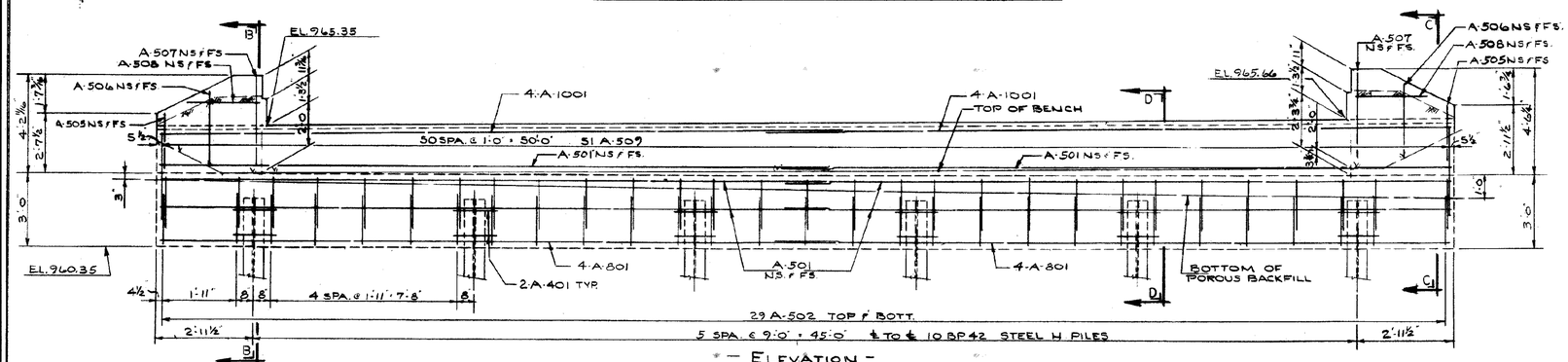


— PLAN - ABUTMENT #2 RIGHT STRUCTURE —

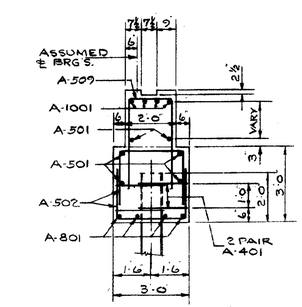


— SECTION B-B ℄ C-C —

SEE SECTION D-D FOR REINFORCING STEEL AND DIMENSIONS NOT SHOWN



— ELEVATION —



— SECTION D-D —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

ABUTMENT #1 & #2 RIGHT

BRIDGE № POR.-18-2054 L.& R.
OVER KALE CREEK
PORTAGE COUNTY
STA. 1084+40.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
STD	LNP		11/14/44	RDH	3/23/44	

DESIGN AGENCY
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT FOUR PRODUCTION
705 OAKWOOD STREET, RAVENNA, OHIO

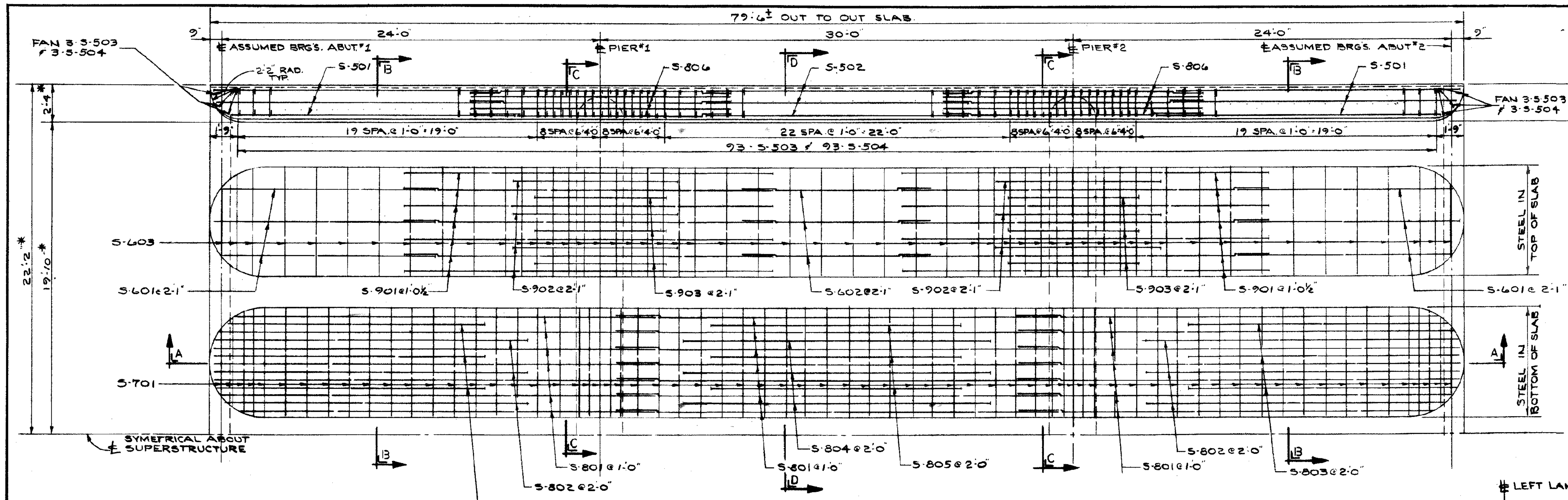
DESIGNED	DRAWN	REVIEWED	DATE
CET	JEL	DLG	01/25/00
CHECKED		REVISED	STRUCTURE FILE NUMBER 6703.18 LEFT 6703.18 RIGHT

ORIGINAL ABUTMENT DETAILS
BRIDGE NO. POR-76-2057 L&R
ORIGINAL PLAN SHEET 169/226 (NOT TO SCALE)

POR-76-13.55

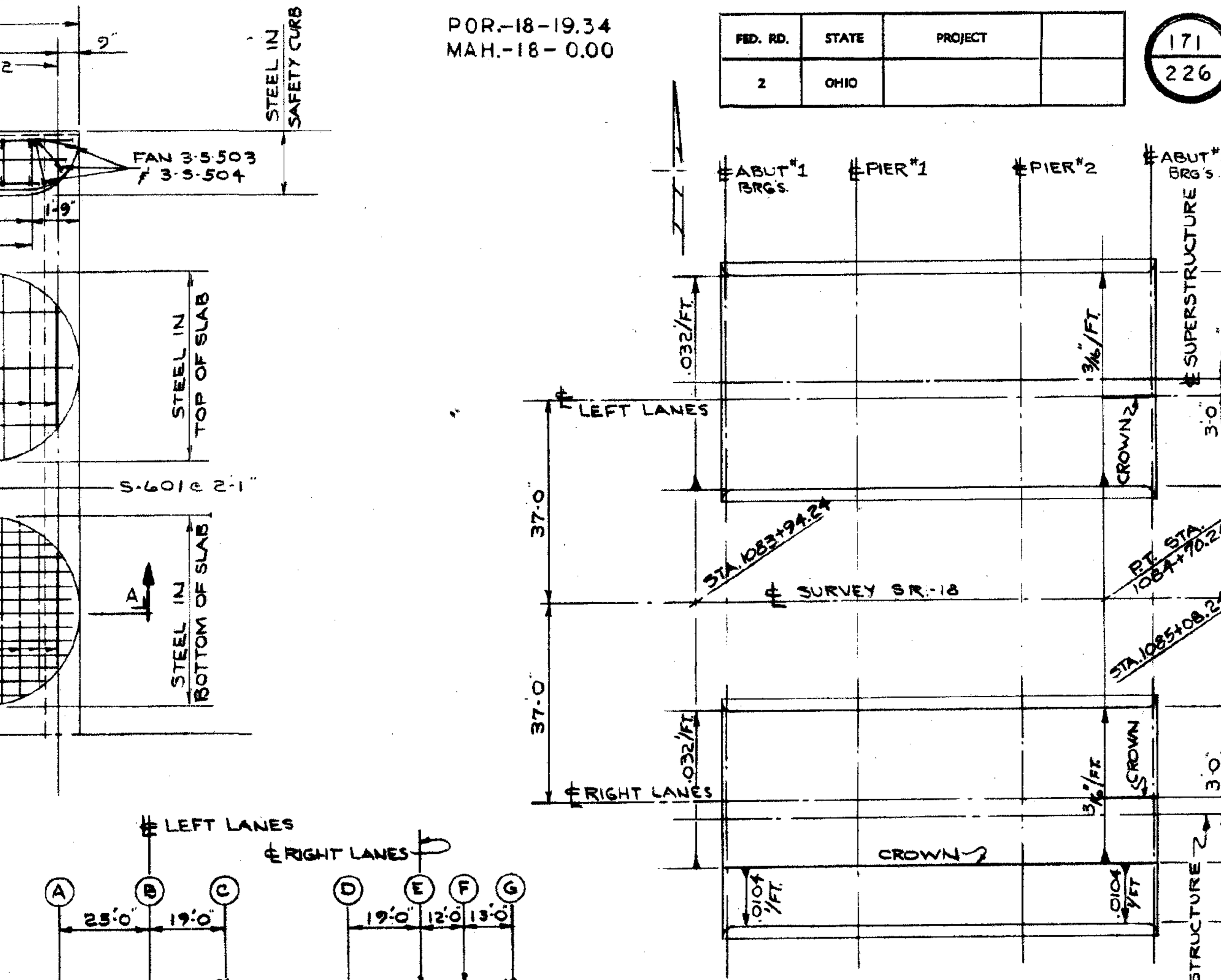
41/42

99/100

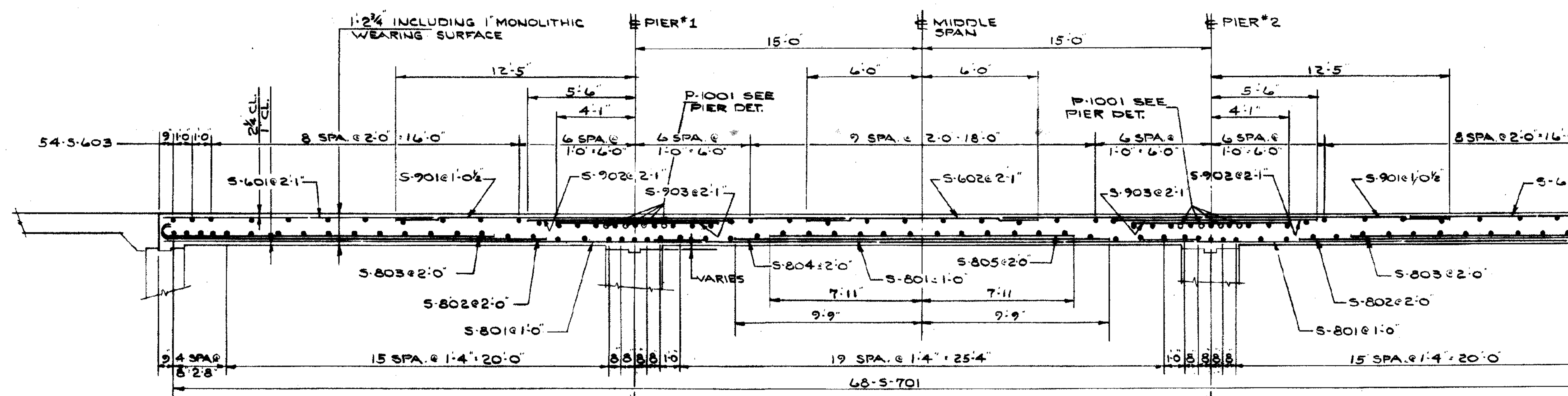


— PARTIAL SLAB REINFORCING PLAN. —

— REINFORCING STEEL SYMMETRICAL ABOUT ℄ SUPERSTRUCTURE —

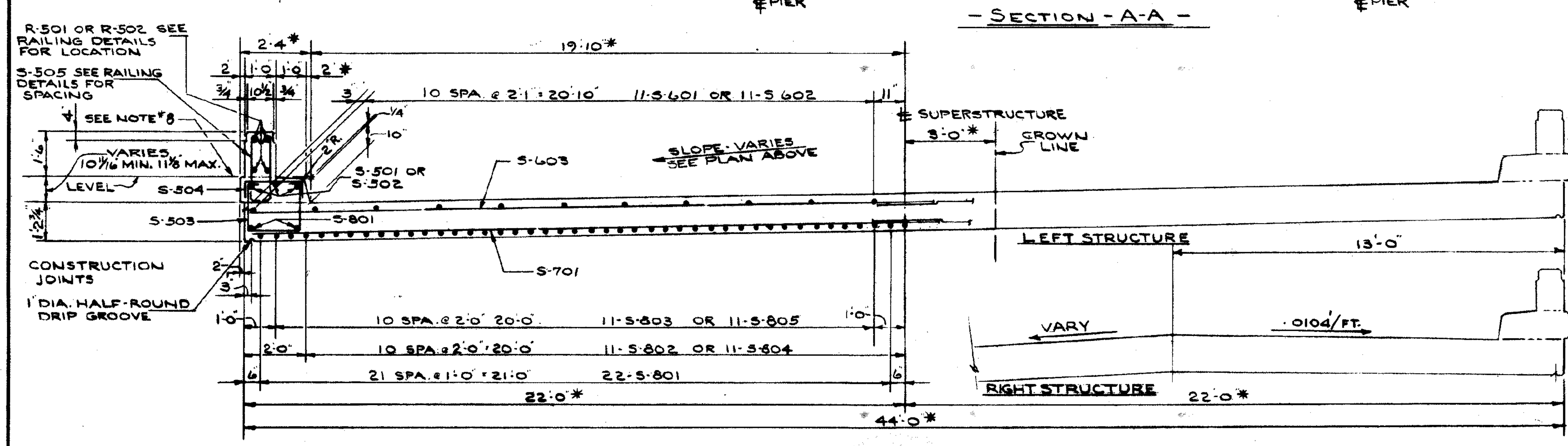


PLAN SHOWING SLOPE OF PAVEMENT.



- SECTION - A-A -

FINISHED PAVEMENT ELEVATIONS							
STA.	A	B	C	D	E	F	G
1084+00	965.75		967.11	966.68		967.63	967.50
+10	965.81		967.07	966.67		967.55	967.42
+20	965.87		967.03	966.66		967.48	967.35
+30	965.92		966.99	966.65		967.41	967.28
+40	965.99		966.97	966.65		967.34	967.21
+50	966.06		966.94	966.66		967.28	967.15
+60	966.13		966.92	966.67		967.22	967.09
+70	966.21		966.90	966.68		967.17	967.03
+80	966.26	966.65	966.87	966.68	966.98	967.12	966.98



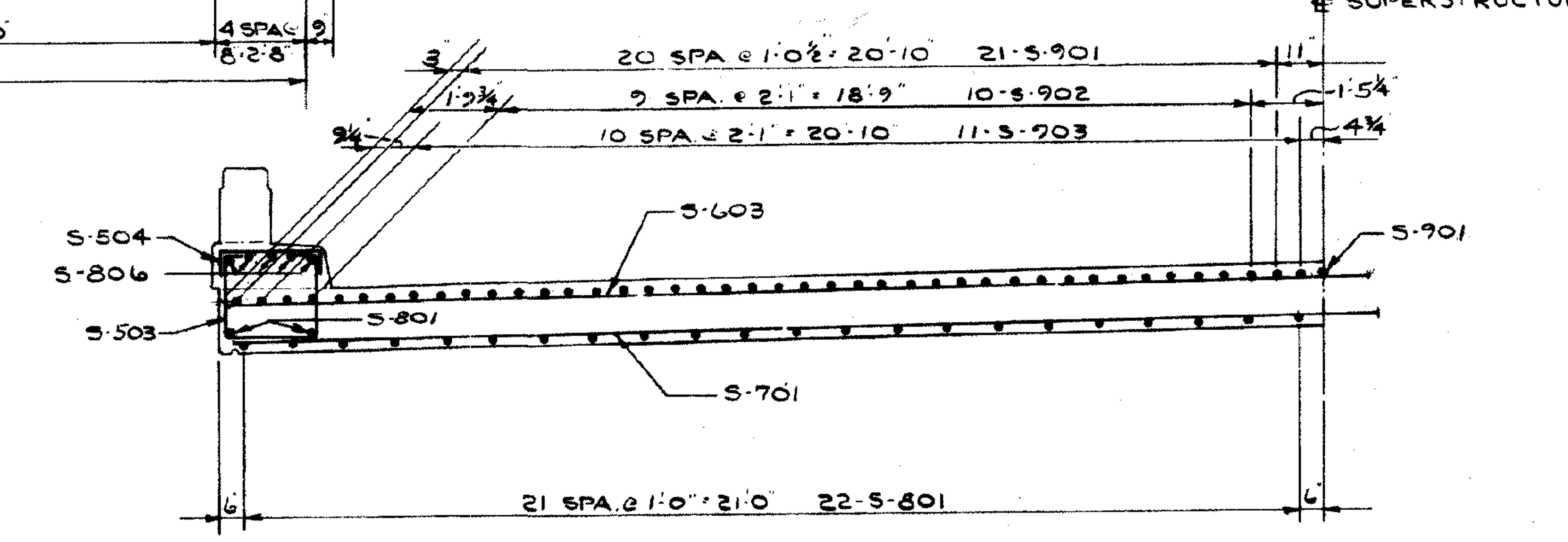
— SECTION "B-B" OR "D-D" —

- REINFORCING STEEL SYMMETRICAL ABOUT ℄ SUPERSTRUCTURE -

LEFT STRUCTURE SHOWN

- RIGHT STRUCTURE OPP. HAND & NOTED -

*- DENOTES RADIAL DIMENSIONS



— SECTION "C-C" —

REINFORCING STEEL SYMMETRICAL ABOUT ℄ SUPERSTRUCTURE

CAMBER OF 1/800 OF THE SPAN SHALL BE PROVIDED IN EACH SPAN (IN ADDITION TO ANY REQUIRED FOR CONFORMANCE WITH THE PROFILE OF THE HIGHWAY) TO ALLOW FOR DEAD LOAD DEFLECTION. THIS IS THE AMOUNT OF CAMBER REQUIRED BEFORE FALSEWORK IS RELEASED. TO OBTAIN THIS, PROPER ALLOWANCE SHALL BE MADE FOR THE DEFLECTION OF FALSEWORK MEMBERS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

SLAB DETAILS

BRIDGE № POR-18-2054 L.& R.
OVER KALE CREEK
PORTAGE COUNTY
STA. 1084+40.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
STD	JP		GW 1/10/64	RBH	3/23/64	

FED. RD.	STATE	PROJECT
2	OHIO	

171/226

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT FOUR PRODUCTION, 705 OAKWOOD STREET, RAVENNA, OHIO

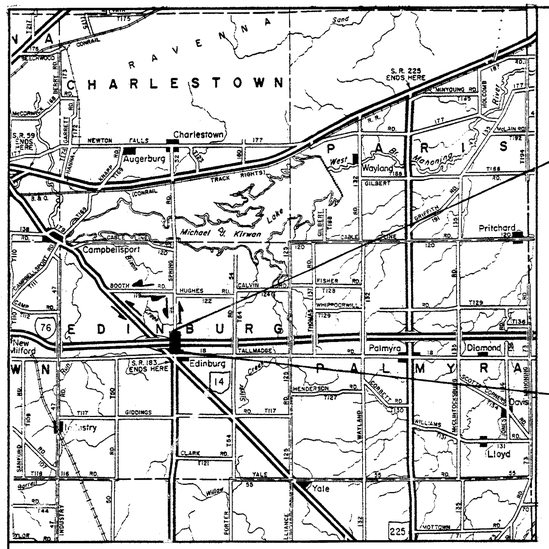
REVIEWED DLG DATE 01/25/00
STRUCTURE FILE NUMBER 6703151 LEFT, 6703186 RIGHT
DRAWN JEL REVISED
DESIGNED CET CHECKED

ORIGINAL SUPERSTRUCTURE DETAILS
BRIDGE NO. POR-76-2057 L&R
ORIGINAL PLAN SHEET 171/226 (NOT TO SCALE)

POR-76-13.55

42/42

100/100



LOCATION MAP
SCALE IN MILES
0 1 2 3 4 5 6

END PROJECT
STA. 51+20.42

BEGIN PROJECT
STA. 48+79.58

N

Portion to be improved
State & Federal Routes
Other Roads
Detour Routes

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

POR-76-13.62

EDINBURG TOWNSHIP
PORTAGE COUNTY

PART 2

FOR PART 1,
SEE POR-76-13.55

INDEX OF SHEETS

PROJECT DESCRIPTION

The proposed project includes replacement of the existing deteriorating reinforced concrete deck, rehabilitation of the structural steel, and repair abutments and piers as necessary with minimal approach work. The alignment shall follow the existing and the existing profile shall be adjusted to provide for a 16.5' vertical clearance requirement. The total length of the project is 240.84 L.F. with the work limits extending to include existing roadway guardrail to be removed and replaced.

1997 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal govern this improvement.

I hereby approve these plans and declare that the making of this improvement will require the closing to traffic of the highway, and that a detour will be provided, as indicated on Sheet no. 1

Approved David R Dreger
Date 2/24/00 District Deputy Director of Transportation

Approved Gordon Proctor
Date 3-8-00 Director, Department of Transportation

DESIGN DESIGNATION (ROCK SPRING ROAD)

Current Year	A.D.T. (1999)	= 660
Design Year	A.D.T. (2019)	= 1200
D.H.V.		= 120
D(Directional Distribution)		= 55%
T(Percent B & C Trucks)		= 6%
V(Design Speed)		= 55 m.p.h.
V(Legal Speed)		= 55 m.p.h.
Functional Classification		= Rural I.R./Major Collector

DESIGN EXCEPTIONS

1) Stopping Sight Distance 4-22-94
2) Vertical Alignment 4-22-94

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

Prepared By:
Thomas Fok & Associates, LTD.
CONSULTING ENGINEERS YOUNGSTOWN, OHIO 44515

STRUCTURE PLANS REVIEWED BY:
Burgess & Niple, Limited
Engineers and Architects

ENGINEERS SEAL:

SIGNED Thomas S. Fok
DATE: 2-23-00

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
SEE PART 1									

SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
SEE PART 1			

FEDERAL PROJECT NO. TE21-G000 (225)
P.I.D. NO. 18375
CONSTRUCTION PROJECT NO.
RAILROAD INVOLVEMENT NONE
POR-76-13.62
1/24

i:\users\liddle\donwork\por\POR76\SCANFILE\scan2.dgn 23-FEB-2000 8:54AM sbennett

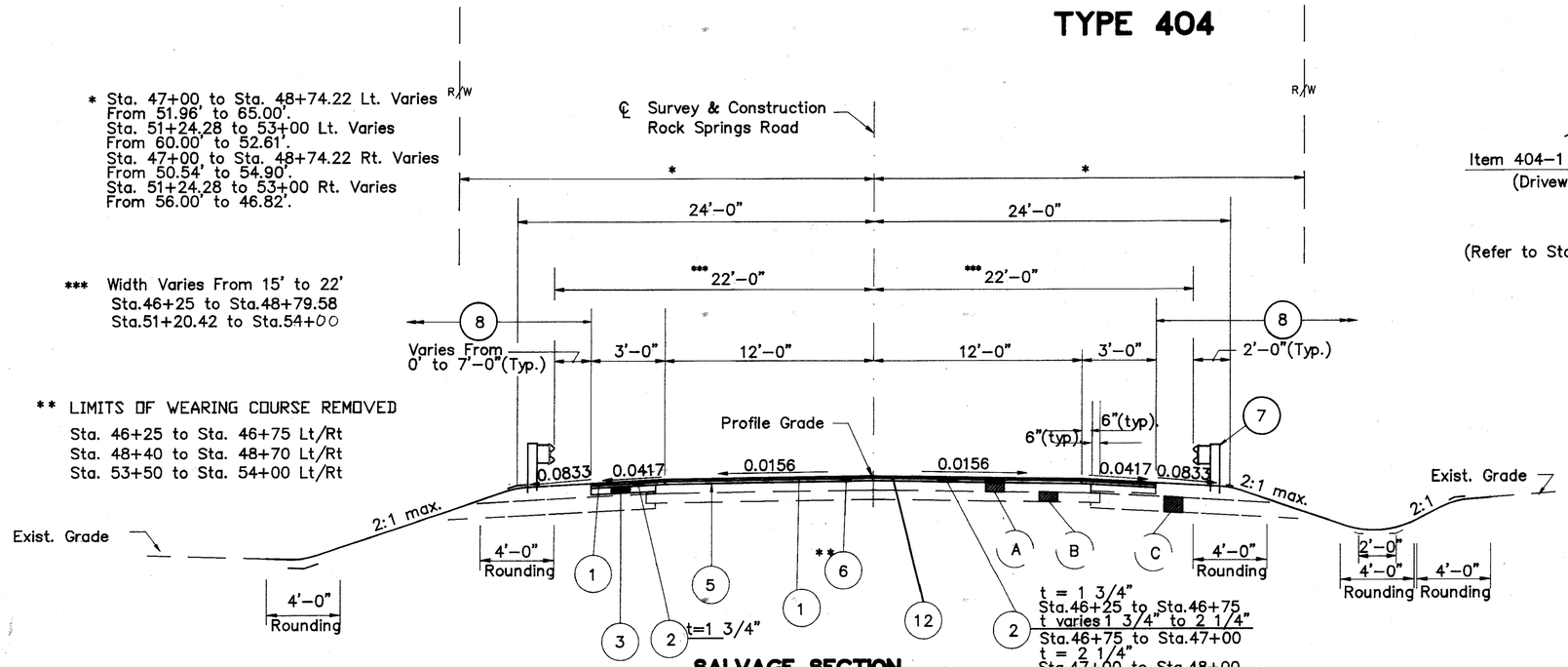
TYPICAL SECTION

TYPE 404

* Sta. 47+00 to Sta. 48+74.22 Lt. Varies From 51.96' to 65.00'.
Sta. 51+24.28 to 53+00 Lt. Varies From 60.00' to 52.61'.
Sta. 47+00 to Sta. 48+74.22 Rt. Varies From 50.54' to 54.90'.
Sta. 51+24.28 to 53+00 Rt. Varies From 56.00' to 46.82'.

*** Width Varies From 15' to 22'
Sta.46+25 to Sta.48+79.58
Sta.51+20.42 to Sta.54+00

** LIMITS OF WEARING COURSE REMOVED
Sta. 46+25 to Sta. 46+75 Lt/Rt
Sta. 48+40 to Sta. 48+70 Lt/Rt
Sta. 53+50 to Sta. 54+00 Lt/Rt

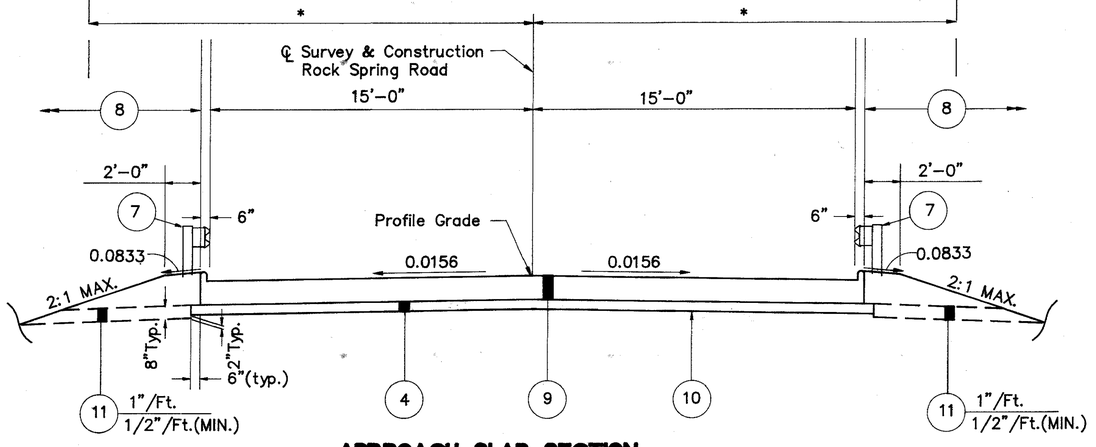


SALVAGE SECTION

LIMITING STATIONS

Sta.46+25 to Sta.48+79.58 = 254.58 LF.
Sta.51+20.42 to Sta.54+00 = 279.58 LF.
TOTAL = 534.16 LF.

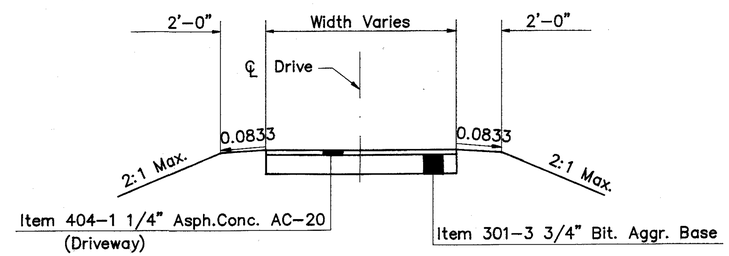
t = 1 3/4"
Sta.46+25 to Sta.46+75
t varies 1 3/4" to 2 1/4"
Sta.46+75 to Sta.47+00
t = 2 1/4"
Sta.47+00 to Sta.48+00
t varies 2 1/4" to 1 3/4"
Sta.48+00 to Sta.48+79.58
t varies 3 1/2" to 1 3/4"
Sta.51+20.42 to Sta.53+25
t = 1 3/4"
Sta.53+25 to Sta.54+00



APPROACH SLAB SECTION

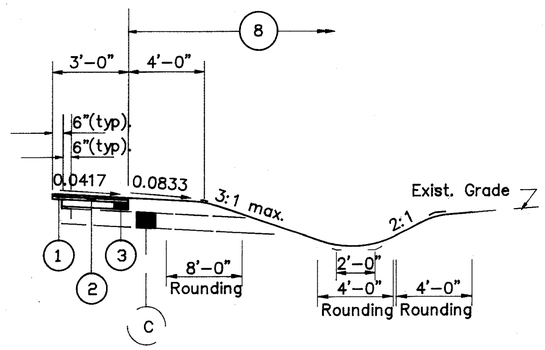
LIMITING STATIONS

Sta.48+79.58 to Sta.48+94.58 = 15.00 LF.
Sta.51+05.42 to Sta.51+20.42 = 15.00 LF.
TOTAL = 30.00 LF.



DRIVEWAY APPROACH SECTION

(Refer to Std. Construction Drawing BP-4.IM and sheet no. 5,7,11,12 for additional information)



SHOULDER TREATMENT W/O GUARDRAIL

LEGEND – PROPOSED

1. Item 448 – 1 1/4" Asphalt Concrete, Surface Course, Type I, PG64-22, As Per Plan
2. Item 448 – Asphalt Concrete, Intermediate Course, Type 2, PG64-22 (Depth as Shown)
3. Item 301 – 4" Bituminous Aggregate Base, PG64-22
4. Item 304 –6" Aggregate Base
5. Item 407 – Tack Coat (See General Note)
6. ** Item 202 – Wearing Course Removed
7. Item 606 – Guardrail Type 5, Rebuilt
8. Item 659 – Seeding and Mulching (See General Note)
9. Item 611 – Reinforced Concrete Approach Slab (t=12")
10. Item 203 – Subgrade Compaction
11. Item 605 – Aggregate Drain
12. Item 407 - Tack Coat for Intermediate Course

LEGEND – EXISTING

- A – Existing Asphalt Course
- B – Existing Base Course
- C – Aggregate Drain

NOTE: Refer To Sheet No. 5 For Existing Roadway Section

TYPICAL SECTION

POR–76–13.62

2
24

GENERAL NOTES

ROUNDING
THE ROUNDING AT SLOPE BREAK POINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

UTILITIES
LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AMERITECH
50 W. BOWERY ST.
4TH FLOOR
AKRON, OHIO 44308
PHONE: 330-384-8057
CONTACT: JIM McLAUGHLIN

FIRST ENERGY
1910 WEST MARKET
AKRON, OHIO 44313
PHONE: 330-742-8140
CONTACT: STEVE VANCHOFF

THERE ARE NO KNOWN UNDERGROUND UTILITIES ON THIS PROJECT.

CONTINGENCY QUANTITIES
THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ELEVATION DATUM
ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM-BENCH 1181
ADJ. 1903(300 FT. N. OF INTERSECTION OF S.R. 80 & S.R.18.)

CLEARING AND GRUBBING : ALTHOUGH THERE ARE NO TREES AND/OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THIS PROJECT, A LUMP SUM QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 659, SEEDING AND MULCHING
SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING, ARE BASED ON THESE LIMITS.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

659, SEEDING AND MULCHING 2832 SQ. YD.

WATERING PERMANENT SEEDED AREAS
THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR PERMANENT SEEDED AREAS PER 659.09:

659, WATER 6 M GAL.

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:

870, TEMPORARY PERIMETER FILTER FABRIC FENCE 800 LIN. FT.

ITEM 605, AGGREGATE DRAINS
AGGREGATE DRAINS SHALL BE PLACED AT FIFTY (50) FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT TWENTY-FIVE (25) FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

ITEM 407, TACK COAT AND TACK COAT FOR INTERMEDIATE COURSE
THE RATE OF APPLICATION OF THE 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.

ITEM 614, MAINTENANCE OF TRAFFIC
TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED NINETY (90) CONSECUTIVE CALENDER DAYS; THROUGH TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 1.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INGRESS AND EGRESS AT ALL TIMES FOR ANY RESIDENTIAL DRIVEWAYS WITHIN THE WORK LIMITS.

THE CONTRACTOR SHALL NOTIFY THE DISTRICT TRAFFIC ENGINEER IN WRITING A MINIMUM OF (18) DAYS IN ADVANCE OF THE DATE THE DETOUR IS NEEDED. THE STATE OF OHIO WILL INSTALL, MAINTAIN, SUBSEQUENTLY REMOVE DETOUR SIGNING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE GATES AND BARRICADES AT THE APPROXIMATE WORK LIMITS OF THE PROJECT.

THE NINETY (90) CONSECUTIVE CALENDER DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDER DAY BEYOND THE NINETY (90) CONSECUTIVE CALENDER DAYS THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR WILL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

410, TRAFFIC COMPACTED SURFACE, TYPE A OR B 50 CU. YD.
616, CALCIUM CHLORIDE 2 TONS
616, WATER 2 M GALS.

TEMPORARY WORK ZONE MARKINGS AND SIGNS
THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF 614.04 AND 614.10.

614, TEMPORARY CENTER LINE, CLASS I 0.15 MI.
614, TEMPORARY EDGE LINE, CLASS I 0.30 MI.

ITEM SPECIAL - MAILBOX SUPPORT, SINGLE
THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

WOOD POSTS SHALL BE NOMINAL 4"x4" SQUARE OR 4-1/2" DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2" I.D., AND CONFORM TO AASHTO M 181.

HARDWARE (PLATES, SCREWS, BOLTS, ETC.) SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS. TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.12. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT, (SINGLE).

THE FOLLOWING QUANTITY IS TO BE USED AS DIRECTED BY THE ENGINEER :

ITEM 690 SPECIAL- MAIL BOX SUPPORT, SINGLE 10 EACH

ITEM 448, ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22, AS PER PLAN
THE REQUIREMENTS OF 441 AND 448 SHALL APPLY; DEVIATIONS FROM THESE ARE AS FOLLOWS:
ANY PERCENTGE OF RECLAIMED MATERIAL PROPOSED FOR USE SHALL BE INCLUDED IN THE MIX DESIGN PROCESS TO ESTABLISH THE JOB MIX FORMULA (JMF) IN ACCORDANCE WITH 441.02.

JOINT SEALERS
ALL REFERENCES TO 705.01 OR 705.02 APPEARING ON STANDARD DRAWINGS OR ON THE PLANS, SHALL BE CONSIDERED TO READ 705.01.

CALCULATED M.P.
CHECKED J.T.

GENERAL NOTES

POR-76-13.62

3
24

CALCULATIONS AND GENERAL SUMMARY

APPROACH SLAB SECTION (STATION LIMITS)

STA. 48+79.58 TO STA. 48+94.58 = 15 L.F. W=31' AREA=465 S.F.
STA. 51+05.42 TO STA. 51+20.42 = 15 L.F. W=31' AREA=465 S.F.

SALVAGE SECTION (STATION LIMITS)

STA. 46+25 TO STA. 46+75 = 50 L.F. W=24' AREA=1200 S.F.
STA. 46+75 TO STA. 47+00 = 25 L.F. W=24' AREA=600 S.F.
STA. 47+00 TO STA. 48+00 = 100 L.F. W=24' AREA=2400 S.F.
STA. 48+00 TO STA. 48+79.58=79.58 L.F. W=24' AREA=1909.92 S.F.
STA. 51+20.42 TO STA. 53+00=179.58 L.F. W=24' AREA=4309.92 S.F.
STA. 53+00 TO STA. 54+00 = 100 L.F. W=23' AVG. AREA=2300 S.F.
TOTAL=534.16 L.F. TOTAL=12719.84 S.F.

CALCULATIONS

ITEM 202 – WEARING COURSE REMOVED

STA. 46+25 TO STA. 46+75 = 50 L.F.
STA. 48+40 TO STA. 48+70 = 30 L.F.
STA. 53+50 TO STA. 54+00 = 50 L.F.

[(80 L.F.)(24')+(50 L.F.)(23')](1/9) = 341.11 S.Y.
USE 341 S.Y.

ITEM 202 – APPROACH SLABS REMOVED

(465 S.F.+465 S.F.)(1/9) = 103.33 S.Y.
USE 103 S.Y.

ITEM 448 – 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE I, PG64-22, AS PER PLAN

SALVAGE SECTION:
(12719.84 S.F.)(1 1/4"/12)(1/27) = 49.07 C.Y.

SHOULDERS:
(2)(534.16 L.F.)(3')(1 1/4"/12)(1/27) = 12.36 C.Y.

TOTAL:
49.07 C.Y.+12.36 C.Y. = 61.43 C.Y.
USE 62 C.Y.

ITEM 448 – ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (DEPTH AS SHOWN)

SALVAGE SECTION:

STA. 46+25 TO STA. 46+75 = 50 L.F.
(50 L.F.)(24')(1 3/4"/12)(1/27) = 6.48 C.Y.

STA. 46+75 TO STA. 47+00 = 25 L.F.
(25 L.F.)(24')((1 3/4"+2 1/4")/2)(1/12)(1/27) = 3.70 C.Y.

STA. 47+00 TO STA. 48+00 = 100.00 L.F.
(100 L.F.)(24')(2 1/4"/12)(1/27) = 16.67 C.Y.

STA. 48+00 TO STA. 48+79.58 = 79.58 L.F.
(79.58 L.F.)(24')((2 1/4" +1 3/4)/2)(1/12)(1/27) = 11.78 C.Y.

STA. 51+20.42 TO STA. 53+25 = 204.58 L.F.
(204.58 L.F.)(24')((1 3/4"+3 1/2")/2)(1/12)(1/27) = 39.78 C.Y.

STA. 53+25 TO STA. 54+00 =75 L.F.
(75 L.F.)(23')(1 3/4"/12)(1/27) = 9.32 C.Y.

SHOULDER SECTION:
(2)(534.16 L.F)(3')(1 3/4"/12)(1/27) = 17.31 C.Y.

TOTAL:
6.49C.Y.+3.70C.Y.+16.67C.Y.+11.78C.Y.
+39.78C.Y.+9.32C.Y.+17.31C.Y.=105.05 C.Y. USE 105 C.Y.

ITEM 301 – BITUMINOUS AGGREGATE BASE, PG64-22

SHOULDER SECTION:
(2)(534.16 L.F)(3')(4"/12)(1/27) = 39.57 C.Y.
USE 40 C.Y.

ITEM 605 – AGGREGATE DRAIN

STA. 48+85 L/R 30 L.F.
STA. 51+10 L/R 20 L.F.
USE 50 L.F.

ITEM 304 – 6" AGGREGATE BASE

(2)(15')(32')(6"/12)(1/27) = 17.78 C.Y.
USE 18 S.Y.

ITEM 407 – TACK COAT (0.075 GAL./S.Y.)

(12719.84 S.F.)(1/9)(0.075 GAL./S.Y.)
= 106.00 GAL.
USE 106 GAL.

ITEM 611 – REINFORCED CONCRETE APPROACH SLAB (T=12")

(2)(15 L.F.)(31')(1/9) = 103.33 S.Y.
USE 103 S.Y.

ITEM 203 – SUBGRADE COMPACTION

(2)(15 L.F.)(31')(1/9) = 103.33 S.Y.
USE 103 S.Y.

ITEM 659 – COMMERCIAL FERTILIZER

(2.2)(2832)(9)(1/1000)(20)(1/2000) = 0.561 TON
USE 0.56 TONS

ITEM 659 – AGRICULTURAL LIME

(2832)(9)(1/1000)(46)(1/2000) = 0.586 TON
USE 0.59 TONS

ITEM 659 – WATER

(2832)(9)(1/1000)(120 GAL./1000) = 3.06 MGAL.
(2)3.06 MGAL.=6.12MGAL.

USE 6 MGAL.

QTY. CARRIED TO GENERAL SUMMARY FROM SHEET 3.

ITEM 642 – EDGELINE, TYPE 2

STA. 46+25 TO STA. 54+00 = 775 L.F. = 0.147 MI.
(2)(0.147 MI.) = 0.294 MI.
USE 0.29 MI.

ITEM 642 – CENTERLINE, TYPE 2

STA. 46+25 TO STA. 54+00 = 775 L.F. = 0.147 MI.
USE 0.15 MI.

ITEM 802 – BARRIER REFLECTORS, TYPE A

STA. 47+21.43 TO STA. 48+83.93 LT. = 162.5 L.F.
(162.5–25)(1/100) +1 = 2.38 USE 2 EA.
STA. 47+21.43 TO STA. 48+83.93 RT. = 162.5 L.F.
(162.5–25)(1/100) +1 = 2.38 USE 2 EA.
STA. 51+16.07 TO STA. 52+78.57 LT. = 162.5 L.F.
(162.5–25)(1/100) +1 = 2.38 USE 2 EA.
STA. 51+16.07 TO STA. 51+84.82 RT. = 75 L.F.
(75)(1/100) +1 = 1.75 USE 2 EA.
STA. 52+04.07 TO STA. 52+72.32 RT. = 75 L.F.
(75–25)(1/100) +1 = 1.50 USE 2 EA.
TOTAL: USE 10 EACH

ITEM 802 – BARRIER REFLECTORS, TYPE B

(232.14)(1/100) +1 = 3.32 USE 3
(2)(3) = 6
USE 6 EACH

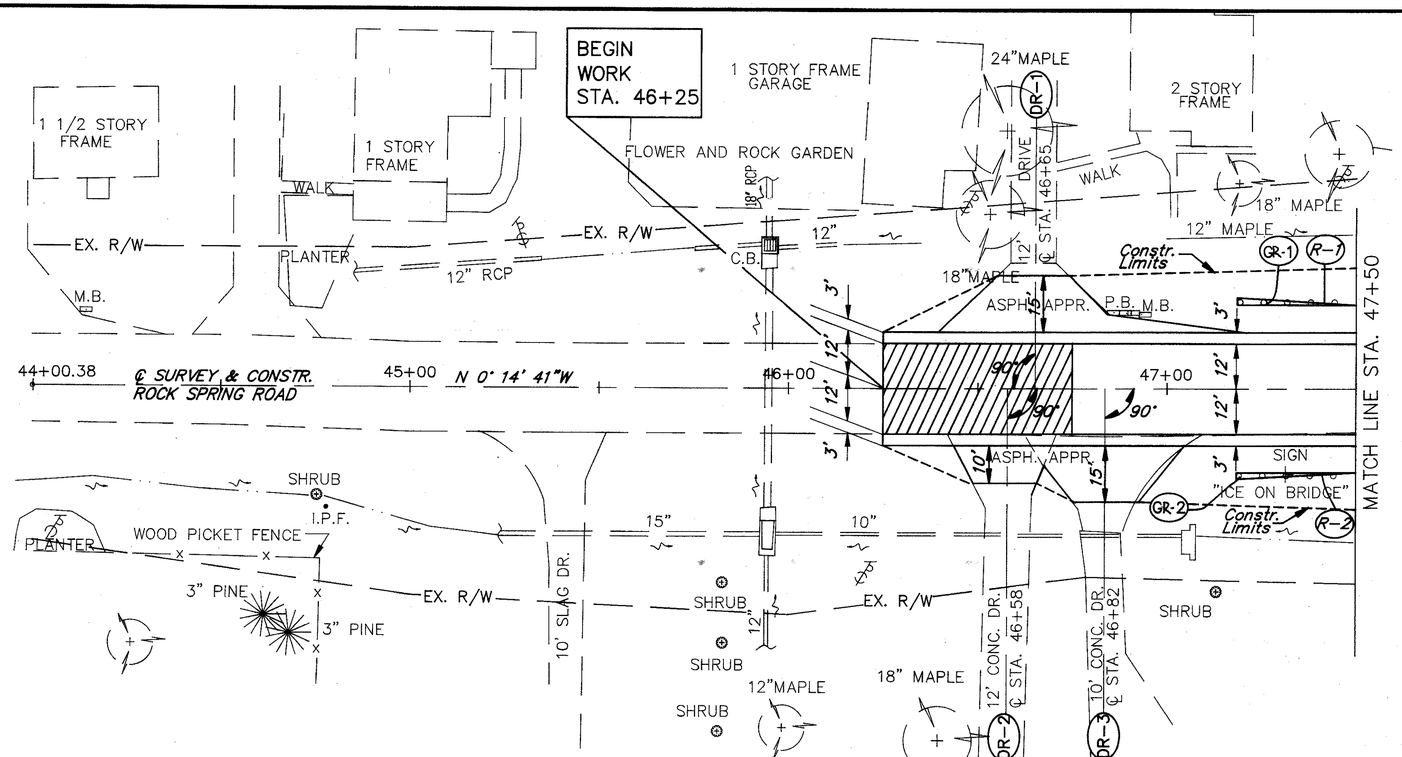
TOTAL FROM SHEET NO.					ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION
3	4	5	6	7					
									ROADWAY
LUMP					201	11000	LUMP		Clearing and Grubbing
	103				202	22900	103	S.Y.	Approach Slab Removed
	341				202	23500	341	S.Y.	Wearing Course Removed
		57.14	267.86	287.5	202	38200	612.5	L.F.	Guardrail Removed For Reuse
		58	90	84	203	12000	232	C.Y.	Excavation Not Including Embankment Constr.
		8	59	166	203	20000	233	C.Y.	Embankment
	103				203	50000	103	S.Y.	Subgrade Compaction
			275	262.5	606	16500	537.5	L.F.	Guardrail Rebuilt, Type 5
		2		2	606	25000	4	EA.	Anchor Assembly, Type A
				2	606	26500	2	EA.	Anchor Assembly, Type T
			2	2	606	35000	4	EA.	Bridge Terminal Assembly, Type 1
10					SPECIAL	69050100	10	EA.	Special-Mail Box Support, Single
									EROSION CONTROL
800					207	30000	800	L.F.	Filter Fabric Fence
2832					659	10000	2832	S.Y.	Seeding & Mulching
	0.56				659	20000	0.56	TON	Commercial Fertilizer
	0.59				659	30000	0.59	TON	Agricultural Liming
6					659	35000	6	MGAL.	Water
									DRAINAGE
	50				605	31100	50	L.F.	Aggregate Drain
									PAVEMENT
	40	13		17	301	46000	70	C.Y.	Bituminous Aggregate Base, PG64-22
	18				304	20000	18	C.Y.	Aggregate Base
	105				448	46050	105	C.Y.	Asphalt Concrete Intermediate Course, Type 2, PG64-22
	62				448	47021	62	C.Y.	Asphalt Concrete Surface Course, Type I, PG64-22, As Per Plan
		4		6	448	46024	10	C.Y.	Asphalt Concrete Intermediate Course, Type 2, PG64-22 (Driveways)
	106				407	10000	106	GAL.	Tack Coat
			22	22	830	26000	44	L.F.	Curb, Type 6
	103				611	10001	103	S.Y.	Reinforced Concrete Approach Slab (T=12")
									TRAFFIC CONTROL
	0.29				642	00102	0.29	MI.	Edge Line, Type 2
	0.15				642	00302	0.15	MI.	Center Line, Type 2
	10				626	00100	10	EA.	Barrier Reflector, Type A
	6				626	00200	6	EA.	Barrier Reflector, Type B
									MAINTENANCE OF TRAFFIC
50					410	12000	50	C.Y.	Traffic Compacted Surface, Type A or B
2					616	10000	2	MGAL.	Water
2					616	20000	2	TON	Calcium Chloride
0.15					614	21000	0.15	MI.	Temporary Center Line, Class I
0.30					614	22000	0.30	MI.	Temporary Edge Line, Class I
									STRUCTURE 20' SPAN & OVER
									For Structure Quantities, See Sheet No. 16

CALCULATED MP CHECKED JT

CALCULATIONS & GENERAL SUMMARY

POR-76-13.62

4 / 24

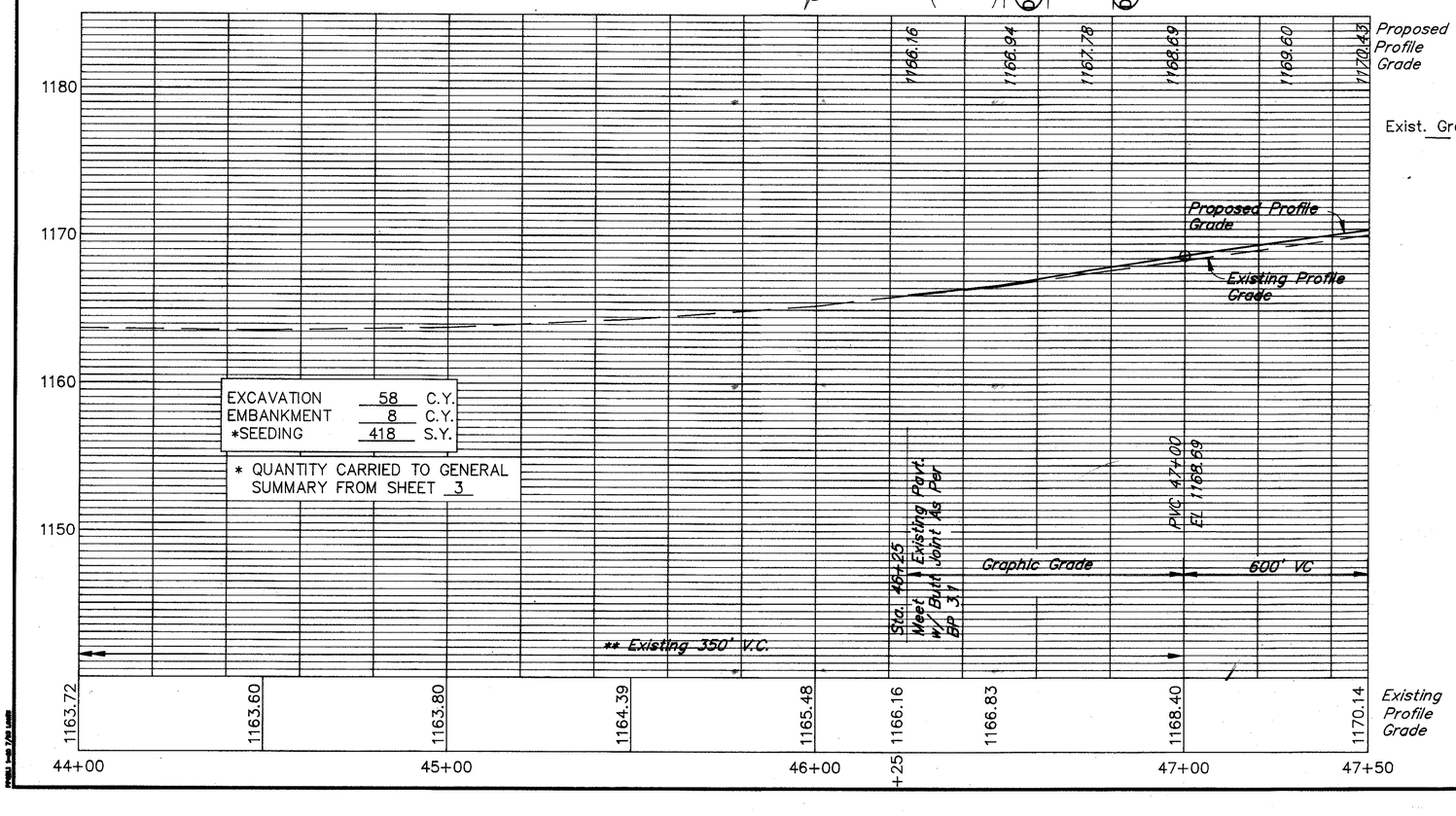


Ref. No.	Station To Station	Side	202 Guardrail Removed Re-Use L.F.	606 Anchor Assembly Type A EA.	404 1 1/4" Asphalt Conc. AC-20 Driveway C.Y.	301 3 3/4" Bitum. Aggregate Base AC-20 C.Y.
R-1	47+21.43 to 47+50	Lt.	28.57			
R-2	47+21.43 to 47+50	Rt.	28.57			
GR-1	47+21.43 to 47+46.43	Lt.		1		
GR-2	47+21.43 to 47+46.43	Rt.		1		
DR-1	46+65	Lt.			2	6
DR-2	46+58	Rt.			1	3
DR-3	46+82	Rt.			1	4
	TOTAL		57.14	2	4	13

** Refer to State of Ohio Plans for POR-13.55

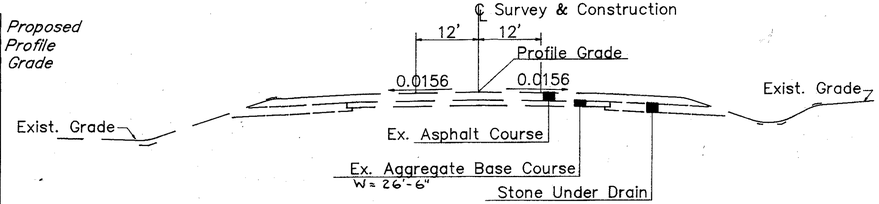
Note: For Drive Details See Sheet 21

— Wearing Course Removed



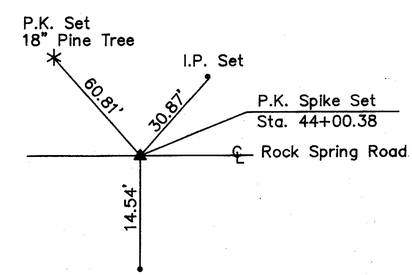
EXCAVATION	58	C.Y.
EMBANKMENT	8	C.Y.
*SEEDING	418	S.Y.

* QUANTITY CARRIED TO GENERAL SUMMARY FROM SHEET 3



EXISTING ROADWAY SECTION

BENCHMARK	BENCHMARK
Portage BM #537 A Chiseled Box On The Top Of The N.E. Corner Concrete Culvert Headwall. Sta. 45+93, 45' Rt. El.=1172.74	U.S.G.S. Standard Tablet Stamped "1181 Adj. 1903" 300' N. of Intersection of State Routes 80 & 18 Sta. 30+21.38, 72' Lt. El.=1181.34



℄ Construction P.O.T. Sta. 44+00.38
Reference Tie

HORIZONTAL SCALE IN FEET

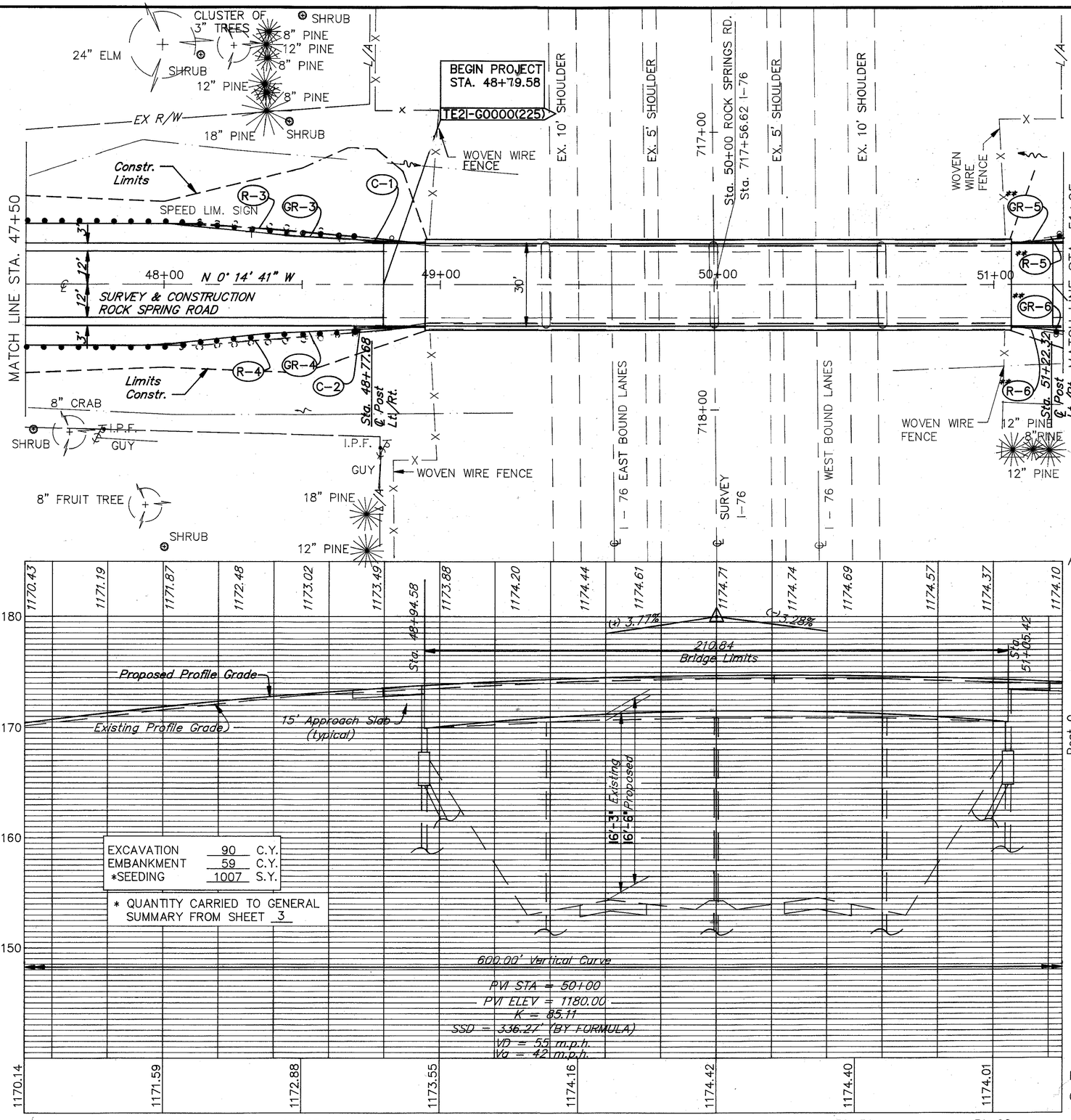
CALCULATED M.P.

CHECKED J.T.

PLAN AND PROFILE
STA. 44+00 TO STA. 47+50

POR-76-13.62

5
24

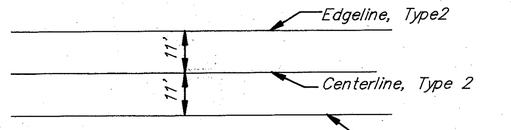


EXCAVATION	90	C.Y.
EMBANKMENT	59	C.Y.
*SEEDING	1007	S.Y.

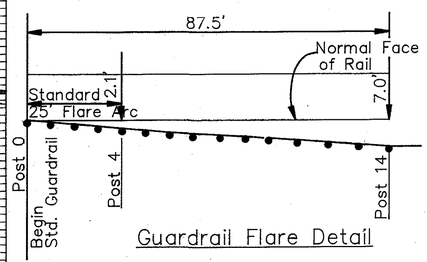
* QUANTITY CARRIED TO GENERAL SUMMARY FROM SHEET 3

Ref. No.	Station To Station	Side	202 Guardrail Removed For Reuse	606 Guardrail Rebuilt, Type 5	606 Bridge Terminal Assy. Type 1		830 Curb Type 6				
			L.F.	L.F.	EA.		L.F.				
R-3	47+50 – 48+83.93	Lt.	133.93								
R-4	47+50 – 48+83.93	Rt.	133.93								
GR-3	47+46.43–48+83.93	Lt.		137.5	1						
GR-4	47+46.43–48+83.93	Rt.		137.5	1						
C-1	48+68.58–48+79.58	Lt.					11				
C-2	48+68.58–48+79.58	Rt.					11				
			267.86	275	2		22				

** Quantities For GR-5,Gr-6,R-5 & R-6 Are Carried To Sheet 7



Pavement Marking Detail



Guardrail Flare Detail

Guardrail Flare Offsets

POST NO.	OFFSET
0	0'
1	0.50'
2	1.0'
3	1.55'
4	2.1'
5	2.62'
6	3.14'
7	3.66'
8	4.18'
9	4.70'
10	5.22'
11	5.74'
12	6.27'
13	6.64'
14–	7.0'

12:1 Std. Taper

EXISTING STRUCTURE

TYPE : 4 Span Continuous Steel Beam with Reinforced Concrete Deck and Substructures
SPAN : 42'–6"±/60'–8"±/60'–8"±/42'–6"± c/c Bearings
ROADWAY : 28'–0"± f/f of 2'–3" Safety Curbs
SKEW : None
ALIGNMENT : Tangent
DESIGN LOADING : CF–130
YEAR BUILT: 1961
STRUCTURE FILE NO : 6702732
WEARING SURFACE : 3/4" Monolithic

PROPOSED STRUCTURE

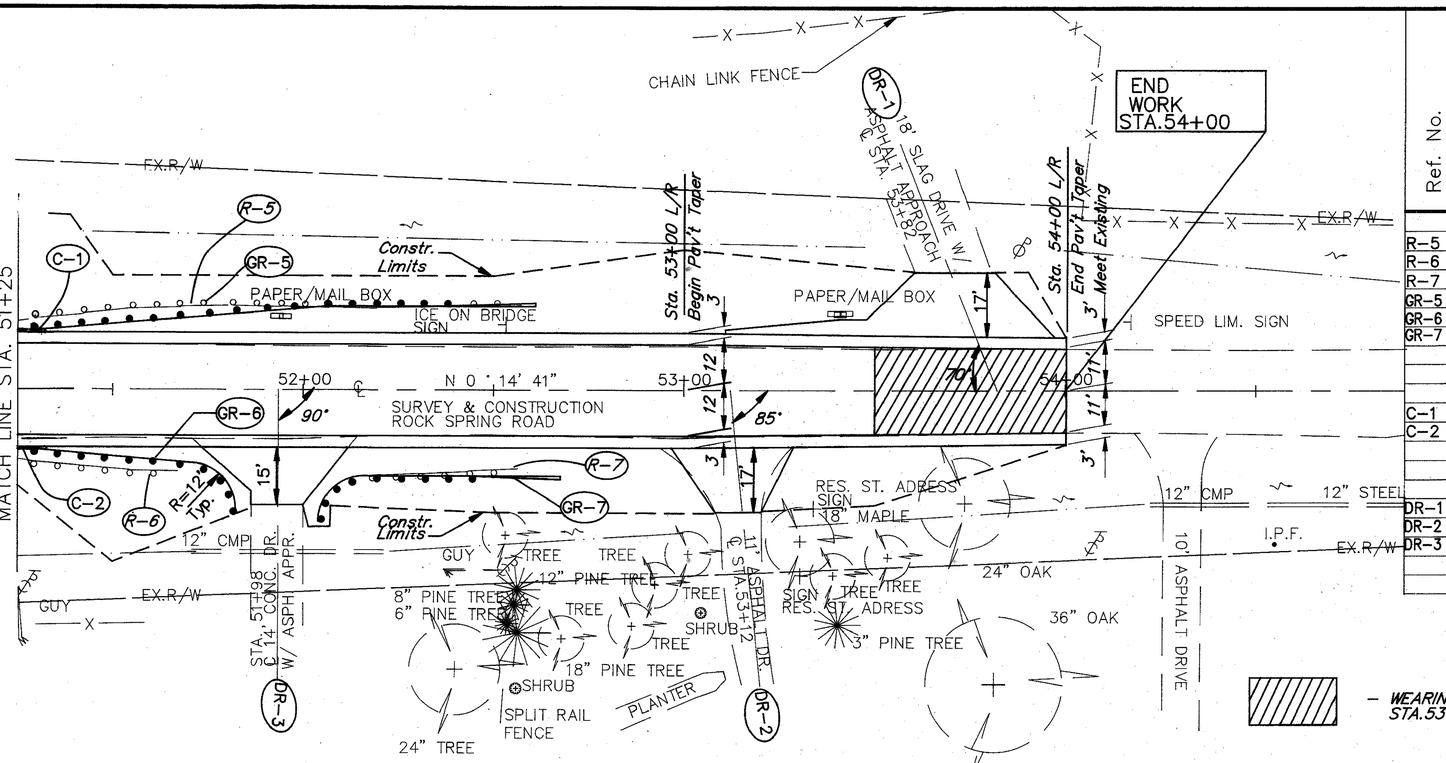
TYPE : 4 Span Cont. Steel Beam with Composite Reinf. Conc. Deck and Substructures
SPAN : 42'–6"±/60'–8"±/60'–8"±/42'–6"± c/c Bearings
ROADWAY : 30'–0" t/t parapets
SKEW : None
ALIGNMENT : Tangent
DESIGN LOADING : HS 20–44, Case 1, and Alternate Military Loading
APPROACH SLABS : 15'–0" (AS–1–81)
CROWN : 3/16" / Ft. (0.0156)
WEARING SURFACE : 1"Mono. Conc.
AVG. DAILY TRAFFIC: (1993) 660
(2013) 1200

HORIZONTAL SCALE IN FEET
20 0 10 20
CALCULATED M.P.
CHECKED J.T.

PLAN AND PROFILE STA. 47+50 TO STA. 51+25

POR–76–13.62

6
24

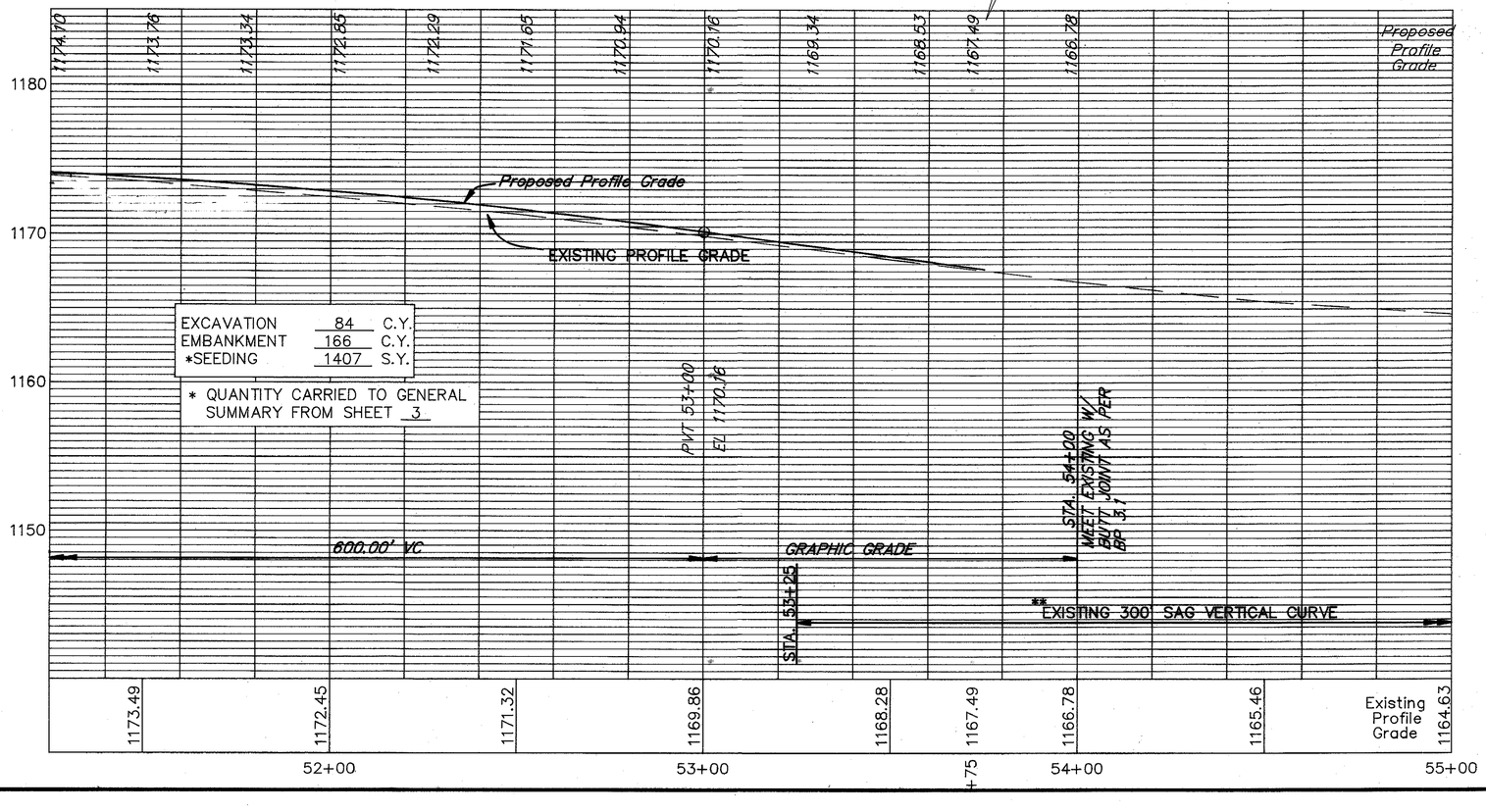


Ref. No.	Station To Station	Side	202 Guardrail Rem. For Reuse L.F.	606 Guardrail Rebuilt, Type 5 L.F.	606 Bridge Terminal Assy. Type 1 EA.	606 Anchor Assy. Type A EA.	606 Anchor Assy. Type T EA.	404 1 1/4" Asphalt Concrete AC-20 (Driveways) C.Y.	301 3 3/4" Bituminous Aggr. Base AC-20 C.Y.	830 Curb Type 6 L.F.
R-5	51+16.07–52+78.57	Lt.	162.5							
R-6	51+16.07–51+78.57	Rt.	62.5							
R-7	52+10.00–52+72.50	Rt.	62.5							
GR-5	51+16.07–52+78.57	Lt.		137.5	1	1				
GR-6	51+16.07–51+84.82	Rt.		75	1		1			
GR-7	52+04.07–52+72.32	Rt.		50		1	1			
C-1	51+20.42–51+31.42	Lt.								11
C-2	51+20.42–51+31.42	Rt.								11
DR-1	53+82	Lt.						3	8	
DR-2	53+12	Rt.						1	4	
DR-3	51+98	Rt.						2	5	
			287.5	262.5	2	2	2	6	17	22

** Refer to State of Ohio Plans for POR-13.55

NOTE: FOR DRIVE DETAILS SEE SHEET NO. 2.11 & 12

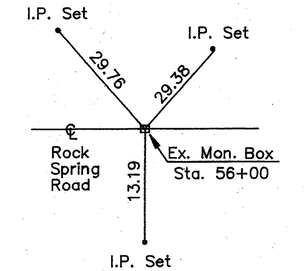
— WEARING COURSE REMOVED STA.53+50 TO STA.54+00



EXCAVATION	84	C.Y.
EMBANKMENT	166	C.Y.
*SEEDING	1407	S.Y.

* QUANTITY CARRIED TO GENERAL SUMMARY FROM SHEET 3

BENCHMARK
I.P. Set
Sta. 56+00, 13.19' Rt.
Elev =1163.21



℄ Construcion P.O.T. Sta. 56+00
Reference Tie

HORIZONTAL SCALE IN FEET

CALCULATED M.P.
CHECKED J.T.

PLAN AND PROFILE
STA. 51+25 TO STA. 55+00

POR-76-13.62

7
24

SEEDING	
END WIDTH	SQ. YDS.
25	35
0	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	0		
		5	0
2	0		

℄ Survey & Constr.
Rock Spring Road

R/W

1166.96
46+50
1166.83

46+00
1165.48

45+50
1164.39

Begin Work
Sta. 46+25

1170 1160 1150 1170 1165 1175 1155 1165 1145

45 35 25 15 5 5 15 25 35 45

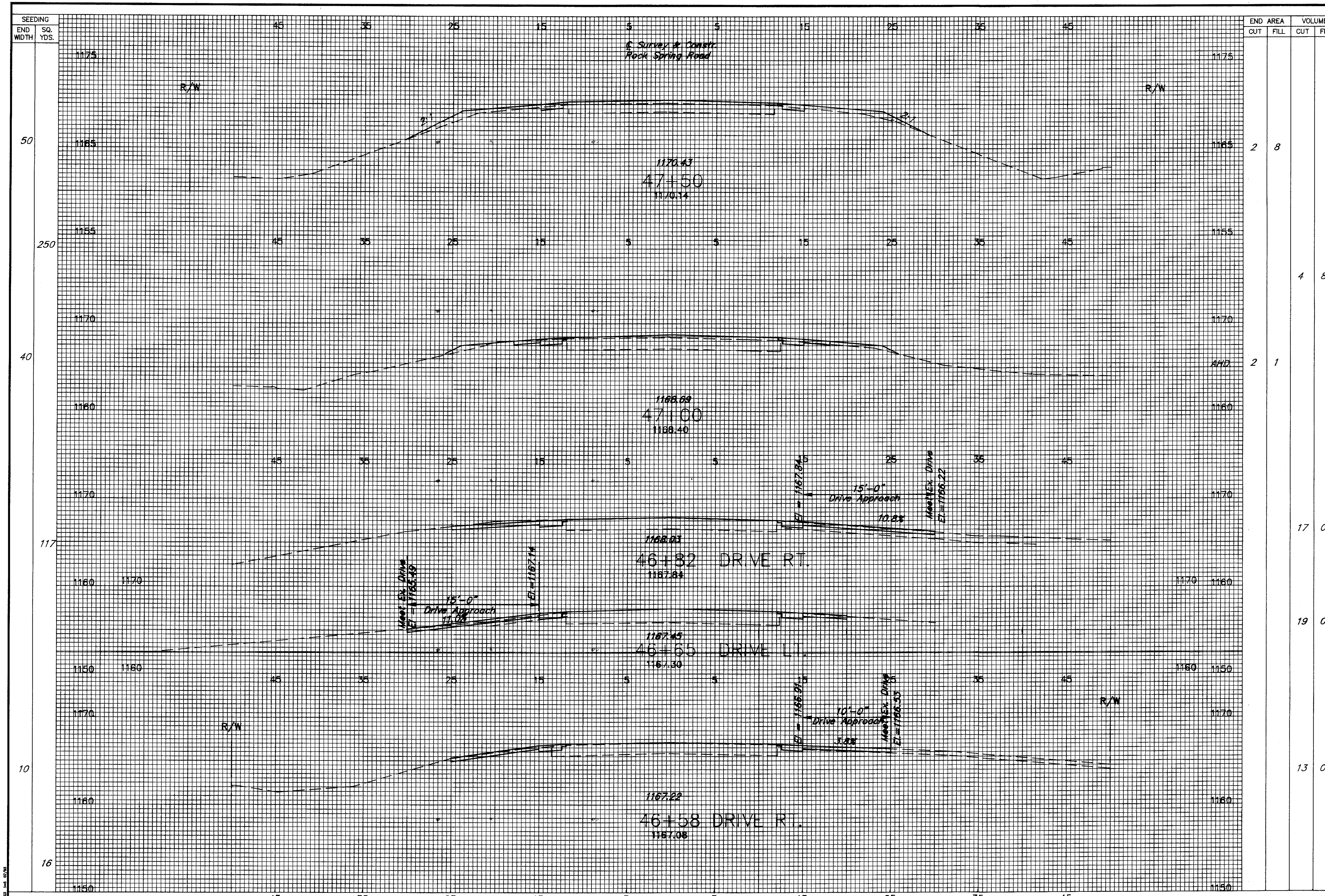
SCALE IN FEET HORZ. 0 5 10
SCALE IN FEET VERT. 0 5

CALCULATED M.P.
CHECKED J.T.

CROSS SECTIONS
STA. 45+50 TO STA. 46+50

POR-76-13.62

8
24


SEEDING
END WIDTH
SQ. YDS.
END AREA
CUT
FILL
VOLUME
CUT
FILL
℄ Survey & Constr.
Rock Spring Road
R/W
R/W
2:1
2:1
1170.43
47+50
1170.14
50
250
2 8
4 8
1168.69
47+00
1168.40
40
AHD
2 1
15'-0"
Drive Approach
10.8%
El = 1167.84
Meet Ex. Drive
El=1166.22
1168.03
46+82 DRIVE RT.
1167.84
117
17 0
15'-0"
Drive Approach
11.0%
Meet Ex. Drive
El = 1165.49
El=1167.14
1167.45
46+65 DRIVE LT.
1167.30
19 0
10'-0"
Drive Approach
3.8%
El = 1166.91
Meet Ex. Drive
El=1166.55
R/W
R/W
1167.22
46+58 DRIVE RT.
1167.08
10
13 0
16
1175
1165
1155
1170
1160
1150
45
35
25
15
5

SCALE IN FEET HORZ.

SCALE IN FEET VERT.

CALCULATED M.P.

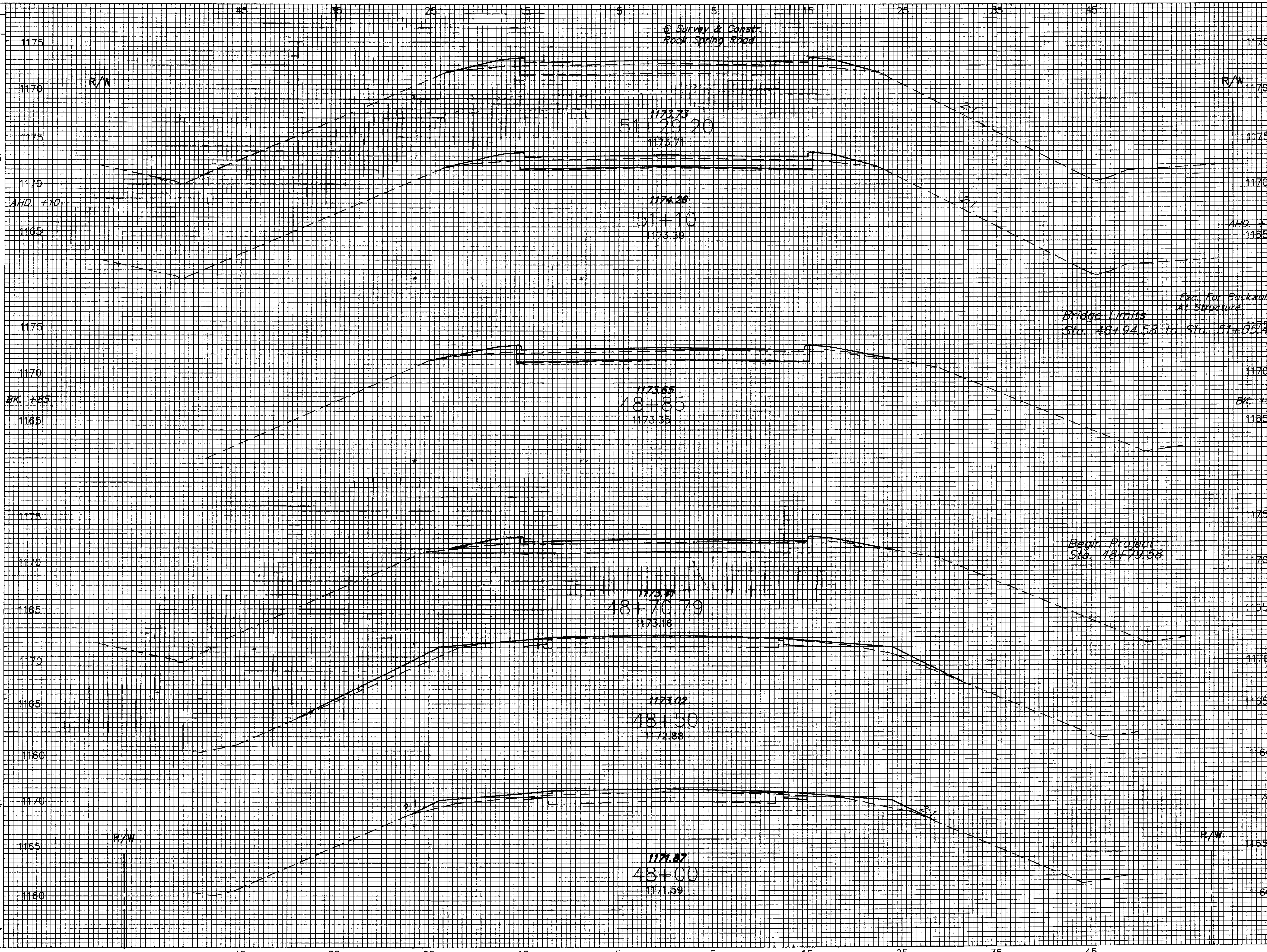
CHECKED J.T.

CROSS SECTIONS
STA. 46+58 TO STA. 47+50

POR-76-13.62

9
24

SEEDING END WIDTH	SEEDING SQ. YDS.
85	
	155
60	
60	
	118
90	
	173
60	
	294
46	
	267



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
38	12		
		27	9
38	12		
		20	0
38	12		
		20	6
38	12		
		15	9
2	12		
		4	19
2	9		
		4	16

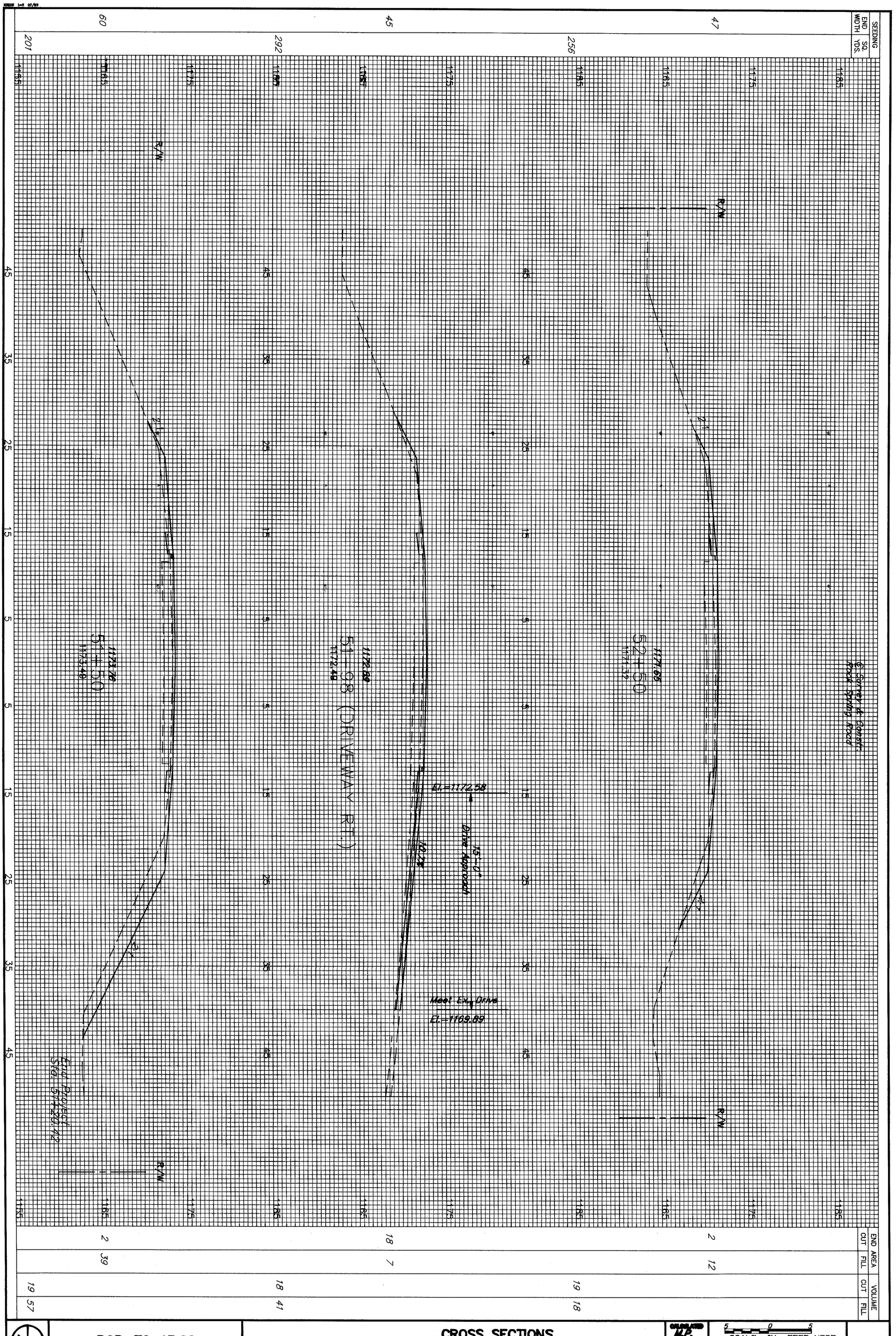
5 0 5 SCALE IN FEET HORZ.
5 0 5 SCALE IN FEET VERT.

CALCULATED M.P.
CHECKED J.T.

CROSS SECTIONS STA. 48+00 TO STA. 51+00

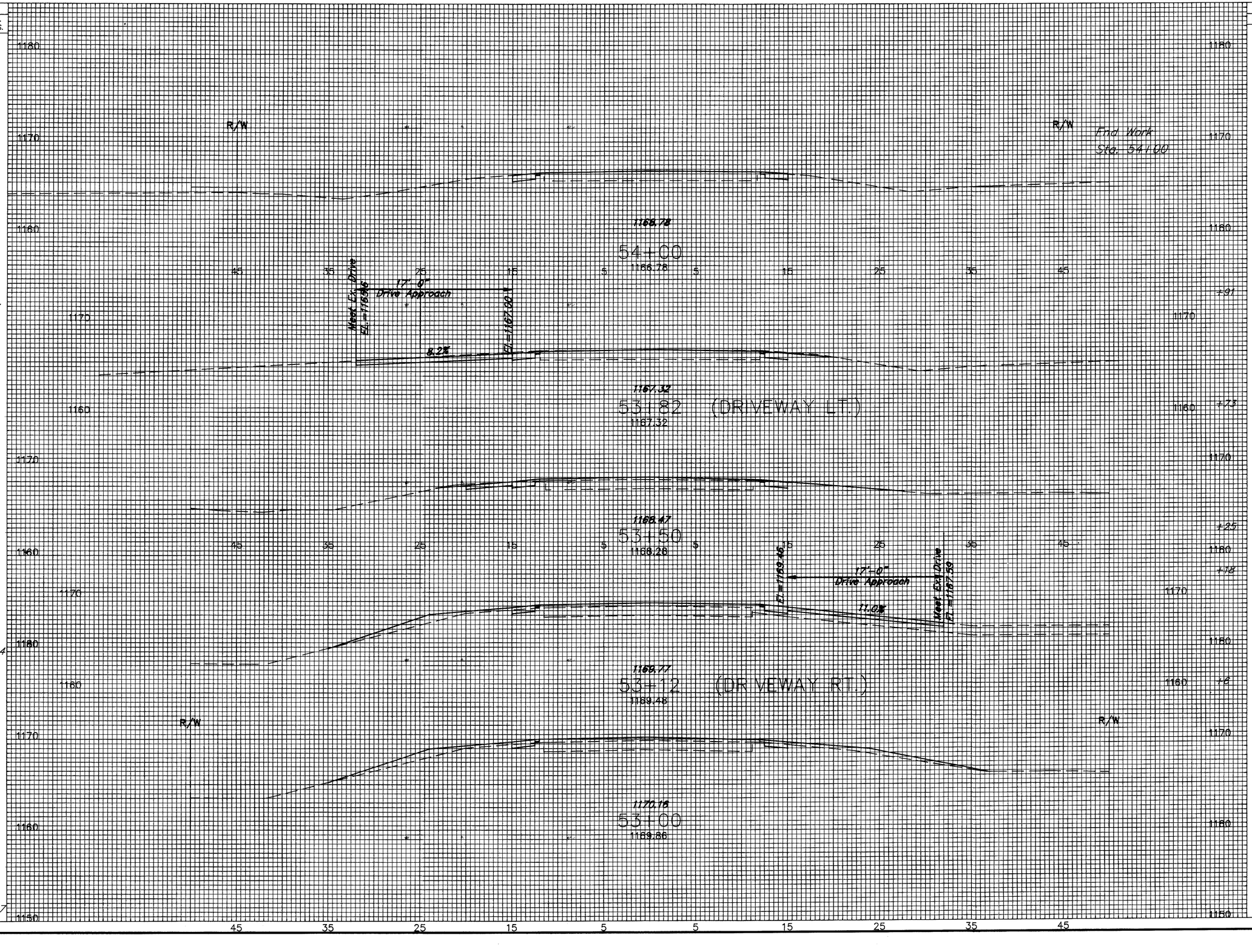
POR-76-13.62

10/24



11/24	POR-76-13.62	CROSS SECTIONS STA. 51+50 TO STA. 52+50	CALCULATED M.P. CHECKED J.T.	SCALE IN FEET HORZ. SCALE IN FEET VERT.

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
0		2	0		
				2	1
	97	9	1		
				3	1
		9	1		
				3	1
		9	1		
				6	1
35		4	1		
				3	8
		2	16		
				2	5
		8	7		
				2	2
264		8	7		
				2	2
		8	7		
				1	3
60		2	16		
				4	26



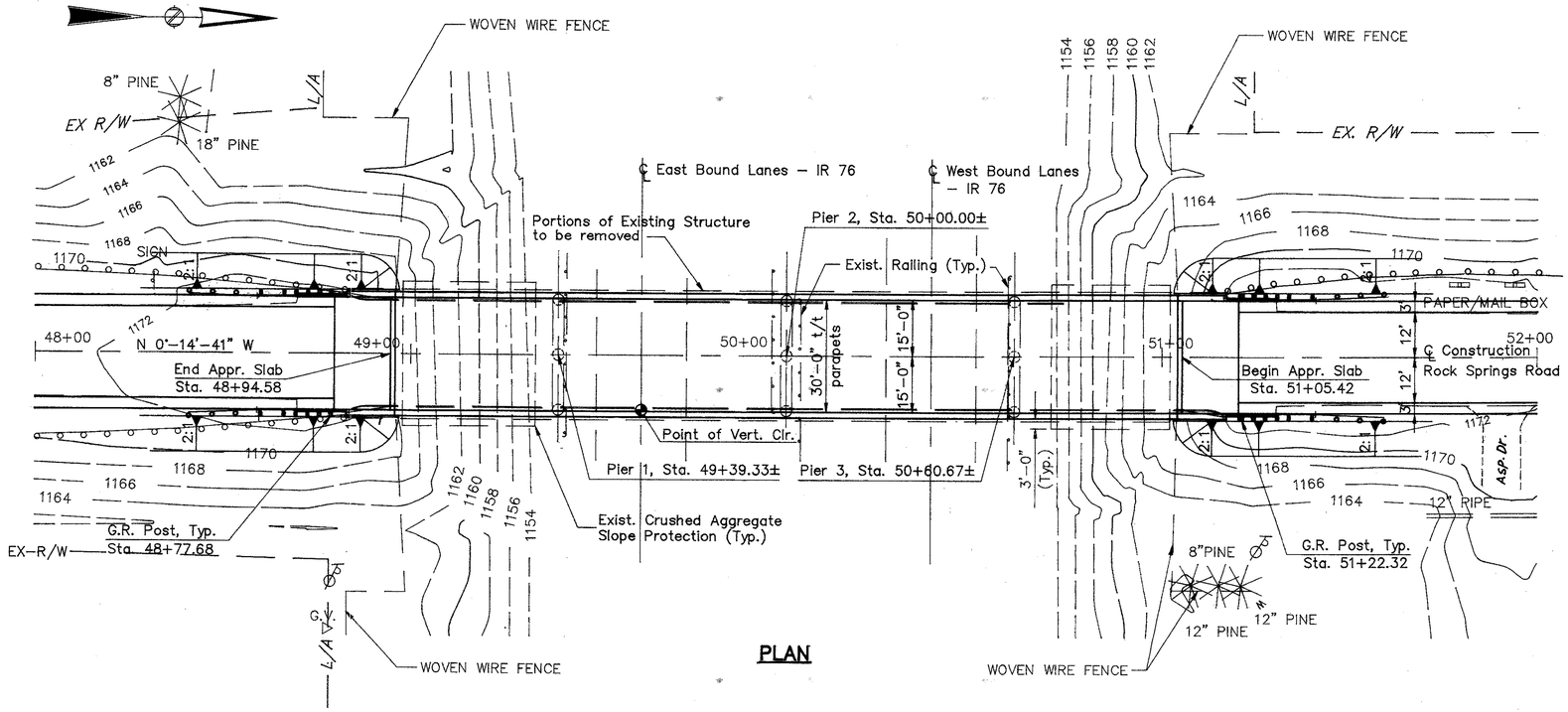
SCALE IN FEET HORZ. 0 5 10
SCALE IN FEET VERT. 0 5

M.P.
J.T.

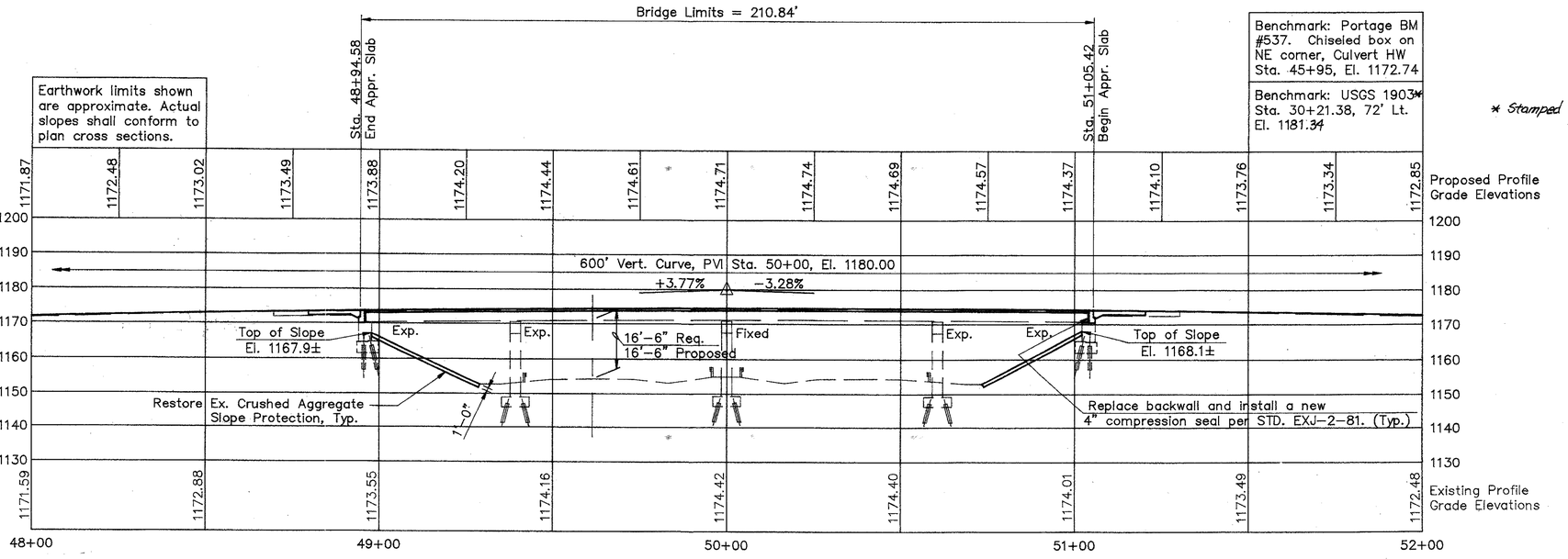
CROSS SECTIONS
STA. 53+00 TO STA. 54+00

POR-76-13.62

12
24



PLAN



PROFILE AT ℄ CONSTRUCTION

REVIEWED BY BURGESS & NIPLE, LTD.
MPB 2-8-94

EXISTING STRUCTURE

TYPE: 4 Span Continuous Steel Beam w/ Reinforced Concrete Deck and Substructures
SPANS: 42'–6"±/60'–8"±/60'–8"±/42'–6"± c/c brgs
ROADWAY: 28'–0"± f/f 2'–3"± safety curbs
SKEW: None
ALIGNMENT: Tangent
DESIGN LOADING: CF–130
YEAR BUILT: 1962
STRUCTURE FILE NUMBER: 6702732
APPROACH SLABS: 25'–0"±
WEARING SURFACE: Monolithic Concrete

PROPOSED STRUCTURE

TYPE: 4 Span Continuous Steel Beam w/ Composite Reinforced Concrete Deck and Substructures
SPANS: 42'–6"±/60'–8"±/60'–8"±/42'–6"± c/c bearings
ROADWAY: 30'–0" t/t parapets
DESIGN LOADING: HS 20–44, and Alternate Military Loading
SKEW: None
ALIGNMENT: Tangent
WEARING SURFACE: Monolithic Concrete
APPROACH SLABS: 15'–0" (AS–1–81)
CROWN: 3/16" / Ft
AVG. DAILY TRAFFIC: (1999) 660
ADTT 72 (2019) 1200
STRUCTURE FILE NUMBER: 6702740

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

DESIGNED KOS
DRAWN KOS
CHECKED JDV
REVIEWED TF
REVISED
DATE 12–93
STRUCTURE FILE NUMBER

PORTAGE COUNTY
STA. 48+94.58
STA. 51+05.42

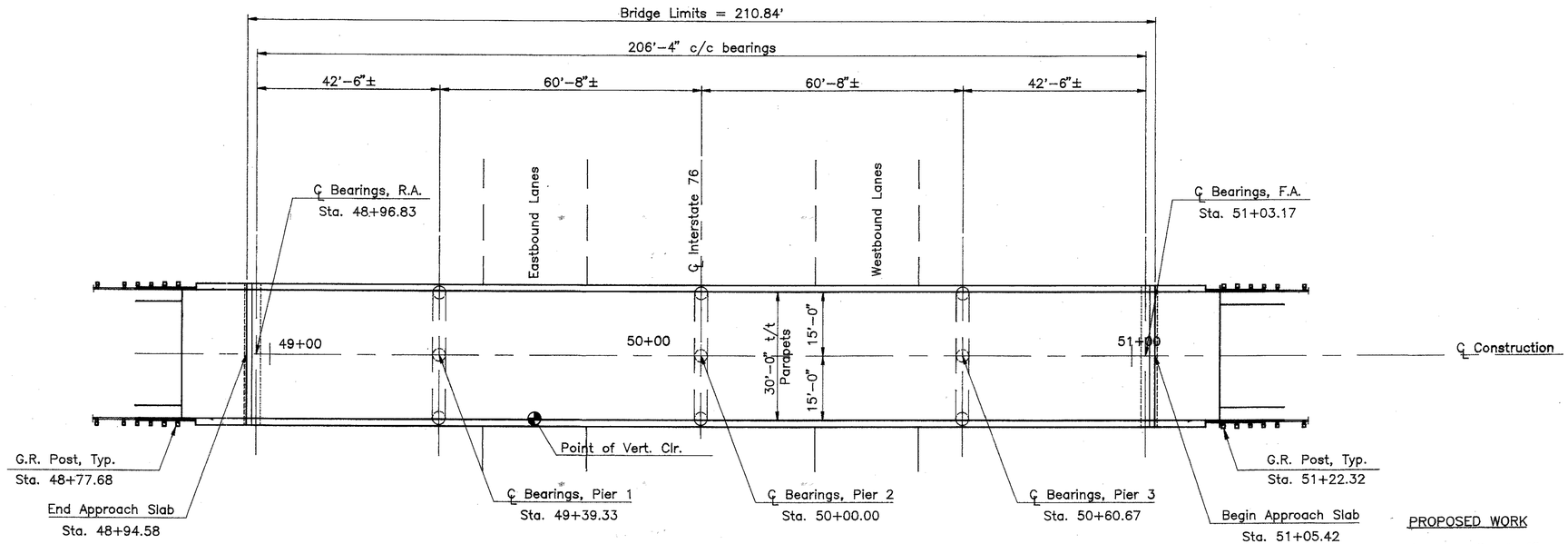
SITEPLAN

SITE PLAN
BRIDGE NO. POR–76–1362
ROCK SPRINGS ROAD OVER I.R. 76

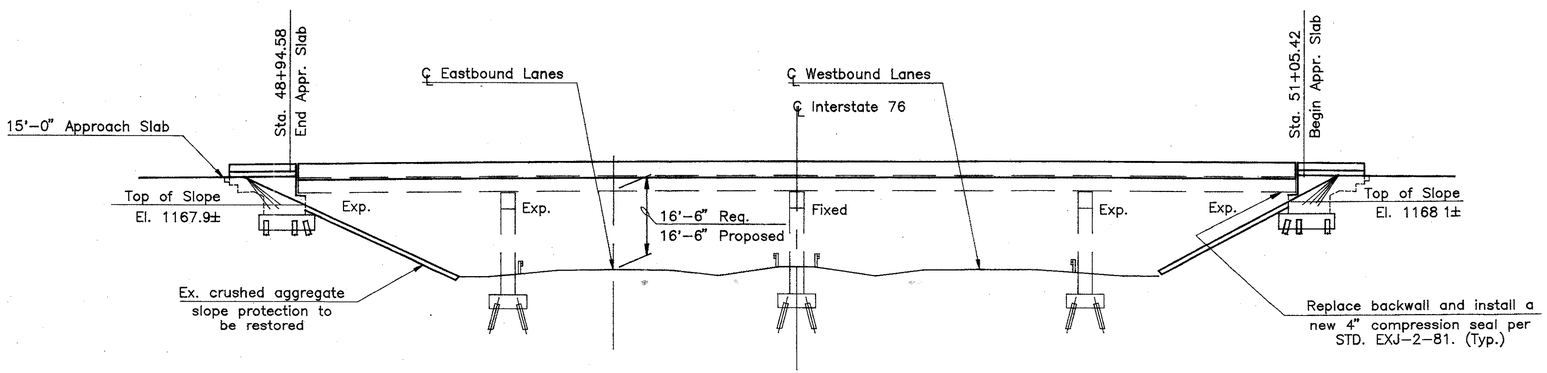
POR–76–13.62

1 / 12

13 / 24



PLAN



ELEVATION

PROPOSED WORK

1. Set traffic control devices and detours. Close structure to traffic.
2. Remove existing deck, safety curbs, and portions of abutments as noted on the plans.
3. Raise remaining superstructure and set steel plates between existing beams and bearings.
4. Refurbish, reset, and repaint existing bearings as per plan. Replace bearings indicated on the plan.
5. Install studded shear connectors, end cross frames, and deck joint armor.
6. Replace deck, parapets, and portions of abutments.
7. Install new compression seal expansion joint at abutments.
8. Place new approach slabs
9. Repair damaged concrete on abutments and piers as per plan
10. Seal concrete surfaces as noted on plans
11. Paint existing structural steel as per plan
12. Open structure to traffic

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3986 MAHONING AVE., YOUNGSTOWN, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
KOS	KOS	TF	12-93
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDV		GENPLAN	

GENERAL PLAN AND ELEVATION

BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

POR-76-13.62

2 / 12

14
24

STRUCTURE GENERAL NOTES

REFERENCE **shall be made** to Standard Drawings:

AS-1-81	Dated	9-15-94
EXJ-2-81	Dated	2-14-97
RB-1-55	Revised	2-2-59
GSD-1-96	Dated	2-12-97

and to Supplemental Specifications:

842	DATED	1-6-99
849	Dated	6-14-95
863	Dated	9-9-97
885	Dated	8-10-99
899	Dated	10-21-98
910	Dated	7-28-98
949	Dated	9-26-86

DESIGN SPECIFICATIONS: This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1996, the interim specifications, and the ODOT Bridge Design Manual.

DESIGN LOADING: HS20-44, Case I and the Alternate Military Loading.

DESIGN DATA:

Concrete Class S – compressive strength 4500 p.s.i. (superstructure)

Concrete Class C – compressive strength 4000 p.s.i. (substructure)

Reinforcing steel – ASTM A615, A616 or A617
Grade 60 minimum yield strength 60,000 p.s.i.

Structural Steel
ASTM A36 – yield strength 36,000 p.s.i.

DECK PROTECTION METHOD:
Epoxy coated reinforcing steel.
2-1/2" concrete cover.
Sealing of Concrete Surfaces.

MONOLITHIC WEARING SURFACE is assumed, for design purposes, to be 1" thick.

ITEM SPECIAL, SEALING OF CONCRETE SURFACES: A concrete sealer shall be applied to the concrete surfaces shown on sheet [7/12], [10/12], and [11/12]. See proposal for surface preparation requirements, application rates, material requirements and application procedures.

PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

DESCRIPTION: This work shall consist of the removal of concrete decks including sidewalks, parapets, railings, deck joints and other appurtenances from steel supporting systems (beams, girders, cross frames, etc.). Care shall be taken during deck removals to protect portions of such systems that are to be salvaged and incorporated into the proposed structure. In this respect, the use of explosives, headache balls and/or hoe ram type of equipment is prohibited.

PROTECTION OF TRAFFIC: Prior to demolition of any portions of the existing superstructure, the contractor shall submit his plans for the protection of traffic (vehicular, pedestrian, boat, etc.) adjacent to and/or under the structure to the Director for approval. These plans shall include provisions for any devices and structures that may be necessary to ensure such protection. Temporary vertical clearances specified on the plans or in the proposal shall be maintained at all times except as otherwise approved by the Director.

PROTECTION OF STEEL SUPPORT SYSTEMS: Before deck slab cutting is permitted, the outline of primary steel members in contact with the bottom of the deck shall be drawn on the surface of deck. Small diameter pilot holes shall be drilled 2 inches outside these lines to confirm the location of flange edges. Deck cuts over or within 2 inches of flange edges shall not extend lower than the bottom layer of deck slab reinforcing steel. Cuts made outside 2 inches of flange edges may extend the full depth of the deck. During cutting of the deck slab, care shall be taken not to damage steel members that are to be incorporated into the proposed structure.

REMOVAL METHODS: Concrete may be removed by cutting and by means of hand operated pneumatic hammers employing pointed or blunted chisel type tools. For removals above steel members, a hammer heavier than 35 pounds but not to exceed 90 pounds may be used at the approval of the Engineer, to ensure adequate depth control and to prevent nicking or gouging the primary steel members.

DECK REMOVALS: Due to the possible presence of welded attachments to existing structural steel (finishing machine, scupper and form supports, etc.), care shall be taken during deck removal to avoid damaging stringers which are to remain. Stringers damaged by the Contractor's removal operations shall, at no cost to the project, be replaced or repaired. Proposed repairs, developed by a registered professional engineer, shall be submitted in writing for review and approval by the Director.

EXTRANEOUS MEMBERS: Existing extraneous members (i.e., finishing machine and form supports, etc., and the support for scuppers and bulb angles which are to be removed) attached by welded connections to portions of the top flanges designated "tension" shall be removed and the flange surfaces ground smooth. Grinding shall be carefully done and parallel to the flanges.

LOADING LIMITATIONS: No part of the structure shall be subjected to unit stresses that exceed 136.5% of the allowable unit stresses given in the AASHTO Standard Specifications for Highway Bridges due either to demolition, erection or construction methods, or to the use or movement of demolition or erection equipment on or across the structure. Structural analysis computations, by a registered professional engineer, showing the allowable stresses and the maximum stresses produced by the Contractor's methods or equipment shall be submitted to the Director for review and approval at least two weeks prior to the start of the work.

PAYMENT: This work will be paid for at the contract lump sum price bid, which price and payment shall be full compensation for all labor, equipment, materials and incidentals necessary to complete the work in conformance with these requirements, with pertinent provisions of 202, and to the satisfaction of the Engineer.

PORTIONS OF STRUCTURES REMOVED: Removal not included in Item 202, Portions of Structures Removed, over 20 foot span, as per plan, shall be included in this Item for Payment.

CUT LINE CONSTRUCTION JOINT PREPARATION: Saw cut boundaries of proposed concrete removals 1" deep. Remove concrete to a rough surface. Where practicable, the existing reinforcing steel where required in the plans shall be left in place. Install dowel bars if specified. Prior to concrete placement abrasively clean joint surface and exposed reinforcement to remove loose and disintegrated concrete and loose rust. Then, the joint surface and exposed reinforcement shall be thoroughly cleaned of all dirt, dust, or other foreign material by the use of water, air under pressure, or other methods that produce satisfactory results. Concrete bonding surfaces shall be wet without free water as concrete is placed.

SUBSTRUCTURE CONCRETE REMOVAL shall be by means of approved pneumatic hammers employing pointed and blunt chisel tools. Hydraulic hoe-ram type hammers will not be permitted. The weight of the hammer shall not be more than 35 pounds for removal within 18-inches of portions to be preserved. Outside the 18-inch limit, a hammer heavier than 35 pounds, but not to exceed 90 pounds, may be used at the approval of the Engineer. Pneumatic hammers shall not be placed in direct contact with reinforcing steel that is to be retained in the rebuilt structure.

EXISTING STRUCTURE VERIFICATION: Details and dimensions shown on these plans pertaining to the existing structure have been obtained from plans of the existing structure and 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, and 105.02.

Contract bid prices shall be based upon a recognition of the uncertainties described above and 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.

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 their cost. Any existing reinforcing bars deemed by the Engineer to be unusable because of corrosion shall be replaced with new steel. An allowance 100 pounds is included in the respective 842 items for this purpose.

ITEM 516 – REFURBISHING BEARING DEVICES, AS PER PLAN This item shall include all work necessary to properly align bridge bearings as well as their cleaning and painting. Included shall be the disassembly of the bearings, hand tool cleaning (grinding if necessary), painting as required by Item 885, replacement of any damaged sheet lead with preformed bearing pads installation of any necessary steel shims as specified, bearing realignment so that the bearings are vertically aligned at 60 degrees F, lubricating sliding surfaces, and reassembly of the bearings. The Contractor shall be sure that all bearings are shimmed adequately and that no beams and/or bearing devices are "floating". At the option of the Contractor and at no additional cost to the State, new bearings of the same type as the existing may be installed in lieu (place) of refurbishing the bearings. All work shall be to the satisfaction of the Engineer. Payment for all the above described labor and materials will be made at the contract price bid for Item 516 – Refurbish and Reset Bearing Devices, As Per Plan.

REINFORCING BAR SPLICE LENGTHS shall conform to 509.08 unless otherwise shown or noted on the plans.

ITEM SPECIAL, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN. This item shall include all work necessary to jack and adequately support the existing superstructure.

The Contractor shall be responsible for the design, installation and operation of an adequate jacking system, including any temporary or permanent supports, to perform the work described in the project plans. Three (3) sets of jacking and support plans, procedures and loading calculations, performed and stamped by a registered professional engineer, shall be submitted to the Director for approval at least thirty (30) days before actual work is to begin. Submittals shall include at least the following:

Physical dimensions and capacity of the jacking systems along with the actual positions, including dimensions, defining where the jacking systems will be physically located on the structure to perform the required lifts.

Physical dimensions, materials, fabrication details and design calculations for any temporary or permanent supports along with actual details of their installed locations on the structure. Horizontal movement restraints shall be designed and detailed. Lateral and longitudinal design loads and supporting design calculations shall be included.

A jacking plan sheet layout, with adequate details to show all jacking points, calculated loadings at those points, locations of jacking equipment and temporary or permanent supports shall be included in the submittal. Any phased construction, special traffic requirements, clearance requirements, or special construction details that affect the jacking operation and any other details the Contractor deems necessary to adequately visually describe the jacking operation shall also be included in the jacking plan sheet.

The plan sheet shall include a step by step jacking procedure detailing all steps in the operation including the required work described in the project plans.

Jacking operations are limited to a maximum differential jacking height between adjacent bearings of 1/4 inch.

At a minimum, a jacking operation shall lift all bearings at any one abutment or pier simultaneously. Maximum differential jacking height between any adjacent abutments or piers shall be limited by stresses induced in the affected structural members. Calculations detailing all stresses induced in the affected members and limited by allowable stresses of 136.5% of normal design stresses, shall be included in the jacking procedure submittal. The only exception to the simultaneous jacking requirement is when actual project work requires individual bearings to be replaced or rehabilitated, no permanent shimming is required and the height of the total lift does not exceed 1/4 inch.

All labor, tools, equipment, materials and incidentals necessary to complete this work are included under Item Special, Lump Sum, Jacking and Temporary Support of Superstructure.

INSPECTION OF STRUCTURAL STEEL: The Engineer shall visually inspect all existing butt-welded splices and/or top flange cover plate fillet welds to ensure that they are free from defects. The deck slab haunch forms immediately adjacent to such welds shall not be erected until after the Engineer has completed this inspection. This inspection shall not take place until after the top flanges are cleaned as specified in 511.08, but it shall be done before the deck slab reinforcement is installed. The cost associated with this inspection shall be included with Item 842, Class S concrete, Superstructure for payment. Any cracks found should be reported to the Office of Structural Engineering, bridge construction specialist, along with specific information on location of the cracks, length and depth so an evaluation and repair or replacement recommendation can be made.

ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T= 12"), AS PER PLAN: The reinforcing steel for the approach slab of this structure shall be epoxy coated in conformance with 509.

Materials, labor and installation shall be included for payment in this Item 611 Reinforced Concrete Approach Slab (T= 12"), As Per Plan,
See sheet 4/24.

ITEM 518, 6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN: Corrugated pipe used in abutment drainage shall be 6 inch diameter, plastic corrugated as per CMS 707.33, AASHTO M294, Type SP.

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

DESIGNED	DRAWN	REVIEWED	DATE
KOS	KRM	TF	12-93
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDV	KOS	GENOTE1	

GENERAL NOTES
BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

POR-76-13.62

STRUCTURE GENERAL NOTES AND ESTIMATED QUANTITIES

ITEM 518, 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS: Corrugated pipe used in abutment drainage shall be 6 inch diameter, plastic corrugated as per CMS 707.33 , AASHTO M294, Type S. This item shall include all elbows, tees and end caps required to complete the abutment drainage system.

ITEM 518 POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN:
This item shall include the removal and disposal of the existing porous backfill and the placing of new porous backfill. Prior to placing the porous backfill, filter fabric meeting the requirements of 712.09, type A shall be installed between the porous backfill and the existing ground.

Porous backfill 2 feet thick shall extend up to the plane of the subgrade, to one foot below the embankment surface, and laterally to the ends of the wingwalls.

All work shall be done in accordance with the requirements of item 518. Payment for the above work, including excavation, porous backfill, filter fabric, and all incidentals shall be included in the contract price bid for item 518 porous backfill with filter fabric, as per plan.

BACKWALL CONCRETE: In addition to the provisions of 511.08, backwall concrete above the optional construction joint at the approach slab seat shall not be placed until after the deck concrete in the span adjacent to the abutment has been placed.

INSTALLATION OF SEAL: During installation of the support/armor for the superstructure side of the expansion joint seal, the seating of the beams on bearings shall be carefully observed to assure that positive bearing is maintained. Proper vertical fit of the support/armor on the beams shall be achieved by positioning of the bevel fill plates rather than by clamping force.

WELDED ATTACHMENT of supports for concrete deck finishing machine may be made to areas of the fascia stringer designated "Compression". Attachments shall not be made to areas designated "Tension". Fillet welds to compression flanges shall be not closer than 1" from the edge of flange, be not more than 2" long, and be not smaller than the minimum size required by AASHTO.

EXISTING BRIDGE PLANS: The original construction plans of the existing bridge are available upon request at the District 4 Office of the OHIO DEPARTMENT OF TRANSPORTATION, Ravenna, Ohio.

PAINTING OF STRUCTURAL STEEL: New steel shall be cleaned and prime painted in the shop and field painted with an intermediate and finish coat of paint using System IZEU. Existing steel shall be field cleaned and painted with a prime, intermediate, and finish coat of paint using Item 885. For pay purposes, cleaning and prime painting new steel is included in 863, intermediate and finish painting of new steel in 816 , and field cleaning and painting existing steel in the several 885 items. The surface area pay quantities are based on the surface area of main members increased be 10 percent to account for the area of crossframes, bearings, and other steel incidentals being cleaned and painted.

CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN: After completion of major modification items, existing embankment surfaces shall be restored to a uniform plane surface with crushed aggregate slope protection. New embankment surfaces shall be protected as specified in 601.05. Restoration shall extend longitudinally from face of abutments to toe of slope and laterally to at least 3'-0" beyond deck fascias. The minimum total thickness of proposed protection restored shall be 1'-0".

ELASTOMERIC SEALS: The joint seal for each bridge deck joint shall be furnished in one continuous piece.

MAINTENANCE OF TRAFFIC: Two lanes of traffic in each direction with a minimum horizontal width of 26'-0" and a minimum vertical clearance of 15'-0" shall be maintained on I.R. 76 at all times.

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

ITEM 863 STRUCTURAL STEEL MEMBERS MISCELLANEOUS FABRICATION, AS PER PLAN:
All sections of SS 863 apply except as revised herein. The engineer is responsible for ensuring any fabricated steel supplied under this bid item is acceptable. The requirements for submittal of shop drawings to the Office of Structural Engineering is waived. The contractor shall supply the engineer with shop drawings stamped by a professional engineer and dated, as per 863.08, prior to any incorporation of fabricated steel at the project. The engineer shall assure the submitted drawings match the fabricated steel delivered before the steel is incorporated into the work. If the engineer is satisfied the contractor shall supply a copy set, stamped and dated as per 863.08, to the Office of Structural Engineering for record purposes. SS 863's required test data submittal to the Office of Structural Engineering is waived, but the contractor's written acceptance of the material test reports shall be furnished to both the engineer and the Office of Structural Engineering prior to installation of any steel.

At or before the prefabrication meeting the engineer may choose to request assistance from the Office of Structural Engineering in whatever capacity is required.

Steel members included in this item include the end crossframes, bearing shims, and any miscellaneous items.

Painting of these members shall be included under item 885 Field Painting of Steel, With Warranty.

ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN: This item shall include all material, labor and equipment necessary to restore the existing crushed aggregate slope protection to its original condition.

ESTIMATED QUANTITIES									SEE SHEET
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	
202	11200	LUMP		PORTIONS OF STRUCTURE REMOVED				LUMP	
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LUMP	3/12
503	21300	LUMP		UNCLASSIFIED EXCAVATION				LUMP	
SPECIAL	51267510	629	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	104	128	397		
516	10500	66	LIN FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL *			66		
516	46200	3	EACH	BEARING DEVICE, ROCKER (R-75)	3				
516	46801	22	EACH	REFURBISH AND RESET BEARING, AS PER PLAN	7	15			3/12
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LUMP		3/12
518	21201	21	CU YD	POROUS BACKFILL WITH FILTER FABRIC, AS PER PLAN	21				4/12
518	40001	60	LIN FT	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	60				6/12
518	40010	60	LIN FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	60				
519	11100	88	SQ FT	PATCHING CONCRETE STRUCTURE [1]	28	60			
SPECIAL	51912600	74	LIN FT	CONCRETE REPAIR BY EPOXY INJECTION *	22	52			
601	20001	80	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN				80	4/12
816	00610	8625	POUND	FIELD PAINTING OF NEW STEEL, INTERMEDIATE AND FINISH COAT, SYSTEM IZEU *			8625		
842	34400	235	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE			235		
842	45700	20	CU YD	CLASS C CONCRETE, ABUTMENT	20				
863	10201	8625	POUND	STRUCTURAL STEEL MEMBERS, MISCELLANEOUS LEVEL FABRICATION, AS PER PLAN			8625		4/12
863	20000	2050	EACH	WELDED STUD SHEAR CONNECTORS			2050		
885	10000	LUMP		SURFACE PREPARATION OF EXISTING STEEL, WITH WARRANTY **			LUMP		
885	11000	LUMP		FIELD PAINTING OF EXISTING STEEL, PRIME COAT, WITH WARRANTY **			LUMP		
885	12000	LUMP		FIELD PAINTING OF EXISTING STEEL, INTERMEDIATE COAT, WITH WARRANTY **			LUMP		
885	13000	LUMP		FIELD PAINTING OF EXISTING STEEL, FINISH COAT, WITH WARRANTY **			LUMP		

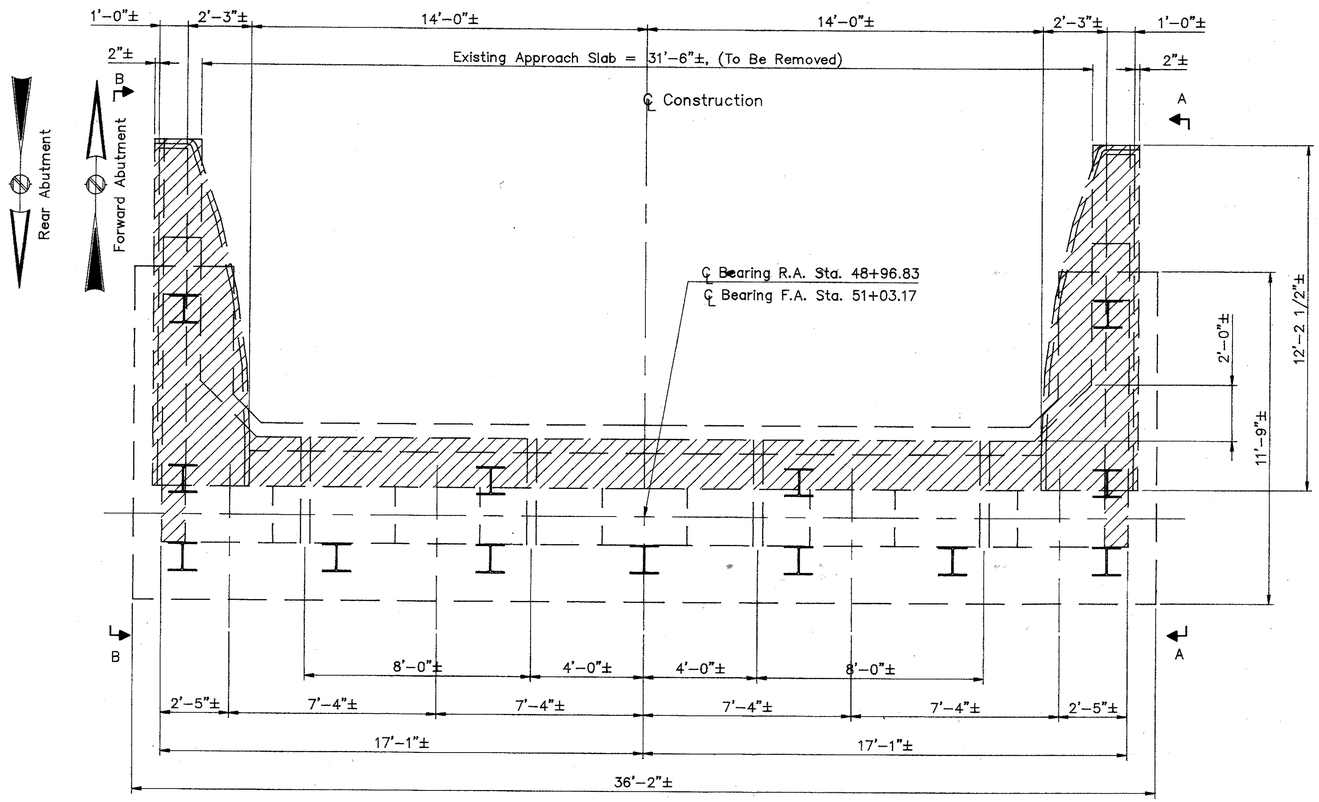
- • See Proposal Note
- •• Prime coat for new steel shall be inorganic zinc and shop applied. Prime coat for existing steel shall be organic zinc and field applied.
- [1] This quantity has been increased to include a contingency of 300% of the measured area.

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

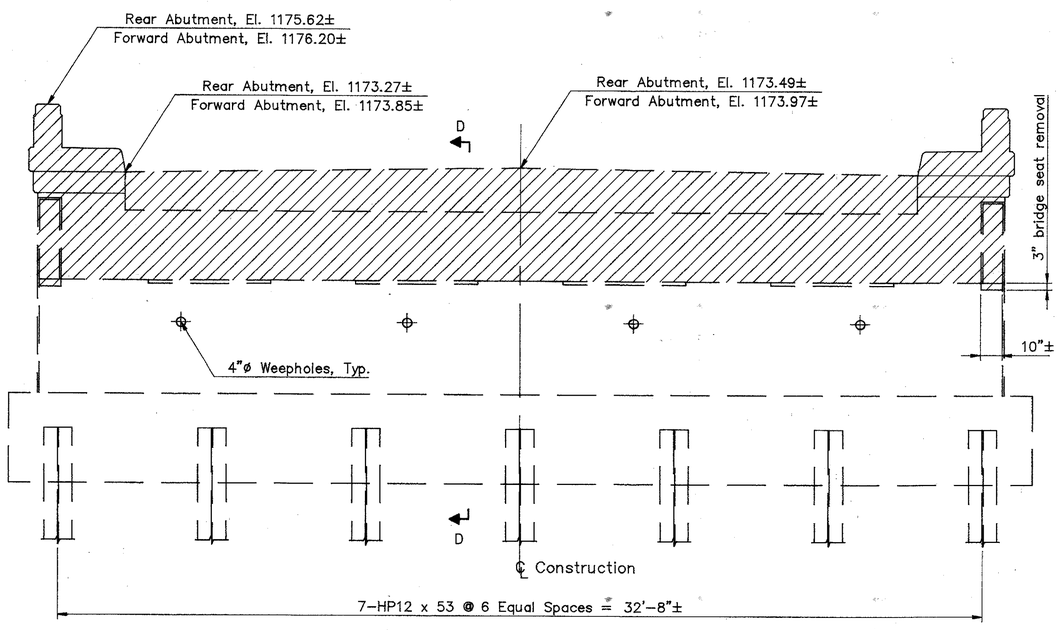
DESIGNED	DRAWN	REVISED	DATE
KOS	KOS	TF	12-93
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDV		GENOTE2	

GENERAL NOTES, PROPOSED WORK, AND ESTIMATED QUANTITIES
BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

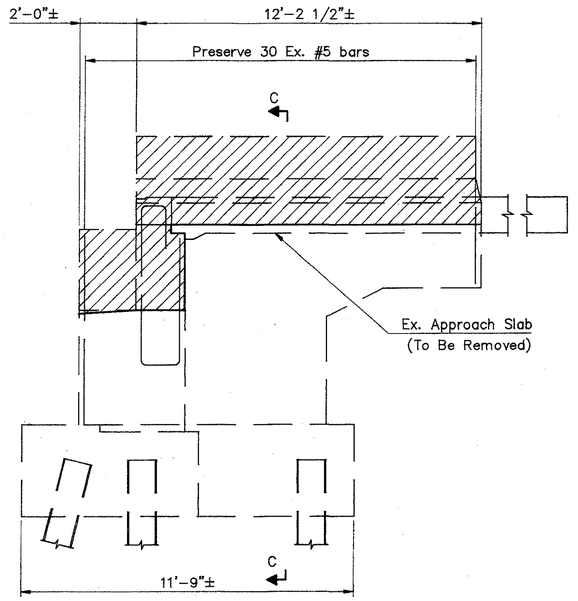
POR-76-13.62



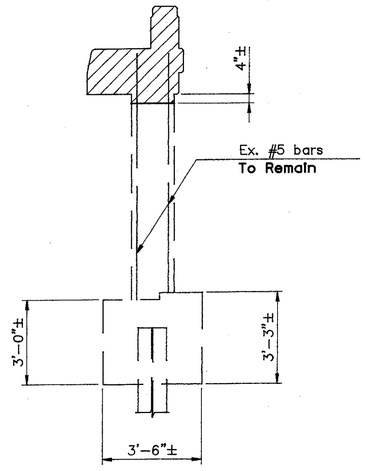
PLAN



ELEVATION

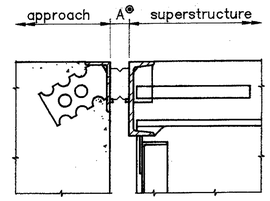


VIEW A-A, VIEW B-B OPP. HAND



SECTION C-C

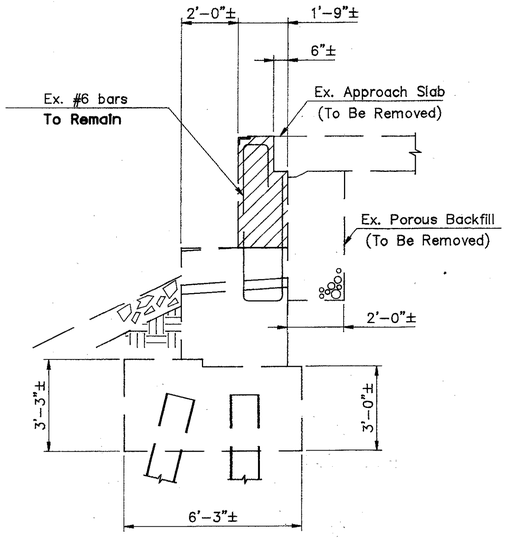
DIMENSION A®	
Temperature	Dimension A
90° F	2"
80° F	2 1/16"
70° F	2 3/16"
60° F	2 1/4"
50° F	2 5/16"
40° F	2 3/8"



The Contractor is to refer to Std. Dwgs. EXJ-2-81 and SD-1-69 for details of the compression seal, end dam units, and end crossframes.

Refer to the adjacent table for the determination of dimension A®.

DETAIL A



SECTION D-D

LEGEND		
▨	–	Indicates limits of existing structure to be removed, as per Item 202
R.A.	–	Rear Abutment
F.A.	–	Forward Abutment

ABUTMENT REMOVAL AND REAR ABUTMENT PATCHING
BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

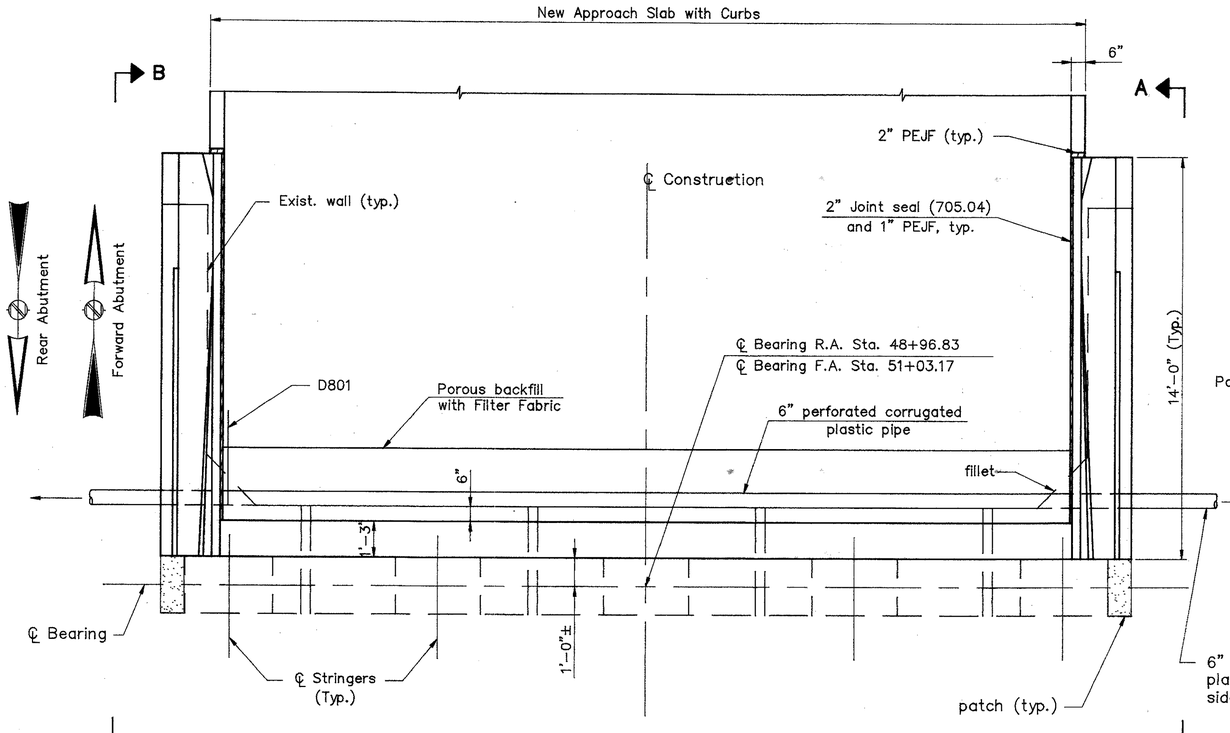
DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3998 MAHONING AVE., YOUNGSTOWN, OHIO

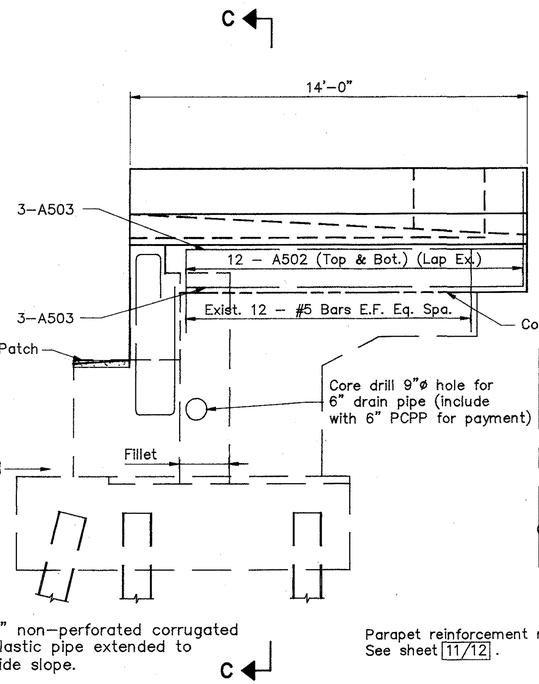
DESIGNED	DRAWN	REVIEWED	DATE
KOS	KOS	TF	12-93
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDV	KOS	ADETAIL1	

POR-76-13.62

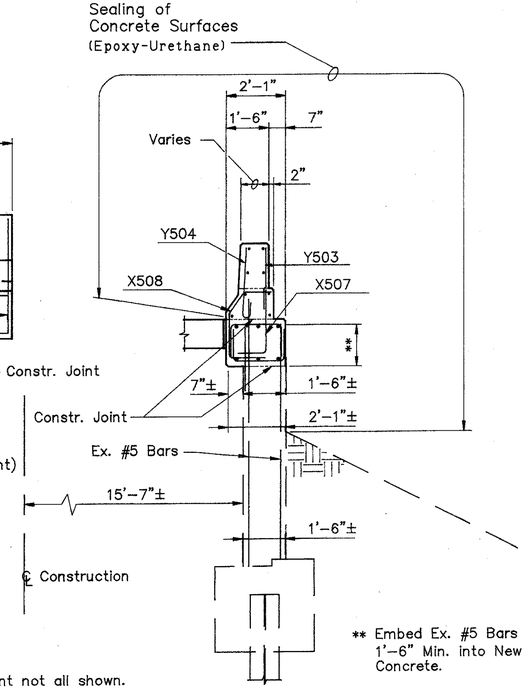
5/12

17/24





Parapet reinforcement not all shown.
See sheet 11/12 .

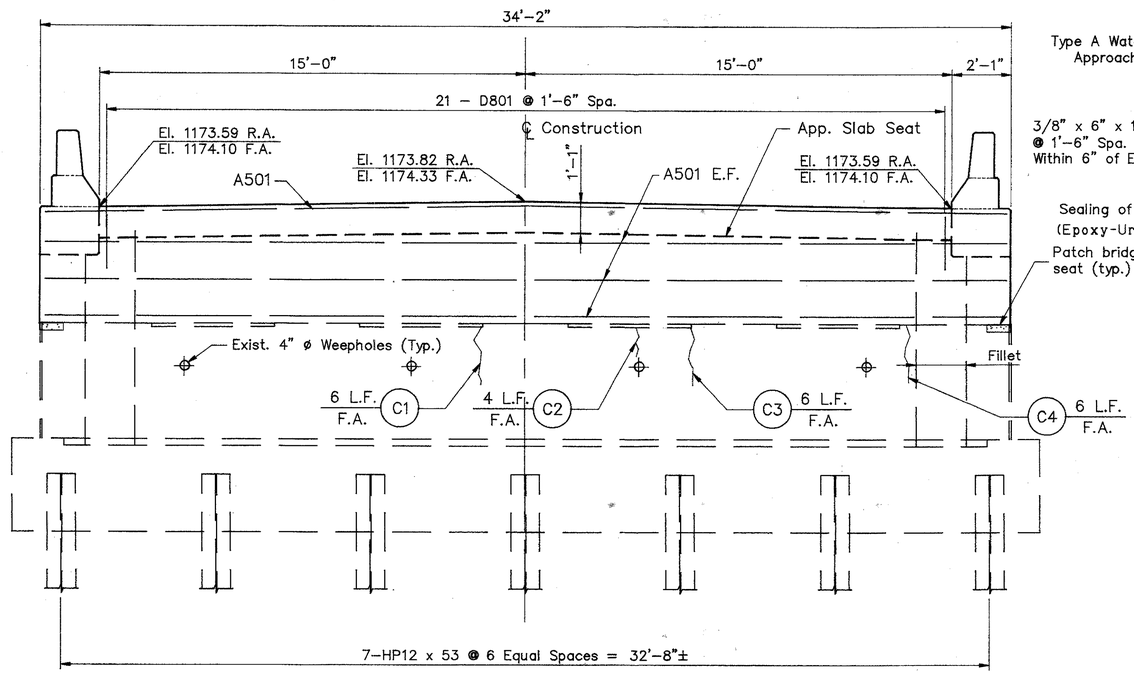


SECTION C-C

** Embed Ex. #5 Bars
1'-6" Min. into New
Concrete.

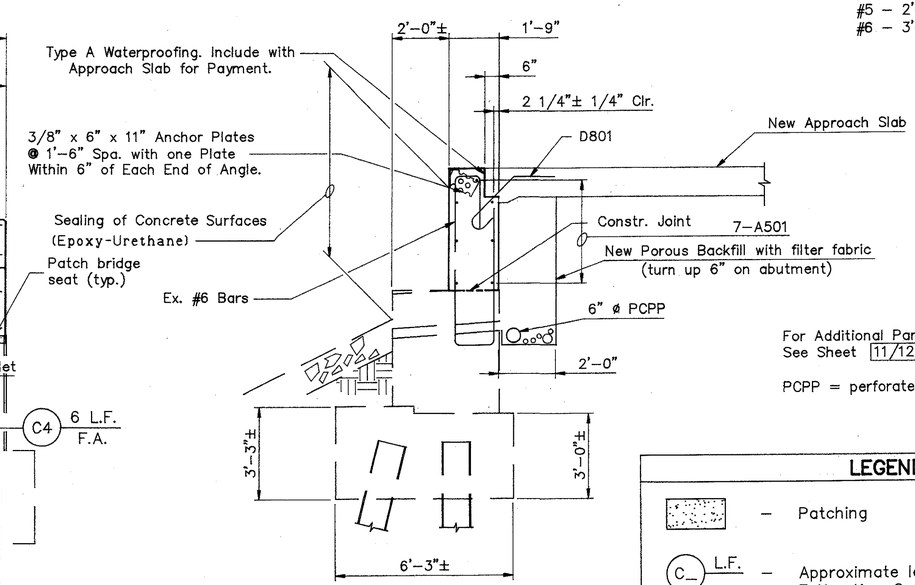
VIEW A-A, VIEW B-B OPP. HAND

PLAN



ELEVATION

BAR LAP LENGTHS:
#4 - 2'-3"
#5 - 2'-9"
#6 - 3'-4"



SECTION D-D

For Additional Parapet Details
See Sheet 11/12 .

PCPP = perforated corrugated plastic pipe

LEGEND

	–	Patching
C_ L.F.	–	Approximate length Used for Estimating Cracks to be Repaired
R.A.	–	Rear Abutment
F.A.	–	Forward Abutment

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

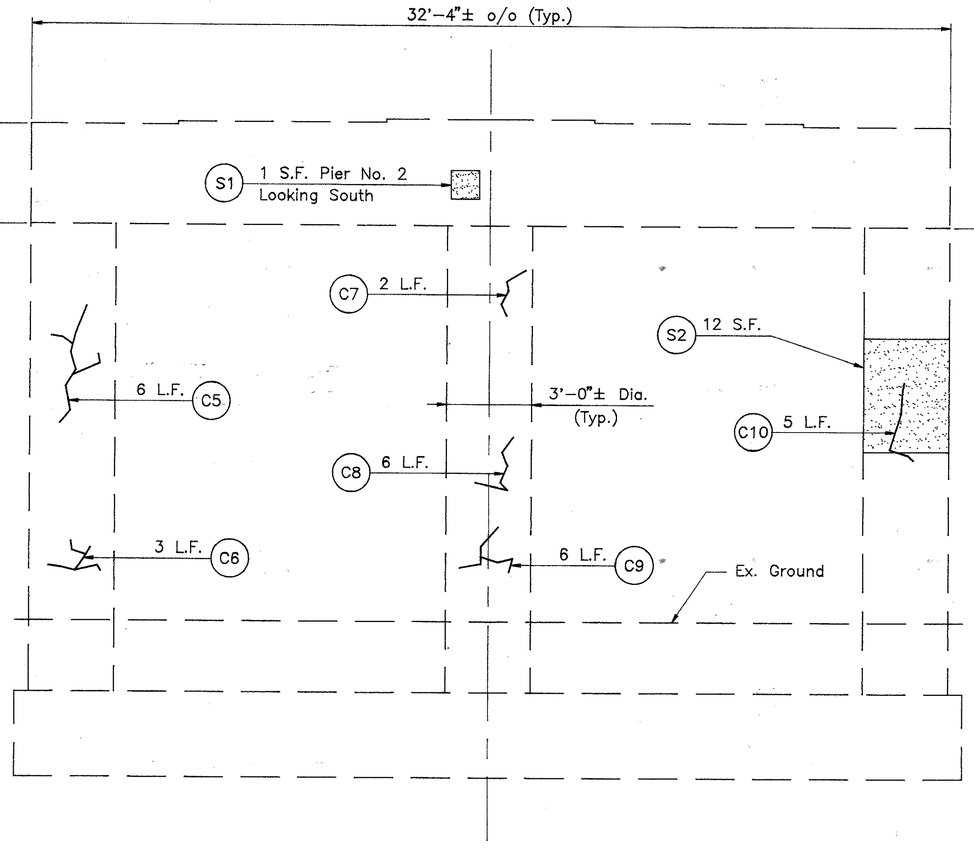
DESIGNED KRM
DRAWN KRM
CHECKED JDV
REVISED
DATE 12-93
REVIEWED TF
STRUCTURE FILE NUMBER ADETAIL2

ABUTMENT DETAILS AND FORWARD ABUTMENT
BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

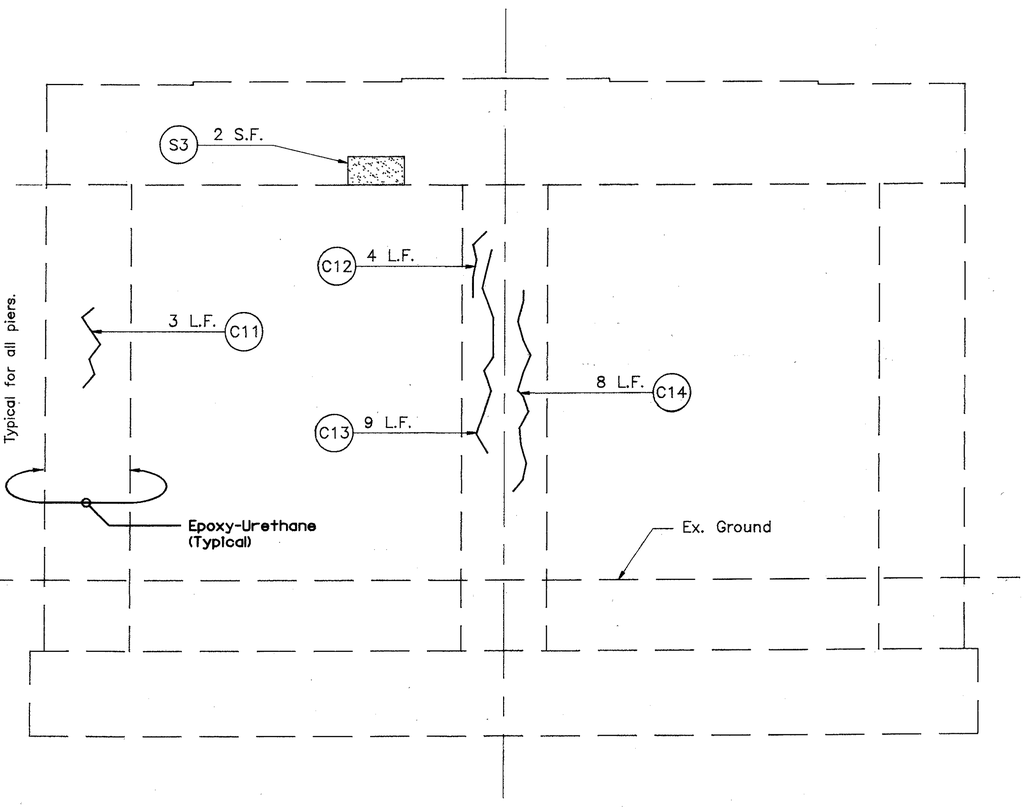
POR-76-13.62

6 / 12

18 / 24



PIER NO. 1 LOOKING SOUTH



PIER NO 3 LOOKING SOUTH

LEGEND

- Spalled concrete for patching
- S_ S.F. – Approximate area Used for Estimating Spalled Area to be Repaired
- C_ L.F. – Approximate Lin. Ft. Used for Estimating Cracks to be Repaired

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3986 WAHONING AVE., YOUNGSTOWN, OHIO

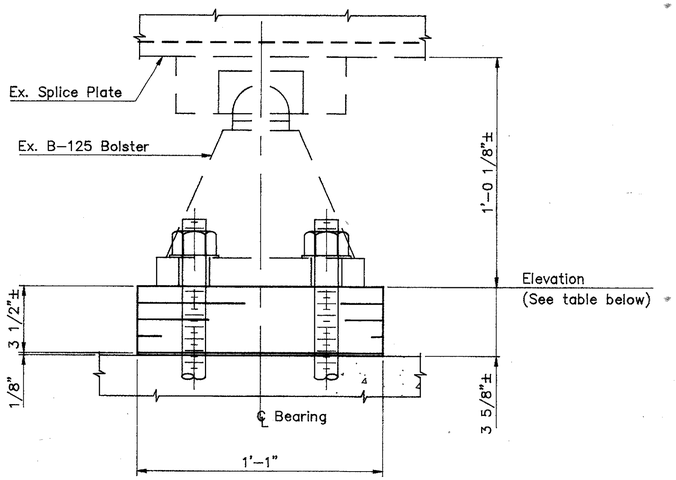
DESIGNED	DRAWN	REVIEWED	DATE
KOS	KOS	TF	12-93
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDV	KRM	PDETAIL1	

PIER REPAIRS
BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

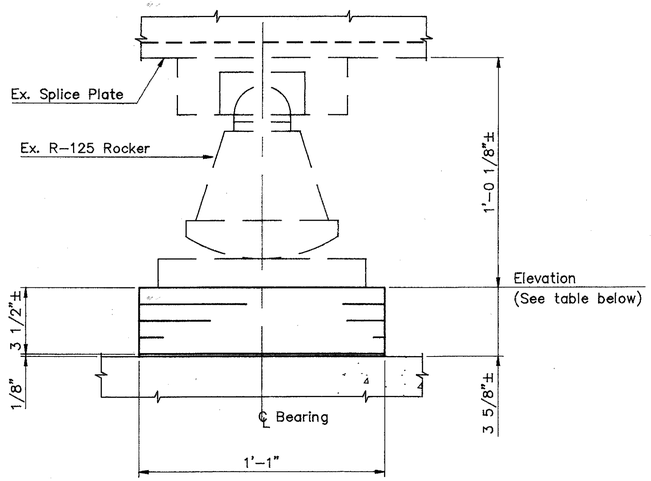
POR-76-13.62

7/12

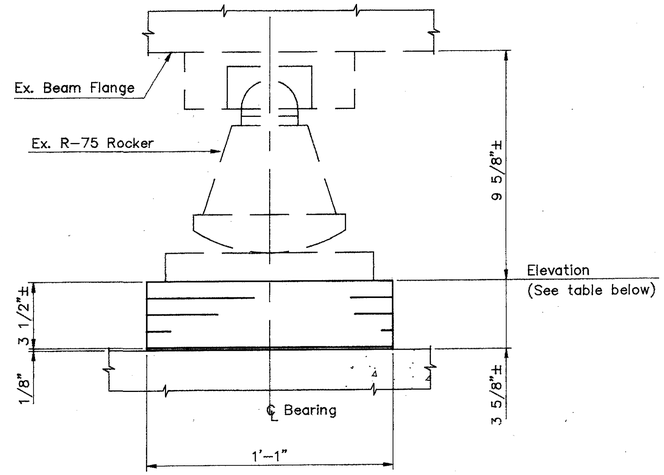
19/24



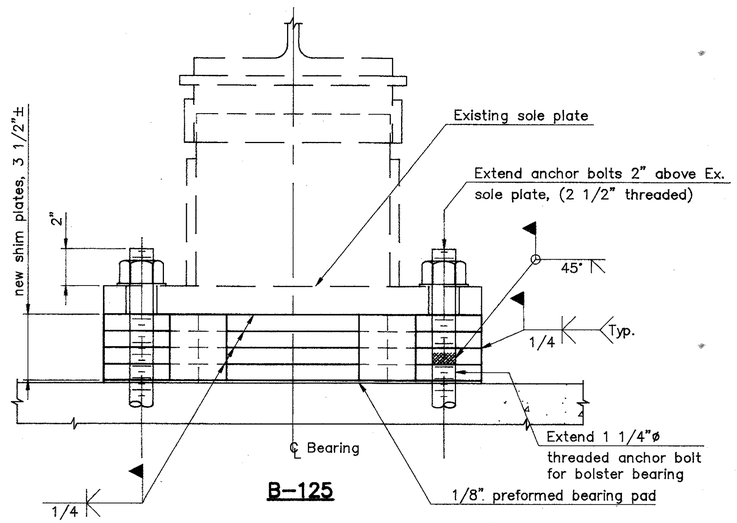
STRUCTURAL STEEL BOLSTER
B–125, PIER 2



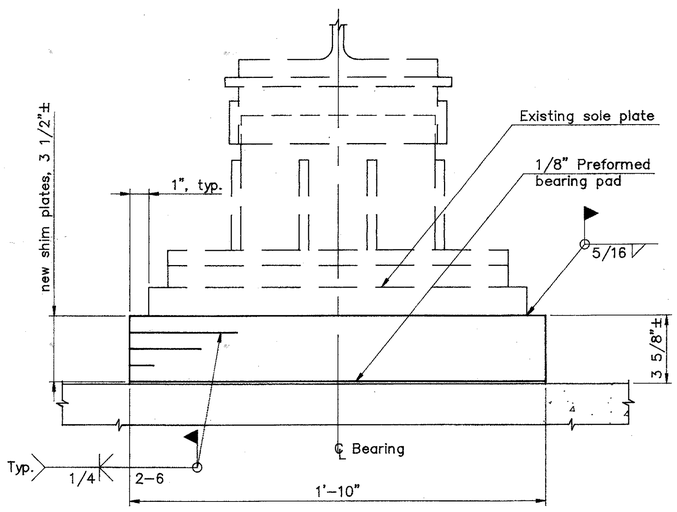
STRUCTURAL STEEL ROCKER
R–125, PIERS 1 AND 3



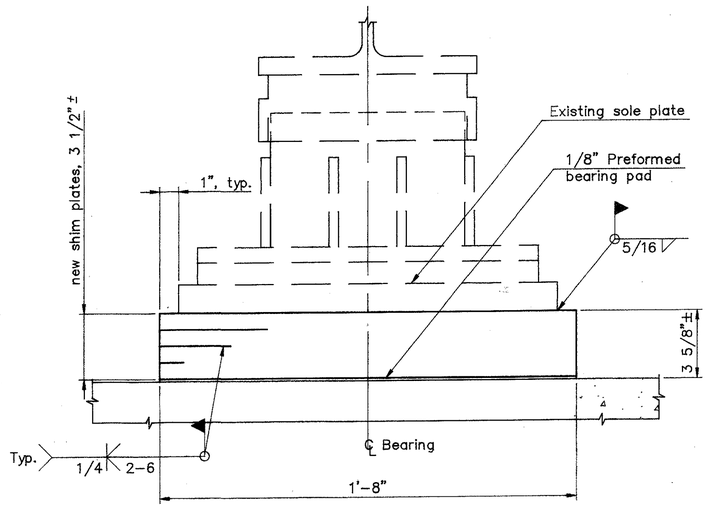
STRUCTURAL STEEL ROCKER
R–75, REAR AND FORWARD ABUTMENTS



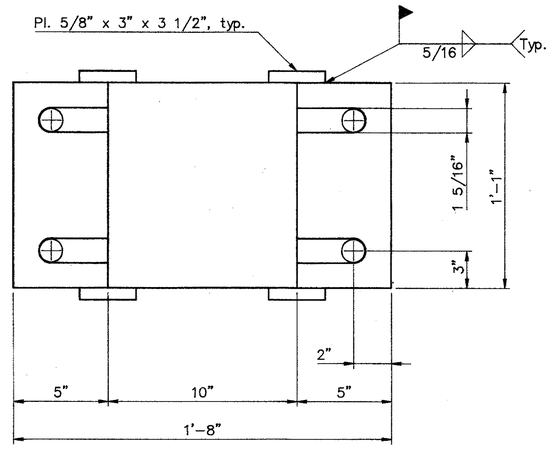
B–125



R–125



R–75



SHIM PLATES FOR BOLSTERS

TABLE OF ELEVATIONS *					
LOCATION	TOP OF SHIM ELEVATIONS				
℄ BEARINGS	1	2	3	4	5
R.A.	1169.54	1169.66	1169.77	1169.66	1169.54
PIER P–1	1169.81	1169.92	1170.04	1169.92	1169.81
PIER P–2	1170.17	1170.29	1170.40	1170.29	1170.17
PIER P–3	1170.10	1170.22	1170.33	1170.22	1170.10
F.A.	1170.05	1170.16	1170.28	1170.16	1170.05

* At ℄ Bearings and ℄ Beams.

NOTES:

All work and material required to refurbish bearings shown on this sheet is to be included for payment with Item 516, Refurbish and Reset Bearing Device, as per Plan, **except for painting. Painting of the new and existing bearings shall be included with Item 885.** Jacking the existing structure is included for payment with Item Special, Jacking and Temporary Support of Superstructure, As Per Plan.

Three Abutment rockers shall be replaced with R–75 steel rockers. These rockers are to be included with Item 516 Bearing Device, Rocker (R-75). Reference sheet 9/12 for locations of bearings to be replaced.

The Contractor shall refer to Standard Drawing RB–1–55, Rockers and Bolsters, for details and dimensions of the existing and proposed bearing units.

As a minimum, the following must be performed for Item 516, Refurbish and Reset Bearing Devices, as per plan:

1. Clean and Paint existing steel bearings and plates, **per Item 885.**
2. Provide field welding of new **shim** plates as directed by the Engineer.
3. Clean existing bridge seats.
4. Set rockers vertical at 60° F.

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

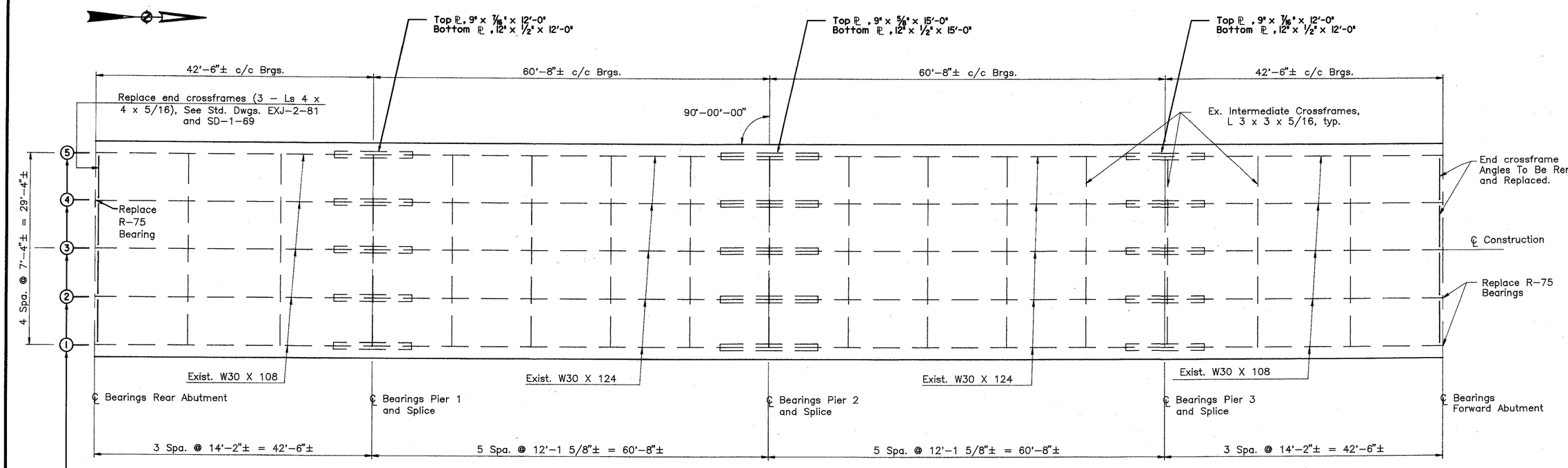
DESIGNED KOS
DRAWN KOS
CHECKED JDV
REVIEWED TF
DATE 12-93
STRUCTURE FILE NUMBER BEARING1
REVISED KOS

BEARING DETAILS
BRIDGE NO. POR–76–1362
ROCK SPRINGS ROAD OVER I.R. 76

POR–76–13.62

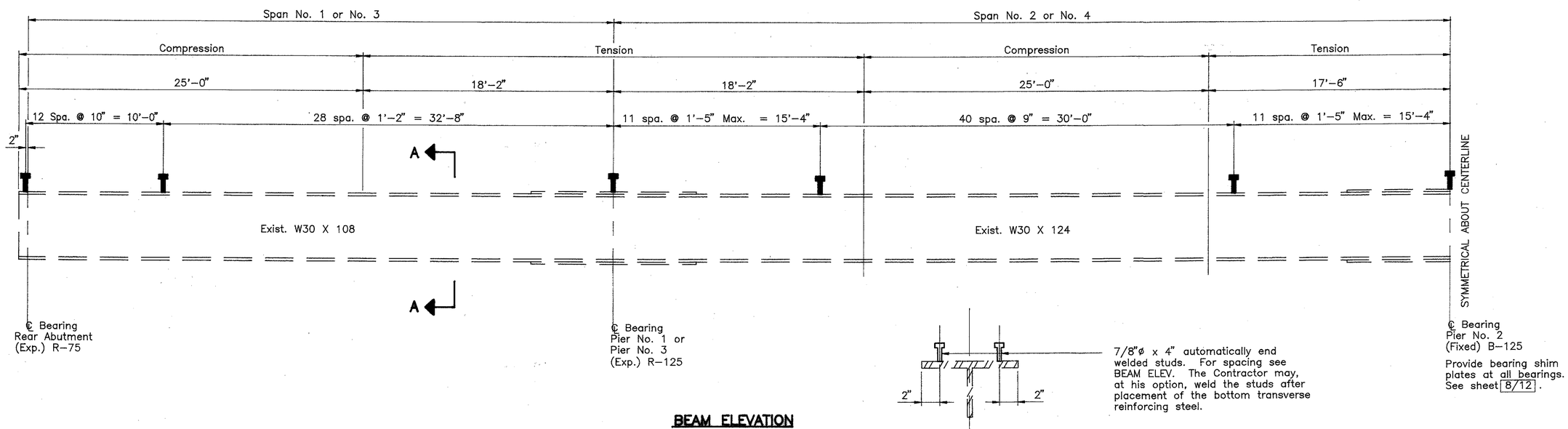
8 / 12

20 / 24



See sheet 8/12 for bearing details.

PLAN



BEAM ELEVATION

7/8"ø x 4" automatically end welded studs. For spacing see BEAM ELEV. The Contractor may, at his option, weld the studs after placement of the bottom transverse reinforcing steel.

SECTION A-A

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

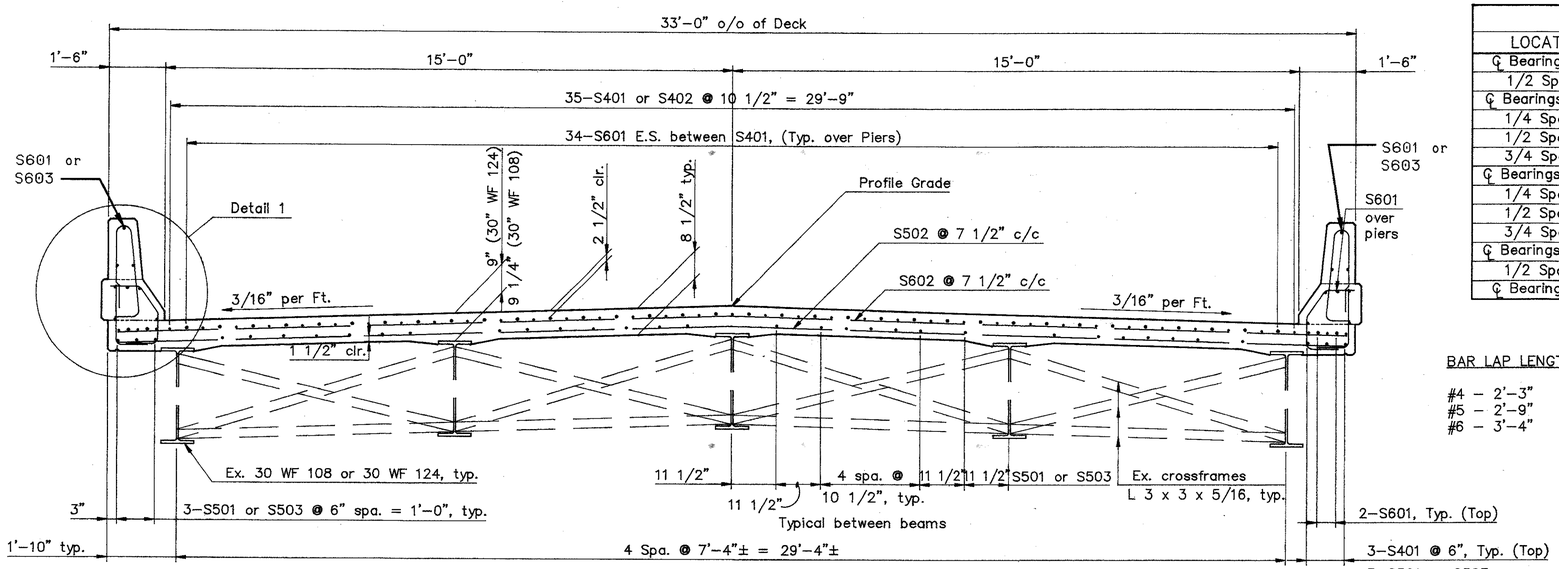
DESIGNED	DRAWN	REVIEWED	DATE
KOS	KRM	TF	12-93
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JDV	BEI	FRAMPLAN	

FRAMING PLAN AND DETAILS
BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

POR-76-13.62

9 / 12

21
24



TRANSVERSE SECTION

SCREED ELEVATIONS *				
LOCATION	STATION	15'–0" LT. ℄	℄ PROFILE	15'–0" RT. ℄
℄ Bearings R.A.	48+96.83	1173.60	1173.83	1173.60
1/2 Span 1	49+18.08	1173.90	1174.13	1173.90
℄ Bearings Pier 1	49+39.33	1174.12	1174.35	1174.12
1/4 Span 2	49+54.50	1174.27	1174.50	1174.27
1/2 Span 2	49+69.67	1174.38	1174.61	1174.38
3/4 Span 2	49+84.83	1174.45	1174.68	1174.45
℄ Bearings Pier 2	50+00.00	1174.48	1174.71	1174.48
1/4 Span 3	50+15.17	1174.53	1174.76	1174.53
1/2 Span 3	50+30.34	1174.53	1174.76	1174.53
3/4 Span 3	50+45.50	1174.49	1174.72	1174.49
℄ Bearings Pier 3	50+60.67	1174.41	1174.64	1174.41
1/2 Span 4	50+81.92	1174.30	1174.53	1174.30
℄ Bearings F.A.	51+03.17	1174.11	1174.34	1174.11

BAR LAP LENGTHS:

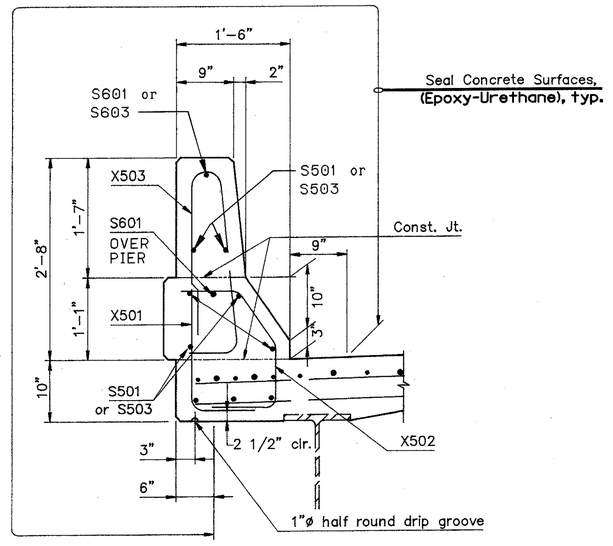
#4 – 2'–3"
#5 – 2'–9"
#6 – 3'–4"

NOTES:

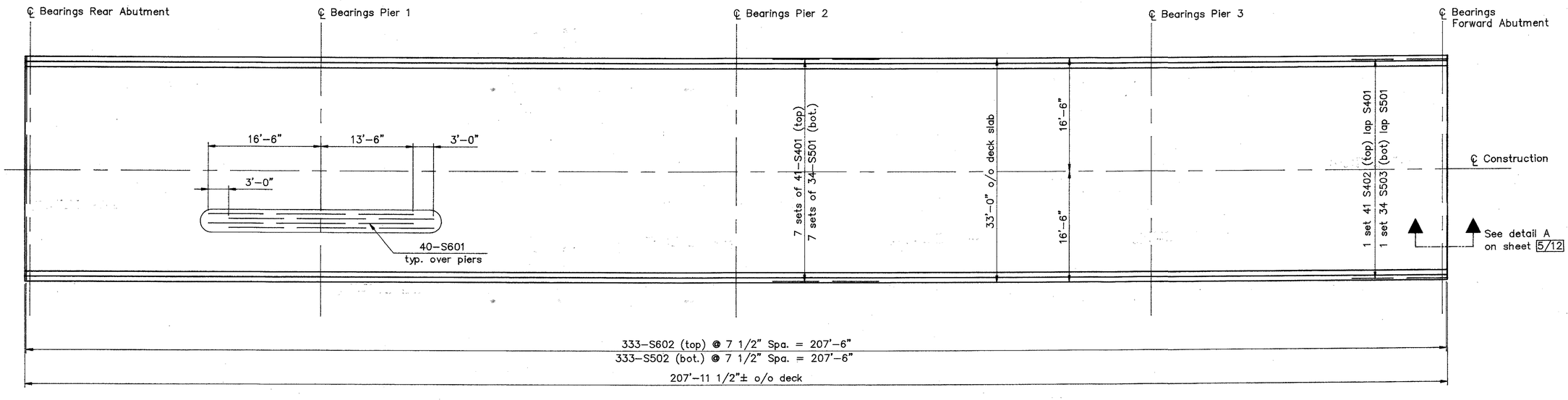
DECK SLAB DEPTH: The distance shown from the top of the deck slab to the top of the steel beam is the theoretical design dimension including the design haunch thickness of ½". The quantity of deck concrete to be paid for shall be based on this dimension, minus the design haunch thickness, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.

A HAUNCH WIDTH of 9 inches shall be used for computing quantity of concrete. However, the haunch width may be greater at the Contractor's option.

* SCREED ELEVATIONS shown are for the deck slab surface prior to concrete placement. Allowance has been made for anticipated dead load deflections.



DETAIL 1



PLAN

For S501, S503 and S601 in parapets, see sheet 11/12

DESIGN AGENCY: THOMAS FOK & ASSOC., LTD. CONSULTING ENGINEERS, SURVEYORS, & PLANNERS 3896 MAHONING AVE., YOUNGSTOWN, OHIO

DATE: 12-93 | REVIEWED: TF | STRUCTURE FILE NUMBER: TRANSECT

DRAWN: KOS | REVISED: BEI

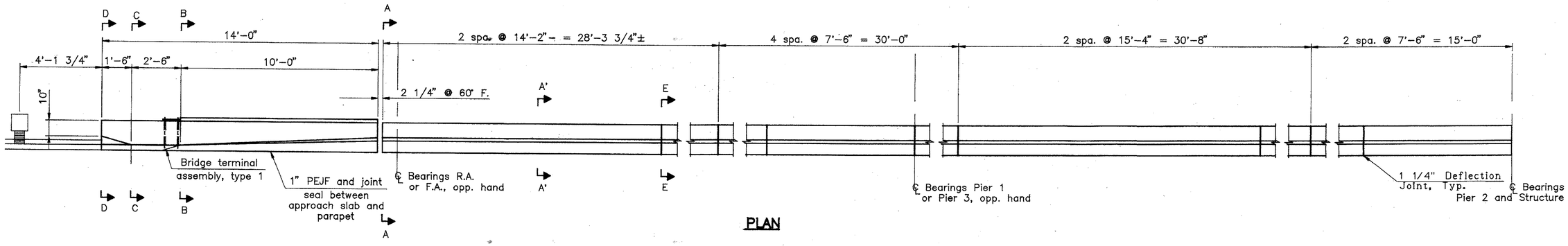
DESIGNED: KOS | CHECKED: JDV

TRANSVERSE SECTION
BRIDGE NO. POR–76–1362
ROCK SPRINGS ROAD OVER I.R. 76

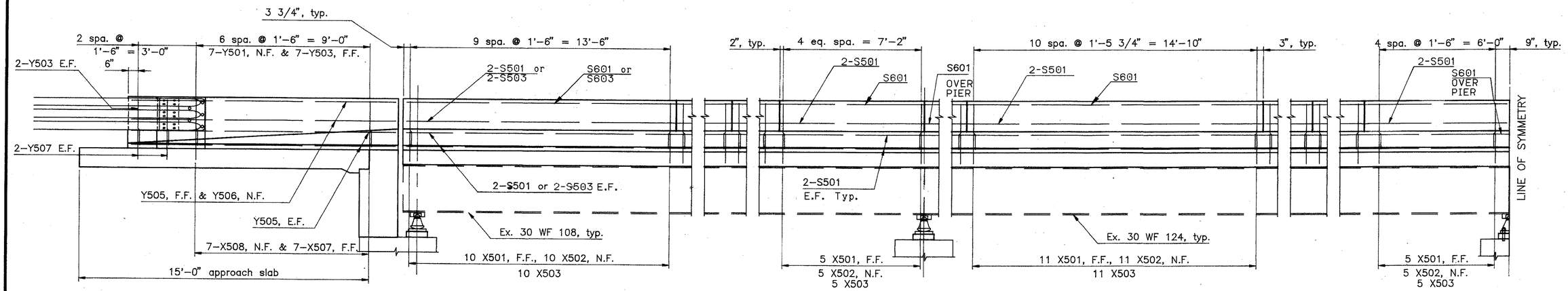
POR–76–13.62

10 / 12

22 / 24

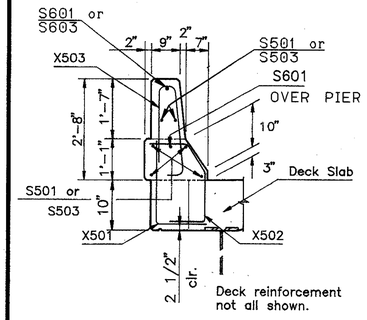


PLAN

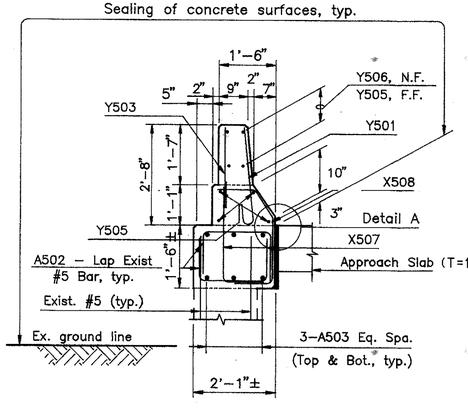


ELEVATION

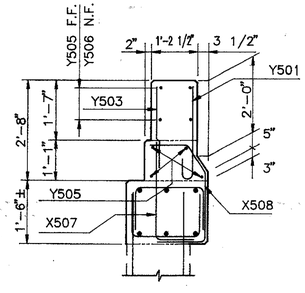
West Elevation shown,
East Elevation opposite hand



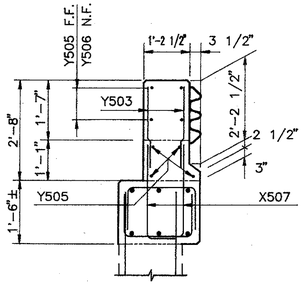
SECTION A'–A'



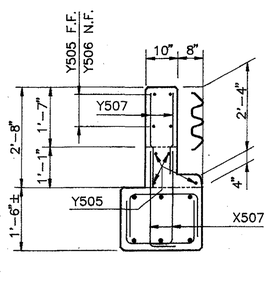
SECTION A–A



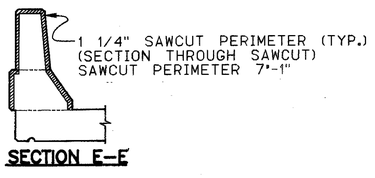
SECTION B–B



SECTION C–C

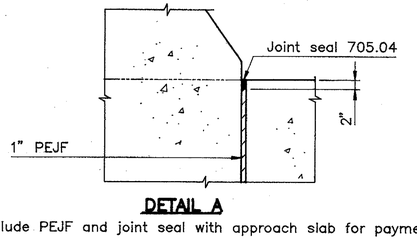


SECTION D–D



SECTION E–E

BAR LAP LENGTHS:
#4 – 2'-3"
#5 – 2'-9"
#6 – 3'-4"



DETAIL A

Include PEJF and joint seal with approach slab for payment.

NOTES:

1. Use Class S Concrete, f' = 4500 p.s.i. and ASTM A615, A616, or A617, epoxy coated reinforcing steel, Grade 60.
2. As soon as a concrete saw can be operated without damaging the freshly placed concrete, 1 1/4" deep control joints shall be sawed into the perimeter of the concrete parapet. The sawcut shall be made in the complete circumference of the parapet, starting and ending at the elevation of the concrete deck. The sawcuts shall be placed at a minimum of 6'-0" and a maximum of 10'-0" centers. The use of an edge guide, fence, or jig is required to insure that the cut joint is straight, true, and aligned on all faces of the parapet. The joint width shall be the width of the saw blade, a nominal width of 1/4 inch. The perimeter of the deflection control joint shall be sealed with a caulking material conforming to Federal Specification, TT-S-00227E to a minimum depth of 1 inch. The bottom 1/2 inch of the inside and outside face should be left unsealed to allow water to escape.
3. For Reinforcing Steel List, refer to Sheet 12/12 .

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

DESIGNED KOS
DRAWN KOS
REVIEWED TF
DATE 12-93
CHECKED JDV
REVISED KOS
STRUCTURE FILE NUMBER PARAPET

PARAPET DETAILS

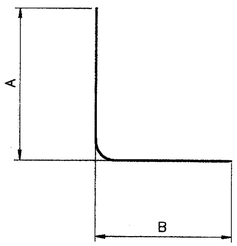
BRIDGE NO. POR-76-1362
ROCK SPRINGS ROAD OVER I.R. 76

POR-76-13.62

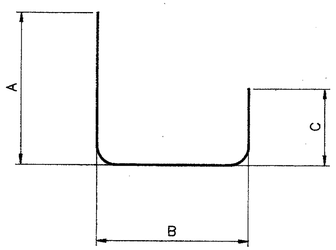
REINFORCING STEEL LIST

MARK	NO. REQD.	LENGTH	TYPE	DIMENSIONS A	B	C	D	INCRM.	SUPERSTRUCTURE NO. REQD.	SUPERSTRUCTURE WEIGHT	ABUTMENTS NO. REQD.	ABUTMENTS WEIGHT	TOTAL WEIGHT
S401	287	30'–0"	ST						287	5751			5751
S402	41	13'–3"	ST						41	363			363
S501	322	30'–0"	ST						322	10,075			10,075
S502	333	32'–6"	ST						333	11,288			11,288
S503	46	16'–9"	ST						46	804			804
S601	134	30'–0"	ST						134	6038			6038
S602	333	32'–6"	ST						333	16,255			16,255
S603	2	20'-10"	ST						2	63			63
X501	288	2'–4"	1	1'–8"	10"				288	700			700
X502	288	2'–10"	4	10"					288	851			851
X503	288	5'–3"	10						288	1577			1577
X507	44	3'–1"	1	2'–5"	10"						44	142	142
X508	28	3'–9"	4	1'–6"							28	110	110
Y501	28	3'–0"	16	2'–5"					28	88			88
Y503	44	2'–5"	ST						44	111			111
Y505	24	13'–8"	ST						24	342			342
Y506	8	13'–8"	17						8	114			114
A501	14	33'–10"	ST								14	494	494
A502	96	3'–11"	2	1'–3"	1'–8"	1'–3"					96	392	392
A503	24	13'–8"	ST								24	342	342
D801	42	4'–7"	12	2'–3"							42	514	514
								TOTALS		54,521		1994	56,515

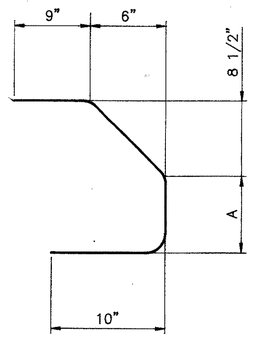
ALL REINFORCING STEEL TO BE EPOXY COATED.



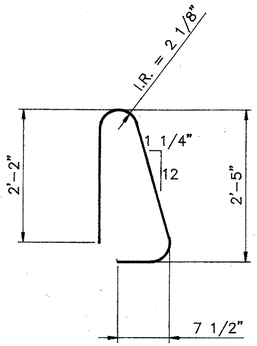
TYPE 1



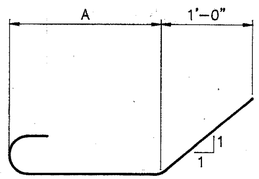
TYPE 2



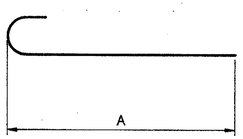
TYPE 4



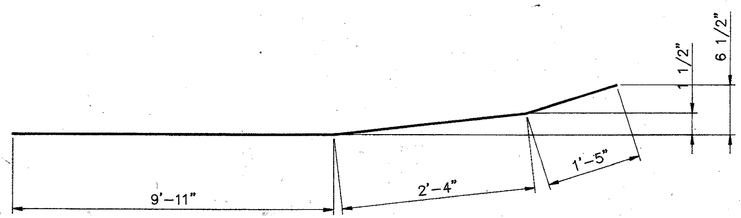
TYPE 10



TYPE 12



TYPE 16



TYPE 17

DESIGN AGENCY
THOMAS FOK & ASSOC., LTD.
CONSULTING ENGINEERS, SURVEYORS, & PLANNERS
3896 MAHONING AVE., YOUNGSTOWN, OHIO

DESIGNED KOS
DRAWN KOS
CHECKED JDV
REVIEWED TF
DATE 12–93
REVISED KOS
STRUCTURE FILE NUMBER REBAR1

REINFORCING STEEL LIST
BRIDGE NO. POR–76–1362
ROCK SPRINGS ROAD OVER I.R. 76

POR–76–13.62

12/12

24
24