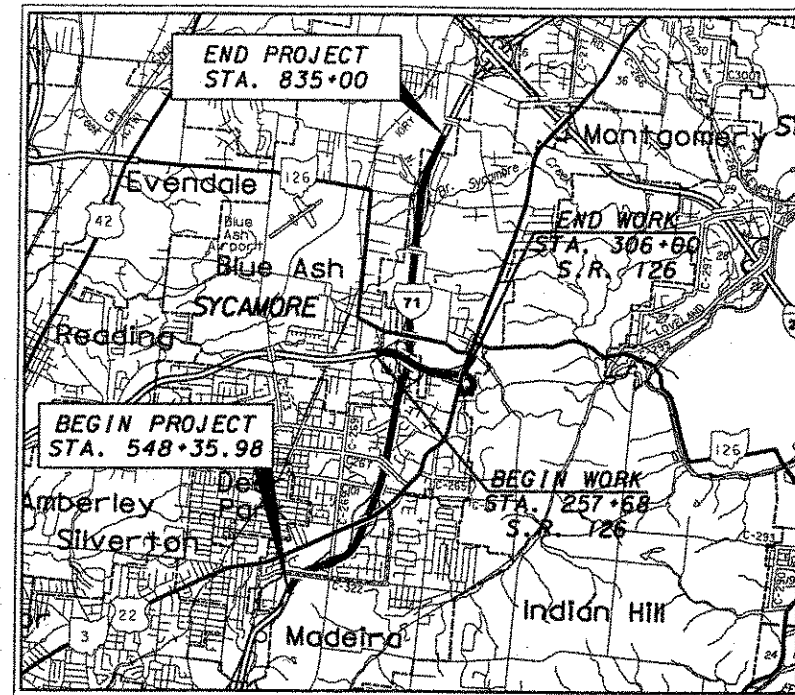
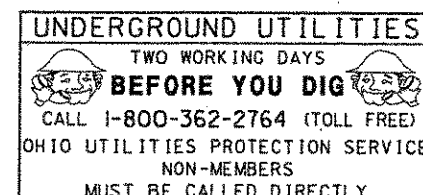


PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION	HAM-71	SR-126
CURRENT ADT (2001)	111970	55,600
DESIGN YEAR ADT (2021)	123370	72,400
DESIGN HOURLY VOLUME (2021)	1110	3017 (Avg)
DIRECTIONAL DISTRIBUTION	60/40 %	60/40 %
TRUCKS (24 HOUR B&C)	39 %	3 %
DESIGN SPEED	55 MPH SLM 11.08-12.39	50 MPH
	65 MPH SLM 12.39-16.60	
LEGAL SPEED	55 MPH SLM 11.08-12.39	50 MPH
	65 MPH SLM 12.39-16.60	

DESIGN FUNCTIONAL CLASSIFICATION: URBAN EXPRESSWAY/FREEWAY

DESIGN EXCEPTIONS
NONE REQUIRED



PLAN PREPARED BY:

KZF DESIGN
Architecture | Engineering | Interiors | Planning
KZF DESIGN INC. 655 Eden Park Drive Cincinnati, OH 45202-8000
TEL 513.621.6211 FAX 513.621.39530 WEB www.kzf.com

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
HAM-71-11.08
**CITY OF SILVERTON, MADEIRA,
BLUE ASH & MONTGOMERY
SYCAMORE & SYMMES TOWNSHIP
HAMILTON COUNTY**

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"AS BUILT" PLANS

PROJECT DESCRIPTION
PLANE, FILLING AND OVERLAY OF PAVEMENT,
REPAIR PAVEMENT, REPLACE GUARDRAILS,
REHAB AND RAISE STRUCTURES, MAINTAIN
TRAFFIC, REPLACE SIGNS, REPLACE LIGHTING
CIRCUIT AT GALBRAITH ROAD OVERPASS.
PROJECT LIMITS ARE I-71 FROM SOUTH OF
EUCLID ROAD OVERPASS TO SOUTH OF
DEERFIELD ROAD OVERPASS.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED
FOR THROUGH TRAFFIC AND HAS BEEN DECLARED
A LIMITED ACCESS HIGHWAY OR FREEWAY BY
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 SPECI-
FICATIONS LISTED IN THE PROPOSAL SHALL
GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE
THAT THE MAKING OF THIS IMPROVEMENT DID
NOT REQUIRE THE CLOSING TO TRAFFIC OF THE
THE HIGHWAY AND THAT PROVISIONS FOR THE
MAINTENANCE AND SAFETY OF TRAFFIC WERE
SET FORTH IN THE PLANS AND ESTIMATES.

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

APPROVED _____
DATE _____ DISTRICT PROJECT ENGINEER

APPROVED _____
DATE _____ DISTRICT CONSTRUCTION
ENGINEER

ENGINEERS SEAL

SIGNED: _____

DATE: _____

STANDARD CONSTRUCTION DRAWINGS

STANDARD CONSTRUCTION DRAWINGS												SPECIFICATIONS	
BP-2.3	07/28/00	GR-1.1M	10/21/97	AS-1-81	04/20/01	MT-35.10M	01/30/95	MT-102.20M	01/30/95	TC-52.20	04/20/01	813	06/14/95
BP-3.1	07/28/00	GR-1.2M	01/03/96	BR-1	01/06/99	MT-35.11M	01/30/95	MT-105.10M	04/25/94	TC-61.10	01/19/01	815	02/22/00
BP-4.1	07/28/00	GR-1.3M	11/30/94	BR-2-98	12/29/98	MT-95.30M	04/25/94	MT-105.11M	04/25/94	TC-65.10	01/19/01	841	10/12/99
BP-5.1	07/28/00	GR-2.1M	04/14/98	EXJ-4-87	04/20/01	MT-95.31M	04/25/94			TC-65.11	01/19/01	842	01/06/99
BP-9.1	07/28/00	GR-3.1M	10/21/97	PCB-91	07/06/99	MT-96.10M	01/30/95	TC-07.65	01/19/01	TC-65.12	01/19/01	843	05/05/98
		GR-3.2M	10/21/97	SICD-1-96	04/20/01	MT-96.20M	01/30/95	TC-21.10	01/19/01	TC-72.20	01/19/01	848	06/30/98
CB-3.1	07/20/01	GR-3.4M	10/21/97	VFF-1-90M	03/20/95	MT-96.25M	01/30/95	TC-21.20	01/19/01	TC-82.10	01/19/01	864	07/11/00
CB-3.3	07/20/01	GR-4.2M	10/21/97			MT-97.10M	04/25/94	TC-31.21	04/20/01			899	10/21/98
DM-1.1	07/20/01	GR-5.2M	10/30/94	HL-20.11M	03/31/95	MT-98.12M	06/24/93	TC-32.10	10/19/01			910	07/11/00
DM-1.2	07/20/01	GR-5.3M	11/30/94	HL-30.11	07/20/01	MT-98.13M	06/24/93	TC-41.10	01/19/01			954	09/09/97
DM-2.1	07/20/01	GR-6.1M	01/03/96	HL-30.21M	05/01/95	MT-98.14M	06/24/93	TC-41.20	01/19/01				
DM-4.1	07/20/01	GR-6.2M	01/03/96	HL-30.22	07/20/01	MT-98.15M	06/24/93	TC-41.50	01/19/01				
DM-4.3	04/29/99			HL-30.31M	05/01/95	MT-98.16M	06/24/93	TC-42.10	01/19/01				
DM-4.4	04/29/99	RM-4.3M	10/21/97	HL-30.32M	08/14/96	MT-98.17M	04/25/94	TC-42.20	04/20/01				
		RM-4.2	01/10/02	HL-60.11	07/20/01	MT-98.18M	04/25/94	TC-51.11	04/20/01				
F-1.1	07/28/00	RM-4.5M	10/21/97	HL-60.12	07/20/01	MT-98.19M	03/06/96	TC-51.12	04/20/01				
F-3.1	07/28/00					MT-102.10M	01/30/95	TC-52.10	04/20/01				

FEDERAL PROJECT NO.
TE21-G010 (068)

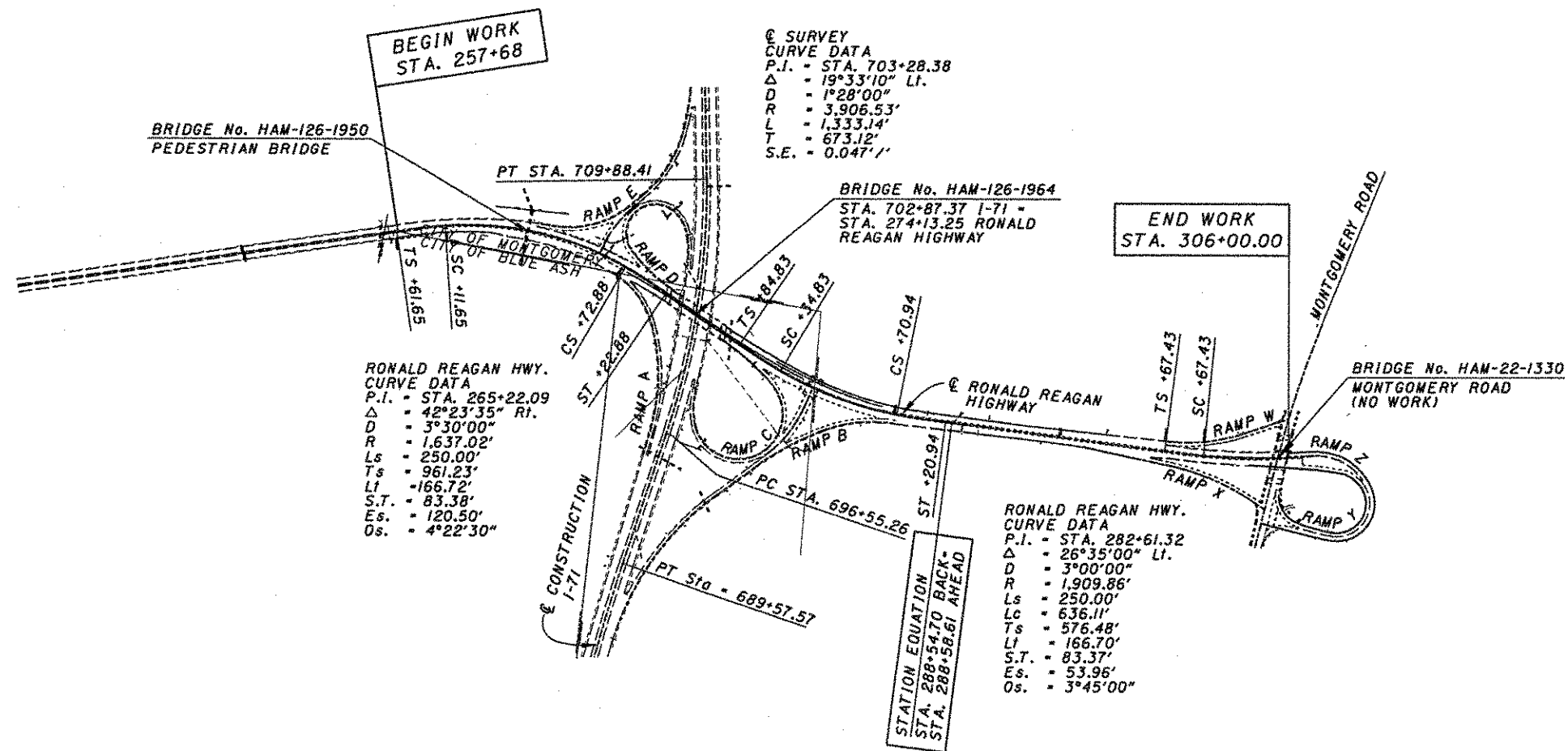
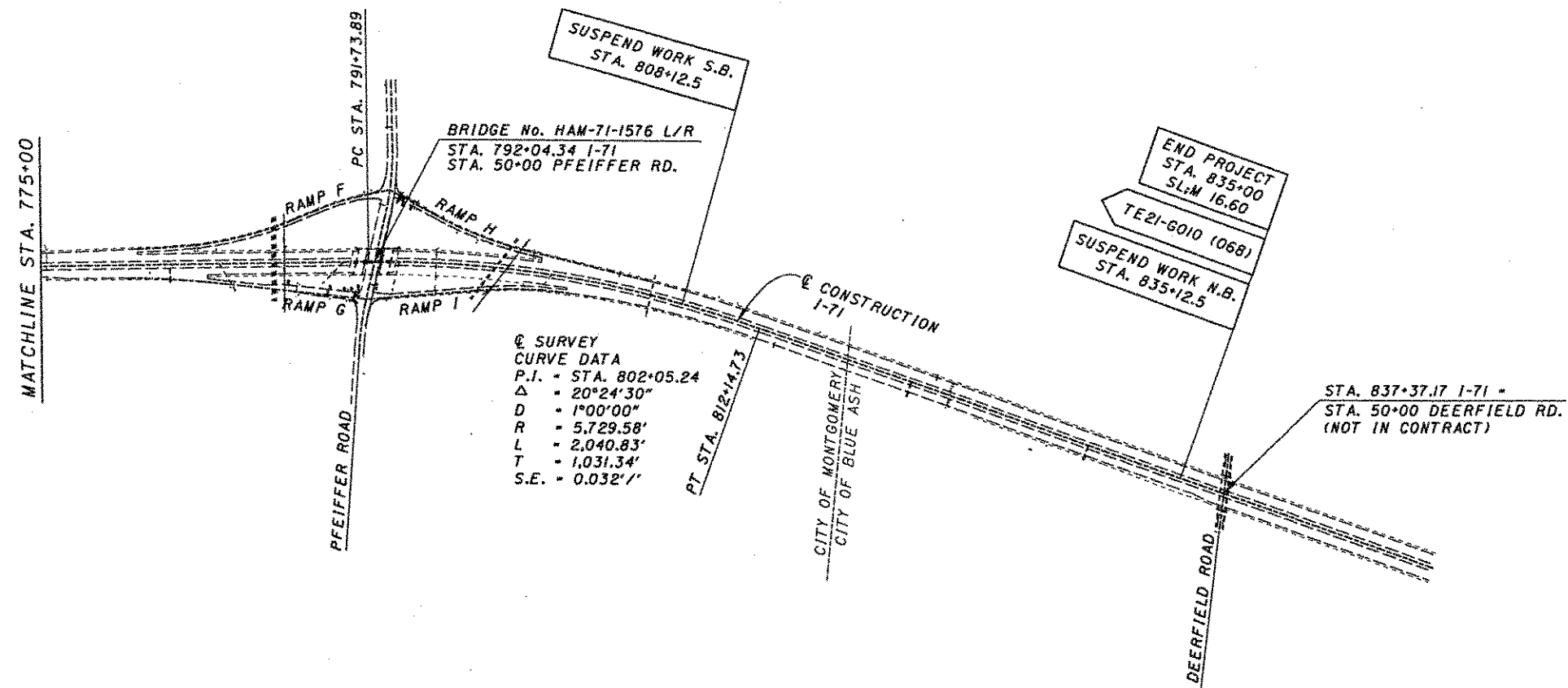
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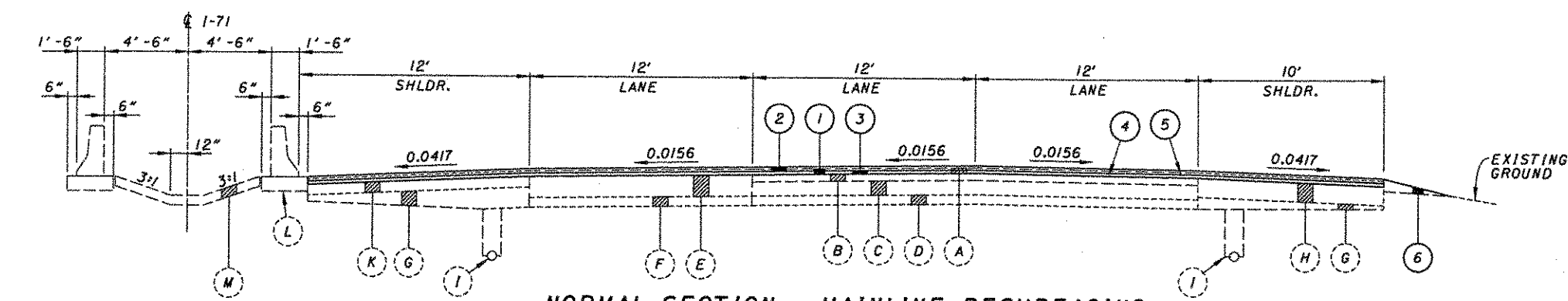
CONSTRUCTION PROJECT NO.
3009-01

RAILROAD INVOLVEMENT
NONE

HAM-71-11.08

1
205





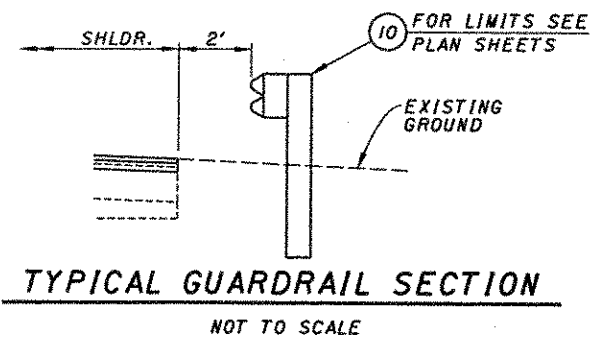
NORMAL SECTION - MAINLINE RESURFACING

SOUTHBOUND (OPP. HAND)

STATION EQUATION	STA. 572+06.93 BACK -	STA. 572+27.37 AHEAD	
	STA. 572+27.37 TO	STA. 579+31.27	- 703.90 L.F.
	STA. 579+31.27 TO	STA. 579+32.58	- 1.31 L.F.
	STA. 605+00.00 TO	STA. 616+25.00	- 1125.00 L.F.
	STA. 616+25.00 TO	STA. 629+82.43	- 1357.43 L.F.
BRIDGE HAM-71-1272 L/R	STA. 629+82.43 TO	STA. 631+80.97	- (198.54 L.F.)
(GALBRAITH ROAD)	STA. 631+80.97 TO	STA. 675+50.00	- 4369.03 L.F.
	STA. 691+00.00 TO	STA. 694+25.00	- 325.00 L.F.
	STA. 712+00.00 TO	STA. 789+75.00	- 7775.00 L.F.
	TOTAL LENGTH 15656.67 L.F.		

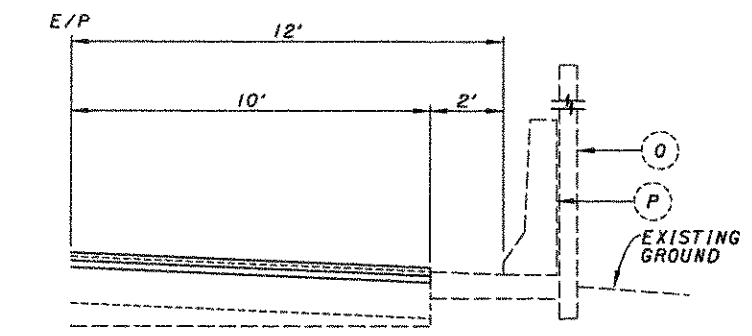
NORTHBOUND

STATION EQUATION	STA. 572+06.93 BACK -	STA. 572+27.37 AHEAD TO	STA. 579+32.58	- 705.21 L.F.
	STA. 572+27.37 TO	STA. 579+32.58	- 1.31 L.F.	
	STA. 605+00.00 TO	STA. 618+55.00	- 1355.00 L.F.	
	STA. 618+55.00 TO	STA. 629+82.43	- 1127.43 L.F.	
BRIDGE HAM-71-1272 L/R	STA. 629+82.43 TO	STA. 631+80.97	- (198.54 L.F.)	
(GALBRAITH ROAD)	STA. 631+80.97 TO	STA. 675+50.00	- 4369.03 L.F.	
	STA. 691+00.00 TO	STA. 694+25.00	- 325.00 L.F.	
	STA. 712+00.00 TO	STA. 789+75.00	- 7775.00 L.F.	
	STA. 814+00.00 TO	STA. 835+12.50	- 2112.50 L.F.	
	TOTAL LENGTH 17769.17 L.F.			



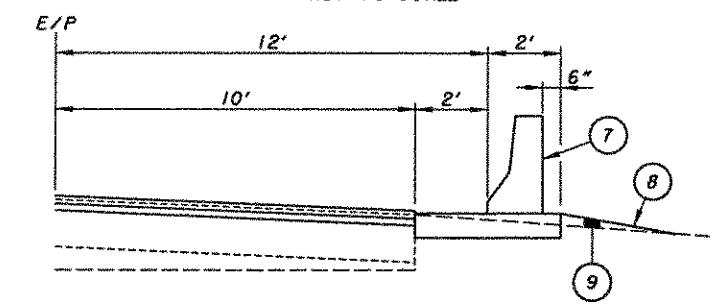
TYPICAL GUARDRAIL SECTION

NOT TO SCALE



TYPICAL EXISTING CONCRETE BARRIER SECTION

NOT TO SCALE

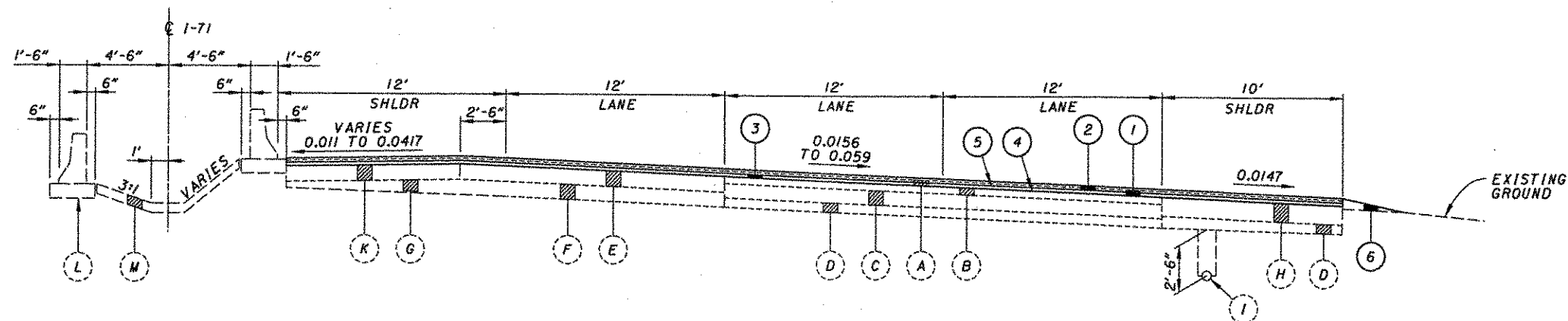


TYPICAL NEW CONCRETE BARRIER SECTION

NOT TO SCALE

ITEM LEGEND

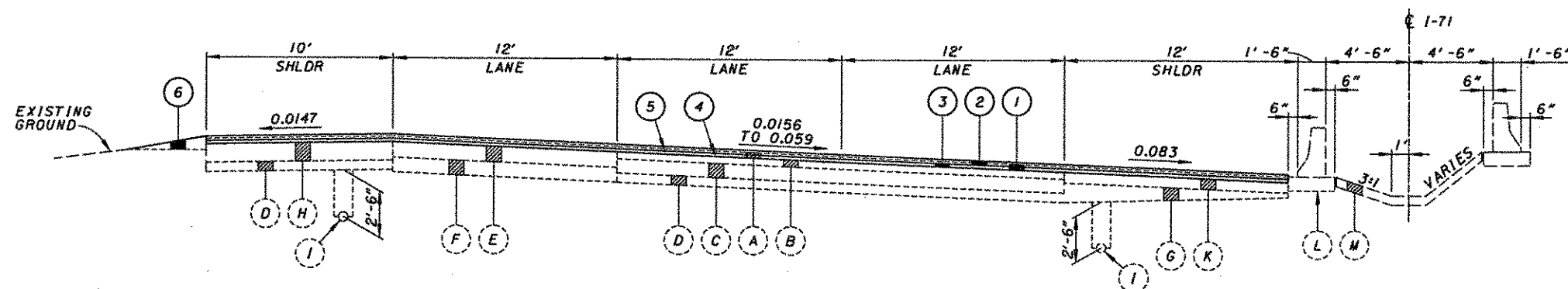
- | | | | |
|---|---|---|--|
| <ul style="list-style-type: none"> (1) ITEM 254 - 3" PAVEMENT PLANING, BITUMINOUS (2) ITEM 446 - 1 1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE 1H (3) ITEM 446 - 2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 2 (4) ITEM 407 - TACK COAT, (0.075 GAL/SQ.YD.) (5) ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL/SQ.YD.) (6) ITEM 617 - COMPACTED AGGREGATE, TYPE B, APPLICABLE IF DROP FROM EDGE SHOULDER IS GREATER THEN 1 1/2" (LOCATION TO BE DETERMINED IN FIELD) (7) ITEM 622 - CONCRETE BARRIER, TYPE D, AS PER PLAN A (8) ITEM 870 - SEEDING AND MULCHING (9) ITEM 203 - EMBANKMENT (10) ITEM 606 - GUARDRAIL, TYPE 5 (11) ITEM 301 - 3" BITUMINOUS AGGREGATE BASE (12) ITEM 446 - 1 3/4" ASPHALT CONCRET INTERMEDIATE COURSE, TYPE 2, PG64-28 (13) ITEM 609 - CONCRETE CURB, TYPE 2B (14) ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN (30" DEPTH, 12" DEPTH IN ROCK) (15) ITEM 301 - BITUMINOUS AGGREGATE BASE VARIABLE THICKNESS (16) ITEM 254 - 4 1/4" PAVEMENT PLANING, BITUMINOUS (17) ITEM 612 - CONCRETE MEDIAN (18) ITEM 609 - CONCRETE CURB, TYPE 6 | <ul style="list-style-type: none"> (19) ITEM 608 - 5" CONCRETE WALK (20) ITEM 301 - 4" BITUMINOUS AGGREGATE BASE (21) ITEM 304 - AGGREGATE BASE VARIABLE THICKNESS (22) ITEM 304 - 9" AGGREGATE BASE (23) ITEM 611 - REINFORCED CONCRETE APPROACH SLAB (T-15") (24) ITEM SPECIAL - BRICK PAVER SIDEWALK INCLUDING GRANULAR BASE (REPLACED IN KIND) (25) ITEM 830 - CONCRETE CURB, TYPE 3 (26) ITEM 448 - 1 1/4" ASPHALT CONCRETE, SURFACE COURSE TYPE 1, PG64-22 (27) ITEM 448 - 1 3/4" ASPHALT CONCRETE, INTERMEDIATE COURSE TYPE 2, PG64-22 (28) ITEM 301 - 9" BITUMINOUS AGGREGATE BASE (29) ITEM 622 - CONCRETE BARRIER, TYPE D, AS PER PLAN B (30) ITEM 660 - SODDING, UNSTAKED (31) ITEM 622 - CONCRETE BARRIER, TYPE D, AS PER PLAN C | <ul style="list-style-type: none"> (A) EXISTING 3" ASPHALT CONCRETE (B) EXISTING 4 1/2" BITUMINOUS AGGREGATE BASE (C) EXISTING 9" CONCRETE PAVEMENT (CRACKED AND SEATED, I-71 ML ONLY) (D) EXISTING 6" AGGREGATE BASE (E) EXISTING 10" BITUMINOUS AGGREGATE BASE (F) EXISTING AGGREGATE BASE, VARIABLE DEPTH 8" TO 9 1/2" (G) EXISTING BITUMINOUS AGGREGATE BASE, VARIABLE DEPTH 3" TO 9 1/2" (H) EXISTING 12" BITUMINOUS AGGREGATE BASE (I) EXISTING 6" SHALLOW PIPE UNDERDRAIN (K) EXISTING 6 3/4" BITUMINOUS AGGREGATE BASE (L) EXISTING CONCRETE BARRIER, TYPE D (M) EXISTING 6" PAVED GUTTER (N) EXISTING GUARDRAIL, TYPE 5 (O) EXISTING NOISE BARRIER (P) EXISTING CONCRETE BARRIER, TYPE D-50 (Q) EXISTING 3" WATERPROOF AGGREGATE BASE (R) EXISTING AGGREGATE DRAINAGE CONNECTION (S) EXISTING 4 1/4" ASPHALT CONCRETE (T) EXISTING 6" SUBBASE | <ul style="list-style-type: none"> (U) EXISTING AGGREGATE BASE, VARIABLE DEPTH (V) EXISTING ASPHALT CONCRETE WEARING COURSE THICKNESS UNKNOWN (W) EXISTING CURB, TYPE 2A, TO BE REMOVED (X) EXISTING CONCRETE MEDIAN (Y) EXISTING 3" BITUMINOUS AGGREGATE BASE (Z) EXISTING 6" BITUMINOUS AGGREGATE BASE (AA) EXISTING 3" AGGREGATE BASE (BB) EXISTING 8" SUBBASE (CC) EXISTING 5" SUBBASE (DD) EXISTING CURB, TYPE 6 (EE) EXISTING SIDEWALK (FF) EXISTING ASPHALT CONCRETE (GG) EXISTING 7" REINFORCED CONCRETE (HH) EXISTING 2 3/4" ASPHALT CONCRETE (II) EXISTING 7" BITUMINOUS AGGREGATE BASE (JJ) EXISTING 7 1/2" ASPHALT CONCRETE (KK) EXISTING 15" CONCRETE APPROACH SLAB (LL) EXISTING 1 3/4" AVG. ASPHALT CONCRETE (MM) EXISTING CONCRETE BARRIER, TYPE B-50 |
|---|---|---|--|



SUPERELEVATED SECTION - MAINLINE RESURFACING

NORTHBOUND

STATION EQUATION	STA. 568+48 TO STA. 572+06.93 BACK - STA. 572+27.37 AHEAD	STA. 572+06.93 TO STA. 573+00 - 72.63 L.F.
BRIDGE HAM-71-1176 L/R (KENWOOD ROAD)	STA. 579+32.58 TO STA. 675+50.00	STA. 581+86.54 - (253.96 L.F.)
	STA. 675+50.00 TO STA. 694+25.00	STA. 691+00.00 - 1550.00 L.F.
	STA. 694+25.00 TO STA. 789+75.00	STA. 712+00.00 - 1775.00 L.F.
BRIDGE HAM-71-1576 L/R (PFEIFFER ROAD)	STA. 789+75.00 TO STA. 790+83.10	STA. 790+83.10 - 108.10 L.F.
	STA. 790+83.10 TO STA. 793+13.24	STA. 793+13.24 - (230.14 L.F.)
	STA. 793+13.24 TO STA. 814+00.00	STA. 814+00.00 - 2086.76 L.F.
	TOTAL LENGTH 5467.32 L.F.	



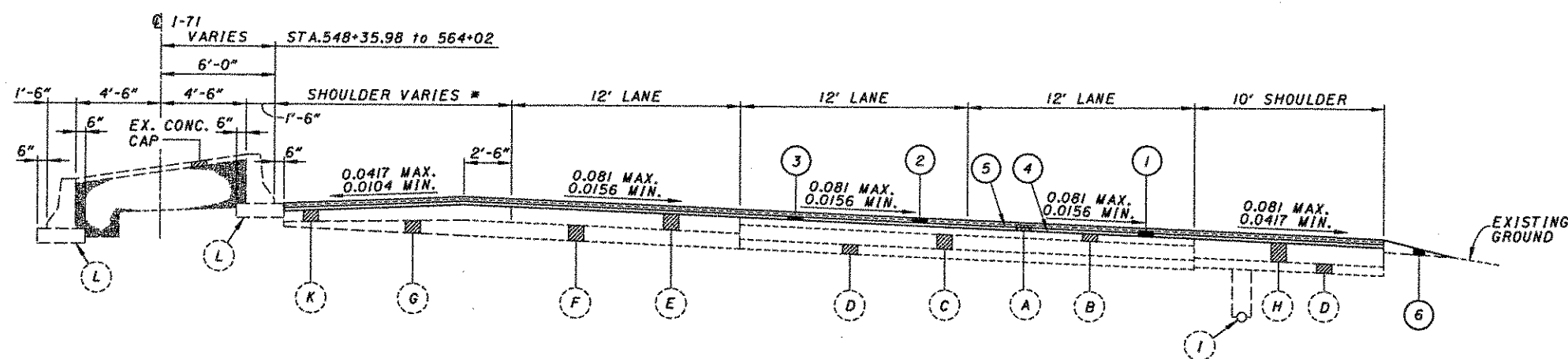
SUPERELEVATED SECTION - MAINLINE RESURFACING

SOUTHBOUND

STATION EQUATION	STA. 568+48.00 TO STA. 572+06.93 BACK - STA. 572+27.37 AHEAD	STA. 572+06.93 TO STA. 579+31.27 - 703.90 L.F.
BRIDGE HAM-71-1176 L/R (KENWOOD ROAD)	STA. 579+32.58 TO STA. 581+86.54	STA. 581+86.54 - (253.96 L.F.)
	STA. 581+86.54 TO STA. 605+00.00	STA. 605+00.00 - 2313.46 L.F.
	STA. 605+00.00 TO STA. 675+50.00	STA. 675+50.00 - 1550.00 L.F.
	STA. 675+50.00 TO STA. 694+25.00	STA. 691+00.00 - 1775.00 L.F.
BRIDGE HAM-71-1576 L/R (PFEIFFER ROAD)	STA. 694+25.00 TO STA. 789+75.00	STA. 712+00.00 - 1775.00 L.F.
	STA. 789+75.00 TO STA. 790+83.10	STA. 790+83.10 - 108.10 L.F.
	STA. 790+83.10 TO STA. 793+13.24	STA. 793+13.24 - (230.14 L.F.)
	STA. 793+13.24 TO STA. 808+12.50	STA. 808+12.50 - 1499.27 L.F.
	TOTAL LENGTH 7824.56 L.F.	

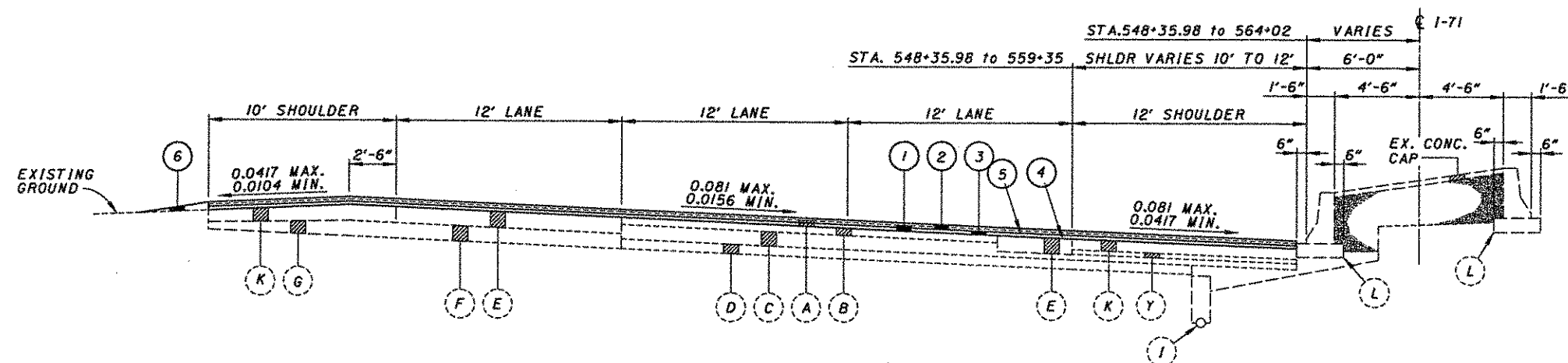
NOTE

1) FOR ITEM LEGEND, SEE SHEET 4.



SUPERELEVATED SECTION - NB 1-71

STA. 548+44:	TO	STA. 552+63.49 (# 12' to 16'-6")	=	419.49 L.F.
STA. 552+63.49	TO	STA. 568+48 (# 12')	=	1584.51 L.F.
TOTAL LENGTH				2004.00 L.F.

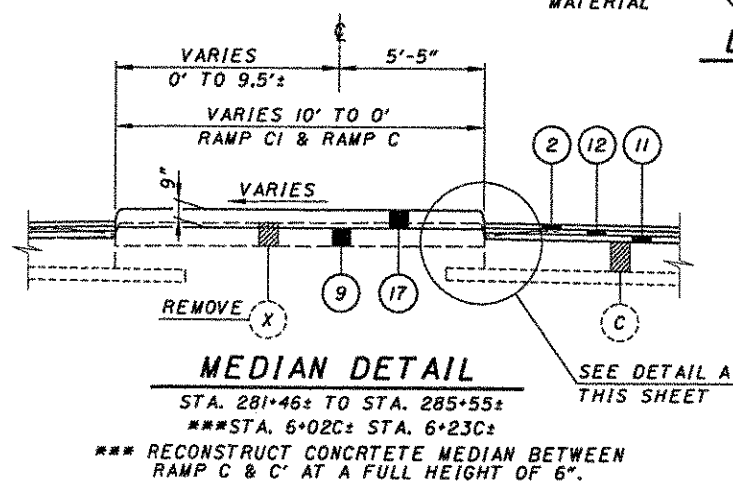
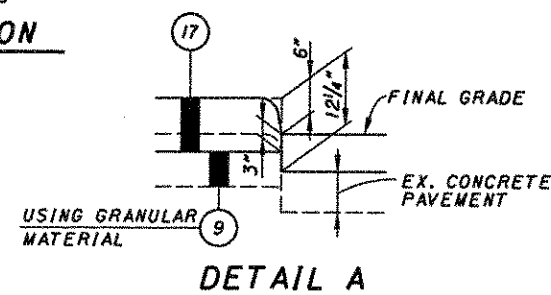
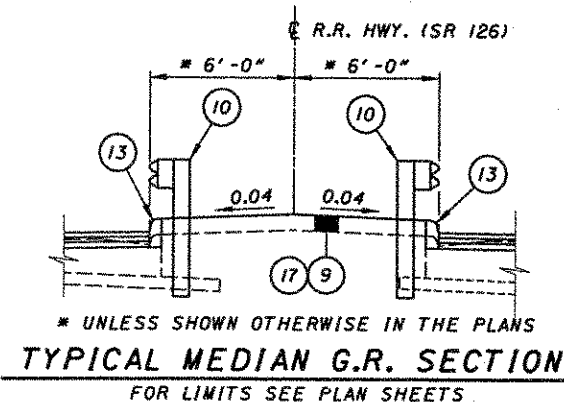
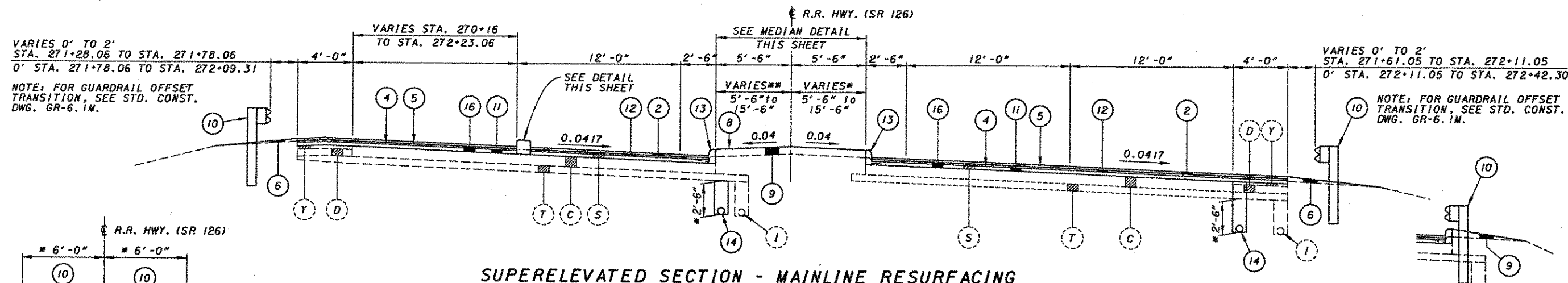
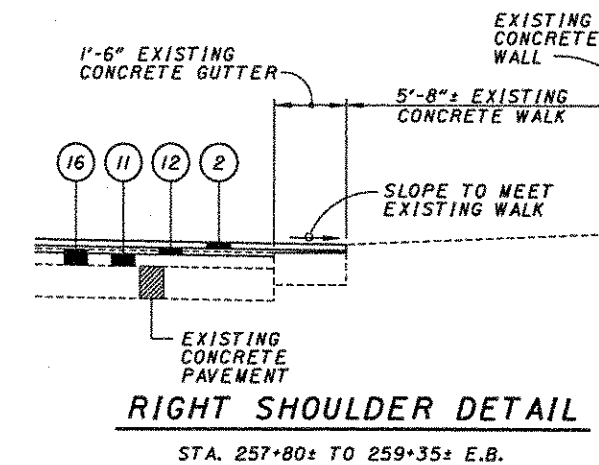
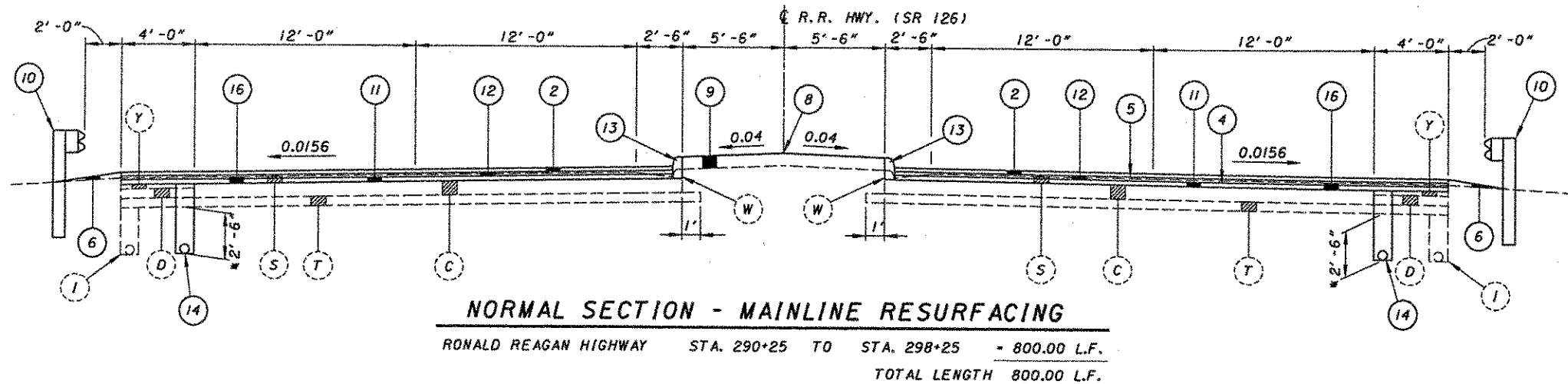


SUPERELEVATED SECTION - SB 1-71

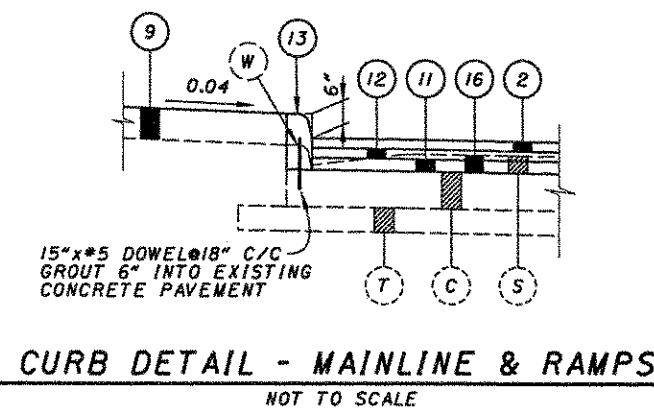
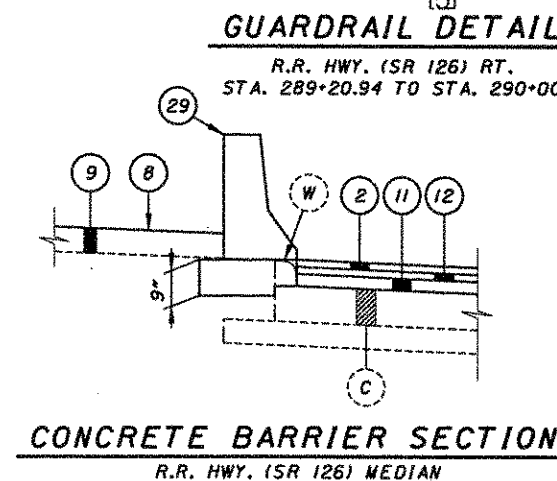
STA. 548+44: TO STA. 568+48 = 2004.00 L.F.
TOTAL LENGTH 2004.00 L.F.

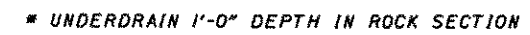
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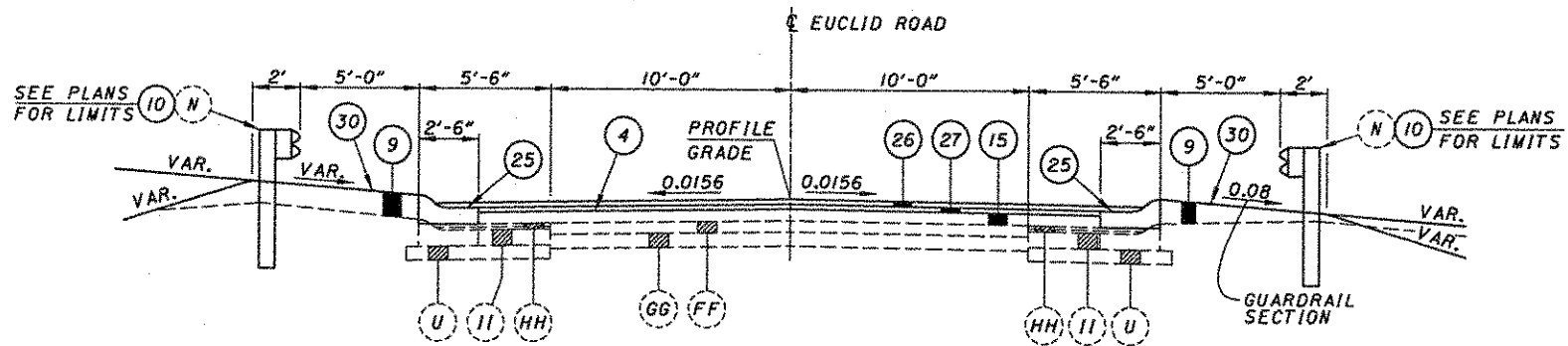
1) FOR ITEM LEGEND, SEE SHEET 4.



NOTE
1) FOR ITEM LEGEND, SEE SHEET 4.



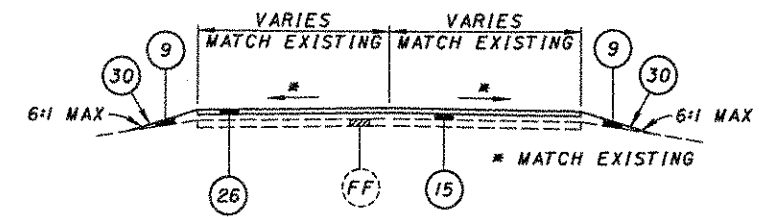




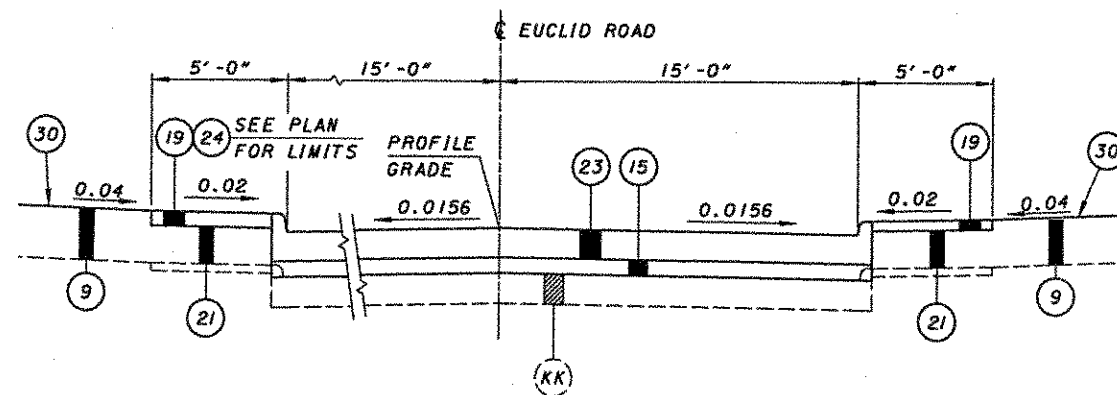
NORMAL SECTION - EUCLID ROAD

BRIDGE HAM-71-1144
(EUCLID ROAD) —

STA. 46+50.00 TO STA. 48+50.71	= 200.71 L.F.
STA. 48+75.71 TO STA. 51+68.64	= 292.93 L.F.
STA. 51+93.64 TO STA. 53+25.00	= 131.36 L.F.
TOTAL LENGTH 625.00 L.F.	



NORMAL SECTION - DRIVEWAY

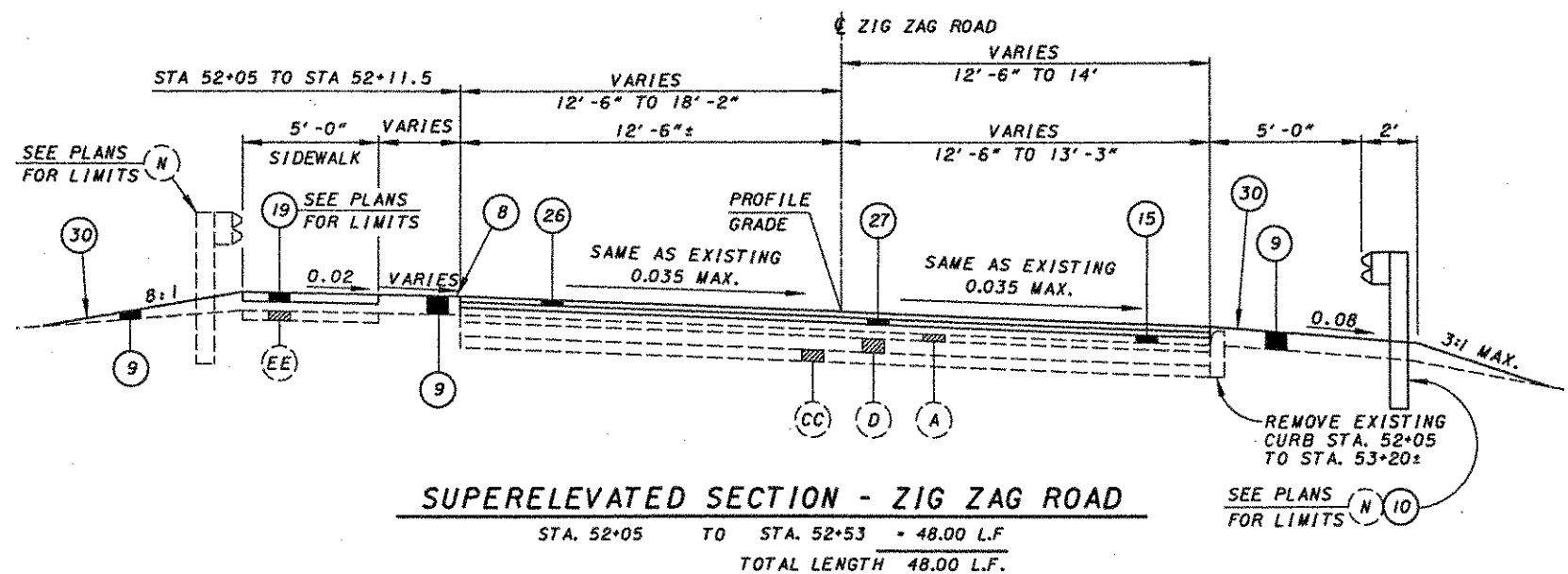
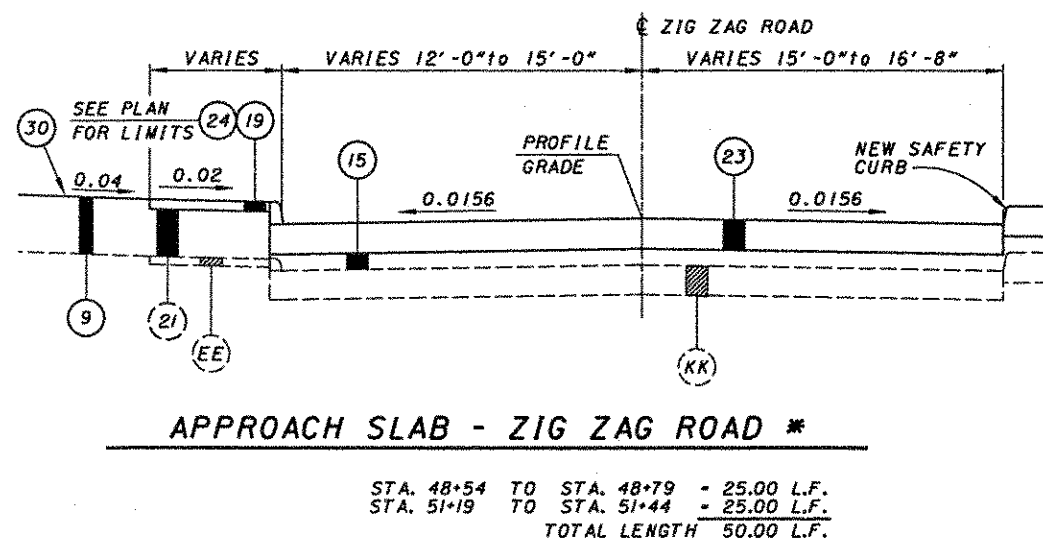
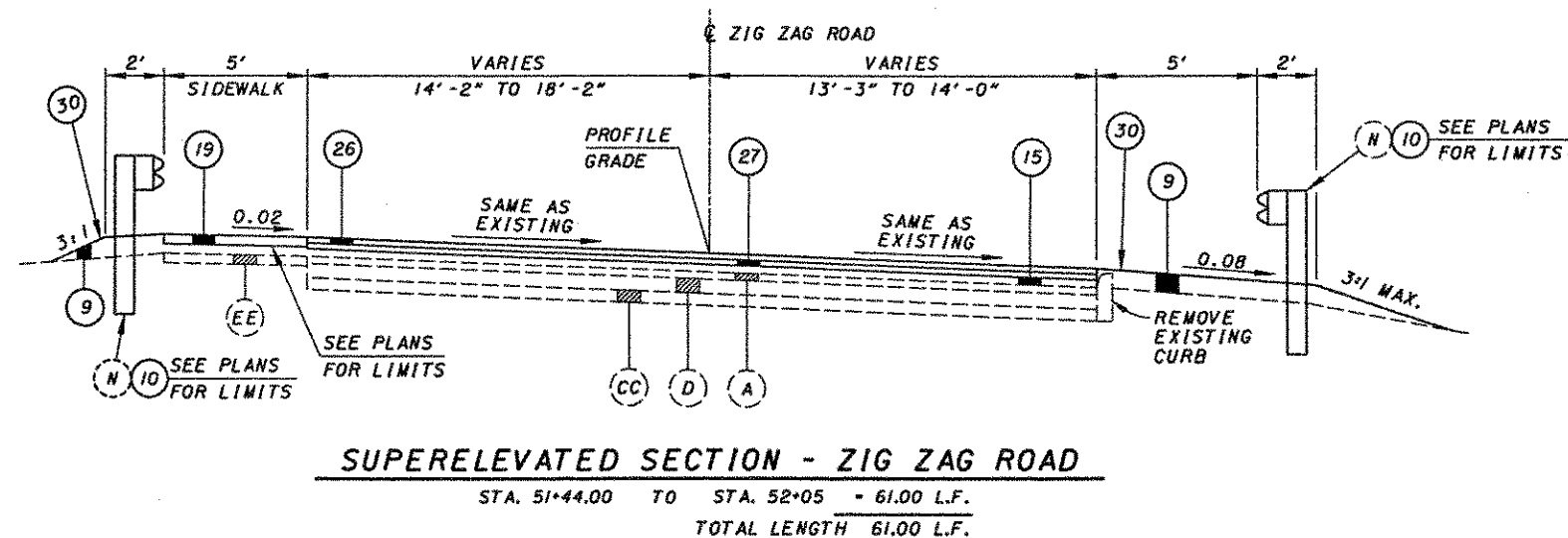
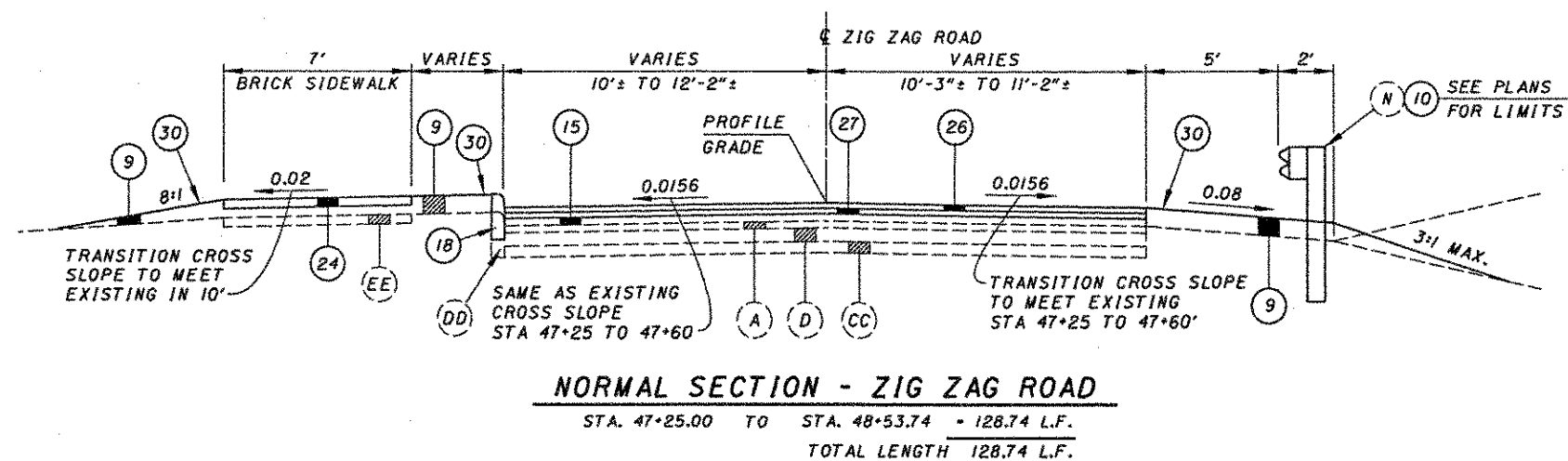


APPROACH SLAB - EUCLID ROAD *

STA. 48+50.71 TO STA. 48+75.71 = 25.00 L.F.
STA. 51+68.64 TO STA. 51+93.64 = 25.00 L.F.
TOTAL LENGTH 50.00 L.F.

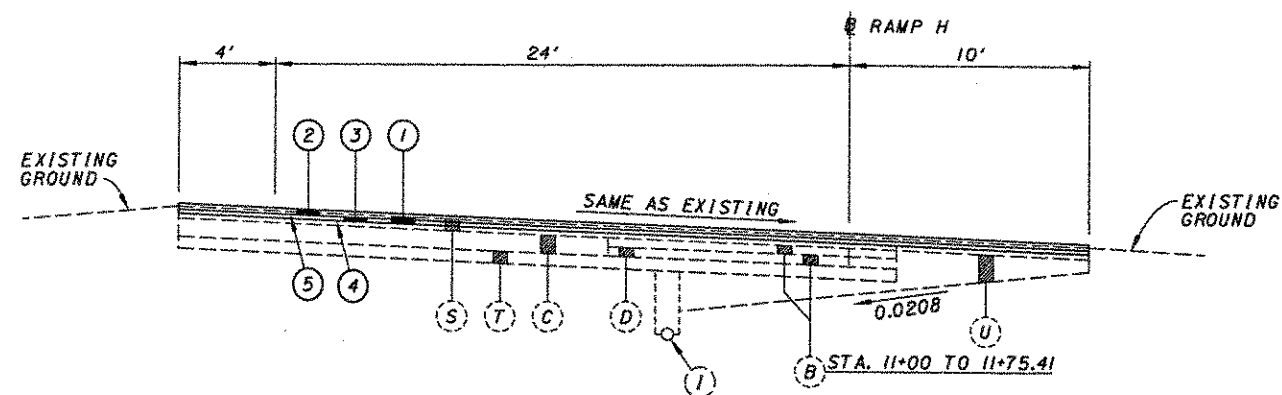
NOTES

- 1) FOR ITEM LEGEND, SEE SHEET 4.
- 2) FOR APPROACH SLAB DETAIL, SEE BRIDGE PLANS.



NOTES

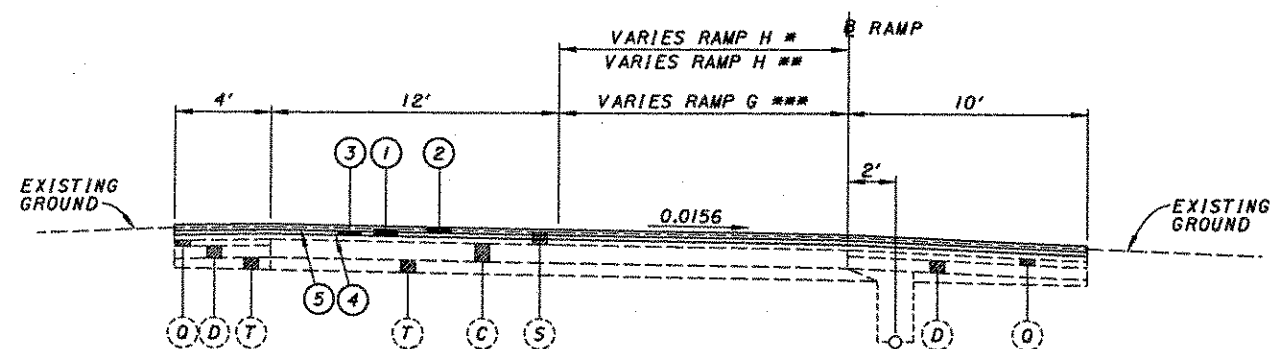
- 1) FOR ITEM LEGEND, SEE SHEET 4.
- 2) FOR APPROACH SLAB DETAIL, SEE BRIDGE PLANS.

**SUPERELEVATED RAMP SECTION**

KENWOOD ROAD RAMP H STA. 8+10.67 TO STA. 11+75.41 = 364.74 L.F.

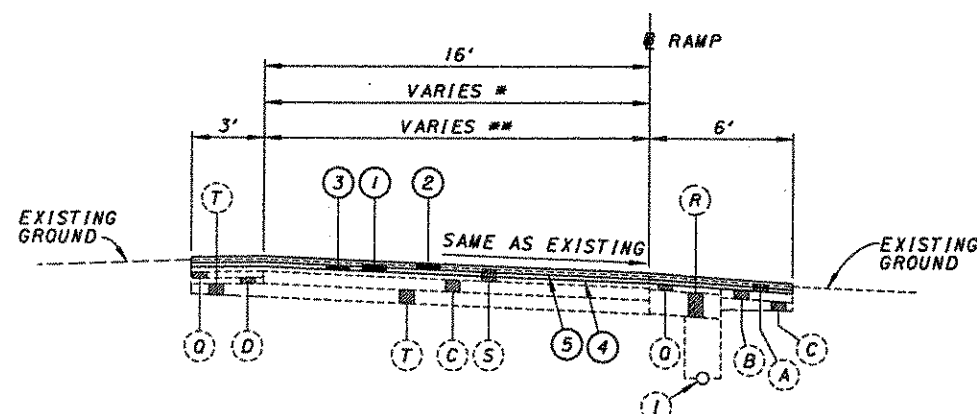
STA. EQUATION: STA. 11+75.41 BK = STA. 6+53.37 AH

TOTAL LENGTH 364.74 L.F.

**NORMAL RAMP SECTION**

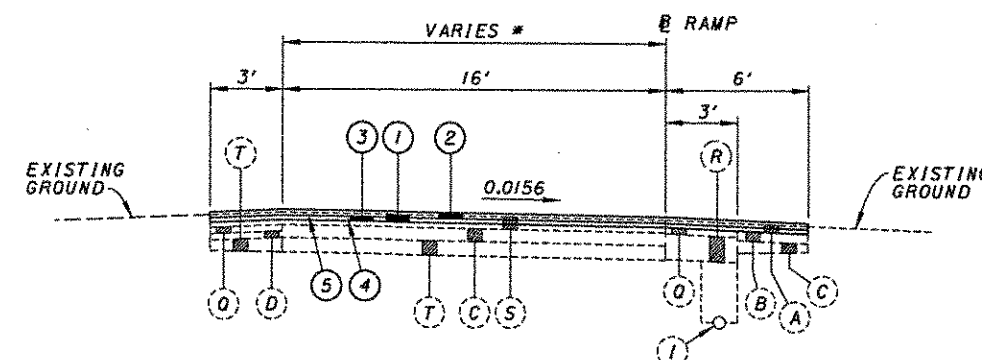
KENWOOD ROAD	RAMP H	STA. 6+53.37	TO	STA. 7+25	= 71.63 L.F.
	RAMP H	STA. 7+25	TO	STA. 8+25 (**12' to 24')	= 100.00 L.F.
	RAMP H	STA. 8+25	TO	STA. 11+75 (**24')	= 350.00 L.F.
	RAMP G	STA. 0+22	TO	STA. 6+79	= 657.00 L.F.
	RAMP G	STA. 6+79	TO	STA. 12+60.44 (***4' to 12')	= 581.44 L.F.

TOTAL LENGTH 1760.07 L.F.

**SUPERELEVATED RAMP SECTION**

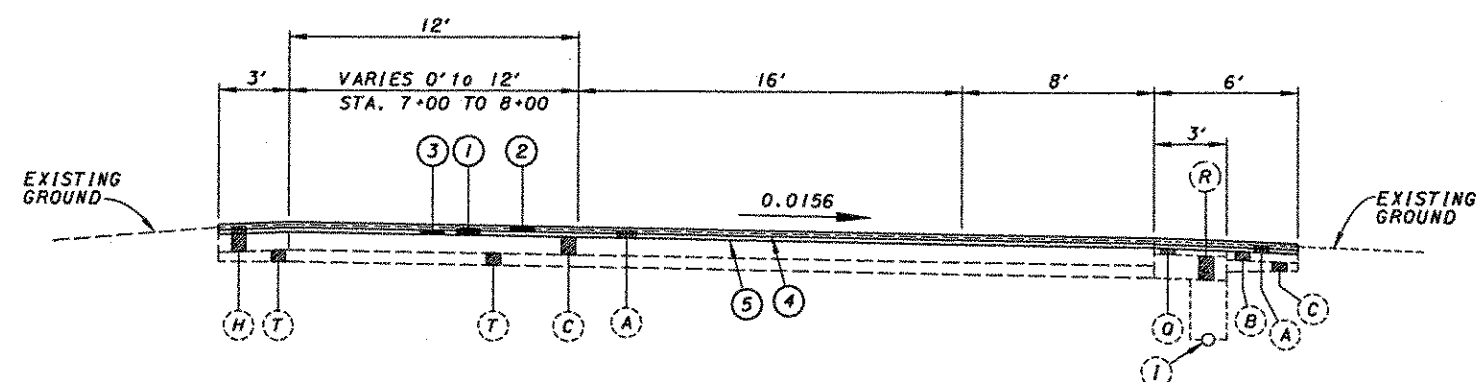
MONTGOMERY ROAD	RAMP C	STA. 2+50	TO	STA. 8+53	= 603.00 L.F.
	RAMP D	STA. 3+00	TO	STA. 7+15	= 415.00 L.F.
	RAMP D	STA. 7+15	TO	STA. 8+15 (**16' to 24')	= 100.00 L.F.
	RAMP D	STA. 8+15	TO	STA. 11+78 (**24') (OPPOSITE HAND)	= 363.00 L.F.
	RAMP E	STA. 3+00	TO	STA. 5+50 (OPPOSITE HAND)	= 250.00 L.F.
	RAMP E	STA. 7+25	TO	STA. 11+18 (**36') (OPPOSITE HAND)	= 393.00 L.F.
	RAMP F	STA. 0+38	TO	STA. 9+64	= 926.00 L.F.
	RAMP F	STA. 0+32	TO	STA. 4+00 (OPPOSITE HAND)	= 368.00 L.F.
	RAMP F	STA. 4+00	TO	STA. 13+34	= 934.00 L.F.
	RAMP G	STA. 4+10	TO	STA. 5+00	= 90.00 L.F.
	RAMP H	STA. 5+55	TO	STA. 11+50	= 595.00 L.F.
	RAMP H	STA. 11+50	TO	STA. 12+50 (**16' to 24')	= 100.00 L.F.
	RAMP H	STA. 12+50	TO	STA. 13+78 (**24')	= 128.00 L.F.
	RAMP I	STA. 5+25	TO	STA. 10+25	= 500.00 L.F.

TOTAL LENGTH 5765.00 L.F.

**NORMAL RAMP SECTION**

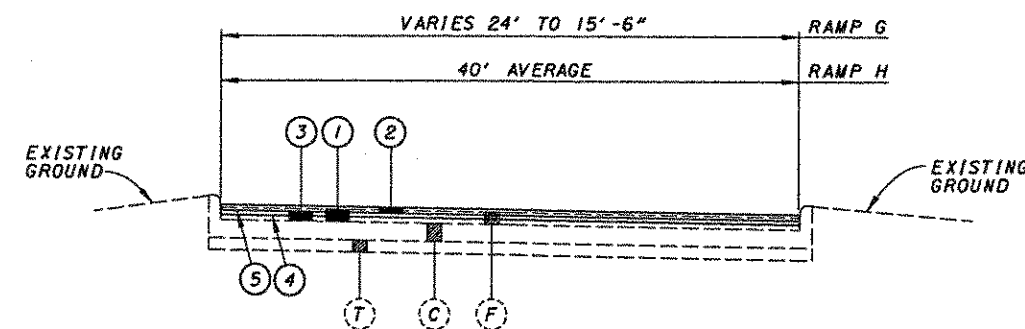
MONTGOMERY ROAD	RAMP C	STA. 0+40	TO	STA. 2+50	= 210.00 L.F.
	RAMP E	STA. 5+50	TO	STA. 7+25 (**24')	= 175.00 L.F.
PFEIFFER ROAD	RAMP G	STA. 5+00	TO	STA. 7+00	= 200.00 L.F.
	RAMP I	STA. 0+25.00	TO	STA. 5+25	= 500.00 L.F.

TOTAL LENGTH 1085.00 L.F.

**NORMAL RAMP SECTION**

PFEIFFER ROAD	RAMP G	STA. 7+00	TO	STA. 11+90	= 490.00 L.F.
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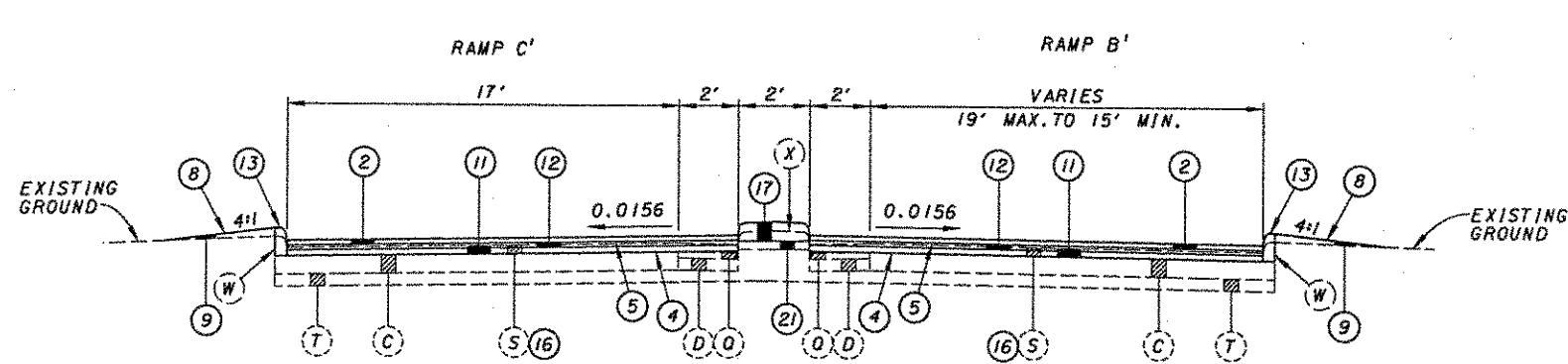
TOTAL LENGTH 490.00 L.F.

**KENWOOD ROAD - ISLAND SECTION**

RAMP G AND RAMP H

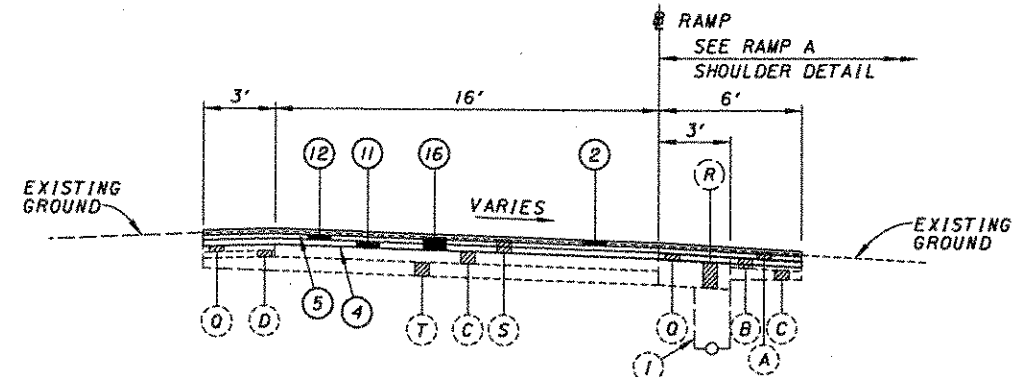
NOTE

1) FOR ITEM LEGEND, SEE SHEET 4.



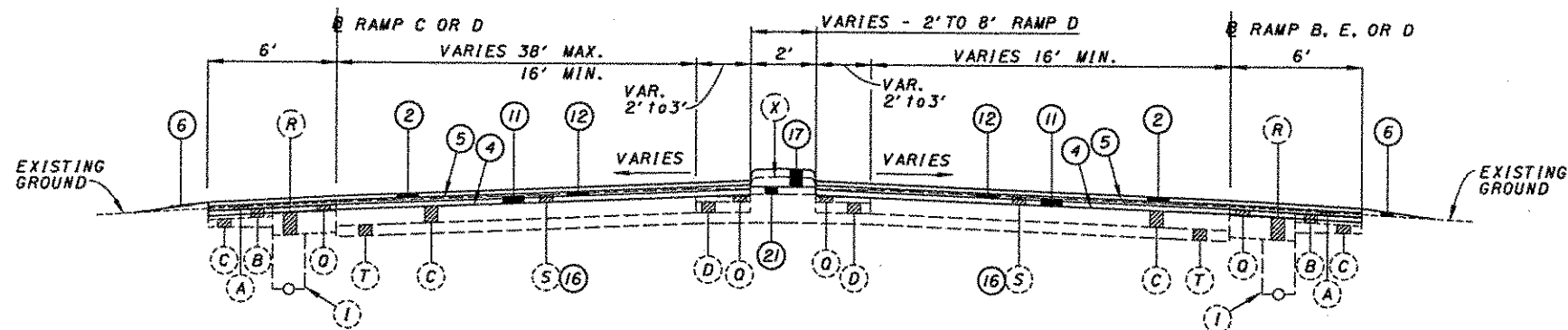
NORMAL RAMP SECTION

RONALD REAGAN HIGHWAY	RAMP B'	STA. 1+14.80	TO	STA. 3+90	=	275.20 L.F.
	RAMP C'	STA. 1+38.71	TO	STA. 3+50	=	211.29 L.F.
						TOTAL LENGTH 486.49 L.F.



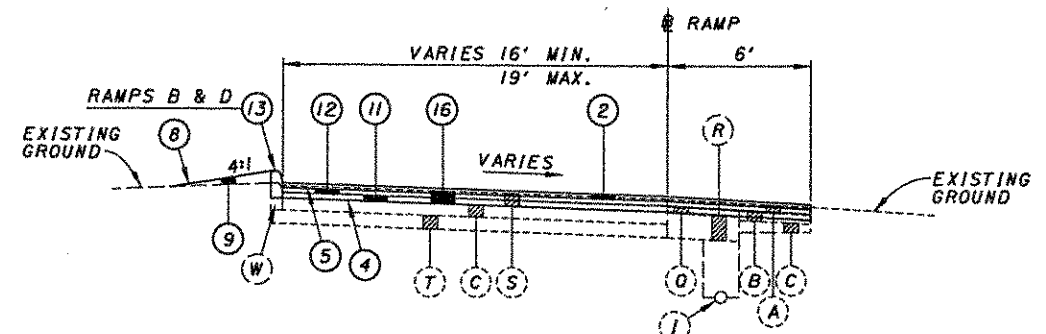
SUPERELEVATED RAMP SECTION

RONALD REAGAN HIGHWAY	RAMP A	STA. 1+34.79	TO	STA. 10+39.28	=	904.49 L.F.
	RAMP B	STA. 3+10	TO	STA. 12+96.76	=	986.76 L.F.
	RAMP B	STA. 17+77.55	TO	STA. 19+77.55	=	200.00 L.F.
	RAMP C	STA. 2+78.12	TO	STA. 6+20	=	341.88 L.F.
	RAMP D	STA. 7+49	TO	STA. 14+29	=	680.00 L.F.
	RAMP D	STA. 5+80	TO	STA. 10+86.50	=	506.50 L.F.
	RAMP E	STA. 2+54.99	TO	STA. 8+39	=	584.01 L.F.
	RAMP E	STA. 1+20.19	TO	STA. 2+70.00	=	149.81 L.F.
						TOTAL LENGTH 4353.45 L.F.



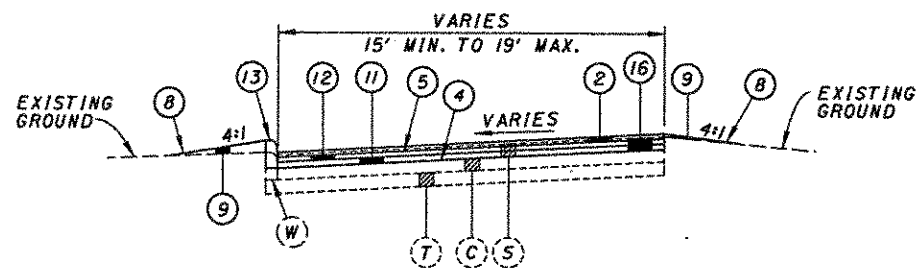
SUPERELEVATED RAMP SECTION

RONALD REAGAN HIGHWAY	RAMP B	STA. 12+96.76	TO	STA. 14+13.30	=	116.54 L.F.
	RAMP C	STA. 6+20	TO	STA. 7+49	=	129.00 L.F.
	RAMP D	STA. 5+20	TO	STA. 5+80	=	60.00 L.F.
	RAMP E	STA. 8+39	TO	STA. 9+10	=	71.00 L.F.
						TOTAL LENGTH 376.54 L.F.



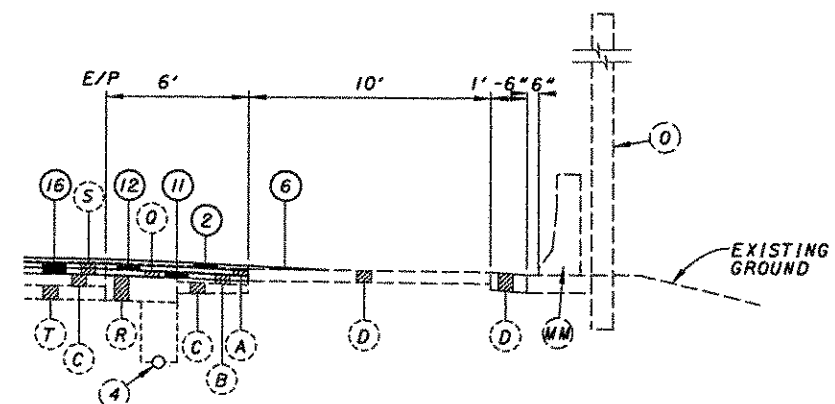
CURBED RAMP SECTION

RONALD REAGAN HIGHWAY	RAMP B	STA. 14+13.30	TO	STA. 17+77.55	=	364.25 L.F.
	RAMP D	STA. 2+42.71	TO	STA. 5+20	=	277.29 L.F.
	RAMP E	STA. 9+10	TO	STA. 13+75	=	465.00 L.F.
						TOTAL LENGTH 1106.54 L.F.



CURBED RAMP SECTION

RONALD REAGAN HIGHWAY	RAMP E'	STA. 0+45	TO	STA. 2+65	=	220.00 L.F.
						TOTAL LENGTH 220.00 L.F.

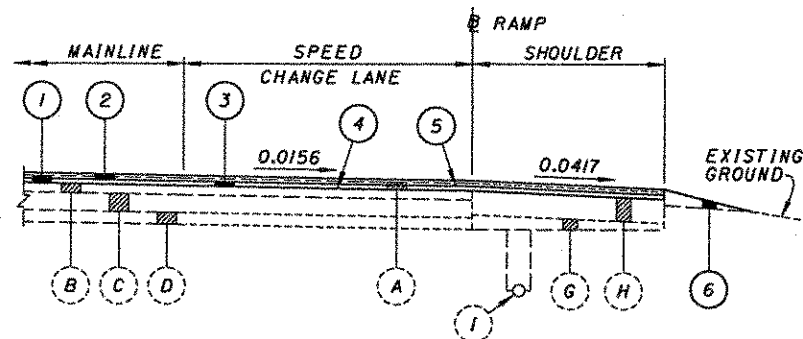


RAMP A SHOULDER DETAIL

RONALD REAGAN HIGHWAY	RAMP A	STA. 1+34.79	TO	STA. 10+39.28	=	904.49 L.F.
						TOTAL LENGTH 904.49 L.F.

NOTE

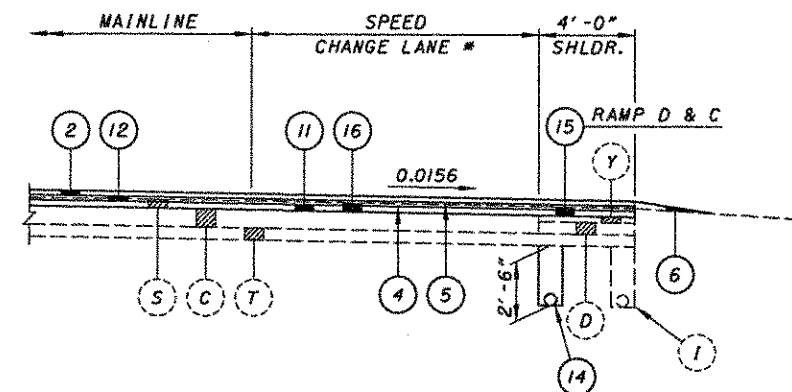
1) FOR ITEM LEGEND, SEE SHEET 4.



SPEED CHANGE LANE

KENWOOD ROAD				SCL	SHLD
NB	STA. 560+64.25	TO	STA. 561+64.25	- 100.00 L.F.	0'to 12'
	STA. 561+64.25	TO	STA. 564+02.60	- 238.35 L.F.	12'
	STA. 564+02.60	TO	STA. 570+70	- 667.40 L.F.	12'to 54'
SB	STA. 559+35	TO	STA. 569+22.45	- 987.45 L.F.	0'to 25'
TOTAL LENGTH				1993.20 L.F.	
MONTGOMERY ROAD				SCL	SHLD
	STA. 598+75	TO	STA. 599+75	- 100.00 L.F.	0'to 12'
	STA. 599+75	TO	STA. 602+70	- 295.00 L.F.	12'
	STA. 602+70	TO	STA. 607+00	- 430.00 L.F.	12'-39'
NB	STA. 625+00	TO	STA. 635+00	- 1000.00 L.F.	25'to 0'
	STA. 592+69.55	TO	STA. 602+69.55	- 1000.00 L.F.	0'to 25'
	STA. 619+50±	TO	STA. 622+50	- 300.00 L.F.	39'to 12'
	STA. 622+50	TO	STA. 626+79	- 429.00 L.F.	12'
SB	STA. 626+79	TO	STA. 627+79	- 100.00 L.F.	12'to 0'
TOTAL LENGTH				3654.00 L.F.	
RONALD REAGAN HIGHWAY				SCL	SHLD
	STA. 680+16	TO	STA. 681+16	- 100.00 L.F.	0'to 12'
	STA. 681+16	TO	STA. 685+31	- 415.00 L.F.	12'
NB	STA. 685+31	TO	STA. 688+45	- 314.00 L.F.	12'to 39'
	STA. 699+64.33	TO	STA. 709+60	- 995.67 L.F.	25'to 0'
	STA. 685+19	TO	STA. 695+19	- 1000.00 L.F.	0'to 25'
SB	STA. 695+19	TO	STA. 705+19	- 1000.00 L.F.	0'to 25'
	STA. 713+45	TO	STA. 716+20	- 275.00 L.F.	39'to 12'
	STA. 716+20	TO	STA. 720+66	- 446.00 L.F.	12'
	STA. 720+66	TO	STA. 721+66	- 100.00 L.F.	12'to 0'
TOTAL LENGTH				4645.67 L.F.	
PFEIFFER ROAD				SCL	SHLD
NB	STA. 775+30	TO	STA. 776+30	- 100.00 L.F.	0'to 12'
	STA. 776+30	TO	STA. 779+40	- 310.00 L.F.	12'
	STA. 779+40	TO	STA. 783+50	- 410.00 L.F.	12'to 39'
	STA. 802+00	TO	STA. 812+00	- 1000.00 L.F.	25'to 0'
SB	STA. 769+93	TO	STA. 779+93	- 1000.00 L.F.	0'to 25'
	STA. 800+45	TO	STA. 806+00	- 555.00 L.F.	39'to 12'
	STA. 806+00	TO	STA. 808+00	- 200.00 L.F.	12'
	STA. 808+00	TO	STA. 812+25	- 425.00 L.F.	12'
	STA. 812+25	TO	STA. 835+00	- 2275.00 L.F.	12'
TOTAL LENGTH				6275.00 L.F.	

SCL = SPEED CHANGE LANE



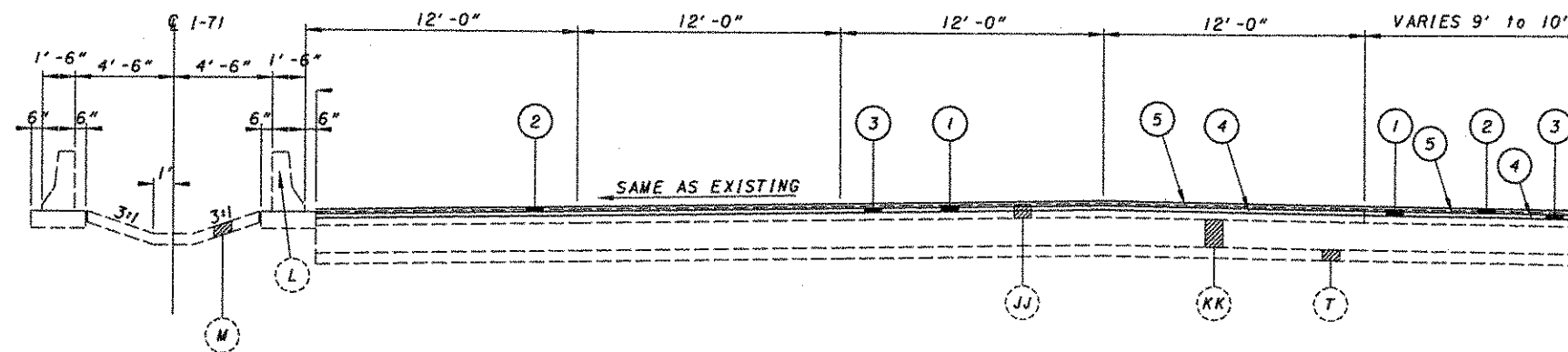
SPEED CHANGE LANE

RONALD REAGAN HIGHWAY (SR 126)				SCL
EB	STA. 262+45.36	TO	STA. 263+35	- 89.64 L.F. (#0'to 12')
EB	STA. 263+35	TO	STA. 269+09	- 574.00 L.F. (#12')
EB	STA. 269+09	TO	STA. 270+50	- 141.00 L.F. (#12'to 31')
WB	STA. 257+80	TO	STA. 264+78.50	- 698.50 L.F. (#2'to 19')
WB	STA. 270+32	TO	STA. 272+10	- 178.00 L.F. (#2'to 29')
EB	STA. 275+05	TO	STA. 278+55	- 350.00 L.F. (#2'to 29')
EB	STA. 285+71	TO	STA. 293+35	- 764.00 L.F. (#19'to 0')
EB	STA. 295+41	TO	STA. 299+47	- 406.00 L.F. (#0'to 29')
WB	STA. 292+13	TO	STA. 299+72.50	- 759.50 L.F. (#0'to 19')
TOTAL LENGTH				3960.64 L.F.

SCL = SPEED CHANGE LANE

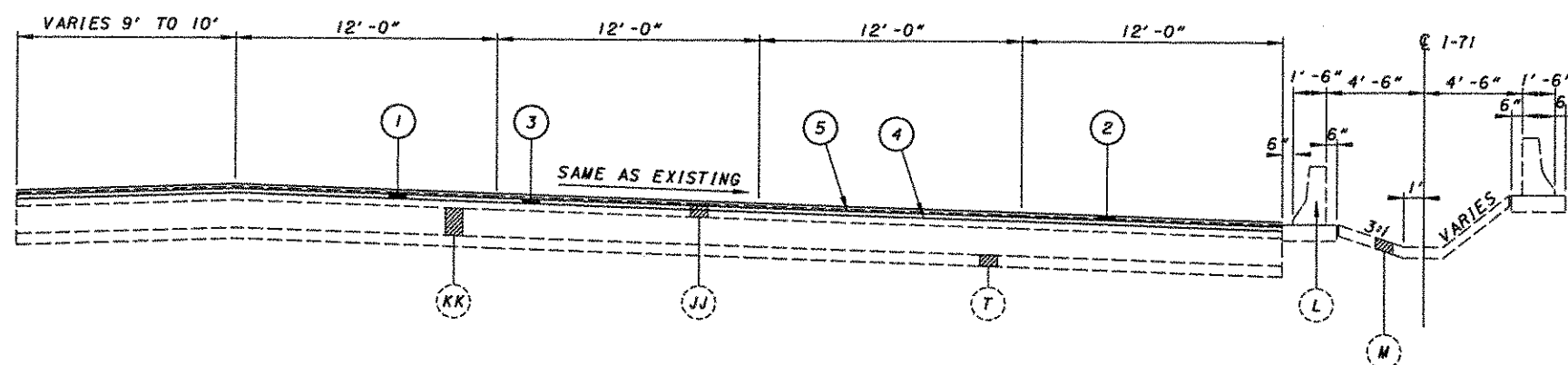
NOTE

1) FOR ITEM LEGEND, SEE SHEET 4.



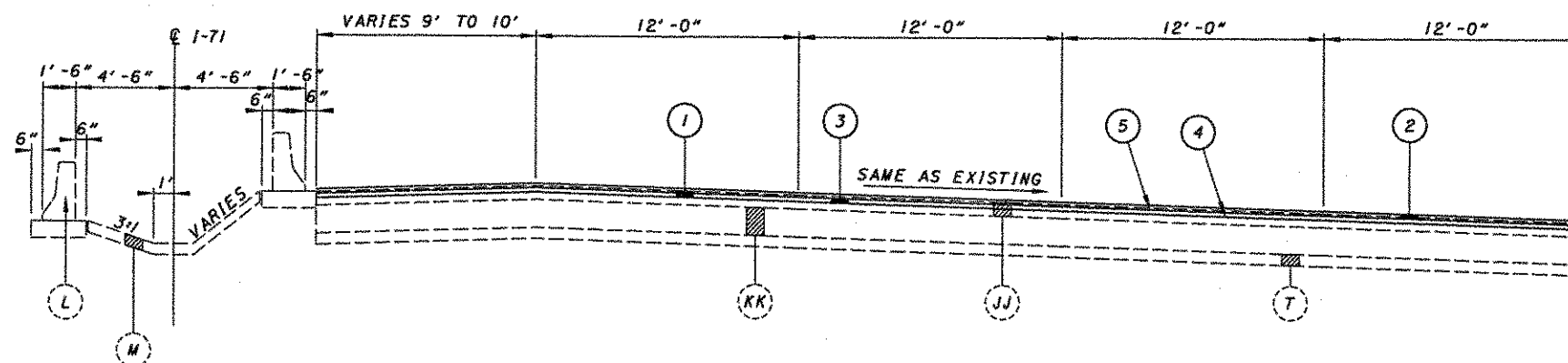
NORMAL APPROACH SLAB SECTION

NORTHBOUND AND SOUTHBOUND
 STA. 629+82.43 TO STA. 630+07.43 = 25.00 L.F.
 STA. 631+55.97 TO STA. 631+80.97 = 25.00 L.F.
 TOTAL LENGTH 50.00 L.F.



SUPERELEVATED APPROACH SLAB SECTION

SOUTHBOUND
 STA. 579+32.58 TO STA. 579+57.58 (OPPOSITE HAND) = 25.00 L.F.
 STA. 581+61.54 TO STA. 581+86.54 (OPPOSITE HAND) = 25.00 L.F.
 STA. 790+83.10 TO STA. 791+08.10 = 25.00 L.F.
 STA. 792+88.24 TO STA. 793+13.24 = 25.00 L.F.
 TOTAL LENGTH 100.00 L.F.

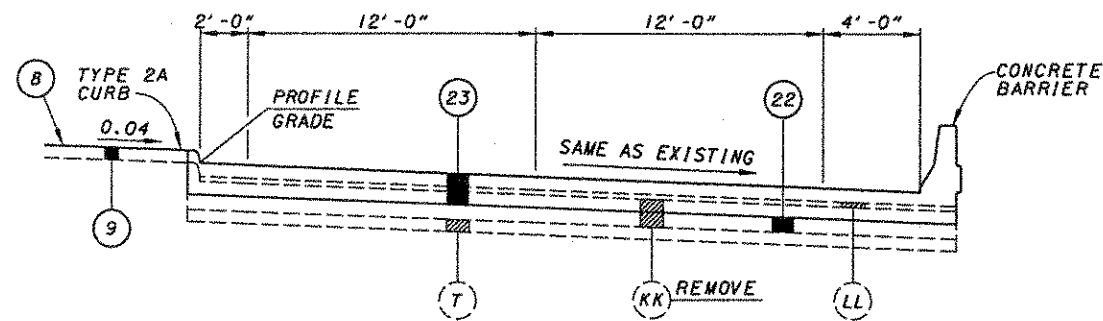


SUPERELEVATED APPROACH SLAB SECTION

NORTHBOUND
 STA. 579+32.58 TO STA. 579+57.58 (OPPOSITE HAND) = 25.00 L.F.
 STA. 581+61.54 TO STA. 581+86.54 (OPPOSITE HAND) = 25.00 L.F.
 STA. 790+83.10 TO STA. 791+08.10 = 25.00 L.F.
 STA. 792+88.24 TO STA. 793+13.24 = 25.00 L.F.
 TOTAL LENGTH 100.00 L.F.

NOTE

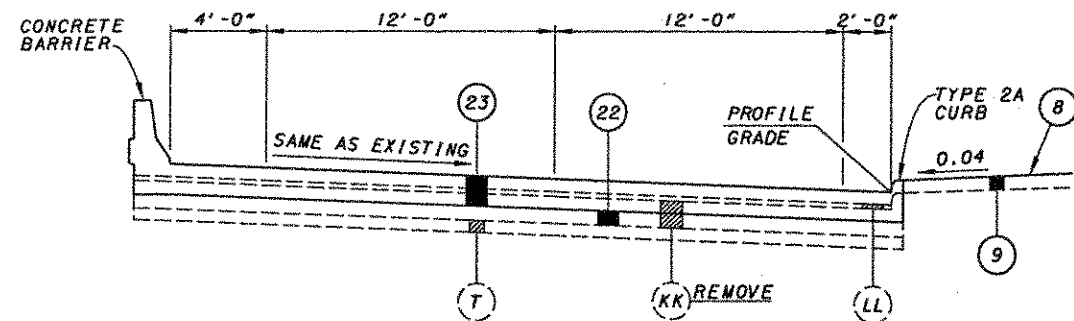
1) FOR ITEM LEGEND, SEE SHEET 4.



APPROACH SLAB - RONALD REAGAN HIGHWAY

WEST APPROACH

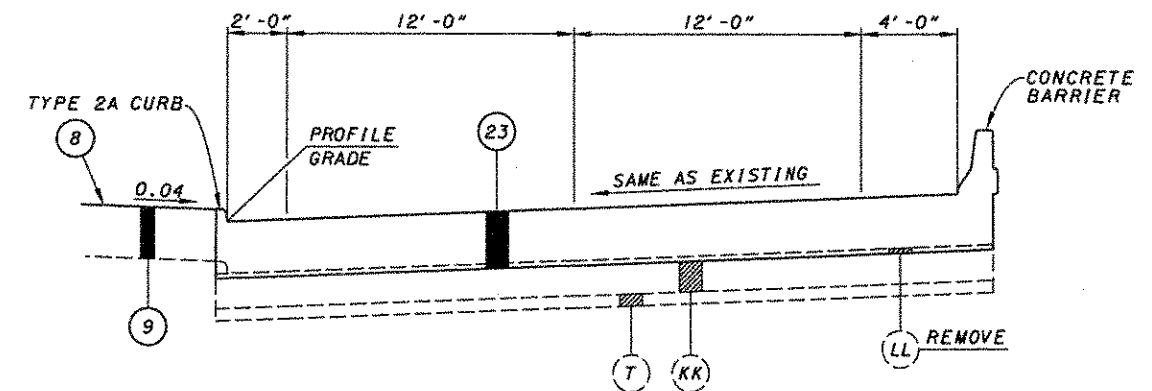
STA. 272+28.56 TO STA. 272+53.56 = 25.00 L.F. EASTBOUND



APPROACH SLAB - RONALD REAGAN HIGHWAY

WEST APPROACH

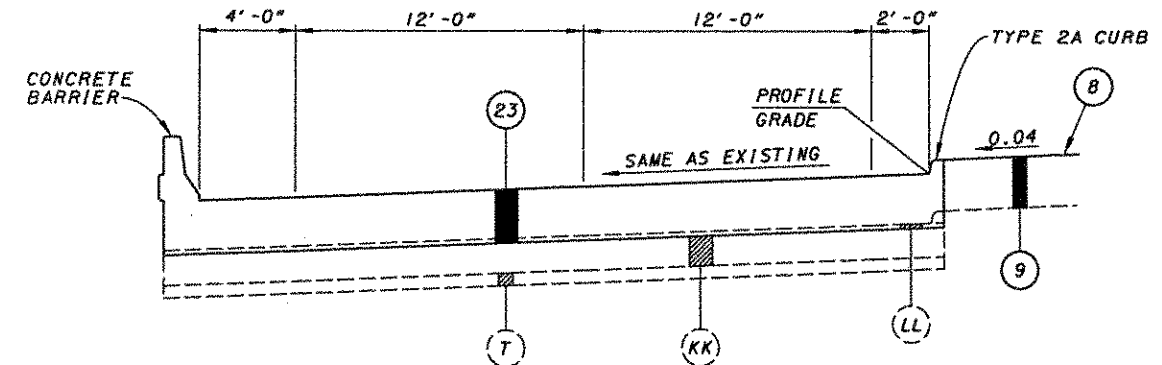
STA. 272+23.06 TO STA. 272+48.06 = 25.00 L.F. WESTBOUND



APPROACH SLAB - RONALD REAGAN HIGHWAY

EAST APPROACH

STA. 275+70.50 TO STA. 275+95.5 = 25.00 L.F. EASTBOUND



APPROACH SLAB - RONALD REAGAN HIGHWAY

EAST APPROACH

STA. 275+65.00 TO STA. 275+90.00 = 25.00 L.F. WESTBOUND

NOTES

- 1) FOR ITEM LEGEND, SEE SHEET 4.
- 2) FOR APPROACH SLAB DETAIL SEE BRIDGE PLAN.

UTILITIES

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

POWER: CINCINNATI ENERGY CORP.
P.O. BOX 960, ROOM 467A
DAYTON, OHIO 45201
513.287.1043

WATER: CINCINNATI WATER WORKS
4747 SPRING GROVE AVENUE
CINCINNATI, OHIO 45232
513.591.7890

GAS: CINCINNATI ENERGY CORP.
P.O. BOX 960, ROOM 460A
DAYTON, OHIO 45201
513.287.2457

SEWER: METROPOLITAN SEWER WORKS
1600 GAST STREET
CINCINNATI, OHIO 45203
513.352.4900

CABLE: TIME WARNER CABLE
11252 CORNELL PARK DRIVE
CINCINNATI, OHIO 45242
513.469.5483

TELEPHONE: CINCINNATI BELL TELEPHONE
201 EAST 4 TH STREET
CINCINNATI, OHIO 45202
513.565.7043

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

ELEVATION DATUM

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

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

EXISTING GROUND LINE

EXISTING GROUND LINES AND ELEVATIONS SHOWN ON THE PROFILE AND CROSS SECTION SHEETS ARE ALONG CENTERLINE CONSTRUCTION.

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.

ITEM 870 - SEEDING AND MULCHING

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE EDGES OF THE NEW PAVEMENT AND THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS.

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN

THIS ITEM SHALL CONSIST OF CONSTRUCTING A BRIDGE TERMINAL ASSEMBLY, TYPE 4 WITHOUT THE GUARDRAIL TYPE 5 TUBULAR BACKUP. INSTALL A HALF-SECTION OF GUARDRAIL AND ATTACH IT TO THE BRIDGE PARAPET USING A W-BEAM TERMINAL CONNECTOR AS SHOWN IN THE STANDARD CONSTRUCTION DRAWING GR-3.2M. REPLACE THE FIRST GUARDRAIL POST OFF THE BRIDGE WITH A 150mm x 200mm AND 150 x 200 x 355mm WOOD BLOCK OUT. FOR FURTHER INFORMATION REFER THE STANDARD CONSTRUCTION DRAWINGS GR-3.2M AND GR-3.4M.

ITEM 618 - RUMBLE STRIPS, TYPE 2

THIS ITEM SHALL CONSIST OF INSTALLING RUMBLE STRIPS, TYPE 2 AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ACCORDING TO STANDARD CONSTRUCTION DRAWING BP-9.J. INSTALLATION SHALL BE ALONG I-71 MAINLINE ONLY.

ITEM 622 - CONCRETE BARRIER TYPE D, AS PER PLAN A

THIS ITEM SHALL CONSIST OF CONSTRUCTING A TYPE D CONCRETE BARRIER WITH A 48" WIDE FOOTING AS DETAILED ON THE MISCELLANEOUS DETAILS. FOR INFORMATION NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWING RM-4.3M.

ITEM 622 - CONCRETE BARRIER TYPE D, AS PER PLAN B

THIS ITEM SHALL CONSIST OF CONSTRUCTING A TYPE D CONCRETE BARRIER WITH A 24" WIDE FOOTING, OMITTING THE 6" PORTION OF THE FOOTING AS DETAILED ON THE MISCELLANEOUS DETAILS. FOR INFORMATION NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWING RM-4.3M.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44200 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. 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. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265 M	ET-2000 (1997) PLAN, ELEVATION & SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION & SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEM, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. 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. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18"x18".

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

FOR OFFSET REQUIREMENTS OF THE ABOVE ANCHOR ASSEMBLYS, SEE STANDARD CONSTRUCTION DRAWING GR-5.3M.

ITEM 622 - CONCRETE BARRIER TYPE D, WITH DRAINAGE SLOTS

THIS ITEM SHALL CONSIST OF CONSTRUCTING A TYPE D CONCRETE BARRIER WITH A 6 FOOT LONG DRAINAGE SLOT AS DETAILED ON THE MISCELLANEOUS DETAILS. FOR INFORMATION NOT SHOWN, SEE STANDARD CONSTRUCTION DRAWING RM-4.3M.

ITEM SPECIAL - BRICK PAVER WALK @ ZIG ZAG ROAD

THE EXISTING BRICK PAVERS SHALL BE REMOVED AND RESET IN KIND. THE WIDTH AND ALIGNMENT OF THE NEW WALK SHALL MATCH THE EXISTING. THE BASE MATERIAL SHALL BE THE SAME TYPE AND THICKNESS AS THE EXISTING. FOR FURTHER INFORMATION, SEE MISCELLANEOUS DETAIL SHEETS.

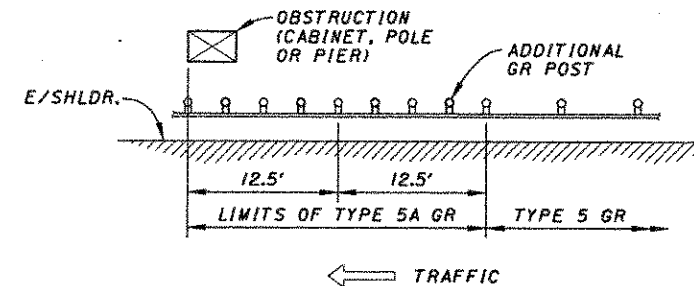
REPLACEMENT OF EXISTING LOOP DETECTORS

VERIFY THE SIZE AND LOCATION OF ALL EXISTING LOOP DETECTORS TO BE REPLACED. SEE PLAN SHEETS FOR LOCATIONS. FOR ADDITIONAL INFORMATION OF THE ARTIMIS LOOP DETECTORS SEE HAM-71-3.556 (ARTIMIS PHASE II INSTALLATION METRIC - 1997) SHEETS 59/78 THRU 61/78 AND HAM-ARTIMIS SHEETS 174/202 AND 175/202.

ITEM 606 - GUARDRAIL, TYPE 5A

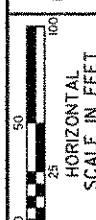
WHERE GUARDRAIL IS INSTALLED INFRONT OF AN OBSTRUCTION WITH AN OFFSET OF LESS THAN 5.5 FEET, BUT GREATER THAN 3.5' FROM THE FACE OF RAIL TO THE FACE OF THE OBJECT, TYPE 5A GUARDRAIL SHALL BE INSTALLED.

PLACE A LENGTH OF 25 FEET OF TYPE 5A GUARDRAIL UPSTREAM FROM THE OBSTRUCTION BEING PROTECTED.



ITEM 202 - GUARDRAIL REMOVED

ANY UNDAMAGED GUARDRAIL AND TERMINAL ASSEMBLIES, INCLUDING TYPE E ANCHOR ASSEMBLYS, SHALL BE SALVAGED AND STORED ON THE PROJECT SITE AT A NON-WORK LOCATION FOR PICK UP BY STATE FORCES IN ACCORDANCE WITH REQUIREMENTS OF ITEM 202. THE SPECIFIC PARTS OF THE TYPE E ANCHOR ASSEMBLY SHALL BE STORED "AS DIRECTED BY THE ENGINEER".

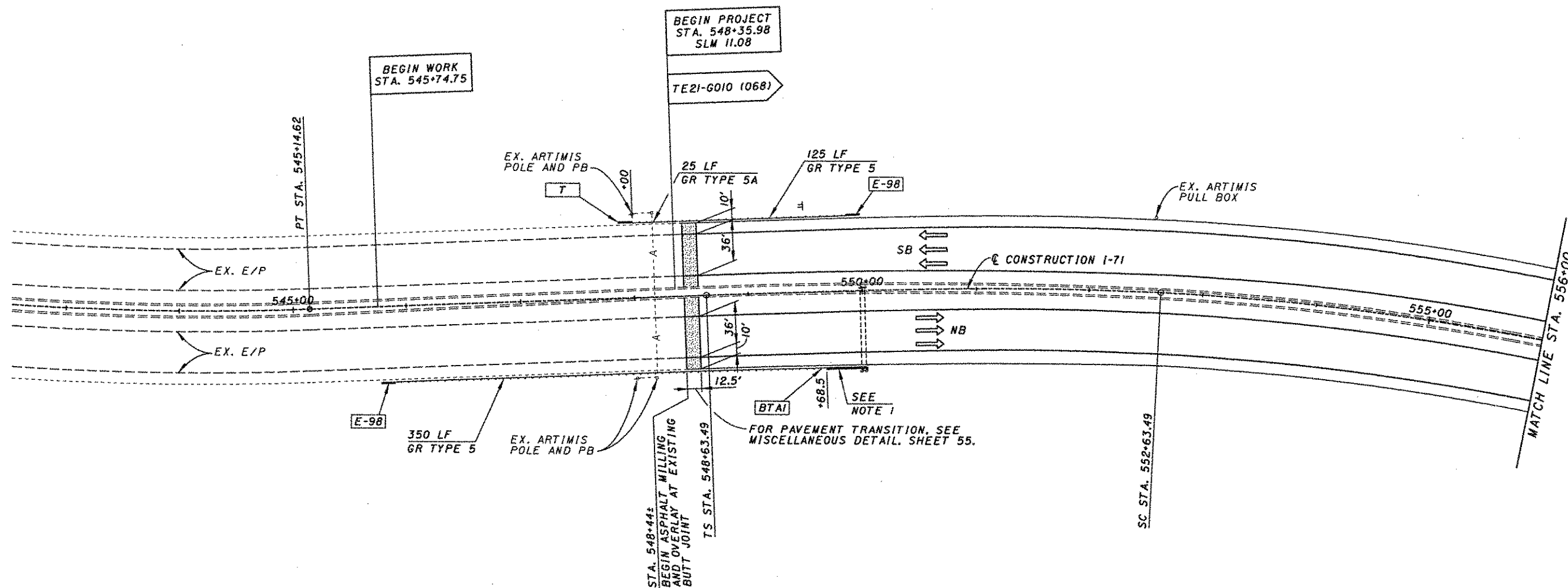


CALCULATED
CHECKED

PLAN I-71
STA. 548+00 TO STA. 556+00

HAM-71-11.08

18
205

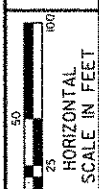


LEGEND

- E-98** GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T** GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- A** GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- BTA1** BRIDGE TERMINAL ASSEMBLY, TYPE 1
- BTA2** BRIDGE TERMINAL ASSEMBLY, TYPE 2

NOTES

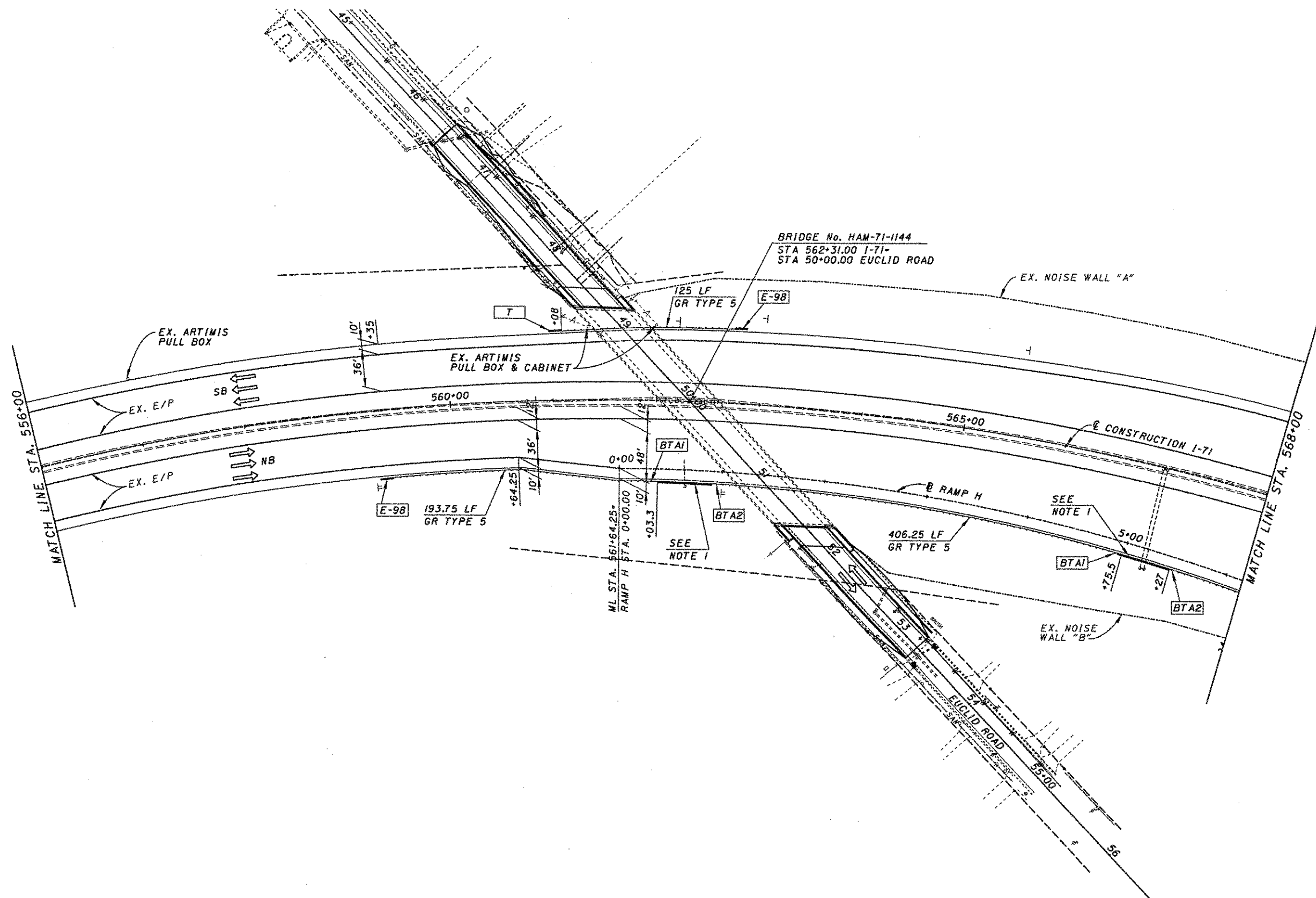
- 1) CONSTRUCT 36.1' OF NEW CONCRETE BARRIER TRANSITION TYPE D, AS PER PLAN A, SEE STANDARD DRAWING RM-4.5M
- 2) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.



CALCULATED
CHECKED

PLAN I-71
STA. 556+00 TO STA. 568+00

HAM-71-11.08



LEGEND

- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- [A] GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- [BTA1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
- [BTA2] BRIDGE TERMINAL ASSEMBLY, TYPE 2

NOTES

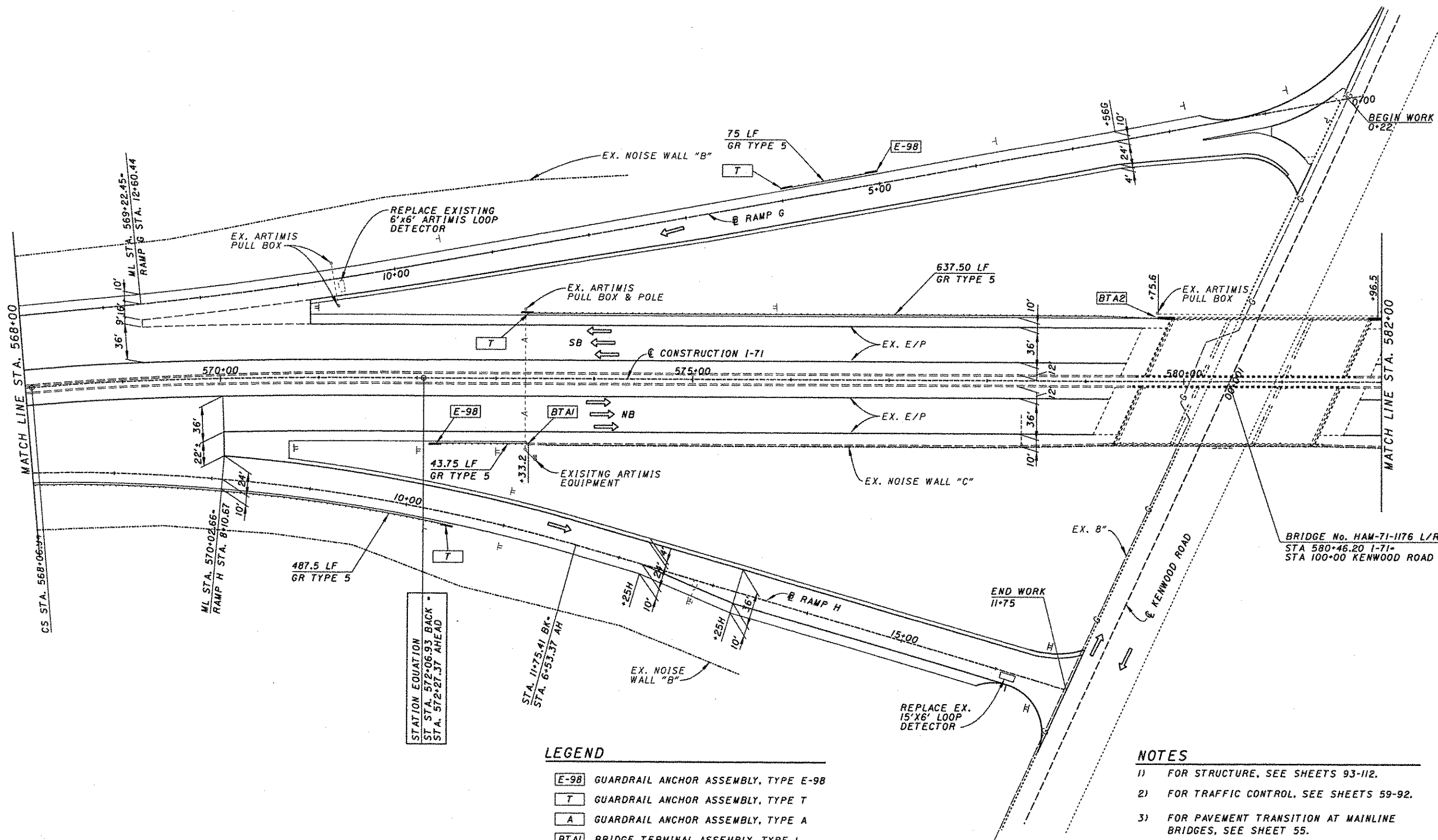
- 1) CONSTRUCT 52.5' OF NEW CONCRETE BARRIER, TYPE D AS PER PLAN A. SEE STANDARD DRAWING RM-4.5M.
- 2) FOR EUCLID ROAD, SEE SHEETS 45, 49-53.
- 3) FOR STRUCTURE, SEE SHEETS 113-127.
- 4) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.



CALCULATED
CHECKED

PLAN I-71
STA. 568+00 TO STA. 582+00

HAM-71-11.08



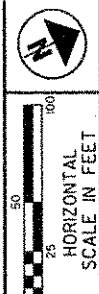
STATION EQUATION
ST STA. 572+06.93 BACK +
STA. 572+27.37 AHEAD

LEGEND

- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- [A] GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- [BTA1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
- [BTA2] BRIDGE TERMINAL ASSEMBLY, TYPE 2

NOTES

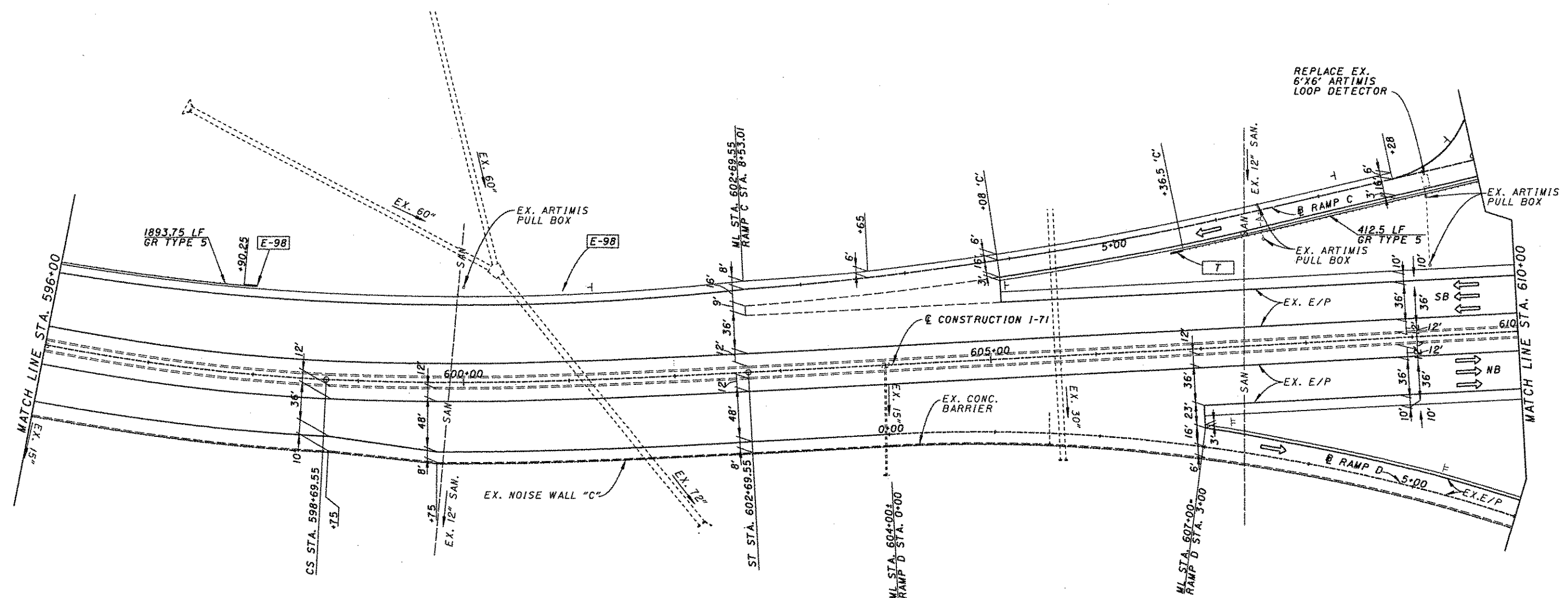
- 1) FOR STRUCTURE, SEE SHEETS 93-112.
- 2) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 3) FOR PAVEMENT TRANSITION AT MAINLINE BRIDGES, SEE SHEET 55.
- 4) FOR PAVEMENT FEATHERING AT RAMPS, SEE SHEET 55.



CALCULATED
CHECKED

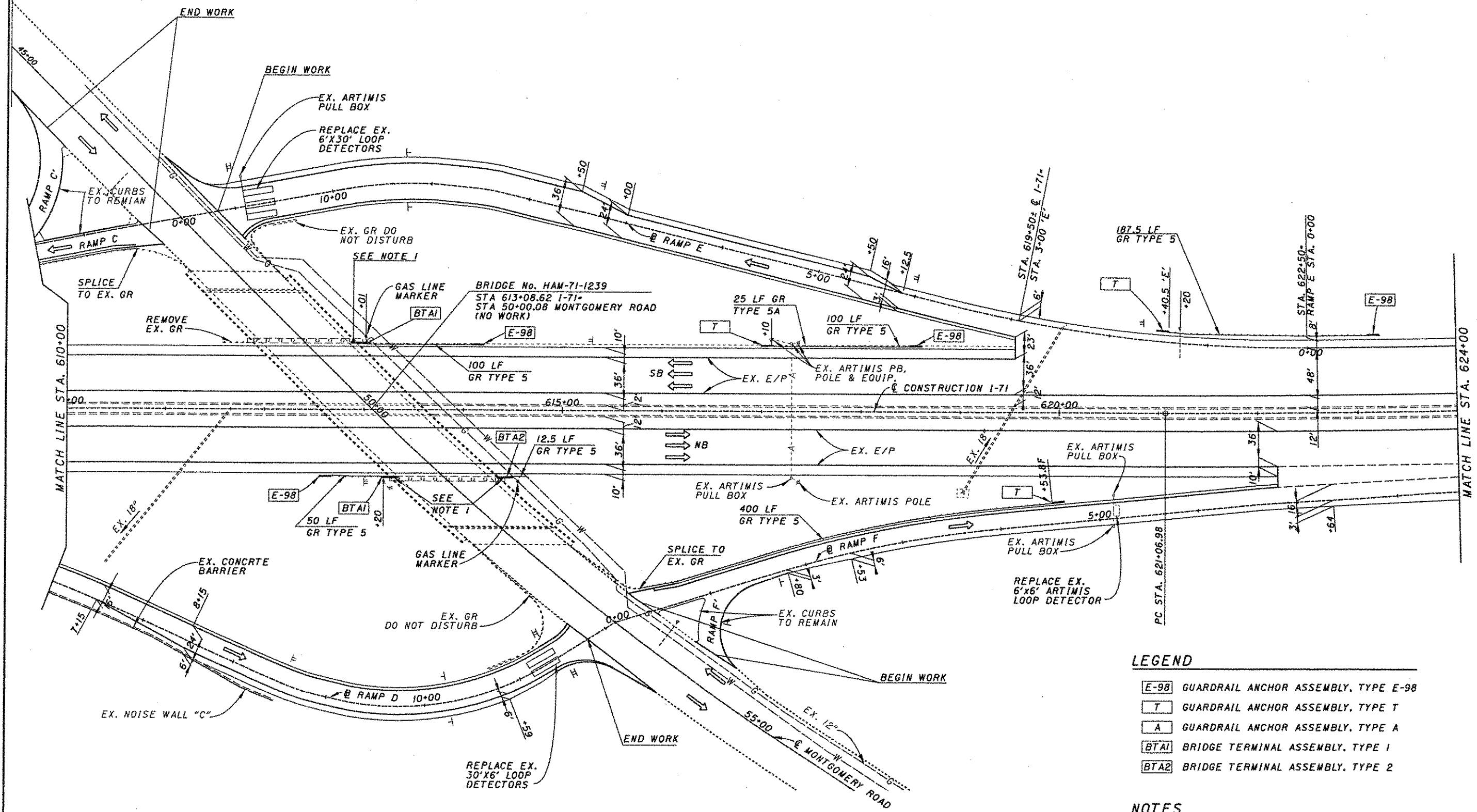
PLAN I-71
STA. 596+00 TO STA. 610+00

HAM-71-11.08



NOTE
1) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.

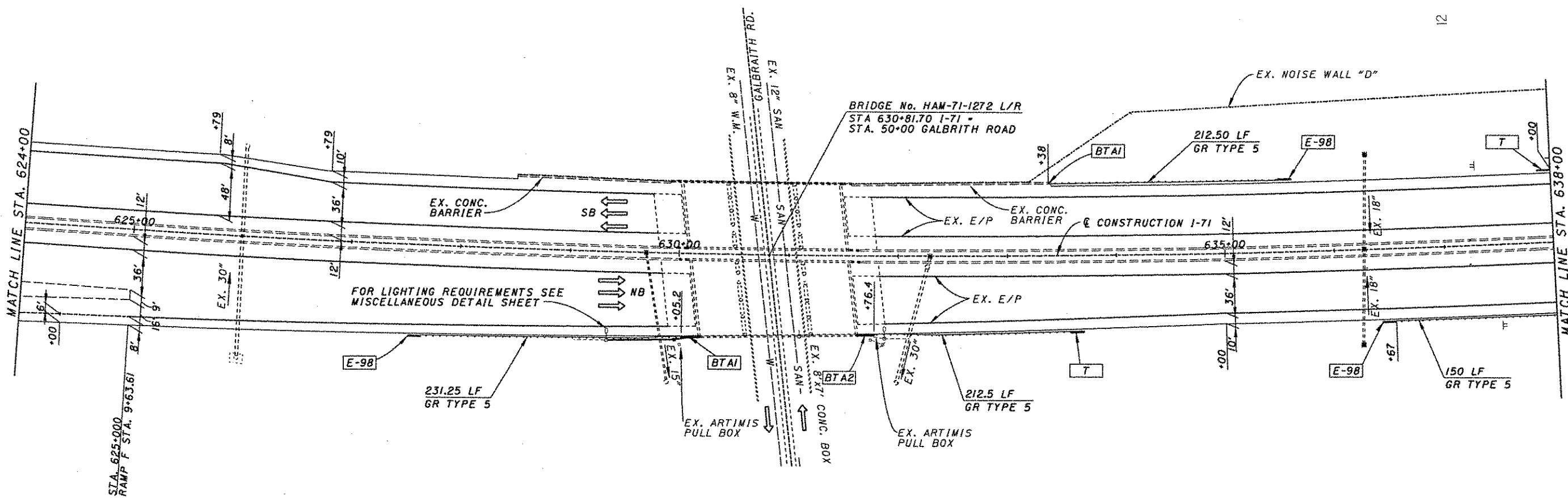
- LEGEND**
- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
 - [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T
 - [BTA1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
 - [BTA2] BRIDGE TERMINAL ASSEMBLY, TYPE 2



- ### LEGEND

 - E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
 - T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
 - A GUARDRAIL ANCHOR ASSEMBLY, TYPE A
 - BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
 - BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2
- ### NOTES

 - 1) REMOVE EXISTING CONCRETE BARRIER TRANSITION SECTION TO EXISTING JOINT AT PIER COLUMN. CONSTRUCT 16.4 LF OF NEW CONCRETE BARRIER TRANSITION AS PER STANDARD DRAWING RM-4.5M.
 - 2) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
 - 3) FOR PAVEMENT FEATHERING AT RAMPS, SEE SHEET 55.

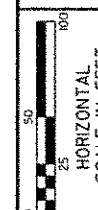


NOTES

- 1) FOR STRUCTURE, SEE SHEETS 93-112.
- 2) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 3) FOR LIGHTING, SEE SHEET 58.
- 4) FOR PAVEMENT FEATHERING AT MAINLINE BRIDGES, SEE SHEET 55.

LEGEND

- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
 T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
 A GUARDRAIL ANCHOR ASSEMBLY, TYPE A
 BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
 BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2



CALCULATED
 CHECKED

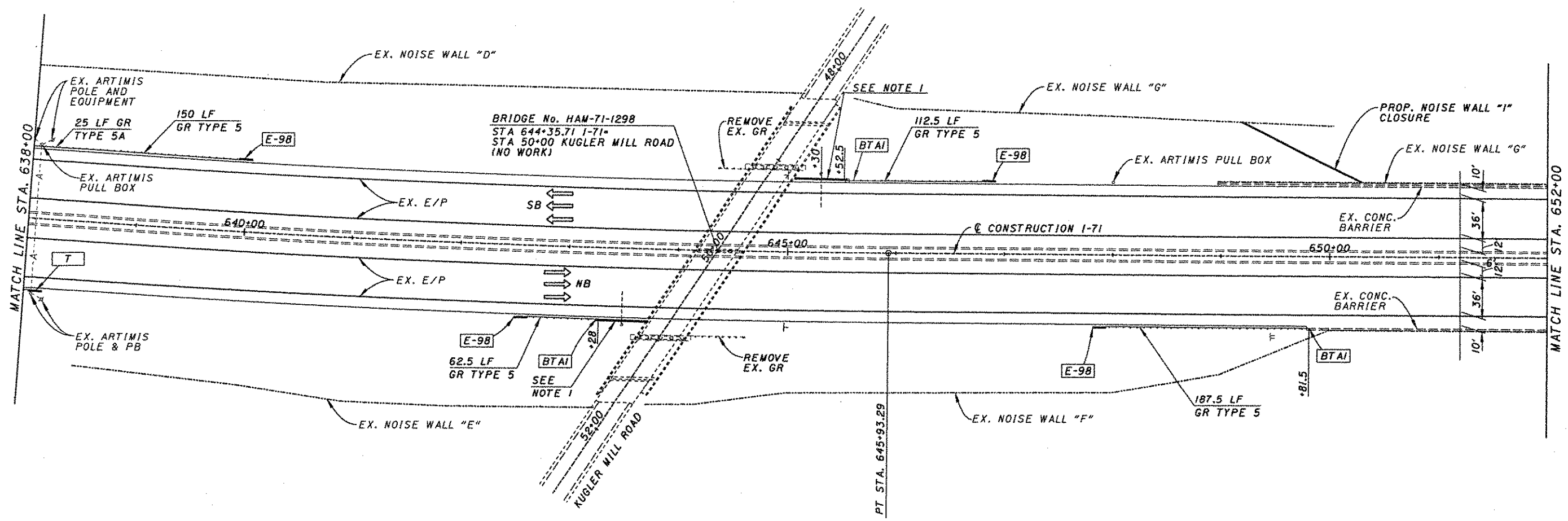
PLAN I-71
 STA. 624+00 TO STA. 638+00

HAM-71-11.08



PLAN I-71
STA. 638+00 TO STA. 652+00

HAM-71-11.08

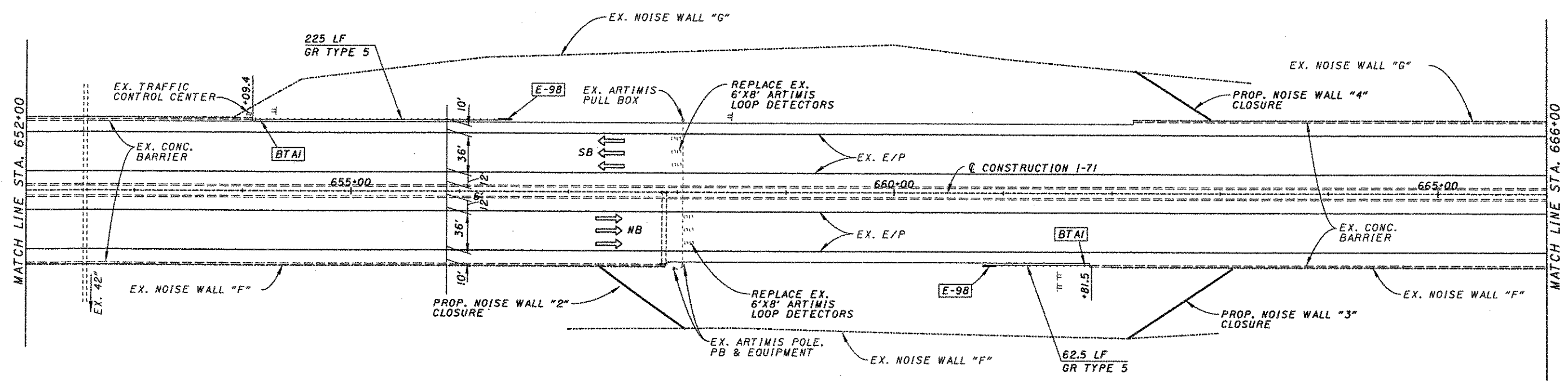


NOTES

- 1) CONSTRUCT 48.6' OF NEW CONCRETE BARRIER TYPE D, AS PER PLAN A. SEE STANDARD DRAWING RM-4.5M
- 2) FOR NOISE WALL CLOSURE, SEE SHEETS 169-204.
- 3) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.

LEGEND

- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- [A] GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- [BTA1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
- [BTA2] BRIDGE TERMINAL ASSEMBLY, TYPE 2

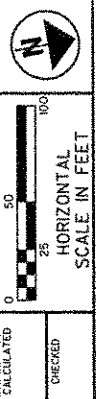


NOTES

- 1) FOR NOISE WALL CLOSURE, SEE SHEETS 169-204.
- 2) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.

LEGEND

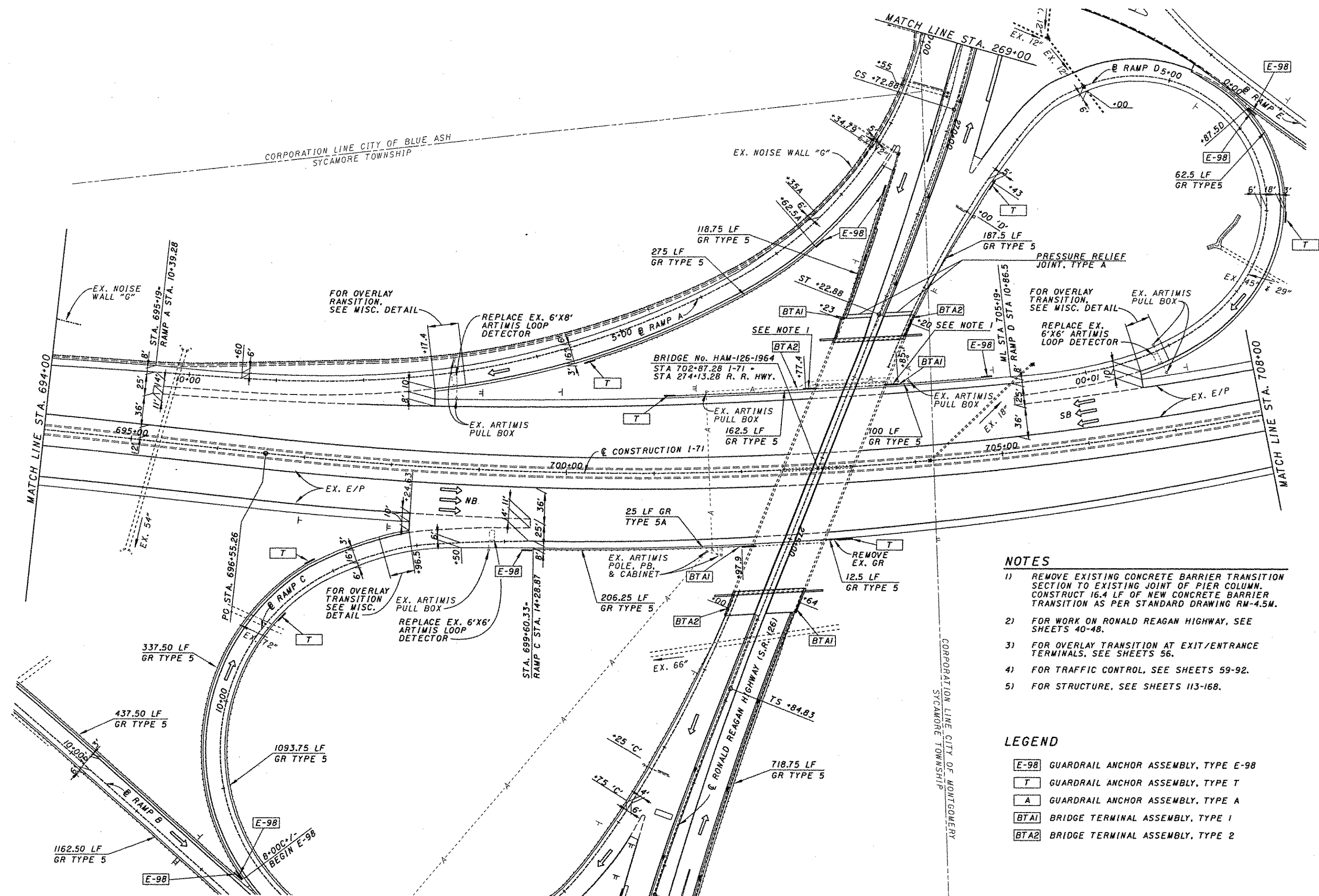
- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- A GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
- BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2



HAM-71-11.08

$$\frac{27}{205}$$

...\\Roadway\\4701GP10.dgn 11/13/2003 03:23:28 PM



PLAN I-71
STA. 694+00 TO STA. 708+00

29
205

...\\Roadway\\4701GP12.dgn 11/13/2003 03:23:59 PM



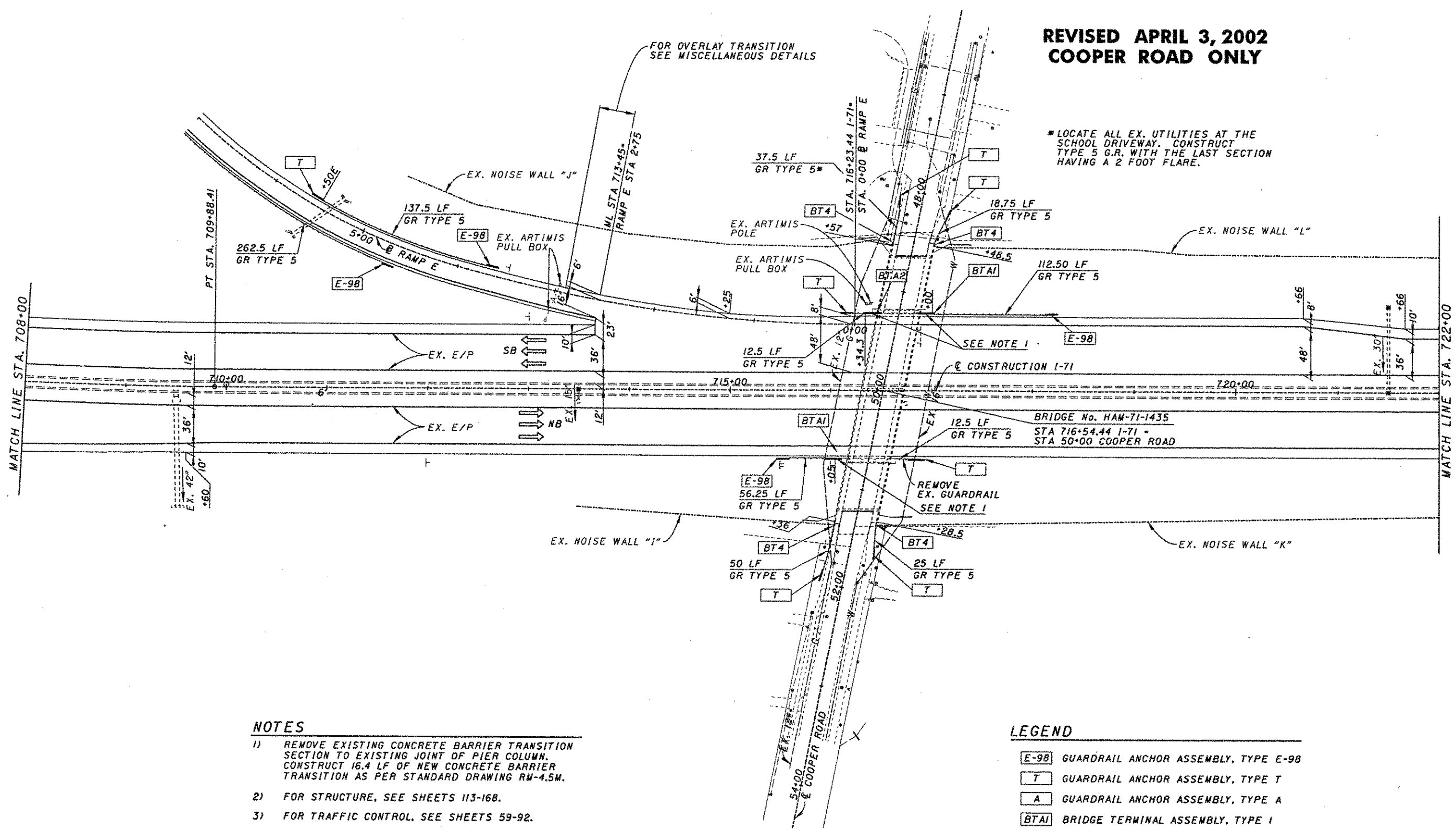
CALCULATED
CHECKED

PLAN I-71
STA. 708+00 TO STA. 722+00

HAM-71-11.08

REVISED APRIL 3, 2002
COOPER ROAD ONLY

* LOCATE ALL EX. UTILITIES AT THE
SCHOOL DRIVEWAY. CONSTRUCT
TYPE 5 G.R. WITH THE LAST SECTION
HAVING A 2 FOOT FLARE.

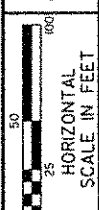


NOTES

- 1) REMOVE EXISTING CONCRETE BARRIER TRANSITION SECTION TO EXISTING JOINT OF PIER COLUMN. CONSTRUCT 16.4 LF OF NEW CONCRETE BARRIER TRANSITION AS PER STANDARD DRAWING RM-4.5M.
- 2) FOR STRUCTURE, SEE SHEETS 113-168.
- 3) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 4) FOR OVERLAY TRANSITION AT EXIT/ENTRANCE RAMP TERMINALS, SEE SHEET 56.
- 5) FOR SHOULDER PAVEMENT UNDERCUTTING UNDER COOPER ROAD, SEE SHEET 57.

LEGEND

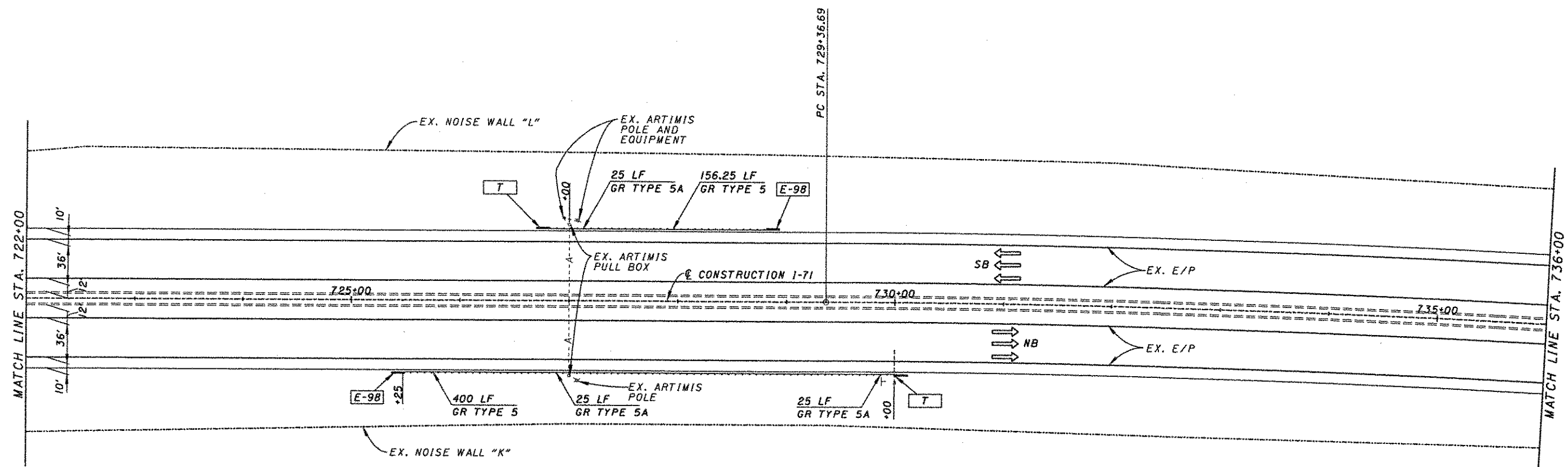
- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- [A] GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- [BTA1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
- [BTA2] BRIDGE TERMINAL ASSEMBLY, TYPE 2
- [BT4] BRIDGE TERMINAL ASSEMBLY, TYPE 4, AS PER PLAN



CALCULATED
CHECKED

PLAN I-71
STA. 722+00 TO STA. 736+00

HAM-71-11.08

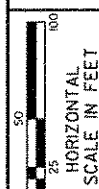


NOTE

1) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.

LEGEND

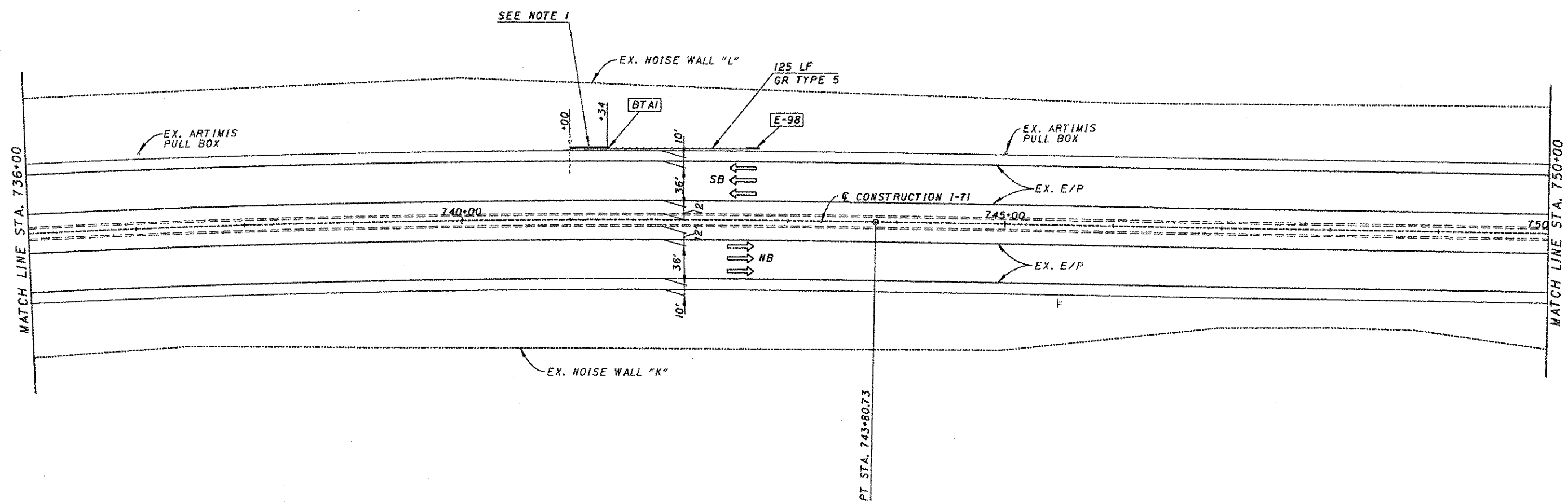
- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- A GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
- BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2



CALCULATED
CHECKED

PLAN I-71
STA. 736+00 TO STA. 750+00

HAM-71-11.08

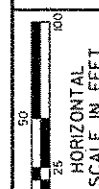


NOTES

- 1) CONSTRUCT 36.1' OF NEW CONCRETE BARRIER TYPE D, AS PER PLAN A. SEE STANDARD DRAWING RM-4.5M
- 2) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.

LEGEND

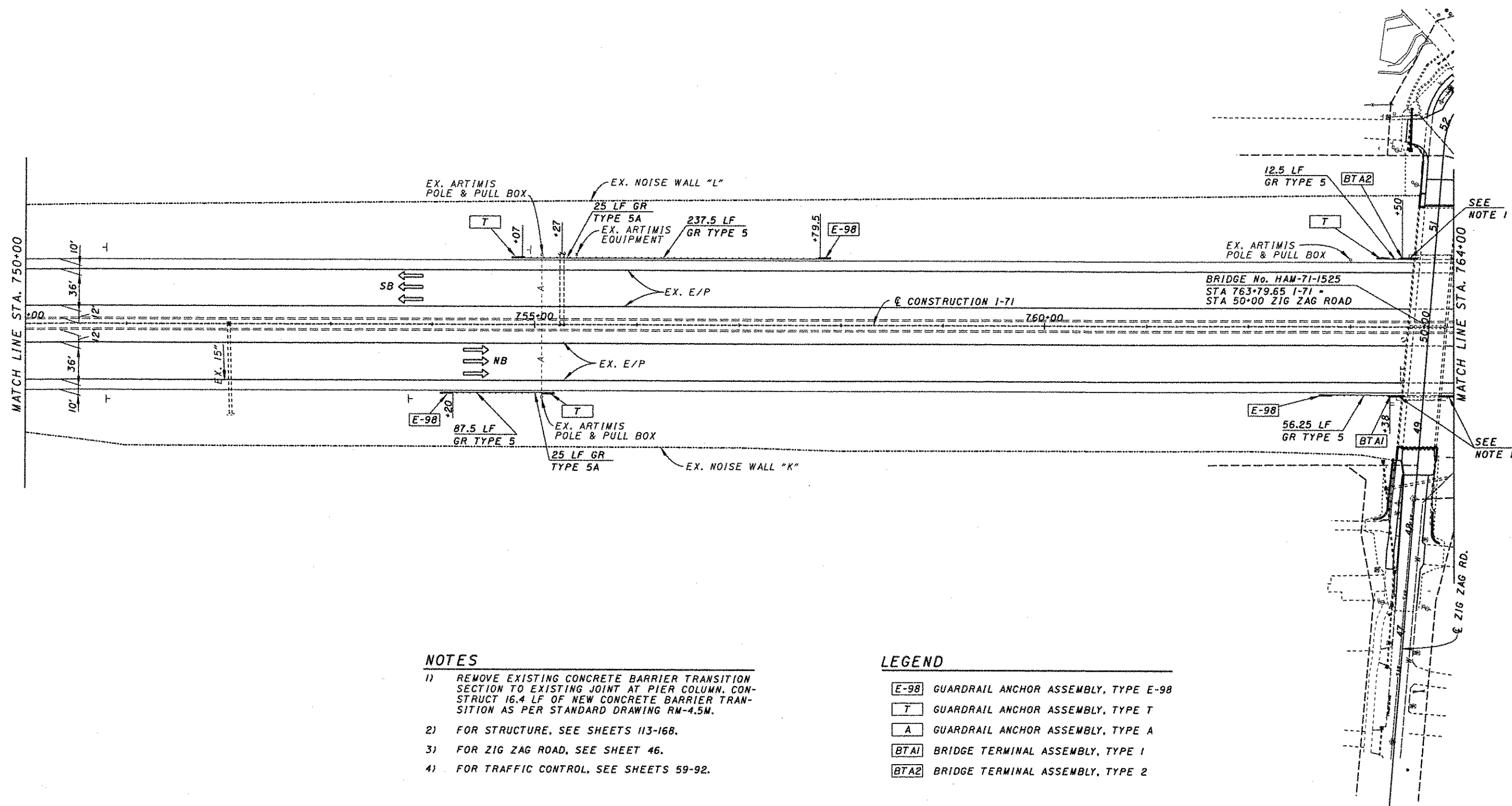
- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- [A] GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- [BTA1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
- [BTA2] BRIDGE TERMINAL ASSEMBLY, TYPE 2



CALCULATED
CHECKED

PLAN I-71
STA. 750+00 TO STA. 764+00

HAM-71-11.08

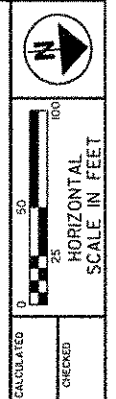


NOTES

- 1) REMOVE EXISTING CONCRETE BARRIER TRANSITION SECTION TO EXISTING JOINT AT PIER COLUMN. CONSTRUCT 16.4 LF OF NEW CONCRETE BARRIER TRANSITION AS PER STANDARD DRAWING RM-4.5M.
- 2) FOR STRUCTURE, SEE SHEETS 113-168.
- 3) FOR ZIG ZAG ROAD, SEE SHEET 46.
- 4) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.

LEGEND

- | | |
|------|--------------------------------------|
| E-98 | GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98 |
| T | GUARDRAIL ANCHOR ASSEMBLY, TYPE T |
| A | GUARDRAIL ANCHOR ASSEMBLY, TYPE A |
| BTA1 | BRIDGE TERMINAL ASSEMBLY, TYPE 1 |
| BTA2 | BRIDGE TERMINAL ASSEMBLY, TYPE 2 |



HAM-71-11.08

34
205

E-98	GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
T	GUARDRAIL ANCHOR ASSEMBLY, TYPE T
A	GUARDRAIL ANCHOR ASSEMBLY, TYPE A
BT1	BRIDGE TERMINAL ASSEMBLY, TYPE 1
BT2	BRIDGE TERMINAL ASSEMBLY, TYPE 2

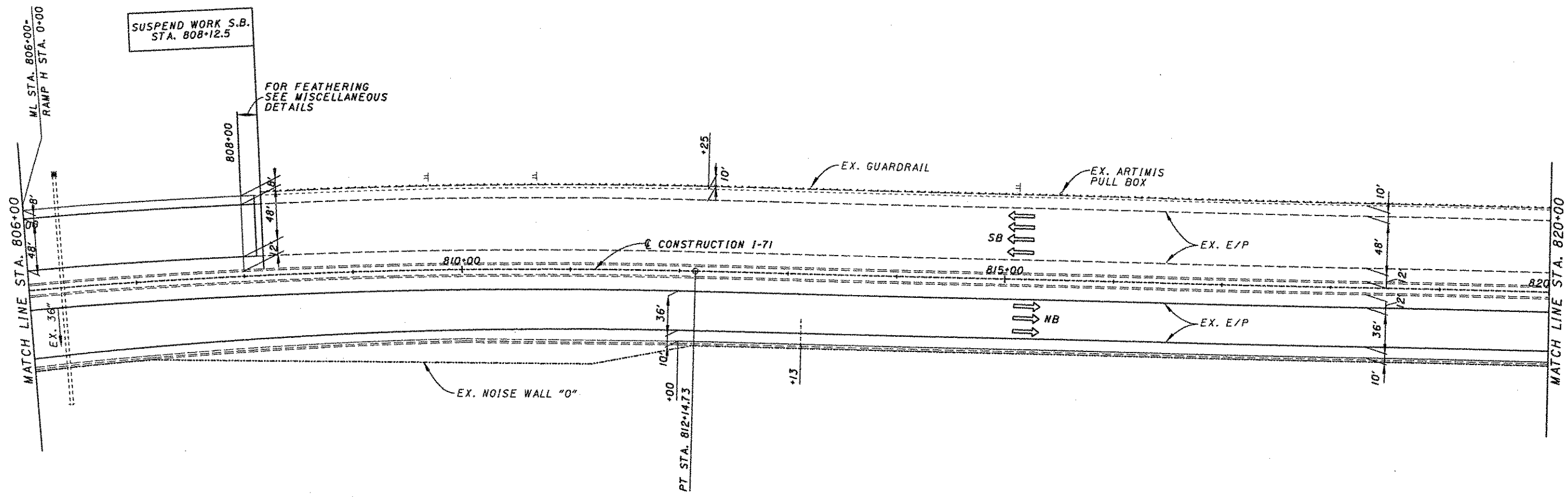




CALCULATED
CHECKED

PLAN I-71
STA. 806+00 TO STA. 820+00

HAM-71-11.08

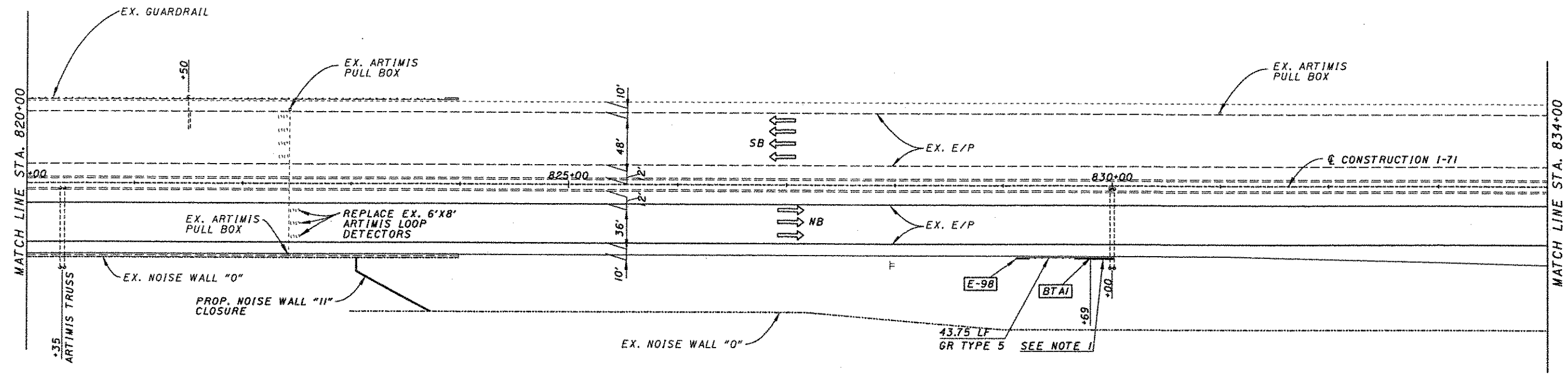


LEGEND

- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- [A] GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- [BTA1] BRIDGE TERMINAL ASSEMBLY, TYPE 1
- [BTA2] BRIDGE TERMINAL ASSEMBLY, TYPE 2

NOTES

- 1) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 2) FOR PAVEMENT FEATHERING, SEE SHEET 55.

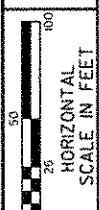


NOTES

- 1) CONSTRUCT 36' OF NEW CONCRETE BARRIER TYPE D, AS PER PLAN A. SEE STANDARD DRAWING RM-4.5M
- 2) FOR NOISE WALL CLOSURE, SEE SHEETS 169-204.
- 3) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.

LEGEND

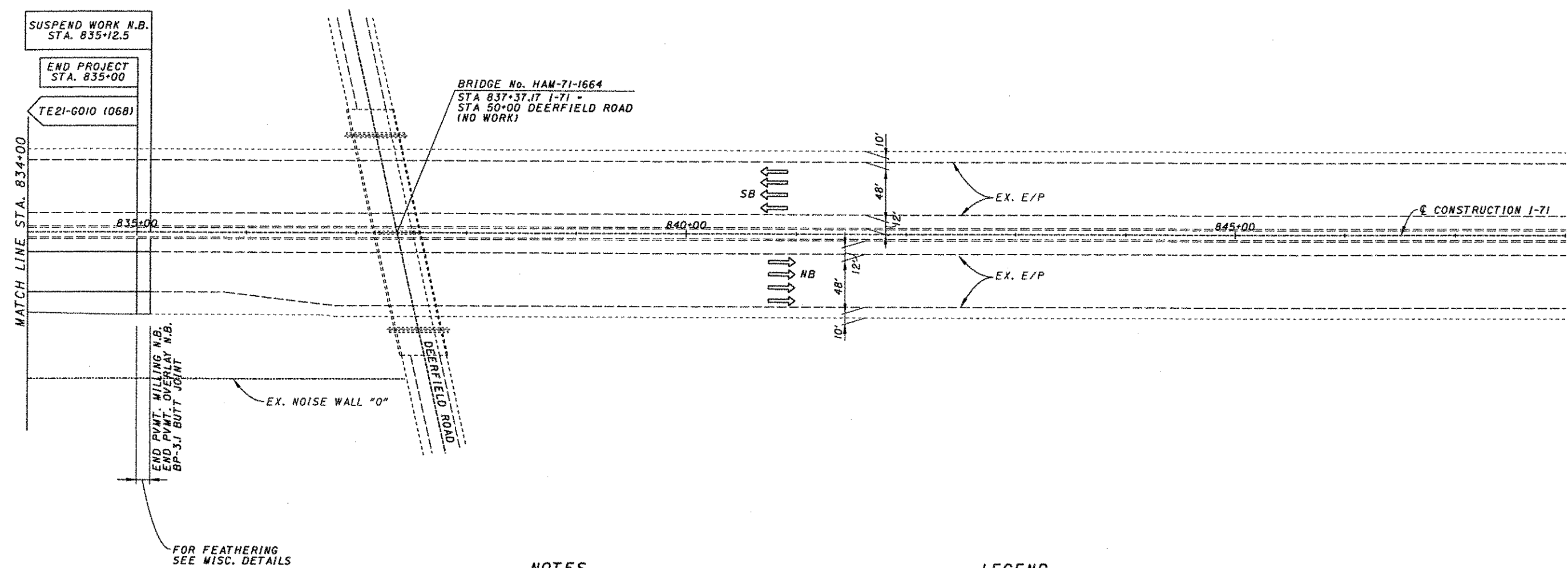
- E-98** GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T** GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- A** GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- BTA1** BRIDGE TERMINAL ASSEMBLY, TYPE 1
- BTA2** BRIDGE TERMINAL ASSEMBLY, TYPE 2



CALCULATED
CHECKED

PLAN I-71
STA. 834+00 TO STA. 835+00

HAM-71-11.08



NOTES

- 1) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 2) FOR PAVEMENT FEATHERING, SEE SHEET 55.

LEGEND

- E-98** GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T** GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- BTA1** BRIDGE TERMINAL ASSEMBLY, TYPE 1
- BTA2** BRIDGE TERMINAL ASSEMBLY, TYPE 2

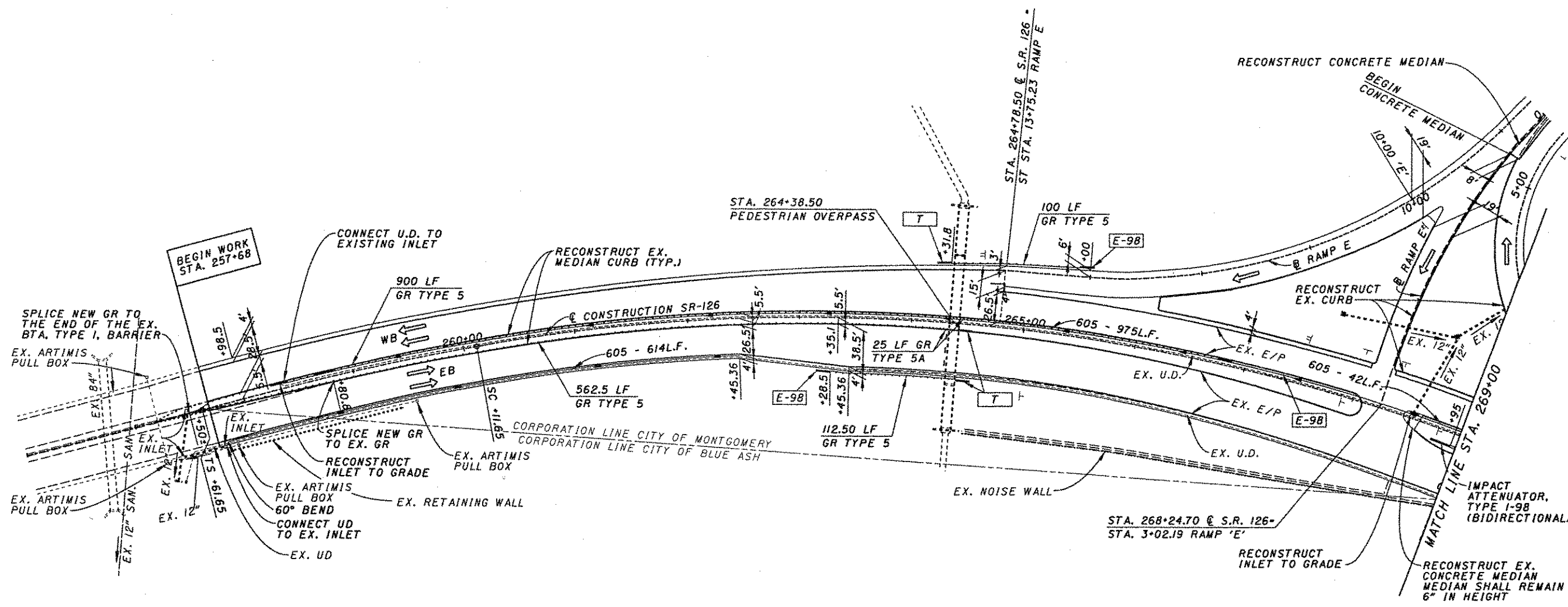


CALCULATED
CHECKED

PLAN - R.R. HWY. (SR 126)
STA. 256+00 TO STA. 269+00

HAM-71-11.08

40
205

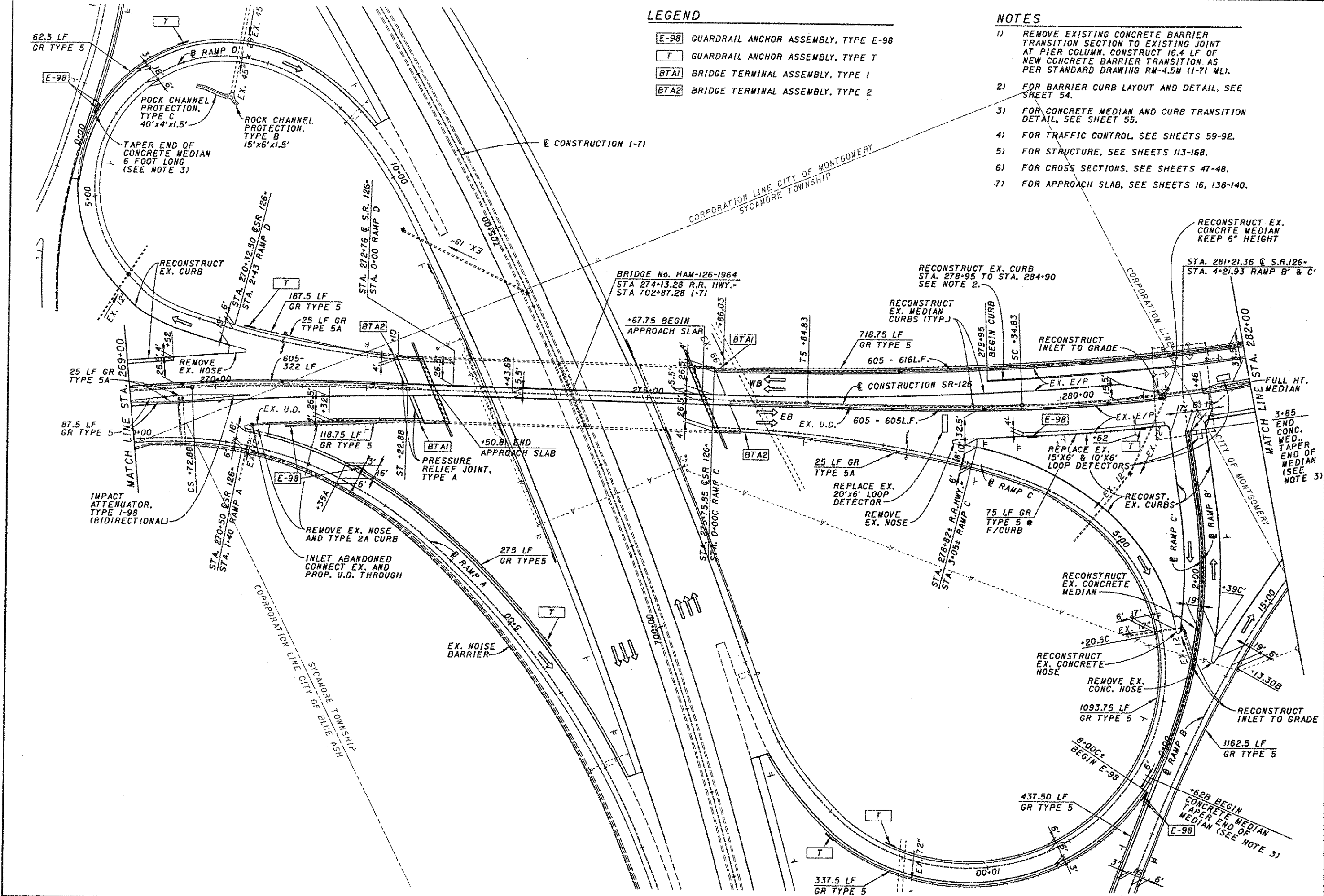


NOTES

- 1) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 2) FOR PAVEMENT FEATHERING AT BEGIN WORK R. R. HWY., SEE SHEET 56.
- 3) FOR PEDESTRIAN OVERPASS, SEE SHEETS 113-168.

LEGEND

- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2



LEGEND

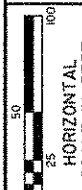
- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
- BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2

NOTES

- 1) REMOVE EXISTING CONCRETE BARRIER TRANSITION SECTION TO EXISTING JOINT AT PIER COLUMN. CONSTRUCT 16.4 LF OF NEW CONCRETE BARRIER TRANSITION AS PER STANDARD DRAWING RM-4.5M (I-71 ML).
- 2) FOR BARRIER CURB LAYOUT AND DETAIL, SEE SHEET 54.
- 3) FOR CONCRETE MEDIAN AND CURB TRANSITION DETAIL, SEE SHEET 55.
- 4) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 5) FOR STRUCTURE, SEE SHEETS 113-168.
- 6) FOR CROSS SECTIONS, SEE SHEETS 47-48.
- 7) FOR APPROACH SLAB, SEE SHEETS 16, 138-140.

PLAN - R.R. HWY. (SR 126)
STA. 269+00 TO STA. 282+00

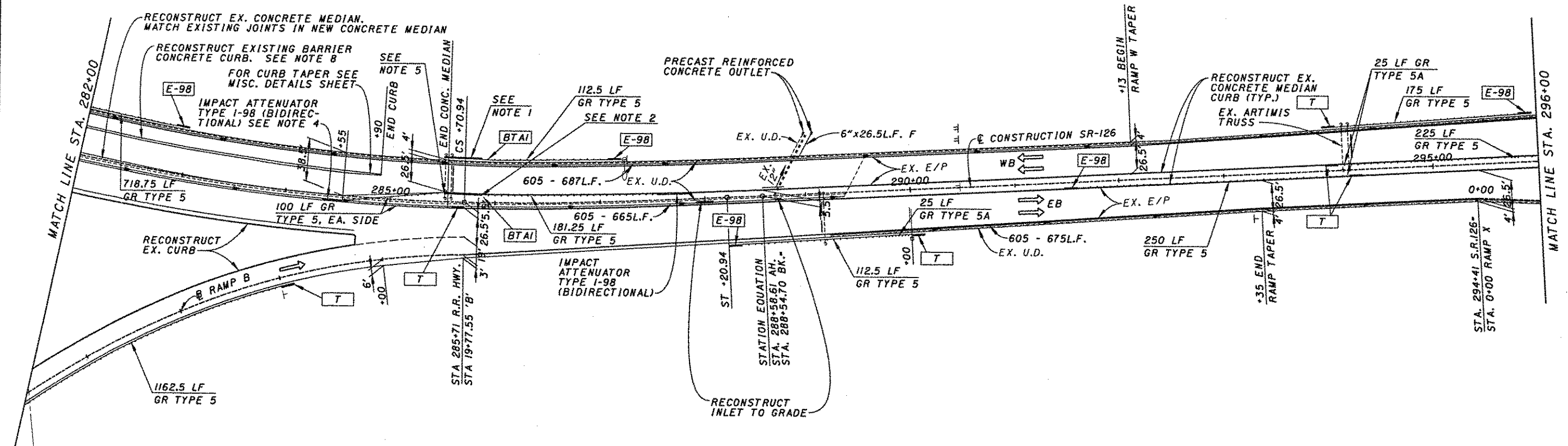
HAM-71-11.08



CALCULATED
CHECKED

PLAN - R.R. HWY. (SR 126)
STA. 282+00 TO STA. 296+00

HAM-71-11.08



NOTES

- 1) CONSTRUCT 36.1' OF NEW CONCRETE BARRIER TYPE D, AS PER PLAN A. SEE STANDARD DRAWING RM-4.5M
- 2) CONSTRUCT 36.1' OF NEW CONCRETE BARRIER TYPE D, AS PER PLAN B. SEE STANDARD DRAWING RM-4.5M
- 3) APPROXIMATE LIMITS OF ROCK NEAR SUBGRADE STA. 286+00 TO STA. 293+00.
- 4) PLACE TYPE I-98 IMPACT ATTENUATOR GUARDRAIL FLUSH WITH THE FACE OF THE CURB.
- 5) BOLT GUARDRAIL TO THE FACE OF THE CONCRETE BARRIER AS PER SCD GR-3.2M.
- 6) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 7) FOR RECONSTRUCTED CONCRETE MEDIAN, SEE SHEET 7.
- 8) FOR BARRIER CURB LAYOUT AND DETAIL, SEE SHEET 54.

LEGEND

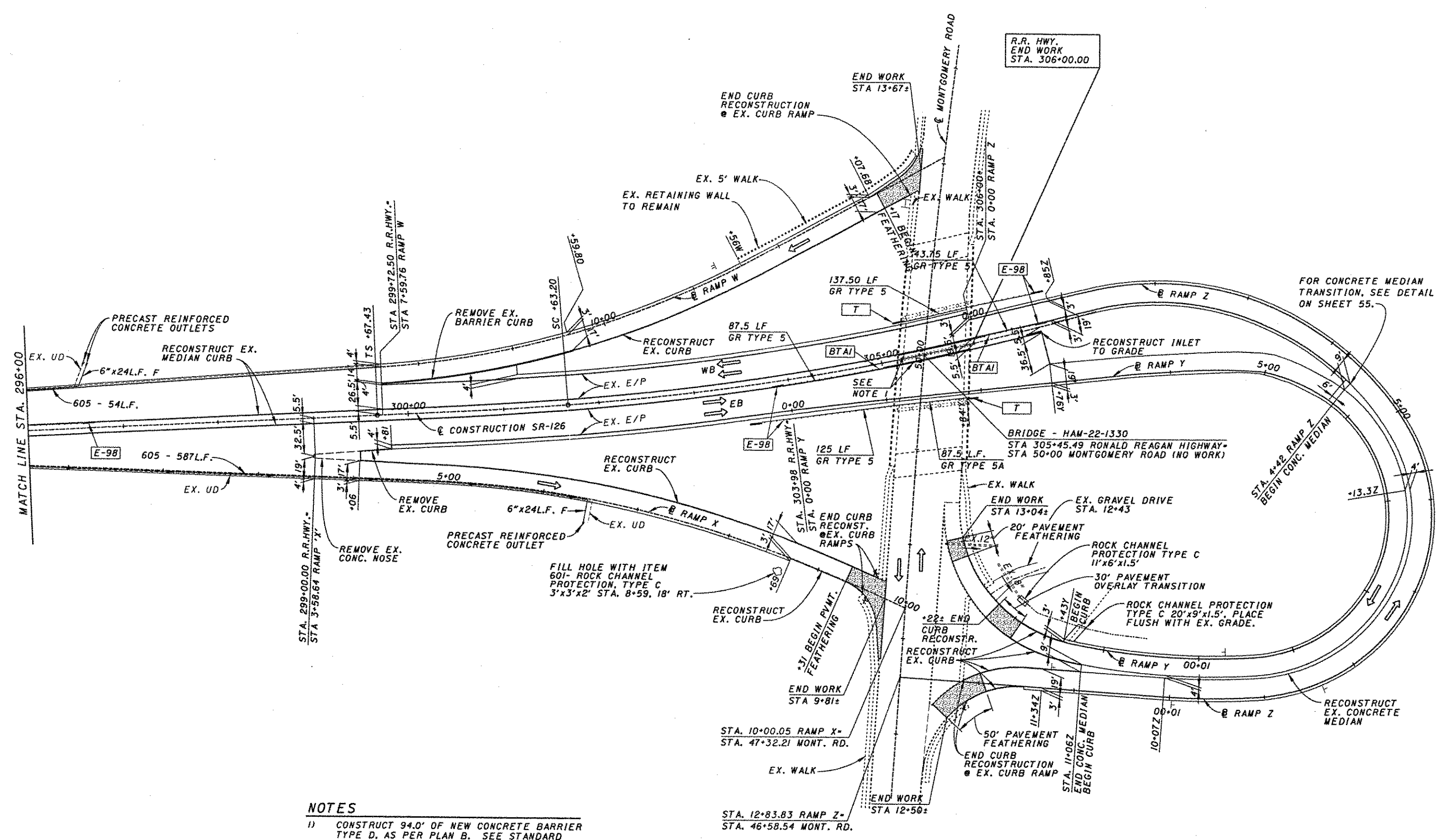
- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2



CALCULATED
CHECKED

PLAN - R.R. HWY. (SR 126)
STA. 296+00 TO STA. 306+24

HAM-71-11.08

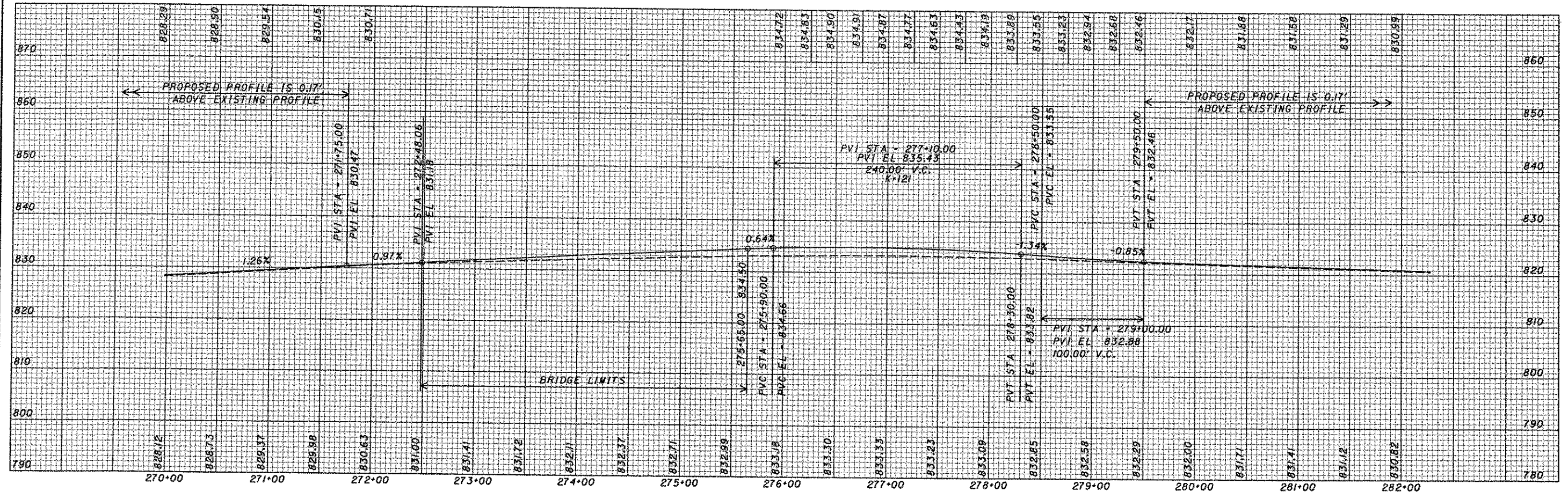


NOTES

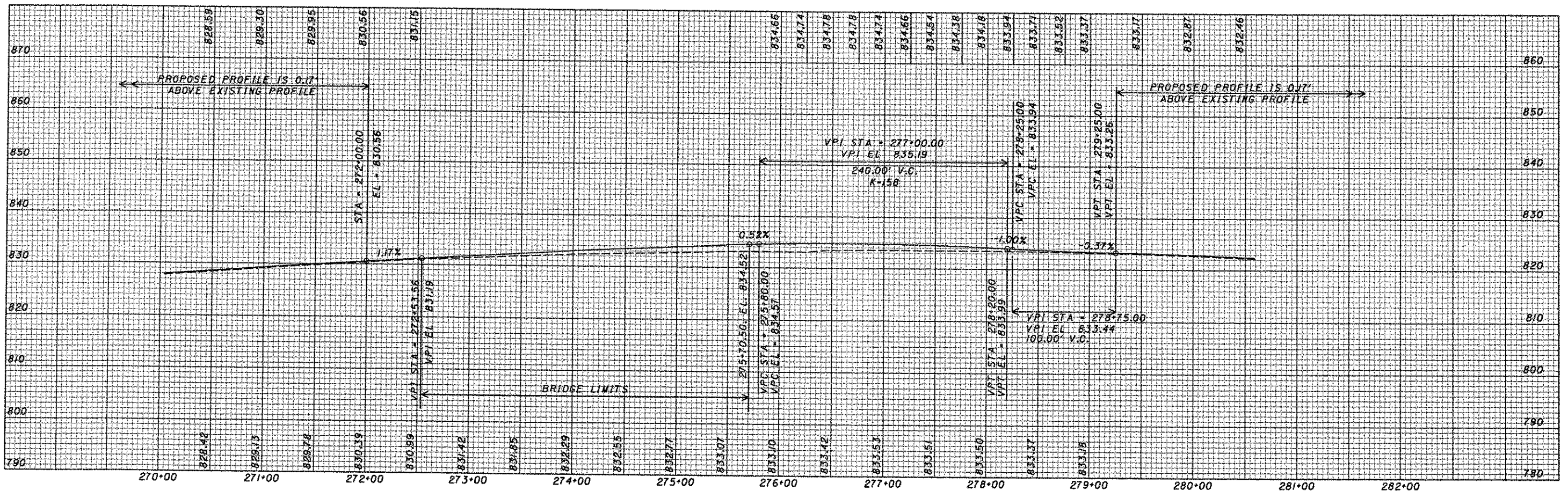
- 1) CONSTRUCT 94.0' OF NEW CONCRETE BARRIER TYPE D, AS PER PLAN B. SEE STANDARD DRAWING RM-4.5M.
- 2) FOR RAMP PAVEMENT FEATHERING, SEE SHEET 55.
- 3) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 4) FOR RECONSTRUCTED CONCRETE MEDIAN, SEE SHEETS 13, 55.

LEGEND

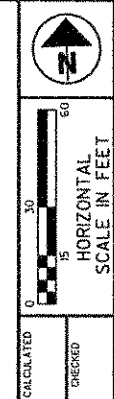
- A GUARDRAIL ANCHOR ASSEMBLY, TYPE A
- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T GUARDRAIL ANCHOR ASSEMBLY, TYPE T
- BTA1 BRIDGE TERMINAL ASSEMBLY, TYPE 1
- BTA2 BRIDGE TERMINAL ASSEMBLY, TYPE 2



WEST BOUND PROFILE



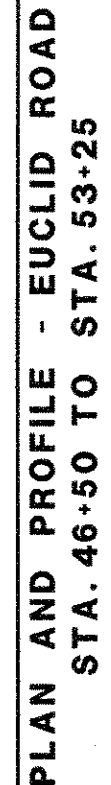
EAST BOUND PROFILE



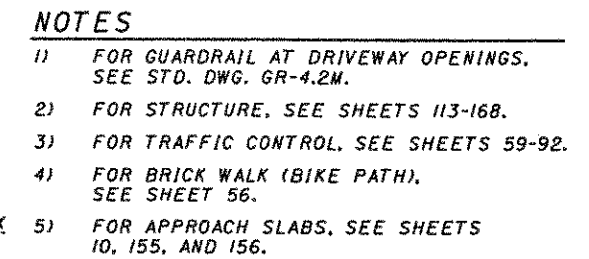
- 1) FOR STRUCTURE, SEE SHEETS 113-168.
- 2) FOR TRAFFIC CONTROL, SEE SHEETS 59-92.
- 3) FOR CROSS SECTIONS, SEE SHEETS 49-53.
- 4) FOR APPROACH SLABS, SEE SHEETS 9, 125, AND 126.
- 5) FOR PAVEMENT FEATHERING, SEE SHEET 55.

- A GUARDRAIL ANCHOR ASSEMBLY, TYPE A
BTA4 BRIDGE TERMINAL ASSEMBLY, TYPE 4
AS PER PLAN

- | | |
|--|--|
| 1 REMOVE EXISTING SPLIT RAIL FENCE | 6 ADJUST INLET TO GRADE |
| 2 REMOVE AND RE-ERECT EXISTING STREET SIGN
REUSE AND/OR REPLACE SECTION OF EXISTING
4"± DOWNSPOUT OUTLET PIPE. ASSURE POSITIVE DRAINAGE. | 7 REMOVE AND RESET HYDRANT |
| 3 CONNECT TO COLLECTOR BEHIND CURB, CONNECT COLLECTOR
TO CATCH BASIN AT STA. 47+60±. | 8 ADJUST VALVE BOX TO GRADE |
| 4 RECONSTRUCT SECTION OF EXISTING 3' CONCRETE WALK | 9 RECONSTRUCT MANHOLE TO GRADE |
| 5 ADJUST MANHOLE TO GRADE | 10 BUTT JOINT, AS PER STD. DWG. BP-3.1 |



	STA. 47+77.2	23' LT
	STA. 47+94.7	22.2' LT
	STA. 48+52.4	14.2' LT
	STA. 48+52.4	12.8' LT

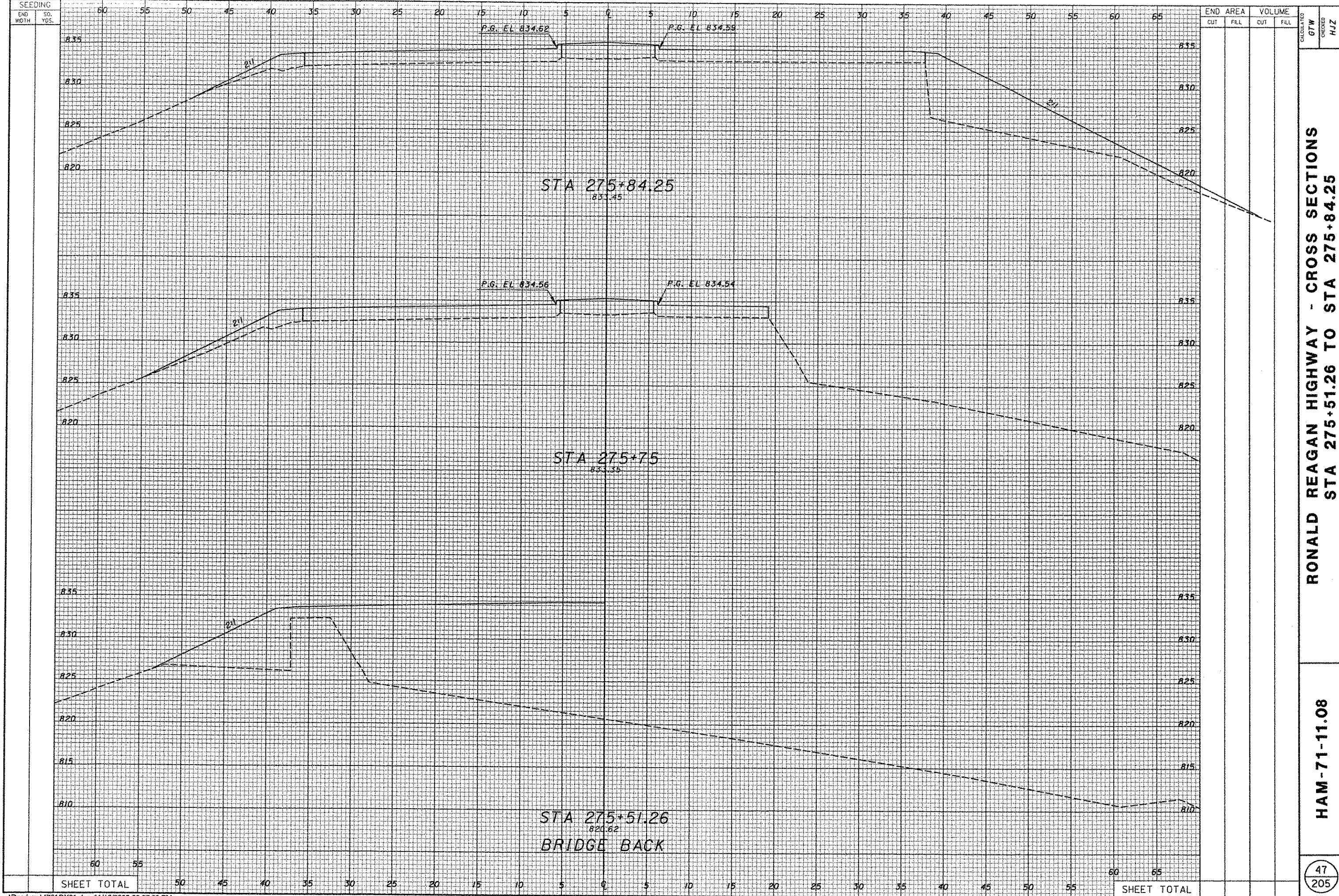


CURVE DATA
 PI STA. 52+64.52
 $\Delta = 94^{\circ}58'45''R$
 $D_c = 74^{\circ}24'36''$
 $R = 77.00$
 $T = 84.00$
 $L = 124.33$
 $E = 36.95$
 $e_{max} = 0.035 \pm$ EXIST.

T	GUARDRAIL ANCHOR ASSEMBLY, TYPE T
A	GUARDRAIL ANCHOR ASSEMBLY, TYPE A
BT A4	BRIDGE TERMINAL ASSEMBLY, TYPE 4 AS PER PLAN

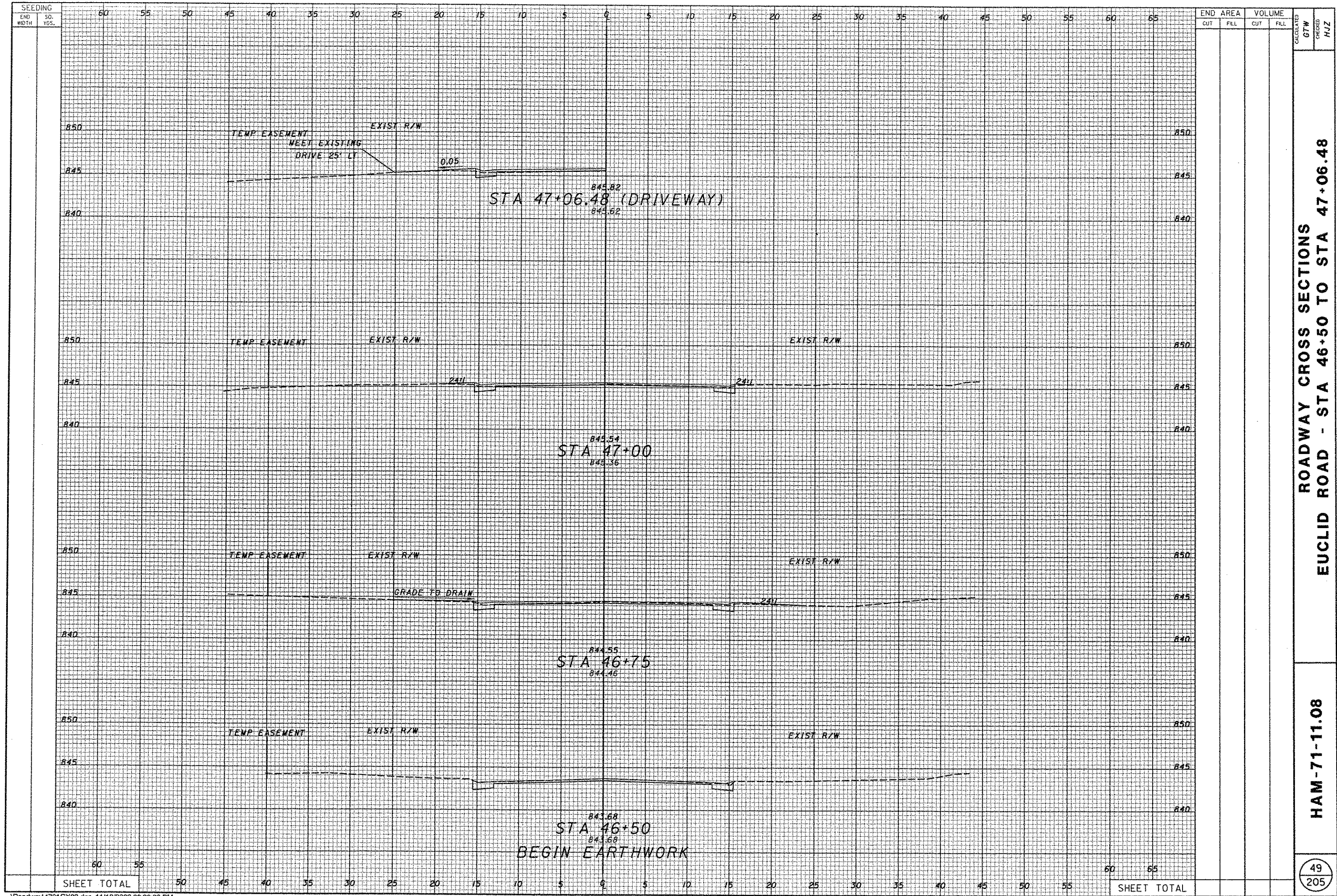
1 REMOVE AND RESET EXISTING BOARD FENCE	6 ADJUST CATCH BASIN TO GRADE	11 DROP CURB AT DRIVEWAY AS PER STD. DWG. BP-4.I
2 REMOVE AND RE-ERECT EXISTING SIGN	7 REMOVE AND RECONSTRUCT EXISTING 5' CONCRETE WALK	12 REMOVE EXISTING 12" DRIVE PIPE INCLUDING HEADWALLS
3 REMOVE AND RESET EXISTING MAILBOX	8 ADJUST VALVE BOX TO GRADE	13 CONSTRUCT 12" DRIVE PIPE INCLUDING HEADWALL AND CATCH BASIN AND GRADE TO DRAIN TO EXISTING DITCH
4 REMOVE AND RECONSTRUCT EXISTING BRICK WALK (BIKE PATH)	9 RECONSTRUCT MANHOLE TO GRADE	14 CONSTRUCT CONCRETE SPECIALTY WALL
5 ADJUST MANHOLE TO GRADE	10 BUTT JOINT, AS PER STD. DWG. BP-3.I	



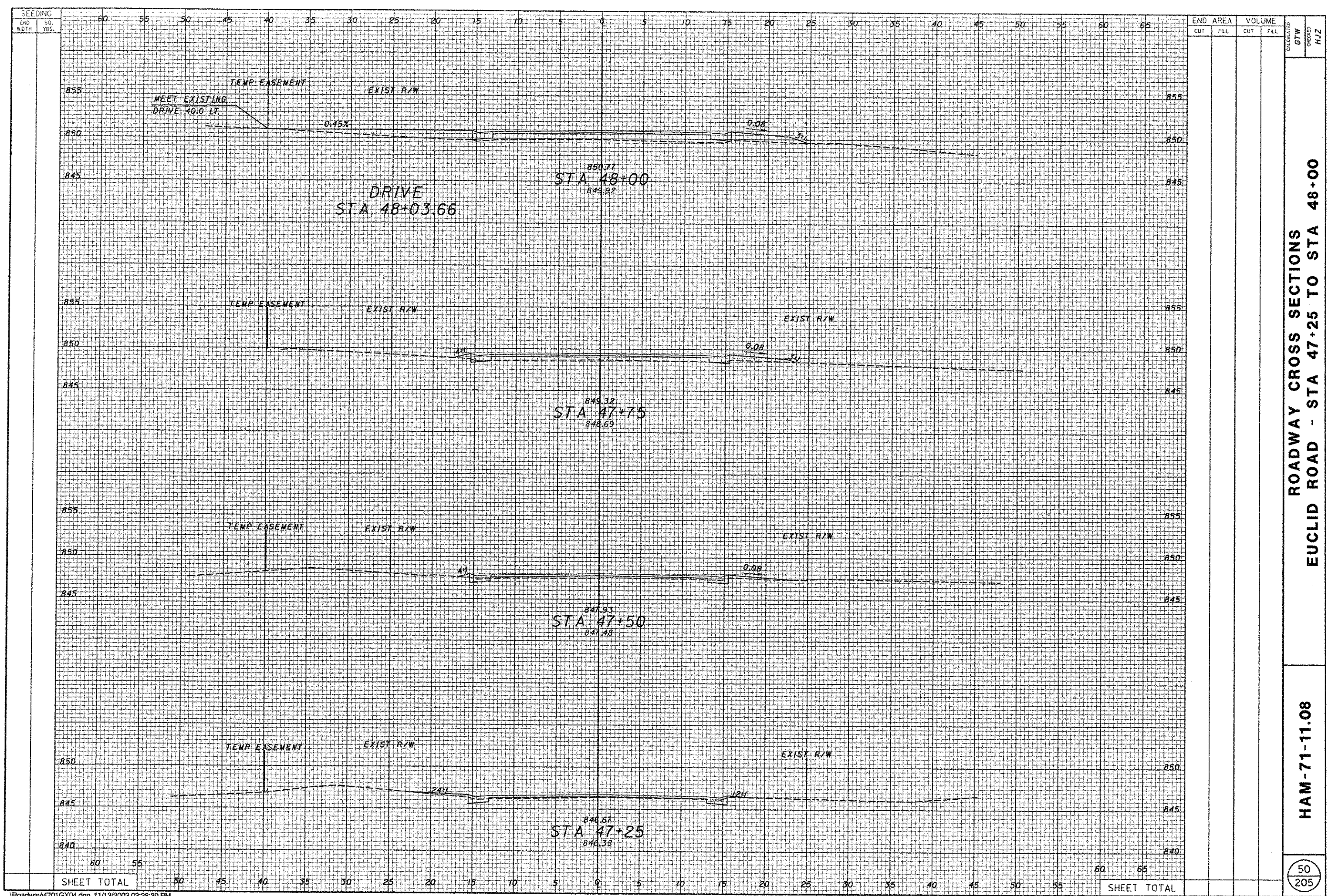


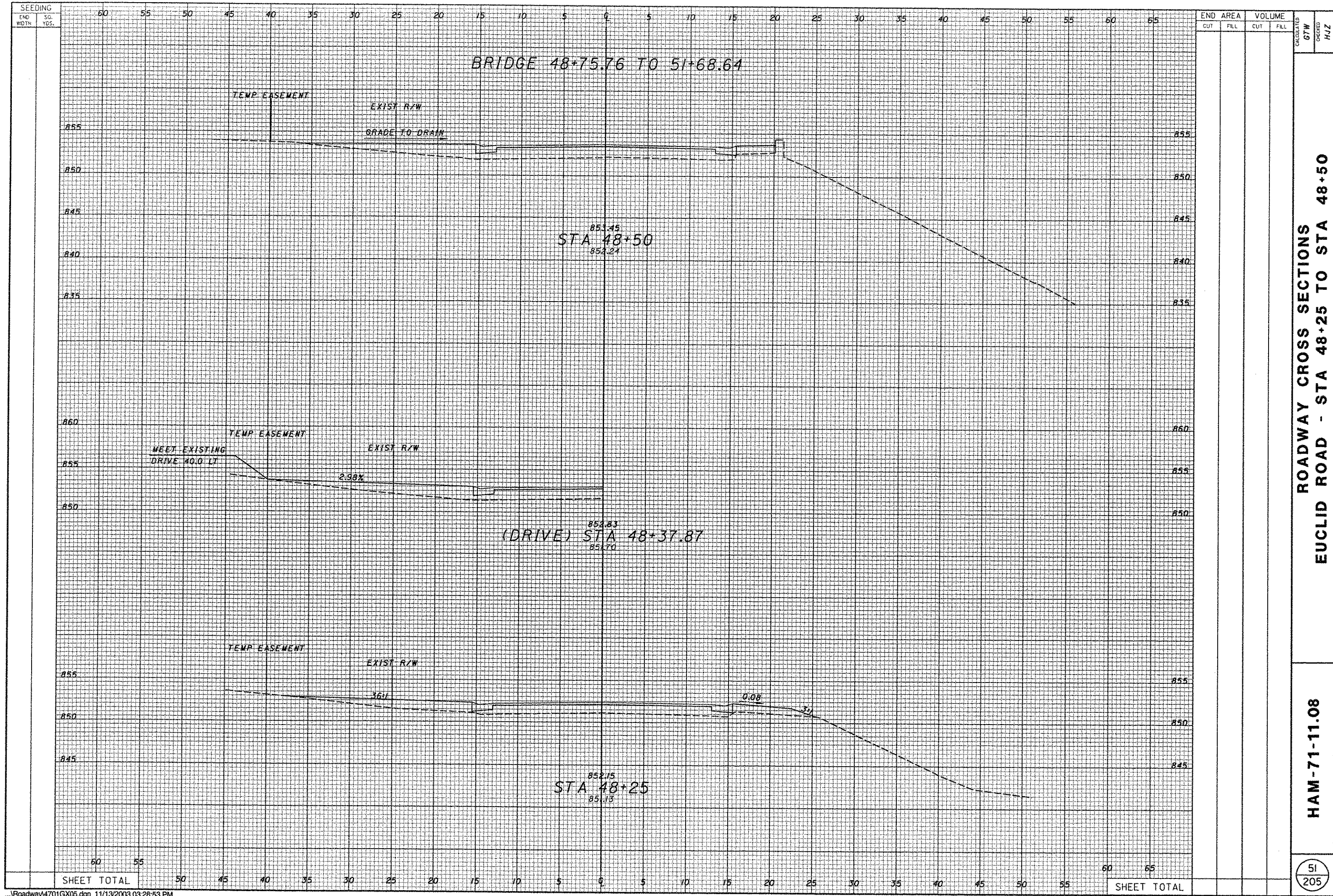
RONALD REAGAN HIGHWAY - CROSS SECTIONS
STA 275+51.26 TO STA 275+84.25

HAM-71-11.08



ROADWAY CROSS SECTIONS
EUCLID ROAD - STA 46+50 TO STA 47+06.48
HAM-71-11.08





END AREA		VOLUME	
CUT	FILL	CUT	FILL

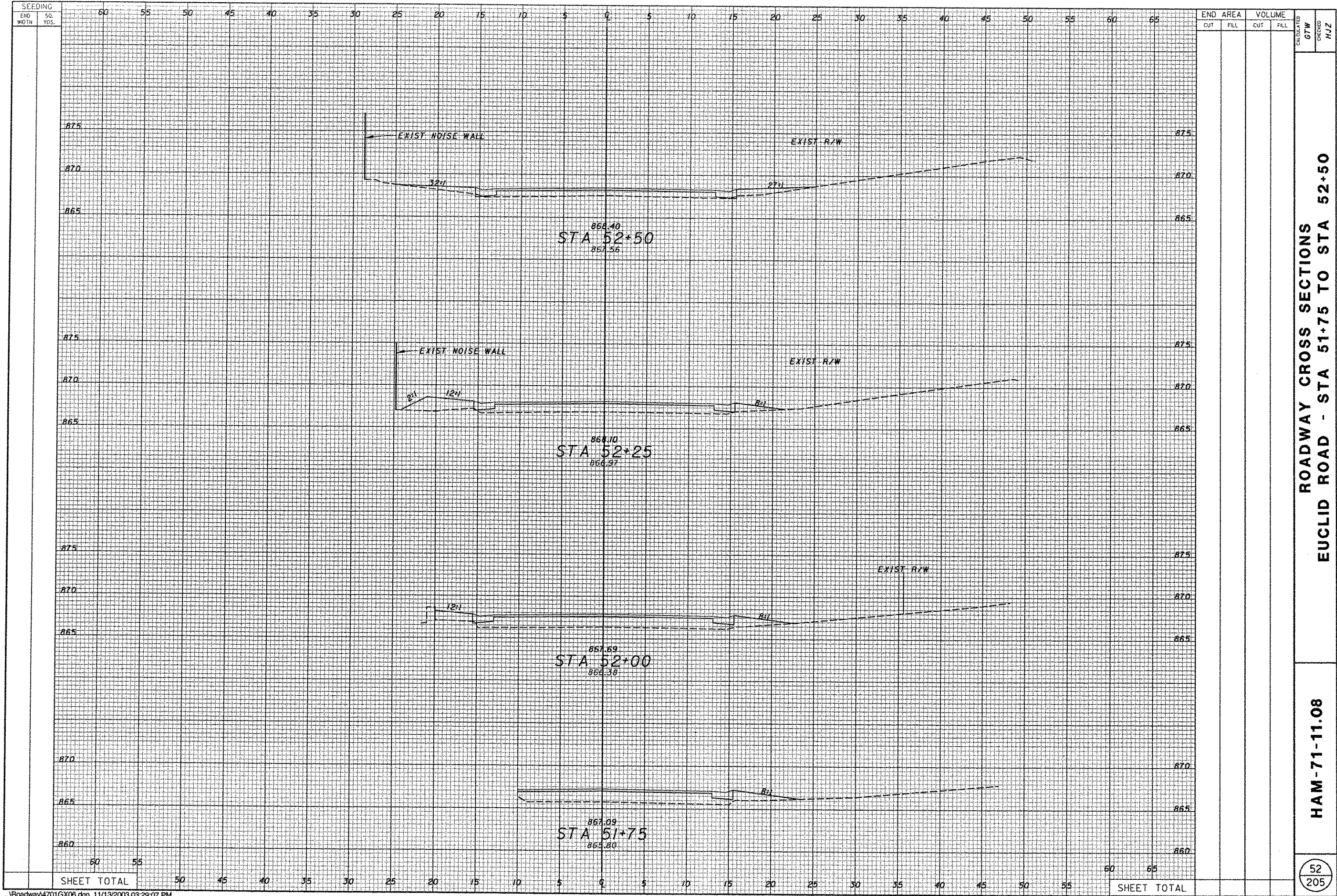
ROADWAY CROSS SECTIONS
EUCLID ROAD - STA 48+25 TO STA 48+50

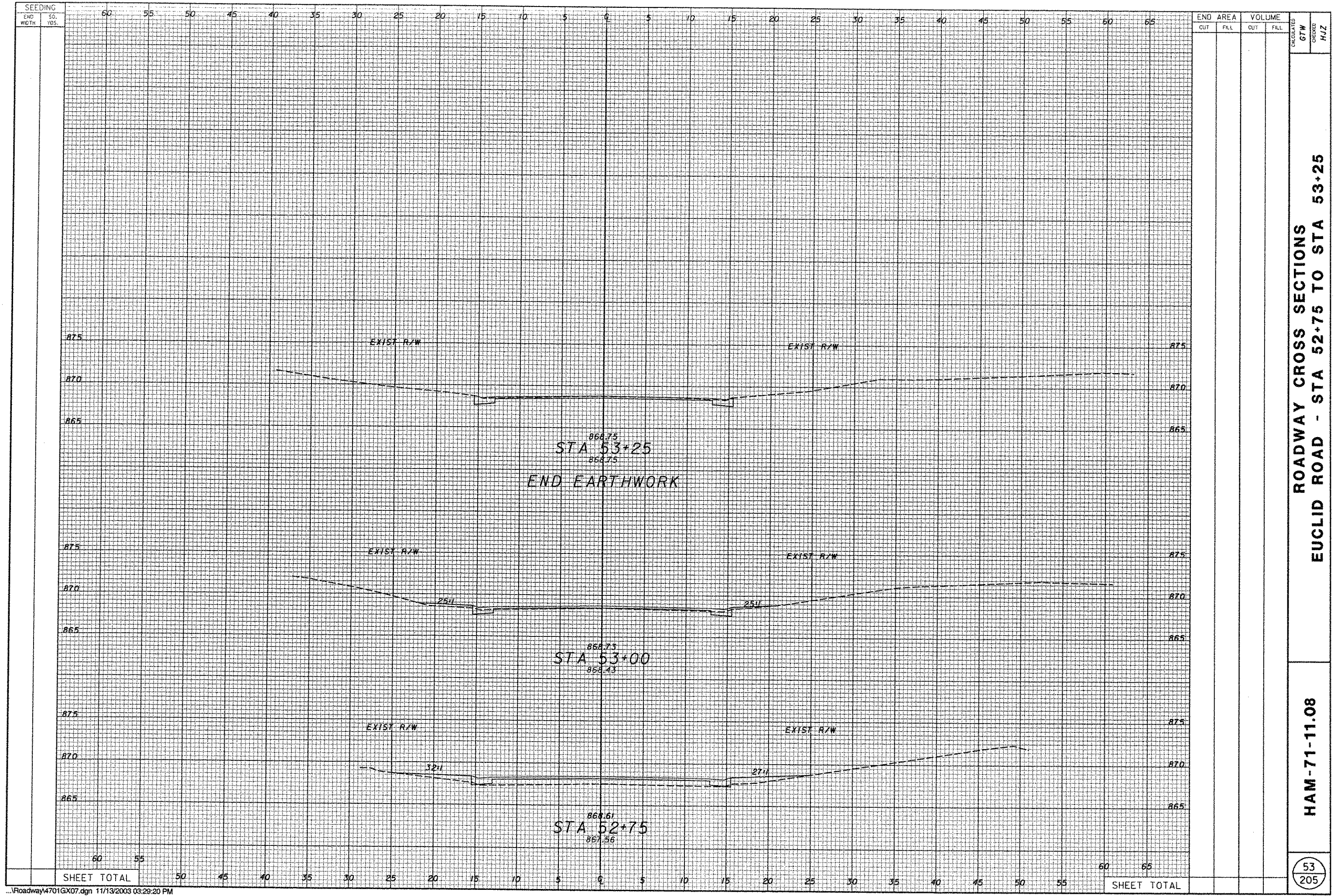
HAM-71-11.08

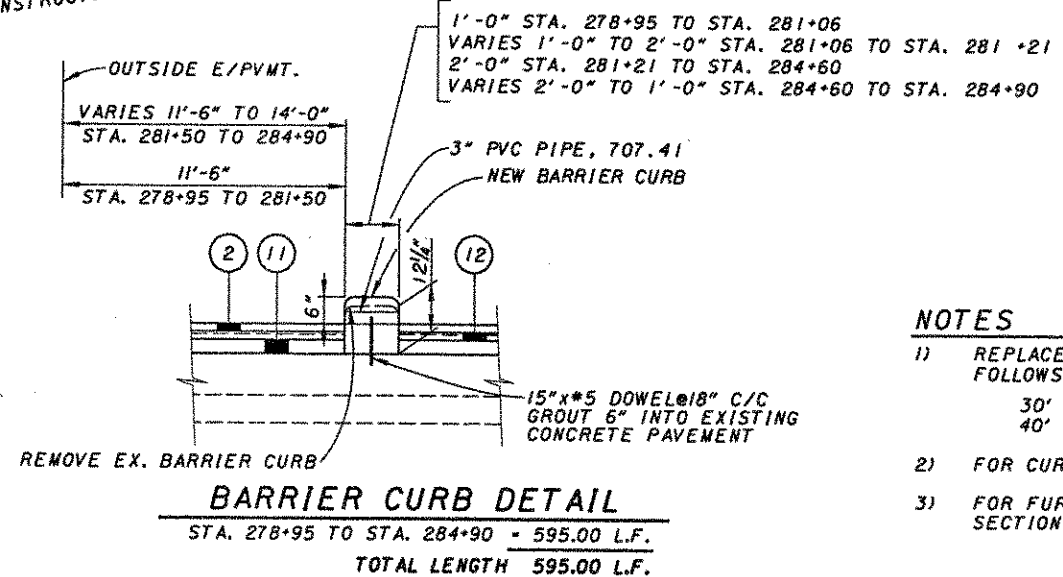
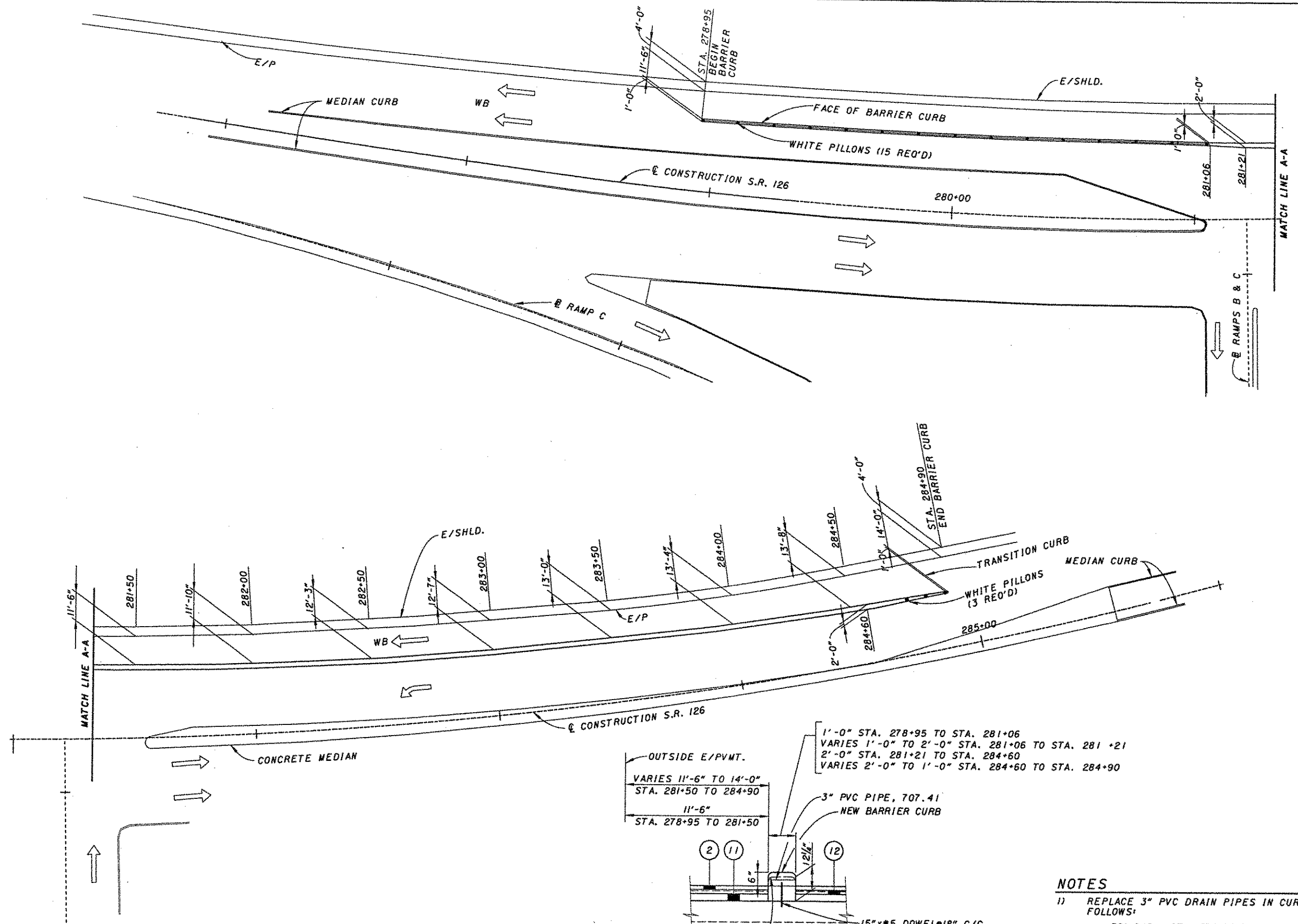
51
205

SHEET TOTAL

SHEET TOTAL

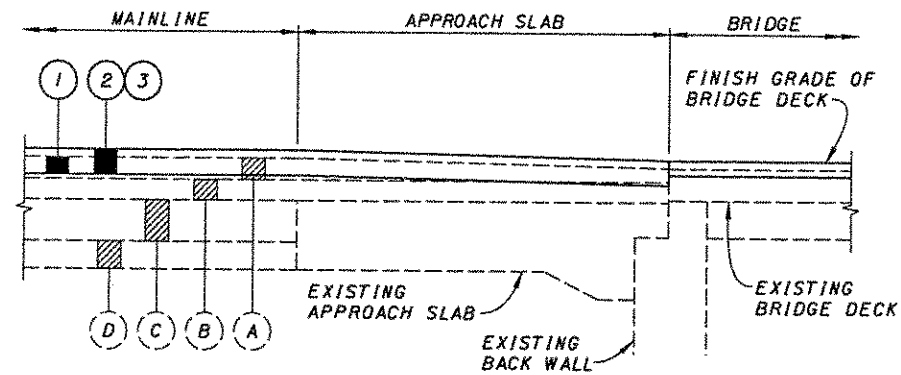




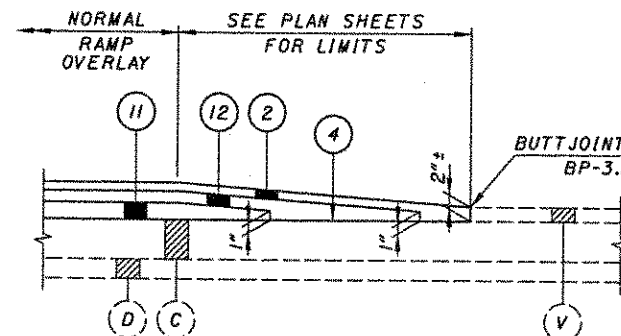


NOTES

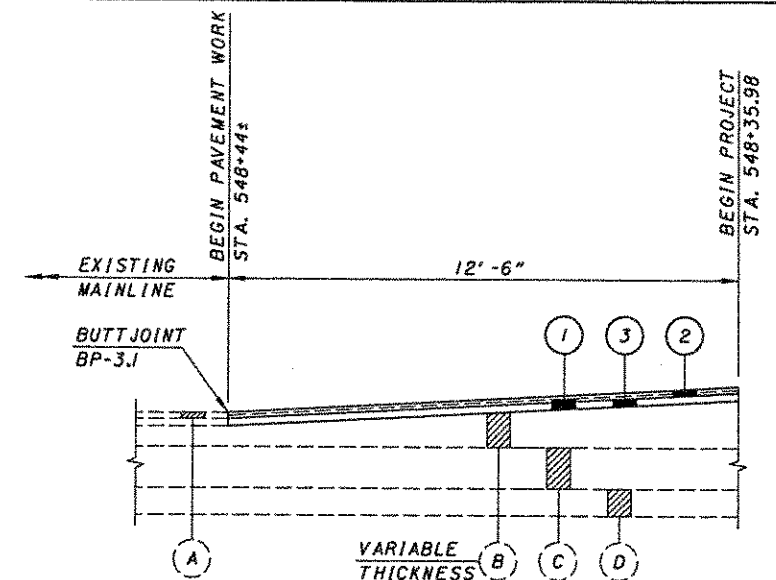
- 1) REPLACE 3" PVC DRAIN PIPES IN CURB AS FOLLOWS:
 30' C/C - STA. 278+95 TO STA. 281+45
 40' C/C - STA. 281+45 TO STA. 284+90
- 2) FOR CURB TRANSITION, SEE SHEET 55.
- 3) FOR FURTHER INFORMATION, SEE TYPICAL SECTIONS, SHEETS 7-8.



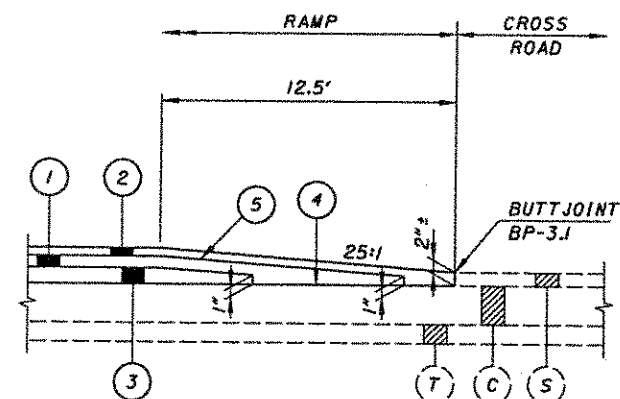
PAVEMENT TRANSITION @ MAINLINE BRIDGES 1-71



PAVEMENT FEATHERING @ RAMP W, X, & Z (RONALD REAGAN HIGHWAY)

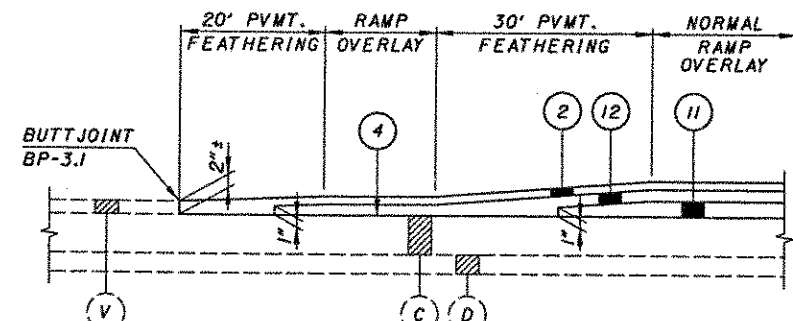


PAVEMENT TRANSITION @ BEGIN PROJECT

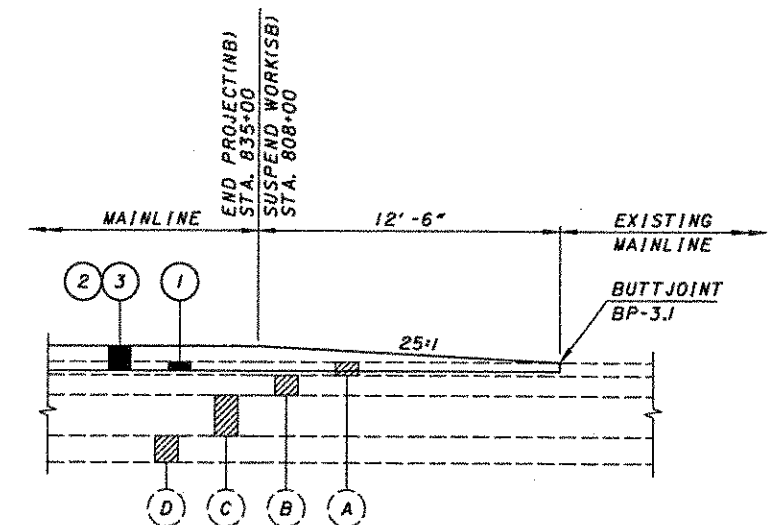


PAVEMENT FEATHERING @ RAMP

KENWOOD RD. - RAMPS G AND H
MONTGOMERY RD. - RAMPS C, D, E, AND F
PFEIFFER RD. - RAMPS F, G, H, AND I

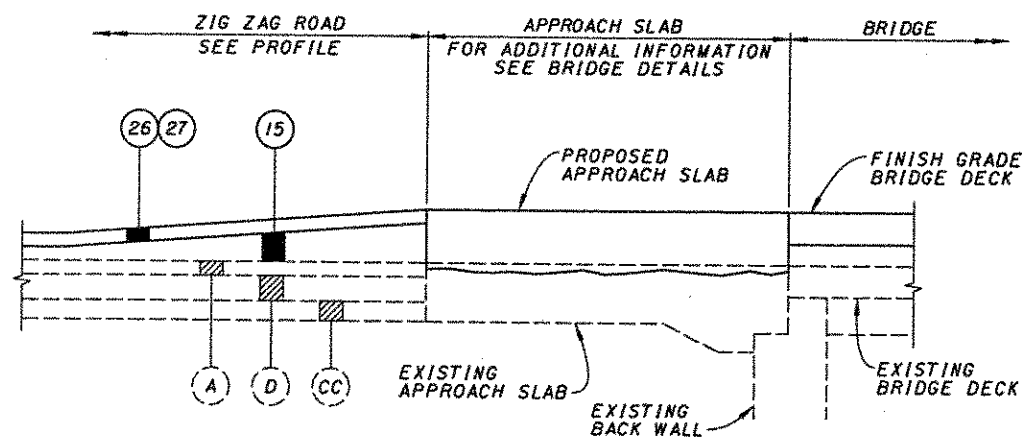


PAVEMENT FEATHERING @ RAMP Y (RONALD REAGAN HIGHWAY)

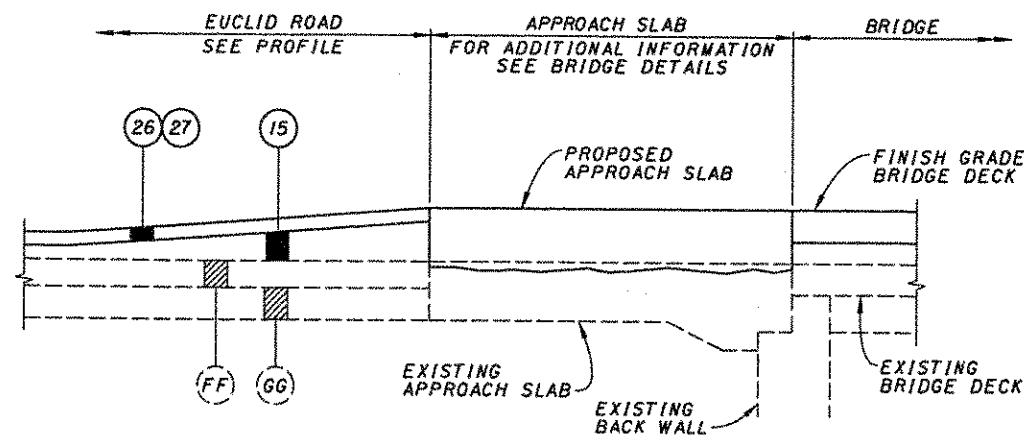


PAVEMENT FEATHERING @ END PROJECT

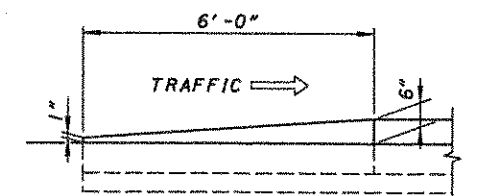
AND SUSPEND WORK S.B. 1-71 (STA. 808+12.5)



PAVEMENT FEATHERING @ ZIG ZAG ROAD



PAVEMENT FEATHERING @ EUCLID ROAD

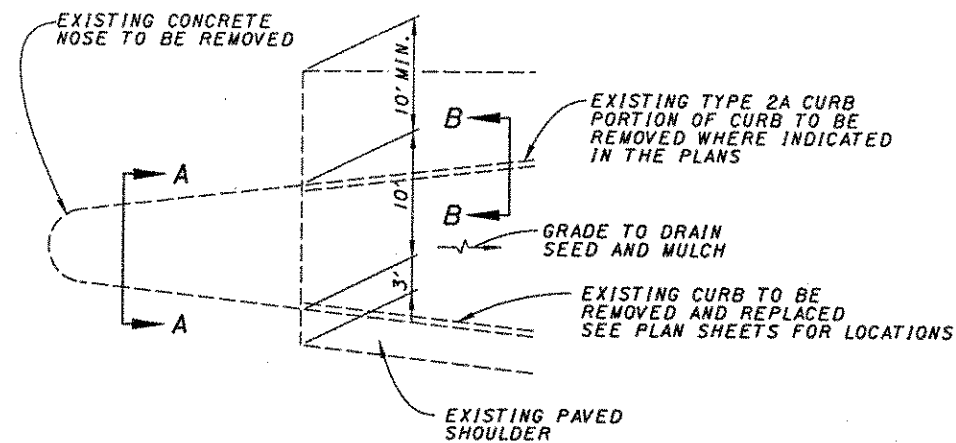


CONCRETE MEDIAN AND CURB TRANSITION DETAIL

TRANSITION APPROACH ENDS OF NEW CONCRETE MEDIANS AND CURBS FROM 1" TO 6" IN HEIGHT WITHIN 6'-0" LENGTH

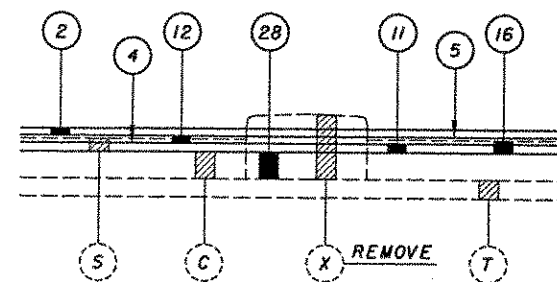
NOTE

1) FOR ITEM LEGEND, SEE SHEET 4.

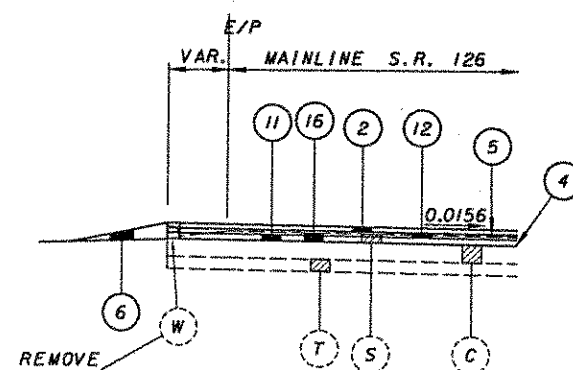


TYPICAL CONCRETE NOSE REMOVAL - PLAN

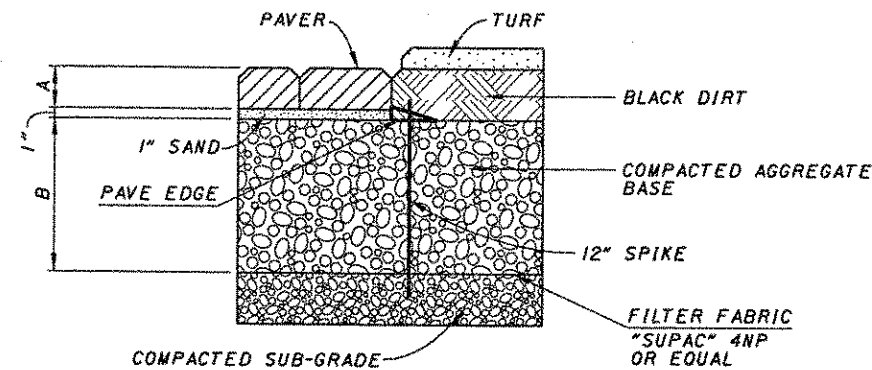
RONALD REAGAN HIGHWAY (SR 126)



SECTION A-A



SECTION B-B

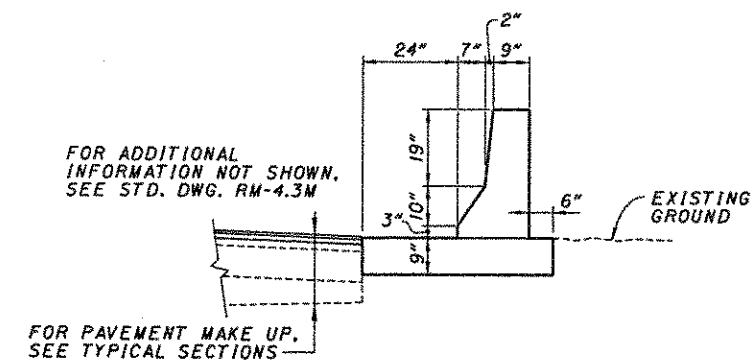


BIKE PATH DETAIL

NOTE:

	A	B
PEDESTRIAN AREAS	3 1/8"	8"
VEHICULAR AREAS	3 1/8"	12"

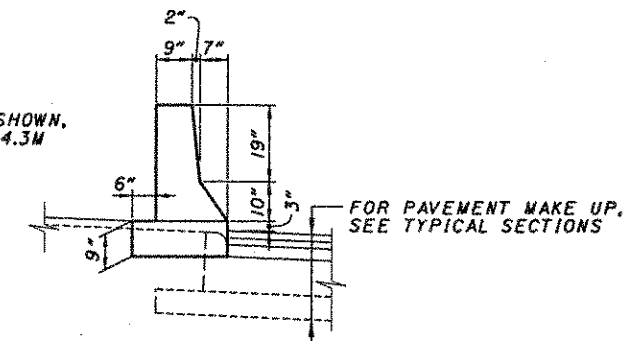
PAVERS TO BE HOLLAND STONE BY INTERPAVE CORP., OR HALFMARK BY PAVERLOCK OR APPROVED EQUAL



CONCRETE BARRIER TYPE D, AS PER PLAN A

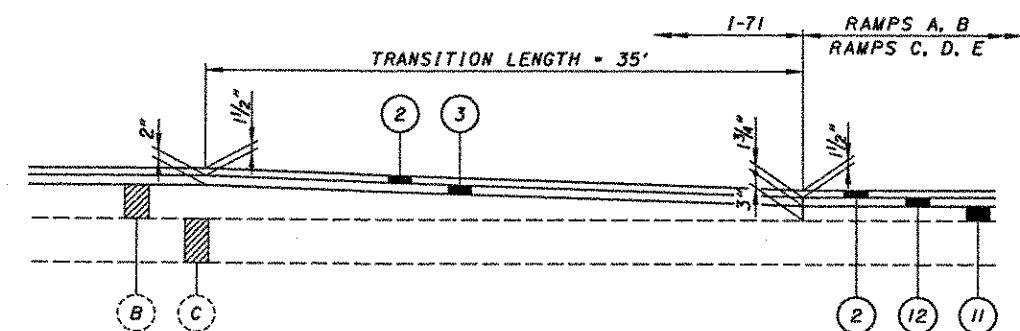
FOR BARRIER LIMITS AND LOCATIONS SEE PLAN SHEETS

FOR ADDITIONAL INFORMATION NOT SHOWN, SEE STD. DWG. RM-4.3M



CONCRETE BARRIER TYPE D, AS PER PLAN B

FOR BARRIER LIMITS AND LOCATIONS SEE PLAN SHEETS



OVERLAY TRANSITION @ EXIT/ ENTRANCE RAMP TERMINALS

S.R. 126/ I-71 SEE PLANS FOR LOCATION

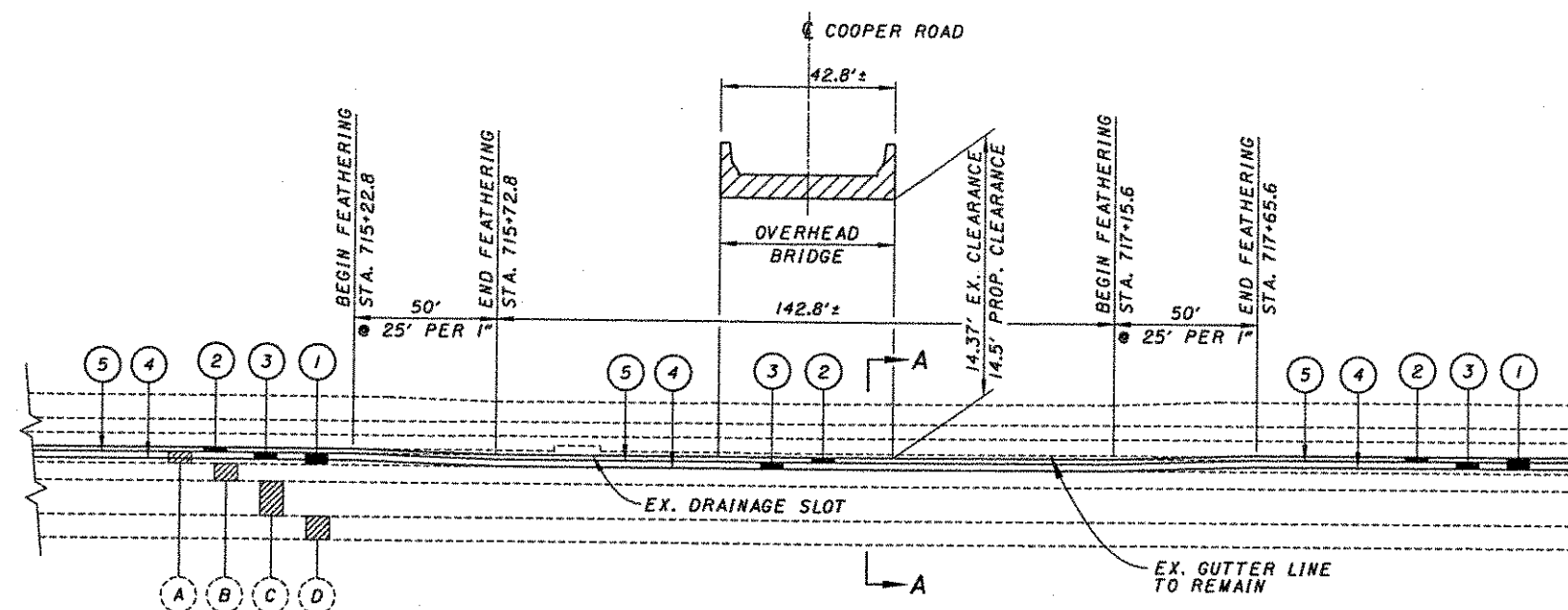
NOTE

1) FOR ITEM LEGEND, SEE SHEET 4.

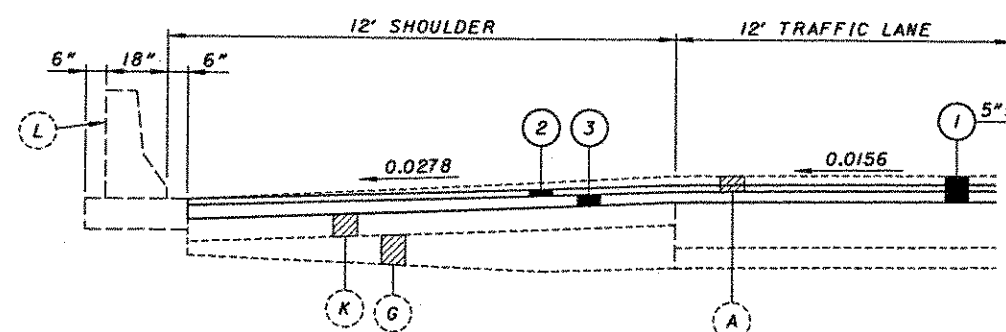
MISCELLANEOUS DETAILS
CONCRETE NOSE REMOVAL - CONCRETE BARRIER - UNDERCUTTING
CURB REMOVAL - OVERLAY TRANSITION - RAMPS

HAM-71-11.08

56
205



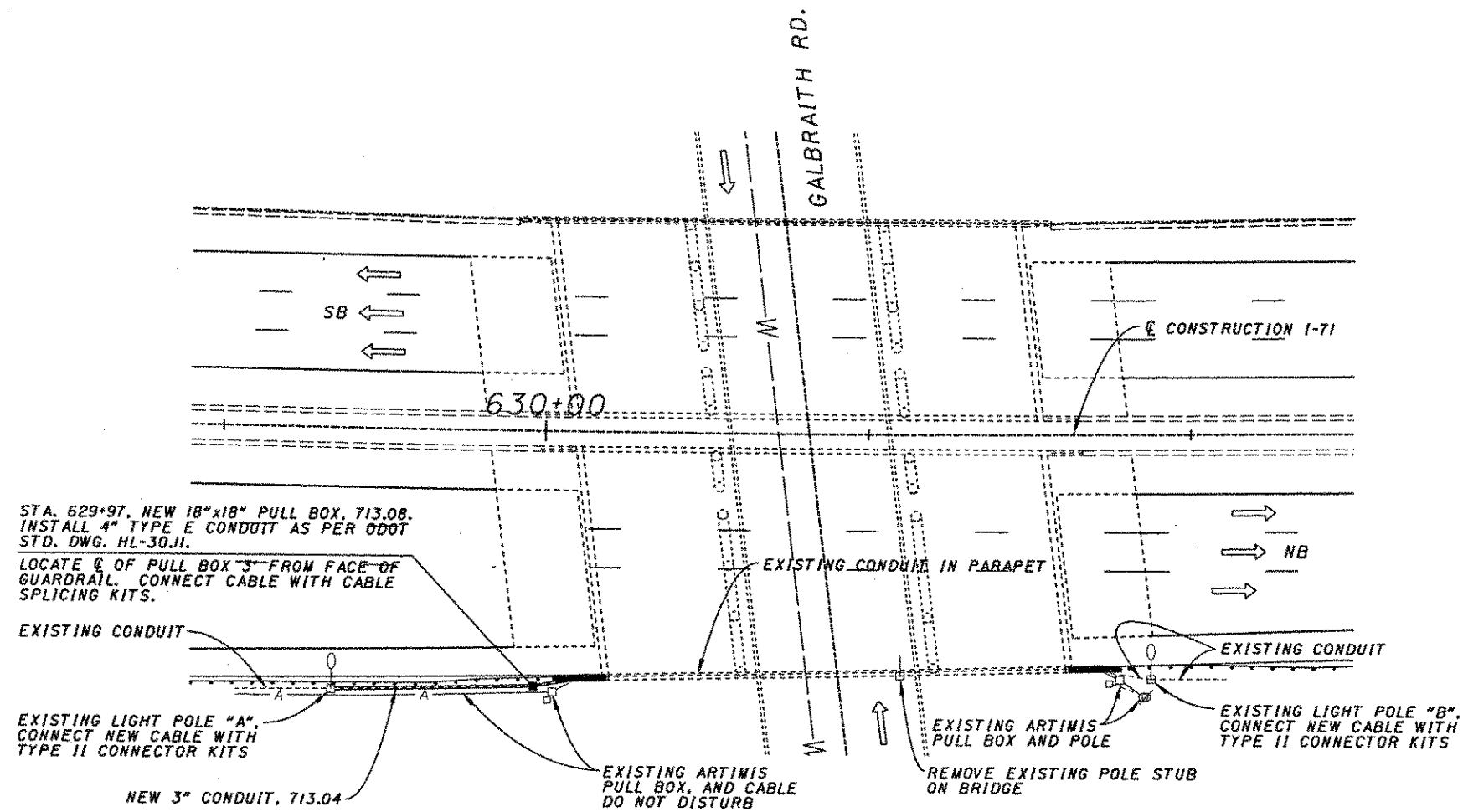
PAVEMENT FEATHERING @ COOPER ROAD BRIDGE HAM-71-1435
NORTHBOUND LANES ONLY



SECTION A-A
NOT TO SCALE

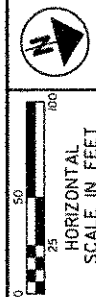
NOTE

1) FOR ITEM LEGEND, SEE SHEET 4.



PROVIDE NEW DISTRIBUTION CABLE FROM EXISTING LIGHT POLE "A"
TO EXISTING LIGHT POLE "B" IN NEW CONDUIT OR EXISTING CONDUIT
AS SHOWN. CONTRACTOR SHALL DETERMINE SIZE OF EXISTING CABLE
AND MATCH NEW DISTRIBUTION CABLE ACCORDINGLY.

PARTIAL PLAN



CALCULATED
CHECKED

MISCELLANEOUS DETAILS
LIGHTING DETAIL AT GALBRAITH RD. BRIDGE

HAM-71-11.08

58
205

EXIT NUMBER PANEL

ALL PROPOSED EXIT NUMBER PANELS SHOWN IN THE PLANS SHALL BE MOUNTED SO THAT THE RIGHT EDGE OF THE PANEL IS FLUSH WITH THE RIGHT EDGE OF THE PRIMARY GUIDE SIGN.

PAVEMENT MARKINGS

ALL PERMANENT MARKINGS SHALL CONFORM TO THE CRITERIA AS DESCRIBED UNDER ITEM 644 - THERMOPLASTIC PAVEMENT MARKINGS. ON THE MAINLINE BRIDGE STRUCTURES, ITEM 645, TYPE A3 SHALL BE USED. ITEM 642 - PAINT, MAY BE USED ON THE OVERHEAD STRUCTURES, INCLUDING THE PAVEMENT ON ZIG ZAG ROAD AND EUCLID ROAD.

ITEM 630 - PREPARATION OF STORED SIGNS, EXTRUSHEET

EXTRUSHEET SIGNS, REMOVED UNDER OTHER ITEMS OF WORK, SHALL BE PROCESSED AND SHIPPED TO THE ODOT CENTRAL OFFICE SIGN SHOP, AT 1606 WEST BROAD STREET, COLUMBUS, OHIO.

THE LOADING, SECURING, TRANSPORTING, AND UNLOADING, OF EXTRUSHEET SIGNS, SHALL BE BY SUITABLE MEANS, TO AVOID DAMAGE TO THE SIGN PANELS. LARGE SIGNS MAY BE CAREFULLY DISASSEMBLED INTO SMALLER ASSEMBLIES TO FACILITATE TRANSPORTATION.

DELIVERIES SHALL BE MADE BETWEEN 8:00 A.M. AND 2:00 P.M. LATE ARRIVALS MUST UNLOAD THE FOLLOWING DAY. NO DELIVERIES WILL BE ACCEPTED ON SATURDAY, SUNDAY AND HOLIDAYS. THE SIGN SHOP ADMINISTRATOR SHALL BE NOTIFIED AT (614) 275-2850, AT LEAST THREE DAYS PRIOR TO THE DELIVERY OF THE SIGNS. DELIVERY ARRANGEMENTS, OTHER THAN THOSE DESCRIBED ABOVE, MUST BE APPROVED, IN ADVANCE, BY THE SIGN SHOP ADMINISTRATOR.

THE SIGNS SHALL BE TRANSPORTED BY THE CONTRACTOR TO THE SIGN SHOP, WHERE THEY WILL BE UNLOADED AND STORED. FOR UNLOADING PURPOSES, A FORK LIFT, OF 1000 POUNDS MAXIMUM CAPACITY, AND ANY NECESSARY PERSONNEL, WILL BE PROVIDED BY THE STATE.

PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR TRAFFIC CONTROL AND SHALL INCLUDE ALL LABOR, EQUIPMENT, BANDING MATERIAL, PALLETS, TRANSPORTATION, AND MISCELLANEOUS MATERIAL, NECESSARY TO PERFORM THE WORK.

S.R. 126 (RONALD REAGAN HIGHWAY) REFERENCE MARKER

THE WHITE ON BLUE REFERENCE MARKERS LOCATED IN THE MEDIAN OF THE RONALD REAGAN HIGHWAY SHALL BE REPLACED IN KIND. THE REFERENCE MARKERS FOR THE EAST BOUND AND WEST BOUND DIRECTION ARE MOUNTED BACK TO BACK ON THE SAME SUPPORT. EACH SIGN HAS A WIDTH OF 14 INCHES AND A HEIGHT OF 48 INCHES. THE CONTRACTOR SHALL REMOVE AND RESET THE EXISTING GROUND MOUNTED SIGN SUPPORT OR INSTALL A NEW SUPPORT SO THAT THE BOTTOM OF THE REFERENCE MARKER IS FIVE FEET ABOVE THE TRAVELED EDGE OF THE PAVEMENT.

THE REFERENCE MARKERS SHALL BE REPLACED EVERY ONE TENTH MILE BEGINNING WITH THE FIRST PAIR OF SIGNS AT MILE POST 15.7 AND ENDING WITH THE LAST SIGNS AT MILE POST 16.5.

FOR ADDITIONAL INFORMATION REFER TO PROJECT HAM-ARTIMIS SHEETS 199 AND 200 OF 202. (PLANS AVAILABLE AT DISTRICT 8 OFFICE)

I-71 MEDIAN BARRIER MOUNTED REFERENCE MARKER

THE WHITE ON BLUE REFERENCE MARKERS NORTH BOUND AND SOUTH BOUND I-71 SHALL BE REPLACED IN KIND AND ATTACHED TO THE EXISTING BARRIER MOUNTED SUPPORT. EACH SIGN HAS A WIDTH OF 14 INCHES AND A HEIGHT OF 48 INCHES.

THE REFERENCE MARKERS SHALL BE REPLACED NORTH BOUND AND SOUTH BOUND AT ONE TENTH MILE INTERVALS BEGINNING WITH THE FIRST PAIR OF SIGNS AT MILE POST 11.2 AND ENDING WITH THE LAST SIGNS AT MILE POST 16.6.

FOR ADDITIONAL SIGN INFORMATION REFER TO PROJECT HAM-ARTIMIS SHEETS 197, 199, AND 200 OF 202. (PLANS AVAILABLE AT DISTRICT 8 OFFICE)

BARRIER MOUNTED SUPPORT FOR REFERENCE MARKER

ANY DAMAGED BARRIER MOUNTED SUPPORTS SHALL BE REPLACED WITH 1 1/2"x1 1/2"x66" GALVANIZED 12 GAUGE PERFORATED SQUARE STEEL TUBING. FOR ADDITIONAL INFORMATION REFER TO PROJECT HAM-ARTIMIS SHEET 199 OF 202.

RAMP REFERENCE MARKER

ALL RAMP REFERENCE MARKER SIGNS (30"x30" WHITE ON BLUE, SERIES C) SHALL BE REMOVED AND REPLACED IN KIND ON EXISTING SUPPORT. ANY DAMAGED SUPPORT SHALL BE REPLACED. FOR SIGN LEGEND AND ADDITIONAL INFORMATION REFER TO PROJECT HAM-ARTIMIS SHEET 199, 200, 201/202.

DELINEATORS

ALL FLEXIBLE DELINEATORS SHALL CONFORM TO ITEM 620 AND SHALL BE PLACED IN ACCORDANCE WITH STD. CONSTRUCTION DWG. TC-61.10. CONFIRMATION, THAT NO CONFLICTS EXIST BETWEEN THE PROPOSED LOCATIONS OF DELINEATORS AND ANY UNDERGROUND UTILITIES, SHALL BE MADE PRIOR TO THE INSTALLATION OF THE DELINEATORS. DELINEATORS SHALL BE PLACED ON RAMPS LEADING TO AND FROM I-71 INCLUDING ALONG ACCELERATION AND DECELERATION LANES.

OVERHEAD SIGN INFORMATION

OVERHEAD SIGN LOCATION	631			631			631	630	630	630
	MERCURY VAPOR LUMINAIRE TYPE TC-31.21			BALLAST TYPE CMRI			SIGN WIRED	LUMINAIRE SUPPORT ASSEMBLY TYPE TC-31.21	GLARE SHIELD EXTRUSHEET PANEL	SIGN ATTACHMENT ASSEMBLY TC-22.20 BRACKETS
STATION	100 W EACH	175 W EACH	250 W EACH	100 W EACH	175 W EACH	250 W EACH	EACH	EACH	SIZE (INCHES)	EACH
550+00 N.B.		2			2		1	2	192 x 6	3
562+30 N.B.		2			2		1	2	204 x 6	3
567+00 N.B. a)		3			3		1	3	240 x 6	4
567+00 N.B. b)		2			2		1	2	204 x 6	3
578+35 N.B.		3			3		1	3	240 x 6	4
95+35 KENWOOD	1			1			1	1	132 x 6	2
0+40 'G' KENWOOD		1			1		1	1	108 x 6	2
605+52 N.B.		3			3		1	3	276 x 6	4
621+47 S.B.		3			3		1	3	276 x 6	4
46+50 MONTGOMERY a)		2			2		1	2	144 x 6	3
46+50 MONTGOMERY b)		2			2		1	2	144 x 6	3
53+75 MONTGOMERY a)		1			1		1	1	132 x 6	2
53+75 MONTGOMERY b)		1			1		1	1	132 x 6	2
643+50 N.B.										3
645+30 S.B.										4
668+60 N.B.			2			2	1	2	216 x 6	3
669+80 S.B.		3			3		1	3	240 x 6	4
685+77 N.B.		3			3		1	3	252 x 6	4
716+69 S.B.		3			3		1	3	252 x 6	4
730+00 N.B.										3
741+00 S.B.										3
763+55 N.B.										3
764+08 S.B.										3
781+62 N.B. a)		2			2		1	2	228 x 6	3
781+62 N.B. b)		2			2		1	2	132 x 6	3
47+10 PFEIFFER a)		1			1		1	1	108 x 6	2
47+10 PFEIFFER b)		1			1		1	1	108 x 6	2
51+15 PFEIFFER a)		1			1		1	1	108 x 6	2
51+15 PFEIFFER b)		1			1		1	1	108 x 6	2
269+55 R.R. HWY a)		1			1		1	1	132 x 6	2
269+55 R.R. HWY b)		2			2		1	2	168 x 6	3
2+25 'C' R.R. HWY		2			2		1	2	168 x 6	3
2+00 'D' R.R. HWY		2			2		1	2	168 x 6	3
280+80 R.R. HWY		1			1		1	1	132 x 6	2
285+60 R.R. HWY a)		2			2		1	2	156 x 6	3
285+60 R.R. HWY b)		2			2		1	2	144 x 6	3

ITEM 621 - RAISED PAVEMENT MARKERS

THE REMOVAL AND REPLACEMENT OF RAISED PAVEMENT MARKERS IS REQUIRED. THE CONTRACTOR SHALL INSTALL ODOT SUPPLIED RECYCLED RAISED PAVEMENT MARKER CASTINGS WITH PRISMATIC REFLECTORS.

ALL RAISED PAVEMENT MARKERS SHALL CONFORM TO ITEM 621 AND SHALL BE REMOVED AND REPLACED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS TC-65.10M THROUGH TC-65.12. THIS ALSO INCLUDES THE USE OF RECYCLED RAISED PAVEMENT MARKER CASTINGS. ODOT WILL SUPPLY THE CONTRACTOR WITH RECYCLED RAISED PAVEMENT MARKER CASTINGS WITH PRISMATIC REFLECTORS. FOR FURTHER INSTRUCTION ON OBTAINING THE CASTINGS, SEE SUPPLEMENTAL SPECIFICATION 1082 - RECYCLED RAISED PAVEMENT MARKER (RPM)'S AUTHORIZATION AND TRANSFER SLIP. RAISED PAVEMENT MARKERS SHALL BE PLACED ON I-71 MAINLINE, INTERCHANGE RAMPS, S.R. 126 AND EUCLID ROAD.

ITEM 626 - BARRIER REFLECTORS

BARRIER REFLECTORS SHALL BE INSTALLED AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL BARRIER REFLECTORS SHALL CONFORM TO ITEM 626 AND SHALL BE PLACED ON BRIDGE PARAPETS, CONCRETE BARRIERS AND GUARDRAIL. BARRIER REFLECTORS ATTACHED TO GUARDRAIL SHALL BE BOLTED.

OVERHEAD LIGHTED SIGNS

THE SIGN HEIGHT SHOWN ON THE PLANS IS THE DESIGN HEIGHT FROM THE DESIGN MANUAL FOR DIRECTIONAL GUIDE SIGNS. IT DOES NOT INCLUDE THE GLARE SHIELD. THE HEIGHT OF THE GLARE SHIELD ADDS 6" TO THE HEIGHT OF THE SIGN AND SHOULD BE INCLUDED WHEN DETERMINING THE QUANTITY OF EXTRUSHEET NECESSARY FOR EACH SIGN. REFER TO THE OVERHEAD SIGN INFORMATION TABLE, THIS SHEET.

A MINIMUM CLEARANCE OF 17'-0" SHALL BE PROVIDED AT EACH OVERHEAD SIGN INSTALLATION. NOTE THAT OVERALL SIGN HEIGHT INCLUDES DESIGN HEIGHT (SHOWN ON PLANS), GLARE SHIELD HEIGHT OF 6", PLUS AN ADDITIONAL 6" FOR THE LUMINAIRE SUPPORT TUBE. SINCE OVERHEAD LIGHTED SIGNS IN ALL CASES ARE TO BE REERECTED ON EXISTING SUPPORTS, CONTRACTOR SHALL ADJUST VERTICAL PLACEMENT OF SIGN, IF REQUIRED, TO PROVIDE MINIMUM CLEARANCE AS STATED ABOVE.

OVERHEAD SIGNS

ALL OVERHEAD SIGNS, INCLUDING OVERHEAD LIGHTED SIGNS, SHALL BE INSTALLED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND AS SHOWN IN THE ODOT STANDARD DRAWINGS. IF AN OVERHEAD SIGN IS TO BE INSTALLED ON AN EXISTING SUPPORT, THE CONTRACTOR WILL NEED TO PROVIDE NEW SIGN ATTACHMENT ASSEMBLIES FOR EACH SIGN.

OVERHEAD LIGHTED SIGNS

THE SIGN HEIGHT SHOWN ON THE PLANS IS THE DESIGN HEIGHT FROM THE DESIGN MANUAL FOR DIRECTIONAL GUIDE SIGNS. IT DOES NOT INCLUDE THE GLARE SHIELD. THE HEIGHT OF THE GLARE SHIELD ADDS 6" TO THE HEIGHT OF THE SIGN AND SHOULD BE INCLUDED WHEN DETERMINING THE QUANTITY OF EXTRUSHEET NECESSARY FOR EACH SIGN. REFER TO THE OVERHEAD SIGN INFORMATION TABLE, THIS SHEET.

A MINIMUM CLEARANCE OF 17'-0" SHALL BE PROVIDED AT EACH OVERHEAD SIGN INSTALLATION. NOTE THAT OVERALL SIGN HEIGHT INCLUDES DESIGN HEIGHT (SHOWN ON PLANS), GLARE SHIELD HEIGHT OF 6", PLUS AN ADDITIONAL 6" FOR THE LUMINAIRE SUPPORT TUBE.

OVERHEAD SIGNS

ALL OVERHEAD SIGNS, INCLUDING OVERHEAD LIGHTED SIGNS, SHALL BE INSTALLED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND AS SHOWN IN THE ODOT STANDARD DRAWINGS.

EXISTING BURIED CABLE

PRIOR TO ANY SIGN FOUNDATION OR PULL BOX REMOVAL WORK, ALL EXISTING BURIED CABLES SHALL BE LOCATED AND MARKED. EXISTING CABLES SHALL BE KEPT IN OPERATION UNTIL IT IS TIME TO MAKE THE CONECTIONS WITHIN THE NEW PULL BOXES.

OVERHEAD SIGN FOUNDATIONS

ALL OVERHEAD SIGN FOUNDATIONS SHALL BE INSTALLED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND AS SHOWN IN THE ODOT STANDARD DRAWING TC-21.10.

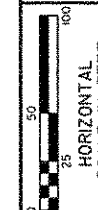
POWER SERVICE

THE EXISTING POWER SERVICE FOR THE NEW TRUSS @ SLM 23.089, NB I-71, SHALL REMAIN AS A 240 VOLT SERVICE.

OVERHEAD SIGN INFORMATION																	
OVERHEAD SIGN LOCATION	631								630			202	630		603	631	
	MERCURY VAPOR LUMINAIRE, TYPE TC-31.21			BALLAST TYPE CMRI, INTEGRAL			SIGN SERVICE	SIGN WIRED	LUMINAIRE SUPPORT ASSEMBLY TYPE TC-31.21	GLARE SHIELD EXTRUSHEET PANEL	GROUND ROD	PULL BOX REMOVED	PULL BOX 18" SQ. HL-30.11	2-NO.4 AWG 5000 VOLT CABLE	CABLE SPLICING KIT	4" CONDUIT, TYPE E	REUSE EX. DISCONNECT SWITCH & ENCLOSURE
SLM	100 W EACH	175 W EACH	250 W EACH	100 W EACH	175 W EACH	250 W EACH	EACH	EACH	EACH	SIZE (INCHES)	EACH	EACH	EACH		EACH		EACH
SLM 18.677 N.B. a.											1						
b.																	
SLM 19.271 N.B. a.		2			2		1	1	2	204 x 6	1	1	1		2	YES	1
b.		4*			4*			1	4*								
SLM 19.604 N.B. a.		2			2		1	1	2	204 x 6	1	1	1		2	NO	1
b.		4*			4*			1	4*								
SLM 20.254 S.B. a.		2			2		1	1	2	204 x 6	1	1	1		2	NO	1
b.		4*			4*			1	4*								
SLM 20.546 S.B. a.		2			2		1	1	2	204 x 6	1		1	*4AWG	2	YES	1
b.		4*			4*			1	4*								
SLM 21.166 S.B. a.											1						
b.																	
SLM 21.821 N.B. a.											1						
b.																	
SLM 22.572 N.B. a.											1						
b.																	
SLM 23.089 N.B. a.		2			2		1	1	2	204 x 6	1	1	1	*4AWG	2	YES	1
b.		3*			3*			1	3*								

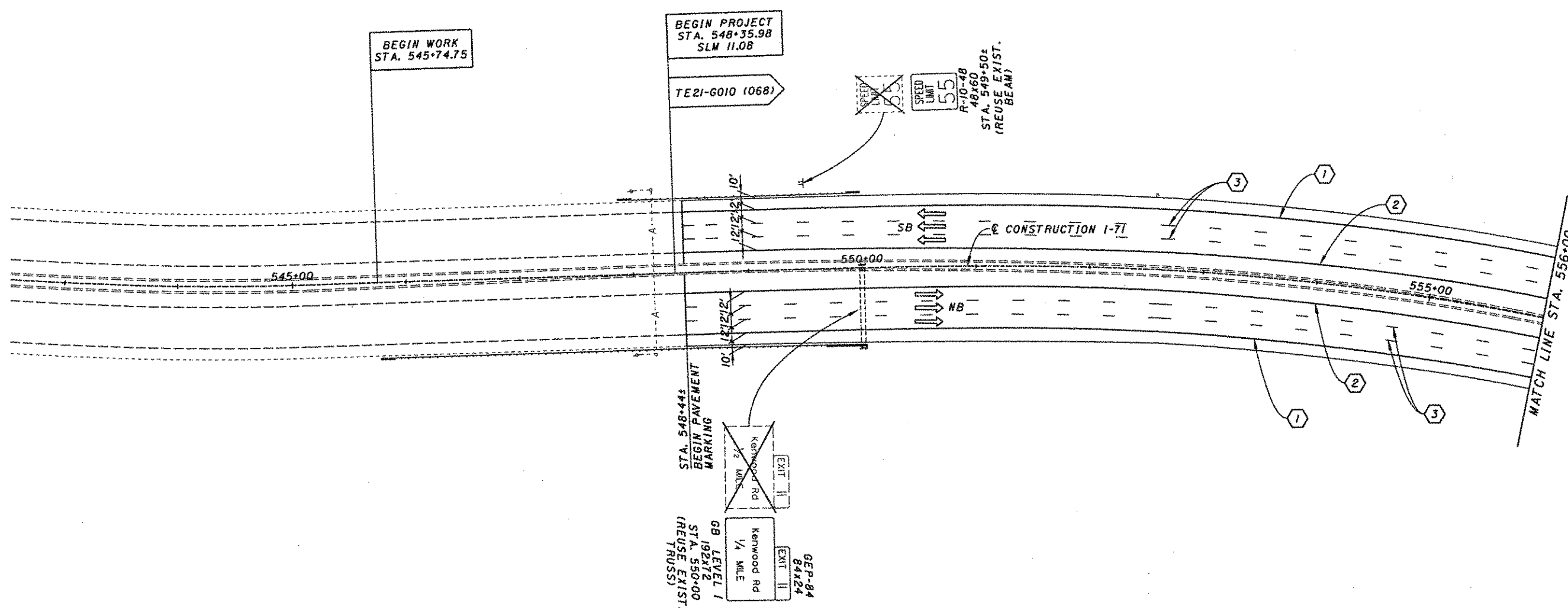
FOR TRUSS PLANS AND ELEVATIONS, SEE SHEETS 89-92.

* THE EXISTING LUMINAIRE SUPPORT ASSEMBLIES, BALLASTS, AND LUMINAIRES SHALL BE REMOVED AND RE-ERECTED FOR THE EXISTING SIGN, TO BE ERECTED ON THE NEW SIGN SUPPORT.



SIGNING AND PAVEMENT MARKING PLAN
STA 548+00 TO STA 556+00

HAM-71-11.08



PAVEMENT MARKING LEGEND

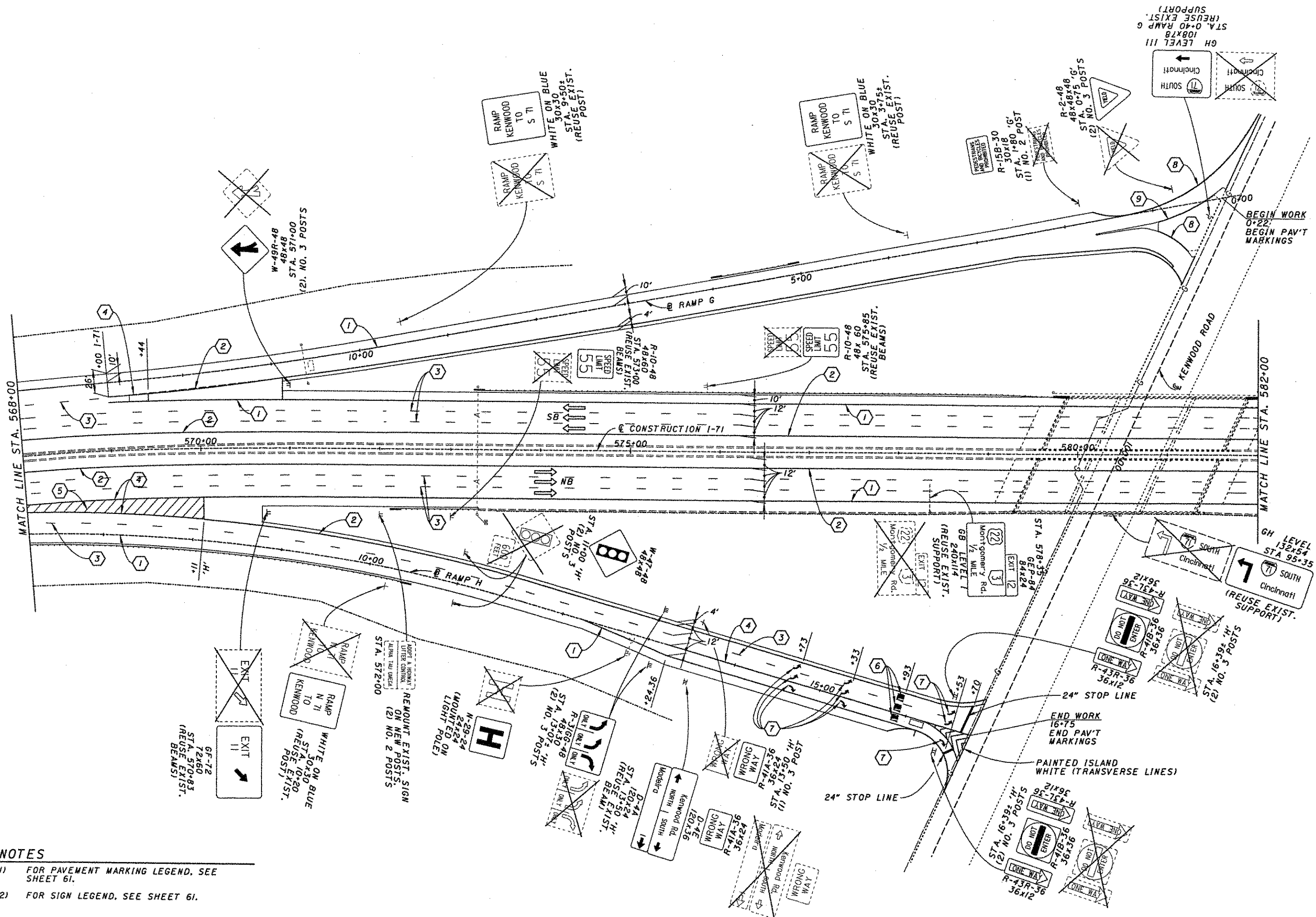
- | | |
|---|-------------------------|
| ① 4" EDGE LINE, WHITE | ⑥ WORD ON PAVEMENT, 96" |
| ② 4" EDGE LINE, YELLOW | ⑦ LANE ARROW |
| ③ 4" LANE LINE | ⑧ WHITE CURB MARKING |
| ④ 8" CHANNELIZING LINE, WHITE | ⑨ YELLOW CURB MARKING |
| ⑤ 24" TRANSVERSE LINE, WHITE, 12' SPACING | ⑩ 4" DOUBLE YELLOW LINE |

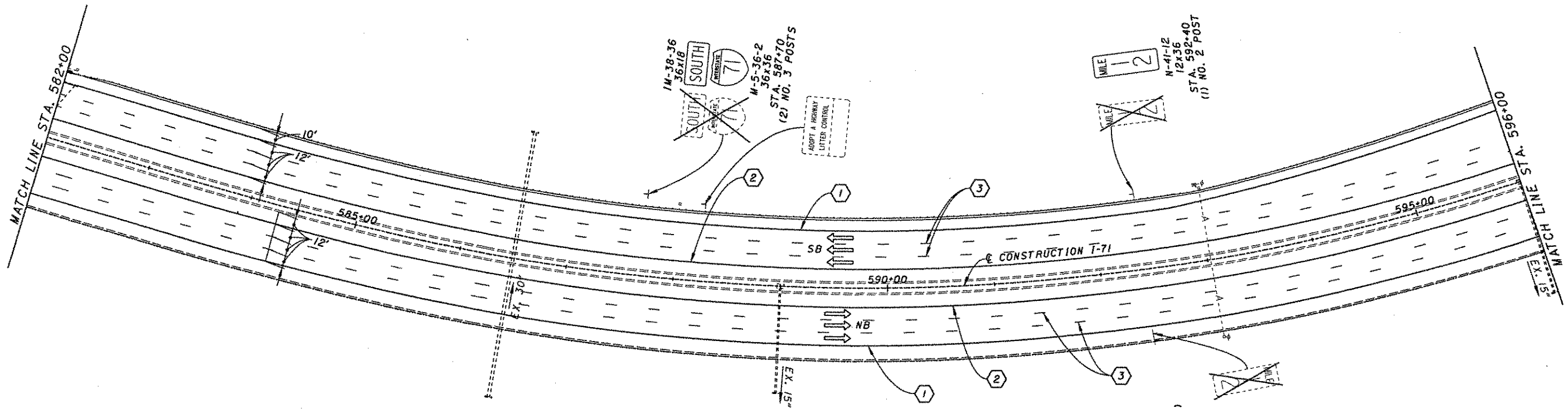
SIGN LEGEND

- | | |
|----|--|
| | NEW SIGN |
| | EXISTING SIGN |
| | EXISTING SIGN, TO BE REMOVED |
| OL | SIGN INSTALLED AND MAINTAINED BY OHIO LOGOS, INC. IF TEMPORARY REMOVAL OR RELOCATION OF SIGN IS NECESSARY, CONTACT OHIO LOGOS AT 1-800-860-5646. |



- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.



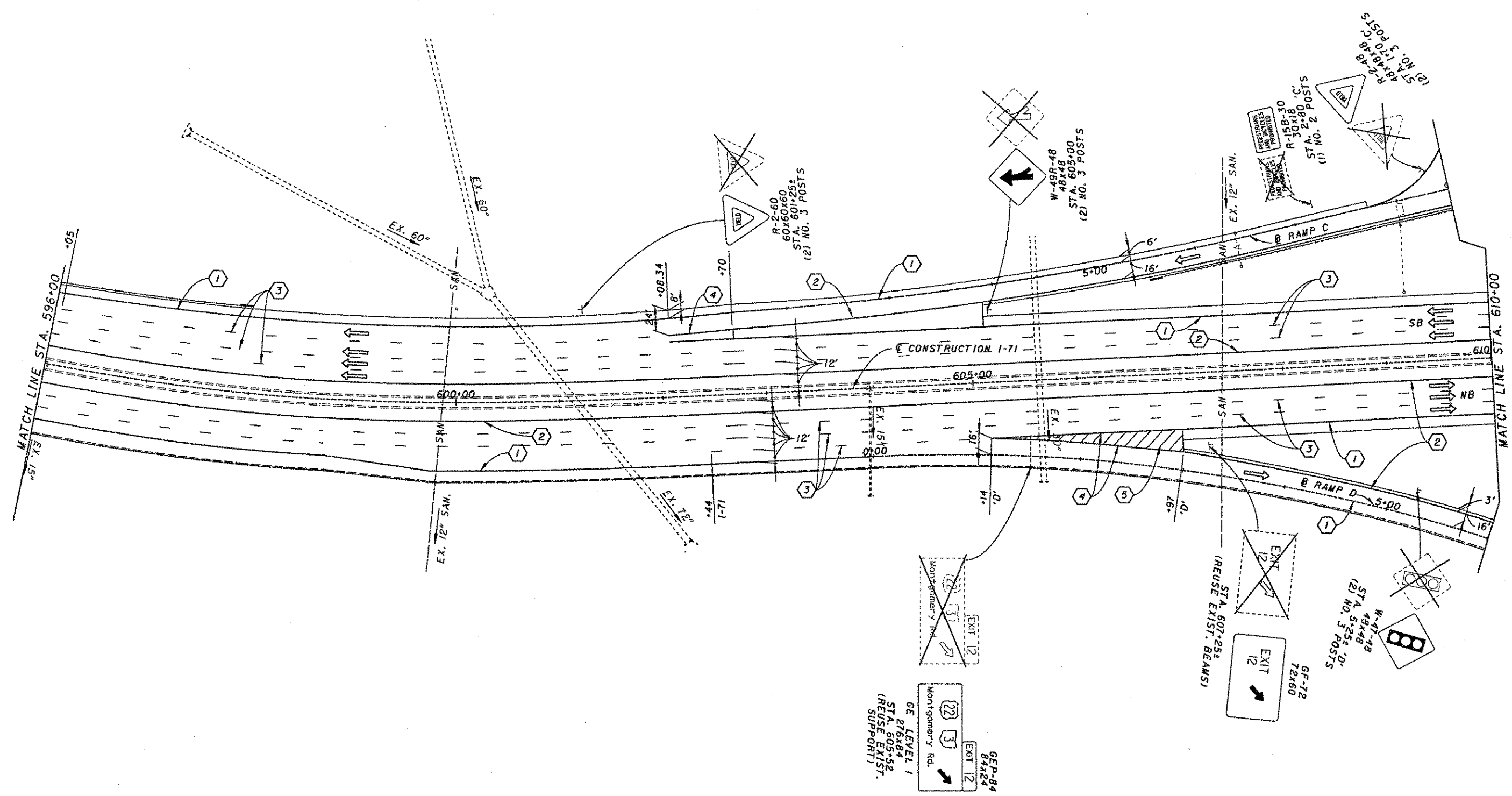


- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.

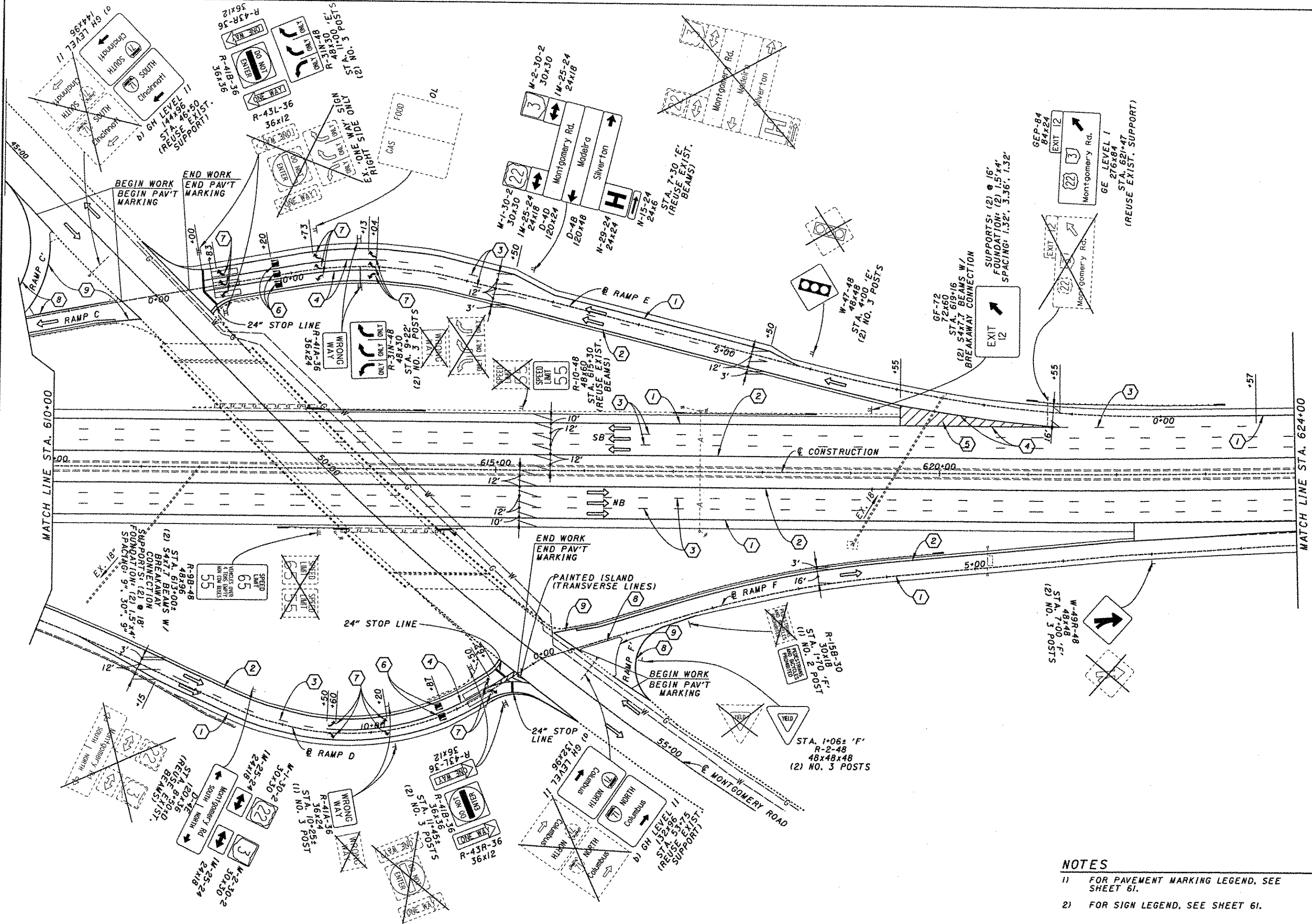
SIGNING AND PAVEMENT MARKING PLAN
STA 582+00 TO STA 596+00

HAM-71-11.08





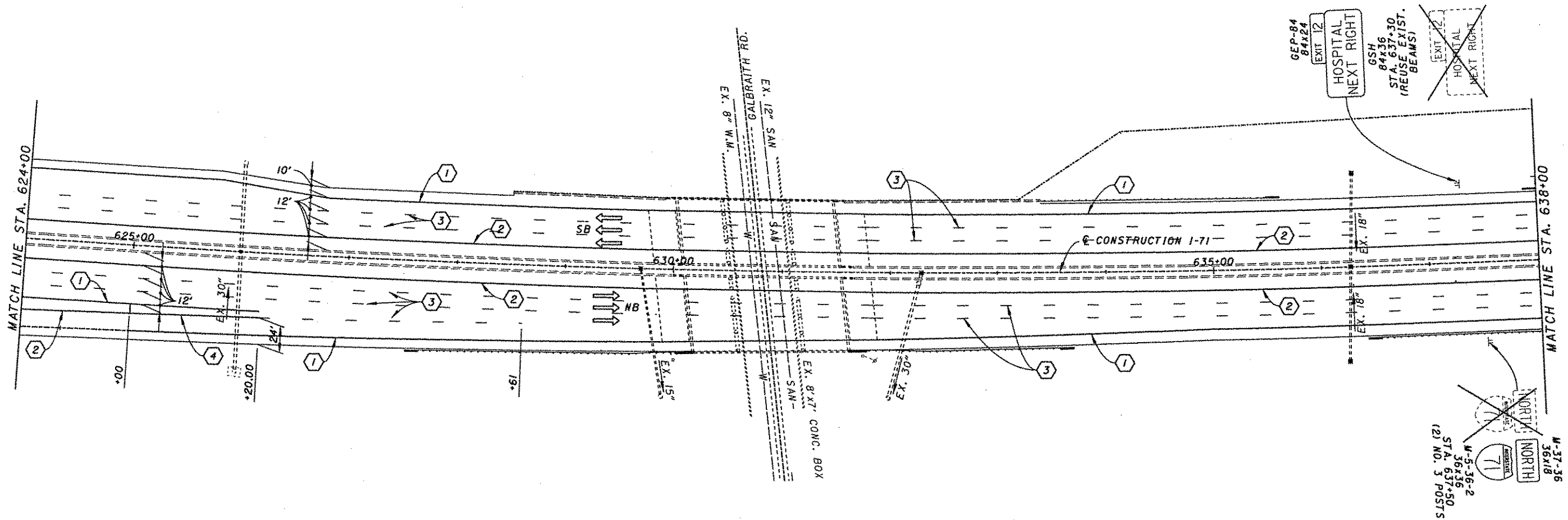
- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.



- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.

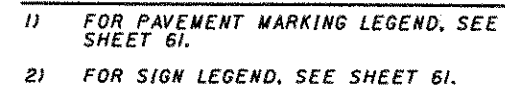
SIGNING AND PAVEMENT MARKING PLAN
STA 610+00 TO STA 624+00

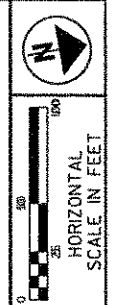
HAM-71-11.08



NOTES

- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.

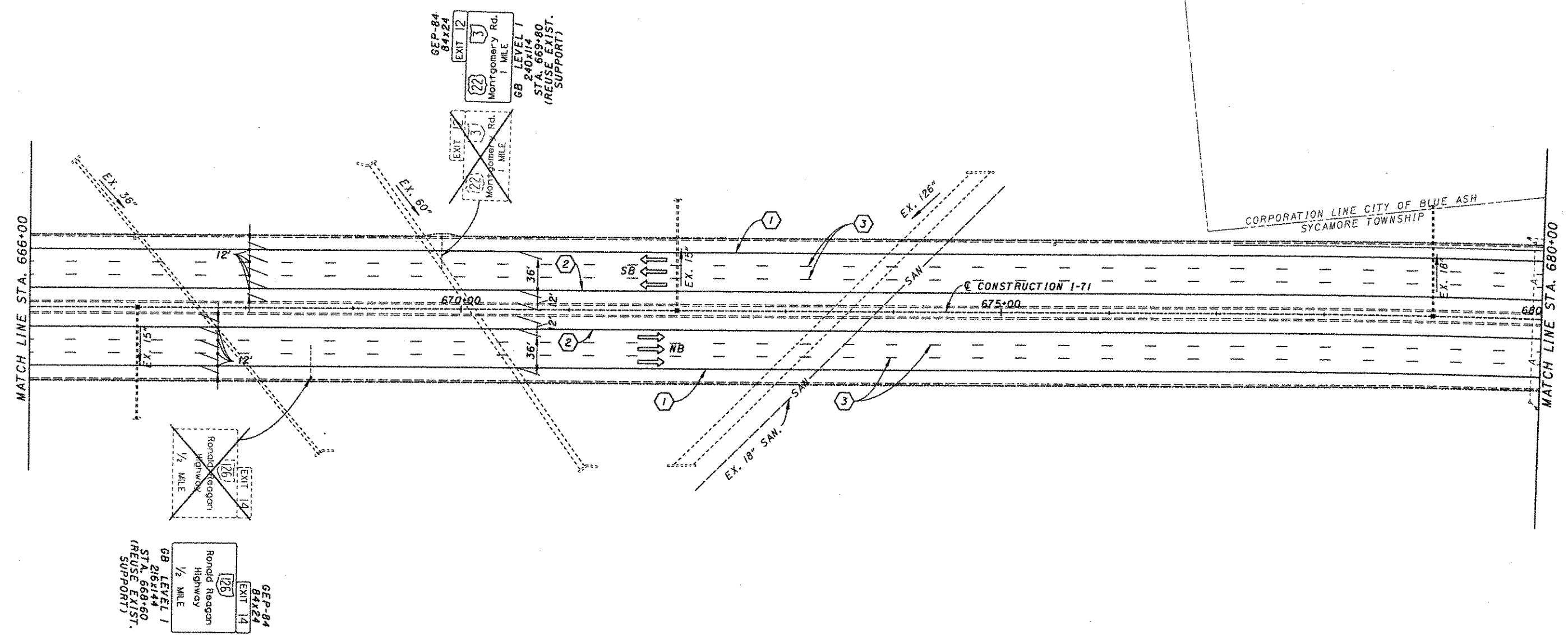




SIGNING AND PAVEMENT MARKING PLAN
STA 666+00 TO STA 680+00

HAM-71-11.08

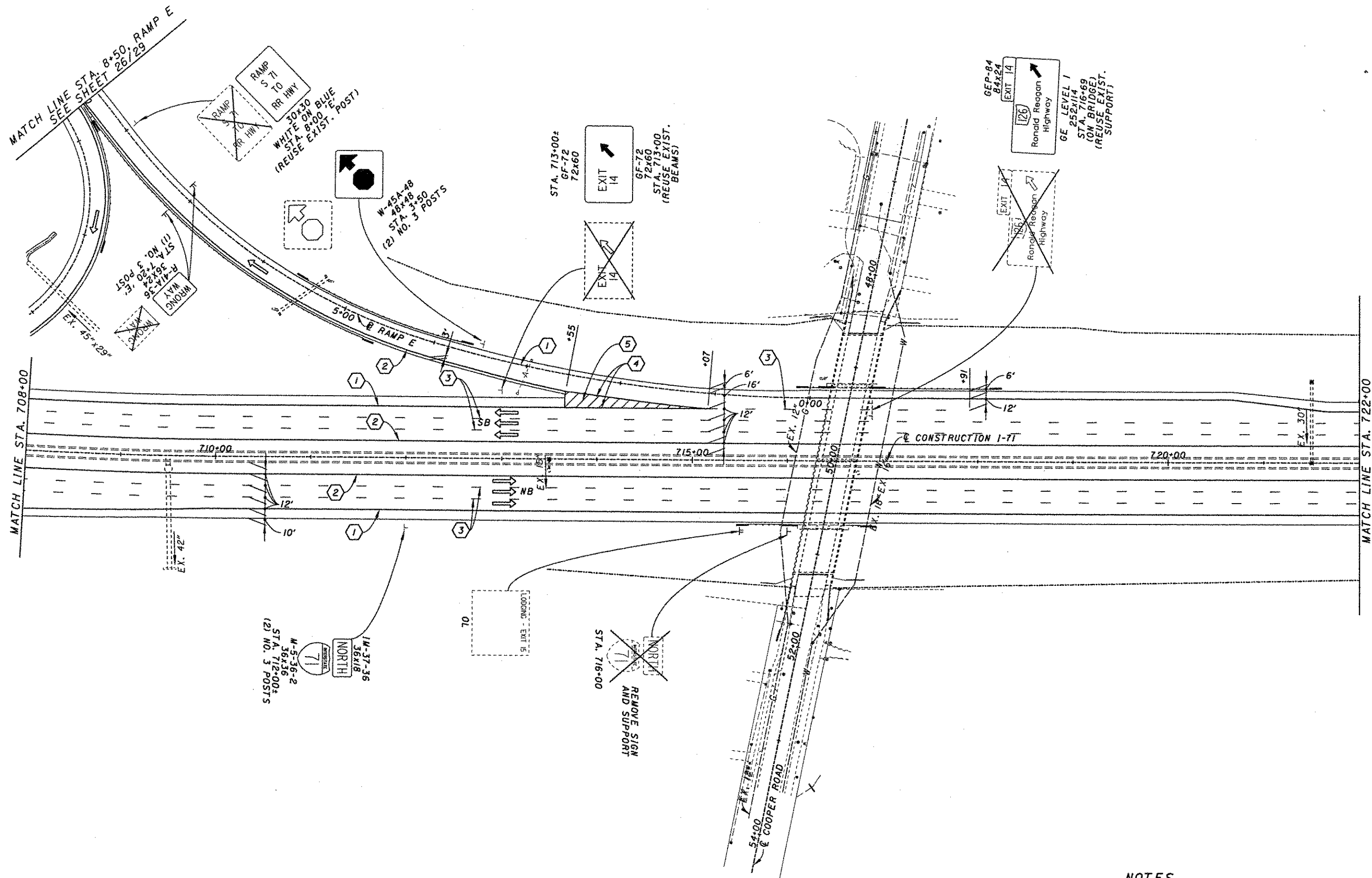
- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.



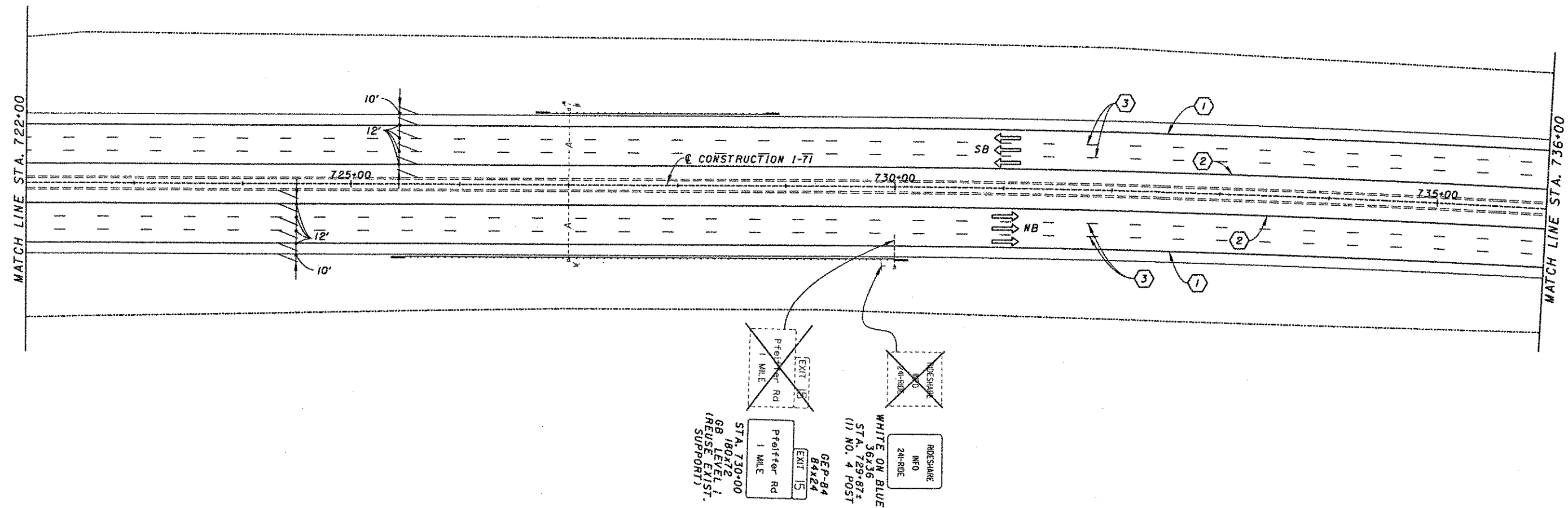


HAM-71-11.08

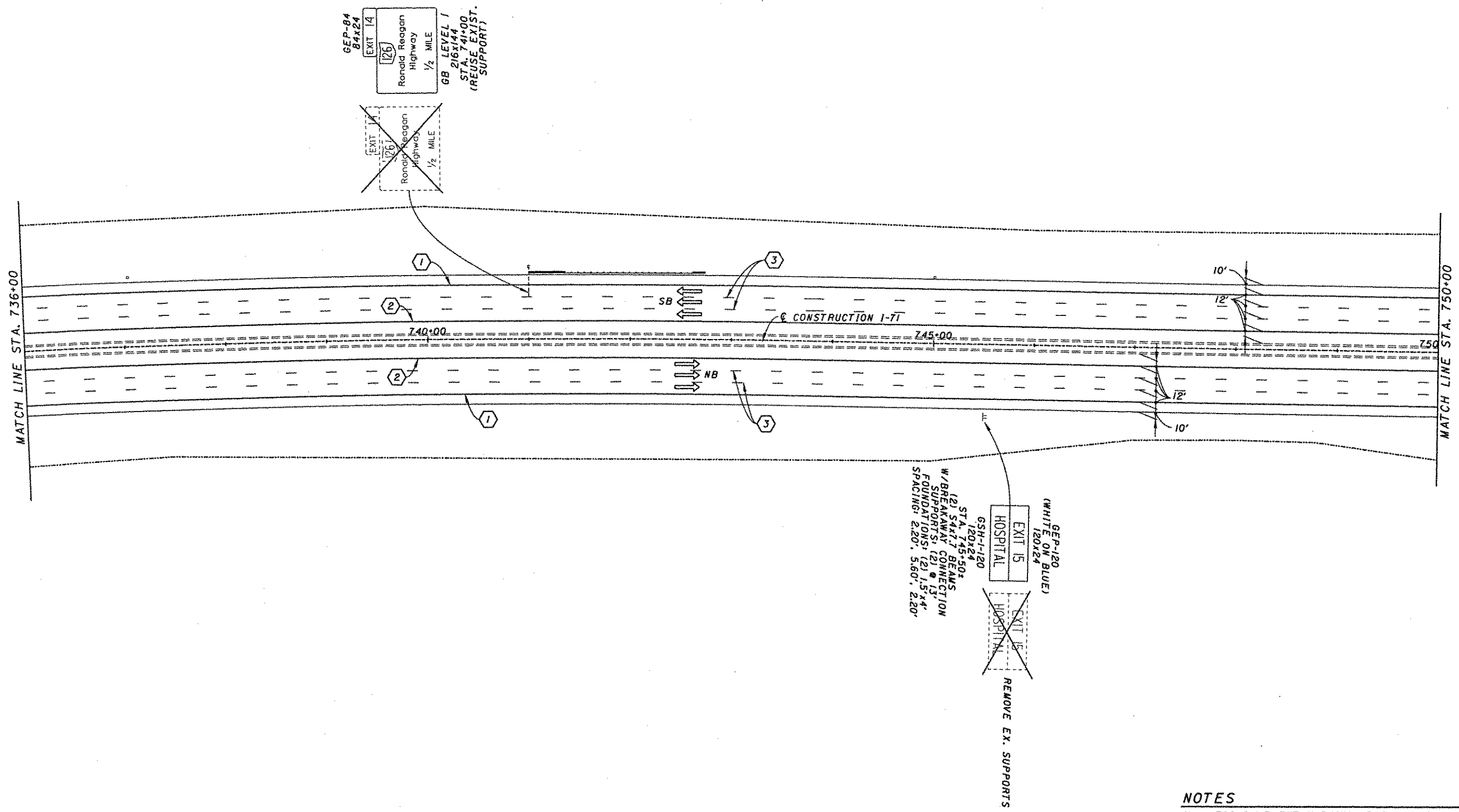
71
205



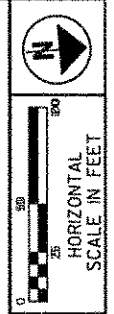
- NOTES
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.



- NOTES
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.

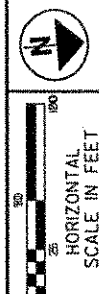


- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.



HAM-71-11.08

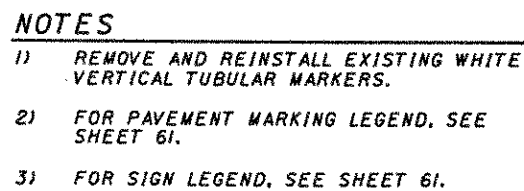
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.

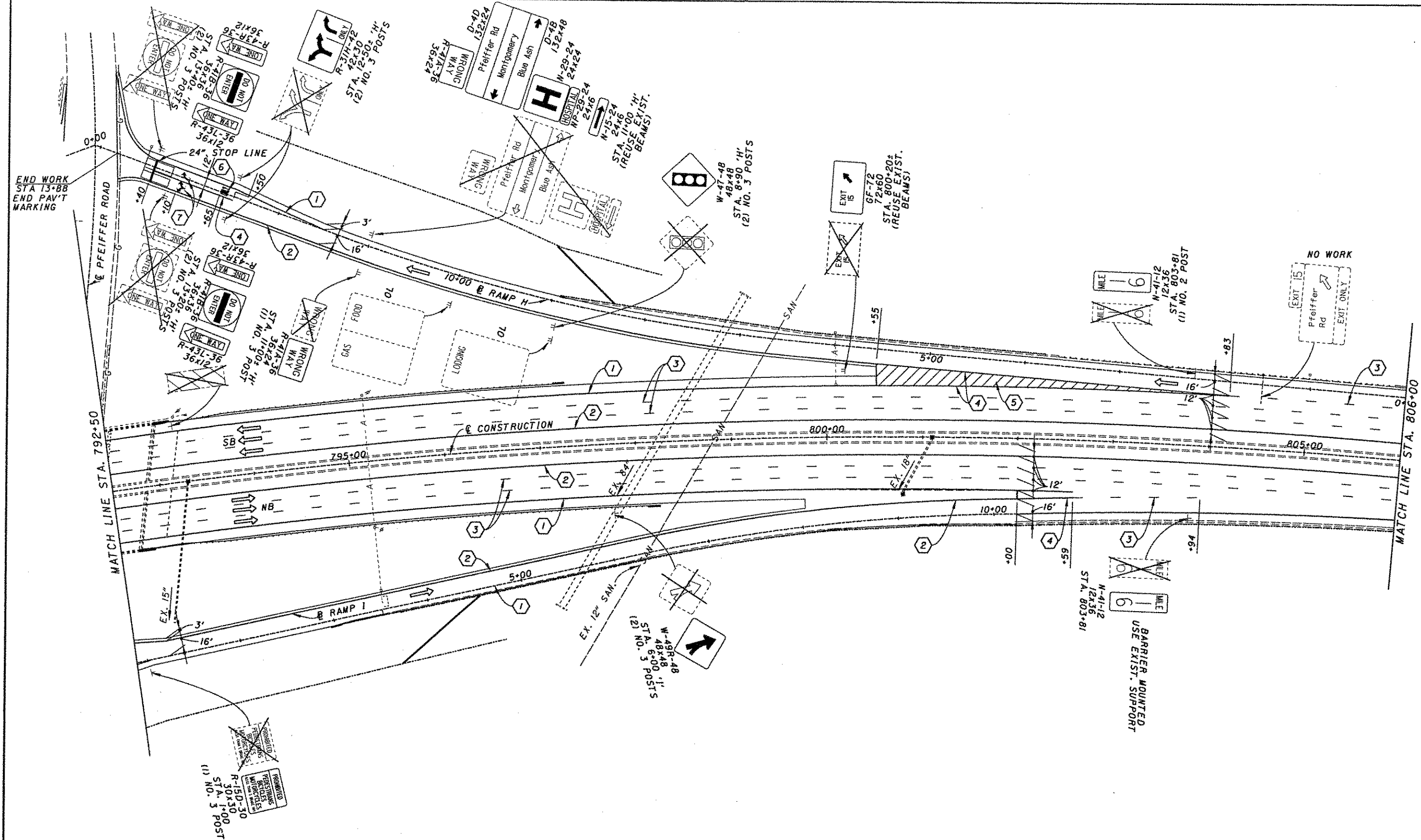


HAM-71-11.08

- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.

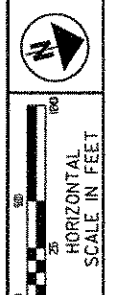
HAM-71-11.08





END WORK
STA 13+88
END PAV'T
MARKING

- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.



SIGNING AND PAVEMENT MARKING PLAN
STA 792+50 TO STA 806+00

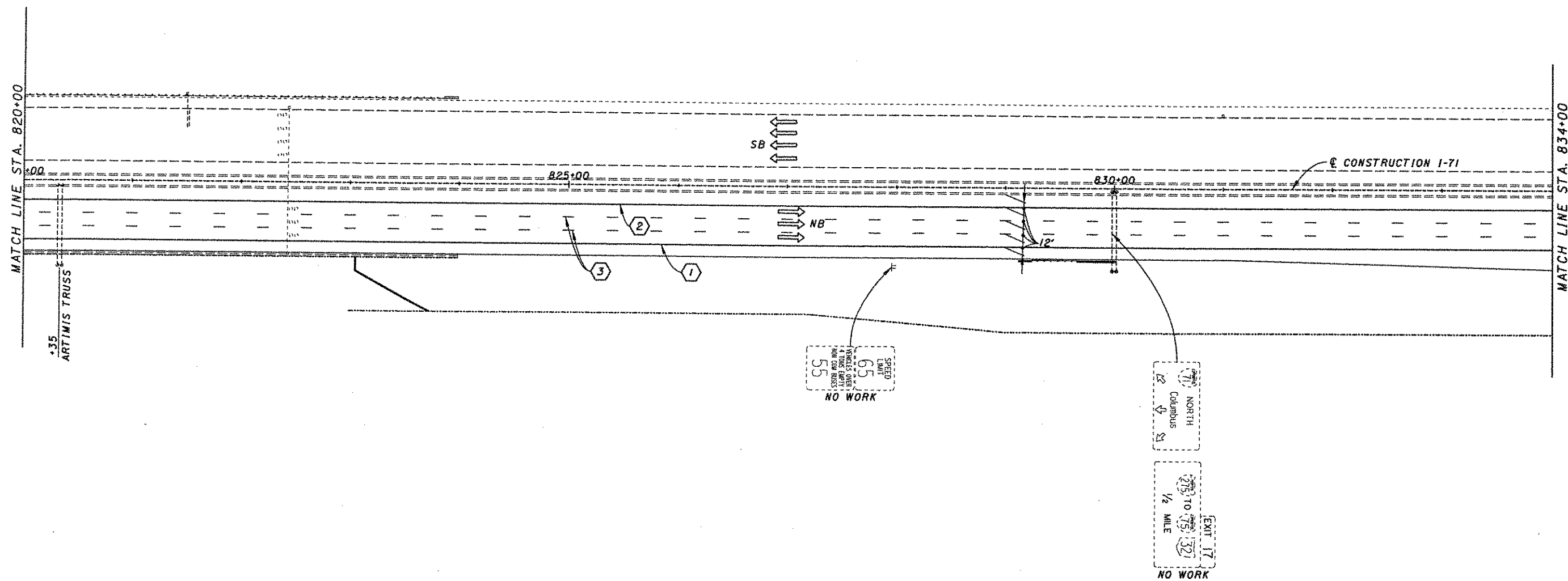
HAM-71-11.08



HAM-71-11.08

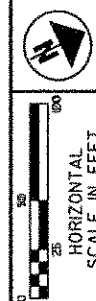
80
205

- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.



NOTES

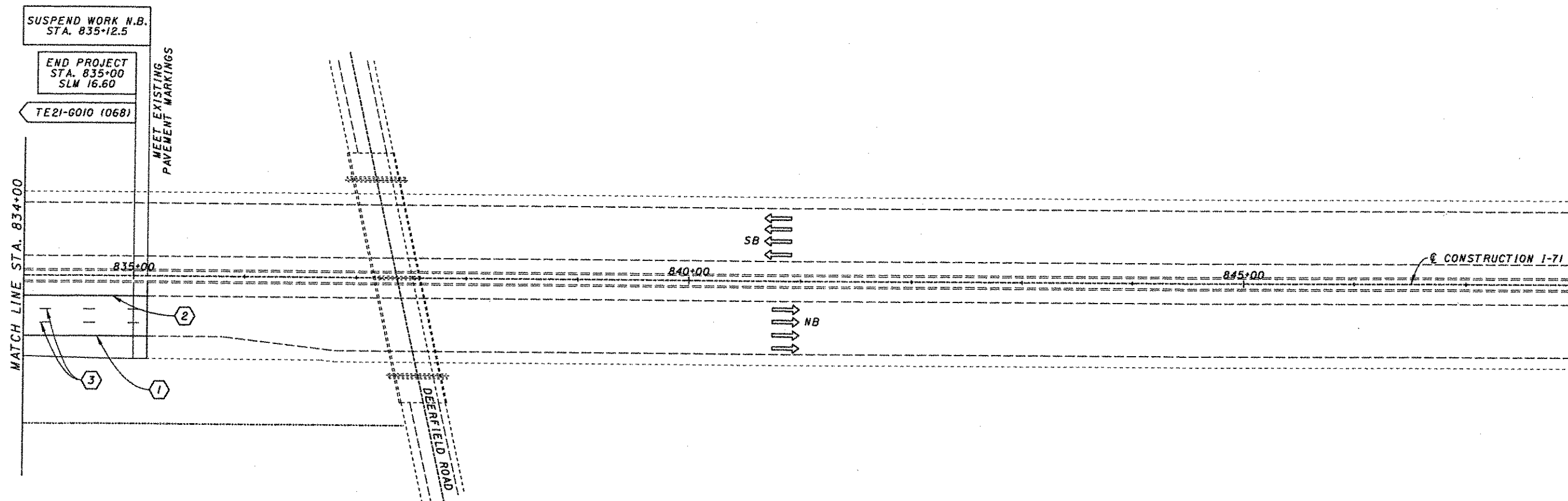
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.



SIGNING AND PAVEMENT MARKING PLAN
STA 834+00 TO STA 835+00

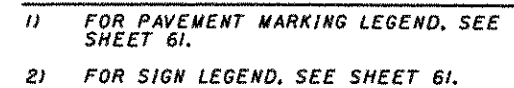
HAM-71-11.08

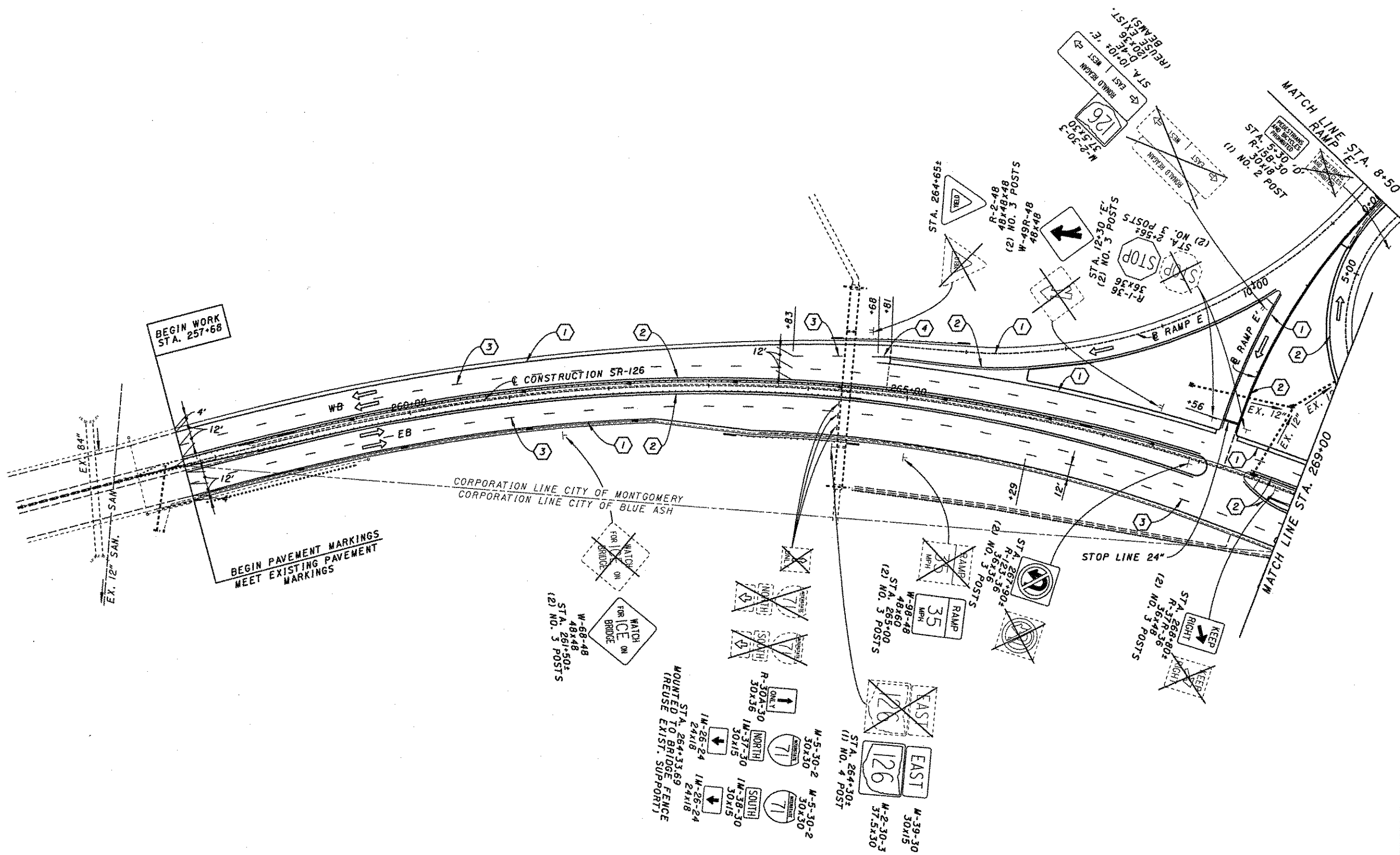
82
205



NOTES

- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.





NOTES

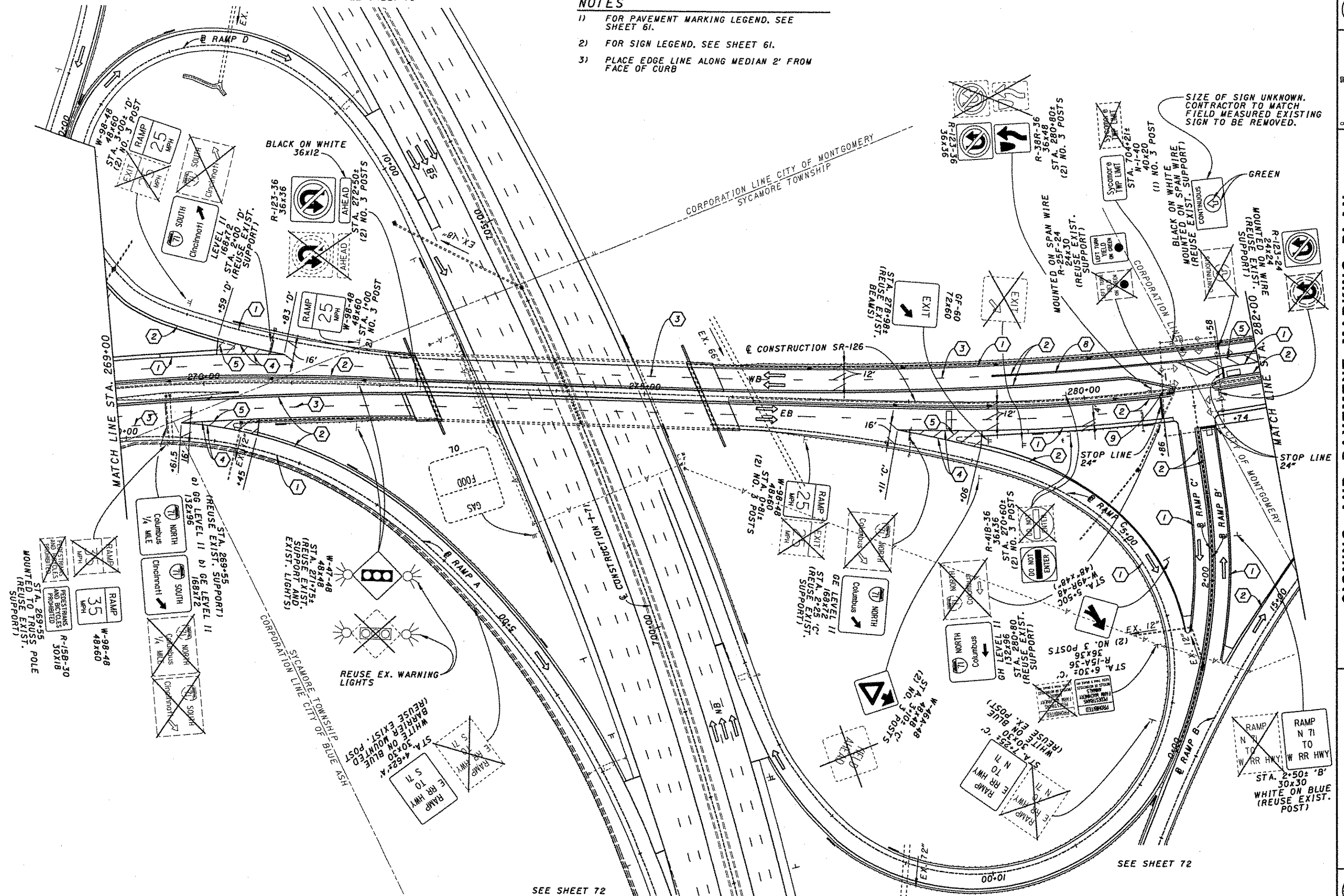
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.
- 3) PLACE EDGE LINE ALONG MEDIAN 2' FROM FACE OF CURB

SEE SHEET 73

SEE SHEET 73

NOTES

- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
- 2) FOR SIGN LEGEND, SEE SHEET 61.
- 3) PLACE EDGE LINE ALONG MEDIAN 2' FROM FACE OF CURB



SEE SHEET 72

SEE SHEET 72

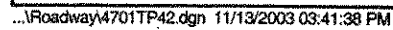


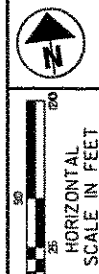
25
50
100
HORIZONTAL
SCALE IN FEET

SIGNING AND PAVEMENT MARKING PLAN
R.R. HWY. (SR 126) - STA. 269+00 TO STA. 282+00

HAM-71-11.08

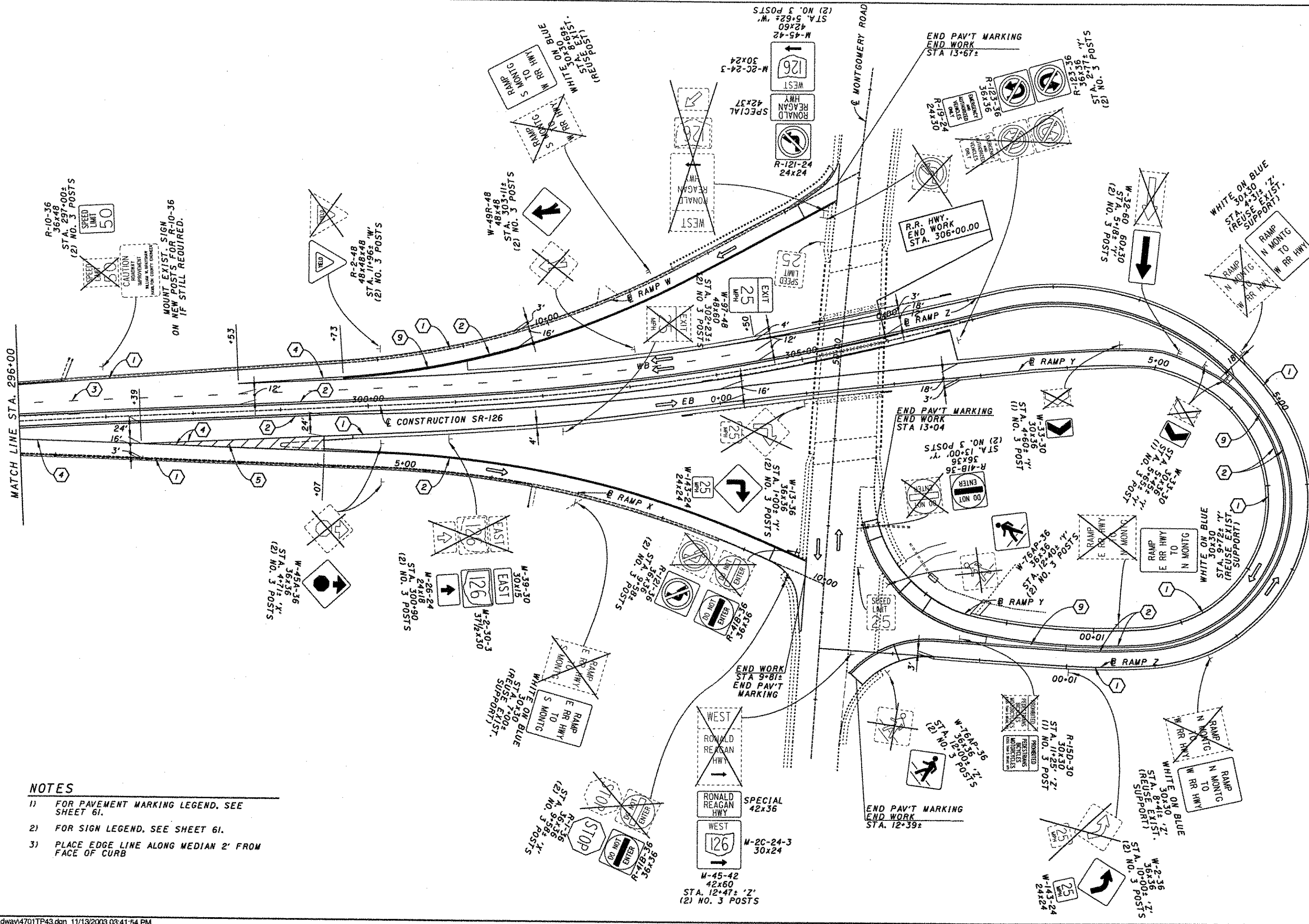
85
205



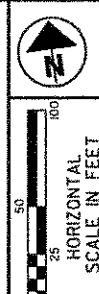


SIGNING AND PAVEMENT MARKING PLAN
R.R. HWY. (SR 126) - STA. 296+00 TO STA. 306+24

HAM-71-11.08

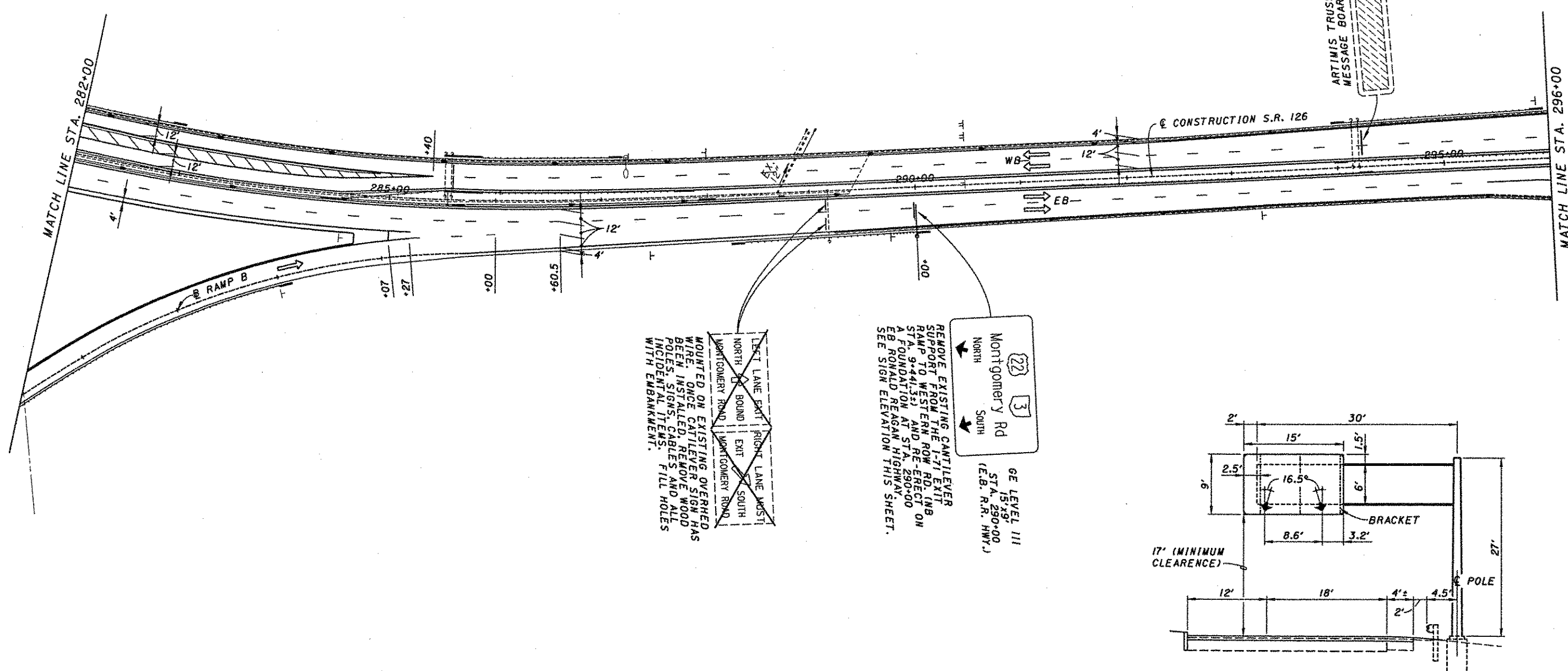


- NOTES**
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.
 - 3) PLACE EDGE LINE ALONG MEDIAN 2' FROM FACE OF CURB



PLAN & SIGN ELEVATION - R.R. HWY. (SR 126)
CANTILEVER SIGN AT STA 290+00

HAM-71-11.08



LEFT LANE EXIT RIGHT LANE MOST
NORTH BOUND EXIT SOUTH
MONTGOMERY ROAD MONTGOMERY ROAD

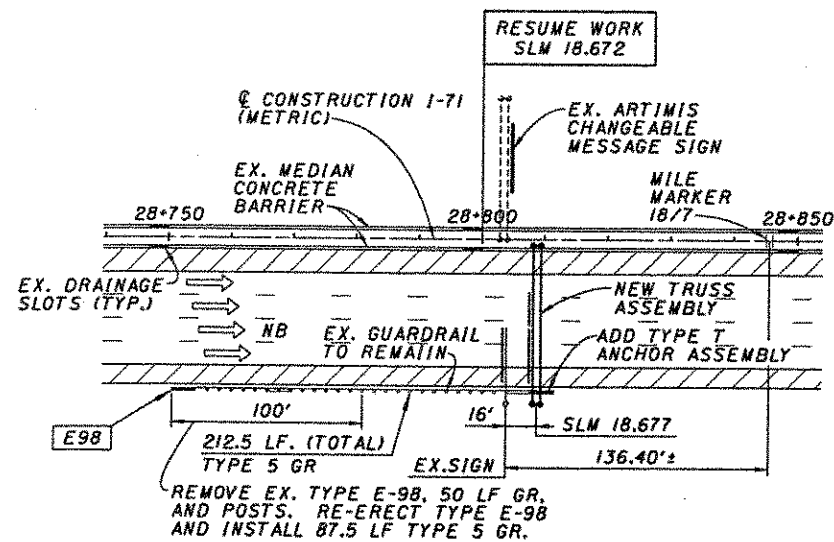
MOUNTED ON EXISTING OVERHEAD
WIRE. ONCE CANTILEVER SIGN HAS
BEEN INSTALLED, REMOVE WOOD
POLES, SIGNS, CABLES AND ALL
INCIDENTAL ITEMS. FILL HOLES
WITH EMBANKMENT.

REMOVE EXISTING CANTILEVER
SUPPORT FROM THE I-71 EXIT
RAMP TO WESTERN ROW RD. (NB
STA. 9+44.33) AND RE-ERECT ON
A FOUNDATION AT STA. 290+00
EB RONALD REAGAN HIGHWAY.
SEE SIGN ELEVATION THIS SHEET.

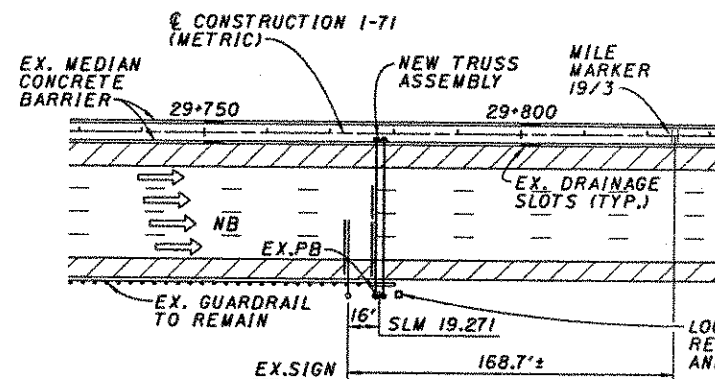
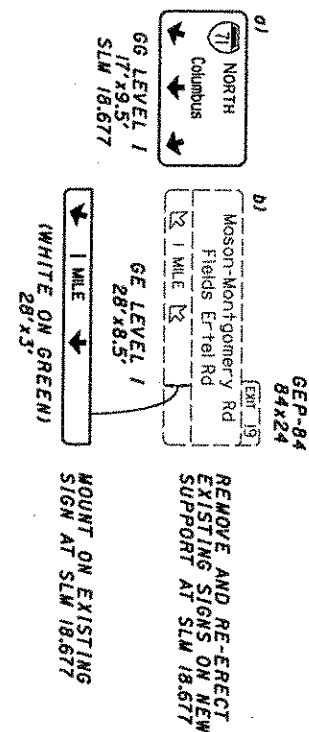
GE LEVEL III
15'x9'x9'
STA. 290+00
(E.B. R.R. HWY.)

Montgomery Rd
NORTH
SOUTH

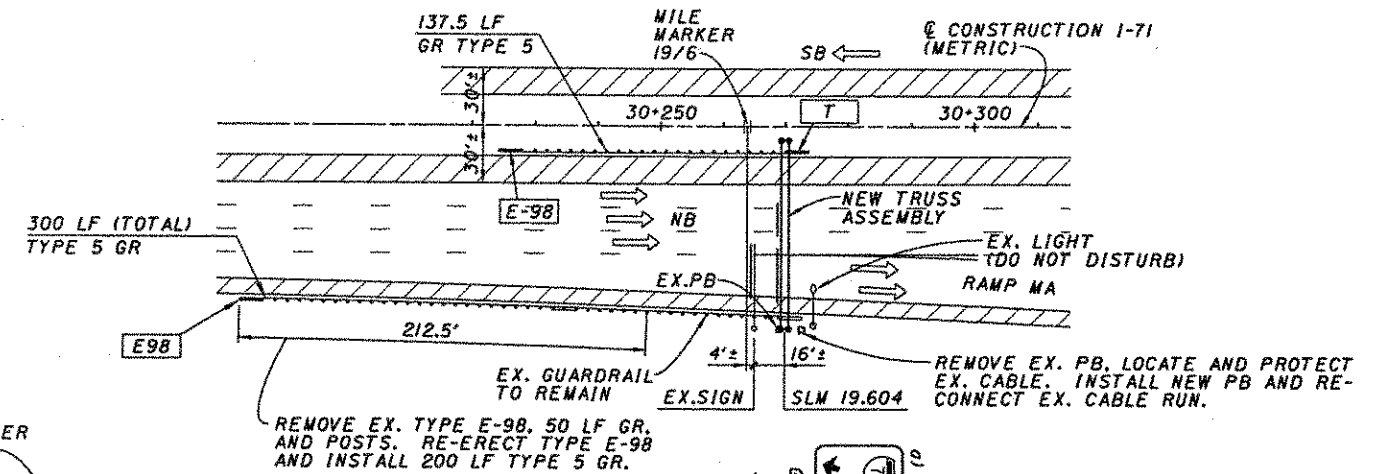
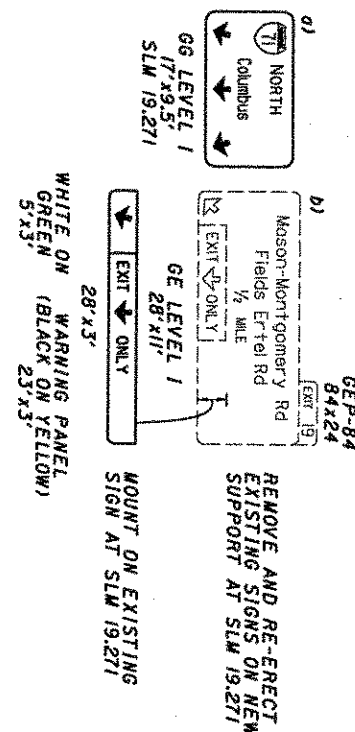
- NOTES
- 1) FOR PAVEMENT MARKING LEGEND, SEE SHEET 61.
 - 2) FOR SIGN LEGEND, SEE SHEET 61.



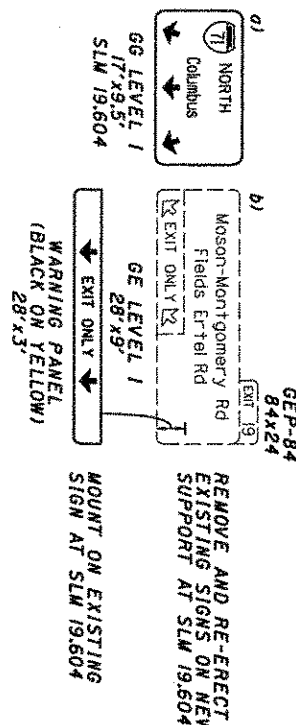
NEW SIGN @ SLM 18.677 NB I-71
(EXISTING SIGN @ STA. 28+804±)



NEW SIGN @ SLM 19.271 NB I-71
(EXISTING SIGN @ STA. 29+733±)



NEW SIGN @ SLM 19.604 NB I-71
(EXISTING SIGN @ STA. 30+265±)

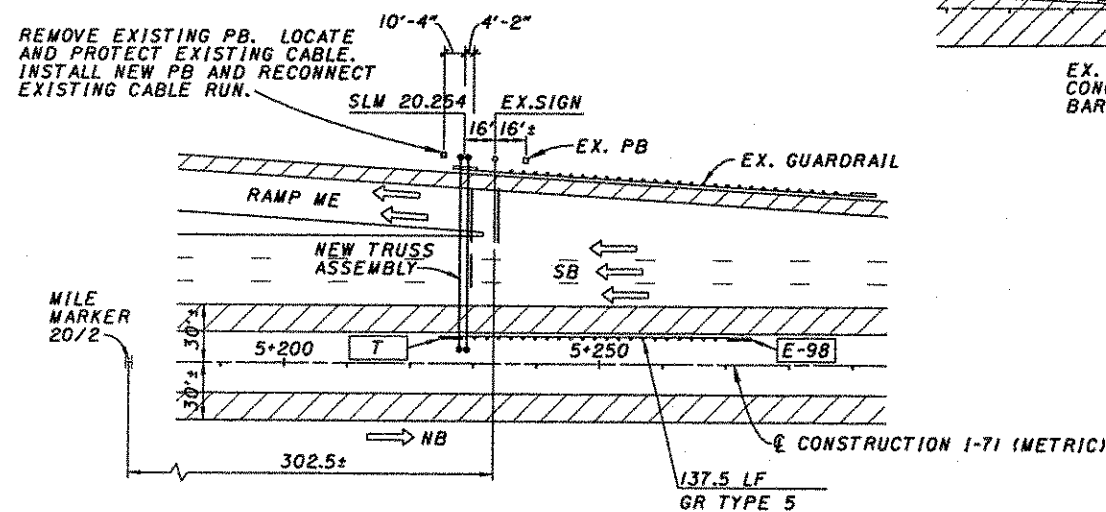


LEGEND

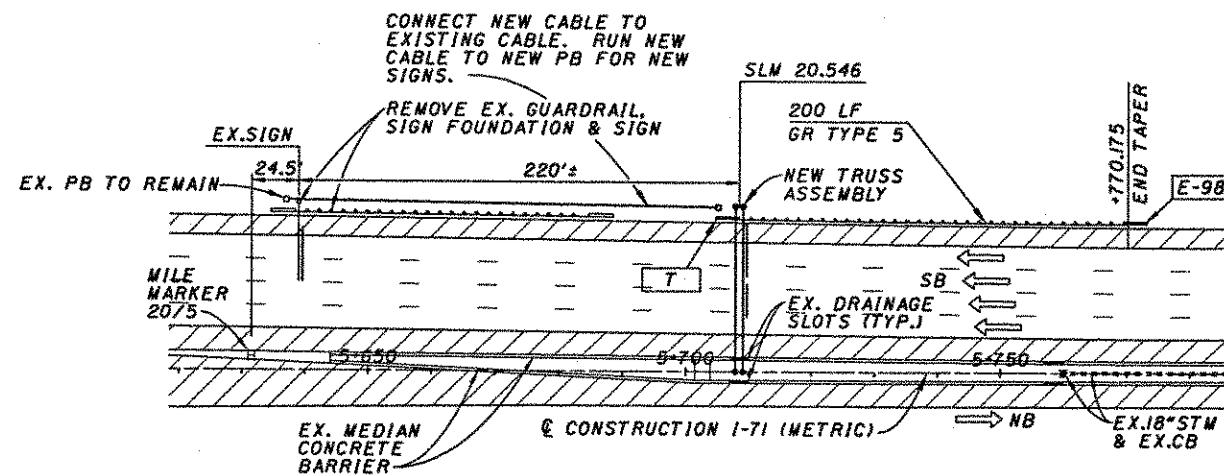
- [E-98] GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- [T] GUARDRAIL ANCHOR ASSEMBLY, TYPE T

SIGN LEGEND

- [] NEW SIGN
- [] EXISTING SIGN



NEW SIGN @ SLM 20.254 SB I-71
(EXISTING SIGN @ STA. 5+244±)



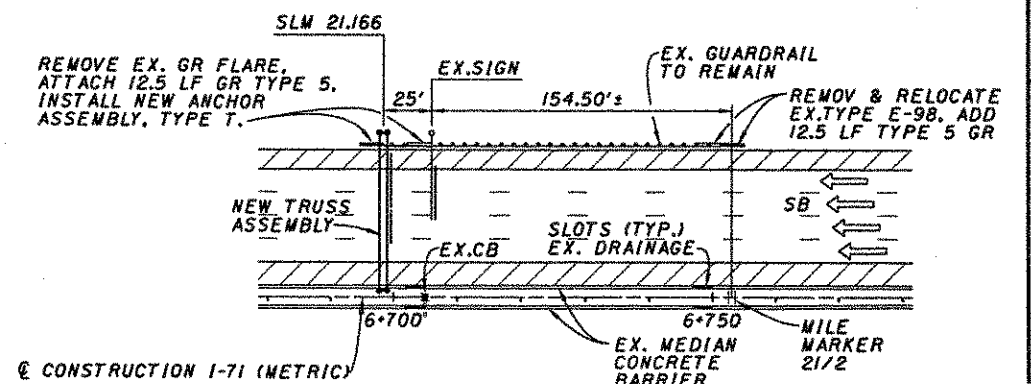
NEW SIGN @ SLM 20.546 SB I-71
(EXISTING SIGN @ STA. 5+710±)

LEGEND

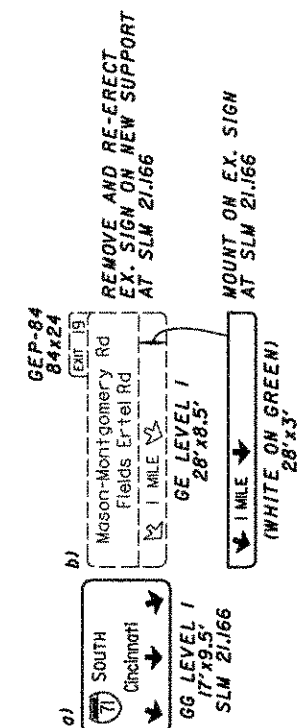
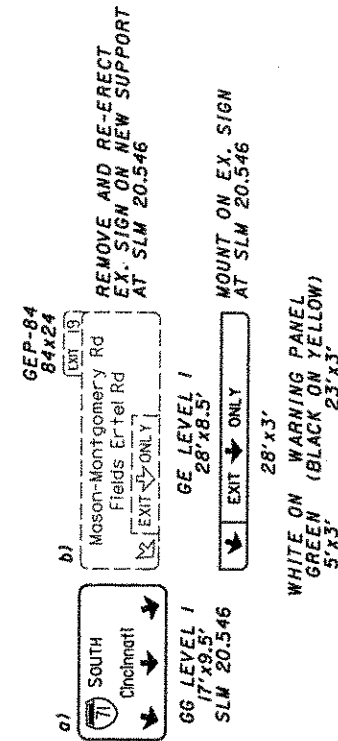
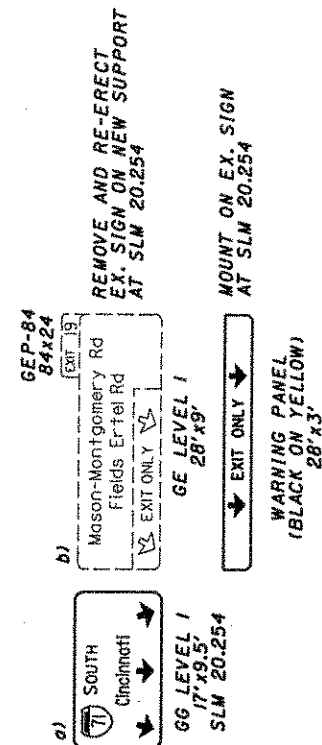
- E-98 GUARDRAIL ANCHOR ASSEMBLY, TYPE E-98
- T GUARDRAIL ANCHOR ASSEMBLY, TYPE T

SIGN LEGEND

- NEW SIGN
- EXISTING SIGN

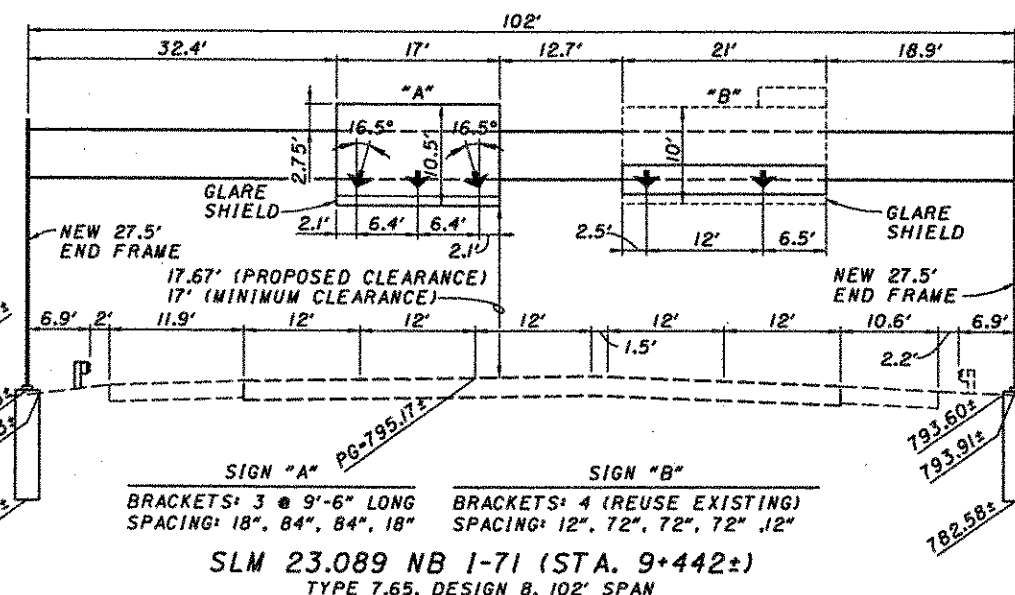
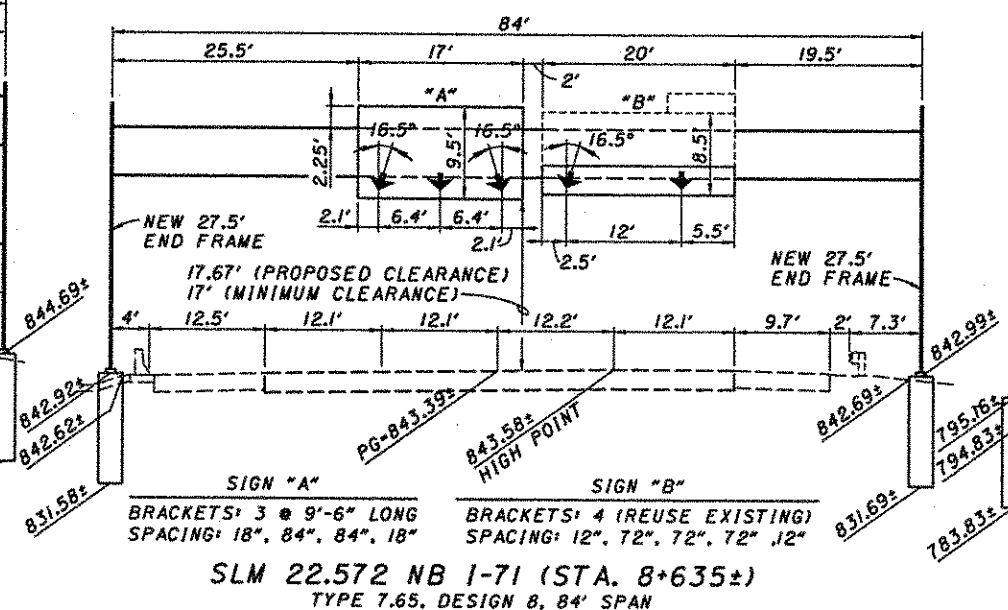
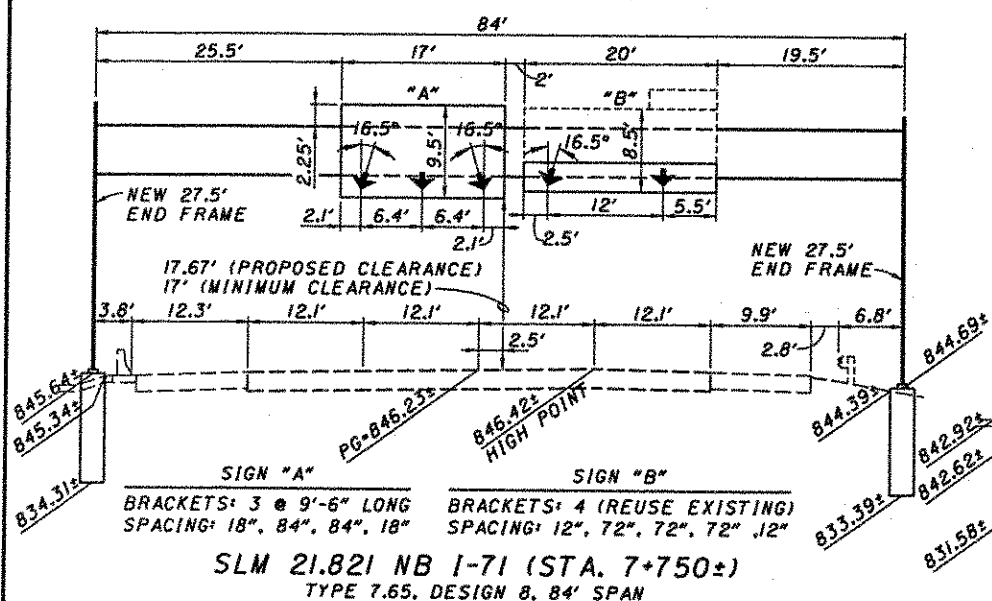
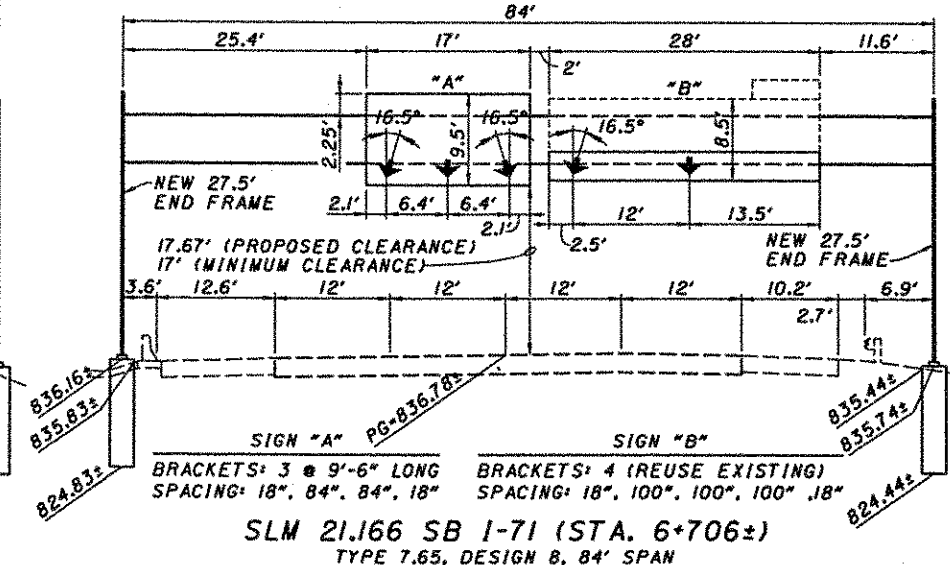
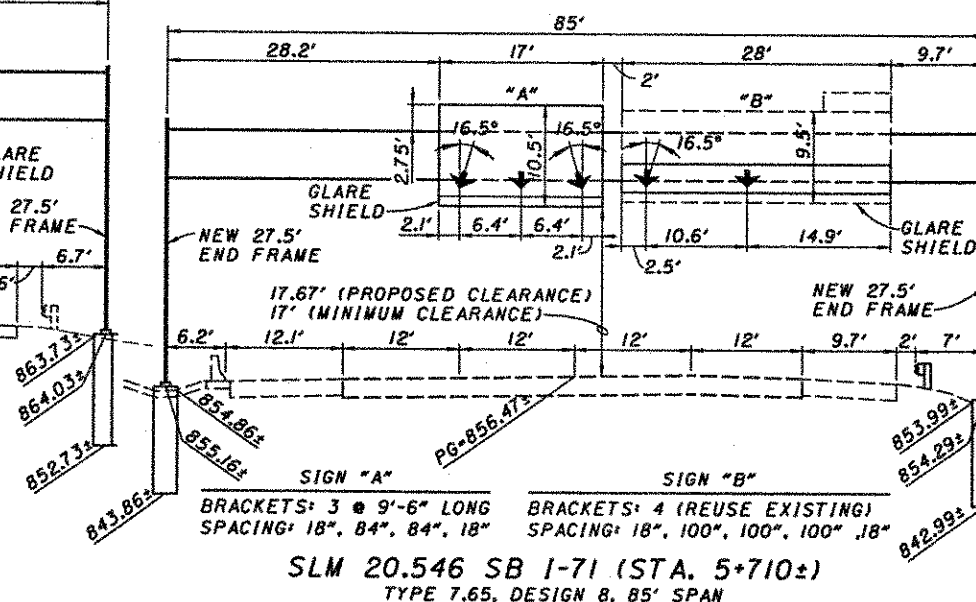
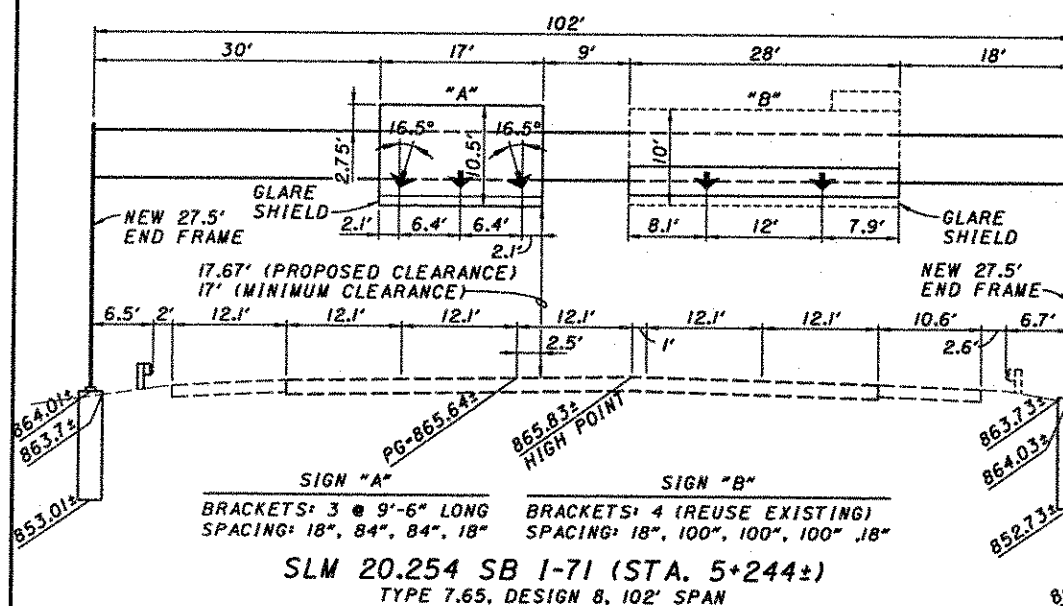
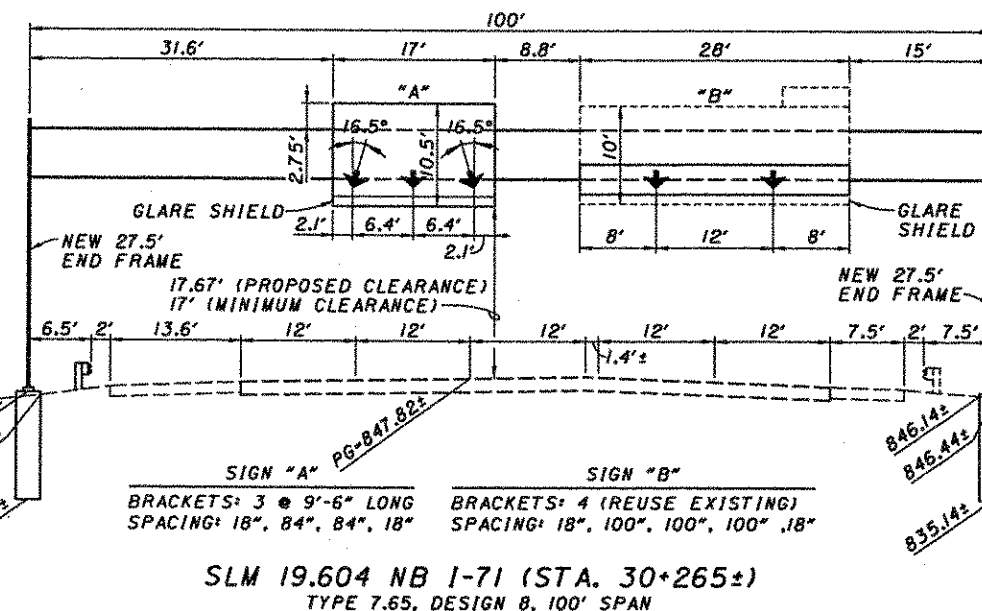
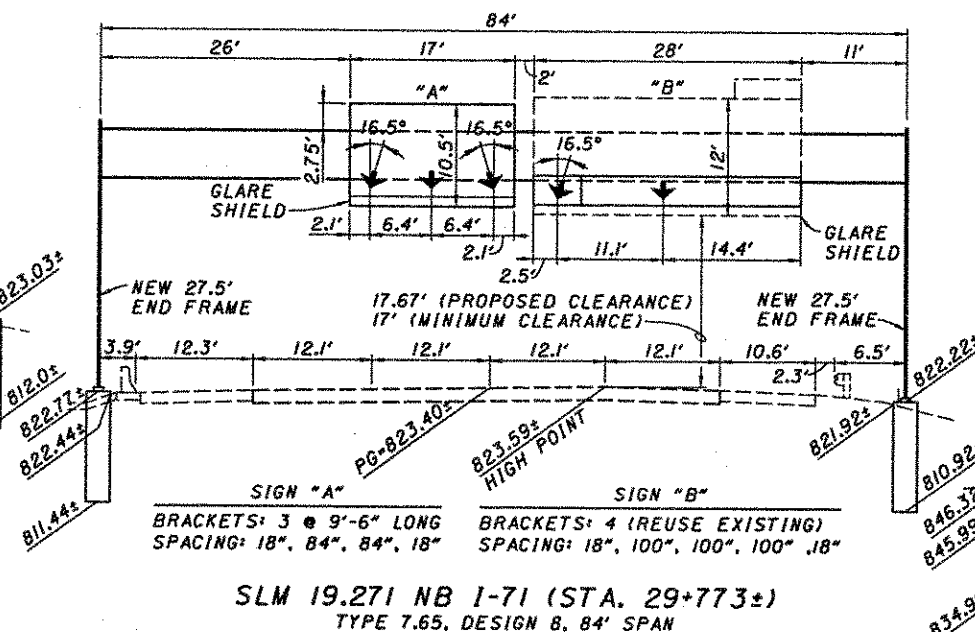
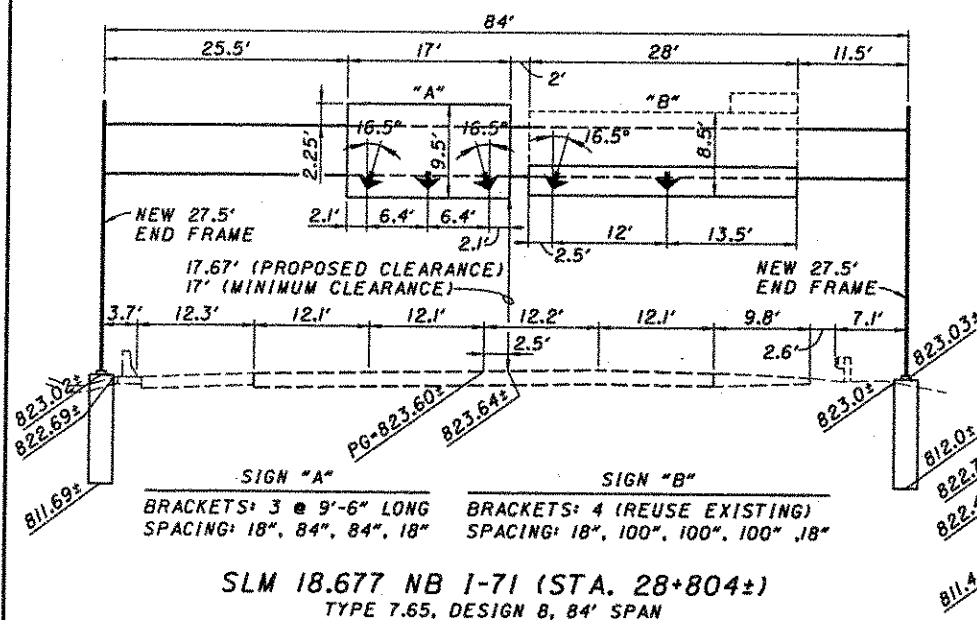


NEW SIGN @ SLM 21.166 SB I-71
(EXISTING SIGN @ STA. 6+706±)



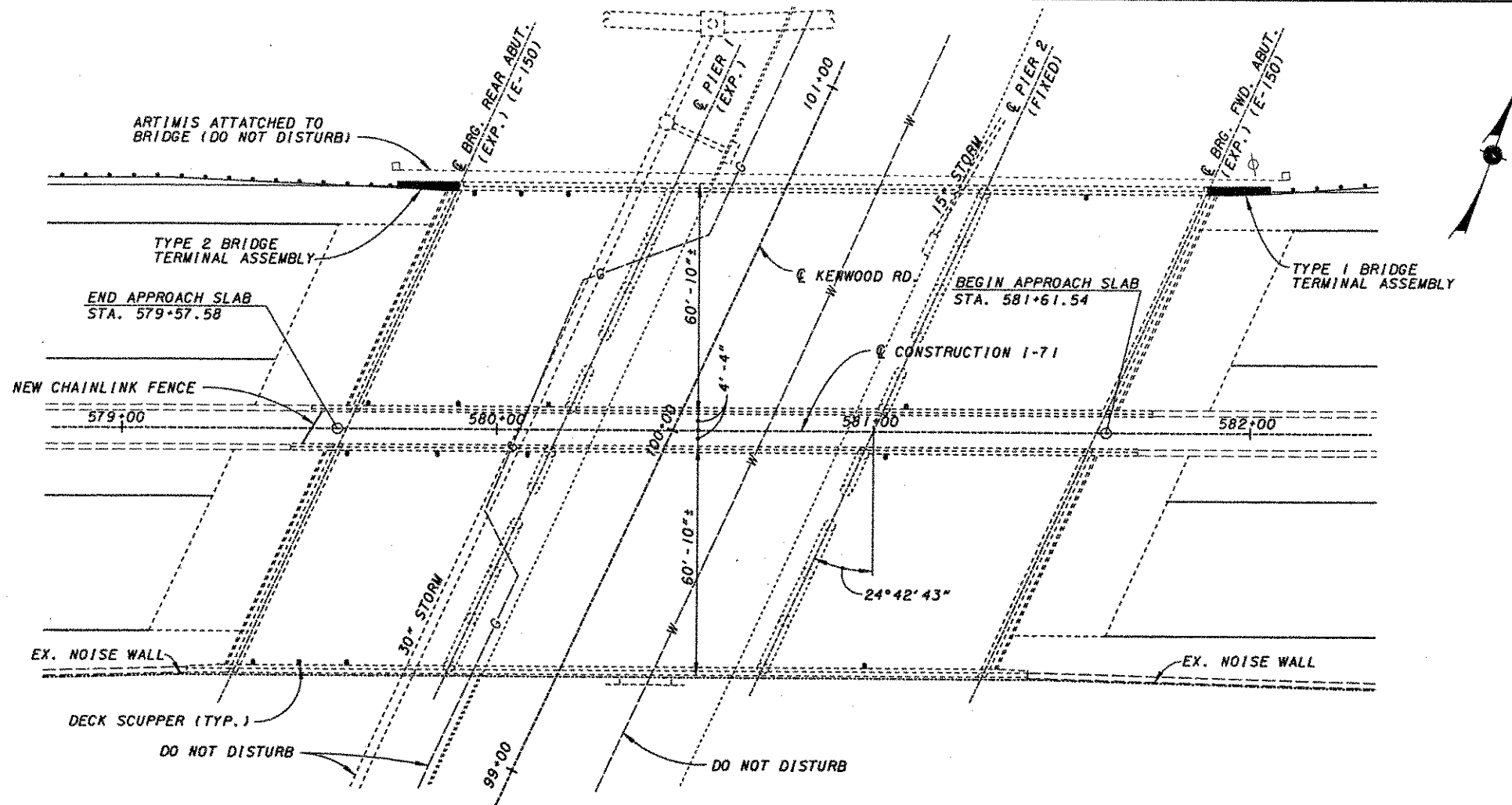
NOTES

1) SEE SHEETS 89-91, FOR TRUSS LOCATIONS.

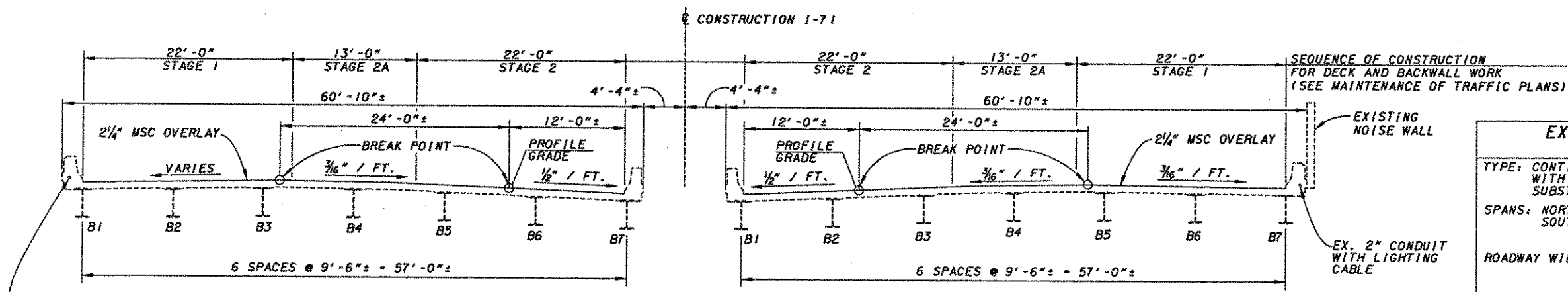


SIGNING ELEVATIONS
NB - SLM 18.677, 19.271, 19.604, 21.821, 22.572, & 23.089
SB - SLM 20.254, 20.546, & 21.166

HAM-71-11.08



PLAN



TYPICAL SECTION

PROPOSED WORK

1. ON THE LEFT BRIDGE, UPGRADE BRIDGE TERMINAL ASSEMBLIES TO TYPE 1 AND TYPE 2.
2. REMOVE EXISTING 1.25" THICK LMC OVERLAY AND 1" OF THE EXISTING DECK. PLACE 2.25" THICK MSC OVERLAY. WORK TO BE PER SS848 AND AS MODIFIED BY THE DESIGN BUILD SCOPE OF SERVICES.
3. FOR REMOVAL AND REPLACEMENT OF ASPHALT OVERLAY ON APPROACH SLABS SEE ROADWAY PLANS.
4. SEAL ABUTMENTS, WINGWALLS, RAILINGS, PIERS, AND BACK WALLS WITH EPOXY-URETHANE, COLOR SHALL BE FEDERAL COLOR STANDARD 17778 (LIGHT NEUTRAL).
5. EXTEND SCUPPERS SO THAT OUTLET IS 8" BELOW BOTTOM FLANGE.
6. RETROFIT EXISTING SLIDING PLATE EXPANSION JOINTS TO STRIP SEAL EXPANSION JOINTS. EXTEND INTO RAILING.
7. REPLACE LOOSE BEARING ANCHORS AT THE FOLLOWING LOCATIONS: LEFT BRIDGE, PIER 1, BEAM 7; LEFT BRIDGE, PIER 2, BEAMS 5, 6, AND 7; AND RIGHT BRIDGE, PIER 1, BEAMS 1 AND 2.
8. REMOVE BRUSH WITHIN 10' OF STRUCTURE LIMITS. KILL AND REMOVE ALL VEGETATION GROWING THROUGH CONCRETE SLOPE PROTECTION.
9. REPAIR SETTLED SECTIONS OF CONCRETE SLOPE PROTECTION.
10. INSTALL CHAINLINK FENCING BETWEEN THE LEFT AND RIGHT BRIDGES AT THE REAR ABUTMENT. SEE STD. DRWGS. F-1.1 AND F-3.1.
11. REFURBISH ALL ABUTMENT BEARINGS.

EXISTING STRUCTURE - I.R. 71 OVER KENWOOD ROAD

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS: NORTHBOUND: 58'-0"±, 83'-0"±, 58'-0"±
SOUTHBOUND: 58'-0"±, 83'-0"±, 58'-0"± (C/C BEARINGS)

ROADWAY WIDTH: FACE OF CURB TO FACE OF PARAPET
NORTHBOUND: 57'-0"±
SOUTHBOUND: 57'-0"±

DESIGN LOADING: CF2000 (57) AASHTO HS20-44 AND THE ALTERNATE MILITARY LOADING

SKEW ANGLE: 24°42'43"± L.F.

SUPERELEVATION: NONE - NORMAL CROWN

WEARING SURFACE: 1 1/4" LATEX MODIFIED CONCRETE

ALIGNMENT: TANGENT

APPROACH SLABS: AS-1-81 & AS-1-54 (25' LONG)

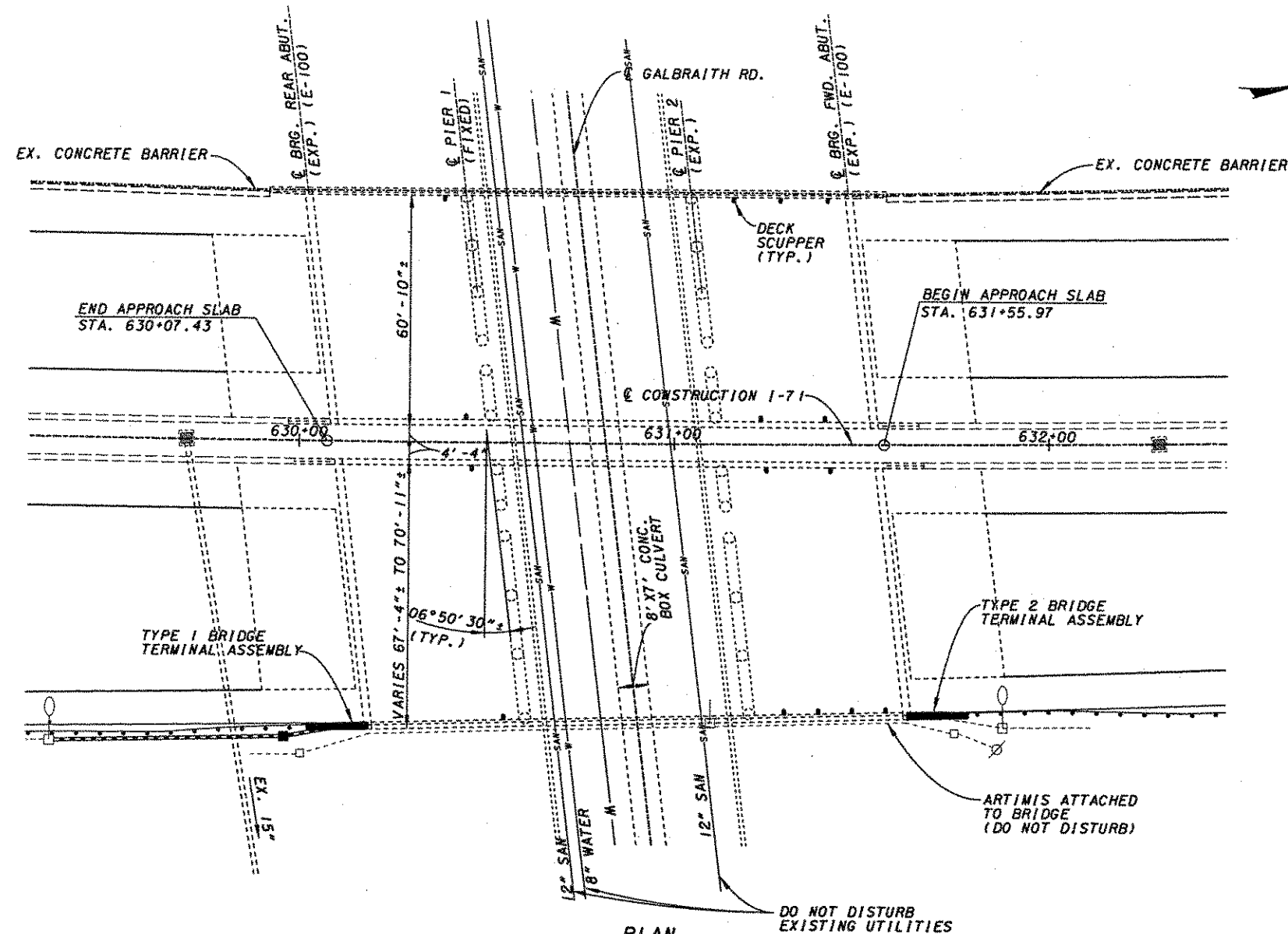
YEAR BUILT: 1967

YEAR REHABBED: 1985:

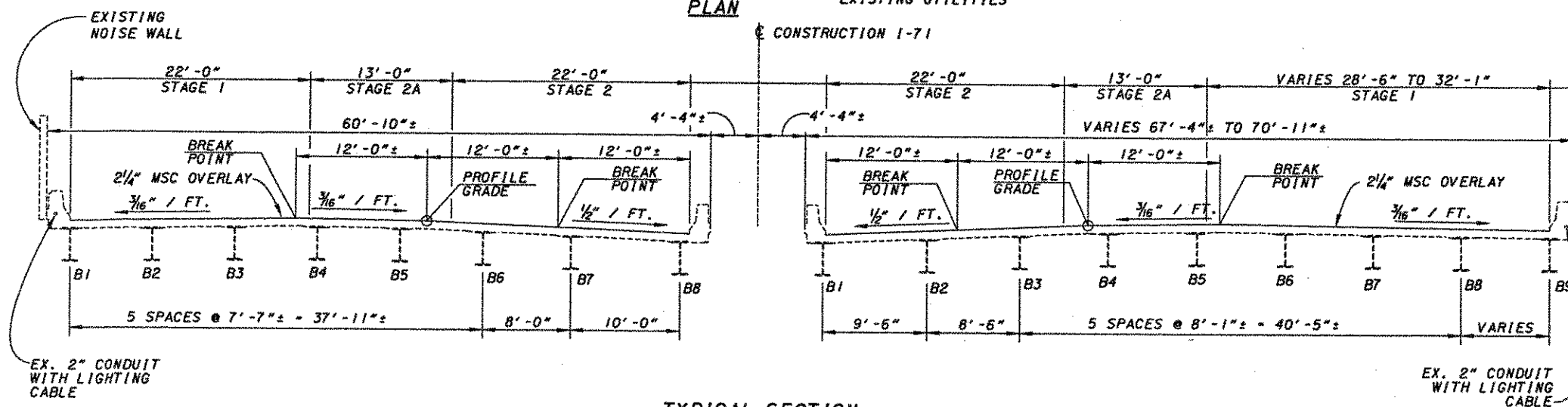
LATITUDE: N 39°11'14"

LONGITUDE: W 84°22'51"

SPN: 3106969L 3106977R



PLAN



TYPICAL SECTION

PROPOSED WORK

1. ON THE RIGHT BRIDGE, UPGRADE BRIDGE TERMINAL ASSEMBLIES TO TYPE 1 AND TYPE 2.
2. REMOVE EXISTING 1.25" THICK LMC OVERLAY AND 1" OF THE EXISTING DECK. PLACE 2.25" THICK MSC OVERLAY. WORK TO BE PER SS848 AND AS MODIFIED BY THE DESIGN BUILD SCOPE OF SERVICES.
3. FOR REMOVAL AND REPLACEMENT OF EXISTING ASPHALT OVERLAY FROM THE APPROACH SLABS SEE ROADWAY PLANS.
4. SEAL ABUTMENTS, WINGWALLS, RAILINGS, PIERS, AND BACK WALLS WITH EPOXY-URETHANE, COLOR SHALL BE FEDERAL COLOR STANDARD 17778 (LIGHT NEUTRAL).
5. EXTEND SCUPPERS SO THAT OUTLET IS 8" BELOW BOTTOM FLANGE.
6. RETROFIT EXISTING SLIDING PLATE EXPANSION JOINTS TO STRIP SEAL EXPANSION JOINTS. EXTEND INTO RAILING.
7. REPLACE LOOSE BEARING ANCHORS AT THE FOLLOWING LOCATIONS: LEFT BRIDGE, PIER 1, BEAM 8; AND RIGHT BRIDGE, PIER 2, BEAM 1.
8. REMOVE BRUSH WITHIN 10' OF STRUCTURE LIMITS. KILL AND REMOVE ALL VEGETATION GROWING THROUGH CONCRETE SLOPE PROTECTION.
9. REFURBISH ALL ABUTMENT BEARINGS.

EXISTING STRUCTURE - I.R. 71 OVER GALBRAITH ROAD

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS: NORTHBOUND: 42'-0"±, 60'-0"±, 42'-0"±
SOUTHBOUND: 42'-0"±, 60'-0"±, 42'-0"±
MEASURED C/C BEARINGS.

ROADWAY WIDTH: FACE OF CURB TO FACE OF PARAPET
SOUTHBOUND: 57'-0"±
NORTHBOUND: VARIES 63'-6"± TO 67'-1"

DESIGN LOADING: CF2000 (57) AASHTO HS20-44 AND THE ALTERNATE MILITARY LOADING
SKEW ANGLE: 6°50'30"± R.F.

SUPERELEVATION: NONE - NORMAL CROWN

WEARING SURFACE: 1 1/4" LATEX MODIFIED CONCRETE

ALIGNMENT: 0°28' HORIZONTAL CURVE TO THE LEFT -- STRAIGHT BRIDGE

APPROACH SLABS: AS-1-B1 & AS-1-54 (25' LONG)

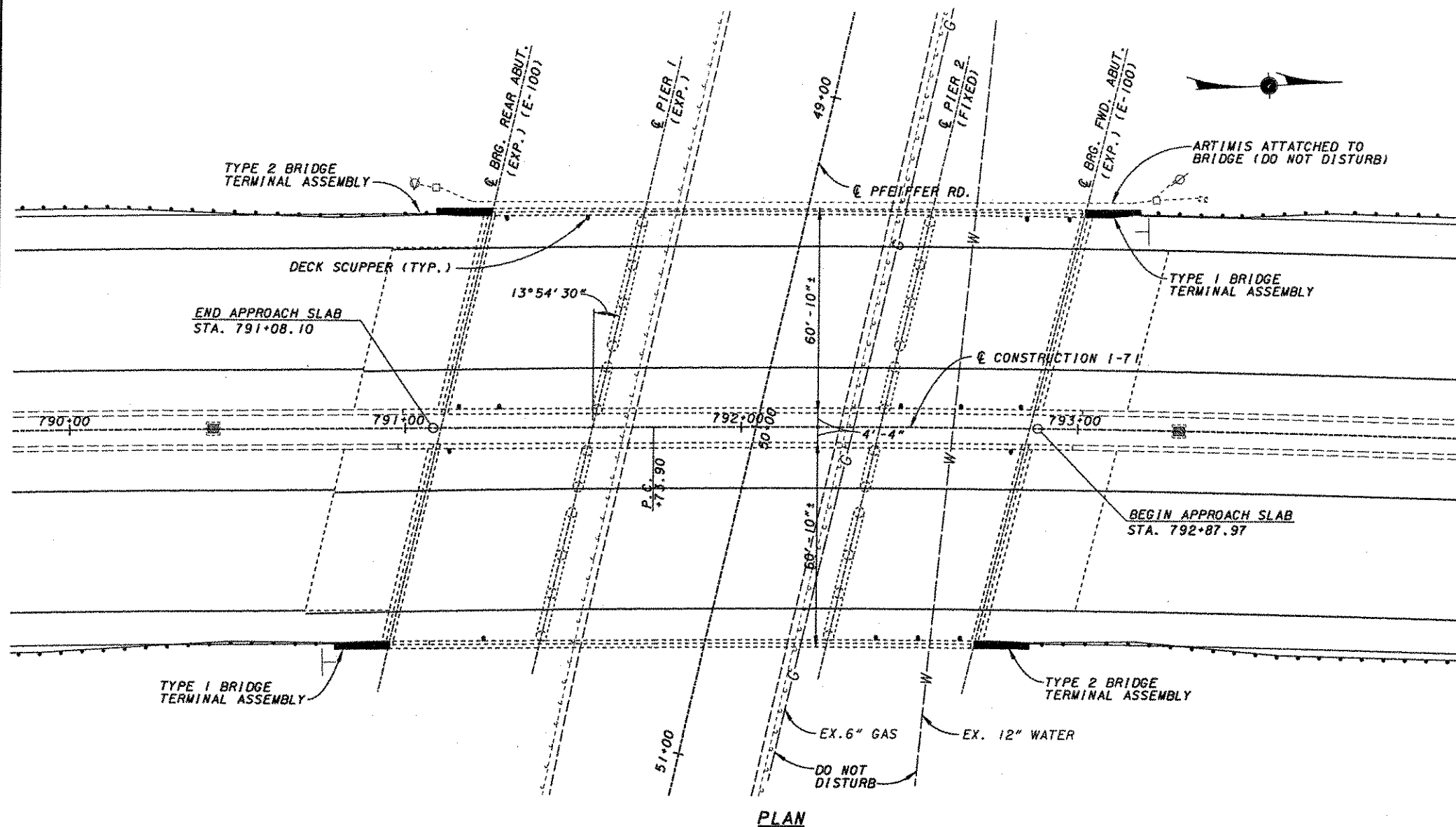
YEAR BUILT: 1968

YEAR REHABBED: 1985±

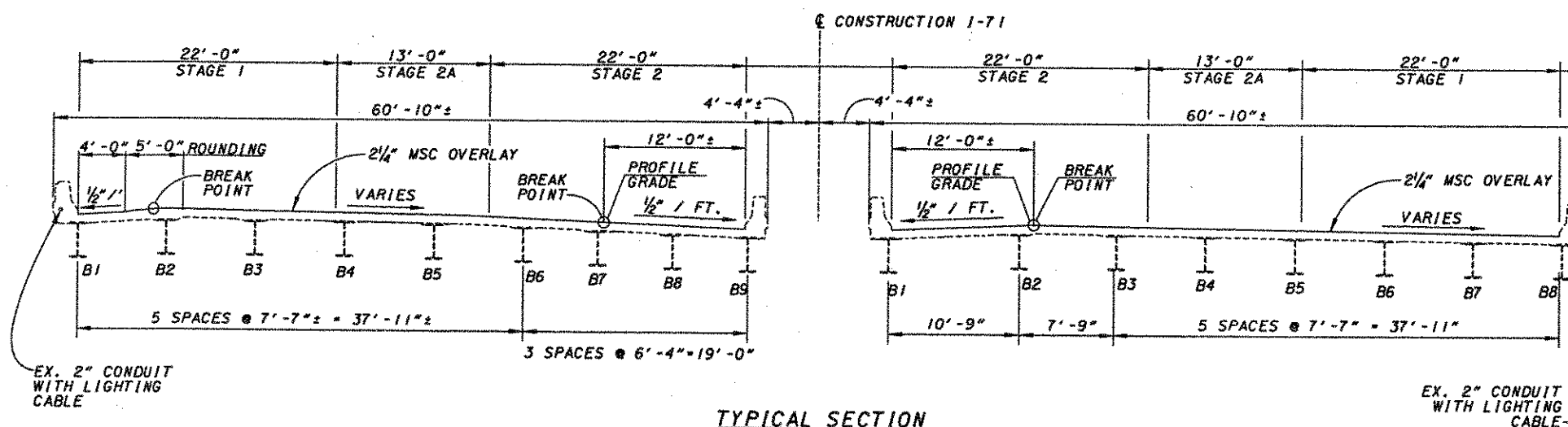
LATITUDE: N 39°12'21"

LONGITUDE: W 84°22'20"

SFN: 3107027L 3107051R



PLAN



TYPICAL SECTION

PROPOSED WORK

1. UPGRADE BRIDGE TERMINAL ASSEMBLIES TO TYPE 1 AND TYPE 2.
2. REMOVE EXISTING 1.25" THICK LMC OVERLAY AND 1" OF THE EXISTING DECK. PLACE 2.25" THICK MSC OVERLAY. WORK TO BE PER SS848 AND AS MODIFIED BY THE DESIGN BUILD SCOPE OF SERVICES.
3. FOR REMOVAL AND REPLACEMENT OF ASPHALT OVERLAY ON APPROACH SLABS SEE ROADWAY PLANS.
4. SEAL ABUTMENTS, WINGWALLS, RAILINGS, PIERS, AND BACK WALLS WITH EPOXY-URETHANE, COLOR SHALL BE FEDERAL COLOR STANDARD 17778 (LIGHT NEUTRAL).
5. EXTEND SCUPPERS SO THAT OUTLET IS 8" BELOW BOTTOM FLANGE.
6. RETROFIT EXISTING SLIDING PLATE EXPANSION JOINTS TO STRIP SEAL EXPANSION JOINTS. EXTEND INTO RAILING.
7. AT LEFT FORWARD ABUTMENT REMOVE BACKWALL DOWN TO APPROACH SLAB SEAT AND 18" OF END OF DECK. INSTALL NEW STRIP SEAL JOINT. PLACE NEW CLASS MS CONCRETE DECK AND BACKWALL.
8. REPLACE LOOSE BEARING ANCHORS AT THE FOLLOWING LOCATIONS: LEFT BRIDGE, PIER 1, BEAM 8; LEFT BRIDGE, PIER 2, BEAMS 7, 8 AND 9.
9. REMOVE BRUSH WITHIN 10' OF STRUCTURE LIMITS.
10. REFURBISH ALL ABUTMENT BEARINGS.

EXISTING STRUCTURE - I.R. 71 OVER PFEIFFER ROAD

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE.

SPANS: NORTHBOUND: 45'-0"±, 85'-6"±, 45'-0"±
SOUTHBOUND: 45'-0"±, 85'-6"±, 45'-0"± (C/C BEARINGS)

ROADWAY WIDTH: FACE OF CURB TO FACE OF PARAPET
NORTHBOUND: 57'-0"±
SOUTHBOUND: 57'-0"±

DESIGN LOADING: CF2000 (57) AND AASHTO HS20-44 AND THE ALTERNATE MILITARY LOADING

SKIEW ANGLE: 13°54'30" L.F. TO BACK TANGENT

SUPERELEVATION: VARIES - 0.032'/' MAX.

WEARING SURFACE: 1 1/4" LATEX MODIFIED CONCRETE

ALIGNMENT: TANGENT & 1° CURVE TO RT.

APPROACH SLABS: AS-1-81 & AS-1-54 (25' LONG)

YEAR BUILT: 1968

YEAR REHABBED: 1985±

LATITUDE: N 39°14'59"

LONGITUDE: W 84°21'56"

SFN: 3107329L 3107353R

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS:

ITEM 201 - CLEARING AND GRUBBING
ITEM 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
ITEM 508 - FALSEWORK AND FORMS.
ITEM 509 - REINFORCING STEEL.
ITEM 510 - DOWEL HOLES
ITEM 513 - STRUCTURAL STEEL.
ITEM 516 - EXPANSION AND CONTRACTION JOINTS, JOINT SEALER AND BEARING DEVICES.
ITEM 518 - DRAINAGE OF STRUCTURES
ITEM 601 - SLOPE AND CHANNEL PROTECTOR
ITEM 607 - FENCE

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT SUPPLEMENTAL SPECIFICATIONS:

813 DATED 06/14/95 - CORRECTING ELEVATION OF CONCRETE APPROACH SLAB AND PAVEMENT
815 DATED 02/22/00 - FIELD PAINTING OF EXISTING STEEL, OZEU.
842 DATED 01/6/99 - CONCRETE FOR STRUCTURES.
843 DATED 05/5/98 - PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR
848 DATED 06/30/98 - BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING HYDRODEMOLITION
899 DATED 10/21/98 - CONCRETE - GENERAL
864 DATED 07/11/00 - SEALING OF CONCRETE SURFACES
910 DATED 07/11/00 - OZEU STRUCTURAL STEEL PAINT
954 DATED 09/09/97 - HIGH MOLECULAR WEIGHT METHACRYLATE (HMMW) RESIN

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT PROPOSAL NOTE:

PROPOSAL NOTE 522 DATED 05/22/97 - CONCRETE REPAIR BY EPOXY INJECTION

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT STANDARD DRAWINGS:

EXJ-4-87 REVISED 04/20/01
BR-1 REVISED 01/06/99
GR-3.1M DATED 10/21/97
GR-3.2M DATED 10/21/97
F-3.1 DATED 07/28/00
F-1.1 DATED 07/28/00

DESIGN SPECIFICATIONS:

NEW WORK FOR THESE STRUCTURES CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING TH 1997, 1998, AND 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN STRESSES:

CLASS 5 CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (28 DAY)
(PARAPETS)
CLASS MS CONCRETE - MODULUS OF RUPTURE 400 PSI (24 HRS.) (BACKWALLS AND DECK)
CLASS C CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (28 DAY) (WINGWALL EXTENSIONS)
STRUCTURAL STEEL - ASTM-A36-YIELD STRENGTH 36,000 PSI
REINFORCING STEEL - ASTM A615, A616, OR A617. EPOXY COATED GRADE 60 - MINIMUM YIELD STRENGTH 60,000 PSI.

DECK PROTECTION METHOD:

SEALING OF CONCRETE SURFACES
MICRO-SILICA MODIFIED CONCRETE OVERLAY

JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE TO ENABLE PERFORMANCE OF BEARING REPAIRS.

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE OR RE-POSITION ANY EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS AND TO ENABLE REPAIRS OF PROJECT BRIDGE BEARINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE 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 AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. THE PLANS SHALL BE PREPARED THE PLANS SHALL BE PREPARED AND STAMPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER.

SUBMITTAL REQUIREMENTS:

THREE (3) SETS OF JACKING PLANS CONSISTING OF AT LEAST THE INFORMATION REQUESTED BY THIS NOTE SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS SCHEDULED TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSES OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR'S SELECTED 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 VALVES, 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.

ABBREVIATION LIST

R.C. - REINFORCED CONCRETE
CONC. - CONCRETE
E.F. - EACH FACE
N.F. - NEAR FACE
F.F. - FAR FACE
C.P.P. - CORRUGATED PLASTIC PIPE
N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE
SER. - SERIES BARS
BTM. - BOTTOM
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
EL. - ELEVATION
TYP. - TYPICAL
STD. - STANDARD
DWG. - DRAWING

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. A METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS SHALL NOT BE PERMITTED.

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

FOR LIFTS GREATER THAN 1 INCH, 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 OVER-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. THE ONLY EXCEPTION IS THE SITUATION WHERE THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS; NO PERMANENT SHIMMING IS REQUIRED AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED 1/4 INCH.

MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1 INCH OR LESS. THIS HEIGHT MAY BE MODIFIED IF CALCULATIONS, BY THE CONTRACTOR'S OHIO REGISTERED PROFESSIONAL ENGINEER, SHOW THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES FOR THOSE COMPONENTS AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER 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. ANY BEAMS THAT SEPARATE FROM THE DECK SHALL BE EPOXY INJECTED FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH ODOT'S PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

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

CLEANING AND RE-USING PLAN-DESIGNATED EXISTING REINFORCING STEEL.

PAYMENT FOR WORK TO CLEAN AND RE-USE PLAN DESIGNATED EXISTING REINFORCING STEEL SHALL BE INCIDENTAL TO THE SUBJECT CONCRETE STRUCTURE WORK.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN.

ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW REINFORCING STEEL. ANY EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT THE CONTRACTOR'S COST. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER.

THE NUMBER OF POUNDS OF REINFORCING STEEL PAID FOR UNDER FORCE ACCOUNT SHALL BE THE ACTUAL POUNDS OF REPLACEMENT REINFORCING STEEL SPECIFIED BY THE ENGINEER DUE TO CORROSION AND SHALL INCLUDE PLACEMENT, DOWELING, BENDING, SUPPORTING, TIE WIRES AND TYING OF THAT SPECIFIED REINFORCING STEEL.

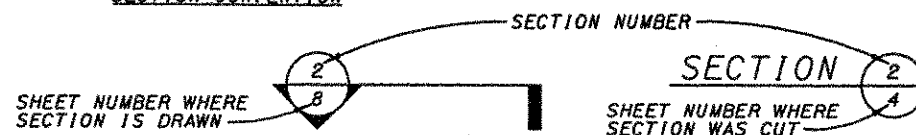
SEAL PIERS, PIER CAPS, WINGWALLS, ABUTMENTS, RAILING, AND DECK EDGES WITH EPOXY-URETHANE.

THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO SEAL THE DESIGNATED EXPOSED CONCRETE SURFACE AREAS IN THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 864.

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, 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. EXISTING VERTICAL CLEARANCES SHALL BE MAINTAINED AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

SECTION CONVENTION



CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 2" 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. 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.

PORTIONS OF STRUCTURE REMOVED:

ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ASBESTOS ABATEMENT

THE CONTRACTOR SHALL CONDUCT ASBESTOS INSPECTIONS OF ALL BRIDGES SUBJECT TO RENOVATION OR DEMOLITION AS PER CHAPTER 3745-20 OF THE OHIO ADMINISTRATIVE CODE (OAC) "ASBESTOS EMISSIONS CONTROL FROM RENOVATION/DEMOLITION AND WASTE DISPOSAL OPERATION" MAY 29, 1990 UTILIZING A CERTIFIED OHIO ASBESTOS HAZARD EVALUATION SPECIALIST. SHOULD SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) BE ENCOUNTERED, PERFORM BULK SAMPLING AND ANALYSIS. PREPARE A LETTER REPORT (1-2 PAGES) INCLUDING A BRIEF DISCUSSION OF THE INSPECTION AND SAMPLING METHODOLOGY AND MAP INDICATING THE BRIDGE LOCATION AND SAMPLING LOCATIONS, AND ANALYTICAL TEST RESULTS.

THE CONTRACTOR SHALL COMPLETE AN ODEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS FORM TO THE OHIO EPA AT LEAST 10 WORKING DAYS BEFORE OPERATIONS BEGIN.

AS THESE INSPECTION REPORTS AND NOTIFICATION FORMS ARE COMPLETED, COPIES SHALL BE FORWARDED TO ODOT'S ON SITE PROJECT ENGINEER.

SHOULD ASBESTOS CONTAINING MATERIAL BE ENCOUNTERED, ALL SUSPECT MATERIALS SHALL BE REMOVED AND PROPERLY DESPOSED OF BY A CERTIFIED ASBESTOS REMOVAL CONTRACTOR IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (30 CFR PART 61, SUBPART M) SHALL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON SHALL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

ALL ASSOCIATED COSTS OF ASBESTOS MATERIALS TO BE REMOVED AND PROPERLY DISPOSED OF, WILL BE PAID UNDER 'THIRD PARTY BILLING' PROVISIONS OF ODOT CHANGE ORDER POLICY 512-004(P) APPENDIX D.

RETRO FIT EXISTING SLIDING PLATE EXPANSION JOINT TO STRIP SEAL EXP. JOINTS

PROVIDE ALL LABOR AND MATERIALS TO RETROFIT EXISTING EXPANSION JOINT TO 3" STRIP SEAL JOINTS. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH PLAN DETAILS AND STANDARD DRAWING EXJ-4-87 DETAILS AND NOTES.

REFURBISHING BEARING DEVICES

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED WITH THIS ITEM THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK ITEMS: DISASSEMBLY OF THE BEARINGS; HAND TOOL CLEANING (GRINDING IF NECESSARY); PAINTING WITH OZEU. REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (SEE ODOT SPEC SECTION 711.21); INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT; REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS; RE-WELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F; LUBRICATING SLIDING SURFACES; AND RE-ASSEMBLY OF THE BEARINGS. THE CONTRACTOR SHALL ASSURE 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 PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE 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 CWS SECTIONS 102.05, 105.02, AND 513.02. 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.

MECHANICAL CONNECTORES:

AN APPROVED MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORES SHALL CONFORM WITH THE MANUFACTURER'S RECOMMENDED PROCEDURES. CONNECTORES AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATINGS FOR BOTH CONNECTORES AND BARS SHALL CONFORM TO SAME SPECIFICATION. COATINGS WHICH HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEET THE SPECIFICATIONS. MECHANICAL CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH ITEM 509.

REPLACE LOOSE BEARING ANCHORS

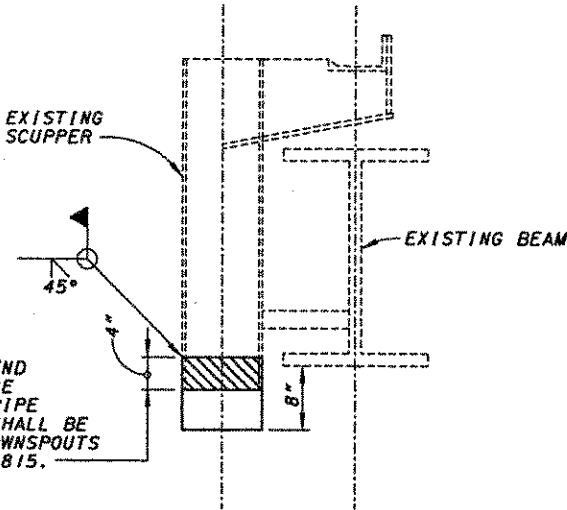
ANCHORS SHALL BE ASTM A-36 GALVANIZED RODS 1 1/4" IN DIAMETER BY 1'-7" LONG. GROUT RODS IN PLACE USING NONSHRINK GROUT PER ITEM 510. RODS SHOULD EXTEND 1" ABOVE BASE PLATE.

REPAIR SETTLED SECTIONS OF CONCRETE SLOPE PROTECTION

SETTLED SECTIONS INDICATED ON THE PLANS SHALL BE REPAIRED BY JACKING PER SUPPLEMENTAL SPECIFICATION 813 OR REPLACEMENT PER ITEM 601.

EXTEND SCUPPERS SO THAT THE OUTLET IS 8" BELOW THE BOTTOM FLANGE.

FURNISH AND INSTALL MATERIALS NECESSARY TO EXTEND SCUPPERS TO AN ELEVATION WHERE THE SCUPPER OUTLET IS LOCATED 8 INCHES BELOW THE BOTTOM FLANGE OF THE ADJACENT BRIDGE BEAM. REMOVE ANY PORTION OF EXISTING SCUPPER THAT IS DETERIORATED PRIOR TO INSTALLATION OF THE NEW EXTENSION.



SCUPPER EXTENSION DETAIL

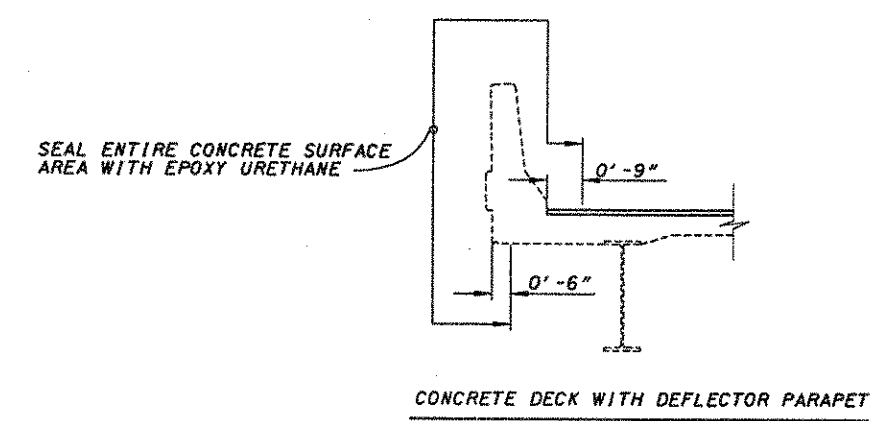
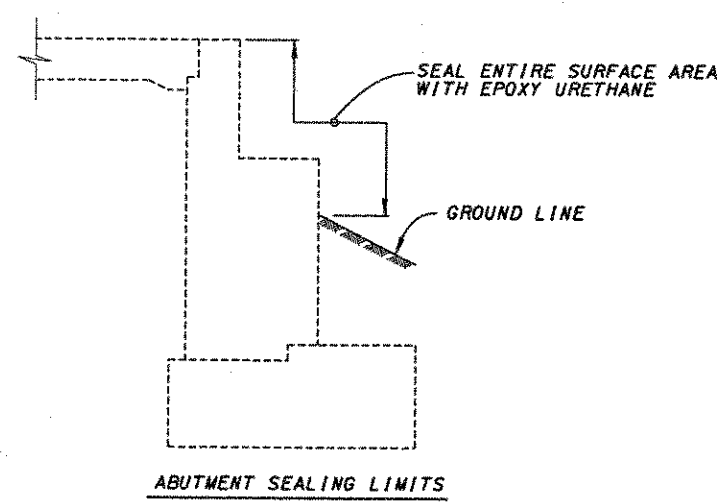
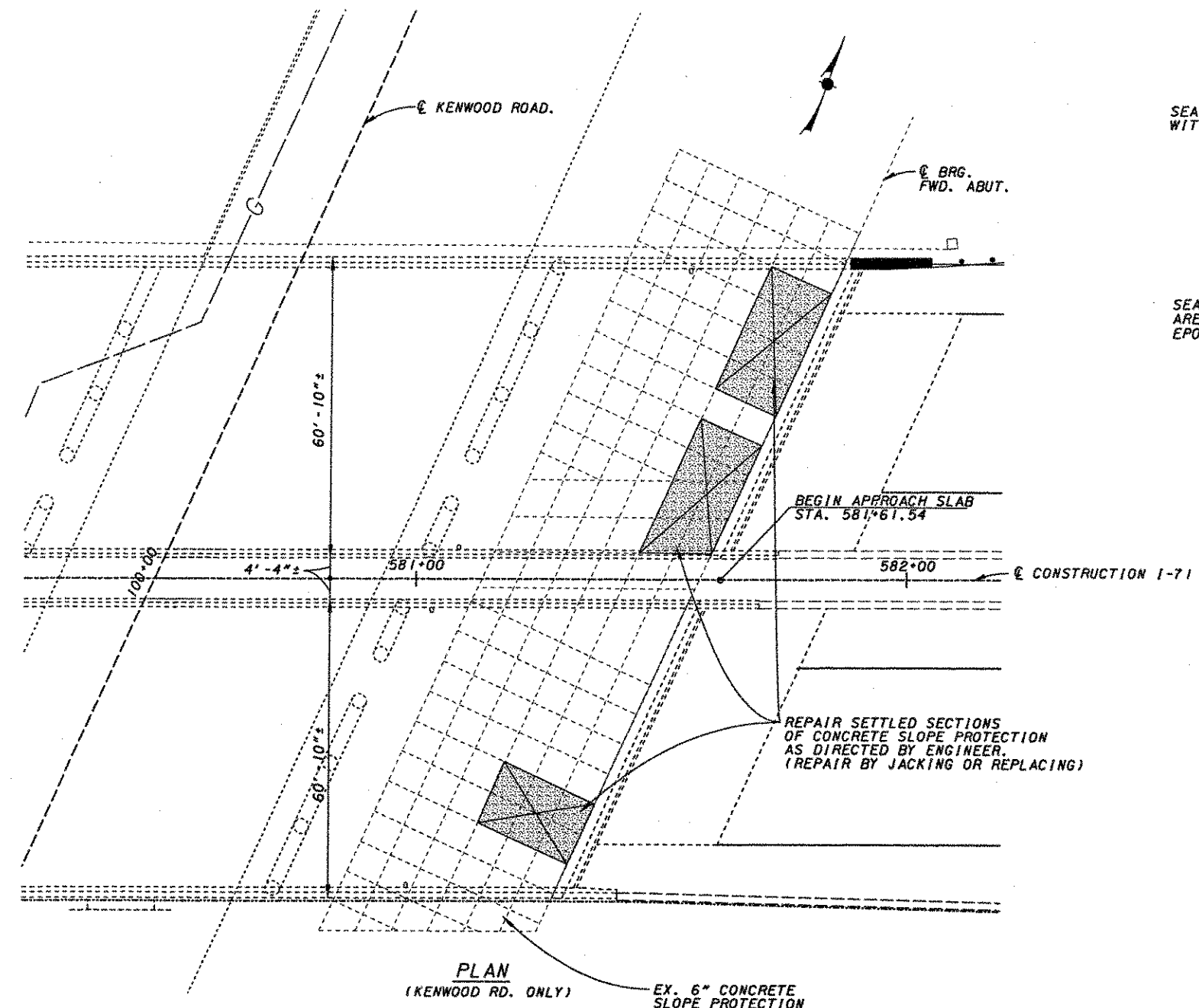
REMOVE MINIMUM OF 4"± OF EXISTING SCUPPER. EXTEND SCUPPER TO 8" BELOW THE BOTTOM OF THE BEAM FLANGE WITH THE SAME SIZE PIPE AS THE EXISTING PIPE. PIPE SHALL CONFORM TO ODOT 748.06. EXTENSION PIECE SHALL BE FURNISHED WITH ONE END BEVELLED FOR WELDING. DOWNSPOUTS SHALL BE PAINTED PER SUPPLEMENTAL SPECIFICATION 815.

UTILITY LINES:

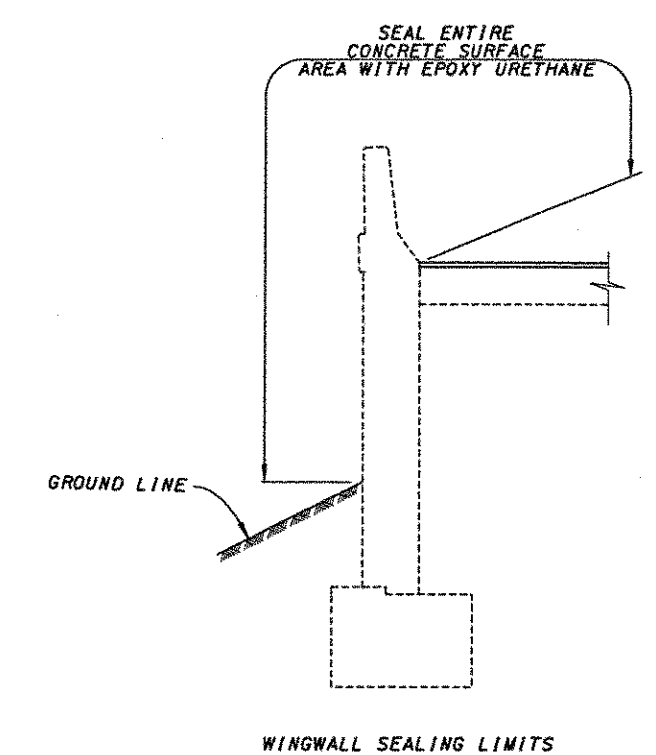
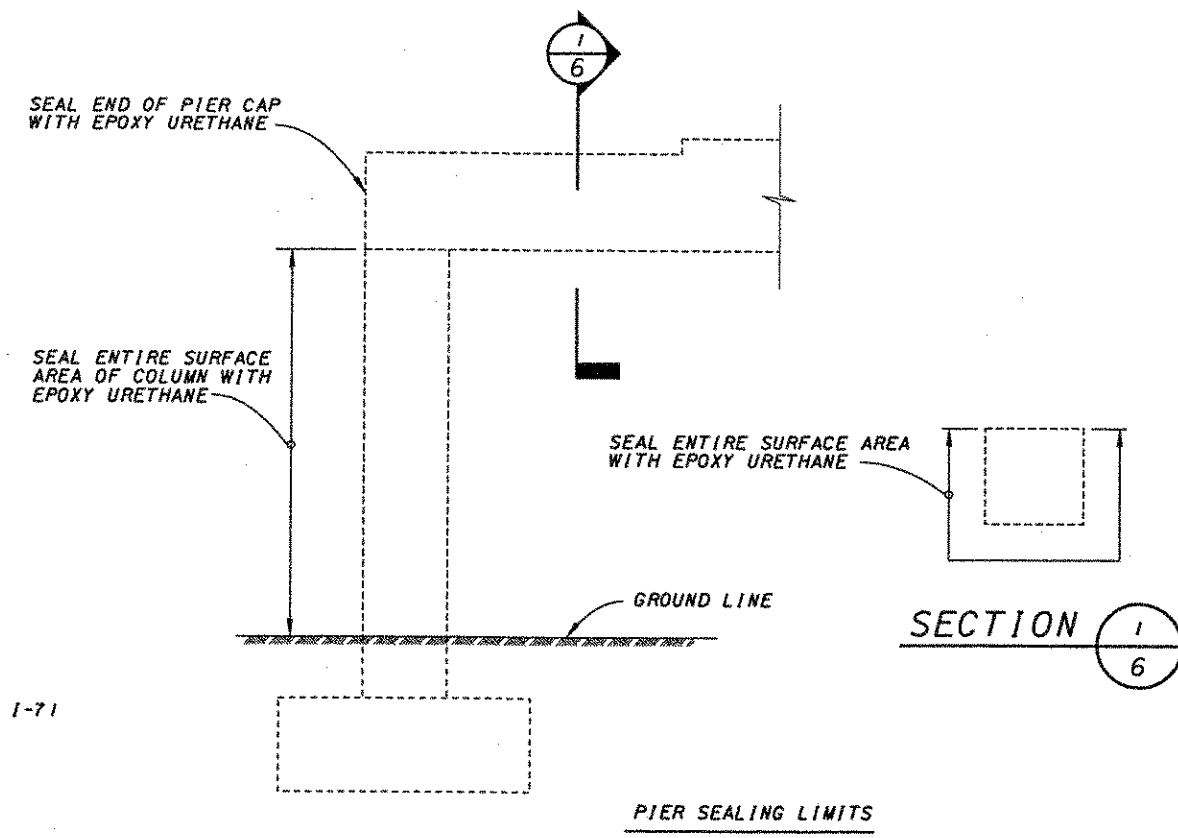
ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

MAINTENANCE OF TRAFFIC:

REFERENCE SHALL BE MADE TO THE PROJECT MAINTENANCE OF TRAFFIC PLANS AND NOTES. ALL WORK TO BE DONE IN STAGES CONSISTANT WITH THE MAINTENANCE OF TRAFFIC REQUIREMENTS.

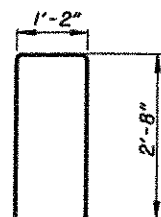


SEALING OF CONCRETE SURFACES. SUPERSTRUCTURE



SEALING OF CONCRETE SURFACES. SUBSTRUCTURE

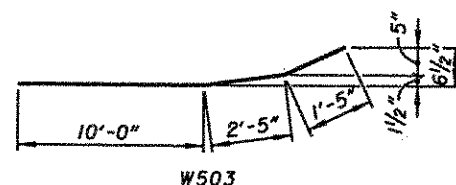
BARRIER REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
W501	24	3' - 0"	75	BENT
W502	2	5' - 7"	12	BENT
W503	4	13' - 10"	57	BENT
W504	16	3' - 6"	58	STR.
W505	6	6' - 3"	39	BENT.
W506	12	2' - 4"	29	STR.
W507	12	13' - 10"	173	STR.
W601	12	3' - 8"	46	BENT
W602	26	2' - 5"	66	BENT
W603	26	3' - 3"	88	STR.
		TOTAL -	643	



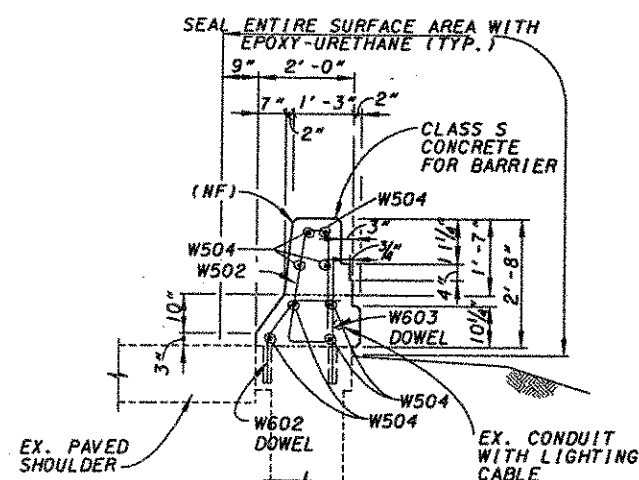
W505



W501

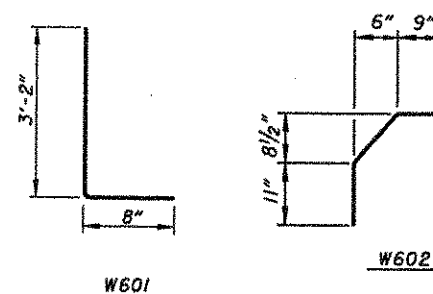


W503

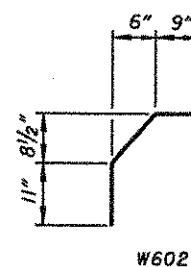


SECTION A
7

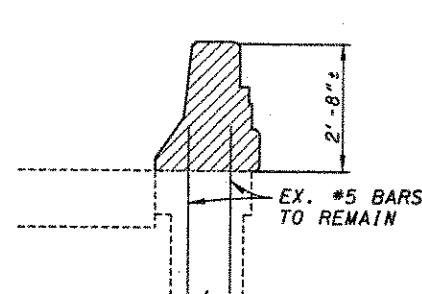
(MATCH EX. BARRIER SHAPE)



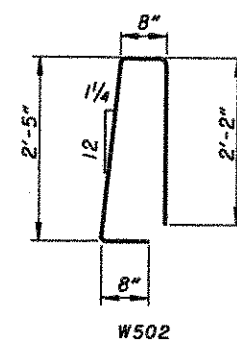
W601



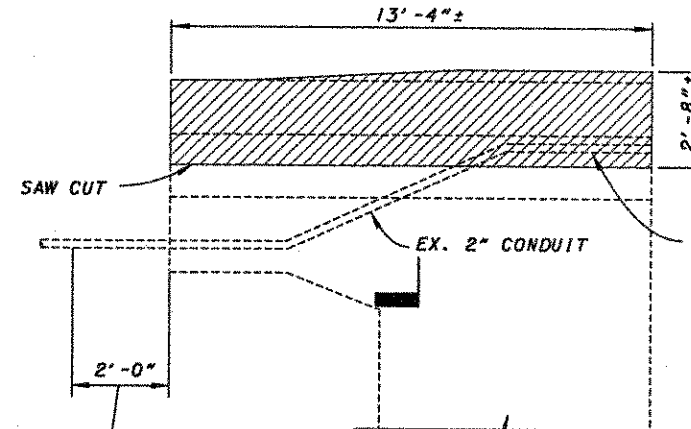
W602



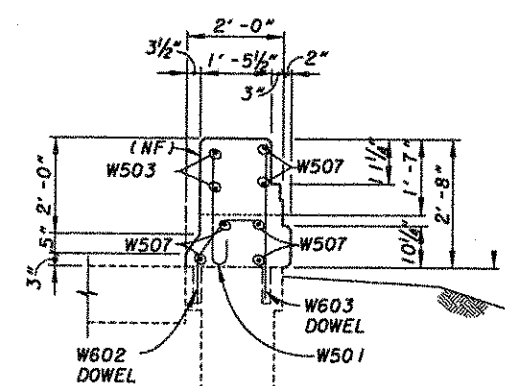
SECTION E
7



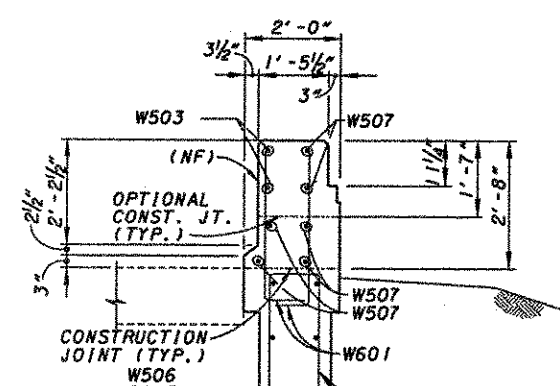
W502



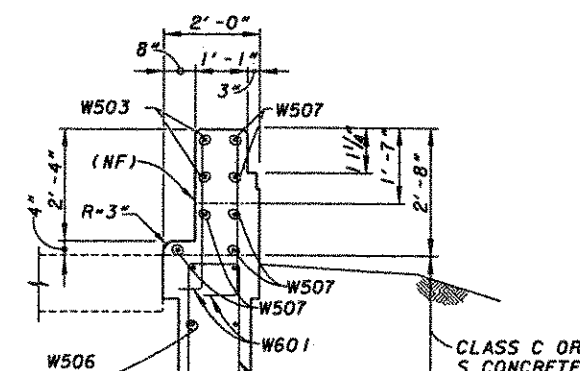
REMOVAL ELEVATION

 DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED

SECTION B
7



SECTION C
7



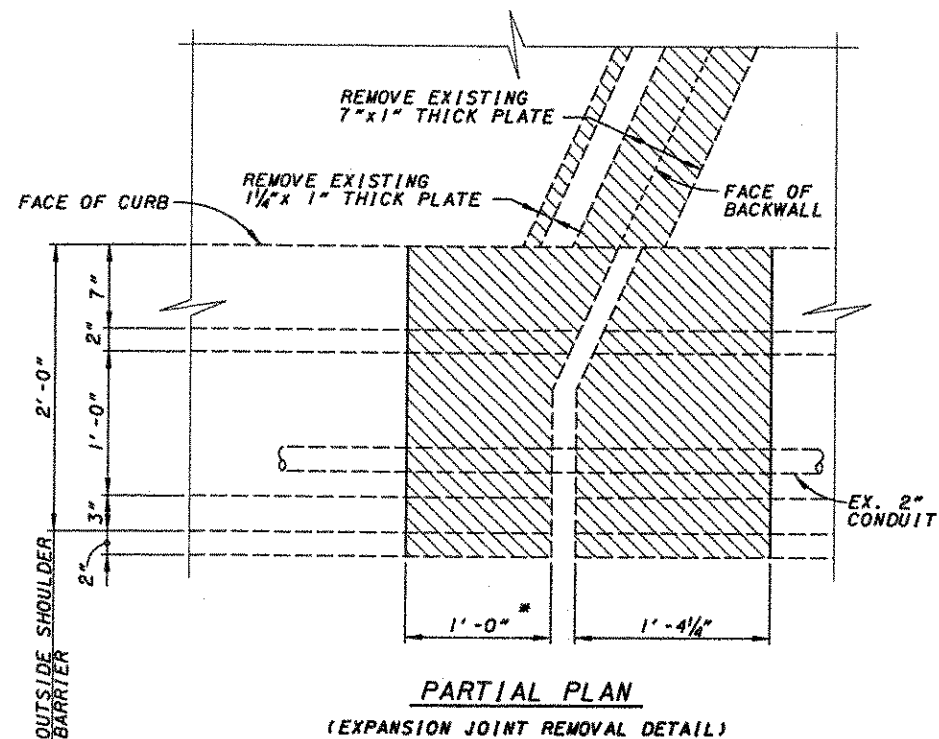
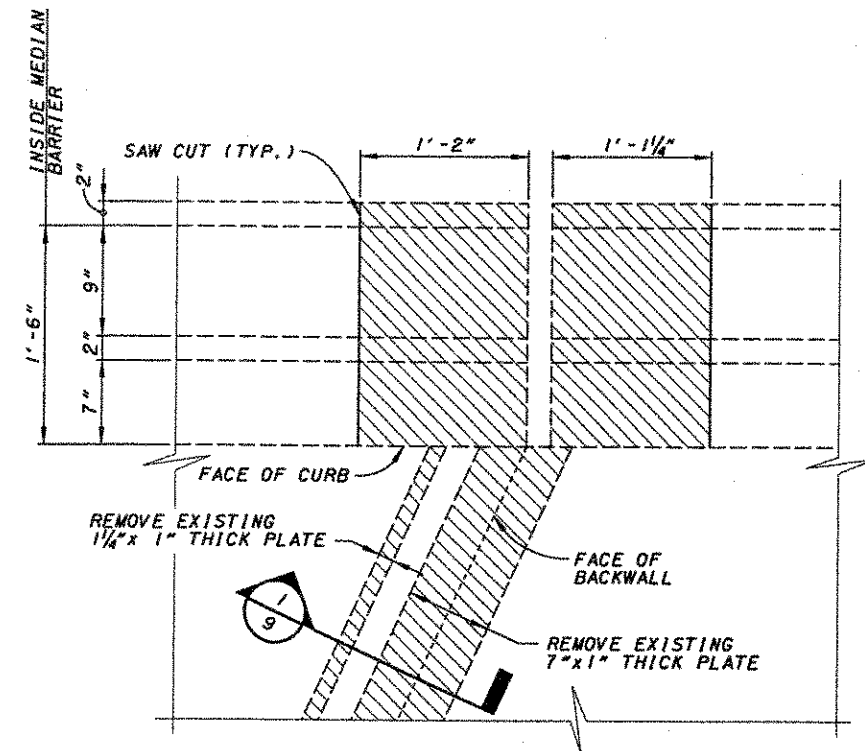
SECTION D
7

ALL STEEL CLEARANCES ARE
2" UNLESS NOTED OTHERWISE.

EPOXY GROUT #6 DOWELS 9" INTO EXISTING CONCRETE.
EPOXY GROUT #5 DOWELS 6" INTO EXISTING CONCRETE.

E.F. = EACH FACE
N.R. = NEAR FACE
F.F. = FAR FACE

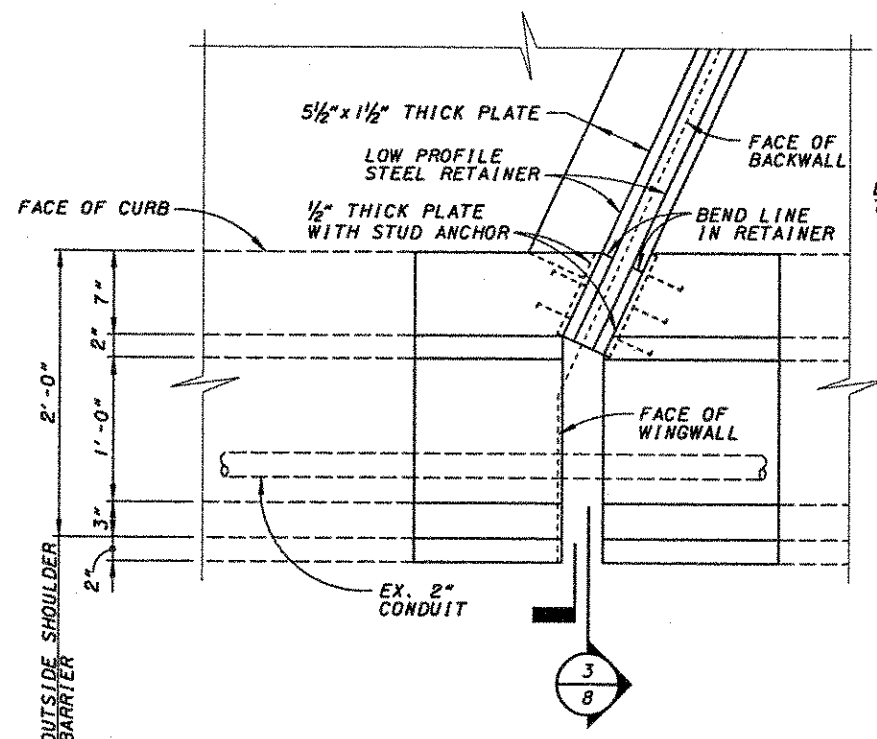
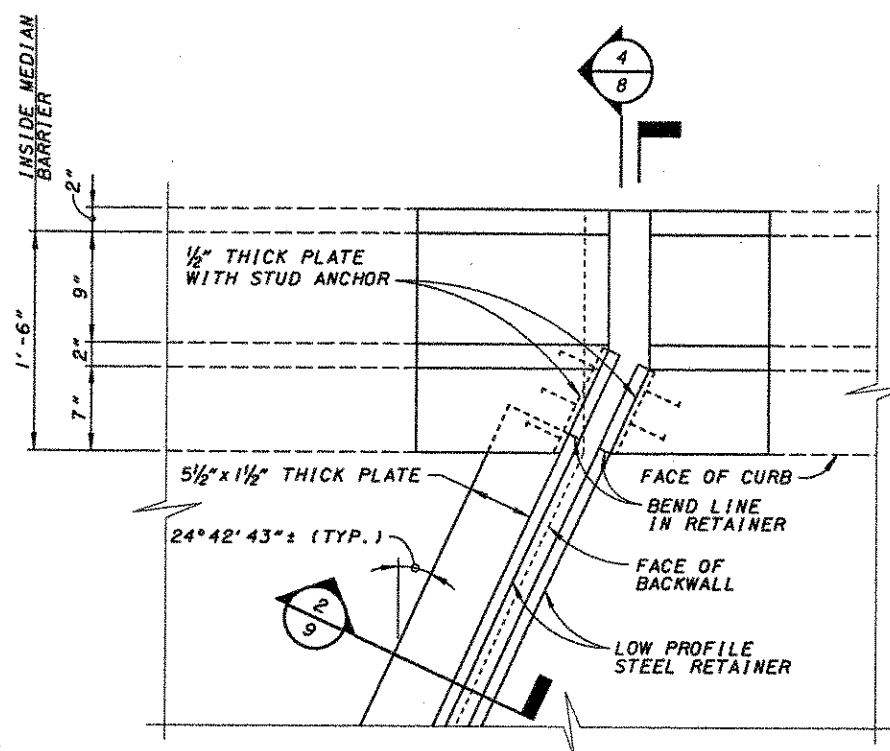
1. SEE STD. DWG. BR-1 FOR ADDITIONAL INFORMATION.



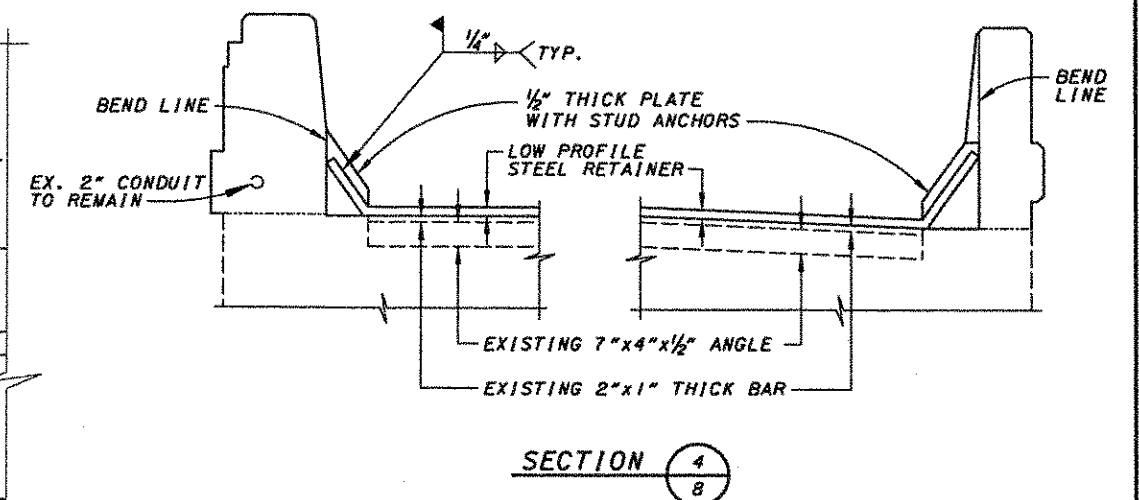
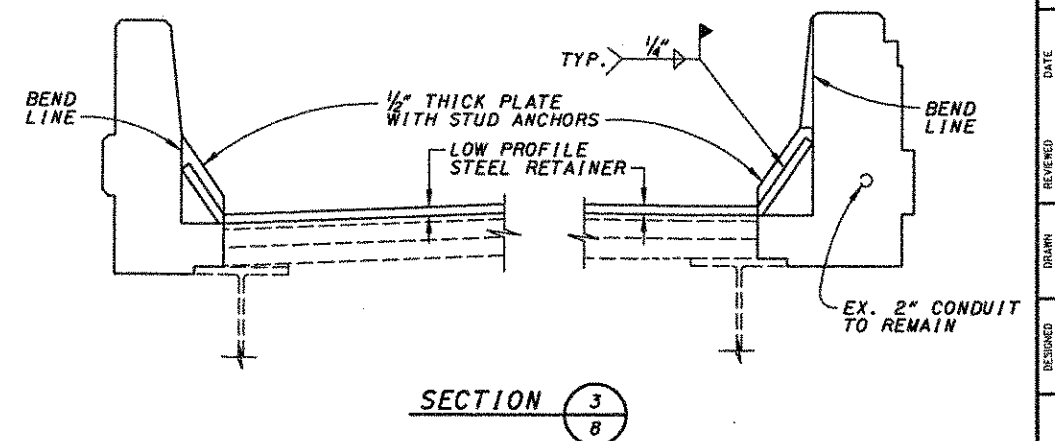
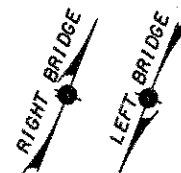
PARTIAL PLAN
(EXPANSION JOINT REMOVAL DETAIL)

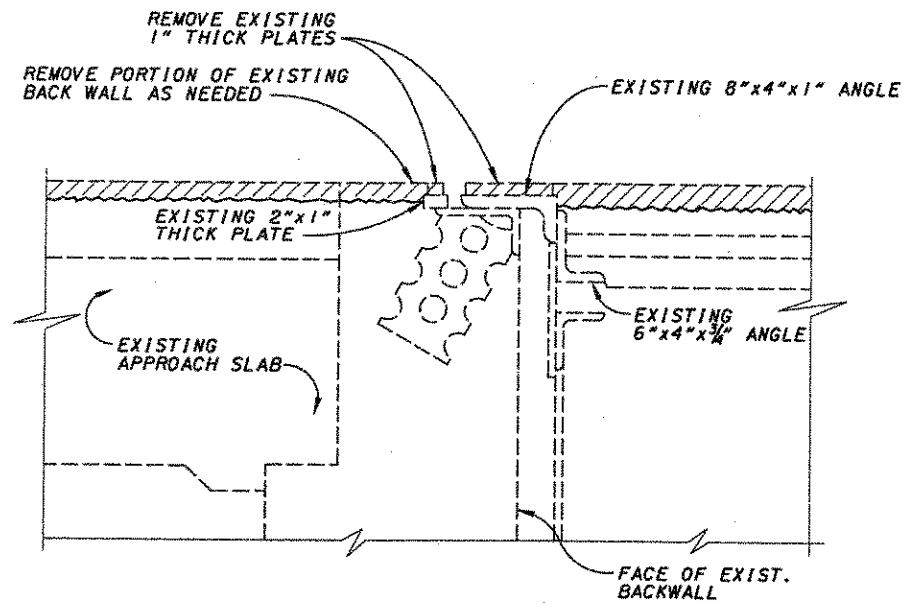
 DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED.

* FOR NORTHBOUND BRIDGE ONLY,
ALL NEW PARAPET ON SOUTHBOUND.



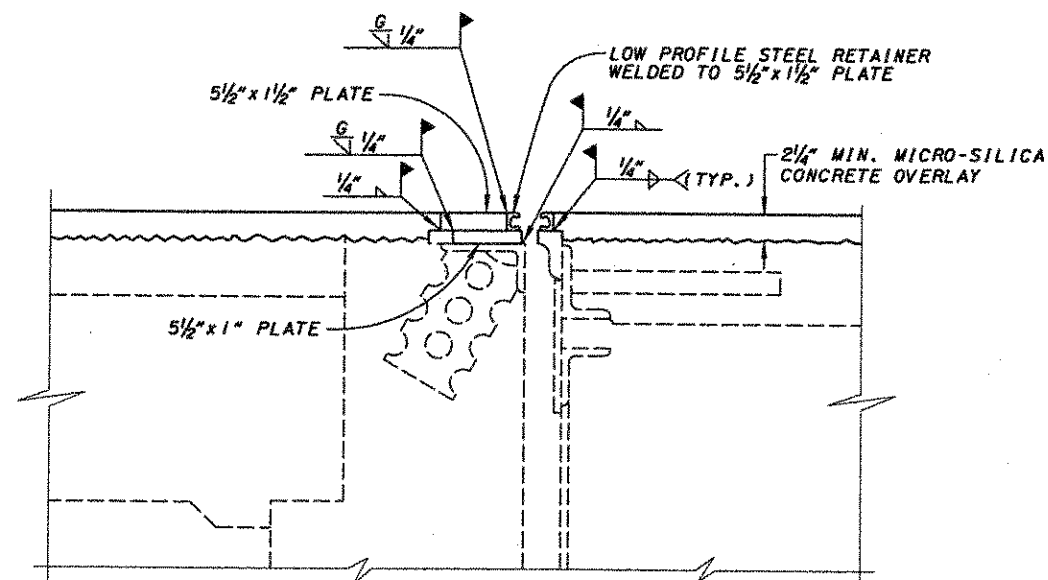
PARTIAL PLAN
(NEW EXPANSION JOINT DETAIL)



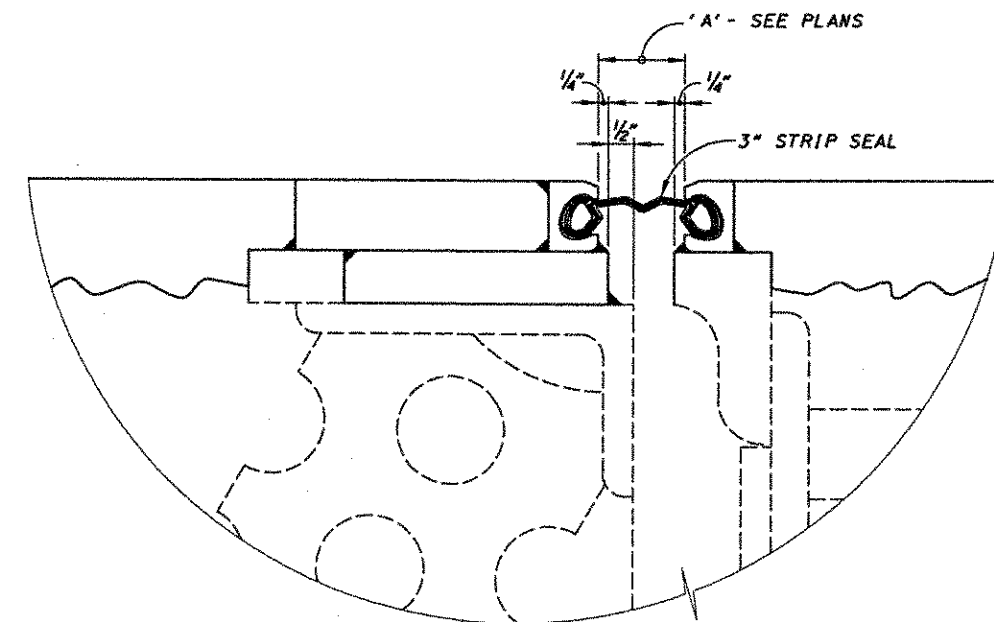


 DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED.

SECTION 1
8

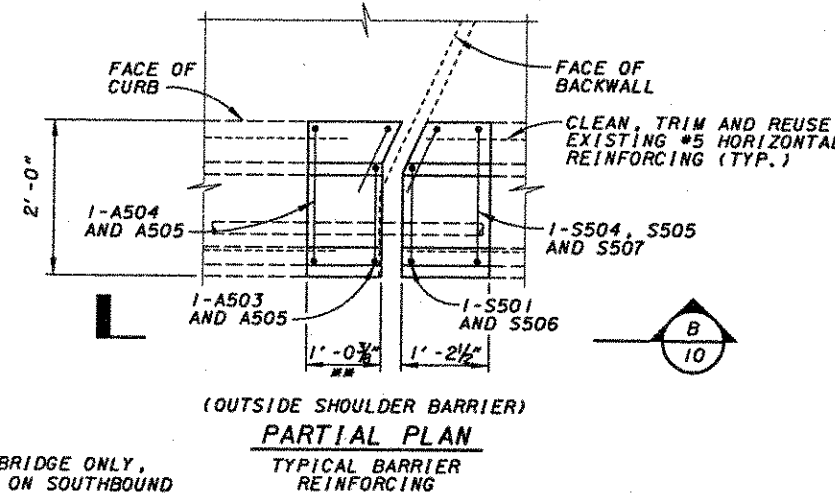
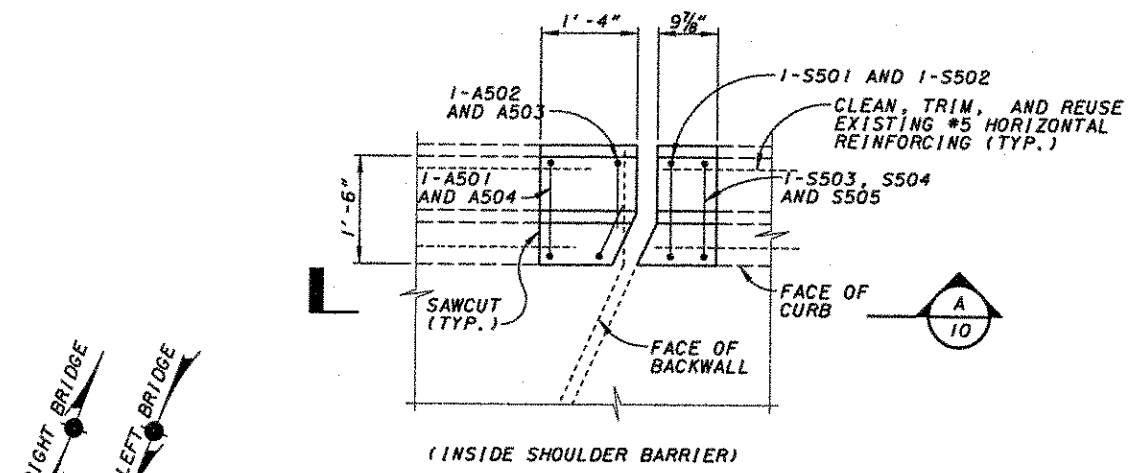


SECTION 2
8

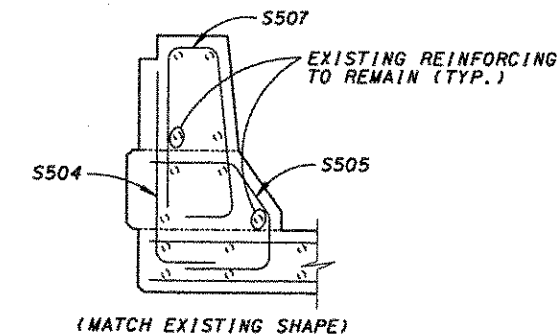
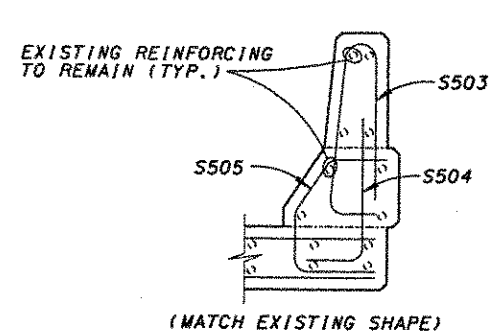
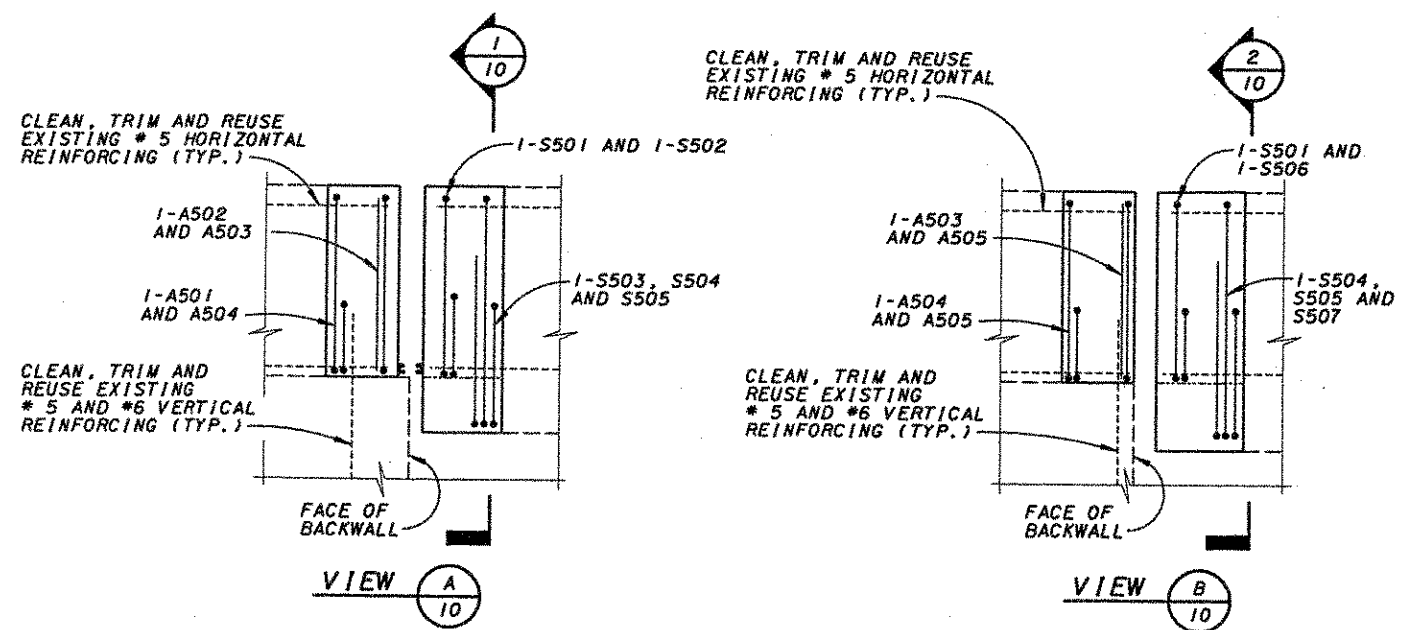


STRIP SEAL DIM. 'A' (SEE STD. DWG. EXJ-4-87)							
TEMPERATURE	30°F	40°F	50°F	60°F	70°F	80°F	90°F
REAR ABUTMENT	2"	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 1/4"
FORWARD ABUTMENT	1 3/4"	1 3/4"	1 5/8"	1 5/8"	1 5/8"	1 1/2"	1 1/2"

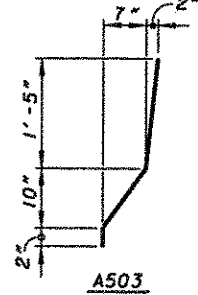
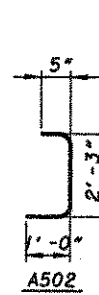
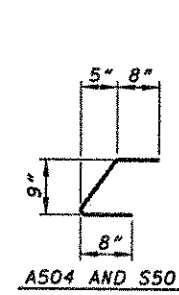
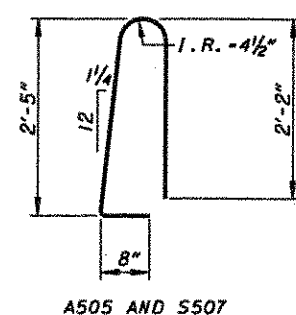
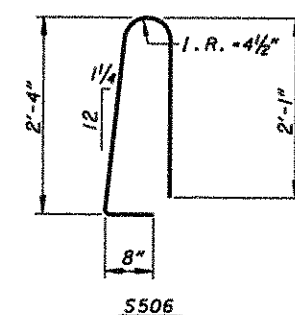
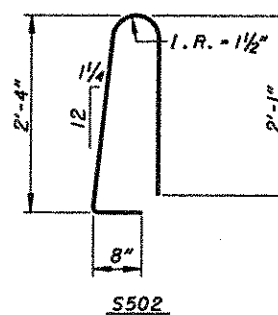
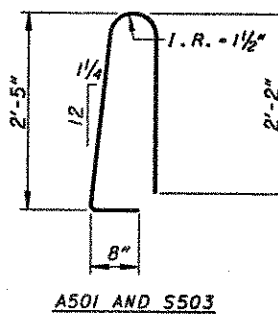
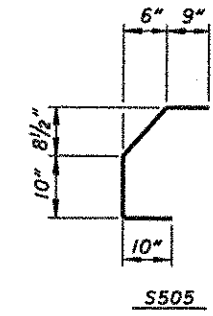
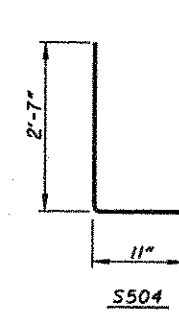
FOR ADDITIONAL JOINT DETAILS, NOTES AND INSTALLATION DETAILS SEE STD. DWG. EXJ-4-87.



** FOR NORTHBOUND BRIDGE ONLY,
ALL NEW PARAPET ON SOUTHBOUND

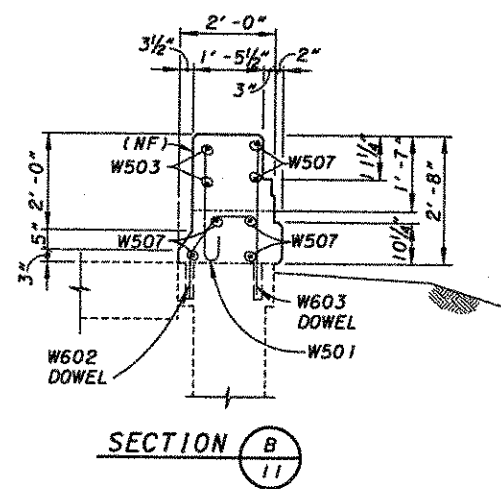
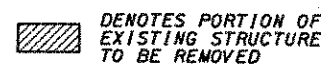
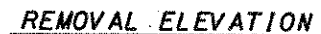
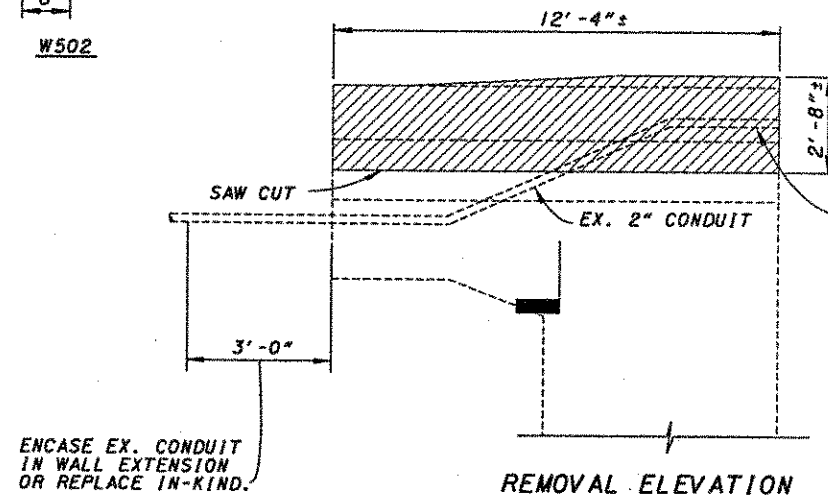
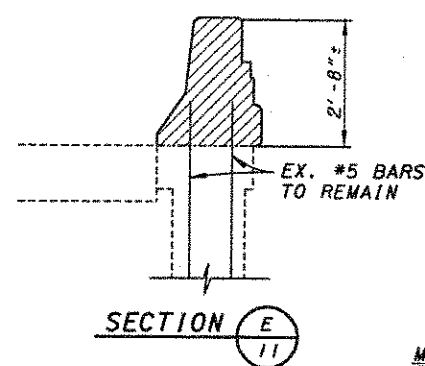
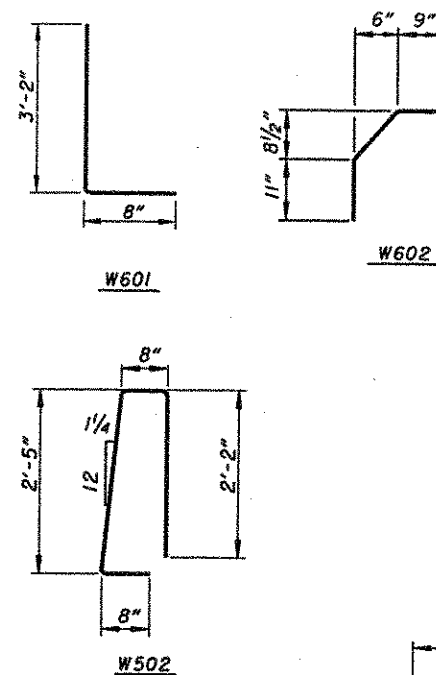
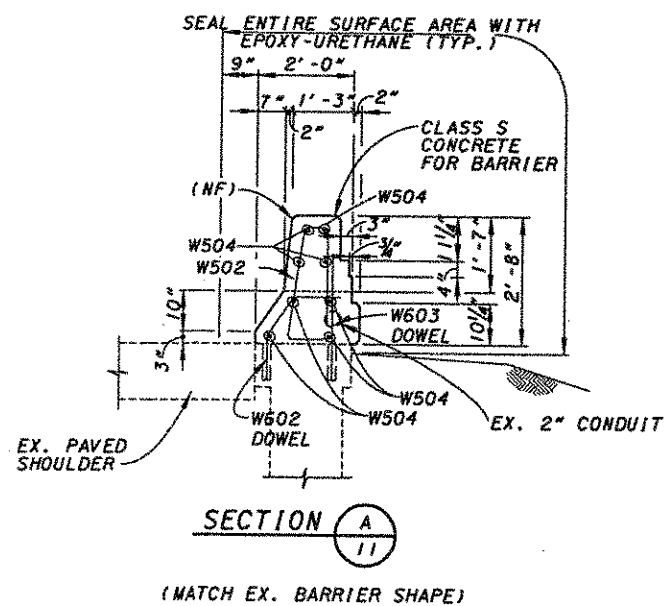
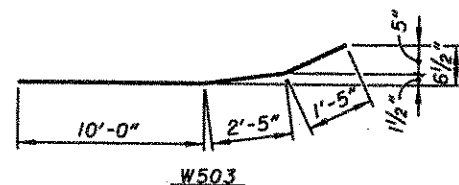
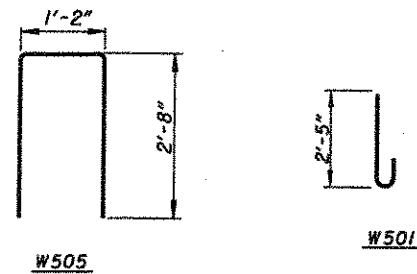


BARRIER REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
A501	4	5'-3"	22	BENT
A502	4	3'-5"	14	BENT
A503	6	2'-7"	16	BENT
A504	6	1'-11"	12	BENT
A505	4	5'-7"	23	BENT
S501	8	1'-11"	16	BENT
S502	4	5'-1"	21	BENT
S503	4	5'-3"	22	BENT
S504	12	3'-5"	43	BENT
S505	12	3'-0"	38	BENT
S506	4	5'-5"	23	BENT
S507	8	5'-7"	47	BENT
TOTAL =			297	

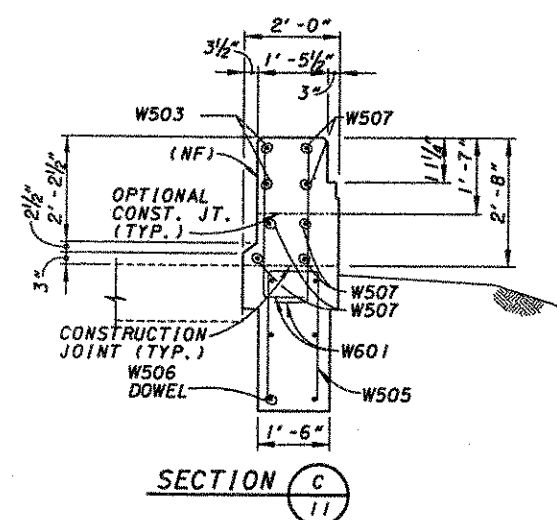


NOTES:
1. SEE SHEET 8/20 FOR JOINT DETAILS.

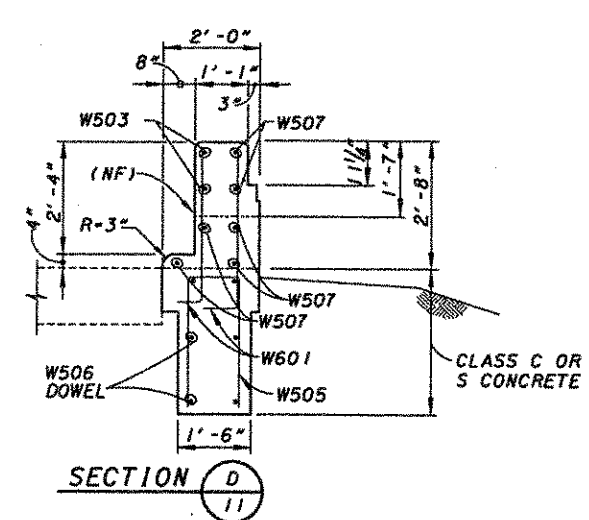
BARRIER REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
W501	24	3' - 0"	75	BENT
W502	2	5' - 7"	12	BENT
W503	4	13' - 10"	58	BENT
W504	16	3' - 0"	17	STR.
W505	6	6' - 3"	39	BENT
W506	12	3' - 4"	42	STR.
W507	12	13 - 10"	173	STR.
W601	12	3' - 8"	46	BENT
W602	26	2' - 5"	66	BENT
W603	26	3' - 3"	88	STR.
		TOTAL -	616	



EPOXY GROUT #6 DOWELS 9" INTO EXISTING CONCRETE.
EPOXY GROUT #5 DOWELS 6" INTO EXISTING CONCRETE.

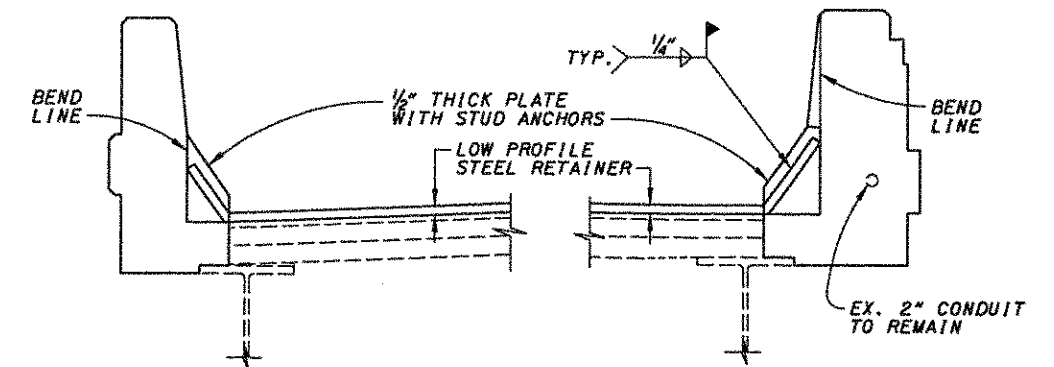
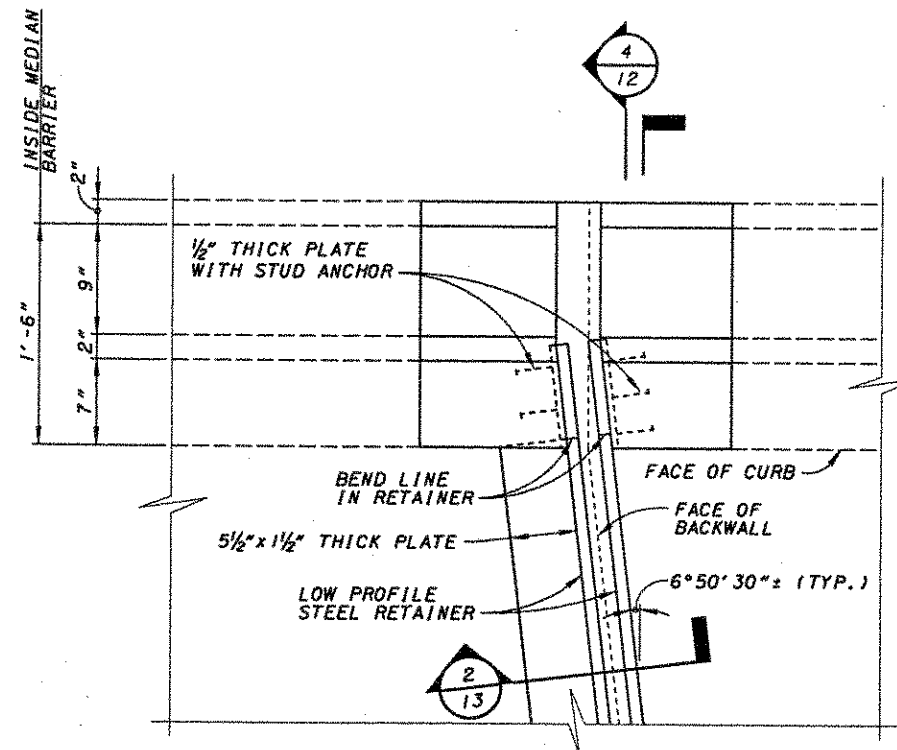
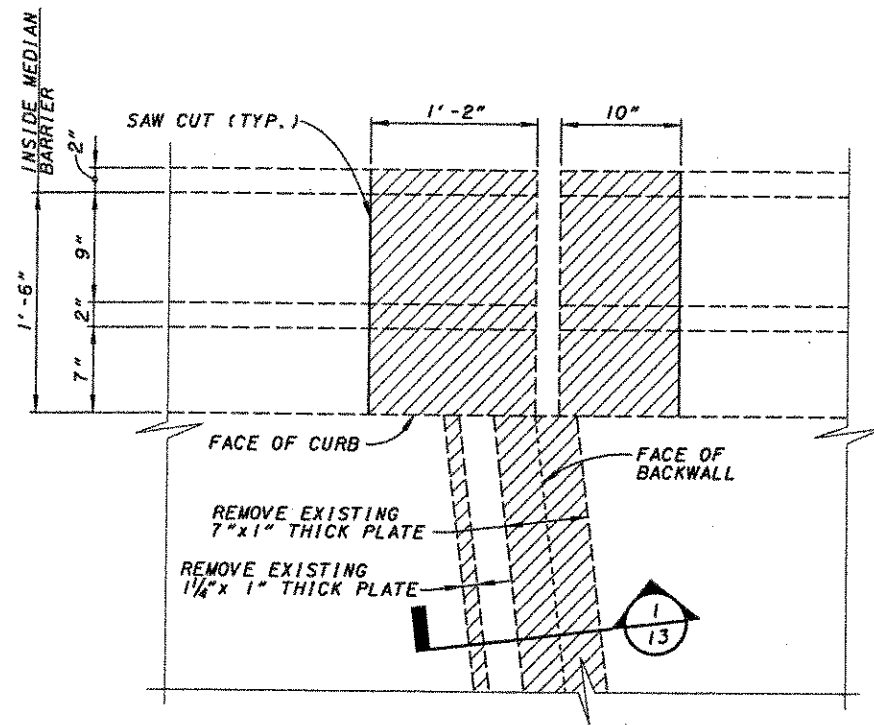


E.F. - EACH FACE
N.R. - NEAR FACE
F.F. - FAR FACE

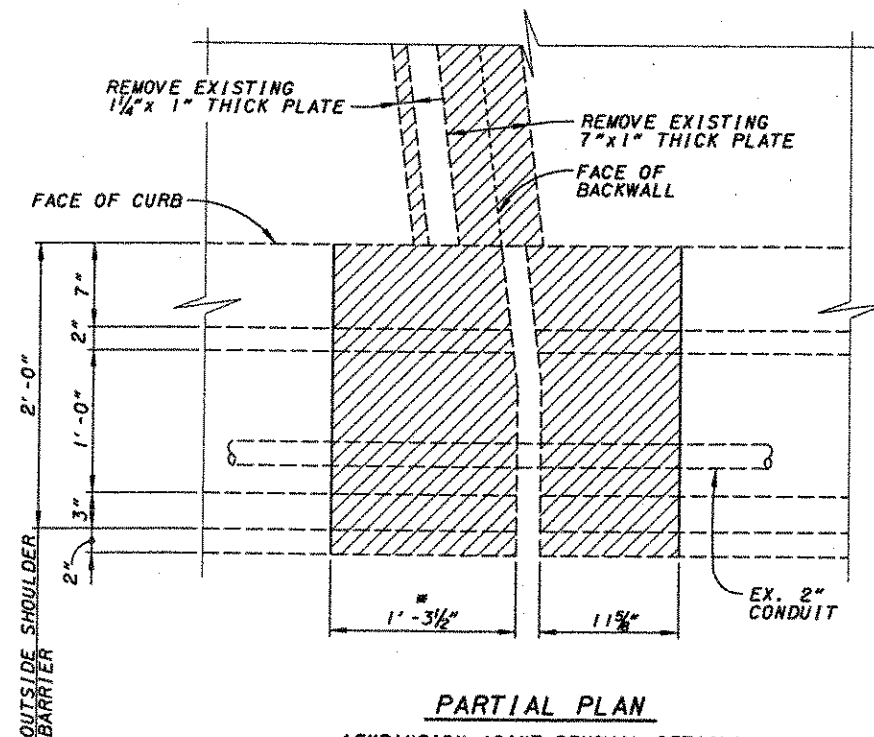


1. SEE STD. DWG. BR-1 FOR ADDITIONAL INFORMATION.

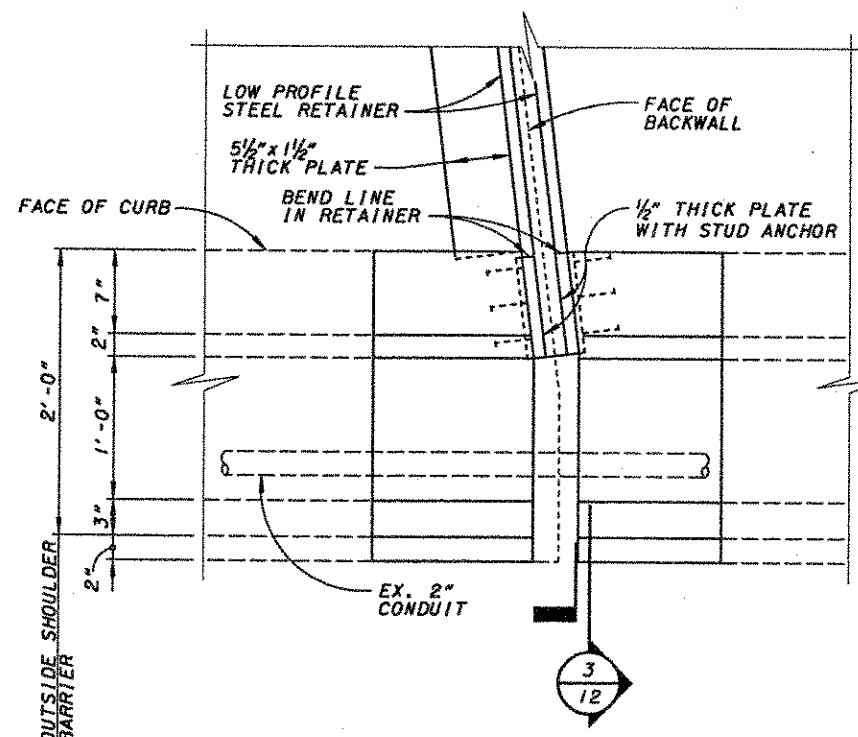
11-11-11.08



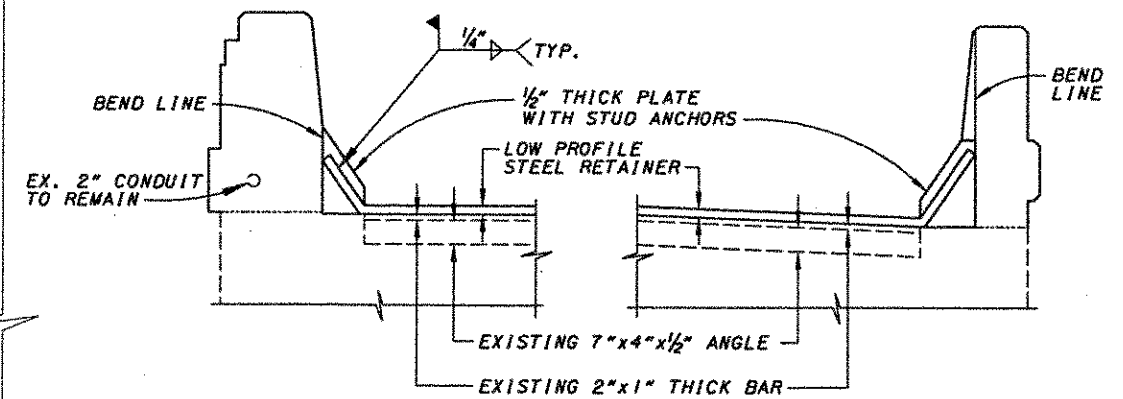
SECTION 3
12



PARTIAL PLAN
(EXPANSION JOINT REMOVAL DETAIL)



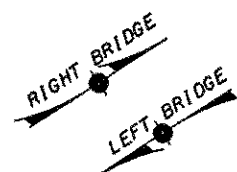
PARTIAL PLAN
(NEW EXPANSION JOINT DETAIL)

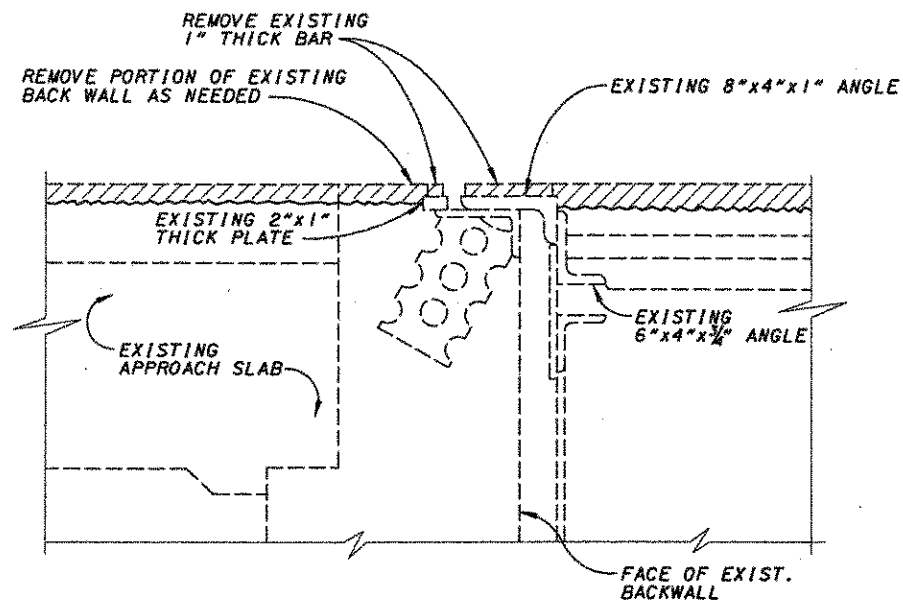


SECTION 4
12

 DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED.

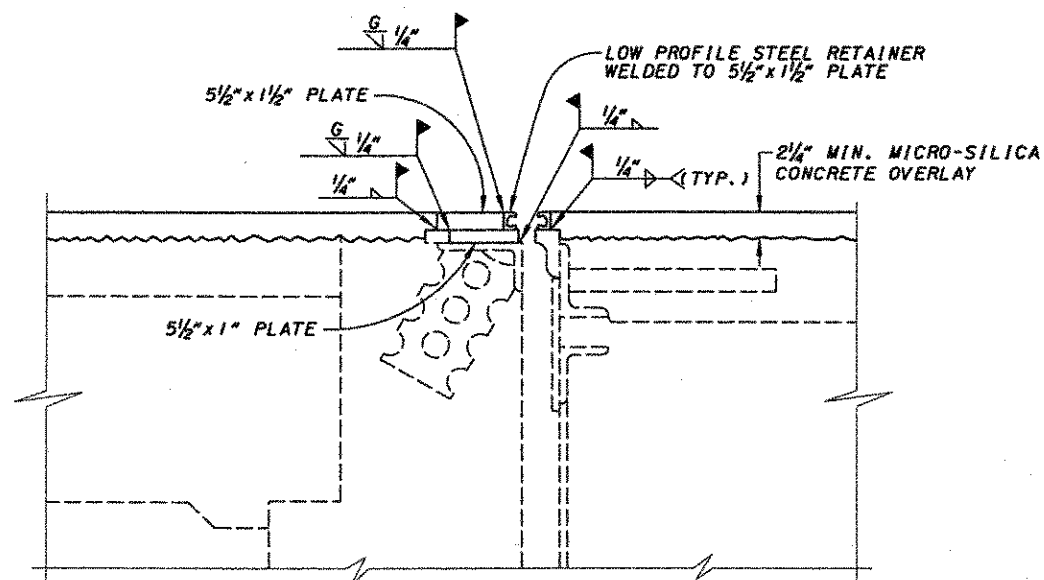
* FOR SOUTHBOUND BRIDGE ONLY,
ALL NEW PARAPET ON NORTHBOUND.



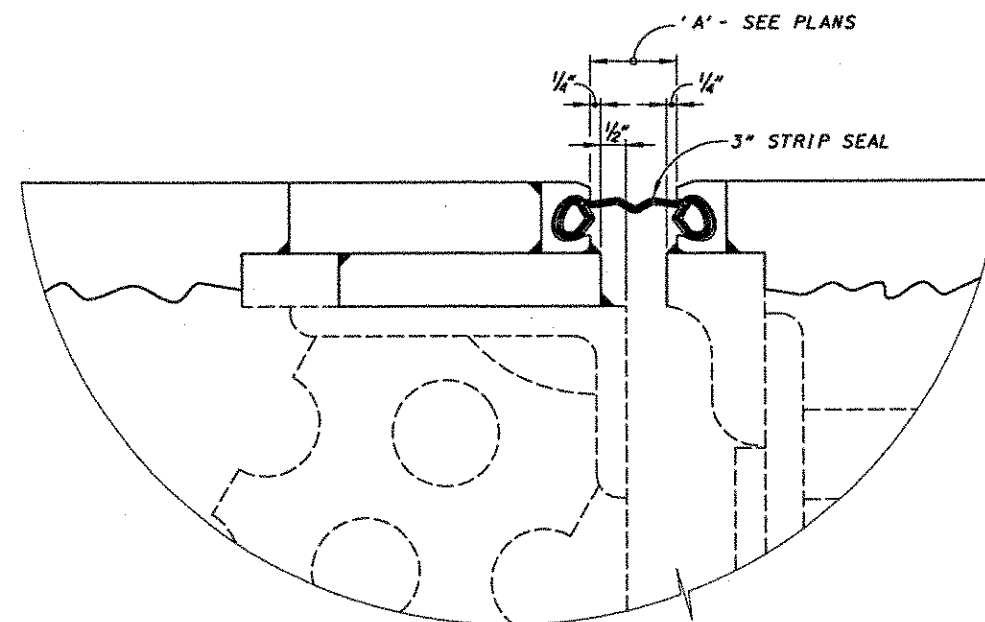


DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED.

SECTION 1
12



SECTION 2
12



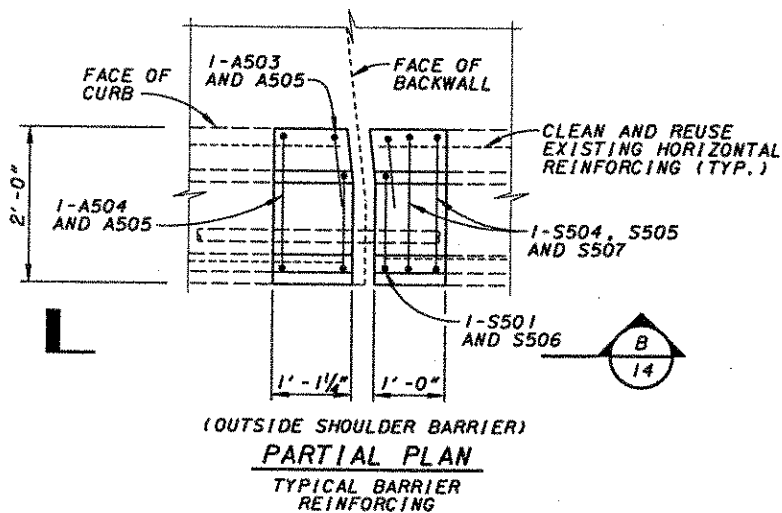
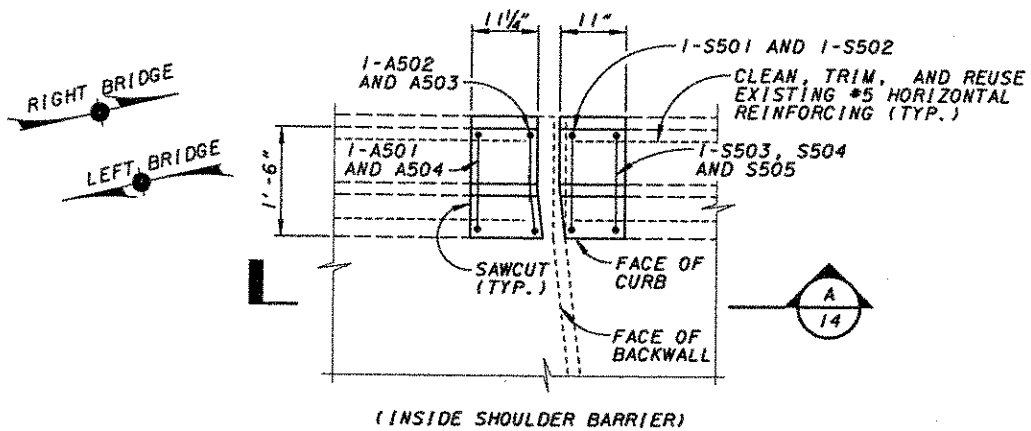
STRIP SEAL DIM. 'A' (SEE STD. DWG. EXJ-4-87)

TEMPERATURE	30°F	40°F	50°F	60°F	70°F	80°F	90°F
REAR ABUTMENT	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 1/2"	1 1/2"
FORWARD ABUTMENT	1 7/8"	1 3/4"	1 3/4"	1 3/4"	1 1/2"	1 1/2"	1 3/8"

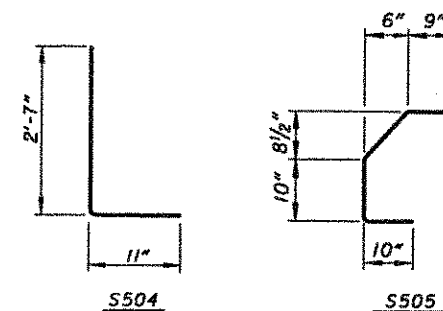
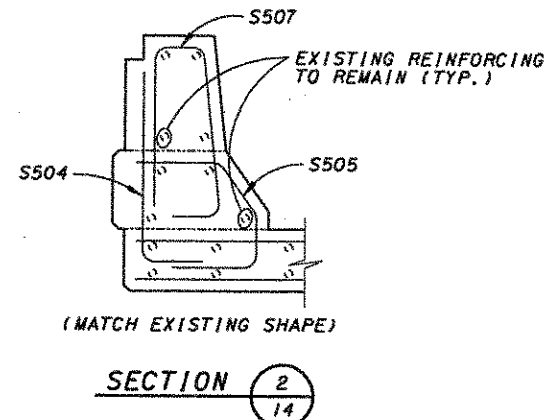
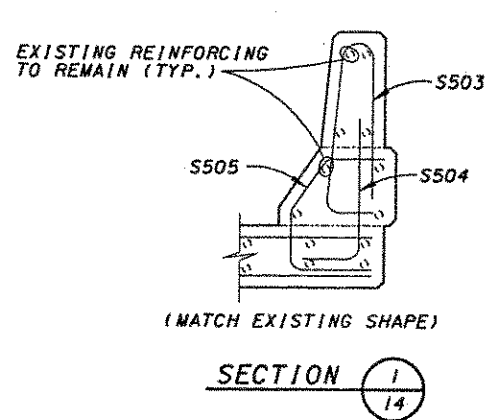
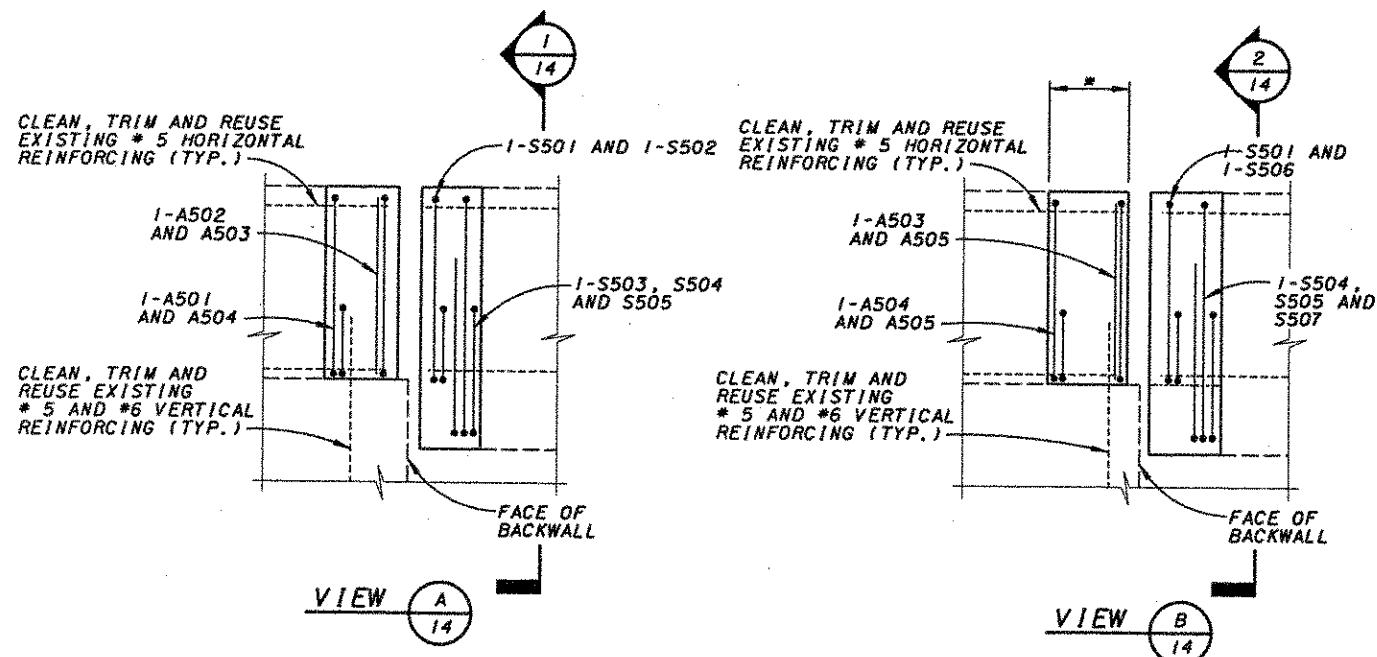
FOR ADDITIONAL JOINT DETAILS, NOTES AND INSTALLATION DETAILS SEE STD. DWG. EXJ-4-87.

NOTES:

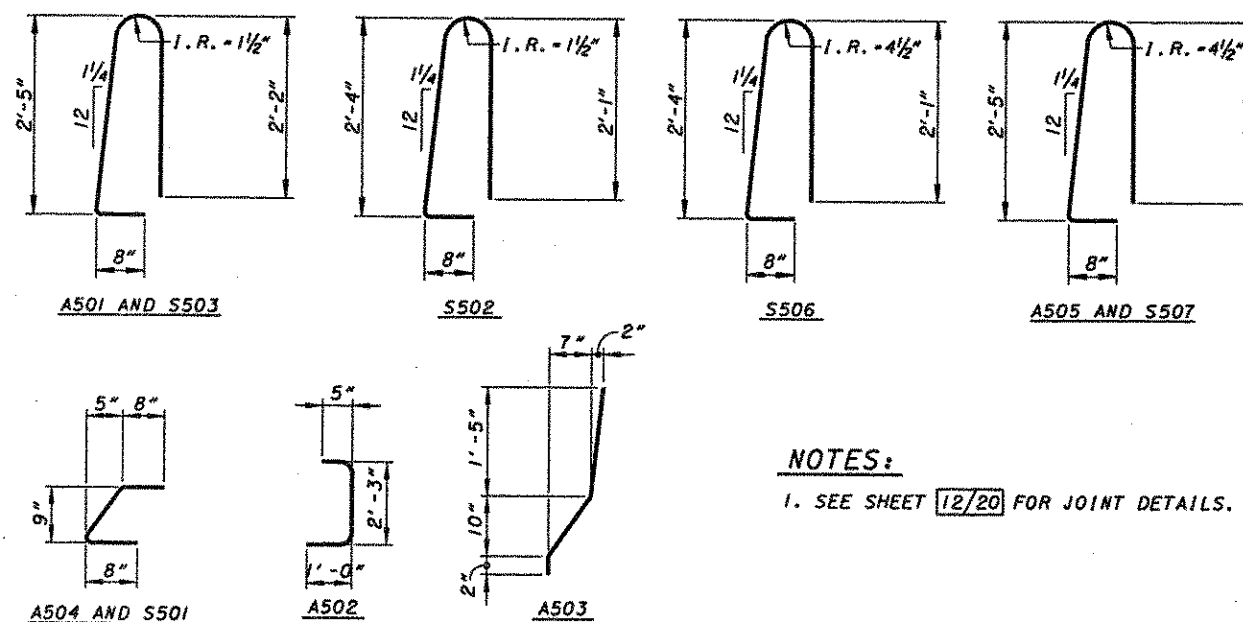
1. SEE SHEET 14/20 FOR REINFORCING DETAILS.
2. SEE STD. DWG. EXJ-4-87 FOR FIELD JOINTS IN RETAINERS AND ARMOR AND ADDITIONAL DETAILS.
3. STRIP SEAL IS TO BE INSTALLED IN ONE PIECE.



* FOR SOUTHBOUND BRIDGE ONLY,
ALL NEW PARAPET ON NORTHBOUND.



BARRIER REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
A501	4	5'-3"	22	BENT
A502	4	3'-5"	14	BENT
A503	6	2'-7"	16	BENT
A504	6	1'-11"	12	BENT
A505	4	5'-7"	23	BENT
S501	8	1'-11"	16	BENT
S502	4	5'-1"	21	BENT
S503	8	5'-3"	44	BENT
S504	16	3'-5"	57	BENT
S505	16	3'-0"	50	BENT
S506	4	5'-5"	23	BENT
S507	8	5'-7"	47	BENT
TOTAL =			345	



NOTES:
1. SEE SHEET 12/20 FOR JOINT DETAILS.

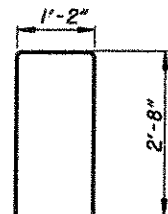
EXPANSION JOINT REINFORCING DETAILS
BRIDGE NO. HAM-71-1272 L/R
I-71 OVER GALBRAITH ROAD

HAM-71-11.08

14/20

106
205

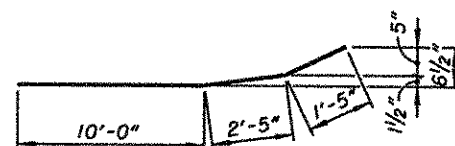
BARRIER REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
W501	48	3'-0"	150	BENT
W502	4	5'-7"	23	BENT
W503	8	13'-10"	115	BENT
W504	32	3'-3"	108	STR.
W505	12	6'-3"	78	BENT
W506	24	2'-10"	71	STR.
W507	24	13'-10"	346	STR.
W601	24	3'-8"	88	BENT
W602	52	2'-5"	131	BENT
W603	52	3'-3"	176	STR.
		TOTAL =	1286	



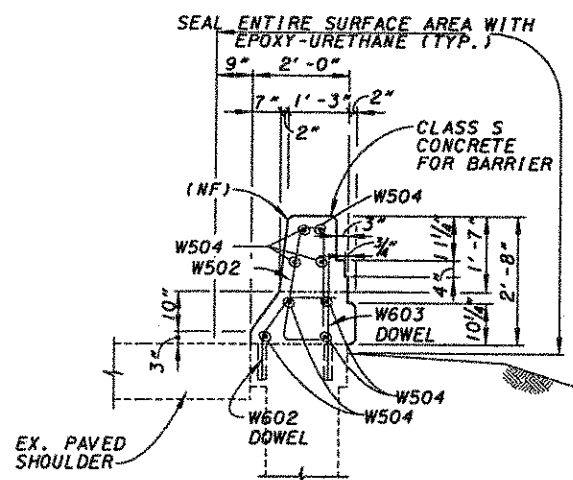
W505



W501

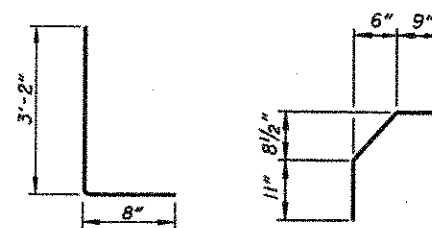


W508



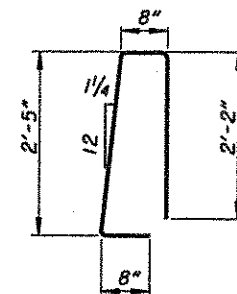
SECTION A
15

(MATCH EX. BARRIER SHAPE)



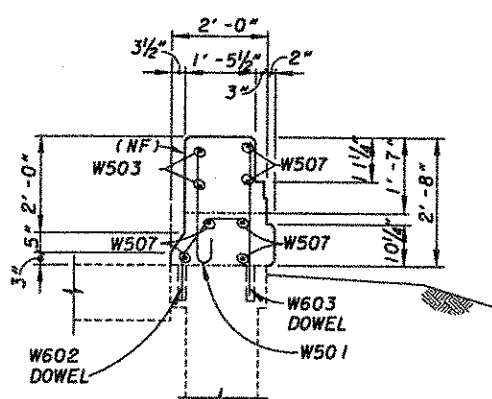
W601

W602



W502

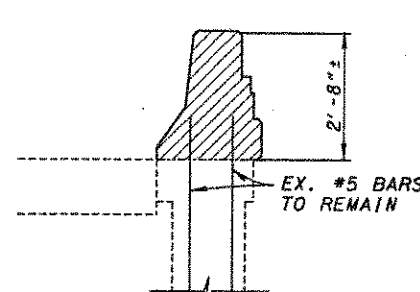
ENCASE EX. CONDUIT
IN WALL EXTENSION
OR REPLACE IN-KIND.



SECTION B
15

DOWELS:

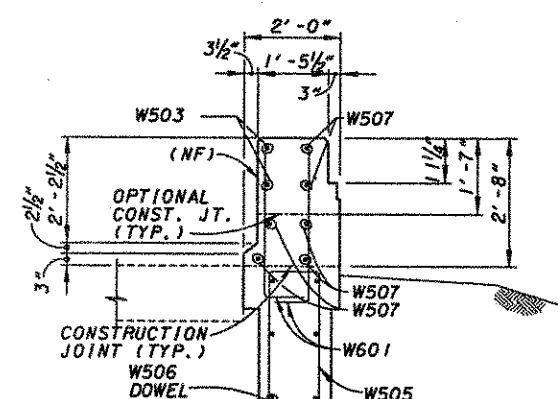
EPOXY GROUT #6 DOWELS 9" INTO EXISTING CONCRETE.
EPOXY GROUT #5 DOWELS 6" INTO EXISTING CONCRETE.



SECTION E
15

REMOVAL ELEVATION

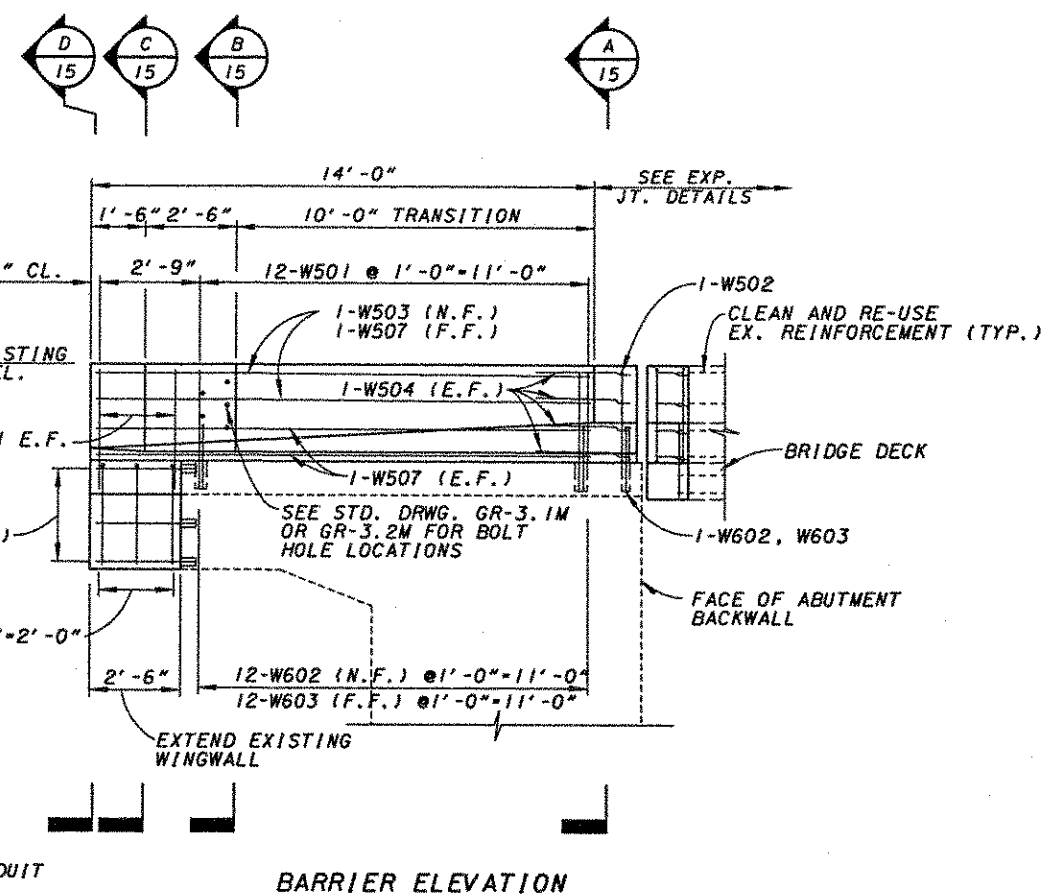
SHADING DENOTES PORTION OF
EXISTING STRUCTURE
TO BE REMOVED



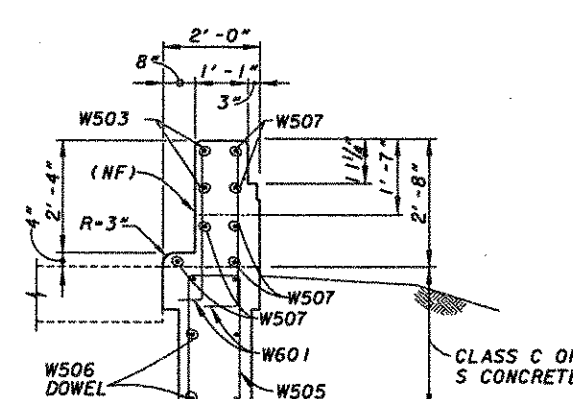
SECTION C
15

LEGEND:

E.F. - EACH FACE
N.R. - NEAR FACE
F.F. - FAR FACE



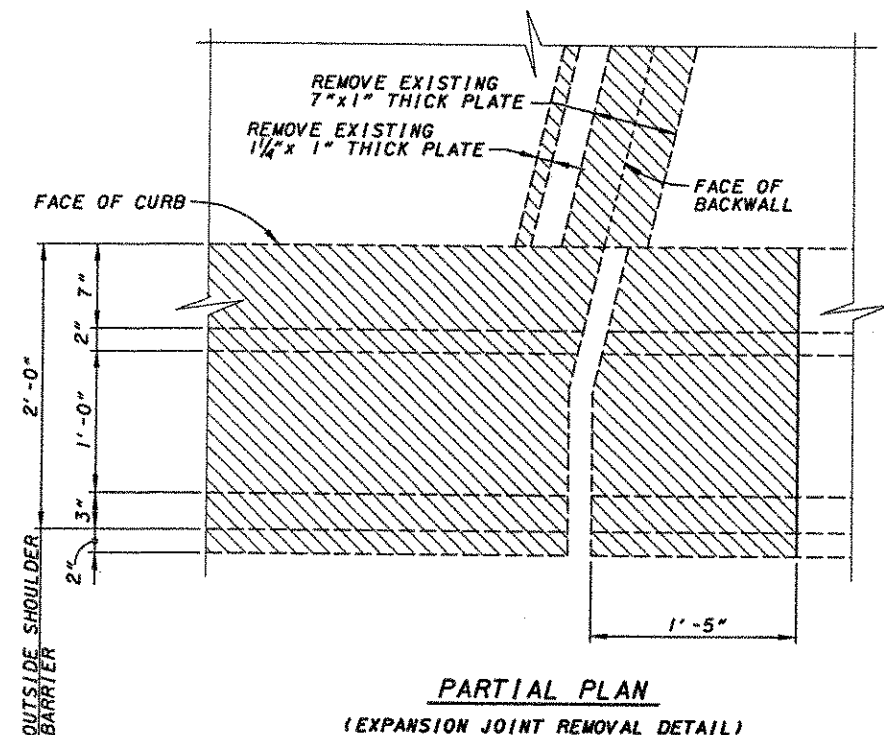
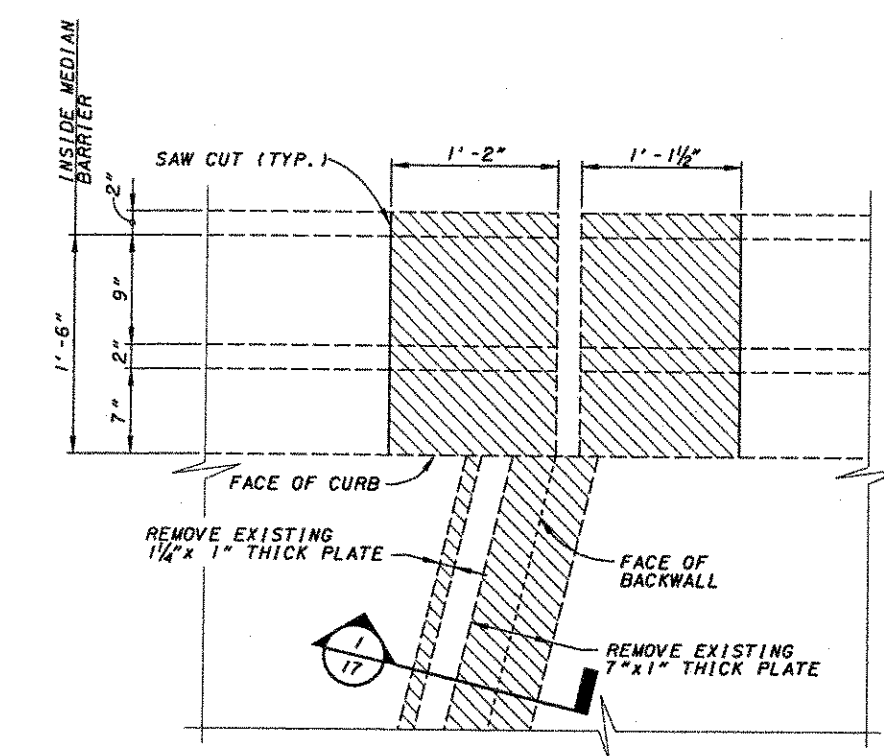
ALL STEEL CLEARANCES ARE
2" UNLESS NOTED OTHERWISE.



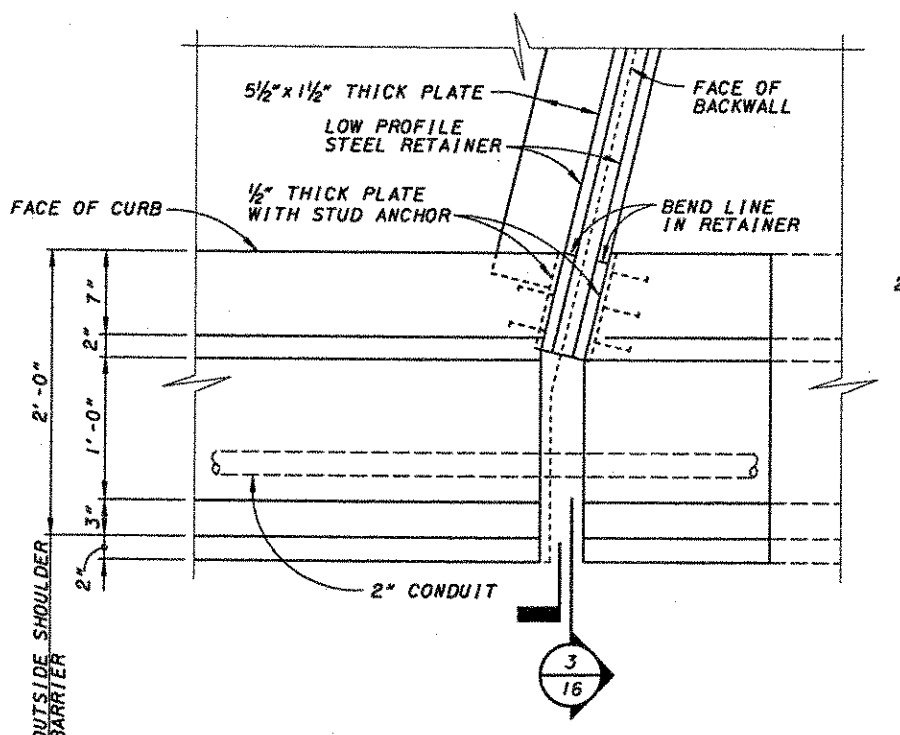
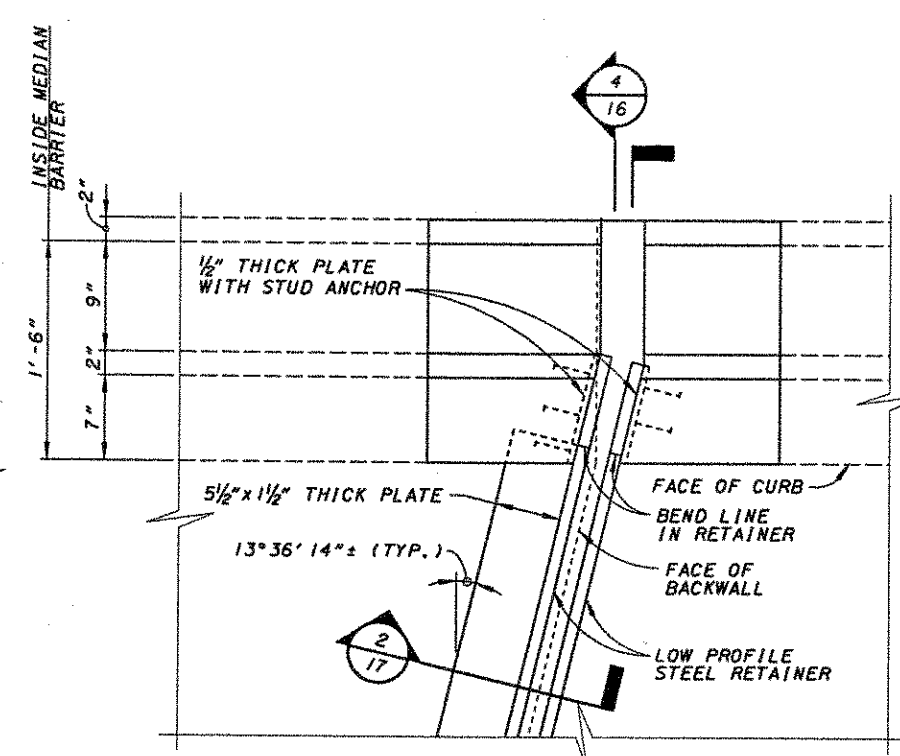
SECTION D
15

NOTES:

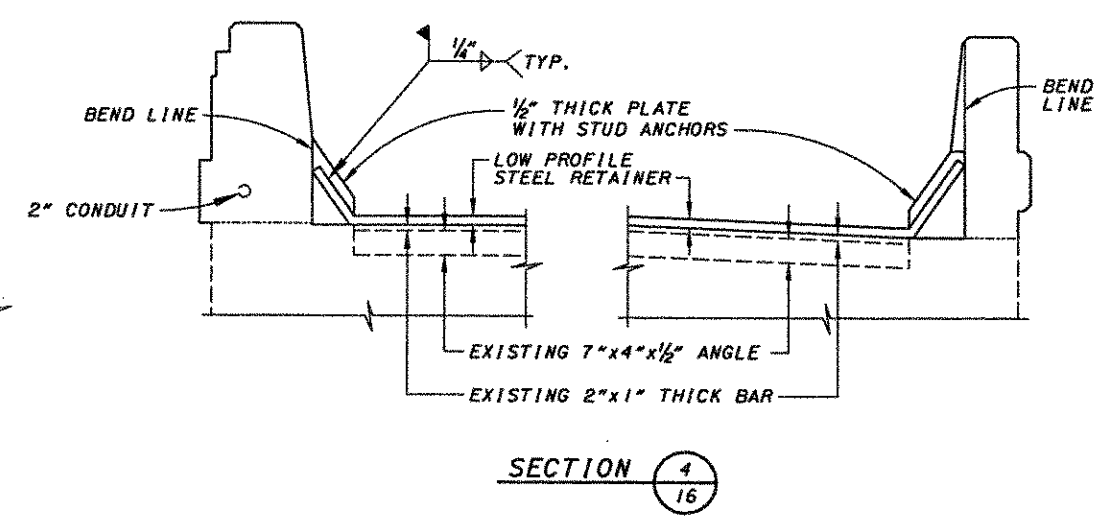
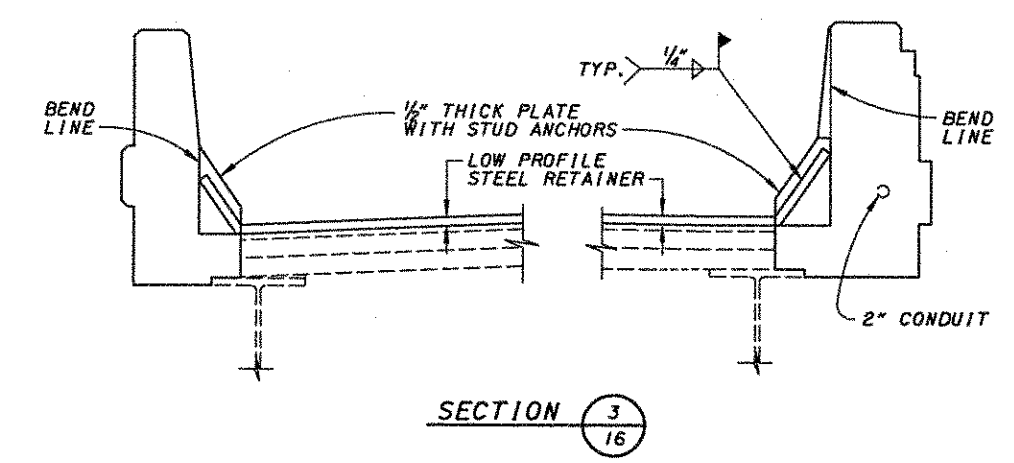
1. SEE STD. DWG. BR-1 FOR ADDITIONAL INFORMATION.



PARTIAL PLAN
(EXPANSION JOINT REMOVAL DETAIL)



PARTIAL PLAN
(NEW EXPANSION JOINT DETAIL)



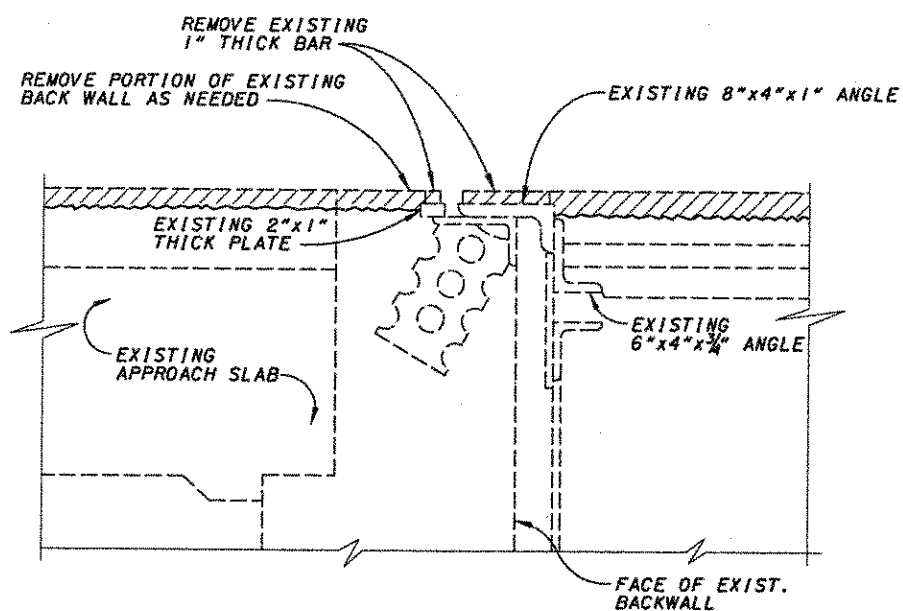
DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED.



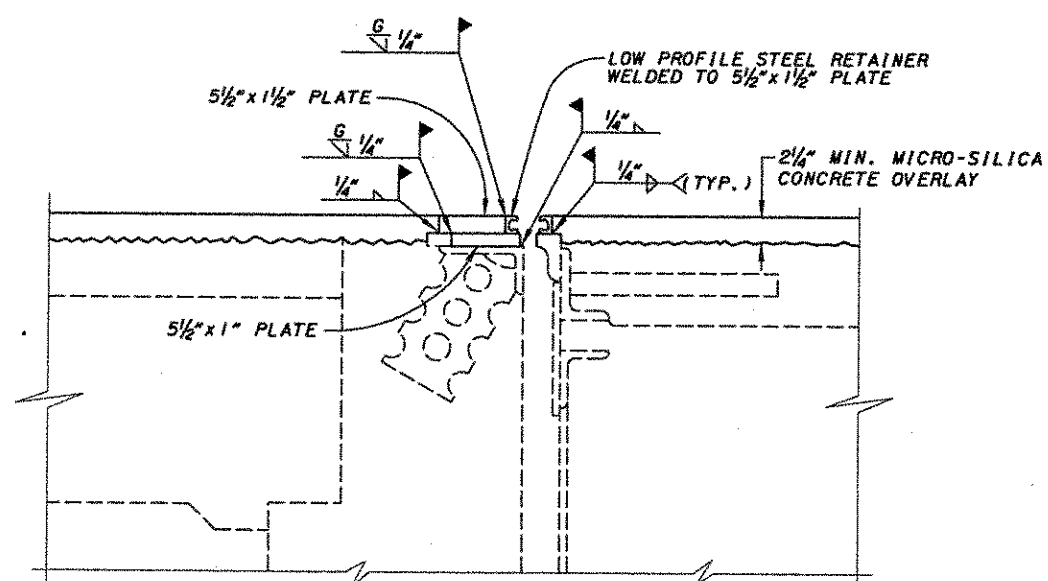
DESIGNED	DATE	REVIEWED	DATE
SJA	5/30/01	DRK	5/30/01
CHECKED	FILE NUMBER	DRN	STRUCTURE
WBS	3107329L	LEP	3107353R

EXPANSION JOINT DETAILS
BRIDGE NO. HAM-71-1576 L/R
I-71 OVER PFEIFFER ROAD

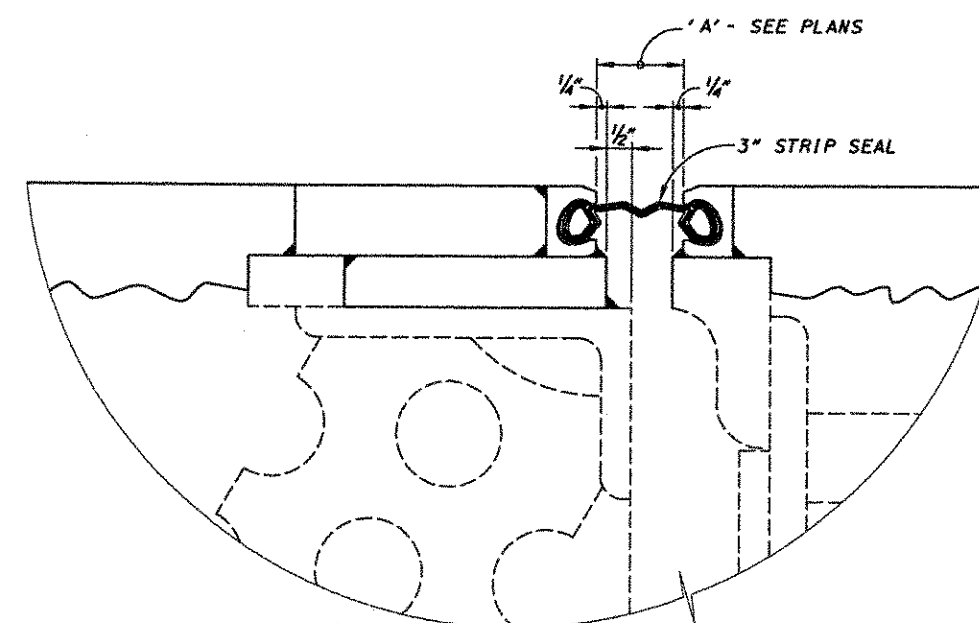
HAM-71-11.08

 DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED.

SECTION 1
16



SECTION 2
16

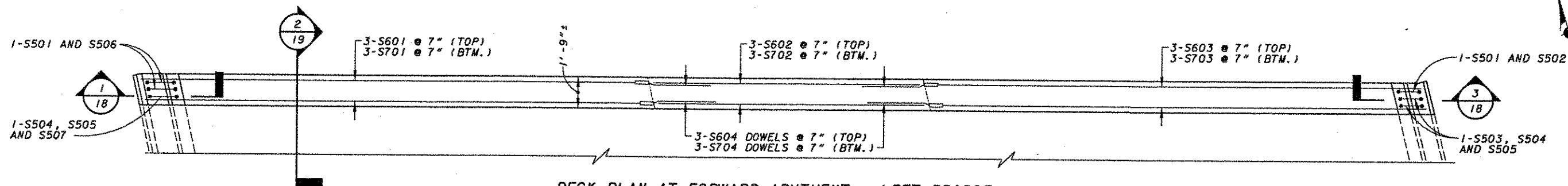


STRIP SEAL DIM. 'A' (SEE STD. DWG. EXJ-4-87)							
TEMPERATURE	30°F	40°F	50°F	60°F	70°F	80°F	90°
REAR ABUTMENT	1 7/8"	1 7/8"	1 3/4"	1 5/8"	1 1/2"	1 3/8"	1 3/8"
FORWARD ABUTMENT	1 3/8"	1 3/4"	1 5/8"	1 5/8"	1 5/8"	1 1/2"	1 1/2"

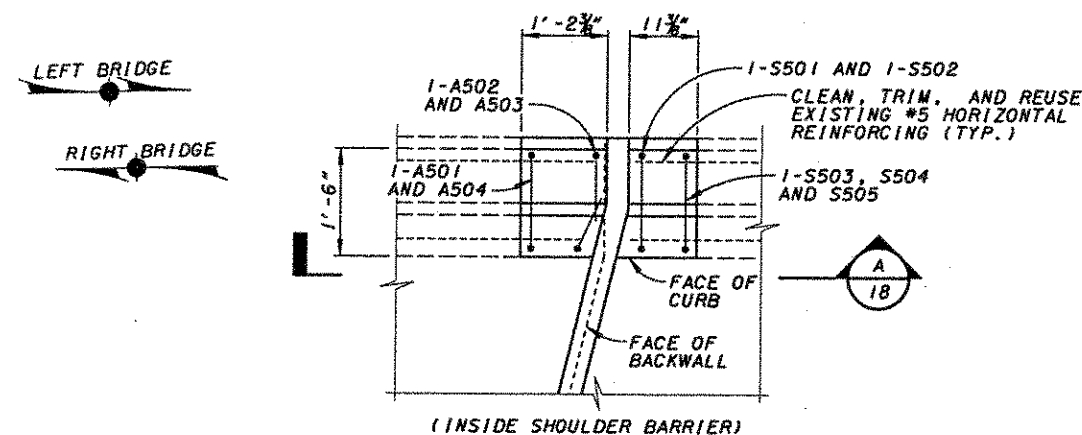
FOR ADDITIONAL JOINT DETAILS, NOTES AND
INSTALLATION DETAILS SEE STD. DWG. EXJ-4-87.

NOTES:

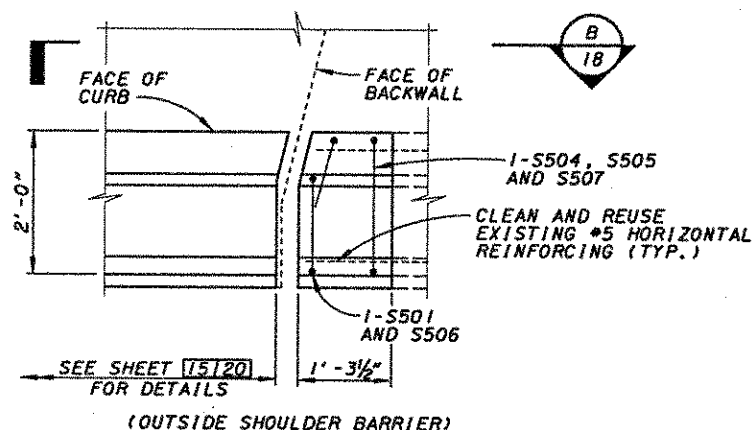
1. SEE SHEET 18/20 FOR REINFORCING DETAILS.
2. SEE STD. DWG. EXJ-4-87 FOR FIELD JOINTS IN RETAINERS AND ARMOR AND ADDITIONAL DETAILS.
3. STRIP SEAL IS TO BE INSTALLED IN ONE PIECE.



DECK PLAN AT FORWARD ABUTMENT - LEFT BRIDGE

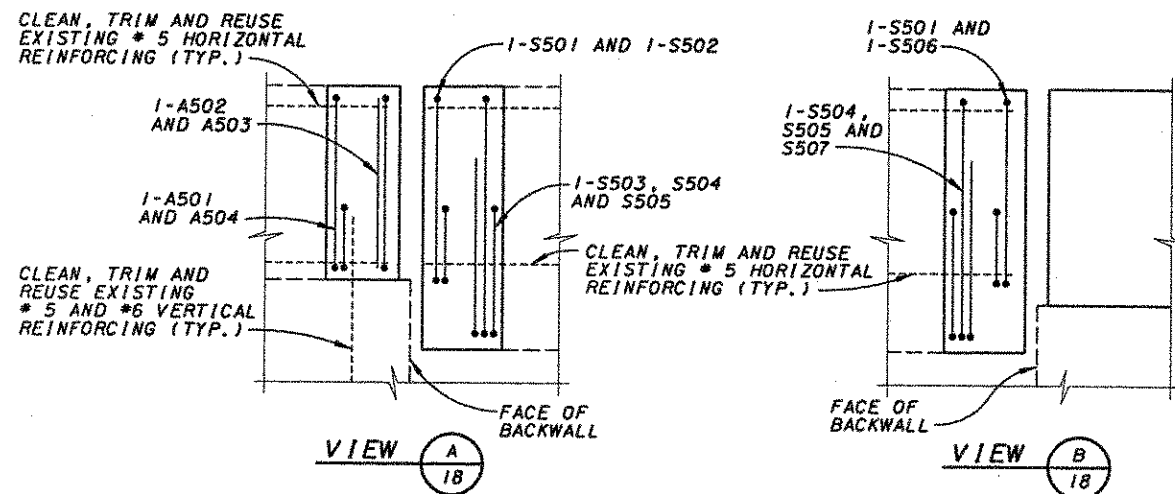


(INSIDE SHOULDER BARRIER)



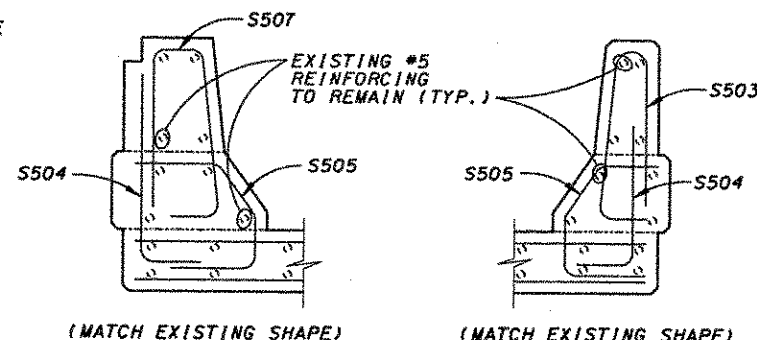
(OUTSIDE SHOULDER BARRIER)

PARTIAL PLAN
TYPICAL BARRIER
REINFORCING



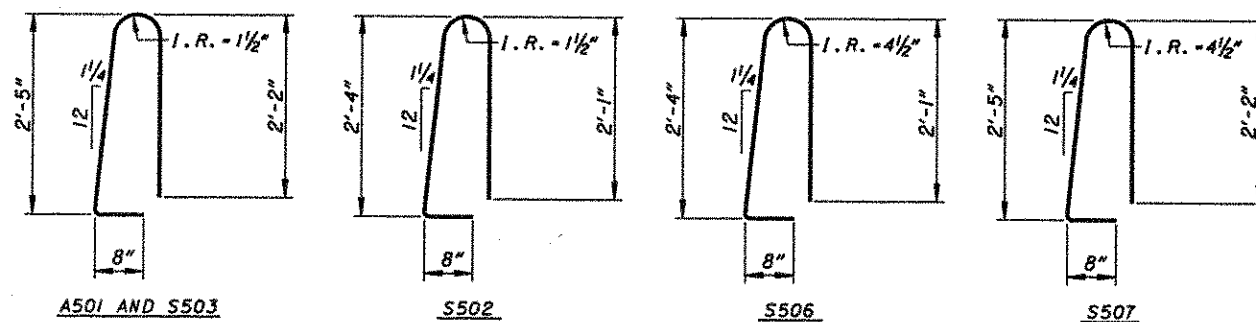
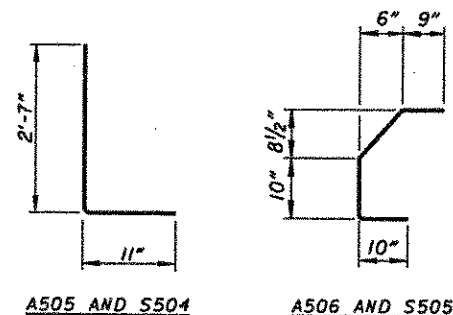
VIEW A
18

VIEW B
18



SECTION 1
18

SECTION 3
18

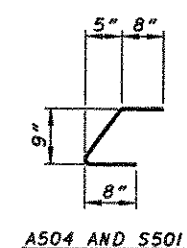


A501 AND S503

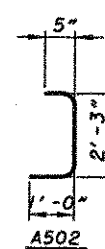
S502

S506

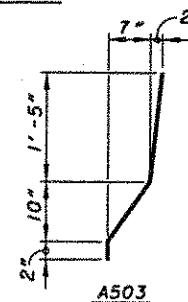
S507



A504 AND S501



A502



A503

NOTES:

1. SEE SHEET 16/20 FOR JOINT DETAILS.

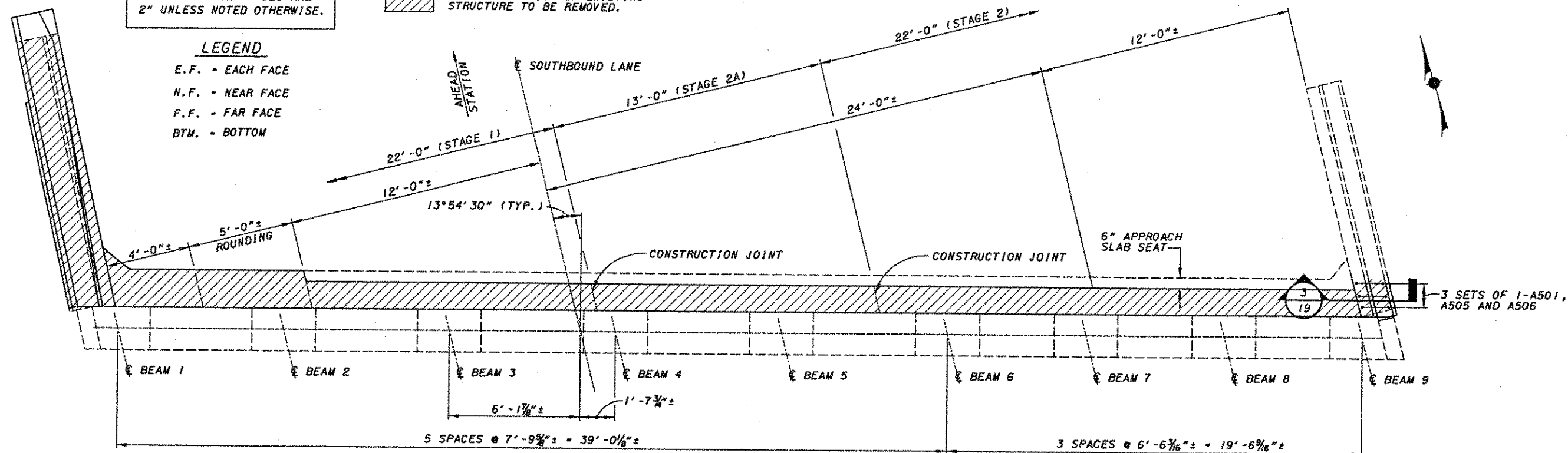
REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
A501	6	5'-3"	33	BENT
A502	3	3'-5"	11	BENT
A503	3	2'-7"	8	BENT
A504	3	1'-11"	6	BENT
A505	3	3'-5"	11	BENT
A506	3	3'-0"	9	BENT
A507	2	11'-0"	23	STR.
A508	8	4'-10"	40	STR.
A509	4	13'-1"	55	STR.
A510	4	24'-0"	100	STR.
A511	4	24'-6"	102	STR.
S501	8	1'-11"	16	BENT
S502	4	5'-1"	21	BENT
S503	8	5'-3"	44	BENT
S504	16	3'-5"	57	BENT
S505	16	3'-0"	50	BENT
S506	4	5'-5"	23	BENT
S507	8	5'-7"	47	BENT
S601	3	24'-6"	110	STR.
S602	3	13'-1"	59	STR.
S603	3	24'-0"	108	STR.
S604	6	3'-0"	27	STR.
S701	3	24'-6"	150	STR.
S702	3	13'-1"	80	STR.
S703	3	24'-0"	147	STR.
S704	6	3'-8"	45	STR.
TOTAL =			1382	

ALL STEEL CLEARANCES ARE
2" UNLESS NOTED OTHERWISE.

 DENOTES PORTION OF EXISTING
STRUCTURE TO BE REMOVED.

LEGEND

E.F. = EACH FACE
N.F. = NEAR FACE
F.F. = FAR FACE
BTM. = BOTTOM



FOR BARRIER DETAILS
SEE SHEET 15/20 (TYP.)

BEND LINE

EL. 100.17

EL. 100.00*

EL. 100.27

EL. 100.19

1-A507 F.F.

END OF APPROACH
SLAB SEAT

1-A511 F.F.

1-A511 N.F.

1-A511 E.F.

EXISTING APPROACH
SLAB SEAT

4-A508
DOWELS

CONSTRUCTION
JOINT

1-A509 F.F.

1-A509 N.F.

1-A509 E.F.

4-A508
DOWELS

MECHANICAL
COUPLER

SAWCUT ABUTMENT
BACKWALL 2" DEEP AT
CONSTRUCTION JOINT (TYP.)

EL. 99.06

1-A510 F.F.

1-A510 N.F.

1-A510 E.F.

EL. 98.56

BEND LINE

EXISTING
REINFORCING
TO REMAIN

A506

A505

A507

A511

A509

A510

A508

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A509

* REFERENCE BENCH MARK.
CONTRACTOR TO FIELD VERIFY EX.
TOP OF BACKWALL ELEVATIONS.

PLAN AT FWD. ABUT. LT. BRIDGE

SECTION 3

19

ELEVATION

EX. ASPHALT OVERLAY

1'-6"

2'-0"

2" DEEP
SAWCUT

CUT AND BEND EXISTING #6
REINFORCING AS NEEDED

1 1/2"

1'-9"

S602 OR S603 TOP
S702 OR S703 BTM.

A509

SECTION 1

19

1'-9"

2'-0"

2" DEEP
SAWCUT

EXISTING #5 & #6
REINFORCING
TO REMAIN

1'-9"

S601 TOP
S701 BTM.

A507

F.F.

A511

N.F.

A509

A510

A508

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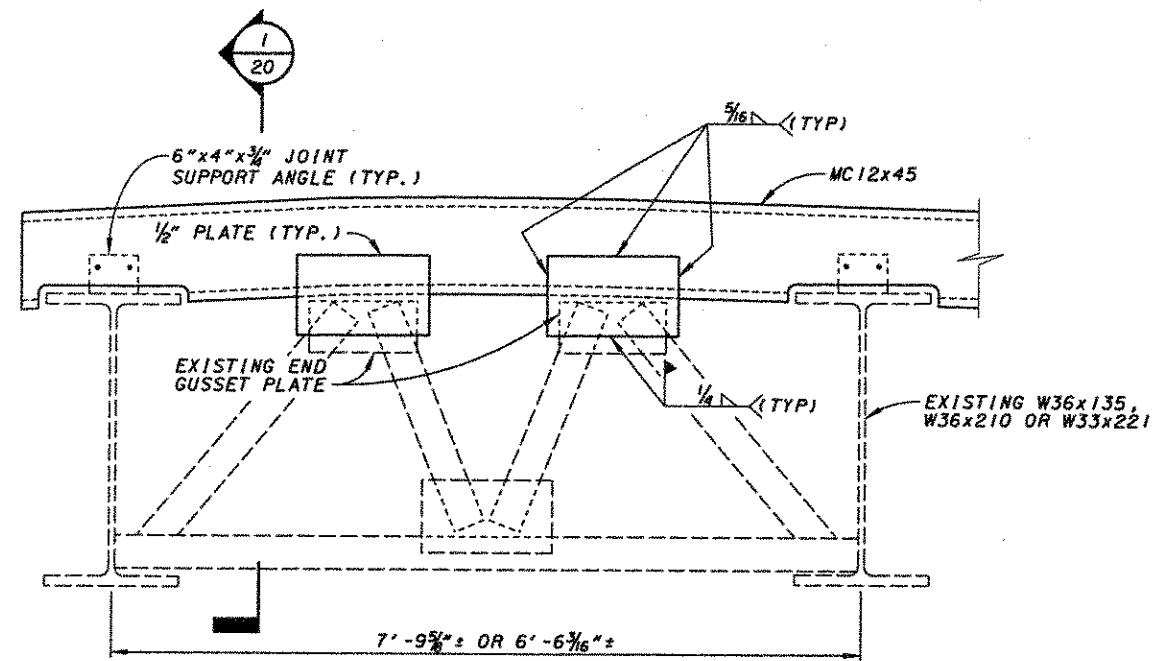
A509

A510

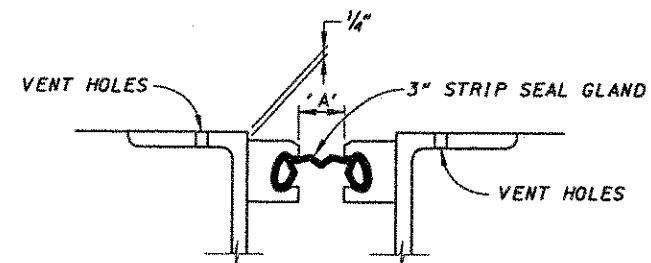
A508

A507

A511

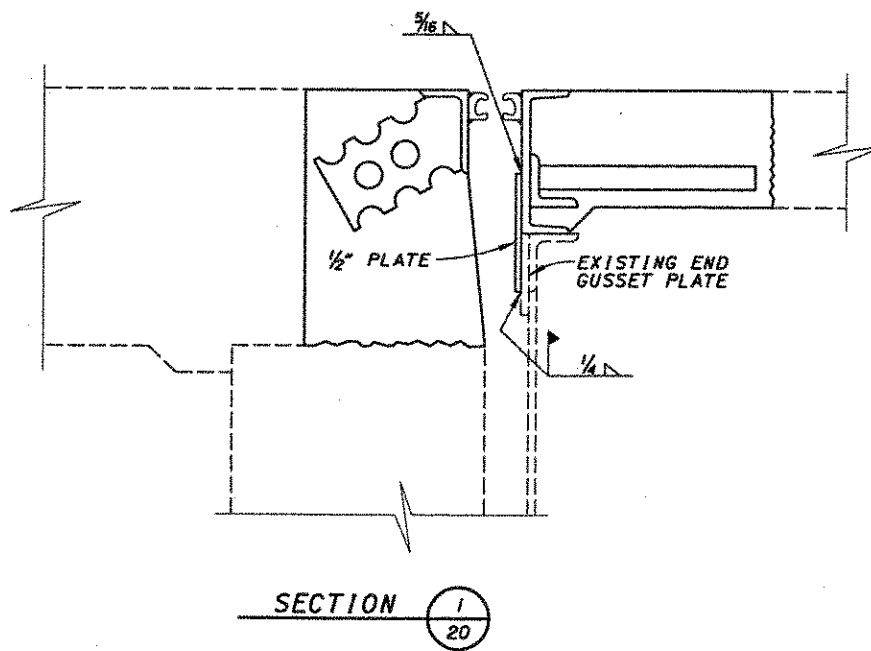
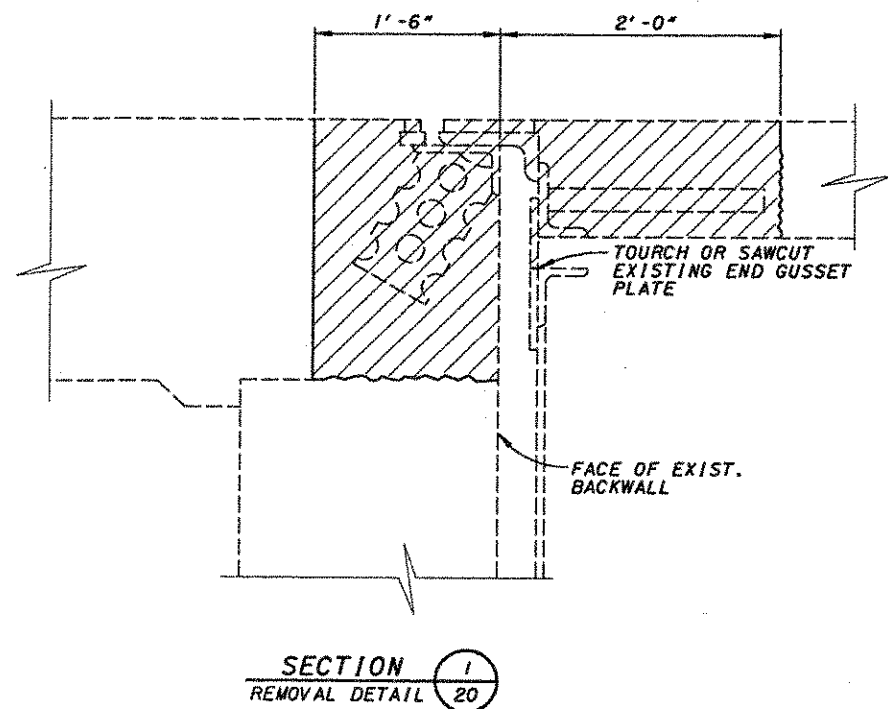


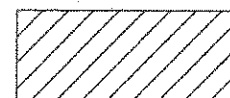
END CROSSFRAME DETAIL
LEFT BRIDGE FORWARD ABUTMENT ONLY

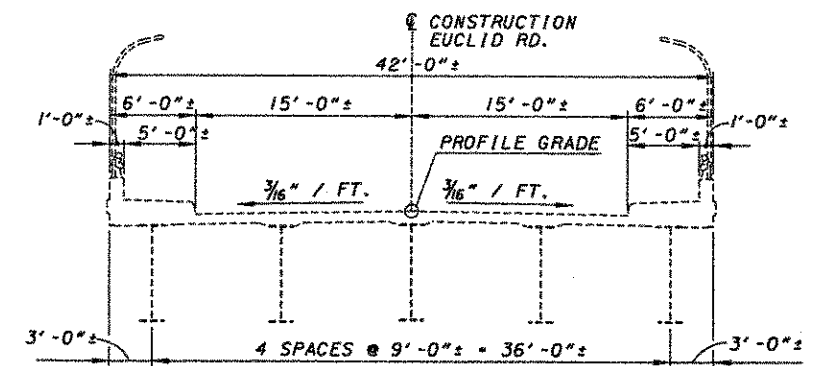
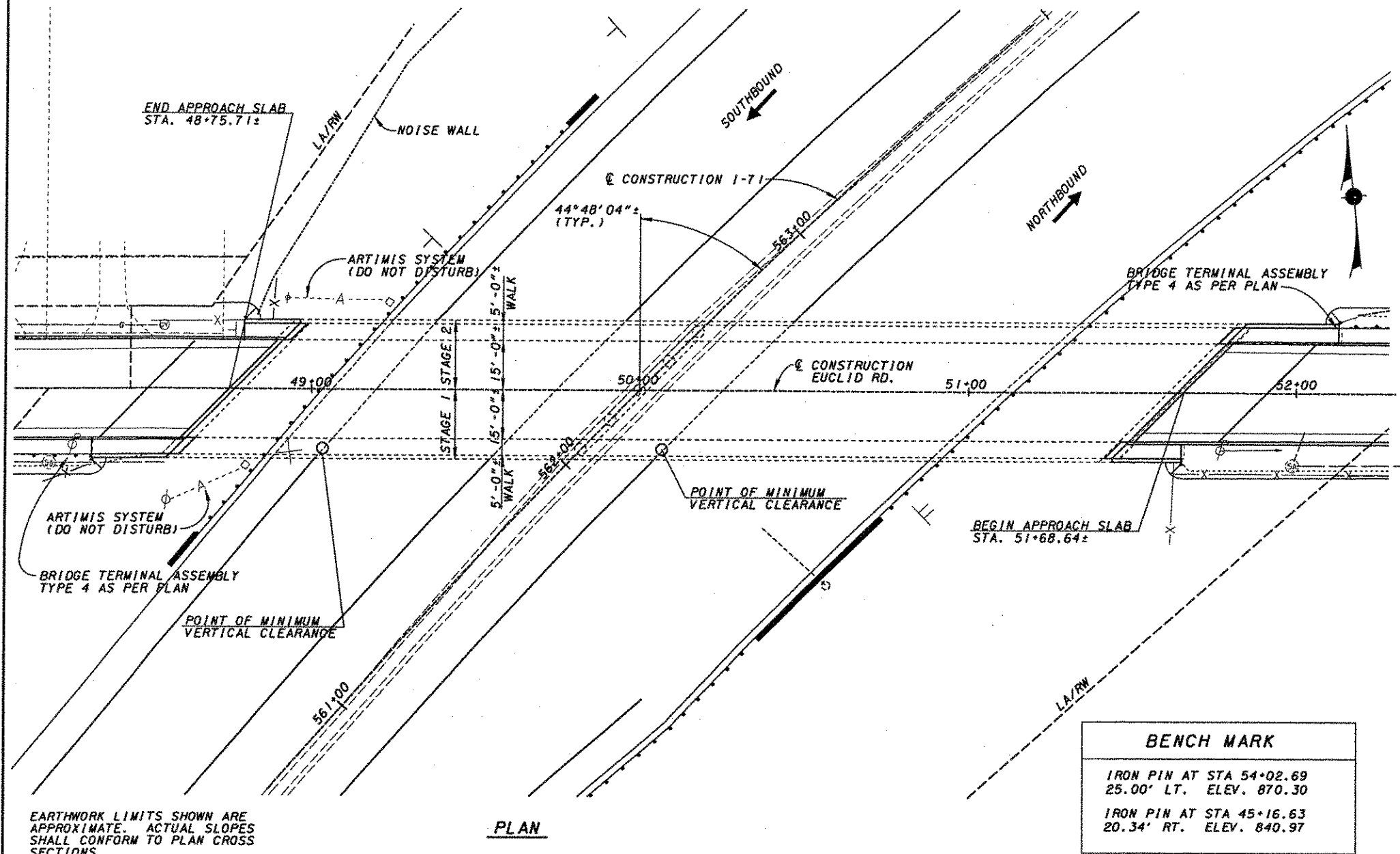


STRIP SEAL DIM. 'A' (SEE STD. DWG. EXJ-4-87)							
TEMPERATURE	30°F	40°F	50°F	60°F	70°F	80°F	90°F
FORWARD ABUTMENT	1 3/4"	1 3/4"	1 5/8"	1 5/8"	1 5/8"	1 1/2"	1 1/2"

FOR ADDITIONAL JOINT DETAILS, NOTES AND
INSTALLATION DETAILS SEE STD. DWG. EXJ-4-87.



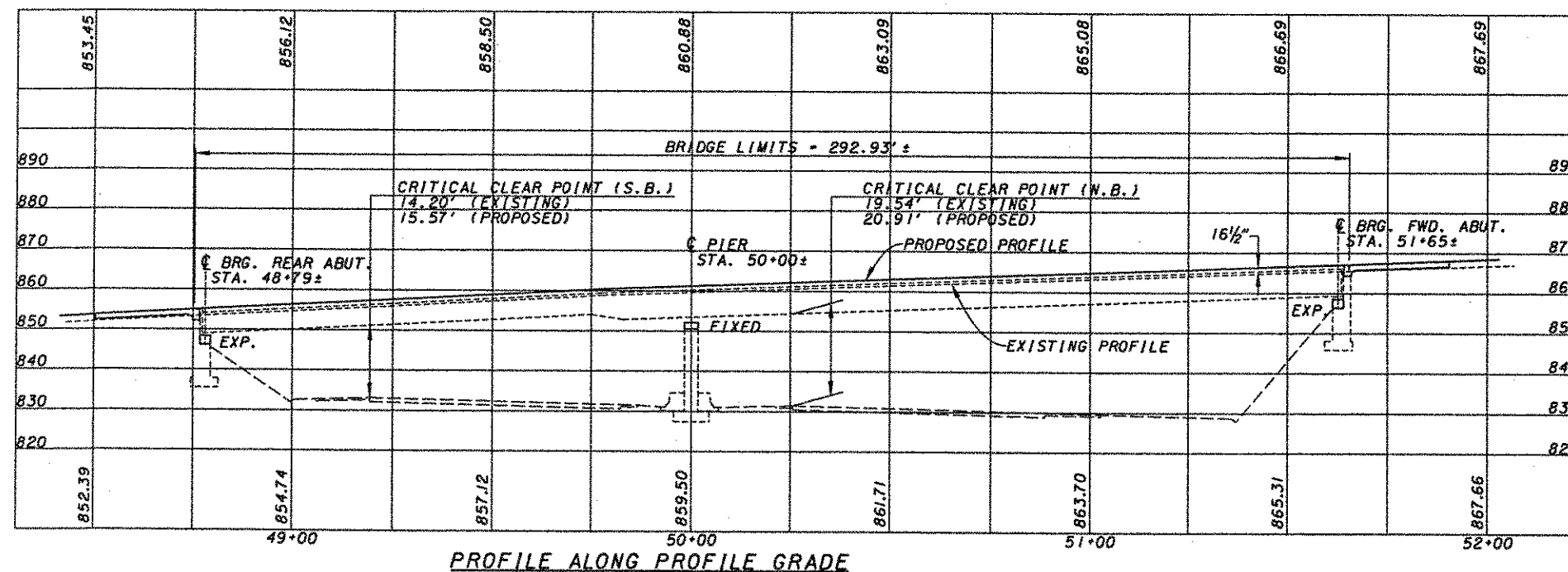
 - DENOTES PORTION OF EXISTING
STRUCTURE TO BE REMOVED



PROPOSED WORK

1. PAINT STRUCTURAL STEEL WITH SYSTEM OZEU, COLOR SHALL BE FEDERAL COLOR STANDARD 14277 - GREEN.
2. RAISE THE EXISTING SUPERSTRUCTURE 16 1/2" TO PROVIDE 15'-6" MINIMUM VERTICAL CLEARANCE. RAISE EXISTING ABUTMENT AND PIER SEATS.
3. SEAL DECK WITH SOLUBLE REACTIVE SILICATE (SRS) ACCORDING TO SUPPLEMENTAL SPECIFICATION 841.
4. SEAL ABUTMENTS, WING WALLS, RAILING, SIDEWALKS, PIERS AND BACK WALLS WITH EPOXY-URETHANE; COLOR SHALL BE FEDERAL COLOR STANDARD 17778 (LIGHT NEUTRAL).
5. REPLACE ALL EXISTING BEARINGS WITH ELASTOMERIC BEARINGS.
6. PATCH EXISTING CONCRETE DECK PER PROPOSAL NOTE 512(91) - PATCHING CONCRETE BRIDGE DECKS, TYPE B.
7. RETROFIT SLIDING PLATE EXPANSION JOINTS TO STRIP SEAL JOINTS.
8. REMOVE EXISTING ABUTMENT BACK WALLS TO THE APPROACH SLAB SEAT AND RECONSTRUCT AT PROPOSED GRADE.
9. REMOVE EXISTING ABUTMENT WING WALLS TO TOP OF CURB AND RECONSTRUCT AT PROPOSED GRADE.
10. CONSTRUCT NEW APPROACH SLABS AT PROPOSED GRADE.
11. REMOVE BRUSH WITHIN 10' OF STRUCTURE LIMITS.
12. REPLACE CORRODED CROSS FRAME MEMBERS AT ABUTMENT AS DIRECTED BY ENGINEER.

BENCH MARK	
IRON PIN AT STA 54+02.69	25.00' LT. ELEV. 870.30
IRON PIN AT STA 45+16.63	20.34' RT. ELEV. 840.97



EXISTING STRUCTURE - I.R. 71 UNDER EUCLID ROAD	
TYPE: CONTINUOUS STEEL PLATE GIRDER "PAINTED" WITH REINFORCED CONCRETE DECK, REINFORCED CONCRETE PIERS AND ABUTMENTS.	
LENGTH OF SPANS: 121'-0"±, 165'-0"± C/C BEARINGS	
ROADWAY WIDTH: 30'-0"± TOE/TOE SIDEWALK CURB.	
DESIGN LOADING: C.F. 400 (57) AASHTO H20	
SKEW ANGLE: 44°48'04"± L.F.	
SUPERELEVATION: NONE - NORMAL CROWN	
WEARING SURFACE: 1 1/4" LATEX MODIFIED CONCRETE	
ALIGNMENT: TANGENT	
APPROACH SLAB: 25' LONG	
YEAR BUILT: 1969±	
YEAR REHABBED: 1985±	
LATITUDE: N 39°11'33"	
LONGITUDE: W 84°23'12"	
SFN: 3106934	

- ITEM 201 - CLEARING AND GRUBBING
- ITEM 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS
- ITEM 448 - ASPHALT CONCRETE
- ITEM 508 - FALSEWORK AND FORMS
- ITEM 509 - REINFORCING STEEL
- ITEM 513 - STRUCTURAL STEEL
- ITEM 516 - EXPANSION AND CONTRACTION JOINTS, JOINT SEALER AND BEARING DEVICES
- ITEM 518 - DRAINAGE OF STRUCTURES
- ITEM 611 - APPROACH SLABS

815 DATED 02/22/00 - FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU.
841 DATED 10/12/99 - SOLUBLE REACTIVE SILICATE (SRS) CONCRETE TREATMENT
842 DATED 01/06/99 - CONCRETE FOR STRUCTURES.
864 DATED 07/11/00 - SEALING OF CONCRETE SURFACES
899 DATED 10/21/98 - CONCRETE - GENERAL
910 DATED 07/11/00 - OZEU STRUCTURAL STEEL PAINT.
954 DATED 09/09/97 - HMMW RESIN

AS-1-81	REVISED	04/20/01
BR-2-98	DATED	12/29/98
EXJ-4-87	REVISED	04/20/01
GR-1.1-M	DATED	10/21/97
GR-3.2-M	DATED	10/21/97
GR-3.4-M	DATED	10/21/97

E.F. EACH FACE
N.F. - NEAR FACE
F.F. - FAR FACE
SER. - SERIES BARS
BTM. - BOTTOM
P.E.J.F. - PERFORMED EXPANSION JOINT FILLER
EL. - ELEVATION
TYP. - TYPICAL
STD. - STANDARD
DWG. - DRAWING

BRIDGE TO BE CLOSED TO TRAFFIC DURING JACKING.

NOTE:
BRIDGE TO BE CLOSED TO TRAFFIC DURING JACKING.

SEAL PIERS, PIER CAPS, WINGWALLS, ABUTMENTS, RAILING, AND DECK EDGES WITH EPOXY-URETHANE

THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO SEAL THE DESIGNATED EXPOSED CONCRETE SURFACE AREAS IN THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 864.

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, 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.

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. 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 UPON 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.

FIELD PAINTING OF EXISTING STRUCTURAL STEEL:

THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 815 DATED FEB. 22, 2000. ALL EXPOSED SURFACES OF BEAMS, CROSS FRAMES, SCUPPERS, DRAINS, AND BEARINGS SHALL BE PAINTED. FINISH COAT COLOR SHALL BE FEDERAL COLOR STANDARD 14277 (GREEN). ALL PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT STAGING AND THE MAINTENANCE OF TRAFFIC PLANS.

SEAL DECK WITH SOLUBLE REACTIVE SILICATE (SRS):

THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 841.

ASBESTOS ABATEMENT

THE CONTRACTOR SHALL CONDUCT ASBESTOS INSPECTIONS OF ALL BRIDGES SUBJECT TO RENOVATION OR DEMOLITION AS PER CHAPTER 3745-20 OF THE OHIO ADMINISTRATIVE CODE (OAC) "ASBESTOS EMISSIONS CONTROL FROM RENOVATION/DEMOLITION AND WASTE DISPOSAL OPERATION" MAY 29, 1990 UTILIZING A CERTIFIED OHIO ASBESTOS HAZARD EVALUATION SPECIALIST. SHOULD SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) BE ENCOUNTERED; PERFORM BULK SAMPLING AND ANALYSIS. PREPARE A LETTER REPORT (1-2 PAGES) INCLUDING A BRIEF DISCUSSION OF THE INSPECTION AND SAMPLING METHODOLOGY AND MAP INDICATING THE BRIDGE LOCATION AND SAMPLING LOCATIONS, AND ANALYTICAL TEST RESULTS.

THE CONTRACTOR SHALL COMPLETE AN OEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS FORM TO THE OHIO EPA AT LEAST 10 WORKING DAYS BEFORE OPERATIONS BEGIN.

AS THESE INSPECTION REPORTS AND NOTIFICATION FORMS ARE COMPLETED, COPIES SHALL BE FORWARDED TO ODOT'S ON SITE PROJECT ENGINEER.

SHOULD ASBESTOS CONTAINING MATERIAL BE ENCOUNTERED, ALL SUSPECT MATERIALS SHALL BE REMOVED AND PROPERLY DESPOSED OF BY A CERTIFIED ASBESTOS REMOVAL CONTRACTOR IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (30 CFR PART 61, SUBPART M) SHALL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON SHALL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

ALL ASSOCIATED COSTS OF ASBESTOS MATERIALS TO BE REMOVED AND PROPERLY DISPOSED OF, WILL BE PAID UNDER 'THIRD PARTY BILLING' PROVISIONS OF ODOT CHANGE ORDER POLICY 512-004(P) APPENDIX D.

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM. FOR ADJUSTMENTS TO UTILITIES SEE ROADWAY PLANS.

PROPOSAL NOTE 512

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS - 11/22/93.

A. DESCRIPTION.

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REPAIR CONCRETE BRIDGE DECKS, INCLUDING THE REMOVAL OF ALL LOOSE AND UNSOUND CONCRETE, BITUMINOUS PATCHES, SURFACE PREPARATION, BONDING COAT AND THE MIXING, PLACING, FINISHING AND CURING OF THE MORTAR OR CONCRETE PATCHES.

B. MATERIALS.

MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
FINE AGGREGATE (NATURAL SAND) 703.02
COARSE AGGREGATE (NO. 8) 703.02
PORTLAND CEMENT 701.05
QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2 705.21
AIR-ENTRAINING ADMIXTURE 705.10
CURING MATERIALS - TYPE B PATCHES 705.07

C. REMOVAL OF UNSOUND CONCRETE.

THE ENGINEER SHALL SOUND THE ENTIRE DECK AND OUTLINE THE AREAS TO BE REMOVED. SOUNDING MAY HAVE TO BE DELAYED UNTIL THE DECK IS SUFFICIENTLY DRY TO PERMIT DETECTION OF ALL AREAS OF DELAMINATION. THE PERIMETER OF ALL REMOVAL AREAS SHALL BE SAWED TO A DEPTH OF 1" TO PRODUCE A VERTICAL OR SLIGHTLY UNDERCUT FACE. ADDITIONAL SAW CUTS MAY BE REQUIRED TO FACILITATE REMOVAL. ALL UNSOUND CONCRETE INCLUDING ALL PATCHES OTHER THAN SOUND PORTLAND CEMENT CONCRETE, AND ALL LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED. THE UNSOUND CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35-POUND CLASS AND SHALL BE OPERATED AT AN ANGLE OF LESS THAN 45 DEGREES MEASURED FROM THE SURFACE OF THE DECK CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. WHERE THE BOND BETWEEN THE CONCRETE AND A PRIMARY REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM 3/4 INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICABLE. REINFORCEMENT WHICH HAS BECOME LOOSE SHALL BE ADEQUATELY SUPPORTED AND TIED BACK INTO PLACE. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATIONS, THE ENGINEER WILL RE-SOUND THE DECK TO INSURE THAT ONLY SOUND CONCRETE REMAINS.

D. SURFACE PREPARATION.

CLEANING SHALL CLOSELY PRECEDE APPLICATION OF THE BONDING GROUT AND/OR THE PATCHING MATERIAL. THE SURFACE TO BE PATCHED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. FOR TYPE B PATCHES WHICH DO NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE SURFACE DRY. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE PATCHING MATERIAL WHICH IS USED.

E. BONDING GROUT.

TYPE B PATCHES SHALL BE BONDED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.

F. PATCHING.

TYPE B. PATCHING MATERIAL SHALL BE MADE USING QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2, 705.21. THE MORTAR SHALL BE MIXED AND PLACED AS PER MANUFACTURER'S RECOMMENDATIONS. COARSE AGGREGATE SHALL BE ADDED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WHEN THE DEPTH OF THE PATCH EXCEEDS 1".

G. CURING.

TYPE B PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

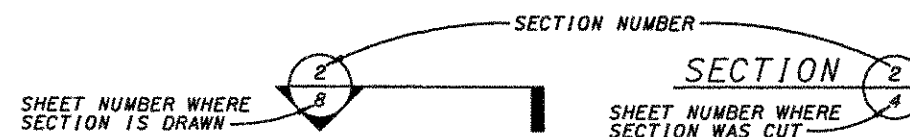
H. METHOD OF MEASUREMENT.

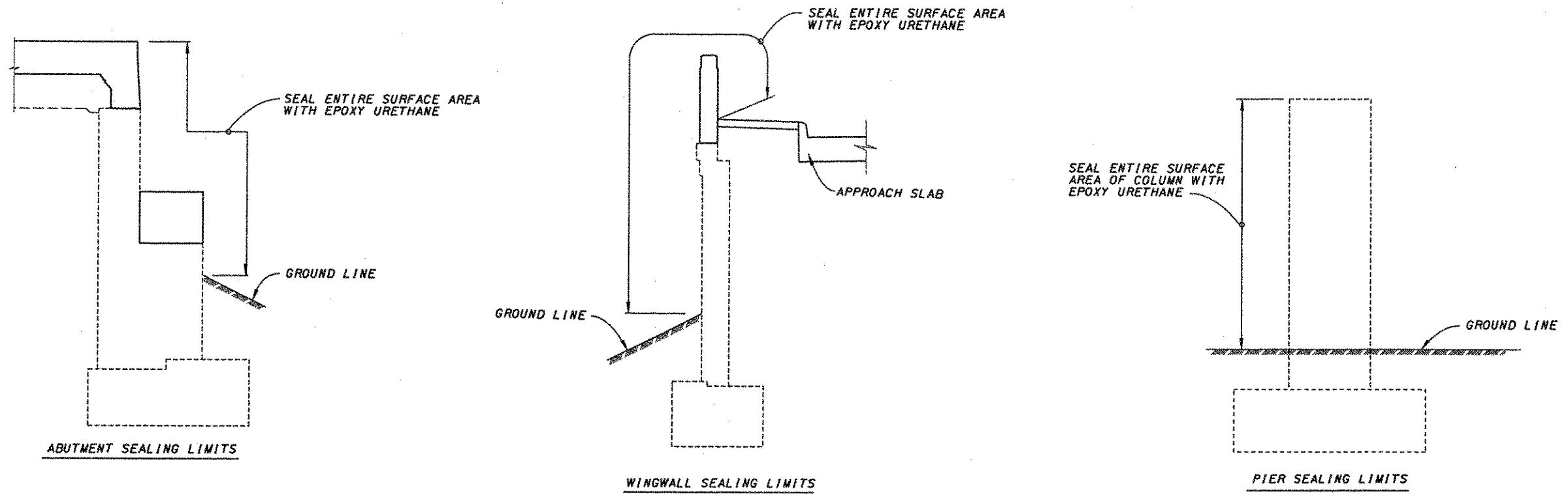
THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE FEET OF THE EXPOSED SURFACE OF ALL PATCHES, IRRESPECTIVE OF THE DEPTH OF THE PATCH, COMPLETE, IN PLACE AND ACCEPTED.

EXISTING STRUCTURE VERIFICATION

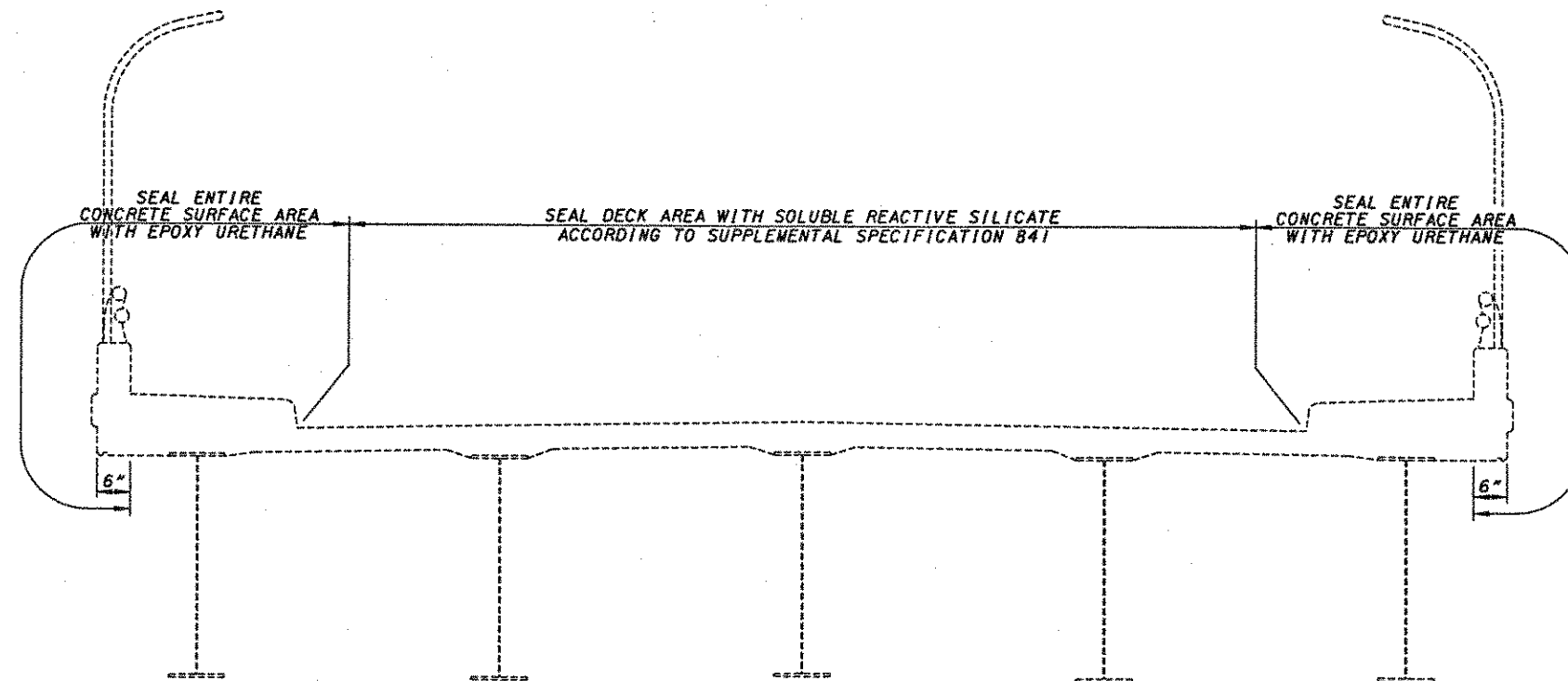
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.02. 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.

SECTION CONVENTION

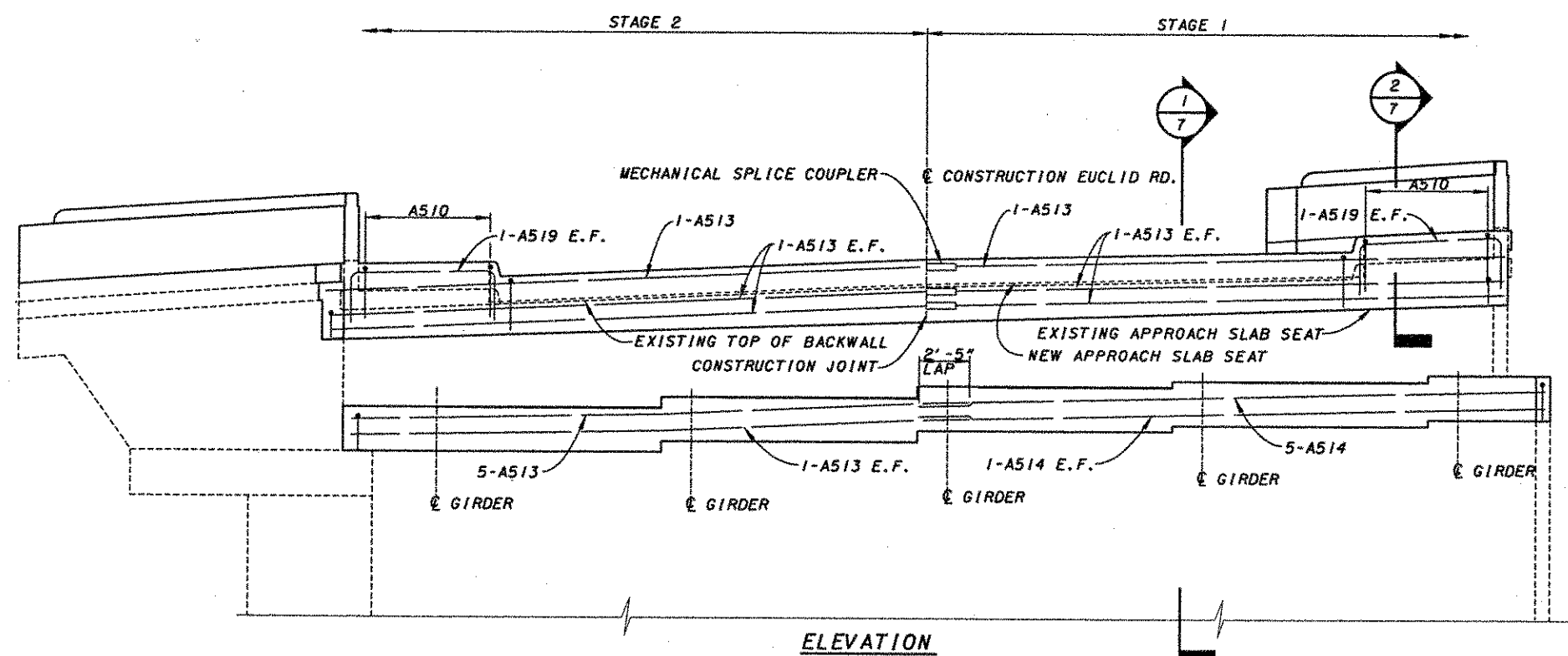
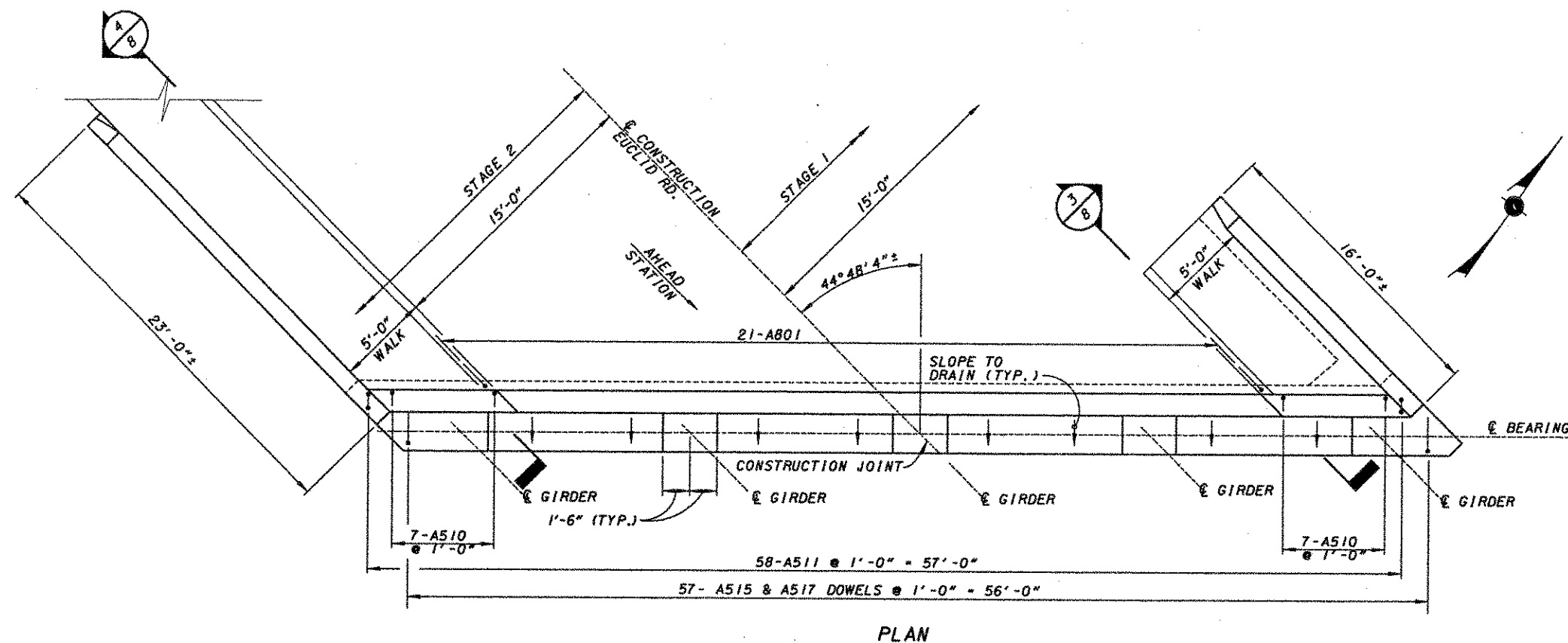




SEALING OF CONCRETE SURFACES. SUBSTRUCTURE



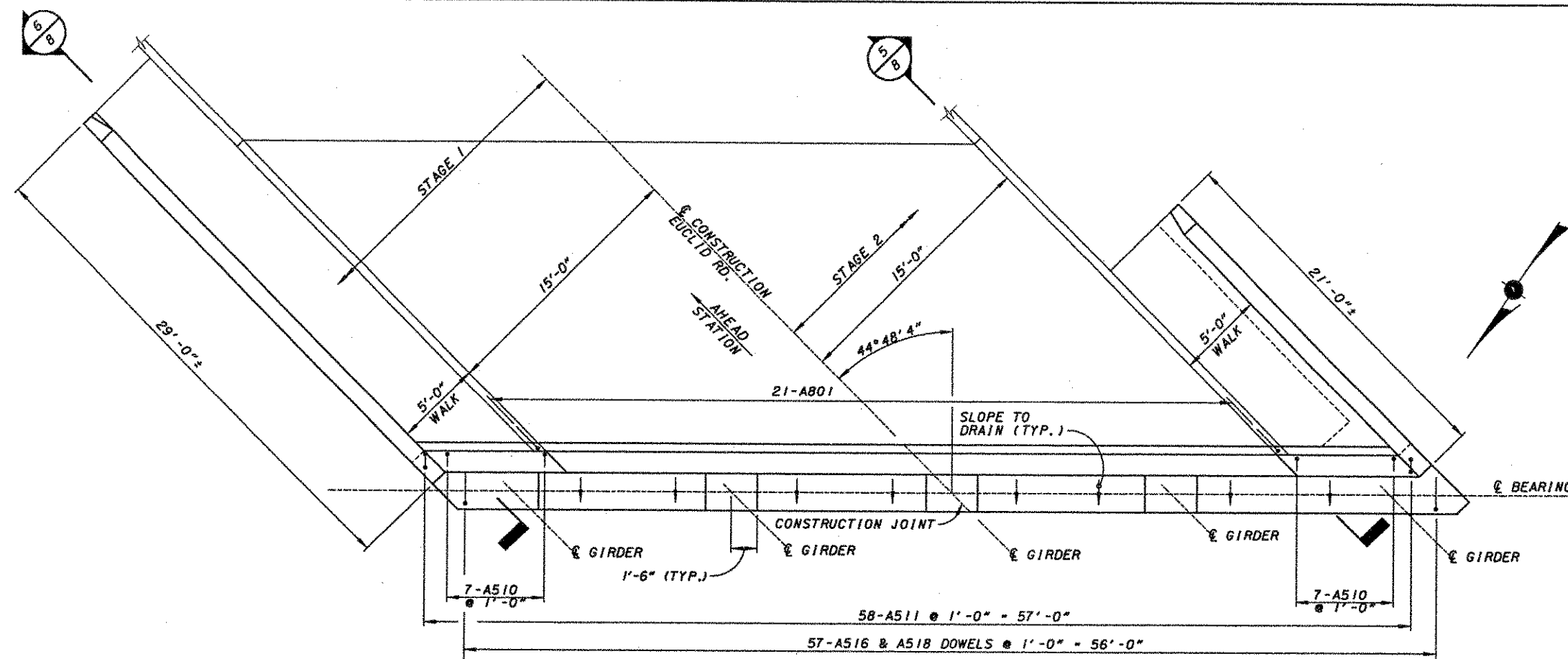
SEALING OF CONCRETE SURFACES, SUPERSTRUCTURE



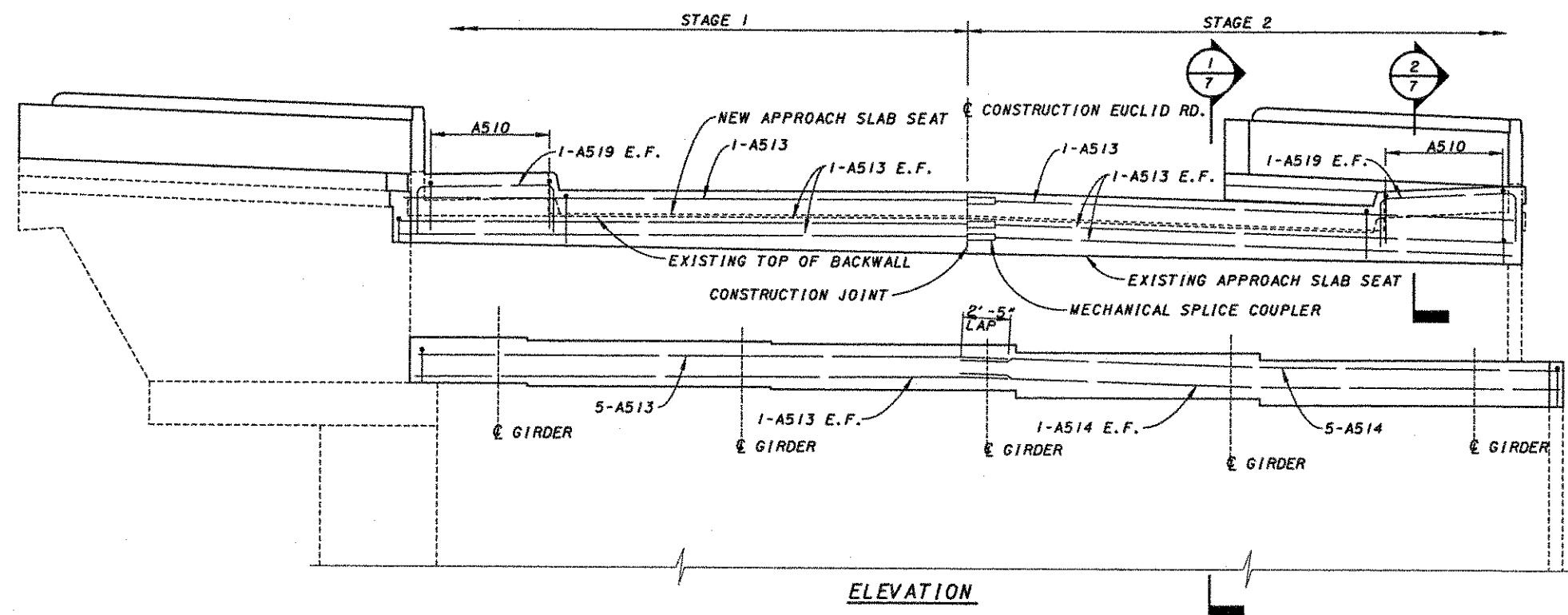
ALL STEEL CLEARANCES ARE
2" UNLESS NOTED OTHERWISE.

LEGEND:
E.F. = EACH FACE

NOTES:
1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
2. SEE SHEET 12/15 FOR BEARING DETAILS.



PLAN



ELEVATION

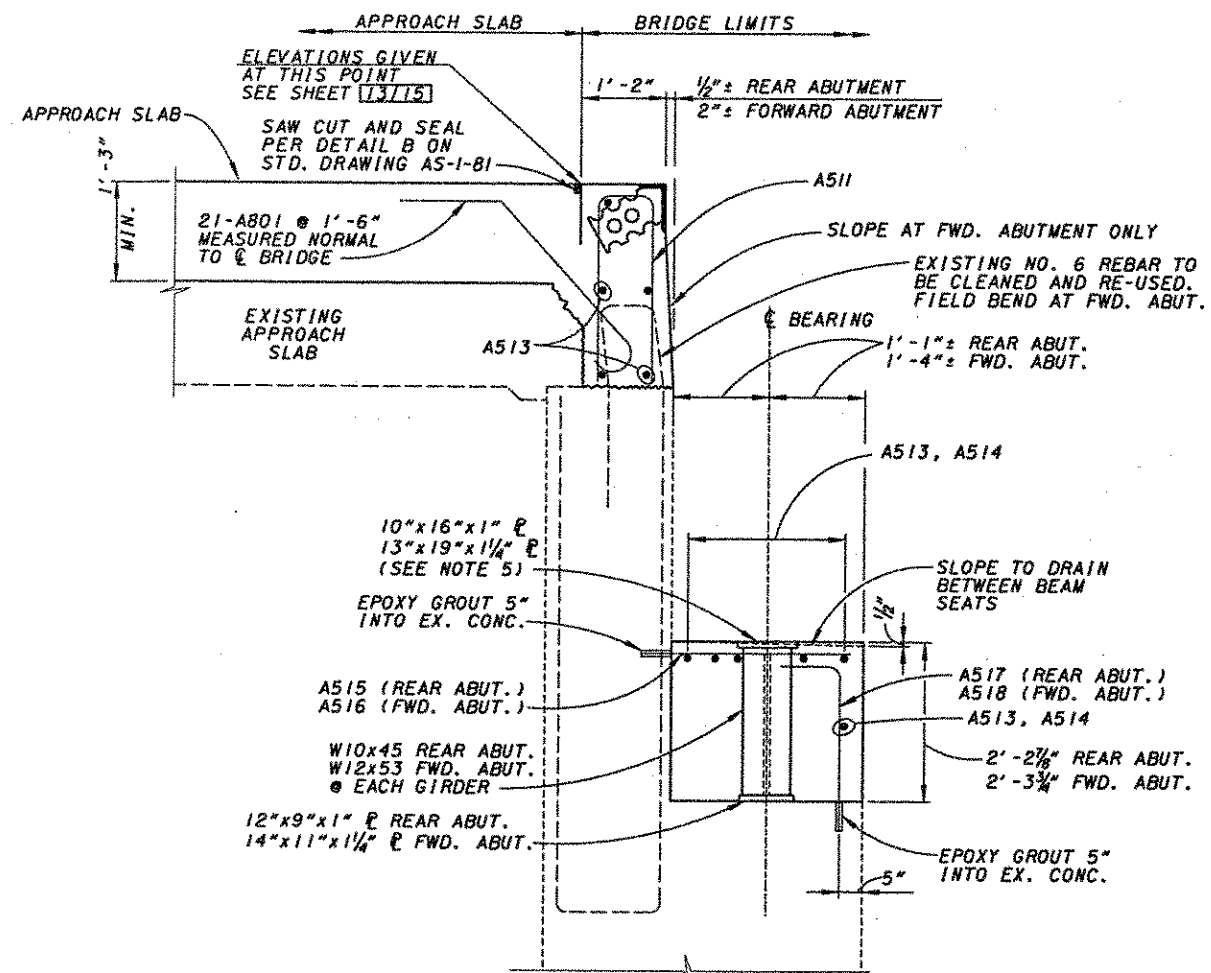
ALL STEEL CLEARANCES ARE
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LEGEND:

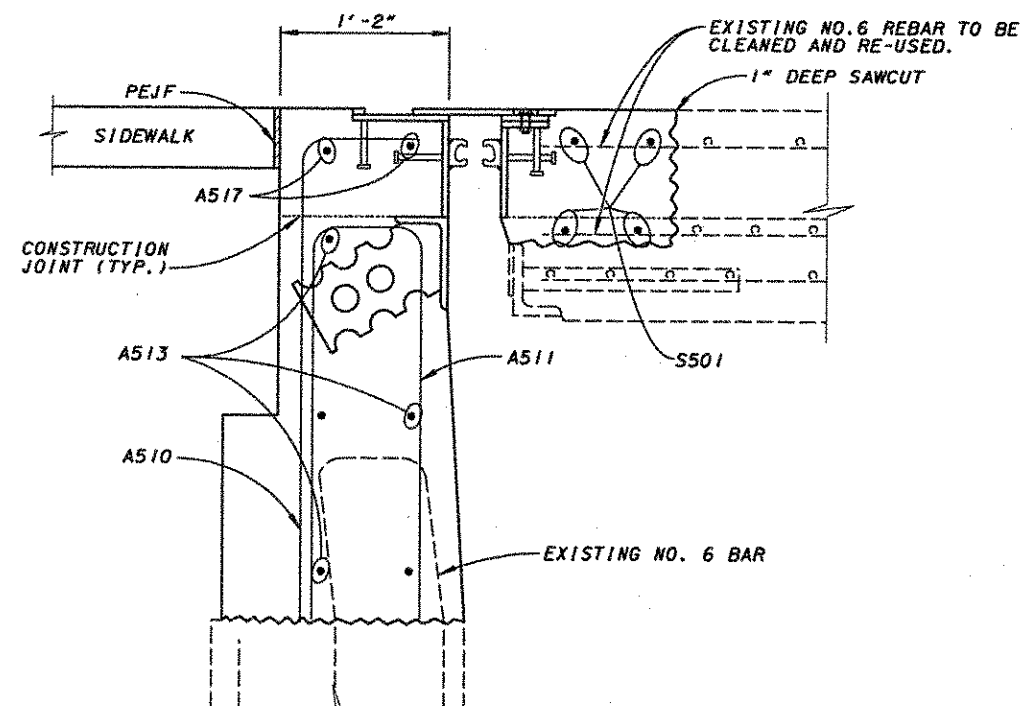
E.F. • EACH FACE

NOTES:

1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
2. SEE SHEET 12/15 FOR BEARING DETAILS.



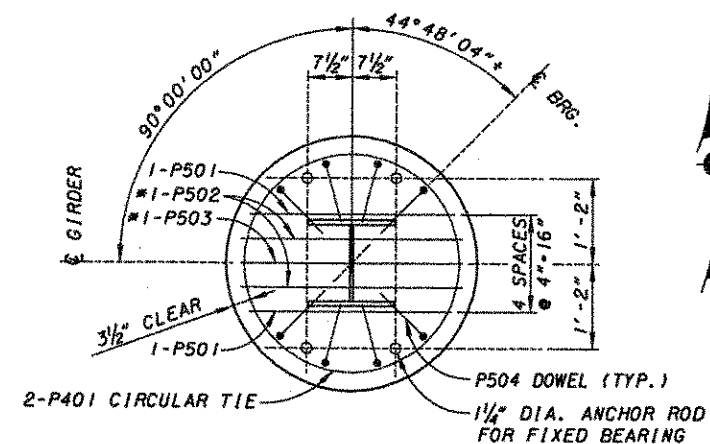
SECTION 1/5



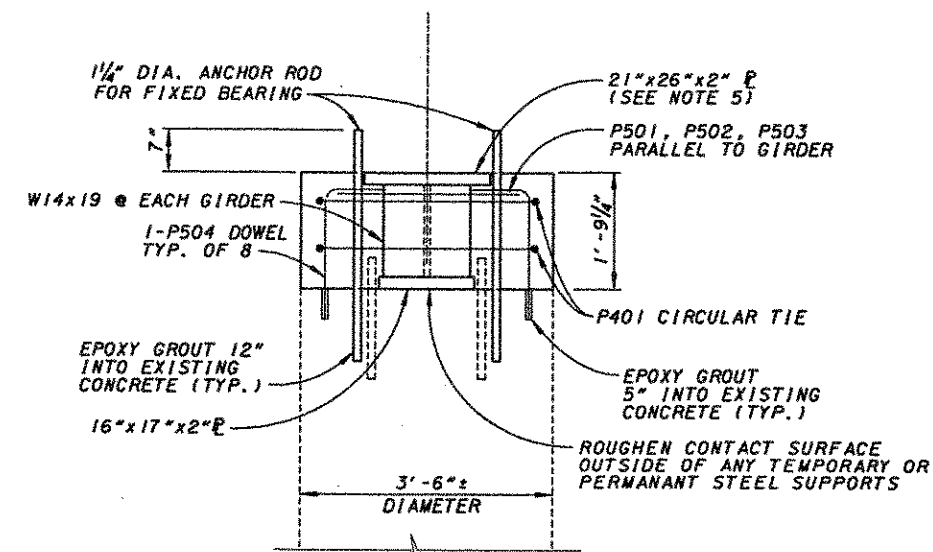
SECTION 2/5

ALL STEEL CLEARANCES ARE 2" UNLESS NOTED OTHERWISE.

* CUT BARS IN FIELD TO AVOID TEMPORARY SUPPORT.



PIER COLUMN PLAN

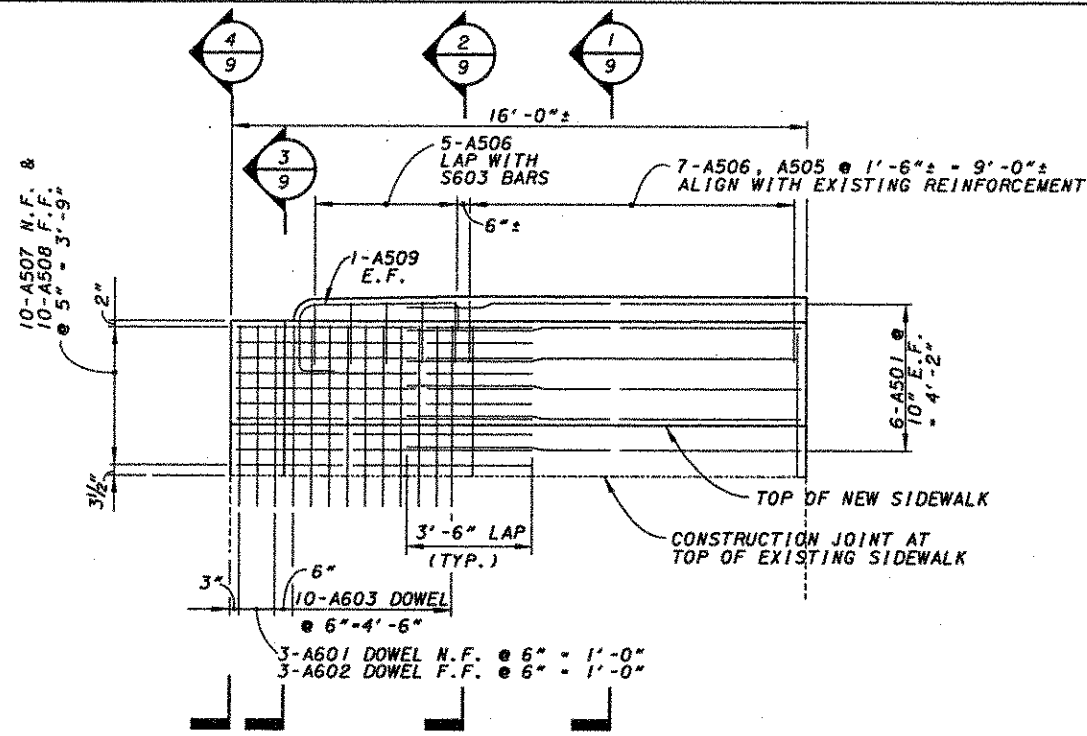


PIER COLUMN ELEVATION

(TYPICAL OF 5 THUS)

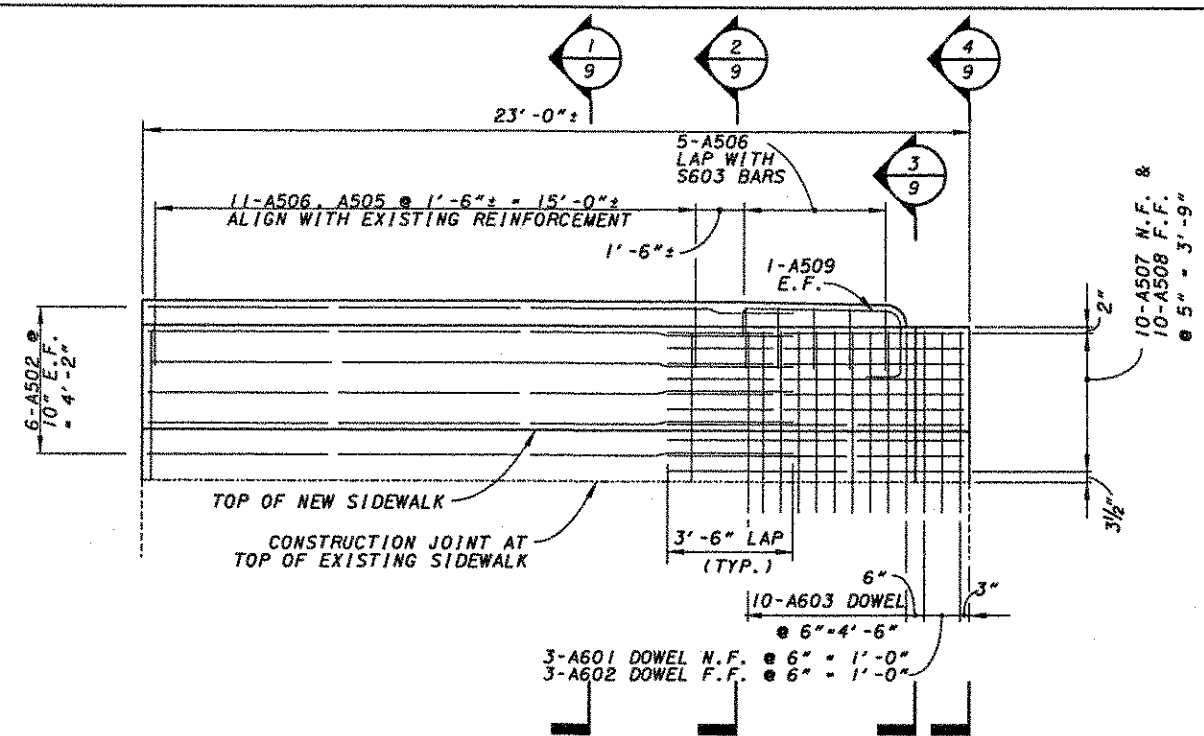
NOTES:

1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
2. SEE SHEET 12/15 FOR BEARING DETAILS.
3. SPLICE COUPLER OR STUD WELDING MAY BE SUBSTITUTED FOR FIELD WELDING PROVIDED THE FULL SHEAR CAPACITY OF THE ANCHOR ROD IS DEVELOPED BY THE SPLICE. ALTERNATE SPLICE DETAILS ARE SUBJECT TO APPROVAL OF THE ENGINEER.
4. SEE SHEET 11/15 FOR REMOVAL DETAILS.
5. TOP PLATE TO BE METALIZED OR GALVANIZED.



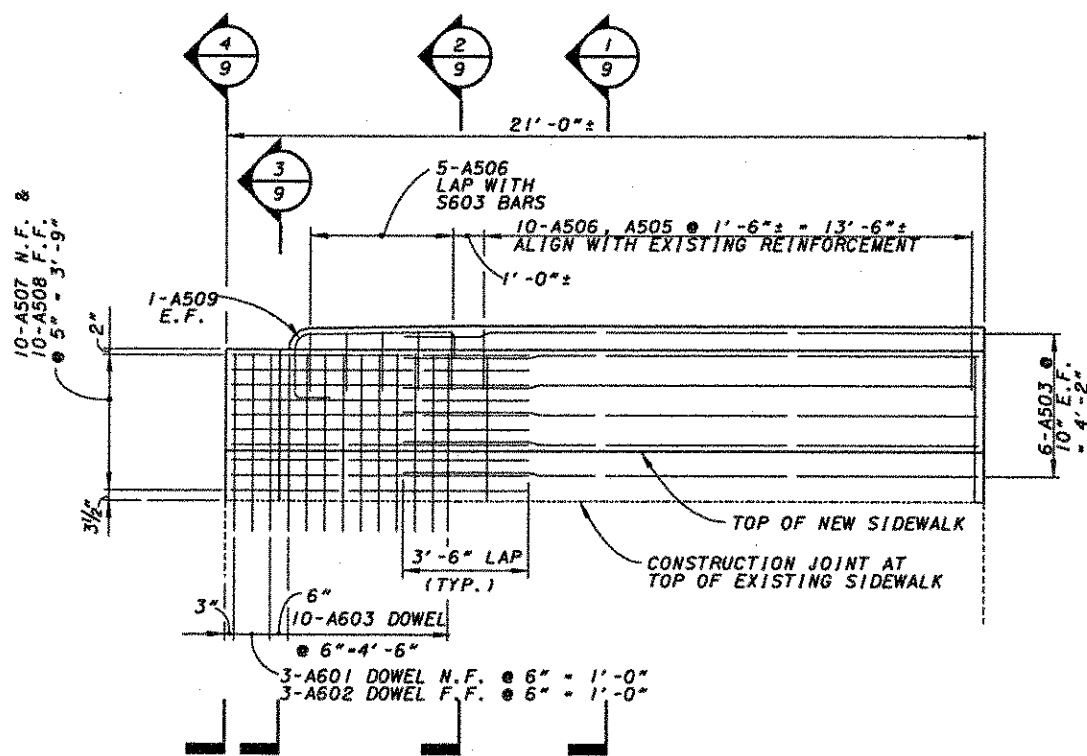
WINGWALL ELEVATION - REAR ABUTMENT - LEFT SIDE
(REINFORCEMENT)

ELEVATION $\frac{3}{5}$



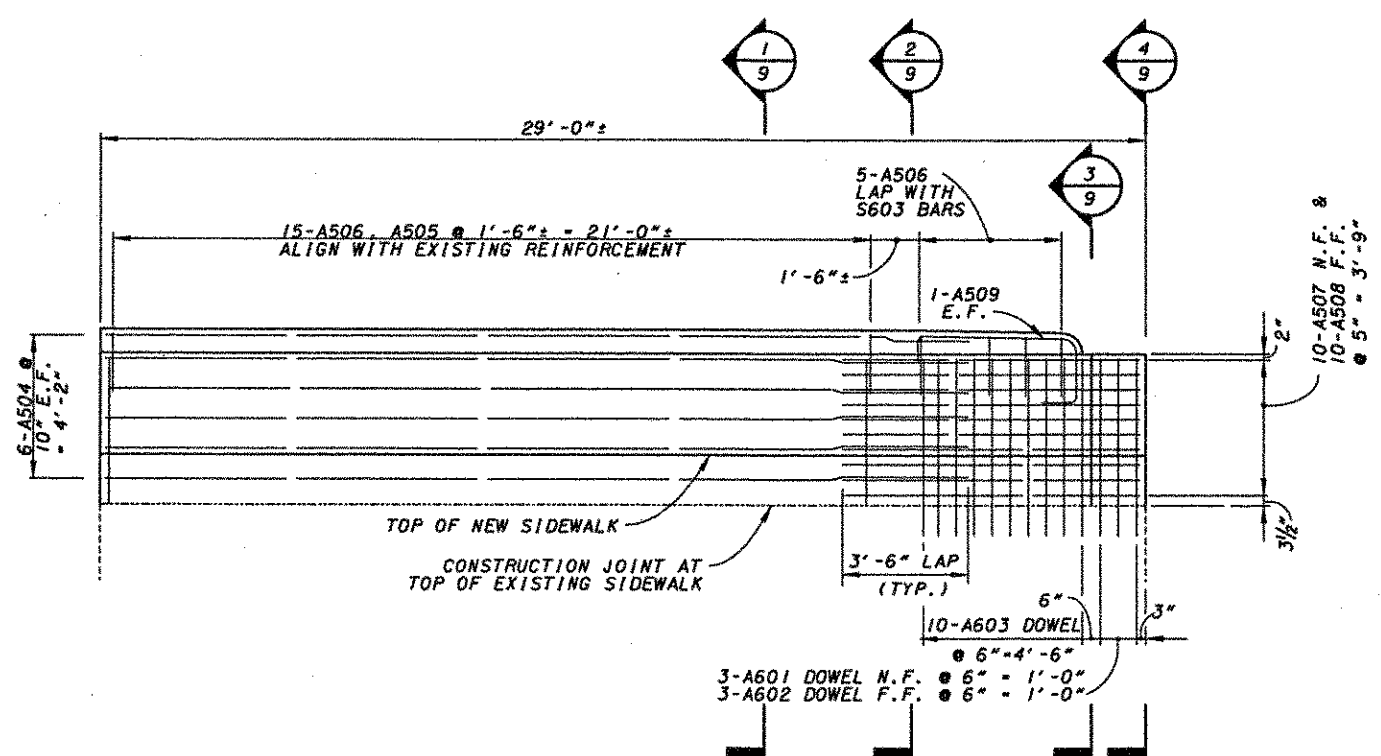
WINGWALL ELEVATION - REAR ABUTMENT - RIGHT SIDE
(REINFORCEMENT)

ELEVATION $\frac{4}{5}$



WINGWALL ELEVATION - FORWARD ABUTMENT - RIGHT SIDE
(REINFORCEMENT)

ELEVATION $\frac{5}{6}$

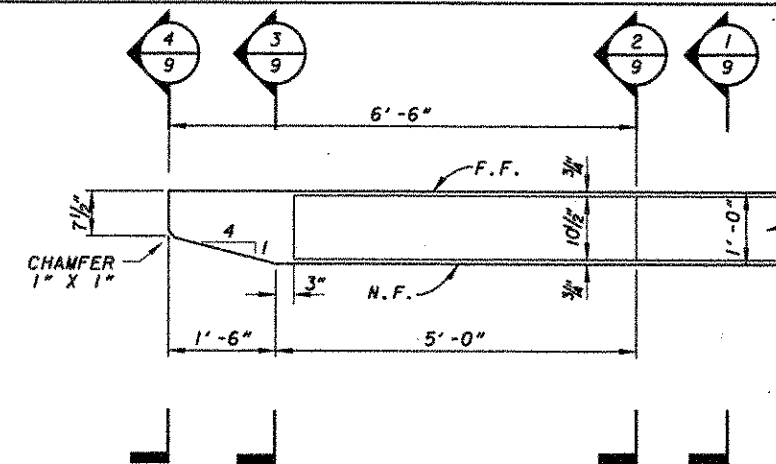
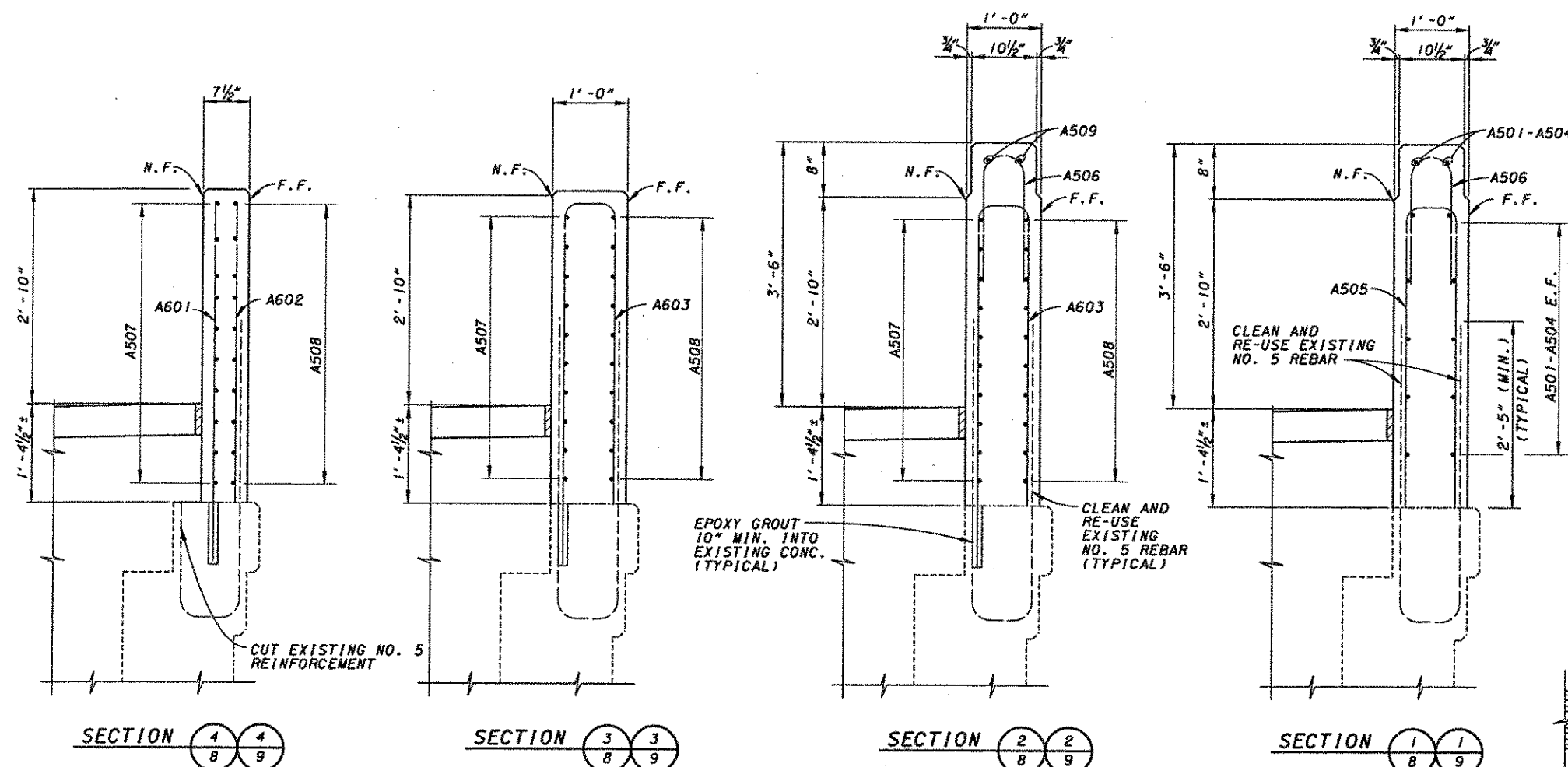


WINGWALL ELEVATION - FORWARD ABUTMENT - LEFT SIDE
(REINFORCEMENT)

ELEVATION $\frac{6}{6}$

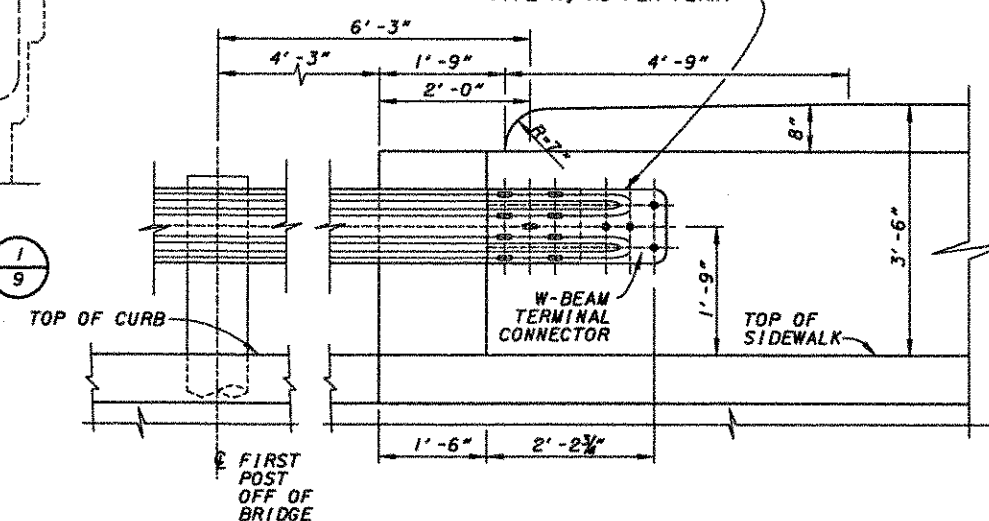
ALL STEEL CLEARANCE ARE 2" UNLESS NOTED OTHERWISE.

- NOTES:**
1. FOR ADDITIONAL PARAPET DETAILS SEE SHEET 9/15.
 2. PLACE PARAPET CONTROL JOINTS IN ACCORDANCE WITH STD. DWG. BR-2-98
 3. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.

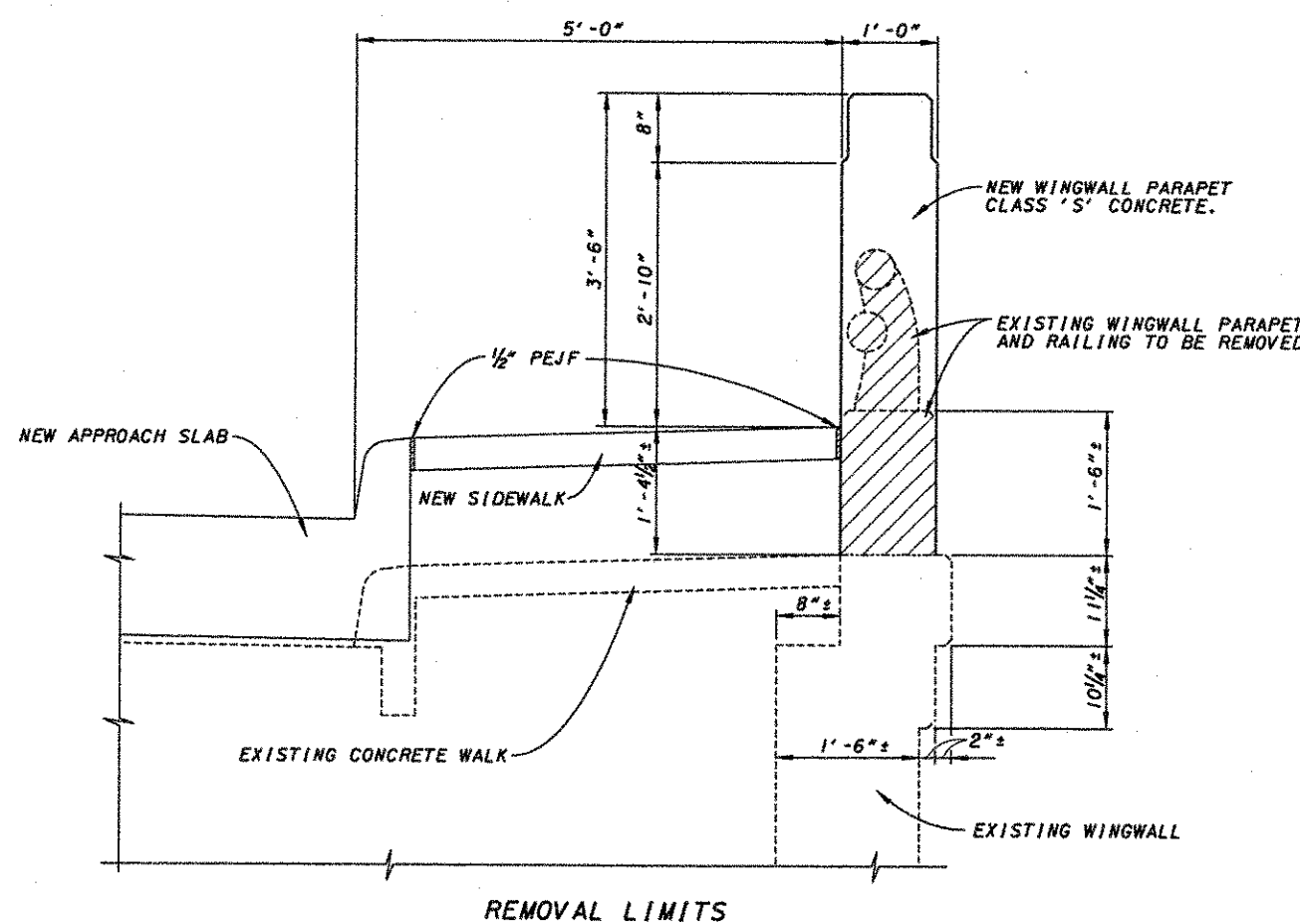


WINGWALL PARAPET PLAN

SEE STD. DWG GR-1.1M FOR CONCRETE INSERT ANCHOR ASSEMBLY, STD. DWG. GR3.2M FOR LOCATION AND INSTALLATION OF THE W-BEAM TERMINAL CONNECTOR SEE STD. DWG. GR-3.4M FOR ADDITIONAL BRIDGE TERMINAL ASSEMBLY. (BRIDGE TERMINAL ASSEMBLY, TYPE A, AS PER PLAN)



GUARDRAIL ATTACHMENT ELEVATION



REMOVAL LIMITS

ALL STEEL CLEARANCE ARE 2" UNLESS NOTED OTHERWISE.

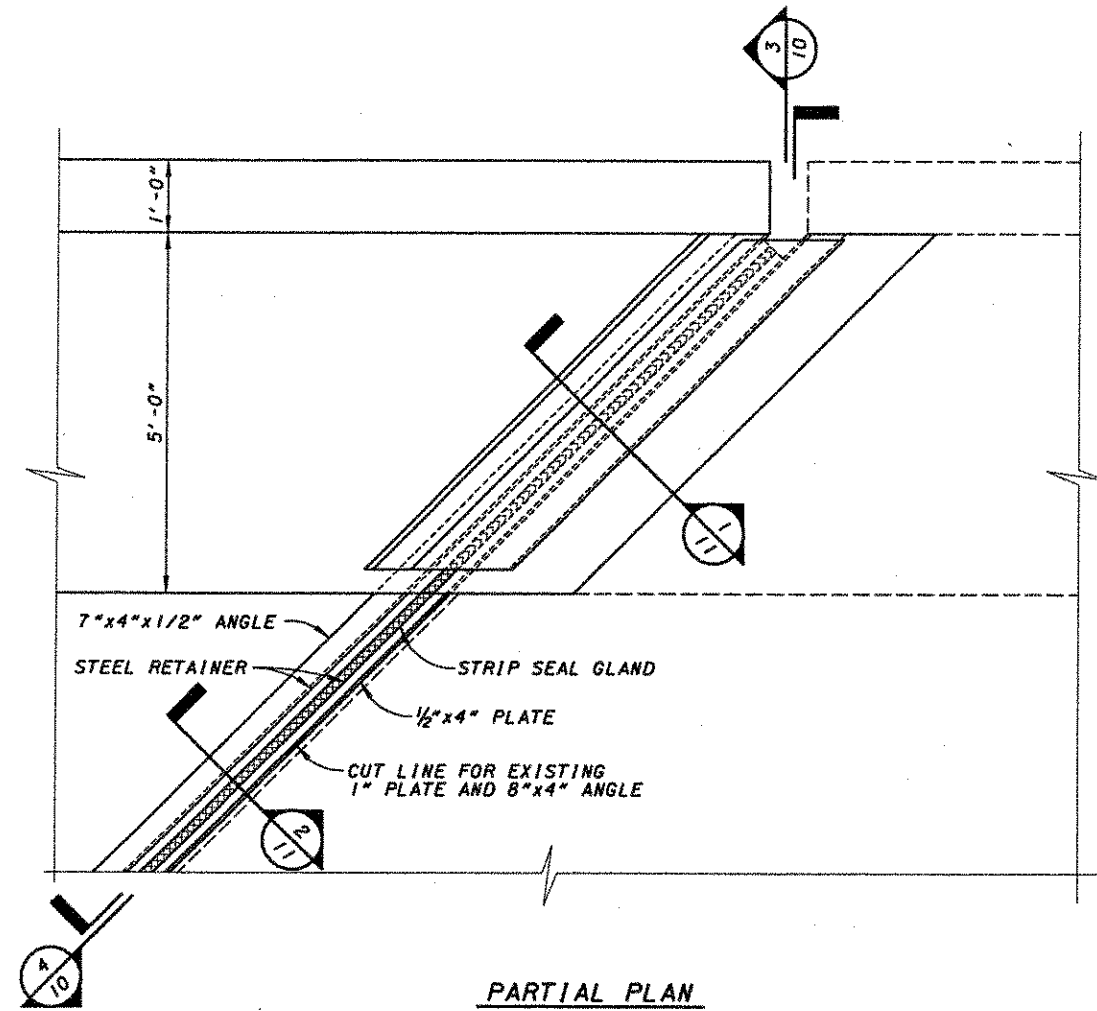
LEGEND

N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
PEJF = PREFORMED EXPANSION JOINT FILLER
T&B = TOP AND BOTTOM
BOT. = BOTTOM

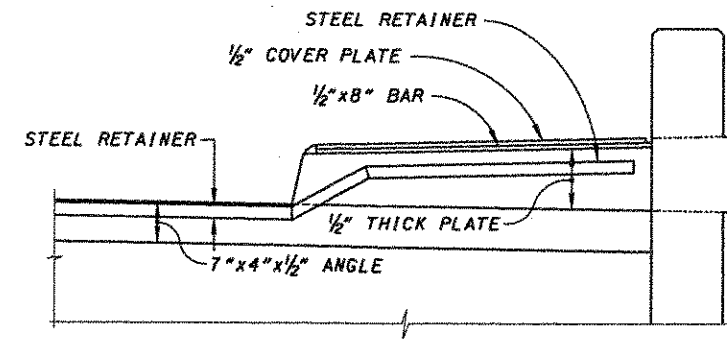
▨ - LIMITS OF REMOVAL

NOTES:

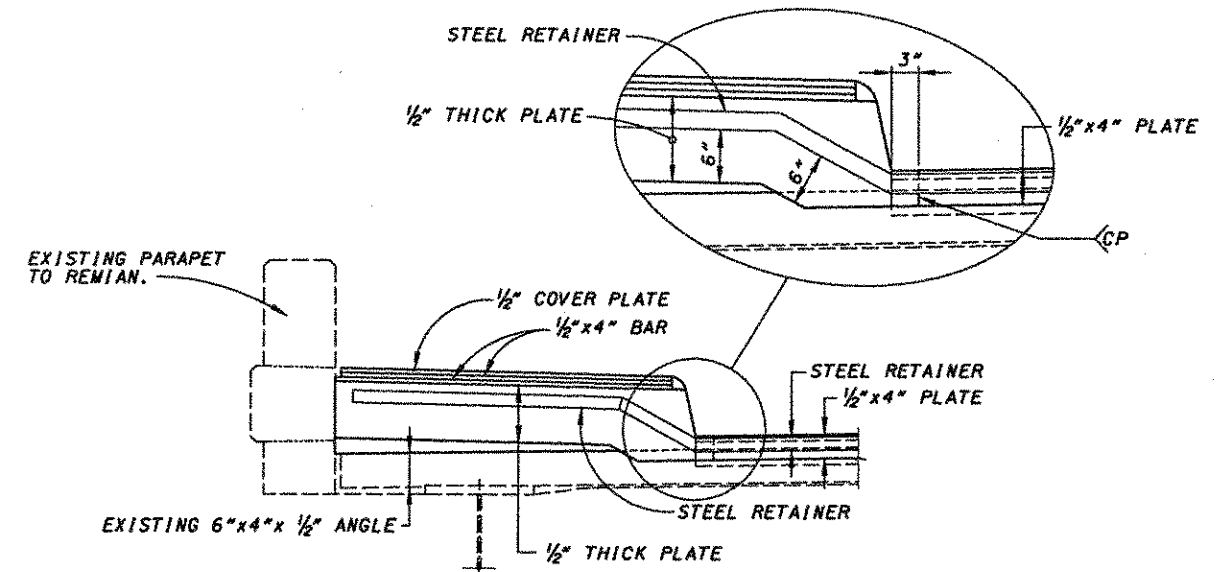
1. FOR ADDITIONAL PARAPET DETAILS SEE SHEET 8/15.
2. PLACE PARAPET CONTROL JOINTS IN ACCORDANCE WITH STD. DWG. BR-2-98
3. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
4. PREFORMED ELASTOMERIC JOINT SEALER AND TYPE A WATERPROOFING AT SIDEWALK SHALL BE INCLUDED IN THE PRICE BID PER SQUARE YARD OF APPROACH SLAB.



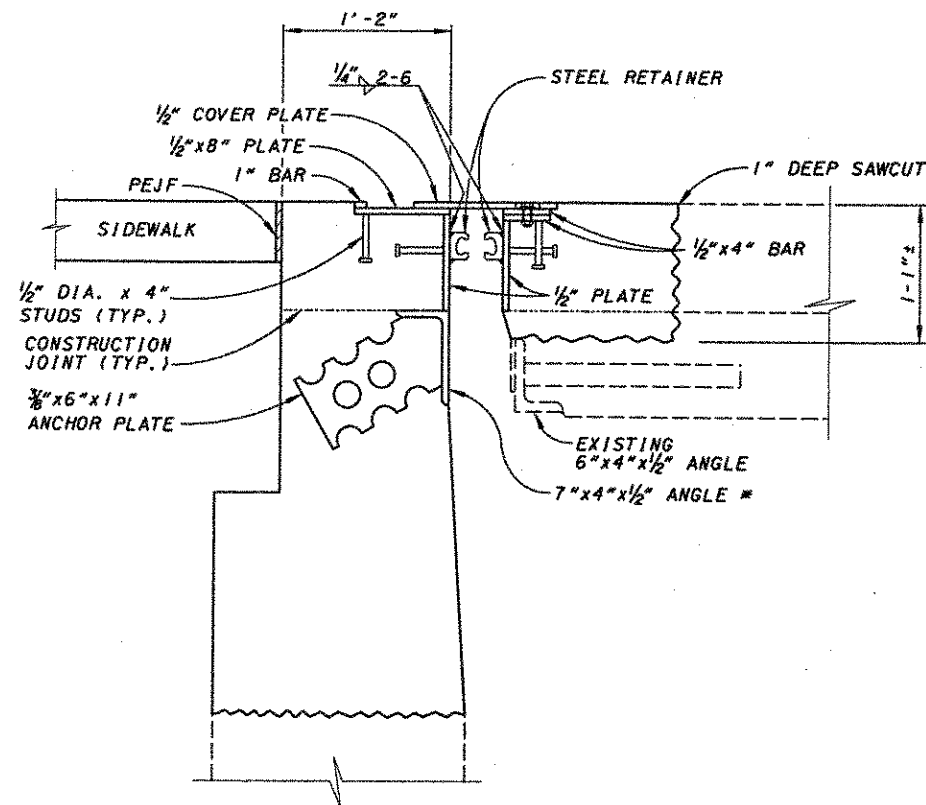
PARTIAL PLAN



SECTION 3/10



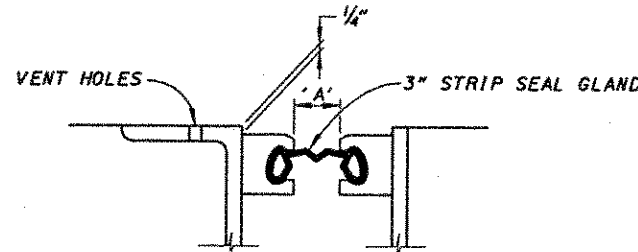
SECTION 4/10



SIDEWALK EXPANSION JOINT REPLACEMENT DETAIL

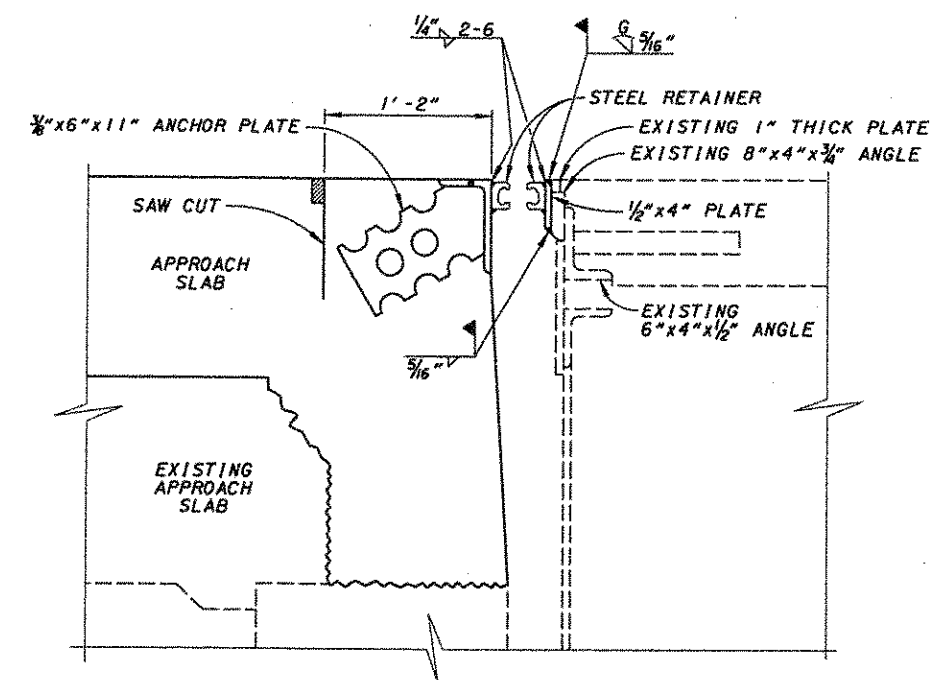
SECTION 1
10

* SET VERTICAL LEG OF
7" x 4" x 1/2" ANGLE
PERPENDICULAR TO
THE ROADWAY GRADE



STRIP SEAL DIM. 'A' (SEE STD. DWG. EXJ-4-87)								
TEMPERATURE	30°F	40°F	50°F	60°F	70°F	80°F	90°F	
REAR ABUTMENT	1 1/8"	1 3/4"	1 3/4"	1 5/8"	1 1/2"	1 1/2"	1 3/8"	
FORWARD ABUTMENT	1 1/8"	1 13/16"	1 11/16"	1 5/8"	1 11/16"	1 7/16"	1 3/8"	

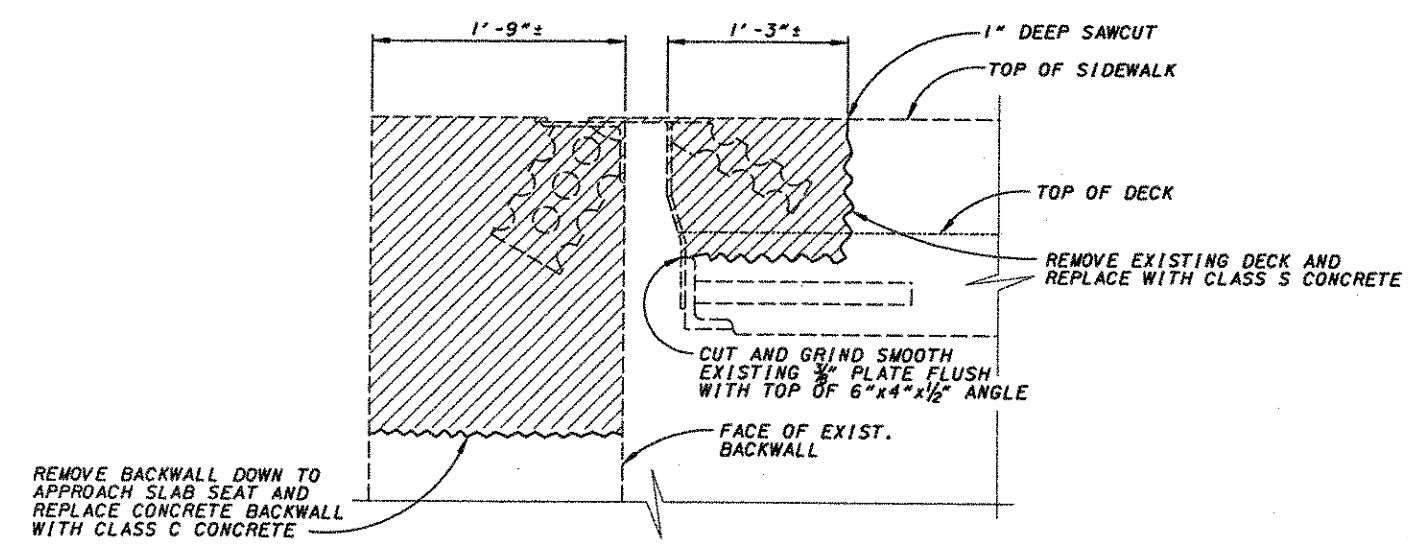
FOR ADDITIONAL JOINT DETAILS, NOTES AND
INSTALLATION DETAILS SEE STD. DWG. EXJ-4-87.



EXPANSION JOINT REPLACEMENT DETAIL

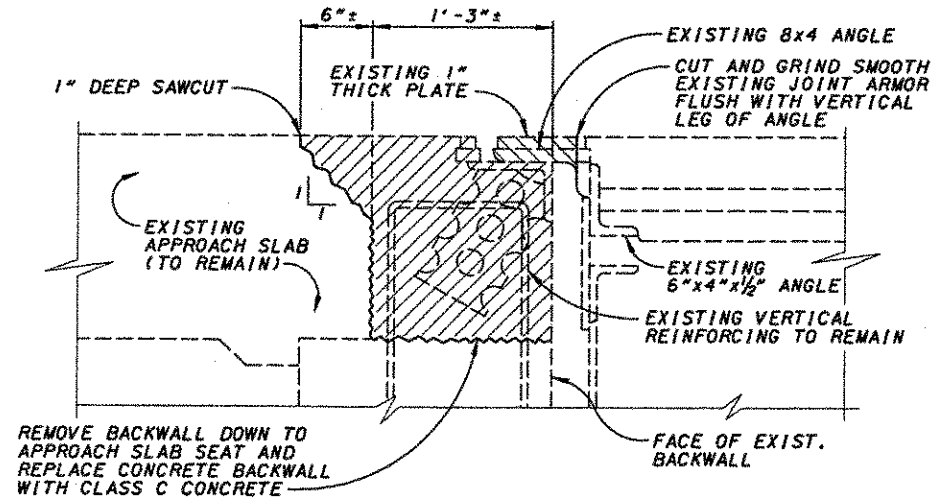
SEE STANDARD DRAWING EXJ-4-87
FOR ADDITIONAL DETAILS NOT SHOWN

SECTION 2
10



SIDEWALK EXPANSION JOINT REMOVAL DETAIL

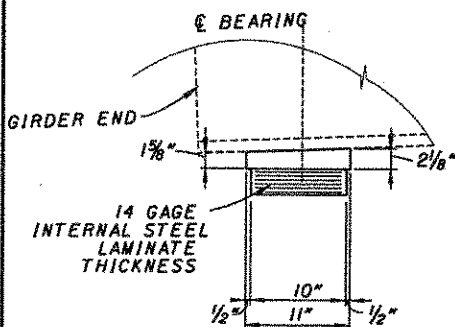
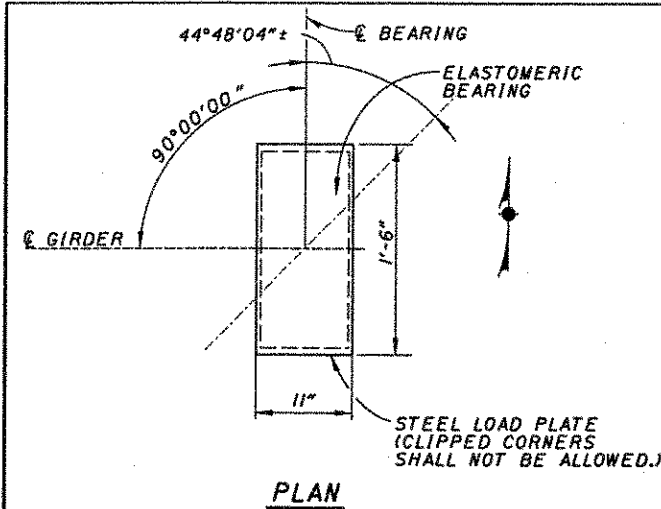
SECTION 1
10



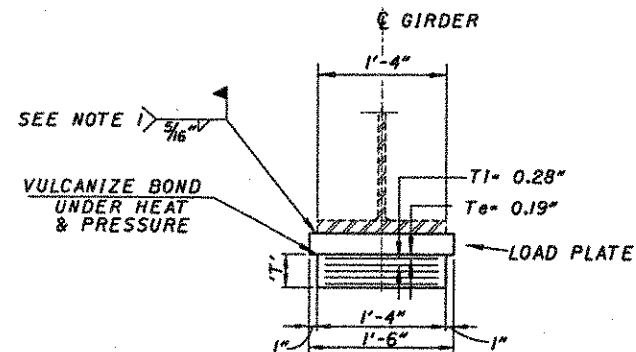
EXPANSION JOINT REMOVAL DETAIL

SECTION 2
10

DENOTES PORTION OF EXISTING
STRUCTURE TO BE REMOVED.



SIDE ELEVATION

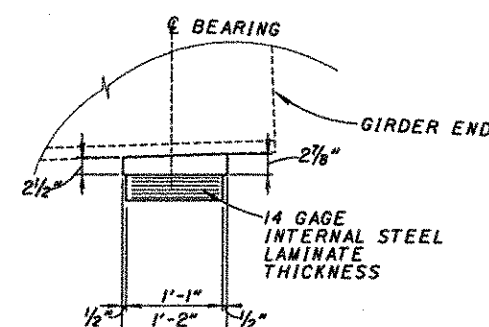
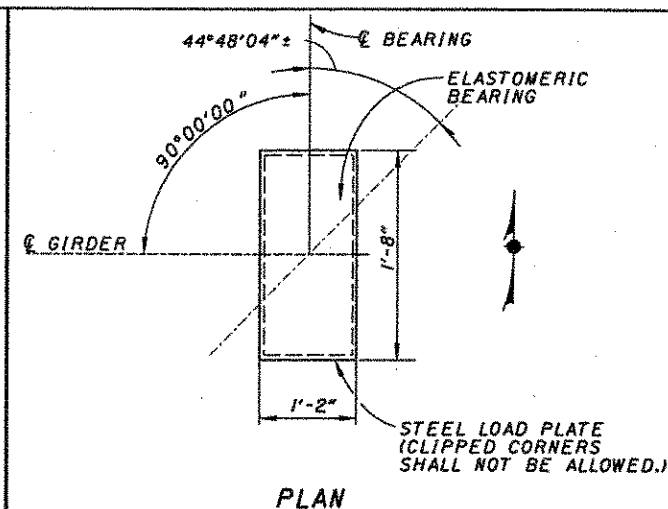


END ELEVATION

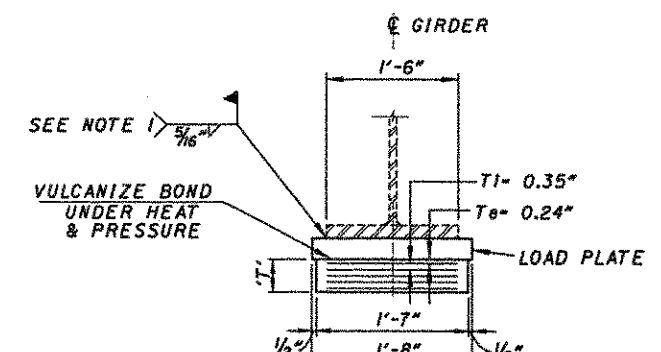
EXTERIOR ELASTOMERIC LAYERS	2 X 0.19 in = 0.38 in
INTERIOR ELASTOMERIC LAYERS	5 X 0.28 in = 1.40 in
STEEL PLATES	6 X 0.075 in = 0.450 in
TOTAL	T = 2.23 in

DEAD LOAD REACTION = 78 KIPS
LIVE LOAD REACTION = 75 KIPS
MAX DESIGN LOAD = 153 KIPS

LAMINATED ELASTOMERIC EXPANSION
BEARING AT REAR ABUTMENT
50 DUROMETER ELASTOMER, GRADE 3



SIDE ELEVATION

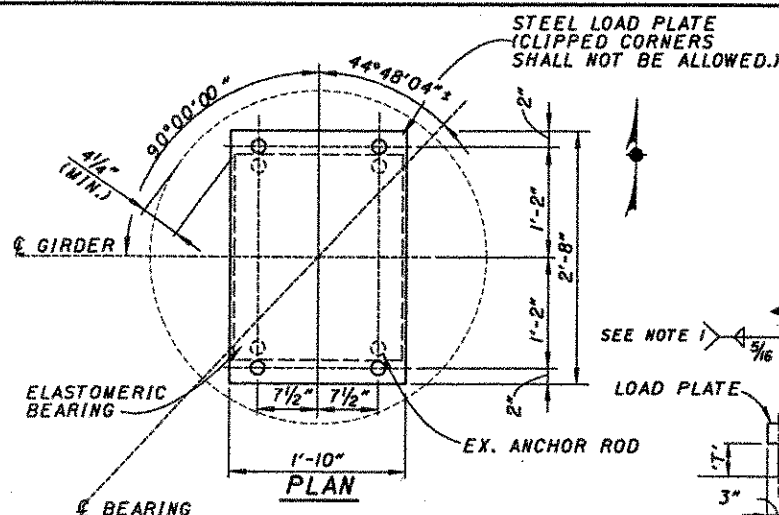


END ELEVATION

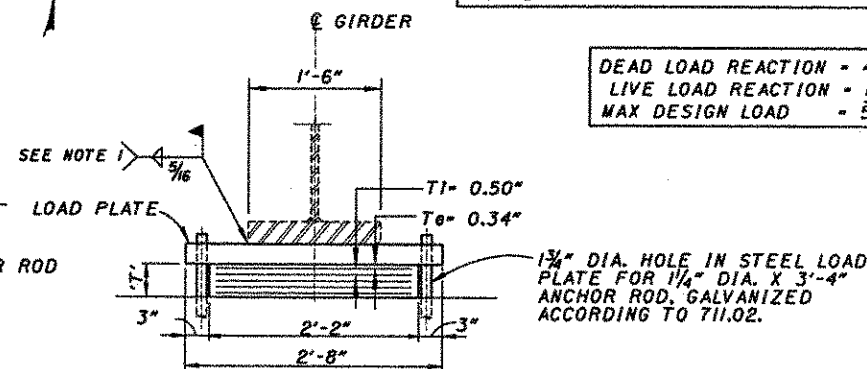
EXTERIOR ELASTOMERIC LAYERS	2 X 0.24 in = 0.48 in
INTERIOR ELASTOMERIC LAYERS	6 X 0.35 in = 2.10 in
STEEL PLATES	7 X 0.075 in = 0.525 in
TOTAL	T = 3.10 in

DEAD LOAD REACTION = 153 KIPS
LIVE LOAD REACTION = 81 KIPS
MAX DESIGN LOAD = 234 KIPS

LAMINATED ELASTOMERIC EXPANSION
BEARING AT FORWARD ABUTMENT
50 DUROMETER ELASTOMER, GRADE 3



AHEAD STATION



END ELEVATION

EXTERIOR ELASTOMERIC LAYERS	2 X 0.34 in = 0.68 in
INTERIOR ELASTOMERIC LAYERS	4 X 0.50 in = 2.00 in
STEEL PLATES	5 X 0.075 in = 0.375 in
TOTAL	T = 3.06 in

DEAD LOAD REACTION = 425 KIPS
LIVE LOAD REACTION = 161 KIPS
MAX DESIGN LOAD = 586 KIPS

LAMINATED ELASTOMERIC FIXED
BEARING AT PIER
50 DUROMETER ELASTOMER, GRADE 3

BEARING NOTES:

1. WELDING OF THE LOAD PLATE TO THE BEAM OR GIRDER FLANGE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMERIC BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

STEEL FOR BEARING LOAD PLATES TO BE A709-36 (A36)

THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

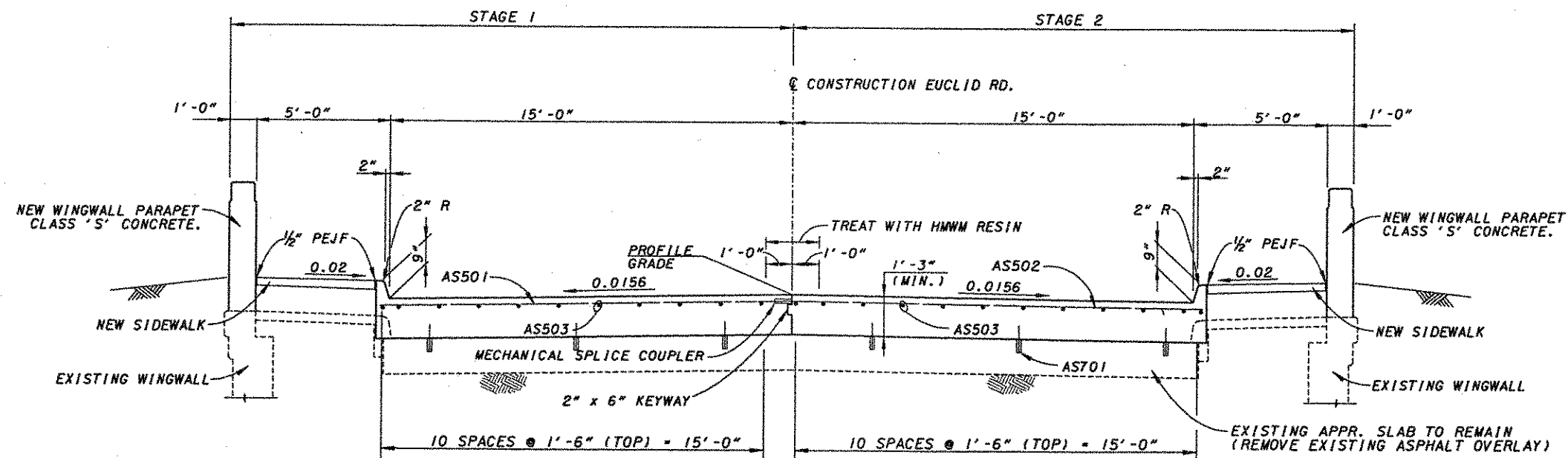
IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE SHEAR DEFLECTION EXCEEDS ONE SIXTH OF THE BEARING HEIGHT AT 60°F ± 9°F, THE GIRDER SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F.

STEEL PORTIONS OF ELASTOMERIC BEARINGS SHALL BE PAINTED PER CMS SPECIFICATION ITEM 514- PAINTING, SYSTEM A. STEEL PORTIONS OF BEARING SHALL RECEIVE A SHOP PRIME COAT PRIOR TO INSTALLATION. FURTHERMORE THE EXPOSED STEEL SURFACES OF THE BEARINGS SHALL RECEIVE A TOP COAT. THE COLOR OF THE TOP COAT SHALL MATCH THE STEEL BEAMS OR GIRDERS.

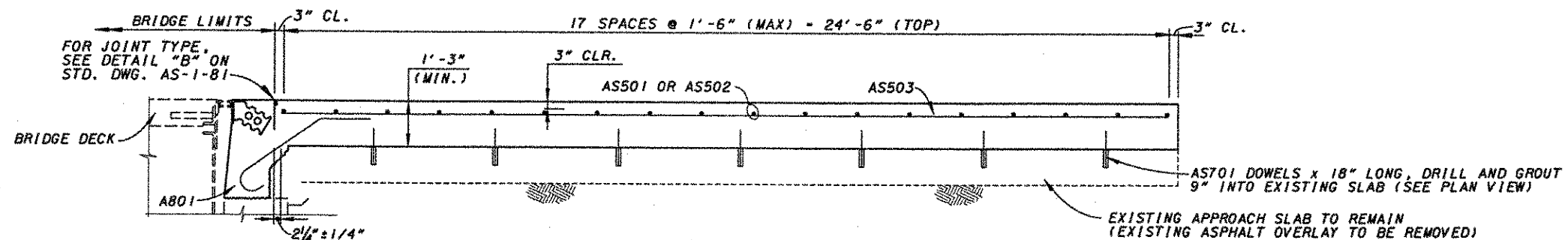
2. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5J AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECT TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 (METHOD A) OF SECTION 14, BEARINGS, DIVISION I, DESIGN.

3. REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.

4. BEARINGS DESIGN LOAD: FOR HS-25 LIVE LOAD AND A 60 PSF FUTURE WEARING SURFACE.



SECTION 1
13



SECTION 2
13

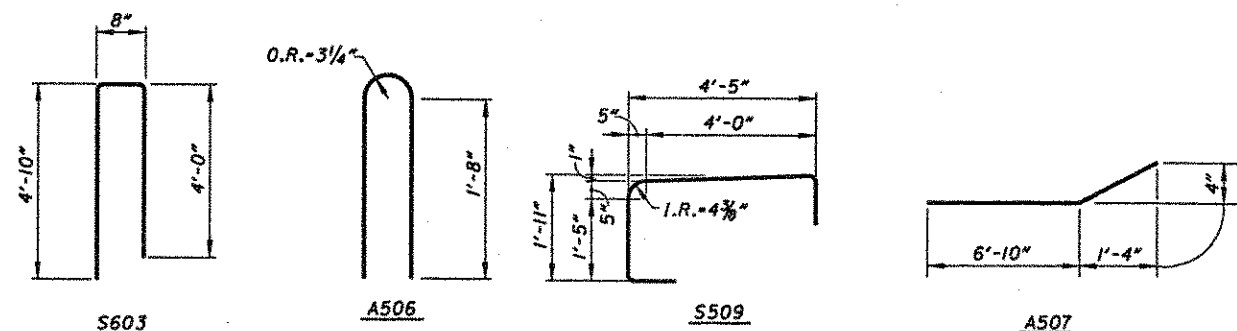
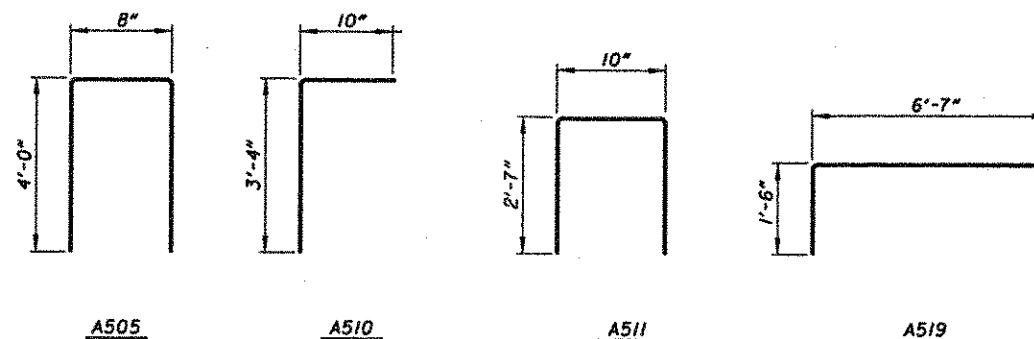
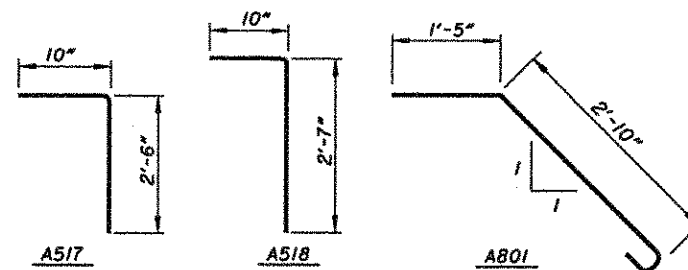
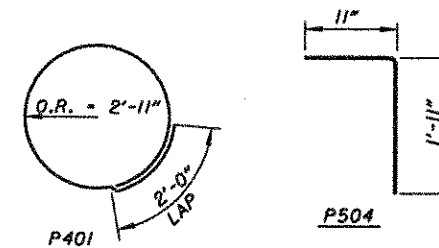
NOTES:

1. SEE STD. DWG. AS-1-81 FOR END JOINT DETAILS.
2. SEE SHEET 15/15 FOR REINFORCING LIST.

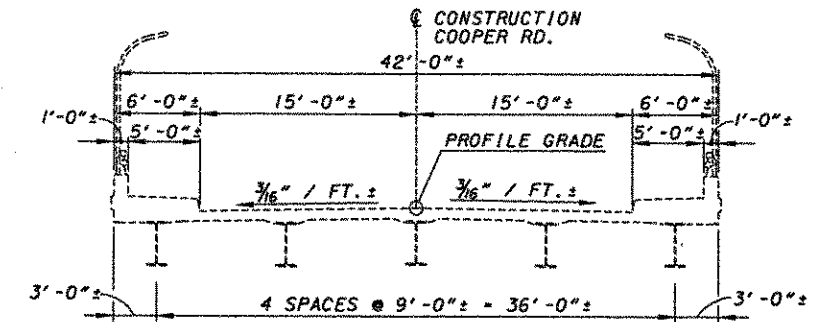
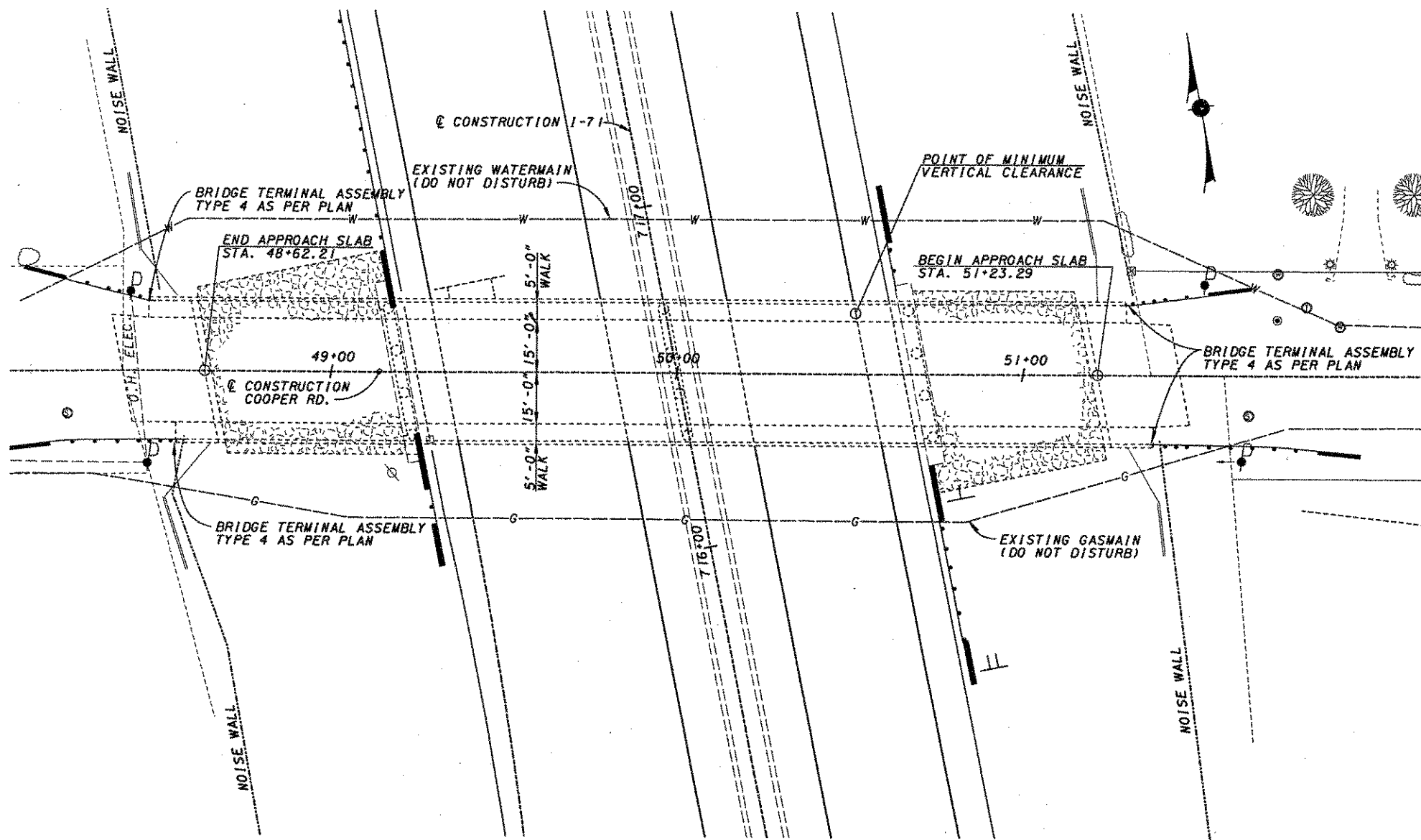
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SUPERSTRUCTURE REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
5501	16	6' - 7"	110	STR.

ABUTMENT REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
A501	12	10' - 11"	137	STR.
A502	12	17' - 11"	224	STR.
A503	12	15' - 11"	199	STR.
A504	12	23' - 11"	299	STR.
A505	43	8' - 5"	377	BENT
A506	63	3' - 9"	246	BENT
A507	40	8' - 2"	341	BENT
A508	40	8' - 3"	344	STR.
A509	8	7' - 6"	63	BENT
A510	28	4' - 1"	119	BENT
A511	116	5' - 9"	696	BENT
A512	NOT USED			
A513	34	28' - 3"	1,002	STR.
A514	14	30' - 8"	448	STR.
A515	57	2' - 5"	144	STR.
A516	57	2' - 11"	173	STR.
A517	57	3' - 3"	193	BENT
A518	57	3' - 4"	198	BENT
A519	8	9' - 4"	78	BENT
A601	12	4' - 10"	87	STR.
A602	12	4' - 0"	72	STR.
A603	40	9' - 2"	551	BENT
A801	42	5' - 2"	579	BENT
TOTAL =			6,571	

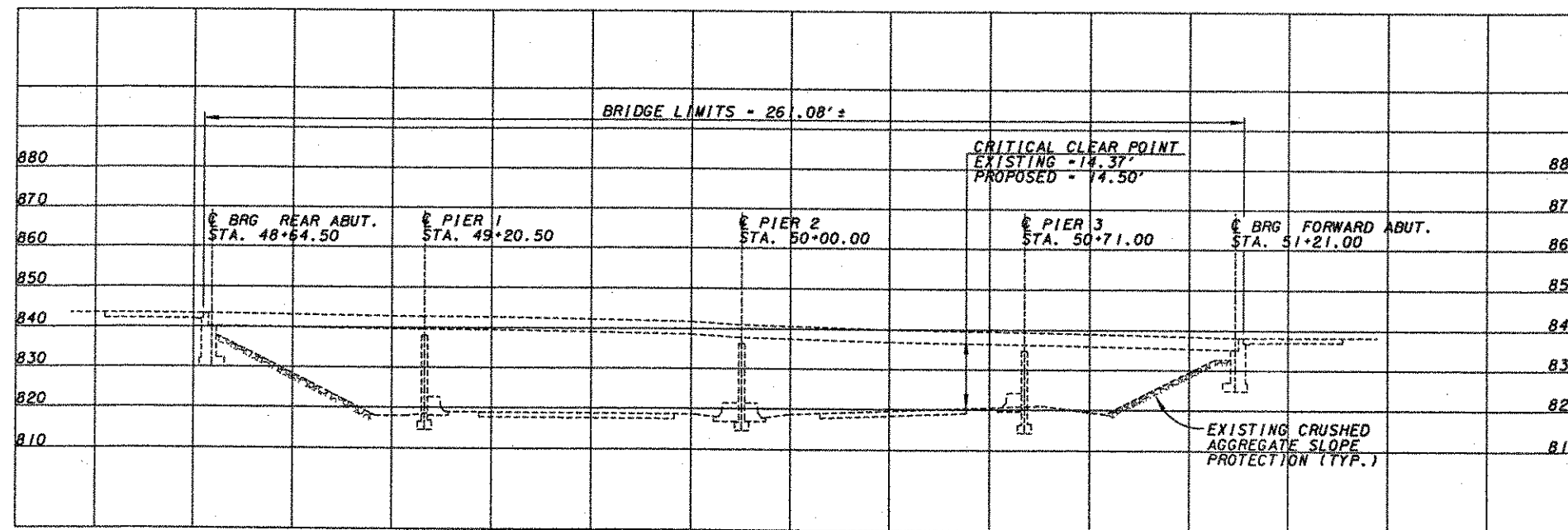
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1. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT ON STANDARD 180° AND 135° HOOKS.
2. DIMENSIONS ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT WHERE RADIUS "R" IS INDICATED.
4. ALL BARS ARE EPOXY COATED.
5. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P501 IS A NO. 5 BAR.



PROPOSED WORK

1. SEAL DECK WITH SOLUBLE REACTIVE SILICATE (SRS) ACCORDING TO SUPPLEMENTAL SPECIFICATION 841.
2. SEAL ABUTMENTS, WING WALLS, RAILING, PIERS AND BACK WALLS WITH EPOXY-URETHANE, COLOR SHALL BE FEDERAL COLOR STANDARD 1777B (LIGHT NEUTRAL). BARRIER PROTECTION AT PIERS 1 AND 3 SHALL ALSO BE SEALED.
3. PLACE A POURED JOINT SEALER IN THE EXISTING STEEL EXPANSION JOINTS AT THE ENDS OF THE BRIDGE.
4. REPAIR EROSION AT FACE OF REAR ABUTMENT UNDER NORTH FACIA BEAM, WITH CRUSHED AGGREGATE SLOPE PROTECTION AS DIRECTED BY THE ENGINEER.
5. REMOVE BRUSH WITHIN 10 FEET OF STRUCTURE LIMITS.
6. LOWER I.R. 71 PAVEMENT BELOW STRUCTURE TO PROVIDE VERTICAL CLEARANCE OF 14'-6". SEE ROADWAY PLANS FOR DETAILS.



PROFILE ALONG PROFILE GRADE

EXISTING STRUCTURE - I.R. 71 UNDER COOPER RD.

TYPE: CONTINUOUS STEEL BEAMS
PAINTED WITH REINFORCED CONCRETE DECK, REINFORCED CONCRETE PIERS AND ABUTMENTS.

LENGTH OF SPANS: 56'-0"±, 79'-6"±, 71'-0"±, 50'-0"± c/c BEARINGS

ROADWAY WIDTH: 30'-0"± TOE/TOE SIDEWALK CURB.

DESIGN LOADING: C.F. 400 (57), AASHTO-H20

SKEW ANGLE: 11°19'20"± R.F.

CROWN: 3/16" / FT.±

WEARING SURFACE: 1 1/4" LATEX CONCRETE

APPROACH SLAB: AS-1-54 (25' LONG)

ALIGNMENT: TANGENT

YEAR BUILT: 1966±

YEAR REHABBED: 1985±

LATITUDE: N 39°13'44"

LONGITUDE: W 84°22'01"

SFN: 3105164

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS:

- ITEM 201 - CLEARING AND GRUBBING.
- ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION.

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT SUPPLEMENTAL SPECIFICATIONS:

- 841 DATED 10/12/99 - SOLUBLE REACTIVE SILICATE (SRS) CONCRETE TREATMENT
- 864 DATED 07/11/00 - SEALING OF CONCRETE SURFACES

DECK PROTECTION METHOD:

SEALING OF CONCRETE SURFACES

SEAL DECK WITH SOLUBALE REACTIVE SILICATE (SRS).

THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 841.

SEAL PIERS, PIER CAPS, WINGWALLS, ABUTMENTS, RAILING, AND DECK EDGES WITH EPOXY-URETHANE.

THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO SEAL THE DESIGNATED EXPOSED CONCRETE SURFACE AREAS IN THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 864.

SEALING OF EXPANSION JOINT

PLACE A POURED JOINT SEALER IN THE EXISTING STEEL EXPANSION JOINTS. BEFORE APPLYING THE SEALANT, JOINT STEEL SHALL BE ABRASIVE BLASTED TO WHITE METAL AND BLOWN CLEAN WITH OIL-FREE COMPRESSED AIR TO REMOVE ANY LATENCE AND DEBRIS. INSTALLATION SHALL FOLLOW THE MANUFACTURER'S REQUIREMENTS. THE JOINT SEALANT SHALL BE THE FOLLOWING OR AN APPROVED EQUAL: DOW CORNING 902 RSC; ALL STATE CAULKING SUPPLY, 586 NORTHLAND BLVD., CINCINNATI, OHIO 45240; PHONE 513-851-9980. A BOND BREAKER SHALL BE APPLIED PRIOR TO INSTALLATION OF THE JOINT SEALANT.

ASBESTOS ABATEMENT

THE CONTRACTOR SHALL CONDUCT ASBESTOS INSPECTIONS OF ALL BRIDGES SUBJECT TO RENOVATION OR DEMOLITION AS PER CHAPTER 3745-20 OF THE OHIO ADMINISTRATIVE CODE (OAC) "ASBESTOS EMISSIONS CONTROL FROM RENOVATION/DEMOLITION AND WASTER DISPOSAL OPERATION" MAY 29, 1990 UTILIZING A CERTIFIED OHIO ASBESTOS HAZARD EVALUATION SPECIALIST. SHOULD SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) BE ENCOUNTERED; PERFORM BULK SAMPLING AND ANALYSIS. PREPARE A LETTER REPORT (1-2 PAGES) INCLUDING A BRIEF DISCUSSION OF THE INSPECTION AND SAMPLING METHODOLOGY AND MAP INDICATING THE BRIDGE LOCATION AND SAMPLING LOCATIONS, AND ANALYTICAL TEST RESULTS.

THE CONTRACTOR SHALL COMPLETE AN OEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS FORM TO THE OHIO EPA AT LEAST 10 WORKING DAYS BEFORE OPERATIONS BEGIN.

AS THESE INSPECTION REPORTS AND NOTIFICATION FORMS ARE COMPLETED, COPIES SHALL BE FORWARD TO ODOT'S ON SITE PROJECT ENGINEER.

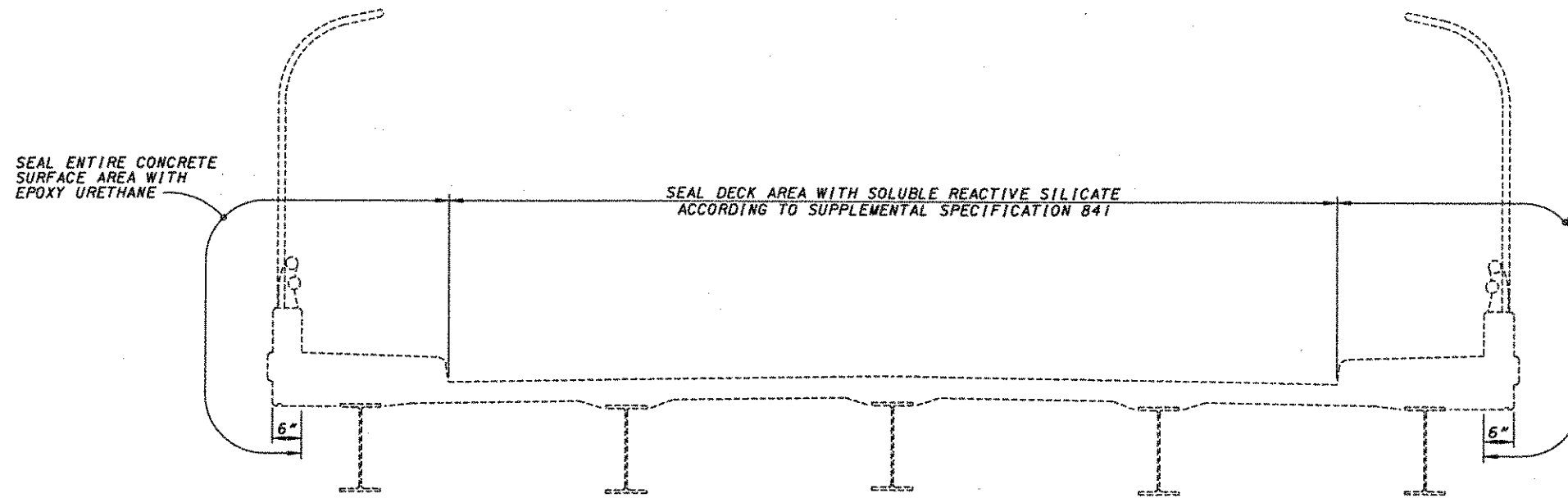
SHOULD ASBESTOS CONTAINING MATERIAL BE ENCOUNTERED, ALL SUSPECT MATERIALS SHALL BE REMOVED AND PROPERLY DESPOSED OF BY A CERTIFIED ASBESTOS REMOVAL CONTRACTOR IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (30 CFR PART 61, SUBPART M) SHALL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON SHALL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

ALL ASSOCIATED COSTS OF ASBESTOS MATERIALS TO BE REMOVED AND PROPERLY DISPOSED OF, WILL BE PAYED UNDER 'THIRD PARTY BILLING' PROVISIONS OF ODOT CHANGE ORDER POLICY 512-004(P) APPENDIX D.

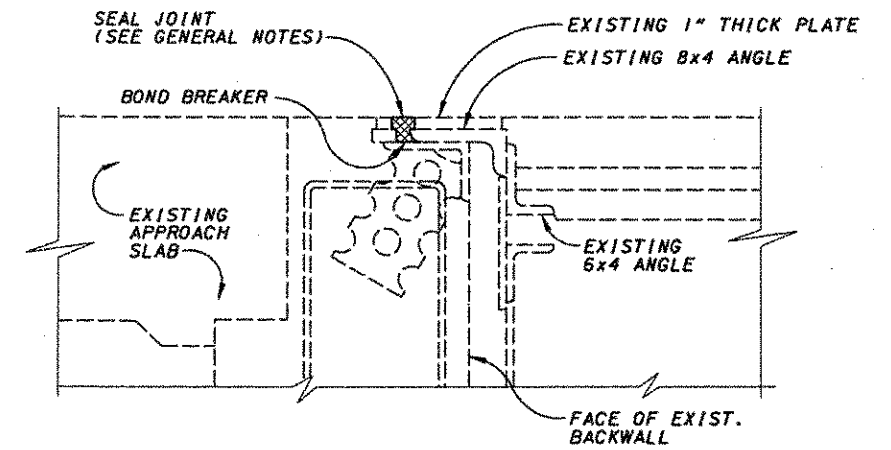
UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

EXISTING STRUCTURE VERIFICATION

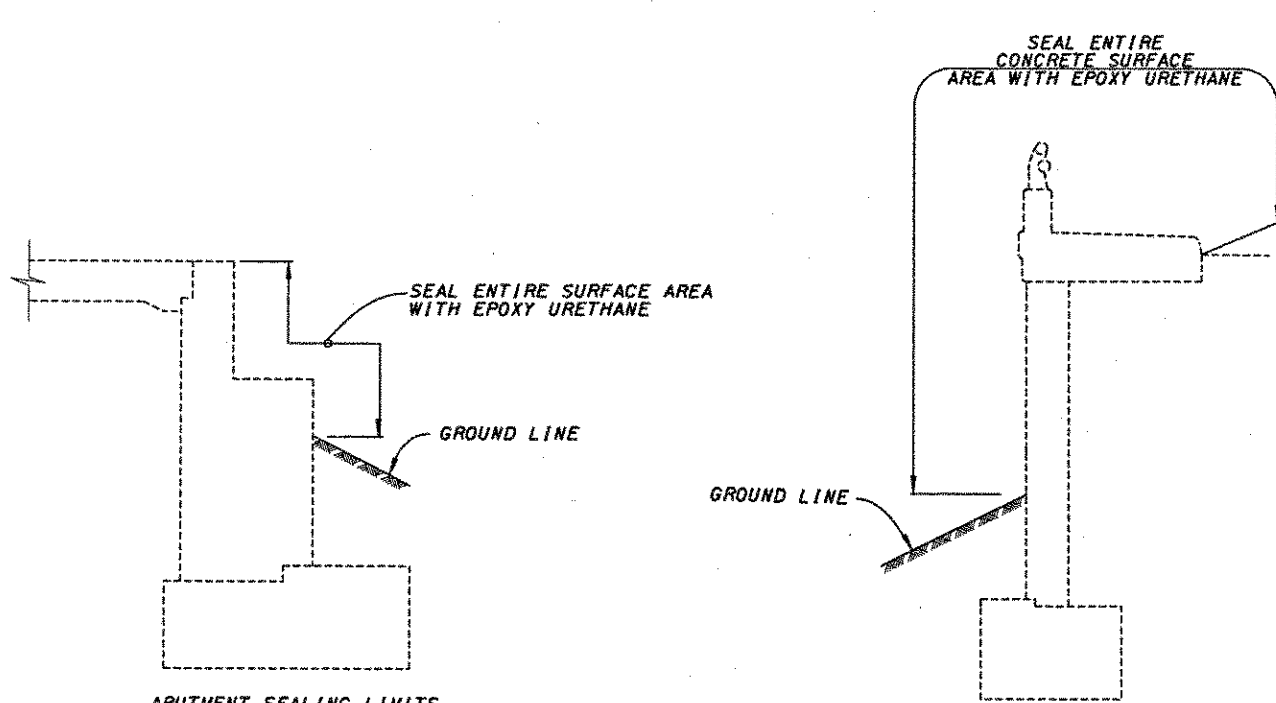
DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.02. 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.



SEALING OF CONCRETE SURFACES, SUPERSTRUCTURE

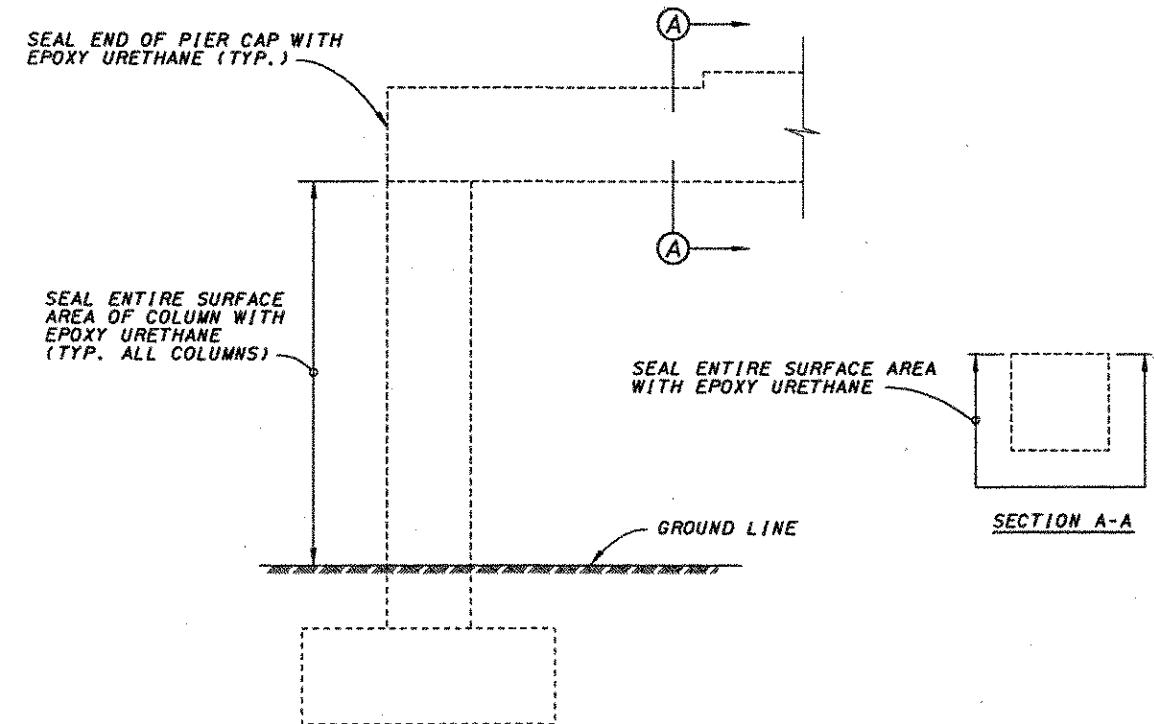


ROADWAY EXPANSION JOINT



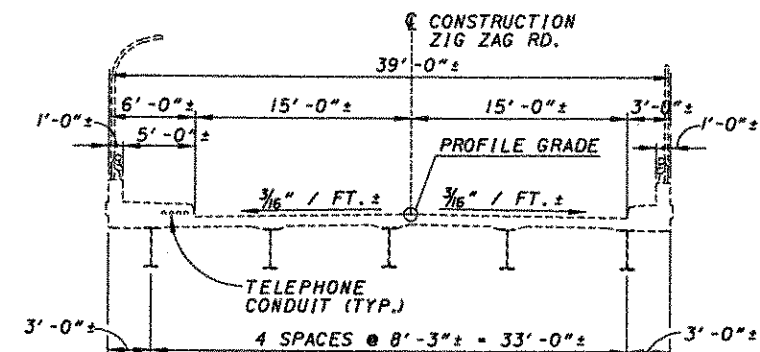
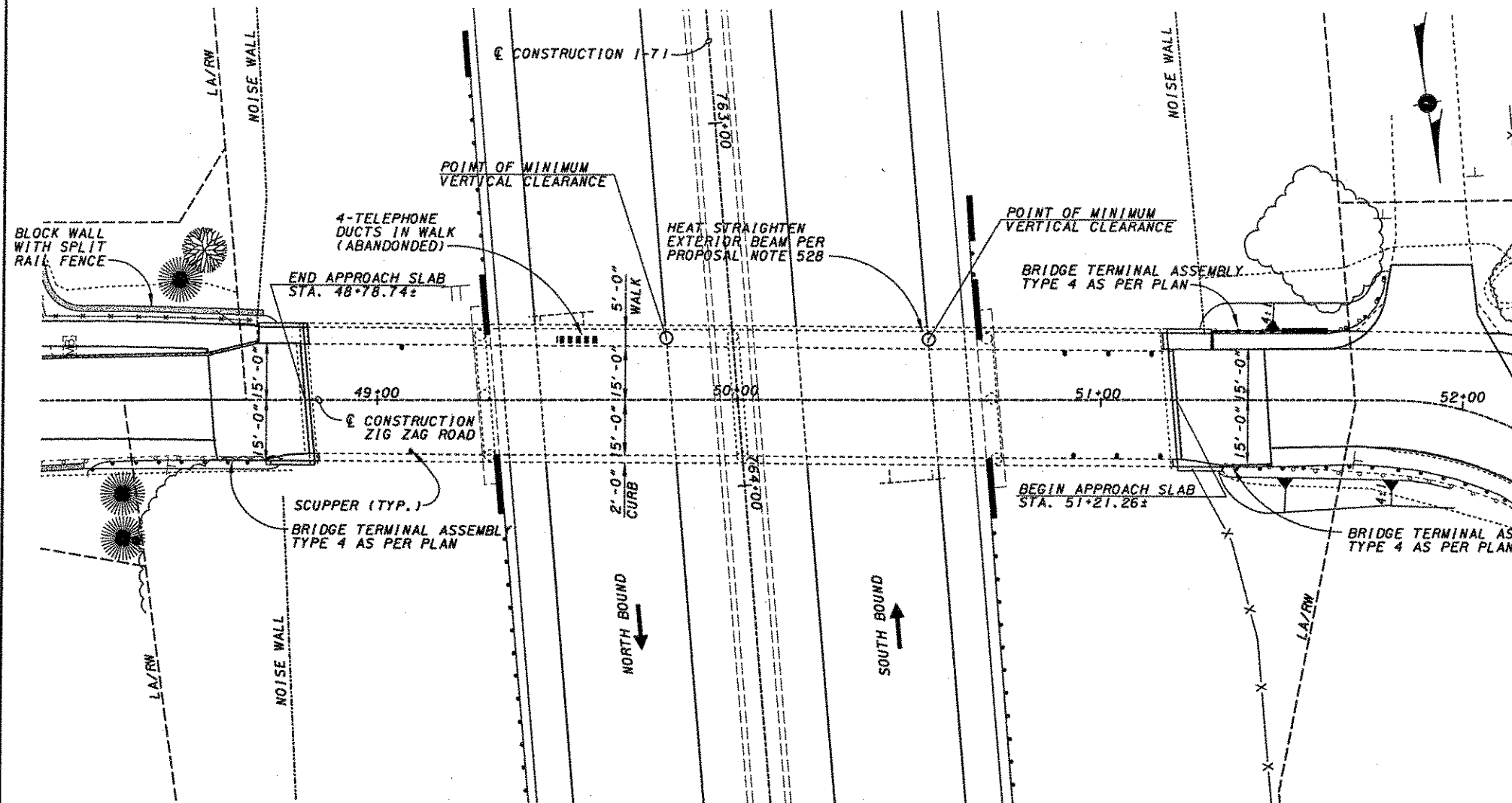
ABUTMENT SEALING LIMITS

WINGWALL SEALING LIMITS



PIER SEALING LIMITS

SEALING OF CONCRETE SURFACES, SUBSTRUCTURE



TYPICAL SECTION

PROPOSED WORK

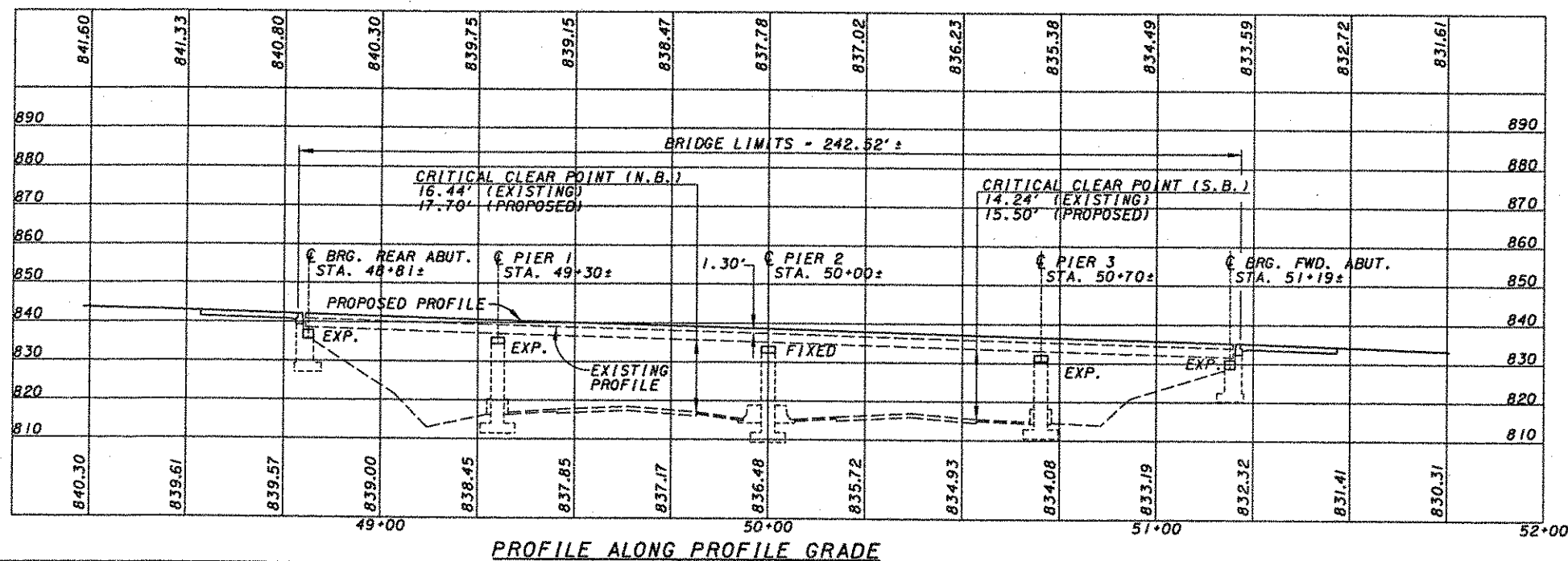
1. PAINT STRUCTURAL STEEL WITH SYSTEM OZEU, COLOR SHALL BE FEDERAL COLOR STANDARD 14277 - GREEN.
2. RAISE THE EXISTING SUPERSTRUCTURE 1'-3 3/4" TO PROVIDE 15'-6" MIN. VERTICAL CLEARANCE. RAISE EXISTING ABUTMENT AND PIER SEATS.
3. SEAL DECK WITH SOLUBLE REACTIVE SILICATE (SRS) ACCORDING TO SUPPLEMENTAL SPECIFICATION 841.
4. SEAL ABUTMENTS, WING WALLS, RAILING, PIERS AND BACK WALLS WITH EPOXY-URETHANE; COLOR SHALL BE FEDERAL COLOR STANDARD 17778 (LIGHT NEUTRAL). BARRIER PROTECTION AT PIERS 1 AND 3 SHALL ALSO BE SEALED.
5. REPLACE ALL EXISTING BEARINGS WITH ELASTOMERIC BEARINGS.
6. PATCH EXISTING CONCRETE DECK PER PROPOSAL NOTE 512(91) - PATCHING CONCRETE BRIDGE DECKS, TYPE B.
7. RETROFIT SLIDING PLATE EXPANSION JOINTS TO STRIP SEAL JOINTS.
8. EXTEND SCUPPERS BELOW BOTTOM BEAM FLANGE.
9. REPAIR BEAM 1 OVER SB I-71 BY HEAT STRAIGHTENING PER PROPOSAL NOTE 528.
10. REMOVE EXISTING ABUTMENT BACK WALLS TO THE APPROACH SLAB SEAT AND RECONSTRUCT AT PROPOSED GRADE.
11. REMOVE EXISTING ABUTMENT WING WALLS TO TOP OF CURB AND RECONSTRUCT AT PROPOSED GRADE.
12. CONSTRUCT NEW APPROACH SLABS AT PROPOSED GRADE WITH TOP MAT OF REINFORCEMENT.
13. REMOVE BRUSH WITHIN 10' OF STRUCTURE LIMITS.
14. REPLACE CORRODED CROSSFRAME MEMBERS AT ABUTMENTS, AS DIRECTED BY ENGINEER.

BENCH MARK

IRON PIN AT STA. 47+15.19
15.60' LT. ELEV. 842.30
BOXED NOTCH AT STA. 52+36.20
41.05' LT. ELEV. 827.64

PLAN

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.



EXISTING STRUCTURE I.R. 71 UNDER ZIG ZAG ROAD

TYPE: CONTINUOUS STEEL BEAMS
"PAINTED" WITH REINFORCED CONCRETE
DECK, REINFORCED CONCRETE PIERS AND
ABUTMENTS.
LENGTH OF SPANS: 49'-0"±, 70'-0"±, 70'-0"±,
49'-0"±
ROADWAY WIDTH: 30'-0"± TOE/TOE SIDEWALK CURB.
DESIGN LOADING: C.F. 130 (57)
SKEW ANGLE: 5°04'00"± R.F.
SUPERELEVATION: NONE - NORMAL CROWN
WEARING SURFACE: 1 1/4" LATEX MODIFIED CONCRETE
ALIGNMENT: TANGENT
YEAR BUILT: 1968±
YEAR REHABBED: 1985±
LATITUDE: N 39°14'31"
LONGITUDE: W 84°21'59"
SFN: 3107264

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS:

ITEM 201 - CLEARING AND GRUBBING
ITEM 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS
ITEM 448 - ASPHALT CONCRETE
ITEM 508 - FALSEWORK AND FORMS
ITEM 509 - REINFORCING STEEL
ITEM 513 - STRUCTURAL STEEL
ITEM 516 - EXPANSION AND CONTRACTION JOINTS, JOINT SEALER AND BEARING DEVICES
ITEM 518 - DRAINAGE OF STRUCTURES
ITEM 611 - APPROACH SLABS

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT SUPPLEMENTAL SPECIFICATIONS:

815 DATED 02/22/00 - FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU.
841 DATED 10/12/99 - SOLUBLE REACTIVE SILICATE (SRS) CONCRETE TREATMENT
842 DATED 01/06/99 - CONCRETE FOR STRUCTURES.
864 DATED 07/11/00 - SEALING OF CONCRETE SURFACES
899 DATED 10/21/98 - CONCRETE - GENERAL
910 DATED 07/11/00 - OZEU STRUCTURAL STEEL PAINT.

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT STANDARD DRAWINGS:

AS-1-81 REVISED 04/20/01
EXJ-4-87 REVISED 04/20/01
GR-3.2M DATED 10/21/97

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT PROPOSAL NOTE:

PROPOSAL NOTE 522 DATED 5/22/97 - CONCRETE REPAIR BY EPOXY INJECTION.

DESIGN SPECIFICATIONS:

NEW WORK FOR THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997, 1998, AND 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN STRESSES:

CLASS S CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (28 DAY)
(PARAPETS, CURBS ON BRIDGES AND DECK SLABS)

CLASS C CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (28 DAY) (SUBSTRUCTURE)
STRUCTURAL STEEL - ASTM-A36-YIELD STRENGTH 36,000 PSI
REINFORCING STEEL - ASTM A615, A616, OR A617 - EPOXY COATED GRADE 60 -
MINIMUM YIELD STRENGTH 60,000 PSI.

DECK PROTECTION METHOD:

SEALING OF CONCRETE SURFACES

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE TO ENABLE RAISING SUPERSTRUCTURE AND REPLACING BEARINGS.

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE OR RE-POSITION ANY EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS AND TO ENABLE REPLACEMENT OF BRIDGE BEARINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE PROJECT

SUBMITTAL REQUIREMENTS:

THREE (3) SETS OF JACKING PLANS CONSISTING OF AT LEAST THE INFORMATION REQUESTED BY THIS NOTE SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS SCHEDULED TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSES OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR'S SELECTED 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 VALVES, 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. A METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS SHALL NOT BE PERMITTED.

JACKING PLAN

THE CONTRACTOR'S PROPOSED PLAN OF STRUCTURE JACKING PERFORMANCE SHALL BE IN CONFORMANCE WITH THE FOLLOWING ITEMS:

1. THE ENTIRE SYSTEM INCLUDING JACKS SHALL PROVIDE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.
2. FOR LIFTS GREATER THAN 1 INCH, JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.
3. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOWED PISTON HEAD, OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.
4. 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.
5. SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.
6. 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.
7. AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE ALL THREE OF THE FOLLOWING ELEMENTS APPLY: THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS, NO PERMANENT SHIMMING IS REQUIRED, AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED 1/4 INCH. MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1 INCH OR LESS. THIS HEIGHT MAY BE MODIFIED IF CALCULATIONS, BY THE CONTRACTOR'S OHIO REGISTERED PROFESSIONAL ENGINEER, SHOW THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES FOR THOSE COMPONENTS AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER 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. ANY BEAMS THAT SEPARATE FROM THE DECK SHALL BE EPOXY INJECTED FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH ODOT'S PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

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

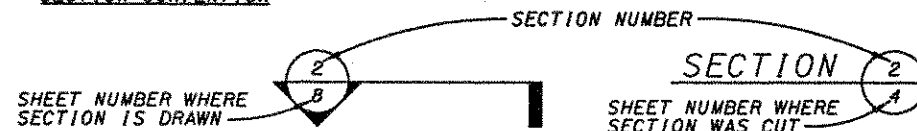
ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:

ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW REINFORCING STEEL. ANY EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT THE CONTRACTOR'S COST. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. THE NUMBER OF POUNDS OF REINFORCING STEEL PAID FOR UNDER FORCE ACCOUNT SHALL BE THE ACTUAL POUNDS OF REPLACEMENT REINFORCING STEEL SPECIFIED BY THE ENGINEER DUE TO CORROSION AND SHALL INCLUDE PLACEMENT, DOWELING, BENDING, SUPPORTING, TIE WIRES AND TYING OF THAT SPECIFIED REINFORCING STEEL.

ABBREVIATION LIST

E.F. - EACH FACE
N.F. - NEAR FACE
F.F. - FAR FACE
SER. - SERIES BARS
BTM. - BOTTOM
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
EL. - ELEVATION
TYP. - TYPICAL
STD. - STANDARD
DWG. - DRAWING

SECTION CONVENTION



SEAL PIERS, PIER CAPS, WINGWALLS, ABUTMENTS, RAILING, AND DECK EDGES WITH EPOXY-URETHANE

THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO SEAL THE DESIGNATED EXPOSED CONCRETE SURFACE AREAS IN THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 864.

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. 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 UPON 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.

FIELD PAINTING OF EXISTING STRUCTURAL STEEL:

ON THOSE BRIDGES REQUIRING FIELD PAINTING THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 815 DATED FEB. 22, 2000. ALL EXPOSED SURFACES OF BEAMS, CROSS FRAMES, SCUPPERS, DRAINS, AND BEARINGS SHALL BE PAINTED. FINISH COAT COLOR SHALL BE FEDERAL COLOR STANDARD 14277 (GREEN). ALL PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT STAGING AND THE MAINTENANCE OF TRAFFIC PLANS.

SEAL DECK WITH SOLUBLE REACTIVE SILICATE (SRS):

THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 841.

ASBESTOS ABATEMENT

THE CONTRACTOR SHALL CONDUCT ASBESTOS INSPECTIONS OF ALL BRIDGES SUBJECT TO RENOVATION OR DEMOLITION AS PER CHAPTER 3745-20 OF THE OHIO ADMINISTRATIVE CODE (OAC) "ASBESTOS EMISSIONS CONTROL FROM RENOVATION/DEMOLITION AND WASTE DISPOSAL OPERATION" MAY 29, 1990 UTILIZING A CERTIFIED OHIO ASBESTOS HAZARD EVALUATION SPECIALIST. SHOULD SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) BE ENCOUNTERED, PERFORM BULK SAMPLING AND ANALYSIS. PREPARE A LETTER REPORT (1-2 PAGES) INCLUDING A BRIEF DISCUSSION OF THE INSPECTION AND SAMPLING METHODOLOGY AND MAP INDICATING THE BRIDGE LOCATION AND SAMPLING LOCATIONS, AND ANALYTICAL TEST RESULTS.

THE CONTRACTOR SHALL COMPLETE AN ODEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS FORM TO THE OHIO EPA AT LEAST 10 WORKING DAYS BEFORE OPERATIONS BEGIN.

AS THESE INSPECTION REPORTS AND NOTIFICATION FORMS ARE COMPLETED, COPIES SHALL BE FORWARDED TO ODOT'S ON SITE PROJECT ENGINEER.

SHOULD ASBESTOS CONTAINING MATERIAL BE ENCOUNTERED, ALL SUSPECT MATERIALS SHALL BE REMOVED AND PROPERLY DESPOSED OF BY A CERTIFIED ASBESTOS REMOVAL CONTRACTOR IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (30 CFR PART 61, SUBPART M) SHALL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON SHALL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

ALL ASSOCIATED COSTS OF ASBESTOS MATERIALS TO BE REMOVED AND PROPERLY DISPOSED OF, WILL BE PAID UNDER 'THIRD PARTY BILLING' PROVISIONS OF ODOT CHANGE ORDER POLICY 512-004(P) APPENDIX D.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE 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, 105.02, AND 513.02. 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.

PROPOSAL NOTE 512

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS - 11/22/93.

A. DESCRIPTION.

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REPAIR CONCRETE BRIDGE DECKS, INCLUDING THE REMOVAL OF ALL LOOSE AND UNSOUND CONCRETE, BITUMINOUS PATCHES, SURFACE PREPARATION, BONDING COAT AND THE MIXING, PLACING, FINISHING AND CURING OF THE MORTAR OR CONCRETE PATCHES.

B. MATERIALS.

MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
FINE AGGREGATE (NATURAL SAND) 703.02
COARSE AGGREGATE (NO.8) 703.02
PORTLAND CEMENT 701.05
QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2 705.21
AIR-ENTRAINING ADMIXTURE 705.10
CURING MATERIALS - TYPE B PATCHES 705.07

C. REMOVAL OF UNSOUND CONCRETE.

THE ENGINEER SHALL SOUND THE ENTIRE DECK AND OUTLINE THE AREAS TO BE REMOVED. SOUNDING MAY HAVE TO BE DELAYED UNTIL THE DECK IS SUFFICIENTLY DRY TO PERMIT DETECTION OF ALL AREAS OF DELAMINATION. THE PERIMETER OF ALL REMOVAL AREAS SHALL BE SAWED TO A DEPTH OF 1" TO PRODUCE A VERTICAL OR SLIGHTLY UNDERCUT FACE. ADDITIONAL SAW CUTS MAY BE REQUIRED TO FACILITATE REMOVAL. ALL UNSOUND CONCRETE INCLUDING ALL PATCHES OTHER THAN SOUND PORTLAND CEMENT CONCRETE, AND ALL LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED. THE UNSOUND CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35-POUND CLASS AND SHALL BE OPERATED AT AN ANGLE OF LESS THAN 45 DEGREES MEASURED FROM THE SURFACE OF THE DECK CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. WHERE THE BOND BETWEEN THE CONCRETE AND A PRIMARY REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM 1/4 INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICABLE. REINFORCEMENT WHICH HAS BECOME LOOSE SHALL BE ADEQUATELY SUPPORTED AND TIED BACK INTO PLACE. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATIONS, THE ENGINEER WILL RE-SOUND THE DECK TO INSURE THAT ONLY SOUND CONCRETE REMAINS.

D. SURFACE PREPARATION.

CLEANING SHALL CLOSELY PRECEDE APPLICATION OF THE BONDING GROUT AND/OR THE PATCHING MATERIAL. THE SURFACE TO BE PATCHED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. FOR TYPE B PATCHES WHICH DO NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE SURFACE DRY. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE PATCHING MATERIAL WHICH IS USED.

E. BONDING GROUT.

TYPE B PATCHES SHALL BE BONDED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.

F. PATCHING.

THE MORTAR OR CONCRETE SHALL BE PLACED AS TYPE B.

TYPE B. PATCHING MATERIAL SHALL BE MADE USING QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2, 705.21. THE MORTAR SHALL BE MIXED AND PLACED AS PER MANUFACTURER'S RECOMMENDATIONS. COARSE AGGREGATE SHALL BE ADDED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WHEN THE DEPTH OF THE PATCH EXCEEDS 1".

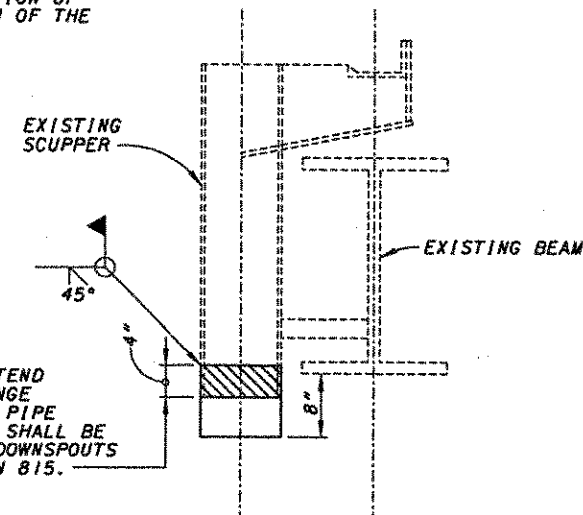
G. CURING.

TYPE B PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

H. METHOD OF MEASUREMENT.

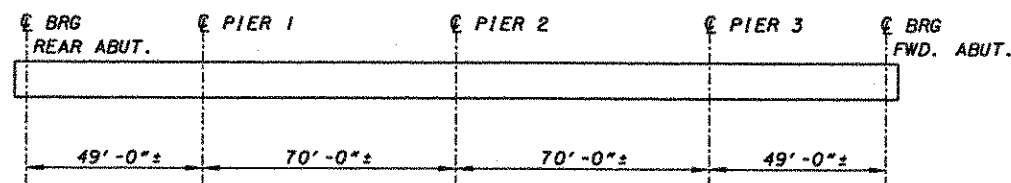
THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE FEET OF THE EXPOSED SURFACE OF ALL PATCHES, IRRESPECTIVE OF THE DEPTH OF THE PATCH, COMPLETE, IN PLACE AND ACCEPTED.

EXTEND SCUPPERS SO THAT THE OUTLET IS 8" BELOW THE BOTTOM FLANGE. FURNISH AND INSTALL MATERIALS NECESSARY TO EXTEND SCUPPERS TO AN ELEVATION WHERE THE SCUPPER OUTLET IS LOCATED 8 INCHES BELOW THE BOTTOM FLANGE OF THE ADJACENT BRIDGE BEAM. REMOVE ANY PORTION OF EXISTING SCUPPER THAT IS DETERIORATED PRIOR TO INSTALLATION OF THE NEW EXTENSION.



REMOVE MINIMUM OF 4"± OF EXISTING SCUPPER. EXTEND SCUPPER TO 8" BELOW THE BOTTOM OF THE BEAM FLANGE WITH THE SAME SIZE PIPE AS THE EXISTING PIPE. PIPE SHALL CONFORM TO ODOT 748.06. EXTENSION PIECE SHALL BE FURNISHED WITH ONE END BEVELLED FOR WELDING. DOWNSPOUTS SHALL BE PAINTED PER SUPPLEMENTAL SPECIFICATION 815.

SCUPPER EXTENSION DETAIL



	REAR ABUT.	PIER 1	PIER 2	PIER 3	FORWARD ABUT.
EXISTING DEAD LOAD (PER BEAM)	25 KIPS	99 KIPS	108 KIPS	99 KIPS	25 KIPS
ADDITIONAL 20%	5 KIPS	20 KIPS	22 KIPS	20 KIPS	5 KIPS
MINIMUM JACKING LOAD	25 KIPS	119 KIPS	130 KIPS	119 KIPS	25 KIPS

JACKING LOADS

NOTE:
BRIDGE TO BE CLOSED TO TRAFFIC DURING JACKING.

PROPOSAL NOTE 528

HEAT STRAIGHTENING OF DAMAGED STRUCTURAL STEEL - 11/01/91

DESCRIPTION - THIS ITEM SHALL CONSIST OF HEAT STRAIGHTENING DAMAGED PORTIONS OF EXISTING BEAMS AS SHOWN ON THE PLANS. IT SHALL BE ACCOMPLISHED IN ACCORDANCE WITH 513.06 AND AS NOTED HEREIN.

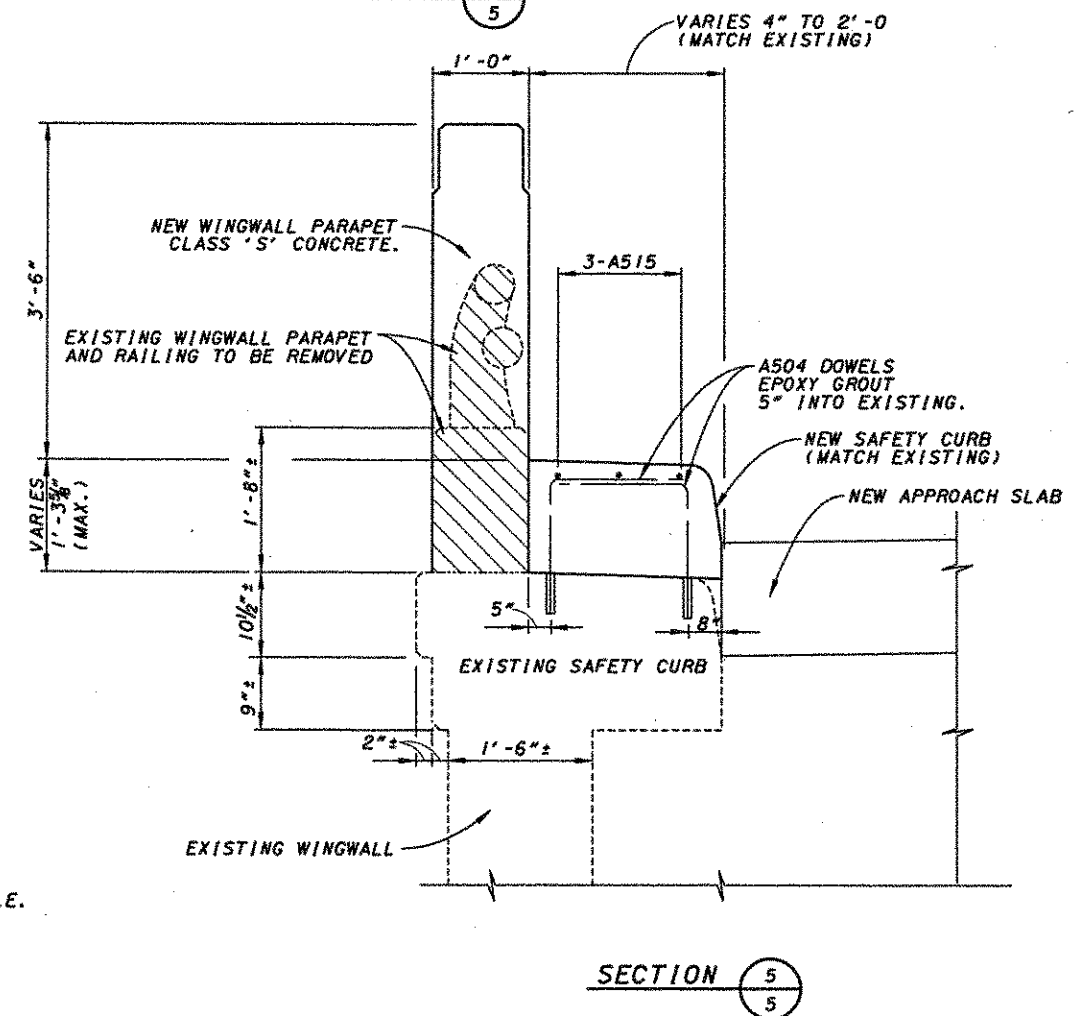
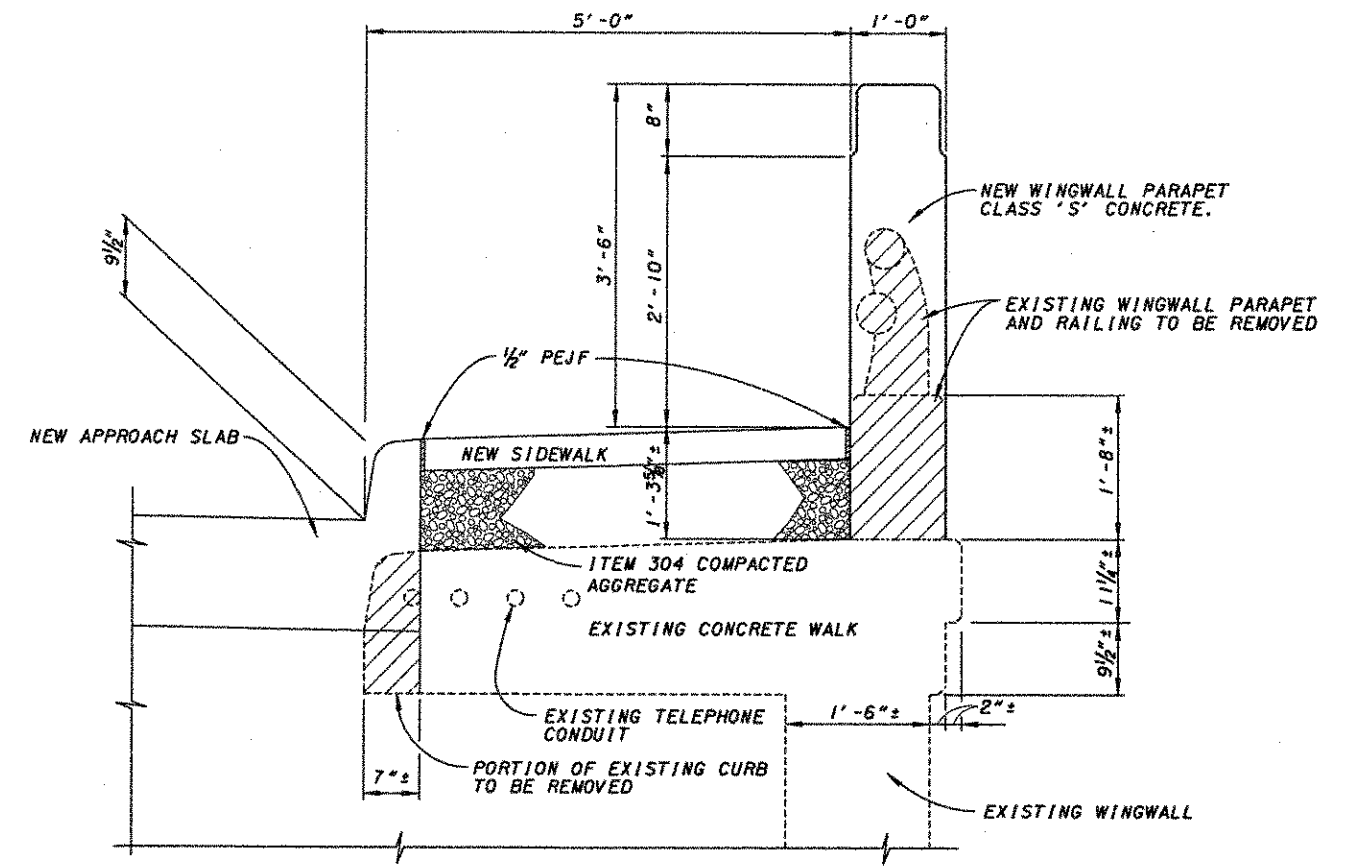
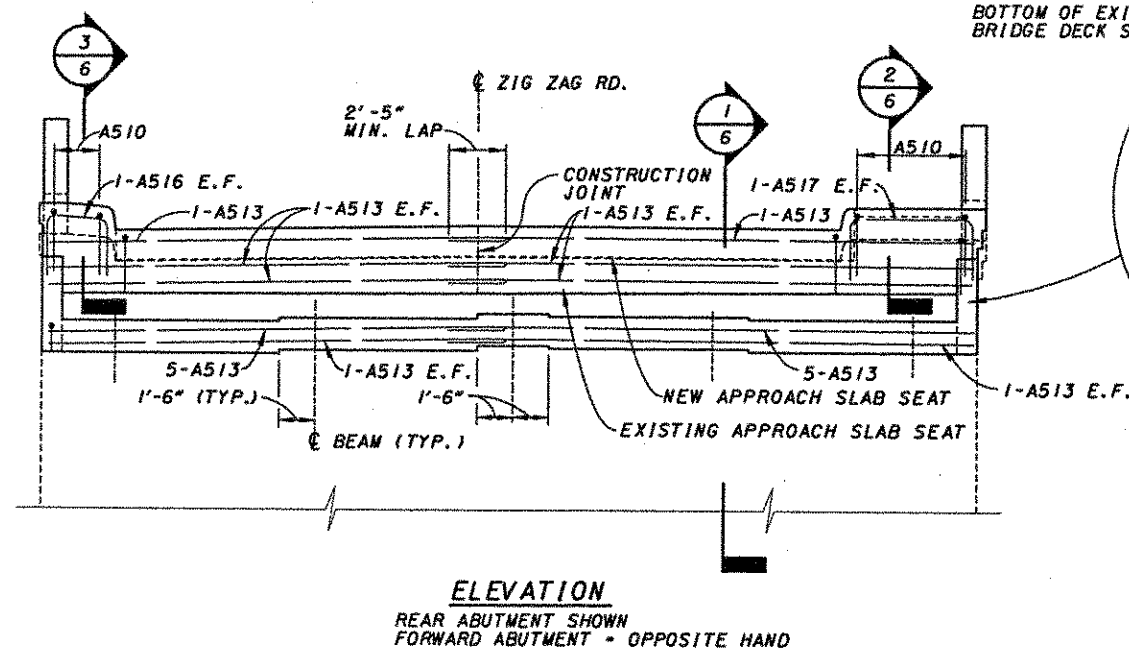
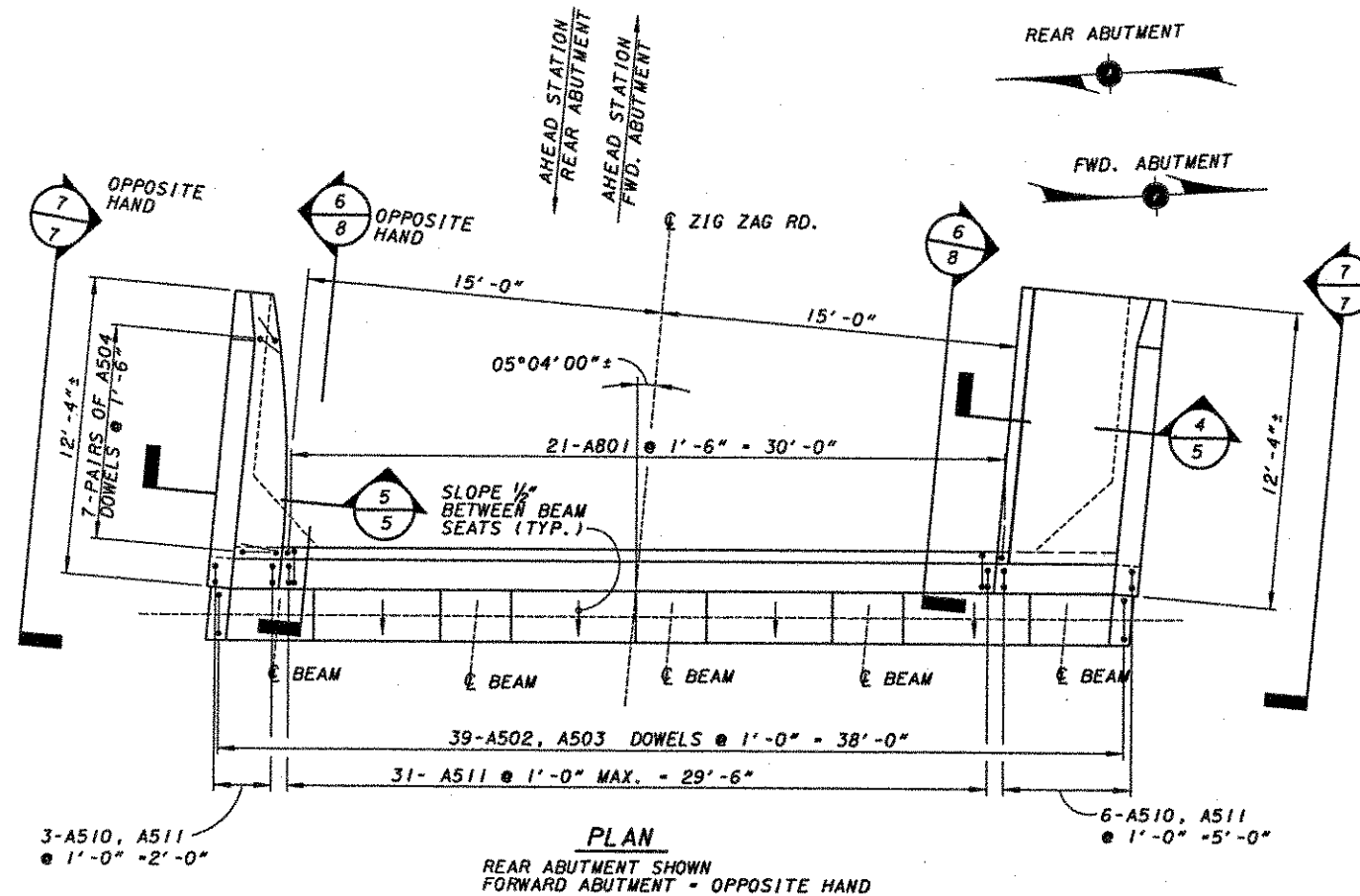
COMMON PROCEDURES, REQUIREMENTS AND RESTRICTIONS - THE REPAIRS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A PERSON WHO SHALL PRESENT WRITTEN DOCUMENTATION PRIOR TO BEGINNING WORK OF HIS SUCCESSFUL HEAT STRAIGHTENING EXPERIENCE WITH COMPARABLE BEAMS. HE SHALL POSSESS THE KNOWLEDGE AND EXPERIENCE TO APPLY THE HEAT IN SUCH A MANNER, SEQUENCE AND AMOUNT THAT THE FINAL STRAIGHTENED MEMBER RETAINS AS LITTLE RESIDUAL STRESS AS POSSIBLE. HEAT SHALL BE APPLIED AT OR BELOW 1200 F AND MONITORED WITH CONTACT THERMOMETERS, PYROMETRIC STICKS, OR OTHER HEAT INDICATING DEVICES. THESE HEAT INDICATING DEVICES SHALL BE SUPPLIED BY THE CONTRACTOR AND MADE AVAILABLE TO THE INSPECTOR AT ALL TIMES. TORCH TIP SIZES SHALL BE LIMITED TO 1" DIAMETER, MAXIMUM. THE HEAT STRAIGHTENING SHALL BE ACCOMPLISHED WITH THE USE OF "V" HEATS OR TRIANGULAR HEATS. THE BASE OF THE "V" SHALL NOT EXCEED 6". THE "V" IS HEATED FROM THE APEX TO THE BASE IN A MANNER SUCH THAT THE ONLY PLACE SHOWING COLOR IS DIRECTLY UNDER THE TORCH. THE ENTIRE "V" SHALL NOT BE HEATED SIMULTANEOUSLY NOR SHALL IT BE REHEATED UNTIL AFTER IT HAS COOLED TO THE TOUCH. FORCED COOLING IS NOT PERMITTED. THE STRAIGHTENING SHALL BE ACCOMPLISHED WITH AS LITTLE MECHANICAL FORCE AS POSSIBLE.

FINAL STRAIGHTNESS TOLERANCES FOR THE BOTTOM FLANGE SHALL BE WITHIN 1/4" OF TILT ROTATION AT THE EDGES AND 1/2" OF SWEEP IN 20 FEET 3/4" AT POINT OF IMPACT. THE FINAL WEB SHALL BE LESS THAN 3/16" OUT OF PLUMB. LOCALIZED DEFLECTIONS IN THE WEB SHALL BE NO MORE THAN 3/16" AS MEASURED WITH A STRAIGHTEDGE HELD VERTICALLY AND HORIZOALLY. THESE TOLERANCES SHALL BE MET BEFORE ANY CROSS FRAMES OR OTHER LATERAL RESTRAINT DEVICES ARE ATTACHED. IN NO CASE SHALL THE BEAMS BE FORCED INTO POSITION AND THEN WELDED TO THE CROSS FRAMES TO HOLD THEM INTO POSITION.

OBVIOUS TEARS OR CRACKS PRESENT IN THE BEAMS/GIRDERS AS A RESULT OF THE ACCIDENT SHALL BE REPAIRED WITH FULL PENETRATION BUTT WELDING AS PER 513.17 AND SUBSEQUENT NON-DESTRUCTIVE TESTING AS PER 513.21, UNLESS OTHERWISE SPECIFIED ON THE PLANS. THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING THIS WELDING RADIOGRAPHICALLY INSPECTED. RADIOGRAPHS SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL.

BURRS, NICKS, GOUGES, SCRAPES, ETC. SHALL BE GROUND AS SMOOTH AS POSSIBLE TO ELIMINATE POSSIBLE STRESS CONCENTRATIONS. THE COMPLETED STRAIGHTENING SHALL BE FOLLOWED BY AN INSPECTION FOR CRACKS ON THE FLANGE EDGES. THIS INSPECTION SHALL BE MADE BY USING A MAGNETIC PARTICLE INSTRUMENT SUCH AS THE PARKER CONTOUR PROBE OR BY DYE PENETRANT TESTING. THE CONTRACTOR IS RESPONSIBLE FOR THIS TESTING AND IT SHALL BE WITNESSED BY THE ENGINEER. MINOR CRACKS IN THE FLANGES (LESS THAN 1/2" LONG) DISCOVERED AS A RESULT OF THIS INSPECTION SHALL BE REMOVED BY GRINDING. LARGER CRACKS SHALL BE REVIEWED BY THE ENGINEER AND SHALL BE PROPERLY PREPARED AND WELDED OR PLATED BY BOLTING.

THIS ITEM SHALL INCLUDE REPLACEMENT OF ALL DAMAGED CROSS FRAMES AND OTHER ATTACHMENTS BY THE SAME METHOD OF ATTACHMENT AS ORIGINALLY CONSTRUCTED. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS IN ACCORDANCE WITH 513.17. IF THE CONTRACTOR CANNOT MEET THE SPECIFIED STRAIGHTNESS TOLERANCES BY HEAT STRAIGHTENING, HE SHALL CUT OUT THE DAMAGED WEB AND BOTTOM FLANGE AND REPLACE WITH NEW STRUCTURAL STEEL OF THE SAME TYPE AND SHAPE BY FULL PENETRATION BUTT WELDING AS PER 513.17 AND SUBSEQUENT NONDESTRUCTIVE TESTING AS PER 513.21. TWO 2 INCH DIAMETER (MINIMUM) COPE HOLES SHALL BE PROVIDED AT ALL WELD INTERSECTIONS. RADIOGRAPHS SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND APPROVAL. CERTIFIED TEST DATA AND SHIPPING INVOICES FOR ALL STRUCTURAL STEEL SHALL BE FURNISHED TO THE ENGINEER SHOWING COMPLIANCE WITH THE REQUIREMENTS OF 711. THE CONTRACTOR SHALL REMOVE THE DEAD LOAD OF THE DAMAGED MEMBER IN A MANNER DEEMED SATISFACTORY TO THE ENGINEER BEFORE THE REMOVAL AND REPLACEMENT PROCESS BEGINS. ANY DAMAGE TO THE STRUCTURE CAUSED BY IMPROPER JACKING AND SUPPORT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE STATE. IF, AS A RESULT OF THE ACCIDENT OR STRAIGHTENING PROCESS THE TOP FLANGE OF THE BEAM HAS PULLED AWAY FROM THE CONCRETE DECK, THE RESULTANT VOID SHALL BE COMPLETELY FILLED BY EPOXY INJECTION AFTER COMPLETION OF THE BEAM REPAIR, AS NOTED IN THE PROPOSAL NOTE 522 (5/22/97) ENTITLED "CONCRETE REPAIR BY EPOXY INJECTION".



ALL STEEL CLEARANCES ARE
2" UNLESS NOTED OTHERWISE.

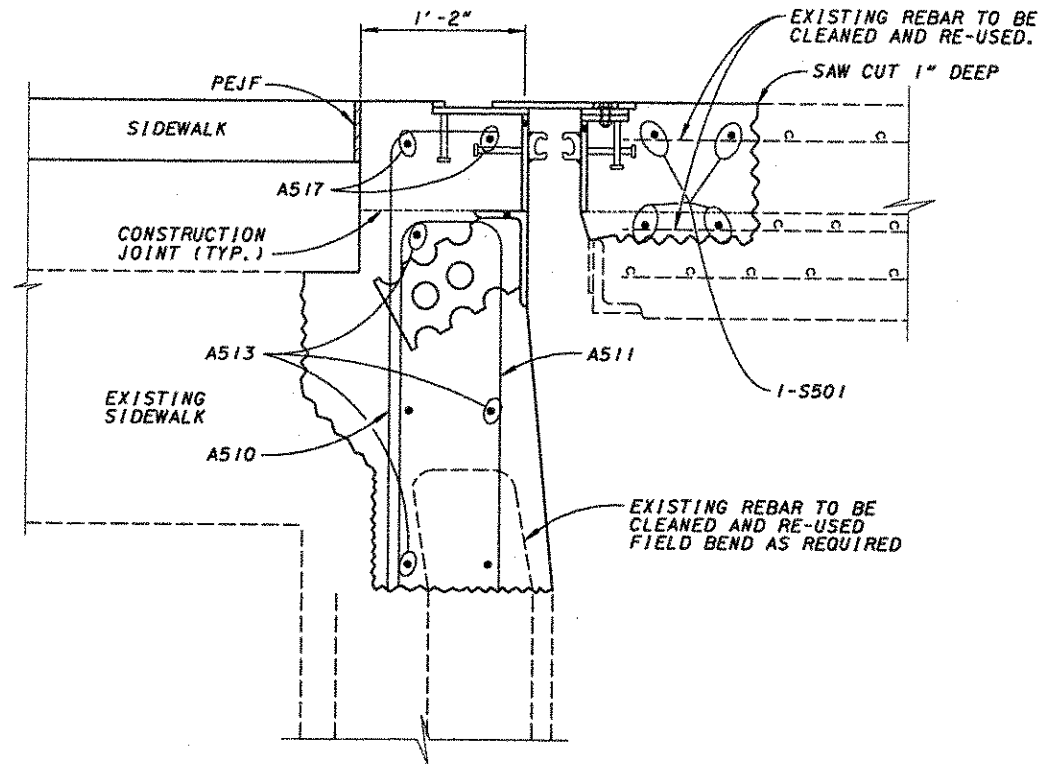
LEGEND:

E.F. - EACH FACE

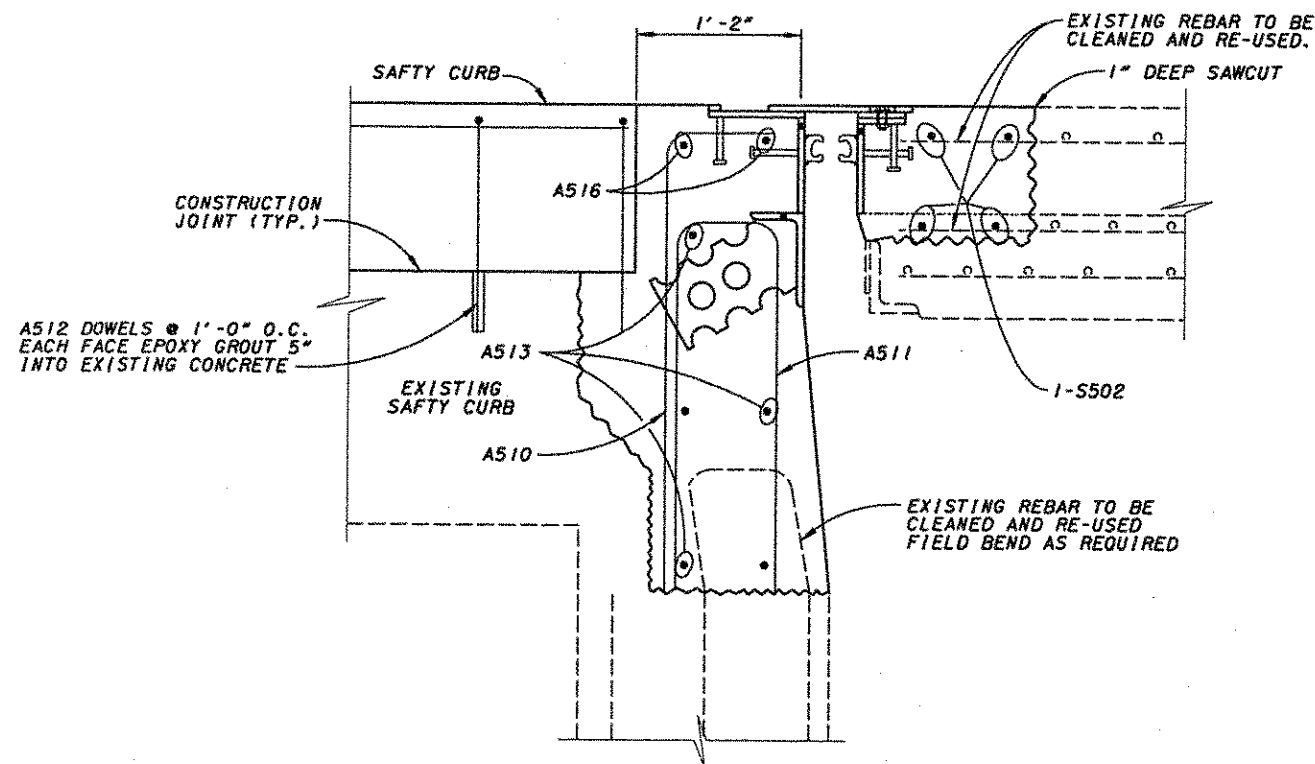
/// - LIMITS OF REMOVAL

NOTES:

1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
2. SEE SHEET 12/15 FOR BEARING DETAILS.

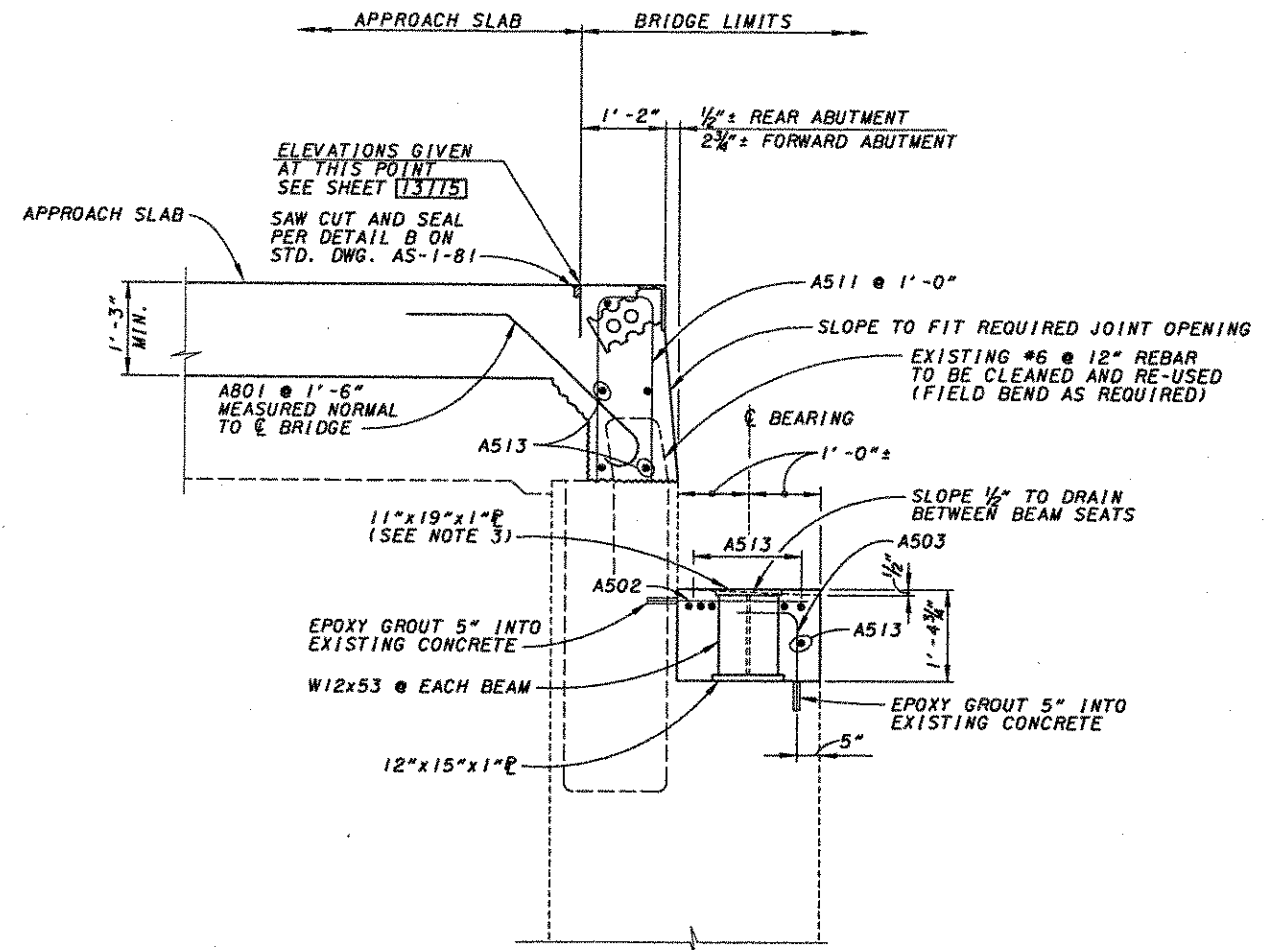


SECTION 2
5



SECTION 3
5

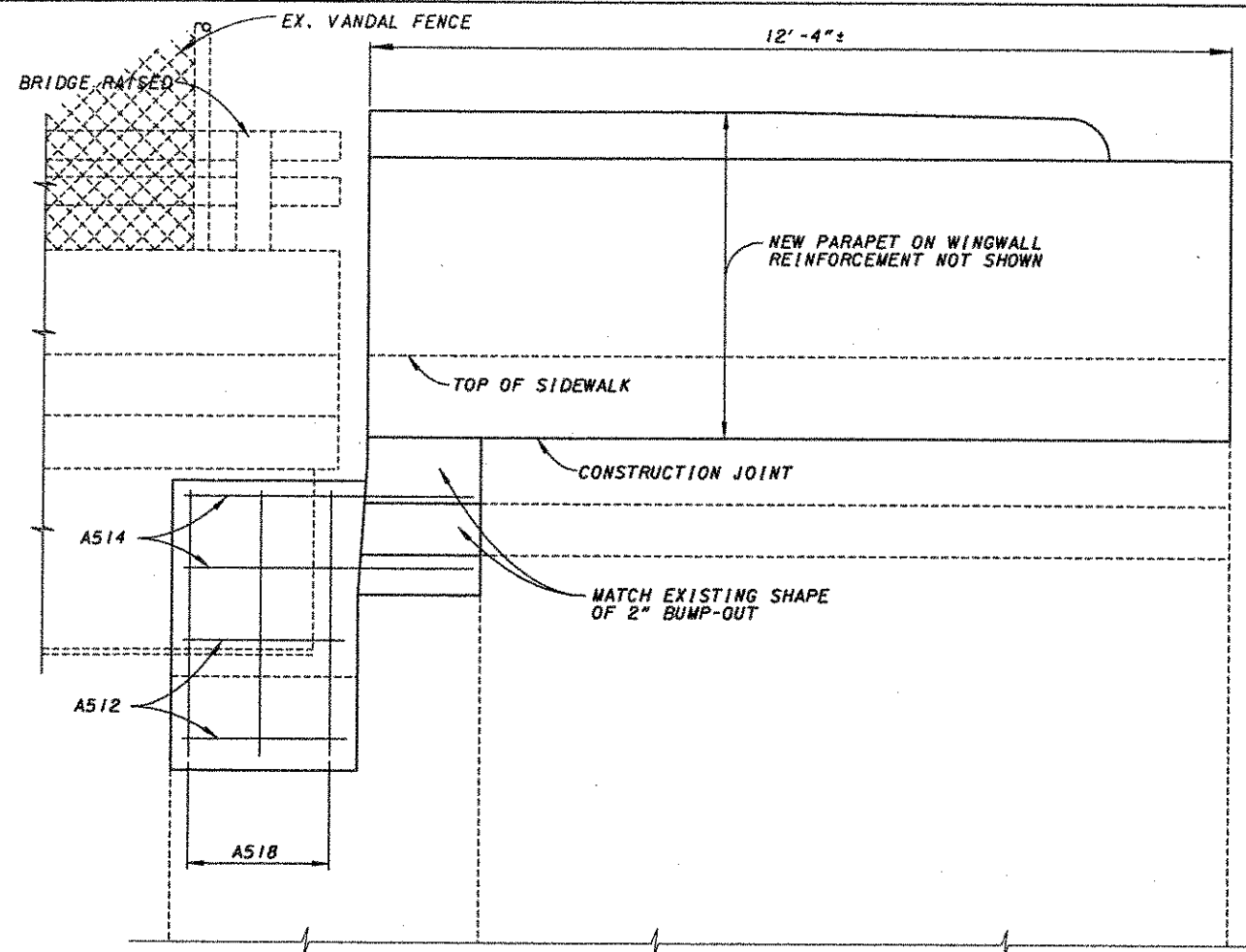
ALL STEEL CLEARANCES ARE
2" UNLESS NOTED OTHERWISE.



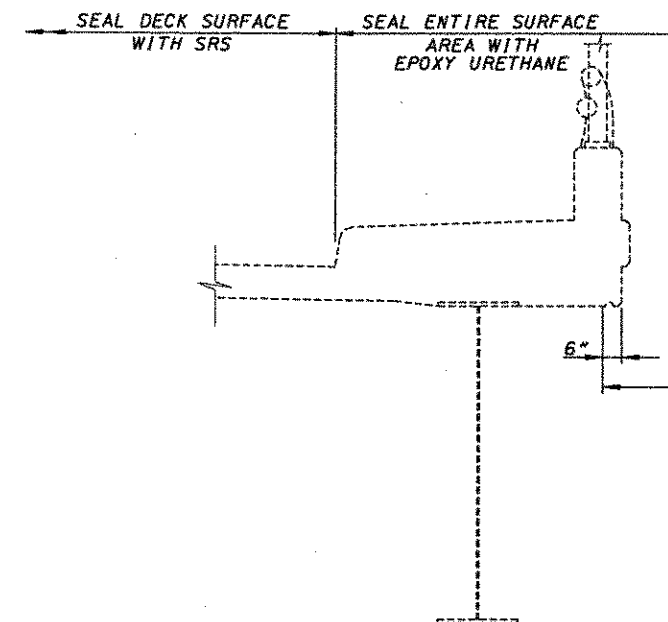
SECTION 1
5

NOTES:

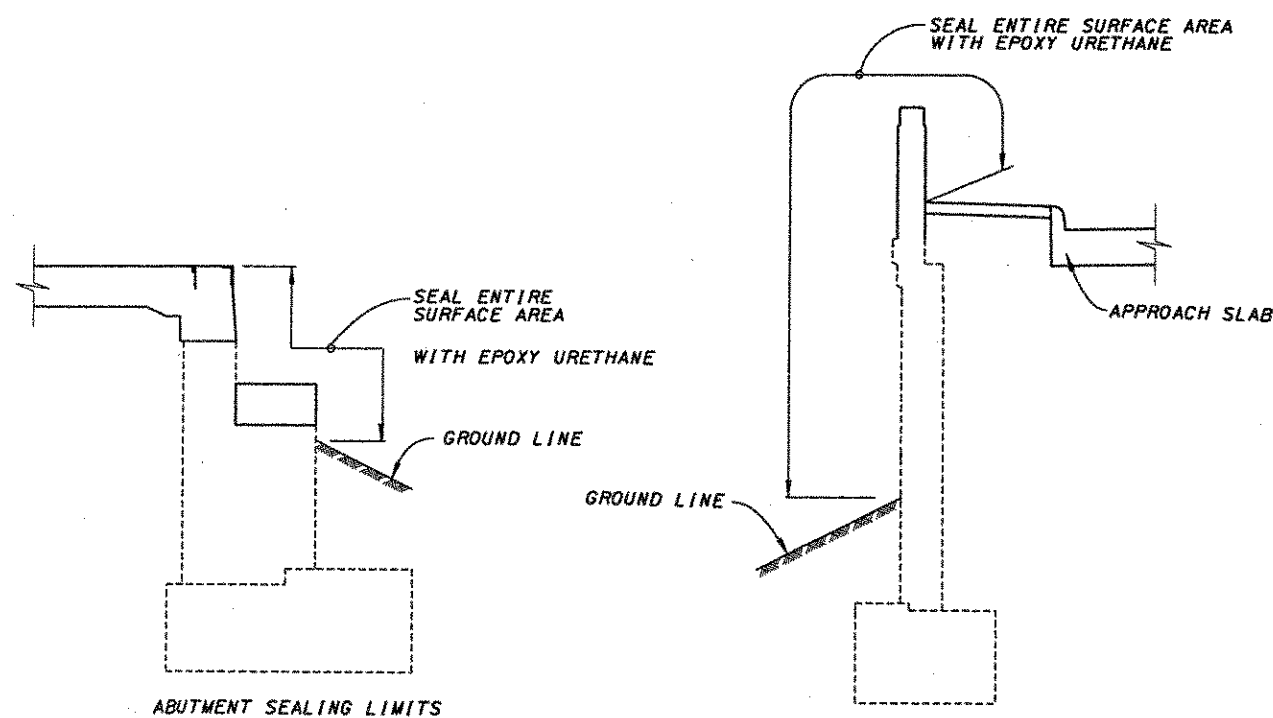
1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
2. SEE SHEET 12/15 FOR BEARING DETAILS.
3. TOP PLATE TO BE METALIZED OR GALVANIZED.



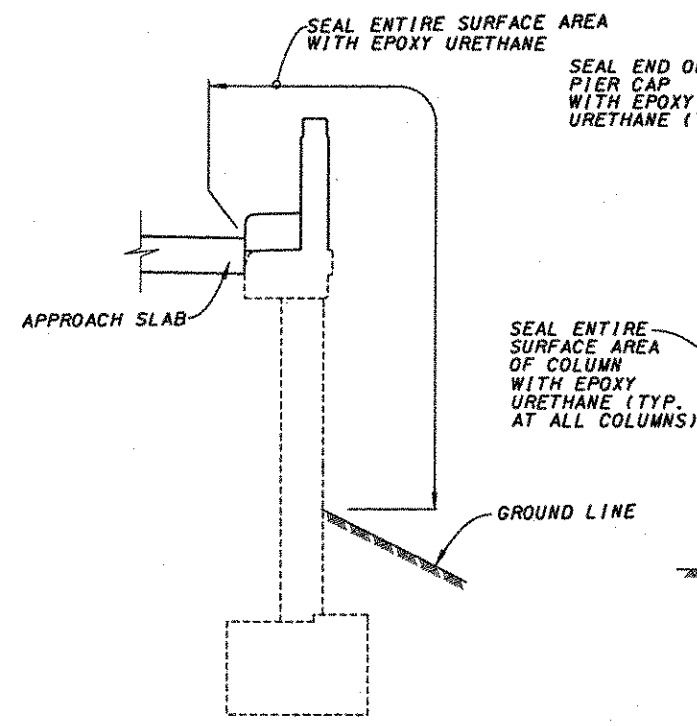
7
5 WINGWALL ELEVATION



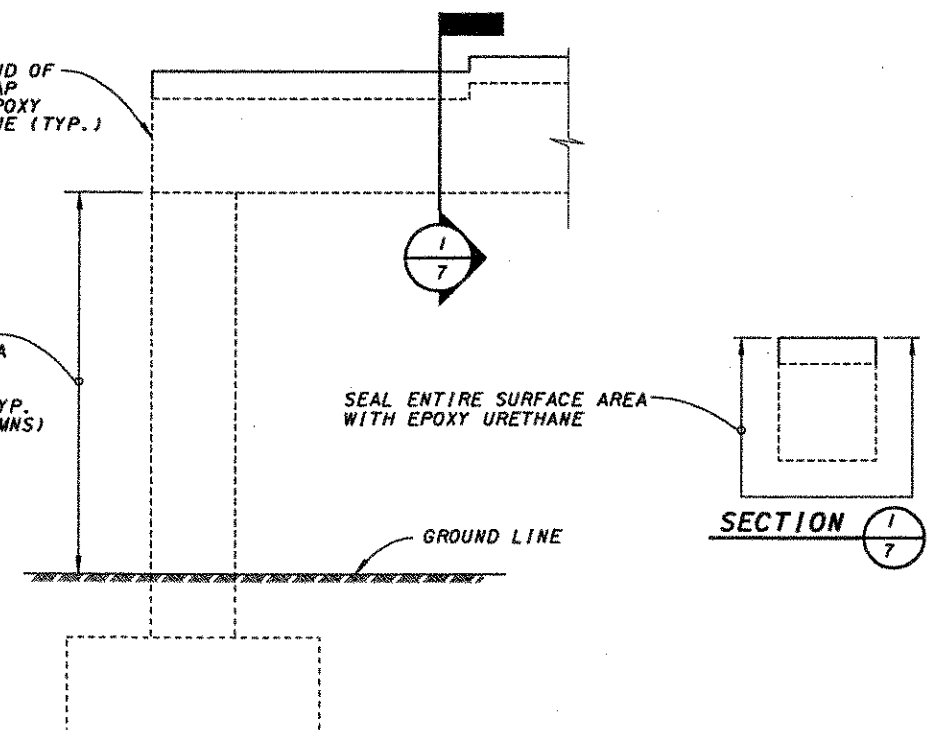
SEALING OF CONCRETE SURFACES, SUPERSTRUCTURE



LEFT WINGWALL SEALING LIMITS

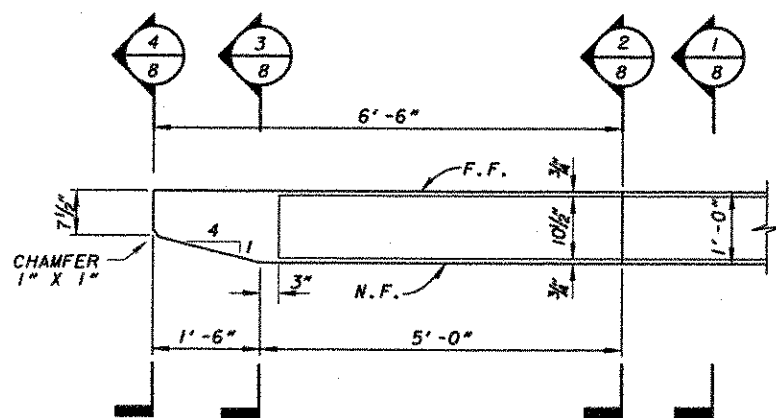


RIGHT WINGWALL SEALING LIMITS

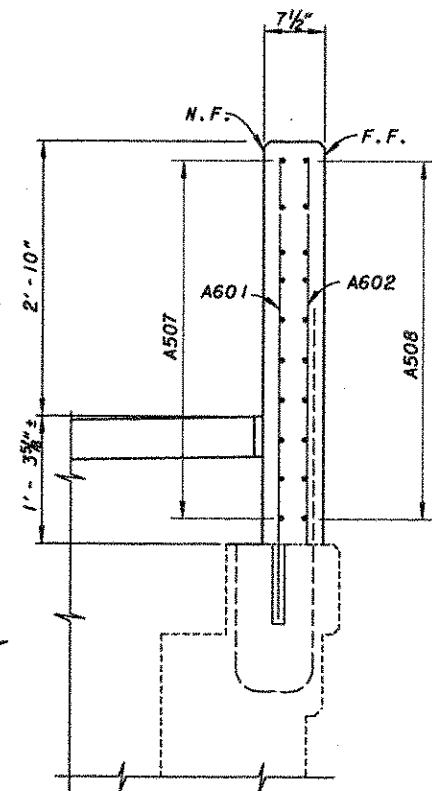


PIER SEALING LIMITS

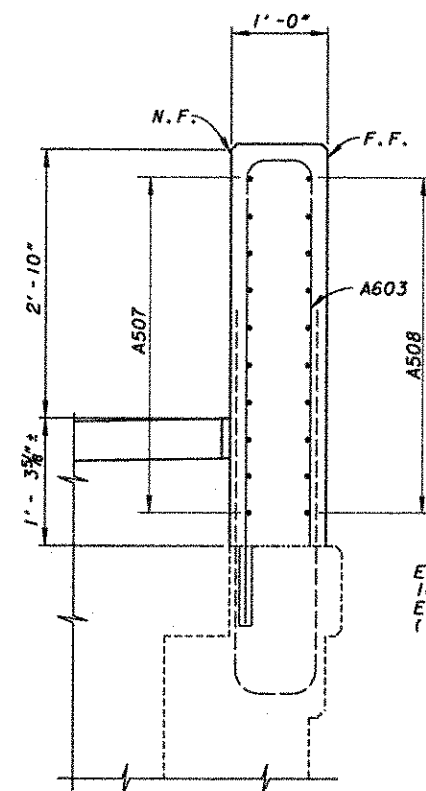
SEALING OF CONCRETE SURFACES. SUBSTRUCTURE



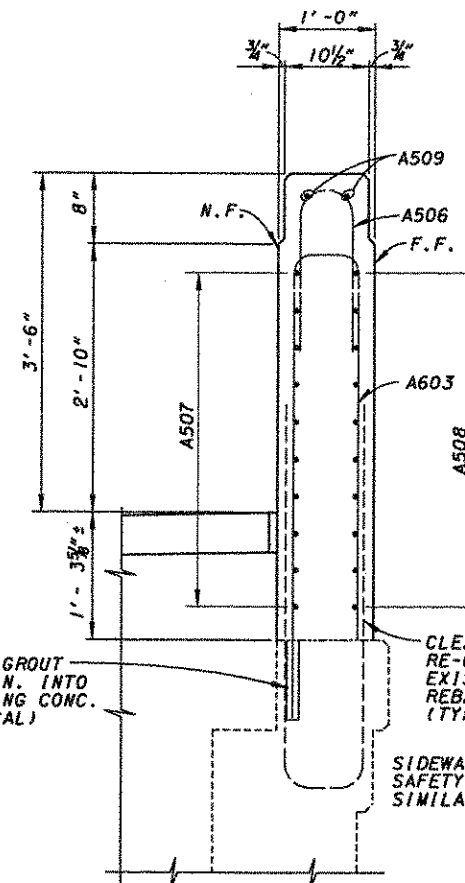
WINGWALL PARAPET PLAN



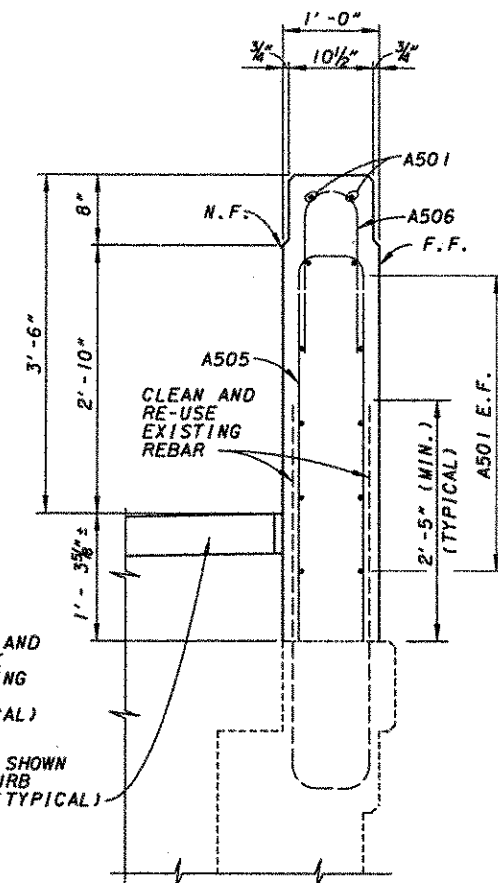
SECTION 4/8



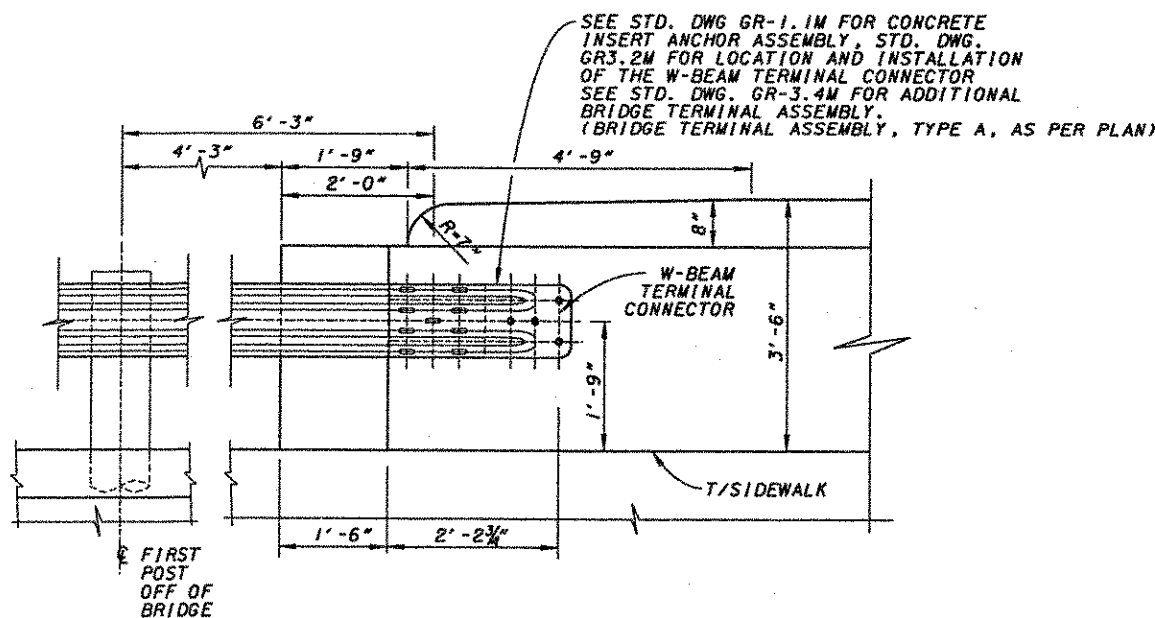
SECTION 3/8



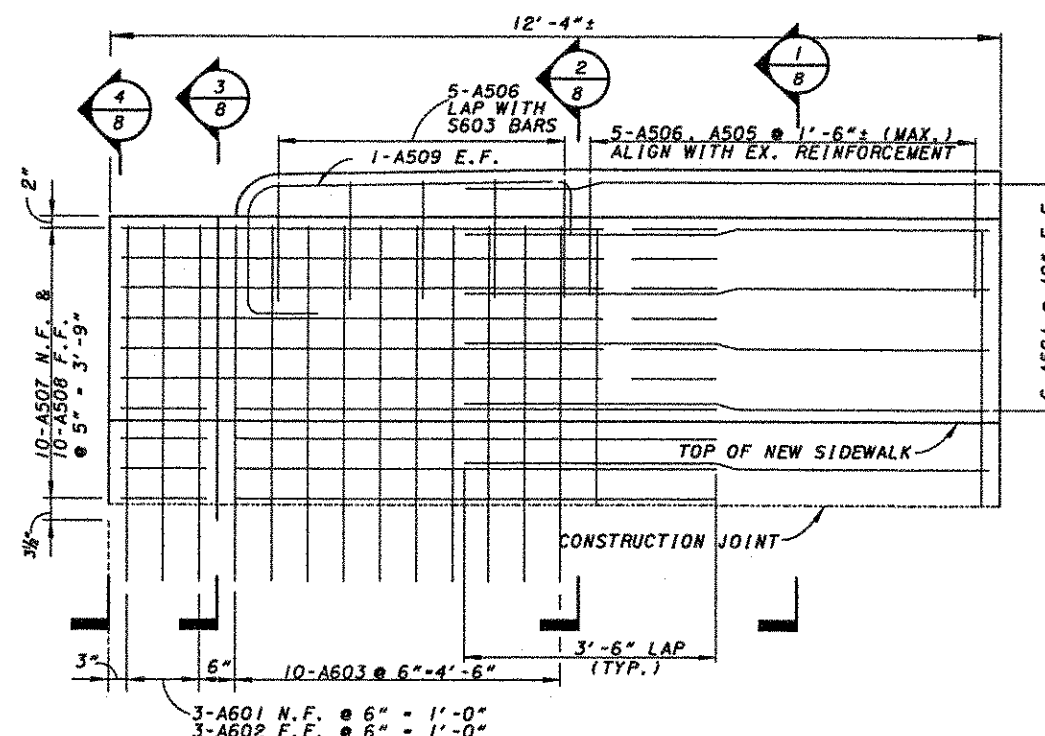
SECTION 2/8



SECTION 1/8



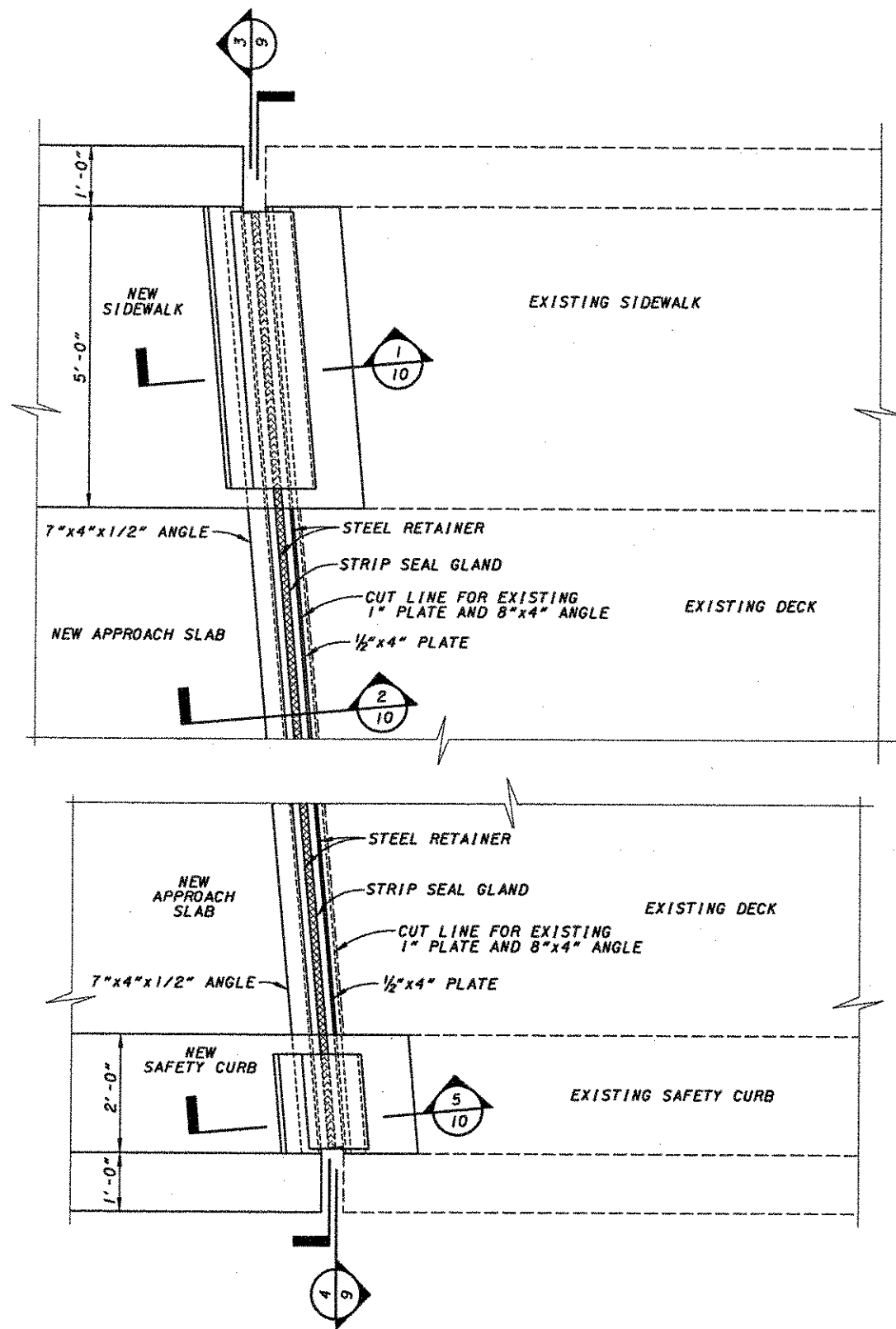
GUARDRAIL ATTACHMENT ELEVATION



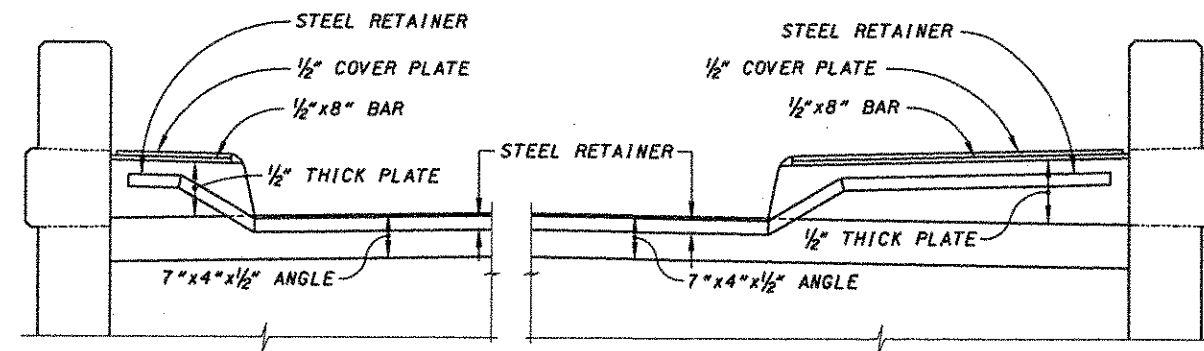
RAILING ELEVATION 6/5

NOTE:

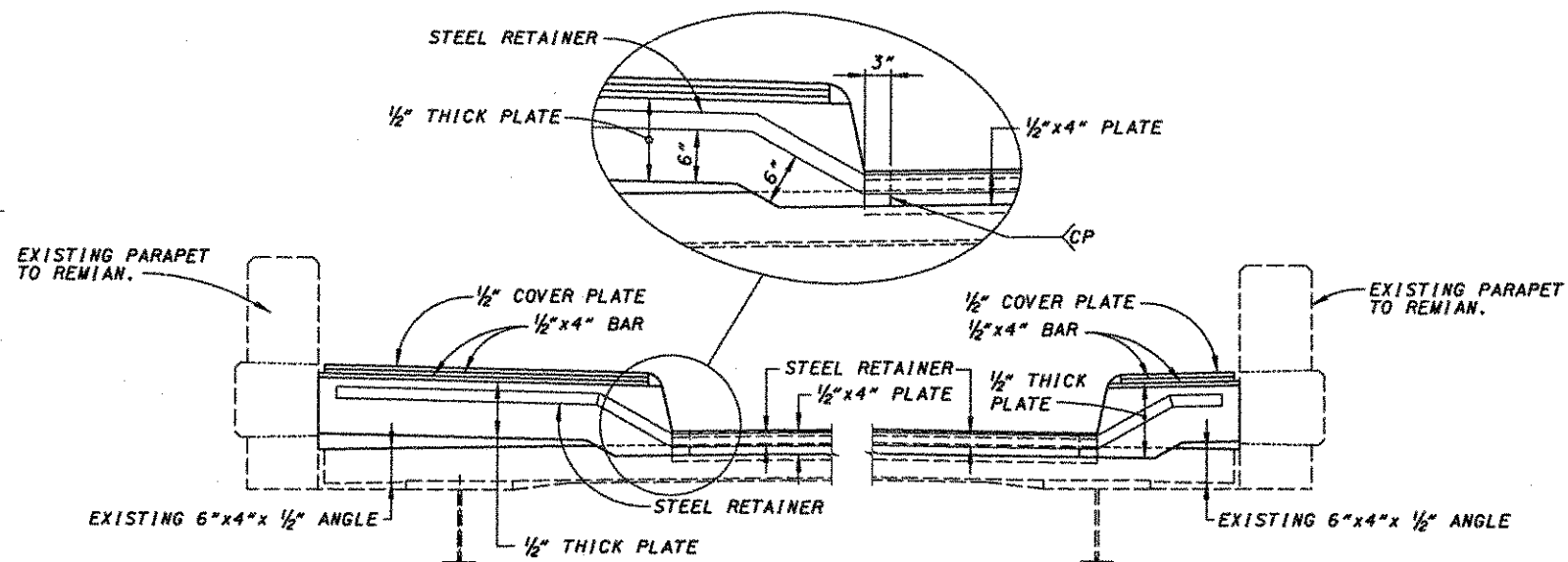
1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.



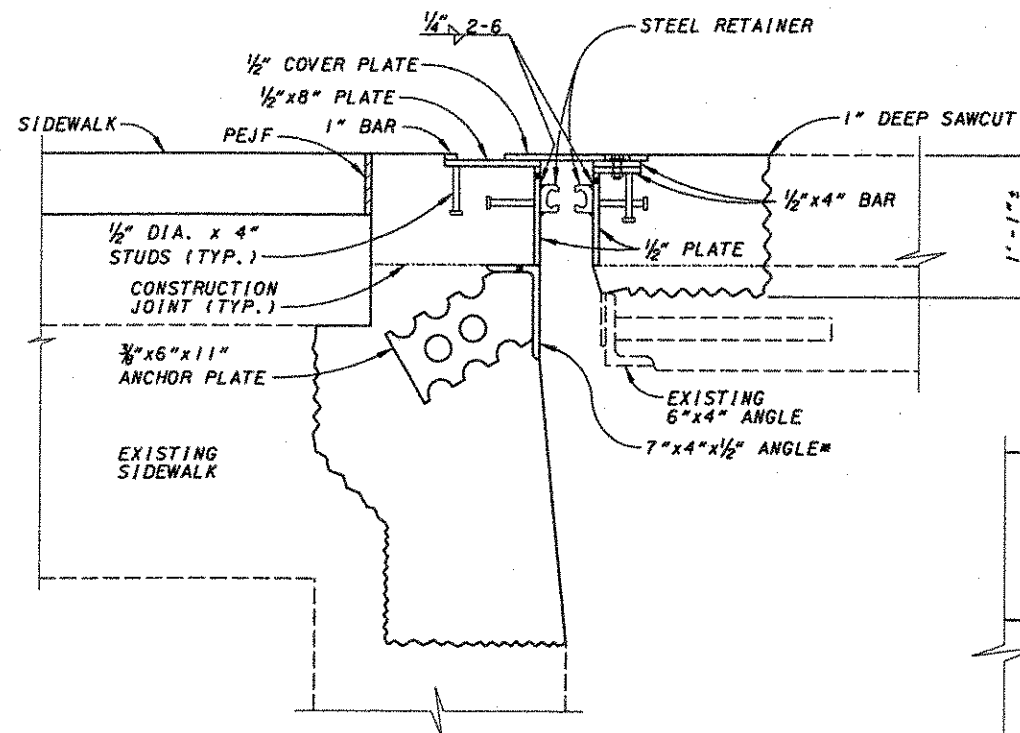
PARTIAL PLAN



SECTION 3/9

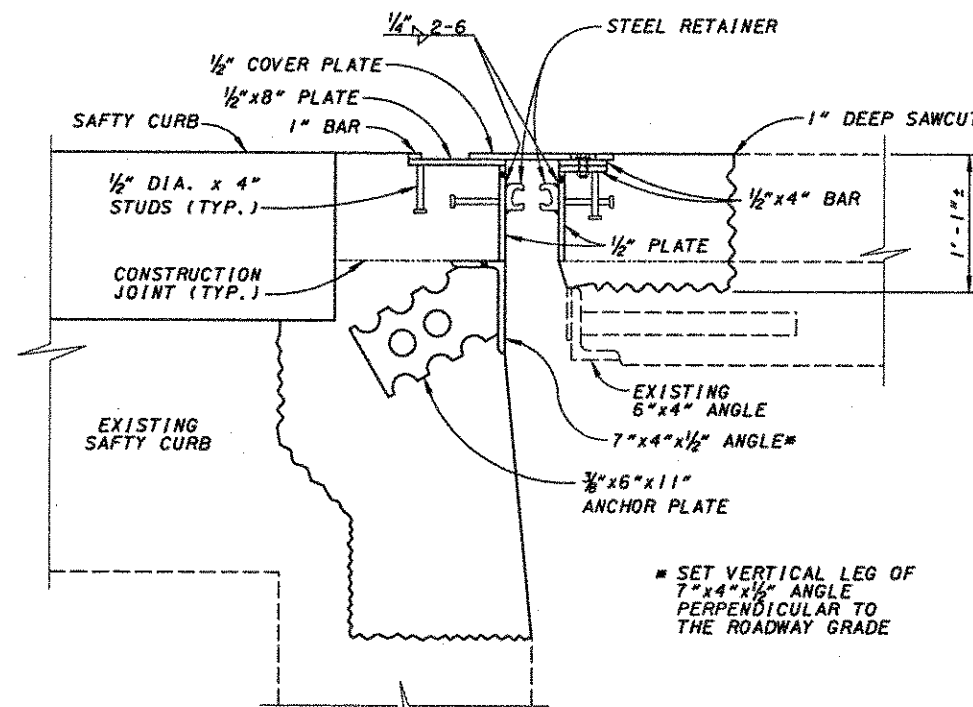


PARTIAL PLAN 4/9



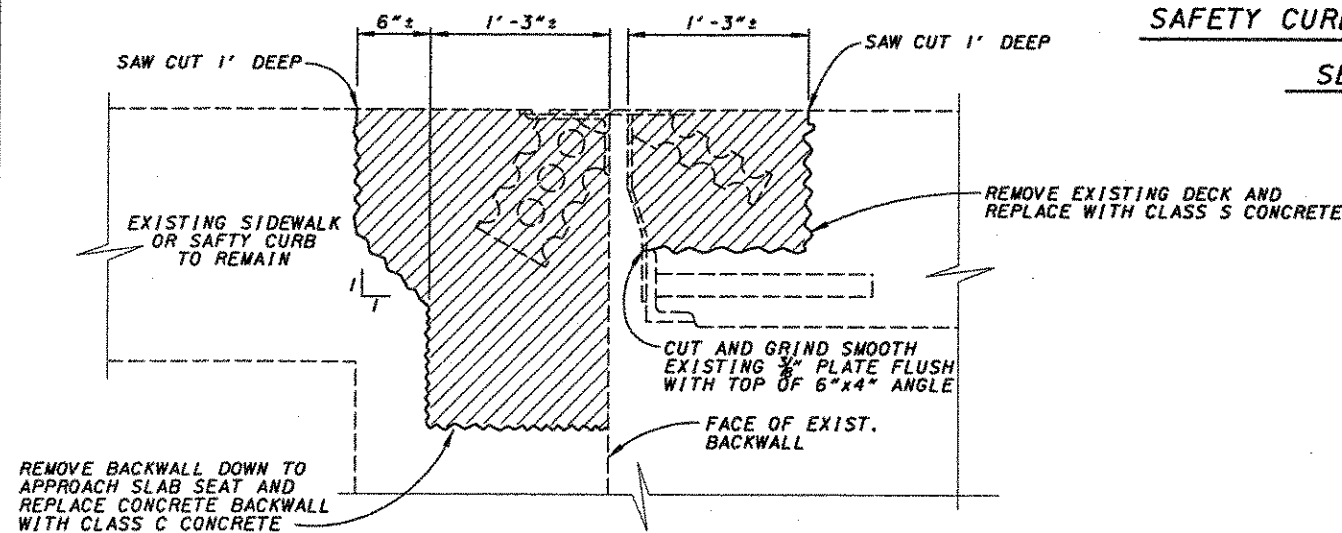
SIDEWALK EXPANSION JOINT REPLACEMENT DETAIL

SECTION 1/9



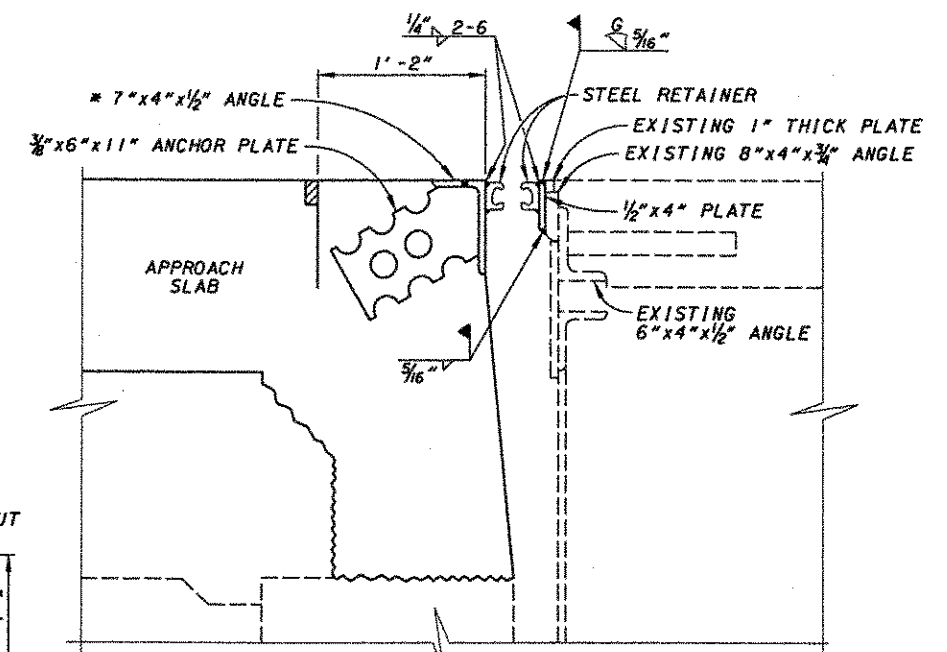
SAFTY CURB EXPANSION JOINT DETAIL

SECTION 5/9



SIDEWALK AND SAFTY CURB EXPANSION JOINT REMOVAL DETAIL

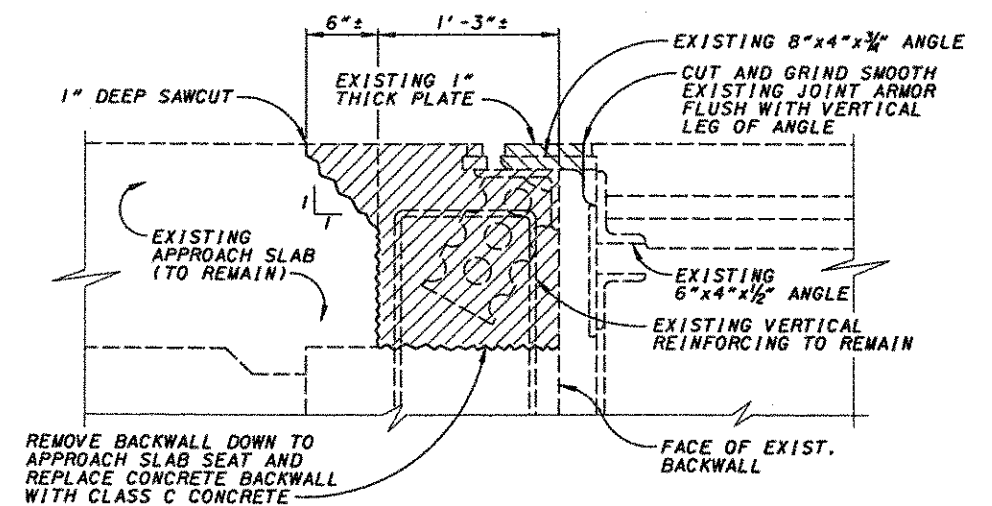
SECTION 1/9 5/9



EXPANSION JOINT REPLACEMENT DETAIL

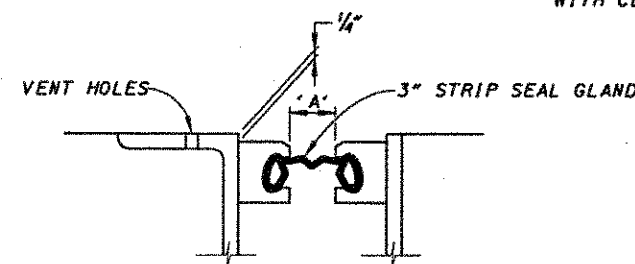
SEE STANDARD DRAWING EXJ-4-87 FOR ADDITIONAL DETAILS NOT SHOWN

SECTION 2/9



EXPANSION JOINT REMOVAL DETAIL

SECTION 2/9



STRIP SEAL DIM. 'A' (SEE STD. DWG. EXJ-4-87)							
TEMPERATURE	30°F	40°F	50°F	60°F	70°F	80°F	90°F
REAR ABUTMENT	1 1/8"	1 3/8"	1 1/2"	1 5/8"	1 7/8"	2 1/8"	2 3/8"
FORWARD ABUTMENT	1 1/8"	1 3/8"	1 1/2"	1 5/8"	1 7/8"	2 1/8"	2 3/8"

FOR ADDITIONAL JOINT DETAILS, NOTES AND INSTALLATION DETAILS SEE STD. DWG. EXJ-4-87.

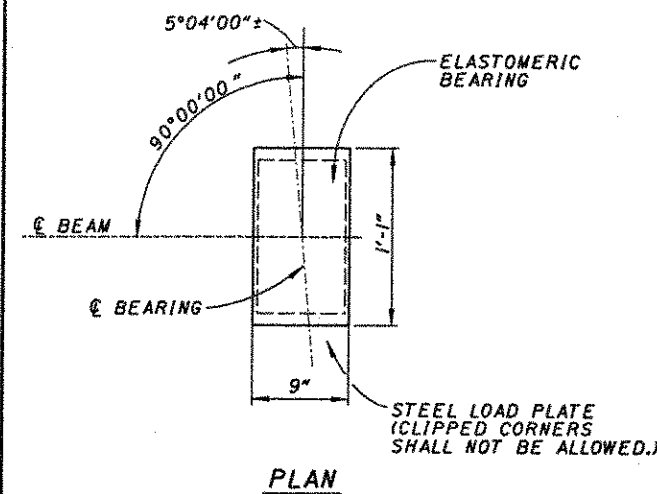
/// DENOTES PORTION OF EXISTING STRUCTURE TO BE REMOVED.



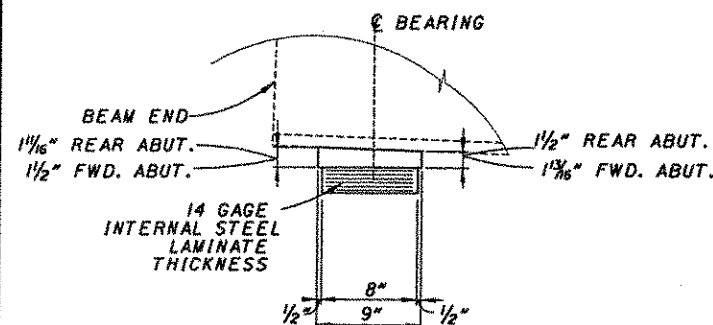
NOTES:

1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
2. SEE SHEET 12/15 FOR BEARING DETAILS.
3. TOP PLATE TO BE METALIZED OR GALVANIZED.

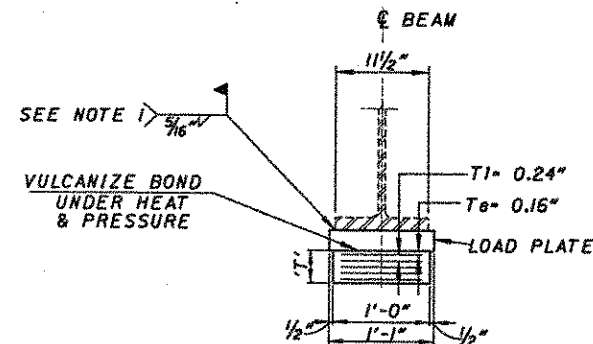
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PLAN



SIDE ELEVATION

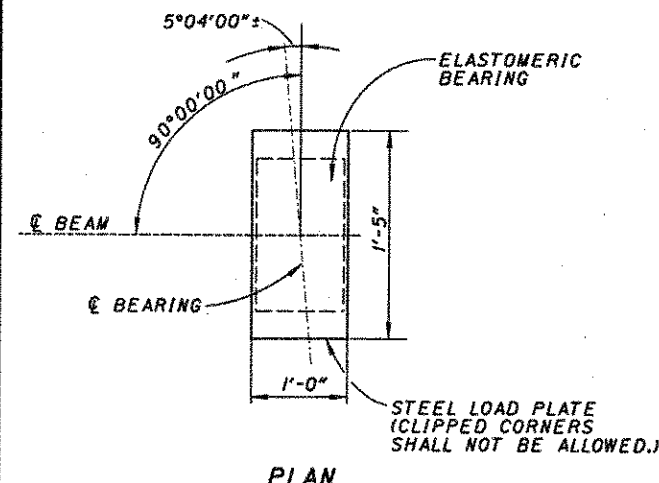


END ELEVATION

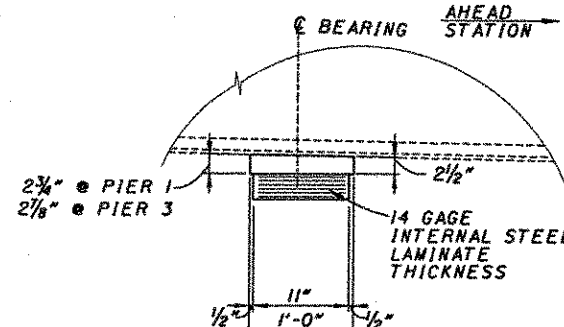
EXTERIOR ELASTOMERIC LAYERS	2 X 0.16 in = 0.32 in
INTERIOR ELASTOMERIC LAYERS	6 X 0.24 in = 1.44 in
STEEL PLATES	7 X 0.075 in = 0.525 in
TOTAL	T = 2.28 in

DEAD LOAD REACTION = 31 KIPS
LIVE LOAD REACTION = 58 KIPS
MAX DESIGN LOAD = 89 KIPS

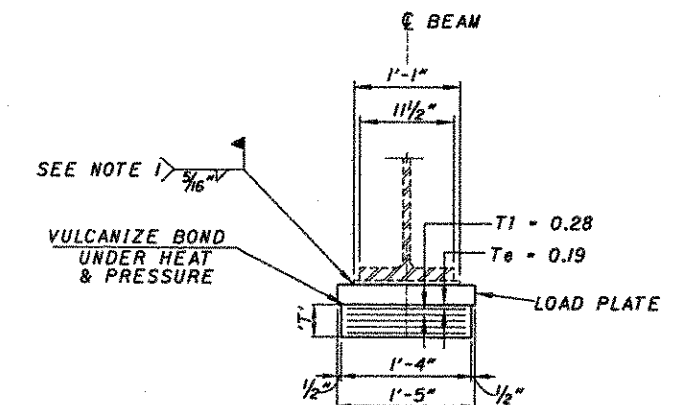
LAMINATED ELASTOMERIC EXPANSION
BEARING AT ABUTMENTS
50 DUROMETER ELASTOMER, GRADE 3



PLAN



SIDE ELEVATION

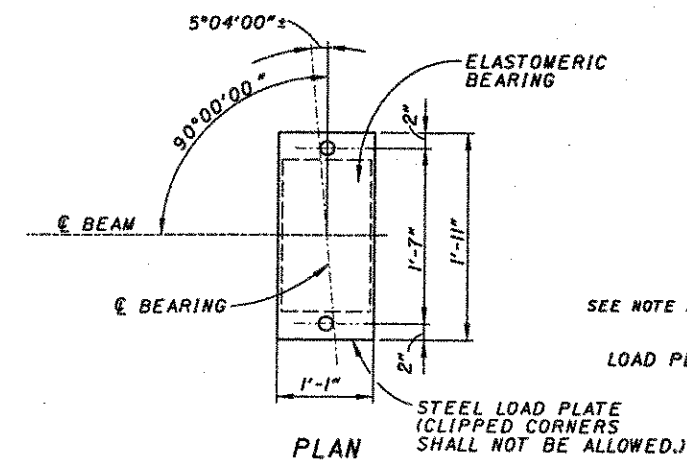


END ELEVATION

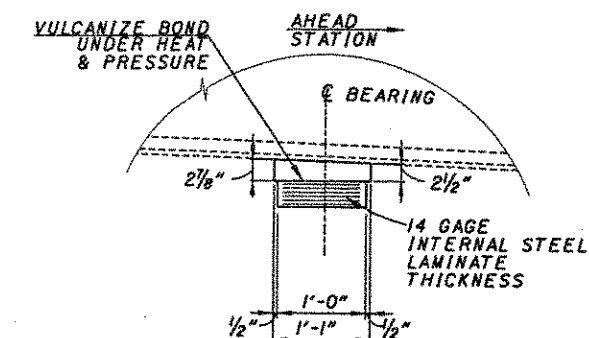
EXTERIOR ELASTOMERIC LAYERS	2 X 0.19 in = 0.38 in
INTERIOR ELASTOMERIC LAYERS	3 X 0.28 in = 0.84 in
STEEL PLATES	4 X 0.075 in = 0.3 in
TOTAL	T = 1.52 in

DEAD LOAD REACTION = 122 KIPS
LIVE LOAD REACTION = 71 KIPS
MAX DESIGN LOAD = 193 KIPS

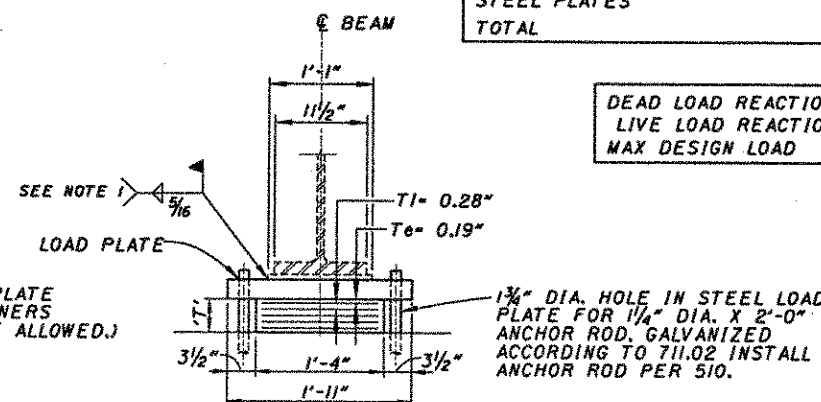
LAMINATED ELASTOMERIC EXPANSION
BEARING AT PIERS 1 & 3
50 DUROMETER ELASTOMER, GRADE 3



PLAN



SIDE ELEVATION



END ELEVATION

EXTERIOR ELASTOMERIC LAYERS	2 X 0.19 in = 0.38 in
INTERIOR ELASTOMERIC LAYERS	3 X 0.28 in = 0.84 in
STEEL PLATES	4 X 0.075 in = 0.3 in
TOTAL	T = 1.52 in

DEAD LOAD REACTION = 134 KIPS
LIVE LOAD REACTION = 72 KIPS
MAX DESIGN LOAD = 206 KIPS

LAMINATED ELASTOMERIC FIXED
BEARING AT PIER 2
50 DUROMETER ELASTOMER, GRADE 3

BEARING NOTES:

1. WELDING OF THE LOAD PLATE TO THE BEAM OR GIRDER FLANGE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMERIC BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

STEEL FOR BEARING LOAD PLATES TO BE A709-36 (A36)

THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

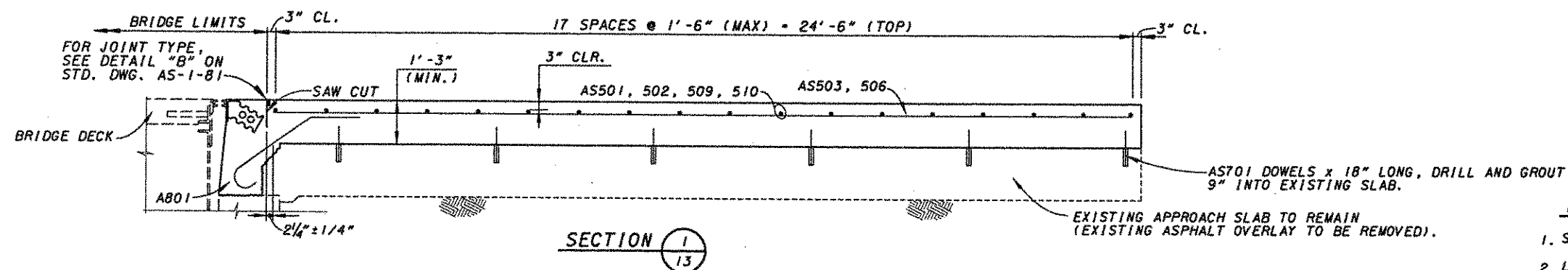
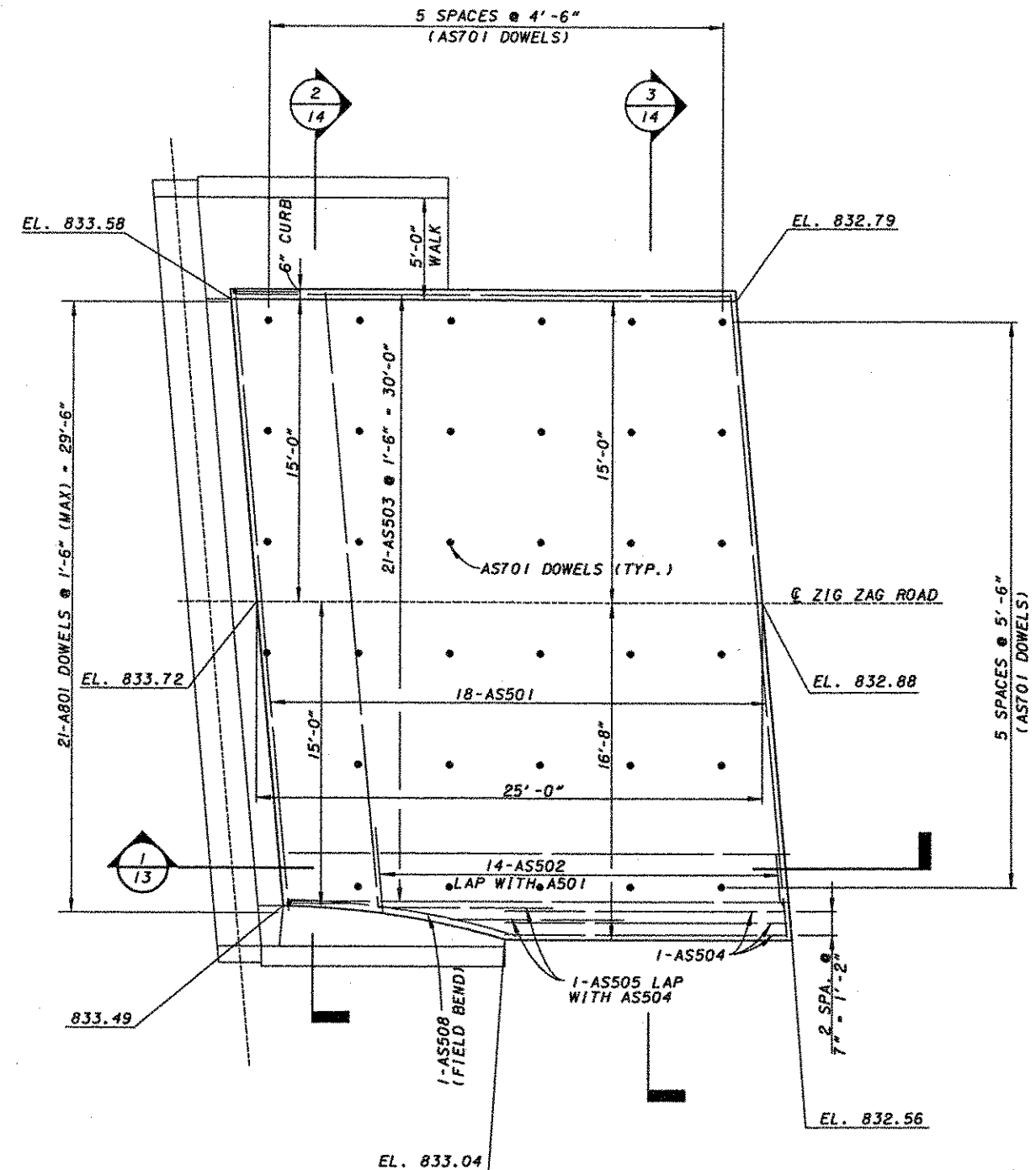
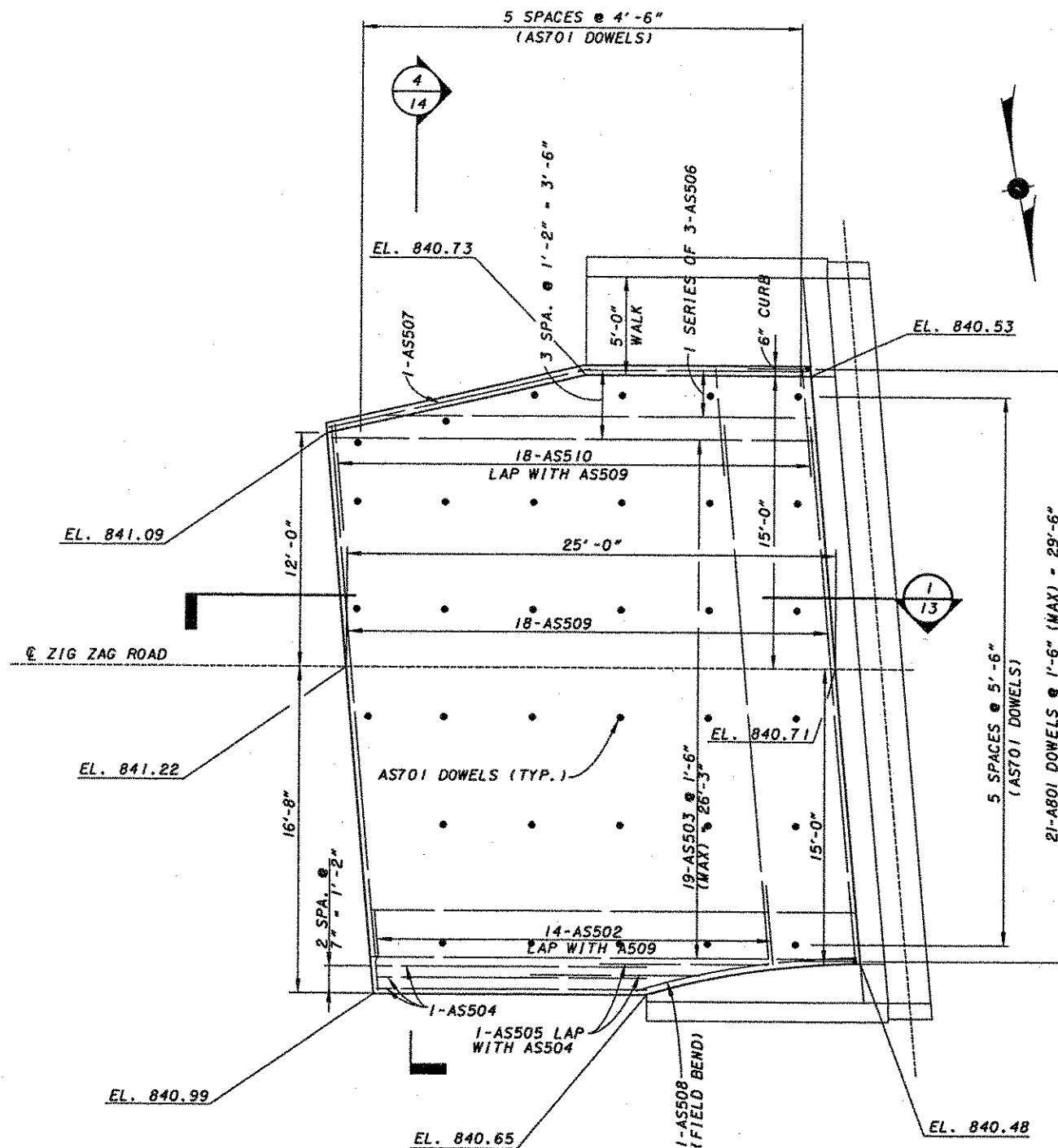
IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F, AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE SIXTH OF THE BEARING HEIGHT AT 60°F ±9°F, THE GIRDER SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F.

STEEL PORTIONS OF ELASTOMERIC BEARINGS SHALL BE PAINTED PER CMS SPECIFICATION ITEM 514- PAINTING, SYSTEM A. STEEL PORTIONS OF BEARING SHALL RECEIVE A SHOP PRIME COAT PRIOR TO INSTALLATION. FURTHERMORE THE EXPOSED STEEL SURFACES OF THE BEARINGS SHALL RECEIVE A TOP COAT. THE COLOR OF THE TOP COAT SHALL MATCH THE STEEL BEAMS OR GIRDERS.

2. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 (METHOD A) OF SECTION 14, BEARINGS, DIVISION I, DESIGN.

3. REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEARING ANCHOR HOLES OR THE PRESETTING OF BEARING ANCHORS.

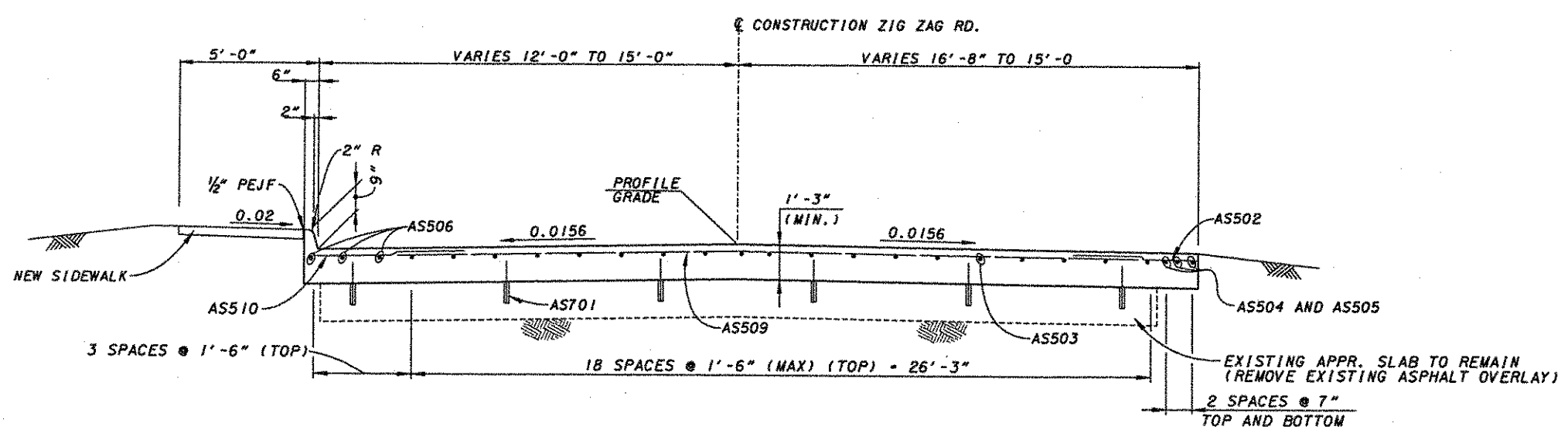
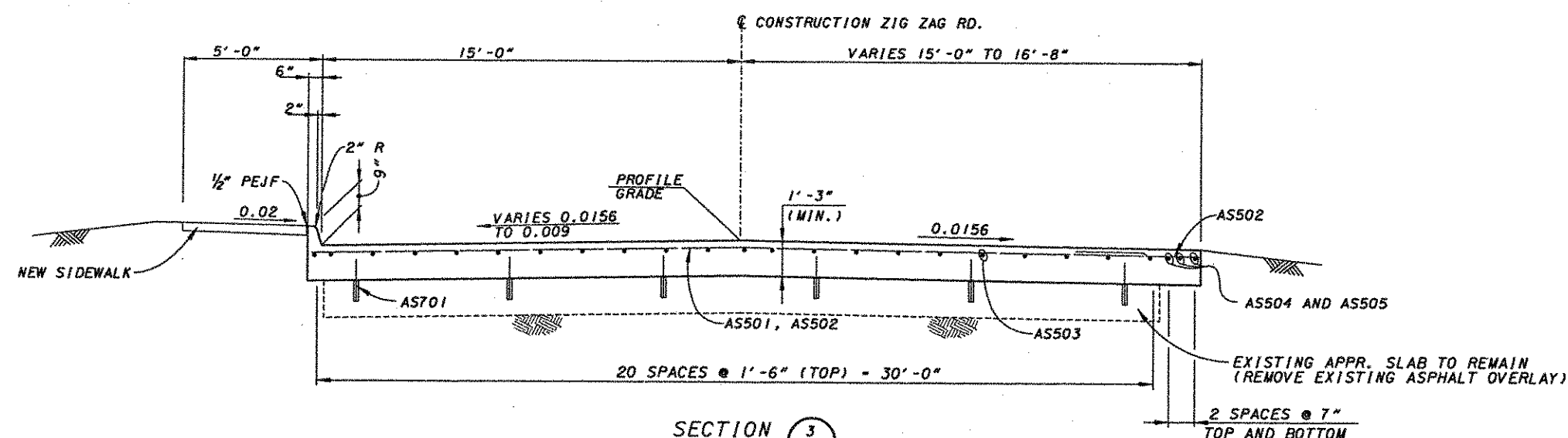
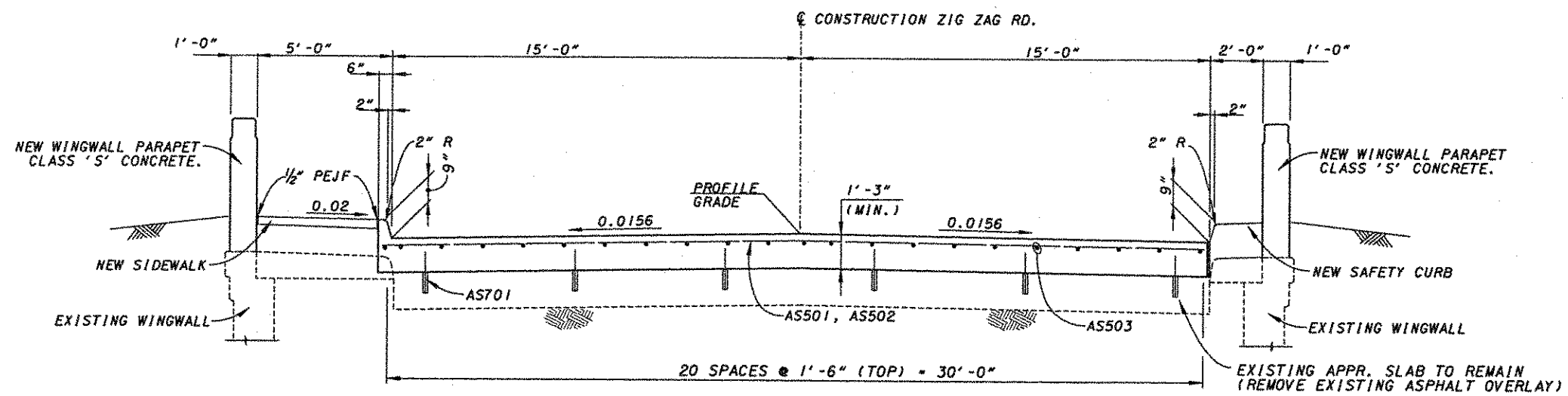
4. BEARINGS DESIGN LOAD: FOR HS-25 LIVE LOAD AND A 60 PSF FUTURE WEARING SURFACE.



ALL STEEL CLEARANCES ARE 3" UNLESS NOTED OTHERWISE.

NOTES:

1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
2. LAP NO. 5 BARS 2'-5" MINIMUM.



NOTES:

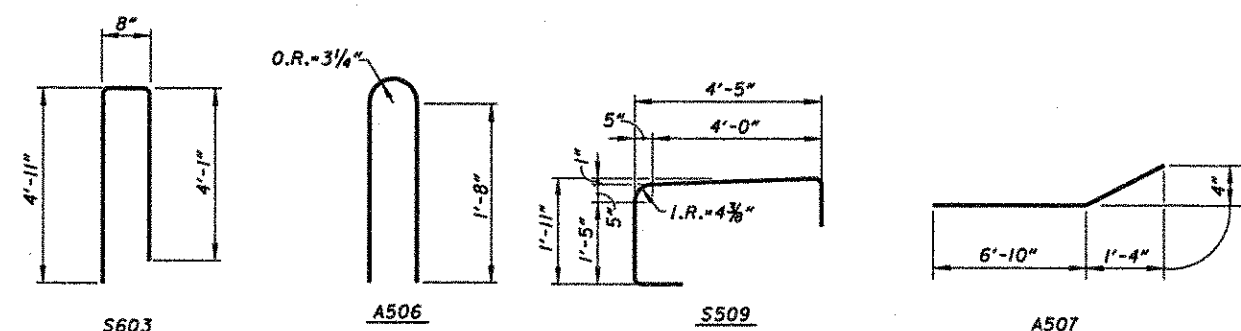
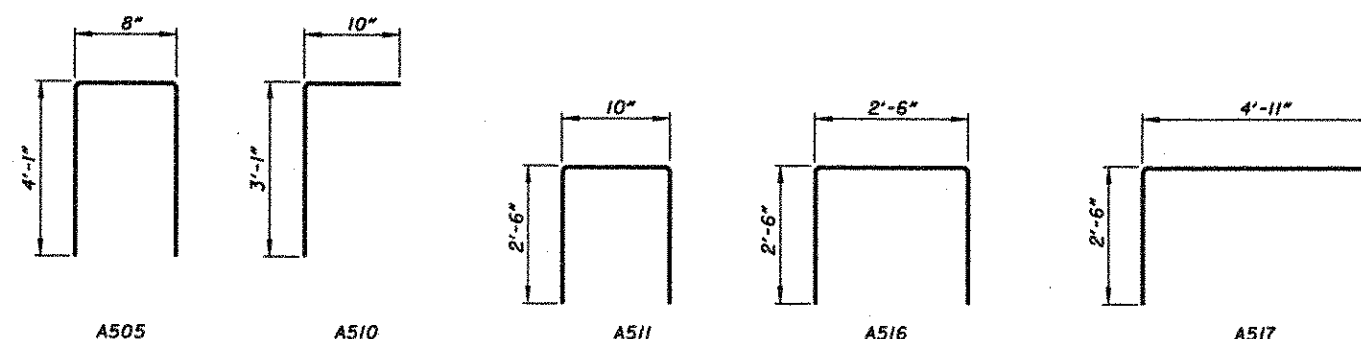
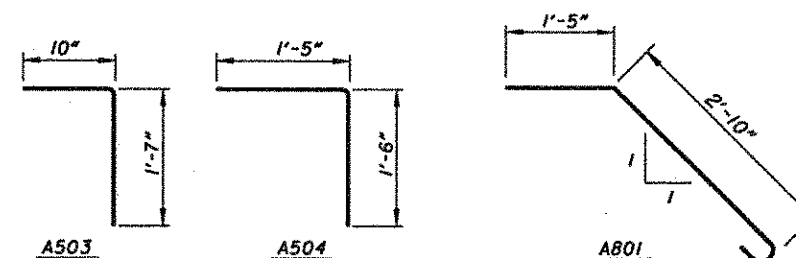
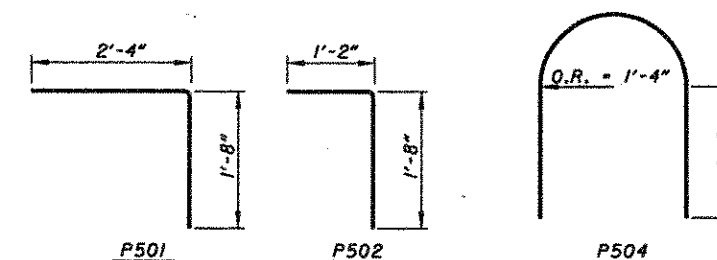
1. SEE STD. DWG. AS-1-81 FOR END JOINT DETAILS.
2. SEE SHEET 15/15 FOR REINFORCING LIST.

APPROACH SLAB REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
AS501	18	30' - 0"	563	STR.
AS502	28	4' - 3"	124	STR.
AS503	40	24' - 6"	1,022	STR.
AS504	6	13' - 8"	86	STR.
AS505	4	8' - 9"	37	STR.
AS506	1	VAR. 11' - 3"		
AS506	SER. OF 3	TO 21' - 9"	49	STR.
AS507	1	13' - 3"	14	STR.
AS508	2	10' - 9"	22	STR.
AS509	18	27' - 1"	508	STR.
AS510	18	5' - 6"	103	STR.
AS701	68	1' - 6"	208	STR.
		TOTAL =	2,737	

SUPERSTRUCTURE REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
S501	8	4' - 8"	39	STR.
S502	8	2' - 8"	22	STR.
		TOTAL =	61	

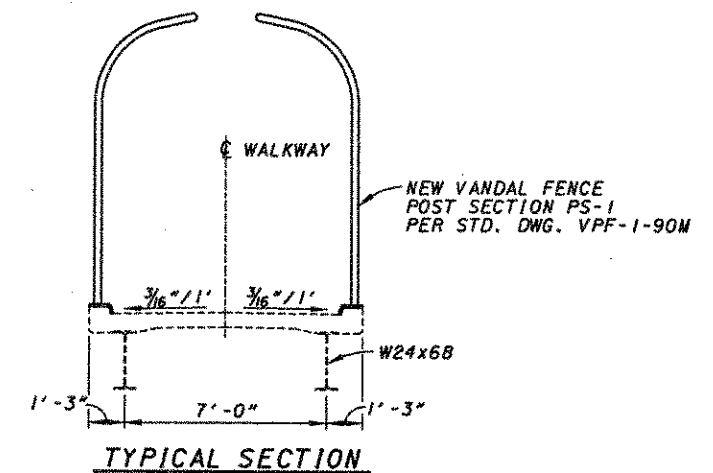
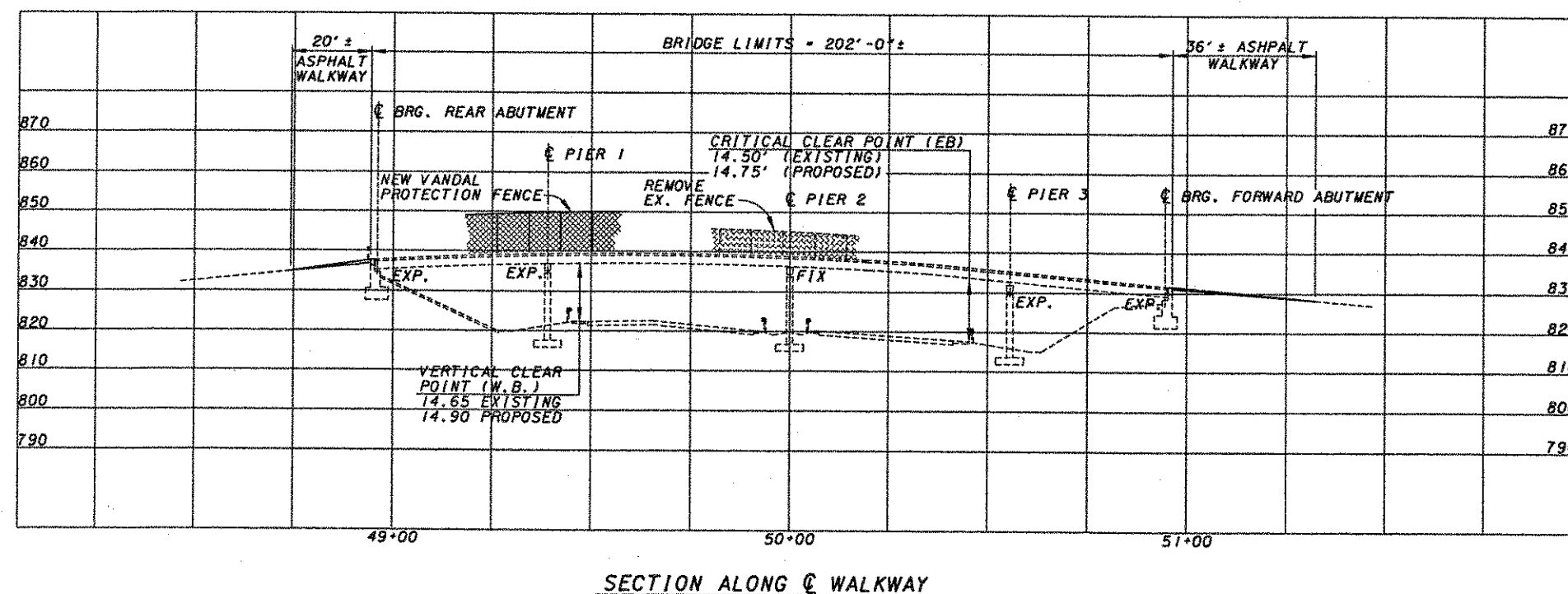
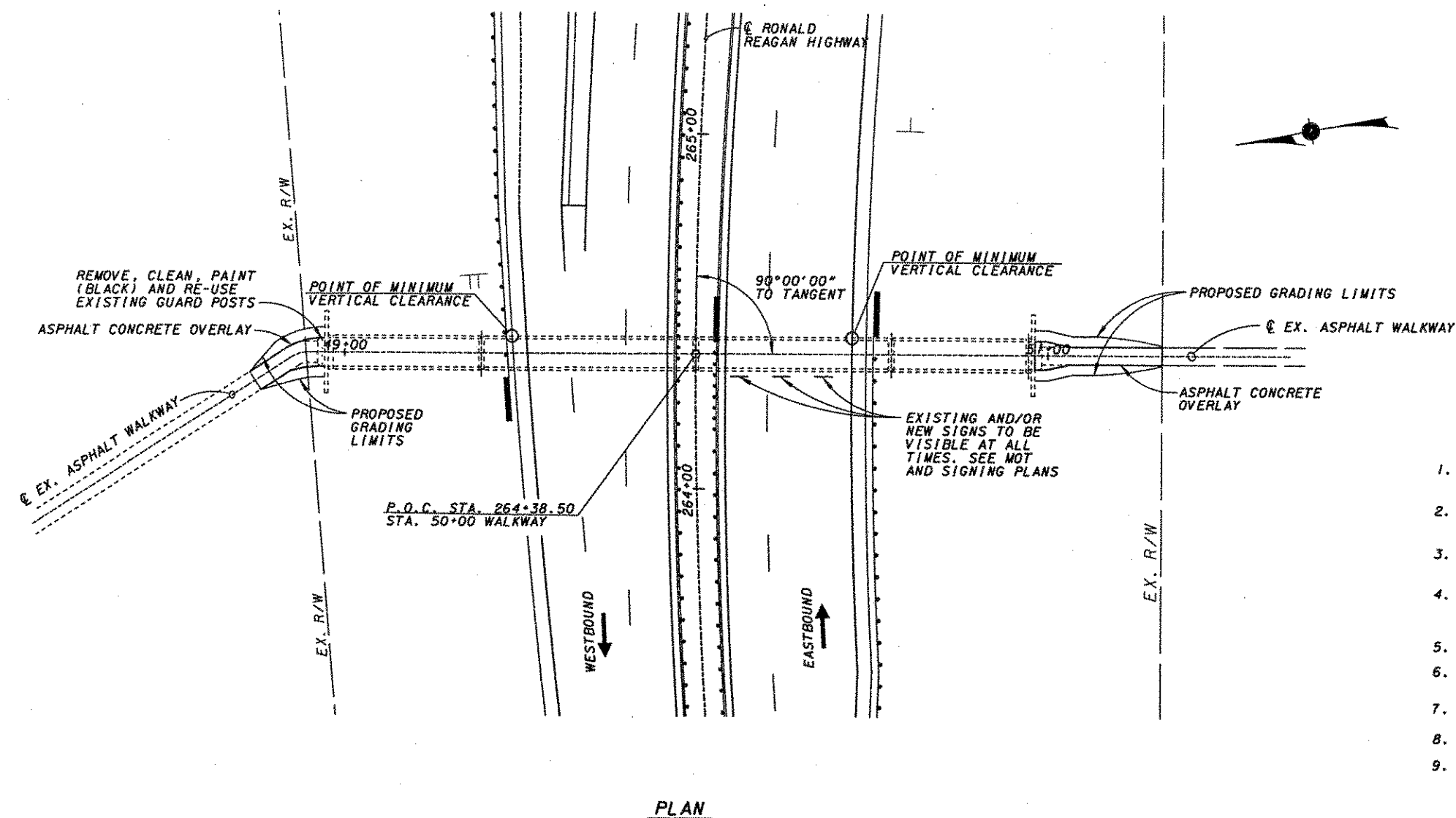
ABUTMENT REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
A501	48	7' - 3"	363	STR.
A502	78	2' - 3"	183	STR.
A503	78	2' - 4"	190	BENT
A504	28	2' - 10"	83	BENT
A505	20	8' - 7"	179	BENT
A506	40	3' - 9"	156	BENT
A507	40	8' - 3"	344	BENT
A508	40	8' - 3"	344	STR.
A509	8	7' - 6"	63	BENT
A510	18	3' - 10"	72	BENT
A511	80	5' - 7"	466	BENT
A512	12	2' - 3"	28	STR.
A513	44	20' - 8"	948	STR.
A514	16	3' - 5"	57	STR.
A515	6	12' - 0"	75	STR.
A516	4	7' - 3"	30	BENT
A517	4	9' - 8"	40	BENT
A518	24	4' - 0"	100	STR.
A601	12	4' - 11"	89	STR.
A602	12	4' - 1"	74	STR.
A603	40	9' - 4"	561	BENT
A801	42	5' - 2"	579	BENT
		TOTAL =	5,025	

PIER REINFORCING LIST				
MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
P501	210	3' - 11"	858	BENT
P502	18	2' - 9"	52	BENT
P503	42	17' - 10"	781	STR.
P504	12	9' - 0"	113	BENT
		TOTAL =	1,803	



REINFORCEMENT NOTES:

1. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT ON STANDARD 180° AND 135° HOOKS.
2. DIMENSIONS ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT WHERE RADIUS "R" IS INDICATED.
4. ALL BARS ARE EPOXY COATED.
5. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P501 IS A NO. 5 BAR.



PROPOSED WORK

1. PAINT STRUCTURAL STEEL WITH SYSTEM OZEU, COLOR SHALL BE FEDERAL COLOR STANDARD 14277 - GREEN.
2. RAISE THE EXISTING SUPERSTRUCTURE TO PROVIDE 14'-9" MIN. VERTICAL CLEARANCE. RAISE EXISTING ABUTMENT AND PIER SEATS.
3. SEAL DECK WITH SOLUBLE REACTIVE SILICATE (SRS) ACCORDING TO SUPPLEMENTAL SPECIFICATION 841.
4. SEAL ABUTMENTS, WING WALLS, CURBS, PIERS AND BACK WALLS WITH EPOXY-URETHANE; COLOR SHALL BE FEDERAL COLOR STANDARD 17778 (LIGHT NEUTRAL).
5. REFURBISH ABUTMENT BEARINGS.
6. PATCH EXISTING CONCRETE DECK PER PROPOSAL NOTE 512(91) - PATCHING CONCRETE BRIDGE DECKS, TYPE B.
7. RETROFIT SLIDING PLATE EXPANSION JOINTS TO STRIP SEAL JOINTS.
8. INSTALL NEW VANDAL PROTECTION FENCEING.
9. ON RIGHT AND LEFT APPROACHS, PROVIDE NEW ASPHALT WALKWAY. WALKWAY SHALL PROVIDE A SMOOTH TRANSITION TO BRIDGE.

JACKING DISTANCE:

REAR ABUTMENT - 6"
PIER 1 - 6"
PIER 2 - 6"
PIER 3 - 6"
FORWARD ABUTMENT - 6"

EXISTING STRUCTURE -
RONALD REAGAN HIGHWAY
UNDER PEDESTRIAN WALKWAY

TYPE: CONTINUOUS STEEL BEAMS
"PAINTED" WITH REINFORCED CONCRETE
DECK, REINFORCED CONCRETE PIERS AND
ABUTMENTS.

LENGTH OF SPANS: 43'-0"±, 61'-0"±, 55'-6"±,
39'-0"± MEASURED c/c BEARINGS

WALKWAY WIDTH: 8'-0" ± TOE/TOE CURB.

DESIGN LOADING: 85 LBS/SQ. FT.

SKEW ANGLE: 0°00'00"

SUPERELEVATION: NONE - NORMAL CROWN

ALIGNMENT: TANGENT

YEAR BUILT: 1967±

LATITUDE: N 39° 14' 31"

LONGITUDE: W 84°21'59"

SFN: 3118991

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS:

ITEM 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS
ITEM 448 - ASPHALT CONCRETE
ITEM 508 - FALSEWORK AND FORMS
ITEM 509 - REINFORCING STEEL
ITEM 513 - STRUCTURAL STEEL
ITEM 516 - EXPANSION AND CONTRACTION JOINTS, JOINT SEALER
ITEM 607 - FENCE
ITEM 608 - WALKS AND STEPS

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT SUPPLEMENTAL SPECIFICATIONS:

815 DATED 02/22/00 - FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU.
841 DATED 10/12/99 - SOLUBLE REACTIVE SILICATE (SRS) CONCRETE TREATMENT
842 DATED 01/06/99 - CONCRETE FOR STRUCTURES.
864 DATED 07/11/00 - SEALING OF CONCRETE SURFACES
899 DATED 10/21/98 - CONCRETE - GENERAL
910 DATED 07/11/00 - OZEU STRUCTURAL STEEL PAINT.

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT STANDARD DRAWINGS:

EXJ-4-87 DATED 04/20/01
VPF-1-90M REVISED 03/20/95

DESIGN SPECIFICATIONS:

NEW WORK FOR THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997, 1998, AND 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN STRESSES:

CLASS C CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (28 DAY) (SUBSTRUCTURE)
STRUCTURAL STEEL - ASTM-A36-YIELD STRENGTH 36,000 PSI
REINFORCING STEEL - ASTM A615, A616, OR A617, EPOXY COATED GRADE 60 - MINIMUM YIELD STRENGTH 60,000 PSI.

DECK PROTECTION METHOD:

SEALING OF CONCRETE SURFACES

JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE TO ENABLE RAISING SUPERSTRUCTURE AND REFURBISHING BEARINGS.

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE OR RE-POSITION ANY EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS AND TO ENABLE REFURBISHING OF BRIDGE BEARINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE PROJECT

SUBMITTAL REQUIREMENTS:

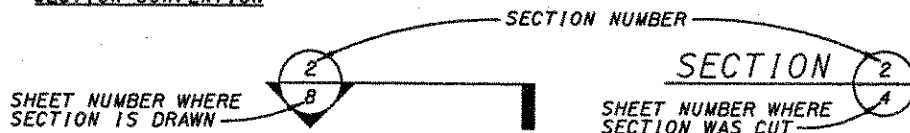
THREE (3) SETS OF JACKING PLANS CONSISTING OF AT LEAST THE INFORMATION REQUESTED BY THIS NOTE SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS SCHEDULED TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSES OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR'S SELECTED 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 VALVES, 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. A METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS SHALL NOT BE PERMITTED.

ABBREVIATION LIST

E.F. - EACH FACE
N.F. - NEAR FACE
F.F. - FAR FACE
SER. - SERIES BARS
BTM. - BOTTOM
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
EL. - ELEVATION
TYP. - TYPICAL
STD. - STANDARD
DWG. - DRAWING

SECTION CONVENTION



JACKING PLAN

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE 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 AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY A OHIO REGISTERED PROFESSIONAL ENGINEER.

THE CONTRACTOR'S PROPOSED PLAN OF STRUCTURE JACKING PERFORMANCE SHALL BE IN CONFORMANCE WITH THE FOLLOWING ITEMS:

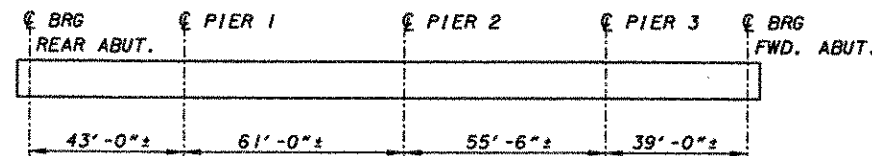
1. THE ENTIRE SYSTEM INCLUDING JACKS SHALL PROVIDE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.
2. FOR LIFTS GREATER THAN 1 INCH, JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.
3. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOMED PISTON HEAD, OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.
4. 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.
5. SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.
6. 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.
7. AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE ALL THREE OF THE FOLLOWING ELEMENTS APPLY: THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS, NO PERMANENT SHIMMING IS REQUIRED, AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED 1/4 INCH. MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1 INCH OR LESS. THIS HEIGHT MAY BE MODIFIED IF CALCULATIONS, BY THE CONTRACTOR'S OHIO REGISTERED PROFESSIONAL ENGINEER, SHOW THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES FOR THOSE COMPONENTS AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER 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. ANY BEAMS THAT SEPARATE FROM THE DECK SHALL BE EPOXY INJECTED FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH ODOT'S PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

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

REFURBISHING BEARING DEVICES

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED WITH THIS ITEM THE CONTRACTOR SHALL PERFORM THE FOLLOWING WORK ITEMS: DISASSEMBLY OF THE BEARINGS; HAND TOOL CLEANING (GRINDING IF NECESSARY); PAINTING WITH OZEU; REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PRE-FORMED BEARING PADS (SEE ODOT SPEC SECTION 711.21); INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT; REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS; RE-WELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F; LUBRICATING SLIDING SURFACES; AND RE-ASSEMBLY OF THE BEARINGS. THE CONTRACTOR SHALL ASSURE 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 PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER.



	REAR ABUT.	PIER 1	PIER 2	PIER 3	FWD. ABUT.
EXISTING DEAD LOAD (PER BEAM)	8 KIPS	31 KIPS	32 KIPS	27 KIPS	8 KIPS
ADDITIONAL 20%	2 KIPS	6 KIPS	6 KIPS	6 KIPS	2 KIPS
MINIMUM JACKING LOAD	10 KIPS	37 KIPS	38 KIPS	33 KIPS	10 KIPS

JACKING LOADS

NOTE:
BRIDGE TO BE CLOSED TO TRAFFIC DURING JACKING.

SEAL PIERS, PIER CAPS, CURBS, WINGWALLS AND ABUTMENTS WITH EPOXY-URETHANE

THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO SEAL THE DESIGNATED EXPOSED CONCRETE SURFACE AREAS IN THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 864.

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, 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.

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. 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 UPON 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.

FIELD PAINTING OF EXISTING STRUCTURAL STEEL

ON THOSE BRIDGES REQUIRING FIELD PAINTING THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 815 DATED FEB. 22, 2000. ALL EXPOSED SURFACES OF BEAMS, CROSS FRAMES, SCUPPERS, DRAINS, AND BEARINGS SHALL BE PAINTED. FINISH COAT COLOR SHALL BE FEDERAL COLOR STANDARD 14277 (GREEN). ALL PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT STAGING AND THE MAINTENANCE OF TRAFFIC PLANS.

SEAL DECK WITH SOLUBLE REACTIVE SILICATE (SRS).

THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 841.

ASBESTOS ABATEMENT

THE CONTRACTOR SHALL CONDUCT ASBESTOS INSPECTIONS OF ALL BRIDGES SUBJECT TO RENOVATION OR DEMOLITION AS PER CHAPTER 3745-20 OF THE OHIO ADMINISTRATIVE CODE (OAC) "ASBESTOS EMISSIONS CONTROL FROM RENOVATION/DEMOLITION AND WASTE DISPOSAL OPERATION" MAY 29, 1990 UTILIZING A CERTIFIED OHIO ASBESTOS HAZARD EVALUATION SPECIALIST. SHOULD SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) BE ENCOUNTERED, PERFORM BULK SAMPLING AND ANALYSIS. PREPARE A LETTER REPORT (1-2 PAGES) INCLUDING A BRIEF DISCUSSION OF THE INSPECTION AND SAMPLING METHODOLOGY AND MAP INDICATING THE BRIDGE LOCATION AND SAMPLING LOCATIONS, AND ANALYTICAL TEST RESULTS.

THE CONTRACTOR SHALL COMPLETE AN ODEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS FORM TO THE OHIO EPA AT LEAST 10 WORKING DAYS BEFORE OPERATIONS BEGIN.

AS THESE INSPECTION REPORTS AND NOTIFICATION FORMS ARE COMPLETED, COPIES SHALL BE FORWARDED TO ODOT'S ON SITE PROJECT ENGINEER.

SHOULD ASBESTOS CONTAINING MATERIAL BE ENCOUNTERED, ALL SUSPECT MATERIALS SHALL BE REMOVED AND PROPERLY DESPOSED OF BY A CERTIFIED ASBESTOS REMOVAL CONTRACTOR IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (30 CFR PART 61, SUBPART M) SHALL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON SHALL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

ALL ASSOCIATED COSTS OF ASBESTOS MATERIALS TO BE REMOVED AND PROPERLY DISPOSED OF, WILL BE PAID UNDER 'THIRD PARTY BILLING' PROVISIONS OF ODOT CHANGE ORDER POLICY 512-004(P) APPENDIX D.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:

ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW REINFORCING STEEL. ANY EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT THE CONTRACTOR'S COST. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. THE NUMBER OF POUNDS OF REINFORCING STEEL PAID FOR UNDER FORCE ACCOUNT SHALL BE THE ACTUAL POUNDS OF REPLACEMENT REINFORCING STEEL SPECIFIED BY THE ENGINEER DUE TO CORROSION AND SHALL INCLUDE PLACEMENT, DOWELING, BENDING, SUPPORTING, TIE WIRES AND TYING OF THAT SPECIFIED REINFORCING STEEL.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE 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, 105.02, AND 513.02. 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.

PROPOSAL NOTE 512

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECKS - 11/22/93.

A. DESCRIPTION.

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REPAIR CONCRETE BRIDGE DECKS, INCLUDING THE REMOVAL OF ALL LOOSE AND UNSOUND CONCRETE, BITUMINOUS PATCHES, SURFACE PREPARATION, BONDING COAT AND THE MIXING, PLACING, FINISHING AND CURING OF THE MORTAR OR CONCRETE PATCHES.

B. MATERIALS.

MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
FINE AGGREGATE (NATURAL SAND) 703.02
COARSE AGGREGATE (NO. 8) 703.02
PORTLAND CEMENT 701.05
QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2 705.21
AIR-ENTRAINING ADMIXTURE 705.10
CURING MATERIALS - TYPE B PATCHES 705.07

C. REMOVAL OF UNSOUND CONCRETE.

THE PERIMETER OF ALL REMOVAL AREAS SHALL BE SAWED TO A DEPTH OF 1" TO PRODUCE A VERTICAL OR SLIGHTLY UNDERCUT FACE. ADDITIONAL SAW CUTS MAY BE REQUIRED TO FACILITATE REMOVAL. ALL UNSOUND CONCRETE INCLUDING ALL PATCHES OTHER THAN SOUND PORTLAND CEMENT CONCRETE, AND ALL LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED. THE UNSOUND CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35-POUND CLASS AND SHALL BE OPERATED AT AN ANGLE OF LESS THAN 45 DEGREES MEASURED FROM THE SURFACE OF THE DECK CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. WHERE THE BOND BETWEEN THE CONCRETE AND A PRIMARY REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM 1/2 INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICABLE. REINFORCEMENT WHICH HAS BECOME LOOSE SHALL BE ADEQUATELY SUPPORTED AND TIED BACK INTO PLACE. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATIONS, THE ENGINEER WILL SOUND THE DECK TO INSURE THAT ONLY SOUND CONCRETE REMAINS.

D. SURFACE PREPARATION.

CLEANING SHALL CLOSELY PRECEDE APPLICATION OF THE BONDING GROUT AND/OR THE PATCHING MATERIAL. THE SURFACE TO BE PATCHED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. FOR TYPE B PATCHES WHICH DO NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE SURFACE DRY. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE PATCHING MATERIAL WHICH IS USED.

E. BONDING GROUT.

TYPE B PATCHES SHALL BE BONDED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.

F. PATCHING.

THE MORTAR OR CONCRETE SHALL BE PLACED AS TYPE B.

TYPE B. PATCHING MATERIAL SHALL BE MADE USING QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2, 705.21. THE MORTAR SHALL BE MIXED AND PLACED AS PER MANUFACTURER'S RECOMMENDATIONS. COARSE AGGREGATE SHALL BE ADDED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS WHEN THE DEPTH OF THE PATCH EXCEEDS 1".

G. CURING.

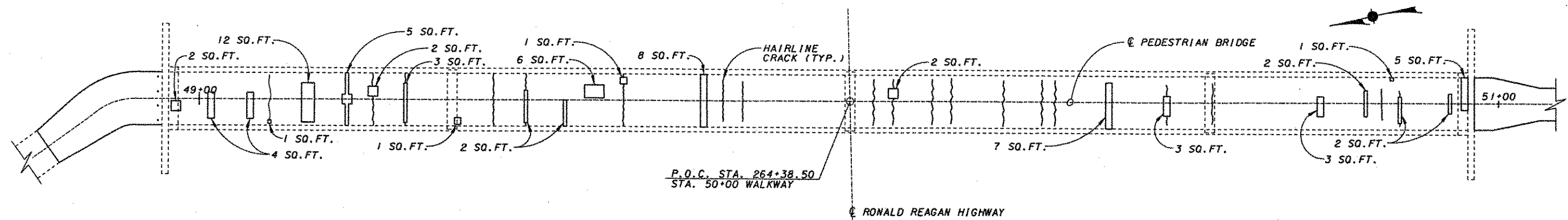
TYPE B PATCHES SHALL BE CURED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

H. METHOD OF MEASUREMENT.

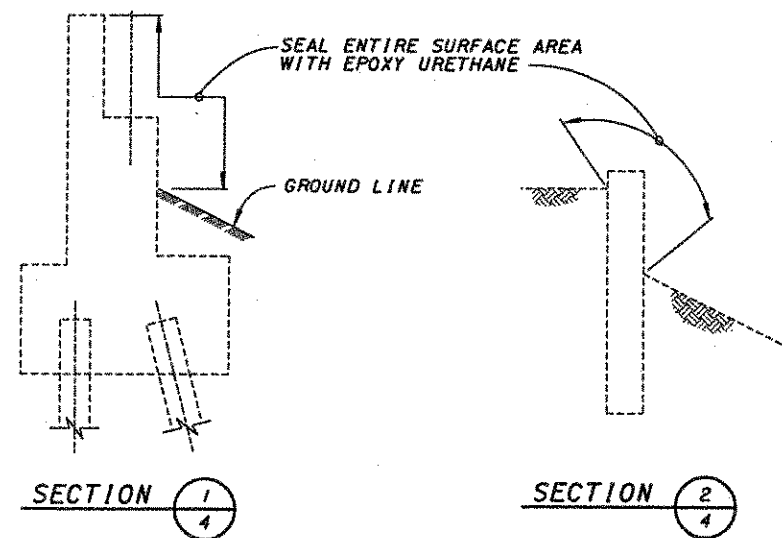
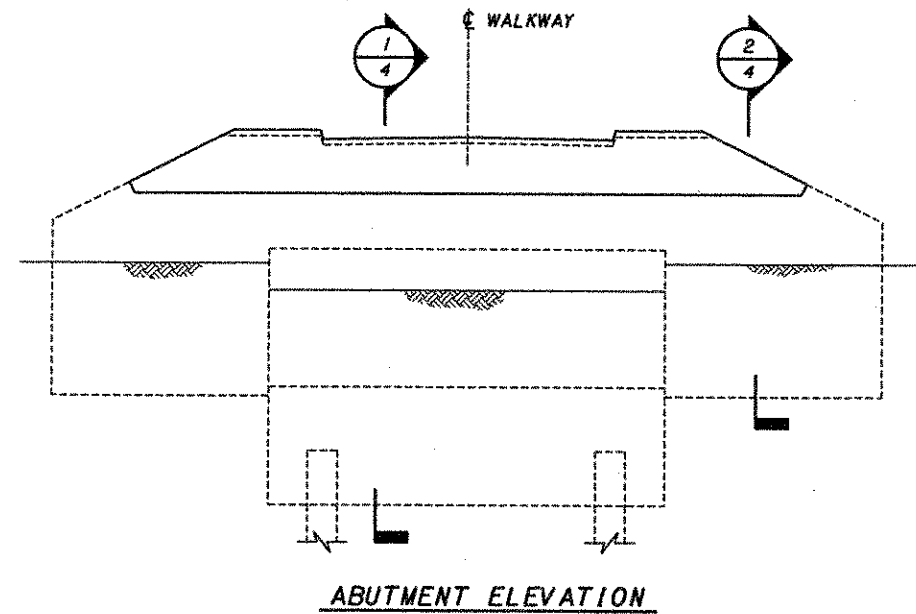
THE QUANTITY SHALL BE THE ACTUAL AREA IN SQUARE FEET OF THE EXPOSED SURFACE OF ALL PATCHES, IRRESPECTIVE OF THE DEPTH OF THE PATCH, COMPLETE, IN PLACE AND ACCEPTED.

VANDAL PROTECTION FENCE:

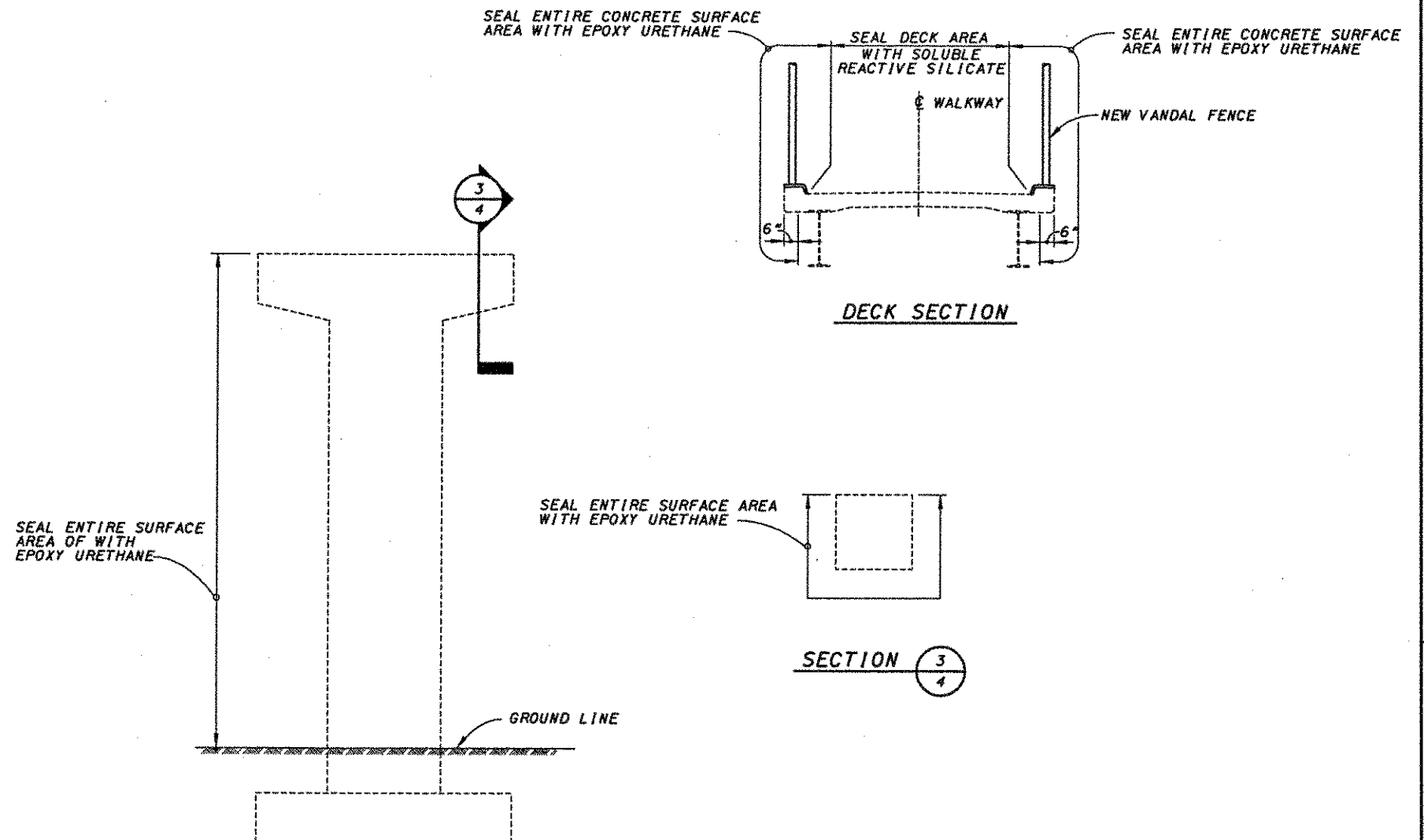
THIS WORK SHALL BE PER STD. DRAWING VPF-1-90W, THESE PLANS AND APPLICABLE SECTIONS OF CMS ITEM 607. AFTER GALVANIZING, THE WIRE FABRIC, POSTS, RAILS, PLATES AND HARDWARE SHALL BE PVC COATED. THE PVC COATING SHALL BE BLACK IN COLOR TO MATCH EXISTING. EXISTING FENCE ON BRIDGE IS TO BE REMOVED AND DISPOSED OF. EXISTING PIPE SLEEVES ARE TO BE FILLED WITH CEMENT GROUT BEFORE SEALING OF CONCRETE.

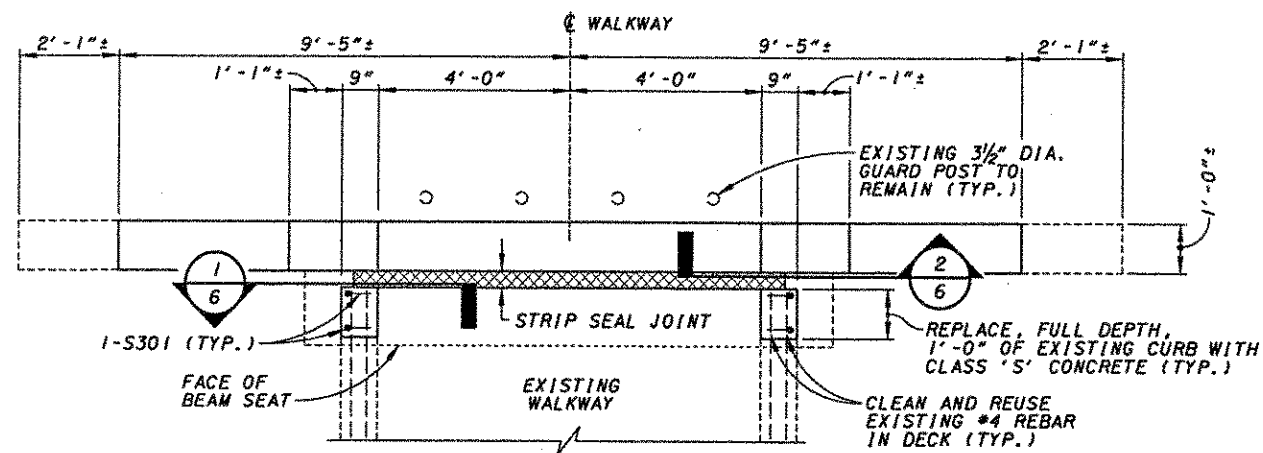


DECK PLAN
(DECK AREAS REQUIRING PATCHING
PER KZF DECK SURVEY 7/02/01)

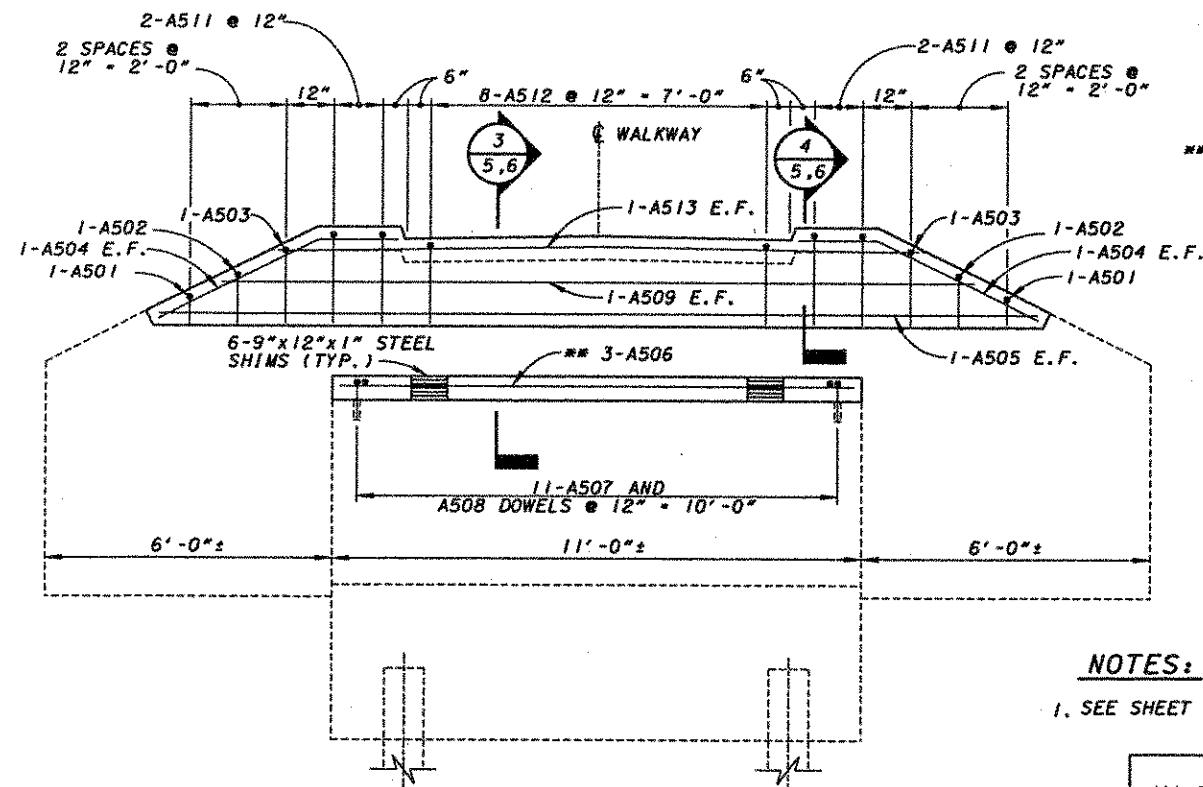


ABUTMENT SEALING LIMITS

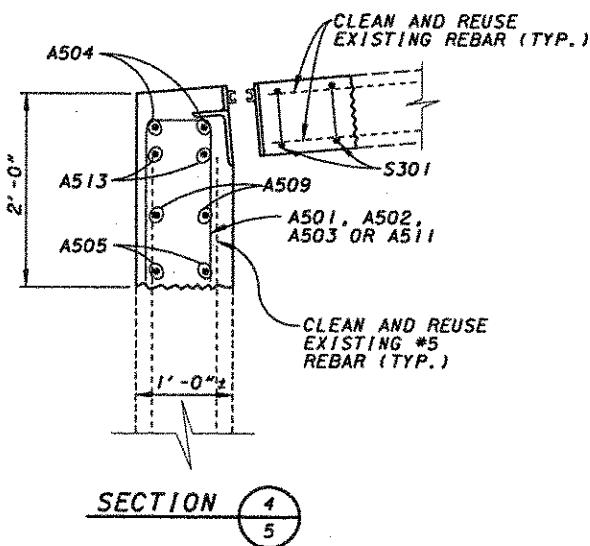
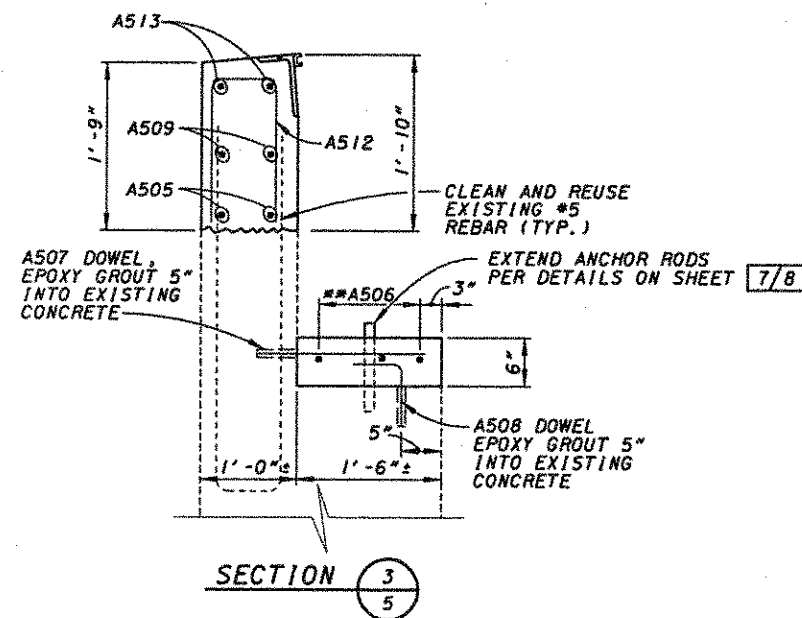




REAR ABUTMENT PLAN



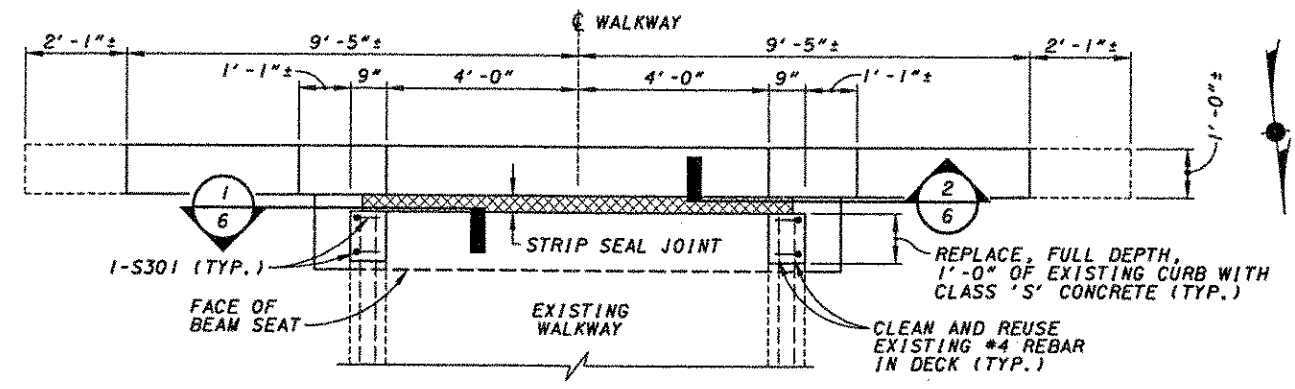
REAR ABUTMENT ELEVATION



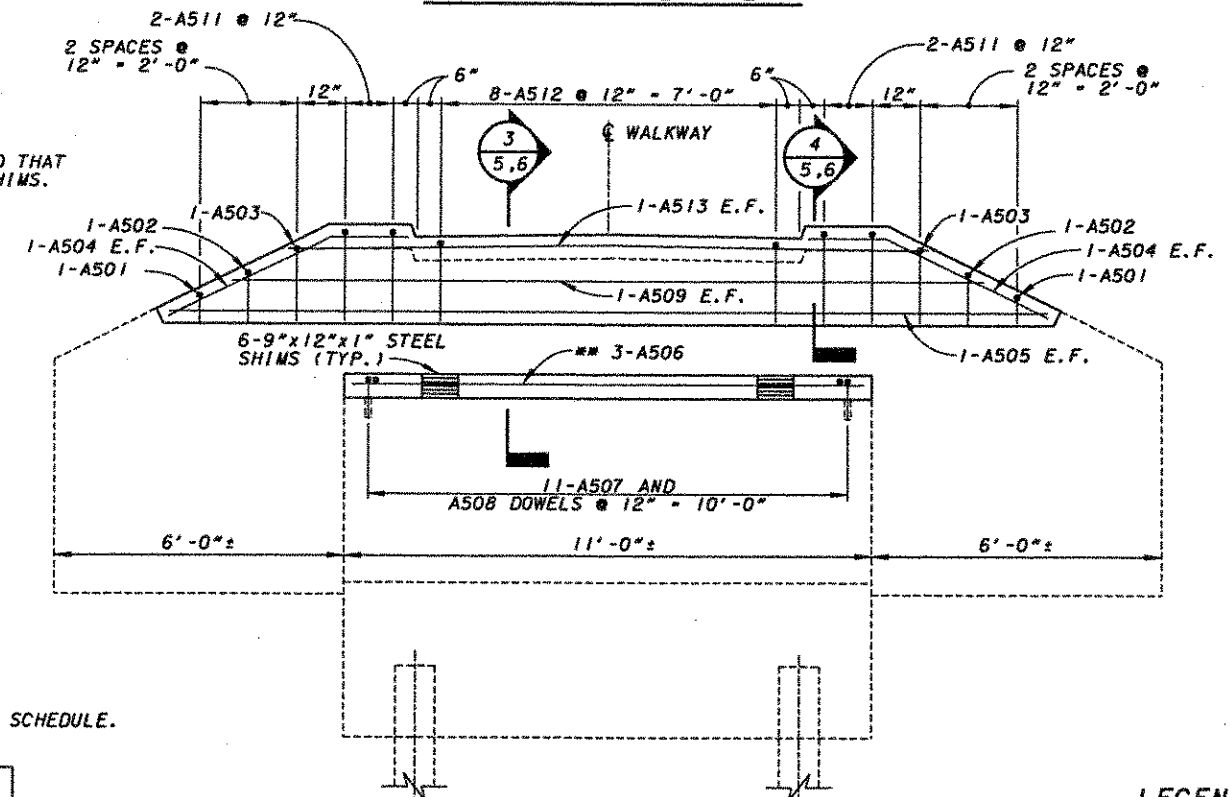
NOTES:

1. SEE SHEET 7/8 FOR REINFORCING SCHEDULE.

ALL STEEL CLEARANCES ARE 2" UNLESS NOTED OTHERWISE.

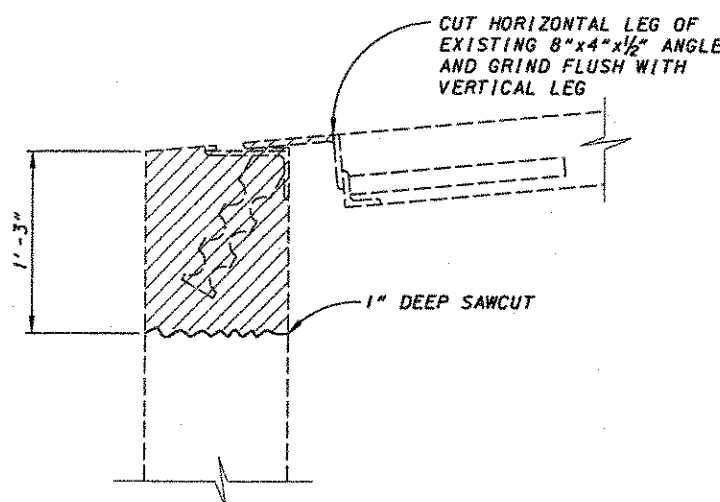


FORWARD ABUTMENT PLAN

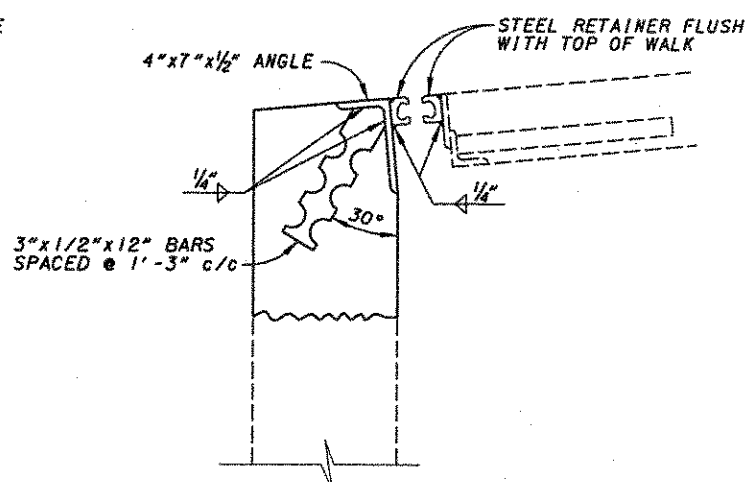


FORWARD ABUTMENT ELEVATION

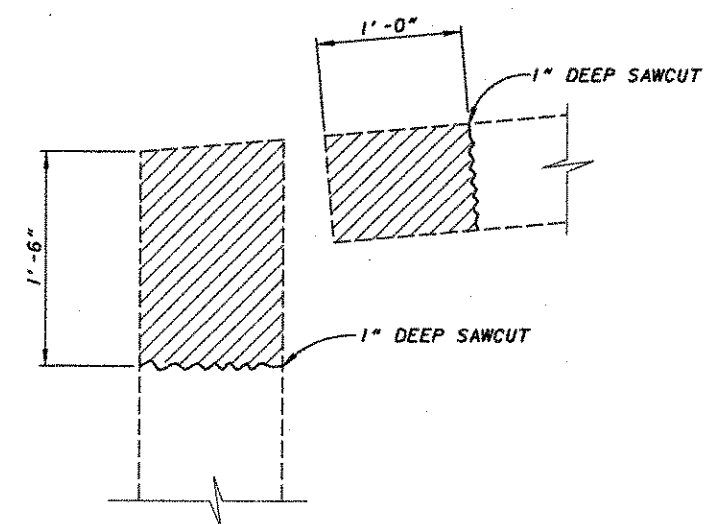
LEGEND:
E.F. = EACH FACE



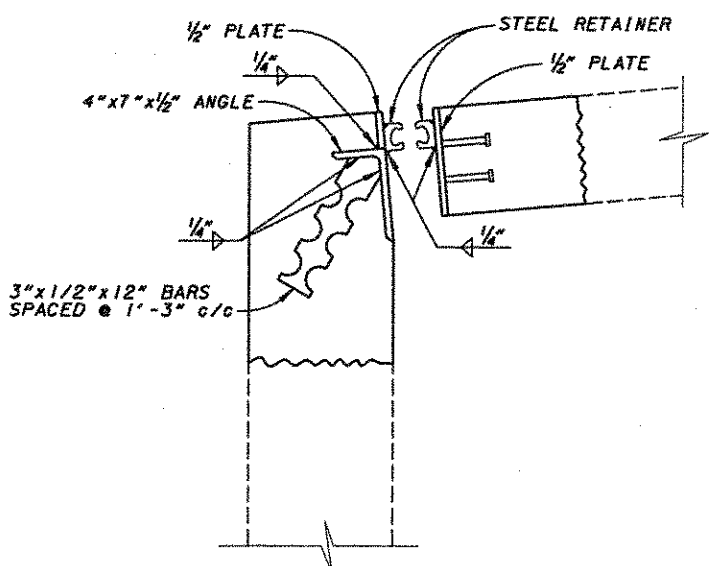
SECTION 3/5
 REMOVAL DETAIL



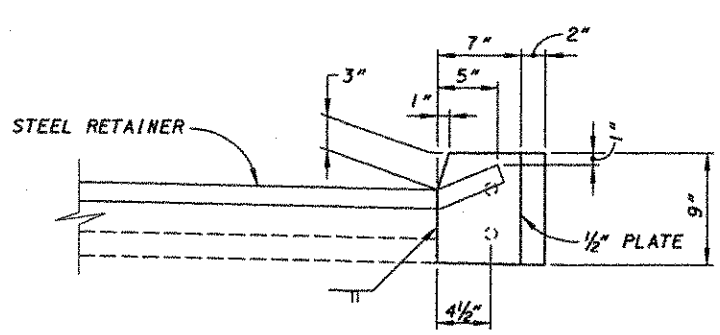
SECTION 3/5



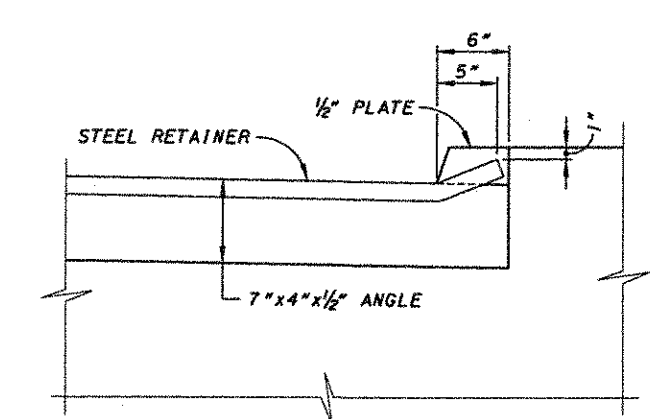
SECTION 4/5
 REMOVAL DETAIL



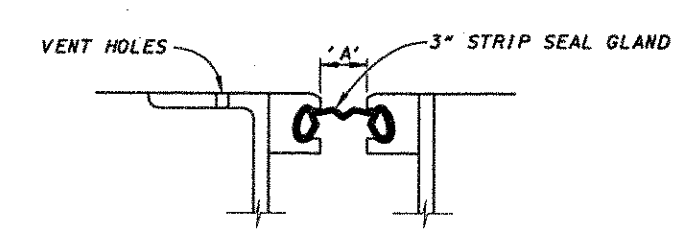
SECTION 4/5



SECTION 1/5

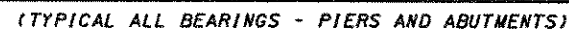


SECTION 2/5



STRIP SEAL DIM. 'A' (SEE STD. DWG. EXJ-4-87)							
TEMPERATURE	30°F	40°F	50°F	60°F	70°F	80°F	90°F
REAR ABUTMENT	1 7/8"	1 3/4"	1 3/4"	1 5/8"	1 1/2"	1 1/2"	1 3/8"
FORWARD ABUTMENT	1 7/8"	1 3/4"	1 3/4"	1 5/8"	1 1/2"	1 1/2"	1 3/8"

FOR ADDITIONAL JOINT DETAILS, NOTES AND
 INSTALLATION DETAILS SEE STD. DWG. EXJ-4-87.



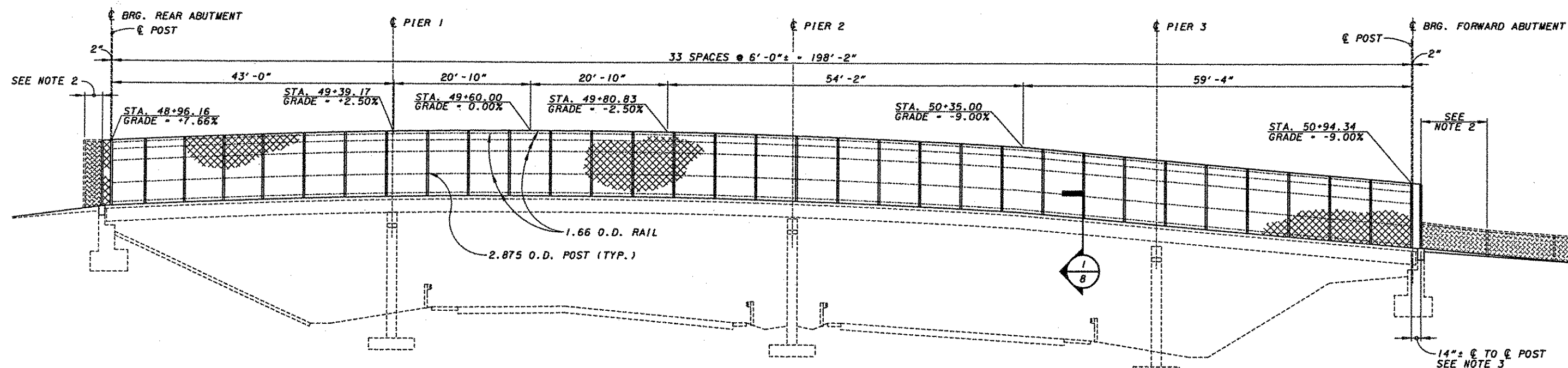
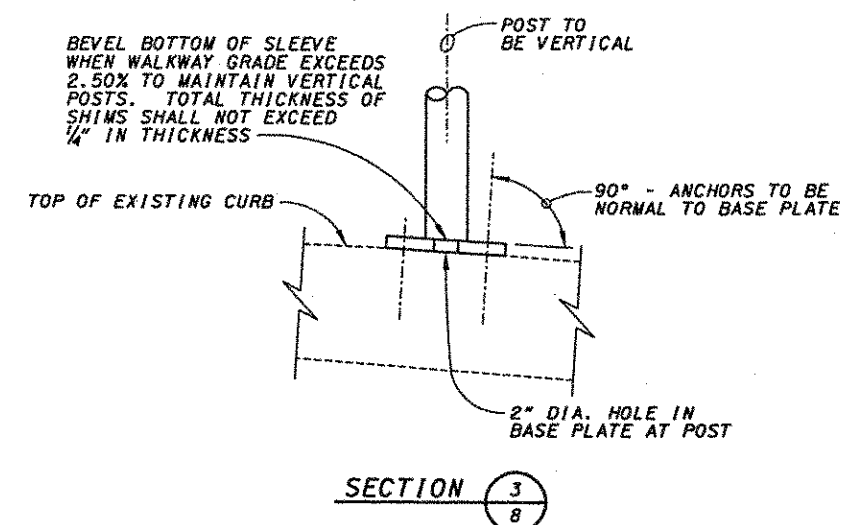
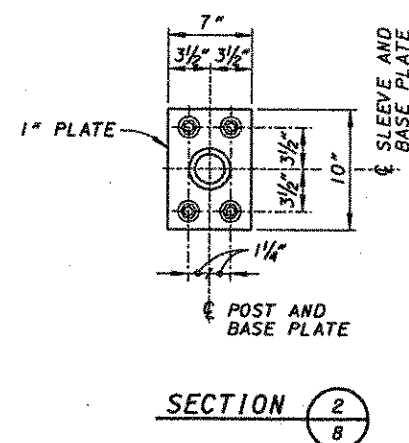
##CUT P502 BARS IN FIELD THAT
CONFLICT WITH STEEL SHIMS



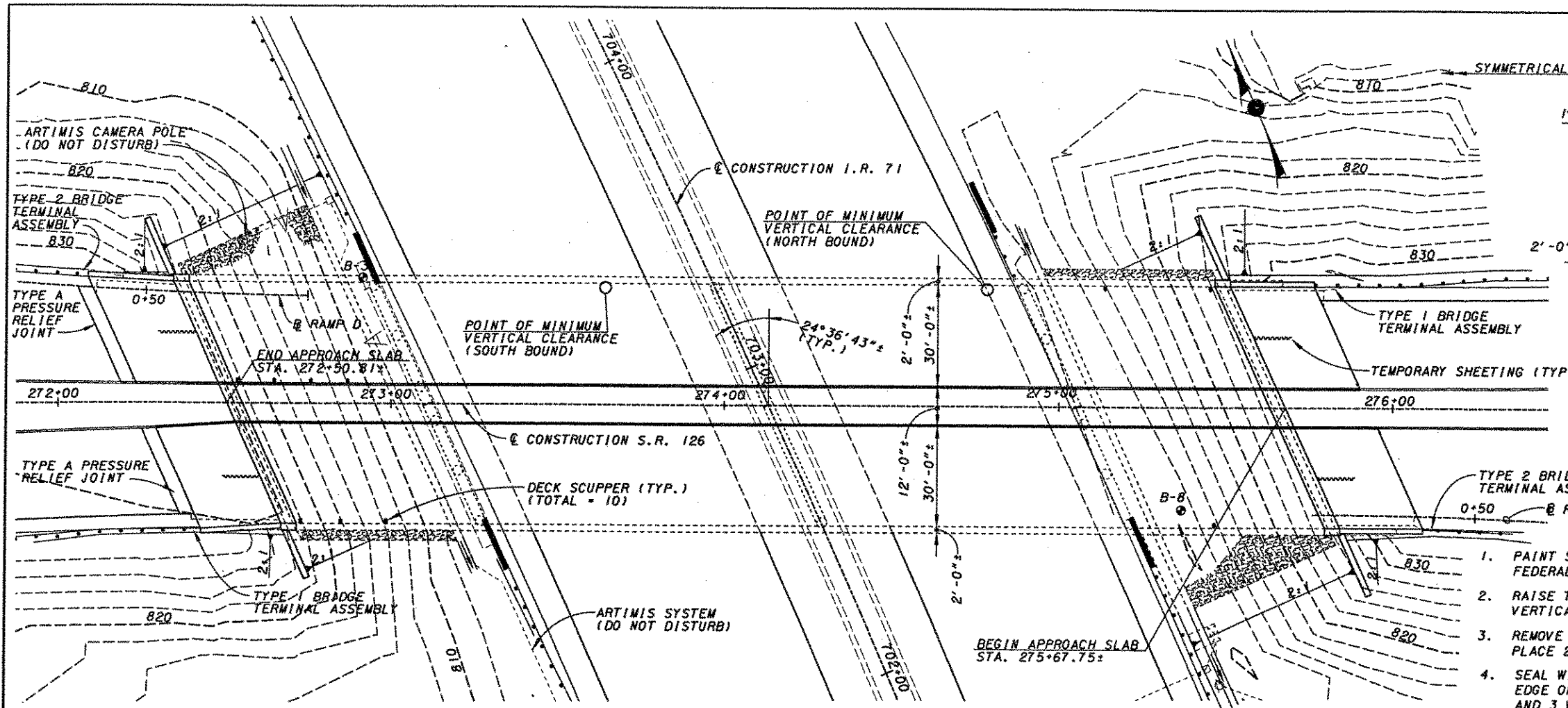
* LOCATED AT END OF WALK ON BRIDGE DECK



1. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT ON STANDARD 180° AND 135° HOOKS.
2. DIMENSIONS ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
3. ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT WHERE RADIUS "R" IS INDICATED.
4. ALL BARS ARE EPOXY COATED.
5. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P501 IS A NO. 5 BAR.



- NOTES:
1. SEE GENERAL NOTES ON SHEET [378].
 2. DISMANTLE EXISTING FENCE TO ALLOW BACKWALL TO BE REMOVED AND RECONSTRUCTED TO GRADE. RE-ERECT FENCE AFTER BACKWALL WORK IS COMPLETE.
 3. CLOSE GAP BETWEEN NEW AND EXISTING FENCE IN A MANNER APPROVED BY THE ENGINEER. (TYP. OF FOUR CORNERS)



EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

• - DENOTES SOIL BORING LOCATION (1963)

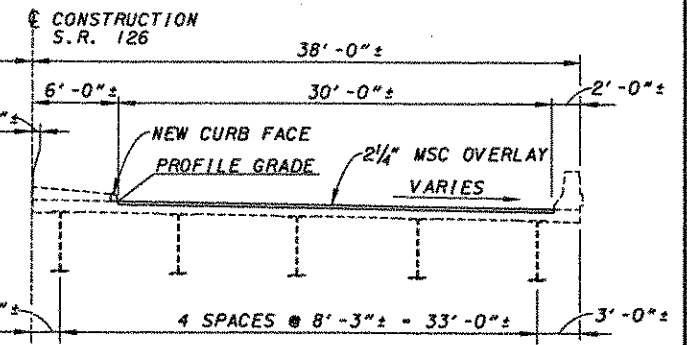
BENCH MARK

BOX NOTCH AT NW CORNER OF CONCRETE BASE OF I-71 NORTH TO COLUMBUS SIGN. EL. = 833.92 STA. 2+27.5 RAMP C, 9.04' RT.

PLAN

JACKING DISTANCE:

REAR ABUTMENT = 2"
PIER 1 = 4 1/8"
PIER 2 = 9 3/4"
PIER 3 = 1'-1 1/8"
FORWARD ABUTMENT = 1'-4 3/4"



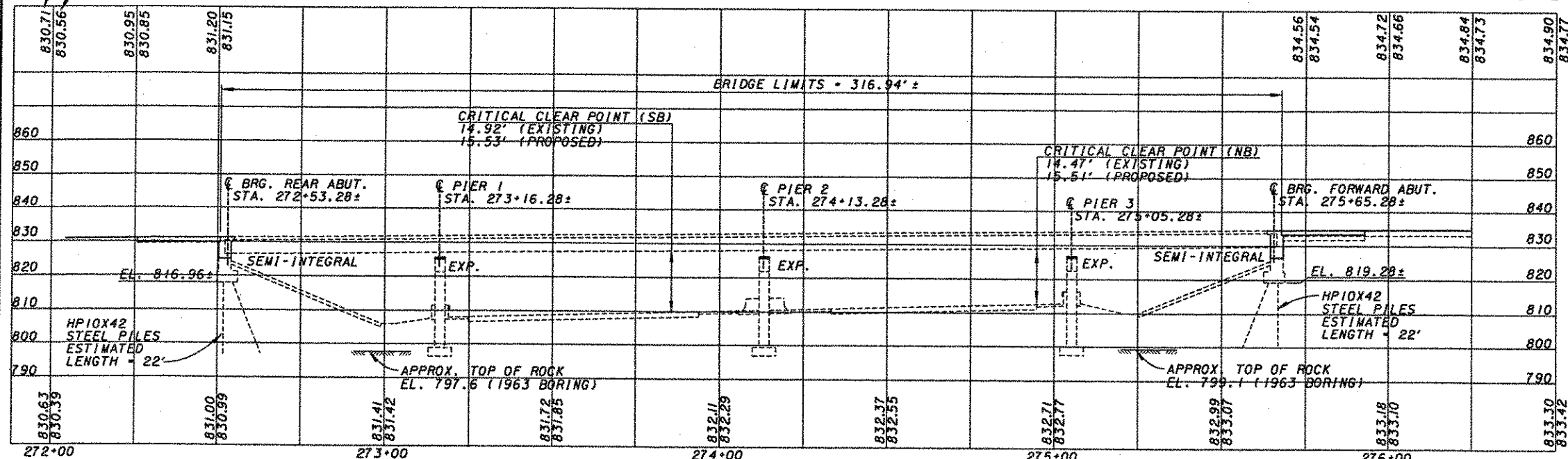
TYPICAL SECTION

TRAFFIC DATA

ADT (2001) = 55,600
ADT (2021) = 72,400
ADTT (2021) = 2,180
SOURCE = ODOT

PROPOSED WORK

1. PAINT STRUCTURAL STEEL WITH SYSTEM OZEU, COLOR SHALL BE FEDERAL COLOR STANDARD 14277 - GREEN.
2. RAISE THE EXISTING SUPERSTRUCTURE TO PROVIDE 15'-6" MINIMUM VERTICAL CLEARANCE. RAISE EXISTING ABUTMENT AND PIER SEATS.
3. REMOVE 1 1/4" THICK LMC OVERLAY AND 1" OF THE EXISTING DECK. PLACE 2 1/4" MIN. THICKNESS MSC OVERLAY.
4. SEAL WING WALLS, RAILING, MEDIAN, CURBS, PIERS, BACK WALLS, EDGE OF DECK, ABUTMENTS AND BARRIER PROTECTION AT PIERS 1 AND 3 WITH EPOXY-URETHANE, COLOR SHALL BE FEDERAL COLOR STANDARD 17778 (LIGHT NEUTRAL).
5. REPLACE ALL EXISTING BEARINGS WITH ELASTOMERIC BEARINGS.
6. CONVERT ABUTMENTS TO SEMI-INTEGRAL DESIGN. CONSTRUCT NEW STRAIGHT WINGWALLS ON NEW FOOTINGS.
7. CONSTRUCT NEW APPROACH SLABS AT PROPOSED GRADE.
8. REPAIR MEDIAN CURB BY REMOVING 6" FROM EACH FACE AND CONSTRUCTING NEW CURB FACE.
9. REMOVE DETERIORATED PORTIONS FROM EXISTING SCUPPERS AND EXTEND THEM 8" BELOW THE BOTTOM FLANGE.
10. PROVIDE TYPE 1 AND TYPE 2 BRIDGE TERMINAL ASSEMBLIES.
11. REMOVE BRUSH WITHIN 10' OF STRUCTURE LIMITS.



PROFILE ALONG PROFILE GRADE

EXISTING STRUCTURE - I.R. 71 UNDER S.R. 126

TYPE: CONTINUOUS STEEL PLATE GIRDER
"PAINTED" WITH REINFORCED CONCRETE DECK, REINFORCED CONCRETE PIERS AND ABUTMENTS.

LENGTH OF SPANS: 63'-0", 97'-0", 92'-0", 60'-0" MEASURED C/C BEARING

ROADWAY WIDTH: TWO ROADWAYS AT 30'-0" AND CENTER MEDIAN AT 12'-0"

DESIGN LOADING: C.F. 400 (57) AASHTO-H20

SKIEW ANGLE: 24°36'43" R.F.

SUPERELEVATION: VARIES

APPROACH SLAB - AS-1-54, 25' LONG

WEARING SURFACE: 1 1/4" LMC CONCRETE OVERLAY

ALIGNMENT: TANGENT

YEAR BUILT: 1967 YEAR REHABBED: 1985

LATITUDE: N 39°13'31"

LONGITUDE: W 84°22'01" SFN: 3107175

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT 1997 CONSTRUCTION AND MATERIAL SPECIFICATIONS:

ITEM 202 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
ITEM 507 - BEARING PILES.
ITEM 508 - FALSEWORK AND FORMS.
ITEM 509 - REINFORCING STEEL.
ITEM 516 - EXPANSION AND CONTRACTION JOINTS, JOINT SEALER AND BEARING DEVICES.
ITEM 518 - DRAINAGE OF STRUCTURES
ITEM 519 - PATCHING CONCRETE STRUCTURES
ITEM 601 - SLOPE AND CHANNEL PROTECTION
ITEM 611 - APPROACH SLABS

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT SUPPLEMENTAL SPECIFICATIONS:

815 DATED 02/22/00 - FIELD PAINTING OF EXISTING STEEL, SYSTEM OZEU.
842 DATED 01/06/99 - CONCRETE FOR STRUCTURES.
848 DATED 06/30/98 - BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING HYDRODEMOLITION
899 DATED 10/21/98 - CONCRETE - GENERAL
864 DATED 07/11/00 - SEALING OF CONCRETE SURFACES
910 DATED 07/11/00 - OZEU STRUCTURAL STEEL PAINT.
954 DATED 09/09/97 - HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) RESIN

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT PROPOSAL NOTE:

PROPOSAL NOTE 522 DATED 5/22/97 - CONCRETE REPAIR BY EPOXY INJECTION.

REFERENCE SHALL BE MADE TO THE FOLLOWING ODOT STANDARD DRAWINGS:

AS-1-81 REVISED 04/20/01
BP-2.3 DATED 07/28/00
BR-1 REVISED 01/06/99
SICD-1-96 DATED 04/20/01
GR-3.1M DATED 10/21/97
GR-3.2M DATED 10/21/97
PCB-91 REVISED 07/06/99

DESIGN SPECIFICATIONS:

NEW WORK FOR THIS STRUCTURE CONFORMS TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996 INCLUDING THE 1997, 1998, AND 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN STRESSES:

CLASS S CONCRETE - COMPRESSIVE STRENGTH 4500 PSI (28 DAY) (PARAPETS, CURBS ON BRIDGES, DECK SLABS AND APPROACH SLABS)
CLASS C CONCRETE - COMPRESSIVE STRENGTH 4000 PSI (28 DAY) (SUBSTRUCTURE)
STRUCTURAL STEEL - ASTM A36-YIELD STRENGTH 36,000 PSI
REINFORCING STEEL - ASTM A615, A616, OR A617. EPOXY COATED GRADE 60 - MINIMUM YIELD STRENGTH 60,000 PSI.

DECK PROTECTION METHOD:

SEALING OF CONCRETE SURFACES
MICRO-SILICA MODIFIED CONCRETE OVERLAY

JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE TO ENABLE PERFORMANCE OF BEARING REPLACEMENT.

THIS ITEM SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS, AND EQUIPMENT TO RAISE OR RE-POSITION ANY EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS AND TO ENABLE REFURBISHMENT OF PROJECT OVERHEAD BRIDGE BEARINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND OPERATION OF AN ADEQUATE JACKING SYSTEM, INCLUDING ANY TEMPORARY OR PERMANENT SUPPORTS NECESSARY TO PERFORM THE WORK DESCRIBED IN THE PROJECT

SUBMITTAL REQUIREMENTS:

THREE (3) SETS OF JACKING PLANS CONSISTING OF AT LEAST THE INFORMATION REQUESTED BY THIS NOTE SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL AT LEAST THIRTY (30) DAYS BEFORE ACTUAL WORK IS SCHEDULED TO BEGIN. THE PLANS SHALL BE PREPARED AND STAMPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER. JACKING SUBMITTALS SHALL INCLUDE AT LEAST THE FOLLOWING:

1. THE SIGNATURE AND NUMBER, OR PROFESSIONAL SEAL, OF THE OHIO REGISTERED PROFESSIONAL ENGINEER WHO PREPARED THE SUBMITTAL.
2. CALCULATIONS AND ANALYSES OF THE STRUCTURE TO DETERMINE AND DEFINE THE ACTUAL LOADING APPLIED AT THE CONTRACTOR'S SELECTED 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 VALVES, 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. A METHOD OF ATTACHMENT TO STRUCTURAL MEMBERS. WELDING TO TENSION AREAS SHALL NOT BE PERMITTED.

ITEM 507, STEEL POINTS, AS PER PLAN:

STEEL PILE POINTS SHALL BE USED TO PROTECT THE TIPS OF THE PROPOSED STEEL "H" PILING. THE STEEL POINTS SHALL BE FURNISHED BY ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BLVD., CLIFTON, NEW JERSEY 07014; INTERNATIONAL CONSTRUCTION EQUIPMENT, INC., 301 WAREHOUSE DRIVE, MATTHEWS, NORTH CAROLINA 28015; DOUGHERTY FOUNDATION PRODUCTS, INC., P.O. BOX 688, FRANKLIN LAKES, NEW JERSEY 07417; VERSA STEEL INC., 3601 NW YEON AVE., P.O. BOX 10559, PORTLAND, OREGON 97210; PILING ACCESSORIES, INC., 3467 GRIBBLE ROAD, MATHEWS, NORTH CAROLINA 28105; OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO DIRECTOR. THE MATERIAL USED FOR THE MANUFACTURING OF PILE POINTS SHALL CONFORM TO ASTM A27/A27M 65/35 (450/240) - CLASS 2 - HEAT TREATED OR AASHTO M103/M103M 65/35 (450/240) - HEAT TREATED. WELDING OF THE PILE POINTS TO THE PILE SHALL BE IN ACCORDANCE WITH AWS D1.5 OR THE MANUFACTURER'S WRITTEN WELDING PROCEDURE SUPPLIED THE ENGINEER BEFORE THE WELDING IS PERFORMED. A NOTARIZED COPY OF THE MILL TEST REPORT SHALL BE SUBMITTED TO THE ENGINEER.

PILES TO BEDROCK:

PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES WITH A MINIMUM RESISTANCE OF 20 BLOWS PER INCH OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECIEVED AT LEAST 20 BLOWS. THE CONTRACTOR IS RESPONSIBLE FOR SELECTING THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE ULTIMATE BEARING VALUE IS 94 TONS PER PILE FOR THE HP10x42 ABUTMENT PILES.

ABUTMENT PILES:

22 PILES 22 FEET LONG, ESTIMATED LENGTH
22 PILES OF ORDER LENGTH 22 FEET LONG
11 SPLICES

MECHANICAL CONNECTORS:

AN APPROVED MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER'S RECOMMENDED PROCEDURES. CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATION. COATINGS WHICH HAVE BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY MAY BE REPAIRED AS DIRECTED BY THE ENGINEER OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEET THE SPECIFICATIONS. MECHANICAL CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM WITH ITEM 509.

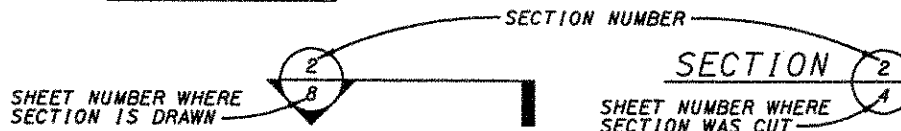
EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM THE 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 CWS SECTIONS 102.05, 105.02, AND 513.02. 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.

ABBREVIATION LIST

R.C. - REINFORCED CONCRETE
CONC. - CONCRETE
E.F. - EACH FACE
N.F. - NEAR FACE
F.F. - FAR FACE
C.P.P. - CORRUGATED PLASTIC PIPE
N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE
SER. - SERIES BARS
BTM. - BOTTOM
P.E.J.F. - PREFORMED EXPANSION JOINT FILLER
EL. - ELEVATION
TYP. - TYPICAL
STD. - STANDARD
DWG. - DRAWING

SECTION CONVENTION



JACKING PLAN

THE CONTRACTOR'S PROPOSED PLAN OF STRUCTURE JACKING PERFORMANCE SHALL BE IN CONFORMANCE WITH THE FOLLOWING ITEMS:
1. THE ENTIRE SYSTEM INCLUDING JACKS SHALL PROVIDE 20% MORE CAPACITY THAN REQUIRED BASED ON CALCULATED LOADS.
2. FOR LIFTS GREATER THAN 1 INCH, JACKS SHALL HAVE LOCKING NUTS TO POSITIVELY LOCK AND SUPPORT THE STRUCTURE DURING THE LIFT.
3. JACKS SHALL HAVE A SWIVEL LOAD CAP, A DOWED PISTON HEAD, OR SOME OTHER DEVICE TO PROTECT AGAINST THE EFFECTS OF SIDE LOAD ON THE JACK.
4. 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.
5. SINGLE ACTING RAMS WITH NO OVER-TRAVEL PROTECTION SYSTEM SHALL NOT BE USED.
6. 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.
7. AT A MINIMUM, A JACKING OPERATION SHALL LIFT ALL BEAMS AT ANY ONE ABUTMENT OR PIER SIMULTANEOUSLY. THE ONLY EXCEPTION IS THE SITUATION WHERE ALL THREE OF THE FOLLOWING ELEMENTS APPLY: THE WORK INVOLVES REPLACING OR REHABILITATING INDIVIDUAL BEARINGS, NO PERMANENT SHIMMING IS REQUIRED, AND THE HEIGHT OF THE LIFT SHALL NOT EXCEED 1/4 INCH. MAXIMUM DIFFERENTIAL JACKING HEIGHT BETWEEN ANY ADJACENT ABUTMENTS OR PIERS SHALL BE 1 INCH OR LESS. THIS HEIGHT MAY BE MODIFIED IF CALCULATIONS, BY THE CONTRACTOR'S OHIO REGISTERED PROFESSIONAL ENGINEER, SHOW THE SUPERSTRUCTURE COMPONENTS WILL NOT BE TEMPORARILY STRESSED BEYOND ALLOWABLE STRESSES FOR THOSE COMPONENTS AND THAT NO PERMANENT STRESSES WILL BE INDUCED IN THE COMPONENTS AFTER THEY OBTAIN THEIR FINAL POSITION.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER 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. ANY BEAMS THAT SEPARATE FROM THE DECK SHALL BE EPOXY INJECTED FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH ODOT'S PROPOSAL NOTE "CONCRETE REPAIR BY EPOXY INJECTION". COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS SHALL BE BORNE BY THE CONTRACTOR.

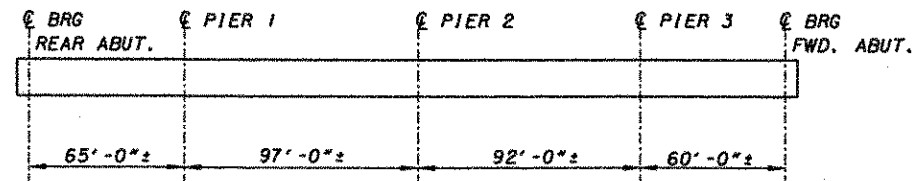
THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT THE BRIDGE BEARINGS ARE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUITABLE MEANS OF REPAIR, SUBJECT TO THE ENGINEER'S APPROVAL, WILL BE REQUIRED AT THE CONTRACTOR'S EXPENSE.

CLEANING AND RE-USING PLAN-DESIGNATED EXISITNG REINFORCING STEEL.

PAYMENT FOR WORK TO CLEAN AND RE-USE PLAN DESIGNATED EXISITNG REINFORCING STEEL SHALL BE INCIDENTAL TO THE SUBJECT CONCRETE STUCTURE WORK.

ITEM 509 REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:

ANY EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION SHALL BE REPLACED WITH NEW REINFORCING STEEL. ANY EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS SHALL BE REPLACED WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT THE CONTRACTOR'S COST. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. THE NUMBER OF POUNDS OF REINFORCING STEEL PAID FOR UNDER FORCE ACCOUNT SHALL BE THE ACTUAL POUNDS OF REPLACEMENT REINFORCING STEEL SPECIFIED BY THE ENGINEER DUE TO CORROSION AND SHALL INCLUDE PLACEMENT, DOWELING, BENDING, SUPPORTING, TIE WIRES AND TYING OF THAT SPECIFIED REINFORCING STEEL.



	REAR ABUT.	PIER 1	PIER 2	PIER 3	FWD. ABUT.
EXISTING DEAD LOAD (PER BEAM)	34 KIPS	155 KIPS	173 KIPS	143 KIPS	34 KIPS
H520 LL+IMP	62 KIPS	79 KIPS	84 KIPS	77 KIPS	61 KIPS
ADDITIONAL 20%	20 KIPS	47 KIPS	52 KIPS	44 KIPS	19 KIPS
MINIMUM JACKING LOAD	116 KIPS	281 KIPS	309 KIPS	264 KIPS	114 KIPS

JACKING LOADS

NOTE:
BRIDGE TO BE OPEN TO TRAFFIC DURING JACKING.

ITEM 516 SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL
INSTALL 3 FOOT WIDE STRIPS, 3/32" THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1/4" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST 1 FOOT IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM	METHOD REQUIREMENT
THICKNESS, INCHES	D 751	0.094" +/- .01
BREAKING STRENGTH, GRAB WXF, LBS, MINIMUM	D 751	700 X 700
ADHESIVE 1" STRIP, 2" MINIMUM, LBS MINIMUM	D 751	9
BURST STRENGTH (MULLEN) PSI, MINIMUM	D 751	1400

UTILITY LINES: ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY. THE CONTRACTOR AND UTILITY ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM 611 REINFORCED CONCRETE APPROACH SLAB:
CONCRETE FOR THIS ITEM SHALL CLASS S, SS 899

SEAL PIERS, PIER CAPS, WINGWALLS, ABUTMENTS, RAILING, AND DECK EDGES WITH EPOXY-URETHANE

THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO SEAL THE DESIGNATED EXPOSED CONCRETE SURFACE AREAS IN THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 864.

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, 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.

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. 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 UPON 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.

DECK AND PARAPET CONCRETE REMOVAL:

ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

FIELD PAINTING OF EXISTING STRUCTURAL STEEL:

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 815 DATED FEB. 22, 2000. ALL EXPOSED SURFACES OF BEAMS, CROSS FRAMES, SCUPPERS, DRAINS, AND BEARINGS SHALL BE PAINTED. FINISH COAT COLOR SHALL BE FEDERAL COLOR STANDARD 14277 (GREEN). ALL PAINTING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT STAGING AND THE MAINTENANCE OF TRAFFIC PLANS.

ASBESTOS ABATEMENT

THE CONTRACTOR SHALL CONDUCT ASBESTOS INSPECTIONS OF ALL BRIDGES SUBJECT TO RENOVATION OR DEMOLITION AS PER CHAPTER 3745-20 OF THE OHIO ADMINISTRATIVE CODE (OAC) "ASBESTOS EMISSIONS CONTROL FROM RENOVATION/DEMOLITION AND WASTE DISPOSAL OPERATION" MAY 29, 1990 UTILIZING A CERTIFIED OHIO ASBESTOS HAZARD EVALUATION SPECIALIST. SHOULD SUSPECT ASBESTOS CONTAINING MATERIAL (ACM) BE ENCOUNTERED, PERFORM BULK SAMPLING AND ANALYSIS. PREPARE A LETTER REPORT (1-2 PAGES) INCLUDING A BRIEF DISCUSSION OF THE INSPECTION AND SAMPLING METHODOLOGY AND MAP INDICATING THE BRIDGE LOCATION AND SAMPLING LOCATIONS, AND ANALYTICAL TEST RESULTS.

THE CONTRACTOR SHALL COMPLETE AN OEPA NOTIFICATION OF DEMOLITION AND RENOVATION FORM AND SUBMIT THIS FORM TO THE OHIO EPA AT LEAST 10 WORKING DAYS BEFORE OPERATIONS BEGIN.

AS THESE INSPECTION REPORTS AND NOTIFICATION FORMS ARE COMPLETED, COPIES SHALL BE FORWARD TO ODOT'S ON SITE PROJECT ENGINEER.

SHOULD ASBESTOS CONTAINING MATERIAL BE ENCOUNTERED, ALL SUSPECT MATERIALS SHALL BE REMOVED AND PROPERLY DESPOSED OF BY A CERTIFIED ASBESTOS REMOVAL CONTRACTOR IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (30 CFR PART 61, SUBPART M) SHALL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON SHALL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

ALL ASSOCIATED COSTS OF ASBESTOS MATERIALS TO BE REMOVED AND PROPERLY DISPOSED OF, WILL BE PAID UNDER 'THIRD PARTY BILLING' PROVISIONS OF ODOT CHANGE ORDER POLICY 512-004(P) APPENDIX D.

PLACE 2 1/4" THICK MSC OVERLAY.

THIS WORK SHALL CONSIST OF FURNISHING ALL NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REMOVE 1 1/4" THICK LMC OVERLAY AND 1" THICKNESS OF THE EXISTING DECK USING HYDRO-DEMOLITION AND PLACE NEW 2 1/4" THICK MSC OVERLAY. THE SPECIFIED WORK SHALL BE PERFORMED ACCORDING TO THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION SUPPLEMENTAL SPECIFICATION 848.

ITEM 203 - EMBANKMENT:

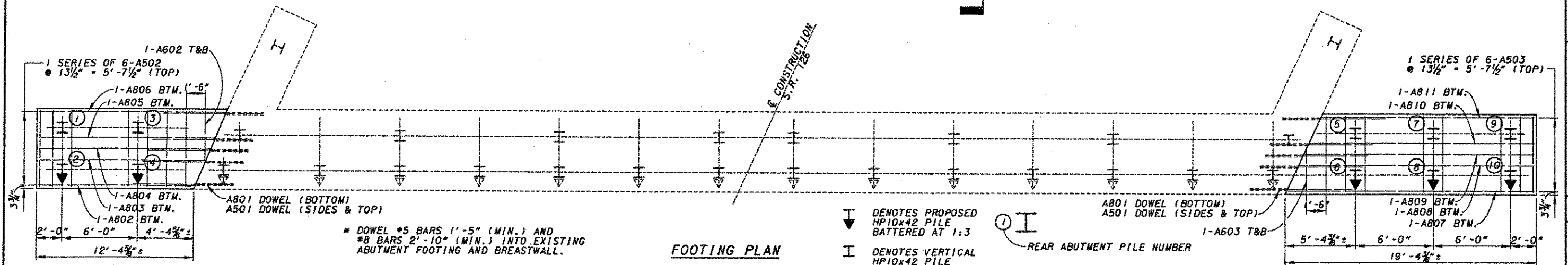
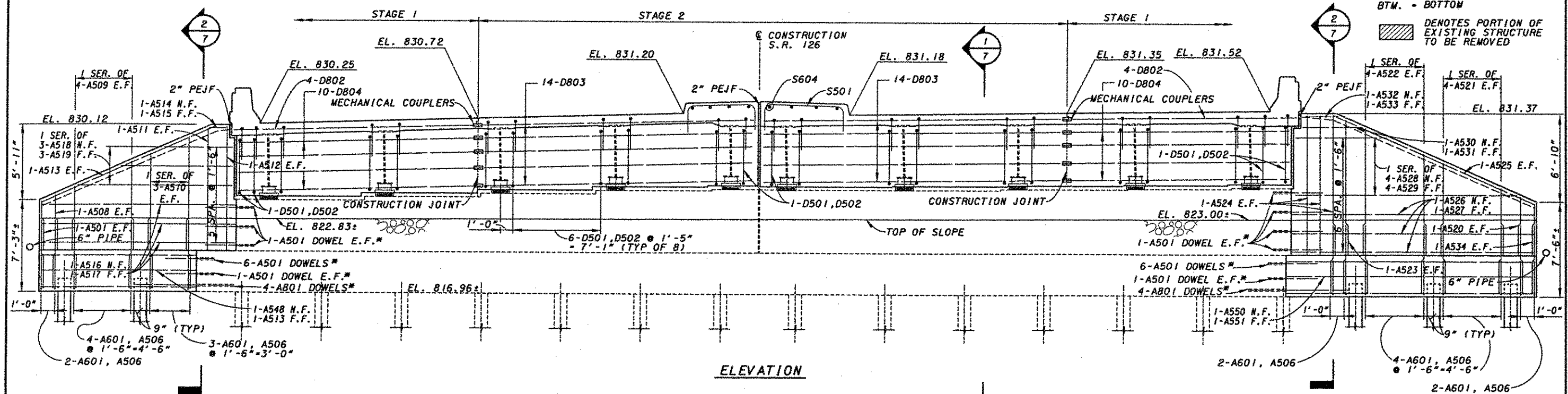
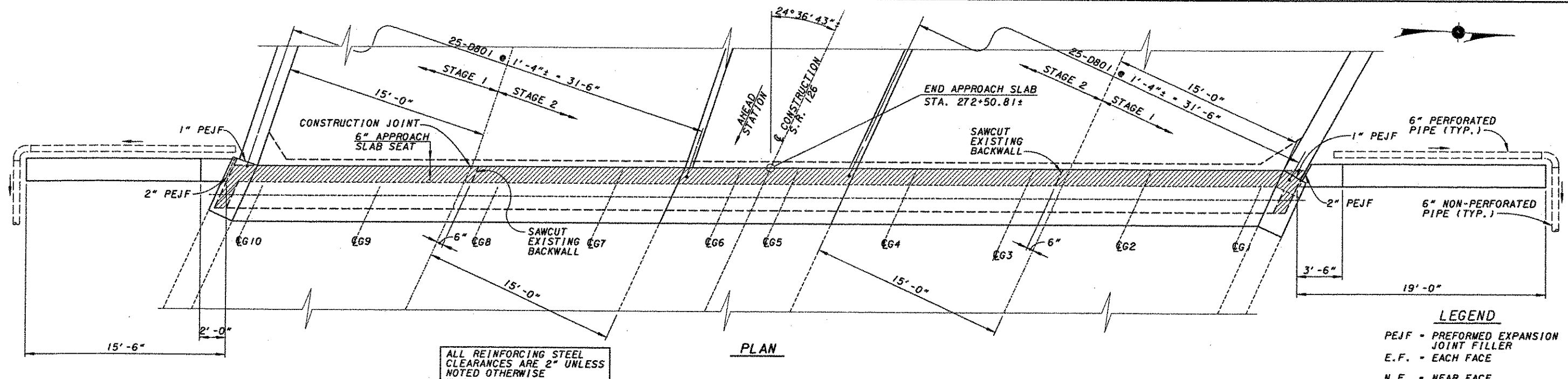
ALL FILL MATERIAL FOR FILLING THE EXCAVATION VOID CREATED BY REMOVAL OF THE EXISTING BACKWALL AND APPROACH SLAB, SHALL BE 203 GRANULAR MATERIAL PLACED IN LIFTS NOT TO EXCEED A THICKNESS OF SIX INCHES.

MAINTENANCE OF TRAFFIC:

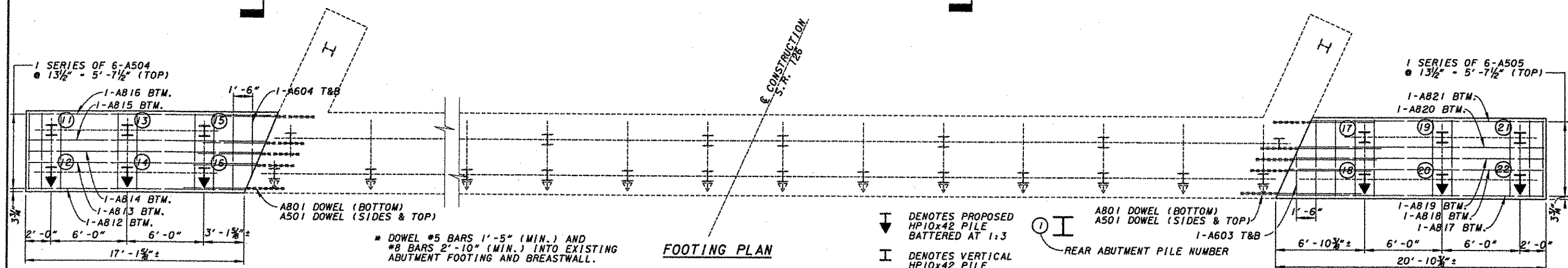
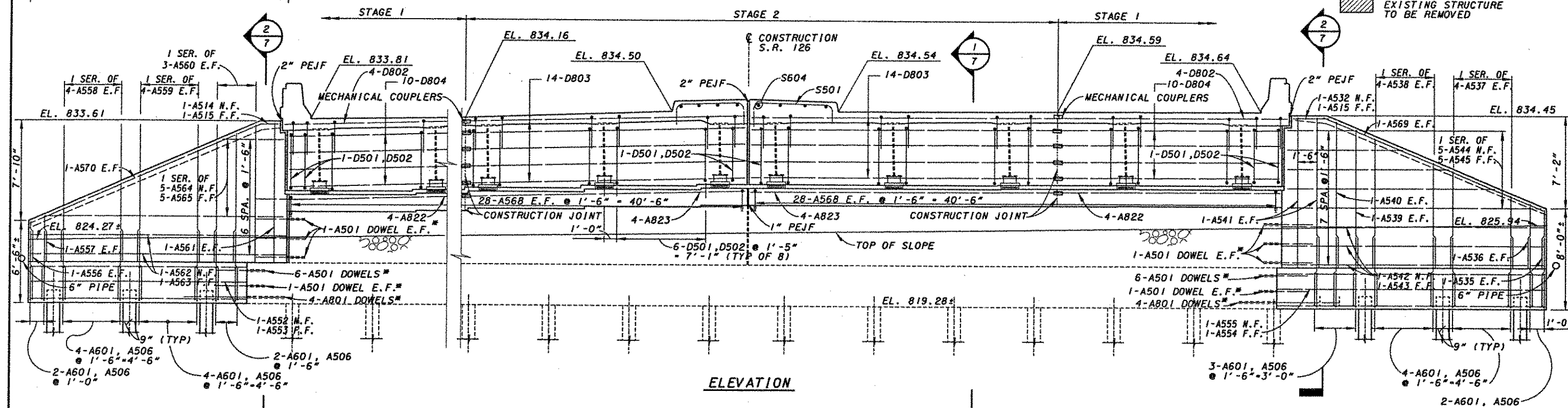
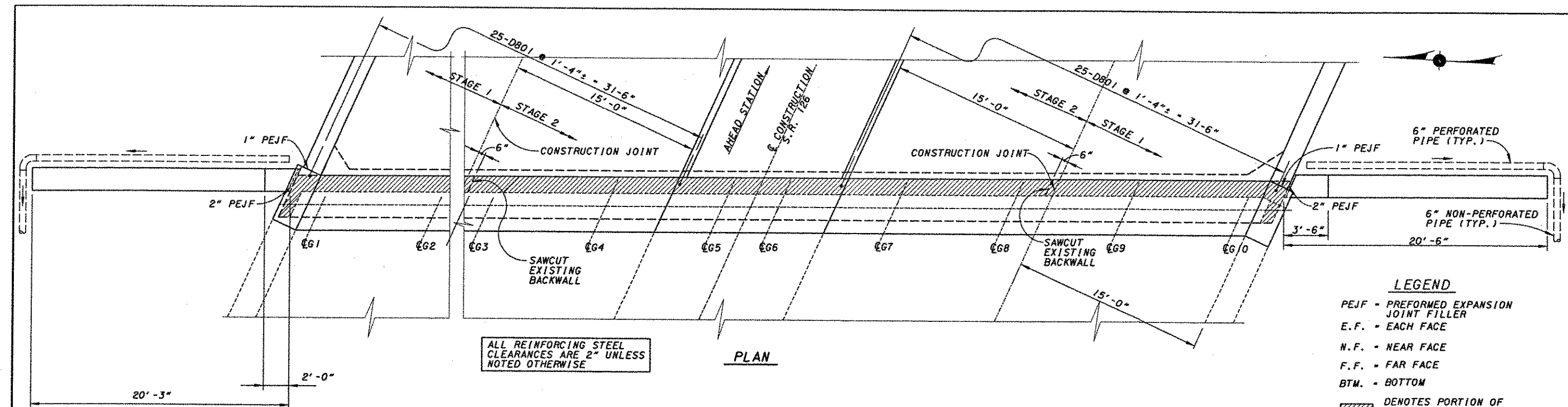
REFERENCE SHALL BE MADE TO THE PROJECT MAINTENANCE OF TRAFFIC PLANS AND NOTES. ALL WORK TO BE DONE IN STAGES CONSISTANT WITH THE MAINTENANCE OF TRAFFIC REQUIREMENTS.

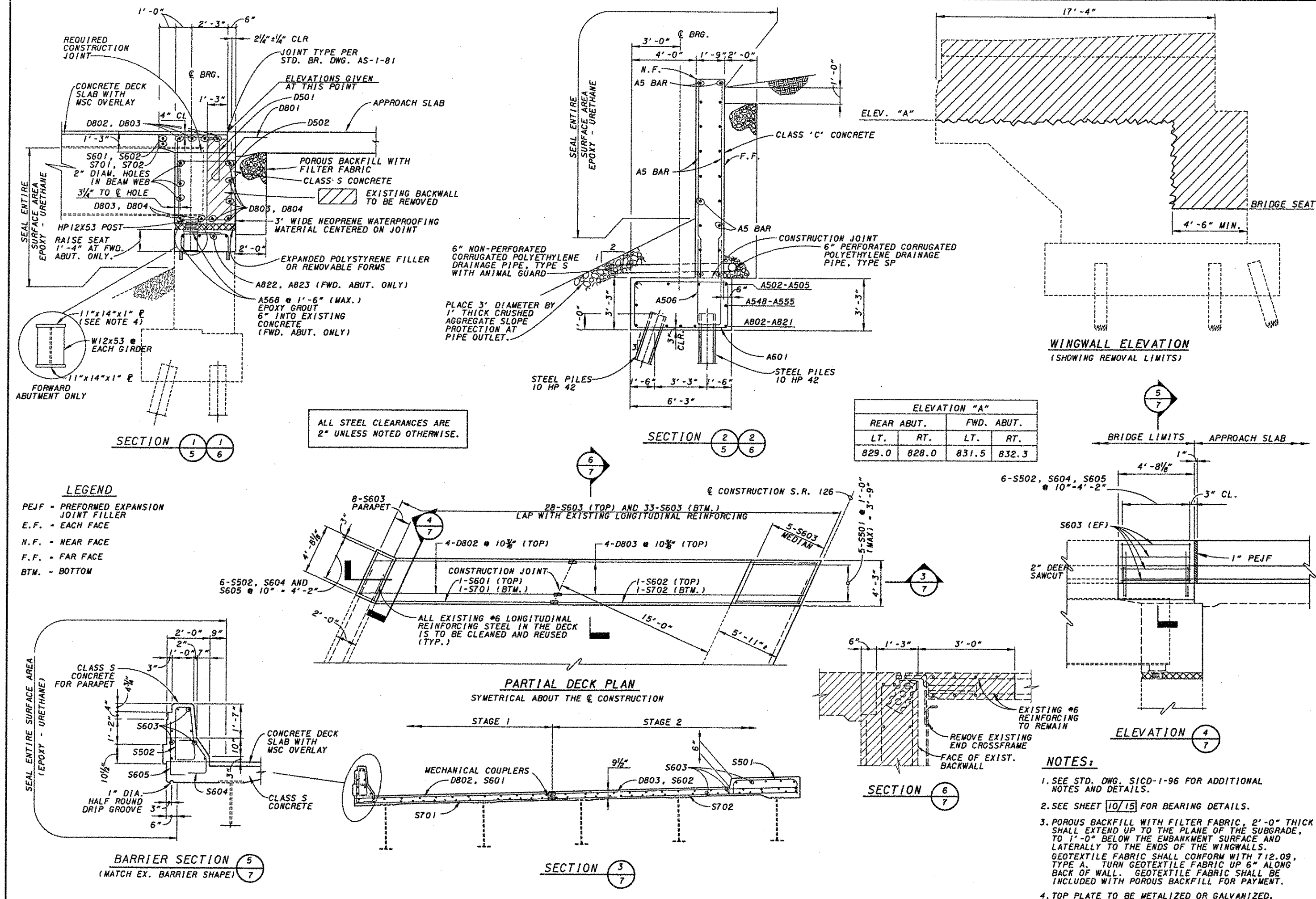


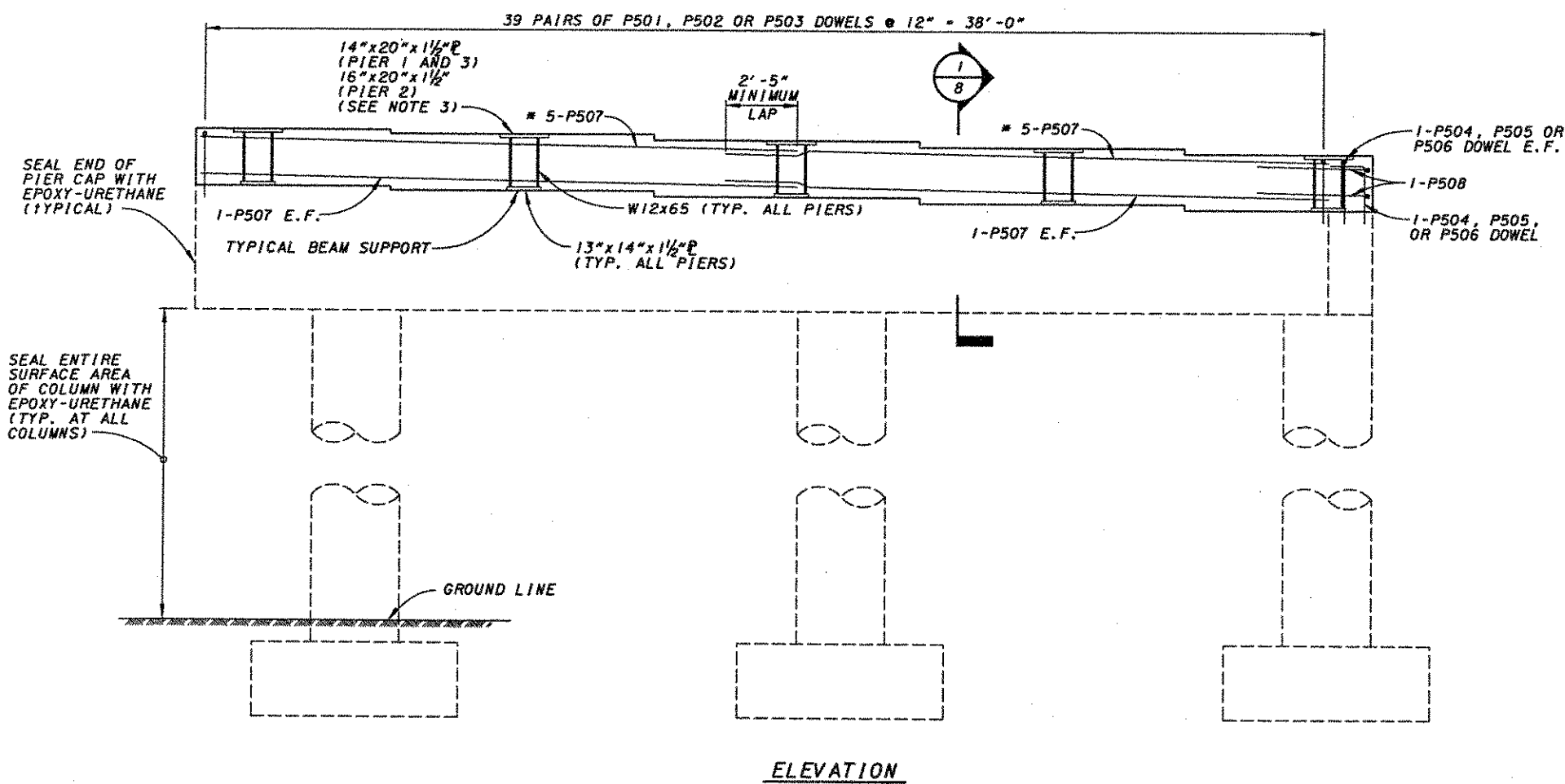
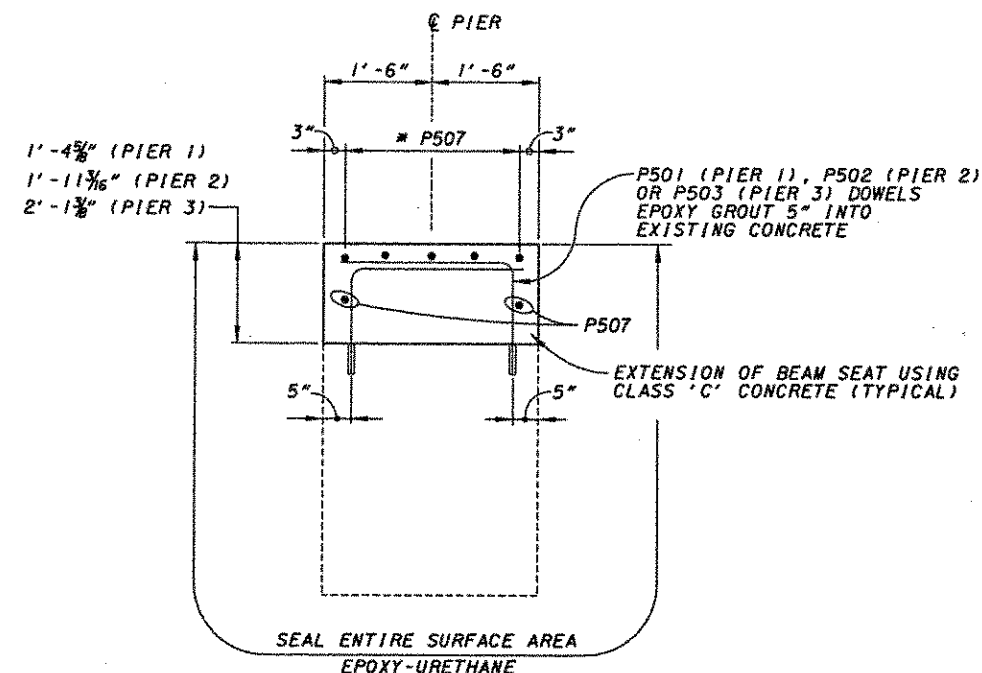
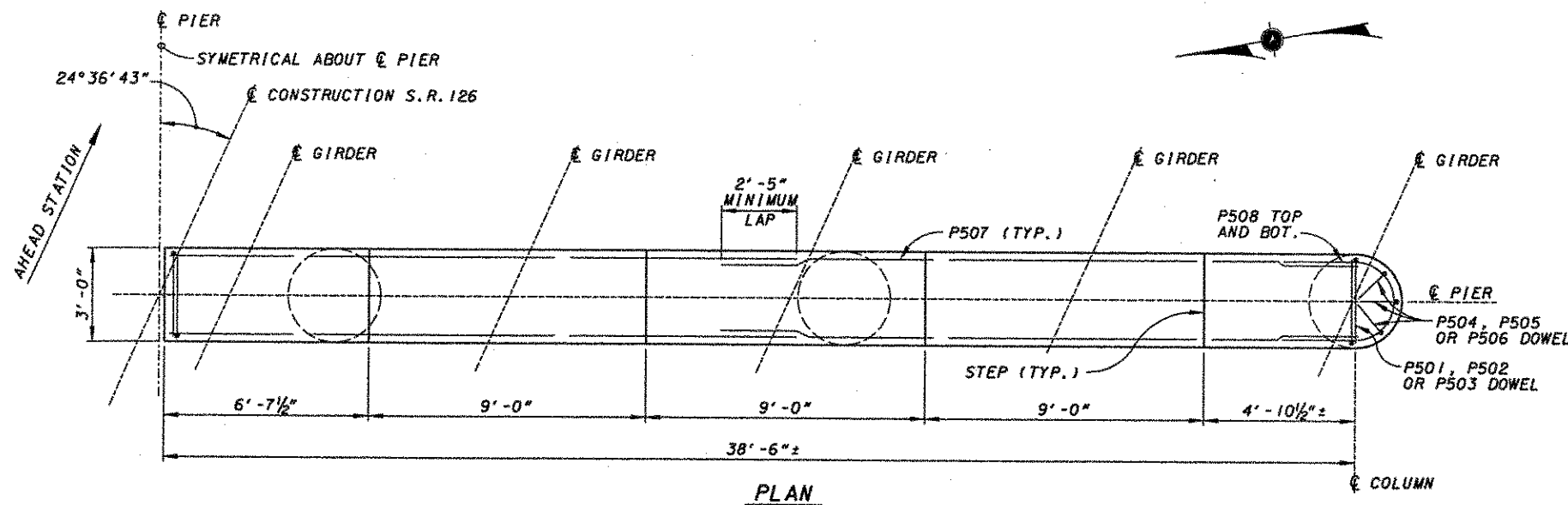
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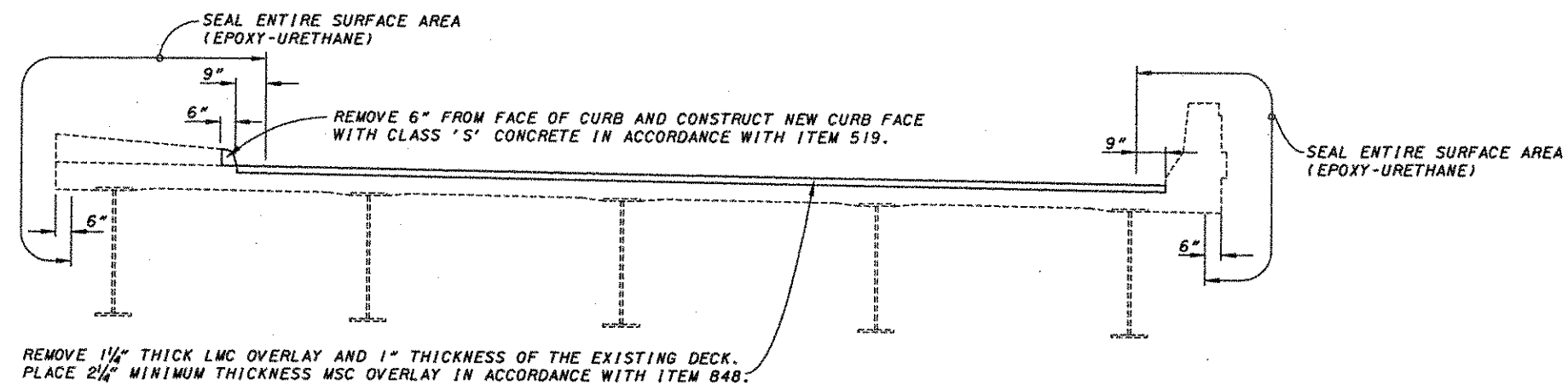
* CUT P507 BARS IN FIELD THAT
CONFLICT WITH BEAM SUPPORT.

LEGEND:

E.F. - EACH FACE
BOT. - BOTTOM

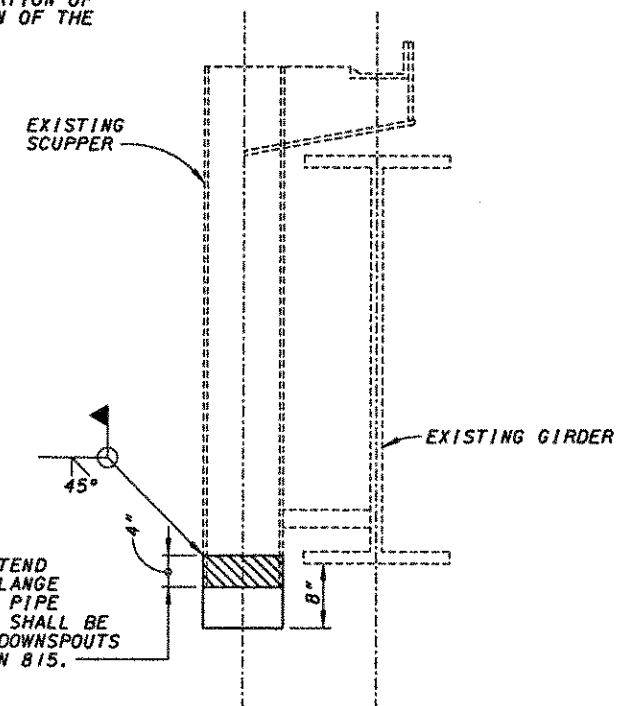
NOTES:

- SEE SHEET 15/15 FOR REINFORCING SCHEDULE.
- SEE SHEET 12/15 FOR BEARING DETAILS.
- TOP PLATE TO BE METALIZED OR GALVANIZED.



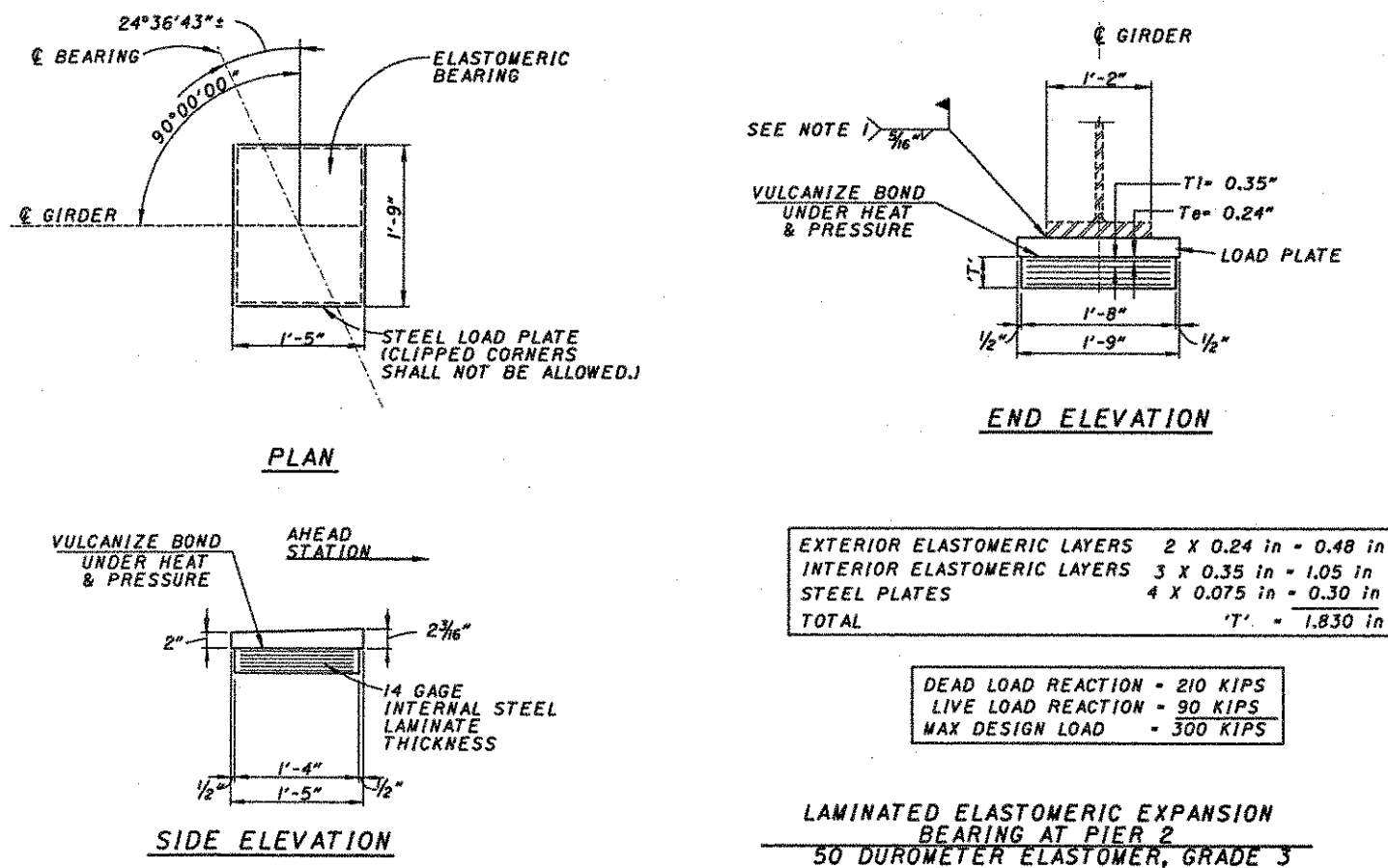
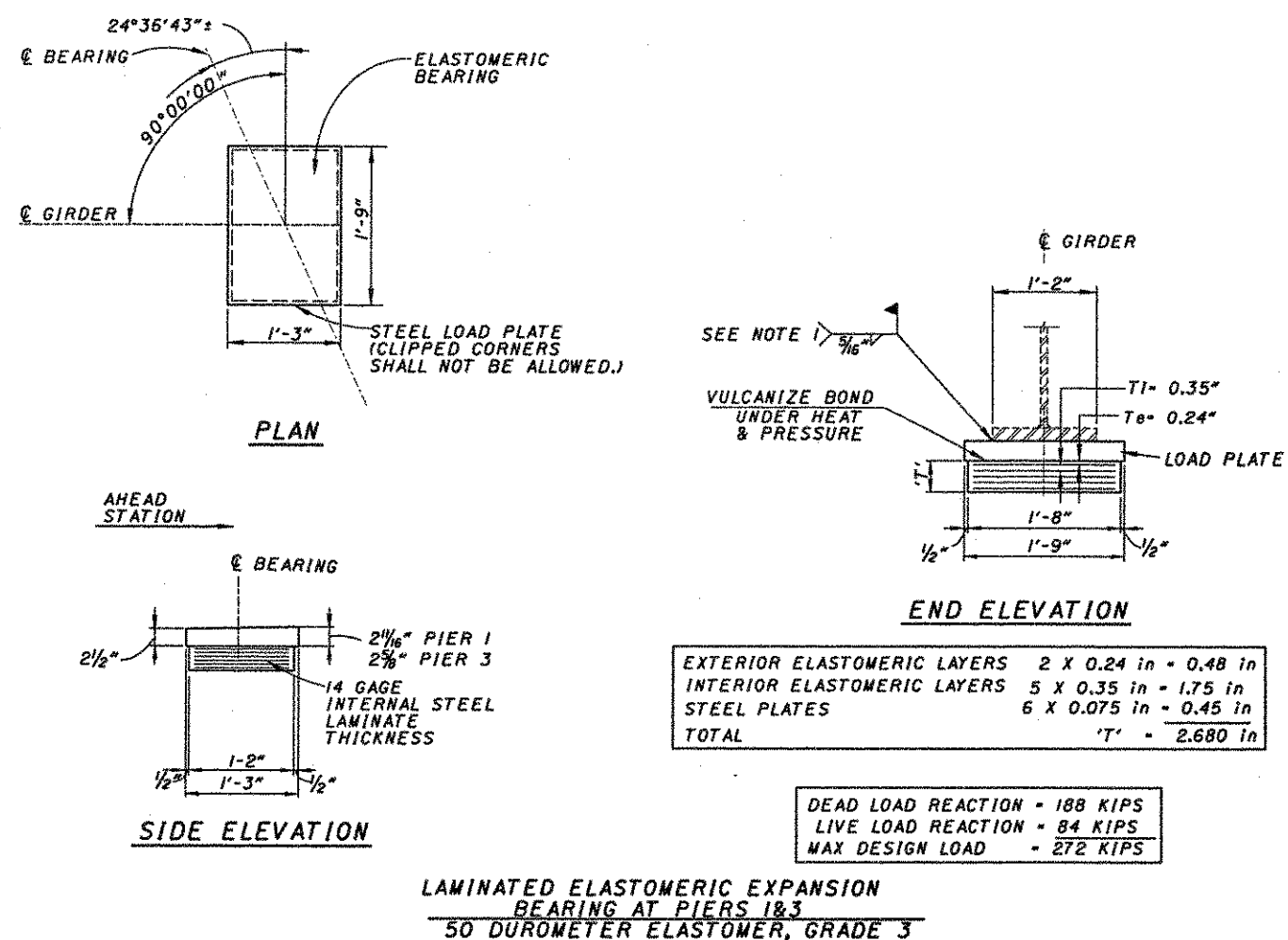
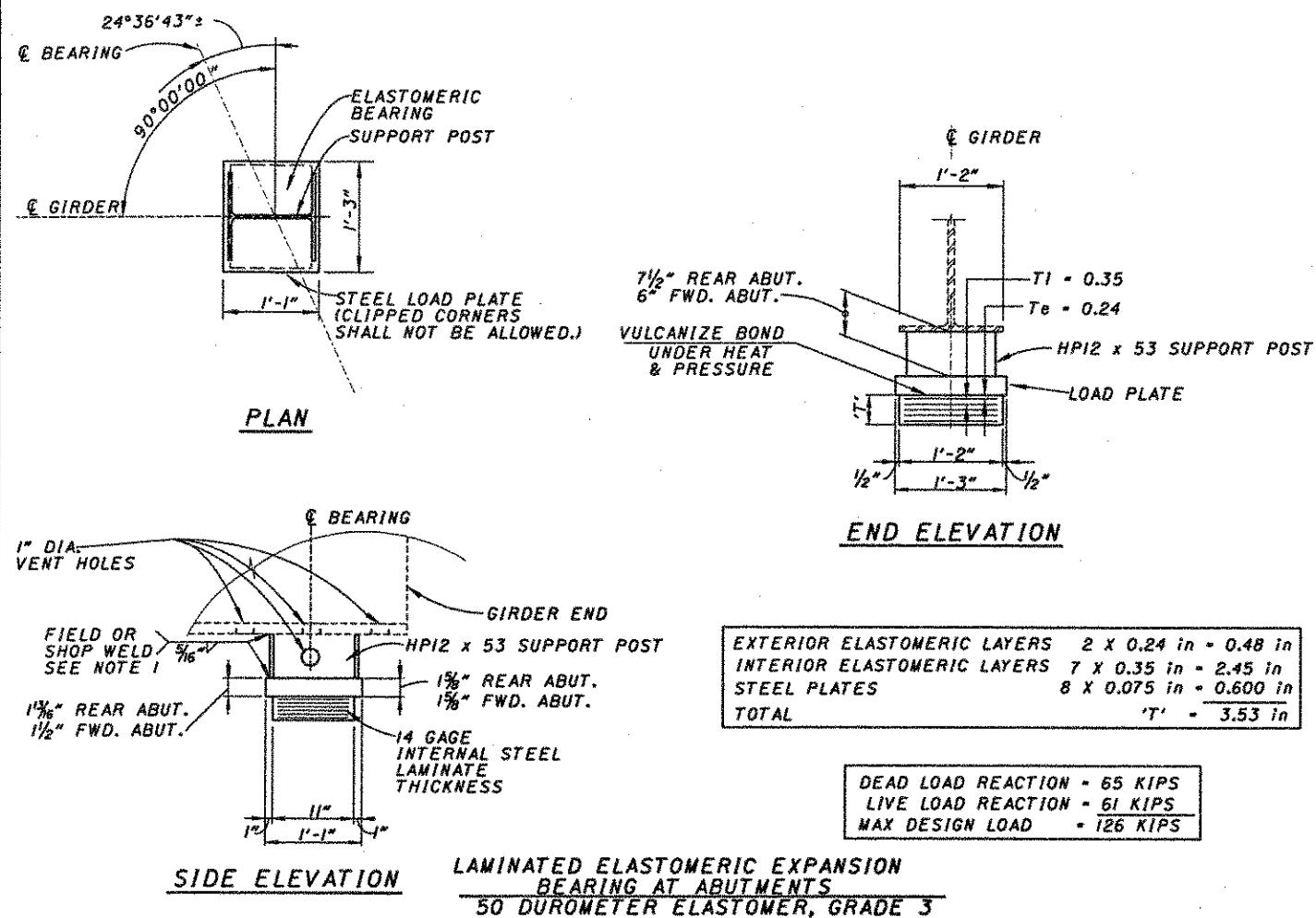
DECK SECTION

EXTEND SCUPPERS SO THAT THE OUTLET IS 8" BELOW THE BOTTOM FLANGE.
 FURNISH AND INSTALL MATERIALS NECESSARY TO EXTEND SCUPPERS TO AN ELEVATION WHERE THE SCUPPER OUTLET IS LOCATED 8 INCHES BELOW THE BOTTOM FLANGE OF THE ADJACENT BRIDGE GIRDER. REMOVE ANY PORTION OF EXISTING SCUPPER THAT IS DETERIORATED PRIOR TO INSTALLATION OF THE NEW EXTENSION.



REMOVE MINIMUM OF 4" OF EXISTING SCUPPER. EXTEND SCUPPER TO 8" BELOW THE BOTTOM OF THE GIRDER FLANGE WITH THE SAME SIZE PIPE AS THE EXISTING PIPE. PIPE SHALL CONFORM TO ODOT 748.06. EXTENSION PIECE SHALL BE FURNISHED WITH ONE END BEVELLED FOR WELDING. DOWNSPOUTS SHALL BE PAINTED PER SUPPLEMENTAL SPECIFICATION 815.

SCUPPER EXTENSION DETAIL



BEARING NOTES:

1. WELDING OF THE LOAD PLATE TO THE BEAM OR GIRDER FLANGE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMERIC BONDED SURFACE DOES NOT EXCEED 300°F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.

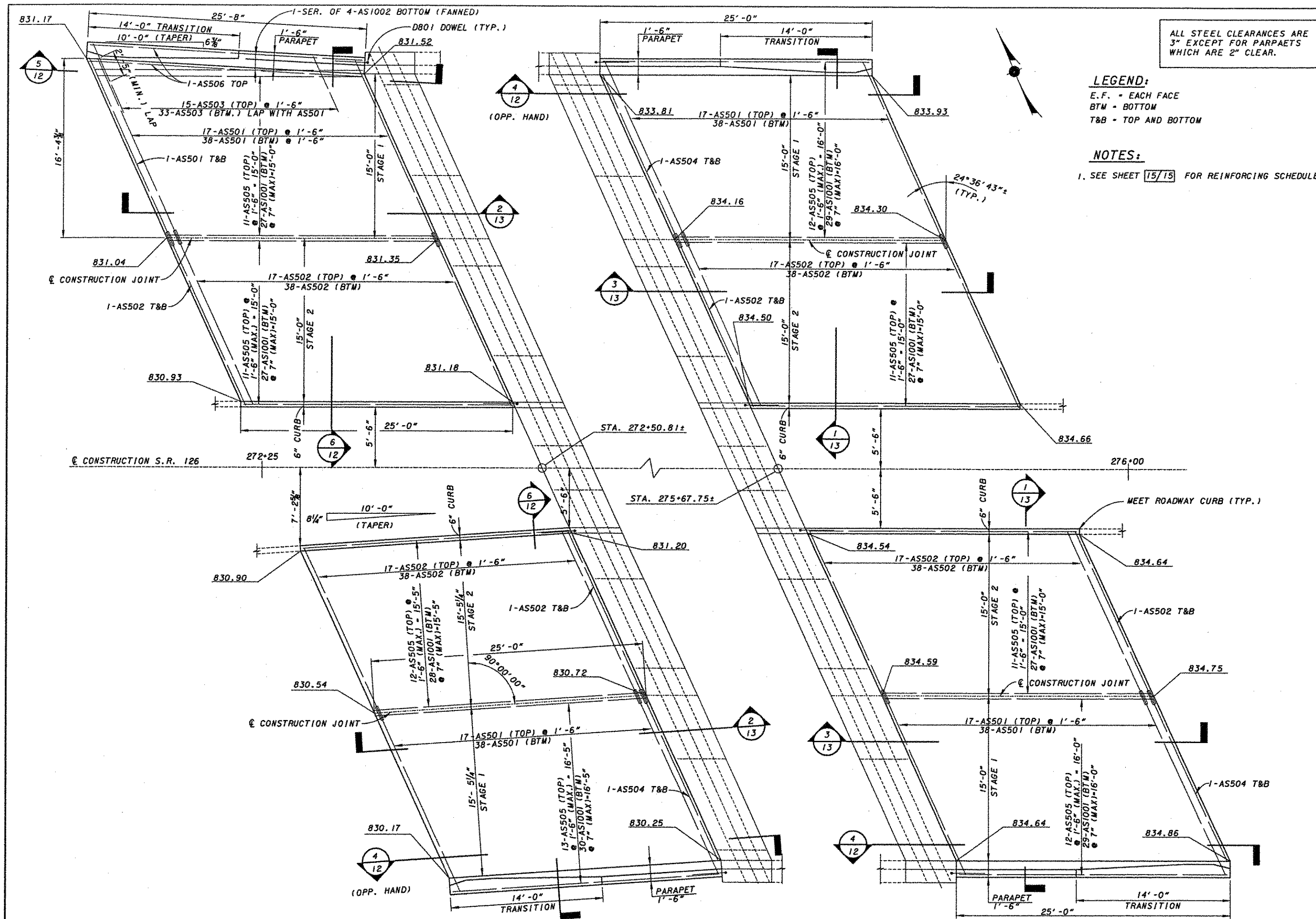
STEEL FOR BEARING LOAD PLATES TO BE A709-36 (A36)

THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

IF THE STEEL IS ERECTED AT AN AMBIENT TEMPERATURE SHEAR DEFLECTION EXCEEDS ONE SIXTH OF THE BEARING HEIGHT AT 60°F ±9°F, THE GIRDER SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60°F.

STEEL PORTIONS OF ELASTOMERIC BEARINGS SHALL BE PAINTED PER CMS SPECIFICATION ITEM 815- PAINTING, SYSTEM OZEU. STEEL PORTIONS OF BEARING SHALL RECEIVE A SHOP PRIME COAT PRIOR TO INSTALLATION. FURTHERMORE THE EXPOSED STEEL SURFACES OF THE BEARINGS SHALL RECEIVE TWO ADDITIONAL FIELD COATS. THE COLOR OF THE TOP COAT SHALL MATCH THE STEEL GIRDERS.

2. ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECT TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 (METHOD A) OF SECTION 14, BEARINGS, DIVISION I, DESIGN.
3. BEARINGS DESIGN LOAD: FOR HS-25 LIVE LOAD AND A 60 PSF FUTURE WEARING SURFACE.



ALL STEEL CLEARANCES ARE 3" EXCEPT FOR PARAPETS WHICH ARE 2" CLEAR.

LEGEND:
E.F. = EACH FACE
BTM = BOTTOM
T&B = TOP AND BOTTOM

NOTES:
1. SEE SHEET 15/15 FOR REINFORCING SCHEDULE.

DESIGN AGENCY

KZ DESIGN

DESIGNED BY

SJA

CHECKED BY

WBS

DATE

05/29/01

REVIEWED BY

DGK

STRUCTURE FILE NUMBER

3107175

DRAWN BY

JDG

REVISION

APPROACH SLAB

BRIDGE NO. HAM-126-1964

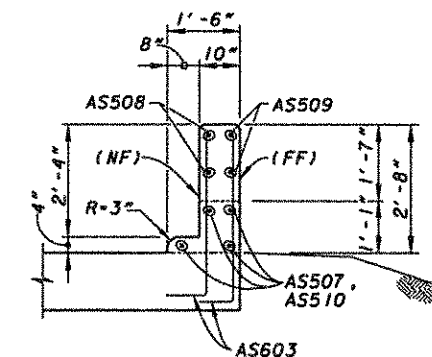
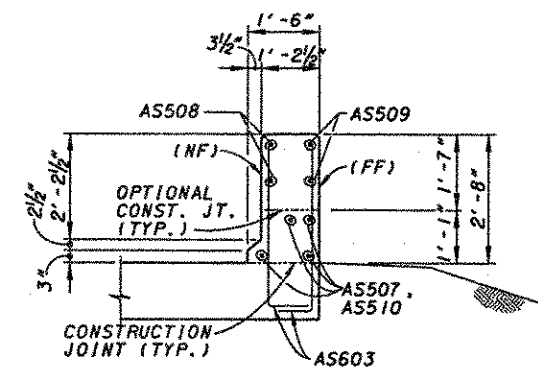
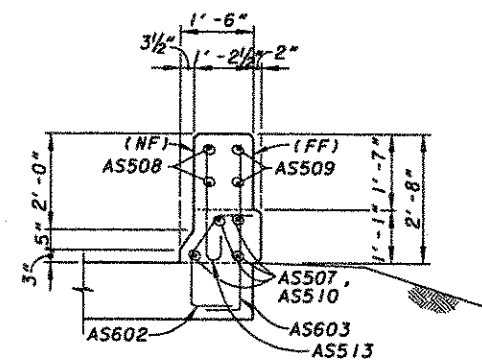
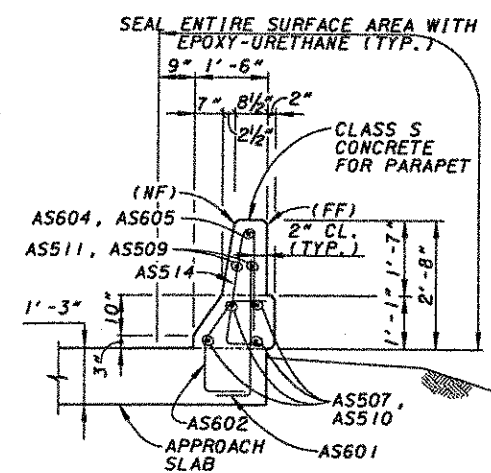
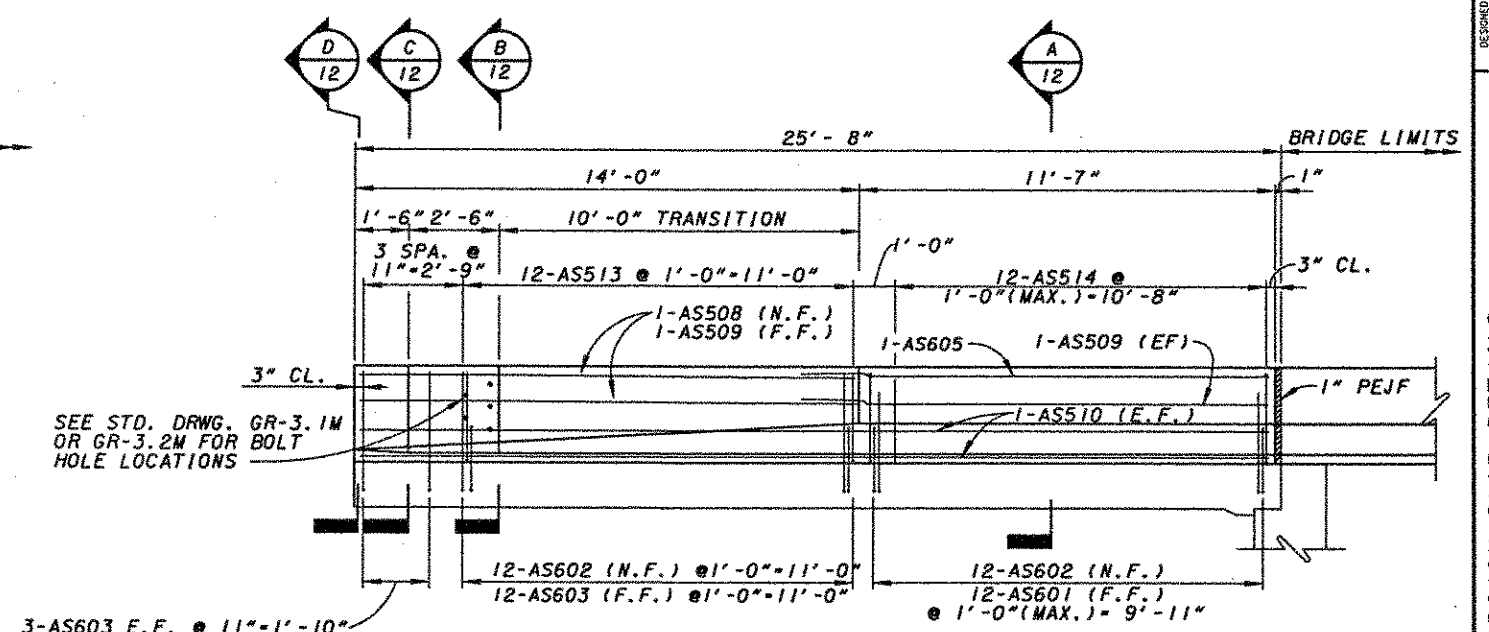
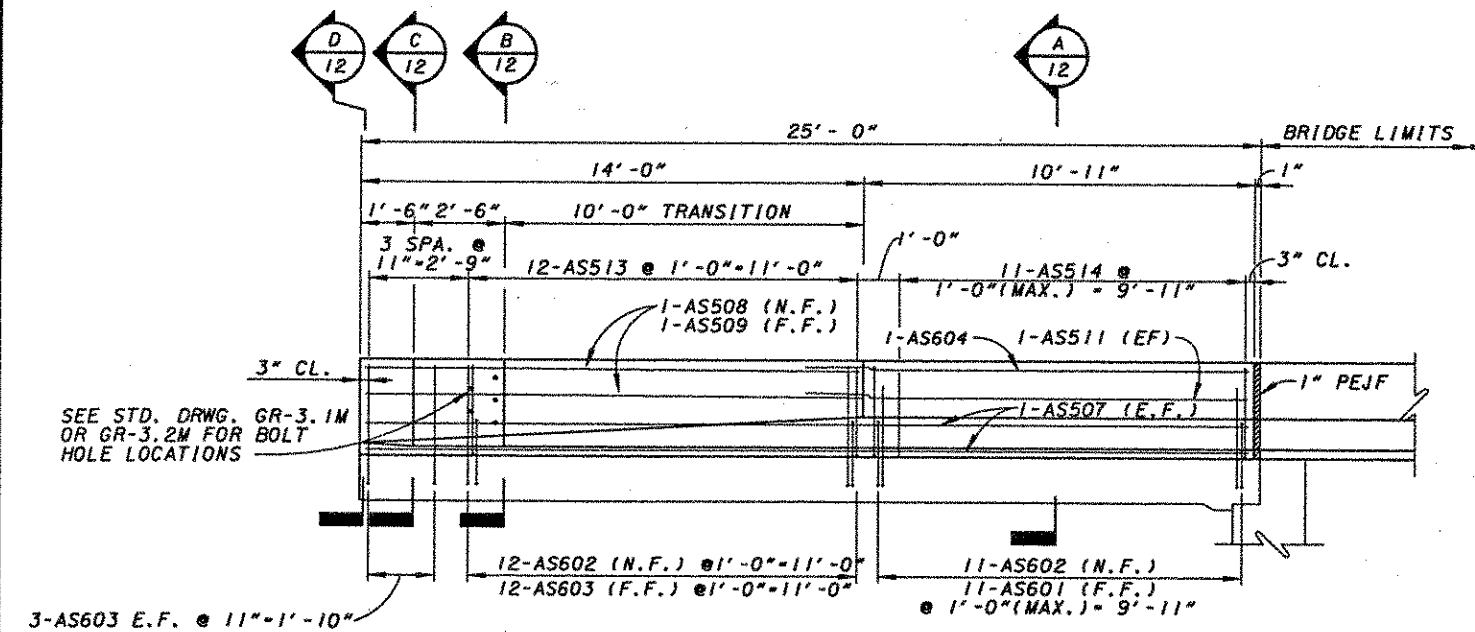
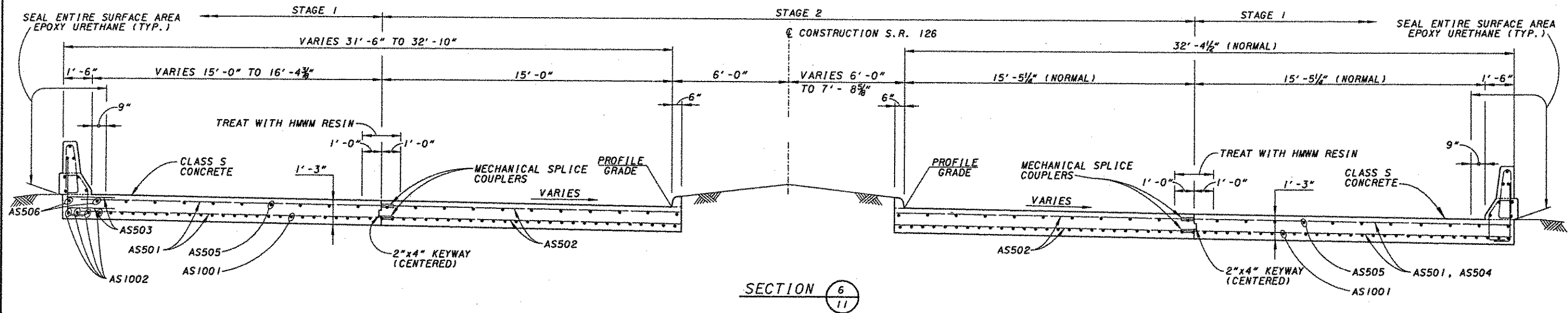
I-71 UNDER SR126 - RONALD REAGAN HIGHWAY

HAM-71-11.08

11/15

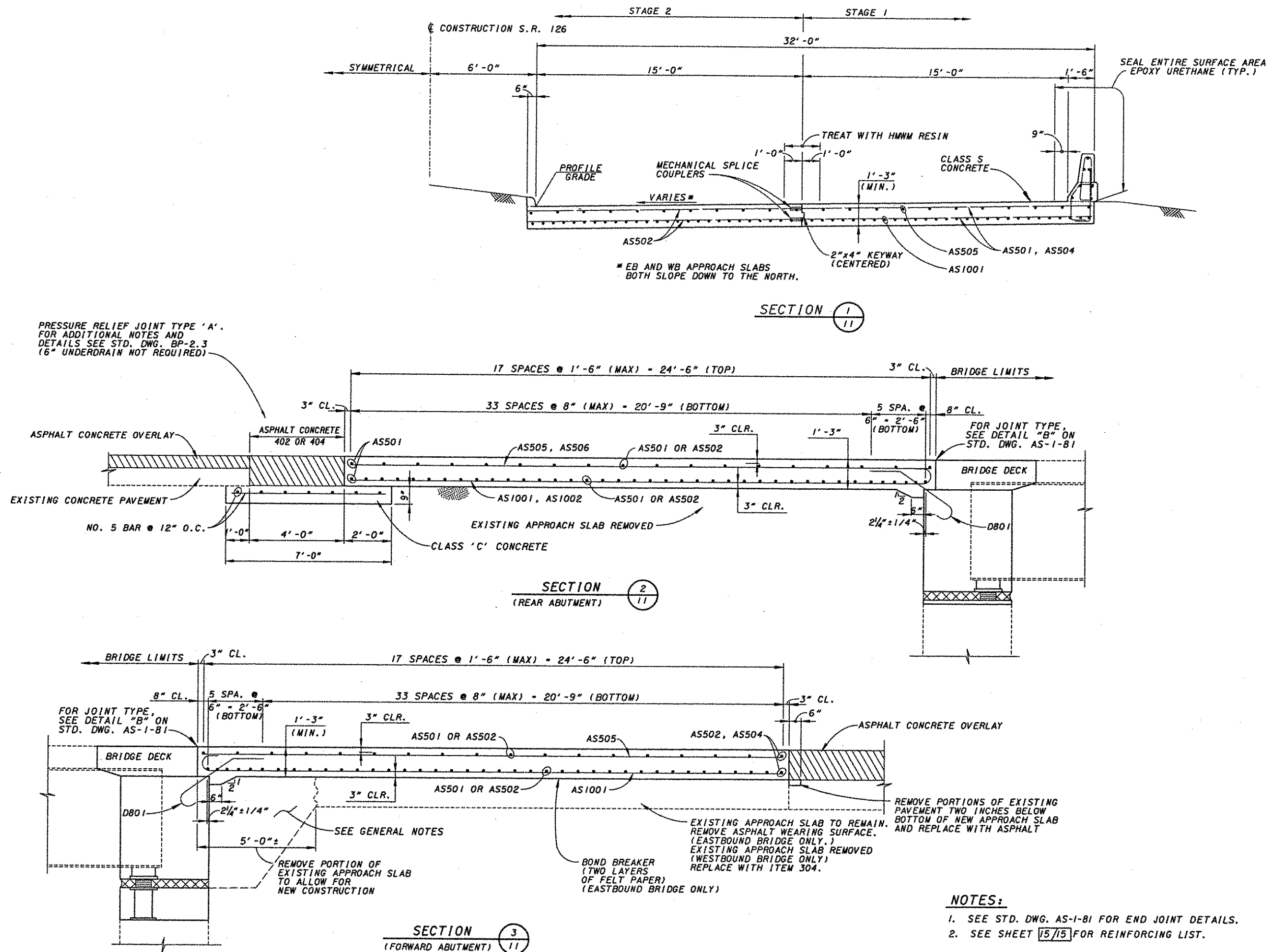
164

205



NOTES:

1. SEE STD. DWG. AS-1-B1 FOR END JOINT DETAILS.
2. SEE SHEET 15/15 FOR REINFORCING LIST.
3. SEE STD. DWG. BR-1 FOR PARAPET NOTES.



ABUTMENT REINFORCING LIST

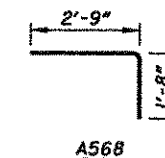
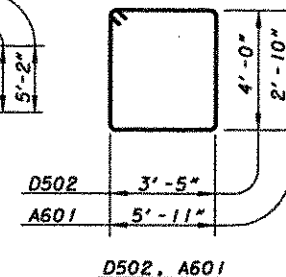
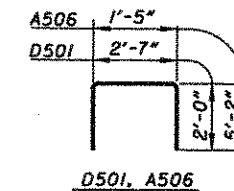
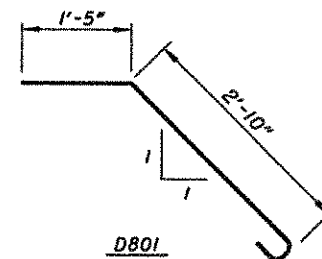
MARK	NUMBER			LENGTH	WEIGHT (LBS)	SHAPE
	REAR	FWD.	TOTAL			
A501	32	28	60	3' - 10"	240	STR.
A502	SER. OF 6		SER. OF 6	VAR. 12'-3" TO 14'-9" BY 6"	84	STR.
A503	SER. OF 6		SER. OF 6	VAR. 16'-5" TO 19'-1" BY 6 3/8"	111	STR.
A504	SER. OF 6		SER. OF 6	VAR. 17'-1" TO 19'-6" BY 5 3/4"	114	STR.
A505	SER. OF 6		SER. OF 6	VAR. 17'-11" TO 20'-7" BY 6 3/8"	120	STR.
A506	21	25	46	11' - 6"	552	BENT
A507	2	NOT USED				
A508	2		2	4' - 4"	9	STR.
A509	SER. OF 4		SER. OF 4	VAR. 5'-0" TO 7'-0" BY 8"	50	STR.
A510	SER. OF 3		SER. OF 3	VAR. 7'-7" TO 8'-11" BY 8"	52	STR.
A511	2		2	9' - 7"	20	STR.
A512	2		2	9' - 9"	20	STR.
A513	3		3	14' - 9"	46	STR.
A514	1	1	2	1' - 10"	4	STR.
A515	1	2	3	2' - 6"	8	STR.
A516	3		3	15' - 4"	48	STR.
A517	3		3	16' - 0"	50	STR.
A518	SER. OF 3		SER. OF 3	VAR. 5'-4" TO 12'-2" BY 3'-5"	27	STR.
A519	SER. OF 3		SER. OF 3	VAR. 6'-0" TO 12'-10" BY 3'-5"	29	STR.
A520	2		2	4' - 7"	10	STR.
A521	SER. OF 4		SER. OF 4	VAR. 5'-3" TO 7'-3" BY 8"	52	STR.
A522	SER. OF 4		SER. OF 4	VAR. 7'-11" TO 9'-11" BY 8"	74	STR.
A523	2		2	10' - 7"	22	STR.
A524	6		6	10' - 11"	68	STR.
A525	2		2	17' - 1"	36	STR.
A526	3		3	18' - 4"	57	STR.
A527	3		3	17' - 9"	56	STR.
A528	SER. OF 4		SER. OF 4	VAR. 6'-7" TO 16'-8" BY 3'-4 3/8"	48	STR.
A529	SER. OF 4		SER. OF 4	VAR. 6'-0" TO 16'-1" BY 3'-4 3/8"	46	STR.
A530	1		1	5' - 0"	5	STR.
A531	1		1	4' - 5"	5	STR.
A532	1	1	2	3' - 2"	7	STR.
A533	1		1	2' - 5"	3	STR.
A534	2		2	4' - 1"	9	STR.
A535	2	2	2	4' - 7"	10	STR.
A536	2	2	2	5' - 1"	11	STR.
A537	SER. OF 4		SER. OF 4	VAR. 5'-8" TO 7'-7" BY 7"	55	STR.
A538	SER. OF 4		SER. OF 4	VAR. 8'-3" TO 10'-2" BY 7"	77	STR.
A539	2	2	2	10' - 9"	22	STR.
A540	2	2	2	11' - 5"	24	STR.
A541	4	4	4	11' - 9"	49	STR.
A542	3	3	3	20' - 3"	63	STR.
A543	3	3	3	19' - 7"	61	STR.
A544	SER. OF 5		SER. OF 5	VAR. 5'-4" TO 19'-7" BY 3'-6 3/4"	65	STR.
A545	SER. OF 5		SER. OF 5	VAR. 4'-8" TO 18'-11" BY 3'-6 3/4"	61	STR.
A546	NOT USED					
A547	NOT USED					
A548	1		1	12' - 3"	13	STR.
A549	NOT USED					
A550	1		1	19' - 1"	20	STR.
A551	1		1	16' - 5"	17	STR.
A552	1		1	17' - 1"	18	STR.
A553	1		1	19' - 6"	20	STR.

ABUTMENT REINFORCING LIST

MARK	NUMBER			LENGTH	WEIGHT (LBS)	SHAPE
	REAR	FWD.	TOTAL			
A554	1	1	2	17' - 11"	19	STR.
A555	1	1	2	20' - 7"	21	STR.
A556	2	2	2	3' - 1"	6	STR.
A557	2	2	2	3' - 7"	7	STR.
A558	SER. OF 4	SER. OF 4	SER. OF 4	VAR. 4'-3" TO 6'-2" BY 7"	43	STR.
A559	SER. OF 4	SER. OF 4	SER. OF 4	VAR. 6'-10" TO 8'-9" BY 7"	65	STR.
A560	SER. OF 3	SER. OF 3	SER. OF 3	VAR. 9'-5" TO 10'-9" BY 8"	63	STR.
A561		2	2	10' - 11"	23	STR.
A562		2	2	20' - 1"	42	STR.
A563		2	2	20' - 9"	43	STR.
A564	SER. OF 5	SER. OF 5	SER. OF 5	VAR. 4'-9" TO 18'-8" BY 3'-5 3/4"	61	STR.
A565	SER. OF 5	SER. OF 5	SER. OF 5	VAR. 5'-5" TO 19'-4" BY 3'-5 3/4"	65	STR.
A566	NOT USED					
A567	NOT USED					
A568	112	112	112	4' - 4"	506	BENT
A569	2	2	2	18' - 6"	39	STR.
A570	2	2	2	19' - 8"	41	STR.
A601	21	25	46	18' - 3"	1,261	BENT
A602	2		2	4' - 0"	12	STR.
A603	2	2	4	3' - 4"	20	STR.
A604	2	2	4	4' - 7"	14	STR.
A801	8	8	16	7' - 9"	331	STR.
A802	1		1	12' - 3"	33	STR.
A803	1		1	13' - 2"	35	STR.
A804	1		1	13' - 6"	36	STR.
A805	1		1	13' - 10"	37	STR.
A806	1		1	14' - 9"	39	STR.
A807	1		1	19' - 1"	51	STR.
A808	1		1	18' - 2"	49	STR.
A809	1		1	17' - 9"	47	STR.
A810	1		1	17' - 4"	46	STR.
A811	1		1	16' - 5"	44	STR.
A812	1		1	17' - 1"	46	STR.
A813	1		1	17' - 10"	48	STR.
A814	1		1	18' - 3"	49	STR.
A815	1		1	18' - 8"	50	STR.
A816	1		1	19' - 6"	52	STR.
A817	1		1	20' - 7"	55	STR.
A818	1		1	19' - 8"	53	STR.
A819	1		1	19' - 3"	51	STR.
A820	1		1	18' - 10"	50	STR.
A821	1		1	17' - 11"	48	STR.
A822	8	8	16	18' - 1"	386	STR.
A823	8	8	16	22' - 10"	488	STR.
TOTAL -					7,144	

DIAPHRAGM REINFORCING LIST

MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
D501	108	6' - 4"	713	BENT
D502	108	15' - 5"	1,737	BENT
D801	100	5' - 2"	1,380	BENT
D802	16	18' - 6"	790	STR.
D803	56	22' - 10"	3,414	STR.
D804	40	18' - 1"	1,931	STR.
TOTAL -			9,965	



REINFORCEMENT NOTES:

- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT ON STANDARD 180° AND 135° HOOKS.
- DIMENSIONS ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT WHERE RADIUS "R" IS INDICATED.
- ALL BARS ARE EPOXY COATED.
- THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P501 IS A NO. 5 BAR.

ABUTMENT REINFORCING STEEL LIST
BRIDGE NO. HAM-126-1964
I-71 UNDER SR126 - RONALD REAGAN HIGHWAY

HAM-71-11.08

14/15

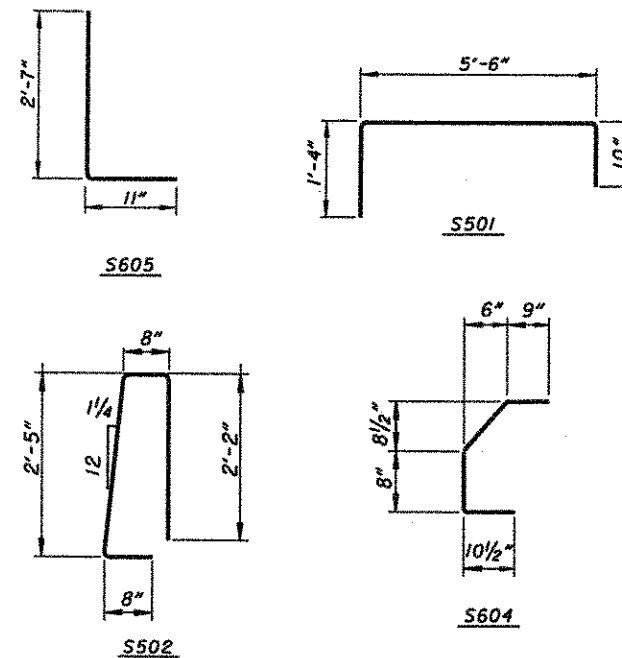
167
205

DESIGN AGENCY
KZF DESIGN
Architectural Engineering Planning
1000 N. 10th St., Suite 100
Tulsa, OK 74103
Tel: (918) 436-1001 Fax: (918) 436-1002

DATE 05/29/01
REVIEWED DOK
DRAWN JDS
DESIGNED SJA
CHECKED WBS
STRUCTURE FILE NUMBER 3107175

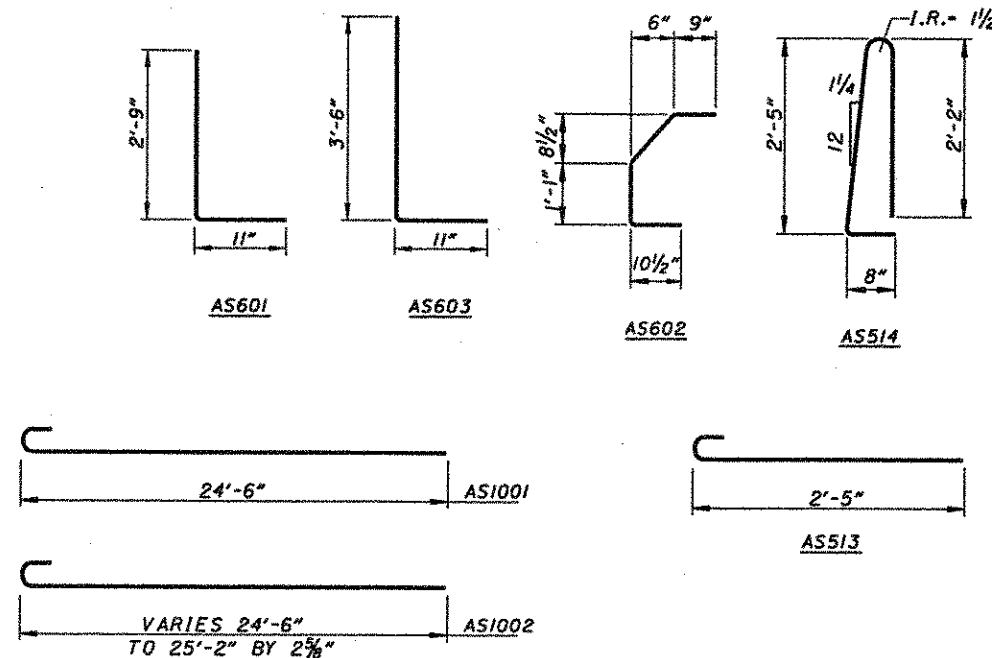
SUPERSTRUCTURE REINFORCING LIST

MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
S501	20	7' - 5"	155	BENT
S502	24	5' - 7"	140	BENT
S601	4	16' - 8"	100	STR.
S602	4	22' - 10"	137	STR.
S603	296	4' - 4"	1,927	STR.
S604	24	3' - 5"	123	BENT
S605	24	3' - 0"	108	BENT
S701	4	16' - 8"	136	STR.
S702	4	22' - 10"	187	STR.
		TOTAL =	3,013	



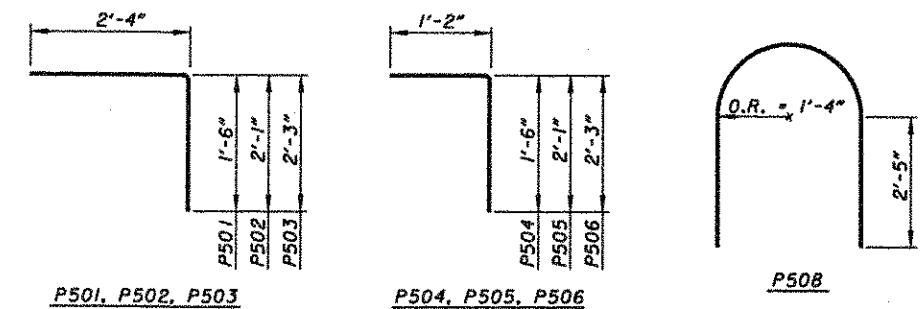
APPROACH SLAB REINFORCING LIST

MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
AS501	222	17' - 10"	4,129	STR.
AS502	228	16' - 9"	3,983	STR.
AS503	48	3' - 10"	192	STR.
AS504	6	16' - 6"	103	STR.
AS505	93	24' - 6"	2,376	STR.
AS506	2	25' - 2"	52	STR.
AS507	12	24' - 8"	309	STR.
AS508	8	13' - 10"	115	BENT
AS509	10	13' - 10"	144	STR.
AS510	4	25' - 0"	104	STR.
AS511	6	13' - 2"	82	STR.
AS512		NOT USED		
AS513	48	3' - 0"	150	BENT
AS514	45	5' - 4"	250	BENT
AS601	45	3' - 6"	237	BENT
AS602	93	3' - 3"	454	BENT
AS603	72	4' - 2"	451	BENT
AS604	3	13' - 8"	62	STR.
AS605	1	14' - 4"	22	STR.
AS1001	224	25' - 11"	24,980	BENT
AS1002	SER OF 4	VAR 25' - 11" TO 26' - 7" BY 2 5/8"	452	BENT
		TOTAL =	38,649	



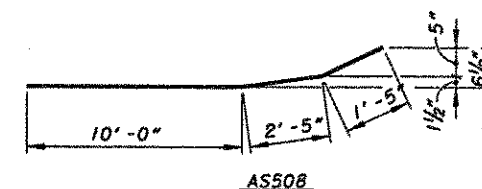
PIER REINFORCING LIST

MARK	NUMBER	LENGTH	WEIGHT (LBS)	SHAPE
P501	156	3' - 9"	610	BENT
P502		4' - 4"	705	BENT
P503	156	4' - 6"	732	BENT
P504	6	2' - 7"	16	BENT
P505	6	3' - 2"	20	BENT
P506	6	3' - 4"	21	BENT
P507	28	20' - 5"	1,789	STR.
P508	4	9' - 0"	113	BENT
		TOTAL =	4,006	



REINFORCEMENT NOTES:

- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT ON STANDARD 180° AND 135° HOOKS.
- DIMENSIONS ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT WHERE RADIUS "R" IS INDICATED.
- ALL BARS ARE EPOXY COATED.
- THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, P501 IS A NO. 5 BAR.



BEGIN PROJECT
STA. 542+65
S.L.M. 11.08

SCALE: 1:30000

LATITUDE: 39°14'48"N LONGITUDE: 84°21'47"W

Abstract

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER HIGHWAYS

CURRENT A.D.T. (2000)	= 132100
DESIGN A.D.T. (2020)	= 172000
D.H.V. (2020)	= 7167
DIRECTIONAL DISTRIBUTION	= 50%
TRUCKS (24 HOUR B & C)	= 6%
DESIGN SPEED	= 70 M.P.H.
LEGAL SPEED	= 65 M.P.H.
DESIGN FUNCTIONAL CLASSIFICATION	= URBAN INTERSTATE

DESIGN EXCEPTIONS SHEET DATE
NONE

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

Plans Prepared and Recommended By:

RESOURCE INTERNATIONAL INC.
281 ENTERPRISE DRIVE
WESTERVILLE, OHIO 43081
(614) 886-1959



INDEX OF SHEETS

TITLE SHEET	1
SCHEMATIC PLAN	2-3
TYPICAL SECTIONS	4-4
GENERAL NOTES	5-6
GENERAL SUMMARY	7-7
NOISE WALL BASELINE GEOMETRY	8-8
PLAN AND PROFILE	9-19
CROSS SECTIONS	20-30
DRAINAGE AND EROSION CONTROL	31-32
SPECIAL DETAILS	33-37

SUBMITTAL	DATE
80% COMPLETE PLAN	10-13-00
FINAL PLANS	10-27-00

[illegible]

THIS PROJECT IS THE CLOSING OF GAPS IN THE
EXISTING NOISE BARRIER.

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.

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 EXCEPT AS
NOTED ON THE MAINTENANCE OF TRAFFIC PLANS.
PROVISIONS FOR THE MAINTENANCE AND SAFETY
OF TRAFFIC WILL BE AS SET FORTH ON THE
PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21,
DIVISION (1) OF THE REVISED CODE OF OHIO,
THE REVISED PRIMA FACIE SPEED LIMITS AS
INDICATED HEREIN ARE DETERMINED TO BE
REASONABLE AND SAFE, AND ARE HEREBY
ESTABLISHED FOR THE DURATION OF THIS
PROJECT. THE PRIMA FACIE SPEED LIMIT OR
LIMITS HEREBY ESTABLISHED SHALL BECOME
EFFECTIVE WHEN APPROPRIATE SIGNS GIVING
NOTICE THEREOF ARE ERECTED.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR OF TRANSPORTATION

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.

PID No.
19705

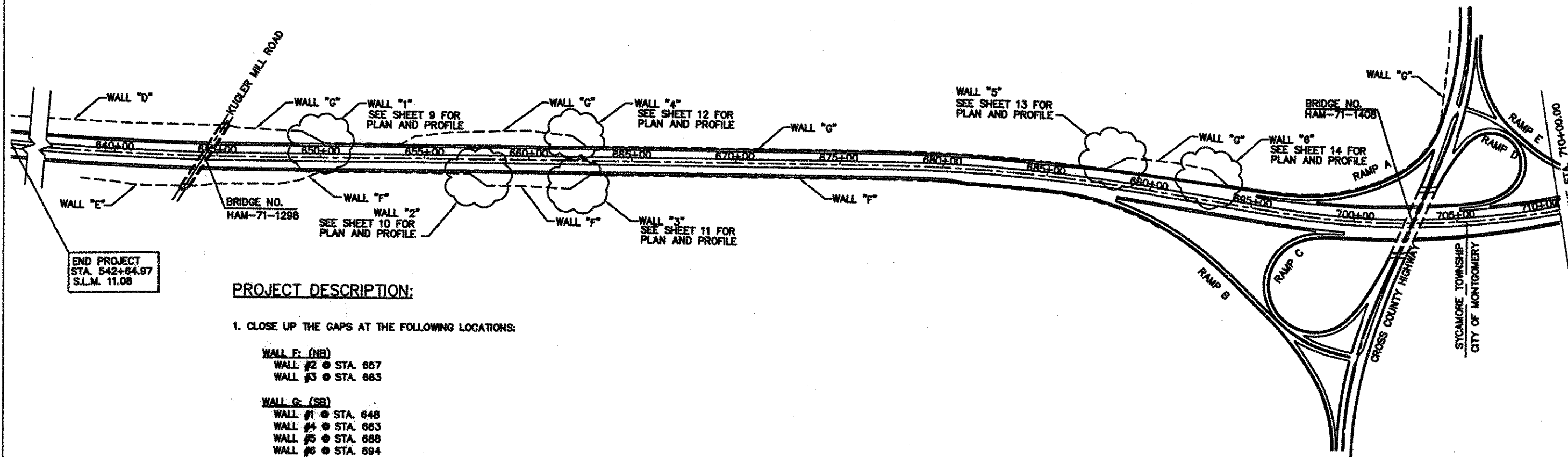
CONSTRUCTION PROJECT NO.

NONE

HAM-71-11.08

1/37

$$\frac{169}{205}$$



END PROJECT
STA. 542+84.97
S.L.M. 11.08

PROJECT DESCRIPTION:

1. CLOSE UP THE GAPS AT THE FOLLOWING LOCATIONS:

WALL F: (NB)
WALL #2 @ STA. 657
WALL #3 @ STA. 663

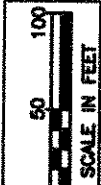
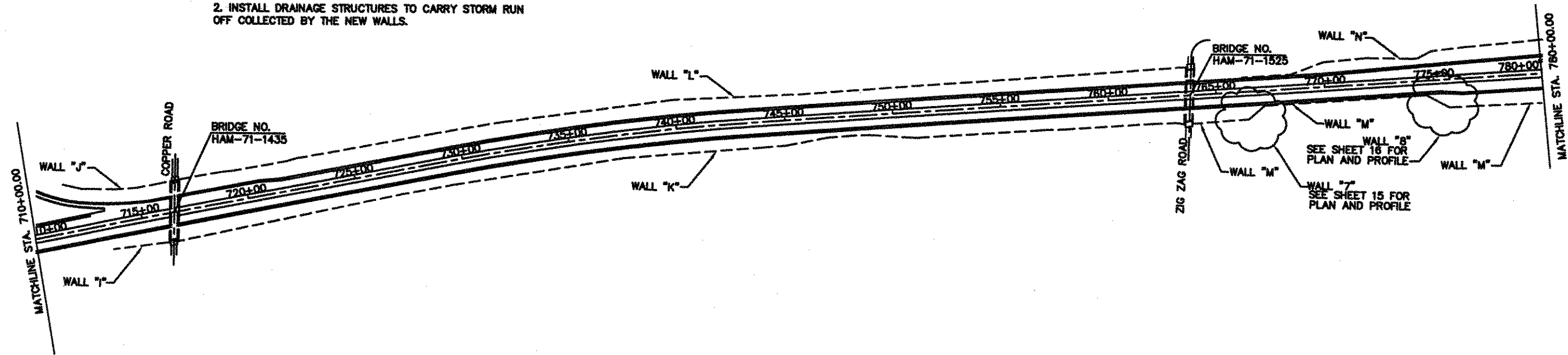
WALL G: (SB)
WALL #1 @ STA. 648
WALL #4 @ STA. 663
WALL #5 @ STA. 688
WALL #6 @ STA. 694

WALL M: (NB)
WALL #7 @ STA. 787
WALL #8 @ STA. 775

WALL Q: (NB)
WALL #9 @ STA. 796
WALL #11 @ STA. 824

WALL P: (SB)
WALL #10 @ STA. 798

2. INSTALL DRAINAGE STRUCTURES TO CARRY STORM RUN
OFF COLLECTED BY THE NEW WALLS.



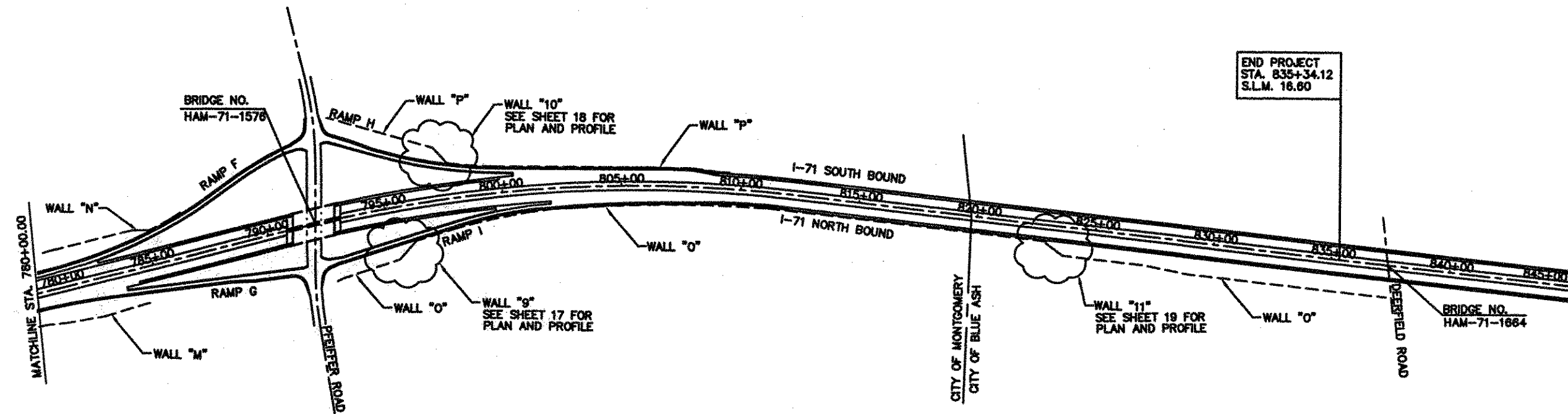
CALCULATED
BY
CHECKED
MRK

SCHEMATIC PLAN
STA. 635+00 TO STA. 780+00

HAM-71-11.08

2/37

170
205



PROJECT DESCRIPTION:

1. CLOSE UP THE GAPS AT THE FOLLOWING LOCATIONS:

WALL F: (NB)
 WALL #2 @ STA. 657
 WALL #3 @ STA. 663

WALL G: (SB)
 WALL #1 @ STA. 648
 WALL #4 @ STA. 663
 WALL #5 @ STA. 688
 WALL #6 @ STA. 694

WALL M: (NB)
 WALL #7 @ STA. 767
 WALL #8 @ STA. 775

WALL O: (NB)
 WALL #9 @ STA. 796
 WALL #11 @ STA. 824

WALL P: (SB)
 WALL #10 @ STA. 798

2. INSTALL DRAINAGE STRUCTURES TO CARRY STORM RUN OFF COLLECTED BY THE NEW WALLS.



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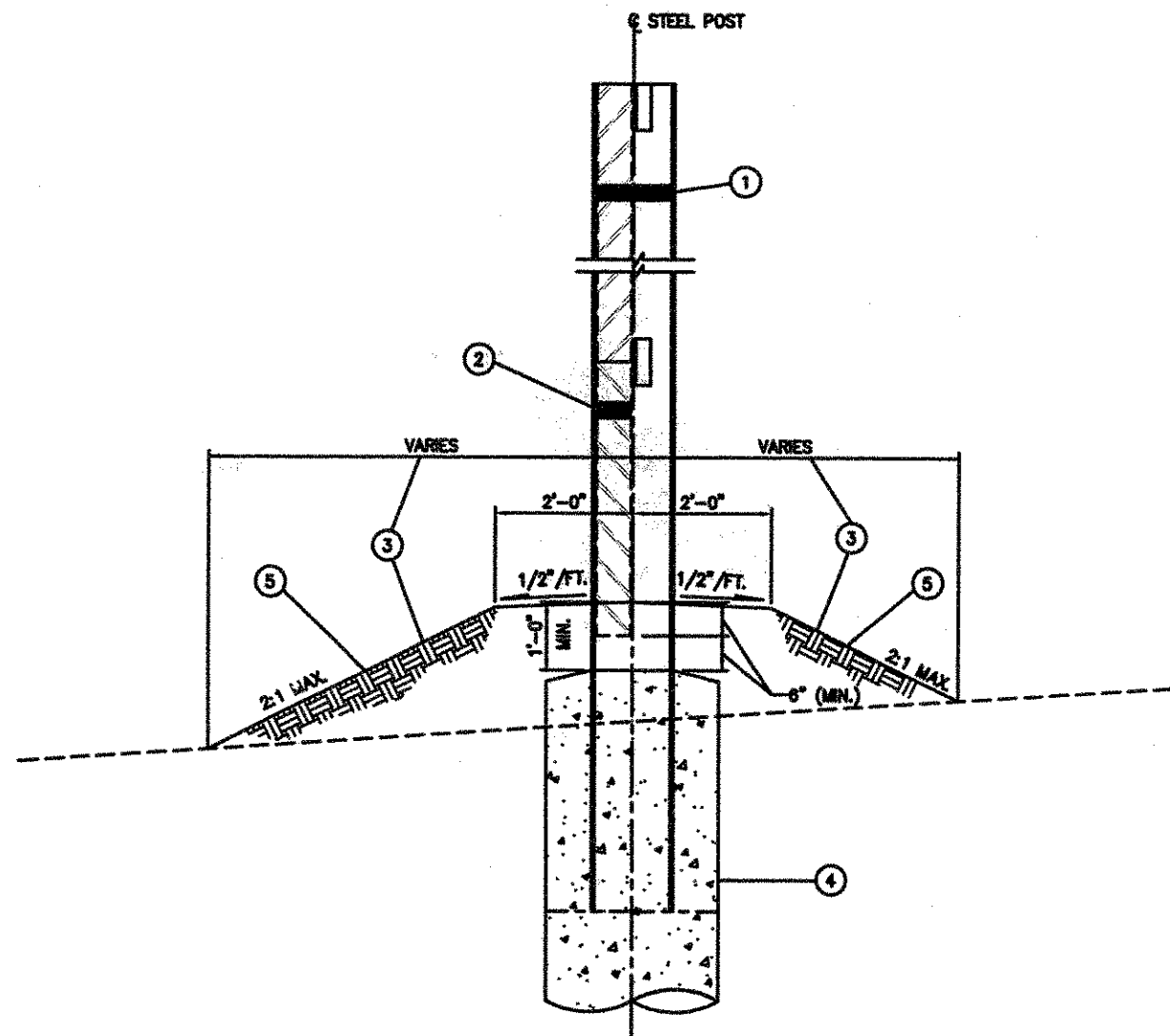
SCHEMATIC PLAN
 STA. 780+00 TO STA. 845+00

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TYPICAL SECTION



NORMAL SECTION

ITEM LEGEND

- ① ITEM 513 STRUCTURAL STEEL
- ② ITEM SPECIAL NOISE BARRIER, 10FT. AND UNDER
ITEM SPECIAL NOISE BARRIER, OVER 10FT. TO 14FT. HEIGHT
ITEM SPECIAL NOISE BARRIER, OVER 14FT. TO 20FT. HEIGHT
- ③ ITEM 659 SEEDING AND MULCHING
- ④ ITEM 524 - DRILLED SHAFTS
- ⑤ ITEM 203 - EMBANKMENT

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NOISE BARRIER TYPICAL SECTION

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GENERAL NOTES

NOISE BARRIER

- | | |
|----------------|---------------------------|
| I. DESCRIPTION | III. CONSTRUCTION METHODS |
| II. POSTS | IV. BASIS OR PAYMENT |

ITEM SPECIAL-NOISE BARRIER

I. DESCRIPTION

THIS WORK SHALL CONSIST OF FURNISHING AND INSTALLING NOISE BARRIERS INCLUDING ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED IN ACCORDANCE WITH THESE PROVISIONS AND APPLICABLE STANDARDS AND IN CONFORMITY WITH THE DIMENSIONS, LINES AND GRADES SHOWN ON THE PLANS.

THE BARRIER AND THE ASSOCIATED WORK SHALL CONFORM TO SECTIONS 499 AND 501 AT THE CMS AS APPROPRIATE.

II. POSTS

A. STEEL POSTS

STEEL POSTS SHALL BE ASTM A-588 AND MANUFACTURED IN ACCORDANCE WITH ITEM 513 OF THE CMS UNLESS OTHERWISE SPECIFIED.

THE PORTION OF ANY POSTS IN CONTACT WITH SOIL AND AN ADDITIONAL 6 INCHES ABOVE AND BELOW THE SOIL CONTACT LINE ON THE POST SHALL BE COATED WITH COAL TAR EPOXY POINT. THE PAINT SHALL CONFORM TO STRUCTURAL STEEL PAINTING COUNCIL (SSPC) PAINT SPECIFICATION 16; BE BLACK IN COLOR; BE APPLIED AS PER THE PAINT MANUFACTURER'S RECOMMENDATIONS, AND HAVE A MINIMUM DRY FILM THICKNESS OF 16 MILLS. ALL SURFACES THAT RECEIVE PAINT ON THE STEEL POSTS, WHETHER COAL TAR EPOXY OR PAINT TO MATCH THE NOISE PANEL'S COLOR, SHALL BE BLAST CLEANED TO CONFORM TO SSPC - SP10, NEAR WHITE METAL.

B. DRILLED SHAFTS

REINFORCING STEEL SHALL BE ASTM A615, GRADE 60.

C. CONCRETE FOR DRILLED SHAFTS

CONCRETE FOR ALL DRILLED SHAFTS SHALL BE CLASS S CONCRETE AND SHALL BE IN ACCORDANCE WITH ITEM 511 EXCEPT AS MODIFIED AND SUPPLEMENTED HEREIN. THE REQUIRED SLUMP IS 7 INCHES PLUS OR MINUS 1/2 INCH. THE MAXIMUM WATER TO CEMENT RATIO SHALL BE 0.50 FOR CONCRETE PLACED UNDER WATER. THE REQUIREMENTS OF ADDING 10 PERCENT MORE CEMENT TO THE CONCRETE MIX SHALL BE WAIVED. THE TOP 10 FEET OF CONCRETE IN THE DRILLED SHAFTS ARE REQUIRED TO BE VIBRATED. ONLY A MINIMAL VIBRATORY EFFORT IS NECESSARY. SPECIAL CARE SHALL BE TAKEN NOT TO OVER-VIBRATE THE DRILLED SHAFT CONCRETE.

NOTE: IF THE CASING IS REMOVED USING A VIBRATORY HAMMER, NO OTHER VIBRATORY EFFORT IS NEEDED. THE CONCRETE FOR THE DRILLED SHAFT SHALL BE PLACED AS PER 511 EXCEPT AS MODIFIED BY THE PLANS. THE CONCRETE PLACEMENT OPERATION SHALL BE CONTINUOUS FROM THE START TO FINISH. THE CONCRETE FOR THE DRILLED SHAFT SHALL BE PLACED PROMPTLY AFTER THE FINAL INSPECTION OF THE SHAFT. IF PRACTICAL, THE CONCRETE SHALL BE PLACED IN A CLEAN DRY EXCAVATION. CARE SHALL BE TAKEN TO ENSURE THAT CONCRETE IS NOT BEING PLACED IN MOVING WATER. THE CONCRETE CAN BE PLACED IN A DRY DRILLED SHAFT EXCAVATION BY THE FREE FALL METHOD PROVIDED THE CONCRETE FALLS TO ITS FINAL POSITION THROUGH AIR WITHOUT STRIKING THE SIDES OF THE HOLE, THE REINFORCING STEEL CAGE OR ANY OTHER OBSTRUCTION. THE FREE FALL METHOD ALLOWS THE CONCRETE TO BE DROPPED FROM THE TOP THROUGH A CENTERING CHUTE TO THE CONCRETE'S FINAL POSITION.

IF THE ENGINEER DETERMINES THAT DEWATERING IS NOT PRACTICAL, THE CONTRACTOR MAY BE GIVEN PERMISSION TO PLACE THE CONCRETE UNDERWATER. THE DRILLED SHAFT EXCAVATION SHALL BE FILLED WITH WATER TO SUCH A DEPTH THAT ALL WATER MOTION HAS CEASED. THE CONCRETE SHALL THEN BE PLACED BY MEANS OF A CONCRETE PUMP. THE CONCRETE PUMP PIPE SHALL HAVE A DIAMETER THAT IS NOT LESS THAN 4 INCHES. THE CONCRETE PUMP EQUIPMENT SHALL BE SO ARRANGED THAT NO VIBRATIONS RESULT WHICH MIGHT DAMAGE FRESH CONCRETE. PIPES CARRYING CONCRETE FROM THE PUMP TO THE SHAFT SHOULD BE ARRANGED WITH A MINIMUM NUMBER OF BENDS. THE PIPE USED TO CONVEY THE CONCRETE TO THE BOTTOM OF THE DRILLED SHAFT EXCAVATION SHALL BE ANCHORED TO THE STEEL CASING TO PREVENT THE PIPE FROM UNDULATING DURING THE INITIAL PLACEMENT OF THE CONCRETE.

THE PUMPING EQUIPMENT SHALL BE SUITABLE IN KIND AND ADEQUATE IN CAPACITY FOR THE WORK REQUIRED. THE USE OF ALUMINUM PIPE AS A CONVEYANCE FOR THE CONCRETE WILL NOT BE PERMITTED. AN ADEQUATE QUANTITY OF GROUT, MORTAR, OR CONCRETE WITH COARSE AGGREGATE OMITTED SHALL BE PUMPED THROUGH THE EQUIPMENT AHEAD OF THE SPECIFICATION CONCRETE TO PROVIDE LUBRICATION TO THE PUMPING SYSTEM. THE CONCRETE USED FOR LUBRICATION SHALL NOT BE PLACED IN THE SHAFT. THE LUBRICATION PROCESS WILL NOT BE REPEATED AS LONG AS THE PUMPING OPERATIONS ARE CONTINUOUS. THE OPERATION OF THE PUMP SHALL BE SUCH THAT A CONTINUOUS STREAM OF CONCRETE WITHOUT AIR POCKETS IS PRODUCED. IN ORDER TO PREVENT THE CONTAMINATION OF THE CONCRETE PLACED INITIALLY AT THE BOTTOM OF THE SHAFT, THE OUTLET END OF THE PUMPING PIPE SHALL BE SEALED WITH A DIAPHRAGM OR PLUG THAT IS FLUSHED OUT WHEN THE HYDROSTATIC PRESSURE FROM THE COLUMN OF CONCRETE EXCEEDS THAT OF THE WATER IN THE SHAFT. THE INITIAL RATE OF CONCRETE PLACEMENT MUST BE CAREFULLY CONTROLLED SO AS NOT TO LIFT OR DISPLACE THE CAGE OF REINFORCING STEEL. THE CONVEYING SYSTEM SHALL BE WATERTIGHT AND THE OUTLET END SHALL ALWAYS REMAIN WELL BELOW THE TOP OF THE FRESHLY PLACED CONCRETE. THE PREFERRED CONCRETE PLACEMENT PROCEDURE IS TO MAINTAIN THE OUTLET END OF THE PUMPING SYSTEM AT APPROXIMATELY 10 FEET BELOW THE TOP OF THE FRESH CONCRETE. WHEN THE CONCRETE REACHES THE TOP OF THE DRILLED SHAFT COLUMN, ALL LAITANCE SHALL BE REMOVED.

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NOISE BARRIER GENERAL NOTES

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III. CONSTRUCTION METHODS

A. NOISE BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE PLANS. JOINTS AND CONNECTIONS SHALL BE SECURED IN SUCH A MANNER AS TO BE STRUCTURALLY SOUND WITH NO VISIBLE OPENINGS FOR SOUND TRANSMISSION. NOISE PANEL ATTACHMENTS TO POSTS AND INSTALLATION METHODS SHALL BE STRUCTURALLY SOUND, GIVE ADEQUATE SUPPORT TO THE NOISE PANELS, AND BE SECURED TO THE POST OR ADEQUATELY BLOCKED BETWEEN THE POST'S FLANGES TO ELIMINATE MOVEMENT AT THE SUPPORT AND ELIMINATE ANY POSSIBLE VIBRATION.

THE TOP OF INSTALLED NOISE BARRIERS SHALL MATCH THE TOP OF WALL DESIGN ELEVATIONS, WITH NO VARIATION BETWEEN POSTS, UNLESS THE DESIGN PLANS REQUIRE AN ELEVATION CHANGE.

B. MARRED, CHIPPED, SCRATCHED, SPALLED, OR ANY OTHER DAMAGE DEEMED DETRIMENTAL TO THE SALVAGED PANELS BY THE ENGINEER SHALL BE REPLACED, AS APPROVED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

ANY NOISE BARRIER PANELS DAMAGED BY THE CONSTRUCTOR SHALL BE REPLACED IN KIND. THE COLOR OF THE REPLACEMENT SHALL BE SEALED WITH EPOXY-URETHENE CONCRETE SEALER TO MATCH THE COLOR OF THE DAMAGED PANEL. ALL COSTS ASSOCIATED WITH THIS WORK IS INCLUDED IN THE LUMP SUM ITEM FOR THIS WORK.

C. TRENCH BACKFILL SHALL BE WITH CLASS S CONCRETE MODIFIED AS PER II.G, ABOVE. THE METHOD OR PLACEMENT SHALL NOT ALLOW VOIDS OR EXCESSIVE SEGREGATION AND SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER.

D. ALL EXCESS EXCAVATION SHALL BE DISPOSED OF IN A MANNER SATISFACTORY TO THE ENGINEER.

E. AFTER ERECTION OF THE NOISE BARRIER, THE DISTURBED AREA SHALL BE LEFT IN A FINISHED CONDITION AT THE DIRECTION OF THE ENGINEER AND A GROWTH OF GRASS ESTABLISHED, AT THE CONTRACTOR'S EXPENSE. IN ACCORDANCE WITH CMS ITEM 659.

F. THE SALVAGED POSTS SHALL BE CUT OFF AT THE GROUND ELEVATION. LEAVE THE EXISTING DEEP FOUNDATIONS IN PLACE.

G. ARTIMIS

IF DURING THE PROCESS OF CONSTRUCTION AND/OR WALL SECTION REMOVAL, THE ARTIMIS EQUIPMENT GETS DAMAGED, IT SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE. ALSO, SERVICE SHALL NOT BE DISRUPTED FOR LONGER THAN 3 DAYS AT A TIME.

H. TOLERANCES

1. POSTS (MEASURED AT TOP)

A. VERTICAL ALIGNMENT SHALL BE WITHIN 0.05 INCH/FT. OF HEIGHT.

B. POSTS SHALL BE SET WITHIN +/- 1/2 INCH OF THEIR SPECIFIED LOCATION.

2. NOISE BARRIERS

A. VERTICAL ALIGNMENT SHALL BE WITHIN 0.05 INCH/FT. OF HEIGHT.

I. FOR NOISE BARRIERS THAT ARE BUILT ON TOP OF EARTH BERMS, THE BERMS SHALL BE CONSTRUCTED OF EARTHWORK FILL MATERIAL IN ACCORDANCE WITH ITEM 203 OF THE CMS.

J. THE CONTRACTOR SHALL MINIMIZE THE DISTURBANCE TO VEGETATION DURING THE DEMOLITION AND CONSTRUCTION OF FENCE AND NOISE BARRIER.

IV. BASIS OF PAYMENT

NOISE BARRIERS, COMPLETED AND IN PLACE, AS DESCRIBED IN METHOD OF MEASUREMENT, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT. THIS PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY TO CONSTRUCT THE NOISE BARRIER. ALL EXCAVATION, BACKFILL WITH SUITABLE MATERIAL AND ANY ADJUSTMENT IN EARTHWORK QUANTITIES REQUIRED DUE TO THE CONTRACTOR'S SELECTED NOISE PANEL, SEALING CONCRETE WITH EPOXY AND URETHANE, AGGREGATE DRAINS, COMPACTION, DISPOSAL OF SURPLUS OR UNSUITABLE MATERIALS, SEEDING, FERTILIZING AND MULCHING OF DISTURBED AREAS SHALL ALSO BE INCLUDED FOR PAYMENT.

ITEM	DESCRIPTION	UNIT
REFLECTIVE TYPE		
SPECIAL	NOISE BARRIER (REFLECTIVE) 10 FT. HT. AND UNDER	ST.FT.
SPECIAL	NOISE BARRIER (REFLECTIVE), OVER 10 TO 14 FT. HT.	SQ.FT.
SPECIAL	NOISE BARRIER (REFLECTIVE), OVER 14 TO 20 FT. HT.	SQ.FT.
ABSORPTIVE TYPE		
SPECIAL	NOISE BARRIER (ABSORPTIVE), 10 FT. HT. AND UNDER.	SQ.FT.
SPECIAL	NOISE BARRIER (ABSORPTIVE), OVER 10 TO 14 FT. HT.	SQ.FT.
SPECIAL	NOISE BARRIER (ABSORPTIVE), OVER 14 TO 20 FT. HT.	SQ.FT.

ABBREVIATIONS	
ATC	AMERICAN INSTITUTE OF TIMBER CONSTRUCTION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWPA	AMERICAN WOOD PRESERVERS' ASSOCIATION
BIA	BRICK INSTITUTE OF AMERICA
CCA	CROMATED COPPER ARSENATE
CMS	CONSTRUCTION AND MATERIALS SPECIFICATIONS OF ODOT
ILI	INDIANA LIMESTONE INSTITUTE
LPG	VOLATILE PETROLEUM SOLVENT (LIQUID PROPANE GAS)
SSPC	STRUCTURAL STEEL PAINTING COUNCIL
VPS	VOLUNTARY PRODUCT STANDARD

APPROVED REFLECTIVE BARRIER SUPPLIERS

SUPPLIERS		DRAWINGS AND NOTES	VARIABLES	COLOR TEXTURE PATTERN BRICK STYLE	CONCRETE
CONCRETE	SOUNDCORE 4043 MAPLE ROAD, SUITE 106 AMHERST, NY 14226 TELEPHONE: (716) 833-7651	SOUNDCORE - STANDARD HOLLOWCORE PRECAST NOISE BARRIERS DRAWING NO. DET-1 (02/12/97)			

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NOISE BARRIER GENERAL NOTES

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SHEET NUMBER																									ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	MARK	CHECKED	RTY																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

NOISEWALL BASELINE GEOMETRY

WALL #	STATION	NORTHING	EASTING	BEARING (FROM BACK TO AHEAD)	DISTANCE & DIRECTION FROM REF. PT TO [B] POINT
1	3+58.49	446420.5168	1438364.0953	N 13°12'18" E	REF. PT. 19 TO STA. 3+58.49 = 61.48', N64°00'59"W REFERENCE POINT FOR WALL 648nb PT.# NORTHING EASTING ELEV. T-19 446393.5830 1438419.3580 801.50
	4+04.34	446467.1019	1438375.0261	N 36°44'47" E	
	5+27.45	446565.7475	1438448.6783	N 10°20'20" E	
	5+99.40	446636.5349	1438461.5923		
2	13+84.86	447159.9358	1438696.3366	N 10°20'51" E	REF. PT. 21 TO STA. 13+84.86 = 180.34', S09°43'13"W REF. PT. 22 TO STA. 16+00.72 = 23.26', S53°28'45"E REFERENCE POINTS FOR WALL 657nb PT.# NORTHING EASTING ELEV. BEARING T-21 447337.6870 1438726.7850 806.41 N63°49'25"E T-22 447358.1870 1438768.5100 807.79
	14+56.60	447230.7014	1438709.2574	N 46°17'09" E	
	15+52.85	447297.2181	1438778.8289	N 10°04'42" E	
	16+00.72	447344.3519	1438787.2084		
3	18+70.08	447626.7898	1438843.7179	N 12°25'18" E	REF. PT. 23 TO STA. 18+70.08 = 25.82', N76°58'15"E REF. PT. 24 TO STA. 18+70.08 = 91.30', N54°11'14"E REFERENCE POINTS FOR WALL 663nb PT.# NORTHING EASTING ELEV. BEARING T-23 447620.9940 1438818.7580 805.70 N45°50'51"E T-24 447573.3480 1438769.6790 804.70
	19+41.93	447696.9527	1438859.1785	N 23°23'43" W	
	20+57.86	447803.3539	1438813.1432	N 10°12'18" E	
	21+05.85	447850.5846	1438821.6455		
4	16+84.82	447631.2528	1438585.3677	N 15°51'11" E	REF. PT. 17 TO STA. 16+84.82 = 91.23', S49°30'40"W REF. PT. 18 TO STA. 16+84.82 = 58.43', N39°44'55"W REFERENCE POINTS FOR WALL 663nb PT.# NORTHING EASTING ELEV. BEARING T-17 447690.0810 1438655.1110 803.61 N16°52'58"E T-18 447585.5588 1438623.3891 803.33
	18+04.75	447748.8199	1438618.1484	N 42°26'20" E	
	18+88.12	447808.1465	1438674.4068	N 10°17'20" E	
	19+84.19	447902.6770	1438691.5672		
5	42+89.88	450213.8468	1439170.9773	N 15°47'58" E	REF. PT. 16 TO STA. 42+89.88 = 183.99', S13°26'48"W REFERENCE POINT FOR WALL 688nb PT.# NORTHING EASTING ELEV. T-16 450392.7690 1439213.8870 798.77
	43+37.87	450260.0268	1439184.0445	N 15°24'14" W	
	44+48.17	450367.3239	1439154.4823	N 11°01'00" E	
	44+73.21	450390.9203	1439159.0761	N 14°43'14" E	
6	45+21.11	450437.2514	1439171.2485		REF. PT. 14 TO STA. 48+03.75 = 133.86', S44°10'37"W REF. PT. 15 TO STA. 48+03.75 = 83.49', N38°14'45"W REFERENCE POINTS FOR WALL 694nb PT.# NORTHING EASTING ELEV. BEARING T-14 450740.7870 1439323.7530 801.19 N14°24'19"E T-15 450579.3620 1439282.2900 800.40
	48+03.75	450644.9284	1439230.8098	N 20°47'43" E	
	49+23.75	450757.1120	1439273.2133	N 48°44'29" E	
	50+36.34	450831.3568	1439357.8472	N 17°19'12" E	
	50+84.35	450877.1920	1439372.1408		

WALL #	STATION	NORTHING	EASTING	BEARING (FROM BACK TO AHEAD)	DISTANCE & DIRECTION FROM REF. PT TO [B] POINT
7	1+77.17	457917.0008	1440107.3970	N 07°21'01" E	REF. PT. 25 TO STA. 1+77.17 = 75.58', S55°31'49"E REFERENCE POINT FOR WALL 767nb PT.# NORTHING EASTING ELEV. T-25 457959.7680 1440045.1000 811.71
	2+01.09	457940.7242	1440110.4572	N 01°28'09" W	
	2+25.26	457964.8884	1440109.8374	N 00°54'04" W	
	2+49.23	457988.8568	1440109.4604	N 01°18'02" W	
8	2+72.96	458012.5815	1440108.9356	N 30°47'24" W	REF. PT. 27 TO STA. 10+83.65 = 162.54', S17°59'06"W REFERENCE POINT FOR WALL 775nb PT.# NORTHING EASTING ELEV. T-27 458965.4560 1440182.4290 808.85
	3+68.57	458094.7159	1440059.9929	N 05°46'06" E	
	3+92.46	458118.4777	1440062.3932		
	10+83.65	458810.8588	1440132.2417	N 05°55'02" E	
9	11+07.59	458834.6750	1440134.7100	N 37°28'02" E	REF. PT. 30 TO STA. 2+15.82 = 105.23', S21°19'31"E REFERENCE POINT FOR WALL 796nb PT.# NORTHING EASTING ELEV. T-30 460822.4304 1440454.4898 788.45
	12+27.69	458929.9925	1440207.7632	N 06°30'43" E	
	12+99.63	459001.4676	1440215.9219		
	2+15.82	460724.4079	1440492.7570	N 01°36'20" E	
10	3+47.83	460856.3635	1440496.4557	N 27°11'04" W	REF. PT. 33 TO STA. 4+00.19 = 169.12', S84°39'15"W REF. PT. 34 TO STA. 4+00.19 = 56.93', N33°07'03"W REFERENCE POINTS FOR WALL 798nb PT.# NORTHING EASTING ELEV. BEARING T-33 461085.9670 1440247.7240 803.50 N65°11'59"E T-34 461022.5310 1440110.4380 796.21
	4+48.45	460945.8670	1440450.4878	N 02°28'19" E	
	5+44.21	461041.5415	1440454.6183		
	4+00.18	461070.2105	1440079.3353	N 35°22'48" E	
11	4+24.11	461089.7211	1440093.1906	N 35°13'19" E	REF. PT. 50 TO STA. 30+35.15 = 68.02', S85°04'05"W REF. PT. 31 TO STA. 32+73.49 = 53.69', S49°29'35"E REFERENCE POINTS FOR WALL 824nb PT.# NORTHING EASTING ELEV. BEARING T-31 463578.1660 1441407.5570 824.77 N65°11'59"E T-50 463373.4148 1441374.6057 821.76
	4+48.18	461109.3712	1440107.0635	N 34°07'38" E	
	4+72.04	461129.1366	1440120.4593	N 59°37'53" E	
	5+53.80	461170.4713	1440191.0014	N 25°02'00" E	
11	6+01.75	461213.9183	1440211.2919		REF. PT. 50 TO STA. 30+35.15 = 68.02', S85°04'05"W REF. PT. 31 TO STA. 32+73.49 = 53.69', S49°29'35"E REFERENCE POINTS FOR WALL 824nb PT.# NORTHING EASTING ELEV. BEARING T-31 463578.1660 1441407.5570 824.77 N65°11'59"E T-50 463373.4148 1441374.6057 821.76
	30+35.15	463367.5666	1441306.8330	N 26°09'53" E	
	31+07.15	463432.1868	1441338.5809	S 63°46'37" E	
	31+16.48	463428.0626	1441346.9540	N 55°10'24" E	
11	32+01.46	463476.5946	1441416.7135	N 26°04'35" E	
	32+73.49	463541.2918	1441448.3753		

NOTE: ALL REFERENCE POINTS ARE IRON PINS.
SEE PLAN SHEETS FOR LOCATIONS.

NOISEWALL BASELINE GEOMETRY

HAM-71-11.08

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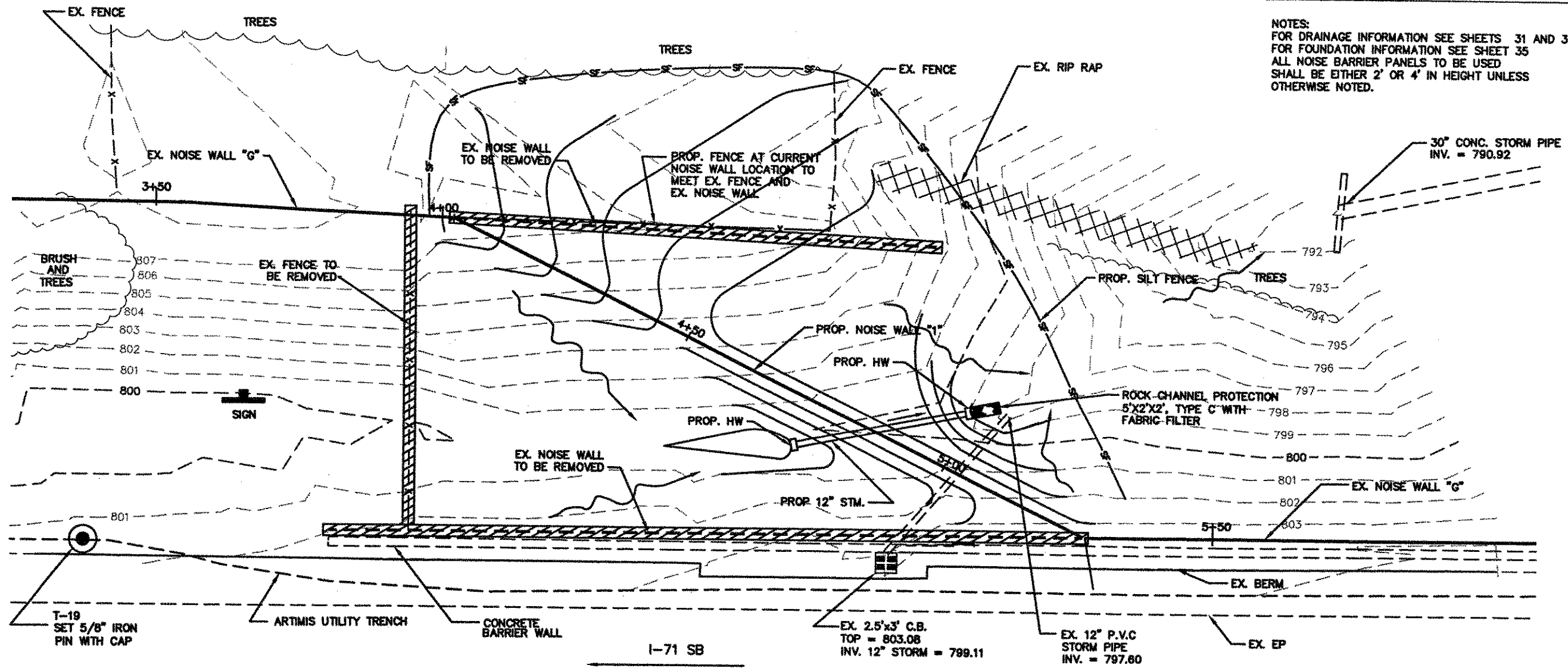
PLAN AND PROFILE SHEET
PROPOSED NOISE WALL #1

HAM-71-11.08

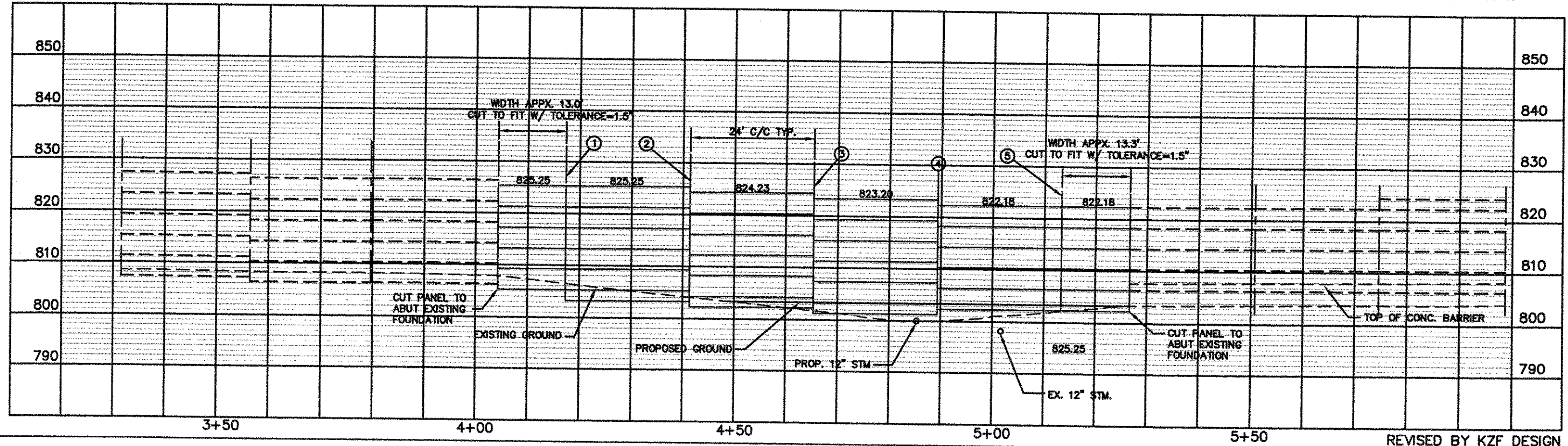
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NOTES:
FOR DRAINAGE INFORMATION SEE SHEETS 31 AND 32
FOR FOUNDATION INFORMATION SEE SHEET 35
ALL NOISE BARRIER PANELS TO BE USED
SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
OTHERWISE NOTED.

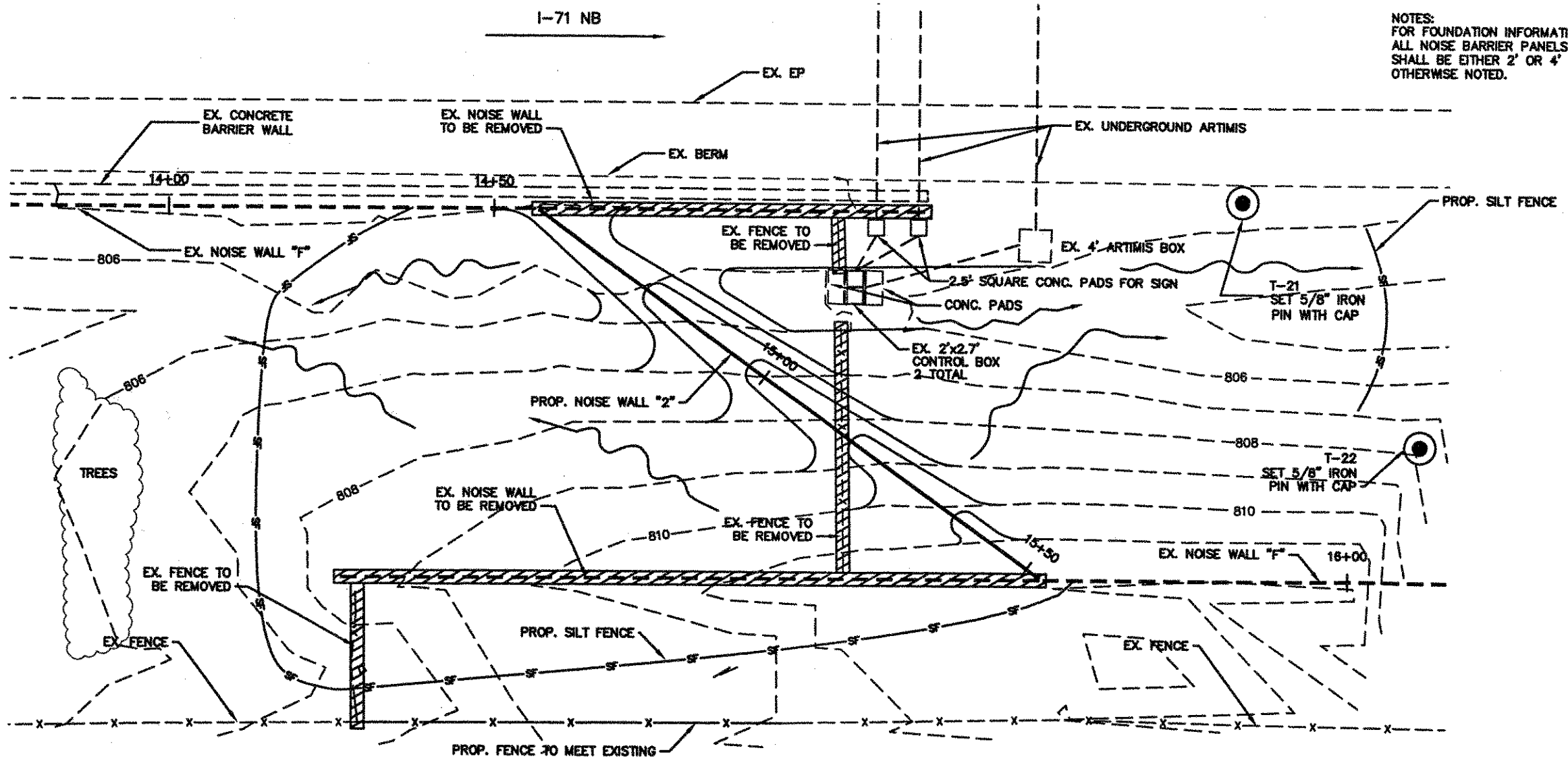


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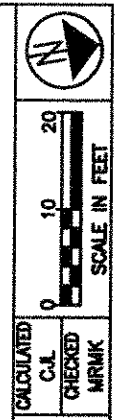


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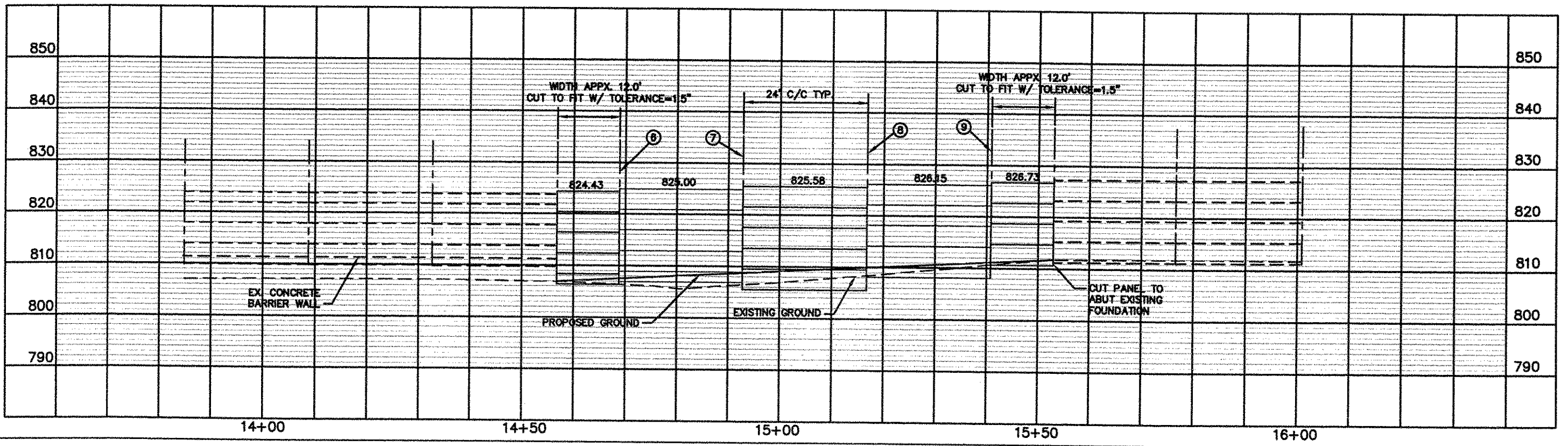
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NOTES:
FOR FOUNDATION INFORMATION SEE SHEET 35
ALL NOISE BARRIER PANELS TO BE USED
SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
OTHERWISE NOTED.



PLAN AND PROFILE SHEET
PROPOSED NOISE WALL #2



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NOTES:
FOR DRAINAGE INFORMATION SEE SHEETS 31 AND 32
FOR FOUNDATION INFORMATION SEE SHEET 35
ALL NOISE BARRIER PANELS TO BE USED
SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
OTHERWISE NOTED.



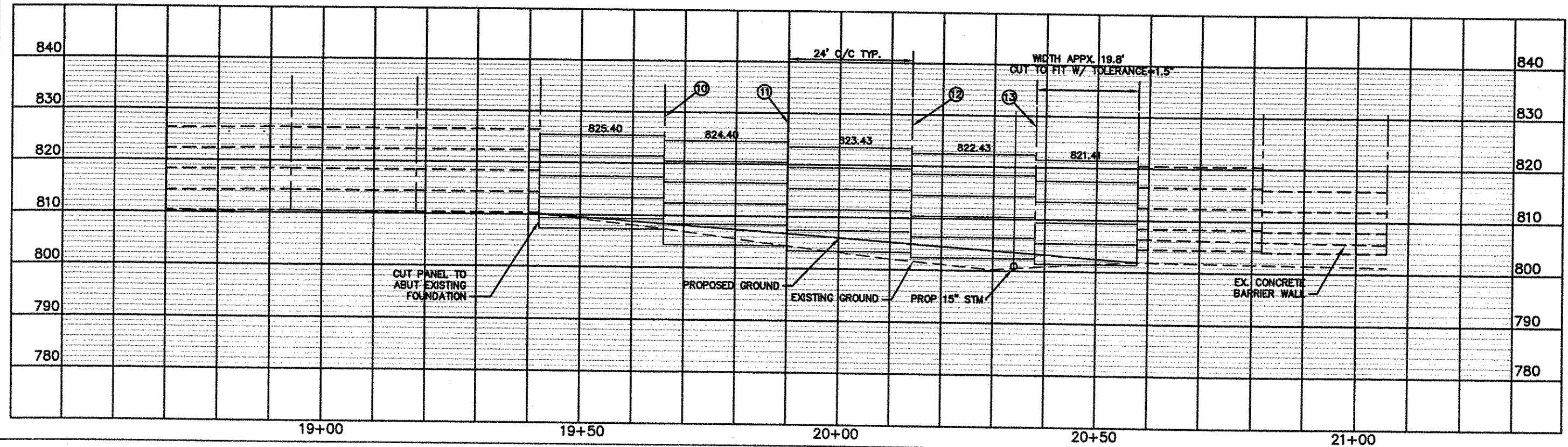
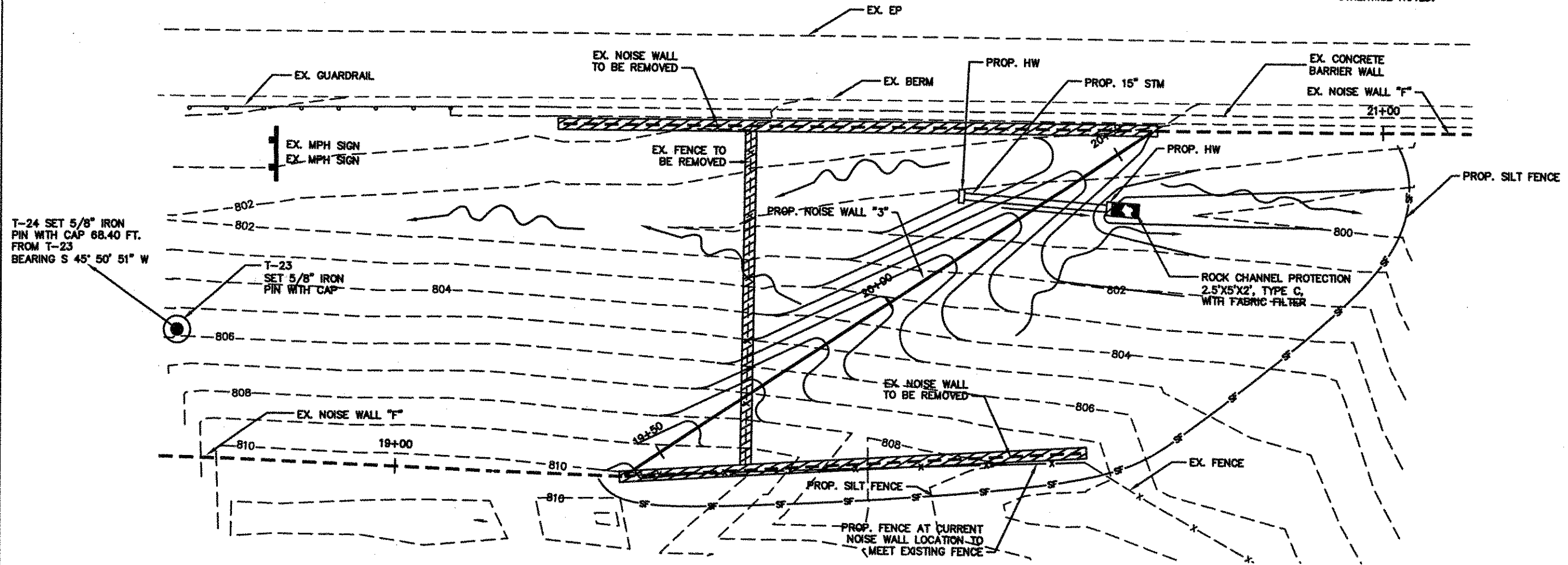
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MRMK

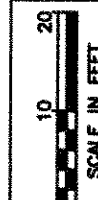
PLAN AND PROFILE SHEET
PROPOSED NOISE WALL "3"

HAM-71-11.08

11/37

179
205





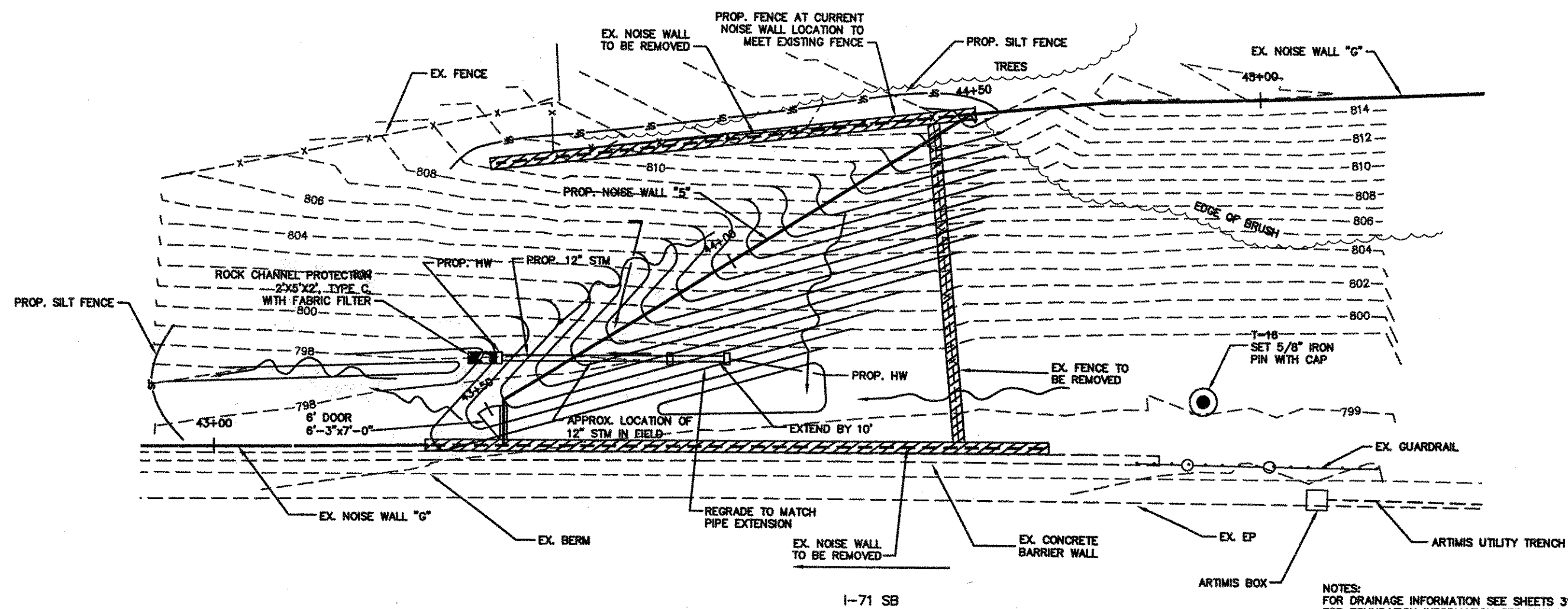
CALCULATED
C.J.L.
CHECKED
M.R.M.K.

PLAN AND PROFILE SHEET
PROPOSED NOISE WALL "5"

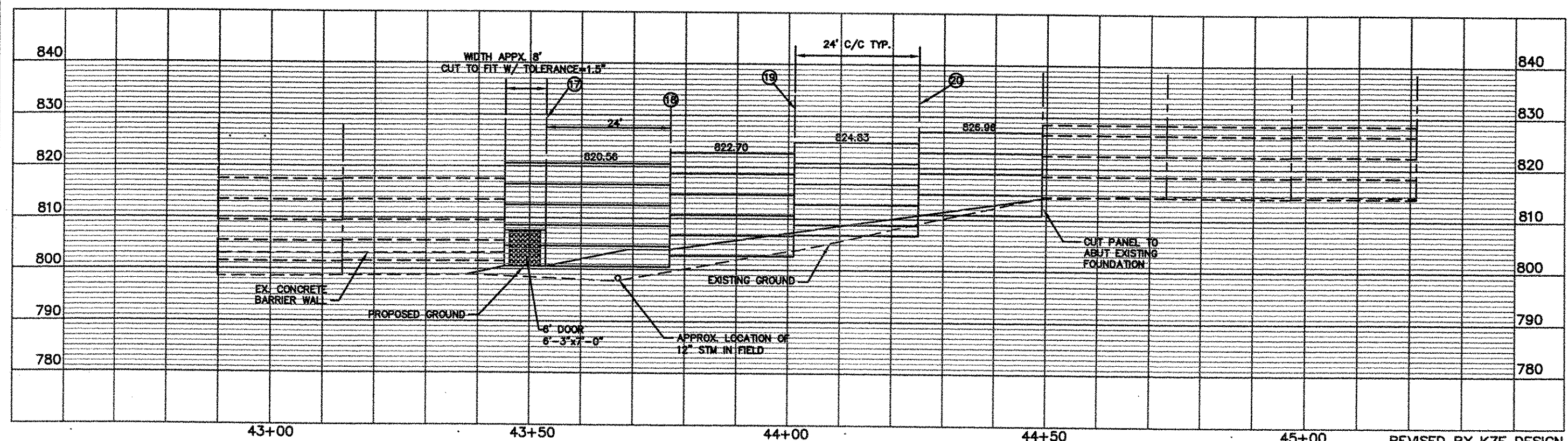
HAM-71-11.08

13/37

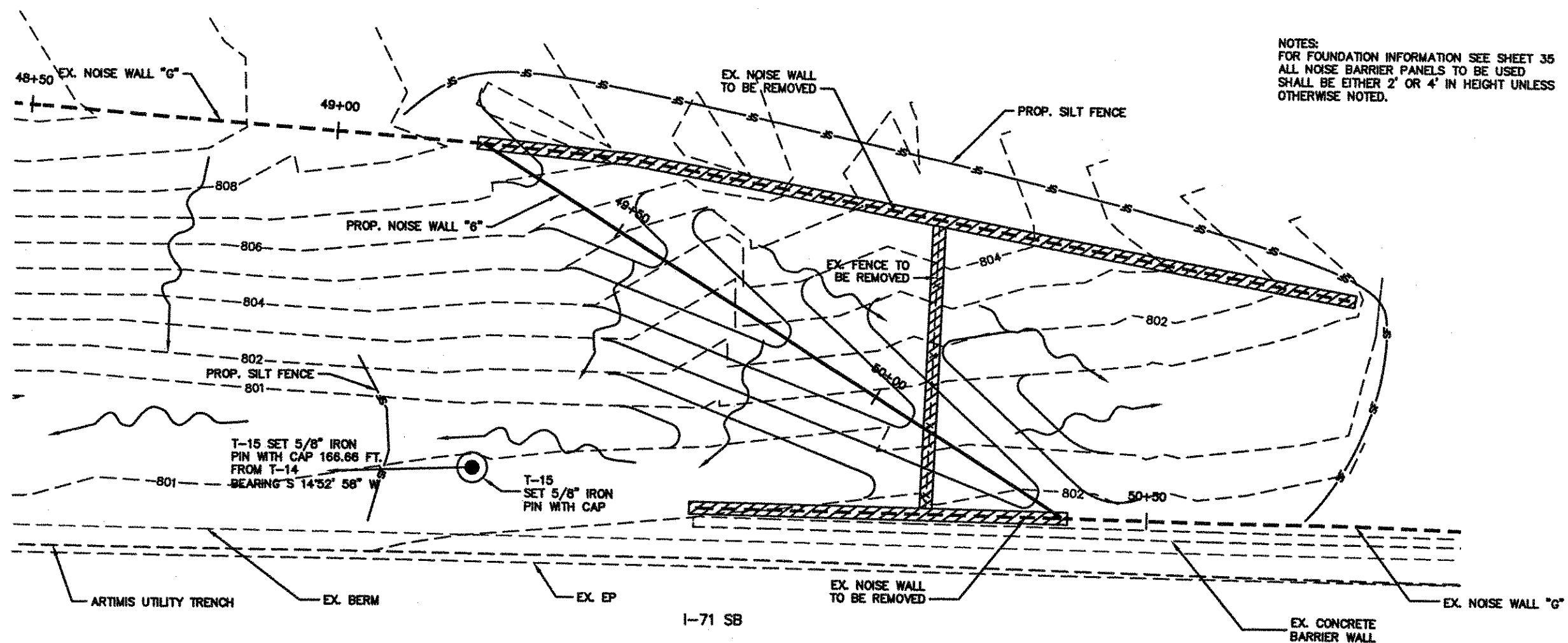
181
205



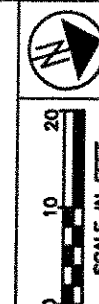
NOTES:
FOR DRAINAGE INFORMATION SEE SHEETS 31 AND 32
FOR FOUNDATION INFORMATION SEE SHEET 35
ALL NOISE BARRIER PANELS TO BE USED
SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
OTHERWISE NOTED.



REVISED BY KZF DESIGN

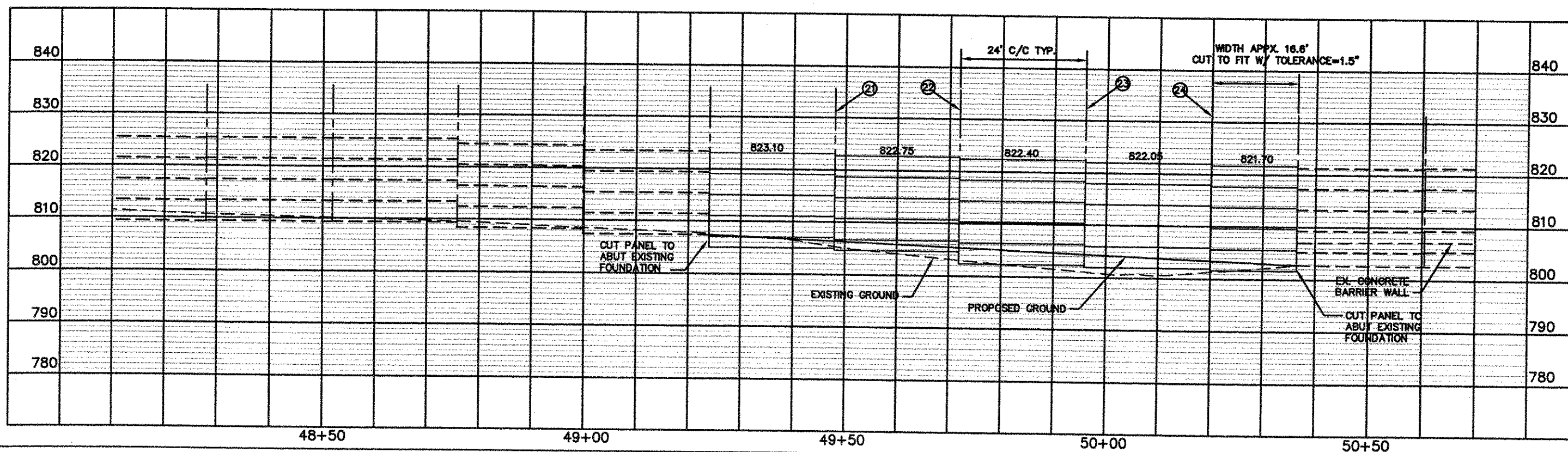


NOTES:
FOR FOUNDATION INFORMATION SEE SHEET 35
ALL NOISE BARRIER PANELS TO BE USED
SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
OTHERWISE NOTED.



CALCULATED
C.A.
CHECKED
MRWK

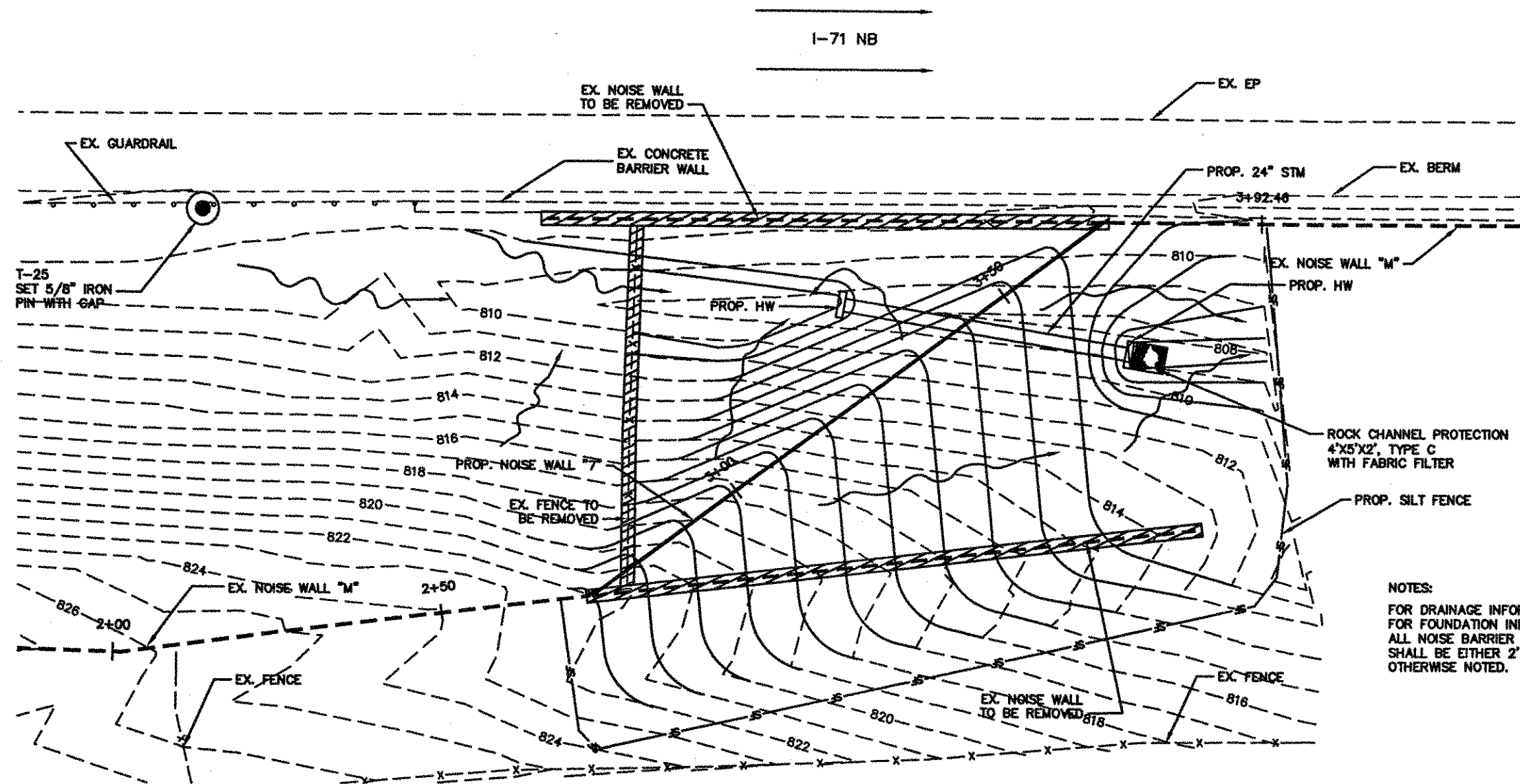
PLAN AND PROFILE SHEET
PROPOSED NOISE WALL "G"



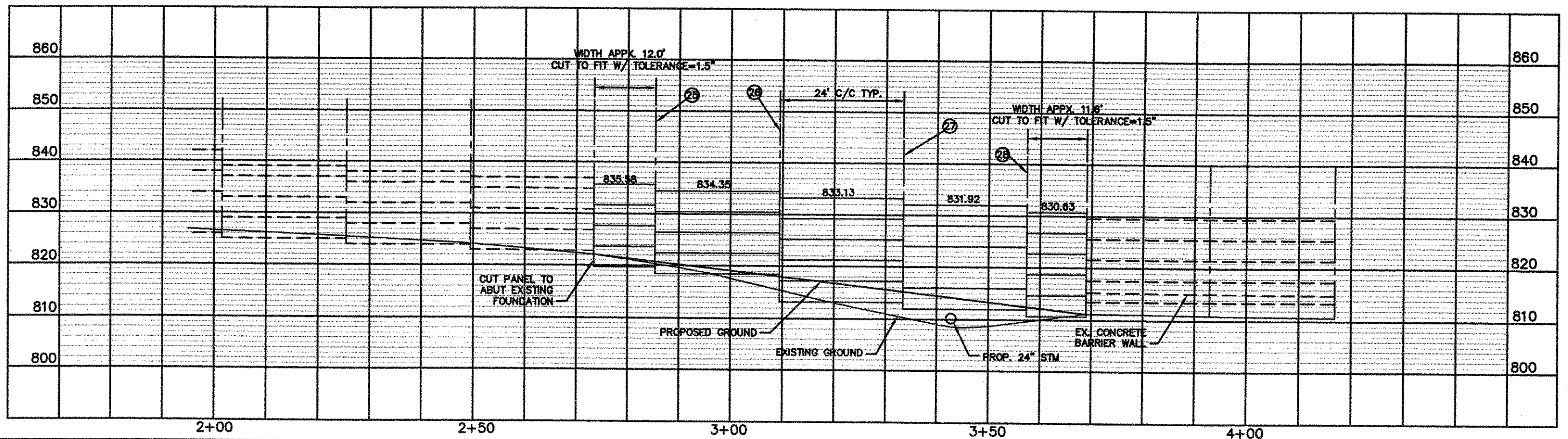
HAM-71-11.08

14/37

182
205



NOTES:
 FOR DRAINAGE INFORMATION SEE SHEETS 31 AND 32
 FOR FOUNDATION INFORMATION SEE SHEET 35
 ALL NOISE BARRIER PANELS TO BE USED
 SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
 OTHERWISE NOTED.



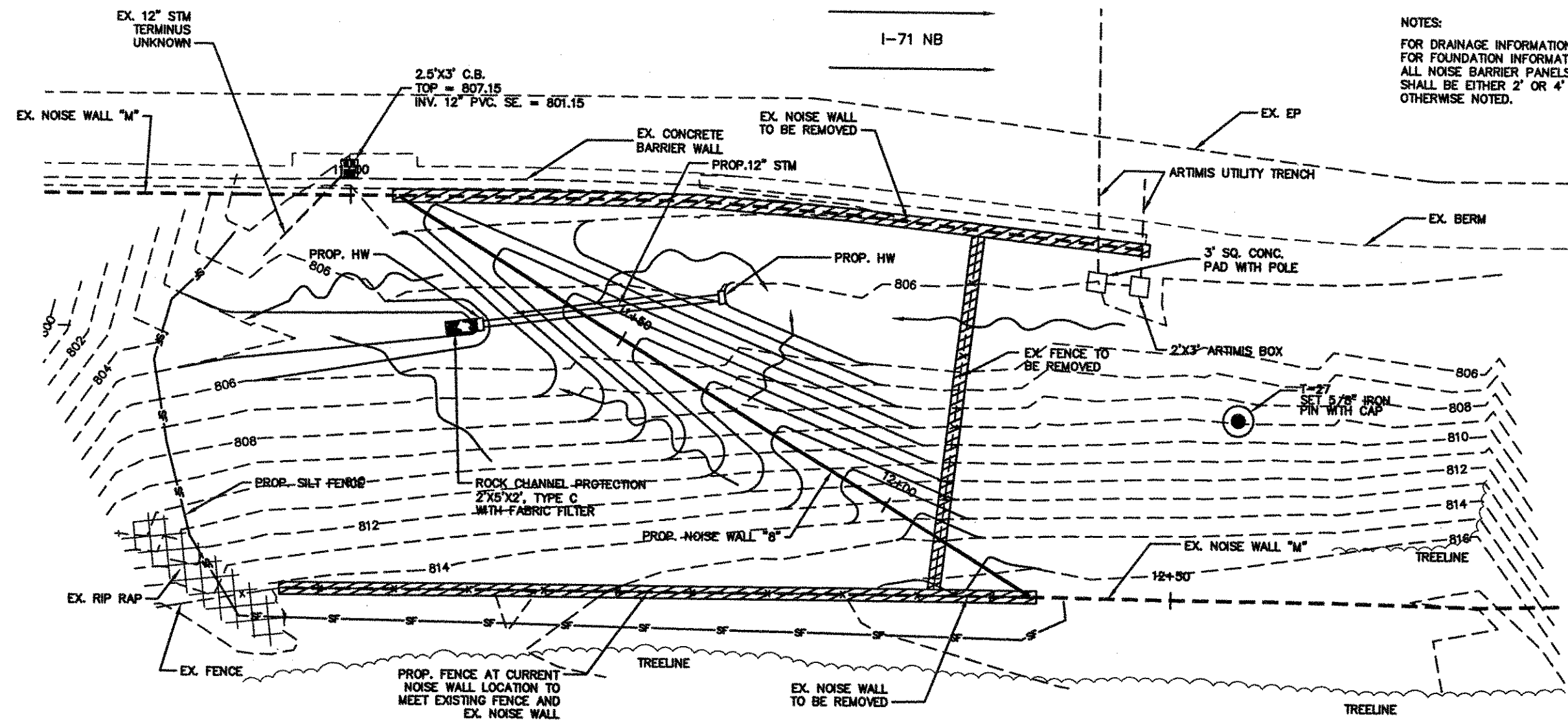
CALCULATED
 C.L.
 CHECKED
 MRMK

PLAN AND PROFILE SHEET
 PROPOSED NOISE WALL

HAM-71-11.08

15/37

183
 205



NOTES:
 FOR DRAINAGE INFORMATION SEE SHEETS 31 AND 32
 FOR FOUNDATION INFORMATION SEE SHEET 35
 ALL NOISE BARRIER PANELS TO BE USED
 SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
 OTHERWISE NOTED.

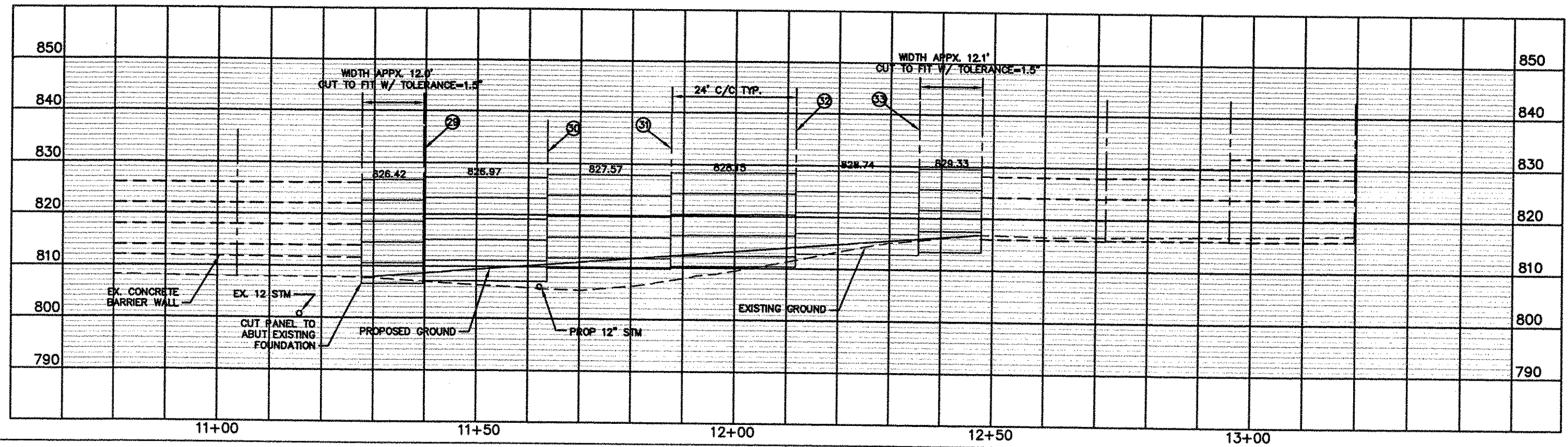
SCALE IN FEET

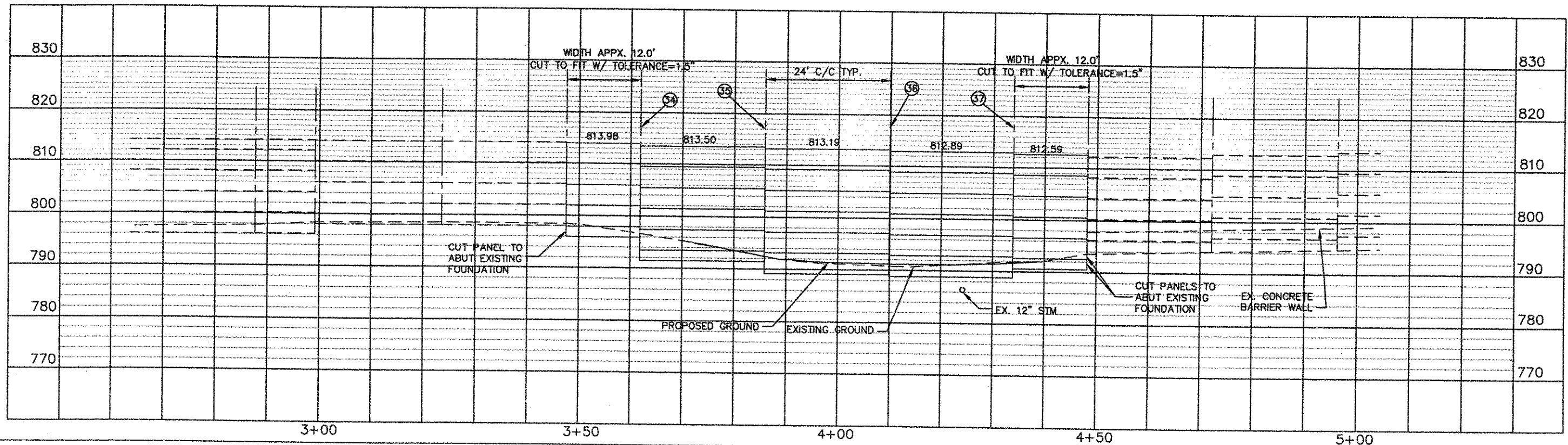
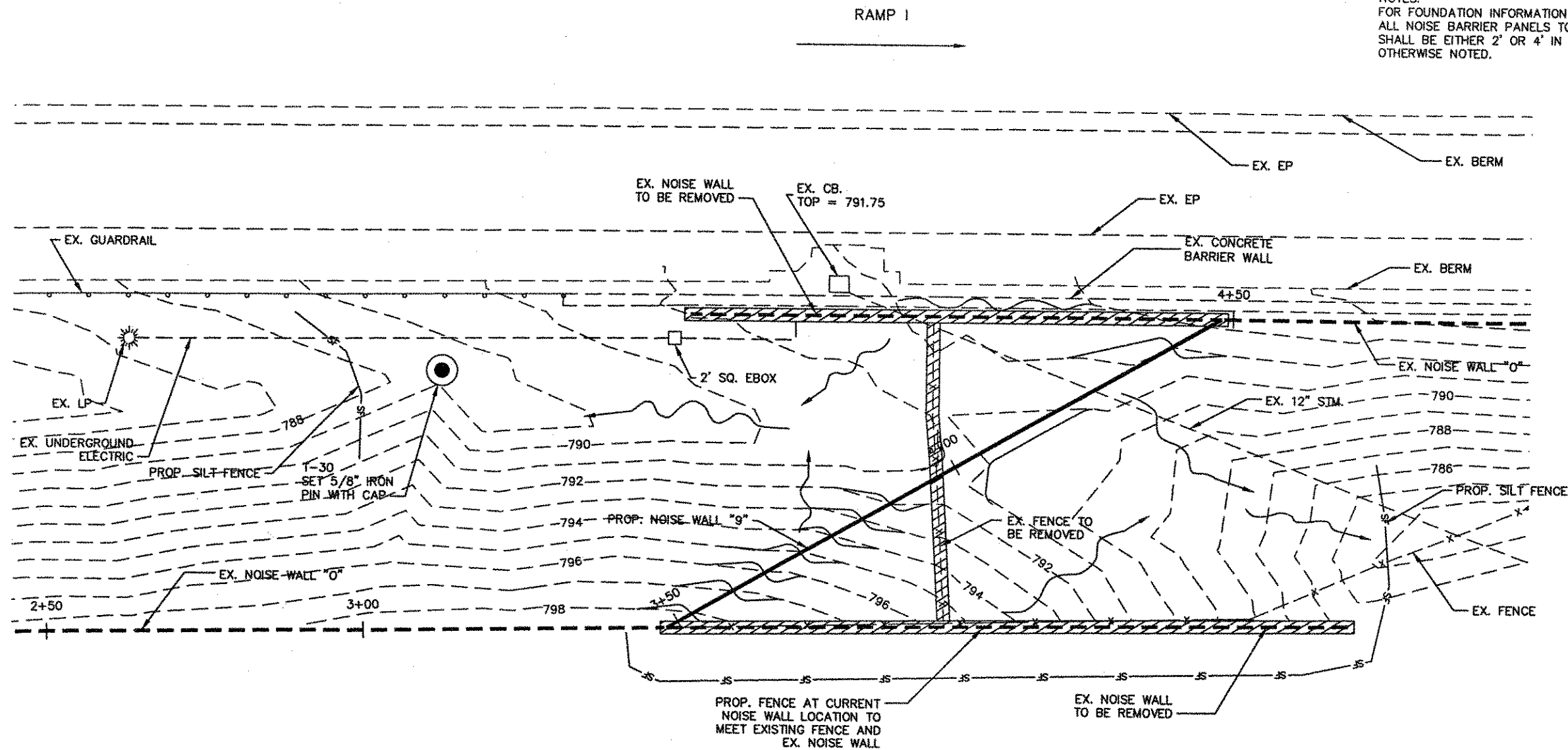
0 10 20

CALCULATED
C.E.

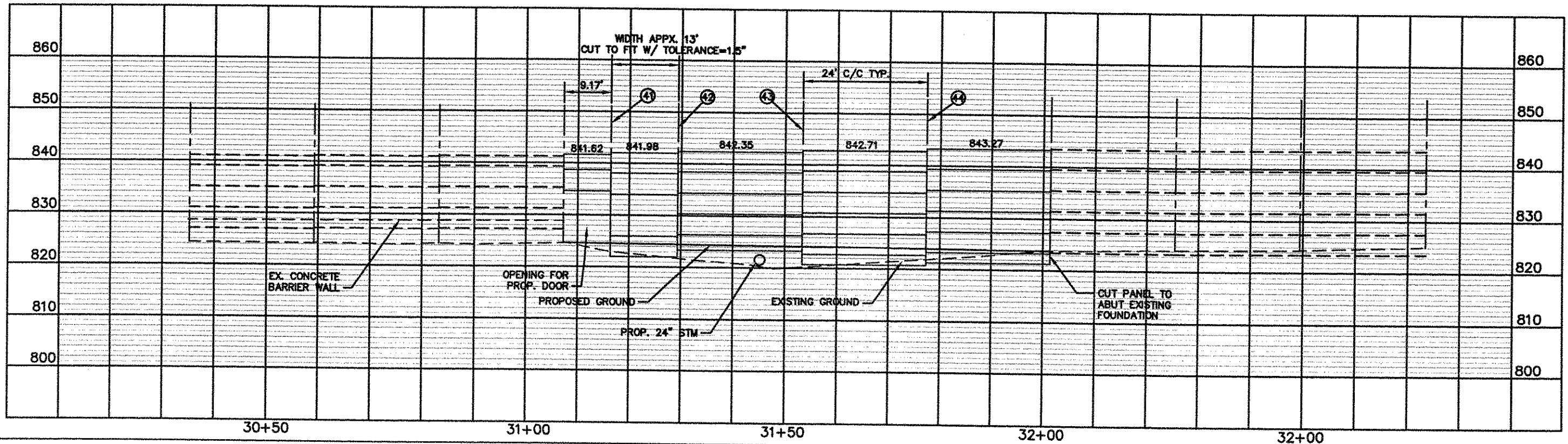
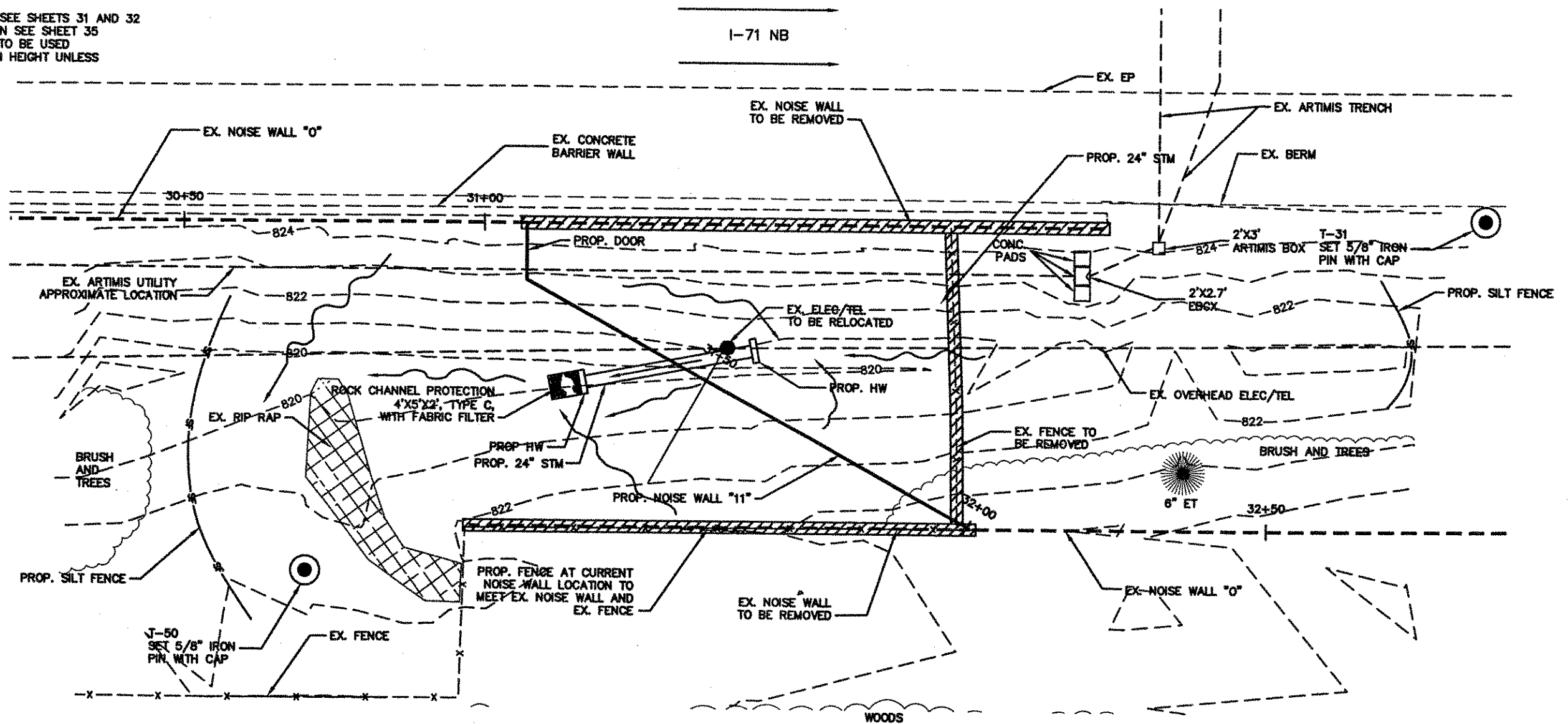
CHECKED
M.R.M.K.

PLAN AND PROFILE SHEET
PROPOSED NOISE WALL "8"





NOTES:
FOR DRAINAGE INFORMATION SEE SHEETS 31 AND 32
FOR FOUNDATION INFORMATION SEE SHEET 35
ALL NOISE BARRIER PANELS TO BE USED
SHALL BE EITHER 2' OR 4' IN HEIGHT UNLESS
OTHERWISE NOTED.



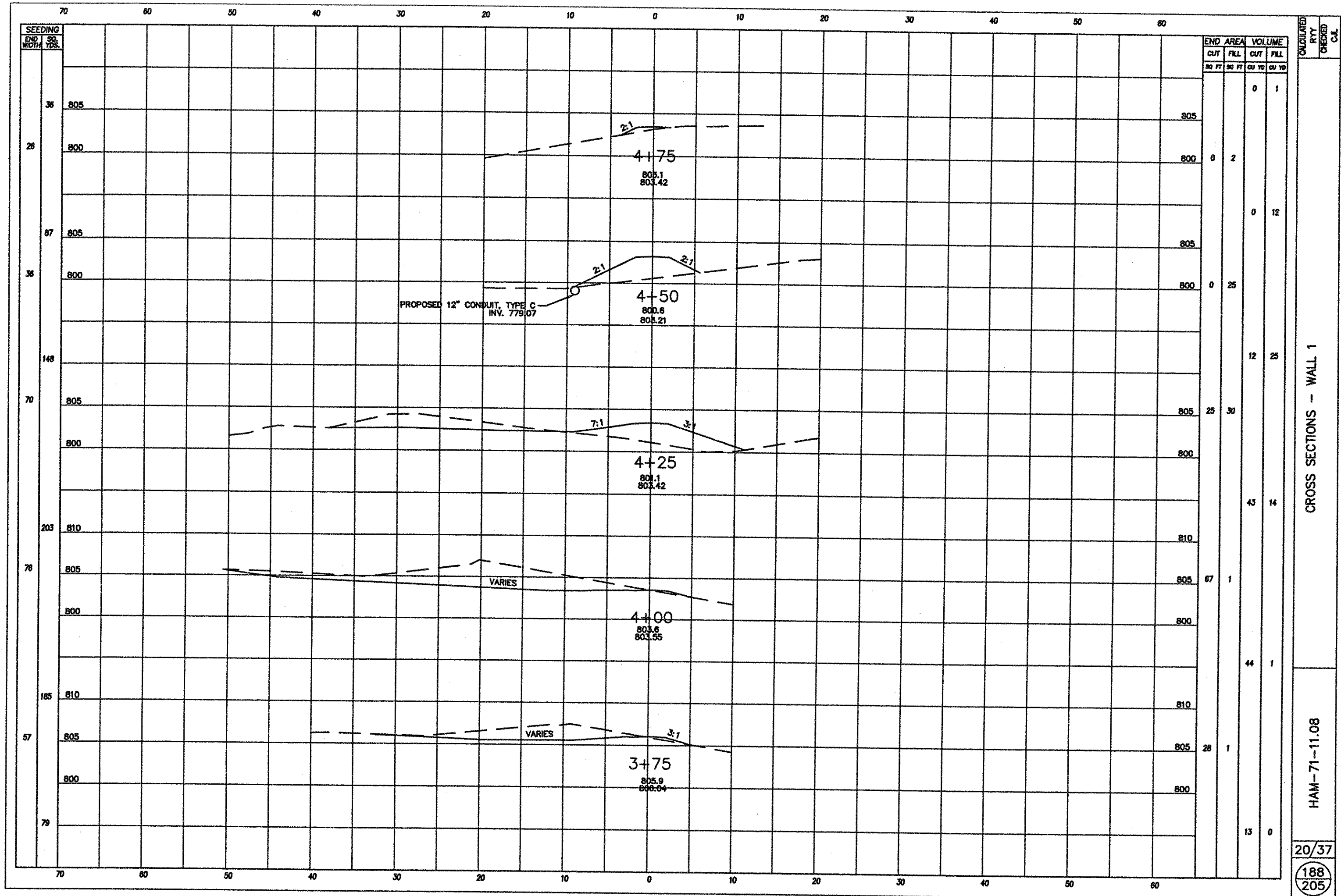
CALCULATED
C.L.
CHECKED
MRUK

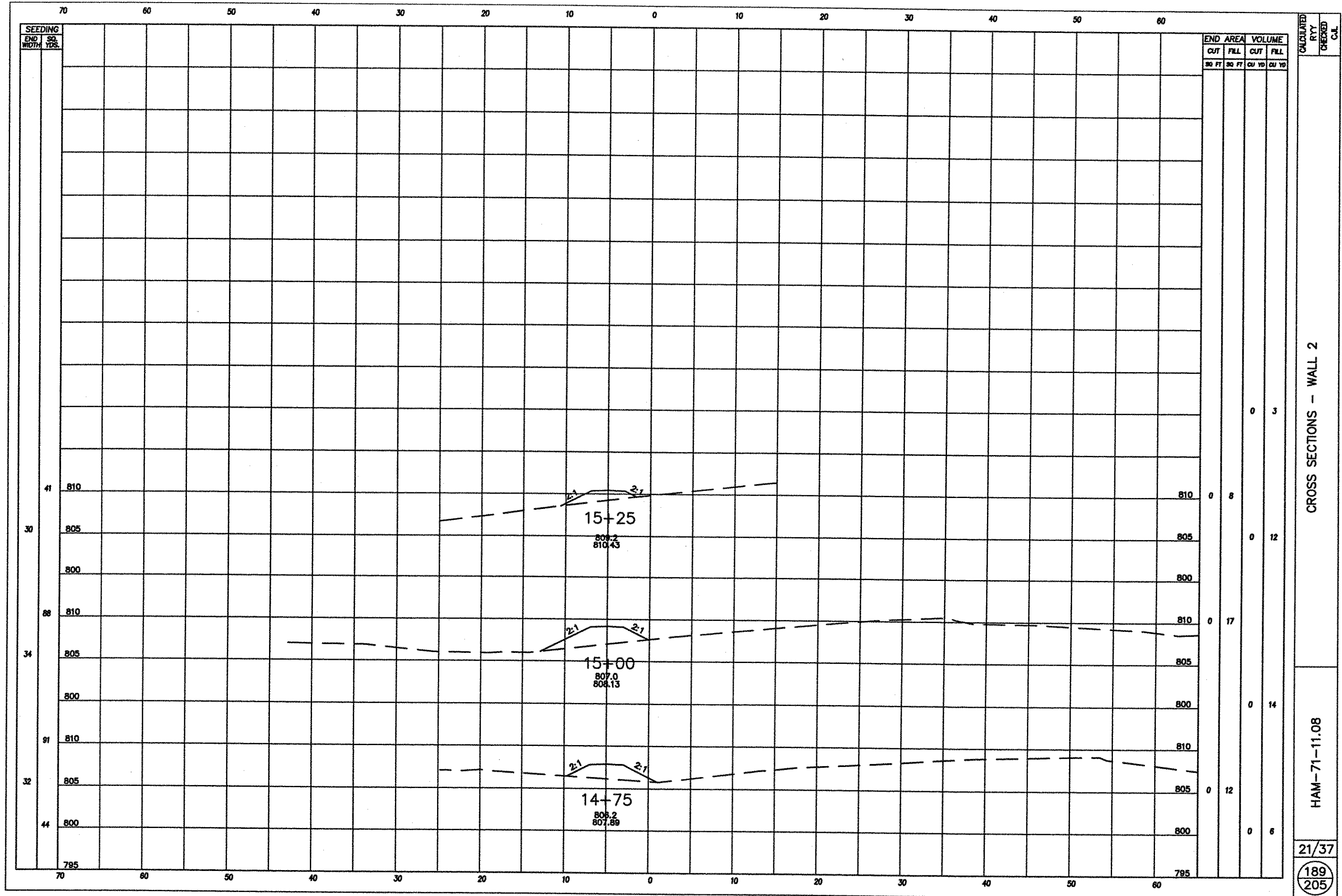
PLAN AND PROFILE SHEET
PROPOSED NOISE WALL "11"

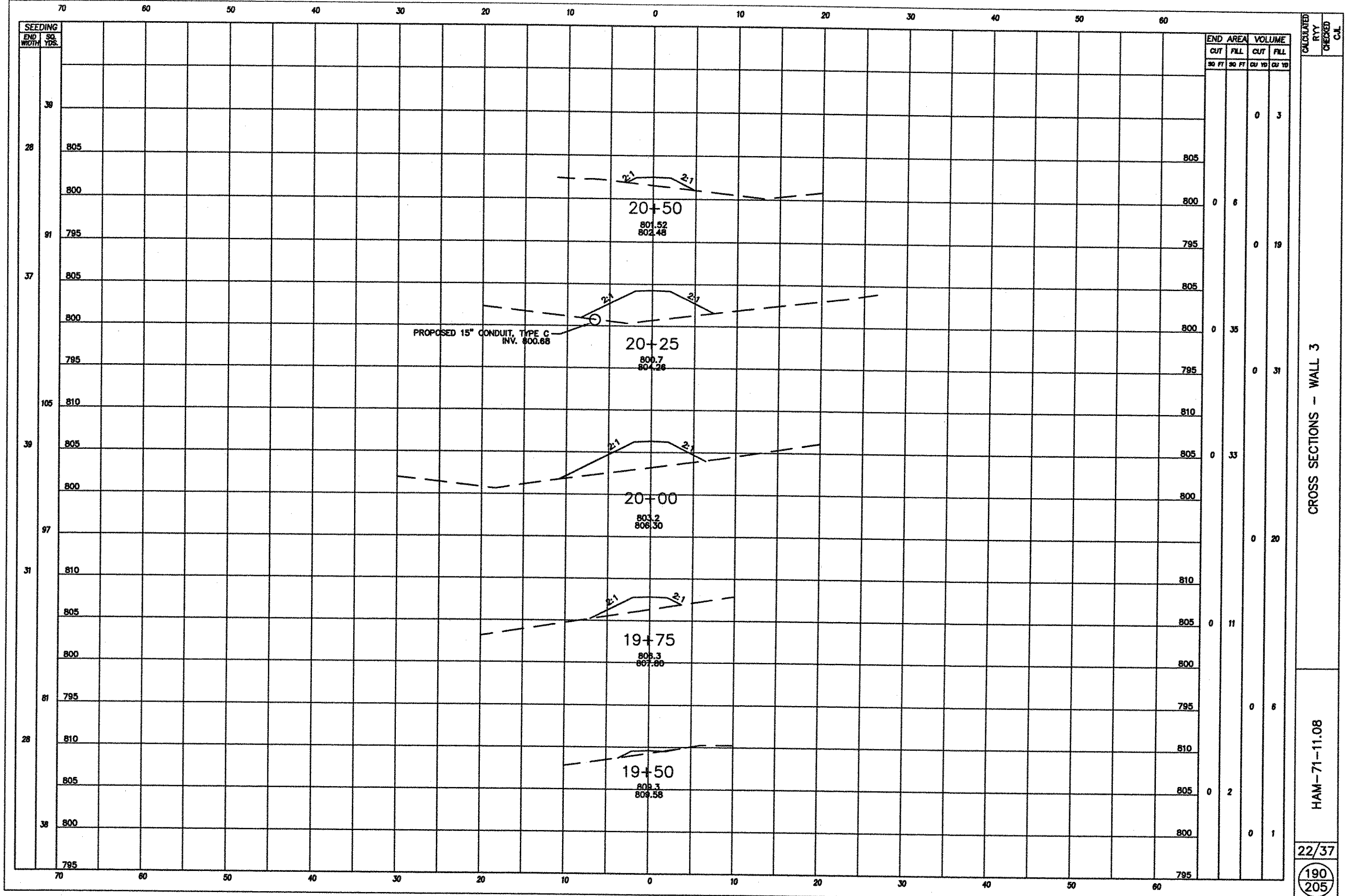
HAM-71-11.08

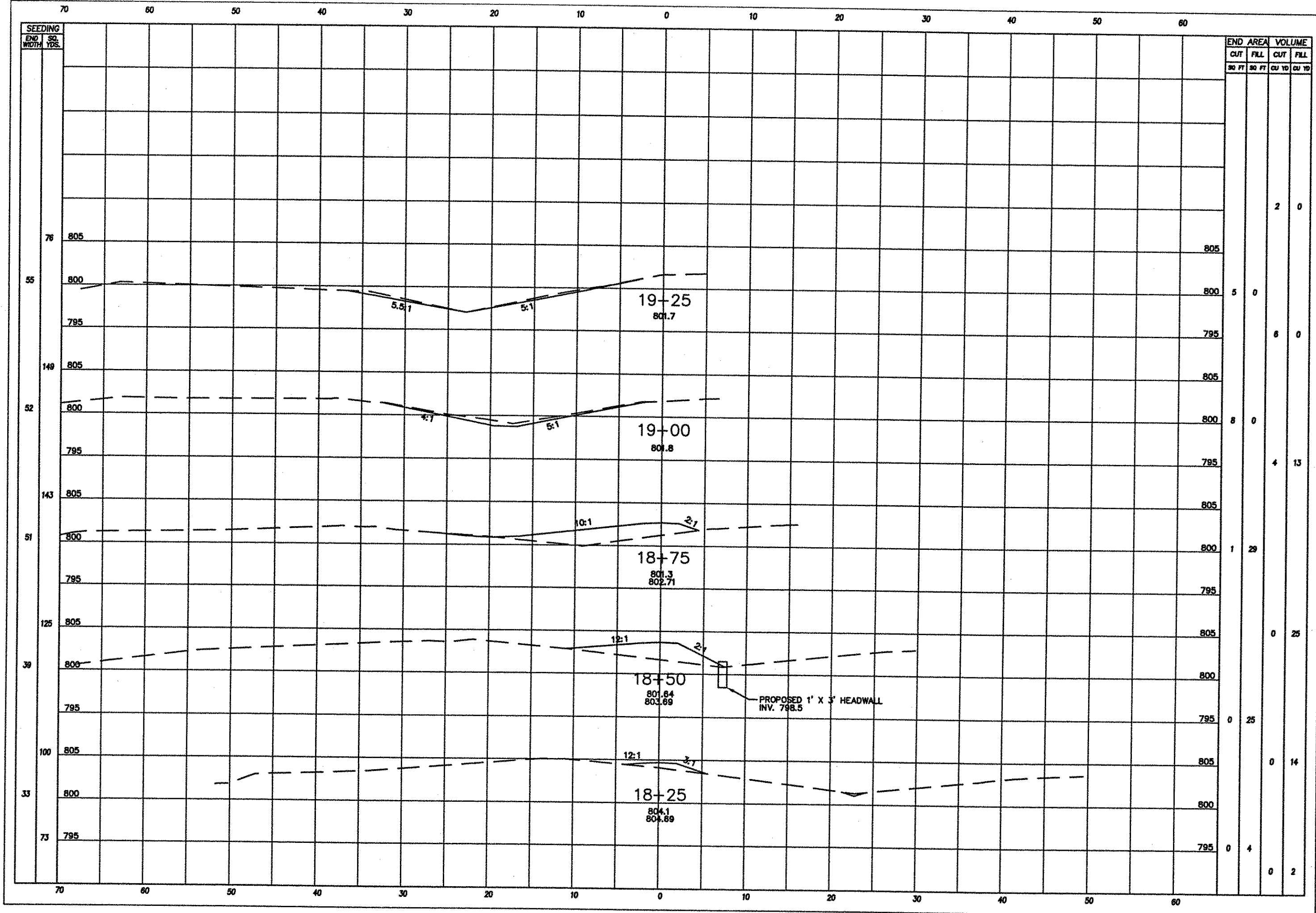
19/37

187
205

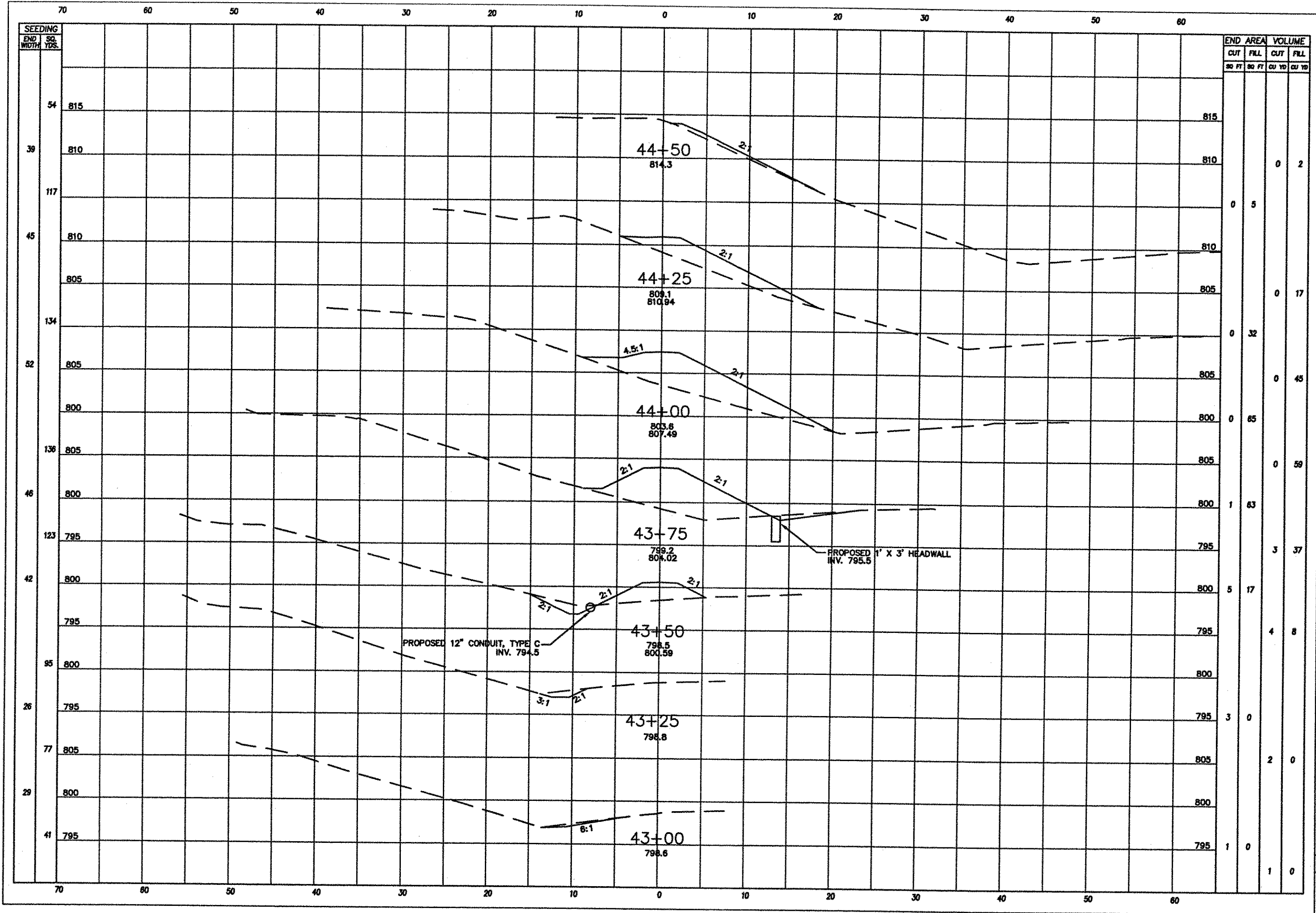


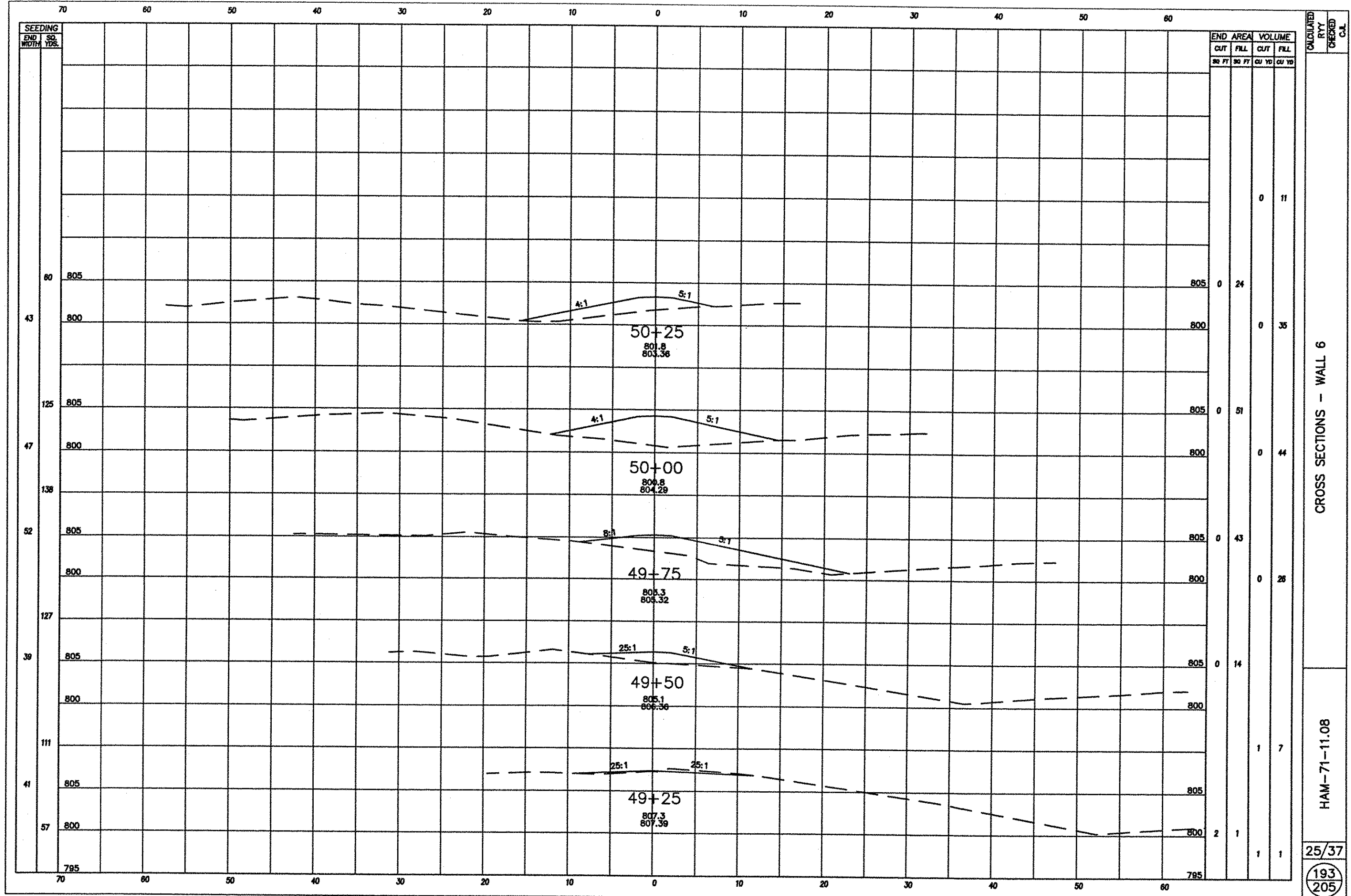


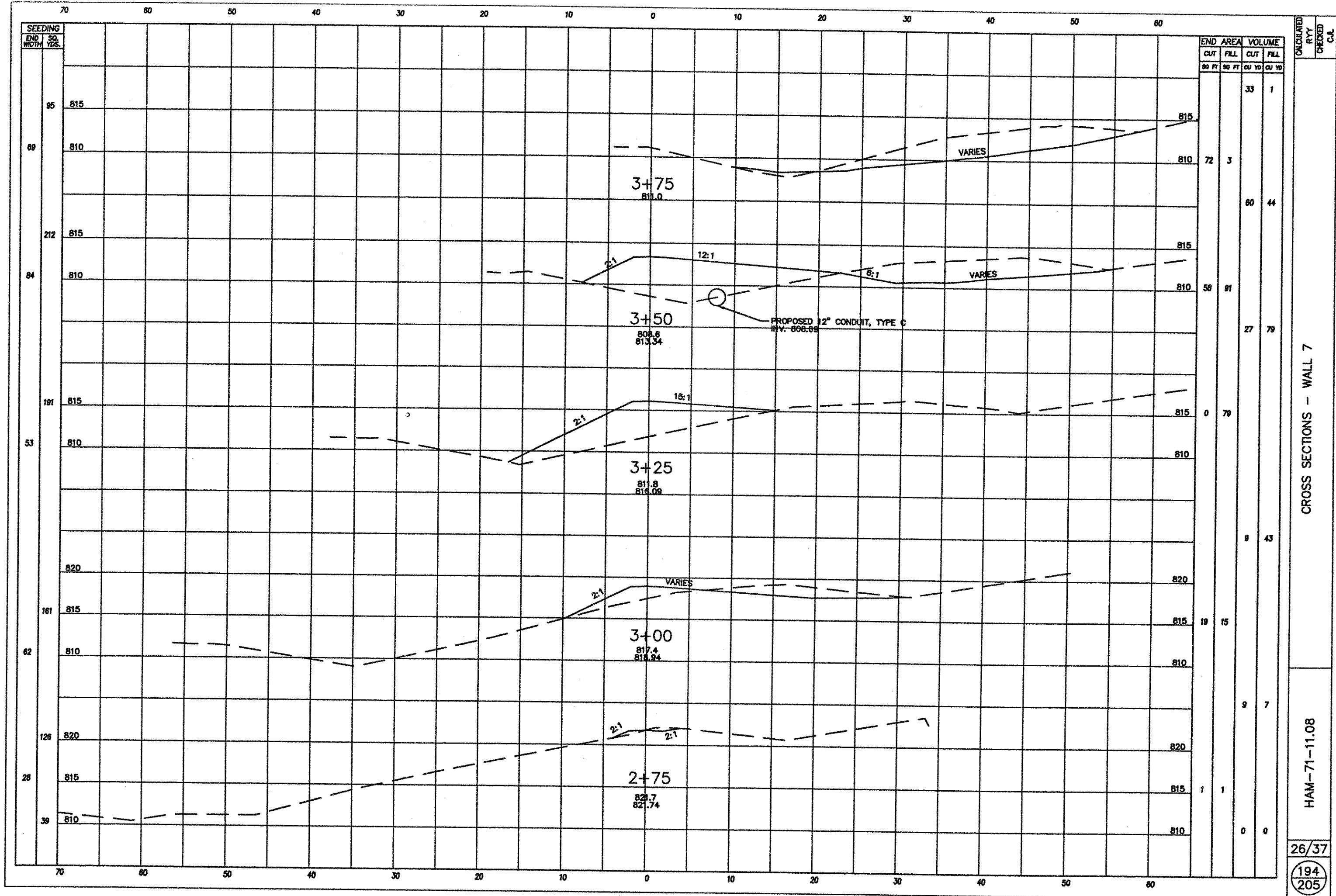


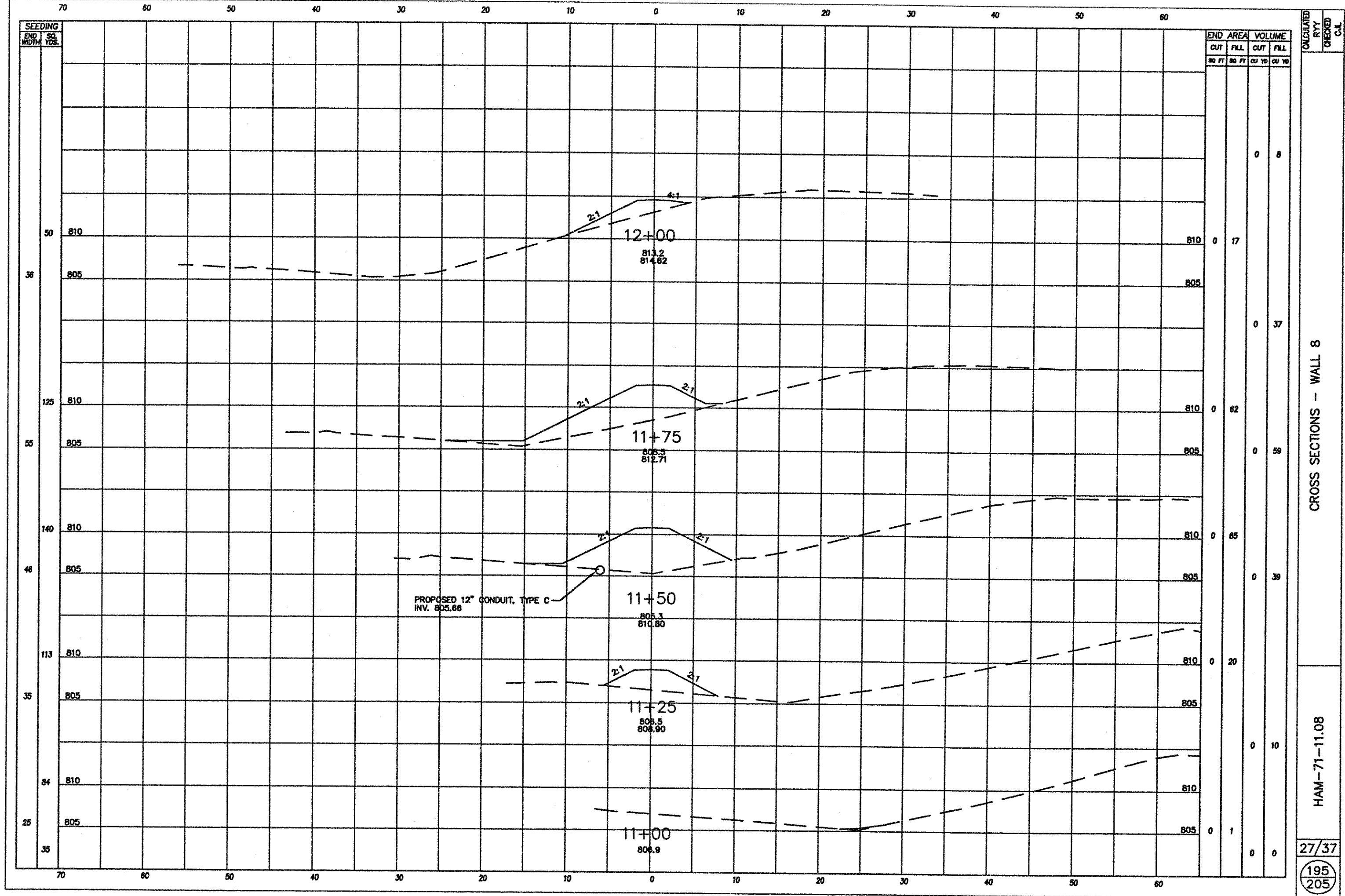


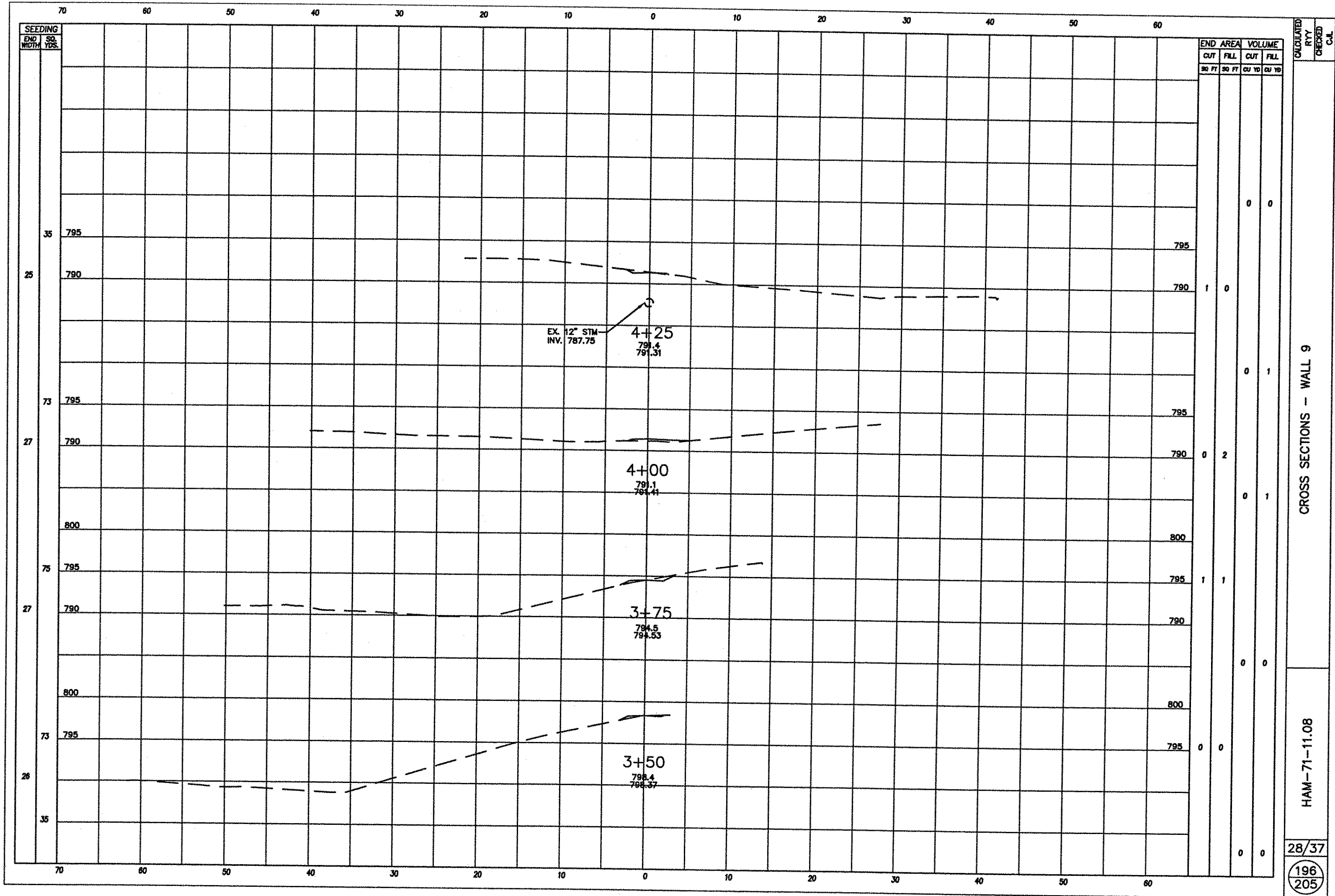
CALCULATED RY	CHECKED C.L.	CROSS SECTIONS - WALL 4			
		HAM-71-11.08			
		23/37	191	205	

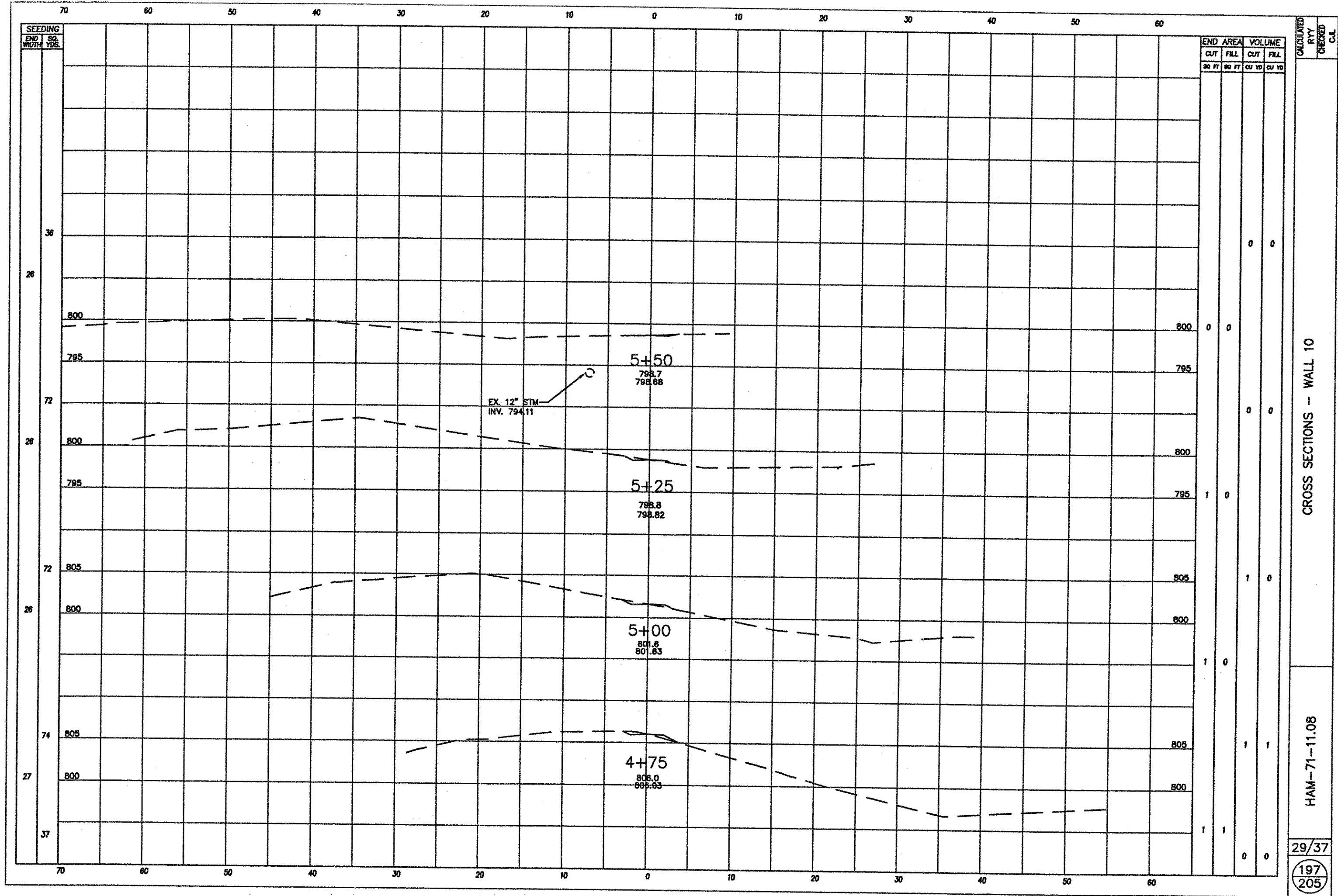


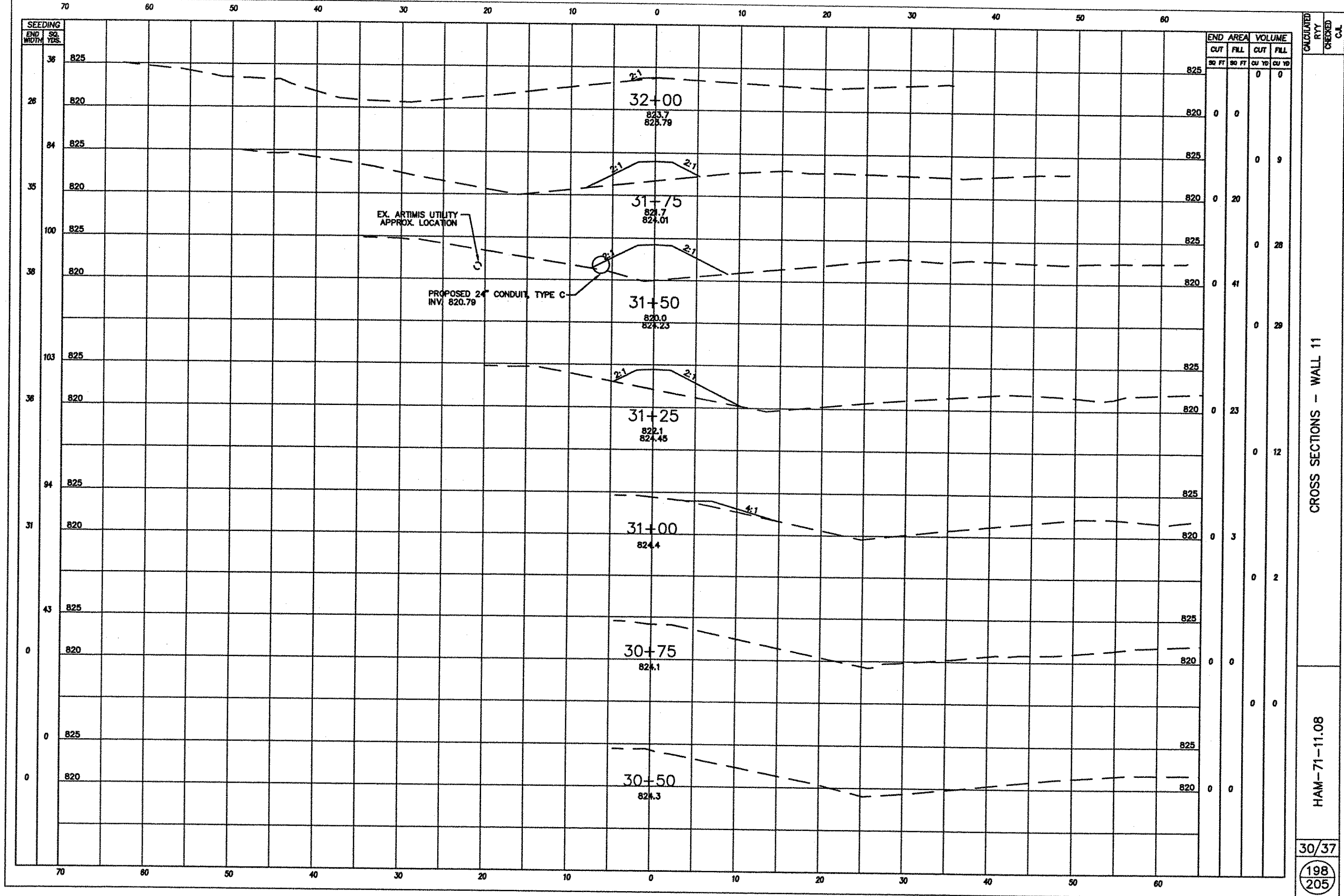


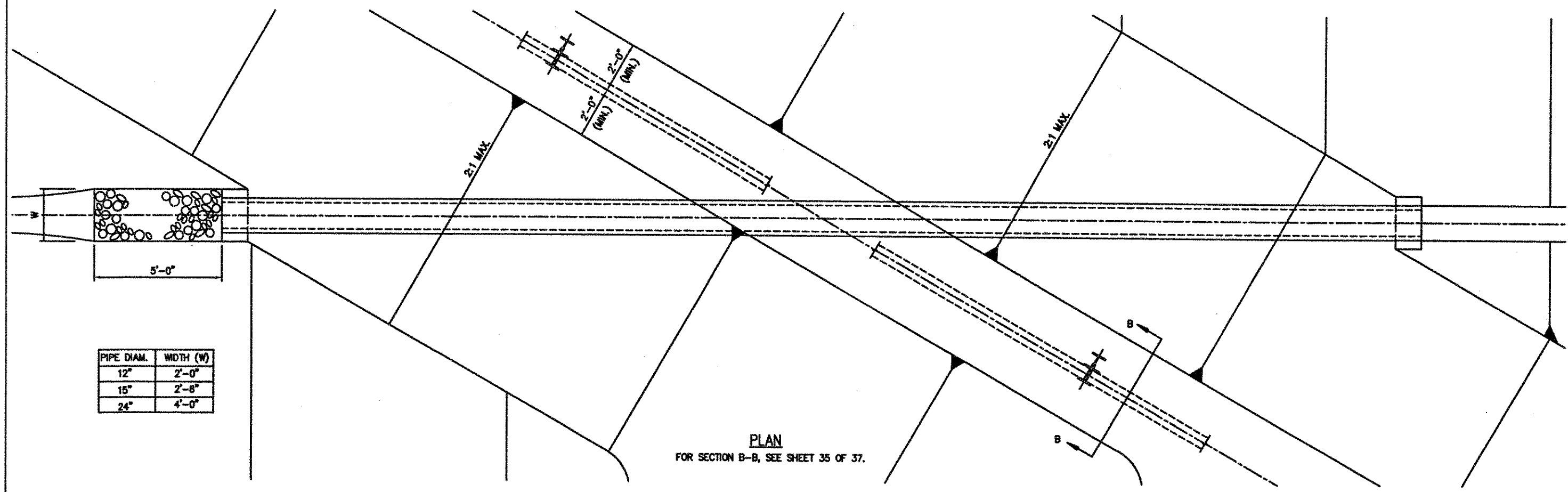




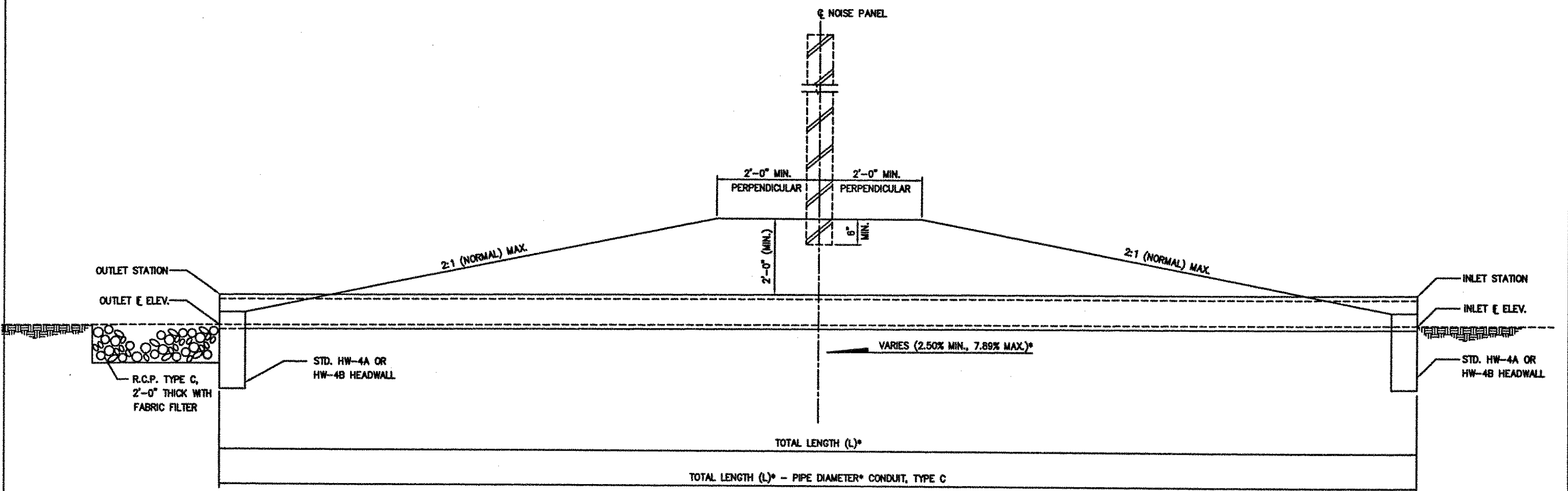








PIPE DIAM.	WIDTH (W)
12"	2'-0"
15"	2'-8"
24"	4'-0"



PROFILE ALONG C₁ PIPE

* SEE TABLE ON SHEET 32 OF 37.

PIPE LOCATION	PIPE DIAMETER (INCH)	TOTAL LENGTH (FEET)	5 YEAR DISCHARGE	10 YEAR DISCHARGE	5 YEAR VELOCITY	10 YEAR VELOCITY	MINIMUM SLOPE (%)	INLET E. ELEV.	INLET STATION	OFFSET	OUTLET E. ELEV.	OUTLET STATION	OFFSET
WALL No. 1	12"	32.00	0.800 CFS	0.850 CFS	1.02 FPS	7.99 FPS	3.13	800.00	4+26.60	8.75 RT.	799.00	4+51.89	10.64 LT.
WALL No. 3	15"	28.00	2.981 CFS	3.168 CFS	2.43 FPS	8.88 FPS	2.86	800.80	20+21.53	9.45 LT.	800.00	20+43.65	7.71 RT.
WALL No. 4	15"	38.00	2.964 CFS	3.150 CFS	2.42 FPS	14.74 FPS	7.89	801.00	18+50.12	8.11 RT.	798.00	18+79.79	15.62 LT.
WALL No. 5	12"	36.00	1.674 CFS	1.779 CFS	2.13 FPS	7.53 FPS	2.78	798.00	43+75.44	15.30 RT.	797.00	43+48.95	9.08 LT.
WALL No. 7	24"	45.00	9.874 CFS	10.177 CFS	3.14 FPS	15.14 FPS	4.44	810.00	3+29.08	13.76 LT.	808.00	3+60.35	18.60 RT.
WALL No. 8	12"	40.00	0.707 CFS	0.751 CFS	0.90 FPS	7.14 FPS	2.50	806.00	11+60.45	14.39 LT.	805.00	11+29.17	10.56 RT.
WALL No. 11	24"	30.00	6.146 CFS	6.531 CFS	1.96 FPS	13.11 FPS	3.33	821.00	31+55.47	8.47 LT.	820.00	31+32.42	10.73 RT.

TABLE (HYDRAULIC INFORMATION)

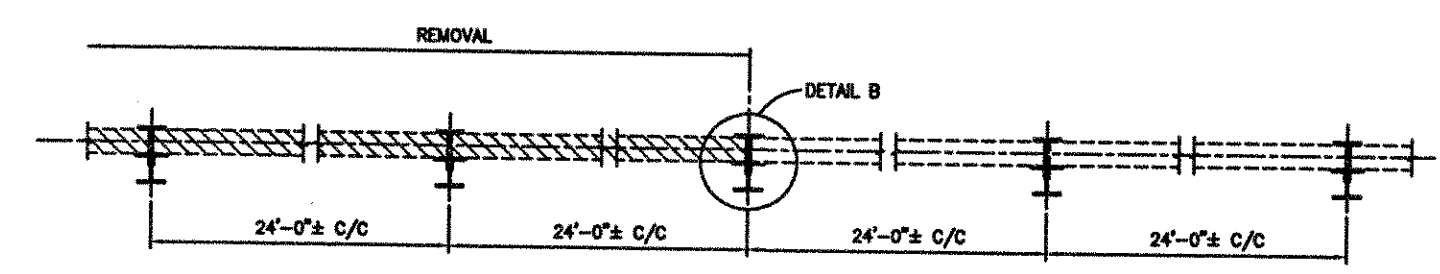
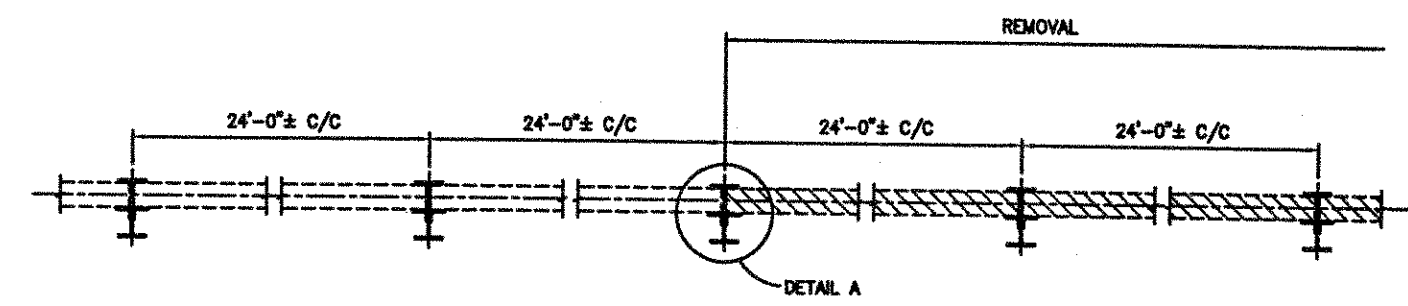
NOTES

1. ALL STORM SEWERS PIPES SHALL CONFORM TO AASHTO SPECIFICATIONS.
2. TRENCHES SHALL BE COMPACTED AS PER ITEM 603, UNLESS OTHERWISE NOTED ON THE PLANS. ANY SETTLEMENT WHICH OCCURS DURING THE GUARANTEE PERIOD, SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE STATE.
3. THE CONTRACTOR IS REQUIRED TO INSPECT THE PROJECT SITE AND FULLY INFORM HIMSELF CONCERNING ALL CONDITIONS AFFECTING THE SCOPE OF THE WORK. FAILURE TO DO SO SHALL NOT RELIEVE HIM FROM ANY RESPONSIBILITY IN THE PERFORMANCE OF THE CONTRACT.
4. ALL TREES (OR SHRUBS) WHETHER SHOWN OR NOT SHOWN ON THE PLANS ARE TO BE PRESERVED, UNLESS APPROVAL IS GIVEN IN WRITING BY THE PROJECT ENGINEER. PAYMENT WILL BE MADE UNDER ITEM 201, CLEARING AND GRUBBING.
5. INVESTIGATION, LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ADDITIONALLY, THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING UTILITY RELOCATIONS WITH THE OWNER OF THE UTILITY.

CALCULATED
MRWK
CHECKED
RYV

DRAINAGE STRUCTURE DETAILS

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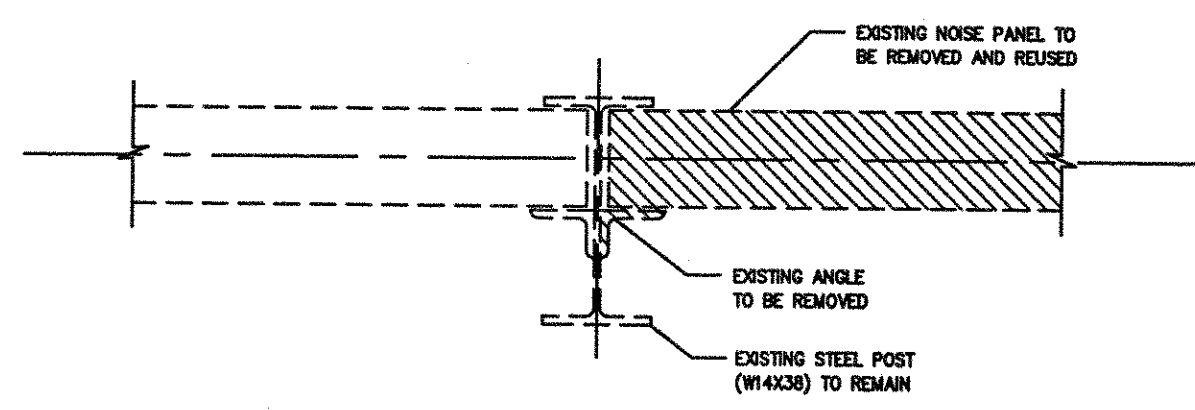


PLAN

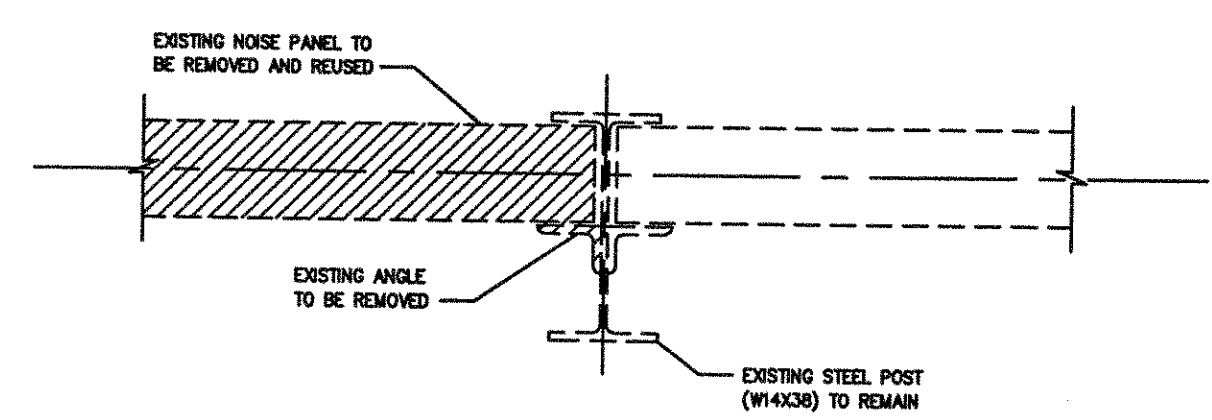
NOTES

THE EXISTING ANGLES SHOULD BE REMOVED AND THE SURFACE OF THE EXISTING STEEL POSTS (W14X38) SHALL BE GROUND SMOOTH TO PROVIDE FOR THE PLACEMENT OF NEW ANGLES AS SHOWN ON THE DETAILS ON SHEET 34 OF 37.

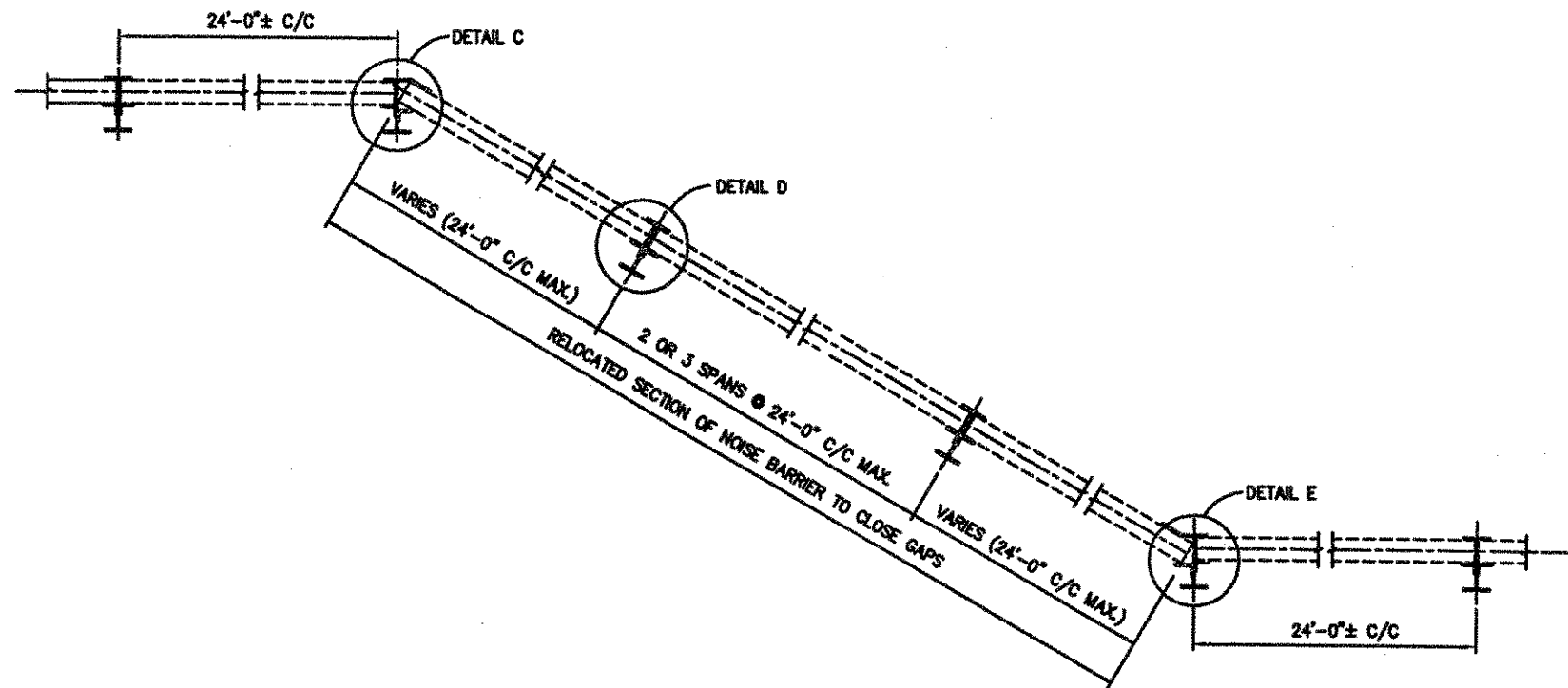
LEGEND
 INDICATES AREA TO BE REMOVED



DETAIL A

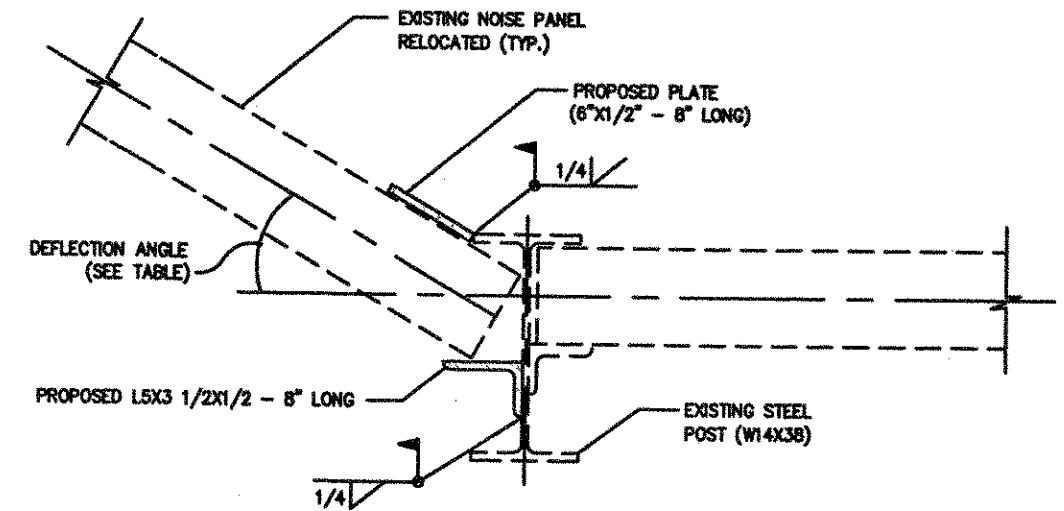


DETAIL B

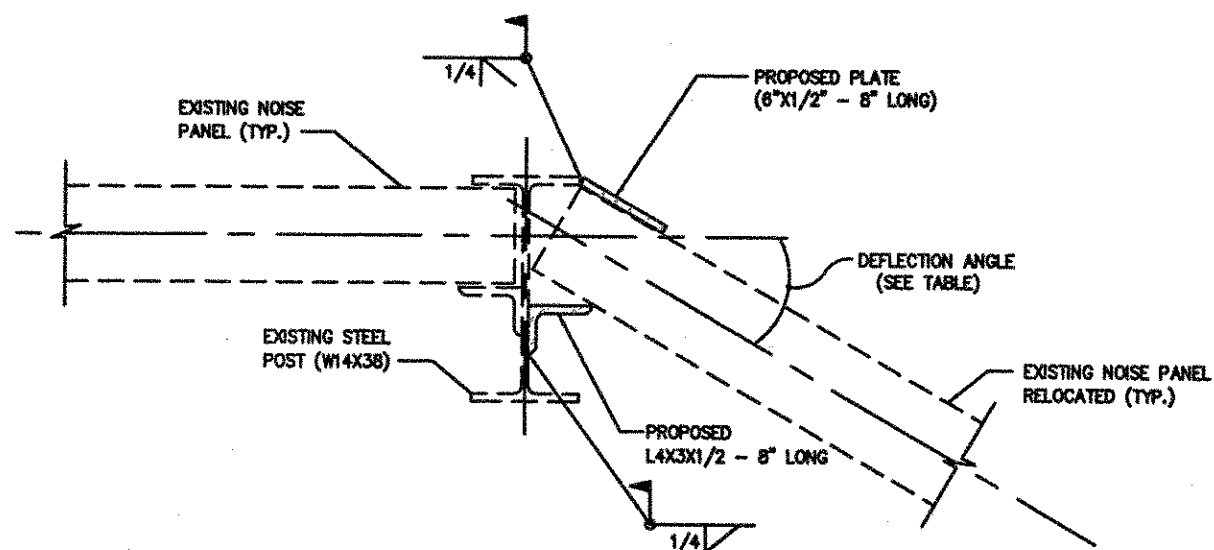


PLAN

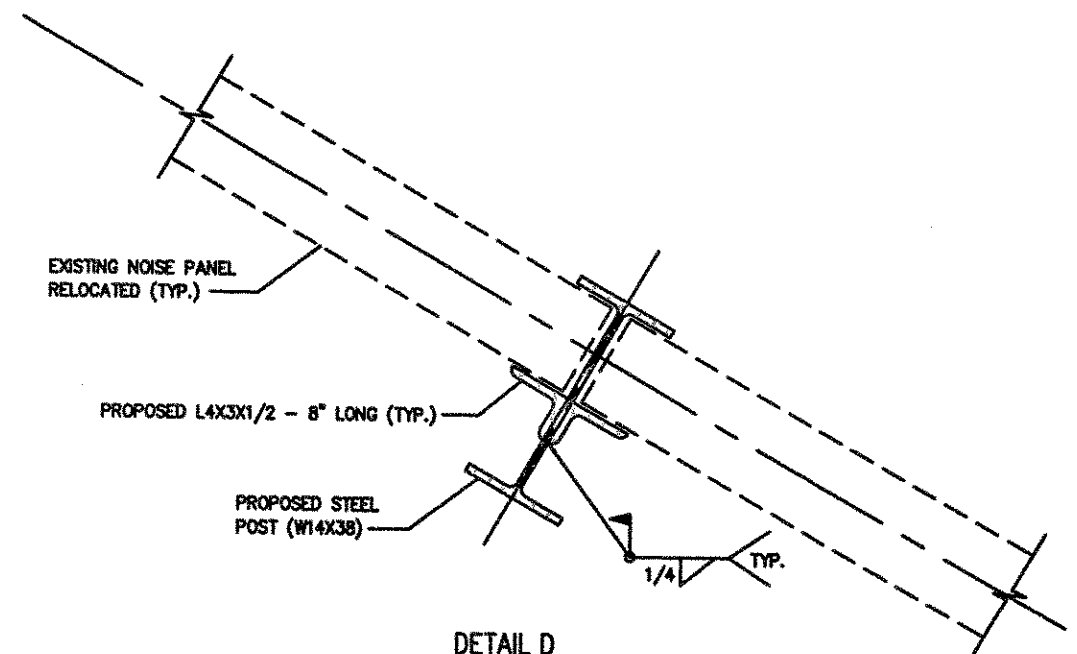
DEFLECTION ANGLE TABLE			
WALL NO.	LOCATION	WEST WALL ANGLE	EAST WALL ANGLE
1	NW G, STA. 648+00 SB	23°45'40"	26°37'18"
2	NW F, STA. 657+00 NB	36°12'35"	36°22'60"
3	NW F, STA. 663+00 NB	33°48'53"	35°38'26"
4	NW G, STA. 663+00 SB	26°42'23"	32°25'56"
5	NW G, STA. 688+00 SB	26°26'22"	31°17'27"
6	NW G, STA. 694+00 SB	27°57'28"	31°15'30"
7	NW M, STA. 787+00 NB	36°42'16"	29°36'27"
8	NW M, STA. 775+00 NB	31°35'51"	30°04'13"
9	NW O, STA. 796+00 NB	29°52'41"	28°46'41"
10	NW P, STA. 796+00 SB	25°32'28"	34°22'47"
11	NW O, STA. 824+00 NB	28°56'54"	29°15'15"



DETAIL E



DETAIL C



DETAIL D

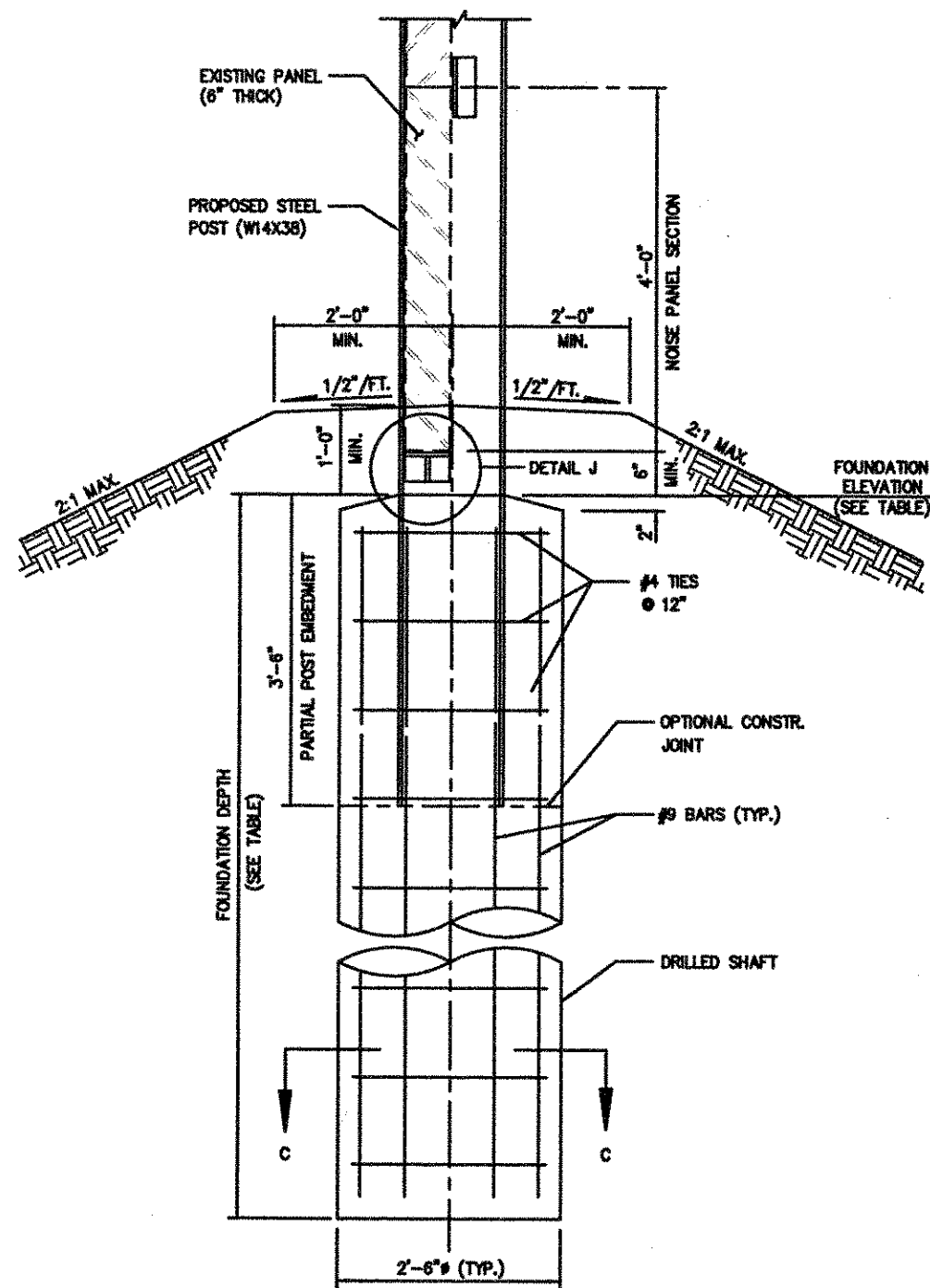
CALCULATED
MRMK
CHECKED
RTY

NOISE BARRIER DETAILS

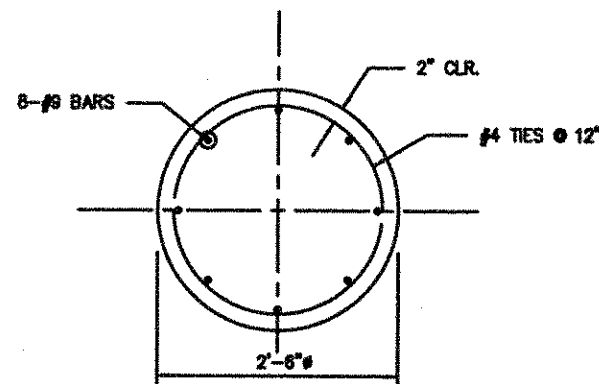
HAM-71-11.08

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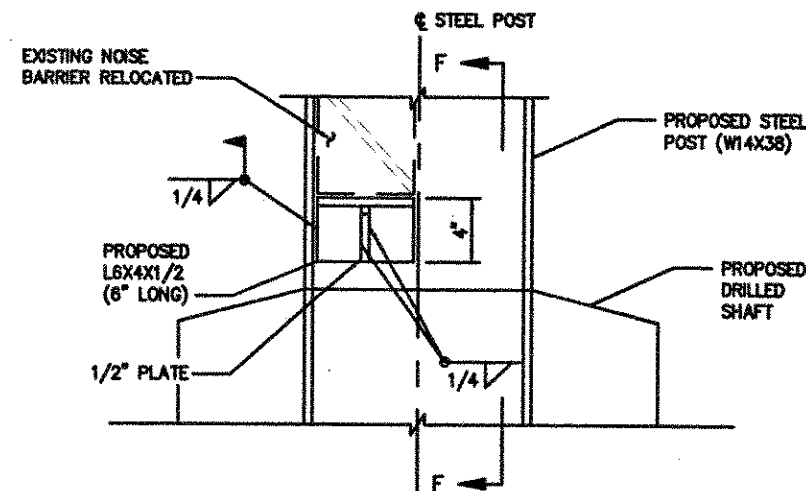
202
205



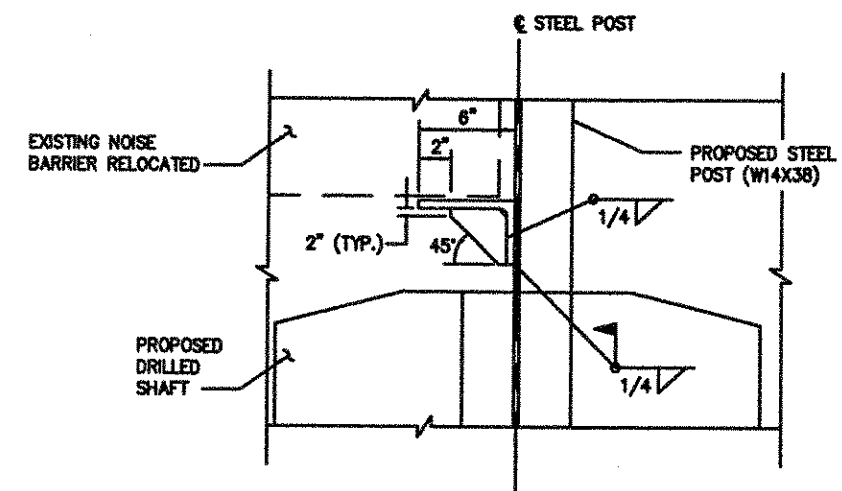
SECTION B-B
REFER TO SHEET 31 OF 37



SECTION C-C



DETAIL J

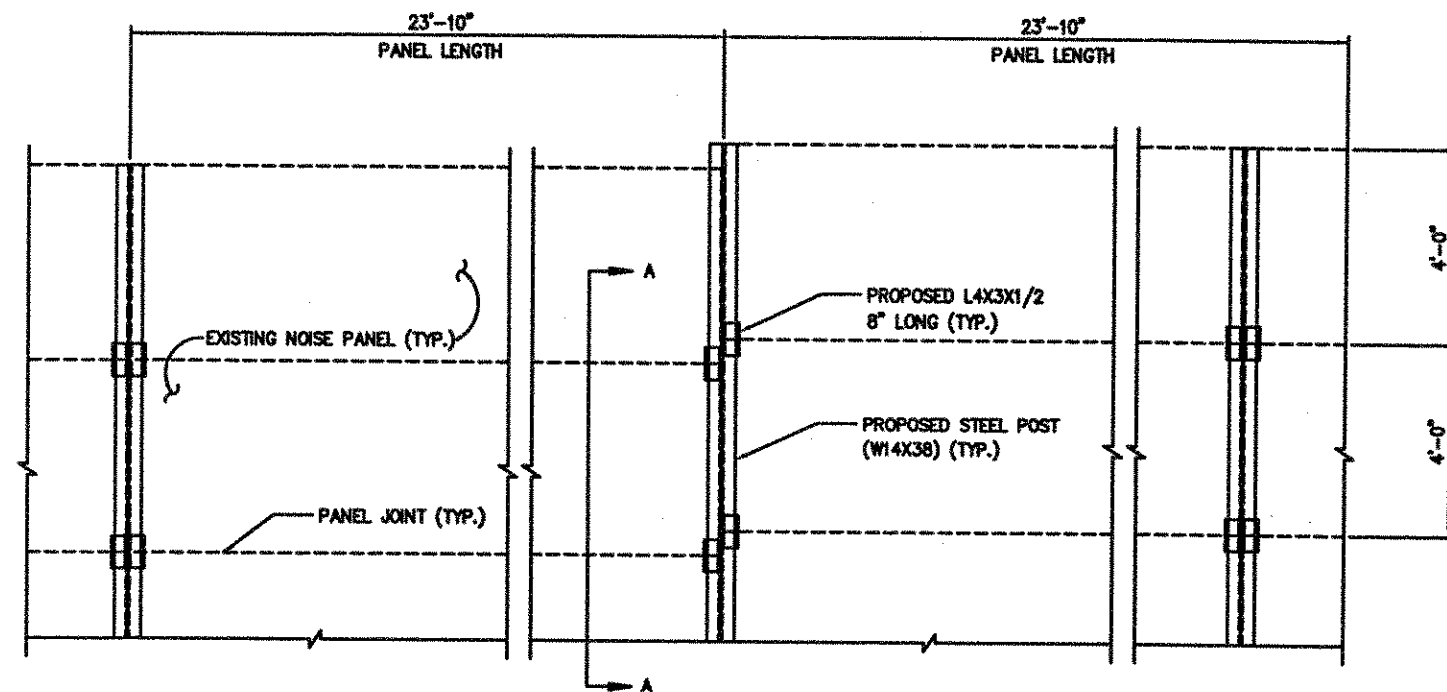


SECTION F-F

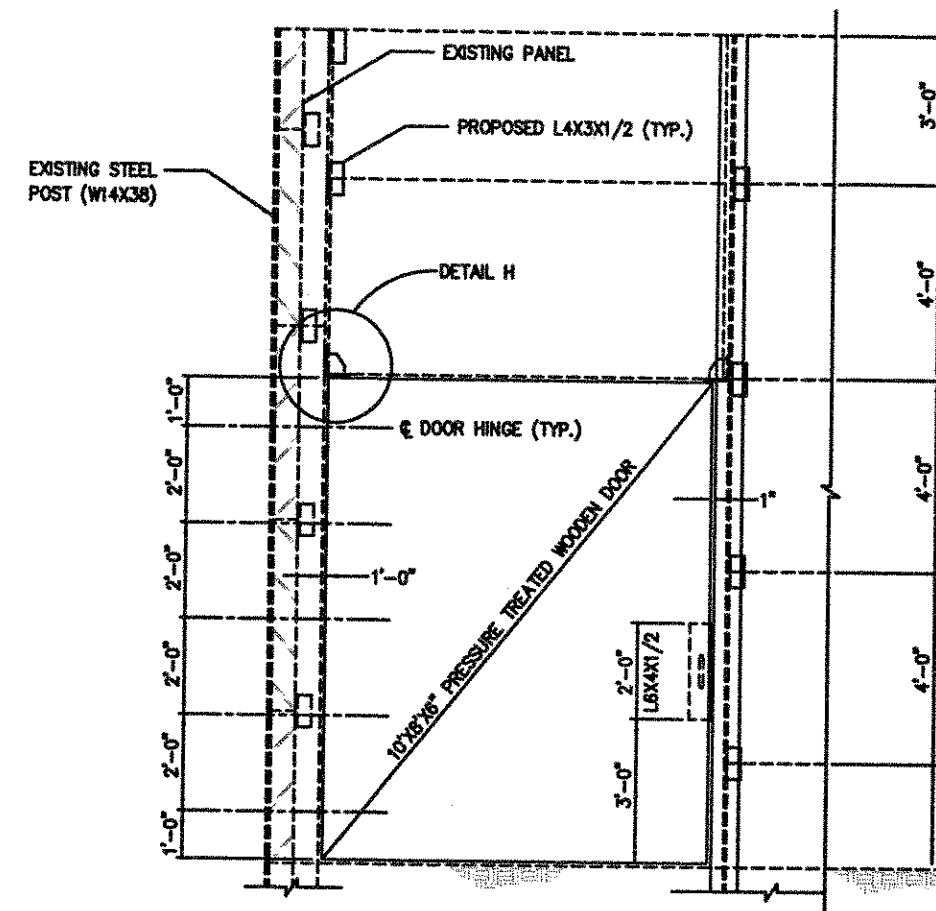
FOUNDATION TABLE							
LOCATION	POST NO.	TOP OF FOUNDATION		LOCATION	POST NO.	TOP OF FOUNDATION	
		ELEVATION	FOUND. DEPTH			ELEVATION	FOUND. DEPTH
		(FEET)	(FEET)			(FEET)	(FEET)
WALL NO. 1	(1)	800.92	14'-0"	WALL NO. 6	(21)	803.75	9'-0"
	(2)	800.92	14'-0"		(22)	801.40	9'-0"
	(3)	800.55	14'-0"		(23)	801.05	9'-0"
	(4)	800.55	14'-0"		(24)	800.70	9'-0"
	(5)	800.19	14'-0"	WALL NO. 7	(25)	817.35	12'-6"
WALL NO. 2	(6)	805.43	9'-0"		(26)	812.13	12'-6"
	(7)	804.58	9'-0"		(27)	810.92	12'-6"
	(8)	804.58	9'-0"		(28)	809.83	12'-6"
	(9)	807.15	9'-0"	WALL NO. 8	(29)	805.42	14'-0"
WALL NO. 3	(10)	803.40	13'-0"		(30)	805.97	14'-0"
	(11)	802.43	13'-0"		(31)	808.57	14'-0"
	(12)	801.43	13'-0"		(32)	809.15	14'-0"
	(13)	800.41	13'-0"		(33)	811.74	14'-0"
WALL NO. 4	(14)	802.39	9'-0"	WALL NO. 9	(34)	790.50	14'-0"
	(15)	801.55	9'-0"		(35)	788.19	14'-0"
	(16)	800.66	9'-0"		(36)	787.89	14'-0"
	(17)	797.43	9'-0"		(37)	787.89	14'-0"
	(18)	799.56	9'-0"	WALL NO. 10	(38)	797.53	15'-0"
WALL NO. 5	(19)	801.70	9'-0"		(39)	796.07	15'-0"
	(20)	805.83	9'-0"		(40)	796.07	15'-0"
				WALL NO. 11	(41)	820.98	13'-0"
					(42)	820.98	13'-0"
					(43)	819.71	13'-0"
					(44)	819.71	13'-0"

NOTES

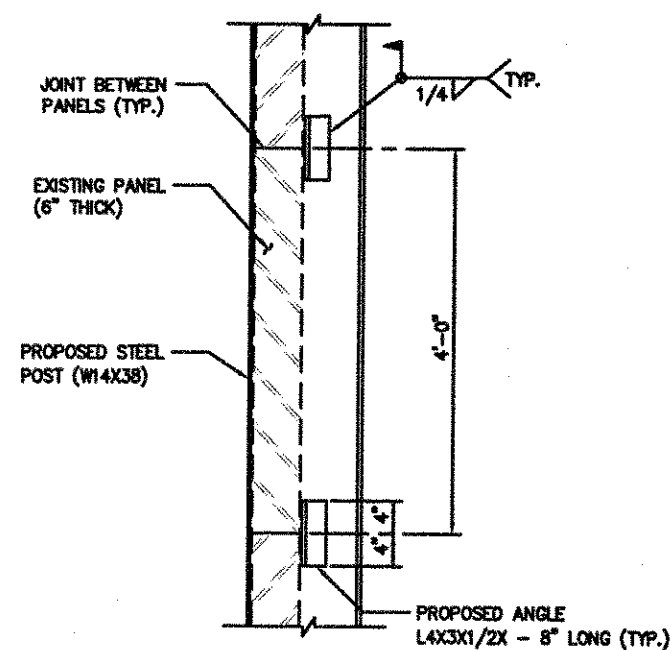
1. THE SUPPORT BRACKET SHOWN ON DETAIL "J" SHOULD BE USED TO SUPPORT ALL THE PROPOSED NOISE BARRIER PANELS.
2. IF WITHIN THE REQUIRED LENGTH OF THE FOUNDATION, BEDROCK IS ENCOUNTERED, THE DRILLED SHAFT FOUNDATION MAY BE TERMINATED AFTER 3 FEET OF PENETRATION INTO HARD BEDROCK OR 6 FEET OF PENETRATION INTO SOFT BEDROCK.
3. REFERRING TO THE BORINGS DRILLED FOR THIS PROJECT, HARD BEDROCK IS DEFINED AS BEDROCK ON WHICH AUGER REFUSAL WAS MET, AND ROCK CORING WAS PERFORMED. SOFT BEDROCK IS DEFINED AS BEDROCK WHICH WAS AUGERED, HOWEVER, SPLIT-SPOON REFUSAL, DEFINED AS RECORDING IN EXCESS OF 50 BLOWS WITH LESS THAN 6" OF PENETRATION, WAS ACHIEVED.



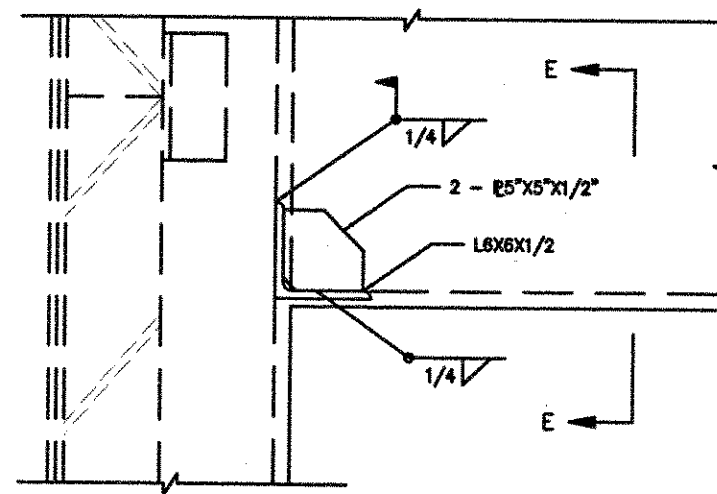
TYPICAL NOISE BARRIER ELEVATION



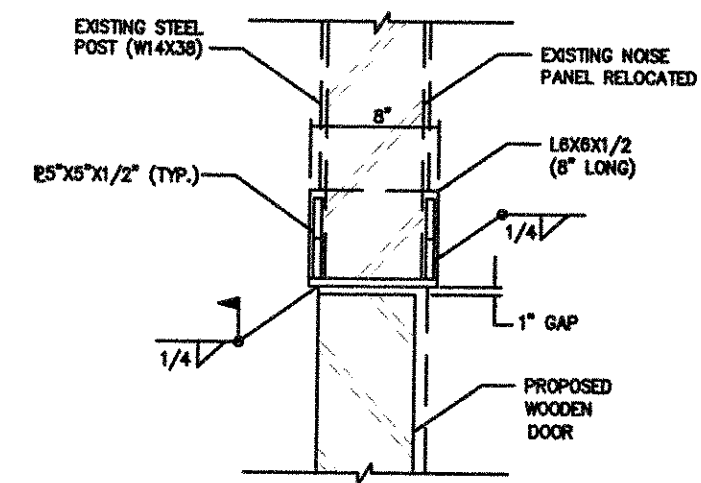
DOOR ELEVATION
(LOOKING NORTH)



SECTION A-A



DETAIL H



SECTION E-E

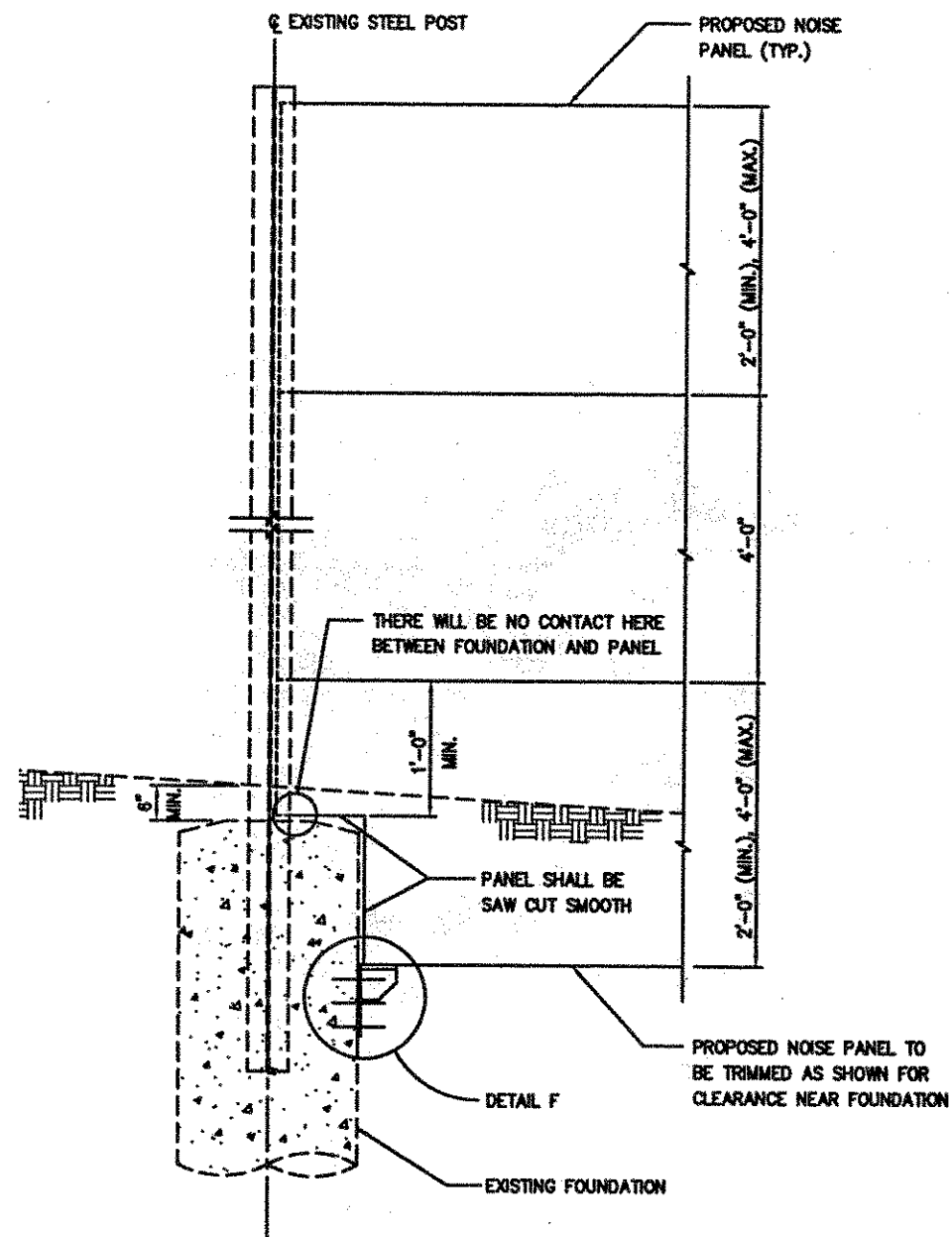
CALCULATED
MRMK
CHECKED
RTY

NOISE BARRIER ELEVATION & DETAILS

HAM-71-11.08

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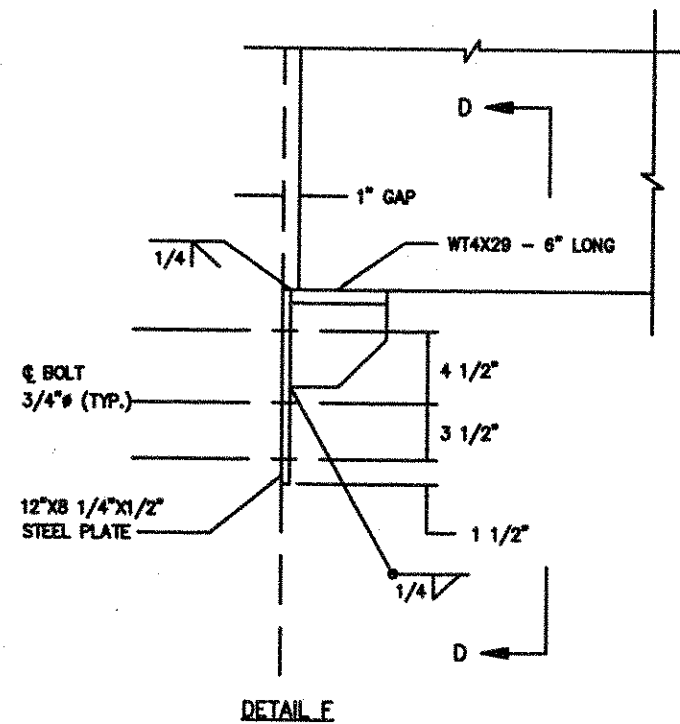
204
205



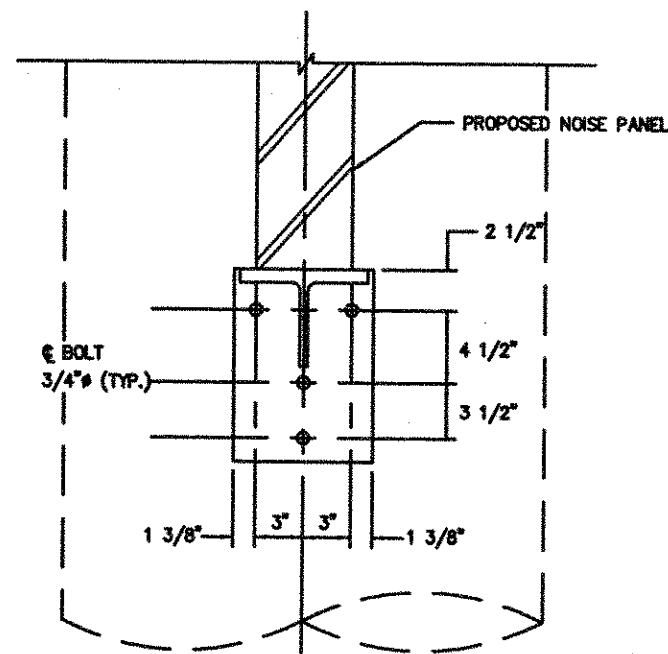
NOISE BARRIER SUPPORT DETAIL

NOTES

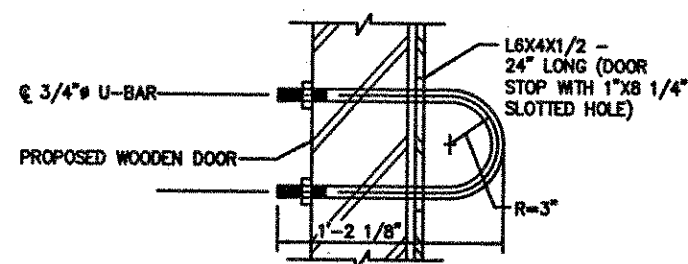
1. ALL ANCHOR BOLTS, U-BAR, NUTS, PLAIN WASHERS AND LOCKWASHERS SHALL BE GALVANIZED AND CONFORM TO THE PHYSICAL PROPERTIES OF ASTM A572 EXCEPT THAT THE MINIMUM ELONGATION SHALL BE 10%. THE CHEMICAL PROPERTIES ARE WAIVED.
2. THE GAP BETWEEN THE FACE OF THE EXISTING FOUNDATION AND THE BACK OF THE STEEL PLATE SHALL BE FILLED WITH GROUT.
3. THE NOISE PANEL SUPPORT SHOULD CARRY THE WEIGHT OF THE PANEL AND ANY CONTACT BETWEEN THE TOP OF THE EXISTING FOUNDATION AND THE BOTTOM OF THE TRIMMED PANEL SHOULD BE AVOIDED.



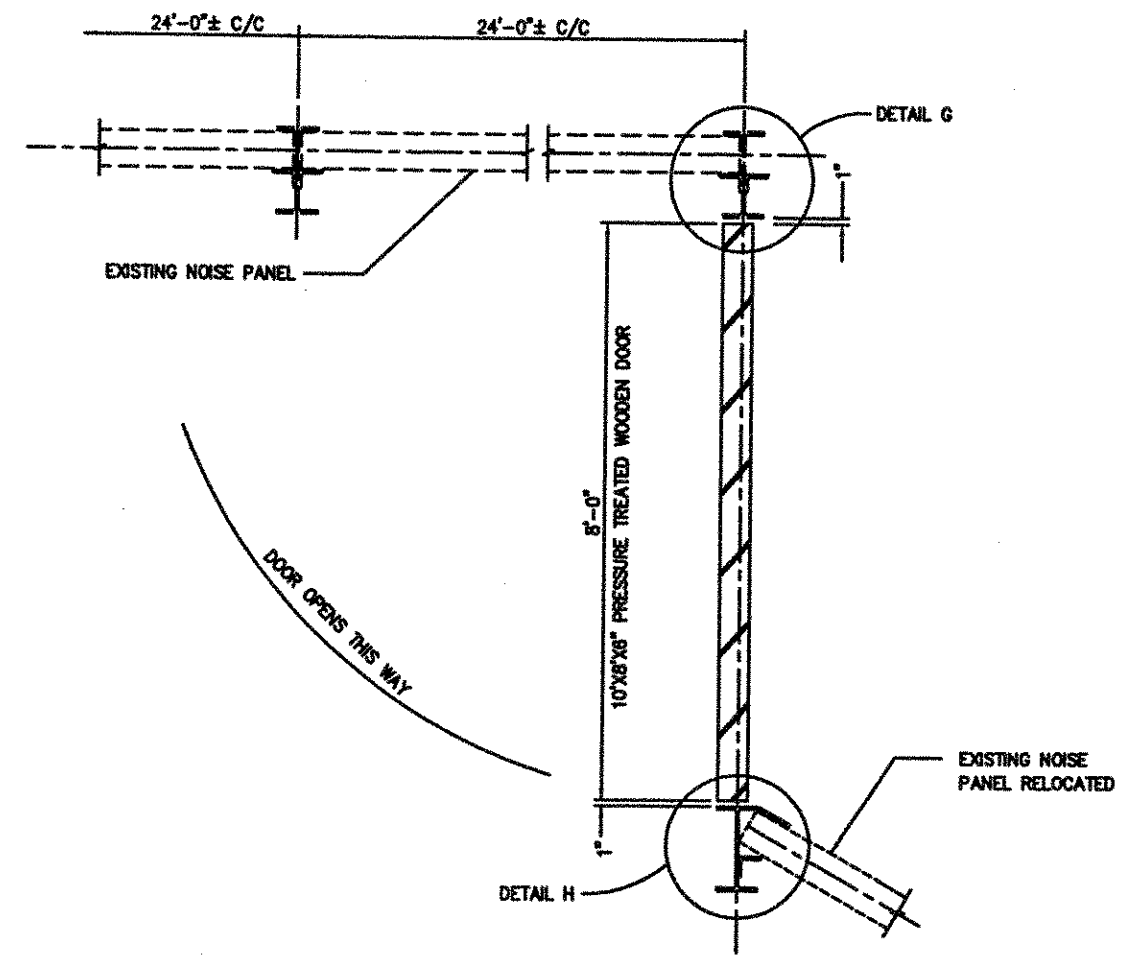
DETAIL E



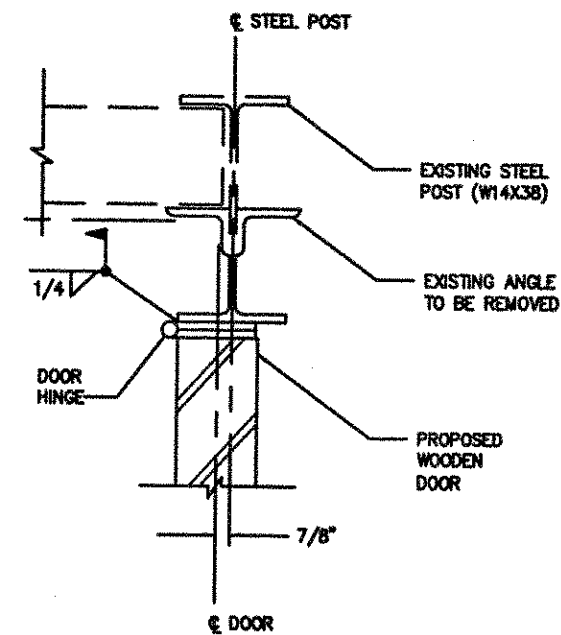
SECTION D-D



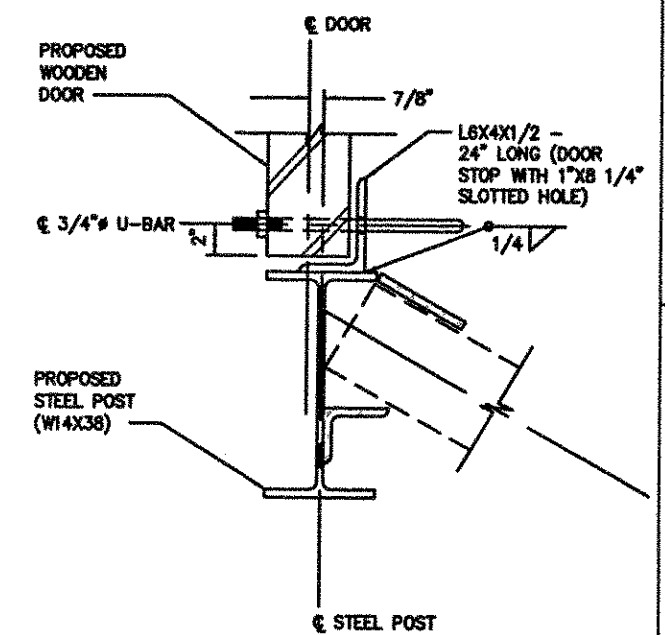
BOLT DETAIL



PLAN
(FOR DOOR ELEVATION, SEE SHEET 36 OF 37)



DETAIL G



DETAIL H
(FOR MORE INFORMATION, SEE SHEET 34 OF 37)