

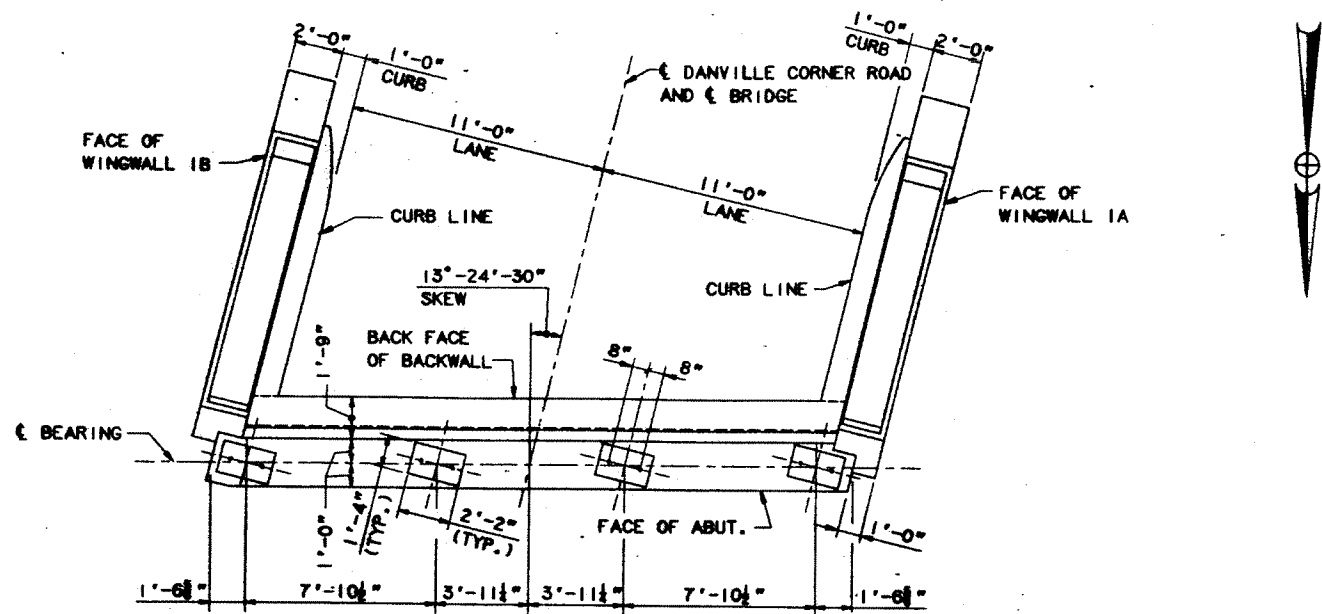
Maine Turnpike Authority  
**Maine Turnpike**

DANVILLE CORNER ROAD UNDERPASS  
**GENERAL PLAN AND ELEVATION**

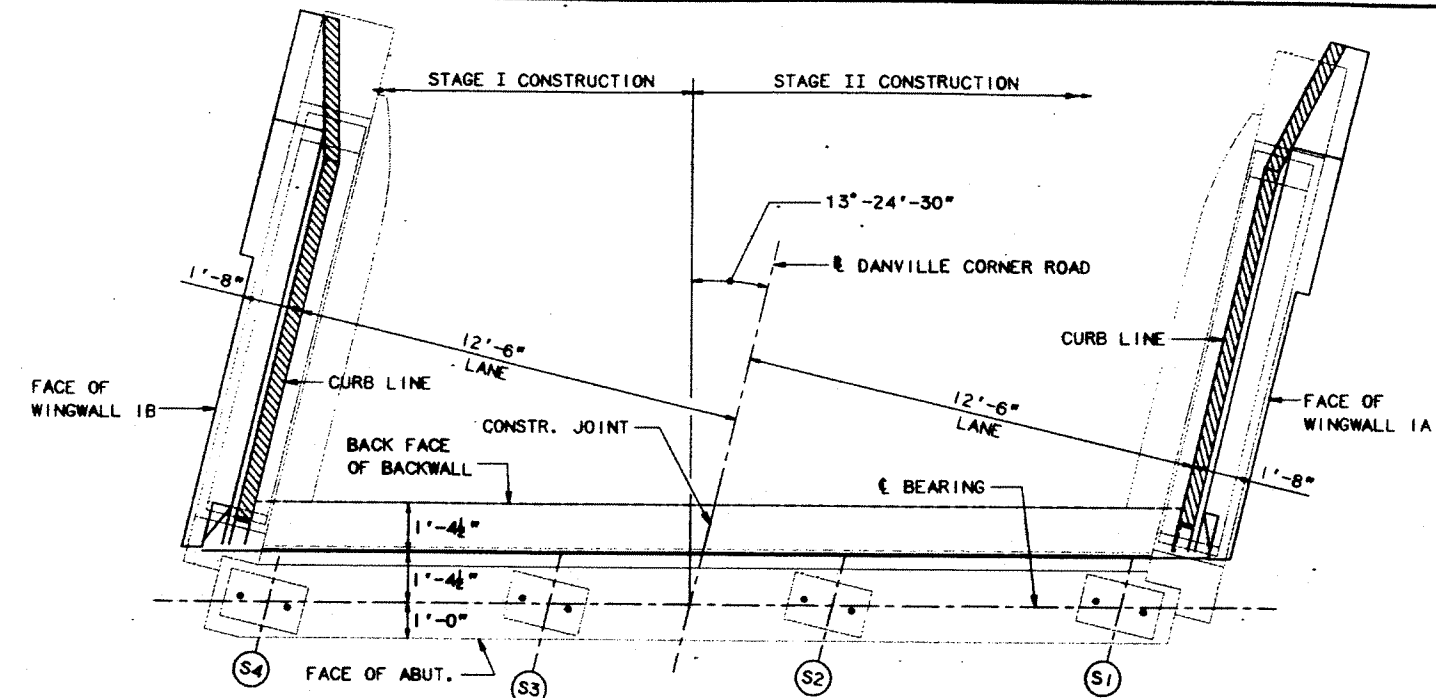
**HNTB** HOWARD NEEDLES TAMM & BERNDORFF, INC.  
 ARCHITECTS ENGINEERS PLANNERS

No.	Revision	By:	Date:	In charge	etc.	RAL
		Designed	XPM	1/96		
		Drawn	LS	1/96		
		Checked	JFW	1/96		

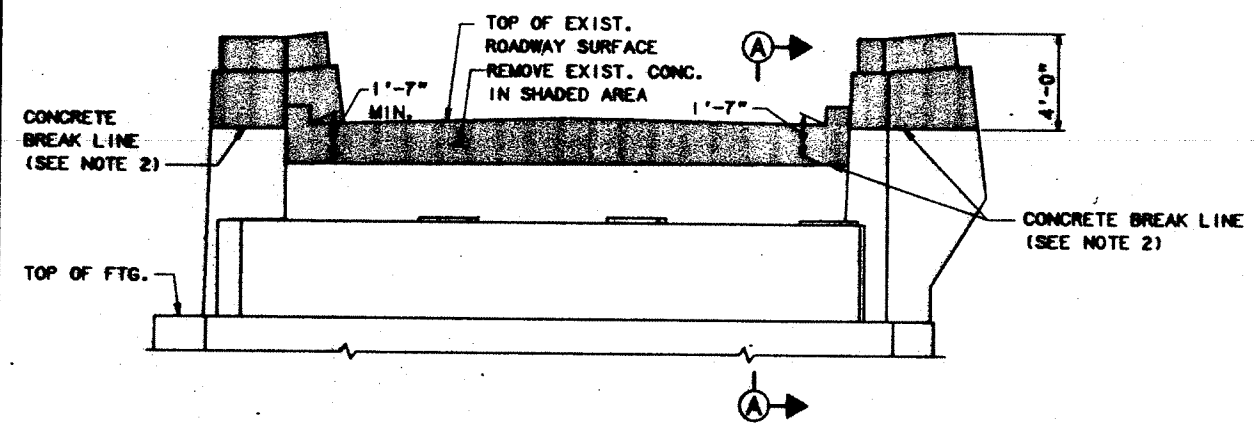
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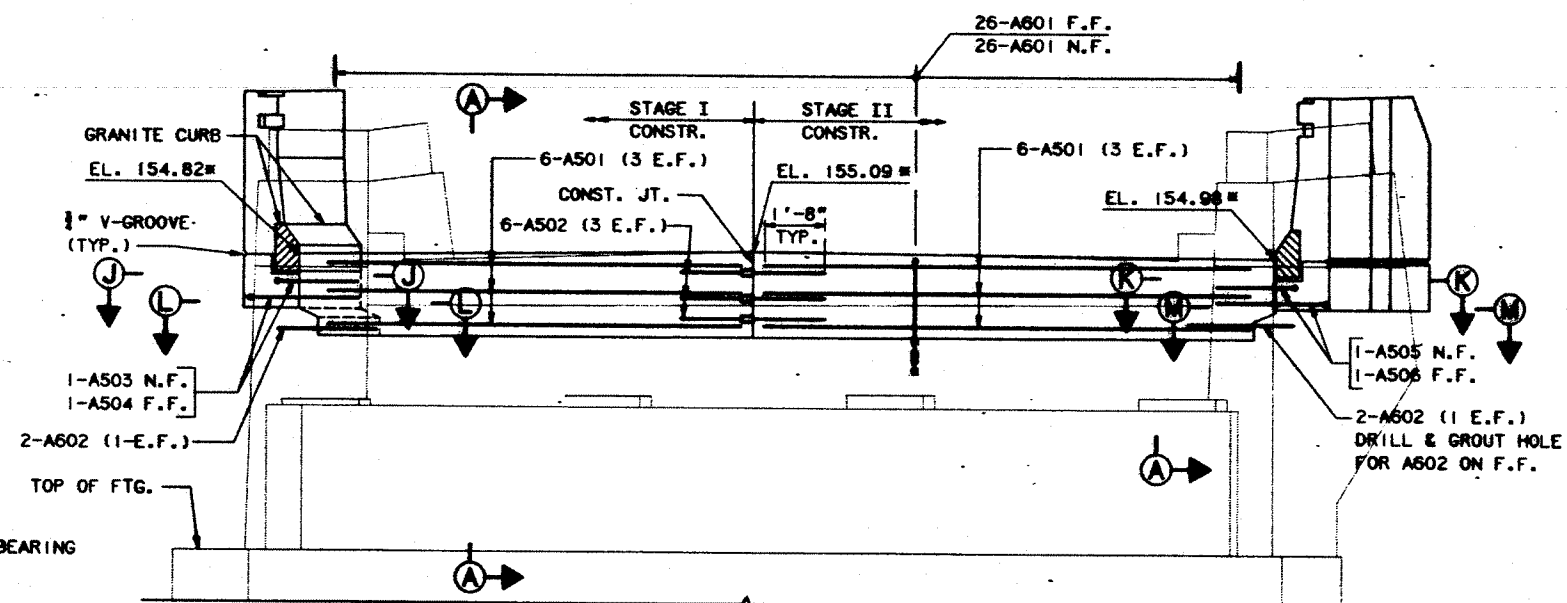
**EXISTING PLAN**  
1/4" = 1'-0"



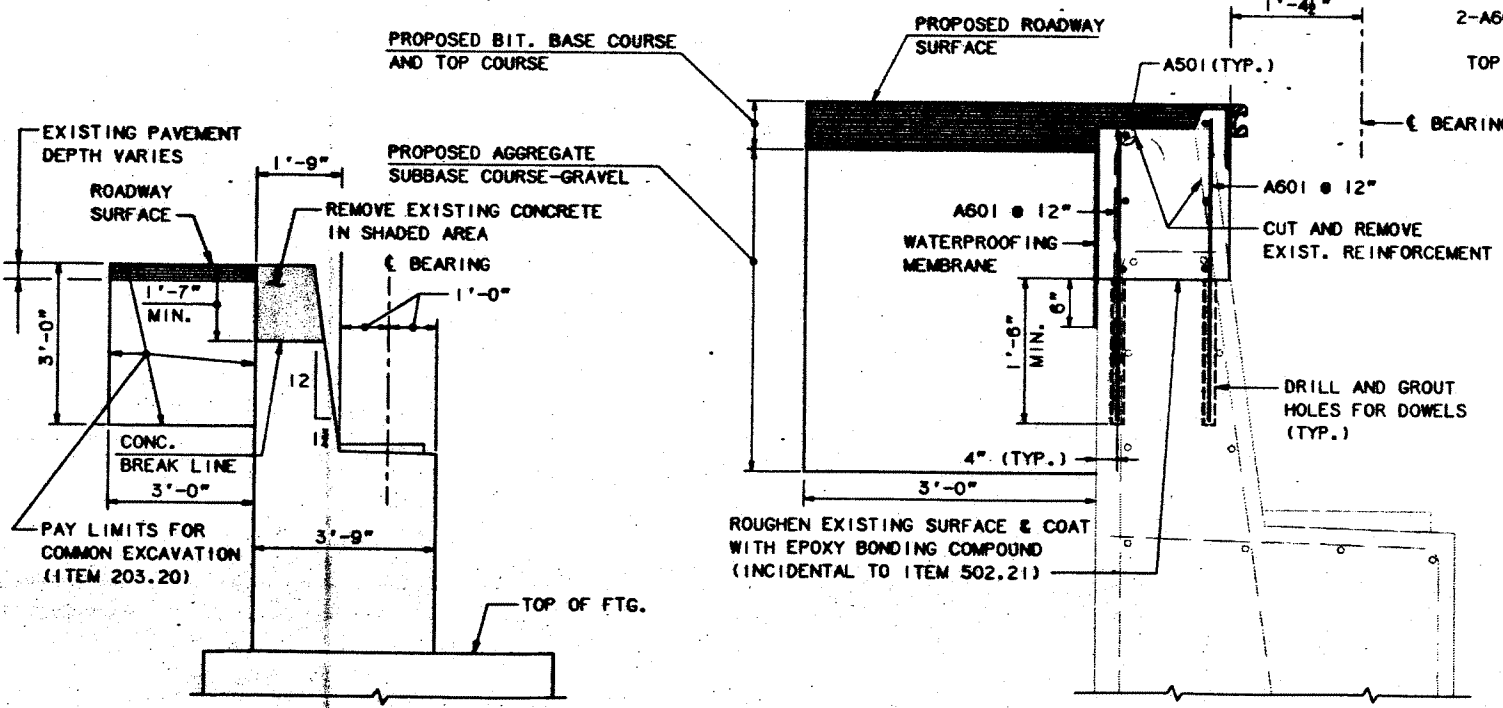
**PROPOSED PLAN**  
1/4" = 1'-0"



**EXISTING ELEVATION**  
1/4" = 1'-0"



**PROPOSED ELEVATION**  
1/4" = 1'-0"



**EXISTING SECTION A-A**  
1/4" = 1'-0"

**PROPOSED SECTION A-A**  
1/4" = 1'-0"

**NOTES**

1. FOR WINGWALL ELEVATIONS AND SECTIONS SEE SHEET NOS. DC-6 AND DC-7.
2. SAW CUT 1" MIN. DEEP BEFORE REMOVING EXISTING CONCRETE
3. FOR ROADWAY EXPANSION JOINT DETAIL, SEE SHEET NOS. DC-12 & DC-13.
4. FOR LIMITS OF CONCRETE PROTECTIVE COATING, SEE SHEET NO. DC-7.
5. FOR SECTION J-J, K-K, L-L & M-M, SEE SHEET NO. DC-5.
6. EXCAVATION FOR BACKWALL MODIFICATION IS TO BE PAID FOR UNDER 203.20 TO THE LIMITS SHOWN.
7. \* ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
8. REMOVAL OF THE EXISTING ARMOR JOINT SHALL BE INCIDENTAL TO ITEM 202.1222.

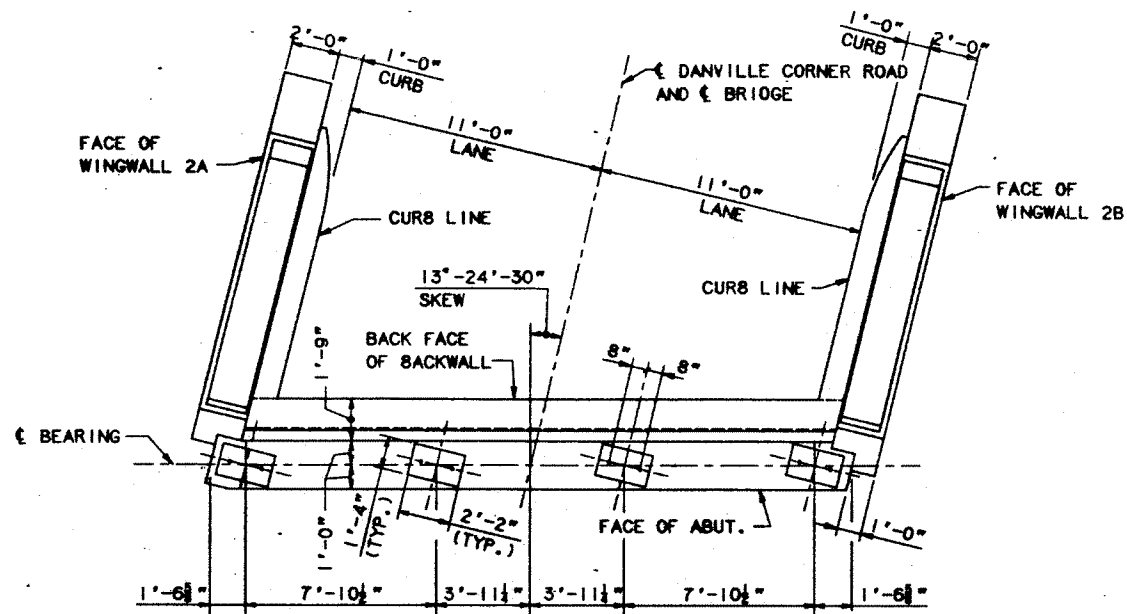
No.	Revision	By	Date	In charge of	RAL
		Designed	XPM	1/90	
		Drawn	LS	1/90	
		Checked	JFW	1/90	

Maine Turnpike Authority  
**Maine Turnpike**

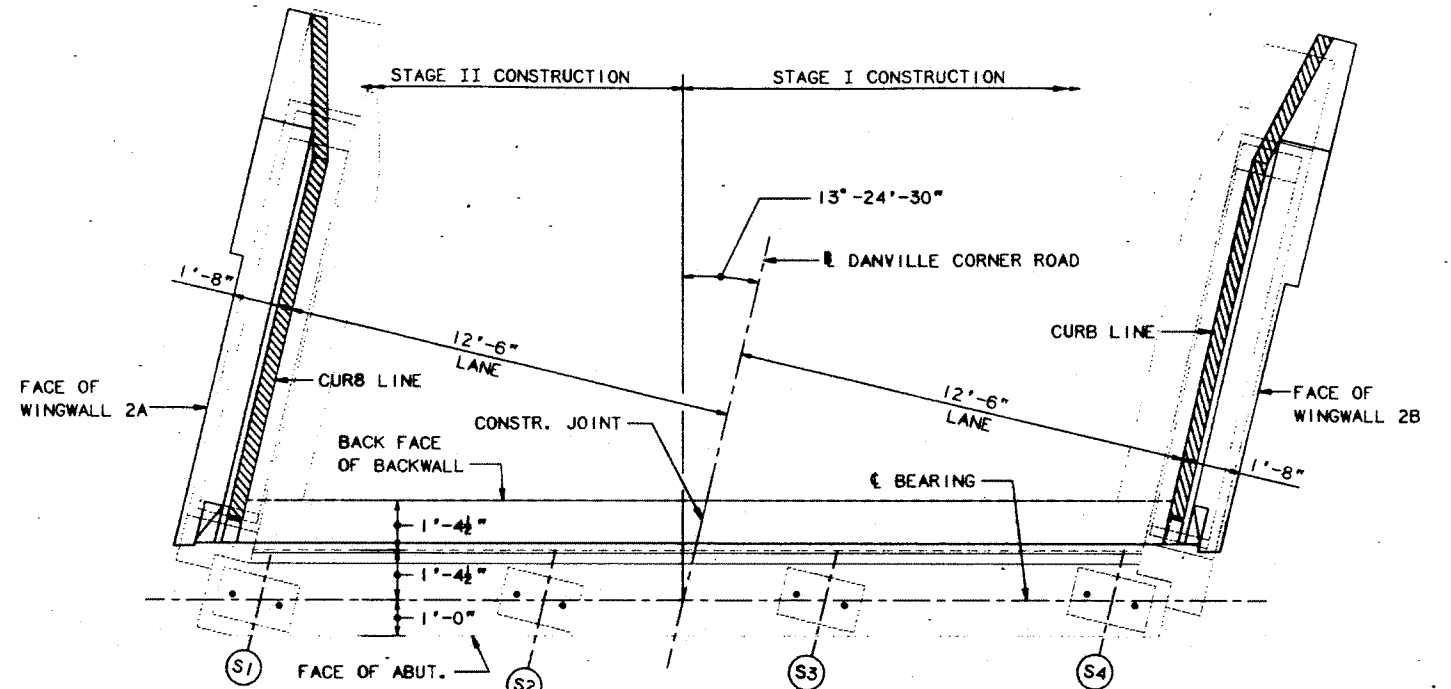
DANVILLE CORNER ROAD  
UNDERPASS  
ABUTMENT 1  
MODIFICATIONS

**HNTB** HOWARD NEEDLES TAMMEN & BERENDORFF, INC.  
ARCHITECTS ENGINEERS PLANNERS

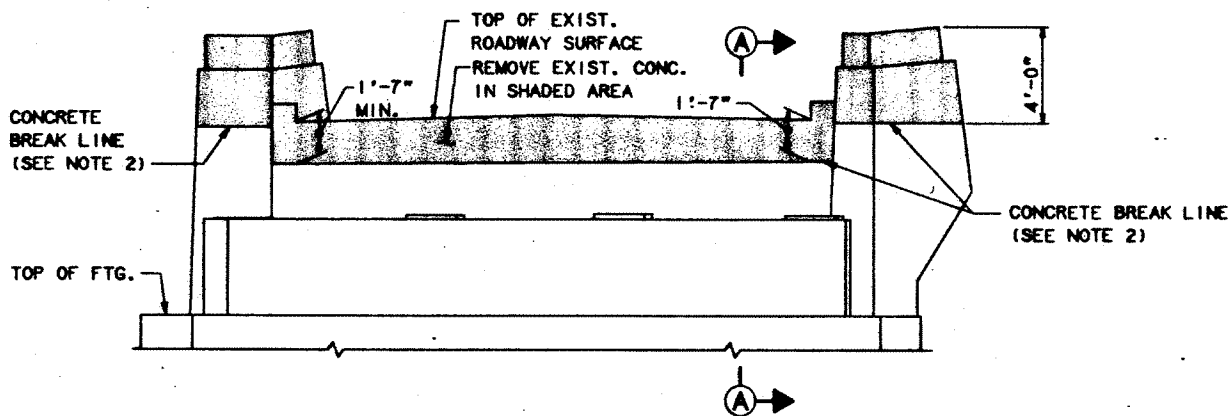
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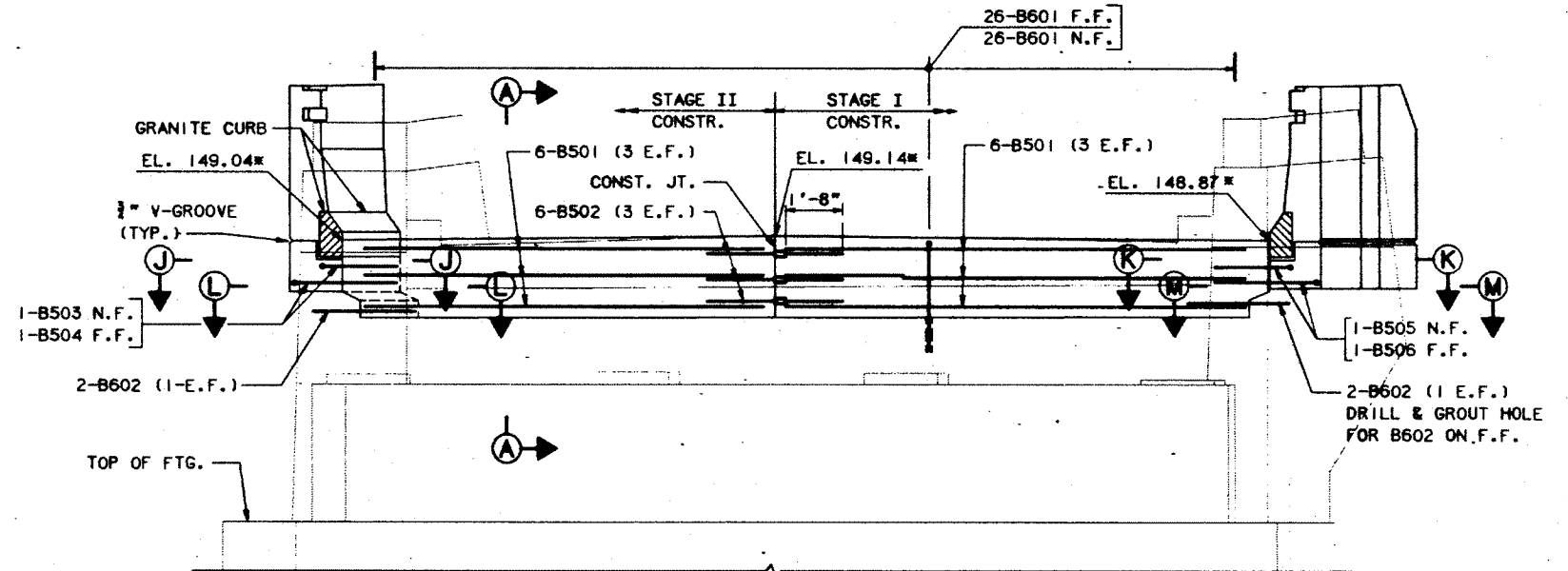
EXISTING PLAN  
1/8" = 1'-0"



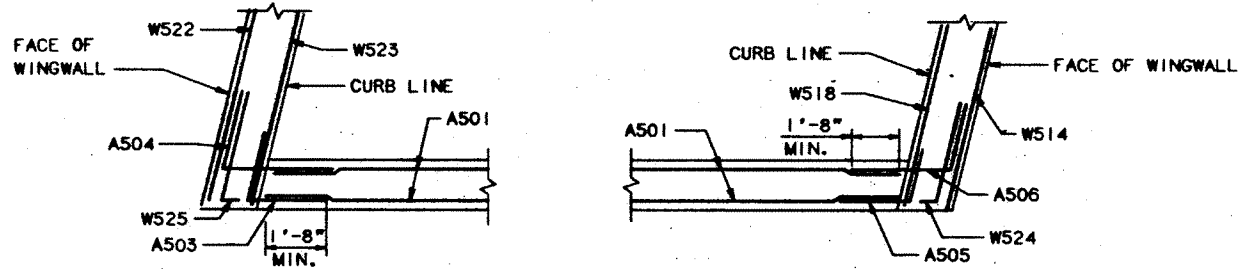
PROPOSED PLAN  
1/8" = 1'-0"



EXISTING ELEVATION  
1/8" = 1'-0"

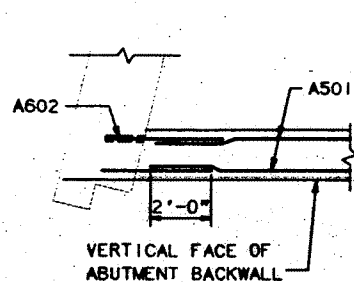


PROPOSED ELEVATION  
1/8" = 1'-0"

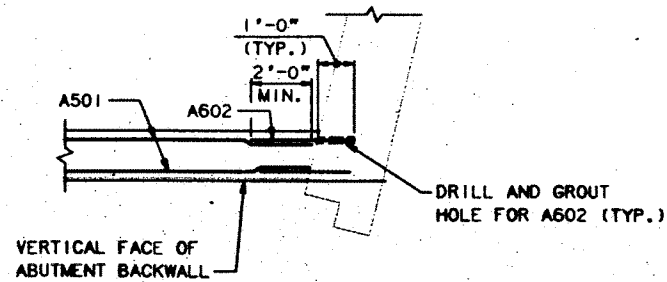


SECTION J-J  
1/8" = 1'-0"

SECTION K-K  
1/8" = 1'-0"



SECTION L-L  
1/8" = 1'-0"



SECTION M-M  
1/8" = 1'-0"

NOTE:  
ABUTMENT NO. 1 SHOWN, ABUTMENT NO. 2 SIMILAR

NOTES

1. FOR WINGWALL ELEVATIONS AND SECTIONS SEE SHEET NOS. DC-6 AND DC-7.
2. SAW CUT 1" MIN. DEEP BEFORE REMOVING EXISTING CONCRETE
3. FOR ROADWAY EXPANSION JOINT DETAIL, SEE SHEET NOS. DC-12 & DC-13.
4. FOR LIMITS OF CONCRETE PROTECTIVE COATING, SEE SHEET NO. DC-7.
5. FOR SECTION A-A, SEE SHEET DC-4.
6. \* ELEVATIONS SHOWN ARE AT THE FRONT FACE OF BACKWALL.
7. REMOVAL OF THE EXISTING ARMOR JOINT SHALL BE INCIDENTAL TO ITEM 202.1222.

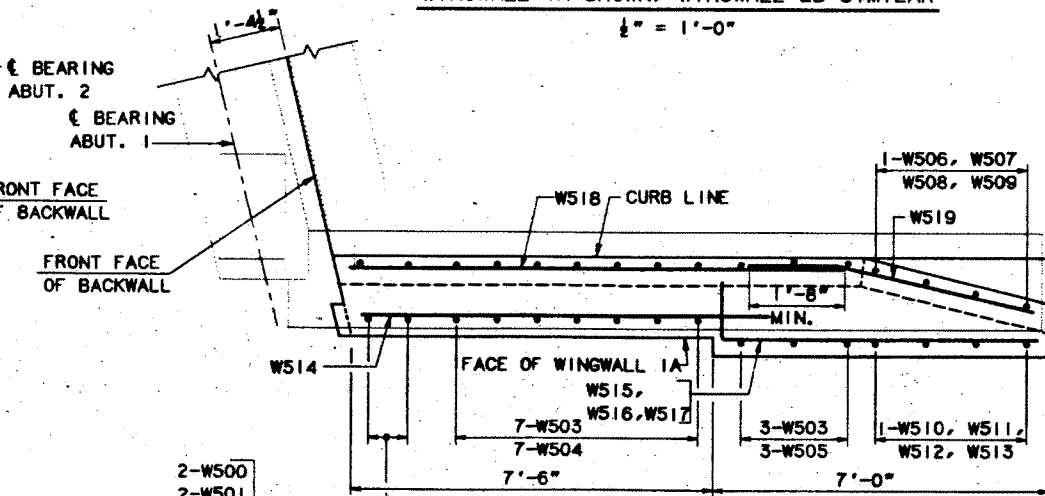
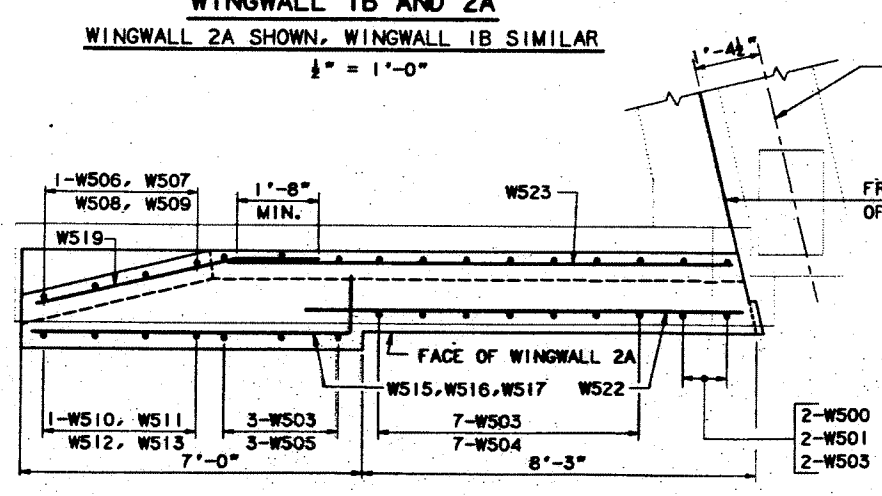
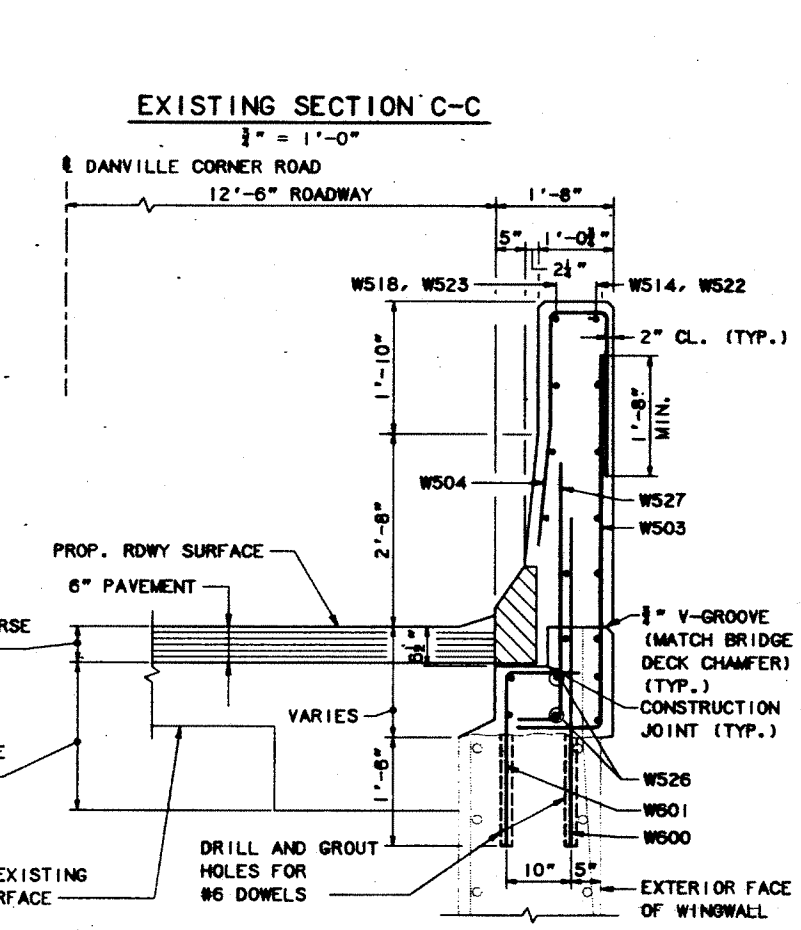
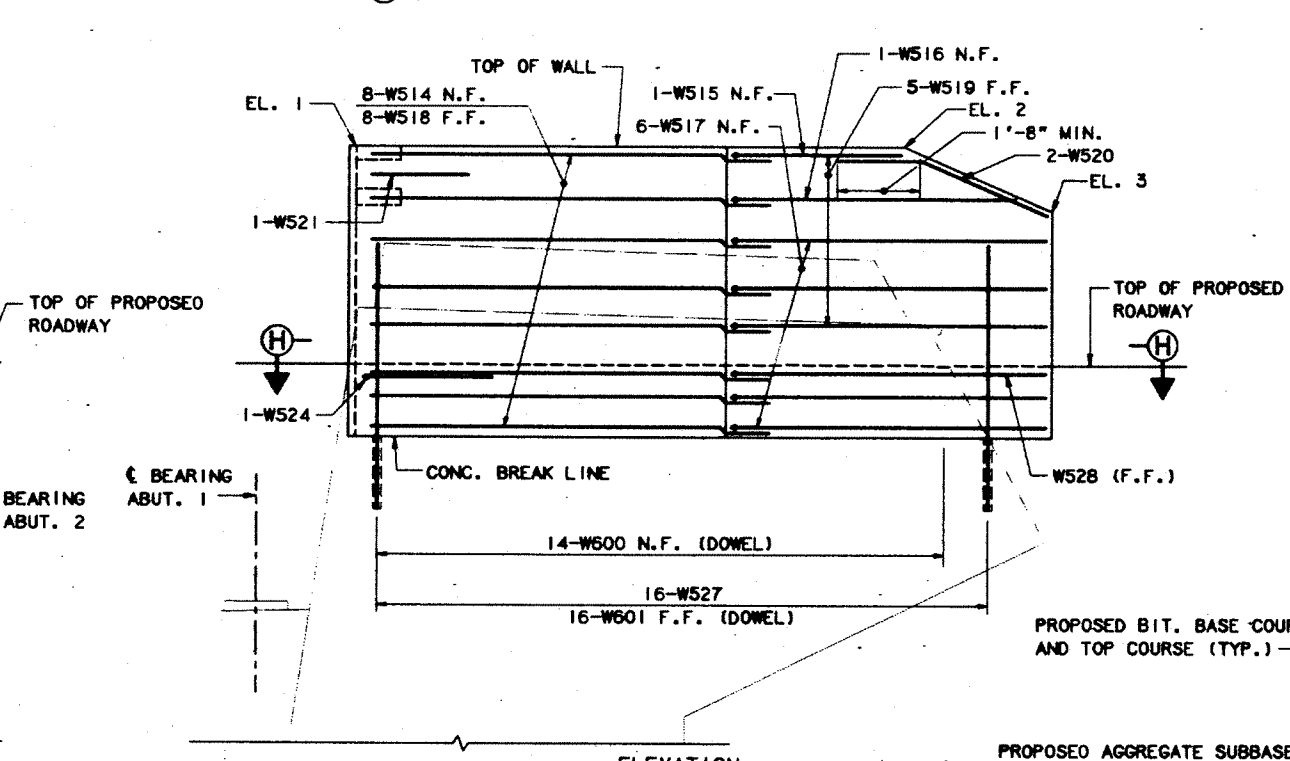
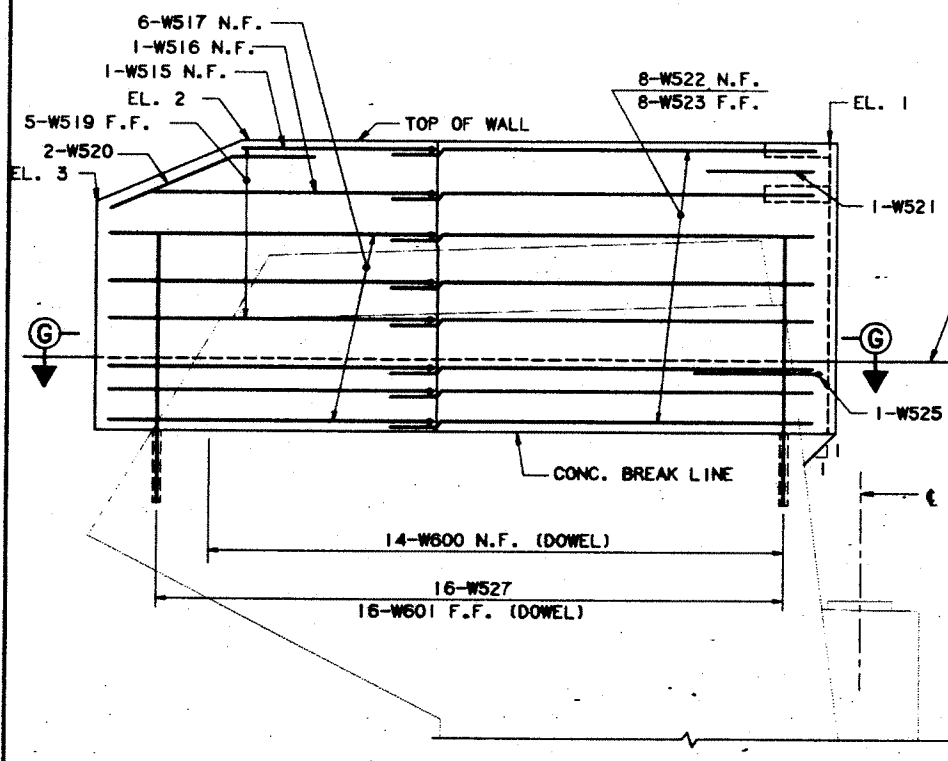
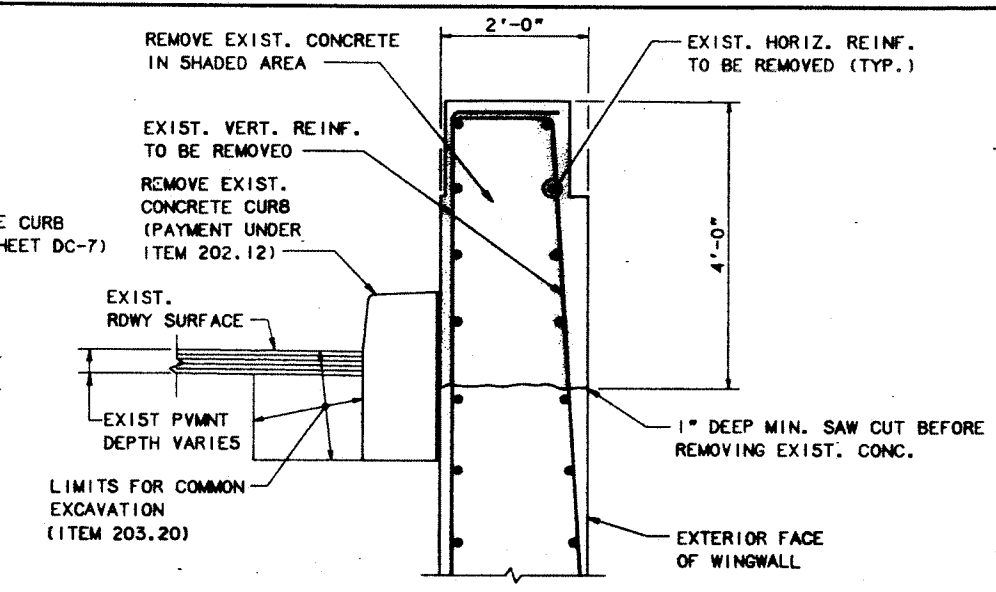
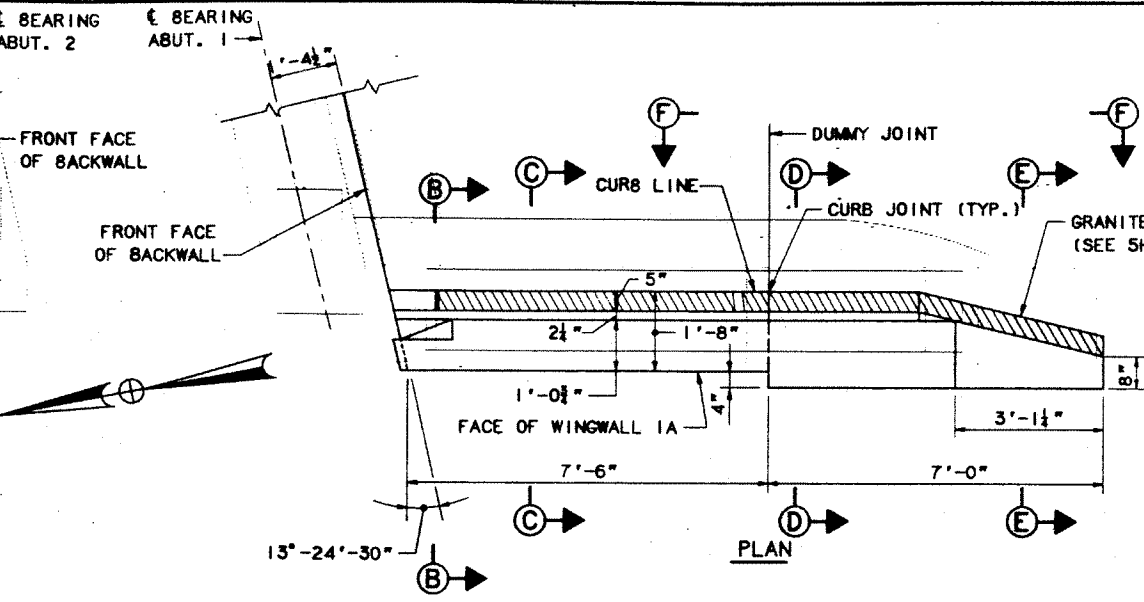
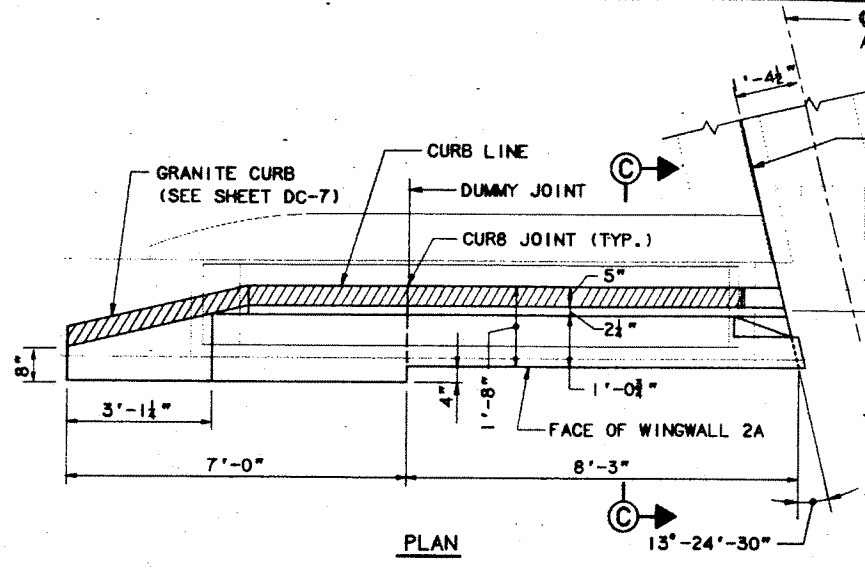
Maine Turnpike Authority  
Maine Turnpike

DANVILLE CORNER ROAD  
UNDERPASS  
ABUTMENT 2  
MODIFICATIONS

Trans  
HNTB  
HOWARD NEEDLES TAMMEN & BERGENOFF, INC.  
ARCHITECTS ENGINEERS PLANNERS

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By: XPM	Date: 1/90
Drawn: LS	1/90
Checked: JFW	1/90
In charge of: RAL	



NOTES  
1. FOR SECTIONS B-B, D-D, E-E, F-F AND GRANITE CURB DETAILS, SEE SHEET NO. DC-7.

WINGWALL ELEVATIONS				
	1A	1B	2A	2B
EL. 1	159.48	159.32	153.54	153.37
EL. 2	159.79	159.65	153.18	153.03
EL. 3	158.54	158.40	151.76	151.60

No.	Revision	By:	Date:	In charge of:	RAL
		Designed	XPM	1/96	
		Drawn	LS	1/96	
		Checked	JFW	1/96	

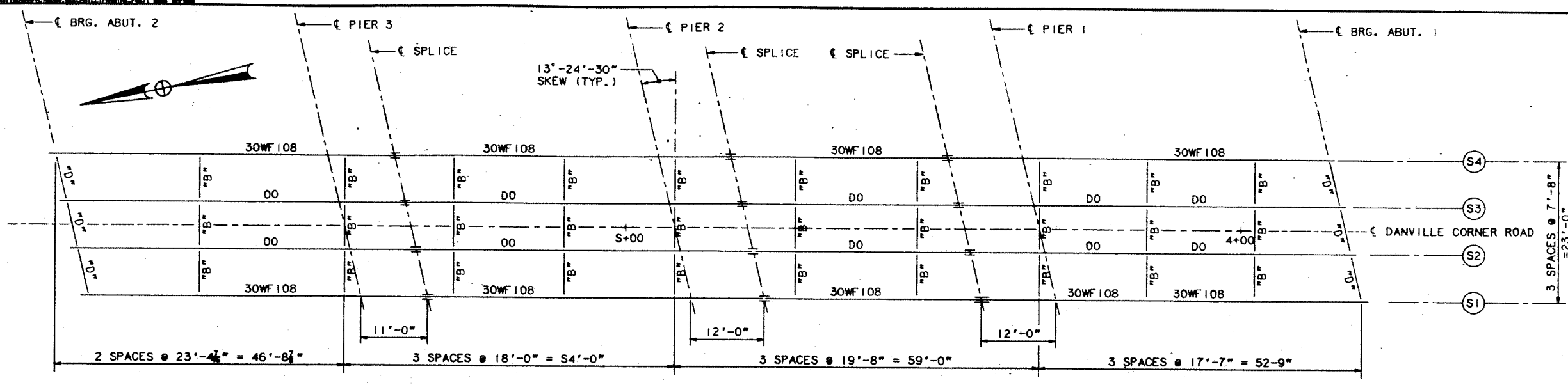
Maine Turnpike Authority  
**Maine Turnpike**

DANVILLE CORNER ROAD  
UNDERPASS  
WINGWALL  
MODIFICATIONS I

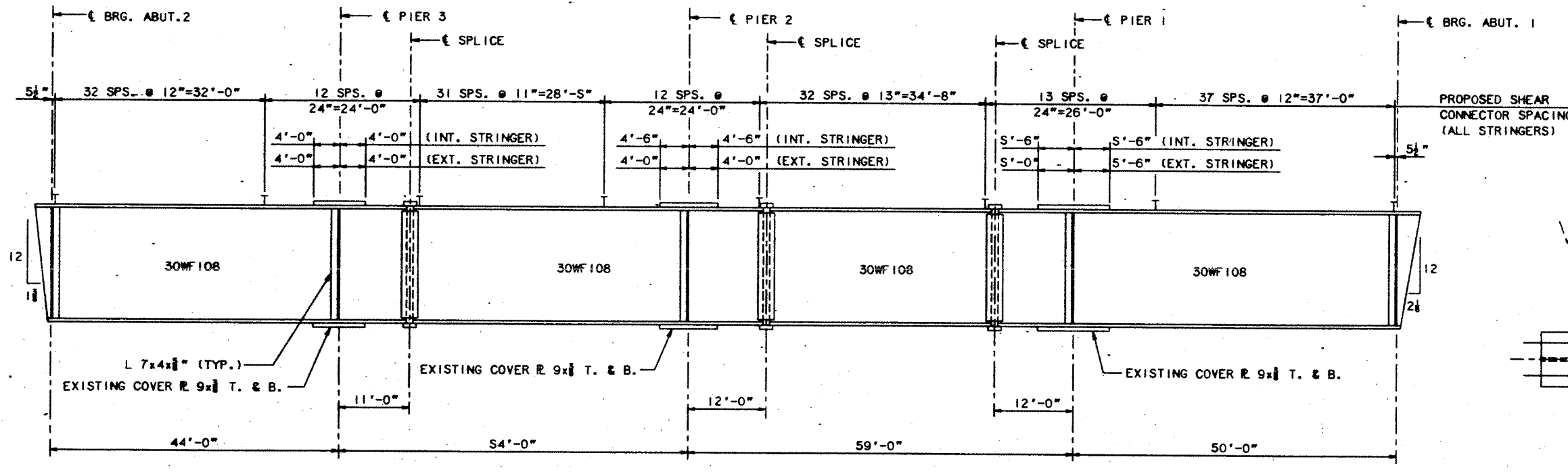
**HNTB** HOWARD NEEDLES TAMMEN & BERENDORFF, INC.  
ARCHITECTS ENGINEERS PLANNERS

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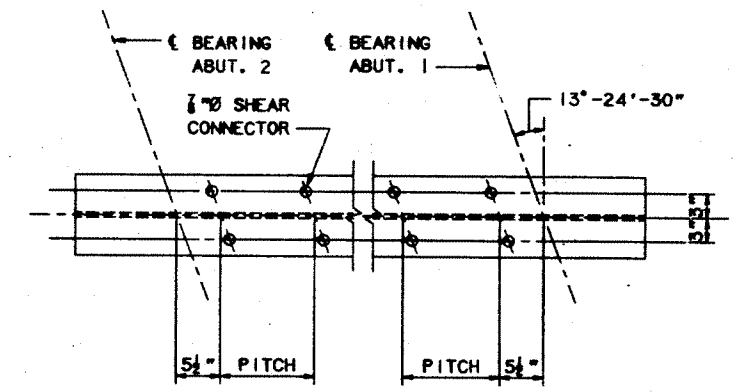




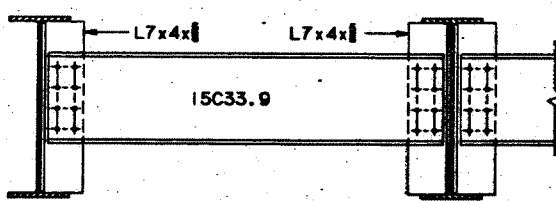
**FRAMING PLAN**  
1" = 10'-0"



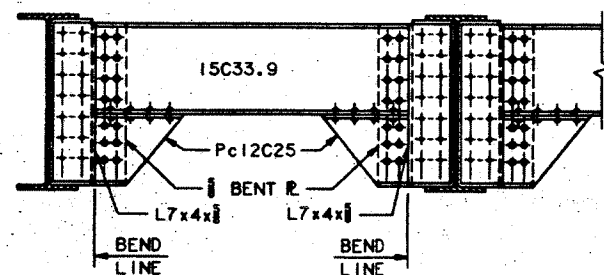
**STRINGER ELEVATION (EXISTING)**  
NO SCALE



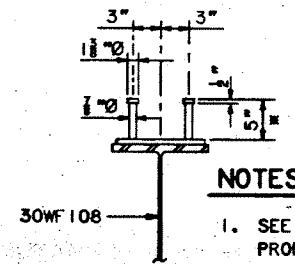
**SHEAR CONNECTOR LAYOUT**  
1" = 1'-0"



**DIAPHRAGM TYPE B (EXISTING)**  
1/2" = 1'-0"



**DIAPHRAGM TYPE D (EXISTING)**  
1/2" = 1'-0"



**PROPOSED SHEAR CONNECTOR DETAIL**  
1" = 1'-0"

**NOTES**

- SEE STRINGER ELEVATION FOR PROPOSED SHEAR CONNECTOR SPACING.
- 7" FOR EXTRA DEPTH HAUNCH. SEE SHEET DC-10.

No.	Revision	By:	Date:	In charge etc.	RAL
		Designed	XPM	1/96	
		Drawn	LS	1/96	
		Checked	JFW	1/96	

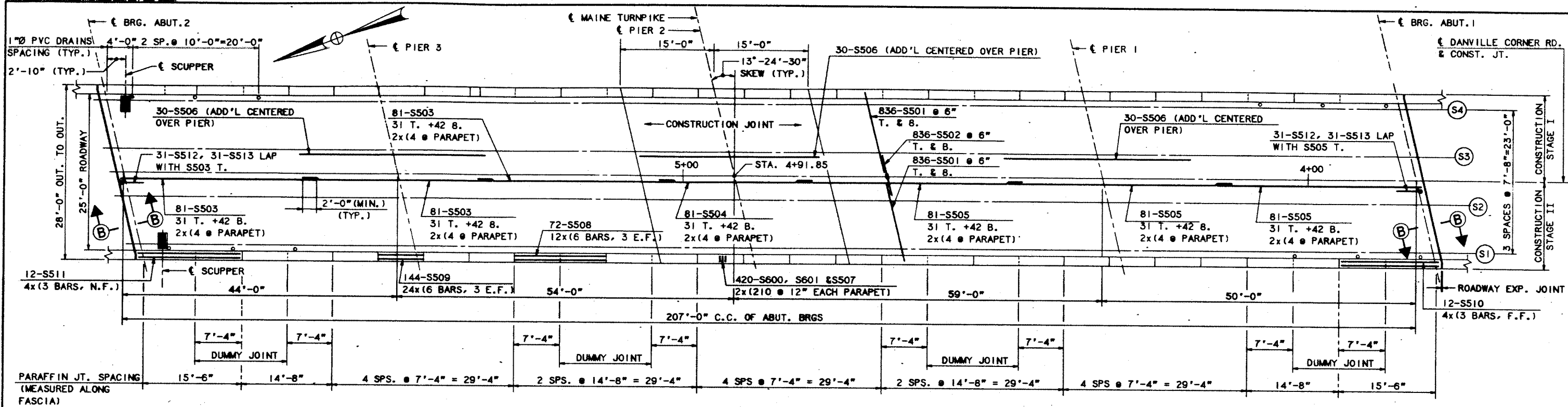
Maine Turnpike Authority  
**Maine Turnpike**

DANVILLE CORNER ROAD  
UNDERPASS

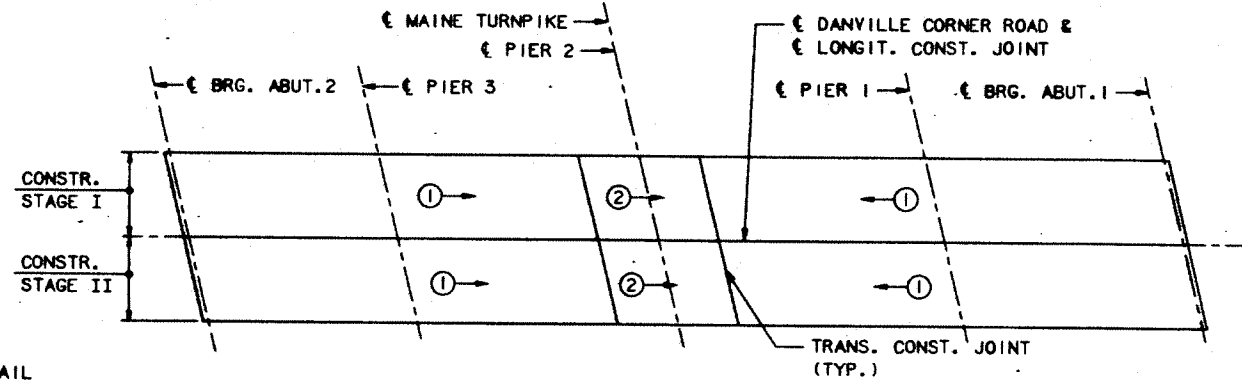
**FRAMING PLAN AND  
STRINGER ELEVATION**

**HNTE** HOWARD NEEDLES TAMMEN & BERGENOFF, INC.  
ARCHITECTS ENGINEERS PLANNERS

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**DECK PLAN**  
(SEE TYPICAL SECTION FOR SPACING)  
1/2" = 1'-0"



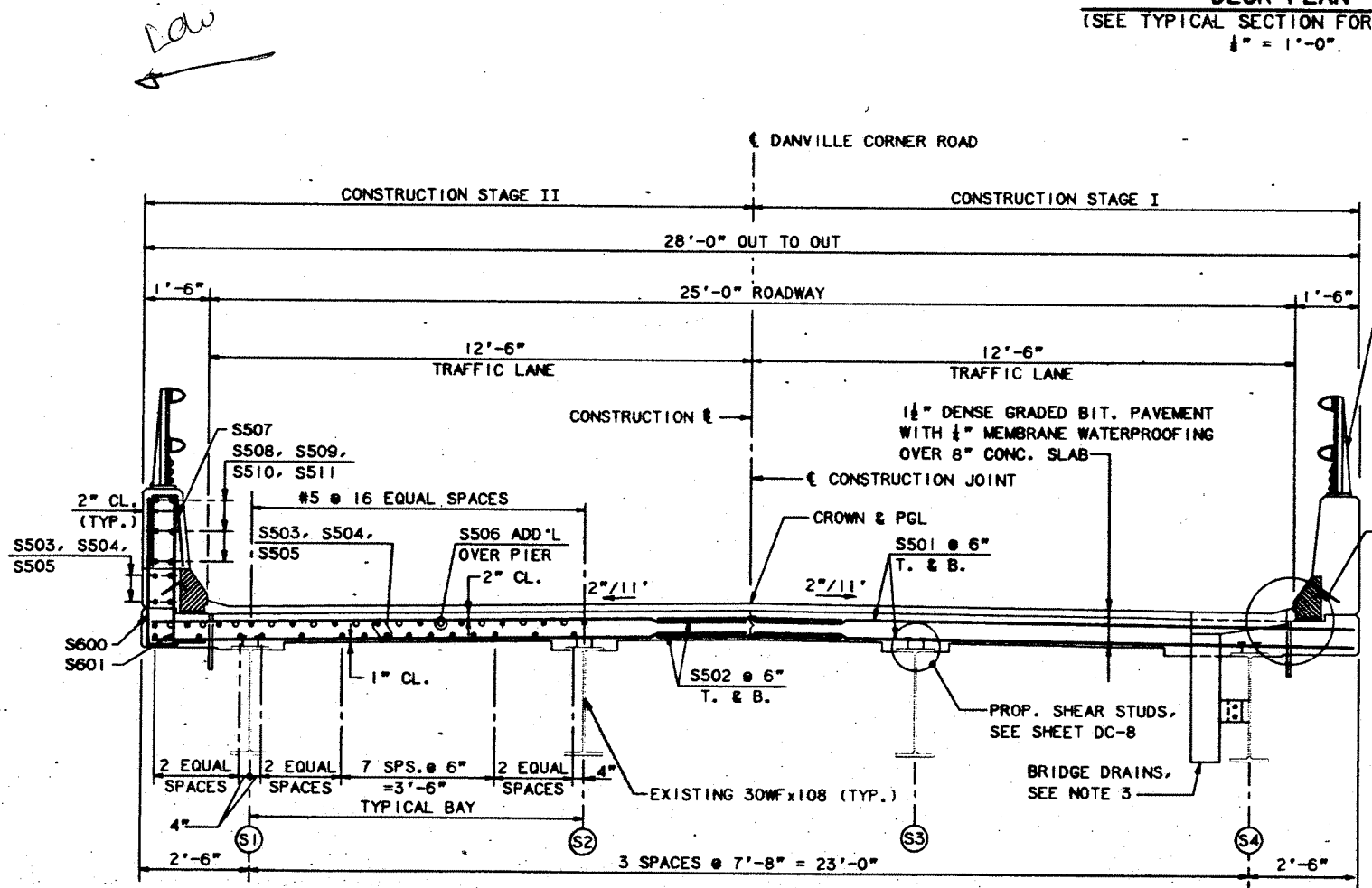
**DECK PLACEMENT SEQUENCE**  
1" = 20'

**PLACEMENT NOTES**

1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE, THE ARROWS INDICATE DIRECTION OF PLACEMENT.
2. THE FORMWORK FOR THE CONSTRUCTION JOINTS SHALL REMAIN IN PLACE UNTIL A MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT OF THE SLAB AFTER WHICH, REMOVAL OF FORMWORK MEETING THE REQUIREMENTS FOR FORM REMOVAL OF SECTION 502 (STRUCTURAL CONCRETE) OF THE STANDARD SPECIFICATIONS, MAY PROCEED.
3. POURS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE POURED THE SAME DAY. A WAITING PERIOD OF 72 HOURS IS NECESSARY BETWEEN ADJACENT POURS.
4. STAY IN PLACE FORMS ARE NOT ALLOWED TO BE USED.
5. BEGIN PLACEMENT AT THE LOW END OF THE BLCK.

**SUPERSTRUCTURE NOTES**

1. ADJUST REINFORCING STEEL TO FIT AROUND THE DRAINS IN A MANNER APPROVED BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS.
2. FOR STEEL REINFORCING SCHEDULE, SEE SHEET NO. DC-15.
3. FOR SCUPPER AND DRAIN DETAILS, SEE SHEET NO. DC-10.
4. FOR 2-BAR ALUMINUM BRIDGE RAILING DETAILS, SEE SHEET NO. DC-14.
5. FOR SLAB DETAILS, SEE SHEET NOS. DC-10 AND DC-11.
6. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NOS. DC-12, DC-13.
7. THE CONCRETE DECK SURFACE SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
8. FOR SECTION B-B, SEE SHEET DC-12.



**TYPICAL SECTION**  
(LOOKING UPSTATION)  
1/2" = 1'-0"

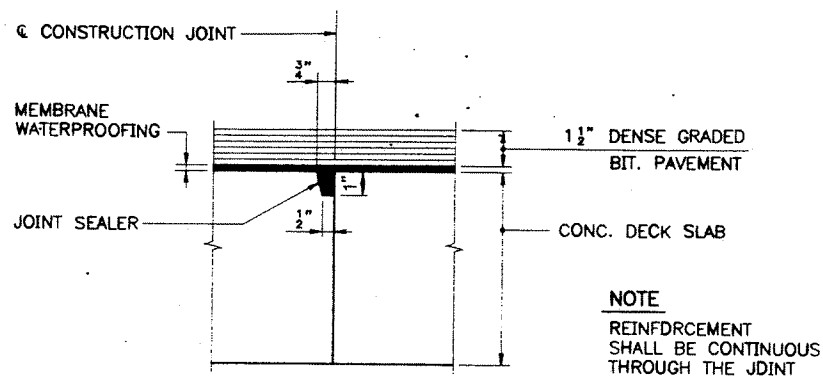
Maine Turnpike Authority  
**Maine Turnpike**

DANVILLE CORNER ROAD  
UNDERPASS  
**DECK PLAN AND  
TYPICAL SECTION**

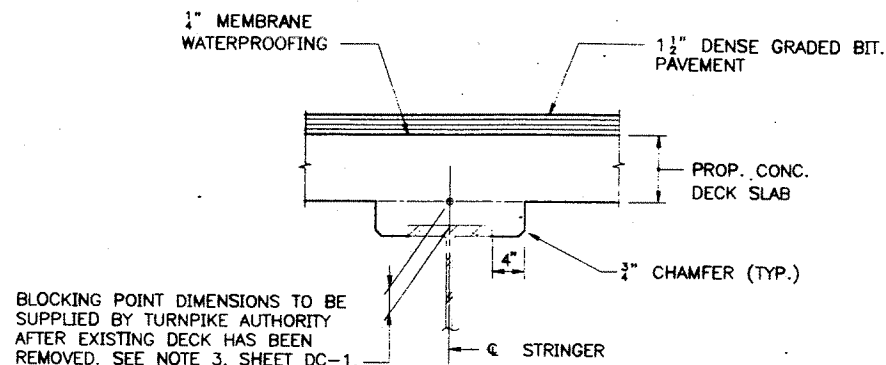
**HNTB** HOWARD NEEDLES TAMMEN & BERGENOFF, INC.  
ARCHITECTS ENGINEERS PLANNERS

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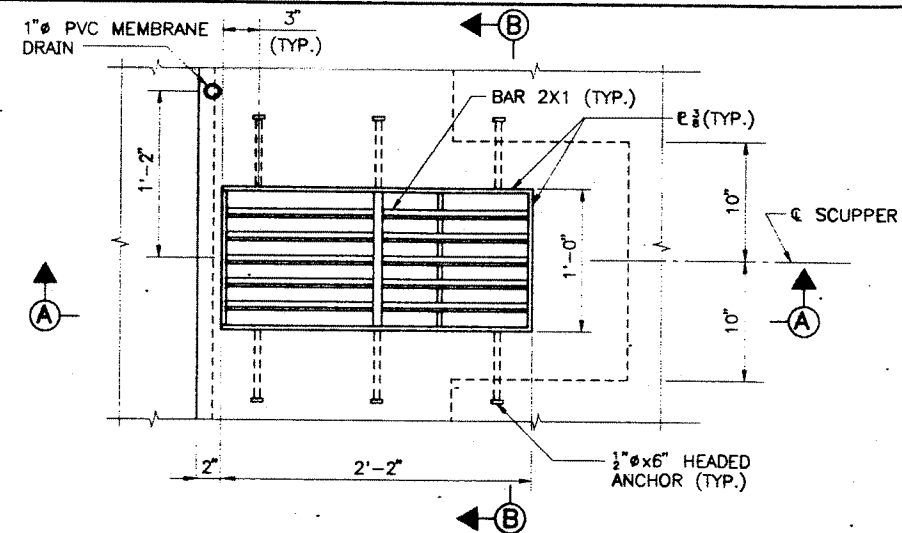
By: XPM	Date: 1/96	Designed: XPM	Date: 1/96
By: RJT	Date: 1/96	Drawn: RJT	Date: 1/96
By: JFW	Date: 1/96	Checked: JFW	Date: 1/96
By: RAL	Date: 1/96	In charge of: RAL	



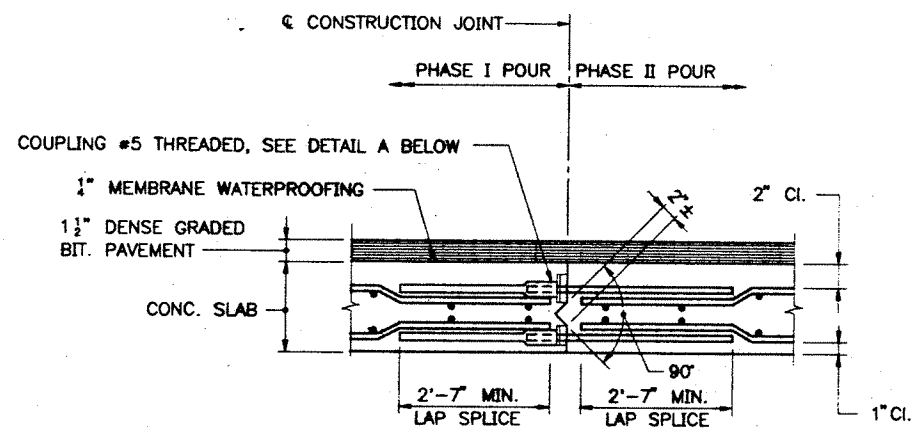
**TRANSVERSE CONSTRUCTION JOINT DETAIL**  
3/4" = 1'-0"



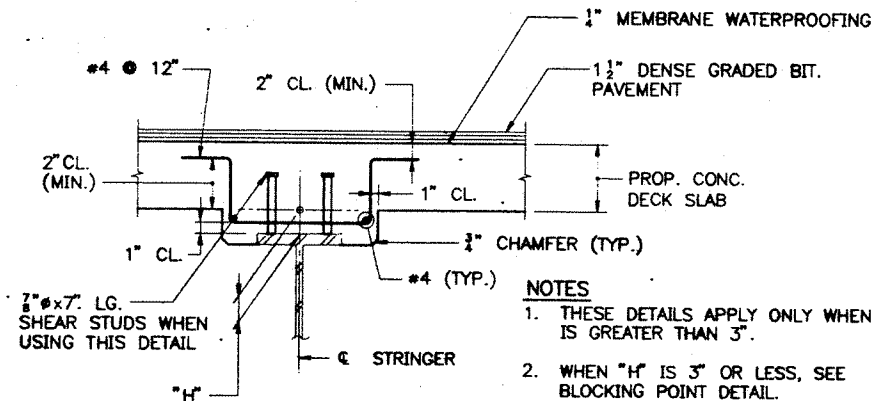
**BLOCKING POINT DETAIL**  
1/2" = 1'-0"



**PLAN - SCUPPER**  
1 1/2" = 1'-0"

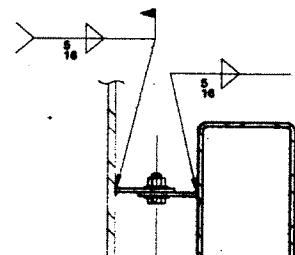


**LONGITUDINAL CONSTRUCTION JOINT DETAIL**  
NOT TO SCALE



**EXTRA DEPTH HAUNCH DETAILS**  
1/2" = 1'-0"

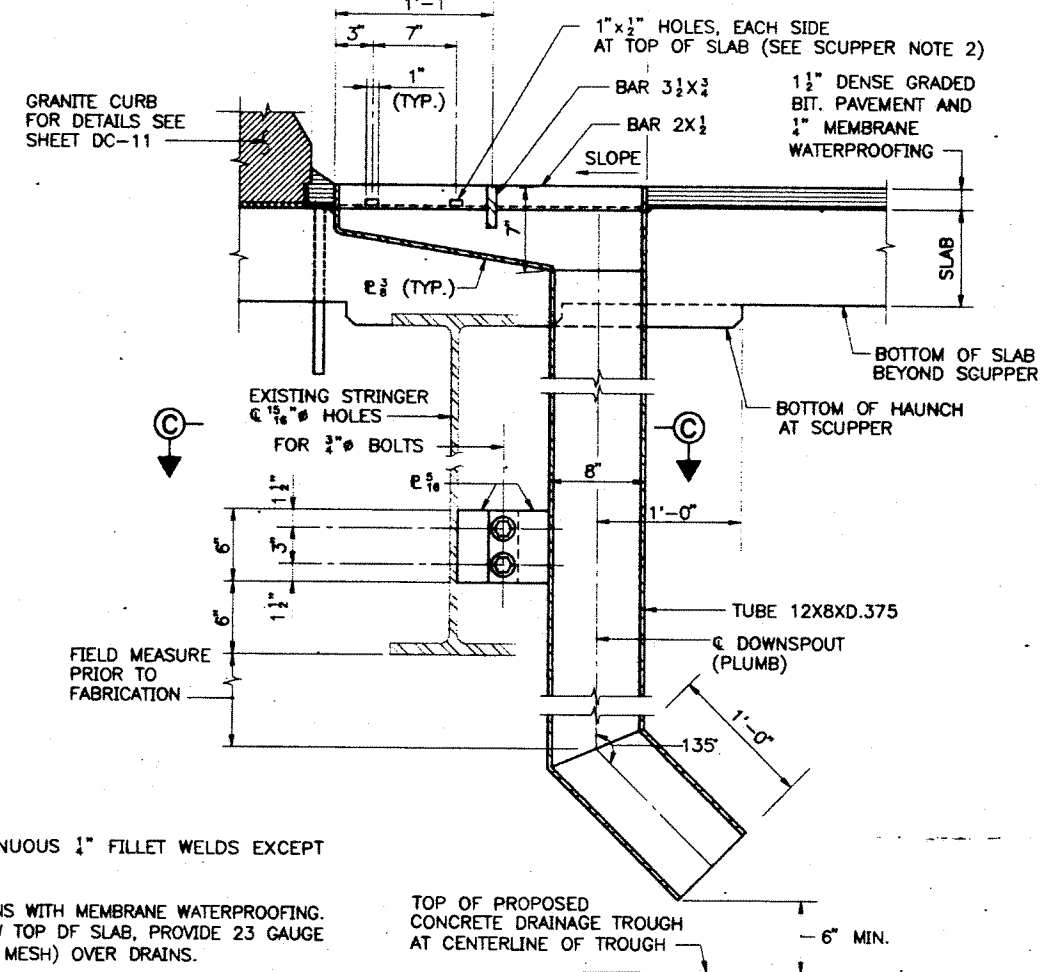
**NOTE:**  
FIELD REPAIR GALVANIZED WITH ZINC RICH PAINT ACCORDING TO SECTION 506 OF THE STANDARD SPECIFICATIONS. (PAYMENT INCIDENTAL TO ITEM 502.262).



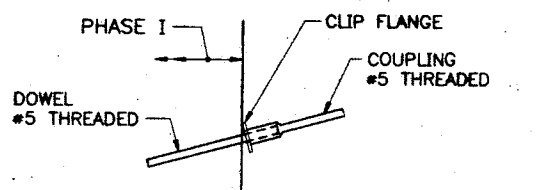
**SECTION C-C**  
1 1/2" = 1'-0"

**SCUPPER NOTES**

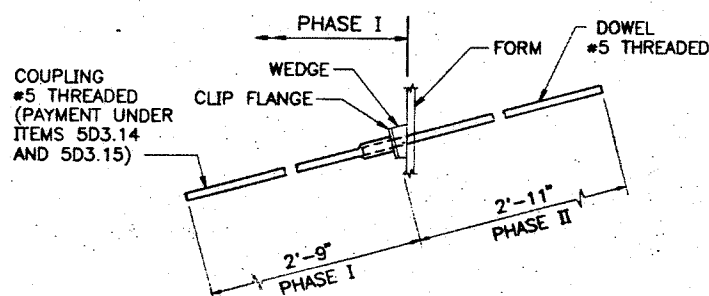
1. ALL WELDS TO BE CONTINUOUS 1/4" FILLET WELDS EXCEPT AS NOTED.
2. DO NOT COVER DECK DRAINS WITH MEMBRANE WATERPROOFING. DEPRESS DRAINS 1/2" BELOW TOP OF SLAB, PROVIDE 23 GAUGE GALVANIZED SCREENS (1/2" MESH) OVER DRAINS.
3. SCUPPERS TO BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
4. ALL PLATES SHALL CONFORM TO ASTM A7D9, GRADE 36.
5. STRUCTURAL TUBES SHALL CONFORM TO ASTM A501.
6. PAYMENT FOR SCUPPERS PVC DRAINS AND SCREENS INCIDENTAL TO CONTRACT ITEM 502.262.
7. FOR LOCATION OF SCUPPERS AND 1" DRAINS, SEE SHEET DC-9.



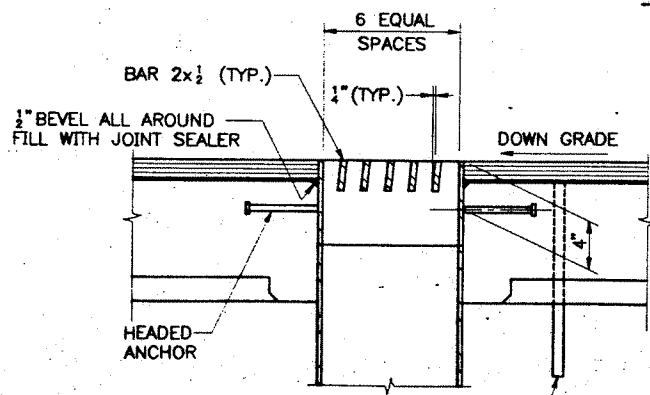
**SECTION A-A**  
1 1/2" = 1'-0"



**OPTIONAL CONSTRUCTION**



**DETAIL A**  
NO SCALE



**SECTION B-B**  
1 1/2" = 1'-0"

1" DRAIN, SEE SUBSECTION 502.17 OF MDOT STANDARD SPECIFICATIONS AND NOTE 2, THIS SHEET

Maine Turnpike Authority  
**Maine Turnpike**

DANVILLE CORNER ROAD UNDERPASS  
**SLAB DETAILS I**

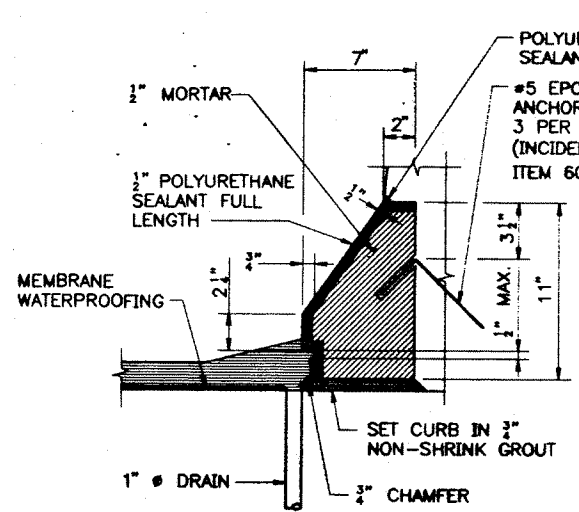
Transpass  
**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF, INC. ARCHITECTS ENGINEERS PLANNERS

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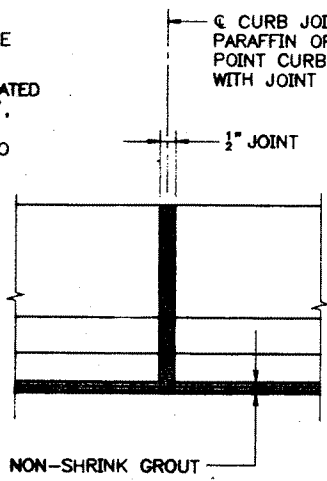
By	Date
Designed	XPM 1/96
Drawn	LMR 1/96
Checked	JFW 1/96
Revision	By Date In Charge Of: RAL

(METPKOB)

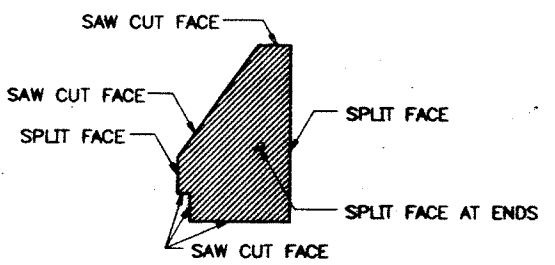




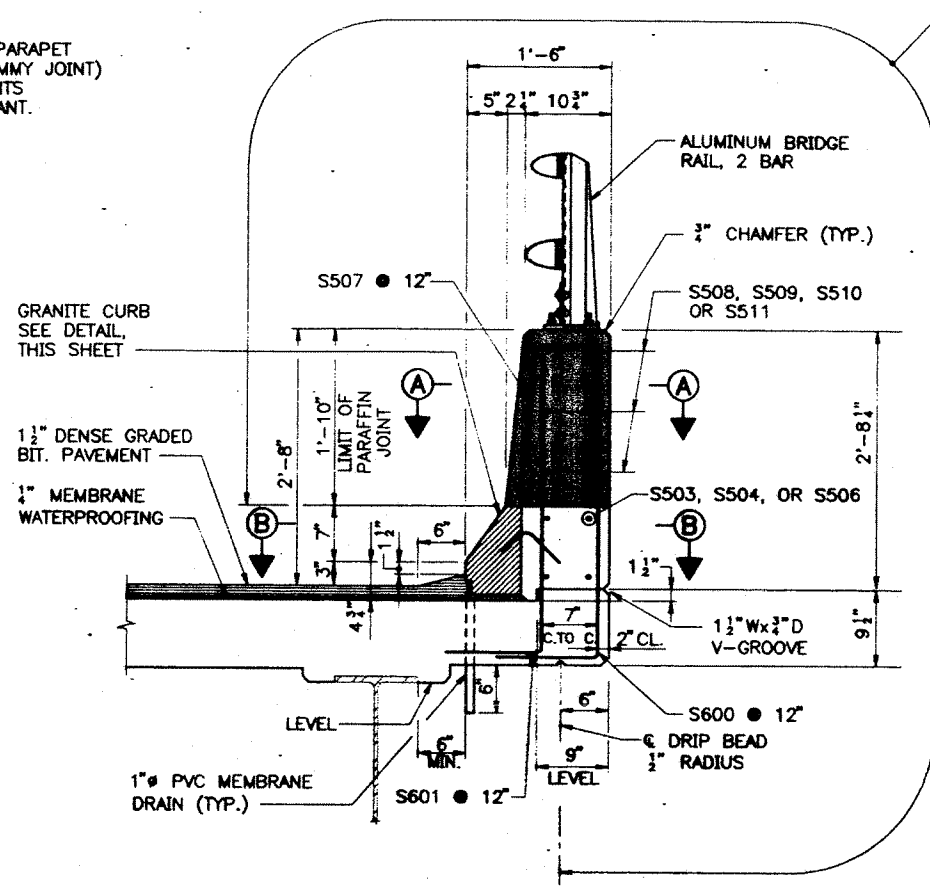
**GRANITE CURB DETAIL**  
2" = 1'-0"



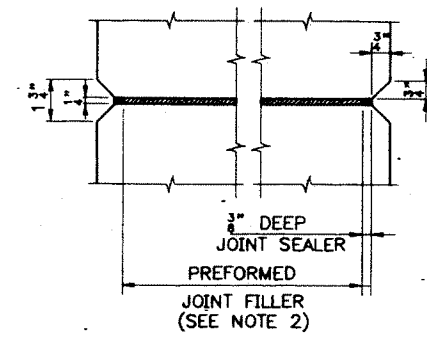
**BRIDGE CURB ELEVATION**  
2" = 1'-0"



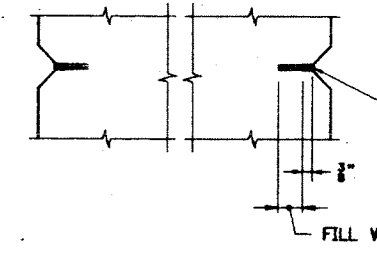
**CURB CUT DETAIL**  
2" = 1'-0"



**PARAPET DETAIL**  
1" = 1'-0"

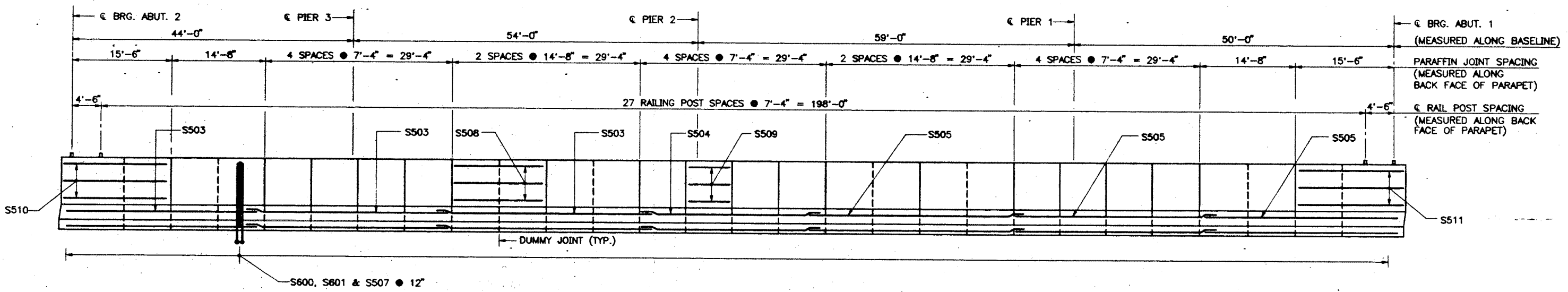


**SECTION A-A**  
3" = 1'-0"



**SECTION B-B**  
3" = 1'-0"

- PARAFFIN AND DUMMY JOINT NOTES**
1. CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF JOINT.
  2. PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D1751.
  3. SECTION B-B ALSO APPLIES TO DUMMY JOINT LOCATIONS.
  4. JOINT SEALER SHALL BE SIKA FLEX 1A.
  5. PREFORMED JOINT FILLER AND JOINT SEALER SHALL BE INCIDENTAL TO ITEM 502.262, STRUCTURAL STRUCTURAL CONCRETE ROADWAY AND PARAPET ON STEEL BRIDGES.
  6. CURB JOINTS SHALL BE ALIGNED WITH PARAFFIN JOINTS.



**PARAPET ELEVATION**  
(EAST ELEVATION SHOWN, WEST ELEVATION SIMILAR)  
HORZ. 1/2" = 1'-0"  
VERT. 1/2" = 1'-0"

Maine Turnpike Authority  
**Maine Turnpike**

DANVILLE CORNER ROAD UNDERPASS  
**SLAB DETAILS II**

Transpass

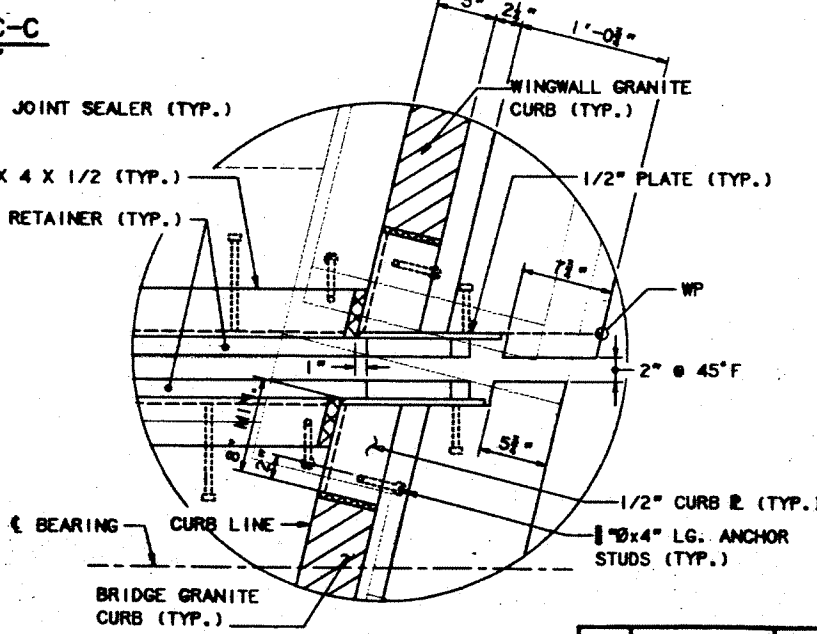
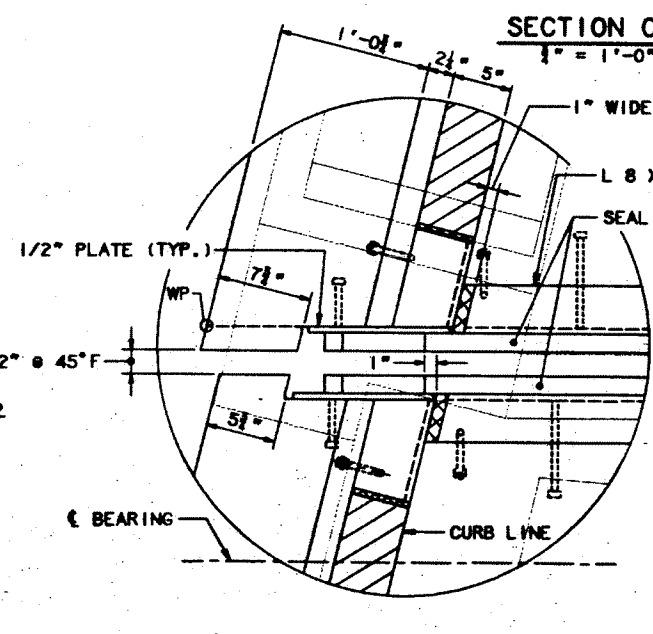
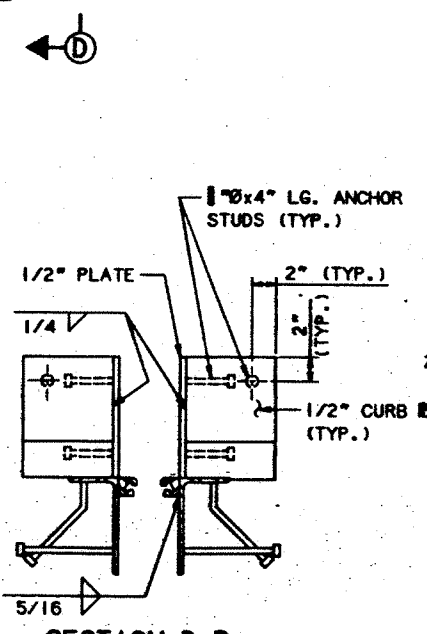
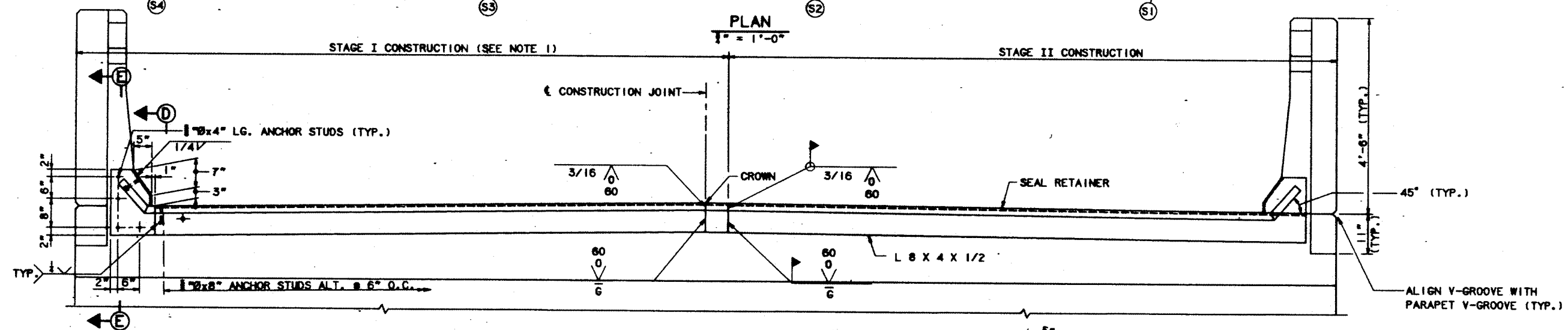
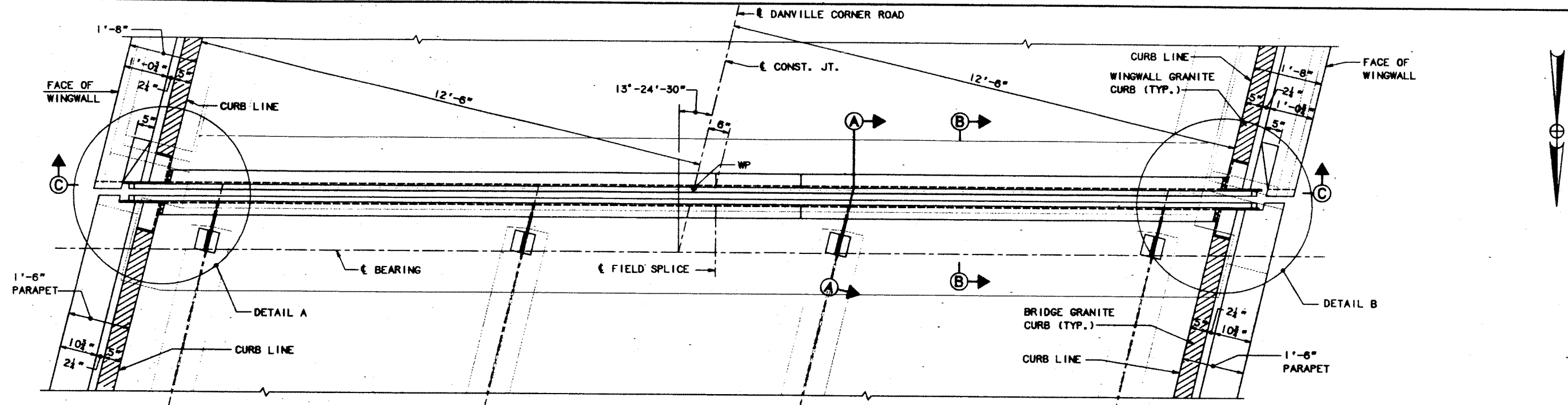
**HNTB** HOWARD NEEDLES TAMMEN & BERGENOFF, INC.  
ARCHITECTS ENGINEERS PLANNERS

Contract 96.5

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By	Date
Designed	XPM 1/96
Drawn	LMR 1/96
Checked	JFW 1/96
Revision	By Date In Charge Of RAL

(METPK08)



- NOTES**
1. CONSTRUCTION STAGES SHOWN RELATE TO THE EXPANSION JOINT ONLY. THE CONCRETE DECK SHALL BE CONSTRUCTED ACCORDING TO THE STAGE CONSTRUCTION SHOWN ON SHEET DC-3.
  2. FOR SECTIONS A-A AND B-B SEE SHEET NO. DC-13.
  3. EXPANSION JOINT AT ABUTMENT NO. 1 SHOWN, EXPANSION JOINT AT ABUTMENT NO. 2 SIMILAR.

Maine Turnpike Authority  
**Maine Turnpike**  
 DANVILLE CORNER ROAD UNDERPASS  
**EXPANSION JOINT DETAILS I**

**HNTB** HOWARD NEEDLES TAMMEN & BERGENOFF, INC.  
 ARCHITECTS ENGINEERS PLANNERS

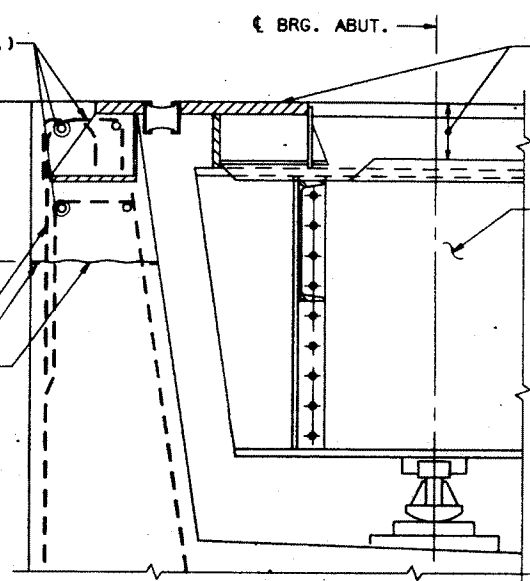
Contract 96.5      Sheet No. DC-12  
 55 of 59

By: XPM	Date: 1/96
Designed: XPM	Date: 1/96
Drawn: LS	Date: 1/96
Checked: JFW	Date: 1/96
In charge of: RAL	

REMOVE EXIST. HORIZ. REINF. AND  $\square$  BAR (TYP.) ROADWAY SURFACE

1'-7" REMOVE CONC. & EXP. JT. AT TOP OF BACKWALL (PAYMENT UNDER ITEM 202.12)

EXISTING VERTICAL REINF. TO REMAIN  
1" SAWCUT (TYP.)  
CONCRETE BREAK LINE



**EXISTING SECTION A-A**  
1" = 1'-0"

REMOVE REINF. CONC. SLAB AND EXP. JT. (PAYMENT UNDER ITEM 202.122)

3" PAVEMENT ABOVE TOP OF BACKWALL

EXIST. STRINGER  
PROP. CONC. CONST. JT.

SHEET MEMBRANE WATERPROOFING

LIMIT OF MEMBRANE WATERPROOFING  
1'-0" 6" 6" 4"  
1"  $\varnothing$  RODS, 2'-2" LONG WITH 8" THREADS, 2 HEX. NUTS AND 2-3/4"  $\varnothing$  WASHERS  
DRILL AND GROUT HOLES FOR ANCHOR ROD (TYP.)

DETAIL C

L8x4x1/2 (TYP.)

OPTIONAL BLOCKOUT (SEE NOTE 3)  
1 1/2" DENSE GRADED BIT. PAVEMENT AND 1/2" MEMBRANE WATERPROOFING

BRG. ABUT.

S503, S505

S501

8" SLAB

EXIST. STRINGER

**PROPOSED SECTION A-A**  
1 1/2" = 1'-0"

**EXPANSION DEVICE NOTES**

- SHOP DRAWINGS OF THE EXPANSION DEVICE SHALL BE SUBMITTED FOR APPROVAL OF THE ENGINEER.
- THE EXPANSION DEVICE SHALL BE SET TO AN OPENING OF 1/4 INCHES IN THE FABRICATION SHOP AND SHALL BE SECURE TO THE STRINGER AND/OR ANCHOR BOLTS WHEN THE AMBIENT TEMPERATURE IS BETWEEN 40°F AND 80°F. THE OPENING SHALL BE ADJUSTED TO REFLECT THE TEMPERATURE OF THE STRUCTURE AT THE TIME OF INSTALLATION. SEE TABLE FOR OPENING DIMENSIONS. (OPENING IS TO BE MEASURED PARALLEL TO THE CENTER LINE OF CONSTRUCTION.)
- THE SLAB CONCRETE SHALL BE IN PLACE BEFORE THE EXPANSION DEVICE IS FIXED IN POSITION. NO ALLOWANCE FOR MOVEMENT DUE TO DEAD LOAD DEFLECTION IS NECESSARY. SEE SECTION 520.06 OF THE STANDARD SPECIFICATIONS.
- THE FABRICATORS ATTENTION IS DIRECTED TO THE NECESSITY OF FABRICATING AND INSTALLING THE DEVICE IN TWO SECTIONS.
- DIRECTION AND LOCATION OF FIELD SPLICES MAY BE ADJUSTED IF REQUIRED TO FACILITATE CONSTRUCTION.
- ALL EXPOSED SURFACES OF ANGLES AND STEEL EXTRUSIONS TO BE FIELD PAINTED.
- ALL STEEL COMPONENTS SHALL BE ASTM A709 GRADE 36, UNLESS OTHERWISE NOTED.
- ALL WELDS ARE 3/8" CONTINUOUS FILLETS, EXCEPT AS NOTED.
- ALL STEEL SURFACES THAT WILL BE EMBEDDED IN CONCRETE SHALL BE COATED WITH EPOXY BONDING COMPOUND.
- THE SEALS TO BE FURNISHED SHALL HAVE A MINIMUM MOVEMENT RATING OF:

ABUTMENT 1 = 1 1/2 INCHES  
ABUTMENT 2 = 1 7/16 INCHES

1/2" x 8" ANCHOR STUDS ALTERNATE @ 6" O.C. BETWEEN EXP. DEVICE ADJUSTMENT STOOL (TYP.)  
3 SIDES AFTER FINAL ADJUSTMENT

1"  $\varnothing$  HOLE @ 3'-0" O.C. (TYP.)  
NEOPRENE STRIP SEAL WITH STEEL EXTRUSION  
A (SEE TABLE) TYP.

L 8 X 4 X 1/2 (TYP.)  
R 1/2  
12  
7 (TYP.)  
1/2"

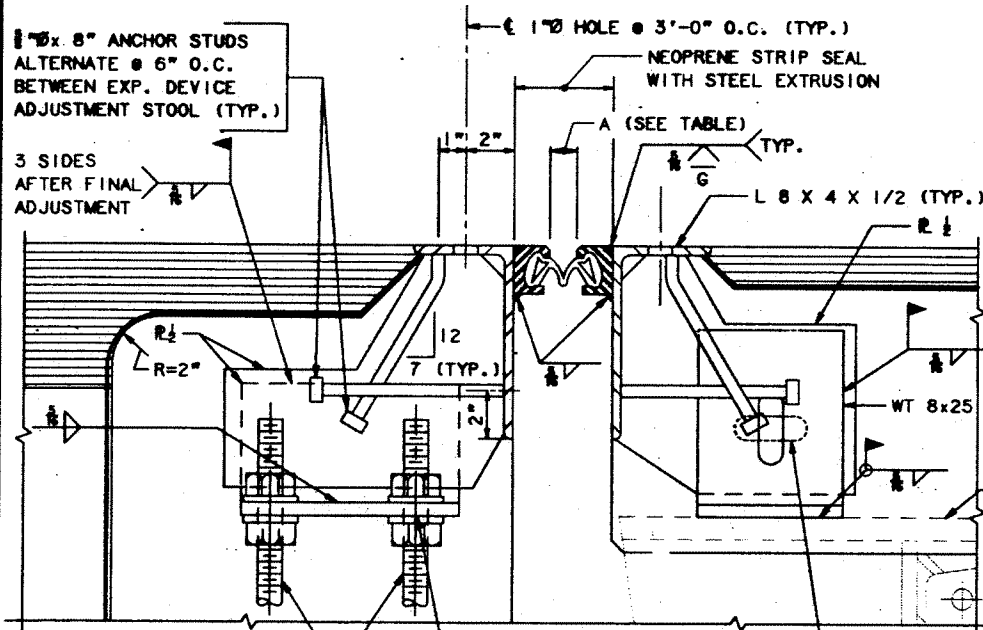
3 SIDES AFTER FINAL ADJUSTMENT  
WT 8x25  
TOP OF FLANGE

1"  $\varnothing$  RODS

**DETAIL C**  
3" = 1'-0"

R 1/2 x 9 x 1'-0" SEE DETAIL D

1" x 3" SLOT FOR 1/2" H.S. BOLT



L 8 X 4 X 1/2 (TYP.)  
1/2" x 8" ANCHOR STUDS ALTERNATE @ 12" O.C. (TYP.)

3" PAVEMENT ABOVE TOP OF BACKWALL

PROPOSED REINF. SEE SHT. DC-4 & DC-5

CONST. JT

SHEET MEMBRANE WATERPROOFING

DRILL AND GROUT HOLES FOR DOWELS (TYP.)

4" MIN. (TYP.)

OPTIONAL BLOCKOUT (SEE NOTE 3)

(SEE TABLE)

BRG. ABUT.

S501\*

S503, S505

S501

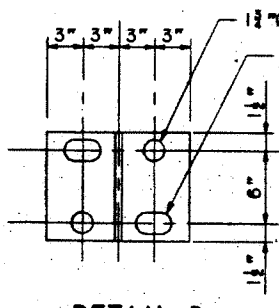
1 1/2" DENSE GRADED BIT. PAVEMENT AND 1/2" MEMBRANE WATERPROOFING  
8" SLAB

S512

S513

4" MIN. (TYP.)

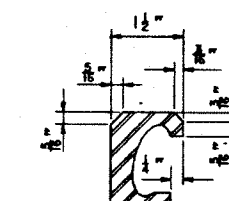
1 1/2"  $\varnothing$  VENT HOLE (TYP.)  
3" x 1 1/2" SLOTTED HOLE FOR 1"  $\varnothing$  ANCHOR ROD (TYP.)



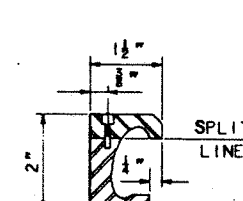
**DETAIL D**  
1 1/2" = 1'-0"

**PROPOSED SECTION B-B**  
1 1/2" = 1'-0"

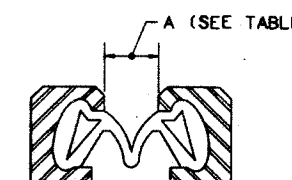
\* FIELD CUT TO FIT AND EPDXY COAT ENDS.



**STEEL EXTRUSION FOR ROADWAY AREAS**



**STEEL EXTRUSION FOR OTHER AREAS**



**STRIP SEAL DETAILS**  
HALF SIZE

SEAL OPENING TABLE (DIM. "A")								
TEMP.	0°F	15°F	30°F	45°F	60°F	75°F	90°F	105°F
ABUT. 1	1 1/8"	1 1/4"	1 1/2"	1 3/4"	1 7/8"	1 5/8"	1 3/4"	1 1/2"
ABUT. 2	1 1/8"	1 1/4"	1 1/2"	1 3/4"	1 7/8"	1 5/8"	1 3/4"	1 1/2"

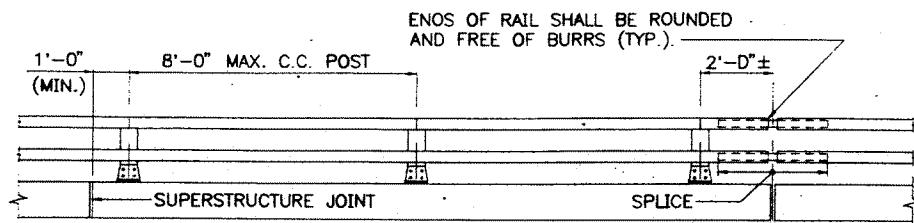
Maine Turnpike Authority  
**Maine Turnpike**

DANVILLE CORNER ROAD UNDERPASS  
**EXPANSION JOINT DETAILS II**

Contract 96.5  
Sheet No. DC-13  
56 of 59

HNTB  
HOWARD NEEDLES TAMMEN & BERGENDOFF, INC.  
ARCHITECTS ENGINEERS PLANNERS

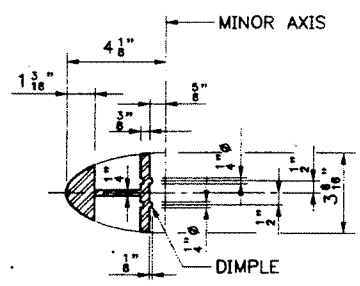
By: Dated	
Designed: XPM	1/96
Drawn: LS	1/96
Checked: JFW	1/96
No. Revision	By: Dated in charge of: RAL



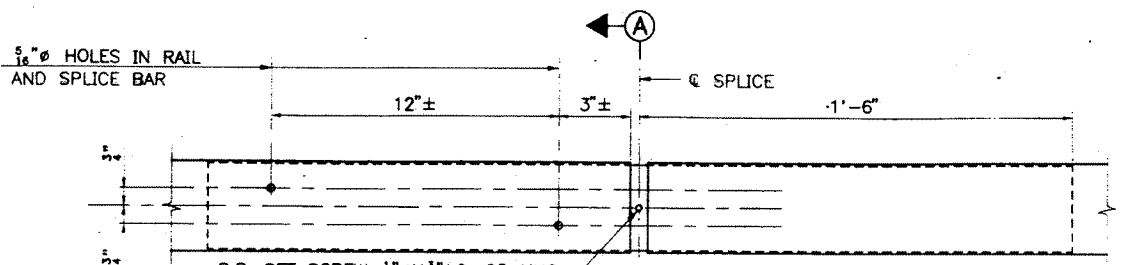
**NOTE**  
 LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL PDST WHENEVER POSSIBLE, AND IN ANY CASE NEVER LESS THAN TWO (2). RAIL POST ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS. BRIDGE PLANS.

2" ● 70' F (BRIDGE EXP. JOINTS)  
 1/2" ● RAIL JOINTS

**RAILING - ELEVATION**  
 3" = 1'-0"

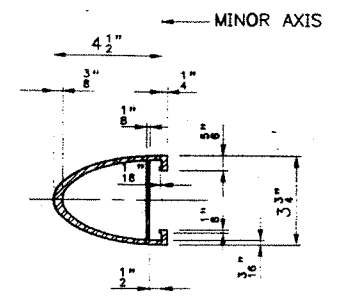


**SECTION A-A (RAIL)**  
 3" = 1'-0"

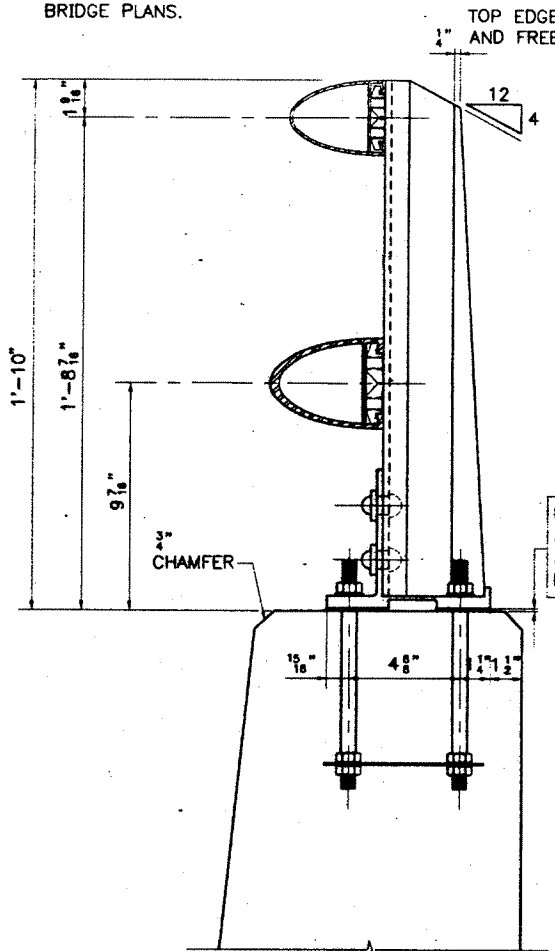


S.S. SET SCREW 1/4" x 3/4" LG. 20 UNC FLAT POINT, SOCKET HEAD. MAX. PROJECTION 1/8"

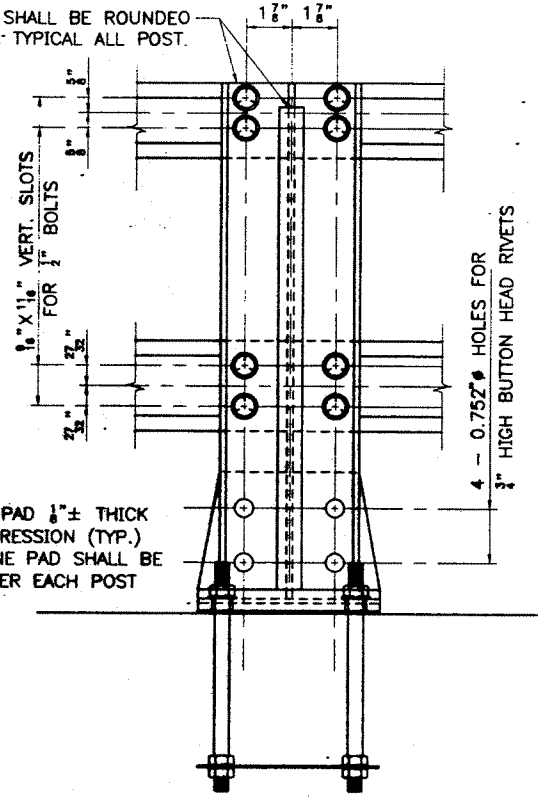
**SPLICE DETAIL**  
 3" = 1'-0"



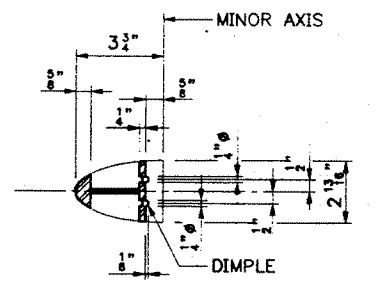
**RAIL MEMBER**  
 3" = 1'-0"



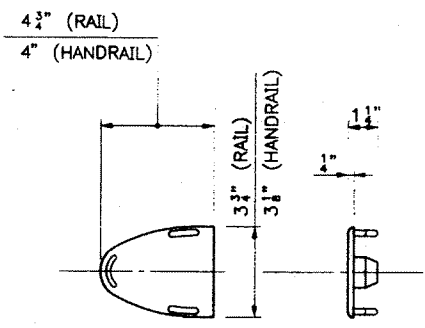
**BRIDGE RAILING (ASSEMBLY)**  
 3" = 1'-0"



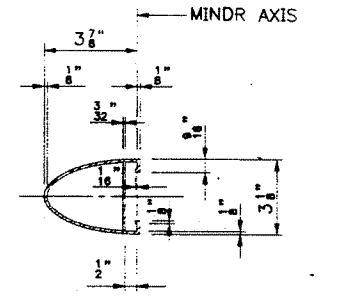
**OUTSIDE ELEVATION OF POST**  
 3" = 1'-0"



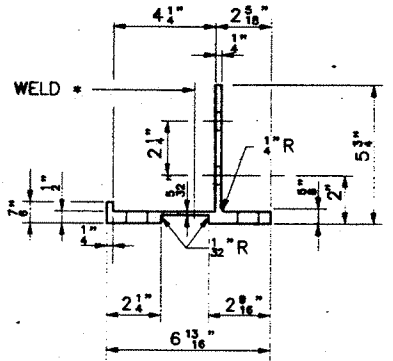
**SECTION A-A (HANDRAIL)**  
 3" = 1'-0"



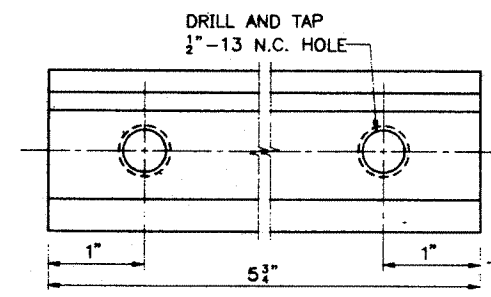
**CAST ALUMINUM DRIVE FIT RAIL CAP**  
 3" = 1'-0"



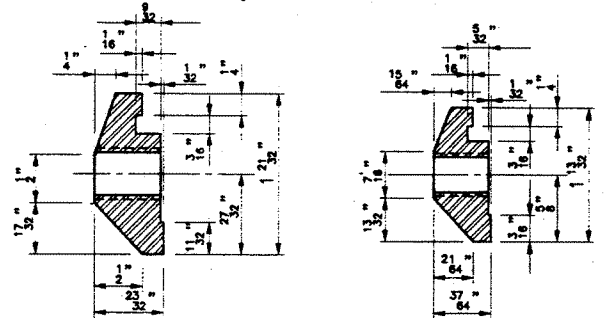
**HANDRAIL MEMBER**  
 3" = 1'-0"



**POST BASE SECTION**  
 3" = 1'-0"

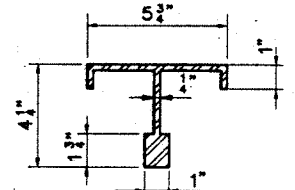


**FOR RAIL MEMBER**



**FOR HANDRAIL**

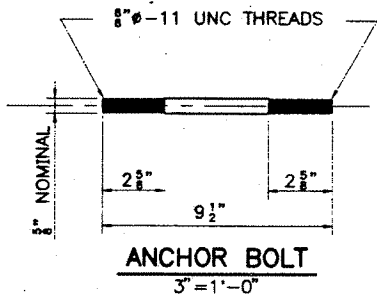
PREFORMED PAD 1/4" ± THICK AFTER COMPRESSION (TYP.) AT LEAST ONE PAD SHALL BE PLACED UNDER EACH POST



**POST SECTION**  
 3" = 1'-0"

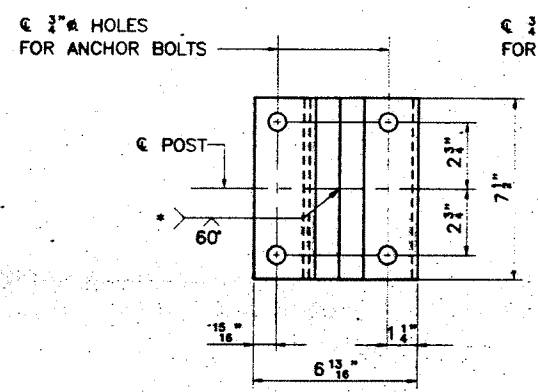
**NOTE**  
 \* ONE-PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE-PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE PLATE

**CLAMP BAR DETAILS**  
 FULL SIZE

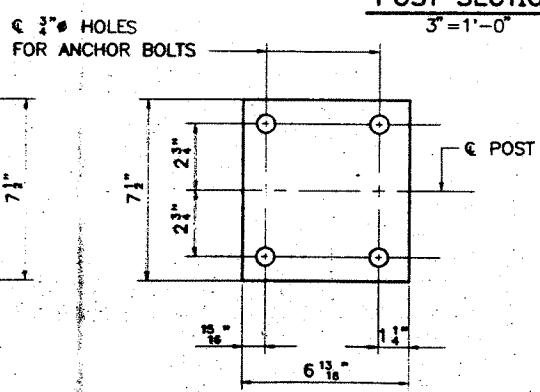


**ANCHOR BOLT**  
 3" = 1'-0"

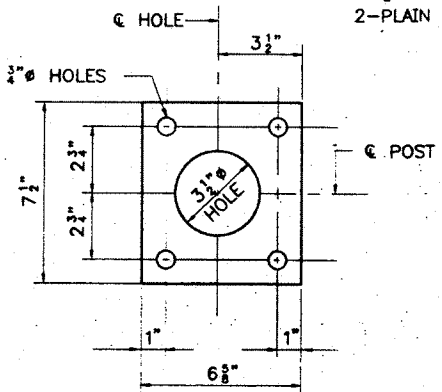
**NOTE**  
 IF CUT THREADS ARE USED, BDDY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.



**POST BASE (BOTTOM VIEW)**  
 3" = 1'-0"

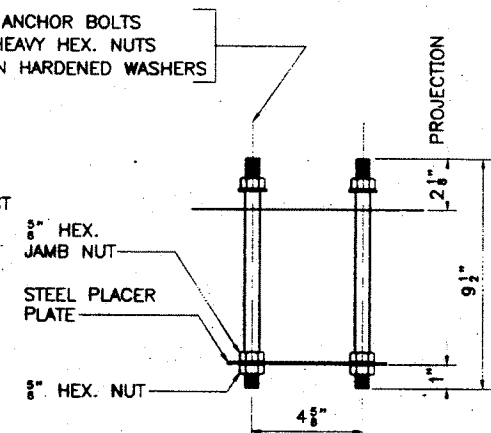


**PREFORMED PAD**  
 3" = 1'-0"



**STEEL SPACER PLATE (FOR ANCHORAGE)**  
 3" = 1'-0"

2-5/8" ● ANCHOR BOLTS  
 2-5/8" HEAVY HEX. NUTS  
 2-PLAIN HARDENED WASHERS



**RAIL POST ANCHORAGE (ASSEMBLY)**  
 3" = 1'-0"

**NOTE**  
 FOUR(4) BOLT, NUT AND WASHER SETS ARE REQUIRED PER ASSEMBLY. ALL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED.

Revision	By	Date	In. Charge Of	RAL
	Designed	XPM	1/96	
	Drawn	RSJ	1/96	
	Checked	JFW	1/96	

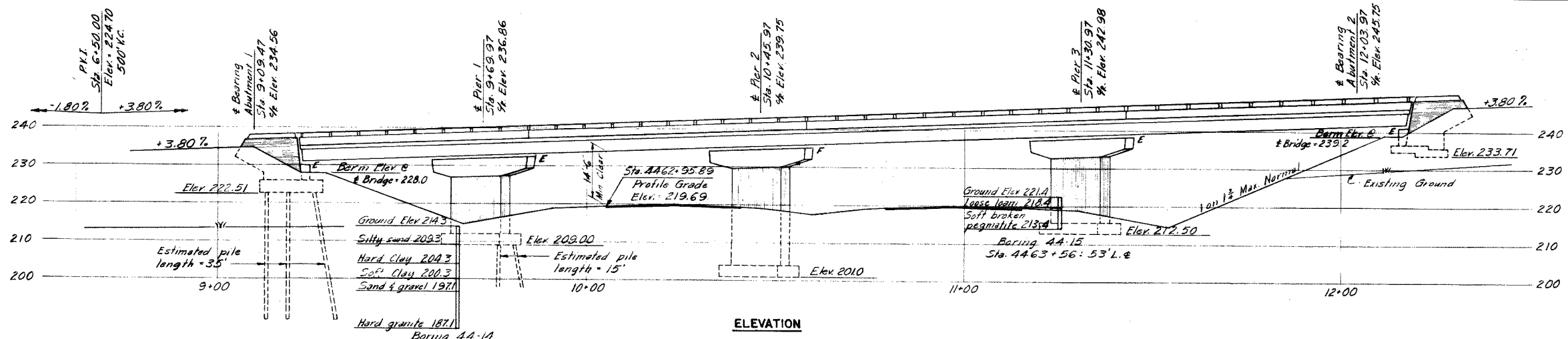
**Maine Turnpike Authority**  
**Maine Turnpike**

**DANVILLE CORNER ROAD UNDERPASS ALUMINUM BRIDGE RAIL DETAILS**

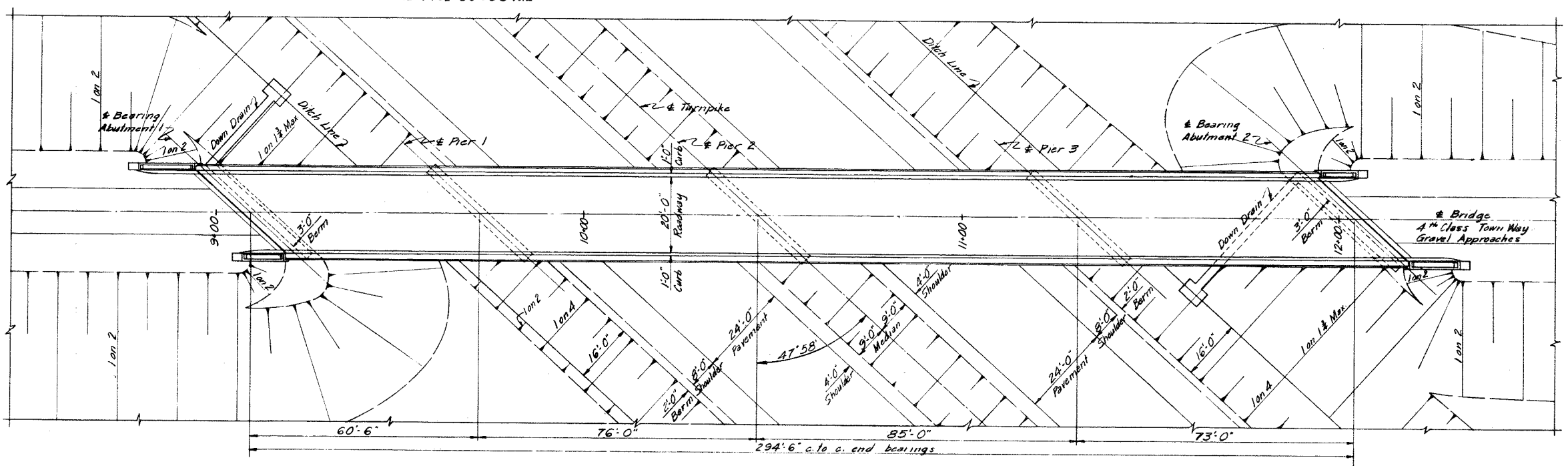
**Transpass**      **HNTB**      HOWARD NEEDLES TAMMEN & BERGENDOFF, INC  
 ARCHITECTS ENGINEERS PLANNERS

Contract 96.5      Sheet No. DC-14  
 57 of 59

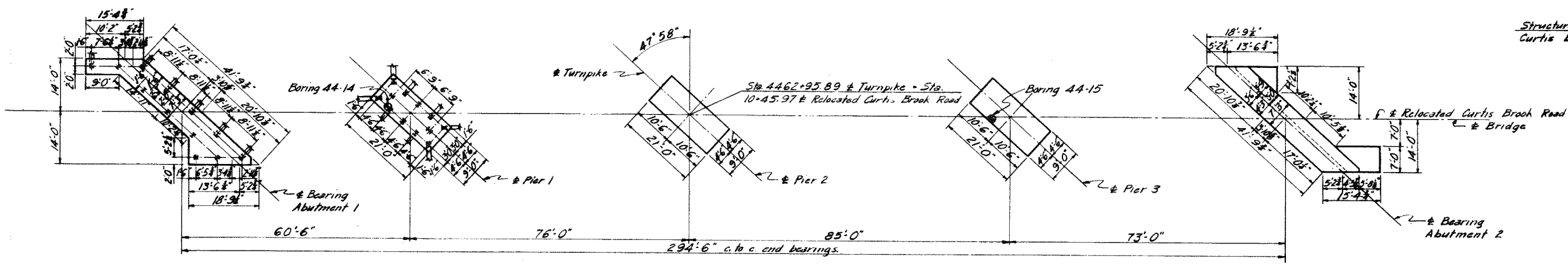
(M.T.P.KOR)



ELEVATION



PLAN



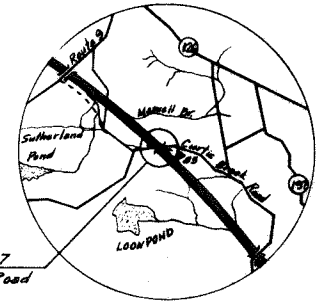
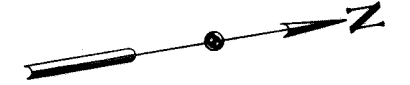
FOOTING PLAN

Note: Abutment piles shall be 10BP42.  
Pier piles shall be 12BP53.  
Batter piles 3' per foot in direction shown.

Note: Piers 2 and 3 footings shall be set 1'-0" Min. into rock.

**GENERAL NOTES**  
Design Specifications: AASHTO (1953) with minor modifications.  
Design Live Load: H-15  
Max. Pile Load:  
Abutment 1 - 30.0 Tons per pile.  
Pier 1 - 54.3 Tons per pile.  
Max. Soil Pressure:  
Pier 2 - 5.6 Tons per sq ft.  
Pier 3 - 5.2 Tons per sq ft.  
Abutment 2 - 1.4 Tons per sq ft.

Drawing Number	Title	Subcontractor	Superstructure			
			Steel Deck	Steel Truss	Floor	Contract
SD-1A	Standard Abutment Details		✓	✓	✓	✓
SD-2	Standard Pier Details		✓	✓	✓	✓
SD-3	Abutment Drainage Details		✓	✓	✓	✓
SD-4	Standard Pile Details		✓	✓	✓	✓
SD-5	Standard Handrail, Bearing Devices & Miscellaneous Details		✓	✓	✓	✓
SD-6	Standard Diaphragm Details		✓	✓	✓	✓
SD-9	Standard Splices for 33# Beams		✓	✓	✓	✓
SD-12A	Roadway Expansion Joint Type 2		✓	✓	✓	✓
SD-14	Standard Bridge Floor Cross-section, 20'-0" & 22'-0" Roadways		✓	✓	✓	✓

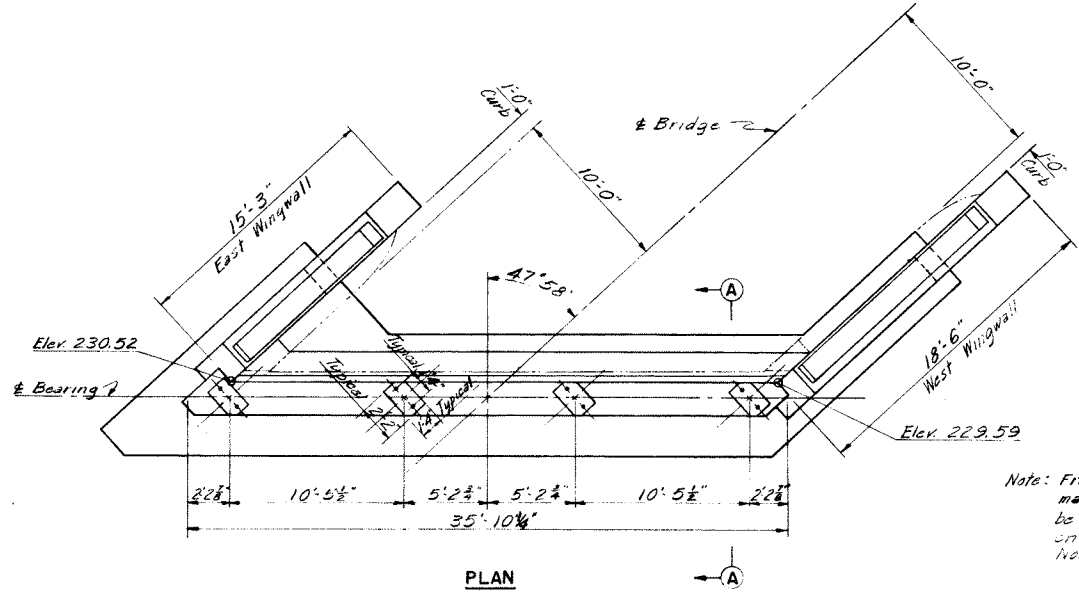


VIGNITY MAP  
Scale: 1" = 1 mile

DRAWING NO. 67.01.04

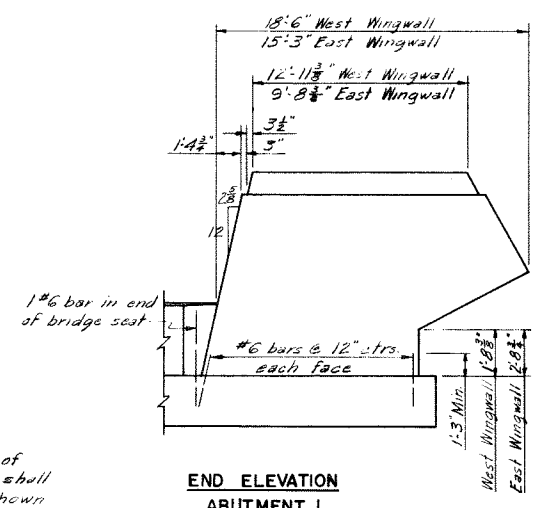
BY	DATE	REVISION	BY	DATE
MADE	RFS 5-24-54			
TRACED		2	As-Built	HBH 8-8-56
CHECKED	RJC 6-15-54	1	Per 2 Flg. Elev.	CWA 7-5-55
IN CHARGE OF	IDSX			

MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
SECTION 2 - PORTLAND TO AUGUSTA  
STRUCTURE NO. 67 CURTIS BROOK ROAD TURNPIKE UNDER  
STA. 4462 + 98.89  
GENERAL PLAN AND ELEVATION  
HOWARD, NEEDLES, TAMMEN & BERGENDORFF CONSULTING ENGINEERS SCALE: 1/4" = 1'-0"  
NEW YORK KANSAS CITY CONTRACT NO. SHEET NO. 322 OF 322

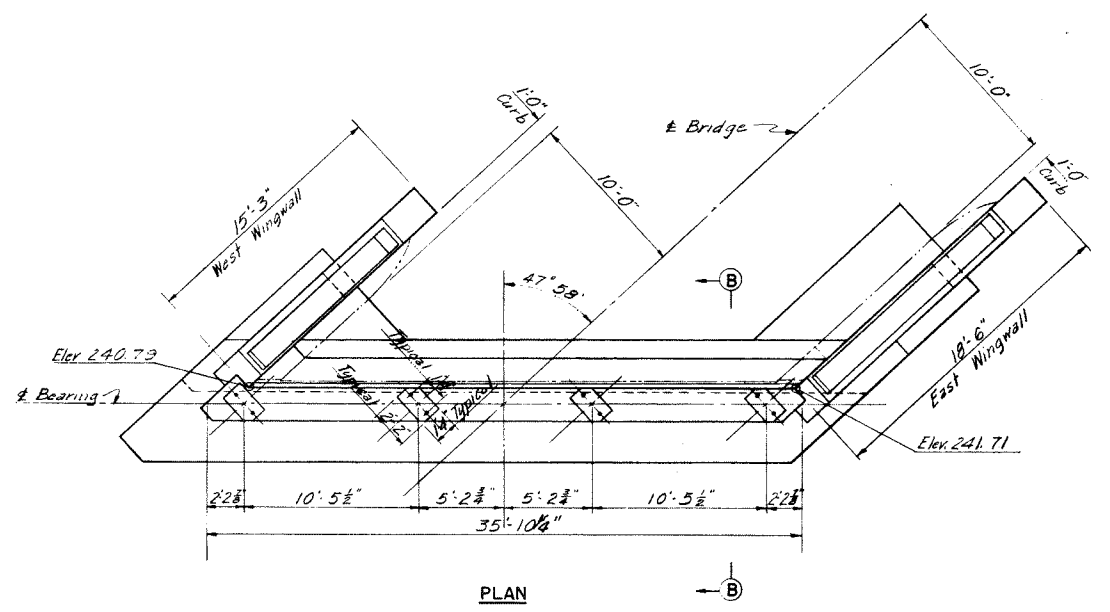


PLAN

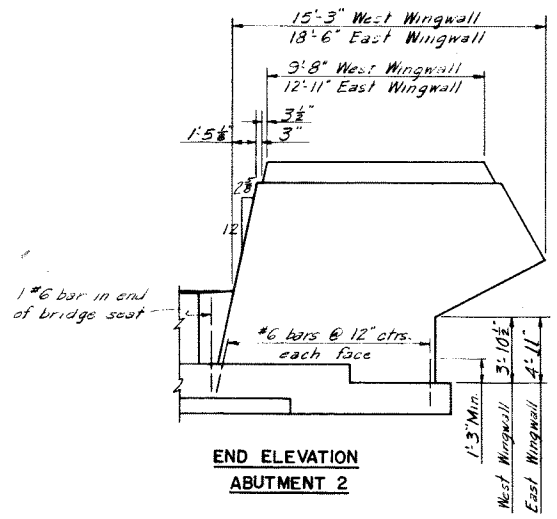
Note: Front corners of masonry plates shall be clipped as shown on Standard Drawing No. 5.



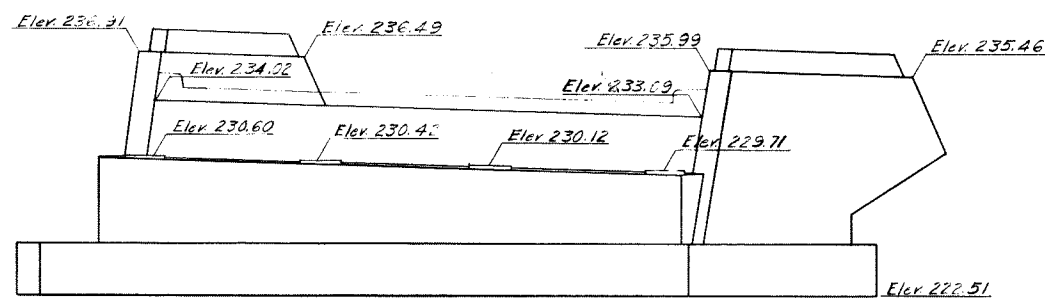
END ELEVATION ABUTMENT 1



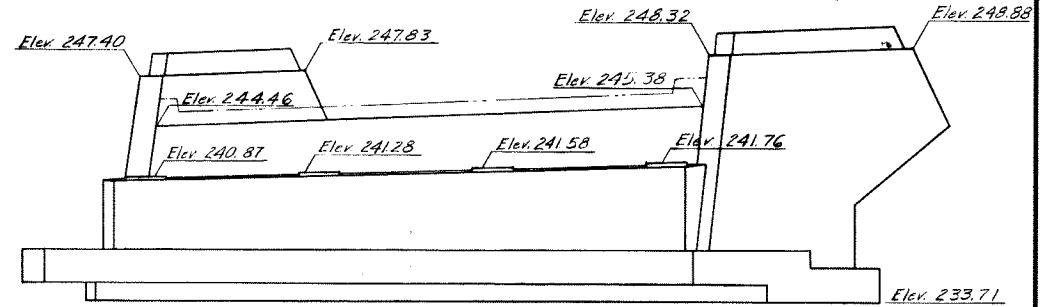
PLAN



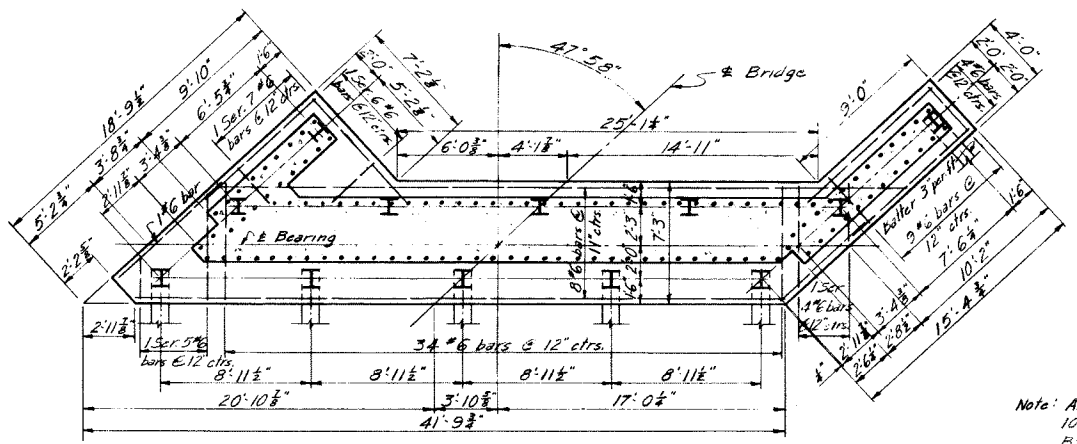
END ELEVATION ABUTMENT 2



ELEVATION

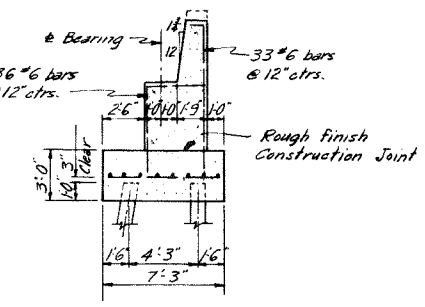


ELEVATION

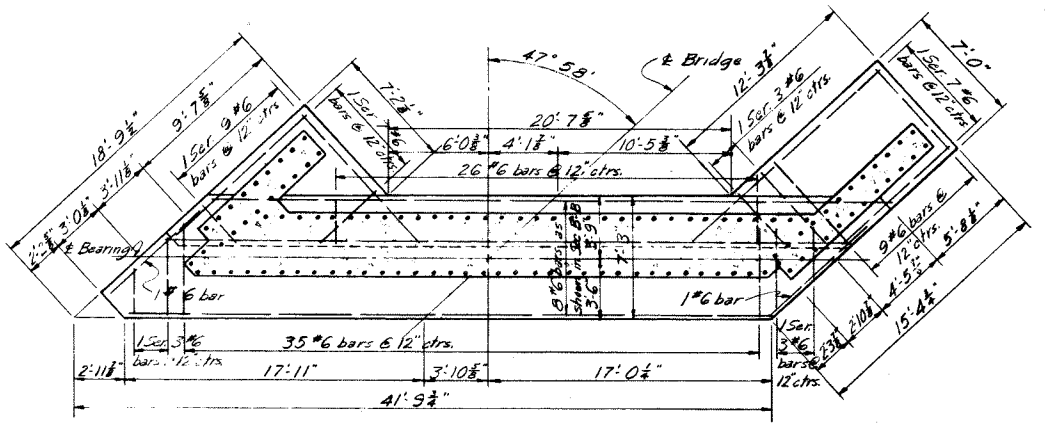


FOOTING PLAN

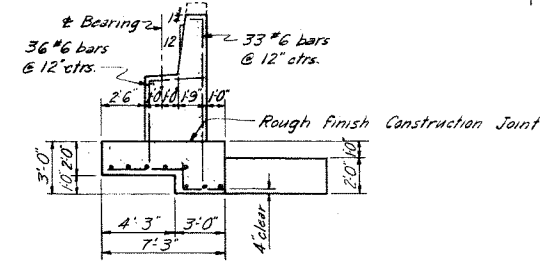
Note: All piles shall be 10 B+42. Batter piles 3" per foot in direction shown.



SECTION A-A



FOOTING PLAN



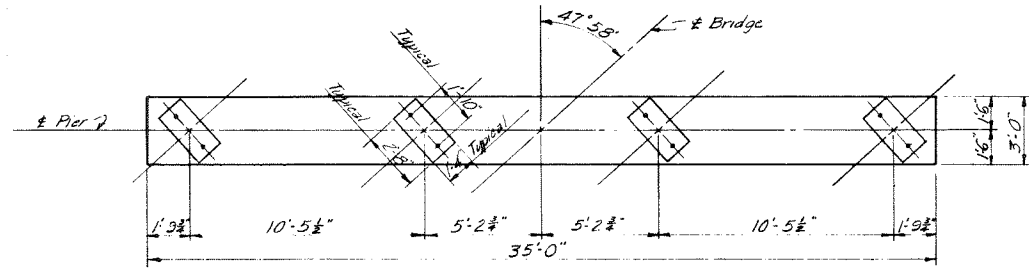
SECTION B-B

ABUTMENT 2

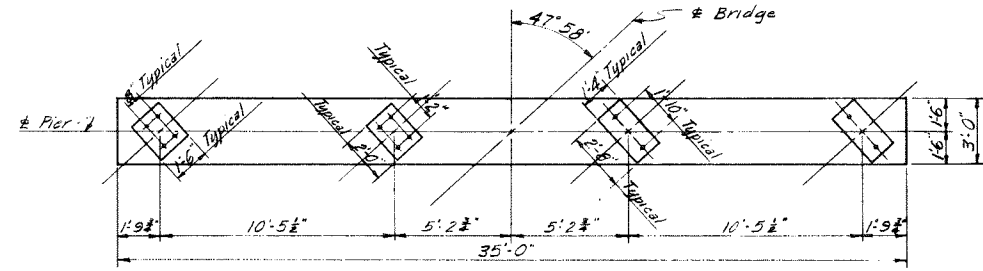
DRAWING NO. 67.02.04					
MADE	BY	DATE			
TRACED	RF5	5-19-54			
CHECKED	H.J.G.	6-11-54	1	As-Built	HBH 28-56
IN CHARGE OF	IOSK	No.	REVISION	BY	DATE

ABUTMENT 1

MAINE TURNPIKE AUTHORITY	
MAINE TURNPIKE	
SECTION 2 - PORTLAND TO AUGUSTA	
STRUCTURE NO. 67	TURNPIKE UNDER
CURTIS BROOK ROAD	
STA. 4462 + 95.89	
ABUTMENTS	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF	SCALE: 1/8" = 1'-0"
CONSULTING ENGINEERS	CONTRACT NO.
NEW YORK	KANSAS CITY
	SHEET NO. 302 OF 382

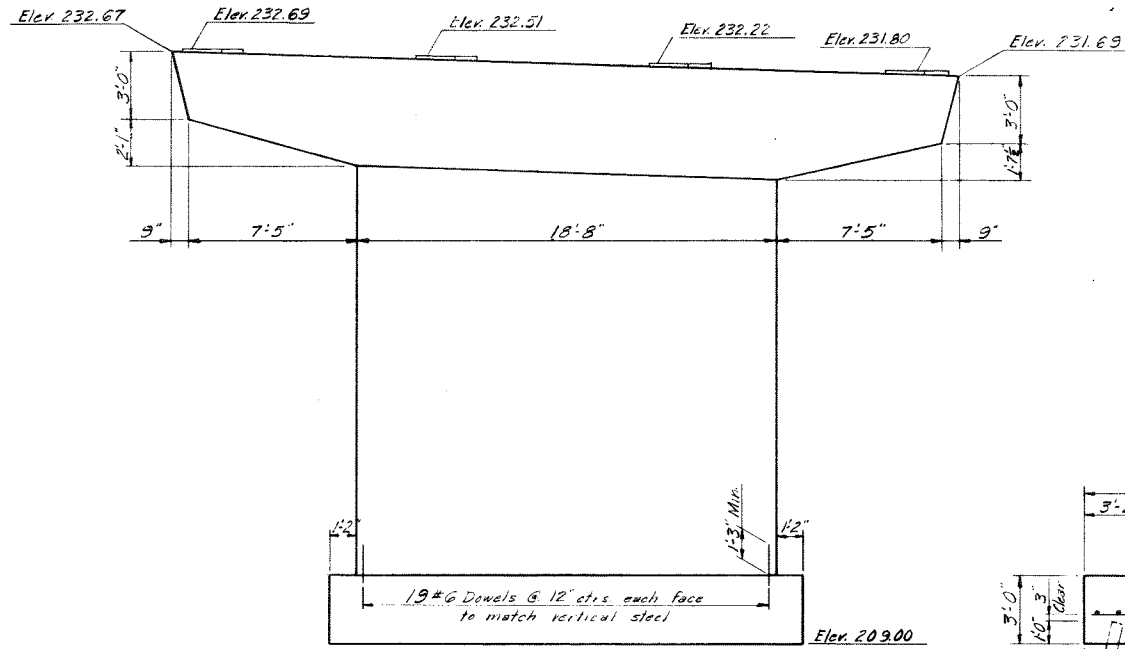


CAP PLAN PIER 1

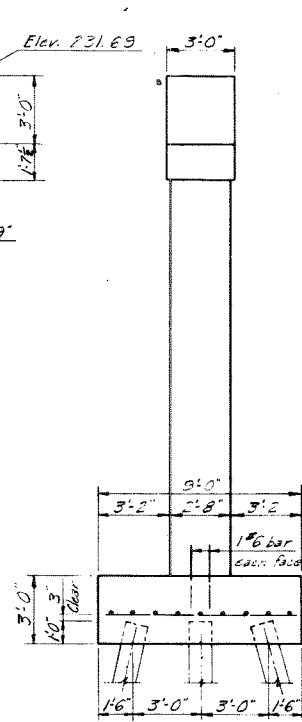


HALF CAP PLAN PIER 2

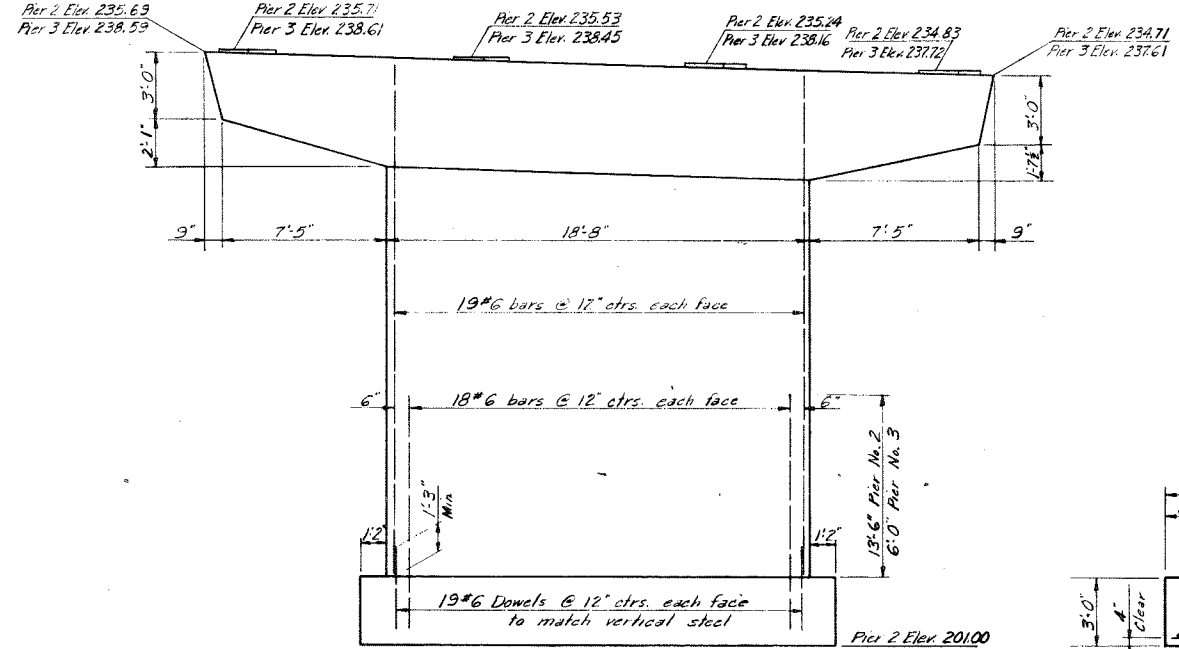
HALF CAP PLAN PIER 3



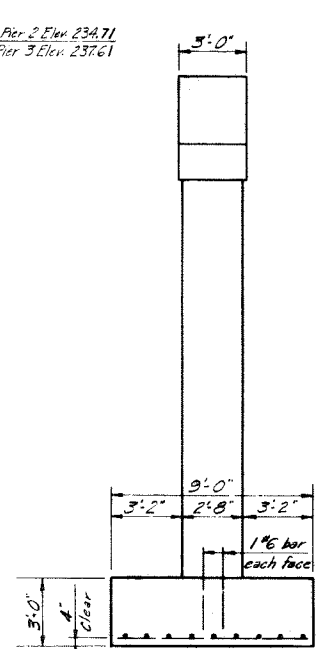
ELEVATION PIER 1



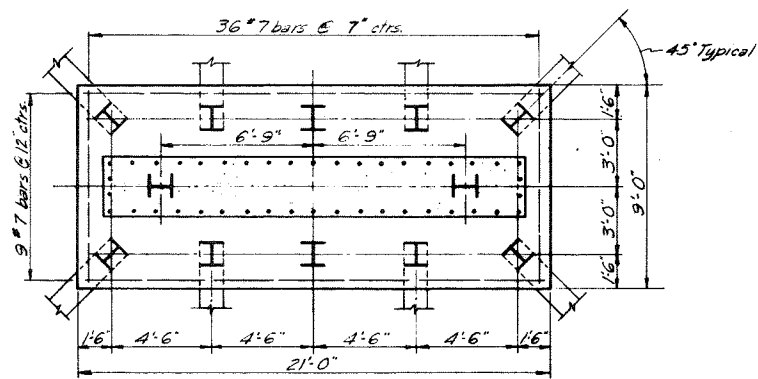
END ELEVATION PIER 1



ELEVATION PIERS 2 & 3

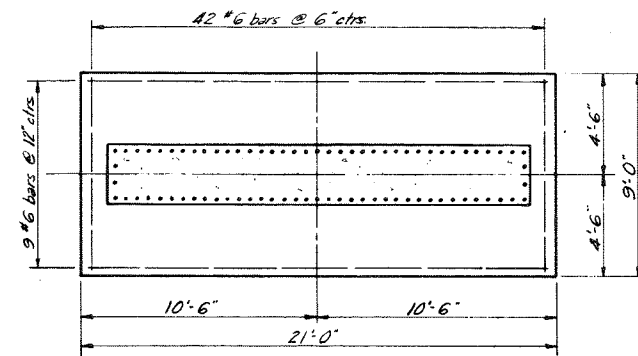


END ELEVATION PIERS 2 & 3



FOOTING PLAN PIER 1

Note: All piles shall be 12 BP53  
Batter piles 3" per ft. in  
direction shown.



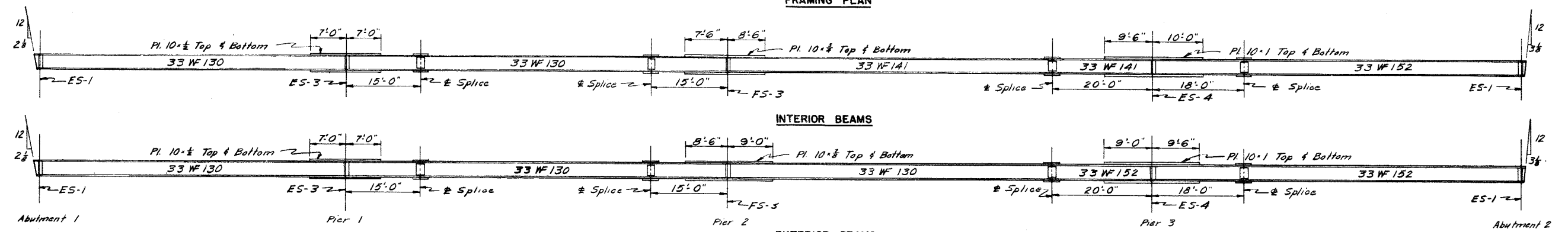
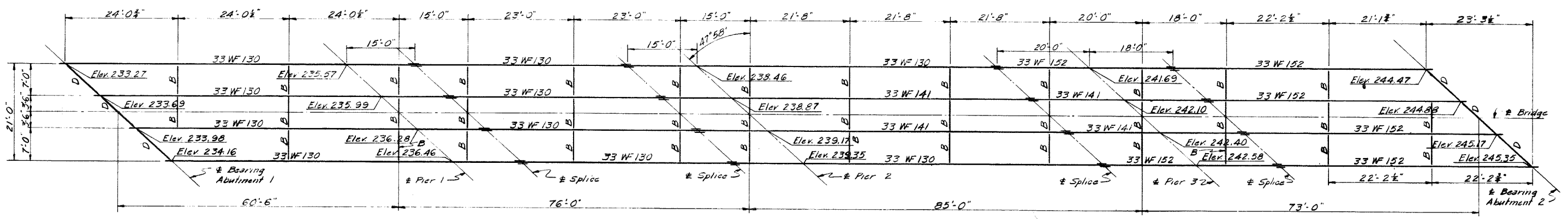
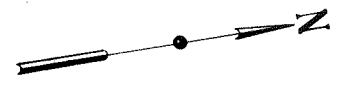
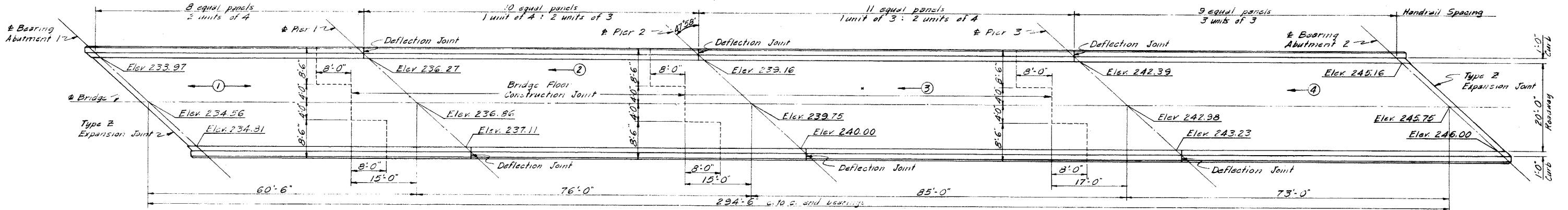
FOOTING PLAN PIERS 2 & 3

Note: Footings shall be set  
1'-0" Min. into rock.

DRAWING NO. 67.03.04

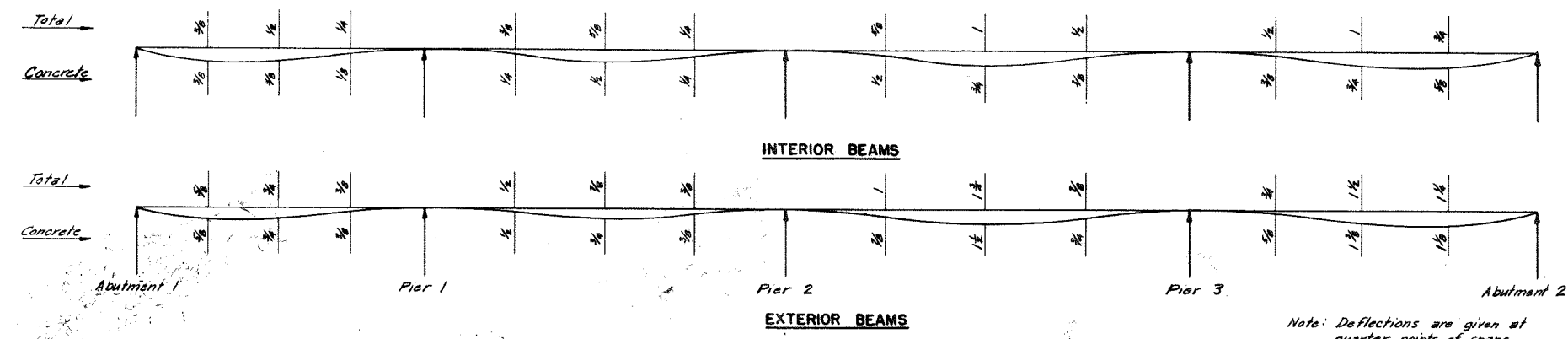
MADE	BY	DATE	REVISION	BY	DATE
	RFS	5-27-54			
TRACED			2 AS-BUILT	HEB	2/25/56
CHECKED	HJG	6-10-54	1 Pier 2 Prop. Elev.	CJA	7/5/58
IN CHARGE OF	IDSX		No.	REVISION	BY

MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
 SECTION 2 — PORTLAND TO AUGUSTA  
 STRUCTURE NO. 67 TURNPIKE UNDER  
 CURTIS BROOK ROAD  
 STA. 4462 + 95.00  
**PIERS**  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS  
 NEW YORK KANSAS CITY  
 SCALE: 1/2" = 1'-0"  
 CONTRACT NO. \_\_\_\_\_  
 SHEET NO. 304 OF 302



Note: Elevations shown on Plan are to top of finished roadway. Floor pouring sequence and direction are noted thus (1) Use 7" floor (non-composite design) as shown on Standard Drawing No. 14. Clip front corner of masonry plates for Abutment bearing devices as shown on Standard Drawing No. 5.

Note: Elevations shown on Framing Plan are to top of beam flanges. Diaphragms are noted as B or D. All stiffener angles at points of support are 7'-4". Slope shown at ends of beams is true with respect to axis of beams only.



DRAWING NO. 67.04.04

BY	DATE				
MADE	RFS	5-26-54			
TRACED					
CHECKED	H.J.G.	6-18-54	1	As-Built	HBA 2856
IN CHARGE OF	IDSK				
NO.	REVISION	BY	DATE		

MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
 SECTION 2 - PORTLAND TO AUGUSTA  
 STRUCTURE NO. 67 TURNPIKE UNDER  
 CURTIS BROOK ROAD  
 STA. 4482 + 98.89  
**SUPERSTRUCTURE**  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS  
 NEW YORK KANSAS CITY  
 SCALE: 1/8" = 1'-0"  
 CONTRACT NO. \_\_\_\_\_  
 SHEET NO. 305 OF 382

Note: Deflections are given at quarter points of spans.



**SPECIFICATIONS**

**DESIGN**

"AAHSTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 1989" WITH ALL THE INTERIMS.

**CONTRACT**

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAY AND BRIDGES, REVISION OF OCTOBER 1990

**LIVE LOAD**

H20 LOAD FACTOR

**MATERIALS**

**CONCRETE**

ALL CONCRETE SHALL BE CLASS AAA  
 $n = 8$   $f_c = 1,800$  P.S.I.  $f'_c = 4,500$  P.S.I.

**REINFORCING STEEL**

ASTM A615 GRADE 60  $f'_b = 24,000$  P.S.I.

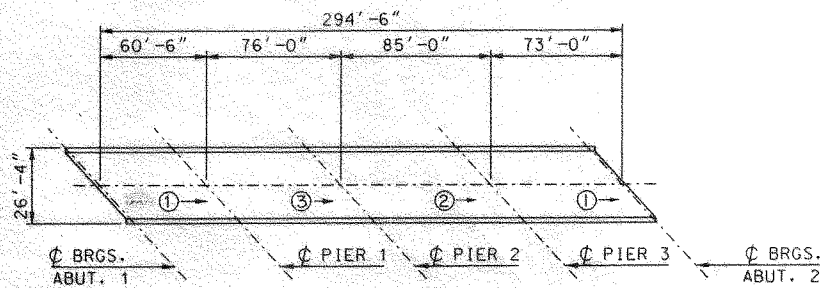
**STRUCTURAL STEEL**

ASTM A709 GRADE 36  $f'_b = 20,000$  P.S.I.

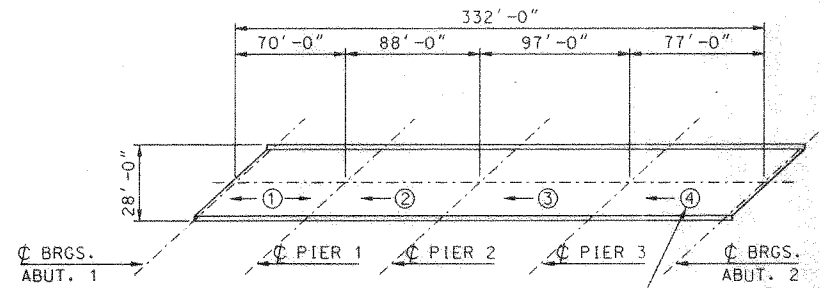
**GENERAL NOTES**

1. REINFORCING STEEL TO HAVE A CLEAR COVER AS SHOWN ON THE PLANS.
2. CHAMFER ALL EXPOSED EDGES 1" UNLESS OTHERWISE NOTED.
3. PLANS OF EXISTING BRIDGES ARE AVAILABLE AT THE AUTHORITY'S OFFICE AT 430 RIVERSIDE ST. PORTLAND, MAINE
4. SHIELDING REQUIRED DURING CONCRETE REMOVAL SHALL NOT PROJECT BELOW THE BOTTOM FLANGES OF STRINGERS. THE ESTIMATED QUANTITY OF SHIELDING IS THE MINIMUM REQUIRED AND IS BASED ON THE FOLLOWING LIMITS:
  - A. NORMAL TO  $\text{C}$  BRIDGE: AS SHOWN ON THE PLANS
  - B. PARALLEL TO  $\text{C}$  BRIDGE: ABUTMENT TO ABUTMENT
5. THE CONTRACTOR HAS THE OPTION OF SUBSTITUTING CLASS A CONCRETE FOR ITEM 502.21
6. FOR STEEL REINFORCING SCHEDULE, SEE SHEETS 3-11, 3-12, 3-19, 3-20, 3-27 & 3-28.
7. ALL STEEL REINFORCING SHALL BE EPOXY COATED.
8. DO NOT COVER DECK DRAINS WITH MEMBRANE. DEPRESS DRAINS  $\frac{1}{2}$ " BELOW TOP OF SLAB. PROVIDE 23 GAUGE GALVANIZED SCREENS ( $\frac{1}{8}$ " MESH) OVER DRAINS. PAYMENT INCIDENTAL TO CONTRACT ITEM 502.262.
9. THE AUTHORITY'S PERSONEL WILL PROFILE THE TOPS OF ALL STRINGERS BEFORE THE FORM WORK IS STARTED AND SUPPLY THE CONTRACTOR WITH FINAL BOTTOM OF SLAB ELEVATIONS.
10. THE CONCRETE DECK SURFACE SHALL BE GIVEN A SMOOTH BULL OR WOOD FINISH.

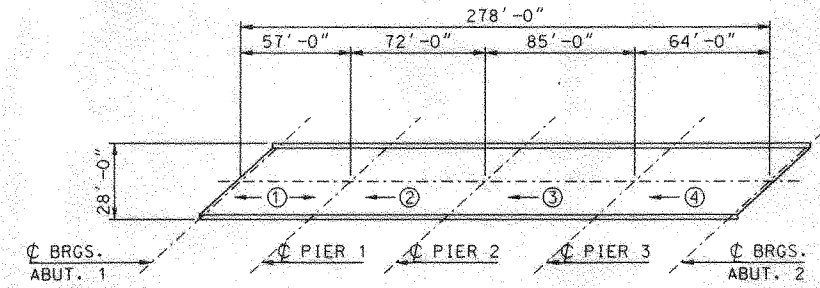
ITEM	DESCRIPTION	UNIT	QUANTITIES		
			FISHER RD.	PLAINS RD.	RTE. 126
202.12	Removing Existing Structural Concrete	C.Y.	17	19	31
202.122	Removing Existing Superstructure Concrete	S.Y.	818	996	1019
202.20	Protective Shield	S.Y.	1014	1217	1209
403.13	Dense Graded Bit. Pav't For Bridges	Ton.	61	74	83
502.21	Structural Concrete, Abutments, Retaining Walls	C.Y.	21	25	29
502.23	Structural Concrete, Piers	C.Y.	3	4	3
502.262	Structural Concrete Roadway and Parapet on Steel Bridge (Fisher Rd. = 257 CY.), (Plains Rd. = 302 CY.) and Rte. 126 = 293 CY.)	L.S.	1	1	1
503.14	Epoxy Coated Reinf. Steel- Fabricated & Delivered	Lb.	70,600	83,300	80,100
503.15	Epoxy Coated Reinf. Steel- Placing	Lb.	70,600	83,300	80,100
504.70	Structural Steel- Fabricated & Delivered	L.S.	1	1	1
504.72	Jacking Exist. Superstructure	L.S.	1	1	—
505.08	Stud Welded Shear Connectors (Fisher Rd. = 2028 PC'S) (Plains Rd. = 2028 PC'S)	L.S.	1	1	—
507.092	Aluminum Bridge Railing, 2 Bar	L.F.	594	669	561
508.13	Membrane Waterproofing (Fisher Rd. = 753 SY.), (Plains Rd. = 910 SY.) and (Rte. 126 = 947 SY.)	L.S.	1	1	1
514.06	Curing Box for Concrete Cylinders	Ea.	1	1	1
515.20	Protective Coating for Concrete Surfaces	S.Y.	509	574	481
515.201	Concrete Protective Coating	S.Y.	307	333	371
523.103	Pot Bearings	EA.	20	20	—
520.22	Expansion Device-Compression Seal (Fisher Rd. = 70 FT.), (Plains Rd. = 85 FT.) and (Rte. 126 = 88 FT.)	EA.	1	1	1
609.15	Sloped Curb Type 1	L.F.	16	16	16



**FISHER ROAD**



**PLAINS ROAD**



**ROUTE 126**

**DECK PLACEMENT DETAILS**

N.T.S.

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 Generated by: P.G.

					By	Date
					Designed	
					Drawn	
					Checked	
No.	Revision	By	Date	In Charge Of:		

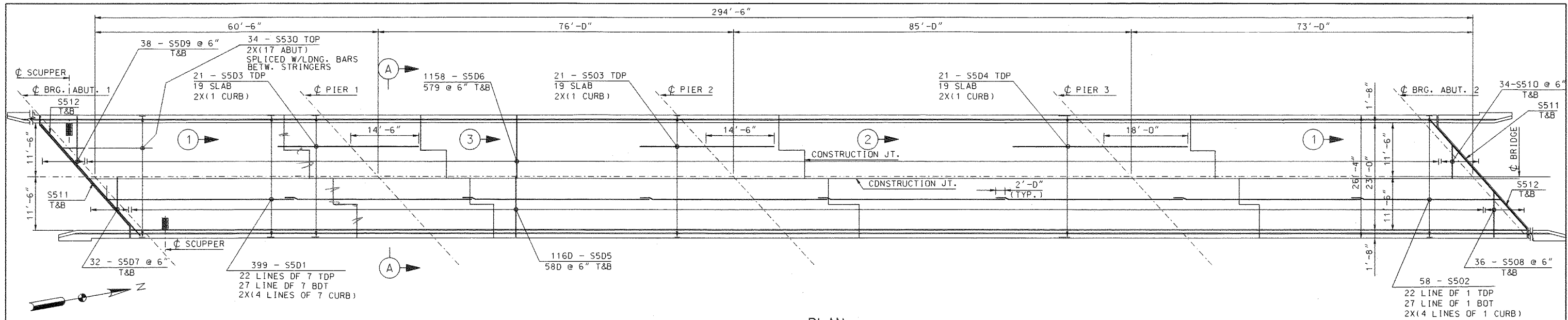
Maine Turnpike Authority  
 Maine Turnpike

**HNTB**  
 HOWARD NEEDLES TAMMEN & BERGENDOFF  
 ARCHITECTS ENGINEERS PLANNERS

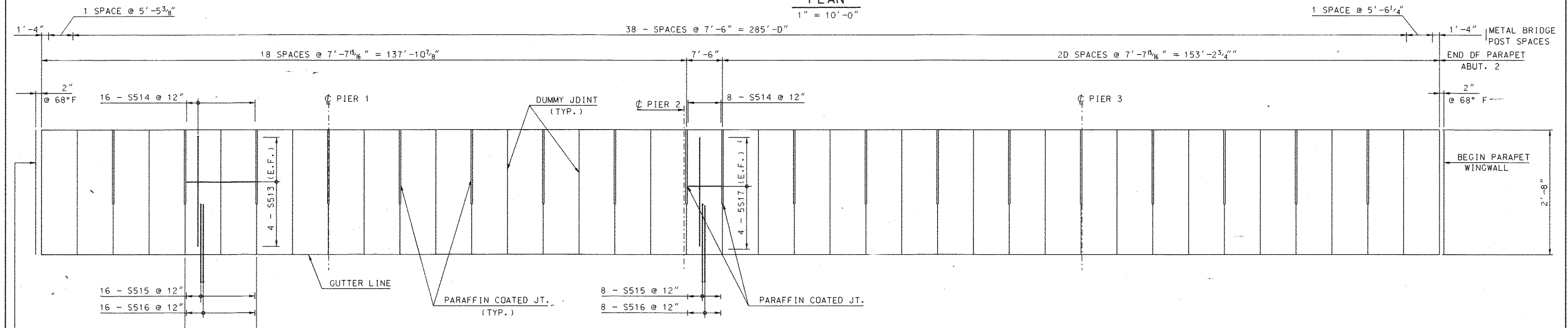
GENERAL NOTES,  
 SPECIFICATIONS,  
 QUANTITIES & DECK  
 PLACEMENT DETAILS

Contract 94.3

Sheet No. S-1  
 31 of 100

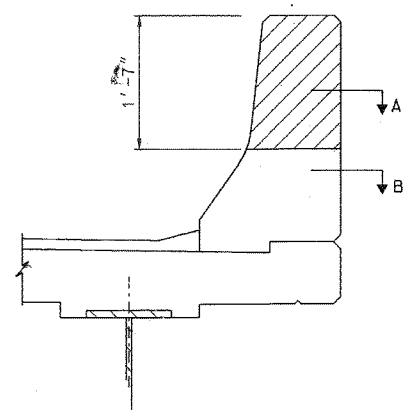


**PLAN**  
1" = 10'-0"

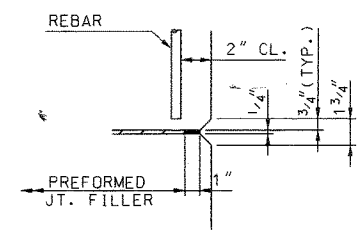


**PARAPET ELEVATION**  
1" = 10'-0" (HORIZ.)  
1" = 1'-0" (VERT.)

NOTE:  
JDINT SPACING SHOWN IS FOR WEST FASCIA (LDDKING AT GUTTER)  
EAST FASCIA SIMILAR(LDDKING AT FASCIA)

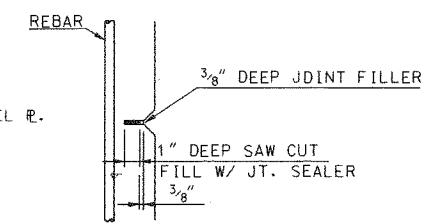


**PARAPET DETAIL**  
3/4" = 1'-0"



**SECTION A-A**  
N.T.S.

NOTES:  
1. CONC. PLACED SIMULTANEOUSLY ON BOTH SIDES OF JDINT.  
2. PREFORMED JDINT FILLER MAY BE SUPPORTED WITH A THIN STEEL R. REMOVE R CAREFULLY WHILE THE CONCRETE IS PLASTIC.



**SECTION B-B**  
N.T.S.

NOTE:  
SECTION B ALSO APPLIES TO DUMMY JDINT LOCATIONS.

- NOTES:
1. FOR BRIDGE RAILING DETAILS, SEE SHEET S-4.
  2. FOR CONSTRUCTION JOINT DETAIL, SEE SHEET S-2.
  3. U.N DENOTES UNLESS OTHERWISE NOTED.
  4. FOR SUPPER DETAILS SEE, SHEET, S-3.

Maine Turnpike Authority  
Maine Turnpike

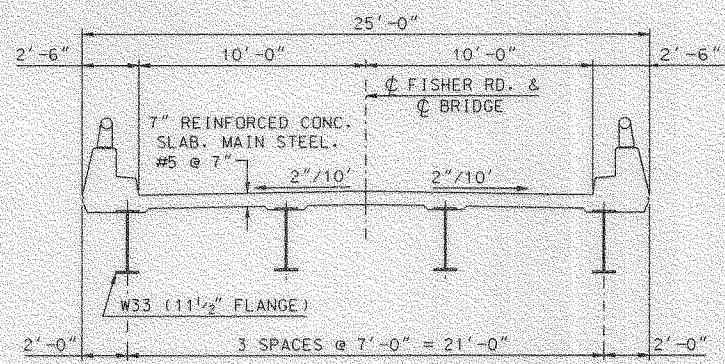
**FISHER ROAD OVER MAINE TURNPIKE DECK REINFORCING**

**HNTB** HOWARD NEEDLES TAMMEN & BERGENOFF ARCHITECTS ENGINEERS PLANNERS

Contract 94.3 Sheet No. S-5 of 60

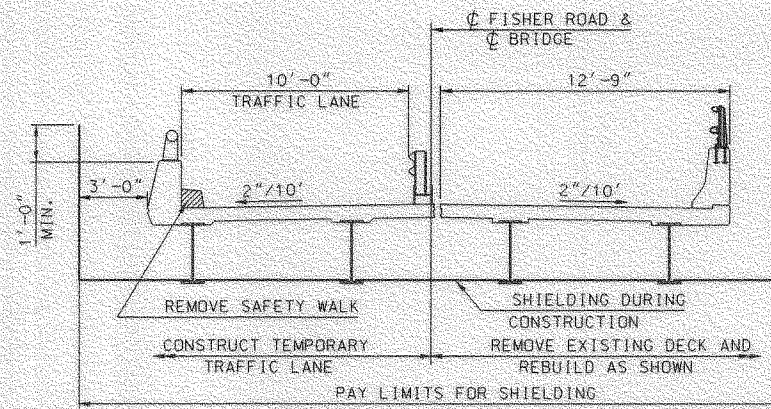
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Checked		
In Charge Of:		

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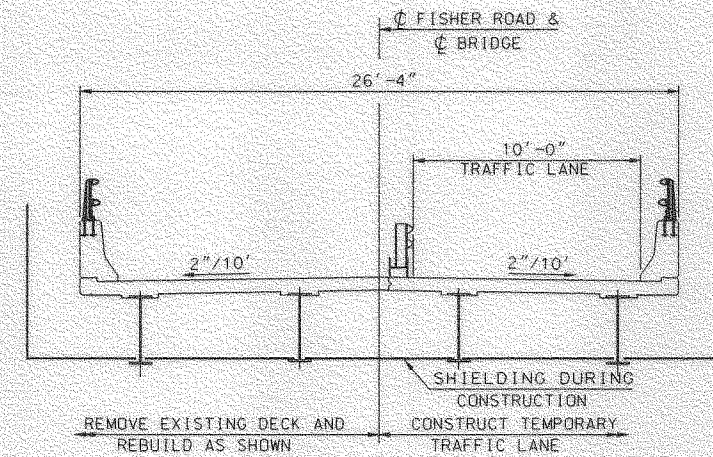
**EXISTING DECK**

1/4" = 1'-0"



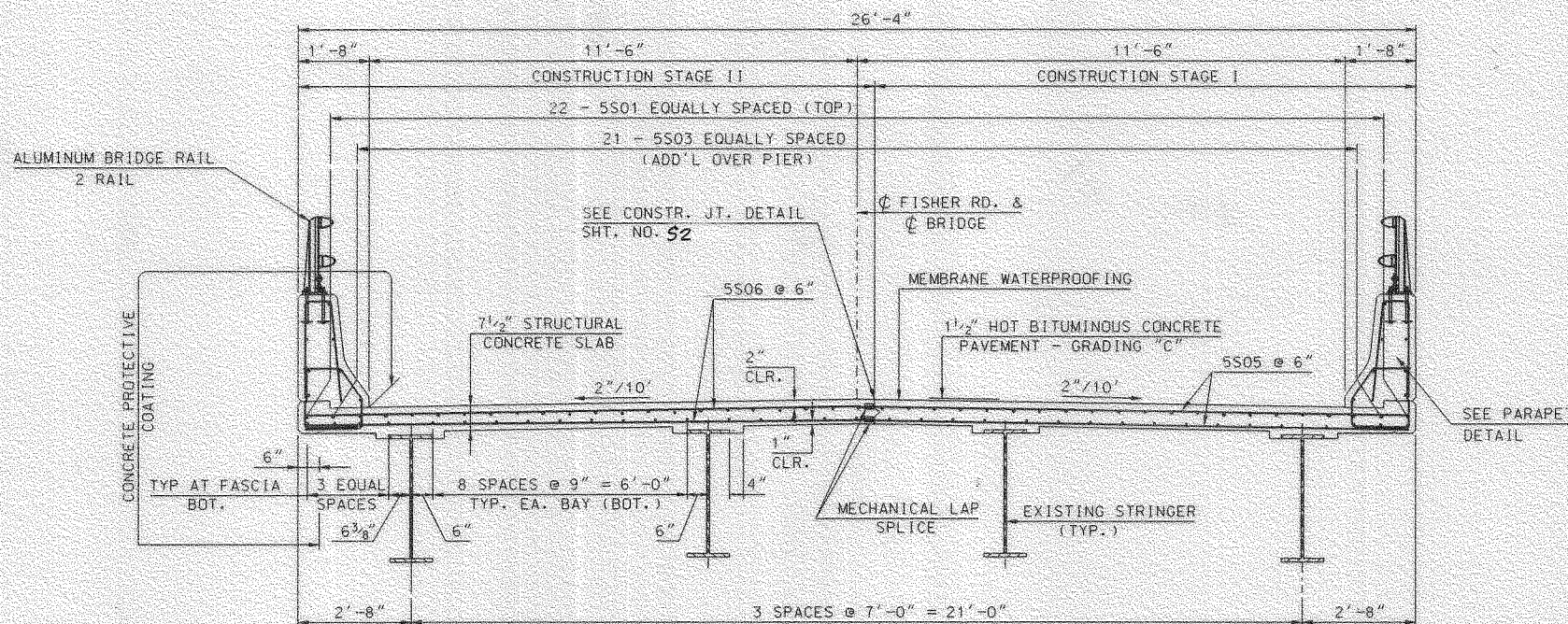
**CONSTRUCTION STAGE I**

1/4" = 1'-0"



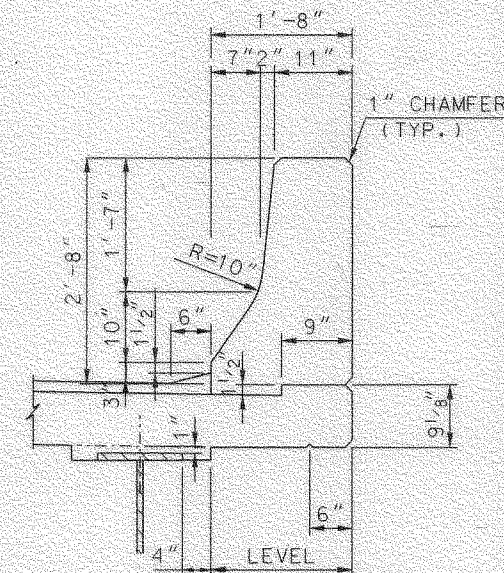
**CONSTRUCTION STAGE II**

1/4" = 1'-0"



**SECTION A - A**

1/4" = 1'-0"



**PARAPET DETAIL**

3/4" = 1'-0"  
10" RADIUS IS TYP. INCLUDING PARAPET ON WINGWALL

NOTE:

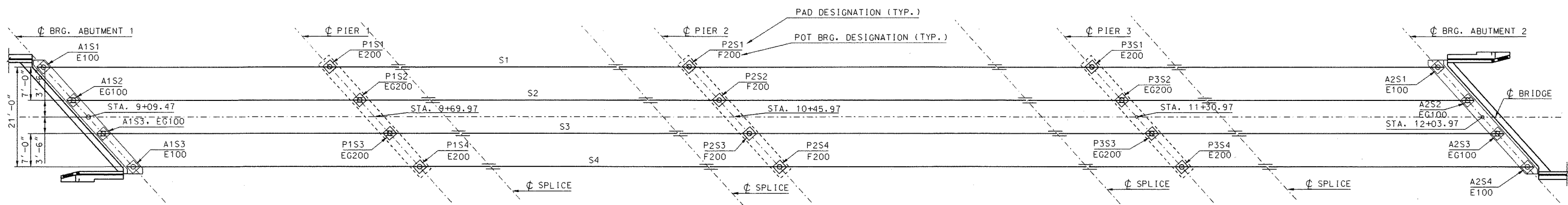
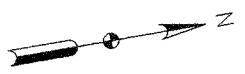
- MECHANICAL COUPLING DEVICE SHALL DEVELOP A MINIMUM OF 125 PERCENT OF YIELD STRENGTH OF REINFORCEMENT STEEL. THE COUPLING DEVICES SHALL BE PROTECTED FROM CORROSION BY EITHER GALVANIZING OR EPOXY COATING.

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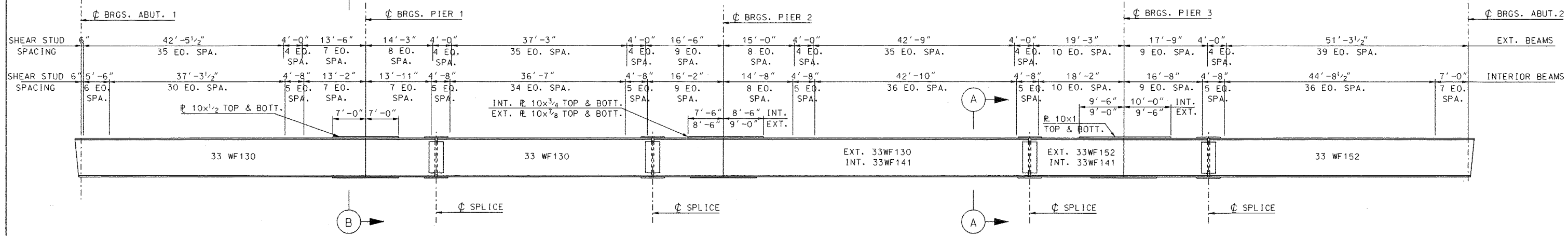
No.	Revision	By	Date	In Charge Of:
1	REISSUED	CFM	5/24	

Maine Turnpike Authority Maine Turnpike	
<b>FISHER ROAD OVER MAINE TURNPIKE TRAFFIC STAGING</b>	
<b>HNTB</b> HOWARD NEEDLES TAMMEN & BERGENOFF ARCHITECTS ENGINEERS PLANNERS	
Contract 94.3	Sheet No. 5-6 36 of 60



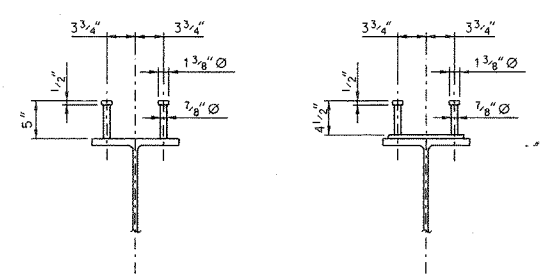


**EXISTING FRAMING PLAN**  
1" = 10'-0"



**TYPICAL BEAM ELEVATION**  
N.T.S.

PAD TABLE					
LOCATION	$\Delta 1$ (FT.)	MASONRY R	PAD SIZE	$\Delta 2$	$\Delta 3$
A1S1	1.0000	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.308	1.308
A1S2	0.9756	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.190	1.166
A1S3	0.9511	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.190	1.144
A1S4	0.9267	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.308	1.234
P1S1	0.8096	20 <sup>1</sup> / <sub>4</sub> x 20 <sup>1</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	24x24	0.450	1.260
P1S2	0.7852		24x24	0.292	1.077
P1S3	0.7607		24x24	0.292	1.503
P1S4	0.7363		24x24	0.450	1.186
P2S1	0.5705		24x24	0.235	0.805
P2S2	0.5460		24x24	0.235	0.781
P2S3	0.5216		24x24	0.235	0.757
P2S4	0.4992		24x24	0.235	0.734
P3S1	0.3030		24x24	0.575	0.878
P3S2	0.2786		24x24	0.417	0.696
P3S3	0.2541		24x24	0.417	0.671
P3S4	0.2297	20 <sup>1</sup> / <sub>4</sub> x 20 <sup>1</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	24x24	0.575	0.805
A2S1	0.0733	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.308	0.381
A2S2	0.0489	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.190	0.240
A2S3	0.0244	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.190	0.214
A2S4	0.0000	17 <sup>3</sup> / <sub>4</sub> x 17 <sup>3</sup> / <sub>4</sub> x 1 <sup>3</sup> / <sub>4</sub>	21x21	0.308	0.308



**SECTION A-A** SCALE: 1" = 1'-0"  
**SECTION B-B** SCALE: 1" = 1'-0"

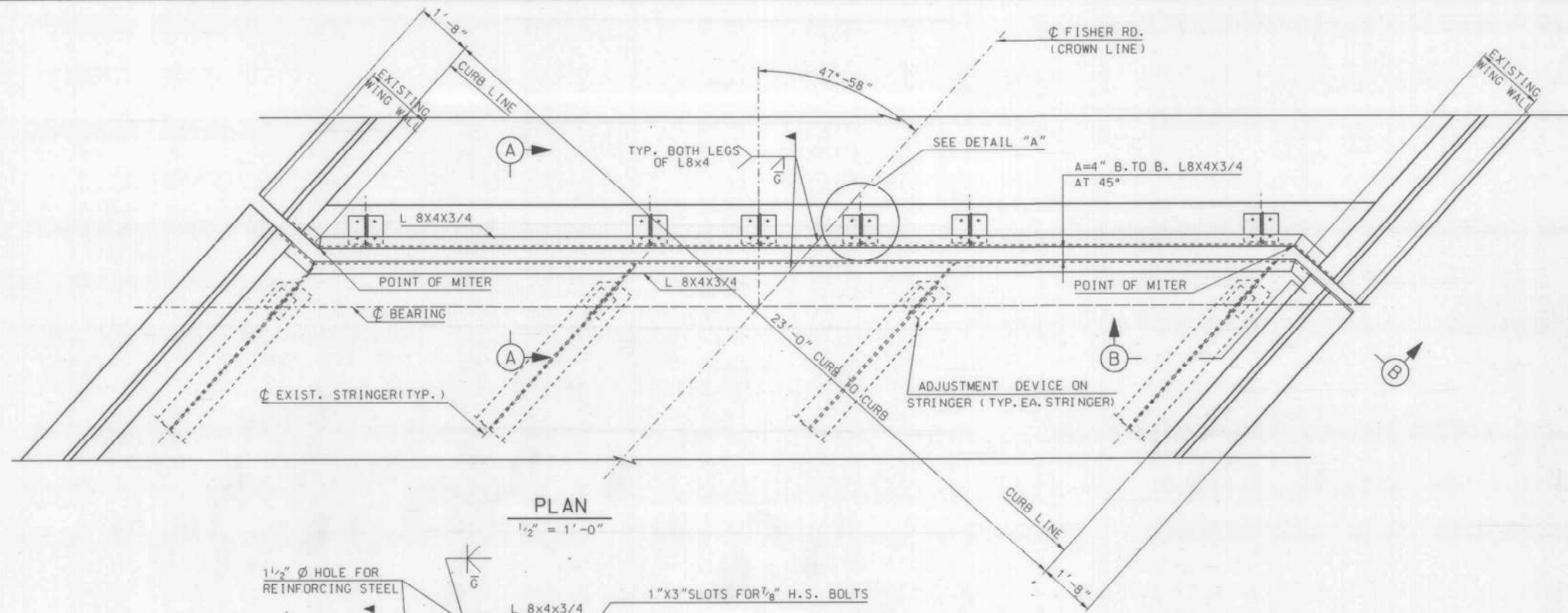
NOTES:  
 $\Delta 1$  = AMOUNT THE ROADWAY IS TO BE RAISED  
 $\Delta 2$  = THE DIFFERENCE BETWEEN EXISTING & PROPOSED BEARING  
 $\Delta 3$  = TOTAL  $\Delta 1 + \Delta 2$  (INCREASE IN BEARING PAD HEIGHT)

NOTES:  
 1. SEE POT BRG. DETAILS. SEE SHEET NO. S21  
 2. ALL PAD REINFORCEMENT IS TO BE EPOXY COATED.  
 3. IF THE POT BEARINGS APPROVED ARE DIFFERENT THAN THOSE DETAILED IN THE PLANS, THE PAD HEIGHT, SHALL BE ADJUSTED ACCORDINGLY

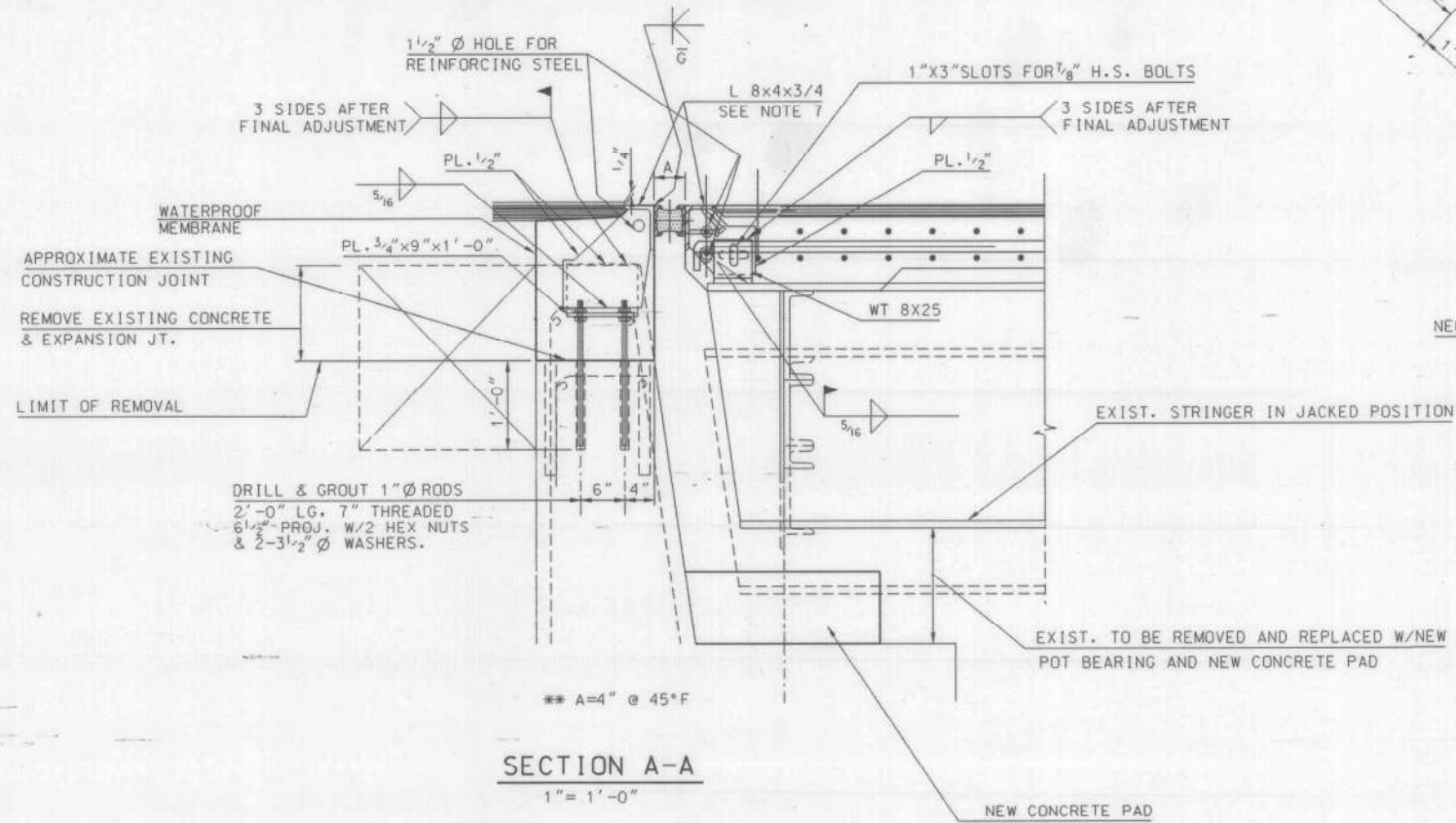
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 Generated by: H.H.

Maine Turnpike Authority  
 Maine Turnpike  
**FISHER ROAD OVER MAINE TURNPIKE FRAMING PLAN**  
 HNTB HOWARD NEEDLES TAMMEN & BERGENDOFF ARCHITECTS ENGINEERS PLANNERS  
 Contract 94.3 Sheet No. 59 of 60

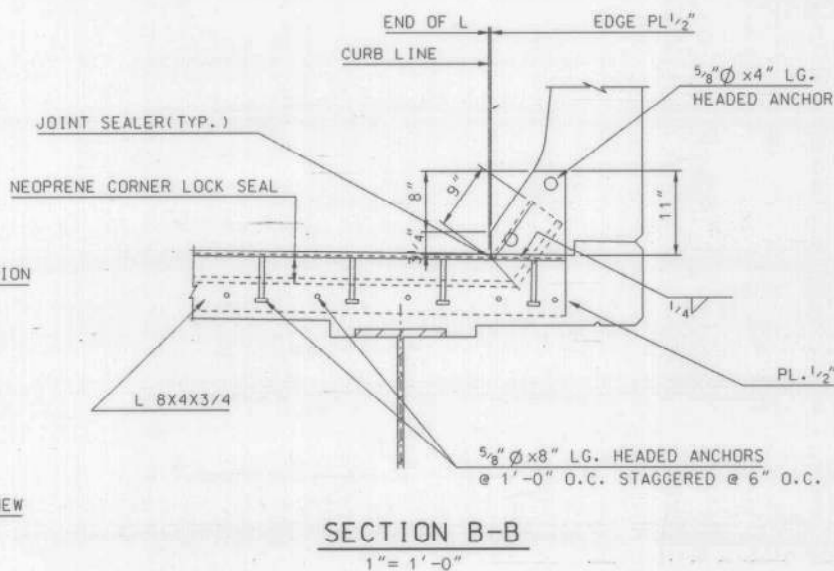
No.	Revision	By	Date	In Charge Of:



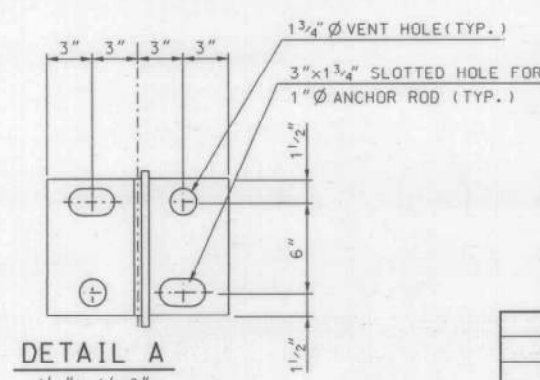
**PLAN**  
1/2" = 1'-0"



**SECTION A-A**  
1" = 1'-0"



**SECTION B-B**  
1" = 1'-0"



**DETAIL A**  
1 1/2" = 1'-0"

- NOTES :
1. SHOP DRAWINGS SHALL BE SUBMITTED FOR EXPANSION DEVICE.
  2. EXPANSION DEVICE ASSEMBLY SHALL BE SECURED TO THE STRINGER AND/OR ANCHOR BOLTS WHEN THE AMBIENT TEMPERATURE IS BETWEEN 40°F AND 80°F. SETTING SCHEDULE FOR DIMENSION A SHALL BE SUPPLIED BY THE MANUFACTURER OF THE SEAL.
  3. NEOPRENE CORNER LOCK SEAL TO BE INSTALLED IN ONE PIECE.
  4. ROADWAY SURFACE OF THE ARMORED DEVICES TO BE PAINTED IN THE FIELD.
  5. THE FABRICATORS ATTENTION IS DIRECTED TO THE NECESSITY OF FABRICATING AND INSTALLING THE DEVICE IN TWO SECTIONS.
  6. WELDS IN CONTACT WITH LOCK SEAL TO BE GROUND SMOOTH.
  7. PROVIDE 3/8" DIA. VENT HOLES IN HORIZONTAL LEG OF 8X4 ANGLE AT 1'-0" O.C. MAX.
  8. DIRECTION AND LOCATION OF FIELD SPLICES MAY BE ADJUSTED IF REQUIRED TO FACILITATE CONSTRUCTION.

Maine Turnpike Authority  
Maine Turnpike

**FISHER ROAD  
OVER  
MAINE TURNPIKE  
EXP. JT. DETAILS**

**HNTB** HOWARD NEEDLES TAMMEN & BERGENDOFF  
ARCHITECTS ENGINEERS PLANNERS

Contract	94.3	Sheet No.	S10
			40 of 60

No.	Revision	By	Date	In Charge Of:
		Designed	JAE 4/94	
		Drawn	EB 4/94	
		Checked	AEM 4/94	
		By	Date	

PLAN  
 CHECKED BY: [Signature]  
 DATE: 5/23/59  
 NO. 1

PROFILE  
 CHECKED BY: [Signature]  
 DATE: 1/23/59  
 NO. 2

No.	Date	By	Revision	Approval
1	9-56	RS	As Built	

See D-35 for Details  
 Sta. 81+50 0° Skew  
 Culvert 72.25' Long Slope 0.58%  
 10'x6' Box  
 Wingwalls  
 Inv. In Elev. 211.11  
 Inv. Out Elev. 210.69

CURVE DATA  
 P1 Sta. 13+87.80  
 $\Delta = 19^\circ - 28' - 30''$   
 $D = 10^\circ - 00'$   
 $R = 572.96'$   
 $T = 98.32'$   
 $L = 194.75'$   
 $E = 8.38'$

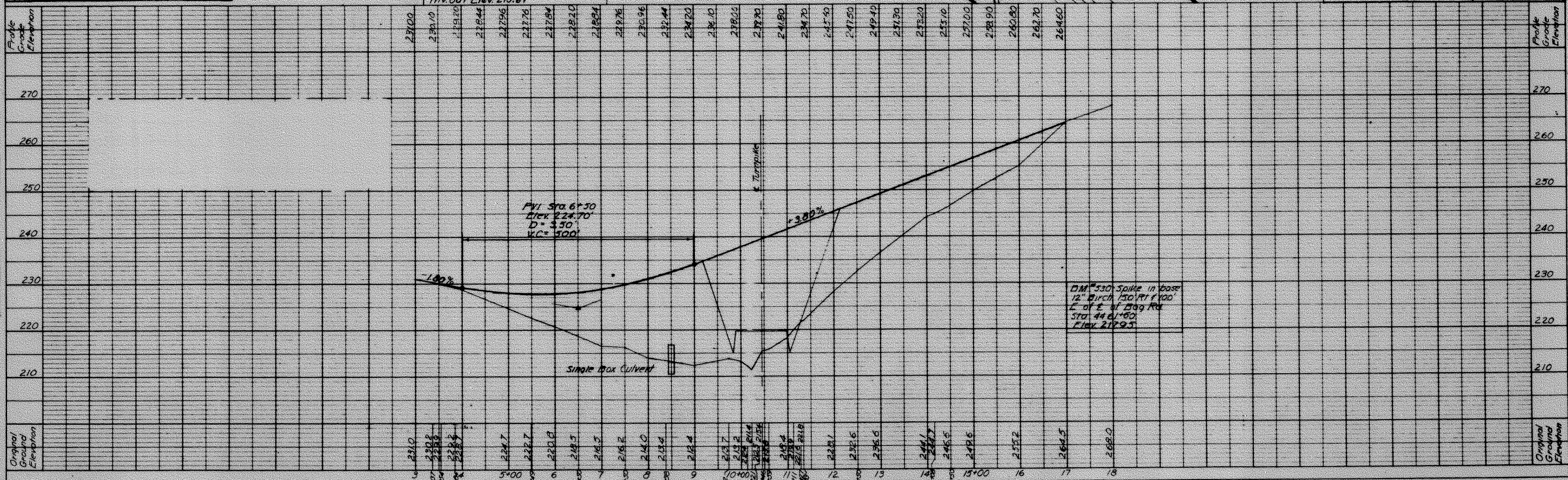


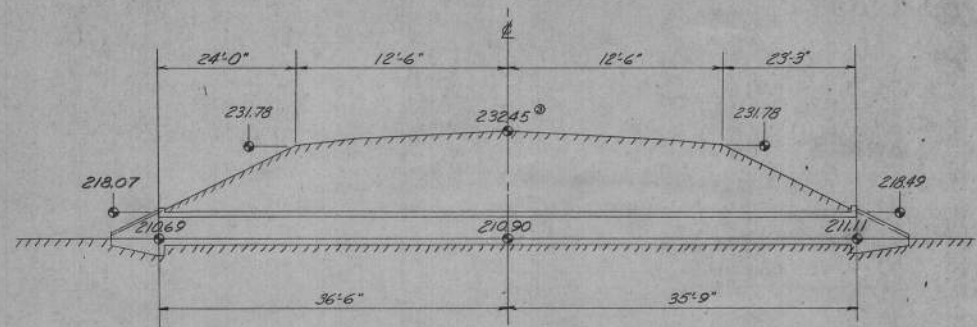
PLATE 1 - PROFILE OF ROAD STANDARD  
 THE FREDERICK ROY CO. CHICAGO

MAINE TURNPIKE AUTHORITY  
 MAINE TURNPIKE  
 SECTION 2 - PORTLAND TO AUGUSTA

CURTIS BROOK RD  
 STA. 4462+95.89

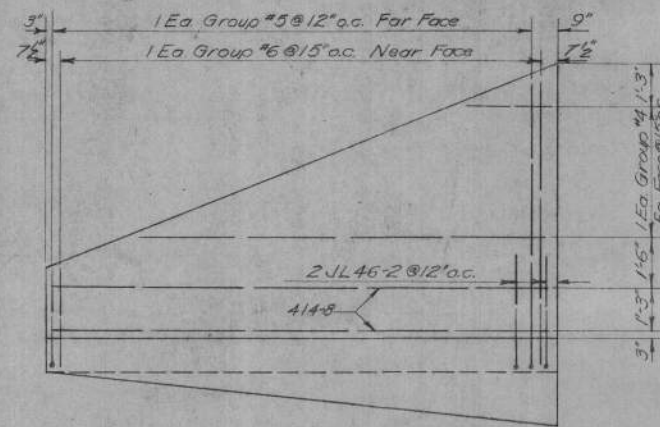
HOWARD, NEEDLES, TAMMEN & BERGENOFF  
 CONSULTING ENGINEERS  
 NEW YORK KANSAS CITY

SCALE: 1" = 100'  
 CONTRACT NO. [Blank]  
 SHEET NO. 250 OF 254



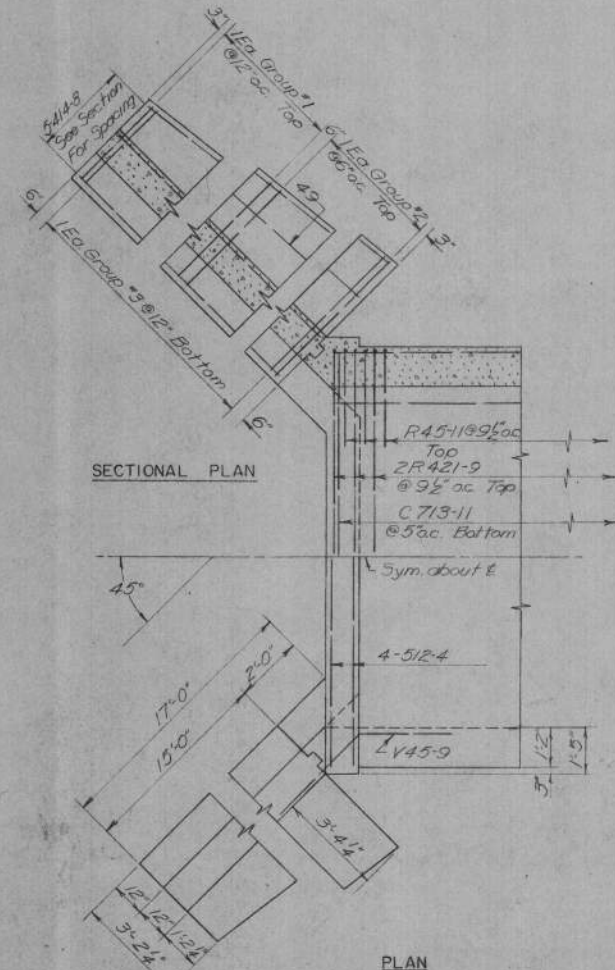
CROSS SECTION AT STA. 8+50.0  
No Scale

Culvert at right angles with & Cuiers Brook Road

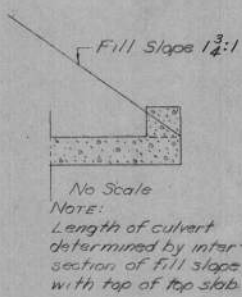


WINGWALL ELEVATION

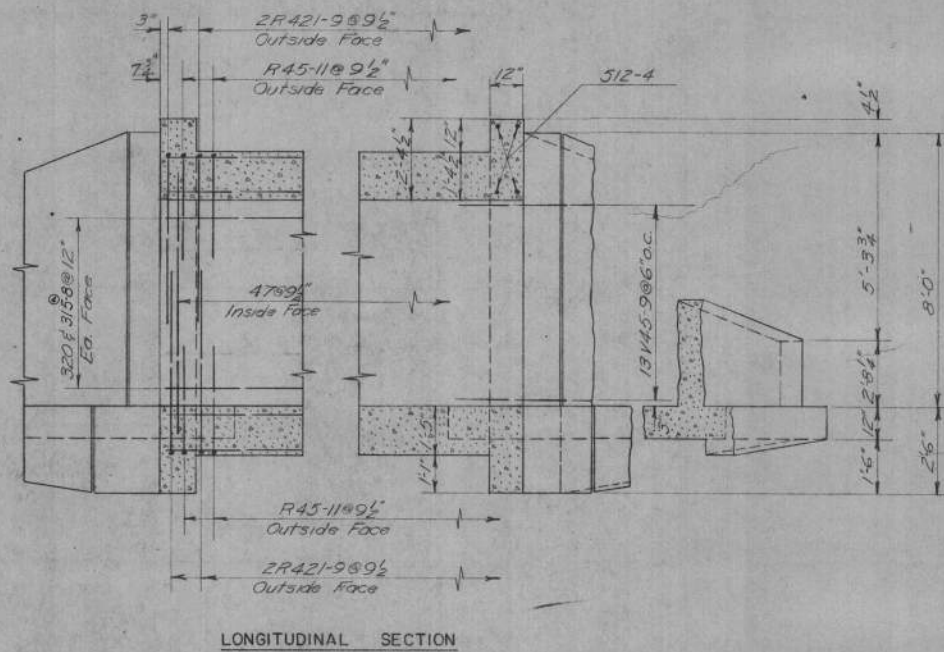
- Note:
- The face of reinforcing bars shall be 2" from the face of the concrete.
  - All bends to be with an 8 diameter radius unless otherwise shown.
  - Bars #20, #16, #11, #20, and #15 shall lap 40 diameters at splices. At construction joints first placed bars shall project 40 diameters beyond joint.



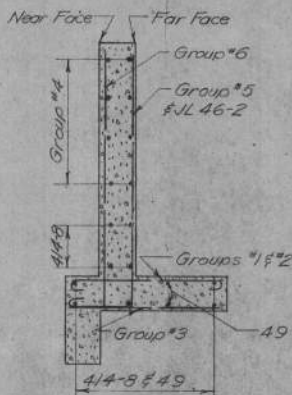
PLAN



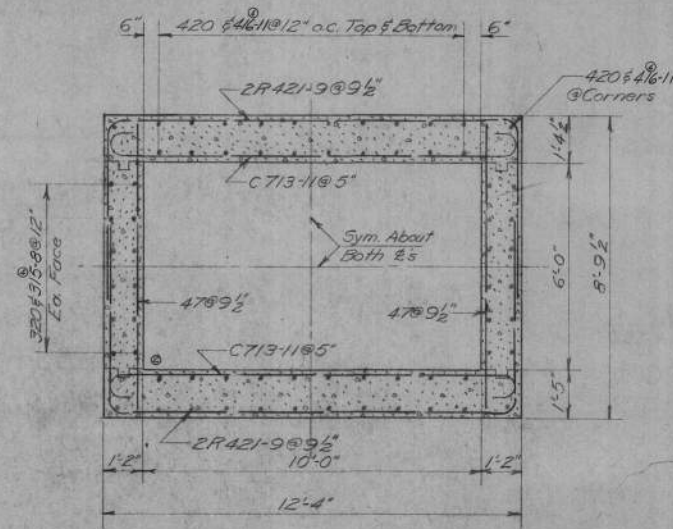
No Scale  
NOTE:  
Length of culvert determined by intersection of fill slope with top of top slab.



LONGITUDINAL SECTION



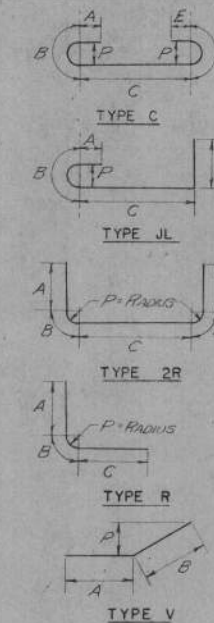
WINGWALL SECTION



TRANSVERSE SECTION

REINFORCING SCHEDULE

NUMBER & SIZE	MARK	BENDING DIMENSIONS						NUMBER & SIZE	MARK	BENDING DIMENSIONS												
		A	B	C	D	E	P			A	B	C	D	E	P							
GROUP #5													GROUP #1									
4	1/2	JL 45-7	0-3	0-7	1-5 1/2	3-3 1/2	0-4	0-4	1/2	2R 421-9	4-7	0-9 1/2	11-0	0-9 1/2	4-7	0-6						
4	1/2	JL 45-11	0-3			3-7 1/2		360	1/2	R 45-11	26 1/2	0-9 1/2	26 1/2			0-6						
4	1/2	JL 46-3	0-3			3-1 1/2		52	1/2	R 45-9	3-6	2-3				1-11						
4	1/2	JL 46-8	0-3 1/2			4-4		8	1/2	JL 46-2	0-3 1/2	0-7	1-5 1/2	3-10		0-4						
4	1/2	JL 47-0	0-3 1/2			4-8			GROUP #1													
4	1/2	JL 47-4	0-3			5-0 1/2			4	1/2	C 44	0-3	0-7	2-4	0-7	0-3	0-4					
4	1/2	JL 47-8	0-3			5-4 1/2			4	1/2	C 44-2			2-6								
4	1/2	JL 48-1	0-3 1/2			5-9			4	1/2	C 44-3			2-7								
4	1/2	JL 48-5	0-3 1/2			6-1			4	1/2	C 44-5			2-9								
4	1/2	JL 48-9	0-3			6-5 1/2			4	1/2	C 44-7			2-11								
4	1/2	JL 49-1	0-3			6-9 1/2			4	1/2	C 44-9			3-1								
4	1/2	JL 49-6	0-3 1/2			7-2			4	1/2	C 44-10			3-2								
4	1/2	JL 49-10	0-3 1/2	0-7	1-5 1/2	7-6	0-4	4	1/2	C 45	0-3	0-7	3-4	0-7	0-3	0-4						
GROUP #2													GROUP #2									
4	1/2	C 55-4	0-3	0-9	3-4	0-9	0-3	0-5														
4	1/2	C 55-5			3-5																	
4	1/2	C 55-6			3-6																	
4	1/2	C 55-7			3-7																	
4	1/2	C 55-8			3-8																	
4	1/2	C 55-9			3-9																	
4	1/2	C 55-10			3-10																	
4	1/2	C 55-11			3-11																	
4	1/2	C 56			4-0																	
4	1/2	C 56-1			4-1																	
4	1/2	C 56-2			4-2																	
4	1/2	C 56-3			4-3																	
4	1/2	C 56-4			4-4																	
4	1/2	C 56-5			4-5																	
4	1/2	C 56-6			4-6																	
4	1/2	C 56-7			4-7																	
4	1/2	C 56-8	0-3	0-9	4-8	0-9	0-3	0-5														



STRAIGHT BARS

NUMBER & SIZE	MARK	LENGTH	NUMBER & SIZE	MARK	LENGTH		
GROUP #3							
4	1/2	42-11	2-11	8	1/2	42-10	2-10
4	1/2	43-1	3-1	8	1/2	46-4	6-4
4	1/2	43-2	3-2	8	1/2	43-10	9-10
4	1/2	43-4	3-4	8	1/2	43-5	13-5
4	1/2	43-6	3-6				
4	1/2	43-7	3-7				
4	1/2	43-9	3-9	GROUP #6			
4	1/2	43-11	3-11	4	1/2	43-5	3-5
4	1/2	44-1	4-1	4	1/2	43-10	3-10
4	1/2	44-2	4-2	4	1/2	44-3	4-3
4	1/2	44-4	4-4	4	1/2	44-8	4-8
4	1/2	44-6	4-6	4	1/2	45-2	5-2
4	1/2	44-7	4-7	4	1/2	45-7	5-7
4	1/2	44-9	4-9	4	1/2	46	6-0
4	1/2	44-11	4-11	4	1/2	46-6	6-6
				4	1/2	46-11	6-11
8	1/2	49	9-0	4	1/2	47-4	7-4
36	1/2	44-8	14-8	4	1/2	47-10	7-10
186	1/2	47	7-0	72	1/2	320	20-0
132	1/2	420	20-0	24	1/2	315-8	15-8
44	1/2	416-11	16-11	8	1/2	512-4	12-4

Type of bend-Omitted if straight  
Size of bar in (5'-3/8")  
Length in feet  
Length in inches-0" if omitted.

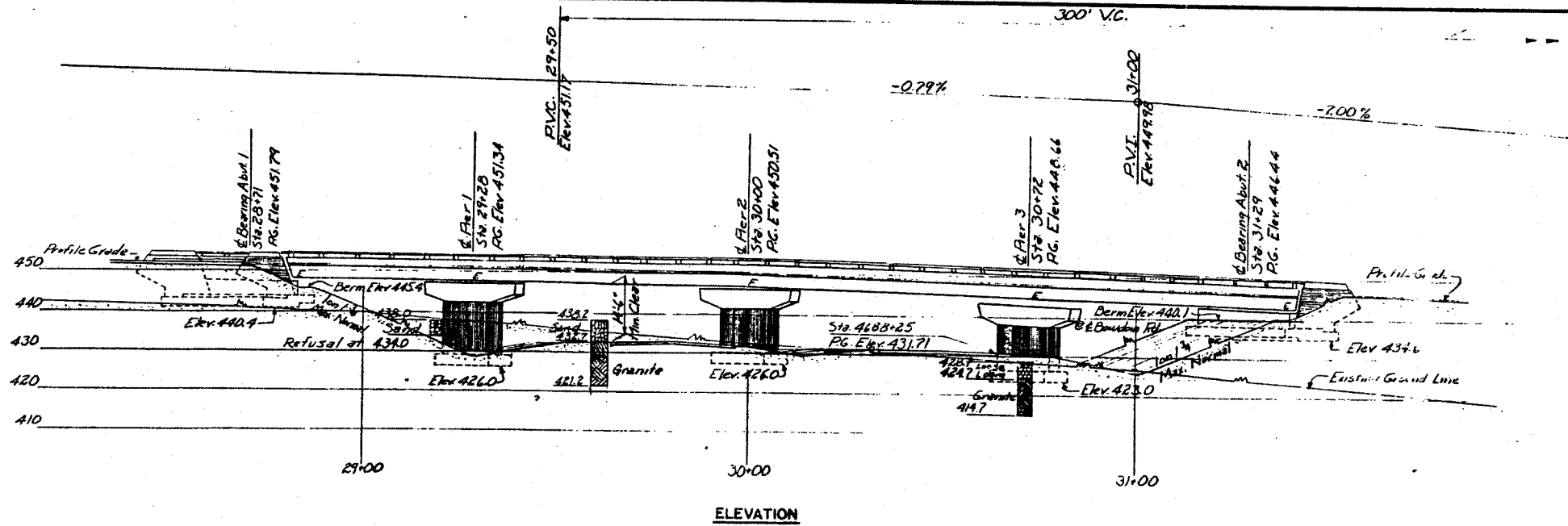
EXPLANATION OF BAR MARKS

QUANTITIES	MAINE TURNPIKE AUTHORITY	
	CONCRETE CU. YDS.	STEEL LBS.
CULVERT BARREL	129.60	17,723
FOUR WINGWALLS	23.03	1720
TWO HEADWALLS	3.06	303

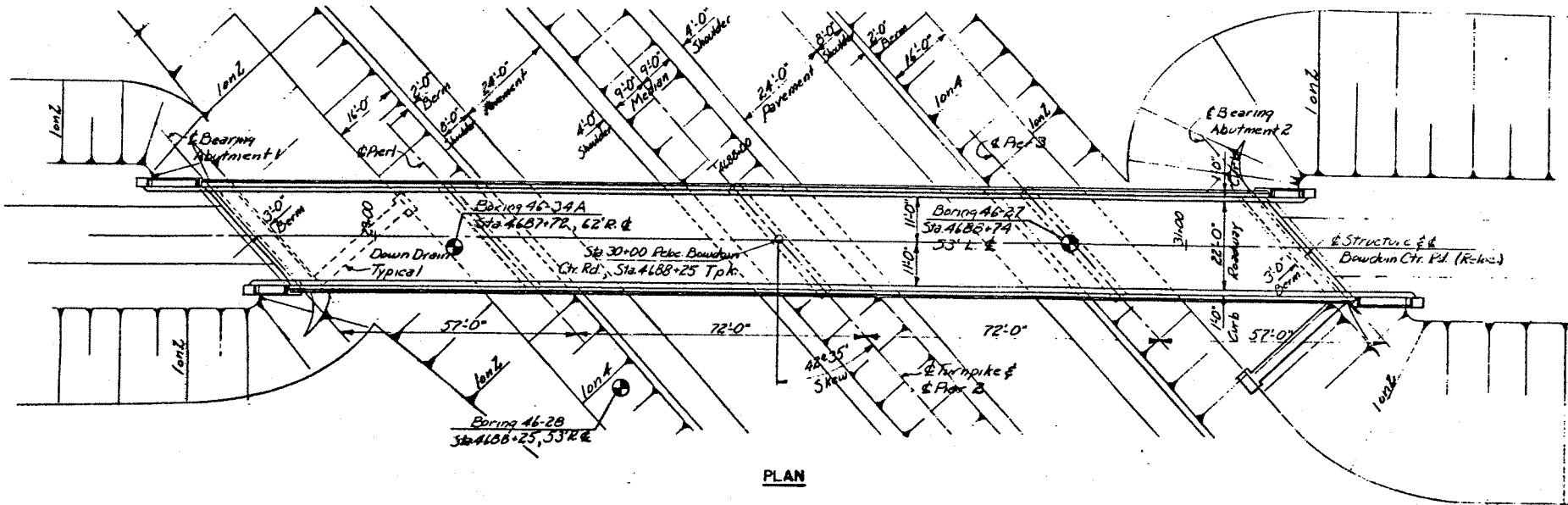
MAINE TURNPIKE AUTHORITY  
SECTION 2 - PORTLAND TO AUGUSTA  
SINGLE BOX CULVERT 10'x6'  
STA. 8+50  
CURTIS BROOK ROAD  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
NEW YORK KANSAS CITY  
SCALE: 3/16" EXCEPT AS NOTED  
CONTRACT NO. \_\_\_\_\_  
SHEET NO. 0-35 OF 37

BY	DATE	REVISION	BY	DATE
6	As Built		HEB	10-24-54
5	Rev. Steel Quantity		HEB	7-28-54
4	Cons. Steel Quant. Change		HEB	5-28-54
3	Rev. Sta. Changed		HEB	5-28-54
2	Deleted Hunch		HEB	2-11-54
1	Complete Hunch		HEB	1-20-54

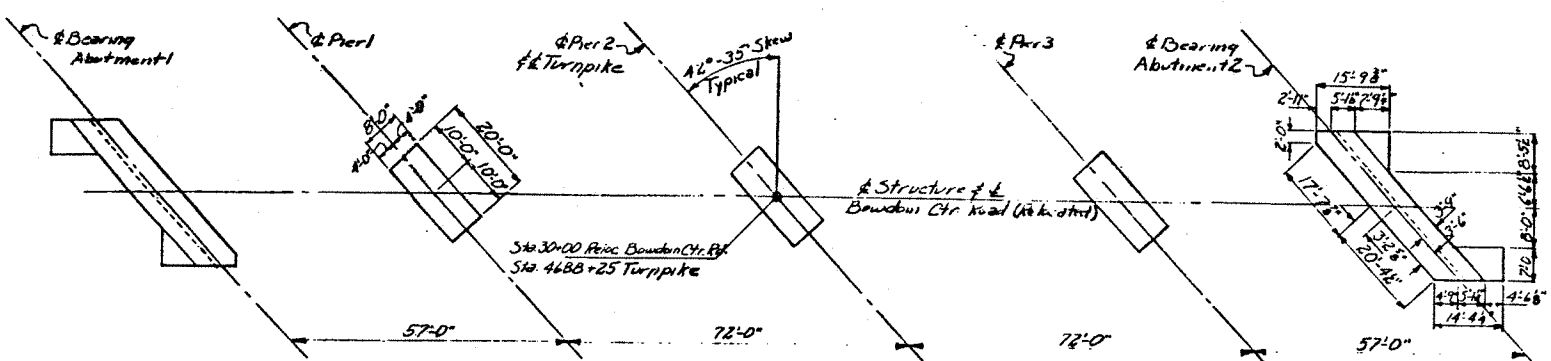




ELEVATION



PLAN

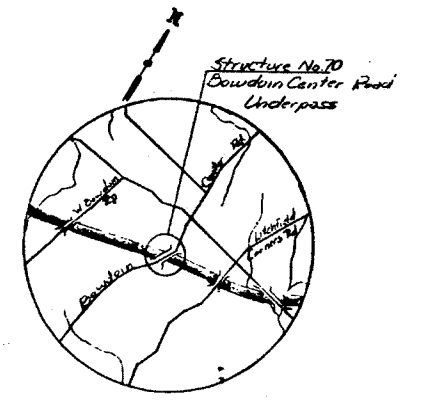
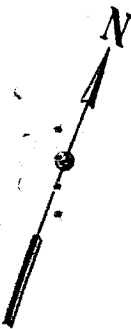


FOOTING PLAN

GENERAL NOTES

Design Specifications: AASHTO (1953) with minor modifications.  
 Design Live Loading: H15  
 Maximum Base Pressures: Abutments - 1.13 tons per square foot  
 Piers - 3.5 tons per square foot

REFERENCES					
Drawing Number	TITLE	Substructure Contractor	Superstructure		
			Steel Girder	Steel Truss	Floor Contractor
SD1A	Standard Abutment Details	✓	✓	✓	✓
SD2	Standard Pier Details	✓	✓	✓	✓
SD3	Standard Abutment Drainage Details	✓	✓	✓	✓
SD5	Standard Handrail, Retaining Devices and Miscellaneous Details	✓	✓	✓	✓
SD6	Standard Diaphragm Details	✓	✓	✓	✓
SD8	Standard Type "A" Splices for 30W Beams	✓	✓	✓	✓
SD12A	Type "Z" Expansion Joint, Expanding Lengths over 100'	✓	✓	✓	✓
SD14	Standard Bridge Flow Cross Sections 20'-0" and 22'-0" Roadways.	✓	✓	✓	✓



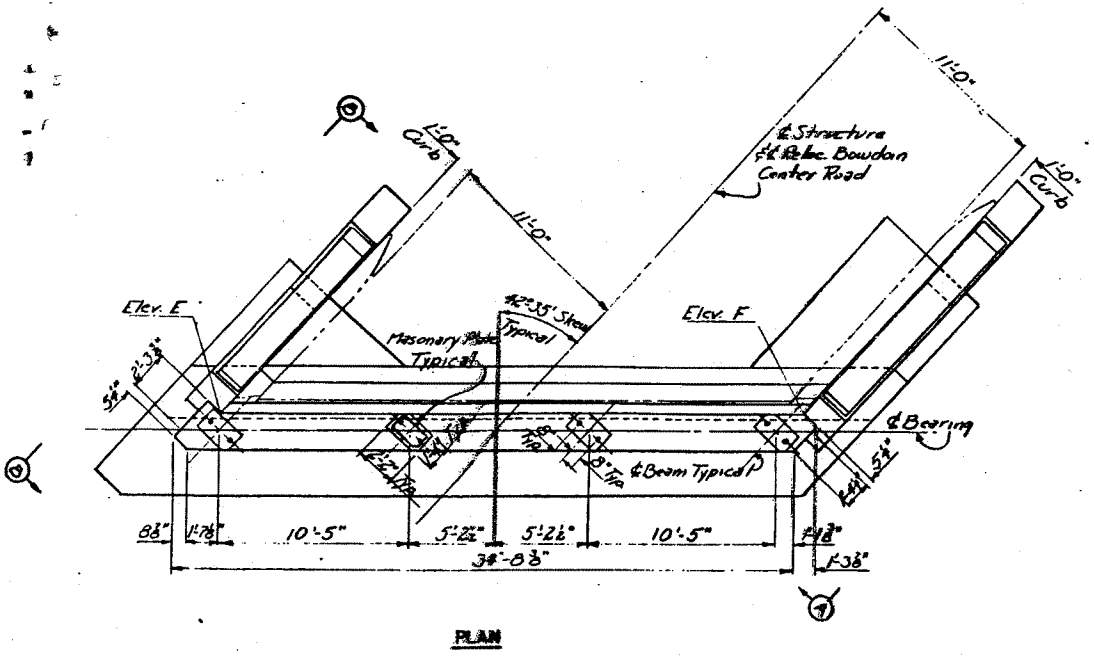
VICINITY MAP  
Scale: 1"=1 Mile

Note:  
 All pier footings are identical.  
 Abutments 1 & 2 are similar by rotation

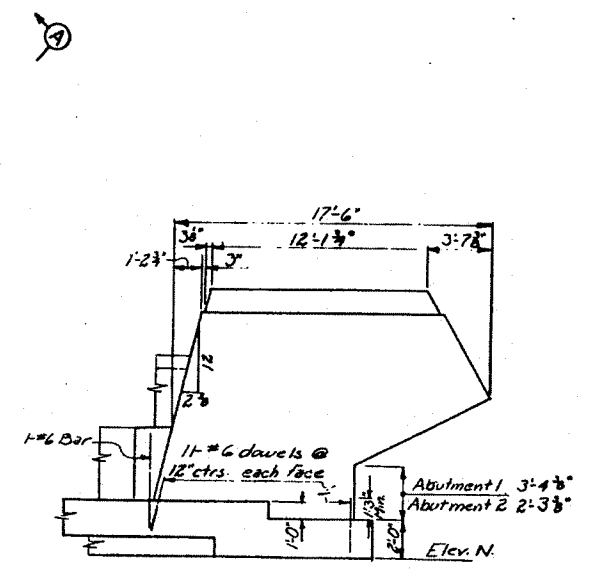
NO. 70.01.03

BY	DATE	REVISION	BY	DATE
RSG	4-20-54			
		2	As-Built	HBH/25/56
A.J.G.	4-23-54	1	Elev. Boring 46-28	DWA/5-4-54
J.D.S.K.				

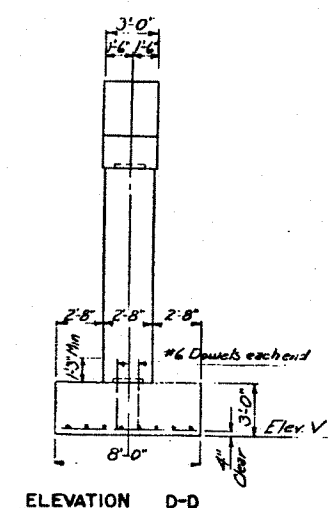
MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
 SECTION 2 — PORTLAND TO AUGUSTA  
 STRUCTURE NO. 70 TURNPIKE UNDER  
 BOWDOIN CENTER ROAD  
 STATION 4688+25  
**GENERAL PLAN AND ELEVATION**  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS SCALE: 1"=20'-0"  
 CONTRACT NO. \_\_\_\_\_



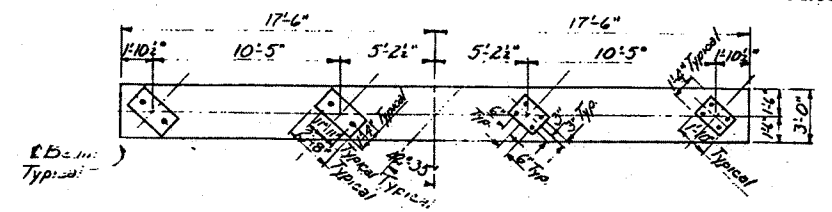
PLAN



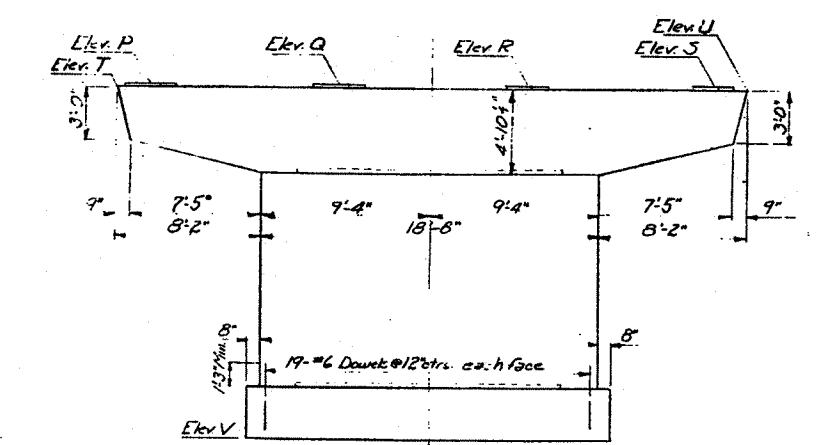
ELEVATION A-A



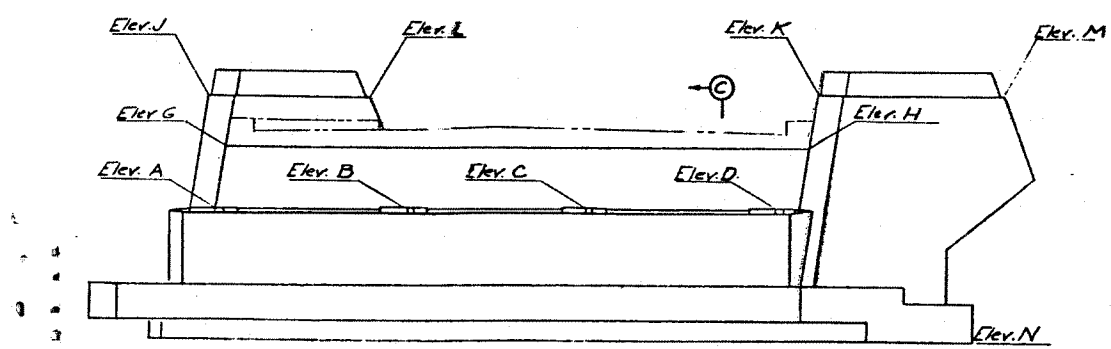
ELEVATION D-D



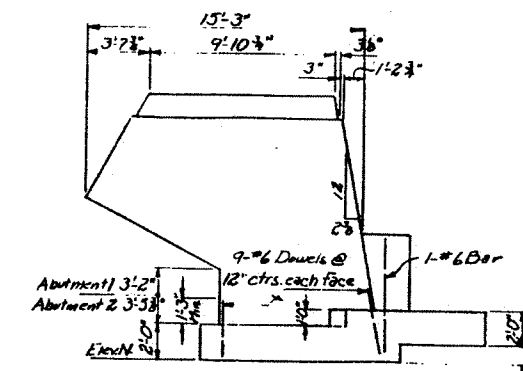
HALF CAP PLAN  
PIERS 1 & 3      HALF CAP PLAN  
PIER 2



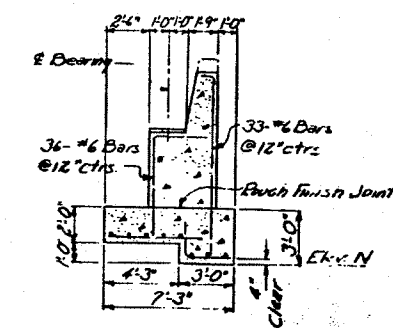
ELEVATION



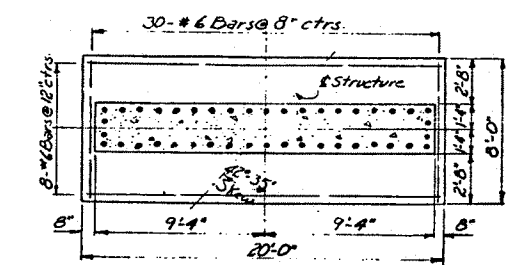
ELEVATION



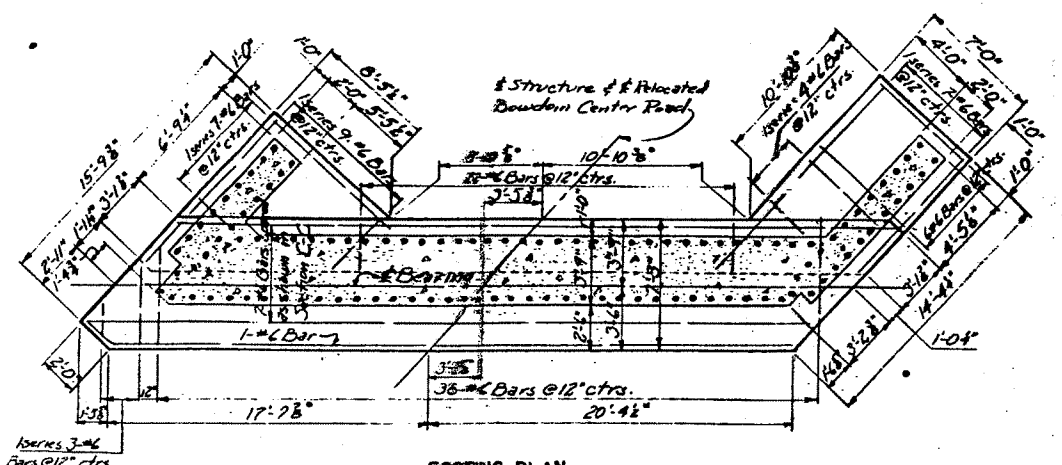
ELEVATION B-B



SECTION C-C



FOOTING PLAN



FOOTING PLAN

ABUTMENTS

ABUTMENT ELEVATIONS	
Abut. 1	Abut. 2
A	447.56 442.76
B	447.73 442.55
C	447.78 442.24
D	447.73 441.80
E	447.48 442.70
F	447.65 441.70
G	450.80 445.91
H	450.97 444.90
J	453.72 448.81
K	453.90 447.80
L	453.81 448.30
M	454.01 447.13
N	440.4 434.6

PIER ELEVATIONS		
Pier 1	Pier 2	Pier 3
P	446.88	446.09 443.93
Q	447.04	446.34 444.28
R	447.10	446.46 444.51
S	447.05	446.48 444.63
T	446.86	446.05 443.89
U	446.86	446.46 444.61
V	426.0	426.0 423.0

Notes:  
Piers 1, 2 & 3 are all similar except for elevations.  
Abutments 1 and 2 are similar by rotation except for elevations.  
Masonry plates on Abutments shall have corners clipped as shown. (See Standard Drawing No. 5)

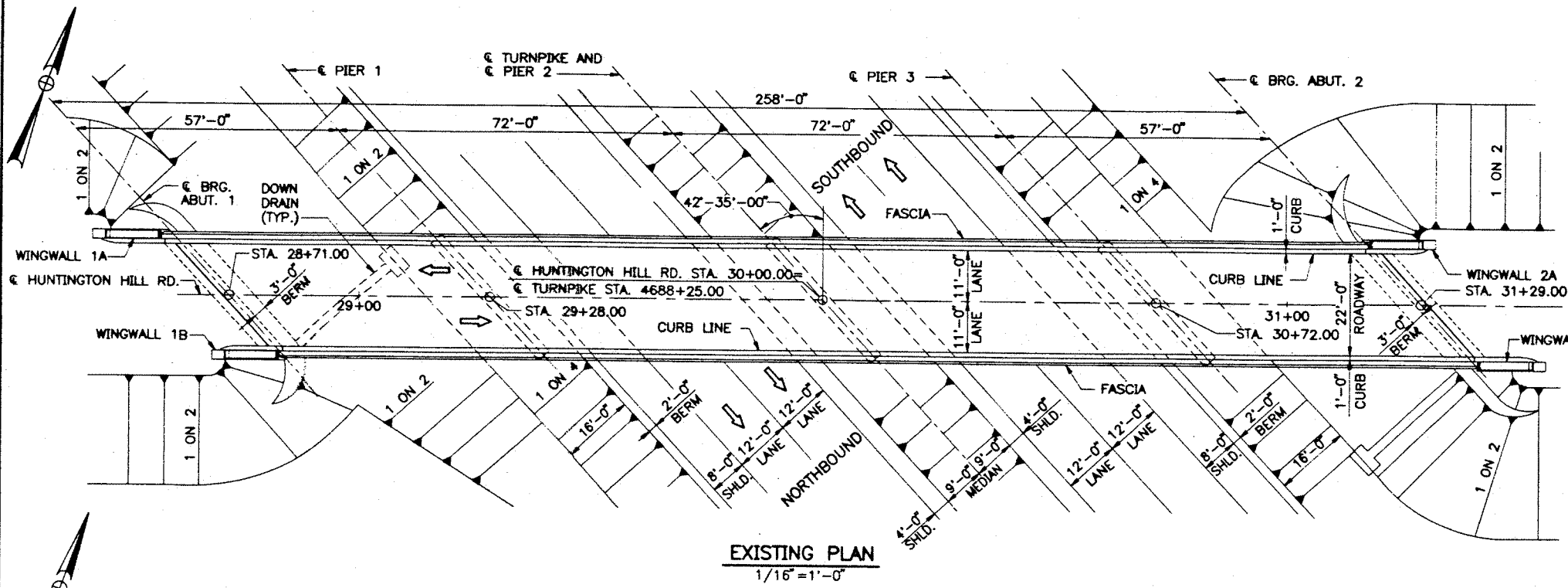
MAINE TURNPIKE AUTHORITY  
SECTION 2— PORTLAND TO AUGUSTA  
STRUCTURE NO. 70 TURNPIKE UNDER  
BOWDOIN CENTER ROAD  
STATION 4688+25  
ABUTMENTS AND PIERS  
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS  
NEW YORK KANSAS CITY  
SCALE: 3/8"=1'-0"  
CONTRACT NO. \_\_\_\_\_  
SHEET NO. 316 OF 382

70.02.03

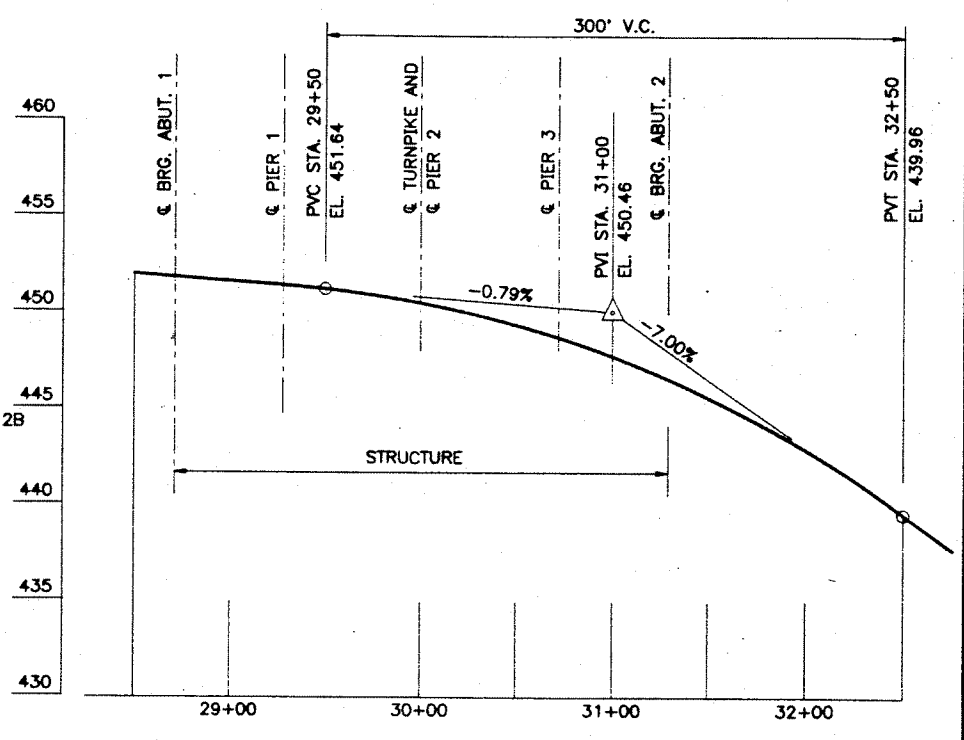
BY	DATE	REVISION	BY	DATE
PSG	4-21-54			
HUG	4-23-54	1	AS-BUILT	WBN 4-25-54

OF 310.SX

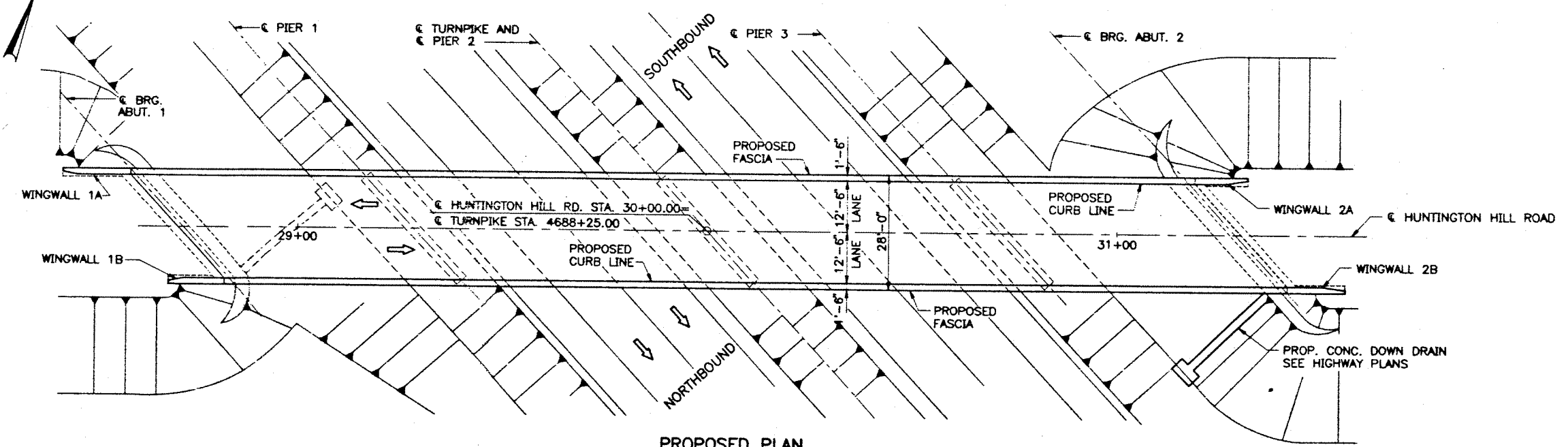
(METPK BDR-01)



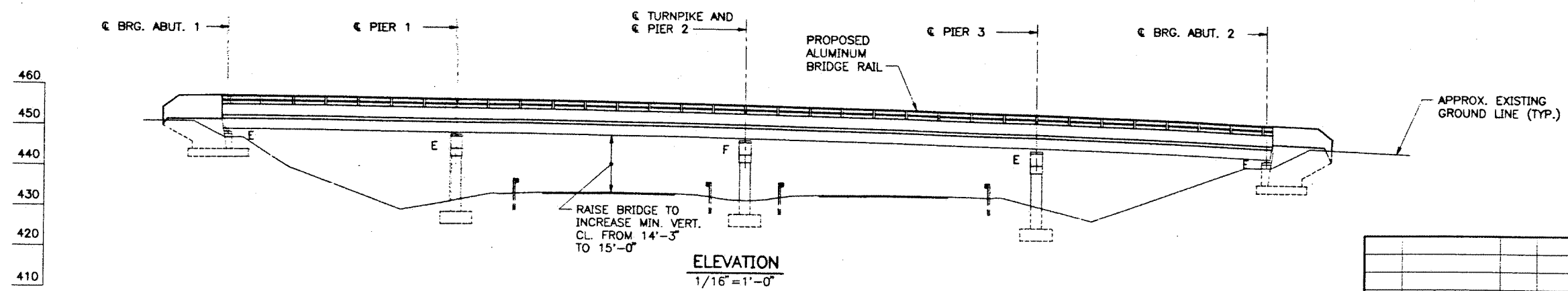
EXISTING PLAN  
1/16" = 1'-0"



PROPOSED PROFILE  
HORIZ. 1" = 50'  
VERT. 1" = 5'



PROPOSED PLAN  
1/16" = 1'-0"



ELEVATION  
1/16" = 1'-0"

No.	Revision	By	Date	In Charge Of	RAL

Maine Turnpike Authority  
Maine Turnpike

HUNTINGTON HILL ROAD UNDERPASS  
GENERAL PLAN AND ELEVATION

**Transpass**

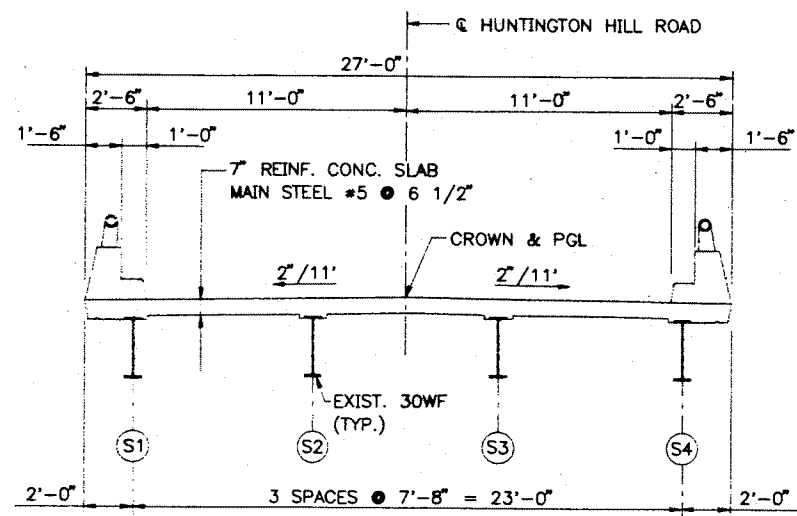
**HNTB**  
ARCHITECTS ENGINEERS PLANNERS

Contract 97.11

Sheet No. HH-2  
32 of 54

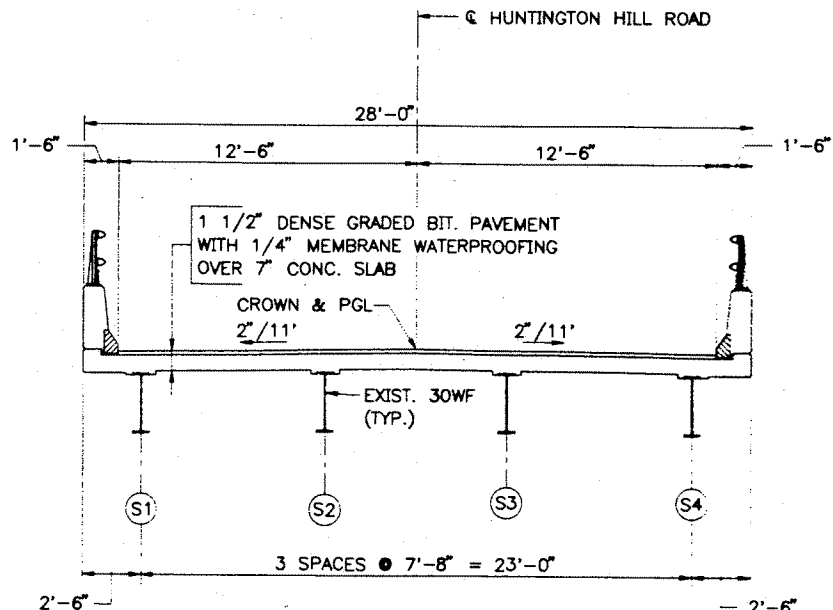
Designed: DWD 3/97  
Drawn: CSL 3/97  
Checked: JMH 3/97

M:\B09009\W\958\045DECK\HH-02 03/17/97 15:51



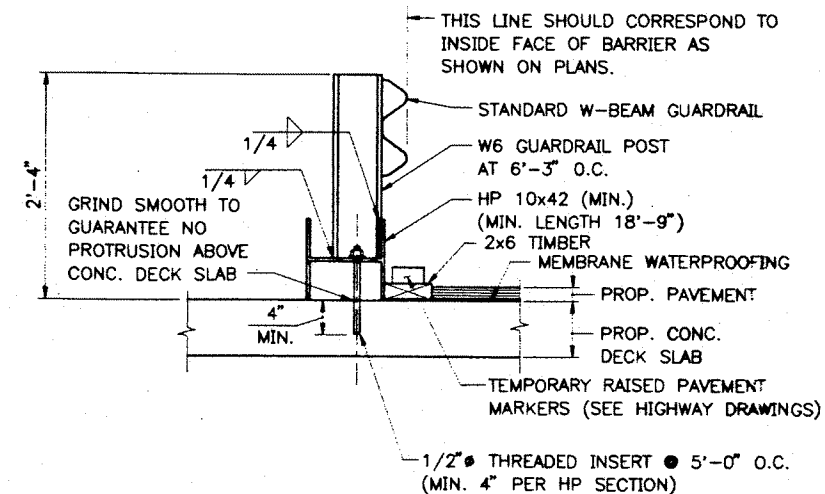
EXISTING CROSS SECTION

1/4" = 1'-0"



PROPOSED CROSS SECTION

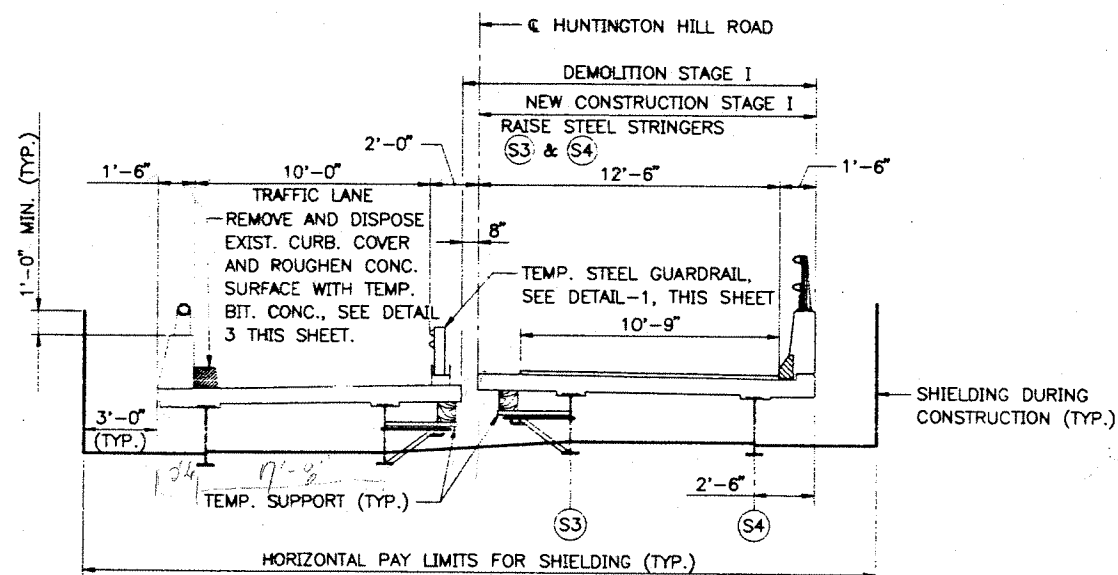
1/4" = 1'-0"



TEMPORARY STEEL GUARDRAIL DETAIL - 2

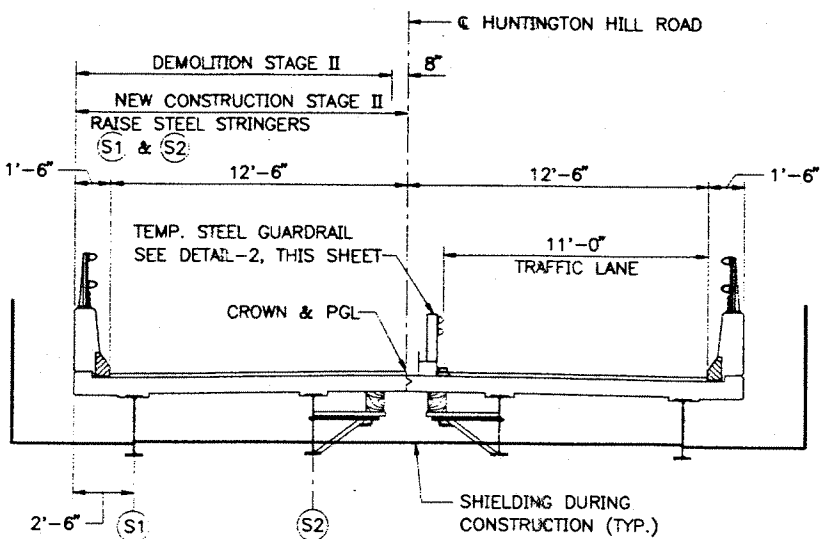
(PROPOSED DECK SLAB)

1" = 1'-0"



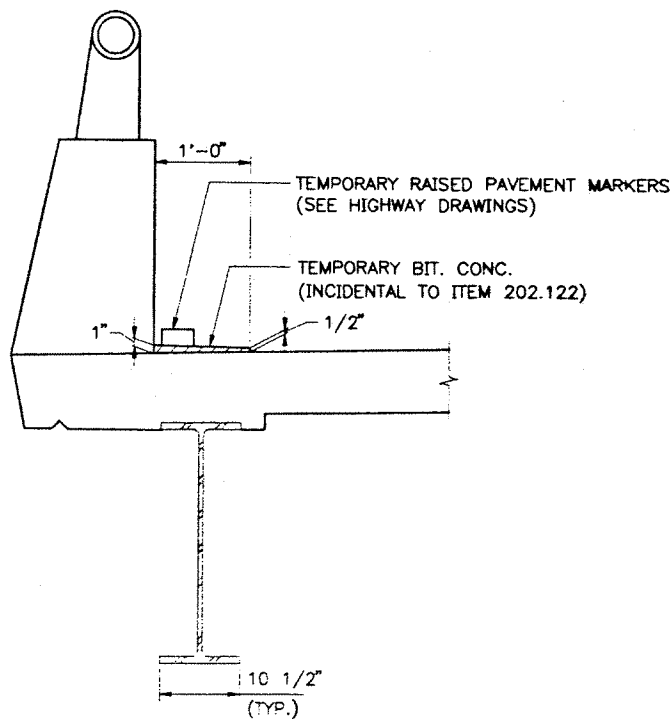
STAGE I CONSTRUCTION

1/4" = 1'-0"



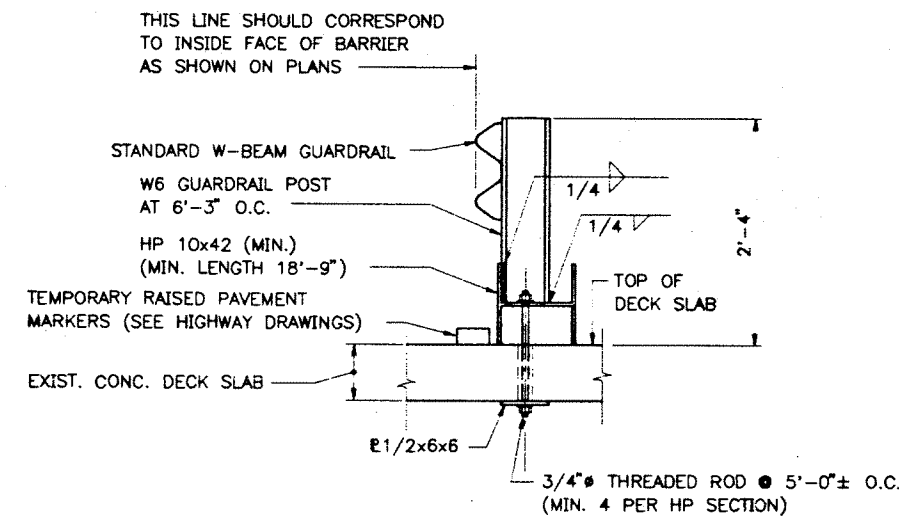
STAGE II CONSTRUCTION

1/4" = 1'-0"



DETAIL 3

1" = 1'-0"



TEMPORARY STEEL GUARDRAIL DETAIL - 1

(EXISTING DECK SLAB)

1" = 1'-0"

NOTES

1. ALL WORK NECESSARY TO ERECT AND REMOVE AND RESET TEMP. STEEL GUARDRAIL SHALL BE PAID UNDER ITEM 606.172.
2. THE CONTRACTOR SHALL SUBMIT A TEMPORARY DECK SUPPORT DESIGN FOR REVIEW AND APPROVAL.
3. TEMPORARY DECK SUPPORTS SHALL BE DESIGNED FOR H20 LIVE LOAD.
4. ALL WORK NECESSARY TO ERECT AND REMOVE THE TEMPORARY DECK SUPPORTS SHALL BE PAID FOR UNDER ITEM 524.361.
5. ALL SECTIONS ARE LOOKING UPSTATION.

By	Date				
Designed	DMD 3/97				
Drawn	JFT 3/97				
Checked	JMH 3/97				
No	Revision	By	Date	In Charge Of	RAL

Maine Turnpike Authority  
**Maine Turnpike**

HUNTINGTON HILL ROAD UNDERPASS  
SEQUENCE OF CONSTRUCTION

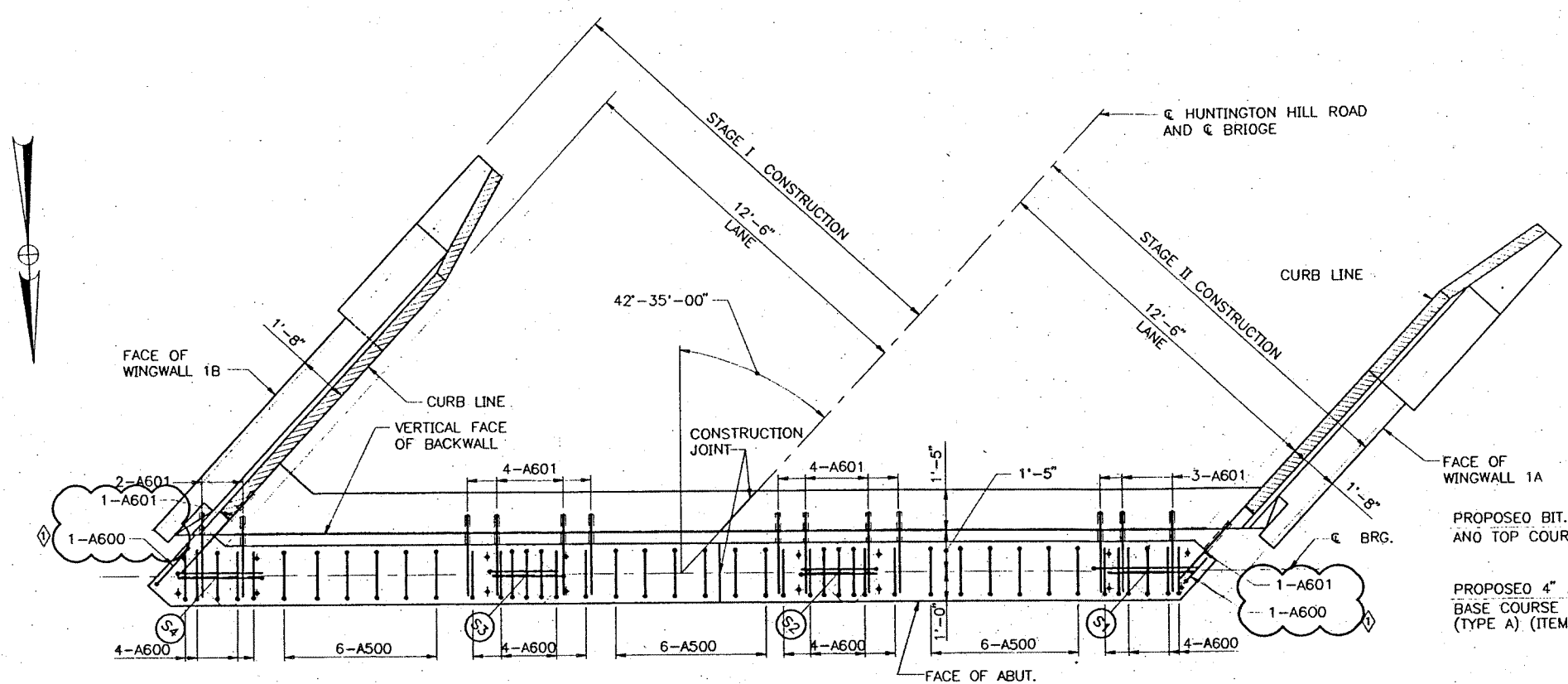
**Transpass**

**HNTB**  
ARCHITECTS ENGINEERS PLANNERS

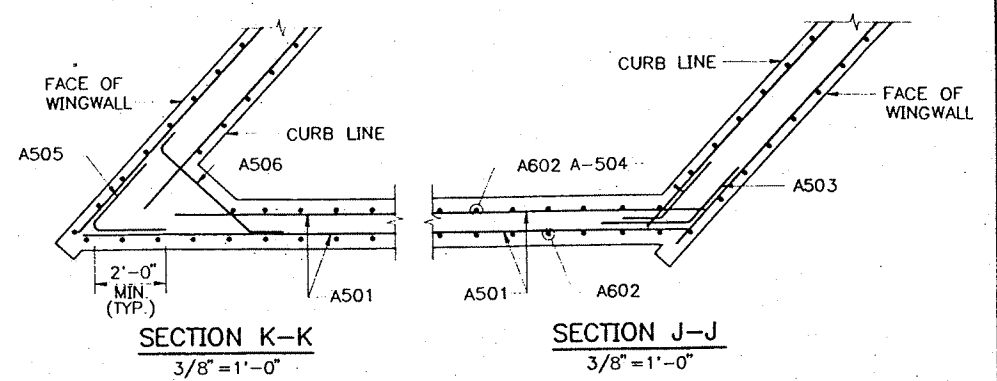
Contract 97.11

Sheet No. HH-3  
33 of 54





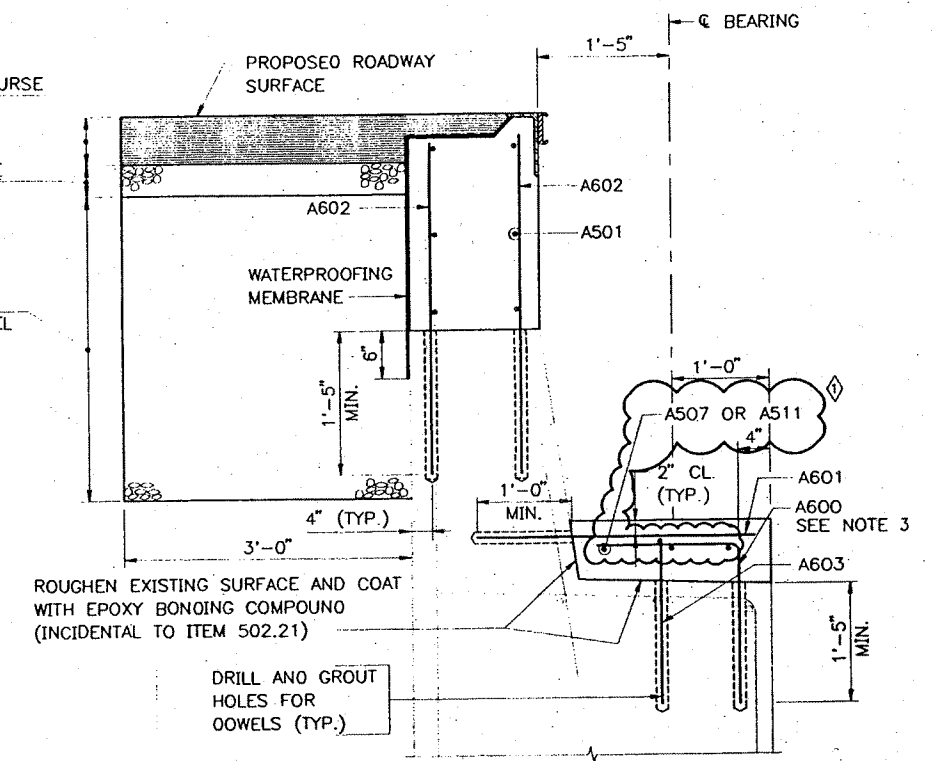
PROPOSED PLAN  
3/8" = 1'-0"



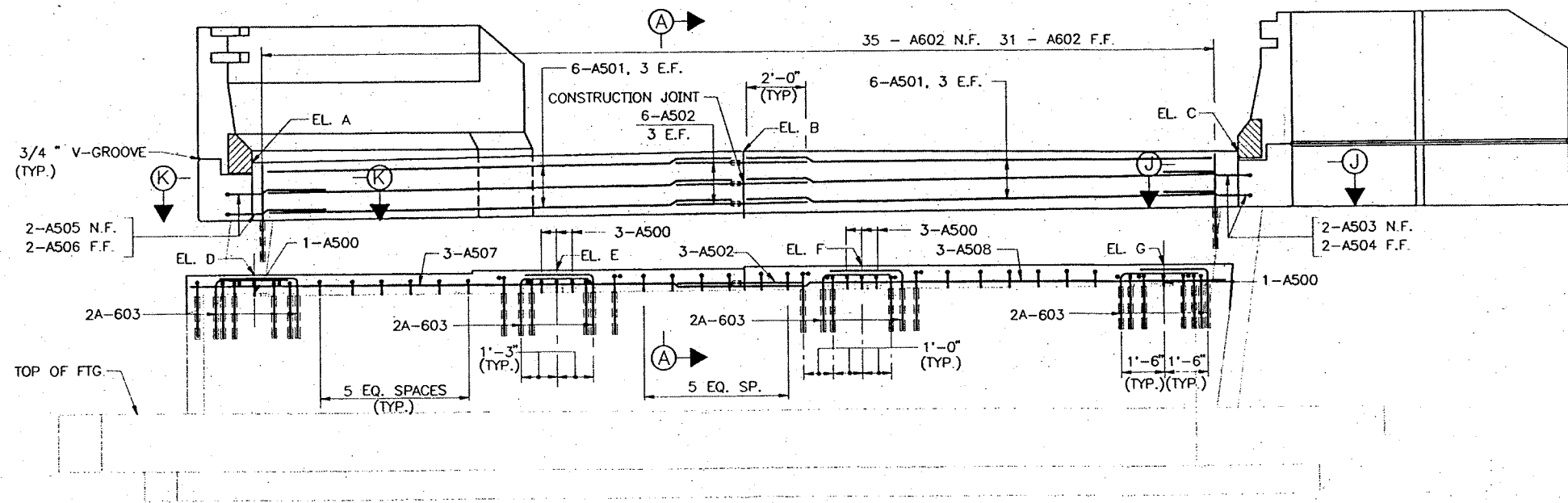
SECTION K-K  
3/8" = 1'-0"

SECTION J-J  
3/8" = 1'-0"

- PROPOSED BIT. BASE COURSE AND TOP COURSE
- PROPOSED 4" AGGREGATE BASE COURSE CRUSHED (TYPE A) (ITEM 304.09)
- PROPOSED AGGREGATE SUBBASE COURSE- GRAVEL (ITEM 304.10)



PROPOSED SECTION A-A  
1" = 1'-0"



PROPOSED ELEVATION  
3/8" = 1'-0"

- NOTES**
- FOR ABUTMENT NOTES, SEE SHEET NO. HH-4.
  - FOR REINFORCING STEEL SCHEDULE, SEE SHEET NO. HH-20.
  - A600 BARS SHALL BE LOCATED SO AS NOT TO INTERFERE WITH THE INSTALLATION OF ANCHOR BOLTS FOR THE MASONRY PLATE.
  - FOR PROPOSED ANCHOR BOLT LAYOUT, SEE SHEET NO. HH-6.

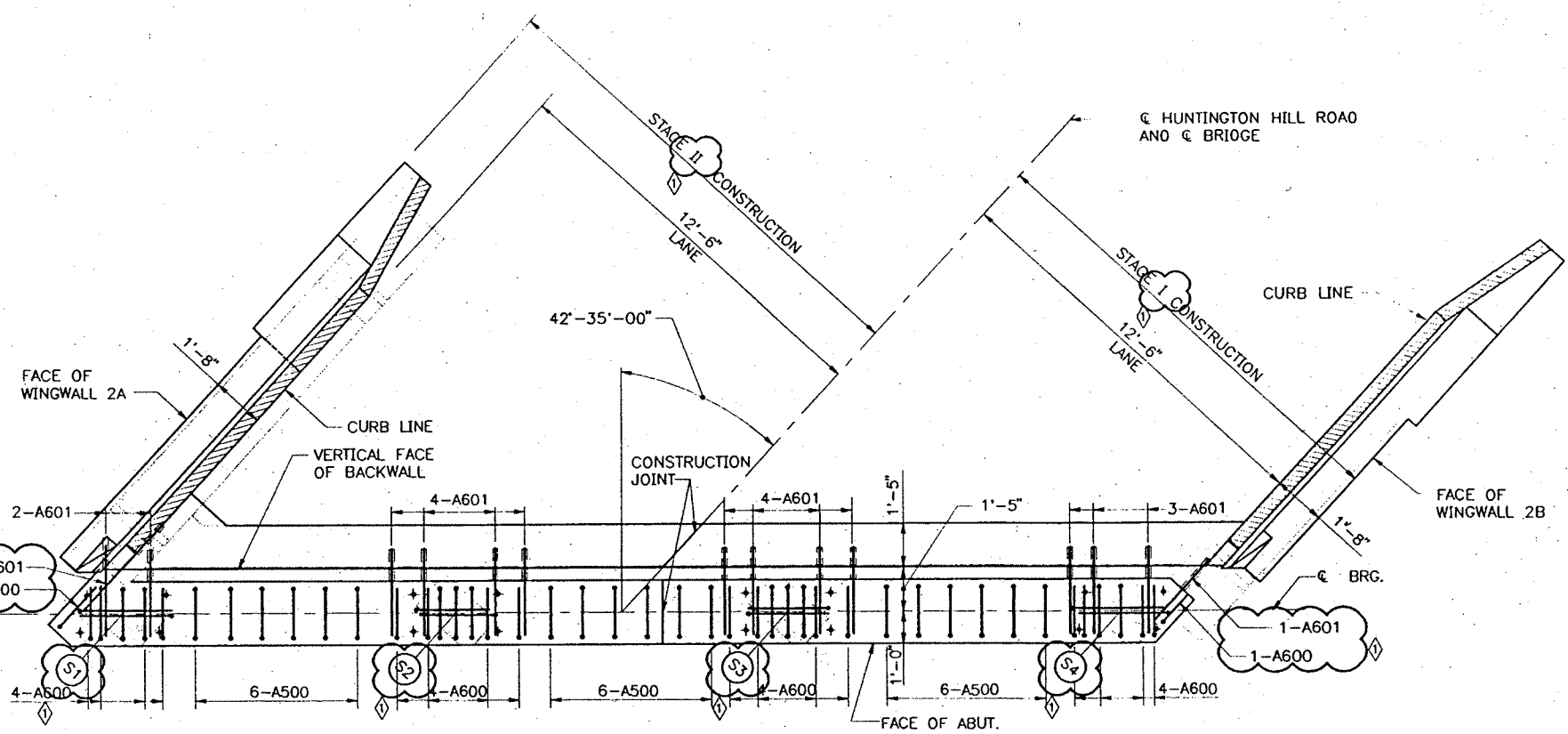
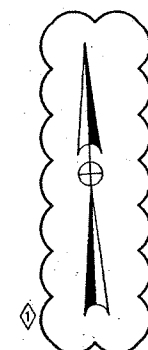
ABUTMENT ELEVATIONS	
POINT	ABUTMENT 1
A	452.00*
B	452.28*
C	452.18*
D	448.15
E	448.25
F	448.31
G	448.32

\* ELEVATIONS ARE AT FRONT FACE OF BACKWALL

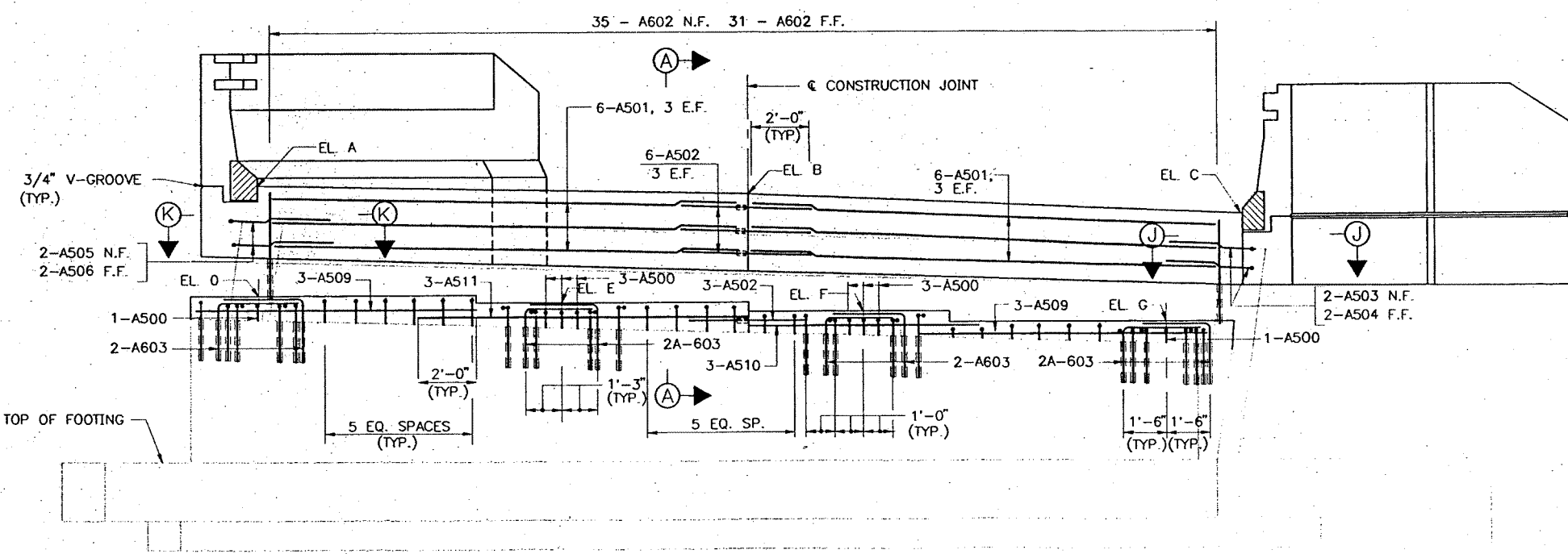
Maine Turnpike Authority  
**Maine Turnpike**  
 HUNTINGTON HILL ROAD UNDERPASS  
 ABUTMENT 1 MODIFICATIONS

**HNTB**  
 ARCHITECTS ENGINEERS PLANNERS  
 Contract 97.11  
 Sheet No. HH-5  
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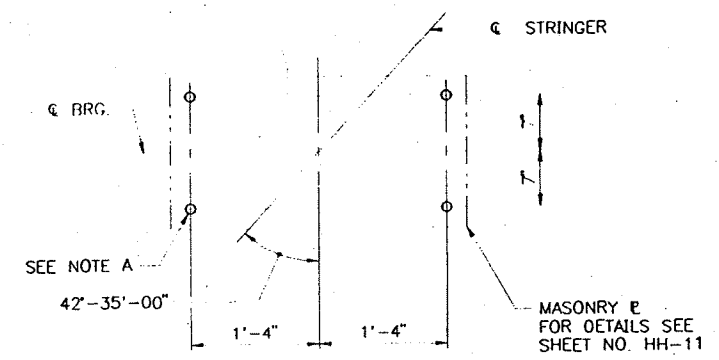
No.	Revision	By	Date	In Charge Of	RAL
1	GENERAL REVISION	HLR	4/4/97	Checked	JMH 3/97
				Designed	DMD 3/97
				Drawn	KSP 3/97



**PROPOSED PLAN**  
3/8" = 1'-0"

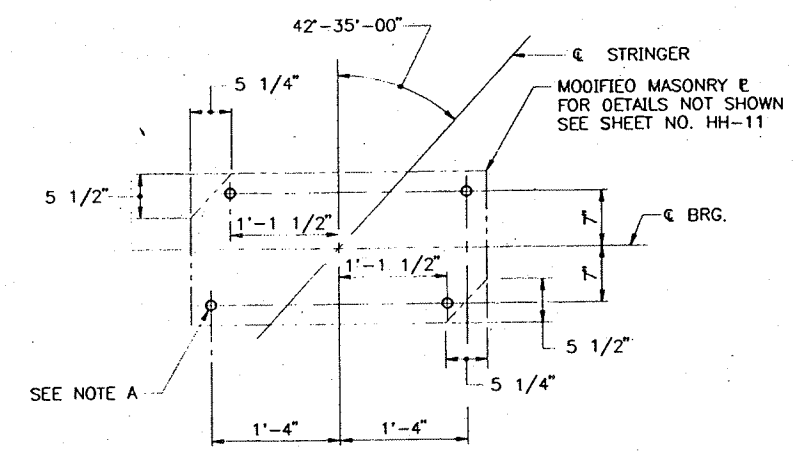


**PROPOSED ELEVATION**  
3/8" = 1'-0"



**TYPICAL PROPOSED ANCHOR BOLT LAYOUT FOR STRINGERS S2 AND S3**  
1" = 1'-0"

**NOTE "A"**  
ANCHOR BOLT LOCATION SHALL BE COORDINATED WITH BEARING MANUFACTURER, AND SHALL ALLOW FOR DRILLING OF HOLES WITH EXISTING STRINGERS AND DIAPHRAGMS IN PLACE.



**TYPICAL PROPOSED ANCHOR BOLT LAYOUT FOR STRINGERS S1 AND S4**  
1" = 1'-0"

ABUTMENT ELEVATIONS	
POINT	ABUTMENT 2
A	447.15*
B	446.83*
C	446.11*
O	443.35
E	443.09
F	442.77
G	442.40

\* ELEVATIONS ARE AT FRONT FACE OF BACKWALL

- NOTES**
- FOR REINFORCING STEEL SCHEDULE, SEE SHEET NO. HH-20.
  - FOR PROPOSED SECTIONS A-A, J-J, AND K-K, SEE SHEET NO. HH-5.

Maine Turnpike Authority  
**Maine Turnpike**

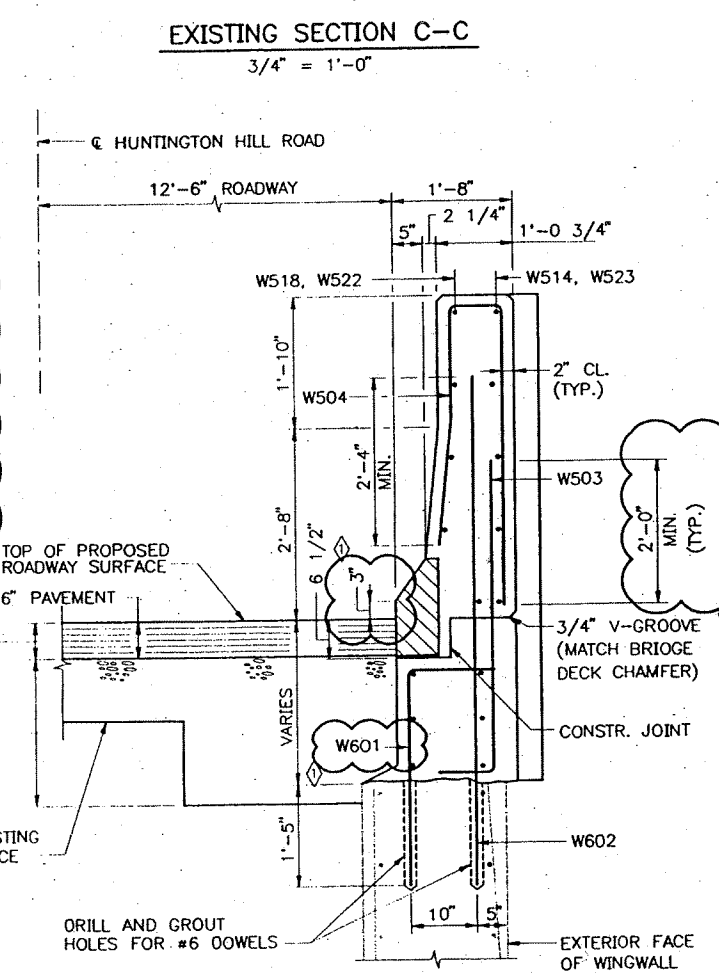
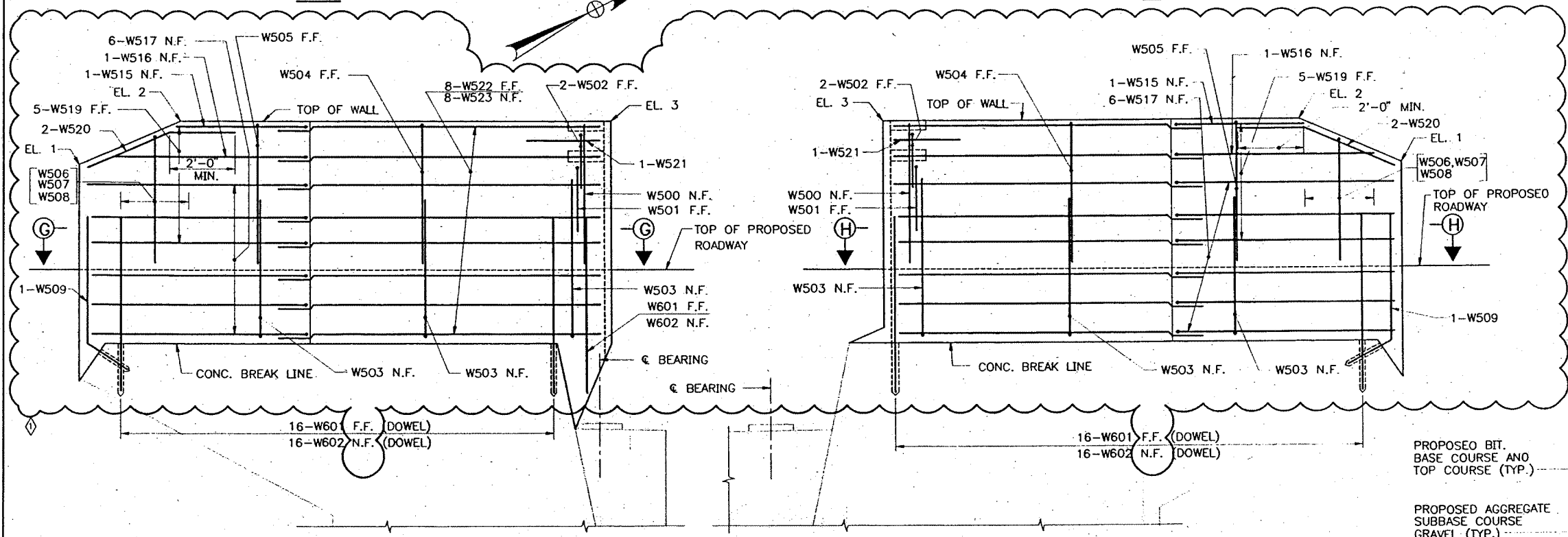
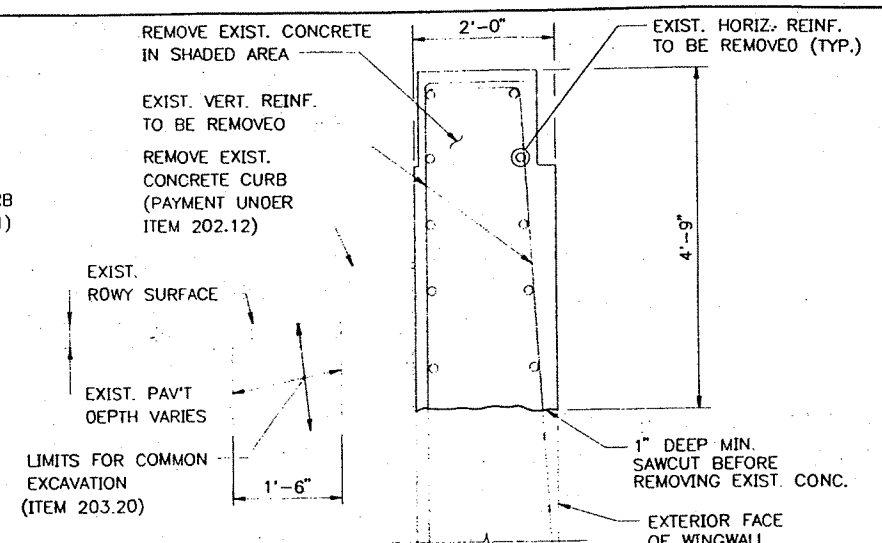
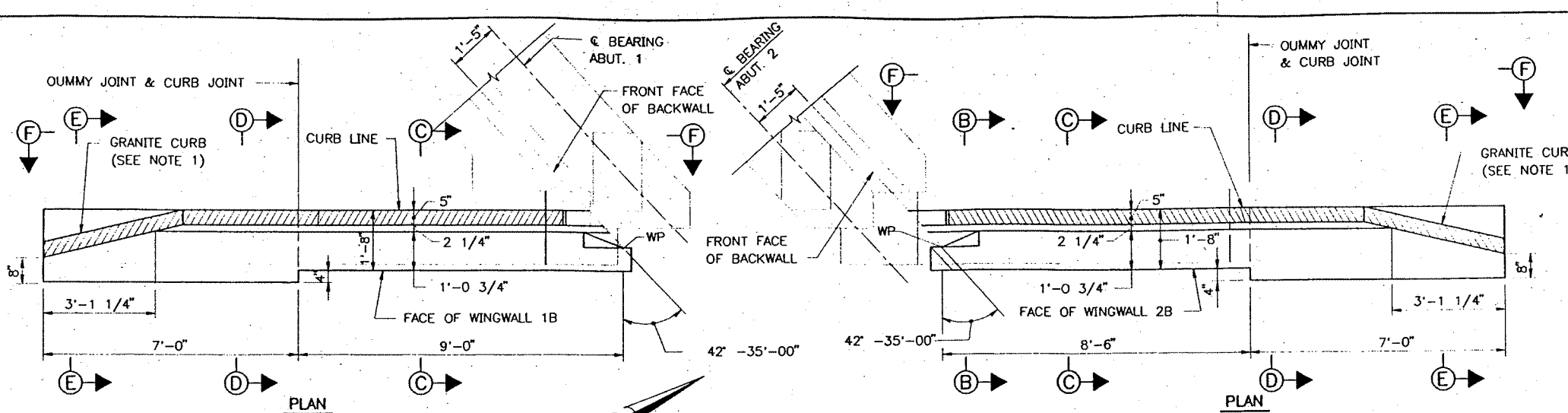
HUNTINGTON HILL ROAD UNDERPASS  
ABUTMENT 2 MODIFICATIONS

No.	Revision	By	Date	In Charge Of	RAL
1	GENERAL REVISION	HLR	4/4/97	Checked	JMH 3/97
				Designed	DMD 3/97
				Drawn	LMR 3/97

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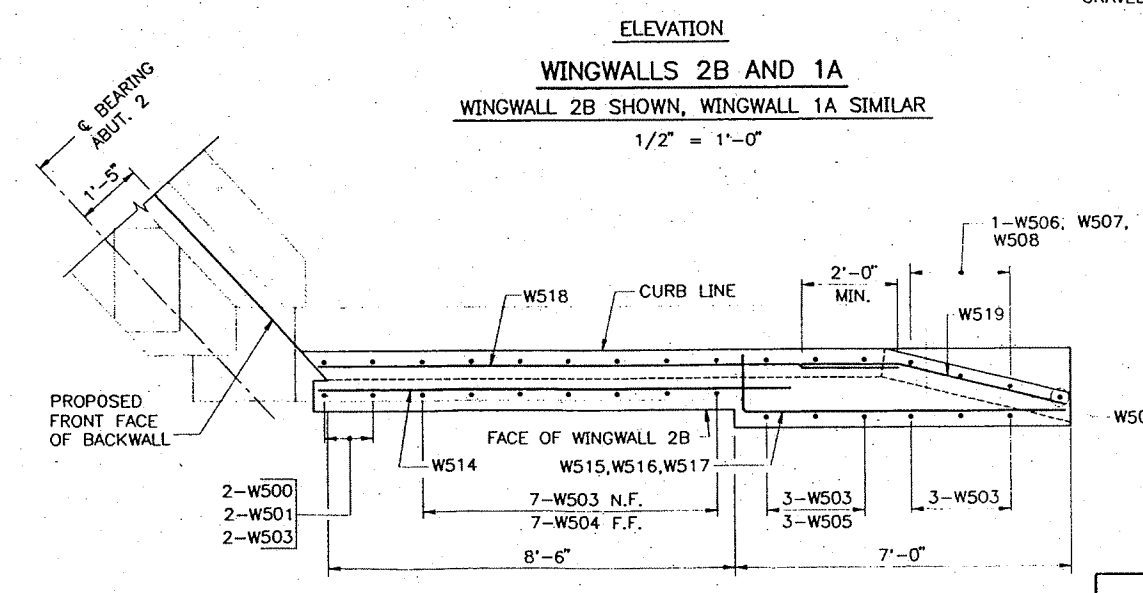
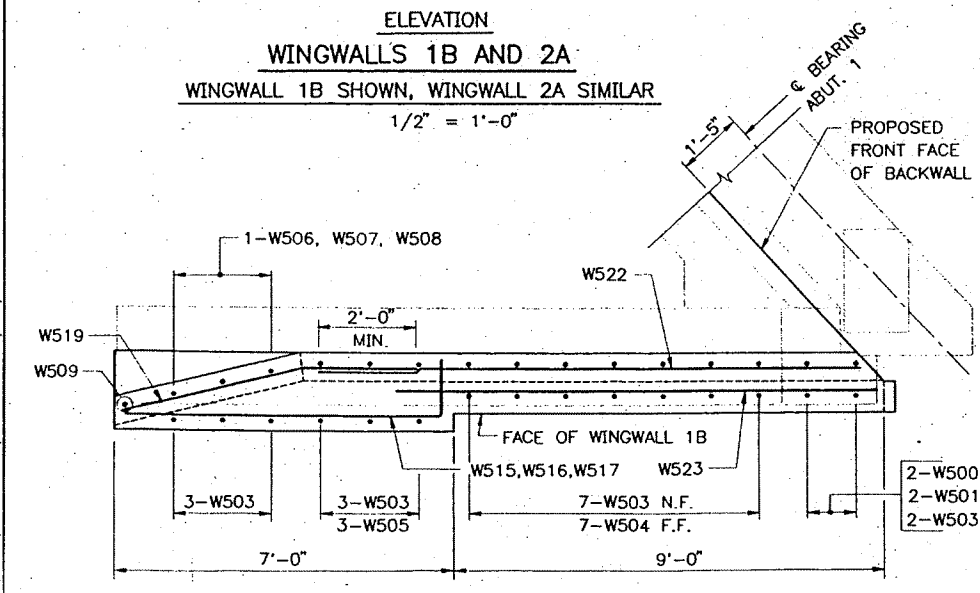
B09009XW\958\045DECK\HH-26 04/11/97 11:23



ELEVATION  
WINGWALLS 1B AND 2A  
WINGWALL 1B SHOWN, WINGWALL 2A SIMILAR  
1/2" = 1'-0"

ELEVATION  
WINGWALLS 2B AND 1A  
WINGWALL 2B SHOWN, WINGWALL 1A SIMILAR  
1/2" = 1'-0"

PROPOSED SECTION C-C  
3/4" = 1'-0"



SECTION G-G  
1/2" = 1'-0"

SECTION H-H  
1/2" = 1'-0"

WINGWALL ELEVATIONS

	1A	1B	2A	2B
EL. 1	455.46	455.27	449.64	448.40
EL. 2	456.77	456.57	451.11	449.88
EL. 3	456.67	456.47	451.68	450.51

NOTE  
1. FOR SECTIONS B-B, O-D, E-E, F-F AND GRANITE CURB DETAILS, SEE SHEET NO. HH-8.

No.	Revision	By	Date	In Charge Of
		Designed	DMD 3/97	
		Drawn	LS 3/97	
		Checked	JMH 3/97	
		General Revision	JMH 4/4/97	

Maine Turnpike Authority  
Maine Turnpike

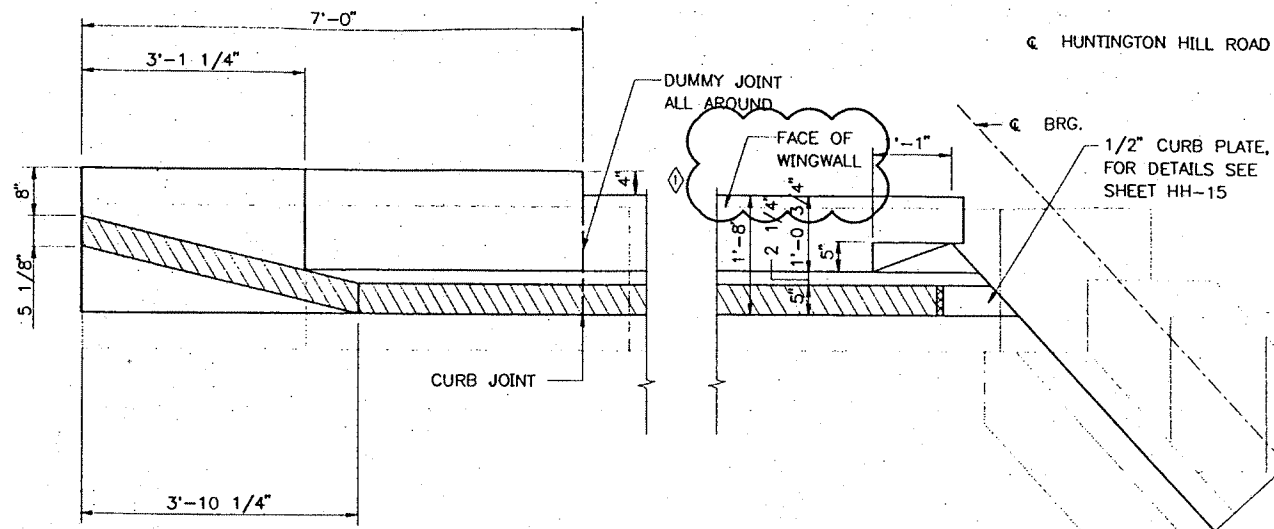
HUNTINGTON HILL ROAD UNDERPASS  
WINGWALL MODIFICATIONS I

Transpass

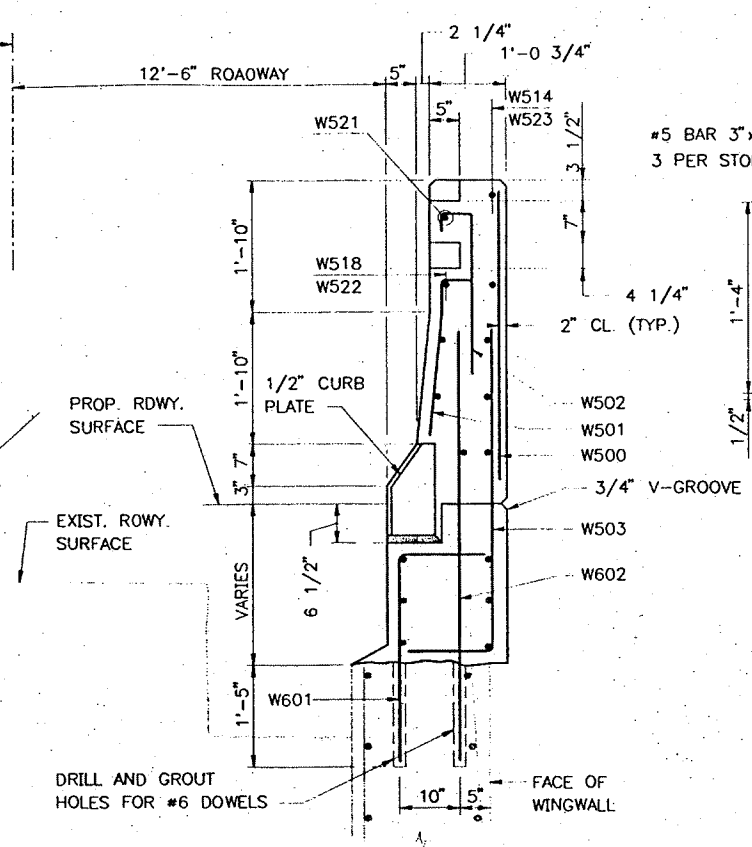
HNTB  
ARCHITECTS ENGINEERS PLANNERS

Contract 97.11  
Sheet No. HH-7  
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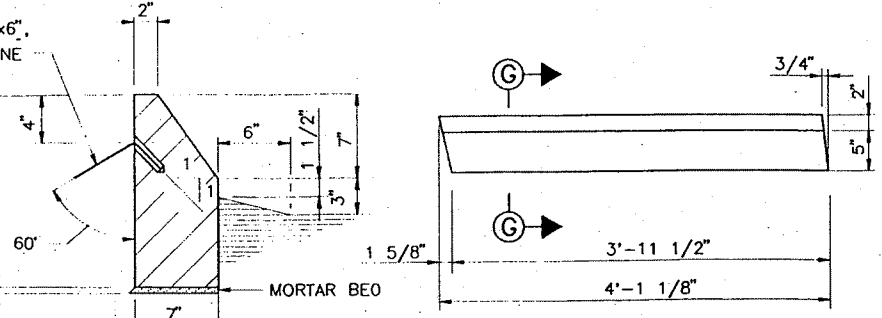




END POST DETAIL  
3/4" = 1'-0"



SECTION B-B  
3/4" = 1'-0"

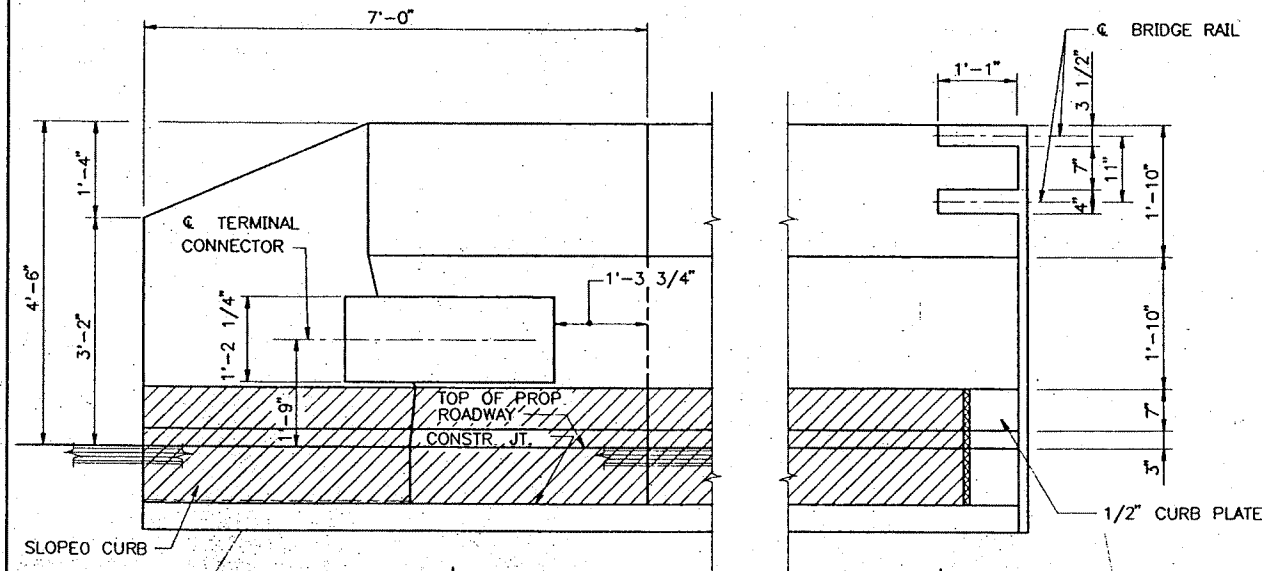


SECTION G-G  
1 1/2" = 1'-0"

PLAN AT ENDPOST  
1" = 1'-0"

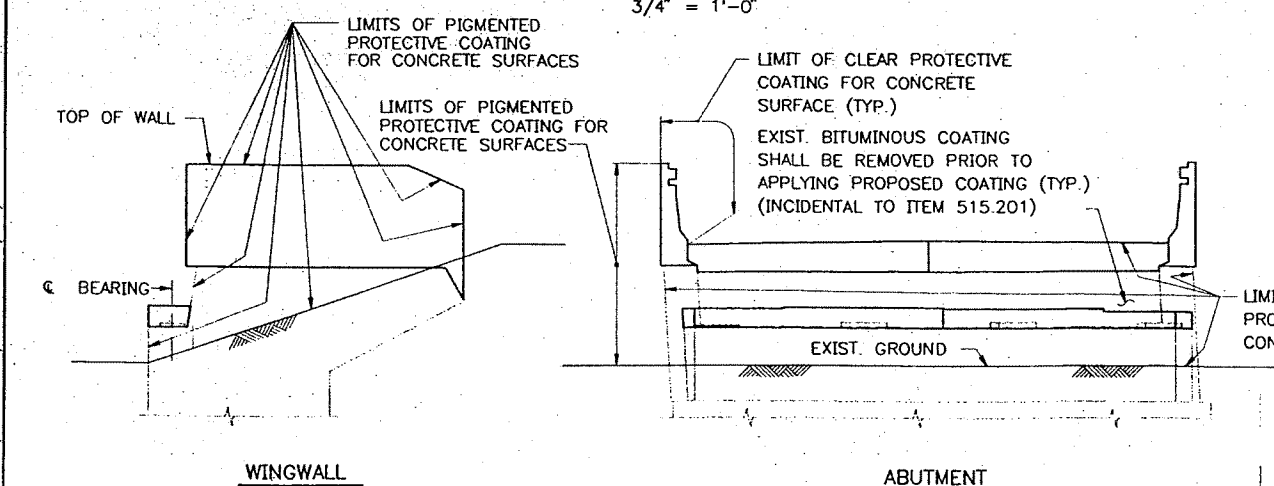
WINGWALL GRANITE CURB DETAILS

NOTE  
(CURB FOR WINGWALLS 1A & 2B SHOWN  
CURB FOR WINGWALLS 1B & 2A SIMILAR  
BUT OPPOSITE HAND).



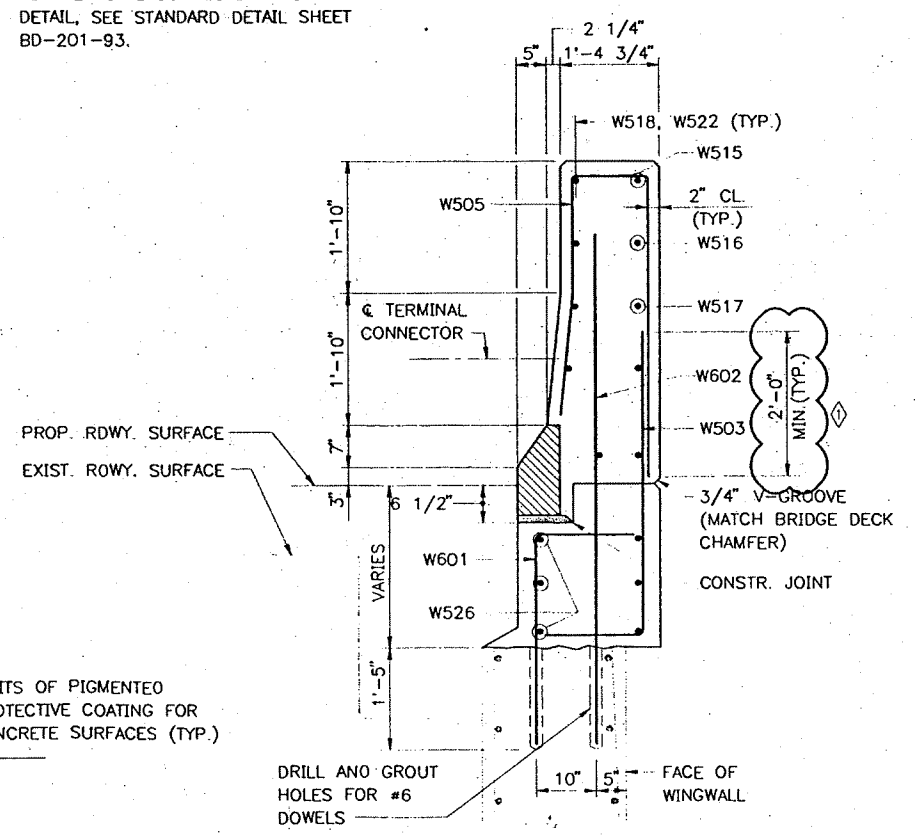
SECTION F-F  
3/4" = 1'-0"

NOTE  
FOR TERMINAL CONNECTOR ANCHORAGE  
DETAIL, SEE STANDARD DETAIL SHEET  
BD-201-93.

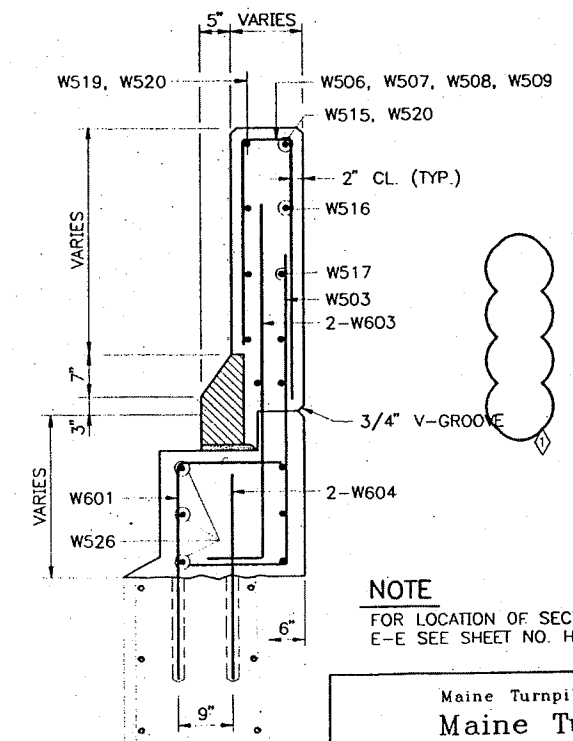


LIMITS OF CONCRETE PROTECTIVE COATING  
AT ABUTMENTS AND WINGWALLS  
1/4" = 1'-0"

NOTE A  
FOR LIMITS OF PROTECTIVE COATING AT PIERS,  
SEE SHEET NO. HH-9.



SECTION D-D  
3/4" = 1'-0"



SECTION E-E  
3/4" = 1'-0"

NOTE  
FOR LOCATION OF SECTIONS B-B, D-D, AND  
E-E SEE SHEET NO. HH-7.

Maine Turnpike Authority  
**Maine Turnpike**

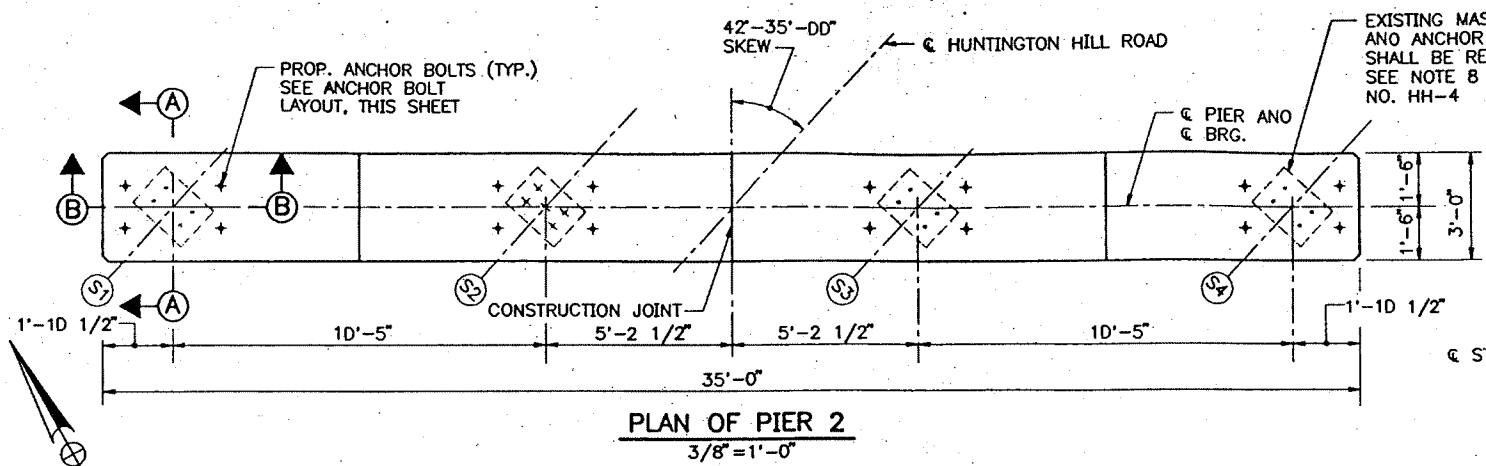
HUNTINGTON HILL ROAD  
UNDERPASS  
WINGWALL  
MODIFICATIONS II

No.	Revision	By	Date	In Charge Of	RAI
1	GENERAL REVISION	HLR	4/4/97	Checked	JMH
				Designed	DMD
				Drawn	LS

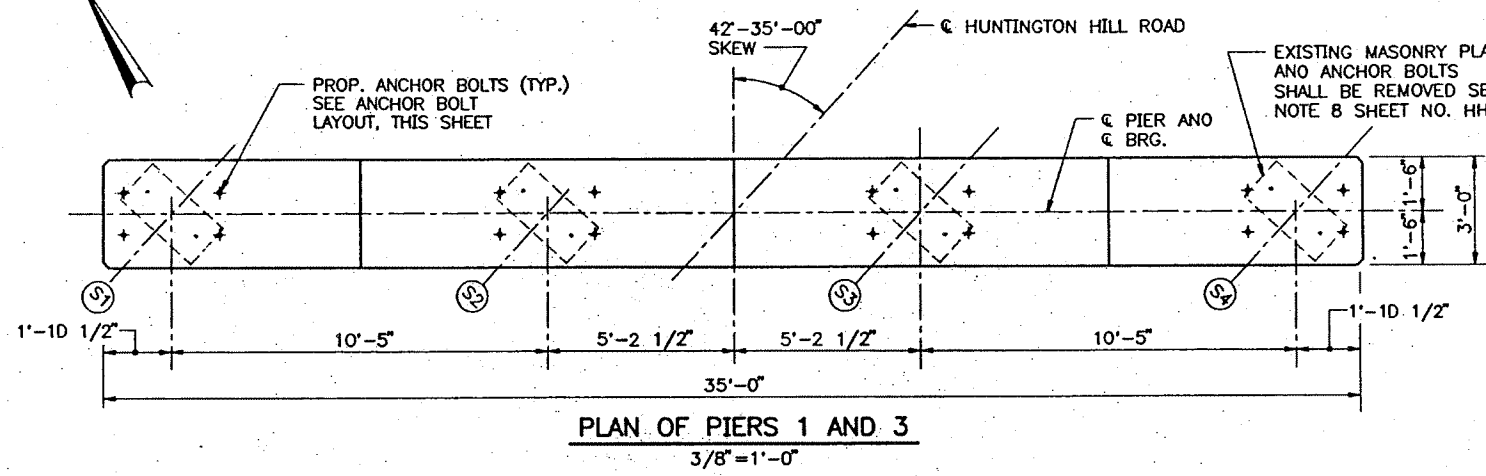
Contract 97.11

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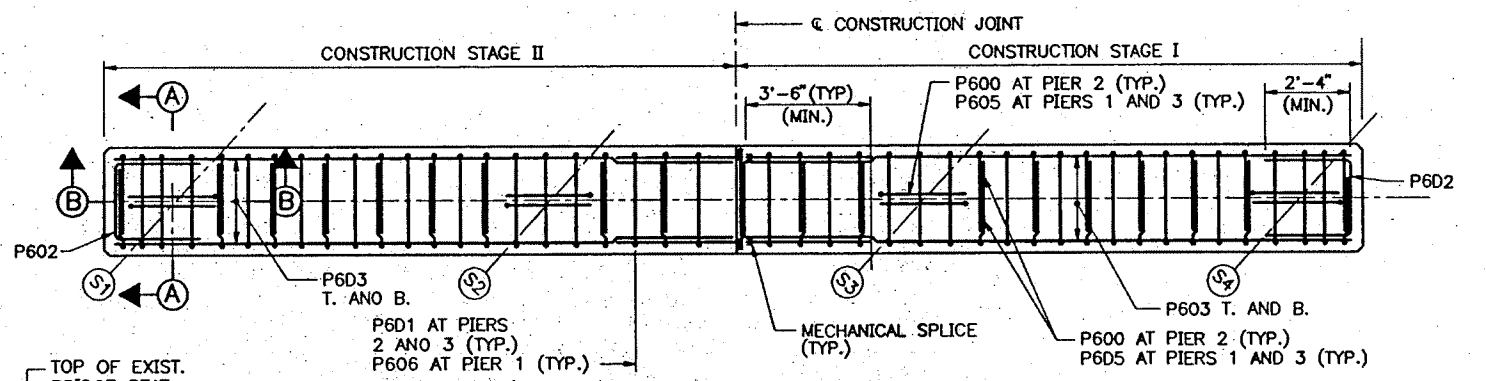
HNTB  
ARCHITECTS ENGINEERS PLANNERS



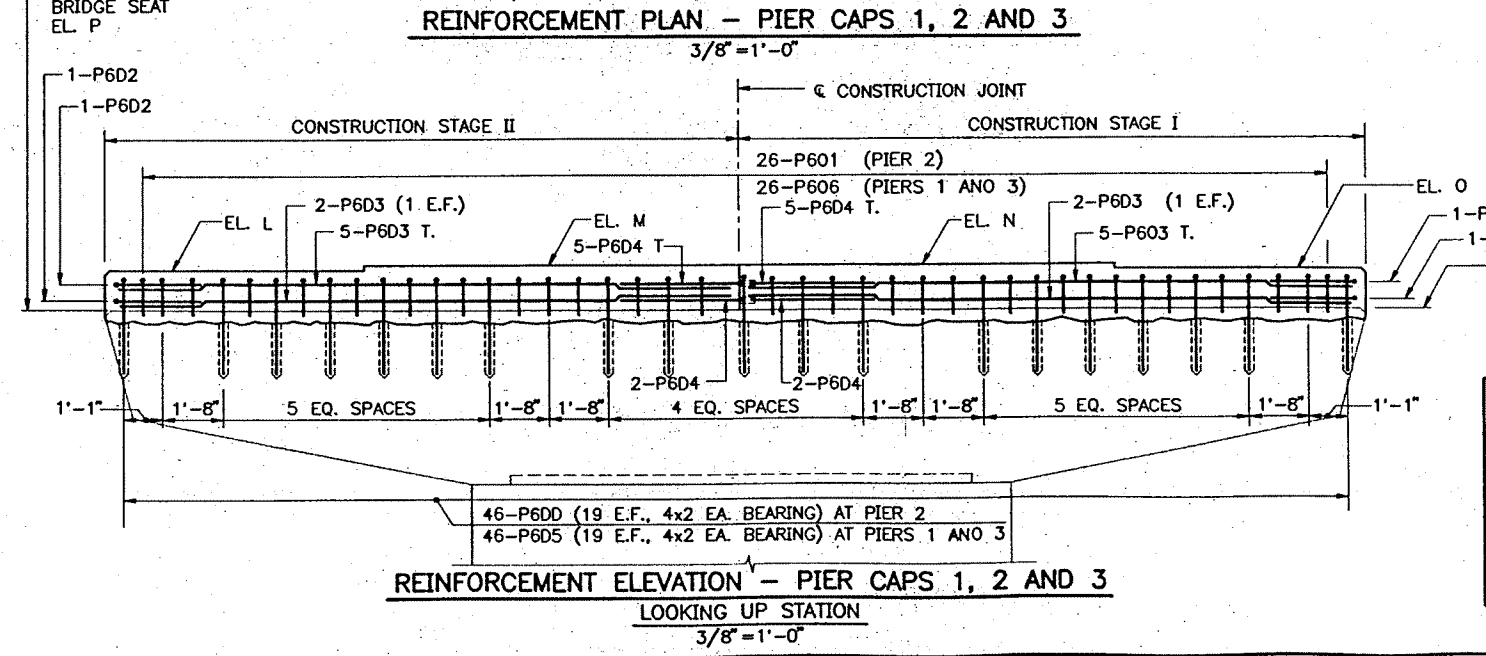
PLAN OF PIER 2  
3/8" = 1'-0"



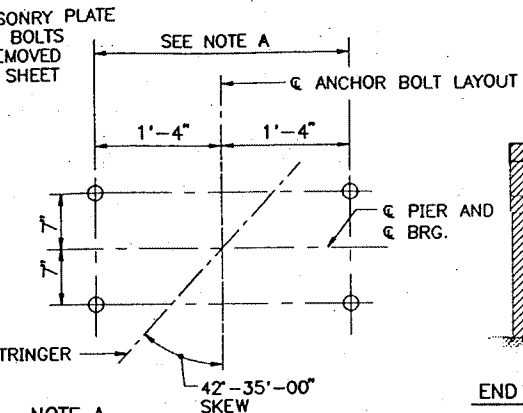
PLAN OF PIERS 1 AND 3  
3/8" = 1'-0"



REINFORCEMENT PLAN - PIER CAPS 1, 2 AND 3  
3/8" = 1'-0"

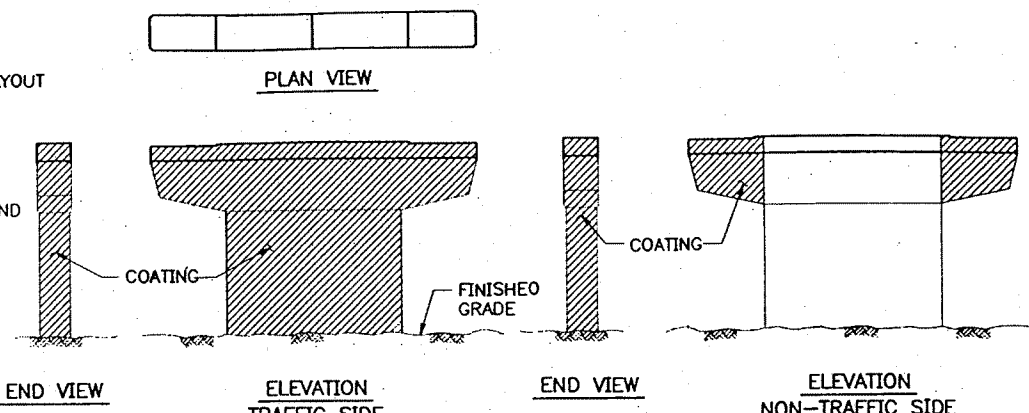


REINFORCEMENT ELEVATION - PIER CAPS 1, 2 AND 3  
LOOKING UP STATION  
3/8" = 1'-0"



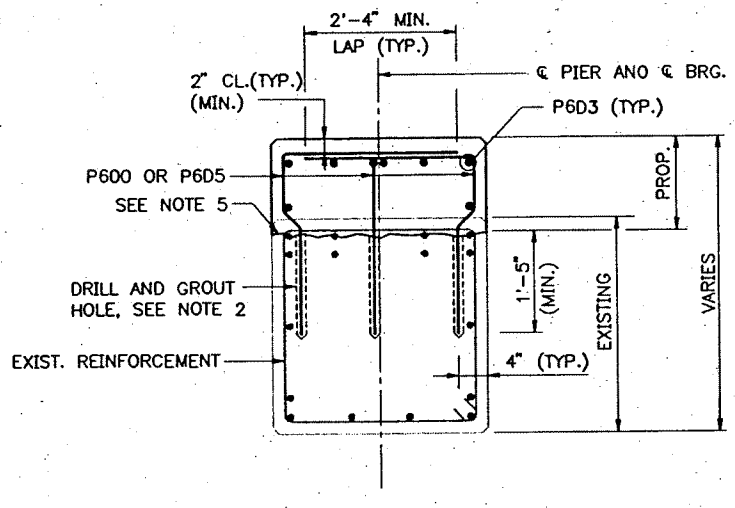
NOTE A  
ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER, AND SHALL ALLOW FOR DRILLING OF HOLES WITH EXISTING STRINGERS AND DIAPHRAGMS IN PLACE.

ANCHOR BOLT LAYOUT  
PIERS 1, 2 AND 3  
1" = 1'-0"

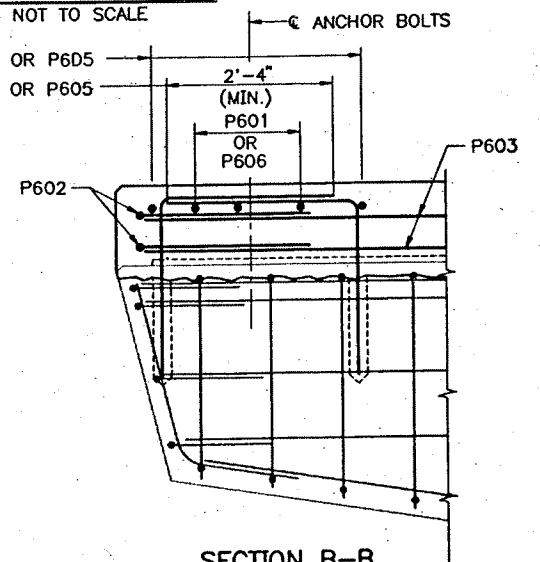


NOTE  
ALL EXPOSED SURFACES ON PIER 2, EXCEPT TOP OF PIER CAP, SHALL BE COATED WITH PROTECTIVE COATING.

LIMITS OF PIGMENTED PROTECTIVE COATING  
PIERS 1, 2, AND 3  
NOT TO SCALE



SECTION A-A  
3/4" = 1'-0"



SECTION B-B  
3/4" = 1'-0"

- NOTES
1. REINFORCING SHOWN IS TYPICAL FOR ALL PIERS, UNLESS OTHERWISE NOTED.
  2. THE CONTRACTOR SHALL EXPOSE THE TOP LAYER OF THE REINFORCING STEEL WHERE DRILLING IS REQUIRED PRIOR TO ANY DRILLING. THE CONTRACTOR SHALL REPORT INTERFERENCE OF DOOWELS WITH EXISTING REINFORCING TO THE ENGINEER. CARE SHALL BE TAKEN NOT TO DAMAGE EXISTING REINFORCING STEEL. (DRILLING AND GROUTING HOLES SHALL BE INCIDENTAL TO ITEM 502.23)
  3. REMOVAL OF THE EXISTING MASONRY PLATE, ANCHOR BOLTS AND BEARING ASSEMBLY SHALL BE INCIDENTAL TO ITEM 202.12.
  4. SEE SHEET NO. HH-20 FOR REINFORCING STEEL SCHEDULE.
  5. REMOVE ALL DETERIORATED OR LOOSE CONCRETE. ROUGHEN AND CLEAN TO ELIMINATE BOND INHIBITING MATERIALS ON ALL CONCRETE SURFACES, INCLUDING LOCATIONS WHERE EXPOSING THE TOP LAYER OF REINFORCING IS NOT REQUIRED. CLEAN ALL EXPOSED REINFORCING STEEL USING AN ACCEPTABLE METHOD APPROVED OF BY THE ENGINEER AND THEN APPLY AN EPOXY COATING TO BARS. APPLY A BONDING AGENT TO THE EXISTING SUBSTRATE, BY FOLLOWING THE MANUFACTURER'S INSTRUCTIONS AND APPROVED OF BY THE ENGINEER, PRIOR TO PLACEMENT OF NEW CONCRETE. (INCIDENTAL TO ITEM 502.23.)

PIER ELEVATIONS			
POINT	PIER 1	PIER 2	PIER 3
L	447.81	446.98	445.39
M	447.73	447.04	445.14
N	447.67	446.91	444.91
O	447.64	446.59	444.69
P	446.28	445.89	444.03
Q	446.28	445.51	443.38

THIS SHEET REVISED 4/17/97

No.	Revision	By	Date	In Charge Of	RAL
	EXIST. PIER ELEV. ADJUSTED	HLR	4/17/97	Checked	JMH 3/97
				Drawn	LMR 3/97
				Designed	DMD 3/97

Maine Turnpike Authority  
Maine Turnpike

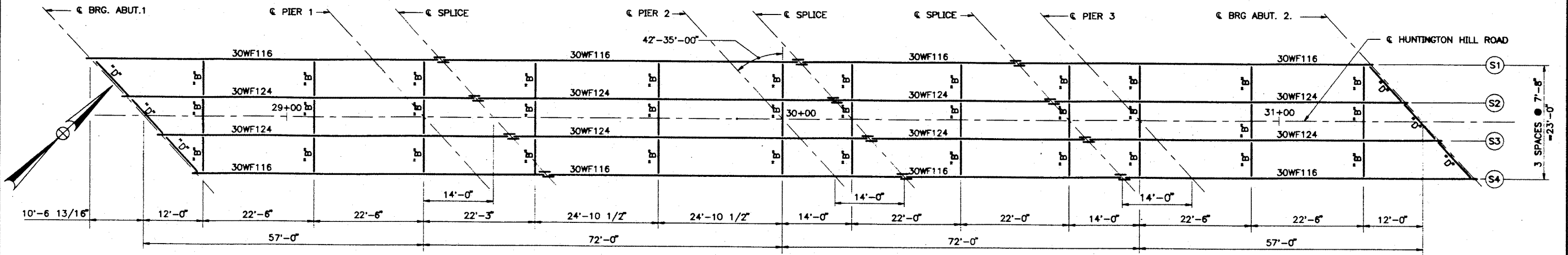
HUNTINGTON HILL ROAD  
UNDERPASS

PIER MODIFICATIONS

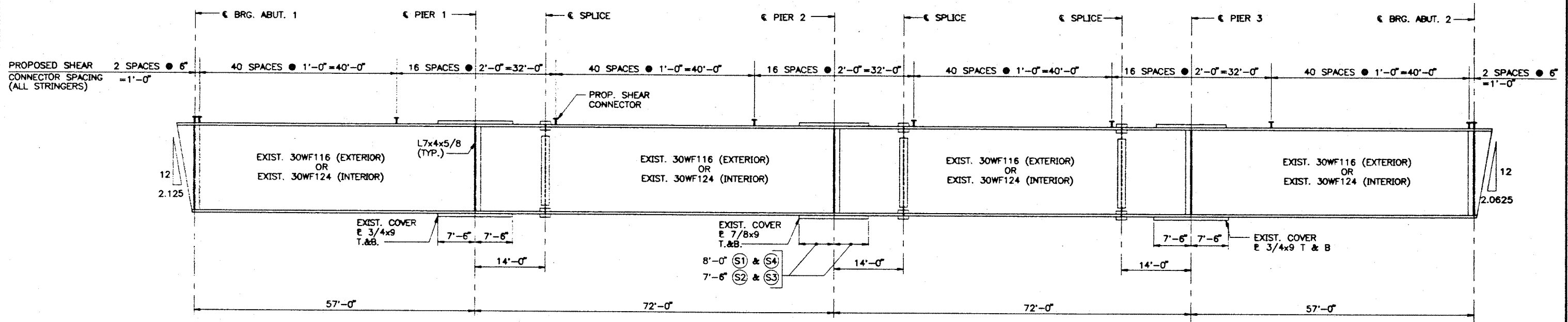
**HNTB**  
ARCHITECTS ENGINEERS PLANNERS

Contract 97.11

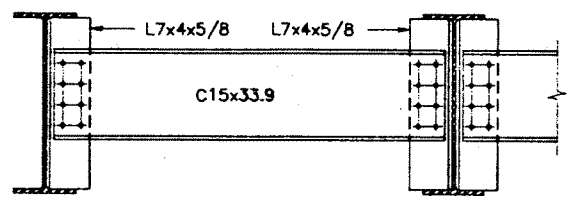
Sheet No. HH-9  
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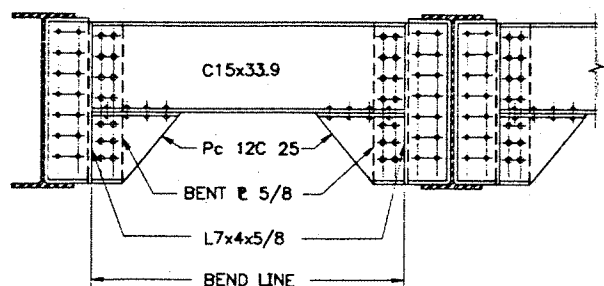
FRAMING PLAN (EXISTING)  
1"=10'



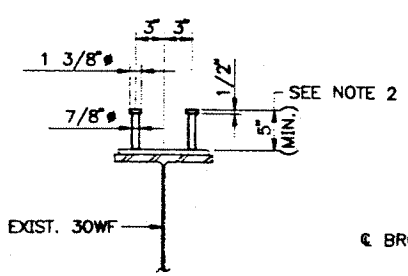
STRINGER ELEVATION  
1"=10' (HORIZONTAL)



DIAPHRAGM TYPE B (EXISTING)  
3/4"=1'-0"



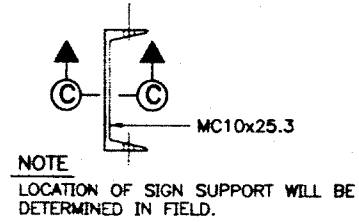
DIAPHRAGM TYPE D (EXISTING)  
3/4"=1'-0"



**SHEAR CONNECTOR NOTES**

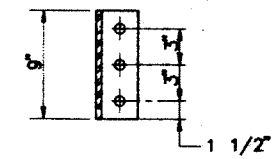
- SEE STRINGER ELEVATION FOR PROPOSED SHEAR CONNECTOR SPACING.
- 7" FOR EXTRA DEPTH HAUNCH SEE SHEET HH-13.

PROPOSED SHEAR CONNECTOR DETAIL  
1"=1'-0"

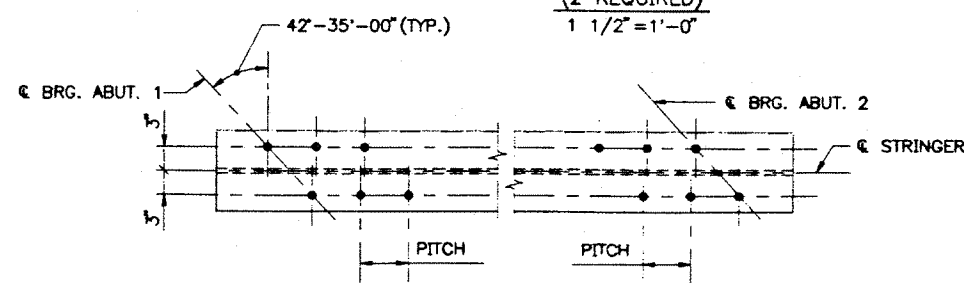


**NOTE**  
LOCATION OF SIGN SUPPORT WILL BE DETERMINED IN FIELD.

SIGN SUPPORT  
(2 REQUIRED)  
1 1/2"=1'-0"



SECTION C-C  
1 1/2"=1'-0"



SHEAR CONNECTOR LAYOUT  
1"=1'-0"

**NOTES**

- EXISTING DIAPHRAGMS ARE CONNECTED TO THE STRINGERS WITH THE USE OF BOLTS AND/OR RIVETS. ALL BOLTS AND RIVETS WHICH ARE REMOVED TO JACK THE SUPERSTRUCTURE, SHALL BE REPLACED WITH NEW 7/8" AASHTO M164 HIGH STRENGTH BOLTS, NUTS AND WASHERS, WHICH SHALL BE INCIDENTAL TO ITEM 504.721, JACKING EXISTING SUPERSTRUCTURE. ALL DIAPHRAGM HOLES SHALL BE GROUND SMOOTH.
- PROPOSED SHEAR CONNECTORS ARE REQUIRED AND SHOWN ON THE EXISTING STRINGER ELEVATION. SHEAR CONNECTORS ARE PAID FOR UNDER ITEM 505.09.
- ALL DIAPHRAGM BOLTED CONNECTIONS BETWEEN NEW CONSTRUCTION STAGE I AND STAGE II, (IN BAY BETWEEN STRINGERS S2 AND S3), SHALL BE MADE AFTER NEW CONSTRUCTION STAGE II IS LOADED.
- SIGN SUPPORTS SHALL BE INCIDENTAL TO ITEM 520.221.

Maine Turnpike Authority  
**Maine Turnpike**

HUNTINGTON HILL ROAD UNDERPASS  
FRAMING PLAN AND STRINGER ELEVATION

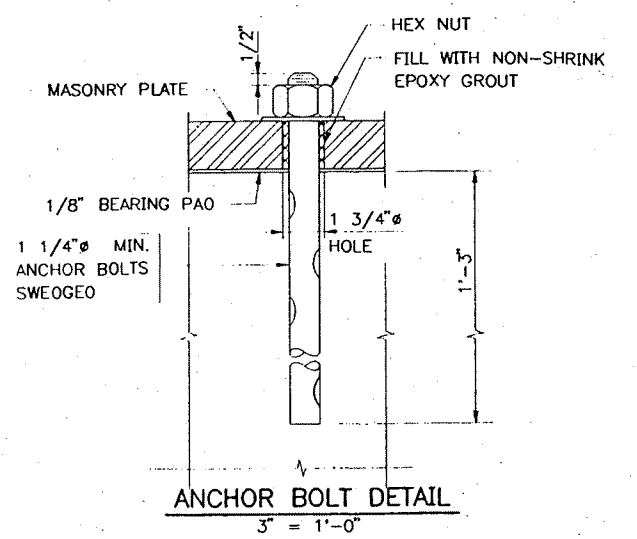
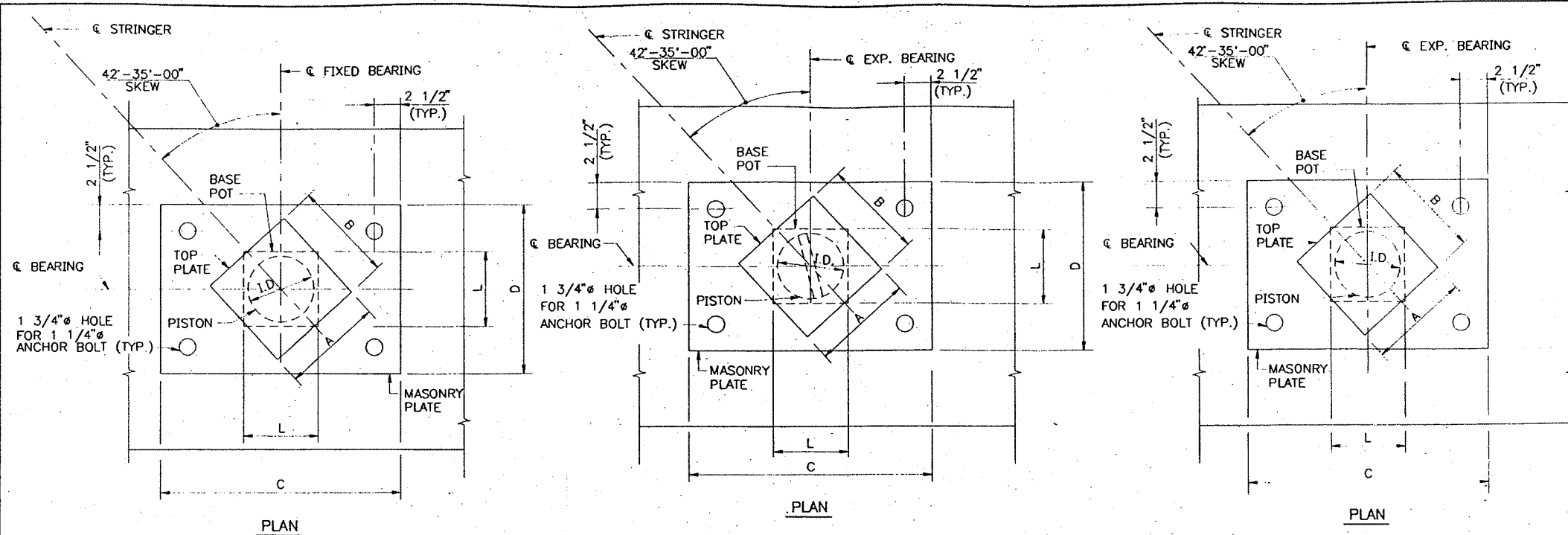
**Transpass**

**HNTB**  
ARCHITECTS ENGINEERS PLANNERS

Contract 97.11  
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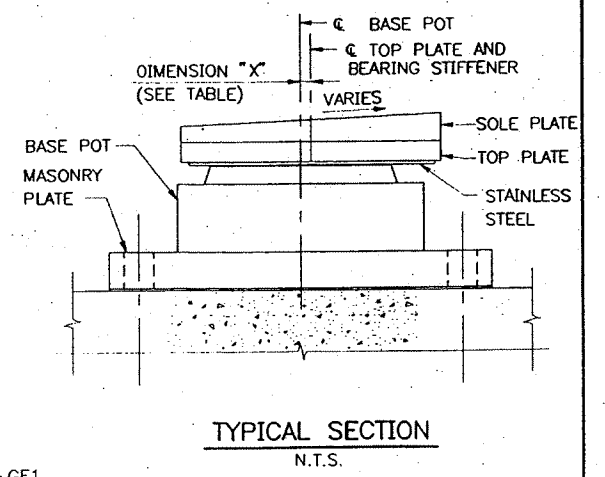
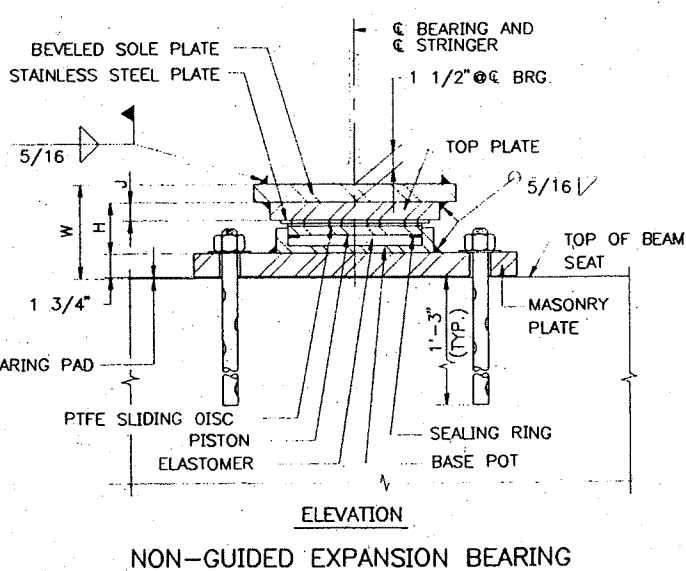
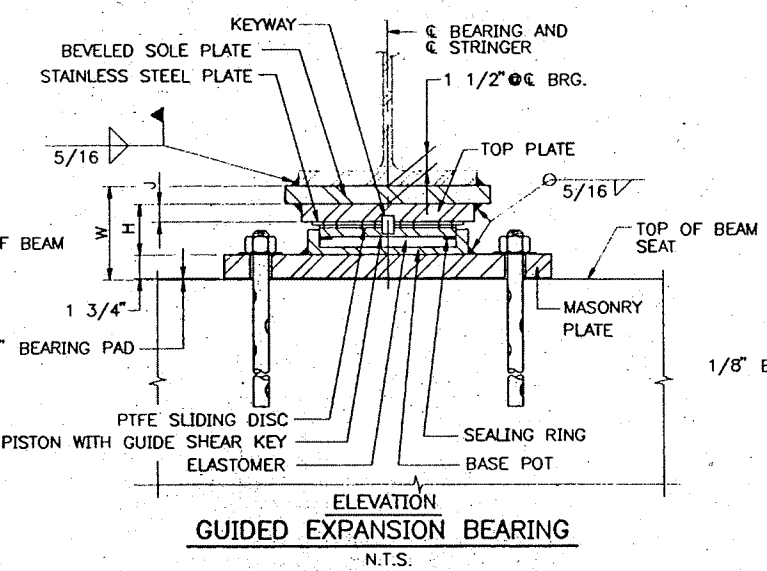
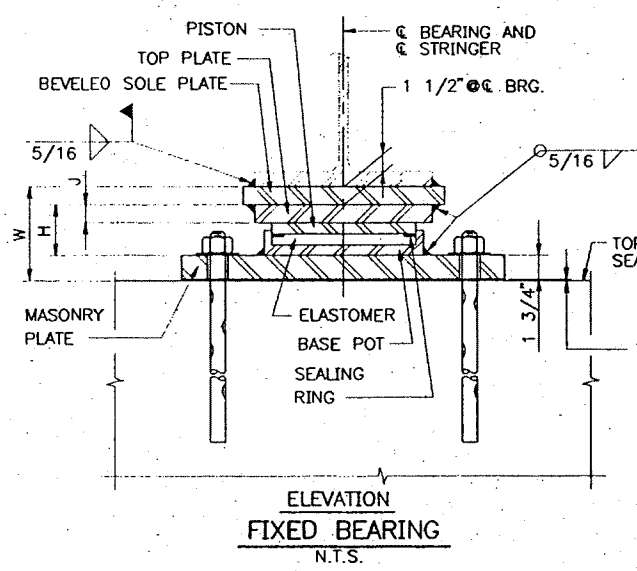
No.	Revision	By	Date	In Charge Of	RAL
		Designed	DMD 3/97	By Date	
		Drawn	CSL 3/97		
		Checked	JMH 3/97		

(METPK) BDR-01



**BEARING DEVICE NOTES**

1. THE BEARING DIMENSIONS SHOWN ON THIS SHEET AND THE CORRESPONDING BRIDGE SEAT ELEVATIONS ARE ESTIMATED BASED ON GUIDED EXPANSION & FIXED BEARINGS MANUFACTURED BY STRUCTURAL ACCESSORIES, INC. OF TERRYVILLE, CT. AFFECTED DETAILS AND ELEVATIONS SHALL BE ADJUSTED TO ACCOMMODATE THE SELECTED BEARINGS ACTUALLY SUPPLIED.
2. ALL DIMENSIONS ARE IN INCHES.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
4. ALL STEEL FOR THE BEARING DEVICE ASSEMBLIES, INCLUDING MASONRY PLATES, SHALL BE AASHTO M270, GRADE 50.
5. THE BASE POT SHALL BE SHOP WELDED TO THE MASONRY PLATE AS SHOWN. HOLD-DOWNS SHALL NOT BE PROVIDED.
6. PTFE INDICATES POLYTETRAFLUORETHYLENE.
7. MASONRY BASE PLATES SHALL BE PLACED ON 1/8" PREFORMED FABRIC PAD.
8. THE 1 1/4" ANCHOR BOLTS AND NUTS SHALL BE A3D7. WASHERS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M293 (ASTM F4361). WASHERS AND NUTS SHALL BE GALVANIZED.
9. ANCHOR BOLT SPACING SHALL BE COORDINATED WITH THE BEARING MANUFACTURER.
10. BEARINGS TO BE ADJUSTED FOR TEMPERATURE ACCORDING TO THE CORRECTIONS TABLE, OR AS DIRECTED BY THE ENGINEER.

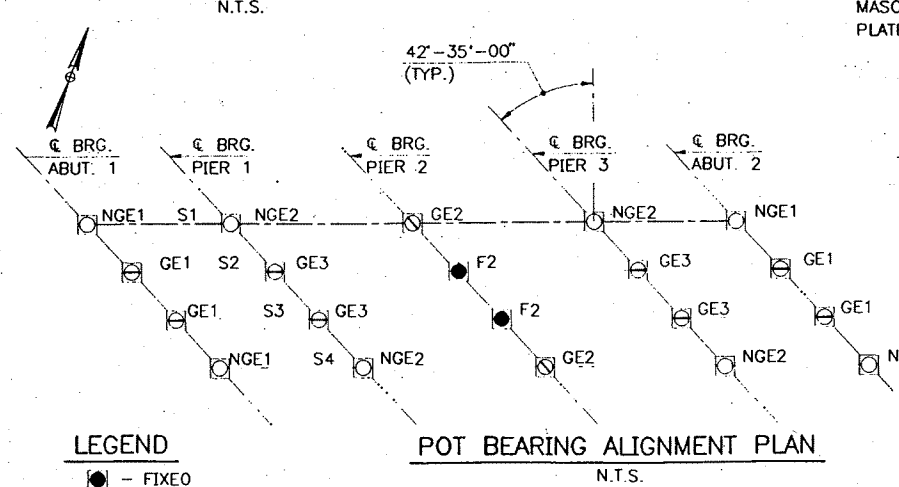


MAXIMUM LOADS ON EACH BEARING																					
LOCATION	STRINGER	BEARING TYPE	D.L. (KIPS)	LL (KIPS)	TOTAL (KIPS)	HORIZ. FORCE (KIPS)	TOTAL LONG. MOVEMENT (IN)	BEARING SETTING CORRECTIONS (INCHES)													
								LONG. TRANS.		DIMENSION "X"											
ABUTMENT 1	S1, S4	NGE1	26	37	63	-	1 1/2	7/16	5/16	1/8	0	1/8	5/16	7/16	9/16						
	S2, S3	GE1	27	35	62	-	7														
PIER 1 OR PIER 3	S1, S4	NGE2	81	61	142	-	13/16	1/4	3/16	1/16	0	1/16	3/16	1/4	5/16						
	S2, S3	GE3	91	71	162	-	17														
PIER 2	S1, S4	GE2	82	63	145	15	-	-	-	-	0	-	-	-	-						
	S2, S3	F2	92	73	165	17	17														
ABUTMENT 2	S1, S4	NGE1	24	37	61	-	1 1/2	7/16	5/16	1/8	0	1/8	5/16	7/16	9/16						
	S2, S3	GE1	27	36	63	-	7														

BEARING TYPE	MAX VERT. LOAD (KIP)	DIMENSIONS (INCHES)								SOLE PLATE		MASONRY PLATE 1 3/4" THICK	
		I.O.	A	B	H	J	L	W	C	D			
GE1	100	6.03	7.50	10.25	3.304	1.00	7.75	6.679	12 3/4x12 3/4x1 1/2	37	19		
GE2	150	7.38	9.00	11.75	3.777	1.375	9.00	7.152	12 3/4x12 3/4x1 1/2	37	19		
GE3	200	8.53	10.25	13.00	4.129	1.50	10.25	7.504	12 3/4x12 3/4x1 1/2	37	19		
F2	200	8.53	9.75	9.75	2.85	0.75	10.25	6.225	12 3/4x12 3/4x1 1/2	37	19		
NGE1	100	6.03	10.00	10.00	2.65	0.75	7.75	6.025	12 3/4x12 3/4x1 1/2	37	19		
NGE2	150	7.38	11.25	11.25	2.63	0.75	9.00	6.005	12 3/4x12 3/4x1 1/2	37	19		

\* = MASONRY PLATES FOR STRINGERS S1 AND S4 AT ABUTMENTS 1 AND 2 SHALL BE MODIFIED. SEE SHEET HH-6 FOR DETAILS.

**NON-GUIDED EXPANSION BEARING**



- LEGEND**
- - FIXED
  - - GUIDED LONGITUDINAL EXP.
  - - GUIDED TRANSVERSE EXP.
  - - NON-GUIDED EXPANSION

**POT BEARING ALIGNMENT PLAN**

No.	Revision	By	Date	In Charge Of
1	BRG. TABLE REVISED	HLR	4/4/97	Checked HLR 3/97

Maine Turnpike Authority  
**Maine Turnpike**  
 HUNTINGTON HILL ROAD UNDERPASS  
**POT BEARING DETAILS**

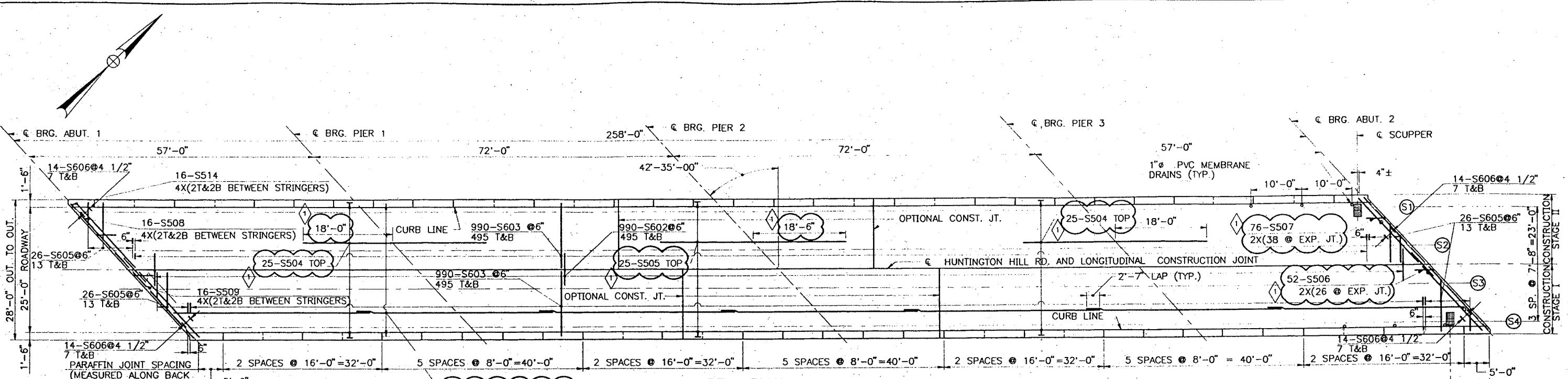
Contract 97.11  
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ARCHITECTS ENGINEERS PLANNERS  
**HNTB**

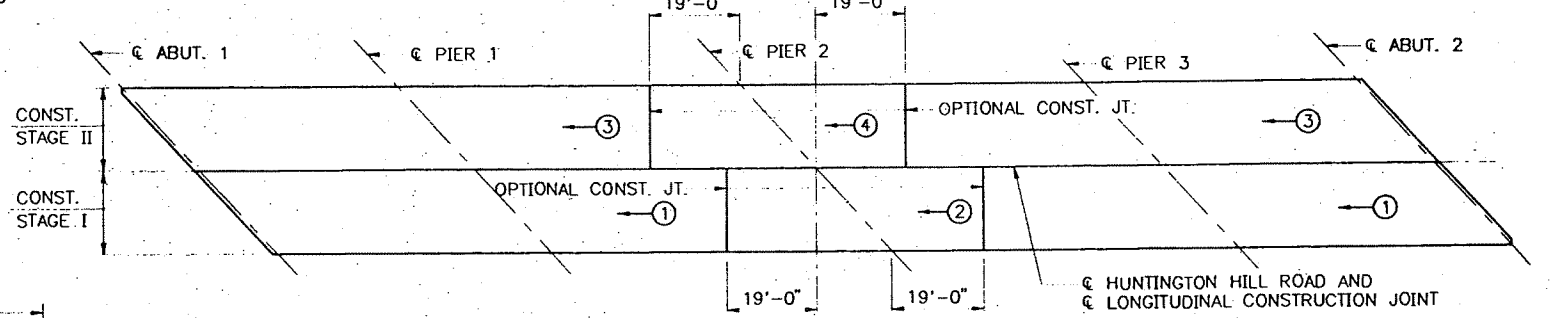
By Date  
 Designed JMH 3/97  
 Drawn LMR 3/97  
 Checked HLR 3/97  
 In Charge Of RAL

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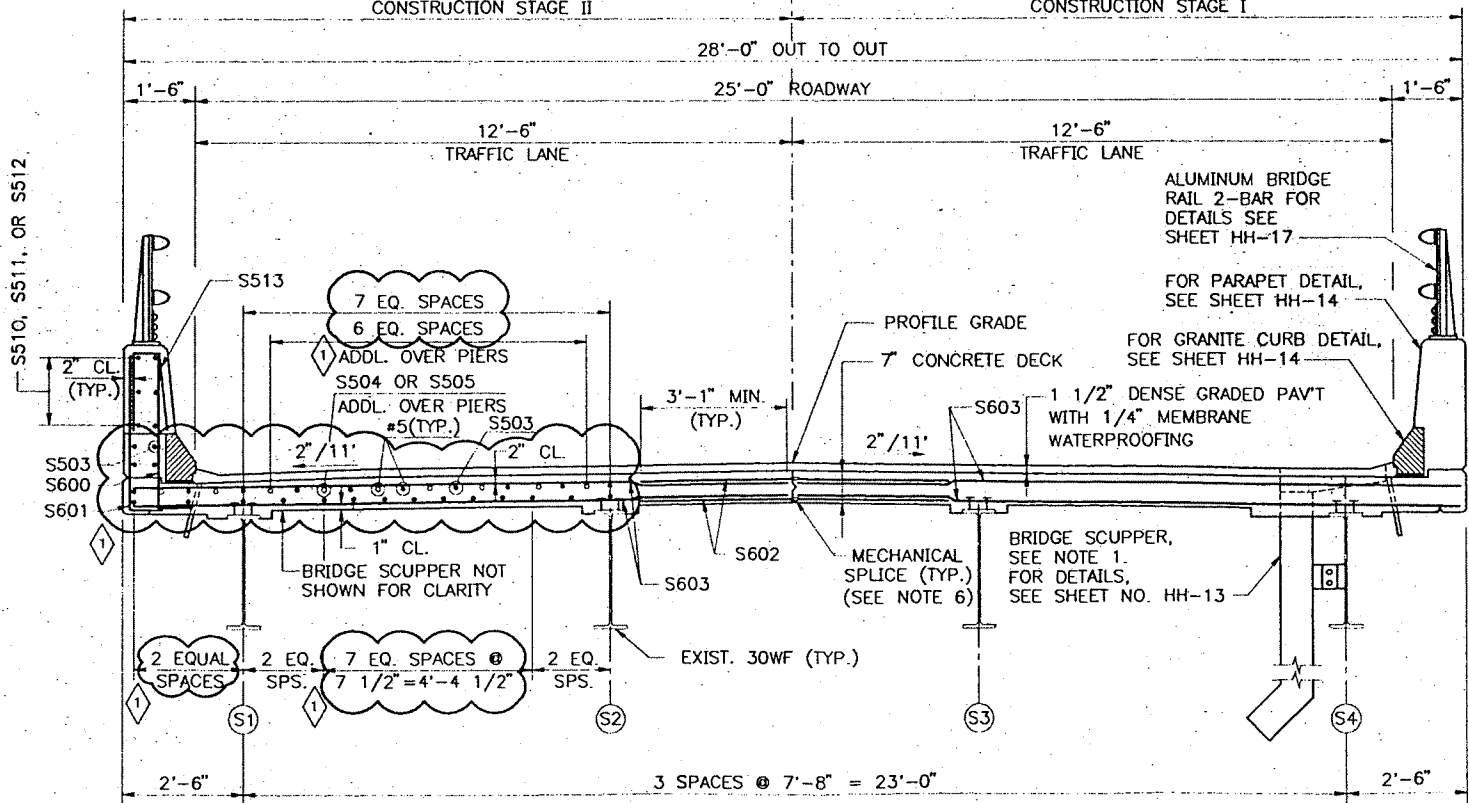
(METPK) BDR-01



DECK PLAN  
1"=10'



DECK PLACEMENT SEQUENCE  
1"=20'



TYPICAL SECTION  
1/2"=1'-0"

**SUPERSTRUCTURE NOTES**

1. ADJUST REINFORCING STEEL TO FIT AROUND THE DRAINS IN A MANNER APPROVED BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS. CUT LONGITUDINAL STEEL IN FIELD TO SUIT AND EPOXY COAT CUT ENDS.
2. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
3. FOR SLAB DETAILS, SEE SHEET NOS. HH-13 AND HH-14.
4. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEET NOS. HH-15 AND HH-16.
5. FOR STEEL REINFORCING SCHEDULE, SEE SHEET NO. HH-20.
6. ONLY DOWEL BAR SPLICERS SHALL BE USED WITHIN CONCRETE DECK SLAB FOR STAGE I CONSTRUCTION AT THE LONGITUDINAL CONSTRUCTION JOINT. DOWEL-IN BARS SHALL THEN BE USED WITHIN CONCRETE DECK SLAB FOR STAGE II CONSTRUCTION.
7. 1"Ø PVC MEMBRANE DECK DRAINS SHALL BE INSTALLED SUCH THAT THEY DO NOT DRAIN ONTO A STRINGER FLANGE OR BRIDGE SEAT.

**PLACEMENT NOTES**

1. THE NUMBERS IN CIRCLES INDICATE PLACING SEQUENCE. THE ARROWS INDICATE DIRECTION OF PLACEMENT.
2. THE FORMWORK FOR THE CONSTRUCTION JOINTS SHALL REMAIN IN PLACE UNTIL MINIMUM OF 48 HOURS HAS ELAPSED AFTER PLACEMENT OF THE SLAB, AFTER, WHICH REMOVAL OF FORMWORK MEETING THE REQUIREMENTS FOR FORM REMOVAL OF SECTION 502 (STRUCTURAL CONCRETE) OF THE STANDARD SPECIFICATIONS, MAY PROCEED.
3. POURS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE POURED THE SAME DAY. A WAITING PERIOD OF 72 HOURS IS NECESSARY BETWEEN ADJACENT POURS.
4. STAY IN PLACE FORMS SHALL NOT BE USED.
5. BEGIN PLACEMENT AT THE LOW END OF THE BLOCK.
6. THE TRANSVERSE CONSTRUCTION JOINTS MAY BE OMITTED, IF APPROVED BY THE ENGINEER AND PROVIDED THAT THE CONCRETE OF THE ENTIRE DECK SLAB REMAINS PLASTIC UNTIL THE COMPLETION OF THE LAST PLACEMENT AND ALL OTHER SPECIFICATIONS ARE FOLLOWED. A WRITTEN REQUEST TO OMIT THE TRANSVERSE CONSTRUCTION JOINTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

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Maine Turnpike Authority  
**Maine Turnpike**

HUNTINGTON HILL ROAD UNDERPASS  
DECK PLAN AND TYPICAL SECTION

**Transpass**

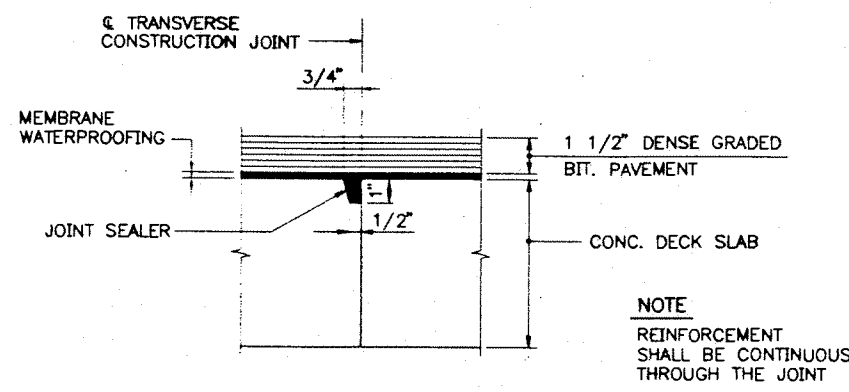
**HNTB**  
ARCHITECTS ENGINEERS PLANNERS

Contract 97.11

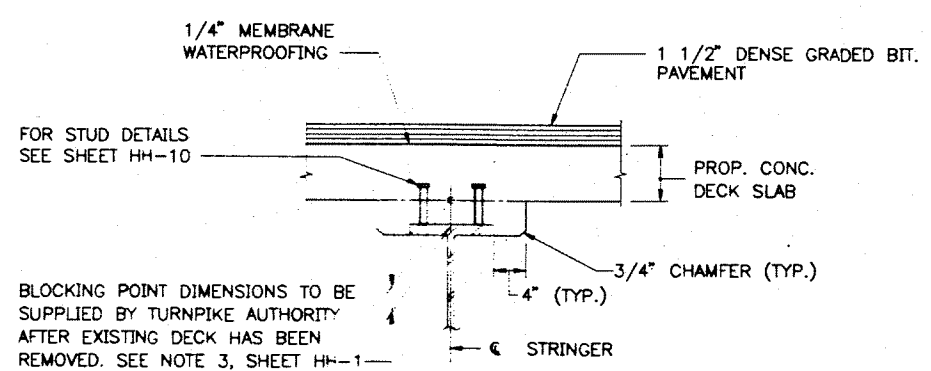
Sheet No. HH-12  
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Designed	DMD	3/97
Drawn	RJC	3/97
Checked	JMH	3/97
In Charge of	RAL	

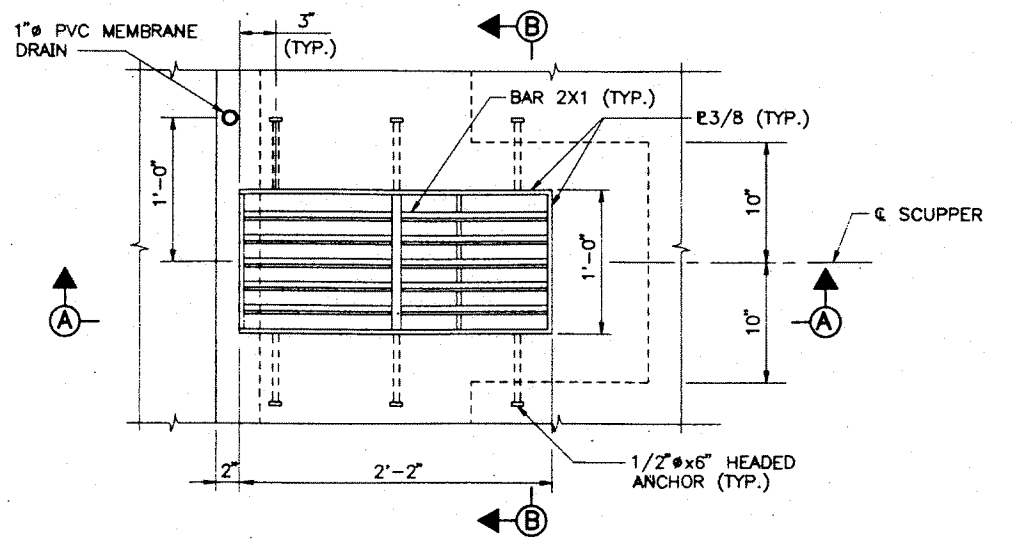
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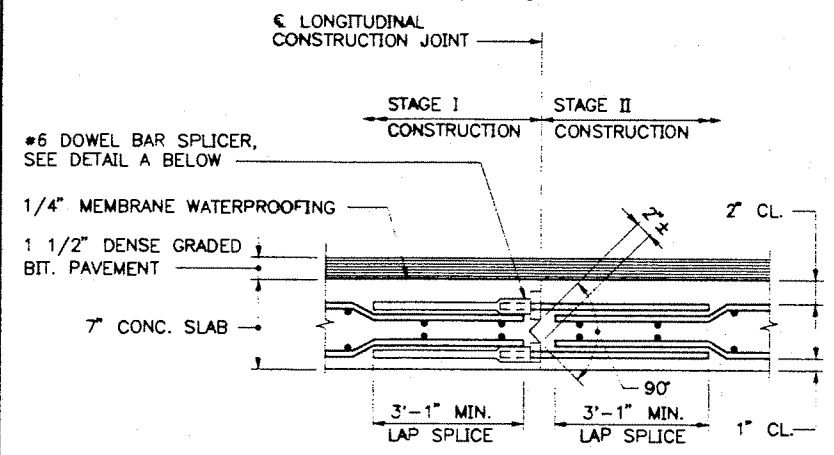
**TRANSVERSE CONSTRUCTION JOINT DETAIL**  
3" = 1'-0"



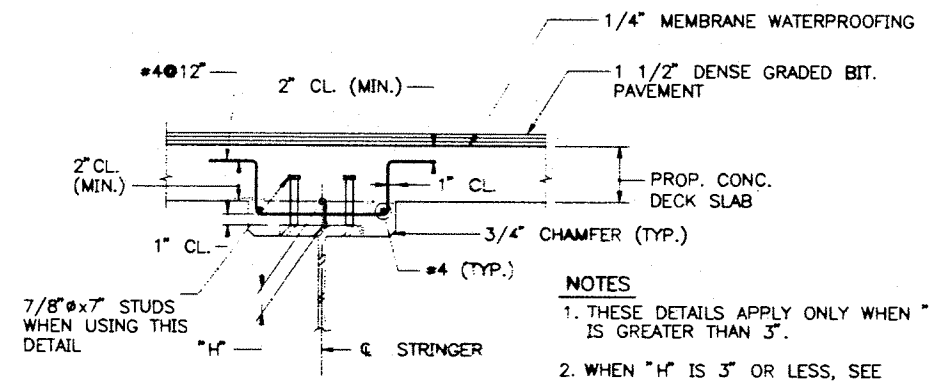
**BLOCKING POINT DETAIL**  
1" = 1'-0"



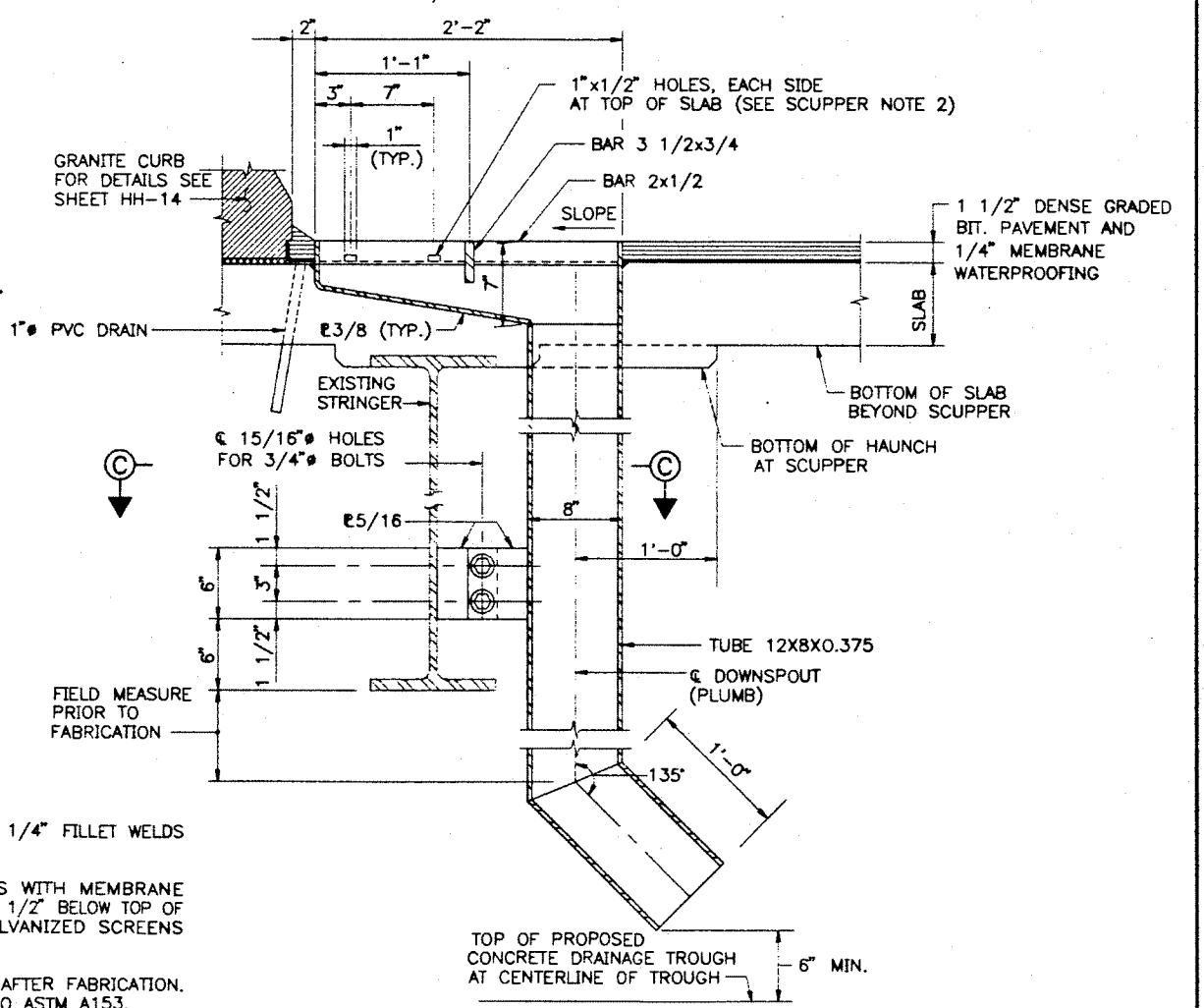
**PLAN - SCUPPER**  
1 1/2" = 1'-0"



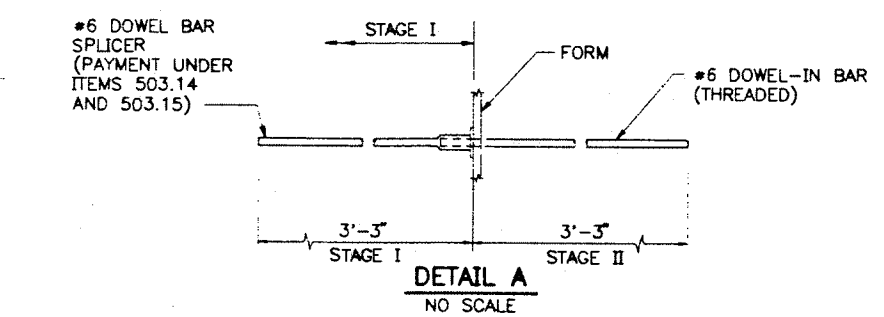
**LONGITUDINAL CONSTRUCTION JOINT DETAIL**  
NOT TO SCALE



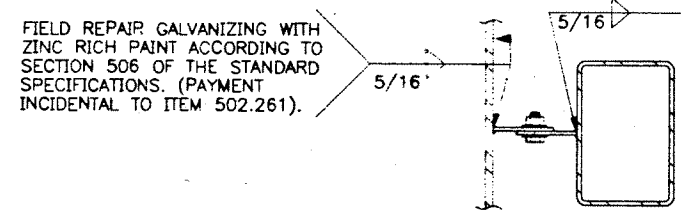
**EXTRA DEPTH HAUNCH DETAILS**  
1" = 1'-0"



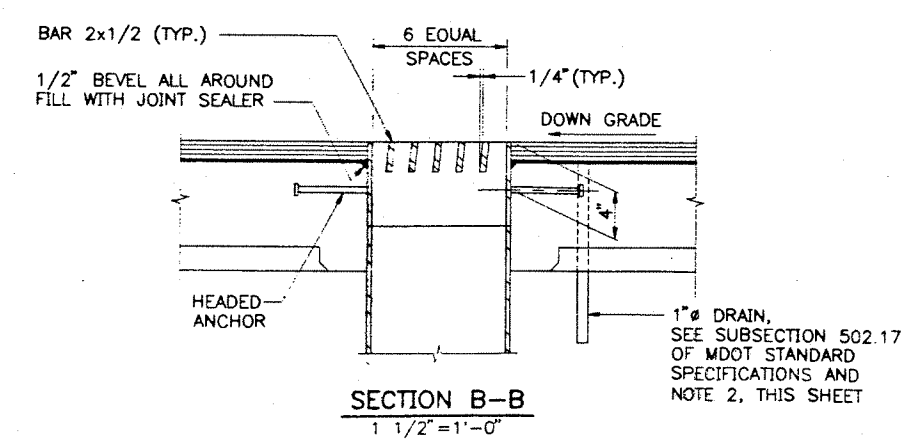
**SECTION A-A**  
1 1/2" = 1'-0"



**DETAIL A**  
NO SCALE



**SECTION C-C**  
1 1/2" = 1'-0"



**SECTION B-B**  
1 1/2" = 1'-0"

- NOTES**
1. THESE DETAILS APPLY ONLY WHEN "H" IS GREATER THAN 3".
  2. WHEN "H" IS 3" OR LESS, SEE BLOCKING POINT DETAIL.

- SCUPPER NOTES**
1. ALL WELDS TO BE CONTINUOUS 1/4" FILLET WELDS EXCEPT AS NOTED.
  2. DO NOT COVER DECK DRAINS WITH MEMBRANE WATERPROOFING. DEPRESS DRAINS 1/2" BELOW TOP OF SLAB, PROVIDE 23 GAUGE GALVANIZED SCREENS (1/4" MESH) OVER DRAINS.
  3. SCUPPERS TO BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
  4. ALL PLATES SHALL CONFORM TO ASTM A709, GRADE 36.
  5. STRUCTURAL TUBES SHALL CONFORM TO ASTM A501.
  6. PAYMENT FOR SCUPPERS PVC DRAINS AND SCREENS INCIDENTAL TO CONTRACT ITEM 502.261.
  7. FOR LOCATION OF SCUPPERS AND 1" DRAINS, SEE SHEET HH-12.
  8. THE SCUPPER DOWNSPOUT LOCATED ADJACENT TO S1 ONLY, SHALL BE PLUMB FULL LENGTH AND NOT FABRICATED WITH THE 1'-0" (+/-) FLARE AT THE BASE AS SHOWN IN SECTION A-A. FIELD MEASUREMENT IS REQUIRED TO DETERMINE THE LENGTH OF DOWNSPOUT BEYOND THE BOTTOM FLANGE AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION.

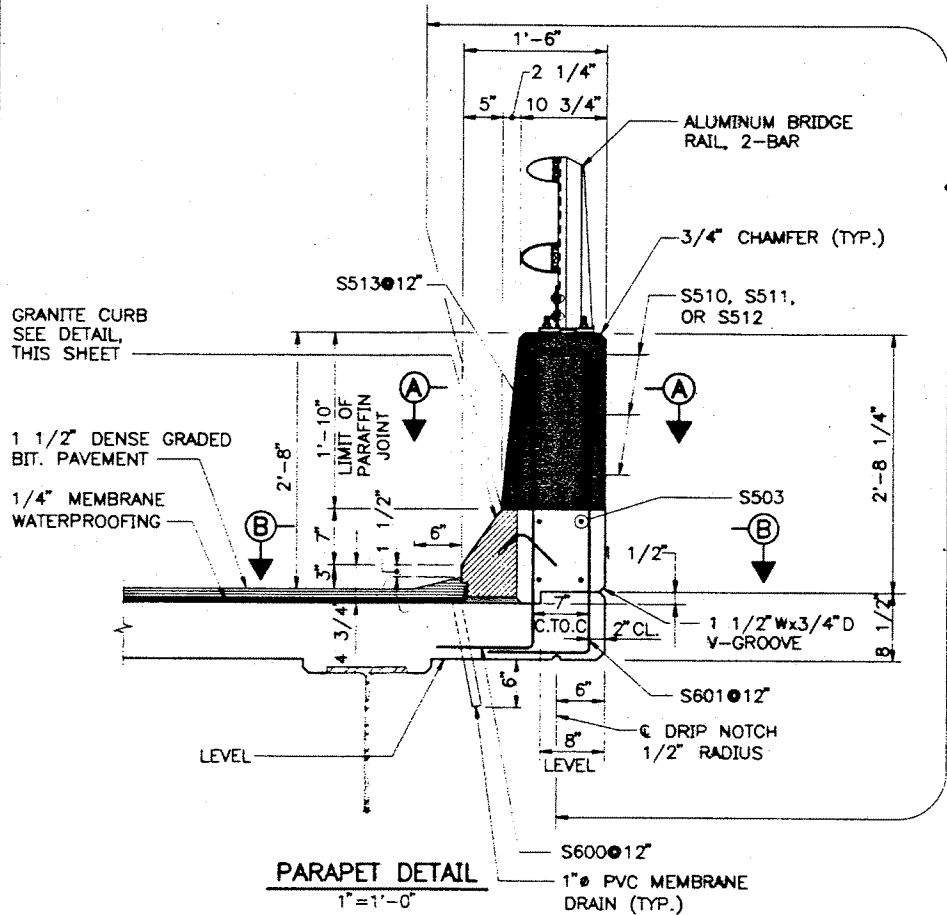
No.	Revision	By	Date	In Charge Of	RAL

Maine Turnpike Authority  
**Maine Turnpike**

HUNTINGTON HILL ROAD UNDERPASS  
SLAB DETAIL I

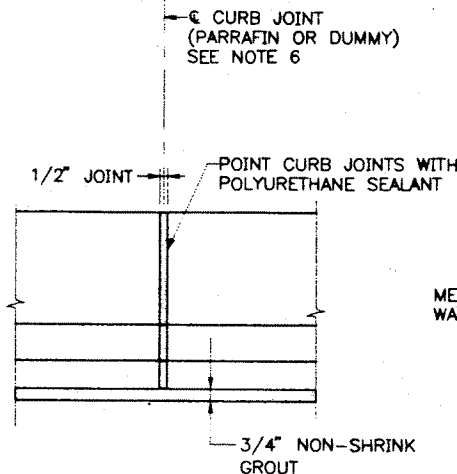
**HNTB**  
ARCHITECTS ENGINEERS PLANNERS

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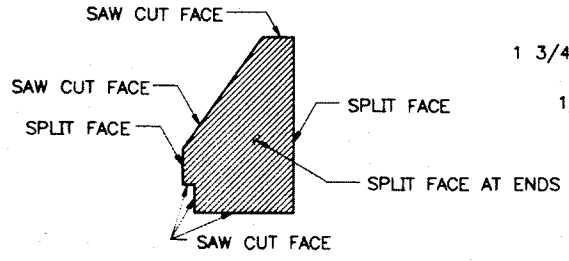


**PARAPET DETAIL**  
1'-1'-0"

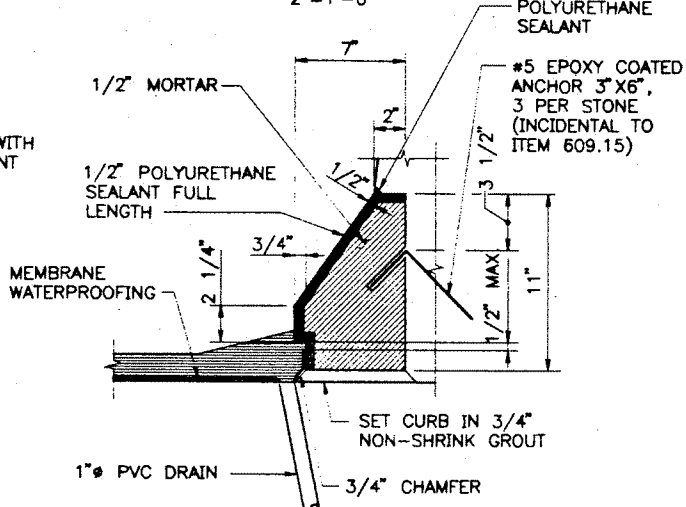
COAT WITH CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES



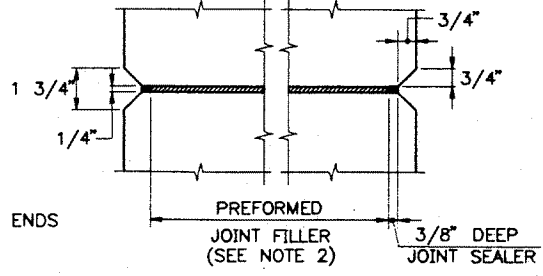
**BRIDGE CURB ELEVATION**  
2'-1'-0"



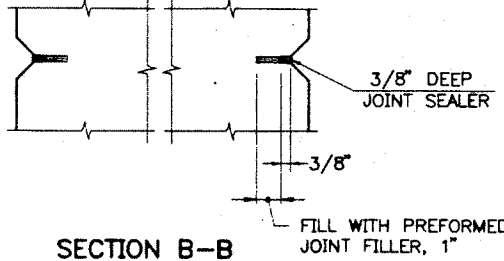
**CURB CUT DETAIL**  
2'-1'-0"



**GRANITE CURB DETAIL**  
2'-1'-0"



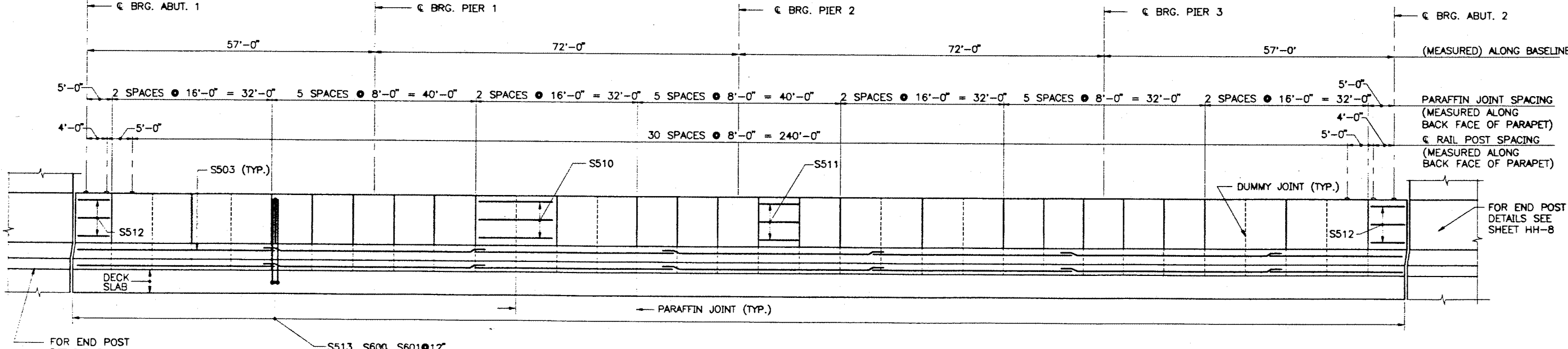
**SECTION A-A**  
3'-1'-0"



**SECTION B-B**  
3'-1'-0"

**PARAFFIN AND DUMMY JOINT NOTES**

1. CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF JOINT.
2. PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D1751.
3. SECTION B-B ALSO APPLIES TO DUMMY JOINT LOCATIONS.
4. JOINT SEALER SHALL BE SIKA FLEX 1A.
5. PREFORMED JOINT FILLER AND JOINT SEALER SHALL BE INCIDENTAL TO ITEM 502.261, STRUCTURAL CONCRETE ROADWAY AND PARAPET ON STEEL BRIDGES.
6. CURB JOINTS SHALL BE ALIGNED WITH PARAFFIN AND DUMMY JOINTS.



**PARAPET ELEVATION**  
(SOUTH ELEVATION SHOWN, NORTH ELEVATION SIMILAR)  
HORIZ. 3/32" = 1'-0"  
VERT. 1/2" = 1'-0"

Maine Turnpike Authority  
**Maine Turnpike**

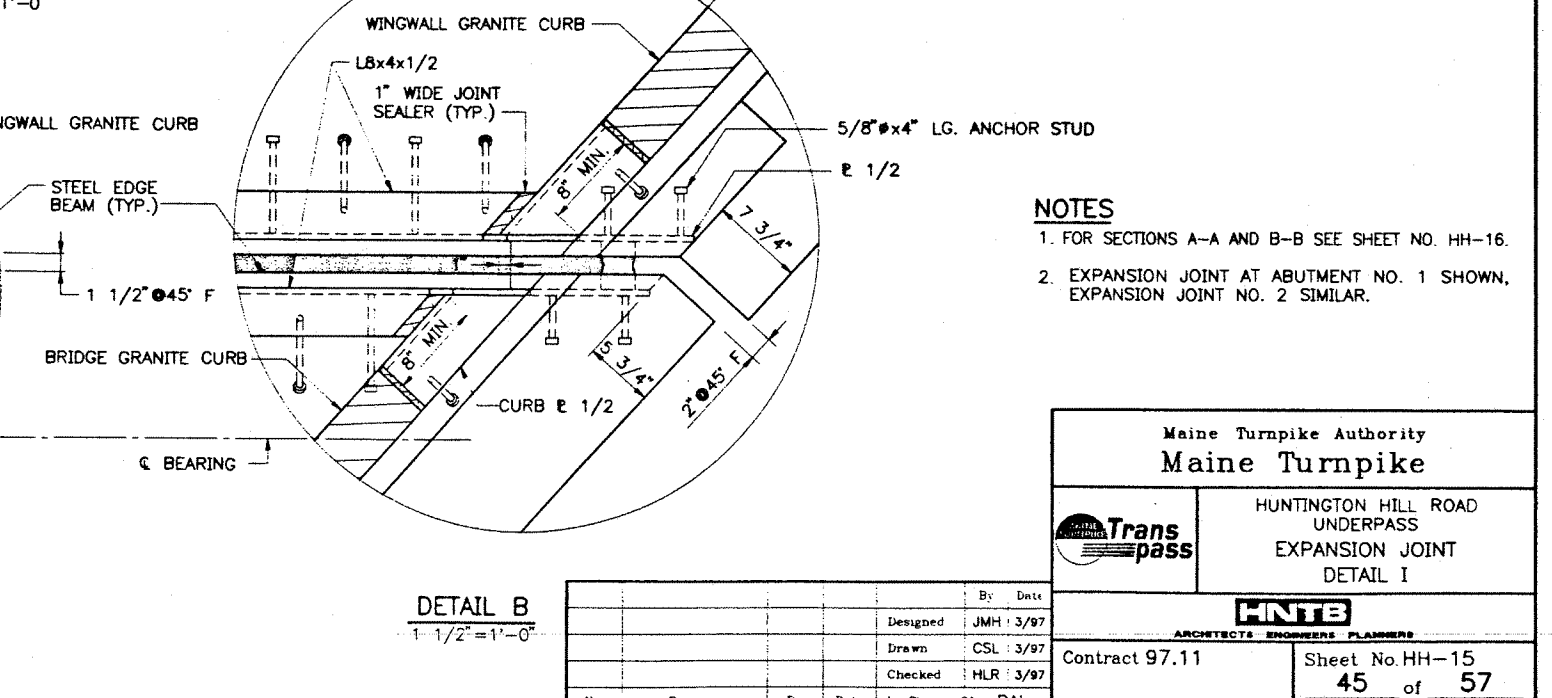
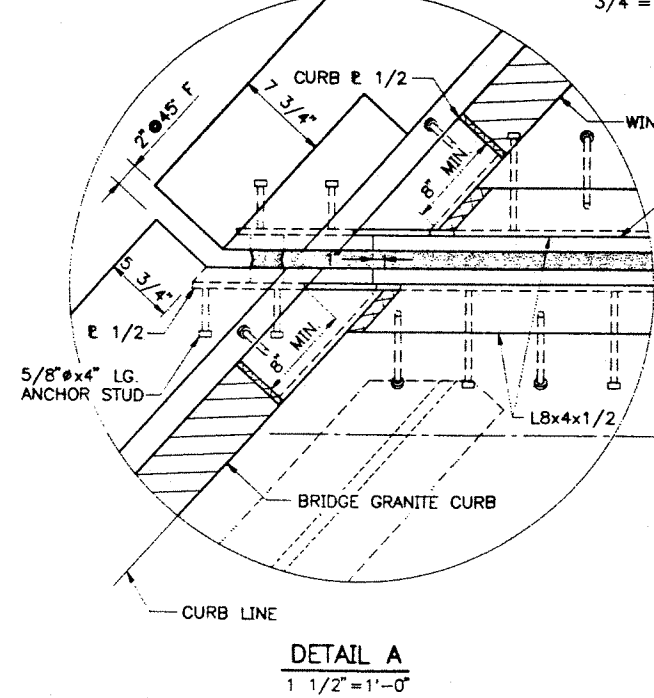
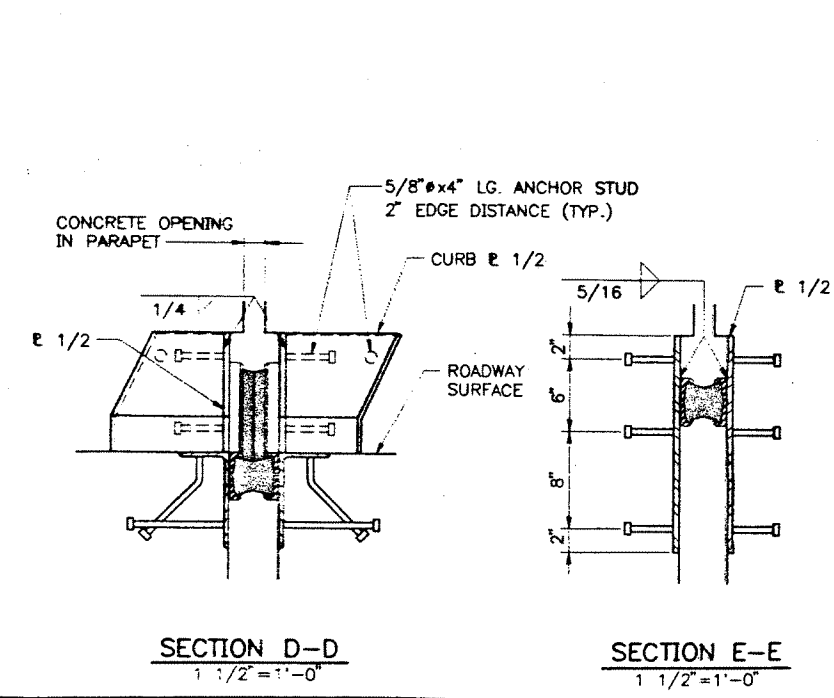
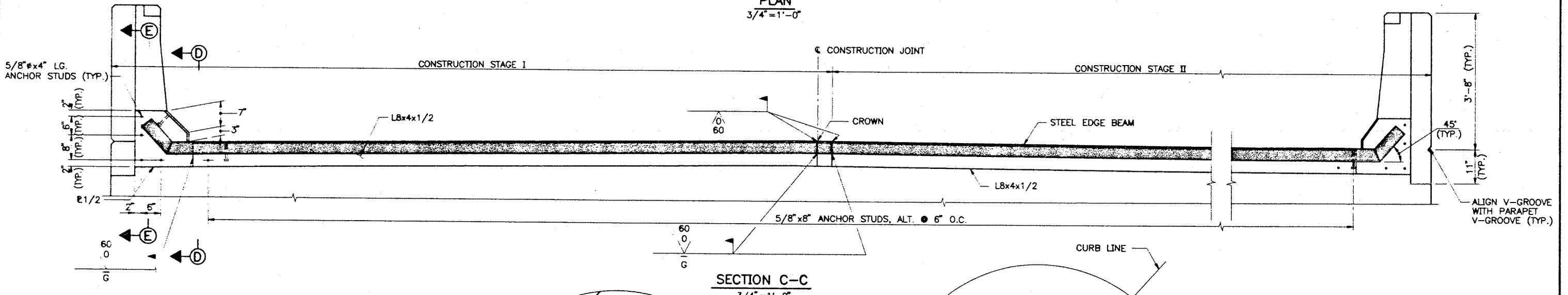
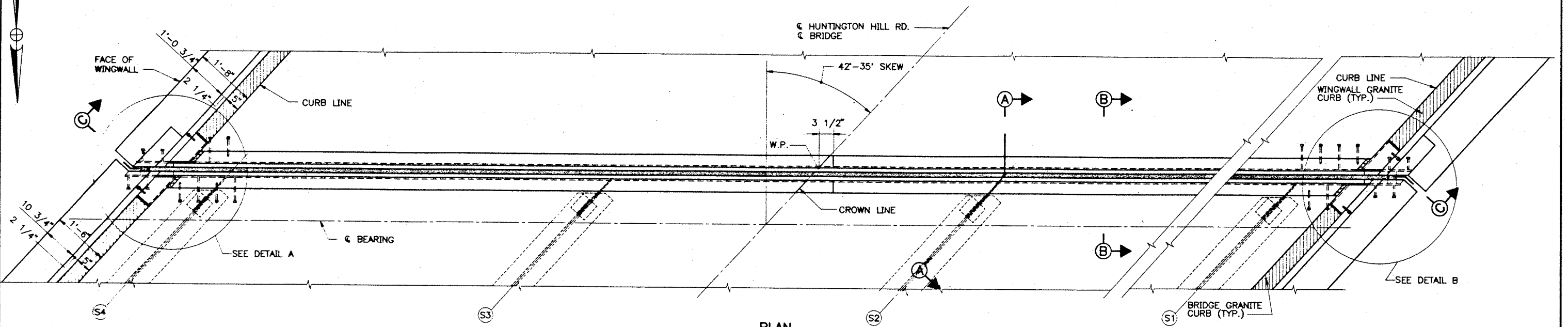
HUNTINGTON HILL ROAD UNDERPASS  
SLAB DETAILS II

**HNTB**  
ARCHITECTS ENGINEERS PLANNERS

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By: Date	
Designed: DMD 3/97	
Drawn: JFT 3/97	
Checked: JMH 3/97	
No. Revision	By Date In Charge Of RAL

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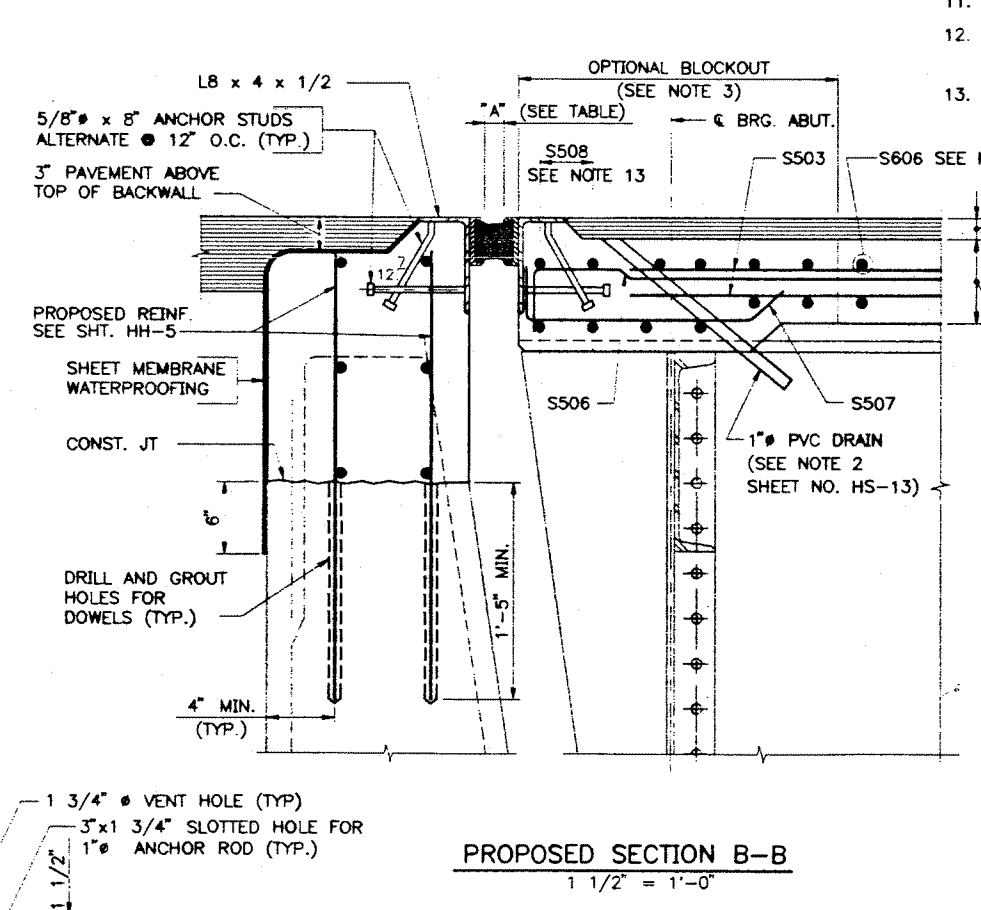
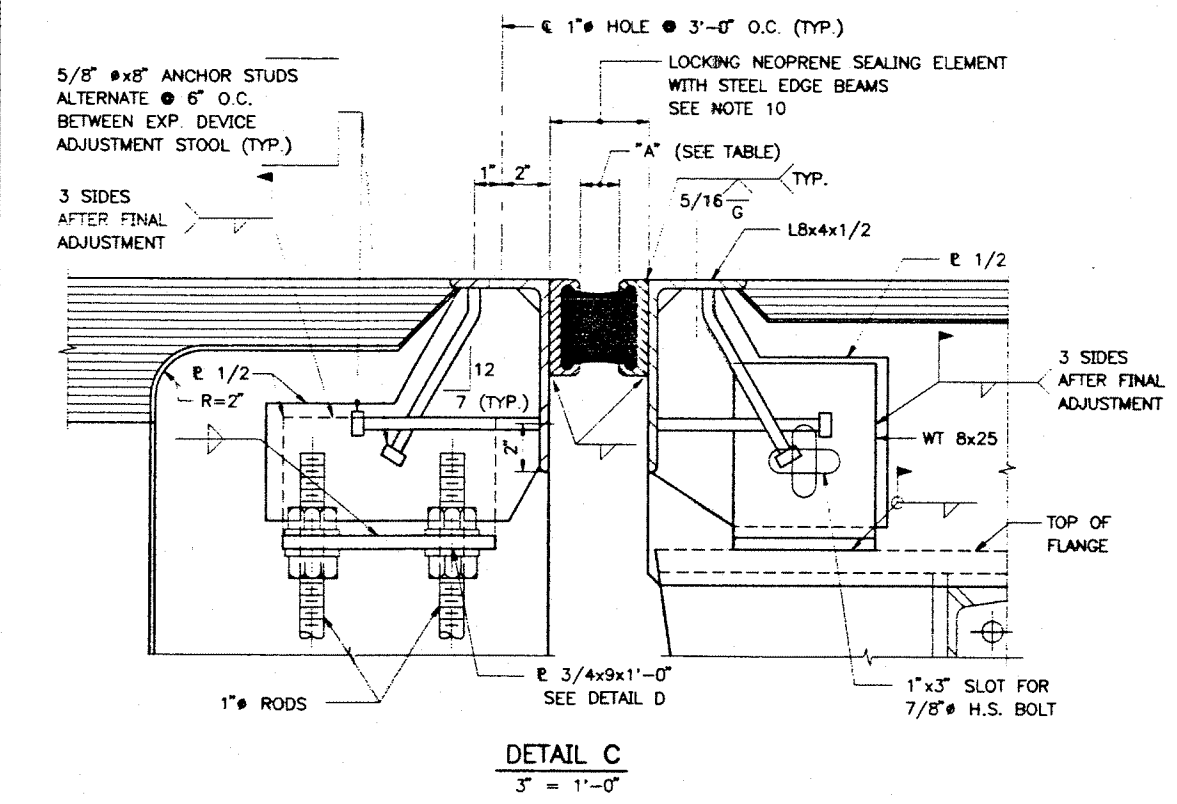
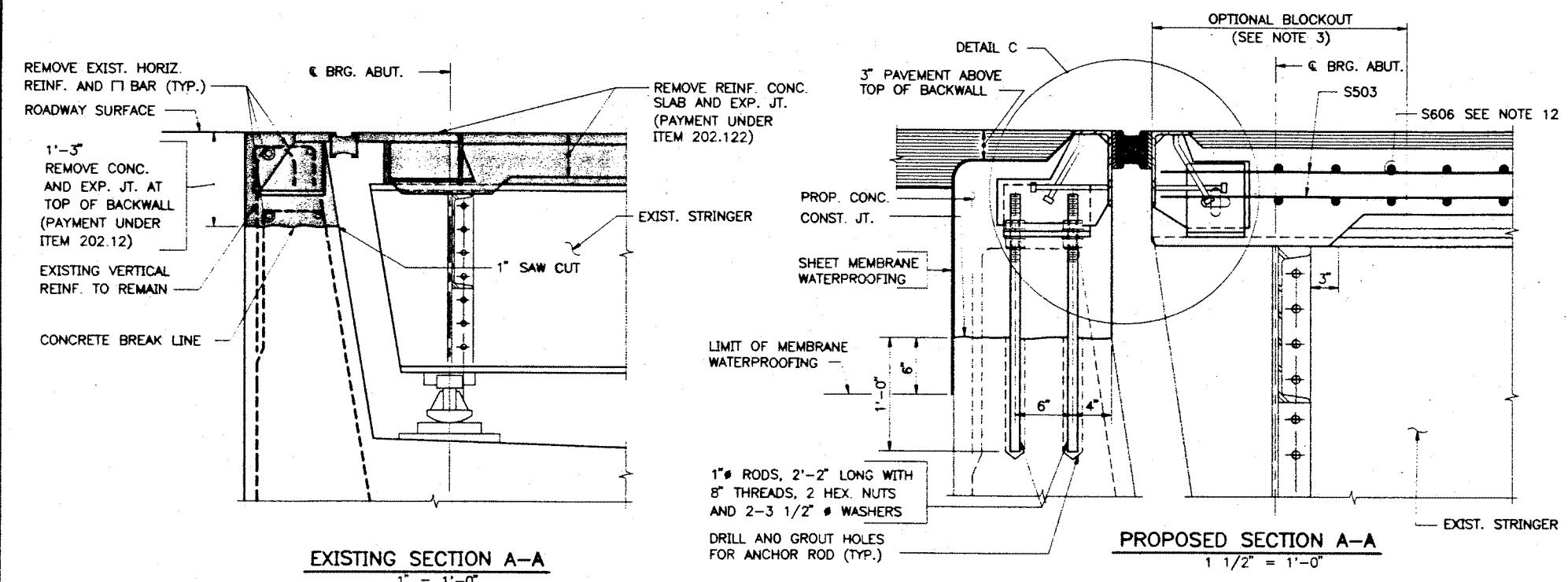
- NOTES**
- FOR SECTIONS A-A AND B-B SEE SHEET NO. HH-16.
  - EXPANSION JOINT AT ABUTMENT NO. 1 SHOWN, EXPANSION JOINT NO. 2 SIMILAR.

Maine Turnpike Authority <b>Maine Turnpike</b>	
HUNTINGTON HILL ROAD UNDERPASS EXPANSION JOINT DETAIL I	
<b>HNTB</b> ARCHITECTS ENGINEERS PLANNERS	
Contract 97.11	
Sheet No. HH-15 45 of 57	

No.	Revision	By	Date	In Charge Of
		Designed	JMH 3/97	
		Drawn	CSL 3/97	
		Checked	HLR 3/97	
				RAL



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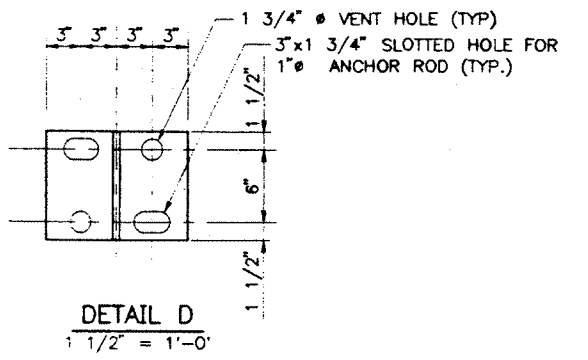


**EXPANSION DEVICE NOTES**

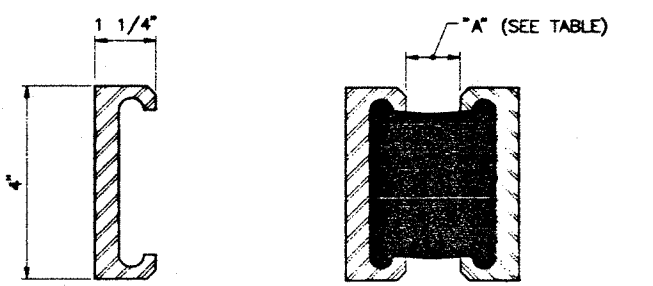
1. SHOP DRAWINGS OF THE EXPANSION DEVICE SHALL BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
2. THE EXPANSION DEVICE SHALL BE SET TO AN OPENING OF 1 1/2 INCHES. IN THE FABRICATION SHOP AND SHALL BE SECURED TO THE STRINGER AND/OR ANCHOR BOLTS WHEN THE AMBIENT TEMPERATURE IS BETWEEN 40°F AND 80°F. THE OPENING SHALL BE ADJUSTED TO REFLECT THE TEMPERATURE OF THE STRUCTURE AT THE TIME OF INSTALLATION. SEE TABLE FOR OPENING DIMENSIONS. OPENING IS TO BE MEASURED PARALLEL TO THE CENTER LINE OF CONSTRUCTION.
3. THE SLAB CONCRETE SHALL BE IN PLACE BEFORE THE EXPANSION DEVICE IS FIXED IN POSITION. NO ALLOWANCE FOR MOVEMENT DUE TO DEAD LOAD DEFLECTION IS NECESSARY. SEE SECTION 520.06 OF THE STANDARD SPECIFICATIONS.
4. THE FABRICATORS ATTENTION IS DIRECTED TO THE NECESSITY OF FABRICATING AND INSTALLING THE DEVICE IN TWO SECTIONS.
5. DIRECTION AND LOCATION OF FIELD SPLICES MAY BE ADJUSTED IF REQUIRED TO FACILITATE CONSTRUCTION.
6. ALL EXPOSED SURFACES OF ANGLES AND STEEL EDGE BEAMS SHALL BE FIELD PAINTED.
7. ALL STEEL COMPONENTS SHALL BE AASHTO M270 GRADE 36, UNLESS OTHERWISE NOTED.
8. ALL WELDS ARE 5/16" CONTINUOUS FILLETS, EXCEPT AS NOTED.
9. ALL STEEL SURFACES THAT WILL BE EMBEDDED IN CONCRETE SHALL BE COATED WITH AN EPOXY BONDING COMPOUND.
10. THE NEOPRENE COMPRESSION SEALS TO BE FURNISHED SHALL HAVE A MINIMUM MOVEMENT RATING OF:  
 ABUTMENT 1 = 3 INCHES  
 ABUTMENT 2 = 3 INCHES
11. FOR LOCATION OF SECTIONS A-A AND B-B, SEE SH HH-15
12. ONLY BARS PARALLEL TO THE ABUTMENT ARE SHOWN. BARS PERPENDICULAR TO STRINGERS ARE NOT SHOWN FOR CLARITY.
13. FIELD CUT TO FIT AND EPOXY COAT ENDS.

**SEAL OPENING TABLE (DIM. "A")**

TEMPERATURE	0°F	15°F	30°F	45°F	60°F	75°F	90°F	105°F
ABUTMENT (1)	1 15/16"	1 13/16"	1 5/8"	1 1/2"	1 3/8"	1 3/16"	1 1/16"	7/8"
ABUTMENT (2)	1 15/16"	1 13/16"	1 5/8"	1 1/2"	1 3/8"	1 3/16"	1 1/16"	7/8"



**DETAIL - STEEL EDGE BEAM**  
N.T.S.



**DETAIL - NEOPRENE COMPRESSION SEAL WITH STEEL EDGE BEAMS**  
N.T.S.

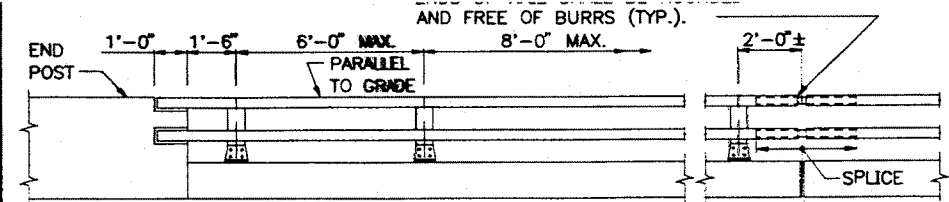
By	Date		
Designed	JMH	3/97	
Drawn	LMR	3/97	
Checked	HLR	3/97	
In Charge Of	RAL		

Maine Turnpike Authority  
**Maine Turnpike**  
 HUNTINGTON HILL ROAD UNDERPASS  
 EXPANSION JOINT DETAILS II

**HNTB**  
 ARCHITECTS ENGINEERS PLANNERS

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(METPK) BDR-0

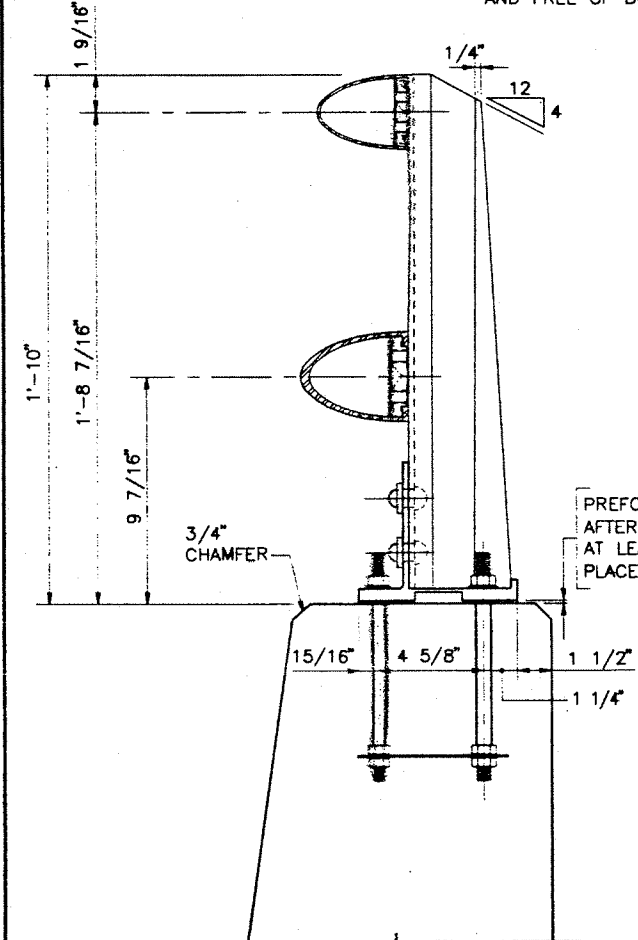


**NOTE**  
LENGTHS OF RAIL SHALL BE ATTACHED TO A MIN. OF FOUR (4) RAIL POST WHENEVER POSSIBLE, AND IN ANY CASE NEVER LESS THAN TWO (2). RAIL POST ARE TO BE SET NORMAL TO GRADE UNLESS OTHERWISE SHOWN ON THE BRIDGE PLANS.

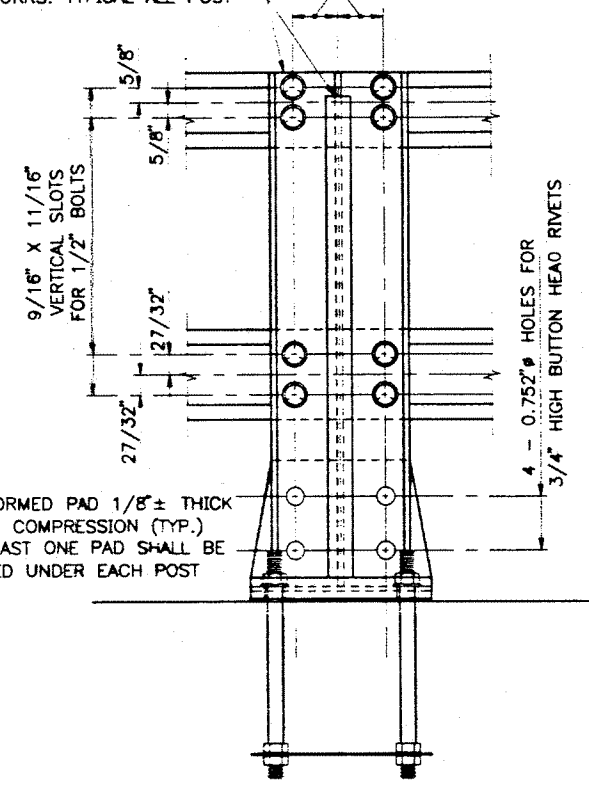
2" • 70° F (BRIDGE EXP. JOINTS)  
3/4" • RAIL JOINTS

**RAILING - ELEVATION**  
3/8" = 1'-0"

TOP EDGES OF POST SHALL BE ROUNDED AND FREE OF BURRS. TYPICAL ALL POST

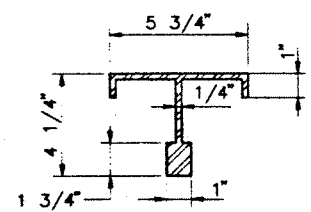


**BRIDGE RAILING (ASSEMBLY)**  
3" = 1'-0"

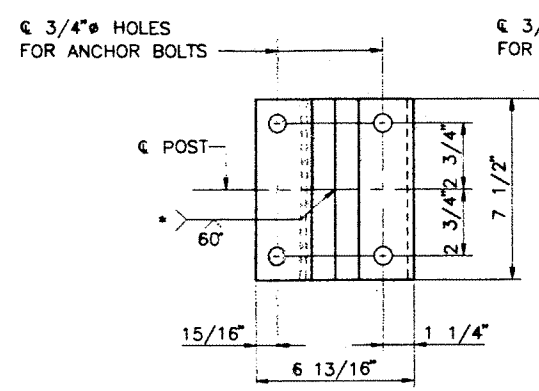


**OUTSIDE ELEVATION OF POST**  
3" = 1'-0"

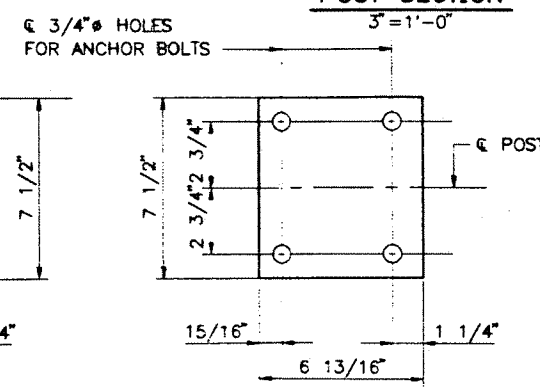
PREFORMED PAD 1/8" ± THICK AFTER COMPRESSION (TYP.) AT LEAST ONE PAD SHALL BE PLACED UNDER EACH POST



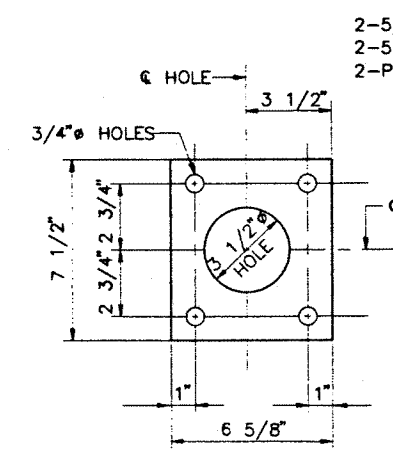
**POST SECTION**  
3" = 1'-0"



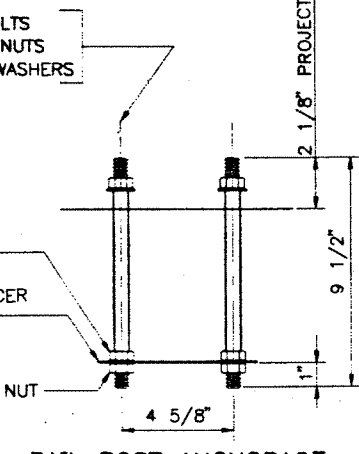
**POST BASE (BOTTOM VIEW)**  
3" = 1'-0"



**PREFORMED PAD**  
3" = 1'-0"



**STEEL SPACER PLATE (FOR ANCHORAGE)**  
3" = 1'-0"



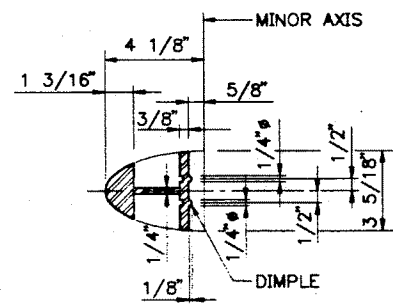
**RAIL POST ANCHORAGE (ASSEMBLY)**  
3" = 1'-0"

2-5/8" ANCHOR BOLTS  
2-5/8" HEAVY HEX. NUTS  
2-PLAIN HARDENED WASHERS

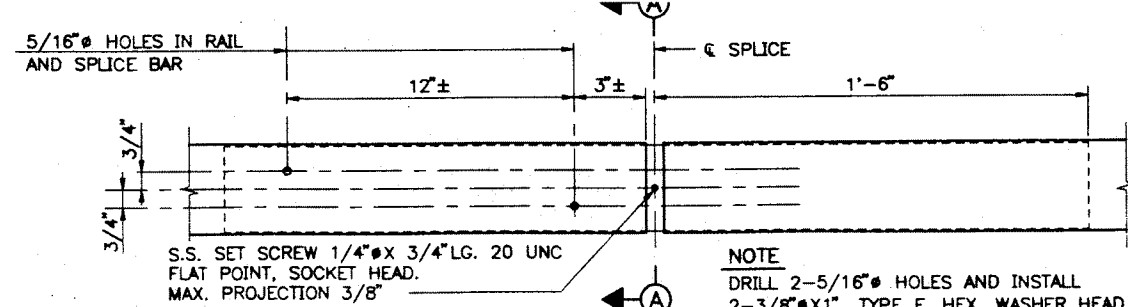
5/8" HEX. JAMB NUT  
STEEL SPACER PLATE  
5/8" HEX. NUT

**NOTE**  
FOUR (4) BOLT, NUT AND WASHER SETS ARE REQUIRED PER ASSEMBLY. ALL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED.

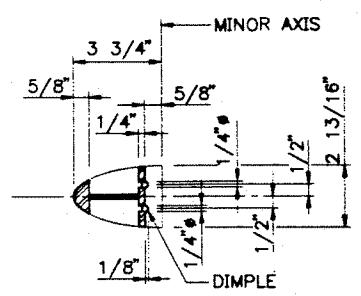
No.	Revision	By	Date	In Charge Of	RAL
		Designed	AD	3/97	
		Drawn	LMR	3/97	
		Checked	JMH	3/97	



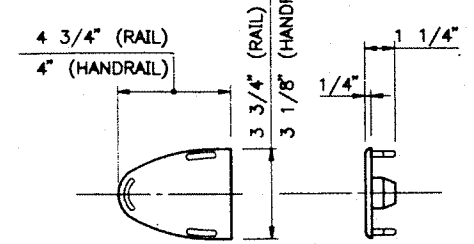
**SECTION A-A (RAIL)**  
3" = 1'-0"



**SPLICE DETAIL**  
3" = 1'-0"

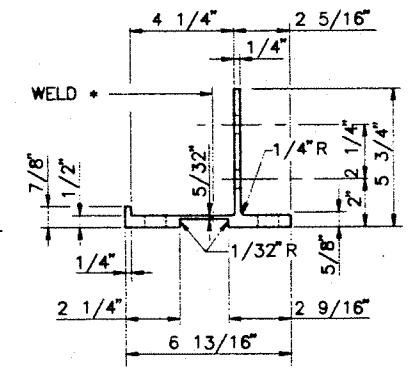


**SECTION A-A (HANDRAIL)**  
3" = 1'-0"

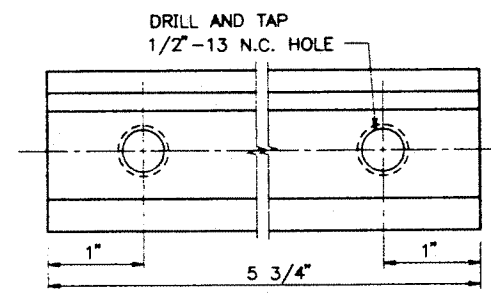


**CAST ALUMINUM DRIVE FIT RAIL CAP**  
3" = 1'-0"

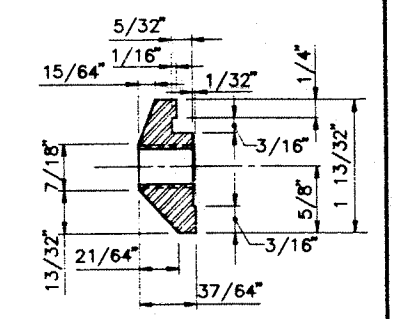
**NOTE**  
ONE-PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE-PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE PLATE



**POST BASE SECTION**  
3" = 1'-0"

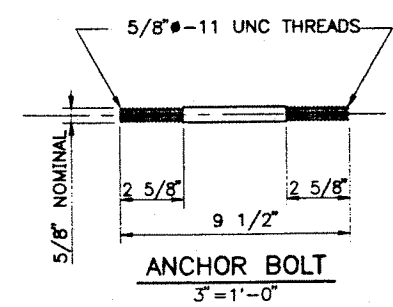


**FOR RAIL MEMBER**



**FOR HANDRAIL**

**CLAMP BAR DETAILS**  
FULL SIZE



**ANCHOR BOLT**  
3" = 1'-0"

**NOTE**  
IF CUT THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN NOMINAL DIAMETER. IF ROLLED THREADS ARE USED, BODY DIAMETER SHALL BE NOT LESS THAN PITCH DIAMETER OF THE THREADS.

Maine Turnpike Authority  
**Maine Turnpike**

HUNTINGTON HILL ROAD UNDERPASS  
ALUMINUM BRIDGE RAIL DETAILS

**Transpass**

**HNTP**  
ARCHITECTS ENGINEERS PLANNERS

Contract 97.11

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