

GENERAL NOTES

SPECIFICATIONS

DESIGN
AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES
1996 WITH 1998 INTERIM REVISIONS.

CONTRACT
STATE OF MAINE, DEPARTMENT OF TRANSPORTATION,
STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES,
REVISION OF APRIL 1995.

DESIGN LOADING

LIVE LOAD
HS 25, 2,000,000 CYCLES

DESIGN METHOD
SERVICE LOAD DESIGN

MATERIALS

CONCRETE
SUPERSTRUCTURE SLAB, PARAPETS AND END POSTS (ABOVE CONST. JT.)
CONCRETE SHALL BE CLASS AAA, $f'_c = 4,500$ P.S.I.
ALL OTHER SUBSTRUCTURE CONCRETE SHALL BE
CLASS A, $f'_c = 4,000$ P.S.I.

REINFORCING STEEL
AASHTO M31, GRADE 60. (EPOXY-COATED AND UNCOATED
BARS).

STRUCTURAL STEEL
PROPOSED STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36.
PROPOSED BEARING PEDESTALS SHALL BE AASHTO M270, GRADE 50.
HIGH STRENGTH BOLTS SHALL BE AASHTO M164.

BASIC ALLOWABLE STRESSES

CONCRETE
 $f'_c = 1,800$ P.S.I. (SUPERSTRUCTURE)
 $f'_c = 1,600$ P.S.I. (ALL OTHER)

REINFORCING STEEL
 $f_s = 24,000$ P.S.I.

STRUCTURAL STEEL
AASHTO M270 GRADE 50 $f_s = 27,000$ P.S.I.
AASHTO M270 GRADE 36 $f_s = 20,000$ P.S.I.

NOTES

- COPIES OF AS-BUILT PLANS OR PREVIOUS CONTRACT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. A PORTION OF THESE PLANS ARE INCLUDED IN THIS CONTRACT FOR THE CONTRACTOR'S CONVENIENCE. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.
- ALL PROPOSED ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM (NAVD) 1988. THE ELEVATIONS REFERENCED ON THE CONTRACT 93.7 PLANS MAY DIFFER.
- FOR ADDITIONAL DETAILS REFERENCED IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD DETAILS, HIGHWAYS AND BRIDGES, APRIL 1997.

SUMMARY OF BRIDGE QUANTITIES

ITEM	DESCRIPTION	UNIT	QUANTITY
202.12	REMOVING EXISTING STRUCTURAL CONCRETE	C.Y.	6
202.1222	REMOVING EXISTING SUPERSTRUCTURE CONCRETE - B & M RR (50 S.Y.)*	L.S.	1
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	C.Y.	20
206.10	STRUCTURAL EARTH EXCAVATION - PIERS	C.Y.	70
206.11	STRUCTURAL ROCK EXCAVATION - PIERS	C.Y.	70
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	C.Y.	60
403.081	HOT BITUMINOUS PAVEMENT, TURNPIKE GRADING C	TON	30
501.40	STEEL H-BEAM PILES 53 LBS/FT, DELIVERED	L.F.	225
501.401	STEEL H-BEAM PILES 53 LBS/FT, IN PLACE	L.F.	225
501.90	PILE TIPS	EACH	10
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	C.Y.	45
502.23	STRUCTURAL CONCRETE PIERS	C.Y.	65
502.2632	STRUCTURAL CONCRETE ROADWAY AND END POSTS ON STEEL BRIDGES - B & M RR (80 C.Y.)*	L.S.	1
502.2642	STRUCTURAL CONCRETE PARAPETS - B & M RR (15 C.Y.)*	L.S.	1
502.312	STRUCTURAL CONCRETE APPROACH SLAB - B & M RR (14 C.Y.)*	L.S.	1
503.12	REINFORCING STEEL, FABRICATED AND DELIVERED	LB.	12,900
503.13	REINFORCING STEEL, PLACING	LB.	12,900
503.14	EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED	LB.	33,100
503.15	EPOXY-COATED REINFORCING STEEL, PLACING	LB.	33,100
504.7012	STRUCTURAL STEEL FABRICATED AND DELIVERED, ROLLED - B & M RR (55,000 LBS. GRADE 36, 1,800 LBS. GRADE 50)*	L.S.	1
504.712	STRUCTURAL STEEL ERECTION - B & M RR (56,800 LB.)*	L.S.	1
505.082	STUD WELDED SHEAR CONNECTORS - B & M RR (912 EA.)*	L.S.	1
506.302	SHOP COATING OF STRUCTURAL STEEL - B & M RR (56,800 LB.)*	L.S.	1
506.312	FIELD REPAIR OF DAMAGED COATING - B & M RR	L.S.	1
507.0912	ALUMINUM BRIDGE RAILING, 1 BAR - B & M RR (625 LF.)*	L.S.	1
508.132	MEMBRANE WATERPROOFING - B & M RR (330 S.Y.)*	L.S.	1
511.092	TEMPORARY EARTH SUPPORT SYSTEM - B & M RR	L.S.	1
514.06	CURING BOX FOR CONCRETE CYLINDERS	EACH	1
515.202	CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE	S.Y.	135
520.2212	EXPANSION DEVICE - LOCKING COMPRESSION SEAL W/STEEL EDGE BEAMS - B & M RR (21 L.F.)*	EACH	1
524.40	PROTECTIVE SHIELD	S.Y.	135
609.15	SLOPED CURB TYPE 1	L.F.	175

* QUANTITIES FOR ESTIMATING PURPOSES ONLY

INDEX OF DRAWINGS

SHEET NO.	TITLE
BM-S1	GENERAL PLAN & ELEVATION
BM-S2	GENERAL NOTES, INDEX & QUANTITIES
BM-S3	FOUNDATION PLAN
BM-S4	ABUTMENT DEMOLITION DETAILS
BM-S5	SOUTH ABUTMENT - NORTHBOUND
BM-S6	NORTH ABUTMENT - NORTHBOUND
BM-S7	SOUTH ABUTMENT REINFORCEMENT
BM-S8	NORTH ABUTMENT REINFORCEMENT
BM-S9	PIER DETAILS
BM-S10	MISCELLANEOUS SUBSTRUCTURE DETAILS
BM-S11	END POST DETAILS I
BM-S12	END POST DETAILS II
BM-S13	DECK CONSTRUCTION SEQUENCE
BM-S14	FRAMING PLAN & DETAILS
BM-S15	BLOCKING POINTS & STEEL DETAILS
BM-S16	DECK PLAN & SECTION
BM-S17	SUPERSTRUCTURE DETAILS
BM-S18	SCUPPER DETAILS
BM-S19	PARAPET DETAILS
BM-S20	ALUMINUM BRIDGE RAIL DETAILS
BM-S21	NORTH ABUTMENT EXPANSION JOINT DETAILS I
BM-S22	NORTH ABUTMENT EXPANSION JOINT DETAILS II
BM-S23	REINFORCING STEEL SCHEDULE I
BM-S24	REINFORCING STEEL SCHEDULE II

ABBREVIATIONS

S.B.	SOUTHBOUND
N.B.	NORTHBOUND
N.F.	NEAR FACE
F.F.	FAR FACE
E.F.	EACH FACE

CONTRACT 93.7 PLANS

SHEET NO.	TITLE
BM-S1	GENERAL PLAN & ELEVATION
BM-S3	BORING LOGS
BM-S4	BORING LOGS
BM-S5	BORING LOGS
BM-S6	FOOTING PLAN & PAY LIMITS
BM-S7	SOUTH ABUTMENT - NORTHBOUND
BM-S10	NORTH ABUTMENT - NORTHBOUND
BM-S16	FRAMING PLAN & DETAILS
BM-S17	BLOCKING POINTS & STEEL DETAILS
BM-S18	SUPERSTRUCTURE DETAILS I
BM-S22	NORTH ABUTMENT JOINT DETAILS
BD 101-89	BEARING PEDESTALS
BD 112-89	DIAPHRAGMS & CROSSFRAMES
SEE SHEETS 139 TO 149 & 176 TO 178	

M:\09009\002\117\56QUANT.DWG 12/29/99 11:53

Scale: NO SCALE

Designed by:



ARCHITECTS ENGINEERS PLANNERS

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**



**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
GENERAL NOTES, INDEX & QUANTITIES**

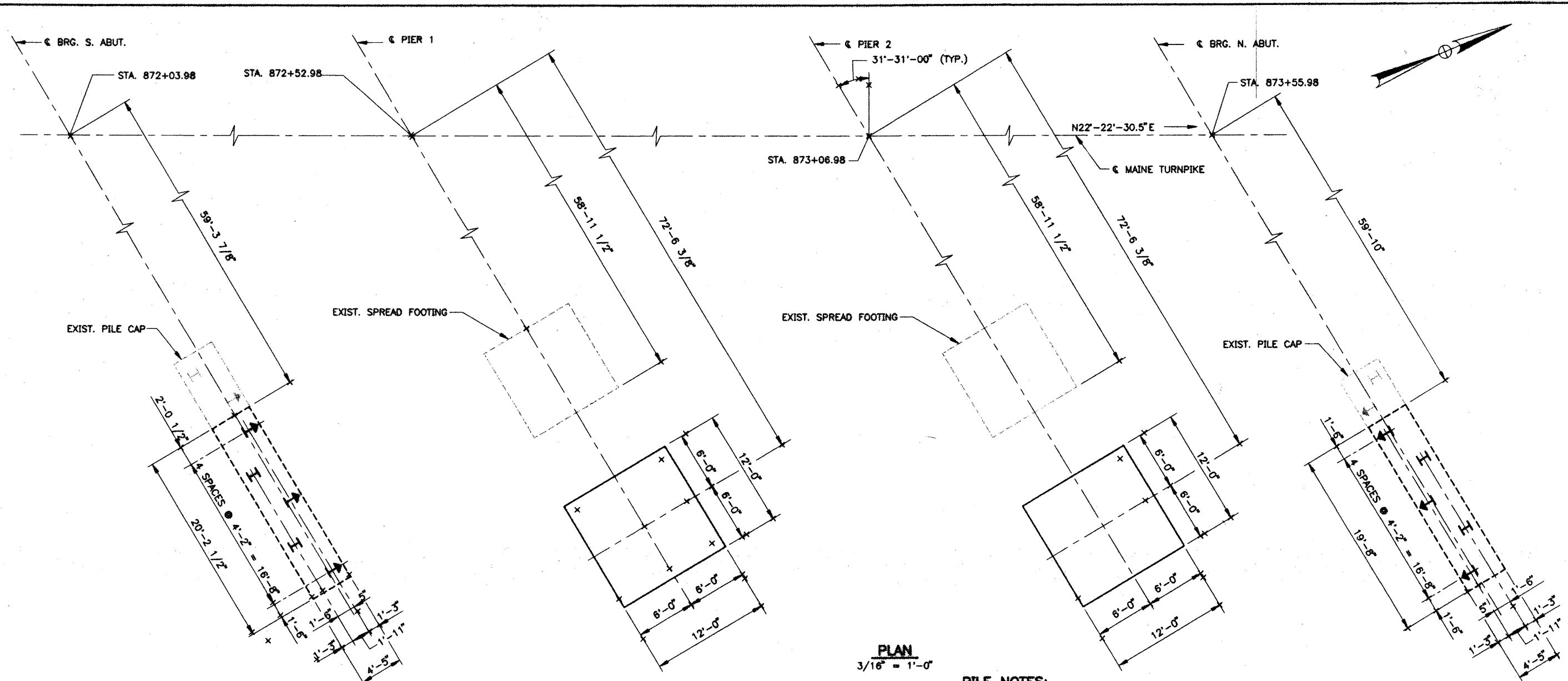
No.	Revision	By	Date

	By	Date	Checked	By	Date
Designed	KAC	12/99	Checked	KJG	12/99
Drawn	LS	12/99	In Charge of	RAL	12/99

CONTRACT: 2000.03

SHEET NUMBER: **BM-S2**

71 OF 178



PLAN
3/16" = 1'-0"

PILE NOTES:

1. ALL PILES SHALL BE HP12x53 CONFORMING TO ASTM DESIGNATION A709, GRADE 36.
2. PILES MARKED THUS \rightarrow , SHALL BE BATTERED 2" PER FOOT IN THE DIRECTION OF THE ARROW.
3. HP 12x53 SHALL BE DRIVEN TO AN ULTIMATE CAPACITY OF 157.5 TONS. DESIGN LOAD = 57 TONS AND F.S. = 2.75. CONSTRUCTION CONTROL: WAVE EQUATION ANALYSIS IS REQUIRED FOR ONE PILE PRIOR TO INSTALLATION OF PRODUCTION PILES.
4. ESTIMATE OF PILES REQUIRED:
NORTH ABUTMENT:
5 @ 20' (NB) = 100 LF
SOUTH ABUTMENT:
5 @ 25' (NB) = 125 LF
5. HP13x60 BEARING PILES MAY BE SUBSTITUTED FOR HP12x53 BEARING PILES AT THE OPTION OF THE CONTRACTOR.

NOTES:

1. COVER FOR FOOTING REINFORCING STEEL SHALL BE 3".
2. TOP OF FOOTINGS MAY BE LOWERED 1' WITHOUT REQUIRING A REDESIGN, AS DIRECTED BY THE ENGINEER.
3. FOR PAY LIMITS AT PIERS, SEE SHEET BM-S10.
4. FOR ADDITIONAL PAY LIMITS AT ABUTMENTS, SEE SHEET BM-S10.
5. FOR SUBSURFACE DATA, REFER TO BORING LOGS FROM CONTRACT 93.7 PLANS.

M:\09009\002\117\STENDPLN.DWG 12/29/99 07:45

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

	By	Date	Checked	By	Date
Designed	KAC	12/99		KJG	12/99
Drawn	LS	12/99	In Charge of	RAL	12/99

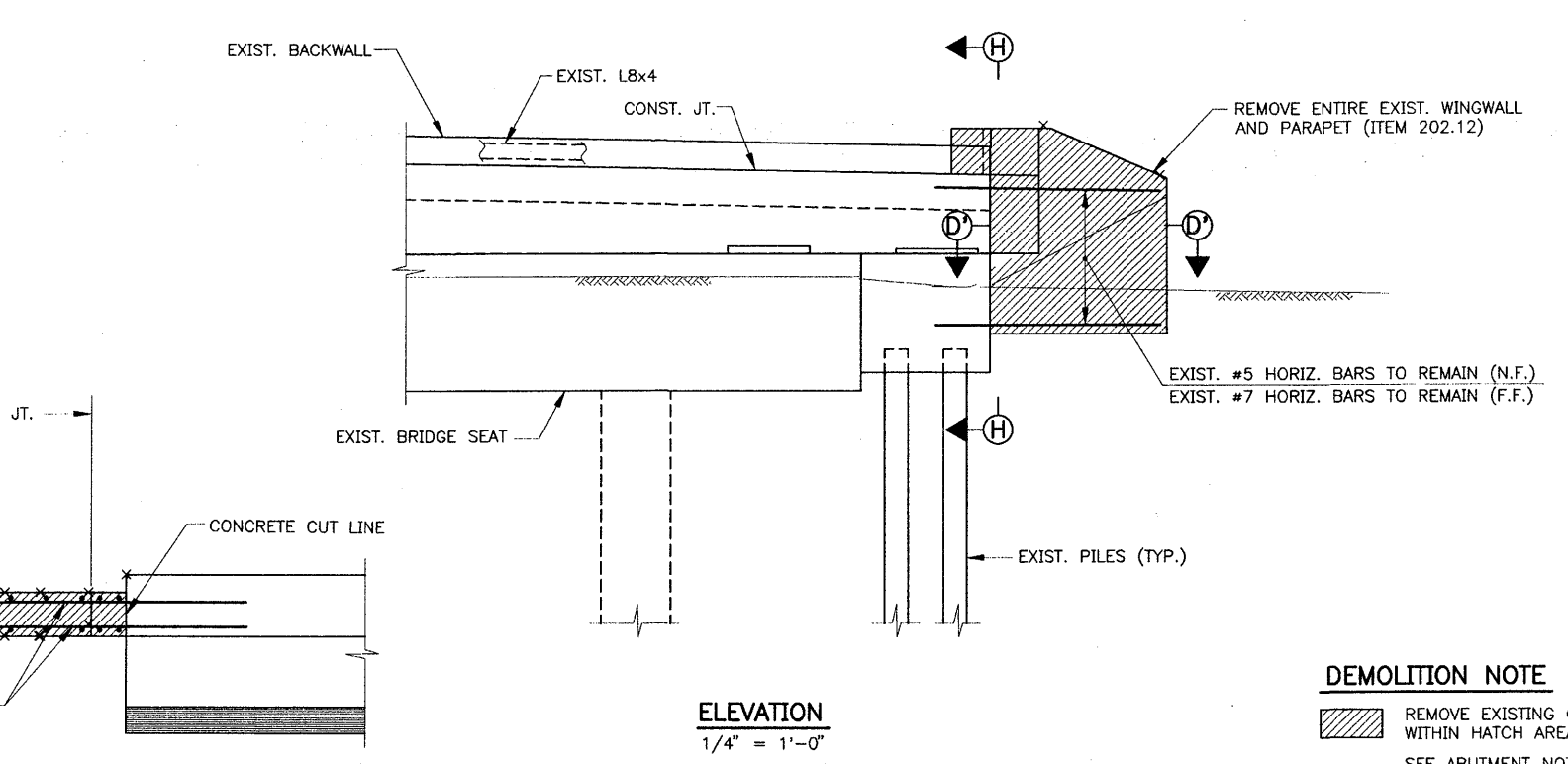
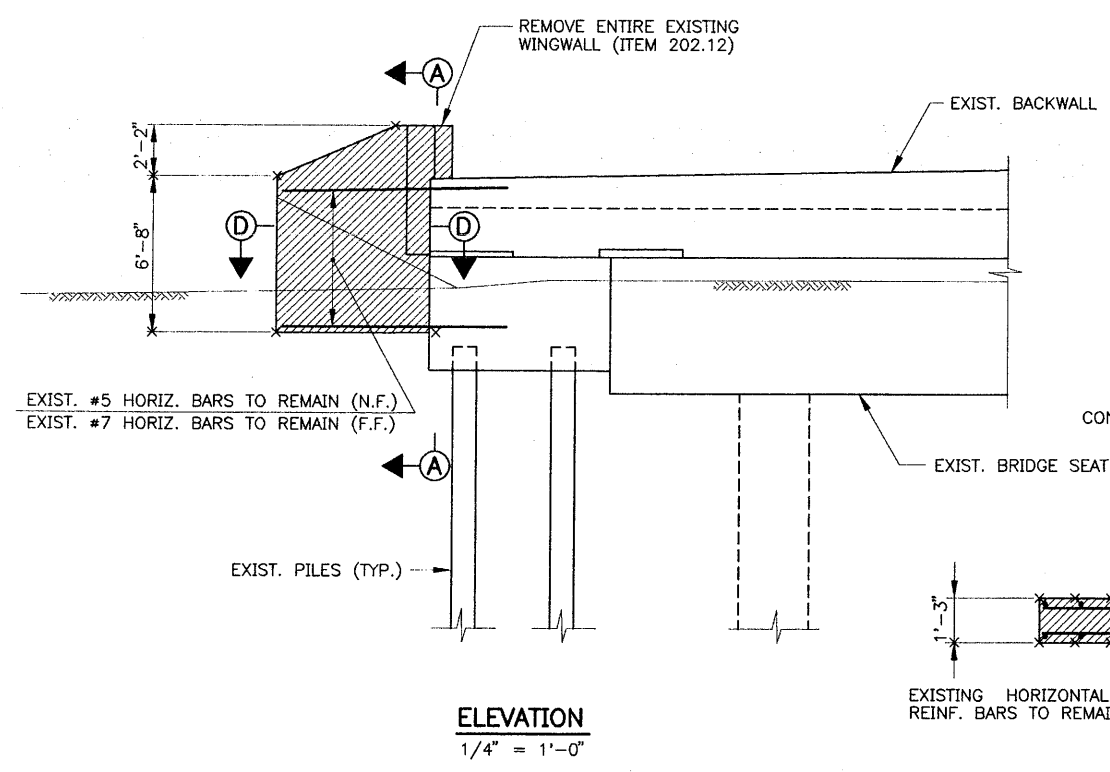
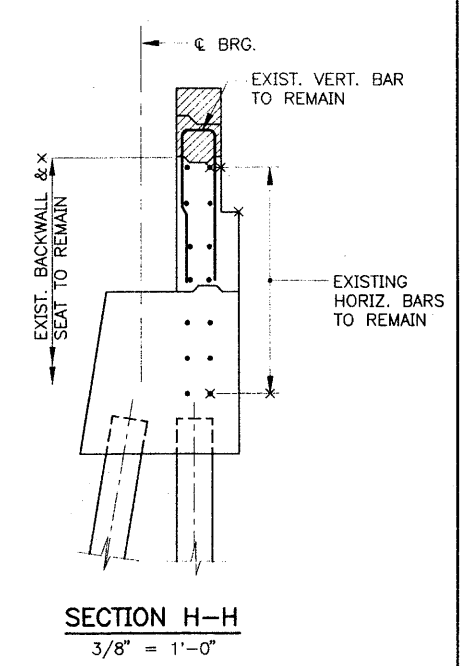
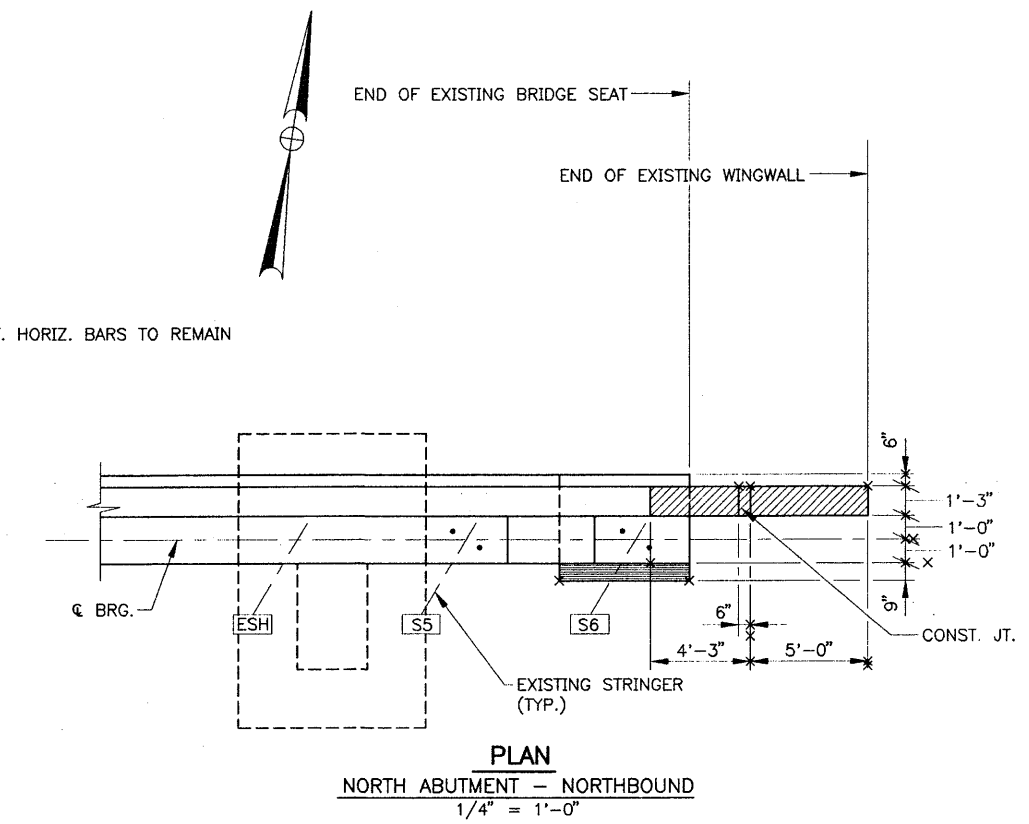
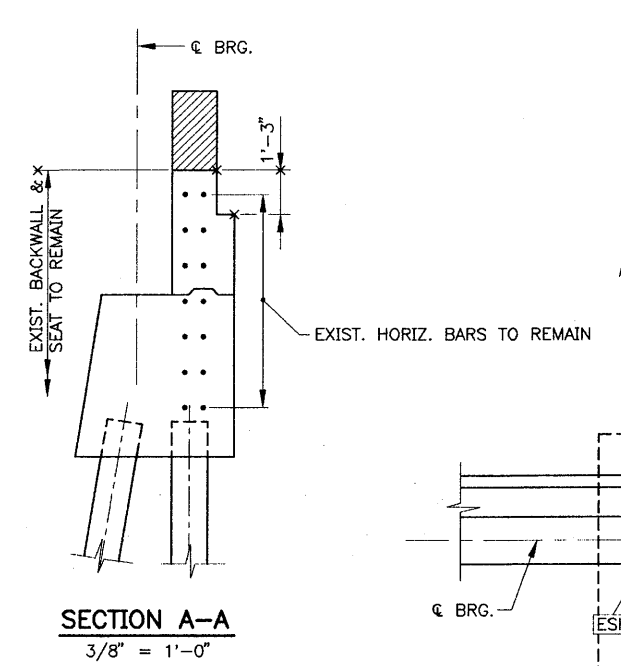
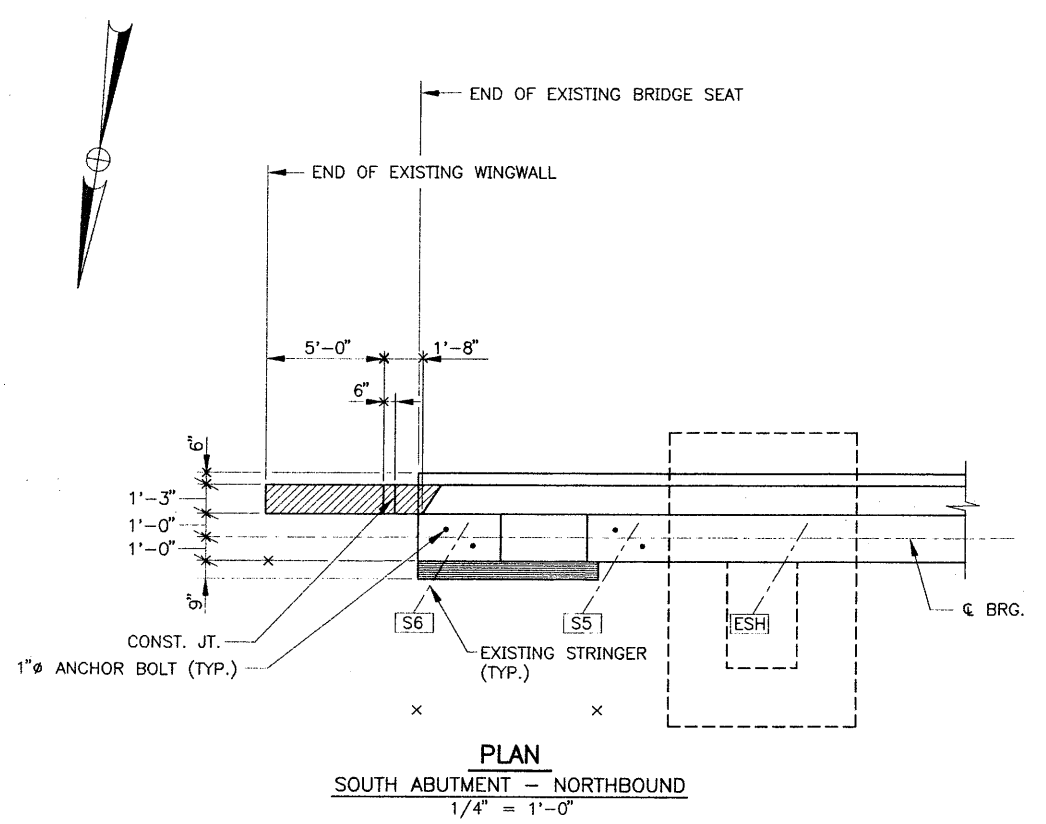
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
FOUNDATION PLAN**

CONTRACT: 2000.03

SHEET NUMBER: **BM-S3**
72 OF 178



DEMOLITION NOTE
 [Hatched Area] REMOVE EXISTING CONCRETE WITHIN HATCH AREA (TYP.)
 SEE ABUTMENT NOTES ON SHEET BM-S5 FOR ADDITIONAL REQUIREMENTS.

M:\09009\002\117\SSABDEM.DWG 12/29/99 07:46

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
 ARCHITECTS ENGINEERS PLANNERS

	By	Date	Checked	By	Date
Designed	KAC	12/99		KJG	12/99
Drawn	LS	12/99	In Charge of	RAL	12/99

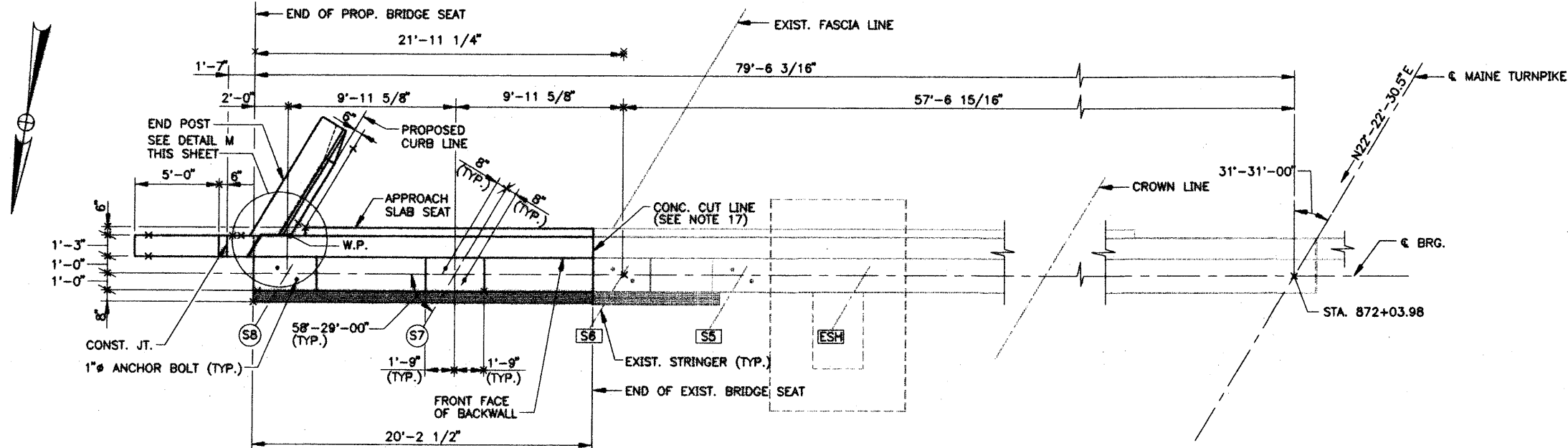
HNTB CORPORATION
 2 Thomas Drive
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
 MODERNIZATION AND WIDENING PROJECT**

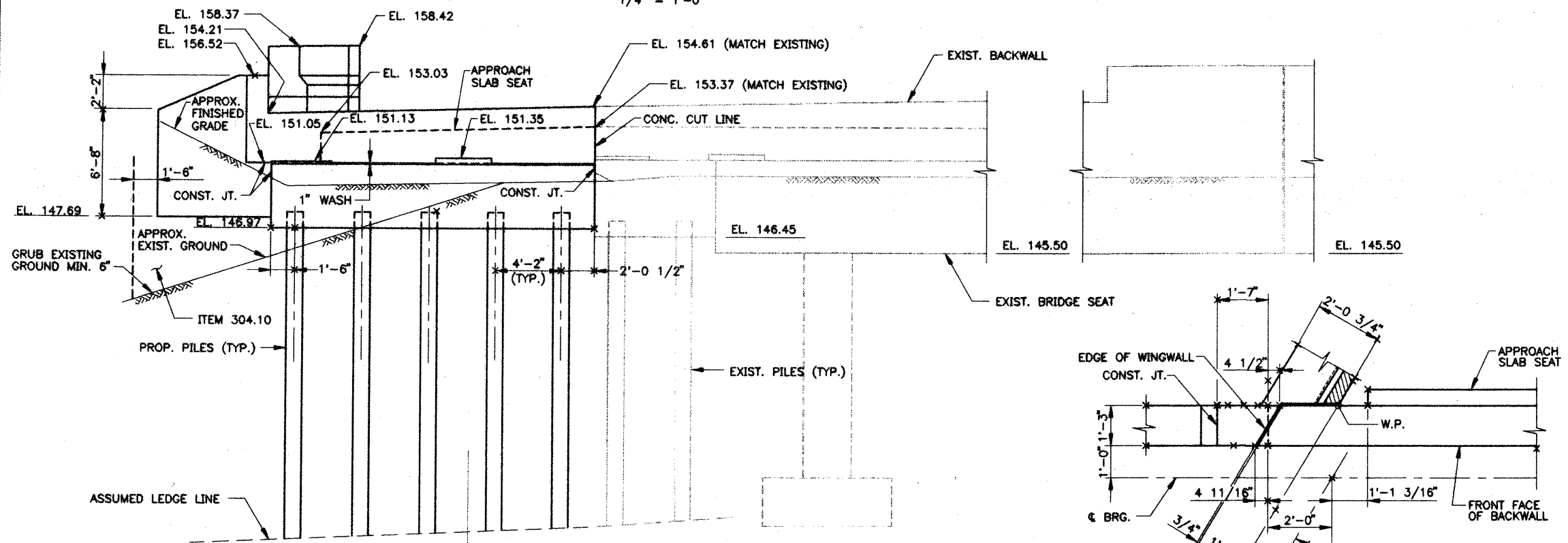
**MAINLINE BRIDGE WIDENING
 B & M RAILROAD OVERPASS
 ABUTMENT DEMOLITION DETAILS**

CONTRACT: 2000.03

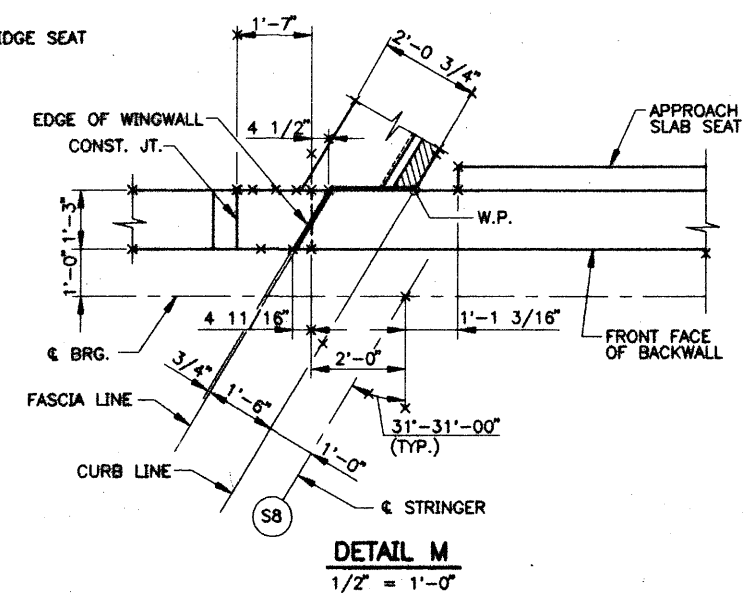
SHEET NUMBER: **BM-S4**
 73 OF 178



PLAN
SOUTH ABUTMENT - NORTHBOUND
1/4" = 1'-0"



ELEVATION
1/4" = 1'-0"



DETAIL M
1/2" = 1'-0"

ABUTMENT NOTES

1. N.F. DENOTES NEAR FACE, F.F. DENOTES FAR FACE, E.F. DENOTES EACH FACE.
2. REINFORCING STEEL SHALL HAVE 2" MINIMUM COVER UNLESS OTHERWISE NOTED.
3. PLACE REINFORCING STEEL TO CLEAR ANCHOR BOLTS.
4. EXISTING REINFORCING STEEL THAT IS EXPOSED AFTER REMOVAL OF EXISTING CONCRETE SHALL NOT BE CUT, EXCEPT AS NOTED, BUT SHALL BE CLEANED AND EXTENDED INTO NEW CONCRETE AS FAR AS PRACTICABLE. PAYMENT FOR CLEANING SHALL BE INCIDENTAL TO ITEM 202.12.
5. ANY EXISTING REINFORCING STEEL, INTENDED FOR RE-USE IN THE PROPOSED CONSTRUCTION, THAT IS DAMAGED OR BROKEN DURING THE REMOVAL OF EXISTING CONCRETE SHALL BE REPLACED IN DRILLED HOLES AND SECURED BY GROUTING. PAYMENT TO BE INCIDENTAL TO ITEM 202.12.
6. PAYMENT FOR DRILLING HOLES AND GROUTING DOWELS AND ANCHOR BOLTS TO BE INCIDENTAL TO ITEM 504.7012. ALL DOWELS TO BE GROUTED WITH NON-SHRINK GROUT.
7. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".
8. DRESS BEARING PAD AREAS 1" LARGER ALL AROUND THE MASONRY PLATES TO EXACT ELEVATIONS SHOWN.
9. TOP PORTION OF NORTH ABUTMENT BACKWALL SHALL NOT BE PLACED UNTIL AFTER EXPANSION JOINT ASSEMBLY IS PLACED AND ADJUSTED.
10. COVER HORIZONTAL & VERTICAL CONSTRUCTION & CONTRACTION JOINTS ON THE BACK WITH TWO LAYERS OF HEAVY ROOFING FELT. SEE MDOT STANDARD DETAIL SHEET 502(1).
11. WATERSTOPS ARE NOT REQUIRED IN HORIZONTAL CONSTRUCTION JOINTS IN ABUTMENT BACKWALLS.
12. REMOVAL LIMITS OF EXISTING CONCRETE THAT DO NOT FALL AT AN EXISTING CONSTRUCTION JOINTS AND THAT WILL BE EXPOSED IN THE COMPLETED STRUCTURE SHALL BE CUT ALONG THESE LIMITS WITH A MASONRY SAW TO A MINIMUM DEPTH OF 1" FROM THE SURFACE. THE CONCRETE SHALL THEN BE REMOVED IN A MANNER THAT WILL LEAVE THE SAW CUT EDGES UNDAMAGED.
13. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE SHALL BE APPLIED TO THE TOP OF ABUTMENT BACKWALLS AND ONE (1) FOOT BELOW TOP OF BACKWALL ON THE BACKFACE.
14. FOR DETAILS OF CONSTRUCTION AND CONTRACTION JOINTS, SEE MDOT STANDARD DETAIL SHEET 502(1).
15. FOR BEARING PEDESTALS AND ANCHOR BOLT DETAILS, SEE SHEET BD 101-89, BEARING PEDESTALS, FROM CONTRACT 93.7 PLANS. BEARING PEDESTALS SHALL BE PLACED NORMAL TO STRINGERS.
16. THE EXISTING BACKWALL SURFACE, AT THE INTERFACE OF THE BACKWALL AND BRIDGE SEAT, SHALL BE CLEAN AND FREE OF BOND INHIBITING MATERIALS. THE SURFACE SHALL BE ROUGHENED AND THEN A BONDING AGENT, APPROVED OF BY THE ENGINEER, SHALL BE APPLIED PRIOR TO THE NEW CONCRETE ABUTMENT PLACEMENT. PAYMENT TO BE INCIDENTAL TO ITEM 502.21.
17. SELECTIVE REMOVAL OF THE EXISTING ARMORED JOINT AT THE TOP OF BACKWALL SHALL BE INCIDENTAL TO ITEM 202.12.

NOTES:

1. FOR END POST DETAILS, SEE SHEET BM-S11.

M:\090009\002\117\15\15ABUT.DWG 12/29/99 07:47

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

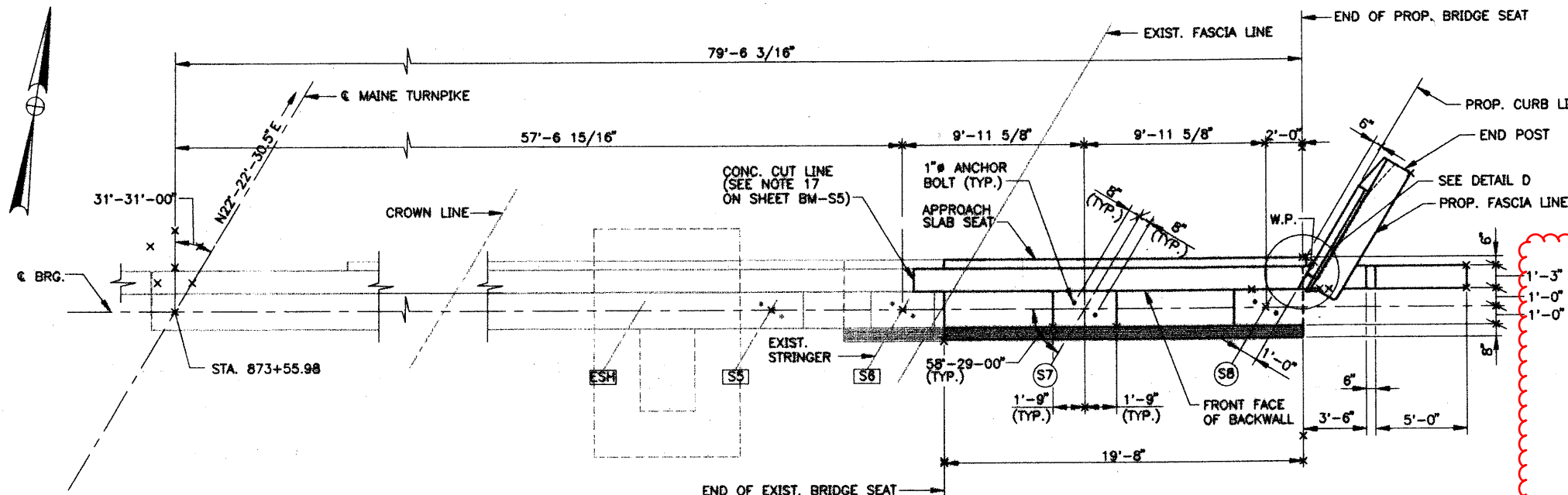
	By	Date		By	Date
Designed	KAC	12/99	Checked	KJG	12/99
Drawn	LS	12/99	In Charge of	RAL	12/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

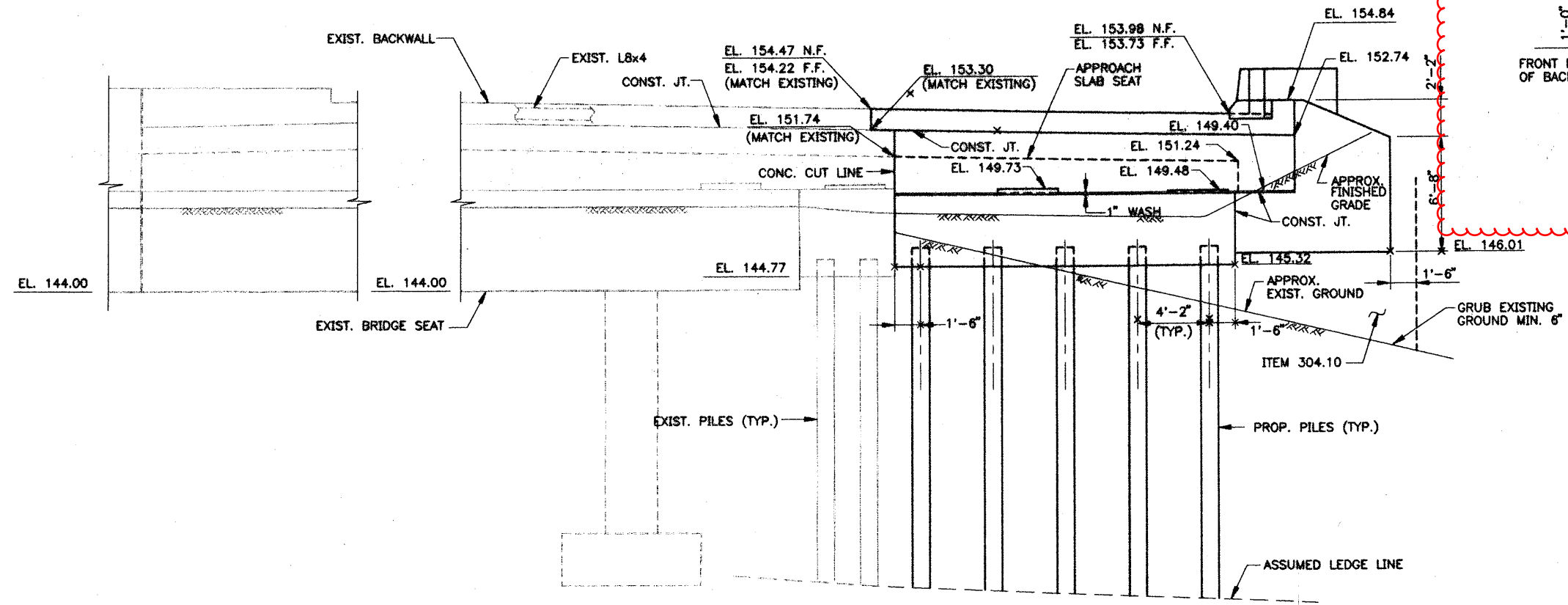
**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
SOUTH ABUTMENT - NORTHBOUND**

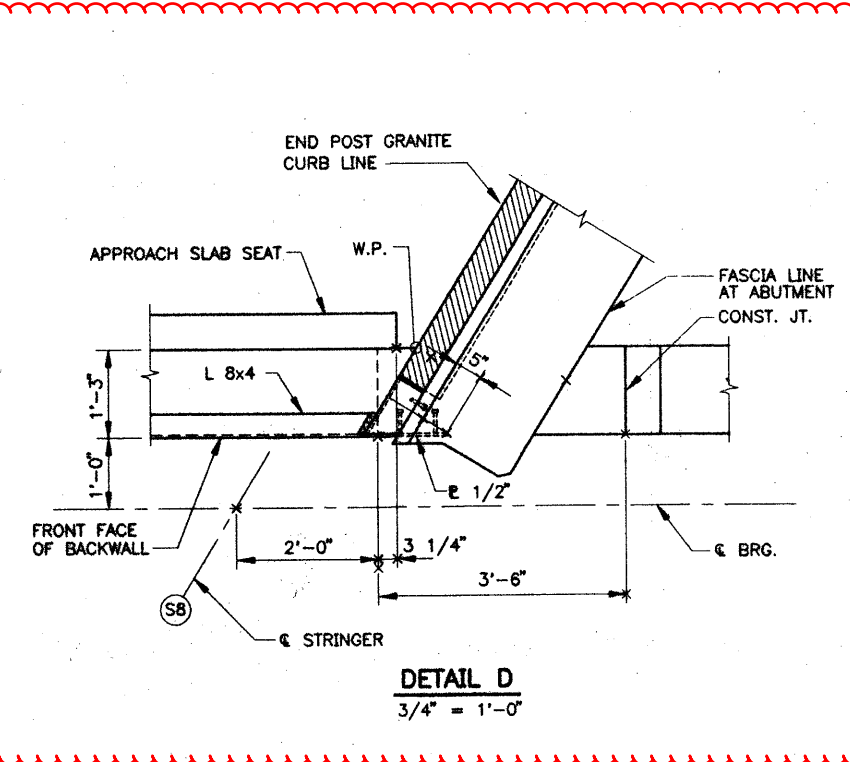
SHEET NUMBER: **BM-S5**
CONTRACT: 2000.03
74 OF 178



PLAN
NORTH ABUTMENT - NORTHBOUND
1/4" = 1'-0"



ELEVATION
1/4" = 1'-0"



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

- NOTES:**
1. FOR END POST DETAILS, SEE SHEET BM-S12.
 2. FOR ABUTMENT NOTES, SEE SHEET BM-S5.

M:\09009\002\117\SI\ABUT.DWG 12/29/99 07:48

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

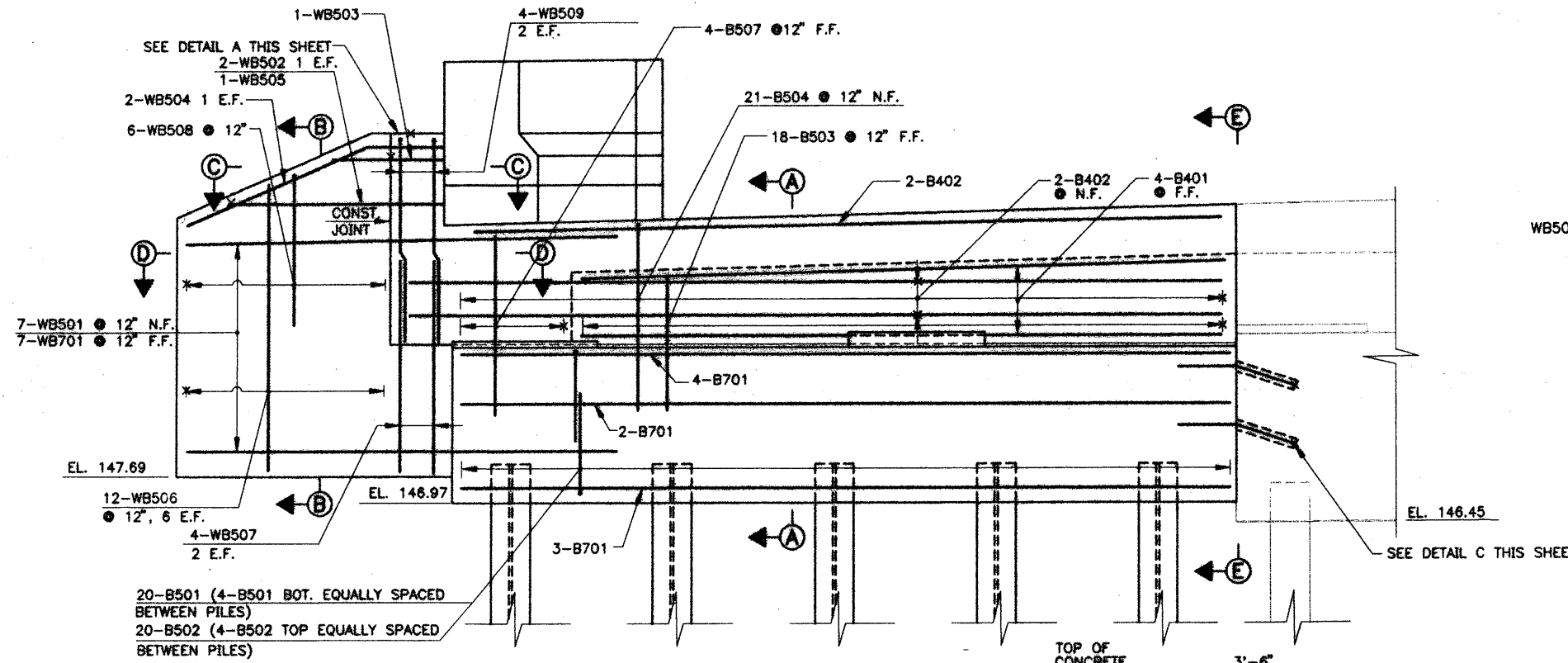
By	Date	Checked	By	Date	
Designed	KAC	12/99	KJG	12/99	
Drawn	LS	12/99	In Charge of	RAL	12/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

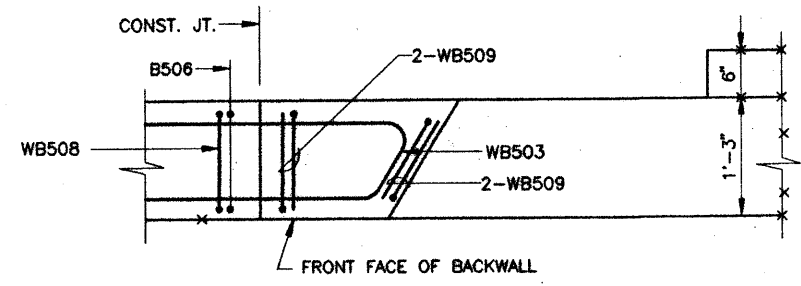
MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
NORTH ABUTMENT - NORTHBOUND

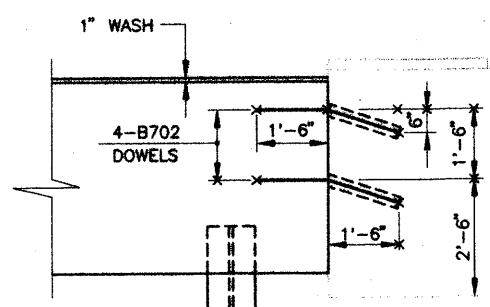
SHEET NUMBER: **BM-S6**
CONTRACT: 2000.03
75 OF 178



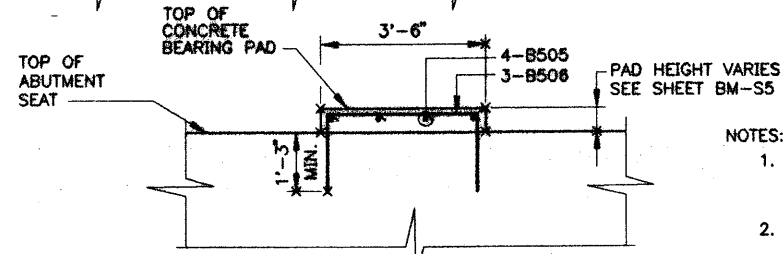
SOUTH ABUTMENT - NORTHBOUND
1/2" = 1'-0"



DETAIL A
1" = 1'-0"

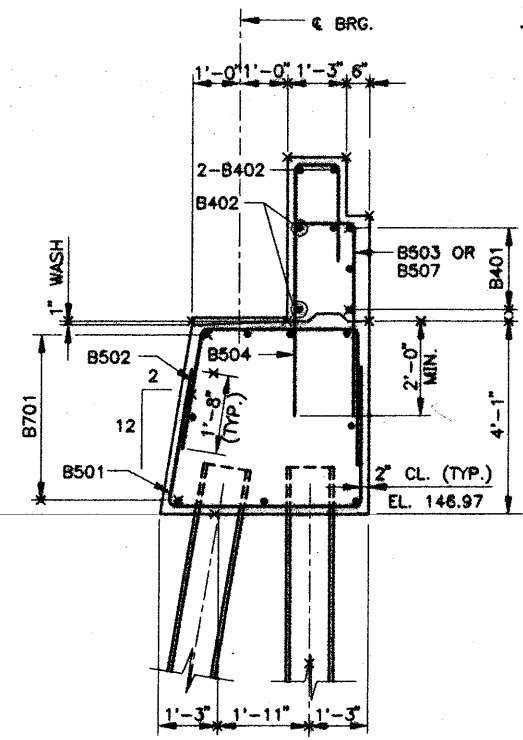


DETAIL C
1/2" = 1'-0"

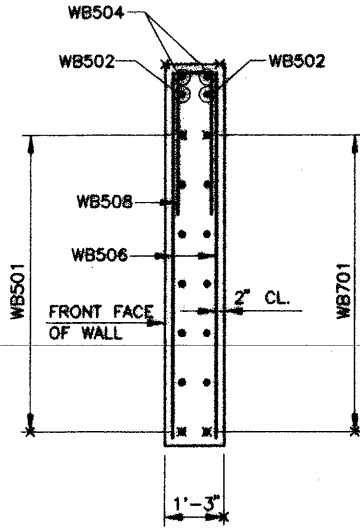


CONCRETE BEARING PAD DETAIL
1/2" = 1'-0"

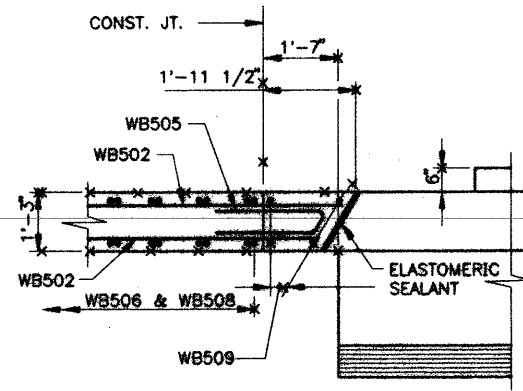
- NOTES:
1. REINFORCING BARS SHALL BE USED ONLY WHERE CONCRETE PAD HEIGHT EXCEEDS 3".
 2. CONTRACTOR SHALL LOCATE STEEL REINFORCING BARS TO AVOID BOLTS.



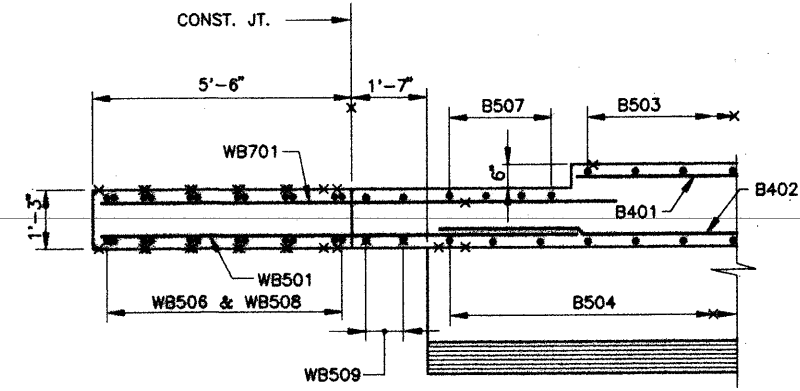
SECTION A-A
1/2" = 1'-0"



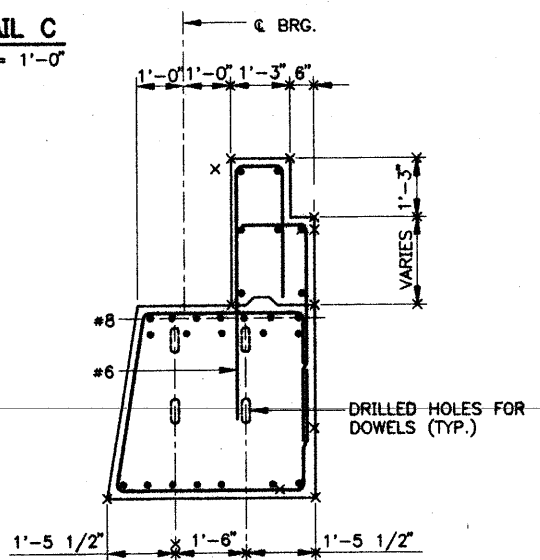
SECTION B-B
1/2" = 1'-0"



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



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



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

M:\09009\002\117\AS1\SABRBM.DWG 12/29/99 07:49

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

By	Date	Checked	By	Date
KAC	12/99	KJG	KJG	12/99
LS	12/99	In Charge of	RAL	12/99

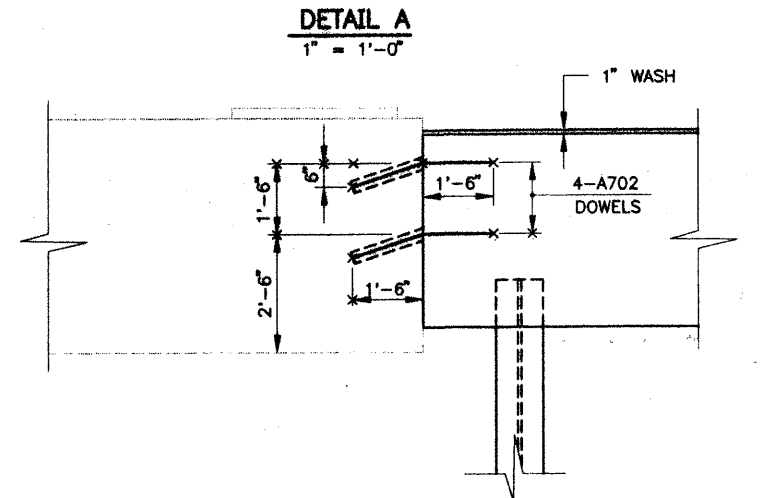
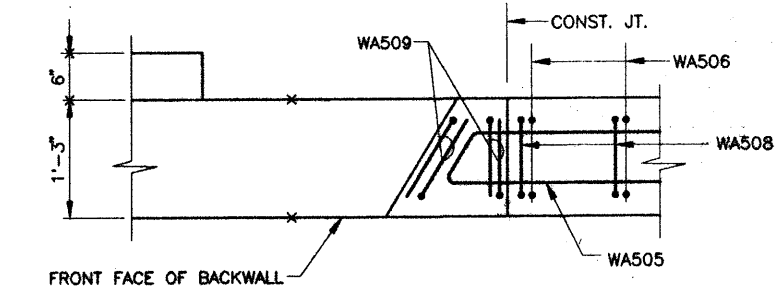
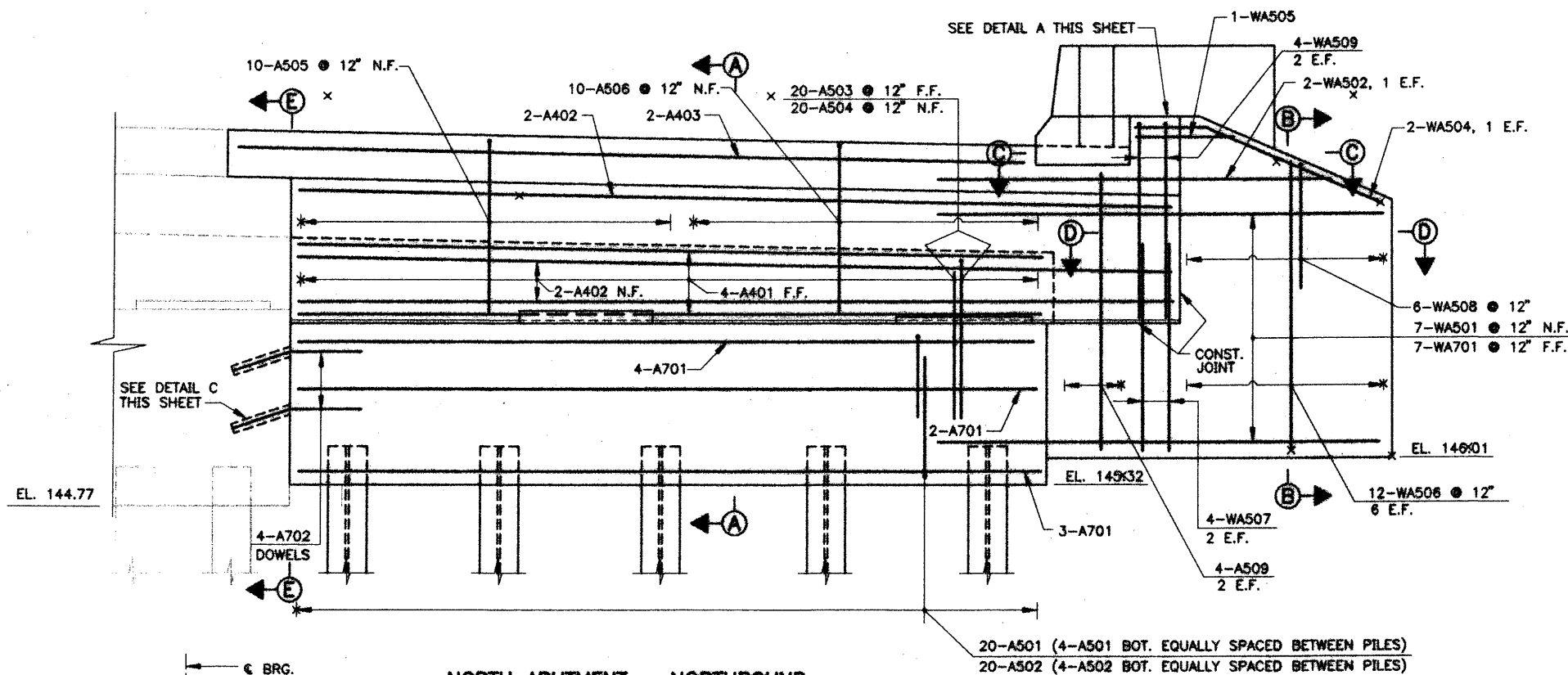
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

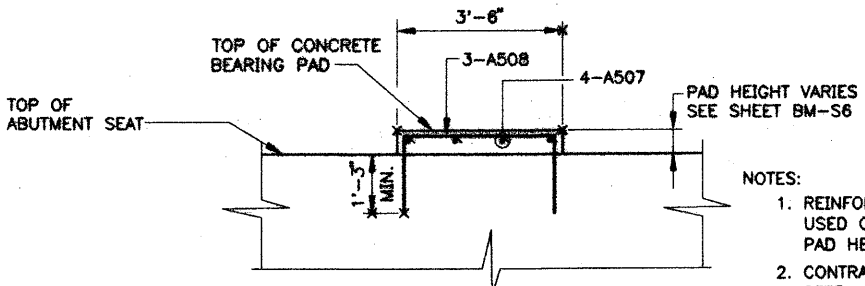
**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
SOUTH ABUTMENT REINFORCEMENT**

CONTRACT: 2000.03

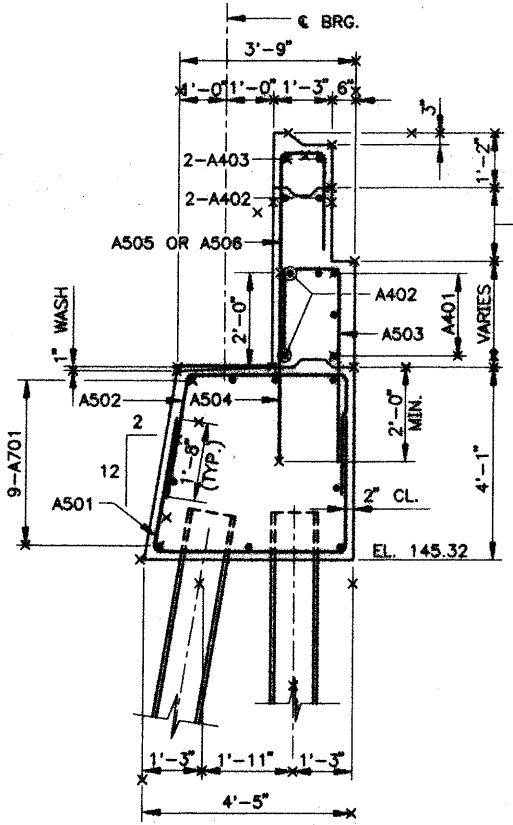
SHEET NUMBER: **BM-57**
76 OF 178



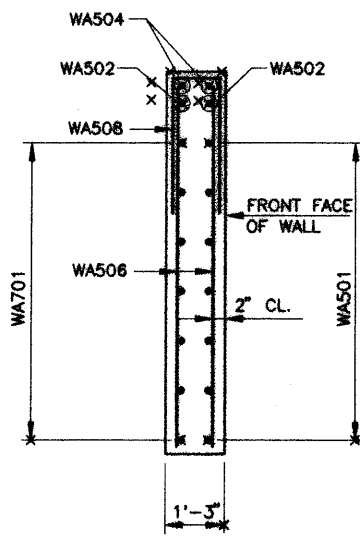
NORTH ABUTMENT - NORTHBOUND
1/2" = 1'-0"



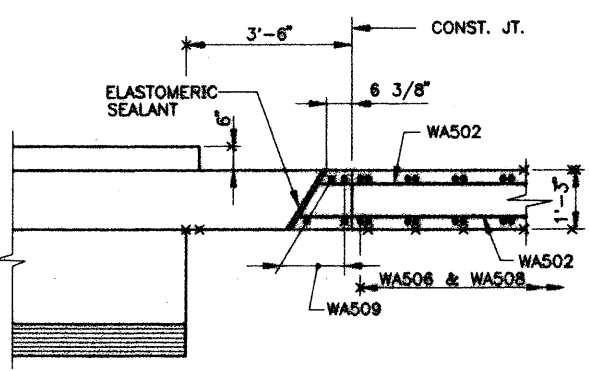
- NOTES:
1. REINFORCING BARS SHALL BE USED ONLY WHERE CONCRETE PAD HEIGHT EXCEEDS 3".
 2. CONTRACTOR SHALL LOCATE STEEL REINFORCING BARS TO AVOID BOLTS.



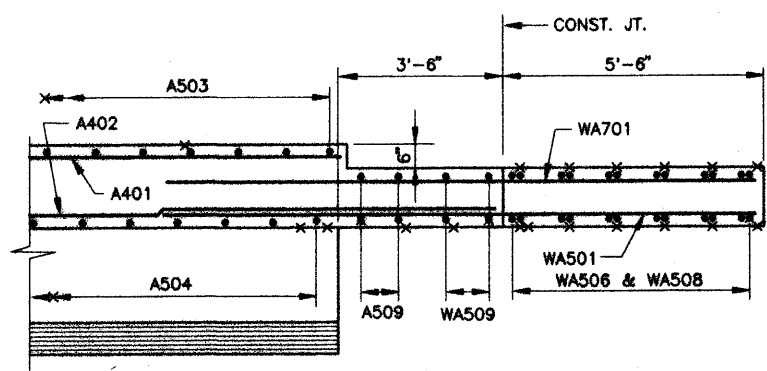
SECTION A-A
1/2" = 1'-0"



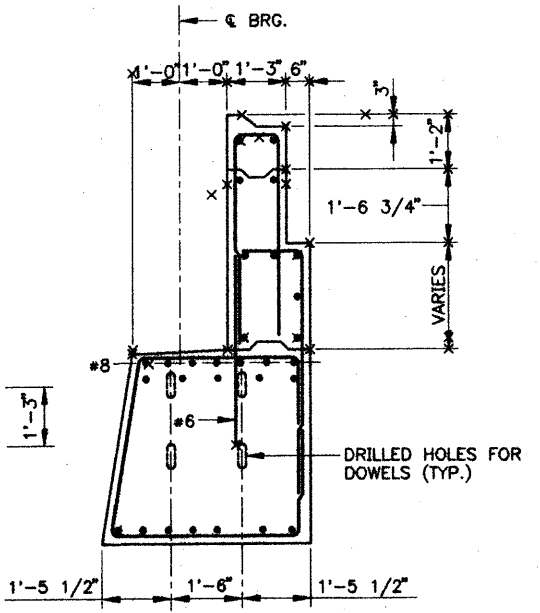
SECTION B-B
1/2" = 1'-0"



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



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



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

M:\09009\002\117\11A\BRM.DWG 12/29/99 07:50

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

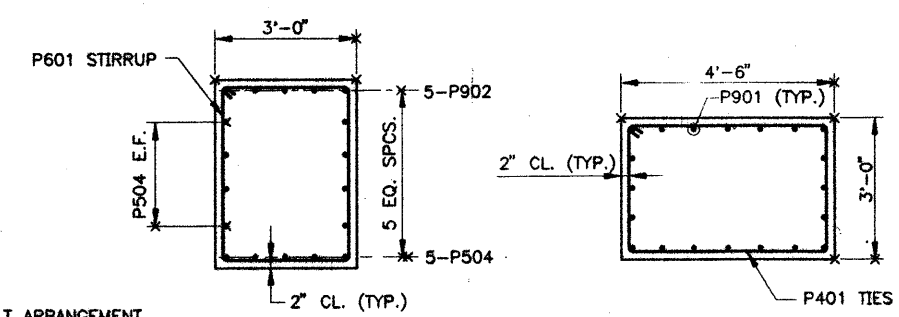
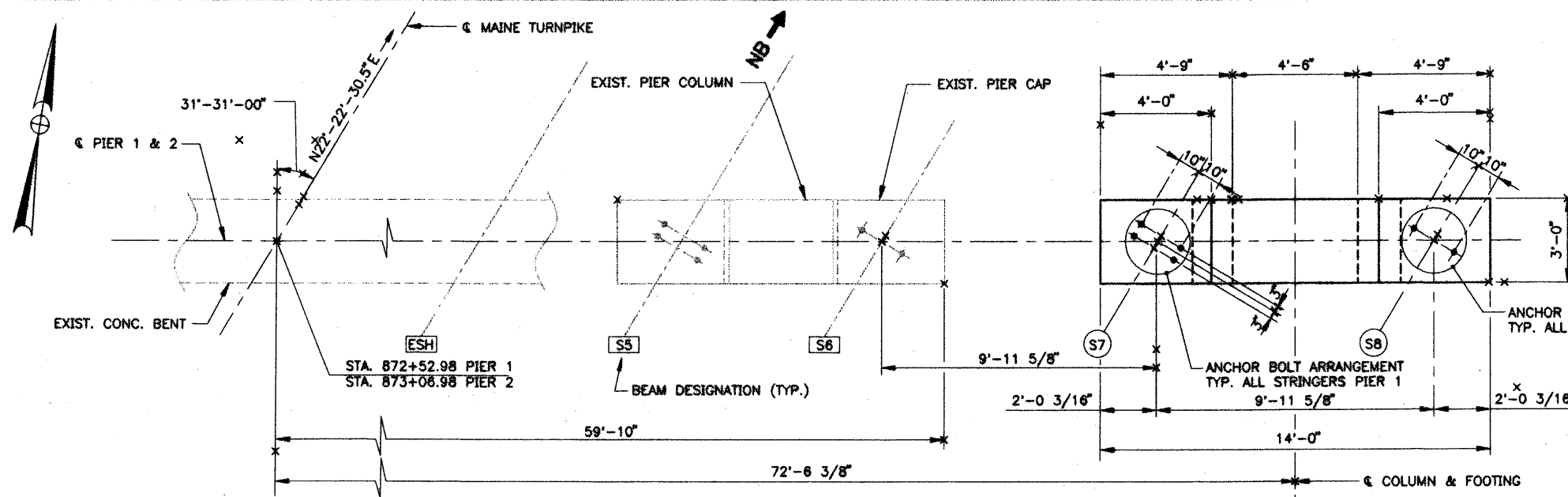
By	Date	Checked	By	Date
KAC	12/99	KJG	KJG	12/99
LS	12/99	In Charge of	RAL	12/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
NORTH ABUTMENT REINFORCEMENT**

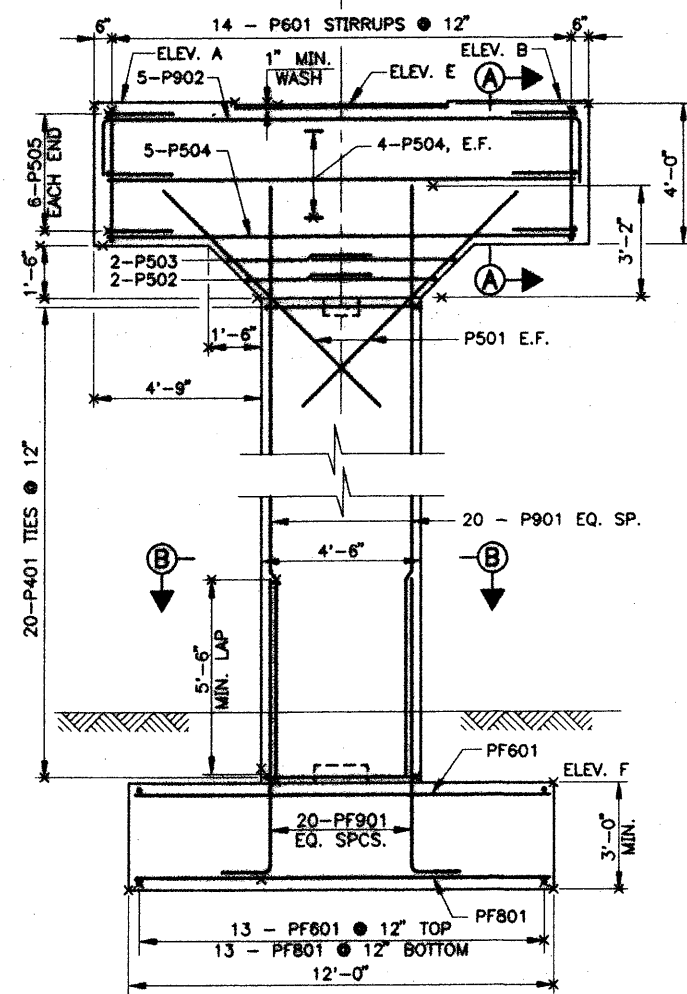
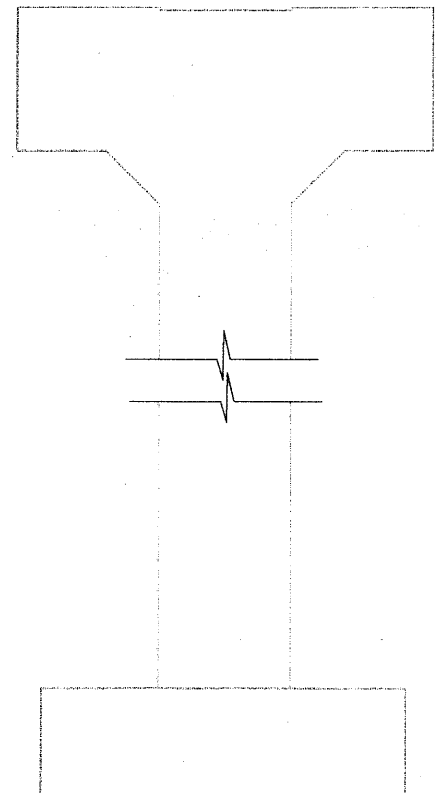
SHEET NUMBER: **BM-S8**
CONTRACT: 2000.03
77 OF 178



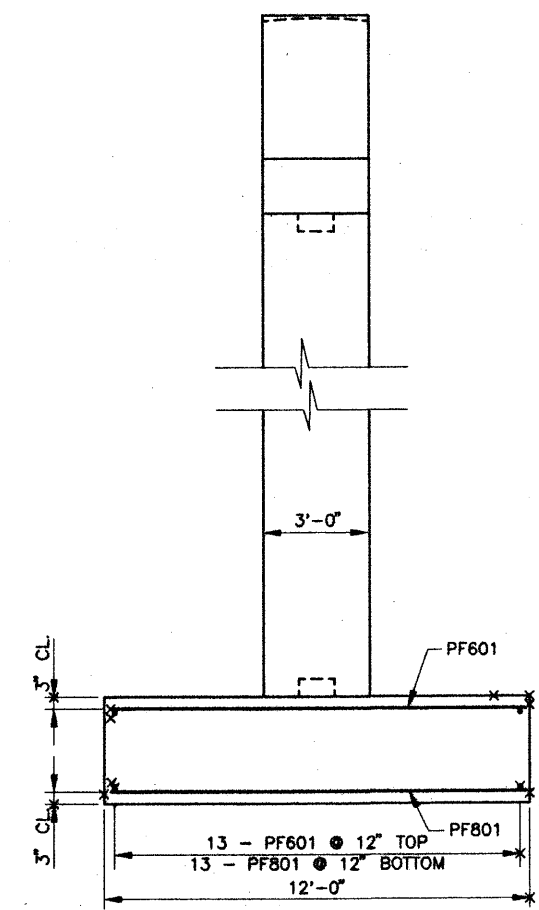
SECTION A-A
 $1/2'' = 1'-0''$
 NOTE: ADJUST REINFORCING FOR BEARING ANCHOR BOLTS.

SECTION B-B
 $1/2'' = 1'-0''$

PLAN
 $3/8'' = 1'-0''$



ELEVATION
 $3/8'' = 1'-0''$



END ELEVATION
 $3/8'' = 1'-0''$

ELEVATIONS				
PIER	A	B	E	F
1	150.85	150.62	150.50	126.00
2	149.94	149.70	149.60	126.00

M:\09009\002\117\SSNBRBM.DWG 12/29/99 07:52

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB
 ARCHITECTS ENGINEERS PLANNERS

Designed	By	Date	Checked	By	Date
Drawn	By	Date	In Charge of	By	Date
	ELR	12/99		KJG	12/99
	LS	12/99		RAL	12/99

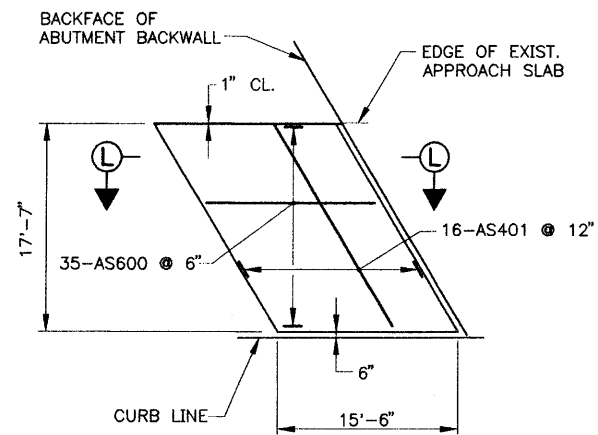
HNTB CORPORATION
 2 Thomas Drive
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
 MODERNIZATION AND WIDENING PROJECT**

**MAINLINE BRIDGE WIDENING
 B & M RAILROAD OVERPASS
 PIER DETAILS**

CONTRACT: 2000.03

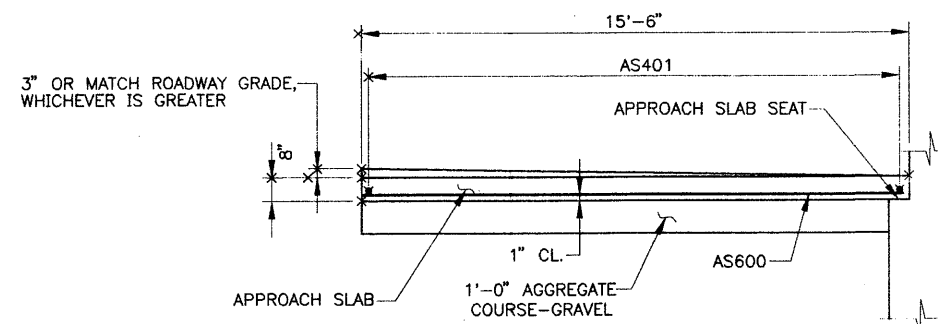
SHEET NUMBER: **BM-S9**
 78 OF 178



NORTHBOUND APPROACH SLAB

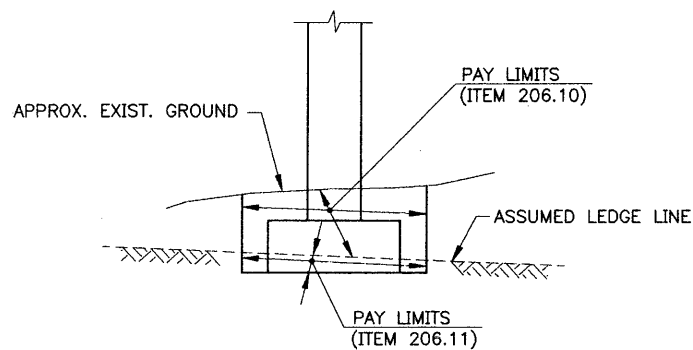
1/8" = 1'-0"

NOTE:
SOUTH ABUTMENT APPROACH SLAB SHOWN, NORTH ABUTMENT APPROACH SLAB SIMILAR.

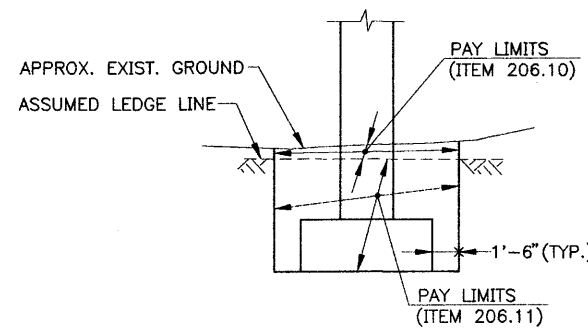


SECTION L-L

3/8" = 1'-0"



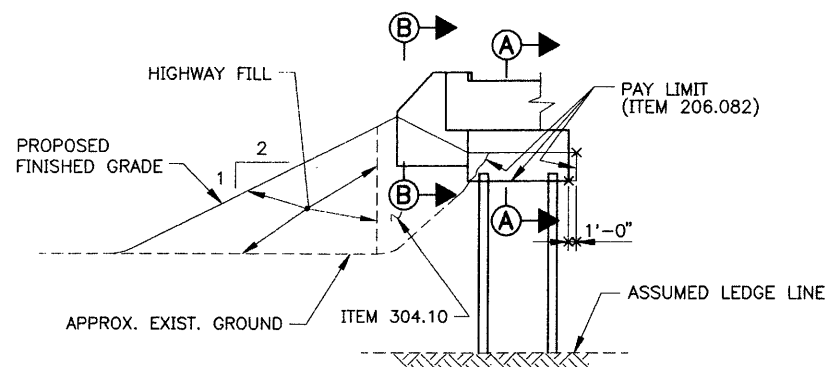
PIER 1 N.B.



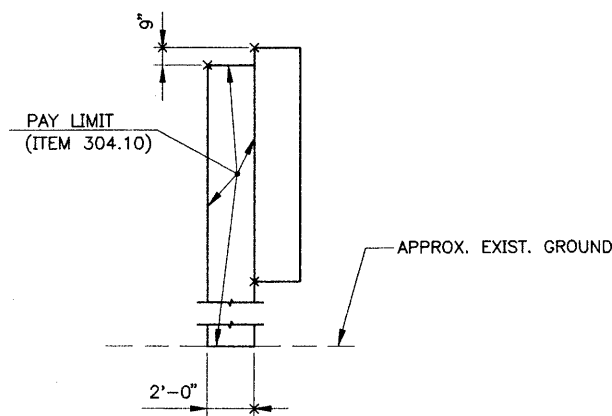
PIER 2 N.B.

PAY LIMITS - PIERS

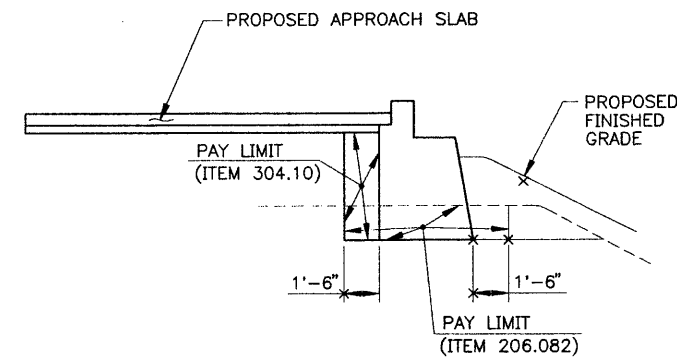
NTS



ELEVATION NORTHBOUND



SECTION B-B



SECTION A-A

PAY LIMITS - ABUTMENTS

NTS

Scale: AS NOTED

Designed by:



ARCHITECTS ENGINEERS PLANNERS

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**



**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
MISCELLANEOUS SUBSTRUCTURE DETAILS**

No.	Revision	By	Date

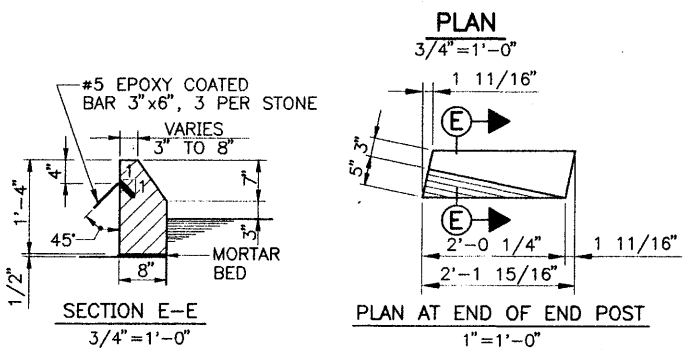
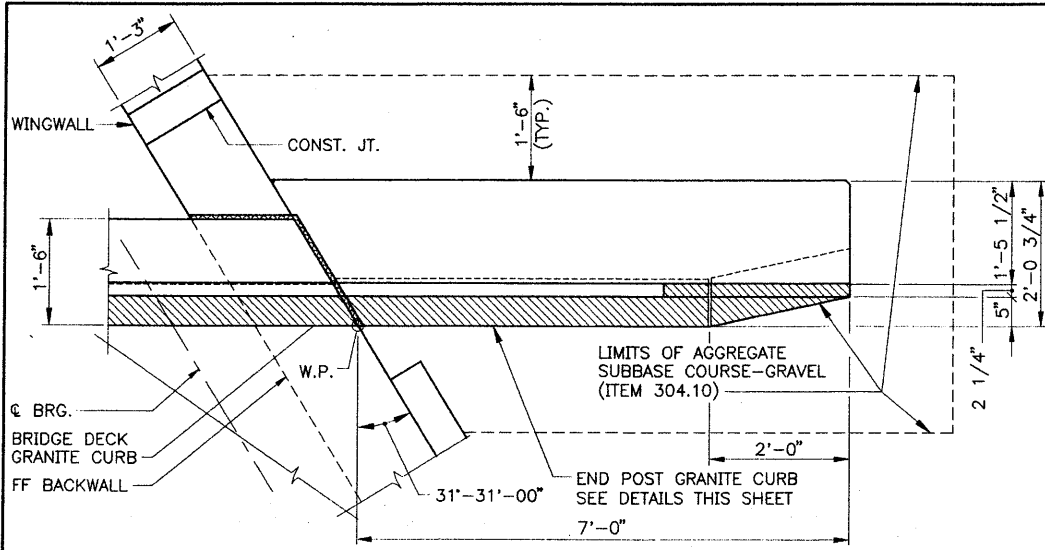
	By	Date		By	Date
Designed	KAC	12/99	Checked	SJC	12/99
Drawn	LS	12/99	In Charge of	RAL	12/99

SHEET NUMBER: **BM-S10**

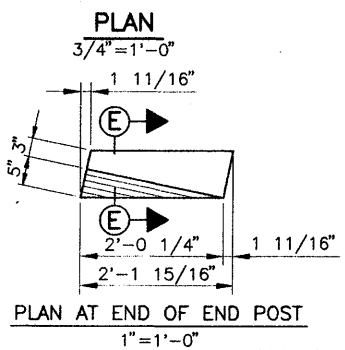
CONTRACT: **2000.03**

79 OF 178

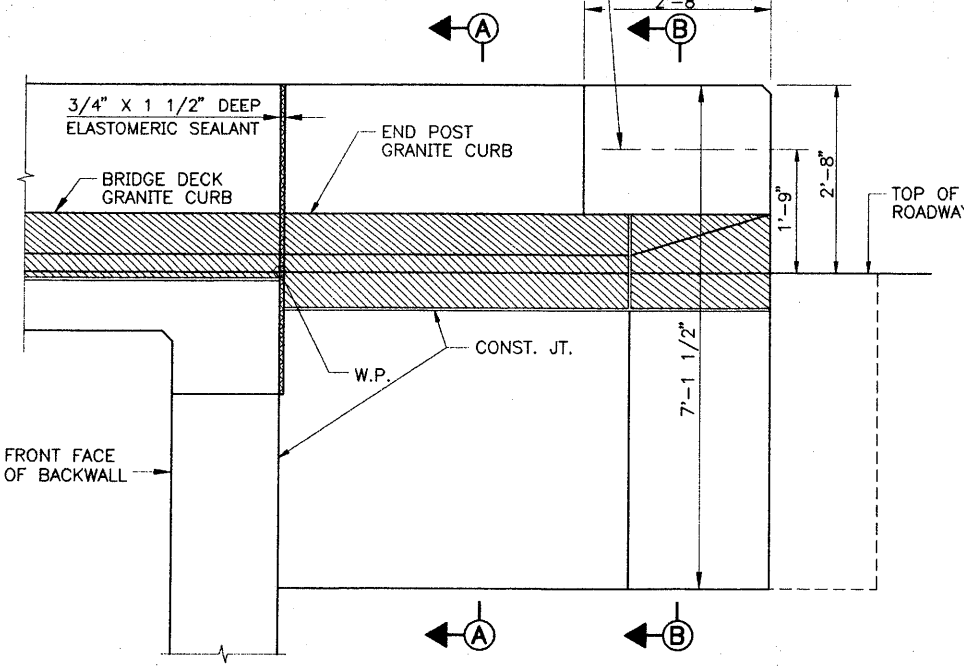
M:\09009\002\117\SEM\SCBM.DWG 12/29/99 07:53



TYPICAL GRANITE CURB

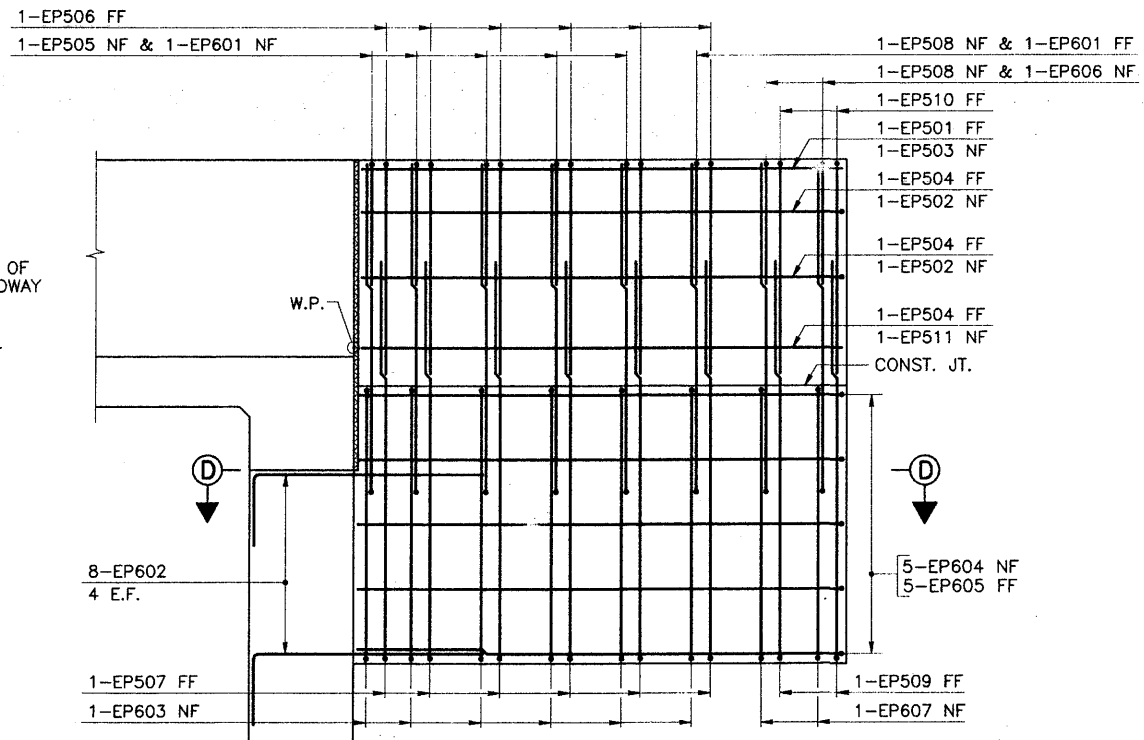
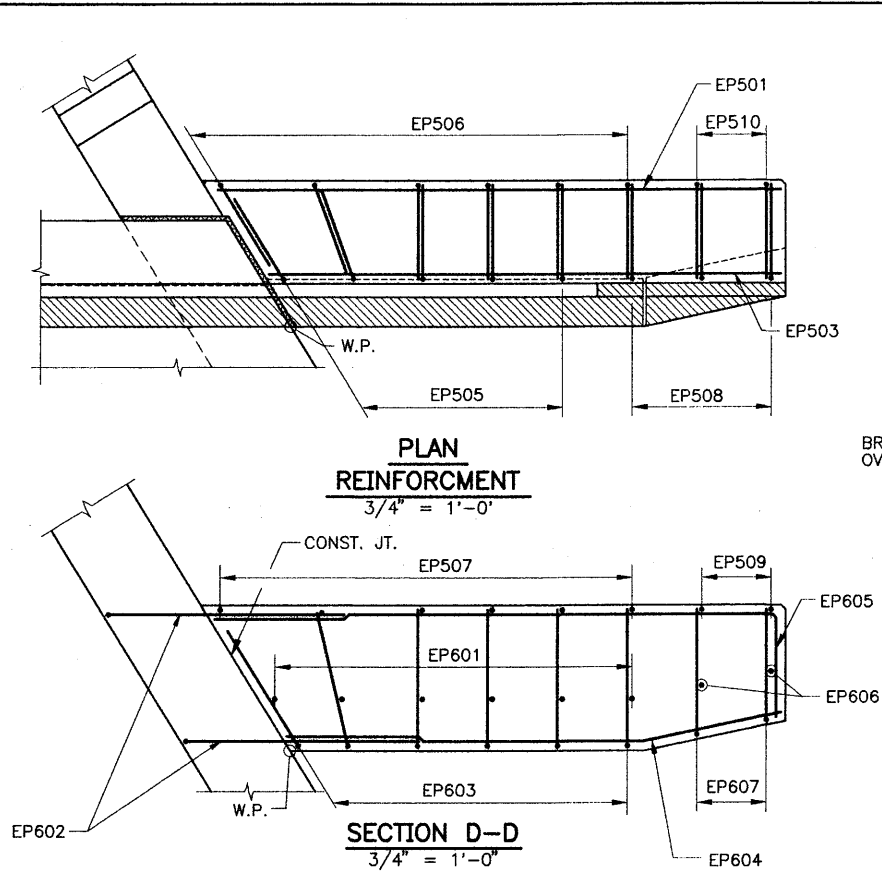


PLAN AT END OF END POST

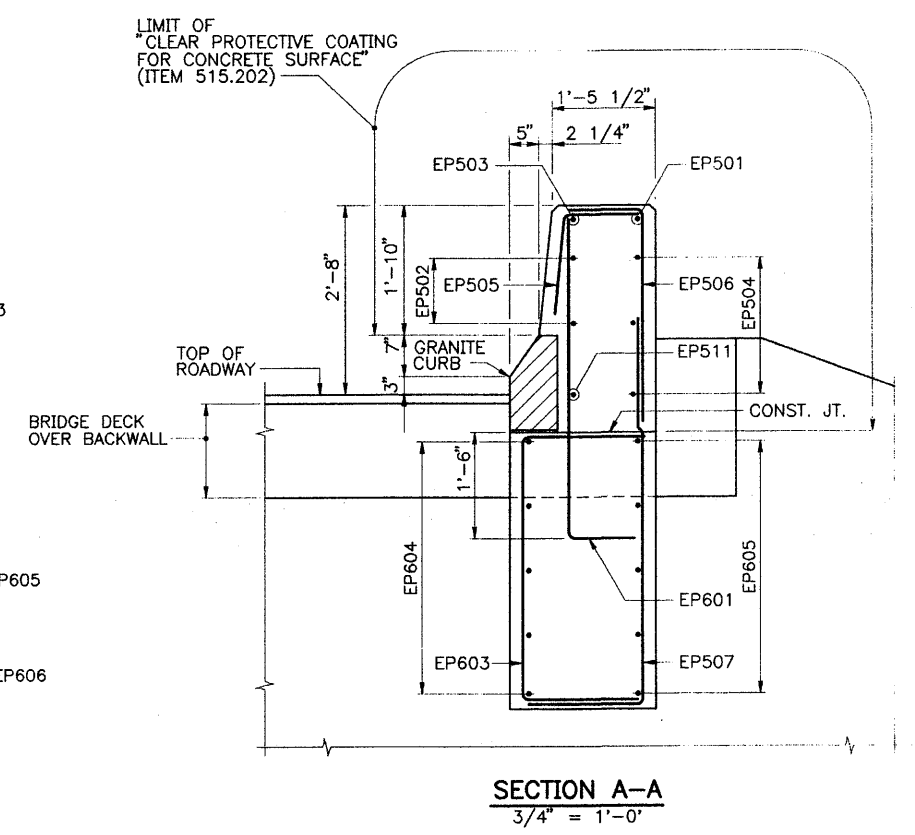


ELEVATION
3/4" = 1'-0"

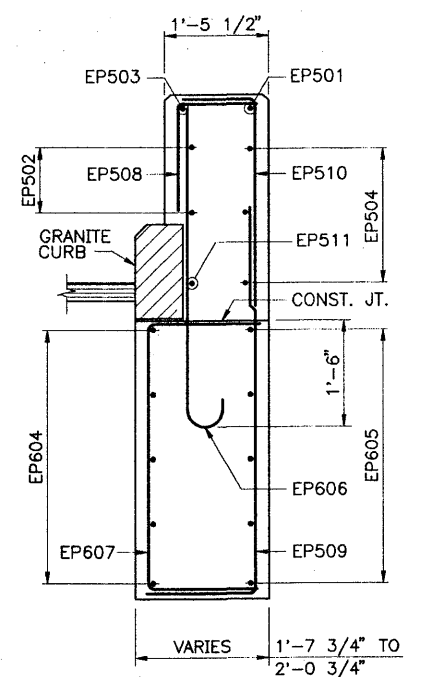
NOTES
1. FOR TERMINAL CONNECTOR ANCHORAGE DETAIL, SEE SHEET MD-C3.



ELEVATION REINFORCEMENT
3/4" = 1'-0"



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



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

M:\09009\002\117\SSEP18M.DWG 12/29/99 07:54

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

	By	Date	Checked	By	Date
Designed	KAC	11/99	Checked	SHR	11/99
Drawn	LS	11/99	In Charge of	RAL	11/99

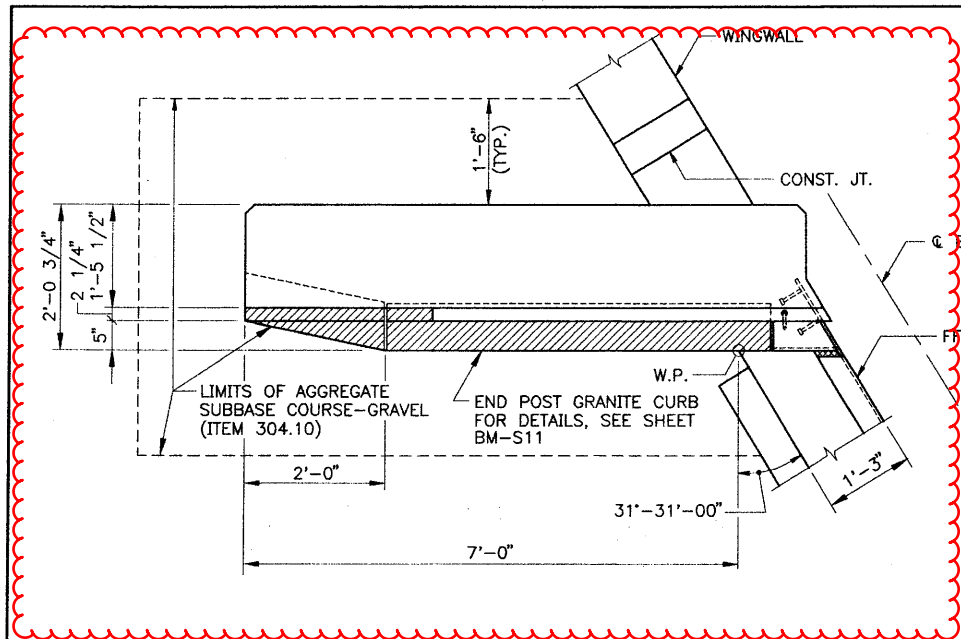
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

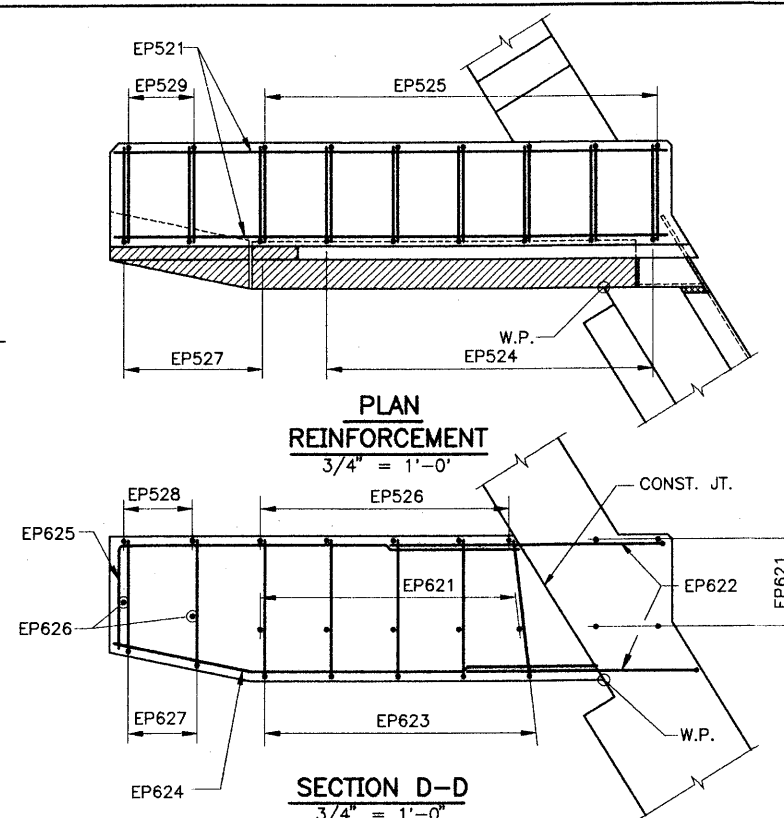
**MAINLINE BRIDGE WIDENING
B&M RAILROAD OVERPASS
END POST DETAILS I**

SHEET NUMBER: **BM-S11**
80 OF 178

CONTRACT: 2000.03

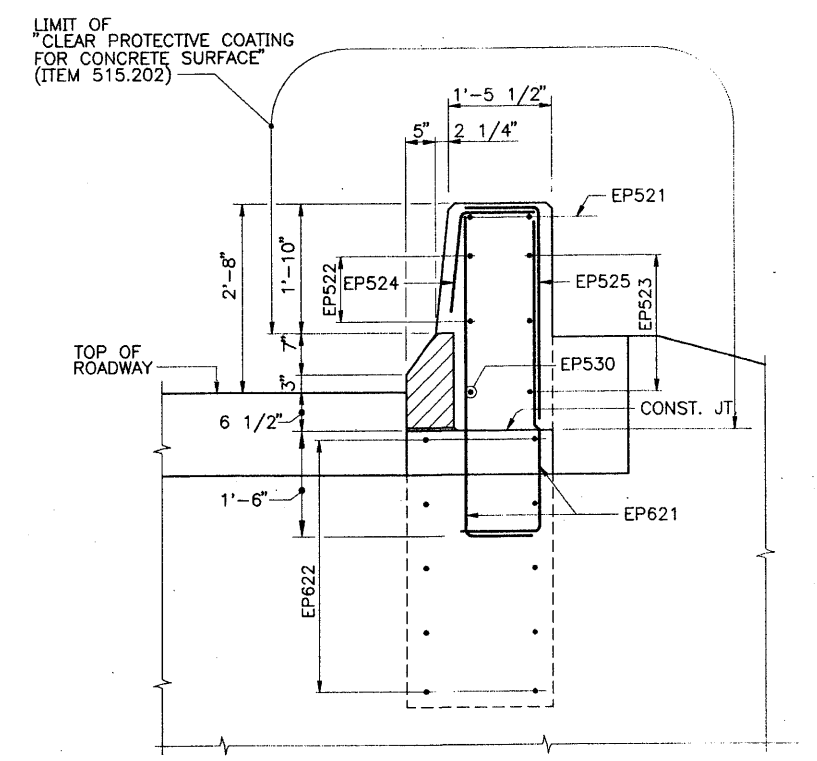


PLAN
3/4" = 1'-0"

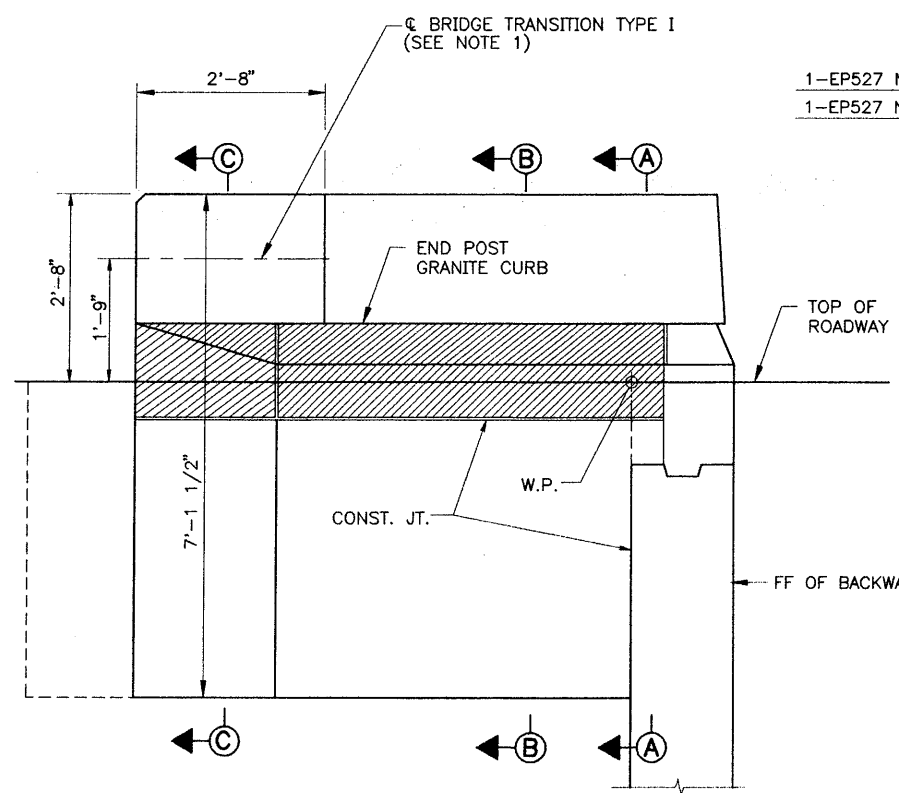


PLAN REINFORCEMENT
3/4" = 1'-0"

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

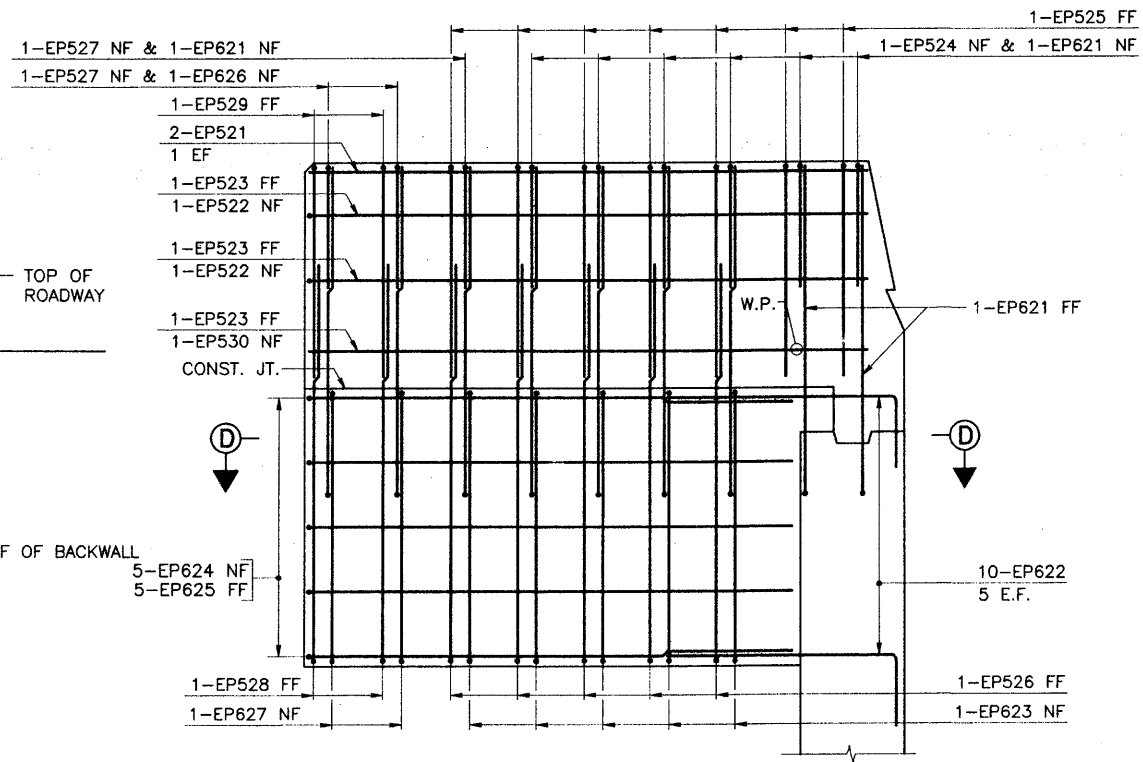


SECTION A-A
3/4" = 1'-0"

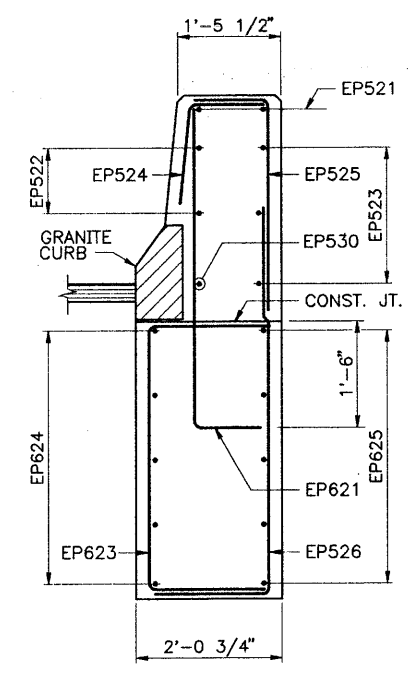


ELEVATION
3/4" = 1'-0"

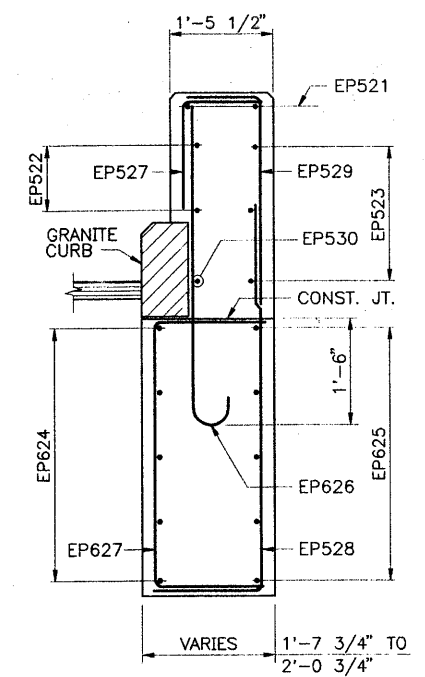
NOTES
1. FOR TERMINAL CONNECTOR ANCHORAGE DETAIL, SEE MDOT STANDARD DETAIL SHEET 606(21).



ELEVATION REINFORCEMENT
3/4" = 1'-0"



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



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

M:\09009\002\117\SSP2BM.DWG 12/29/99 07:55

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

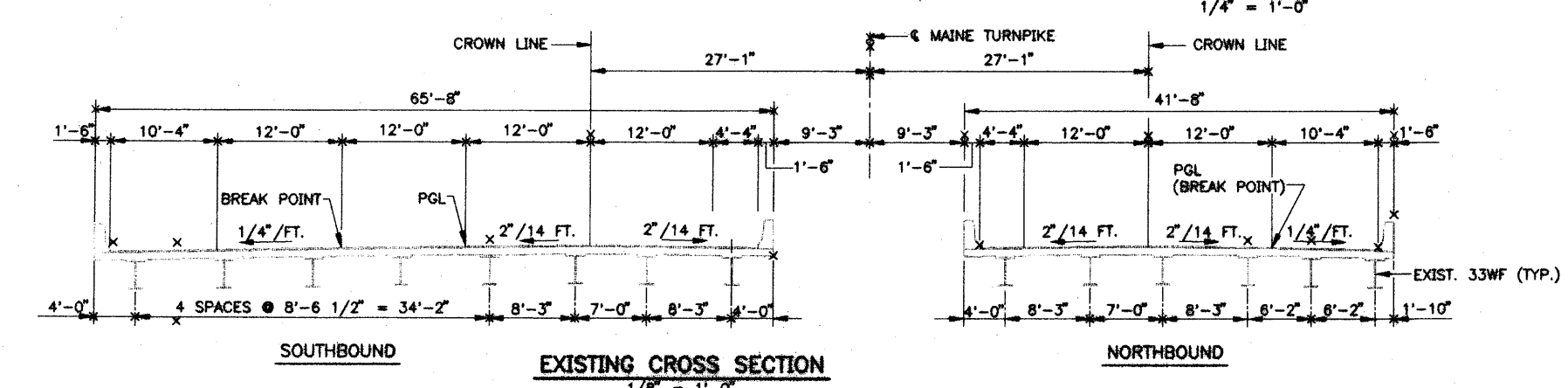
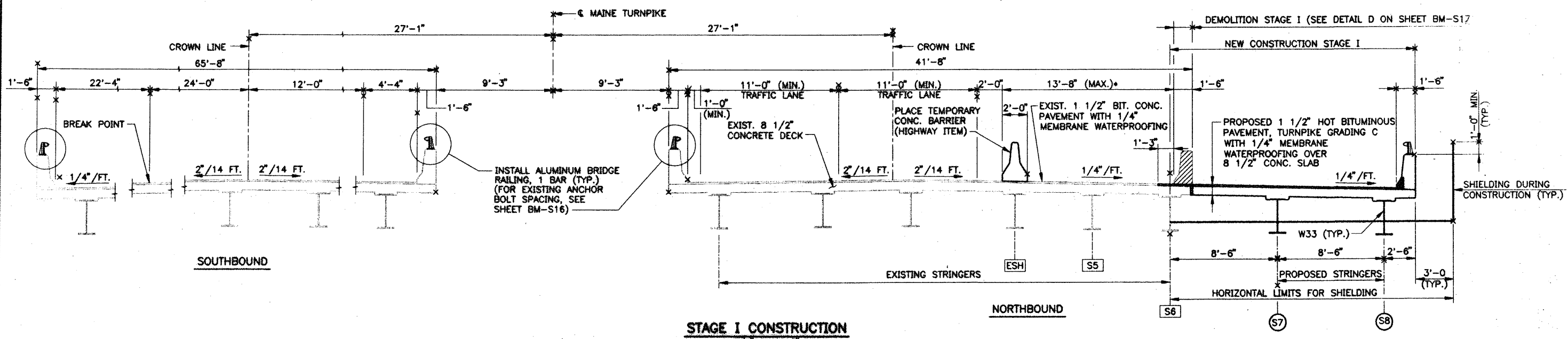
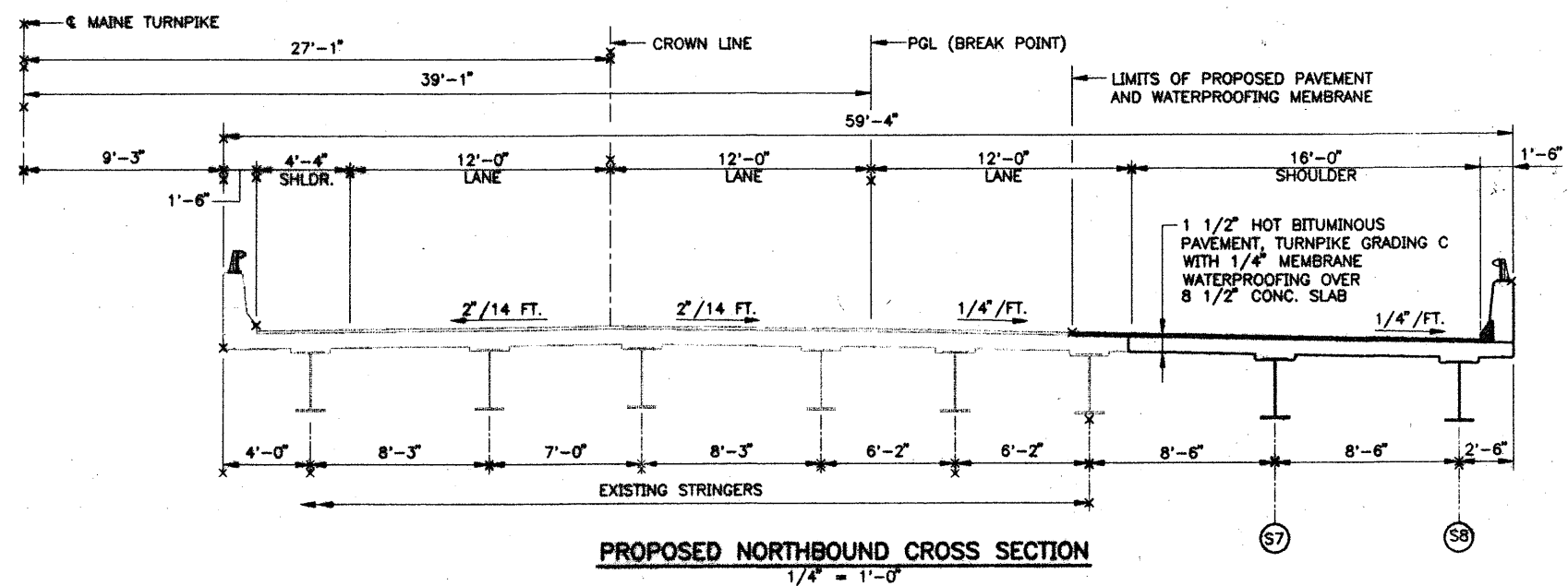
By	Date	By	Date
Designed	KAC 11/99	Checked	SHR 11/99
Drawn	LS 11/99	In Charge of	RAL 11/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
END POST DETAILS II**

SHEET NUMBER: **BM-S12**
CONTRACT: 2000.03
81 OF 178



• SEE HIGHWAY PLANS FOR ACTUAL LOCATION

NOTE
1. NORTHBOUND MEDIAN BRIDGE RAIL SHALL NOT BE INSTALLED WHILE TEMPORARY CONCRETE BARRIER AND TRAFFIC SHIFT IS IN PLACE.

M:\09009\002\117\33SEQ\BM.DWG 12/29/99 07:56

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

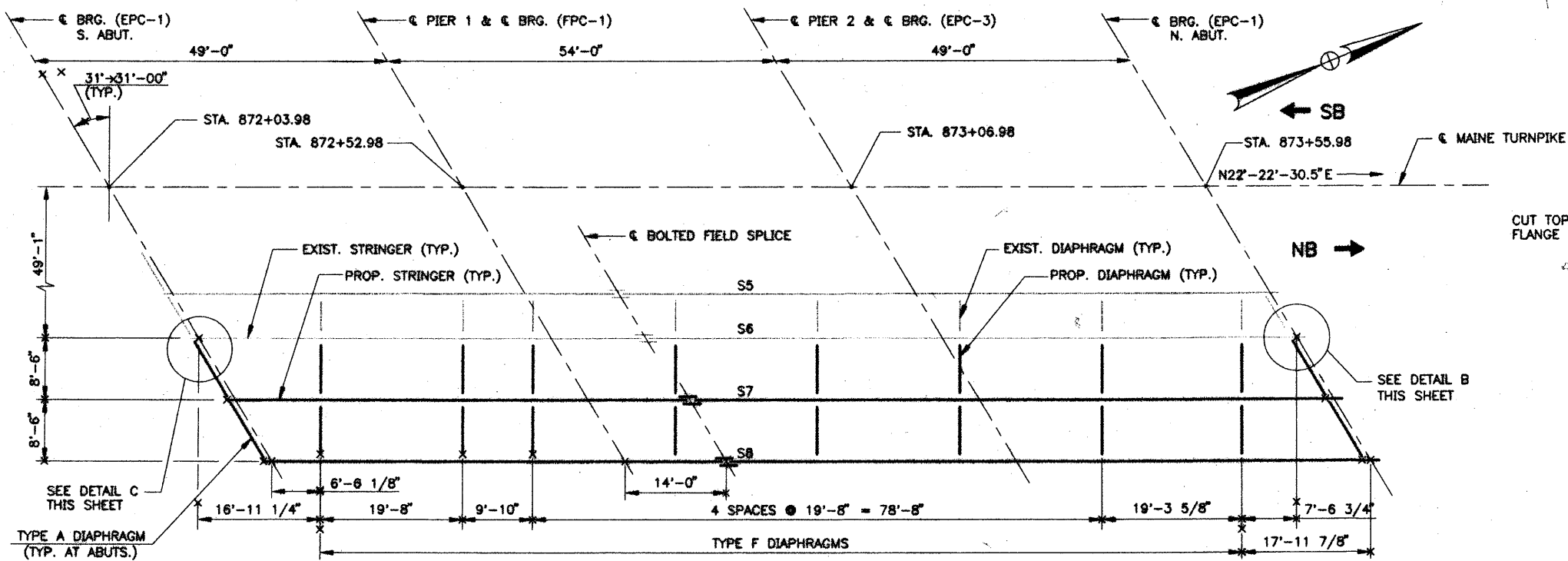
By	Date	Checked	By	Date
KAC	12/99	SJC	SJC	12/99
LS	12/99	In Charge of	RAL	12/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

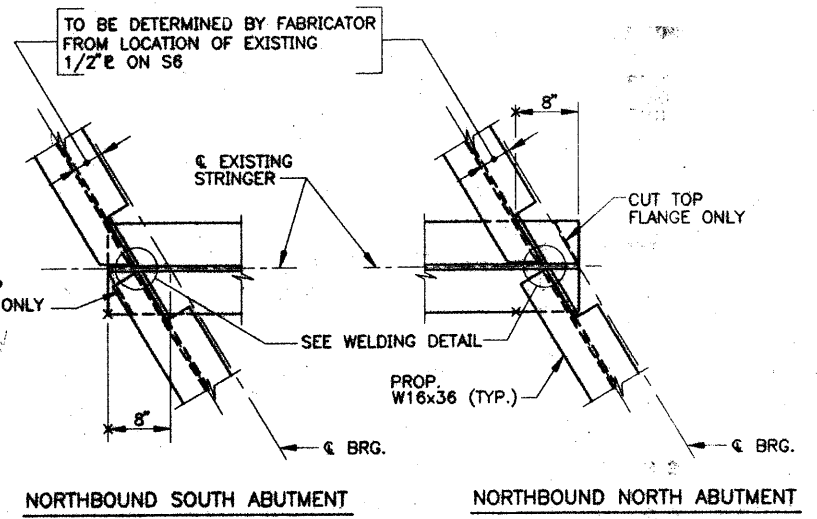
**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
DECK CONSTRUCTION SEQUENCE**

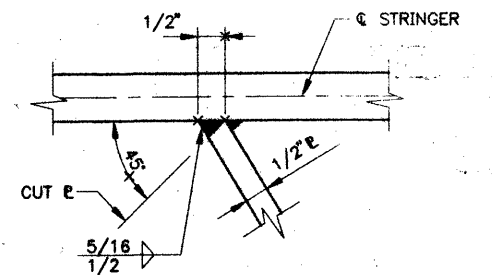
SHEET NUMBER: **BM-S13**
CONTRACT: 2000.03
82 OF 178



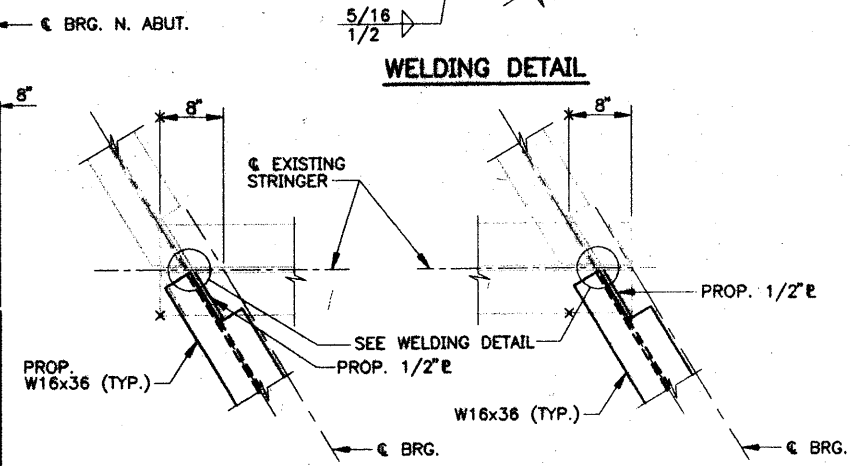
FRAMING PLAN
1" = 10'



END OF STRINGER DETAILS
1" = 1'-0"



WELDING DETAIL

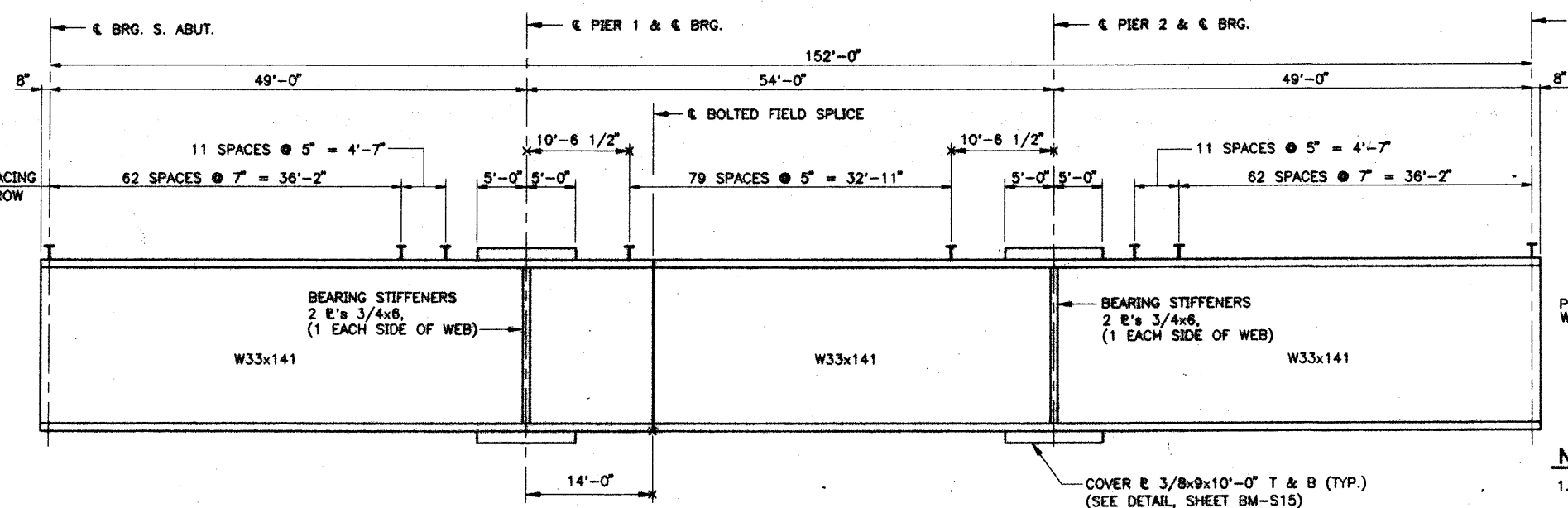


DETAIL C
1" = 1'-0"

DETAIL B
1" = 1'-0"

NOTES:

1. FOR BEARING PEDESTAL DETAILS, SEE STANDARD DETAIL SHEET NO. BD 101-89 FROM CONTRACT 93.7 PLANS. EIGHT (8) PEDESTALS ARE REQUIRED AND SPECIFIED ON THE FRAMING PLAN. PAYMENT FOR FURNISHING AND INSTALLING BEARING PEDESTALS SHALL BE INCIDENTAL TO ITEM 504.7012 AND ITEM 504.712.
2. FOR ARMORED JOINT, SEE SHEETS BM-S21 AND BM-S22.
3. ALL BOLTS TO BE 7/8" H.S. BOLTS IN 15/16" HOLES.
4. FOR BOLTED FIELD SPLICE AND COVER PLATE DETAILS, SEE SHEET BM-S15.
5. FOR SHEAR CONNECTOR DETAILS, SEE MDOT STANDARD SHEET 505(1).
6. FOR ADDITIONAL DIAPHRAGM DETAILS, SEE SHEET BM-S15 AND STANDARD DETAIL SHEET NO. BD 112-89 FROM CONTRACT-93.7 PLANS.
7. ALL DIAPHRAGM BOLTED CONNECTIONS SHALL BE MADE AFTER STAGE I IS LOADED.



TYPICAL STRINGER ELEVATION*
NO SCALE

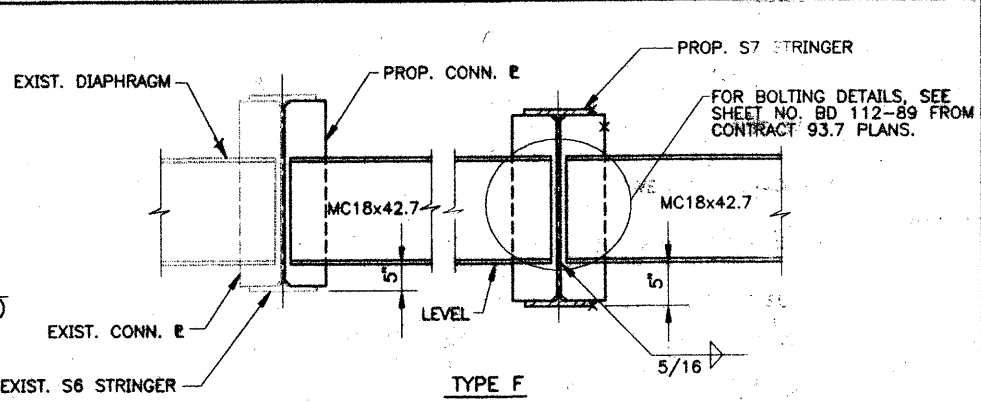
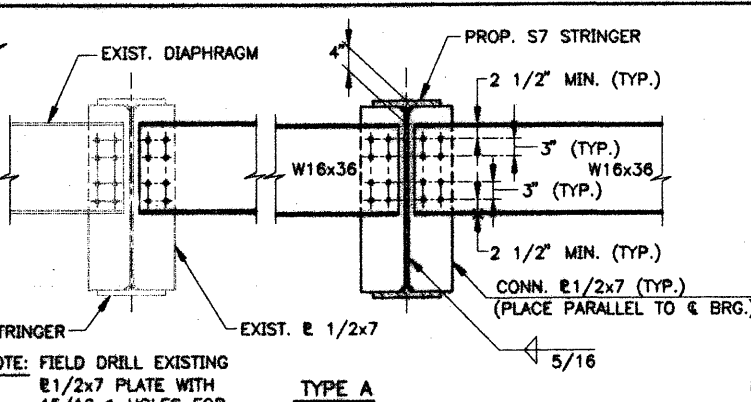
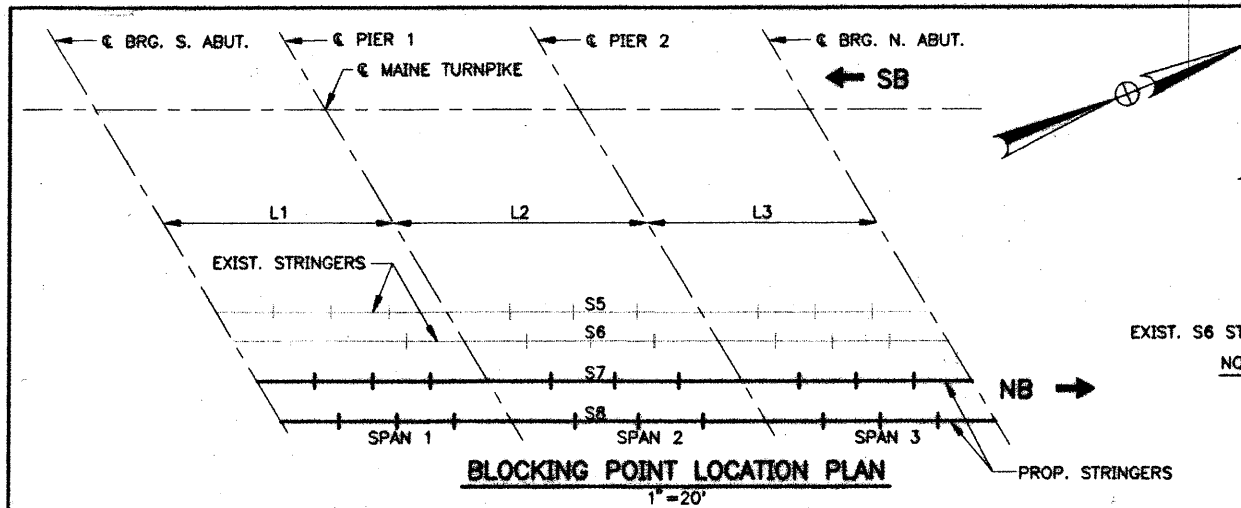
* STRINGERS S7 & S8

DIAPHRAGM NOTE:

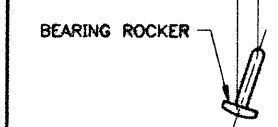
THE INTENT OF THE DIAPHRAGM SPACING SHOWN IS TO MATCH THAT IN THE EXISTING BRIDGE SO AS TO MAKE USE OF THE CONNECTION PLATES ON THE EXISTING STRINGERS. BEFORE FABRICATION THE CONTRACTOR SHALL VERIFY BY FIELD MEASUREMENTS, THE ACTUAL LOCATION OF THE EXISTING CONNECTION PLATES.

M:\09009\002\117\STFRMPLN.DWG 12/29/99 07:57

Scale: AS NOTED		Designed by:		 HNTB CORPORATION 2 Thomas Drive Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 772-7410		MAINE TURNPIKE AUTHORITY MODERNIZATION AND WIDENING PROJECT 		MAINLINE BRIDGE WIDENING B & M RAILROAD OVERPASS FRAMING PLAN & DETAILS																																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision			By	Date													<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>Checked</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>KAC</td> <td>12/99</td> <td>SJC</td> <td>12/99</td> </tr> <tr> <td>Drawn</td> <td>LS</td> <td>12/99</td> <td>In Charge of</td> <td>RAL</td> <td>12/99</td> </tr> </tbody> </table>		By	Date	Checked	By	Date	Designed	KAC	12/99	SJC	12/99	Drawn	LS	12/99	In Charge of	RAL	12/99	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>KAC</td> </tr> <tr> <td>Checked</td> <td>SJC</td> </tr> <tr> <td>By</td> <td>RAL</td> </tr> <tr> <td>Date</td> <td>12/99</td> </tr> </tbody> </table>		By	Date	Designed	KAC	Checked	SJC	By	RAL	Date	12/99
No.	Revision	By	Date																																														
By	Date	Checked	By	Date																																													
Designed	KAC	12/99	SJC	12/99																																													
Drawn	LS	12/99	In Charge of	RAL	12/99																																												
By	Date																																																
Designed	KAC																																																
Checked	SJC																																																
By	RAL																																																
Date	12/99																																																

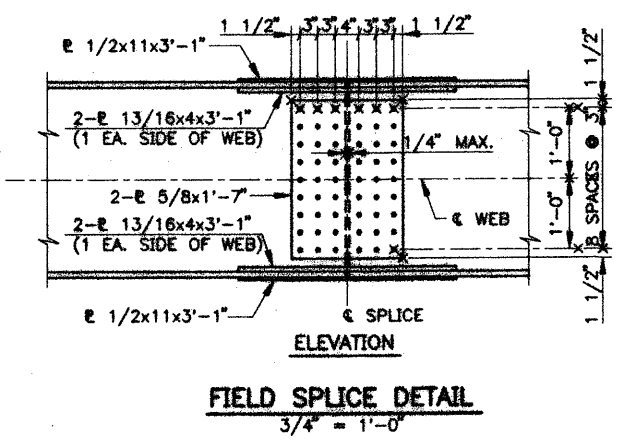
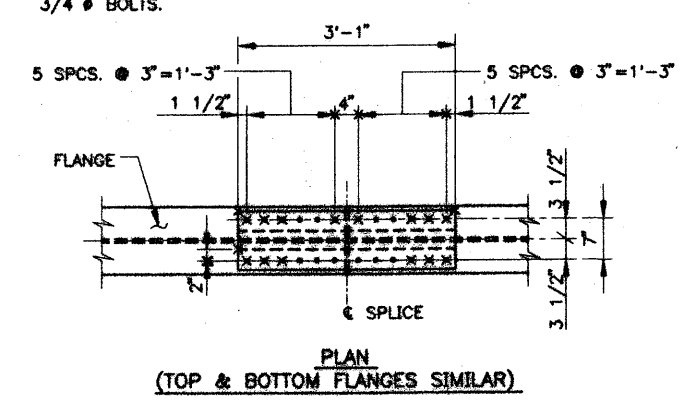
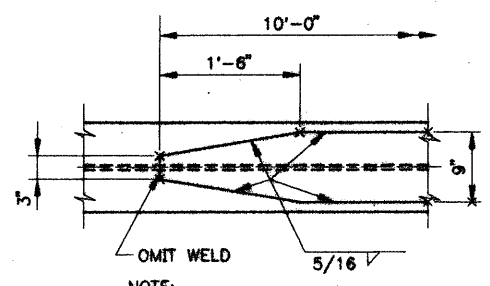
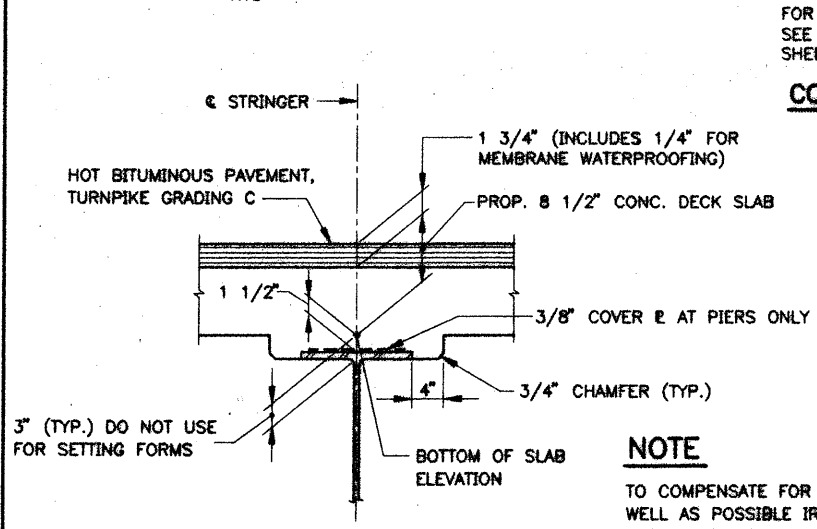


SETTING CORRECTION
 0.038" PER 10' F TEMP. CHANGE (S. ABUT.)
 0.042" PER 10' F TEMP. CHANGE (PIER 2)
 0.080" PER 10' F TEMP. CHANGE (N. ABUT.)

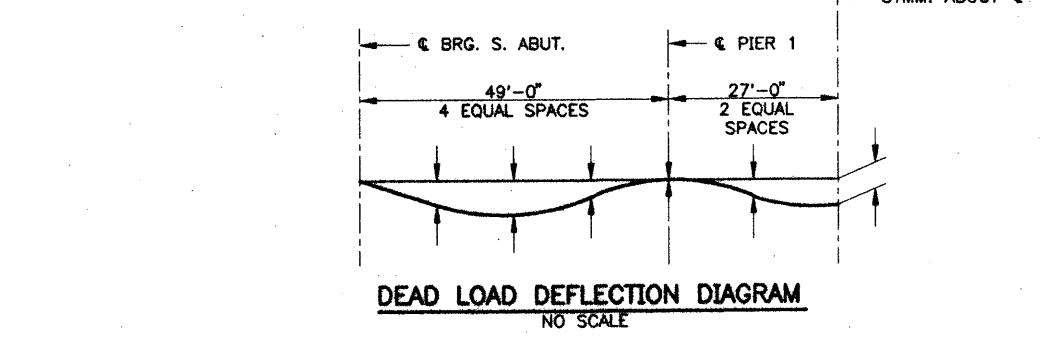
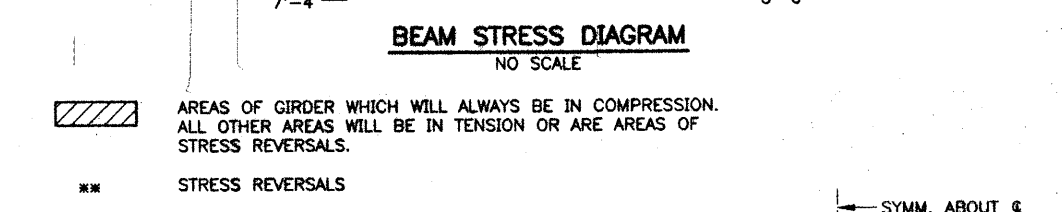
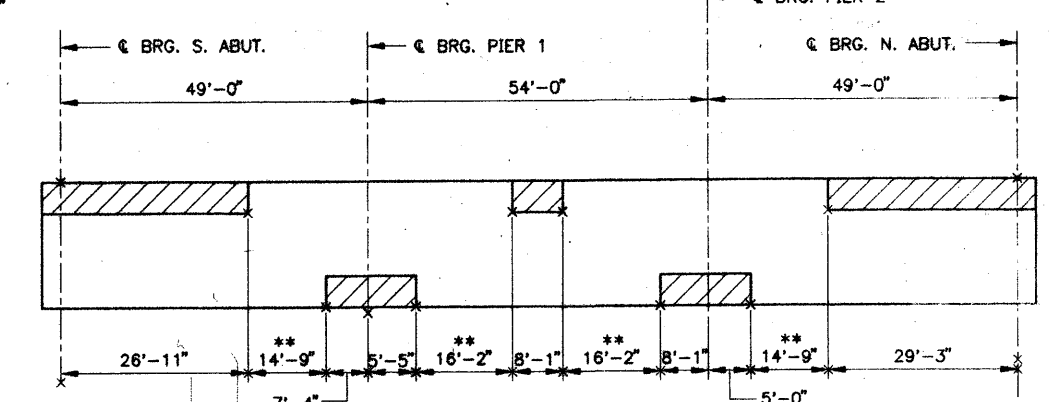


- EXPANSION BEARING NOTES:**
1. ROCKERS TO BE VERTICAL AT 45° F.
 2. TEMPERATURE RISE, TILT ROCKERS AWAY FROM PIER 1.
 3. TEMPERATURE FALL, TILT ROCKERS TOWARD PIER 1.

EXPANSION BEARING SETTING
NTS



DIAPHRAGM DETAILS
3/4" = 1'-0"



BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS

STRINGER NO.	C BRG. S. ABUT.	SPAN 1			C PIER 1	SPAN 2			C PIER 2	SPAN 3			C BRG. N. ABUT.
		.25 L1	.50 L1	.75 L1		.25 L2	.50 L2	.75 L2		.25 L3	.50 L3	.75 L3	
S7	155.07	154.95	154.84	154.75	154.65	154.52	154.37	154.23	154.08	153.91	153.75	153.59	153.45
S8	154.85	154.73	154.63	154.53	154.42	154.29	154.14	153.99	153.84	153.67	153.50	153.35	153.19

DEAD LOAD DEFLECTIONS

STRINGER NO.	TYPE	SPAN 1			SPAN 2			
		S. ABUT.	.25 L1	.50 L1	.75 L1	C PIER 1	.25 L2	.50 L2
S7 & S8	STEEL	0"	1/16"	1/16"	0"	0"	0"	
	ALL OTHER	0"	1/4"	5/16"	3/16"	0"	1/16"	1/8"
	TOTAL	0"	5/16"	3/8"	3/16"	0"	1/16"	1/8"

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

By	Date	Checked	By	Date
KAC	12/99	SJC	SJC	12/99
LS	12/99		RAL	12/99

HNTB CORPORATION
 2 Thomas Drive
 Westbrook, ME 04092
 TEL (207) 774-5155
 FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

Transpass

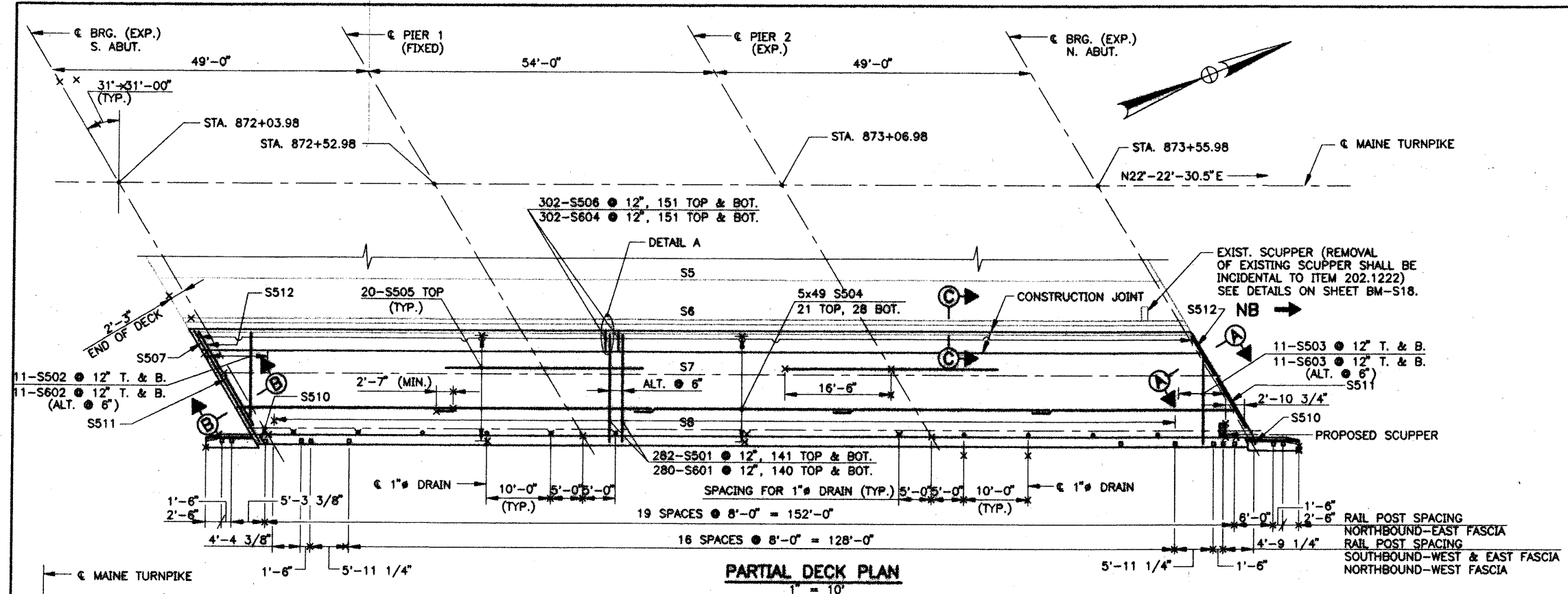
MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
BLOCKING POINTS & STEEL DETAILS

SHEET NUMBER: **BM-S15**
 CONTRACT: 2000.03
 84 OF 178

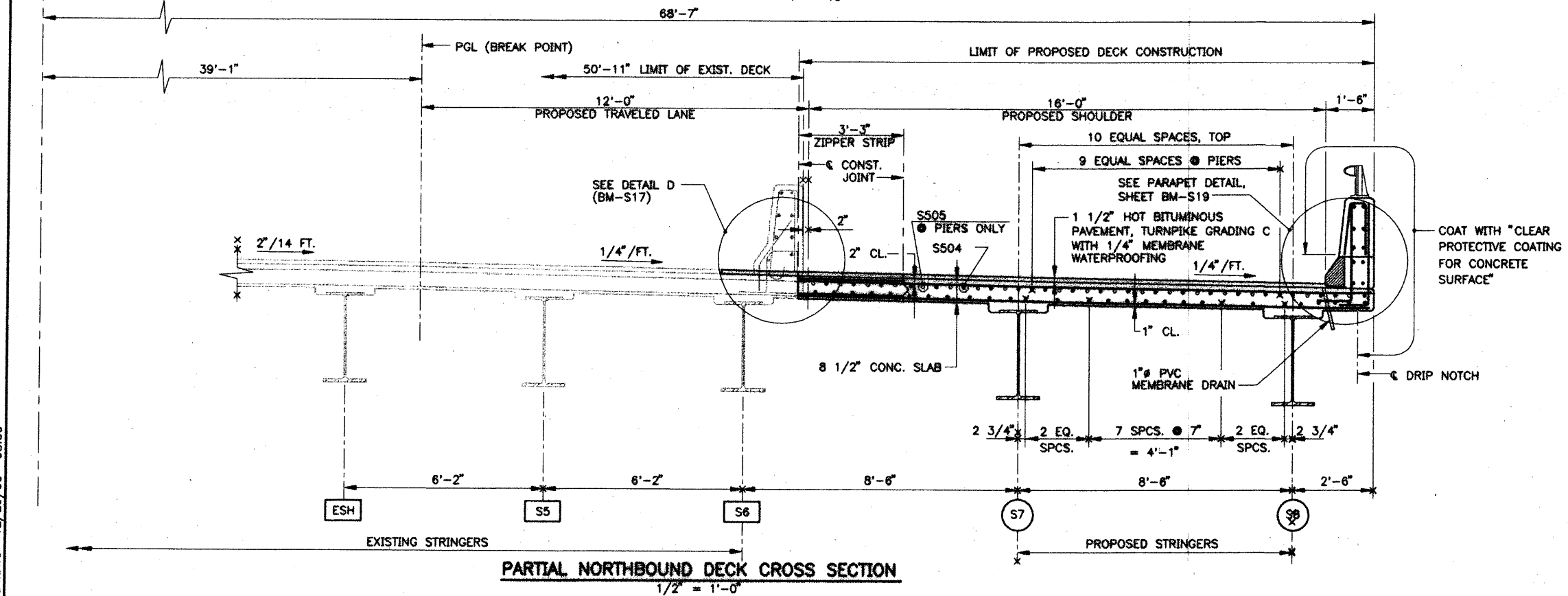
M:\09009\002\117\66STLDET.DWG 12/29/99 07:58

SUPERSTRUCTURE NOTES

1. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4", UNLESS OTHERWISE NOTED.
2. REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 2", UNLESS OTHERWISE NOTED.
3. MORTAR FOR BEDDING AND FOR JOINTS IN THE GRANITE CURB SHALL CONTAIN A NON-SHRINK ADDITIVE.
4. CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE SHALL BE APPLIED TO THE FOLLOWING AREAS: PARAPET SURFACES, FASCIA DOWN TO DRIP NOTCH AND ALL EXPOSED CONCRETE SURFACES ON THE END POSTS.
5. FOR 1-BAR ALUMINUM BRIDGE RAIL DETAILS, SEE SHEET BM-S20.
6. IF THE SLAB PLACEMENT HAS TO BE TERMINATED, THE TERMINATION POINT MUST BE AT THE POINTS INDICATED IN THE PLACEMENT DETAILS, SHOWN ON SHEET BM-S17.
7. ADJUST REINFORCING STEEL TO FIT AROUND THE SCUPPER IN A MANNER APPROVED BY THE ENGINEER. DO NOT CUT TRANSVERSE REINFORCING BARS. CUT LONGITUDINAL REINFORCING STEEL IN THE FIELD TO SUIT, THEN EPOXY-COAT CUT ENDS.
8. FOR REINFORCING STEEL SCHEDULE, SEE SHEET BM-S24.
9. FOR SCUPPER AND DRAIN DETAILS, SEE SHEETS BM-S18 AND BM-S19 RESPECTIVELY.
10. FOR SLAB DETAILS, SEE SHEET BM-S17.
11. FOR ROADWAY EXPANSION JOINT DETAILS, SEE SHEETS BM-S21 AND BM-S22.
12. THE CONCRETE DECK SHALL BE GIVEN A SMOOTH BULL FLOAT OR WOOD FLOAT FINISH.
13. FOR SECTIONS A-A, B-B AND C-C AND DETAILS A AND D, SEE SHEET BM-S17.
14. GRANITE CURB JOINTS SHALL LINE UP WITH PARAFFIN AND DUMMY JOINTS.
15. FOR FUTURE REINFORCING STEEL DETAIL, SEE SHEET BM-S17.
16. ALL BRIDGE PARAPET CONCRETE, INCLUDING INSIDE FACE, TOP AND OUTSIDE FACE, END POSTS AND DECK FASCIA SHALL HAVE A RUBBED FINISHED PRIOR TO THE APPLICATION OF THE CLEAR PROTECTIVE COATING FOR CONCRETE SURFACE.
17. THE AUTHORITY'S PERSONNEL SHALL PROFILE THE TOP OF ALL PROPOSED STRINGERS BEFORE THE FORMWORK IS STARTED AND SHALL SUPPLY THE CONTRACTOR WITH FINAL BOTTOM OF SLAB ELEVATIONS. TEN (10) DAYS SHALL BE ALLOWED FOR THE BLOCKING POINT TURN AROUND TIME.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING FIELD MEASUREMENTS TO ASSURE LOCATION AND ORIENTATION OF EXISTING ANCHOR BOLTS AND PROVIDE ON SHOP DRAWINGS PRIOR TO FABRICATION OF RAIL. COST OF STRAIGHTENING BENT BOLTS SHALL BE CONSIDERED INCIDENTAL TO ITEM 507.0912.
19. CONTRACTOR SHALL HAVE THE OPTION OF USING PRECAST CONCRETE DECK PANELS AS AN ALTERNATIVE FROM THE CONCRETE SLAB DETAILS SHOWN ON THE CONTRACT PLANS. THE REQUIREMENTS SHOWN ON PAGES 502(7)-502(12) OF THE MDOT STANDARD DETAILS SHALL APPLY. ALSO, THE DESIGN MUST MEET THE SATISFACTION OF THE ENGINEER AND THE RESPECTIVE SHOP DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
20. ZIPPER STRIP CONCRETE SHALL BE PLACED LAST IN STAGE I DECK CONSTRUCTION.



PARTIAL DECK PLAN
1" = 10'



PARTIAL NORTHBOUND DECK CROSS SECTION
1/2" = 1'-0"

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

Designed	By	Date	Checked	By	Date
	KAC	12/99		SJC	12/99
Drawn	LS	12/99	In Charge of	RAL	12/99

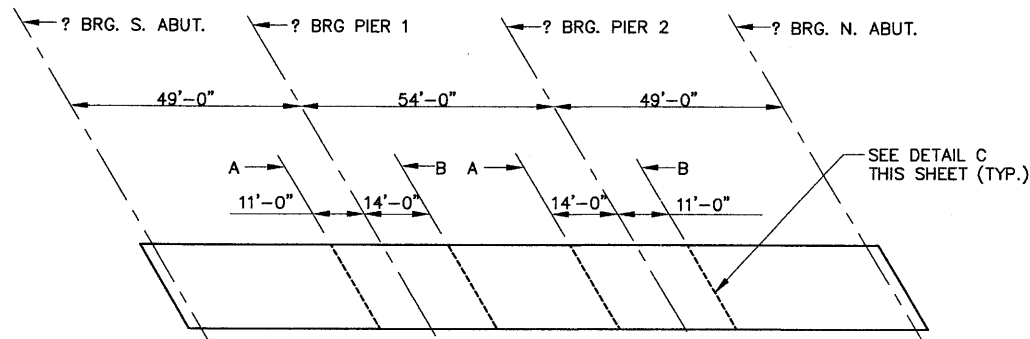
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
DECK PLAN & SECTION**

SHEET NUMBER: **BM-S16**
CONTRACT: 2000.03
85 OF 178

M:\09009\002\117\SDCKPLN.DWG 12/29/99 08:00



NOTES:

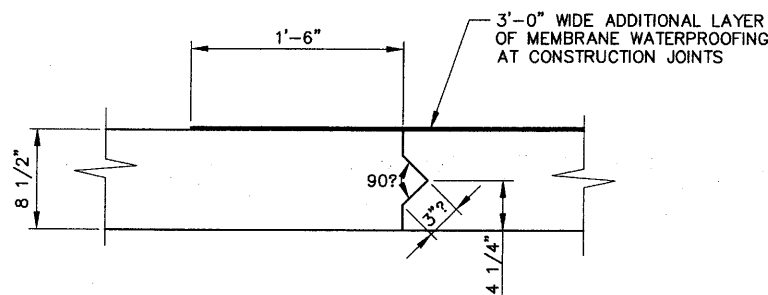
1. THE SUPERSTRUCTURE SLAB CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION AND THE CONCRETE SHALL BE KEPT PLASTIC ONE COMPLETE SPAN BEHIND THE SPAN BEING PLACED.
2. IF THE SPAN PLACEMENT HAS TO BE TERMINATED, THE TERMINATION POINT MUST BE AT THE POINTS INDICATED IN THE DIAGRAMS SHOWN ON THIS SHEET.

DECK PLACEMENT DETAIL

1" = 20'

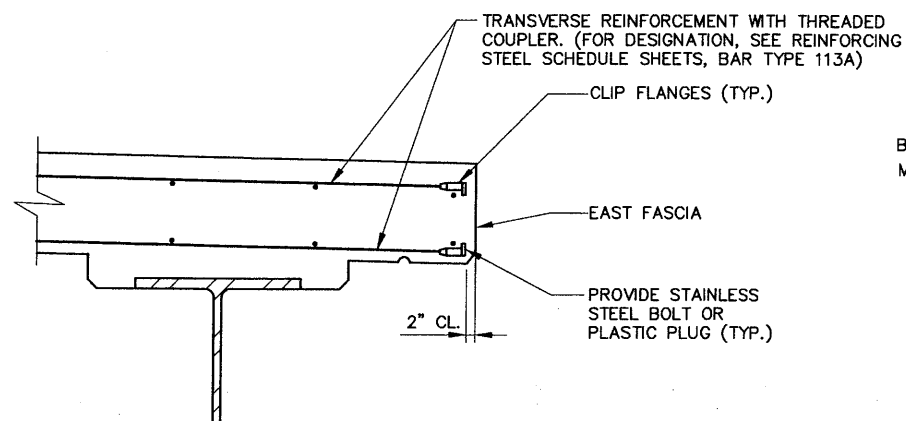
NOTES:

- A = TERMINATION POINTS WHEN PLACEMENT STARTS AT SOUTH ABUTMENT.
 B = TERMINATION POINTS WHEN PLACEMENT STARTS AT NORTH ABUTMENT.

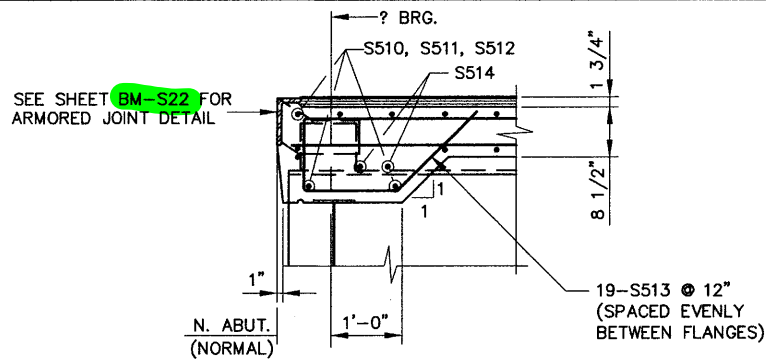


DETAIL C

1 1/2" = 1'-0"

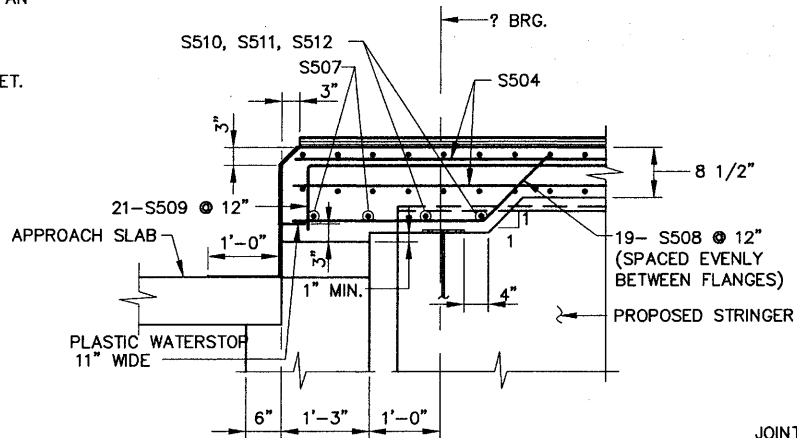


FUTURE REINFORCING STEEL DETAIL
NO SCALE



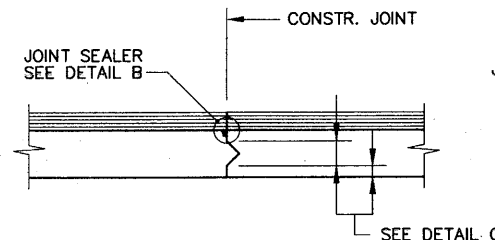
SECTION A-A

3/4" = 1'-0"



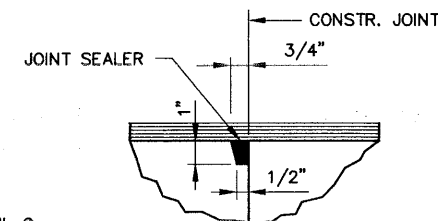
SECTION B-B

3/4" = 1'-0"



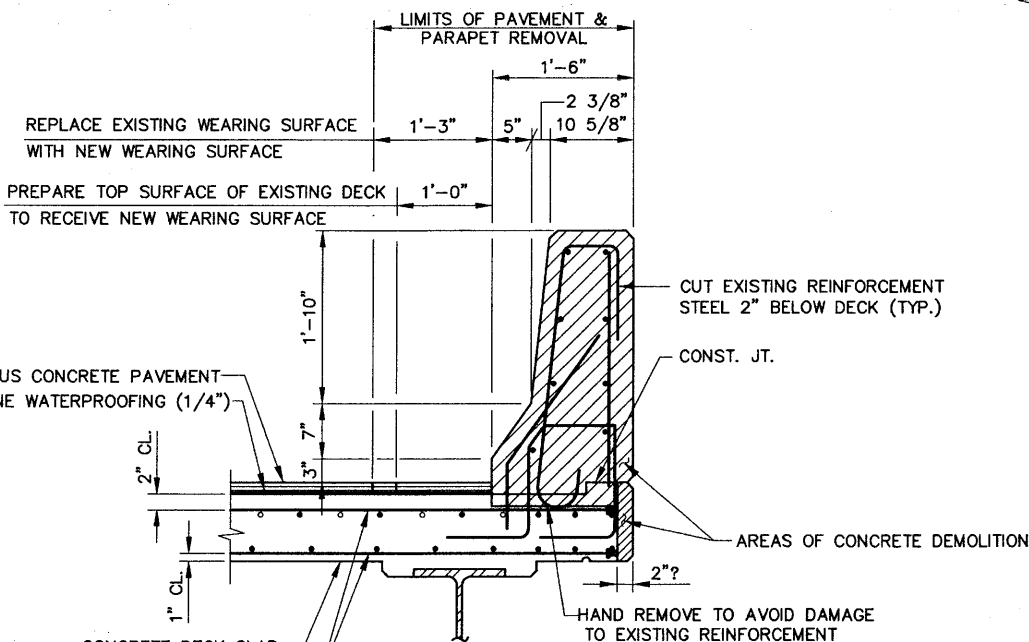
SECTION C-C

NOT TO SCALE



DETAIL B

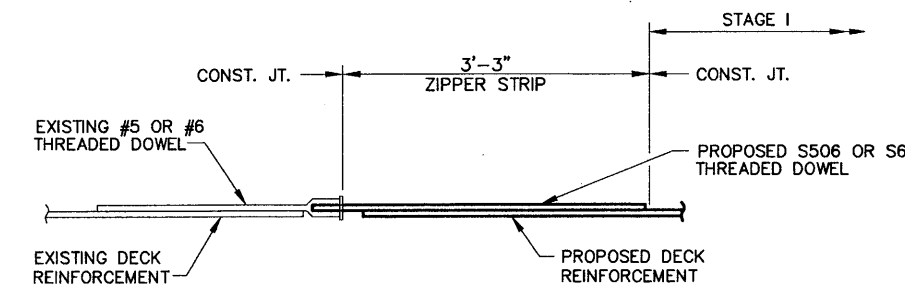
3" = 1'-0"



DETAIL D

1" = 1'-0"

NOTE:
ALL CUT REINFORCING STEEL SHALL BE COATED WITH EPOXY PAINT AND CONCRETE SURFACE AREAS, AT DEMOLITION LOCATIONS, SHALL BE COATED WITH A BONDING AGENT PRIOR TO NEW CONCRETE PLACEMENT.



DETAIL A

NOT TO SCALE

NOTES:

1. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET BM-S16.
2. FOR LOCATION OF DETAILS A AND D, SEE SHEET BM-S13.

M:\09009\002\117\SSDECK.DWG 01/04/00 09:46

Scale AS NOTED

Designed by:



ARCHITECTS ENGINEERS PLANNERS

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT



MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
SUPERSTRUCTURE DETAILS

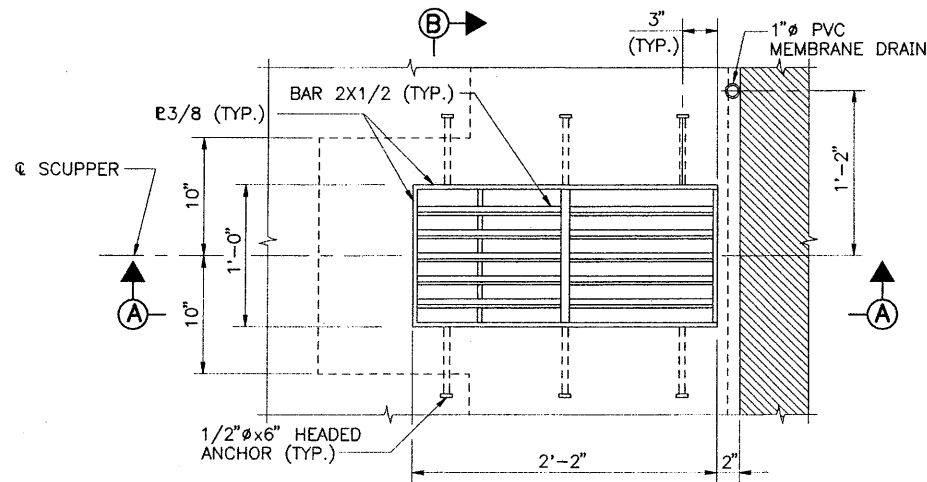
No.	Revision	By	Date

	By	Date		By	Date
Designed	KAC	11/99	Checked	SJC	11/99
Drawn	LS	11/99	In Charge of	RAL	11/99

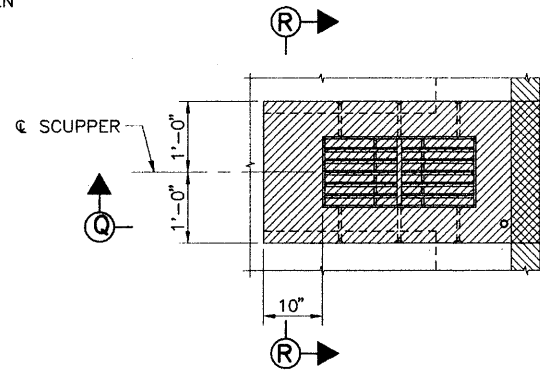
CONTRACT: 2000.03

SHEET NUMBER: BM-S17

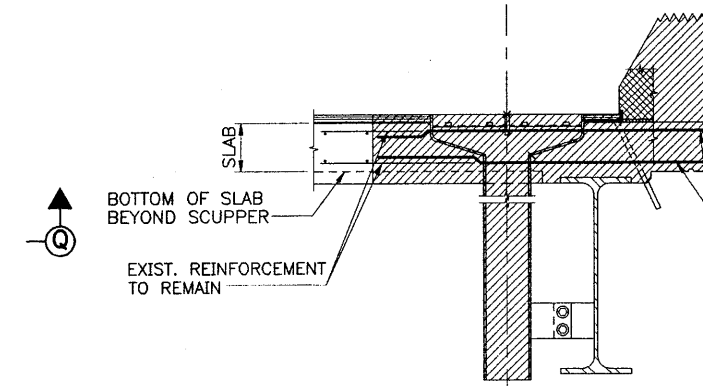
86 OF 178



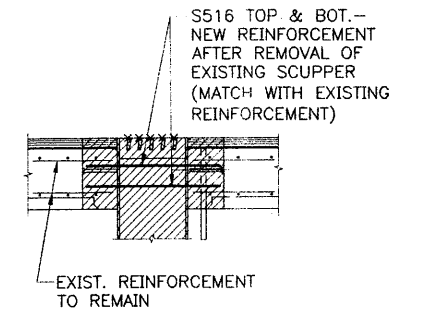
PLAN - SCUPPER
1 1/2" = 1'-0"



PLAN - LIMITS OF DECK AND SCUPPER
3/4" = 1'-0"

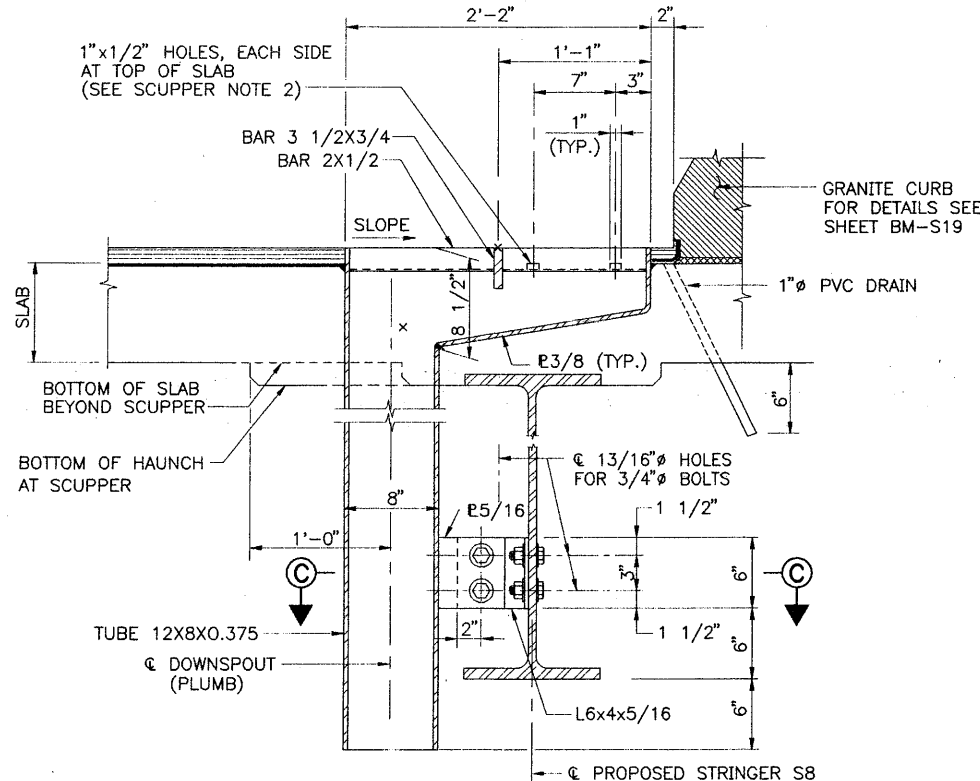


SECTION Q-Q
3/4" = 1'-0"

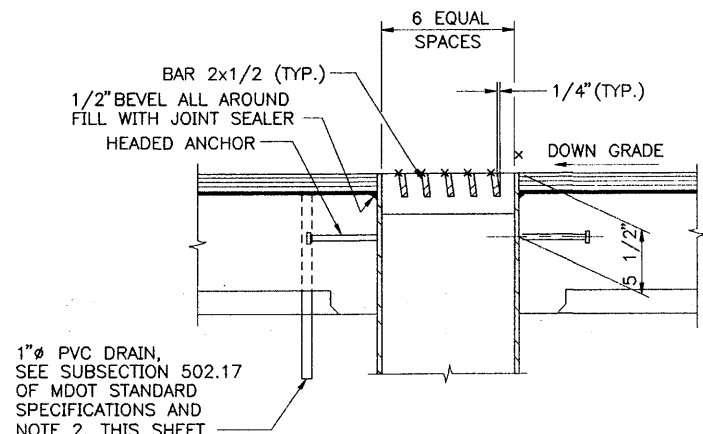


SECTION R-R
3/4" = 1'-0"

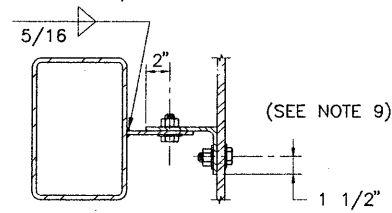
SCUPPER DEMOLITION DETAILS



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



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



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

DEMOLITION NOTE
REMOVE EXISTING CONCRETE, SCUPPER AND STEEL WITHIN HATCHED AREA.
REMOVAL OF SCUPPER SHALL BE INCIDENTAL TO ITEM 202.1222.

- SCUPPER NOTES**
- ALL WELDS SHALL BE CONTINUOUS 1/4" FILLET WELDS, EXCEPT AS NOTED.
 - 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.
 - SCUPPERS SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO ASTM A153.
 - ALL PLATES SHALL CONFORM TO AASHTO M270, GRADE 36.
 - STRUCTURAL TUBES SHALL CONFORM TO ASTM A501.
 - PAYMENT FOR SCUPPERS, PVC DRAINS AND SCREENS SHALL BE INCIDENTAL TO ITEM 502.2632.
 - FOR LOCATION OF SCUPPERS AND 1" DRAINS, SEE SHEET BM-S16.
 - FIELD REPAIR GALVANIZING WITH ZINC RICH PAINT ACCORDING TO SECTION 506 OF THE SPECIAL PROVISIONS. (PAYMENT INCIDENTAL TO ITEM 502.2632).
 - ANGLE CLIP HOLES THROUGH WEB SHALL BE FIELD DRILLED, THEN PAINTED TO THE SATISFACTION OF THE ENGINEER PRIOR TO INSTALLING BOLTS.

M:\09009\002\117\SSCUPDT.DWG 12/29/99 08:02

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

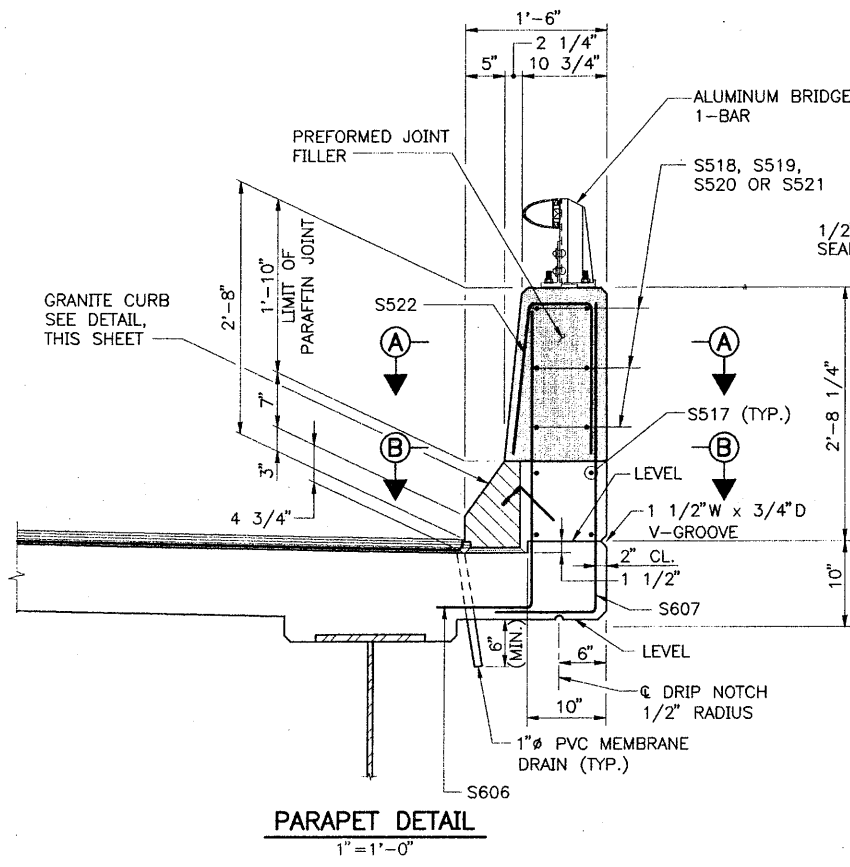
	By	Date	Checked	By	Date
Designed	KAC	11/99		SJC	11/99
Drawn	LS	11/99	In Charge of	RAL	11/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

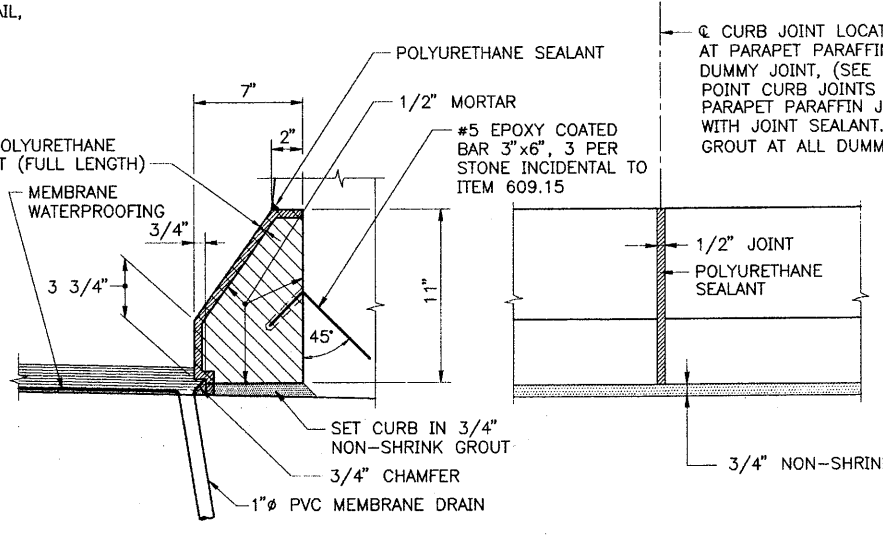
**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

**MAINELINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
SCUPPER DETAILS**

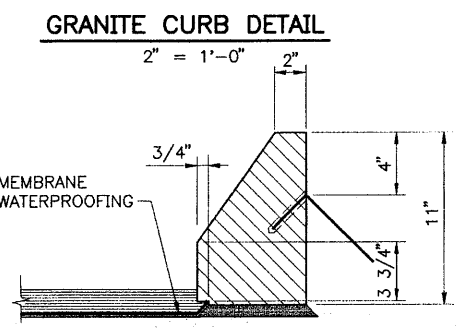
SHEET NUMBER: **BM-S18**
CONTRACT: 2000.03
87 OF 178



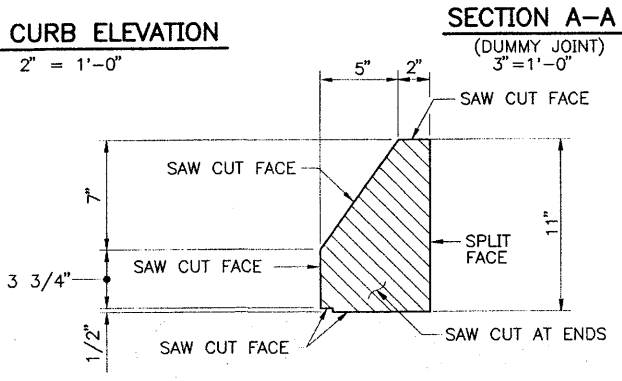
PARAPET DETAIL
1" = 1'-0"



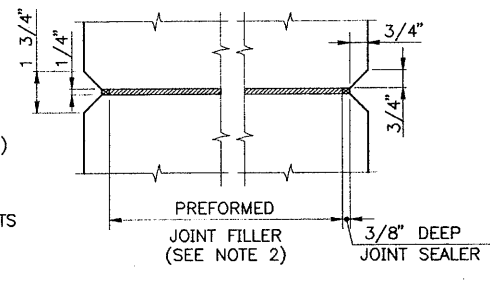
BRIDGE CURB ELEVATION
2" = 1'-0"



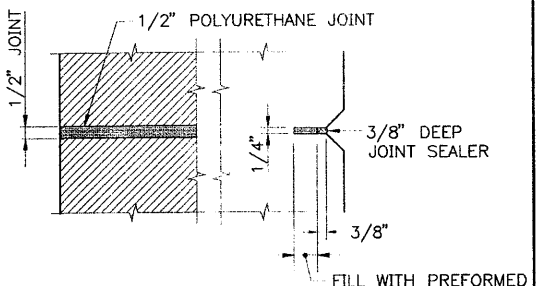
GRANITE CURB DETAIL
2" = 1'-0"



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



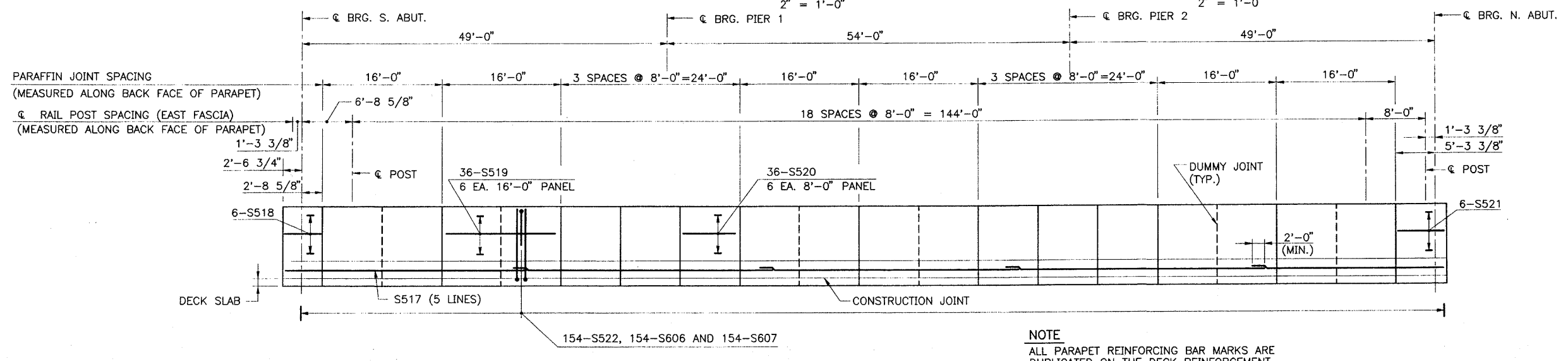
SECTION A-A (PARAFFIN JOINT)
3" = 1'-0"



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

PARAFFIN AND DUMMY JOINT NOTES

1. CONCRETE SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF JOINT. ASPHALT TYPE JOINT FILLER SHALL NOT BE USED. ONLY CERAMAR OR CORK TYPE SHALL BE PERMITTED.
2. PREFORMED JOINT FILLER SHALL CONFORM TO ASTM DESIGNATION D 1752 AND MAY BE SUPPORTED WITH A THIN STEEL PLATE. REMOVE PLATE CAREFULLY WHILE CONCRETE IS PLASTIC.
3. SECTION B-B APPLIES TO DUMMY AND PARAFFIN JOINT LOCATIONS.
4. JOINT SEALER SHALL BE SIKAFLEX 1A.
5. PREFORMED JOINT FILLER AND JOINT SEALER SHALL BE INCIDENTAL TO ITEM 502.2642, STRUCTURAL CONCRETE PARAPETS.
6. CURB JOINTS SHALL BE ALIGNED WITH PARAFFIN AND DUMMY JOINTS.



PARAPET ELEVATION
HORIZ. 1/8" = 1'-0"
VERT. 1/2" = 1'-0"

NOTE
ALL PARAPET REINFORCING BAR MARKS ARE DUPLICATED ON THE DECK REINFORCEMENT, SHEET.

M:\09009\002\117\SGPARADT.DWG 12/29/99 08:03

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

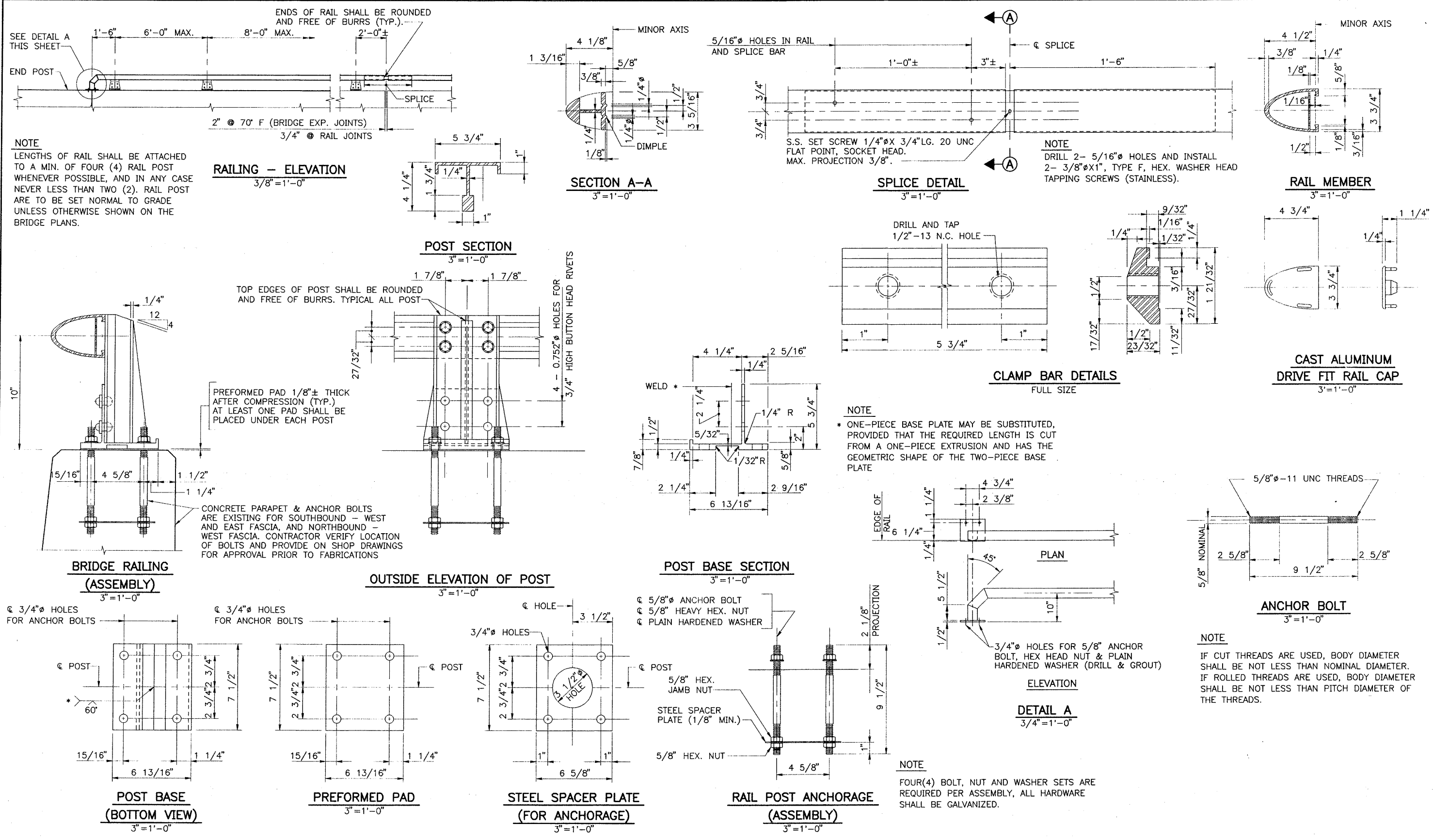
By	Date	By	Date
Designed KAC	12/99	Checked KJG	12/99
Drawn LS	12/99	In Charge of RAL	12/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

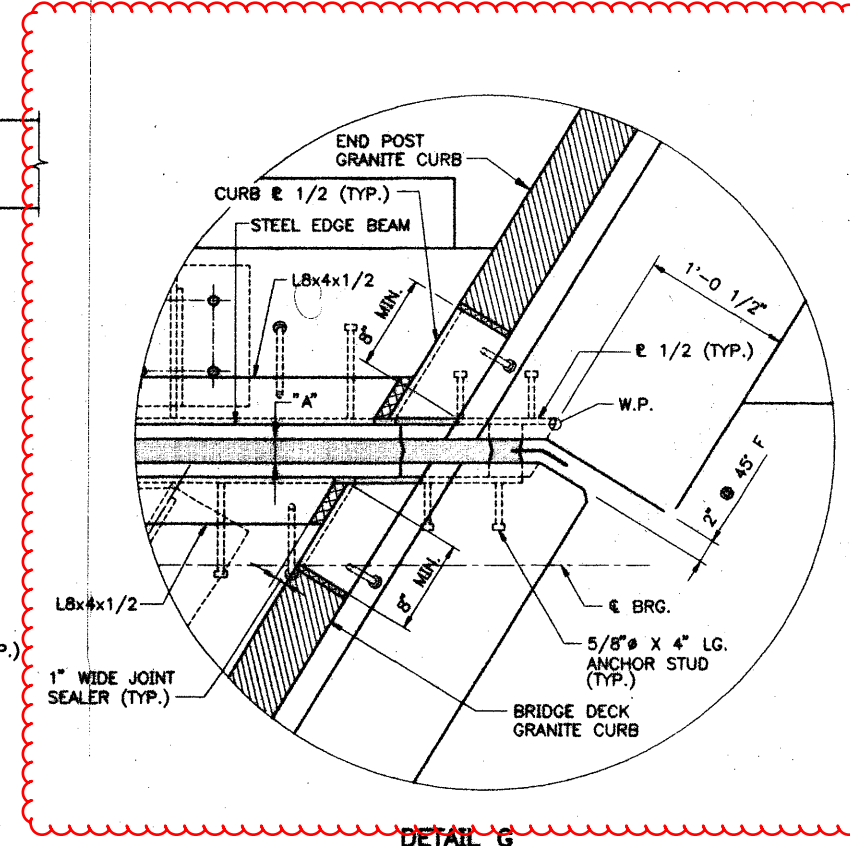
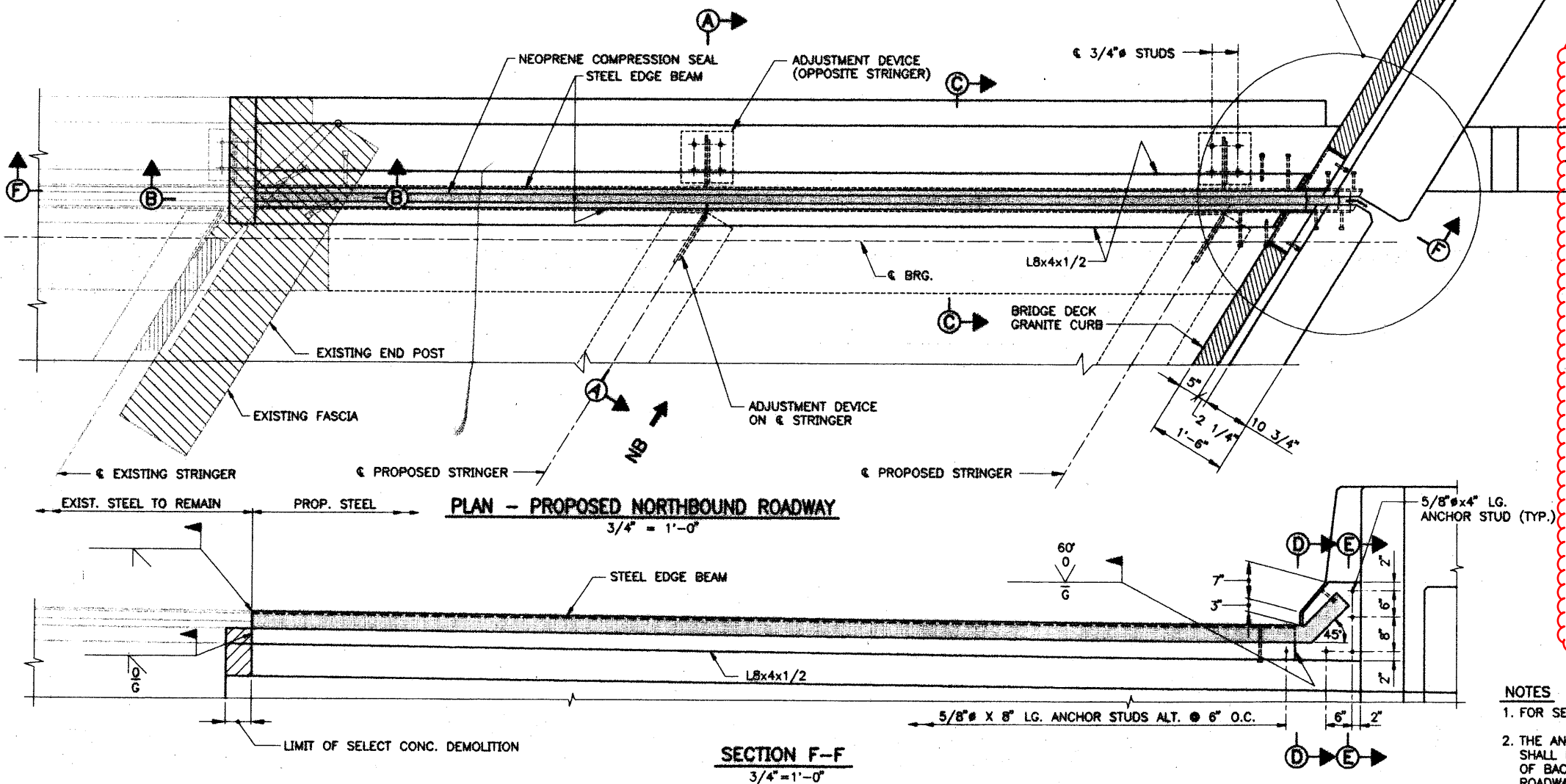
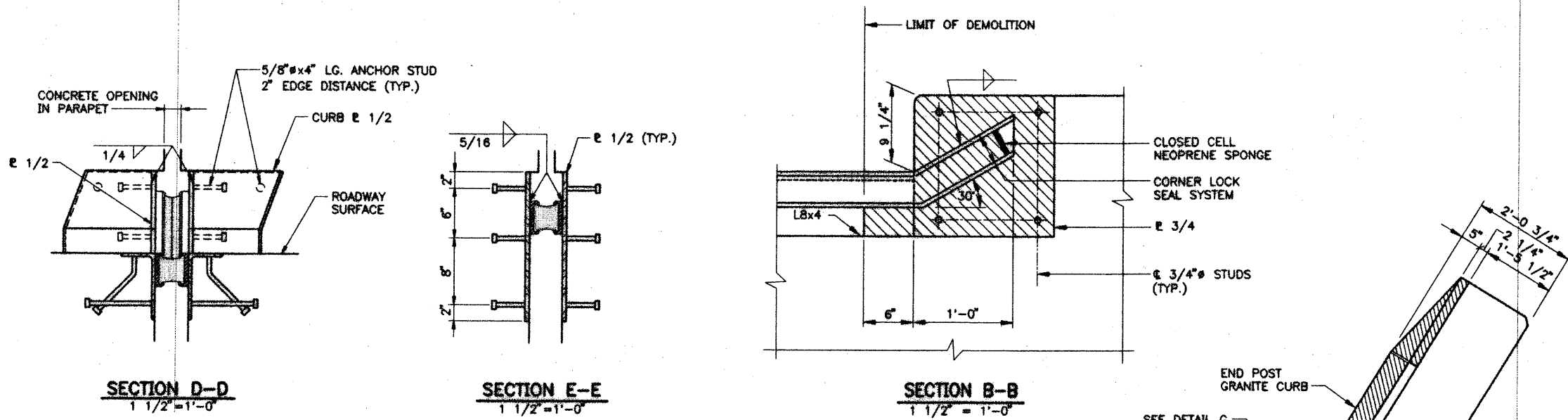
**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
PARAPET DETAILS**

SHEET NUMBER: **BM-S19**
CONTRACT: 2000.03
88 OF 178



M:\09009\002\117\SRRAIL.DWG 12/29/99 08:04

Scale: AS NOTED		Designed by:		HNTB ARCHITECTS ENGINEERS PLANNERS		HNTB CORPORATION 2 Thomas Drive Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 772-7410		MAINE TURNPIKE AUTHORITY MODERNIZATION AND WIDENING PROJECT 		MAINLINE BRIDGE WIDENING B & M RAILROAD OVERPASS ALUMINUM BRIDGE RAIL DETAILS																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		No.	Revision	By	Date													<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed KAC</td> <td>12/99</td> <td>Checked SJC</td> <td>12/99</td> </tr> <tr> <td>Drawn LS</td> <td>12/99</td> <td>In Charge of RAL</td> <td>12/99</td> </tr> </tbody> </table>		By	Date	By	Date	Designed KAC	12/99	Checked SJC	12/99	Drawn LS	12/99	In Charge of RAL	12/99					SHEET NUMBER: BM-S20	
No.	Revision	By	Date																																		
By	Date	By	Date																																		
Designed KAC	12/99	Checked SJC	12/99																																		
Drawn LS	12/99	In Charge of RAL	12/99																																		
								CONTRACT: 2000.03		89 OF 178																											



- NOTES**
1. FOR SECTIONS A-A AND C-C, SEE SHEET NO. BM-S22.
 2. THE ANGLES, L8x4x1/2, AND STEEL EDGE BEAMS SHALL BE FABRICATED BY CONFORMING TO THE TOP OF BACKWALL ELEVATIONS, FOR THE NORTHBOUND ROADWAY, SHOWN ON SHEET NO. BM-S8.

M:\09009\002\117\SSEXPEN.DWG 12/29/99 08:08

Scale: AS NOTED

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

By	Date	Checked	By	Date
KAC	12/99	SHR	SHR	12/99
LS	12/99	In Charge of	RAL	12/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

**MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT**

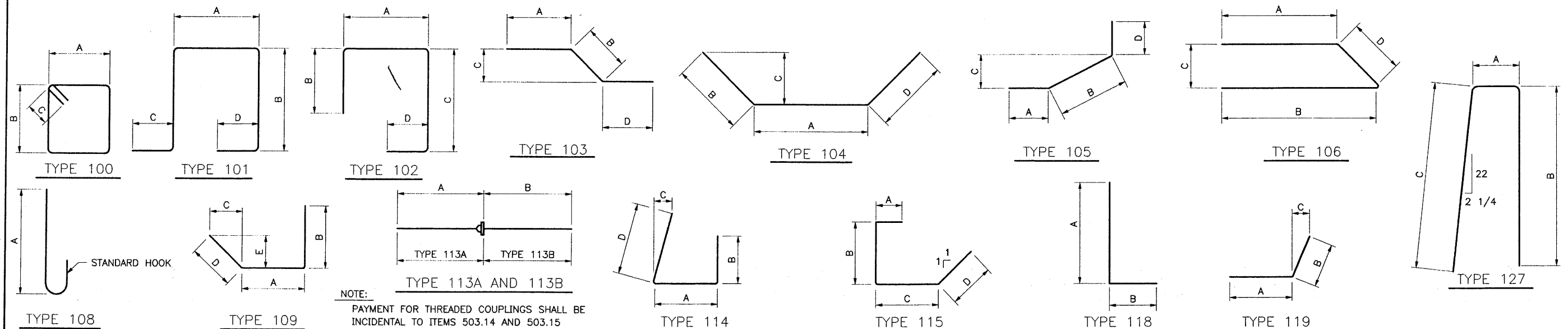
**MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
NORTH ABUTMENT EXPANSION JOINT DETAILS I**

SHEET NUMBER: **BM-S21**
CONTRACT: **2000.03**
90 OF 178

MARK	SIZE	NO	LENGTH		TYPE	A		B		C		D		INCR.	REMARKS
			FT	IN		FT	IN	FT	IN	FT	IN				
SOUTH ABUTMENT															
B401	4	4	16	- 8	STR										BACKWALL HORIZ.
B402	4	4	21	- 5	STR										BACKWALL HORIZ.
B501	5	20	9	- 7	114	4 - 1	2 - 9	0 - 5	2 - 9						CAP. - BOT. HORIZ.
B502	5	20	8	- 11	109	3 - 5	2 - 9	0 - 5	2 - 9						CAP. - TOP HORIZ.
B503	5	18	5	- 8	118	4 - 3	1 - 5								BACKWALL VERT.
B504	5	21	8	- 3	102	0 - 11	2 - 0	5 - 4							BACKWALL VERT.
B505	5	4	4	- 6	101	1 - 8	1 - 5								BEARING PAD
B506	5	3	5	- 10	101	3 - 0	1 - 5								BEARING PAD
B507	5	4	5	- 6	STR										BACKWALL VERT.
B701	7	9	19	- 10	STR										CAP HORIZ.
B702	7	4	3	- 1	109	1 - 6		1 - 6	1 - 7	E=6"					DOWEL BARS
S.E. WINGWALL															
WB501	5	7	10	- 2	STR										WINGWALL HORIZ.
WB502	5	2	5	- 6	STR										WINGWALL HORIZ.
WB503	5	1	6	- 6	106	2 - 8	3 - 0	0 - 9	0 - 10						WINGWALL HORIZ.
WB504	5	2	7	- 2	103	2 - 0	5 - 2	2 - 0							WINGWALL HORIZ.
WB505	5	1	5	- 1	106	2 - 0	2 - 3	0 - 9	0 - 10						WINGWALL HORIZ.
WB506	5	12	6'-4" TO 8'-5"		STR					VARY EVERY OTHER BY 0'-5"					WINGWALL VERT.
WB507	5	4	5	- 3	STR										WINGWALL VERT.
WB508	5	6	6	- 9	101	0 - 9	3 - 0								WINGWALL VERT.
WB509	5	4	6	- 0	118	5 - 3	0 - 9								WINGWALL VERT.
WB701	7	7	11	- 2	STR										WINGWALL HORIZ.
SOUTH APPROACH SLAB															
AS401	4	16	20	- 0	STR										
AS600	6	35	15	- 2	STR										

MARK	SIZE	NO	LENGTH		TYPE	A		B		C		D		INCR.	REMARKS
			FT	IN		FT	IN	FT	IN	FT	IN				
NORTH ABUTMENT															
*A401	4	4	19	- 7	STR										BACKWALL HORIZ.
*A402	4	4	22	- 10	STR										BACKWALL HORIZ.
*A403	4	2	20	- 4	STR										BACKWALL HORIZ.
*A501	5	20	9	- 7	114	4 - 1	2 - 9	0 - 5	2 - 9						CAP - BOT. HORIZ.
*A502	5	20	8	- 11	109	3 - 5	2 - 9	0 - 5	2 - 9						CAP - TOP HORIZ.
*A503	5	20	5	- 8	118	4 - 3	1 - 5								BACKWALL VERT.
*A504	5	20	4	- 0	STR										BACKWALL VERT.
*A505	5	10	7	- 5	102	0 - 9	2 - 5	4 - 3							BACKWALL VERT.
*A506	5	10	7	- 0	102	0 - 9	2 - 5	3 - 10							BACKWALL VERT.
*A507	5	4	4	- 6	101	1 - 8	1 - 8								BEARING PAD
*A508	5	3	5	- 10	101	3 - 0	1 - 5								BEARING PAD
*A509	5	2	7	- 0	STR										BACKWALL VERT.
*A701	7	9	19	- 4	STR										CAP HORIZ.
*A702	7	4	3	- 1	109	1 - 6		1 - 6	1 - 7	E=6"					DOWEL BARS
N.E. WINGWALL															
*WA501	5	7	11	- 10	STR										WINGWALL HORIZ.
*WA502	5	2	10	- 8	STR										WINGWALL HORIZ.
WA503					NOT USED										
*WA504	5	2	6	- 8	103	1 - 8	5 - 2	2 - 0							WINGWALL HORIZ.
*WA505	5	1	6	- 4	106	2 - 8	3 - 0	0 - 9	0 - 10						WINGWALL HORIZ.
WA506	5	12	6'-4" TO 8'-5"		STR					VARY EVERY OTHER BY 0'-5"					WINGWALL VERT.
*WA507	5	4	5	- 6	STR										WINGWALL VERT.
WA508	5	6	6	- 9	101	0 - 9	3 - 0								WINGWALL VERT.
*WA509	5	4	6	- 0	118	5 - 3	0 - 9								WINGWALL VERT.
*WA701	7	7	11	- 10	STR										WINGWALL HORIZ.
NORTH APPROACH SLAB															
AS401	4	16	20	- 0	STR										
AS600	6	35	15	- 2	STR										

* EPOXY COATED BAR



NOTE:
PAYMENT FOR THREADED COUPLINGS SHALL BE INCIDENTAL TO ITEMS 503.14 AND 503.15

M:\09009\002\117\SRRESH1CT.DWG 12/29/99 14:47

Scale: AS NOTED			
No.	Revision	By	Date

Designed by:					
HNTB					
ARCHITECTS ENGINEERS PLANNERS					
Designed	By	Date	Checked	By	Date
Drawn	KAC	12/99	In Charge of	KJG	12/99
	LS	12/99		RAL	12/99

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINLINE BRIDGE WIDENING
B & M RAILROAD OVERPASS
REINFORCING STEEL SCHEDULE I



CONTRACT: 2000.03
SHEET NUMBER: **BM-S23**
92 OF 178

MARK	SIZE	NO	LENGTH		TYPE	A		B		C		D		INCR.		REMARKS			
			FT	IN		FT	IN	FT	IN	FT	IN	FT	IN	FT	IN				
PIER FOOTING																			
PF601	6	52	11	-	6	STR										TOP/BOT. REINF.			
PF801	8	52	11	-	6	STR										TOP/BOT. REINF.			
PF901	9	40	9	-	11	118	8	-	4	1	-	7				FOOTING/COL. DOWELS			
PIER CAP AND COLUMN																			
P401	4	40	14	-	5	100	4	-	2	2	-	8	0	-	4 1/2	COLUMN TIES			
P501	5	8	8	-	11	STR										COLUMN/CAP DIAGONALS			
P502	5	4	9	-	0	101	2	-	8	3	-	2				CAP HORIZ.			
P503	5	4	10	-	0	101	2	-	8	3	-	8				CAP HORIZ.			
P504	5	26	13	-	8	STR										CAP HORIZ.			
P505	5	24	5	-	8	101	2	-	6	1	-	7				CAP HORIZ.			
P601	6	28	13	-	10	100	2	-	8	3	-	7	0	-	8	CAP STIRRUPS			
P901	9	40	22	-	0	STR										COLUMN VERT.			
P902	9	10	16	-	10	101	13	-	8	1	-	7				CAP HORIZ.			
DECK SLAB AND PARAPETS																			
*S501	5	280	17	-	4	113A										TRANS-TOP AND BOT.			
*S502	5	22	2'-4" TO 17'-4"			STR									VARY EVERY OTHER BY 1'-6"	TRANS-TOP AND BOT.			
*S503	5	22	17'-4" TO 2'-4"			113A									VARY EVERY OTHER BY 1'-6"	TRANS-TOP AND BOT.			
*S504	5	245	33	-	0	STR										LONG. TOP AND BOT.			
*S505	5	40	33	-	0	STR										LONG. SLAB OVER PIERS			
*S506	5	302	3	-	0	113B										TRANS TREADED BAR			
*S507	5	2	20	-	8	113A										END SLAB S. ABUT.			
*S508	5	19	4	-	1	105	2	-	8	1	-	5	1	-	0	END SLAB S. ABUT.			
*S509	5	21	6	-	0	118	5	-	0	1	-	0				END SLAB S. ABUT.			
*S510	5	5	2	-	6	STR										END SLAB-2 S. ABUT., 3 N. ABUT.			
*S511	5	5	9	-	6	STR										END SLAB-2 S. ABUT., 3 N. ABUT.			
*S512	5	5	7	-	9	STR										END SLAB-2 S. ABUT., 3 N. ABUT.			
*S513	5	19	4	-	10	115	0	-	8	0	-	11	1	-	9	1	-	6	END SLAB N. ABUT.
*S514	5	2	20	-	8	113A											END SLAB N. ABUT.		
*S515	5	3	4	-	8	113A											EXISTING SCUPPER LOCATION		
*S516	5	6	1	-	10	STR											EXISTING SCUPPER LOCATION		
*S517	5	20	33	-	0	STR											LONG. PARAPET		
*S518	5	6	4	-	11	STR											LONG. PARAPET		
*S519	5	36	15	-	8	STR											LONG. PARAPET		
*S520	5	36	7	-	8	STR											LONG. PARAPET		
*S521	5	6	5	-	6	STR											LONG. PARAPET		
*S522	5	154	3	-	8	127	0	-	6	1	-	7	1	-	7		TRANS. PARAPET		
*S601	6	280	17	-	6	113A											TRANS-TOP AND BOT.		
*S602	6	22	1'-6" TO 17'-4"			STR									VARY EVERY OTHER BY 1'-7"	TRANS-TOP AND BOT.			
*S603	6	22	17'-4" TO 1'-6"			113A									VARY EVERY OTHER BY 1'-7"	TRANS-TOP AND BOT.			
*S604	6	302	3	-	3	113B											TRANS TREADED BAR		
*S605	6	3	4	-	8	113A											EXISTING SCUPPER LOCATION		
*S606	6	154	4	-	2	118	3	-	2	1	-	0					TRANS. PARAPET		
*S607	6	154	4	-	2	118	3	-	2	1	-	0					TRANS. PARAPET		

MARK	SIZE	NO	LENGTH		TYPE	A		B		C		D		INCR.		REMARKS	
			FT	IN		FT	IN	FT	IN	FT	IN	FT	IN	FT	IN		
END POSTS																	
*EP501	5	1	7	-	10	STR											HORIZ TOP
*EP502	5	2	7	-	11	118	6	-	10	1	-	1					HORIZ TOP
*EP503	5	1	6	-	10	STR											HORIZ TOP
*EP504	5	3	7	-	10	STR											HORIZ SIDE
*EP505	5	5	2	-	7	119	1	-	6	1	-	1	0	-	2		VERT TOP/SIDE
*EP506	5	6	3	-	11	118	2	-	10	1	-	1					VERT TOP/SIDE
*EP507	5	6	7	-	5	118	5	-	9	1	-	8					VERT SIDE/BOT.
*EP508	5	3	2	-	7	118	1	-	6	1	-	1					VERT. - TOP SIDE
*EP509	5	2	7	-	0	118	5	-	9	1	-	3					VERT. - SIDE/BOT.
*EP510	5	2	3	-	11	118	2	-	10	1	-	1					VERT. TOP/SIDE
*EP511	5	1	7	-	1	104	5	-	2	1	-	11	0	-	5		HORIZ /SIDE
*EP521	5	2	7	-	7	STR											HORIZ TOP
*EP522	5	2	8	-	8	118	7	-	7	1	-	1					HORIZ SIDE
*EP523	5	3	7	-	7	STR											HORIZ SIDE
*EP524	5	6	2	-	7	119	1	-	6	1	-	1	0	-	2		VERT TOP-SIDE
*EP525	5	7	3	-	11	118	2	-	10	1	-	1					VERT. TOP-SIDE
*EP526	5	5	7	-	5	118	5	-	9	1	-	8					VERT. SIDE/BOT.
*EP527	5	3	2	-	7	118	1	-	6	1	-	1					VERT. TOP/SIDE
*EP528	5	2	7	-	0	118	5	-	9	1	-	3					VERT. SIDE/BOT.
*EP529	5	2	3	-	11	118	2	-	10	1	-	1					VERT. TOP/SIDE
*EP530	5	1	7	-	7	104	5	-	8	1	-	11	0	-	5		HORIZ SIDE
*EP601	6	6	5	-	6	118	4	-	6	1	-	0					VERT.
*EP602	6	8	4	-	4	118	3	-	4	1	-	0					HORIZ.
*EP603	6	6	6	-	11	102	3	-	7	1	-	8	1	-	8		VERT.
*EP604	6	5	6	-	7	119	4	-	9	1	-	10	1	-	10		HORIZ.
*EP605	6	5	9	-	0	118	7	-	11	1	-	1					HORIZ.
*EP606	6	2	5	-	2	108	4	-	6								VERT. (180 HOOK)
*EP607	6	2	6	-	1	102	3	-	7	1	-	3	1	-	3		VERT.
*EP621	6	9	5	-	8	118	4	-	6	1	-	0					VERT.
EP622	6	10	4	-	4	11	3	-	4	1	-	0					HORIZ.
*EP623	6	5	6	-	11	102	3	-	7	1	-	8	1	-	8		VERT. SIDE/BOT.
*EP624	6	5	6	-	7	119	4	-	9	1	-	10	1	-	10		HORIZ.
*EP625	6	5	6	-	5	118	5	-	4	1	-	1					HORIZ.
*EP626	6	2	5	-	2	108	4	-	6								VERT. (180 HOOK)
*EP627	6	2	6	-	1	102	3	-	7	1	-	3	1	-	3		VERT. SIDE/BOT.

* EPOXY COATED BAR

M:\09009\002\117\S6RESH2CT.DWG 12/29/99 08:12

Scale: AS NOTED		Designed by:				HNTB CORPORATION 2 Thomas Drive Westbrook, ME 04092 TEL (207) 774-5155 FAX (207) 772-7410				MAINLINE BRIDGE WIDENING B & M RAILROAD OVERPASS REINFORCING STEEL SCHEDULE II	
No.	Revision	By	Date								
				Drawn	By	Date	In Charge of				CONTRACT: 2000.03
					LS	12/99		RAL			93 OF 178