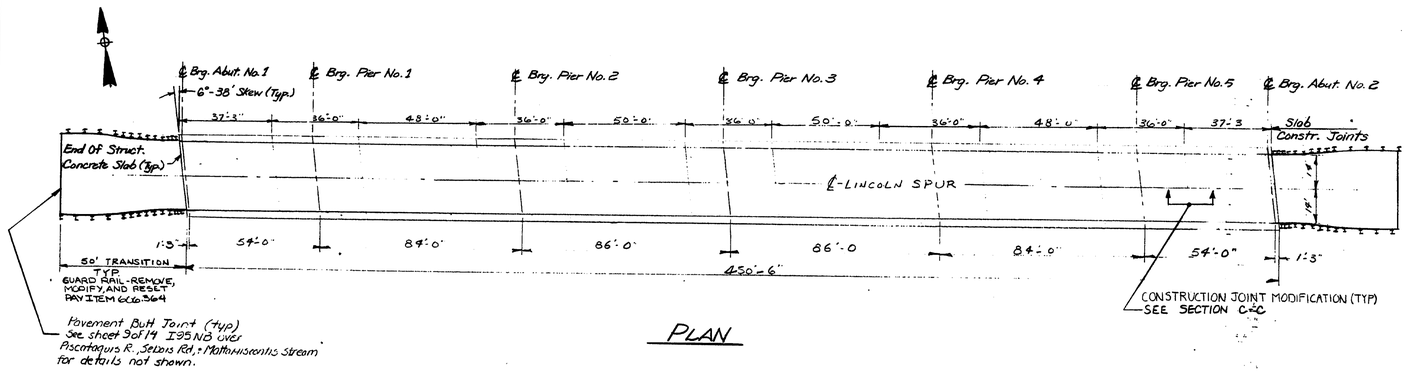
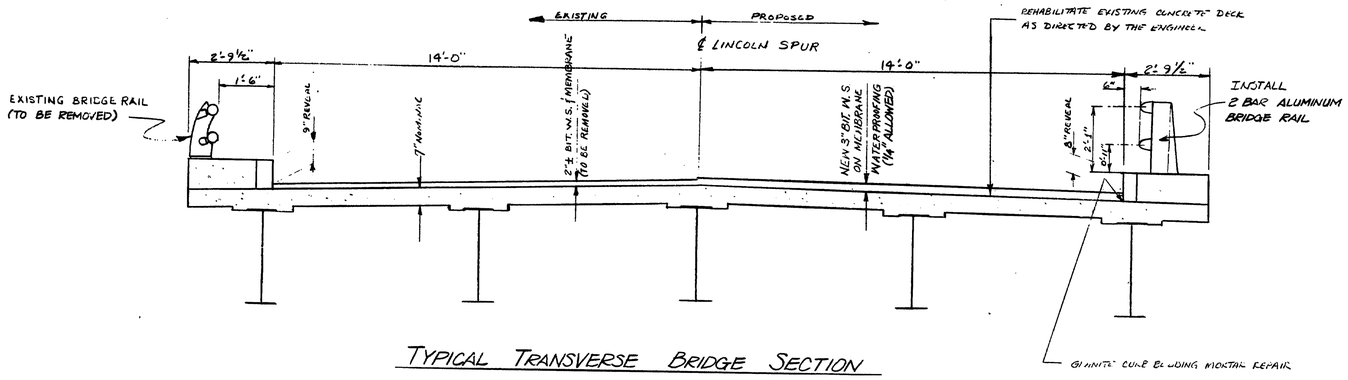
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-IM-95-8(147)	10	14

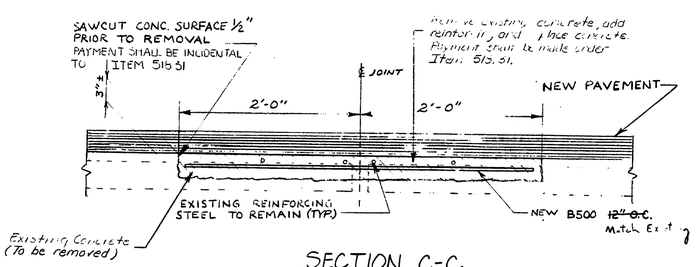
004200.00



PLAN



TYPICAL TRANSVERSE BRIDGE SECTION



SECTION C-C
CONSTRUCTION JOINT DETAIL (TYP)

SPECIFICATIONS

DESIGN: LOAD FACTOR DESIGN PER AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES 1989 AND INTERIM SPECIFICATIONS 1990 AND 1991.

CONTRACT: STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, HIGHWAYS & BRIDGES, REVISION OF OCT. 1990.

SCOPE OF WORK

REPLACE EXISTING BITUMINOUS PAVEMENT WEARING SURFACE AND MEMBRANE WATERPROOFING WITH NEW MEMBRANE WATERPROOFING AND 3" BITUMINOUS PAVEMENT WEARING SURFACE.

REHABILITATE STRUCTURAL CONCRETE SLAB.

REMOVE EXISTING, AND INSTALL NEW BRIDGE RAIL.

REMOVE EXISTING, AND CONSTRUCT NEW STANDARD CONCRETE END POSTS.
APPLY PROTECTIVE COATING TO CONCRETE SURFACES.
REMOVE, MODIFY, AND RESET EXISTING APPROACH GUARD RAIL.

REMOVE CONCRETE DECK HAUNCHES 3'-0" FROM ℄ BEARING AT ABUTMENTS.
INSTALL SHEAR CONNECTORS (DOUBLE STUDS) ON BEAMS AT ENDS OF DECK SLAB. CONSTRUCT NEW CONCRETE DECK HAUNCHES WITH REINFORCING STEEL.
INSTALL NEW JOINT ARMOR, EXPANSION DAMS AND GLAND SEALS.

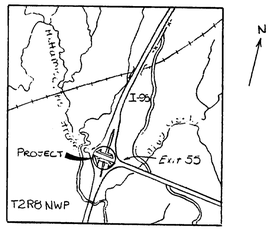
REHABILITATE SLAB CONSTRUCTION JOINTS.
TRANSITION PAVEMENT ON LEADING AND TRAILING ENDS.

MAINTENANCE OF TRAFFIC

MAINTAIN ONE 11'-6" MINIMUM LANE OF TRAFFIC DURING CONSTRUCTION.
SEE STAGE CONSTRUCTION DETAILS - SHEET 2

DESIGN LOADING

LIVE LOAD: HS20-44 (EXISTING)



LOCATION MAP

Note: A Bridge Deck Evaluation report of the existing bridge is available for the contractor's reference at the Bridge Design Office in Augusta. The report contains visual maps that information and deck core data of the bridge. There is no assurance that the information or data is a true representation of the conditions of the entire deck.

Note: The lines of the existing bridge are available to the contractor reference at the Bridge Design Office in Augusta. The plans are reproductions of dirty tracings and it is very unlikely that the plans show any construction field changes or any alterations which may have been made to the bridge during its life span.

TRAFFIC DATA

AADT (1992)	1500
AADT (2012)	2400
DHV-% OF AADT	11
DESIGN HOUR VOLUME	264
% HEAVY TRUCKS (AADT)	21
18 KIP EQUIVALENT P 2.5	279

107-393

Revised As Built 1993 P Roberts

BRIDGE NO. 6074

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

LINCOLN SPUR
OVER
INTERSTATE 95
IN THE TOWN OF
T2R8 NWP

92

PENOBSCOT COUNTY
GENERAL PLAN

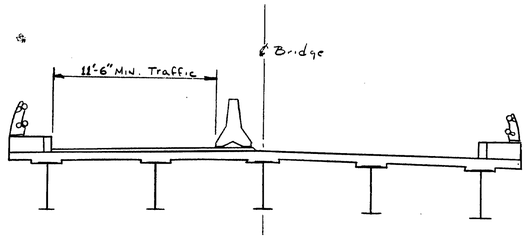
SHEET 10 OF 14 AUGUSTA, MAINE

PROJECT ADMIN. ENGINEER		
PLANS	DESIGN-DETAILED	G.L. Cobb / M.J. Bartel
	CHECKED	
	REVIEWED	
	FIELD CHANGES	

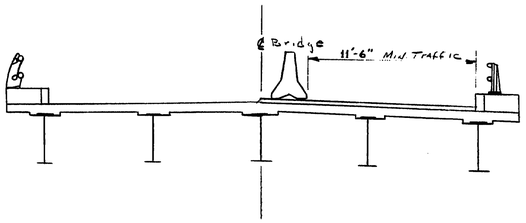
	DATE
M.J. Bartel	2/92
PES	5/92

BRUNING 44-132 457101

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	IR-TM-95-8(147) 004200.00	11	14



STAGE I - REMOVE HALF OF BITUMINOUS CONCRETE PAVEMENT & MEMBRANE. PERFORM ALL REQUIRED REPAIR & REPLACEMENTS NECESSARY BEHIND TEMPORARY BARRIERS. INSTALL MEMBRANE. PAVE CLOSED HALF OF ROADWAY WITH ONE COURSE OF HOT BITUMINOUS PAVEMENT.

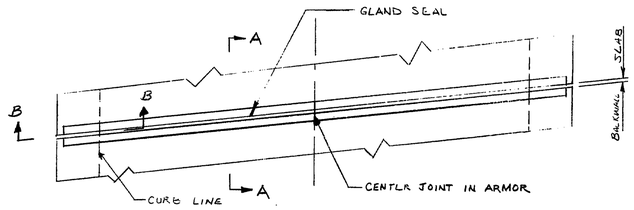


STAGE II - RELOCATE TEMPORARY CONCRETE BARRIER AND REMOVE REMAINING BITUMINOUS CONCRETE PAVEMENT AND MEMBRANE. PERFORM REMAINING REQUIRED REPAIRS AND REPLACEMENTS. INSTALL MEMBRANE. PAVE CLOSED HALF OF ROADWAY WITH ONE COURSE OF HOT BITUMINOUS PAVEMENT.

STAGE III - REMOVE TEMPORARY CONCRETE BARRIER. PAVE FINAL COURSE OF HOT BITUMINOUS PAVEMENT AND APPROACH TRANSITIONS IN ONE OPERATION.

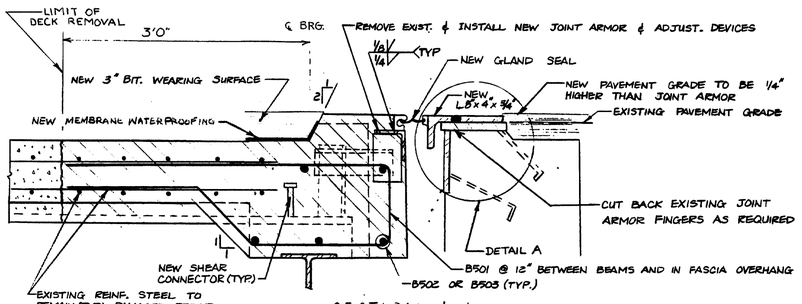
NOTE - MAINTAIN A MINIMUM OF ONE SIGNALIZED TRAFFIC LANE AT ALL TIMES.

STAGE CONSTRUCTION



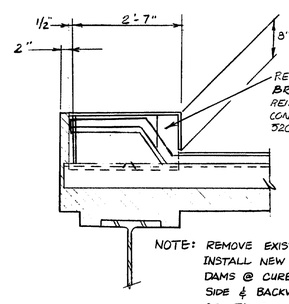
PLAN

ABUTMENT JOINTS WITH MODIFICATION FOR GLAND SEAL.
(TYP. BOTH ABUTMENTS)



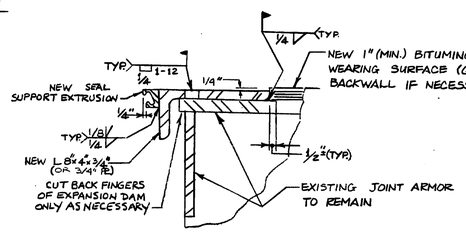
SECTION A-A

EXPANSION JOINT MODIFICATION
(REFER BD 302-89 FOR DETAILS NOT SHOWN)

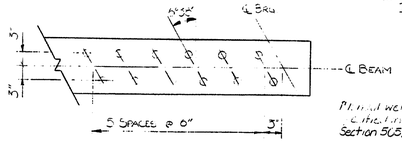


NOTE: REMOVE EXISTING AND INSTALL NEW EXPANSION DAMS @ CURBS, SLAB SIDE & BACKWALL SIDE OF JOINT.

SECTION B-B
CURB DETAIL
FOR DETAILS NOT SHOWN SEE BD 302-89



DETAIL A



SHEAR CONNECTOR LAYOUT
FOR DETAILS NOT SHOWN SEE BD 521-89

Minimal welding will be allowed as outlined in Standard Specifications Section 506.03.

CONSTRUCTION NOTES

1. The top surface of existing concrete slabs shall be repaired as directed by the Engineer in accordance with Supplemental Specification Section 518, Rehabilitation of Structural Concrete Bridge Decks.
2. Rehabilitate the concrete deck at slab joints, between the existing curbs, as directed by the Engineer.
3. Repair granite bedding mortar in accordance with Special Provision 518, Repairing Granite Curb Bedding Mortar.
4. Reinforcing steel shall have 2 inch minimum cover unless otherwise noted.
5. Protective coating for concrete surfaces shall be applied to the following areas:
   a. all exposed areas of concrete end posts
   b. top and fascia of all curbs down to the drip notch
6. All work shall be done behind temporary concrete barriers.
7. Depress the bituminous wearing surface around the existing bridge drains as directed by the Engineer.
8. The gland seals to be furnished shall have a minimum Movement Rating of 2 3/4".
9. The seal shall be approved by the Engineer prior to fabrication of the joint armor.
10. The joint opening will vary depending on the dimensions of the seal selected by the contractor. The joint opening shall be set according to the opening shown on the approved shop drawings.
11. The joint armor shall be installed in two sections which shall allow one lane of traffic over the bridge during construction. The two sections of joint armor are to be welded in the field to produce one continuous section. Two coats of paint will be applied in accordance with Special Provision Section 506, Zinc Hydroxy Phosphite - Code Number ZHP-1.
12. The seals shall be installed in one continuous length. Splicing on the seal will not be allowed.
13. The existing finger joints shall be modified as shown on the plans.
14. MODIFICATIONS TO GUARDRAIL FOR CONFORMANCE WITH STANDARD DETAILS ON BD 201-89, INCLUDING MATERIALS AND LABOR, WILL BE CONSIDERED INCIDENTAL TO ITEM 606.364.
15. EXISTING BRIDGE RAIL SHALL BE DELIVERED TO MDOT BRIDGE MAINTENANCE LOT. PAYMENT SHALL BE INCIDENTAL TO ITEM 202.15.

GLAND SETTING TABLE

TEMPERATURE (°F)	
120	5/8"
105	7/8"
90	1 1/8"
75	1 7/16"
60	1 3/4"
45	2"
30	2 1/4"
15	2 3/16"
0	2 7/8"
-15	3 1/8"
-30	3 3/8"

16. All labor, equipment and materials necessary to remove and replace 3" of deck at the ends shall be included in Item 520.245 except reinforcing steel, membrane, hot bituminous pavement and shear connectors which shall be paid under the appropriate contract items.
17. For details of membrane waterproofing not shown, see BD 521-89.
18. Removal of existing guard rail attachments will be paid for under Item 202.17.

Revised As Built 1993 P. Roberts

PROJECT DESIGN ENGINEER SWHL	BY	DATE
PLANS — DESIGN - DETAILED	WJ RAYMOND	3/92
CHECKED	GHL	5/92
REVISIONS	ECS	
FIELD CHANGES		

DRAWING 44-132-4710-1

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

LINCOLN SPUR OVER INTERSTATE 95
IN THE TOWN OF T2R8 NWP
PENOBSCOT COUNTY
DETAILS

93

SHEET 11 OF 14 AUGUSTA, MAINE

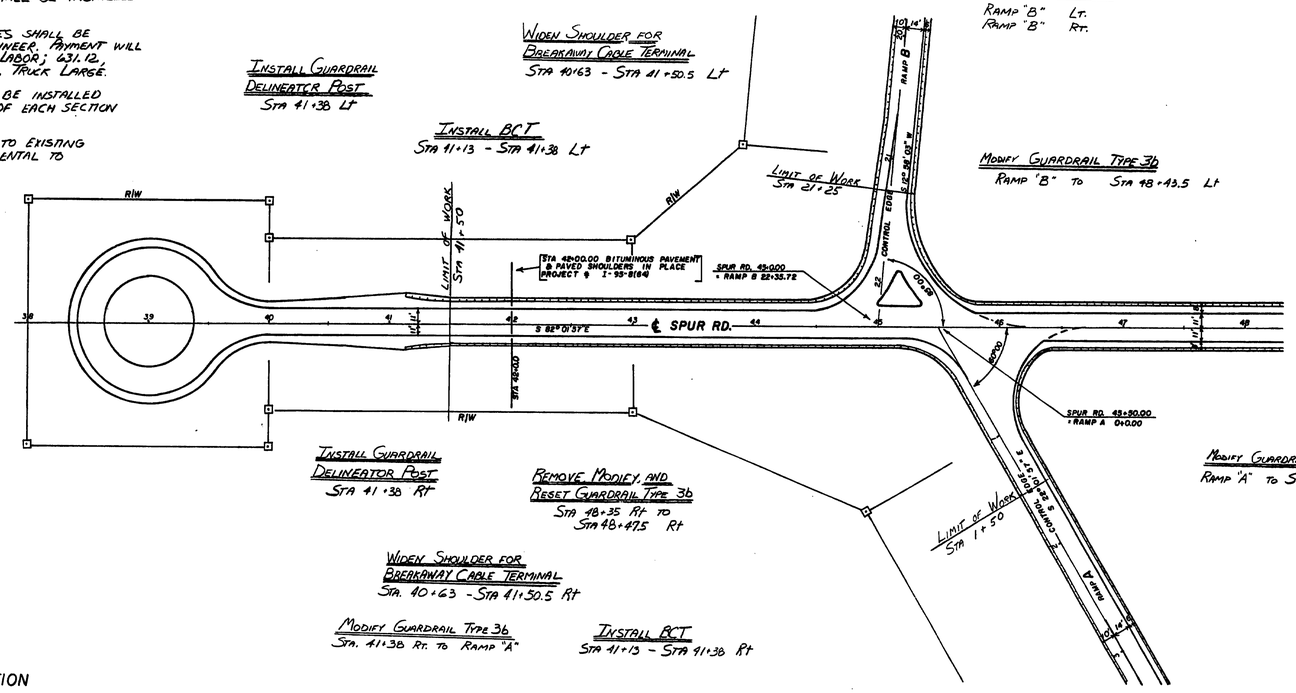
107-394

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO	TOTAL SHEETS
1	MAINE	IR-IM-95-8(147)	13	14

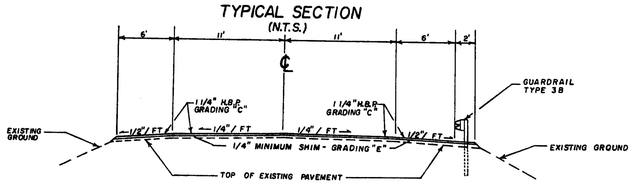
T 2 R 8

GENERAL NOTES

1. NO UTILITY INVOLVEMENT IS ANTICIPATED.
2. ANY EXISTING PAVED SIDE ROADS OR SHOULDERS SHALL BE RESURFACED AS DETERMINED IN THE FIELD BY THE ENGINEER.
3. A VARIABLE DEPTH SHIM COURSE (ITEM 403.121) SHALL BE APPLIED PRIOR TO PLACING THE 1¼" HOT BITUMINOUS PAVEMENT.
4. PLAN SHEETS OF PREVIOUSLY CONSTRUCTED PROJECTS IN THIS AREA ARE AVAILABLE ON REQUEST. THESE PROJECTS ARE IR-95-8(117)204, AND I-95-8(64)210.
5. ONE GUARDRAIL DELINEATOR POST SHALL BE INSTALLED AT EACH GUARDRAIL END.
6. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE MADE UNDER ITEMS 629.05, HAND LABOR; 631.12, ALL PURPOSE EXCAVATOR; AND 631.172, TRUCK LARGE.
7. BREAKAWAY CABLE TERMINALS SHALL BE INSTALLED CONCURRENTLY WITH THE PLACEMENT OF EACH SECTION OF BEAM GUARDRAIL.
8. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL WILL BE CONSIDERED INCIDENTAL TO ITEM 606.
9. ALL EXCESS GUARDRAIL SHALL BE THE PROPERTY OF THE STATE AND WILL BE STOCKPILED AT THE WEST ENFIELD MAINTENANCE LOT LOCATED ON U.S. ROUTE 2, ABOUT 0.5 MILES SOUTH OF THE JUNCTION OF U.S. ROUTE 2 AND ROUTE 155. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVAL AND STOCKPILING.



TYPICAL SECTION
(N.T.S.)



1-1/4" H.B.P. Overlay

STA. 41+50 → 49+0±
STA. 53+50± → 62+0

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	L. Sheehan	'93
CHECKED		
REVISIONS FIELD CHANGES		

REVISED "AS BUILT" 1993 D. GAYNE

107-395

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

T2R8 95

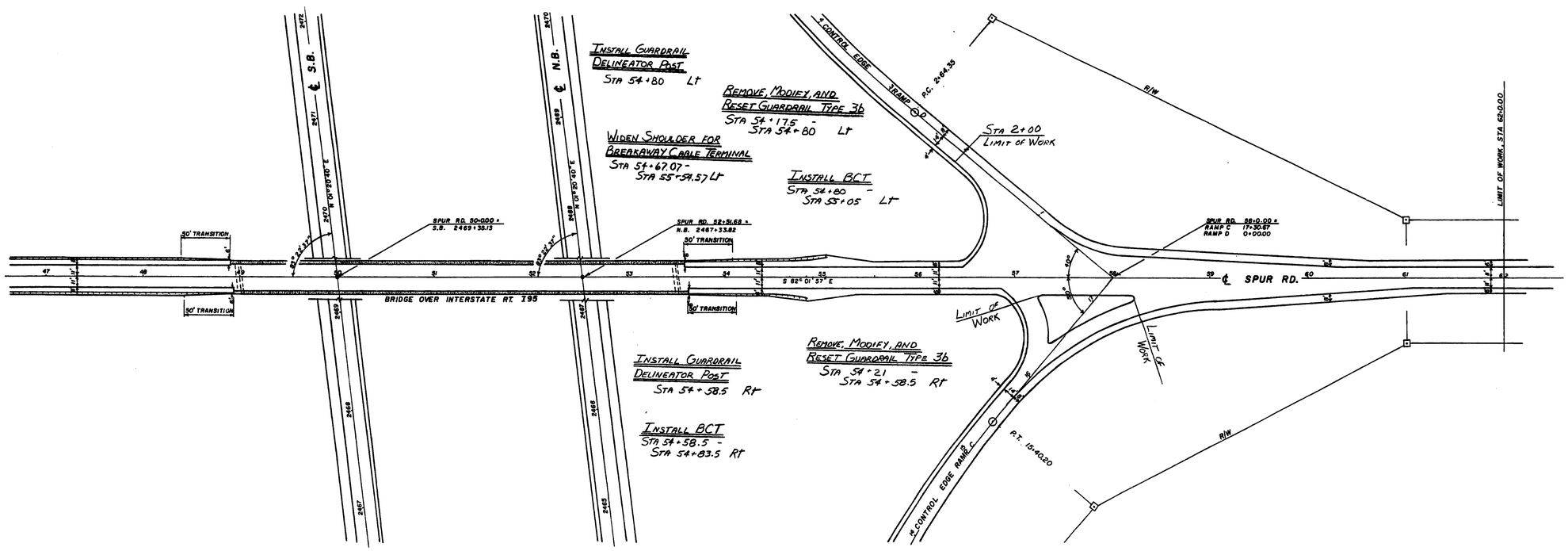
IR-IM-95-8(147)

50' 0 50' 100'

SHEET 13 OF 14 AUGUSTA, MAINE

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	IR-IM-95-8(147)	14	14

T2R8



PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	L. Sheehan	93
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

"REVISED "AS BUILT" 1993 D. GAINE

107-396

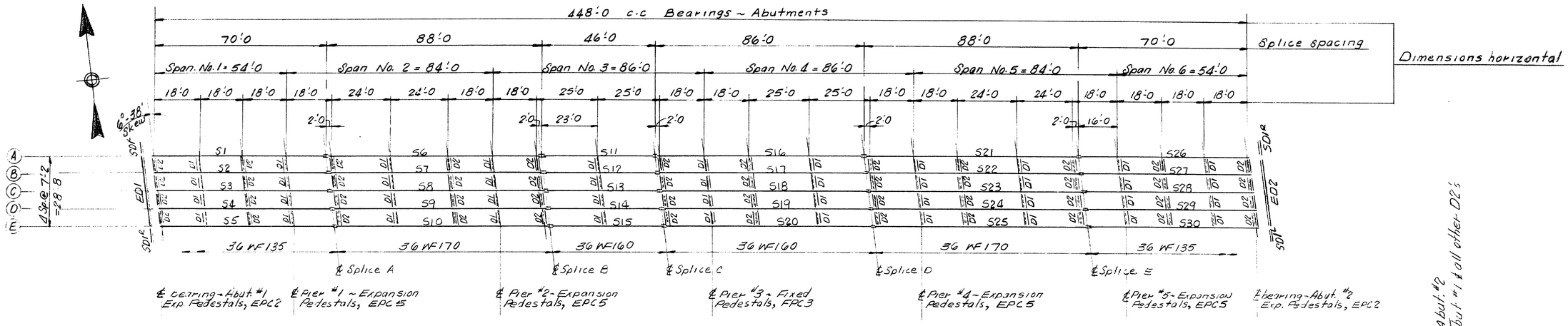
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

T2R8 96

IR-IM-95-8 (147)

50' 0 50' 100'

SHEET 14 OF 14 AUGUSTA, MAINE

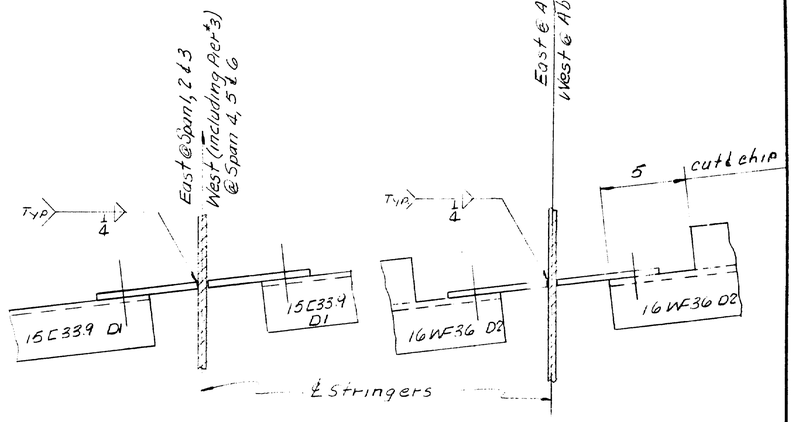


ERECTION DIAGRAM

Notes:

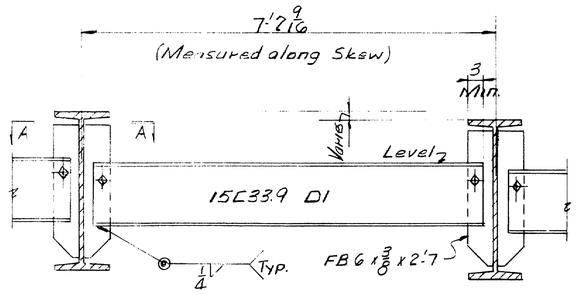
1- Plug form bracket holes (for Fleming Brackets) with 3/4 x 0:14 Long carriage bolts. Heads to be on outside and are to be completely covered.

2- Letter of compliance required for electrodes and flux.

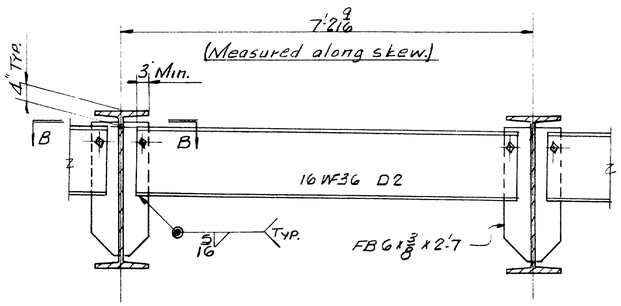


SECT. A-A

SECT. B-B



INTERMEDIATE DIAPHRAGMS



DIAPHRAGMS @ ABUT. & CONSTRUCTION JOINTS

PROJECT NO. I-95-8 (51)

ERECTION DIAGRAM

Bancroft & Martin Inc.
South Portland, Maine

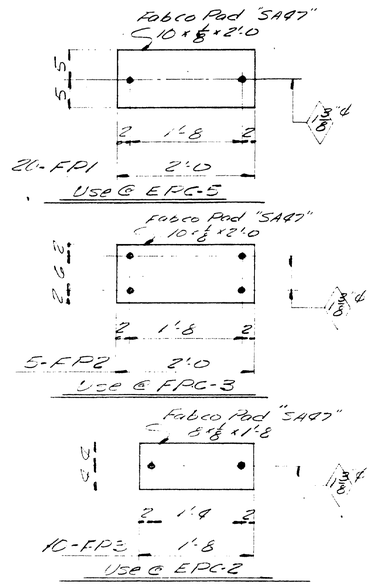
LINCOLN SPUR OVER I-95
(T2-R8) PENOBSCOT COUNTY, ME.

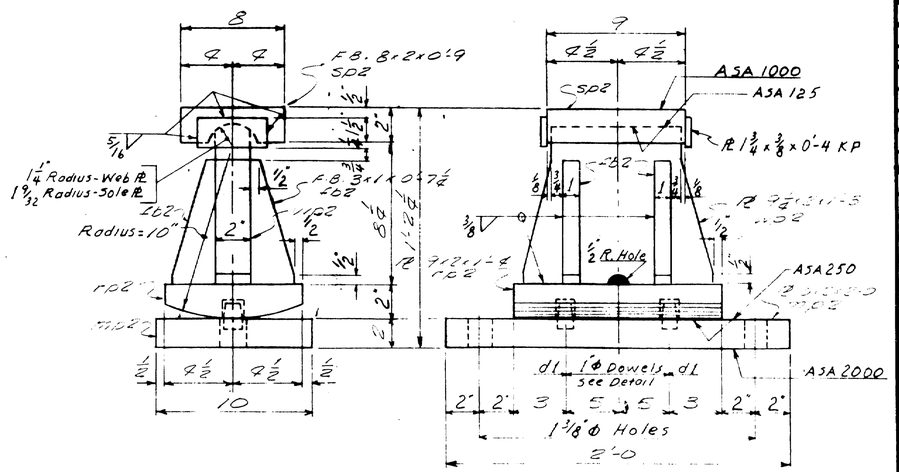
CUSTOMER Cianchette Bros., Inc.
DESIGNER Maine S.H.C. - Bridge Div.

DRAWN	6-22-65	RJM
REVISION		
REVISION		
REVISION		

ORDER NO. Verbal
DWG. NO. 65-131-E1

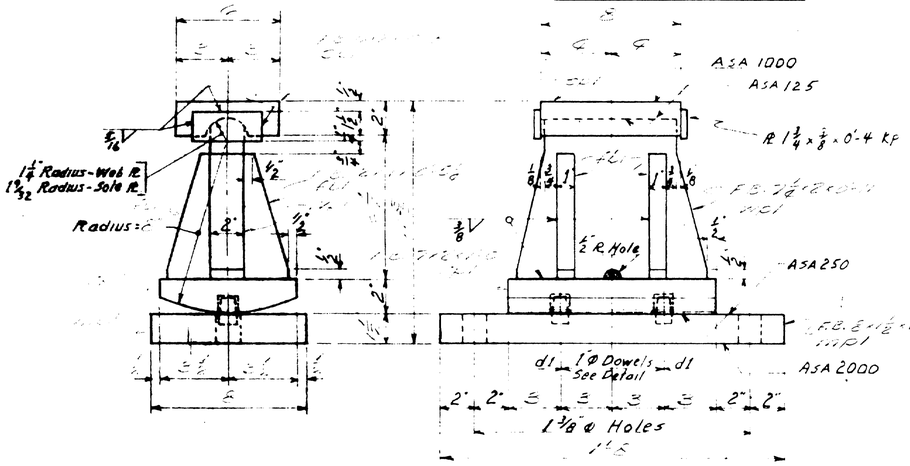
94-22





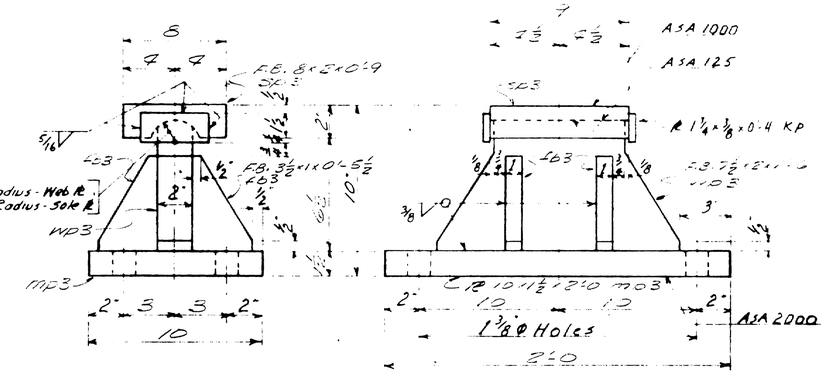
EXPANSION PEDESTAL EPC-5

20-REQ'D.

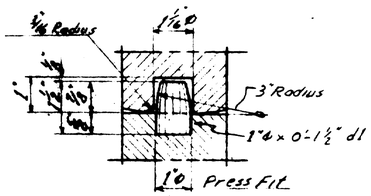


EXPANSION PEDESTAL EPC-2

10-REQ'D.



FIXED PEDESTAL - FPC-3 5-REQ'D.

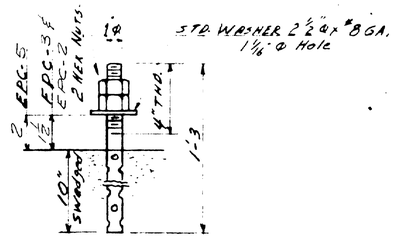


DOWEL DETAIL

PAINT NOTE

NO PAINT ON TOP OR SOLE PLATES "SP1" AND "SP2" 1" DOWN FROM TOP ON SIDES; COAT WITH BOILED LINSEED OIL.
NO PAINT ON SURFACE WITH ASA 125 FINISH, COAT WITH MIXTURE OF WHITE LEAD AND TALLOW.

NOTE:
See State Highway Comm. Dwgs. for location of Pedestals.



ANCHOR BOLTS 1" Φ x 1'-3 AB1

2 REQ FOR EPC-2 & 5 4 REQ'D FOR FPC-3

NO PAINT ~ OIL THDS.

SHIP MARK	NO.	MARK	SHAPE	LENGTH		
			BILL OF MATERIAL			
EPC2	10		Ex. Ped. Sh. Mg.			
	10	mp1	F.B. 3 x 1/2	1	3	
	10	rp1	F.B. 7 x 2	1	0	
	10	wp1	F.B. 7 1/2 x 2	2	11	
	10	sp1	F.B. 8 x 2	3	3	
	20	fb1	F.B. 3 x 1	0	5 1/2	
	20	fb2	F.B. 3/4 x 3/4	3	2	
	20	s1	1 Φ Dowel	0	1 1/2	
EPC5	20		Ex. Ped. Sh. Mg.			
	20	mp2	F.B. 7 x 2	3	0	
	20	rp2	F.B. 7 x 2	1	3	
	20	wp2	F.B. 7 1/2 x 2	1	3	
	20	fb3	F.B. 3 x 2	0	7	
	20	wp2	F.B. 9 x 1	3	7 1/2	
	20	fb2	F.B. 3/4 x 3/4	3	2	
	20	s1	1 Φ Dowel	0	1 1/2	
FPC3	5		Fixed Ped. Sh. Mg.			
	5	mp3	F.B. 8 x 2	3	0	
	5	rp3	F.B. 8 x 2	1	6	
	5	wp3	F.B. 8 x 1/2	3	7	
	10	fb3	F.B. 3 x 3/8	3	2	
	20	fb3	F.B. 3 x 1	3	5 1/2	
	50		[illegible]		3	
	20		[illegible]			[illegible] 1 1/16" Φ hole
EP1	20		[illegible]	0	0	[illegible]
EP2	5		[illegible]	0	0	[illegible]
EP3	10		[illegible]	0	8	[illegible]
						[illegible]
			[illegible]			
			[illegible]			
			[illegible]			
			[illegible]			
			[illegible]			
			[illegible]			
			[illegible]			

BEARING MATERIAL TO BE ASTM A36
ANCHOR BOLTS TO BE A7, A36 OR A307
SHOP CONNECTIONS: WELDED
FIELD CONNECTIONS:
HOLES: AS NOTED
PAINT: RED LEAD PER MAINE SPEC. SPEC.

SOLE PLATES "SP1" FIELD WELDED TO STRINGERS

TYPE EPC & FPC

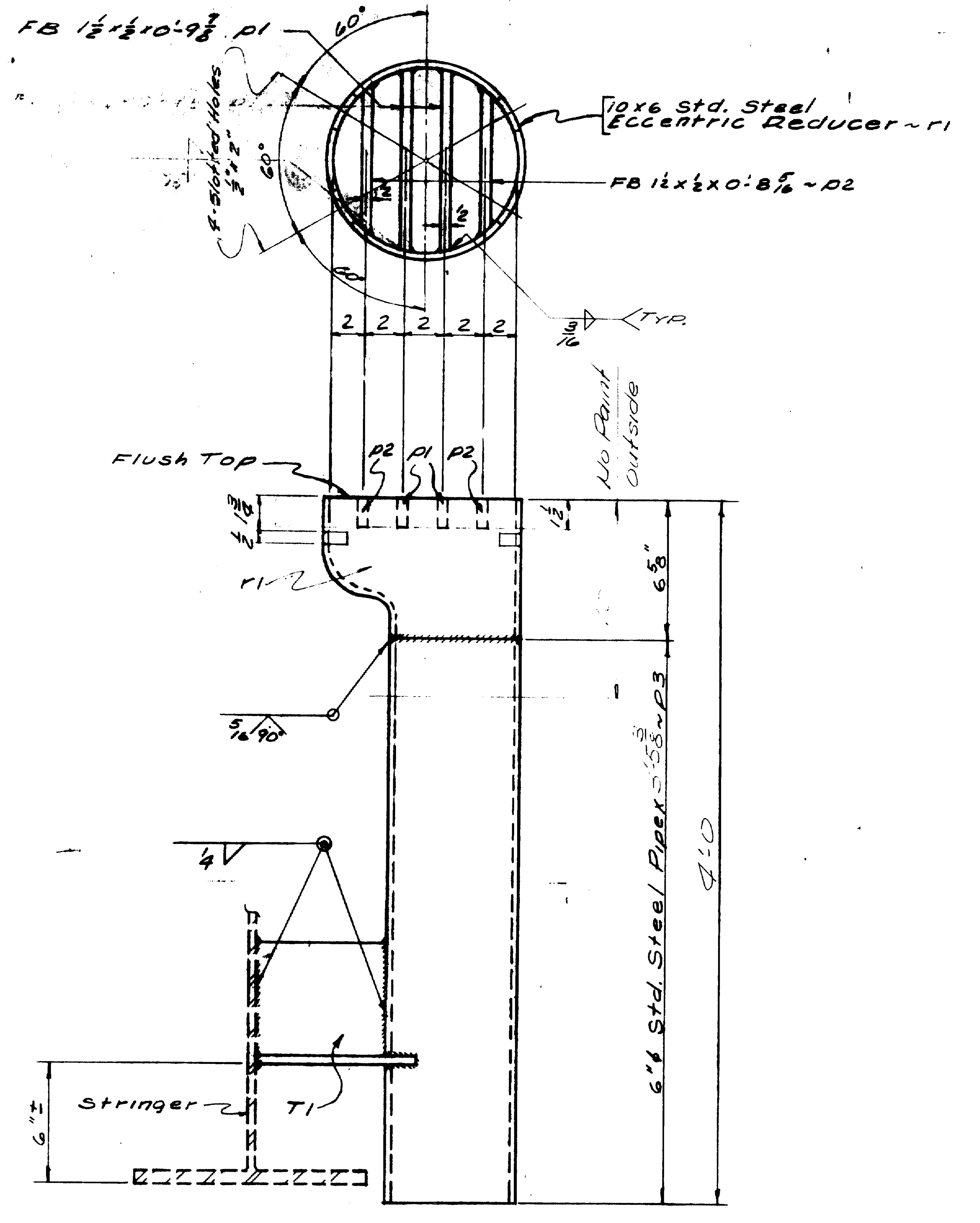
BEARING DETAILS

Bancroft & Martin Inc.
South Portland 7, Maine

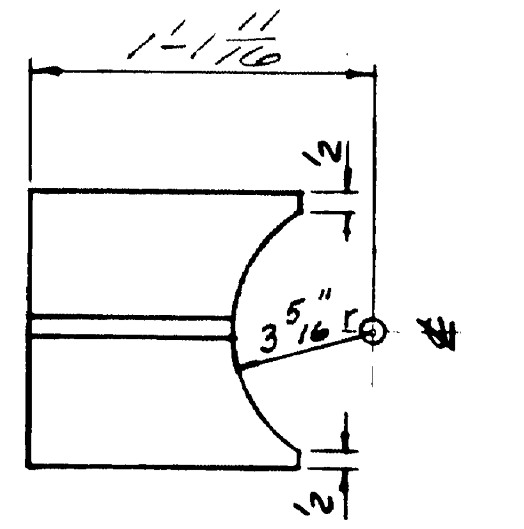
DRAWN	6-5-55	H.L.
REVISION		
REVISION		
REVISION		

CUSTOMER: [redacted]
DESIGNER: [redacted]
ORDER NO. [redacted]

0 1 2 3 4 5 INCHES



DRAIN DR1 ~ 16-REQ'D.



ST 6 WF 13.5 × 0'-11 13/16 ~ T1
16-REQ'D.

NOTE:
SEE STATE'S DWGS. FOR
DRAIN LOCATION

SHIP	BILL OF MATERIAL						DWG. NO. 65-131-S2
MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
DR1	16		Shop Assy	—	—		
T1	16		ST6WF13.5	0	11 13/16		
	32	p1	FB 1½×½	0	9⅞		
	32	p2	do	0	8 5/16		
	16	p3	6" Std. Pipe	3	5⅜		
	16	r1	10×6	0	7		Std. Steel Eccentric Reducer Req. # 3067

PROJECT NO. I-95-3([illegible])

ITEM NO. [illegible]

SHOP CONNECTIONS: WELDED
FIELD CONNECTIONS: WELDED
HOLES: ———
PAINT: PER ME. STATE SPECS.
RED LEAD & OIL & AS NOTED

APPROVED 7-27-65

DRAIN DETAILS

Bancroft & Martin Inc.
South Portland 7, Maine

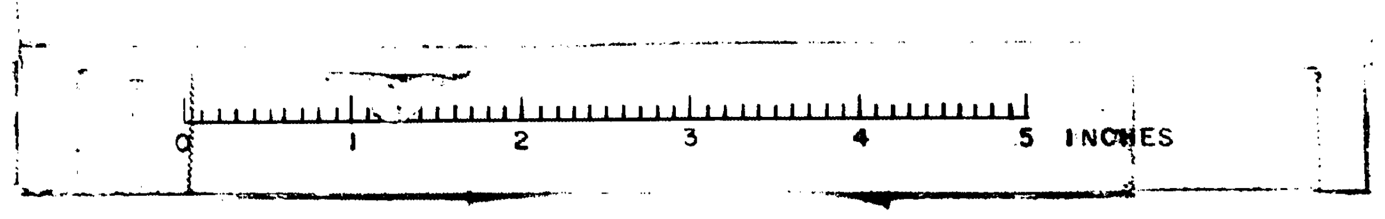
LINCOLN SPUR OVER I-95
T2 R3
PENOBSCOT COUNTY, MAINE.

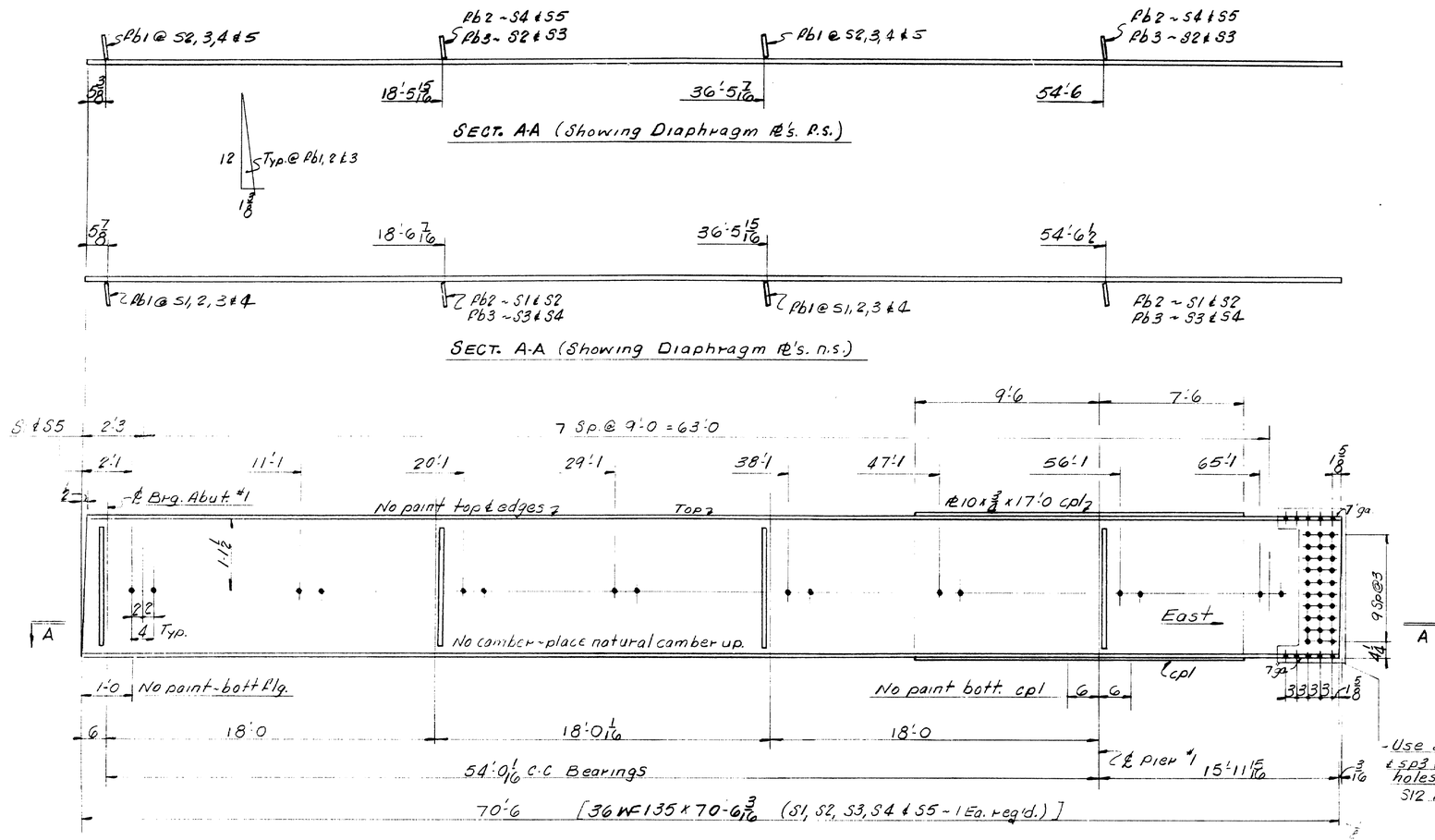
CUSTOMER CIANCHETTE BROS. INC.
DESIGNER M.S.H.C.

DRAWN	6-9-65	H.L.
REVISION		
REVISION		
REVISION		

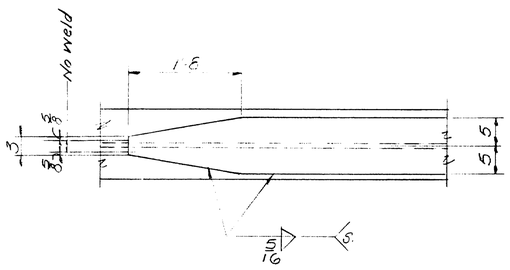
ORDER NO. Verbal
DWG. NO. 65-131-S2

94-24

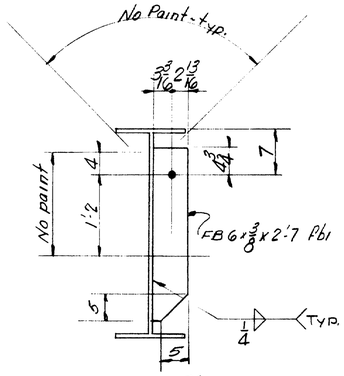




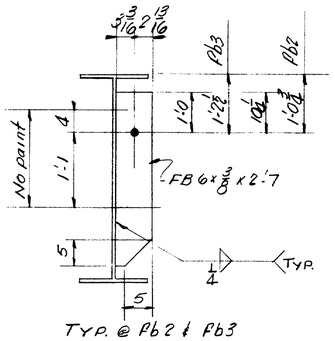
- Use splice plates sp1, sp2 & sp3 as templates to drill holes (See dwg. S4 for detail & S12 for location.



COVER PLATE DETAIL



TYP. @ Pb1



TYP. @ Pb2 & Pb3

TYPICAL SECTIONS

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
S1	1		36 WF 135	70	6 3/16		
S2	1		do	70	6 3/16		
S3	1		do	70	6 3/16		
S4	1		do	70	6 3/16		
S5	1		do	70	6 3/16		
	16	Pb1	FB 6 x 3/8	2	7		
	8	Pb2	do	2	7		
	8	Pb3	do	2	7		
	10	cpl	℄ 10 x 3/4	17	0		
Field	1550		7/8 ϕ H.S. Bolt	0	3 1/4		ASTM A-325 with heavy semi-finished hex nut
do	408		do	0	3 3/4		
do	357		7/8 ϕ H.S. Bolt	0	4		
do	2795		7/8 Hard Washer				
do	200		5/8 ϕ H.S. Bolts	0	1 1/4		
							+36 S-Rel

BILL OF MATERIAL — DWG. NO. 65-131-S3

ITEM 712-103.2

SHOP CONNECTIONS: Welded - ETJ Eq'l
FIELD CONNECTIONS: Welded & Bolted
HOLES: 13/16 ϕ
PAINT: Red lead per M.S.H.C. specs. as noted.
PROJECT NO. 1-95-3 (61)

Splice holes are for high tensile bolts. They are to be [illegible] and shall not be [illegible] surface within [illegible] open holes.

STRINGER DETAILS SPAN 1

Bancroft & Martin Inc.
South Portland 7, Maine

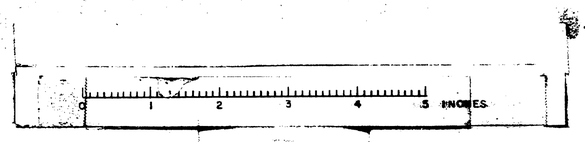
LINCOLN SPUR OVER I-95
(T2-R3) PENOBSCOT COUNTY ME.

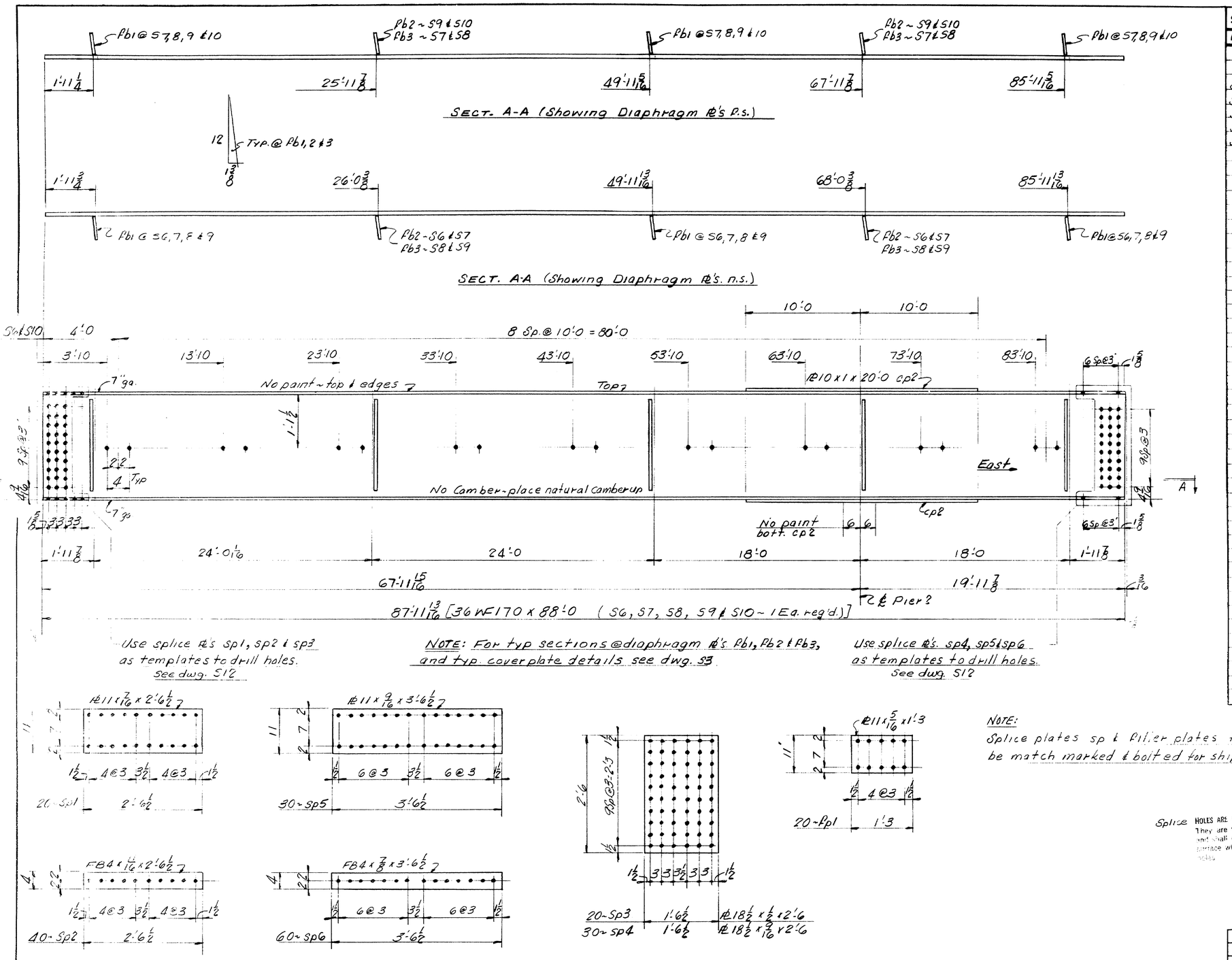
DRAWN	6-22-65	EGW
REVISION		
REVISION		
REVISION		

CUSTOMER: CIANCHETTE BROS., INC.
DESIGNER: MAINE S.H.C. - BRIDGE DIV.
ORDER NO. VERBAL
DWG. NO. 65-131-S3

APPROVED

94-25





Use splice PL's sp1, sp2 & sp3 as templates to drill holes. See dwg. S12

NOTE: For typ sections @ diaphragm PL's Pb1, Pb2 & Pb3, and typ. cover plate details see dwg. S3

Use splice PL's. sp4, sp5 & sp6 as templates to drill holes. See dwg. S12

NOTE:
Splice plates sp & Pillar plates tp are to be match marked & bolted for shipment.

Splice HOLES ARE FOR HIGH TENSILE BOLTS. They are to be free from burrs and shall not be painted on any surface within 2" of such hole.

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
S6	1		36 WF 170	88	0		
S7	1		do	88	0		
S8	1		do	88	0		
S9	1		do	88	0		
S10	1		do	88	0		
	24	Pb1	FB 6 x 3/8	2	7		
	8	Pb2	do	2	7		
	8	Pb3	do	2	7		
	10	cp2	PL 10 x 1	20	0		
	20	Sp1	PL 11 x 7/16	2	6 1/2		
	40	Sp2	FB 4 x 11/16	2	6 1/2		
	20	Sp3	PL 18 1/2 x 1/2	2	6		
	30	Sp4	PL 18 1/2 x 9/16	2	6		
	30	Sp5	PL 11 x 9/16	3	6 1/2		
	60	Sp6	FB 4 x 3/8	3	6 1/2		
	20	Pp1	PL 11 x 5/16	1	3		

BILL OF MATERIAL — DWG. NO. 65-131-S4

I 702-1.5.2

SHOP CONNECTIONS: Welded ~ E70 Rod
FIELD CONNECTIONS: As Tied & Bolted
HOLES: 5/8
PAINT: Red lead per U.S. H.C. specs. 1 as noted.
PROJECT NO. 1-15-3 (3)

STRINGER DETAILS SPAN 2

Bancroft & Martin Inc.
South Portland 7, Maine

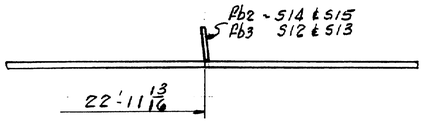
LINCOLN SPUR OVER I 95
(T2-R3) PENOBSCOT COUNTY, ME.

CUSTOMER CIANCHETTE BROS., INC.
DESIGNER MAINE S.H.C. ~ BRIDGE DIV.

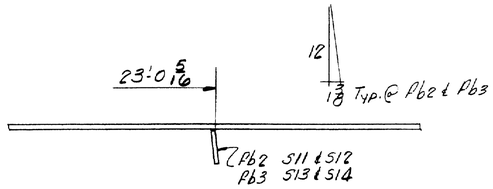
DRAWN	6-23-65	RGM
REVISION		
REVISION		
REVISION		

ORDER NO. VERBAL — DWG. NO. 65-131-S4

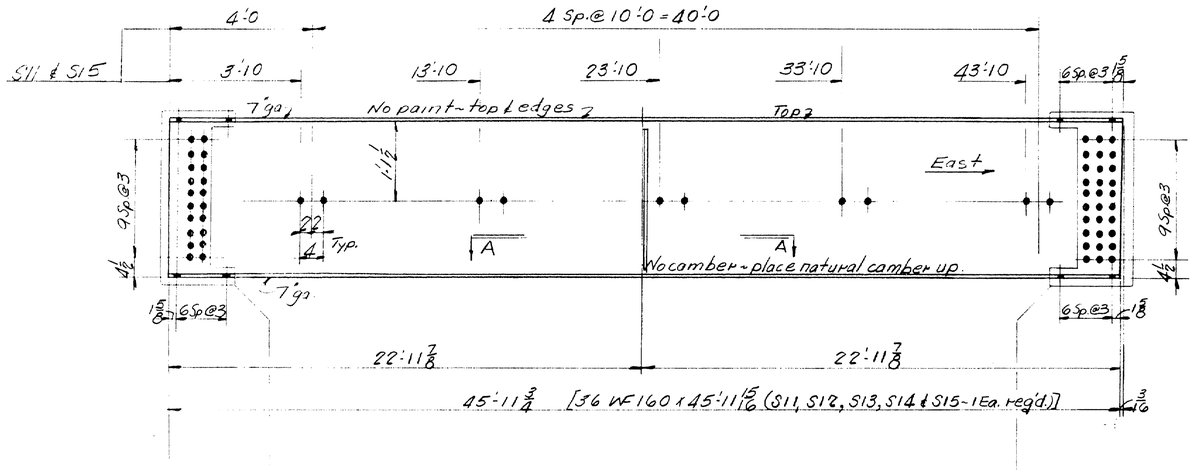
94-26



SECTION. A-A (Showing Diaphragm Pl's. P.s.)



SECTION A-A (Showing Diaphragm Pl's n.s.)



Use splice Pl's. Sp4, sp5 & sp6
as templates to drill holes.
See dwg S4 & S12

For typ. section @ diaphragm Pl's Pb2 & Pb3 see dwg. S3.

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
S11	1		36WF160	45	11 15/16		
S12	1		do	45	11 15/16		
S13	1		do	45	11 15/16		
S14	1		do	45	11 15/16		
S15	1		do	45	11 15/16		
	4	Pb2	FB 6 x 3/8	2	7		
	4	Pb3	do	2	7		

BILL OF MATERIAL — DWG. NO. 65-131-S5

SHOP CONNECTIONS: Welded - Bolted
FIELD CONNECTIONS: Welded & Bolted
HOLES: 15/16 Ø
PAINT: Red lead per M.S.H.C. Spec's. & as noted.

Splice HOLES ARE FOR HIGH TENSILE BOLTS. They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

PROJECT No. I 15-8 (2)

STRINGER DETAILS SPAN 3

Bancroft & Martin Inc.
South Portland 7, Maine

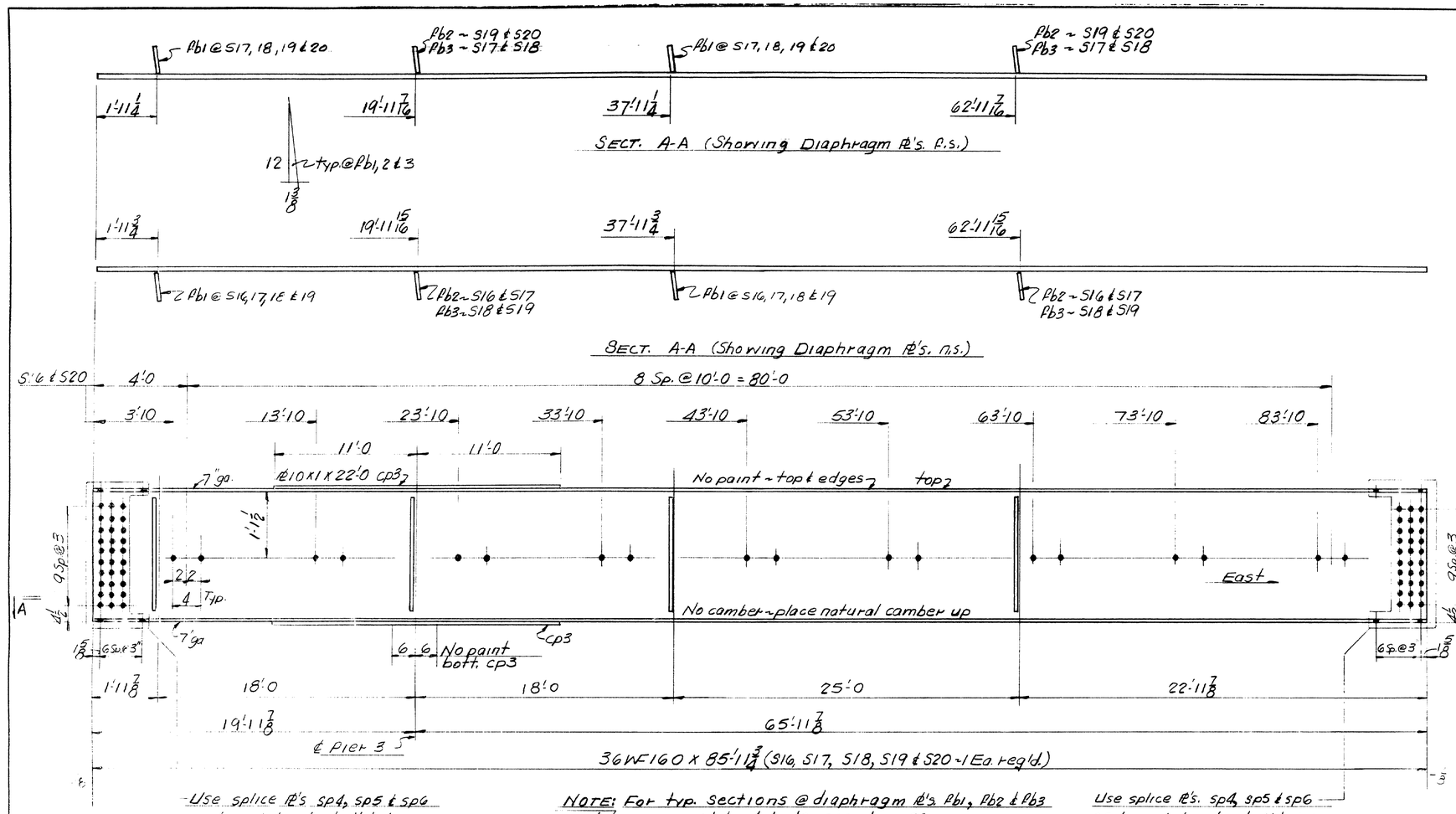
LINCOLN SPUR OVER I-95
(T2-R3) PE.10.350 T.O. UTT, ME.

CUSTOMER Fianchette Bros., Inc.
DESIGNER MAINE S.H.C. BRIDGE DIV.

DRAWN	6-30-65	RGM
REVISION		
REVISION		
REVISION		

ORDER NO. VERBAL — DWG. NO. 65-131-S5

94: 27



SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
S16	1		36 WF 160	85	11 3/4		
S17	1		do	85	11 3/4		
S18	1		do	85	11 3/4		
S19	1		do	85	11 3/4		
S20	1		do	85	11 3/4		
	16	Pb1	FB 6 x 3/8	2	7		
	8	Pb2	do	2	7		
	8	Pb3	do	2	7		
	10	cp3	PL 10 x 1	22	0		

BILL OF MATERIAL — DWG. NO. 65-131-S6

SHOP CONNECTIONS: Welded ~ ETU Rod
FIELD CONNECTIONS: Welded & Bolted
HOLES: 15/16 ø
PAINT: Red lead per N.S.H.C. Spec's. unless noted.

Splice HOLES ARE FOR HIGH TENSILE BOLTS. They are to be free from burrs and shall not be painted on any surface within 5" of such open holes.

STRINGER DETAILS SPAN 4

Bancroft & Martin Inc.
South Portland 7, Maine

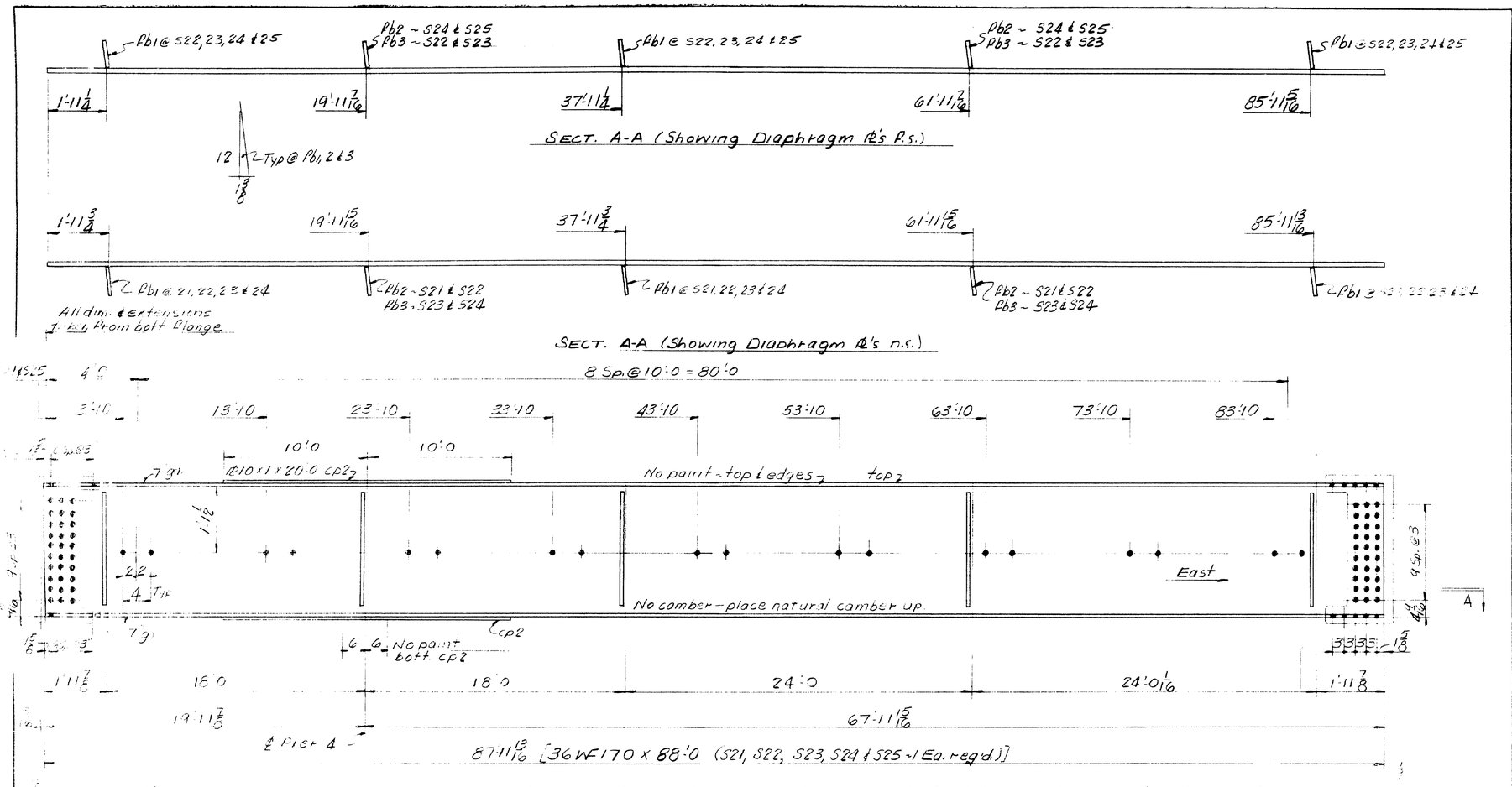
LINCOLN SOUR RIVER I-95
(T2-R8 PENOBSCOT SCHIT), ME.

CUSTOMER: CIANCHETTE BROS., INC.
DESIGNER: MAINE S.H.C. BRIDGE DIV.
ORDER NO.: VERBAL
DWG. NO. 65-131-S6

DRAWN	6-29-65	REGM.
REVISION		
REVISION		
REVISION		

APPROVED 7-27-65

94-28



Use splice PLs sp4, sp5 & sp6 as templates to drill holes see dwg. S4 & S12

NOTE: For typ sections @ diaphragm PL's Pb1, Pb2 & Pb3 and typ cover plate details see dwg. S3.

Use splice PL's sp1, sp2 & sp3 as templates to drill holes see dwg. S4 & S12

SHIP MARK	NO.	MARK	BILL OF MATERIAL SHAPE	LENGTH		WT.	REMARKS
S21	1		36 WF 170	38	0		
S22	1		Do	38	0		
S23	1		Do	38	0		
S24	1		Do	38	0		
S25	1		Do	38	0		
	24	Pb1	FB [illegible]	2	7		
	9	Pb2	Do	2	7		
	9	Pb3	Do	2	7		
	10	[illegible]	PL 10 x 1	20	0		

DWG. NO 65-131-57

A [illegible] STEEL

I-02 [illegible]

SHOP CONNECTIONS [illegible]
FIELD CONNECTIONS [illegible]
HOLES: 5-b
PAINT: [illegible]

Splice HOLES ARE FOR HIGH TENSILE BOLTS [illegible] are to be free from burrs [illegible] shall not be [illegible] within [illegible] of such [illegible]

PROJECT NO. [illegible]

STRINGER DETAILS SP-N 5

Bancroft & Martin Inc.
South Portland 7, Maine

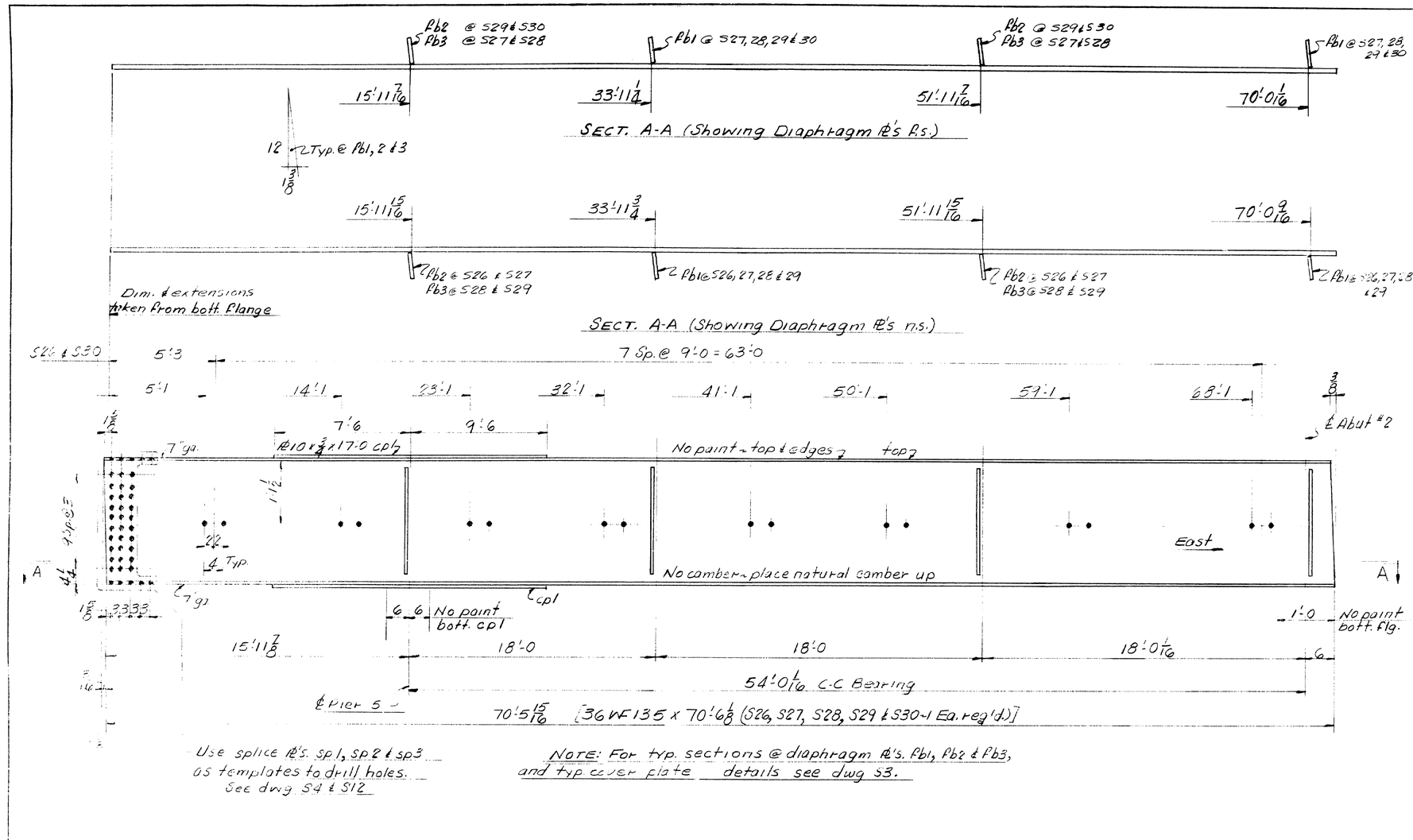
LINCOLN TOUR OVER I-95
(T2-R1) REID-SOUT [illegible], N/E.

DRAWN	6-24-[illegible]	[illegible]
REVISION		
REVISION		
REVISION		

CUSTOMER CIANBETTE BRIDGE INC.
DESIGNER MAINE STATE BRIDGE DIV.
ORDER NO. VERBAL
DWG. NO. 65-131-57

94-29

0 1 2 3 4 5 INCHES



Use splice Pl's. sp1, sp2 & sp3 as templates to drill holes. See dwg. S4 & S12

NOTE: For typ. sections @ diaphragm Pl's. Pb1, Pb2 & Pb3, and typ cover plate details see dwg S3.

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
S26	1		36 WF 135	70	6 3/8		
S27	1		DO	70	6 3/8		
S28	1		DO	70	6 3/8		
S29	1		DO	70	6 3/8		
S30	1		DO	70	6 3/8		
	16	Pb1	FB 6 x 3/8	2	7		
	3	Pb2	DO	2	7		
	3	Pb3	DO	2	7		
	10	cp1	Pl 10 x 3/4	17	0		
							A-36 Steel

BILL OF MATERIAL DWG. NO 65-131-S8

I 702-[illegible]

SHOP CONNECTIONS: Welded - E70 Rod
FIELD CONNECTIONS: Welded & Bolted
HOLES: 15/16
PAINT: Red lead per M.S.H.C. specs. & as noted.

Splice HOLES ARE FOR HIGH TENSILE BOLTS They are to be free from burrs and shall not be painted on any [illegible] holes.

PROJECT No. I-95-3 (61)

STRINGER DETAILS SPAN 6

Bancroft & Martin Inc.
South Portland 7, Maine

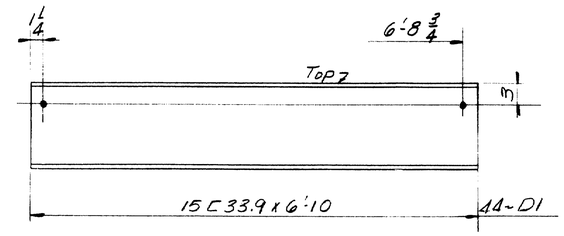
LINCOLN SPUR OVER I-95
(T2-R8) PENOBSCOT COUNTY, ME.

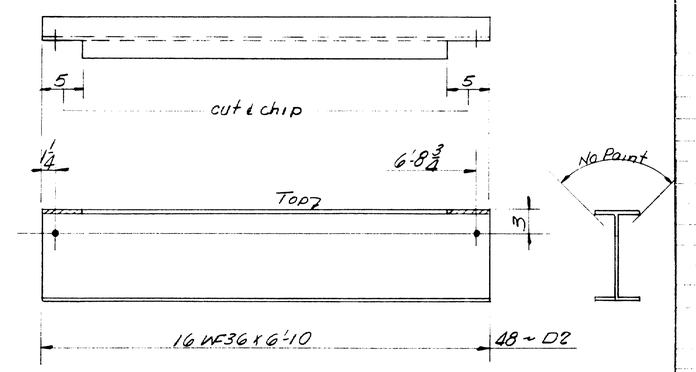
CUSTOMER CIANCHETTE BROS., INC.
DESIGNER MAINE S.H.C. BRIDGE DIV.

DRAWN	6-30-65	RGM
REVISION		
REVISION		
REVISION		

ORDER NO. VERBAL
DWG. NO. 65-131-S8

94-30





NOTE:
No Paint within 5" ea. end D1 & D2

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
D1	44		15C33.9	6	10		
D2	48		16WF36	6	10		
Field	193		3/4ΦN.Bolt	0	2		

BILL OF MATERIAL — DWG. NO 65-131-S9

Sheet 700

ITEM 702-103.2

SHOP CONNECTIONS:
FIELD CONNECTIONS: Bolted 3/4 ϕ A325
HOLES: 3/4 ϕ
PAINT: Red lead per [illegible] & as noted.

PROJECT NO. [illegible]

DIAPHRAGM DETAILS

Bancroft & Martin Inc.
South Portland 7, Maine

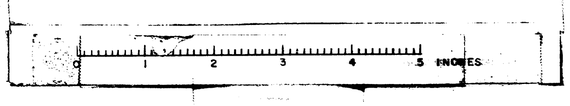
LINCOLN SOUR OVER 545
(T2-R3) PENOBSCOT COUNTY, ME.

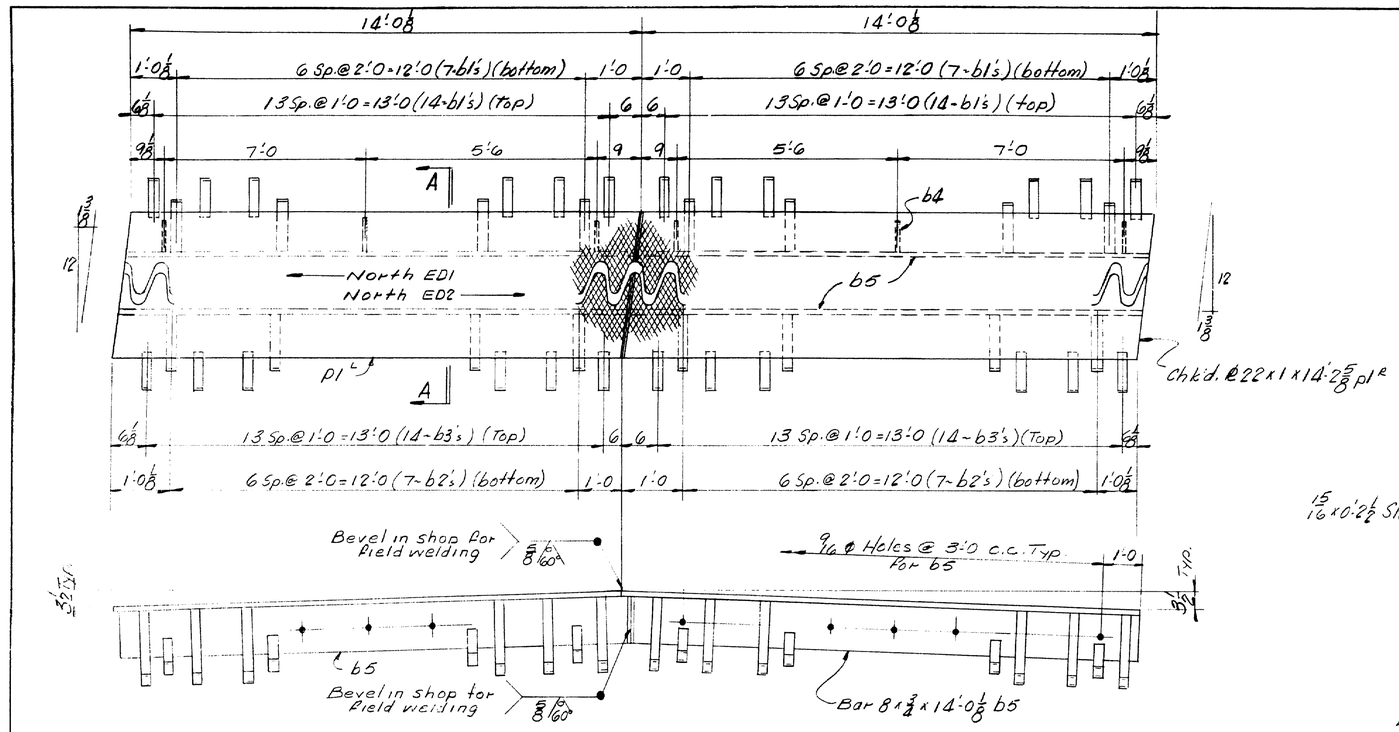
CUSTOMER: CIANCHETTE BROS., INC.
DESIGNER: MAINE S.H.C. - BRIDGE DIV.

DRAWN	6-30-65	RGM.
REVISION		
REVISION		
REVISION		

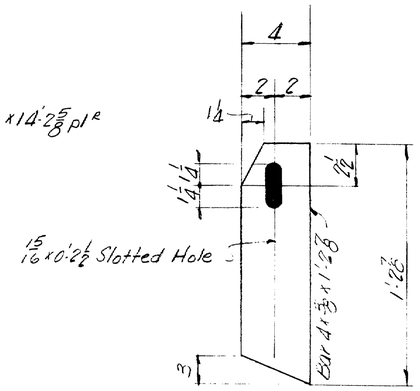
ORDER NO. VERBAL — DWG. NO. 65-131-S9

94-31

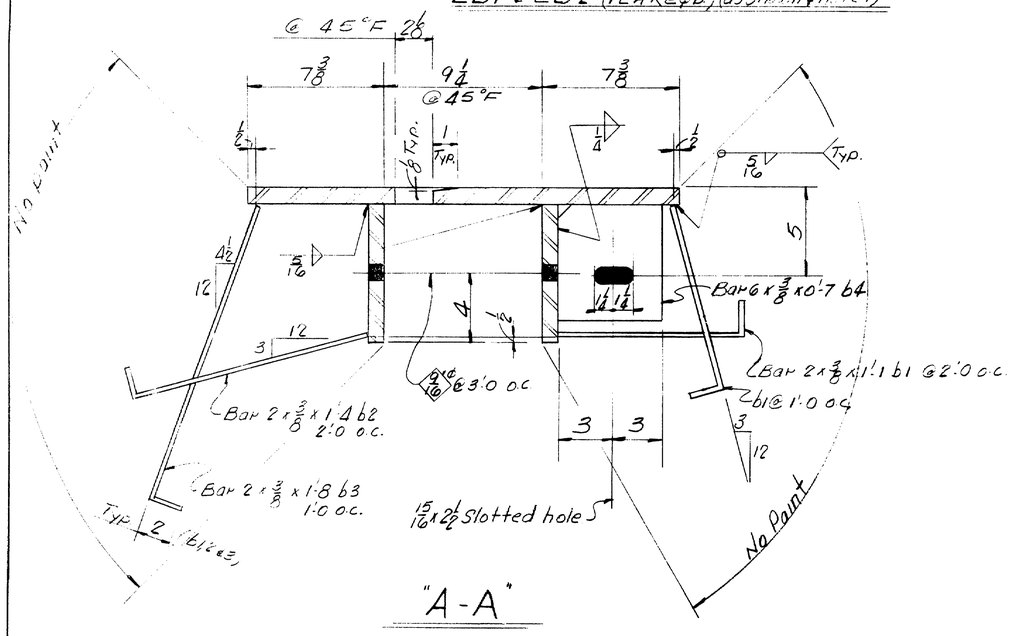




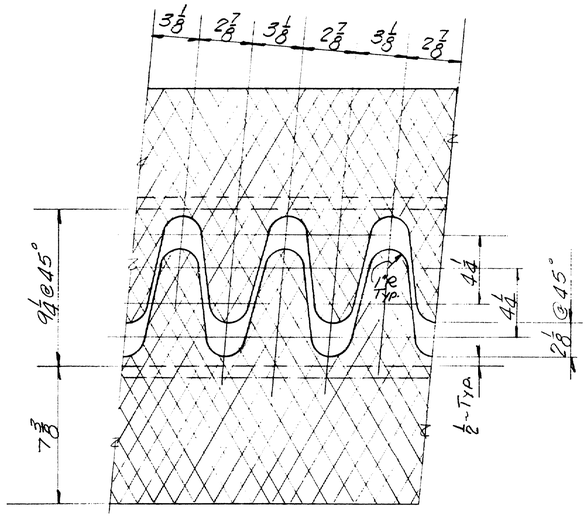
ED1 & ED2 (1 EA REQ'D) (as shown & noted)



b6 - 12 REQ'D. (No paint)
Bolt to b5 for shipment with 7/8 ø x 0'-2 1/4 H.S. Bolts
Field weld to top of diaphragm



"A-A"



CUTTING DIAGRAM
Cut from 22x1 non skid PL & match mark

SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
ED1	1		Shop Assy			—	(4 parts)
ED2	1		do			—	(4 parts)
	2	pl R	PL 22 x 1	14	2 5/8		Chk'd PL
	2	pl L	PL 22 x 1	14	2 5/8		Chk'd PL
	34	b1	Bar 2 x 3/8	1	1		Bent
	28	b2	Bar 2 x 3/8	1	4		Bent
	56	b3	Bar 2 x 3/8	1	8		Bent
	12	b4	Bar 6 x 3/8	0	7		
	3	b5	Bar 8 x 3/4	14	0 1/8		
	12	b6	Bar 4 x 3/8	1	2 7/8		
	12		Hsp 7/8 ø H.S. Bolts	0	2 1/4		
	12		Hsp 7/8 Hard Washer				
							A36

BILL OF MATERIAL — DWG. NO. 65-131-S10

ITEM T03-103.2

SHOP CONNECTIONS: Welded - E70
FIELD CONNECTIONS: Welded
HOLES: [illegible]
PAINT: Field coat per MS [illegible] unless noted.
(PROJECT No. [illegible])

EXPANSION DAM DETAILS

Bancroft & Martin Inc.
South Portland 7, Maine

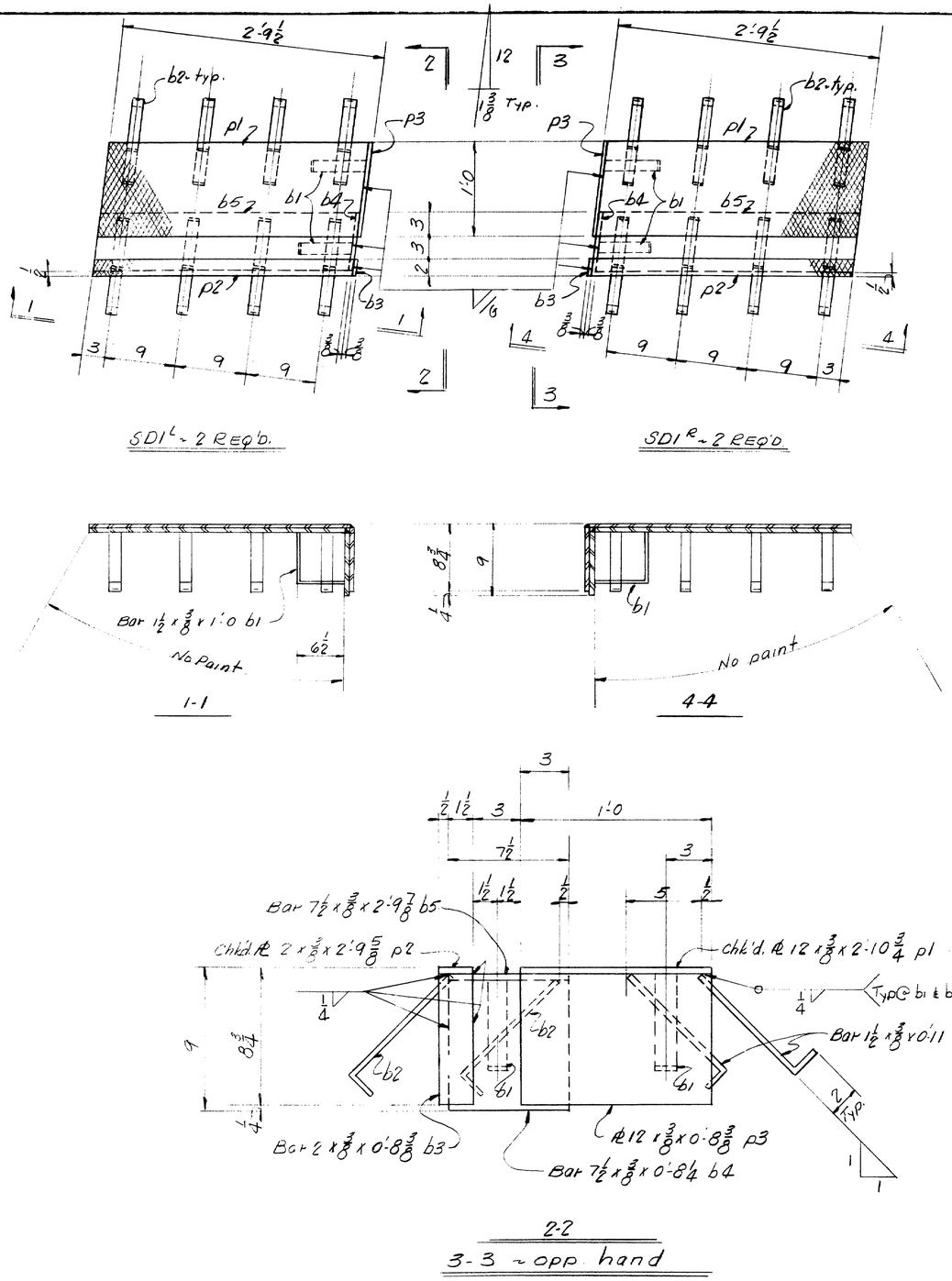
LINCOLN TOUR OVER I-95
(T2-R8) PENOBSCOT COUNTY, ME.

CUSTOMER: CIANCHETTE BROS., INC.
DESIGNER: MAINE S.H.C. BRIDGE DIV.
ORDER NO.: VERBAL
DWG. NO. 65-131-S10

DRAWN	7-1-65	RGM.
REVISION		
REVISION		
REVISION		

APPROVED [illegible]

94-32



SHIP MARK	NO.	MARK	SHAPE	LENGTH		WT.	REMARKS
SD1L	2		Shop Assy.			—	
SD1R	2		Shop Assy.			—	
	4	p1	PL 12 x 3/8	2	10 3/4		Chk'd. PL
	4	p2	PL 2 x 3/8	2	9 5/8		Chk'd. PL
	4	p3	PL 12 x 3/8	0	8 3/8		
	8	b1	Bar 1 1/2 x 3/8	1	0		
	64	b2	Bar 1 1/2 x 3/8	0	11		
	4	b3	Bar 2 x 3/8	0	8 3/8		
	4	b4	Bar 7 1/2 x 3/8	0	8 1/4		
	4	b5	Bar 7 1/2 x 3/8	2	9 7/8		

BILL OF MATERIAL — DWG. NO. 65-131-S11

ITEM 702-1.3.2

SHOP CONNECTIONS: As shown on Dwg.
FIELD CONNECTIONS: —
HOLES: —
PAINT: Red lead per Mass. H.C. Specs. and as noted.
PROJECT No. 1-15-9(61)

SIDENALK EXPANSION DAM

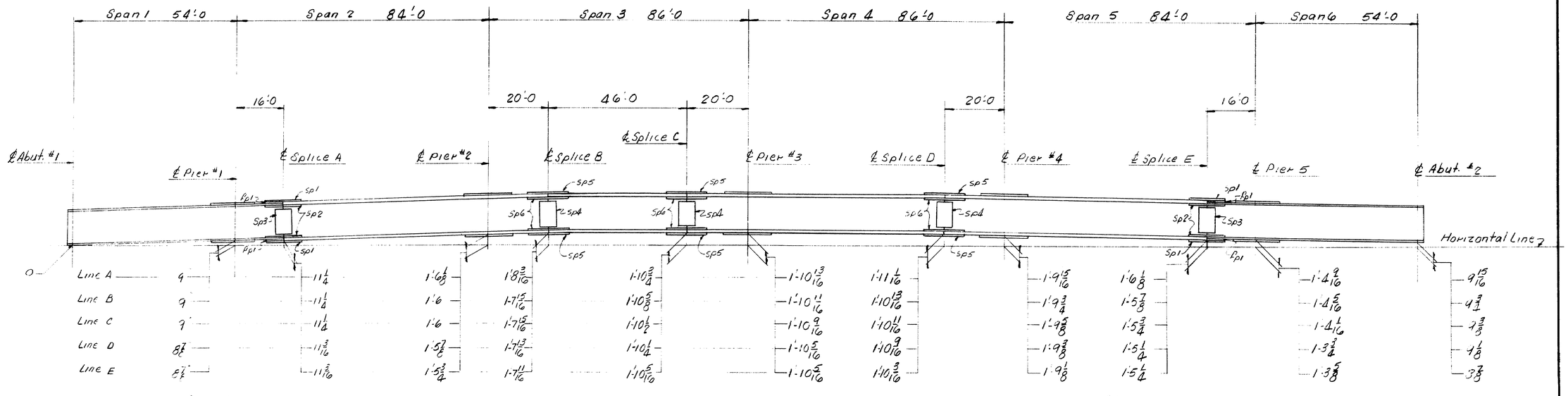
Bancroft & Martin Inc.
South Portland 7, Maine

LINCOLN SPUR OVER I-95
(T2.88) PENOBSCOT COUNTY, ME.

DRAWN	7-2-65	RGM
REVISION		
REVISION		
REVISION		

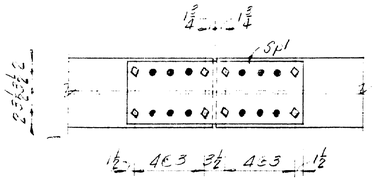
CUSTOMER: CIANCHETTE BROS., INC.
DESIGNER: MAINE S.H.C. BRIDGE DIV.
ORDER NO. VERBAL — DWG. NO. 65-131-S11

94-33

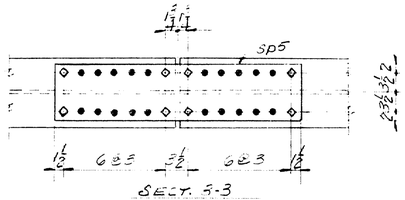


NOTE: Vertical dimensions taken to the bottom of the stringers. Where one stringer is larger, the dimensions are to the bottom of the larger stringer.

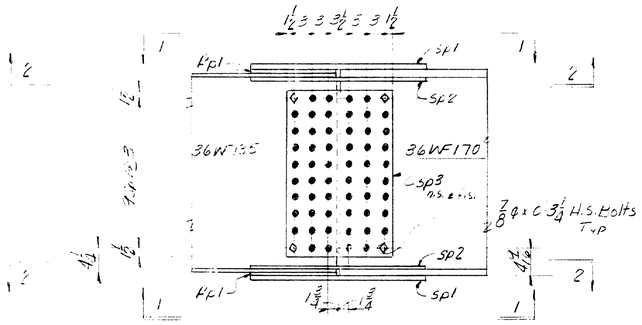
SHOP LAYOUT DIAGRAM



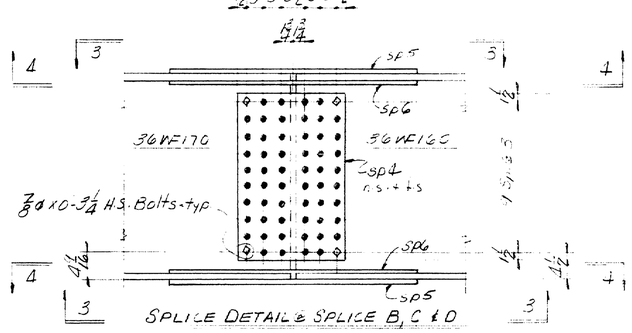
SECTION 1-1



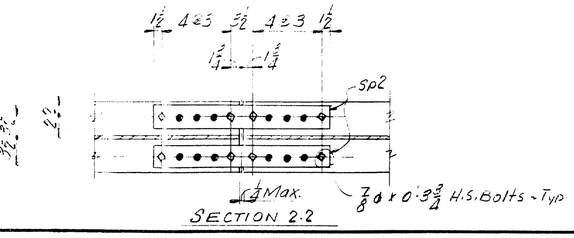
SECT. 5-3



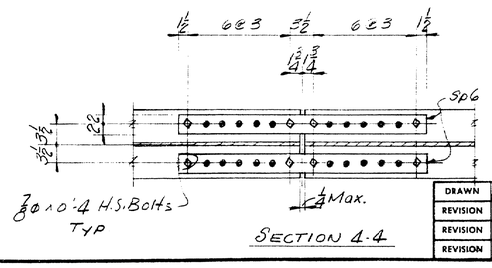
SPLICE DETAIL @ SPLICE A & E



SPLICE DETAIL @ SPLICE B, C & D



SECTION 2-2

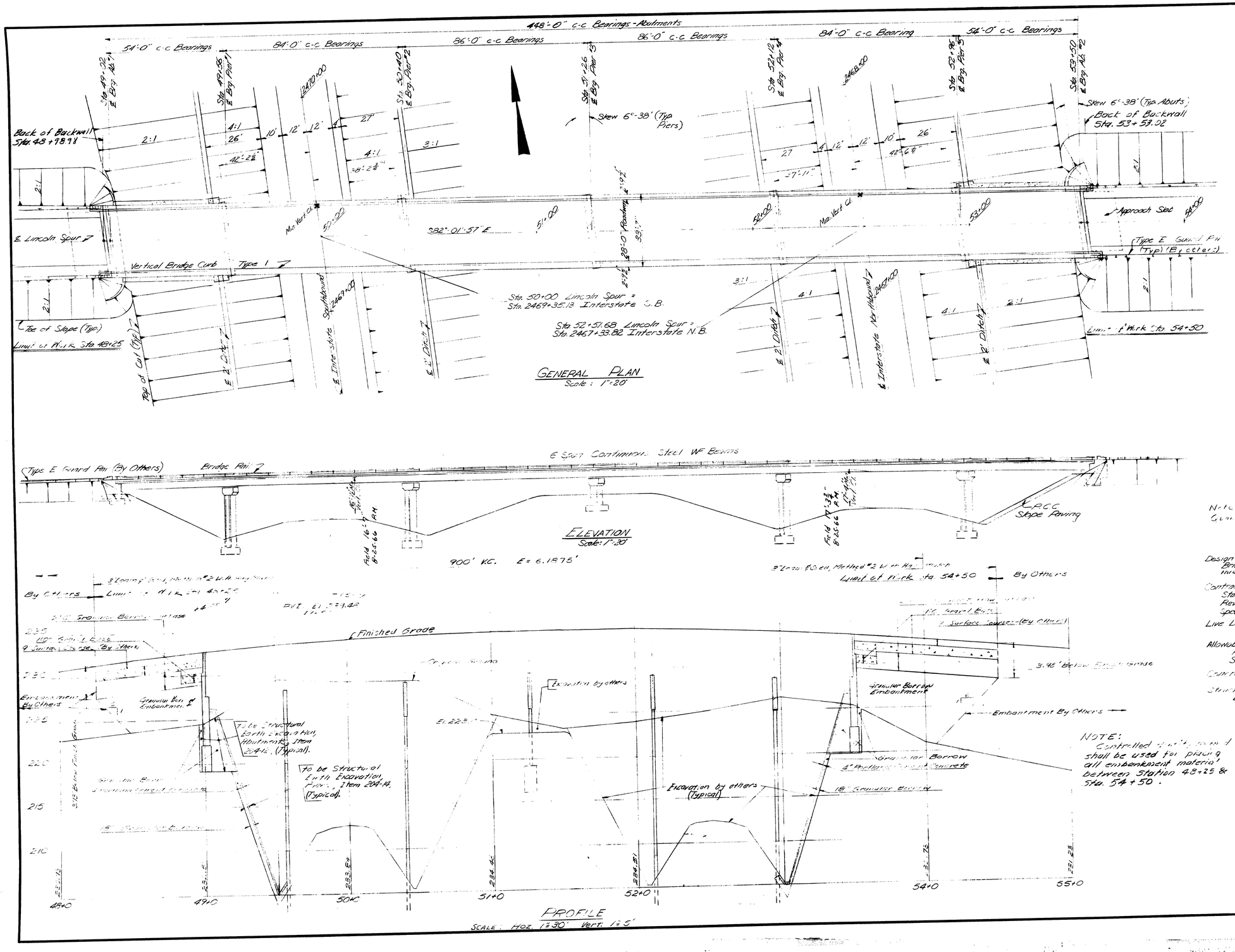


SECTION 4-4

SHOP LAYOUT DIAGRAM			
Bancroft & Martin Inc. South Portland 7, Maine			
LINCOLN ROUTE OVER I-95 (T2-R3) DEXTER TOWNSHIP, ME.			
DRAWN	6 28 65	RSH	CUSTOMER GIANCHETTE BROS., INC.
REVISION			DESIGNER MAINE S.H.C. BRIDGE DIV.
REVISION			
REVISION			ORDER NO. VERBAL / DWG. NO. 65-131-S12

94-34

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	13	26



INDEX OF SHEETS

SHEET NO	DESCRIPTION
1	GENERAL PLAN
2	CROSS SECTION
3	FOUNDATION SURVEY
4	BORING DETAILS
5	ABUTMENTS NO1 & NO2
6	ABUTMENT DETAILS & APPROACH SLAB
7	SLOPE PAVING
8	PIERS 1, 2, 4 & 5
9	PIER 3
10	ERECTION DIAGRAM & BLOCKING
11	SUPERSTRUCTURE
12	REINFORCING STEEL SCHEDULE
STANDARD DETAILS	
BD101-64	BEARING PEDESTALS
BD103-64	BEAM SPLICE
BD104-64	DIAPHRAGMS; ARMORED JOINTS; SHEAR CONNECTORS; DRAINS
BD105-64	EXPANSION DAMS
BD107-64	STEEL RAIL
BD108-64	ALUMINUM RAIL
ENGINEERS FIELD OFFICES	

Note - See Sheet "6" For Estimate Of Quantities

SPECIFICATIONS

Design: AASHO Standard Specifications for Highway Bridges 1961 with Interim Specifications, thru 1962.

Contract: State of Maine, State Highway Commission Standard Specifications for Highways & Bridges, Revision of January 1956 and Supplemental Specifications February 1960.

Live Loading: HS20-44

Allowable Stresses: Concrete - f'c = 1200 psi n=10
Reinforcing Steel - Intermediate Grade: fs = 20,000 psi
Structural Steel - A36 = 20,000 psi

Concrete Classification: All concrete - Class "A" except Slope Paving - Class "Y".

Structural Steel Classification: ASTM A36 unless otherwise noted on the Standard Details.

NOTE:
Controlled [illegible] shall be used for placing all embankment material between Station 48+25 & Sta. 54+50.

DESIGN- L.L.K.
TRACE- A.
CHECK- N.H.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR
OVER
INTERSTATE 95
IN
T2 R8
PENOBSCOT COUNTY

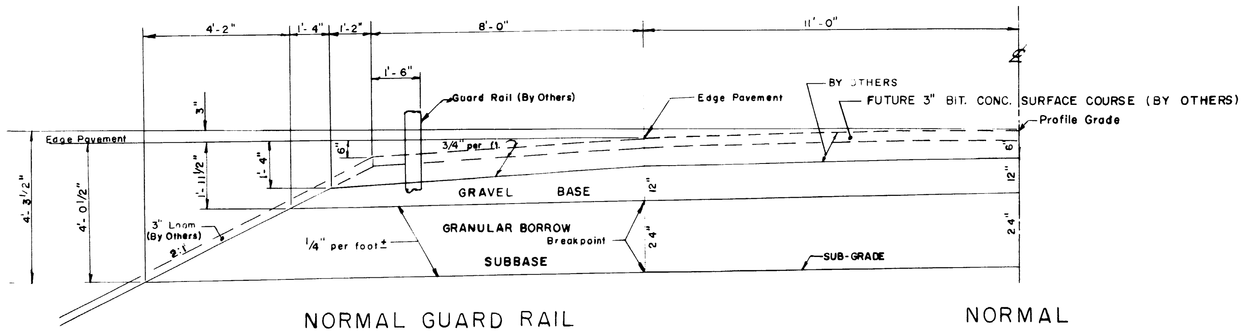
GENERAL PLAN

SHEET 1 OF 12 AUGUSTA, MAINE JAN. 1965

95-163

0 1 2 3 4 5 INCHES

R.L.L. 12 Mar 64



NORMAL GUARD RAIL
8 FT. SHOULDER

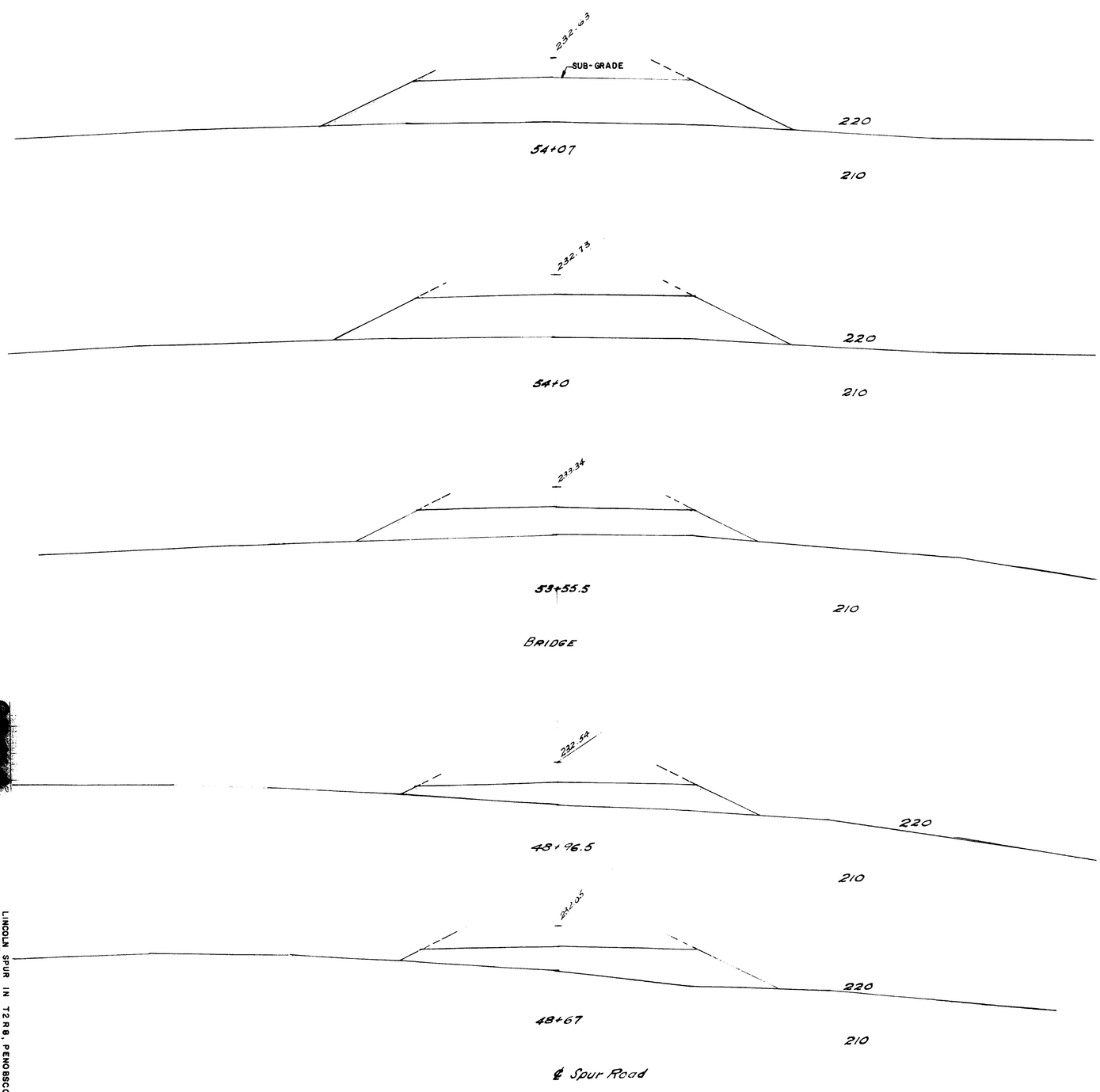
12" GRAVEL BASE COURSE = 28.61 C.Y. PER 100 L.F.
24" GRANULAR BORROW SUBBASE = 93.22 C.Y. PER 100 L.F.

NORMAL
22 F.T. PAVEMENT

12" GRAVEL BASE COURSE = 81.48 C.Y. PER 100 L.F
24" GRANULAR BORROW SUBBASE = 162.96 C.Y. PER 100 L.F.

TYPICAL APPROACH SECTION - SPUR ROAD

(ONE HALF SECTION SHOWN, SECTION IS SYMMETRICAL ABOUT CENTER LINE)

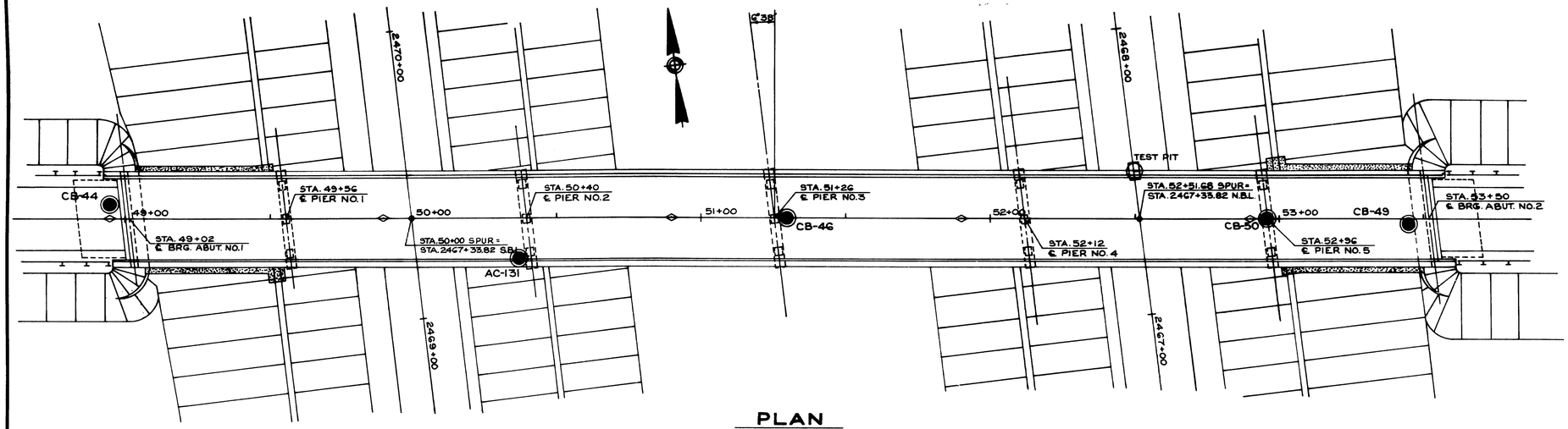


[redacted]

LINCOLN SPUR IN T2 R8, PENOBSCOT COUNTY
CROSS-SECTIONS OF LINCOLN SPUR ROAD

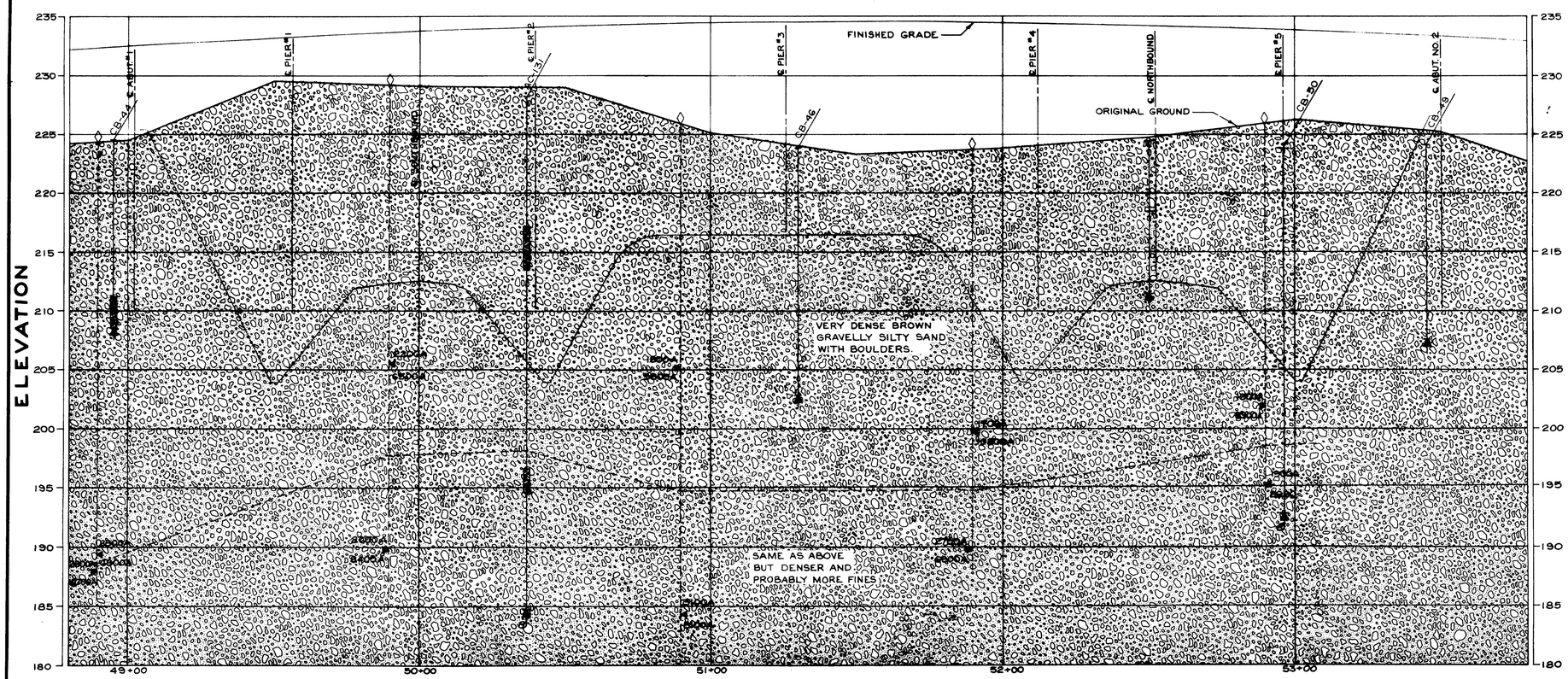
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(1)	11	3

B. P. R. BRK. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(6)	17	26



PLAN

SCALE 1"=20'



℄ PROFILE

SCALES: VERT. 1"=5' HORIZ. 1"=20'

LEGEND

PLAN NOTES

- ROD SOUNDING
- WASH BORING
- TEST PIT
- SEISMIC: SHOT LOCATION

PROFILE NOTES

- SEISMIC: 1800 CHANGE IN VELOCITY (FT./SEC.) & 19000 PROBABLE CHANGE IN MATERIAL
- BOTTOM OF EXPLORATION
- REFUSAL

DESIGN– TRACE– CHECK–	BRIDGE NO. SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR OVER INTERSTATE 95 IN T2 R8 PENOBSCOT COUNTY

FOUNDATION SURVEY

SHEET 3 OF 12 AUGUSTA, MAINE

95-165

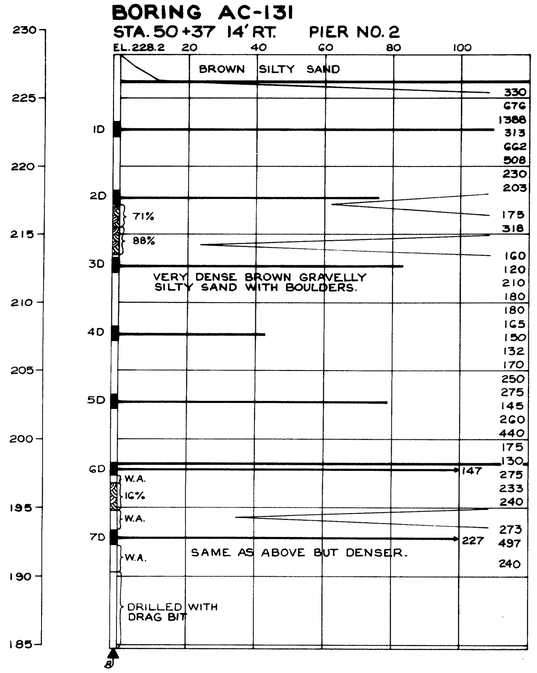
C. B. CO., NO. 44-131 29788

0 1 2 3 4 5 INCHES

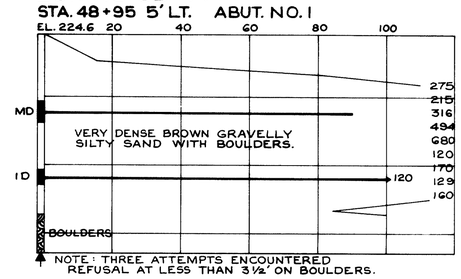
B. P. R. REF. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	18	26

ELEVATION

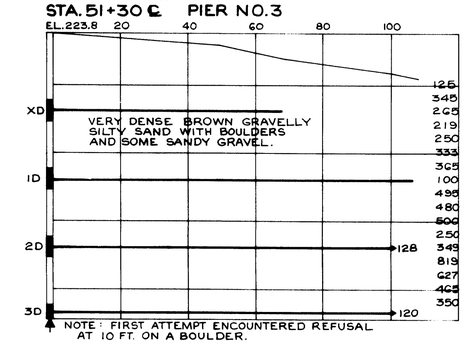
BORING AC-131
STA. 50+37 14' RT. PIER NO. 2



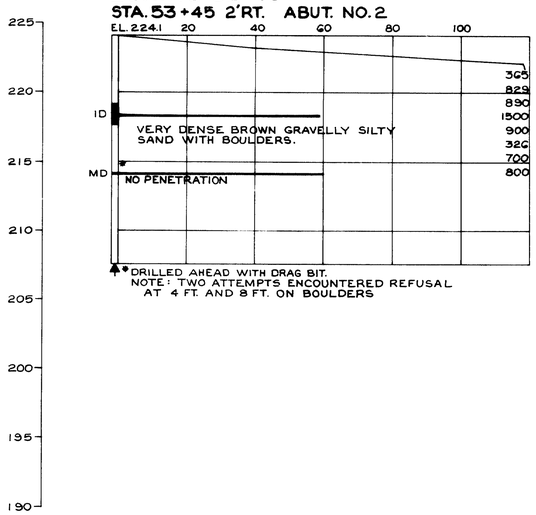
BORING CB-44
STA. 48+95 5' LT. ABUT. NO. 1



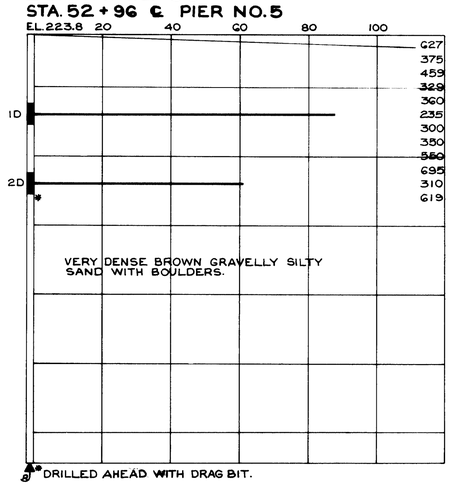
BORING CB-46
STA. 51+30 ℄ PIER NO. 3



BORING CB-49
STA. 53+45 2' RT. ABUT. NO. 2



BORING CB-50
STA. 52+96 ℄ PIER NO. 5



BORING NOTES

Casing size 2½"
W.A. Washed ahead.
All samples are made ahead of casing.
≥ Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow.
Location of sample or sample attempt.
Number and type of dry sample.
1D S & H Sampler # 1290'S
MD Unsuccessful sample attempt and type of sampler.
Number of blows required to drive spoon one foot with 350 ft. lbs. of energy per blow.
Bottom of boring (May not be bottom of soil strata.)
90% Locations cored by diamond bit and per cent recovery of rock.

DESIGN– TRACE– CHECK–	BRIDGE NO. SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR OVER INTERSTATE 95 IN T2 R8 PENOBSCOT COUNTY

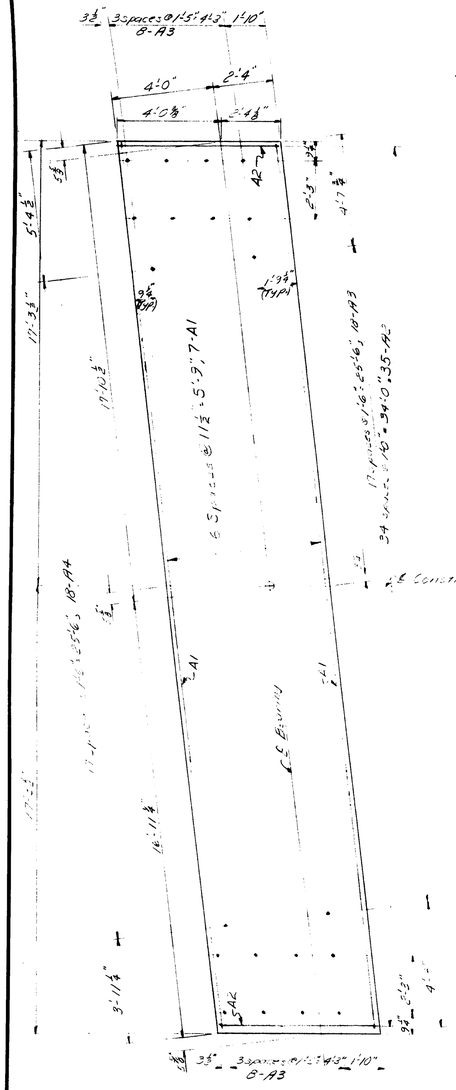
BORING DETAILS

SHEET 4 OF 12 AUGUSTA, MAINE

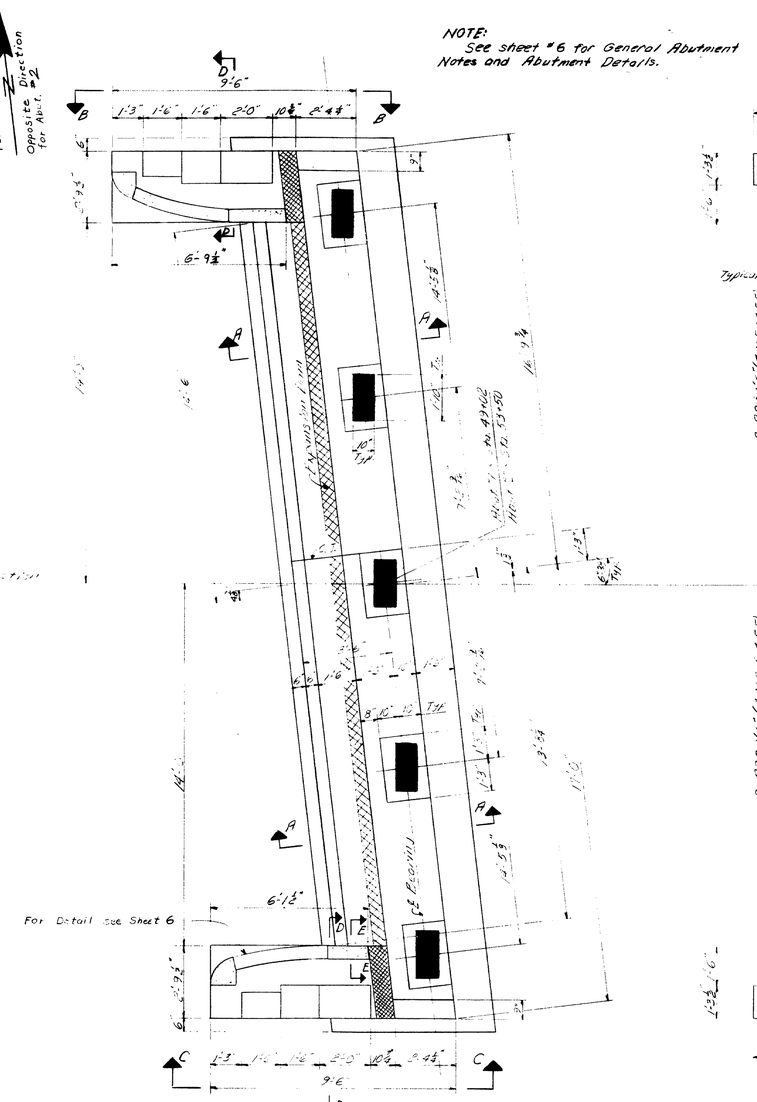
95-166

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	19	20

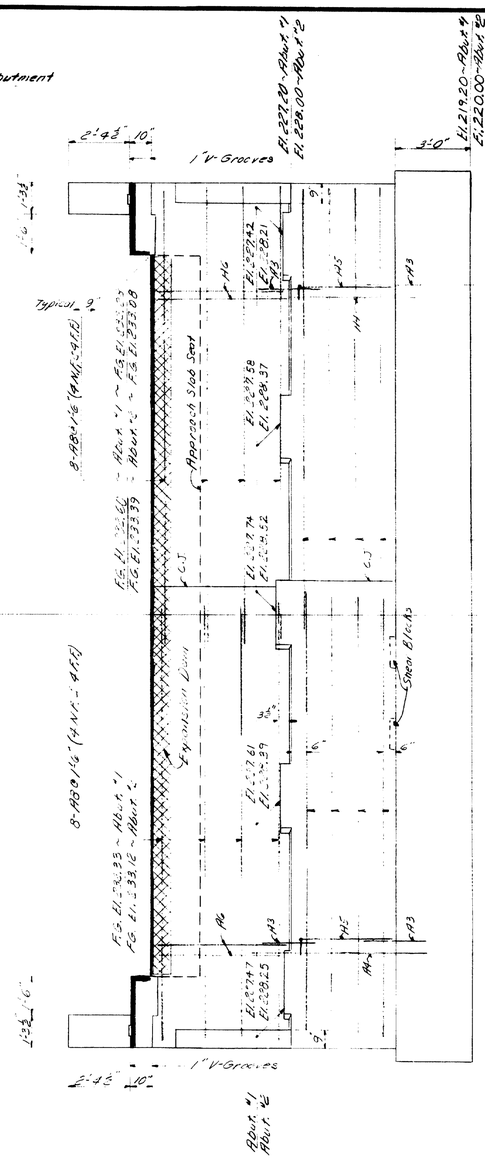
NOTE:
See sheet #6 for General Abutment Notes and Abutment Details.



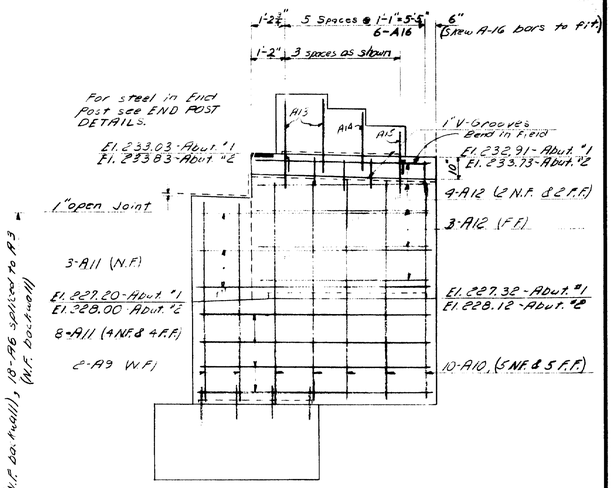
FOOTING PLAN



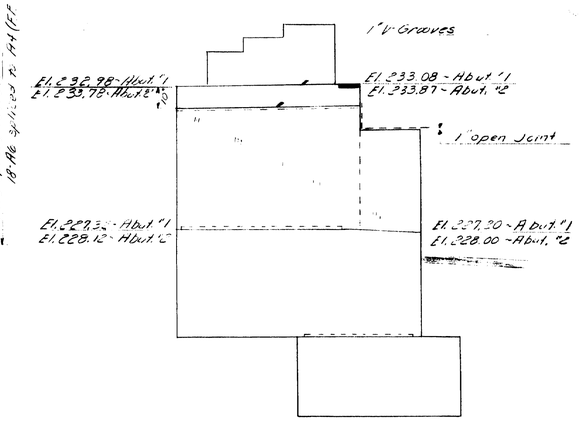
PLAN



FRONT ELEVATION

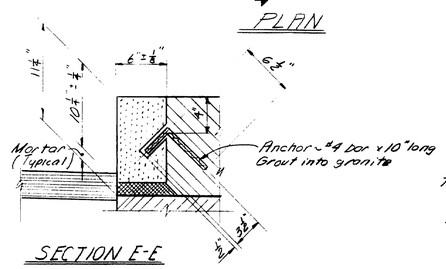


ELEVATION B-B



ELEVATION C-C

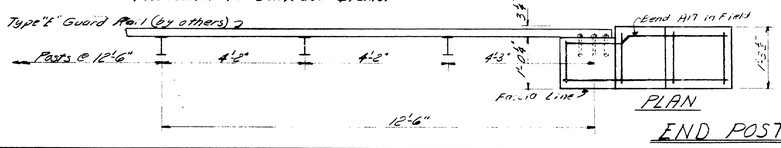
Reinforcing is identical to Elevation B-B



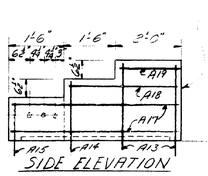
SECTION E-E

TYPICAL FOR VERTICAL BRIDGE CURB - TYPE I

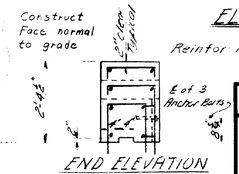
Note: Payment for furnishing & setting Anchor Bolts for End Posts is to be incidental to Contract Items.



PLAN



SIDE ELEVATION



END ELEVATION

ANCHOR BOLT

END POST DETAILS

DESIGN - L.L.R.
TRACE - L.L.R.
CHECK - A.H.R.

BRIDGE NO.
SURVEY -
PLOT -

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR
OVER
INTERSTATE 95
IN
T2 R8
PENOBSCOT COUNTY

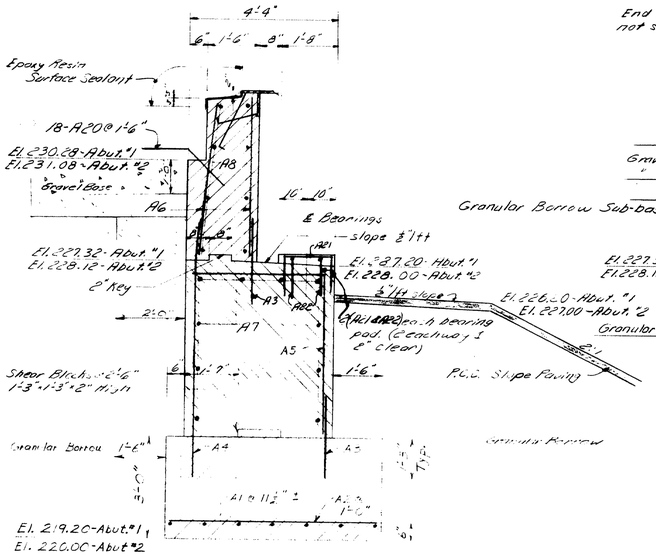
ABUTMENT NO. 1 & NO. 2

SHEET 5 OF 12 AUGUSTA, MAINE JAN. 1965

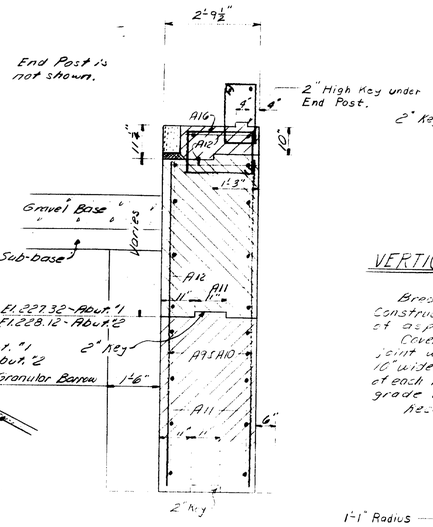
95-167

0 1 2 3 4 5 INCHES

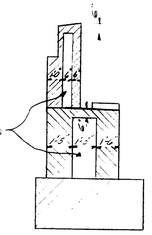
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	20	26



SECTION A-A



SECTION D-D

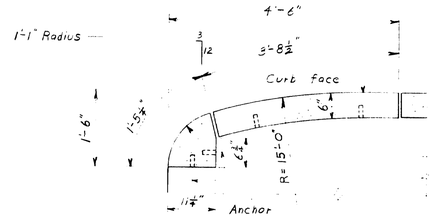


VERTICAL CONSTRUCTION JOINT

Break the bond at the vertical construction joint with a suitable grade of asphalt paint.

Cover the back side of the vertical joint with two layers of heavy roofing paper 16" wide. Coat concrete and contact surfaces at each layer of roofing paper with a suitable grade of roofing cement.

Excess area to be covered ½".



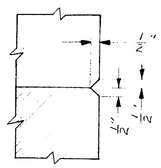
TYPICAL DETAIL @ END OF BRIDGE CURB

GENERAL ABUTMENT NOTES

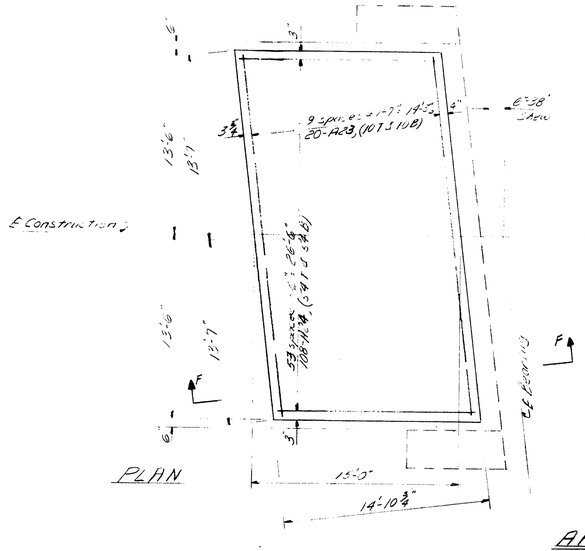
1. Dress shaded Bearing Areas to exact elevations shown and 1" larger than masonry plates all around.
2. Point the face at backwall, top of bridge seat, face of breastwall, and inside of curtain walls with Epoxy Resin Surface Sealant.
3. Backwall and wingwalls are to be built after structural steel has been erected and bottom of slab elevations established.
4. All reinforcing steel splices are to be a minimum of 20 bar diameters.
5. All reinforcing steel is to have 3" of cover unless otherwise noted.
6. Place reinforcing steel to clear anchor bolts.
7. For Expansion Dam Details see Standard Details BD-105-64.
8. Legend: C.J.: Construction Joint
El.: Elevation F.G.: Finished Grade
Abut.: Abutment N.F.: Near Face
F.F.: Far Face T: Top B: Bottom
9. Maximum Soil Pressure: 2.7 tons/ft².
10. Concrete in End Posts to be paid for under Item 701-33.

ESTIMATE OF QUANTITES

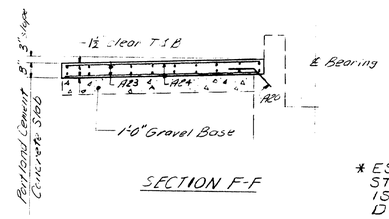
	DESCRIPTION	UNIT	QUANTITY
	STRUCTURAL EARTH EXCAVATION, ABUTMENTS AND RETAINING WALLS	C.Y.	230
	STRUCTURAL EARTH EXCAVATION, PIERS	C.Y.	650
	FIELD OFFICE, TYPE "C" (2 ROOM SHOP)	L.S.	LUMP SUM
	GRANULAR BORROW	C.Y.	3035
	GRAVEL BASE COURSE - IPM	C.Y.	220
▶	BITUMINOUS CONCRETE SURFACE COURSE, TYPE "A"	TONS	158
	PORTLAND CEMENT CONCRETE ABUTMENTS AND RETAINING WALLS	C.Y.	162
	DIRT, ALL CONSIST OF [illegible] HIGHWAY AND SIDEWALK SLABS [illegible] BRIDGES	C.Y.	449
*	STRUCTURAL STEEL, FABRICATED AND DELIVERED	L.S.	LUMP SUM
*	STRUCTURAL STEEL, ERECTION	L.S.	LUMP SUM
*	STRUCTURAL STEEL FIELD PAINTING	L.S.	LUMP SUM
	BRIDGE RAIL	LIN. FT.	904
▶	MEMBRANE WATERPROOFING	SQ. YDS.	1400
	SLOPE PAVING	SQ. YDS.	477
	VERTICAL BRIDGE CURB - TYPE I	LIN. FT.	907
	VERTICAL BRIDGE CURB - CIRCULAR - TYPE I	LIN. FT.	21
	PORTLAND CEMENT CONCRETE - PIERS	C.Y.	253
	REINFORCING STEEL, DELIVERED	LBS	123,800
	REINFORCING STEEL, PLACING	LBS	123,800
	EPOXY RESIN SURFACE SEALANT	SQ. YDS.	86



1" V-GROVE DETAIL



PLAN



SECTION F-F

APPROACH SLAB

Abut. #1 is shown, Abut. #2 is identical when rotated 180°.
Approach Slab Concrete is to be paid for under Item 701-33, P.C.C. Abuts. & Retaining Walls.

* ESTIMATED WEIGHT OF STRUCTURAL STEEL - 436,000 LBS - INCLUDING DRAINS IS BASED ON NOMINAL SIZE AND DOES NOT INCLUDE WELDS.

▶ NOT A PART OF THIS CONTRACT

DESIGN- L.I.R.
TRACE- J.L.R.
CHECK- AHH

BRIDGE NO.
SURVEY-
PLOT-

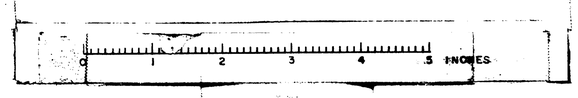
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR
OVER
INTERSTATE 95
IN
T2 R8
PENOBSCOT COUNTY

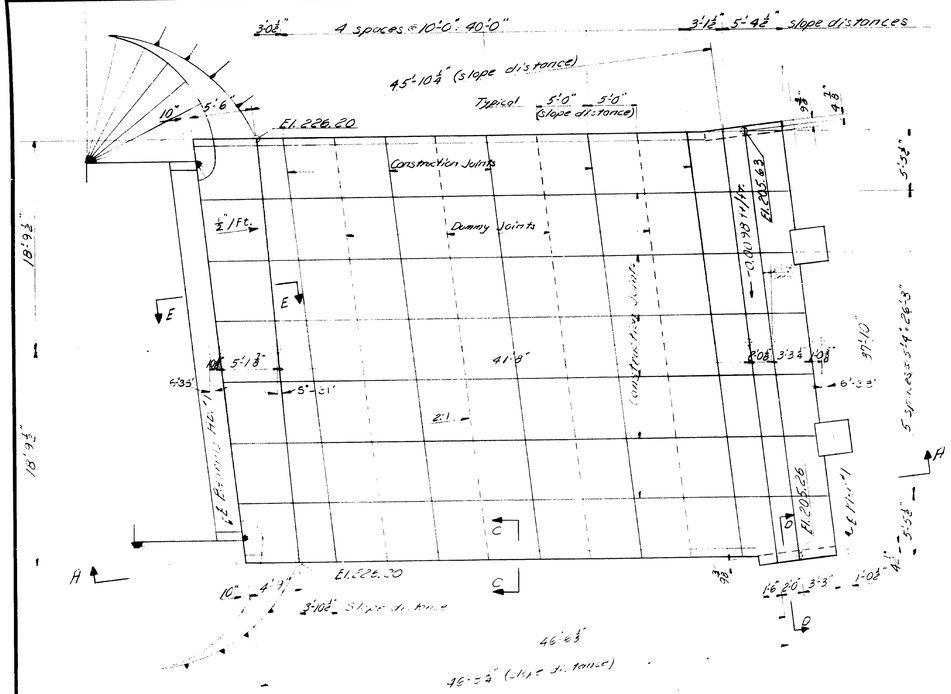
ABUTMENT DETAILS & APPROACH SLAB

SHEET 6 OF 12 AUGUSTA, MAINE JAN. 1965

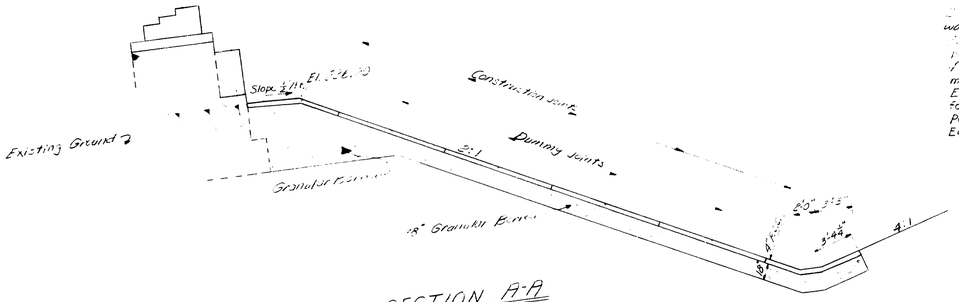
95-168



B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	21	26



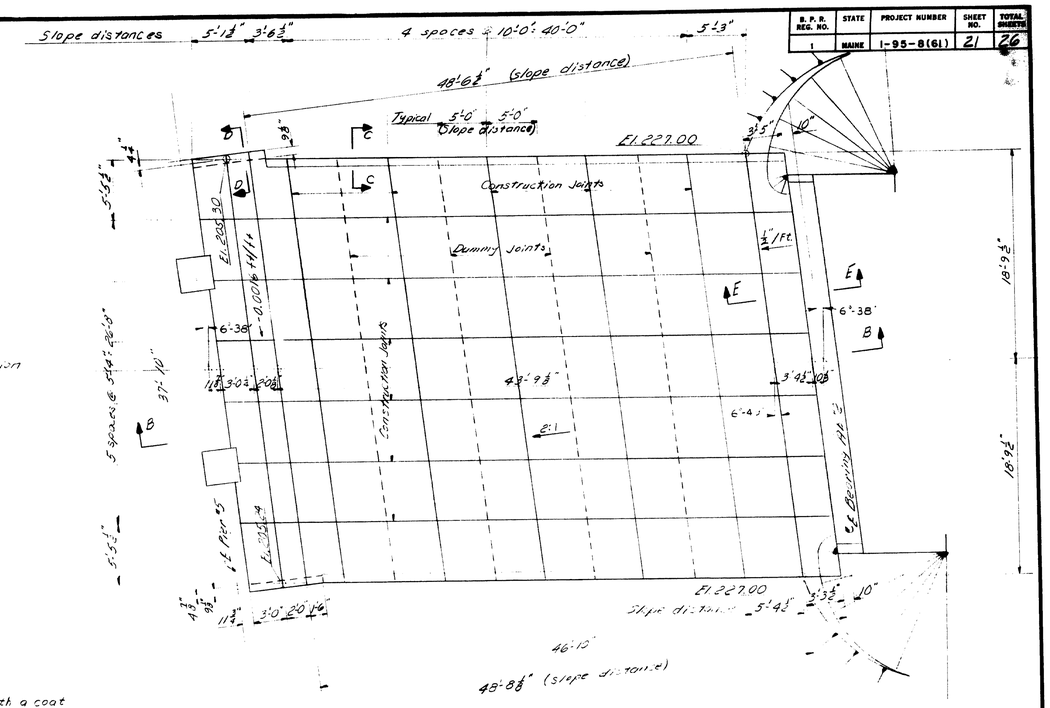
PLAN - ABUT. #1



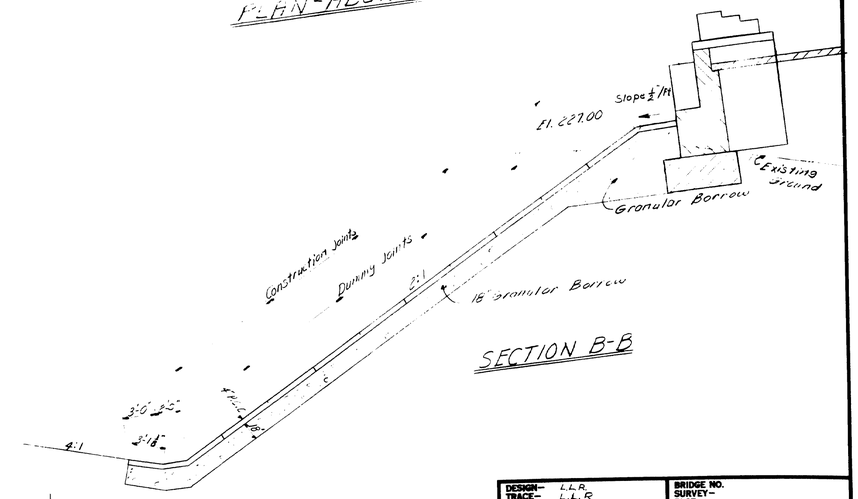
SECTION A-A

NOTES

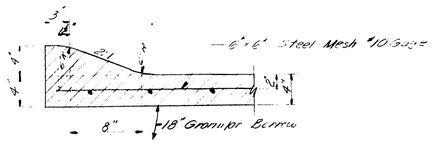
1. Break tens at Construction Joints with a coat of asphalt paint.
2. Dummy Joints shall be made with a sidewalk edging tool to a depth of ¼".
3. Reinforce with #10 gage 6"x6" steel mesh, not to pass through construction joints.
4. The 18" of Granular Borrow under the Slope Paving may be reduced or omitted if, in the opinion of the Engineer, the existing material is suitable. Payment for excavation for Granular Borrow under Slope Paving to be made under Item 204-14, "Structural Earth Excavation, Piers."



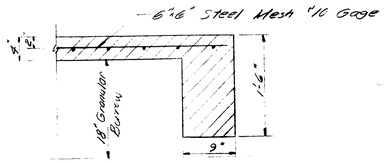
PLAN - ABUT. #2



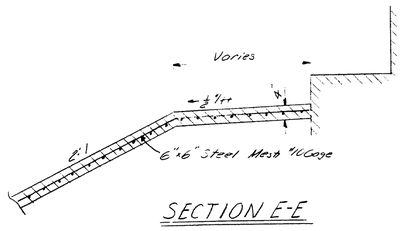
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

DESIGN- L.L.R. TRACE- L.L.R. CHECK-	BRIDGE NO. SURVEY- PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR
OVER
INTERSTATE 95
IN
T2 R8
PENOBSCOT COUNTY

SLOPE PAVING

SHEET 7 OF 12 AUGUSTA, MAINE JAN. 1965

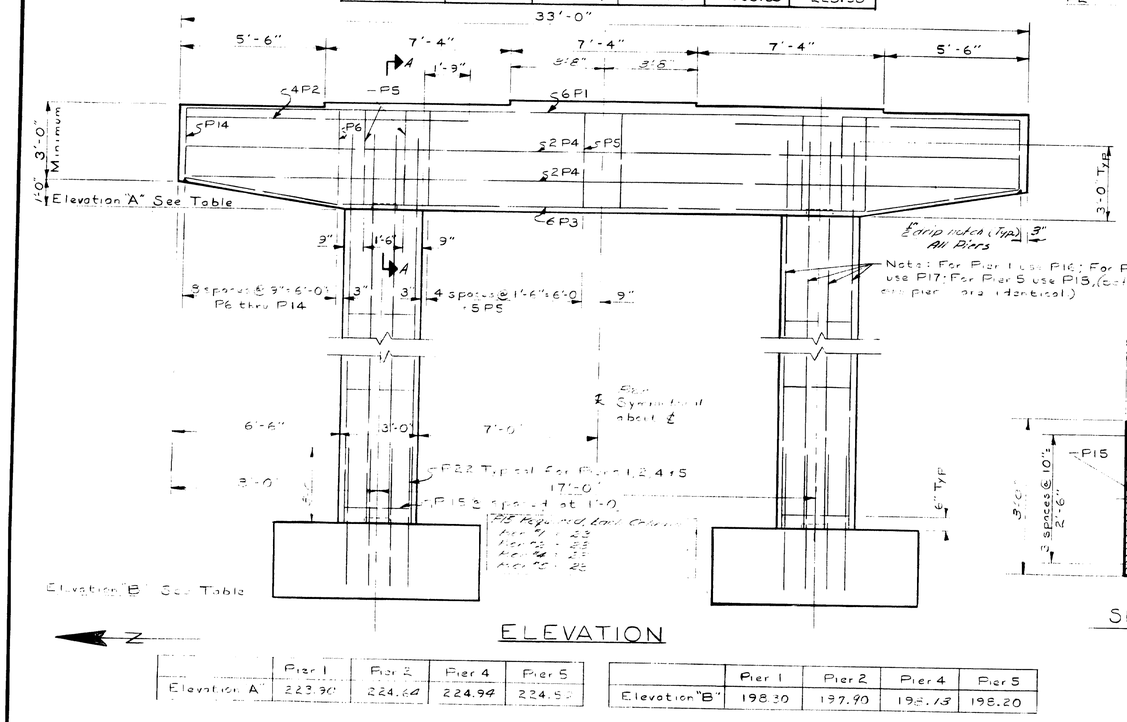
95-169

0 1 2 3 4 5 INCHES

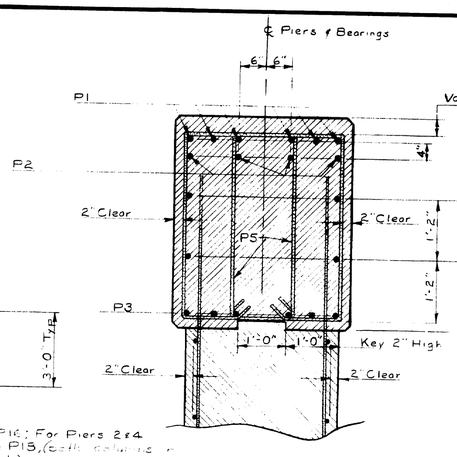
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	22	26

BRIDGE SEAT ELEVATIONS

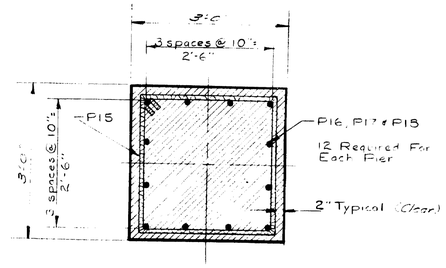
	A	B	C	D	E
PIER 1	227.90	228.06	228.22	228.08	227.94
PIER 2	228.64	228.79	228.95	228.81	228.66
PIER 4	228.96	229.10	229.25	229.10	228.94
PIER 5	228.53	228.67	228.81	228.65	228.50



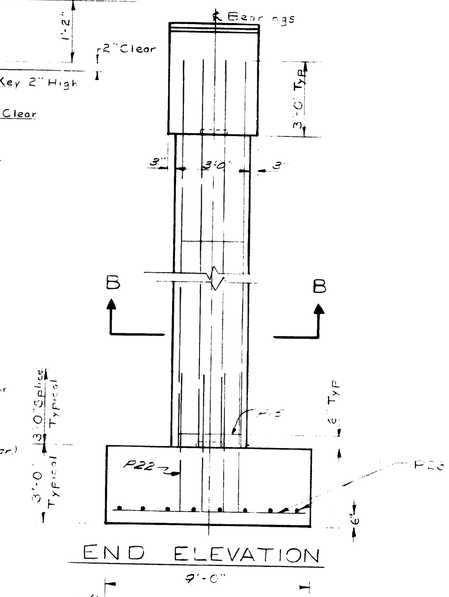
ELEVATION



SECTION A-A



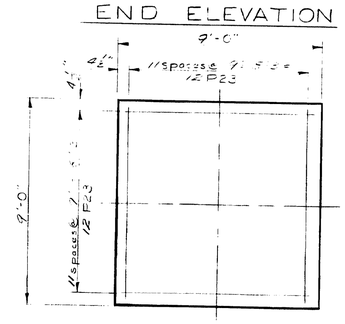
SECTION B-B



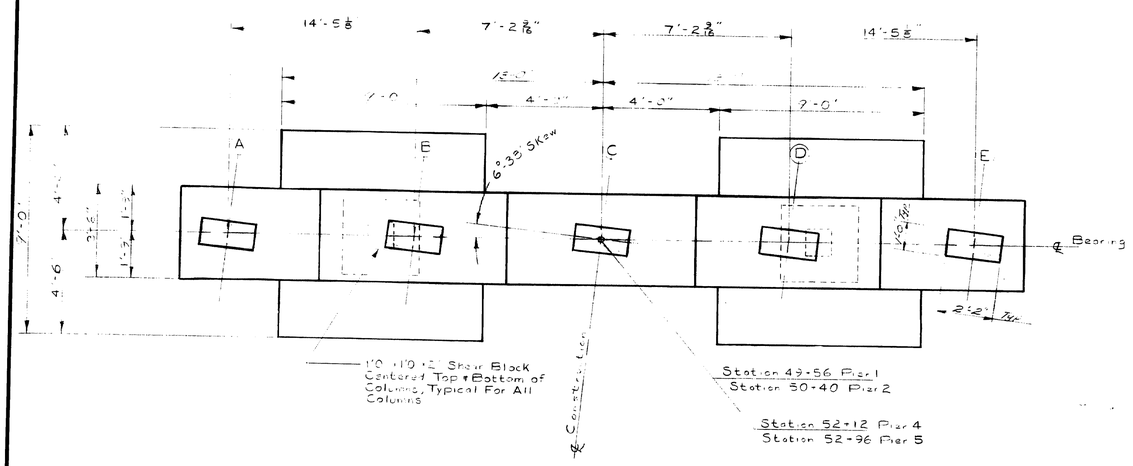
END ELEVATION

	Pier 1	Pier 2	Pier 4	Pier 5
Elevation "A"	223.90	224.64	224.94	224.53

	Pier 1	Pier 2	Pier 4	Pier 5
Elevation "B"	198.30	197.90	198.13	198.20



FOOTING



PLAN

GENERAL FILE NOTES

1. [illegible]
2. [illegible]
3. [illegible]
4. Max. Footing Pressure = 4.5 Tons/sq. foot

DESIGN– THK & ALL TRACE– J.G. CHECK– AHR	BRIDGE NO. SURVEY– PLOT–

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR
OVER
INTERSTATE 95
IN
T2 R8
PENOBSCOT COUNTY

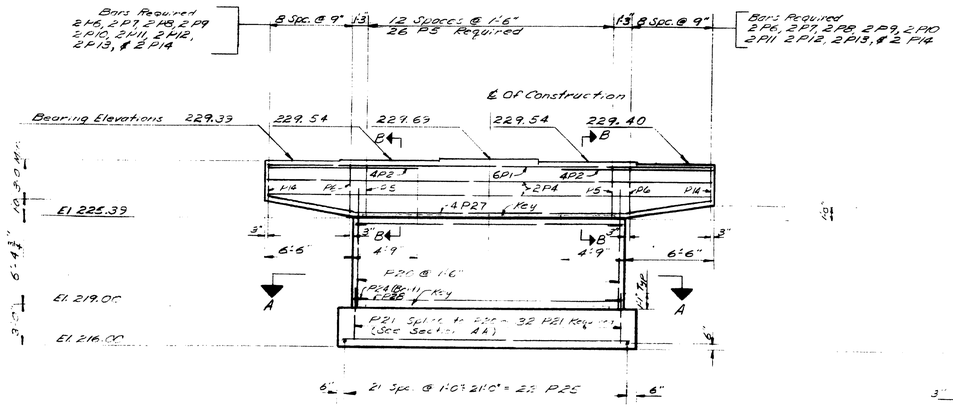
PIERS NO. 1, 2, 4, & 5

SHEET 3 OF 12 AUGUSTA, MAINE FEB. 1965

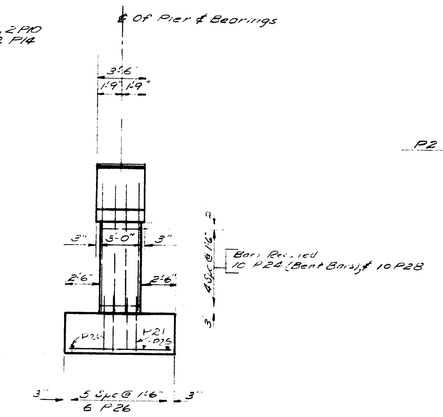
95-170

0 1 2 3 4 5 INCHES

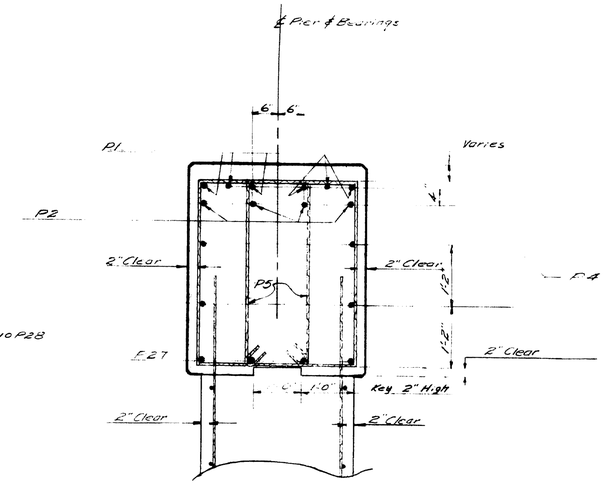
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-3 (61)	23	26



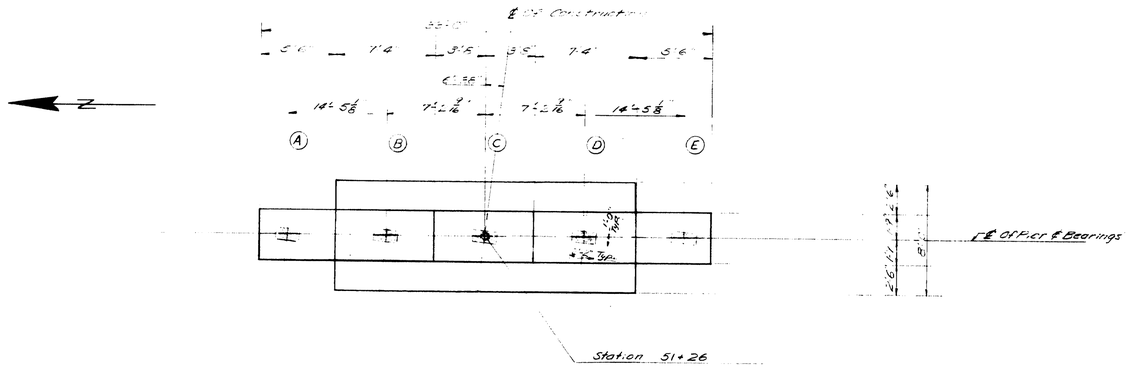
ELEVATION



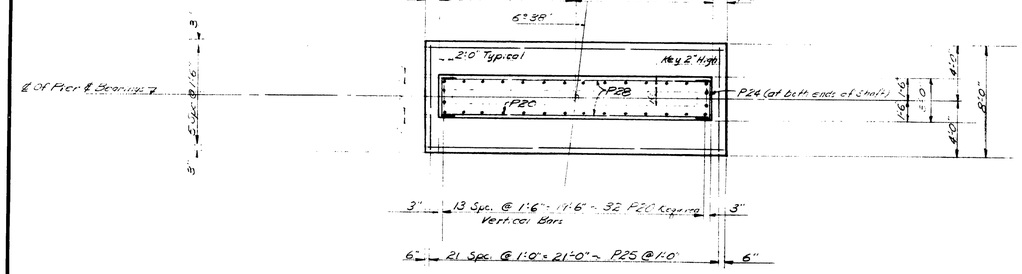
END ELEVATION



SECTION BB



PLAN



SECTION AA

GENERAL NOTES

1. Counter all exposed corners of concrete 3/4
2. [illegible] Steel & construction joints.
3. Reinforcing Steel to have 2" [illegible] unless otherwise noted.
4. Max. Footing Pressure = 4.5 Tons/Sq. Foot

DESIGN– A.L.L. TRACE– A.L.L. CHECK– AHF	BRIDGE NO. SURVEY– PLOT–

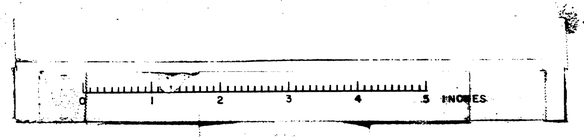
STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR
OVER
INTERSTATE 95
IN
T 2 R 8
PENOBSCOT COUNTY

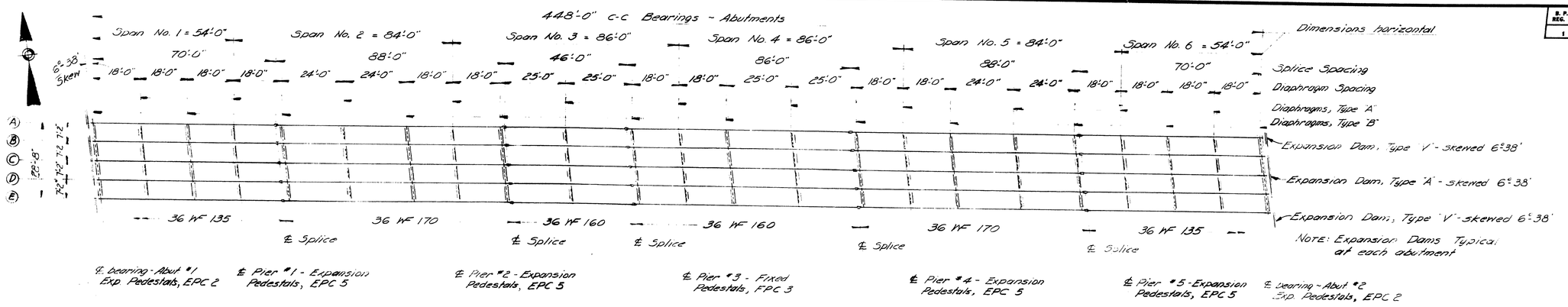
PIER NO. 3

SHEET 9 OF 12 AUGUSTA, MAINE FEB. 1965

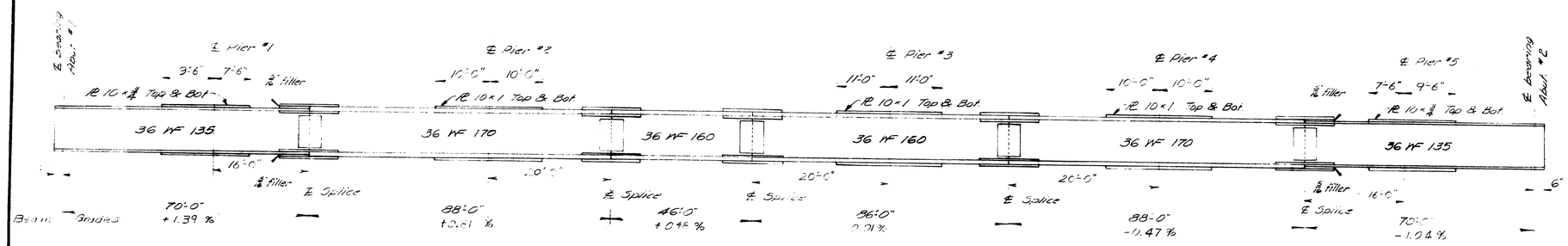
95-171



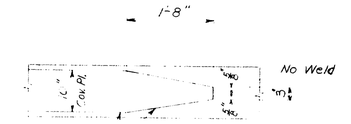
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	24	26



ERECTION DIAGRAM



STRINGERS - A-B-C-D-E



COVER PLATE DETAIL

SPECIFICATIONS

Fabrication & Erection: State of Maine Standard Specifications, Highway & Bridges, Revision of Jan 1956 and supplements
Design & Details: A.A.S.H.O. Standard Specifications of 1961, and Interim Specifications, 1961, 1962, 1963 and 1964.
All Structural Steel shall be A36 except as shown on Standard Details.

REFERENCES

Splice - See Standard Details BD 103-64
Diaphragms - See Standard Details BD 104-64
Pedestals - See Standard Details BD 101-64
Expansion Dams - See Standard Details BD 105-64
Drains - Sheet 11 of BD-104-64

PEDESTALS

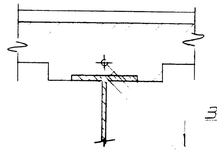
10 - EPC 2 required
20 - EPC 5 required
5 - FPC 3 required

BLOCKING TABLE

	BOTTOM OF SLAB ELEVATIONS																						
	℄ Brg. Abut 1	+13'-6"	+27'-0"	+40'-6"	℄ Brg. Pier 1	+42'-0"	+28'-0"	+42'-0"	+56'-0"	+70'-0"	℄ Brg. Pier 2	+14'-4"	+28'-8"	+43'-0"	+57'-4"	+71'-8"	℄ Brg. Pier 3	+14'-4"	+28'-8"	+43'-0"	+57'-4"	+71'-8"	℄ Brg. Pier 4
LINE A	231.53	231.75	231.94	232.11	232.28	232.47	232.65	232.80	232.91	233.00	233.09	233.20	233.31	233.39	233.44	233.46	233.47	233.51	233.54	233.55	233.52	233.46	233.41
B	231.69	231.91	232.10	232.27	232.44	232.62	232.81	232.96	233.07	233.16	233.24	233.35	233.46	233.54	233.59	233.61	233.62	233.66	233.69	233.70	233.67	233.61	233.55
C	231.85	232.07	232.26	232.43	232.60	232.78	232.96	233.11	233.23	233.31	233.40	233.51	233.61	233.70	233.74	233.76	233.75	233.81	233.84	233.85	233.81	233.76	233.70
D	231.72	231.93	232.12	232.29	232.46	232.64	232.82	232.97	233.08	233.17	233.26	233.36	233.47	233.55	233.59	233.61	233.63	233.66	233.69	233.70	233.66	233.60	233.55
E	231.58	231.80	231.99	232.15	232.32	232.50	232.68	232.83	232.94	233.03	233.11	233.22	233.32	233.40	233.45	233.46	233.48	233.51	233.54	233.55	233.51	233.45	233.40

	BOTTOM OF SLAB ELEVATIONS									
	℄ Brg. Pier 4	+14'-0"	+28'-0"	+42'-0"	+56'-0"	+70'-0"	℄ Brg. Pier 5	+13'-6"	+27'-0"	+40'-6"	℄ Brg. Abut 2
LINE A	233.41	233.37	233.33	233.27	233.17	233.04	232.90	232.79	232.67	232.52	232.35
B	233.55	233.52	233.48	233.42	233.32	233.18	233.05	232.93	232.81	232.66	232.49
C	233.70	233.66	233.62	233.56	233.46	233.33	233.19	233.07	232.95	232.80	232.63
D	233.55	233.51	233.47	233.41	233.30	233.17	233.03	232.91	232.79	232.65	232.47
E	233.40	233.36	233.32	233.25	233.15	233.02	232.88	232.76	232.63	232.49	232.31

Note:
In order that the roadway slab will conform to the profile and cross sections shown on these plans the accompanying table of Elevations is given. Elevations for the bottom of slab which are computed to compensate for dead load deflections, must be set before slab forms are started.



Bottom of Slab Elev.

Normal Blocking = 2" @ ℄ Bearings. Do not use for setting forms.

BLOCKING DETAIL

DESIGN- T.L.K.
TRACE- S.V.
CHECK- AHR

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

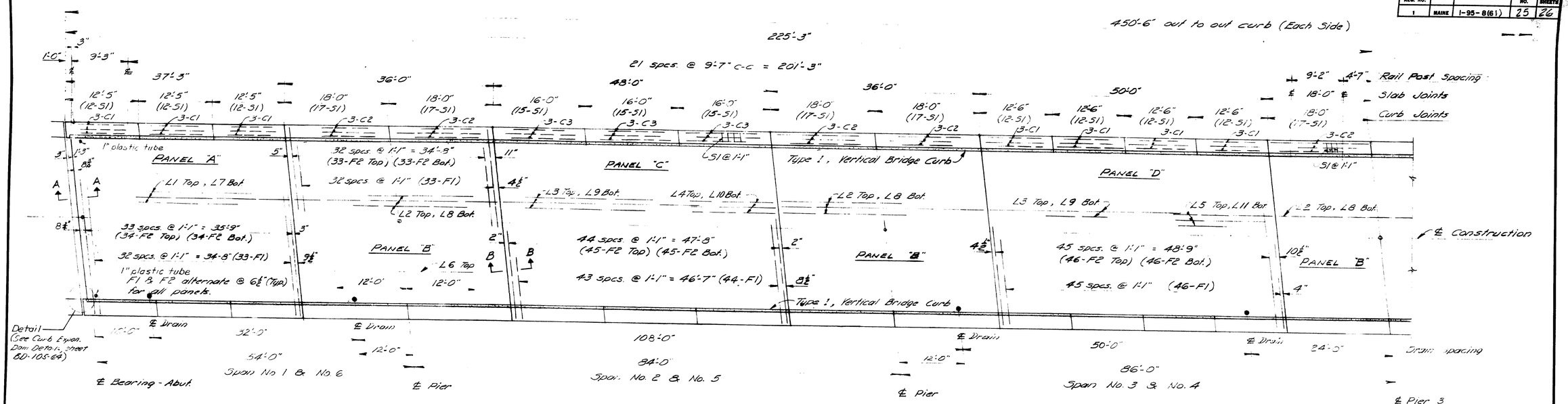
LINCOLN SPUR
OVER
INTERSTATE 95
IN
T2 R8
PENOBSCOT COUNTY

ERECTION DIAGRAM & BLOCKING

SHEET 10 OF 12 AUGUSTA, MAINE JAN. 1965

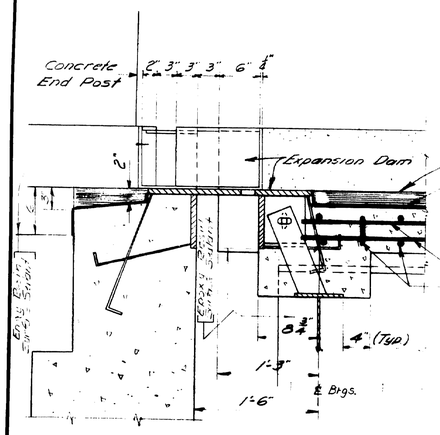
95-172

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(61)	25	26

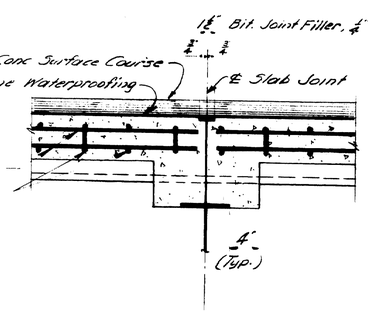


PLAN - SUPERSTRUCTURE

Rotate 180° about ℄ of Pier 3 for Spans No. 4, 5, & 6

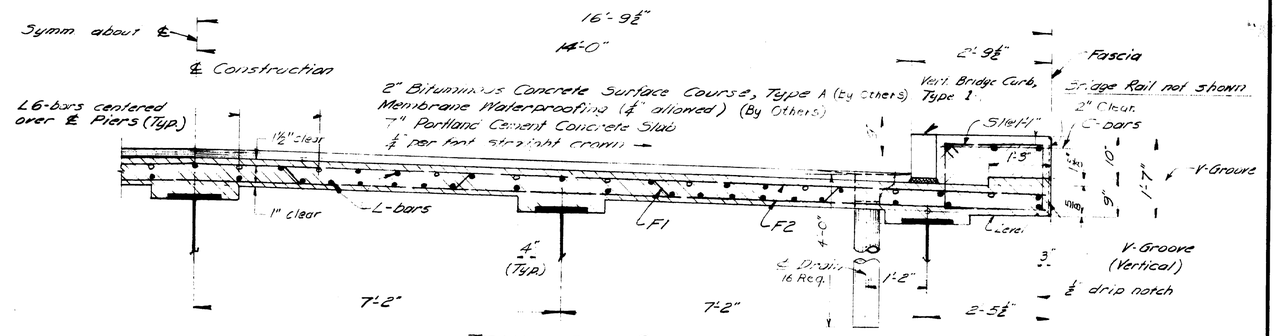


SECTION A-A

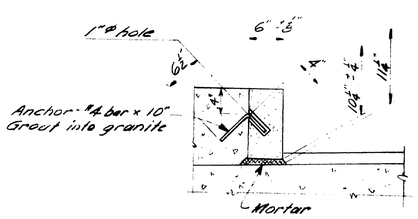


SECTION B-B

Typical

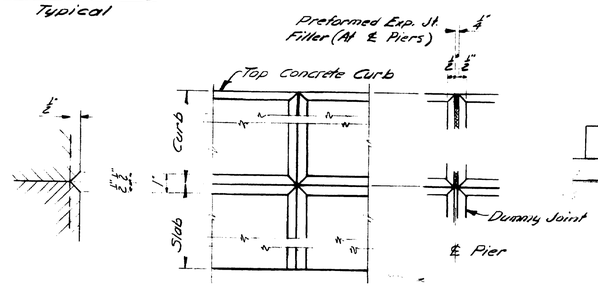


TRANSVERSE SECTION



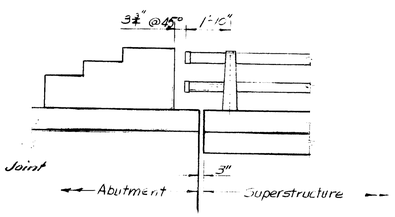
VERTICAL BRIDGE CURB - TYPE 1

Joints in Type 1 Curb shall be located at each joint in Concrete Curb. Granite Joints shall be cut square except at ends of superstructure.



V-GROOVE

Vertical groove @ each joint in Curb concrete.



TYPICAL DETAIL AT END OF SUPERSTRUCTURE

GENERAL NOTES

Bridge Rail (See Standard Details BD-107 & 108-64)

At low points in slab, exact location to be determined by the Engineer, place 1"ϕ plastic tubing through slab for drainage. Do not cover with waterproofing. Payment shall be considered incidental to contract items.

Joints in Granite Bridge Curb shall be located at each construction joint in curb.

Placing Sequence - Place all panels "A", "C" and "D" before placing panels "B".

DESIGN- T.H.K.
TRACE- G.W.C.
CHECK- A.H.P.

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

LINCOLN SPUR OVER INTERSTATE 95 IN T2 R8 PENOBSCOT COUNTY

SUPERSTRUCTURE

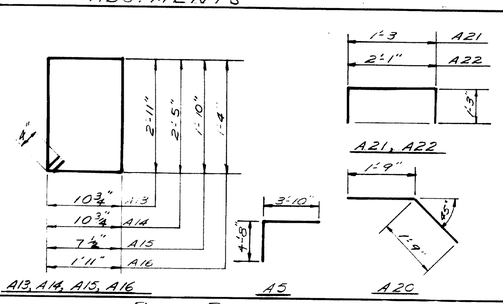
SHEET 11 OF 12 AUGUSTA, MAINE JAN. 1965

95-173

REINFORCING STEEL SCHEDULE

R.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	I-95-8(6J)	26	26

LLR ABUTMENTS



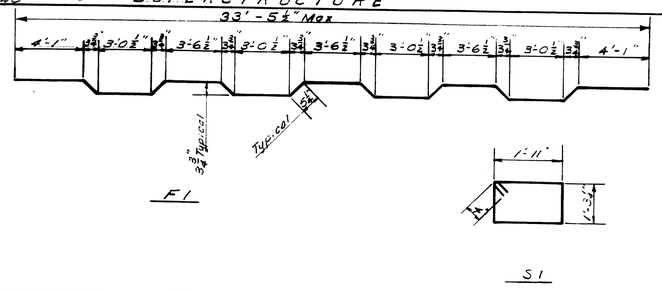
BENT BARS

Mark	Size	Number	Length	Location
A5	#5	36	8'-6"	Breastwall
A13	5	8	8'-3"	Wing Walls (End Posts)
A14	5	4	7'-3"	" " " "
A15	5	4	5'-7"	" " " "
A16	5	24	7'-2"	" " Curbs
A20	6	36	3'-6"	Approach Slab to Backwall
A21	4	20	3'-9"	Bearing Pads
A22	4	20	4'-7"	Bearing Pads

STRAIGHT BARS

Mark	Size	Number	Length	Location
A1	6	14	34'-4"	Footings
A2	6	70	5'-11"	"
A3	5	104	2'-6"	Footings & Breastwall
A4	5	36	7'-9"	"
A6	5	72	4'-9"	Backwall
A7	5	40	17'-3"	Breastwall
A8	4	32	17'-3"	Backwall
A9	5	8	8'-9"	Wingwalls
A10	5	40	9'-7"	"
A11	5	44	9'-0"	"
A12	5	28	6'-8"	"
A17	4	16	4'-8"	End Posts
A18	4	8	3'-2"	" "
A19	4	8	1'-8"	" "
A23	4	40	26'-10"	Approach Slab
A24	6	216	14'-8"	" "

GWC SUPERSTRUCTURE



BENT BARS

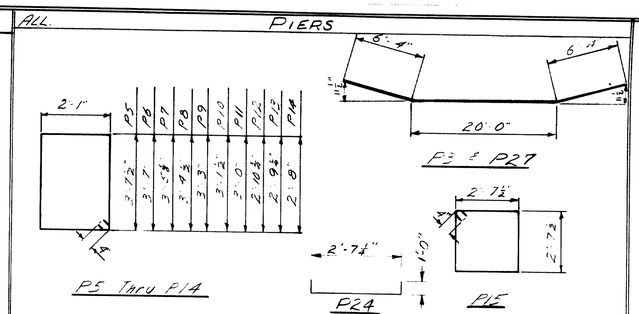
Mark	Size	Number	Length	Location
F1	#6	411	34'-6"	Slab - Transverse Bars
S1	5	856	7'-0"	Curbs

STRAIGHT BARS

Mark	Size	Number	Length	Location
F2	#5	830	33'-6"	Slab - Transverse Bars
L1	4	46	36'-6"	Slab - Longitudinal Bars
L2	4	115	35'-6"	" " "
L3	4	32	30'-0"	" " "
L4	4	46	18'-9"	" " "
L5	4	46	20'-9"	" " "
L6	4	30	24'-0"	" " (Over Piers)
L7	5	72	36'-6"	" " "
L8	5	180	35'-6"	" " "
L9	5	144	30'-0"	" " "
L10	5	72	18'-9"	" " "
L11	5	72	20'-9"	" " "
C1	5	84	12'-0"	Curb
C2	5	60	17'-6"	"
C3	5	36	15'-6"	"

Note: All reinforcing steel to be intermediate grade. Dimensions to ℄ of bars.

ALL PIERS



BENT BARS

Mark	Size	Number	Length	Location
P3	#9	24	[illegible]	Cap, Pier #2 & #5
P5	#5	38	12'-1"	Stirrups in Cap
P6	"	20	[illegible]	"
P7		"	[illegible]	"
P8			[illegible]	"
P9			[illegible]	"
P10			[illegible]	"
P11			10'-10"	"
P12			[illegible]	"
P13	"	"	11'-5"	"
P14	#5	20	10'-2"	"
P15	#4	184	11'-2"	Stirrups in Shaft, Pier #2 & #3
P16	#5	10	4'-8"	Shaft, Pier #3
P17	#7	4	32'-8"	Cap, Pier #3

STRAIGHT BARS

Mark	Size	Number	Length	Location
[illegible]	[illegible]	30	[illegible]	[illegible]
[illegible]	[illegible]	40	[illegible]	
P14	#6	20	[illegible]	All Pier Caps
P16	#9	24	25'-8"	Vertical Bars in Columns, Pier #2
P17	#9	48	26'-9"	" " " " Pier #3 & #4
P18	#9	24	[illegible]	" " Pier #5
P20	#5	[illegible]	8'-6"	" " in Shaft Pier #2
P21	#5	[illegible]	3'-9"	Dowels Footing to Shaft Pier #2
P22	#9	96	5'-6"	" " Columns Piers #2, #3, #4, & #5
P23	#7	132	3'-0"	Footings Piers #2, #3, #4, & #5
P25	#7	[illegible]	[illegible]	Footing Pier #2
P26	#5	6	21'-6"	[illegible]
P28	#5	10	19'-8"	Shaft Pier #2

DESIGN- [illegible]
TRACE-
CHECK- [illegible]

BRIDGE NO.
SURVEY-
PLOT-

STATE HIGHWAY COMMISSION
BRIDGE DIVISION

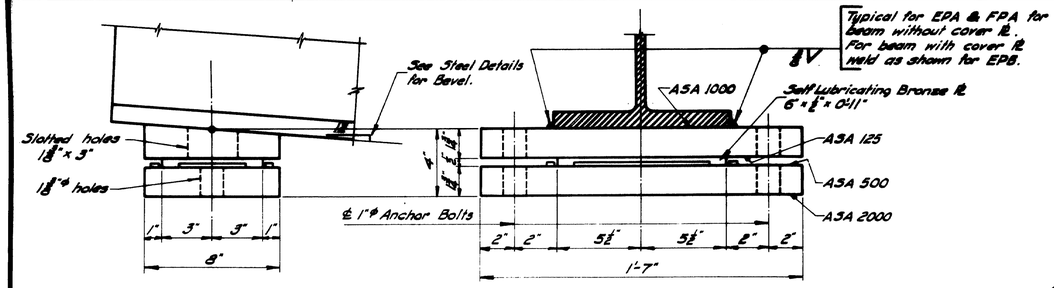
LINCOLN SPUR
OVER
INTERSTATE 95
IN
T2 R8
PENOBSCOT COUNTY

REINFORCING STEEL SCHEDULE

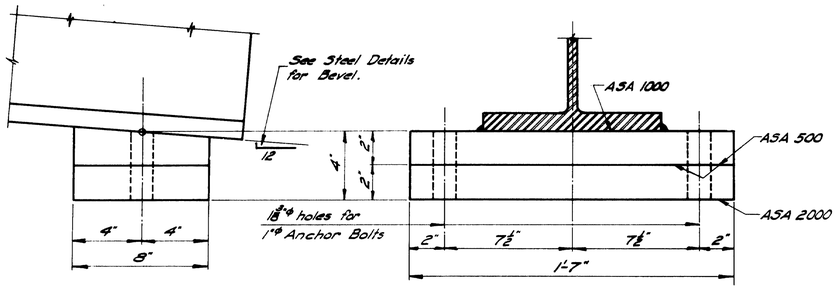
SHEET 12 OF 12 AUGUSTA, MAINE JAN. 1965

95-174

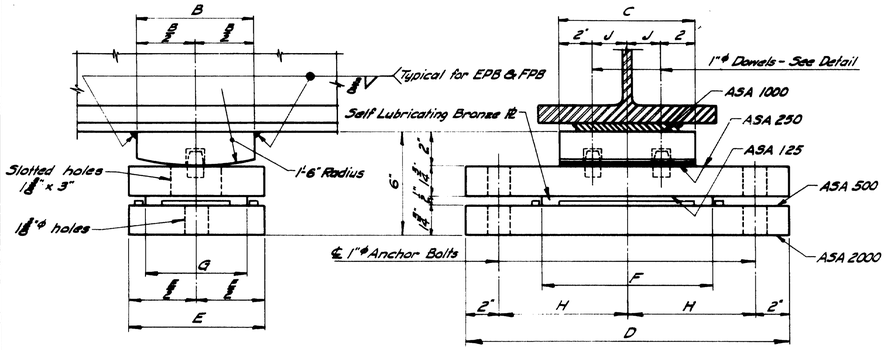
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



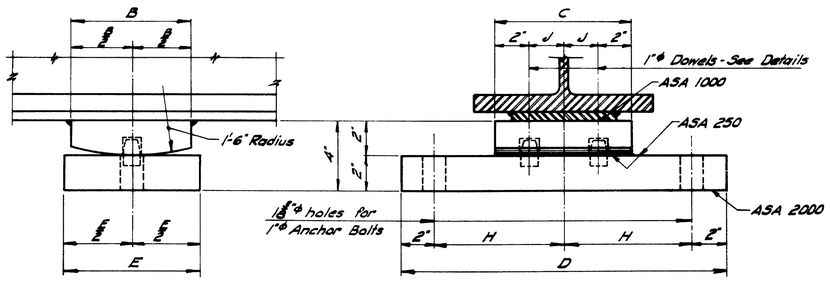
EXPANSION PEDESTAL - EPA



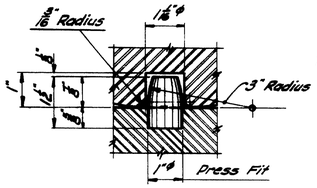
FIXED PEDESTAL - FPA



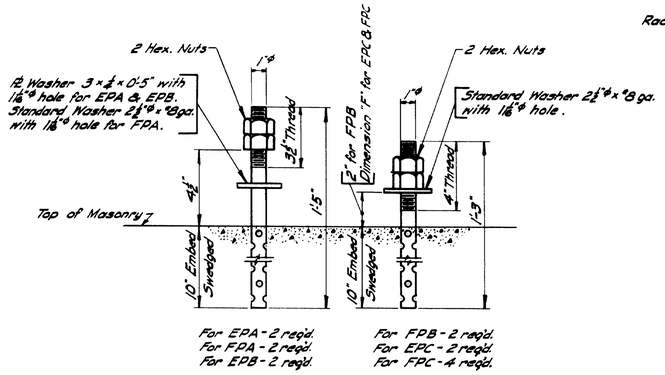
EXPANSION PEDESTAL - EPB



FIXED PEDESTAL - FPB



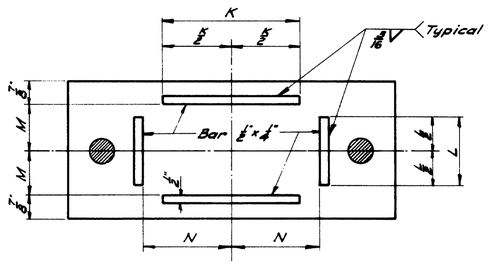
DOWEL DETAIL



For EPA - 2 req'd.
For FPA - 2 req'd.
For EPB - 2 req'd.

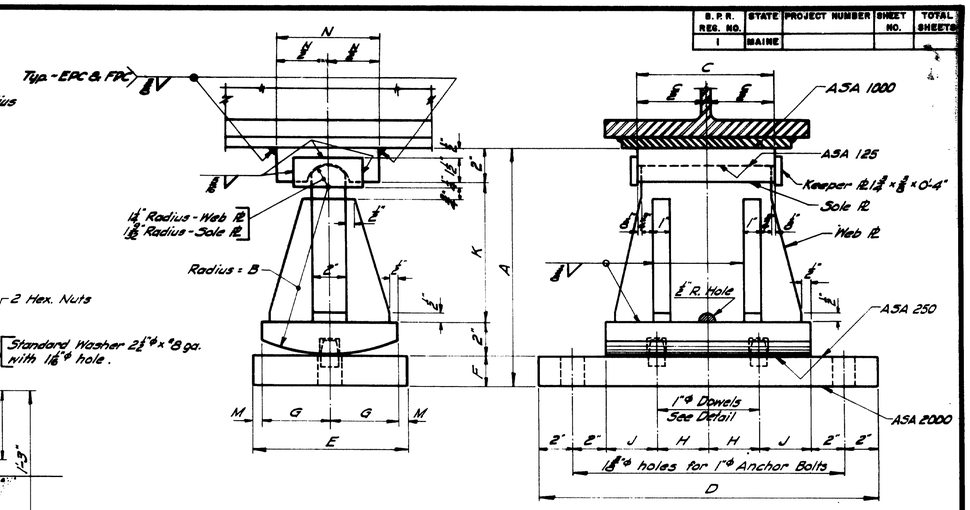
For FPB - 2 req'd.
For EPC - 2 req'd.
For FPC - 4 req'd.

ANCHOR BOLT DETAIL

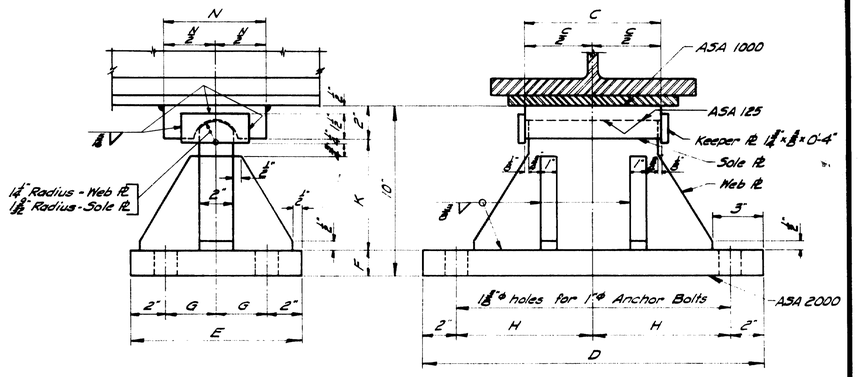


For EPA & EPB

MASONRY PLATE



EXPANSION PEDESTAL - EPC



FIXED PEDESTAL - FPC

NOTE: At the location of bearing pedestals the concrete bridge seats shall be dressed one inch larger all around than size of masonry plates and to exact elevations shown on the plans. If dressed areas are below the surface of the surrounding bridge seat a small channel shall be cut to the edge of the bridge seat for drainage where required by the Engineer. Channels shall have a min. width of 2", and min. slope of 1/2 inch per foot. No separate payment for this work will be made as it shall be considered incidental to contract items.

PEDESTALS — ALLOWABLE LOADS & DIMENSIONS

Pedestal	Load	A	B	C	D	E	F	G	H	J	K	L	M	N
EPA	132 K	—	—	—	—	—	—	—	—	—	8"	4"	3 3/8"	5 5/8"
FPA	130 K	—	—	—	—	—	—	—	—	—	—	—	—	—
EPB-1	120 K	—	6"	8"	1'-7"	8"	10"	6"	7 1/2"	2"	8"	4"	3 3/8"	5 5/8"
EPB-2	165 K	—	7"	10"	1'-8"	9"	1'-0"	7"	8"	3"	10"	5"	3 3/8"	6 5/8"
EPB-3	224 K	—	8"	1'-1"	2'-0"	10"	1'-4"	7"	10"	4 1/2"	1'-2"	5"	3 3/8"	8 5/8"
FPB-1	120 K	—	6"	8"	1'-7"	8"	—	—	7 1/2"	2"	—	—	—	—
FPB-2	165 K	—	7"	10"	1'-8"	9"	—	—	8"	3"	—	—	—	—
FPB-3	224 K	—	8"	1'-2"	2'-0"	10"	—	—	10"	5"	—	—	—	—
EPC-1	70 K	9 1/2"	6"	8"	1'-8"	8"	1 1/2"	3 1/2"	3"	3"	4 1/2"	—	1/2"	6"
EPC-2	100 K	11 1/2"	8"	8"	1'-8"	8"	1 1/2"	3 1/2"	3"	3"	6 1/2"	—	1/2"	6"
EPC-3	130 K	1'-2"	10"	8"	1'-8"	9"	1 1/2"	4"	3"	3"	8 1/2"	—	1/2"	7"
EPC-4	160 K	1'-2"	10"	8"	1'-10"	9"	1 1/2"	4"	4"	3"	8 1/2"	—	1/2"	7"
EPC-5	190 K	1'-2 1/2"	10"	9"	2'-0"	10"	2"	4 1/2"	5"	3"	8 1/2"	—	1/2"	8"
EPC-6	220 K	1'-4 1/2"	1'-0"	10"	2'-0"	1'-0"	2 1/2"	5"	5"	3"	10 1/2"	—	1"	8"
EPC-7	250 K	1'-4 1/2"	1'-0"	1'-0"	2'-2"	1'-0"	2 1/2"	5"	5"	4"	10 1/2"	—	1"	8"
FPC-1	100 K	—	—	8"	1'-8"	9"	1 1/2"	2 1/2"	8"	—	6 1/2"	—	—	6"
FPC-2	160 K	—	—	8"	1'-8"	10"	1 1/2"	3"	8"	—	6 1/2"	—	—	7"
FPC-3	190 K	—	—	9"	2'-0"	10"	1 1/2"	3"	10"	—	6 1/2"	—	—	8"
FPC-4	220 K	—	—	10"	2'-0"	1'-0"	1 1/2"	4"	10"	—	6 1/2"	—	—	8"
FPC-5	250 K	—	—	1'-0"	2'-0"	1'-0"	2"	4"	10"	—	6"	—	—	8"

DESIGN SPECIFICATIONS

A.A.S.H.O., Standard Specifications for Highway Bridges, 1961, with Interim Specifications, 1961 & 1962

A.S.T.M. STEEL CLASSIFICATION

Anchor Bolts - A7, A36, or A 307
All other - A36.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

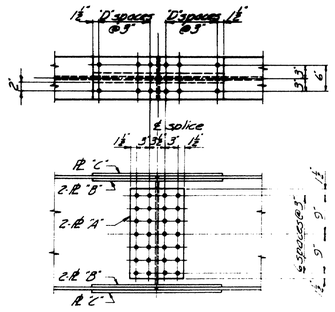
(BD 101 - 64)

BEARING PEDESTALS

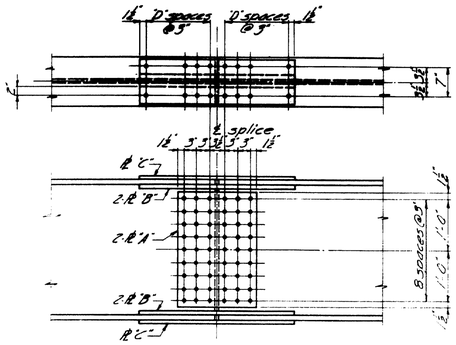
JANUARY 1964

95-175

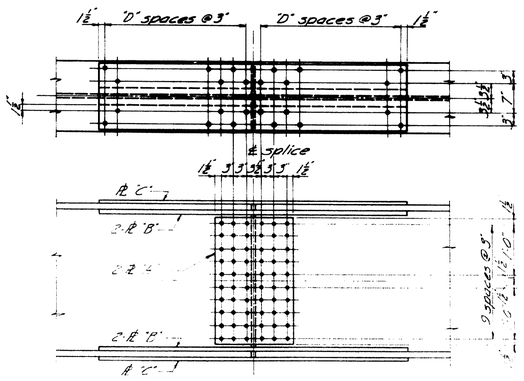
B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEET
1	MAINE			



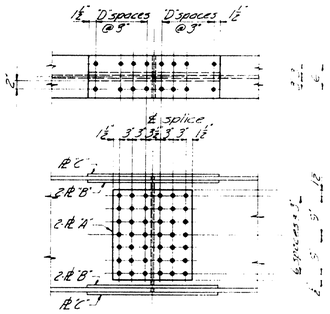
27 WF 84



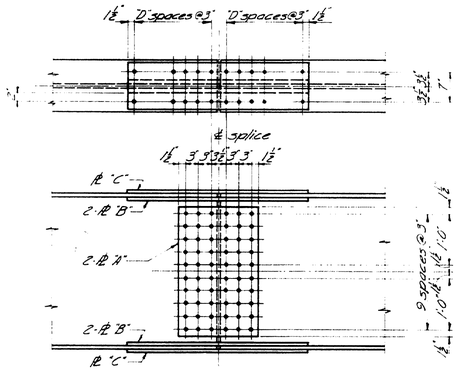
33 WF 118, 130, 141, 152



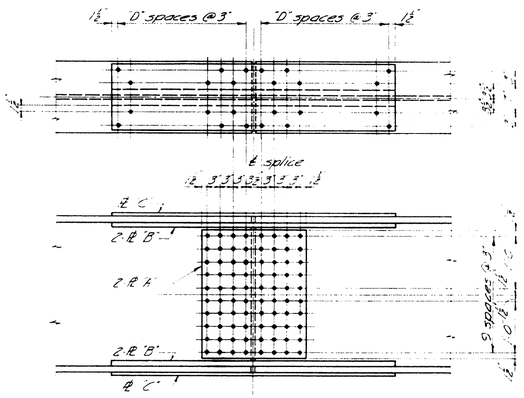
36 WF 245, 280



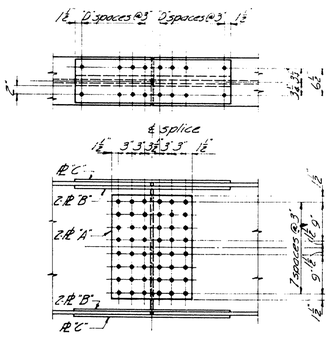
27 WF 94, 102, 114



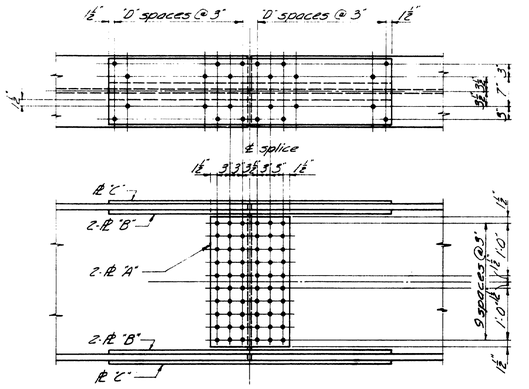
36 WF 135, 150, 160, 170, 182, 194



36 WF 300



30 WF 99, 108, 116, 124, 132



36 WF 230, 260

SPLICE DESIGN, PLATES AND FLANGE HOLES

BEAM	BEND. M.	SHEAR	PLATE "A"	PLATE "B"	PLATE "C"	"D"
27 WF 84	3070'K	111K	12½ x ½	4 x 7/16	10 x 7/16	3
27 WF 94	3520'K	119K	18½ x 9/16	4 x ½	10 x ⅜	3
27 WF 102	3862'K	126K	18½ x ⅝	4 x ⅝	10 x 7/16	4
27 WF 114	4341'K	140K	18½ x ⅝	4 x ⅝	10 x ½	4
30 WF 99	3921'K	139K	18½ x ½	4 x ½	10 x ⅜	3
30 WF 108	4360'K	147K	18½ x 7/16	4 x ⅝	10 x 7/16	4
30 WF 116	4780'K	152K	[illegible]	4 x ⅝	10 x 7/16	4
30 WF 123	5170'K	158K	[illegible]	4 x 11/16	10 x ½	4
30 WF 132	5536'K	168K	[illegible]	4 x ⅝	10 x 9/16	5
33 WF 118	5287'K	165K	[illegible]	[illegible]	11 x 7/16	4
33 WF 130	5970'K	[illegible]	[illegible]	4 x ⅝	11 x 7/16	5
33 WF 141	6604'K	187K	18½ x 7/16	4 x 13/16	11 x ½	5
33 WF 152	7193'K	196K	18½ x 9/16	4 x ⅝	11 x 9/16	6
36 WF 135	6473'K	191K	18½ x 7/16	4 x 7/16	11 x 7/16	4
36 WF 150	7436'K	203K	18½ x [illegible]	4 x 13/16	11 x ½	5
36 WF 160	8065'K	212K	18½ x ⅝	4 x ⅝	11 x 9/16	6
36 WF 170	8572'K	222K	18½ x [illegible]	4 x 15/16	11 x ⅝	6
36 WF 182	9264'K	237K	18½ x [illegible]	[illegible]	11 x 7/16	7
36 WF 194	9938'K	253K	18½ x [illegible]	4 x 1	11 x ⅝	8
36 WF 230	12570'K	247K	18½ x ⅝	4 x 1	16 x ⅝	10
36 WF 245	13421'K	260K	18½ x [illegible]	4 x [illegible]	16 x [illegible]	11
36 WF 260	14335'K	270K	18½ x [illegible]	4 x 1 1/16	16 x ⅝	12
36 WF 280	15515'K	285K	18½ x [illegible]	4 x ⅝	16 x ⅝	13
36 WF [illegible]	16570'K	[illegible]	[illegible]	4 x [illegible]	16 x ⅝	14

GENERAL NOTES

1. Splice connections to be made with ¾" high tensile strength bolts, holes to be ⅞".

2. The design bending moment is 90% of the net resisting moment of the beam with an allowable stress of 20,000 p.s.i. The design shear is 75% of the shear strength of the gross section of the web with an allowable stress of 12,000 p.s.i.

3. If beams of different sizes are to be spliced, use splice details shown for the smaller of the beams being spliced unless otherwise directed by design details. See design details for filler thickness. Place fillers to limits of splice plates only, with no extensions.

4. See design details for slopes of beams in order to correctly fabricate bevels at the splices.

A.S.T.M. STEEL CLASSIFICATION

High Tensile Strength Bolts A-325
Splice Plates A-36

DESIGN SPECIFICATIONS

AASHO Standard Specifications for Highway Bridges, 1961 with Interim Specifications, 1961 & 1962

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

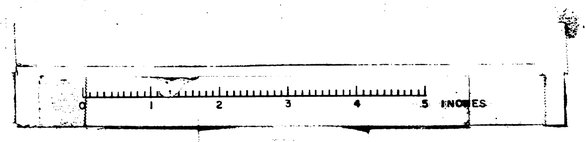
STANDARD DETAILS

(BD 103-64)

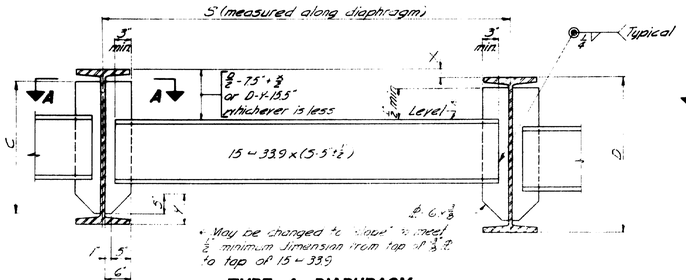
BEAM SPLICES

JANUARY 1964

95-176

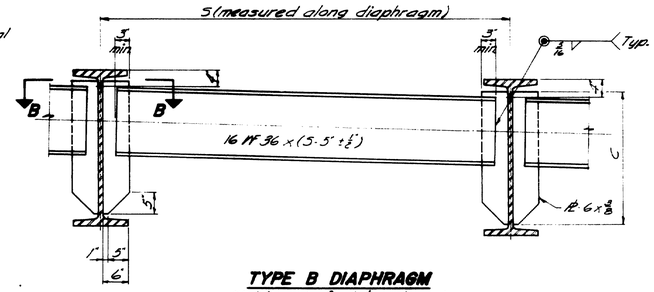


B.P.R. DIV. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

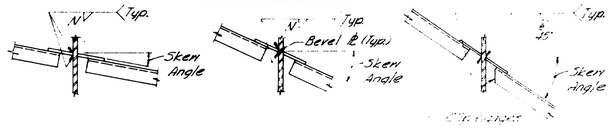


* May be changed to "slope" to meet ½ minimum dimension from top of ⅜ PL to top of 15 ~ 33.9

TYPE A DIAPHRAGM



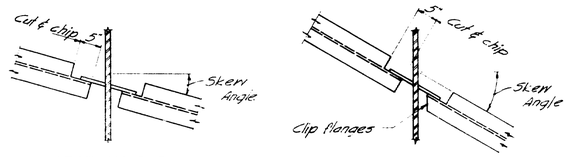
TYPE B DIAPHRAGM
Welding 6 x ⅜ plates to web same as for Type A Diaphragm.



SECTION A-A
Skew Angle 0° to 18°-30'

SECTION A-A
Skew Angle over 18°-30' to 32°-30'

SECTION A-A
Skew Angle over 32°-30'



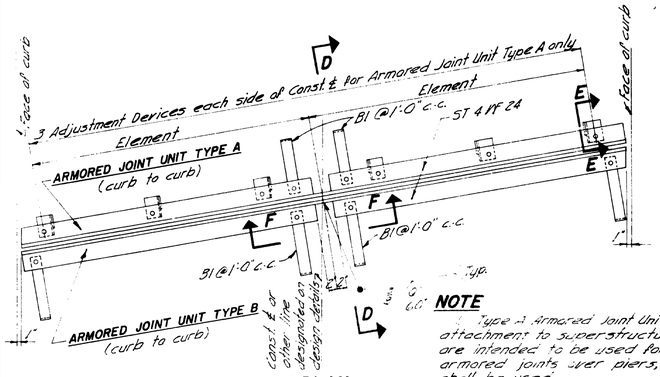
SECTION B-B
Skew Angle 0° to 25°-00'

SECTION B-B
Skew Angle over 25°-00'

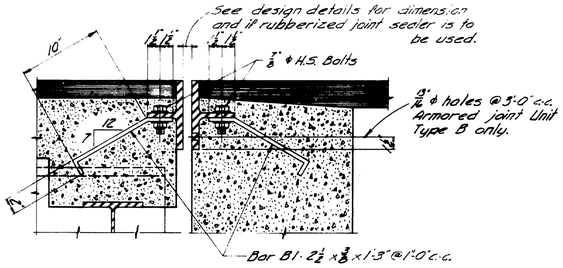
NOTE
See design details for diaphragm type, location and skew.

FILLET WELD SIZE "W" & DIMENSION "C" FOR DIAPHRAGM PLATES		
BEAM	C	N
27 WF 84 to 114 incl.	1'-11"	4
30 WF 99 to 132 incl.	2'-2"	5
33 WF 118 to 152 incl.	2'-5"	4
36 WF 135 to 194 incl.	2'-7"	5
36 WF 230 to 300 incl.	2'-6"	5/16

DIAPHRAGMS



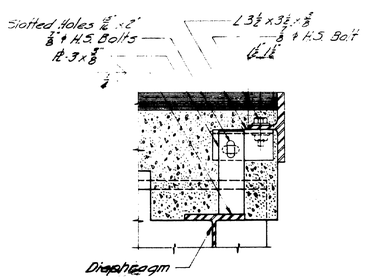
PLAN



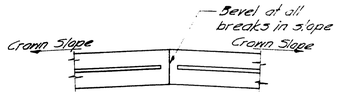
NOTE
1. Type A Armored Joint Units are intended to be used for attachment to superstructures. Type B Armored Joint Units are intended to be used for attachment to abutments. At armored joints over piers, two Type A Armored Joint Units shall be used.
2. If rubberized joint sealer is called for on the design details the area to which it is to be bonded shall not be painted and it shall be supported on non-bituminous material. At the Contractor's option the supporting material may be left in place or be removed. If the supporting material is left in place, it shall be compressible in accordance with specification AASHO M 153-54. In either case bond between the supporting material and the rubberized joint sealer shall be prevented by a 1" minimum thickness of Poly-urethane foam.
3. If more elements than the two shown in the "Plan" are required by the design details, there shall be three adjustment devices for each element for Armored Joint Unit Type A and the elements of both units shall be field welded together in the same manner as shown in the "Plan".
4. Armored Joints to be paid for as Structural Steel.

ARMORED JOINT UNIT TYPE A — ARMORED JOINT UNIT TYPE B

SECTION D-D

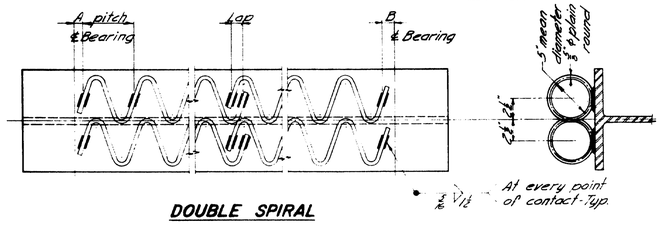


SECTION E-E
Showing Adjustment Device Armored Joint Unit Type A only - After Unit is in final position weld ⅜ PL to angle with ¼" fillet

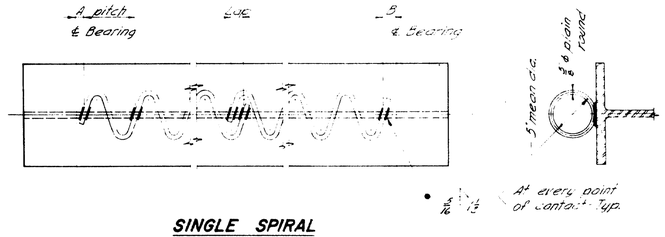


SECTION F-F
Note: See design details for Constr. ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions necessary to complete the fabrication details, and location.

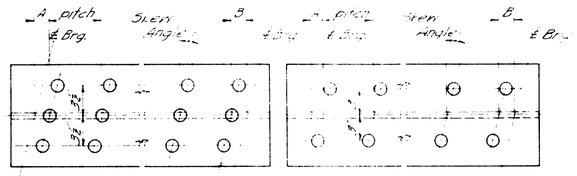
ARMORED JOINT
An armored joint consists of two armored joint units. See note 1.



DOUBLE SPIRAL



SINGLE SPIRAL

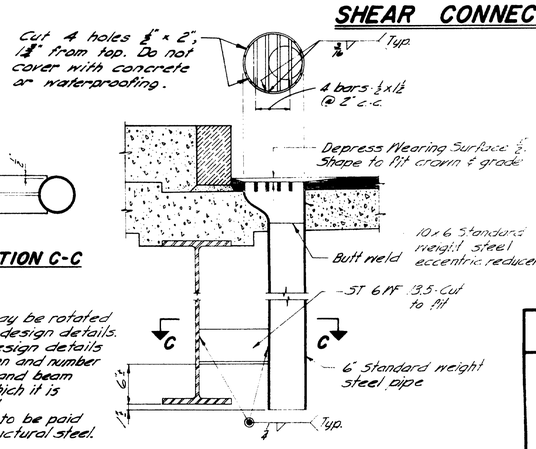


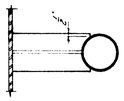
TRIPLE STUDS **DOUBLE STUDS**

STUD DETAIL

NOTE
1. Spiral reinforcing or studs may be used at the option of the contractor.
2. If studs are used they shall be granular or solid flux filled and automatically end welded to the top flange in the shop or field.
3. Studs are a patented product. If the Contractor elects to use them the royalty pay the royalty and payment to the contractor will be included in the lump sum price for Shear Connectors.
4. See the design details for Dimensions "A" and "B", spiral and stud [illegible] Skew Angle for Studs.

SHEAR CONNECTORS





SECTION C-C

NOTE
1. Drain may be rotated 180°. See design details.
2. See design details for location and number of drains and beam size to which it is connected.
3. Drains to be paid for as structural steel.

DRAIN

GENERAL NOTE
Use only those items called for on design details. In case of conflict between these Standard Details and the design details, the requirements of the design details shall be followed.

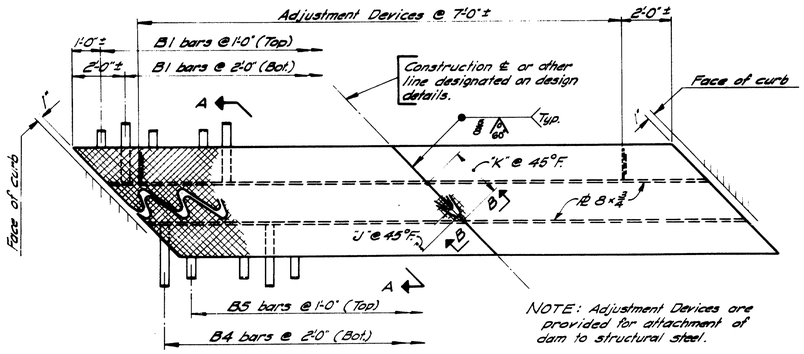
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 104-64)
DIAPHRAGMS, ARMORED JOINT, SHEAR CONNECTORS, DRAIN

JANUARY 1964

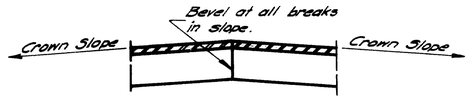
95-177

B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			



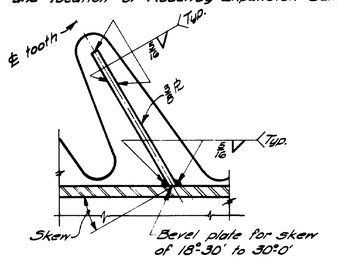
PLAN

Right skew indicated



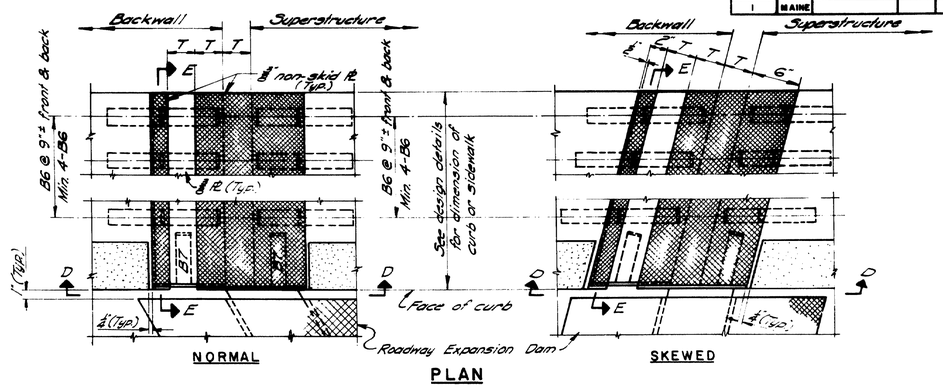
SECTION B-B

See design details for construction ℄ to curb dimensions, skew, crown slope, slab thickness, other dimensions & angles that are necessary to complete fabrication details and location of Roadway Expansion Dam.

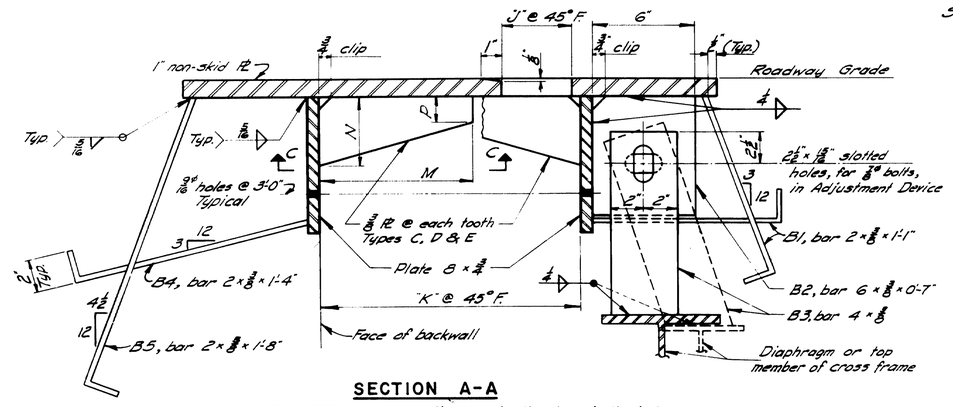


SECTION C-C

Skew ~0° to 30°0'

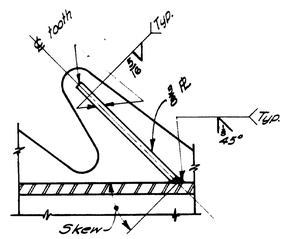


PLAN



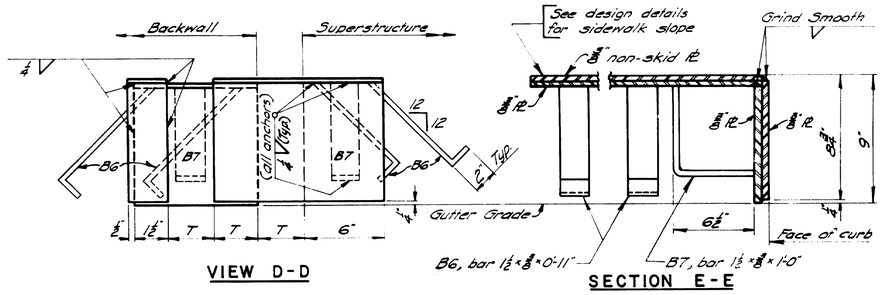
SECTION A-A

Bar B3 may be vertical or inclined as indicated, depending on design conditions.
After Adjustment Device is in final position weld bars B2 to B3 with 1/4" fillet weld.



SECTION C-C

Skew over 30°

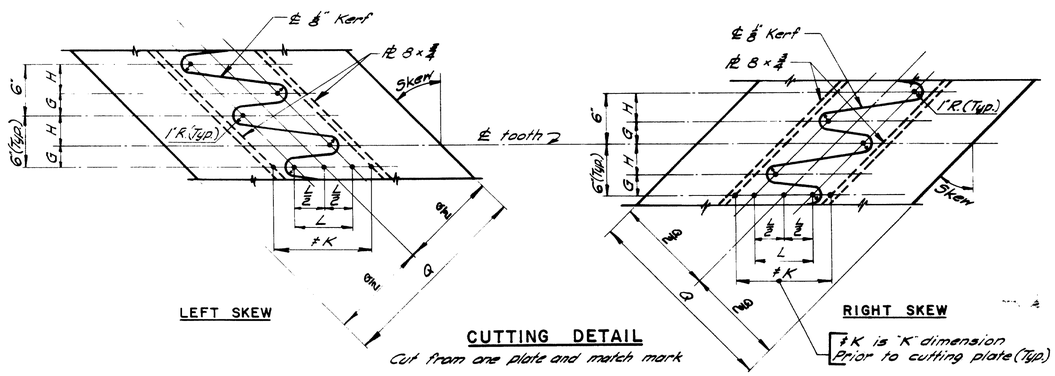


VIEW D-D

SECTION E-E

TYPE	V	W	X	Y	Z
Exp. Length	100'-280'	280'-440'	440'-600'	600'-760'	760'-920'
T	3"	4"	5"	6"	7"

CURB AND SIDEWALK EXPANSION DAM - DETAILS



CUTTING DETAIL

Cut from one plate and match mark

ROADWAY EXPANSION DAM - DETAILS

TABLE OF DIMENSIONS

Type	Exp. Length	Skew	≠K	L	G	H	K@45	J@45	M	N	P	Q
A	100'-280'	0°-5° incl.	7"	4"	3"	3"	9"	2 3/8"	—	—	—	21"
		5°-10°	7 1/4"	4 1/4"	2 3/8"	3 3/8"	9 1/4"	2 3/8"	—	—	—	22"
		10°-20°	8"	4 1/2"	2 3/8"	3 3/8"	10"	2 3/8"	—	—	—	22"
		20°-30°	8 3/4"	5 1/4"	2 3/8"	3 3/8"	10 3/4"	2 3/8"	—	—	—	23"
		30°-40°	9 1/2"	5 1/2"	2 3/8"	3 3/8"	11 1/2"	2 3/8"	—	—	—	23"
		40°-50° incl.	11 1/4"	6 1/2"	2 1/2"	3 3/8"	13 1/4"	2 3/8"	—	—	—	23"
B	280'-440'	0°-5° incl.	9"	6"	3"	3"	12"	3 3/8"	—	—	—	23"
		5°-10°	9 1/4"	6 1/4"	2 3/8"	3 3/8"	12 1/4"	3 3/8"	—	—	—	24"
		10°-20°	10"	6 1/2"	2 3/8"	3 3/8"	13"	3 3/8"	—	—	—	24"
		20°-30°	10 3/4"	7 1/4"	2 3/8"	3 3/8"	13 3/4"	3 3/8"	—	—	—	25"
		30°-40°	12"	8"	2 3/8"	3 3/8"	15"	3 3/8"	—	—	—	25"
		40°-50° incl.	13 1/2"	8 3/4"	2 3/8"	3 3/8"	16 1/2"	3 3/8"	—	—	—	25"
C	440'-600'	0°-10° incl.	11 1/4"	8 1/2"	3"	3"	15 3/4"	4 3/8"	9"	4"	1 1/2"	26"
		10°-20°	12"	8 3/4"	2 3/8"	3 3/8"	16"	4 3/8"	10"	4"	1 1/2"	26"
		20°-30°	12 3/4"	9 1/4"	2 3/8"	3 3/8"	16 3/4"	4 3/8"	11"	4"	1 1/2"	26"
		30°-40°	14"	10"	2 3/8"	3 3/8"	18"	4 3/8"	11"	4"	1 1/2"	26"
		40°-50° incl.	15 1/2"	10 3/4"	2 3/8"	3 3/8"	19 1/2"	4 3/8"	12"	4"	1 1/2"	26"
D	600'-760'	0°-10° incl.	13 1/2"	10 3/4"	3"	3"	18 1/2"	5 3/8"	11"	5"	2"	30"
		10°-20°	14"	10 3/4"	2 3/8"	3 3/8"	19"	5 3/8"	12"	5"	2"	30"
		20°-30°	14 3/4"	11 1/4"	2 3/8"	3 3/8"	19 3/4"	5 3/8"	13"	5"	2"	30"
		30°-40°	16"	12"	2 3/8"	3 3/8"	21"	5 3/8"	13"	5"	2"	30"
		40°-50° incl.	17 1/4"	13"	2 3/8"	3 1/2"	22 1/4"	5 3/8"	15"	5"	2"	30"
E	760'-920'	0°-10° incl.	15 1/4"	12 1/2"	3"	3"	21 1/4"	6 3/8"	13"	6"	2 1/2"	36"
		10°-20°	16"	12 3/4"	2 3/8"	3 3/8"	22"	6 3/8"	14"	6"	2 1/2"	36"
		20°-30°	16 3/4"	13 1/4"	2 3/8"	3 3/8"	22 3/4"	6 3/8"	15"	6"	2 1/2"	36"
		30°-40°	18"	14"	2 3/8"	3 3/8"	24"	6 3/8"	15"	6"	2 1/2"	36"
		40°-50° incl.	19 3/4"	15"	2 3/8"	3 1/2"	25 3/4"	6 3/8"	17"	6"	2 1/2"	36"

GENERAL NOTES

Expansion Dams to be paid for as Structural Steel.

If there is conflict between this Standard Detail and the design details, the requirements of the design details shall be followed.

Steel Classification: A.S.T.M. A36

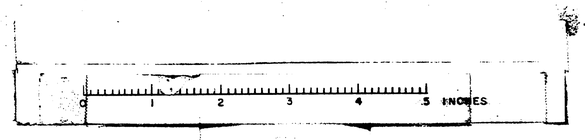
MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS
(BD 105 - 64)

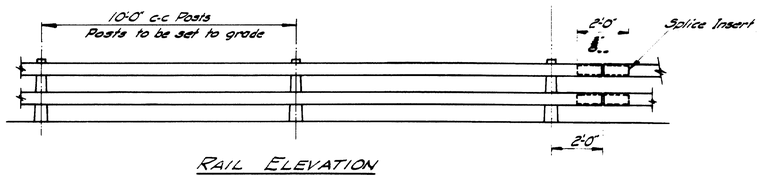
EXPANSION DAMS

APRIL, 1964

95-178

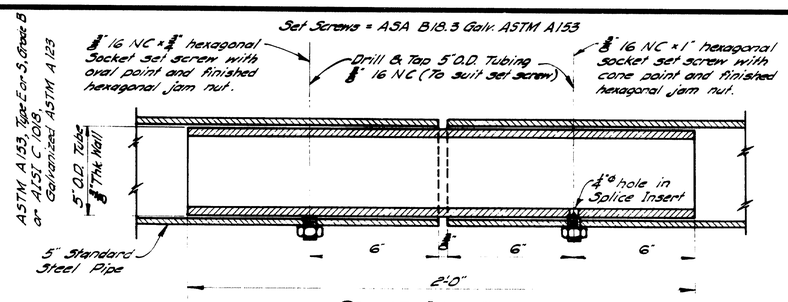


S. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

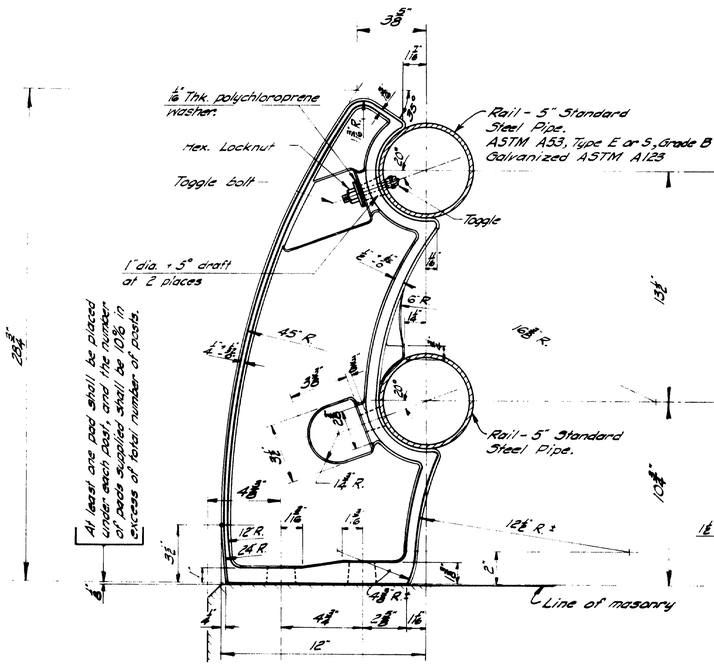


RAIL ELEVATION

Lengths of rail shall be attached to a minimum of (4) four rail posts, wherever possible, and in any case never less than (2) two.



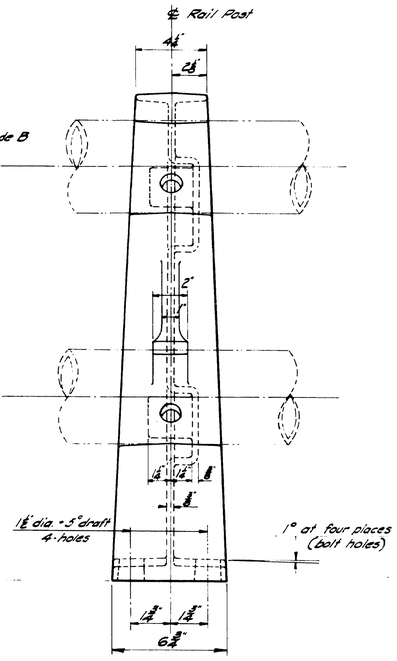
SPLICE INSERT



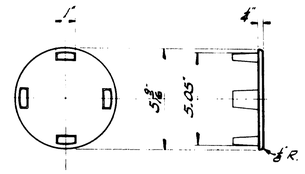
RAIL POST

ASTM A27, Grade 65-35, Galvanized ASTM A153

At least one pad shall be placed under each post, and the number of pads supplied shall be 10% in excess of total number of posts.

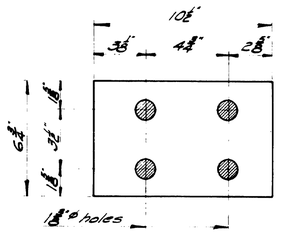


FRONT ELEVATION



RAIL CAP

ASTM A27, Grade 65-35, Galv. ASTM A153



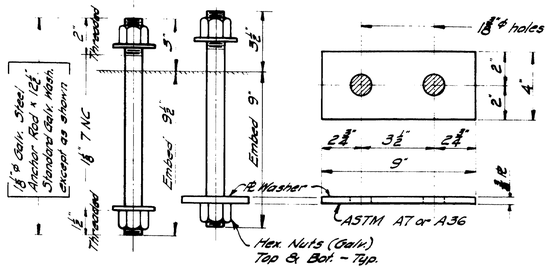
PAD

At each rail post

See Article 702-80 Supplemental Specifications of Feb. 1960.

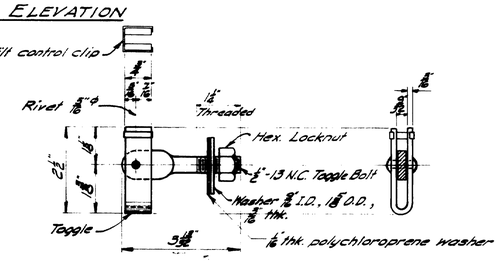
DESIGN SPECIFICATIONS

A.A.S.H.O. Interim Specifications Int. 1 (64)



RAIL POST ANCHORAGE

Bolts, Nuts, & Std. Washers = ASTM A325 Galvanized ASTM A153



TOGGLE BOLT DETAIL

Cadmium Plate metal parts ASTM A165-55, Type N5, .0005" thick

Toggle = ASTM A303, 1015 H.R. Steel.
Rivet = ASTM A195. 1038 C.R. Steel, Heat Treated
Toggle Bolt = ASTM A354, 1335 C.R. Steel, Heat Treated RC 32-38.
Washer = ASTM A7, 1020 H.R. Steel
Hex. Locknut = Finished Hexagonal Locknut Prevailing Torque Type Steel Grade C or D, Industrial Fasteners Institute.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

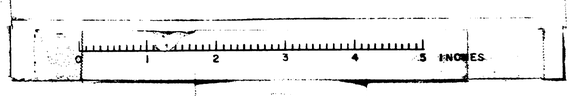
(BD 107 - 64)

STEEL RAIL

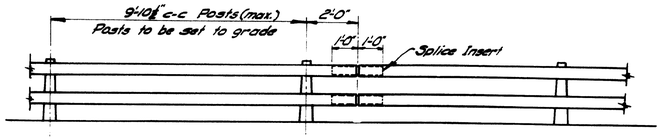
(2-BAR PIPE RAIL)
CAST POST

OCT. 1964

95-179



B.P.R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE			

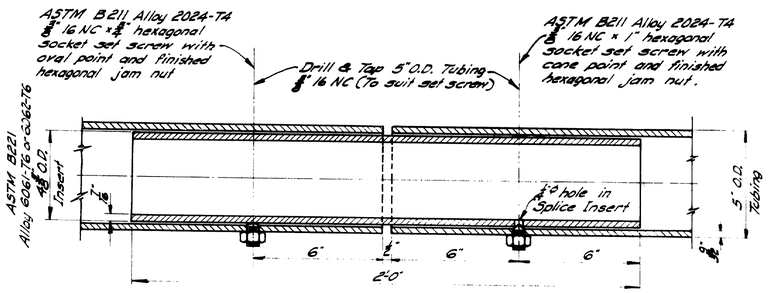


RAIL ELEVATION

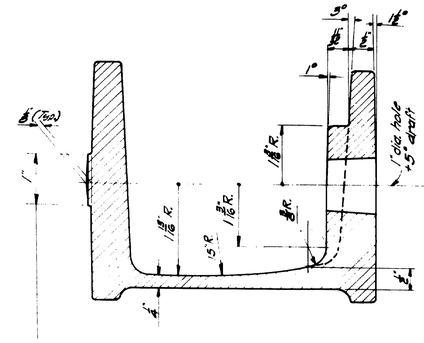
Lengths of rail shall be attached to a minimum of (4) four rail posts, wherever possible, and in any case never less than (2) two.

△ ORIGIN LOCATION - PRINCIPAL CURVES

Curve	Radius	"X"	"Y"
#1	24"	24"	3 15/32"
#2	45"	45"	2 27/32"
#3	15"	15 11/16"	4 23/32"
#4	9 3/8"	20 11/16"	2 11/32"
#5	19"	28 17/32"	11"
#6	6"	16 17/32"	16 1/16"

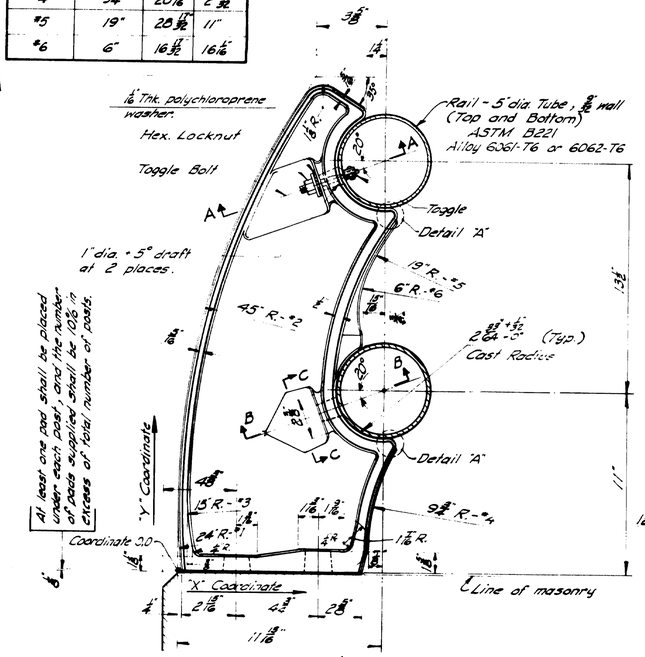


SPLICE



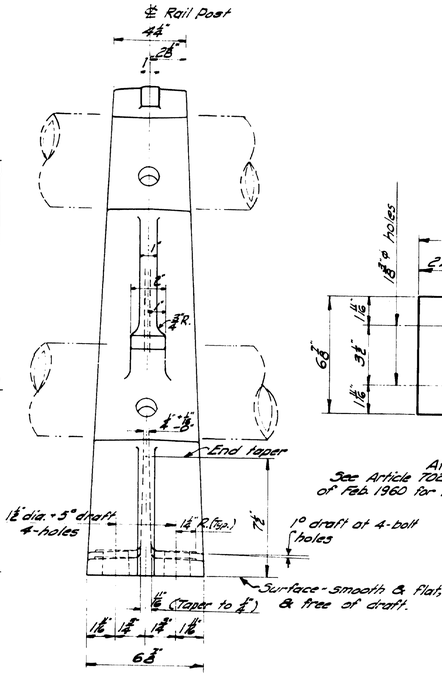
SECTION A-A

Casting to be supplied with a 60 grid belt grind finish on all gating rib surfaces around entire casting.

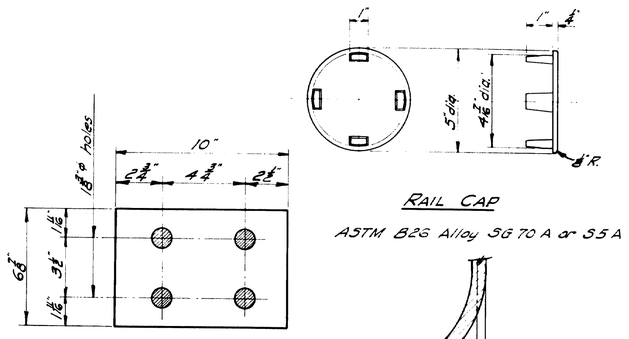


RAIL POST △

Aluminum Association Alloy A344-T4



FRONT ELEVATION



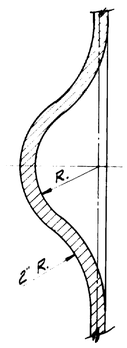
RAIL CAP

ASTM B26 Alloy SG 70 A or S5 A

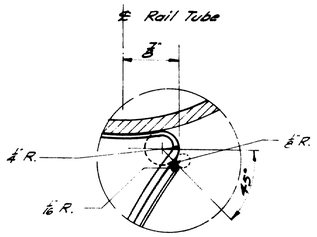
PAD

At each rail post

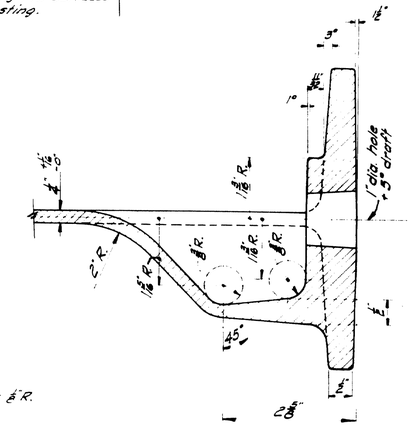
See Article 702-80, Supplemental Specifications of Feb. 1960 for Pad & Fabric Washers.



SECTION C-C



DETAIL "A" △



SECTION B-B

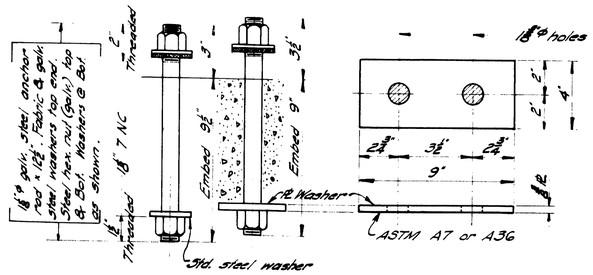
DESIGN SPECIFICATIONS

A.A.S.H.O. Interim Specifications Int. I (64).

A 344 - T4 Alloy to meet the Specification outlined by Aluminum Association.

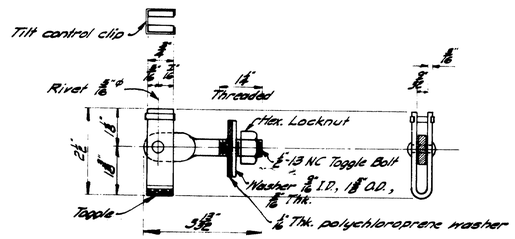
ALTERATION:

△ - Added Detail "A" and Origin Location-Principal Curves. Nov. 19, 1964.



RAIL POST ANCHORAGE

Bolts, Nuts & Std. Washers = ASTM A 325 Galvanized ASTM A153



TOGGLE BOLT DETAIL

Cadmium Plate metal parts ASTM A165-55, Type N.5, .0005" thick

Toggle = ASTM A303, 1015 H.R. Steel.
Rivet = ASTM A195. 1038 C.R. Steel, Heat Treated
Toggle Bolt = ASTM A354, 1335 C.R. Steel, Heat Treated RC 32-38.
Washer = ASTM A7, 1020 H.R. Steel.
Hex. Locknut = Finished Hexagon Locknut Installing Torque Type Steel Grade C or D, Industrial Fasteners Institute.

MAINE STATE HIGHWAY COMMISSION
AUGUSTA, MAINE

STANDARD DETAILS

(BD 108-64)

ALUMINUM RAIL

2 - BAR (TUBE RAIL)
CAST POST

OCT. 1964

95-180