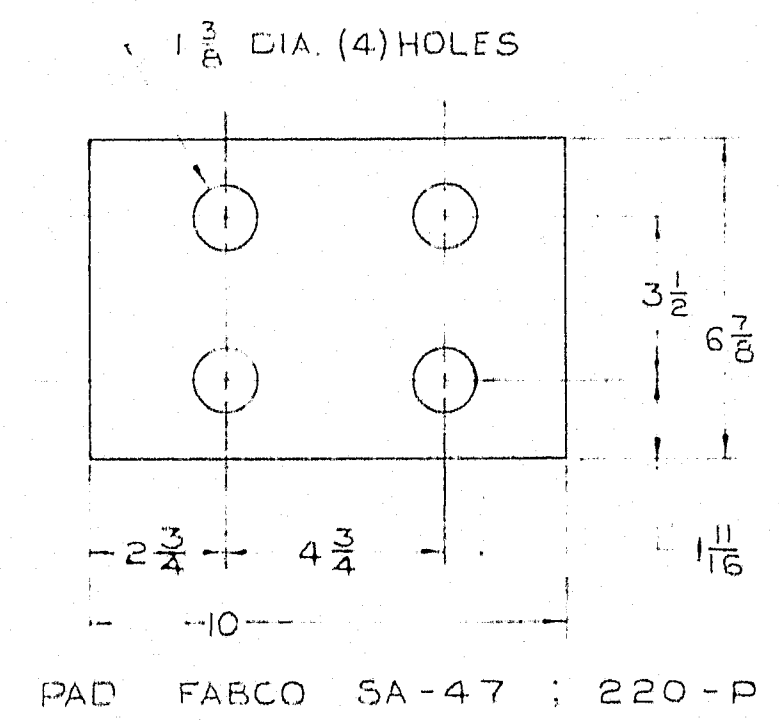
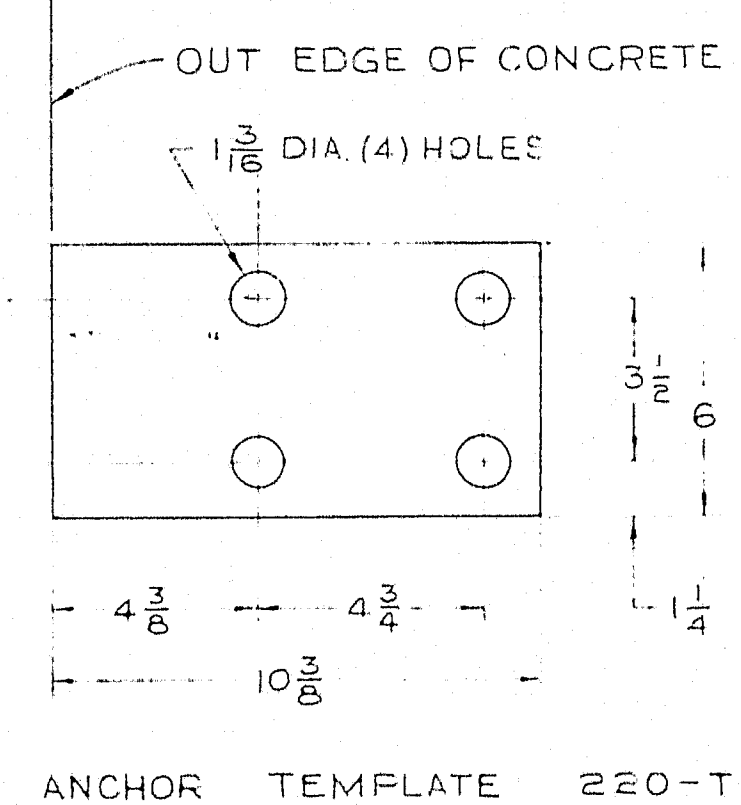
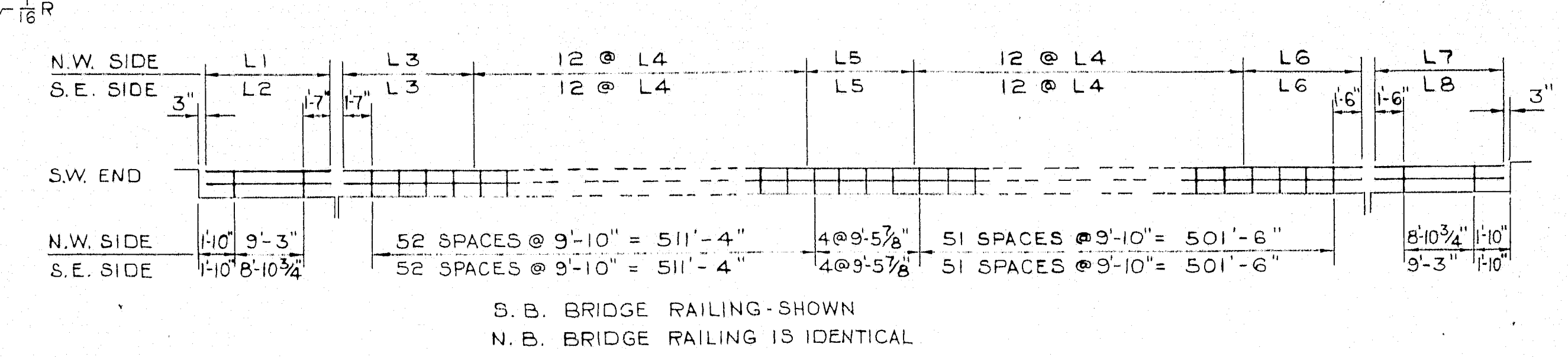
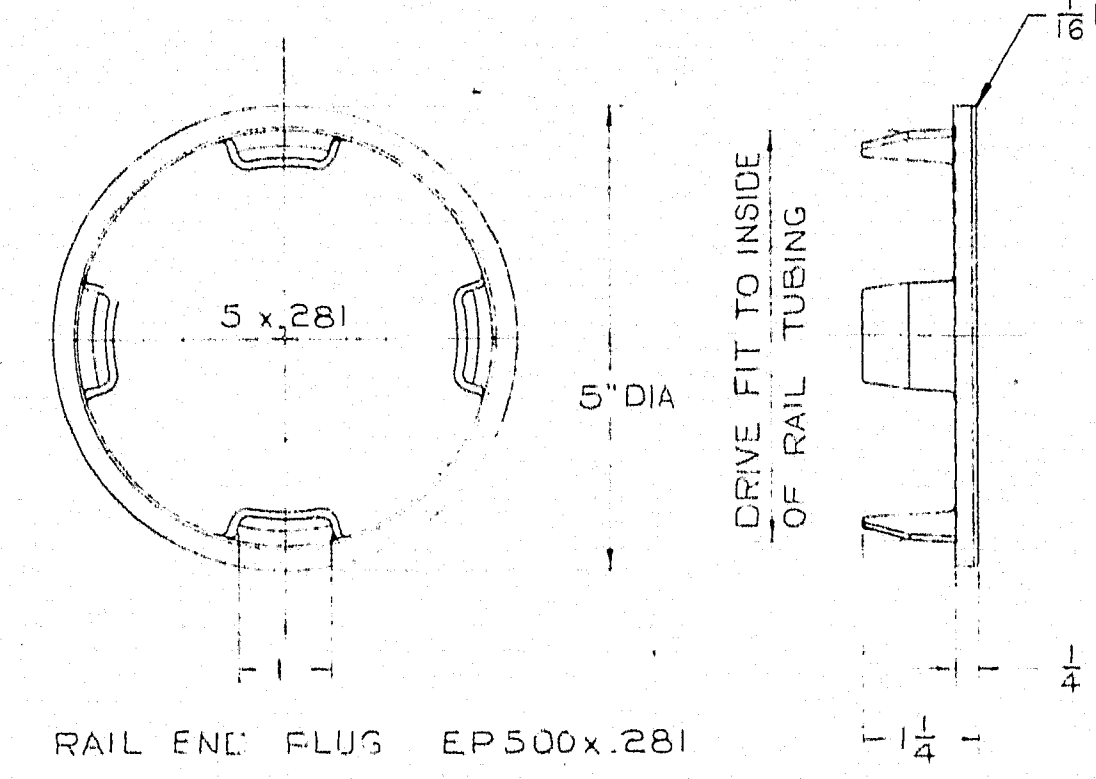
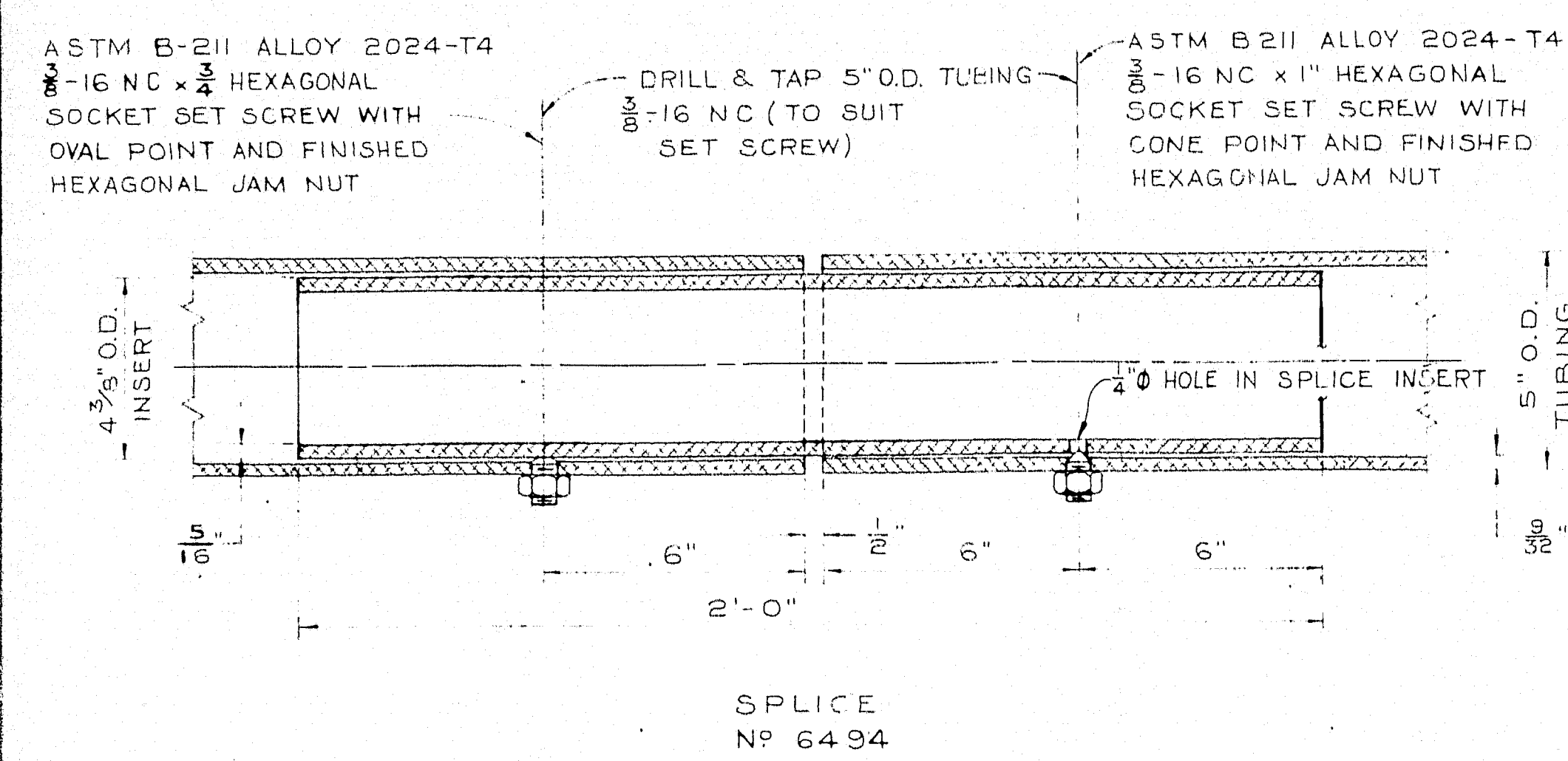


REVISIONS		
A	4-8-65	JAPLEGATE

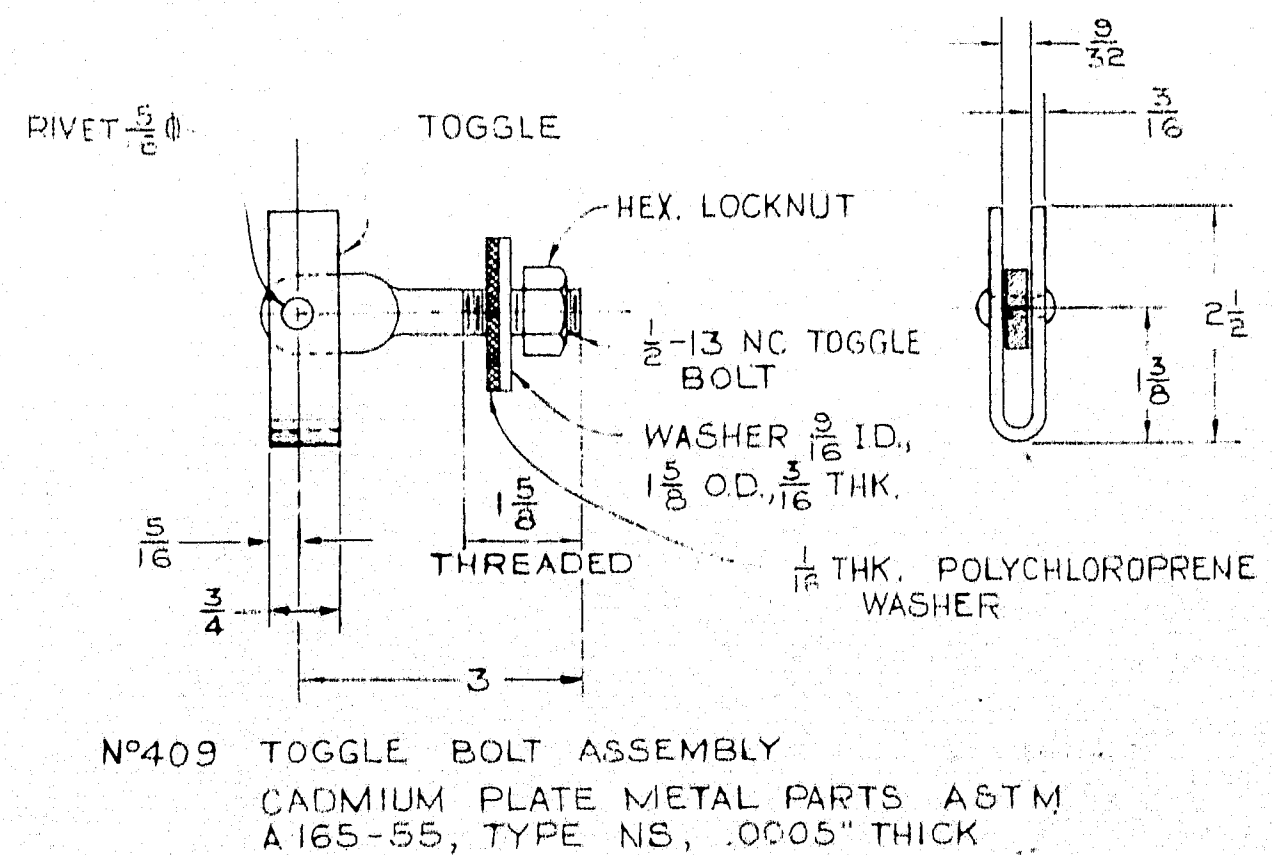
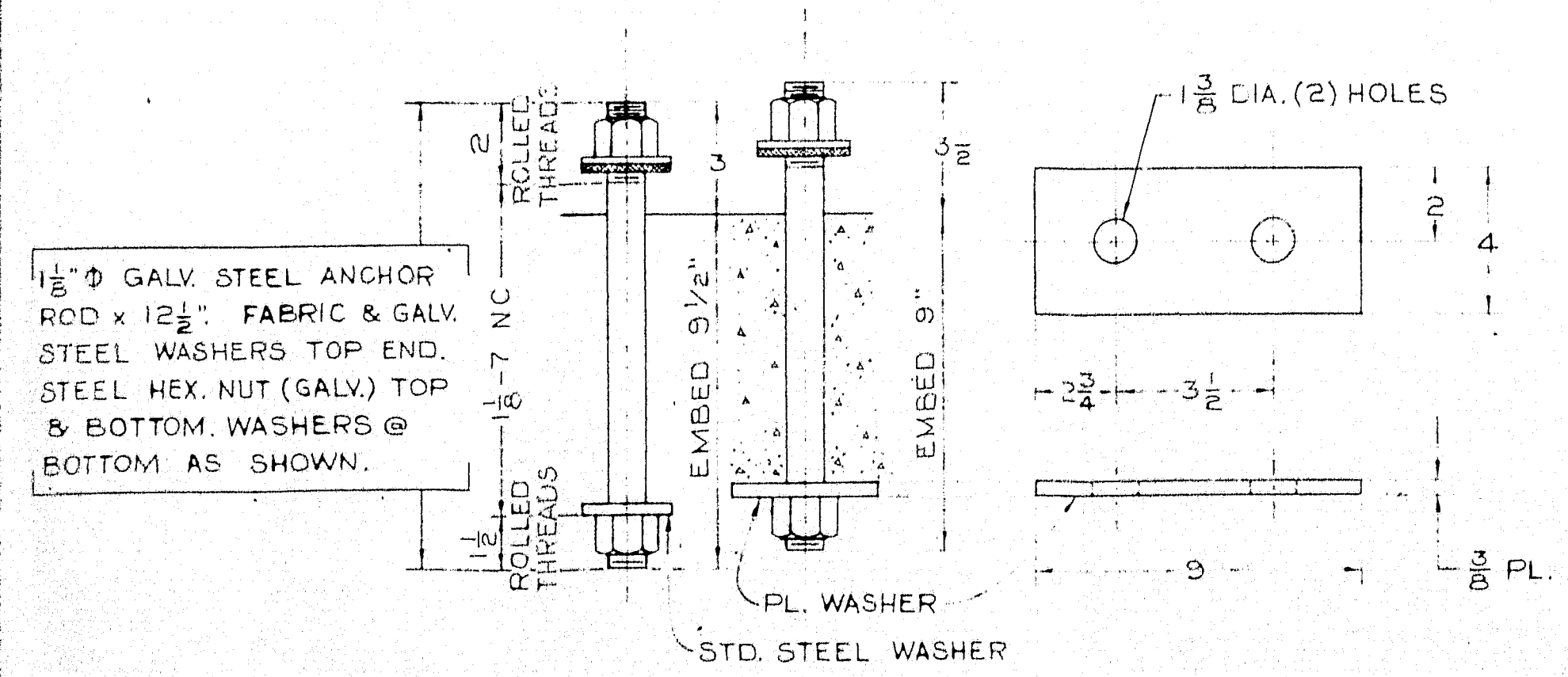


NOTES:

S1 - DRILL & TAP 5" O.D. TUBING 3/8-16 NC 6" FROM END, (TO SET SCREW) ONE END ONLY.

S2 - DRILL & TAP 5" O.D. TUBING 3/8-16 NC 6" FROM EACH END ON SAME VERTICAL AXIS (TO SUIT SET SCREW).

1" Ø HOLES IN TUBING TO RECEIVE TOGGLE BOLTS, SHALL BE PROVIDED IN THE FIELD.



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 PREVAILING TORQUE TYPE STEEL GRADE C OR D, INDUSTRIAL FASTENERS INSTITUTE.

BILL OF MATERIAL	
ASTM	REF: - DWG. & STANDARD DETAILS (BD 108-64)
448	HOWE Nº 220 CAST POST ALUM. A-344-T4
B26	48 EP 500x.281 END PLUG ALLOY SG70A OR 5A
B221	208 SPLICE 4 3/8 O.D. x 7/16 WALL x 24" LG ALUM. 6061-T6
416	3/8-16 NC FINISHED HEX. JAM NUT ALLOY 2024-T4
B211	208 3/8-16 NC x 3/4 HEX. SKT. SET SCREW OVAL PT 2024-T4
B211	208 3/8-16 NC x 1" HEX. SKT. SET SCREW CONE PT. 2024-T4
493	220-P 1/8" THK. FABCO PAD 5A-47
MISC.	896 TOGGLE BOLT ASSEMBLY Nº 409
448	220-T 6 x 10 3/8" TEMPLATE
A7	448 3/4 x 4 x 9 PL. ASTM A7
A325	896 1 1/8" STD. STEEL WASHER
A325	3584 1 1/2"-7 NC STEEL HEX NUT GALV.
A325	1792 1 1/8" Ø-7 NC x 12 1/2" ANCHOR ROD GALV. STEEL
	1792 1 1/8" FABRIC WASHER
A325	1792 1 1/8" GALV. STEEL WASHER
B221	4 L1 12'-4 1/2" L - TOP OR BOTTOM RAIL
"	4 L2 12'-0 1/4" 5" O.D. x 9/32 WALL TUBING
"	8 L3 38'-10 1/2" S1 ALUM. ALLOY 6061-T6 Nº 649
"	192 L4 39'-3 1/2" S2 4 L7 11'-11 1/4"
"	8 L5 37'-11" S2 4 L8 12'-3 1/2"
B221	8 L6 32'-11 1/2" S1

INDIANAPOLIS

195 OVER PENOBSCOT RIVER & OLD ROUTE 157
RELOC. IN MEDWAY

APR 1965

DISTRIBUTOR: BANCROFT & MARTIN INC. Nº 11921
CONTRACTOR: CALLAHAN BROS.

SCALE: 3-3-65 JAPLEGATE: CC AS NOTED

TITLE: ALUMINUM BRIDGE RAIL
PENOBSCOT CO. MAINE PROJ. I-95-9(29)

howe 1357
engineering co., inc.
3800 MASSACHUSETTS AVE. • INDIANAPOLIS 18, INDIANA

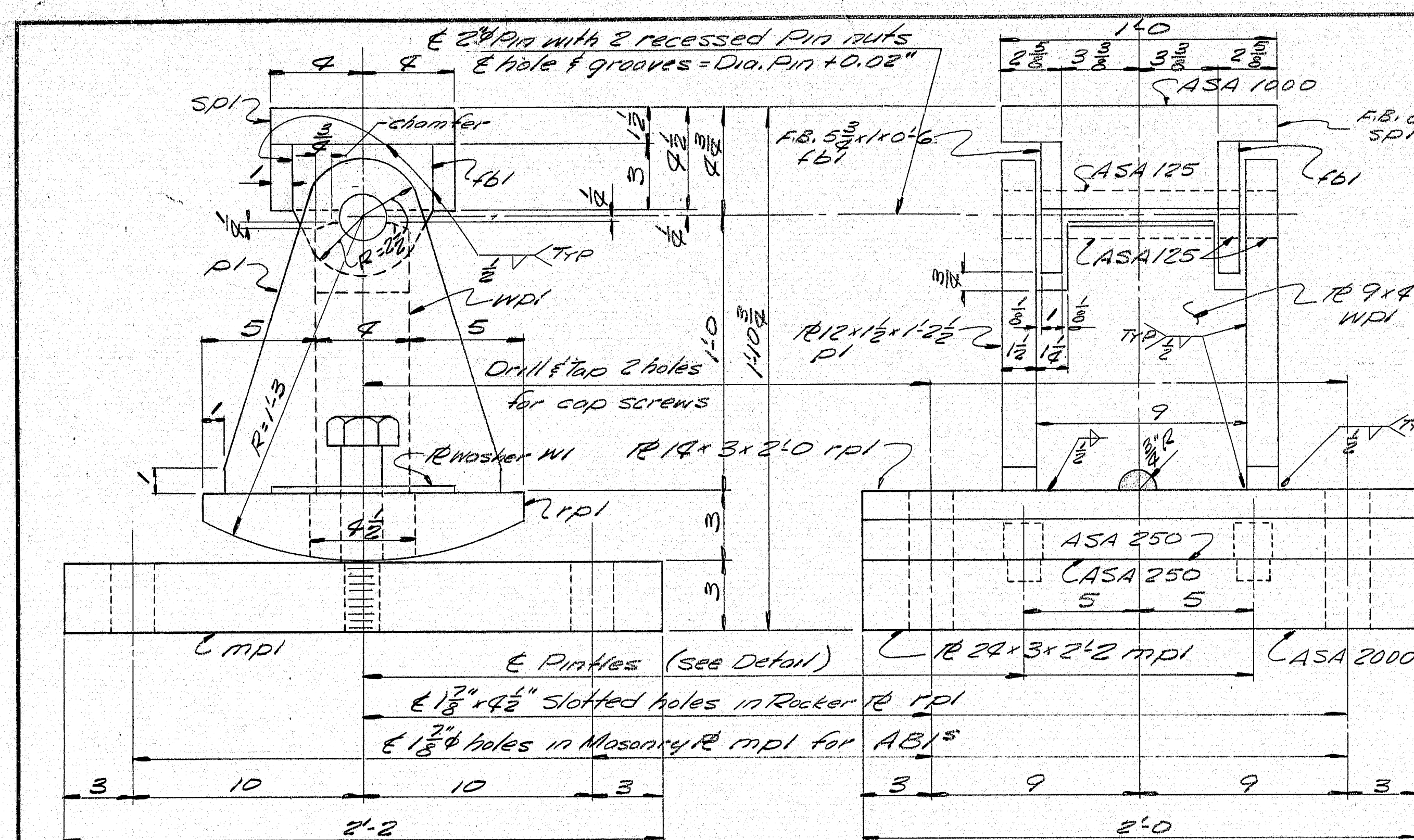
HEC NO. 1 OF 2

SHIP		BILL OF MATERIAL			DWG. NO. 65-19-S/S	
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS
EP-58	8		EXPANSION PEDESTAL			
	8	MP1	R24x3	2 2		
	8	IP1	R14x3	2 0		
	8	WD1	R9x4	0 11 3/4		
	8	SP1	F8.8x4 1/2	1 0		Field weld to Girder
	16	PI	R12x1 1/2	1 2 1/2		
	16	FB1	F8.5 3/4 x 1	0 6		
	16	SHOP	1 3/4" x 5/8" SCREW	0 8		Mach.
	8	SHOP	2" PIN	1 2 1/2		with 2 recessed nuts
	16	DI	bar 1 1/2" x 1/2"	0 2 1/2		
	16	WI	F8.4x 1/2	0 8		
EP-58	12		EXPANSION PEDESTAL			
	12	MP2	R24x4 1/2	3 0		
	12	IP2	R12x4	3 0		
	12	WD2	R17 3/4 x 4	1 8 1/2		
	12	SP2	R14x4	1 6		Field weld to Girder
	24	D2	R10x1 1/2	1 8 1/2		
	24	FB2	F8.5 3/4 x 1	1 0		
	24	SHOP	1 3/4" x 5/8" SCREW	0 8		Mach.
	24	WI	F8.4x 1/2	0 8		
	12	SHOP	2" PIN	2 1 1/2		with 2 recessed nuts
	24	DI	bar 1 1/2" x 1/2"	0 2 1/2		
	24	FB3	F8.3x1 1/2	1 3 1/2		
EP-58	4		FIXED PEDESTAL			
	4	MP3	R24x3 1/2	3 0		
	4	WD3	R20 1/2 x 4	1 10		
	4	SP3	R14x4	1 6		Field weld to Girder
	8	D3	R22x1 1/2	2 0 3/4		
	8	FB3	F8.5 3/4 x 1	1 0		
	8	D4	R9x1 1/2	1 7		
	4	SHOP	2" PIN	2 1 1/2		with 2 recessed nuts
AB1	32		bar 1 1/2" x 1/2"	1 8 1/2		
AB2	48		bar 1 1/2" x 1/2"	1 9 1/2		
AB3	16		bar 1 1/2" x 1/2"	1 8 1/2		
	96	SHOP	1 1/2" x 5/8" HEX. WASH.			
Field	96		1 1/2" x 5/8" WASHER			
FPA	8		Pad 24x 1/2	2 2		Fabco Pad "SA 87" Req. No.
FPB	16		Pad 24x 1/2	3 0		Do Do
NOTE: Allowance to be made for machining when cutting above plates.						
ASTM STEEL CLASSIFICATION						
PLATE - A36 (Class E) or 108 (Grade 1021 to 1030)						
ANCHOR BOLTS - A36 or A307						
ALL OTHER - A36						
All welds to be made with E70 Electrodes						
Proj. No. 1-95-9(29)						
ITEM No. 702-103 B						
SHOP CONNECTIONS: Welded						
FIELD CONNECTIONS: Welded						
HOLES: As noted						
PAINT: Red lead per M.S.H.C. Spec. except as noted.						
SOUTH BOUND						
BEARING PEDESTAL						
Bancroft & Martin Inc.						
South Portland 7, Maine						
INTERSTATE 95						
OVER PENOBSCOT RIVER						
MEDWAY, MAINE.						
CUSTOMER CALLAHAN BROS. INC.						
DESIGNER M.S.H.C. BRIDGE DIV.						
DRAWN 9-30-65 H.L.						
REVISION						
REVISION						
REVISION						
			ORDER NO. Verbal		DWG. NO. 65-19-S/S	

156-182

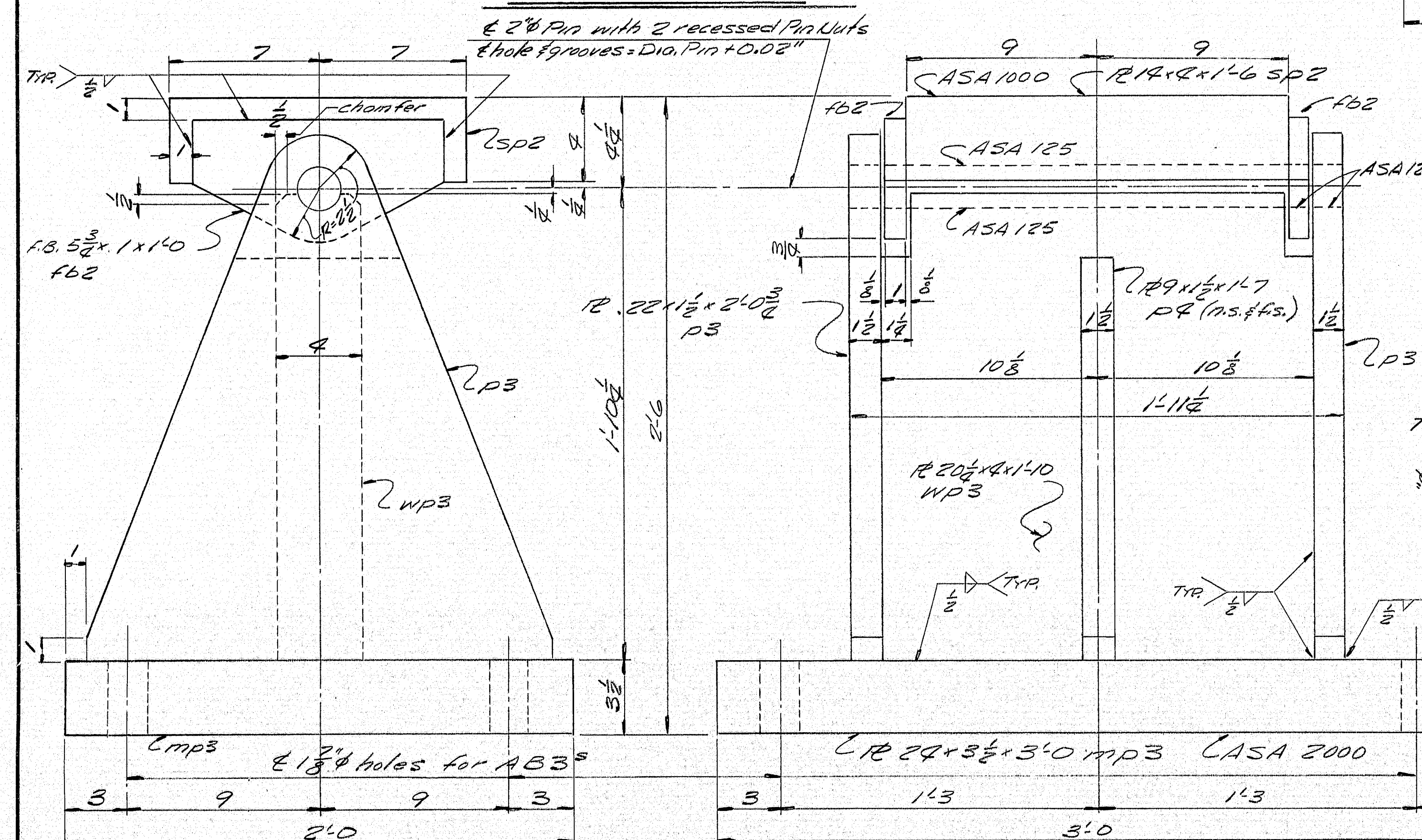
SHIP			BILL OF MATERIAL			DWG. NO. 65-19-S/N			
MARK	NO.	MARK	SHAPE	LENGTH	WT.	REMARKS			
EP-1/8	8		EXPANSION PEDESTAL						
	8	MP1	R 24 x 3	2 2					
	8	IP1	R 14 x 3	2 0					
	8	WD1	R 9 x 4	0 11 3/4					
	8	SP1	F 8.8 x 4 1/2	1 0		Field weld to Girder			
	16	PI	R 12 x 1 1/2	1 2 1/2					
	16	FB1	F 8.5 3/4 x 1	0 6					
	16	shop	1 3/4" x 5/8" x 1/2" SCREW	0 8		Mach.			
	8	shop	2" PIN	1 2 1/2		with 2 recessed nuts			
	16	DI	bar 1 1/2" x 1/2"	0 2 1/2					
16	WI	F 8.4 x 1/2	0 8						
EP-12	12		EXPANSION PEDESTAL						
	12	MP2	R 24 x 4 1/2	3 0					
	12	IP2	R 12 x 4	3 0					
	12	WD2	R 17 3/4 x 4	1 8 1/2					
	12	SP2	R 14 x 4	1 6		Field weld to Girder			
	24	D2	R 10 x 1 1/2	1 8 1/2					
	24	FB2	F 8.5 3/4 x 1	1 0					
	24	shop	1 3/4" x 5/8" x 1/2" SCREW	0 8		Mach.			
	24	WI	F 8.4 x 1/2	0 8					
	12	shop	2" PIN	2 1 1/2		with 2 recessed nuts			
24	DI	bar 1 1/2" x 1/2"	0 2 1/2						
24	FB3	F 8.3 x 1 1/2	1 2 3/4						
EP-1/8	4		FIXED PEDESTAL						
	4	MP3	R 24 x 3 1/2	3 0					
	4	WD3	R 20 1/2 x 4	1 10					
	4	SP2	R 14 x 4	1 6		Field weld to Girder			
	8	D3	R 22 x 1 1/2	2 0 3/4					
	8	FB2	F 8.5 3/4 x 1	1 0					
	8	D4	R 9 x 1 1/2	1 7					
	4	shop	2" PIN	2 1 1/2		with 2 recessed nuts			
	AB1	32		bar 1 1/2" x 1/2"	1 8 1/2				
	AB2	48		bar 1 1/2" x 1/2"	1 9 1/2				
AB3	16		bar 1 1/2" x 1/2"	1 8 1/2					
	96	shop	1 1/2" x 5/8" x 1/2" HEX. WASH.						
Field	96		1 1/2" x 5/8" WASHER						
FPA	8		Pad 24 x 1/2	2 2		Fabco Pad "SA 87" Req. No.			
FPB	16		Pad 24 x 1/2	3 0		Do Do			
NOTE: Allowance to be made for Machining when cutting above plates.									
ASTM STEEL CLASSIFICATION									
PLATE - A36 (Class E) or 108 (Grade 1021 to 1030)									
ANCHOR BOLTS - A36 or A307									
ALL OTHER - A36									
All welds to be made with E70 Electrodes									
Proj. No. 1-95-9(29)									
ITEM No. 702-103B									
SHOP CONNECTIONS: Welded									
FIELD CONNECTIONS: Welded									
HOLES: As noted									
PAINT: Red lead per M.S.H.C. Spec. except as noted.									
NORTH BOUND									
BEARING PEDESTAL									
Bancroft & Martin Inc.									
South Portland 7, Maine									
INTERSTATE 95									
OVER PENOBSCOT RIVER									
MEDWAY, MAINE.									
CUSTOMER CALLAHAN BROS. INC.									
DESIGNER M.S.H.C. BRIDGE DIV.									
DRAWN	9-30-65	H.L.							
REVISION									
REVISION									
REVISION									
			ORDER NO. Verbal		DWG. NO. 65-19-S/N				

156-183



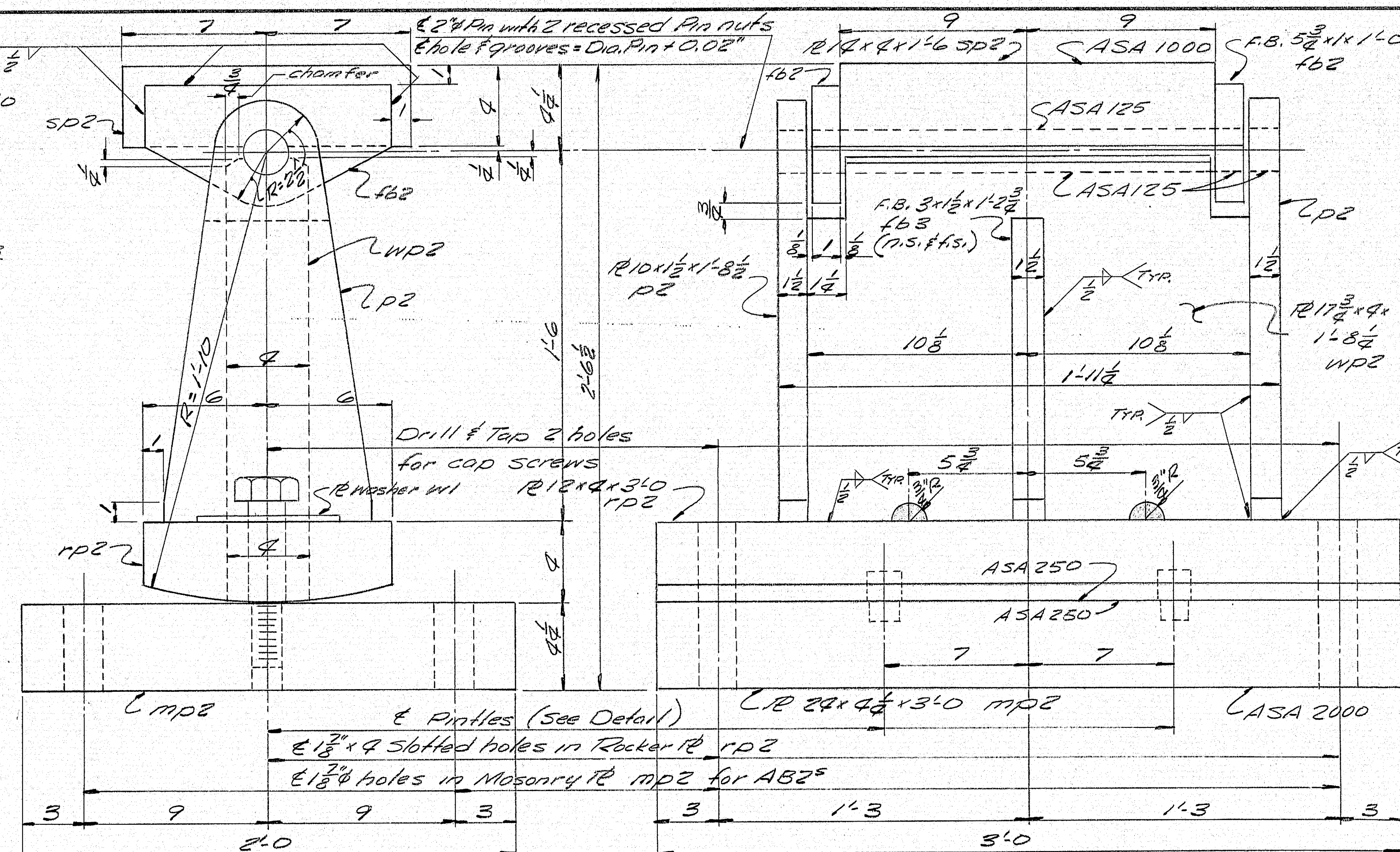
EXPANSION PEDESTAL EPI 8 REQ'D.

@ ABUTMENTS



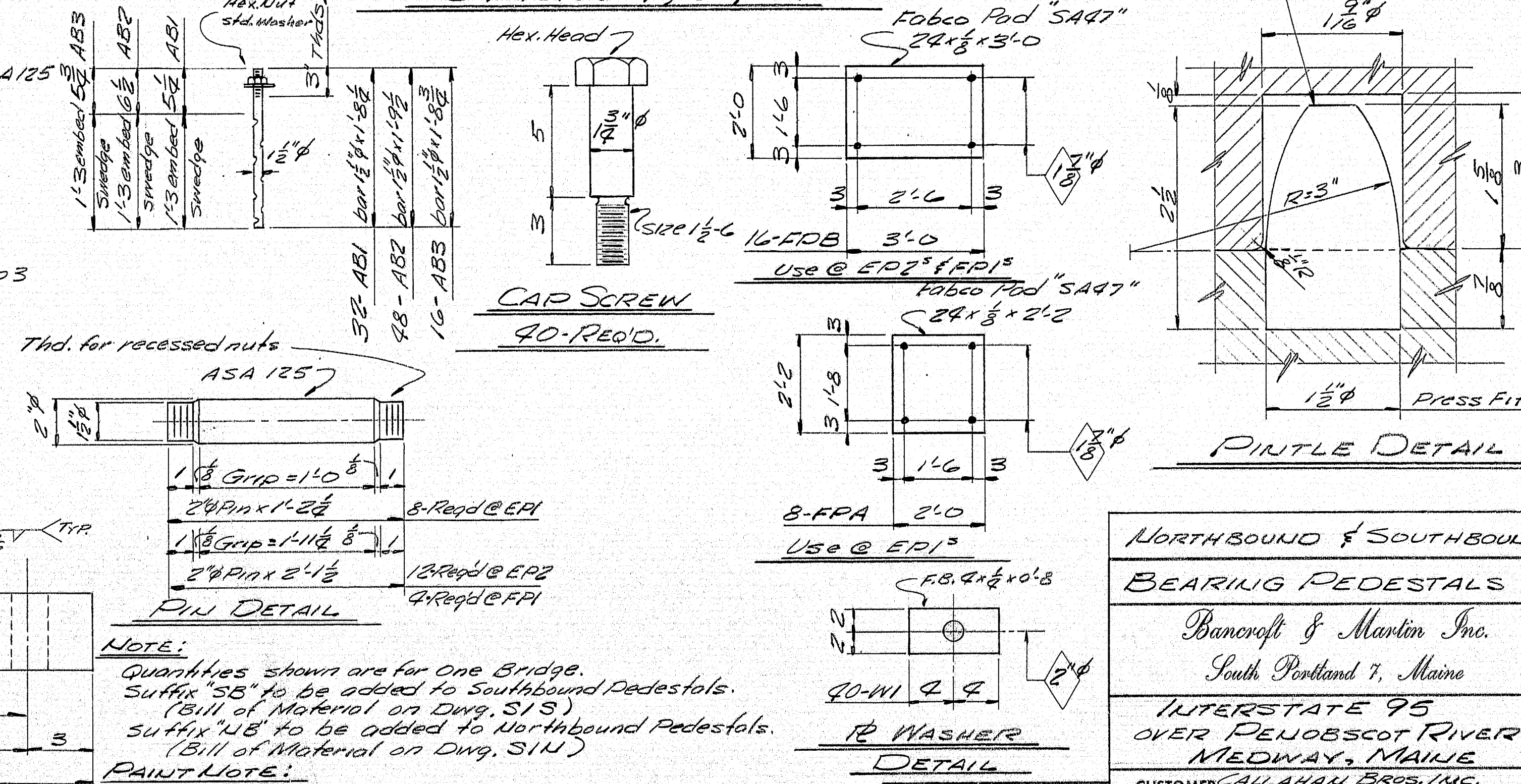
FIXED PEDESTAL FPI 4 REQ'D.

@ PIERS 3



EXPANSION PEDESTAL EP2 12 REQ'D.

@ PIERS 1, 2 & 4



NOTE:

Quantities shown are for one bridge.
 Suffix "SB" to be added to Southbound Pedestals.
 (Bill of Material on Dwg. 513)
 Suffix "NB" to be added to Northbound Pedestals.
 (Bill of Material on Dwg. 514)

PAINT NOTE:

No Paint on Anchor Bolts - Oil Thds.
 No Paint on top surface and 1" down from top on sides
 of side plates sp1 & sp2
 No paint on surfaces for ASA 125 and ASA 250. Coat with
 hot mixture of white lead and tallow.

NORTHBOUND & SOUTHBOUND	
BEARING PEDESTALS	
Bancroft & Martin Inc.	
South Portland 7, Maine	
INTERSTATE 95	
OVER PENOBSCOT RIVER	
MEDWAY, MAINE	
CUSTOMER CALLAHAN BROS. INC.	
DESIGNER M.S.H.C. BRIDGE DIV.	
ORDER NO. Verbal	DWG. NO. 65-1951

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