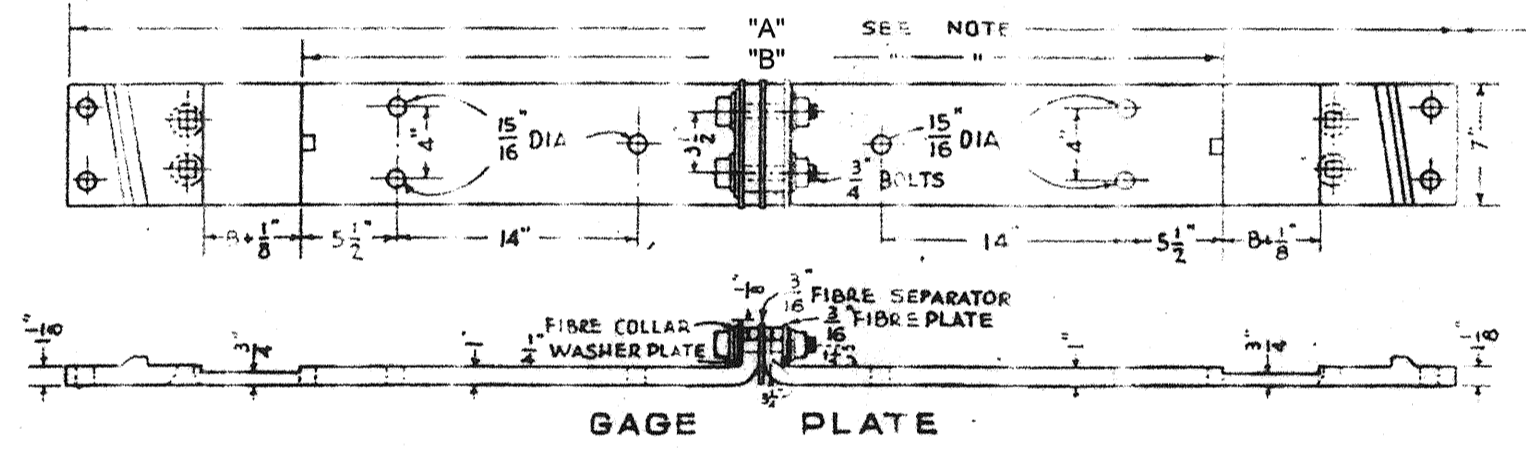


**PLACING OF HOOK FLANGE GUARD RAILS**

NUMBER OF FROG	LENGTH OF GUARD RAIL	PLACE GUARD RAILS ON TIES NO. 10	PLACE GUARD RAILS ON TIES NO. 23	FOR THE REFERENCE OF FROG
10	9'-0"	20-25	23	C407

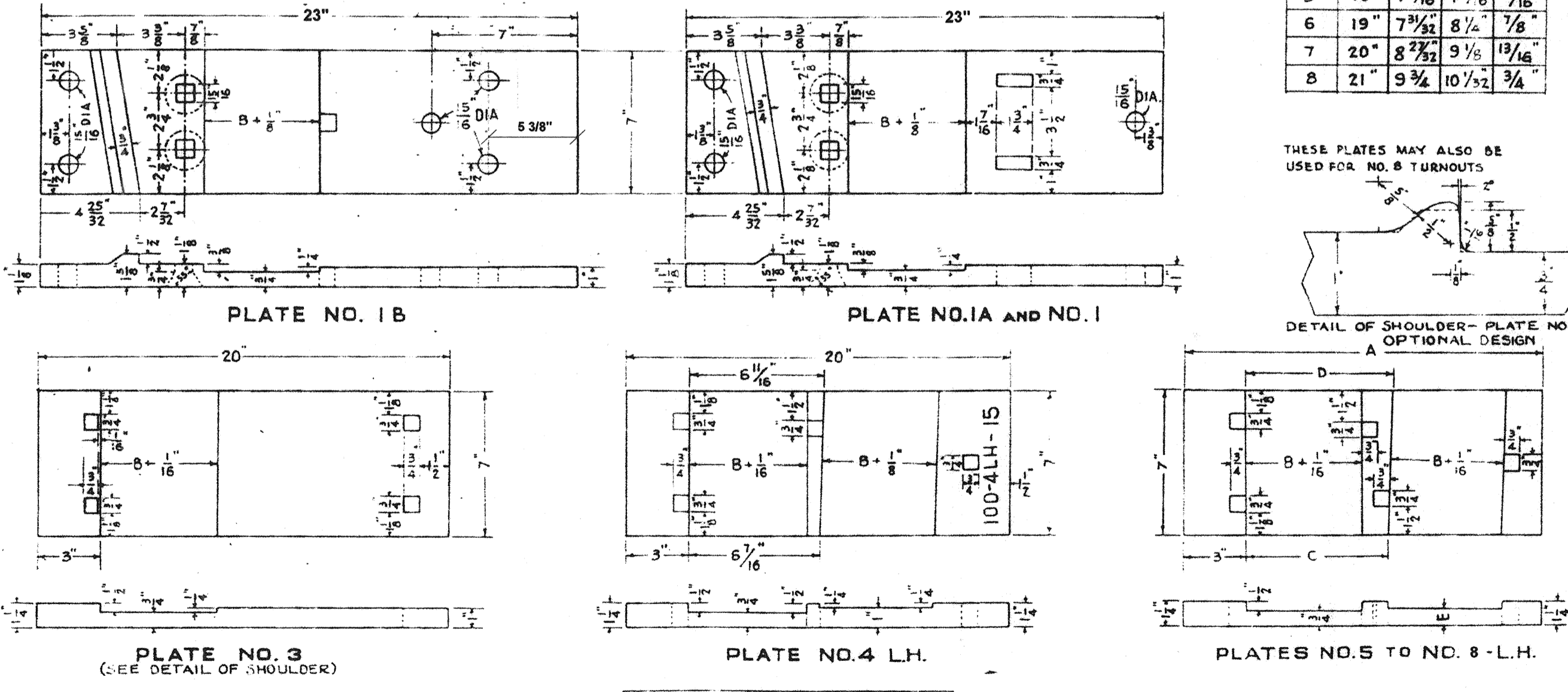
**HOOK FLANGE GUARD RAIL DETAIL**  
N.T.S.



MODIFY STANDARD GAGE PLATES:  
REMOVE 2'-8" INCLUDING INSULATED PORTION, BUT WELD REMAINDER WITH FULL PENETRATION WELDS  
DISTANCE "A" = 4'-0 1/2"  
DISTANCE "B" = 1'-7 1/2"

**PLATES FOR NO. 10 TURNOUT**

PLATE NO.	A	C	D	E
5	18"	7 3/16"	7 7/8"	15 1/16"
6	19"	7 3/16"	8 1/4"	7 7/8"
7	20"	8 3/16"	9 1/8"	13 1/16"
8	21"	9 3/16"	10 1/2"	3 3/4"

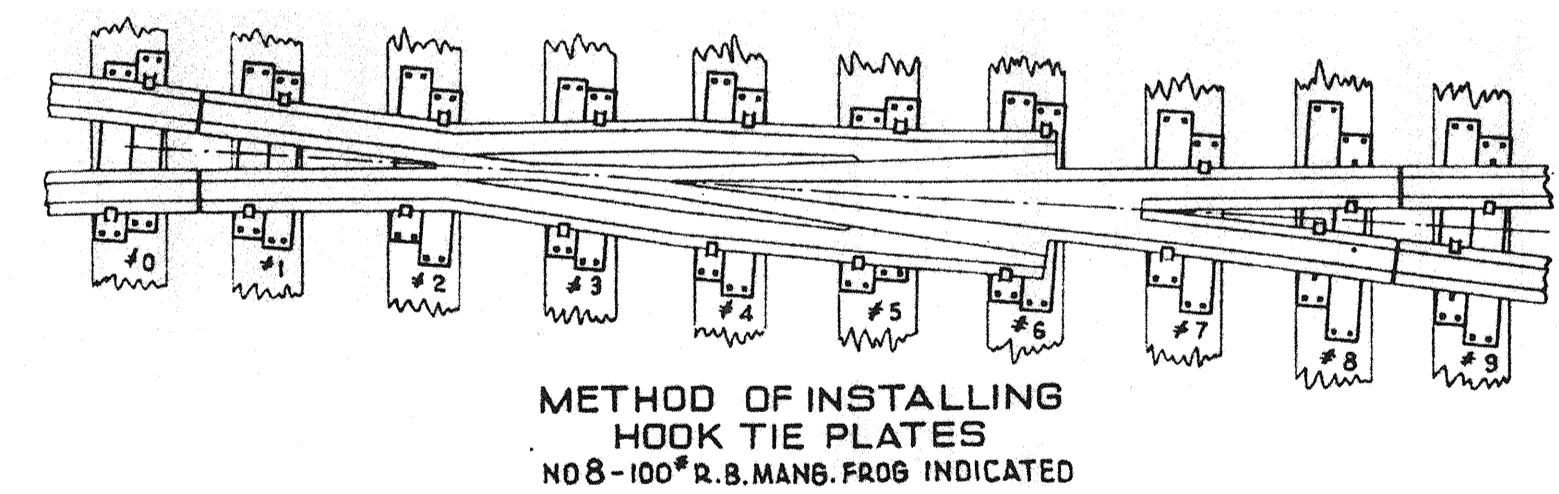


**NOTES:**  
RIGHT HAND PLATES ARE SAME AS LEFT HAND PLATES SHOWN EXCEPT OPPOSITE HAND.  
PLATES NO. 8, NO. 12, NO. 11 AND GAGE PLATE TO CONFORM TO ADJUSTABLE BRACE AS PER STANDARD PLAN F 20.  
EACH PLATE SHALL BE MARKED BY DEEPLY CUT CHARACTERS NOT LESS THAN 3/4" HIGH, DESIGNATING WEIGHT OF RAIL, NUMBER OF PLATE AND LENGTH OF SWITCH IN POSITION SHOWN ON PLATE NO. 4 L.H.  
PLATES NO. 1, 1A, 1B TO BE MODIFIED FROM STANDARD 27" LONG PLATES.  
GAGE PLATES TO BE MODIFIED AS SHOWN.

**LIST OF PLATES REQUIRED**

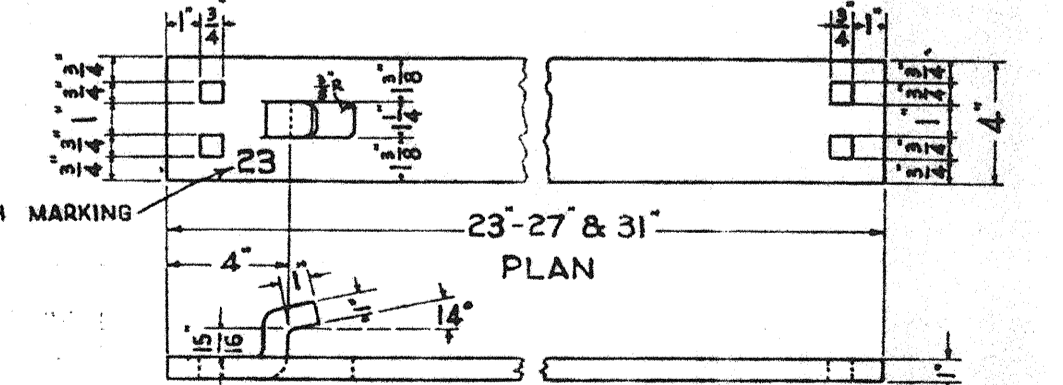
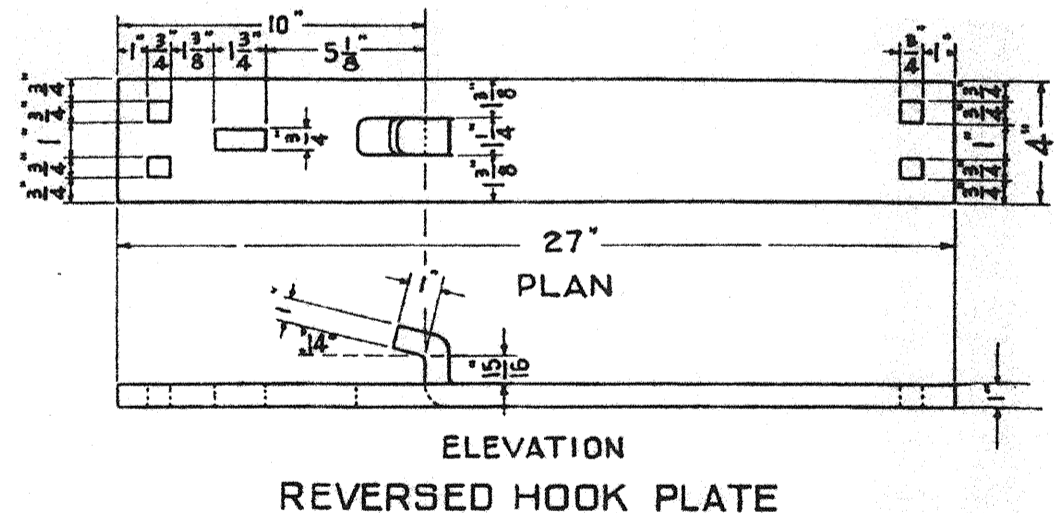
PLATE NO.	NUMBER REQUIRED	PLATE NO.	NUMBER REQUIRED
1B	2	7LH	
1A & 1	8	7RH	
3	10	8LH	
4LH	1	8RH	
4RH	1		
5LH	1	TOTAL	30
5RH	1		
6LH	1		
6RH	1		

**SLIDE PLATES FOR 15 FT SWITCH DETAILS**  
N.T.S.



**TABLE OF HOOK TIE PLATES WITH LENGTHS AND NUMBER PER FROG LOCATION ON TIES AS PER STANDARD PLANS.**

RAIL BOUND MANGANESE STEEL FROGS										
FROG NO.	WT. OF FROG	27" x 4" NO. 2	31" x 4" NO. 3	27" x 4" NO. 4	23" x 4" NO. 5	NO. TOTAL	PLAN NO.	RAIL LENGTH	REVERSED REQ'D	STANDARD REQ'D
10	85-30	16-5"	10-11	4	0-1-4-5-6-7	12	2-3-6-9	8	24	F 9
10	101	16-3"	10-11-12	6	1-4-5-6-7	10	2-3-8-9	8	24	F 9



**ELEVATION STANDARD HOOK PLATE**

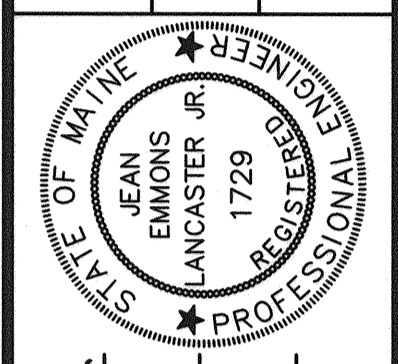
WEIGHT OF PLATES,	
STANDARD 23"	25.5 #
27"	29.9 #
31"	34.4 #
REVERSED 27"	29.6 #

**SPECIFICATION**  
MATERIAL- FORGED STEEL  
SOFT GRADE- AREA SPECIFICATIONS.  
MARK PLATES WITH 3/8" NUMBERS INDICATING THE LENGTH.

**TWIN HOOK FROG PLATES DETAIL**  
N.T.S.

J.E. LANCASTER, P.E.  
Railroad Engineering  
PO Box 377, Gray, ME 04039-9377

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
PROJECT NUMBER 009215.00  
PIN 009215.00



DATE 10/8/04  
P.E. NUMBER 1729  
SIGNATURE

DATE	BY	PROJ. MANAGER	PAUL POTTLER	DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
10/11/04	JEL	JEL	JEL	JEL	JEL	JEL	JEL					

CITY OF PORTLAND  
OCEAN GATEWAY PHASE 1

RAILROAD DETAILS - 3

C409