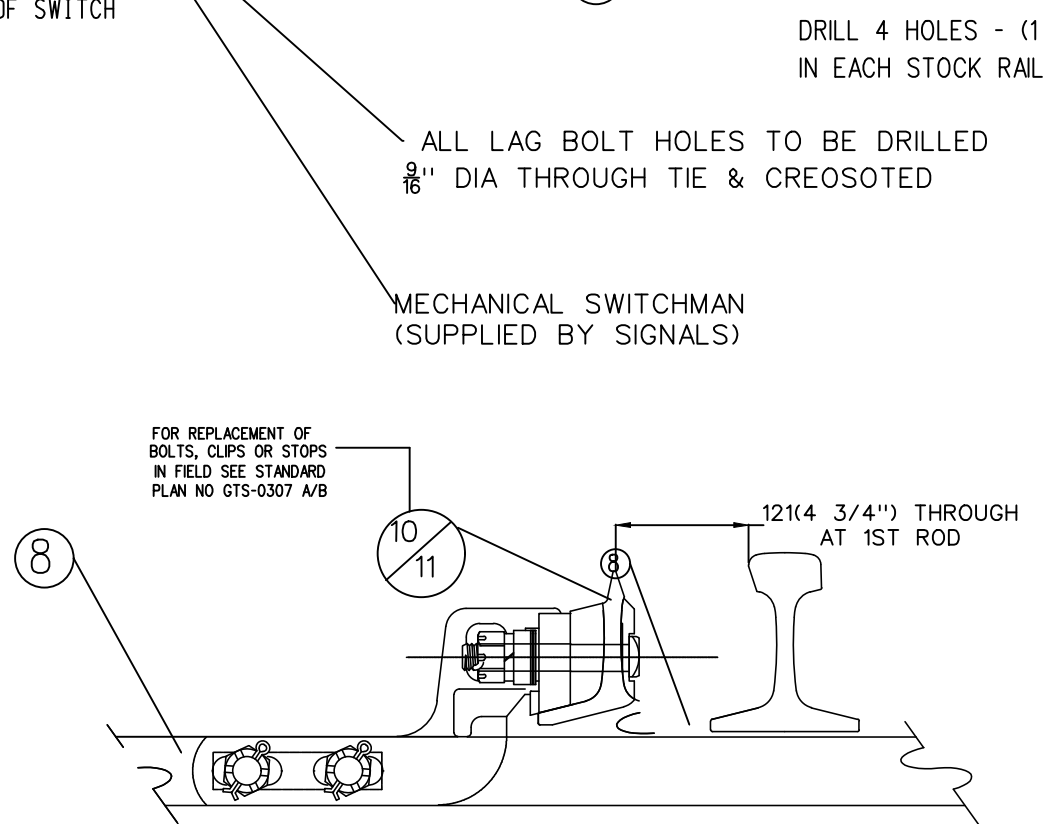
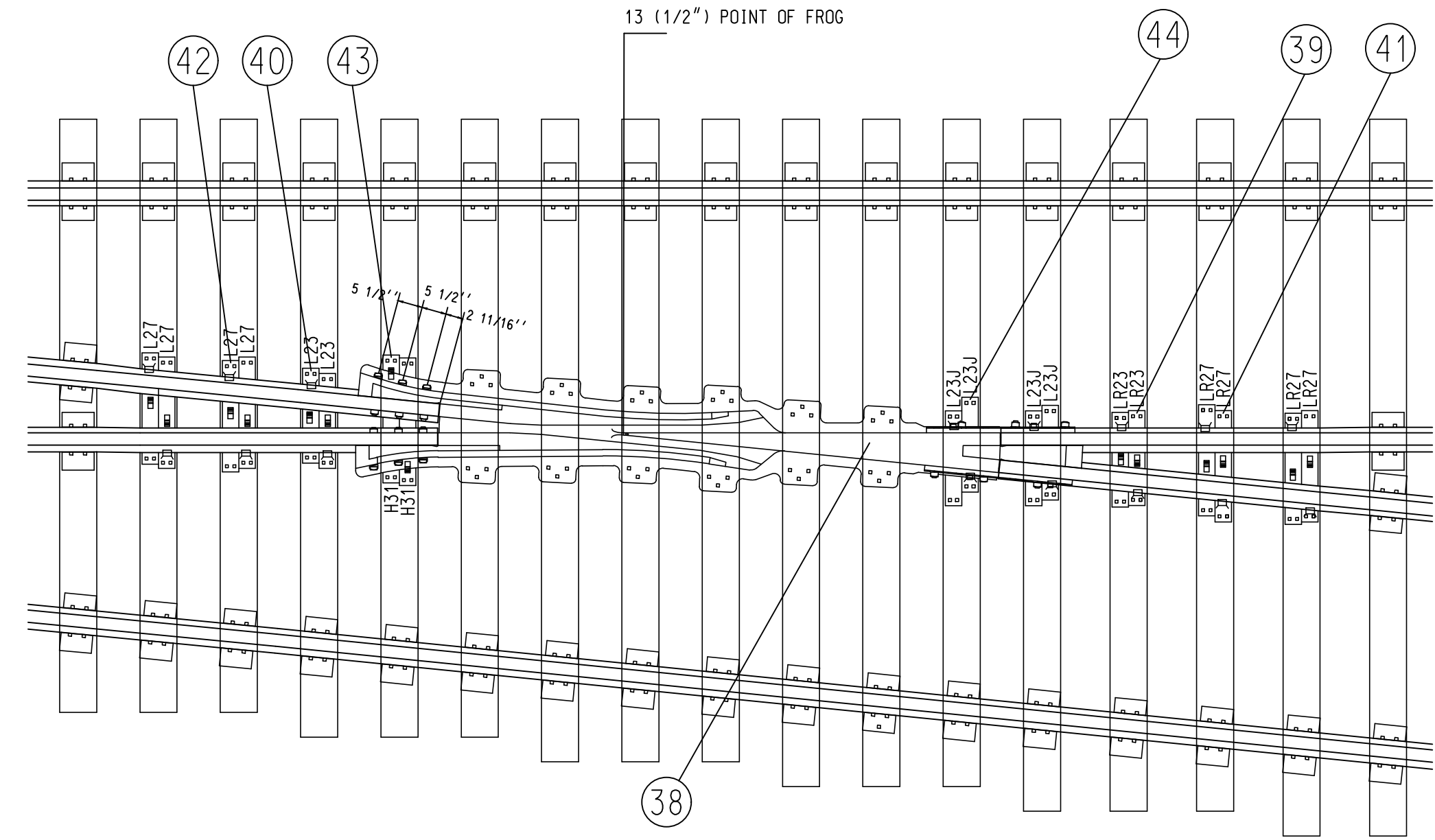
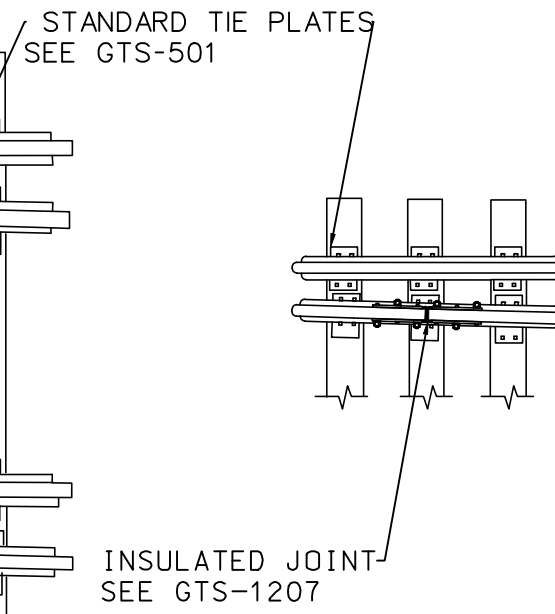
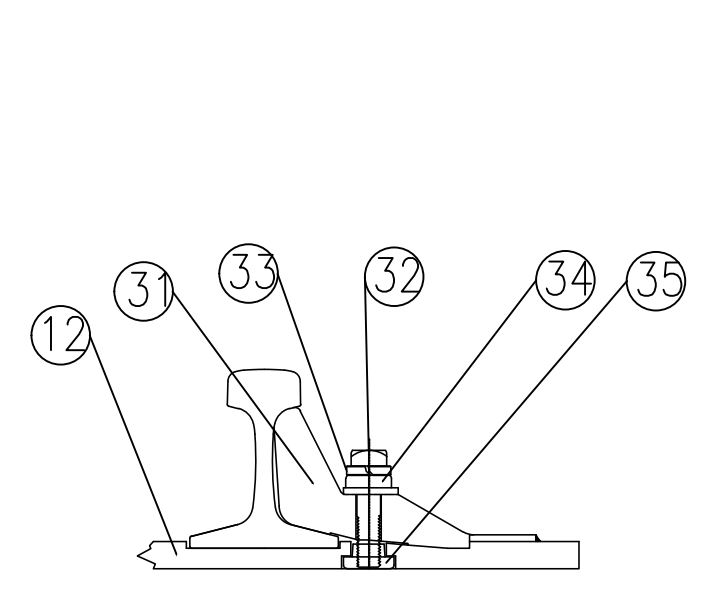


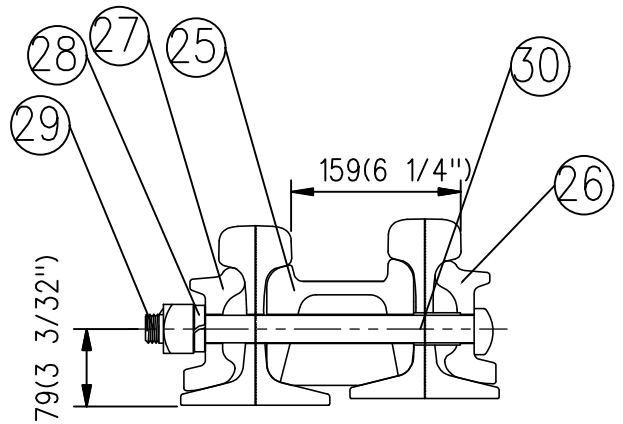
**GENERAL ARRANGEMENT**  
DRAWING NO GTS-0154 A  
RIGHT HAND TURNOUT



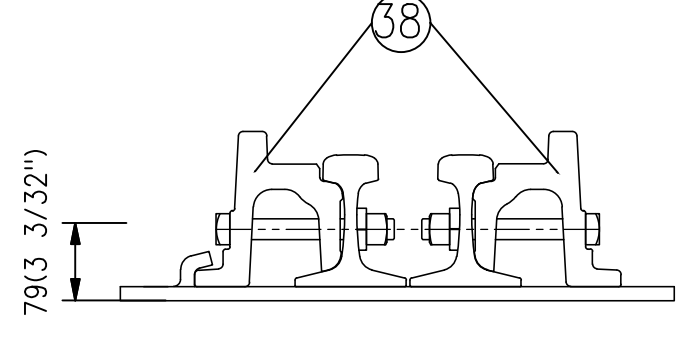
**"MJ" CLIP ASSEMBLY**



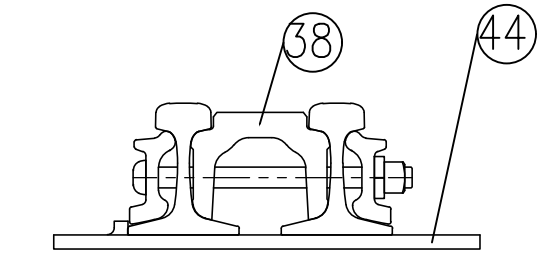
**ADJUSTABLE RAIL BRACE ASSEMBLY**



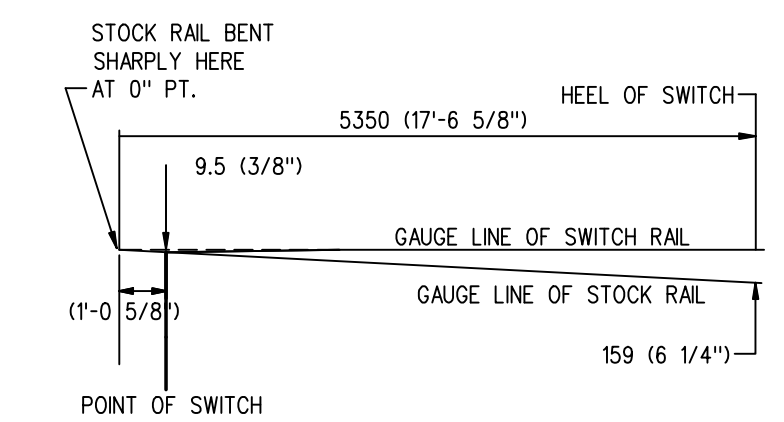
**HEEL BLOCK ASSEMBLY**



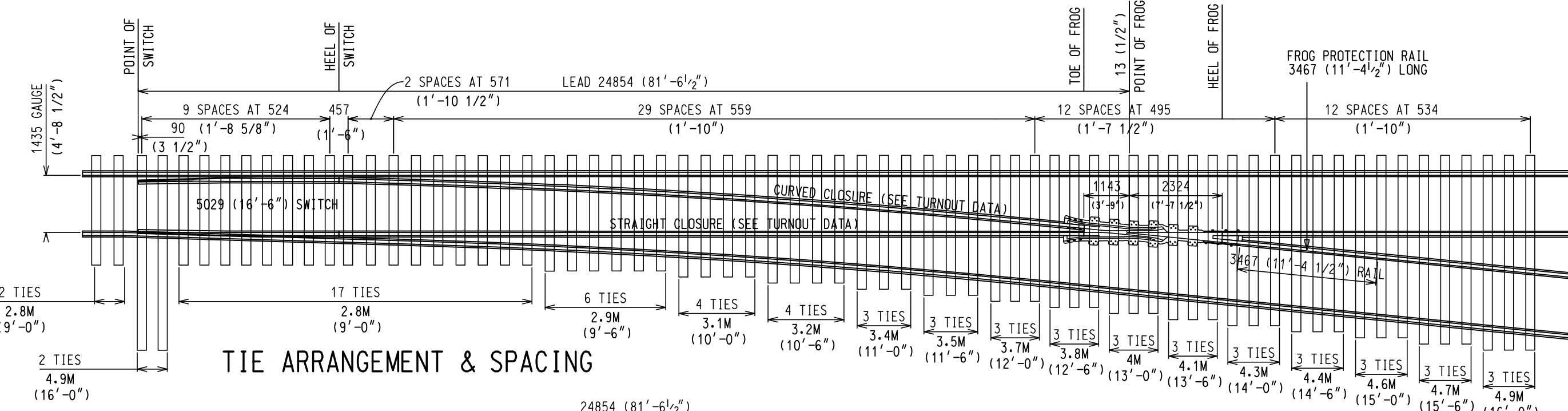
**HEEL OF FROG ASSEMBLY**



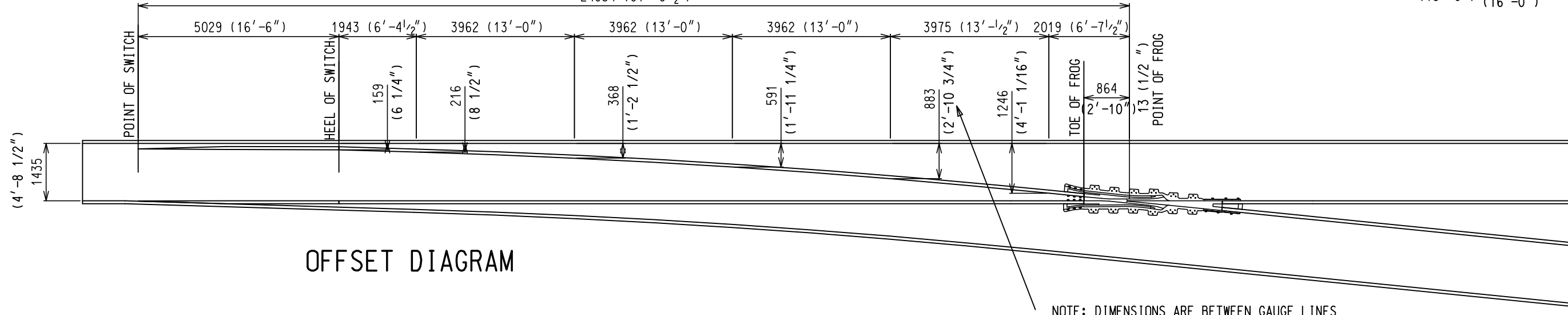
**TOE OF FROG ASSEMBLY**



**STOCK RAIL BENDING DETAIL**



**TIE ARRANGEMENT & SPACING**



**OFFSET DIAGRAM**

NOTE: DIMENSIONS ARE BETWEEN GAUGE LINES

**NOTES**

- TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDING WITH THE LATEST ISSUE OF: RM.3500 TURNOUTS RM.3502 POWER, SPRING AND INSTALLED SWITCH RM.3506 SWITCH STAND, SWITCH LAMPS AND TARGETS, WHERE APPLICABLE
- WHEN REFERRING TO MANUAL TURNOUTS, DRAWING NUMBER MUST BE STATED AS A OR B: A-RIGHT HAND TURNOUT B-LEFT HAND TURNOUT
- FOR GENERAL ARRANGEMENT OF SWITCH STAND & COMBINATION SEE GTS-701 AND GTS-702
- FOR THE VARIOUS STANDARD TURNOUT COMBINATIONS SEE INDEX SHEET GTS-0
- TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-2

**TURNOUT DATA:**

FROG NO -----10  
 LENGTH OF SWITCH-----16'-6"  
 HEEL SPREAD-----6 1/4"  
 LEAD-----81'-6 1/2"  
 PS TO H.F.-----89'-2"

61'-3 1/2" STRAIGHT CLOSURE LENGTH  
 MADE UP BY A 61'-3 1/2" RAIL OR:  
 A 39' AND 22'-3 1/2" RAIL  
 A 36' AND 25'-3 1/2" RAIL  
 A 33' AND 28'-3 1/2" RAIL

61'-5 1/2" CURVE CLOSURE LENGTH  
 MADE UP BY A 61'-5 1/2" RAIL OR:  
 A 39' AND 22'-5 1/2" RAIL  
 A 36' AND 25'-5 1/2" RAIL  
 A 33' AND 28'-5 1/2" RAIL

METRIC CONVERSION: 1 inch=25.4mm, 1 foot=304.8mm

No.	Date	Revision	By Approved
1	18/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE	
Standard		NO. 10 TURNOUT-16'-6" POINTS SPRING SWITCH-S.G.M. FROG 132LB. R.E. RAIL	
Drawn	Checked	Approved	Management
MG	GGG		
Date	Plan Number	GTS-0154	Rev 1
DEC 15, 2017			
REFERENCE: TS-154 A/B		Sheet 1 OF 1	



**BILL OF MATERIALS FOR GTS-0154**

ITEM	DESCRIPTION	STANDARD DRAWING	MARK NO.	QUANTITY	
				A	B
<b>SWITCH PACK</b>					
1	1st. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP100/GP100	1	1
2	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP105/GP101	1	-
-	2nd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP102	-	1
3	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP128/GP101	1	-
	3rd. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP127	-	1
4	4th. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP112/GP101	1	-
	4th. GAUGE PLATE C/W INSULATION PLATE 100/132	GTS-0522	GP101/GP111	-	1
5	MILD STEEL STRAP	GTS-0356C	356C	2	2
6	MILD STEEL STRAP	GTS-0356A	356A	1	1
7	DOUBLE SPRING WASHER - TYPE FE6	GTS-1310	-	36	36
8	SWITCH ROD	GTS-0344B	344B	1	1
9	SWITCH ROD	GTS-0344C	344C	2	2
10	RIGHT SAMSON POINT RAIL	GTS-0348A	348A	-	1
	RIGHT POINT RAIL	GTS-0318A	318A	1	-
11	LEFT SAMSON POINT RAIL	GTS-0348B	348B	1	-
	LEFT POINT RAIL	GTS-0318B	318B	-	1
12	SWITCH PLATE	GTS-0508	SP315	2	2
13	SWITCH PLATE	GTS-0509	SP316	6	6
14	SWITCH PLATE	GTS-0510	SP317	2	2
15	SWITCH PLATE	GTS-0511	SP335	2	2
16	SWITCH PLATE	GTS-0511	SP336	2	2
17	SWITCH PLATE	GTS-0511	SP337	2	2
18	HOOK TWIN TIE PLATE	GTS-0503	LR23	6	6
19	HOOK TWIN TIE PLATE	GTS-0503	L23	6	6
20	HOOK TWIN TIE PLATE	GTS-0503	LR27	8	8
21	HOOK TWIN TIE PLATE	GTS-0503	L27	8	8
22	HOOK TWIN TIE PLATE	GTS-0503	LR31	4	4
23	HOOK TWIN TIE PLATE	GTS-0503	L31	3	3
24	HOOK TWIN TIE PLATE	GTS-0503	L31J	1	1
25	HEEL BLOCK	GTS-0360	16-6&22GP1-S	2	2
26	BENT SPLICE BAR(4 HOLE) - 132/136 LB. R.E.	GTS-1204D	1204D	2	2
27	STRAIGHT SPLICE BAR (4 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1
28	SPRING WASHER for 1 - 1/8" DIA. BOLT	GTS-1301	-	12	12
29	1 - 1/8"DIA. - 7 NC OVAL NECK TRACK BOLT X 12 - 1/2" LG. C/W SQ. NUT	GTS-1320/4	-	8	8
30	PIPE THIMBLE - 1 - 1/4" DIA. X 2 - 3/8" LONG	GTS-0345J	J	2	2
31	ADJUSTABLE RAIL BRACE	GTS-0354	132M-14	12	12
32	7/8" DIA. 9 UNC SQ. HD. BOLT X 3-3/4" LG.	GTS-1308/5	-	24	24
33	SPRING WASHER for 7/8" DIA. BOLT	GTS-1301	-	24	24
34	DOUBLE WASHER	GTS-0354	M-10	12	12
35	DOUBLE NUT	GTS-0354	M-9	12	12
36	UNDERCUT STOCK RAIL - 132 LB. R.E. 39' - 0" LG.	GTS-1105C	1105C	1	1
37	PANDROL CLIP - PR 631A	GTS-1322	-	2	2
<b>FROG</b>					
38	#10-132 LB. SELF GUARDED MANGANESE STEEL FROG (INTEGRAL BASE)	D-10229 NOR	-	1	1
<b>FROG PACK</b>					
39	HOOK TWIN TIE PLATE	GTS-0503	LR23	2	2
40	HOOK TWIN TIE PLATE	GTS-0503	L23	2	2
41	HOOK TWIN TIE PLATE	GTS-0503	LR27	2	2
42	HOOK TWIN TIE PLATE	GTS-0503	L27	2	2
43	HOOK TWIN TIE PLATE	GTS-0503	H31	2	2
44	HOOK TWIN TIE PLATE	GTS-0503	L23J	4	4
46	STRAIGHT SPLICE BAR (6 HOLE) - 132/136 LB. R.E.	GTS-1203	-	1	1
***TO UPGRADE EXISTING TURNOUT, REPLACE 132 LB. PLATES WITH EQUIVALENT 136 LB. PLATES.***					
*** MINOR TIE SPACING ADJUSTMENTS MAY BE NECESSARY. ***					
<b>TURNOUT PACKAGES</b>					
<b>TURNOUT NUMBER</b>	<b>DESCRIPTION</b>	<b>QUANTITY PER TURNOUT</b>			
GTS- 154A	FROG SGM 10 - 132	1			
	SW-PK INS SO NO. 10A - 132 LBS.	1			
	FR-PK SGM 10 - 132	1			
GTS- 154B	FROG SGM 10 - 132	1			
	SW-PK INS SO NO. 10B - 132 LBS.	1			
	FR-PK SGM 10 - 132	1			
<b>ABBREAVATIONS</b>					
SW - PK - SWITCH PAK		SAM - SAMSON		SGM -	
FR - PK - FROG PAK		SELF GUARD MANGANESE		RBM -	
GR - PK - GUARD RAIL PAK		HO - HAND OPERATED			
INS - INSULATED		RAIL BOUND MANGANESE			
NOTE:					
1 - For a new installation, necessary rail, bonded insulated joints, splice bars, bolts, washers, rail anchors, connecting rod, switch stand, targe and reflectorized target kit may be required in addition to the materials listed above					
<b>BILL OF SWITCH TIES FOR HAND AND SPRING OPERATION</b>					
TIES 180 X 230 mm (7" X 9")					
<b>LENGTH</b>					
<b>METRES</b>	<b>FEET/INCHES</b>	<b>NO. OF PIECES</b>			
2.8	9' - 0"	19			
3.1	10' - 0"	10			
3.4	11' - 0"	7			
3.7	12' - 0"	6			
4.0	13' - 0"	6			
4.3	14' - 0"	6			
4.6	15' - 0"	6			
4.9	16' - 0"	8			
TOTAL NUMBER OF TIES - 68					