

**GENERAL ARRANGEMENT**  
DRAWING NO. GTS-0274A  
RIGHT HAND TURNOUT

THESE HOLES TO BE USED ONLY FOR SPIKING POINTS IN CLOSED POSITION

BEND IN STOCK RAIL SEE DETAIL BELOW

NOT LESS THAN 1370(4'-6") TO NEAREST JOINT

FOR ROLLER PLACEMENT AND CONFIGURATION SEE GTS-0390

SWITCH MACHINE & OTHER ITEMS SHOWN IN DOTTED LINES TO BE SUPPLIED BY SIGNALS & COMMUNICATIONS.

INSTALL ADZED HEAD BLOCK TIES • 1 & • 2 ON SIDES TO ALLOW CLEARANCE FOR SWITCH ROD.

ALL TIE SCREW HOLES TO BE DRILLED 17 (21/32") DIA. x MINIMUM 127 (5") DEEP & TREATED WITH PRESERVATIVE.

POINT OF SWITCH

FOR REPLACEMENT OF CLIPS OR STOPS IN FIELD SEE GTS-0378

FOR CLIP ASSEMBLY SEE GTS-0352

UNDERCUT STOCK RAIL

HEEL BLOCK ASSEMBLY

HOLD-DOWN CLIP ASSEMBLY

BONDED INSULATED RAIL JOINT

GUARD RAIL ASSEMBLY

ROLLED PANDROL PLATES TO END OF TURNOUT TIES

**SWITCH POINT THROWS POWER OPERATED SWITCHES**

- 1st ROD- 127 (5") ±1/16"
- 2nd ROD- 107 (3 29/32") ±1/16"
- 3rd ROD- 88 (2 27/32") ±1/16"
- 4th ROD- 68 (2 9/16") ±1/16"

- NOTES:**
- TURNOUT TO BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE LATEST ISSUE OF THE RM.
  - WHEN REFERRING TO POWER OPERATED TURNOUTS, DRAWING NUMBER MUST BE STATED AS INDICATED:  
R-RIGHT HAND TURNOUT P.O. MACHINE ON RIGHT  
L-LEFT HAND TURNOUT P.O. MACHINE ON LEFT
  - FOR OTHER TURNOUT COMBINATIONS SEE INDEX GTS-0000 SHEETS 1 TO 3.
  - TURNOUT GEOMETRY, FOR TABLES OF DIMENSIONS AND OFFSETS SEE GTS-0004A No. 16 ALL WELDED TURNOUTS.

**ADJUSTABLE RAIL BRACE ASSEMBLY**

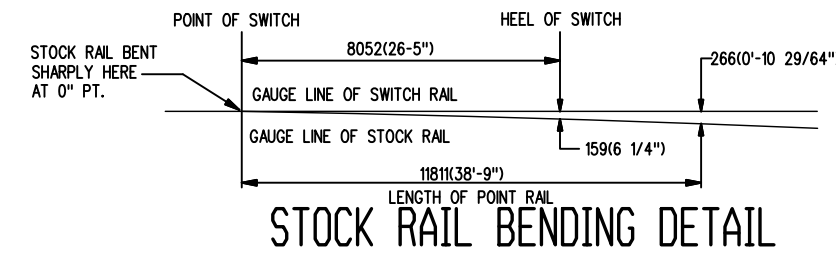
**ROCKER CLIP ASSEMBLY**

**HEEL BLOCK ASSEMBLY**

**HOLD-DOWN CLIP ASSEMBLY**

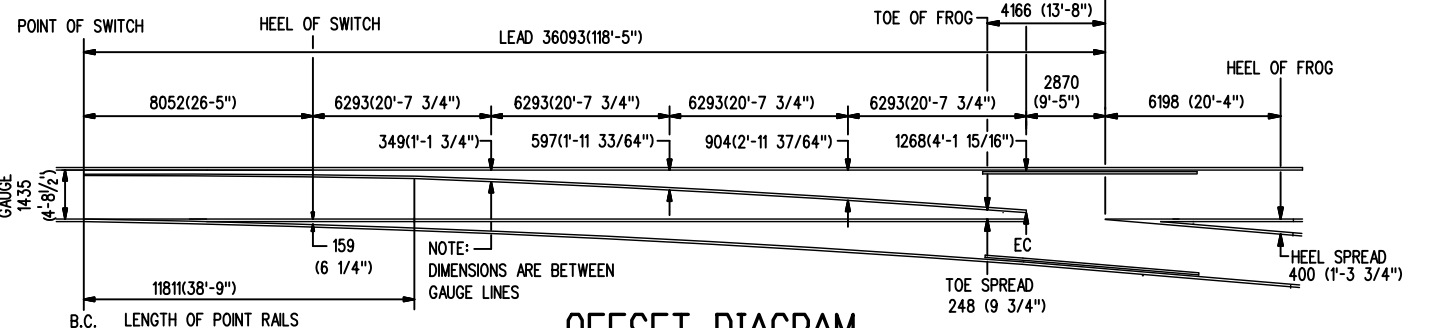
**BONDED INSULATED RAIL JOINT**

**GUARD RAIL ASSEMBLY**

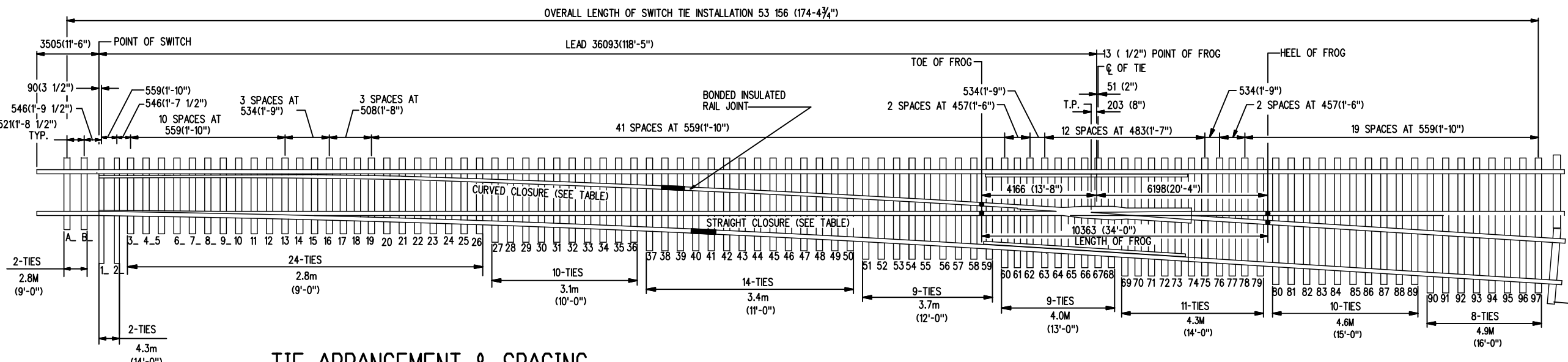


**STOCK RAIL BENDING DETAIL**

**SWITCH MACHINE PLATE ASSEMBLY**



**OFFSET DIAGRAM**



**TIE ARRANGEMENT & SPACING**

**TURNOUT DATA**

FROG NO.	16
LENGTH OF SWITCH PT.	11811 (38'-9")
HEEL SPREAD	159 (6 1/4")
LEAD	36093 (118'-5")
P.S. TO H.F.	42291 (138'-9")

16816 (55'-2") STRAIGHT CLOSURE LENGTHS  
1684(55'-3") CURVED CLOSURE LENGTHS

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

1	18/07/27	ADDED IMPERIAL TO METRIC CONVERSION NOTE	
No.	Date	Revision	By Approved

Standard

**NO. 16 TURNOUT-136 LB. RAIL  
38" POWER OPERATED-SAMSON POINT SWITCH  
UNIFORM RISER DESIGN-ALL WELDED  
W.H.M. FROG-WOOD TIES**

Drawn RL Checked JR Approved [Signature]  
V.P. Engineering & Asset Management

**METROLINX**

Date SEPT 15/2017 Plan Number GTS-0274 Rev 1

REFERENCE: TS-0274\_R3 Sheet 1 OF 1

**BILL OF MATERIALS FOR GTS-0274**

ITEM	DESCRIPTION	MARK NUMBER	STANDARD DRAWING	QUANTITY	
				L	R
<b>SWITCH PACK</b>					
1	1st. GAUGE PLATE ASSEMBLY	GP396/GP396	GTS-0523	1	1
2	2nd. GAUGE PLATE ASSEMBLY	GP408/GP397	GTS-0523	-	1
	2nd. GAUGE PLATE ASSEMBLY	GP397/GP406	GTS-0523	1	-
3	3rd. GAUGE PLATE ASSEMBLY	GP409/GP397	GTS-0523	-	1
	3rd. GAUGE PLATE ASSEMBLY	GP397/GP407	GTS-0523	1	1
4	SWITCH MACHINE PLATE	SM100	GTS-0520	2	2
5	SWITCH MACHINE PLATE CLAMP (includes serrated washer)	-	GTS-0520	2	2
6	1" DIA. - 8 UNC SQ.HD. BOLT X 3-1/2" LG. C/W SQ. NUT	-	GTS-1309/13	4	4
7	LOCKNUT FOR 1" DIA.- 8 UNC BOLT	-	GTS-1302	4	4
8	SPRING WASHER for 1" DIA. BOLT	-	GTS-1301	4	4
9	MILD STEEL STRAP	356B	GTS-0356B	1	1
10	SWITCH ROD	344H	GTS-0344H	1	1
11	SWITCH ROD	344I	GTS-0344I	4	4
12	SWITCH ROD	344J	GTS-0344J	1	1
13	ROCKER CLIP ASSEMBLY	352L	GTS-0352L	2	2
14	ROCKER CLIP ASSEMBLY	352M	GTS-0352M	6	6
15	RIGHT SAMPSON POINT RAIL - THICK WEB			-	1
	LEFT SAMPSON CURVED POINT RAIL - THICK WEB			1	-
16	LEFT SAMPSON POINT RAIL - THICK WEB			1	-
	RIGHT SAMPSON CURVED POINT RAIL - THICK WEB			-	1
17	SWITCH PLATE - SUREFIT BRACE PLATE	SP798	GTS-0508	8	8
18	ROLLER PLATE - SUREFIT BRACE PLATE	RP798	GTS-0508	2	2
19	SWITCH PLATE	SP363	GTS-0530	8	8
20	ROLLER PLATE	RP363	GTS-0530	6	6
21	SWITCH PLATE	SP198	GTS-0530	4	4
22	SWITCH PLATE (RIGHT HAND)	SP822R	GTS-0586/1	1	1
23	SWITCH PLATE (LEFT HAND)	SP822L	GTS-0586/2	1	1
24	SWITCH PLATE (RIGHT HAND)	SP823R	GTS-0586/1	1	1
25	SWITCH PLATE (LEFT HAND)	SP823L	GTS-0586/2	1	1
26	SWITCH PLATE (RIGHT HAND)	SP824R	GTS-0586/3	1	1
27	SWITCH PLATE (LEFT HAND)	SP824L	GTS-0586/4	1	1
28	SWITCH PLATE (RIGHT HAND)	SP825R	GTS-0586/3	1	1
29	SWITCH PLATE (LEFT HAND)	SP825L	GTS-0586/4	1	1
30	SWITCH PLATE (RIGHT HAND)	SP826R	GTS-0586/3	1	1
31	SWITCH PLATE (LEFT HAND)	SP826L	GTS-0586/4	1	1
32	SWITCH PLATE (RIGHT HAND)	SP827R	GTS-0587/3	1	1
33	SWITCH PLATE (LEFT HAND)	SP827L	GTS-0587/4	1	1
34	SWITCH PLATE (RIGHT HAND)	SP828R	GTS-0587/3	1	1
35	SWITCH PLATE (LEFT HAND)	SP828L	GTS-0587/4	1	1
36	SWITCH PLATE (UNIVERSAL)	SP188	GTS-0560/2	2	2
38	SWITCH PLATE (UNIVERSAL)	SP190	GTS-0560/2	2	2
39	SWITCH PLATE (UNIVERSAL)	SP191	GTS-0560/2	2	2
40	SWITCH PLATE (UNIVERSAL)	SP192	GTS-0560/2	2	2
41	SWITCH PLATE (UNIVERSAL)	SP193	GTS-0560/2	2	2
42	SWITCH PLATE (UNIVERSAL)	SP194	GTS-0560/2	2	2
43	SWITCH PLATE (UNIVERSAL)	SP195	GTS-0560/2	2	2
44	ROLLED PANDROL PLATE	ROLLED	GTS-0501	100	100
45	PANDROL CLIP - e2063 (for INSULATED RAIL JOINTS)	e2063	GTS-1322	8	8
46	SUREFIT BOLTLESS ADJUSTABLE RAIL BRACE	-	GTS-0354	16	16
47	SERRATED WASHER FOR BOLTLESS ADJUSTABLE BRACE		GTS-0354	18	18
48	HEEL BLOCK - SYMMETRICAL FOR THICK WEB POINT	CN383-TW	GTS-0383	2	2
49	BOLT, 1 1/8" DIA X 5-1/2" LONG, 7 UNC C/W NUT	TS1308/10	GTS-1308	4	4
50	LOCKNUT FOR 1-1/8" DIA. - 7 UNC BOLT	-	GTS-1302	4	4
51	SPRING WASHER for 1-1/8" DIA BOLT	-	GTS-1301	4	4
52	HOLD DOWN CLIP	FS156	GTS-1334	14	14
56	PANDROL CLIP - e2055	e2055	GTS-1322	310	310
57	SCREW SPIKE - POINTED	Ss5	GTS-1315	660	660
58	UNDERCUT STOCK RAIL - LEFT HAND - 136 LB. R.E. 78'- 0" LG.	1105R	GTS-1105R	-	1
	UNDERCUT STOCK RAIL - RIGHT HAND - 136 LB. R.E. 78'- 0" LG.	1105T	GTS-1105T	1	-
59	BENT UNDERCUT STOCK RAIL - R/H - 136 LB. R.E. 78'- 0" LG.	1109KK	GTS-1109KK	-	1
	BENT UNDERCUT STOCK RAIL - L/H - 136 LB. R.E. 78'- 0" LG.	1109LL	GTS-1109LL	1	-
<b>FROG</b>					
60	#16-136 LB. RAIL BOUND MANGANESE STEEL FROG 34'	-		1	1
	MAINTENANCE LENGTH FROG - CUT TO SHORTEST LENGTH				
<b>FROG PACK</b>					
70	FROG PLATE (RIGHT HAND)	FP517R	GTS-0547	-	1
	FROG PLATE (LEFT HAND)	FP517L	GTS-0547	1	-
71	FROG PLATE (RIGHT HAND)	FP518R	GTS-0547	-	1
	FROG PLATE (LEFT HAND)	FP518L	GTS-0547	1	-
72	FROG PLATE (RIGHT HAND)	FP519R	GTS-0546	-	1
	FROG PLATE (LEFT HAND)	FP519L	GTS-0546	1	-
73	FROG PLATE (RIGHT HAND)	FP520R	GTS-0556	-	1
	FROG PLATE (LEFT HAND)	FP520L	GTS-0556	1	-
74	FROG PLATE (RIGHT HAND)	FP767R	GTS-0615/1	-	1
	FROG PLATE (LEFT HAND)	FP767L	GTS-0615	1	-
75	FROG PLATE (RIGHT HAND)	FP768R	GTS-0670/1	-	1
	FROG PLATE (LEFT HAND)	FP768L	GTS-0670	1	-
76	FROG PLATE (RIGHT HAND)	FP769R	GTS-0615/1	-	1
	FROG PLATE (LEFT HAND)	FP769L	GTS-0615/2	1	-
77	FROG PLATE (RIGHT HAND)	FP531R	GTS-0554	-	1
	FROG PLATE (LEFT HAND)	FP531L	GTS-0554	1	-
78	FROG PLATE (RIGHT HAND)	FP770R	GTS-0596	-	1
	FROG PLATE (LEFT HAND)	FP770L	GTS-0596	1	-
79	FROG PLATE (RIGHT HAND)	FP771R	GTS-0597	-	1
	FROG PLATE (LEFT HAND)	FP771L	GTS-0597	1	-
80	FROG PLATE (RIGHT HAND)	FP772R	GTS-0598	-	1
	FROG PLATE (LEFT HAND)	FP772L	GTS-0598	1	-
81	FROG PLATE (RIGHT HAND)	FP740R	GTS-0554/1	-	1
	FROG PLATE (LEFT HAND)	FP740L	GTS-0554/2	1	-

**BILL OF MATERIALS FOR GTS-0274**

ITEM	DESCRIPTION	MARK NUMBER	STANDARD DRAWING	QUANTITY	
				L	R
82	FROG PLATE (RIGHT HAND)	FP535R	GTS-0554	-	1
	FROG PLATE (LEFT HAND)	FP535L	GTS-0554	1	-
83	FROG PLATE (RIGHT HAND)	FP773R	GTS-0615/1	-	1
	FROG PLATE (LEFT HAND)	FP773L	GTS-0615/2	1	-
84	FROG PLATE (RIGHT HAND)	FP777R	GTS-0662/1	-	1
	FROG PLATE (LEFT HAND)	FP777L	GTS-0662/2	1	-
85	FROG PLATE (RIGHT HAND)	FP774R	GTS-0670	-	1
	FROG PLATE (LEFT HAND)	FP774L	GTS-0670	1	-
86	FROG PLATE (UNIVERSAL)	FP754	GTS-0662/1	1	1
87	FROG PLATE (RIGHT HAND)	FP775R	GTS-0615/1	-	1
	FROG PLATE (LEFT HAND)	FP775L	GTS-0615/2	1	-
88	FROG PLATE (RIGHT HAND)	FP521R	GTS-0546	-	1
	FROG PLATE (LEFT HAND)	FP521L	GTS-0546	1	-
89	FROG PLATE (RIGHT HAND)	FP522R	GTS-0546	-	1
	FROG PLATE (LEFT HAND)	FP522L	GTS-0546	1	-
90	FROG PLATE (RIGHT HAND)	FP523R	GTS-0547	-	1
	FROG PLATE (LEFT HAND)	FP523L	GTS-0547	1	-
91	FROG PLATE (RIGHT HAND)	FP524R	GTS-0547	-	1
	FROG PLATE (LEFT HAND)	FP524L	GTS-0547	1	-
92	PANDROL FROG CLAMP INCLUDES SERRATED WASHER		GTS-0365	20	20
93	INSULATION KIT FOR 3/4" THICK PLATE c/w HARDWARE	-		6	6
94	ROLLED PANDROL PLATE	ROLLED	GTS-0501	30	30
95	PANDROL CLIP - e2055	e2055	GTS-1322	140	140
96	SCREW SPIKE - POINTED	Ss5	GTS-1315	270	270
	<b>GUARD RAIL PACK</b>				
97	GUARD RAIL ASSEMBLY (RIGHT SIDE for RIGHT HAND TURNOUT)		GTS-1123	-	1
	GUARD RAIL ASSEMBLY (LEFT SIDE for LEFT HAND TURNOUT)		GTS-1123	1	-
98	GUARD RAIL ASSEMBLY (STRAIGHT SIDE)		GTS-1123	1	1
	<b>GUARD RAIL PACK continued</b>				
99	ROLLED PANDROL PLATE	ROLLED	GTS-0501	52	52
100	PANDROL CLIP - e2055	e2055	GTS-1322	164	164
101	SCREW SPIKE - POINTED	Ss5	GTS-1315	410	410
	<b>Switch Packs</b>				
	#16 - 136, Power Operated - Right Hand Turnout				
	#16 - 136, Power Operated - Left Hand Turnout				
	<b>Frog Packs</b>				
	#16 - 136, RBM - Right Hand Turnout				
	#16 - 136, RBM - Left Hand Turnout				
	<b>Guard Rail Packs</b>				
	#16 - 136, RBM - Right Hand Turnout				
	#16 - 136, RBM - Left Hand Turnout				
	<b>SWITCH TIES</b>				
	9 ft (2.8 m)			26	26
	10 ft (3.1 m)			10	10
	11 ft (3.4 m)			14	14
	12 ft (3.7 m)			9	9
	13 ft (4.0 m)			9	9
	14 ft (4.3 m)			13	13
	15 ft (4.6 m)			10	10
	16 ft (4.9 m)			8	8