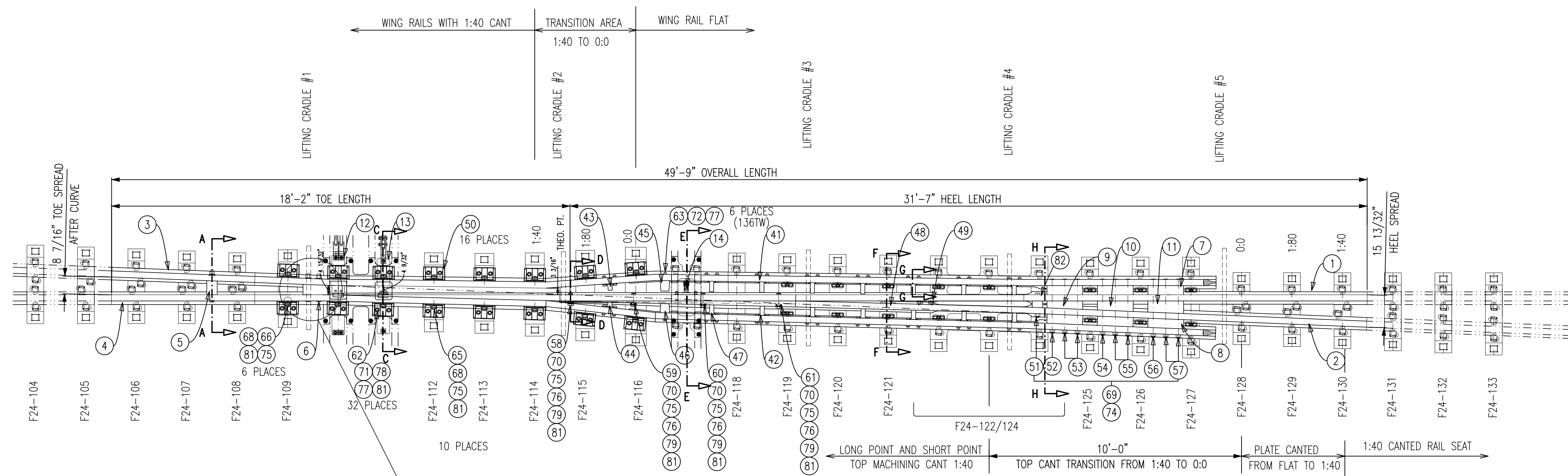
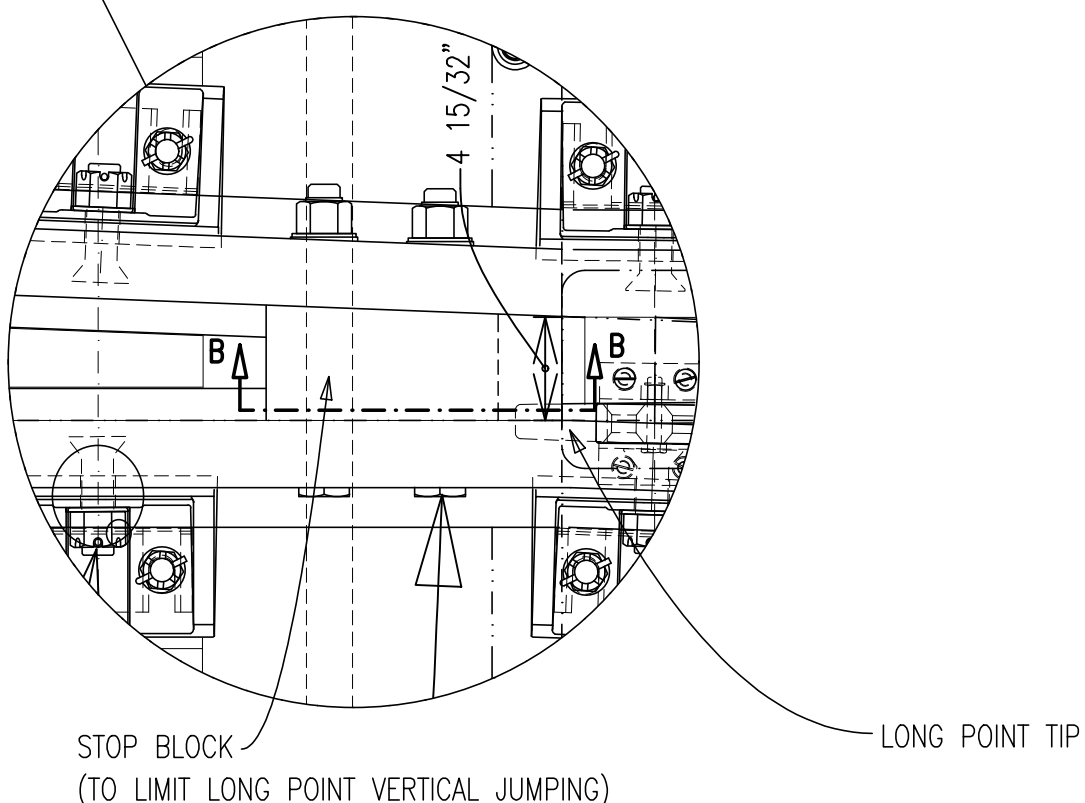


BILL OF MATERIAL			BILL OF MATERIAL			BILL OF MATERIAL			BILL OF MATERIAL		
ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY
1	LONG POINT, RH x 41'-3 1/2" LONG, 136TW	1	23	FROG PLATE F24-113	1	45	WING STOP 5	1	67	T-BOLT, 7/8" DIA. x 4" LONG, Gr8	16
2	SHORT POINT, RH x 31'-11 3/4" LONG, 136RE	1	24	FROG PLATE F24-114	1	46	WING STOP 6	1	68	NUT, 1 3/8" DIA. HEAVY HEX, SLOTTED, Gr8	16
3	WING RAIL, LH x 43'-9 1/2" LONG, 136TW/136RE	1	25	FROG PLATE F24-115	1	47	WING STOP 7	1	69	NUT, 1 3/8" DIA. HEAVY HEX, SECURITY LOCK, Gr8 (PART # SH53008)	10
4	WING RAIL, RH x 43'-9 1/2" LONG, 136TW/136RE	1	26	FROG PLATE F24-116	1	48	STOP 1 ASSEMBLY, LP TO SP, C/W HARDWARE, 1" DIA. Gr. 8	1	70	NUT, 1 1/8" DIA. HEAVY HEX, SLOTTED, Gr8	4
5	TOE BLOCK ASSEMBLY 1, 136RE, RH, 1 3/8" DIA. HARDWARE Gr.8	1	27	FROG PLATE F24-118	1	49	STOP 2 ASSEMBLY, LP TO SP, C/W HARDWARE, 1" DIA. Gr. 8	1	71	NUT, 1" DIA. HEAVY HEX, SLOTTED, Gr8	32
6	TOE BLOCK ASSEMBLY 2, 136TW, RH, 1 3/8" DIA. HARDWARE Gr.8	1	28	FROG PLATE F24-119	1	50	BRACE, WING RAIL HOLD-DOWN FOR 136TW	16	72	NUT, 1" DIA. HEAVY SQ., SECURITY LOCK, Gr8	34
7	HEEL BLOCK 1, MAINLINE	3	29	FROG PLATE F24-120	1	51	BOLT, 1 3/8" DIA. x 10 3/4" LONG, HEX HEAD, Gr8	1	73	NUT, 7/8" DIA. HEAVY HEX, SECURITY LOCK, Gr8	16
8	HEEL BLOCK 2, DIVERGING	3	30	FROG PLATE F24-121	1	52	BOLT, 1 3/8" DIA. x 25" LONG, HEX HEAD, Gr8	1	74	SPHERICAL WASHER, 1 3/8" DIA.	10
9	HEEL BLOCK 3, RH	1	31	FROG PLATE F24-122/124	1	53	BOLT, 1 3/8" DIA. x 25 1/2" LONG, HEX HEAD, Gr8	2	75	WASHER, FLAT, 1 3/8" DIA. x 5/32" THICK, HARDENED	20
10	HEEL BLOCK 4, RH	1	32	FROG PLATE F24-125	1	54	BOLT, 1 3/8" DIA. x 26" LONG, HEX HEAD, Gr8	1	76	WASHER, BELLEVILLE SPRING, 1 3/8" I.D. x 2 3/4" O.D.	20
11	HEEL BLOCK 5, RH	1	33	FROG PLATE F24-126	1	55	BOLT, 1 3/8" DIA. x 27 1/2" LONG, HEX HEAD, Gr8	1	77	WASHER, FLAT, 1" DIA. x 5/32" THICK, HARDENED	68
12	POINT CLAMP ASSEMBLY 1 c/w HARDWARE	1	34	FROG PLATE F24-127	1	56	BOLT, 1 3/8" DIA. x 28" LONG, HEX HEAD, Gr8	1	78	WASHER, SPRING, 1" DIA.	32
13	POINT CLAMP ASSEMBLY 2 c/w HARDWARE	1	35	FROG PLATE F24-128	1	57	BOLT, 1 3/8" DIA. x 29 1/2" LONG, HEX HEAD, Gr8	2	79	WASHER, FLAT, 1 1/8" DIA. x 5/32" THICK, HARDENED	4
14	POINT CLAMP ASSEMBLY 3 c/w HARDWARE	1	36	FROG PLATE F24-129	1	58	MACHINED SPACER BOLT, 1 1/8" DIA. x 5 1/2" LG, DRILL @ 4 7/8", Gr8	1	80	WASHER, FLAT, 7/8" DIA. HARDENED	16
15	FROG LIFTING CRADLE, UNIVERSAL	5	37	FROG PLATE F24-130	1	59	MACHINED SPACER BOLT, 1 1/8" DIA. x 5 3/4" LG, DRILL @ 5 1/8" Gr8	1	81	COTTER PIN, 1/4" DIA. x 2 1/2" LONG	52
16	FROG PLATE F24-104	1	38	FROG PLATE F24-131	1	60	MACHINED SPACER BOLT, 1 1/8" DIA. x 6 1/4" LG, DRILL @ 5 5/8", Gr8	1	82	WASHER, HEAD LOCK, 136TW FOR 1 3/8" DIA. BOLT	1
17	FROG PLATE F24-105	1	39	FROG PLATE F24-132	1	61	MACHINED SPACER BOLT, 1 1/8" DIA. x 6 5/8" LG, DRILL @ 6", Gr8	1	83	WASHER, RAIL, 136RE FOR 1" DIA. BOLT	28
18	FROG PLATE F24-106	1	40	FROG PLATE F24-133	1	62	BOLT, 1" DIA. x 3 1/4" LONG, THIN SQ HEAD, Gr. 8, DRL 2 3/4"	32	84	WASHER, RAIL, HEAD LOCK 136RE FOR 1 3/8" DIA. BOLT	9
19	FROG PLATE F24-107	1	41	WING STOP 1	7	63	BOLT, 1" DIA. x 4 1/2" LONG, HEX HEAD, Gr8	6	85	WASHER, RAIL, TAIL 136RE FOR 1 3/8" DIA. BOLT	10
20	FROG PLATE F24-108	1	42	WING STOP 2	6	64	BOLT, 1" DIA. x 4" LONG, HEX HEAD, Gr8	28	86	E-CLIP, PANDROL, E-2055 RH	64
21	FROG PLATE F24-109	1	43	WING STOP 3	1	65	CAP SCREW, HEX SOCKET FLAT C'SUNK HEAD, 1 3/8" DIA. x 4 1/2" LG, Gr8	10	87	VOSSLOH CLIP, SKL12	16
22	FROG PLATE F24-112	1	44	WING STOP 4	1	66	CAP SCREW, HEX SOCKET FLAT C'SUNK HEAD, 1 3/8" DIA. x 5 1/8" LG, Gr8	6			



NOTES:

- RAIL, LONG POINT IS 136TW, SHORT POINT IS 136RE, WING RAILS ARE 136RE+136TW.
- RAILS ARE WITH 1:40 CANT, EXCEPT TRANSITION AREA.
- BOLT TORQUE: 1" DIA. BOLTS: 710FT-Lbs MIN., 746 FT-Lbs MAX.
1 1/8" DIA. BOLTS: MIN. 960 FT-Lbs, MAX. 1008 FT-Lbs.
1 3/8" DIA. BOLTS: 1700 FT-Lbs MIN., 1785 FT-Lbs MAX.
(MEASURED WITH DRY THREADS)
- PANDROL TOE LOADS: 2200 FT-Lbs MIN., 3025 FT-Lbs MAX.
- THE POINT ASSEMBLY SHOULD BE CENTERED BETWEEN WING RAILS IN ITS 'AT REST' STATE.
- DIMENSIONS SHOWN IN SECTIONS ARE TAKEN AT GAUGE, 5/8" BELOW TOP OF RAIL.
- I.D. TAG IS TO BE AFFIXED TO WEB OF WING RAIL LOCATED ADJACENT TO THEORETICAL POINT OF FROG. A WHITE LINE, 1/4" WIDE SHALL BE MARKED ACROSS TOP OF POINT AND WING RAILS MARKING THEORETICAL POINT OF FROG.
- MPF SLIDE PLATE LOCATED WITHIN HST TO BE SMEARED GREASE PER CUSTOMER CRITERIA.
- MPF CONNECTING RODS TO BE HOUSED INSIDE FULL HST ASSEMBLY AND REQUIRES ADDITIONAL DETAILED ASSEMBLY DRAWINGS.
- SNOW CLEARING DEVICES (SCD) FOR SWITCH POINTS AND MPF TO BE DETAILED AND SUPPLIED BY OTHERS.

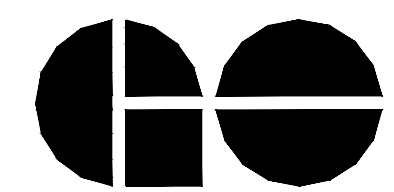


METRIC CONVERSION: 1 inch=25.4mm, 1 foot=304.8mm

No.	Date	Revision	By Approved
1	22/08/30	SECTION B-B CORRECTLY INDICATED, NOTE 9 UPDATED TO REQUIRE DETAILED ASSEMBLY DRAWINGS, AND ADDED NOTE 10 SCD FOR MPF	
0	20/12/09	INITIAL VERSION ESTABLISHED	

Standard / NO. 24 - 136RE MPF PACK RH
136TW LP & 136RE SP, HST

Drawn JB Checked JE Approved *Jay Pittman* Chief Engineer



METROLINX

Date DEC. 9, 2020 Plan Number GTS-0890 Rev 1

REFERENCE: Sheet 1 OF 2