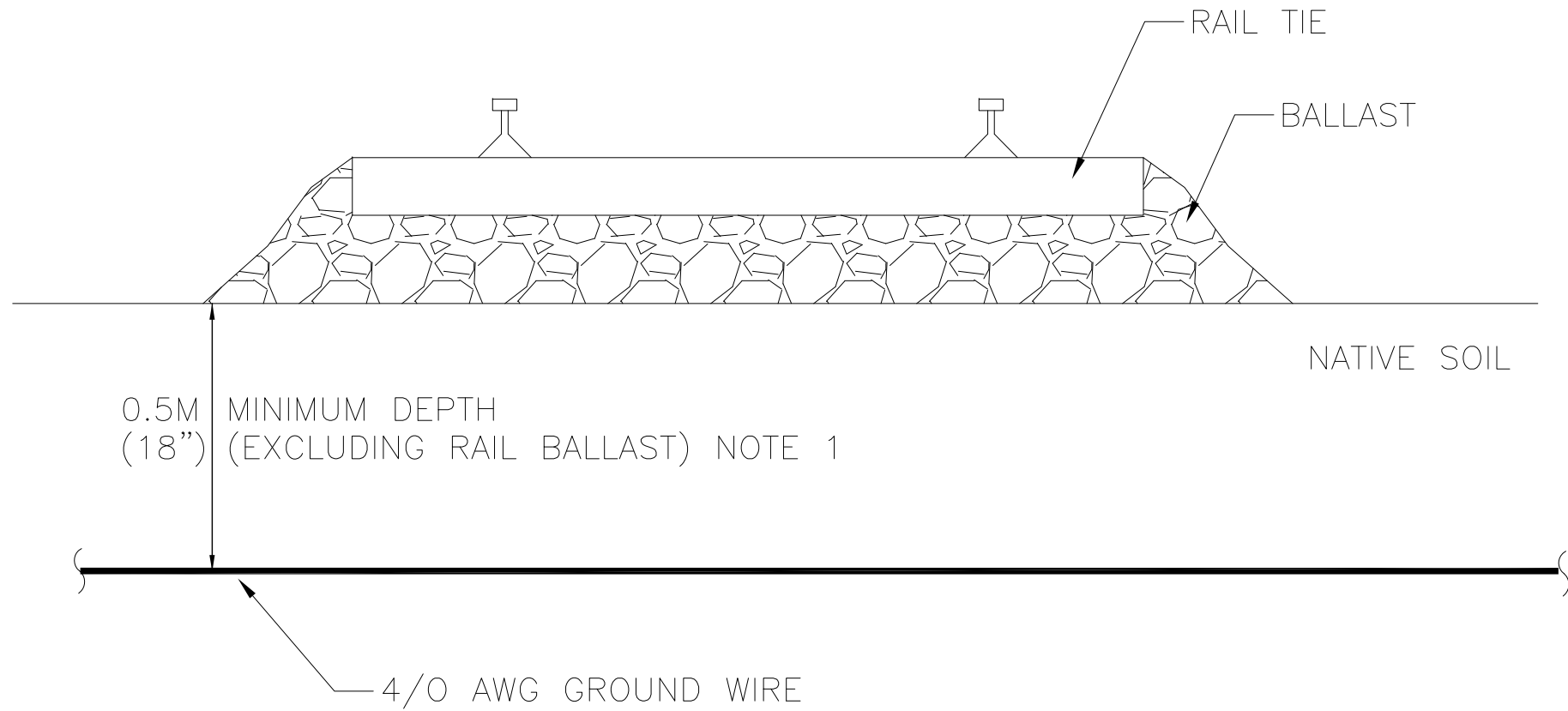


PLOTTED BY: FALLURI PLOTTED DATE: 2015/04/02 PAPER SIZE (AT FULL): ANSI D (22.00" x 34.00 INCHES)
 FILE: \\FILE-RGDC01\DEPT\GOIC017 PROGRAM MANAGEMENT & STANDARDS\PMPS DESIGN STANDARDS\7 REFERENCE MATERIAL\24 ELECTRIFICATION\GROUNDING AND BONDING STANDARD DRAWINGS\MXS-200-005.DWG

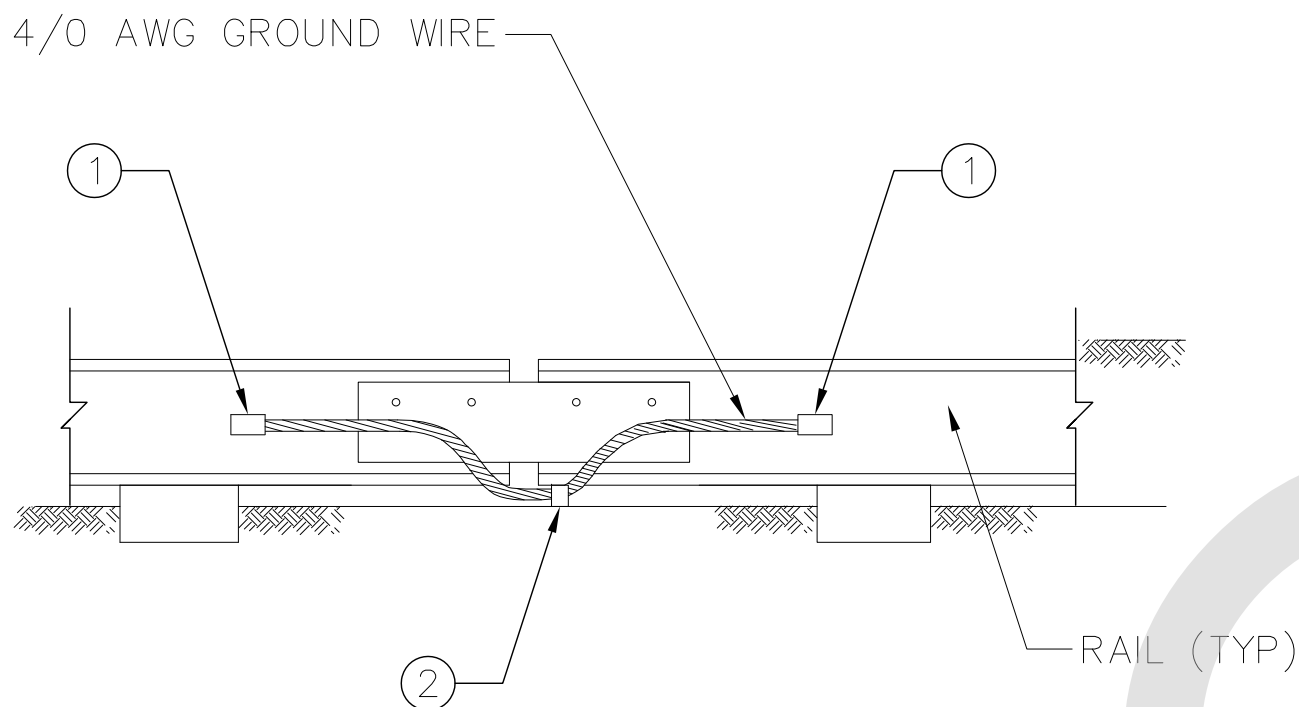
NOTES:

1. THE DEPTH OF THE GROUND GRID WILL DEPEND ON LOCAL SITE CONDITIONS AND MUST BE DETERMINED BY THE CONTRACTOR PRIOR TO INSTALLATION. 0.5M IS A TYPICAL VALUE THAT HAS BEEN PROVIDED FOR REFERENCE.



DETAIL 1 – GROUND CONDUCTOR UNDER TRACK CROSSING

NOTE:
THIS DRAWING IS PROVIDED FOR INSTRUCTIONAL DESIGN PURPOSES ONLY BASED ON METROLINX GO TRANSIT DESIGN GUIDELINES AND REQUIREMENTS. THE CONSULTANT SHALL VERIFY FOR LOCAL CODE COMPLIANCE, EXISTING SITE CONDITIONS AND INTER DISCIPLINARY DRAWING COORDINATION. ALL DIMENSIONS AND SPECIFICATIONS SHOULD BE VERIFIED BY CONSULTANT AND/OR CONTRACTOR BEFORE ACTUAL CONSTRUCTION BEGINS.



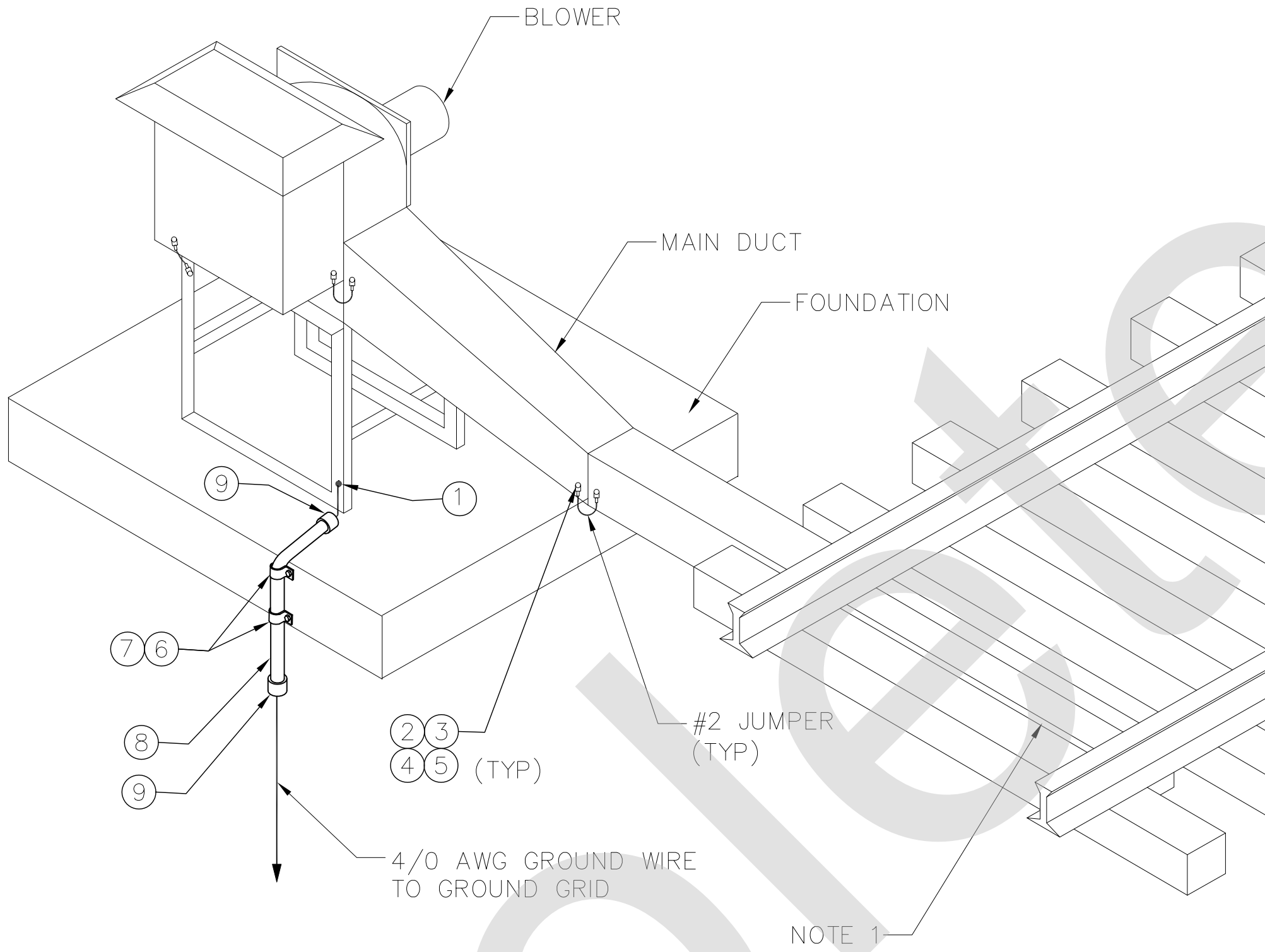
DETAIL 2 – RUNNING RAILS SPLICE BONDING

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	2	EA	WIRE TO RAIL EXOTHERMIC CONNECTION	ERICO: STR-2Q OR EQUIVALENT
2	1	EA	HAMMER ON RAIL CLIP	ERICO: SBA252S0 OR EQUIVALENT

REFERENCE DRAWINGS			ISSUE			REVISIONS		
			3	15/04/06	FINAL DESIGN			
			2	15/03/06	100% DESIGN			
			1	15/02/09	90% DESIGN			
			0	15/01/16	60% DESIGN			
DWG NO.	TITLE		NO.	DATE	ISSUED FOR	REV.	DATE	

NOTES:

1. MAIN DUCT MUST BE ISOLATED FROM RAILS.

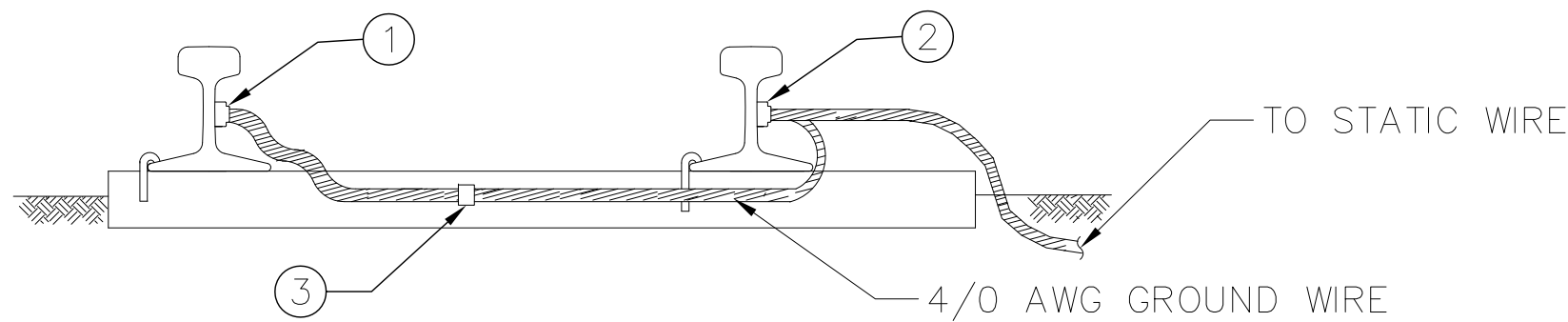


DETAIL 3 – SNOW MELTING EQUIPMENT, BLOWERS

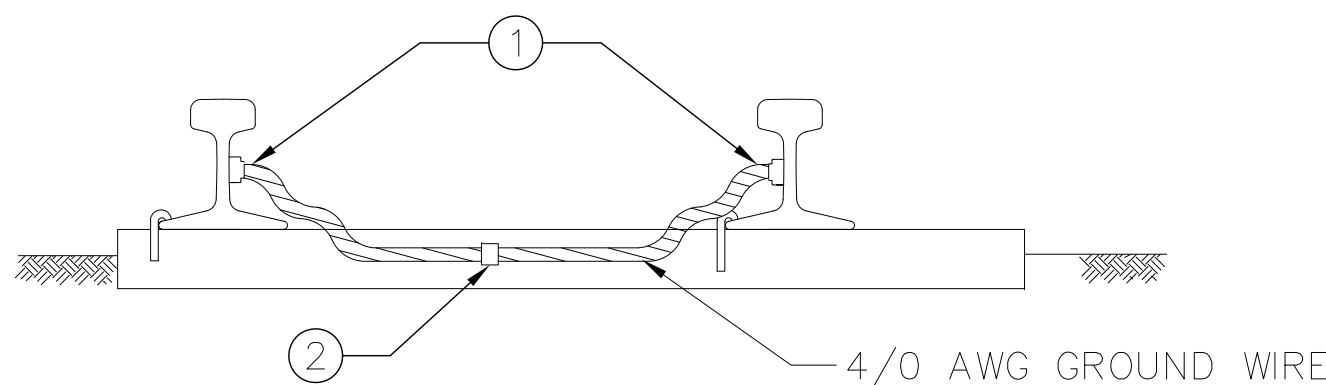
ITEM	QTY	UNIT	MATERIAL DESCRIPTION	MANUFACTURER & CAT. NO.
1	1	EA	VERTICAL CABLE TO VERTICAL STEEL SURFACE EXOTHERMIC CONNECTION	BURNDY: B-8718 OR EQUIVALENT
2	2/JUMPER	EA	BOLT, HEX, SS, 1/2"-13 NC x 1", A304/A316	(GENERIC)
3	2/JUMPER	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316	
4	4/JUMPER	EA	WASHER, FLAT, SS, 1/2", A304/A316	
5	2/JUMPER	EA	TERMINAL 1 HOLE FOR #2 WIRE	BURNDY: YA2CL6-BOX OR EQUIVALENT
6	2	EA	ANCHOR, 1 1/4", SS 304,316	HILTI: KB3 1/4" X 2-1/4" OR EQUIVALENT
7	2	EA	27mm CONDUIT CLAMP 1-HOLE	T&B: 1278 OR EQUIVALENT
8	PER DESIGN	N/A	27mm CONDUIT	(GENERIC)
9	2	EA	BUSHING	

NOTES:

1. THIS CROSS BONDING CONFIGURATION SHALL NOT BE APPLIED WHERE TRACK CIRCUITS ARE UTILIZED FOR TRAIN DETECTION PURPOSES.



ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	1	EA	WIRE TO RAIL EXOTHERMIC CONNECTION	ERICO: STR-2Q OR EQUIVALENT
2	1	EA	WIRE TO RAIL EXOTHERMIC CONNECTION	ERICO: SPR-2Q OR EQUIVALENT
3	1	EA	RAIL TIE CABLE CLIP	GENERIC

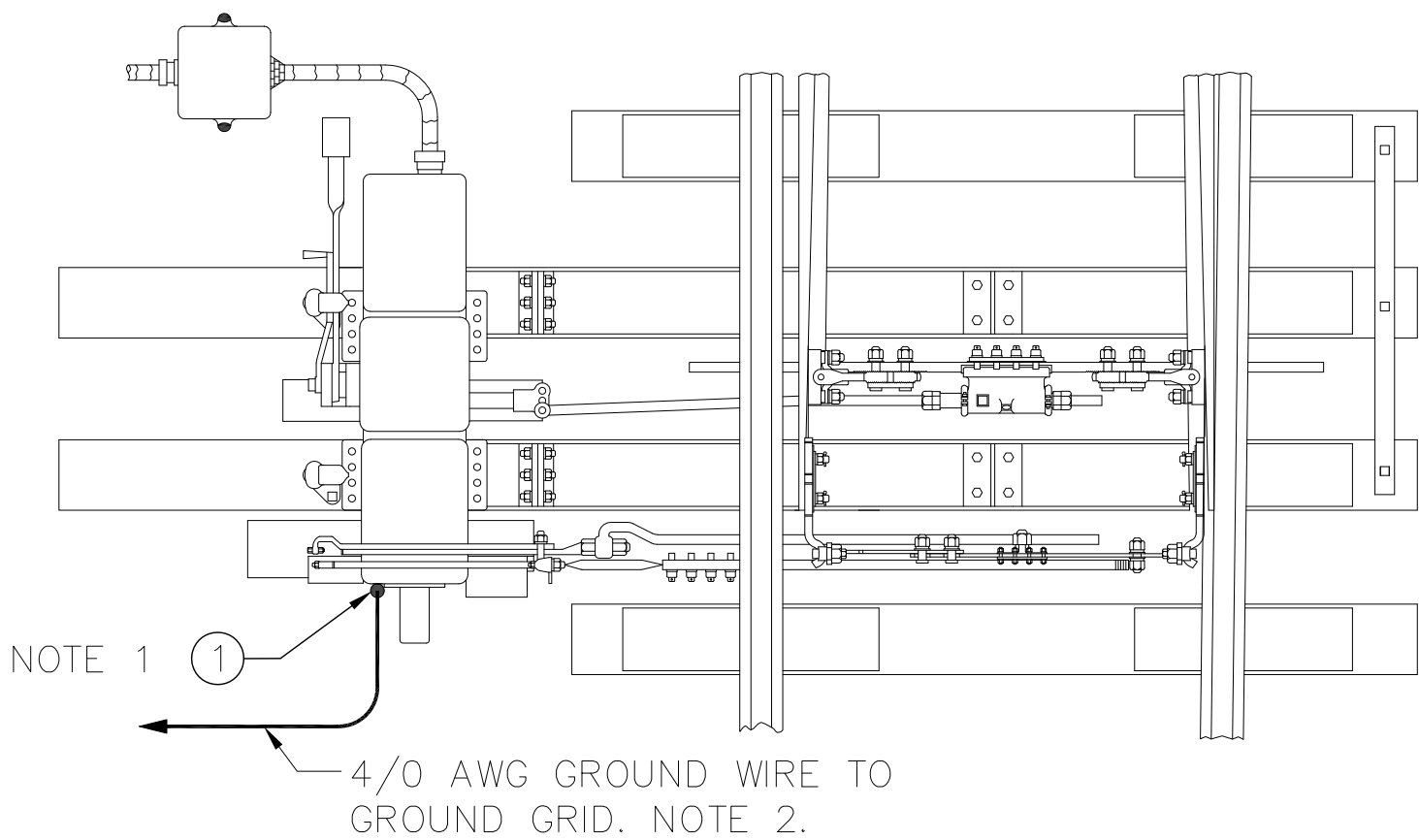


DETAIL 4 – RUNNING RAILS CROSS BONDING

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	2	EA	WIRE TO RAIL EXOTHERMIC CONNECTION	ERICO: STR-2Q OR EQUIVALENT
2	1	EA	RAIL TIE CABLE CLIP	GENERIC

NOTES:

1. 4/0 GROUND WIRE SHALL BE TERMINATED TO GROUND STUD PROVIDED BY SWITCH MACHINE MANUFACTURER. EXACT PART NUMBER FOR TERMINAL MUST BE COORDINATED WITH PROVIDED GROUND STUD. TYPICAL PART NUMBER PROVIDED FOR REFERENCE ONLY.
2. 4/0 GROUND WIRE CONNECTED TO GROUND GRID WHEN SWITCH MACHINE INSTALLED IN STATION. FOR OTHER SWITCHES GROUND WIRE MUST BE CONNECTED TO STATIC WIRE.
3. ADDITIONAL GROUND CONNECTIONS MAY BE REQUIRED. MANUFACTURES SPECIFICATION MUST BE FOLLOWED FOR COMPLETE INSTALLATION.



DETAIL 5– SWITCH MACHINE

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	1	EA	TERMINAL 1 HOLE FOR 4/0 WIRE	BURNDY: YA28L-BOX OR EQUIVALENT

PARSONS
BRINCKERHOFF

METROLINX

TRACTION ELECTRIFICATION
GROUNDING AND BONDING
STANDARD INSTALLATION DESIGN DETAILS
ABOVE-GRADE RAILWAY INFRASTRUCTURE

CONTRACT NO.	DWG. NO.	REV.	SHEET
RQQ-2011-PP-032	MXS-200-005	0	13/26