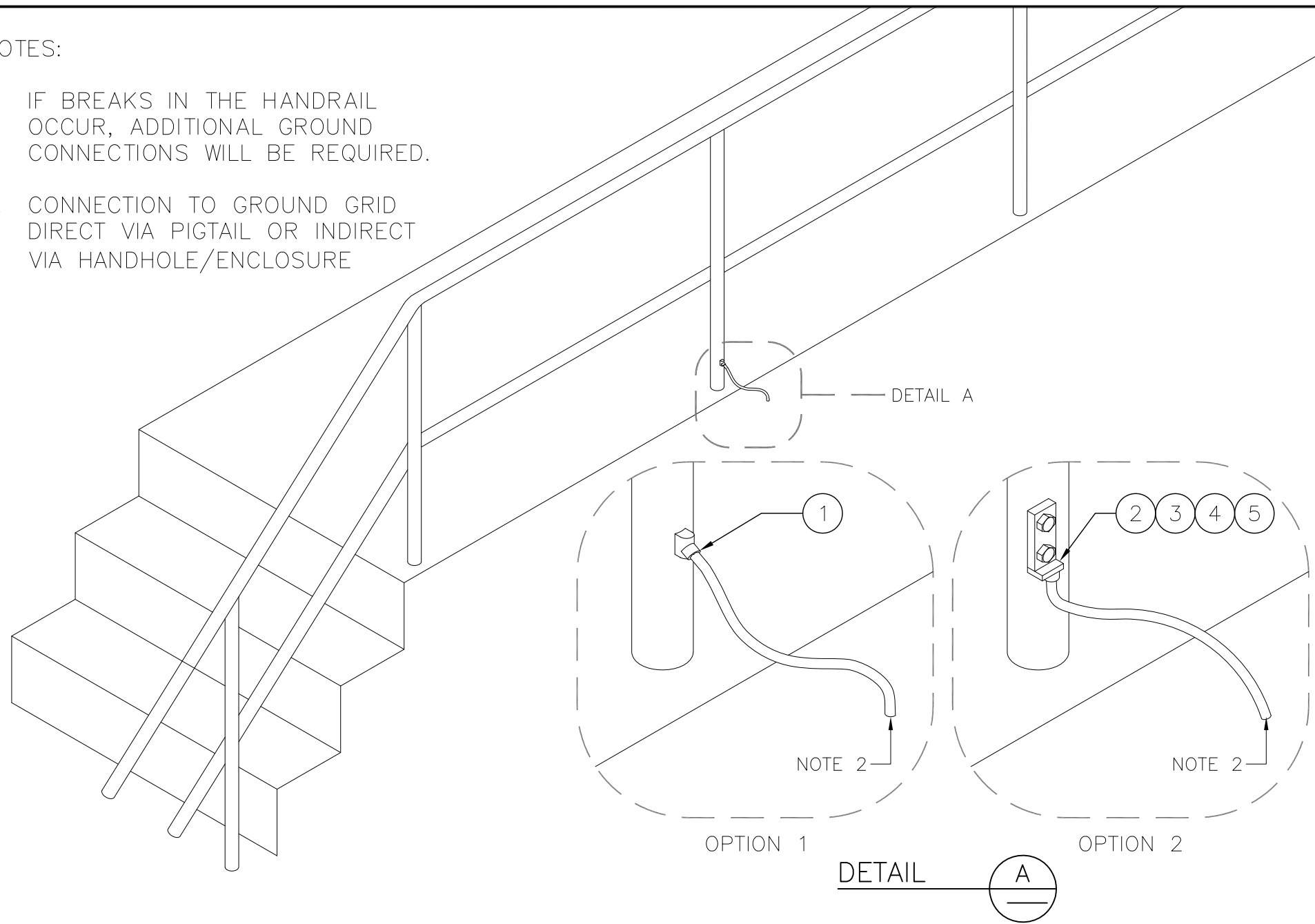


PLOTTED BY: FALLURI PLOTTED DATE: 20150402 PAPER SIZE AT FULL: ANSI D (22.00 x 34.00 INCHES)
 FILE: \\FILE-RGDC01\DEPT\PROGRAM MANAGEMENT & STANDARDS\PMPS DESIGN STANDARDS\7 REFERENCE MATERIAL\24 ELECTRIFICATION\GROUNDING AND BONDING STANDARD DRAWINGS\MXS-200-002.DWG

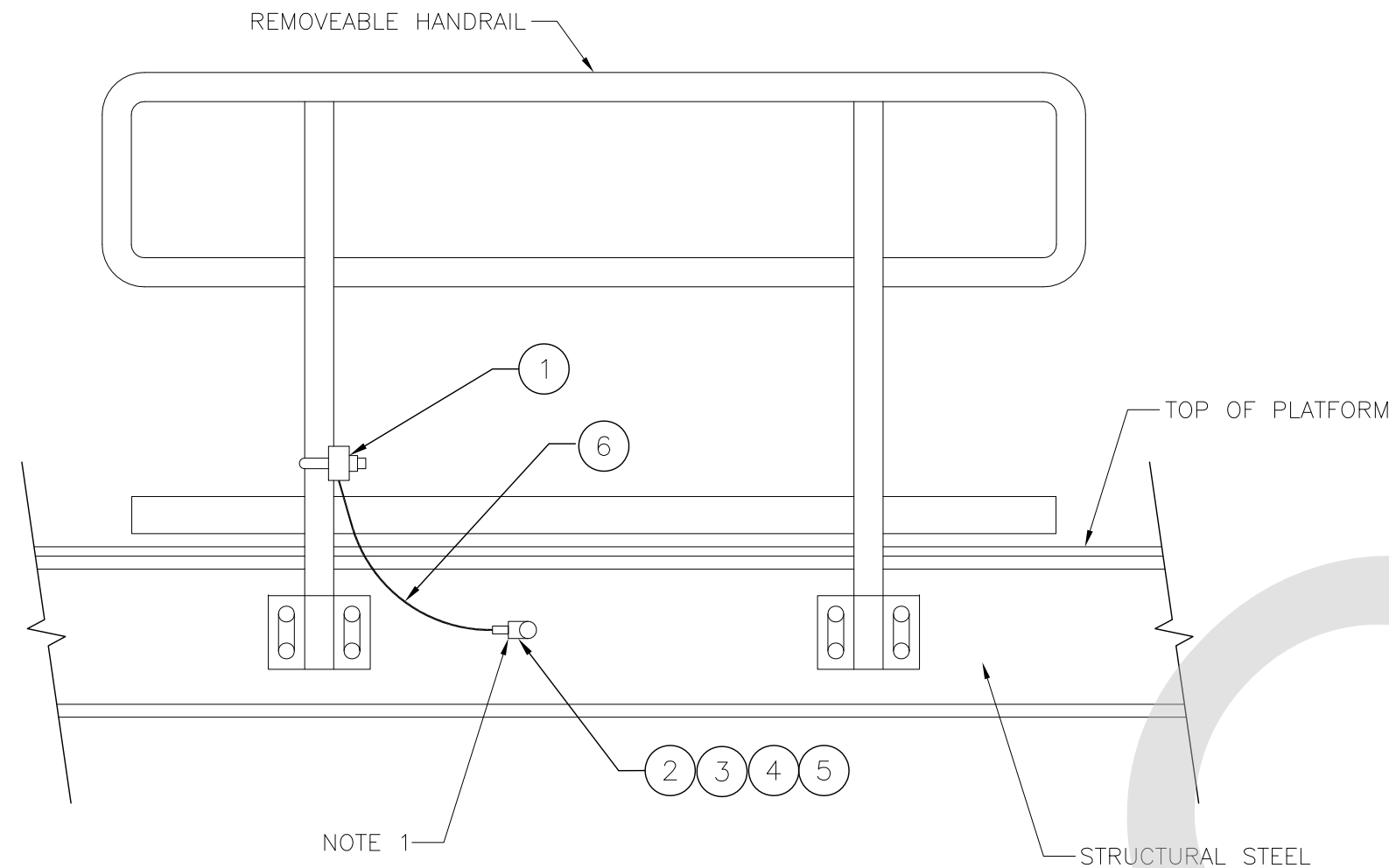
- NOTES:
- IF BREAKS IN THE HANDRAIL OCCUR, ADDITIONAL GROUND CONNECTIONS WILL BE REQUIRED.
 - CONNECTION TO GROUND GRID DIRECT VIA PIGTAIL OR INDIRECT VIA HANDHOLE/ENCLOSURE



DETAIL 1 – GROUNDING CONNECTION TO FIXED METALLIC HANDRAILS

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	1	EA	VERTICAL WIRE TO VERTICAL STEEL SURFACE EXOTHERMIC CONNECTION	BURNDY: B-2781 OR EQUIVALENT
2	6	EA	BRONZE BOLT 12MM – 13x25mm (1/2" – 13x1")	(GENERIC)
3	6	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316	
4	6	EA	WASHER, FLAT, SS, 1/2", A304/A316	
5	1	EA	TWO HOLE LUG FOR #2 AWG WIRE	BURNDY: YGA2C-2N OR EQUIVALENT

- NOTES:
- THE STEEL STRUCTURE MUST BE CONNECTED TO THE GROUNDING SYSTEM. THIS CONNECTION WILL BE MADE IN A CONVENIENT LOCATION AS DETERMINED BY THE CONTRACTOR ON SITE.

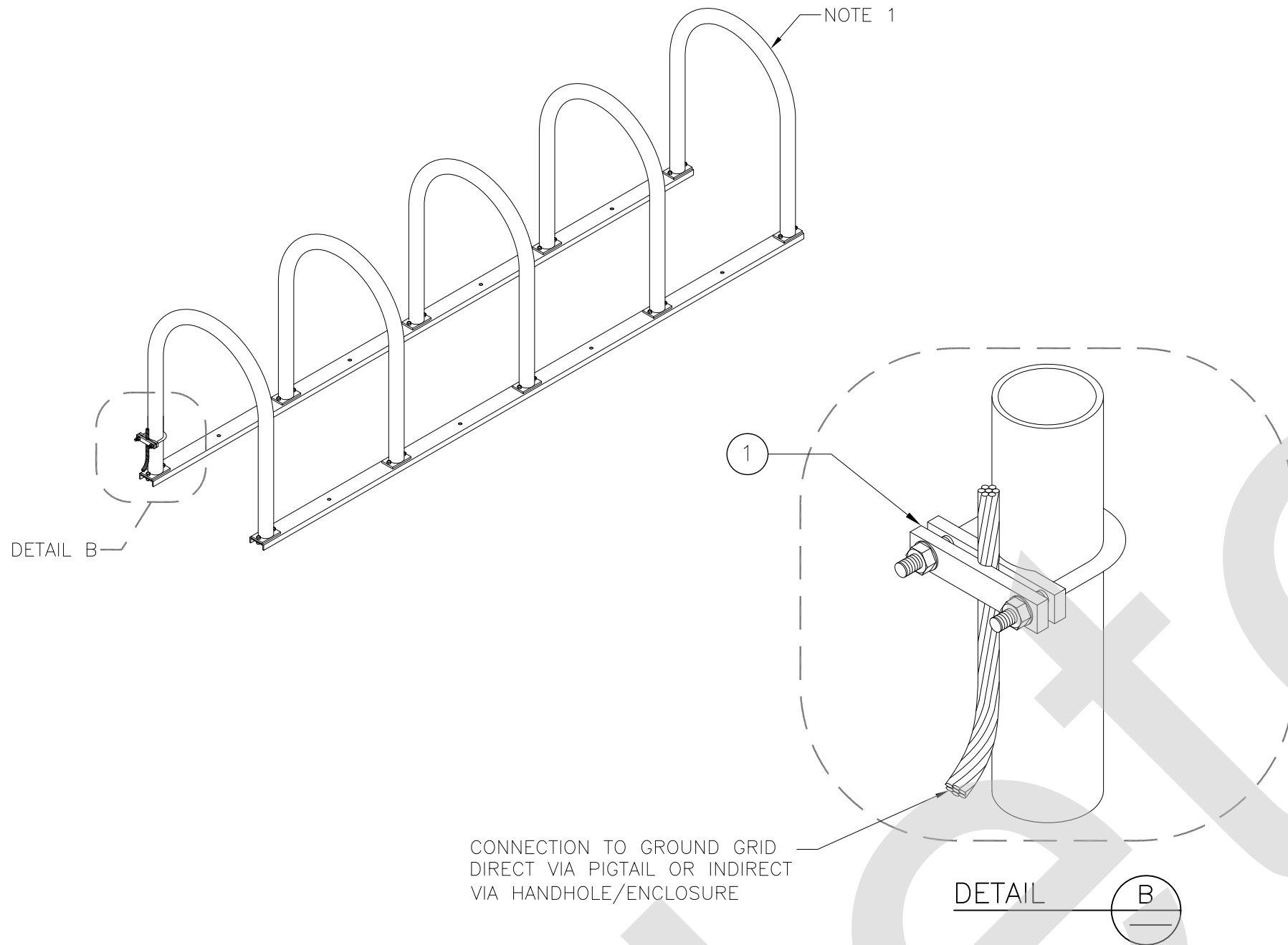


DETAIL 2 – GROUNDING CONNECTION TO REMOVABLE METALLIC HANDRAILS

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	1	EA	CONNECTOR, GROUND, CABLE TO PIPE, #4-2/0 , IPS:1-1/2", PIPE	BURNDY: GAR1726 OR EQUIVALENT
2	1	EA	TERMINAL 1 HOLE FOR #2 WIRE	BURNDY: YA26L6-BOX OR EQUIVALENT
3	1	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316	(GENERIC)
4	2	EA	WASHER, FLAT, SS, 1/2", A304/A316	
5	1	EA	BOLT, HEX, SS, 1/2"-13 NC x 1", A304/A316)	
6	3	FT	#2 GROUND WIRE	

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

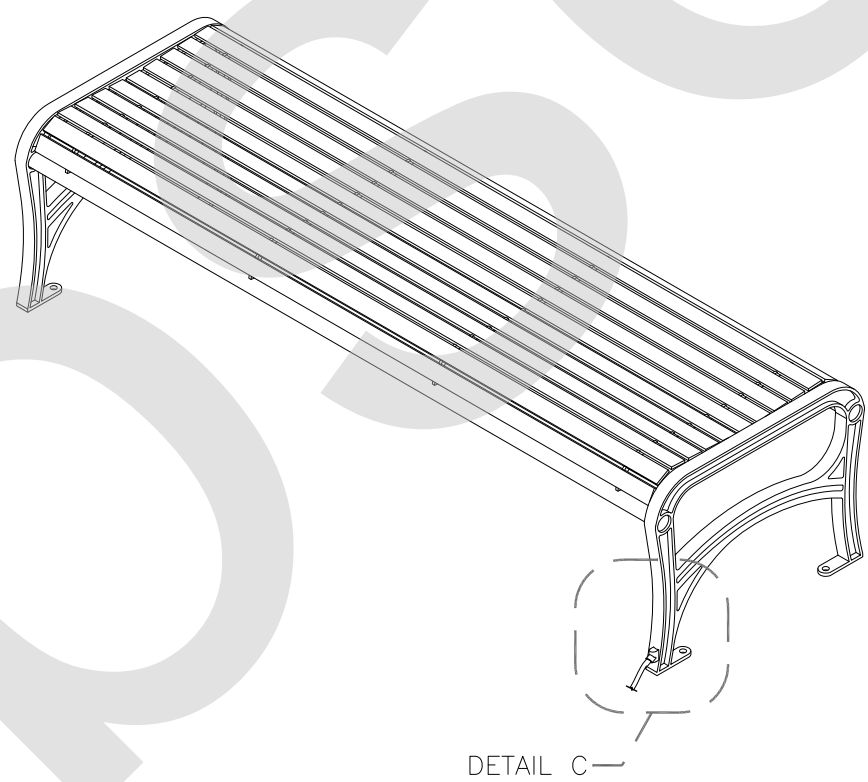
- NOTES:
- GALVANIZED STEEL BICYCLE RACK.



DETAIL 3 – GROUNDING CONNECTION TO FIXED METALLIC BIKE RACKS

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	1	EA	CONNECTOR, GROUND, CABLE TO PIPE, #4-2/0 , IPS:1-1/2", PIPE	BURNDY: GAR1726 OR EQUIVALENT

- NOTES:
- CONNECTION TO GROUND GRID DIRECT VIA PIGTAIL OR INDIRECT VIA HANDHOLE/ENCLOSURE

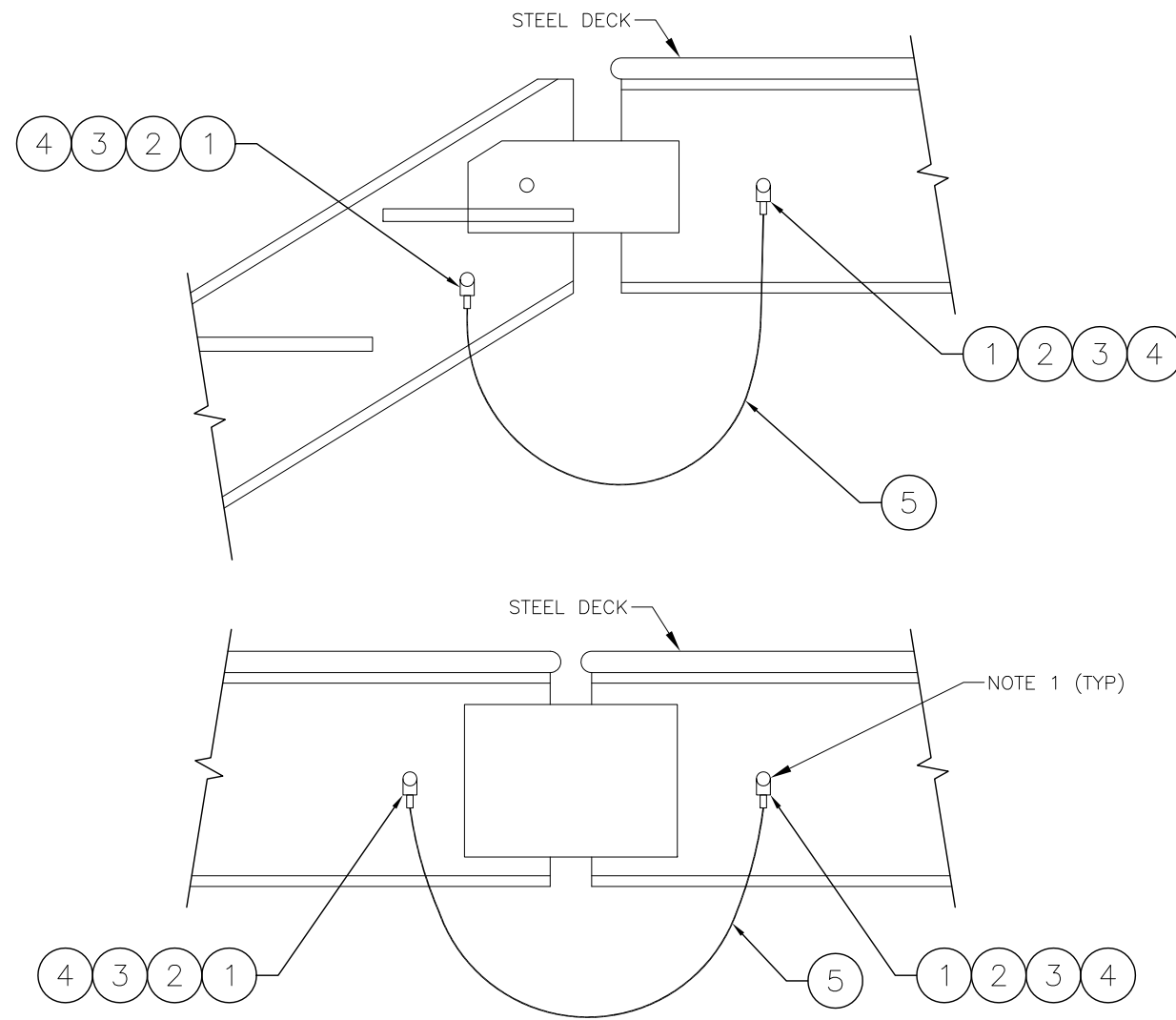


DETAIL 4 – GROUNDING CONNECTION TO FIXED METALLIC BENCH

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	1	EA	VERTICAL WIRE TO VERTICAL STEEL SURFACE EXOTHERMIC CONNECTION	BURNDY: B-2741 OR EQUIVALENT
2	6	EA	BRONZE BOLT 12MM – 13x25mm (1/2" – 13x1")	(GENERIC)
3	6	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316	
4	6	EA	WASHER, FLAT, SS, 1/2", A304/A316	
5	1	EA	TWO HOLE LUG FOR #2 AWG WIRE	BURNDY: YGA2C-2N OR EQUIVALENT

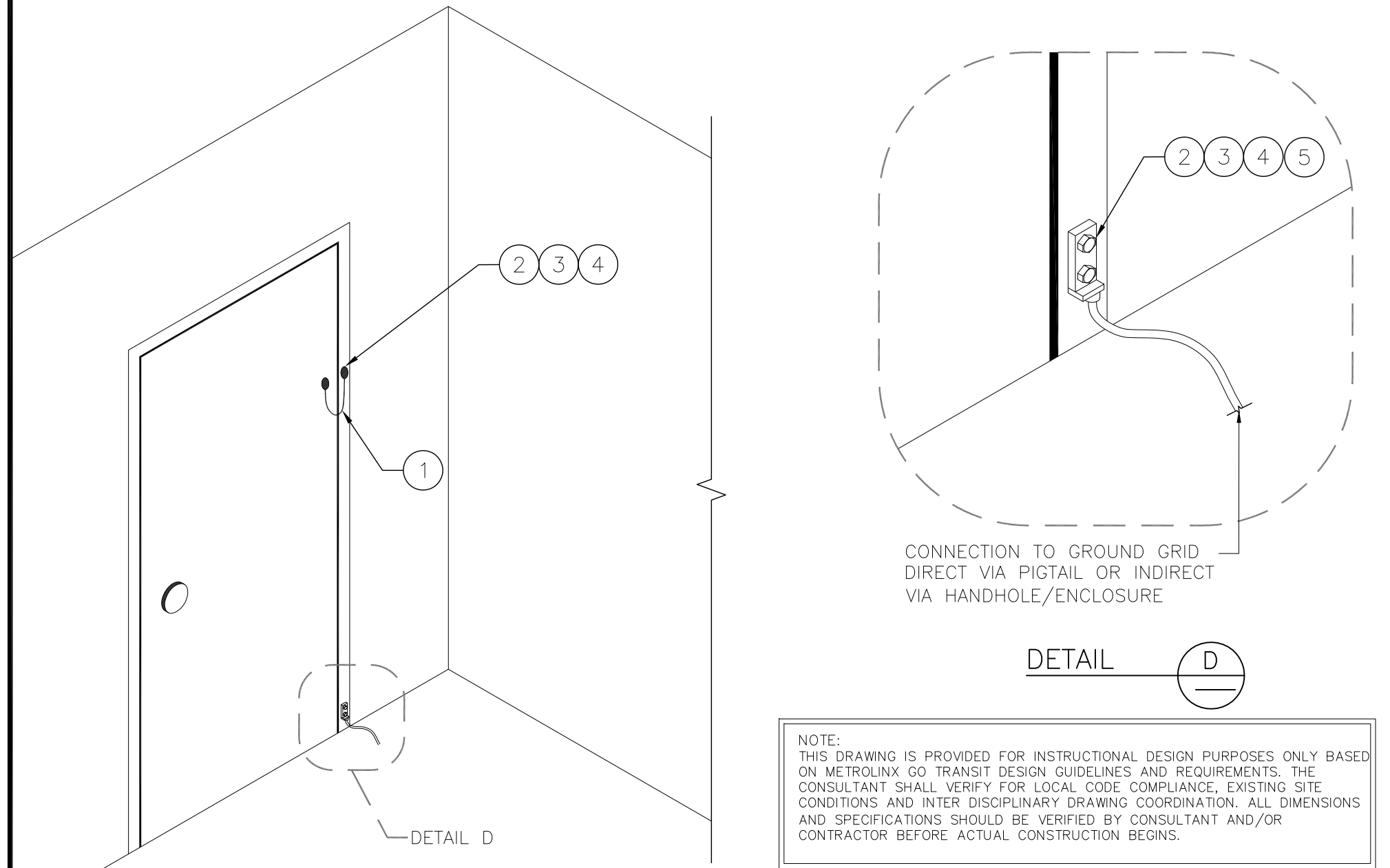
DRAWN BY: RCW 14/12/11		DESIGNED BY: SXF 14/12/11	
CHECKED BY: CTG 15/01/16		APPROVED BY: ZBT 15/01/16	
SCALE: NTS		FULL SIZE ONLY	

- NOTES:
- THE STEEL STRUCTURE MUST BE CONNECTED TO THE GROUNDING SYSTEM. THIS CONNECTION WILL BE MADE IN A CONVENIENT LOCATION AS DETERMINED BY THE CONTRACTOR ON SITE.



DETAIL 5 – GROUNDING CONNECTION TO FIXED METALLIC STAIRS

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER & CAT. NO.
1	2	EA	TERMINAL 1 HOLE FOR #2 WIRE	BURNDY: YA26L6-BOX OR EQUIVALENT
2	2	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316	(GENERIC)
3	4	EA	WASHER, FLAT, SS, 1/2", A304/A316	
4	2	EA	BOLT, HEX, SS, 1/2"-13 NC x 1", A304/A316)	
5	3	FT	# 2 GROUND WIRE	



DETAIL 6 – GROUNDING CONNECTION TO METALLIC SWING DOORS

ITEM	QTY	UNIT	DESCRIPTION	MANUFACTURER
1	1	EA	FLEXIBLE COPPER BRAID	BURNDY: BD18 OR EQUIVALENT
2	8	EA	BRONZE BOLT 12MM – 13x25mm (1/2" – 13x1")	(GENERIC)
3	6	EA	WASHER, SPRING (LOCK), STAINLESS, 1/2", A304/A316	
4	6	EA	WASHER, FLAT, SS, 1/2", A304/A316	
5	1	EA	TWO HOLE LUG FOR #2 AWG WIRE	BURNDY: YGA2C-2N OR EQUIVALENT

PARSONS
BRINCKERHOFF



TRACTION ELECTRIFICATION
GROUNDING AND BONDING
STANDARD INSTALLATION DESIGN DETAILS
PASSENGER STATION FURNITURE

CONTRACT NO. RQQ-2011-PP-032	DWG. NO. MXS-200-002	REV. 0	SHEET 10/26
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