

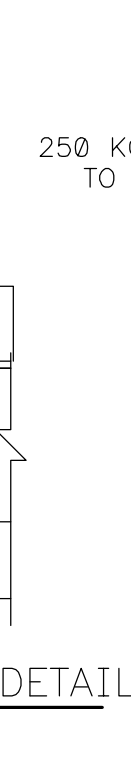
PLAN VIEW - FOUNDATION GROUNDING



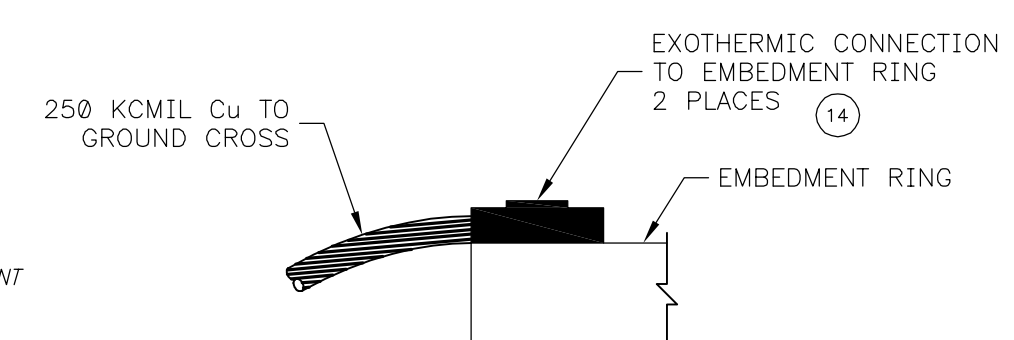
C TOWER & EQUIPMENT GROUNDING DETAIL
N.T.S. TYPICAL 2 PLACES



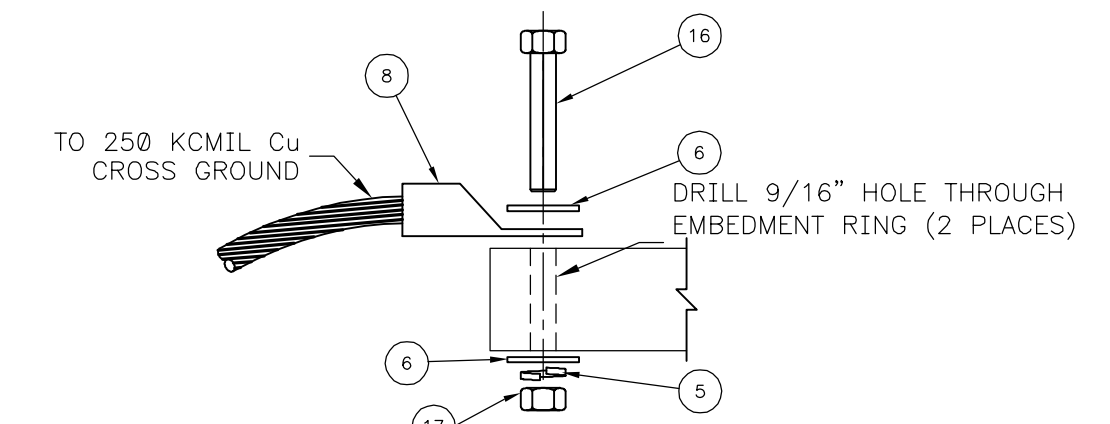
D TOWER GROUNDING DETAIL
N.T.S. TYPICAL 2 PLACES



E GROUNDING PLATE DETAILS
SCALE = 8X TYPICAL 4 PLACES



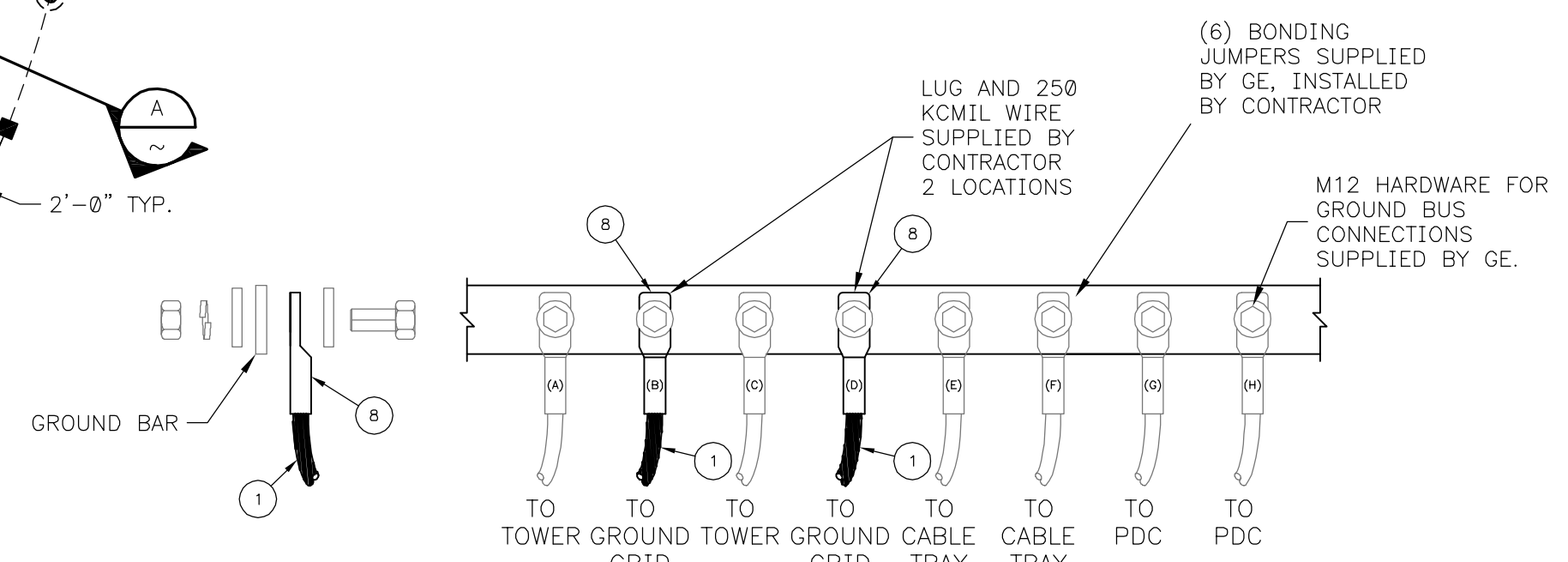
F ALTERNATE EMBEDMENT RING GROUNDING
SCALE = 16X TYPICAL 2 PLACES



G EMBEDMENT RING GROUNDING
SCALE = 16X TYPICAL 2 PLACES

NOTES

1. ALL GROUNDING CONDUCTOR SHALL BE 250 kcmil AWG BARE STRANDED COPPER.
2. GROUND RODS SHALL BE COPPER CLAD STEEL 5/8 INCH DIAMETER BY 10 FEET.
3. ALL GROUNDING CONDUCTOR CONNECTIONS SHALL BE COMPRESSION EXCEPT FOR CAD WELD TO EMBEDMENT RING IF ALTERNATE METHOD OF RING GROUNDING IS USED.
4. GROUND GRID RESISTANCE SHALL BE MEASURED AND RECORDED FOR EACH TOWER LOCATION - RESISTANCE SHALL BE MEASURED USING THE FALL-OF-POTENTIAL METHOD BEFORE CONNECTING CABLE NEUTRALS. (SEE SPECIFICATIONS)
5. LEAVE TRANSFORMER GROUND TAILS LONG ENOUGH TO CONNECT TO TRANSFORMER.

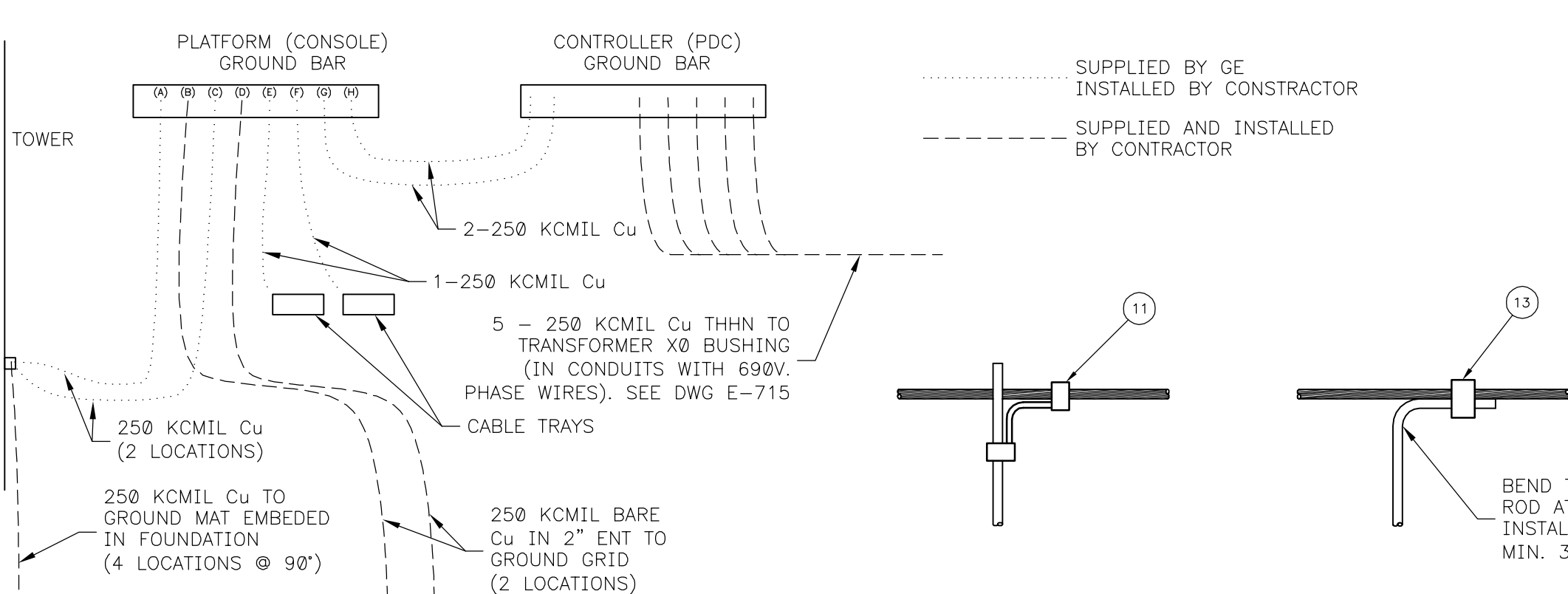


B PLATFORM (CONSOLE) GROUND BAR DETAIL
N.T.S.

WF5728-16
TURBINE SITE GROUNDING, SPREAD FOUNDATION, 1.6 MW GE ESS

ITEM	QTY	MATID	UNIT	DESCRIPTION
1	875	05048	FT	WIRE, 250KCMIL STR COPPER, SD, BARE
2	8	10404	EA	ROD, GROUND, 5/8" X 10', COPPERWELD
3	4	14141	EA	LUG, COMPRESSION GROUNDING, 250 KCMIL CU, 2 HOLE
4	8	12218	EA	BOLT, 18-8 OR 316 STAINLESS, 1/2"-13 X 3/4"
5	10	12540	EA	WASHER, HELICAL SPRING LOCK, 18-8 OR 316 STAINLESS, 1/2" REGULAR, PER ASME B18.21.1
# 6	12	12542	EA	WASHER, STAINLESS, FLAT, ROUND, 1/2" USS, 1.375" OD, 0.109" TK
7	4	14470	EA	PLATE, GROUNDING 2-HOLE #2-250 KCMIL CU
# 8	8	14064	EA	LUG, COMPRESSION, COPPER, 1 HOLE, 1/2" STUD, 250 KCMIL
9	4	12240	EA	BOLT, 18-8 OR 316 STAINLESS, M12-1.75 X 20 MM, DIN 933
10	4	12549	EA	WASHER, SPLIT LOCK, 18-8 STAINLESS, M12, DIN 127
* 11	8	14215	EA	CONNECTOR, COMP GRD, CROSS, 1/2"-5/8" ROD OR #2-250 KCMIL TO #2-250 KCMIL
12	4	14460	EA	CONNECTOR, BOLTED GRD, #2/0-250 KCMIL TO 3/8" IPS OR 5/8-3/4" ROD
* 13	36	14214	EA	CONNECTOR, COMP GRD, 1/2-5/8" ROD OR 3/0-250 KCMIL TO 3/0-250 KCMIL
# 14	0	14108	EA	CONNECTOR, EXOTHERMIC WELD, 250 KCMIL TO FLAT STEEL (MOLD ERICO HSC-2V)
15	4	14454	EA	CONNECTOR, BOLTED GRD, #2/0-250 KCMIL TO 1/2-3/4" IPS OR 7/8-1" ROD
# 16	2	12207	EA	BOLT, 18-8 OR 316 STAINLESS, 1/2"-13 X 3", FULLY THREADED
# 17	2	12364	EA	NUT, 1/2"-13 18-8 OR 316 STAINLESS STEEL
18	0.1	90250	EA	COMPOUND, OXIDE INHIBITOR, NO GRIT

* IF USING ALTERNATE GROUND ROD CONNECTION, DELETE (8) FROM ITEM 11 AND ADD (8) TO ITEM 13.
ADD (2) TO ITEM 14 & DELETE (2) FROM ITEM 5, 8, 16, & 17 AND DELETE (4) FROM ITEM 6 WHEN USING ALTERNATE EMBEDMENT RING GROUNDING METHOD



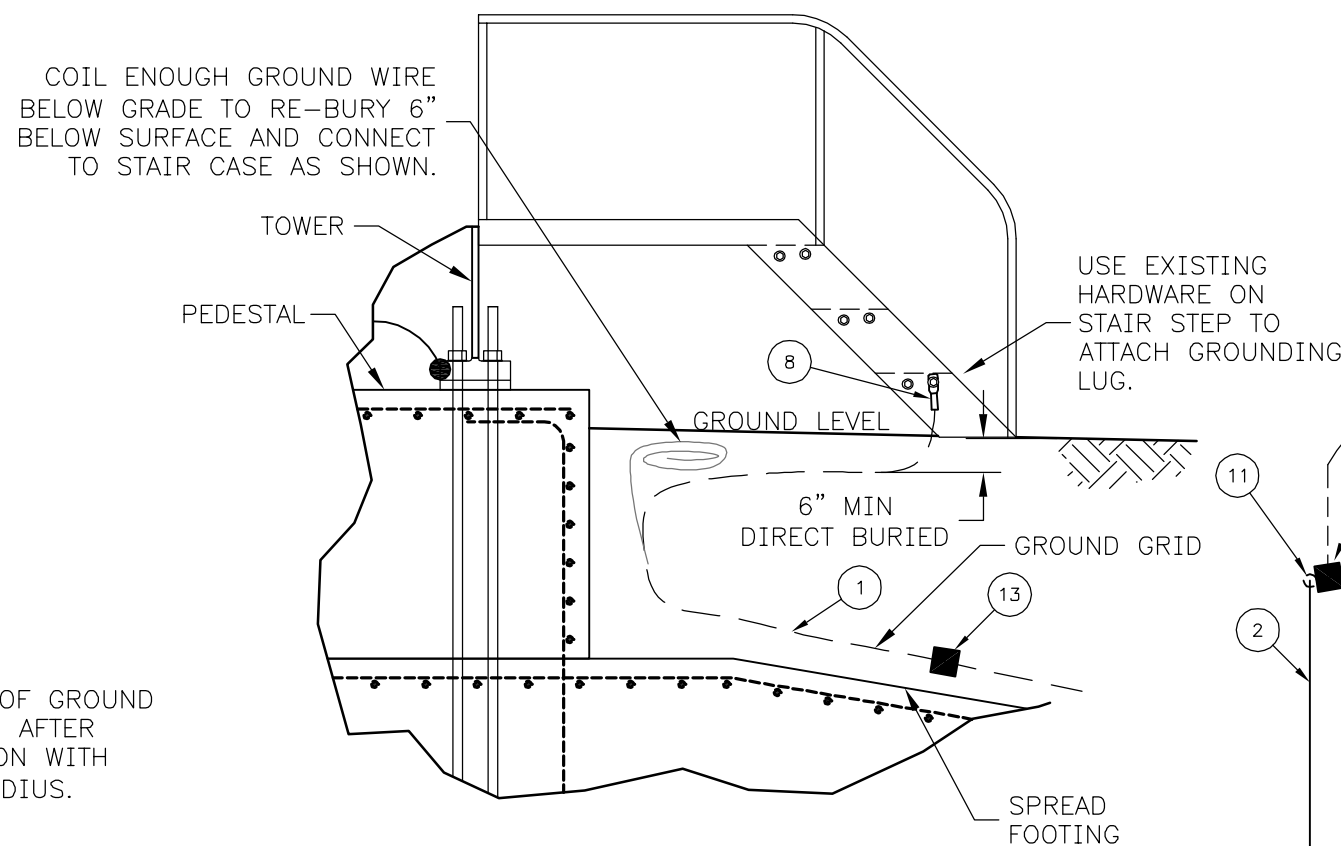
ESS GROUNDING DETAIL DIAGRAM



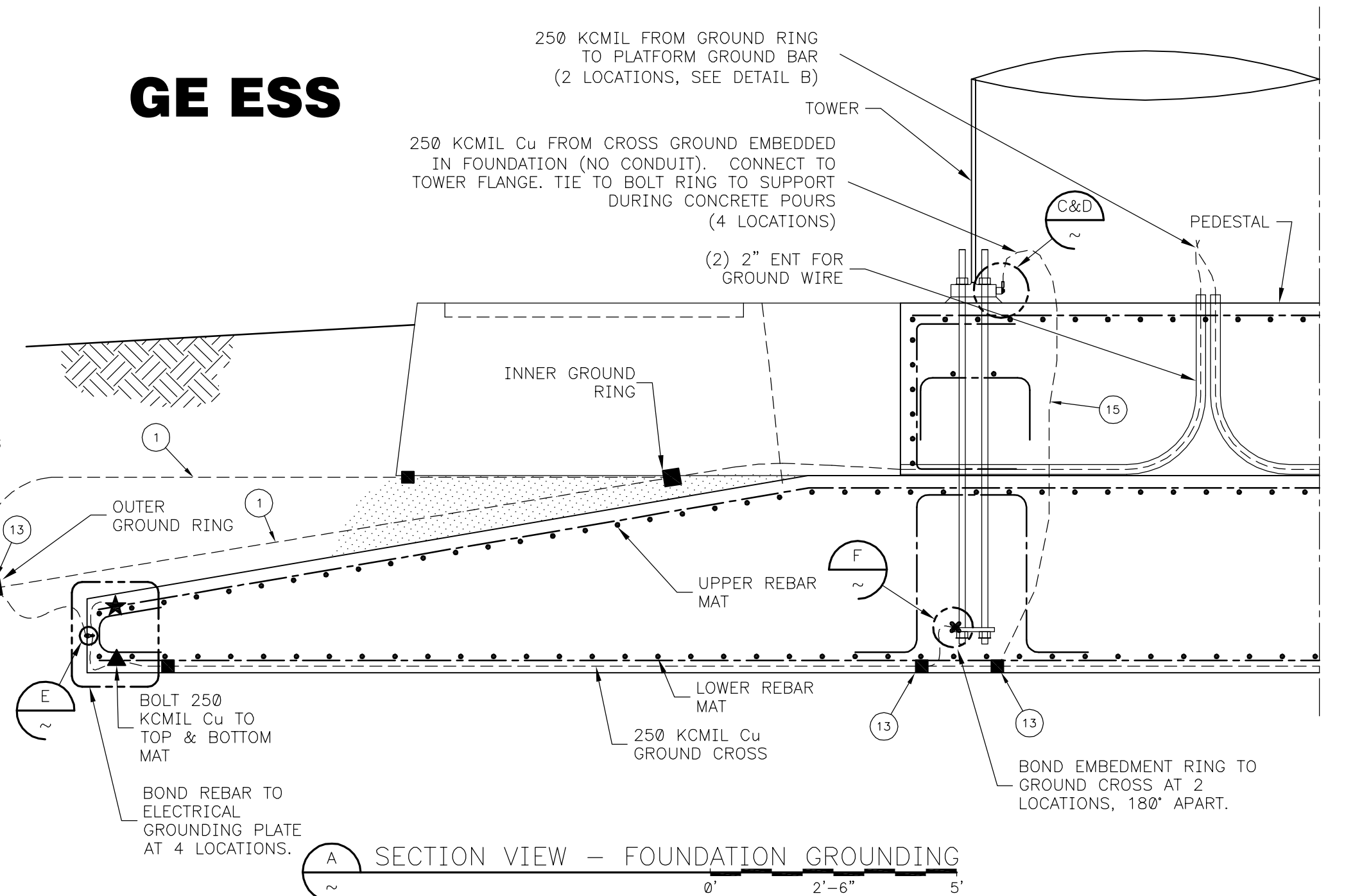
H TYPICAL GROUND ROD CONNECTION METHOD
N.T.S.



H ALTERNATE GROUND ROD CONNECTION METHOD
N.T.S.



G STAIR GROUNDING DETAIL
N.T.S.



A SECTION VIEW - FOUNDATION GROUNDING
SCALE = 16X TYPICAL 2 PLACES

GE ESS

250 KCMIL FROM GROUND RING TO PLATFORM GROUND BAR (2 LOCATIONS, SEE DETAIL B)
250 KCMIL Cu FROM CROSS GROUND EMBEDDED IN FOUNDATION (NO CONDUIT). CONNECT TO TOWER FLANGE. TIE TO BOLT RING TO SUPPORT DURING CONCRETE POURS (4 LOCATIONS)
(2) 2" ENT FOR GROUND WIRE

THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY RICHARD D. KLINE, PROFESSIONAL ENGINEER, 20035, ON 05/17/12. THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

ISSUED FOR CONSTRUCTION

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NEXTERA ENERGY RESOURCES

REV NO.	DESCRIPTION	ENG	DWN	CHKD	DATE	ENG: P&E
A	ORIGINAL DESIGN	P&E	RMB	MCR	04/30/12	DRAWN: RMB
0	ISSUED FOR CONSTRUCTION	P&E	RMB	MCR	05/17/12	CHKD: MCR
						APPR: RDK
						DATE: 04/30/12

CLIENT/PROJECT:	NEXTERA ENERGY RESOURCES MINCO WIND III, LLC
TITLE:	GE 1.6 MW TURBINE SITE TOWER AND EQUIPMENT GROUNDING
SCALE:	MEASURE ON D-SIZE ONLY AS SHOWN
DRAWING NUMBER:	E9961-705
REVISION NUMBER:	0

MODULE NUMBER: WF5728-16