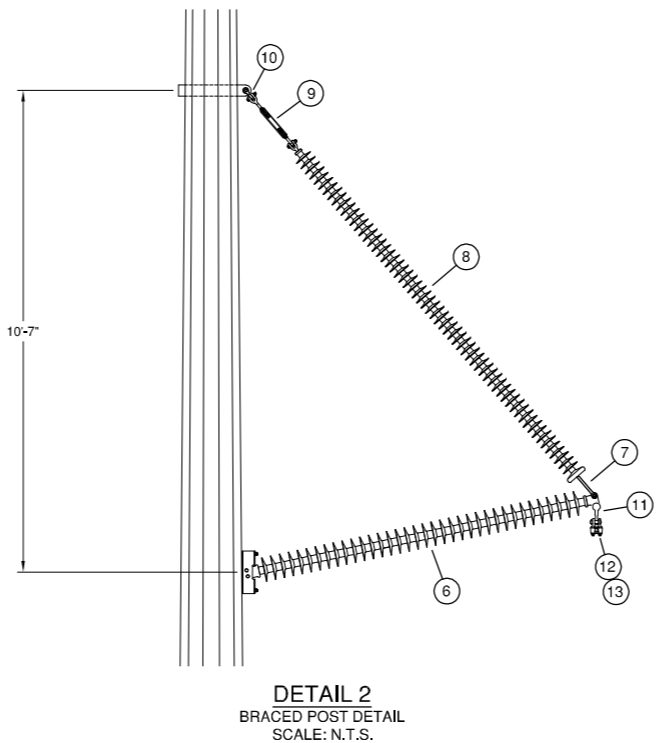
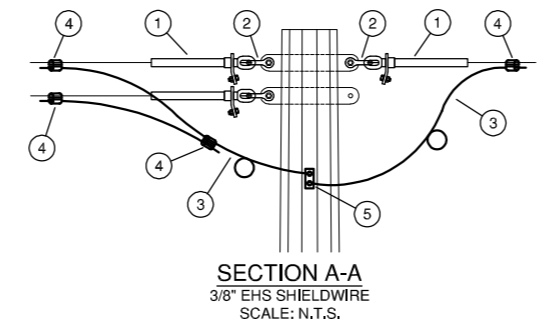
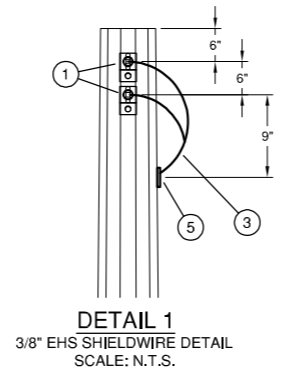
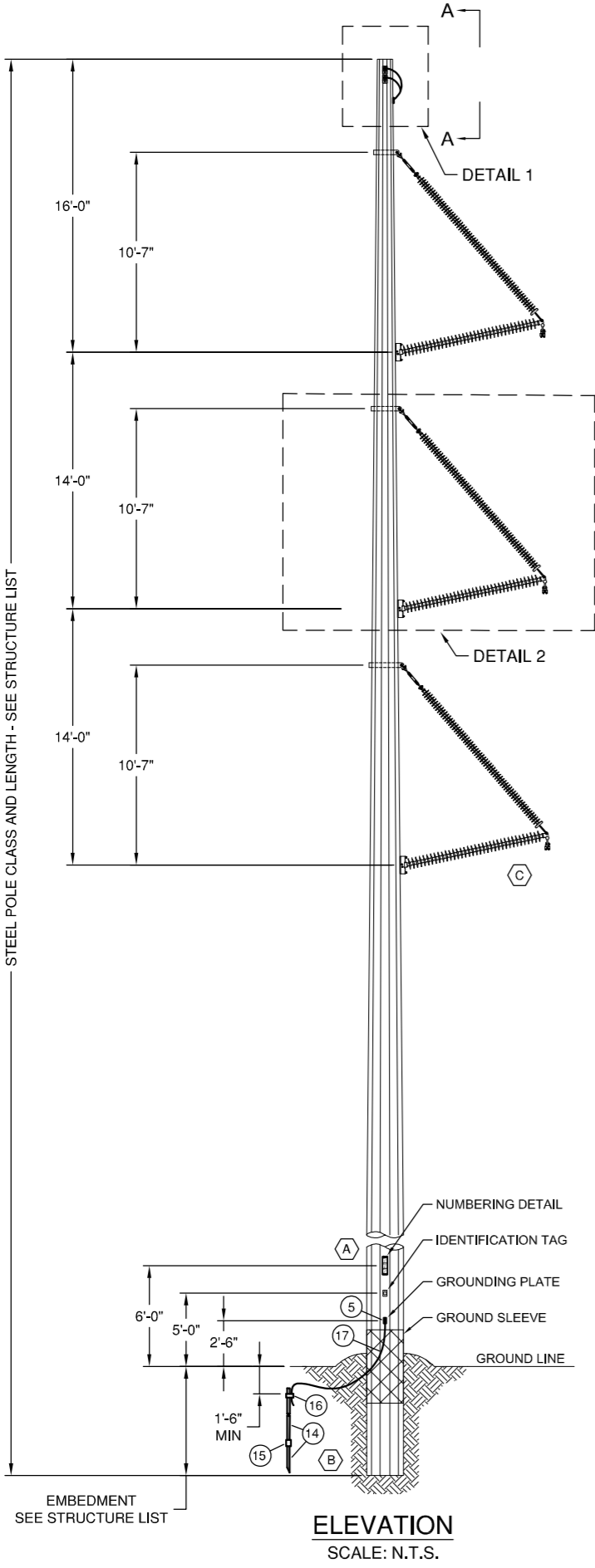


**Combined Application for Certificate of Corridor
Compatibility and Route Permit
Appendix C
Project Design Drawings**

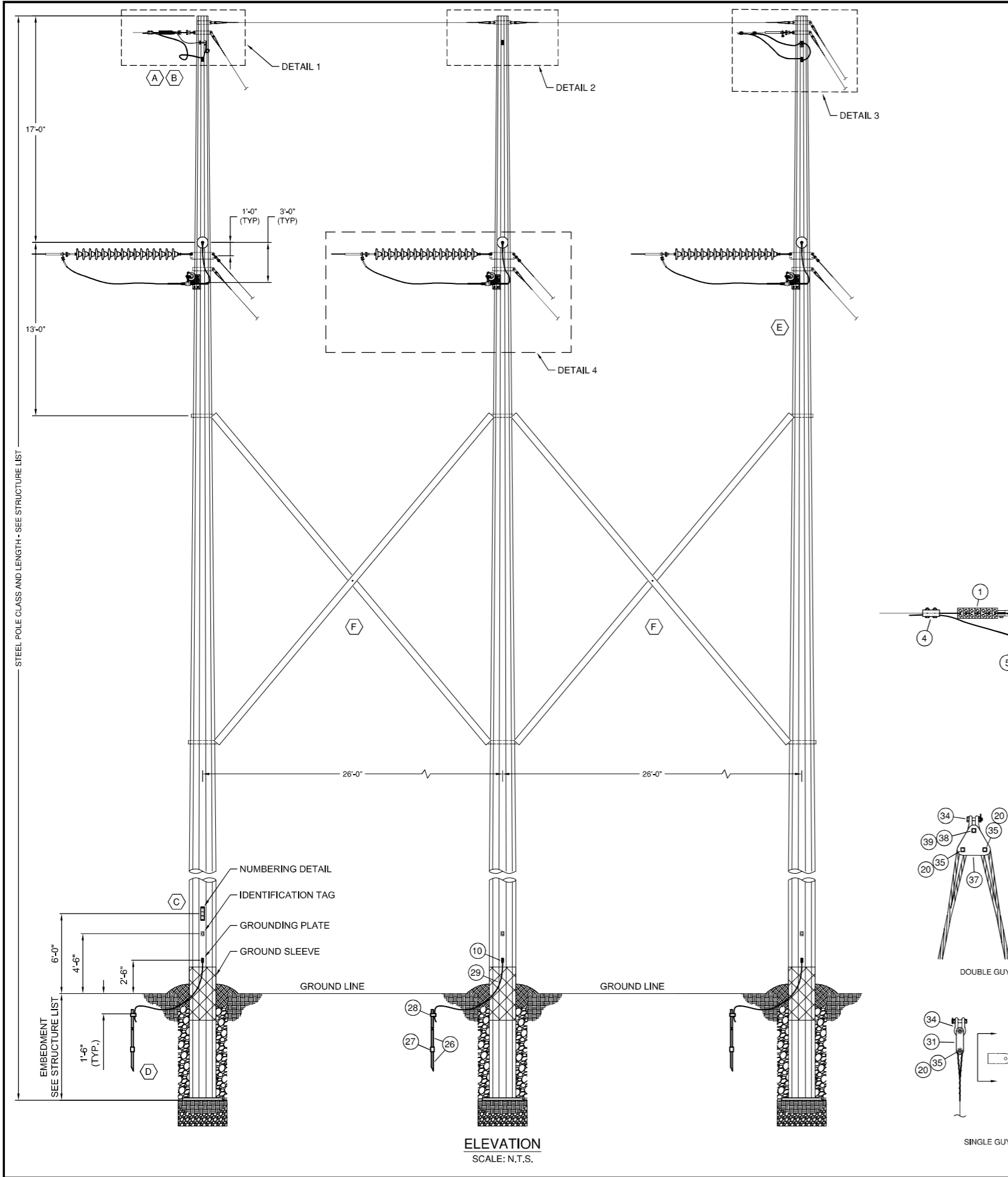


LIST OF MATERIALS			
DWG REF	QTY	DESCRIPTION	STOCK NUMBER
1	3	DEADEND BODY, 3/8 IN. GUY WIRE, #4514.12J,W/BOLTED JUMPER,ALCOA	7273301487
2	3	SHACKLE, ANCHOR, 1/2", 30K, AFL: ANSH30L-BNC	NON-STANDARD
3	30'	CONDUCTOR, COPPER, #4 BARE, STRANDED, 7.76 FT./LB., 1239 LBS/FT., (25#/REEL)	7262060092
4	4	CLAMP, PARALLEL GROOVE, ANDERSON ST-4	7272100950
5	3	CONNECTOR, STEEL POLE GRNDING, TRANSFORMER TANK GROUND, BLACKBURN TTC-2P TIN PLATED, HJBELL #876032000	7274101748
6	3	INSULATOR, HORIZ POST, POLYMER, 230 KV, FLAT BASE, 7/8" MTG BOLTS, OB-522015-1004, W/12" CORONA RING LP25CR6	7274902339
7	3	SOCKET CLEVIS, 5/8" PIN 30,000 LB, MACLEAN SC-55, HUBBELL #876032000	7277305075
8	3	INSULATOR, SUSPENSION, 230KV, POLYMER, Y-CLEVIS, 105", RELIABLE #5548105VA06,	7274902476
9	3	TURNBUCKLE, 3/4" X 12", CLEVIS & EYE, 28,000#, CAT. NO. AS2545-BEB, HUGHES BROS.	7274504080
10	3	SHACKLE, ANCHOR, 30,000 LB. 5/8" BOLT, W=1-3/4", AS-25-W-BNK ANDERSON	7277704856
11	3	Y-CLEVIS EYE FOR AGS SUSPENSION, COND DIA. 1.006"-1.557", P/LP YC-5209	NON-STANDARD
12	3	ROD, ARMOR, 795 MCM 24/7 ACSR, S/S PREF., 12 RODS PER SET YELLOW, P/LP AGS-5130 (HSU2770RCD DULM)	7276503670
13	3	CLAMP, SUSPENSION AGS, 795 24/7 ACSR, W/INSERT, INSERT RANGE 1.091-1.118, P/LP (HSU2770H DULM)	7276503681
14	2	GROUND ROD, GALVANIZED STEEL, DUAL PURPOSE, 5/8" X 8', J23282.8, JOSLYN	7274105017
15	1	COUPLING, GROJND ROD, GALVANIZED STEEL, 5/8", J23282A, JOSLYN	7274102020
16	1	CLAMP, GROUND ROD, 5/8 IN. 1/0 TO 3 SOLID, JAB58H, BLACKBURN	7274101775
17	10'	WIRE, GROUND, 5/16 IN. 3-WIRE GALVANIZED STEEL, BB GRADE GALV., 171 LB. PER FT 5.85 FT PER L3 (2,500 FEET/REEL)	7274101950

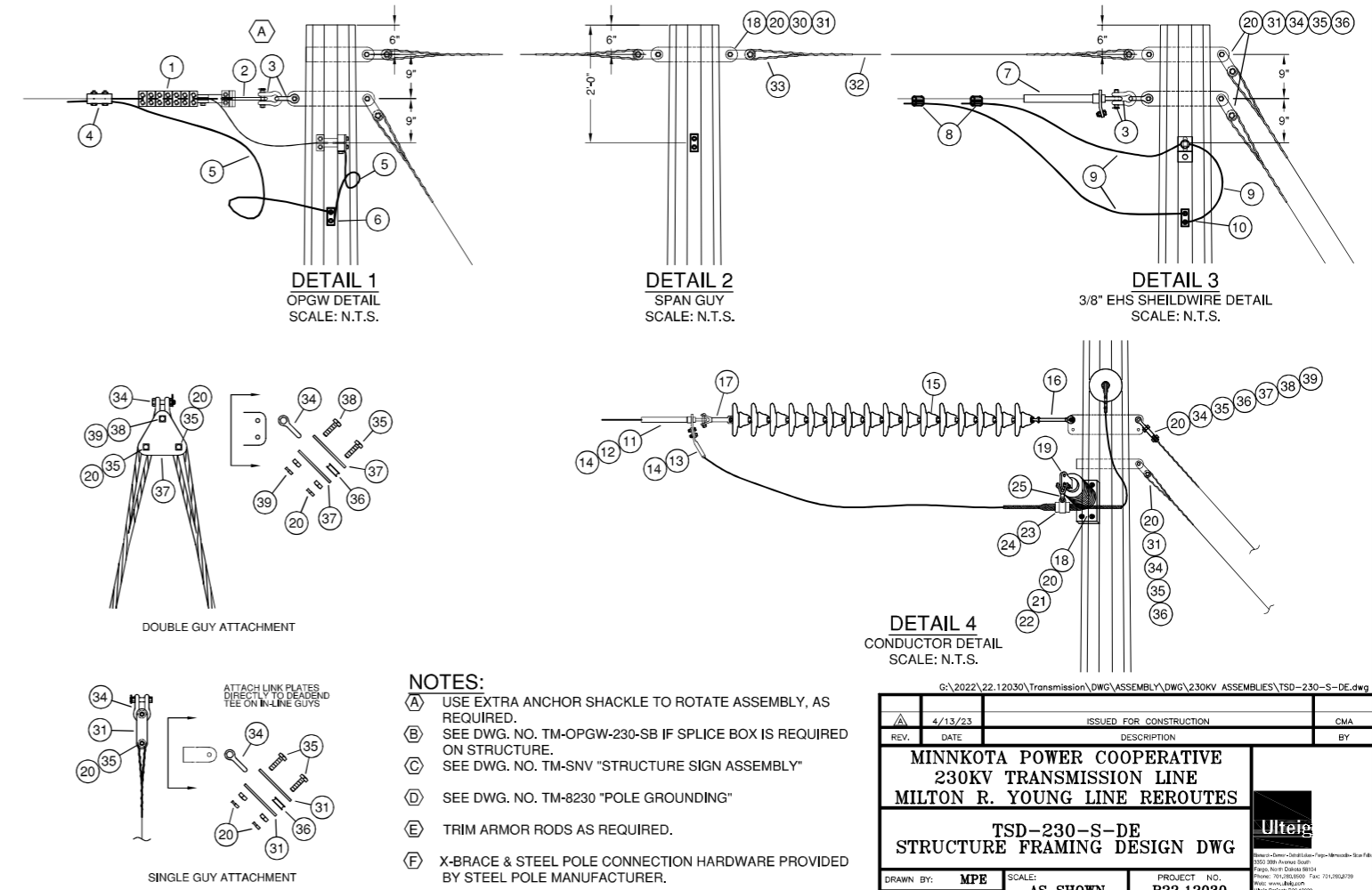
- NOTES:
- (A) SEE DWG. NO. TM-SNV "STRUCTURE SIGN ASSEMBLY"
 - (B) SEE DWG. NO. TM-8230 "POLE GROUNDING"
 - (C) TRIM ARMOR RODS AS REQUIRED.

G:\2022\22.12030\Transmission\DWG\ASSEMBLY\DWG\230KV ASSEMBLIES\TBP-230-SA-SWDE.dwg

REV.	5/25/23	ISSUED FOR CONSTRUCTION	CMA
DATE		DESCRIPTION	BY
MINNKOTA POWER COOPERATIVE 230KV TRANSMISSION LINE MILTON R. YOUNG LINE REROUTES			
TBP-230-SA-SWDE STRUCTURE FRAMING DESIGN DWG			
DRAWN BY: MPE		SCALE: AS SHOWN	PROJECT NO. R22.12030
CHECKED BY: CMA		DATE: 05/25/23	SHEET 1 OF 1
APPROVED BY: CMA			



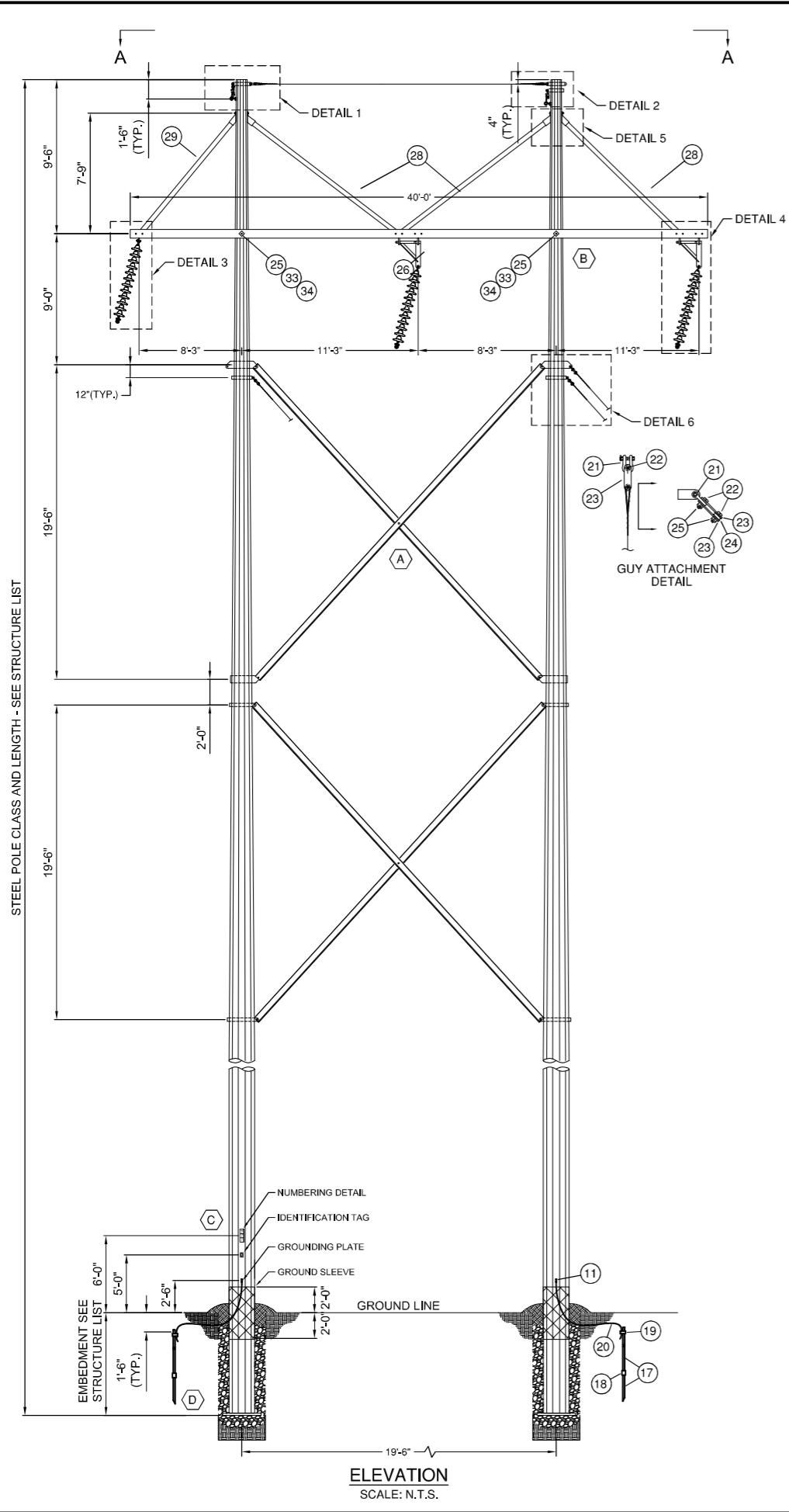
DWG REF	QTY	DESCRIPTION	STOCK NUMBER
1	2	DEADEND, BOLTED FOR OPGW, RANGE .460-.469, PART # ODEC460/469G08, AFL	7273301602
2	2	PLATE, LINK, OPGW, 50,000 LB., 10 INCH, CAT. # ODELP10, FROM CGF	7274502128
3	10	SHACKLE, ANCHOR, 1/2", 30K; AFL: ANSH30L-BNC	NON-STANDARD
4	2	CLAMP, PARALLEL GROOVE, BOLTED, GROUNDING JUMPER; AFL: OBCA2D22	NON-STANDARD
5	20'	JUMPER, GROUNDING 4/0 AAC 7-STR.	NON-STANDARD
6	2	CLAMP, GROUNDING, BRONZE, CABLE TO TRANSFORMER TANK; HUBBELL: GTCS-41	NON-STANDARD
7	2	DEADEND BODY, 3/8 IN. GUY WIRE, #E4514.12J, W/BOLTED JUMPER, ALCOA	7273301487
8	4	CLAMP, PARALLEL GROOVE, ANDERSON ST-4	7272100950
9	30'	CONDUCTOR, COPPER, #4 BARE, STRANDED, 7.76 FT./LB., 1289 LBS/FT., (25#/REEL)	7262060092
10	5	CONNECTOR, STEEL POLE GRNDING, TRANSFORMER TANK GROUND, BLACKBURN TTC-2P TIN PLATED, HUBBELL GTCS-34A	7274101748
11	6	DEADEND BODY, SINGLE TONGUE, 959 MCM 22/7 ACSS, CAT. #8130.122HT, AFL	7273301407
12	6	DEADEND STEEL EYE, 959 MCM 22/7 ACSS, CAT. #9314.453, AFL	7273301417
13	6	DEADEND, JUMPER TERMINAL, 959 MCM 22/7 ACSS, CAT. #5130.122HT, AFL	7273301422
14	6	COMPOUND, SLEEVE FILLER, HIGH TEMP ACSS, FARGO PART # HTJC-16 DR AFL MODEL # AFCHT, FROM CGF	7276904445
15	96	INSULATORS, SUSPENSION, GLASS, ANSI 52-8, 40,000 LBS M&E, SEDIVER/SEVES (FOR CGF LINE)	7274902525
16	6	LINK, EXTENSION, BALL/Y-CLEVIS, 50,000 LB., HUBBELL PART # HYBC-50-11, FROM CGF	7277305061
17	6	LINK, EXTENSION, SOCKET/Y-CLEVIS, 50,000 LB., HUBBELL PART # HSYC-50, FROM CGF	7277305062
18	20	BOLT, MACHINE, 7/8 IN. X 3 IN.	7270900695
19	3	INSULATOR, HORIZ POST, POLYMER, 230 KV, FLAT BASE, 7/8" MTG BOLTS, RELIABLE-H211091VA05, OB-522015-1004, W/12" CORONA RING LP25CR6	7274902339
20	48	NUT, M-F LOCK, 7/8 IN. CAT. NO. J-8584 1/2 JOSLYN	7275302695
21	24	WASHER, ROUND, 15/16" HOLE, 3" WIDE; HB RW3-80	NON-STANDARD
22	12	WASHER, LOCK, SINGLE COIL, 7/8"; HUGHES BROTHERS SLW-80	NON-STANDARD
23	3	ROD, ARMOR, 795 MCM 24/7 ACSR, S/S PREF., 12 RODS PER SET YELLOW PLP AGS-5130 (HSU2770D DULM)	7276503670
24	3	CLAMP, SUSPENSION AGS, 795 24/7 ACSR, W/INSERT, INSERT RANGE 1.091-1.118, PLP (HSU2770H DULM)	7276503681
25	3	Y-CLEVIS EYE FOR AGS SUSPENSION, COND DIA. 1.006"-1.557", PLP YC-5209	NON-STANDARD
26	6	GROUND ROD, GALVANIZED STEEL, DUAL PURPOSE, 5/8" X 8", J23282.8, JOSLYN	7274105017
27	3	COUPLING, GROUND ROD, GALVANIZED STEEL, 5/8", J23282A, JOSLYN	7274102020
28	3	CLAMP, GROUND ROD, 5/8 IN. 1/0 TO 8 SOLID, JAB58H, BLACKBURN	7274101775
29	30'	WIRE, GROUND, 5/16 IN. 3-WIRE GALVANIZED STEEL, BB GRADE GALV., 171 LB. PER FT 5.85 FT PER LB (2,500 FEET/REEL)	7274101950
30	4	ROLLER, GUY, 2-1/2 IN. W/15/16 IN. HOLE, HUGHES 28086, J-6290, SEE 740-10-450-2135	7274502135
31	24	LINK, GUY, 3/8" X 3" X 6" CC HOLE, 15/16" HOLES, 38,000 LB/PR, HUGHES J-22421 (CHARGE OUT AS EACH - BUT ORDERED BY PAIR)	7274502080
32	60'	WIRE, GUY, 3/8 IN. E.H.S. "B" COATING, 7 STRD, ASTM-A363, FOR 5"ATIC WIRE, 3.66 FT/LB., 273 LBS/FT (2,500 FT/REEL)	7272901080
33	4	DEADEND GUY GRIP, 3/8 IN. PREFORMED, PLP GDE-1107, FARGO FWDE-1107	7273301515
34	14	SHACKLE, ANCHOR, 60,000 LB., 3/4" BOLT, HUBBELL AS50-BNK	727704860
35	28	BOLT, MACHINE, 7/8" X 4", HUGHES B84-2,	7270900696
36	20	ROLLER, GUY, 3-1/4 IN. W/1-1/16 IN. HOLE, HUGHES 28083,	7274502138
37	12	TRIPLE HOLE GUY PLATE, 3/4" THICK, ONE 1-1/16" HOLE, TWO 15/16" HOLES, 38,000 LBS, HUGHES AS2355-E	7274502107
38	6	BOLT, MACHINE, 1" X 4", HUGHES B104-2,	7270900715
39	6	NUT, M-F LOCK, 1 IN., J-8585 JOSLYN,	7275302700



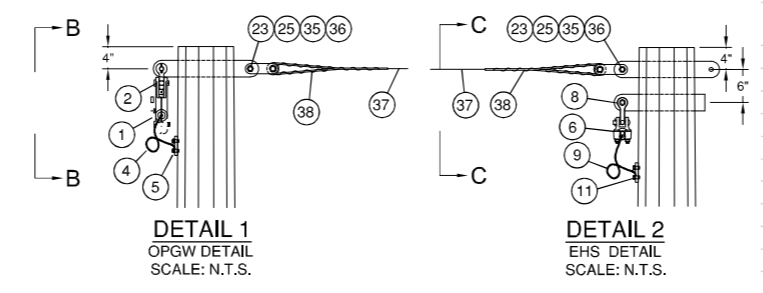
- NOTES:**
- (A) USE EXTRA ANCHOR SHACKLE TO ROTATE ASSEMBLY, AS REQUIRED.
 - (B) SEE DWG. NO. TM-OPGW-230-SB IF SPLICE BOX IS REQUIRED ON STRUCTURE.
 - (C) SEE DWG. NO. TM-SNV "STRUCTURE SIGN ASSEMBLY"
 - (D) SEE DWG. NO. TM-8230 "POLE GROUNDING"
 - (E) TRIM ARMOR RODS AS REQUIRED.
 - (F) X-BRACE & STEEL POLE CONNECTION HARDWARE PROVIDED BY STEEL POLE MANUFACTURER.

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REV.	DATE	DESCRIPTION	CMA
4/13/23		ISSUED FOR CONSTRUCTION	
MINNKOTA POWER COOPERATIVE 230KV TRANSMISSION LINE MILTON R. YOUNG LINE REROUTES			
TSD-230-S-DE STRUCTURE FRAMING DESIGN DWG			
DRAWN BY: MPE	SCALE: AS SHOWN	PROJECT NO. R22.12030	
CHECKED BY: CMA	DATE: 04/13/23	SHEET 1 OF 1	

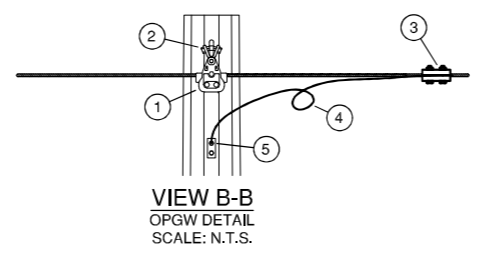


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SCALE: N.T.S.

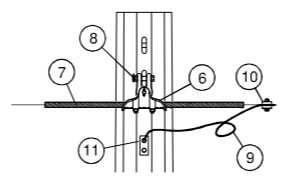


DETAIL 1
OPGW DETAIL
SCALE: N.T.S.

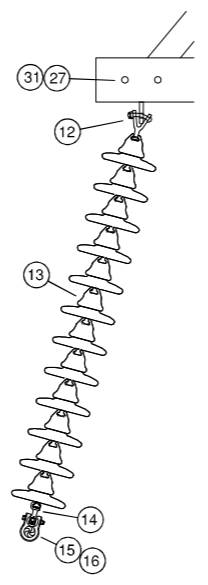
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EHS DETAIL
SCALE: N.T.S.



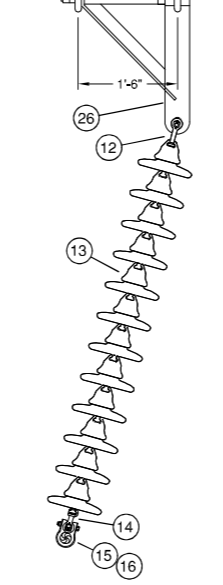
VIEW B-B
OPGW DETAIL
SCALE: N.T.S.



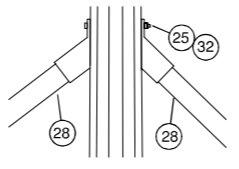
VIEW C-C
EHS DETAIL
SCALE: N.T.S.



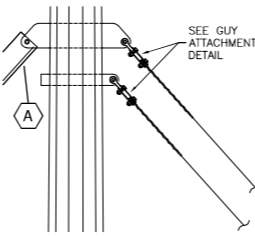
DETAIL 3
CONDUCTOR DETAIL
SCALE: N.T.S.



DETAIL 4
CONDUCTOR DETAIL
SCALE: N.T.S.

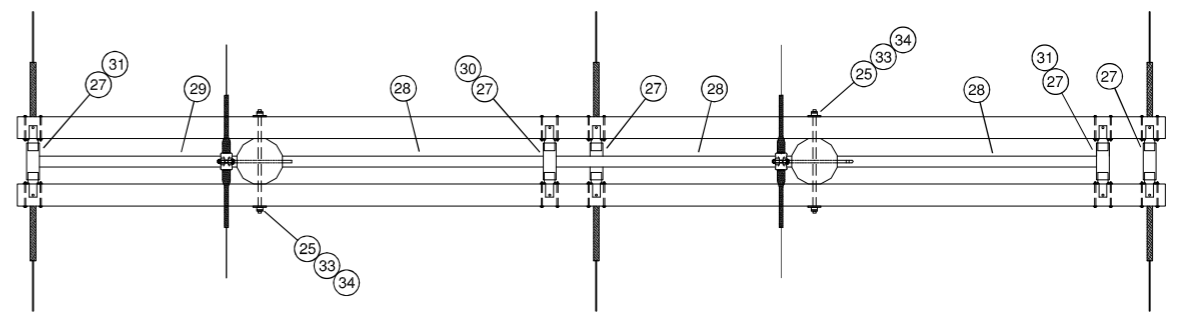


DETAIL 5
BRACE CONNECTION DETAIL
SCALE: N.T.S.



DETAIL 6
X-BRACE/GUYING DETAIL
SCALE: N.T.S.

LIST OF MATERIALS			
DWG REF	QTY	DESCRIPTION	STOCK NUMBER
1	1	CLAMP, SUSP, OPGW 449"-.465" DIA, HIBUS SERIES; AFL: HOS449/465	NON-STANDARD
2	1	EYE, Y-CLEVIS, 5/8" WIDTH, 11/16" HOLE; AFL: YC90E-688-625	NON-STANDARD
3	1	CLAMP, PARALLEL GROOVE, BOLTED, GROUNDING JUMPER; AFL: OBCA2D22	NON-STANDARD
4	10'	JUMPER, GROUNDING 4/0 AAC 7-STR.	NON-STANDARD
5	1	CLAMP, GROUNDING, BRONZE, CABLE TO TRANSFORMER TANK, HUBBELL GTCS-41	NON-STANDARD
6	1	CLAMP, SUSPENSION, 3/8 IN. 7W STEEL, CAT. NO. FSC60, BETHEA	7277304785
7	1	ROD, ARMOR, 3/8" 7W GALV PREF ORANGE, CAT. NO. AR1130, PLP	7276503785
8	2	SHACKLE, ANCHOR, 30,000 LB, 5/8" BOLT, AS-25-L-BNK ANDERSON, BT3024 BNK JOSLYN	7277704855
9	10'	CONDUCTOR, COPPER, #4 BARE, STRANDED, 7.76 FT./LB., 1289 LBS/FT., (25#/REEL)	7262060092
10	1	CLAMP, PARALLEL GROOVE, ANDERSON ST-4	7272100950
11	3	CONNECTOR, STEEL POLE GRNDING, TRANSFORMER TANK GROUND, BLACKBURN TTC-2P TIN PLATED, HUBBELL GTCS-34A	7274101748
12	3	BALL, Y-CLEVIS, 35,000 LBS, YCB-65A, MACLEAN	7272504882
13	36	INSULATOR, SUSPENSION, 10 IN., 22,000 LB., B & S, GLASS-SOCKET TYPE, SEVES/SEDIWER CAT. NO. N100/146	7274902512
14	3	SOCKET EYE 1 1/8 INCH WIDTH, 13/16 IN. HOLE 30,000 LB, LINDSEY CAT# 3327, ANDERSON, #SA-10.5-L OR SA10-5-13	7277305150
15	3	ROD, ARMOR, 795 MCM 24/7 ACSR, 5/5 PREF, .12 RODS PER SET YELLOW, PLP AGS-5130 (HSU2770ROD DULM)	7276503670
16	3	CLAMP, SUSPENSION AGS, 795 24/7 ACSR, W/INSERT, INSERT RANGE 1.091-1.118, PLP (HSU2770H DULM)	7276503681
17	4	GROUND ROD, GALVANIZED STEEL, DUAL PURPOSE, 5/8" X 8", J23282.8, JOSLYN	7274105017
18	2	COUPLING, GROUND ROD, GALVANIZED STEEL, 5/8", J23282A, JOSLYN	7274102020
19	2	CLAMP, GROUND ROD, 5/8 IN. 1/0 TO 8 SOLID, JAB58H, BLACKBURN	7274101775
20	20'	WIRE, GROUND, 5/16 IN. 3-WIRE GALVANIZED STEEL, 88 GRADE GALV., 171 LB. PER FT 5.85 FT PER LB (2,500 FEET/REEL)	7274101950
21	2	SHACKLE, ANCHOR, 60,000 LB, 3/4" BOLT, HUBBELL AS50-BNK	7277704860
22	4	BOLT, MACHINE, 7/8" X 4", HUGHES B84-2,	7270900696
23	8	LINK, GUY, 3/8" X 3" X 6" CC HOLE, 15/16" HOLES, 38,000 L3/PR, HUGHES 3165, JOSLYN J-22421	7274502080
24	2	ROLLER, GUY, 3-1/4 IN. W/1-1/16 IN. HO, E, HUGHES 28083,	7274502138
25	14	NUT, M-F LOCK, 7/8 IN., CAT. NO. J-8584 1/2, JOSLYN	7275302695
26	2	BRACKET, SWING ANGLE, 21" LONG, 18" SPACING, HUGHES 2821 8	NON-STANDARD
27	5	SPACER FITTING, FOR 6"X4" ARM, ADJUSTABLE, 8.5"-12.5"; HUGHES 3414.2HAA-100	NON-STANDARD
28	3	BRACE, VEE 19 1/2 FT. POLE SPACING, 30 DEGREE - 50 DEGREE ENDS, HUGHES 2025M-ADV-144.7	NON-STANDARD
29	1	BRACE, VEE, 45 DEGREE - 45 DEGREE ENDS, HUGHES 2025M-CCV-132	NON-STANDARD
30	1	BOLT, BENT STUD, 7/8 X 8 IN. FOR VEE BRACE, W/NUTS & MF LOCKNUTS, HUGHES 2722.1D-B	7270900550
31	2	BOLT, MACHINE BENT, 7/8 IN. X 6 1/2 IN., CAT. NO. J-27289 W/J27196 NUT, JOSLYN	7270900737
32	2	7/8" x REQ'D LENGTH MACHINE BOLT	727090
33	2	7/8" x REQ'D LENGTH DOUBLE ARMING MACHINE BOLT	727090
34	4	WASHER, SQUARE FLAT, 4"X4"X1/4", W/15/16" HOLE, FOR 7/8" BOLT, CAT. NO SW4-80, HUGHES	7277705380
35	4	BOLT, MACHINE, 7/8 IN. X 3 IN.	7270900695
36	2	ROLLER, GUY, 2-1/2 IN. W/15/16 IN. HOLE, HUGHES 28086, J-6290, SEE 740-10-450-2135	7274502135
37	20'	WIRE, GUY, 3/8 IN. E.H.S., "B" COATING, 7 STRD, ASTM-A363, FOR STATIC WIRE, 3.66 FT/LB., 273 LBS/FT (2,500 FT/REEL)	7272901080
38	2	DEADEND GUY GRIP, 3/8 IN. PREFORMED, PLP GDE-1107, FARGO FWDE-1107	7273301515

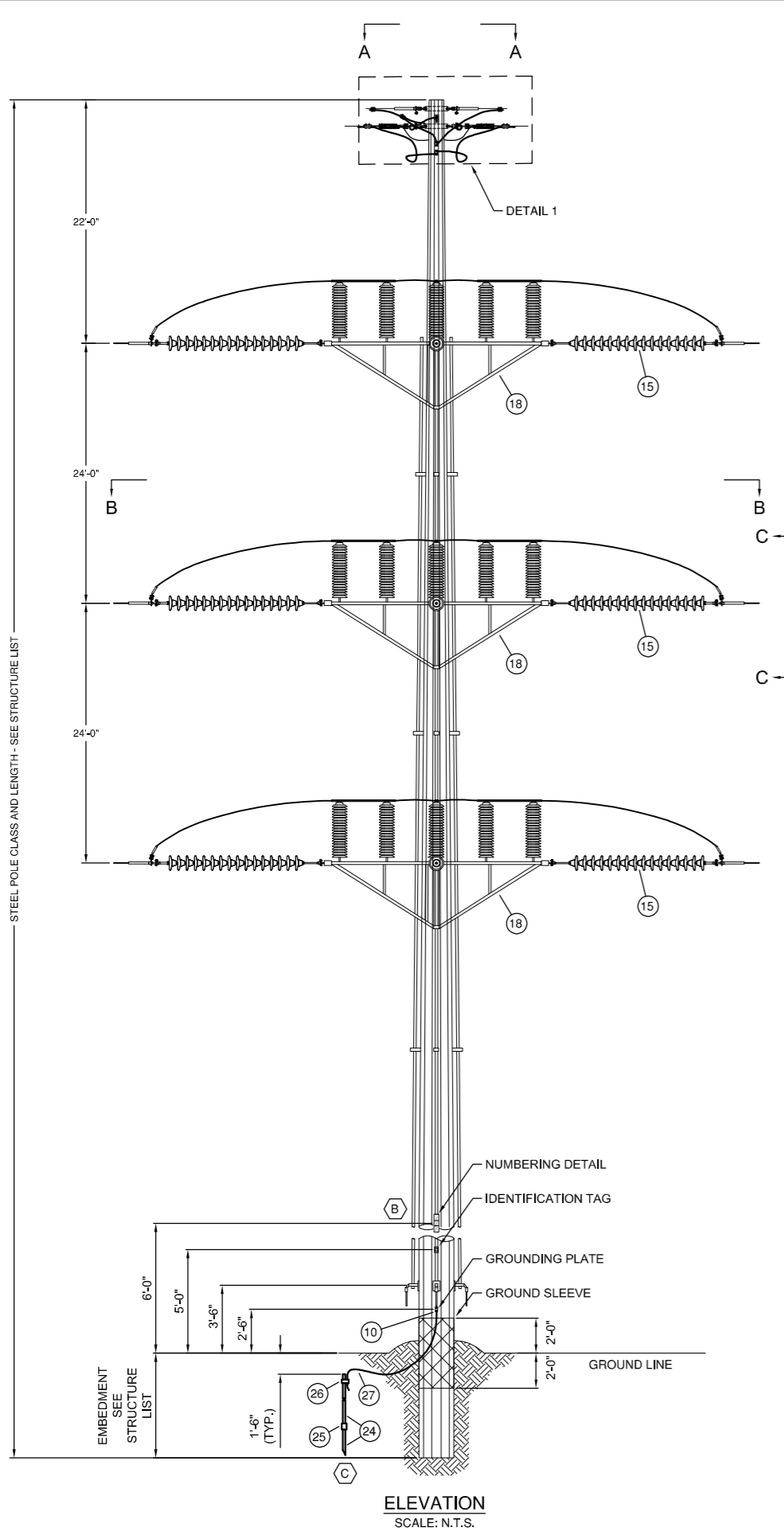


VIEW A-A
STRUCTURE PLAN DETAIL
SCALE: N.T.S.

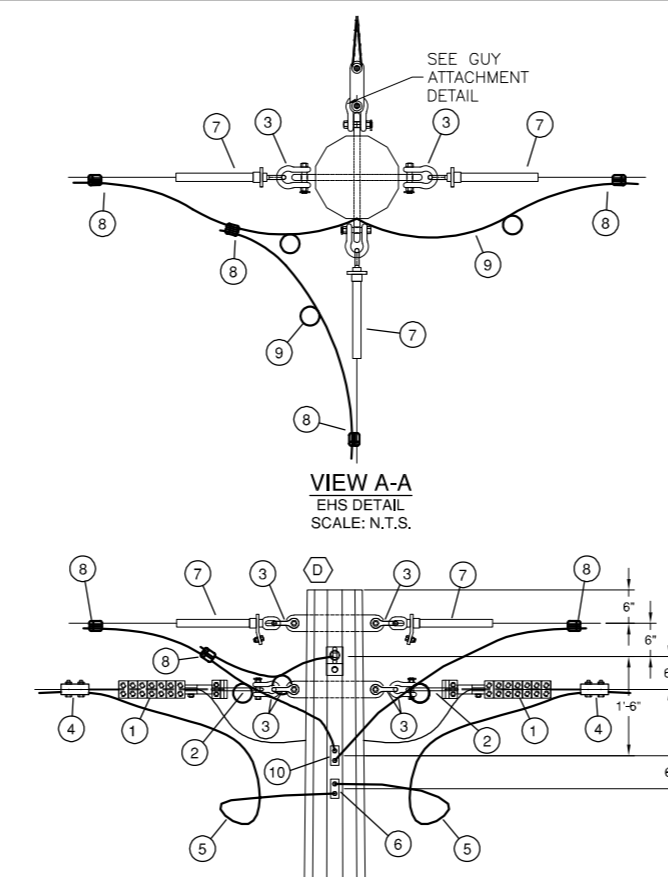
- NOTES:**
- (A) X-BRACE & CONNECTION HARDWARE PROVIDED BY STEEL POLE MANUFACTURER.
 - (B) STEEL CROSSARM SUPPLIED BY STEEL POLE MANUFACTURER.
 - (C) SEE DWG. NO. TM-SNV "STRUCTURE SIGN ASSEMBLY"
 - (D) SEE DWG. NO. TM-8230 "POLE GROUNDING"

G:\2022\22.12030\Transmission\DWG\ASSEMBLY\DWG\230KV ASSEMBLES\TST-230-S-SA.dwg

REV.	DATE	DESCRIPTION	CMA
	4/17/23	75% DESIGN REVIEW	
MINNKOTA POWER COOPERATIVE 230KV TRANSMISSION LINE MILTON R. YOUNG LINE REROUTES			
TST-230-S-SA STRUCTURE FRAMING DESIGN DWG			
DRAWN BY: MPE		SCALE: AS SHOWN	PROJECT NO. R22.12030
CHECKED BY: CMA		DATE: 04/17/23	SHEET 1 OF 1
APPROVED BY: CMA			

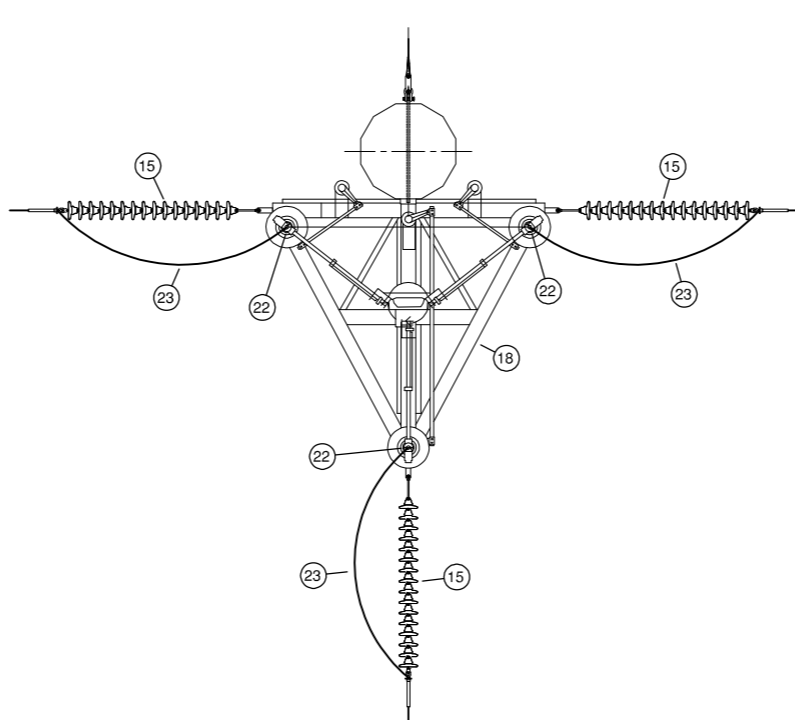


ELEVATION
SCALE: N.T.S.

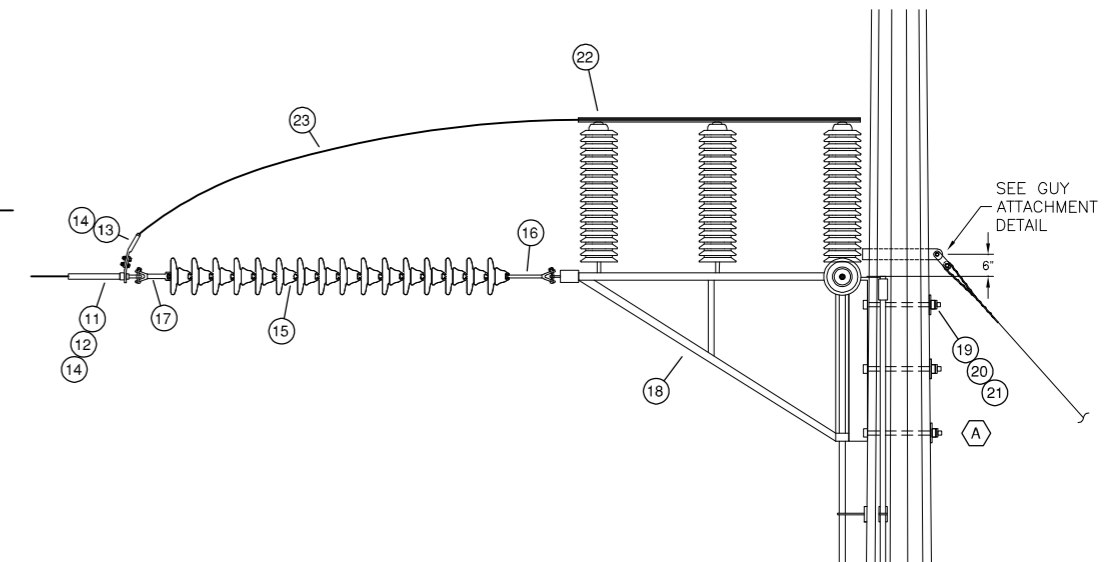


VIEW A-A
EHS DETAIL
SCALE: N.T.S.

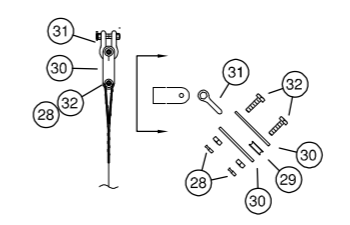
DETAIL 1
OPGW/EHS DETAIL
SCALE: N.T.S.



VIEW B-B
STRUCTURE PLAN DETAIL
SCALE: N.T.S.



VIEW C-C
SWITCH & GUYING DETAIL
SCALE: N.T.S.



GUY ATTACHMENT DETAIL
SCALE: N.T.S.

- NOTES:**
- (A) VERIFY SWITCH MOUNTING DETAILS WITH SWITCH MANUFACTURER DRAWINGS.
 - (B) SEE DWG. NO. TM-SNV "STRUCTURE SIGN ASSEMBLY"
 - (C) SEE DWG. NO. TM-8230 "POLE GROUNDING"
 - (D) USE EXTRA ANCHOR SHACKLE TO ROTATE ASSEMBLY, AS REQUIRED.

LIST OF MATERIALS			
DWG REF	QTY	DESCRIPTION	STOCK NUMBER
1	2	DEADEND, BOLTED FOR OPGW, RANGE .460-.469, PART # ODEC460/469G08, AFL	7273301602
2	2	PLATE, LINK, OPGW, 50,000 LB., 10 INCH, CAT. # ODEL10, FROM CGF	7274502123
3	12	SHACKLE, ANCHOR, 1/2", 30K; AFL: ANSH30L-BNC	NON-STANDARD
4	2	CLAMP, PARALLEL GROOVE, BOLTED, GROUNDING JUMPER; AFL: OBKA2D22	NON-STANDARD
5	20'	JUMPER, GROUNDING 4/0 AAC 7-STR.	NON-STANDARD
6	2	CLAMP, GROUNDING, BRONZE, CABLE TO TRANSFORMER TANK; HUBBELL: GTCS-41	NON-STANDARD
7	3	DEADEND BODY, 3/8 IN. GUY WIRE, #E4514.12J, W/BOLTED JUMPER, ALCOA	7273301487
8	4	CLAMP, PARALLEL GROOVE, BOLTED, GROUNDING JUMPER; AFL: OBKA2D22	7272100950
9	60'	CONDUCTOR, COPPER, #1 BARE, STRANDED, 7.76 FT./LB., 1239 LBS/FT., (25#/REEL)	7262060092
10	3	CONNECTOR, STEEL POLE GRNDING, TRANSFORMER TANK GROUND, BLACKBURN TTC-2P TIN PLATED, HUBBELL GTCS-34A	7274101743
11	9	DEADEND BODY, SINGLE TONGUE, 959 MCM 22/7 ACSS, CAT. # 8130.122HT, AFL	7273301407
12	9	DEADEND STEEL EYE, 959 MCM 22/7 ACSS, CAT. # 9314.453, AFL	7273301417
13	9	DEADEND, JUMPER TERMINAL, 959 MCM 22/7 ACSS, CAT. # 5130.122HT, AFL	7273301422
14	9	COMPOUND, SLEEVE FILLER, HIGH TEMP ACSS, FARGO PART # HTJC-16 OR AFL MODEL # AFCHT, FROM CGF	7276904445
15	144	INSULATORS, SUSPENSION, GLASS, ANSI 52-8, 40,000 LBS M&E, SEDIVER/SEVES (FOR CGF LINE)	7274902525
16	9	LINK, EXTENSION, BALL/Y-CLEVIS, 50,000 LB, HUBBELL PART # HYBC-50-11, FROM CGF	7277305061
17	9	LINK, EXTENSION, SOCKET/Y-CLEVIS, 50,000 LB, HUBBELL PART # HSYC-50, FROM CGF	7277305062
18	1	SWITCH, AIRBREAK, 230 KV, 2000 AMP, 3-WAY; SEECO 3G23020SN	NON-STANDARD
19	9	3/4" x REQ'D LENGTH MACHINE BOLT	727090
20	9	NUT, M-F LOCK, 3/4 IN., J-8584,	7275302690
21	9	WASHER, SQUARE, 3X3X1/4 W/13/16 HOLE, CAT. NO. J-1079 JOSLYN,	7278105345
22	9	DEADEND JUMPER TERMINAL, 954 MCM 54/7 ACSR, CAT. TF13, DIE 13CD, ALCOA	7273301430
23	130'	CONDUCTOR, ALUMINUM, 959.6, 22/7 ASCR-TW, TRAPEZOIDAL, SUWANNEE, .7587 FT/LB, 1.318 LBS/FT (FOR CGF LINE)	7272900750
24	2	GROUND ROD, GALVANIZED STEEL, DUAL PURPOSE, 5/8" X 8', J23282.8, JOSLYN	7274105017
25	1	COUPLING, GROUND ROD, GALVANIZED STEEL, 5/8", J23282A, JOSLYN	7274102020
26	1	CLAMP, GROUND ROD, 5/8 IN. 1/0 TO 8 SOLID, JAB58H, BLACKBURN	7274101775
27	10'	WIRE, GROUND, 5/16 IN. 3-WIRE GALVANIZED STEEL, BB GRADE GALV., 171 LB. PER FT 5.85 FT PER LB (2,500 FEET/REEL)	7274101950
28	8	NUT, M-F LOCK, 7/8 IN., CAT. NO. J-8584 1/2, JOSLYN	7275302695
29	4	ROLLER, GUY, 2-1/2 IN. W/15/16 IN. HOLE, HUGHES 28086, J-6290, SEE 740-1D-450-2135	7274502135
30	8	LINK, GUY, 3/8" X 3" X 6" CC HOLE, 15/16" HOLES, 38,000 LB/PR, HUGHES 3165 (CHARGE OUT AS EACH - BUT ORDERED BY PAIR)	7274502080
31	4	SHACKLE, ANCHOR, 60,000 LB, 3/4" BOLT, HUBBELL AS50-BNK	7277704860
32	8	BOLT, MACHINE, 7/8" X 4", HUGHES B84-2,	7270900595

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REV.	DATE	DESCRIPTION	CMA
4/18/23		ISSUED FOR CONSTRUCTION	

MINNKOTA POWER COOPERATIVE
230KV TRANSMISSION LINE
MILTON R. YOUNG LINE REROUTES

TST-230-S-SWITCH
STRUCTURE FRAMING DESIGN DWG

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DRAWN BY: MPE	SCALE: AS SHOWN	PROJECT NO. R22.12030
CHECKED BY: CMA	DATE: 04/18/23	SHEET 1 OF 1