

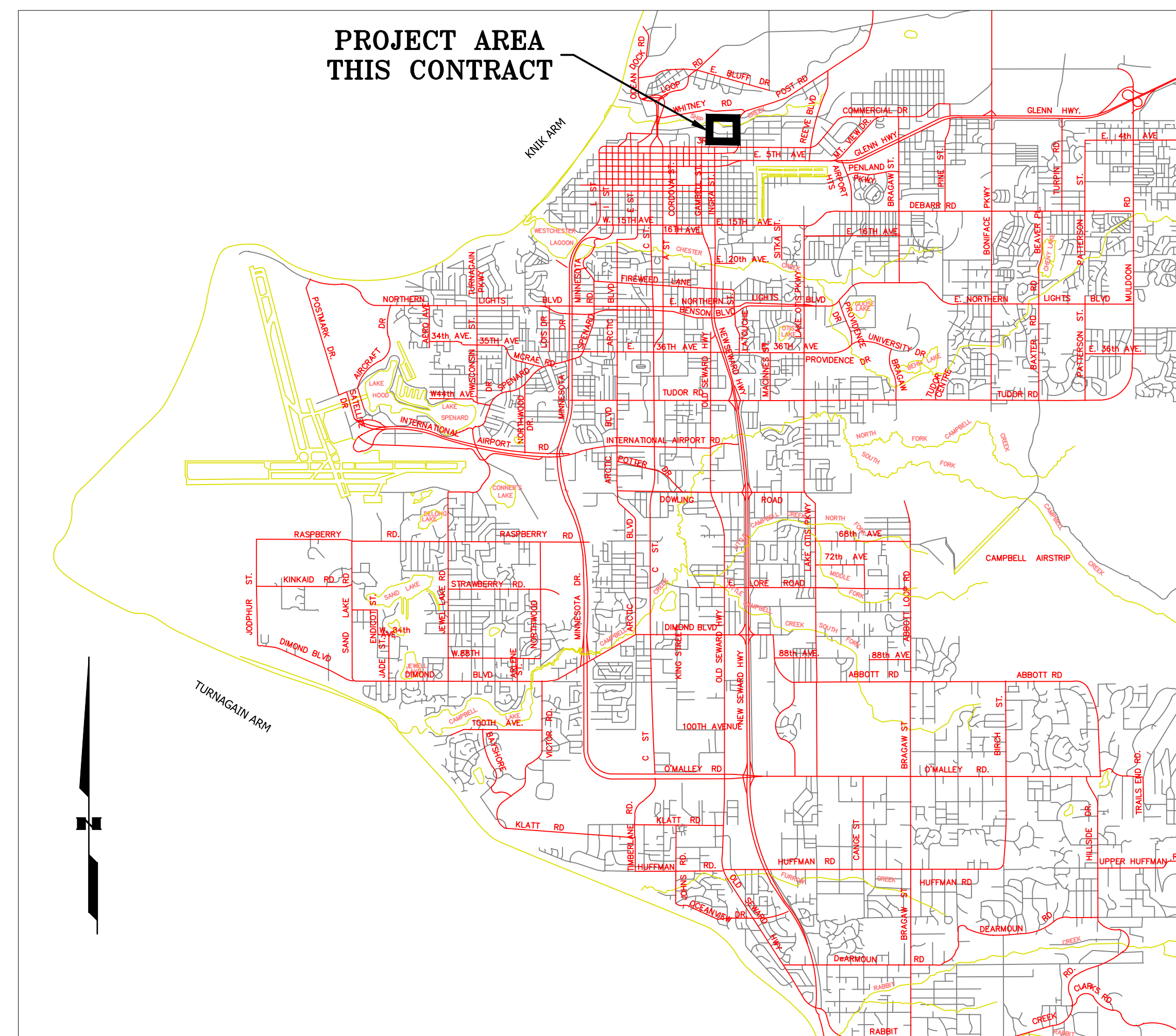
CHUGACH ELECTRIC ASSOCIATION INC

SUB 01 PLANT 1 SWITCHYARD

821 E. 1ST AVE. ANCHORAGE, AK 99501

PLANT 1 115kV BREAKER REPLACEMENT

W.O. P1700073



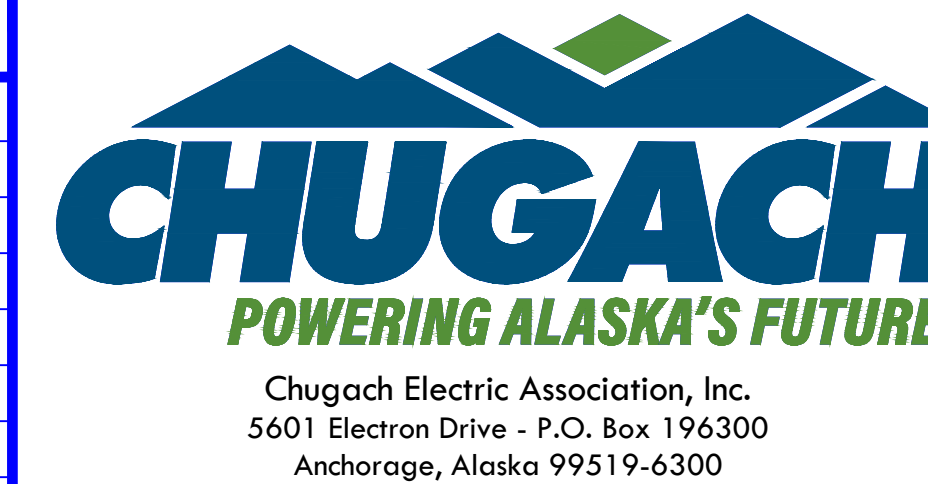
VICINITY MAP

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2	01SS-MC-INDEX_0002	2 OF 2	DRAWING INDEX	
3	01SS-MC-0001_0002	2 OF 3	GENERAL INFORMATION	
4	01SS-MC-0001_0003	3 OF 3	GENERAL INFORMATION	
5	01SS-EL-SA-0002_0001	1 OF 5	SITE PLAN	
6	01SS-EL-SA-0002_0002	2 OF 5	EXISTING & PROPOSED ONE-LINE	
7	01SS-EL-SA-0002_0003	3 OF 5	FOUNDATION PLAN AND DETAILS	
8	*01SS-EL-SA-0002_0004	4 OF 5	CONDUIT PLAN AND DETAILS	
9	01SS-EL-SA-0002_0005	5 OF 5	CABLE PULLING SCHEDULE 115KV BREAKERS	
10	01SS-EL-SO-0001_0002_2-1	2 OF 33	TRIP SUB 10, BREAKER 115-1 & 115-6 - EXISTING-PROPOSED	
11	01SS-EL-SO-0001_0001_2-1	1 OF 33	TRIP SUB 12, BREAKER 115-2 & 115-3 - EXISTING-PROPOSED	
12	01SS-EL-SO-0001_0009_2-1	9 OF 33	TRIP SUB 6, BREAKER 115-4 & 115-5 - EXISTING-PROPOSED	
13	*01SS-EL-SO-0001_0010_2-1	10 OF 33	115KV X-FMR AND BUS DIFFERENTIAL	
14	01SS-EL-SO-0002_0001	1 OF 6	115-1 AC & DC SCHEMATIC - PROPOSED	
15	01SS-EL-SO-0002_0002	2 OF 6	115-2 AC & DC SCHEMATIC - PROPOSED	
16	01SS-EL-SO-0002_0002	5 OF 28	115-2 WIRING DIAGRAM 1 - PROPOSED	
17	01SS-EL-SO-0002_0003	3 OF 6	115-3 AC & DC SCHEMATIC - PROPOSED	
18	01SS-EL-SO-0002_0004	4 OF 6	115-4 AC & DC SCHEMATIC - PROPOSED	
19	01SS-EL-SO-0002_0005	5 OF 6	115-5 AC & DC SCHEMATIC - PROPOSED	
20	01SS-EL-SO-0002_0006	6 OF 6	115-6 AC & DC SCHEMATIC - PROPOSED	
21	01SS-EL-WO-0003_0001	1 OF 28	115-1 WIRING DIAGRAM 1 - PROPOSED	
22	*01SS-EL-WO-0003_0002	2 OF 28	115-1 WIRING DIAGRAM 2	
23	01SS-EL-WO-0003_0003	3 OF 28	115-1 CT WIRING DIAGRAM - PROPOSED	
24	01SS-EL-WO-0003_0004	4 OF 28	115-1 JUNCTION CABINET - PROPOSED	
25	*01SS-EL-WO-0003_0005	6 OF 28	115-2 WIRING DIAGRAM 2	
26	01SS-EL-WO-0003_0007	7 OF 28	115-2 CT WIRING DIAGRAM - PROPOSED	
27	01SS-EL-WO-0003_0008	8 OF 28	115-2 JUNCTION CABINET - PROPOSED	
28	01SS-EL-WO-0003_0009	9 OF 28	115-3 WIRING DIAGRAM 1 - PROPOSED	
29	*01SS-EL-WO-0003_0010	10 OF 28	115-3 WIRING DIAGRAM 2	
30	01SS-EL-WO-0003_0011	11 OF 28	115-3 CT WIRING DIAGRAM - PROPOSED	
31	01SS-EL-WO-0003_0012	12 OF 28	115-3 JUNCTION CABINET - PROPOSED	
32	01SS-EL-WO-0003_0013	13 OF 28	115-4 WIRING DIAGRAM 1 - PROPOSED	
33	*01SS-EL-WO-0003_0014	14 OF 28	115-4 WIRING DIAGRAM 2	
34	01SS-EL-WO-0003_0015	15 OF 28	115-4 CT WIRING DIAGRAM - PROPOSED	
35	01SS-EL-WO-0003_0016	16 OF 28	115-4 JUNCTION CABINET - PROPOSED	
36	01SS-EL-WO-0003_0017	17 OF 28	115-5 WIRING DIAGRAM 1 - PROPOSED	
37	*01SS-EL-WO-0003_0018	18 OF 28	115-5 WIRING DIAGRAM 2	
38	01SS-EL-WO-0003_0019	19 OF 28	115-5 CT WIRING DIAGRAM - PROPOSED	
39	01SS-EL-WO-0003_0020	20 OF 28	115-5 JUNCTION CABINET - PROPOSED	
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* DRAWING FOR REFERENCE ONLY

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD
MISCELLANEOUS & KEY MAP
DRAWING INDEX

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DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-MC-INDEX

01SS-MC-INDEX_0001.dwg

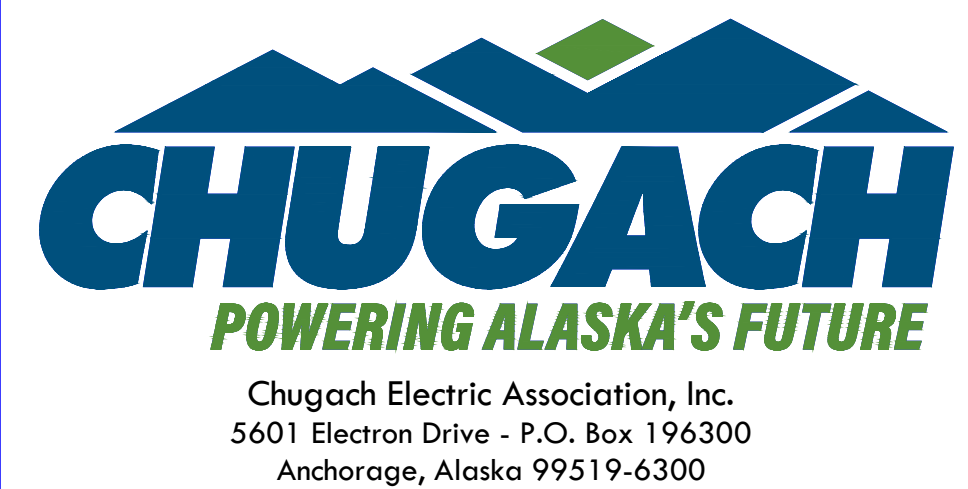
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42	01SS-EL-WO-0003_0023	23 OF 28	115-6 CT WIRING DIAGRAM - PROPOSED	
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45	01SS-EL-WO-0003_0027	27 OF 28	MARSHALLING PANEL WIRING DIAGRAM 2 RIGHT SIDE	
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49	01SS-EL-TL-0001_0002_2-1	2 OF 7	BREAKER 115-4, 115-5, AND 115-6 - EXISTING-PROPOSED	
50	*01SS-EL-TL-0001_0003_2-1	3 OF 7	TT-2	
51	01SS-SS-0020_0001	1 OF 8	FOUNDATION DETAILS	
52	01SS-SS-0020_0002	2 OF 8	GROUNDING PLAN & UNDERGROUND SERVICE	
53	01SS-SS-0020_0004	4 OF 8	BILL OF MATERIALS	
54	01SS-SS-0002_0001_1	1 OF 1	STATION SERVICE - 34.5KV FEED - PROPOSED	
55	01SS-SS-0001_0001_1	1 OF 1	STATION SERVICE GROUNDING - PROPOSED	
56	01SS-SS-0018_0001_1-1	1 OF 1	115KV BREAKER - PLAN VIEW - PROPOSED	
57	01SS-SS-0019_0001_1-1	1 OF 1	115KV BREAKER - SECTION VIEW - PROPOSED	
58	01SS-SS-0020_0007	7 OF 8	115KV BREAKER - JUNCTION CABINET - PROPOSED	
59	01SS-SS-0017_0001_0	1 OF 1	115KV YARD GROUNDING PLAN VIEW - PROPOSED	
60	01SS-SS-0016_0001_0	1 OF 1	115KV YARD CONDUIT PLAN - EXISTING	
61	01SS-SS-0020_0008	8 OF 8	115KV BREAKER CHANGEOUT - BILL OF MATERIALS	
62	01SS-EL-SO-7000_0001	1 OF 1	DEMOLITION - OCB 115-1 SCHEMATIC	
63	01SS-EL-SO-7001_0001	1 OF 1	DEMOLITION - OCB 115-2 SCHEMATIC	
64	01SS-EL-SO-7002_0001	1 OF 1	DEMOLITION - OCB 115-3 SCHEMATIC	
65	01SS-EL-SO-7003_0001	1 OF 1	DEMOLITION - OCB 115-4 SCHEMATIC	
66	01SS-EL-SO-7004_0001	1 OF 1	DEMOLITION - OCB 115-5 SCHEMATIC	
67	01SS-EL-SO-7005_0001	1 OF 1	DEMOLITION - OCB 115-6 SCHEMATIC	
68	01SS-EL-WO-7006_0001	1 OF 1	DEMOLITION - OCB 115-1 WIRING DIAGRAM	
69	01SS-EL-WO-7007_0001	1 OF 1	DEMOLITION - OCB 115-2 WIRING DIAGRAM	
70	01SS-EL-WO-7008_0001	1 OF 1	DEMOLITION - OCB 115-3 WIRING DIAGRAM	
71	01SS-EL-WO-7009_0001	1 OF 1	DEMOLITION - OCB 115-4 WIRING DIAGRAM	
72	01SS-EL-WO-7010_0001	1 OF 1	DEMOLITION - OCB 115-5 WIRING DIAGRAM	
73	01SS-EL-WO-7011_0001	1 OF 1	DEMOLITION - OCB 115-6 WIRING DIAGRAM	
74	01SS-SS-7012_0001	1 OF 1	DEMOLITION - 115KV BREAKER - PLAN VIEW	
75	01SS-SS-7013_0001	1 OF 1	DEMOLITION - 115KV BREAKER - SECTION VIEW	
76	01SS-SS-7014_0001	3 OF 8	CONDUIT AND CABLE SCHEDULE	

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DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD SUBSTATION ELECTRICAL DRAWING INDEX	
CONFIDENTIAL		01SS-MC-INDEX_0002.dwg	
DRAWING NO. - PREVIOUS/REFERENCE			
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SUB 01_PLANT 1 SWITCHYARD

821 E. 1ST AVE. ANCHORAGE, AK 99501

CHUGACH ELECTRIC ASSOCIATION, INC.
5601 ELECTRON DRIVE - P.O. BOX 196300
ANCHORAGE, ALASKA 99519-6300

STANDARD ABBREVIATIONS - ELECTRICAL

<p>& AND @ AT CL CENTERLINE φ PHASE # POUND OR NUMBER A AMPERE ACB AIR CIRCUIT BREAKER AB AIR BREAK ABV ABOVE AC ALTERNATING CURRENT ADJ ADJUSTABLE ADJT ADJACENT ALT ALTERNATE APPRX APPROXIMATE B BUS BF BREAKER FAIL BFI BREAKER FAIL INITIATE BKR BREAKER BLDG BUILDING BLK BLOCK BOT BOTTOM BTU BRITISH THERMAL UNIT BTWN BETWEEN BU BACKUP C COLUMN CAP CAPACITOR OR CAPACITANCE CAP CORRUGATED ALUMINUM PIPE CB CENTER BREAK CBL CABLE CEA CHUGACH ELECTRIC ASSOCIATION CEM CEMENT CF CUBIC FOOT CHK CHECK CI CAST IRON CIP CAST IRON PIPE CIPC CAST-IN-PLACE CONCRETE CIR CIRCL CKT CIRCUIT CLK CLOCK CLS CLOSE CML CIRCLAR MIL CMP CORRUGATED METAL PIPE COS COSINE CONC CONCRETE CONST CONSTRUCTION CONT CONTINUOUS CONTR CONTRACTOR CS CIRCUIT SWITCHER OR CONTROL SWITCH CSP CORRUGATED STEEL PIPE CT CURRENT TRANSFORMER CTRL CONTROL CTS CLEAR TO SEND DC DIRECT CURRENT DCD DATA CARRIER DETECT DCE DATA COMMUNICATIONS EQUIPMENT DDE DOUBLE DEAD END DE DEAD END DEM DEMOLISH, DEMOLITION DEMOB DEMOBILIZE DET DETAIL DFR DISTURBANCE FAULT RECORDER DI DIGITAL INPUT DIA DIAMETER DIAG DIAGONAL DIM DIMENSION DIST DISTRIBUTION DBSS DEBARR. SUBSTATION DLSS DOWLING SUBSTATION DNP DISTRIBUTED NETWORK PROTOCOL DO DIGITAL OUTPUT DTE DATA TERMINAL EQUIPMENT DWG DRAWING</p>	<p>EA EACH EIA ELECTRONICS INDUSTRY ASSOCIATION EJ EXPANSION JOINT EL ELECTRICAL ELEV ELEVATION ENCL ENCLOSURE EQ EQUAL EQUIP EQUIPMENT EST ESTIMATE EXIST EXISTING F FUSE FREQ FREQUENCY FT FEET FT FEED THROUGH FUT FUTURE G CONDUCTANCE OR GROUND GA GAUGE GALV GALVANIZED GB GROUND BUS GCB GAS CIRCUIT BREAKER GEN GENERATOR GI GALVANIZED IRON GND GROUND GOAB GANG OPERATED AIR-BREAK SWITCH GRC GALVANIZED RIGID CONDUIT GRD GRADE, GRADING GRSC GALVANIZED RIGID STEEL CONDUIT H HENRY HDPE HIGH-DENSITY POLYETHYLENE HLO HOT LINE ORDER HNSS HANE SUBSTATION HORIZ HORIZONTAL HP HORSEPOWER HPSS HOPE SUBSTATION HZ HERTZ IA PHASE A CURRENT IB PHASE B CURRENT IC PHASE C CURRENT ID INSIDE DIAMETER IN INPUT IN INCH IN NEUTRAL CURRENT INCL INCLUDE(D), INCLUDING IND INDUSTRY INT INTERSECTION INV INVERT IP POLARIZING CURRENT j COMPLEX NUMBER J JOULE JB JUNCTION BOX KA KILOAMPERE KV KILOVOLT KW KILOWATT L INDUCTANCE L LINE L LOAD LB LOAD BREAK LT LIGHT M METER(S) MAT MATERIAL MAX MAXIMUM MFG MANUFACTURER MI MILE MIN MINIMUM MISC MISCELLANEOUS MM MILLIMETER(S) MO MOTOR OPERATED (OR) MOBILIZE MTR METER MW MEGAWATT N NEUTRAL N NEWTON</p>	<p>N NORTH NC NORMALLY CLOSED NCC NORMALLY CLOSED CONTACT N/C NO CONNECTION NIC NOT IN CONTRACT NO NORMALLY OPEN NOC NORMALLY OPEN CONTACT NS SYNCHRONIZING NEUTRAL NTS NOT TO SCALE OD OUTSIDE DIAMETER OUT OUTPUT P REAL POWER OR PRIMARY PUSH BUTTON PF POWER FACTOR PLC PROGRAMMABLE LOGIC CONTROLLER PM PAD-MOUNT TRANSFORMER PT POINT PT POTENTIAL TRANSFORMER PTSS PORTAGE SUBSTATION PVC POLYVINYL CHLORIDE PVMT PAVEMENT PWR POWER Q REACTIVE POWER R RESISTANCE OR RESISTOR RBS RASPBERRY SUBSTATION RAD RADIUS RD ROAD RE REMOTE END REF REFERENCE REQD REQUIRED RET REMOTE END TRIP RETURN REV REVISION RLY RELAY RR RAILROAD ROW RIGHT OF WAY RTS READY TO SEND RTU REMOTE TERMINAL UNIT RX RECEIVE S APPARENT POWER S SOUTH S SOURCE S-L SOURCE-LOAD SA SURGE ARRESTOR SC SWITCH CABINET SEC SECTION SEC SECONDARY SVC SERVICE SVC STATIC VAR COMPENSATOR SHT SHEET SIM SIMILAR SIN SINE SPEC SPECIFICATION SPECIFICATIONS SS SYNCHRONIZING SWITCH STA STATION STD STANDARD SUSS SUMMIT LAKE SUBSTATION SW SWITCH SWGR SWITCHGEAR SYM SYMMETRICAL SYNCH SYNCHRONIZE T TIME OR TRANSFORMER TAN TANGENT TCM TRIP COIL MONITOR TEL TELEPHONE TERM TERMINAL TEMP TEMPORARY THK THICK(NESS) TIA TELECOMMUNICATIONS INDUSTRY ASSOCIATION TRIP TRP TRIP TURB TURBINE</p>
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ABBREVIATIONS: WHEN USED IN THESE ELECTRICAL DRAWINGS SHALL CONFORM TO THE ABOVE LIST, UNLESS NOTED OTHERWISE. OTHER SECTIONS (SUCH AS STRUCTURAL AND CIVIL PLANS) MAY CONTAIN SPECIFIC REFERENCES AND LEGENDS WITH INTERPRETATIONS INTENDED ONLY FOR THOSE SECTIONS. NOT ALL ABBREVIATIONS MAY BE USED IN THIS DRAWING SET.

STANDARD BLOCKS - ELECTRICAL



CONTRACT NOTES

- THE FOLLOWING TRIANGLES AND CLOUDING WILL BE USED ON DRAWINGS TO IDENTIFY THE CONTRACTOR'S SCOPE OF WORK IN SPECIFIC AREAS. AREAS NOT CLOUDED ON DRAWINGS SHALL NOT BE IN THE CONTRACTOR'S SCOPE OF WORK.
 - IN CONTRACT**: [Symbol]
 - NOT IN CONTRACT**: [Symbol]
- IF NO CLOUDS ARE NOTED ON THE DRAWING, THE CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE THE ENTIRE DRAWING.
- IF THE DRAWING IS ISSUED FOR REFERENCE ONLY, IT WILL BE IDENTIFIED WITH THE FOLLOWING BLOCK. THE PURPOSE OF AN "ISSUED FOR REFERENCE ONLY" DRAWING IS TO CONVEY INFORMATION THAT MAY BE USEFUL TO THE CONTRACTOR IN PERFORMANCE OF THE CONTRACT. NONE OF THE MATERIAL SHOWN ON THE DRAWING IS WITHIN THE CONTRACTOR'S SCOPE OF WORK TO SUPPLY.
- DEMOLITION DRAWINGS WILL BE IDENTIFIED WITH THE FOLLOWING BLOCK. DEMOLITION WORK THAT IS WITHIN THE CONTRACTOR'S SCOPE OF WORK WILL BE IDENTIFIED BY DEMOLITION CLOUDS. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT FOR THE REMOVAL OF THE IDENTIFIED ITEMS. SCOPE OF WORK OR PERFORMANCE INFORMATION FOR THE CONTRACTOR MAY BE CONVEYED WITH "DEMOLITION NOTES". BELOW IS AN EXAMPLE OF A DEMOLITION CLOUD AND DEMOLITION NOTES.
 - DEMOLITION**: [Symbol]
 - EXAMPLE DEMOLITION CLOUD**: [Symbol]
 - EXAMPLE DEMOLITION NOTES**: [Symbol]

ISSUED FOR REFERENCE ONLY
- DO NOT EDIT -

- SCOPE OF WORK OR PERFORMANCE INFORMATION FOR THE CONTRACTOR MAY BE CONVEYED WITH "CONSTRUCTION NOTES". BELOW IS AN EXAMPLE OF CONSTRUCTION NOTES.
 - CONSTRUCTION NOTES**: [Symbol]
 - EXAMPLE NOTE**: [Symbol]
 - EXAMPLE NOTE**: [Symbol]

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073		ENG. STAMP		
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1						



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD MISCELLANEOUS & KEY MAP GENERAL INFORMATION	
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01SS-MC-INFO_0001.dwg	
DRAWING NO. - PREVIOUS/REFERENCE	
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SUB 01_PLANT 1 SWITCHYARD

CABLE AND WIRE STANDARD

A. CABLE COLOR CODES

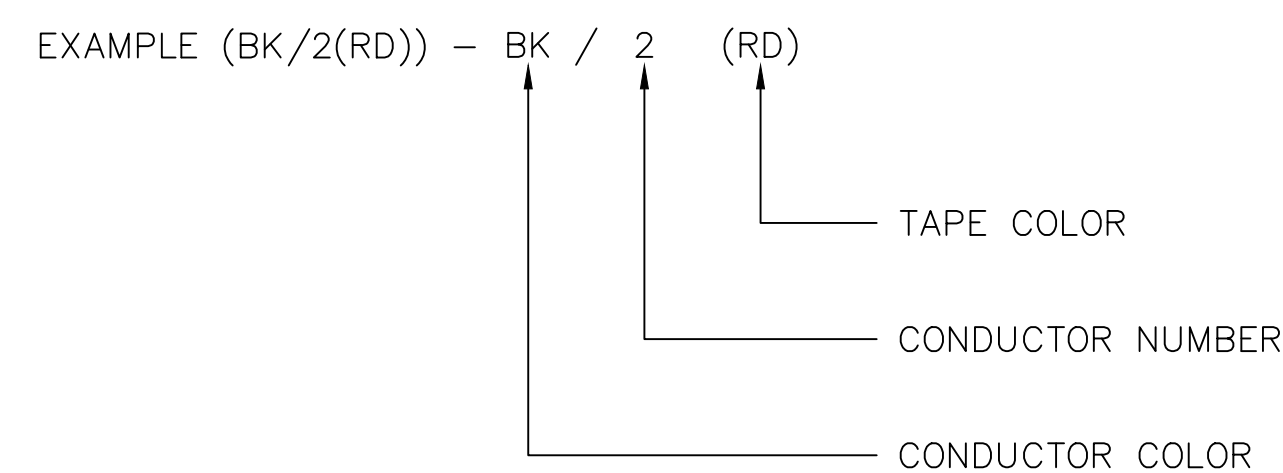
COND. NO.	BASE COLOR	TRACER COLOR	ABBR.
1	BLACK	-	BK
2	WHITE	-	WH
3	RED	-	RD
4	GREEN	-	GN
5	ORANGE	-	OR
6	BLUE	-	BL
7	WHITE	BK	WH/BK

COND. NO.	BASE COLOR	TRACER COLOR	ABBR.
1	BLACK	-	BK
2	RED	-	RD
3	BLUE	-	BL
4	ORANGE	-	OR
5	YELLOW	-	YL
6	BROWN	-	BN
7	RED	BLACK	RD/BK
8	BLUE	BLACK	BL/BK
9	ORANGE	BLACK	OR/BK
10	YELLOW	BLACK	YL/BK
11	BROWN	BLACK	BN/BK
12	BLACK	RED	BK/RD
13	BLUE	RED	BL/RD
14	ORANGE	RED	OR/RD
15	YELLOW	RED	YL/RD
16	BROWN	RED	BN/RD
17	BLACK	BLUE	BK/BL
18	RED	BLUE	RD/BL
19	ORANGE	BLUE	OR/BL

NO.	COLOR	TAPE COLORS			
		240 VAC		DC	
1	BLACK	L1	BLACK	POS	RED
2	BLACK	L2	RED	NEG	BLACK
3	BLACK	N	WHITE	N/A	N/A
-	BARE	GND	N/A	N/A	N/A

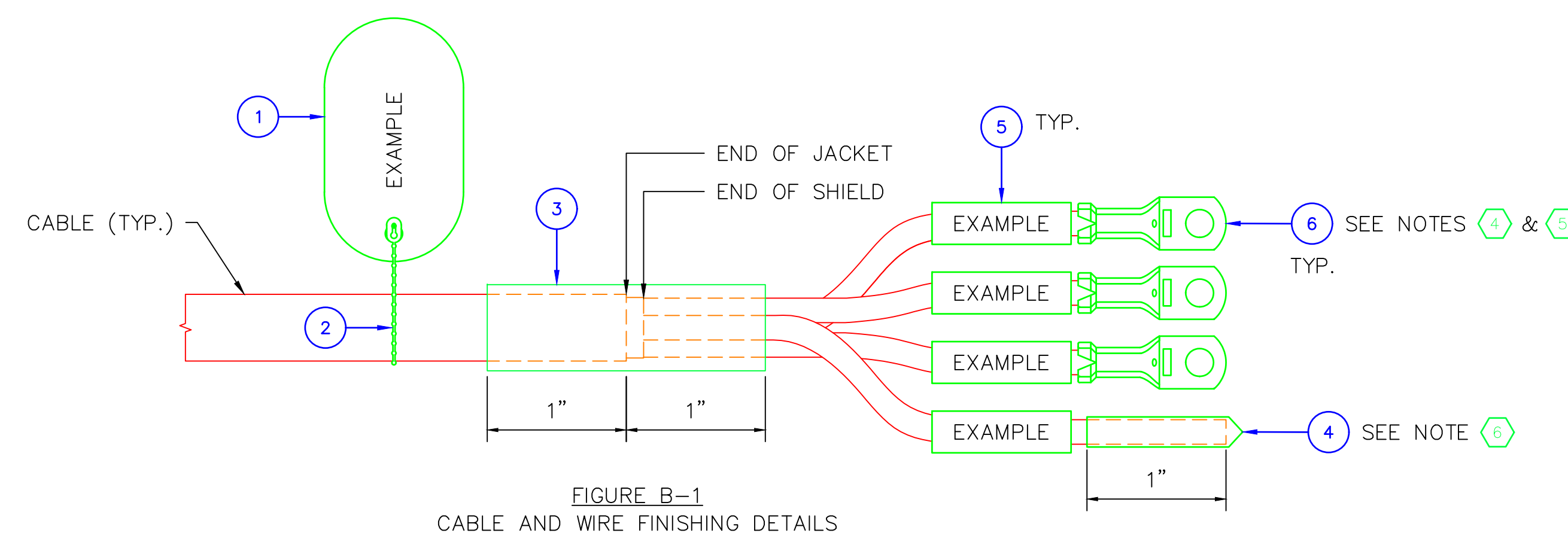
NOTES:

- 1 POWER CABLES WITH ICEA METHOD 4 COLOR CODING SHALL HAVE THEIR CONDUCTORS IDENTIFIED WITH COLORED TAPE ACCORDING TO TABLE A-4, AND AS IDENTIFIED IN THE DRAWINGS. THE FOLLOWING IS AN EXAMPLE OF TAPE APPLICATION FOR A CONDUCTOR IN A POWER CABLE WITH ICEA METHOD 4 COLOR CODE.



B. CABLE AND WIRE FINISHING

PAIR NO.	COLOR
1	BLACK
1	WHITE
2	BLACK
2	WHITE
3	BLACK
3	WHITE
4	BLACK
4	WHITE
5	BLACK
5	WHITE
6	BLACK
6	WHITE
7	BLACK
7	WHITE
8	BLACK
8	WHITE
9	BLACK
9	WHITE
10	BLACK
10	WHITE
11	BLACK
11	WHITE
12	BLACK
12	WHITE



REF. NO.	DESCRIPTION	MANUFACTURER/CATALOG NUMBER
1	CABLE TAG, FLAME RETARDANT, 1.75" X 1.00"	BRADY/B-145 (OAE)
2	CABLE TAG FASTENER	BRADY/81761 (OAE)
3	HEAVY WALL HEAT-SHRINKABLE TUBING	THOMAS & BETTS/HS-SERIES (OAE)
4	THIN WALL HEAT-SHRINKABLE TUBING	THOMAS & BETTS/CP0-SERIES (OAE)
5	WIRE LABEL	BRADY/B-342 (OAE) (SEE NOTE 2)
6	WIRE TERMINAL 10-12 AWG, 8-10 STUD 10-12 AWG, 1/4" STUD 8 AWG, 8-10 STUD 6 AWG, 8-10 STUD NOT LISTED	BURNDY/YAV10-H BURNDY/YAV10-H3 BURNDY/YAV8C-L BURNDY/YAV6C-L1 SUBMIT FOR APPROVAL

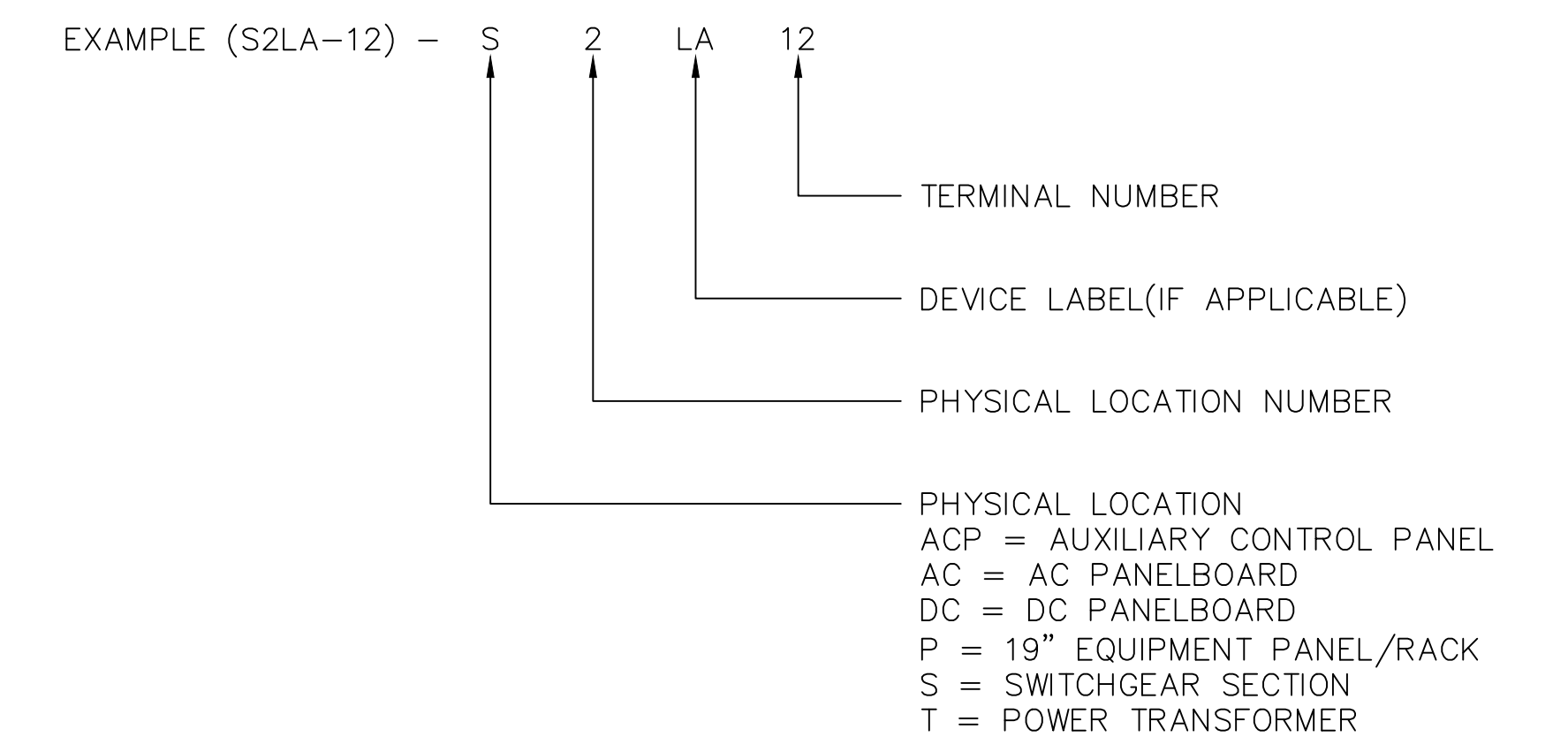
NOTES:

- CABLE AND WIRE FINISHING MATERIAL QUANTITIES TO BE DETERMINED BY THE CONTRACTOR.
- LABELS ARE NOT TO BE HEAT SHRUNK. LABELS SHALL BE CLEARLY VISIBLE IN THE AS-LEFT POSITION.
- SHIELDED COMMUNICATION CABLES SHALL HAVE ONLY ONE END OF THE SHIELD GROUNDED. SHIELD-GROUND CONNECTION SHALL BE MADE IN THE SWITCHGEAR ENCLOSURE FOR CABLES THAT EXTEND OUTSIDE OF THE SWITCHGEAR ENCLOSURE.
- TERMINATED CONDUCTORS SHALL HAVE SUFFICIENT LENGTH TO BE RE-TERMINATED AT ANY LOCATION WITHIN THE CABINET OR RACK.
- WIRE TERMINAL SHROUDS SHALL NOT HAVE HEAT SHRINK TUBING APPLIED.
- SPARE CONDUCTORS SHALL HAVE SUFFICIENT LENGTH TO BE RE-TERMINATED AT ANY LOCATION WITHIN THE CABINET OR RACK.
- AFTER THE CABLE JACKET HAS BEEN STRIPPED BACK TO THE APPROPRIATE LENGTH, EACH CABLE SHALL HAVE A MINIMUM 2 INCH PIECE OF HEAT SHRINK TUBING WITH INTERNAL HOT MELT SEALING COMPOUND INSTALLED. THE PURPOSE OF THE HEAT SHRINK TUBING IS TO SEAL THE END OF THE CABLE AND PROVIDE A CLEAN INSTALLATION. THE HEAT SHRINK TUBING SHALL BE LONG ENOUGH AND POSITIONED SO THAT APPROXIMATELY 1 INCH OF HEAT SHRINK TUBING IS POSITIONED OVER THE CABLE JACKET AND 1 INCH OF HEAT SHRINK TUBING IS POSITIONED OVER THE CONDUCTORS. HEAT SHRINK TUBING SHALL BE THOMAS & BETTS HS-SERIES, HEAVY-WALL HEAT-SHRINKABLE TUBING, BLACK.

C. WIRE LABELING

NOTES:

- ALL WIRE LABELS SHALL BE TYPED, NOT HAND WRITTEN, AND INSTALLED SUCH THAT THEY ARE CLEARLY VISIBLE IN THE AS-LEFT POSITION.
- WIRE LABEL TEXT SHALL BE UPPER CASE "ARIAL BOLD" FONT WITH A HEIGHT OF 0.125 INCHES (9PT).
- TEXT SHALL BE CENTERED ON THE WIRE LABEL.
- WIRE LABELING WILL USE THE "DESTINATION" METHOD TO LABEL INDIVIDUAL WIRES. THE FOLLOWING IS AN EXAMPLE OF WIRE TERMINAL NUMBERING:



D. CABLE TAGGING

NOTES:

- ALL CABLE TAGS SHALL BE TYPED, NOT HAND WRITTEN, AND INSTALLED SUCH THAT THEY ARE CLEARLY VISIBLE IN THE AS-LEFT POSITION.
- CABLE TAG TEXT SHALL BE UPPER CASE "ARIAL BOLD" FONT WITH A MINIMUM HEIGHT OF 0.125 INCHES (9PT).
- TEXT SHALL BE CENTERED ON THE CABLE TAG.
- CABLE NUMBER SHALL BE ACCORDING TO THE CABLE SCHEDULE.
- PRINTED CABLE TAG EXAMPLE (BOTH SIDES):

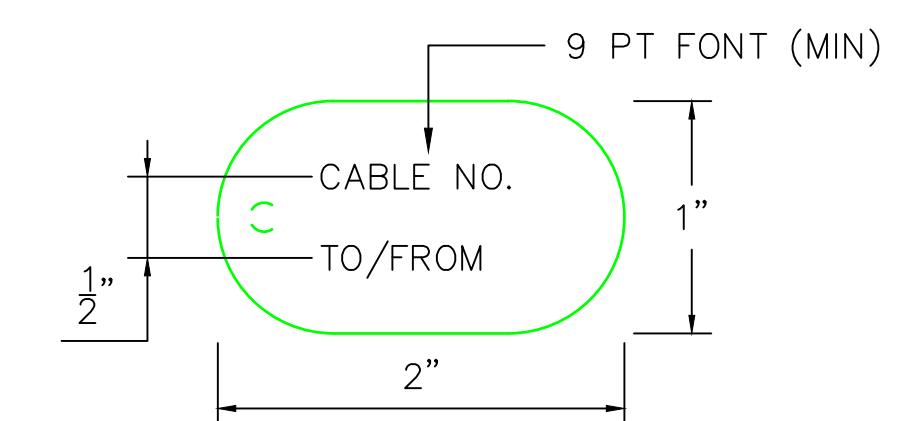


FIGURE D-1
PRINTED CABLE TAG EXAMPLE

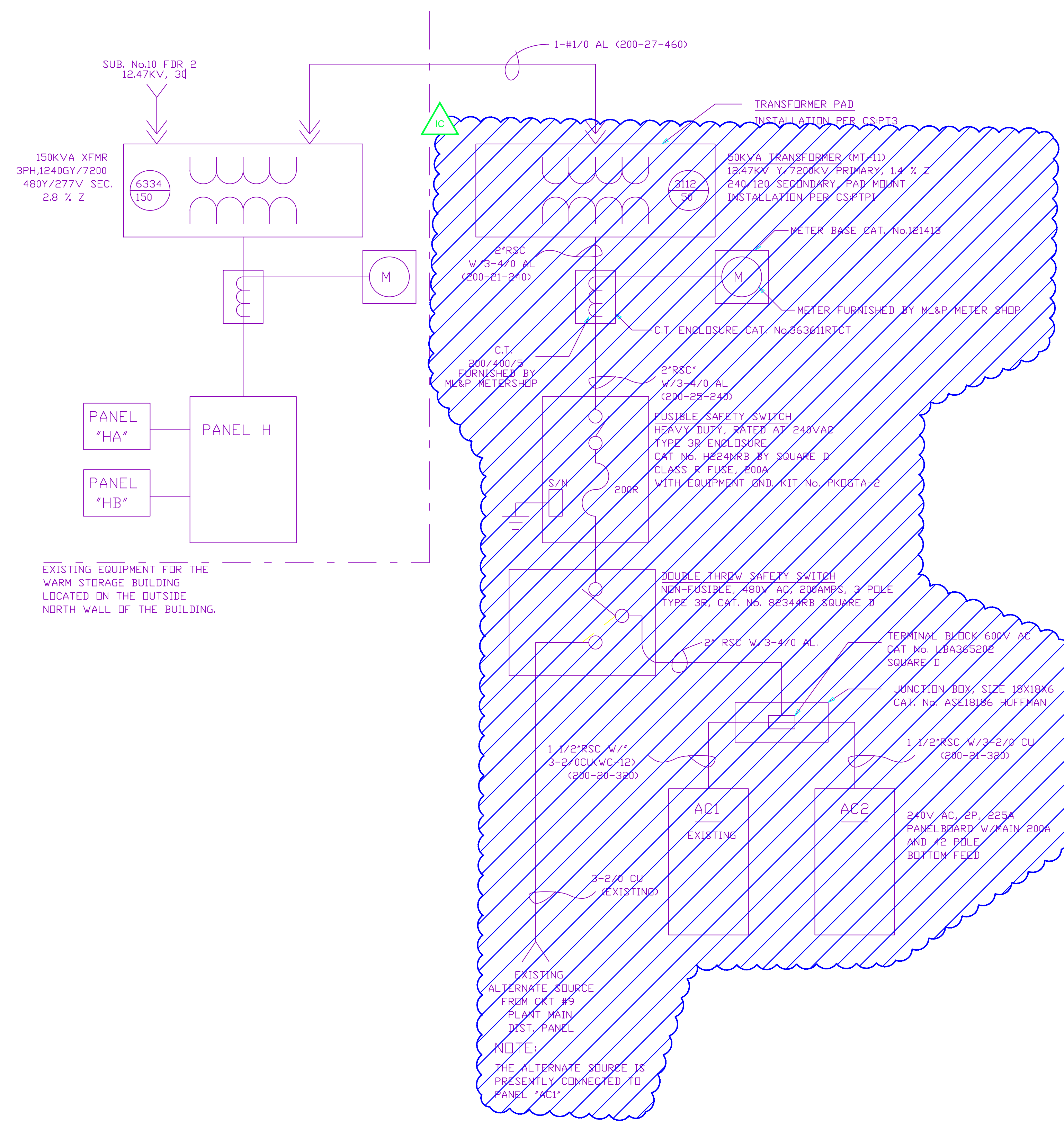
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W.O. # P1700073					
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						

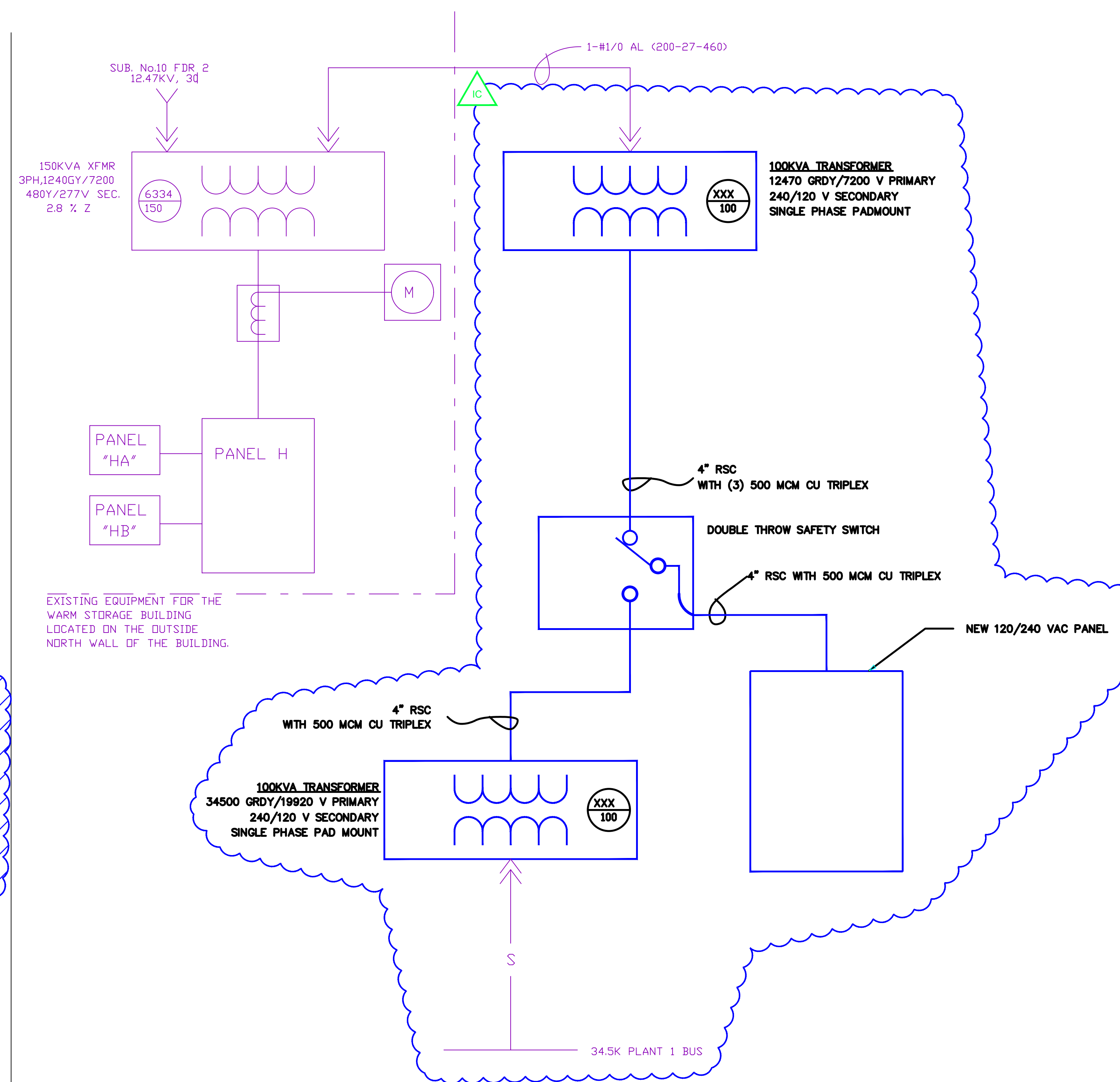


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Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD MISCELLANEOUS & KEY MAP GENERAL INFORMATION CABLE & WIRE STANDARD
CONFIDENTIAL	01SS-MC-INFO_0002.dwg
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.:	01SS-MC-INFO
SHEET 0002 OF 3	PAGE 4 / 76



1 SCHEMATIC
DEMOLITION - ONE LINE DIAGRAM
N.T.S.



2 SCHEMATIC
PROPOSED - ONE LINE DIAGRAM
N.T.S.

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

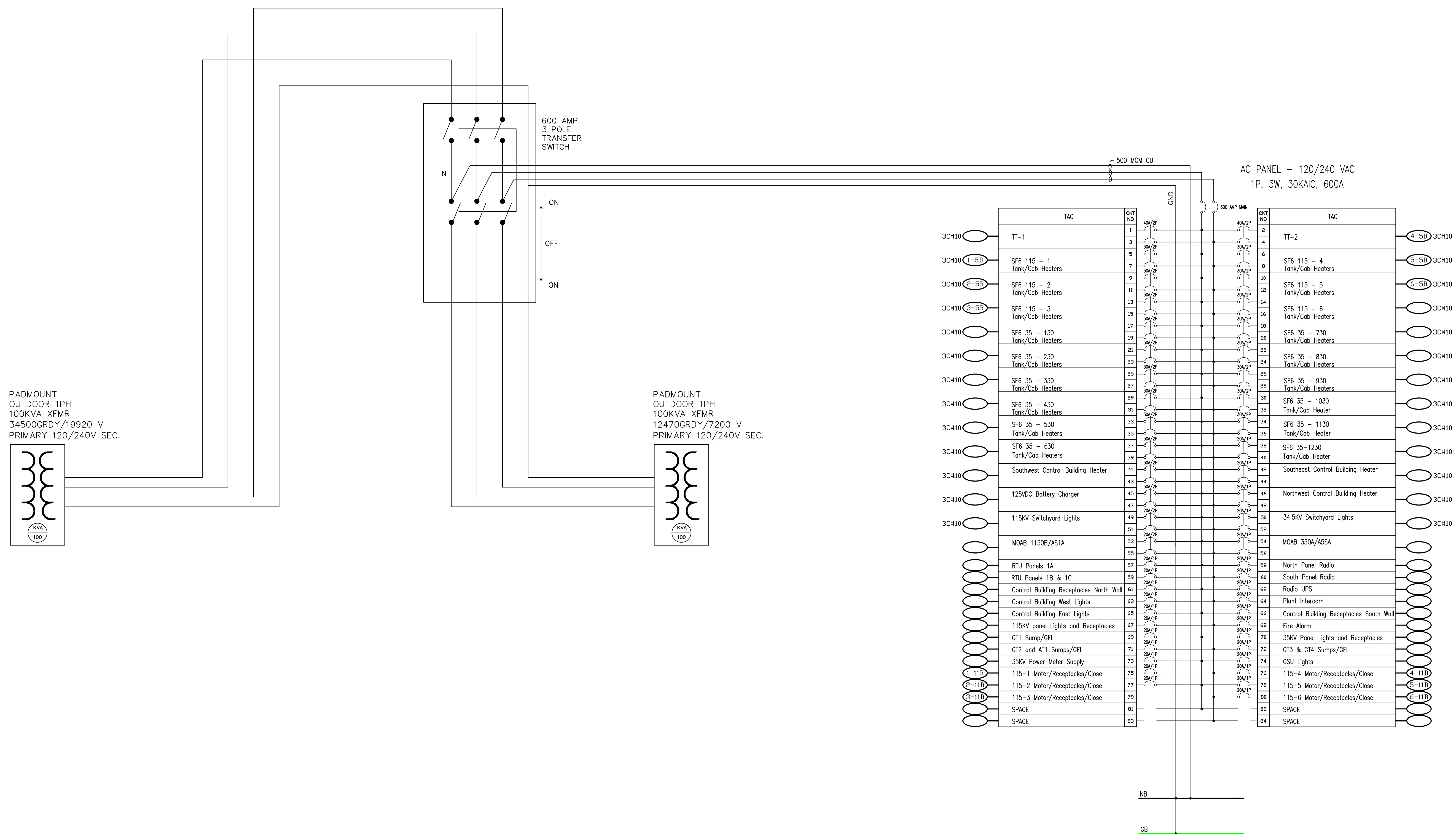
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLE BLOCK	BA			GC	03/11/21



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL-OTHER STATION AUXILIARY DRAWINGS AC STATION SERVICE	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE 8210E10A	SHEET 0001 OF 5
DRAWING NO.: 01SS-EL-SA-0002	PAGE 5 / 76

01SS-EL-SA-0002_0001.dwg



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073					
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL-OTHER STATION AUXILIARY DRAWINGS AC PANEL WIRING DIAGRAM EXISTING - PROPOSED

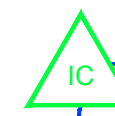
CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-EL-SA-0002

SHEET 0002 OF 5
PAGE 6 / 76

01SS-EL-SA-0002_0002.dwg



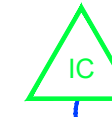
EXISTING AC PANELS

Table with columns: AC PANEL #1 (AC1), SIZE 240 VAC/225 A, MAIN BKR 200A, MOUNT LOCATION SURFACE/SWITCHGEAR ENCLOSURE, SHORT CKT 65,000 AIC, CKT #, CIRCUIT DESCRIPTION, BKR AMP/POLE, CKT, KVA (L1, L2), CKT, BKR AMP/POLE, CIRCUIT DESCRIPTION, CKT #.

TOTAL CONNECTED LOAD (kVA): 48.83 ESTIMATED DEMAND LOAD (kVA): 15
PANEL MANUFACTURER/MODEL: GE NLAB STYLE 5, AMP 225, NEUTRAL AMP 225, VOLT 120/240, PH 1, W 3, PLANT S, USE GE TQB BREAKERS.

Table with columns: AC PANEL #2 (AC2), SIZE 240 VAC/225 A, MAIN BKR 200A, MOUNT LOCATION SURFACE/SWITCHGEAR ENCLOSURE, SHORT CKT 65,000 AIC, CKT #, CIRCUIT DESCRIPTION, BKR AMP/POLE, CKT, KVA (L1, L2), CKT, BKR AMP/POLE, CIRCUIT DESCRIPTION, CKT #.

TOTAL CONNECTED LOAD (kVA): 85.6 ESTIMATED DEMAND LOAD (kVA): 26.20
PANEL MANUFACTURER/MODEL: SQUARE D NODD, CATALOG NOOD42L225, AMP 225, NEUTRAL AMP 225, VOLT 120/240, PH 1, W 3, PLANT S, MAIN BREAKER NOOD222502MB +



PROPOSED AC PANEL

Table with columns: AC PANEL #1 (AC1), SIZE 240 VAC/400 A, MAIN BKR 400A, SHORT CKT 65,000 AIC, MOUNT LOCATION SURFACE/SWITCHGEAR ENCLOSURE, CKT #, CIRCUIT DESCRIPTION, BKR AMP/POLE, CKT, KVA (L1, L2), CKT, BKR AMP/POLE, CIRCUIT DESCRIPTION, CKT #.

TOTAL CONNECTED LOAD (kVA): ESTIMATED DEMAND LOAD (kVA): 35.50 30.50
PANEL MANUFACTURER/MODEL: STYLE AMP 600, NEUTRAL AMP 600, VOLT 120/240, PH 1, W 3, PLANT S.

Table with columns: PROJECT: PLANT 1 115KV BREAKER REPLACEMENT, ENG./DESIGN.: J. MOE/A. MITCHELL, W.O. # P1700073, NO., DESIGN/CONSTRUCTION/ASBUILT REVISION, DWN. BY/DATE, REVIEWED MGR./SUPV./DATE, APPROVED DIRECTOR/DATE, ENG. STAMP.

Table with columns: NO., RECORD REVISION, CAD DRAWN BY, W.P.#, W.O. NUMBER, RECORD APPROVED, DATE.



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL-OTHER STATION AUXILIARY DRAWINGS AC PANEL PANEL DIAGRAM EXISTING - PROPOSED

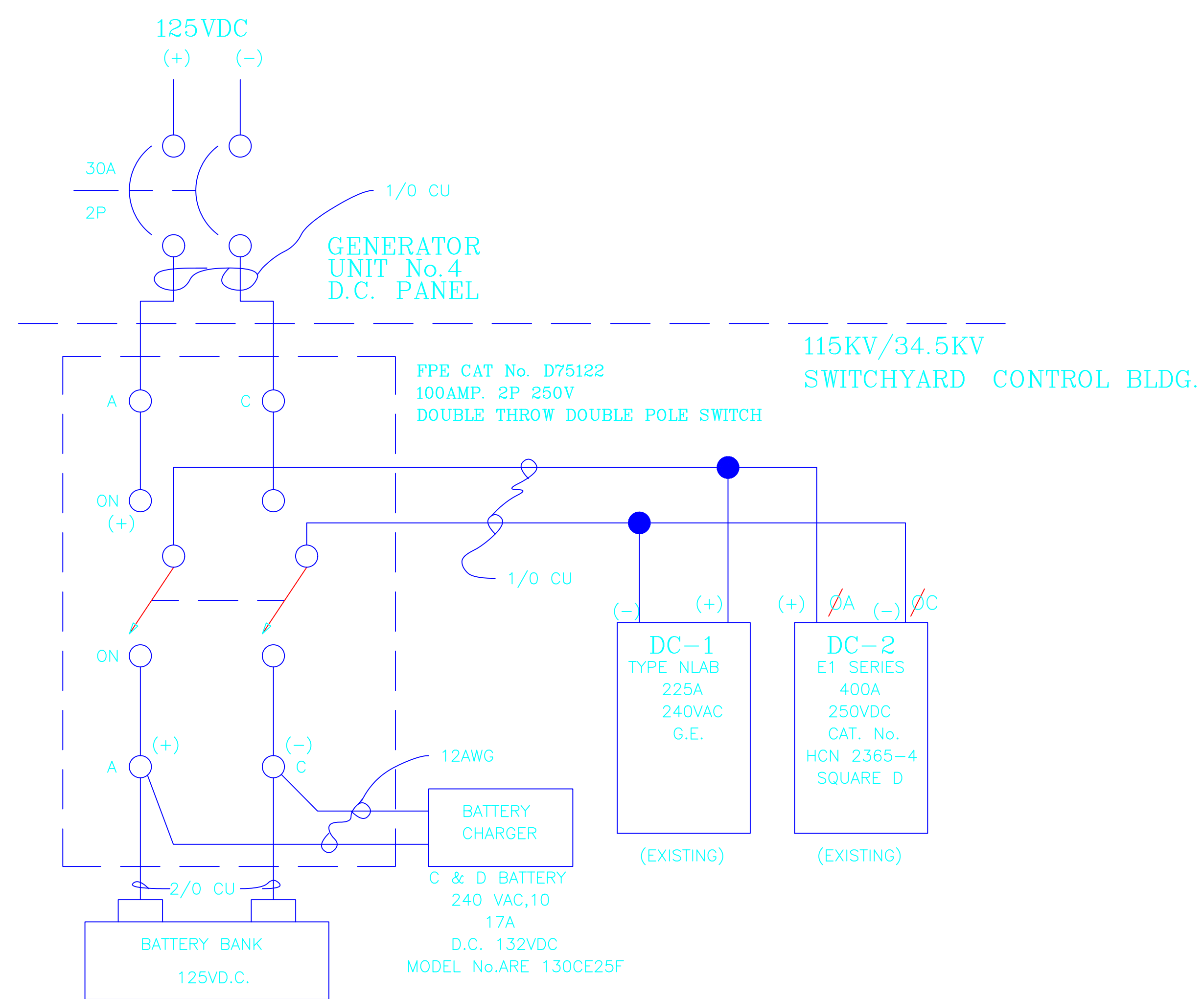
CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE: 6210E201_0440
DRAWING NO.:

01SS-EL-SA-0002

01SS-EL-SA-0002_0003.dwg

SHEET 0003 OF 5
PAGE 7 / 76



D.C. STATION SERVICE

PANEL "DC-1"									
240 VOLTS 225AMP									
LOAD/DESCRIPTION	KVA	LOAD AMPS	BKR	CKT	CKT	BKR	LOAD AMPS	KVA	LOAD/DESCRIPTION
OCB 115-2			40/2	1	2	40/2			OCB 115-3
OCB 730			40/2	3	4	40/2			RTU DC
OCB 115-5			40/2	5	6	40/2			OCB 115-6
SUB #9 REMOTE COMMUNICATION			40/2	7	8	40/2			MOAB 1150B
BLDG EMER. DC LIGHT			20/2	9	10	40/2			115KV DSB
MOAB 350A			40/2	11	12	40/2			OCB 115-1
OCB 115-4			40/2	13	14	20/2			DISPATCH VOLT/FREQ. MON.
				15	16				

G.E. TYPE NAB PANELBOARD
BRANCH CKT BREAKER TYPE "TED"

NOTE:

PANEL "DC-2"									
LOAD/DESCRIPTION	KVA	LOAD AMPS	BKR	CKT	CKT	BKR	LOAD AMPS	KVA	LOAD/DESCRIPTION
CB 430			30/2	1	2	30/2			CB 930
CB 630			30/2	3	4	30/2			CB 1030
CB 830			30/2	5	6	30/2			CB 1130
CB 130			30/2	7	8	30/2			CB 230
CB 530			30/2	9	10	30/2			CB 330
FUT. CB 730			30/2	11	12	30/2			FUT. CB 1230
34.5KV DSB			20/2	13	14	20/2			SPARE
				15	16				

SQUARE D-I-LINE PANELBOARD
CAT. HCN 2065-4 E1 SERIES, 250VDC, 600VAC, 400A.
BRANCH CKT BREAKER TYPE FA

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- DO NOT EDIT -

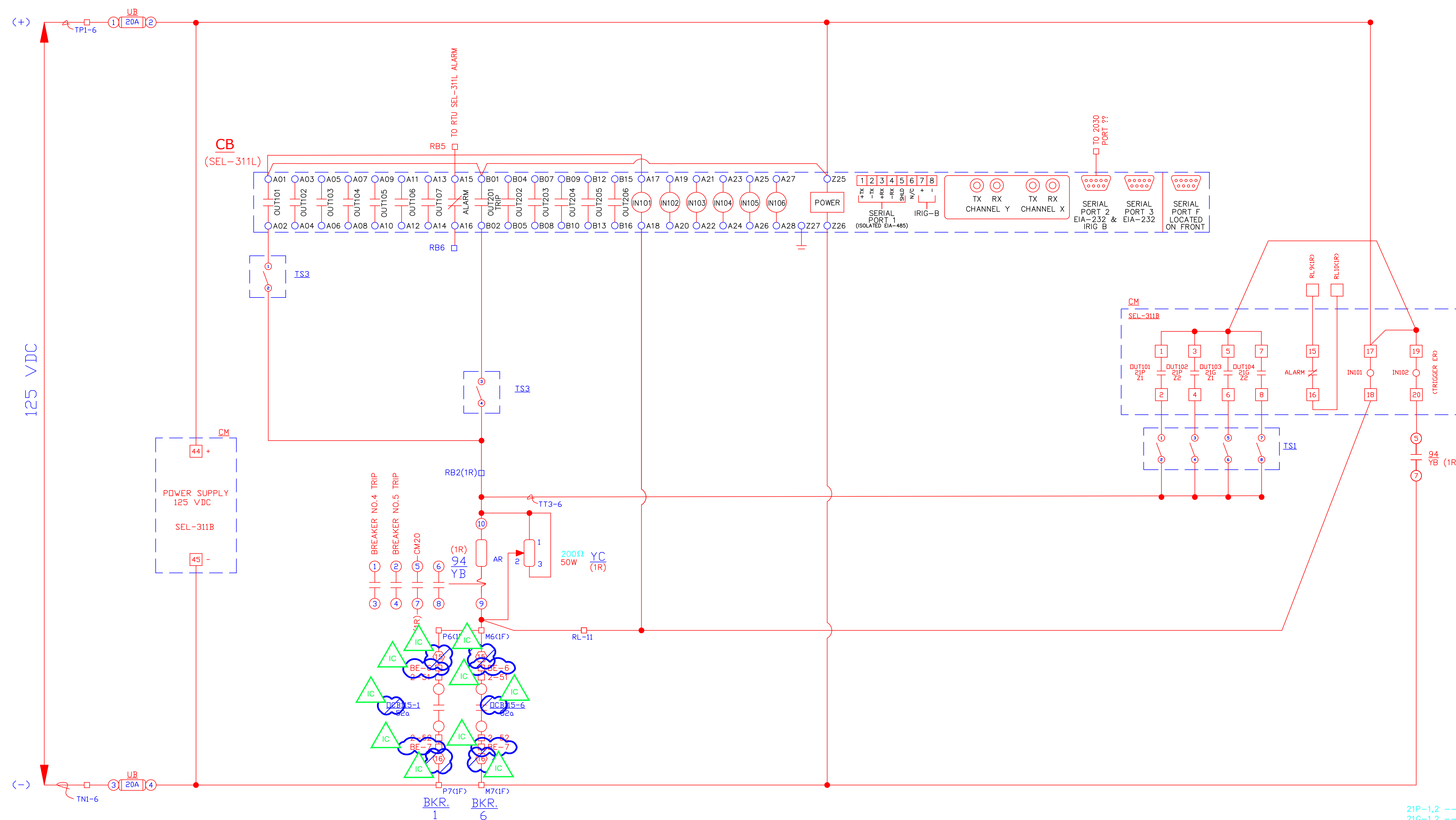
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073							
ENG./DESIGN.: J. MOE/A. MITCHELL												
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		1						



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OTHER STATION AUXILIARY DRAWINGS DC PANEL DIAGRAM EXISTING	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	SHEET 0004 OF 5
DRAWING NO.: 01SS-EL-SA-0002	PAGE 8 / 76

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- PANEL 1R -
SUBSTATION NO.10 LINE

- 21P-1,2 --- DISTANCE IMPEDANCE PHASE RELAY (SEL-311B)
- 21G-1,2 --- GROUND DISTANCE RELAY (SEL-311B)
- 50 --- INSTANTANEOUS FAULT DETECTING RELAY (PJC)
- 62 --- TIMING RELAY (TD-5)
- 85 --- PILOT WIRE RELAY (HCB-1)
- 94 --- AUXILIARY TRIPPING RELAY (AR)
- 74 --- TYPE PH PILOT WIRE MONITORING RELAY
- --- SWITCHBOARD TERMINAL POINT
- △ --- PILOT WIRE PANEL (TB-1A) TERMINAL POINT
- --- TEST SWITCH
- --- DEVICE TERMINAL POINT

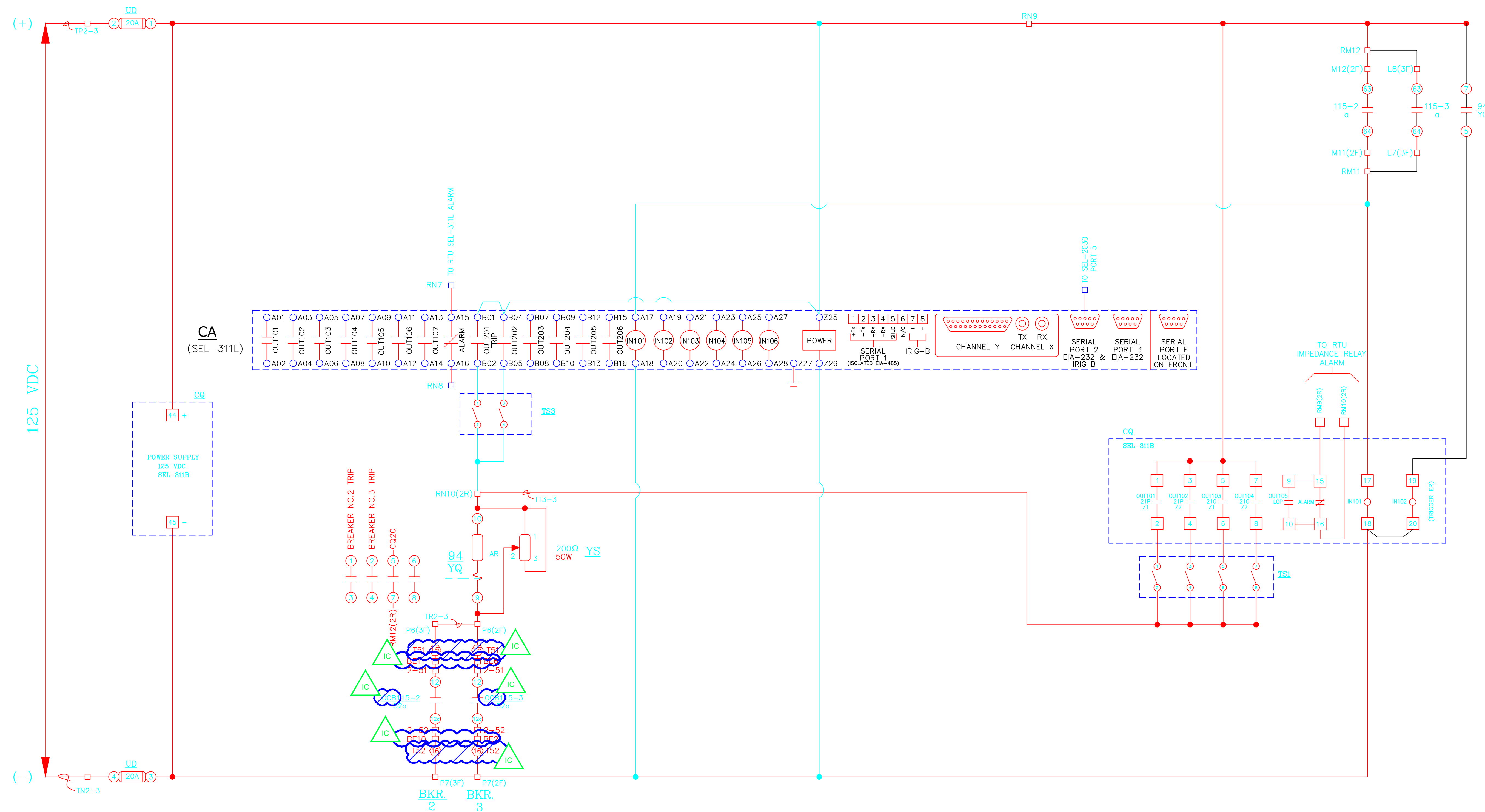
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - INSIDE SCHEMATIC TRIP SUB 10, BREAKER 115-1 & 115-6 EXISTING - PROPOSED	
CONFIDENTIAL	01SS-EL-SO-0001 0002 2-1.dwg
DRAWING NO. - PREVIOUS/REFERENCE 7519E7, 10226, GP1E190	SHEET 0002 OF 33 PAGE 10 / 76
DRAWING NO.: 01SS-EL-SO-0001	



- PANEL 2R -
SUBSTATION NO 12 LINE

LEGEND

- 21P-1,2 --- DISTANCE IMPEDANCE PHASE RELAY (SEL-311B & SEL-311L)
- 21G-1,2 --- GROUND DISTANCE RELAY (SEL-311B & SEL-311L)
- 87L --- DIFFERENTIAL RELAY (311L)
- 9.4 --- AUXILIARY TRIPPING RELAY (AR)
- --- SWITCHBOARD TERMINAL POINT
- TS1 --- TEST SWITCH
- --- DEVICE TERMINAL POINT

AS-BUILT 1/12/2021 AJM

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL					ENG. STAMP	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE		
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21

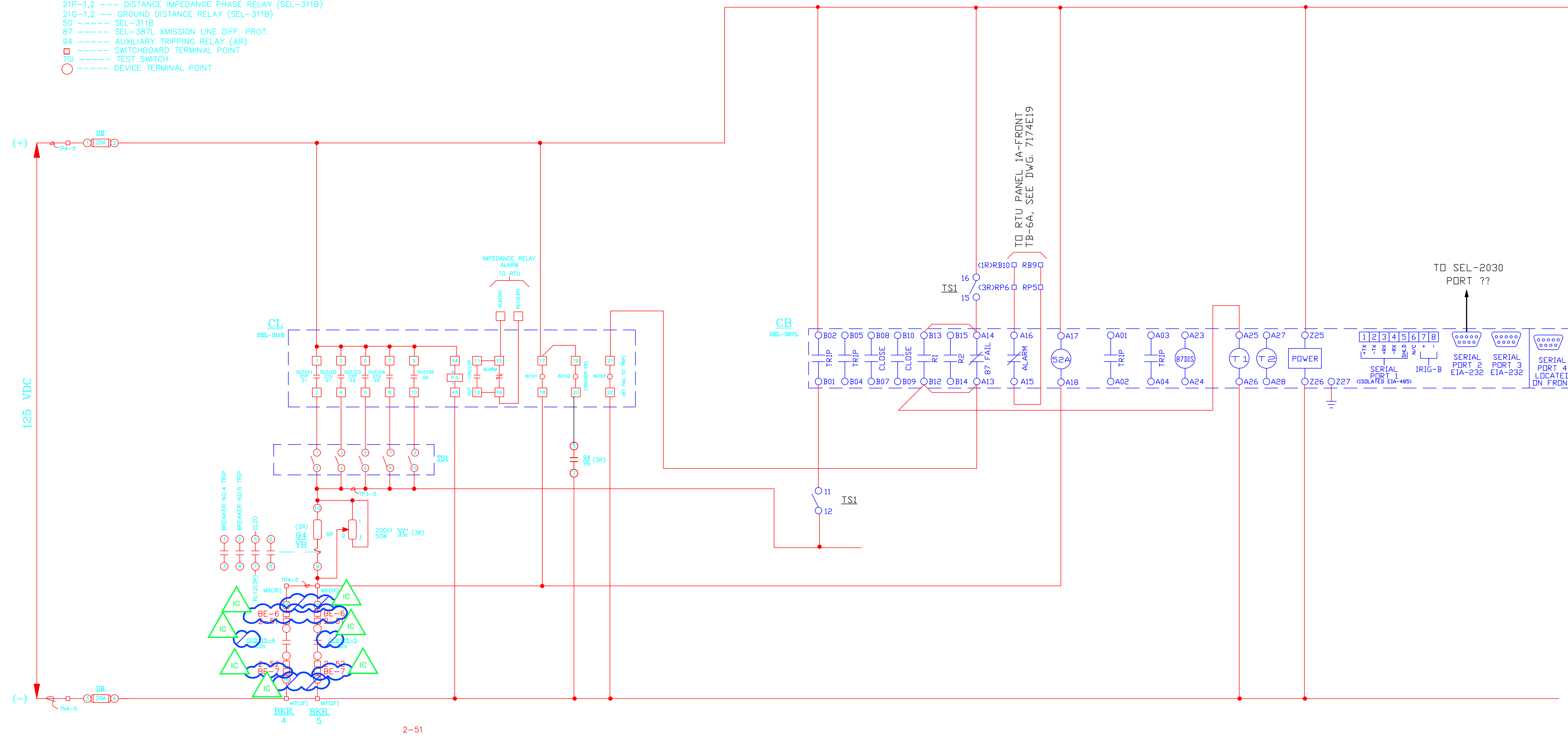


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Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - INSIDE SCHEMATIC TRIP WUB 12, BREAKER 115-2 & 115-3 EXISTING - PROPOSED
CONFIDENTIAL	01SS-EL-SO-0001_0001_2-1.dwg
DRAWING NO. - PREVIOUS/REFERENCE	7429E7, 10225
DRAWING NO.:	01SS-EL-SO-0001
SHEET	0001 OF 33
PAGE	11 / 76

LEGEND

- 21P-1,2 --- DISTANCE IMPEDANCE PHASE RELAY (SEL-311B)
- 21G-1,2 --- GROUND DISTANCE RELAY (SEL-311B)
- 50 --- SEL-311B
- 87 --- SEL-387L XMISSION LINE DIFF. PROT.
- 94 --- AUXILIARY TRIPPING RELAY (AR)
- --- SWITCHBOARD TERMINAL POINT
- TS --- TEST SWITCH
- --- DEVICE TERMINAL POINT



- PANEL 3R -
SUBSTATION NO.6 LINE

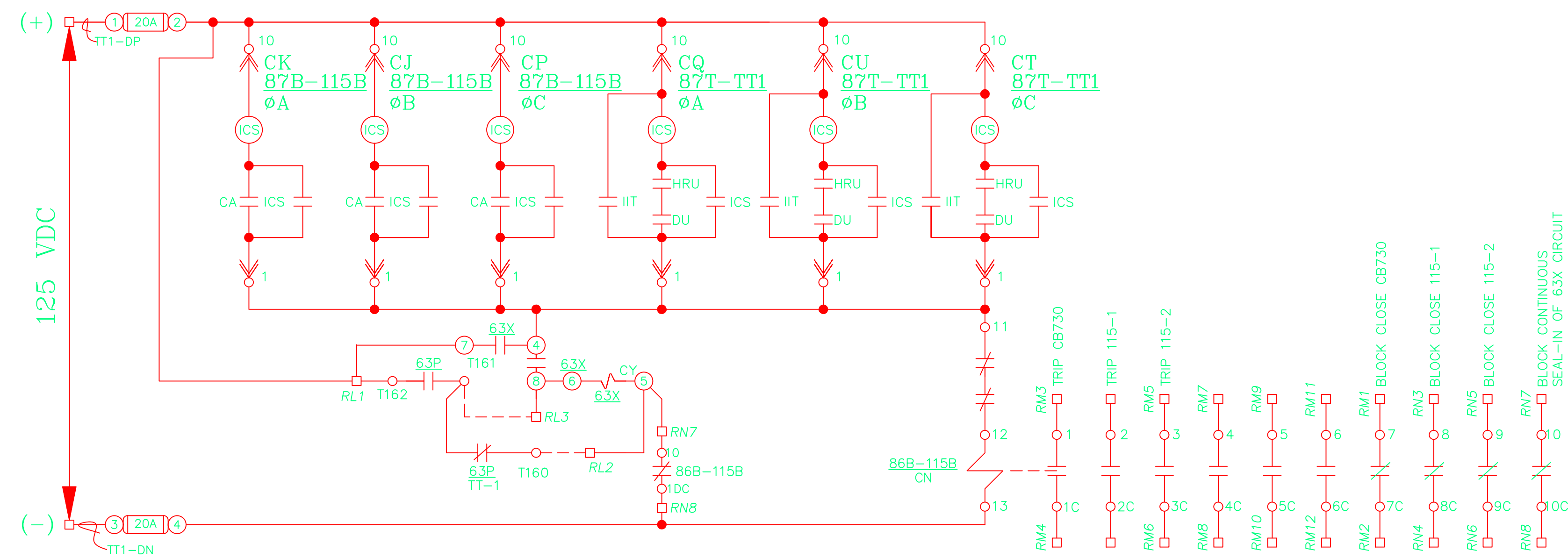
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073					
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

NO.	RECORD REVISION	CAD DRAWN BY	W.P. #	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21

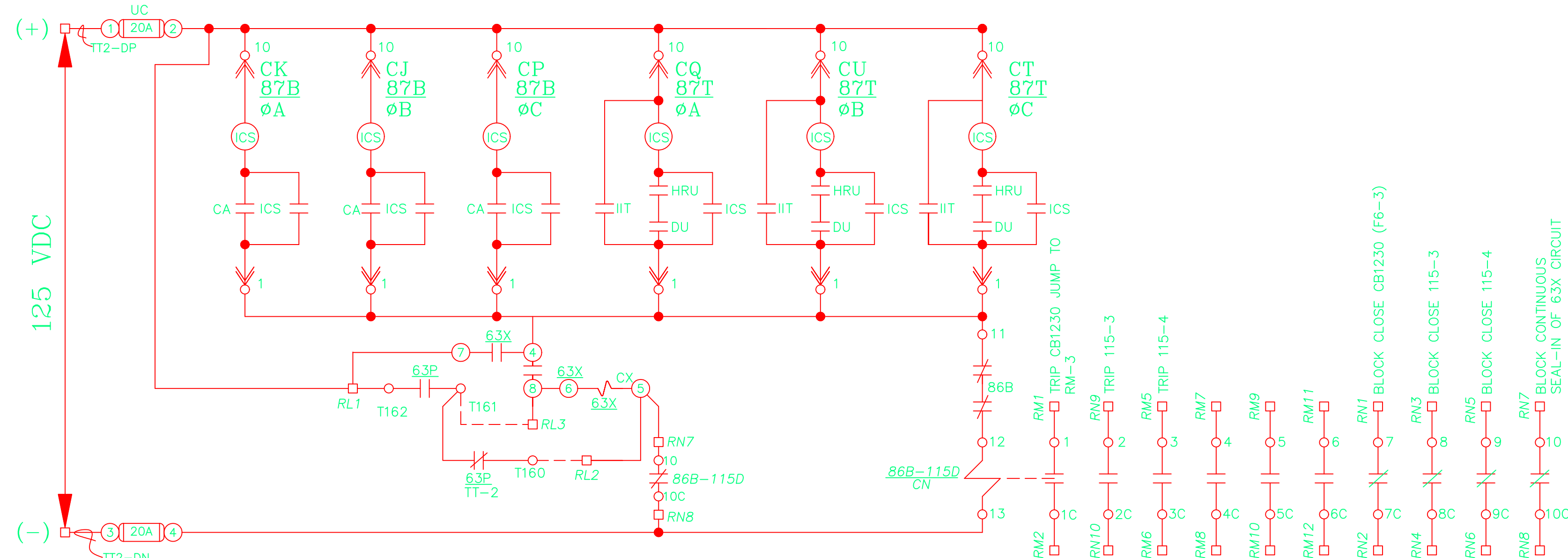


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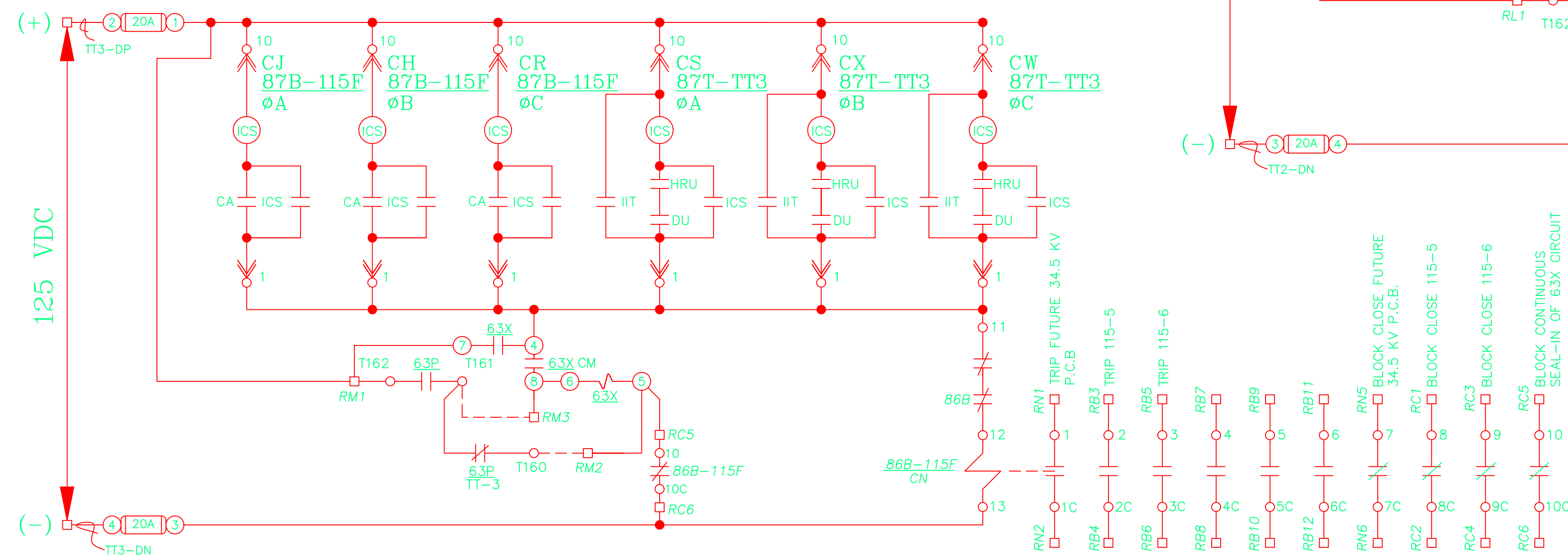
DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - INSIDE SCHEMATIC TRIP SUB 5, BREAKER 115-4 & 115-5 EXISTING - PROPOSED
CONFIDENTIAL	01SS-EL-SO-0001 0009 2-1.dwg
DRAWING NO. - PREVIOUS/REFERENCE	01E210, PPP-3-2687-26
DRAWING NO.:	01SS-EL-SO-0001
SHEET 0009 OF 33	PAGE 12 / 76



TT-1 XFMR. AND BUS DIFFERENTIAL CIRCUIT
(PANEL 1R)



TT-2 XFMR. AND BUS DIFFERENTIAL CIRCUIT
(PANEL 3R)



TT-3 XFMR. AND BUS DIFFERENTIAL CIRCUIT
(PANEL 2R)

ISSUED FOR REFERENCE ONLY
- DO NOT EDIT -

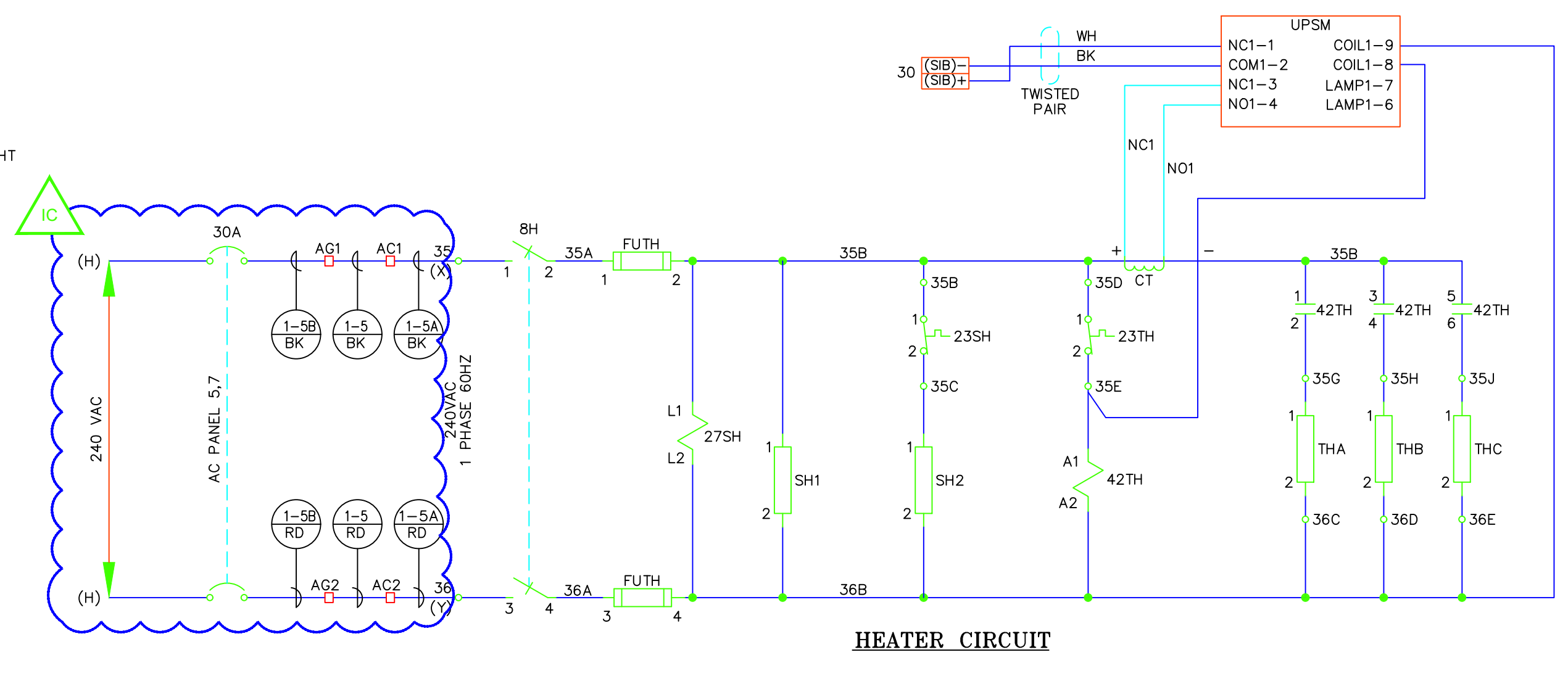
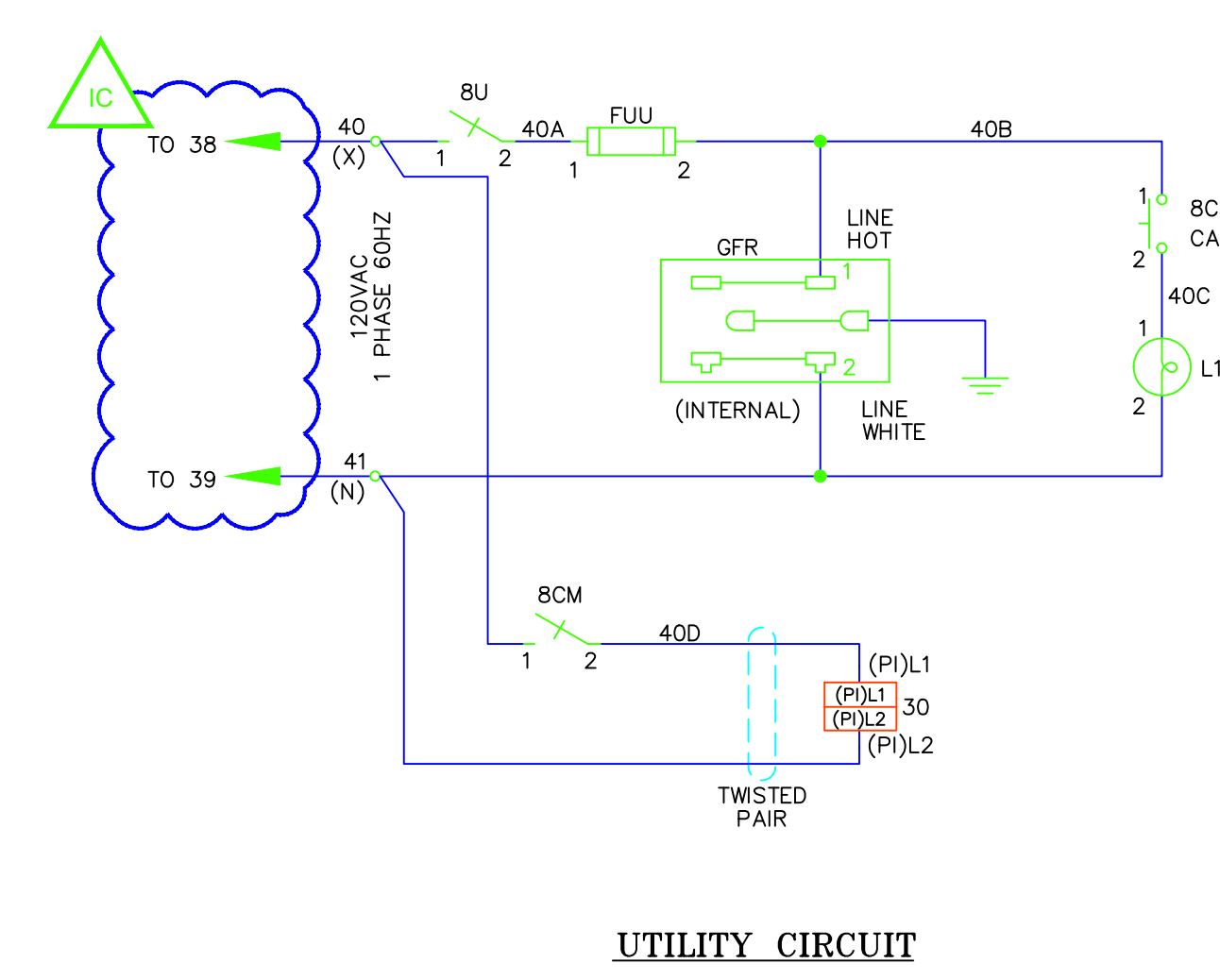
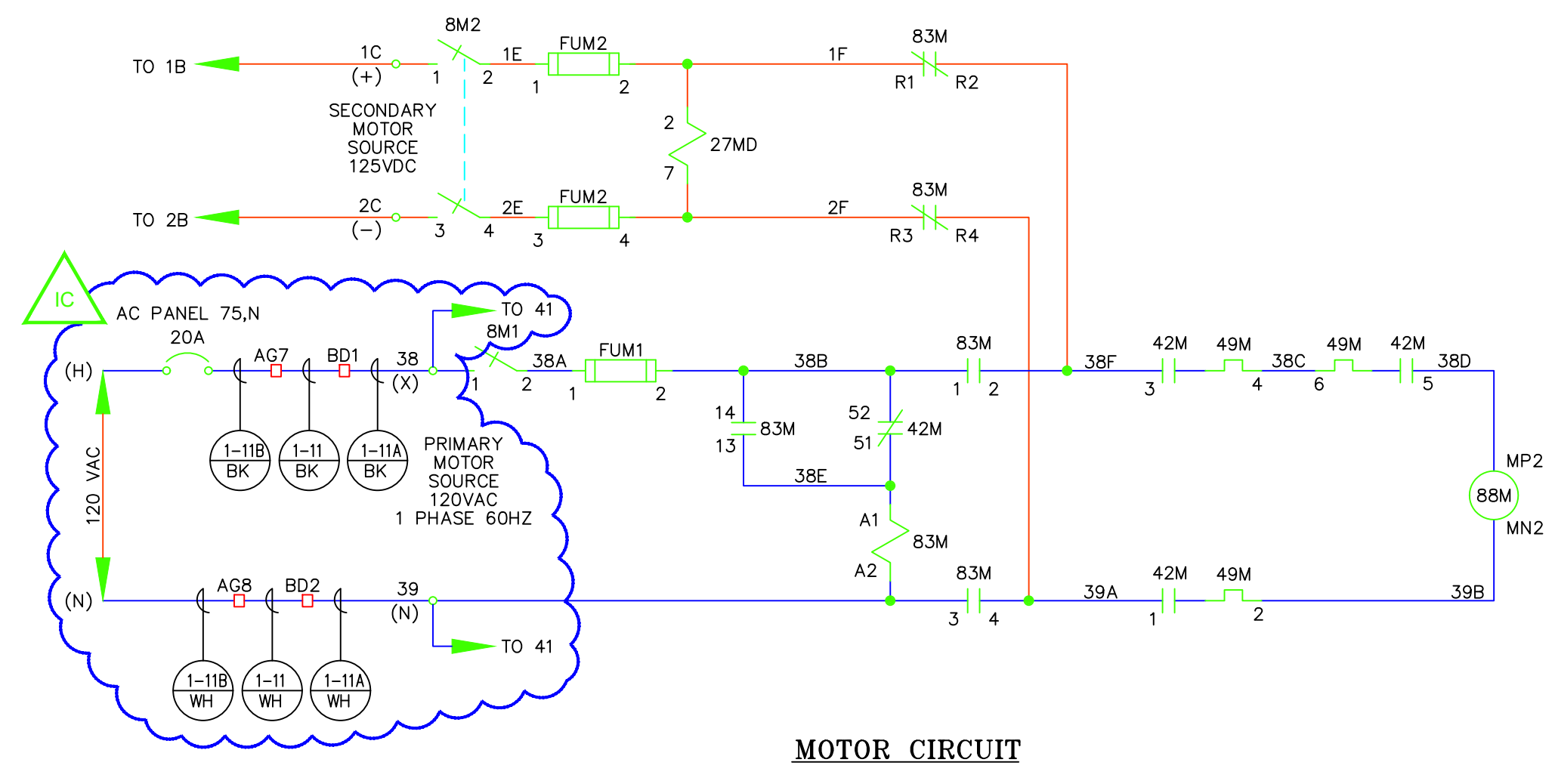
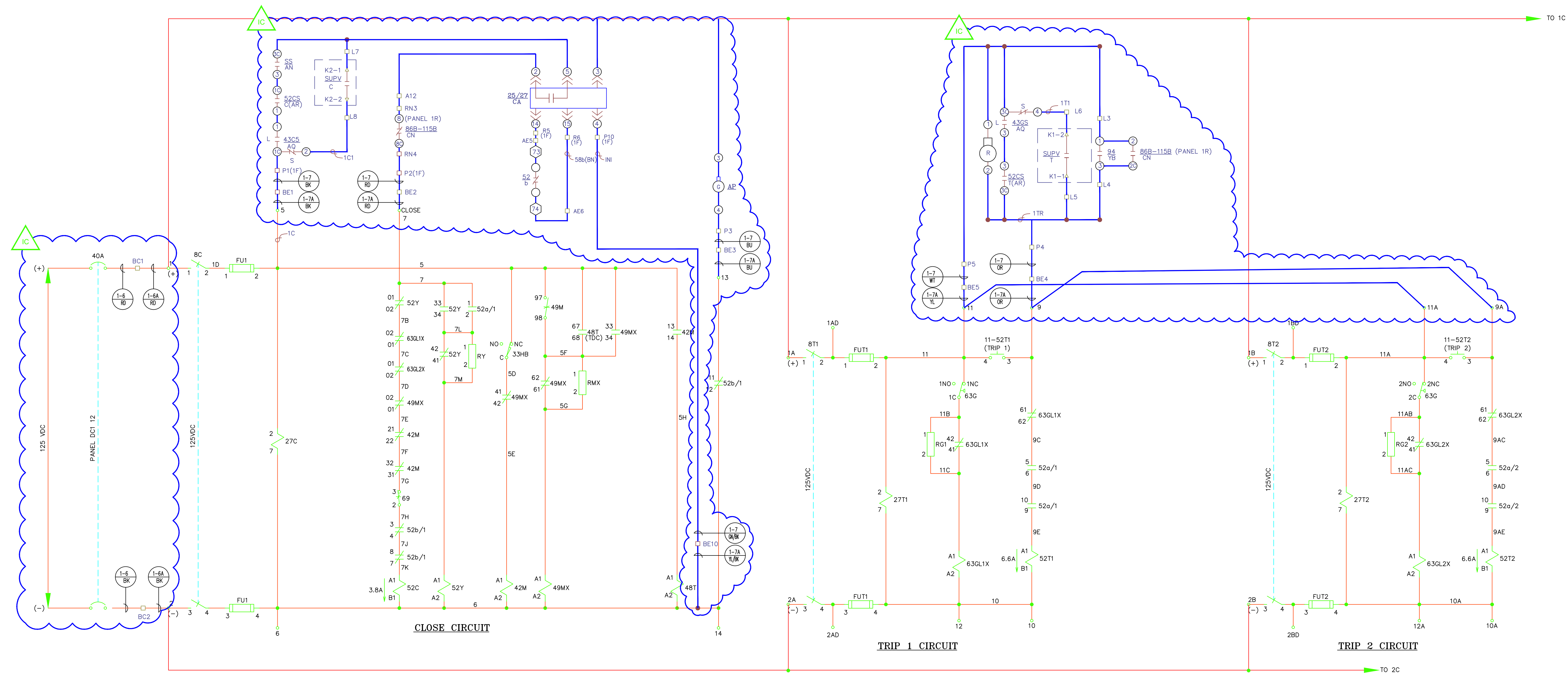
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - INSIDE SCHEMATIC 115KV X-FMR AND BUSS DIFFERENTIAL	
CONFIDENTIAL		01SS-EL-SO-0001_0010_2-1.dwg	
DRAWING NO. - PREVIOUS/REFERENCE		GPIE220_3-2687-17	
DRAWING NO.:		01SS-EL-SO-0001	
SHEET 0010 OF 33		PAGE 13 / 76	



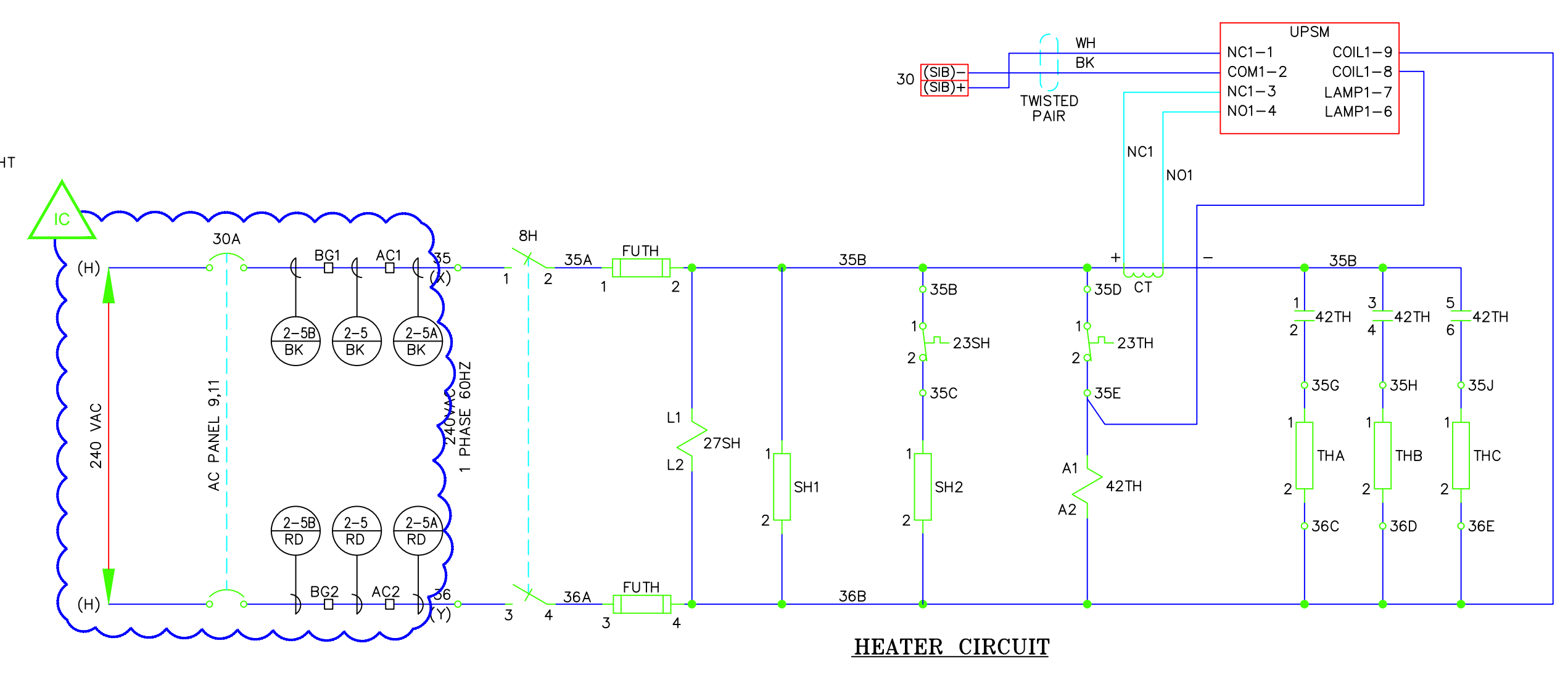
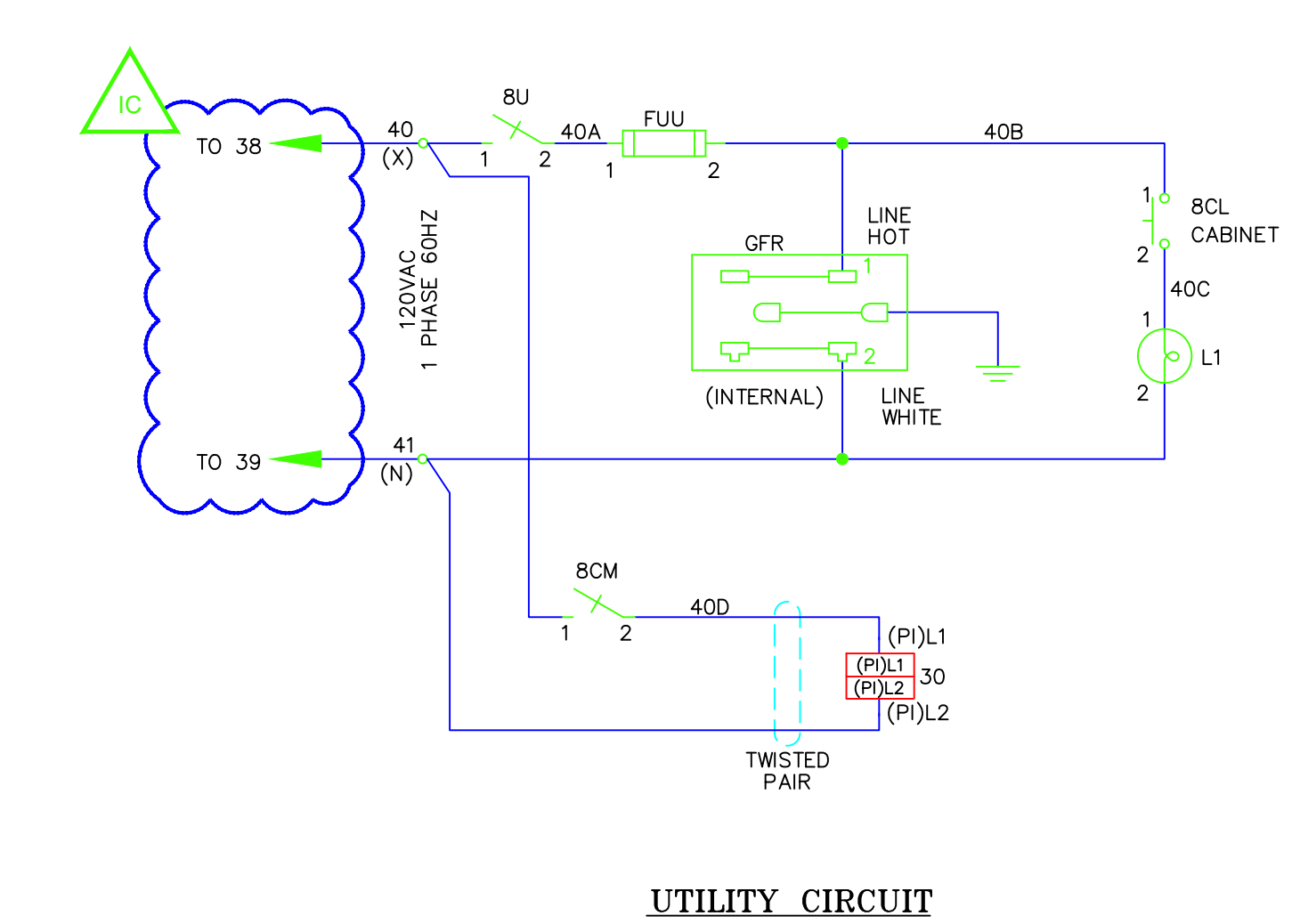
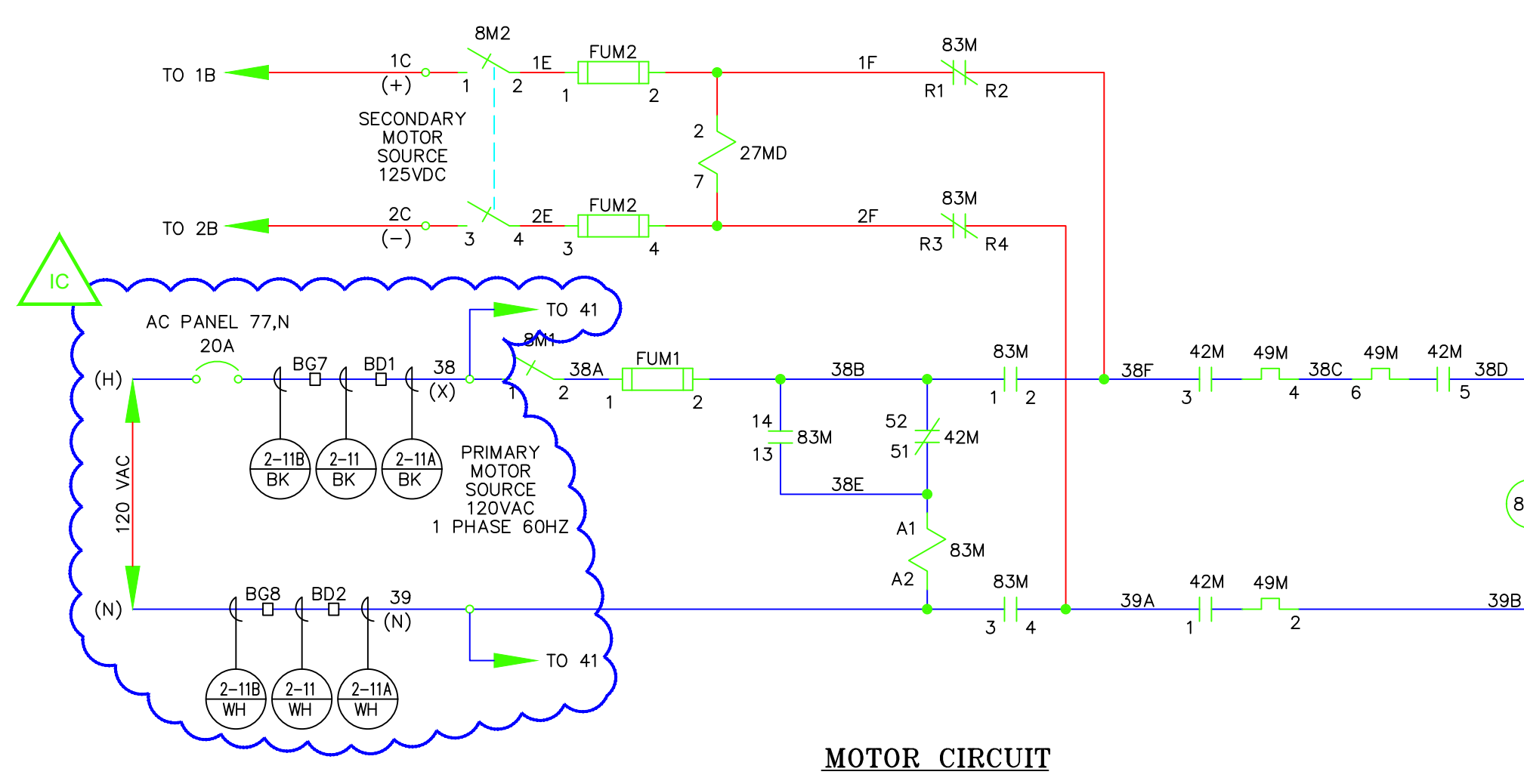
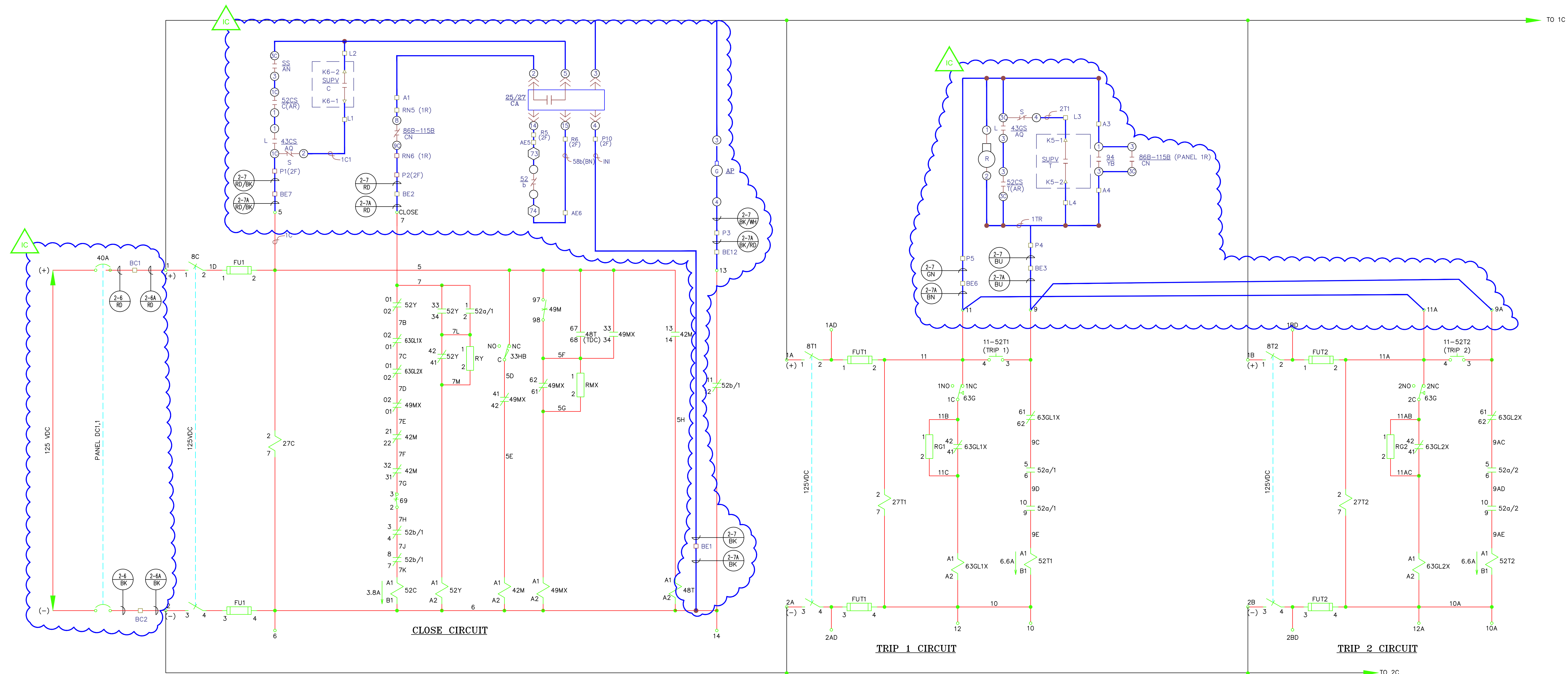
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE SCHEMATIC 115-1 AC & DC SCHEMATIC PROPOSED	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-S0-0002
DRAWING NO.: 01SS-EL-S0-0002	SHEET 0001 OF 6 PAGE 14 / 76



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073							
ENG./DESIGN.: J. MOE/A. MITCHELL												
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		1						

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE SCHEMATIC 115-2 AC & DC SCHEMATIC PROPOSED

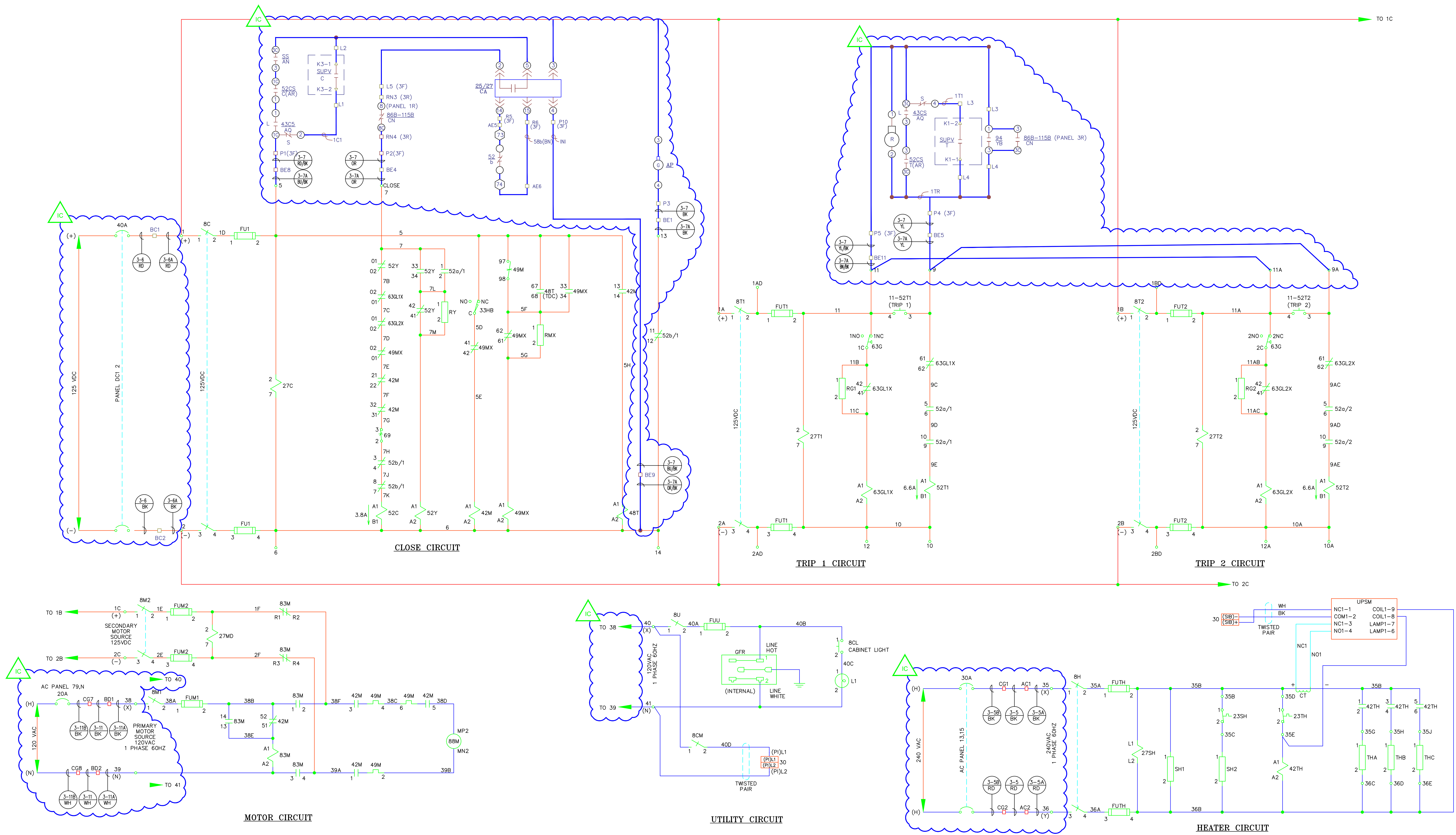
CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-EL-SO-0002

SHEET 0002 OF 6
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01SS-EL-SO-0002_0002.dwg



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

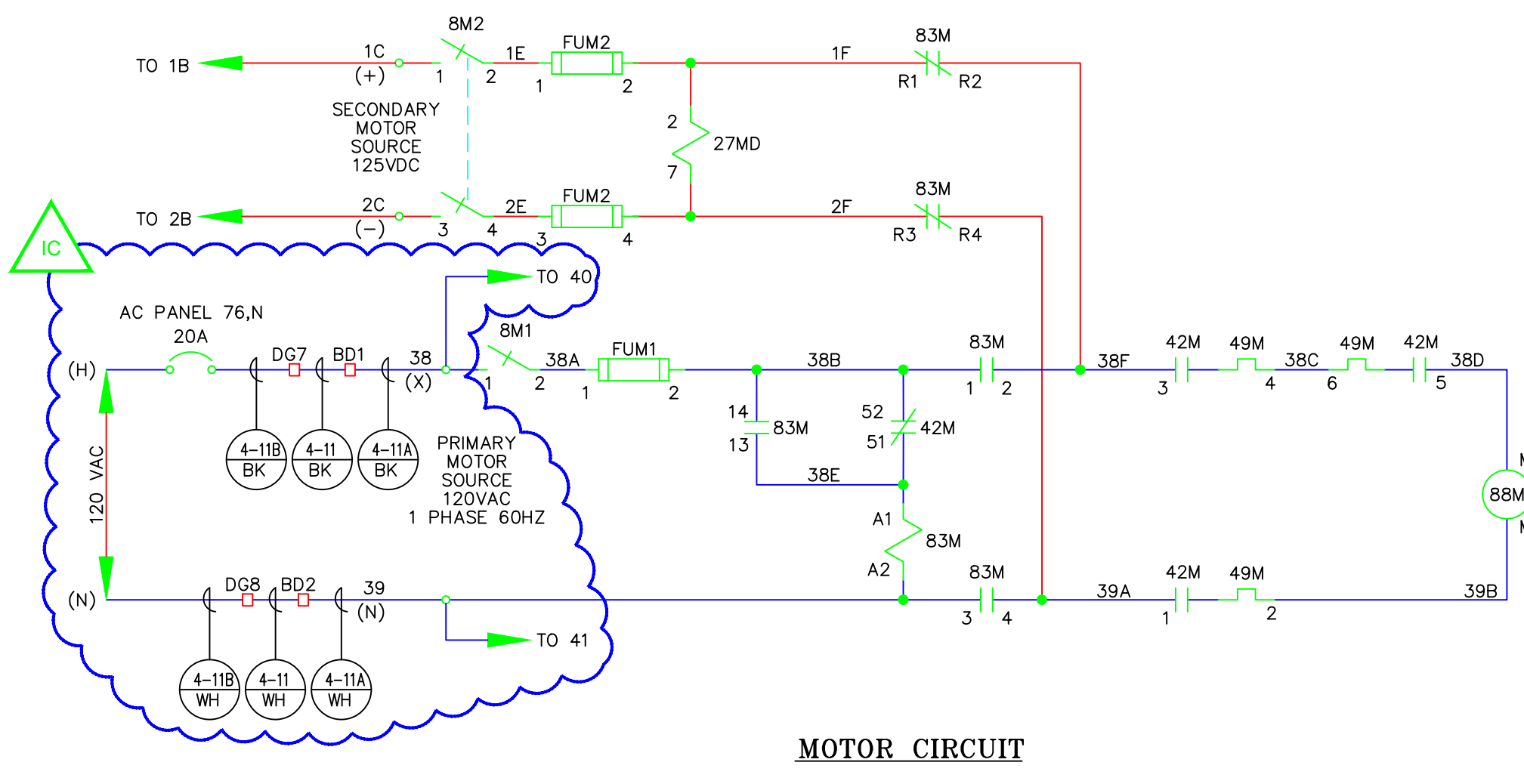
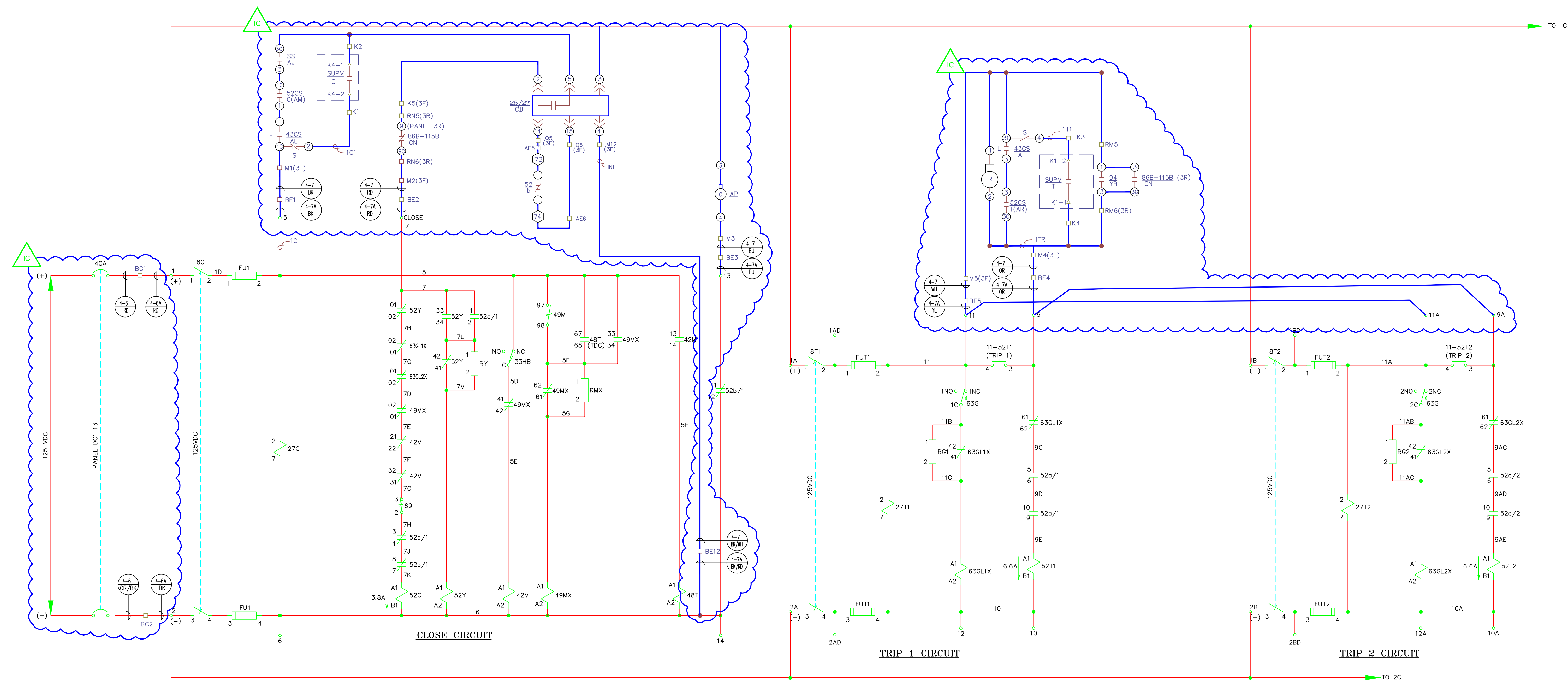
NO.	RECORD REVISION	CAD DRAWN BY	W.P. #	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



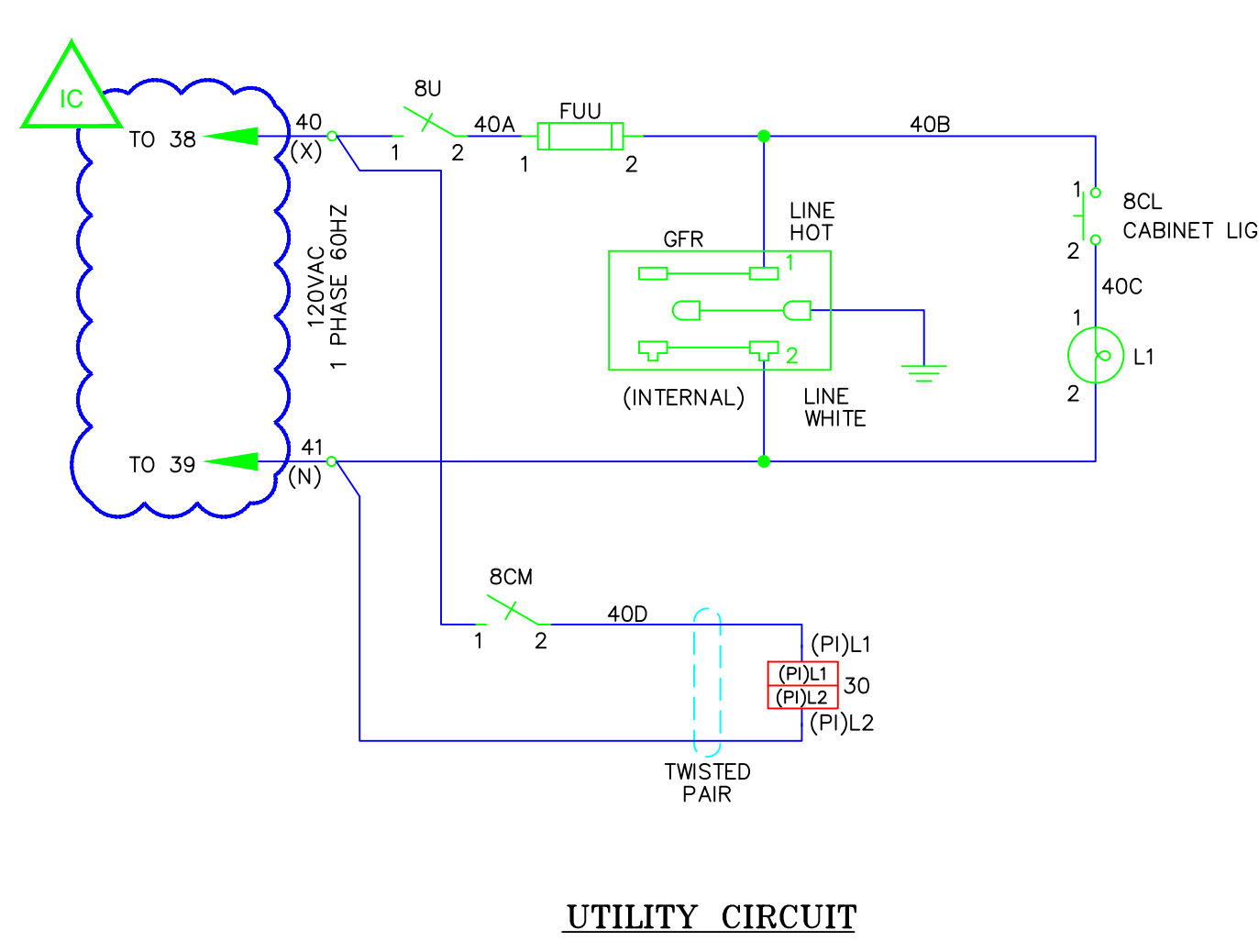
Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE SCHEMATIC 115-3 AC & DC SCHEMATIC PROPOSED	
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-S0-0002_0003.dwg	
DRAWING NO.:		01SS-EL-S0-0002	
SHEET 0003 OF 6		PAGE 16 / 76	

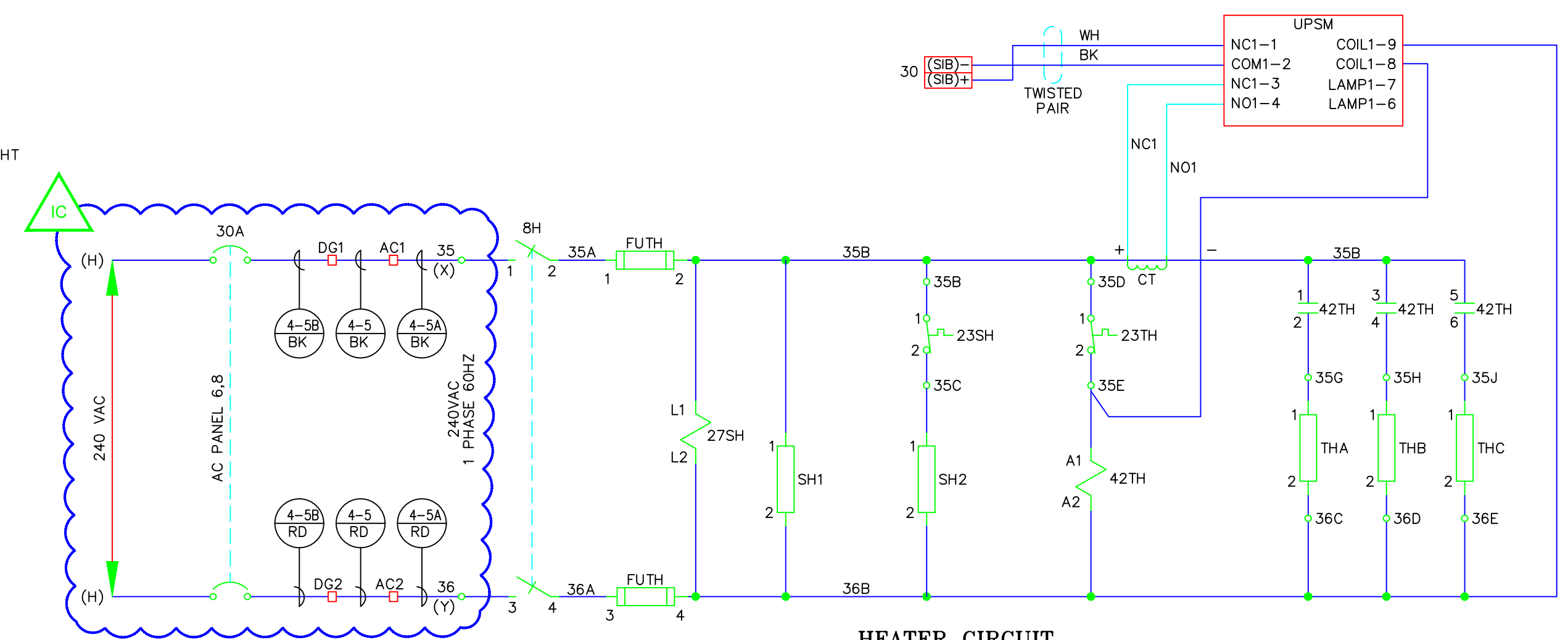
CONFIDENTIAL



MOTOR CIRCUIT



UTILITY CIRCUIT



HEATER CIRCUIT

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
			W.O. # P1700073	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA	-	-	GC	02/05/21

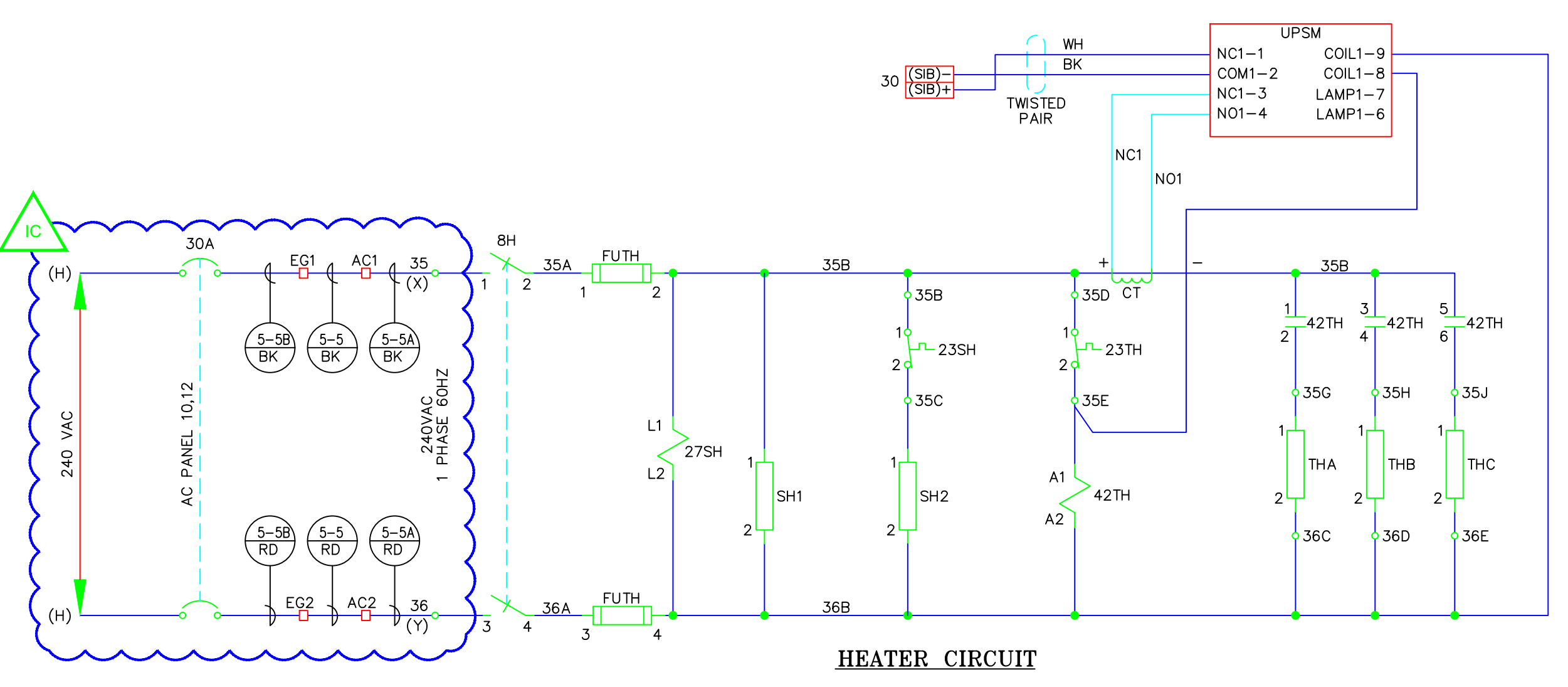
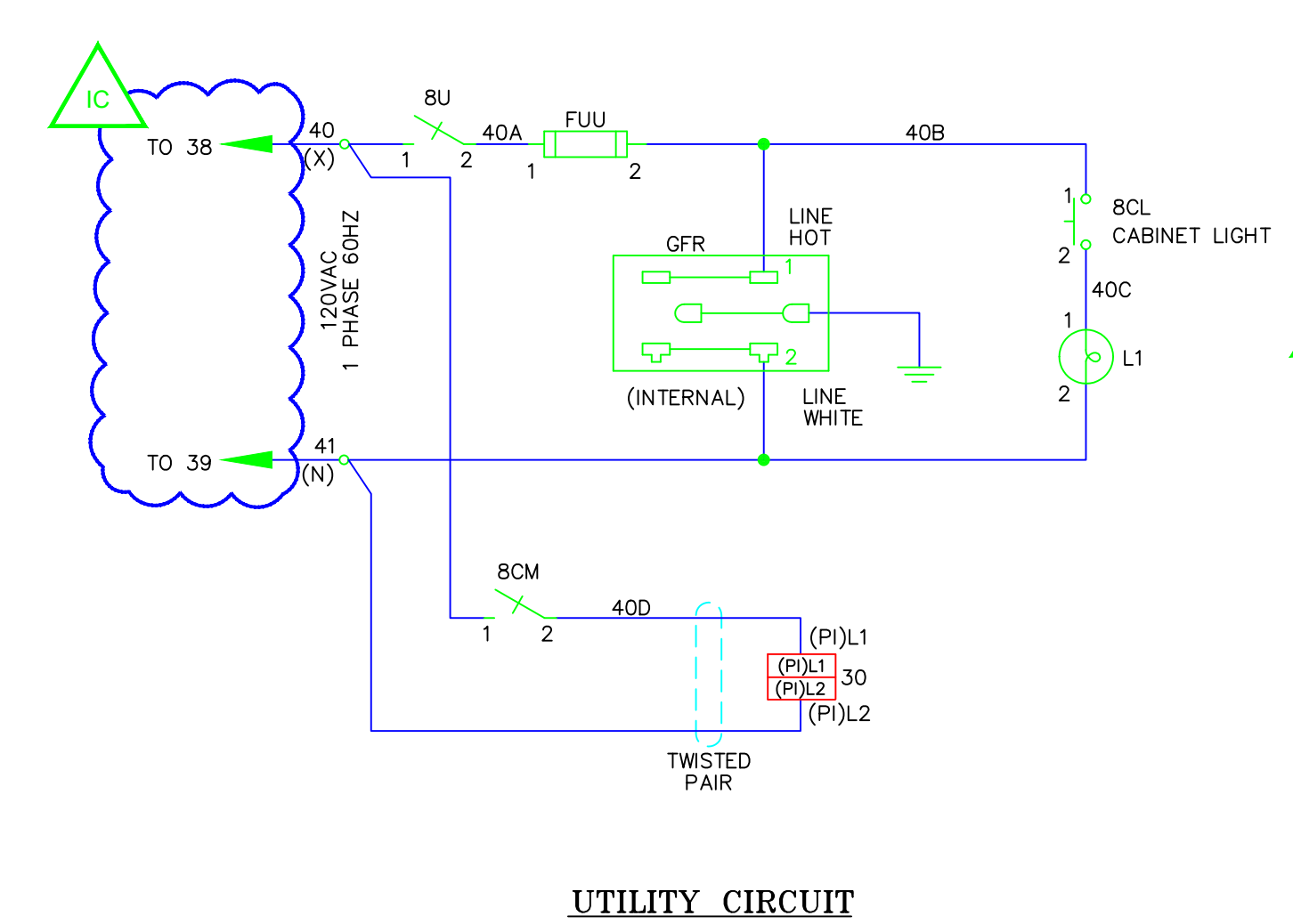
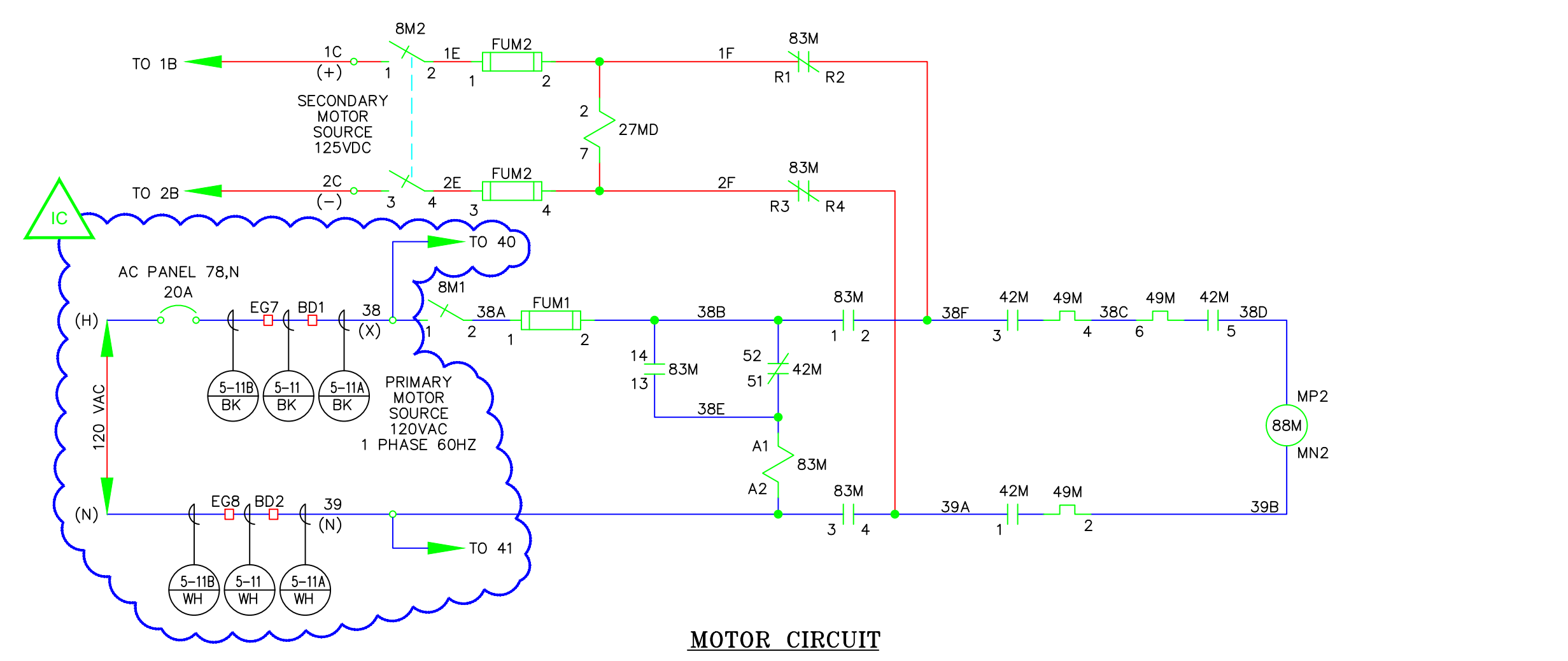
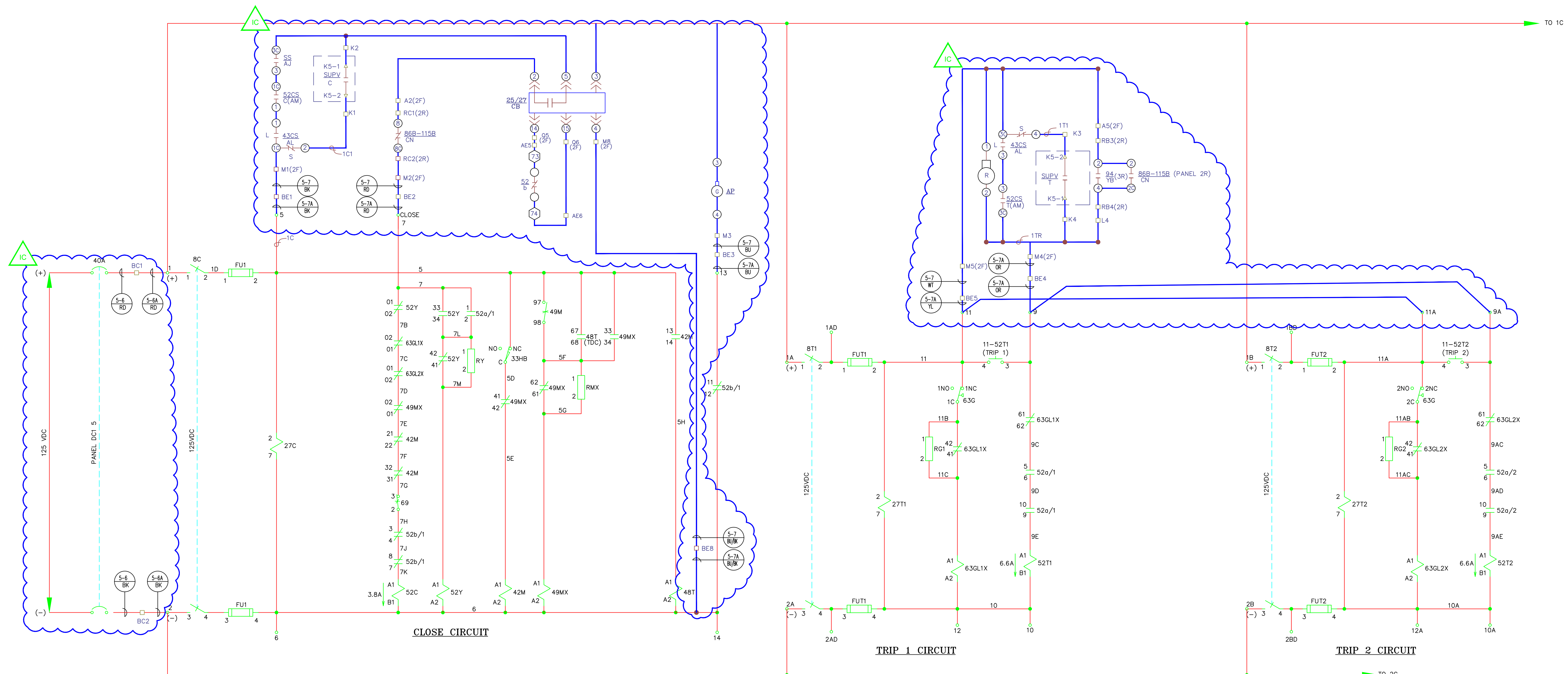


Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE SCHEMATIC 115-4 AC & DC SCHEMATIC PROPOSED	
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-SO-0002	
DRAWING NO.:		01SS-EL-SO-0002	
SHEET 0004 OF 6		PAGE 17 / 76	

CONFIDENTIAL

01SS-EL-SO-0002_0004.dwg



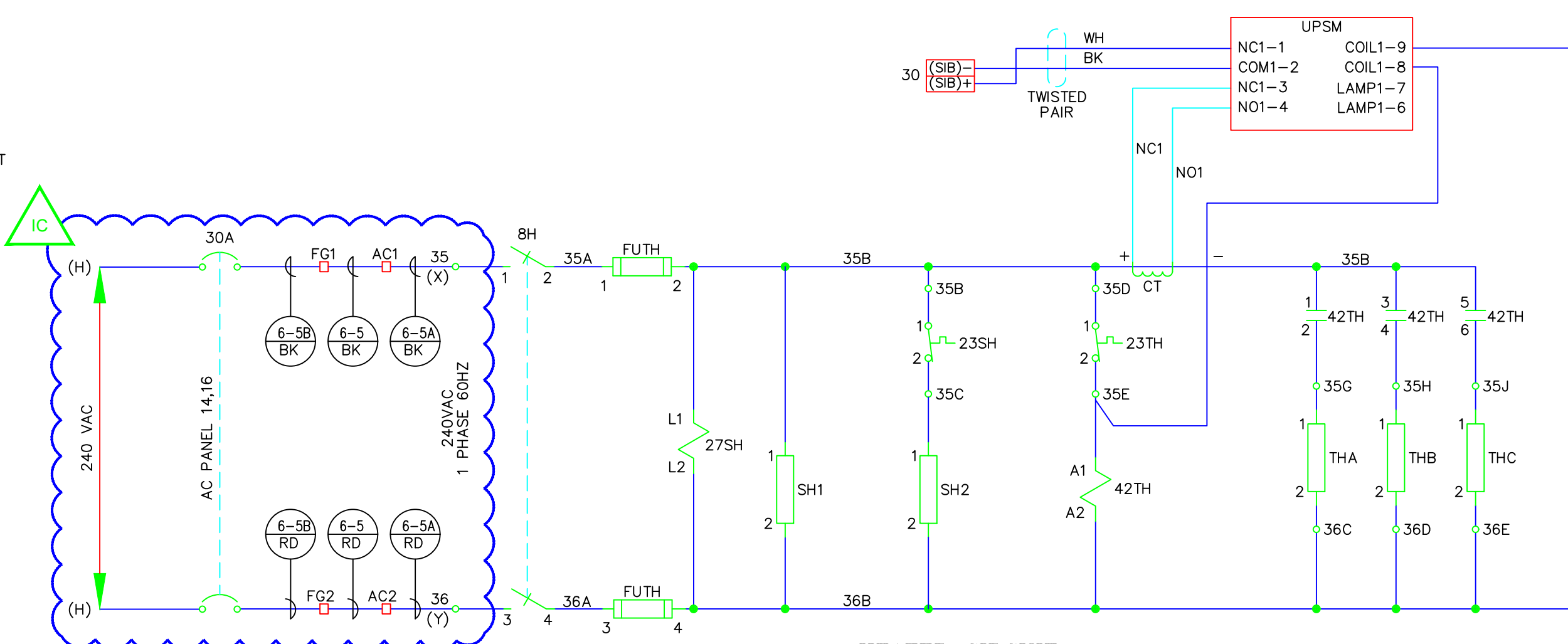
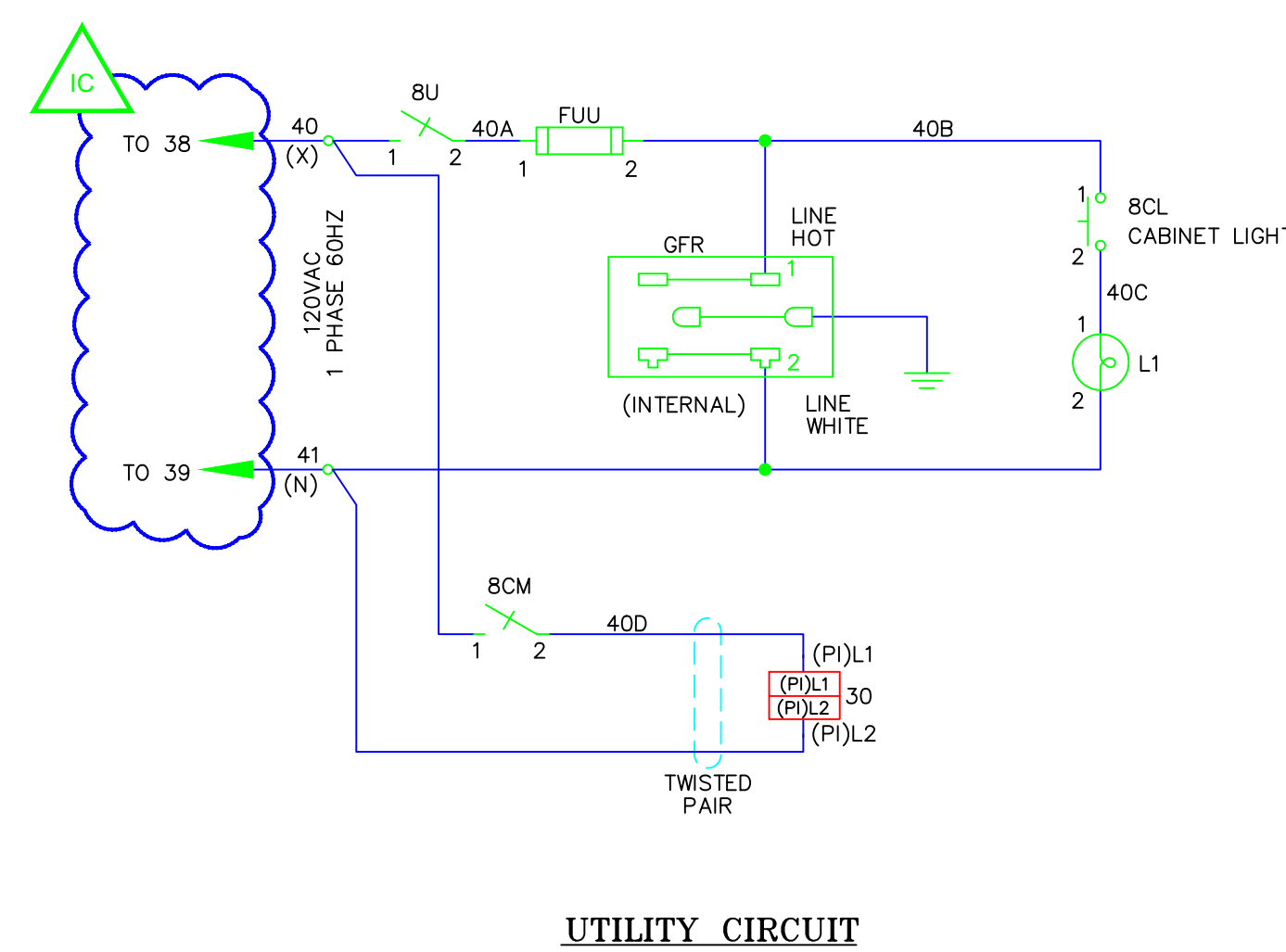
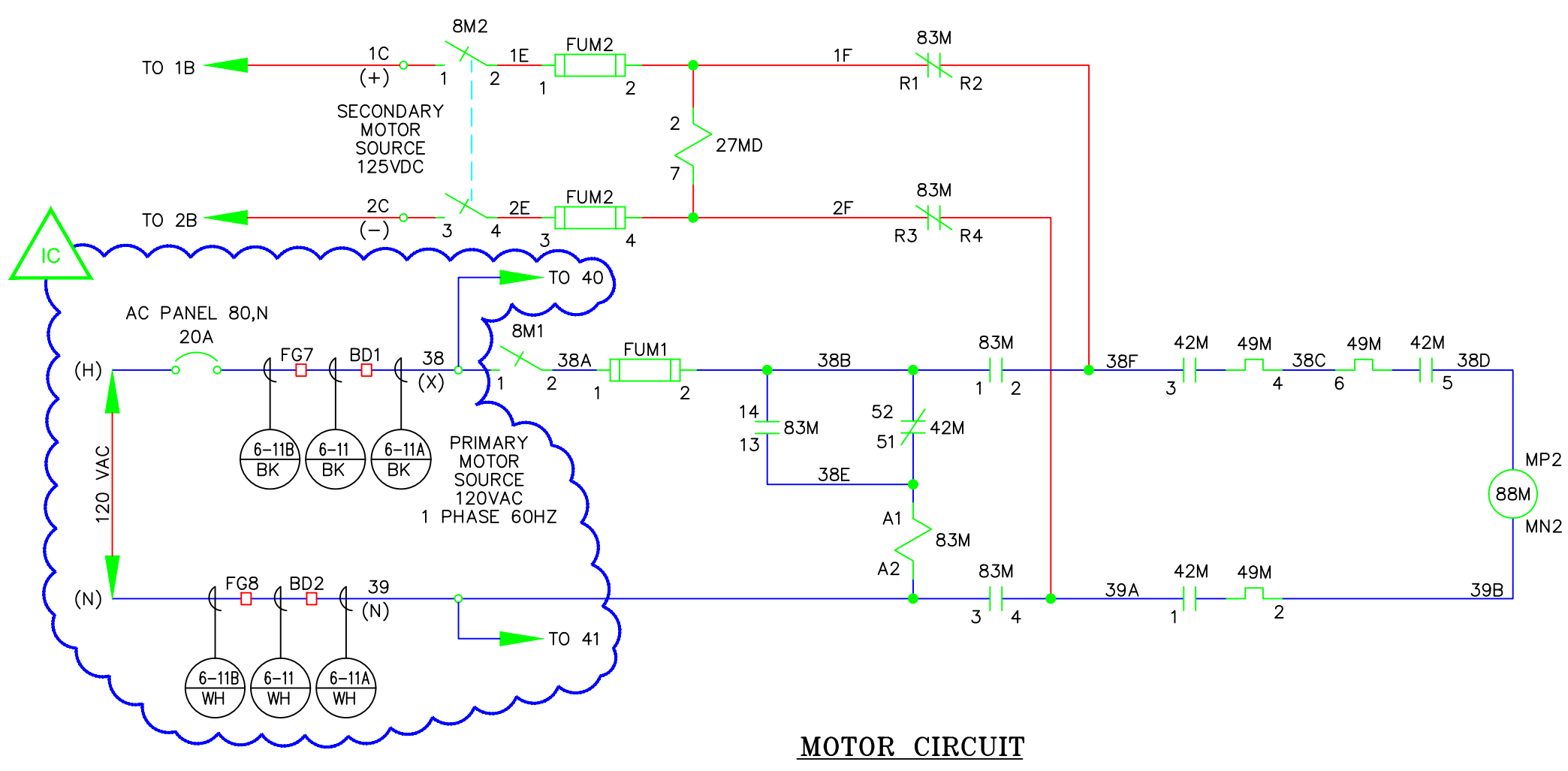
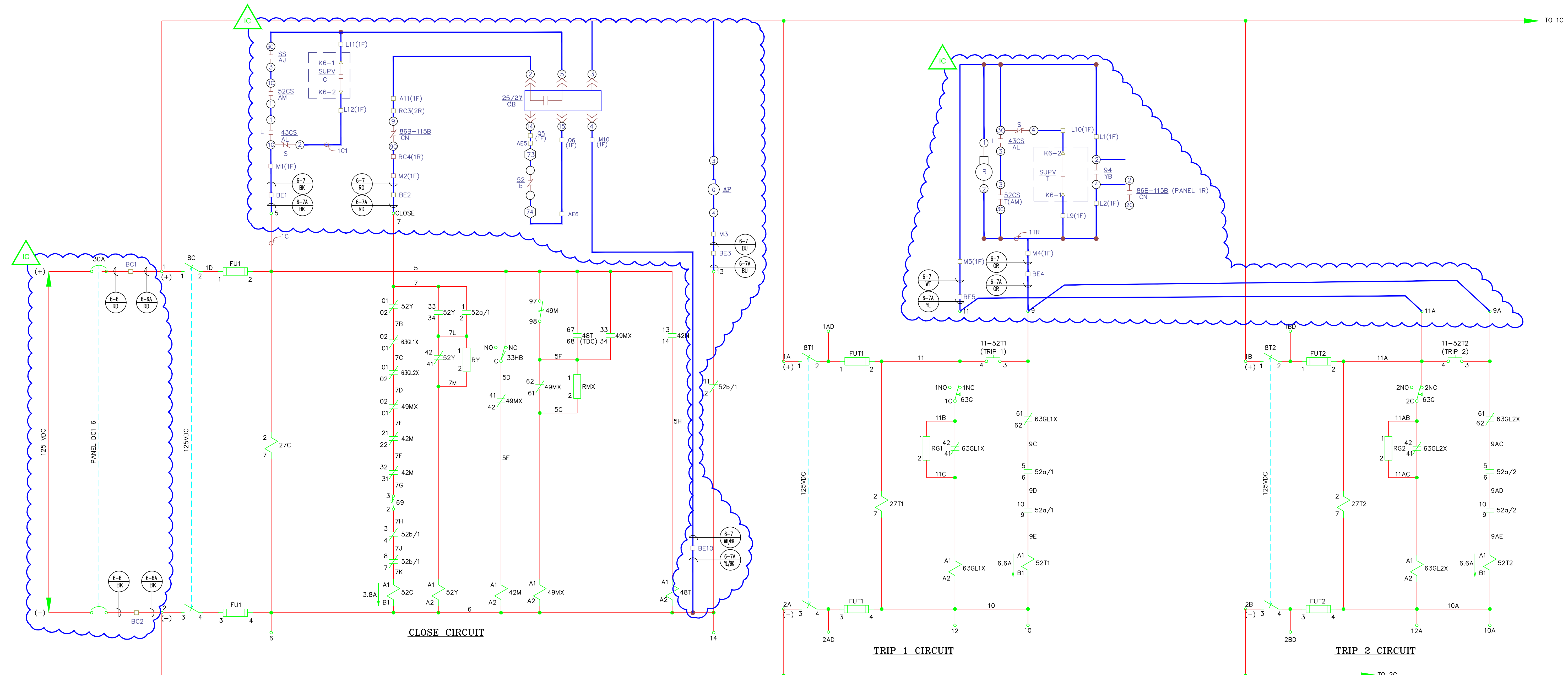
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
				W.O. # P1700073
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



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Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE SCHEMATIC 115-5 AC & DC SCHEMATIC PROPOSED	
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-SO-0002	
DRAWING NO.:		01SS-EL-SO-0002	
SHEET 0005 OF 6		PAGE 18 / 76	



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

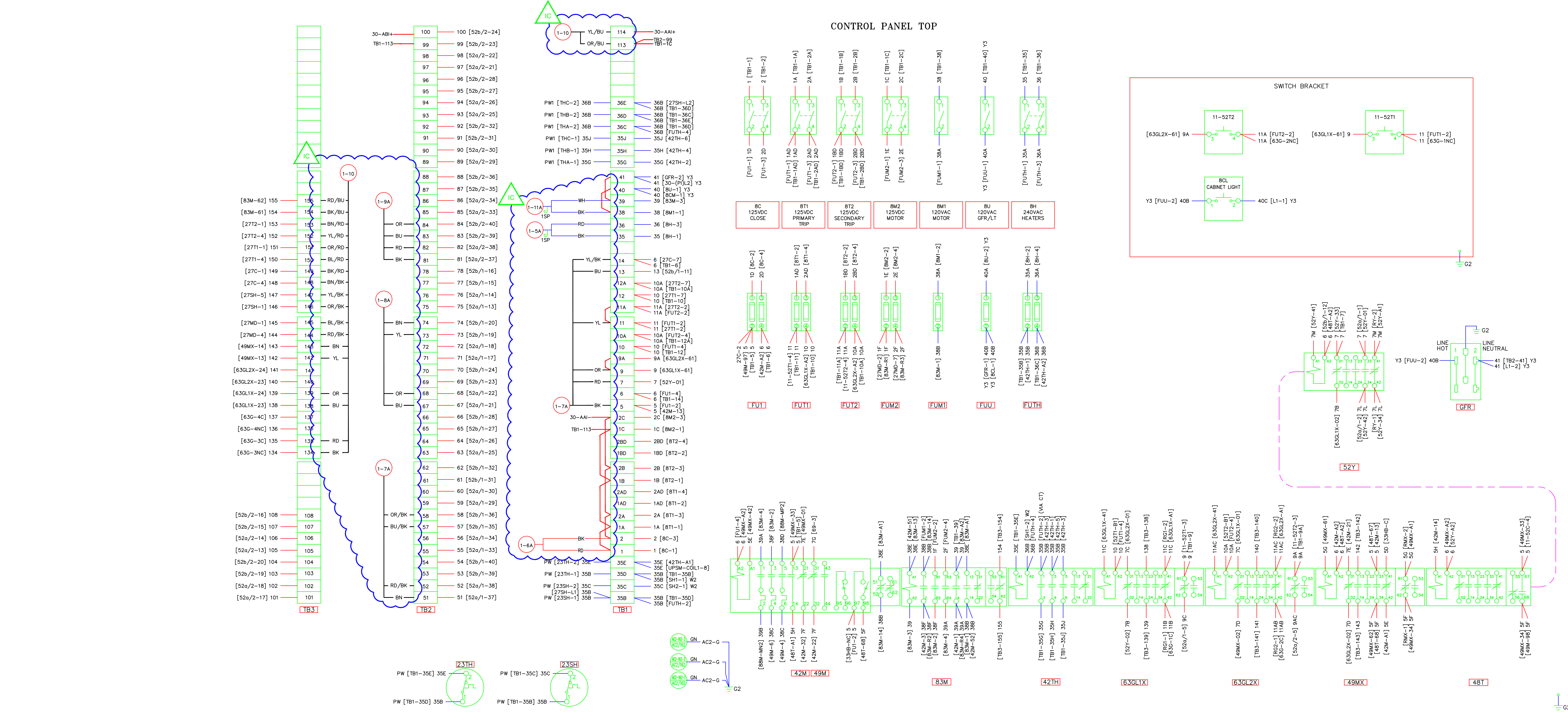
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA	-	-	GC	02/05/21



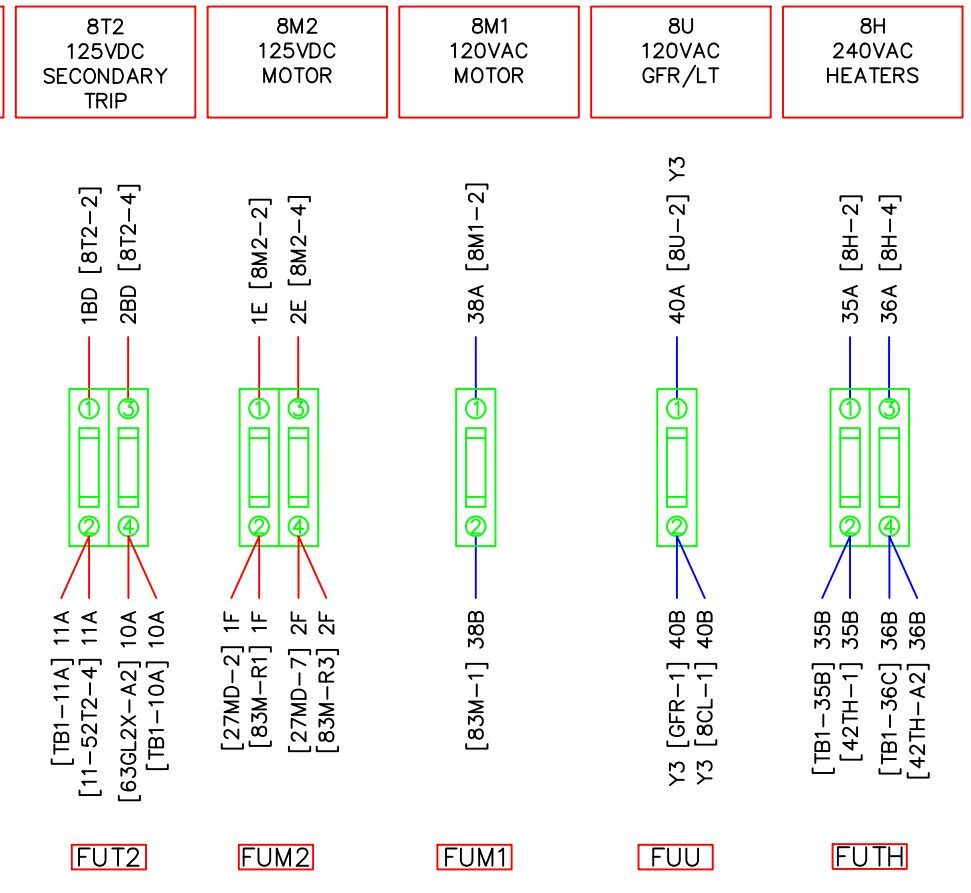
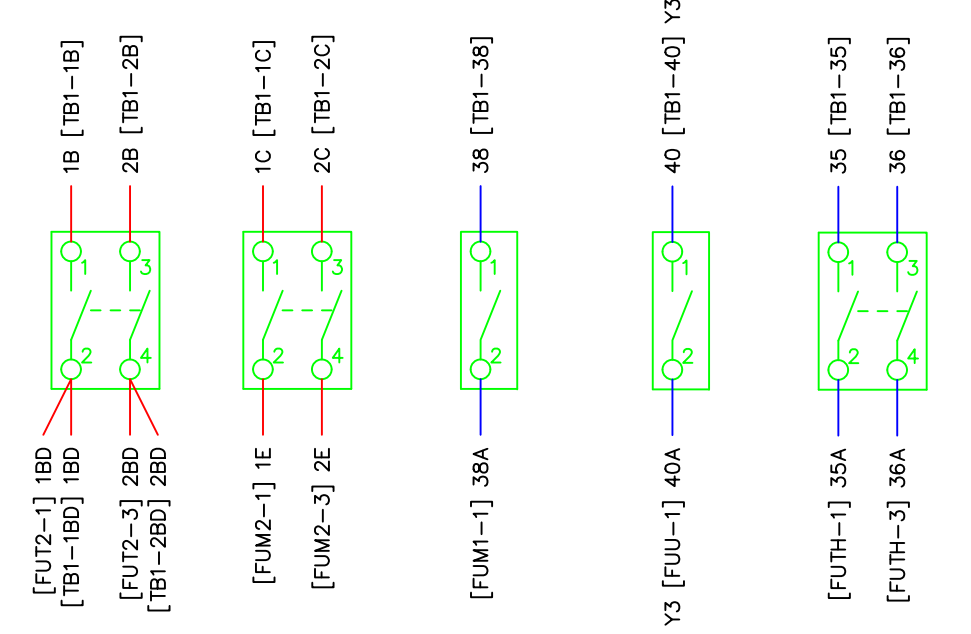
Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE SCHEMATIC 115-6 AC & DC SCHEMATIC PROPOSED	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-SO-0002
SHEET 0006 OF 6	PAGE 19 / 76

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CONTROL PANEL TOP



CONTROL PANEL BOTTOM

- NOTES
- WIRE CODES ARE AS FOLLOWS:
 CABINET HEATER LEAD WIRES - 600V SFF-2 12AWG (WHITE) - W2
 CABINET HEATER COVER GROUND - 600V SFF-2 10AWG (GREEN) - G3
 TANK HEATER LEAD WIRES - 600V TEFLO 12AWG (WHITE) - PW1
 GROUNDING CIRCUITS - 600V SIS 12 AWG (GREEN) - G2
 GFR CIRCUIT - 600V SIS 12AWG (GRAY) - Y3
 TWISTED PAIR W/ALUMINUM 3 TWISTS PER FOOT - 600V SIS 14AWG (GRAY) - TP
 ALL OTHER CIRCUITS - 600V SIS 14AWG (GRAY) Y2 OR NO MARK
 PRE-WIRED LEADS - PW
 - TERMINAL BLOCKS
 TYPE AND RATING: MARATHON 1506STD OR 1512STD 600V, 30A
 TERMINAL SCREW: #10-32 SCREW
 WIRE RANGE #10 TO #16 AWG COPPER WIRE
 WITH PROPER TERMINATION APPROVED FOR 75AMP
 - WIRE TERMINATIONS: NON-INSULATED, RING-TONGUE, COMPRESSION TYPE.
 - WIRE NUMBER IS THE SAME AS THE TERMINAL POINT NUMBER UNLESS OTHERWISE IDENTIFIED.

CONSTRUCTION NOTES:

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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 Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-1 WIRING DIAGRAM 1 PROPOSED

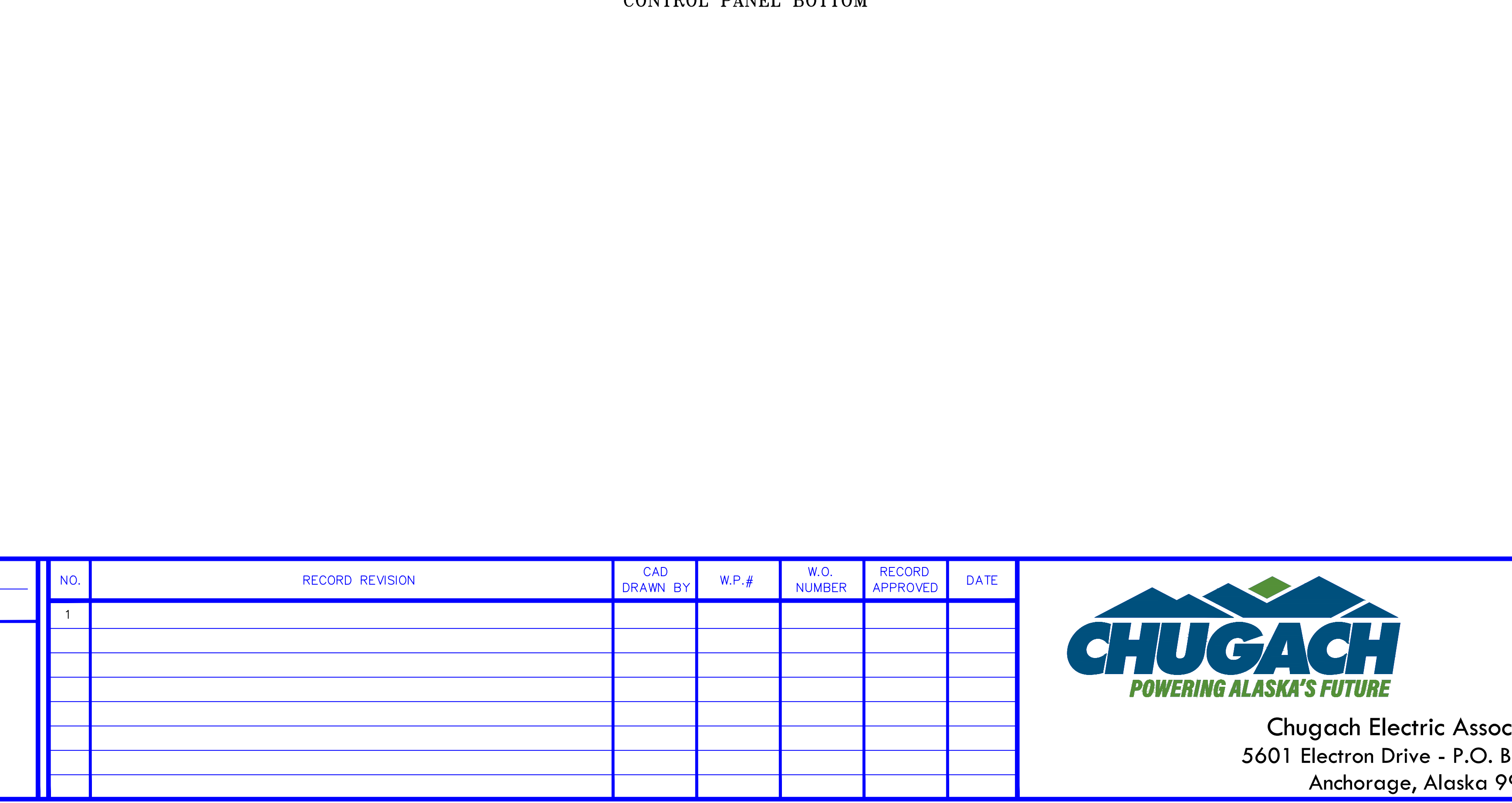
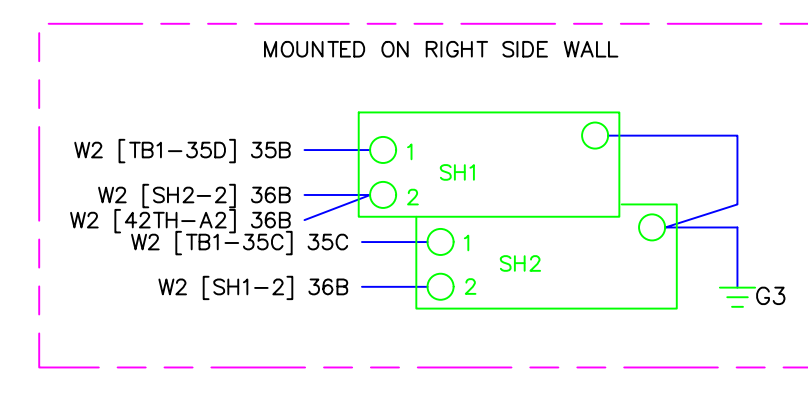
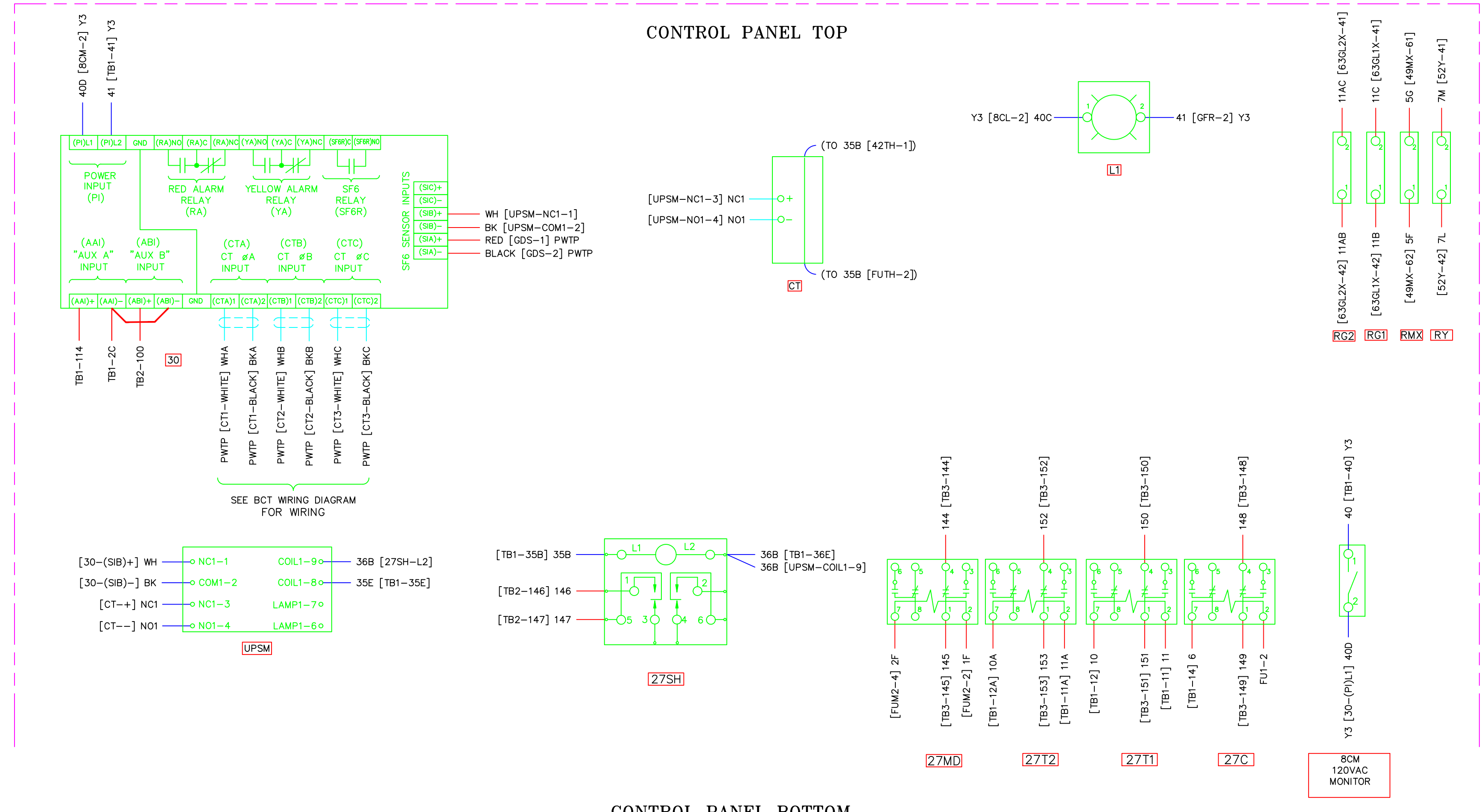
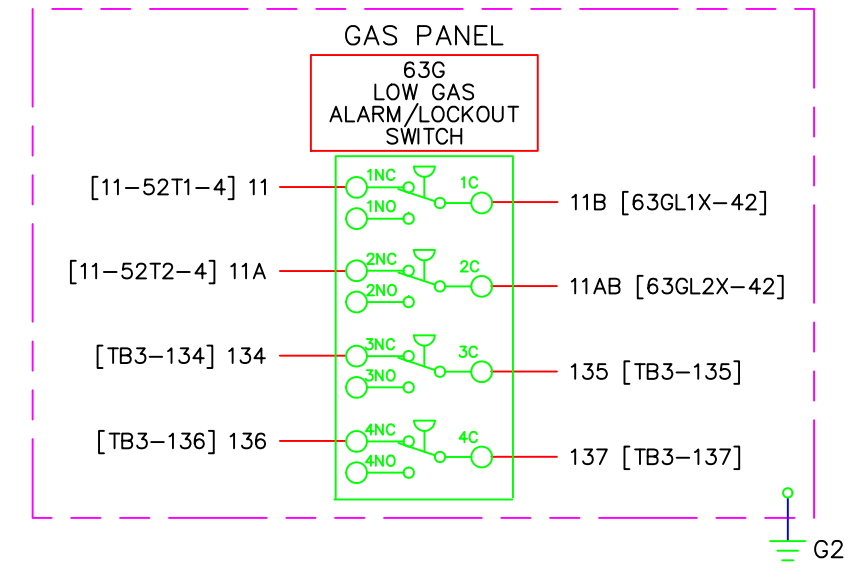
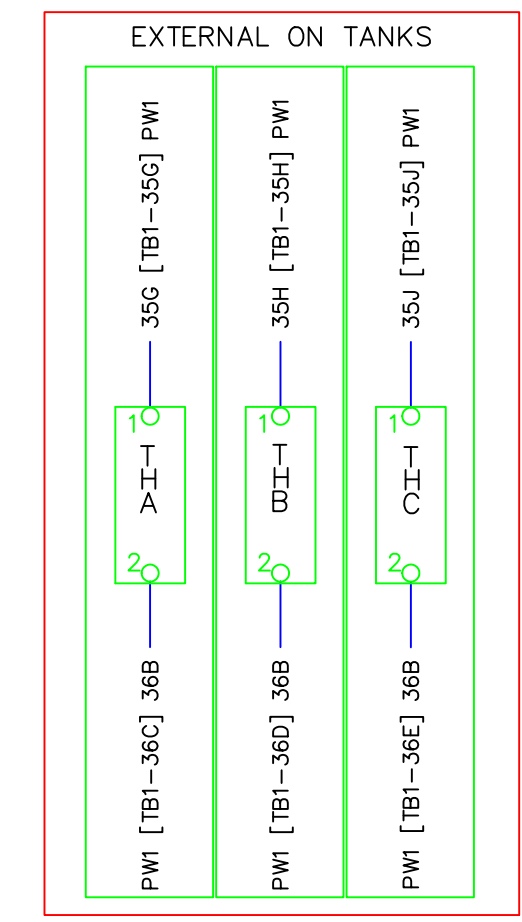
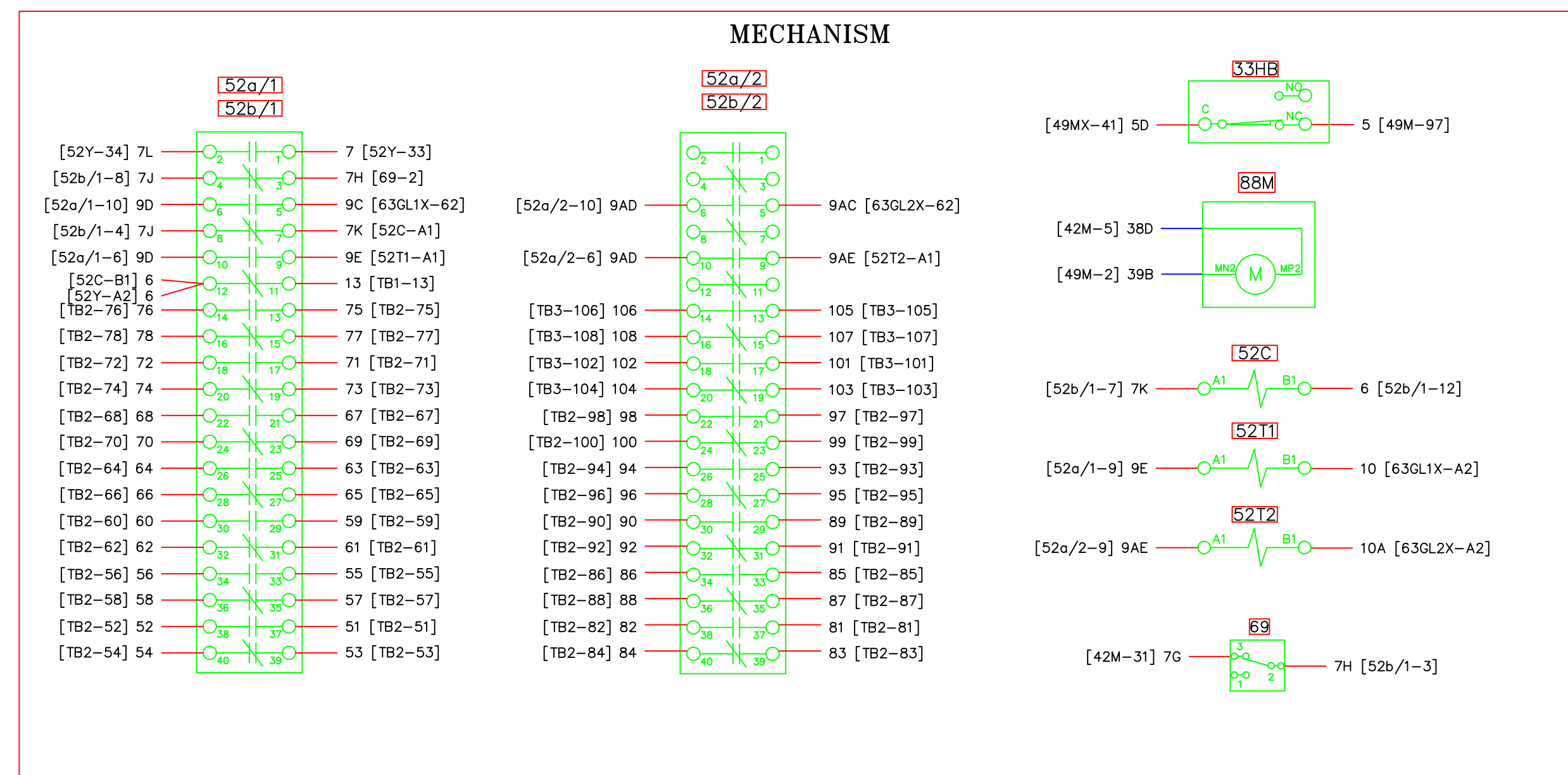
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DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-EL-WO-0003

SHEET 0001 OF 28
 PAGE 20 / 76

01SS-EL-WO-0003_0001.dwg



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PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

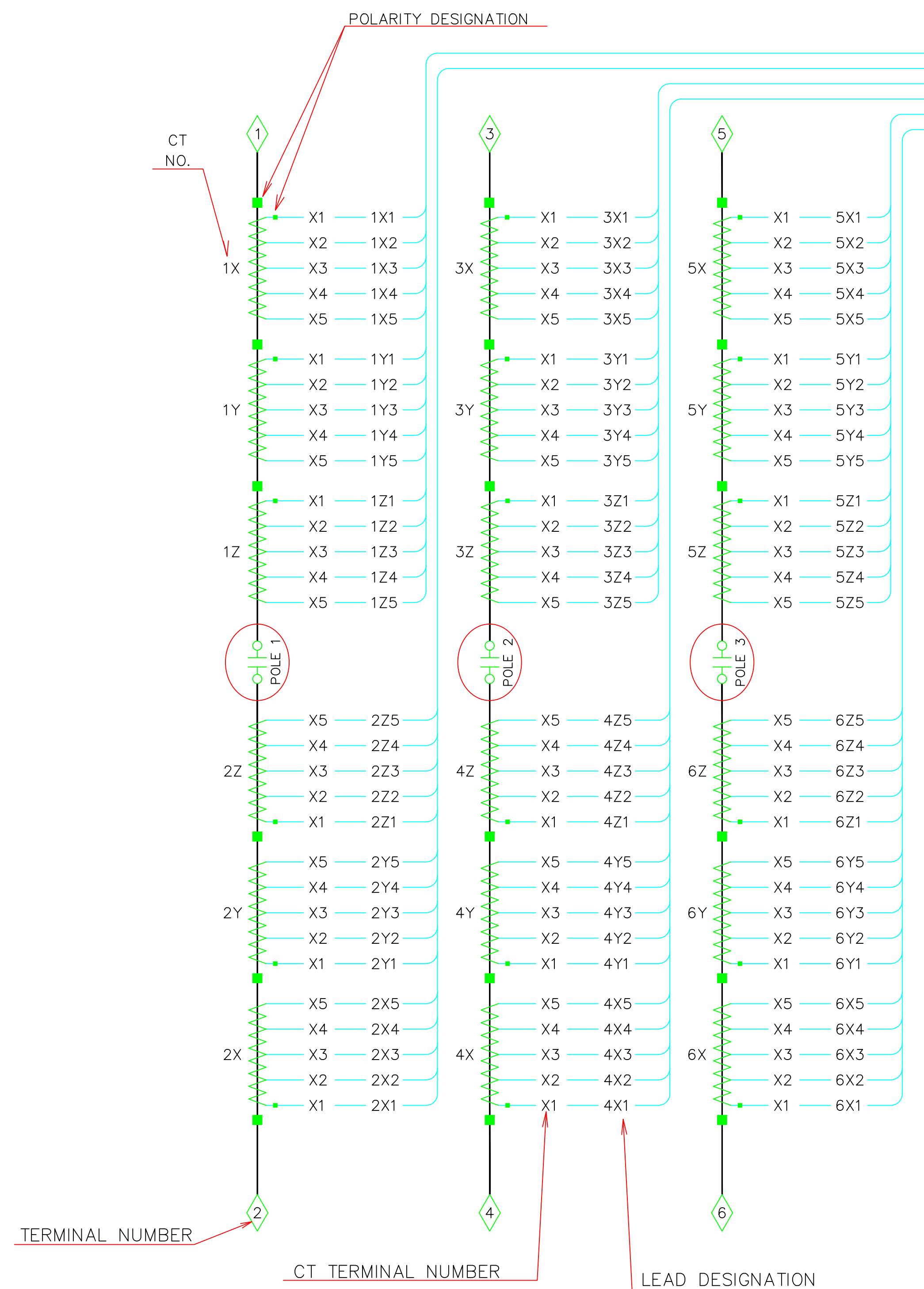
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-1 WIRING DIAGRAM 2	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	SHEET 0002 OF 28
DRAWING NO.: 01SS-EL-WO-0003	PAGE 21 / 76

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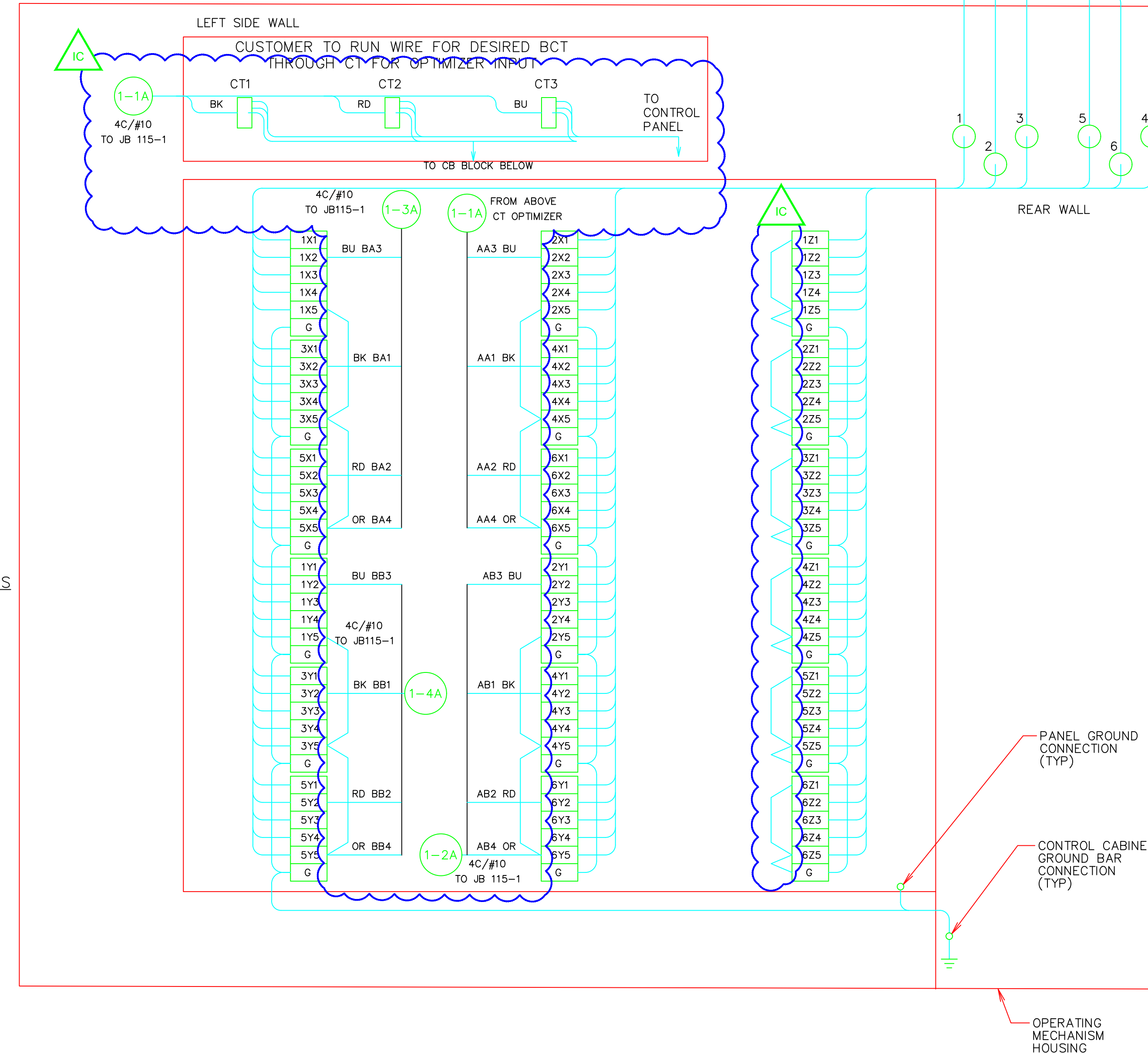


1X, 1Y, 2X, 2Y, 3X, 3Y, 4X, 4Y, 5X, 5Y, 6X, 6Y
ACCURACY CLASS C800 (AT MAX. TAP)
THERMAL RATING 2.5

SECONDARY TAPS	CURRENT RATINGS
X1-X5	1200/5A
X2-X5	1000/5A
X3-X5	900/5A
X1-X4	800/5A
X2-X4	600/5A
X3-X4	500/5A
X4-X5	400/5A
X1-X3	300/5A
X1-X2	200/5A
X2-X3	100/5A

1Z, 2Z, 3Z, 4Z, 5Z, 6Z
ACCURACY CLASS 0.3B1.2 (AT MAX. TAP)
THERMAL RATING 5.0

SECONDARY TAPS	CURRENT RATINGS
X1-X5	600/5A
X2-X5	500/5A
X3-X5	450/5A
X1-X4	400/5A
X2-X4	300/5A
X3-X4	250/5A
X4-X5	200/5A
X1-X3	150/5A
X1-X2	100/5A
X2-X3	50/5A



- NOTES
- BCT SECONDARIES (MAX TAP) TO BE SHORTED TO GROUND PRIOR TO SHIPMENT
 - TERMINAL BLOCK SPECIFICATION: SHORTING - MARATHON 1508SC 6-POINT TERMINAL SCREW: 10-32 WASHER HEAD COMPATIBLE WITH CONDUCTORS UP TO 10AWG WITH PROPER TERMINATION
 - WIRE SPECIFICATION: GROUND WIRING - 10AWG, 600V MTW, GREEN ALL OTHER WIRING - 10AWG, 600V MTW, YELLOW
 - WIRE TERMINATIONS: NON-INSULATED RING TONGUE COMPRESSION TYPE TERMINALS ARE TO BE USED

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD
ELECTRICAL - OUTSIDE WIRING DIAGRAM
115-1 CT WIRING DIAGRAM
PROPOSED

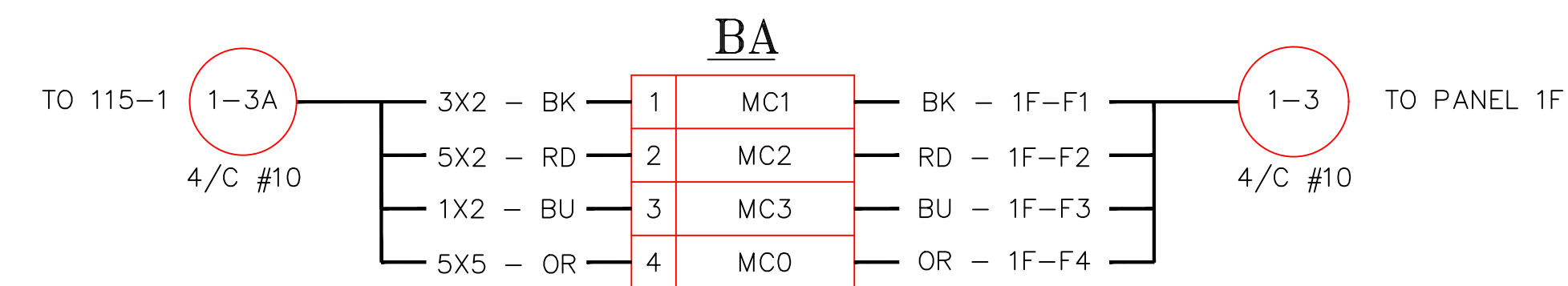
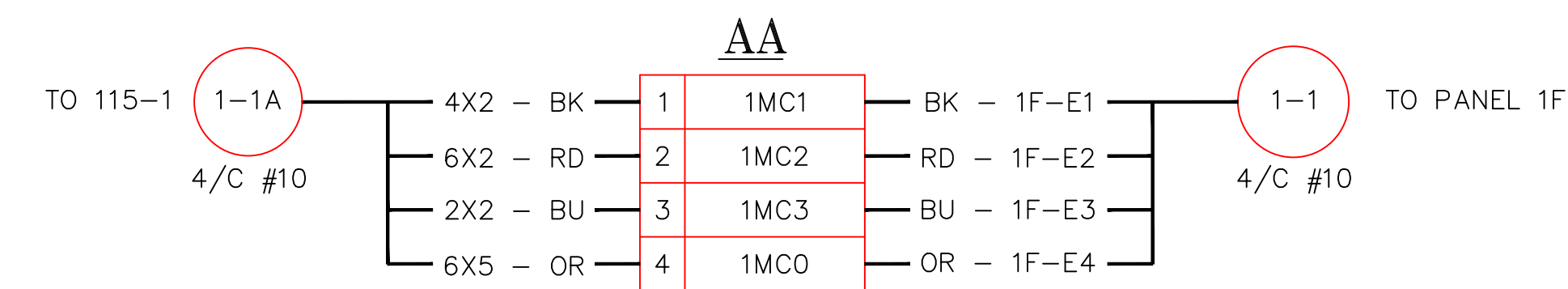
CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE

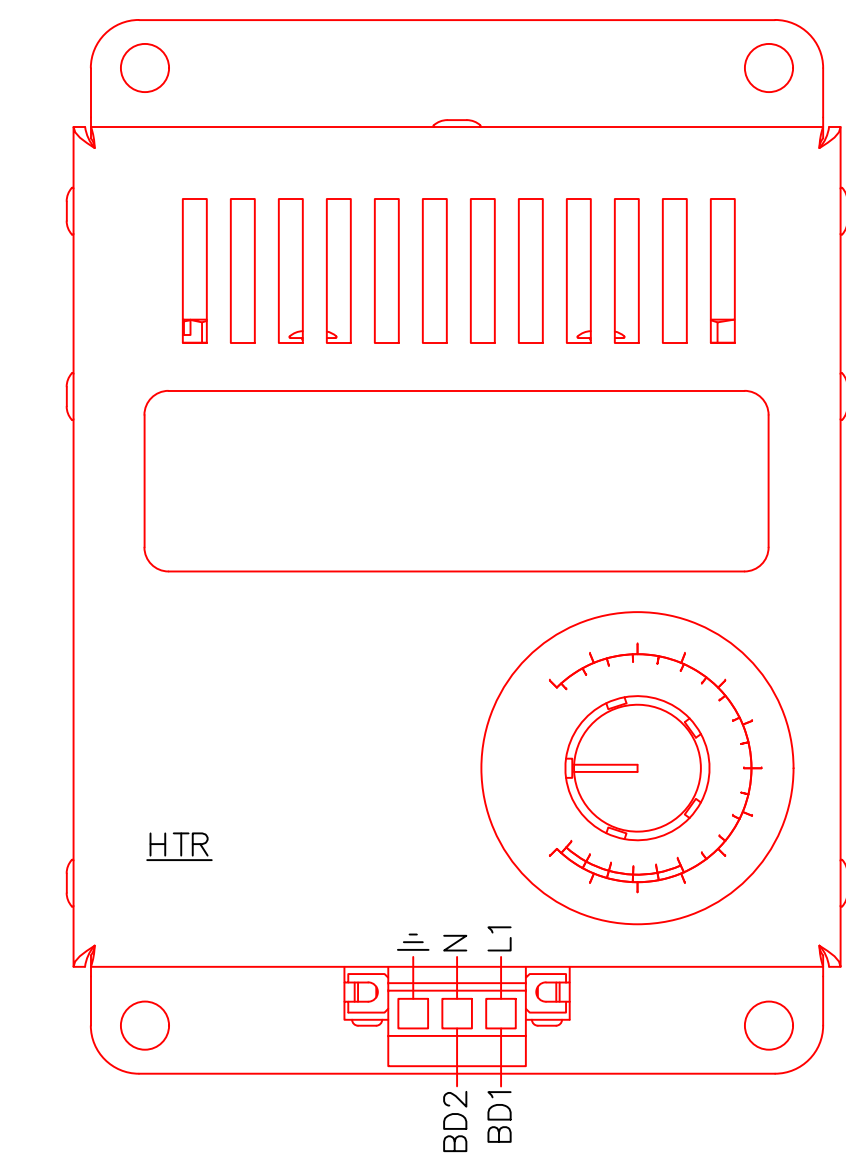
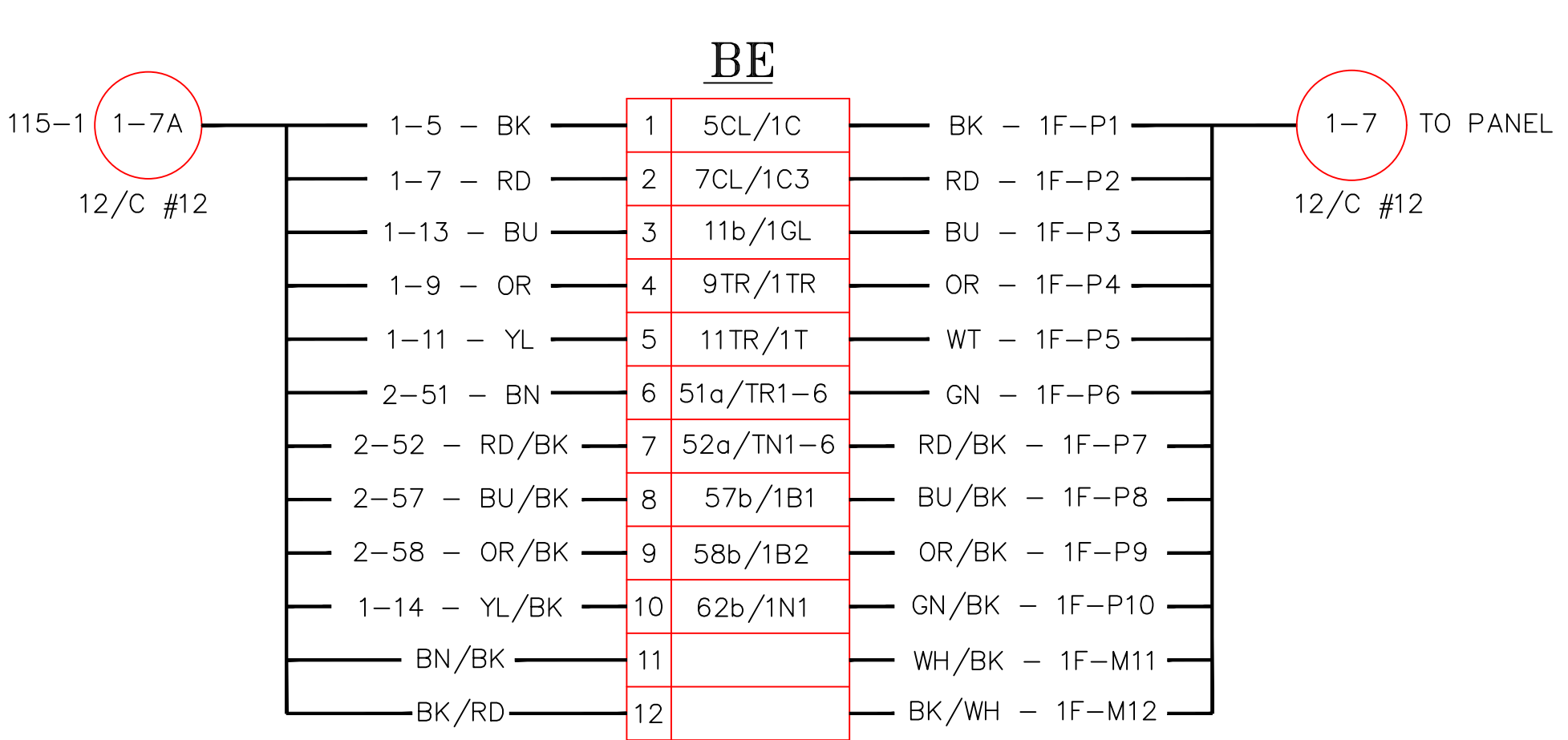
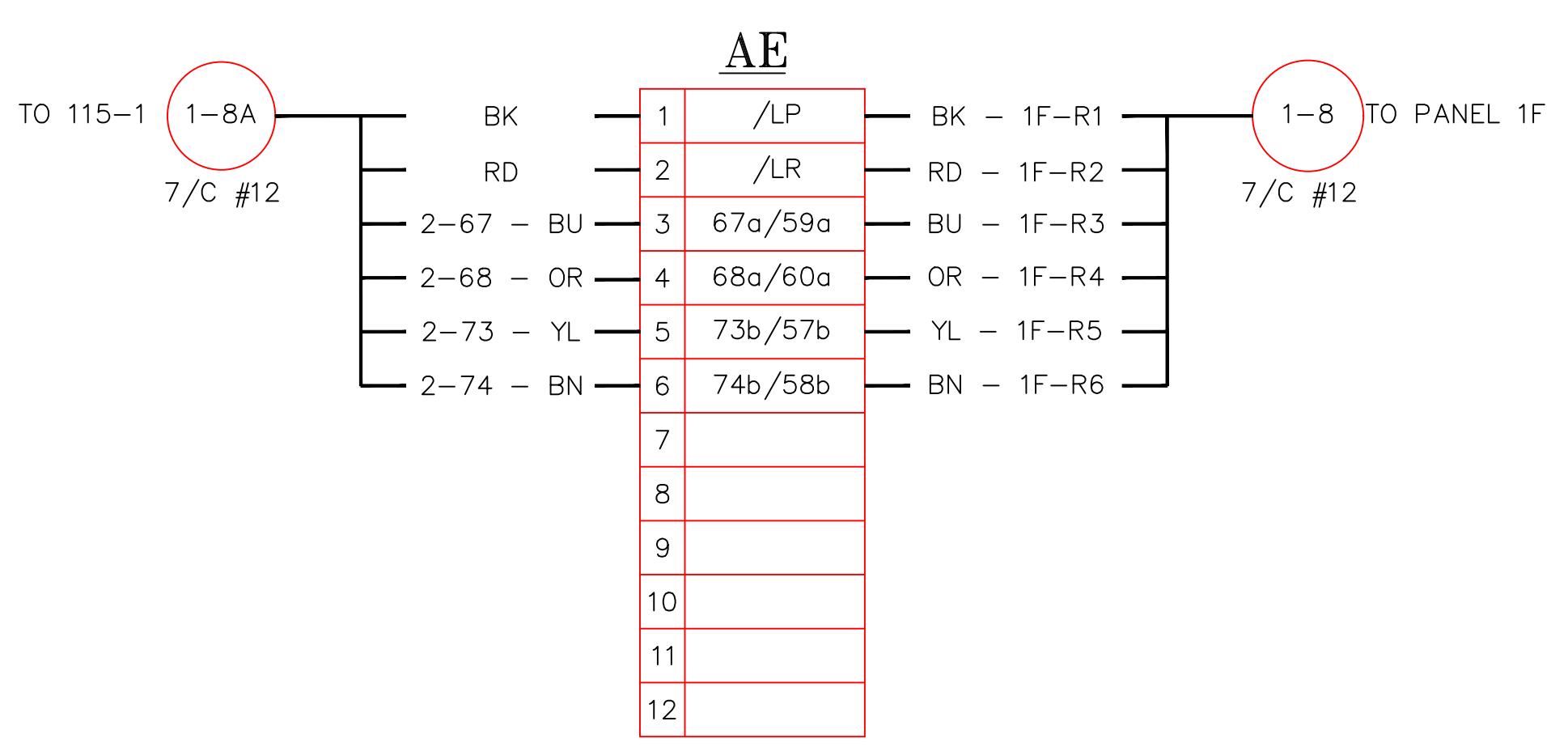
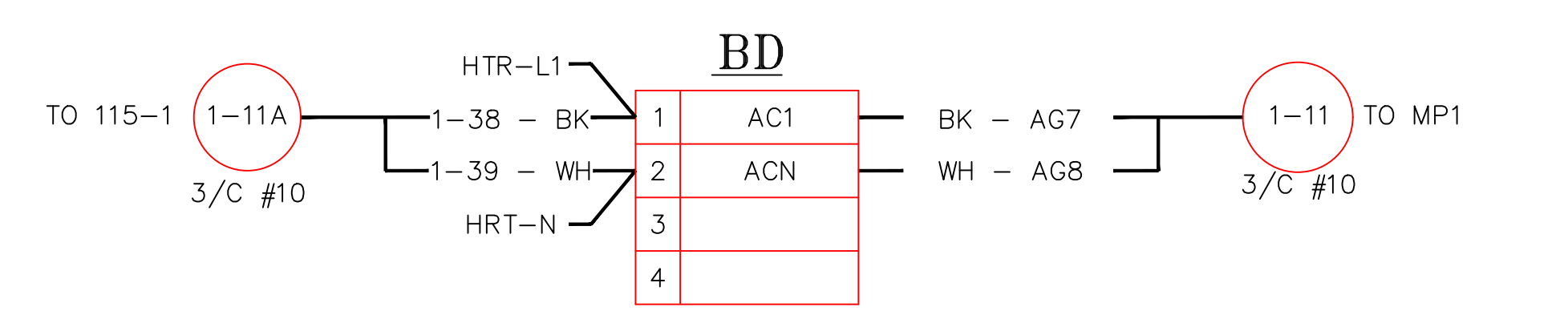
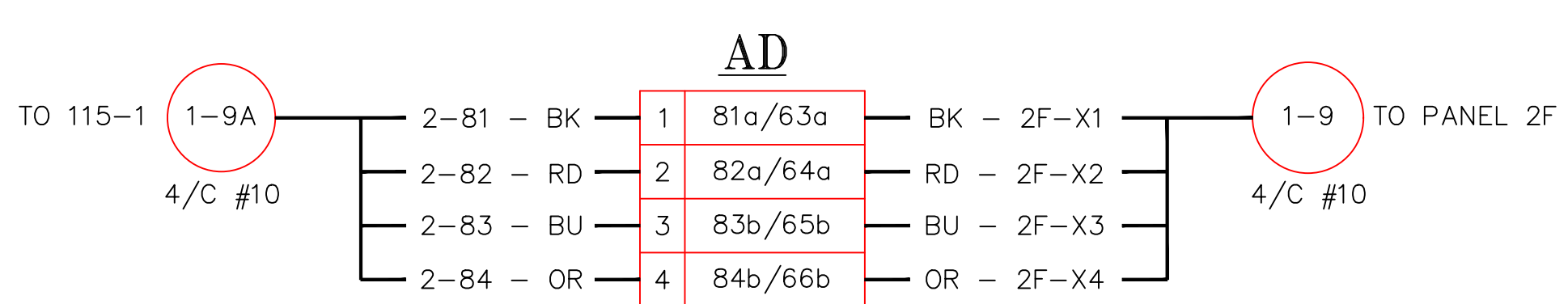
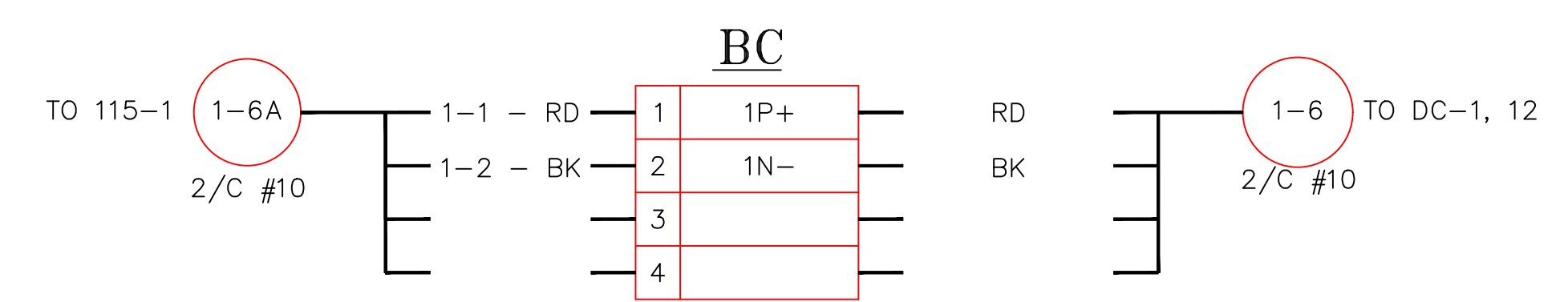
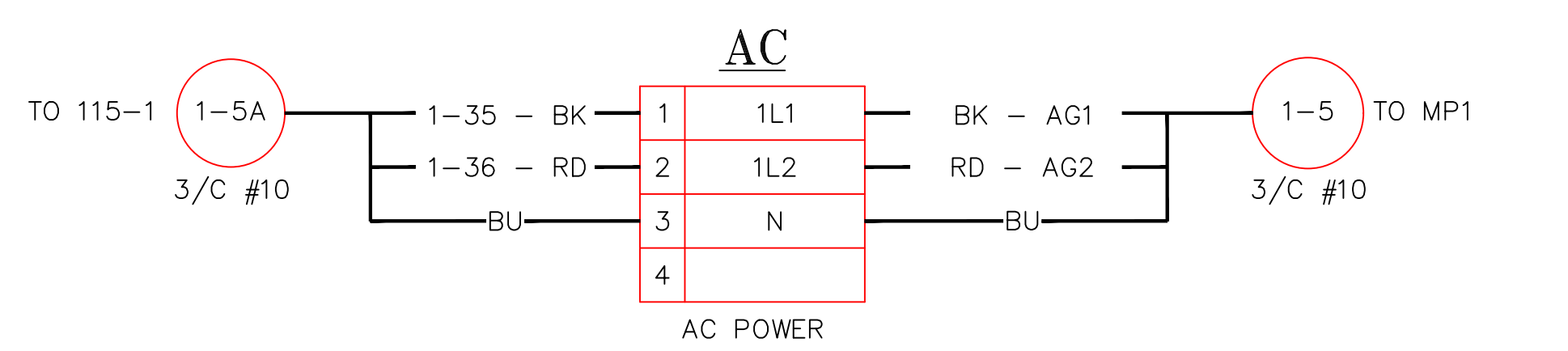
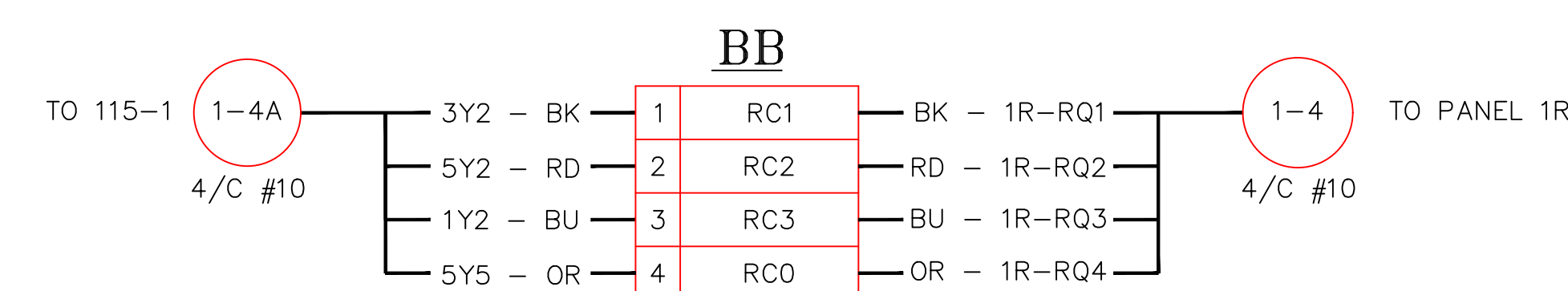
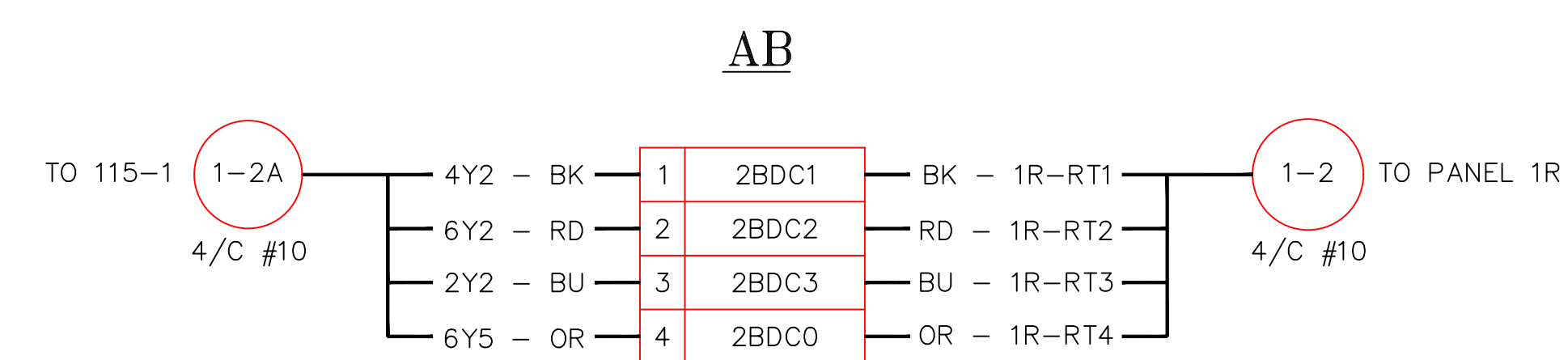
DRAWING NO.: 01SS-EL-WO-0003

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- 51a/TR1-6 TRIP CIRCUIT DEVICE 94
- 52a/TN1-6
- 57b/1B1 CB #730 INTERLOCK
- 58b/1B2
- 11b/1GL GREEN LIGHT
- 12b/1N1
- 63a/LP UNUSED
- 64a/LR
- 67a/59a RTU BREAKER POSITION
- 68a/60a
- 73b/57b SYNC CHECK RELAY
- 74b/58b
- 81a/63a TT1 AND TT2 PARALLELING CIRCUIT
- 82a/64a
- 83b/65b
- 84b/66b



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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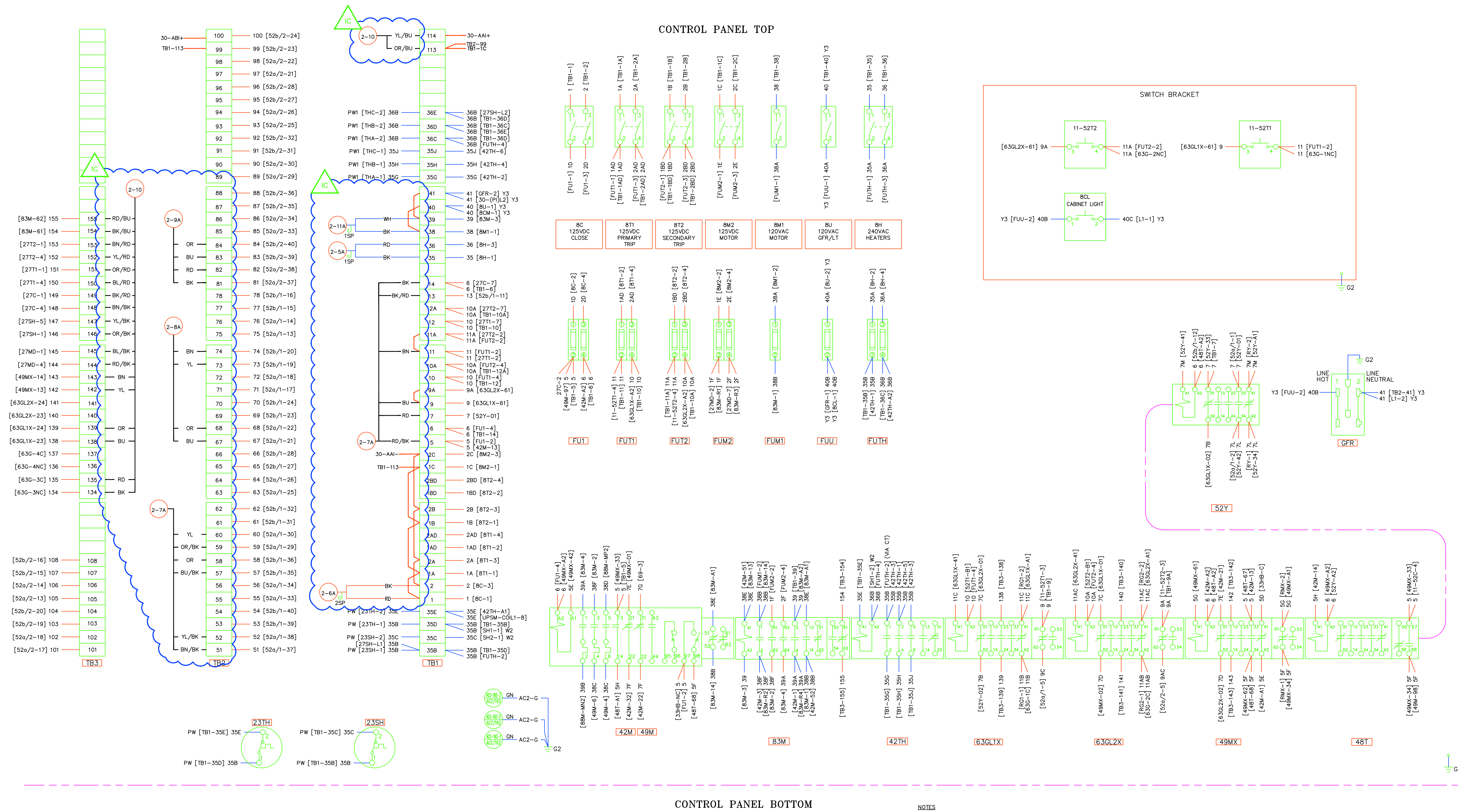
Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-1 JUNCTION CABINET PROPOSED

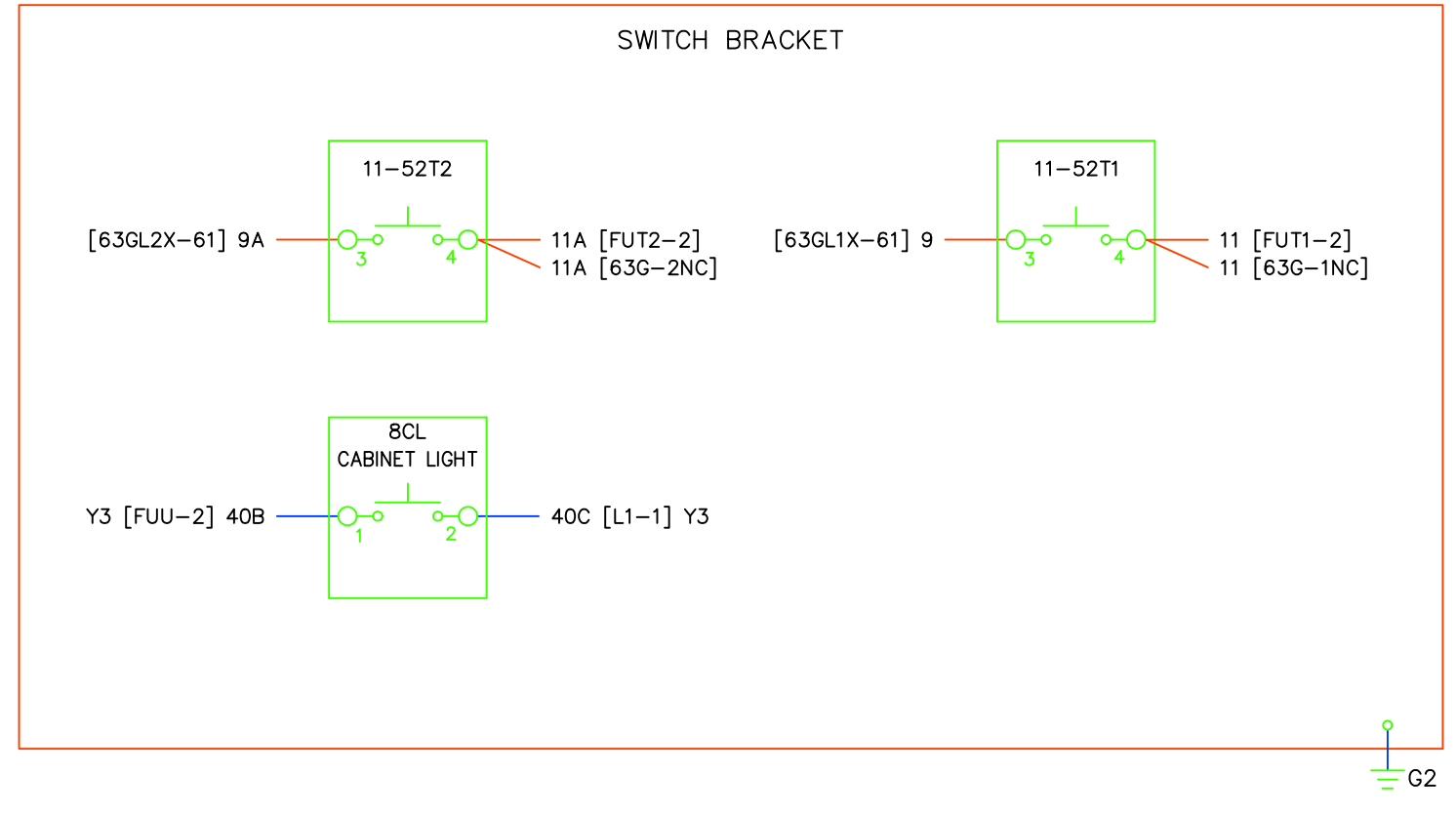
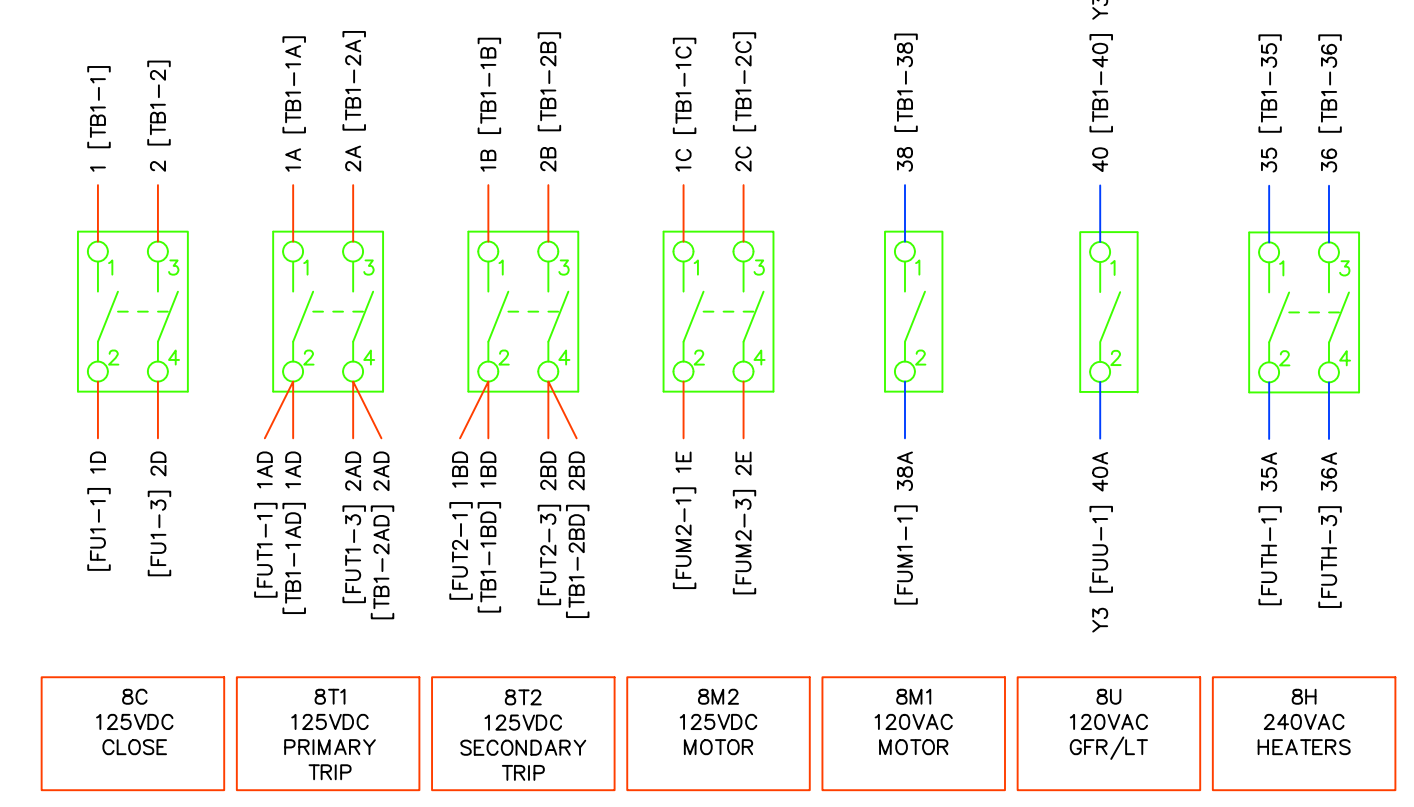
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DRAWING NO.: 01SS-EL-WO-0003

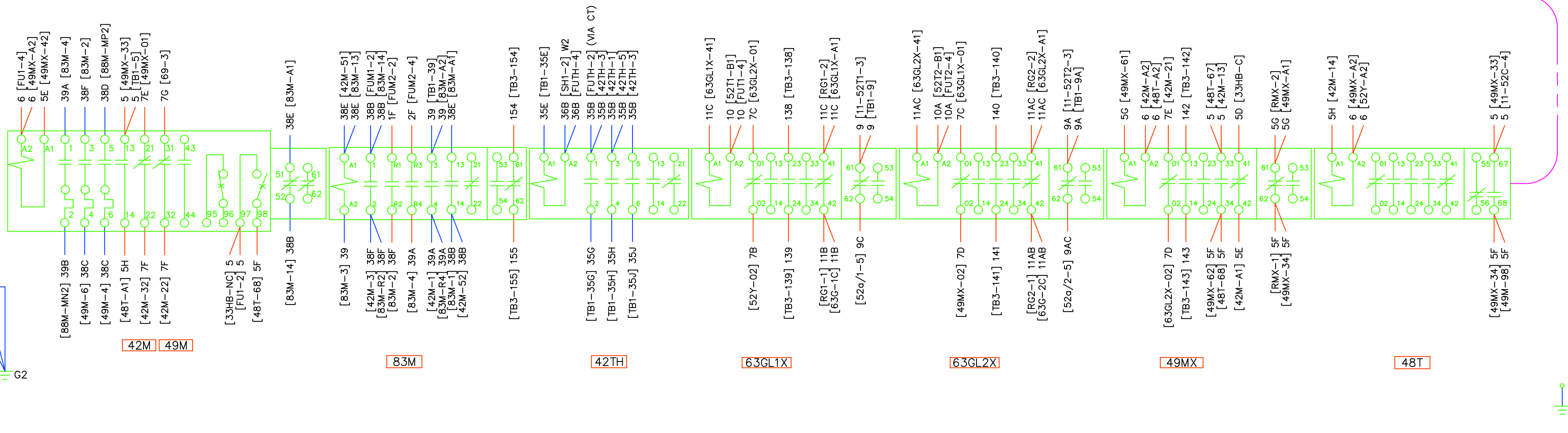
SHEET 0004 OF 28
PAGE 23 / 76



CONTROL PANEL TOP



CONTROL PANEL BOTTOM



CONSTRUCTION NOTES:

- NOTES
- WIRE CODES ARE AS FOLLOWS:
 CABINET HEATER LEAD WIRES - 600V SFF-2 12AWG (WHITE) - W2
 CABINET HEATER COVER GROUND - 600V SFF-2 10AWG (GREEN) - G3
 TANK HEATER LEAD WIRES - 600V TEFELON 12AWG (WHITE) - PW
 GROUNDING CIRCUITS - 600V SIS 12 AWG (GREEN) - G2
 GFR CIRCUIT - 600V SIS 12AWG (GRAY) - Y3
 TWISTED PAIR W/ALUMINUM 3 TWISTS PER FOOT - 600V SIS 14AWG (GRAY) - TP
 ALL OTHER CIRCUITS - 600V SIS 14AWG (GRAY) Y2 OR NO MARK
 PRE-WIRED LEADS - PW
 - TERMINAL BLOCKS:
 TYPE AND RATING: MARATHON 1506STD OR 1512STD 600V, 30A
 TERMINAL SCREW: #10-32 SCREW
 WIRE RANGE: #10 TO #18 AWG COPPER WIRE
 WITH PROPER TERMINATION APPROVED FOR 75AMP
 - WIRE TERMINATIONS: NON-INSULATED, RING-TONGUE, COMPRESSION TYPE.
 - WIRE NUMBER IS THE SAME AS THE TERMINAL POINT NUMBER UNLESS OTHERWISE IDENTIFIED.

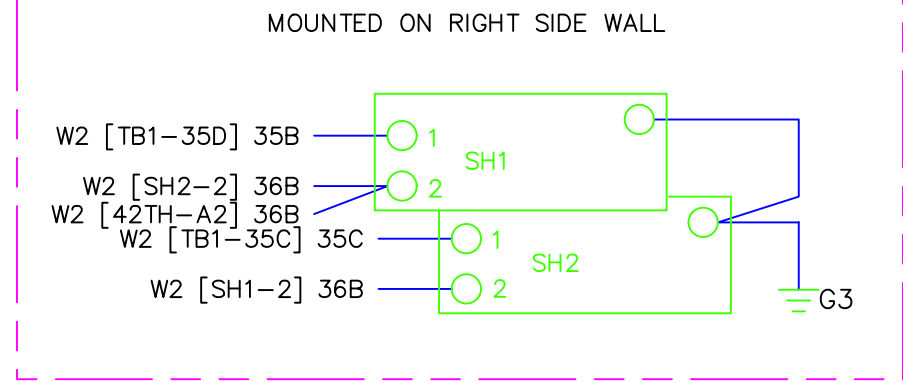
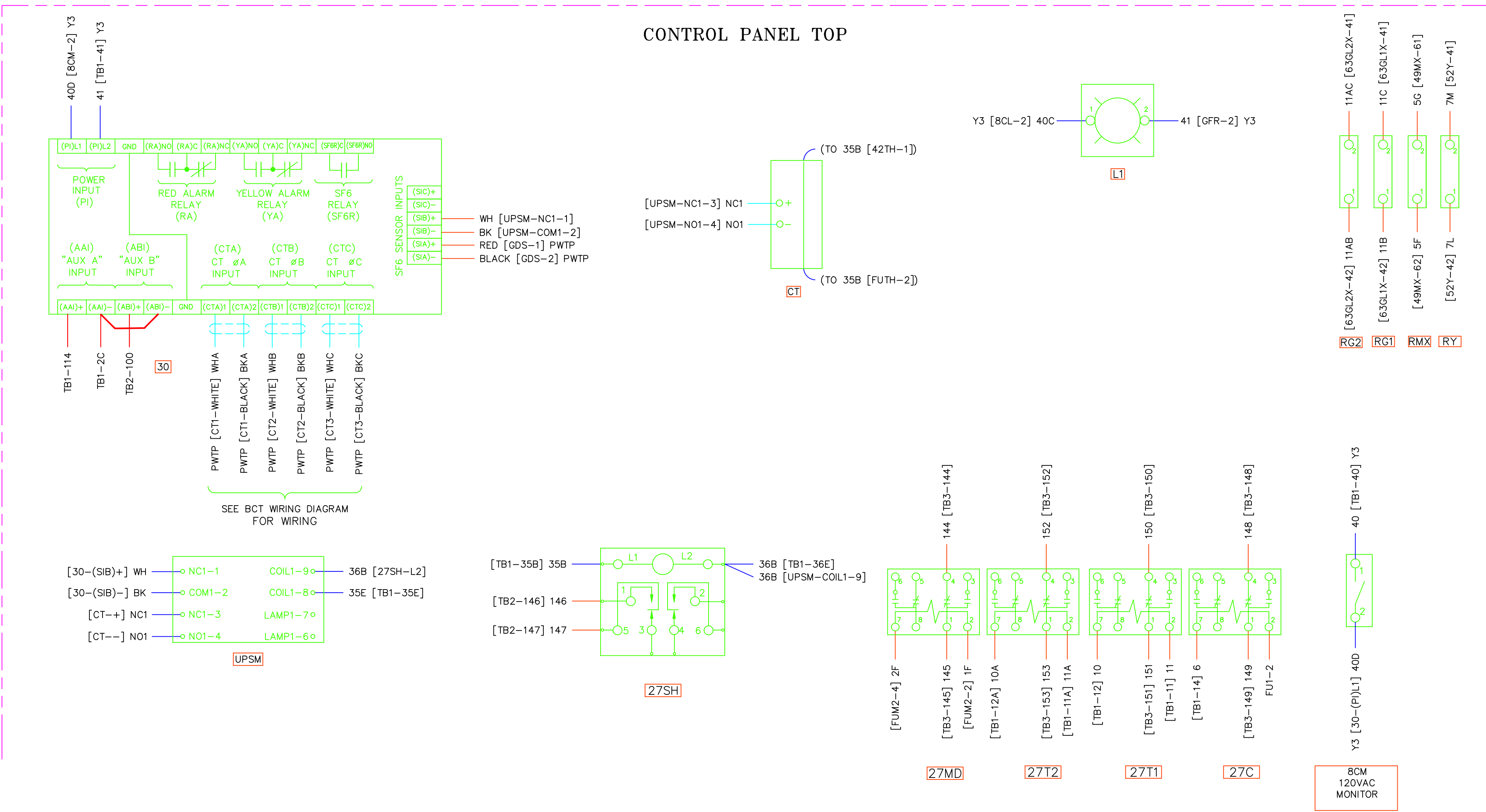
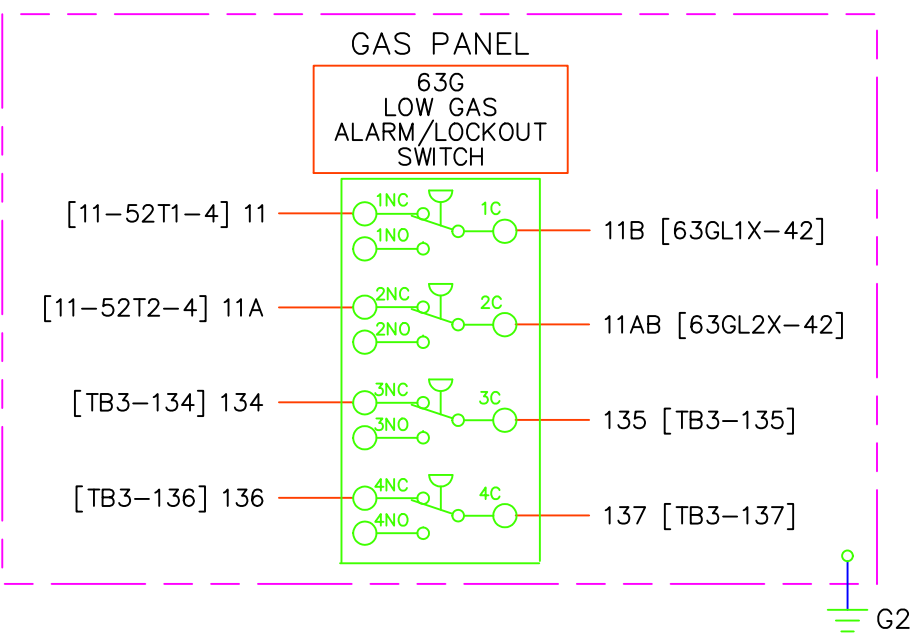
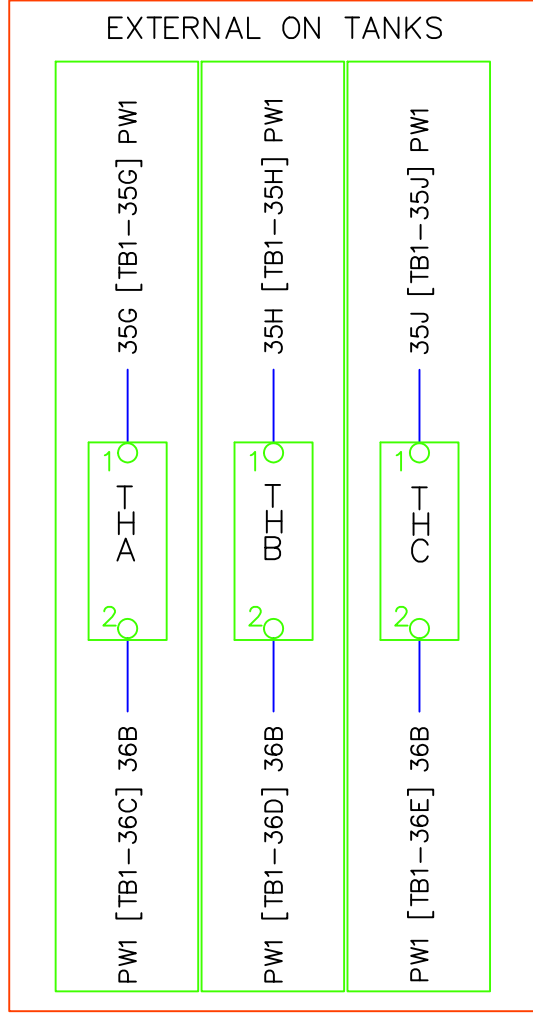
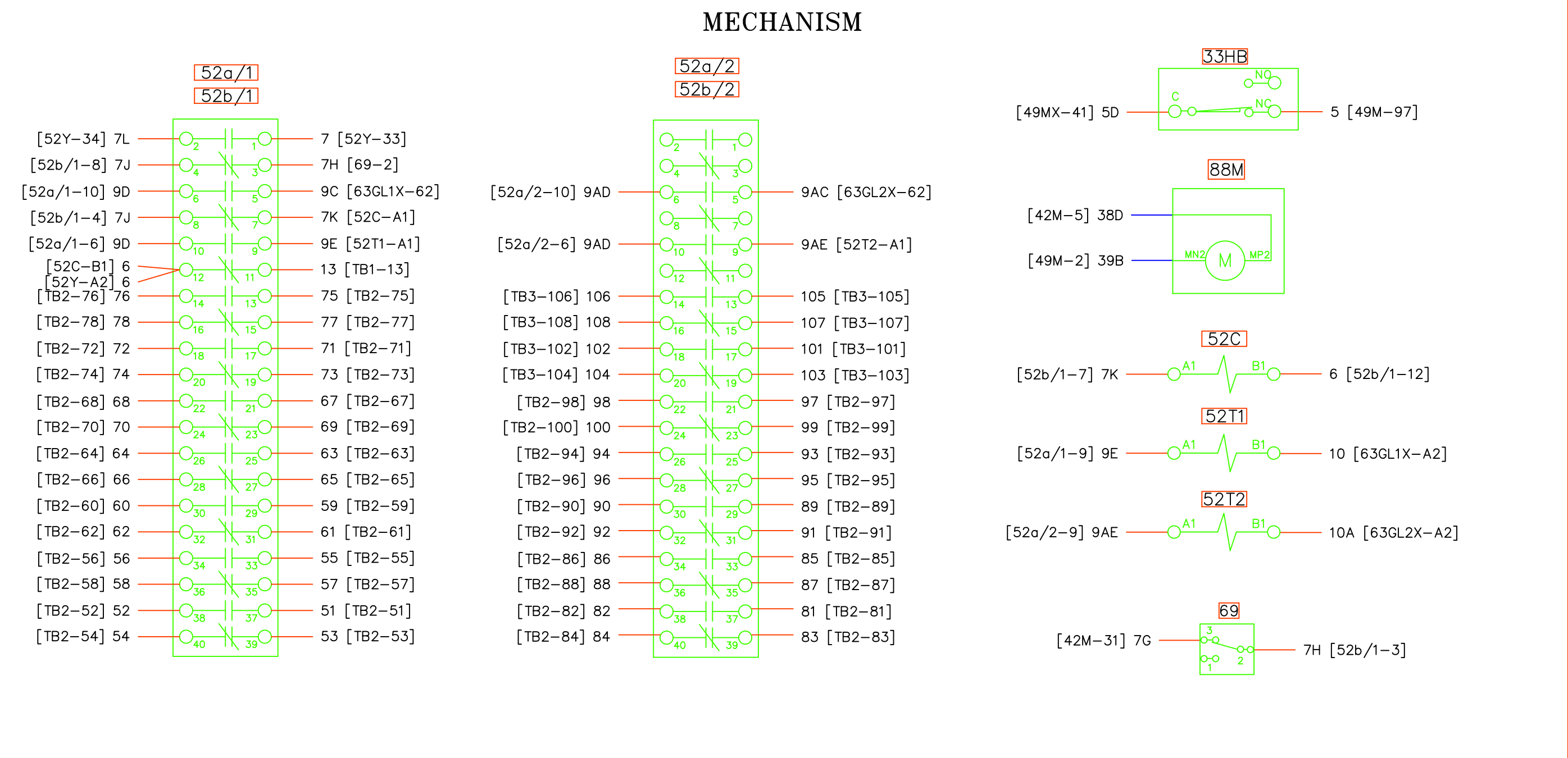
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
			W.O. # P1700073	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
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NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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 Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-2 WIRING DIAGRAM 1 PROPOSED	
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-WO-0003	
DRAWING NO.:		01SS-EL-WO-0003	
SHEET		0005 OF 28	
PAGE		24 / 76	



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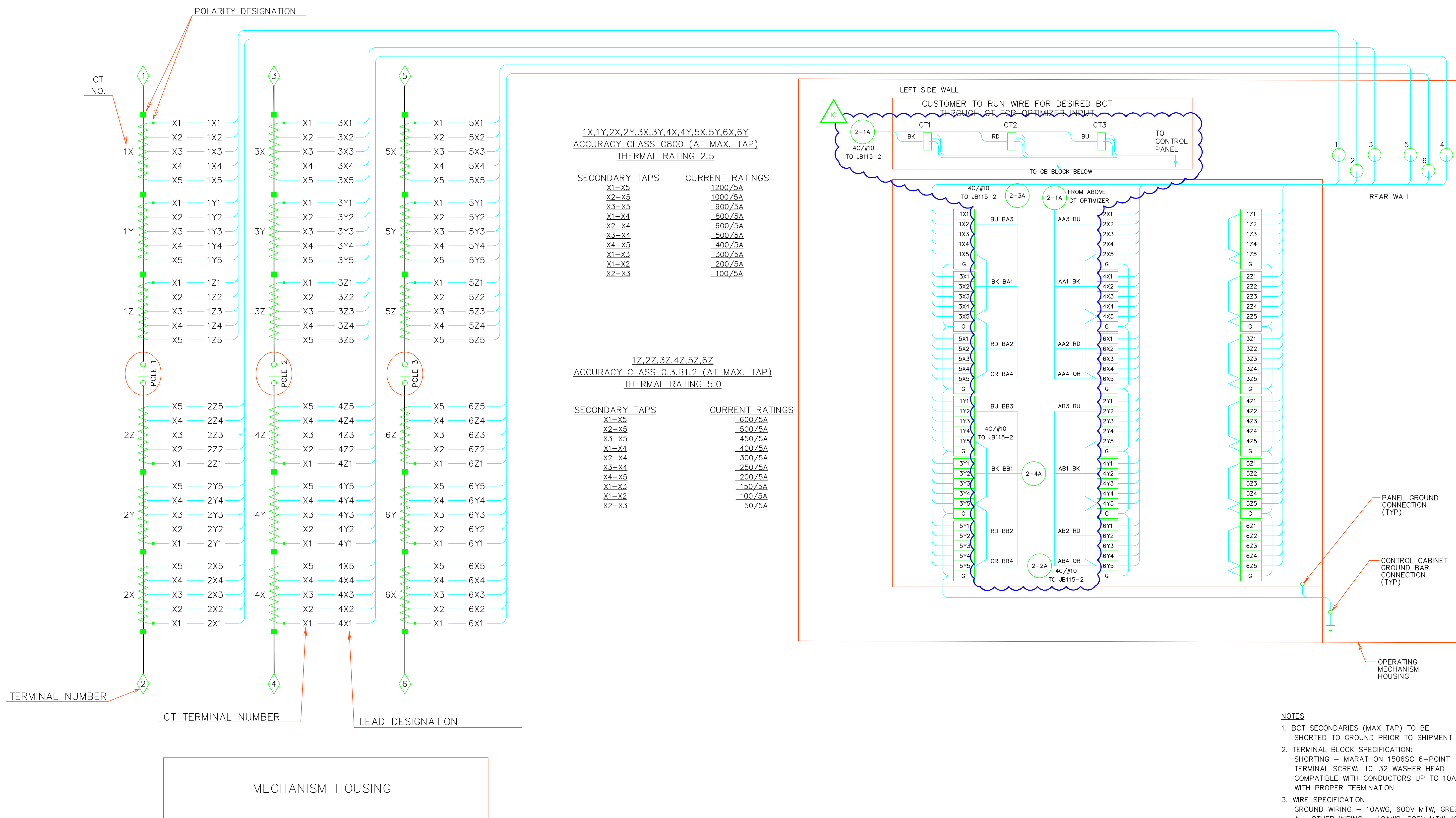
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-2 WIRING DIAGRAM 2	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.: 01SS-EL-WO-0003	SHEET 0006 OF 28 PAGE 25 / 76



- NOTES**
- BCT SECONDARIES (MAX TAP) TO BE SHORTED TO GROUND PRIOR TO SHIPMENT
 - TERMINAL BLOCK SPECIFICATION: SHORTING - MARATHON 1508SC 6-POINT TERMINAL SCREW, 10-32 WASHER HEAD COMPATIBLE WITH CONDUCTORS UP TO 10AWG WITH PROPER TERMINATION
 - WIRE SPECIFICATION: GROUND WIRING - 10AWG, 600V MTW, GREEN ALL OTHER WIRING - 10AWG, 600V MTW, YELLOW
 - WIRE TERMINATIONS: NON-INSULATED RING TONGUE COMPRESSION TYPE TERMINALS ARE TO BE USED

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-2 CT WIRING DIAGRAM PROPOSED

CONFIDENTIAL

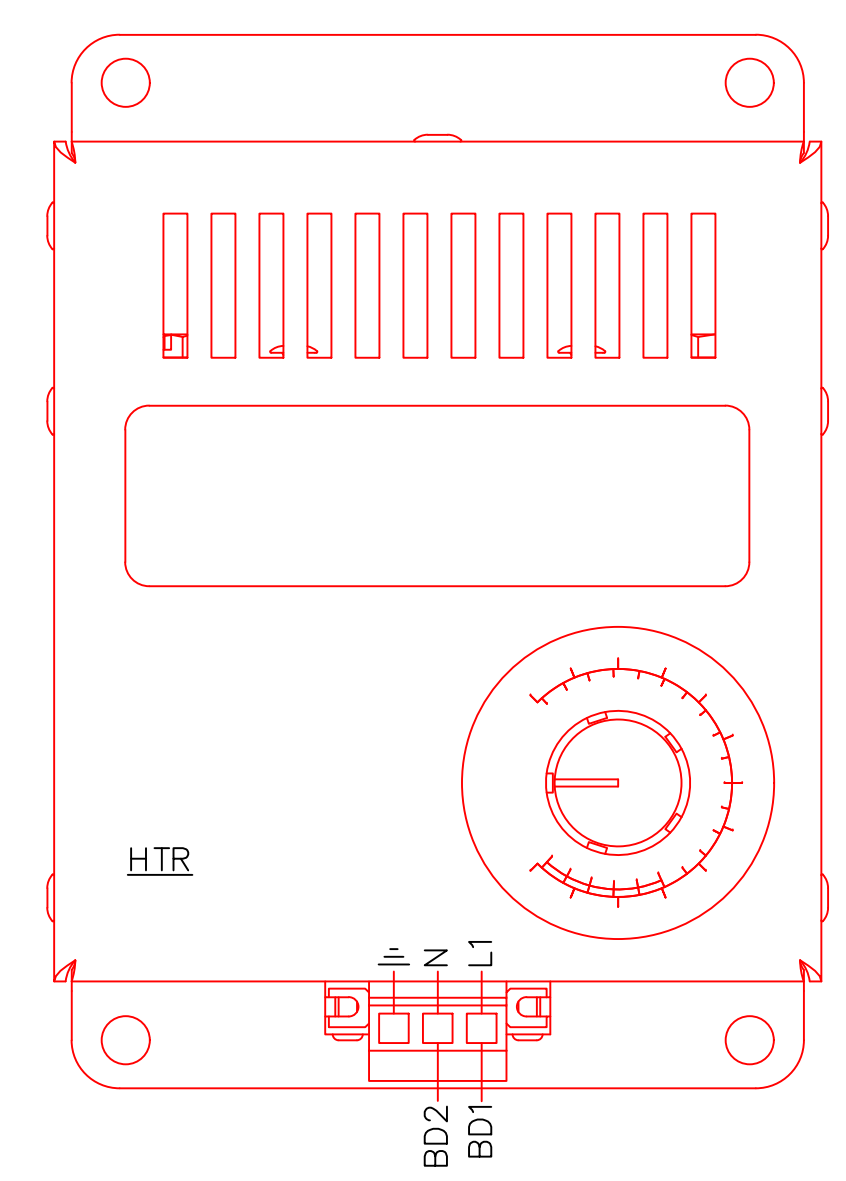
DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-EL-WO-0003

SHEET 0007 OF 28
 PAGE 26 / 76



- 51a/TR2-3 TRIP CIRCUIT DEVICE 94
- 52a/TN2-3
- 57b/2B1 CB #730 INTERLOCK
- 58b/2B2
- 11b/2GL GREEN LIGHT
- 12b/2N1
- 63a/2LP UNUSED
- 64a/2LQ
- 67a/55a RTU BREAKER POSITION
- 68a/56a
- 73b/58b SYNC CHECK RELAY
- 74b/57b
- 81a/65a TT1 AND TT2 PARALLELING CIRCUIT
- 82a/66a
- 83b/67b
- 84b/68b



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

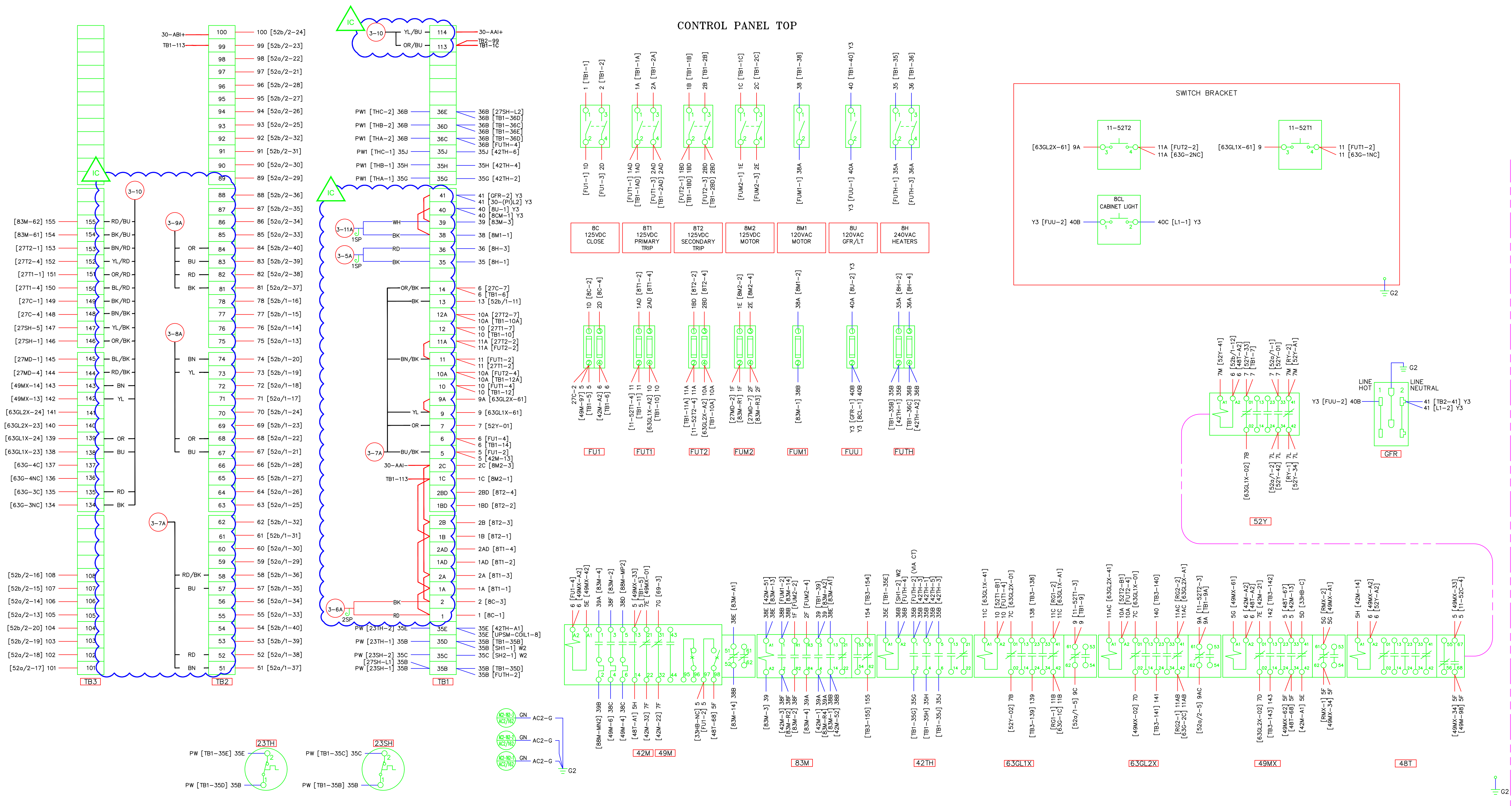
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-2 JUNCTION CABINET PROPOSED	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-WO-0003
DRAWING NO.:	01SS-EL-WO-0003
SHEET 0008 OF 28	PAGE 27 / 76

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CONSTRUCTION NOTES:

- NOTES:
1. WIRE CODES ARE AS FOLLOWS:
 CABINET HEATER LEAD WIRES - 600V SFF-2 12AWG (WHITE) - W2
 CABINET HEATER COVER GROUND - 600V SFF-2 10AWG (GREEN) - G3
 TANK HEATER LEAD WIRES - 600V TEFLOX 12AWG (WHITE) - PW1
 GROUNDING CIRCUITS - 600V SIS 12 AWG (GREEN) - G2
 GFI CIRCUIT - 600V SIS 12AWG (GRAY) - Y3
 TWISTED PAIR W/ MINIMUM 5 TWISTS PER FOOT - 600V SIS 14AWG (GRAY) - TP
 ALL OTHER CIRCUITS - 600V SIS 14AWG (GRAY) Y2 OR NO MARK
 PRE-WIRED LEADS - PW
 2. TERMINAL BLOCKS - PW
 TYPE AND RATING: MARATHON 1506STD OR 1512STD 600V, 30A
 TERMINAL SCREW: #10-32 SCREW
 WIRE RANGE: #10 TO #16 AWG COPPER WIRE
 WITH PROPER TERMINATION APPROVED FOR 75AMP
 3. WIRE TERMINATIONS: NON-INSULATED, RING-TONGUE, COMPRESSION TYPE.
 4. WIRE NUMBER IS THE SAME AS THE TERMINAL POINT NUMBER UNLESS OTHERWISE IDENTIFIED.

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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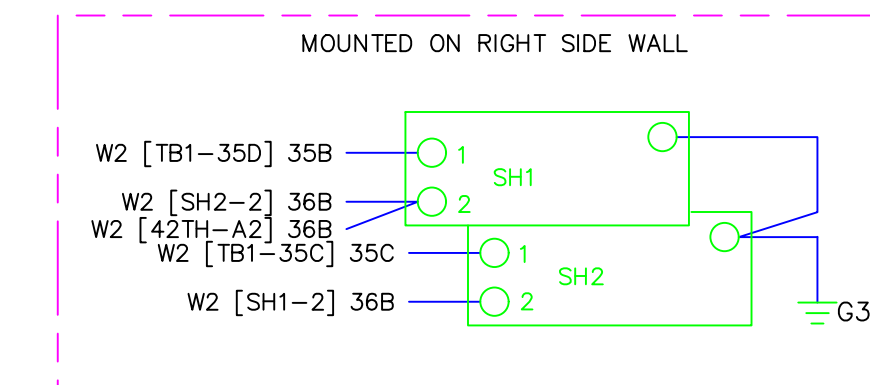
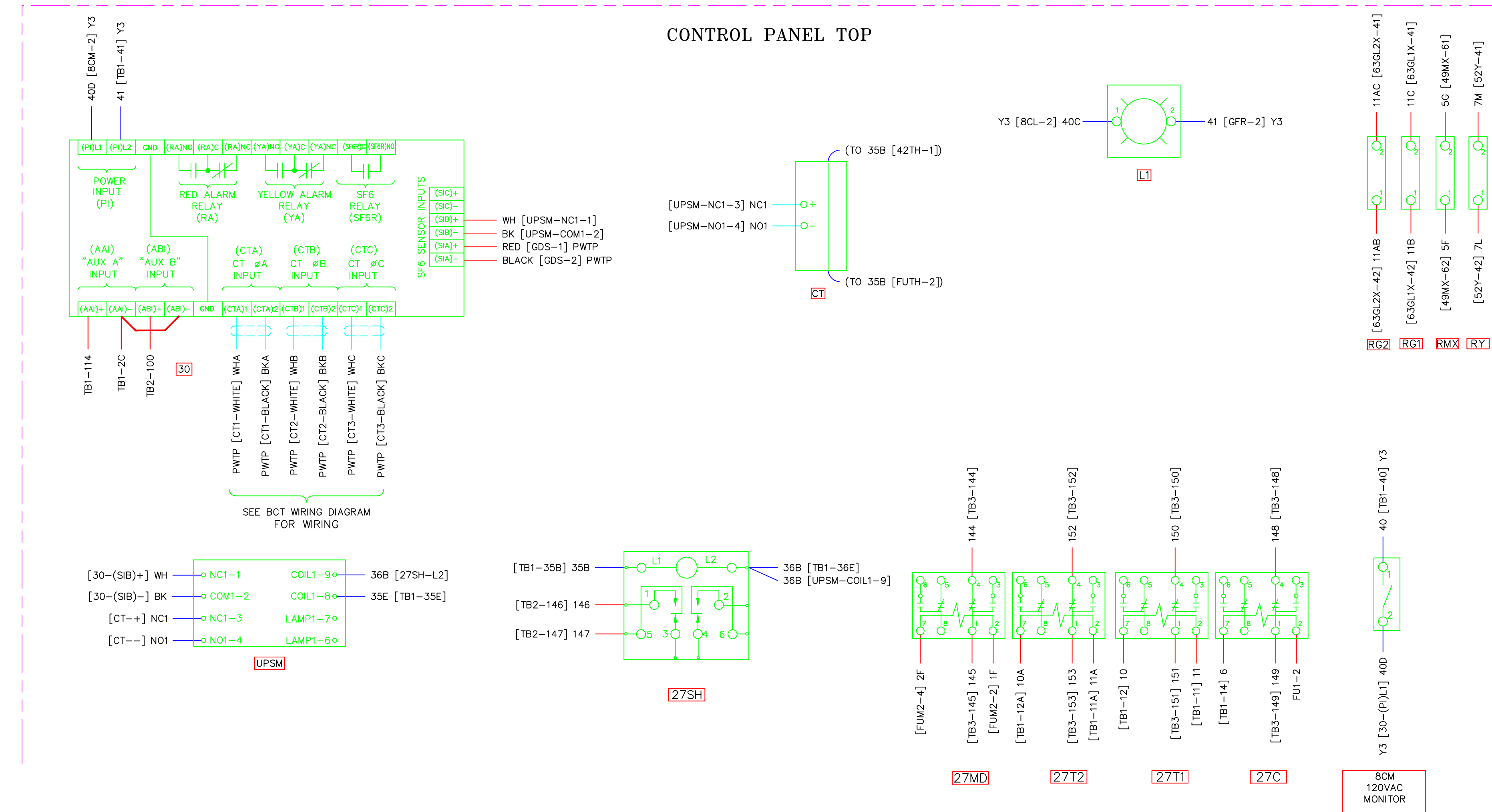
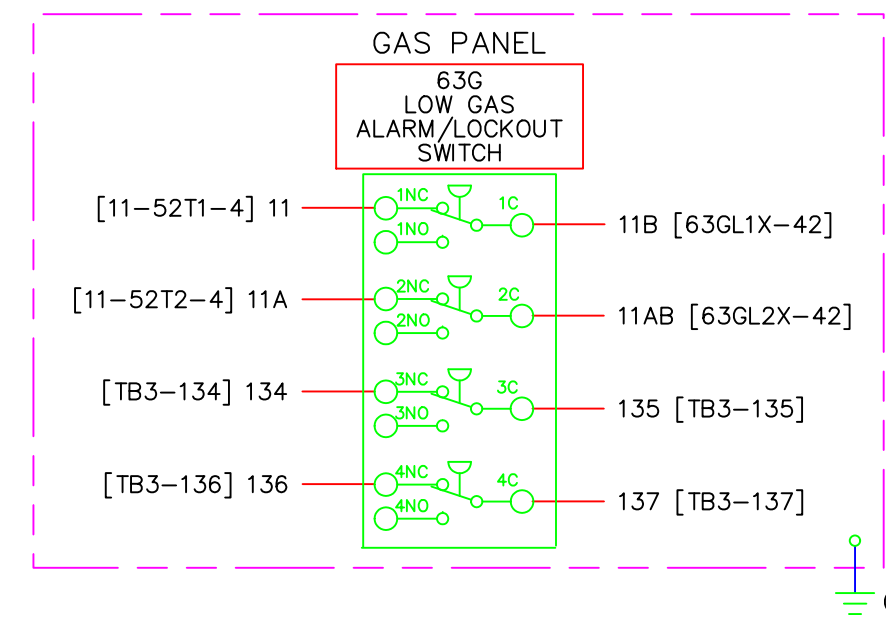
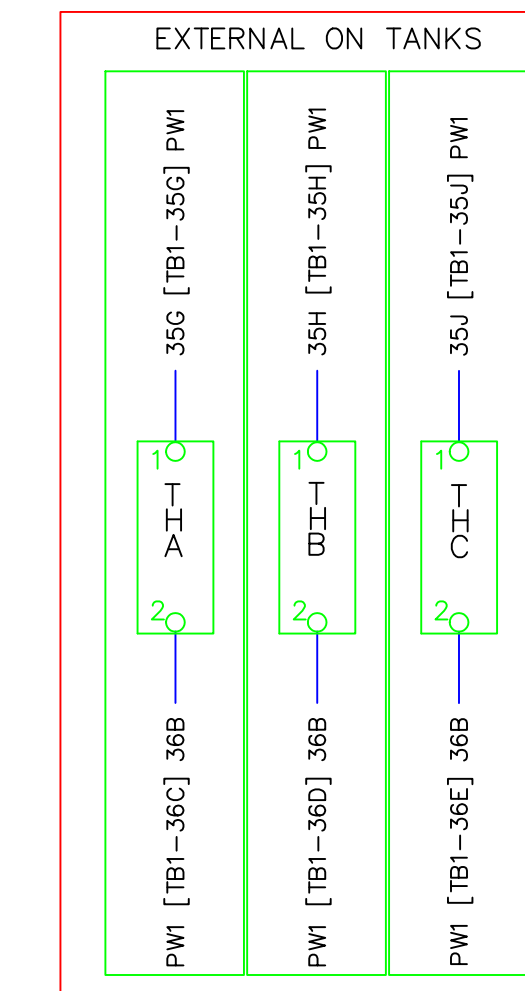
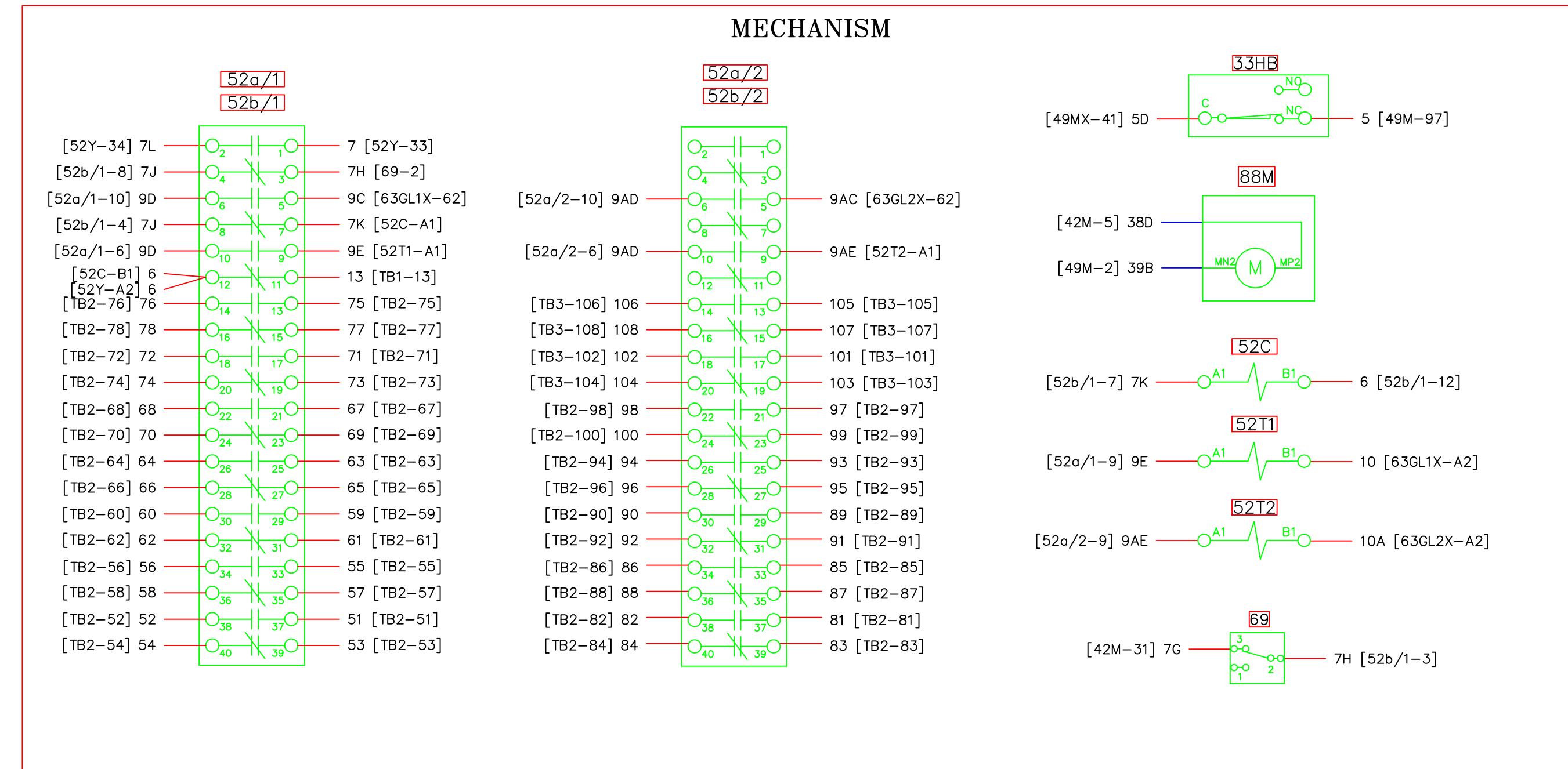
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CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE: 01SS-EL-WO-0003_0009.dwg

DRAWING NO.: 01SS-EL-WO-0003

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CONTROL PANEL BOTTOM

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- DO NOT EDIT -

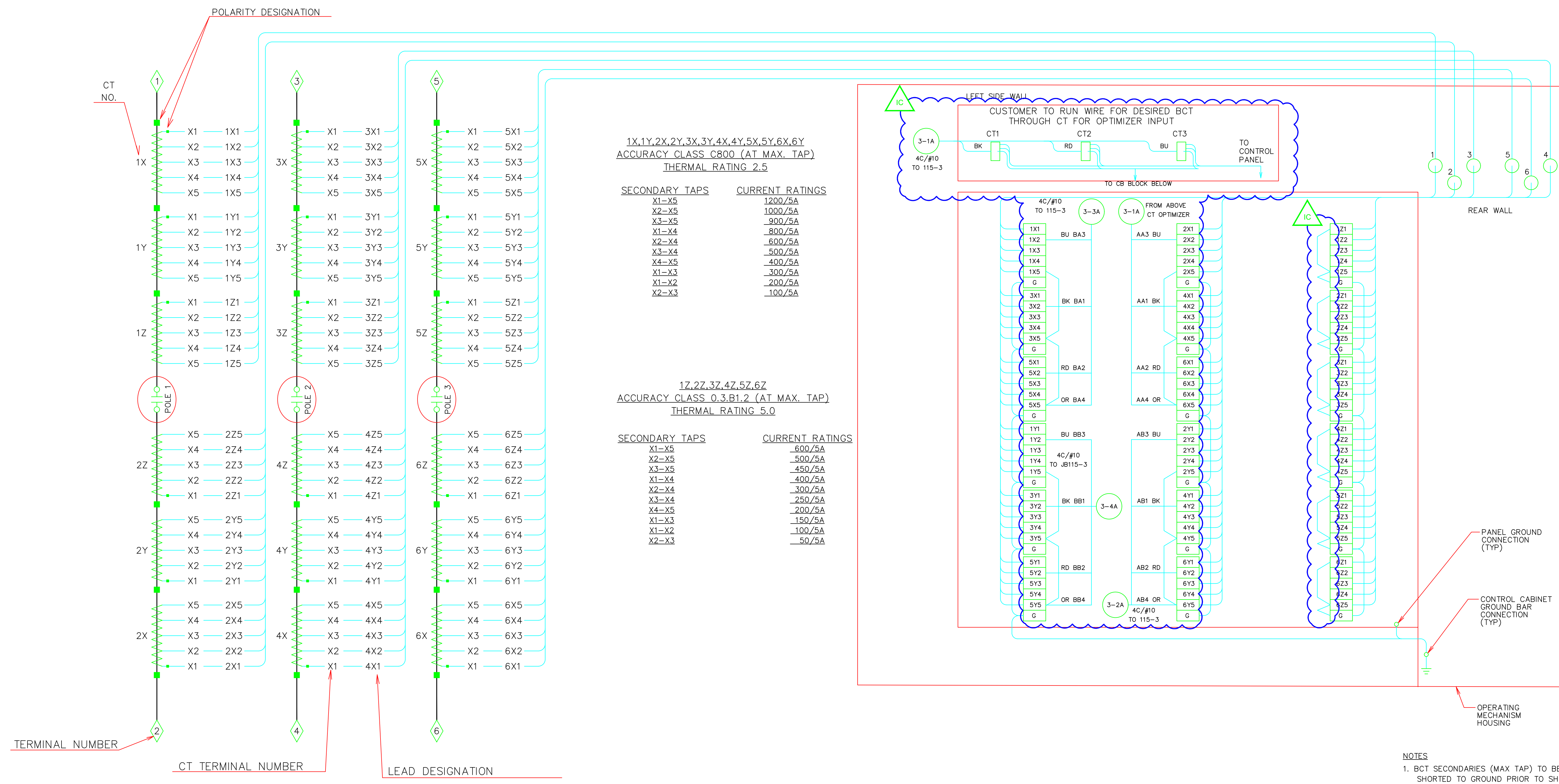
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-3 WIRING DIAGRAM 2	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.: 01SS-EL-WO-0003	
SHEET 0010 OF 28	PAGE 29 / 76



- NOTES**
- BCT SECONDARIES (MAX TAP) TO BE SHORTED TO GROUND PRIOR TO SHIPMENT
 - TERMINAL BLOCK SPECIFICATION:
SHORTING - MARATHON 1506SC 6-POINT
TERMINAL SCREW: 10-32 WASHER HEAD
COMPATIBLE WITH CONDUCTORS UP TO 10AWG
WITH PROPER TERMINATION
 - WIRE SPECIFICATION:
GROUND WIRING - 10AWG, 600V MTW, GREEN
ALL OTHER WIRING - 10AWG, 600V MTW, YELLOW
 - WIRE TERMINATIONS:
NON-INSULATED RING TONGUE COMPRESSION TYPE
TERMINALS ARE TO BE USED

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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 Anchorage, Alaska 99519-6300

DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-3 CT WIRING DIAGRAM PROPOSED**

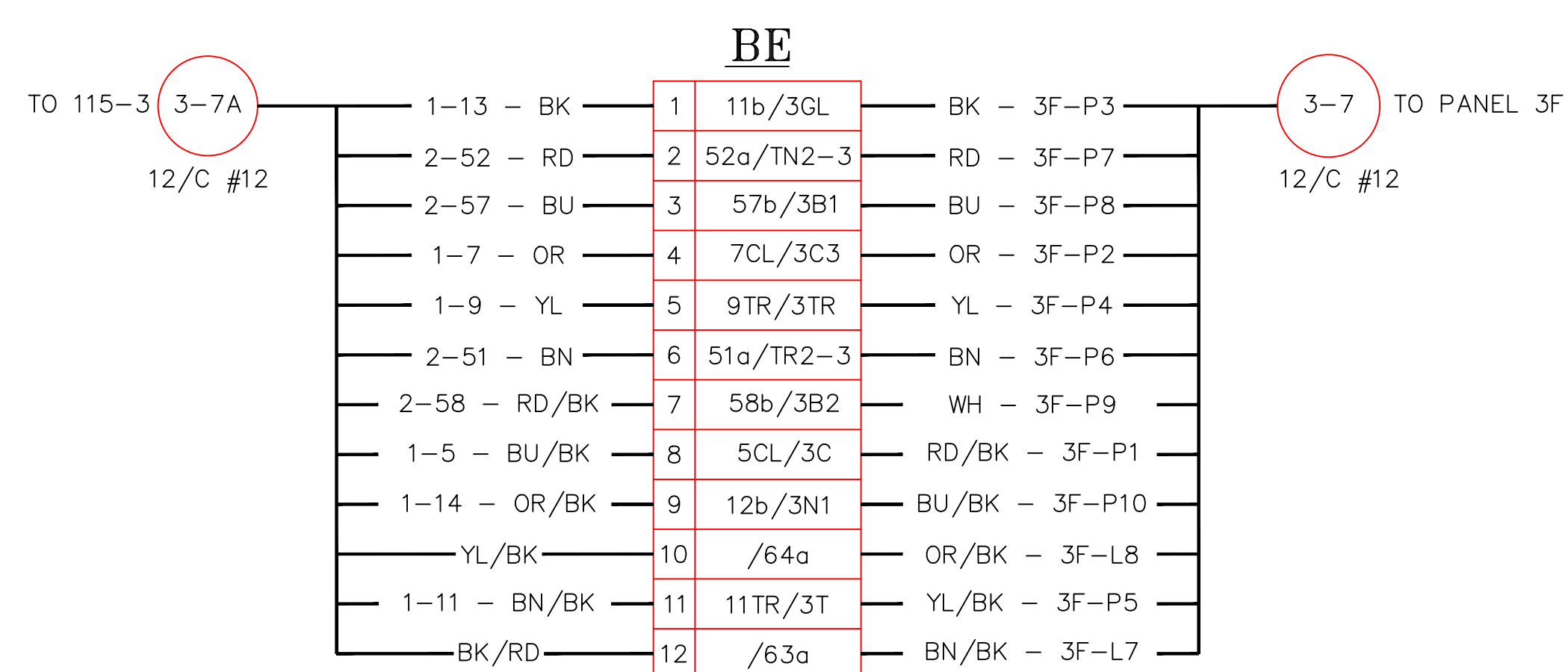
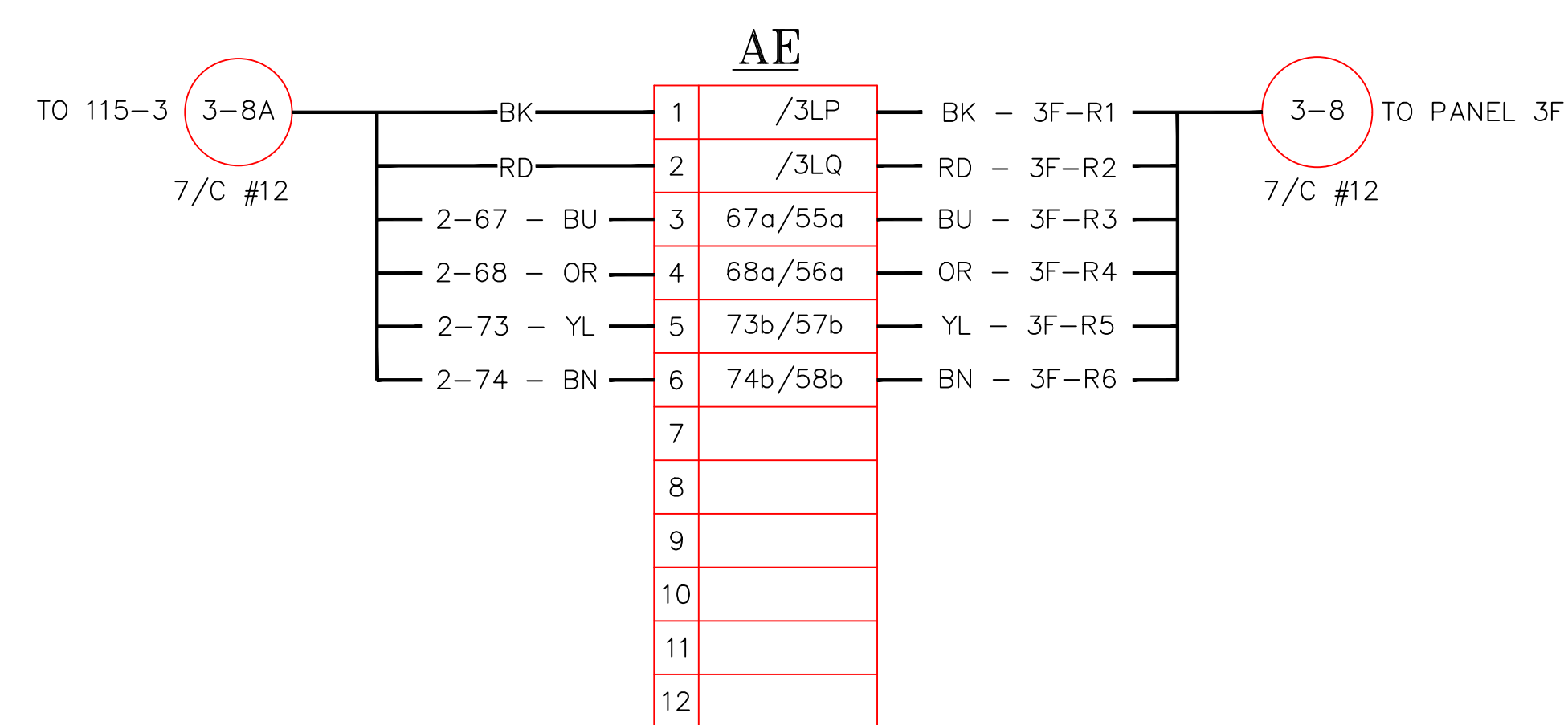
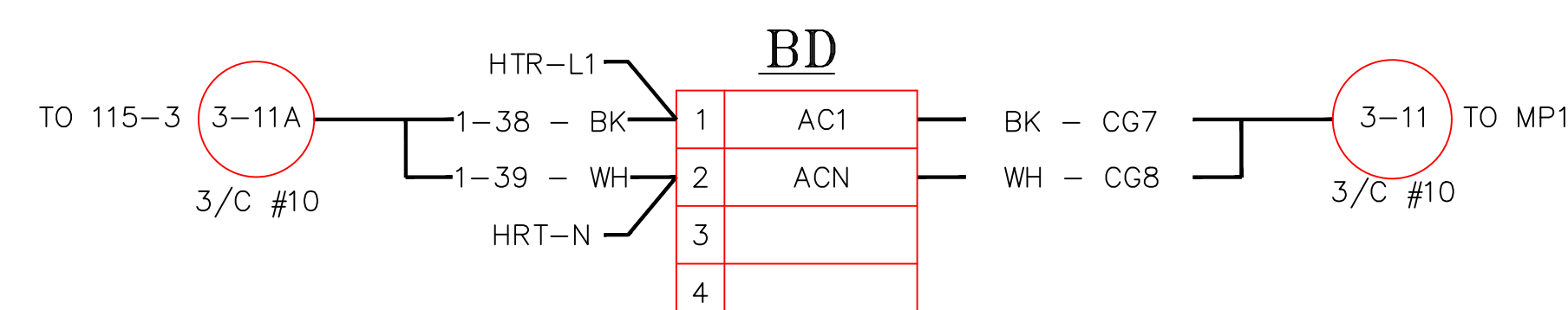
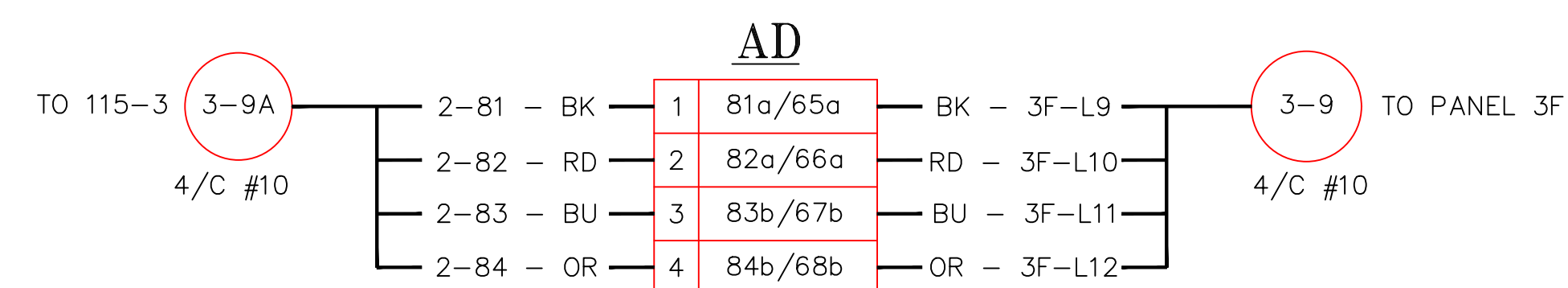
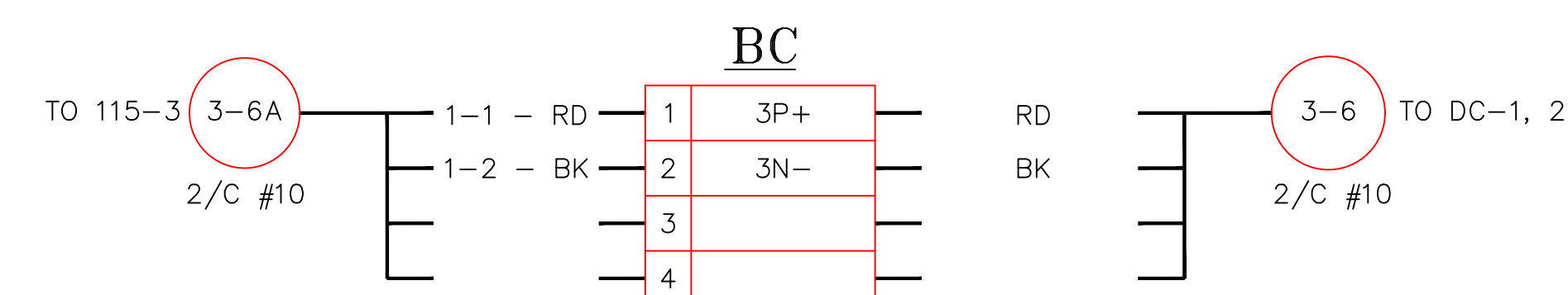
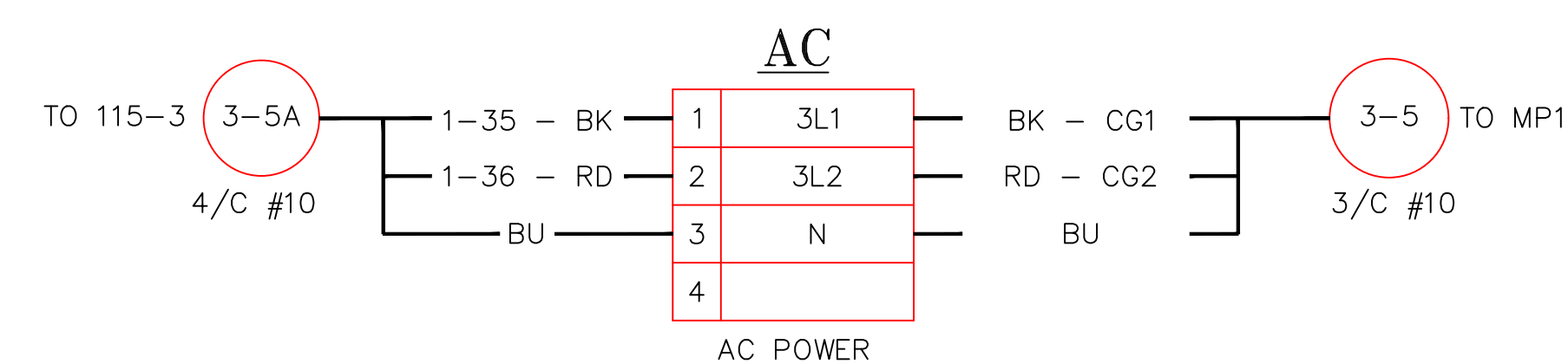
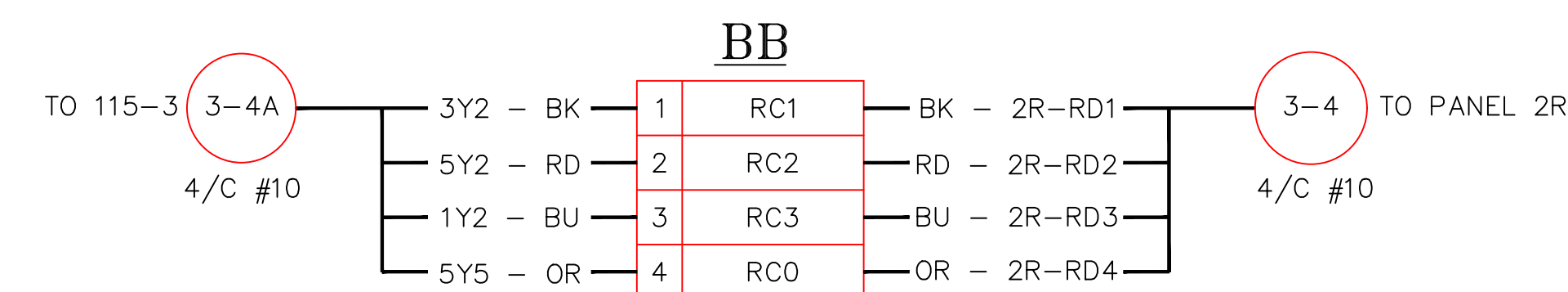
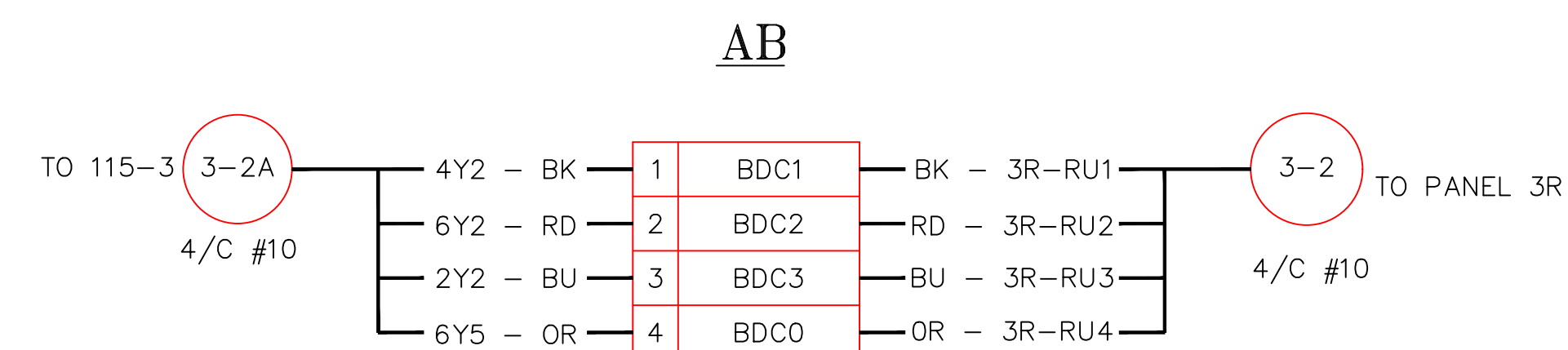
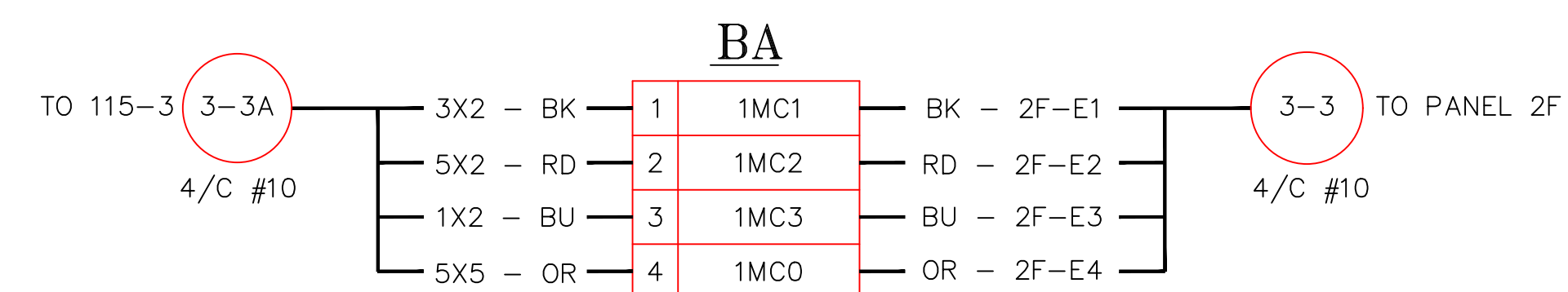
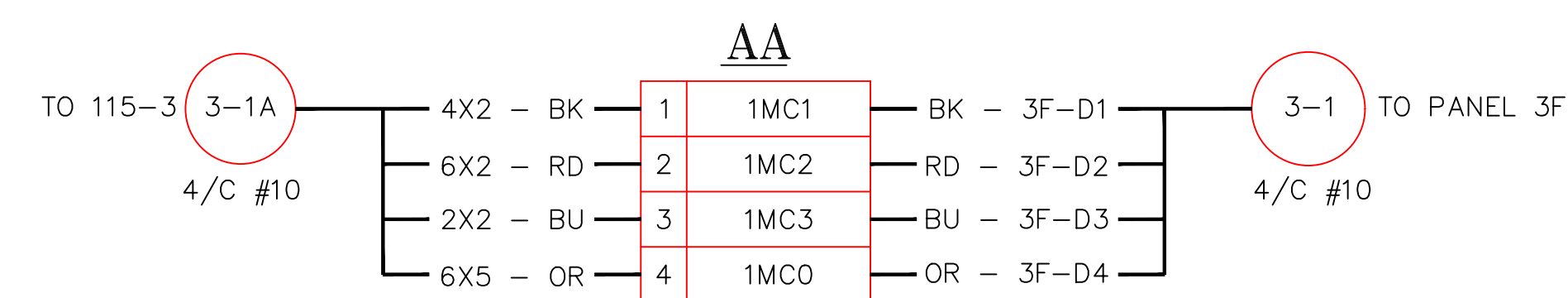
CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE

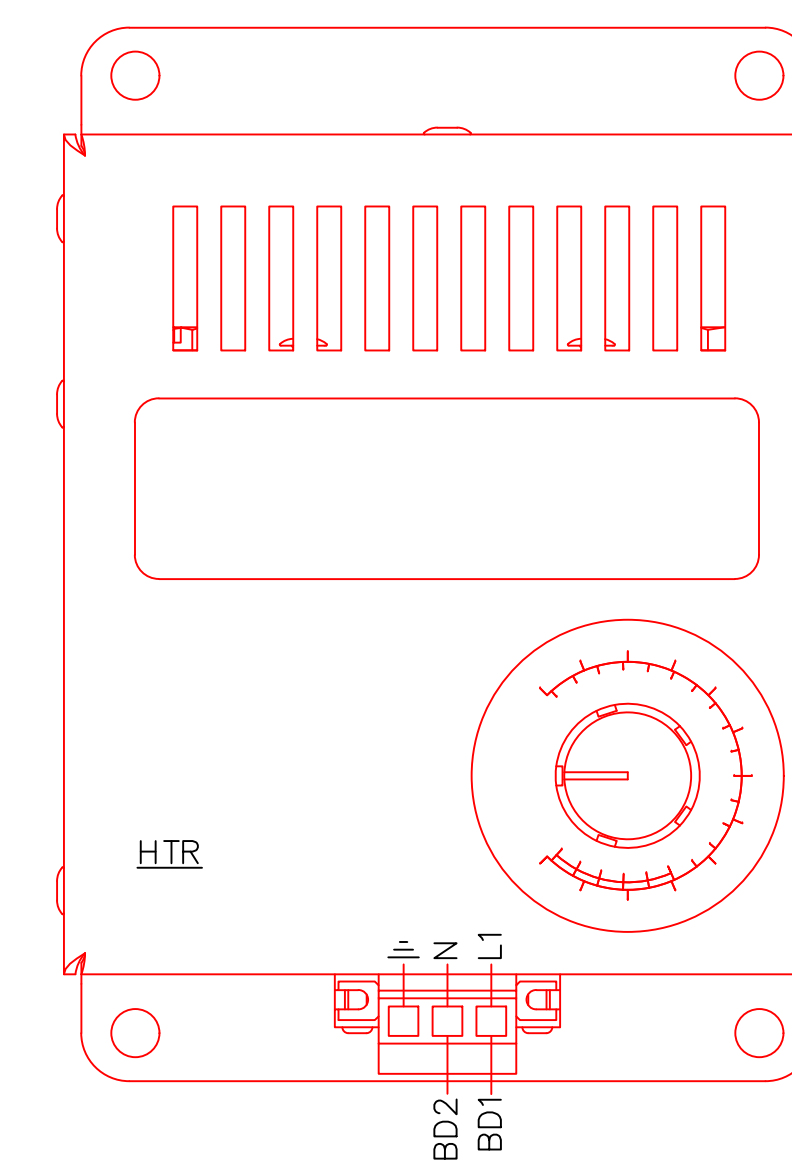
DRAWING NO.: **01SS-EL-WO-0003**

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01SS-EL-WO-0003_0011.dwg



- 51a/TR2-3 TRIP CIRCUIT DEVICE 94
- 52a/TN2-3
- 57b/3B1 CB #730 INTERLOCK
- 58b/3B2
- 11b/3GL GREEN LIGHT
- 12b/3N1
- 63a/3LP UNUSED
- 64a/3LQ
- 67a/55a RTU BREAKER POSITION
- 68a/56a
- 73b/57b SYNC CHECK RELAY
- 74b/58b
- 81a/65a TT1 AND TT2 PARALLELING CIRCUIT
- 82a/66a
- 83b/67b
- 84b/68b



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD
ELECTRICAL - OUTSIDE WIRING DIAGRAM
115-3 JUNCTION CABINET
PROPOSED

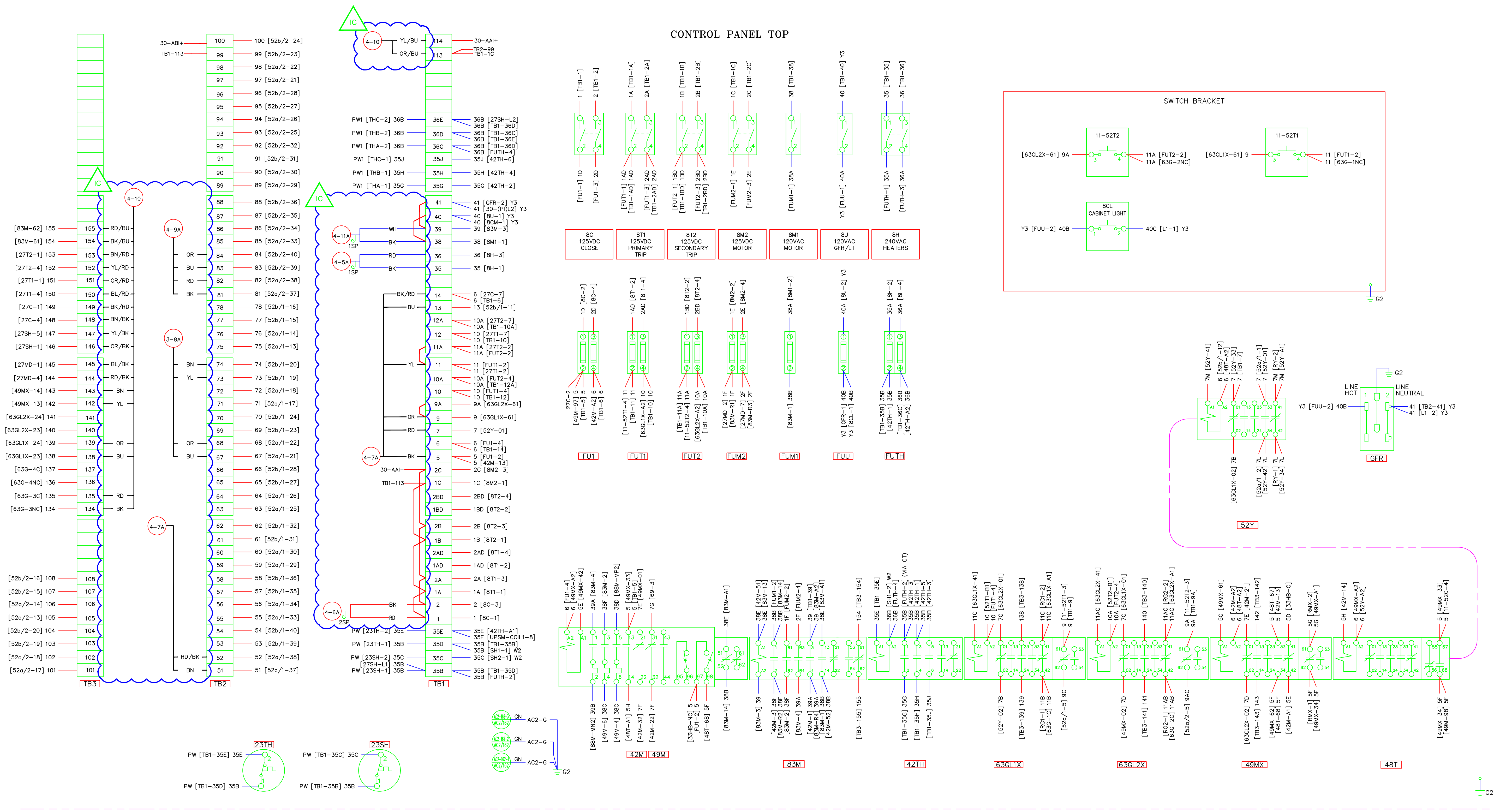
CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-EL-WO-0003

01SS-EL-WO-0003_0012.dwg

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CONSTRUCTION NOTES:

- NOTES**
- WIRE CODES ARE AS FOLLOWS:
 CABINET HEATER LEAD WIRES - 600V SFF-2 12AWG (WHITE) - W2
 CABINET HEATER COVER GROUND - 600V SFF-2 12AWG (GREEN) - G3
 TANK HEATER LEAD WIRES - 600V TEFLON 12AWG (WHITE) - PW1
 GROUNDING CIRCUITS - 600V SIS 12 AWG (GREEN) - G2
 GFR CIRCUIT - 600V SIS 12AWG (GRAY) - Y3
 TWISTED PAIR W/MINIMUM 3 TWISTS PER FOOT - 600V SIS 14AWG (GRAY) - TP
 ALL OTHER CIRCUITS - 600V SIS 14AWG (GRAY) Y2 OR NO MARK
 PRE-WIRED LEADS - PW
 - TERMINAL BLOCKS
 TYPE AND RATING: MARATHON 1506STD OR 1512STD 600V, 30A
 TERMINAL SCREW #10-32 SCREW
 WIRE RANGE #10 TO #16 AWG COPPER WIRE
 WITH PROPER TERMINATION APPROVED FOR 75AMP
 - WIRE TERMINATIONS: NON-INSULATED, RING-TONGUE, COMPRESSION TYPE.
 - WIRE NUMBER IS THE SAME AS THE TERMINAL POINT NUMBER UNLESS OTHERWISE IDENTIFIED.

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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 Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-4 WIRING DIAGRAM 1 PROPOSED

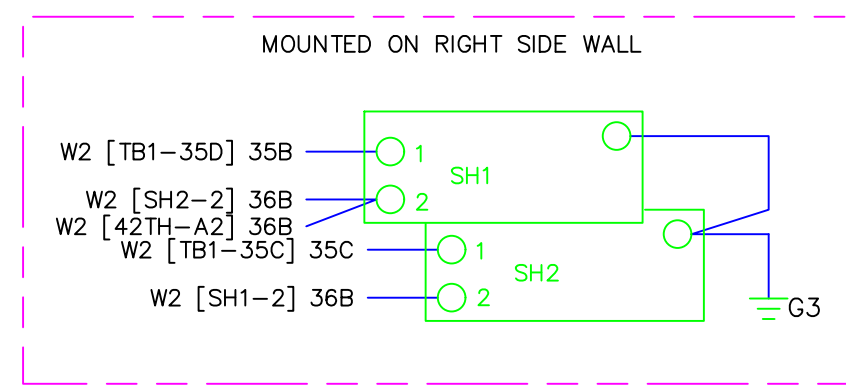
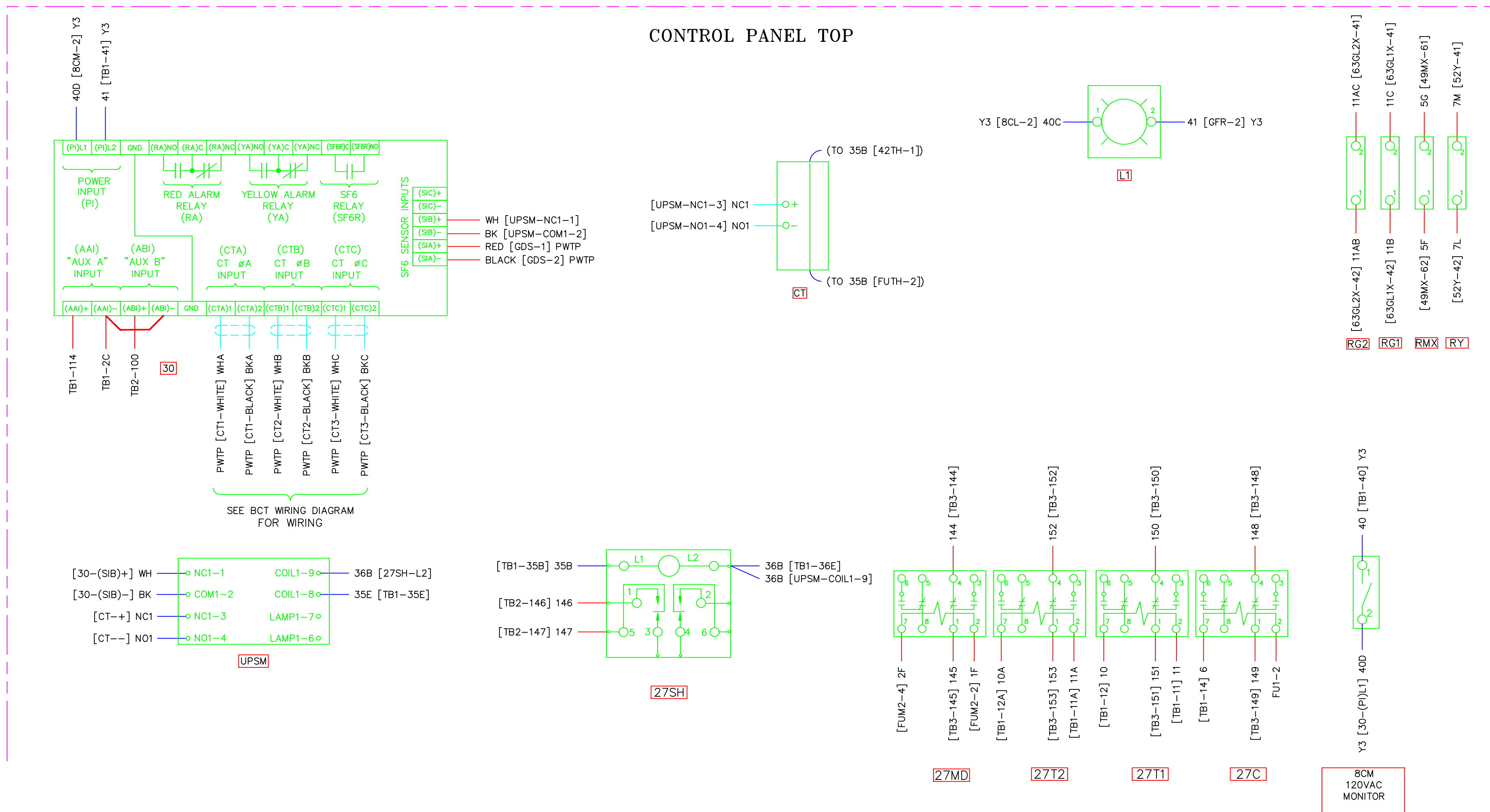
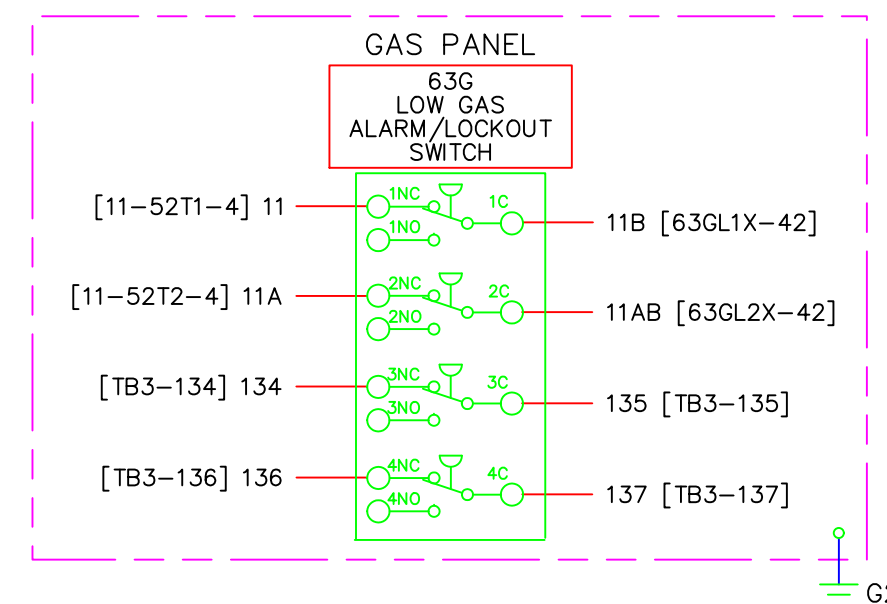
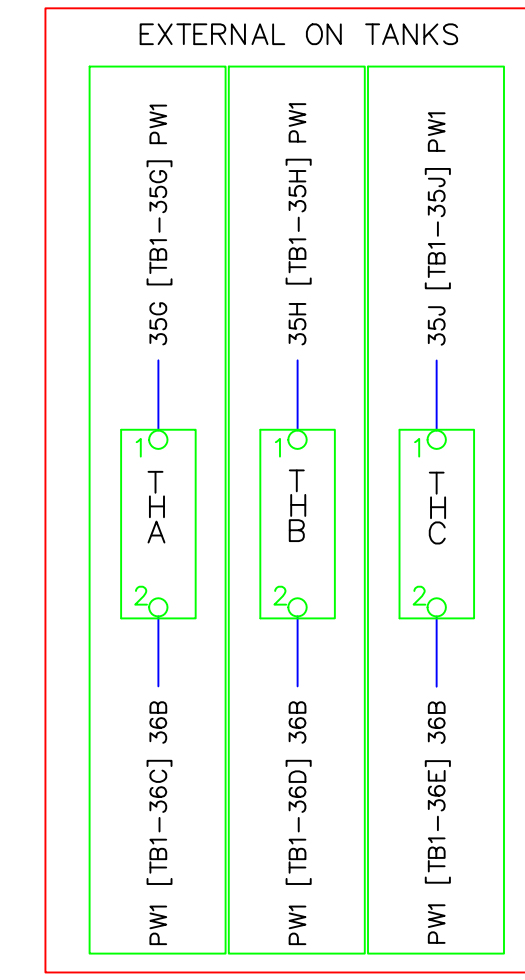
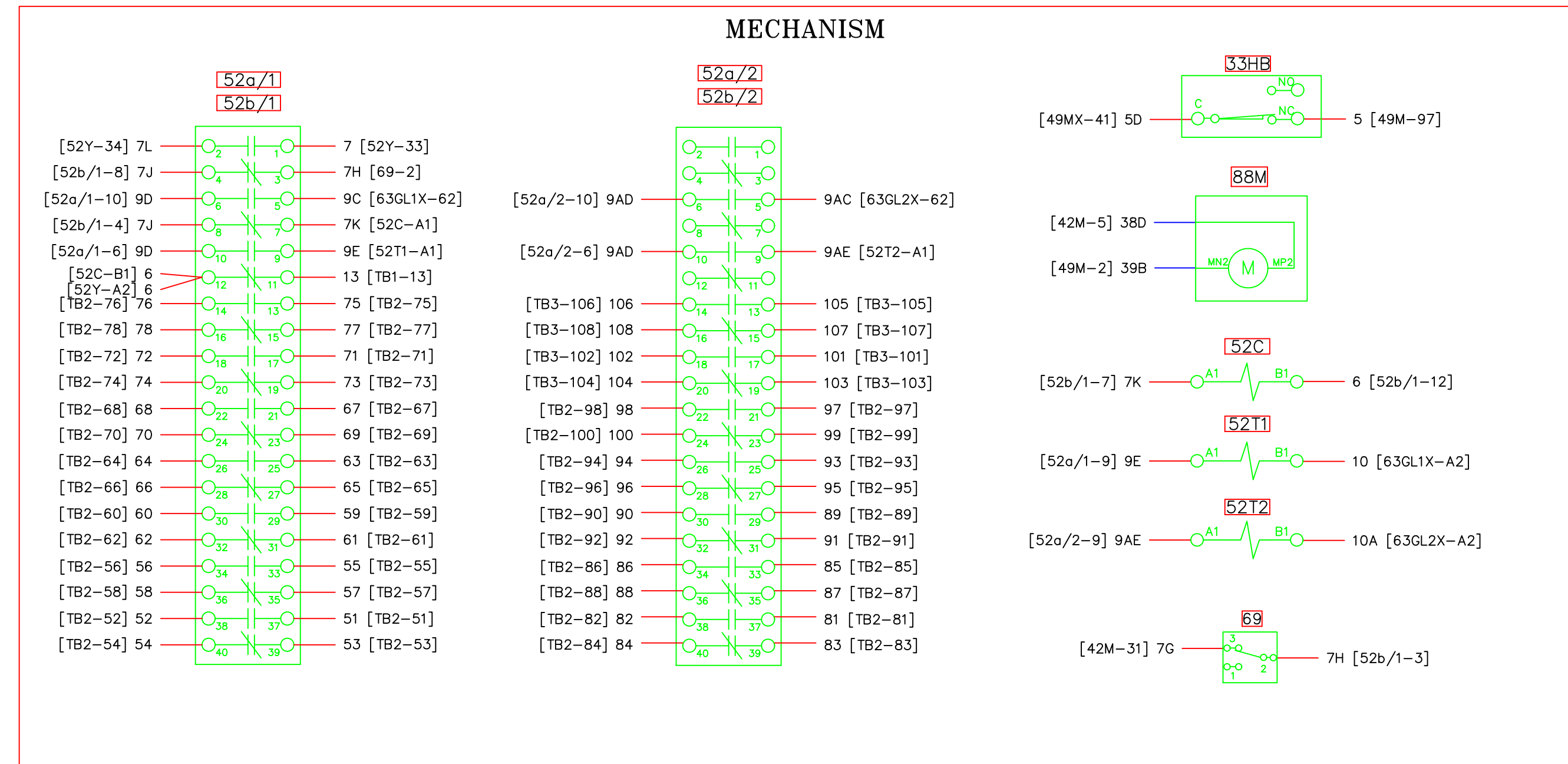
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DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-EL-WO-0003

SHEET 0013 OF 28
 PAGE 32 / 76

01SS-EL-WO-0003_0013.dwg



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PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL			W.O. # P1700073	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

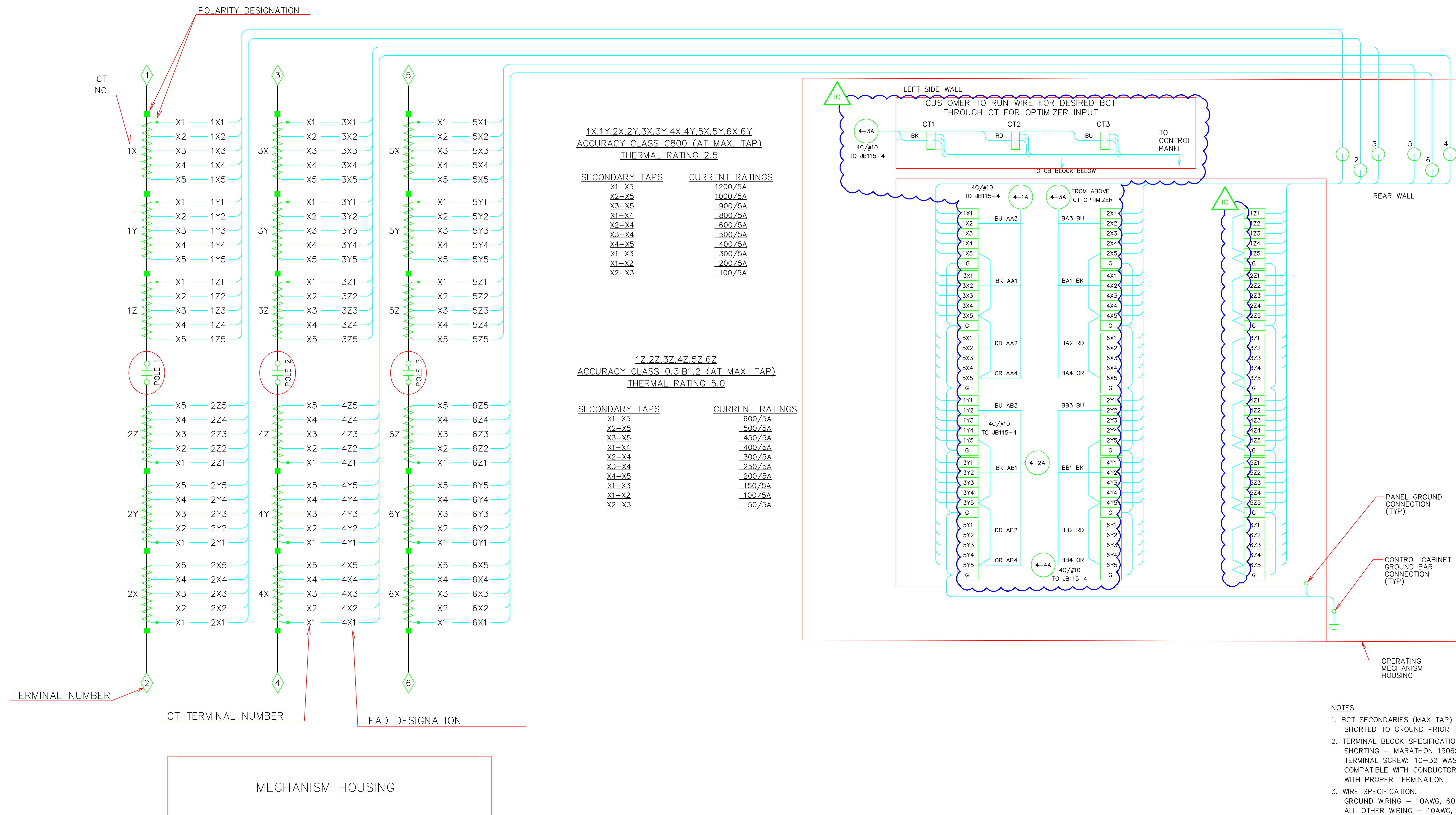
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Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-4 WIRING DIAGRAM 2	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.: 01SS-EL-WO-0003	
SHEET 0014 OF 28	PAGE 33 / 76

01SS-EL-WO-0003_0014.dwg



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
				W.O. # P1700073
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

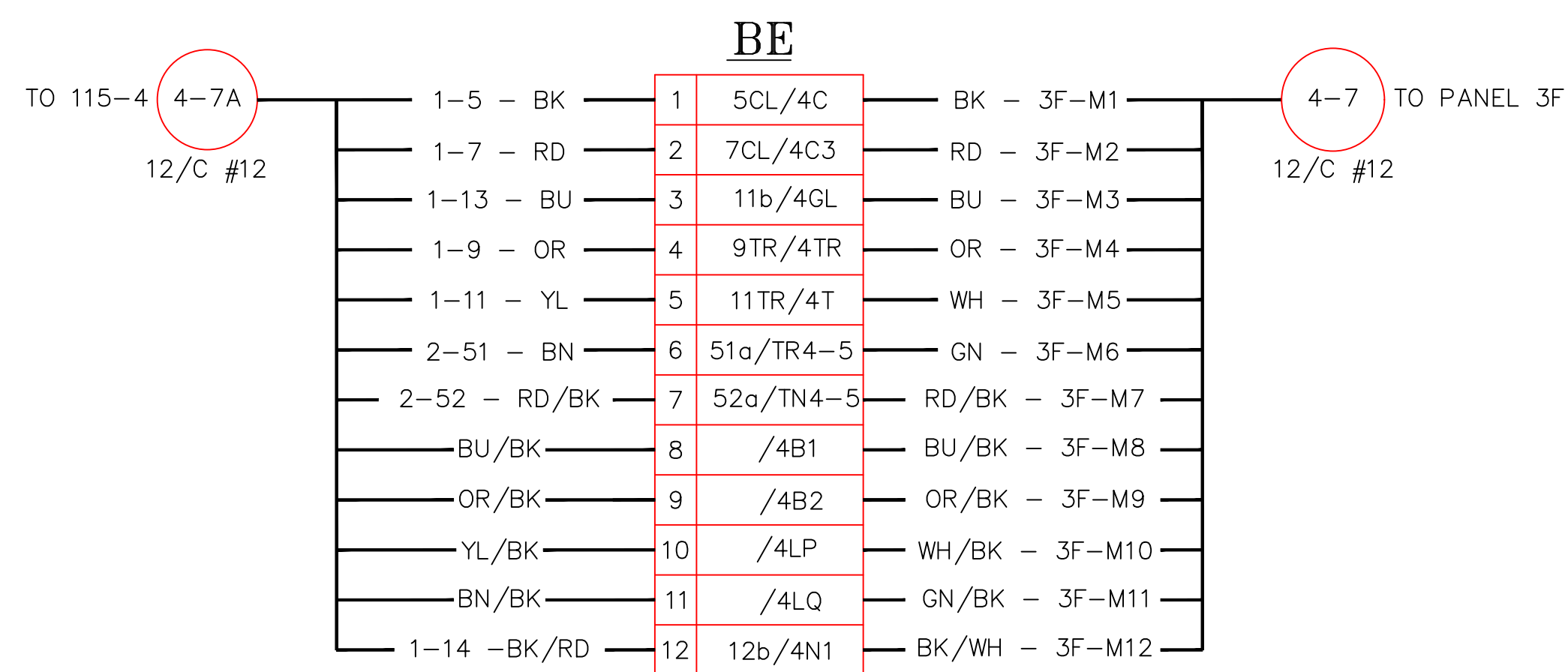
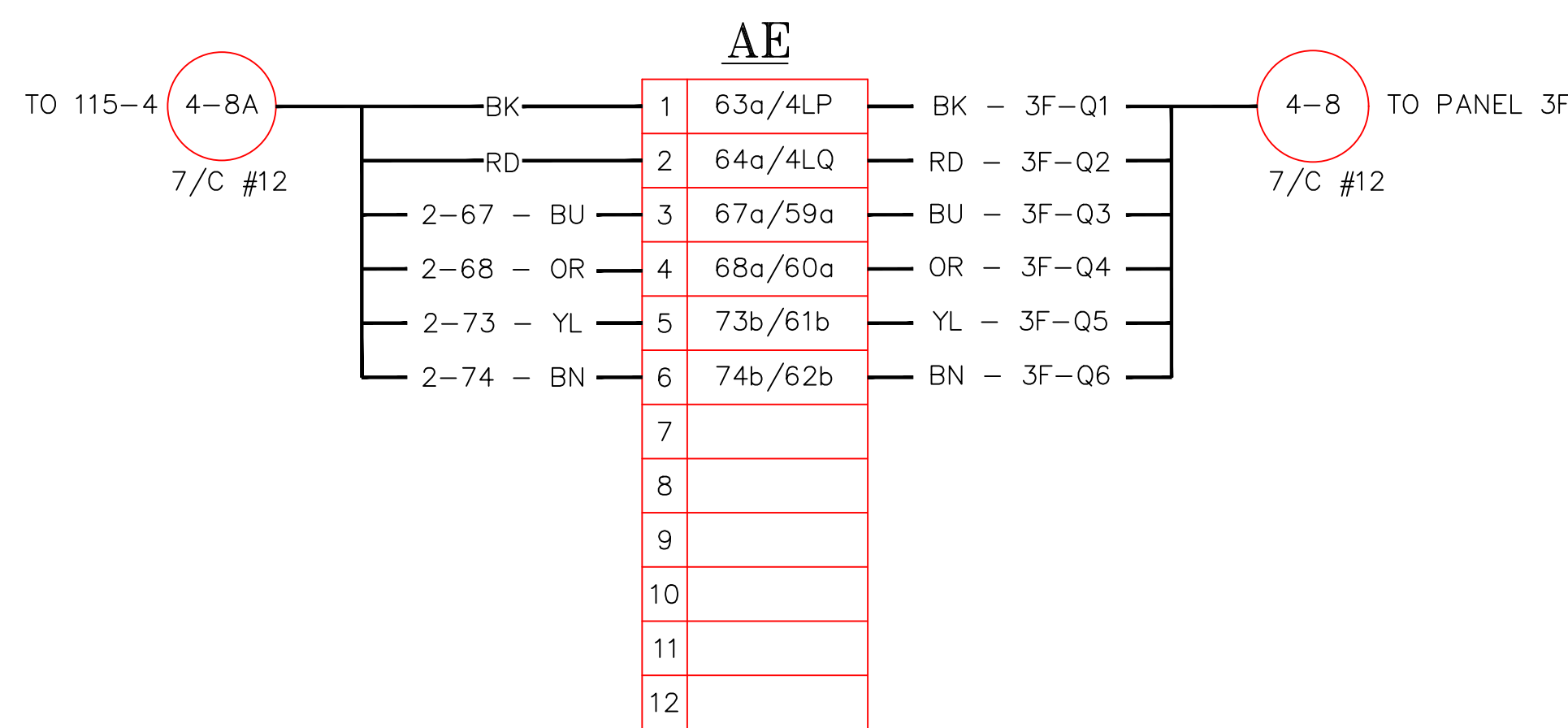
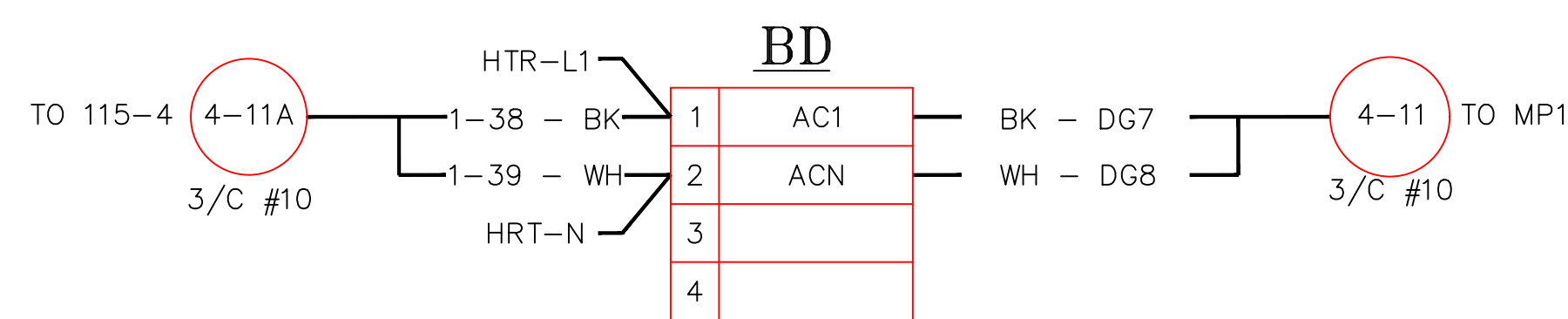
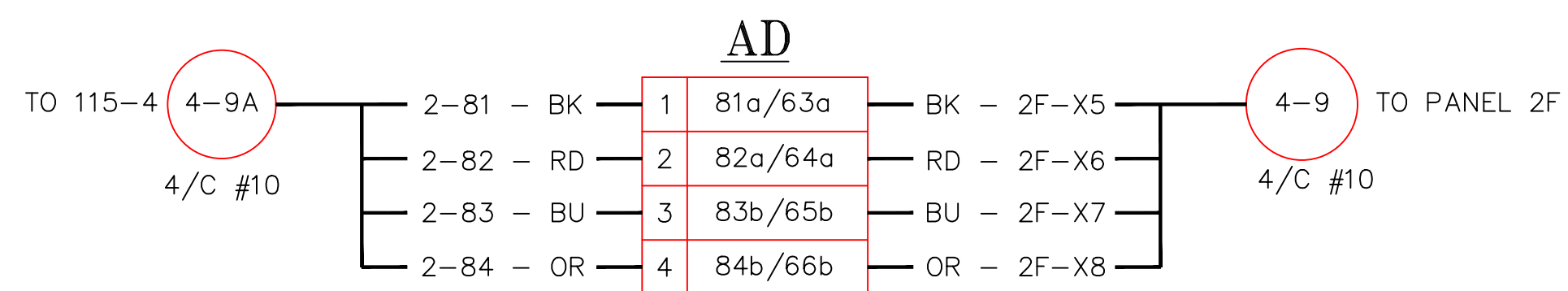
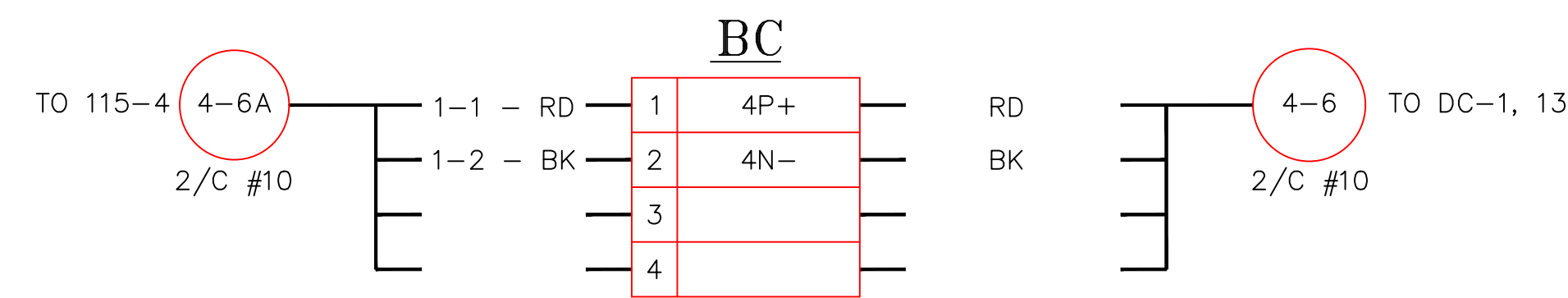
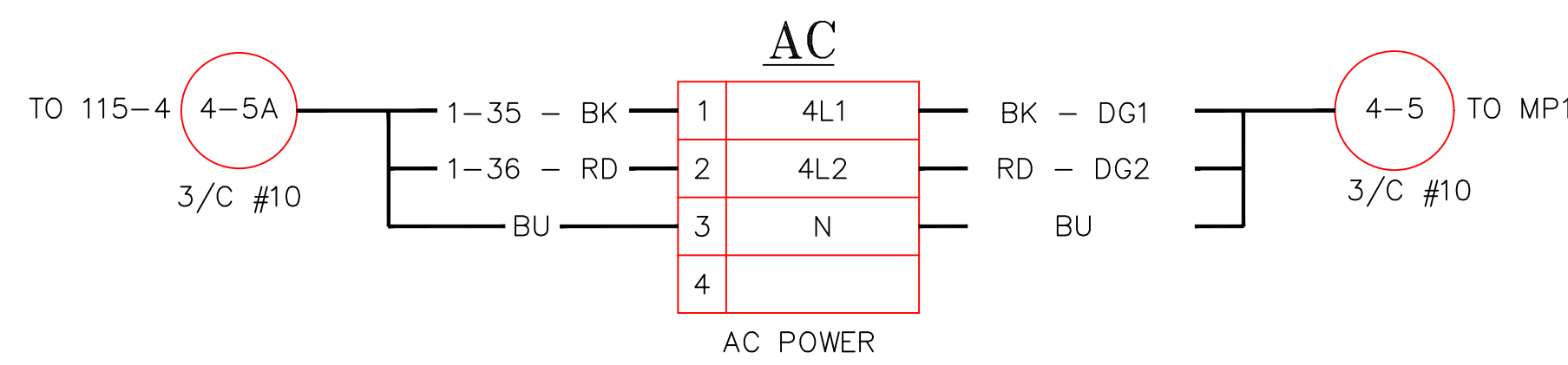
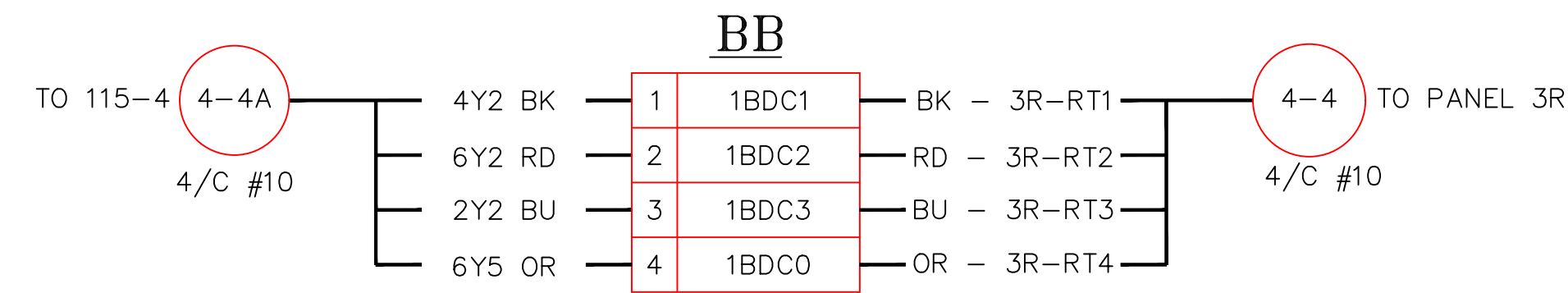
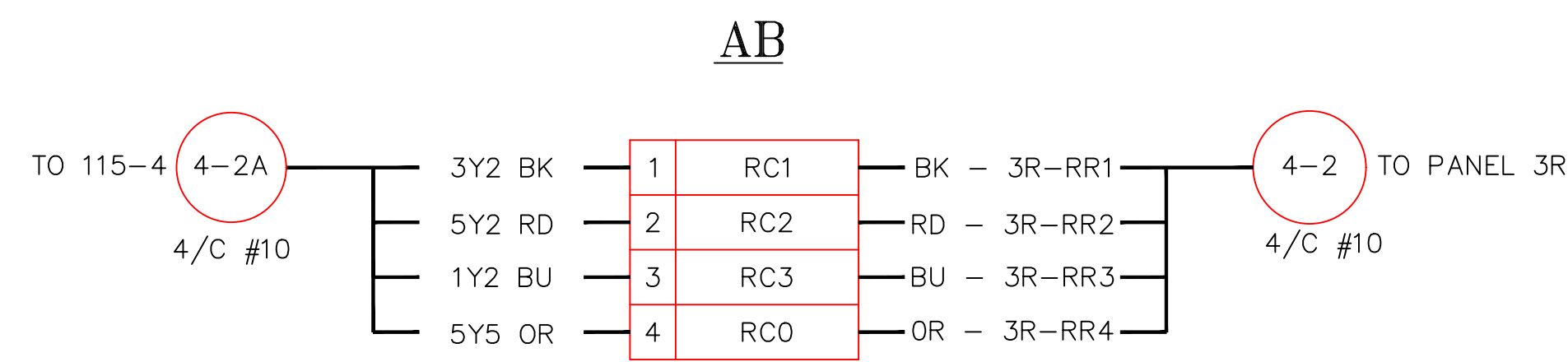
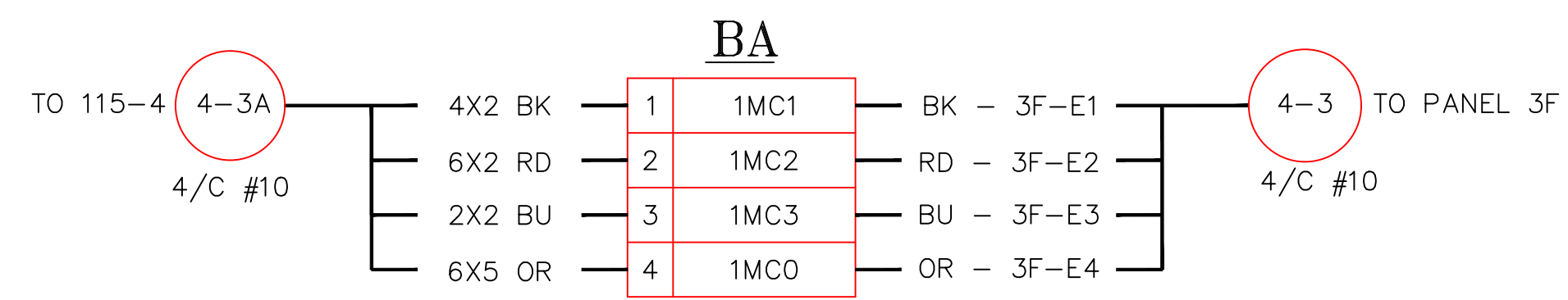
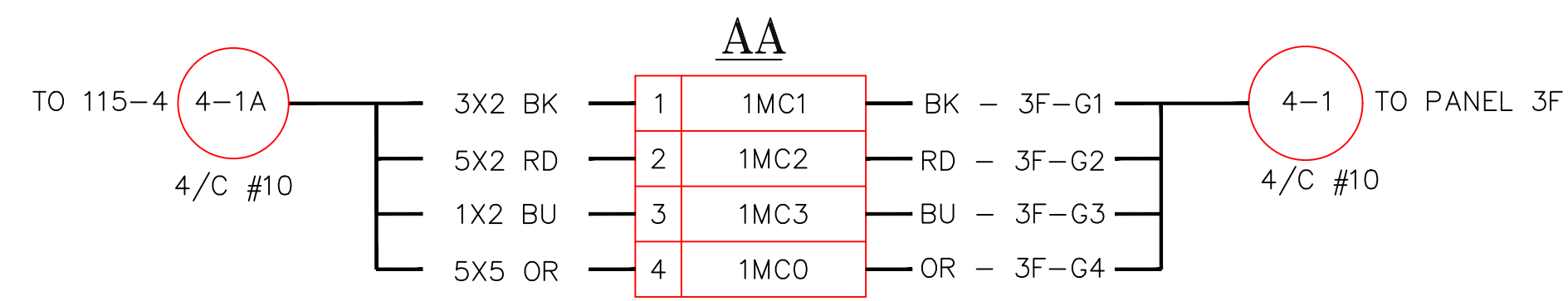
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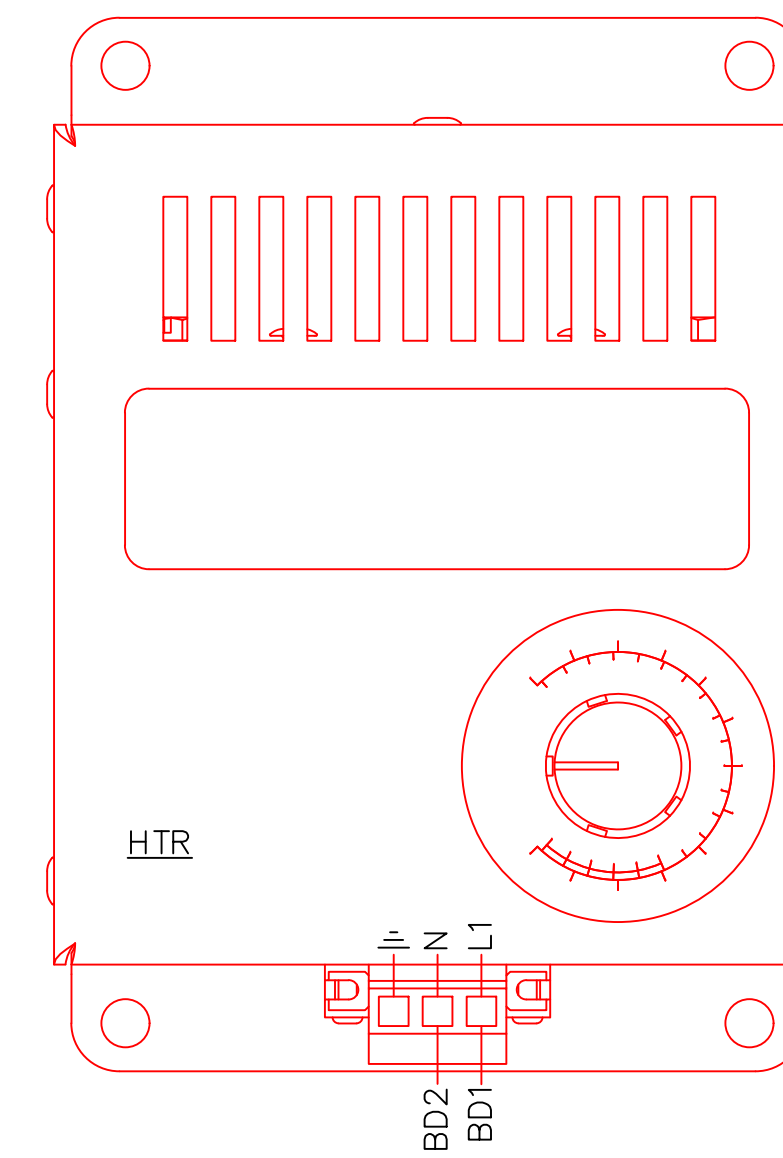
Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300
 Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-4 CT WIRING DIAGRAM PROPOSED	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-WO-0003
DRAWING NO.:	01SS-EL-WO-0003
SHEET 0015 OF 28	PAGE 34 / 76

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- 51a/TR4-5 TRIP CIRCUIT DEVICE 94
- 52a/TN4-5
- 57b/4B1 CB #730 INTERLOCK
- 58b/4B2
- 11b/4GL GREEN LIGHT
- 12b/4N1
- 63a/4LP UNUSED
- 64a/4LQ
- 67a/59a RTU BREAKER POSITION
- 68a/60a
- 73b/61b SYNC CHECK RELAY
- 74b/62b
- 81a/63a TT1 AND TT2 PARALLELING CIRCUIT
- 82a/64Aa
- 83b/65b
- 84b/66b



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

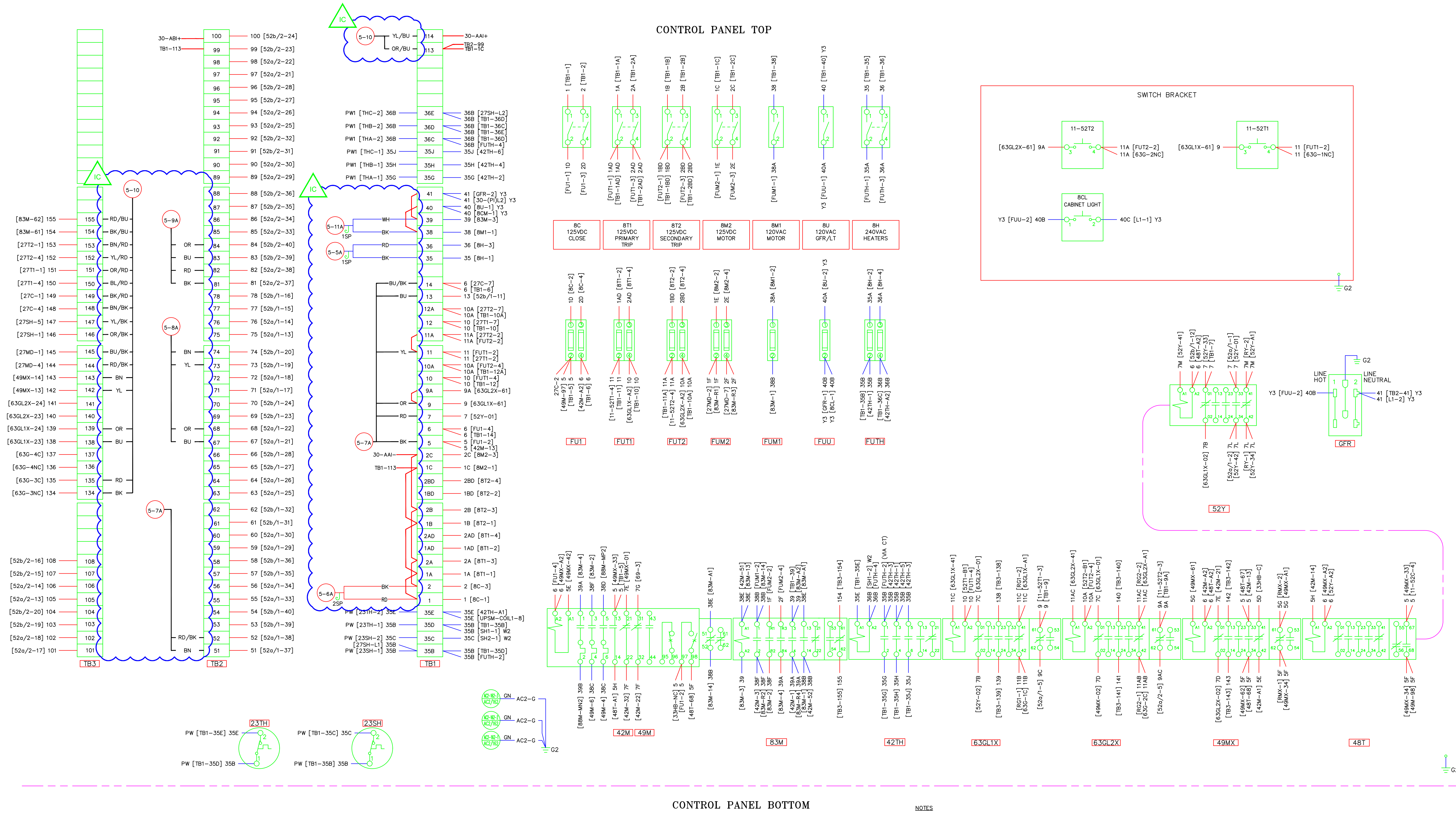
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-4 JUNCTION CABINET PROPOSED	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-WO-0003
DRAWING NO.:	01SS-EL-WO-0003
SHEET 0016 OF 28	PAGE 35 / 76

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CONSTRUCTION NOTES:

- NOTES
1. WIRE CODES ARE AS FOLLOWS:
 CABINET HEATER LEAD WIRING - 600V SFF-2 12AWG (WHITE) - W2
 CABINET HEATER COVER GROUND - 600V SFF-2 10AWG (GREEN) - G3
 TANK HEATER LEAD WIRING - 600V TEP/LON 12AWG (WHITE) - PW
 GROUNDING CIRCUITS - 600V SIS 12 AWG (GREEN) - G2
 GFR CIRCUIT - 600V SIS 12AWG (GRAY) - Y3
 TWISTED PAIR W/ MINIMUM 3 TWISTS PER FOOT - 600V SIS 14AWG (GRAY) - TP
 ALL OTHER CIRCUITS - 600V SIS 14AWG (GRAY) Y2 OR NO MARK
 PRE-WIRED LEADS - PW
 2. TERMINAL BLOCKS:
 TYPE AND RATING: MARATHON 1506STD OR 1512STD 600V, 30A
 TERMINAL SCREW: #10-32 SCREW
 WIRE RANGE: #10 TO #16 AWG COPPER WIRE
 WITH PROPER TERMINATION APPROVED FOR 75AMP
 3. WIRE TERMINATIONS: NON-INSULATED, RING-TONGUE, COMPRESSION TYPE.
 4. WIRE NUMBER IS THE SAME AS THE TERMINAL POINT NUMBER UNLESS OTHERWISE IDENTIFIED.

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
			W.O. # P1700073	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300
 Anchorage, Alaska 99519-6300

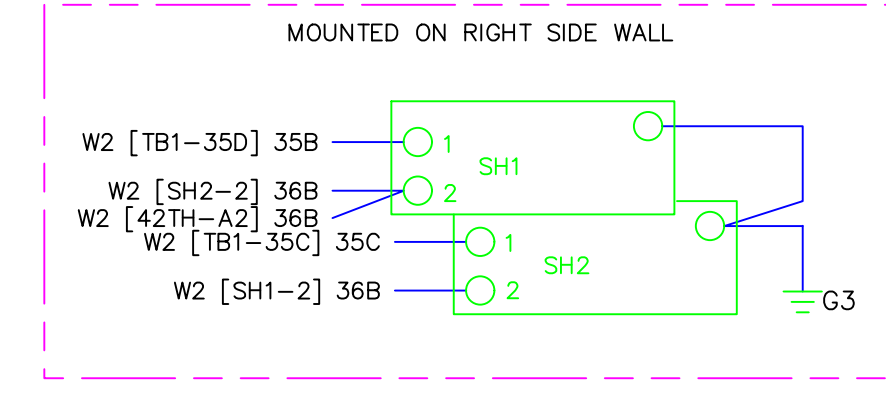
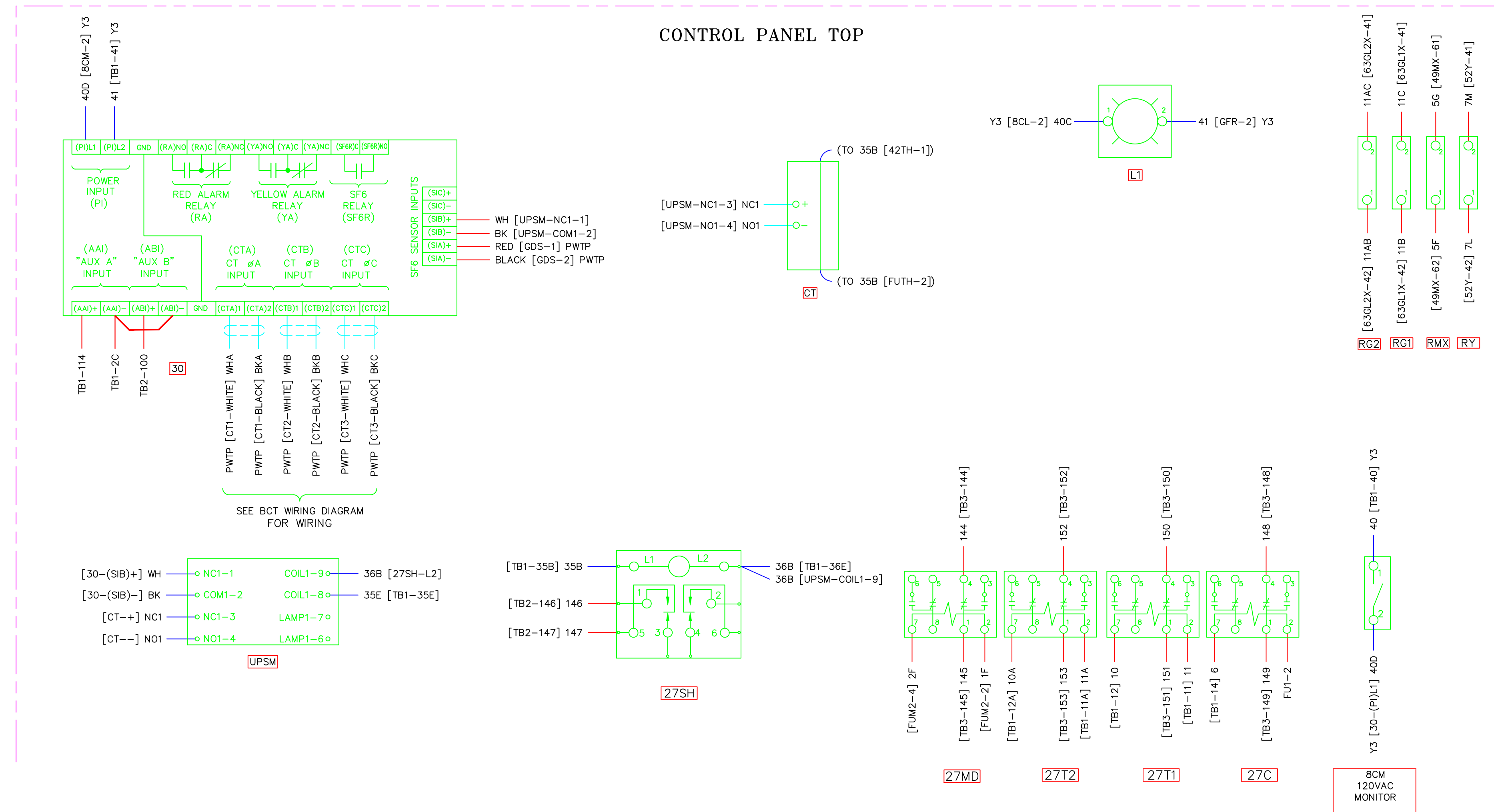
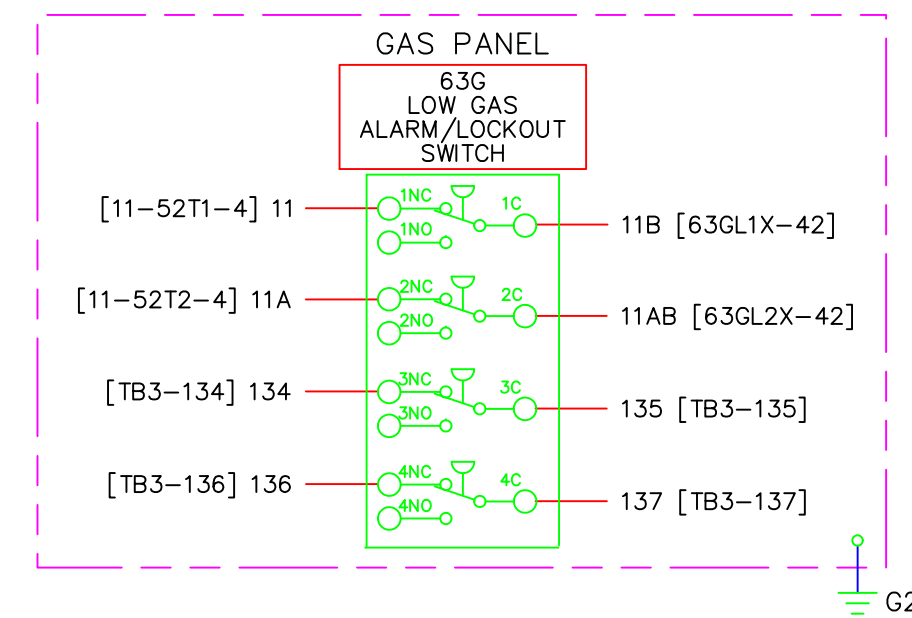
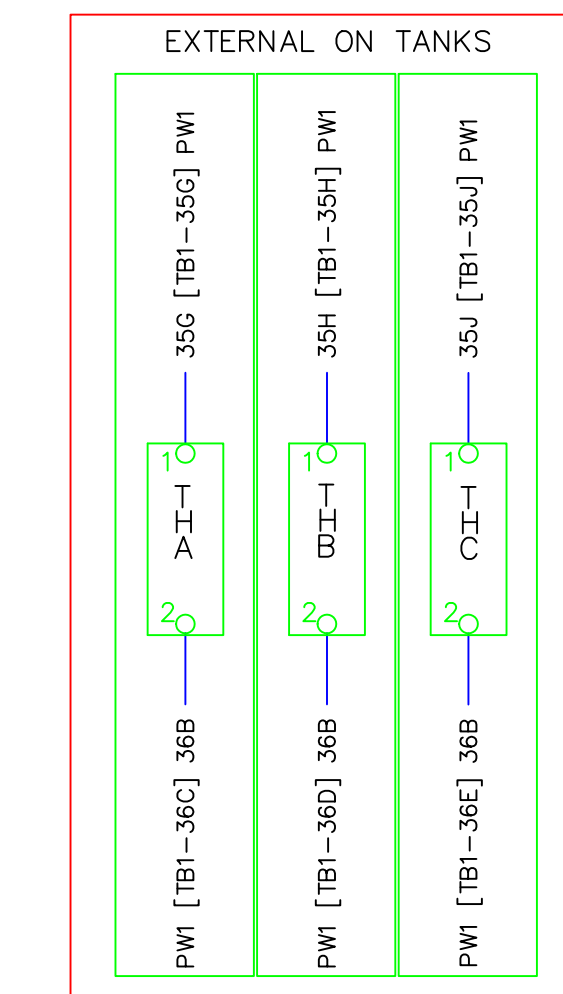
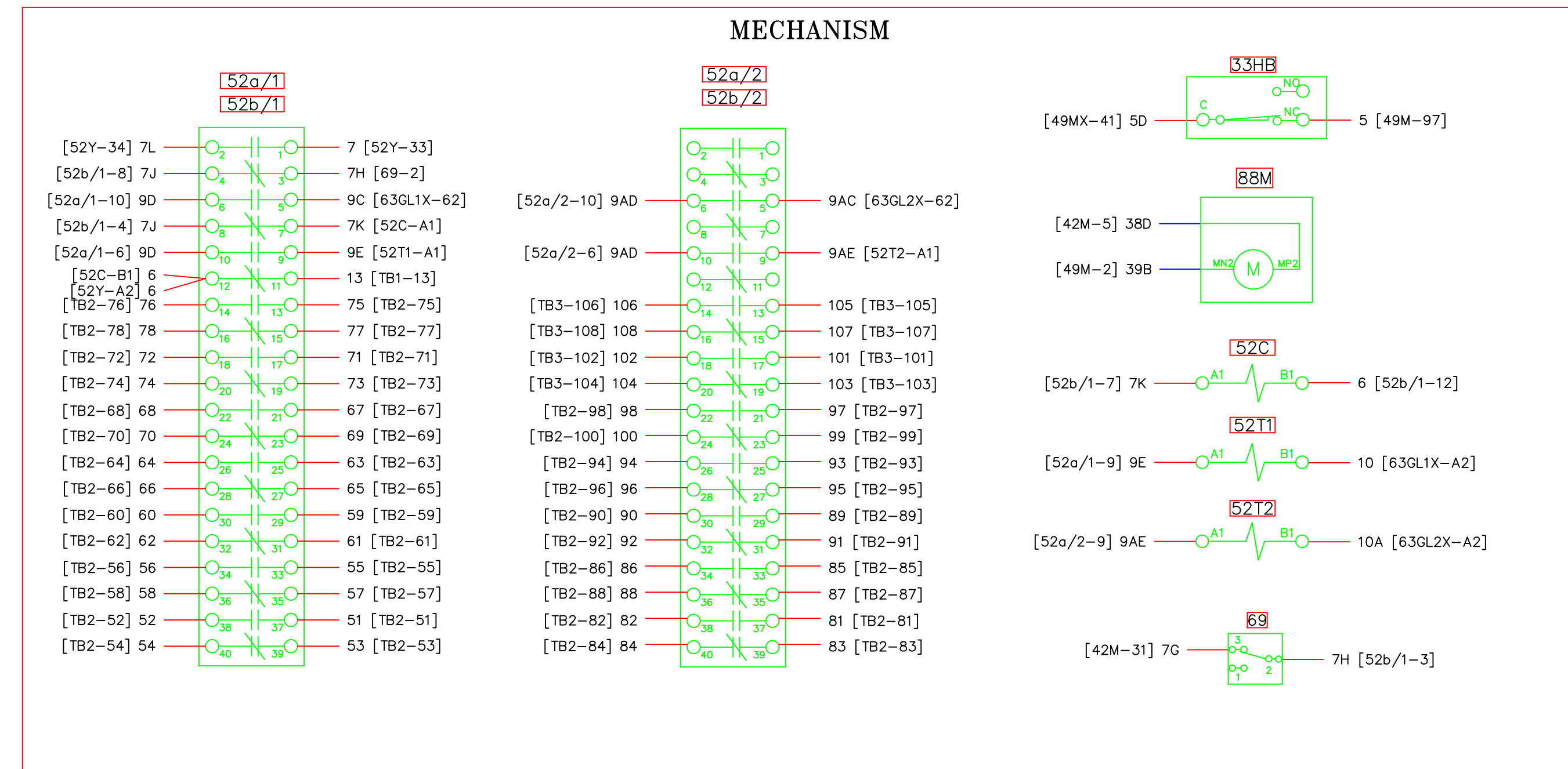
DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD
 ELECTRICAL - OUTSIDE WIRING DIAGRAM
 115-5 WIRING DIAGRAM 1
 PROPOSED

CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE: 01SS-EL-WO-0003_0017.dwg

DRAWING NO.: 01SS-EL-WO-0003

SHEET 0017 OF 28
 PAGE 36 / 76



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- DO NOT EDIT -

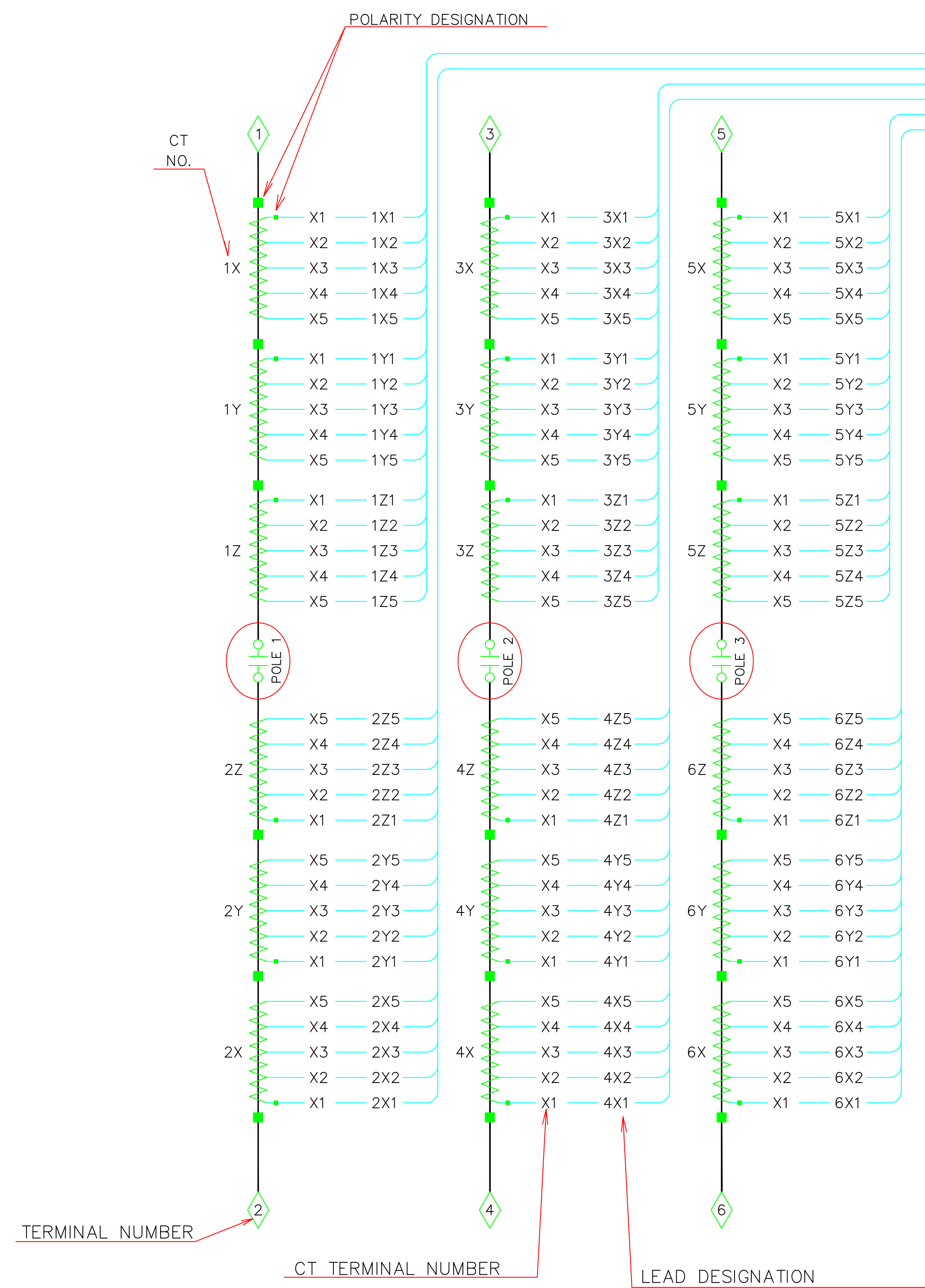
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL				W.O. # P1700073	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



Chugach Electric Association, Inc.
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Anchorage, Alaska 99519-6300

DRAWING NAME:	
SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-5 WIRING DIAGRAM 2	
CONFIDENTIAL	
01SS-EL-WO-0003_0018.dwg	
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.: 01SS-EL-WO-0003	
SHEET 0018 OF 28	PAGE 37 / 76

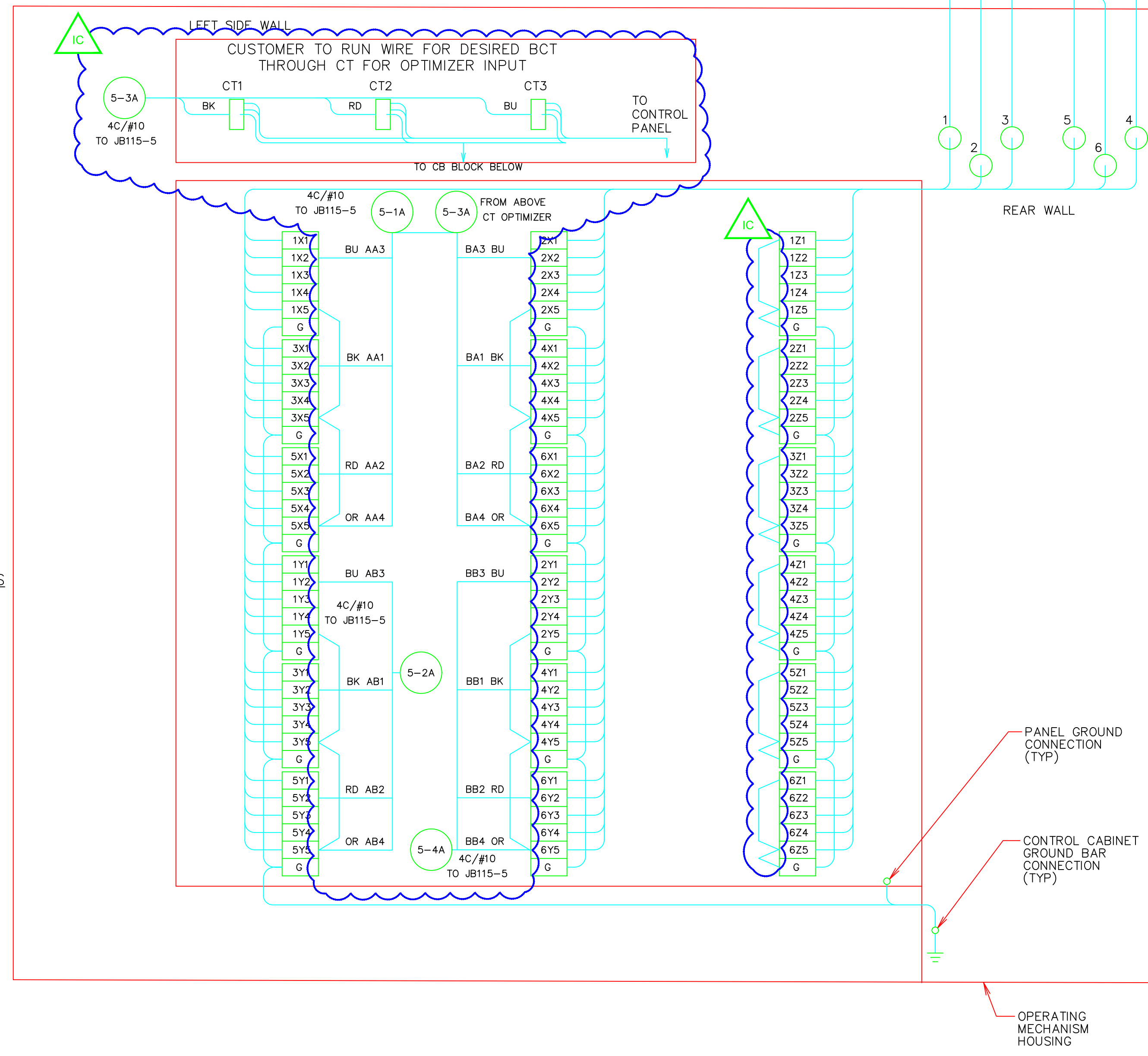


1X, 1Y, 2X, 2Y, 3X, 3Y, 4X, 4Y, 5X, 5Y, 6X, 6Y
 ACCURACY CLASS C800 (AT MAX. TAP)
 THERMAL RATING 2.5

SECONDARY TAPS	CURRENT RATINGS
X1-X5	1200/5A
X2-X5	1000/5A
X3-X5	900/5A
X1-X4	800/5A
X2-X4	600/5A
X3-X4	500/5A
X4-X5	400/5A
X1-X3	300/5A
X1-X2	200/5A
X2-X3	100/5A

1Z, 2Z, 3Z, 4Z, 5Z, 6Z
 ACCURACY CLASS 0.3B1.2 (AT MAX. TAP)
 THERMAL RATING 5.0

SECONDARY TAPS	CURRENT RATINGS
X1-X5	600/5A
X2-X5	500/5A
X3-X5	450/5A
X1-X4	400/5A
X2-X4	300/5A
X3-X4	250/5A
X4-X5	200/5A
X1-X3	150/5A
X1-X2	100/5A
X2-X3	50/5A



- NOTES
- BCT SECONDARIES (MAX TAP) TO BE SHORTED TO GROUND PRIOR TO SHIPMENT
 - TERMINAL BLOCK SPECIFICATION: SHORTING - MARATHON 1506SC 6-POINT TERMINAL SCREW: 10-32 WASHER HEAD COMPATIBLE WITH CONDUCTORS UP TO 10AWG WITH PROPER TERMINATION
 - WIRE SPECIFICATION: GROUND WIRING - 10AWG, 600V MTW, GREEN ALL OTHER WIRING - 10AWG, 600V MTW, YELLOW
 - WIRE TERMINATIONS: NON-INSULATED RING TONGUE COMPRESSION TYPE TERMINALS ARE TO BE USED

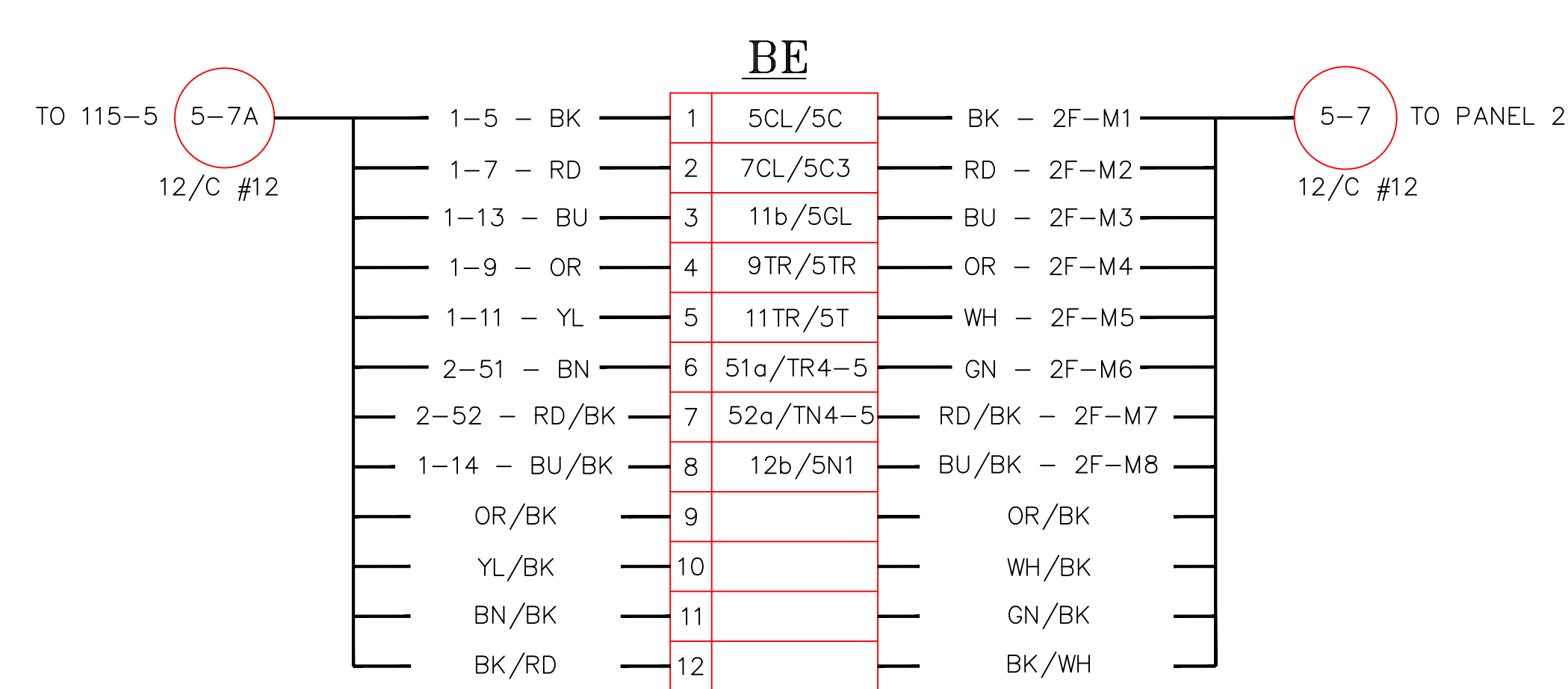
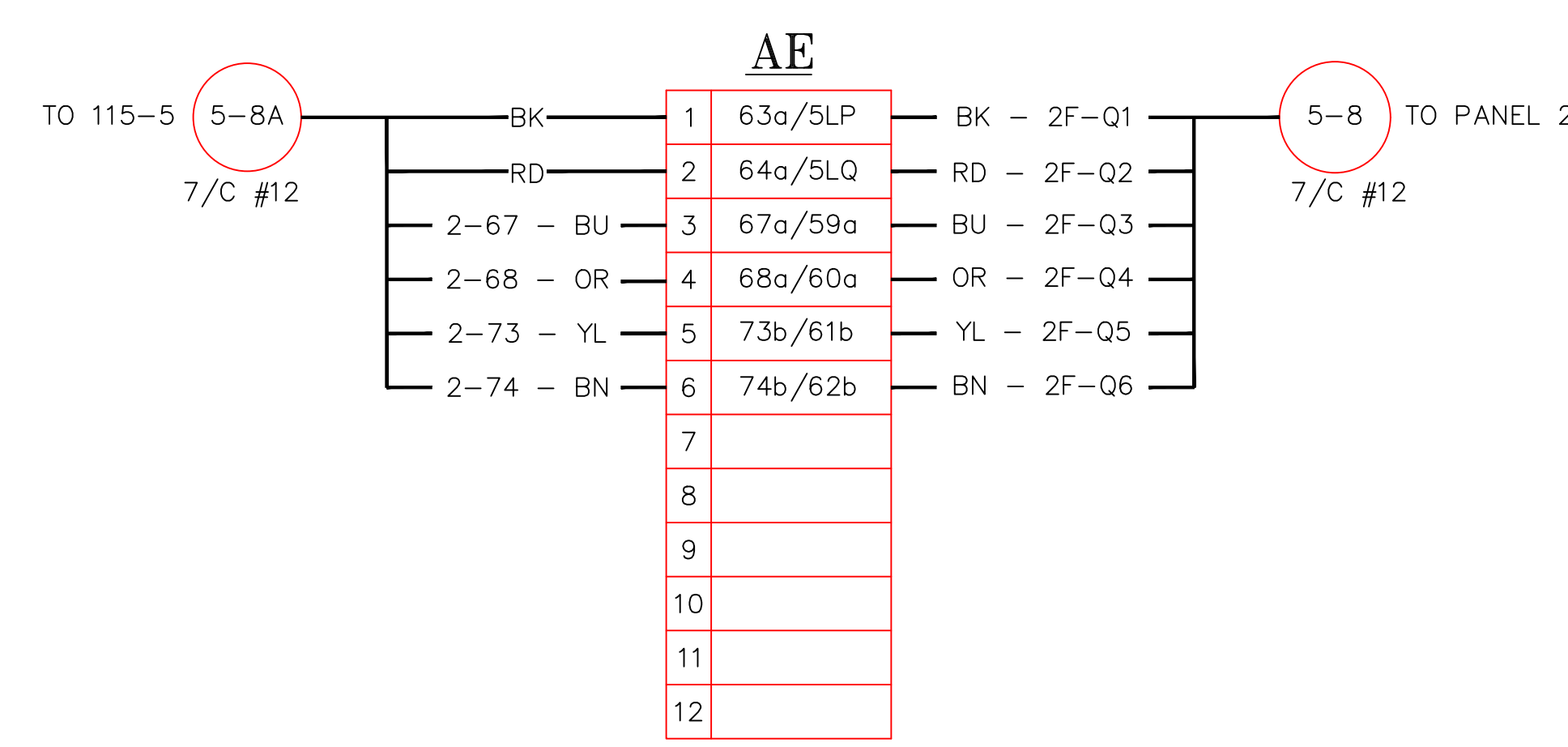
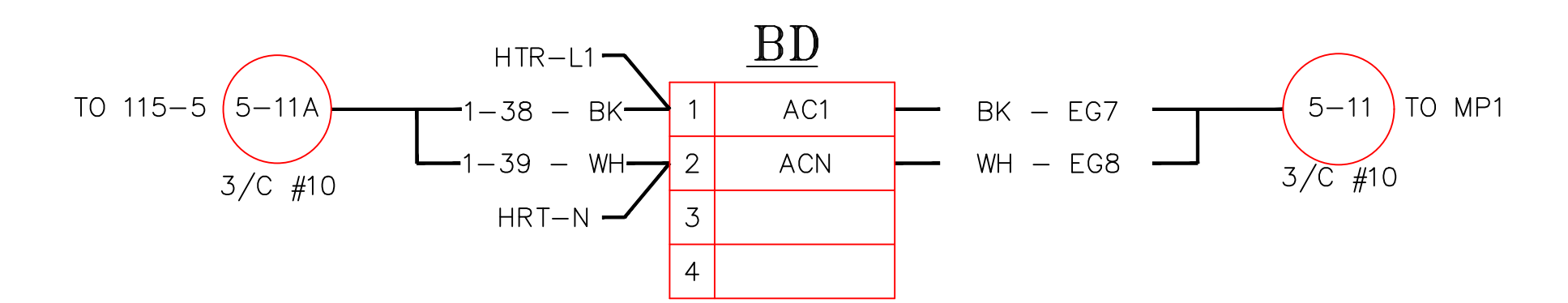
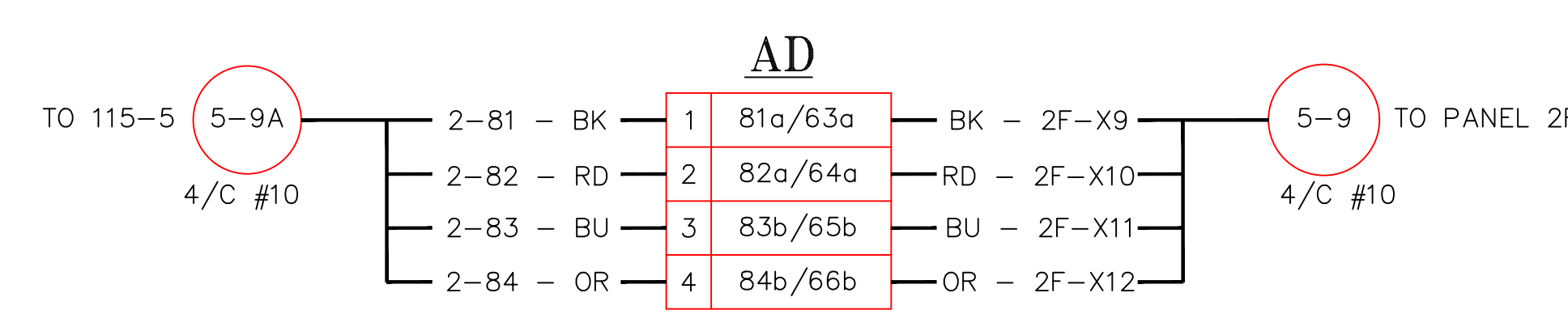
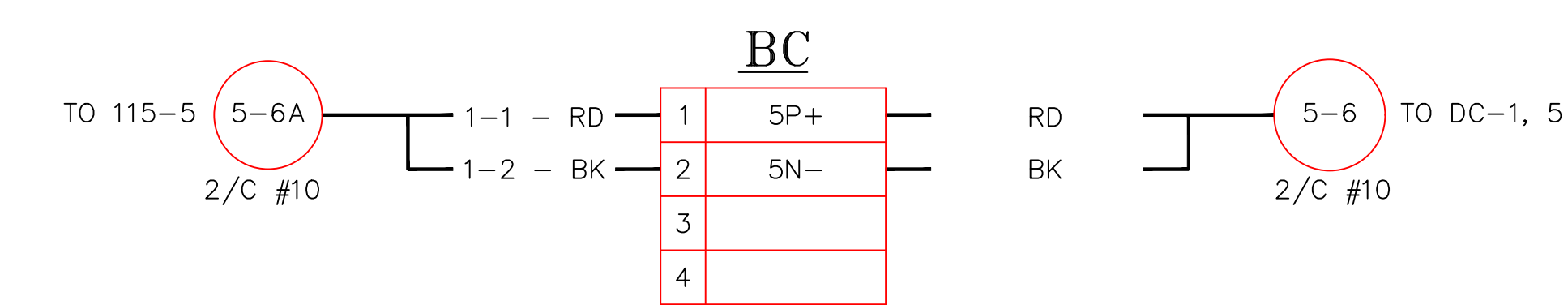
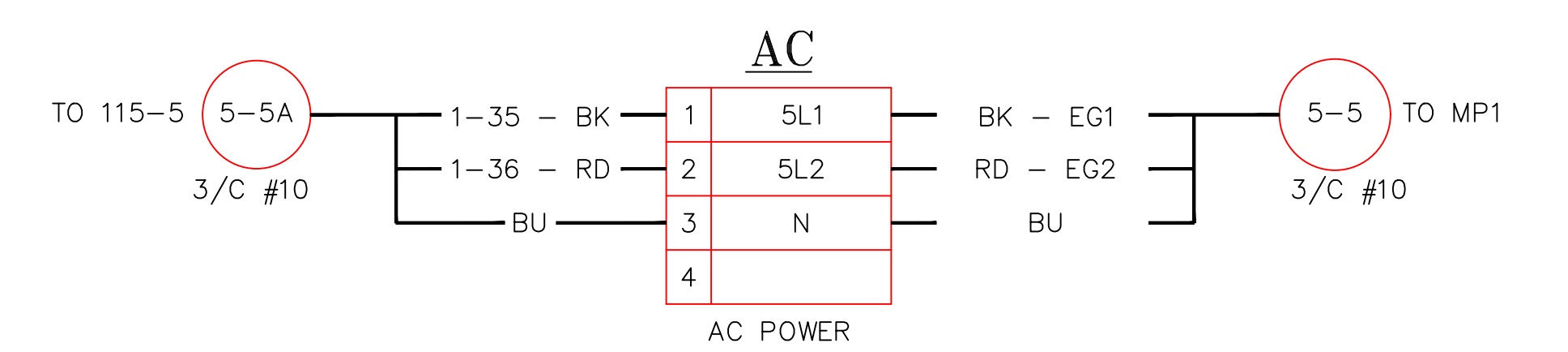
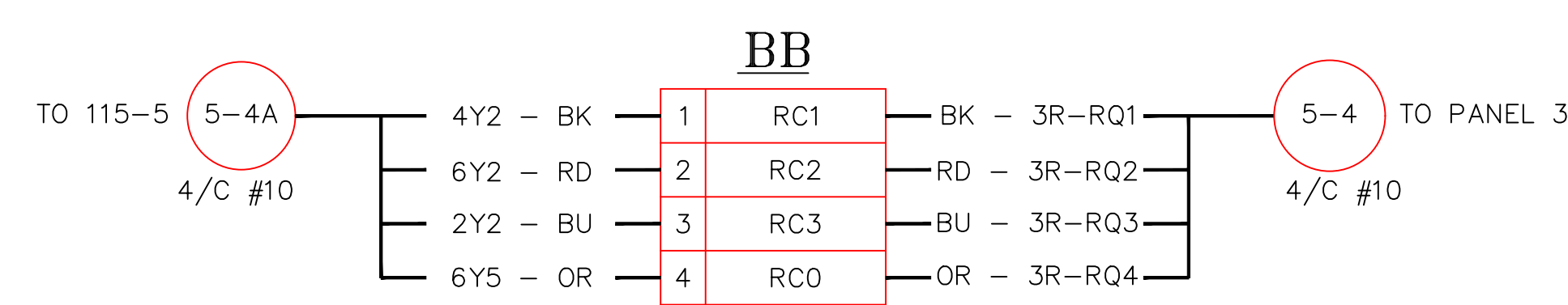
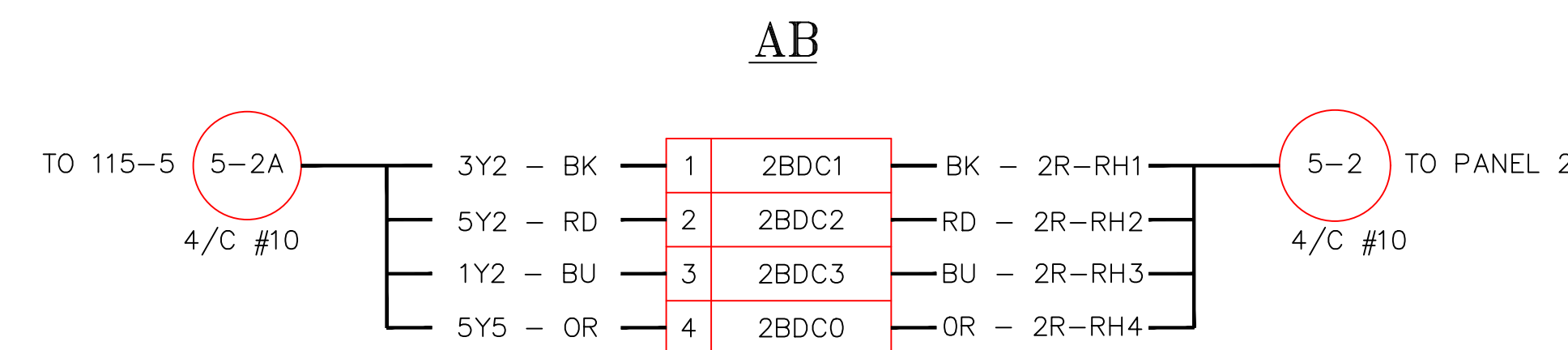
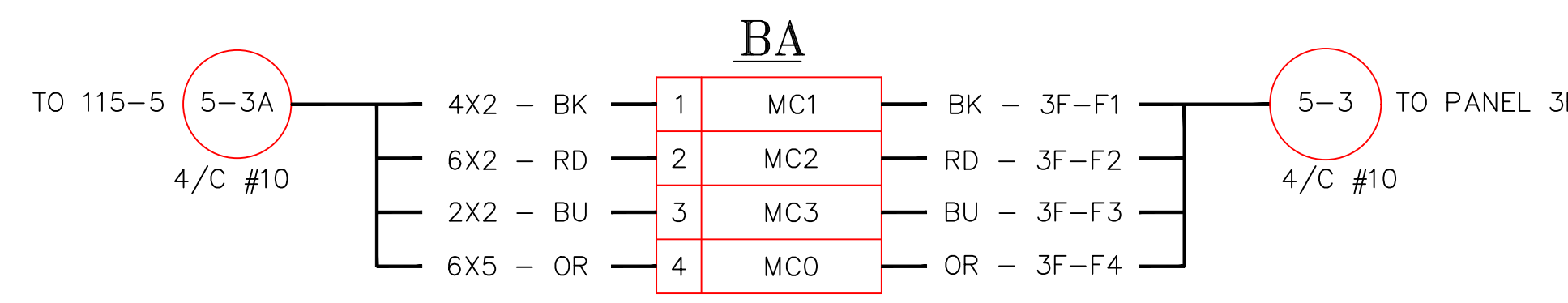
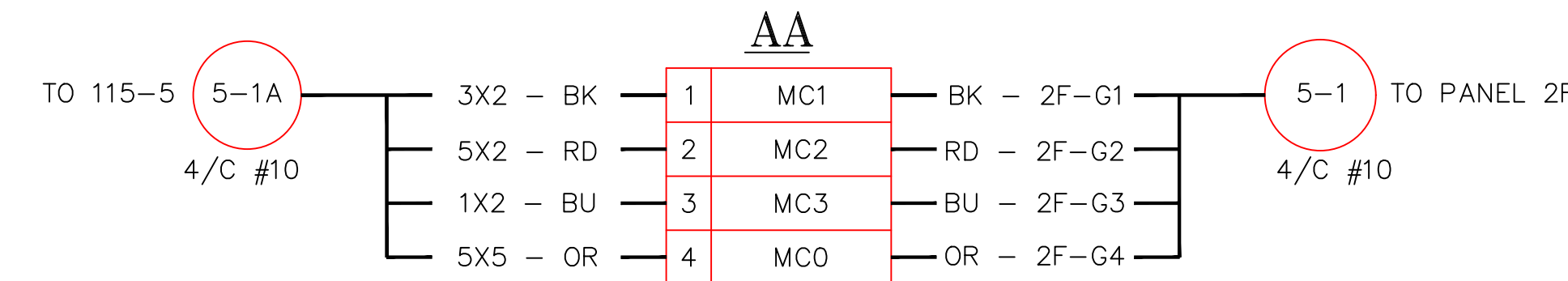
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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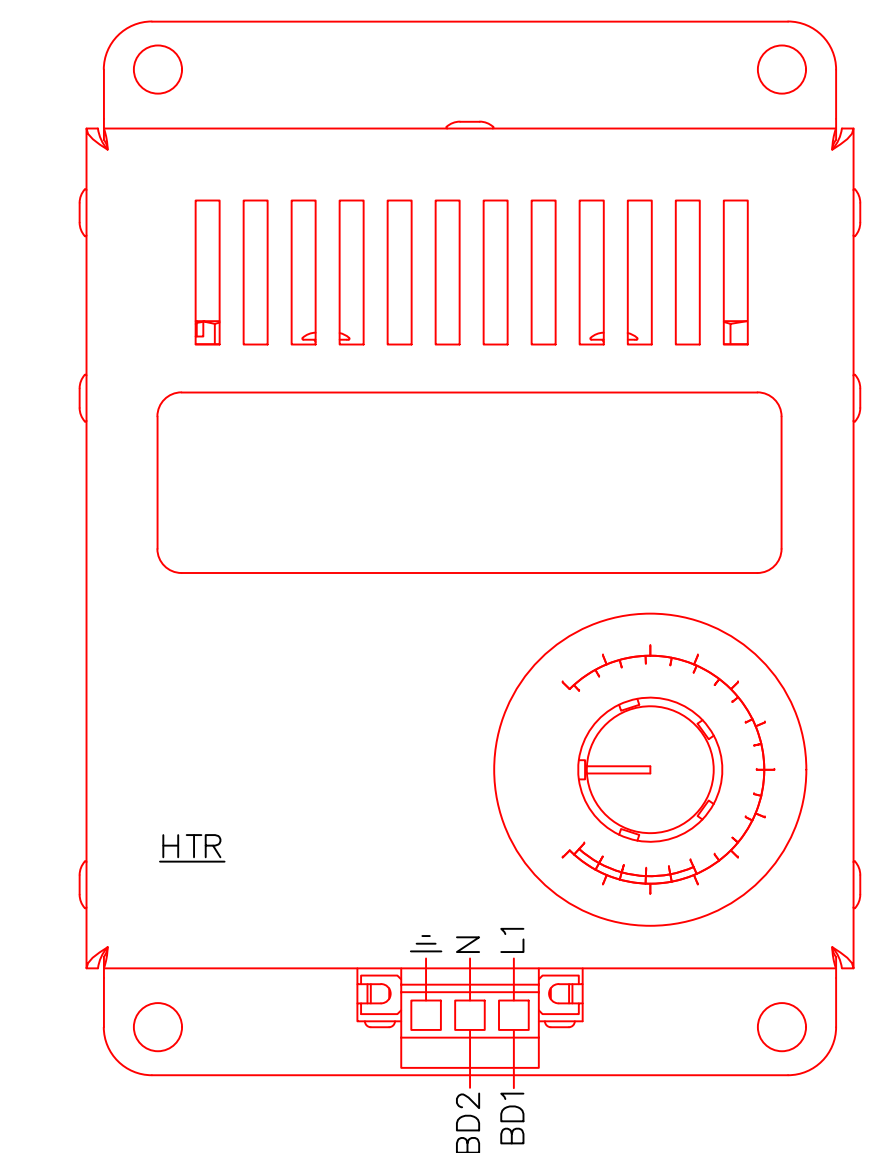


Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300
 Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-5 CT WIRING DIAGRAM PROPOSED	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-WO-0003
DRAWING NO.:	01SS-EL-WO-0003
SHEET 0019 OF 28	PAGE 38 / 76



- 51a/TR4-5 TRIP CIRCUIT DEVICE 94
- 52a/TN4-5
- 11b/5GL GREEN LIGHT
- 12b/5N1
- 63a/5LP UNUSED
- 64a/5LQ
- 67a/59a RTU BREAKER POSITION
- 68a/60a
- 73b/61b SYNC CHECK RELAY
- 74b/62b
- 81a/63a TT1 AND TT2 PARALLELING CIRCUIT
- 82a/64a
- 83b/65b
- 84b/66b



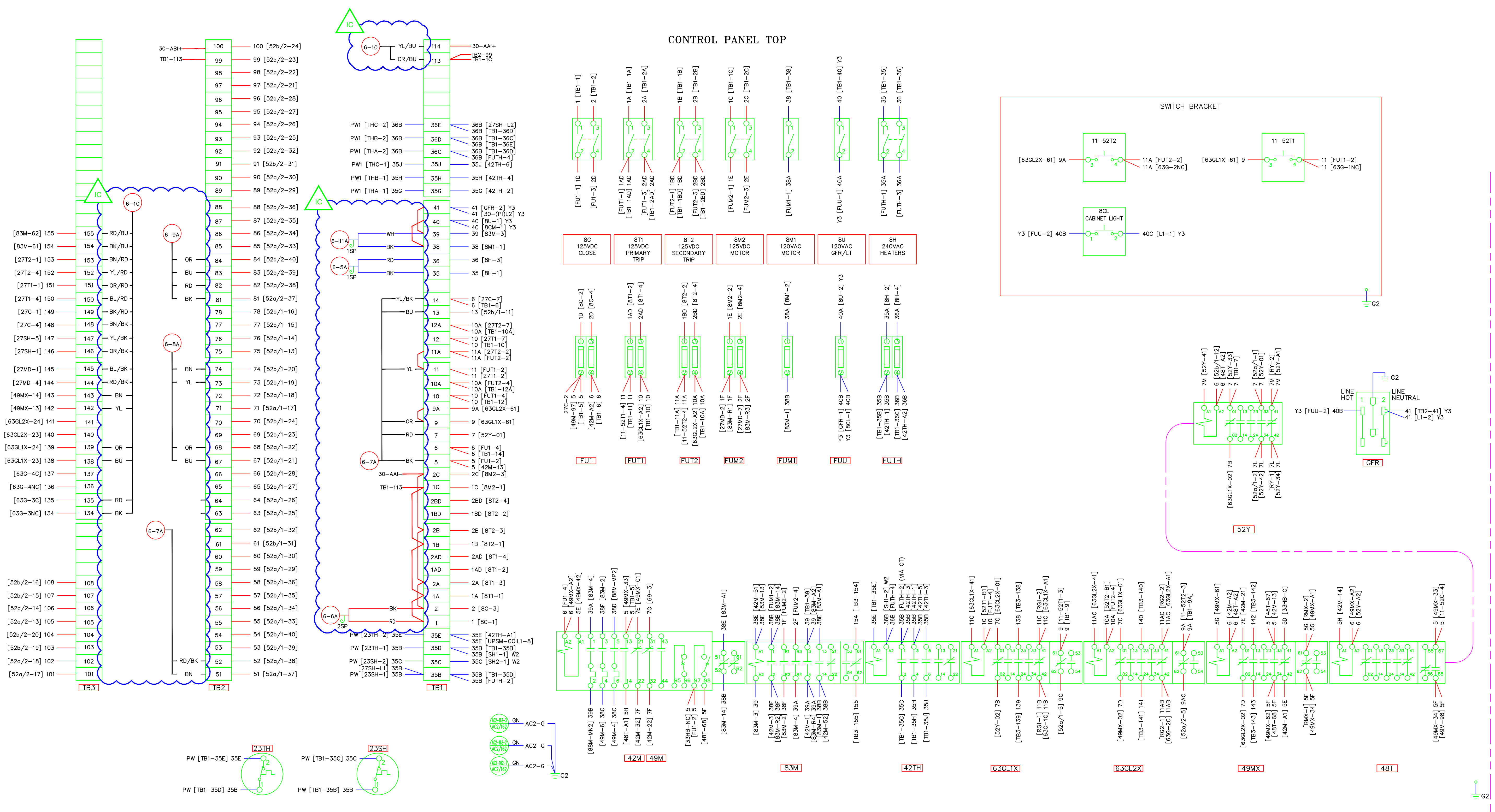
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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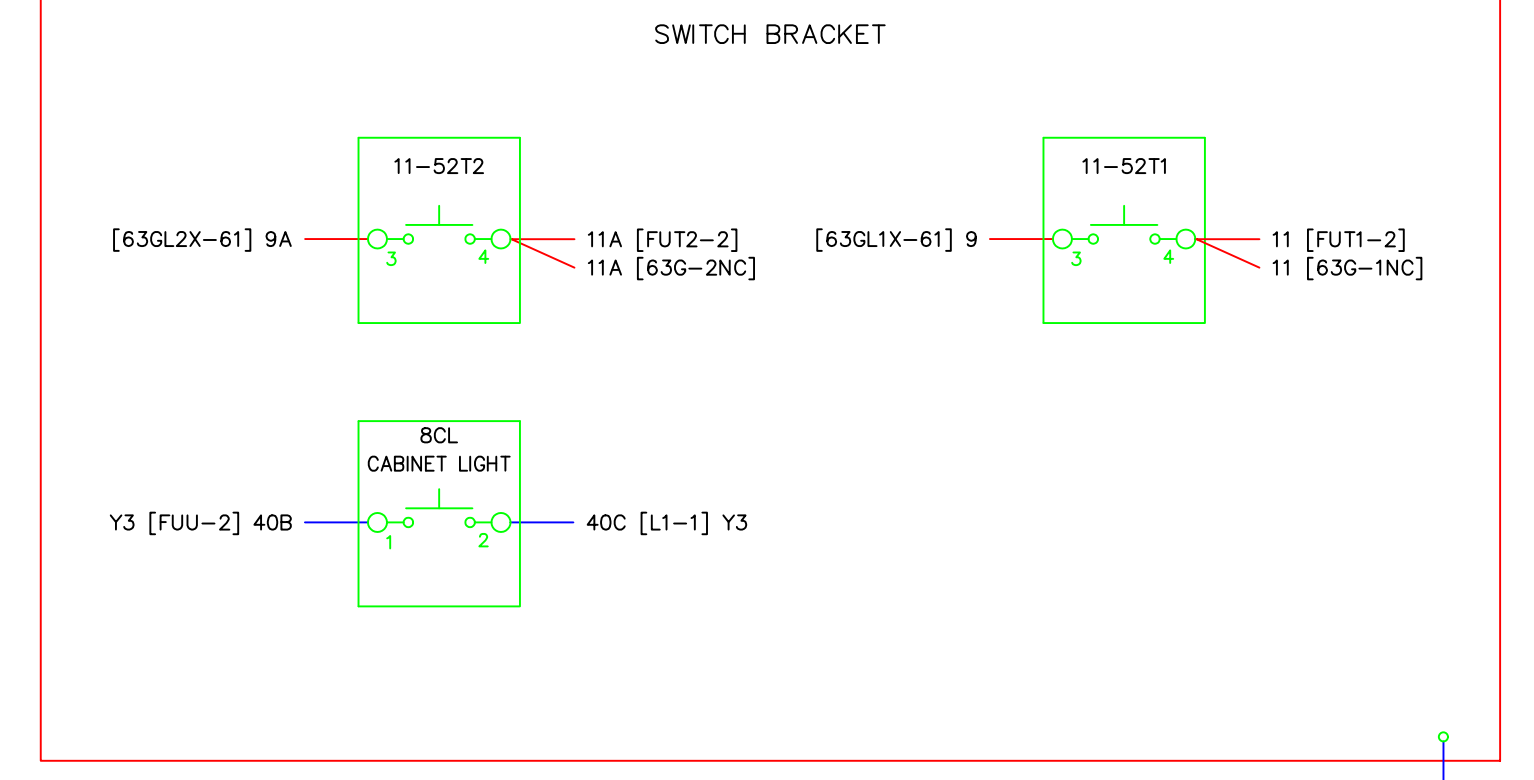
Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-5 JUNCTION CABINET PROPOSED	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-WO-0003_0020.dwg
DRAWING NO.: 01SS-EL-WO-0003	SHEET 0020 OF 28 PAGE 39 / 76



CONTROL PANEL TOP

CONTROL PANEL BOTTOM



- NOTES
- WIRE CODES ARE AS FOLLOWS:
 CABINET HEATER LEAD WIRES - 600V SFF-2 12AWG (WHITE) - W2
 CABINET HEATER COVER GROUND - 600V SFF-2 10AWG (GREEN) - G3
 TANK HEATER LEAD WIRES - 600V TFLON 12AWG (WHITE) - PW1
 GROUNDING CIRCUITS - 600V SIS 12 AWG (GREEN) - G2
 GFR CIRCUIT - 600V SIS 12AWG (GRAY) - Y3
 TWISTED PAIR W/MINIMUM 3 TWISTS PER FOOT - 600V SIS 14AWG (GRAY) - TP
 ALL OTHER CIRCUITS - 600V SIS 14AWG (GRAY) Y2 OR NO MARK PRE-WIRED LEADS - PW
 - TERMINAL BLOCKS
 TYPE AND RATING: MARATHON 150STD OR 1512STD 600V, 30A
 TERMINAL SCREW: #10-32 SCREW
 WIRE RANGE: #10 TO #16 AWG COPPER WIRE
 WITH PROPER TERMINATION APPROVED FOR 75AMP
 - WIRE TERMINATIONS: NON-INSULATED, RING-TONGUE, COMPRESSION TYPE.
 WIRE NUMBER IS THE SAME AS THE TERMINAL POINT NUMBER UNLESS OTHERWISE IDENTIFIED.

CONSTRUCTION NOTES:

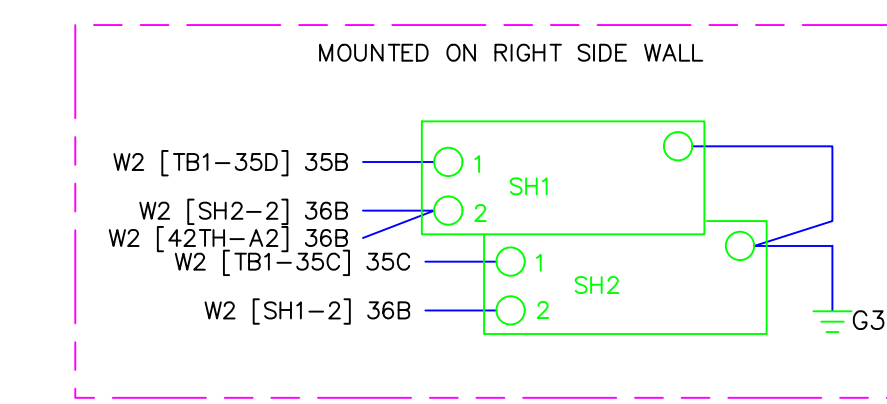
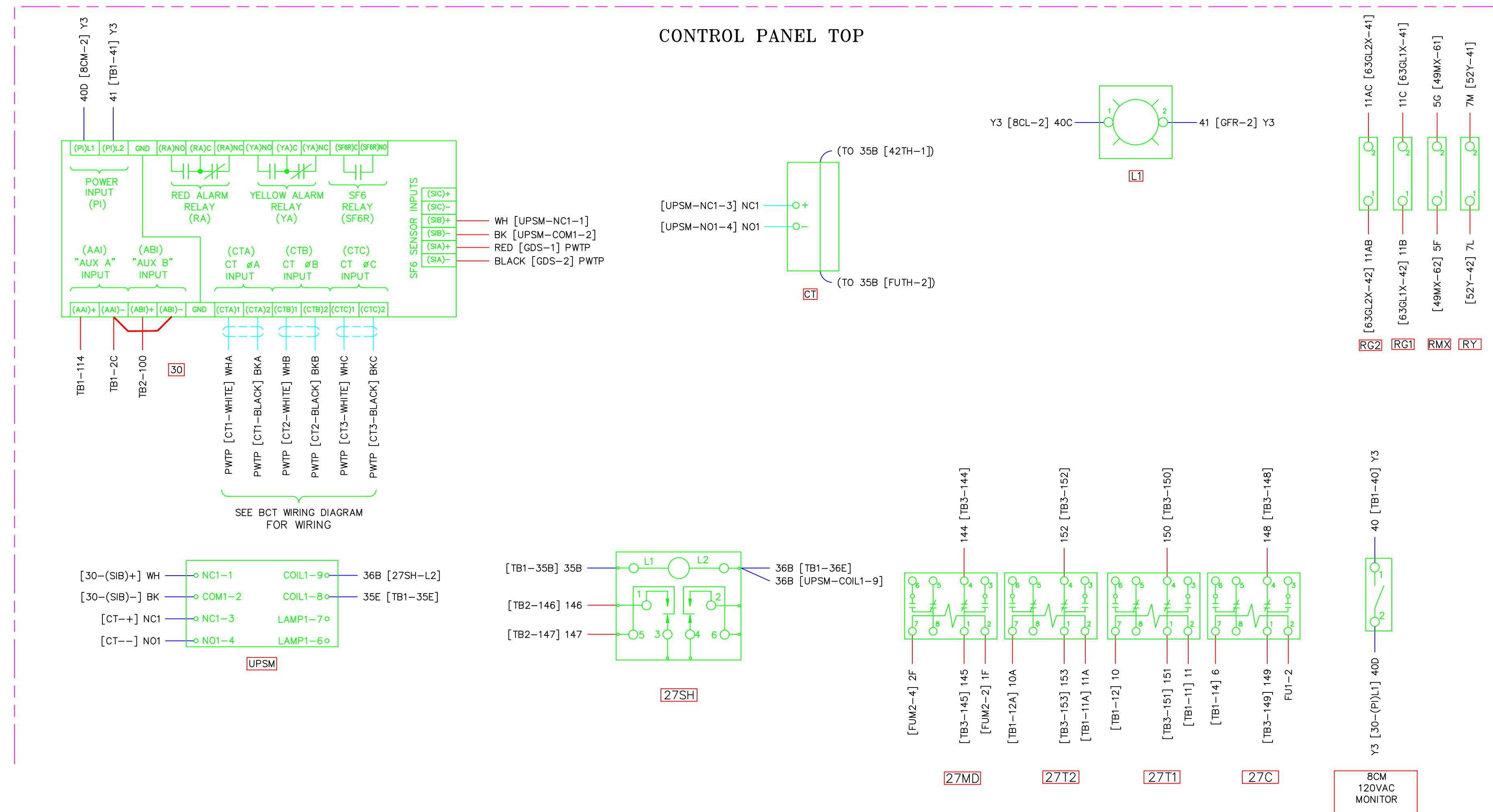
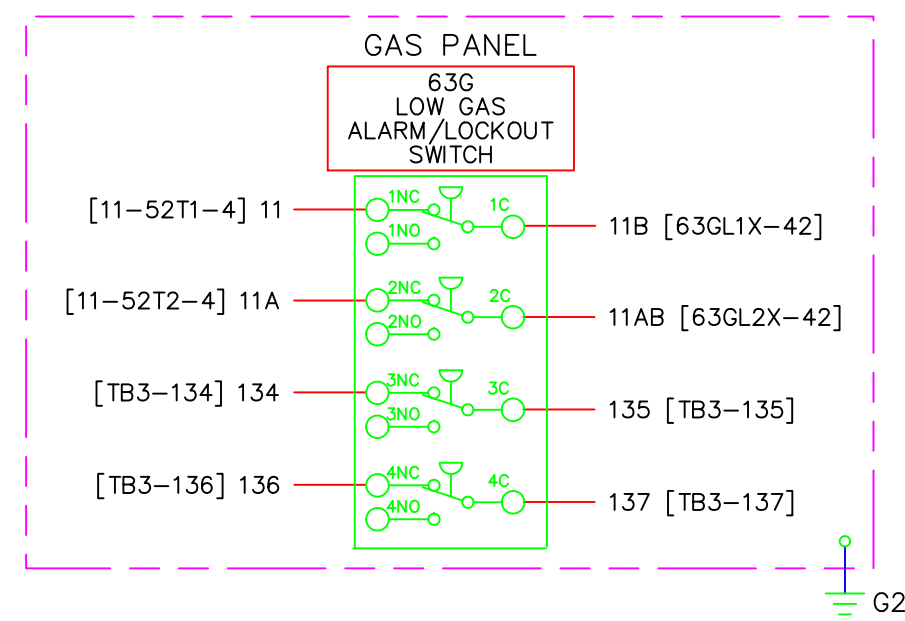
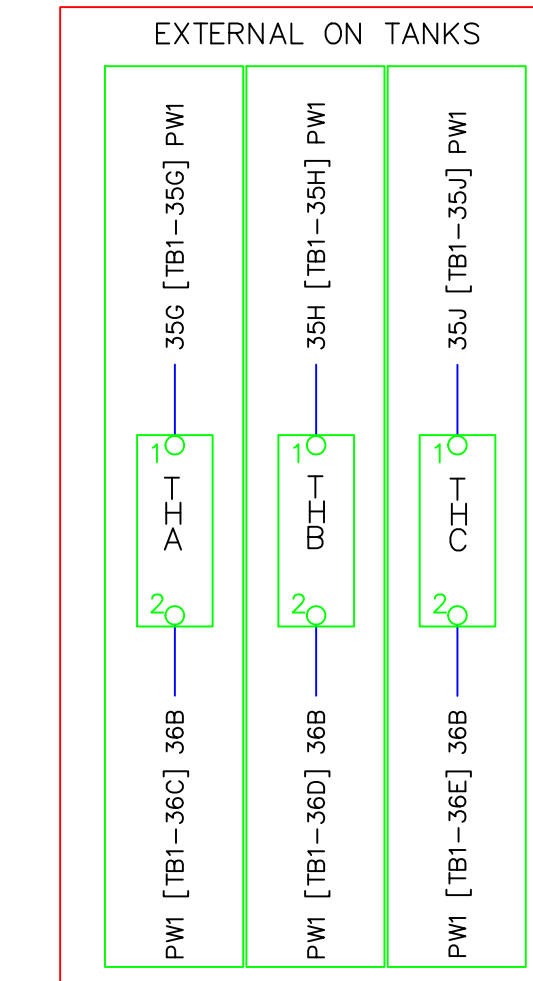
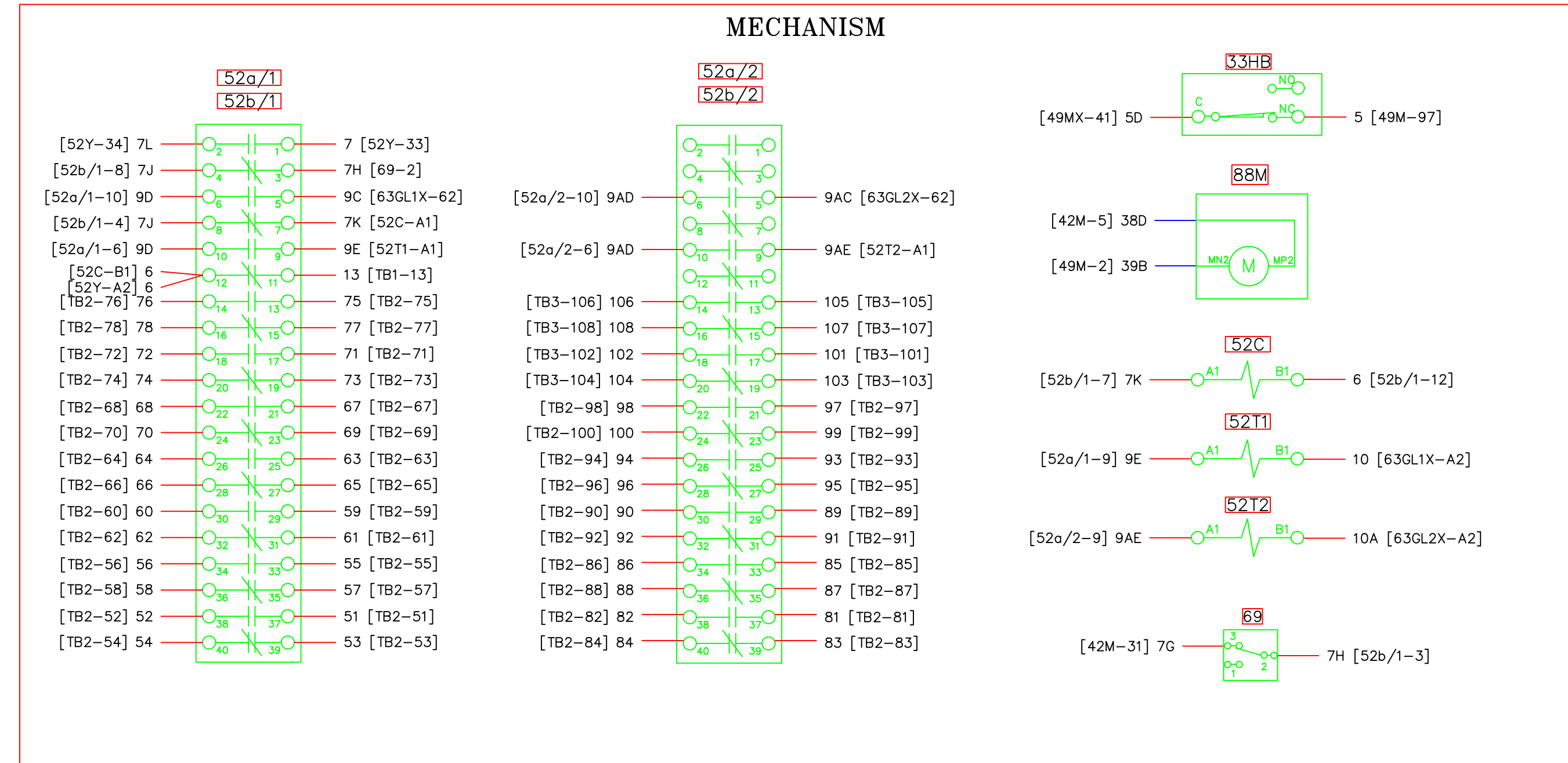
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
NO.		DESIGN/CONSTRUCTION/ASBUILT REVISION		W.O. #
1		ISSUED FOR CONSTRUCTION		P1700073
DWN. BY/DATE	REVISED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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 Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD	
		ELECTRICAL - OUTSIDE WIRING DIAGRAM	
		115-6 WIRING DIAGRAM 1	
		PROPOSED	
CONFIDENTIAL			
DRAWING NO. - PREVIOUS/REFERENCE			
DRAWING NO.:		01SS-EL-WO-0003	
SHEET		0021 OF 28	
PAGE		40 / 76	



CONTROL PANEL BOTTOM

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- DO NOT EDIT -

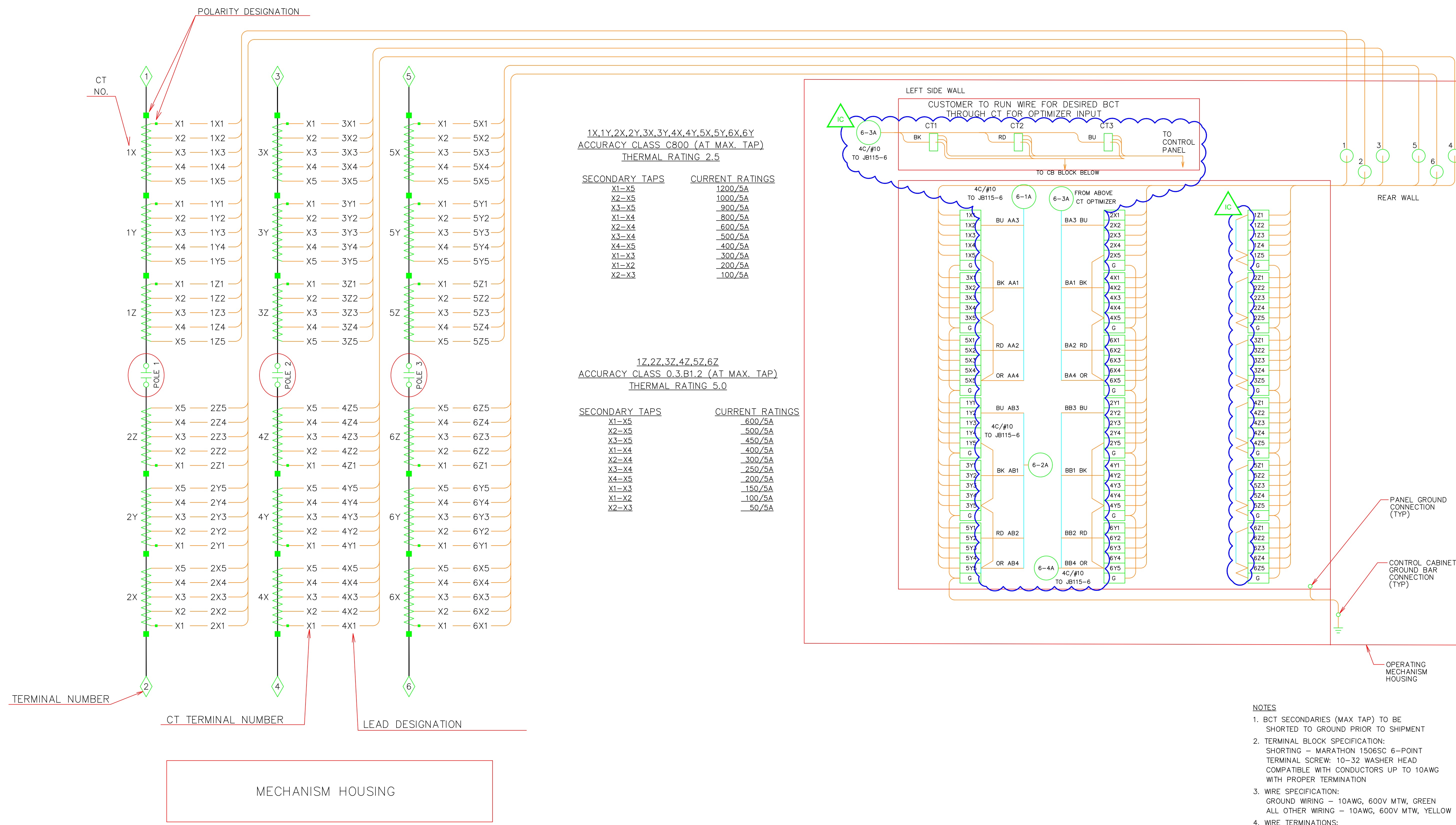
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL					
W.O. # P1700073					ENG. STAMP
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-6 WIRING DIAGRAM 2	
CONFIDENTIAL	
DRAWING NO.: 01SS-EL-WO-0003	SHEET 0022 OF 28 PAGE 41 / 76



- NOTES**
- BCT SECONDARIES (MAX TAP) TO BE SHORTED TO GROUND PRIOR TO SHIPMENT
 - TERMINAL BLOCK SPECIFICATION:
SHORTING - MARATHON 1506SC 6-POINT
TERMINAL SCREW: 10-32 WASHER HEAD
COMPATIBLE WITH CONDUCTORS UP TO 10AWG WITH PROPER TERMINATION
 - WIRE SPECIFICATION:
GROUND WIRING - 10AWG, 600V MTW, GREEN
ALL OTHER WIRING - 10AWG, 600V MTW, YELLOW
 - WIRE TERMINATIONS:
NON-INSULATED RING TONGUE COMPRESSION TYPE TERMINALS ARE TO BE USED

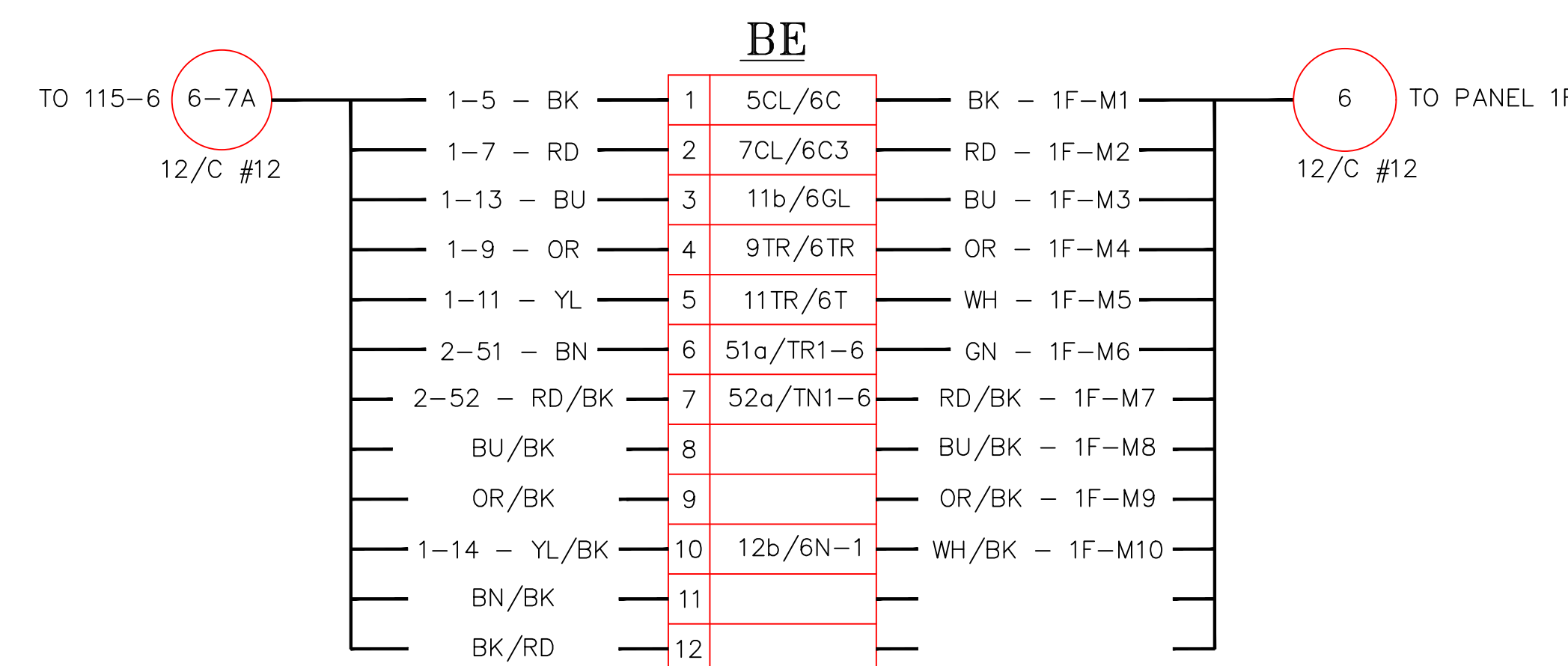
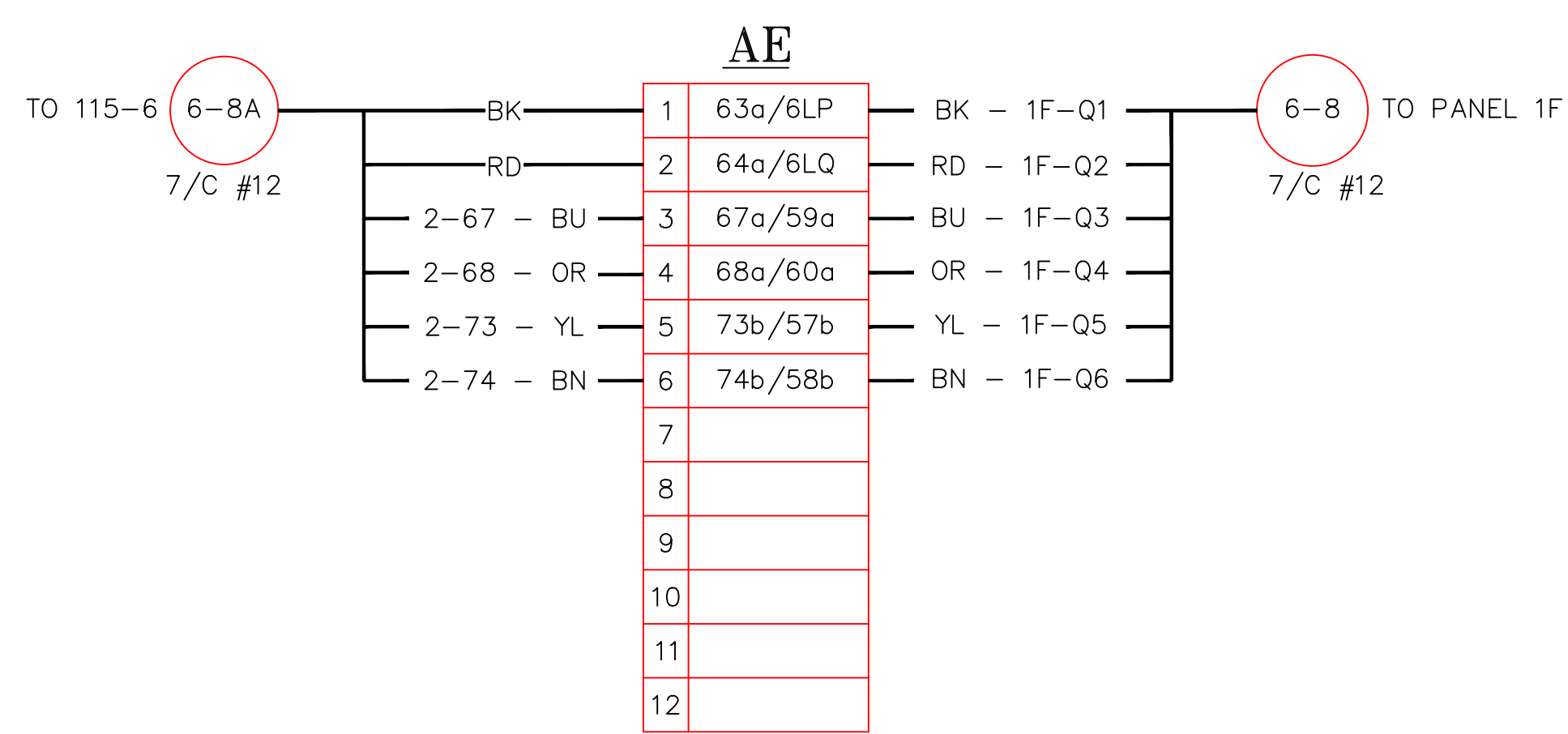
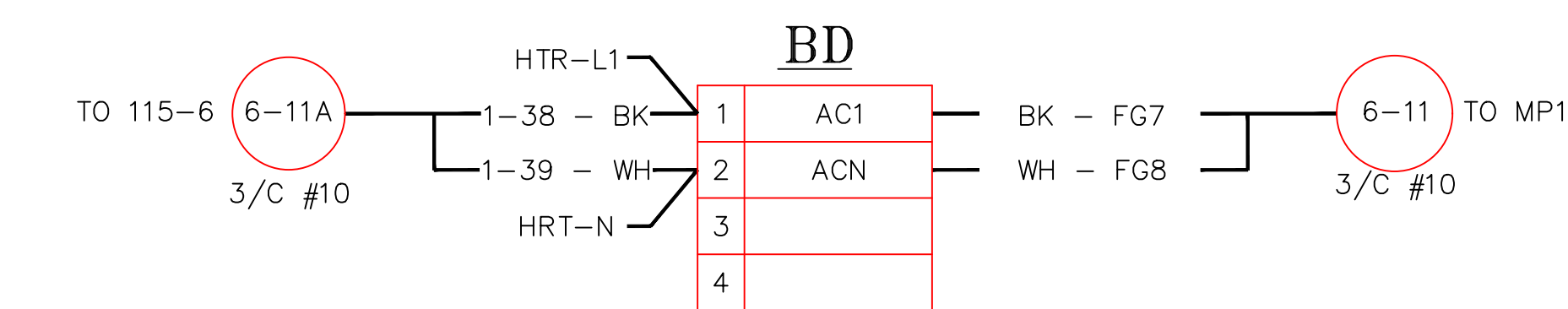
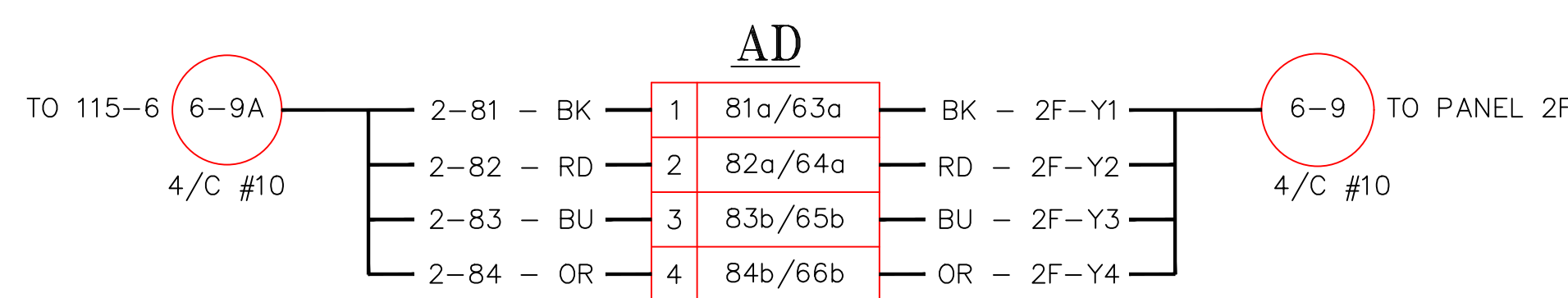
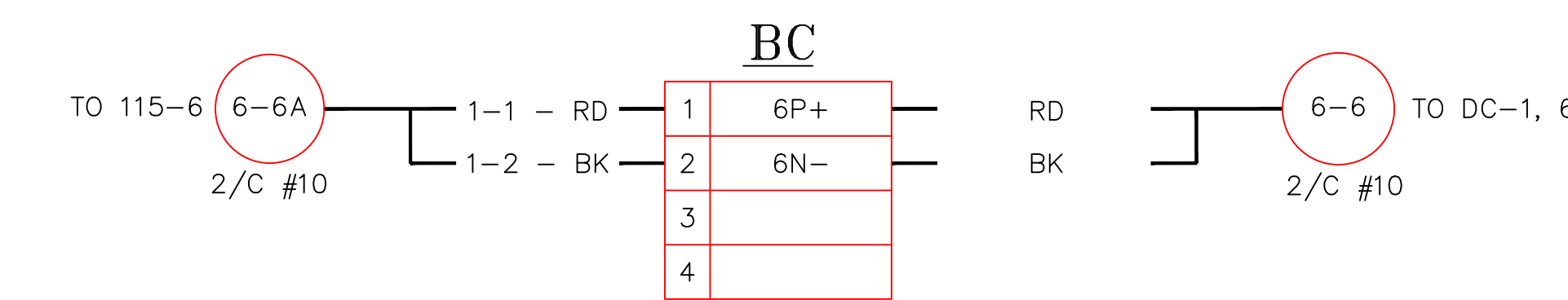
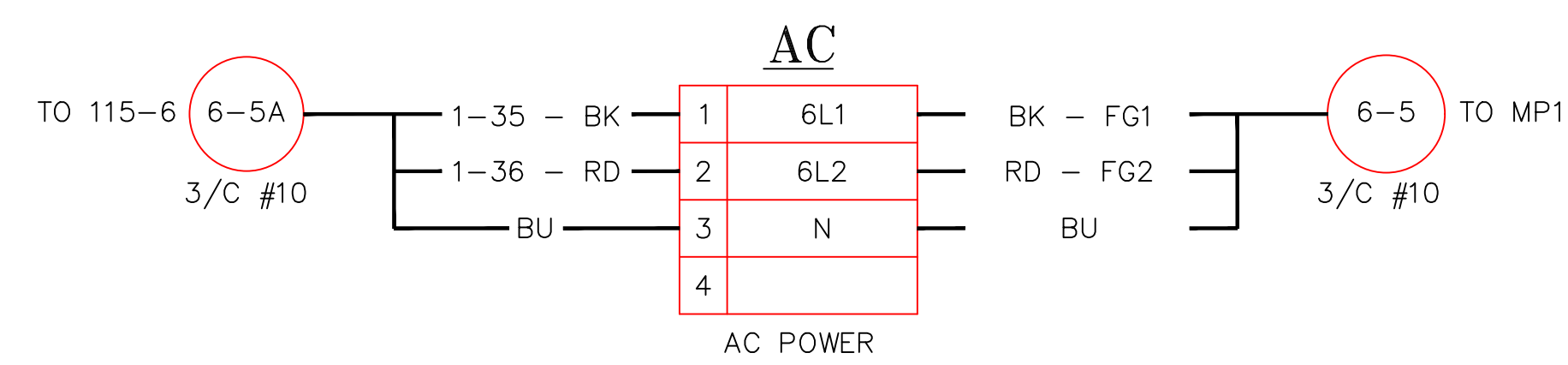
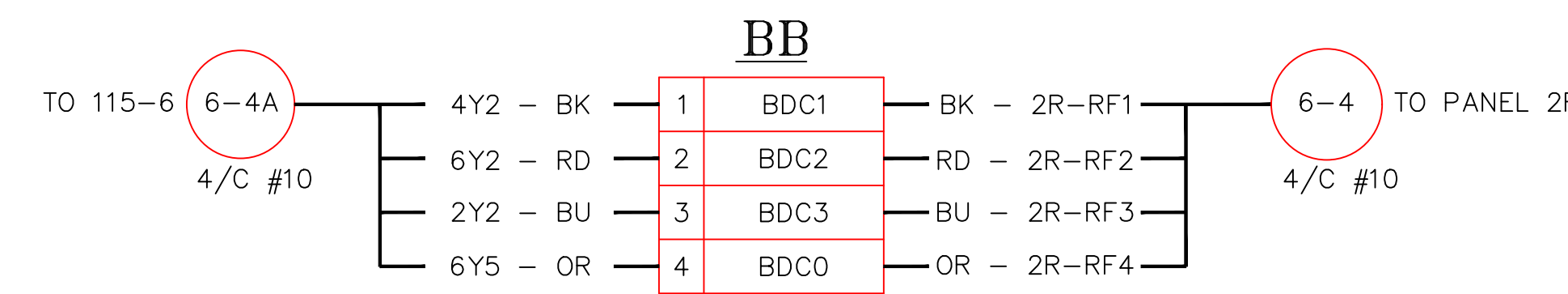
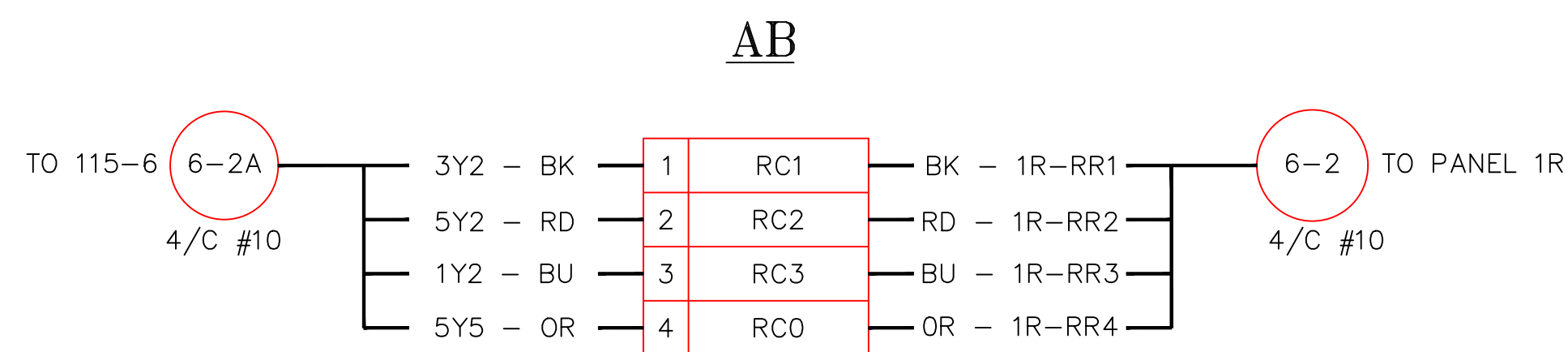
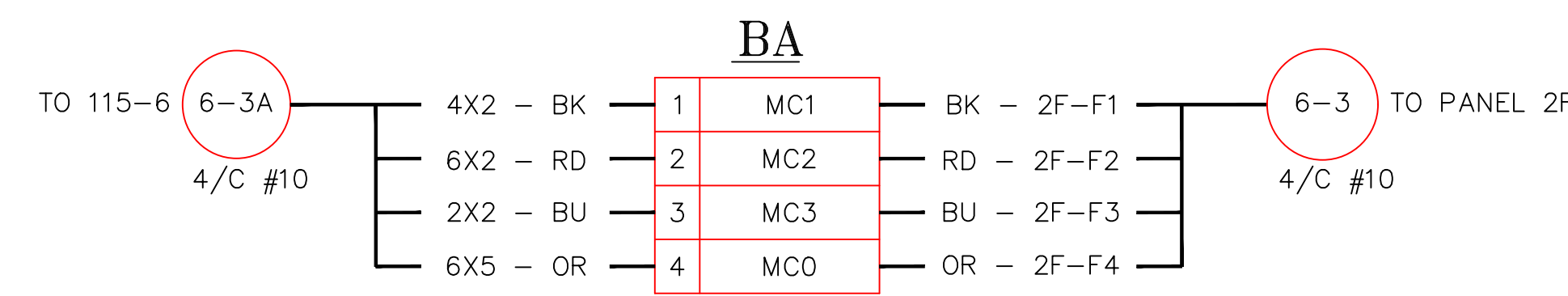
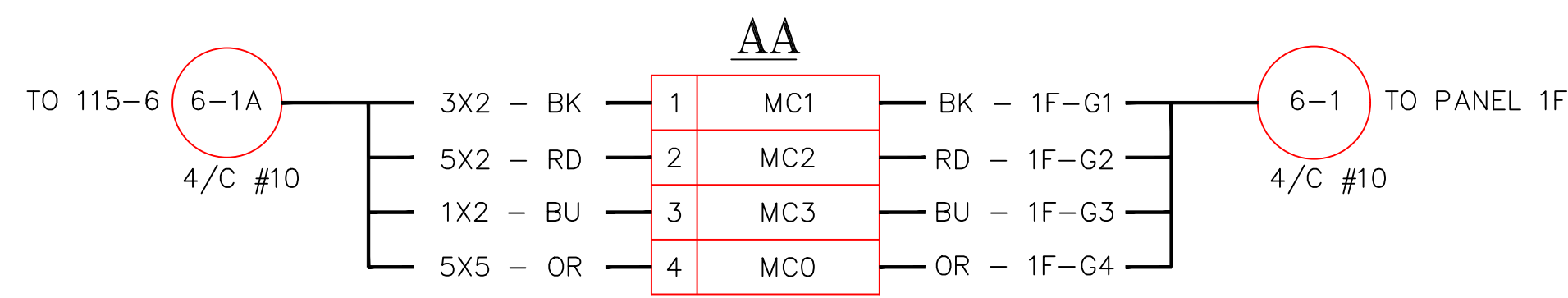
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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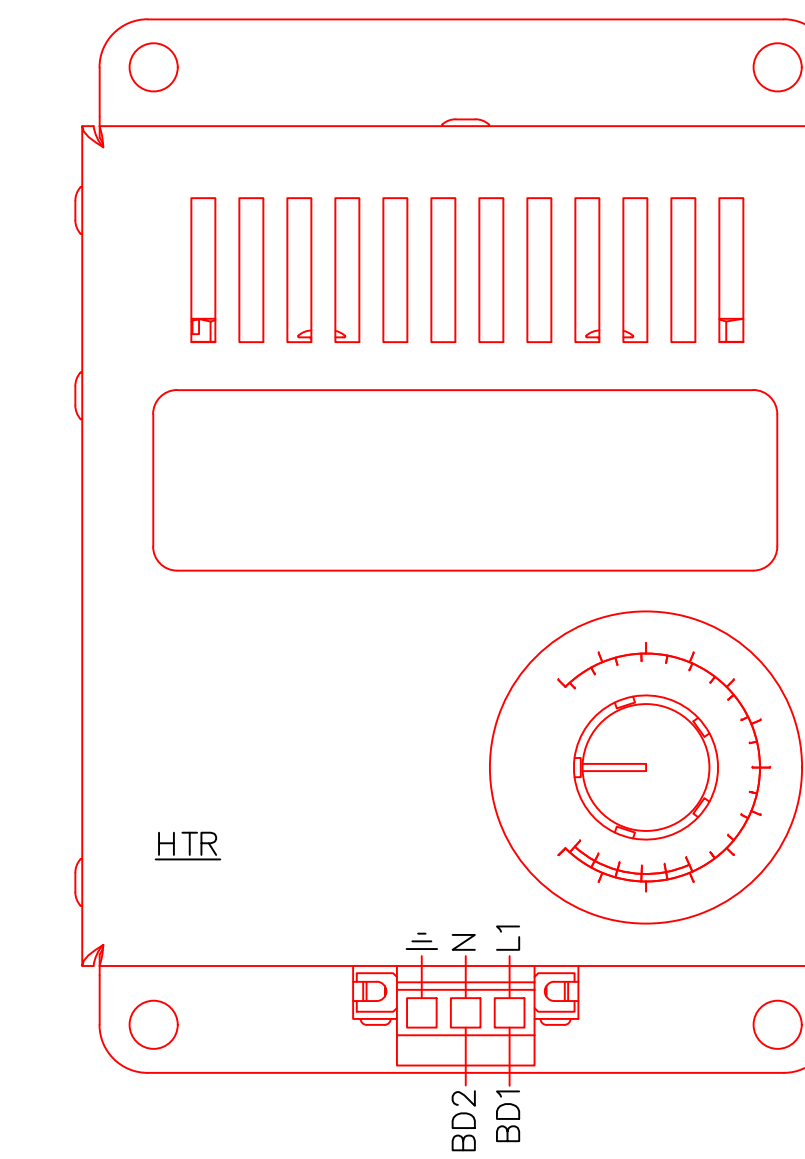


Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM 115-6 WIRING DIAGRAM PROPOSED	
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-WO-0003_0023.dwg	
DRAWING NO.:		01SS-EL-WO-0003	
SHEET 0023 OF 28		PAGE 42 / 76	



- 51a/TR1-6 TRIP CIRCUIT DEVICE 94
- 52a/TN1-6
- 11b/6GL GREEN LIGHT
- 12b/6N1
- 63a/6LP UNUSED
- 64a/6LQ
- 67a/59a RTU BREAKER POSITION
- 68a/60a
- 73b/57b SYNC CHECK RELAY
- 74b/58b
- 81a/63a TT1 AND TT2
- 82a/64a PARALLELING
- 83b/65b CIRCUIT
- 84b/66b



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL					ENG. STAMP	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE		
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NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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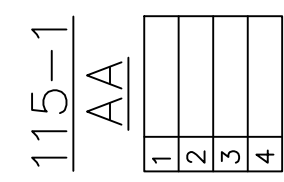
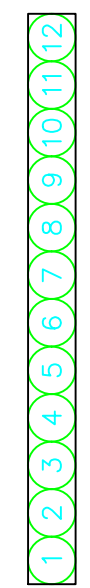


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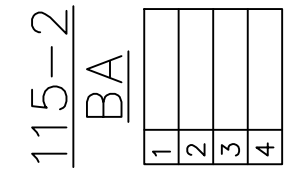
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CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-EL-WO-0003
DRAWING NO.: 01SS-EL-WO-0003	SHEET 0024 OF 28 PAGE 43 / 76

- NOTES:
- CONTROL/RACK PANEL NUMBER (RP)
 - TERMINAL BLOCKS IN THE CONTROL PANELS
 - TERMINAL WIRE AS REQUIRED TO PROVIDE BREAKER CONTROL AND PROTECTION USING M&P
 - SPARE TERMINAL BLOCKS (SP)

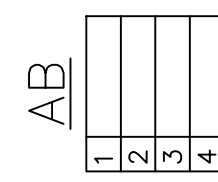
MARSHALLING PANEL 1 LEFT



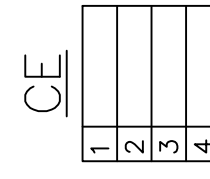
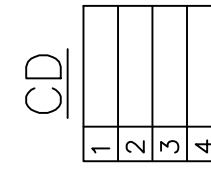
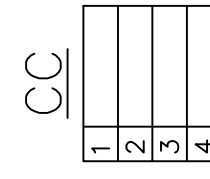
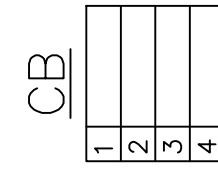
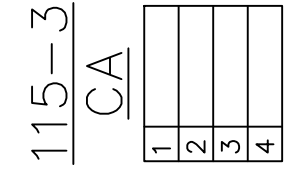
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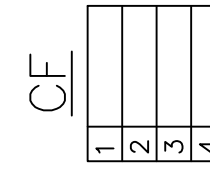
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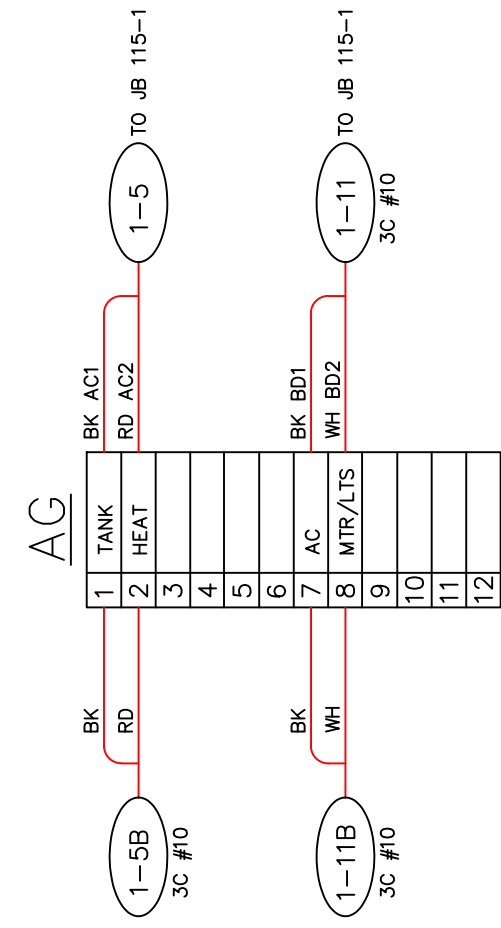
CT3



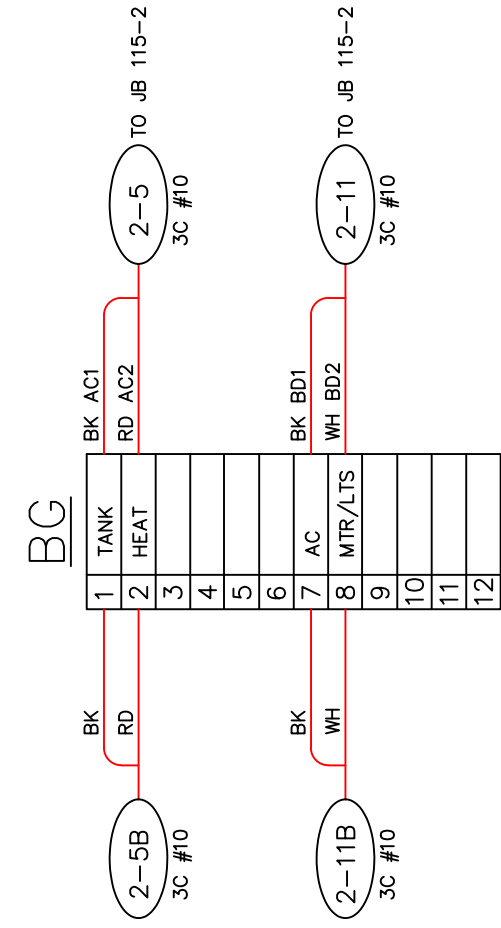
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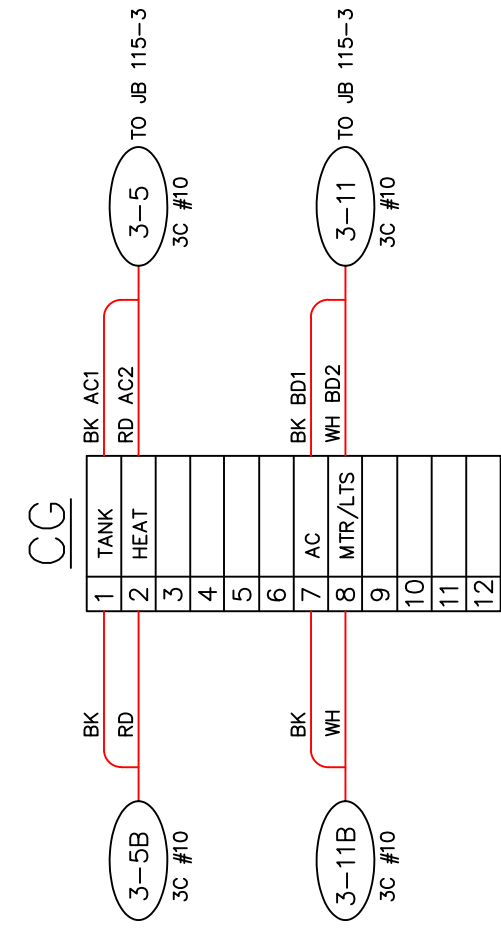
CT6



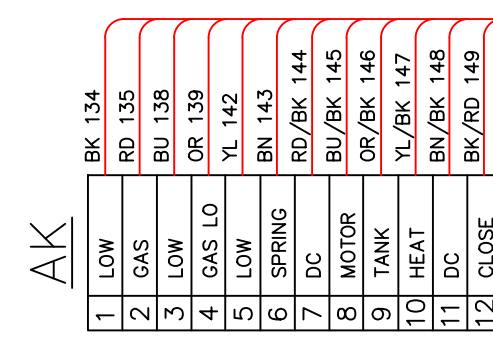
AC/DC SOURCE



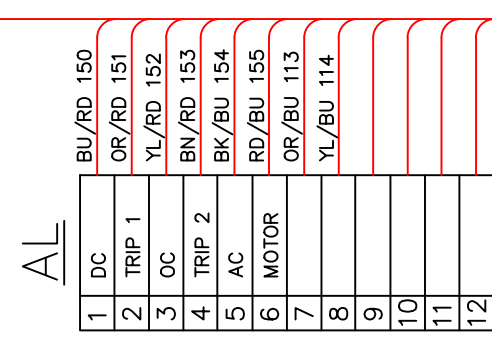
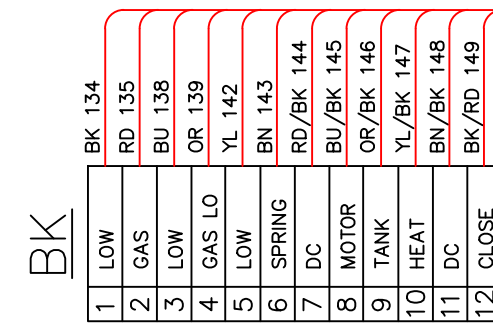
CONTROL AND 52A



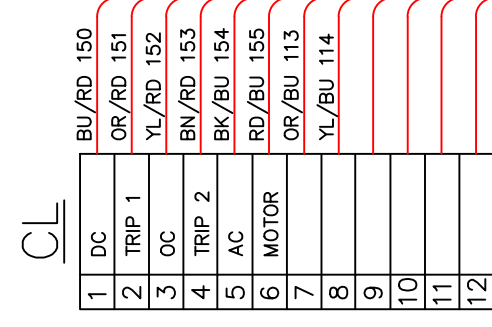
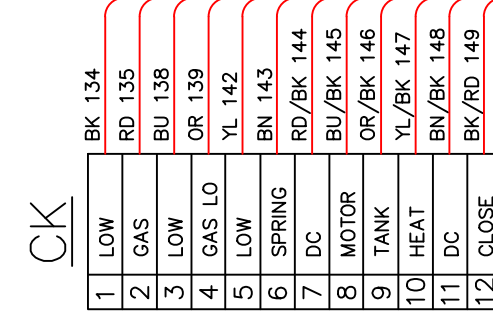
52A



ALARMS



ALARMS



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P. #	W.O. NUMBER	RECORD APPROVED	DATE
1						

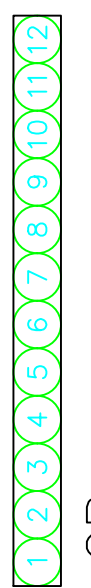


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Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM MARSHALLING PANEL WIRING DIAGRAM 1 - LEFT SIDE	
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.: 01SS-EL-WO-0003	
SHEET 0026 OF 28 PAGE 44 / 76	

MARSHALLING PANEL 1 RIGHT

- NOTES:
- CONTROL/TRACK PANEL NUMBER (RP) LABELLED BY CONTRACTOR (TR#) MUST BE LABELED BY CONTRACTOR (TR#)
 - TERMINAL WIRES AS REQUIRED TO PROVIDE IDENTIFICATION TO THE FIELD SHALL BE IDENTIFIED BY MARKING SCHEMATIC DRAWINGS (SP) REFERENCE.
 - SPARE TERMINAL BLOCKS (SP)



GB (GROUND BUS)

115-4

DA	1	2	3	4
----	---	---	---	---

CT1

DB	1	2	3	4
----	---	---	---	---

CT2

DC	1	2	3	4
----	---	---	---	---

CT3

DD	1	2	3	4
----	---	---	---	---

CT4

DE	1	2	3	4
----	---	---	---	---

CT5

DF	1	2	3	4
----	---	---	---	---

CT6

115-6

FA	1	2	3	4
----	---	---	---	---

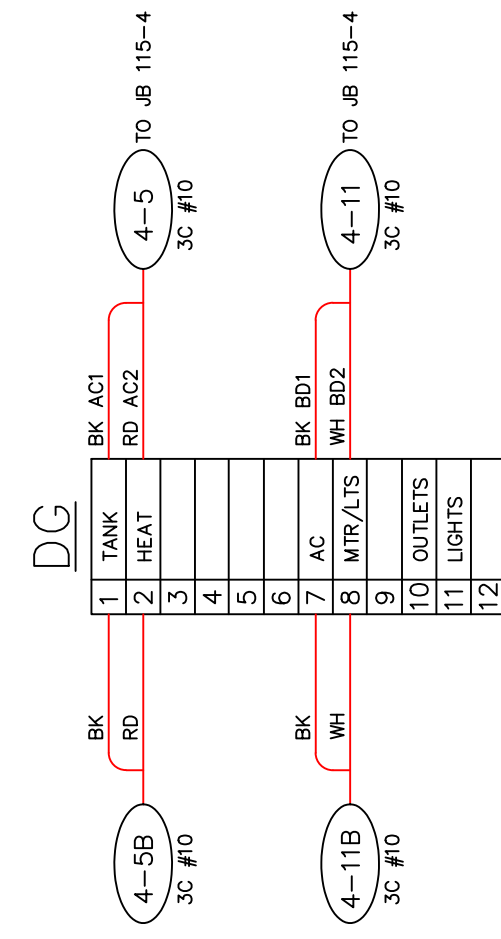
FB	1	2	3	4
----	---	---	---	---

FC	1	2	3	4
----	---	---	---	---

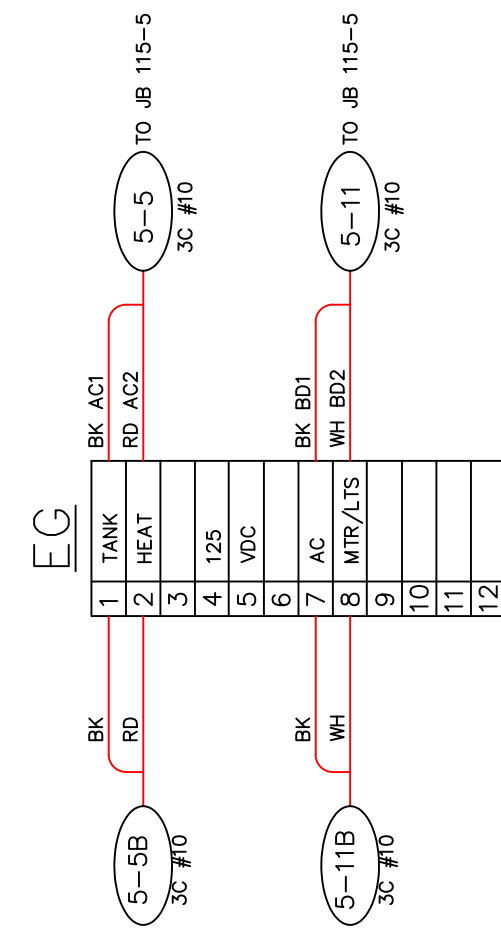
FD	1	2	3	4
----	---	---	---	---

FE	1	2	3	4
----	---	---	---	---

FF	1	2	3	4
----	---	---	---	---



AC/DC SOURCE



DH	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----

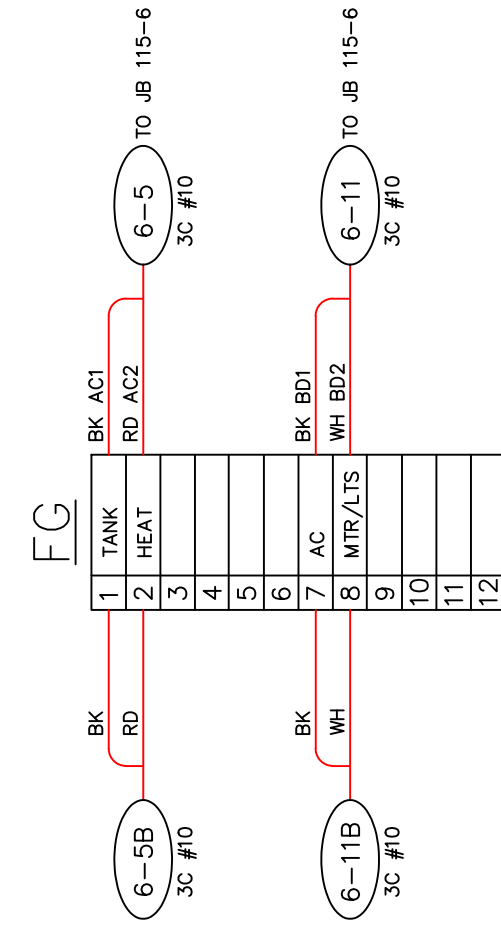
CONTROL AND 52A

EH	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----

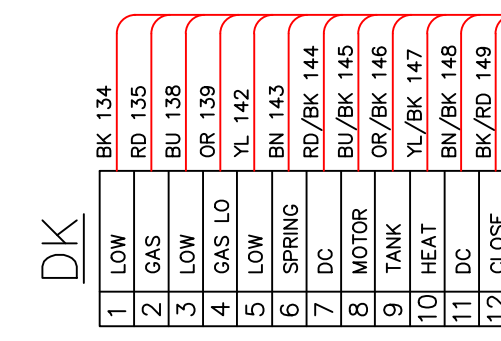
DJ	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----

52A

FJ	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----

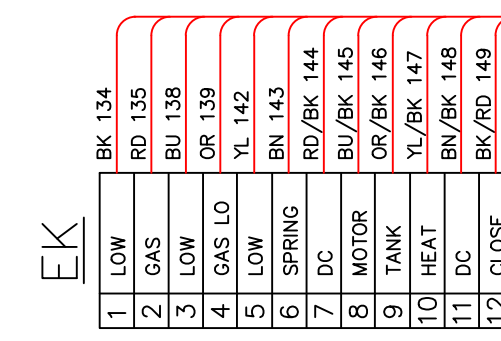


FH	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----

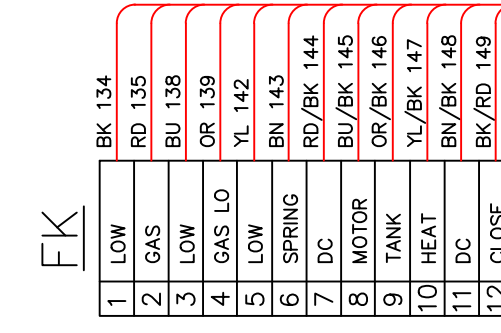


DL	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----

ALARMS



EL	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----



FL	1	2	3	4	5	6	7	8	9	10	11	12
----	---	---	---	---	---	---	---	---	---	----	----	----

ALARMS

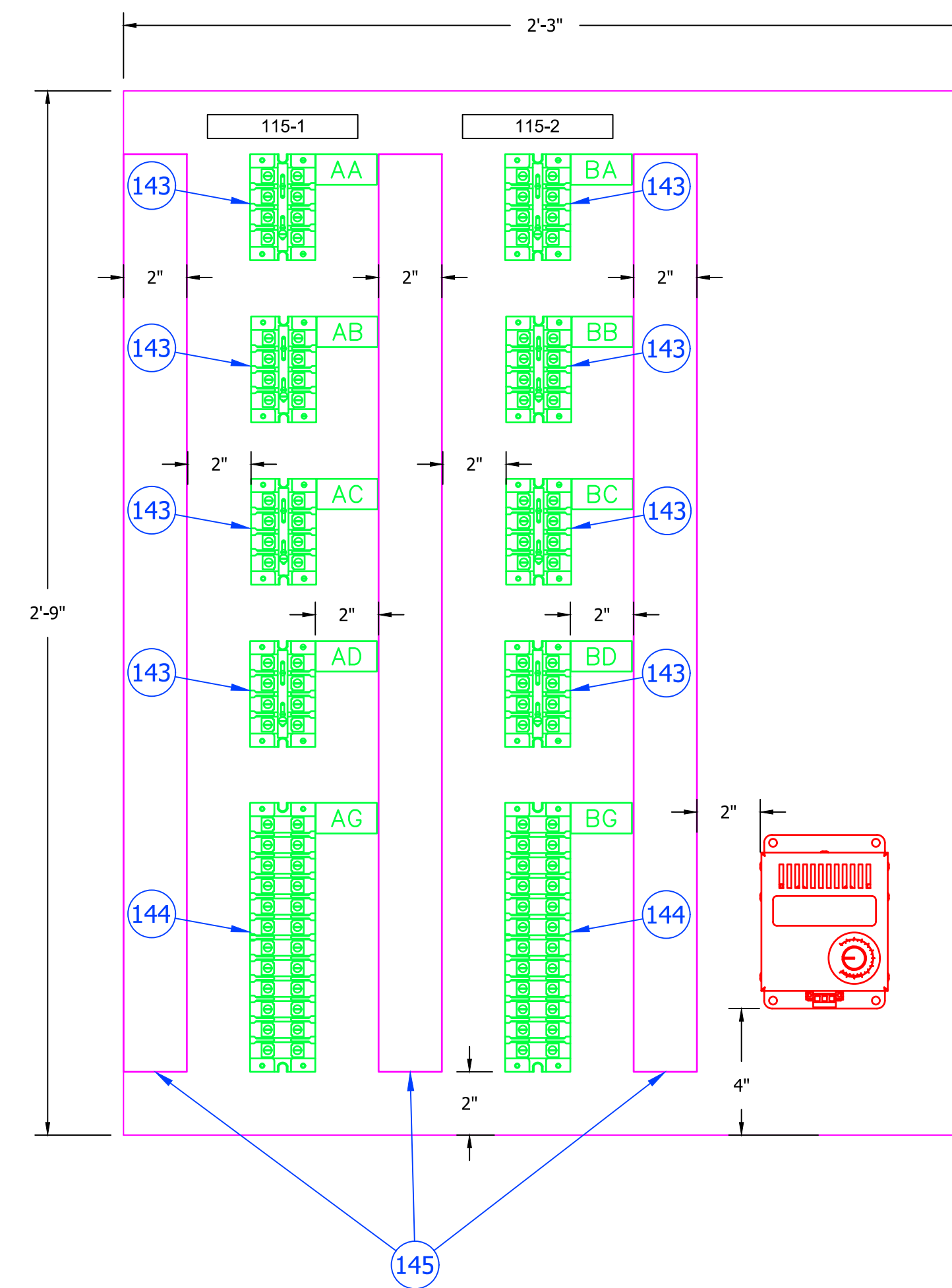
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - OUTSIDE WIRING DIAGRAM MARSHALLING PANEL WIRING DIAGRAM 2- RIGHT SIDE	
CONFIDENTIAL		01SS-EL-WO-0003_0027.dwg	
DRAWING NO. - PREVIOUS/REFERENCE			
DRAWING NO.:		01SS-EL-WO-0003	
SHEET 0027 OF 28		PAGE 45 / 76	



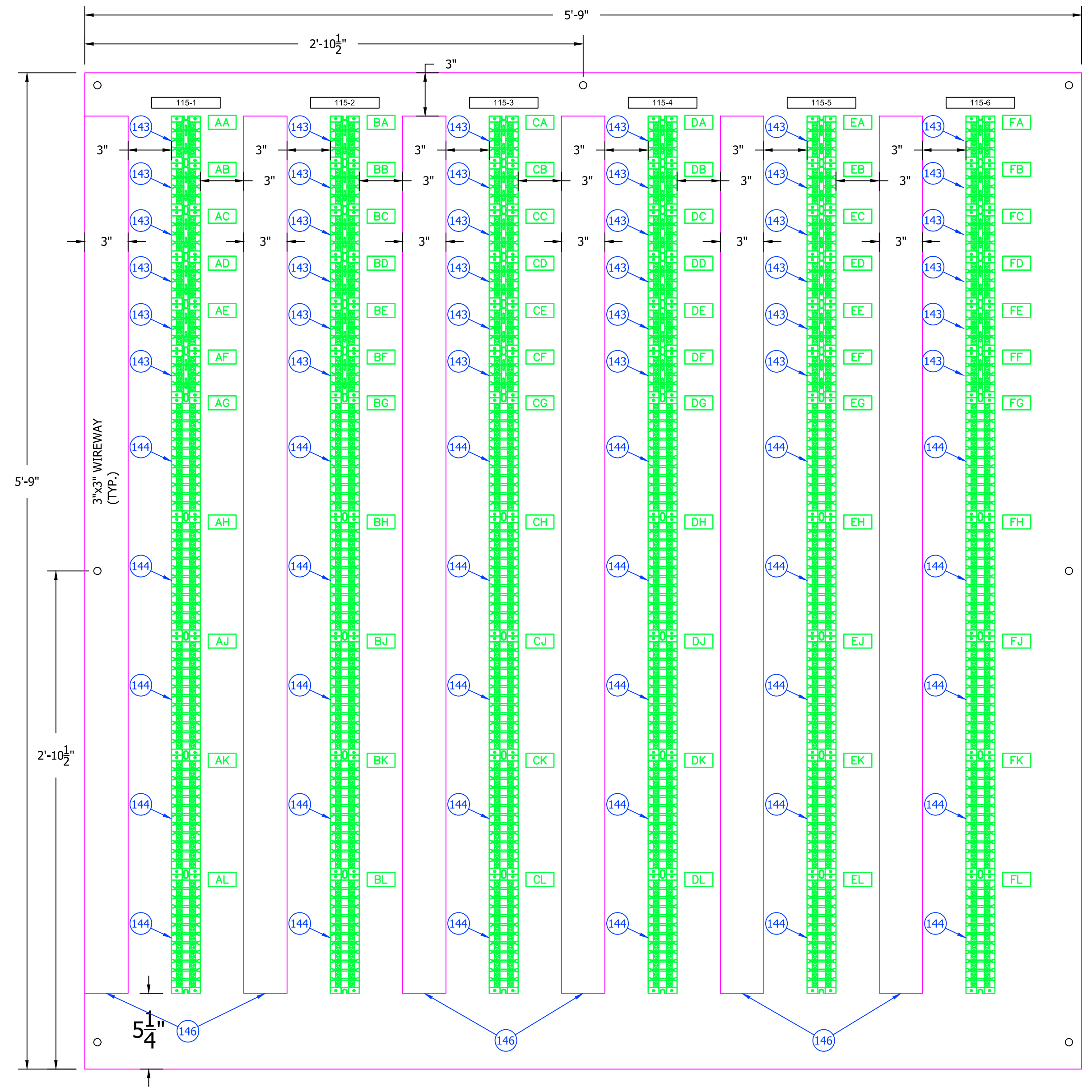
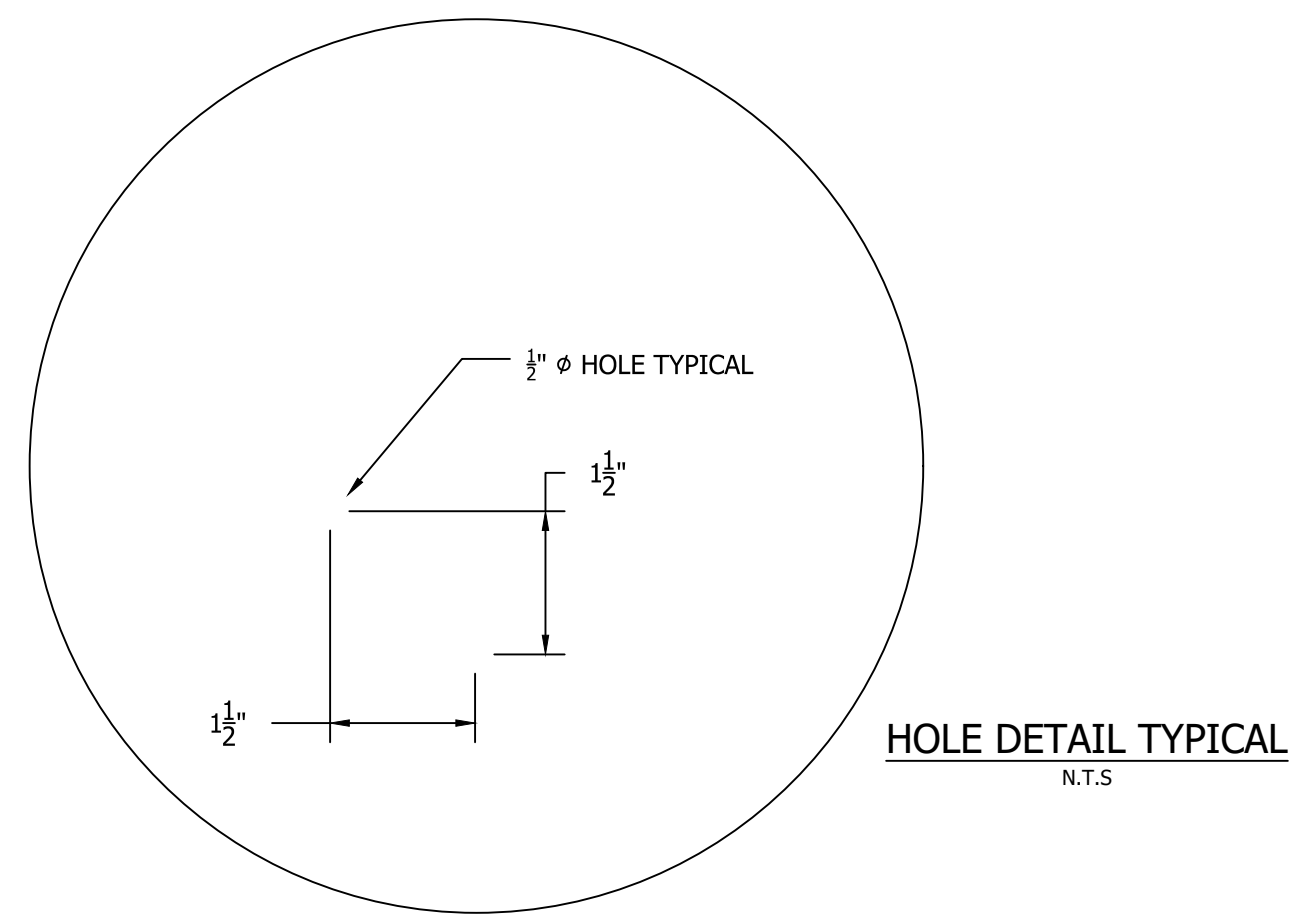
- NOTES:**
1. DRILL MOUNTING HOLES AND PROVIDE ALL MOUNTING HARDWARE FOR THE TERMINAL BLOCKS.
 2. MOUNT TERMINAL BLOCKS WITH #10 STAINLESS SCREWS TAPPED INTO THE ALUMINUM AS SHOWN.
 3. INSTALL LIGHT GREY PVC FLUSH COVER WIDE SLOT WIDE FINGER PANDUIT WIRING DUCT G2X3LG6. INSTALL AS SHOWN.
 4. INSTALL HOFFMAN HEATER WHERE SHOWN.

NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD SUBSTATION ELECTRICAL EQUIPMENT JUNCTION CABINET BACK PLANE	
CONFIDENTIAL		01SS-EL-WO-0003_002B.dwg	
DRAWING NO. - PREVIOUS/REFERENCE			
DRAWING NO.:		01SS-EL-WO-0003	
SHEET 002B OF 28		PAGE 46 / 76	

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073							
ENG./DESIGN.: J. MOE/A. MITCHELL												
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		1						

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Anchorage, Alaska 99519-6300



- NOTES:
1. BACK PLANE SHOULD BE 1/4" THICK ALUMINUM 5'-9"
 2. DRILL MOUNTING HOLES AND PROVIDE ALL MOUNTING HARDWARE FOR MOUNTING THE PANEL AND THE TERMINAL BLOCKS
 3. MOUNT TERMINAL BLOCKS WITH #10 STAINLESS SCREWS TAPPED INTO THE ALUMINUM AS SHOWN
 4. INSTALL LIGHT GREY PVC FLUSH COVER WIDE SLOTS WIDE FINGER PANDUIT WIRING DUCT G3X3LG6. INSTALL AS SHOWN
 5. CUT AN OVAL HOLE IN THE BOTTOM OF THE MARSHALLING PANEL FOR EASY ENTRANCE OF CABLES VIA THE BOTTOM. INSTALL RUBBER EDGE TRIM AROUND THE OPENING TO PROTECT THE CABLES FROM SHARP EDGES

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

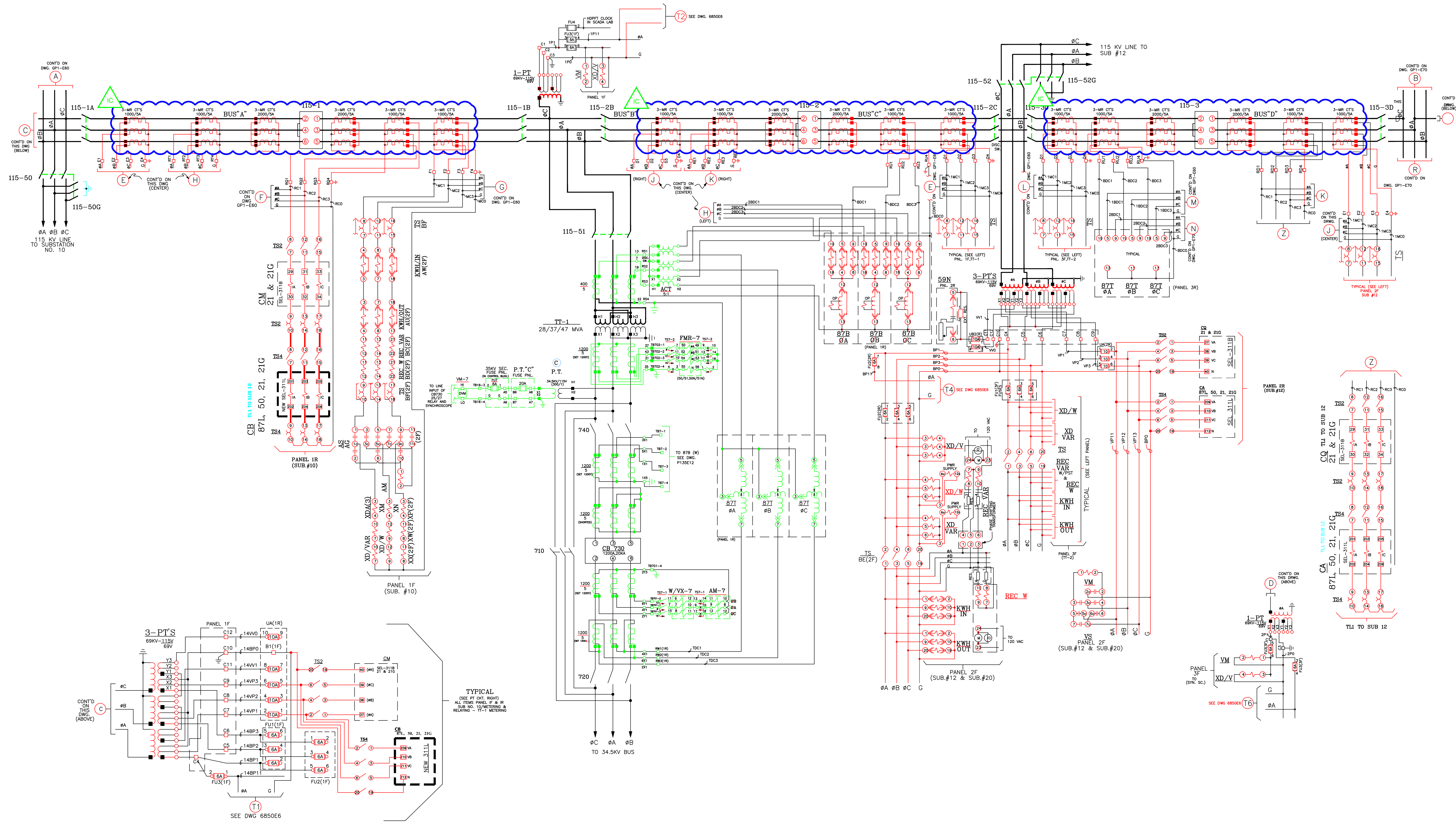
DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD EQUIPMENT MARSHALLING PANEL BACK PLANE

CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE: 01SS-EL-WO-0003

DRAWING NO.: 01SS-EL-WO-0003

SHEET 0025 OF 28
PAGE 47 / 76



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
			W.O. # P1700073	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

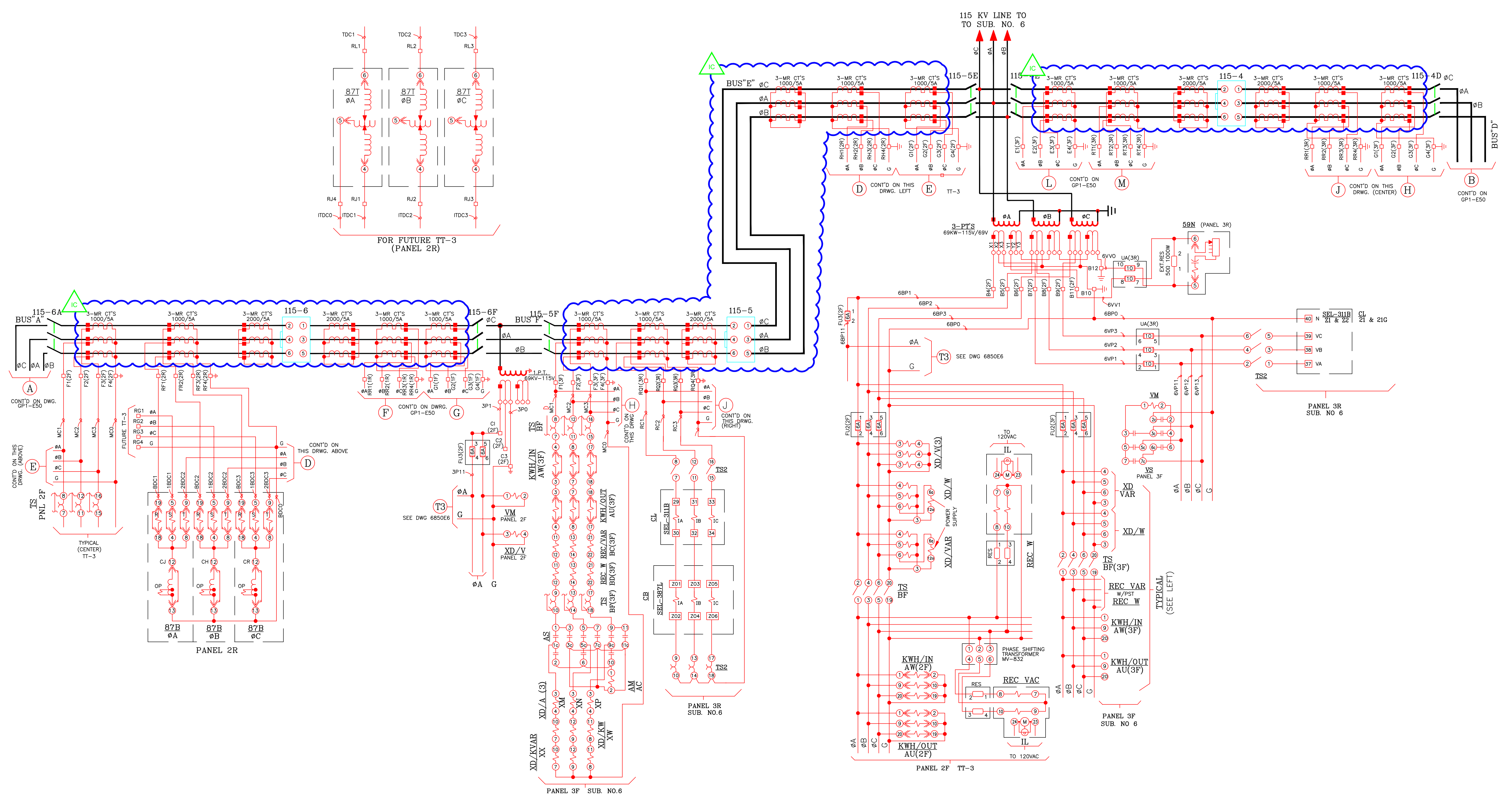
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/08/21



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Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - THREE LINE DIAGRAMS BREAKER 115-1, 115-2, AND 115-3 EXISTING - PROPOSED	
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-TL-0001	
DRAWING NO.:		01SS-EL-TL-0001	
SHEET		0001 OF 7	
PAGE		48 / 76	

01SS-EL-TL-0001_0001_2-1.dwg



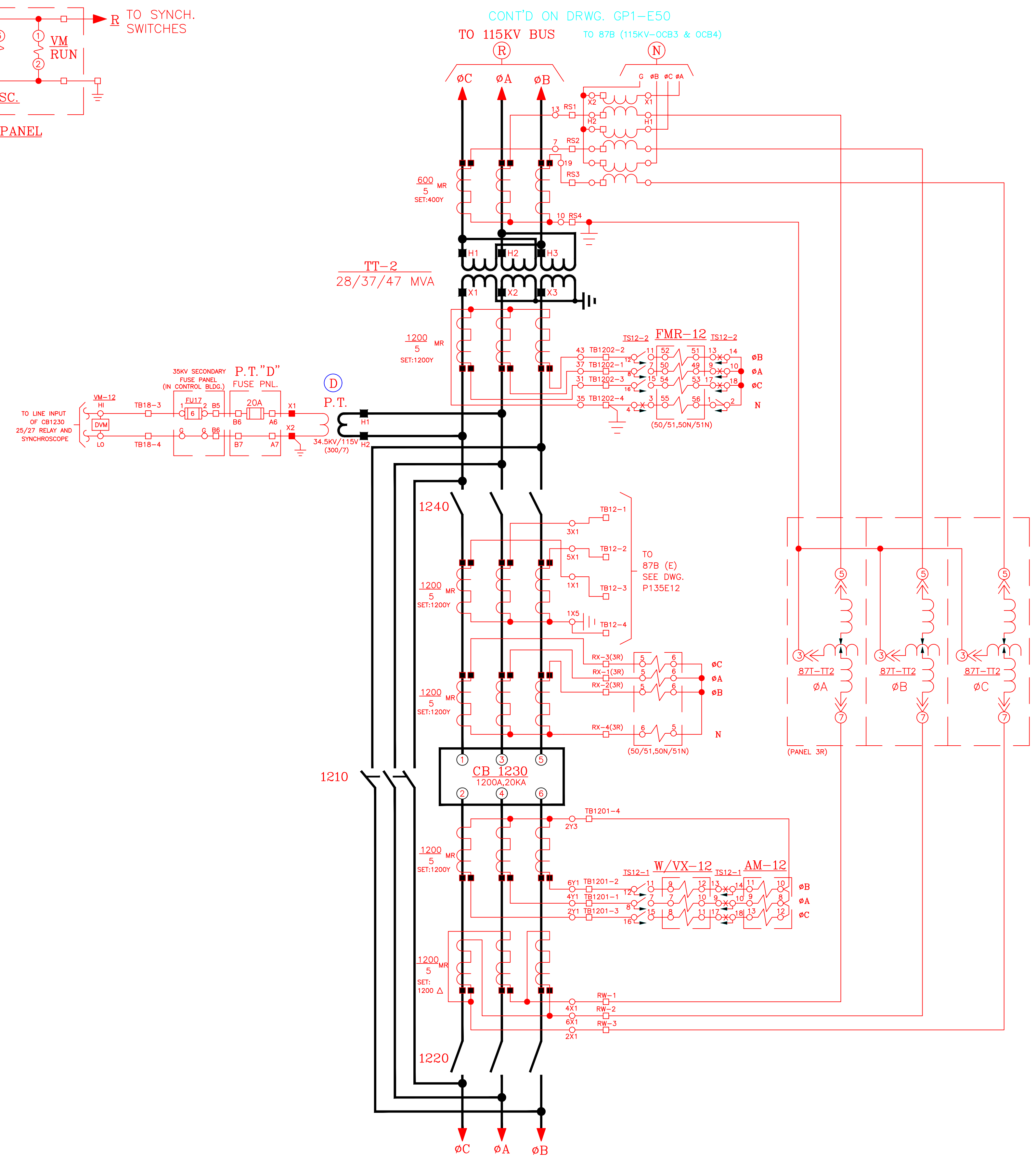
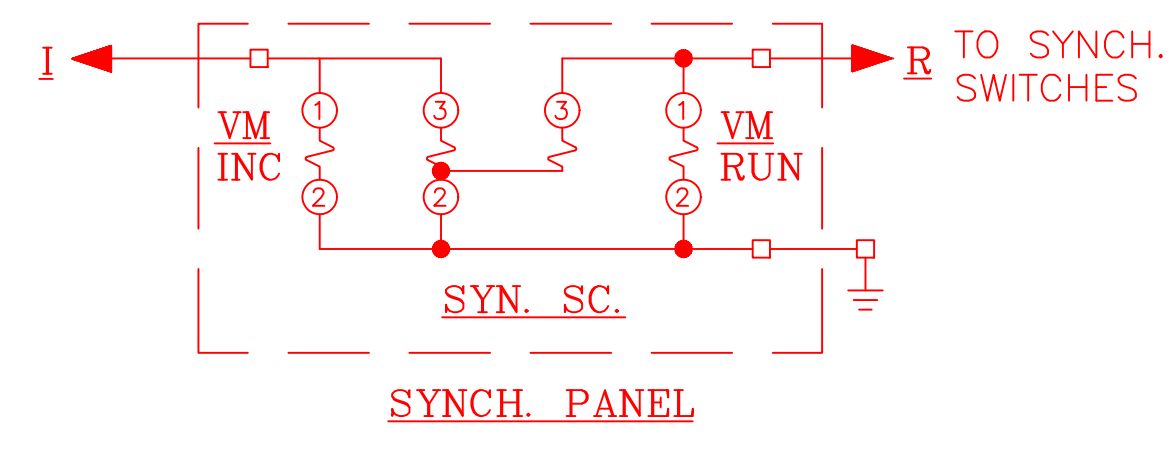
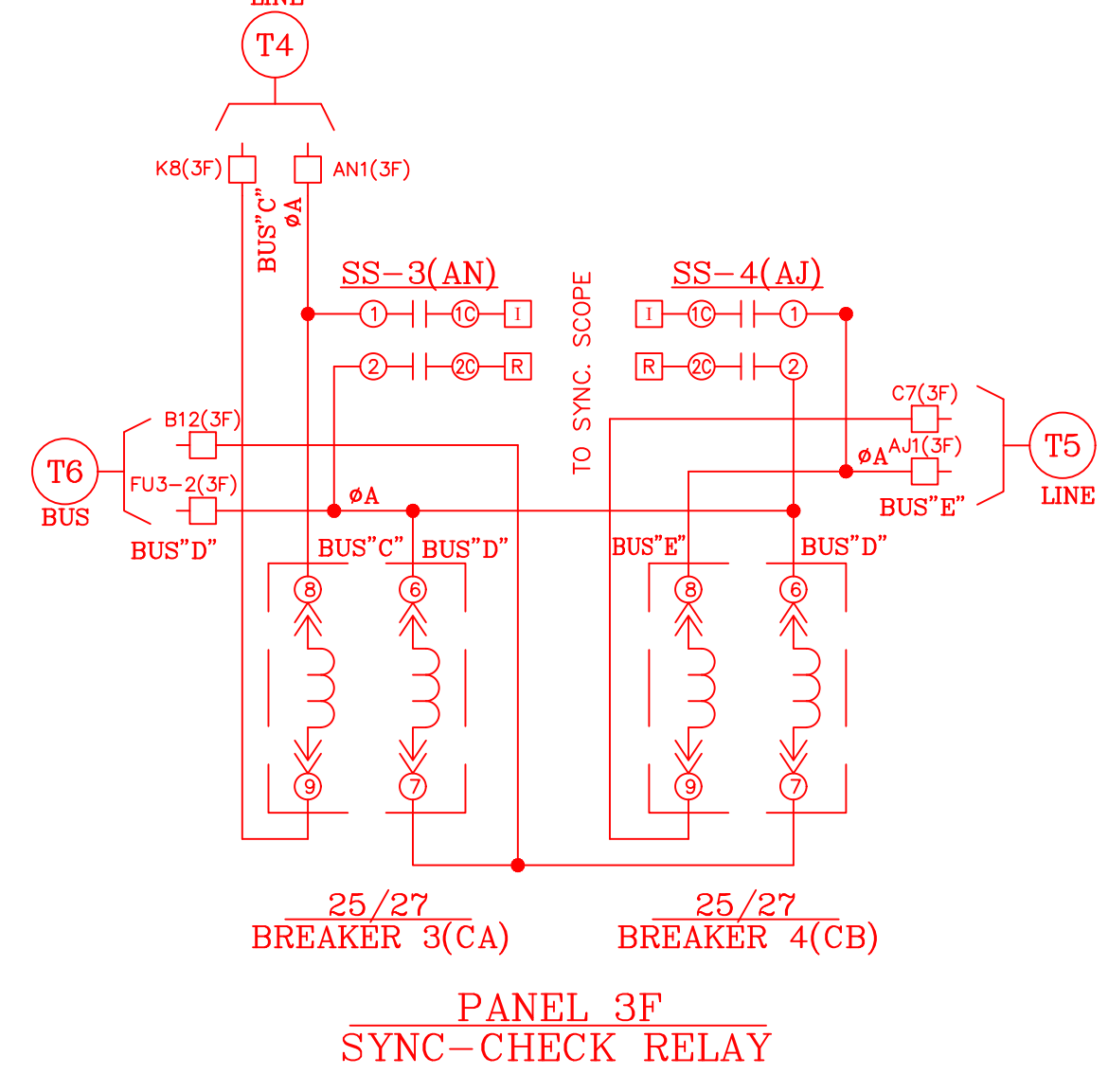
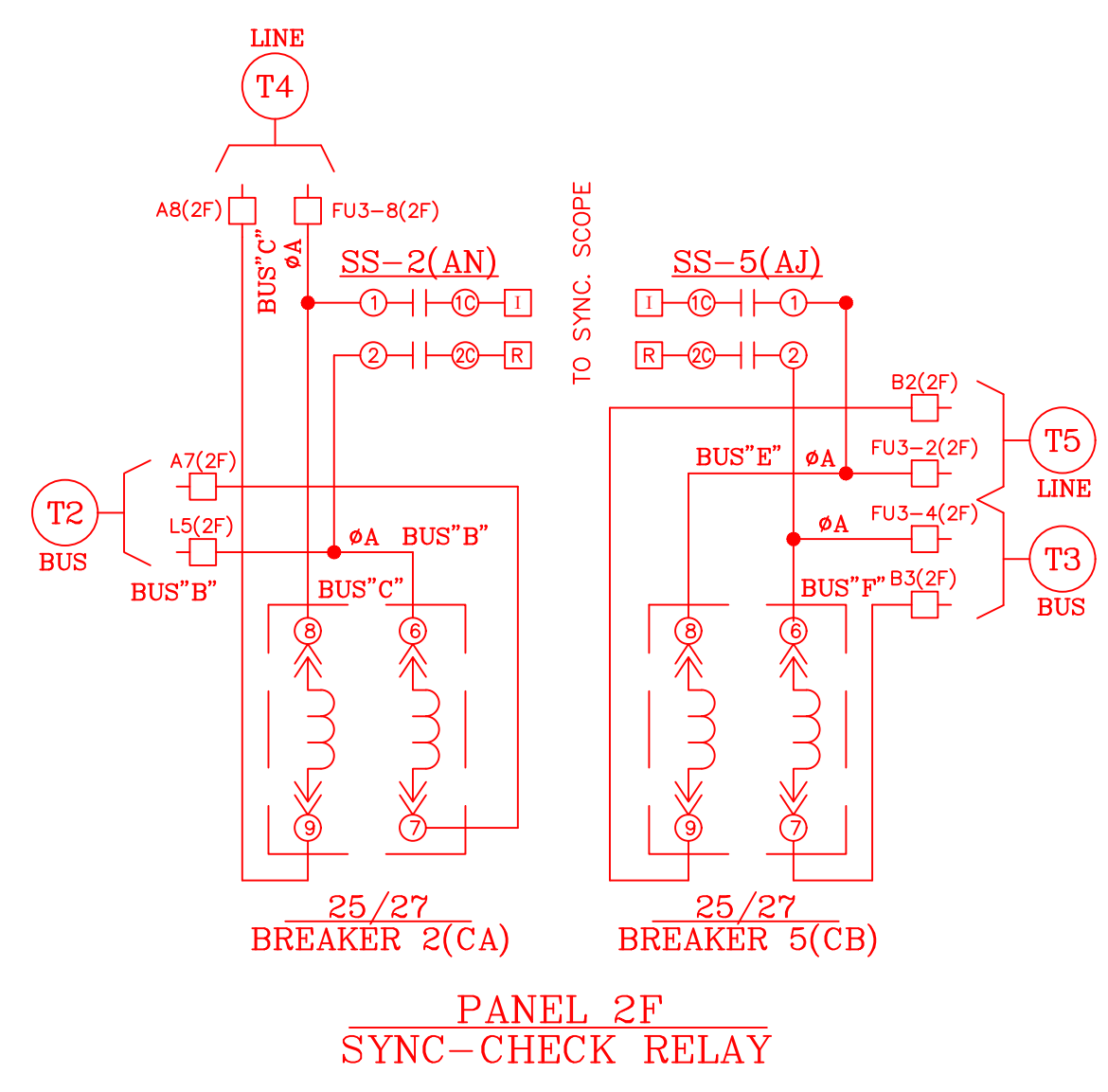
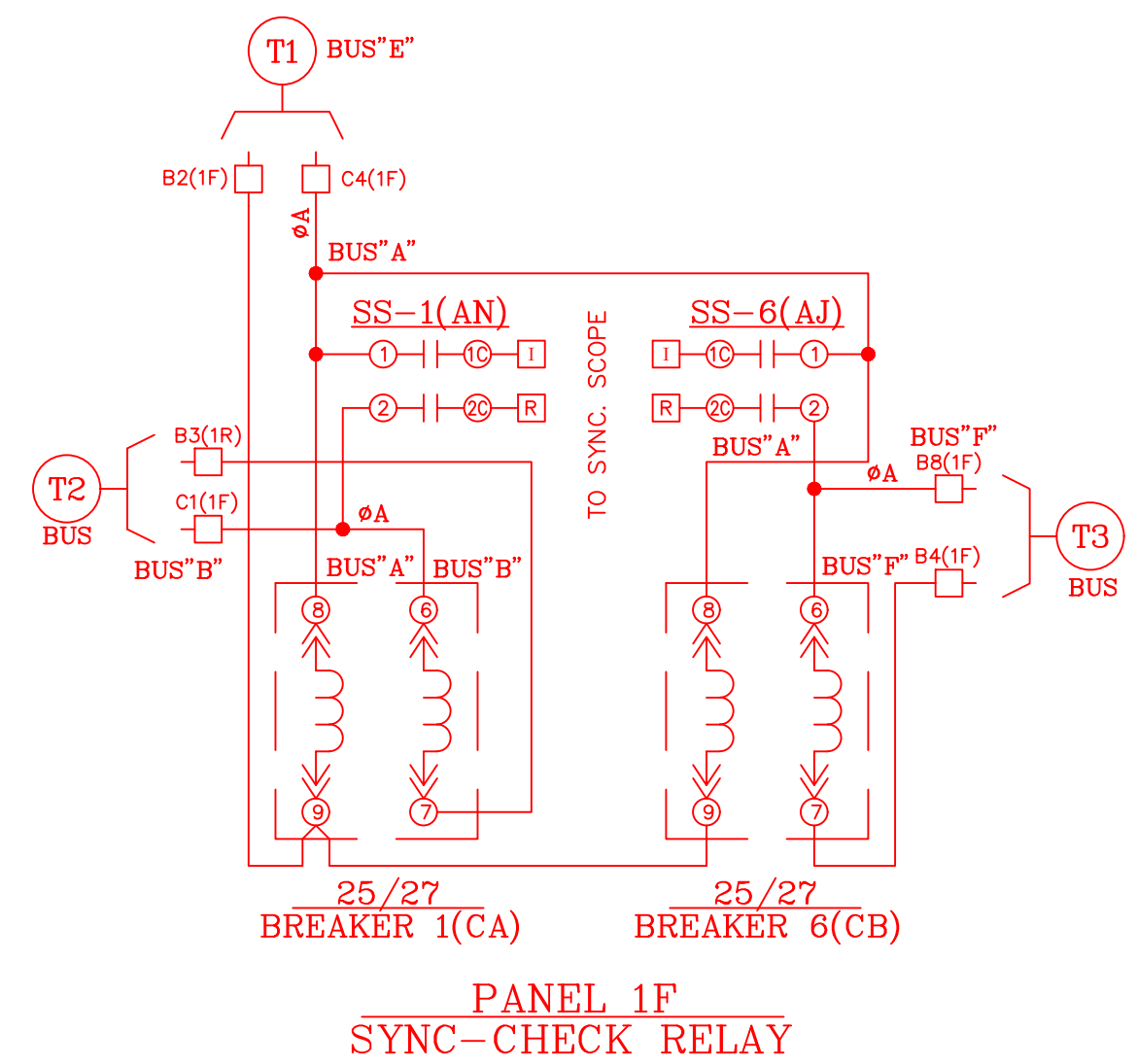
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD BREAKER 115-4, 115-5, AND 115-6 EXISTING - PROPOSED	
CONFIDENTIAL		01SS-EL-TL-0001_0002_2-1.dwg	
DRAWING NO. - PREVIOUS/REFERENCE		GPIE60, PPP-3-2687-8	
DRAWING NO.:		01SS-EL-TL-0001	
SHEET 0002 OF 7		PAGE 49 / 76	



ISSUED FOR REFERENCE ONLY
- DO NOT EDIT -

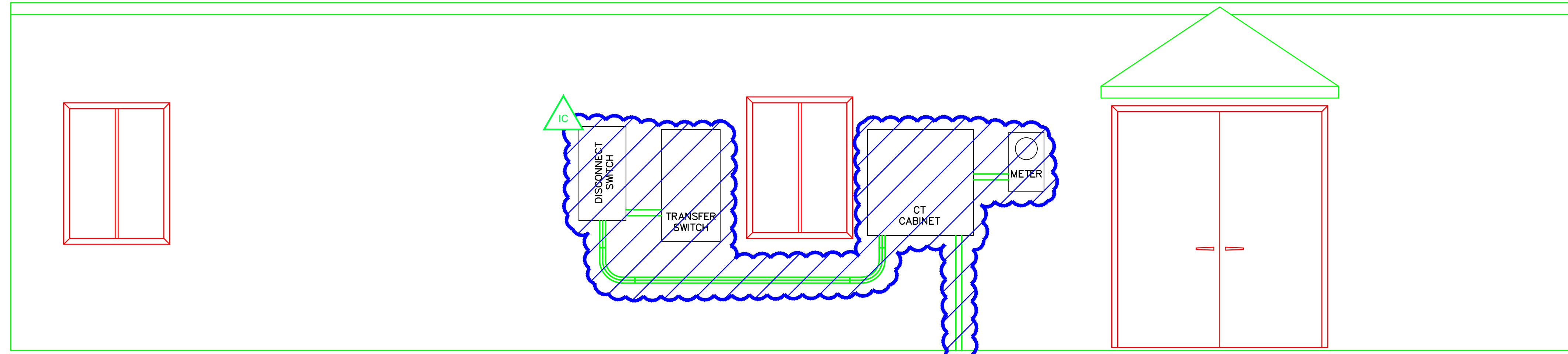
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/08/21

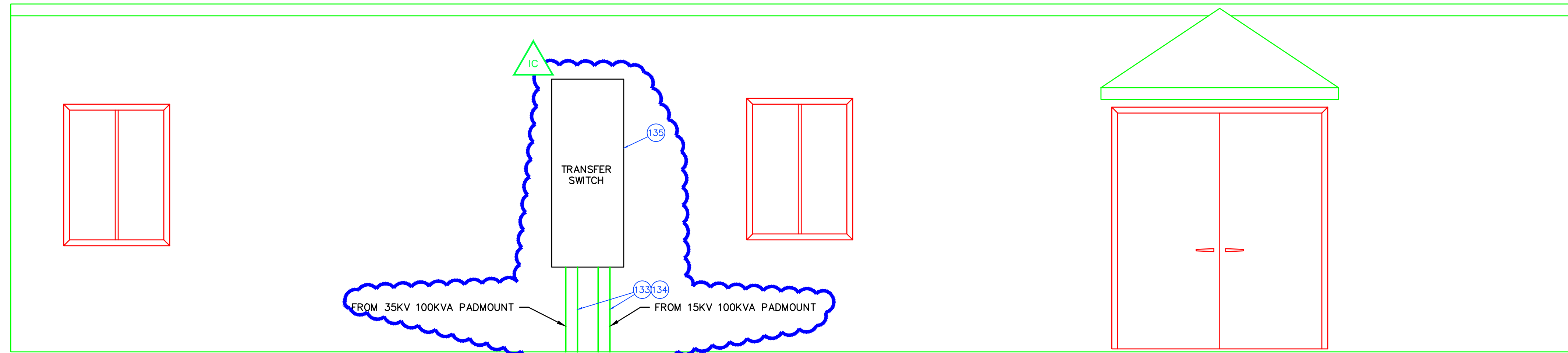


Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD ELECTRICAL - THREE LINE DIAGRAMS TT-2	
CONFIDENTIAL	01SS-EL-TL-0001_0003_2-1.dwg
DRAWING NO. - PREVIOUS/REFERENCE GP1E70, PPP-3-2687-10	SHEET 0003 OF 7
DRAWING NO.: 01SS-EL-TL-0001	PAGE 50 / 76



1
ELEVATION
 EXISTING CONTROL ENCLOSURE - OUTSIDE ELEVATION - LOOKING NORTH
 SCALE: 1/2"=1'-0"



2
ELEVATION
 PROPOSED CONTROL ENCLOSURE - OUTSIDE ELEVATION - LOOKING NORTH
 SCALE: 1/2"=1'-0"

NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						


CHUGACH
 POWERING ALASKA'S FUTURE
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 Anchorage, Alaska 99519-6300

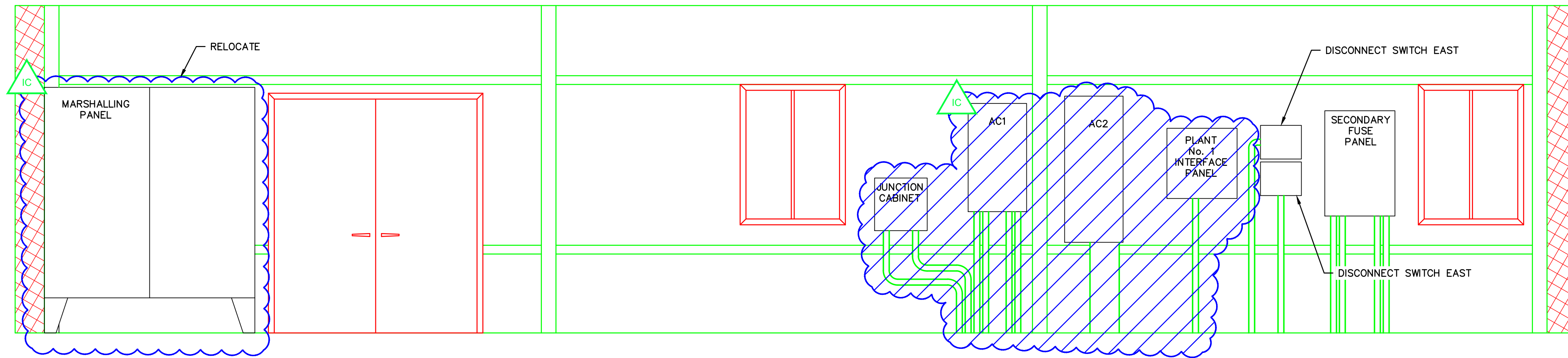
DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL SWITCHYARD BUILDING OUTSIDE NORTH WALL ELEVATION**

CONFIDENTIAL

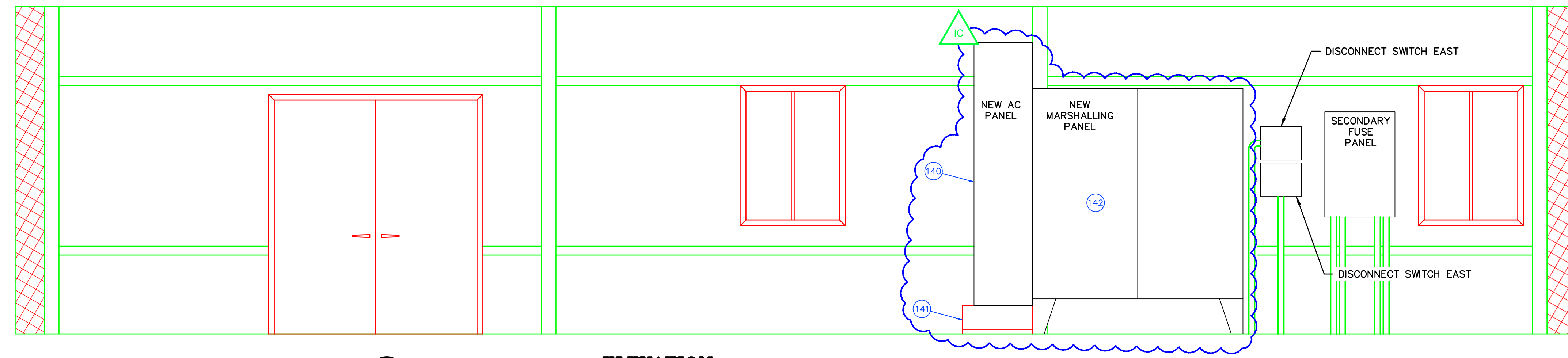
DRAWING NO. - PREVIOUS/REFERENCE: 01SS-SS-0020

DRAWING NO.: **01SS-SS-0020**

SHEET **0001** OF **8**
 PAGE **51** / **76**



1
ELEVATION
 EXISTING CONTROL ENCLOSURE - INSIDE ELEVATION - LOOKING NORTH
 SCALE: 1/2"=1'-0"



2
ELEVATION
 PROPOSED CONTROL ENCLOSURE - INSIDE ELEVATION - LOOKING NORTH
 SCALE: 1/2"=1'-0"

NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						


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 Chugach Electric Association, Inc.
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 Anchorage, Alaska 99519-6300

DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL SWITCHYARD BUILDING INSIDE NORTH WALL ELEVATION**

CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE: 01SS-SS-0020

DRAWING NO.: **01SS-SS-0020**

SHEET **0002** OF **8**
 PAGE **52** / **76**

GENERAL NOTE:

MUCH OF THE SOIL IN THE VICINITY OF THIS PROJECT IS EITHER KNOWN TO BE CONTAMINATED WITH PCB'S (OUTSIDE THE SUBSTATION FENCE) OR IS ANTICIPATED TO BE CONTAMINATED WITH PCB'S (INSIDE THE SUBSTATION FENCE). TESTING WILL BE CONDUCTED PRIOR TO THE START OF THE PROJECT AND DURING THE PROJECT TO DETERMINE IF ANY OF THE SOIL EXCAVATED DURING THIS PROJECT CAN BE PLACED BACK IN THE TRENCHES. ANY SOIL EXCAVATED WILL BE PLACED IN CHUGACH PROVIDED BINS AND IF DETERMINED TO BE CONTAMINATED WILL BE DISPOSED OF BY CHUGACH ELECTRIC, AND IF DETERMINED TO BE NON-CONTAMINATED WILL BE PLACED BACK IN THE TRENCH BY THE CONTRACTOR. CHUGACH ELECTRIC IS RESPONSIBLE FOR THE TESTING. ANY ADDITIONAL BACKFILL REQUIRED FOR THIS PROJECT WILL BE PROVIDED BY THE CONTRACTOR AT THE CONTRACTED PRICE. TRENCH DEPTH WILL BE MINIMIZED IF WATER IS ENCOUNTERED.

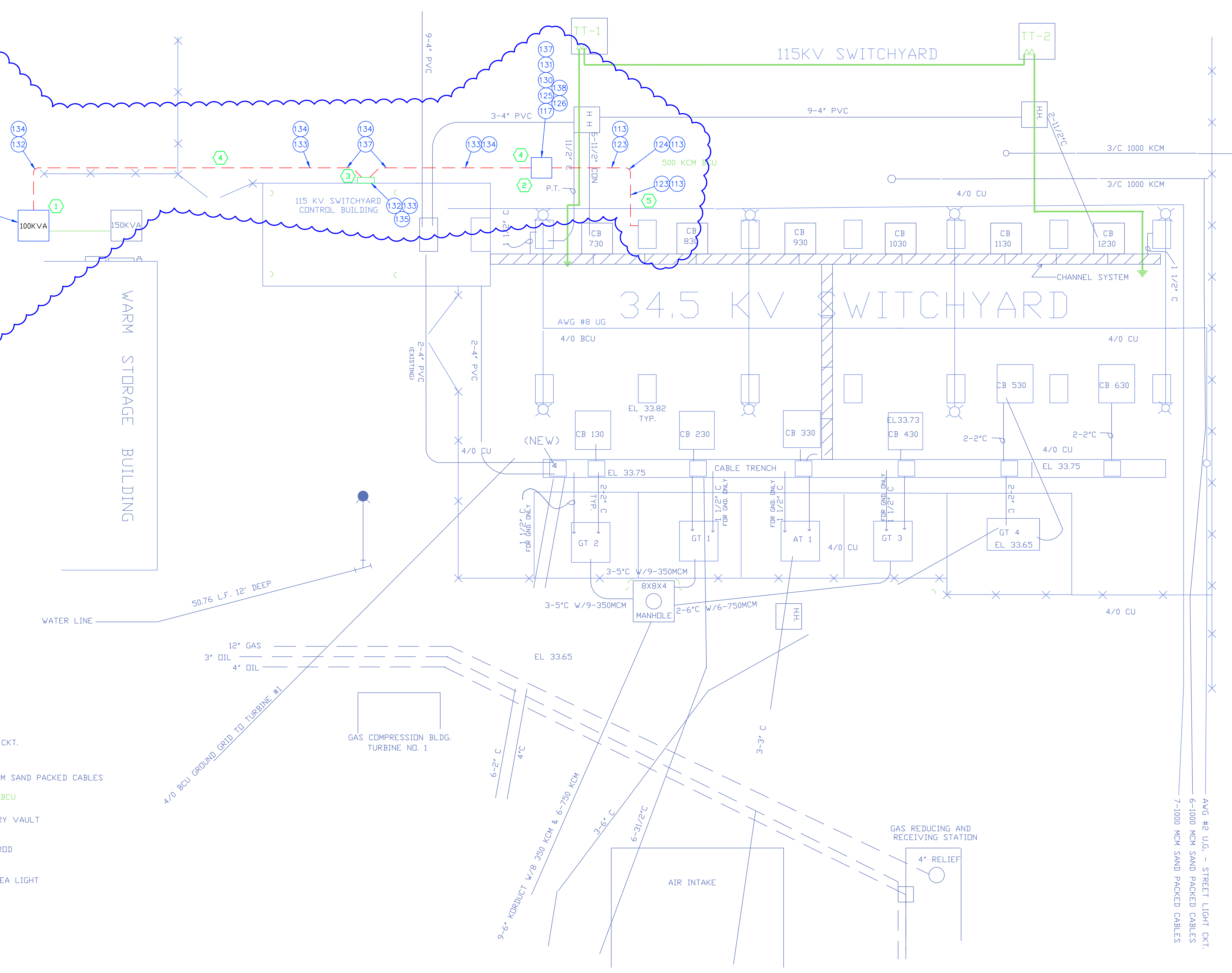
CONSTRUCTION NOTES:

1. INSTALL NEW SINGLE PHASE 100KVA 12470GRDY/7200 V X 120/240V PADMOUNT TRANSFORMER ON EXISTING CONCRETE BASE NORTH OF THE WARM STORAGE BUILDING.
2. INSTALL NEW SINGLE PHASE 100KVA 34500GRDY/19920 V X 120/240V PADMOUNT TRANSFORMER ON NEW 4'X4' CONCRETE BASE NORTH OF BREAKER 35-730 SIMILAR TO SUM1 AND SUG7-100.
3. INSTALL NEW DOUBLE THROW SAFETY SWITCH ON THE NORTH SIDE EXTERIOR OF THE SWITCHGEAR BUILDING.
4. TRENCH 18" DEEP AND INSTALL NEW 4" RIGID STEEL CONDUIT BETWEEN THE NEW PADMOUNT TRANSFORMERS AND THE NEW DOUBLE THROW SAFETY SWITCH. PULL NEW 600V 500MCM TRIPLEX IN NEW CONDUITS AND CONNECT FOR 120/240VAC SERVICE.
5. INSTALL A SINGLE PHASE 34.5KV RISER IN 2" RIGID STEEL CONDUIT SIMILAR TO SUA1 AS SHOWN ON THE DRAWINGS. INSTEAD OF A 34.5KV CUTOUT, MOUNT A S&C MSD-1A 34.5KV FUSE HOLDER AND FUSE WITH A 50E FUSE. MOUNT THE FUSEHOLDER A MINIMUM OF 48" WEST OF THE EXISTING DISCONNECT SWITCH. USE A #2 COVERED JUMPER WIRE ON EITHER SIDE OF THE FUSEHOLDER.
6. TRENCH 42" DEEP AND EXTEND THE 2" RISER CONDUIT TO THE NEW 34.5KV 100KVA PADMOUNT IN 2" RIGID STEEL.

LEGEND

- ✕ ✕ ✕ FENCE
- CONDUIT
- LIGHTING CKT.
- 4/0 CKT
- 7-1000 KCM SAND PACKED CABLES
- 500 KCM BCU
- SECONDARY VAULT
- GROUND ROD
- 400W AREA LIGHT

SCALE: 1" = 10'-0"



PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL					
			W.O. # P1700073		
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	03/11/21



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NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

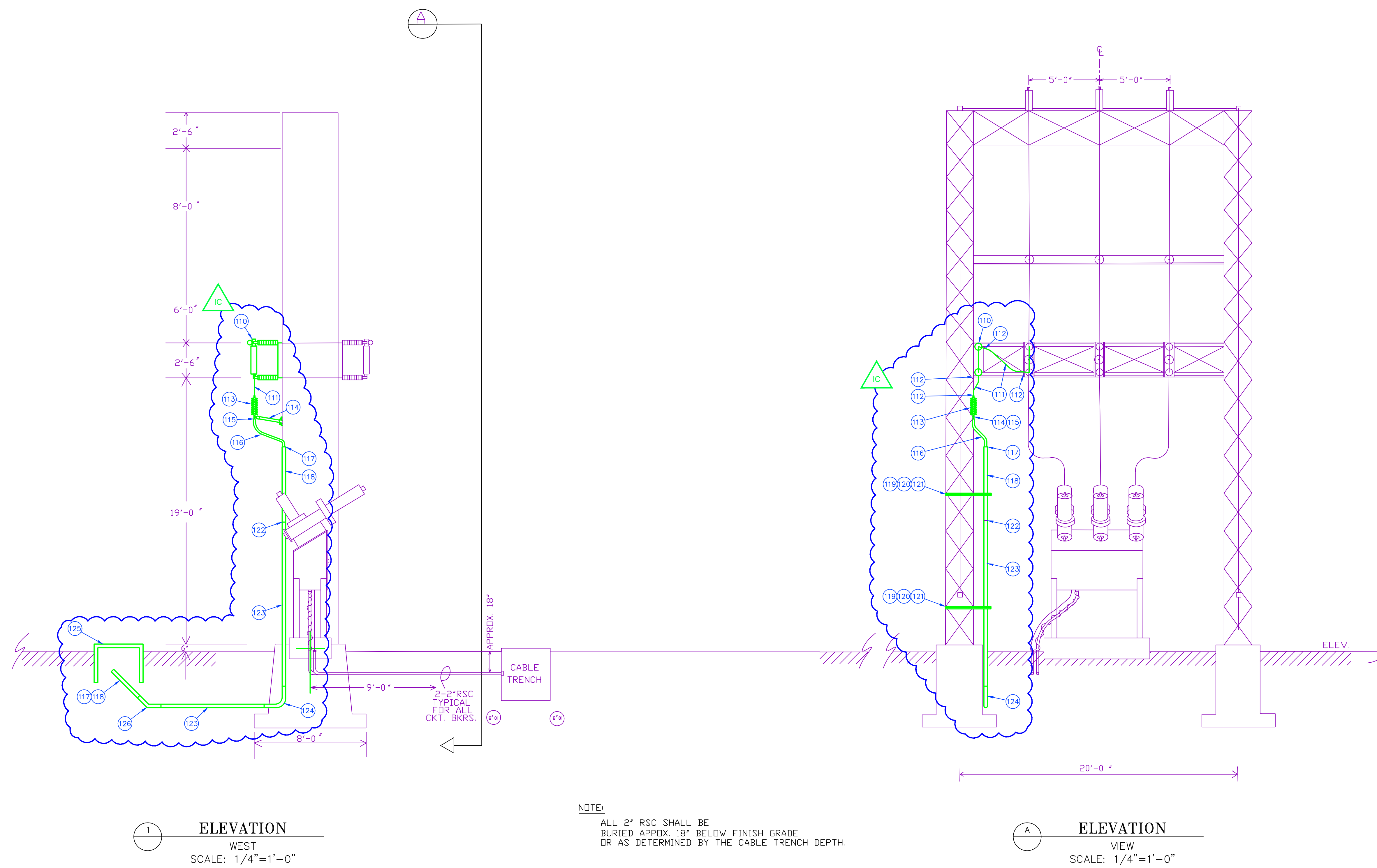
DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL STATION SERVICE - PLAN VIEW PROPOSED**

CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE: 6210E10A

DRAWING NO.: **01SS-SS-0020**

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PAGE **53** / **76**



NOTE:
 ALL 2" RSC SHALL BE
 BURIED APPROX. 18" BELOW FINISH GRADE
 OR AS DETERMINED BY THE CABLE TRENCH DEPTH.

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	03/11/21

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NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD SITE & STRUCTURAL STATION SERVICE -34.5KV FEED PROPOSED**

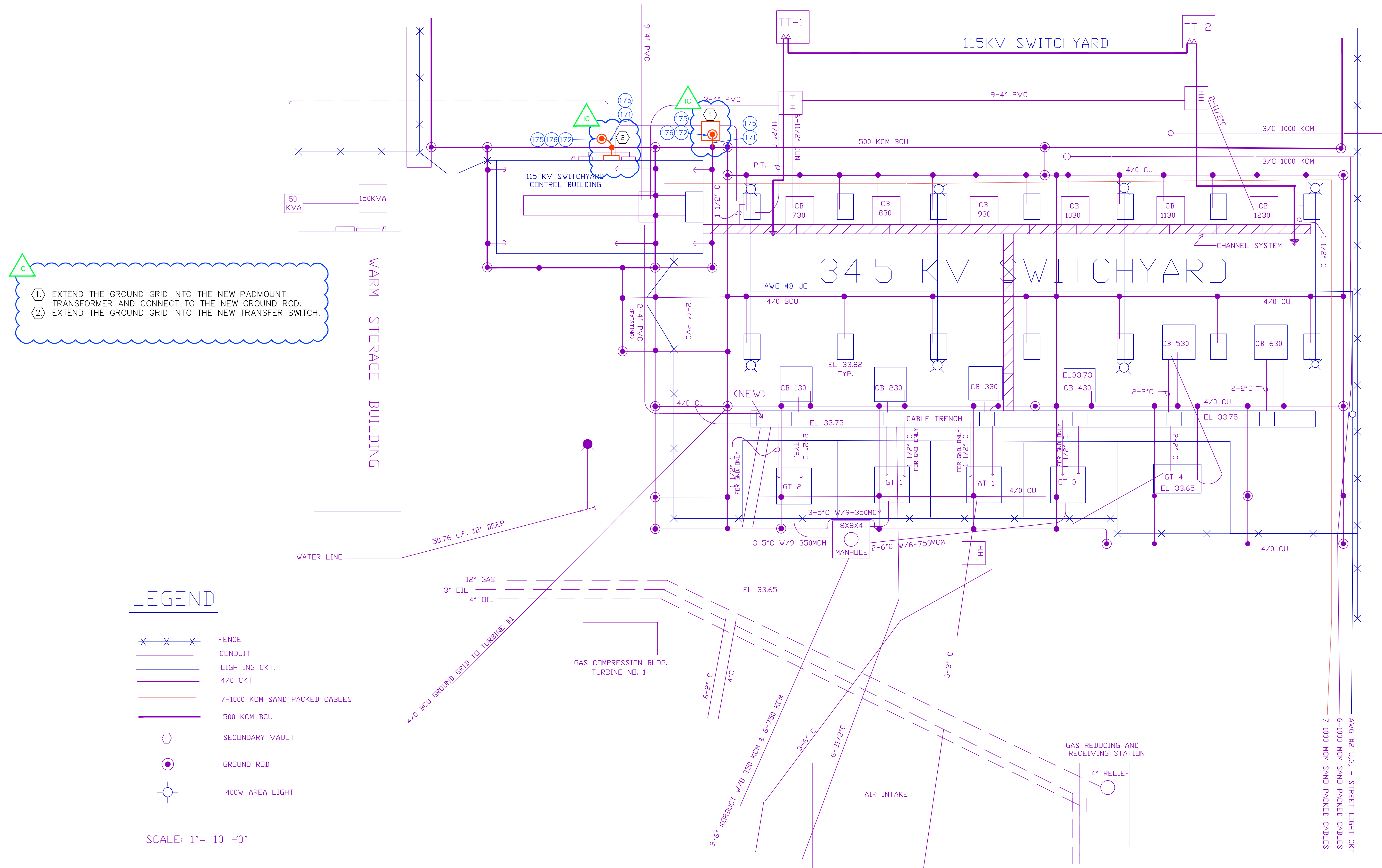
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DRAWING NO. - PREVIOUS/REFERENCE: 6210E13A

DRAWING NO.: **01SS-SS-0002**

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① EXTEND THE GROUND GRID INTO THE NEW PADMOUNT TRANSFORMER AND CONNECT TO THE NEW GROUND ROD.
 ② EXTEND THE GROUND GRID INTO THE NEW TRANSFER SWITCH.



LEGEND

- ✕ ✕ ✕ FENCE
- CONDUIT
- LIGHTING CKT.
- 4/0 CKT
- 7-1000 KCM SAND PACKED CABLES
- 500 KCM BCU
- SECONDARY VAULT
- GROUND ROD
- ⊙ 400W AREA LIGHT

SCALE: 1" = 10' - 0"

NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	03/11/21



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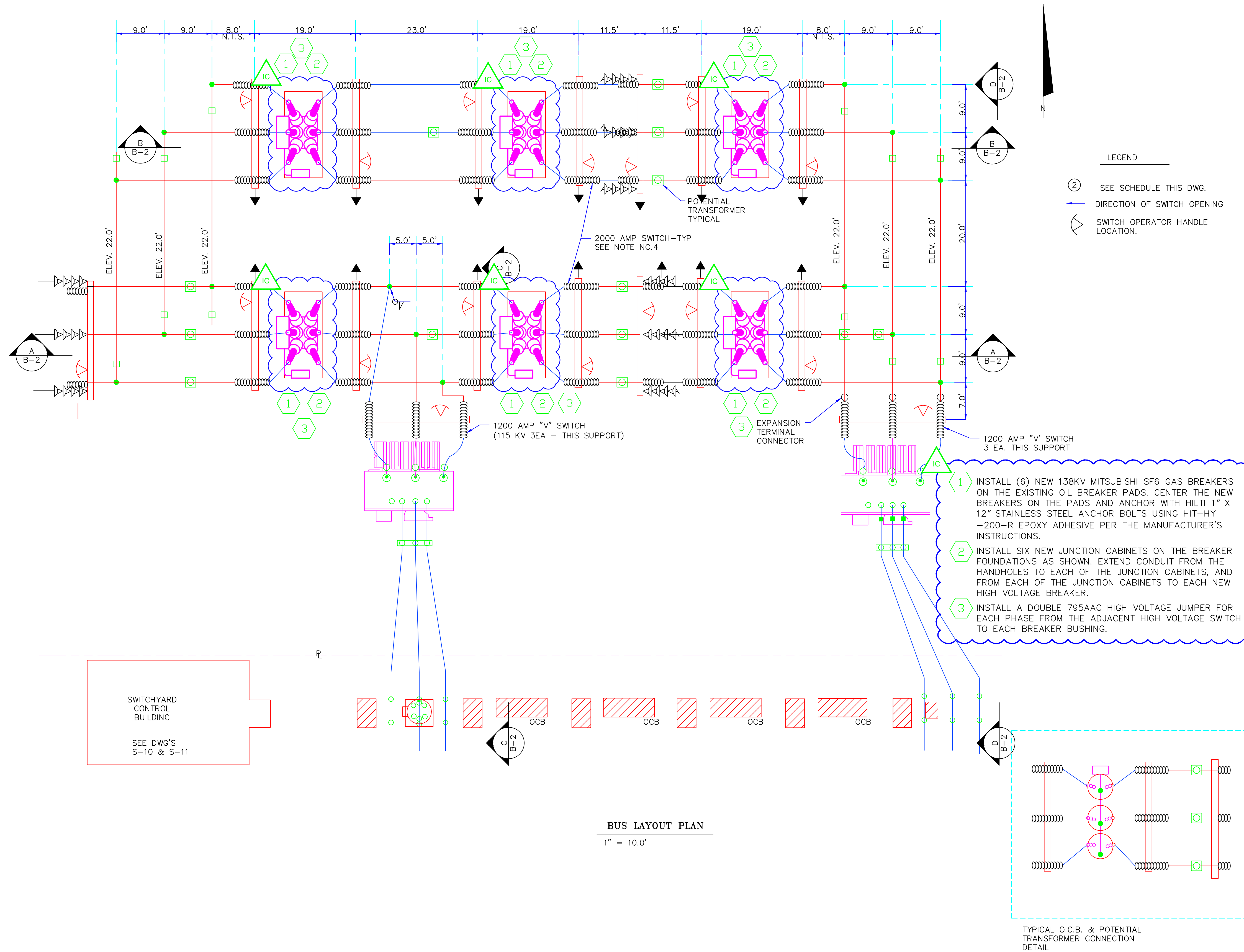
DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD SITE & STRUCTURAL STATION SERVICE GROUNDING PROPOSED**

CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE: 6210E10A

DRAWING NO.: **01SS-SS-0001**

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ITEM	QUAN.	DESCRIPTION
1		RTE POWER TRANSFORM 3Ø 42 MVA.
2		OIL CIRCUIT BREAKER - MCGRAW EDISON - 2000A
3		OIL CIRCUIT BREAKER - WESTING HOUSE - 1200A
4		3Ø DISCONNECT SWITCH - MORGAN - 2000A
5		3Ø DISCONNECT SWITCH - MORGAN - 1200A
6		3Ø DISCONNECT AND GROUNDING SWITCH-MORGAN-1200A
7		POTENTIAL TRANSFORMER - WESTING HOUSE - 115KV
8		5' FLEXIBLE JUMPER - ALCOA - 2000A
9		7' FLEXIBLE JUMPER - ALCOA - 2000A
10		2½" FLEXIBLE JUMPER - ALCOA - 600A
11		2" FLEXIBLE JUMPER - ALCOA - 1200A
12		AL STUD CONNECTOR - 2" STUD 4 HOLE PAD
13		AL. STUD. CONNECTOR - 1½" STUD-4 HOLE PAD
14		AL. STUD. CONNECTOR - 1½" STUD - 2 HOLE PAD
15		4 HOLE SPADE LUG - 397.5 KCM ACSR
16		4 HOLE SPADE LUG-336.4 KCM ACSR
17		397.5 KCM ACSR - 26/7 STR. JUMPER WIRE
18		336.4 KCM ACSR - 26/7 STR. JUMPER WIRE
19		30Ø AL BUS ELBOW - WELD TYPE
20		4 HOLE SPADE LUG FOR 4" BUS - WELD TYPE
21		4" BUS WELDING COUPLER
22		4" AL BUS

NOTES

- FOR STRUCTURAL DETAIL SEE DWGS. S1 THRU S9
- DIMENSION & ELEVATION ARE TO CENTER LINE OF BUS. UNLESS NOTED OTHERWISE, BUS & ELEVATIONS ARE 16.0' FROM BOTTOM OF BASE PLATES ON STEEL STRUCTURES (BOTTOM OF STEEL = 0.00 FT.)
- LETTER MARKS INDICATE BUS BAR TYPE. SEE DRAWINGS B-4, B-5 & B-6 FOR DETAILS.
- UNLESS NOTED OTHERWISE, ALL SWITCHES SHALL BE RATED FOR 2000 AMPS.
- ALL STATION POST INSULATOR STACKS SHALL BE OHIO BRASS CAT NO. 47801, STANDARD STRENGTH OR EQUAL UNLESS NOTED OTHERWISE, INSTALL BUS BAR SUPPORT BRACKETS TO INSULATOR STACK WITH NOT DIPPED GALVANIZED A307 STEEL BOLTS, WHERE NOTED, HIGH STRENGTH (H.S.) INSULATOR STACK SHALL BE OHIO BRASS CAT. NO. 47821.
- PREFABRICATED BUS BARS & ACCESSORIES PROVIDED BY M/L & P CONTRACTOR RESPONSIBLE FOR FIELD FABRICATION AS REQUIRED FIELD WELDING AND ERECTION OF BUS BARS

ALL BUS BARS

ALUMINUM BUS CONDUCTORS:
ALUMINUM BUS CONDUCTORS SHALL CONFORM TO ASTM DESIGNATION B221 AND B241; SIZE, ALLOY, AND LOCATION AS SHOWN ON THE DRAWINGS. WELDING PROCESS AND ALL WELDING OPERATORS SHALL BE QUALIFIED IN ACCORDANCE WITH THE ALUMINUM ASSOCIATION, "ALUMINUM CONSTRUCTION MANUAL," SECTION 7.2.4, "QUALIFICATIONS OF WELDING PROCEDURE AND WELDING." ALL WELDS SHALL BE MADE BY THE GAS METAL-ARC (MIG) OR GAS TUNGSTEN-ARC (TIG) WELDING PROCESS.

ELECTRICAL CONDUCTOR ACCESSORY PRODUCTS:
ALCOA CATALOG DG4A OR EQUAL.

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
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1	HYBRID INTO CEA TITLE BLOCK	GC			GC	11/12/21
2	CONVERT RASTER IMAGE TO CAD DRAWING BY DESIGN PRESENTATIONS	DP			AM	11/13/21



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DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL 115KV BREAKER - PLAN VIEW PROPOSED

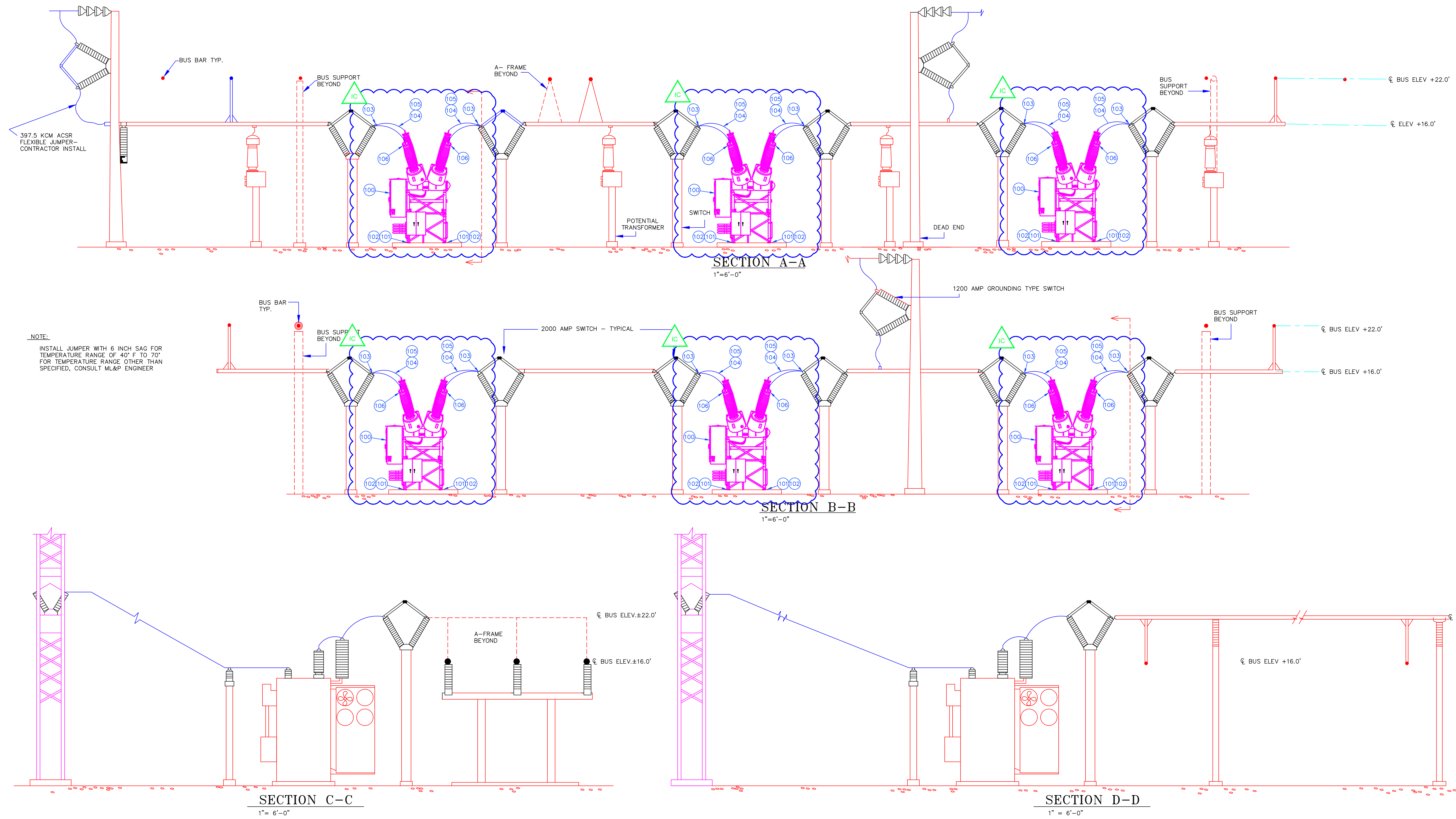
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DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: 01SS-SS-0018

01SS-SS-0018_0001_1-1.dwg

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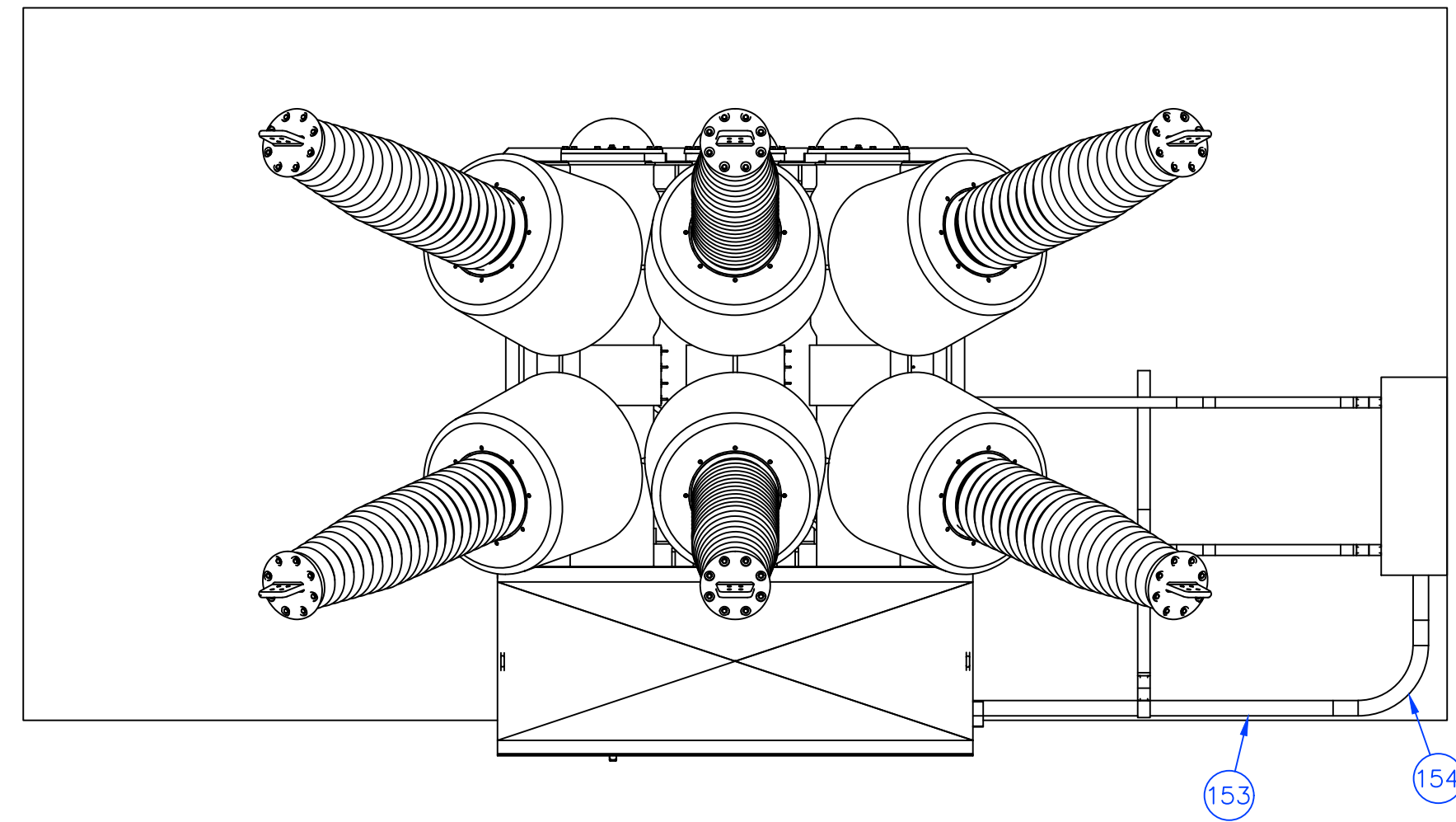
NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
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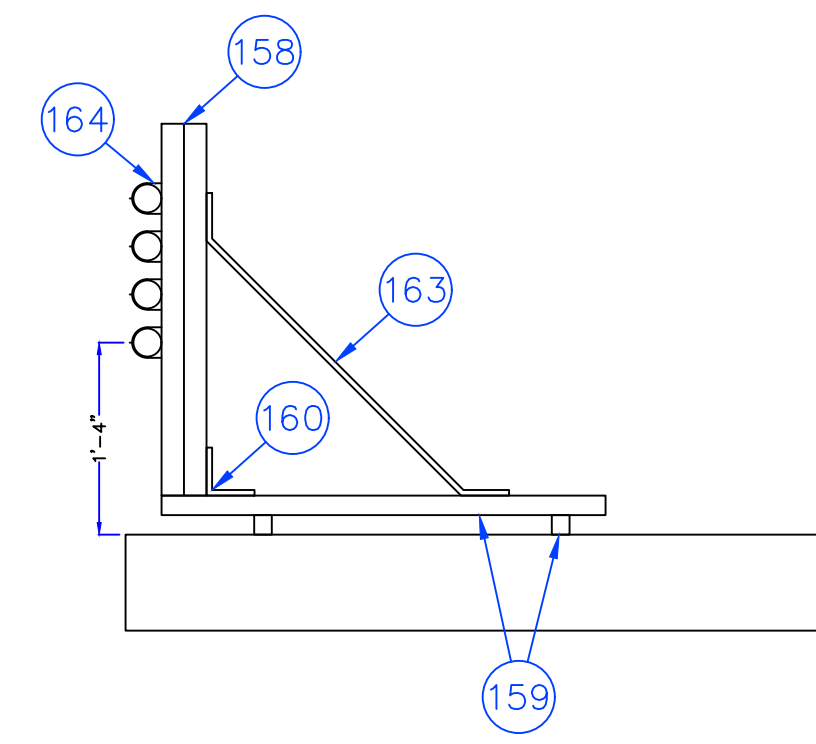
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						


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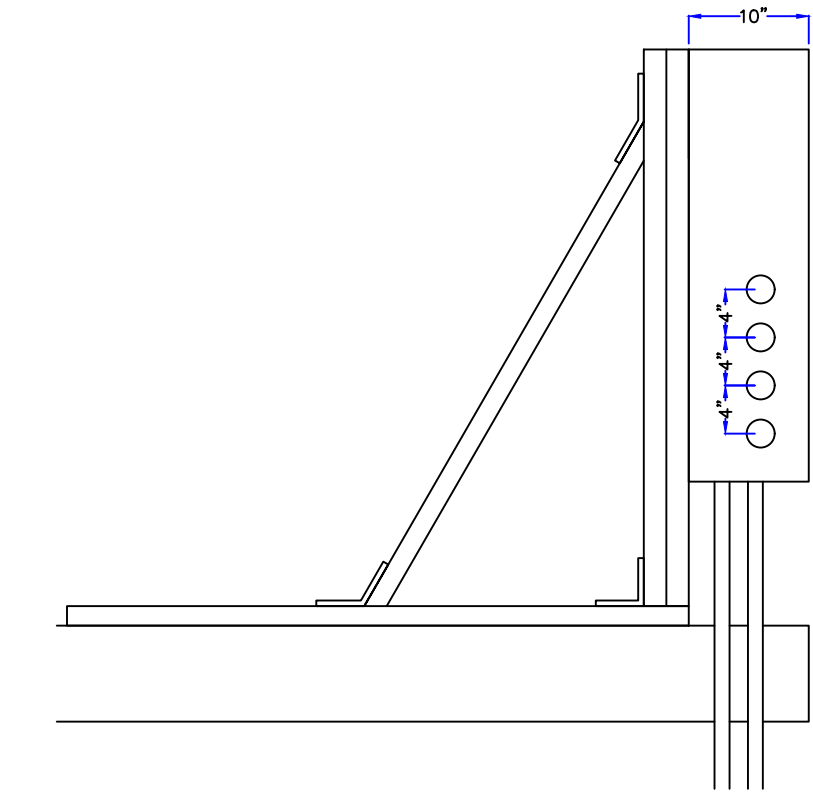
DRAWING NAME: SUB 01_PLANT 1 SWITCHYARD
 SITE AND STRUCTURAL
 115KV BREAKER - SECTION VIEW
 PROPOSED
CONFIDENTIAL
 01SS-SS-0019_0001_1-1.dwg
 DRAWING NO. - PREVIOUS/REFERENCE
 DRAWING NO.: 01SS-SS-0019
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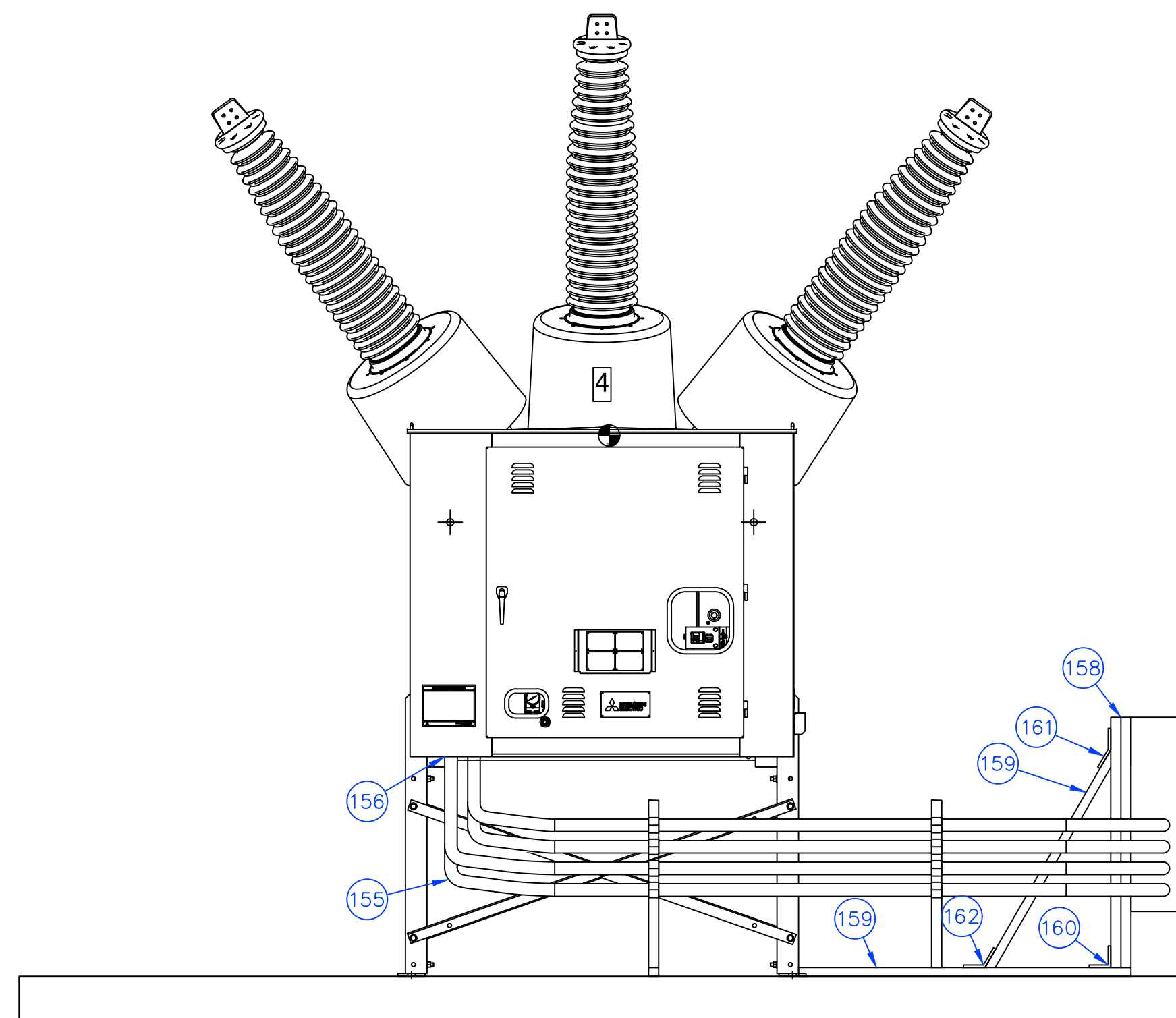
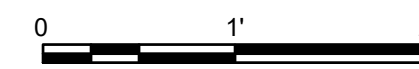
A BREAKER, PLAN VIEW
SCALE: 1/2" = 1'



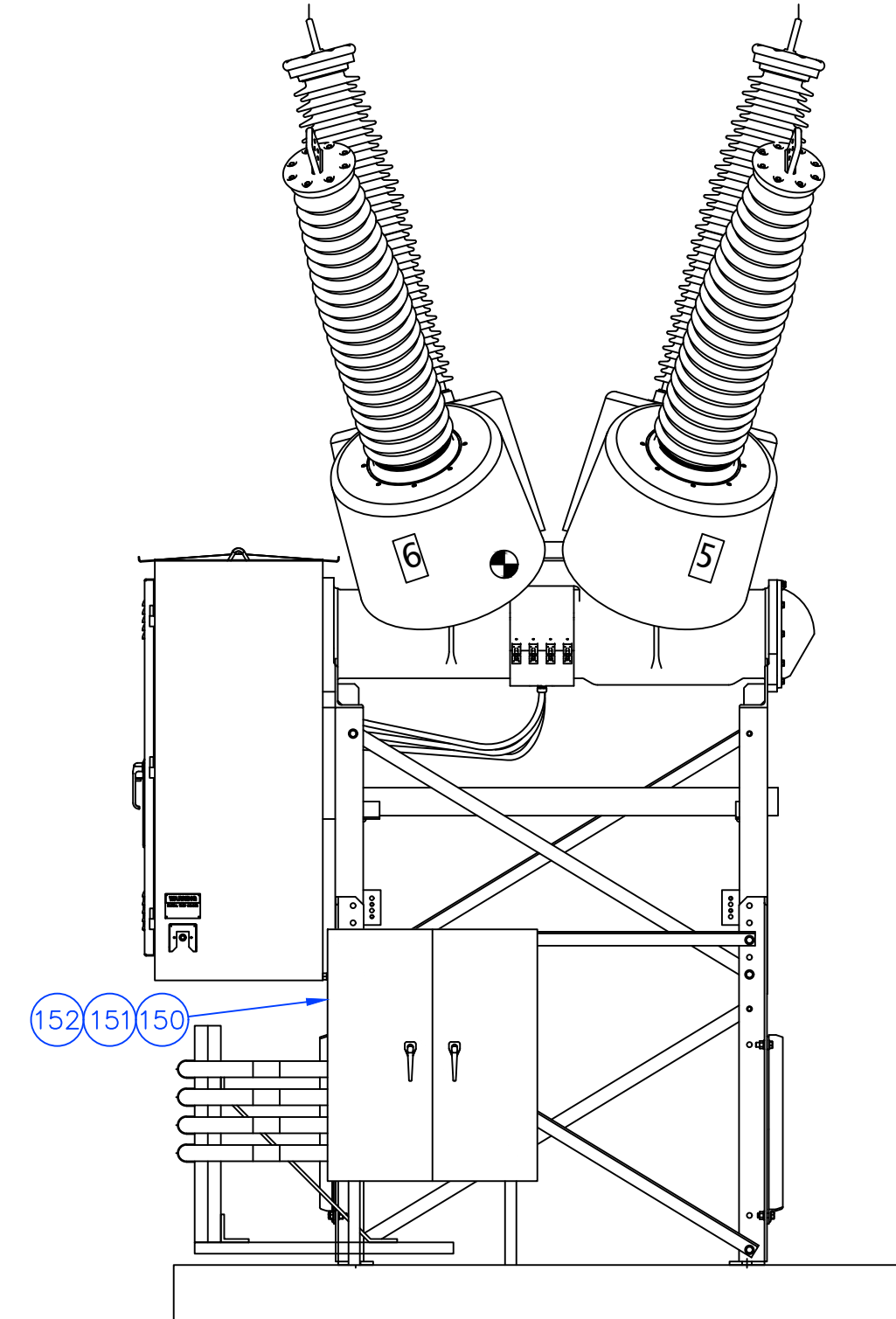
B BREAKER CONDUIT DETAIL
SCALE: 3/4" = 1'



C JUNCTION CABINET DETAIL
SCALE: 3/4" = 1'



D BREAKER, SECTION VIEW 'D'
SCALE: 1/2" = 1'



E BREAKER, SECTION VIEW 'E'
SCALE: 1/2" = 1'

NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-SS-0020	BILL OF MATERIALS

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073					
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
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NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						

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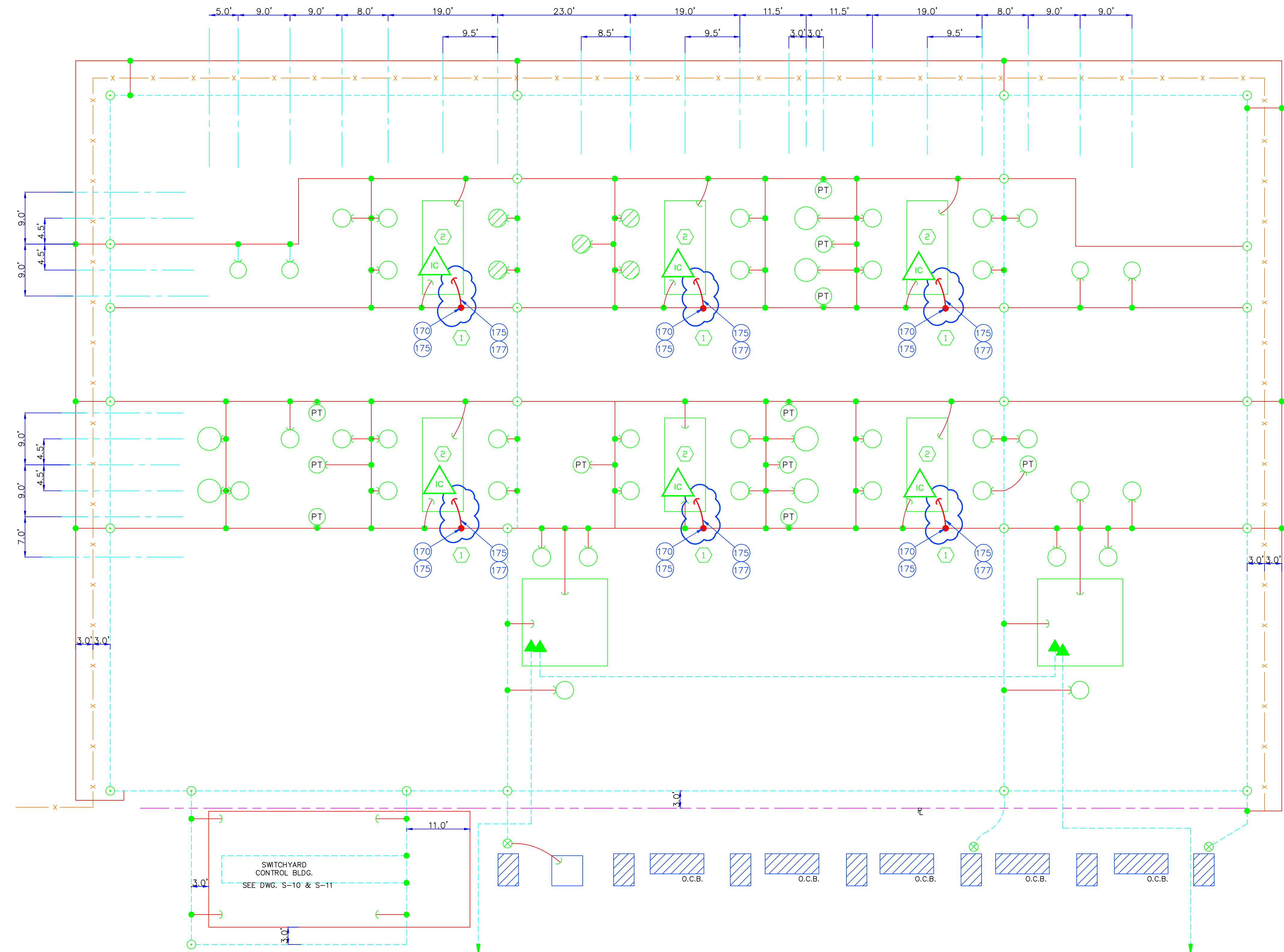
DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD
SITE AND STRUCTURAL
115KV BREAKER - JUNCTION CABINET
PROPOSED**

CONFIDENTIAL

DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: **01SS-SS-0020**

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- LEGEND**
- 4/0 STR. CU. BARE (D.B.)
 - 500 KCM STR. CU. BARE (D.B.)
 - APPARATUS GROUND GRID RISER CONNECTION
 - GROUND GRID CADWELD CONNECTION
 - ⊗ CADWELD TO EXISTING GROUND GRID 4/0 RISER CABLE
 - ▲ CONNECTION TO TRANSFORMER X NEUTRAL UTILIZING COMPRESSION LUGS & SPADE STUD CONNECTION
 - 3/4"x20' GROUND ROD & GRID CONNECTION
 - x FENCE
- NOTES**
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TYPICAL DETAIL SHOWN ON PAGE 5-6.
 2. DRIVE ALL GROUND RODS COMPLETELY WITH TOP 12" BELOW FINISHED GRADE.
 3. BURY ALL GROUND GRID CONDUCTORS 18" BELOW FINISHED GRADE.
 4. ALL CADWELDS SHALL BE COMPLETED IN A NEAT AND CLEAN MANNER.
 5. COIL 5' RISER CABLE TAILS ABOVE GRADE AT ALL LOCATIONS WHERE STEEL WILL NOT BE ERECTED THIS CONTRACT.
 6. 3' OUTSIDE OF FENCE RINGED WITH BURIED 4/0 CU.
 7. CONNECT ALL GATES AS SHOWN ON DWG. S-6.
 8. FENCE POSTS TO BE TIED TO GROUND GRID EVERY 20' MIN.
 9. ALL CADWELD MATERIAL TO BE SUPPLIED BY CONTRACTOR.
- ① INSTALL NEW 4/0 GROUND GRID CONNECTION TO NEW BREAKER JUNCTION CABINET.

② EXTEND EXISTING BREAKER GROUND TAIL. CONNECT TO NEW BREAKER AT 2 LOCATIONS AND EXTEND 1 TAIL TO BREAKER CONTROL CABINET.

1 **PLAN**
 SWITCHYARD GROUND
 SCALE: 1"=10'

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
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1	01SS-SS-0020	BILL OF MATERIALS

DRAWING NAME: **SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL 115KV YARD GROUNDING PLAN VIEW PROPOSED**

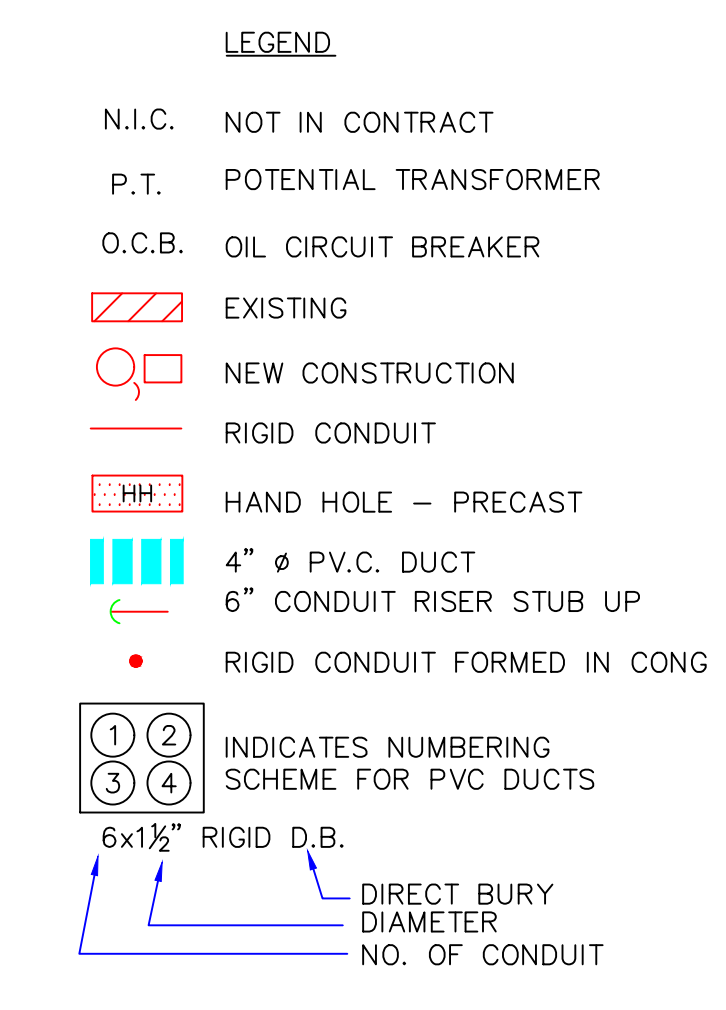
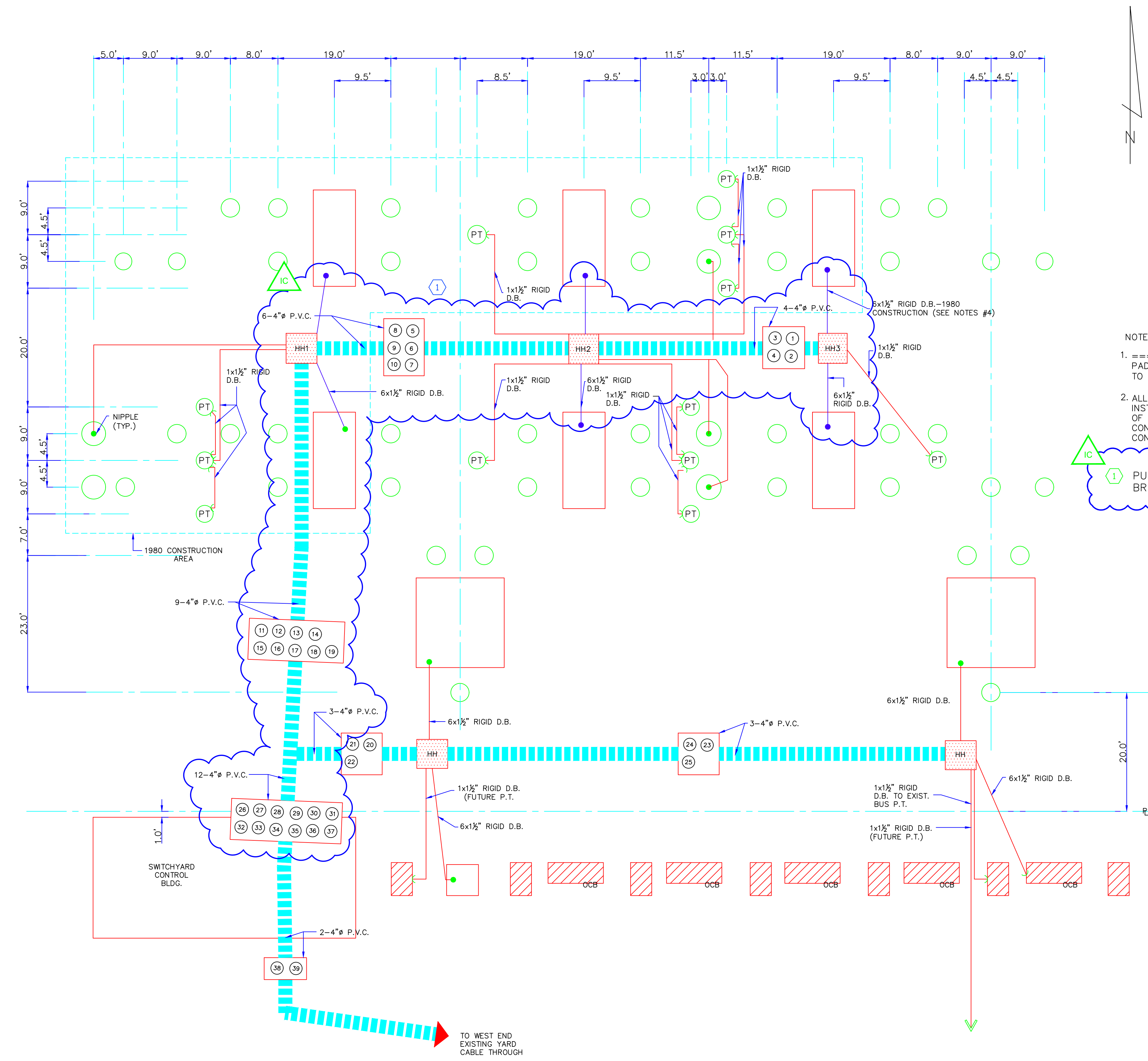
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DRAWING NO. - PREVIOUS/REFERENCE

DRAWING NO.: **01SS-SS-0017**

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NOTE:

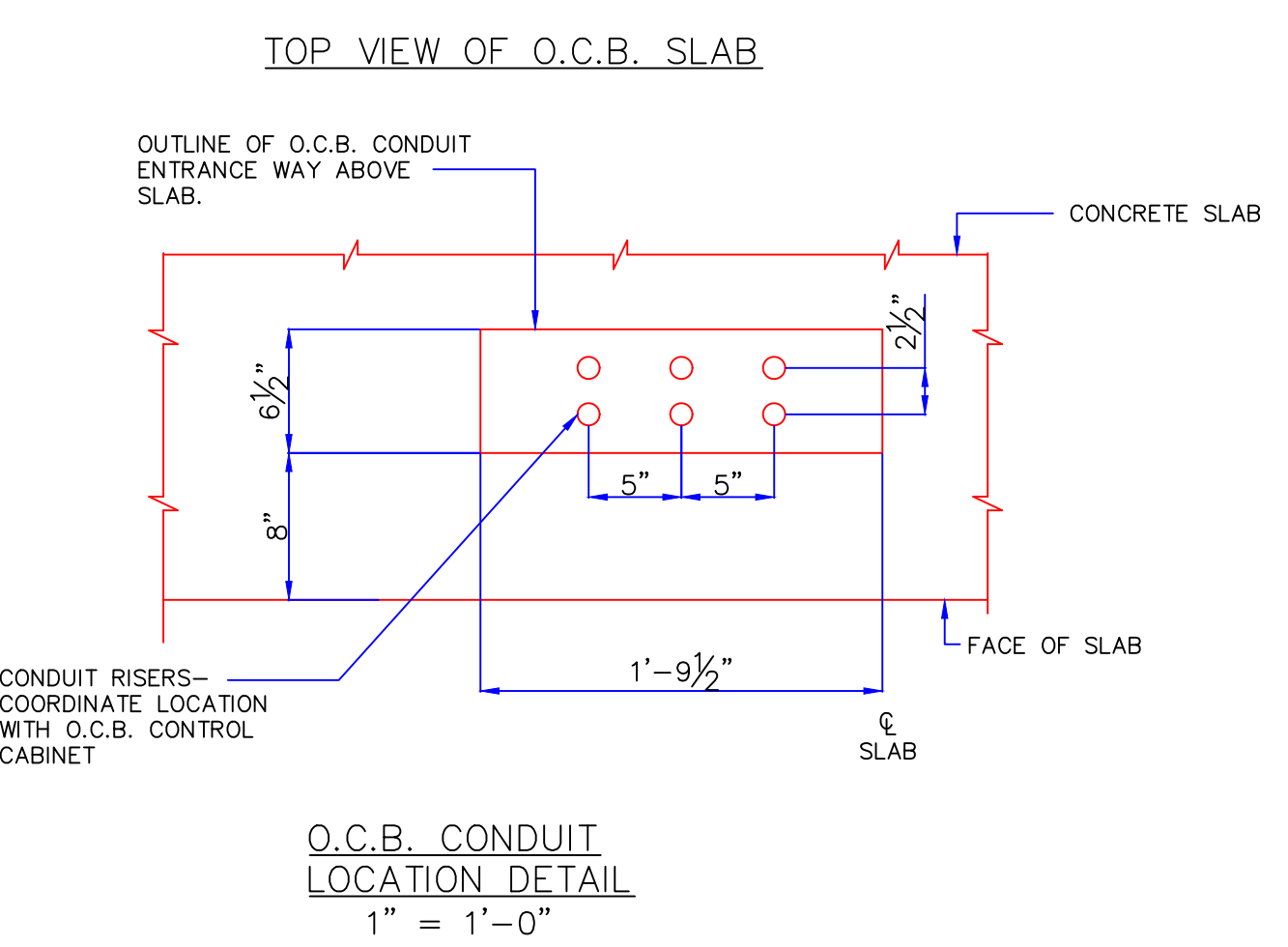
- ==== INDICATES 1 1/2" RIGID CONDUITS FROM O.C. B PAD TO RESPECTIVE HAND HOLE CONDUIT TO BE BURIED TO A DEPTH OF APPROXIMATELY 18" BELOW GRADE
- ALL OTHER 1 1/2" RIGID D.B. CONDUIT SHOWN WAS INSTALLED IN 1979. AFTER INSTALLATION & ERECTION OF ELECTRICAL APPRATUS FOR 1980, ALL RESPECTIVE CONDUITS SHALL BE EXTENDED INTO APPARATUS CONDUIT OR CONTROL BOX.

① PULL NEW CONTROL CABLES TO NEW BREAKERS IN EXISTING CONDUIT SYSTEM.

NOTES

115 KV DUCT AND VAULT CONTROL CONDUIT NOTES

- HANDHOLES SHALL BE 4'x4' PRECAST CONCRETE WITH HEAVY LID MANUFACTURED BY UTILITY VAULT CO. NO. 444-LA. ALL VAULTS SHALL BE SET AND LEVELED ON SUITABLE SOIL WITH LID GRADE APPROXIMATELY 1" ABOVE SITE FINISHED GRADE.
- ALL DUCT SYSTEMS SHALL BE CONCRETE ENCASED 4" PVC TYPE EB CONDUIT TERMINATED IN EACH HANDHOLE WITH BELL ENDS FLUSH WITH THE INSIDE OF THE WALL ALL CONDUIT AND DUCT SYSTEMS SHALL BE GRADED EVENLY BETWEEN HANDHOLES. ALL PVC CONDUIT SHALL BE PROVIDED WITH PULL WIRES AND SHALL BE TESTED FOR OBSTRUCTIONS BY PULLING THROUGH A 4" MANDREL THROUGH INDIVIDUAL CONDUITS PRIOR TO COMPLETION OF THE PROJECT.
- ALL DIRECT BURIED CONDUIT SHALL BE RIGID STEEL GALVANIZED EXCEPT AS NOTED. STEEL CONDUIT SHALL BE BURIED TO A DEPTH OF APPROXIMATELY 18" BELOW GRADE, EXCEPT WHERE OTHERWISE SPECIFIED, CONDUIT SHALL BE STUBBED AT DIMENSION SHOWN 6" ABOVE GRADE AND TERMINATED WITH THREADED END AND CAPPED WITH GALVANIZED CAP. ALL SPARE STEEL CONDUIT SHALL BE CAPPED WITH GALVANIZED STEEL CAPS.
- ALL OIL CIRCUIT BREAKER (OCB) AND TRANSFORMER DIRECT BURIED RIGID CONDUIT SHALL BE FORMED IN THE RESPECTIVE APPARATUS PAD AND TERMINATED FLUSH WITH THE PAD WITH GALVANIZED STEEL COUPLINGS AND COUNTERSUNK CONDUIT PLUGS. LOCATION, AND ARRANGEMENT OF CONDUIT SHALL BE AS SHOWN ON DRAWINGS.
- CONDUITS FOR POTENTIAL TRANSFORMERS SHALL BE STUBBED UP 6" ABOVE GRADE WITH GALVANIZED COUPLINGS AND END PLUG, AND SHALL BE LOCATED AS SHOWN ON DRAWINGS ADJACENT TO POTENTIAL TRANSFORMER FOUNDATIONS.
- ALL LIGHTING CONDUIT SHALL BE CAST IN RESPECTIVE CONCRETE PIERS IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS TERMINATE CONDUIT FLUSH WITH THE FOUNDATION PIER FINISH ELEVATION AND INCLUDE GALVANIZED COUPLINGS AND END PLUGS
- CONCRETE ENCASED PVC DUCTS SHALL HAVE STANDARD SPACING OF 6.5 INCHES CENTER LINE TO CENTER LINE IN ACCORDANCE WITH THE DRAWINGS AND SHALL UTILIZE CARLON NUMBER #S288NJ INTERMEDIATE SPACERS AND #S288NJ BASE PACERS INTERMEDIATE SPACERS AND BASE SPACERS PROVIDED BY MUNICIPAL LIGHT AND POWER.
- FOLLOWING INSTALLATION AND ERECTION OF APPARATUS. ALL RESPECTIVE CONDUITS SHALL BE EXTENDED INTO APPARATUS CONDUIT OR CONTROL BOX IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.



1 UNDERGROUND CONDUIT PLAN
SCALE: 1" = 10'

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
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ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
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DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL 115KV YARD CONDUIT PLAN EXISTING
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	01SS-SS-0016_0001_0.dwg
DRAWING NO.:	01SS-SS-0016
SHEET 0001 OF 1	PAGE 60 / 76

BILL OF MATERIAL			
REF. NO.	DESCRIPTION	MANUFACTURER/CATALOG NUMBER	REF DRAWING
100	GAS CIRCUIT BREAKER, 138KV, 3,000 AMP	MITSUBISHI/120-SFMT-40HE-1	
101	1" DIAM ANCHOR BOLT FOR CIRUCIT BREAKER	HILTI HAS-R 1"X12" S5304 #385474	
102	HILTI ADHESIVE	HILTI HIT-HY-200-R	
103	TERMINAL, 3" WIDE, 4-HOLE, 2 CABLES, 30 DEG ANGLE, ARBUTUS	DMC POWER/CPLK9633D07950S	
104	795 AAC, 37 STRAND, ARBUTUS	SOUTHWIRE/ARBUTUS	
105	SPLIT SPACER, 2 SPLIT CABLE RUNS, 4", ARBUTUS	DMC POWER/CL702D07950-4S	
106	TERMINAL, 3" WIDE, 4-HOLE, 2 CABLES, OFFSET, ARBUTUS	DMC POWER/CPLK9632D07950S	
107	NOT USED		
108	NOT USED		
109	NOT USED		
110	POWER FUSE, SMD1A W/SOE FUSE	S&C/186704R1 + 564050	
111	COVERED JUMPER WIRE, #2 CU STR	CEA 12097	
112	COPPER 2 HOLE PADDLE FOR #2	CEA 200-52-498	
113	COLD SHRINK TERMINATION, 35KV, 1/0 CU UNISHIELD	3M/COLD SHRINK QT-III 7684-S-8	
114	SINGLE PHASE CUTOFF BRACKET	AB CHANCE/1SBM18C	
115	SUPPORT, CABLE, 2IN	ALUMIFORM/CS-820	
116	1/0 35KV UNISHIELD CABLE	CEA 200-23-820	
117	END BELL, PVC, 2IN, SCHEDULE 40	CANTEX/5144008	
118	CONDUIT, PVC, 2IN, SCHEDULE 40		
119	UNISTRUT	UNISTRUT/P1000	
120	BEAM CLAMP	UNISTRUT/P2785	
121	STRAP, BRACKET, 2IN FOR RIGID STEEL CONDUIT	UNISTRUT/P1117	
122	ADAPTER, RIGID TO PVC, 2IN, SCHEDULE 40		
123	CONDUIT, RIGID, 2IN, SCHEDULE 40	CALCONDUIT/ST2010CT00	
124	CONDUIT, ELBOW, RIGID, 2IN, SCHEDULE 40, 90 DEGREE, 36" RADIUS	CALCONDUIT/ST2018SW45	
125	CONCRETE PAD, 4X4 PER CEA SUM1	CEA 200-41-400	
126	CONDUIT, ELBOW, RIGID, 2 IN, SCHEDULE 40, 45 DEGREE, 36" RADIUS		
127	NOT USED		
128	NOT USED		
129	NOT USED		
130	SINGLE PHASE PADMOUNT TRANSFORMER, 100KVA, 19.92KV X 240/120V, PER CEA SUG6		
131	34.5KV 200 AMP LOADBREAK ELBOW	CEA 200-34-220	
132	CONDUIT, ELBOW, RIGID, 4IN, SCHEDULE 40, 90 DEGREE, 36" RADIUS		

BILL OF MATERIAL			
REF. NO.	DESCRIPTION	MANUFACTURER/CATALOG NUMBER	REF DRAWING
133	CONDUIT, RIGID, 4IN, SCHEDULE 40		
134	SECONDARY CONDUCTOR, UG, TRIPLEX, CU, 500KCM	CEA 361	
135	DOUBLE THROW SAFETY SWITCH, 3 POLE, 600AMP, 240VAC, NEMA 3R	SQUARE D/DTU326R	
136	SINGLE PHASE PADMOUNT TRANSFORMER, 100KVA, 12.47KV X 240/120V, PER CEA SUG6		
137	CONDUIT, ELBOW, RIGID, 4 IN, SCHEDULE 40, 45 DEGREE, 36" RADIUS		
138	ENDBELL, PVC, 4 IN, SCHEDULE 40		
139	NOT USED		
140	AC PANEL, NEMA 1, 600AMP, 120/240VAC, 1PH, 3W, 35KAIC	EATON/P2C600B784CH01	
141	8X8X24 SCREW COVER WIRING TROUGH, TYPE 1	HOFFMAN/A8824T1T	
142	68" X 68" BACK PLANE FOR MARSHALLING PANEL		
143	4-POSITION SHORTING TERMINAL BLOCK	GE/EB27B04S	
144	12-POSITION TERMINAL BLOCK	GE/EB25B12	
145	2x3 WIRE SLOT DUCT WITH COVER	PANDUIT/G2x3LG6	
146	3x3 WIRE SLOT DUCT WITH COVER	PANDUIT/G3x3LG6	
147	NOT USED		
148	NOT USED		
149	NOT USED		
150	30" X 36" JUNCTION CABINET, STAINLESS STEEL WITH BACKPLANE	HOFFMAN/A36H3010SSLP3PT	
151	BACKPLANE FOR PANEL ABOVE	HOFFMAN/A36P30	
152	ELECTRIC HEATER	HOFFMAN/DAH1001A	
153	CONDUIT, RIGID, 2" SCHEDULE 40		
154	CONDUIT, ELBOW, RIGID, 2IN SCHEDULE 40, 90 DEGREE, 9.5" RADIUS		
155	CONDUIT, LIQUIDTITE, 2"		
156	MEYERS HUBS, 2", WITH GROUNDING CONNECTORS		
157	STRAIGHT CONNECTORS, 2", WITH GROUNDING CONNECTORS		
158	DOUBLE STRUT	UNISTRUT/P1001	
159	SINGLE STRUT	UNISTRUT/P1000	
160	90 DEGREE CONNECTOR	UNISTRUT/P1315	
161	30 DEGREE CONNECTOR	UNISTRUT/P2263	
162	60 DEGREE CONNECTOR	UNISTRUT/P2267	
163	30" BRACE	UNISTRUT/P2458	
164	2" PIPE CLAMP	UNISTRUT/P1217	
165	NOT USED		

BILL OF MATERIAL			
REF. NO.	DESCRIPTION	MANUFACTURER/CATALOG NUMBER	REF DRAWING
166	NOT USED		
167	NOT USED		
168	NOT USED		
169	NOT USED		
170	GROUNDING, SPLIT CROSS SPLICE, 4/0 AWG, 4/0 AWG	DMC POWER/GC759B004-004	
171	GROUNDING, SPLIT CROSS SPLICE, 4/0 AWG, 500MCM	DMC POWER/GC759B004-050	
172	GROUNDING, SPLIT CROSS SPLICE, 4/0 AWG 3/4" GROUND ROD	DMC POWER/GC759B004-682	
173	GROUNDING, SPLIT PARALLEL SPLICE, 4/0 AWG, 4/0 AWG	DMC POWER/GC721B004-004	
174	GROUNDING, SPLIT PARALLEL SPLICE, 4/0 AWG, 500MCM	DMC POWER/GC721B004-050	
175	WIRE, CU SDB #4/0 19 STR	CEA 200-01-180	
176	GROUND ROD, 3/4", COPPERCLAD, 8'	CEA 4067	
177	PADDLE, 2 HOLE, 4/0, TIN PLATED CU	CEA 200-52-230	
178	NOT USED		
179	NOT USED		
180	NOT USED		

NOTES:

- NOT ALL BILL OF MATERIAL ITEMS ARE IDENTIFIED ON DRAWINGS.

NO.	DRAWING NO./SHEET	REFERENCE DRAWING/DETAIL/PLAN/SECTION DESCRIPTION
1	01SS-EL-WO-0003	JUNCTION CABINET BACK PLANE
2	01SS-EL-WO-0003	MARSHALLING PANEL BACK PLANE
3	01SS-SS-0020	SWITCHYARD BUILDING OUTSIDE NORTH WALL ELEVATION
4	01SS-SS-0020	SWITCHYARD BUILDING INSIDE NORTH WALL ELEVATION
5	01SS-SS-0020	STATION SERVICE PLAN VIEW
6	01SS-SS-0002	STATION SERVICE - 34.5KV FEED
7	01SS-SS-0001	STATION SERVICE GROUNDING
8	01SS-SS-0019	115KV BREAKER - SECTION VIEW
9	01SS-SS-0020	115KV BREAKER - JUNCTION CABINET
10	01SS-SS-0017	115KV YARD GROUNDING PLAN VIEW

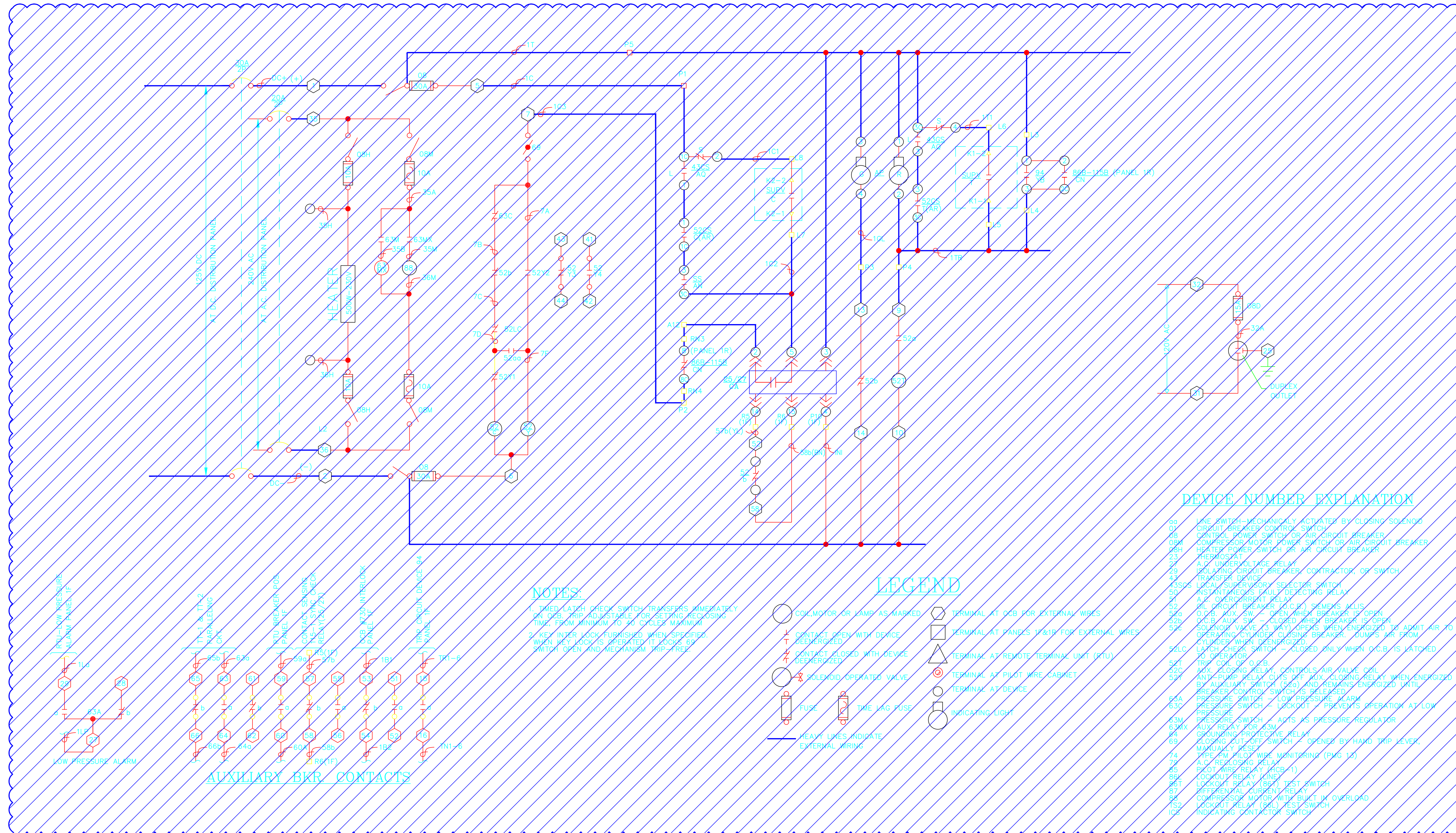
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL					ENG. STAMP	
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE		
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1						



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Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL 115KV BREAKER CHANGEOUT BILL OF MATERIALS	
CONFIDENTIAL		01SS-SS-0020_0008.dwg	
DRAWING NO. - PREVIOUS/REFERENCE			
DRAWING NO.:		01SS-SS-0020	
SHEET 0008 OF 8		PAGE 61 / 76	



DEVICE NUMBER EXPLANATION

- 00 LINE SWITCH—MECHANICALLY ACTIVATED BY CLOSING SOLENOID CIRCUIT BREAKER CONTROL SWITCH
- 01 CONTROL POWER SWITCH OR AIR CIRCUIT BREAKER
- 05 COMPRESSOR MOTOR POWER SWITCH OR AIR CIRCUIT BREAKER
- 06H HEATER POWER SWITCH OR AIR CIRCUIT BREAKER
- 21 A/C UNDERVOLTAGE RELAY
- 22 ISOLATING CIRCUIT BREAKER, CONTRACTOR, OR SWITCH
- 23 TRANSFER DEVICE
- 24 LOCAL SUPERVISORY SELECTOR SWITCH
- 43SC INSTANTANEOUS FAULT DETECTING RELAY
- 51 A/C OVERCURRENT RELAY
- 52 OIL CIRCUIT BREAKER (O.C.B.) SIEMENS ALLIS
- 52O O.C.B. AUX. SW. — OPEN WHEN BREAKER IS OPEN
- 52C O.C.B. AUX. SW. — CLOSED WHEN BREAKER IS OPEN
- 52S SOLENOID VALVE (3 WAY) OPENS WHEN ENERGIZED TO ADMIT AIR TO OPERATING CHAMBER CLOSING BREAKER. DUMPS AIR FROM CYLINDER WHEN DEENERGIZED.
- 52L LATCH CHECK SWITCH — CLOSED ONLY WHEN O.C.B. IS LATCHED TO OPERATOR
- 52T TRIP COIL OF O.C.B.
- 52C ANTI-PUMP RELAY. CONTROLS AIR VALVE COIL
- 52Y ANTI-PUMP RELAY. CUTS OFF AUX. CLOSING RELAY WHEN ENERGIZED BY AUXILIARY SWITCH (52S) AND REMAINS ENERGIZED UNTIL BREAKER CONTROL SWITCH IS RELEASED
- 63A PRESSURE SWITCH — LOW PRESSURE ALARM
- 63Y PRESSURE SWITCH — LOCKOUT — PREVENTS OPERATION AT LOW PRESSURE
- 63M PRESSURE SWITCH — ADPTS AS PRESSURE REGULATOR
- 63MA AUX. RELAY FOR 63M
- 64 GROUNDING PROTECTIVE RELAY
- 69 CLOSING LATCH OFF SWITCH — OPENED BY HAND TRIP LEVER.
- 74 MAXIMUM PRESS. MONITORING (PMG 12)
- 75 A/C REVERSING RELAY
- 85 PILOT WIRE RELAY (PCB-1)
- 85 LOCKOUT RELAY (KIN)
- 86 LOCKOUT RELAY (KIN)
- 86T LOCKOUT RELAY (KIN) TEST SWITCH
- 87 DIFFERENTIAL CURRENT RELAY
- 88 COMPRESSOR MOTOR WITH BUILT IN OVERLOAD
- 102 LOCKOUT RELAY (LOR) TEST SWITCH
- 103 INDICATING CONTACTOR SWITCH

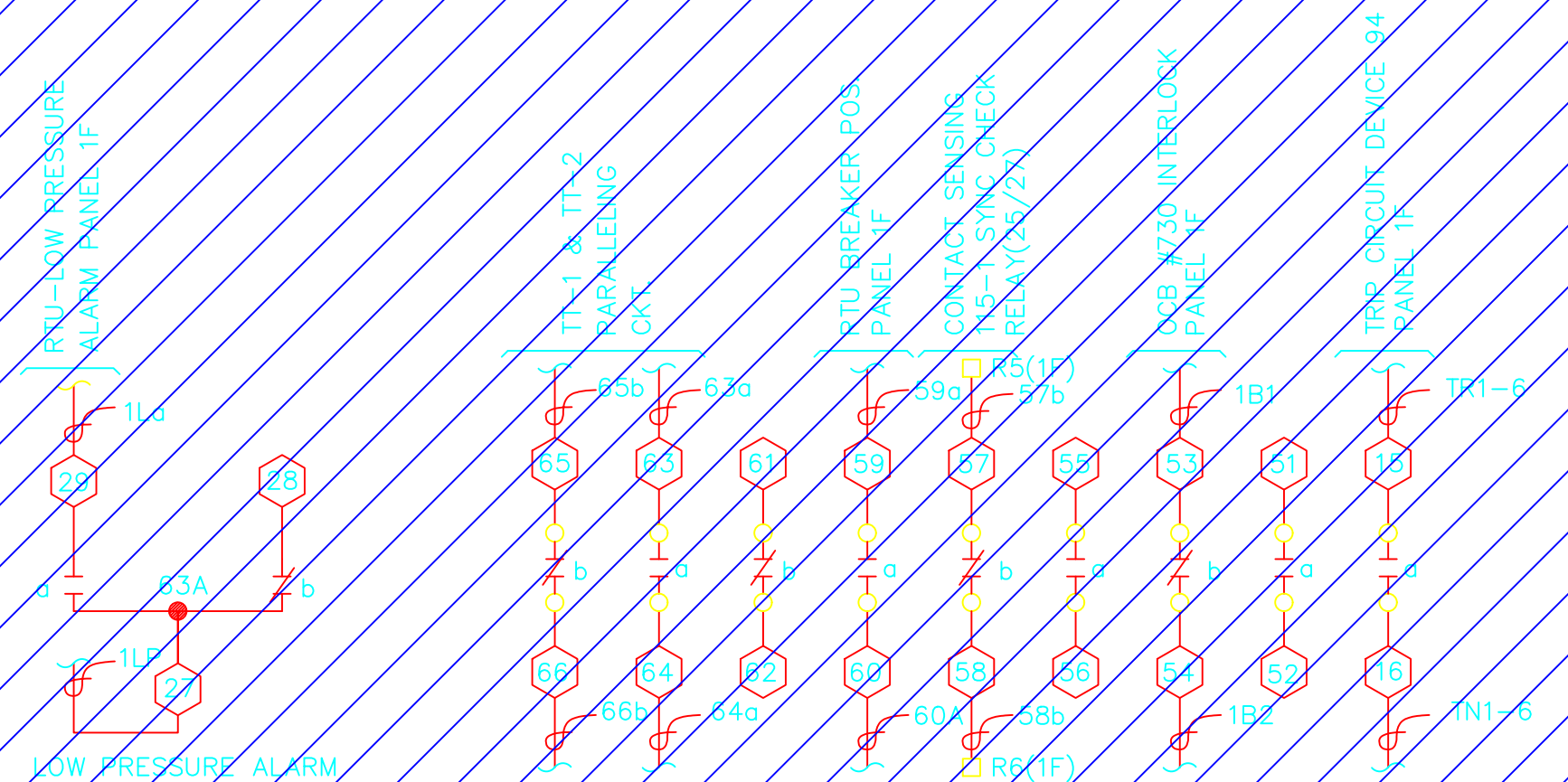
LEGEND

- COIL, MOTOR OR YAM AS MARKED
- CONTACT OPEN WITH DEVICE
- CONTACT CLOSED WITH DEVICE
- SOLENOID OPERATED VALVE
- FUSE
- DME VAG FUSE
- HEAVY LINES INDICATE EXTERNAL WIRING
- TERMINAL AT OCB FOR EXTERNAL WIRES
- TERMINAL AT PANELS 1Y&1R FOR EXTERNAL WIRES
- TERMINAL AT REMOTE TERMINAL UNIT (RTU)
- TERMINAL AT PILOT WIRE CABINET
- TERMINAL AT DEVICE
- INDICATING LIGHT

NOTES

1. LATCH CHECK SWITCH TRANSFERS IMMEDIATELY ON O.C.B. TRIP. ADJUSTABLE FOR SETTING RECLOSING TIME, FROM MINIMUM TO 90 CYCLES MAXIMUM.
2. KEY INTER LOCK FURNISHED WHEN SPECIFIED. WHEN KEY LOCK IS PRESENTLY IN KEYED SW. SWITCH OPEN AND MECHANISM TRIP-FREE.

AUXILIARY BKR CONTACTS



DEMOLITION

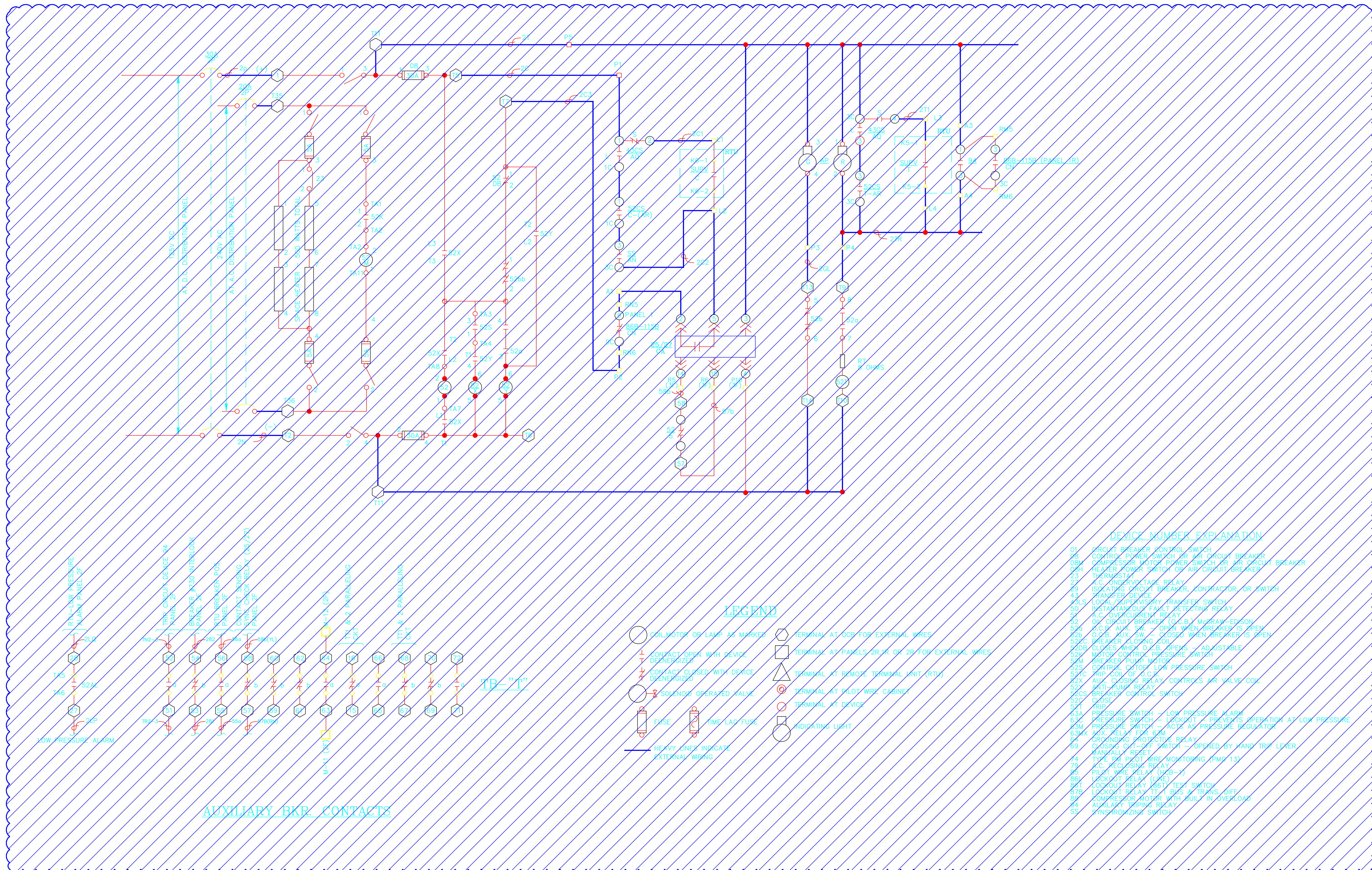
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ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



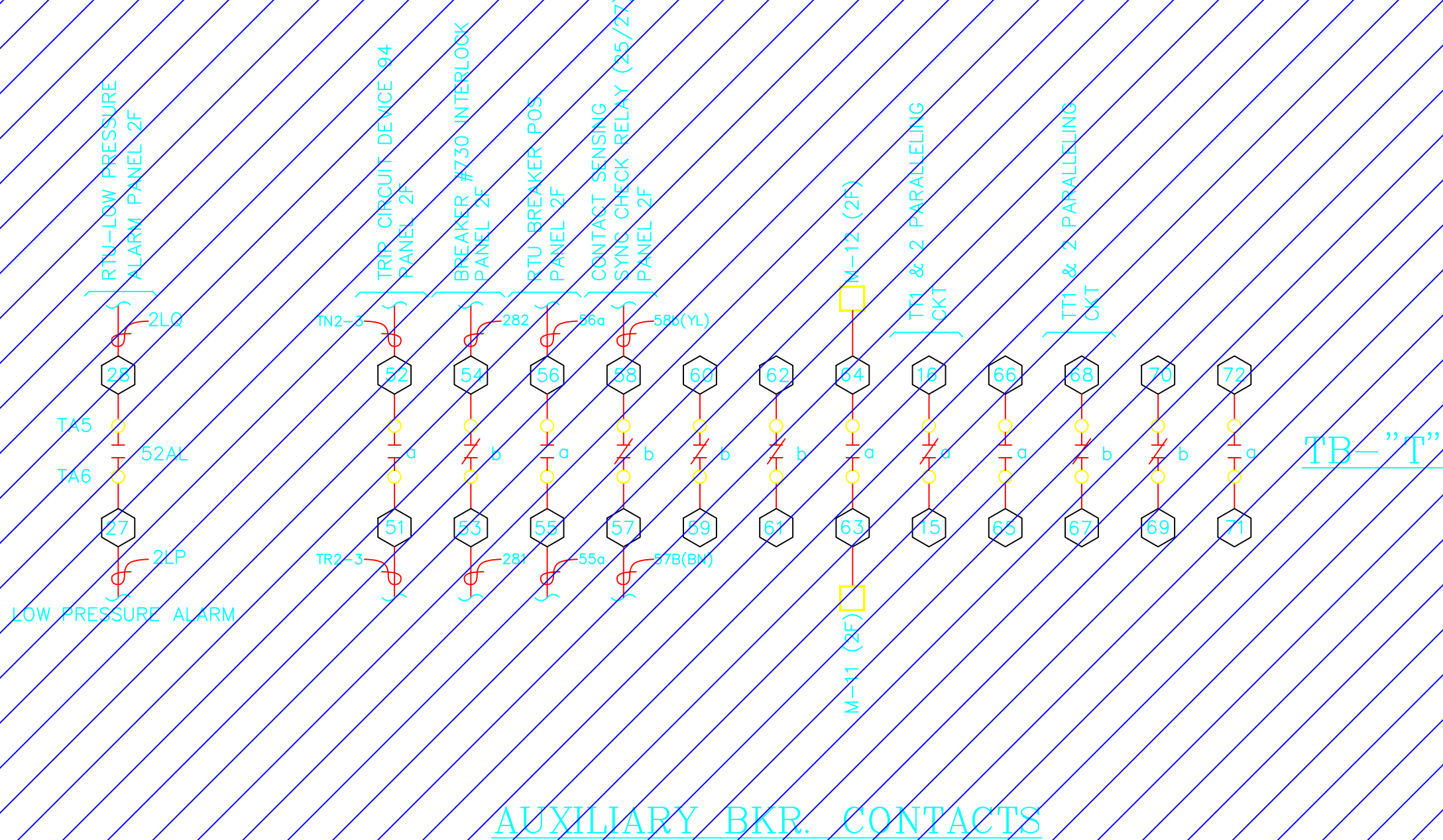
Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-1 SCHEMATIC
CONFIDENTIAL	
01SS-EL-S0-7000_0001_1.dwg	
DRAWING NO. — PREVIOUS/REFERENCE 0PE220_3-2687-17	
DRAWING NO.:	
01SS-EL-S0-7000	
SHEET 0001 OF 1 PAGE 62 / 76	



- DEVICE NUMBER EXPLANATION**
- 01 CIRCUIT BREAKER CONTROL SWITCH
 - 06 CONTROL POWER SWITCH OR MR CIRCUIT BREAKER
 - 08M COMPRESSOR MOTOR POWER SWITCH OR AIR CIRCUIT BREAKER
 - 08H HEATER POWER SWITCH OR AIR CIRCUIT BREAKER
 - 23 THERMIST
 - 27 K.C. UNDERVOLTAGE RELAY
 - 28 ISOLATING CIRCUIT BREAKER, CONTACTOR, OR SWITCH
 - 41 TRANSFER DEVICE
 - 41.5 LOCAL/REMOTE TRANSFER SWITCH
 - 50 INSTANTANEOUS FAULT DETECTING RELAY
 - 51 A.C. OVERCURRENT RELAY
 - 52 O.C. CIRCUIT BREAKER (O.C.B.) MORGAN-EDSON
 - 52A O.C.B. AUX. SW. - OPEN WHEN BREAKER IS OPEN
 - 52B O.C.B. AUX. SW. - CLOSED WHEN BREAKER IS OPEN
 - 52C BREAKER CLOSING COIL
 - 52DB CLOSING WHEN O.C.B. OPENS - ADJUSTABLE
 - 52D MOTOR CONTROL PRESSURE SWITCH
 - 52H BREAKER PUMP MOTOR
 - 52S CONTROL OUTSIDE LOW PRESSURE SWITCH
 - 52TC TRIP COIL OF O.C.B.
 - 52Y AUX. CLOSING RELAY, CONTROLS MR VALVE COIL
 - 52Z ANTI-PUMP RELAY
 - 52CS BREAKER CONTROL SWITCH
 - 52I TRIP
 - 53A PRESSURE SWITCH - LOW PRESSURE ALARM
 - 53C PRESSURE SWITCH - LOCKOUT - PREVENTS OPERATION AT LOW PRESSURE
 - 53M PRESSURE SWITCH - ACTS AS PRESSURE REGULATOR
 - 53MX NOX RELAY FOR 53M
 - 54 CRUISING PROTECTIVE RELAY
 - 59 CLOSING CUT-OFF SWITCH - OPENED BY HAND TRIP LEVER
 - 65 MANUALLY RESET
 - 74 TYPE 280 BUILT-IN WIRE MONITORING (FMG 13)
 - 79 I.C. RE-CLOSING RELAY
 - 86 PILOT WIRE RELAY (LUPB-1)
 - 86T LOCKOUT RELAY (LUPB-1)
 - 87B LOCKOUT RELAY (LUPB-1) TRIP TEST SW.
 - 87C COMPRESSOR MOTOR WITH FULLY IN-OVERLOAD
 - 84 AUXILIARY TRIPPING RELAY
 - 85 SYNCHRONIZING SWITCH

- LEGEND**
- COIL/MOTOR OR LAMP AS MARKED
 - ⊕ CONTACT OPEN WITH DEVICE DEENERGIZED
 - ⊖ CONTACT CLOSED WITH DEVICE DEENERGIZED
 - ⊗ SOLENOID OPERATED VALVE
 - ⊘ FUSE
 - ⊙ TIME-LAG FUSE
 - ⊙ TERMINAL AT OCB FOR EXTERNAL WIRES
 - ⊙ TERMINAL AT PANELS 2R OR 2B FOR EXTERNAL WIRES
 - ⊙ TERMINAL AT REMOTE TERMINAL UNIT (RTU)
 - ⊙ TERMINAL AT PILOT-WIRE CABINET
 - ⊙ TERMINAL AT DEVICE
 - ⊙ INDICATING LIGHT
 - HEAVY LINES INDICATE EXTERNAL WIRING



DEMOLITION

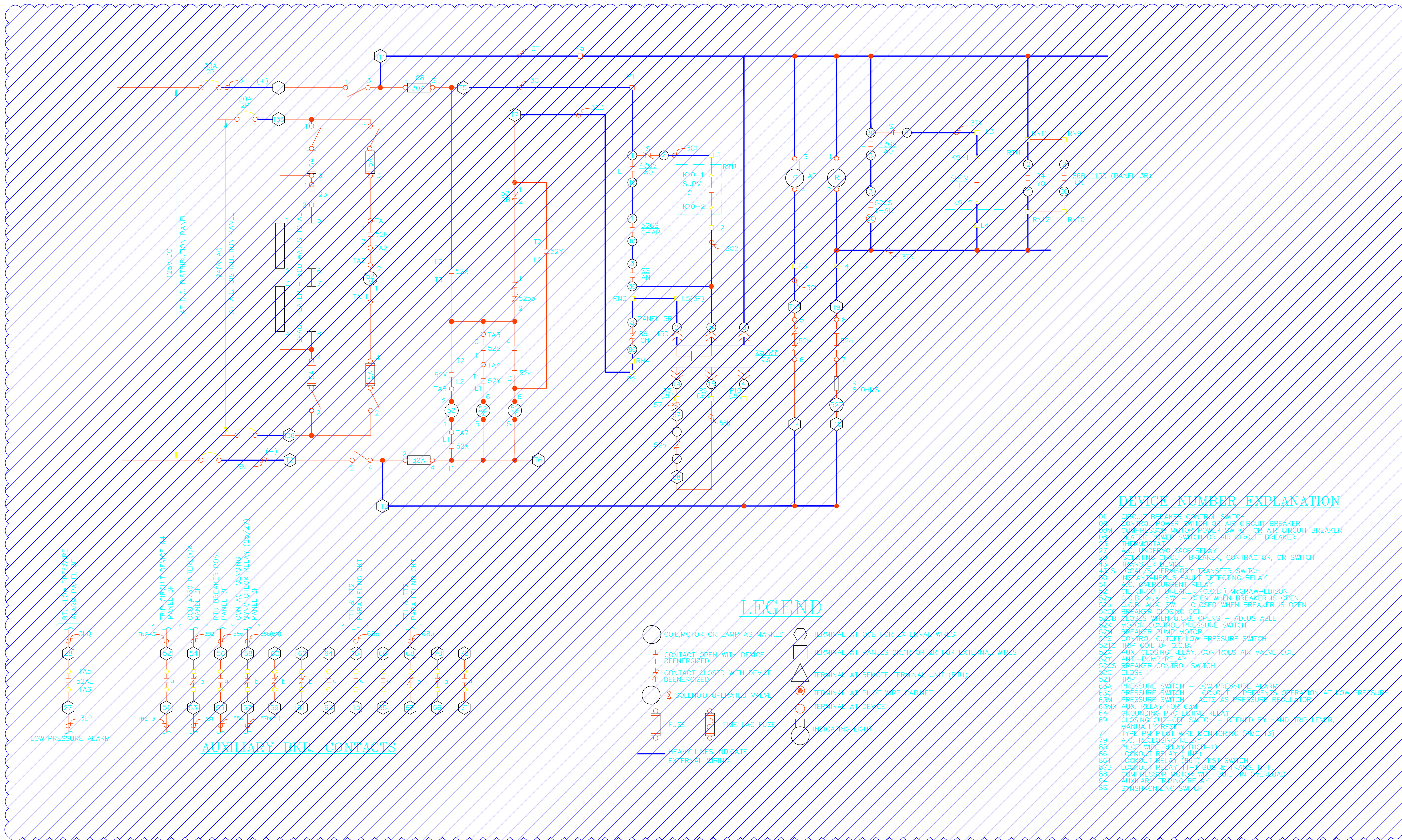
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
NO.		W.O. # P1700073		
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



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DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-2 SCHEMATIC	
CONFIDENTIAL			
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-SO-7001_0001.dwg	
DRAWING NO.:		01SS-EL-SO-7001	
SHEET 0001 OF 1		PAGE 63 / 76	



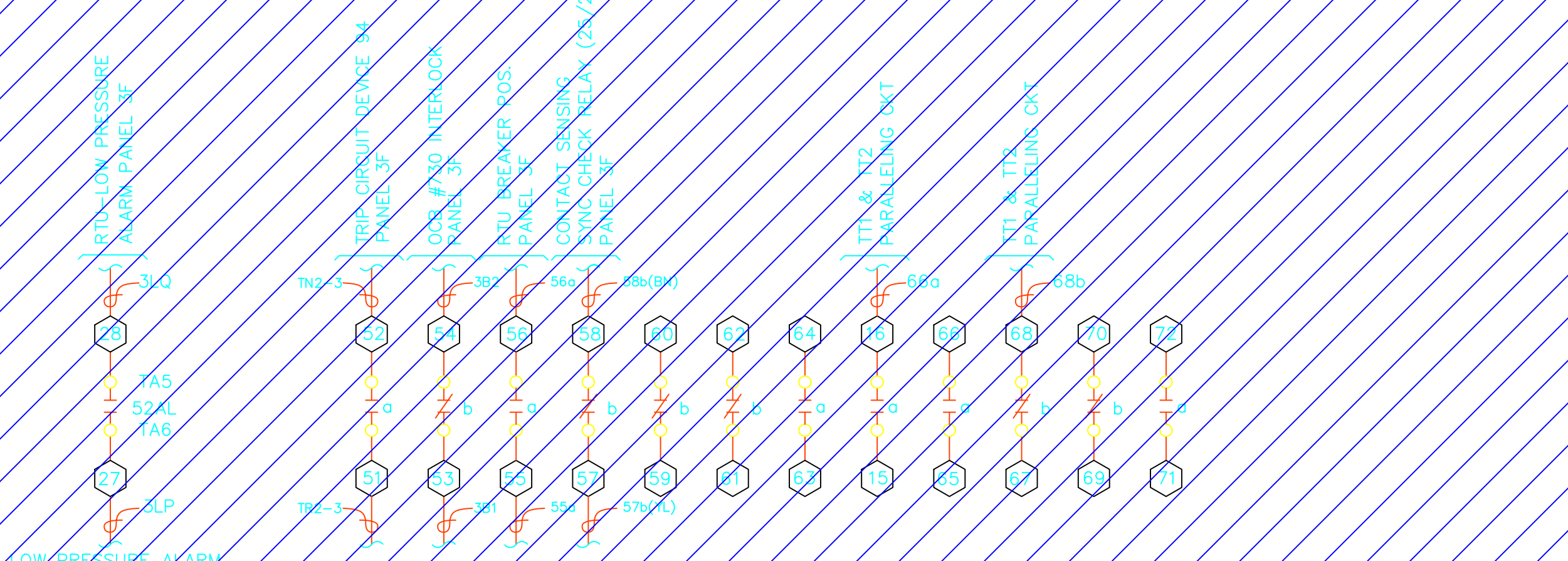
DEVICE NUMBER EXPLANATION

- 01 CIRCUIT BREAKER CONTROL SWITCH
- 03 CONTROL POWER SWITCH OR AIR CIRCUIT BREAKER
- 06M COMPRESSOR MOTOR/POWER SWITCH OR AIR CIRCUIT BREAKER
- 08M HEATER POWER SWITCH OR AIR CIRCUIT BREAKER
- 27 THERMOSTAT
- 34 SOLID STATE RELAY
- 43 TRANSFER SWITCH
- 43S TRANSFER SWITCH
- 50 INSTANTANEOUS FAULT DETECTING RELAY
- 51 OIL OVERCURRENT RELAY
- 52 OIL CIRCUIT BREAKER (O.C.B.) McSWAY-EDISON
- 52a O.C.B. AUX. SW. - OPEN WHEN BREAKER IS OPEN
- 52b O.C.B. AUX. SW. - CLOSE WHEN BREAKER IS OPEN
- 5200 BREAKER CLOSING COIL
- 5200B CLOSING COIL - ADJUSTABLE
- 52M MOTOR CONTROL PRESSURE SWITCH
- 52N BREAKER PUMP MOTOR
- 52S CONTROL CUTOFF LOW PRESSURE SWITCH
- 53 TRIP COIL #1 O.C.B.
- 53A AUX. CLOSING RELAY, CONTROL AIR VALVE COIL
- 52Y AHT-BUMP RELAY
- 52Z BREAKER CONTROL SWITCH
- 52ZC TRIP
- 52ZD TRIP
- 52ZM TRIP
- 52ZS TRIP
- 52ZT TRIP
- 52ZU TRIP
- 52ZV TRIP
- 52ZW TRIP
- 52ZX TRIP
- 52ZY TRIP
- 52ZZ TRIP
- 53A TRIP
- 53B TRIP
- 53C TRIP
- 53D TRIP
- 53E TRIP
- 53F TRIP
- 53G TRIP
- 53H TRIP
- 53I TRIP
- 53J TRIP
- 53K TRIP
- 53L TRIP
- 53M TRIP
- 53N TRIP
- 53O TRIP
- 53P TRIP
- 53Q TRIP
- 53R TRIP
- 53S TRIP
- 53T TRIP
- 53U TRIP
- 53V TRIP
- 53W TRIP
- 53X TRIP
- 53Y TRIP
- 53Z TRIP

LEGEND

- COIL/MOTOR OR LAMP AS MARKED
- CONTACT OPEN WITH DEVICE DEENERGIZED
- CONTACT CLOSED WITH DEVICE DEENERGIZED
- SOLENOID OPERATED VALVE
- FUSE
- TIME LAG FUSE
- HEAVY LINES INDICATE EXTERNAL WIRING
- TERMINAL AT OCB FOR EXTERNAL WIRES
- TERMINAL AT PANELS 3R, 1R, OR 2R FOR EXTERNAL WIRES
- TERMINAL AT REMOTE TERMINAL UNIT (RTU)
- TERMINAL AT PILOT WIRE CABINET
- TERMINAL AT DEVICE
- INDICATING LIGHT

AUXILIARY BKR. CONTACTS



DEMOLITION

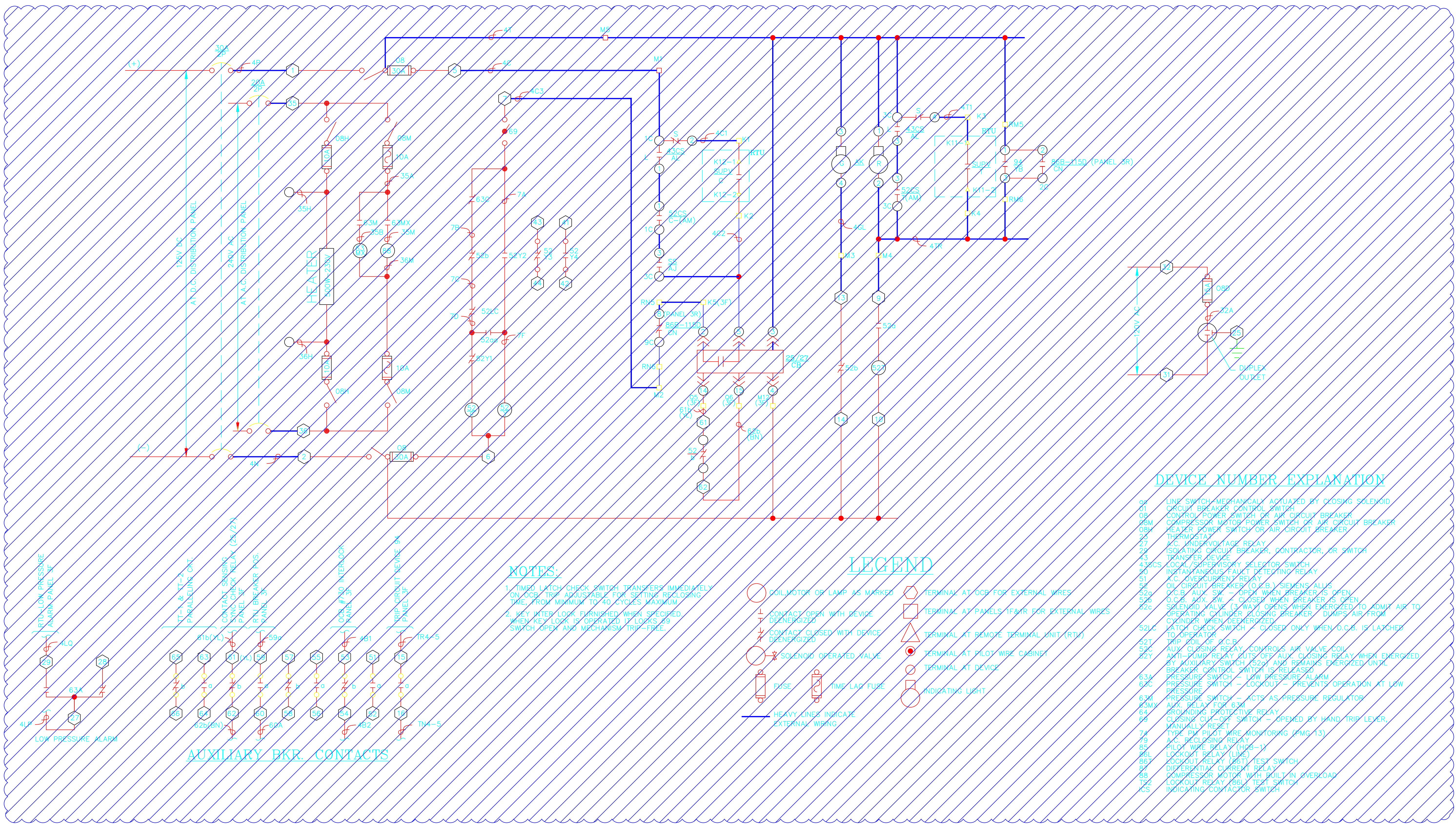
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL					
			W.O. # P1700073		
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



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5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-3 SCHEMATIC	
		CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-S0-7002_0001.dwg	
DRAWING NO.:		01SS-EL-S0-7002	
SHEET		0001 OF 1	
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DEMOLITION

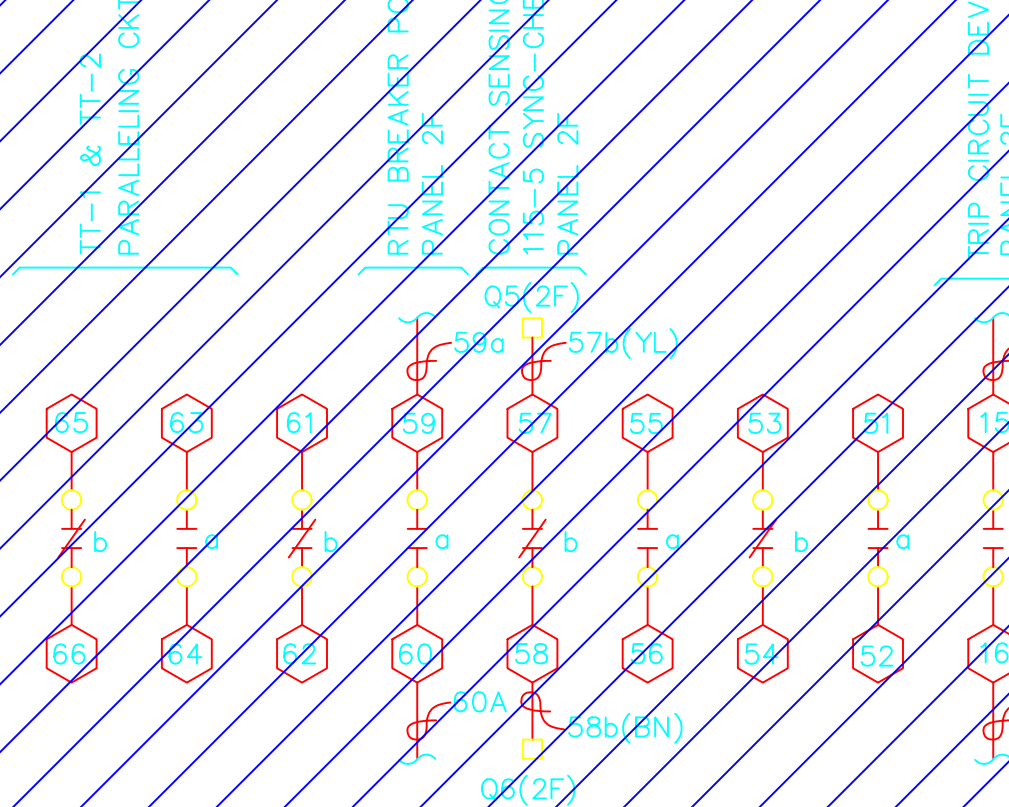
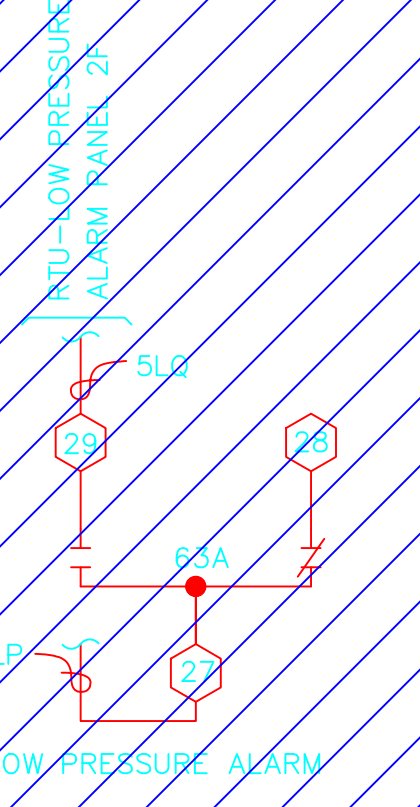
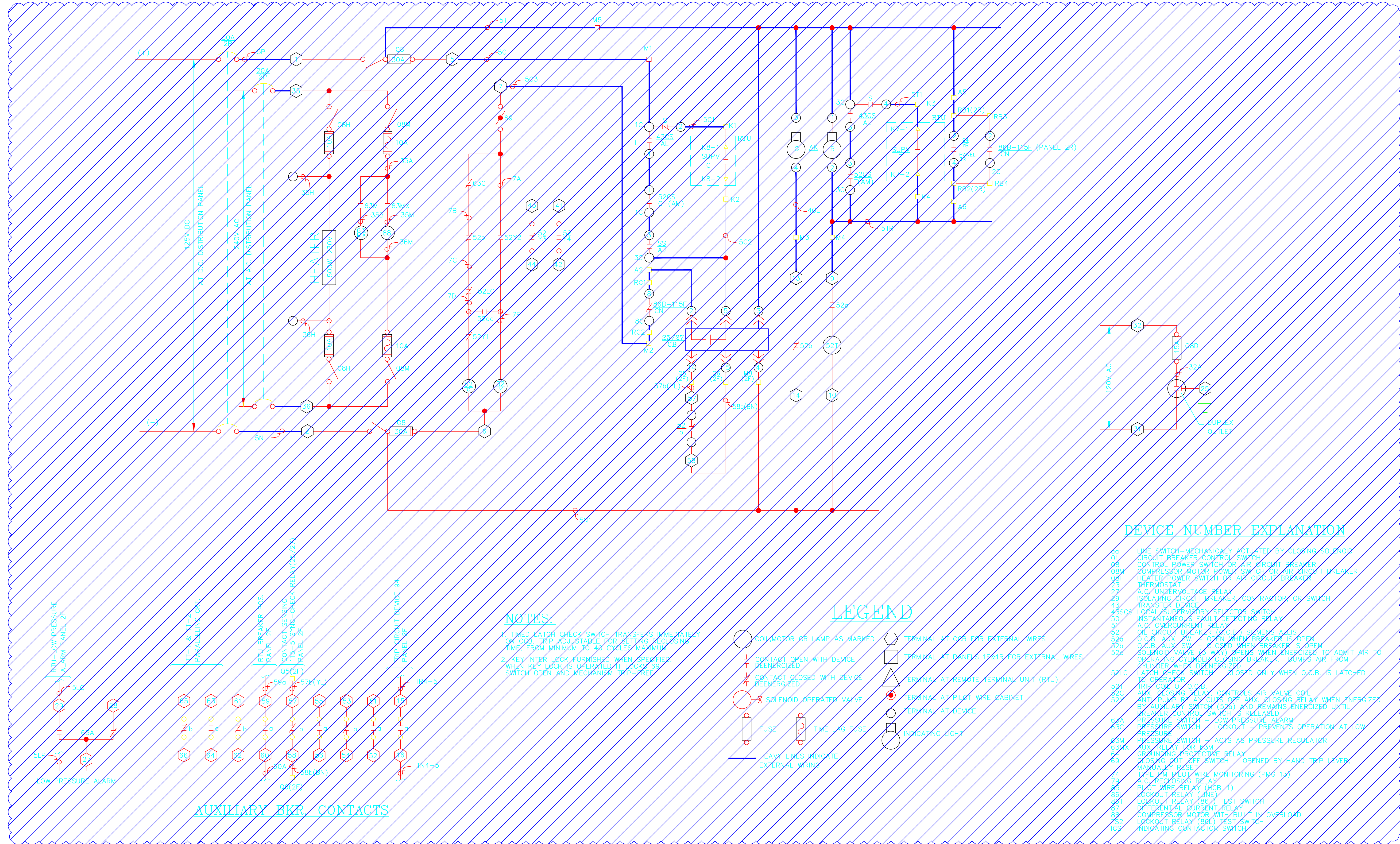
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



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Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-4 SCHEMATIC	
CONFIDENTIAL			
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-S0-7003_0001.dwg	
DRAWING NO.:		01SS-EL-S0-7003	
SHEET 0001 OF 1		PAGE 65 / 76	



- NOTES**
1. TIMED LATCH CHECK SWITCH TRANSFERS IMMEDIATELY ON OCB TRIP TO PREVENT RE-CLOSING. TRIP FROM MINIMUM TO 30 CYCLES MAXIMUM.
 2. KEY INTER LOCK FURNISHED WHEN SPECIFIED. WHEN KEY LOCK IS OPERATED IT LOCKS B9 SWITCH OPEN AND MECHANISM TRIP-FREE.

- LEGEND**
- SOLENOID, MOTOR OR LAMP AS MARKED
 - CONTACT OPEN WITH DEVICE RE-ENERGIZED
 - CONTACT CLOSED WITH DEVICE RE-ENERGIZED
 - SOLENOID OPERATOR VALVE
 - FUSE
 - TIME LAG FUSE
 - HEAVY LINES INDICATE EXTERNAL WIRING
 - TERMINAL AT OCB FOR EXTERNAL WIRES
 - TERMINAL AT PANELS 1F&1R FOR EXTERNAL WIRES
 - △ TERMINAL AT REMOTE TERMINAL UNIT (RTU)
 - TERMINAL AT PILOT WIRE CABINET
 - TERMINAL AT DEVICE
 - INDICATING LIGHT

- DEVICE NUMBER EXPLANATION**
- S0 LINE SWITCH—MECHANICALLY ACTUATED BY CLOSING SOLENOID
 - S1 CIRCUIT BREAKER CONTROL SWITCH
 - S2 CONTROL POWER SWITCH OR AIR CIRCUIT BREAKER
 - S3 COMPRESSOR MOTOR POWER SWITCH OR AIR CIRCUIT BREAKER
 - S4 HEATER POWER SWITCH OR AIR CIRCUIT BREAKER
 - S5 THERMOSTAT
 - S6 UNDERVOLTAGE RELAY
 - S7 ISOLATING CIRCUIT BREAKER, CONTACTOR, OR SWITCH
 - S8 TRANSFER DEVICE
 - S9 LOCAL SUPERVISORY SELECTOR SWITCH
 - S10 INSTANTANEOUS FAULT DETECTING RELAY
 - S11 A.C. OVERCURRENT RELAY
 - S12 O.C.B. AUX SW. — OPEN WHEN BREAKER IS OPEN
 - S13 O.C.B. AUX SW. — CLOSED WHEN BREAKER IS OPEN
 - S14 SOLENOID VALVE (2-WAY) OPENS WHEN ENERGIZED TO ADMIT AIR TO OPERATING CYLINDER-CLOSING BREAKER. BOUNCES AIR FROM CYLINDER WHEN DEENERGIZED.
 - S15 LATCH CHECK SWITCH — CLOSED ONLY WHEN O.C.B. IS LATCHED
 - S16 TRIP COIL OF O.C.B.
 - S17 AUX. CLOSING RELAY—CONTROLS AIR VALVE COIL
 - S18 AUX. TRIP RELAY COILS OF AUX. CLOSING RELAY WHEN ENERGIZED BY AUXILIARY SWITCH (S19) AND REMAINS ENERGIZED UNTIL BREAKER CONTROL SWITCH IS RELEASED
 - S19 PRESSURE SWITCH — LOW PRESSURE ALARM
 - S20 PRESSURE SWITCH — LOCKOUT — PREVENTS OPERATION AT LOW PRESSURE
 - S21 PRESSURE SWITCH — ACTS AS PRESSURE REGULATOR
 - S22 AUX. RELAY FOR S20
 - S23 GROUNDING PROTECTIVE RELAY
 - S24 COSMIC RADIATION SWITCH — OPENED BY HAND TRIP LEVER, MANUALLY RESET
 - S25 P.C. PILOT WIRE MONITORING (PIWG 13)
 - S26 A.C. RE-ENERGIZING DELAY
 - S27 PILOT WIRE RELAY (IICB-1)
 - S28 LOCKOUT RELAY (LARD)
 - S29 LOCKOUT RELAY (BBI) TEST SWITCH
 - S30 DIFFERENTIAL CURRENT RELAY
 - S31 COMPRESSOR MOTOR WITH TRIP BY OVERLOAD
 - S32 LOCKOUT RELAY (SBL) TEST SWITCH
 - ICS INDICATING CONTACTOR SWITCH

DEMOLITION

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT		W.O. # P1700073			
ENG./DESIGN: J. MOE/A. MITCHELL					
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

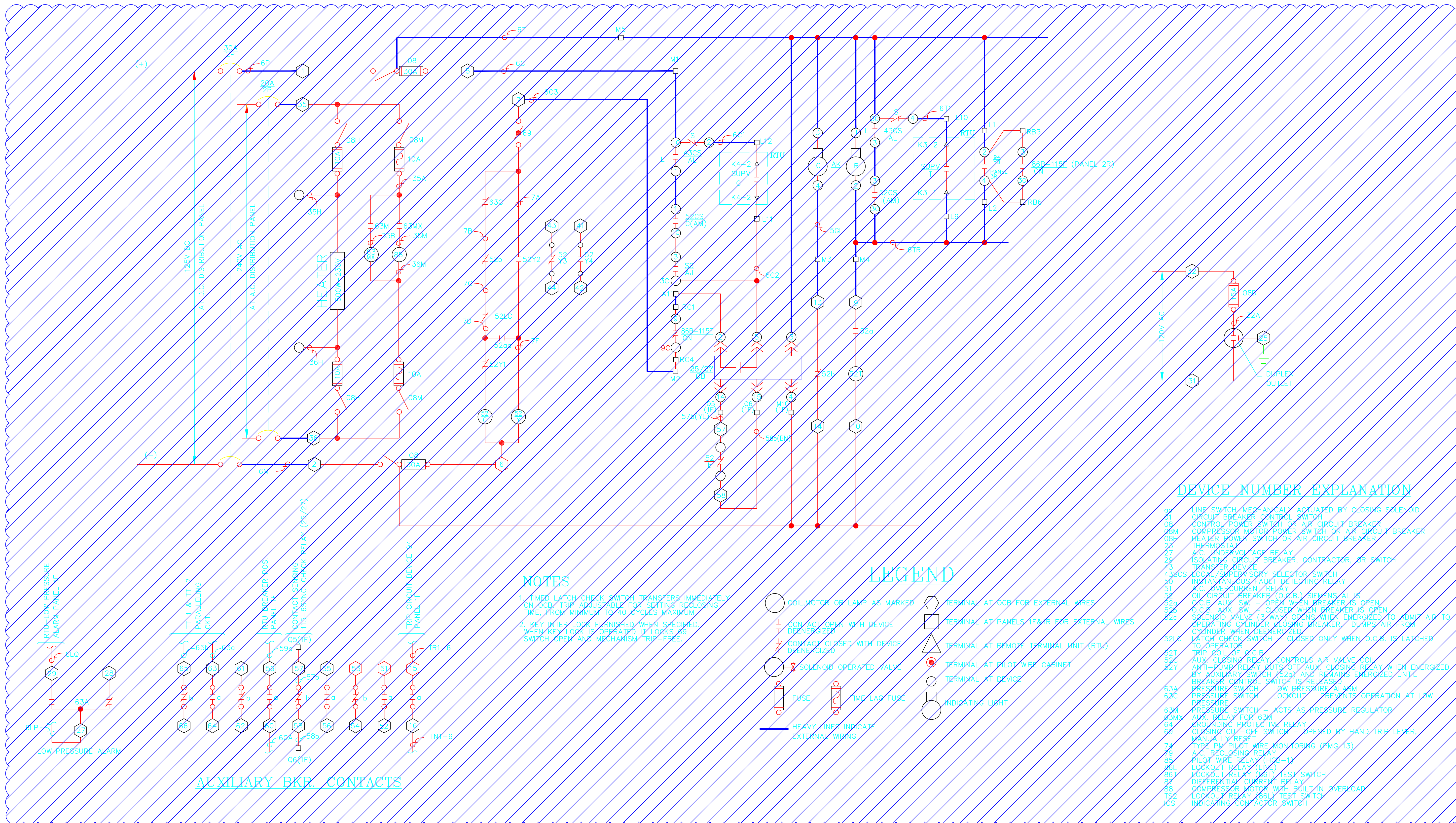
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-5 SCHEMATIC	
CONFIDENTIAL		
DRAWING NO. — PREVIOUS/REFERENCE		
DRAWING NO.:	01SS-EL-S0-7004	
SHEET 0001 OF 1	PAGE 66 / 76	

01SS-EL-S0-7004_0001.dwg



- DEVICE NUMBER EXPLANATION**
- 02 LINE SWITCH - MECHANICALLY ACTUATED BY CLOSING SOLENOID
 - 01 CIRCUIT BREAKER CONTROL SWITCH
 - 08 CONTROL POWER SWITCH OR AIR CIRCUIT BREAKER
 - 09M COMPRESSOR MOTOR POWER SWITCH OR AIR CIRCUIT BREAKER
 - 09H HEATER POWER SWITCH OR AIR CIRCUIT BREAKER
 - 09T THERMISTAT
 - 27 K.C. UNDERVOLTAGE RELAY
 - 28 ISOLATING CIRCUIT BREAKER, CONTACTOR, OR SWITCH
 - 29 TRANSFER RELAY
 - 43CS LOCK/SUPERVISORY SELECTOR SWITCH
 - 50 INSTANTANEOUS FAULT DETECTING RELAY
 - 51 K.C. OVERCURRENT RELAY
 - 52 OIL CIRCUIT BREAKER (O.C.B.) SIEMENS ALLIS
 - 52a O.C.B. AUX. SW. - CLOSING WHEN BREAKER IS OPEN
 - 52b O.C.B. SW. - CLOSING WHEN BREAKER IS OPEN
 - 52c SOLENOID VALVE (3-WAY) OPENS WHEN EMERGENCY TO ADMIT AIR TO OPERATING CYLINDER CLOSING BREAKER. DUMPS AIR FROM CYLINDER WHEN DEENERGIZED
 - 52d LATCH CHECK SWITCH - CLOSED ONLY WHEN O.C.B. IS LATCHED TO OPERATOR
 - 52L LATCH CHECK SWITCH - CLOSED ONLY WHEN O.C.B. IS LATCHED TO OPERATOR
 - 52T TRIP COIL OF O.C.B.
 - 52C AUX. CLOSING RELAY - CONTROLS AIR VALVE COIL WITH PRIMARY RELAY COILS OF AUX. CLOSING RELAY WHEN EMERGENCY BY AUXILIARY SWITCH (52a) AND REMAINS ENERGIZED UNTIL BREAKER CONTROL SWITCH IS RELEASED
 - 53A PRESSURE SWITCH - LOW PRESSURE ALARM
 - 53C PRESSURE SWITCH - LOCKOUT - PREVENTS OPERATION AT LOW PRESSURE
 - 53M PRESSURE SWITCH - ACTS AS PRESSURE REGULATOR
 - 63M AUX. RELAY FOR 6M
 - 64 GROUNDING PROTECTIVE RELAY
 - 04 CLOSING COIL OR SWITCH - OPENED BY HAND, TRIP LEVER, MANUALLY RESET
 - 74 TYPE PH PILOT WIRE MONITORING (PMG 13)
 - 79 K.C. LOCKOUT RELAY
 - 85 PILOT WIRE RELAY (HCB-1)
 - 86L LOCKOUT RELAY (LHM)
 - 86R LOCKOUT RELAY (RST) TEST SWITCH
 - 87 DIFFERENTIAL CURRENT RELAY
 - 88 COMPRESSOR MOTOR WITH BUILT-IN OVERLOAD
 - 89C LOCKOUT RELAY (RST) TEST SWITCH
 - 85 INDICATING CONTACTOR SWITCH

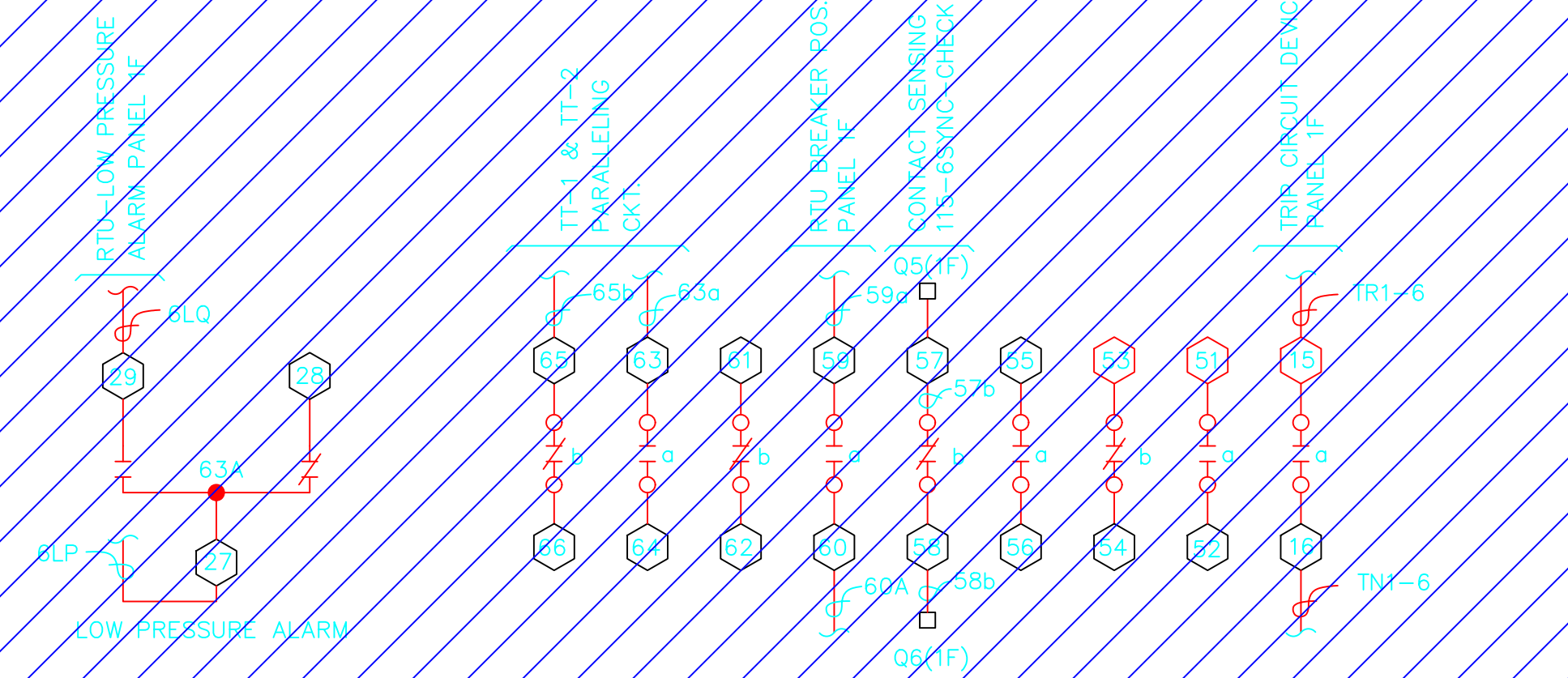
NOTES

1. TIME LATCH CHECK SWITCH TRANSFERS IMMEDIATELY ON OCB TRIP. ADJUSTABLE FOR SETTING RE-CLOSING TIME FROM MINIMUM TO 60 CYCLES MAXIMUM
2. KEY INTER LOCK ENERGIZED WHEN SPECIFIED. WHEN KEY LOCK IS OPERATED, IT LOCKS SW. SWITCH OPEN AND MECHANISM TRIP-FREE

LEGEND

- COIL/MOTOR OR LAMP AS MARKED
- CONTACT OPEN WITH DEVICE DEENERGIZED
- CONTACT CLOSED WITH DEVICE DEENERGIZED
- SOLENOID OPERATED VALVE
- FKSE
- TIME LAD FUSE
- HEAVY LINES INDICATE EXTERNAL WIRING
- TERMINAL AT OCB FOR EXTERNAL WIRES
- TERMINAL AT PANELS/FMR FOR EXTERNAL WIRES
- TERMINAL AT REMOTE TERMINAL UNIT (RTU)
- TERMINAL AT PILOT WIRE CABINET
- TERMINAL AT DEVICE
- INDICATING LIGHT

AUXILIARY BKR. CONTACTS



DEMOLITION

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

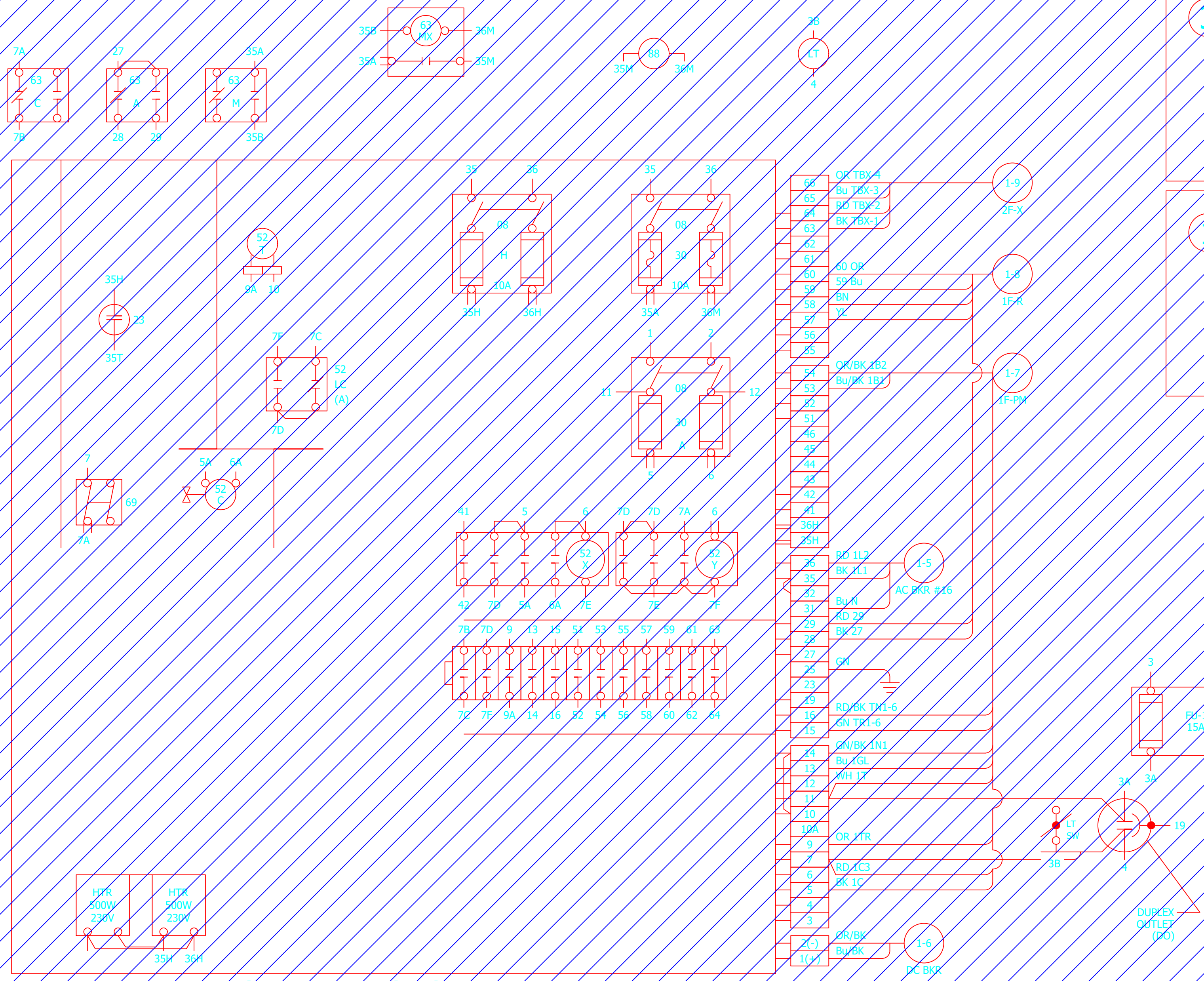
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	02/05/21



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

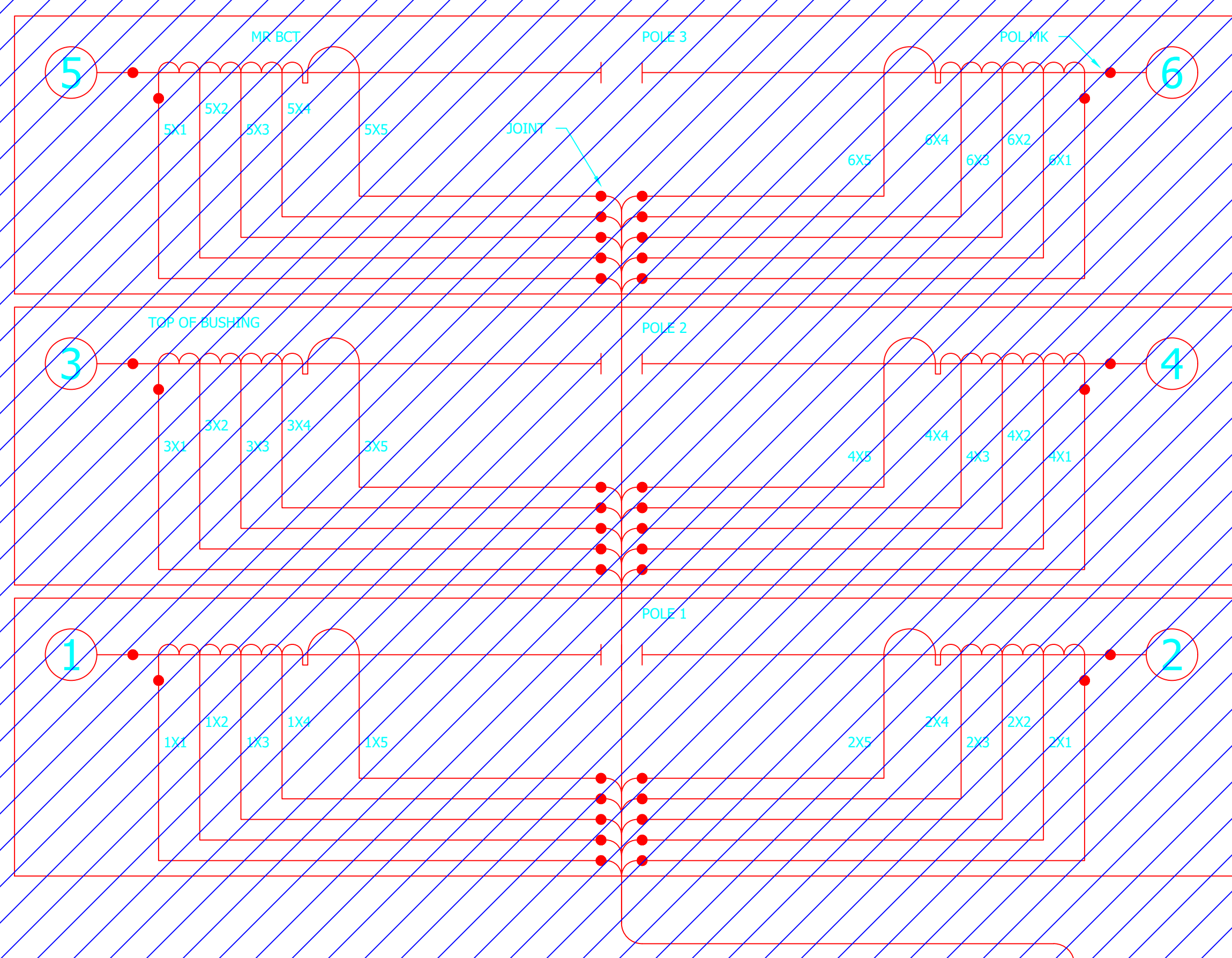
DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-6 SCHEMATIC	
CONFIDENTIAL			
DRAWING NO. - PREVIOUS/REFERENCE		01SS-EL-S0-7005_0001.dwg	
DRAWING NO.:		01SS-EL-S0-7005	
SHEET 0001 OF 1		PAGE 67 / 76	

WIRE NO.	FROM	TO
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2	7B	7A
3	7B	7A
4	7B	7A
5	7B	7A
6	7B	7A
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94	7B	7A
95	7B	7A
96	7B	7A
97	7B	7A
98	7B	7A
99	7B	7A
100	7B	7A



OPERATING CABINET

115-1



RIGHT SIDE OF OPERATING CABINET

COLOR OF LEADS

- X1 & Y1 - RED
- X2 & Y2 - BLACK
- X3 & Y3 - WHITE
- X4 & Y4 - GREEN
- X5 & Y5 - YELLOW

NOTE: CONTACTS MANUFACTURED BY SELWEN-ALTISS INC.

TAPS	1200/5A	RATIO
X1-X5	240	1200/5
X2-X5	200	1000/5
X3-X4	180	900/5
X1-X3	60	300/5
X2-X4	120	600/5
X2-X3	20	100/5
X4-X5	80	400/5
X1-X2	40	200/5
X3-X5	180	900/5
X3-X4	100	500/5

DEMOLITION

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

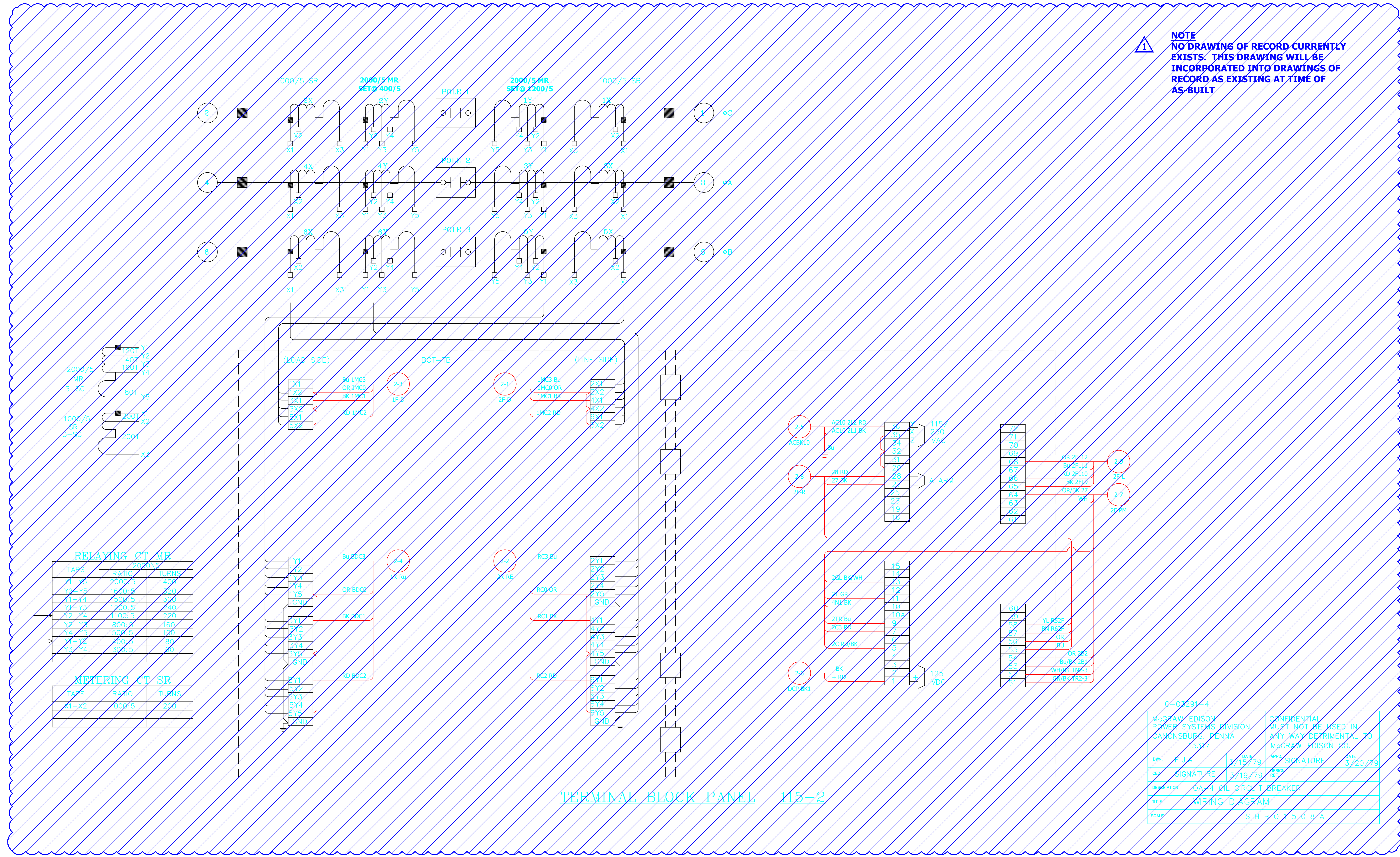
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	06/08/21



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-1 WIRING DIAGRAM
CONFIDENTIAL	01SS-EL-WO-7006_0001.dwg
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.:	01SS-EL-WO-7006
SHEET 0001 OF 1	PAGE 68 / 76

NOTE
 NO DRAWING OF RECORD CURRENTLY EXISTS. THIS DRAWING WILL BE INCORPORATED INTO DRAWINGS OF RECORD AS EXISTING AT TIME OF AS-BUILT



McGraw-Hill Construction Information Group		CONFIDENTIAL	
POWER SYSTEMS DIVISION		MUST NOT BE USED IN ANY WAY DETRIMENTAL TO	
CANONSBURG, PENNSYLVANIA 15317		McGraw-Hill Construction Information Group	
DATE	DATE	DATE	DATE
3/19/79	3/19/79	13/20/79	
SIGNATURE	SIGNATURE	SIGNATURE	SIGNATURE
DA-4 OIL CIRCUIT BREAKER			
WIRING DIAGRAM			
SCALE: 1" = 5.000"			

DEMOLITION

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	06/08/21

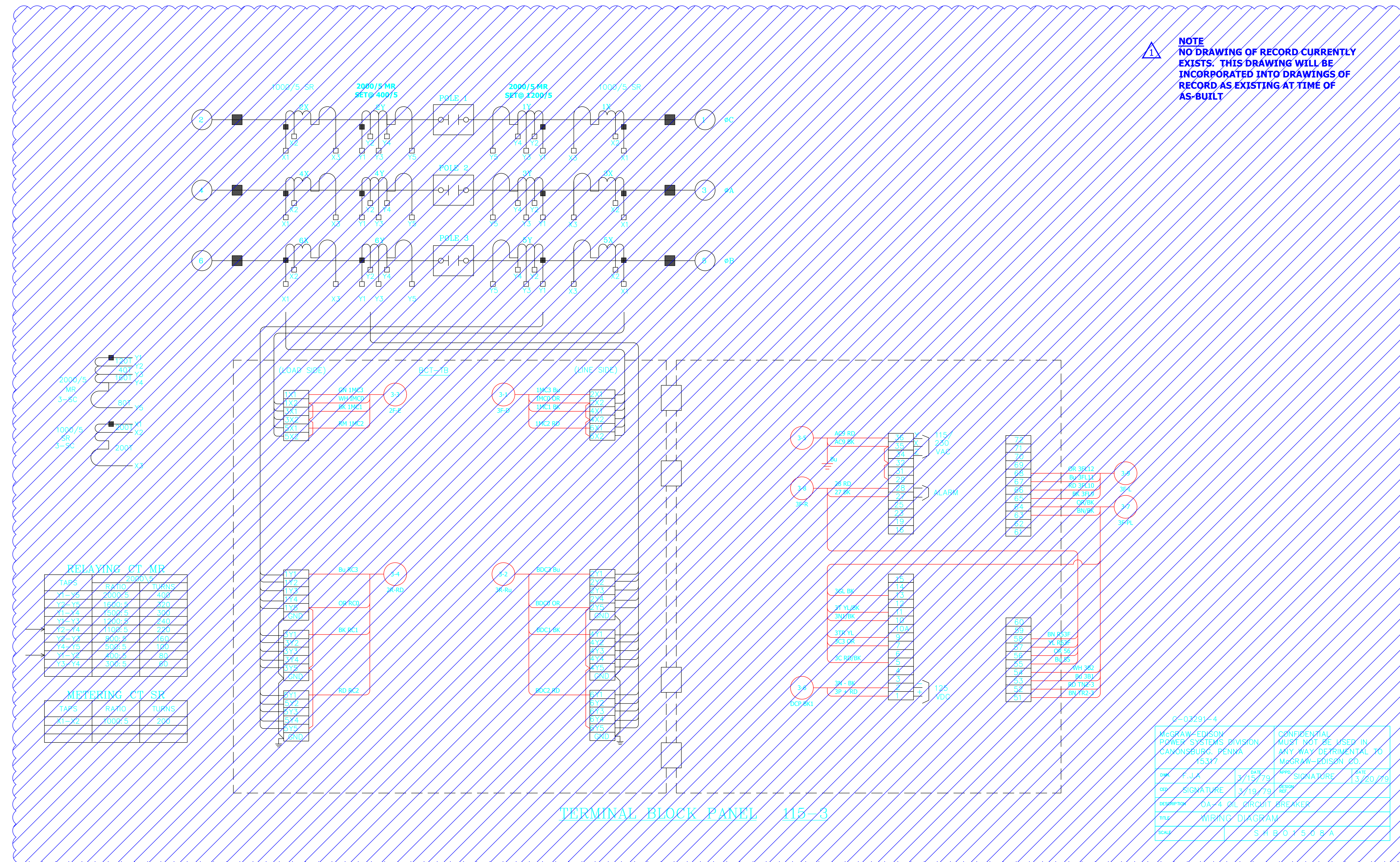


Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300
 Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD	
		DEMOLITION	
		OCB 115-2 WIRING DIAGRAM	
CONFIDENTIAL			
DRAWING NO. - PREVIOUS/REFERENCE			
DRAWING NO.:		01SS-EL-WO-7007	
SHEET 0001 OF 1		PAGE 69 / 76	

01SS-EL-WO-7007_0001.dwg

NOTE
 NO DRAWING OF RECORD CURRENTLY EXISTS. THIS DRAWING WILL BE INCORPORATED INTO DRAWINGS OF RECORD AS EXISTING AT TIME OF AS-BUILT



RELAYING CT MR

TAPS	RATIO	TURNS
X1-X2	2000/5	400
Y2-Y3	1000/5	200
X1-Y1	500/5	100
Y2-Y3	1000/5	200
X2-X3	1000/5	200
Y2-Y3	1000/5	200
X4-X5	800/5	160
Y1-Y2	400/5	80
X3-Y4	300/5	60

METERING CT SE

TAPS	RATIO	TURNS
X1-X2	1000/5	200

TERMINAL BLOCK PANEL 115-3

Q-03291-4	
McGraw-Edison POWER SYSTEMS DIVISION CANONSBURG, PENNSA 15317	CONFIDENTIAL MUST NOT BE USED IN ANY WAY DETRIMENTAL TO McGraw-Edison CO.
DATE: 3/19/79	DATE: 13/20/79
SIGNATURE: [Signature]	SIGNATURE: [Signature]
DESCRIPTION: OA-4 OIL CIRCUIT BREAKER	
TITLE: WIRING DIAGRAM	
SCALE: 1	SCALE: S M B O X 5 0 8 A

DEMOLITION

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	06/08/21

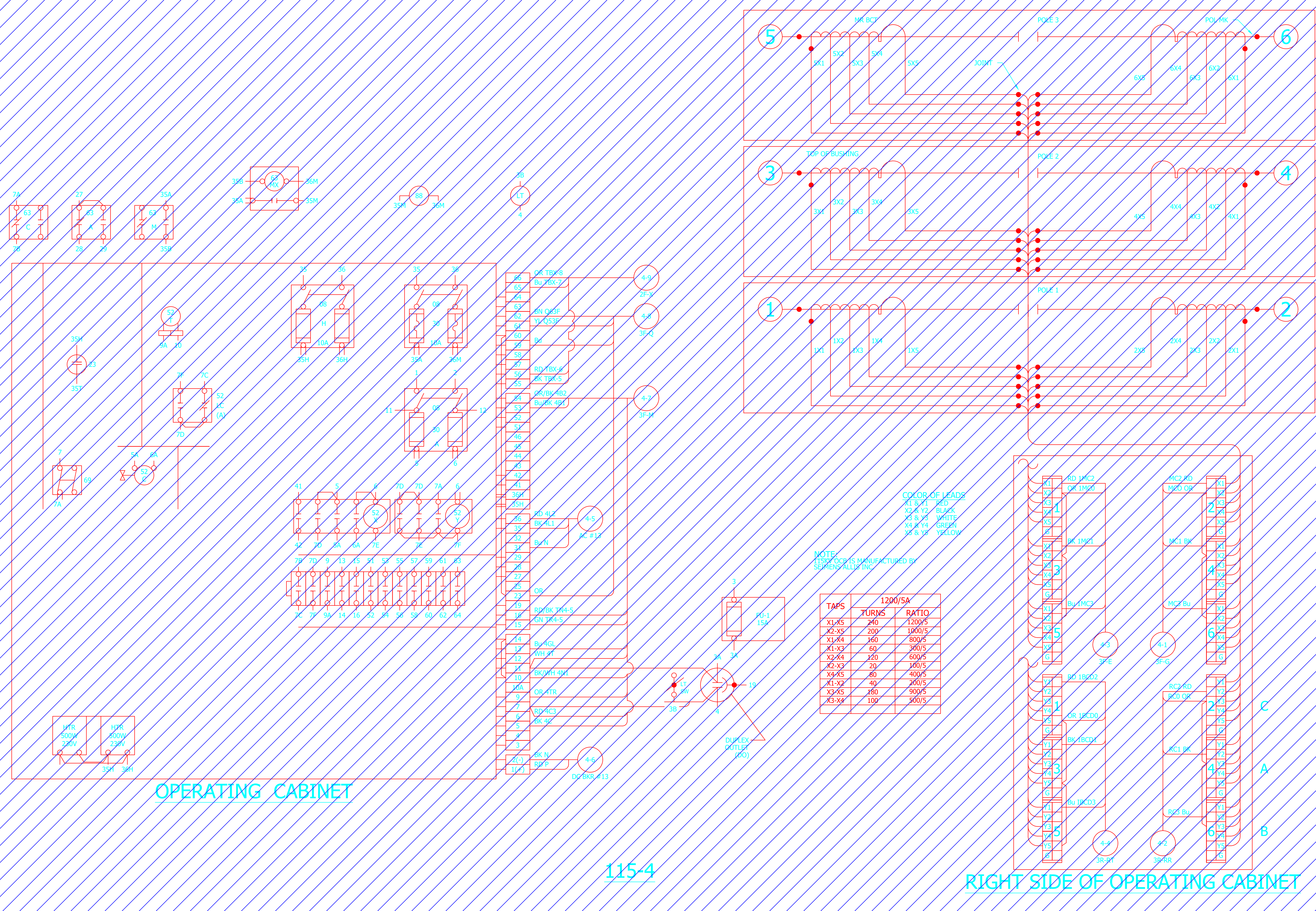


Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300
 Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-3 WIRING DIAGRAM
CONFIDENTIAL	01SS-EL-WO-7008_0001.dwg
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.:	01SS-EL-WO-7008
SHEET 0001 OF 1	PAGE 70 / 76

WIRE TABLE

WIRE No.	FROM	TO
1	TB-2	OB
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4	TB-1	D/O
5	TB-2	OB
6	TB-2	OB
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100	TB-2	OB



DEMOLITION

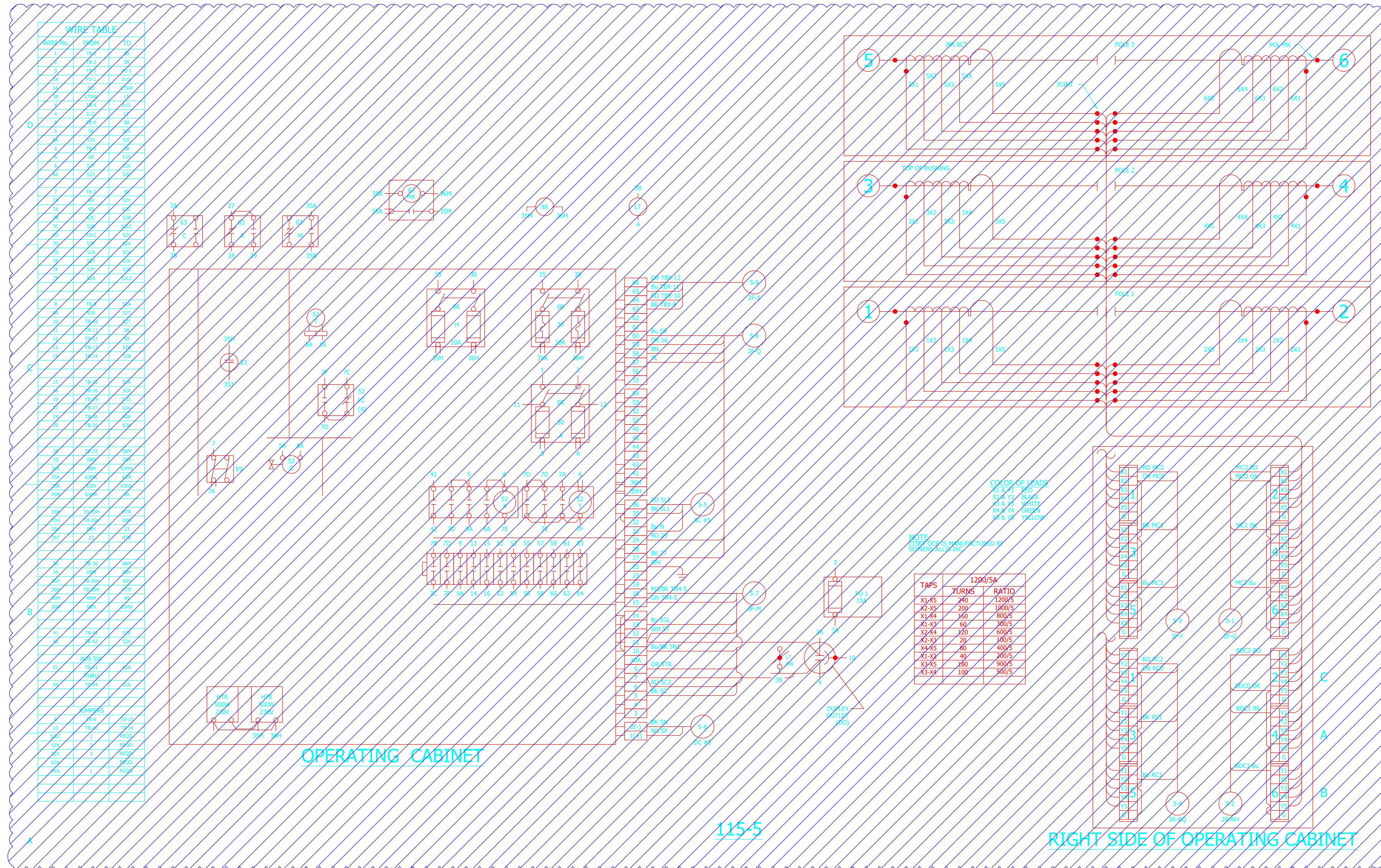
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL				
W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	06/08/21

CHUGACH
 POWERING ALASKA'S FUTURE

Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300
 Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD
	DEMOLITION
	OCB 115-4 WIRING DIAGRAM
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.:	01SS-EL-WO-7009
SHEET 0001 OF 1	PAGE 71 / 76
	01SS-EL-WO-7009_0001.dwg



DEMOLITION

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
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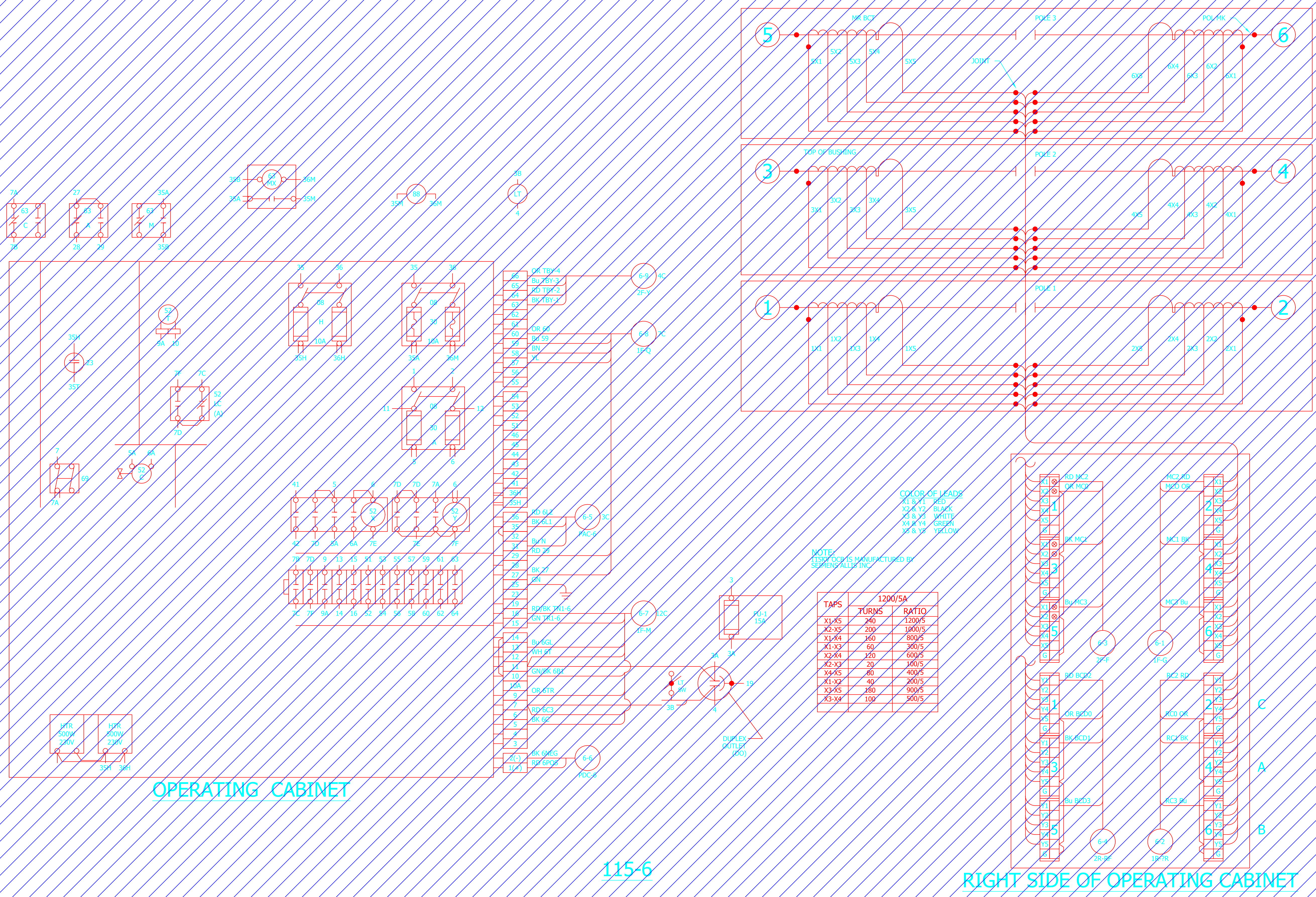
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	06/08/21



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300
Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD DEMOLITION OCB 115-5 SCHEMATIC
CONFIDENTIAL	01SS-EL-WO-7010_0001.dwg
DRAWING NO. - PREVIOUS/REFERENCE	
DRAWING NO.:	01SS-EL-WO-7010
SHEET 0001 OF 1	PAGE 72 / 76

WIRE No.	FROM	TO
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2	TR-2	08
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3A	TR-1	010
3B	TR-2	010
3C	TR-3	010
4	TR-4	17
5	TR-5	08
6	TR-6	025
7	TR-7	09
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98	TR-98	025
99	TR-99	025
100	TR-100	025



TAPS	TURNS	RATIO
X1-X5	240	1200/5
X2-X5	200	1000/5
X1-X4	160	800/5
X1-X3	60	300/5
X2-X4	120	600/5
X2-X3	20	100/5
X4-X5	80	400/5
X1-X2	40	200/5
X3-X5	180	900/5
X3-X4	100	500/5

COLOR OF LEADS
 X1 & X4 RED
 X2 & X3 BLACK
 X3 & X5 WHITE
 X4 & X5 GREEN
 X5 & X3 YELLOW

NOTE:
 BREAKER IS MANUFACTURED BY
 SHERIDAN ELECTRIC INC.

DEMOLITION

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					
ENG./DESIGN.: J. MOE/A. MITCHELL					
W.O. # P1700073					
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022	

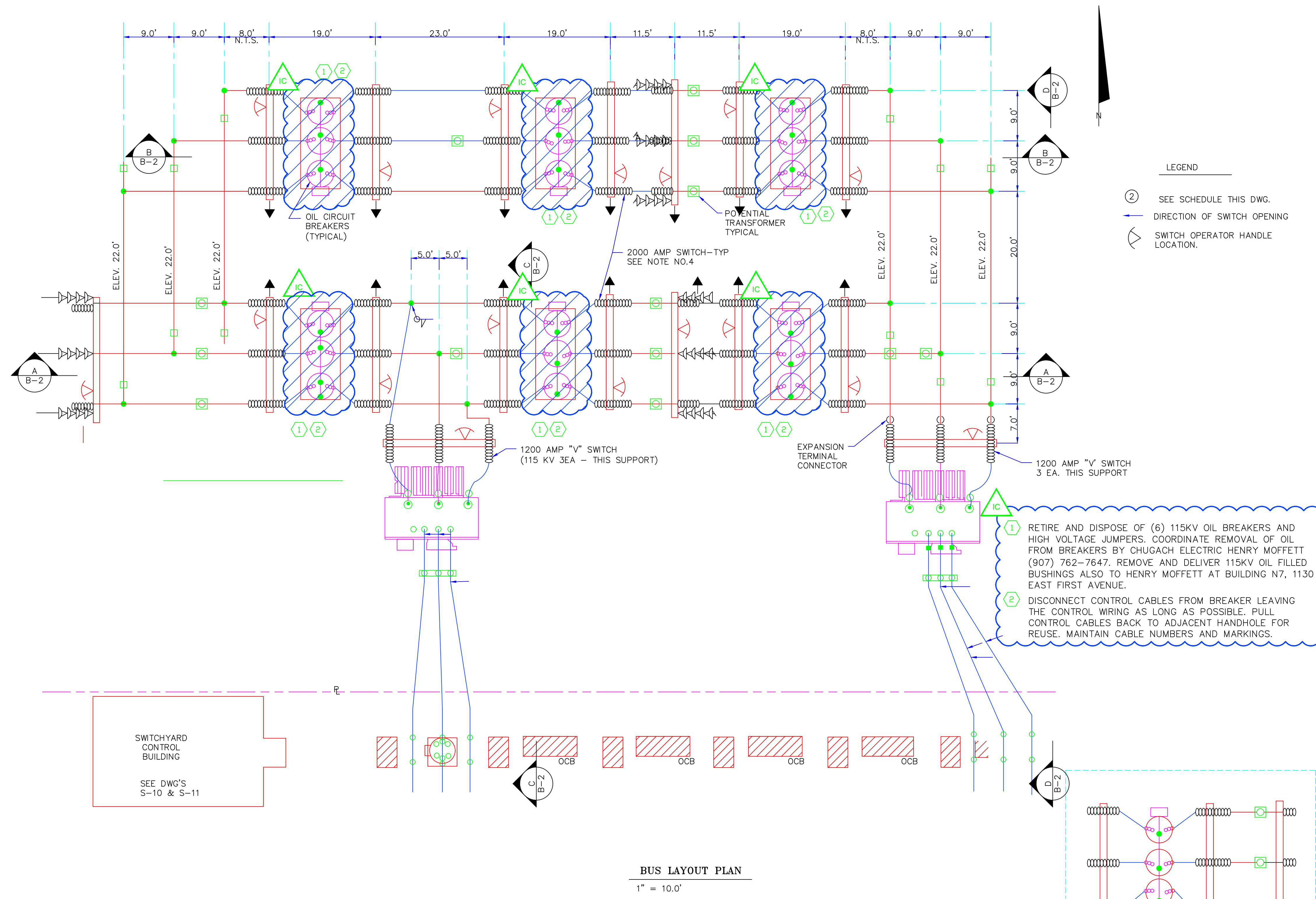
NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	06/08/21



Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300
 Anchorage, Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD DEMOLITION 115KV BREAKER 115-6 WIRING DIAGRAM	
DRAWING NO. - PREVIOUS/REFERENCE			
DRAWING NO.:		01SS-EL-WO-7011	
SHEET 0001 OF 1		PAGE 73 / 76	

01SS-EL-WO-7011_0001.dwg

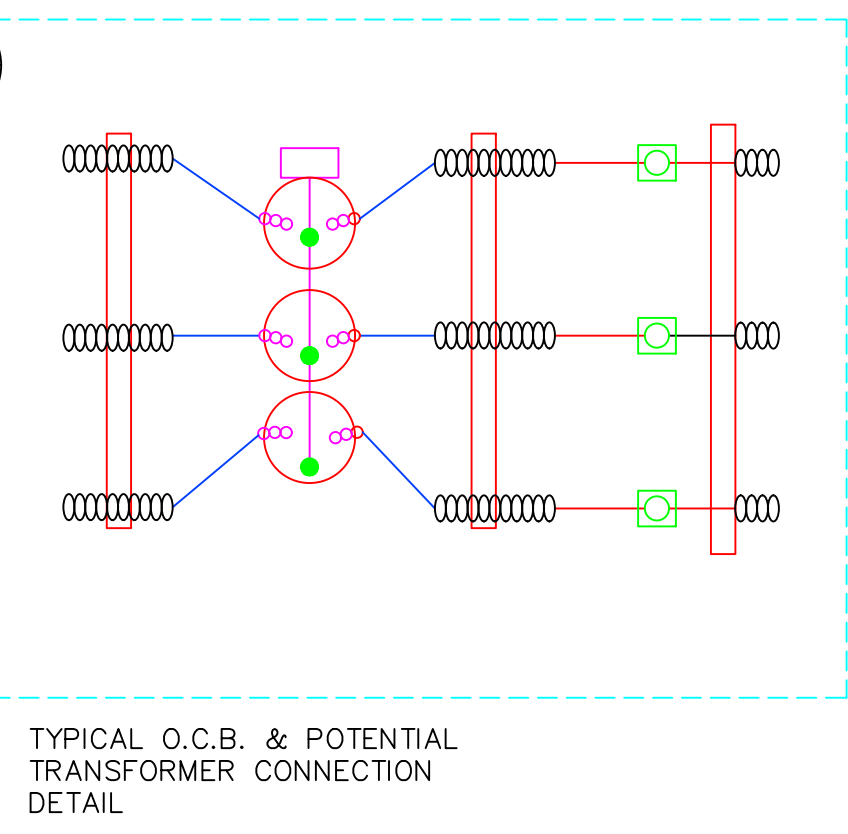


ITEM	QUAN.	DESCRIPTION
1		RTE POWER TRANSFORM 3Ø 42 MVA.
2		OIL CIRCUIT BREAKER - MCGRAW EDISON - 2000A
3		OIL CIRCUIT BREAKER - WESTING HOUSE - 1200A
4		3Ø DISCONNECT SWITCH - MORGAN - 2000A
5		3Ø DISCONNECT SWITCH - MORGAN - 1200A
6		3Ø DISCONNECT AND GROUNDING SWITCH-MORGAN-1200A
7		POTENTIAL TRANSFORMER - WESTING HOUSE - 115KV
8		5" FLEXIBLE JUMPER - ALCOA - 2000A
9		7" FLEXIBLE JUMPER - ALCOA - 2000A
10		2½" FLEXIBLE JUMPER - ALCOA - 600A
11		2" FLEXIBLE JUMPER - ALCOA - 1200A
12		AL STUD CONNECTOR - 2" STUD 4 HOLE PAD
13		AL STUD. CONNECTOR - 1½" STUD-4 HOLE PAD
14		AL STUD. CONNECTOR - 1¼" STUD - 2 HOLE PAD
15		4 HOLE SPADE LUG - 397.5 KCM ACSR
16		4 HOLE SPADE LUG-336.4 KCM ACSR
17		397.5 KCM ACSR - 26/7 STR. JUMPER WIRE
18		336.4 KCM ACSR - 26/7 STR. JUMPER WIRE
19		30Ø AL BUS ELBOW - WELD TYPE
20		4 HOLE SPADE LUG FOR 4" BUS - WELD TYPE
21		4" BUS WELDING COUPLER
22		4" AL BUS

- NOTES**
- FOR STRUCTURAL DETAIL SEE DWGS. S1 THRU S9
 - DIMENSION & ELEVATION ARE TO CENTER LINE OF BUS, UNLESS NOTED OTHERWISE, BUS & ELEVATIONS ARE 16.0' FROM BOTTOM OF BASE PLATES ON STEEL STRUCTURES (BOTTOM OF STEEL = 0.00 FT.)
 - LETTER MARKS INDICATE BUS BAR TYPE, SEE DRAWINGS B-4, B-5 & B-6 FOR DETAILS.
 - UNLESS NOTED OTHERWISE, ALL SWITCHES SHALL BE RATED FOR 2000 AMPS.
 - ALL STATION POST INSULATOR STACKS SHALL BE OHIO BRASS CAT. NO. 47801, STANDARD STRENGTH OR EQUAL UNLESS NOTED OTHERWISE, INSTALL BUS BAR SUPPORT BRACKETS TO INSULATOR STACK WITH NOT DIPPED GALVANIZED A307 STEEL BOLTS, WHERE NOTED, HIGH STRENGTH (H.S.) INSULATOR STACK SHALL BE OHIO BRASS CAT. NO. 47821.
 - PREFABRICATED BUS BARS & ACCESSORIES PROVIDED BY M.L. & P. CONTRACTOR RESPONSIBLE FOR FIELD FABRICATION AS REQUIRED FIELD WELDING AND ERECTION OF BUS BARS

① RETIRE AND DISPOSE OF (6) 115KV OIL BREAKERS AND HIGH VOLTAGE JUMPERS. COORDINATE REMOVAL OF OIL FROM BREAKERS BY CHUGACH ELECTRIC HENRY MOFFETT (907) 762-7647. REMOVE AND DELIVER 115KV OIL FILLED BUSHINGS ALSO TO HENRY MOFFETT AT BUILDING N7, 1130 EAST FIRST AVENUE.

② DISCONNECT CONTROL CABLES FROM BREAKER LEAVING THE CONTROL WIRING AS LONG AS POSSIBLE. PULL CONTROL CABLES BACK TO ADJACENT HANDHOLE FOR REUSE. MAINTAIN CABLE NUMBERS AND MARKINGS.



ALL BUS BARS
ALUMINUM BUS CONDUCTORS SHALL CONFORM TO ASTM DESIGNATION B221 AND B241; SIZE, ALLOY, AND LOCATION AS SHOWN ON THE DRAWINGS. WELDING PROCESS AND ALL WELDING OPERATORS SHALL BE QUALIFIED IN ACCORDANCE WITH THE ALUMINUM ASSOCIATION, "ALUMINUM CONSTRUCTION MANUAL," SECTION 7.2.4, "QUALIFICATIONS OF WELDING PROCEDURE AND WELDING." ALL WELDS SHALL BE MADE BY THE GAS METAL-ARC (MIG) OR GAS TUNGSTEN-ARC (TIG) WELDING PROCESS.

ELECTRICAL CONDUCTOR ACCESSORY PRODUCTS:
ALCOA CATALOG DG4A OR EQUAL.

DEMOLITION

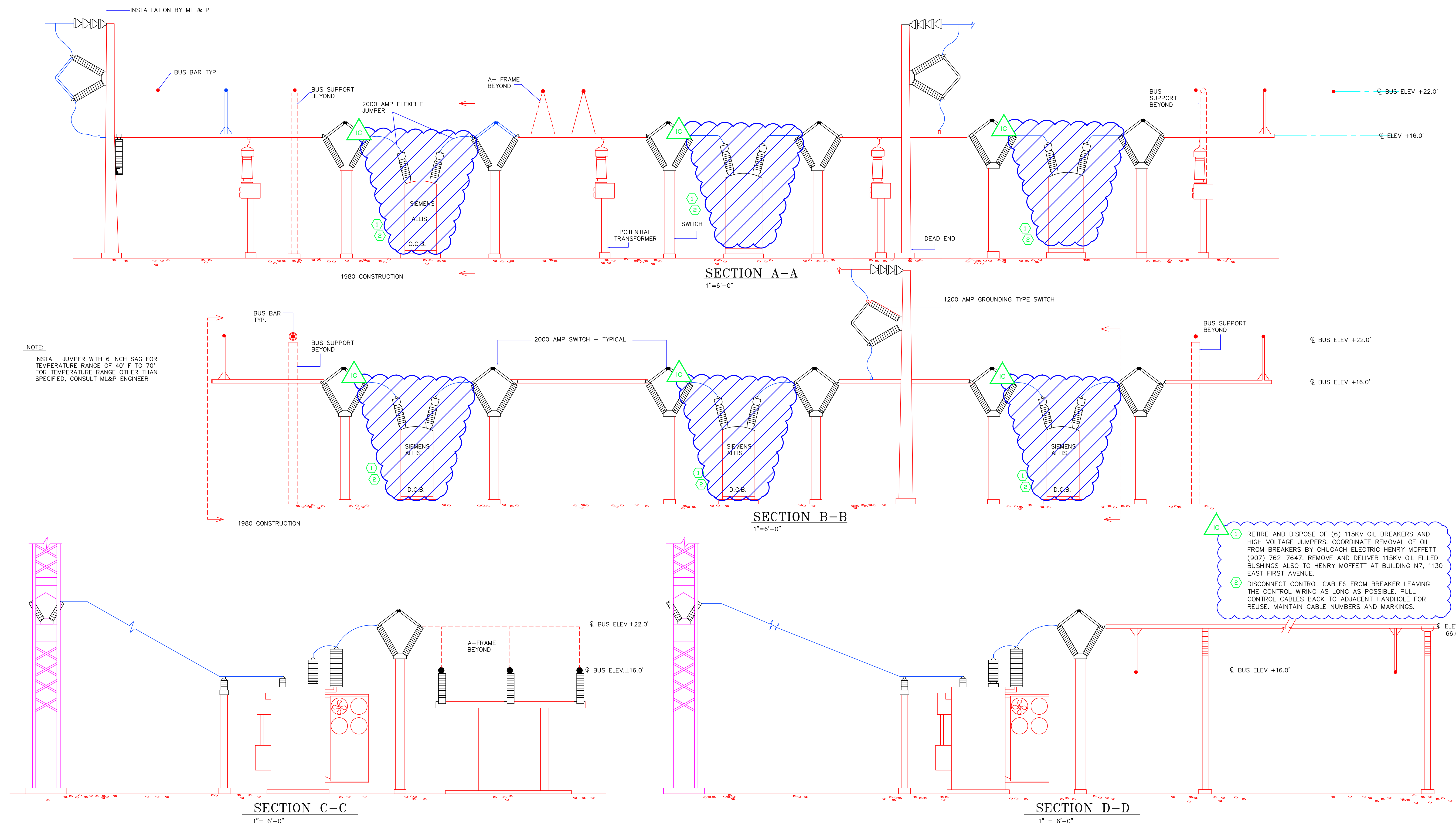
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT					W.O. # P1700073	
ENG./DESIGN.: J. MOE/A. MITCHELL						
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE	ENG. STAMP	
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022		

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	HYBRID INTO CEA TITLE BLOCK	GC			GC	11/12/21
2	CONVERT RASTER IMAGE TO CAD DRAWING BY DESIGN PRESENTATIONS	DP			AM	11/13/21

CHUGACH
POWERING ALASKA'S FUTURE

Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300 Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD DEMOLITION 115KV BREAKER - PLAN VIEW
CONFIDENTIAL	
DRAWING NO. - PREVIOUS/REFERENCE	8210E10A
DRAWING NO.:	01SS-SS-7012
SHEET 0001 OF 1	PAGE 74 / 76



NOTE:
 INSTALL JUMPER WITH 6 INCH SAG FOR TEMPERATURE RANGE OF 40° F TO 70° FOR TEMPERATURE RANGE OTHER THAN SPECIFIED, CONSULT ML&P ENGINEER

IC 1 RETIRE AND DISPOSE OF (6) 115KV OIL BREAKERS AND HIGH VOLTAGE JUMPERS. COORDINATE REMOVAL OF OIL FROM BREAKERS BY CHUGACH ELECTRIC HENRY MOFFETT (907) 762-7647. REMOVE AND DELIVER 115KV OIL FILLED BUSHINGS ALSO TO HENRY MOFFETT AT BUILDING N7, 1130 EAST FIRST AVENUE.
 IC 2 DISCONNECT CONTROL CABLES FROM BREAKER LEAVING THE CONTROL WIRING AS LONG AS POSSIBLE. PULL CONTROL CABLES BACK TO ADJACENT HANDHOLE FOR REUSE. MAINTAIN CABLE NUMBERS AND MARKINGS.

DEMOLITION

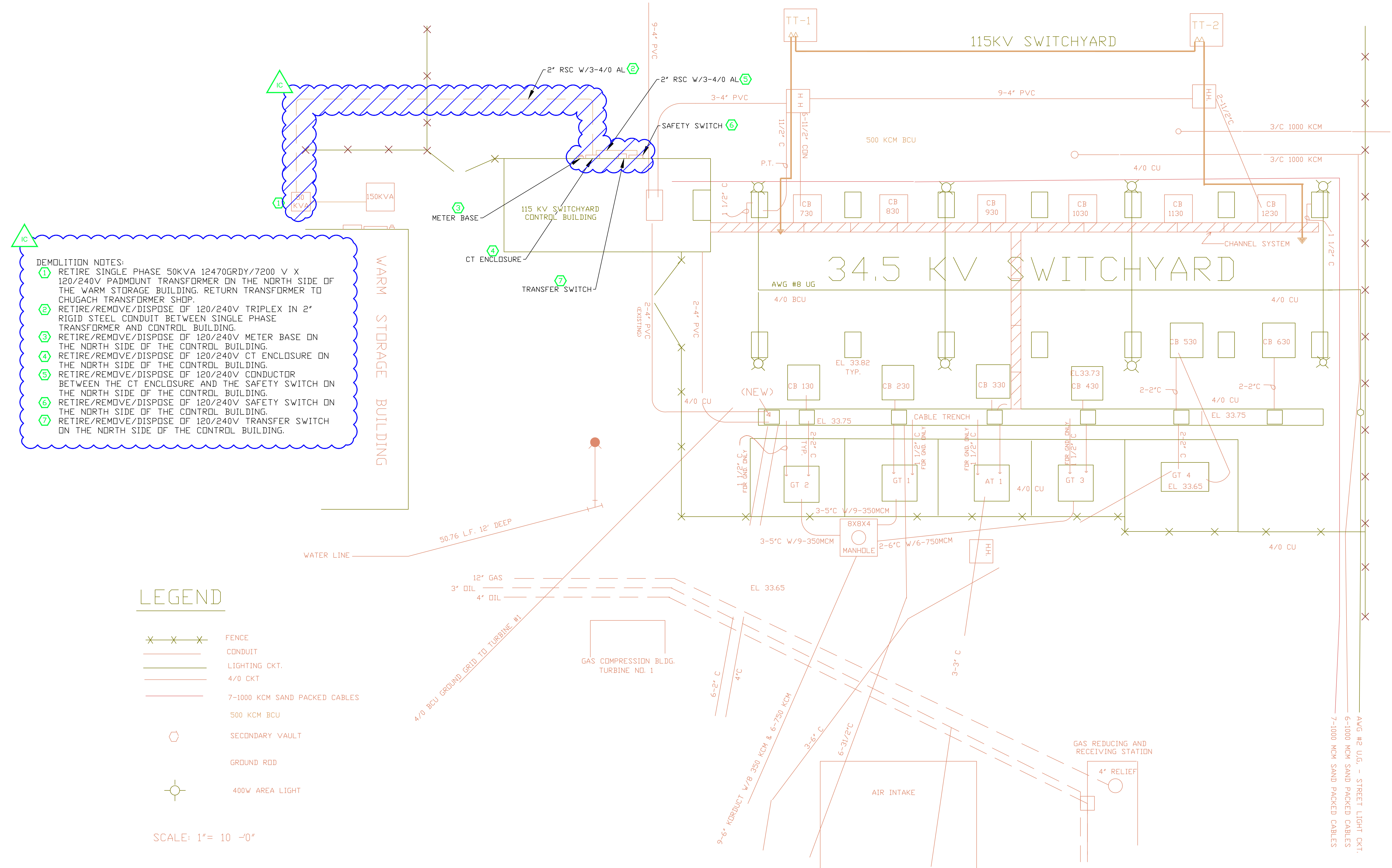
PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	HYBRID INTO CEA TITLE BLOCK	GC			GC	11/12/21
2	CONVERT RASTER IMAGE TO CAD DRAWING BY DESIGN PRESENTATIONS	DP			AM	11/13/21



Chugach Electric Association, Inc.
 5601 Electron Drive - P.O. Box 196300 Anchorage,
 Alaska 99519-6300

DRAWING NAME:		SUB 01_PLANT 1 SWITCHYARD DEMOLITION	
		115KV BREAKER - SECTION VIEW	
CONFIDENTIAL			
DRAWING NO. - PREVIOUS/REFERENCE		01SS-SS-7013_0001.dwg	
DRAWING NO.:		01SS-SS-7013	
SHEET 0001 OF 1		PAGE 75 / 76	



- DEMOLITION NOTES:**
- ① RETIRE SINGLE PHASE 50KVA 12470GRDY/7200 V X 120/240V PADMOUNT TRANSFORMER ON THE NORTH SIDE OF THE WARM STORAGE BUILDING. RETURN TRANSFORMER TO CHUGACH TRANSFORMER SHOP.
 - ② RETIRE/REMOVE/DISPOSE OF 120/240V TRIPLEX IN 2" RIGID STEEL CONDUIT BETWEEN SINGLE PHASE TRANSFORMER AND CONTROL BUILDING.
 - ③ RETIRE/REMOVE/DISPOSE OF 120/240V METER BASE ON THE NORTH SIDE OF THE CONTROL BUILDING.
 - ④ RETIRE/REMOVE/DISPOSE OF 120/240V CT ENCLOSURE ON THE NORTH SIDE OF THE CONTROL BUILDING.
 - ⑤ RETIRE/REMOVE/DISPOSE OF 120/240V CONDUCTOR BETWEEN THE CT ENCLOSURE AND THE SAFETY SWITCH ON THE NORTH SIDE OF THE CONTROL BUILDING.
 - ⑥ RETIRE/REMOVE/DISPOSE OF 120/240V SAFETY SWITCH ON THE NORTH SIDE OF THE CONTROL BUILDING.
 - ⑦ RETIRE/REMOVE/DISPOSE OF 120/240V TRANSFER SWITCH ON THE NORTH SIDE OF THE CONTROL BUILDING.

LEGEND

- ✕ ✕ ✕ FENCE
- CONDUIT
- LIGHTING CKT.
- 4/0 CKT
- 7-1000 KCM SAND PACKED CABLES
- SECONDARY VAULT
- GROUND ROD
- 400W AREA LIGHT

SCALE: 1" = 10' - 0"

PROJECT: PLANT 1 115KV BREAKER REPLACEMENT				
ENG./DESIGN.: J. MOE/A. MITCHELL W.O. # P1700073				
NO.	DESIGN/CONSTRUCTION/ASBUILT REVISION	DWN. BY/DATE	REVIEWED MGR./SUPV./DATE	APPROVED DIRECTOR/DATE
1	ISSUED FOR CONSTRUCTION	AS 10/25/2022	AJM 10/25/2022	BDA 10/25/2022
ENG. STAMP				

NO.	RECORD REVISION	CAD DRAWN BY	W.P.#	W.O. NUMBER	RECORD APPROVED	DATE
1	IMPORT INTO MERIDIAN AND ADD CEA TITLEBLOCK	BA			GC	03/11/21



Chugach Electric Association, Inc.
5601 Electron Drive - P.O. Box 196300 Anchorage, Alaska 99519-6300

DRAWING NAME:	SUB 01_PLANT 1 SWITCHYARD SITE AND STRUCTURAL STATION SERVICE - PLAN VIEW RETIREMENT
CONFIDENTIAL	01SS-SS-7014_0001.dwg
DRAWING NO. - PREVIOUS/REFERENCE	8210E10A
DRAWING NO.:	01SS-SS-7014
SHEET	0001 OF 8
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