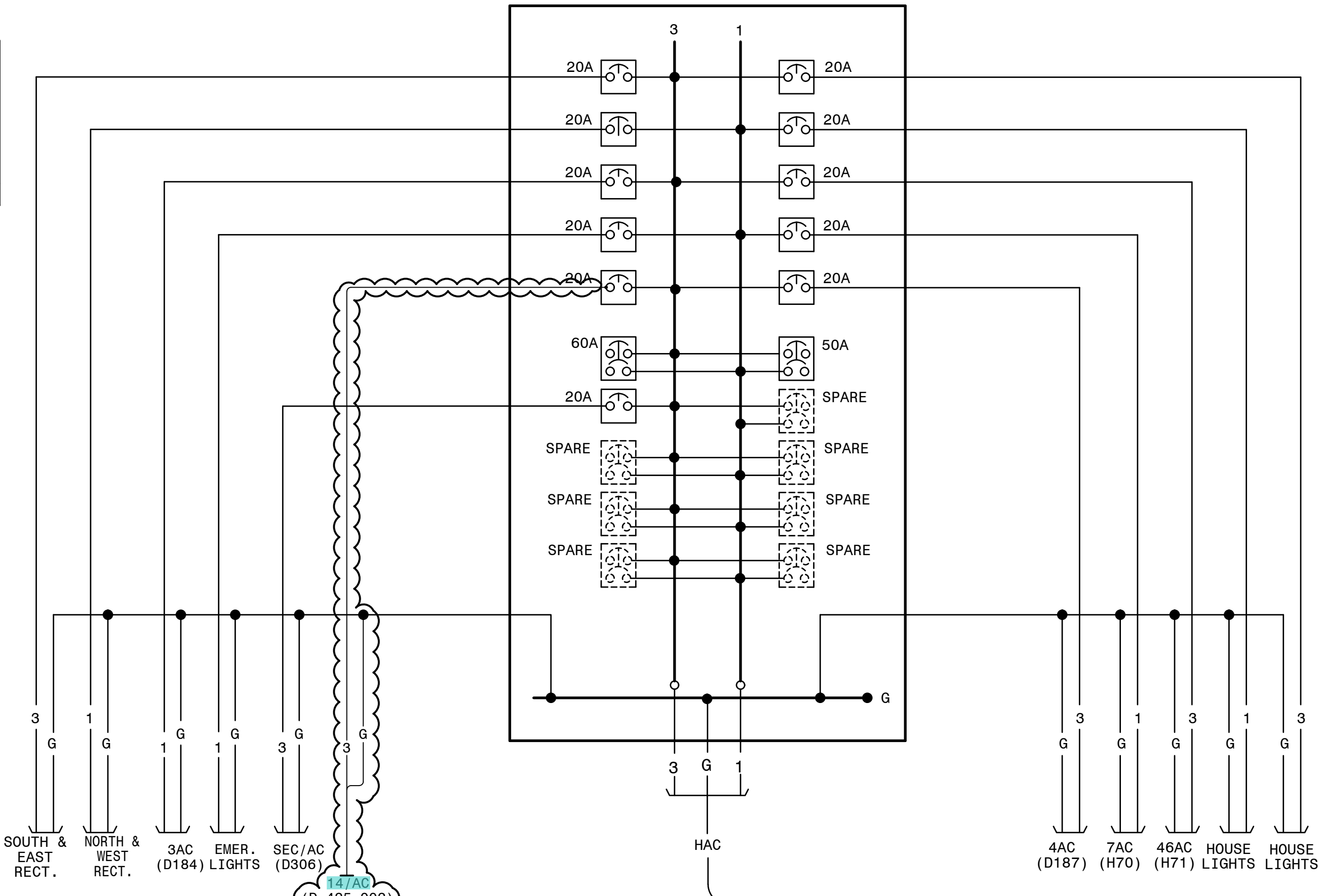
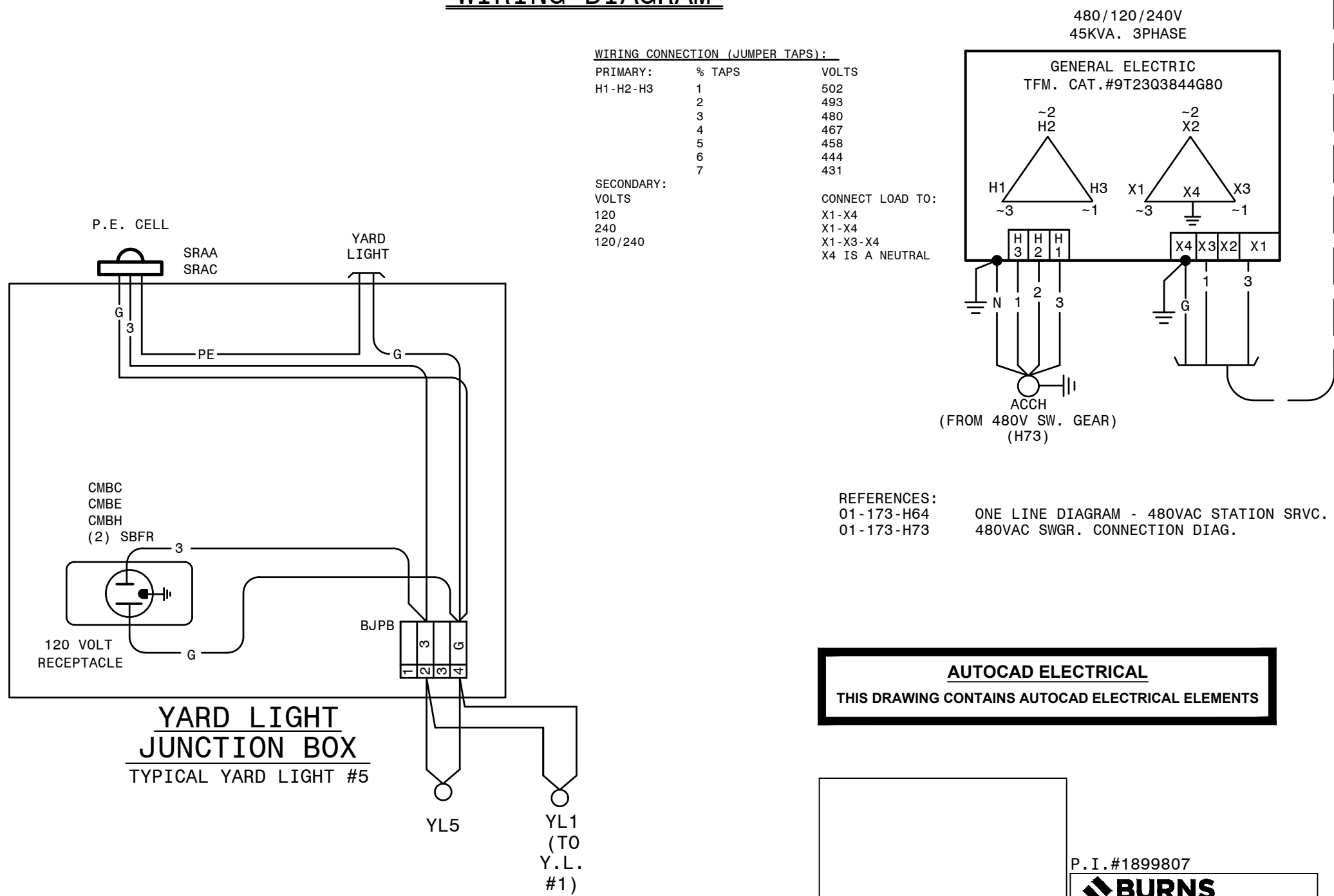


HVAC A.C. PANEL
WIRING DIAGRAM



HOUSE A.C. PANEL
WIRING DIAGRAM




REFERENCES:
01-173-H64
01-173-H73

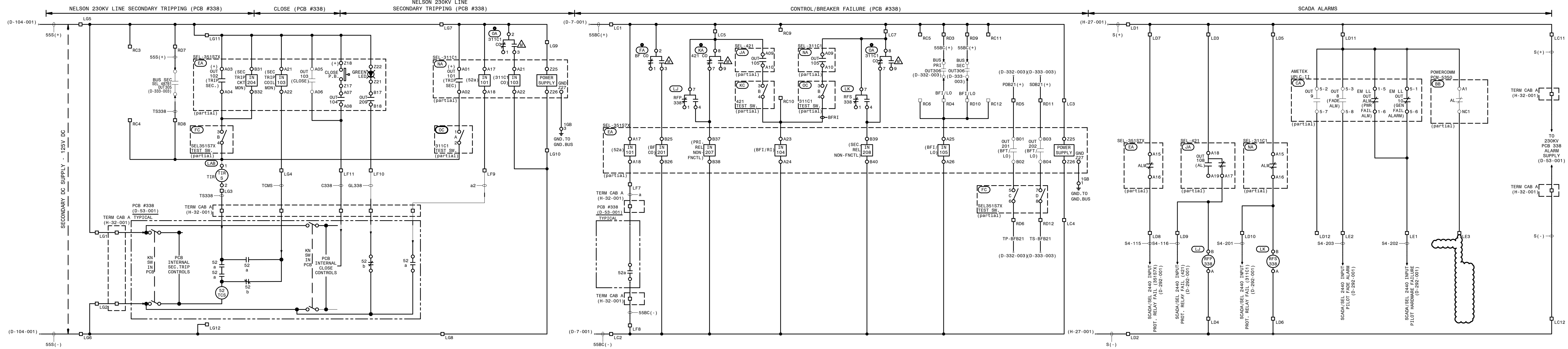
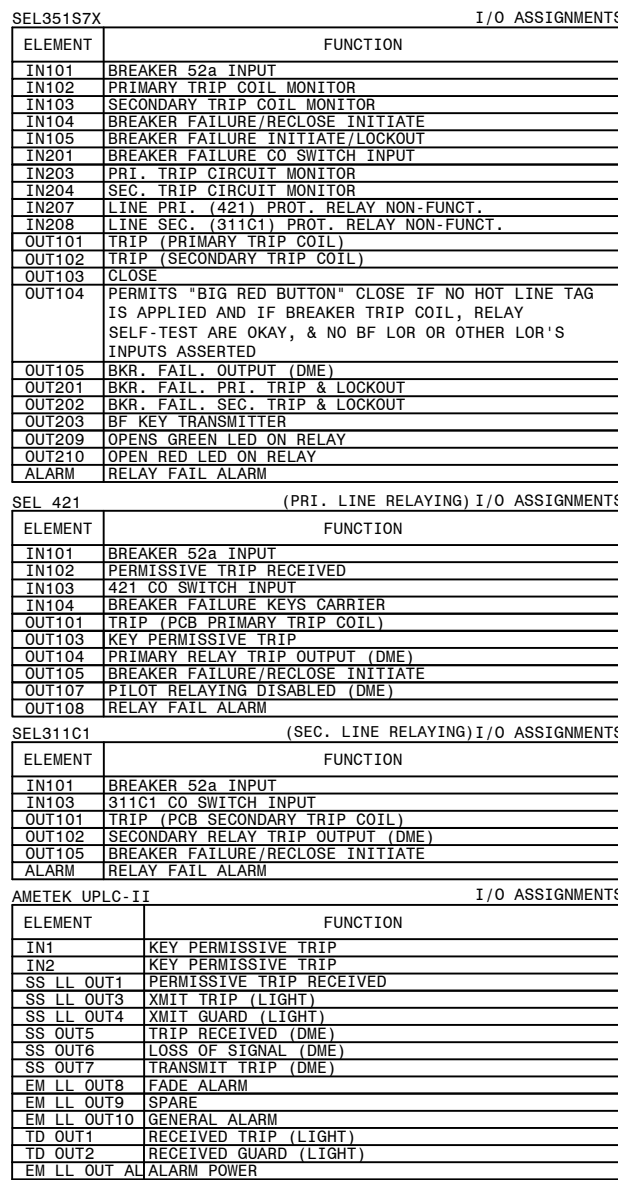
ONE LINE DIAGRAM - 480VAC STATION SRVC.
480VAC SWGR. CONNECTION DIAG.





AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

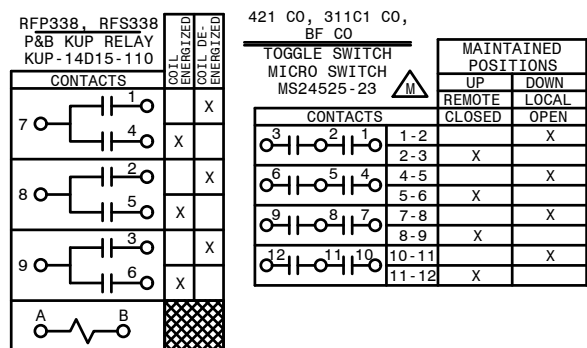
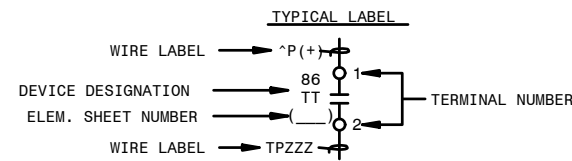
P. I. #1899807
**BURNS
McDONNELL**
4004 SUMMIT BLVD., NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770)587-4776
Burns & McDonnell Engineering Co., Inc.
GA ENGINEERING LICENSE: PE0000100
EXPIRATION DATE: 03/31/2028
THE REGISTRANT OF THE NEWLY APPLIED
SEAL DATED 03/31/2028
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISIONS.

 GEORGIA POWER <small>A SOUTHERN COMPANY</small>	FACILITY NAME:				MCGRAU FORD TS	
	TITLE: MISCELLANEOUS WIRING DIAG.					
	DRAWN: JLC					
	CHECKED: AJW	TYPE: WD	FACILITY #:		NUMBER:	SHEET: REV:
	APPROVED: AJW	SCALE: NO SCALE	01 - 173		D-9	- 001 - 05
DATE: 06-29-05	BOM:					
ASC FACS:			ALT DWG NUM:			

			PI:				PI:	01 JLC AJW	06/29/05	PI:	02 JLC AJW	09/15/05	PI:	03 AJW PWJ	01-22-07	PI: 0848727	04 AJW PWJ	09-10-07	PI: 0848727	05 BPE BPE	BPE	06/10/2022	PI: 1609401	06 EG DN	AA	08/20/2024	PI: 1899807
								ADDED DRAWING REFERENCES TO 480VAC SWITCHGEAR SS, ADDED TRANSFORMERS, 480VAC CABLES ACHVAC, ACCH, TYPICAL YARD LIGHT JUNCTION BOX. ADDED CABLES 7AC, AND 46AC.				ADDED CABLE 3AC AND CABLE 4AC.				REVISED 480/120/240 TRANSFORMER CONN. FOR RECORD ONLY.				ADD CABLE SEC/AC FOR PHYSICAL SECURITY BACKBOARD AC SUPPLY.				INSTALL CABLE 14/AC.			




-  - SLIDING LINK TERMINALS
OR PHOENIX PLUG
-  - BARRIER BLOCK TERMINAL
-  - LED INDICATING LIGHT
-  - SWITCH SHOWN IN OFF POSN



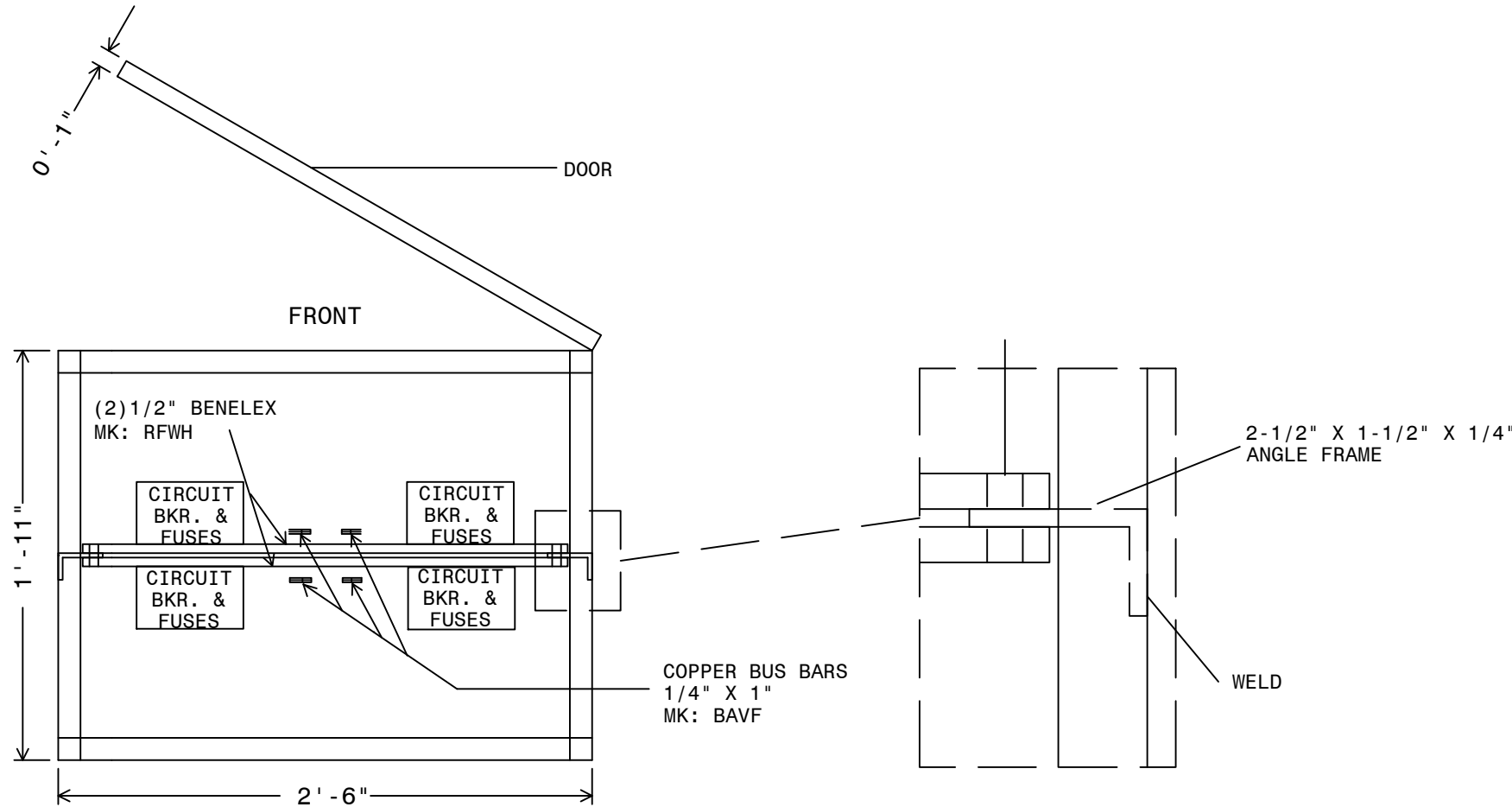
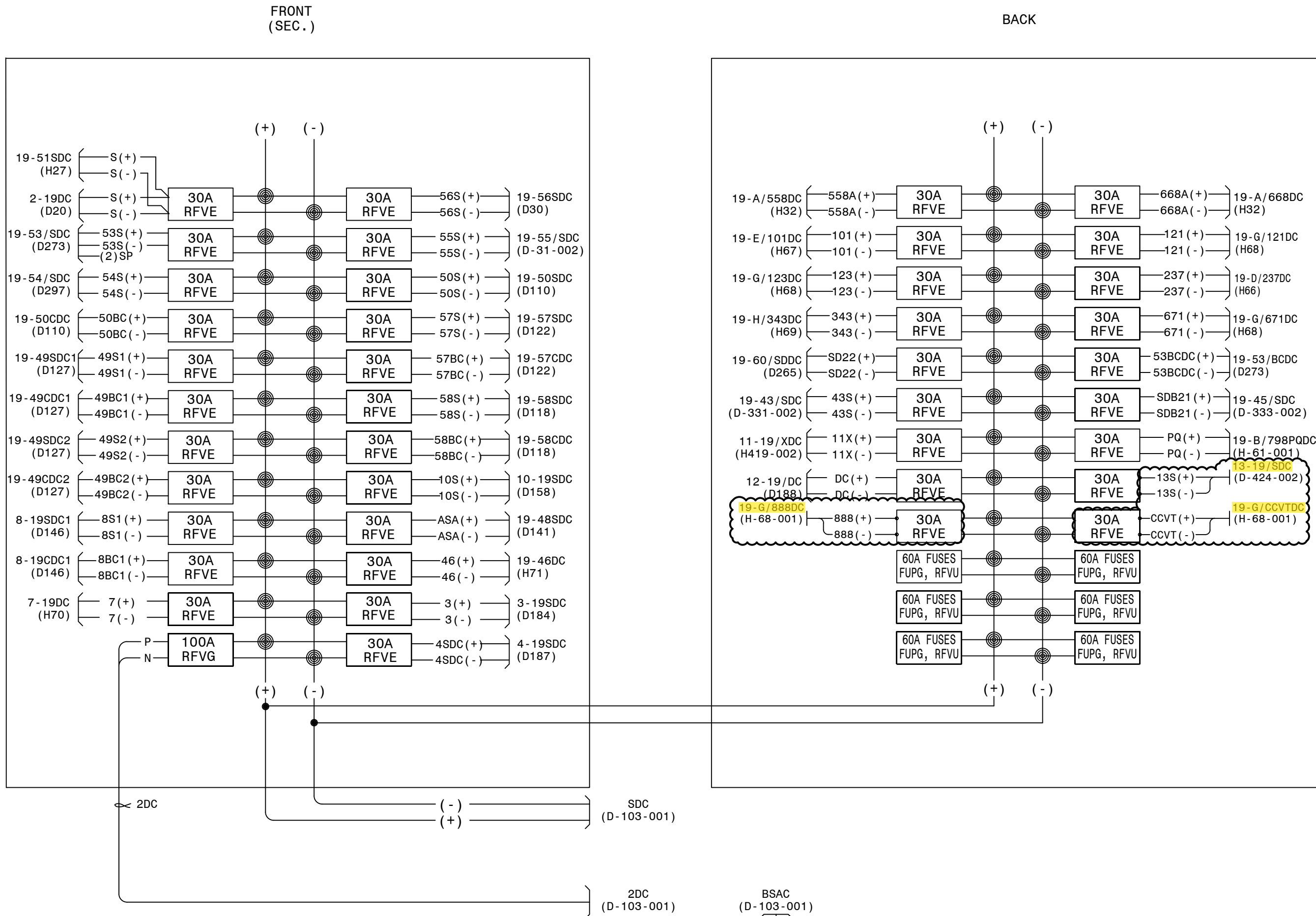
AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

01-173-D-31-001	PANEL #55 FRONT VIEW & NAMEPLATES
01-173-D-31-002	PANEL #55 WIRING DIAGRAM
01-173-D-31-004	PANEL #55 AC ELEMENTARY DIAGRAM
01-173-D-31-005	PANEL #55 LOGIC DIAGRAM (351S7X)
01-173-D-31-006	PANEL #55 LOGIC DIAGRAM (421, 311C1)

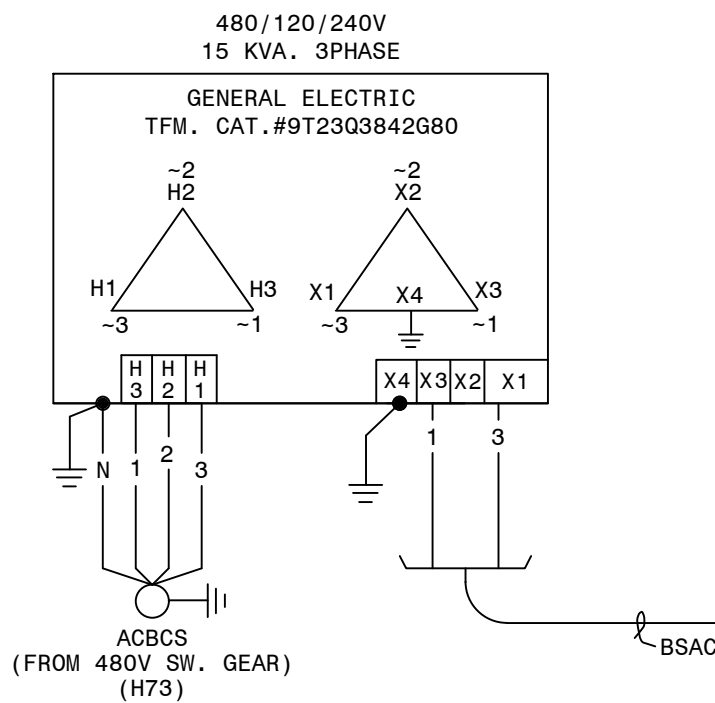
TRANS. LINE DIRECTIONAL COMPARISON UNBLOCKING/STEP DISTANCE- (STRAIGHT BUS)

	FACILITY NAME:		MCGRAU FORD TS	
	TITLE: PANEL #55, DC ELEMENTARY - NELSON 230KV LINE, SEL421 (PRI DCUB), SEL311C1 (SEC), SEL35187X (BF/RECL) RELAYING			
	CHECKED: BPE	TYPE: 52	FACILITY #:	NUMBER: 31
	APPROVED: 1943901	SCALE: N.T.S.	01 - 173	D- 31
	DATE: 05/31/2023	BOM:		
ASC FACS:		ALT DWG NUM: DCUB		

QTY.	CMS UNIT	MATL. MK.	DESCRIPTION	REMARKS	NON STOCK
2	BAVF	BAVF	BAR-CU 1IN X 1IN X 12FT		
41	RFVE-D	RFVE	CIRCUIT BREAKER, AMB COMP, 2P, 30A		
1	RFVG	RFVG	CIRCUIT BREAKER, AMB COMP, 2P, 100A		
2	RFWH	RFWH	PANEL-BENELEX 402 28IN X 41IN X 1IN		
1	RGRG-D	RGRG	SWBD REAR DOOR, FOR 30 X 90 X 21IN PAN.	0-31-D1	YES
			SWITCHBOARD ANGLE FRAME 30 X 90 X 21IN	0-31-D1	



WIRING CONNECTION (JUMPER TAPS):		
PRIMARY:	% TAPS	VOLTS
H1-H2-H3	1	502
	2	493
	3	480
	4	467
	5	458
	6	444
	7	431
SECONDARY:		
		CONNECT LOAD TO:
120	X1-X4	
240	X1-X4	
120/240	X1-X3-X4	
	X4 IS A NEUTRAL	



AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

REFERENCES:
01-173-D7-001
01-173-D8-001
01-173-D8-002
01-173-D103-001
01-173-D104-002
01-173-D13

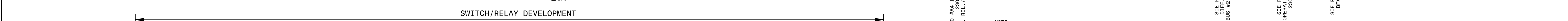
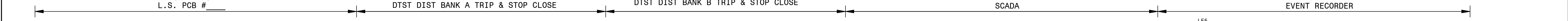
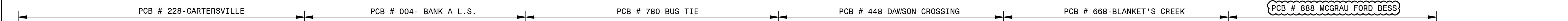
PANEL #1 WIRING DIAGRAM PRIMARY D.C. PANEL
PRIMARY DC SUPPLY AND BATTERY CHARGER ELEMENTARY
PRIMARY DC - MOBILE BATTERY TRAILER CONNECTIONS
SECONDARY DC SUPPLY AND BATTERY CHARGER ELEMENTARY
SECONDARY DC - MOBILE BATTERY TRAILER CONNECTIONS
S.S. & THROWOVER CAB #2 WIRG & CONN. DIAGRAM

CTLSTD:175.DGN (DCP-B-0-WD)



GEORGIA POWER		FACILITY NAME:		MCGRAU FORD TS	
SOUTHERN COMPANY		TITLE: PANEL #19 WIRING DIAGRAM SECONDARY D.C. PANEL			
DRAWN:	JLC/CP	TYPE:	WD	FACILITY #:	01-173
CHECKED:	AJW/TEB	SCALE:	AS SHOWN	NUMBER:	D-104
APPROVED:		DATE:	11/22/2004	REV:	001-12
ASC FAC:		ALT DWG NUM:			

06 BAK TM	P1: 1402601	07 CSM DML	10/10/2015 P1: 1451605	08 BAS JWH USPP	3/27/2020 P1: 1616363	09 JCM JCM	2/5/2021 P1: 1855101	10 BPE BPE	05/31/2023 P1: 1930501	11 BPE BPE	08/01/2023 P1: 1930501	12 RJH KDB USPP	4/1/2024 P1: 2014906	13 EG SW AA	8/20/2024 P1: 1899807
REMOVE CABLE 19-53SDC. ADD CABLE 19-53/SDC, 19-53/BCDC FOR PANEL #53 REPLACEMENT.		FIELD CHANGES SHOWN FOR RECORD ONLY.		FCF#10 (CC): UPDATED STATUS POINT NAMES.		REMOVE CABLE 19-54SDC & ADD CABLE 19-54/SDC, FOR PANEL #54 REPLACEMENT.		UPDATE CIRCUITS FOR NEW PANEL #55 NELSON LINE. ADD CIRCUITS FOR NEW PANELS #43 & #45 AS SHOWN. 19-51SDC, 19-A/558DC, 19-A/668DC CORRECT CABLE NAMES, FOR RECORD ONLY.DWG UPDATED FOR NEW STANDARD DC BATTERY SYSTEM UPGRADE.		INSTALL 30A DC BREAKER FOR SOURCE TO POWER QUALITY METER ON PCB 798 SVS LINE AS SHOWN.		INSTALL THREE 30A DC BREAKER FOR SOURCE TO POWER NEW TRANSFER TRIP PANEL #11, PANEL #12, AND SPARE. ADD CABLES 11-19/XDC AND 12-19/DC.		INSTALL TWO 30A CIRCUIT BREAKERS AND CABLES 13-19/SDC, 19-G/888DC, AND 19-G/COVTD.	



C4.4.2

PI:		PI:		02 PJW RSW		10/31/2006 PI:		03 CP TEB		2/27/2012 PI: 1402601		04 JOR GAS		4/24/2013 PI: FC5		05 BAS JWH USPP		3/27/2020 PI: 1616363		06 JCM JCM		2/5/2021 PI: 1855101		07 EG SW		AA		8/16/2024 PI: 1899807		<div>GEORGIA POWER</div> <div>A SOUTHERN COMPANY</div>		MCGRAU FORD TS			
				FC366 (JSH) REVISED WIRE LABELS.				ADD CROSS TRIGGERS TO SEL-487B. ADD U7C (B90) & DST22A/B INPUTS FROM NEW 86BS22. REMOVE TEST JUMPER FROM LE1/2. REMOVE OLD 86BS22 CONTACTS. GE-B90 NOW #2 PRI. DIFF. DST 22B CONTACT 2/3 NOW CONNECTED TO BFI/L0. DWG. TITLE NOW CHANGED TO BUS #2 PRI. DIFF.				ADDED SECONDARY DIFF LINKS, CHANGED TO B CONTACT, REMOVED 'TEST' BREAKER LABEL, FOR RECORD ONLY.				FC#10 (CC): UPDATED STATUS POINT NAMES.				REPLACE CARTERSVILLE 230KV LINE RELAYING PANEL. REMOVE REFERENCE TO TEST BREAKER ON GE-B90 W1a INPUT. REMOVE LEFTOVER 86BS22 CONTACTS, FOR RECORD ONLY. FIELD CHANGE: UPDATE MISC GE-B90 CONNECTIONS.				ADD RELAYING FOR PANEL 13.				TITLE: PANEL #59 DC ELEM. DIAG. 230KV BUS PRI. DIFF. NO. 2 - GE B90 LOCKOUT REL							
																												FACILITY #:		NUMBER:		SHEET: REV:			
																												01-173		D-112		-001-06			



(TRANS. BUS PROTECTION/GE-B90/LOCKOUT/8 CURRENT CKT./STRAIGHT BUS)

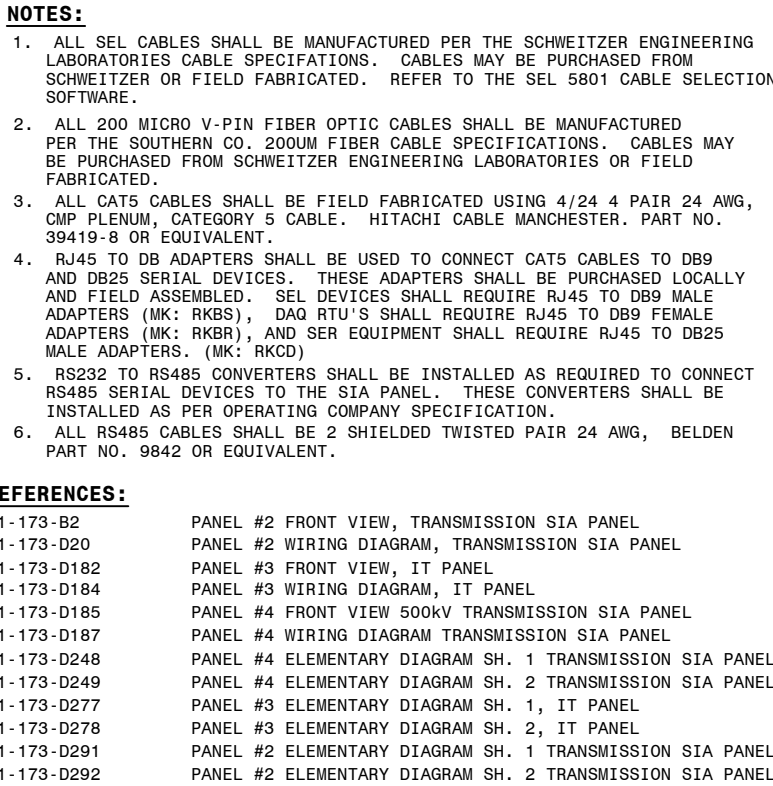
P. I. #1899807

**BURNS
MCDONNELL**

4004 SUMMIT BLVD, NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770) 587-4776

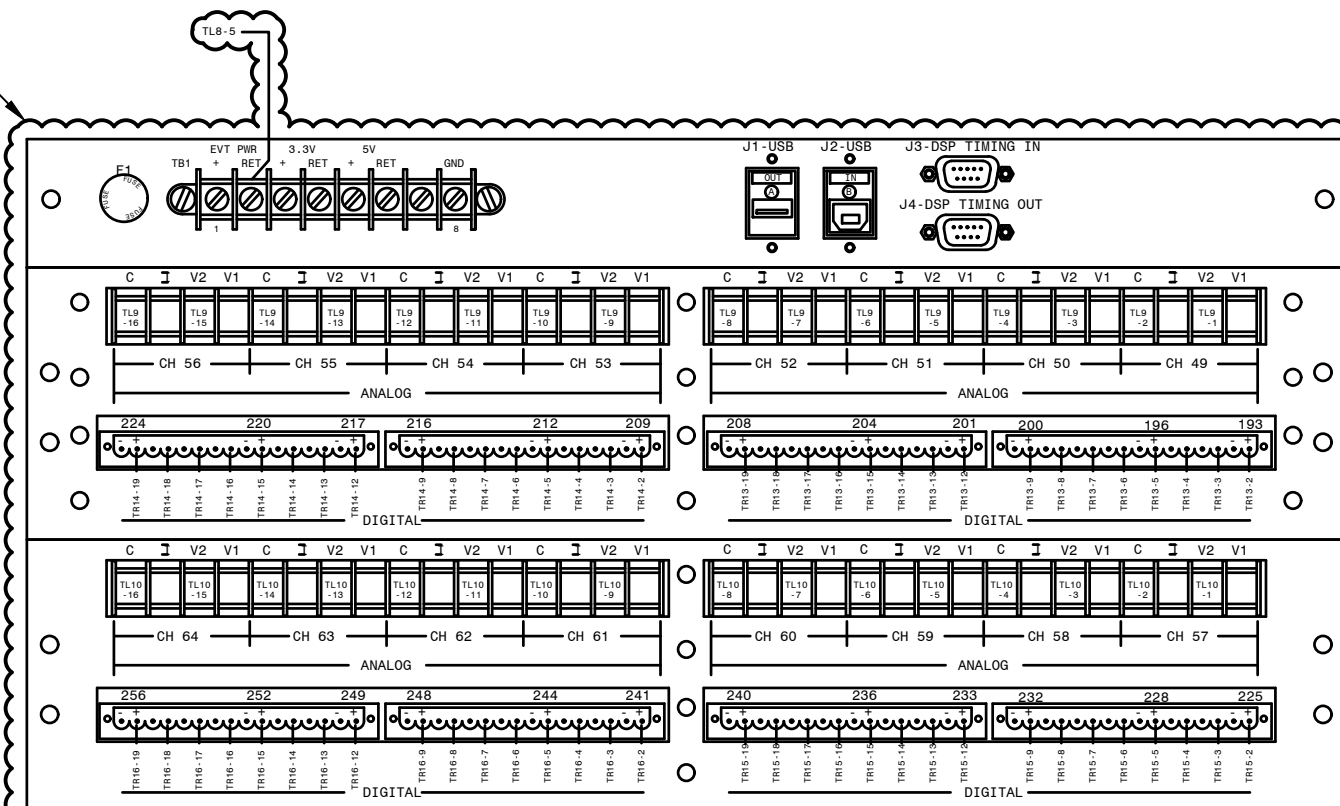
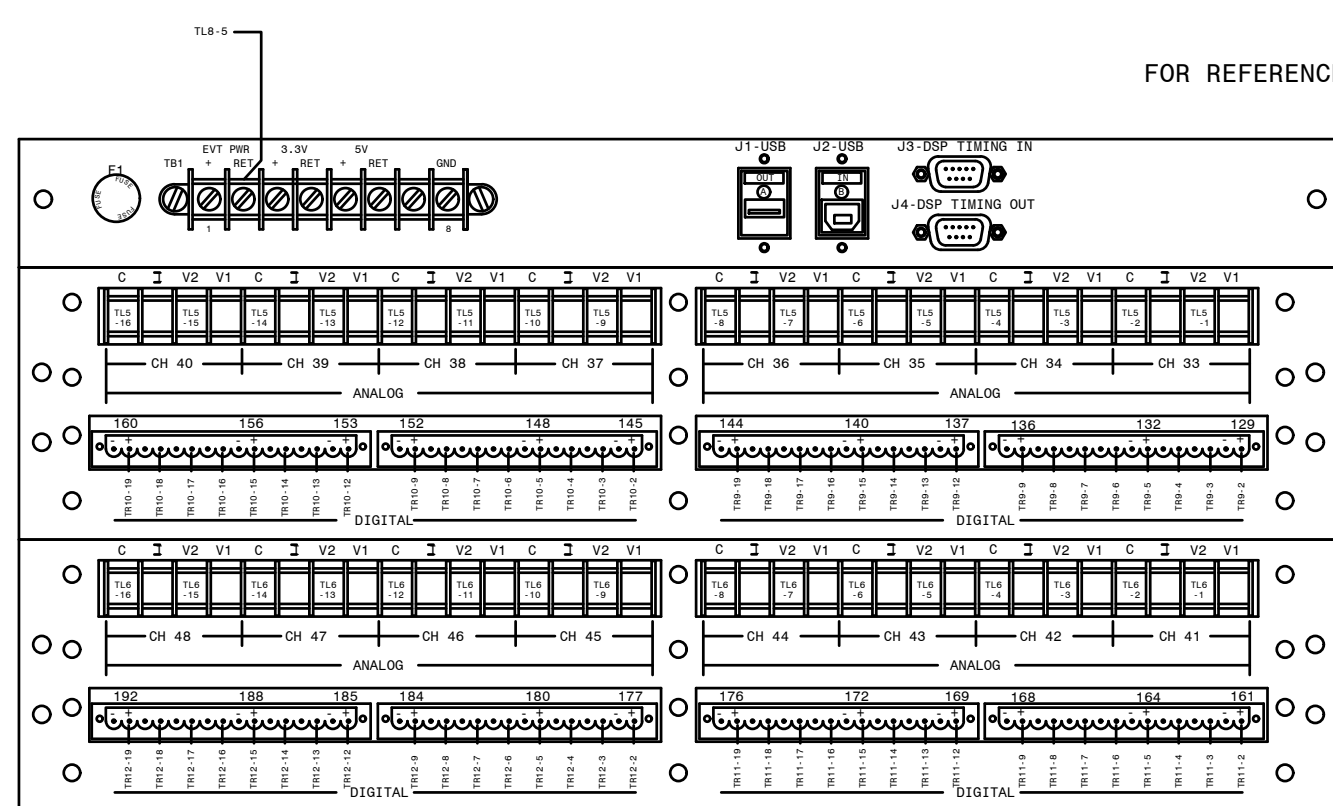
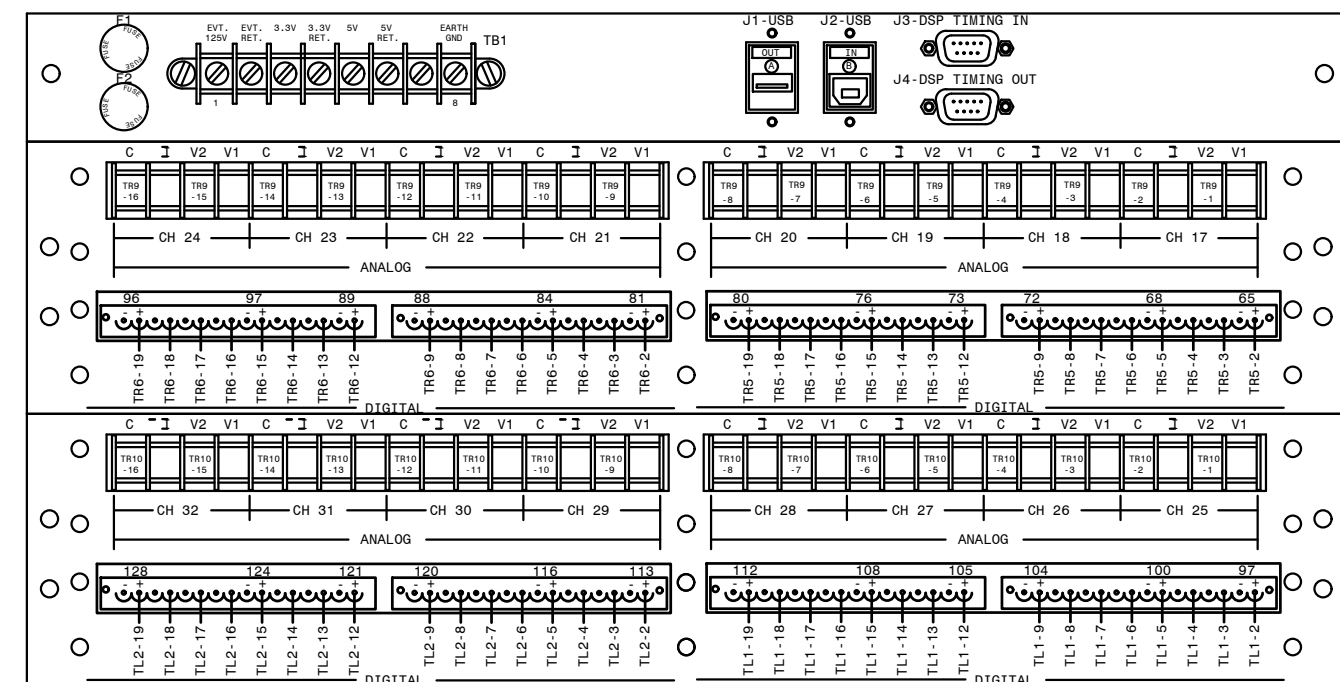
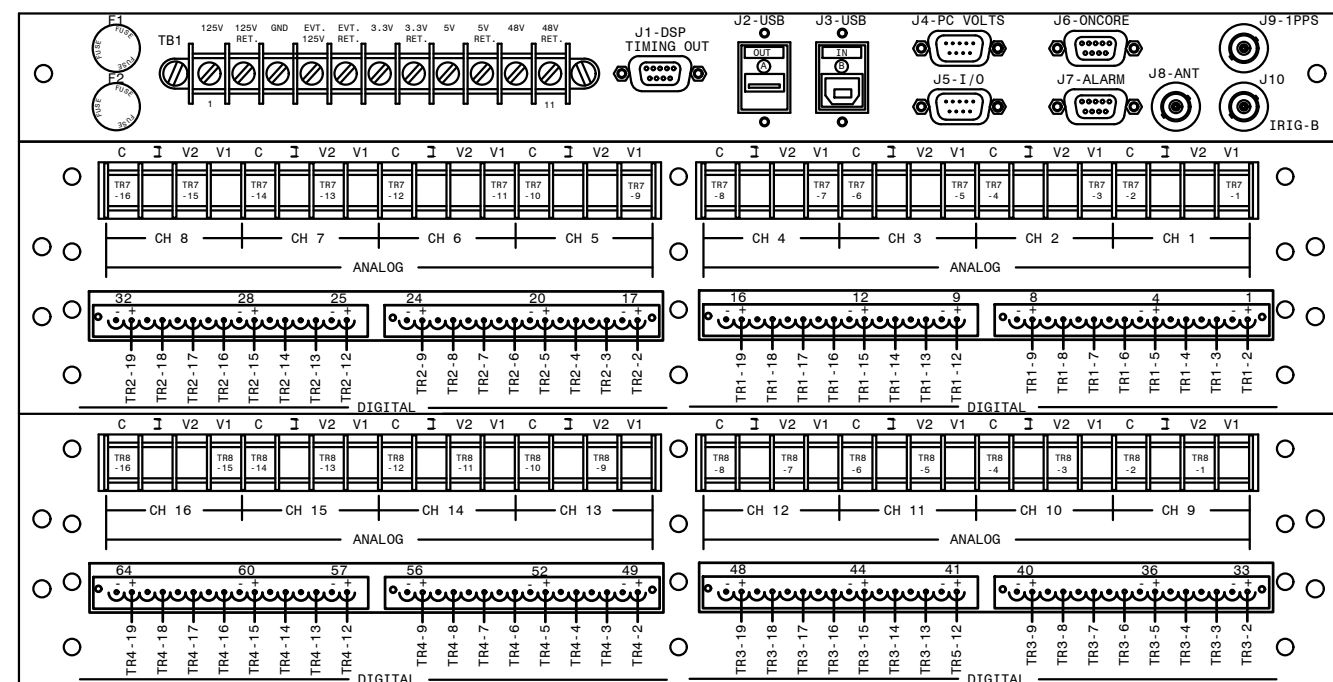
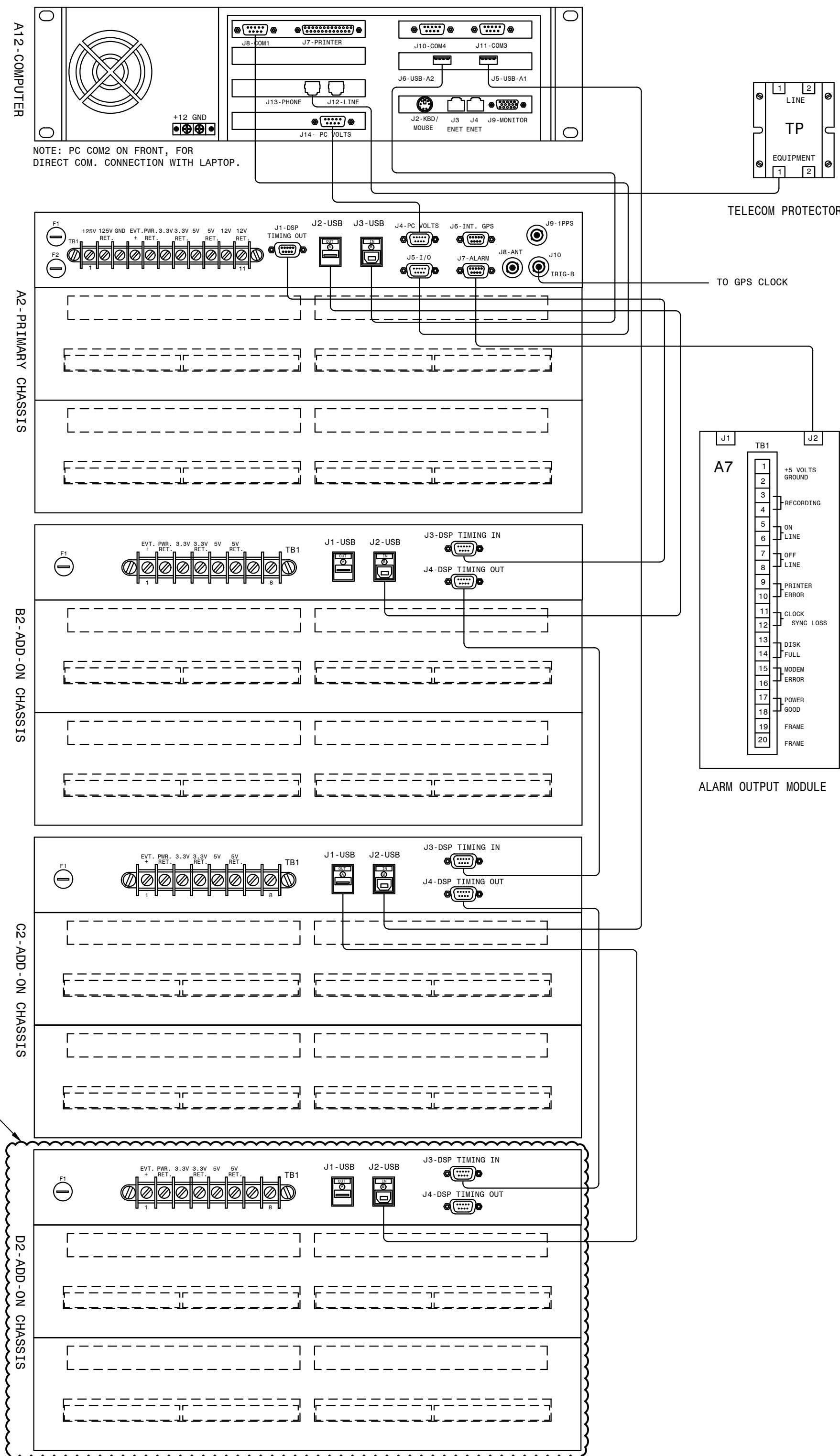
Burns & McDonnell Engineering Co. Inc.
GA ENGINEERING LICENSE: PEF000100
EXPIRATION DATE: 6/30/2026

THE REGISTRANT OF THE NEWLY APPLIED
SEAL, DATED XXXXX/2026,
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISION(S): 03.



SEAL, DATED XX/XX/2024.
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISION(S) 15.

DATE: 7/31/2006	BOM:		D	100	001	14
	100 5100			115 000 000		




INTERCONNECTING CABLES LIST	
A12-J6 TO A2-J3	A12 COMPUTER USB (A2) TO PRIMARY CHASSIS USB (B)
A12-J5 TO A2-J2	A12 COMPUTER USB (A1) TO PRIMARY CHASSIS USB (B)
A12-J14 TO A2-J4	COMPUTER PC VOLTS TO PRIMARY CHASSIS
A12-J8 TO A2-J5	COMPUTER COM1 TO PRIMARY CHASSIS I/O PORT
A12-J13 TO A11 PORT	1-8 COMPUTER J13 TO A11 PORT DESIGNATION PER STATION
A12-J11 TO A2-J6	COMPUTER COM3 TO PRIMARY CHASSIS INT. GPS
A2-J1 TO B2-J3	A2 CHASSIS DSP TIMING (OUT) TO B2 CHASSIS DSP TIMING (IN)
A2-J2 TO B2-J2	A2 CHASSIS USB (A) TO B2 CHASSIS USB (B)
A2-J8 TO A10-IRIG-B	MODULATED IRIG-B CLOCK SOURCE
A2-J7 TO A7-J2	ALARM OUTPUT MODULE
B2-J1 TO C2-J2	B2 CHASSIS USB (A) TO C2 CHASSIS USB (B)
B2-J4 TO C2-J3	B2 CHASSIS DSP TIMING (OUT) TO C2 CHASSIS DSP TIMING (IN)
C2-J1 TO D2-J2	C2 CHASSIS USB (A) TO D2 CHASSIS USB (B)
C2-J4 TO D2-J3	C2 CHASSIS DSP TIMING (OUT) TO D2 CHASSIS DSP TIMING (IN)

ITEM	QTY	DESCRIPTION
A2	1	PRIMARY CHASSIS 16A, 64E
B2	1	ADD-ON CHASSIS 16A, 64E
C2	1	ADD-ON CHASSIS 16A, 64E
D2	1	ADD-ON CHASSIS 16A, 64E
A6	1	MONITOR/KEYBOARD
A7	1	ALARM OUTPUT MODULE
A9	1	MODEM- INTERNAL TO A12
A12	1	COMPUTER
IL	1	INTERIOR LIGHT
CR	2	CONVENIENCE RECEPTACLE
LS	1	LIGHT SWITCH
TP	1	TELECOM PROTECTOR

- NOTES:
1. USE V1 40.01 TO 400V FULL SCALE.
 2. USE V2 1V TO 40V FULL SCALE
 3. WHEN "V2" INPUT IS USED, JUMPER MUST BE CONNECTED BETWEEN V1 & V2 OF SAME CHANNEL.
 4. F1 = MAIN POWER FUSE
 5. F2 = EVENT POWER FUSE
 6. ALL WIRES 14AWG SIS UNLESS OTHERWISE SPECIFIED.
 7. ALL EVENT (DIGITAL) CHANNELS HAVE COMMON RETURN. JUMPERS INSIDE CHASSIS TIE RETURNS TOGETHER
 8. ADD-ON CHASSIS D2 WAS A 0 ANALOG, 64 EVENT POINT CHASSIS AND HAS BEEN REPLACED WITH A 16 ANALOG, 64 EVENT POINT CHASSIS BY THE FIELD. SHOWN FOR REFERENCE. FIELD TO VERIFY THE CONNECTIONS.

- REFERENCES:
- | | |
|-------------|-----------------------------------------------|
| 01-173-D205 | DFR #1 CABINET F.V. & SECTIONS, PANEL #46 |
| 01-173-D132 | DFR #1 CHANNEL & EVENT ASSIGNMENTS, PANEL #46 |
| 01-173-H71 | DFR #1 CONNECTION DIAGRAM, PANEL #46 |


P. I. #1899807

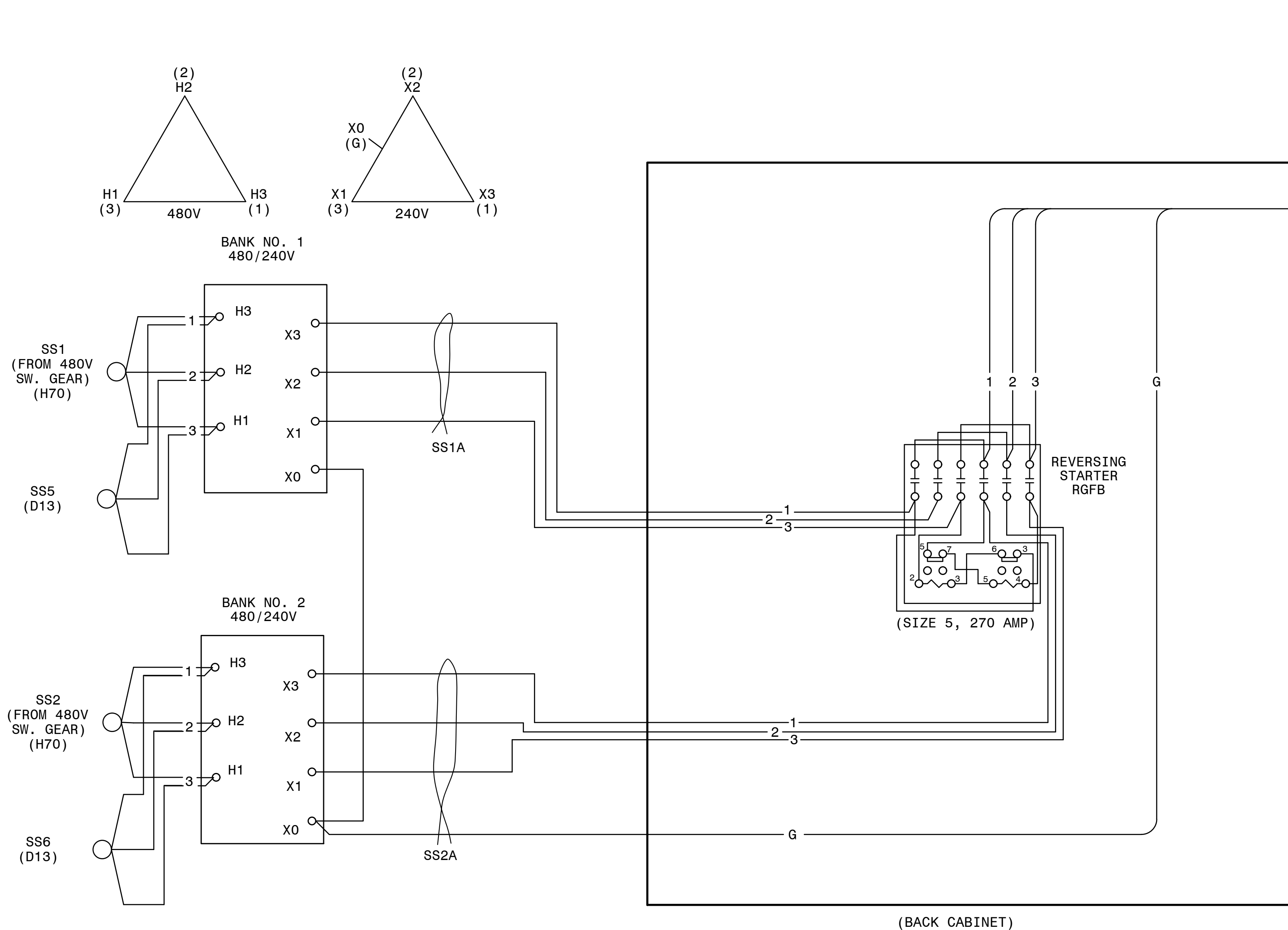
 **BURNS
& McDONNELL**

4004 SUMMIT BLVD., NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770)587-4775
FAX: (770)587-4776

Burns & McDonnell Engineering Co. Inc.
GA PROFESSIONAL LICENSE: PE000100
EXPIRATION DATE: 6/30/2020

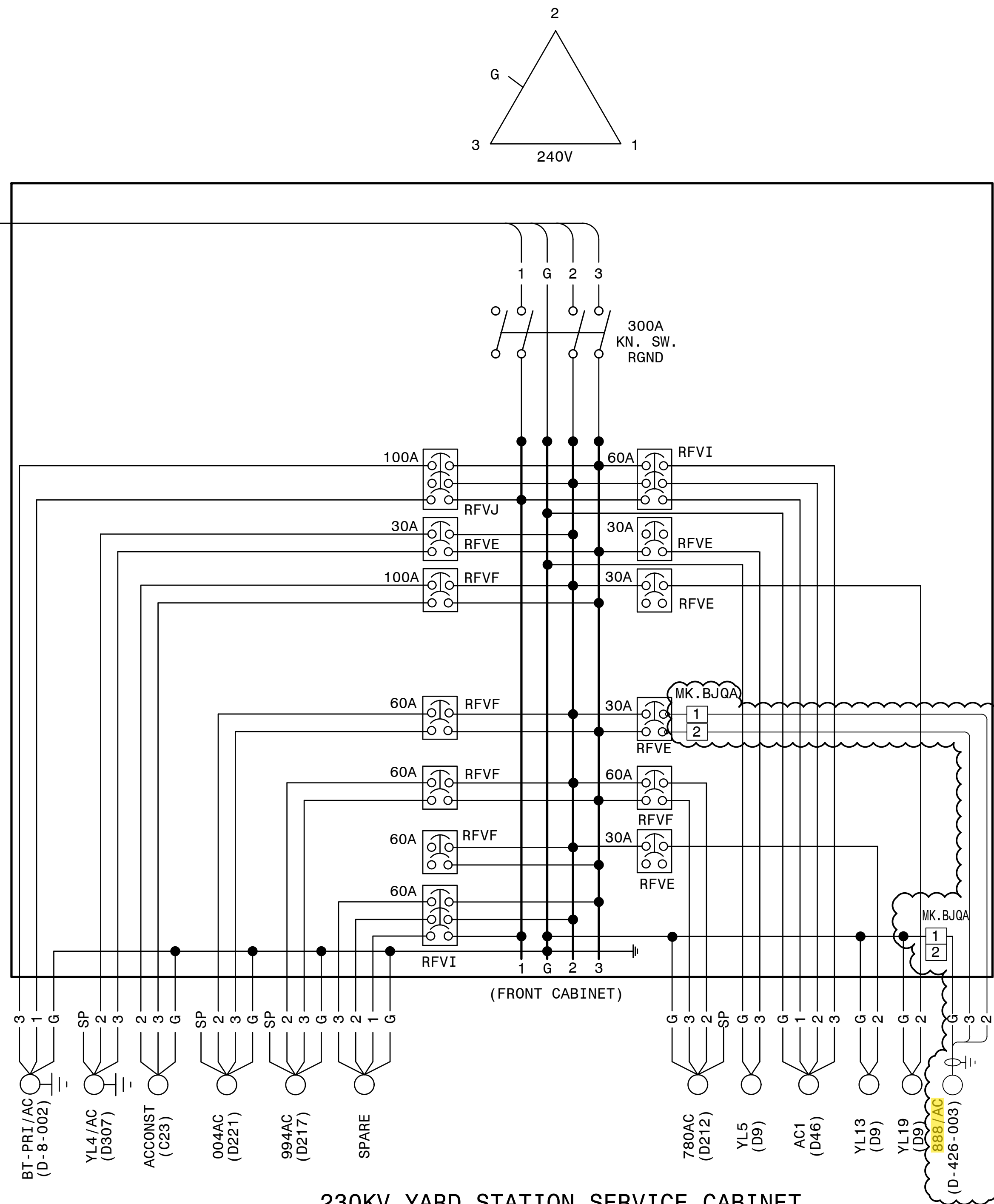
THE REGISTRANT OF THE NEWLY APPLIED
SEAL, DATED 04/06/2024,
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792

 GEORGIA POWER <small>SOUTHERN COMPANY</small>	FACILITY NAME:										MCGRAU FORD TS																	
	TITLE: DIGITAL FAULT RECORDER #1 CABINET REAR VIEW, PANEL #46 (230KV)																											
	DRAWN: JLC				TYPE: 82				FACILITY #:				D-				NUMBER:				SHEET:				REV:			
	CHECKED: AJW				SCALE: N.T.S.				01-173								206				- 001 -				-			
	APPROVED:				BOM:																							
DATE: 08/25/2005				ASC FACS:												ALT DWG NUM:												



230KV YARD STATION SERVICE TRANSFORMERS

230KV YARD THROWOVER CABINET



230KV YARD STATION SERVICE CABINET

- NOTES:
- POWER TERMINAL BLOCK MK. BJQA TO BE LOCATED AND INSTALLED BY THE FIELD, AS REQUIRED.
 - CABLES INSTALLED FROM POWER TERMINAL BLOCK MK. BJQA TO BLOCK TERMINAL MK. BJPE TO BE #10.

P.I.#1899807

BURNS MEDONNELL

4004 SUMMIT BLVD. NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770) 887-4778

Burns & McDonnell Engineering Co. Inc.
GA ENGINEERING LICENSE #1930501
EXPIRATION DATE: 05/30/2026

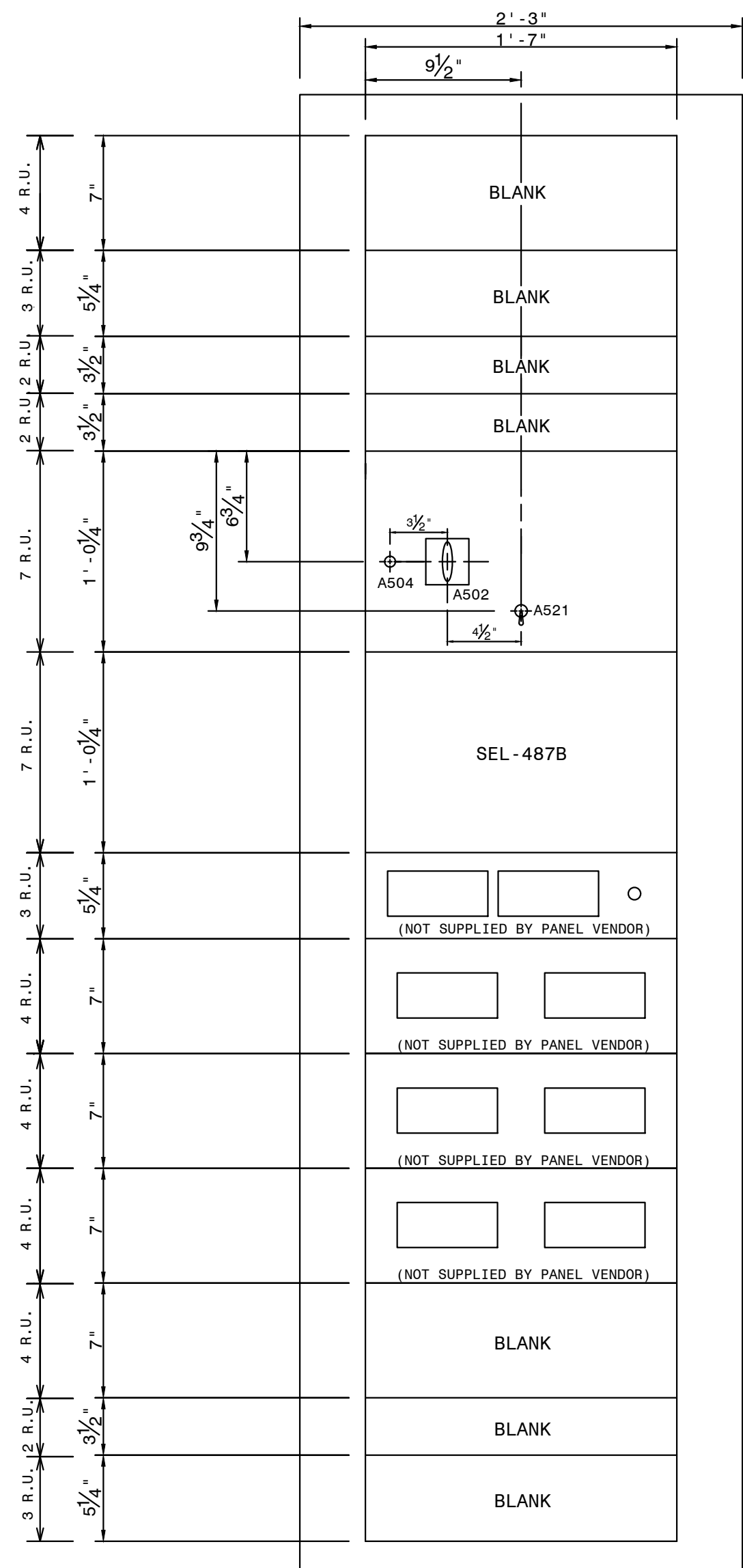
THE REGISTRANT OF THE NEWLY APPLIED
SEAL ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISIONS.

AUTOCAD ELECTRICAL

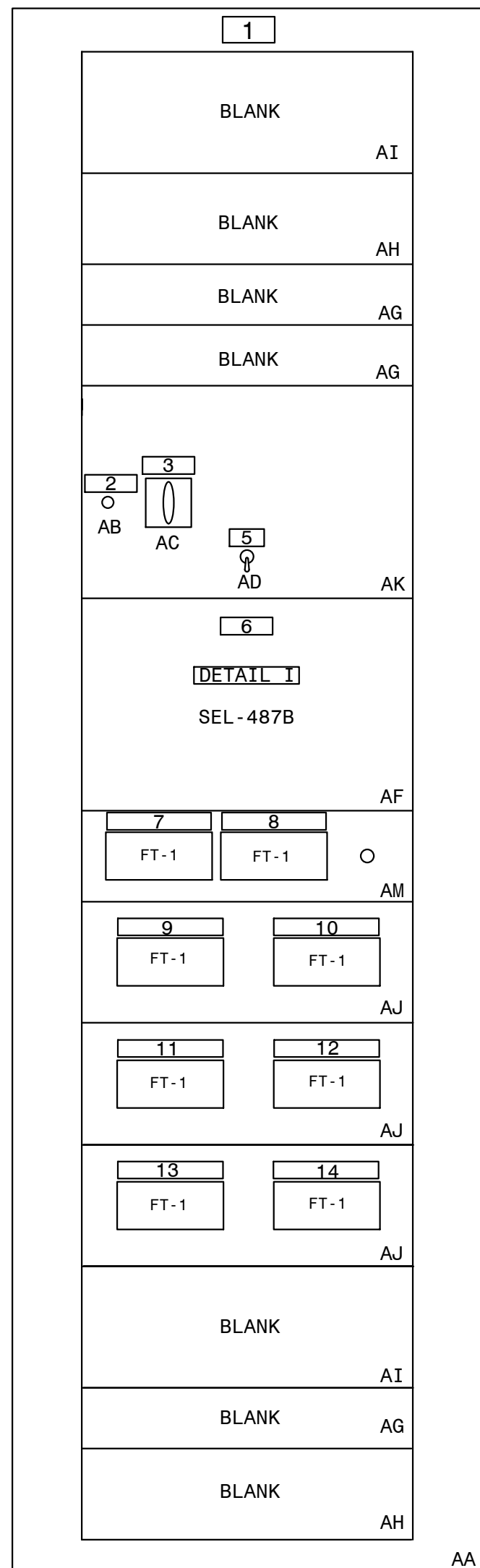
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

GEORGIA POWER		FACILITY NAME:		MCGRAU FORD TS	
DRAWN: JLC		TITLE: 230KV YARD STATION SERVICE & THROWOVER CABINET #1		NUMBER: 215	
CHECKED: RLJ		TYPE: WD		FACILITY #:	
APPROVED: AJW		SCALE: NTS		01 - 173	
DATE: 07-18-05		SHEET: 01 - 173		REV: 03	
ASC FACs:		ALT DWG NUM:			

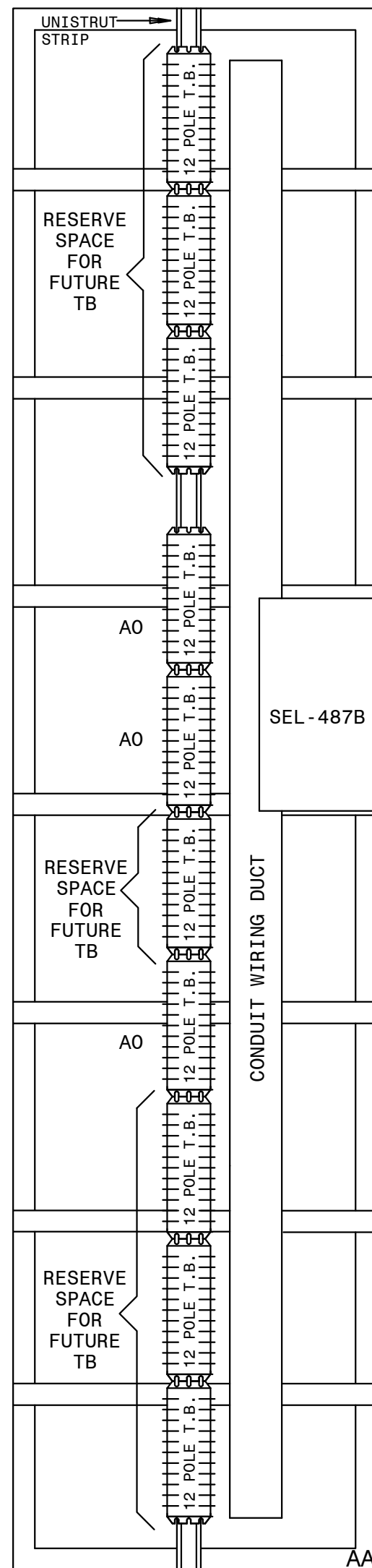
LABEL DETAILS					
LABEL NO.	FIRST LINE	SECOND LINE	THIRD LINE	FOURTH LINE	FIFTH LINE
1	PANEL NO. 60		DWG. NO. 01-173-D263		
2	TRIP CIRCUIT MONITOR	86BS-22 RELAY			
3	SECONDARY AUX. TRIPPING RELAY	86BS-22	TRIPS-004, 228, 448, 668, 780, 868		
4					
5	87BS-22 CUTOFF SWITCH	230KV BUS NO.2	DIFFERENTIAL		
6	SEL-487B RELAY	230KV BUS NO. 2	DIFFERENTIAL RELAY		
7	SEE DETAIL A				
8	SEE DETAIL B				
9	SEE DETAIL C				
10	SEE DETAIL D				
11	SEE DETAIL E				
12	SEE DETAIL F				
13	SEE DETAIL G				
14	SEE DETAIL H				



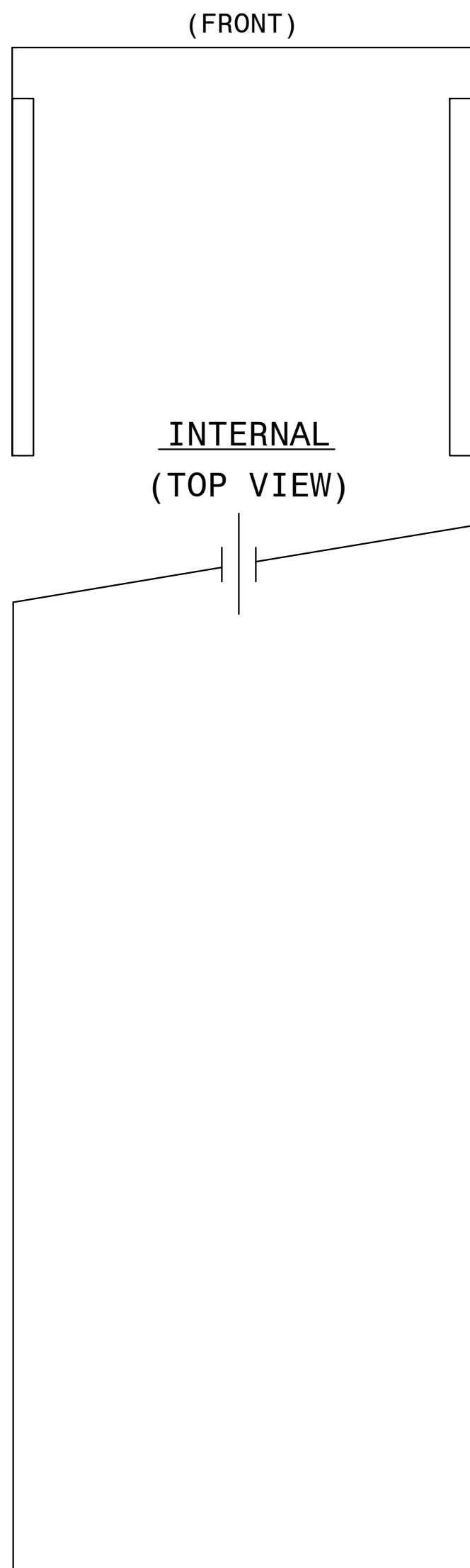
FRONT PANEL
(PUNCH MARKS)



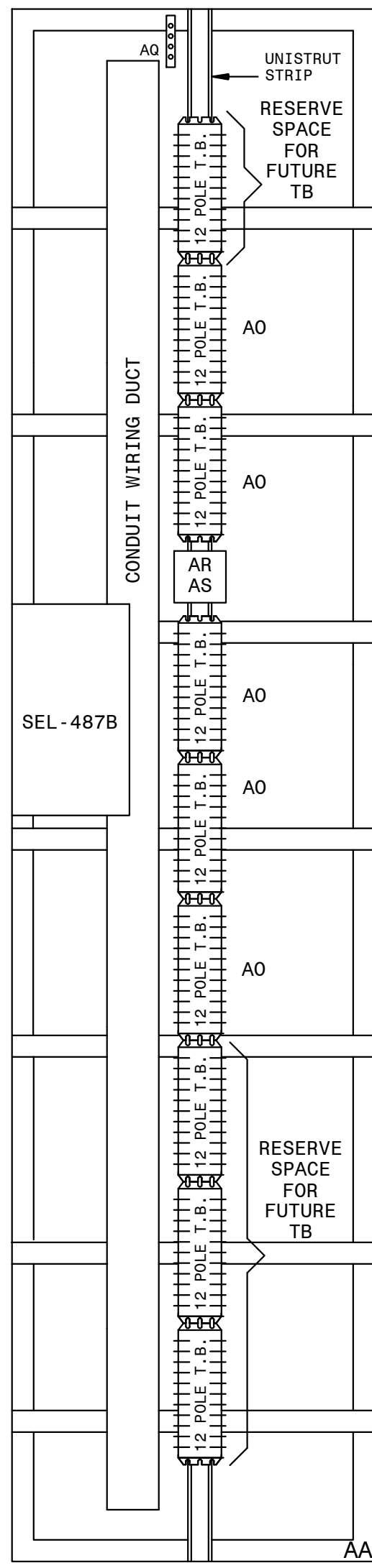
FRONT PANEL
(NAMEPLATES AND MATERIAL MARKS)



LEFT REAR



FRONT PANEL
(INTERNAL PANEL REAR VIEW)



RIGHT REAR

QTY.	MK.	SES ITEM	DESCRIPTION	REMARKS
1	AA	RHCL	SWITCHBOARD PANEL, 49 R.U. SPACES 27" X 90" X 21"	DWG. PAN-CONST-D1
		RHCN	SWITCHBOARD ANGLE FRAME 27" X 90" X 21"	DWG. PAN-CONST-D2
1	AB	RGII	INDICATING LIGHT, NEON, ET-17, COMPLETE	
1	AC	RGGE	REL-AUX 2NO-2NC/DEK 10 DECK, COR/ER, 30-140VDC	EC #79400D
1	AD	RGSI	SWITCH, TOGGLE, 4-POD	MICROSWITCH #47L1-3
1	AF	RIJC	REL-CURRENT DIFF. TYPE SEL-487B, MICROPROC. BASED	SEL 04B7B045X2XXXXX7
3	AG	RGWU	RACK PANEL, 2 R.U. HIGH, BLANK	DWG. PAN-CONST-D1
2	AH	RGWV	RACK PANEL, 3 R.U. HIGH, BLANK	DWG. PAN-CONST-D1
2	AI	RGWV	RACK PANEL, 4 R.U. HIGH, BLANK	DWG. PAN-CONST-D1
3	AJ	RHUC	TEST BLOCK RACK MOUNT SYSTEM, 2-10P	MEGGER 194R-220G-ST OR ABB S54G014NN014BX00N
1	AK	RGWZ	RACK PANEL, 7 R.U. HIGH, PUNCHED & DRILLED	DWG. PAN-CONST-D1
1	AM	RHUA	SWITCH, REL. TEST ASSY., 2-10 POLE W/HOLE PUNCHED FOR CO SWITCH	MEGGER #A193RG-220L-ST OR ABB #
8	AO	BJPE	BLOCK TERMINAL, 12 POLE, SLIDING LINK	
1	AO	BAVD	GROUND BAR, COPPER	
1	AR	FUPH	FUSE BLOCK-THREE POLE 1-30 AMP, 250 VOLT	
3	AS	RFVM	FUSE CARTRIDGE, SINGLE ELEMENT, 250V, 6 AMP	

DETAIL A

87BS-22 TEST SWITCH									
SEC. TRIP 86BS22		BF TRIP 22		004 SEC TRIP	004 BF1/ LO	228 SEC TRIP	228 BF1/ LO	448 SEC TRIP	448 BF1/ LO
A	B	C	D	E	F	G	H	I	J

DETAIL B

87BS-22 TEST SWITCH									
668 SEC TRIP	668 BFI/ LO	780 SEC TRIP	780 BFI/ LO	FUT. SEC TRIP	FUT. BFI/ LO	888 SEC TRIP			
A	B	C	D	E	F	G	H	I	J

DETAIL C

487B TEST SWITCH (004)									
V1	V2	V3	C1	C11	C2	C22	C3	C33	VG
A	B	C	D	E	F	G	H	I	J

DETAIL D

487B TEST SWITCH (228)								
A	B	C	D	E	F	G	H	I

DETAIL E

487B TEST SWITCH (448)									
			C1	C11	C2	C22	C3	C33	
A	B	C	D	E	F	G	H	I	J

DETAIL F

487B TEST SWITCH (668)								
	C1	C11	C2	C22	C3	C33		
A	B	C	D	E	F	G	H	I J

DETAIL G

487B TEST SWITCH (780)									
			C1	C11	C2	C22	C3	C33	
A	B	C	D	E	F	G	H	I	J

DETAIL H

487B TEST SWITCH (FUT.)									
			C1	C11	C2	C22	C3	C33	
A	B	C	D	E	F	G	H	I	J

NOTES:


1. CABLE ENTRY IS FROM TOP OF PANEL.

REFERENCES:

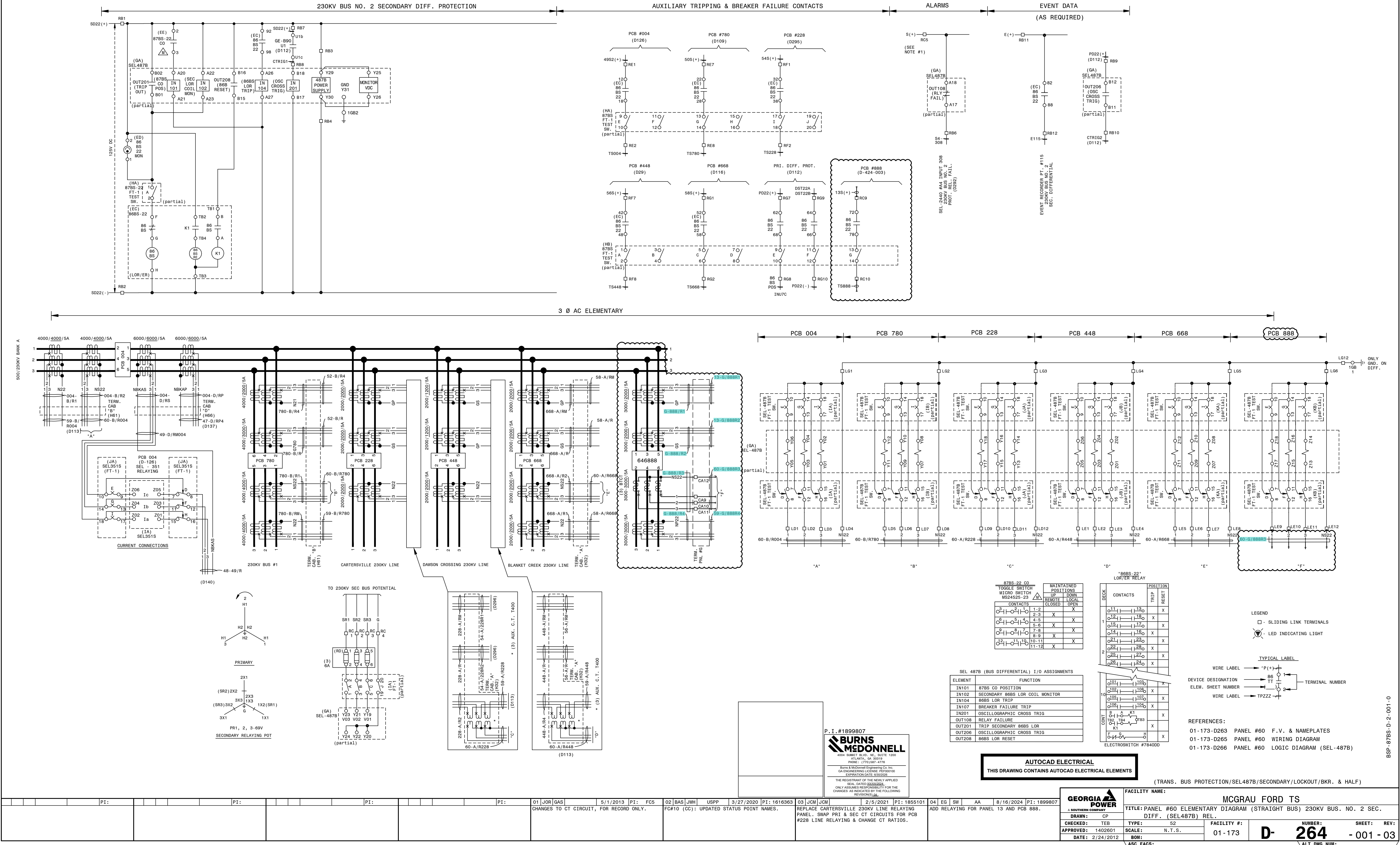
01-173-D264
01-173-D265
01-173-D266
PAN-CONST-D1
PAN-CONST-D2

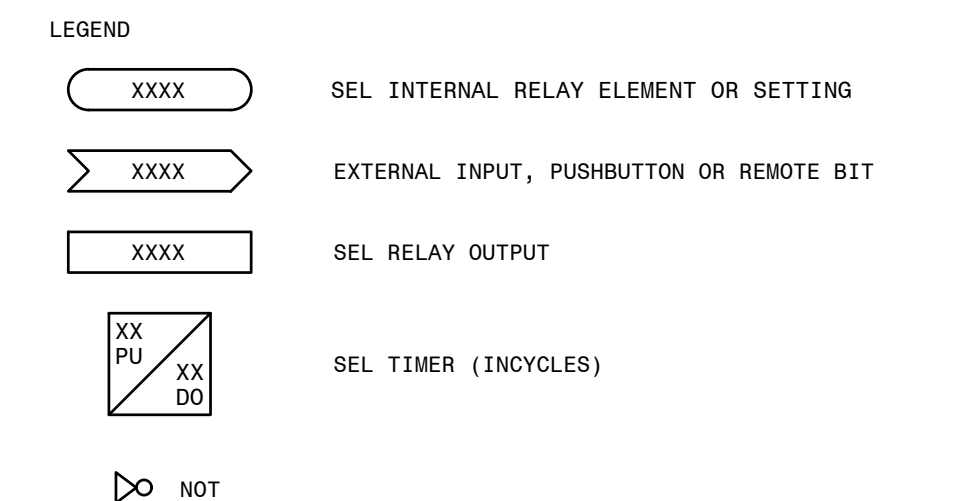
PANEL #60 ELEMENTARY DIAG.
PANEL #60 WIRING DIAGRAM
PANEL #60 LOGIC DIAGRAM (SEL-487B)
CONSTRUCTION DETAILS
CONSTRUCTION DETAILS

(TRANS. BUS PROTECTION/SEL-487B/SECONDARY/LOCKOUT/STRAIGHT BUS)

 GEORGIA POWER <small>A SOUTHERN COMPANY</small>	FACILITY NAME:				MCGRAU FORD TS			
	TITLE: PANEL #60 FRONT VIEW & NAMEPLATES (6 CURR. CKT.) 230KV BUS NO. 2							
	SEC. DIFF. (SEL487B) REL.							
	CHECKED: TEB	TYPE: FV	FACILITY #:	NUMBER:	SHEET: REV:			
DRAWN: CP	SCALE: 1 1/2" = 1' - 0"	01-173	D	263	- 001 - 0			
APPROVED: 1402601	ROM:	ASC FACS:		\\ALT.DWG.NUM:				
DATE: 2/24/2012								

BSP-87BS-D-1-001-0





REFERENCES:
01-173-D264 PANEL #60 ELEMENTARY DIAGRAM
01-173-D265 PANEL #60 WIRING DIAGRAM

(TRANS. BUS PROTECTION/SEL487B/SECONDARY/LOCKOUT/STRAIGHT BUS)

Figure 1 is a schematic diagram of the SEL-2440 #A4 (partial) protection system. It shows a sequence of 16 protection relays, labeled S4-101 through S4-116, connected to a common bus. Each relay has a specific function, such as 'FROM PRIMARY BATTERY CHARGER DC OUTPUT FAULT DETECT' for S4-101 and '230KV BUS LOSS OF DC' for S4-105. The diagram includes input (IN) and output (OUT) terminals for each relay, with a common output line labeled 'SEL-2440 #A4' and a 'partial' label indicating the connection to a larger system.

(D291)

CONTINUED
BELOW

(FROM

CONTINUED
BELOW

The diagram illustrates a power distribution system with 16 units. Each unit is labeled with its power source and failure mode. The units are connected in a daisy-chain fashion. The diagram includes a main power line at the top, a ground line at the bottom, and a series of intermediate lines. A dashed line labeled 'SEL-2440 #A4' runs across the middle. A wavy line labeled 'AB' is connected to the first PDU. A wavy line labeled '(partial)' is connected to the last PDU. The diagram is a technical drawing with various symbols and labels.

Unit	Power Source / Failure Mode	Terminal
1	230KV PCB 668 SEL-351S FAIL (D116)	IN 301
2	230KV PCB 780 MINOR ALARM (D109)	IN 302
3	230KV PCB 780 MAJOR ALARM (D109)	IN 303
4	230KV PCB 780 SEL-351S FAIL (D109)	IN 304
5	230KV PCB 448 TRIP CIRCUIT FAIL (D29)	IN 305
6	DAWSON CROSSING 230KV LINE PILOT LOW SIG AL (D29)	IN 306
7	DAWSON CROSSING 230KV LINE PILOT DC FAIL (D29)	IN 307
8	230KV BUS 2 SEL-487B FAIL (D264)	IN 309
9	FROM SECONDARY BATTERY CHARGER HIGH/LOW DC VOLTAGE (D-103-001)	IN 309
10	FROM SECONDARY BATTERY CHARGER AC POWER FAILURE (D-103-001)	IN 310
11	FROM SECONDARY MULTITEL FLOAT CHARGE (D-103-001)	IN 311
12	FROM SECONDARY BATTERY CHARGER GROUND DETECT (D-103-001)	IN 312
13	FROM SECONDARY BATTERY CHARGER DC OUTPUT FAILURE (D-103-001)	IN 313
14	230KV PCB 888 SEL-351S RELAY FAIL (D-424-003)	IN 314
15	BESS 230KV LINE SEL-411LP RELAY FAIL (D-424-003)	IN 315
16	BESS 230KV LINE SEL-411LS RELAY FAIL (D-424-003)	IN 316

(D277)

S(+)

RD9

Z01

(AB) SEL 2440 #A4 AL

Z02

RD10

S1-112

(D278)


(FROM

THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

**BURNS
MCDONNELL**
4004 SUMMIT BLVD. NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770) 587-4776

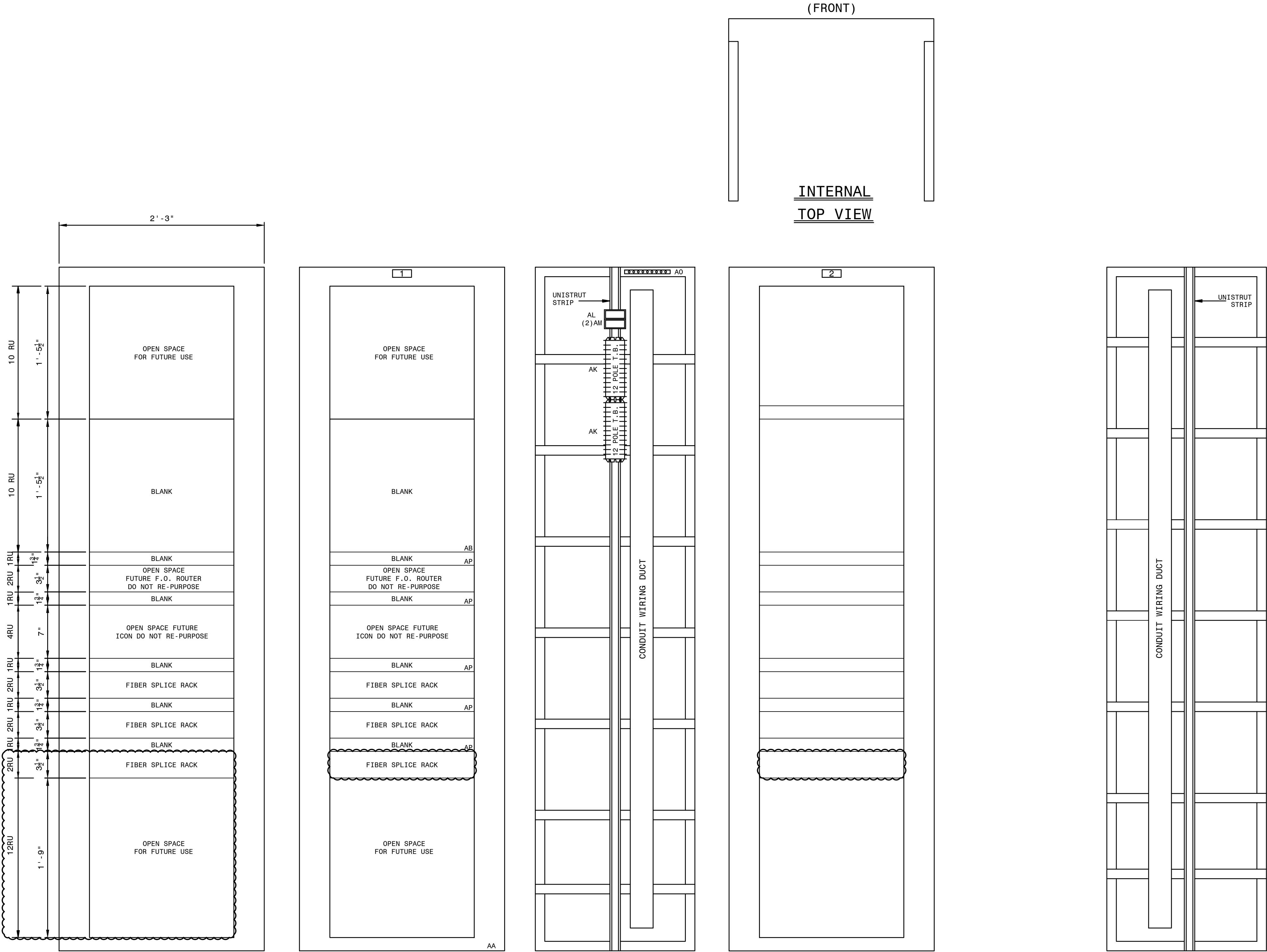
Burns & McDonnell Engineering Co., Inc.
GA ENGINEERING LICENSE: PE#000100
EXPIRATION DATE: 8/31/2016

01-173-B2	PANEL #2 FRONT VIEW, TRANSMISSION SIA PANEL
01-173-D20	PANEL #2 WIRING DIAGRAM, TRANSMISSION SIA PANEL
01-173-D186	SIA COMMUNICATION CONNECTION DIAGRAM
01-173-D291	PANEL #2 ELEMENTARY DIAGRAM SH. 1, TRANSMISSION SIA PANEL

	FACILITY NAME:		MCGRAU FORD TS			
	TITLE: PANEL #2 ELEMENTARY DIAGRAM SH. 2, TRANSMISSION SIA PANEL					
	DRAWN: BAS	TYPE: SIA	FACILITY #:	D-	NUMBER: 292	SHEET: REV: - 001 - 03
	CHECKED: JWH	SCALE: N.T.S.	01-173			
	APPROVED: USPP	BOM:				
DATE: 3/23/2020		ASC FACCS:		ALT DWG NUM:		

LABEL DETAILS			
LABEL NO.	FIRST LINE	SECOND LINE	THIRD LINE
1	PANEL NO. 42	SVS FIBER SPLICE PANEL	DWG. NO.01-173-D-330
2	PANEL NO. 42	SVS FIBER SPLICE PANEL	DWG. NO.01-173-D-330

QTY	ITEM S	CATALOG	DESCRIPTION	REMARKS
1	AA	RHCL-I	27IN X 90IN SWITCHBOARD PANEL (FULL RACK) WITH FRAME	DWG-PAN-CONST-D1, DWG-PAN-CONST-D2
1	AB	RGXC-I	RACK PANEL TYPE C 10-RACK UNITS	DWG-PAN-CONST-D1
2	AK	BJPE-I	12 POLE SLIDING LINK TERMINAL BLOCK	STATES ELECTRIC MFG: M-25012-T
1	AL	FUPF	FUSE BLOCK, PHENOL, 2-POLE, 1-30A	
2	AM	RFWM	FUSE, CARTRIDGE, 1ELEM, NR, 250V, 6A	
1	AO	BAVD-I	COPPER NEUTRAL BAR GRD TERM, #4-#14	BURNDY: K12P4CG1
5	AP	RGWT-I	RACK PANEL TYPE A 1-RACK UNIT	DWG-PAN-CONST-D1



FRONT PANEL
(PUNCH MARKS)

FRONT PANEL
(NAMEPLATES AND
MATERIAL MARKS)

LEFT REAR

REAR PANEL
INTERNAL PANEL
REAR VIEW

RIGHT REAR

AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

- NOTES:
- EQUIPMENT TO BE PLACED AS NEEDED.
 - FOR DATA CONNECTION, SEE COMMUNICATION DIAGRAM D-186-001.

REFERENCES:	
01-173-D-330-002	PANEL #42 WIRING DIAGRAM
01-173-D-330-003	PANEL #42 ELEMENTARY DIAGRAM
01-173-D-330-004	PANEL #42 FIBER SPLICE CONNECTIONS (SVS)
01-173-D-330-005	PANEL #42 FIBER SPLICE CONNECTIONS (MCGRAU FORD BESS)

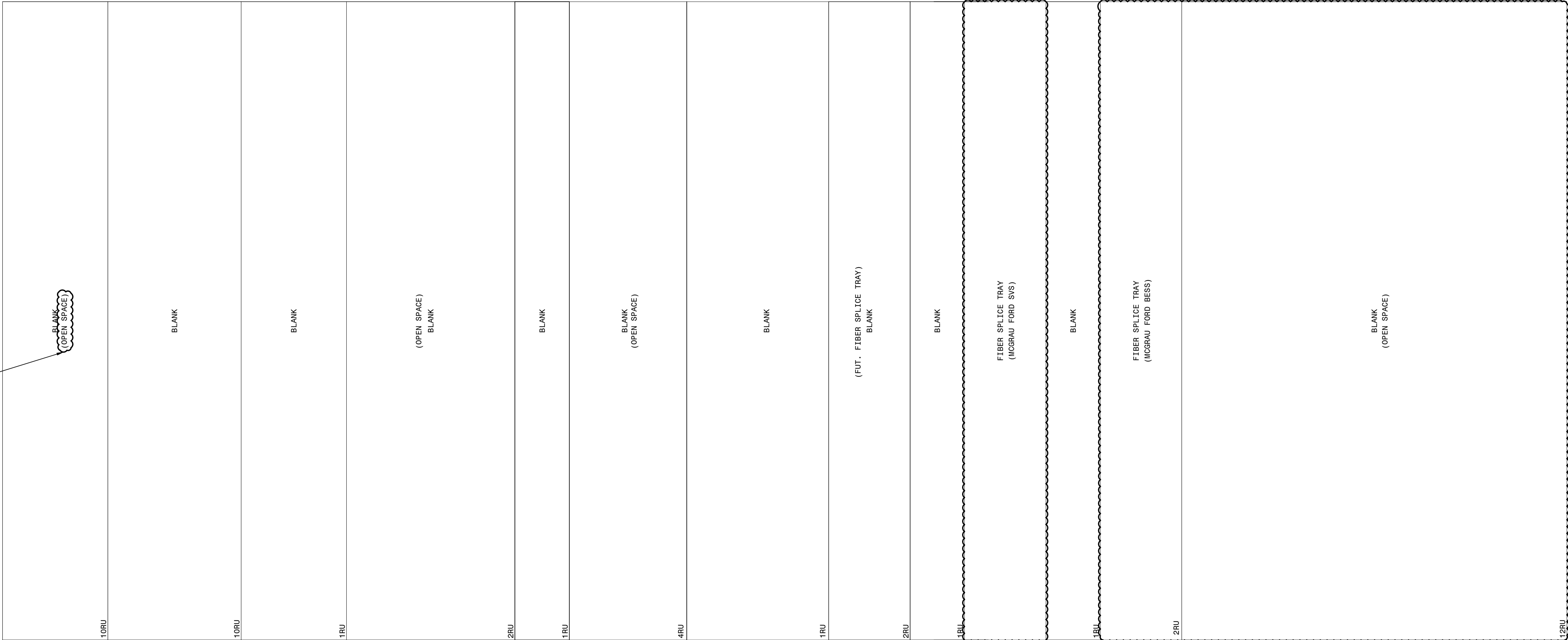
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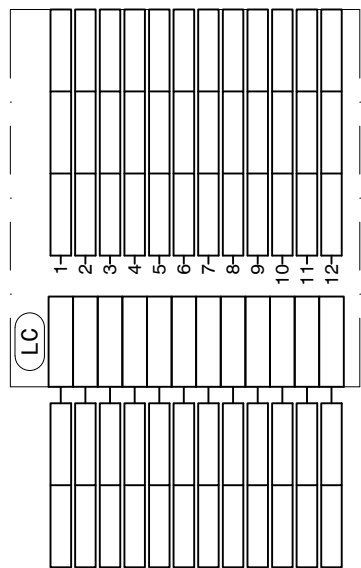
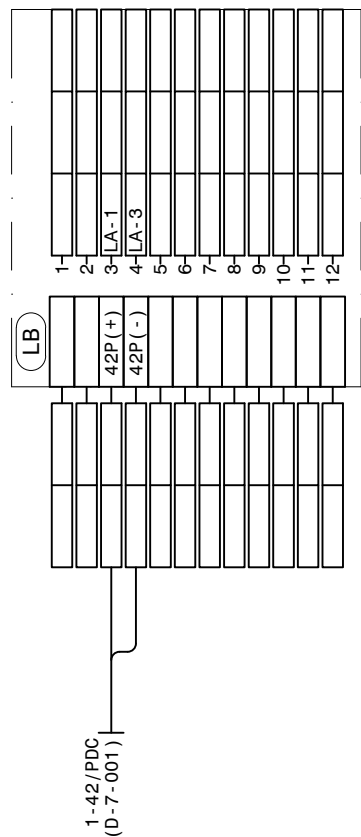
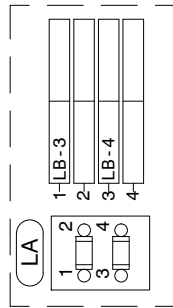
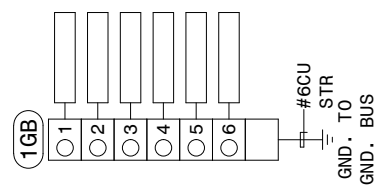
SVS FIBER (AND MCGRAU FORD BESS) INTERFACE

GEORGIA POWER		FACILITY NAME:	
A SOUTHERN COMPANY		MCGRAU FORD TS	
DRAWN: BPE		TITLE: PANEL #42, FRONT VIEW & NAMEPLATES - SVS (AND MCGRAU FORD BESS) FIBER INTERFACE	
CHECKED: BPE		TYPE: FV	
APPROVED: 1930501		FACILITY #: 01-173	
DATE: 05/31/2023		NUMBER: 330	
ASC FACS:		SHEET: REV: 001 - 00	
		ALT DWG NUM:	

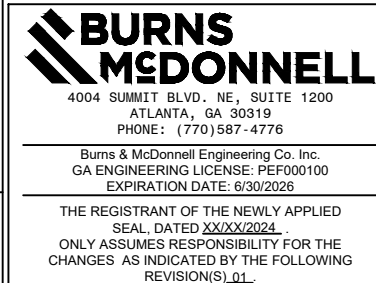
FOR REFERENCE



FOR REFERENCE



P.I.#1899807




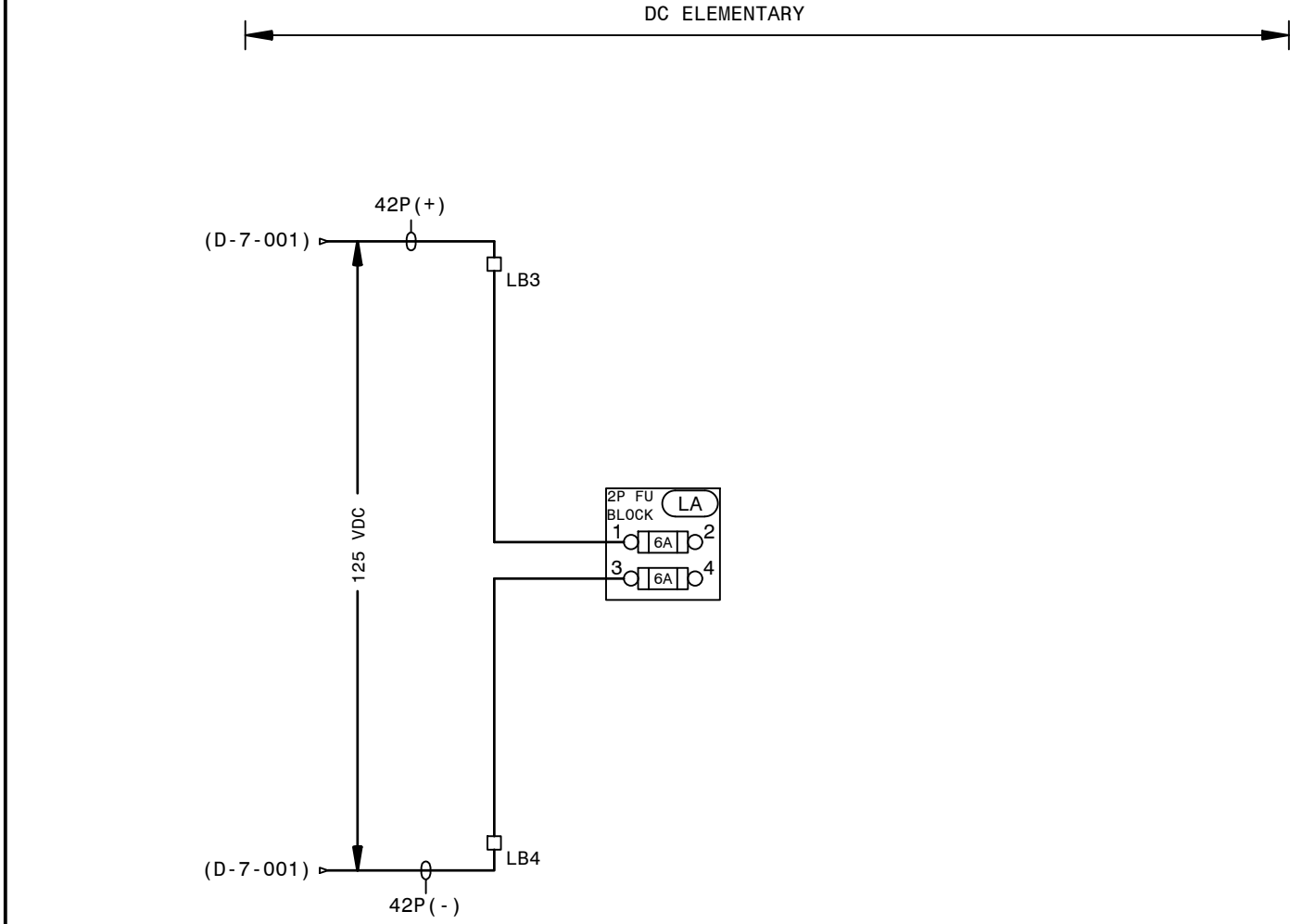
AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

NOTES:
1. FOR SERIAL CONNECTIONS, SEE COMMUNICATION DIAGRAM D-186.

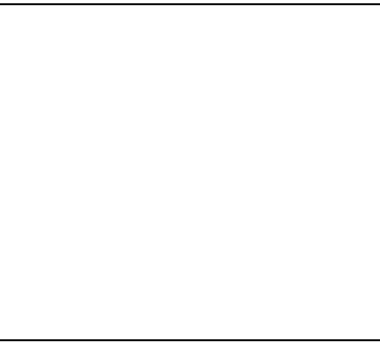
REFERENCES:
01-173-D-330-001 PANEL #42 FRONT VIEW & NAMEPLATES
01-173-D-330-003 PANEL #42 ELEMENTARY
01-173-D-330-004 PANEL #42 FIBER SPLICE CONNECTIONS (SVS)
01-173-D-330-005 PANEL #42 FIBER SPLICE CONNECTIONS (MCGRAU FORD BESS)

SVS (AND MCGRAU FORD BESS) FIBER INTERFACE

<div><div><div><div>GEORGIA</div><div>POWER</div><div>A SOUTHERN COMPANY</div></div></div></div>		FACILITY NAME:			
		MCGRAU FORD TS			
TITLE: PANEL #42, WIRING DIAGRAM - SVS (AND MCGRAU FORD BESS) FIBER INTERFACE					
DRAWN: BPE		TYPE: WD		FACILITY #:	NUMBER: D- 330
CHECKED: BPE		SCALE: NTS			
APPROVED: 1930501		BOM:		01 - 173	
DATE: 05/31/2023		ASC FACS:			
					SHEET: REV: - 002 - 00
					ALT DWG NUM:



AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS



P.I.#1899807

BURNS & McDONNELL
4004 SUMMIT BLVD., NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770) 587-4778

Burns & McDonnell Engineering Co. Inc.
GA ENGINEERING LICENSE #1900100
EXPIRATION DATE: 6/30/2025

THE REGISTRANT OF THE NEWLY APPLIED
SEAL DATED 2022/06/01
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISIONS/RECALL.

LEGEND:

- - SLIDING LINK TERMINALS OR PHEONIX PLUG
- ⊗ - LED INDICATING LIGHT
- - SWITCH SHOWN IN OFF POSN

TYPICAL LABEL

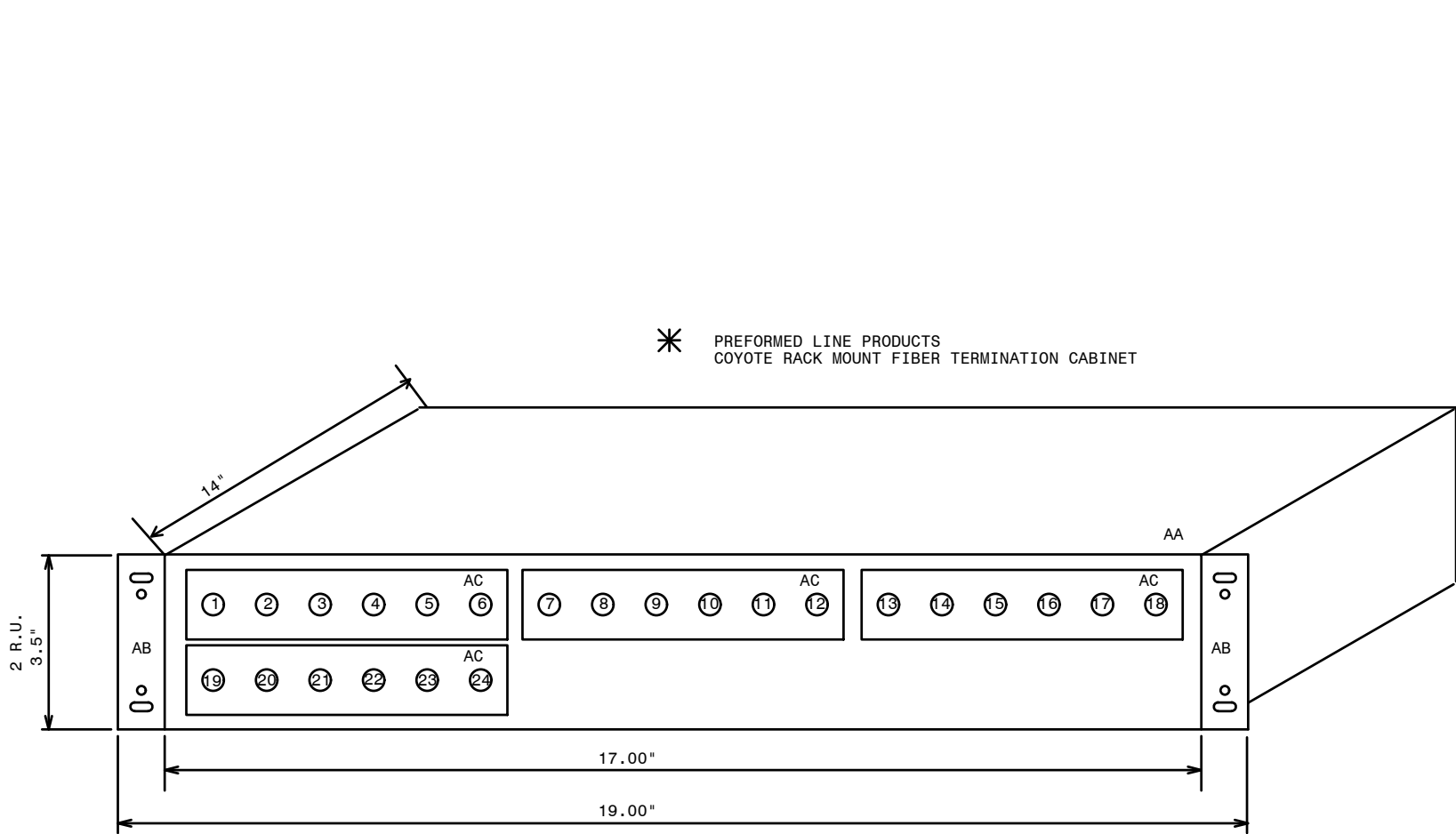
WIRE LABEL → P(+) 1
DEVICE DESIGNATION → 88 TT
ELEM. SHEET NUMBER → 1 2
WIRE LABEL → TPZZZ

REFERENCES:

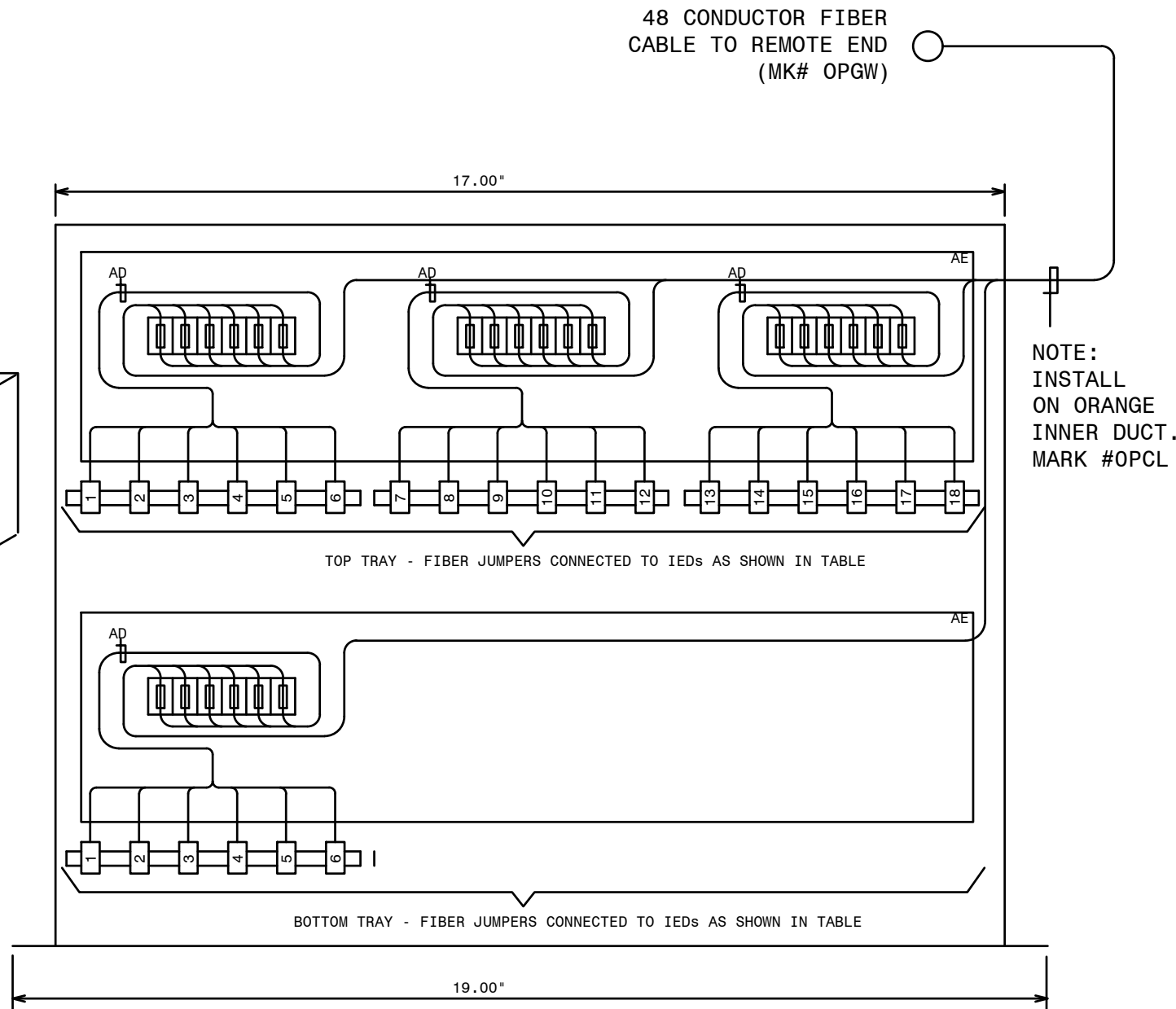
- 01-173-D-330-001 PANEL #42 FRONT VIEW & NAMEPLATES
- 01-173-D-330-002 PANEL #42 WIRING DIAGRAM
- 01-173-D-330-004 PANEL #42 FIBER SPLICE CONNECTIONS (SVS)
- 01-173-D-330-005 PANEL #42 FIBER SPLICE CONNECTIONS (MCGRAU FORD BESS)

SVS AND MCGRAU FORD BESS FIBER INTERFACE

GEORGIA POWER <small>A SOUTHERN COMPANY</small>	FACILITY NAME: MCGRAU FORD TS	
TITLE: PANEL #42, DC ELEMENTARY DIAGRAM - SVS AND MCGRAU FORD BESS FIBER INTERFACE		
DRAWN: BPE	TYPE: S2	FACILITY #: 01-173
CHECKED: BPE	SCALE: N.T.S.	NUMBER: D-330
APPROVED: 1890501	DATE: 05/31/2023	SHEET: - 003 - 00
ASC FACS:		ALT DWG NUM:



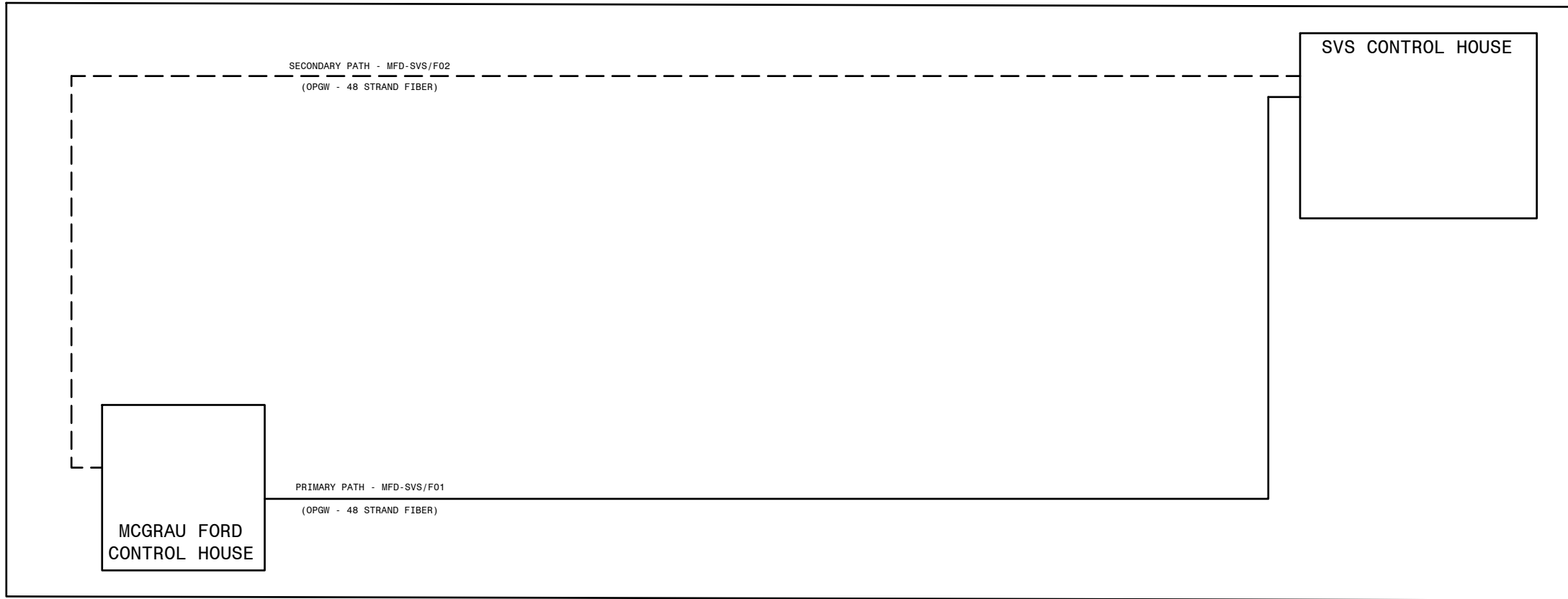
FRONT VIEW CABINETS 1, 2



TOP VIEW CABINETS 1, 2

(SEE NOTE 1)								
FIBER NUMBER	FUNCTION (TX OR RX)	SCHEME	CABLE NAME	LOCAL CONNECTION	REMOTE DEVICE	MARK #	COLOR	BUFFER
1	SEL-421-TX	MCGRAU FORD - SVS (PRIMARY)	T0-43/F01	SEL-421 (PRIMARY)	SEL-487E (PRIMARY-SVS)		BLUE	BLUE
2	SEL-421-RX						ORANGE	
3	SEL-421-TX						GREEN	
4	SEL-421-RX						BROWN	
5	SEL-421-TX						GRAY	
6	SEL-421-RX						WHITE	
7	SEL-421-TX						RED	
8	SEL-421-RX						BLACK	
9		MCGRAU FORD - SVS (SECONDARY)	T0-43/F02	SEL-311C (SECONDARY)	SEL-487E (SECONDARY-SVS)		YELLOW	ORANGE
10							PURPLE	
11							PINK	
12							CYAN	
13	SEL-311C-TX						BLUE	
14	SEL-311C-RX						ORANGE	
15	SEL-311C-TX						GREEN	
16	SEL-311C-RX						BROWN	
17	SEL-311C-TX						GRAY	
18	SEL-311C-RX						WHITE	
19	SEL-311C-TX						RED	
20	SEL-311C-RX						BLACK	
21							YELLOW	
22							PURPLE	
23							PINK	
24							CYAN	

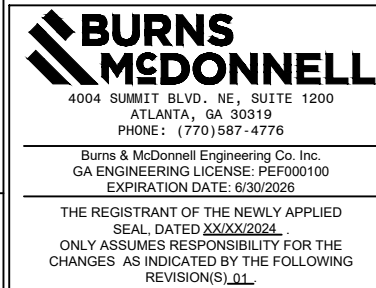
MCGRAU FORD FIBER PATH (OPGW) ROUTING DETAIL



QTY	ITEM	MARK #	CMDTY #	DESCRIPTION	REMARKS
2	AA	OPCF	J-19763	PLP RDC6 RACK MOUNT CABINET ALLOWS UP TO 36 FIBER SPLICES AND CONNECTIONS	PLP MODEL # RDC6
4	AB	OPCJ	J-19773	MOUNTING BRACKET ASSEMBLY FOR MOUNTING RDC6 IN 19" RACK MOUNT PANEL	PLP MODEL # BKT2U19A
8	AC			LC CONNECTORS - TO BE SELECTED AND PLACED BY IT GROUP	LC CONNECTORS
8	AD	OPCH	J-19770	FIBER PIGTAIL - MIC CABLE 6 FIBER, 2 METER ST-SM	PROVIDES SM-ST TERM. FOR 6 FIBERS.
4	AE	OPBD	J-19598	FIBER CABLE SPLICE TRAY - MOUNTS INTERNAL TO OPCF	PLP MODEL # 80805514
	AF	OPCP	J-19820	SINGLE MODE SIMPLEX JUMPER ST TO ST (1 METER)	
	AG	OPCQ	J-19821	SINGLE MODE SIMPLEX JUMPER ST TO ST (33 METER)	
	AH	OPCR	J-19803	SINGLE MODE DUPLEX JUMPER ST TO ST (1 METER)	
	AI	OPCM	J-19804	SINGLE MODE DUPLEX JUMPER ST TO ST (2 METER)	
	AJ	OPDN	J-19805	SINGLE MODE DUPLEX JUMPER ST TO ST (5 METER)	
	AK	OPDA	J-19708	62.5 MICRON MULTIMODE DUPLEX FIBER JUMPER ST TO ST (1 METER)	
	AL	OPDB	J-82075	62.5 MICRON MULTIMODE DUPLEX FIBER JUMPER ST TO ST (2 METER)	
	AM	OPDC	J-81612	62.5 MICRON MULTIMODE DUPLEX FIBER JUMPER ST TO ST (5 METER)	
4	AO	OPDP	J-19864	SINGLE MODE DUPLEX JUMPER ST TO ST (20 METER)	
1	AP	OPCO	J-19776	PLP RDC3 RACK MOUNT CABINET ALLOWS UP TO 18 FIBER SPLICES AND CONNECTIONS	PLP MODEL # RDC3
		OPAZ			


PROVIDED BY IT.

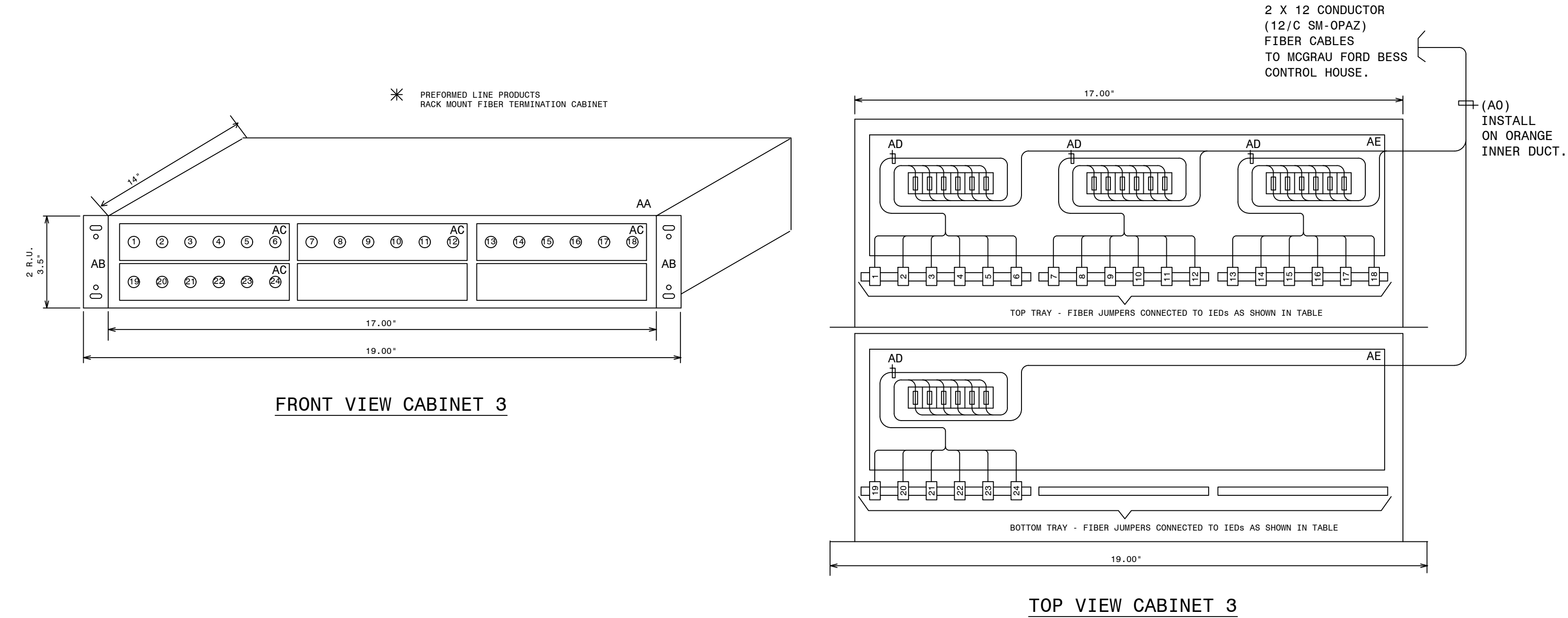
P.I.#1899807



- NOTE:
- FUNCTION MUST BE REVERSED ON REMOTE END. IE - IF A1 IS CONNECTED TO TX ON THIS END, IT MUST BE CONNECTED TO RX ON REMOTE END.
 - SEE SIA COMMUNICATION CONNECTION DIAGRAM D-186 FOR ADDITIONAL INFORMATION.
 - FIELD TO VERIFY FINAL FIBER INSTALLATION DETAILS.
- REFERENCES:
- | | |
|------------------|------------------------------------------------------|
| 01-173-D-330-001 | PANEL #42 FRONT VIEW & NAMEPLATES |
| 01-173-D-330-002 | PANEL #42 WIRING DIAGRAM |
| 01-173-D-330-003 | PANEL #42 AS/DC ELEMENTARY |
| 01-173-D-330-005 | PANEL #42 FIBER SPLICE CONNECTIONS (MCGRAU FORD BSS) |

SVS FIBER INTERFACE

 A SOUTHERN COMPANY		FACILITY NAME:					
		MCGRAU FORD TS					
TITLE: PANEL #42, FIBER SPLICE CONNECTIONS - SVS FIBER INTERFACE							
DRAWN: BPE		TYPE: WD		FACILITY #:		NUMBER:	
CHECKED: BPE		SCALE: N.T.S.		01 - 173		D- 330	
APPROVED: 1930501		BOM:				SHEET: REV:	
DATE: 05/31/2023		ASC FAC:				- 004 - 00	
						ALT DWG NUM:	



(SEE NOTE 1)

TABLE A - FIBER PANEL 2 (FOP-3) FIBER JUMPER CONNECTIONS

FIBER NUMBER	FUNCTION (TX OR RX)	CABLE NAME	REMOTE DEVICE	REMOTE LOCATION	DWG REF	MARK #	COLOR	BUFFER
1	PRI RELAY RX	13-42/FIB1	SEL-411LP MCGRAU FORD BESS 230KV LINE	PANEL 13	D-424-002	OPDP	BLUE	BLUE
2	PRI RELAY TX						ORANGE	
3	SPARE						GREEN	
4	SPARE						BROWN	
5	SPARE						GRAY	
6	SPARE						WHITE	
7	SPARE	13-42/FIB2	SEL-411LS MCGRAU FORD BESS 230KV LINE	PANEL 13	D-424-002	OPDP	RED	ORANGE
8	SPARE						BLACK	
9	SPARE						YELLOW	
10	SPARE						PURPLE	
11	SPARE						PINK	
12	SPARE						CYAN	
13	SEC RELAY RX	13-42/FIB2	SEL-411LS MCGRAU FORD BESS 230KV LINE	PANEL 13	D-424-002	OPDP	BLUE	GREEN
14	SEC RELAY TX						ORANGE	
15	SPARE						GREEN	
16	SPARE						BROWN	
17	SPARE						GRAY	
18	SPARE						WHITE	
19	SPARE	13-42/FIB2	SEL-411LS MCGRAU FORD BESS 230KV LINE	PANEL 13	D-424-002	OPDP	RED	BROWN
20	SPARE						BLACK	
21	SPARE						YELLOW	
22	SPARE						PURPLE	
23	SPARE						PINK	
24	SPARE						CYAN	

✱

QTY	ITEM	MARK #	CMDTY #	DESCRIPTION	REMARKS
1	AA	OPCF	J-19763	PLP RDC6 RACK MOUNT CABINET ALLOWS UP TO 36 FIBER SPLICES AND CONNECTIONS	PLP MODEL # RDC6
1	AB	OPCJ	J-19773	MOUNTING BRACKET ASSEMBLY FOR MOUNTING RDC6 IN 19" RACK MOUNT PANEL	PLP MODEL # BKT2U19A
4	AC	OPCG	J-19767	PLP 6ISMST ST CONNECTOR SIX PACK	ST TO ST TERMINATION FOR 6 FIBERS
4	AD	OPCH	J-19770	FIBER PIGTAIL - MIC CABLE 6 FIBER, 2 METER ST-SM	PROVIDES SM-ST TERM. FOR 6 FIBERS.
1	AE	OPBD	J-19598	FIBER CABLE SPLICE TRAY - MOUNTS INTERNAL TO OPCF	PLP MODEL # 80805514
	AF	OPCP	J-19820	SINGLE MODE SIMPLEX JUMPER ST TO ST (1 METER)	
	AG	OPCQ	J-19821	SINGLE MODE SIMPLEX JUMPER ST TO ST (33 METER)	
	AH	OPCR	J-19803	SINGLE MODE DUPLEX JUMPER ST TO ST (1 METER)	
1	AI	OPCM	J-19804	SINGLE MODE DUPLEX JUMPER ST TO ST (2 METER)	
	AJ	OPDN	J-19805	SINGLE MODE DUPLEX JUMPER ST TO ST (5 METER)	
	AK	OPDA	J-19708	62.5 MICRON MULTIMODE DUPLEX FIBER JUMPER ST TO ST (1 METER)	
	AL	OPDB	J-82075	62.5 MICRON MULTIMODE DUPLEX FIBER JUMPER ST TO ST (2 METER)	
	AM	OPDC	J-81612	62.5 MICRON MULTIMODE DUPLEX FIBER JUMPER ST TO ST (5 METER)	
2	AN	OPDP	J-19864	SINGLE MODE DUPLEX JUMPER ST TO ST (20 METER)	
2	AO	OPAZ	J-19520	OPTICAL CABLE 12 FIBER SINGLE MODE	
	AP	OPBB	J-19549	OPTICAL CABLE 24 FIBER SINGLE MODE	

NOTE:
1. FUNCTION MUST BE REVERSED ON REMOTE END. IE - IF A1 IS CONNECTED TO TX ON THIS END, IT MUST BE CONNECTED TO RX ON REMOTE END.

REFERENCES:
D-330-001 PANEL #42 FRONT VIEW AND NAMEPLATES
D-330-002 PANEL #42 WIRING DIAGRAM
D-330-003 PANEL #42 ELEMENTARY DIAGRAM
D-330-004 PANEL #42 FIBER SPLICE CONNECTIONS (SVS)

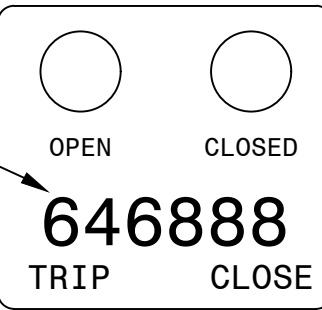


BESS FIBER INTERFACE

GEORGIA POWER A SOUTHERN COMPANY		FACILITY NAME: MCGRAU FORD TS	
DRAWN: EG/BHCD		TITLE: PANEL #42, FIBER SPLICE CONNECTIONS - MCGRAU FORD BESS INTERFACE	
CHECKED: SW/BHCD	TYPE: WD	FACILITY #:	NUMBER:
APPROVED: P1#1899807	SCALE: N.T.S.	01-173	SHEET: REV:
DATE: 9/23/2024	BOH:	D-330	- 005 -- .A
ASC FAC:		ALT DWG NUM:	

NAMEPLATE DETAILS			
NAMEPLATE NO.	FIRST LINE	SECOND LINE	THIRD LINE
1	PANEL NO. 13		DWG.01-173-D424
2	PANEL NO. 13		DWG.01-173-D424
3	351S7X RELAY	646888	CONTROL - BF/RCLS
4	351S7X RELAY	646888	CONTROL - BF/RCLS
5	BF C0	646888	
6	411L PRI RELAY	646888	MCGRAU FORD BESS 230KV LINE
7	411L PRI RELAY	646888	MCGRAU FORD BESS 230KV LINE
8	411L SEC RELAY	646888	MCGRAU FORD BESS 230KV LINE
9	411L SEC RELAY	646888	MCGRAU FORD BESS 230KV LINE

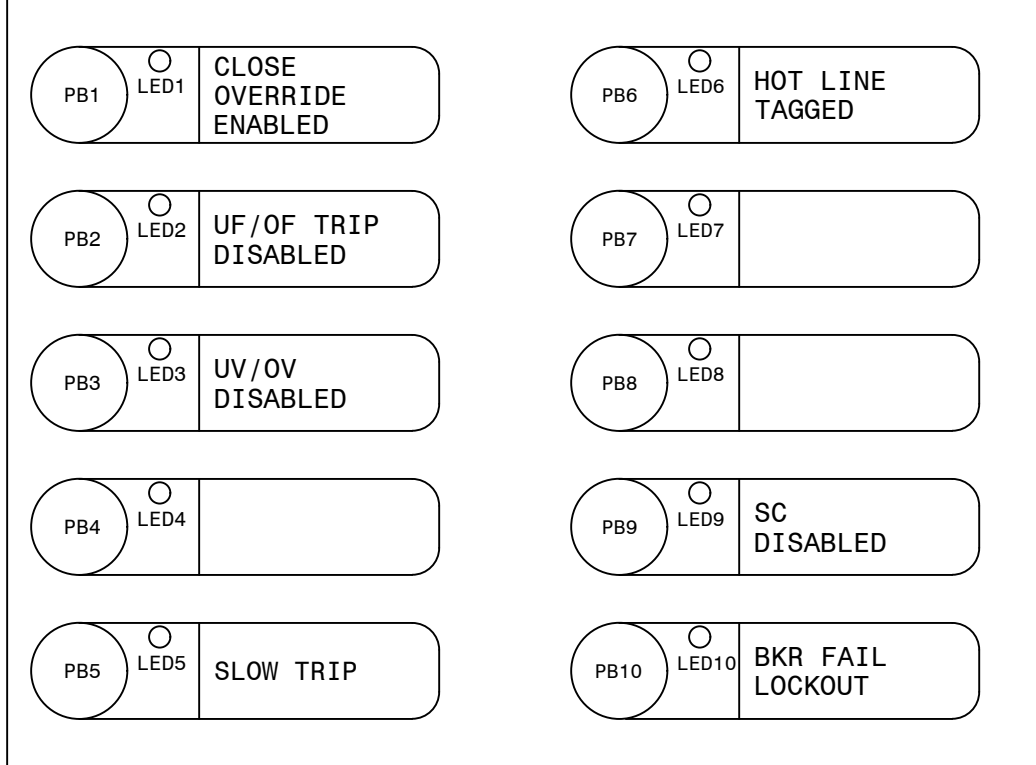
DETAIL A2
(PCB 888 351S7X
CONFIGURABLE LABELS)



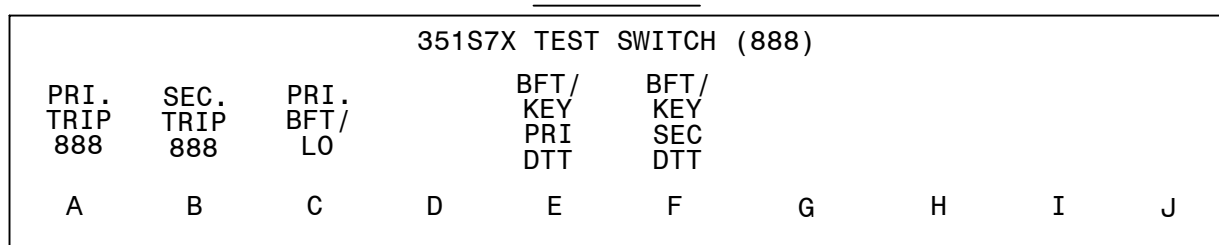
(36PT FONT)

QTY	ITEMS	CATALOG	DESCRIPTION	REMARKS
1	AA	RHCL-I	27IN X 90IN SWITCHBOARD PANEL (FULL RACK) WITH FRAME	DWG-PAN-CONST-D1, DWG-PAN-CONST-D2
6	AB	RGWT-I	RACK PANEL TYPE A 1-RACK UNIT	DWG-PAN-CONST-D1
1	AC	RGWU-I	RACK PANEL TYPE A 2-RACK UNITS	DWG-PAN-CONST-D1
5	AD	RGWV-I	RACK PANEL TYPE B 3-RACK UNITS	DWG-PAN-CONST-D1
1	AE	RLAK	SEL-351S7X	SEL-0351S7XHE4B5421
3	AF	RHUA	2-10 POLE TYPE FT-1 SWITCHES, POS.A:(T T T T T T T T T T),POS. B:(P P P C-C C-C C-P), POS C:(TOGGLE SWITCH CUTOFF)	ABB #SS3G036014S01M
1	AG	RHHS-I	SWITCH,TOGGLE,4P,DT,15A,115V.,.25A@125VDC	MICROSWITCH #4TL1-3
2	AH	RTIW	SEL-411L T/M LINE DIFF/STEP DIST WITH OC AND TRAVELING-WAVE FLT DET., 5RU	SEL #0411L1X6X5B8DHXHE424XX
10	AM	BJPE-I	12 POLE SLIDING LINK TERMINAL BLOCK	STATES ELECTRIC MFG: M-25012-T
1	AN	BAVD-I	COPPER NEUTRAL BAR GRD TERM, #4-#14	BURNDY: K12P4CG1
1	AP	FUPF	FUSE BLOCK, PHENOL,2-POLE,1-30A	BUSSMANN: H25030-2SR
3	AQ	FUPH	FUSE BLOCK, PHENOL,3-POLE,1-30A	BUSSMANN: H25030-3S
10	AR	RFYM	FUSE,CARTIDGE,1ELEM,NR,250V,6A	BUSSMANN: KTN-6J8-11G30
2	AU	RFUT-I	REL-AUX, TRIP CURR IND. - TIR, 1.0A OPER., COIL 10A NOM.	ELECTROMAX #6319209
1	AV	RGWV-I	RACK PANEL TYPE B 4-RACK UNITS	DWG-PAN-CONST-D1
4	BF	RHKH-I	TRANSF-CURRENT 5A WINDOW 500WV, DFR/DME	UTILITY SYSTEMS INC: CTR-1001-17714813

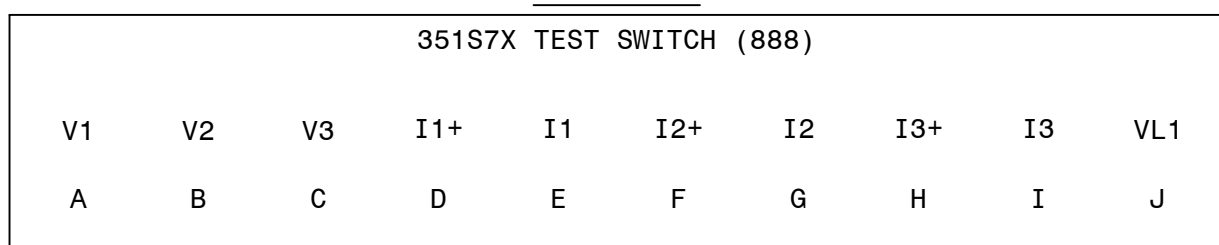
DETAIL A
(351S7X CONFIGURABLE LABELS)



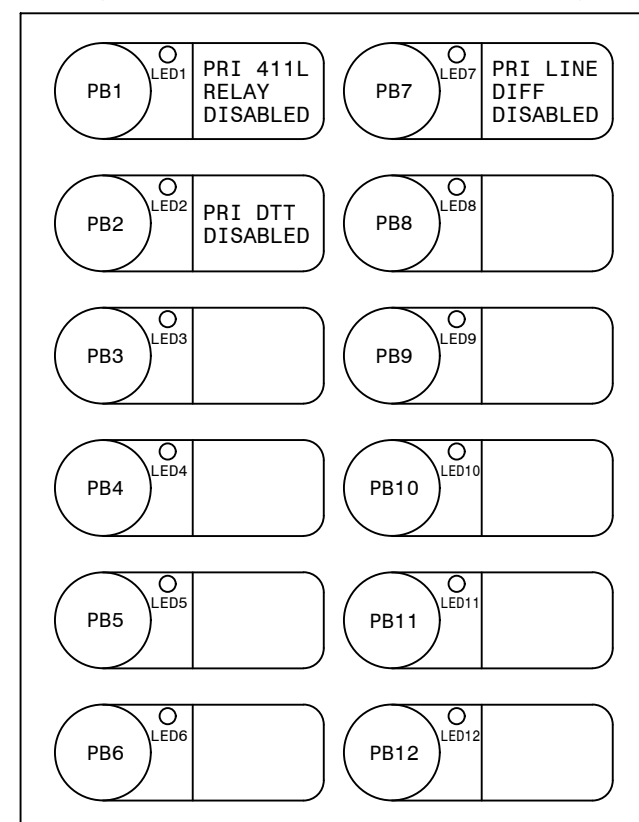
DETAIL B



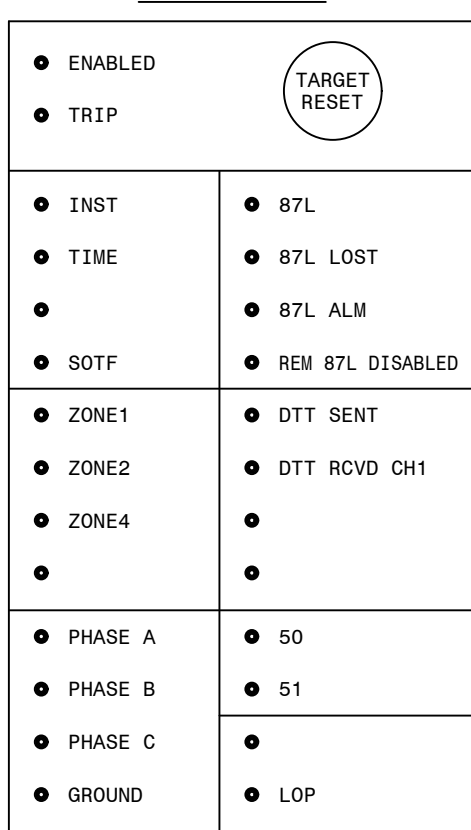
DETAIL C



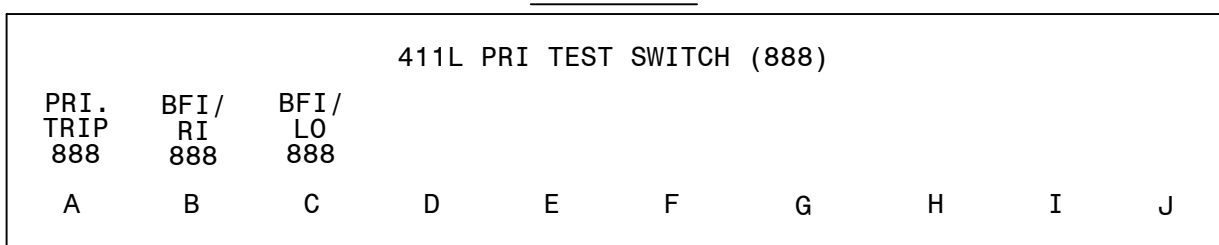
DETAIL D
(411L PRI CONFIGURABLE LABELS)



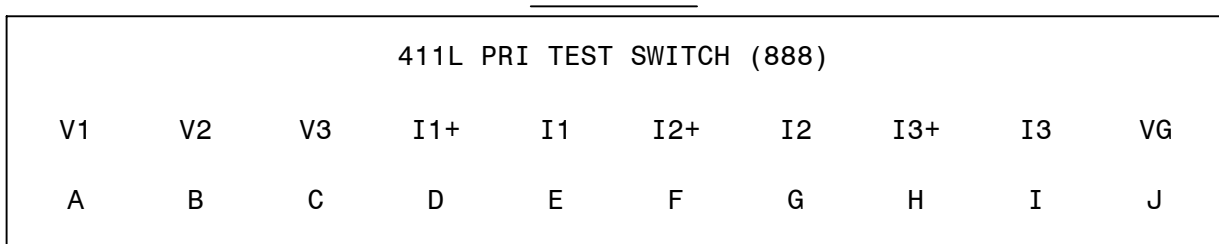
DETAIL D1



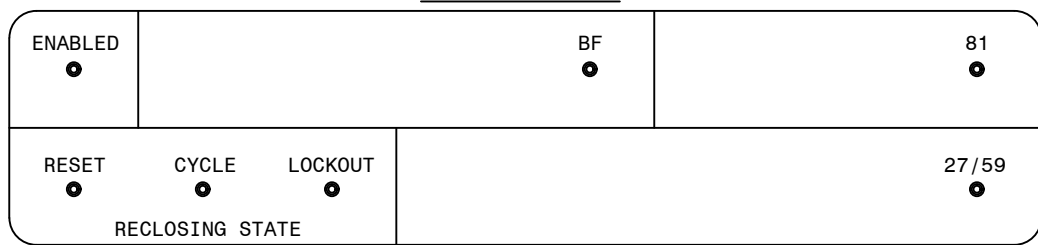
DETAIL E



DETAIL F



DETAIL A1



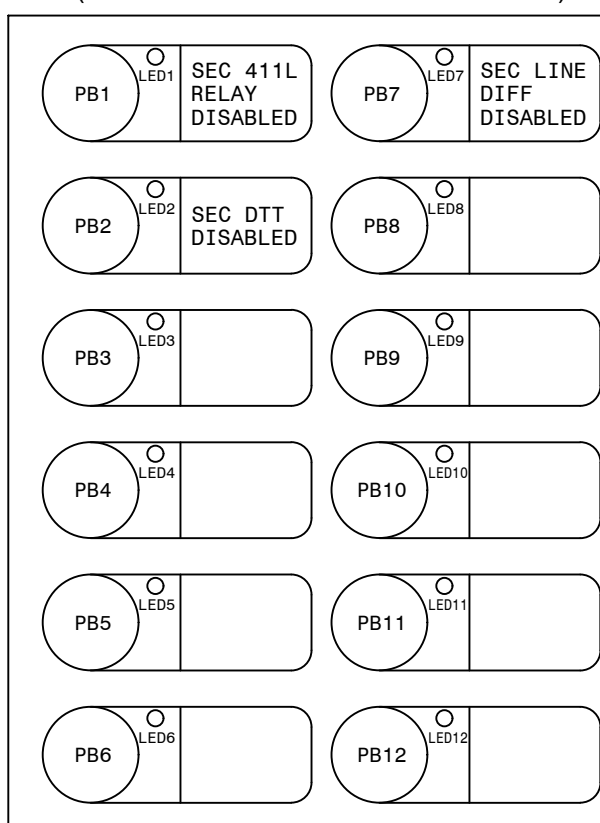
P.I.#1899807



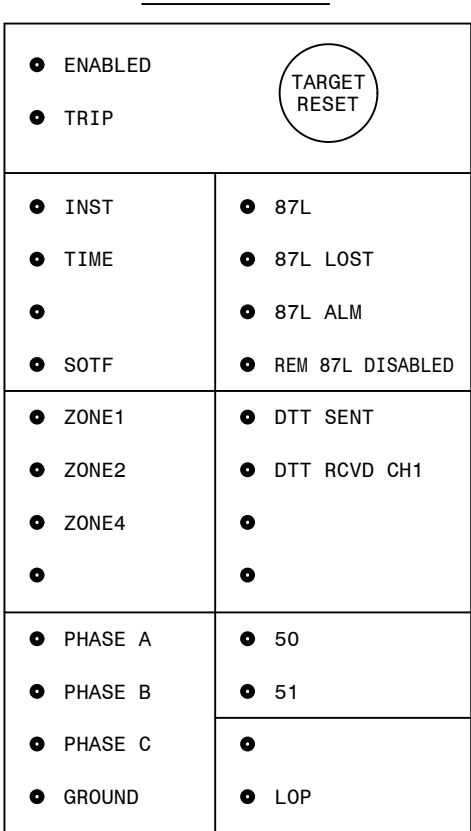
4004 SUMMIT BLVD., NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770)887-4776
Burns & McDonnell Engineering Co. Inc.
GA ENGINEERING LICENSE: PE000100
EXPIRATION DATE: 03/30/2028
THE REGISTRANT OF THE MARK V APPLIED
REAL DATE: 03/30/2028
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISIONS.

DETAIL G

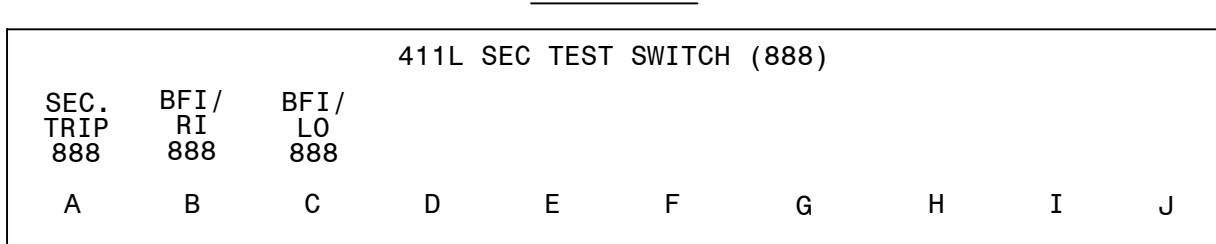
(411L SEC CONFIGURABLE LABELS)



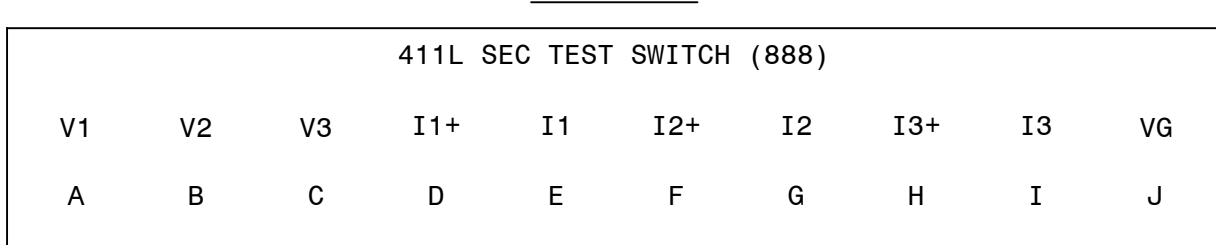
DETAIL G1



DETAIL H



DETAIL I



REFERENCES:

D-424-002 PANEL 13 WIRING DIAGRAM
D-424-003 PANEL 13 DC ELEMENTARY DIAGRAM
D-424-004 PANEL 13 AC ELEMENTARY DIAGRAM
D-424-005 PANEL 13 LOGIC DIAGRAM (411L PRI)
D-424-006 PANEL 13 LOGIC DIAGRAM (411L SEC)
D-424-007 PANEL 13 LOGIC DIAGRAM (351S7X BF/RCLS)

NOTES:

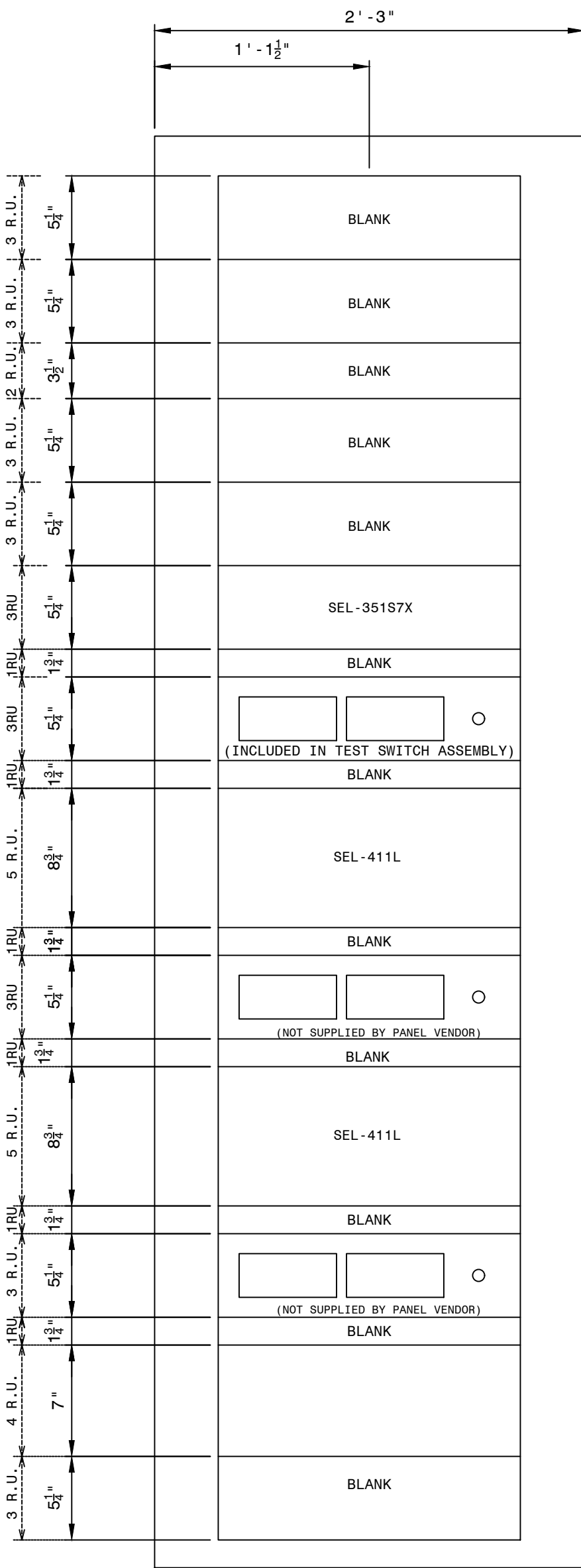
1. SLIDING LINKS TO OPEN TOWARD INTERNAL WIRING SIDE.

AUTOCAD ELECTRICAL

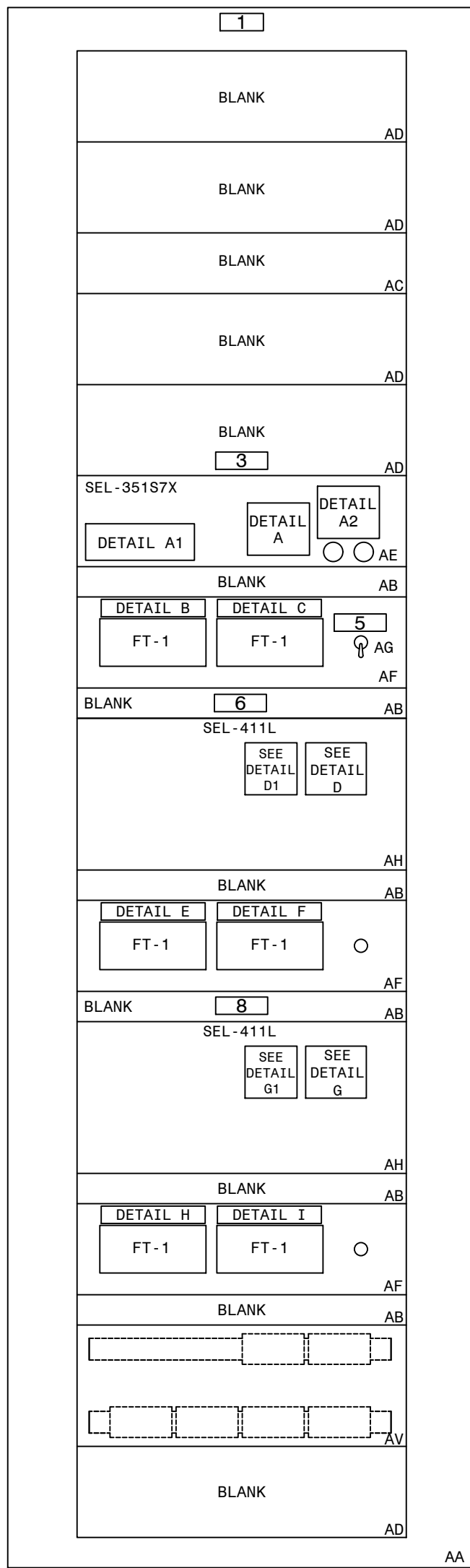
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

PANEL 13, FRONT VIEW, TRANS. LINE 87L/DTT FIBER, STR. BUS

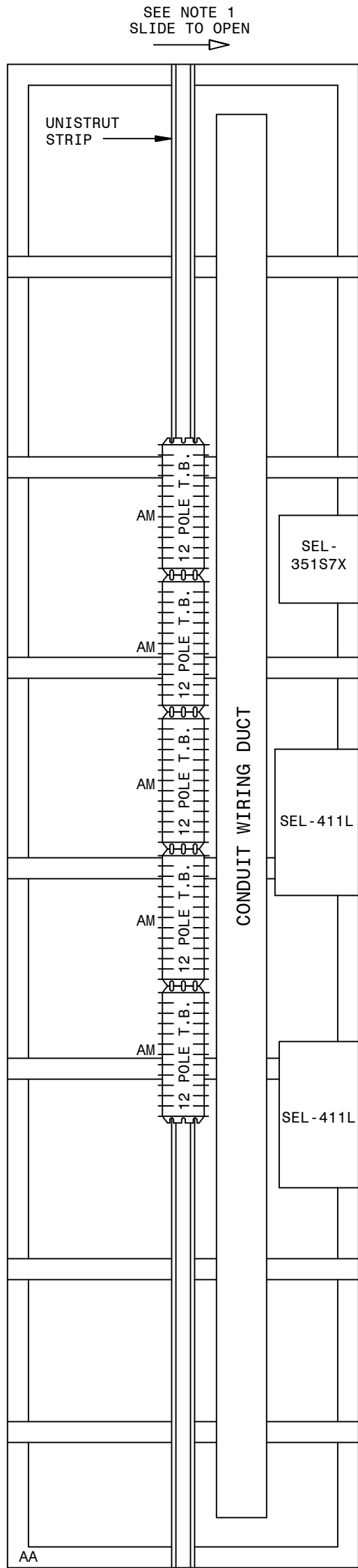
GEORGIA POWER A SOUTHERN COMPANY		FACILITY NAME: MCGRAU FORD TS	
DRAWN: EG/BHCD		TITLE: PANEL NO.13, FRONT VIEW - MC. FORD BESS 230KV LINE SEL411L (PRI-FIB LINE DIFF/DIST.), SEL411L (SEC-FIB LINE DIFF/DIST.), SEL351S (BF/RCLS)	
CHECKED: SW/BHCD		TYPE: FV	
APPROVED: PI#1899807		FACILITY #: 01-173	
DATE: 7/31/2024		SHEET: 424	
SCALE: 1-1/2" = 1'-0"		REV: -001--.A	
BOM:		ASC FACs:	
		ALT DWG NUM:	



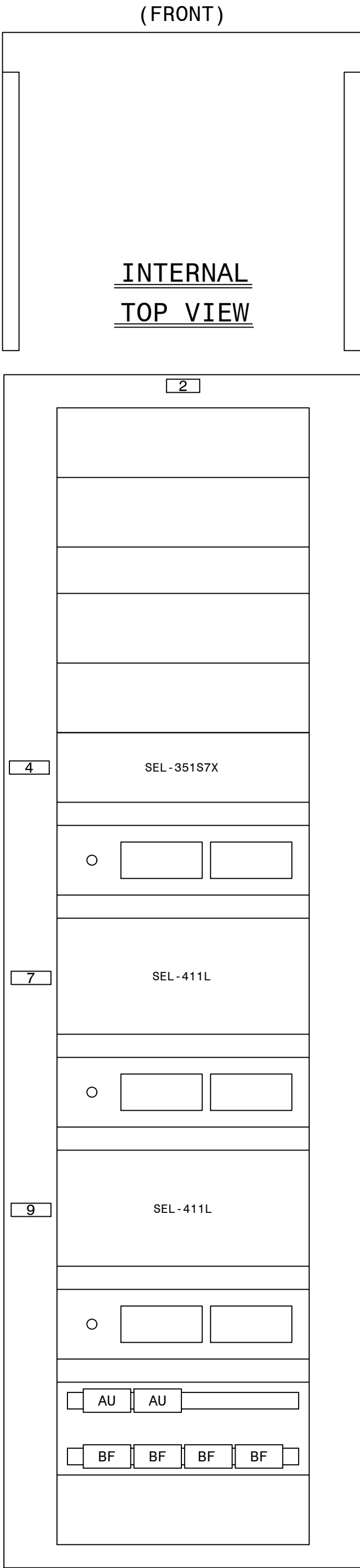
FRONT PANEL
(PUNCH MARKS)



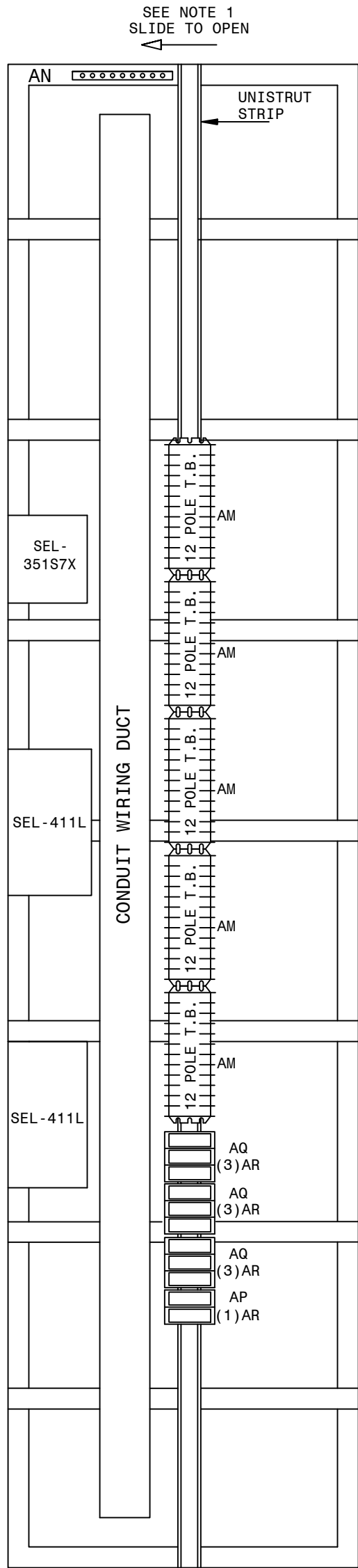
FRONT PANEL
(NAMEPLATES AND
MATERIAL MARKS)



LEFT REAR

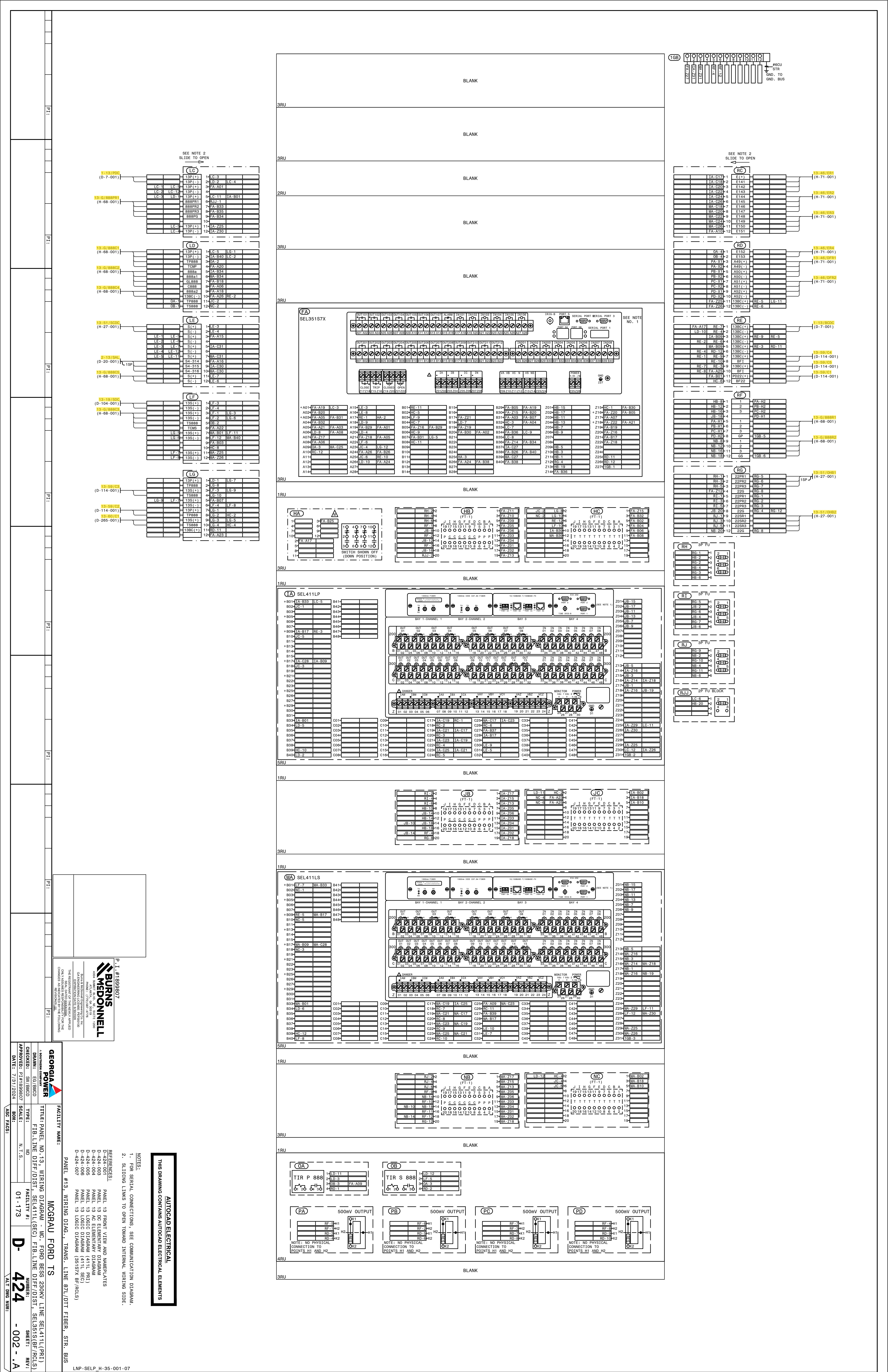


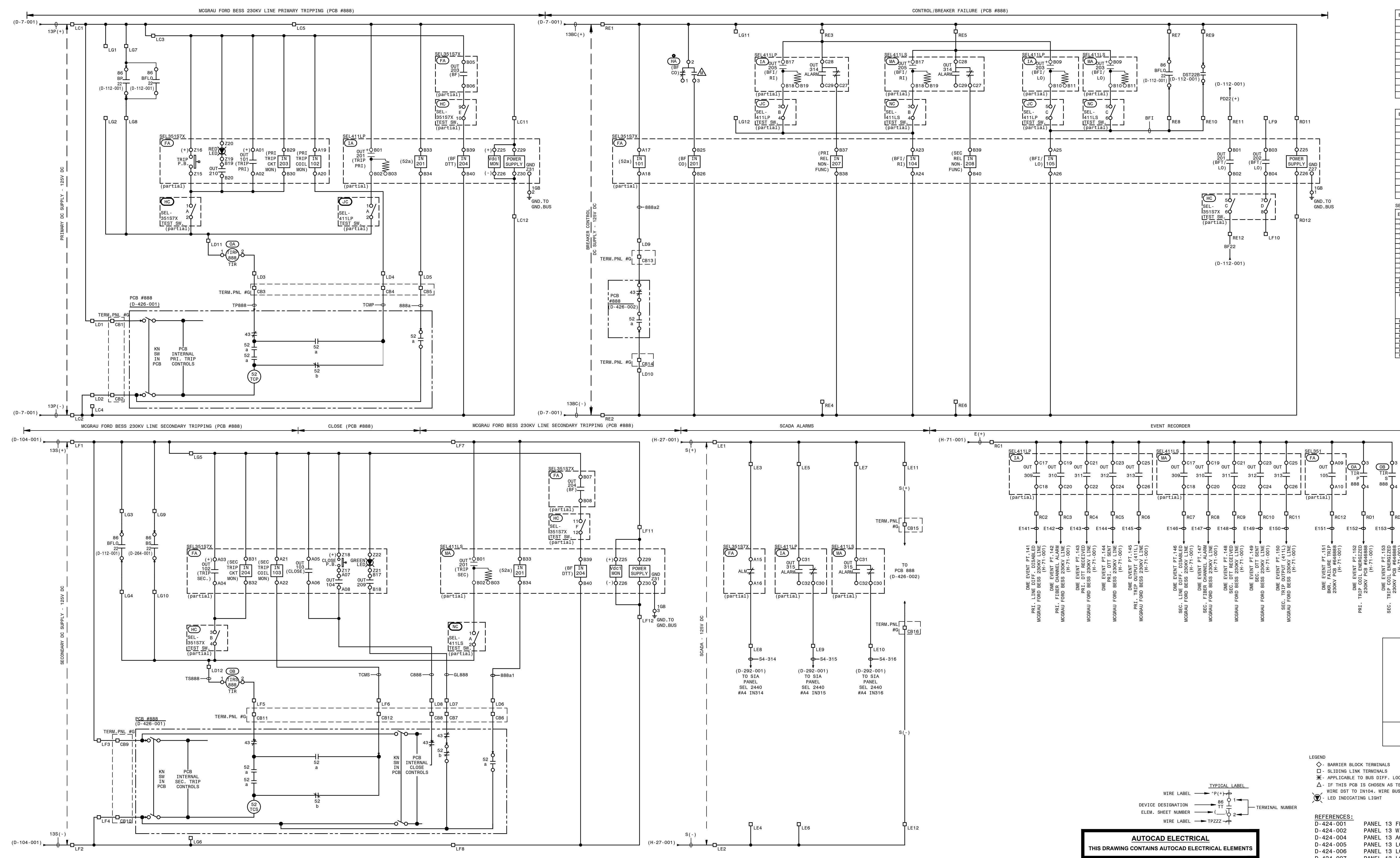
REAR PANEL
(INTERNAL PANEL,
REAR VIEW)



RIGHT REAR

LNP-SELPR-D-32-001-06





SEL 411LP (PRI. LINE DIFF) I/O ASSIGNMENTS	
ELEMENT	FUNCTION
IN201	BREAKER 52a INPUT PCB #888
IN204	BF DTT/PERMISSIVE TRIP PCB #888
OUT201	TRIP (PCB #888 PRI. TRIP COIL)
OUT203	BF INITIATE / LOCKOUT (PCB #888)
OUT205	BF/RECLOSE INITIATE (PCB #888)
OUT309	PRI. LINE DIFF. DISABLED (DME)
OUT310	PRI. FIBER CHANNEL ALARM (DME)
OUT311	PRI. DTT RECEIVED (DME)
OUT312	PRI. DTT SENT (DME)
OUT313	PRI. TRIP OUTPUT (DME)
OUT314	RELAY NON-FUNCTIONAL
OUT315	RELAY FAILURE ALARM

SEL 411LS (SEC. LINE DIFF) I/O ASSIGNMENTS	
ELEMENT	FUNCTION
IN201	BREAKER 52a INPUT PCB #888
IN204	BF DTT/PERMISSIVE TRIP PCB #888
OUT201	TRIP (PCB #888 SEC. TRIP COIL)
OUT203	BF INITIATE / LOCKOUT (PCB #888)
OUT205	BF/RECLOSE INITIATE (PCB #888)
OUT309	SEC. LINE DIFF. DISABLED (DME)
OUT310	SEC. FIBER CHANNEL ALARM (DME)
OUT311	SEC. DTT RECEIVED (DME)
OUT312	SEC. DTT SENT (DME)
OUT313	SEC. TRIP OUTPUT (DME)
OUT314	RELAY NON-FUNCTIONAL
OUT315	RELAY FAILURE ALARM

SEL 351S7X (CONTROL/BF/RCLS) I/O ASSIGNMENTS	
ELEMENT	FUNCTION
IN101	BREAKER 52a INPUT
IN102	PRIMARY TRIP COIL MONITOR
IN103	SECONDARY TRIP COIL MONITOR
IN104	PROTECTIVE RELAY TRIP (BF1/RI)
IN105	EXTERNAL LOR TRIP INPUT (BF1/LO)
IN201	BREAKER FAILURE OUTPUT
IN203	PRI. TRIP CIRCUIT MONITOR
IN204	SEC. TRIP CIRCUIT MONITOR
IN205	PHASE 2 LINE VOLTAGE INPUT
IN206	PHASE 3 LINE VOLTAGE INPUT
IN207	MCGRAU FORD BESS SEC. PROT. RELAY NON-FUNCTIONAL
IN208	MCGRAU FORD BESS SEC. PROT. RELAY NON-FUNCTIONAL
OUT101	TRIP (PRIMARY TRIP COIL)
OUT102	TRIP (SECONDARY TRIP COIL)
OUT103	CLOSE
OUT104	PERMITS "BIG RED BUTTON" CLOSE IF NO HOT LINE TAG IS APPLIED AND IF BREAKER TRIP COIL, RELAY SELF-TEST ARE OKAY, & NO BF LOR OR OTHER LOR'S INPUTS ASSERTED
OUT105	BKR. FAIL. TRIP DME
OUT201	BKR. FAIL. TRIP & LOCKOUT PRI. BUS DIFF
OUT202	BKR. FAIL. TRIP & LOCKOUT SEC. BUS DIFF (NOT USED)
OUT203	BF TIME KEY DTT/ANTI-ISLANDING TO MCGRAU FORD BESS
OUT204	BF TIME KEY DTT/ANTI-ISLANDING TO MCGRAU FORD BESS
OUT209	OPENS GREEN LED ON RELAY
OUT210	OPENS RED LED ON RELAY
OUTALM	RELAY FAILURE ALARM

BF CO		MAINTAINED POSITIONS	
TOGGLE SWITCH MICRO SWITCH NS24525-23		UP	DOWN
CONTACTS		REMOTE CLOSED	LOCAL OPEN
$\overline{C1}$	$C2$	1-2	X
$\overline{C1}$	$C2$	2-3	X
$\overline{C1}$	$C2$	4-5	X
$\overline{C1}$	$C2$	7-8	X
$\overline{C1}$	$C2$	8-9	X
$\overline{C1}$	$C2$	10-11	X
$\overline{C1}$	$C2$	11-12	X

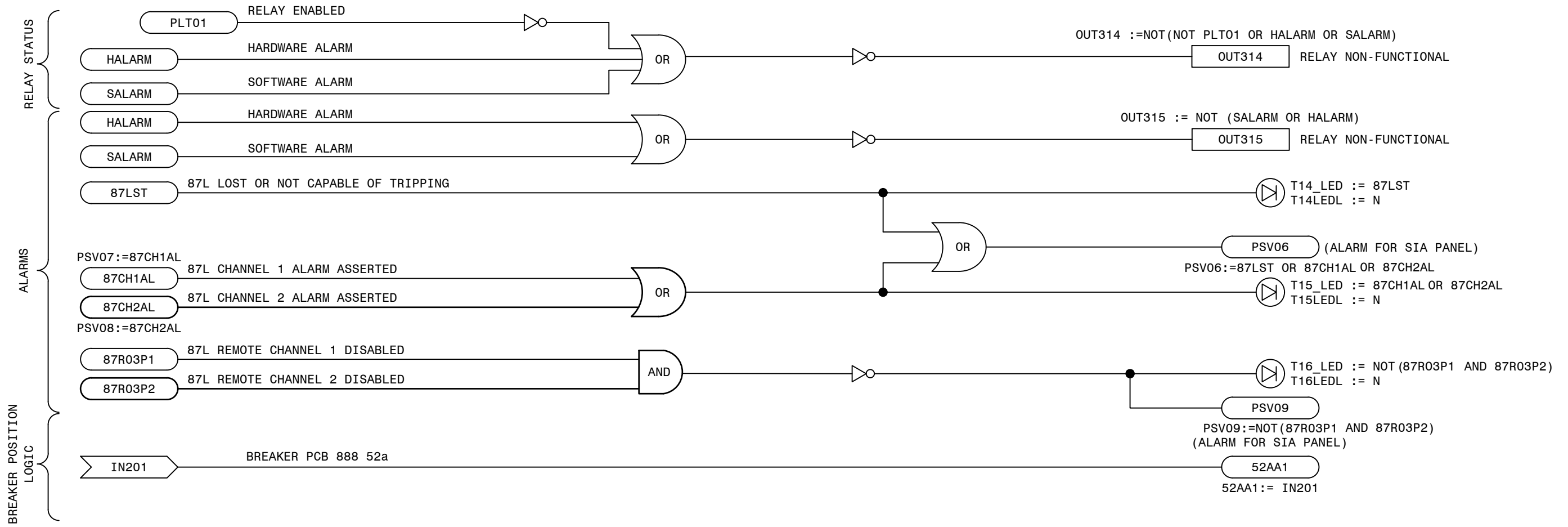
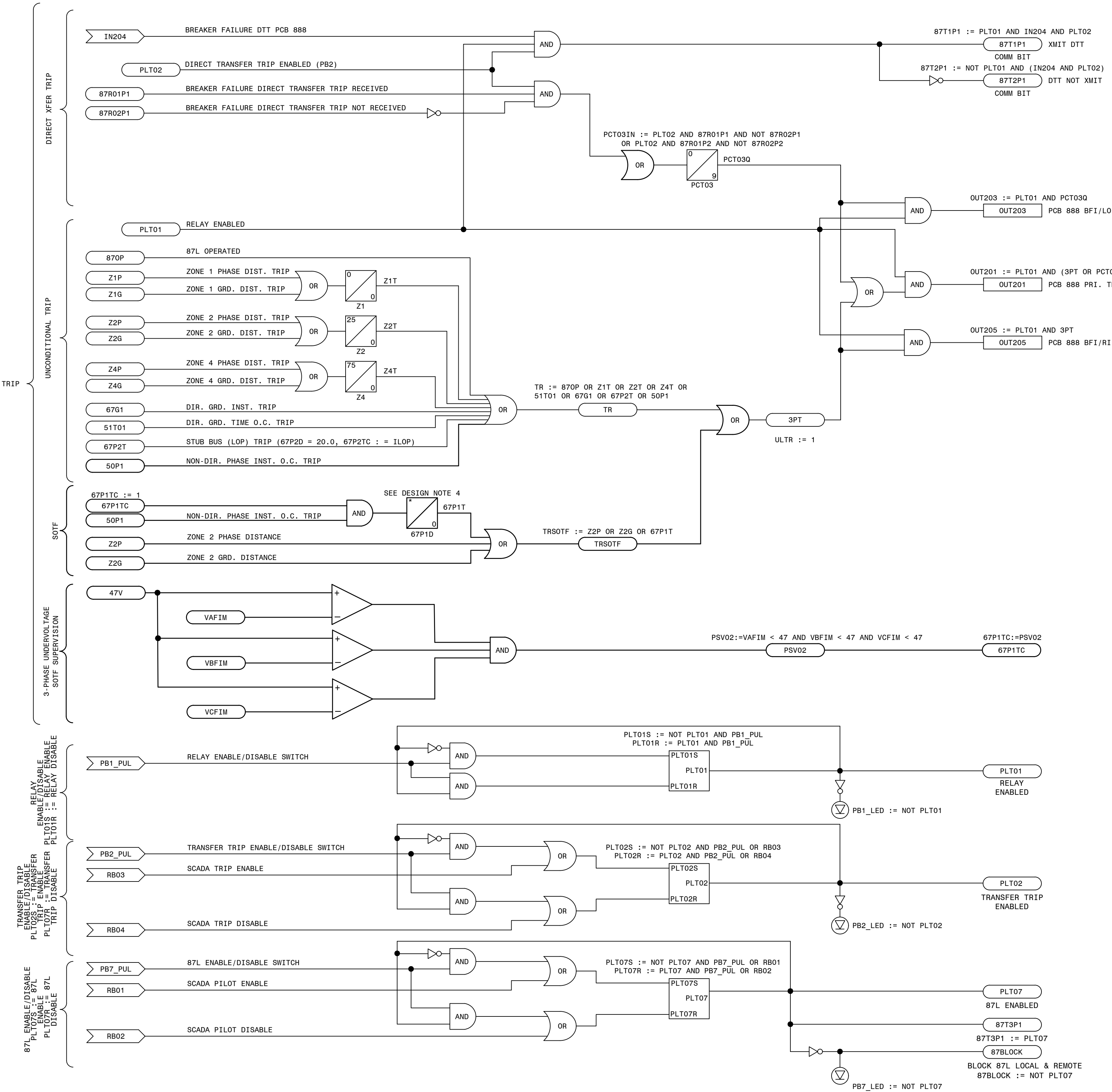
- LEGEND
- ◇ BARRIER BLOCK TERMINALS
 - SLIDING LINK TERMINALS
 - * APPLICABLE TO BUS DIFF. LOCKOUT SCHEMES NO AUTO RESTORATION
 - △ IF THIS PCB IS CHOSEN AS TEST PCB FOR AUTO RESTORATION, DO NOT WIRE DDT TO IN104. WIRE BUS 86BP & BUS 86BS TO IN105.
 - ⬤ LED INDICATING LIGHT

- REFERENCES:
- D-424-001 PANEL 13 FRONT VIEW AND NAMEPLATES
 - D-424-002 PANEL 13 WIRING DIAGRAM
 - D-424-004 PANEL 13 AC ELEMENTARY DIAGRAM
 - D-424-005 PANEL 13 LOGIC DIAGRAM (411LP PRI.)
 - D-424-006 PANEL 13 LOGIC DIAGRAM (411LP SEC.)
 - D-424-007 PANEL 13 LOGIC DIAGRAM (351S7X BF/RCLS)

AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

PANEL 13, DC ELEMENTARY, TRANS. LINE D87L/DTT FIBER, STR. BUS

P1:		P1:		P1:		P1:		P1:		P1:		P1:		P1:	
<div><div><div>GEORGIA POWER A SOUTHERN COMPANY</div><div>CHECKED: EG/BMCD APPROVED: PI#1899807 DATE: 7/31/2024</div></div><div><div>TITLE: PANEL NO.13, DC ELEM. - MC. FORD BESS 230KV LINE SEL411LP (PRI-FIB LINE DIFF/DIST.), SEL411LS (SEC-FIB LINE DIFF/DIST.), SEL351S (BF/RCLS)</div><div>FACILITY #: 01-173</div><div>NUMBER: D-424</div><div>SHEET: REV: -003--.A</div></div><div><div>ASC FACS:</div><div>ALT DWG NUM:</div></div></div>															




- LEGEND:
- xxxx SEL INTERNAL RELAY ELEMENT OR SETTING (IF RECESSED IT WAS DEVELOPED ON THIS SHEET)
 - xxxx EXTERNAL INPUT, PUSHBUTTON OR REMOTE BIT
 - xxxx SEL RELAY OUTPUT
 - xx xx xx SEL TIMER (IN CYCLES)
 - NOT (INVERT INPUT)

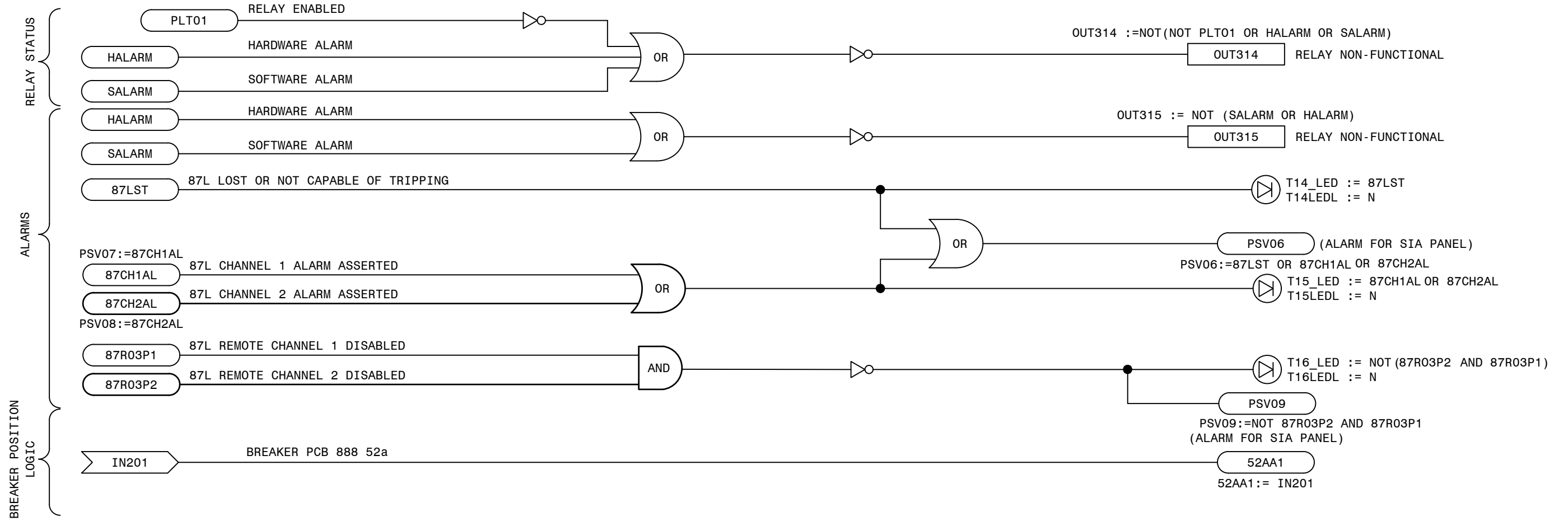
- REFERENCES:
- D-424-001 PANEL 13 FRONT VIEW AND NAMEPLATES
 - D-424-002 PANEL 13 WIRING DIAGRAM
 - D-424-003 PANEL 13 DC ELEMENTARY DIAGRAM
 - D-424-004 PANEL 13 AC ELEMENTARY DIAGRAM
 - D-424-006 PANEL 13 LOGIC DIAGRAM (411L SEC)
 - D-424-007 PANEL 13 LOGIC DIAGRAM (351S7X BF/RCLS)

- ALIAS NOTES:
- THE FOLLOWING LIST PROVIDES ALTERNATE LOGIC EQUATIONS IF ELEMENT ALIASES ARE NOT USED.
- T2_LED := PCT01Q AND NOT (TLED_1 OR TLED_4)
 - T5_LED := (Z1P OR Z1G OR 67G1) AND NOT (TLED_6 OR TLED_7)
 - T6_LED := (Z2P OR Z2G) AND NOT (Z1P OR Z1G OR 67G1 OR TLED_5 OR TLED_7)
 - T7_LED := (Z3P OR Z3G) AND NOT (Z1P OR Z2P OR Z1G OR Z2G OR 67G1 OR TLED_5 OR TLED_6)
 - T21_LED := (67G1 OR 67P1) AND NOT TLED_22
 - T22_LED := 51S1T AND NOT (67G1 OR 67P1 OR TLED_21)

PRELIMINARY DESIGN
INFORMATION CONTAINED WITHIN THIS PRELIMINARY
DESIGN PACKAGE IS SUBJECT TO CHANGE.
NOT FOR CONSTRUCTION

TRANS. LINE PRIMARY 87L/DTT FIBER LOGIC - STRAIGHT BUS

 GEORGIA POWER <small>SOUTHERN COMPANY</small>		FACILITY NAME: MCGR AU FORD TS					
TITLE: PANEL NO.13, LOGIC DIAGRAM - MCGR AU FORD BESS 230KV LINE SEL411L (PRI-FIB. LINE DIFF/DIST.), STRAIGHT BUS							
DRAWN: EG/BMCD		FACILITY #: 01-173		NUMBER: D-424		SHEET: REV: - 005 -- .A	
CHECKED: SW/BMCD							
APPROVED: PJ#1899007		SCALE: N.T.S.		D-424		- 005 -- .A	
DATE: 7/31/2024		BOM:					
ASC FAC'S:		ALT DWG NUM:					



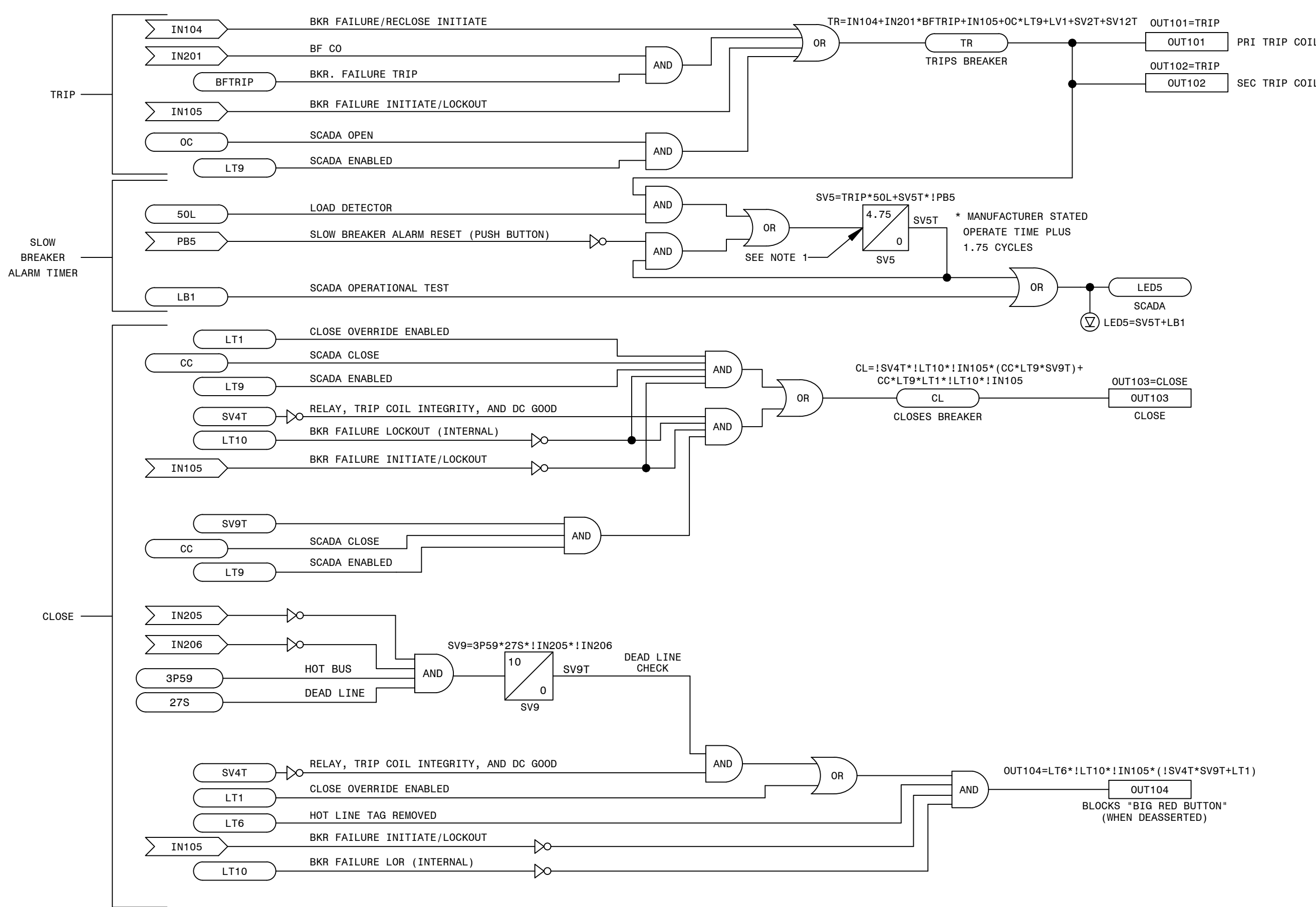
<u>REFERENCES:</u>	
D-424-001	PANEL 13 FRONT VIEW AND NAMEPLATES
D-424-002	PANEL 13 WIRING DIAGRAM
D-424-003	PANEL 13 DC ELEMENTARY DIAGRAM
D-424-004	PANEL 13 AC ELEMENTARY DIAGRAM
D-424-005	PANEL 13 LOGIC DIAGRAM (411L PRI)
D-424-007	PANEL 13 LOGIC DIAGRAM (351S7X BF/RCLS)

```


1. T2_LED := PCT01Q AND NOT (TLED_1 OR TLED_4)
2. T5_LED := (Z1P OR Z1G OR 67G1) AND NOT (TLED_6 OR
   TLED_7)
3. T6_LED := (Z2P OR TLED_6) AND NOT (Z1P OR Z1G OR 67G1 OR
   TLED_5 OR TLED_7)
4. T7_LED := (Z3P OR Z3G) AND NOT (Z1P OR Z2P OR Z1G OR
   Z2G OR 67G1 OR TLED_5 OR TLED_6)
5. T21_LED := (67G1 OR 67P1) AND NOT TLED_22
6. T22_LED := 51S1T AND NOT (67G1 OR 67P1 OR TLED_21)

```

PRELIMINARY DESIGN
INFORMATION CONTAINED WITHIN THIS PRELIMINARY
DESIGN PACKAGE IS SUBJECT TO CHANGE.
NOT FOR CONSTRUCTION

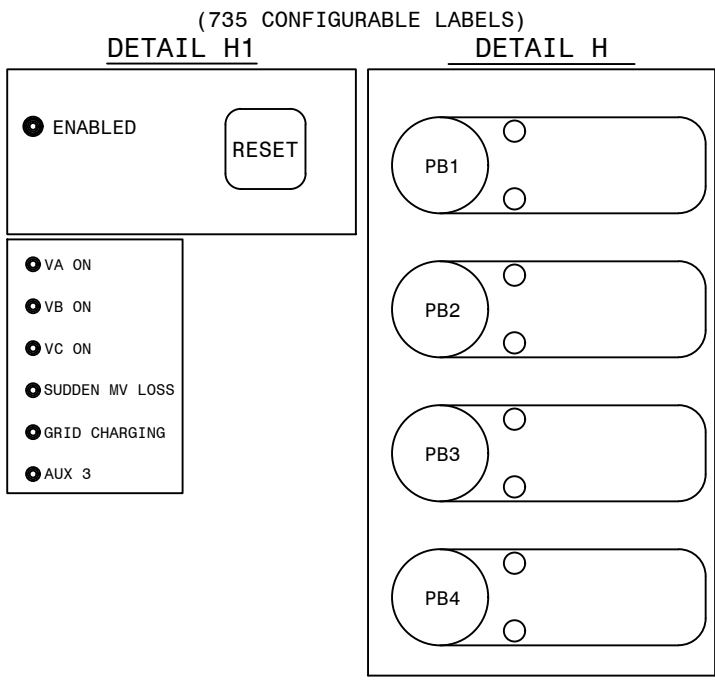


D-424-001	PANEL 13	FRONT VIEW AND NAMEPLATES
D-424-002	PANEL 13	WIRING DIAGRAM
D-424-003	PANEL 13	DC ELEMENTARY DIAGRAM
D-424-004	PANEL 13	AC ELEMENTARY DIAGRAM
D-424-005	PANEL 13	LOGIC DIAGRAM (411L PRI)
D-424-006	PANEL 13	LOGIC DIAGRAM (411L SEC)

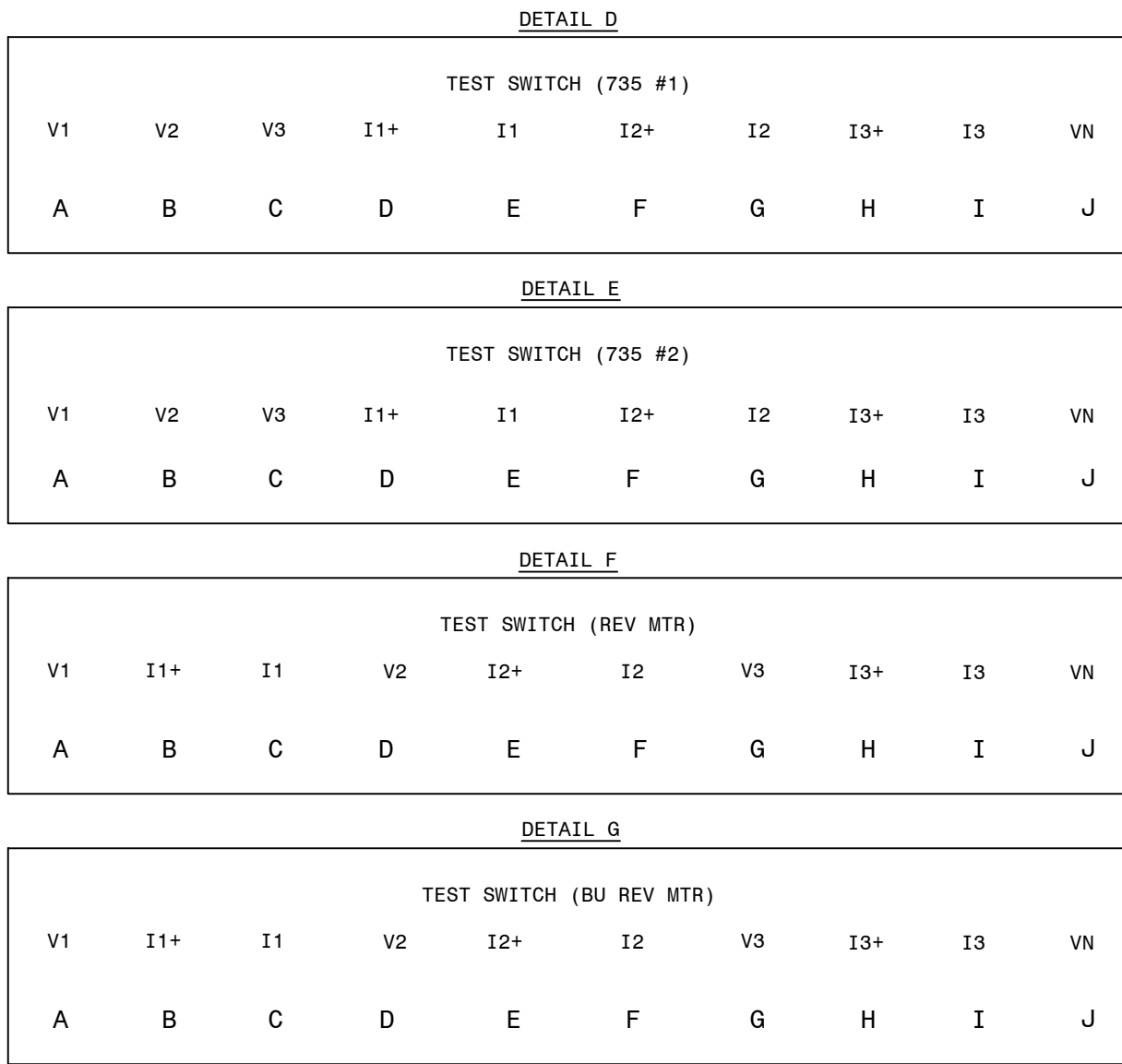
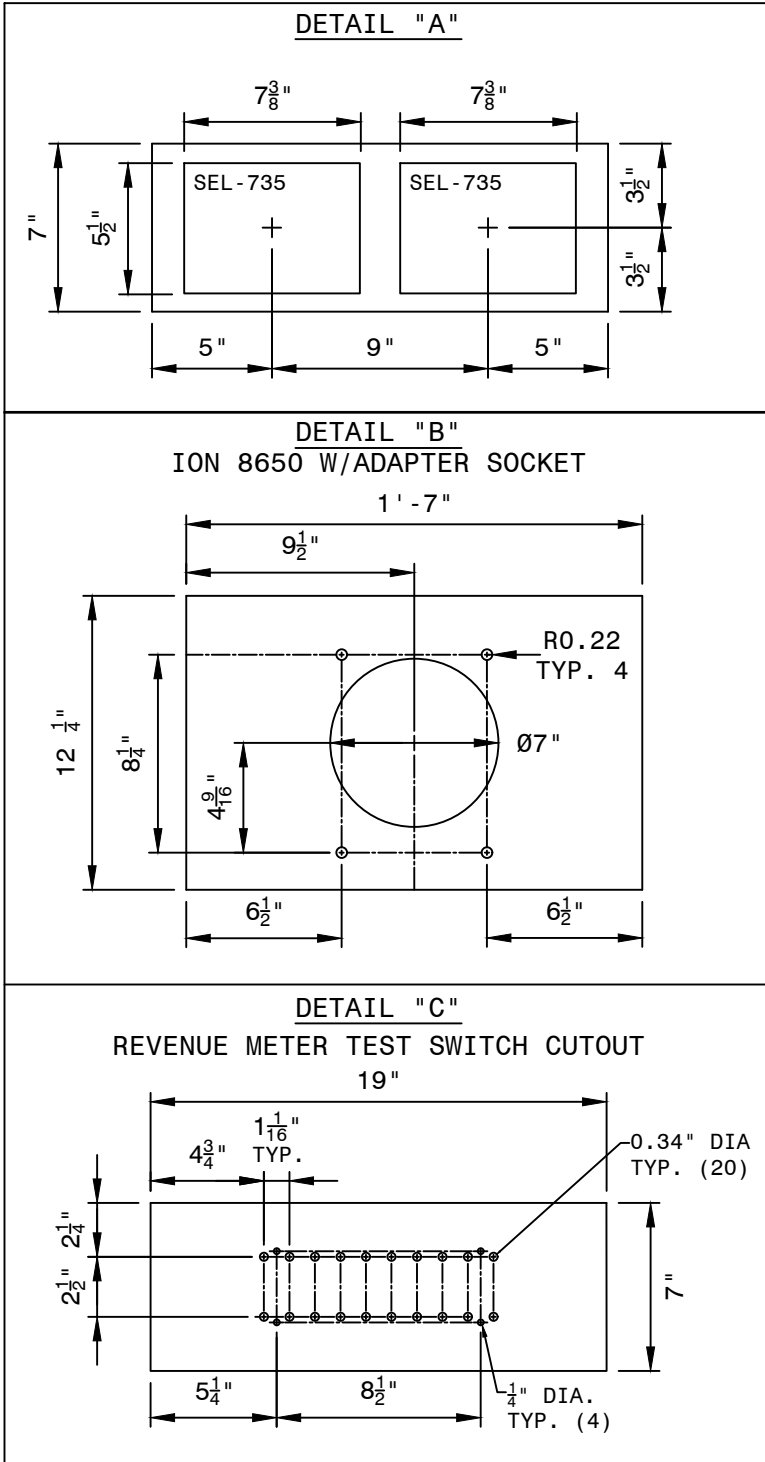
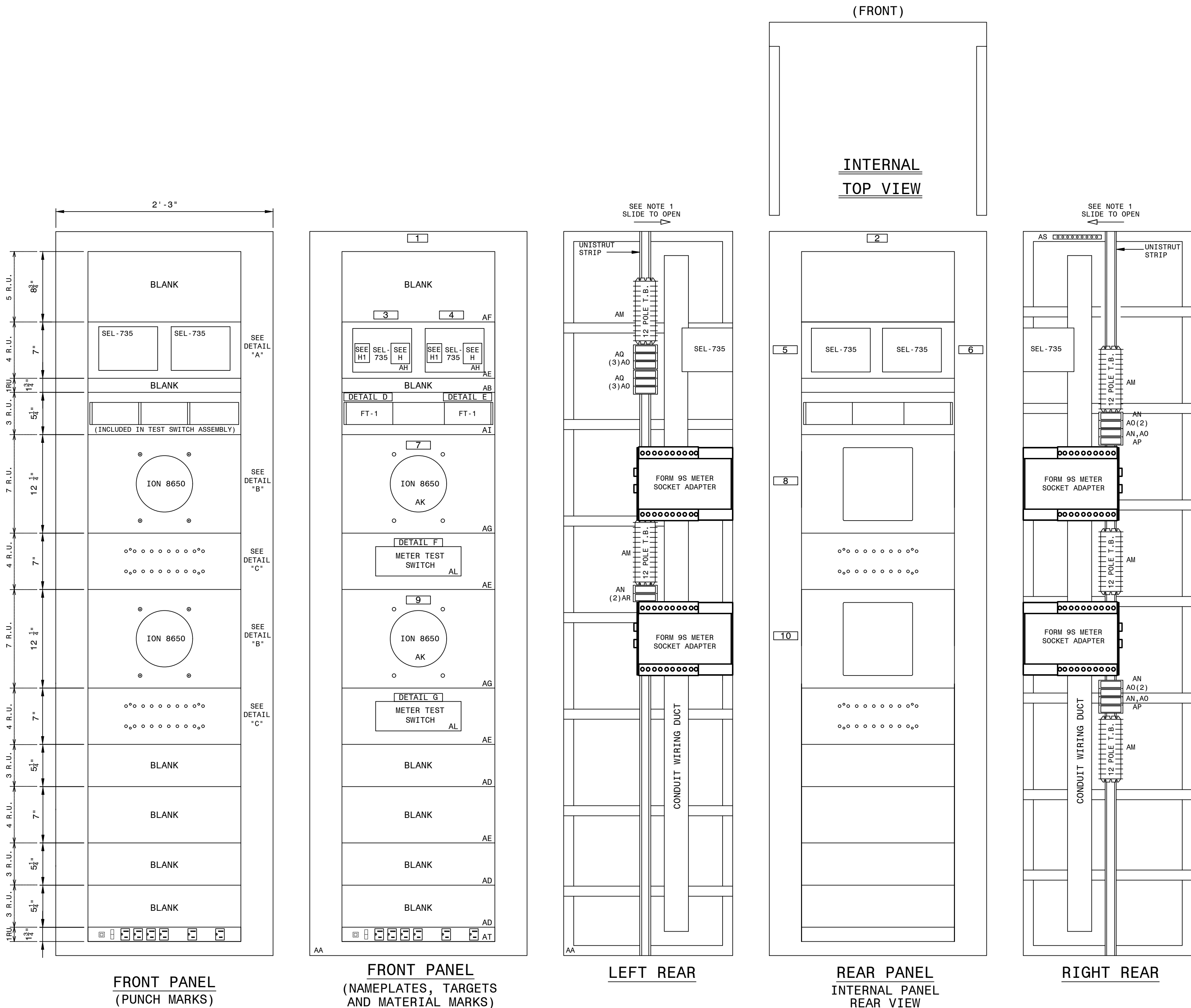
 GEORGIA POWER A SOUTHERN COMPANY	FACILITY NAME:				MCGRU FORD TS			
	TITLE: PANEL NO.13, LOGIC DIAGRAM - MCGRU FORD 230KV LINE SEL351S (BF/RCLS)							
	REL., STRAIGHT BUS							
	DRAWN: EG/BMCD	TYPE: 52L	FACILITY #:		NUMBER:		SHEET:	REV:
	CHECKED: SW/BMCD	SCALE: N.T.S.	01-173	D-	424		- 007 --	A
APPROVED: PT/1899807	BOM:				ALT DWG NUM:			
DATE: 7/31/2024	ASC FACs:							

LNP-SELP-D-38-001-03

NAMEPLATE DETAILS			
NAMEPLATE NO.	FIRST LINE	SECOND LINE	THIRD LINE
1	PANEL NO. 14		DWG. NO. 01-173-D425
2	PANEL NO. 14		DWG. NO. 01-173-D425
3	SEL-735 METER #1	230KV	POWER QUALITY PQ-SENSOR
4	SEL-735 METER #2	230KV	SYSTEM METERING
5	SEL-735 METER #2	230KV	SYSTEM METERING
6	SEL-735 METER #1	230KV	POWER QUALITY PQ-SENSOR
7	REVENUE METER #1	230KV	
8	REVENUE METER #1	230KV	
9	REVENUE METER #2	230KV	
10	REVENUE METER #2	230KV	



QTY	ITEMS	CATALOG	DESCRIPTION	REMARKS
1	AA	RHCL-I	27IN X 90IN SWITCHBOARD PANEL (FULL RACK) WITH FRAME	DWG-PAN-CONST-D1, DWG-PAN-CONST-D2
1	AB	RGWT-I	RACK PANEL TYPE A 1-RACK UNIT	DWG-PAN-CONST-D1
3	AD	RGWV-I	RACK PANEL TYPE B 3-RACK UNITS	DWG-PAN-CONST-D1
4	AE	RGWV-I	RACK PANEL TYPE B 4-RACK UNITS	DWG-PAN-CONST-D1
1	AF	RGWX-I	RACK PANEL TYPE B 5-RACK UNITS	DWG-PAN-CONST-D1
2	AG	RGWZ-I	RACK PANEL TYPE C 7-RACK UNITS	DWG-PAN-CONST-D1
2	AH	RUAB	RELAY, SEL-735, METER, ADVANCED PQ, SS OUTPUTS	SEL #0735AX20944CFXA4XX16101XX
1	AI	RIFY	2-10 POLE TYPE FT-1 SWITCHES, POS. A: (P P P C-C C-C C-C P), POS. B: (BLANK), POS. C: (P P C-C C-C C-C P)	ABB #FS3G014000014M
2	AK	BRBU	FLUSH MOUNT PANEL ADAPTER FOR FORM9 METERS	SUST ADAPTERS #SWAAF9
2	AL	SZGZ	1-10 POLE TYPE SJK SWITCH (P C-C P C-C P C-C P)	STATES #70K10-E-B
5	AM	BJPE-I	12 POLE SLIDING LINK TERMINAL BLOCK	STATES ELECTRIC MFG: M-25012-T
5	AN	FUPF	FUSE BLOCK, PHENOL, 2-POLE, 1-30A	BUSSMANN: H25030-2SR
12	AO	RFVM	FUSE, CARTRIDGE, 1ELEM, NR, 250V, 6A	BUSSMANN: KTN-6/R-11630
2	AP	TVVU	TUBE COPPER 1/4 IPS X 2", 30 AMP SIZE	
2	AQ	FUPH	FUSE BLOCK, PHENOL, 3-POLE, 1-30A	BUSSMANN: H25030-3S
2	AR	FUVM	FUSE, CARTRIDGE, DUAL ELEMENT, TIME DELAY, CURRENT LIMITING, 3 AMP, 250V	BUSSMANN: FRN-R-3
1	AS	BAVD-I	COPPER NEUTRAL BAR GRD TERM, #4-#14	BURNDY: K12P4CG1
1	AT	RHZO-I	19" RACK MOUNT OUTLET STRIP	1582H6A1



AUTOCAD ELECTRICAL

THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

REFERENCES:

D-425-002 PANEL 14 WIRING DIAGRAM

D-425-003 PANEL 14 AC/DC ELEMENTARY

D-425-004 PANEL 14 LOGIC DIAGRAM

PAN-CONST_D1

PAN-CONST_D2

NOTES:

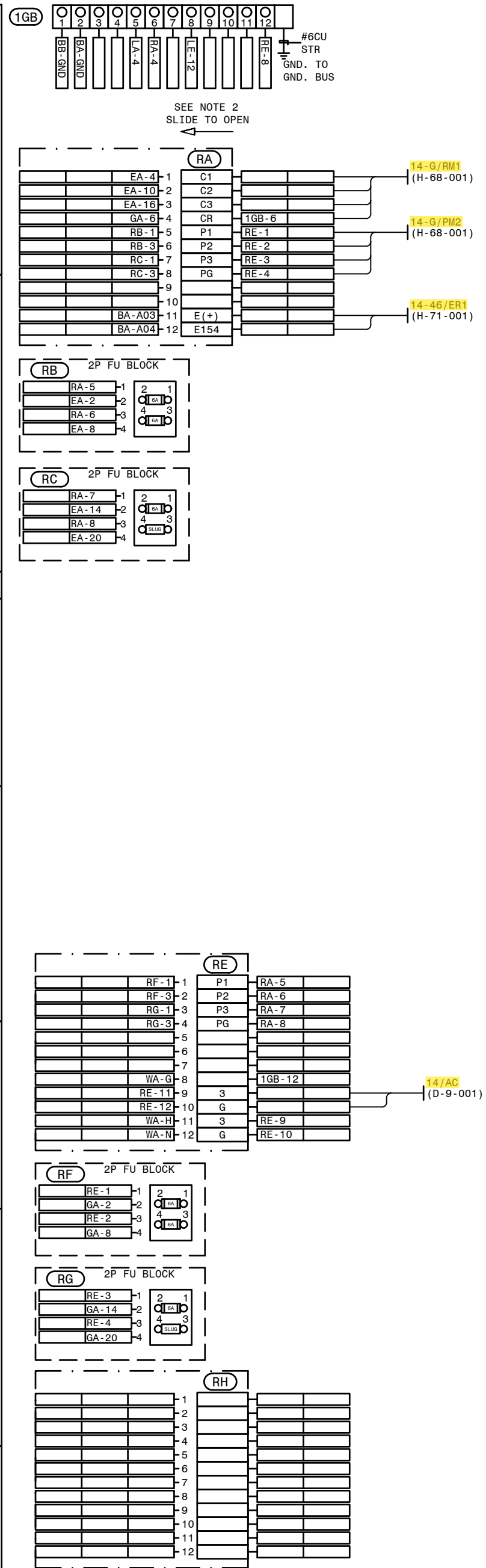
1. SLIDING LINKS TO OPEN TOWARD INTERNAL WIRING SIDE.



FRONT VIEW, TRANS. REVENUE AND PQ METERING PANEL 14

GEORGIA POWER A SOUTHERN COMPANY		FACILITY NAME: MCGRAU FORD TS	
DRAWN: EG/BHCD		TITLE: PANEL NO.14, FRONT VIEW - TRANSMISSION REVENUE AND PQ METERING	
CHECKED: SW/BHCD	TYPE: FV	FACILITY #:	NUMBER:
APPROVED: P.I.#1899807	SCALE: 1-1/2" = 1-0"	01-173	425
DATE: 8/14/2024	DATE: 8/14/2024	ASC FACS:	ALT DWG NUM:

SGEN-PQM-D-1-001-02



AUTOCAD ELECTRICAL
CONTAINS AUTOCAD ELECTRICAL ELEMENTS

REFERENCES:

D-425-001	PANEL 14 FRONT VIEW
D-425-003	PANEL 14 AC/DC ELEMENTARY
D-425-004	PANEL 14 LOGIC DIAGRAM

NOTES:

1. FOR DATA CONNECTIONS, SEE COMMUNICATION DIAGRAM.
2. SLIDING LINKS TO OPEN TOWARD INTERNAL WIRING SIDE

WIRING DIAGRAM, TRANS. REVENUE AND PQ METERING PANEL 14

MCGRATH FORD TS

TITLE: PANEL NO.14, WIRING DIAGRAM - TRANSMISSION REVENUE AND PQ METERING	
MODIFY: 01-01-90	

TRAVEL NOV. 17, WINING DINNER - INTERNATIONAL LEVELS AND TO MILLIONS
BKMD

BRICD	TYPE: WD	FACILITY #:	NUMBER:	SHEET: RE
-------	----------	-------------	---------	-----------

999807	SCALE:	N.T.S.
		01-173

D-425

-003-

2024	BOM:	01/10	D 423 -002-
400. 4400.			117. 0000. 0000.

WIRING DIAGRAM, TRANS. REVENUE AND PQ METERING PANEL 14

FACILITY NAME: _____

FACILITY NAME: MCGRAW HILL

WIRING DIAGRAM TRANSMISSION REVENUE AND BO METERING

FILE: PANEL NO.14, WIRING DIAGRAM - TRANSMISSION REVENUE AND PM METERING	REVENUE
	PM METERING

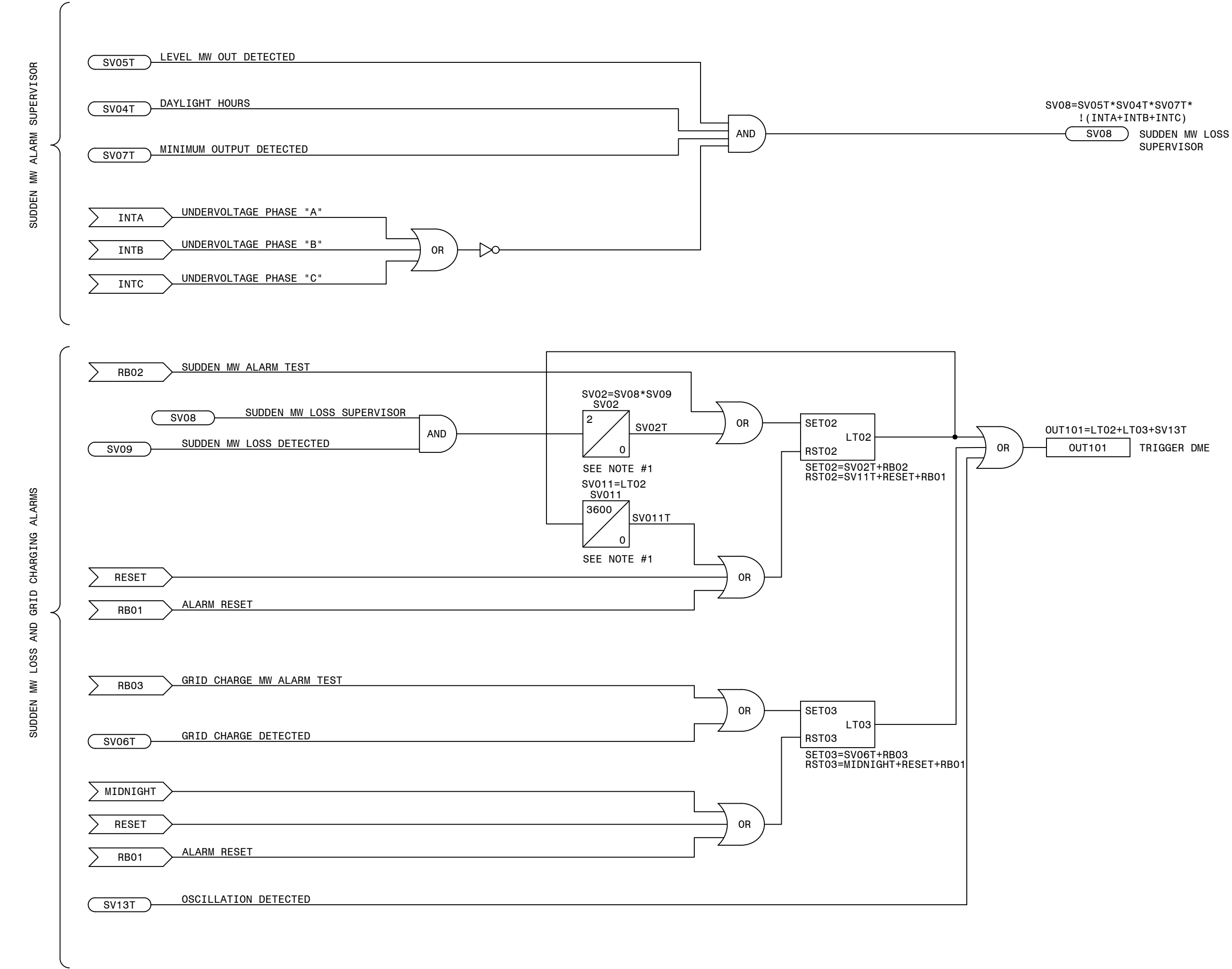
BRMCD	TYPE:	WD	FACILITY #:	NUMBER:	SHEET:	RE
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UNION	FILE	INVOICE #	DATE
199807	SCALE: N.T.S.	01-173	

01-1/3	D-423	-002-
BOM:		
1/2024		

ASC FACTS:	ALT DWG NUM:
------------	--------------

SUDDEN MW LOSS



NOTE:
1. SEL-735P TIMER UNITS ARE SECONDS.

LEGEND:

XXXX SEL INTERNAL RELAY ELEMENT OR SETTING
(IF RECESSED IT WAS DEVELOPED ON THIS SHEET)

XXXX EXTERNAL INPUT, PUSHBUTTON OR REMOTE BIT

XXXX SEL RELAY OUTPUT

XX
PU
XX
DO SEL TIMER (IN CYCLES)

NOT (INVERT INPUT)

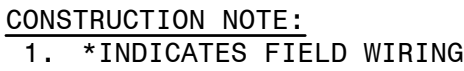
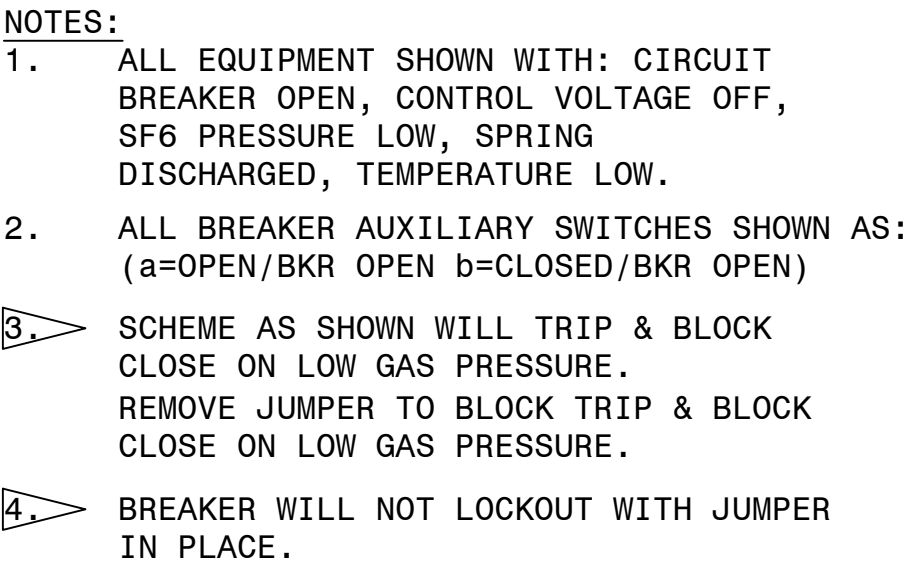
REFERENCES:
D-425-001 PANEL 14 FRONT VIEW
D-425-002 PANEL 14 WIRING DIAGRAM
D-425-003 PANEL 14 AC/DC ELEMENTARY

PRELIMINARY DESIGN
INFORMATION CONTAINED WITHIN THIS PRELIMINARY
DESIGN PACKAGE IS SUBJECT TO CHANGE.
NOT FOR CONSTRUCTION

LOGIC DIAGRAM, TRANS. REVENUE & PQ METERING PANEL 14

<div><div><div><div><div></div><div>GEORGIA POWER</div></div><div><div></div><div>SOUTHERN COMPANY</div></div></div><div><div><div><div><div></div><div>CHECKED: SW/BMCD</div></div><div><div></div><div>APPROVED: PI#1899807</div></div></div><div><div><div></div><div>DATE: 8/14/2024</div></div></div></div><div><div><div><div><div></div><div>DRAWN: EG/BMCD</div></div><div><div></div><div>TYPE: S2L</div></div></div><div><div><div></div><div>SCALE: N.T.S.</div></div><div><div></div><div>BOH:</div></div></div><div><div><div></div><div>ASC FAC:</div></div></div></div></div></div></div></div>	FACILITY NAME: MCGRAU FORD TS		TITLE: PANEL NO.14, LOGIC DIAGRAM - TRANSMISSION REVENUE AND POWER QUALITY METERING	
	FACILITY #: 01 - 173		NUMBER: D- 425	
	SHEET: REV:		- 004 -- .A	
	ALT DWG NUM:			

SGEN-POW_D-1-004-00



REFERENCES			
D-426-002	230KV PCB 646888	(CO.#B19453)	ELEMENTARY DIAGRAM SH.2
D-426-003	230KV PCB 646888	(CO.#B19453)	WIRING DIAGRAM
D-426-004	230KV PCB 646888	(CO.#B19453)	BCT WIRING DIAGRAM & NAMEPLATE
D-426-005	230KV PCB 646888	(CO.#B19453)	NAMEPLATE & GAS SYSTEM

P. I. #1899807


**BURNS
MCDONNELL**

4004 SUMMIT BLVD. NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770)587-4776

Burns & McDonnell Engineering Co. Inc.
GA ENGINEERING LICENSE: PEF000100
EXPIRATION DATE: 6/30/2026

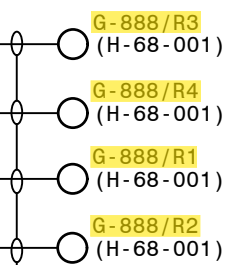
THE REGISTRANT OF THE NEWLY APPLIED
SEAL, DATED XXXXXX2024,
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISION(S) 00.

AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

 <p>GEORGIA POWER SOUTHERN COMPANY</p>	FACILITY NAME:										MCGRAU FORD TS														
	TITLE: 230KV PCB 646888 (CO.#B19453) ELEMENTARY DIAGRAM SH.1																								
	DRAWN: EG/BMCD					TYPE: 92					FACILITY #:					NUMBER:					SHEET: REV:				
	CHECKED: SW/BMCD					SCALE: N.T.S.					01-173					426					- 001 - -				
	APPROVED: PT#189807					BOM:																			
DATE: 12/17/2024					ASC FACS:					DSC					ALT DWG NUM:										



← 1-3-5

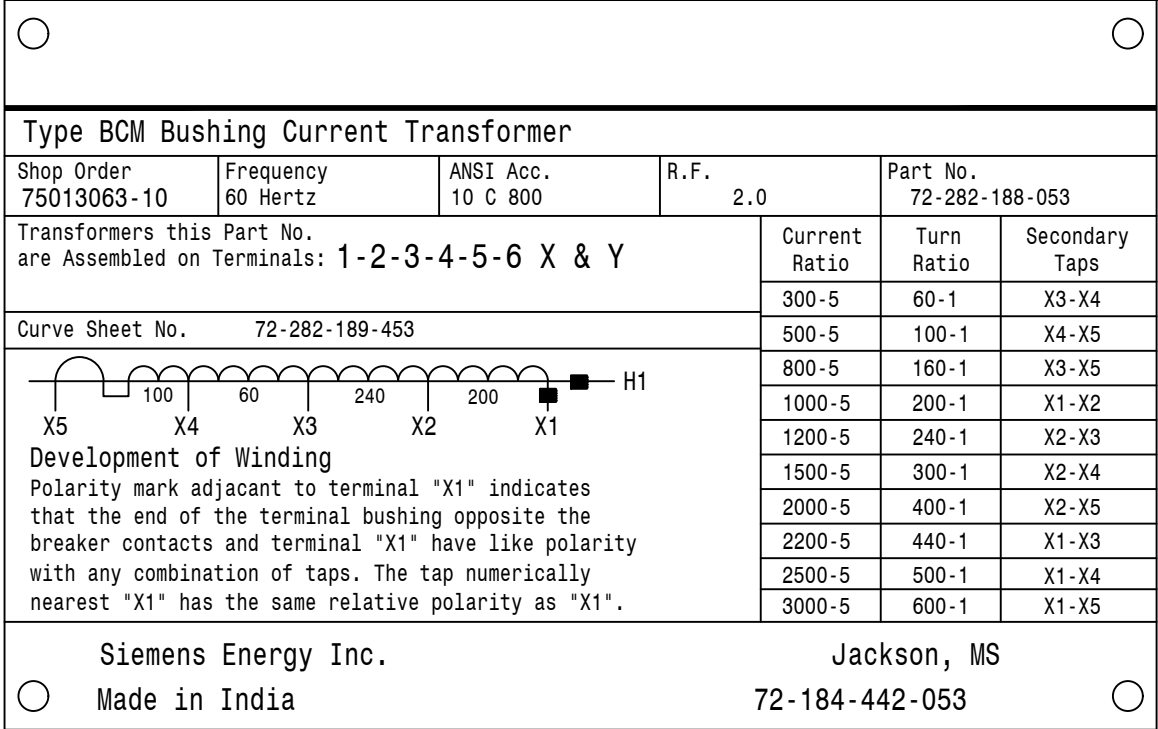


RIGHT SIDE OF MECH HSG.

VIEW A-A

2. CT LEADS ARE #10 AWG.

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



~~Confidential~~ Property of
Siemens Energy, Inc.

CT NAMEPLATE
3000:5 C800 (0.00187 Ohms)

A	FSCM NO.	DWG NO. 72184442053
----------	----------	-------------------------------

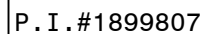
SCALE	NTS	WT	R	F	SHEET	1	OF
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2 3

AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

- CONSTRUCTION NOTES:**
1. *INDICATES FIELD WIRING
 2. POWER TERMINAL BLOCK MK. BJQA TO BE LOCATED AND INSTALLED BY THE FIELD, AS REQUIRED.
 3. CABLES INSTALLED FROM POWER TERMINAL BLOCK MK. BJQA TO BLOCK TERMINAL MK. BJPE TO BE #10.

D-426-001	230KV PCB 646888	(CO.#B19453)	ELEMENTARY DIAGRAM SH.1
D-426-002	230KV PCB 646888	(CO.#B19453)	ELEMENTARY DIAGRAM SH.2
D-426-003	230KV PCB 646888	(CO.#B19453)	WIRING DIAGRAM
D-426-005	230KV PCB 646888	(CO.#B19453)	NAMEPLATE & GAS SYSTEM




GEORGIA POWER
A SOUTHERN COMPANY

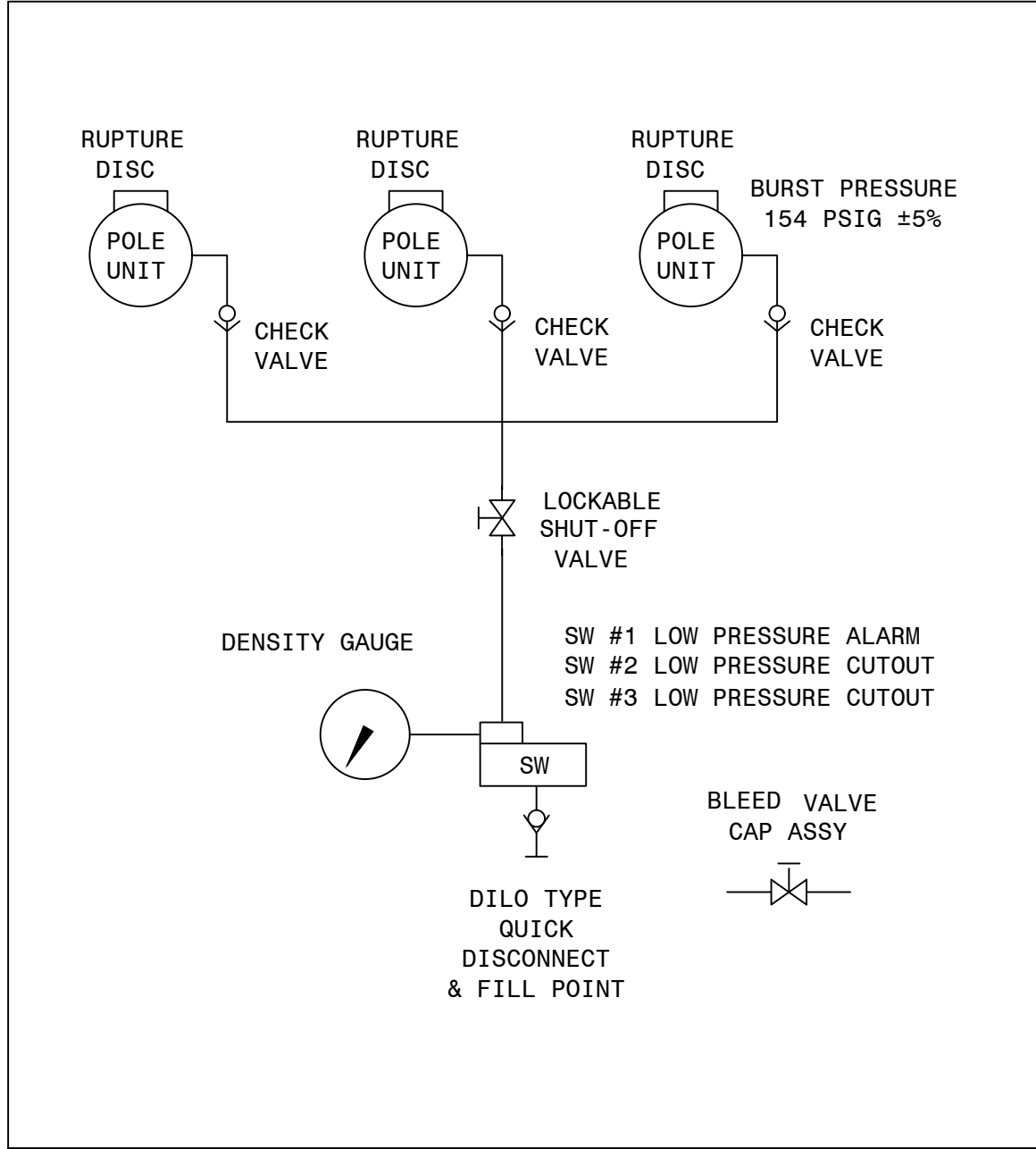
TITLE: 230KV PCB 646888 (CO.#B19453) BCT WIRING DIAGRAM & NAMEPLATE

	TYPE: 82	FACILITY #:	NUMBER: SHE
07	00115: N.T.C.		D 100

SCALE:	N.T.S.	01-173	D-	426	- 00
BOM:					
ASC FACS:		ALT DWG NUM:			

		
Sulfur Hexafluoride Circuit Breaker Type SPS2S-245-63 -1		
Rated Max. Volts 245 kV	Rated Voltage Range Factor 1.0 (K)	Rated Interrupting Time 2.0 Cycles
Rated Continuous Current 3000 A	Rated Short Circuit Current 63000 A	Rated Capacitance Current Switching
Frequency 60 Hz	Rated Out of Phase Current 15800 A	Line Charging 200 A Isolated Bank Sw. 1200 A Back -to- Back Sw. 700 A Inrush Peak 20000 A Inrush Freq. 4250 Hz
Wt. of Breaker With Gas 11200 Lbs	Full Wave Impulse Withstand 900 kV	Rated Operating Duty Cycle OCO-15SEC-CO
Weight of SF6 Gas 116 Lbs	PO# GPC11335358 ITEM# 1876166	
Rated Operating Pressure at 68°F/20 °C 87 psig	Short Time Current Duration 3 SEC	Serial - S.O. 75013063-1 THRU 15
Minimum Operating Pressure at 68 F/20 °C 72 psig	Close and Latch 170 kA	Parts List No.
SF6 Alarm Pressure at 68°F/20 °C 75 psig	Rated Chopped Wave @ 2 microS 1160 kV	Instruction Book PB- 3538-01
SF6 Cutout Pressure at 68°F/20 °C 72 psig		Date of Mfr. MONTH/YEAR
% of DC Component 57 %		
Siemens Energy, Inc. Manufactured or Assembled of U.S. and Foreign Components		Jackson, MS 72184717001

001	72200184027	ALUMINUM	---	F-0	---
MARK	MAKE FROM	MATERIAL	CODE	FINISH	RGH
UNLESS OTHERWISE SPECIFIED		-Confidential- Property of			
ALL DIMENSIONS ARE IN INCHES		Siemens Energy, Inc.			
1-PLACE DECIMAL ± .050		DWG NAME			
2-PLACE DECIMAL ± .020		NAMEPLATE			
3-PLACE DECIMAL ± .005		BREAKER, 245kV			
INTERNAL DIA EXCLUDED		A FSCM NO. DWG NO. ISSUE			
FOR TOL NOT SPECIFIED SEE 500 SERIES SHOP PRGMS STD		72184717001			
UNLESS OTHERWISE SPECIFIED		SCALE 1=1 WT R F SHEET 1 OF 1			
DRAWN MD DATE 6/3/19					
CHECK MD DATE 6/3/19					
APVD BL DATE 2/5/20					
ISSUE TH DATE 2/7/20					



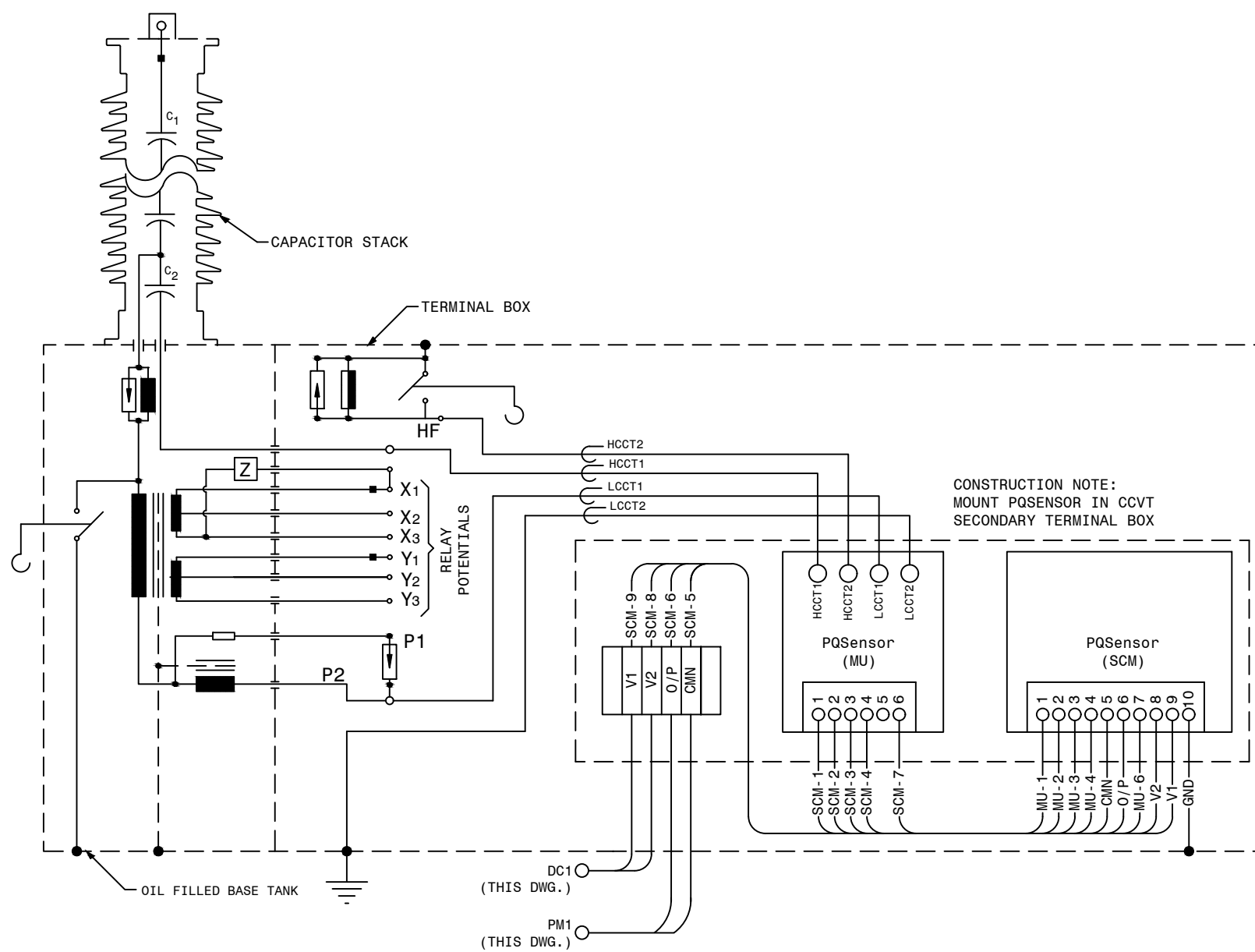
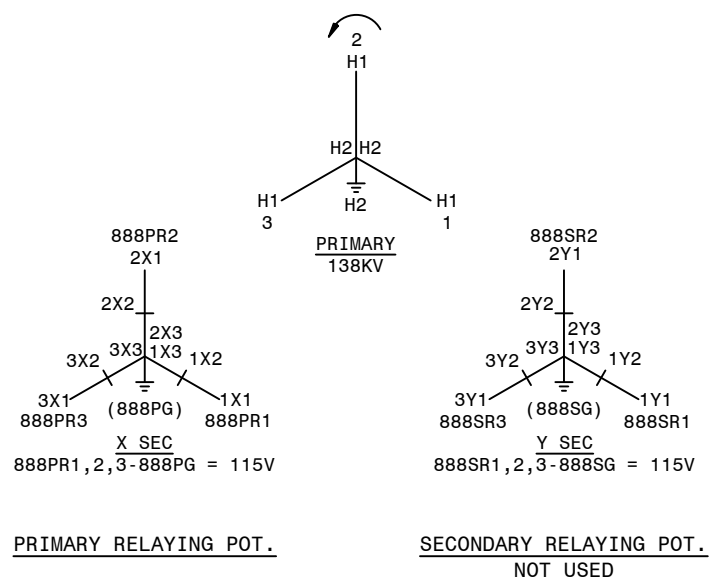
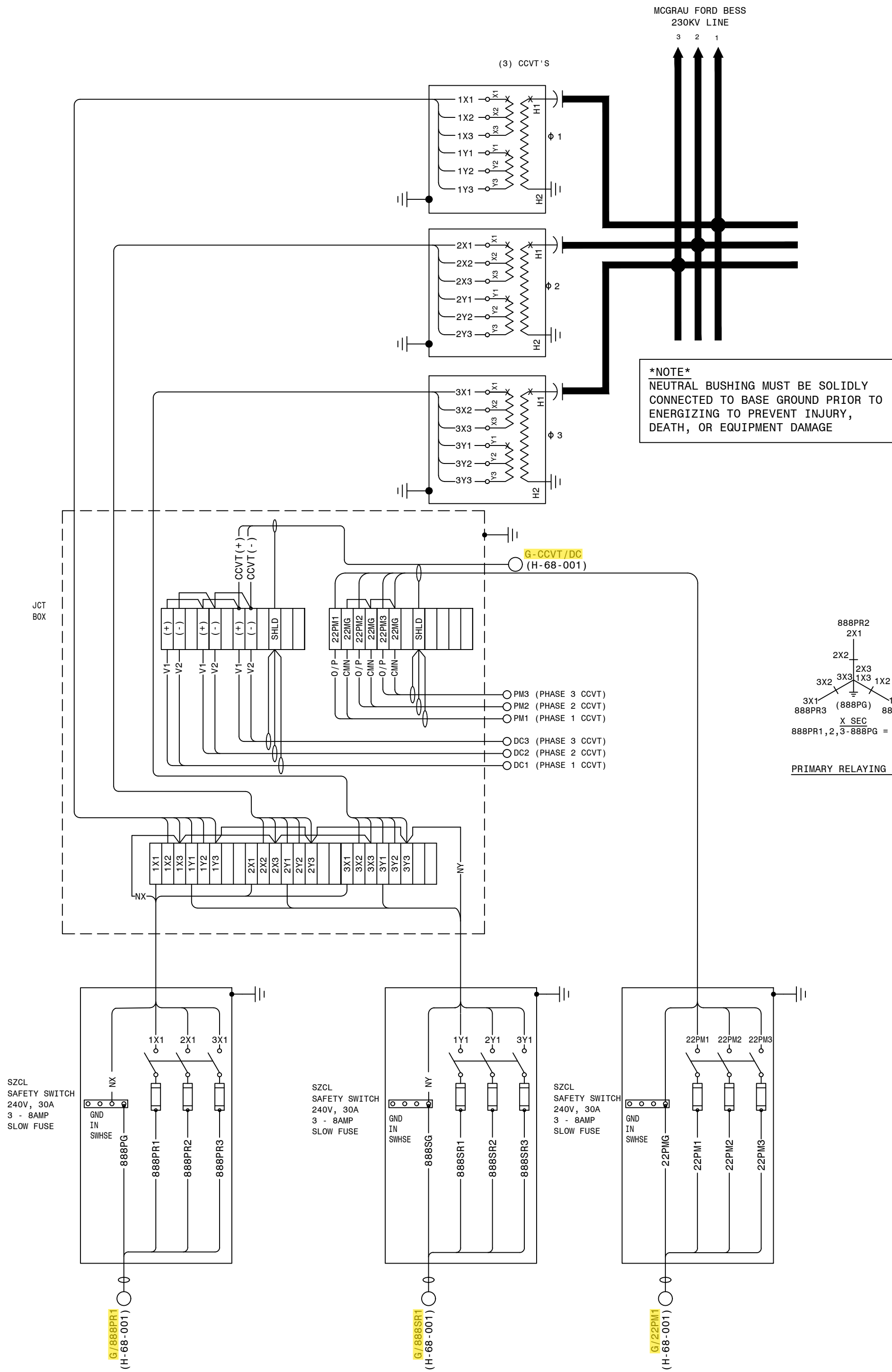
UNLESS OTHERWISE SPECIFIED		-Confidential- Property of			
ALL DIMENSIONS ARE IN INCHES		Siemens Energy, Inc.			
1-PLACE DECIMAL ± .050		DWG NAME			
2-PLACE DECIMAL ± .020		GAS SYSTEM SCHEMATIC			
3-PLACE DECIMAL ± .005		OSDS w/SHUT-OFF			
INTERNAL DIA EXCLUDED		A FSCM NO. DWG NO. ISSUE			
FOR TOL NOT SPECIFIED SEE 500 SERIES SHOP PRGMS STD		72-181-177-442			
UNLESS OTHERWISE SPECIFIED		SCALE NTS WT R F SHEET 1 OF 1			
DRAWN TH DATE 2-16-05					
CHECK TH DATE 2-16-05					
APVD JP DATE 2-17-05					
ISSUE M BOYD DATE 10/07/08					

AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

REFERENCES	
D-426-001	230KV PCB 646888 (CO.#B19453) ELEMENTARY DIAGRAM SH.1
D-426-002	230KV PCB 646888 (CO.#B19453) ELEMENTARY DIAGRAM SH.2
D-426-003	230KV PCB 646888 (CO.#B19453) WIRING DIAGRAM
D-426-004	230KV PCB 646888 (CO.#B19453) BCT WIRING DIAGRAM & NAMEPLATE



GEORGIA POWER A SOUTHERN COMPANY		FACILITY NAME: MCGRAU FORD TS	
DRAWN: EG/BMCD		TITLE: 230KV PCB 646888 (CO.#B19453) NAMEPLATE & GAS SYSTEM	
CHECKED: SW/BMCD		TYPE: 82	
APPROVED: PT#1899807		FACILITY #: 01-173	
DATE: 12/17/2024		NUMBER: 426	
DEV.#: 646888		SHEET: 005 - -	
ASC FACS:		ALT DWG NUM:	



REFERENCE:
H-24-001 SINGLE LINE DIAGRAM SH.1

P.I.#1899807

BURNS & MCDONNELL

4004 SUMMIT BLVD., NE, SUITE 1200
ATLANTA, GA 30319
PHONE: (770) 887-4778

Burns & McDonnell Engineering Co., Inc.
GA ENGINEERING LICENSE: PE000100
EXPIRATION DATE: 03/30/2026

THE REGISTRANT OF THE NEWLY APPLIED
SEAL, ENTERED AND SIGNED,
ONLY ASSUMES RESPONSIBILITY FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISIONS/LOG.

AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

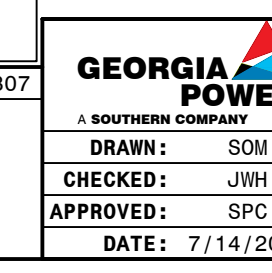
FACILITY NAME:		MCGRAU FORD TS	
TITLE: 230KV MCGRAU FORD BESS CCVT POTENTIAL CONNECTION DIAGRAM			
DRAWN: EG/BMCD	TYPE: PT	FACILITY #:	01 - 173
CHECKED: SW/BMCD	SCALE: N.T.S.	NUMBER:	427
APPROVED: P.I.#1899807	DATE: 12/19/2024	BOI#:	ASC FAC#:
		SHEET: REV: 001 - 00	
		ALT DWG NUM:	



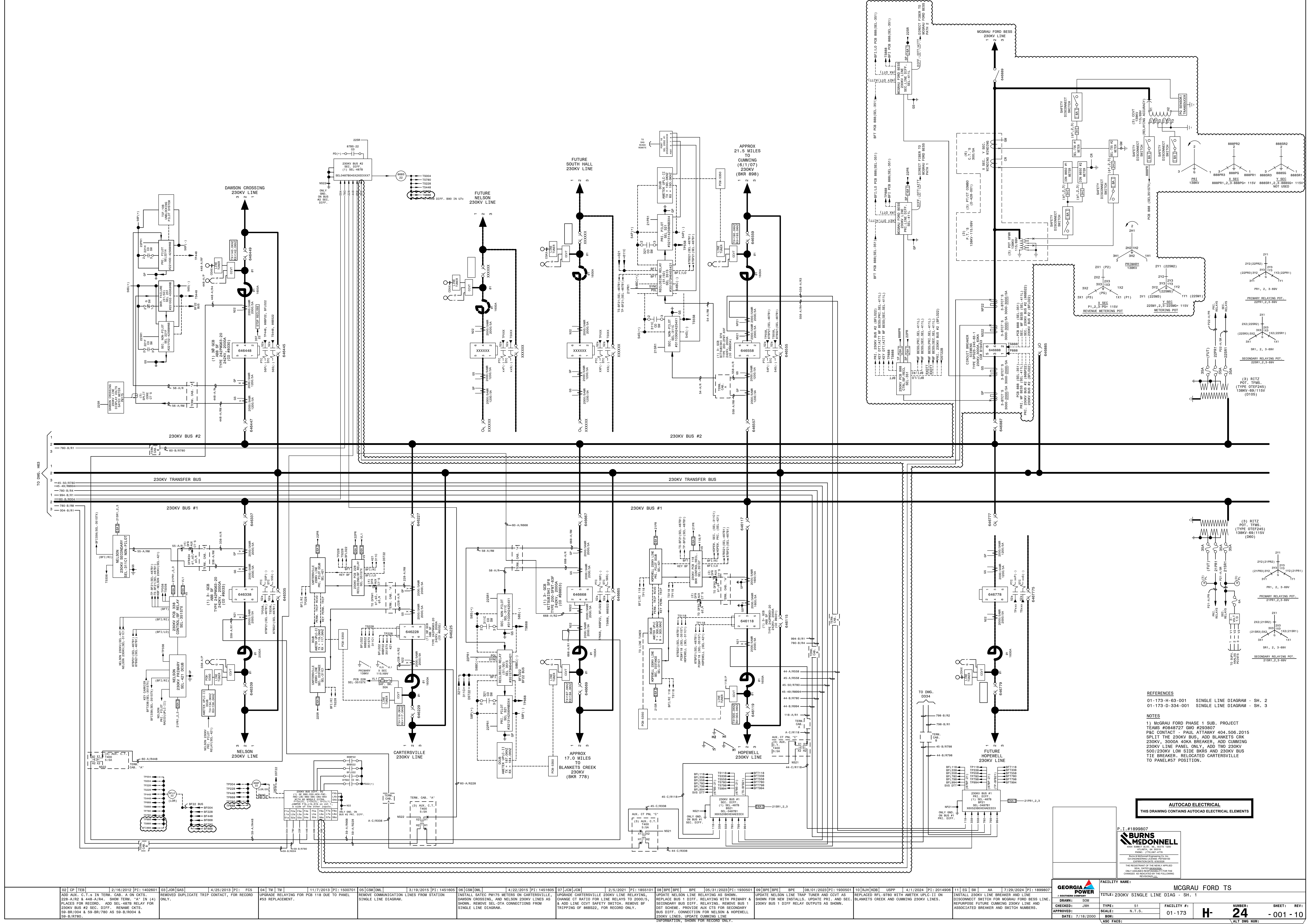
1. FIELD TO LOCATE NEW BATTERY EQUIPMENT.

REFERENCES

01-173-H-24-001	SINGLE LINE DIAGRAM - SH. 1
01-173-H-63-001	SINGLE LINE DIAGRAM - SH. 2
01-173-D-334-001	SINGLE LINE DIAGRAM - SH. 3



FACILITY NAME:					MCGRAU FORD TS				
TITLE: SWITCHBOARD PANEL LAYOUT									
TYPE: 61		FACILITY #:		NUMBER:		SHEET:		REV:	
SCALE: 3/8"=1'-0"		01-173		H-17		- 001 - 09			



REFERENCES
01-173-H-63-001 SINGLE LINE DIAGRAM - SH. 2
01-173-D-334-001 SINGLE LINE DIAGRAM - SH. 3

NOTES
1) MCGRAU FORD PHASE 1 SUB. PROJECT
TEAMS #0849727 GWO #233907
P&C CONTACT - PAUL ATTAWAY 404.506.2015
SPLIT THE 230KV BUS, ADD BLANKETS CRK
230KV, 5000A 40KA BREAKER, ADD CUMMING
230KV LINE PANEL ONLY, ADD TWO 230KV
500/230KV LOW SIDE BKRS AND 230KV BUS
TIE BREAKER, RELOCATED CARTERSVILLE
TO PANEL#57 POSITION.

AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

P.1.#1899807
BURNS MEDONNELL
A SOUTHERN COMPANY
1770 EAST 47TH AVENUE
ATLANTA, GA 30328-1001
PHONE: 404.506.2015
FAX: 404.506.2016
WWW.BURNSMEDONNELL.COM
THE REGISTRATION OF THE SEAL APPLIED
HEREIN IS LIMITED TO THE PROJECT
AND THE REGISTRATION OF THE SEAL APPLIED
HEREIN IS LIMITED TO THE PROJECT

FACILITY NAME: MCGRAU FORD TS	
TITLE: 230KV SINGLE LINE DIAG - SH. 1	
DRAWN: SWH	CHECKED: JWH
DATE: 7/18/2000	SCALE: N.T.S.
FACILITY #: 01-173	
TYPE: S1	
BOM:	
SHEET: REV: 24	
-001-10	
ACT DWG NUM:	

REAR SIDE

FRONT SIDE

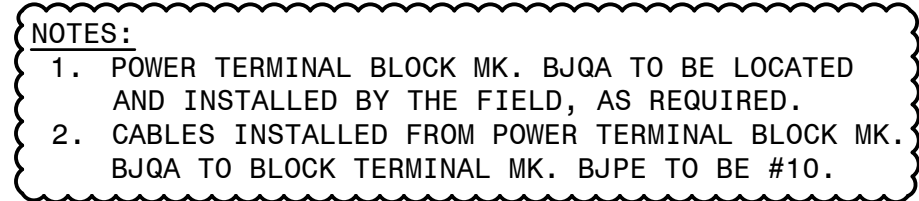


AUTOCAD ELECTRICAL
THIS DRAWING CONTAINS AUTOCAD ELECTRICAL ELEMENTS

P.I. #1899807
BURNS & MCDONNELL
A SOUTHERN COMPANY
1000 ATLANTA RD., SUITE 100
ATLANTA, GA 30339
PHONE: (770) 591-1176
FAX: (770) 591-1177
BURN & MCDONNELL ENGINEERING CO., P.C.
GA PROFESSIONAL LICENSE: PE000500
EXPIRATION DATE: 03/31/2026
THE REGISTRATION OF THE SEALY APPLIED
HEREON IS NOT VALID FOR THE
ONLY AS A SIGNATURE OF THE REGISTERED
ENGINEER OR ARCHITECT FOR THE
CHANGES AS INDICATED BY THE FOLLOWING
REVISIONS:
NO. DATE BY

REFERENCES:
01-173-D84 SWBD, PANEL #51, DETAILS-
O.H. BUS DIST. PANEL

FACILITY NAME: MCGRAU FORD TS	
TITLE: SWITCHBOARD PANEL #51 WIRING DIAGRAM OVERHEAD BUS DISTRIBUTION PANEL	
CHECKED: JWH	TYPE: WD
APPROVED: DATE: 5/14/2008	SCALE: N.T.S.
FACILITY #: 01-173	
NUMBER: 27	
SHEET: REV: -001-10	
ASC FAC:	



15-371-H17 CONTROL PANEL LAYOUT
15-371-D83 SWBD. CONSTRUCTION DETAILS
32" TERMINATION CABINETS A-H

500KV PCB #120; MOD'S 121, 123, & 671.

TITLE: TERMINATION CABINET G CONNECTION DIAGRAM

H- **NUMBER: 68** **SHEET: - 001 -** **REV: 02**

LEFT SIDE SHEET

