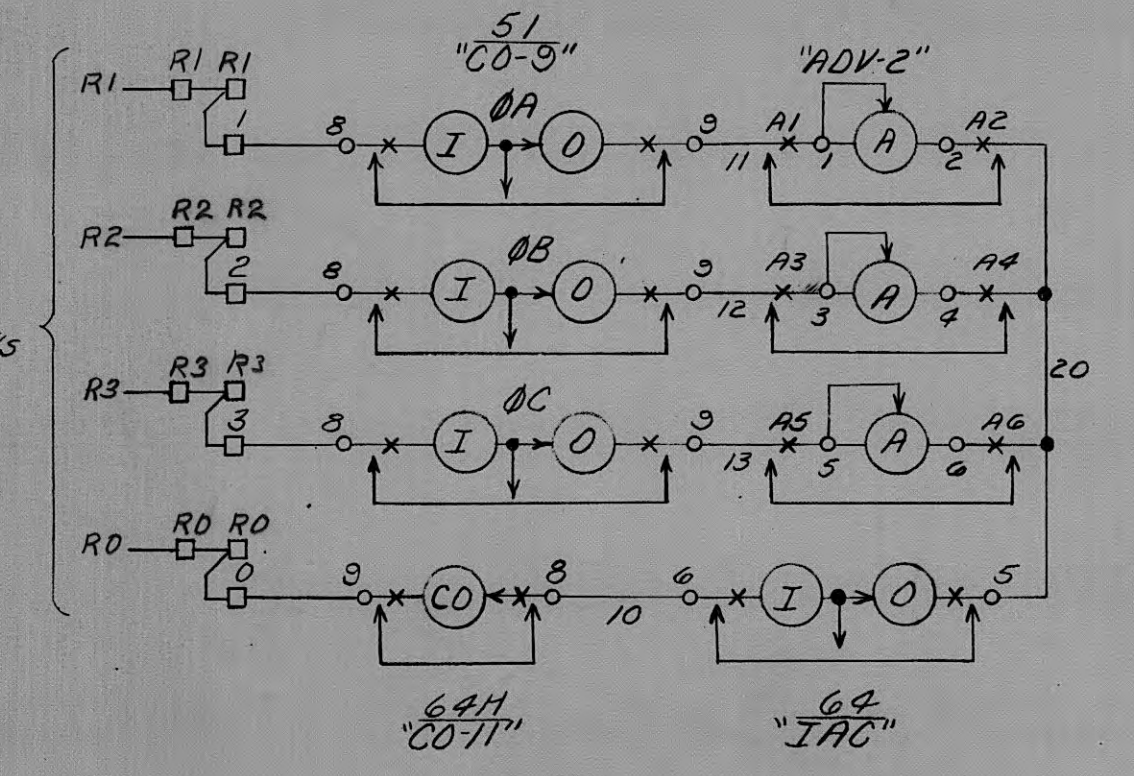
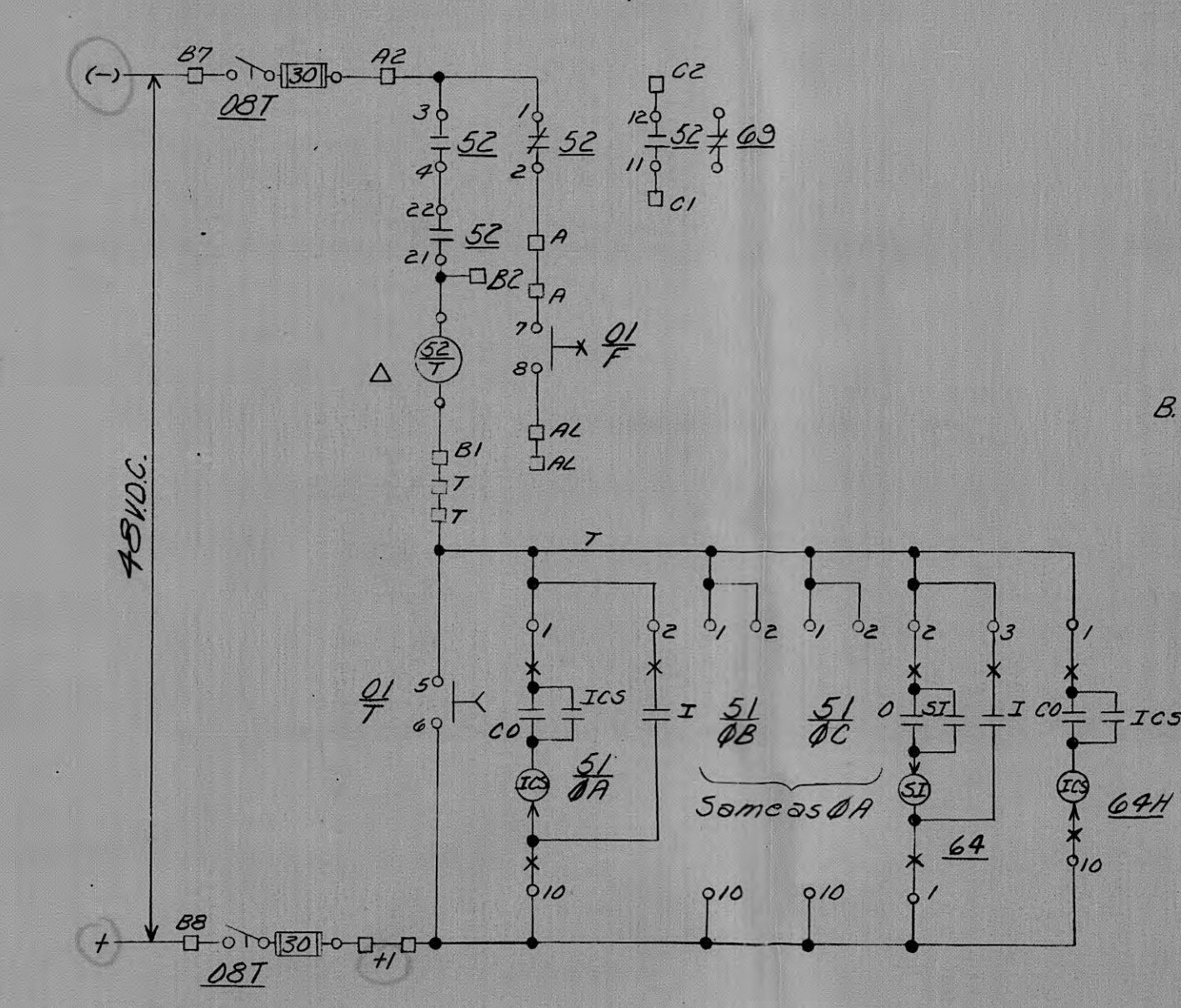
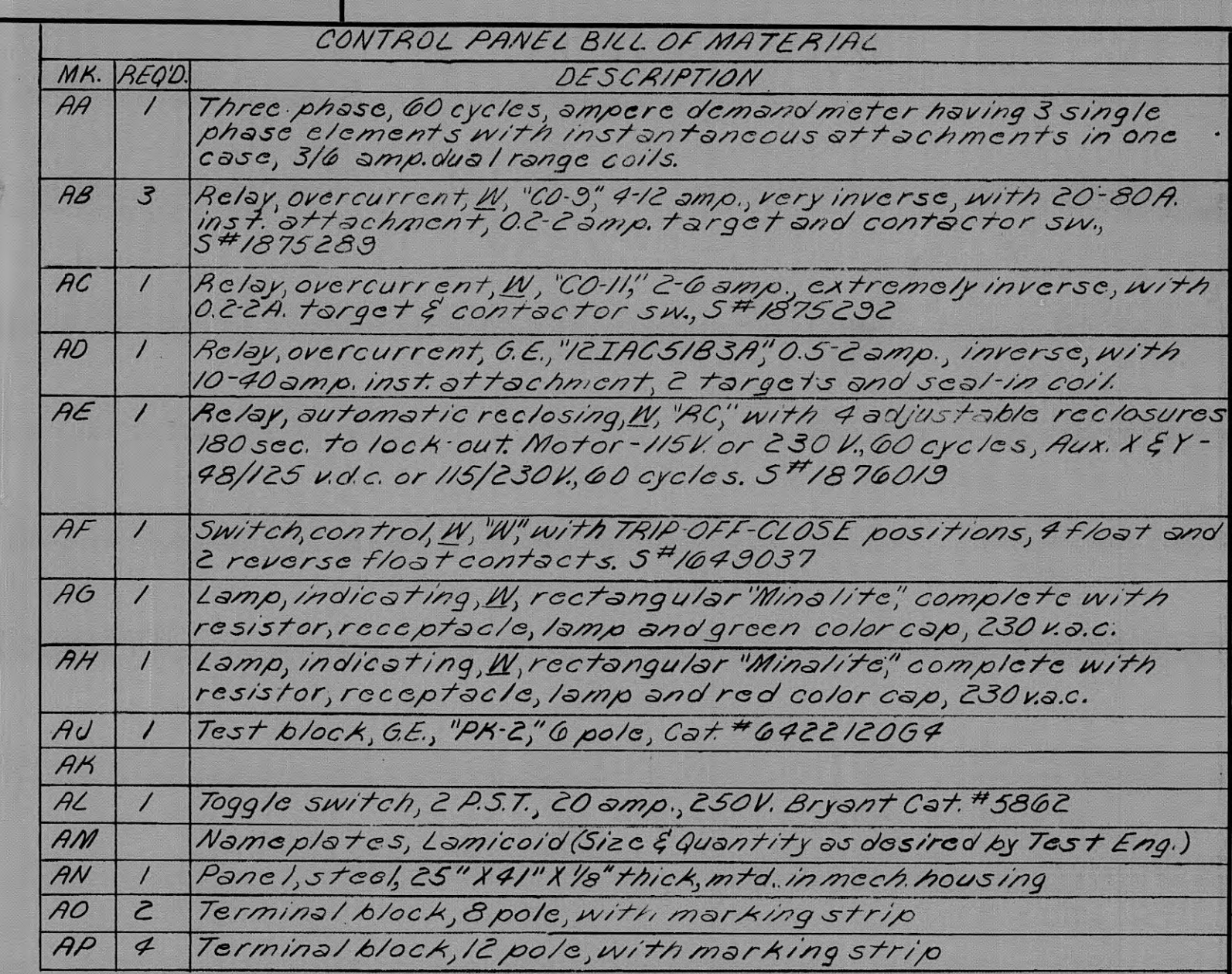
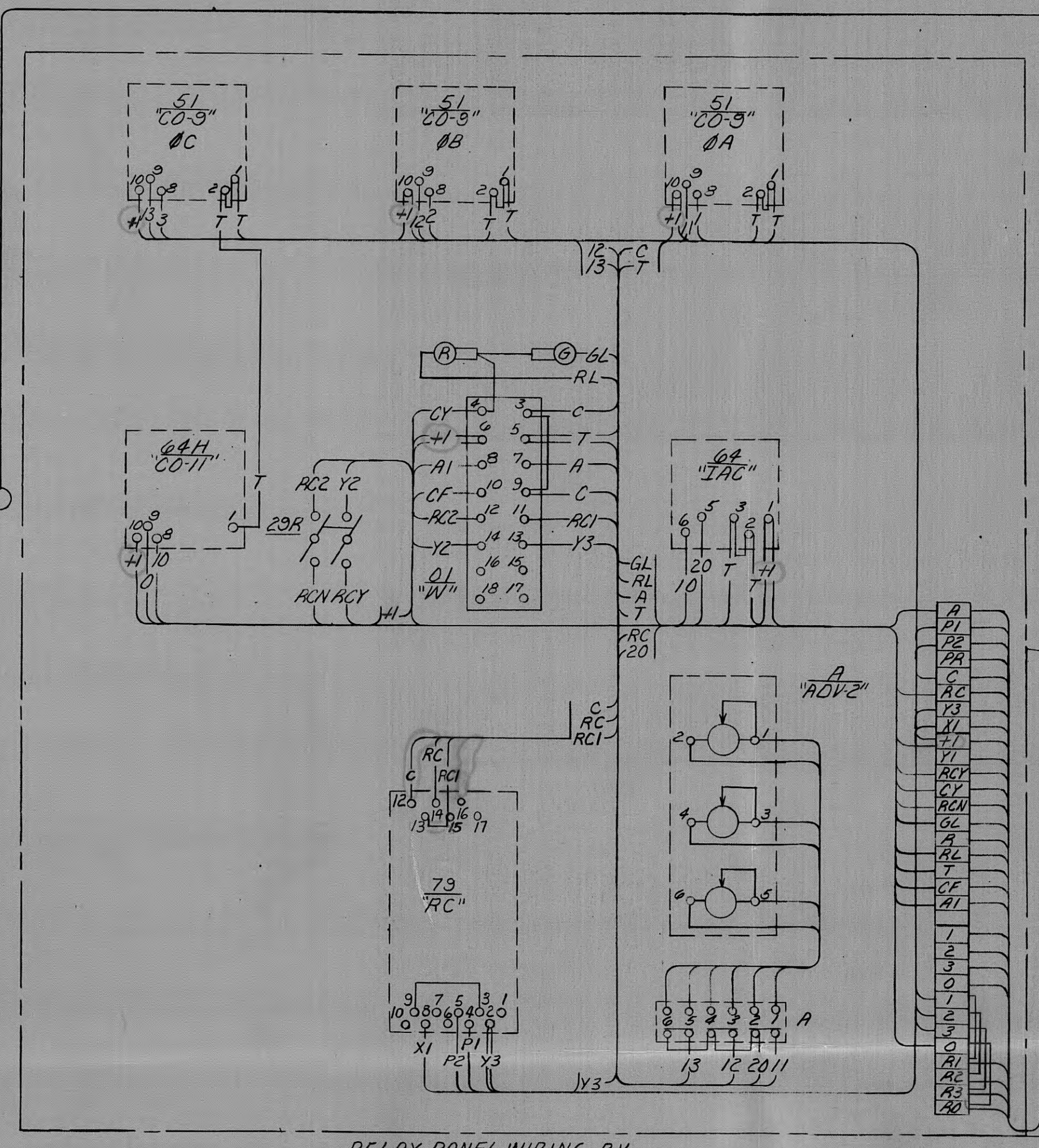


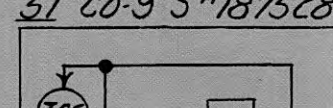


Single Line Diagram	WL-4545
Three Line Diagram	WL-4587
Conduit Plan & Details	LC-49979
Conduit and Cable List	CMC-49981
Polarities, Ratios & Tagging of B.T.C.'s	SC-1999
Manufacturer's Dwg's.	XA-1803
Mfrs. Control Diagram	501F835

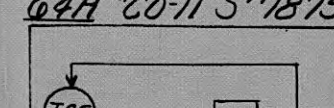
Q1 W 5# 1049037

CONTACTS	POSITIONS			
	CLOSE	NORMAL	TRIP	TRIP
40-1-03	X			
60-1-05				X
80-1-07	X	X		
100-1-09	X	X		
120-1-11	X	X		
140-1-13	X	X		
160-1-15			X	X
180-1-17			X	

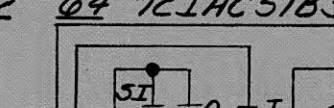
51 "C0-9"5# 1875289

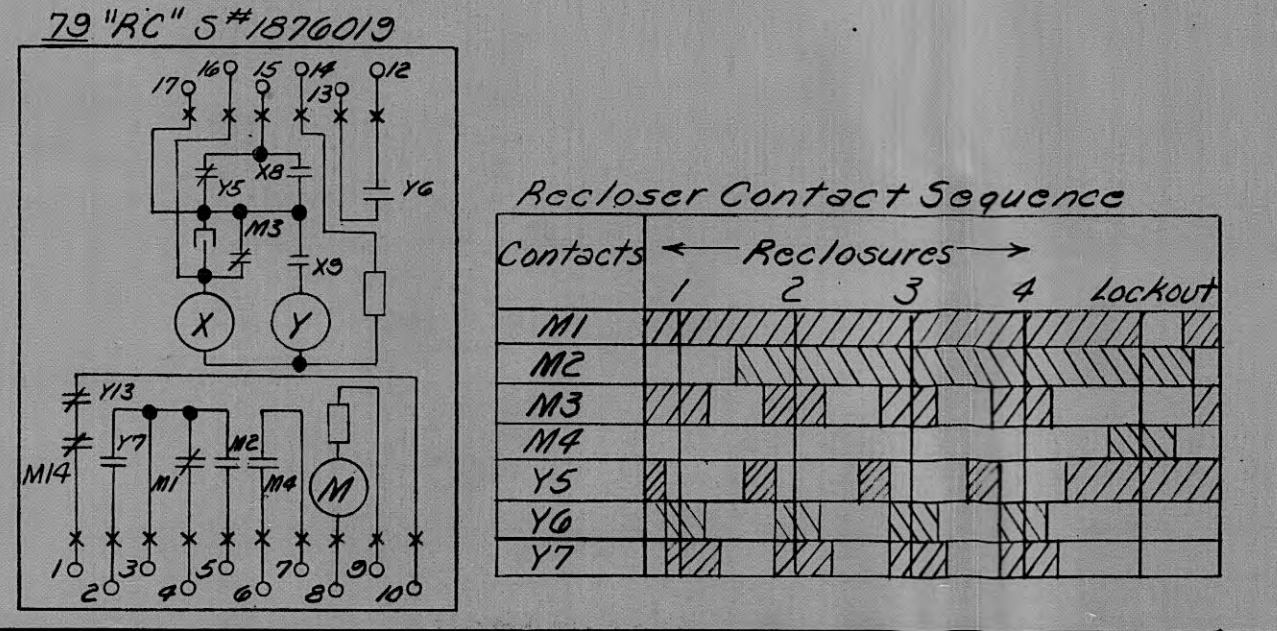


64H "C0-1"5# 1875292



64 "121AC5183A"

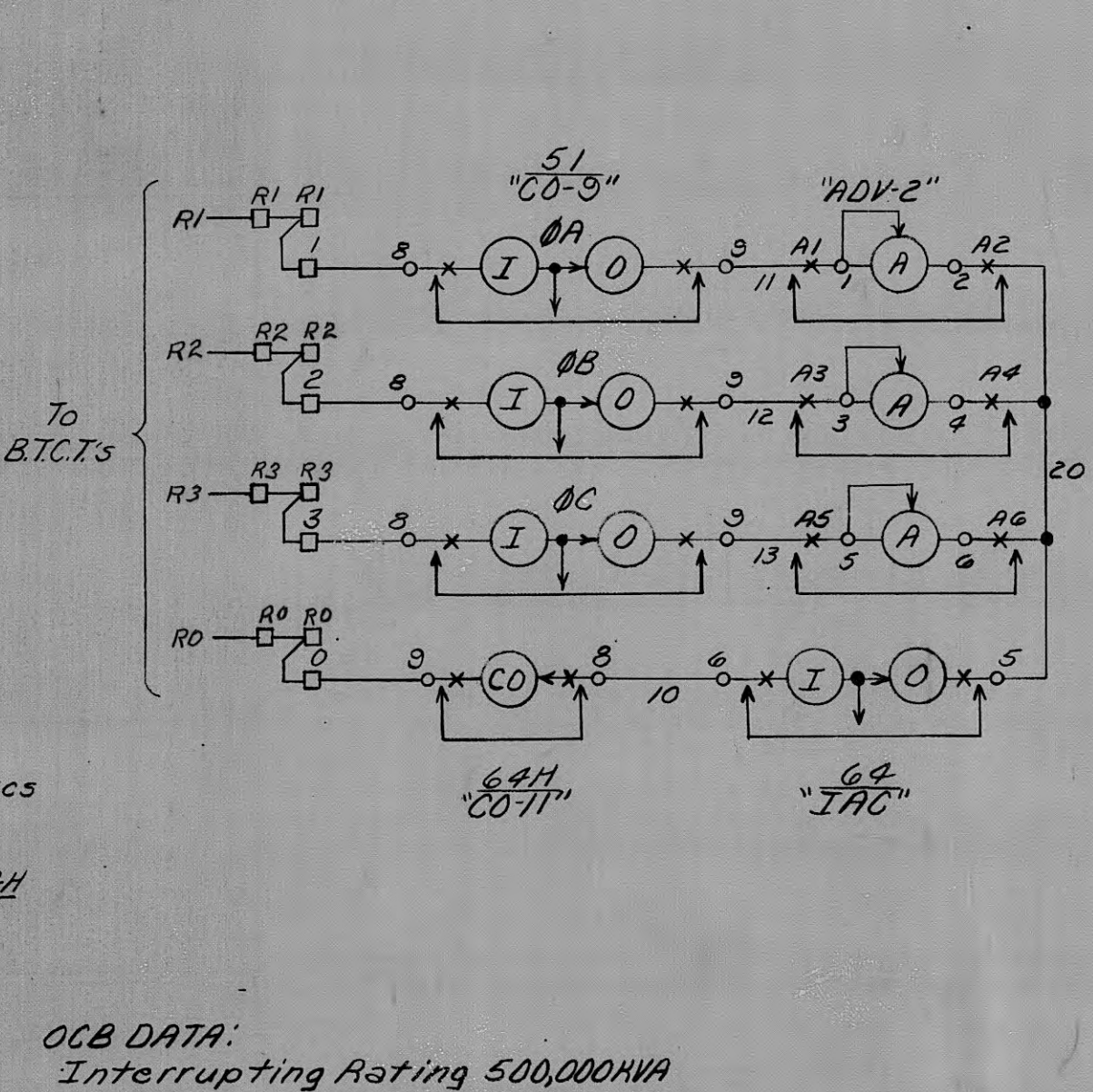
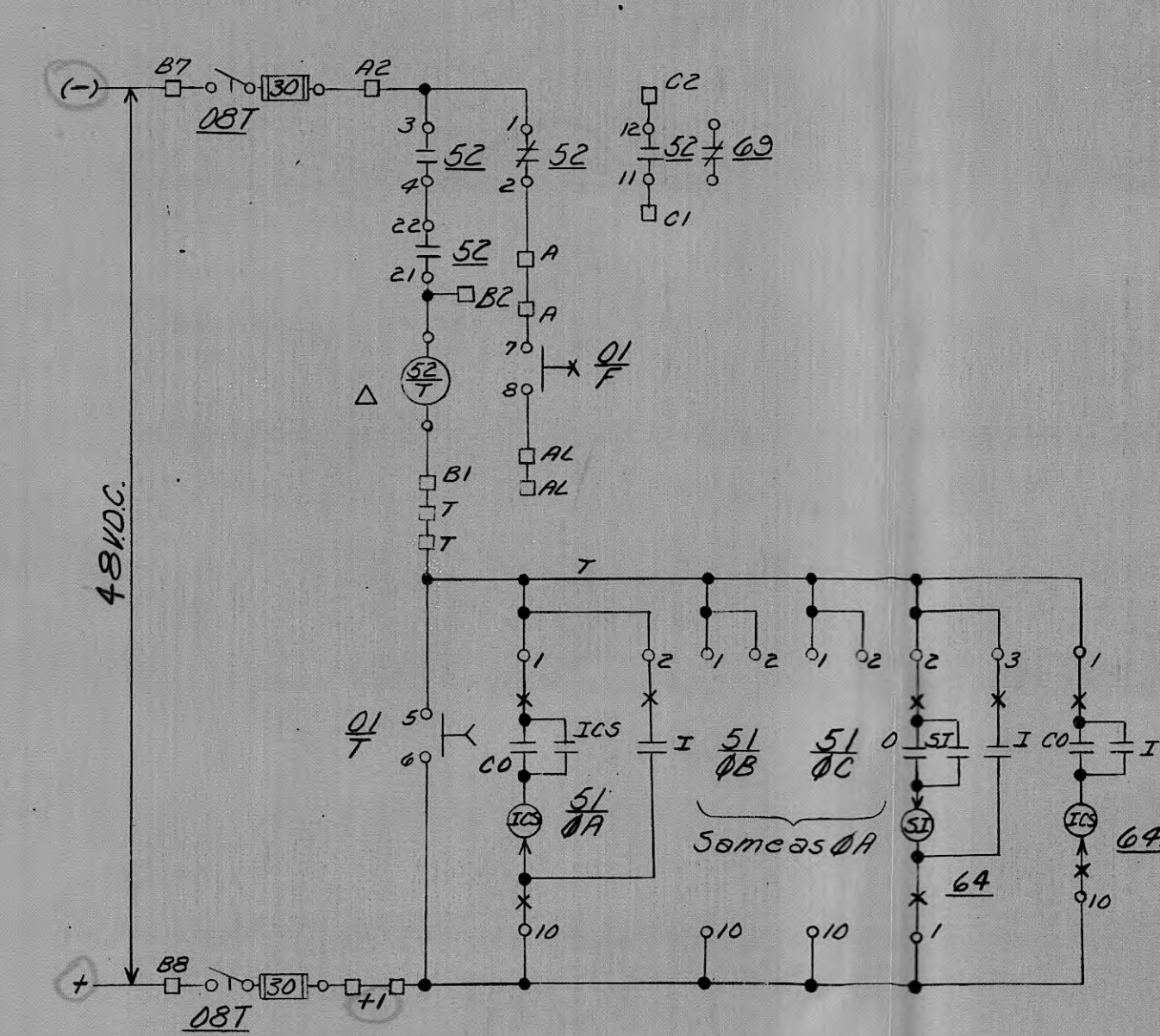
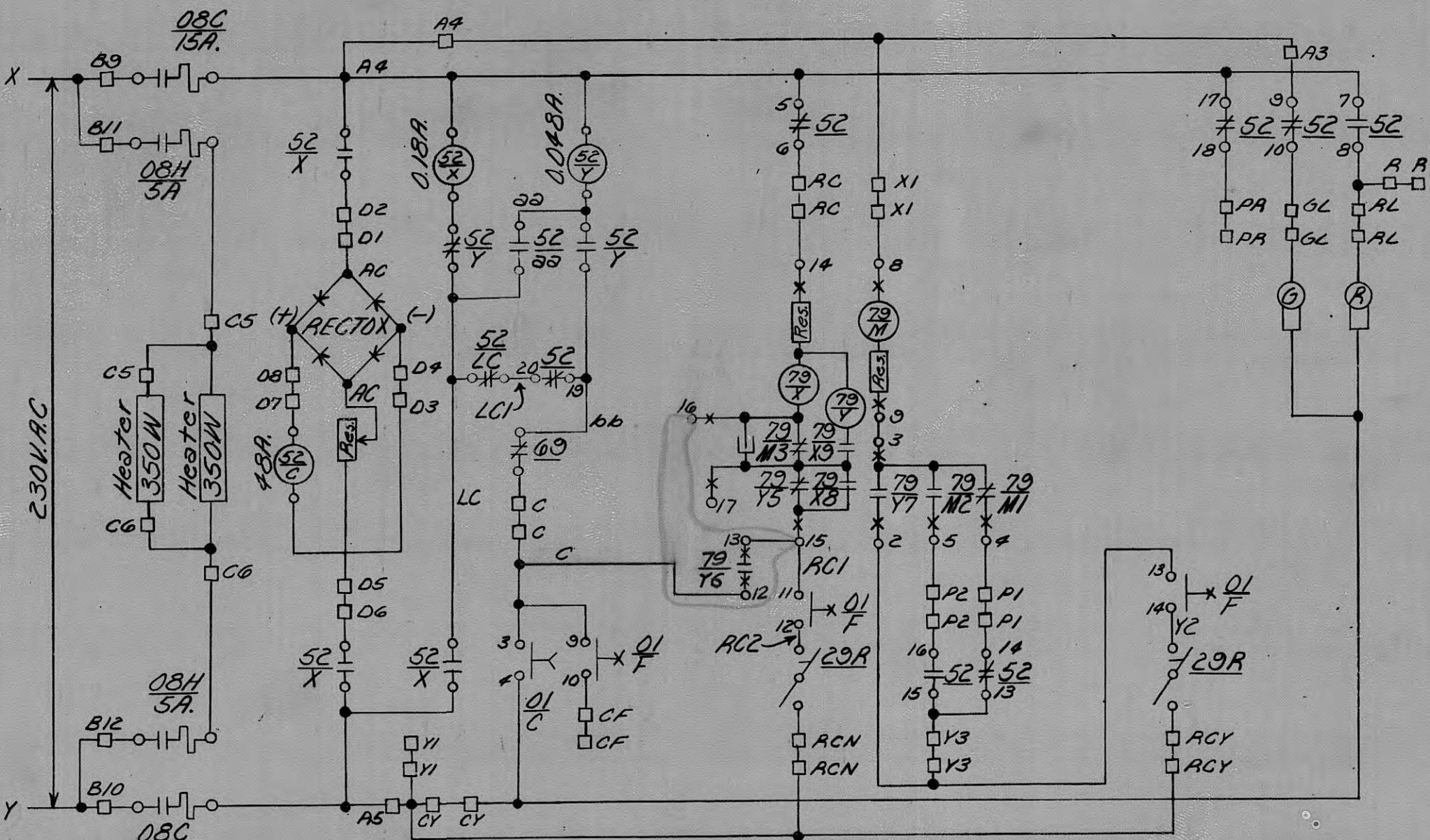
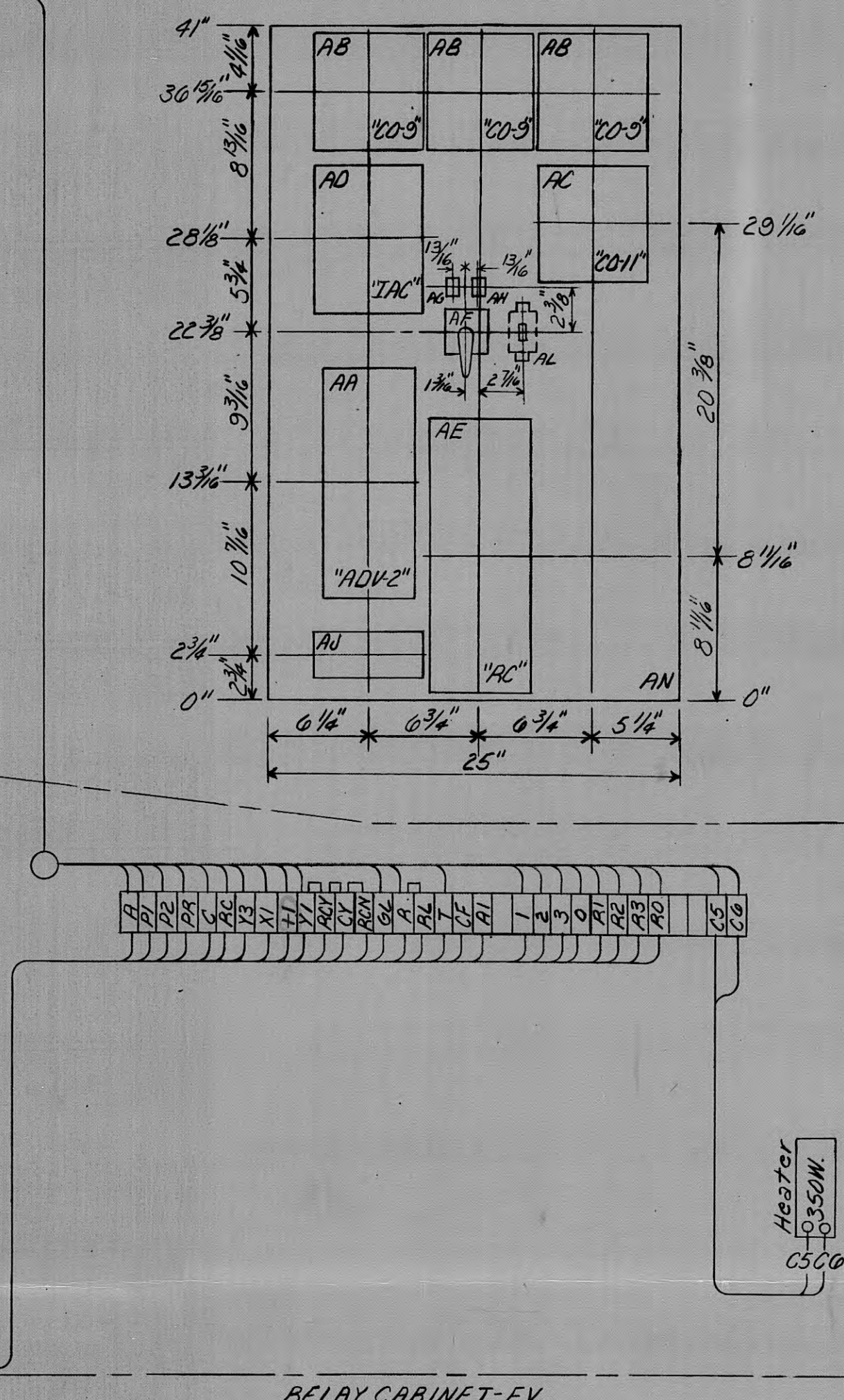
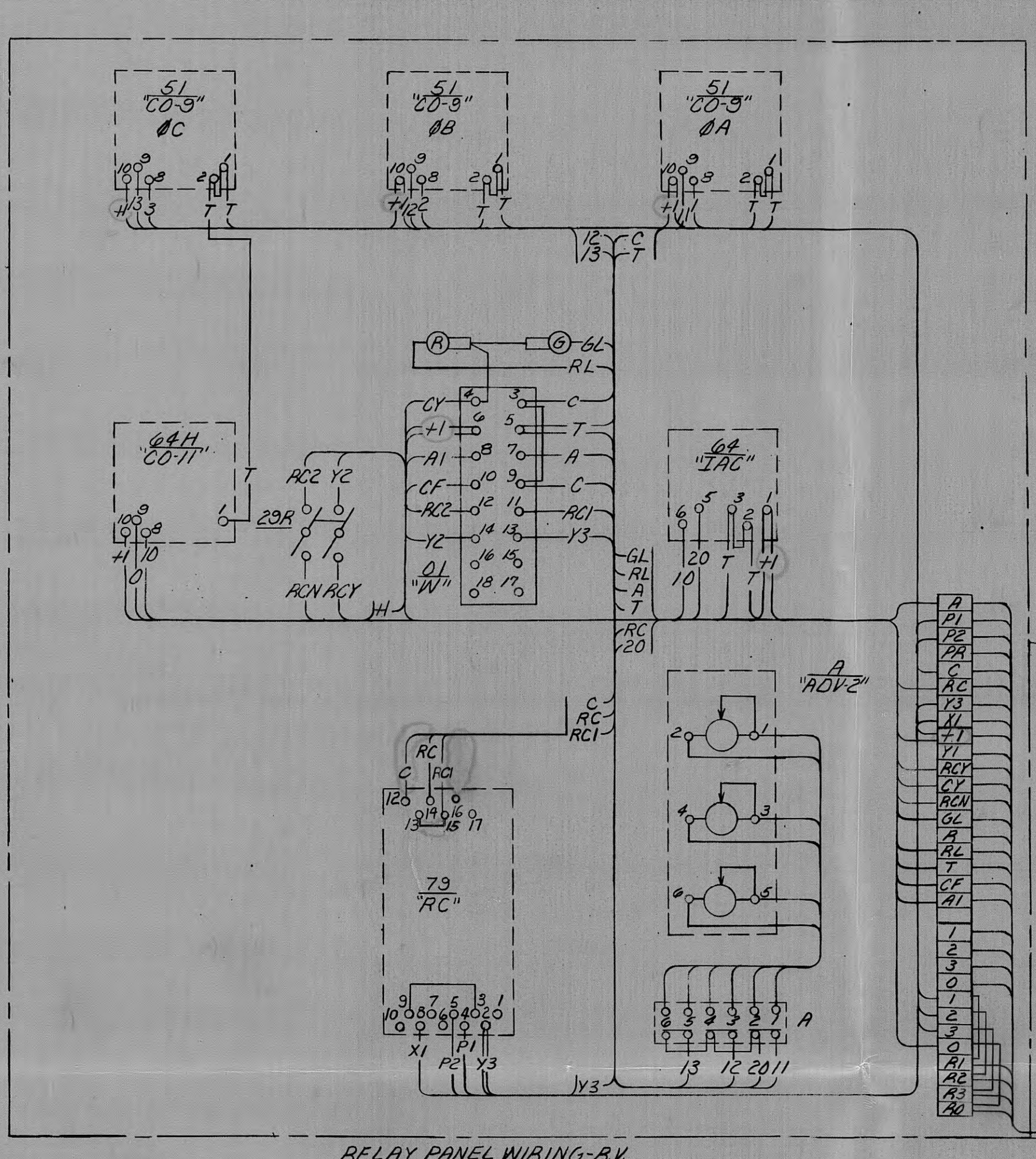
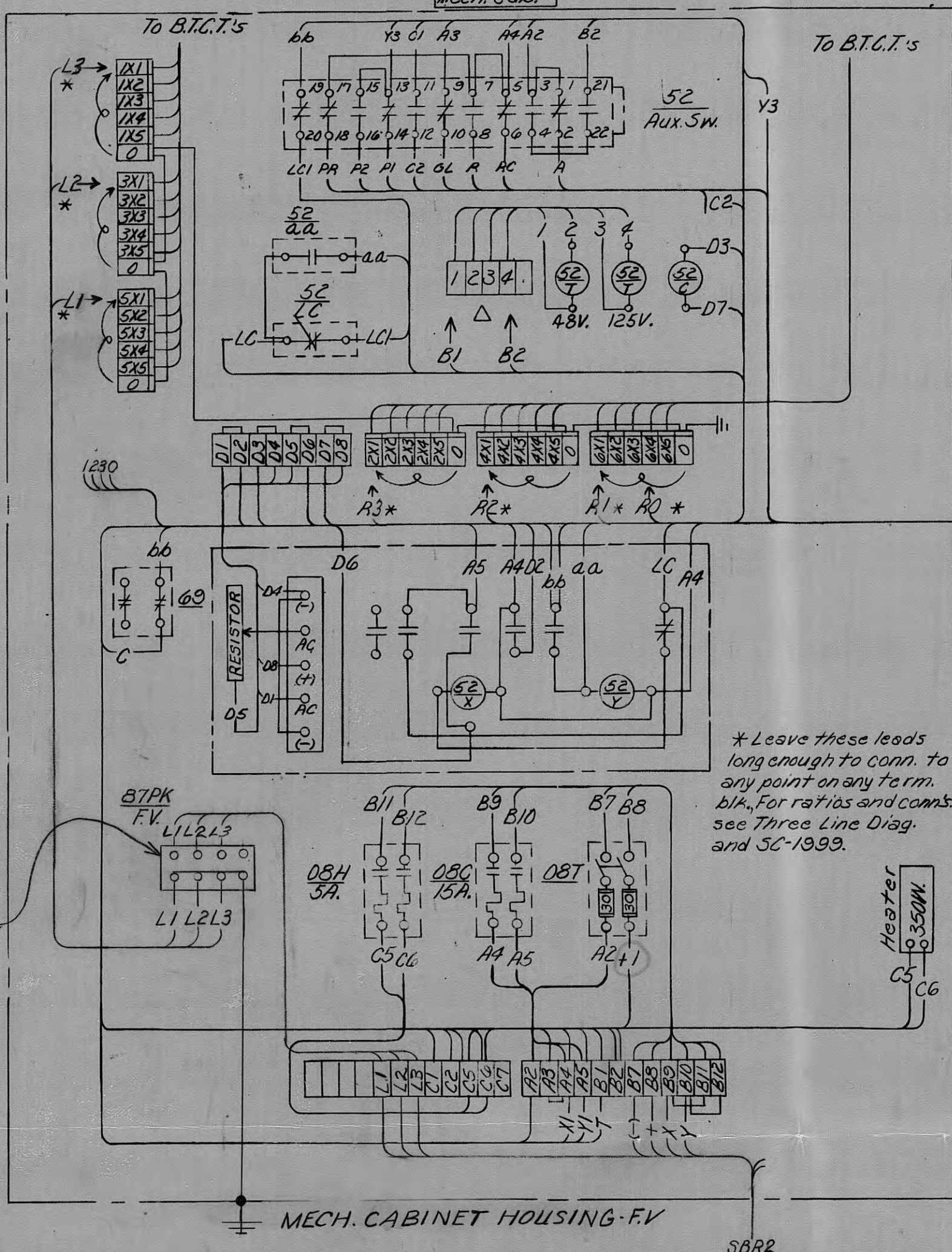
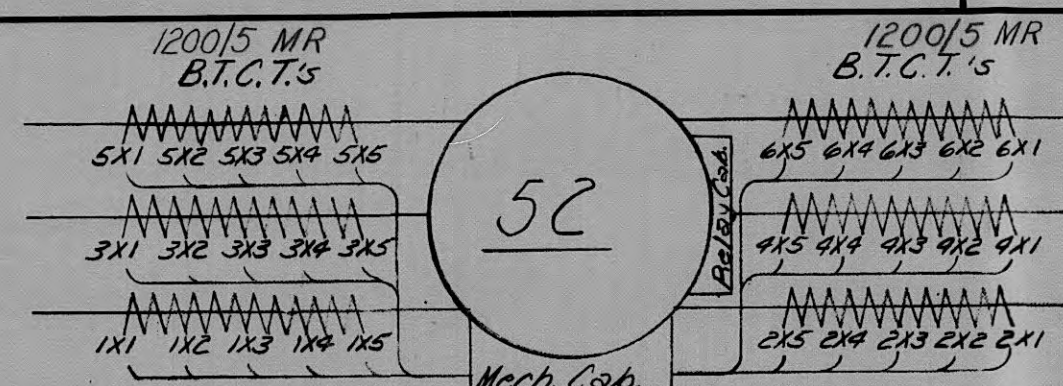




VOLT	CURRENT RATING	CONNECTIONS
48V.	13.3 amps	B1-2, B2-1
125V.	11.4 amps	B1-4, B2-3

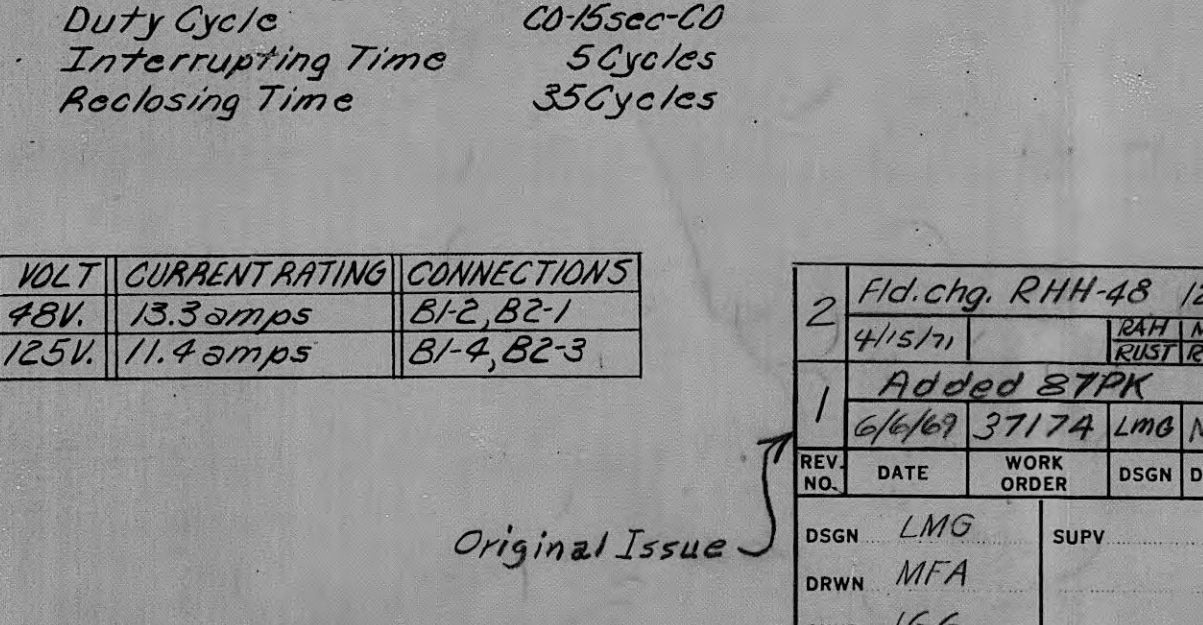
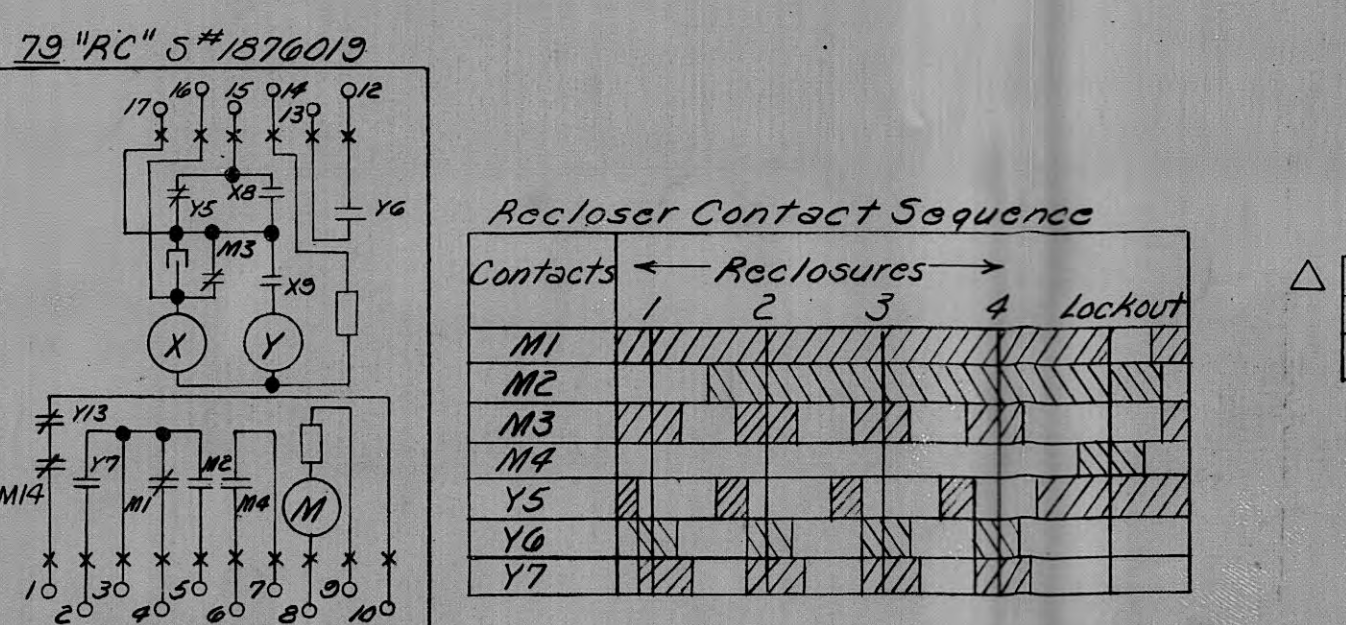
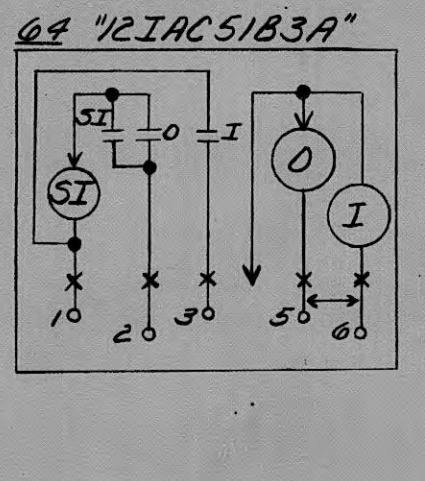
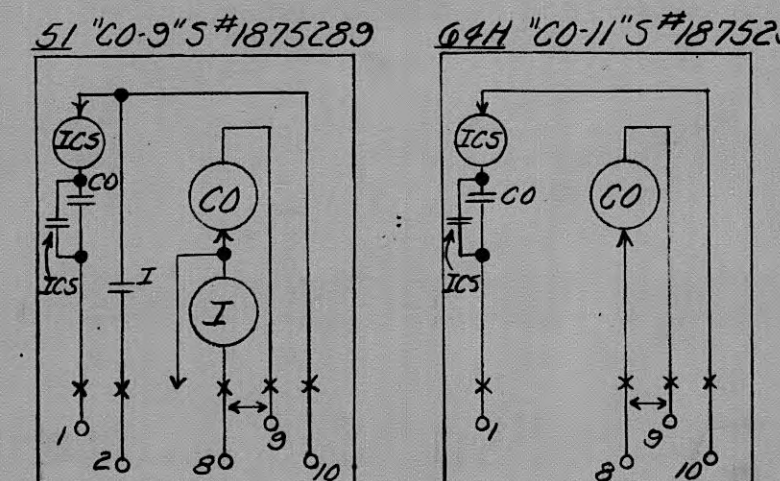
2	Fld. chg. RHH-48 12/3/69						
	4/5/71	SAM 1468 RFB RUST RUST RUST		DNR			
1	Added STPK						
→	6/6/69	37174	LMB	MFA	JGG		
REV. NO.	DATE	WORK ORDER	DSGN	DRWN	CHKD	SUPV	APPD
DSGN	LMG		SUPV		W.O. 37174		
DRWN	MFA				PROJ. ENGR.		
CHKD	JGG						

Harriman UB	234	2300	68P2-10478	
LOCATION	OCB NO.	DEV. SERIES	OCB SERIAL NO.	REQ. NO.
TENNESSEE VALLEY AUTHORITY DIVISION OF POWER PLANNING AND ENGINEERING N.E. HARRIMAN, TENNESSEE, SUB. - 69 KV. CONTROL WIRING, PANEL F.W. & BILL OF MATERIAL FOR W. "144GC500", 14.4 KV, 1200A. OCB WITH SOL. MECH.				
DATE 6/6/69	SUBMITTED Norman D. Hunter	APPROVED	SHEET / OF /	SHEETS
SCALE As Shown	CLASS. CODE E003W	Robert C. Wilson	WL-4571	R-2



01 "W" 5#1049037

CONTACTS	POSITIONS	TRIP
40-03	X	
60-05	X	
80-07	X	
100-09	X	
120-11	X	
140-13	X	
160-15	X	
180-17	X	



CONTROL PANEL BILL OF MATERIAL

MK.	REQD.	DESCRIPTION
AA	1	Three phase, 60 cycles, ampere demand meter having 3 single phase elements with instantaneous attachments in one case, 3/8 amp. dual range coils.
AB	3	Relay, overcurrent, "CO-3" 4-12 amp., very inverse, with 20-80A. inst. attachment, 0.2 amp. target and contactor sw., S#1875289
AC	1	Relay, overcurrent, "CO-11" 2-6 amp., extremely inverse, with 0.2 amp. target & contactor sw., S#1875282
AD	1	Relay, overcurrent, G.E. "12 IACS 183A" 0.5-2 amp., inverse, with 10-40 amp. inst. attachment, 2 targets and seal-in coil.
AE	1	Relay, automatic reclosing, "AC" with 4 adjustable reclosures 180 sec. to lock-out. Motor-115V or 230V, 60 cycles, Aux. X & Y-48/125 v.d.c. or 115/230V, 60 cycles, S#1876019
AF	1	Switch, control, "W" with TRIP OFF-CLOSE positions, 4 float and 2 reverse float contacts, S#1049037
AG	1	Lamp, indicating, "W", rectangular "Minalite", complete with resistor, receptacle, lamp and green color cap, 230 v.a.c.
AH	1	Lamp, indicating, "W", rectangular "Minalite", complete with resistor, receptacle, lamp and red color cap, 230 v.a.c.
AJ	1	Test block, G.E. "PK-2", 6 pole, Cat. #642212064
AK		
AL	1	Toggle switch, 2 A.S.T., 20 amp., 250V, Bryant Cat. #5862
AM		Nameplates, Lamicoid (Size & Quantity as desired by Test Eng.)
AN	1	Panel, steel, 25" X 41" X 1/8" thick, mtd. in mech. housing
AO	2	Terminal block, 8 pole, with marking strip
AP	4	Terminal block, 12 pole, with marking strip

REFERENCES:
 Single Line Diagram
 Three Line Diagram
 Conduit Plan & Details
 Conduit and Cable List
 Polarities, Ratios & Tagging of B.T.C.T.s
 Manufacturer's Dwg's
 Mfr's Control Diagram

WL-4545
 WL-4587
 LC-49979
 CMC-49981
 SC-1999
 XA-1803
 501F835

Harriman U.B. 13KV.			
LOCATION	224	2200	68P2-10478
TENNESSEE VALLEY AUTHORITY			
DIVISION OF POWER PLANNING AND ENGINEERING			
N.E. HARRIMAN, TENNESSEE, SUB - 69 KV.			
CONTROL WIRING, PANEL F.V. & BILL OF MATERIAL			
FOR W. "44GC500", 14.4 KV, 1200A OCB WITH SOL. MECH.			
REV.	DATE	WORK ORDER	DSGN
1	4/15/69	37174	LMB MFA JGS
2	6/4/69	37174	LMB MFA JGS
3	6/4/69	37174	LMB MFA JGS
4	6/4/69	37174	LMB MFA JGS
5	6/4/69	37174	LMB MFA JGS
6	6/4/69	37174	LMB MFA JGS
7	6/4/69	37174	LMB MFA JGS
8	6/4/69	37174	LMB MFA JGS
9	6/4/69	37174	LMB MFA JGS
10	6/4/69	37174	LMB MFA JGS
11	6/4/69	37174	LMB MFA JGS
12	6/4/69	37174	LMB MFA JGS
13	6/4/69	37174	LMB MFA JGS
14	6/4/69	37174	LMB MFA JGS
15	6/4/69	37174	LMB MFA JGS
16	6/4/69	37174	LMB MFA JGS
17	6/4/69	37174	LMB MFA JGS
18	6/4/69	37174	LMB MFA JGS
19	6/4/69	37174	LMB MFA JGS
20	6/4/69	37174	LMB MFA JGS
21	6/4/69	37174	LMB MFA JGS
22	6/4/69	37174	LMB MFA JGS
23	6/4/69	37174	LMB MFA JGS
24	6/4/69	37174	LMB MFA JGS
25	6/4/69	37174	LMB MFA JGS
26	6/4/69	37174	LMB MFA JGS
27	6/4/69	37174	LMB MFA JGS
28	6/4/69	37174	LMB MFA JGS
29	6/4/69	37174	LMB MFA JGS
30	6/4/69	37174	LMB MFA JGS
31	6/4/69	37174	LMB MFA JGS
32	6/4/69	37174	LMB MFA JGS
33	6/4/69	37174	LMB MFA JGS
34	6/4/69	37174	LMB MFA JGS
35	6/4/69	37174	LMB MFA JGS
36	6/4/69	37174	LMB MFA JGS
37	6/4/69	37174	LMB MFA JGS
38	6/4/69	37174	LMB MFA JGS
39	6/4/69	37174	LMB MFA JGS
40	6/4/69	37174	LMB MFA JGS
41	6/4/69	37174	LMB MFA JGS
42	6/4/69	37174	LMB MFA JGS
43	6/4/69	37174	LMB MFA JGS
44	6/4/69	37174	LMB MFA JGS
45	6/4/69	37174	LMB MFA JGS
46	6/4/69	37174	LMB MFA JGS
47	6/4/69	37174	LMB MFA JGS
48	6/4/69	37174	LMB MFA JGS
49	6/4/69	37174	LMB MFA JGS
50	6/4/69	37174	LMB MFA JGS
51	6/4/69	37174	LMB MFA JGS
52	6/4/69	37174	LMB MFA JGS
53	6/4/69	37174	LMB MFA JGS
54	6/4/69	37174	LMB MFA JGS
55	6/4/69	37174	LMB MFA JGS
56	6/4/69	37174	LMB MFA JGS
57	6/4/69	37174	LMB MFA JGS
58	6/4/69	37174	LMB MFA JGS
59	6/4/69	37174	LMB MFA JGS
60	6/4/69	37174	LMB MFA JGS
61	6/4/69	37174	LMB MFA JGS
62	6/4/69	37174	LMB MFA JGS
63	6/4/69	37174	LMB MFA JGS
64	6/4/69	37174	LMB MFA JGS
65	6/4/69	37174	LMB MFA JGS
66	6/4/69	37174	LMB MFA JGS
67	6/4/69	37174	LMB MFA JGS
68	6/4/69	37174	LMB MFA JGS
69	6/4/69	37174	LMB MFA JGS
70	6/4/69	37174	LMB MFA JGS
71	6/4/69	37174	LMB MFA JGS
72	6/4/69	37174	LMB MFA JGS
73	6/4/69	37174	LMB MFA JGS
74	6/4/69	37174	LMB MFA JGS
75	6/4/69	37174	LMB MFA JGS
76	6/4/69	37174	LMB MFA JGS
77	6/4/69	37174	LMB MFA JGS
78	6/4/69	37174	LMB MFA JGS
79	6/4/69	37174	LMB MFA JGS
80	6/4/69	37174	LMB MFA JGS
81	6/4/69	37174	LMB MFA JGS
82	6/4/69	37174	LMB MFA JGS
83	6/4/69	37174	LMB MFA JGS
84	6/4/69	37174	LMB MFA JGS
85	6/4/69	37174	LMB MFA JGS
86	6/4/69	37174	LMB MFA JGS
87	6/4/69	37174	LMB MFA JGS
88	6/4/69	37174	LMB MFA JGS
89	6/4/69	37174	LMB MFA JGS
90	6/4/69	37174	LMB MFA JGS
91	6/4/69	37174	LMB MFA JGS
92	6/4/69	37174	LMB MFA JGS
93	6/4/69	37174	LMB MFA JGS
94	6/4/69	37174	LMB MFA JGS
95	6/4/69	37174	LMB MFA JGS
96	6/4/69	37174	LMB MFA JGS
97	6/4/69	37174	LMB MFA JGS
98	6/4/69	37174	LMB MFA JGS
99	6/4/69	37174	LMB MFA JGS
100	6/4/69	37174	LMB MFA JGS

