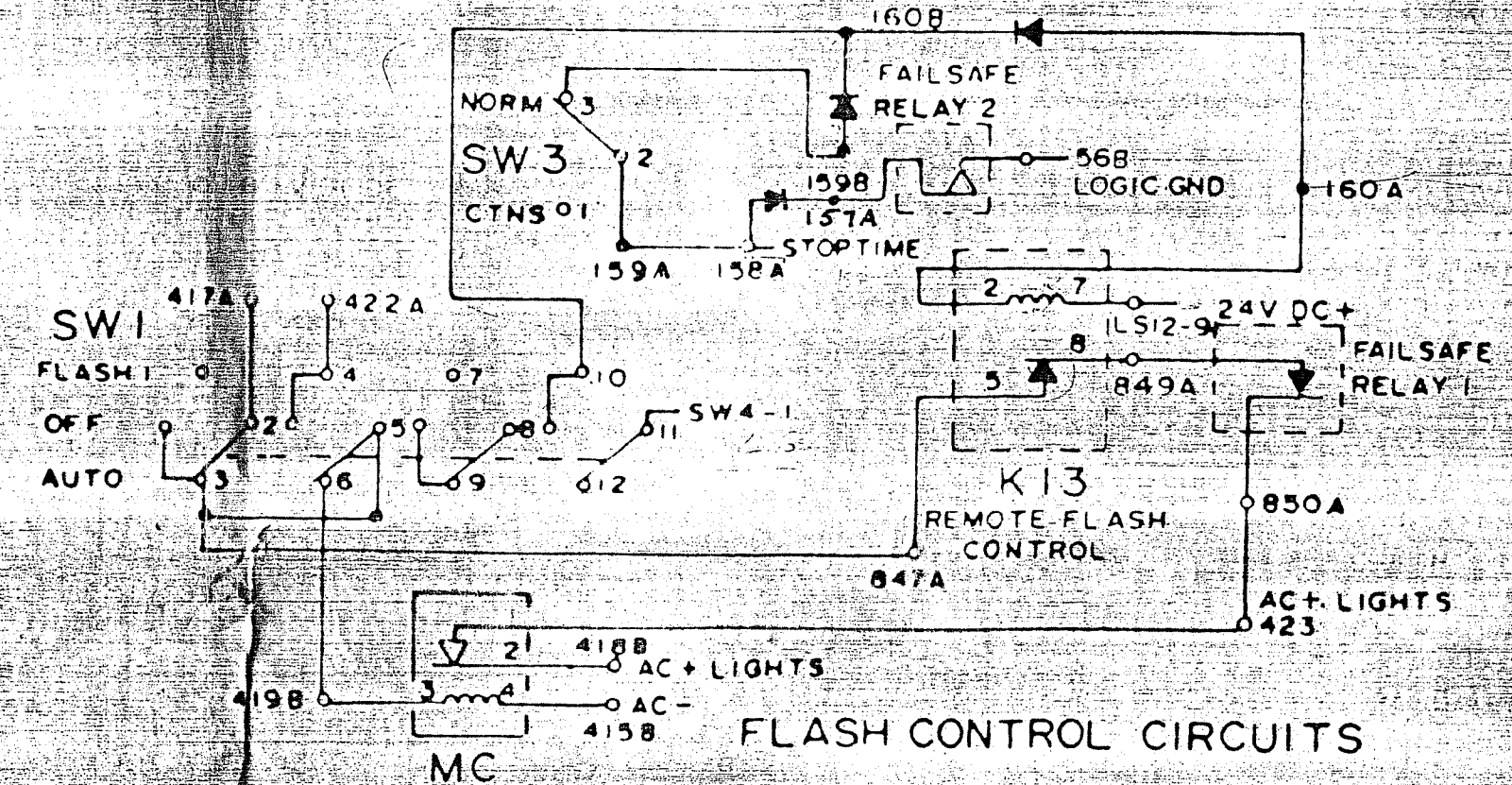
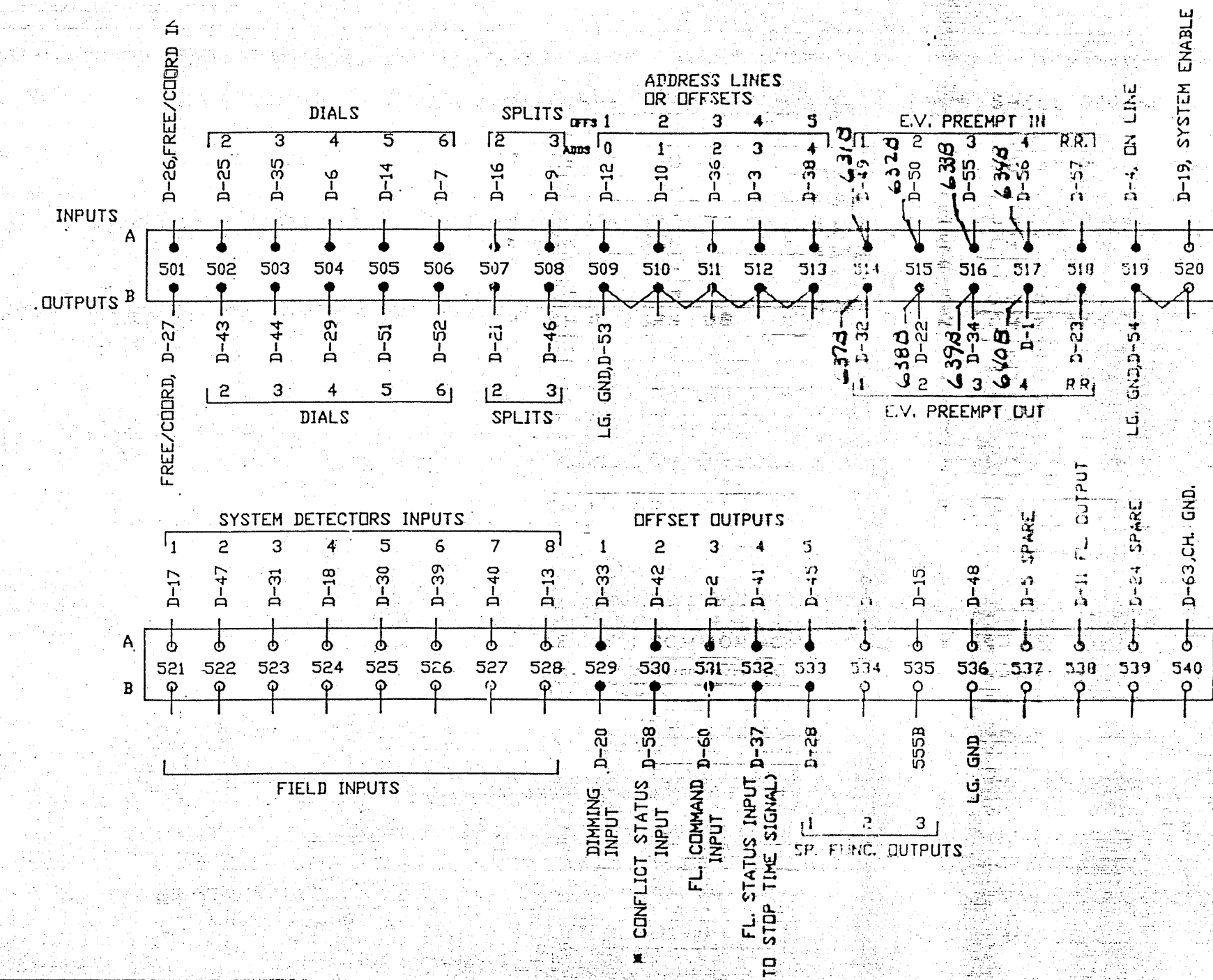


CONTROLLER INTERFACE PANEL

P1	P2	P3
SH SHELL GROUND 6B3	SH SHELL GROUND 6B3	SH SHELL GROUND 6B3
A RESV. 6B	A 01 PHASE NEXT 21B	A STATUS BIT A 2 18B
B 24V DC+ 59A	B SPARE 1 21B	B STATUS BIT B 2 18B
C VOLTAGE MONITOR 54A	C 02 PHASE NEXT 29A	C 08 DWK 126A
D 01 RED 64A	D 03 ORN 22B	D 08 RED 124A
E 01 DWK 66A	E 03 YEL 76A	E 07 YEL 117A
F 02 RED 71A	F 04 RED 78A	F 07 RED 118A
G 02 PCL 73A	G 04 PCL 84A	G 06 RED 111A
H 02 PCL 142A	H 04 PCL 144A	H 05 RED 104A
J 02 WK 72A	J 04 DWK 86A	J 05 YEL 103A
K 02 VEH DET 68A	K 04 CHECK 24A	K 05 PCL 145A
L 02 PED DET 89A	L 04 VEH DET 81A	L 05 DWK 106A
M 02 HOLD 8B	M 04 PED DET 91A	M 05 PHASE NEXT 25B
N STOP TIMING I 15A	N 03 VEH DET 75A	N 05 PHASE ON 37A
P INHIBIT MAX TERM I 9A	P 03 PED DET 90A	P 05 VEH DET 101A
Q EXTERNAL START 8A	Q 03 PHASE OMIT 43A	Q 05 PED DET 108A
R INTERVAL ADVANCE 19A	R 02 PHASE OMIT 42A	R 06 VEH DET 128A
S INDICATOR LAMP CONT 20A	S 05 PED OMIT 37B	S 06 VEH DET 130A
T AC-COMMON 8B3	T 01 PHASE OMIT 41A	T 07 VEH DET 115A
U CHASSIS GROUND 55A	U PED RECYCLE 2 132A	U 07 PED DET 130A
V LOGIC GROUND 55A	V SPARE 2 29B	V 07 VEH DET 115A
W FLASH LOGIC OUT 5A	W SPARE 3 30A	W 08 PED DET 131A
X STATUS BIT C 17B	X 03 WK 79A	X 08 HOLD 14B
Y 01 YEL 63A	Y 03 PCL 143A	Y FORCE OFF 2 8A
Z 02 YEL 70A	Z 04 GRN 82A	Z STOP TIME 2 16A
0 02 CHECK 22A	0 04 WK 85A	0 INHIBIT MAX TERM 2 10A
1 02 PHASE ON 34A	1 04 PHASE ON 36A	0 SPARE 1 31A
2 01 VEH DET 61A	2 04 PHASE NEXT 24B	0 STATUS BIT C 2 20B
3 01 PED DET 88A	3 04 PHASE OMIT 44A	0 08 WK 125A
4 01 HOLD 7B	4 04 HOLD 10B	0 08 YEL 123A
5 FORCE OFF 1 7A	5 03 HOLD 10B	0 07 GRN 109A
6 EXT MIN RECALL ALL 50A	6 03 PED OMIT 35B	0 06 YEL 110A
7 MAN CONTROL ENABLE 4A	7 06 PED OMIT 105A	0 05 GRN 102A
8 CALL TO NON-ACT I 17A	8 05 HOLD 25A	0 05 WK 105A
9 TEST INPUT A 1B	9 05 PHASE OMIT 45A	0 06 CHECK 105A
0 AC+ CONTROL 846B	0 RELAY INC 849A	0 07 PED OMIT 38B
1 SPARE 1 3B	1 RELAY 2 NO 157A	0 08 PED OMIT 39B
2 STATUS BIT B 16B	2 CH 12 WK 837A	0 OL A YEL 98A
3 01 GRN 62A	3 CH 11 WK 838A	0 OL A RED 97A
4 01 WK 65A	4 CH 9 WK 840A	0 03 CHECK 23A
5 01 CHECK 21A	5 CH 7 WK 841A	0 03 PHASE ON 35A
6 02 PED OMIT 34B	6 CH 4 YEL 842A	0 03 PHASE NEXT 23B
7 OMIT RED CLR 11A	7 CH 2 WK 222A	0 OL D RED 140A
8 RED REST MODE 13A	8 CH 1 WK 644A	0 OL D GRN 138A
9 SPARE 2 4B	9 AA SPARE 1 150A	0 04 PED OMIT 36B
0 CALL TO NON-ACT II 18A	0 CC CAB INTERLOCK A 151B	0 MAX 2 SELECT 2 31B
1 WALK REST MODIFIER 2B	0 DD CAB INTERLOCK B 150B	0 OL A GRN 2A
2 STATUS BIT A 15B	0 EE CH 6 WK 06 262A	0 OL B YEL 95A
3 01 PED OMIT 33B	0 FF CH 4 WK 04 256A	0 OL B RED 99A
4 PED RECYCLE 92A	0 GG SPARE 2 151A	0 OL C RED 100A
5 MAX 2 SELECT 1A	0 HH SPARE 3 152A	0 OL C YEL 137A
6 SPARE 3 5B		0 OL C GRN 139A
		0 OL B GRN 135A
		0 08 PHASE ON 40A
		0 08 PHASE NEXT 28B
		0 07 WK 119A
		0 07 PCL 147A
		0 06 WK 112A
		0 07 CHECK 27A
		0 07 PHASE ON 39A
		0 07 PHASE NEXT 27B

NEMA 12L CONFLICT MONITOR

CM1	CM2
SH SHELL GROUND 6B3	SH SHELL GROUND 6B3
A AC+ I 826B	A AC+ II 825B
B RELAY 1 NO 156A	B DELAY RELAY COMM 57B
C RELAY 2 NC 149A	C DELAY RELAY NO 6A
D CH 12 GRN 833A	D CH 12 RED 823A
E CH 11 GRN 834A	E CH 11 RED 826A
F CH 10 GRN 835A	F CH 9 RED 828A
G CH 9 GRN 836A	G CH 8 RED 828A
H CH 8 GRN 837A	H CH 7 RED 828A
I CH 7 GRN 838A	I CH 6 RED 828A
J CH 6 GRN 839A	J CH 5 RED 828A
K CH 5 GRN 840A	K CH 4 RED 828A
L CH 4 GRN 841A	L CH 3 RED 828A
M CH 3 GRN 842A	M CH 2 RED 828A
N CH 2 GRN 843A	N CH 1 RED 828A
P CH 1 GRN 844A	P SPARE 1 206A
Q +24V MONITOR I 50B	Q +24V MONITOR II 51B
R LOGIC GROUND 55B	R SPARE 2 154A
S CHASSIS GROUND 55B	S SPARE 3 155A
T AC- 55B	T DELAY RELAY NC 153B
U RELAY 1 COMMON (AC) 830A	U CH 10 RED 827A
V RELAY 2 COMMON (LG) 50B	V SPARE 4 154B
W CH 12 YEL 829A	W SPARE 5 155B
X CH 11 YEL 830A	X CH 3 RED 828A
Y CH 10 YEL 831A	Y RED ENABLE 846A
Z CH 9 YEL 832A	Z SPARE 6 157B
0 CH 8 YEL 833A	0 SPARE 7 158B
1 CH 7 YEL 834A	
2 CH 6 YEL 835A	
3 CH 5 YEL 836A	
4 CH 4 YEL 837A	
5 CH 3 YEL 838A	
6 CH 2 YEL 839A	
7 CH 1 YEL 840A	
8 CONT. VOLT. MON. 54B	
9 +24V MONITOR INHIBIT 149B	
0 RELAY INC 849A	
1 RELAY 2 NO 157A	
2 CH 12 WK 837A	
3 CH 11 WK 838A	
4 CH 9 WK 840A	
5 CH 7 WK 841A	
6 CH 4 YEL 842A	
7 CH 2 WK 222A	
8 CH 1 WK 644A	
9 AA SPARE 1 150A	
0 CC CAB INTERLOCK A 151B	
1 DD CAB INTERLOCK B 150B	
2 EE CH 6 WK 06 262A	
3 FF CH 4 WK 04 256A	
4 GG SPARE 2 151A	
5 HH SPARE 3 152A	



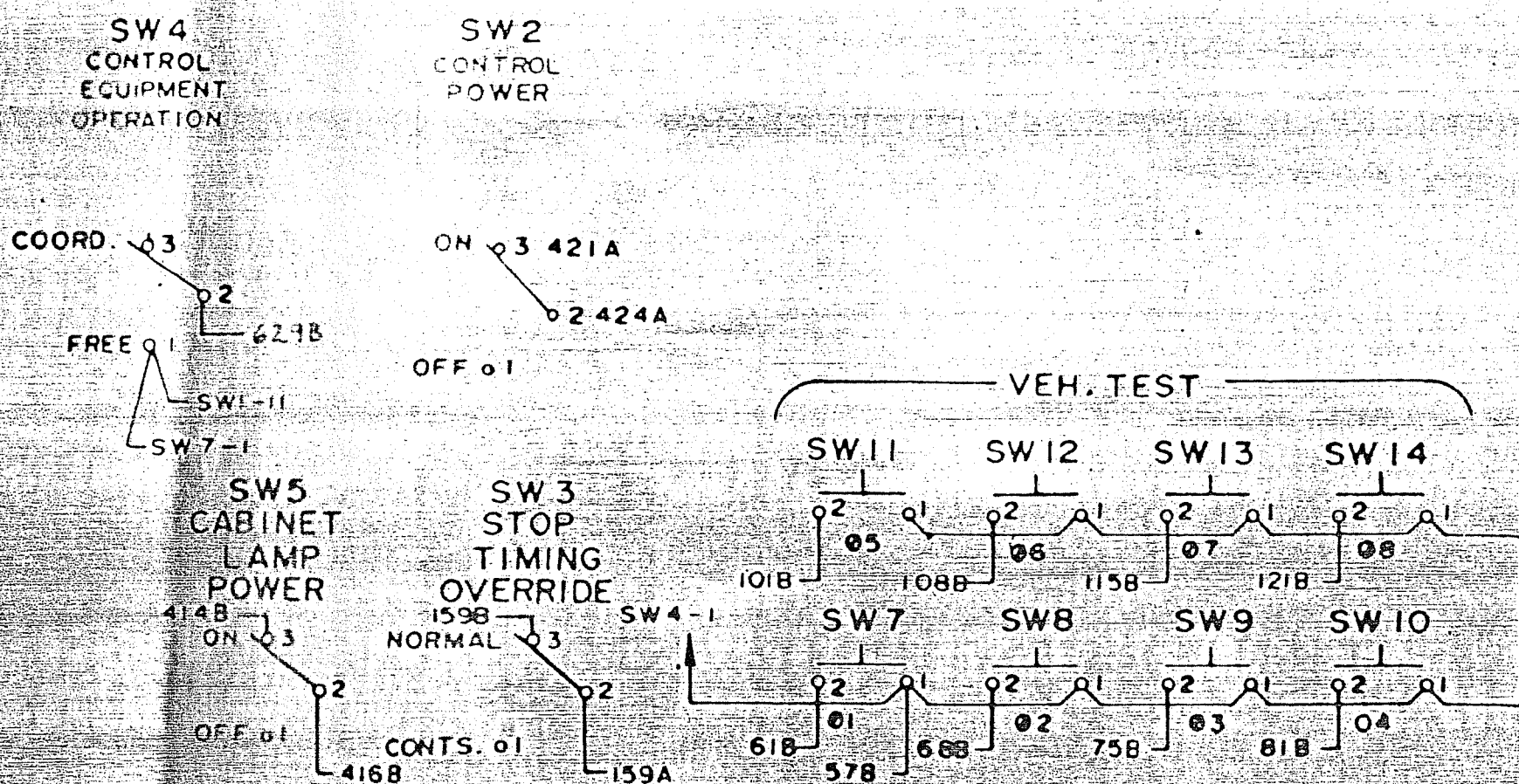
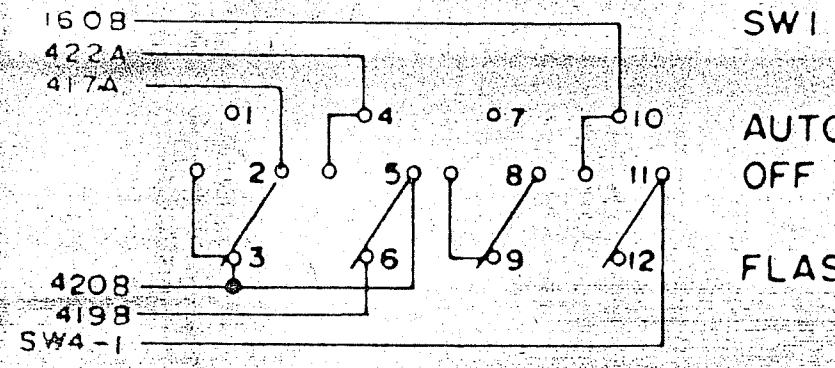
SPECIAL FUNCTION MODULE PIN ASSIGNMENT 'D' CABLE 28022900-004			
CON.	FUNCTION	TERM.	
PIN I/O			
1	EMERG. PR. 4 OUT	517B	
2	OFFSET 3 OUT	531A	
3	OFFSET 4 (ADD BIT 3)	512A	
4	ON LINE	519A	
5	SPARE	537A	
6	DIAL 4	514A	
7	DIAL 6	506A	
8	SPECIAL FUNCTION 2 OUT	534A	
9	OFFSET 2 (ADD BIT 2)	513A	
10	SPLIT 3	510A	
11	FLASH OUT	538A	
12	OFFSET 1 (ADD BIT 1)	509A	
13	SYSTEM DET. 8	517A	
14	DIAL 5	505A	
15	SPECIAL FUNCTION 3 OUT	535A	
16	SPLIT 2	511A	
17	SYSTEM DET. 1 (SEQ. #1)	521A	
18	SYSTEM DET. 4 (SEQ. #4)	524A	
19	SYSTEM ENABLE	507A	
20	DIAL 2	508A	
21	SPLIT 2 OUT	507B	
22	EMERG. PR. 2 OUT	515B	
23	RAILROAD PR. OUT	516B	
24	SPARE	539A	
25	DIAL 1 (SPECIAL FUNCTION 2)	502A	
26	FREE/CORD (SPECIAL FUNCTION 1)	501A	
27	FREE/CORD OUT	501B	
28	SPECIAL FUNCTION 1 OUT	530B	
29	DIAL 4 OUT	504B	
30	SYSTEM DET. 5	532A	
31	SYSTEM DET. 3 (SEQ. #3)	523A	
32	EMERG. PR. 1 OUT	514B	
33	OFFSET 1 OUT	513B	
34	EMERG. PR. 3 OUT	516B	
35	DIAL 3 (SPECIAL FUNCTION 3)	503A	
36	OFFSET 3 (ADD BIT 2)	511A	
37	FLASH STATUS	502B	
38	OFFSET 5 (ADD BIT 4)	513A	
39	SYSTEM DET. 6	526A	
40	SYSTEM DET. 7	527A	
41	OFFSET 4 OUT	532A	
42	OFFSET 2 OUT	503B	
43	DIAL 2 OUT	506B	
44	OFFSET 3 OUT	505B	
45	OFFSET 5 OUT	508B	
46	SPLIT 3 OUT	502B	
47	SYSTEM DET. 2 (SEQ. #2)	522A	
48	LOGIC GND.	536A	
49	EMERG. PREEMPT 1	514A	
50	EMERG. PREEMPT 2	515A	
51	DIAL 5 OUT	505B	
52	DIAL 6 OUT	506B	
53	LOGIC GND.	509B	
54	EMERG. GND.	510B	
55	EMERG. PREEMPT 3	516A	
56	EMERG. PREEMPT 4	517A	
57	RAILROAD PREEMT	530A	
58	CONFLICT STATUS	530B	
59	RESERVED	T	
60	FLASH COMMAND	531B	
61	RESERVED	T	
62	RESERVED	T	
63	CHASSIS GND.	540A	

CABINET WIRING FUNCTIONAL COLOR CODES	
COLOR	FUNCTIONAL *
BLACK	AC +
WHITE	AC NEUTRAL
GREEN	EARTH GROUND
RED	CONFLICT MONITOR WIRING
BLUE	INTERCONNECT
YELLOW	CALLING DETECTOR
ORANGE	
PURPLE	

EVP CONFIRMATORY LIGHTS			
CONTR. CHAN.	PHASES	POLE #	TERM.
1	1-6	1	251
2	2-5	4	257
3	4	2	263
4	8	5	263

EVP SENSORS			
CONTR. CHAN.	PHASES	POLE #	SIGNAL
1	1-6	1	373 374 377
2	2-5	4	376 374 377
3	4	2	378 379 382
4	8	5	381 379 382

POLICE PANEL (REAR VIEW)



VEHICLE SIGNALS			
SIGNAL	TERMINAL	VEH. SIGNALS	VEH. DETECTORS
1-1	201 203 205		D1-1 301-302
1-2	202 204 206		D2-1 306-307
2-1	207 209 211		D4-1 313-314
2-2	208 210 212		D4-2 316-317
2-3	207 209 211		D4-3 325-326
4-1	219 221 223		D4-4 328-329
4-2	220 222 224		D5-1 304-305
4-3	219 221 223		D6-1 309-310
5-1	225 227 229		D8-1 337-338
5-2	226 228 230		D8-2 349-350
6-1	231 233 235		D8-3 352-353
6-2	232 234 236		
6-3	231 233 235		
8-1	243 245 247		
8-2	244 246 248		
8-3	243 245 247		

VEH. DETECTORS	
DET	TERMINAL
D1-1	301-302
D2-1	306-307
D4-1	313-314
D4-2	316-317
D4-3	325-326
D4-4	328-329
D5-1	304-305
D6-1	309-310
D8-1	337-338
D8-2	349-350
D8-3	352-353

PED SIGNALS	
SIGNAL	TERMINAL
P2-1	249 253
P2-2	250 254
P4-1	255 259
P4-2	256 260
P6-1	261 265
P6-2	262 266
P8-1	267 271
P8-2	268 272

PED PUSHBUTTONS	
PPB	TERMINAL
PB2-1, 2	311
PB4-1, 2	312
PB6-1, 2	323
PB8-1, 2	324

Co RD # 3 (Coon Rapids Blvd) & 93rd Ave

MINNESOTA DEPARTMENT OF TRANSPORTATION
8Q CABINET FACILITY

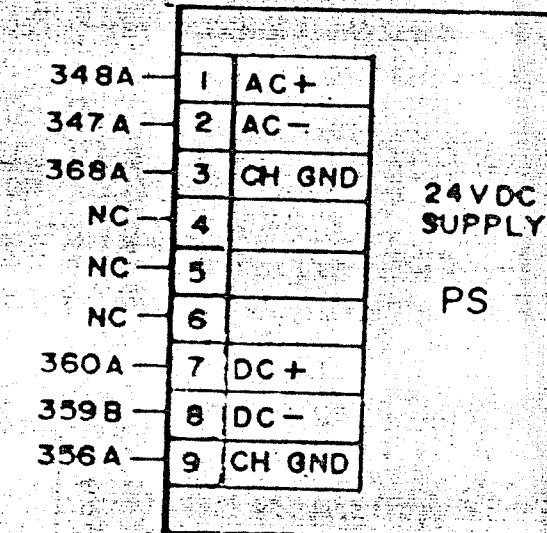
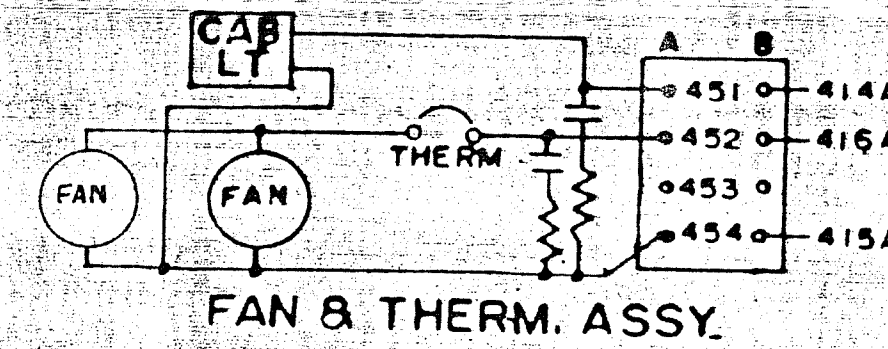
MN 4000

SUPPLIED BY RIDDLE CONTROLS INC.

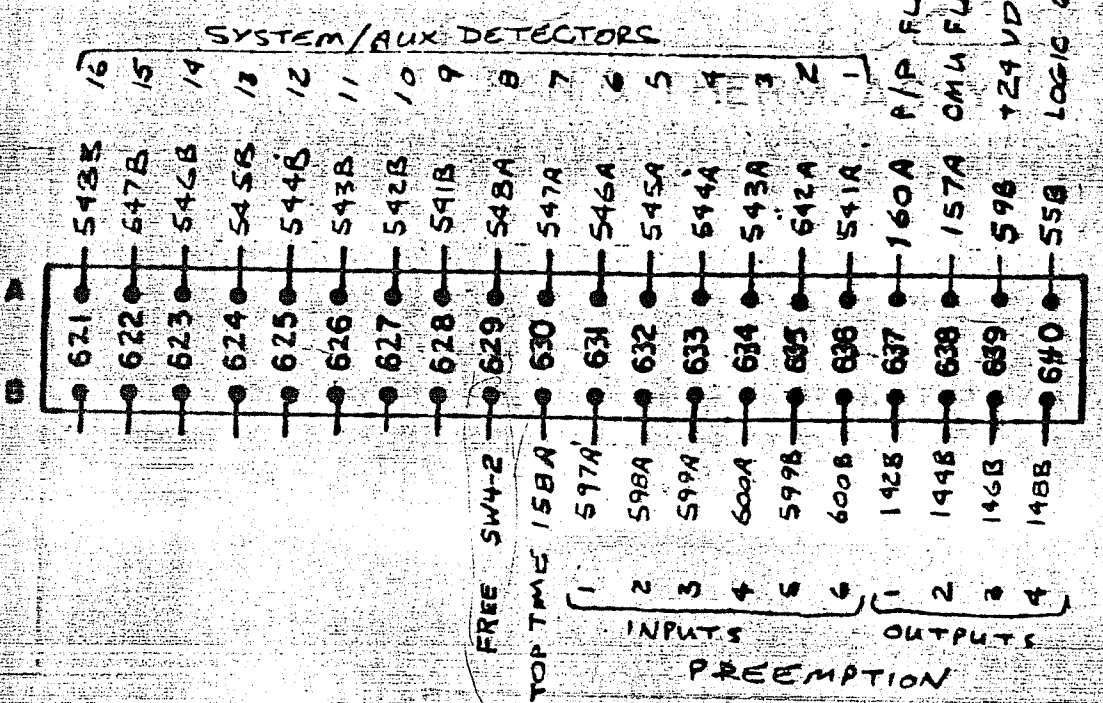
ENGINEER R.R.	REV	ORDER	DATE
DRAFTSMAN	REV	DWG NO.	
APPR.	MNDOT	BTP	PAGE 1 OF 3

SENSOR FIELD PANEL

SENSOR PROGRAM PANEL



4th Connector Termination Block



DETECTOR RACK CARD EDGE HARNESS-TYPICAL

CARD EDGE PIN	HARNESS PIN	COLOR CODE 28 GAUGE	FUNCTION
1	1	WHITE/RED	CH1 TIMER INHIBIT
2	2	BROWN	CH2 TIMER INHIBIT
3	3	WHITE/BROWN	CH1 LOOP
4	4	WHITE/BLUE	CH1 OUT (+)
5	5	BLUE	CH1 OUT (-)
6	6	BLACK/RED	CH2 LOOP
7	7	BLACK/WHITE	CH2 LOOP
8	8	ORANGE	CH3 LOOP
9	9	WHITE/ORANGE	CH3 LOOP
10	10	WHITE/GREY	CH3 OUT (+)
11	11	GREY	CH3 OUT (-)
12	12	YELLOW	CH4 LOOP
13	13	WHITE/YELLOW	CH4 LOOP
14	14	WHITE/VIOLET	CH4 OUT (+)
15	15	VIOLET	CH4 OUT (-)
16	16	WHITE/GREEN	CH4 OUT (+)
17	17	WHITE/BLACK	CH4 OUT (-)
18	18		

THE FOLLOWING 28 GAUGE WIRES ARE SOLDERED TO TERMINALS ON THE BACK OF THE DETECTOR RACK

WIRE	COLOR	FUNCTION
L	GREEN	EARTH GND
M-11	WHITE	AC NEUTRAL
M-12	BLACK	120 VAC +
B	RED	24VDC +
A	BLACK/YELLOW	24VDC -
C	BLACK/BLUE	RESET
D	YELLOW	MONITOR 1
E	ORANGE	MONITOR 2

- FUNCTIONS:
- 1-CALL 4 EXTEND
 - 2-CALL ONLY
 - 3-EXTEND ONLY
 - 4-CALL ONLY DENS
 - 5-DLY CALL ONLY
 - 6-DLY CALL ONLY DENSITY
 - 7-DLY CALL IMMEDIATE
 - 8-CARR. OVER
 - 9-ADVISORY
 - 10-SAMPLING
 - 11-SPECIAL-SEE NOTE

DETECTORS AND PPB ISOLATION

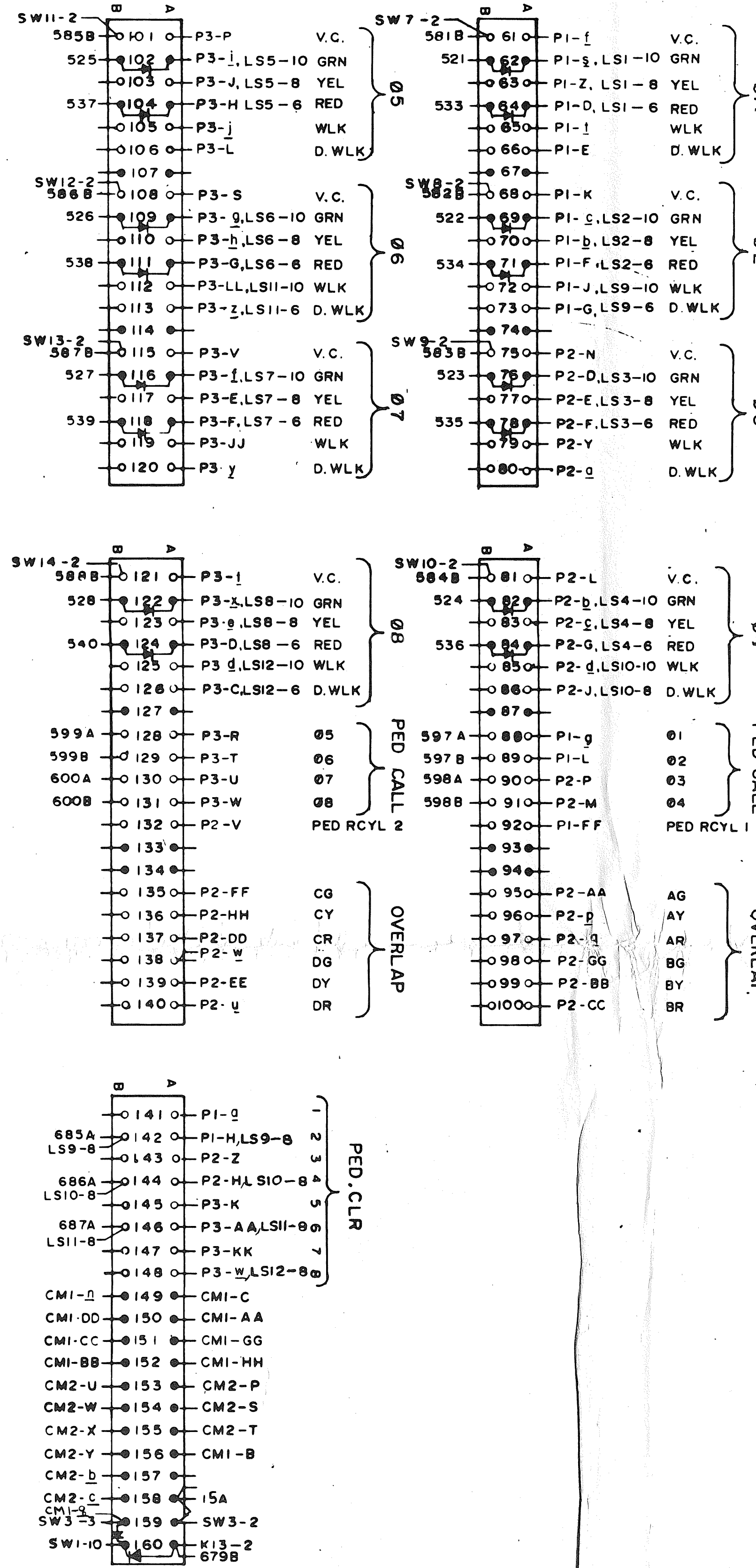
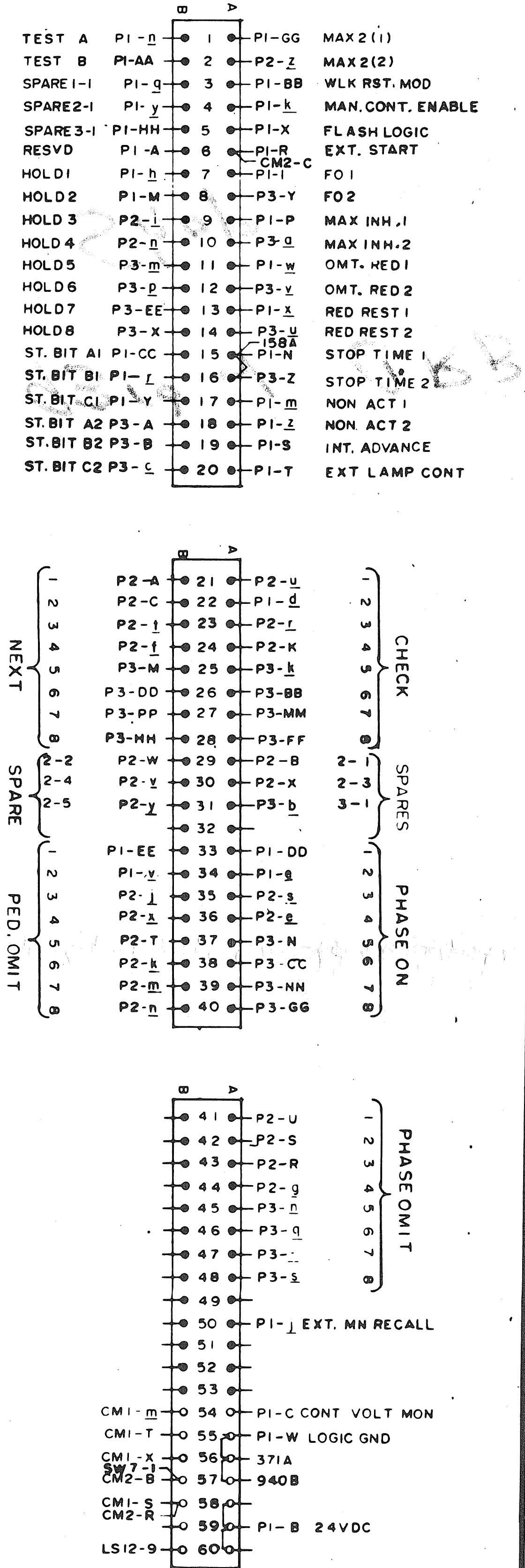
PIN	RACK HARNESS	SA1	SA2	SA3	SA4	SA5	SA6	SA7	SA8	PPB ISOLATION
1	DC GROUND	359A								SPARE
2	24V DC +	360A								SPARE
3	REMOTE RESET									SPARE
4	CH1 LOOP	301A	313A	325A	337A	349A	361A	373A	311A	INPUT CH1
5	CH1 OUTPUT (+)	302A	314A	326A	338A	350A	362A	374A	335B	INPUT COMMON
6	CH1 OUTPUT (-)	501	503	505	507	509	511	513	515	OUTPUT CH1 (+)
7	CH2 LOOP	304A	316A	328A	340A	352A	364A	376A	312A	INPUT CH2
8	CH2 OUTPUT (+)	305A	317A	329A	341A	353A	365A	377A	337B	INPUT COMMON
9	CH2 OUTPUT (-)	502	504	506	508	510	512	514	516	OUTPUT CH2 (-)
10	CH3 LOOP	306A	318A	330A	342A	354A	366A	378A	313A	INPUT CH3
11	CH3 OUTPUT (+)	307A	319A	331A	343A	355A	367A	379A	336B	INPUT COMMON
12	CH3 OUTPUT (-)	503	505	507	509	511	513	515	517	OUTPUT CH3 (+)
13	CH4 LOOP	309A	321A	333A	345A	357A	369A	381A	324A	INPUT CH4
14	CH4 OUTPUT (+)	310A	322A	334A	346A	358A	370A	382A	336A	INPUT COMMON
15	CH4 OUTPUT (-)	504	506	508	510	512	514	516	518	OUTPUT CH4 (+)
16	CH4 OUTPUT (+)	505	507	509	511	513	515	517	519	OUTPUT CH4 (-)
17	CH4 OUTPUT (-)	506	508	510	512	514	516	518	520	OUTPUT CH4 (-)
18	CH4 OUTPUT (+)	507	509	511	513	515	517	519	521	OUTPUT CH4 (+)
19	CH4 OUTPUT (-)	508	510	512	514	516	518	520	522	OUTPUT CH4 (-)
20	MONITOR 1	555A	555B	555C	555D	555E	555F	555G	555H	SPARE
21	MONITOR 2	556A	556B	556C	556D	556E	556F	556G	556H	SPARE

8 Q FACILITY

BTP

MINDOT 1000 CABINET

APPR MINDOT DATE PAGE 2 OF



LS	1	2	3	4	5	6	7	8	9	10	11	12
CONT 0	1	2	3	4	5	6	7	8	2P	4P	6P	8P
PLAN 0												
GREEN / WALK	10	62A	68A	76A	82A	102A	109A	116A	122A	72A	85A	112A
YELLOW / PED CLR	8	63A	70A	77A	83A	103A	110A	117A	123A	142A	144A	148A
RED / DONT WALK	6	64A	71A	78A	84A	104A	111A	118A	124A	73A	86A	113A
GREEN / WALK	7	201A	207A	213A	219A	225A	231A	237A	243A	249A	255A	261A
YELLOW	5	801A	804A	807A	810A	813A	816A	819A	822A	251A	257A	263A
RED / DONT WALK	3	803A	806A	809A	812A	815A	818A	821A	824A	250A	256A	262A
+ 24 VDC	9	LS1-9	LS2-9	LS3-9	LS4-9	LS5-9	LS6-9	LS7-9	LS8-9	LS9-9	LS10-9	LS11-9
CHASSIS GROUND	2	LS2-2	LS3-2	LS4-2	LS5-2	LS6-2	LS7-2	LS8-2	LS9-2	LS10-2	LS11-2	LS12-2
AC COMMON BUS	11	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1
115 VAC BUS	1	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1	SB1

