

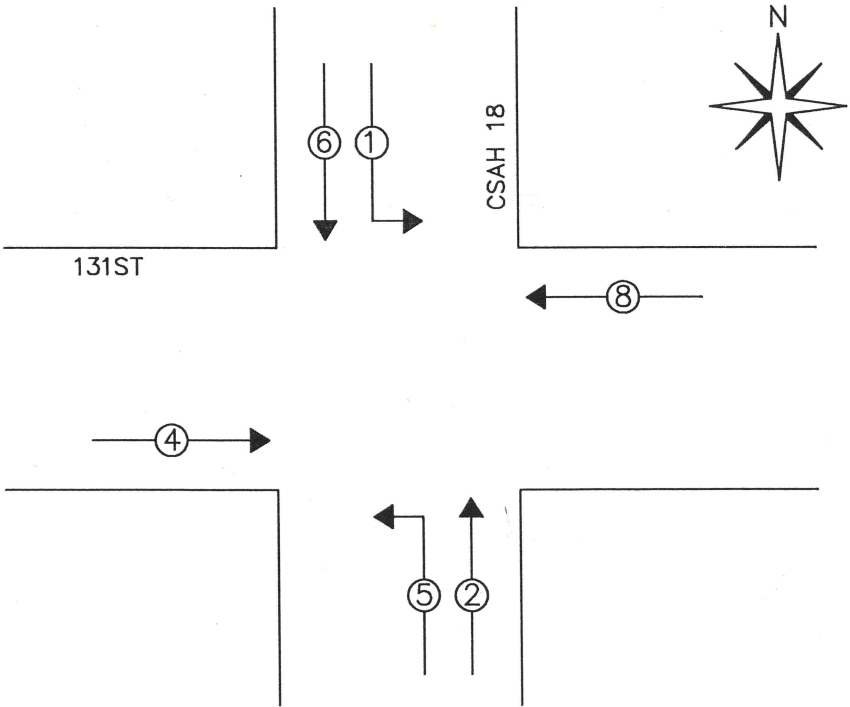
ASC/2S-2100 CONTROLLER WITH:	LEGEND
■ CONFIGURATION EEPROM 32790C1440 ■ SOFTWARE: V1.72 □ SPECIAL SOFTWARE: SEE BELOW FUNCTION □ OVERLAPS □ IN EEPROM □ KEYBOARD ENTERED A = B = C = D = □ ANALOG TELEMETRY MODULE: 32825G1 □ F/O TELEMETRY MODULE: 33525G1 □ TEST INPUT A = □ TEST INPUT B =	BIU BU() CB() C/C CCA CDP CMA CMB CPO CPP DR DS() FL() FR() LS() MC MP PAP PSP SA TB-() BUS INTERFACE UNIT C/C, BIU () CIRCUIT BREAKER () CONNECTING CABLE CONTROLLER CABLE "A" C/C, DR POWER MMU/CMU CABLE "A" MMU/CMU CABLE "B" C/C PRE-EMPT OUTPUTS C/C PRE-EMPT POWER DETECTOR RACK DOOR SWITCH () FLASHER () FLASH XFER. RELAY LOAD SWITCH MERCURY CONTACTOR MAIN PANEL POWER-AUX PANEL CAB. PWR. SUPPLY SURGE ARRESTOR TERM. BLOCK ()

MAIN PANEL PLUG-IN REQUIREMENTS									
BIU2 T&F	BIU3 T&F	LS9 PED 2 BEACONS	LS10 PED 4 BEACONS	LS11 PED 6 BEACONS	LS12 PED 8 BEACONS	LS13 OL "A"	LS14 OL "B"	LS15 OL "C"	LS16 OL "D"
BIU1 T&F	LS1 VEH 1	LS2 VEH 2	LS3 VEH 3	LS4 VEH 4	LS5 VEH 5	LS6 VEH 6	LS7 VEH 7	LS8 VEH 8	FL1 □ 1CKT ■ 2CKT
FR1 L R V1 V5	FR2 L R V2 V6	✕FR3 L R V3 V7	FR4 L R V4 V8	✕FR5 L R A C	✕FR6 L R B D	K1 LS 24V CONT.			
■ DENOTES TYPE OF OPERATION AND/OR WHERE PLUG-IN IS REQUIRED. L = LEFT, R = RIGHT. ✕ DENOTES WHERE "UNUSED RED" JUMPER PART NUMBER 32448G1 IS REQUIRED. INSTALL BETWEEN PINS 1 & 3 FOR LOAD SWITCH OR PINS 6 & 8 AND 5 & 7 FOR FLASH TRANSFER RELAY.						FLASH: □ Ø2&6 YELLOW, ALL OTHERS RED. ■ ALL RED. ■ RELAYS DE-ENERGIZED FOR FLASH. □ RELAYS ENERGIZED FOR FLASH.			

FLASHER	
PIN	FUNCTION
7	CIRCUIT #1
8	CIRCUIT #2
9	CHASSIS GND
10	AC COMMON
11	115 VAC
12	-----

LOAD SWITCH	
PIN	FUNCTION
1	115 VAC
2	CHASSIS GND
3	RED/DW OUTPUT
4	-----
5	YEL OUTPUT
6	RED/DW INPUT
7	GRN/W OUTPUT
8	YEL INPUT
9	+24 VDC
10	GRN/W INPUT
11	AC COMMON
12	-----

①
2.2K
10W



SHEET 1 OF 11

3 USE ONLY COPPER CONDUCTORS FOR FIELD AND SERVICE CONNECTIONS.

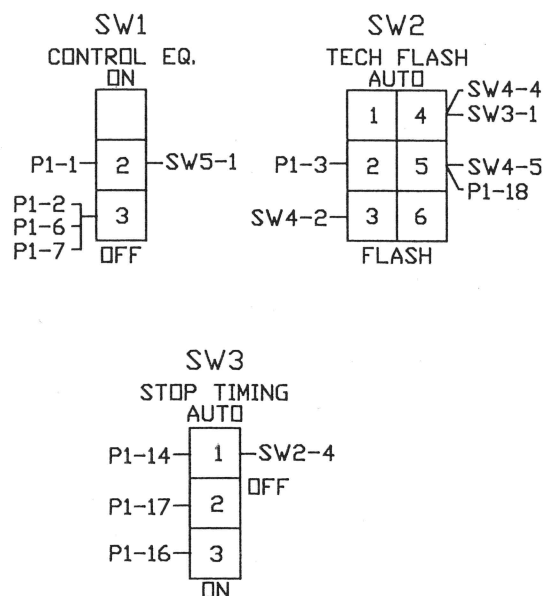
2 CONNECT A.C. SERVICE TO TERMINAL BLOCK 501 (LINE), 502 (NEUTRAL) AND GB2 (EARTH) ON RIGHT SIDEWALL OF CABINET.

① INSTALL 2.2K, 10 WATT LOAD RESISTORS BETWEEN PINS 7 AND 11 ON LOAD SWITCHES 9, 10, 11 & 12.

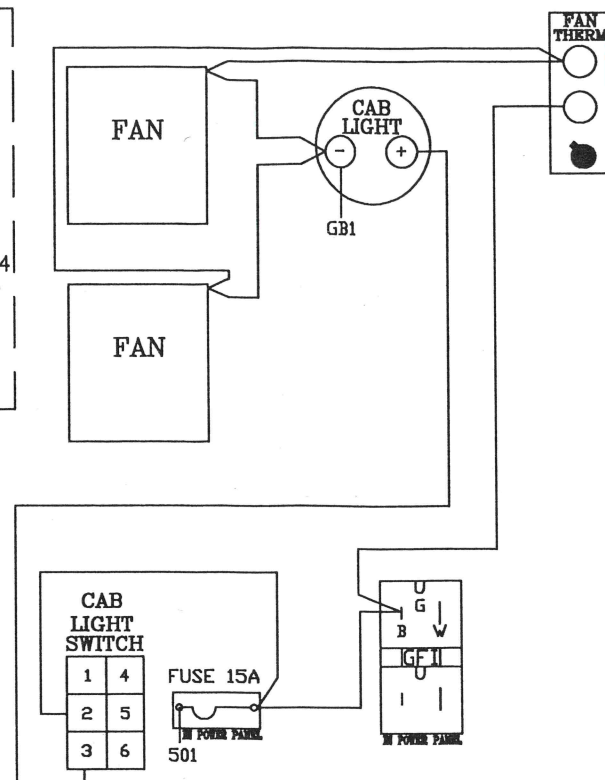
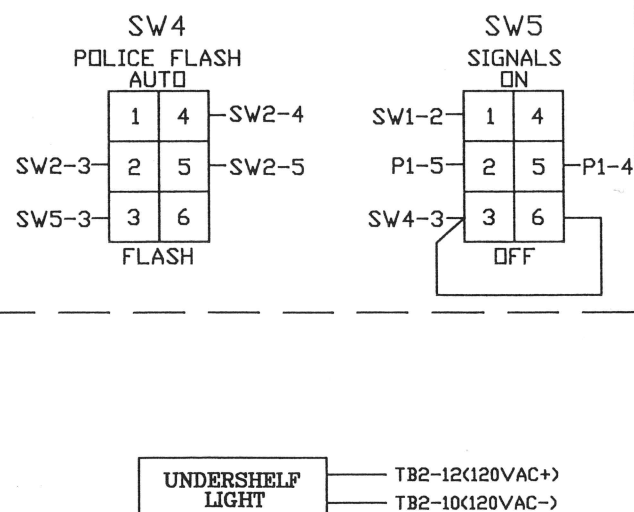
NOTES: UNLESS SPECIFIED OTHERWISE

DESIGNER G.V. T.C.C.	DATE 02/03/97	 ECONOLITE CONTROL PRODUCTS INC.	 TRAFFIC CONTROL CORPORATION	5653 MEMORIAL AVE. OAK PARK HTS, MN 55082			
DRAWN ML ACHD	3/20/07			CABINET SPECIFICATION: TS2TYPE1 2004 ANOKA COUNTY			
CABINET SIZE				CUSTOMER: ANOKA COUNTY HIGHWAY DEPARTMENT			
INSPECTED				INTERSECTION: CSAH 18 AT 131ST			
APPROVED				LOCATION: COON RAPIDS			
		SYSTEM:	CONTROLLER				
CUSTOMER P.O.		INSTALLED BY	SALES ORDER NO.	SIZE B	DRAWING #TS20216PG INTERC		

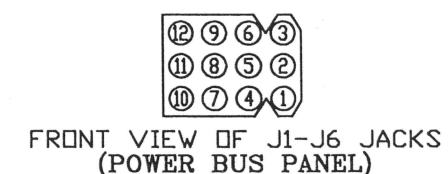
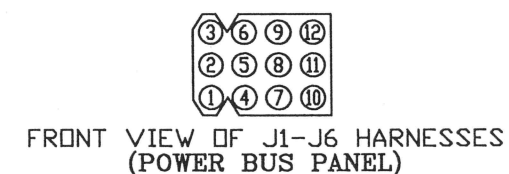
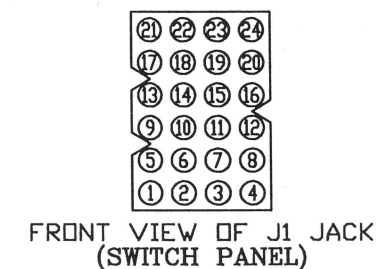
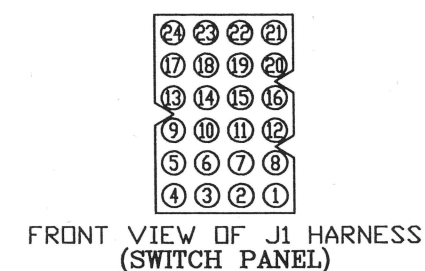
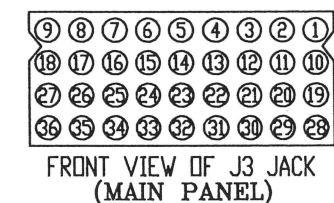
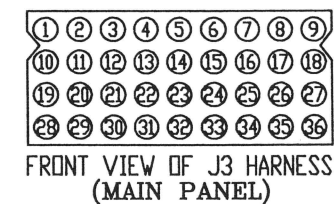
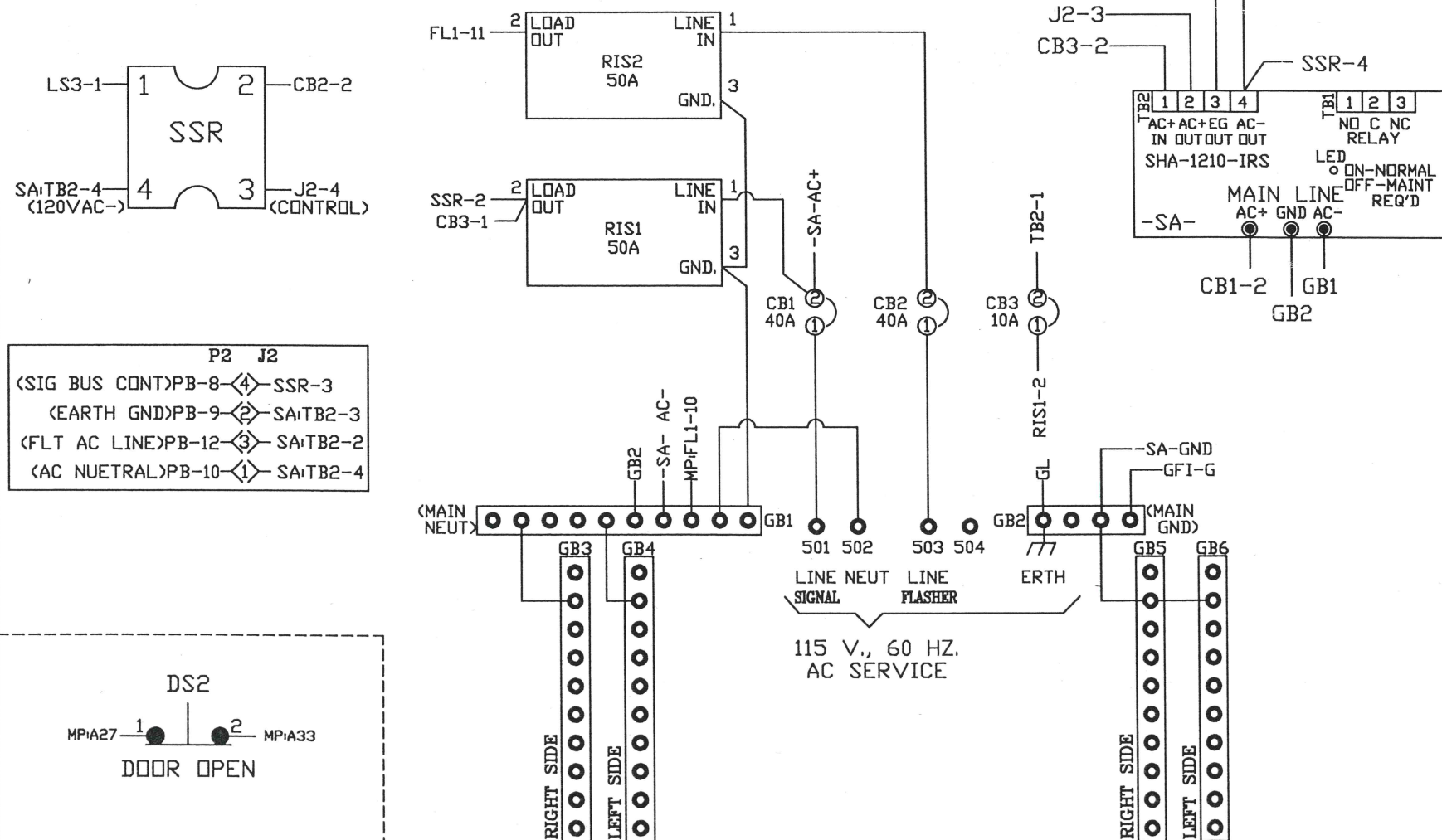
AUXILLARY SWITCH PANEL



POLICE SWITCH PANEL



POWER/AUX PANEL (PAP) 34830G5

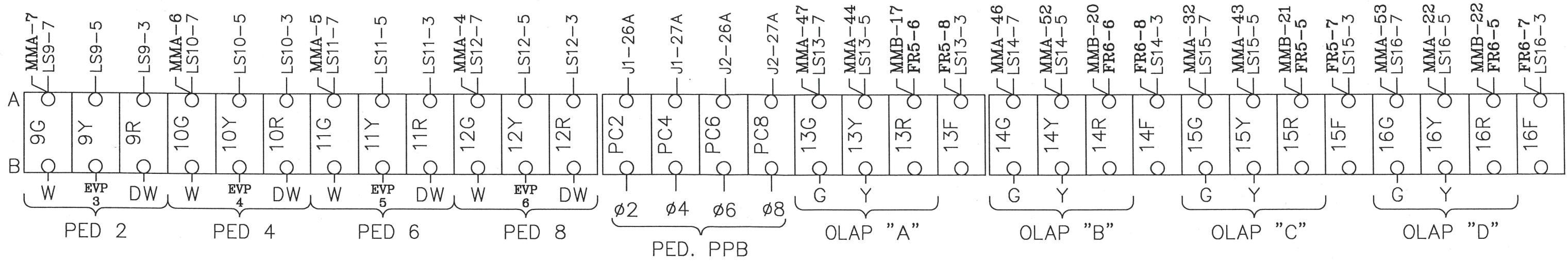


J3		P1
J3-36	1	P1-1 SW1-2
MMB-1	2	P1-2 SW1-3
MMA-37	3	P1-3 SW2-3
K1-10	4	P1-4 SW5-5
FR6-2	5	P1-5 SW5-2
MMB-2	6	P1-6 SW1-3
MMA-20	7	P1-7 SW1-3
	8	P1-8
	9	P1-9
	10	P1-10
	11	P1-11
	12	P1-12
A-39	13	P1-13
A-35	14	P1-14 SW3-1
A-40	15	P1-15
A-31	16	P1-16 SW3-3
A-30	17	P1-17 SW3-2
A-32	18	P1-18 SW2-5
A-38	19	P1-19
A-33	20	P1-20
A-34	21	P1-21
K1-9	22	P1-22
B-3	23	P1-23
B-4	24	P1-24

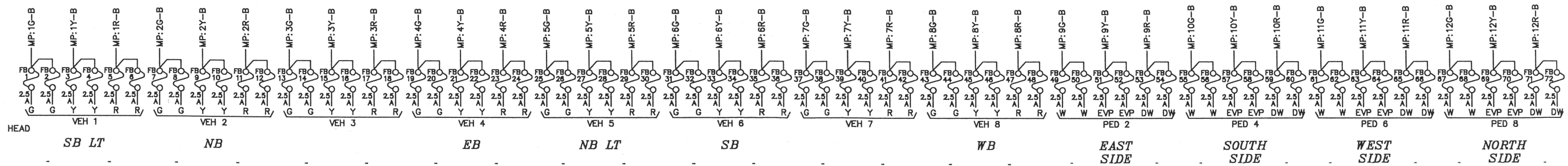
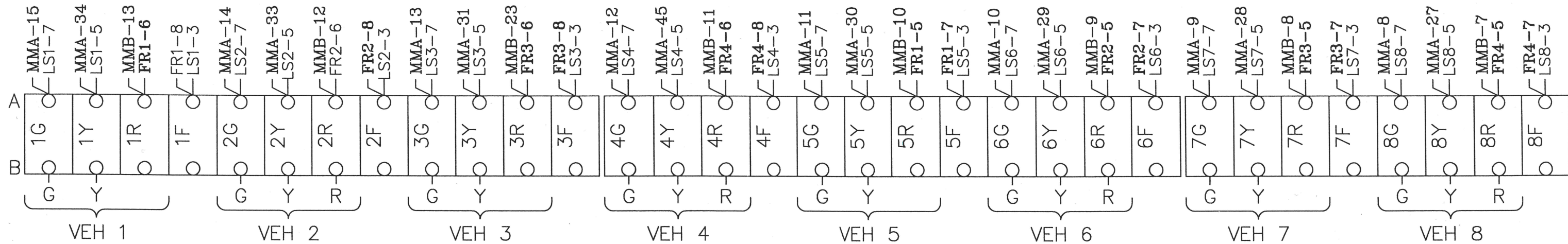
J3		J1
A-35	25	J1-1 TB1-1
K1-11	26	J1-2 TB1-2
	27	---- TB1-3
B-5	28	J1-4 TB1-4
J1-31B	29	J1-5 TB1-5
	30	---- TB1-6
J1-27B	31	J1-7 TB1-7
K1-10	32	J1-8 TB1-8
	33	---- TB1-9
K1-2	34	J1-10 TB1-10
MMB-18	35	J1-11 TB1-11
J3-1	36	J1-12 TB1-12

CONFIRMATION BEACONS

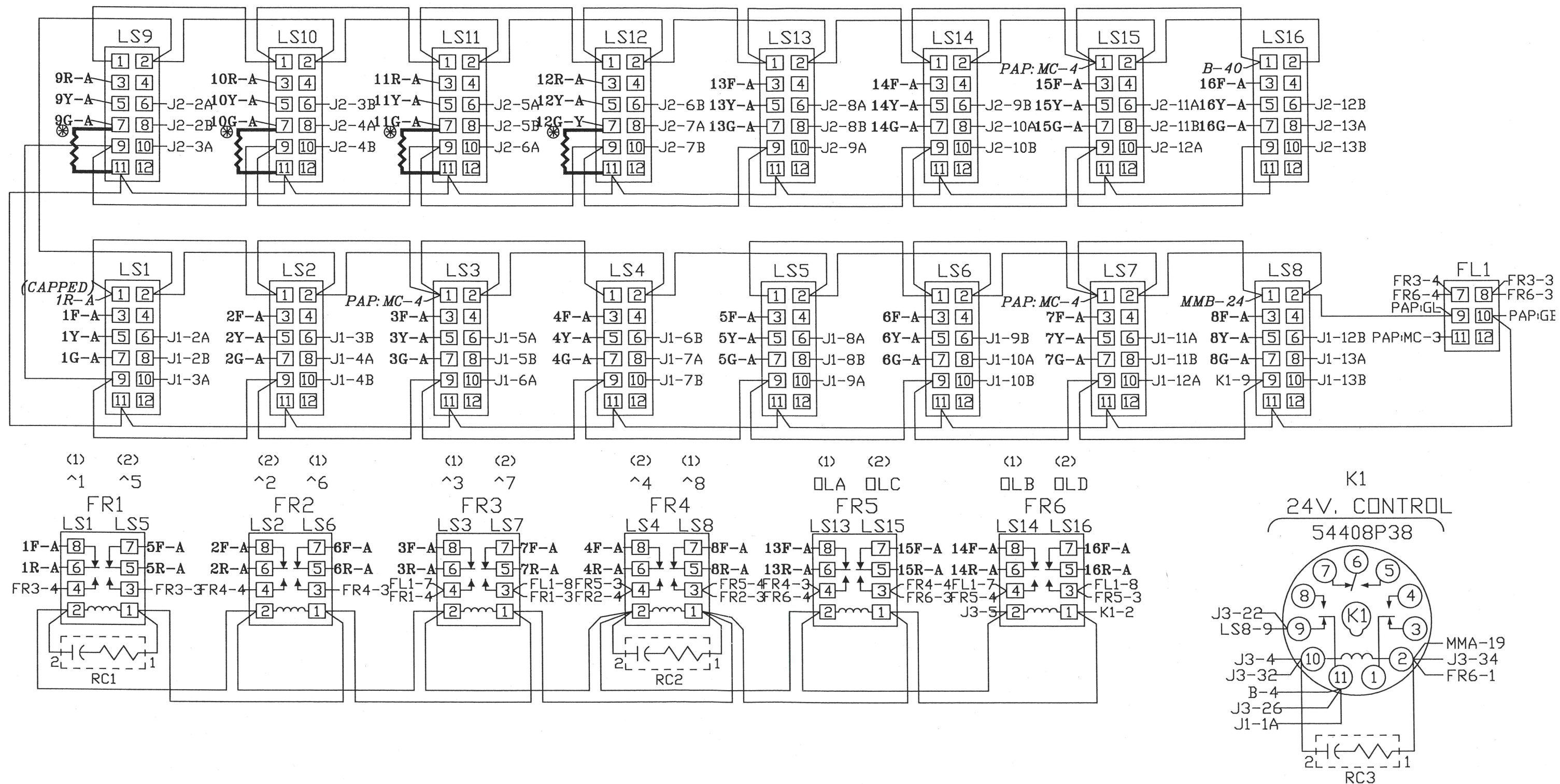
EVP	3	=	1-6
EVP	4	=	2-5
EVP	5	=	8
EVP	6	=	4



(P.B. COMMON TO GB1)



①
2.2K
10W



LOADBAY AND FLASH RELAY'S

SHEET 4 OF 11

SIZE
B

CSAH 18 AT 131ST

B	A	MMU. RESET	MMA-49	J2-21B	RG. 1 INHBT. MAX.
		24 V. MON. INHBT.	MMA-36	J2-22A	RG. 2 INHBT. MAX.
		MMU. +24 V. MON. 2	J3-23	J1-23B	RG. 1 FORCE OFF
		MMU. +24 V. MON. 1	K1-11	J1-24A	RG. 2 FORCE OFF
		FAULT MON.	J3-28	J1-22B	RG. 1 MAX. 2 SEL.
		PC1 PED. DET. 1	MMA-35		RG. 2 MAX. 2 SEL.
		PC3 PED. DET. 3	J1-25B	J1-23A	CALL NONACT. 1
		PC5 PED. DET. 5	J1-26B	J1-24B	CALL NONACT. 2
		PC7 PED. DET. 7	J2-25B	J2-19A	WALK REST MDR.
		BIU. SPR. 1	J2-26B	J1-25A	EXT. MIN. RECALL
		BIU. SPR. 2	J2-19B	J1-20A	EXT. START
		BIU. SPR. 3	J2-20A	J1-20B	TEST INPUT A
		BIU. SPR. 4	J2-20B	J1-17A	TEST INPUT B
		LOGIC GND.	J2-21A	J1-17B	TEST INPUT C
		PMT. CALL 1	MMA-17	J2-25A	T.B.C. ON LINE
		PMT. CALL 2	J1-32A	J2-25A	T.B.C. AUX. 1
		PMT. CALL 3	J1-16A	J1-21A	T.B.C. AUX. 2
		PMT. CALL 4	J1-16B	J1-14A	T.B.C. AUX. 3
		PMT. CALL 5	J2-17A	J1-14B	COORD. STATUS OUT
		PMT. CALL 6	J2-17B	J2-14A	LOGIC GND.

J16-19

J16-20

J16-17

J16-18

21	MMA AC+ I IN	MMA-1	J1-15A	PMT. 1 ACTV.
22	DR1 OPEN	MMA-2	J1-15B	PMT. 2 ACTV.
23	DR2 CLSD	MMA-3	J2-15A	PMT. 3 ACTV.
24	MMA SPR 1	MMA-48	J2-15B	PMT. 4 ACTV.
25	CAB INTLK A	MMA-50	J2-16A	PMT. 5 ACTV.
26	CAB INTLK B	MMA-51	J2-16B	PMT. 6 ACTV.
27	MMA SPR 2	MMA-21	J1-21A	LOGIC GND
28	SDR OPEN	MMA-54	A-20	LOGIC GND
29	MMB SPR 1	MMB-3		LOGIC GND
30	MMB SPR 2	MMB-14		LOGIC GND
31	MMB SPR 3	MMB-16	J1-21B	STOP TIMING 1 & 2
32		MMB-38	J3-17	MMU STOP TIMING
33		MMB-25	J2-23A	LOCAL FLASH STATUS
34		J2-22B	J3-16	ALARM 1
35		J3-18	J2-23B	ALARM 2
36		J2-20	J3-20	LOGIC GND
37	AC+	J2-24A	J3-21	DIM. ENABLE
38	AC+	J1-18B	J1-18B	AUTO FLASH
39	AC+	J2-24B	J2-24B	COORD. FREE
40	AC+	J3-19	J3-19	MANUAL CONT. ENABLE

INTERFACE TERMINAL BLOCKS

BIU #1			BIU #2		
PIN	FUNCTION	TO	PIN	FUNCTION	TO
1A	+24 VDC	K1-11	1A	+24 VDC	J2-1B
1B	+24 VDC	J2-1B	1B	+24 VDC	J1-1B
2A	LS1 RED	LS1-6	2A	LS9 RED	LS9-6
2B	LS1 YELLOW	LS1-8	2B	LS9 YELLOW	LS9-8
3A	LS1 GREEN	LS1-10	3A	LS9 GREEN	LS9-10
3B	LS2 RED	LS2-6	3B	LS10 RED	LS10-6
4A	LS2 YELLOW	LS2-8	4A	LS10 YELLOW	LS10-8
4B	LS2 GREEN	LS2-10	4B	LS10 GREEN	LS10-10
5A	LS3 RED	LS3-6	5A	LS11 RED	LS11-6
5B	LS3 YELLOW	LS3-8	5B	LS11 YELLOW	LS11-8
6A	LS3 GREEN	LS3-10	6A	LS11 GREEN	LS11-10
6B	LS4 RED	LS4-6	6B	LS12 RED	LS12-6
7A	LS4 YELLOW	LS4-8	7A	LS12 YELLOW	LS12-8
7B	LS4 GREEN	LS4-10	7B	LS12 GREEN	LS12-10
8A	LS5 RED	LS5-6	8A	LS13 RED	LS13-6
8B	LS5 YELLOW	LS5-8	8B	LS13 YELLOW	LS13-8
9A	LS5 GREEN	LS5-10	9A	LS13 GREEN	LS13-10
9B	LS6 RED	LS6-6	9B	LS14 RED	LS14-6
10A	LS6 YELLOW	LS6-8	10A	LS14 YELLOW	LS14-8
10B	LS6 GREEN	LS6-10	10B	LS14 GREEN	LS14-10
11A	LS7 RED	LS7-6	11A	LS15 RED	LS15-6
11B	LS7 YELLOW	LS7-8	11B	LS15 YELLOW	LS15-8
12A	LS7 GREEN	LS7-10	12A	LS15 GREEN	LS15-10
12B	LS8 RED	LS8-6	12B	LS16 RED	LS16-6
13A	LS8 YELLOW	LS8-8	13A	LS16 YELLOW	LS16-8
13B	LS8 GREEN	LS8-10	13B	LS16 GREEN	LS16-10
14A	TBC AUX 1	A-16	14A	TBC AUX 3	A-18
14B	TBC AUX 2	A-17	14B	COORD. STATUS	A-19
15A	PMT ACT 1	A-21	15A	PMT ACT 3	A-23
15B	PMT ACT 2	A-22	15B	PMT ACT 4	A-24
16A	PMT CALL 1	B-15	16A	PMT ACT 5	A-25
16B	PMT CALL 2	B-16	16B	PMT ACT 6	A-26
17A	TEST A	A-12	17A	PMT CALL 3	B-17
17B	TEST B	A-13	17B	PMT CALL 4	B-18
18A	AUTO FLASH	A-37	18A	PMT CALL 5	B-19
18B	DIM. ENABLE	A-36	18B	PMT CALL 6	B-20
19A	MANUAL CONT.	A-39	19A	CNA 2	A-8
19B	INT. ADVANCE	A-40	19B	SPARE 1	B-10
20A	EXT. MIN. RECALL	A-10	20A	SPARE 2	B-11
20B	EXT. START	A-11	20B	SPARE 3	B-12
21A	TBC ONLINE	A-15	21A	SPARE 4	B-13
21B	STOP TIME (1)	A-30	21B	INHIBIT MAX (1)	A-1
22A	STOP TIME (2)	A-30	22A	INHIBIT MAX (2)	A-2
22B	MAX. 2 (1)	A-5	22B	LOCAL FLASH	A-32
23A	MAX. 2 (2)	A-6	23A	MMU FLASH	A-31
23B	FORCE OFF (1)	A-3	23B	ALARM 1	A-33
24A	FORCE OFF (2)	A-4	24A	ALARM 2	A-34
24B	CNA 1	A-7	24B	COORD FREE IN	A-38
25A	WALK REST MOD.	A-9	25A	TEST C	A-14
25B	PED. ISO. 1	B-6	25B	PED. ISO. 5	B-8
26A	PED. ISO. 2	PC2-A	26A	PED. ISO. 6	PC6-A
26B	PED. ISO. 3	B-7	26B	PED. ISO. 7	B-9
27A	PED. ISO. 4	PC4-A	27A	PED. ISO. 8	PC8-A
27B	PED. ISO. COMN.	J3-31	27B	PED. ISO. COMN.	J1-27B
28A	ADDR. SEL. 0	-----	28A	ADDR. SEL. 0	J2-32A
28B	ADDR. SEL. 1	-----	28B	ADDR. SEL. 1	-----
29A	ADDR. SEL. 2	-----	29A	ADDR. SEL. 2	-----
29B	ADDR. SEL. 3	-----	29B	ADDR. SEL. 3	-----
30A	RESERVED	-----	30A	RESERVED	-----
30B	RESERVED	-----	30B	RESERVED	-----
31A	EARTH GND.	LS12-2	31A	EARTH GND.	J1-31A
31B	LINE FREQ. REF.	J3-29	31B	LINE FREQ. REF.	J1-31B
32A	LOGIC GND.	B-14	32A	LOGIC GND.	J1-32B
32B	LOGIC GND.	J2-32A	32B	LOGIC GND.	J2-32A

MAIN PANEL CONTROL POWER C/C 34842G4	
PIN	FUNCTION
1	LOGIC GROUND
2	+24 VDC (IN)
3	-----
4	MMU FAULT MONITOR (IN)
5	LINE FREQ. REFERENCE (IN)
6	-----
7	+12 VAC (IN)
8	SIGNAL BUS CONTROL (IN)
9	-----
10	FILTERED AC NEUTRAL (IN)
11	CONT. EQUIP. AC LINE (OUT)
12	FILTERED AC LINE (IN)

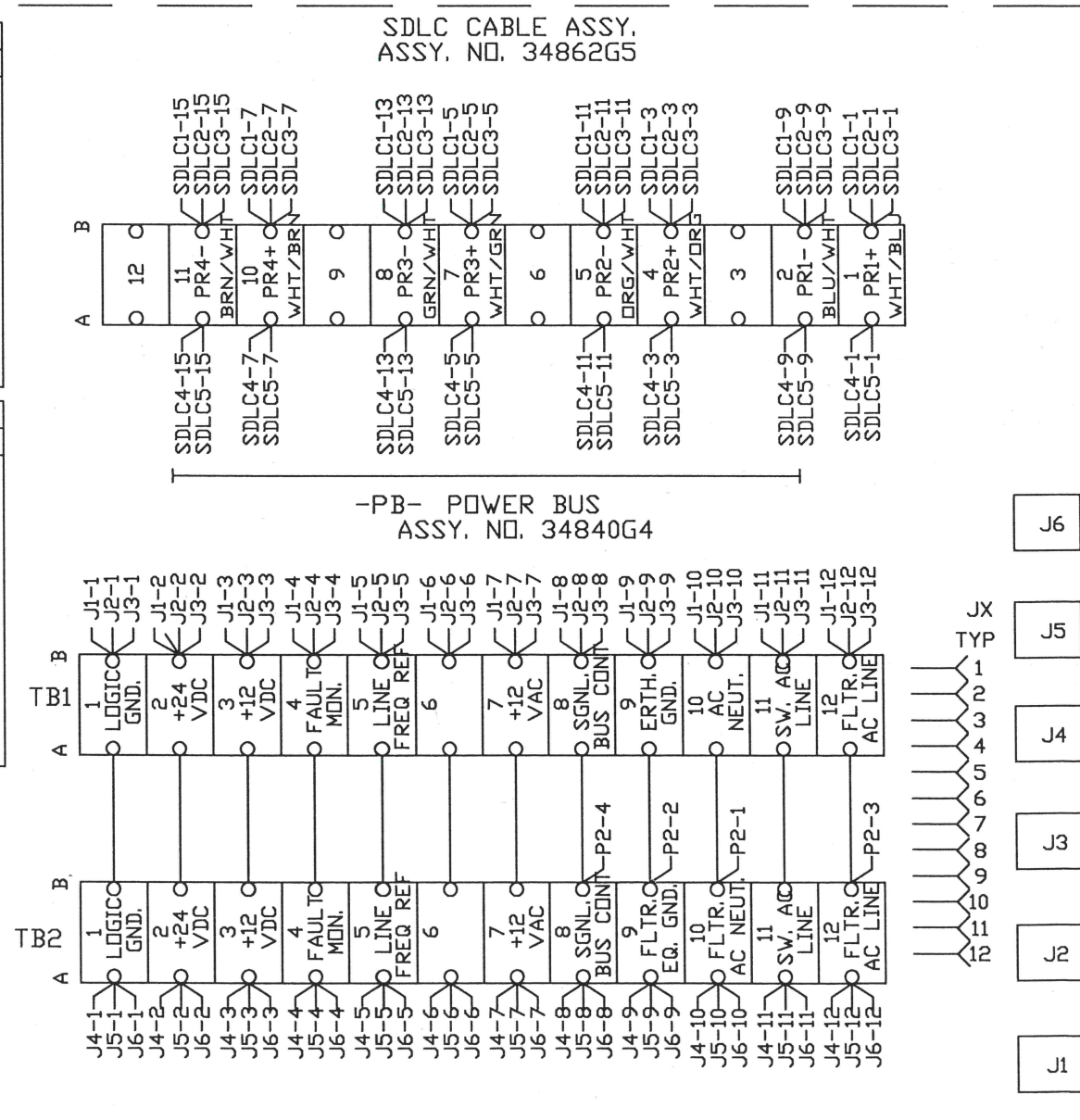
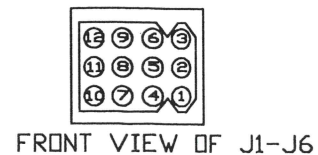
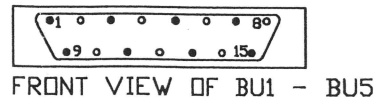
CONTROLLER POWER (CCA2) C/C 34842G3			
WIRE	PIN	SIGNAL	TO
1	A	FAULT MONITOR	PB-4
2	U	AC NEUTRAL	PB-10
3	V	EARTH GROUND	PB-9
4	W	LOGIC GROUND	PB-1
5	P	AC LINE	PB-11
6	SHL	EARTH GROUND	CCA2-V

TYPE 1 CONTROLLER POWER C/C 34842G2		
PIN	FUNCTION	TO
A	AC NEUTRAL	PB-10
B	-----	-----
C	AC LINE	PB-11
D	-----	-----
E	+12 VDC	-----
F	+24 VDC	-----
G	RESERVED	-----
H	LOGIC MON.	PB-4
I	LOGIC GND.	PB-1
J	EARTH GND.	PB-9
K	+12 VAC	-----
L	RESERVED	-----
SHL	EARTH GND.	PIN H

CABINET POWER SUPPLY C/C 34842G1		
PIN	FUNCTION	TO
A	AC NEUTRAL	PB-10
B	LINE FREQUENCY REF.	PB-5
C	AC LINE	PB-11
D	+12 VDC	PB-3
E	+24 VDC	PB-2
F	RESERVED	-----
G	LOGIC GND.	PB-1
H	EARTH GND.	PB-9
I	+12 VAC	PB-7
J	RESERVED	-----
SHL	EARTH GND.	PIN H

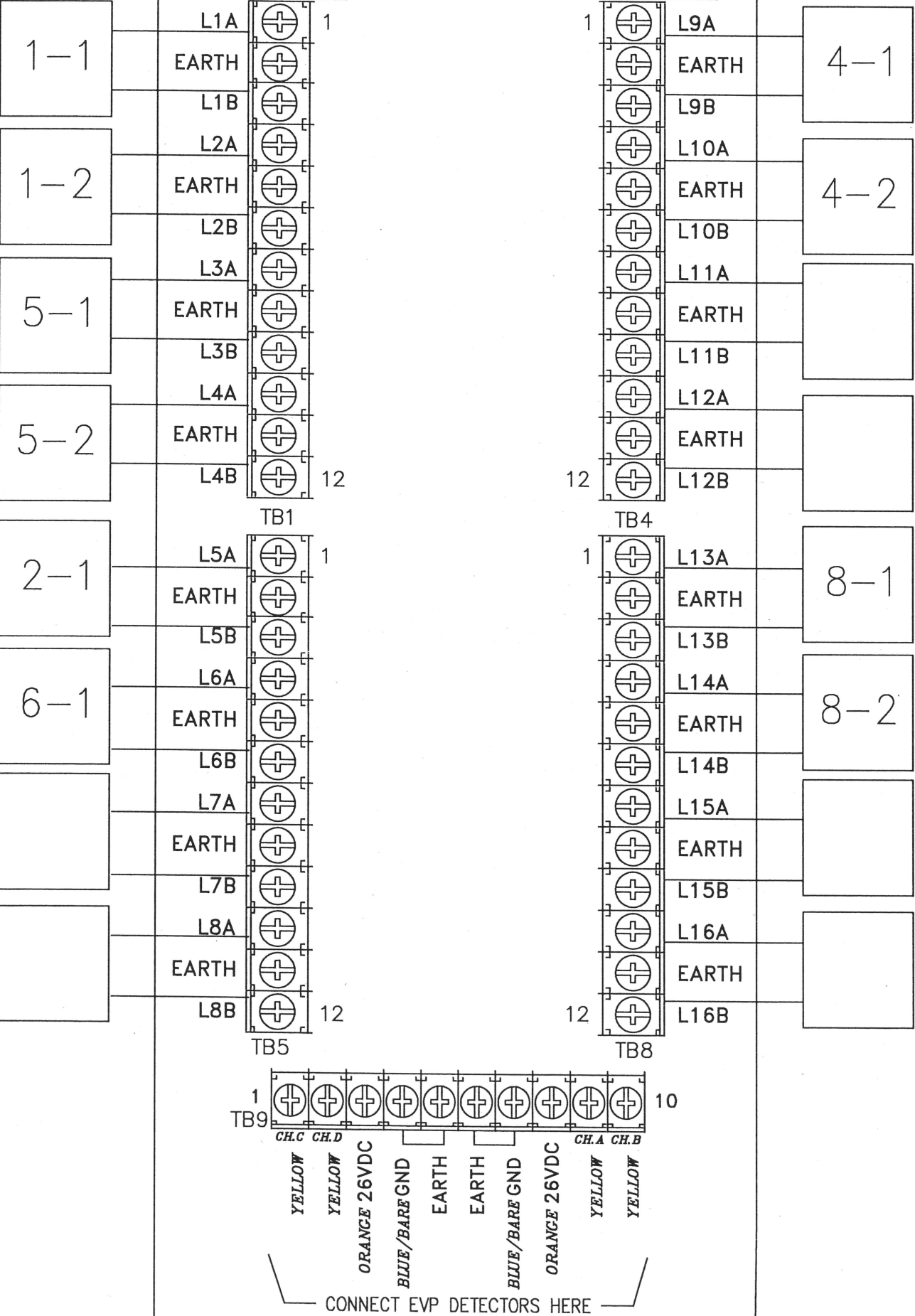
CONTROLLER PORT 1 CONNECTOR			
PIN	SIGNAL	TO	FUNCTION
1	TWISTED PAIR 1+	SDLC-1	CONT TXD+
2	LOGIC GND.	-----	-----
3	TWISTED PAIR 2+	SDLC-4	CONT TXC+
4	LOGIC GND.	-----	-----
5	TWISTED PAIR 3+	SDLC-7	CONT RXD+
6	LOGIC GND.	-----	-----
7	TWISTED PAIR 4+	SDLC-10	CONT RXC+
8	LOGIC GND.	-----	-----
9	TWISTED PAIR 1-	SDLC-2	CONT TXD-
10	PORT 1 DISABLE	-----	-----
11	TWISTED PAIR 2-	SDLC-5	CONT TXC-
12	EARTH GND.	SHIELD WIRE	-----
13	TWISTED PAIR 3-	SDLC-8	CONT RXD-
14	RESERVED	-----	-----
15	TWISTED PAIR 4-	SDLC-11	CONT RXC-

MMU & BIU PORT 1 CONNECTOR			
PIN	SIGNAL	TO	FUNCTION
1	TWISTED PAIR 1+	SDLC-1	BIU RXD+
2	LOGIC GND.	-----	-----
3	TWISTED PAIR 2+	SDLC-4	BIU RXC+
4	LOGIC GND.	-----	-----
5	TWISTED PAIR 3+	SDLC-7	BIU TXD+
6	LOGIC GND.	-----	-----
7	TWISTED PAIR 4+	SDLC-10	BIU TXC+
8	LOGIC GND.	-----	-----
9	TWISTED PAIR 1-	SDLC-2	BIU RXD-
10	PORT 1 DISABLE	-----	-----
11	TWISTED PAIR 2-	SDLC-5	BIU RXC-
12	EARTH GND.	SHIELD WIRE	-----
13	TWISTED PAIR 3-	SDLC-8	BIU TXD-
14	RESERVED	-----	-----
15	TWISTED PAIR 4-	SDLC-11	BIU TXC-



BIU AND CONNECTING CABLES

DETECTOR LOOP
INTERFACE
ASSY. 34040G1



DET. LOOPS 9-16 (J15) C/C 33284G3

PIN	SIGNAL	TO
1	LOOP 9+	LPI2: TB4-1
2	LOOP 9-	LPI2: TB4-3
3	LOOP 10+	LPI2: TB4-4
4	LOOP 10-	LPI2: TB4-6
5	LOOP 11+	LPI2: TB4-7
6	LOOP 11-	LPI2: TB4-9
7	LOOP 12+	LPI2: TB4-10
8	LOOP 12-	LPI2: TB4-12
9	LOOP 13+	LPI2: TB8-1
10	LOOP 13-	LPI2: TB8-3
11	LOOP 14+	LPI2: TB8-4
12	LOOP 14-	LPI2: TB8-6
13	LOOP 15+	LPI2: TB8-7
14	LOOP 15-	LPI2: TB8-9
15	LOOP 16+	LPI2: TB8-10
16	LOOP 16-	LPI2: TB8-12
17	----	
18	----	
19	----	
20	----	

DET. RACK POWER C/C 34842G5			
P1/ DR: J13	P2/ DR: J17	FUNCTION	TO
1		+12 VDC (DET. POWER)	PB-3
2		+24 VDC (BIU POWER)	PB-2
3		LOGIC GROUND	PB-1
4		EARTH GROUND	PB-9
5		"KEY PIN"	
6		LINE FREQUENCY REF.	PB-5
	1	EARTH GROUND	----
	2	AC LINE	PB-12
	3	AC NEUTRAL	PB-10
	4	LOGIC GROUND	----

DET. LOOPS 1-8 (J14) C/C 33284G2

PIN	SIGNAL	TO
1	LOOP 1+	LPI1: TB1-1
2	LOOP 1-	LPI1: TB1-3
3	LOOP 2+	LPI1: TB1-4
4	LOOP 2-	LPI1: TB1-6
5	LOOP 3+	LPI1: TB1-7
6	LOOP 3-	LPI1: TB1-9
7	LOOP 4+	LPI1: TB1-10
8	LOOP 4-	LPI1: TB1-12
9	LOOP 5+	LPI1: TB5-1
10	LOOP 5-	LPI1: TB5-3
11	LOOP 6+	LPI1: TB5-4
12	LOOP 6-	LPI1: TB5-6
13	LOOP 7+	LPI1: TB5-7
14	LOOP 7-	LPI1: TB5-9
15	LOOP 8+	LPI1: TB5-10
16	LOOP 8-	LPI1: TB5-12
17	PMT. DET. CH. C	LPI1: TB9-1
18	PMT. DET. CH. D	LPI1: TB9-2
19	KEY PIN	
20	PMT. CH. C/D +26VDC	LPI1: TB9-3
21	PMT. DC GROUND	LPI1: TB9-4,7
22	PMT. CH. A/B +26VDC	LPI1: TB9-8
23	PMT. DET. CH. A	LPI1: TB9-9
24	PMT. DET. CH. B	LPI1: TB9-10
25	----	
26	----	

EXPANSION OUTPUTS C/C 33284G8		
J16	FUNCTION	TO
17	DET. 17 / PMT. A OUT	MP: B19
18	DET. 18 / PMT. B OUT	MP: B20
19	PMT. C OUT	MP: B17
20	PMT. D OUT	MP: B18

DETECTOR LOOP INTERFACE

WIRE LIST FOR NEMA MALFUNCTION MANAGEMENT UNIT									
CONNECTOR "A" (MMA)					CONNECTOR "B" (MMB)				
PIN	WIRE	MON. FUNCTION	TO	SIG. FUNCTION	PIN	WIRE	MON. FUNCTION	TO	SIG. FUNCTION
A	A-1	AC+ I INPUT	B21		A	B-1	AC+ II INPUT	J3-2	MMU POWER
B	A-2	OUT RLY 1 OPEN	B22		B	B-2	S. DLY RLY COMM.	J3-6	MMU POWER
C	A-3	OUT RLY 2 CLSD	B23		C	B-3	S. DLY RLY OPEN	B28	
D	A-4	CH. 12 GREEN	12G-A	^8 WLK	D	B-4	CH. 12 RED	B40	
E	A-5	CH. 11 GREEN	11G-A	^6 WLK	E	B-5	CH. 11 RED	B39	
F	A-6	CH. 10 GREEN	10G-A	^4 WLK	F	B-6	CH. 9 RED	B37	
G	A-7	CH. 9 GREEN	9G-A	^2 WLK	G	B-7	CH. 8 RED	8R-A	^8 RED
H	A-8	CH. 8 GREEN	8G-A	^8 GRN	H	B-8	CH. 7 RED	7R-A	^7 RED
J	A-9	CH. 7 GREEN	7G-A	^7 GRN	J	B-9	CH. 6 RED	6R-A	^6 RED
K	A-10	CH. 6 GREEN	6G-A	^6 GRN	K	B-10	CH. 5 RED	5R-A	^5 RED
L	A-11	CH. 5 GREEN	5G-A	^5 GRN	L	B-11	CH. 4 RED	4R-A	^4 RED
M	A-12	CH. 4 GREEN	4G-A	^4 GRN	M	B-12	CH. 2 RED	2R-A	^2 RED
N	A-13	CH. 3 GREEN	3G-A	^3 GRN	N	B-13	CH. 1 RED	1R-A	^1 RED
P	A-14	CH. 2 GREEN	2G-A	^2 GRN	P	B-14	(SPARE 1)	B29	
R	A-15	CH. 1 GREEN	1G-A	^1 GRN	R	B-15	+24V MONITOR II	B-3	+24V MON. II
S	A-16	+24V MON. I	B-4	LS +24V MON.	S	B-16	(SPARE 2)	B30	
T	A-17	LOGIC GND	B-14	LOGIC GND	T	B-17	CH. 13 RED	13R-A	OLA RED
U	A-18	CHASSIS GND	LS7-2	EARTH GND.	U	B-18	S. DLY RLY CLSD	J3-35	CONT. POWER
V	A-19	AC- (COMMON)	K1-2	AC NEUTRAL	V	B-19	CH. 10 RED	B38	
W	A-20	OUT RLY 1 COM.	J3-7	SIG BUS CONT	W	B-20	CH. 14 RED	14R-A	OLB RED
X	A-21	OUT RLY 2 COM.	A-27	LOGIC GND	X	B-21	CH. 15 RED	15R-A	OLC RED
Y	A-22	CH. 12 YELLOW	-T-		Y	B-22	CH. 16 RED	16R-A	OLD RED
Z	A-23	CH. 11 YELLOW	-T-		Z	B-23	CH. 3 RED	3R-A	^3 RED
a	A-24	CH. 10 WALK	----		a	B-24	RED ENABLE	LS8-1	SIG BUS CON.
b	A-25	CH. 10 YELLOW	-T-		b	B-25	(SPARE 3)	B31	
c	A-26	CH. 9 YELLOW	-T-		c	B-26	LOCAL FLASH IN	CAPPED	POL/AX FLSH
d	A-27	CH. 8 YELLOW	8Y-A	^8 YEL		B-27	SHELL GROUND	LS6-2	EARTH GND.
e	A-28	CH. 7 YELLOW	7Y-A	^7 YEL	NOTES FOR 16 CHANNEL M.M.U. (1) RELAY CONTACT POSITIONS SPECIFIED ARE FOR NON-CONFLICT MODE. (2) TO PROGRAM MMU, SOLDER JUMPERS IN PROGRAMMING CARD FOR ALL PERMISSABLE PHASE MOVEMENTS, MINIMUM CHANGE DIS-ABLE FOR ALL PEDESTRIAN CHANNELS, AND MIN. FLASH, VOLTAGE MON., AND 24V. MON. LATCH OPTIONS AS DESIRED.				
f	A-29	CH. 6 YELLOW	6Y-A	^6 YEL					
g	A-30	CH. 5 YELLOW	5Y-A	^5 YEL	M.M.U. CHANNEL ASSIGNMENTS CH. 1 = L/S 1 = ^1 VEH. CH. 2 = L/S 2 = ^2 VEH. CH. 3 = L/S 3 = ^3 VEH. CH. 4 = L/S 4 = ^4 VEH. CH. 5 = L/S 5 = ^5 VEH. CH. 6 = L/S 6 = ^6 VEH. CH. 7 = L/S 7 = ^7 VEH. CH. 8 = L/S 8 = ^8 VEH. CH. 9 = L/S 9 = ^2 PED. CH. 10 = L/S 10 = ^4 PED. CH. 11 = L/S 11 = ^6 PED. CH. 12 = L/S 12 = ^8 PED. CH. 13 = L/S 13 = OLAP A CH. 14 = L/S 14 = OLAP B CH. 15 = L/S 15 = OLAP C CH. 16 = L/S 16 = OLAP D				
h	A-31	CH. 3 YELLOW	3Y-A	^3 YEL					
i	A-32	CH. 15 GREEN	15G-A	OLC GRN					
j	A-33	CH. 2 YELLOW	2Y-A	^2 YEL					
k	A-34	CH. 1 YELLOW	1Y-A	^1 YEL					
m	A-35	CONT. VOLT. MON.	B-5	VOLT. MON.					
n	A-36	+24V MON. INH.	B-2						
p	A-37	OUT RLY 1 CLSD	J3-3						
q	A-38	OUT RLY 2 OPEN	A-31	STOP TIME					
r	A-39	CH. 12 WALK	----						
s	A-40	CH. 11 WALK	----						
t	A-41	CH. 9 WALK	----						
u	A-42	CH. 16 YELLOW	16Y-A	OLD YEL					
v	A-43	CH. 15 YELLOW	15Y-A	OLC YEL					
w	A-44	CH. 13 YELLOW	13Y-A	OLA YEL					
x	A-45	CH. 4 YELLOW	4Y-A	^4 YEL					
y	A-46	CH. 14 GREEN	14G-A	OLB GRN					
z	A-47	CH. 13 GREEN	13G-A	OLA GRN					
AA	A-48	(SPARE 1)	B24						
BB	A-49	RESET	B-1						
CC	A-50	CAB. INTLK A	B25						
DD	A-51	CAB. INTLK B	B26						
EE	A-52	CH. 14 YELLOW	14Y-A	OLB YRL					
FF	A-53	CH. 16 GREEN	16G-A	OLD GRN					
GG	A-54	(SPARE 2)	B27						
HH	A-55	TYPE SELECT	A-20	MMU/CMU SEL.					
	A-56	SHELL GND	LS15-2	EARTH GND.					

MMU PROGRAM CARD

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
3	4	5	6	7	8	9	10	11	12	13	14	15	16		
4	5	6	7	8	9	10	11	12	13	14	15	16			
5	6	7	8	9	10	11	12	13	14	15	16				
6	7	8	9	10	11	12	13	14	15	16					
7	8	9	10	11	12	13	14	15	16						
8	9	10	11	12	13	14	15	16							
9	10	11	12	13	14	15	16								
10	11	12	13	14	15	16									
11	12	13	14	15	16										
12	13	14	15	16											
13	14	15	16												
14	15	16													
15	16														

8	7	6	5	4	3	2	1
MIN. CLR. DIS.							
9	10	11	12	13	14	15	16
MIN. FLASH TIME							
8	4	2	1				

24V LATCH ENA.							
CVM LATCH ENA.							

M.M.U. C/C'S AND PROGRAM CARI

SHEET 7 OF 11

SIZE
B

CSAH 18 AT 131ST

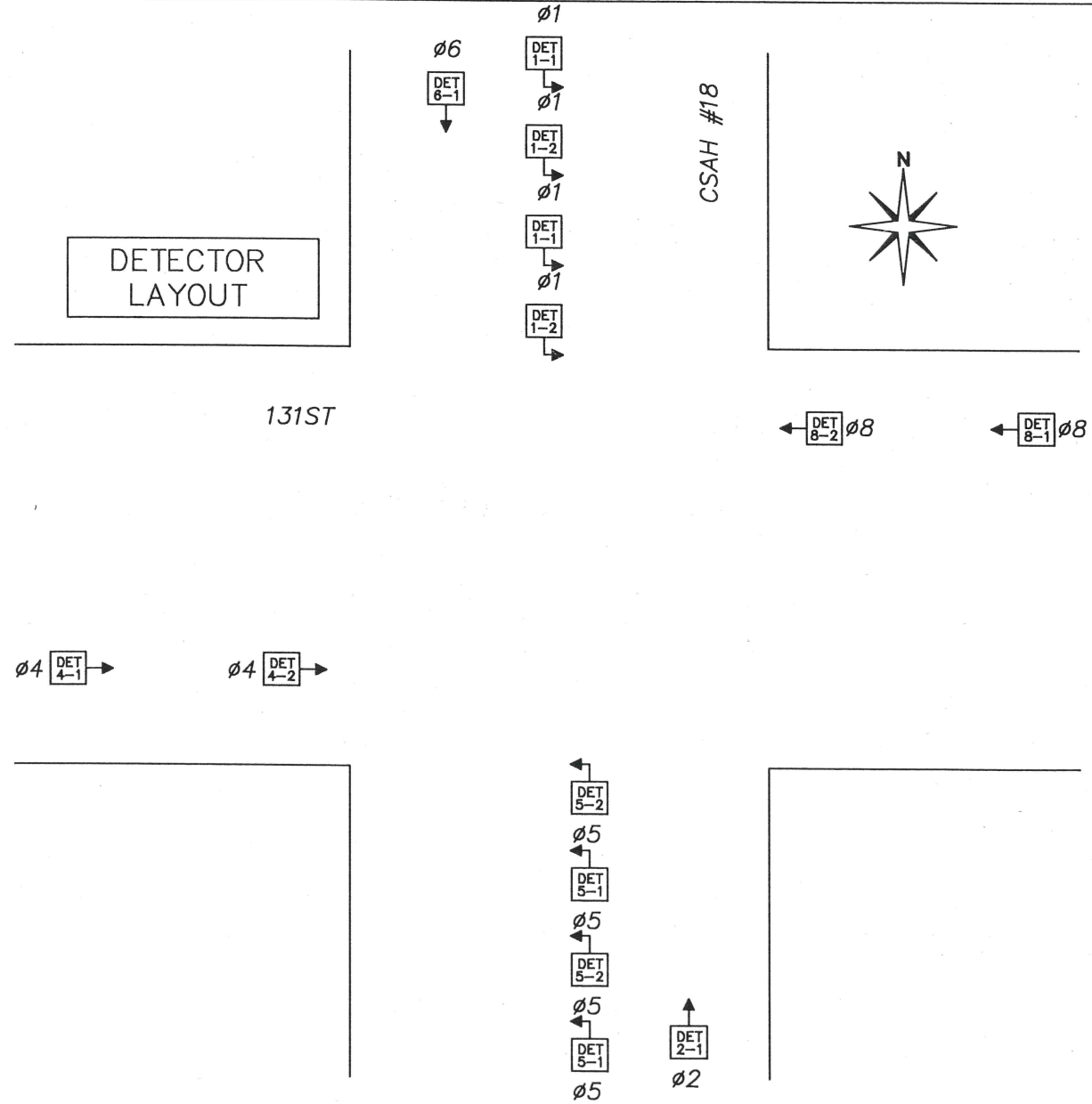
DETECTOR RACK 34030G1

POWER SUPPLY OR B.I.U.	L3	L1	L7	L5	L11	L9	L15	L13	PMT 5 ∅	PMT 3 ∅	PGM. CARD
	5-1	1-1	∅	2-1	∅	4-1	∅	8-1			
	☐ 2CH 5-2	☐ 2CH 1-2	☐ 2CH ∅	☐ 2CH 6-1	☐ 2CH ∅	☐ 2CH 4-2	☐ 2CH ∅	☐ 2CH 8-2	☐ 2CH OPTICOM/ OPIC CH. C CH. D ∅	☐ 4CH ☐ 2CH OPTICOM/ OPIC CH. A CH. B ∅	
	L4	L2	L8	L6	L12	L10	L16	L14	PMT 6	PMT 4	
☒ J13 C/C 33284G10 DC POWER	☒ J16 C/C 33284G8 EXP. OUTPUTS	☒ J14 C/C 33284G2 LPS 1-8	☐ J18 C/C 33284G9 SYS. OUTPUTS	☒ J15 C/C 33284G3 LPS 9-16	☒ J17 C/C 33284G6 AC POWER	☒ J19 C/C 33284G17 PGM. CARD					

①

ADDRESS TABLE					
RACK #	JMPR	DET. #'S	RACK #	JMPR	DET. #'S
1		1-16	5		65-80
2		17-32	6		81-96
3		33-48	7		97-112
4		49-64	8		113-128

DETECTOR ASSIGNMENTS		
CONT. INPUT	PHASE ASGN.	DETECTOR TYPE
1	1-1	1
2	1-2	1
3	5-1	1
4	5-2	1
5	2-1	1
6	6-1	1
7		
8		
9	4-1	1
10	4-2	1
11		
12		
13	8-1	1
14	8-2	1
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
26		
28		
29		
30		
31		
32		
33		
34		
35		
36		



DETECTOR RACK PROGRAMMING JUMPERS																																		
DET. TYPE	JP1 JP2		SLOT 1/2 ①								SLOT 3/4 ①								SLOT 5/6 ①								SLOT 7/8 ①							
			JP3	JP4	JP5	JP6	JP7	JP8	JP9	JP10	JP11	JP12	JP13	JP14	JP15	JP16	JP17	JP18	JP19	JP20	JP21	JP22	JP23	JP24	JP25	JP26	JP27	JP28	JP29	JP30				
① TS-1	NO	NO																																
② TS-2	YES	YES																																
③ LM-632T 262-FC	NO	NO																																
④ MAG.	NO	NO																																

CABLE	DISCR.	PHASES	POLE#	TERMINAL TB9		
	CHAN.			SIGNAL	DC(+)	GND
19	1	6	3	9	8	7
30	2	2	1	10	8	7
35	3	8	4	1	3	4
13	4	4	2	2	3	4

CABLE	SIGNAL	TERMINAL					
		G←	Y←	R←	G	Y	R
25	2-1				7	9	11
24	2-2				8	10	12
25	2-3	25	27		7	9	11
31	2-4	26	28		8	10	12
9,26	4-1,4-3				19	21	23
10	4-2				20	22	24
15	6-1				31	33	35
16	6-2				32	34	36
15	6-3	1	3		31	33	35
9	6-4	2	4		32	34	36
31,16	8-1,8-3				43	45	47
32	8-2				44	46	48

[illegible]

CABLE	PPB	TERMINAL	RETURN
11	2-1	PD2	GB1
27	2-2	PD2	GB1
17	4-1	PD4	GB1
11	4-2	PD4	GB1
33	6-1	PD6	GB1
17	6-2	PD6	GB1
27	8-1	PD8	GB1
33	8-2	PD8	GB1

CABLE	SIGNAL	TERMINAL	
		WK	DW
10	2-1	49	53
26	2-2	50	54
18	4-1	55	59
10	4-2	56	60
32	6-1	61	65
16	6-2	62	66
28	8-1	67	71
32	8-2	68	72

CABLE	CONTR CHAN.	PHASES	POLE#	TERM.
19	3	6	3	51
12	4	2	1	57
34	5	8	4	63
12	6	4	2	69