



MASTER DETAIL REVISED 08/09/06

CONNECTOR C1P AND C1S

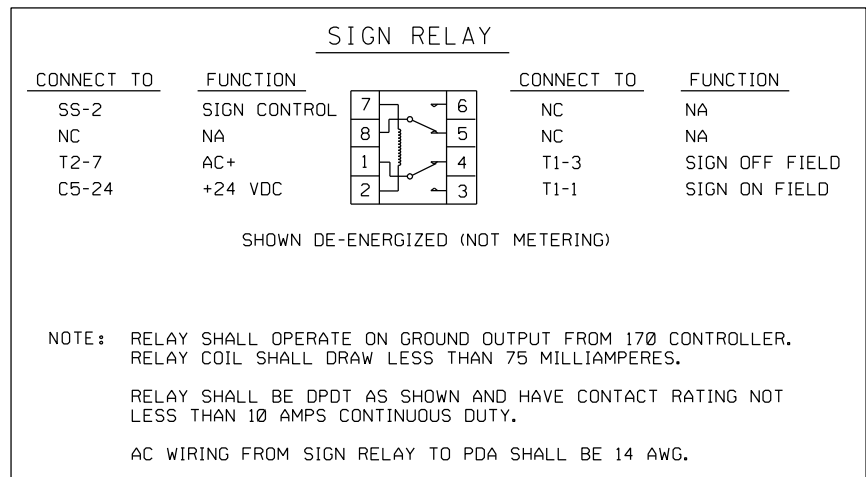
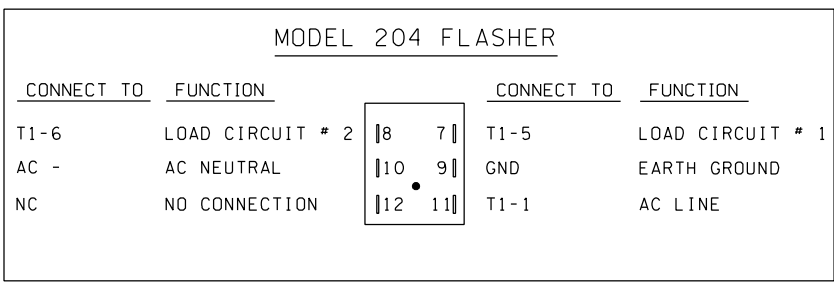
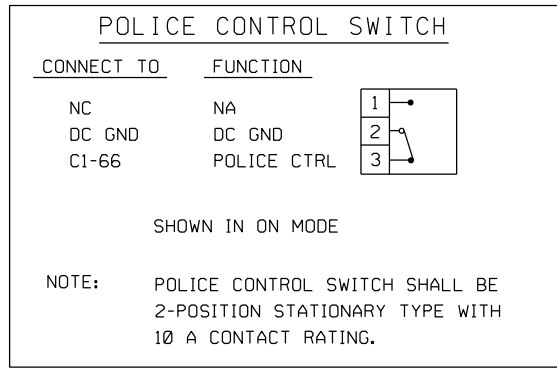
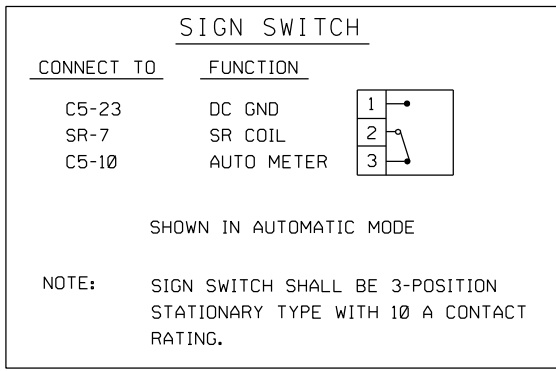
PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION
1	DC GRD	DC GROUND	27	NC	NA	53	DP 55	DET 15	79	DP 77/C4-6	DET37/CM1G
2	C6-1	SWPK1-RED	28	NC	NA	54	DP 56	DET 16	80	DP 78/C4-7	DET38/CM3R
3	C6-2	SWPK1-GRN	29	NC	NA	55	DP 57	DET 17	81	DP 79/C4-8	DET39/CM3Y
4	C6-3	SWPK2-RED	30	NC	NA	56	DP 58	DET 18	82	DP 80/C4-9	DET40/CM3G
5	C6-4	SWPK2-YEL	31	NC	NA	57	DP 59	DET 19	83	C5-1	DP REMOTE
6	C6-5	SWPK2-GRN	32	NC	NA	58	DP 60	DET 20	84	C5-2	NA
7	C6-6	SWPK3-RED	33	NC	NA	59	DP 61	DET 21	85	C5-3	DP TRAFFIC
8	C6-7	SWPK3-YEL	34	NC	NA	60	DP 62	DET 22	86	C5-4	DP CLOCK
9	C6-8	SWPK3-GRN	35	NC	NA	61	DP 63	DET 23	87	C5-5	DP TELEMETRY
10	NC	NA	36	NC	NA	62	DP 64	DET 24	88	C5-6	DP ECHO
11	NC	NA	37	C6-9	SWPK1-YEL	63	C4-1	CM2-RED	89	C5-7	DP CONFLICT
12	NC	NA	38	NC	NA	64	C4-2	CM2-YEL	90	C5-8	DP DET FAILED
13	NC	NA	39	DP 41	DET 1	65	C4-3	CM2-GRN	91	C5-9	DP RED L1
14	I15-4	INPUT GND	40	DP 42	DET 2	66	PC-3	POLICE CONTROL	92	DC GND	OUTPUT GND
15	NC	NA	41	DP 43	DET 3	67	DP 65	DET 25	93	C5-10	SIGN-AUTO/DP METER
16	NC	NA	42	DP 44	DET 4	68	DP 66	DET 26	94	C5-11	DP RED L2
17	NC	NA	43	DP 45	DET 5	69	DP 67	DET 27	95	C5-12	DP YEL L2
18	NC	NA	44	DP 46	DET 6	70	DP 68	DET 28	96	C5-13	DP GRN L2
19	NC	NA	45	DP 47	DET 7	71	DP 69	DET 29	97	C5-14	DP YEL L1
20	NC	NA	46	DP 48	DET 8	72	DP 70	DET 30	98	C5-15	DP GRN L1
21	NC	NA	47	DP 49	DET 9	73	DP 71	DET 31	99	C5-16	DP RED L3
22	NC	NA	48	DP 50	DET 10	74	DP 72	DET 32	100	C5-17	DEP YEL L3
23	NC	NA	49	DP 51	DET 11	75	DP 73	DET 33	101	C5-18	DP GRN L3
24	NC	NA	50	DP 52	DET 12	76	DP 74	DET 34	102	I15-3	DET RESET
25	NC	NA	51	DP 53	DET 13	77	DP 75/C4-4	DET35/CM1R	103	C6-10	WATCHDOG
26	NC	NA	52	DP 54	DET 14	78	DP 76/C4-5	DET36/CM1Y	104	DC GND	INPUT GND

P1 CONNECTOR - FEMALE  
INPUT FILE TO DISPLAY PANEL

P1 PIN#	CONNECTION	FUNCTION
1	DP1	DET. 1
2	DP2	DET. 2
3	DP3	DET. 3
4	DP4	DET. 4
5	DP5	DET. 5
6	DP6	DET. 6
7	DP7	DET. 7
8	DP8	DET. 8
9	DP9	DET. 9
10	DP10	DET.10
11	DP11	DET.11
12	DP12	DET.12
13	DP13	DET.13
14	DP14	DET.14
15	DP15	DET.15
16	DP16	DET.16
17	DP17	DET.17
18	DP18	DET.18
19	DP19	DET.19
20	DP20	DET.20
21	DP21	DET.21
22	DP22	DET.22
23	DP23	DET.23
24	DP24	DET.24
25	DP25	DET.25
26	DP26	DET.26
27	DP27	DET.27
28	DP28	DET.28
29	DP29	DET.29
30	DP30	DET.30
31	DP31	DET.31
32	DP32	DET.32
33	DP33	DET.33
34	DP34	DET.34
35	DP35	DET.35
36	DP36	DET.36
37	DP37	DET.37
38	DP38	DET.38
39	DP39	DET.39
40	DP40	DET.40
41	NC	NA
42	NC	NA
43	NC	NA
44	NC	NA
45	NC	NA
46	NC	NA
47	NC	NA
48	NC	NA
49	+24 VDC	POWER
50	LOGIC GND	GROUND

P2 CONNECTOR - MALE  
DISPLAY PANEL TO C1

P2 PIN#	CONNECTION	FUNCTION
1	DP41	DET. 1
2	DP42	DET. 2
3	DP43	DET. 3
4	DP44	DET. 4
5	DP45	DET. 5
6	DP46	DET. 6
7	DP47	DET. 7
8	DP48	DET. 8
9	DP49	DET. 9
10	DP50	DET.10
11	DP51	DET.11
12	DP52	DET.12
13	DP53	DET.13
14	DP54	DET.14
15	DP55	DET.15
16	DP56	DET.16
17	DP57	DET.17
18	DP58	DET.18
19	DP59	DET.19
20	DP60	DET.20
21	DP61	DET.21
22	DP62	DET.22
23	DP63	DET.23
24	DP64	DET.24
25	DP65	DET.25
26	DP66	DET.26
27	DP67	DET.27
28	DP68	DET.28
29	DP69	DET.29
30	DP70	DET.30
31	DP71	DET.31
32	DP72	DET.32
33	DP73	DET.33
34	DP74	DET.34
35	DP75	DET.35
36	DP76	DET.36
37	DP77	DET.37
38	DP78	DET.38
39	DP79	DET.39
40	DP80	DET.40
41	NC	NA
42	NC	NA
43	NC	NA
44	NC	NA
45	NC	NA
46	NC	NA
47	NC	NA
48	NC	NA
49	NC	NA
50	NC	NA



- KEY TO ABBREVIATIONS**
- CB = CIRCUIT BREAKER
  - CM = CURRENT MONITOR
  - DP = DISPLAY PANEL
  - MU = MONITOR UNIT
  - NA = NOT ASSIGNED
  - NC = NOT CONNECTED
  - PC = POLICE CONTROL SWITCH
  - SR = SIGN RELAY
  - SS = SIGN SWITCH
  - SWPK = SWITCH PACK
  - TR = TRANSFER RELAY

**C4 CONNECTOR (TO CURRENT MONITOR)**

PIN	CONNECTION	FUNCTION
1	C1-63	CM2-RED
2	C1-64	CM2-YEL
3	C1-65	CM2-GRN
4	C1-77	CM1-RED
5	C1-78	CM1-YEL
6	C1-79	CM1-GRN
7	C1-80	CM3-RED
8	C1-81	CM3-YEL
9	C1-82	CM3-GRN
10	C1-36	NA
11	NC	NA
12	NC	NA
13	NC	NA
14	NC	NA
15	NC	NA
16	NC	NA
17	C1-70	NA
18	C1-71	NA
19	C1-72	NA
20	NC	NA
21	C5-19	NA
22	C5-20	NA
23	DC GND	DC GROUND
24	TB1-1B	+24 VDC

**C5 CONNECTOR (TO DISPLAY PANEL)**

PIN	CONNECTION	FUNCTION
1	C1-83	DP -REMOTE
2	C1-84	DP -NA
3	C1-85	DP -STANDBY TRAFFIC
4	C1-86	DP -STANDBY CLOCK
5	C1-87	DP -TELEMETRY
6	C1-88	DP -ECHO
7	C1-89	DP -CONFLICT
8	C1-90	DP -DET. FAILED
9	C1-91	DP -RED LANE 1
10	C1-93	DP -METERING, SS-3
11	C1-94	DP -RED LANE 2
12	C1-95	DP -YELLOW LANE 2
13	C1-96	DP -GREEN LANE 2
14	C1-97	DP -YELLOW LANE 1
15	C1-98	DP -GREEN LANE 1
16	C1-99	DP -RED LANE 3
17	C1-100	DP -YELLOW LANE 3
18	C1-101	DP -GREEN LANE 3
19	NC	NA
20	NC	NA
21	NC	NA
22	NC	NA
23	DC GND	SS-1
24	TB1-2B	+24 VDC

**C6 CONNECTOR (TO PDA)**

PIN	CONNECTION	FUNCTION
1	C1-2	SWPK1-RED
2	C1-3	SWPK1-GRN
3	C1-4	SWPK2-RED
4	C1-5	SWPK2-YEL
5	C1-6	SWPK2-GRN
6	C1-7	SWPK3-RED
7	C1-8	SWPK3-YEL
8	C1-9	SWPK3-GRN
9	C1-37	SWPK1-YEL
10	C1-103	WATCHDOG MU
11	NC	NA
12	NC	NA
13	NC	NA
14	NC	NA
15	NC	NA
16	NC	NA
17	NC	NA
18	NC	NA
19	NC	NA
20	NC	NA
21	NC	NA
22	NC	NA
23	DC GND	DC GROUND
24	TB1-3B	+24 VDC

MODEL 334 CABINET DETAILS  
WITH TWISTED-PAIR COMMUNICATION

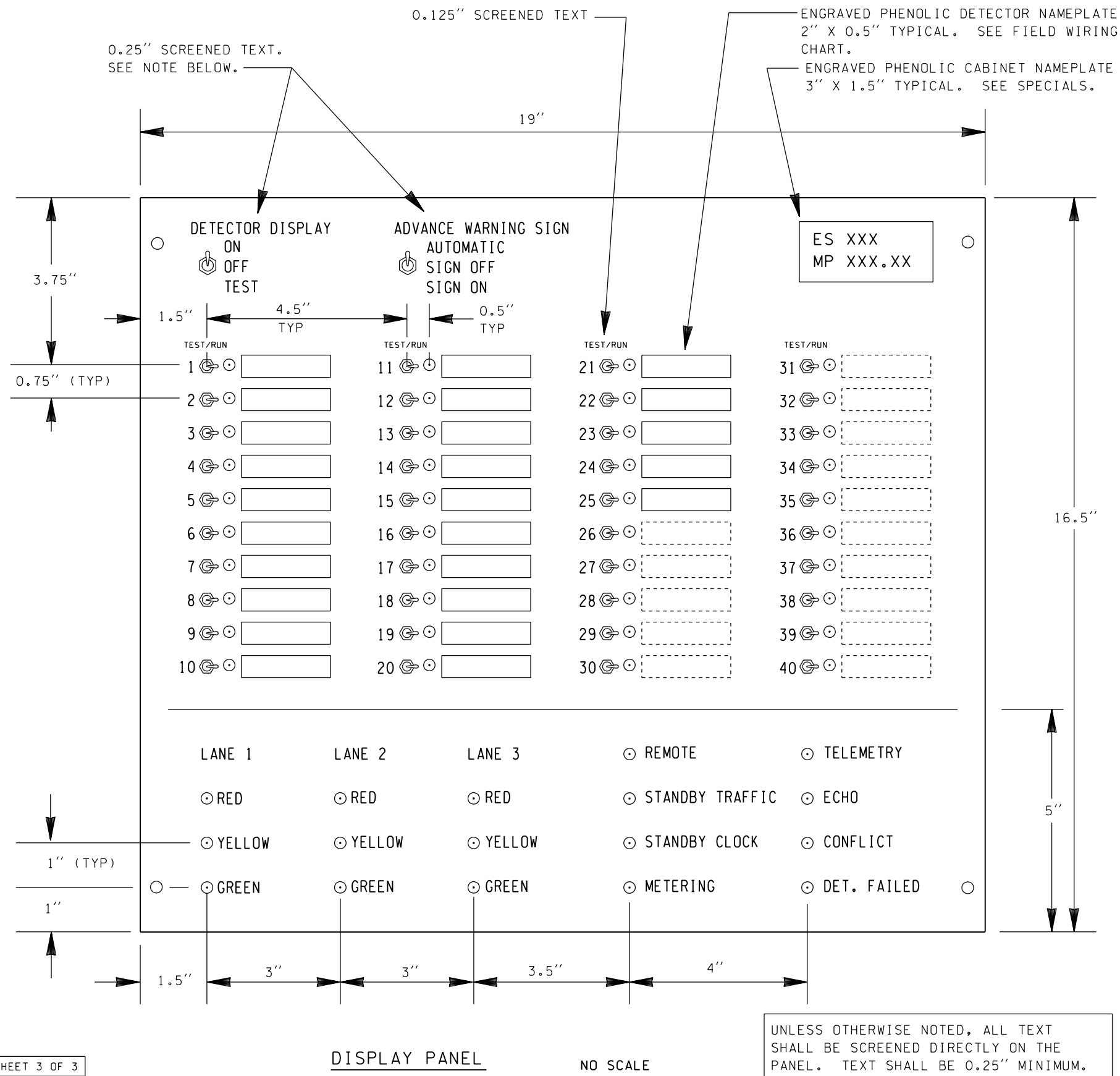
SHEET 2 OF 3

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<b>DATE</b>	7/1/2009	<b>JOB NUMBER</b>							
<b>PLOTTED BY</b>	tranp	<b>CONTRACT NO.</b>		<b>LOCATION NO.</b>					
<b>DESIGNED BY</b>									
<b>ENTERED BY</b>									
<b>CHECKED BY</b>									
<b>PROJ. ENGR.</b>									
<b>REGIONAL ADM.</b>		<b>REVISION</b>		<b>DATE</b>		<b>BY</b>		<b>DATE</b>	
								<b>P.E. STAMP BOX</b>	<b>DATE</b>
								<b>P.E. STAMP BOX</b>	<b>DATE</b>



SHEET  
OF  
SHEETS

MASTER DETAIL REVISED 08/09/06



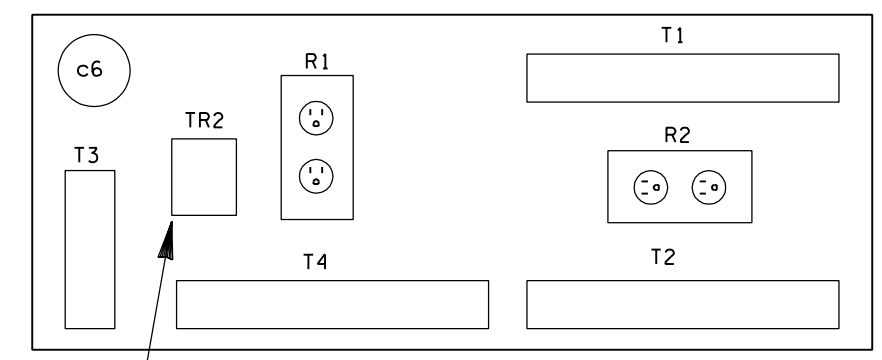
SHEET 3 OF 3

DISPLAY PANEL

NO SCALE

POWER DISTRIBUTION ASSEMBLY (PDA) #3

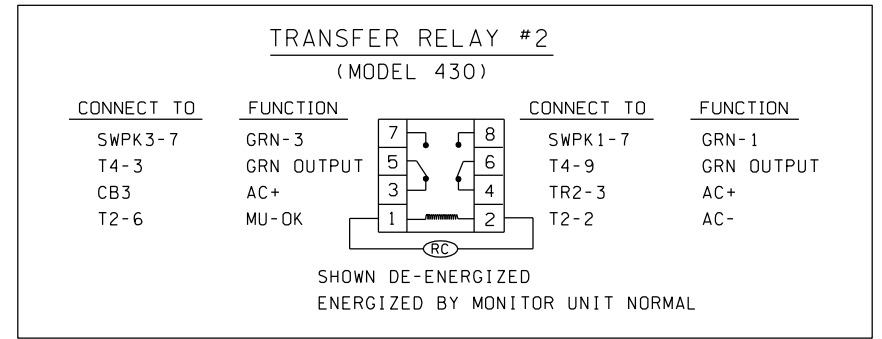
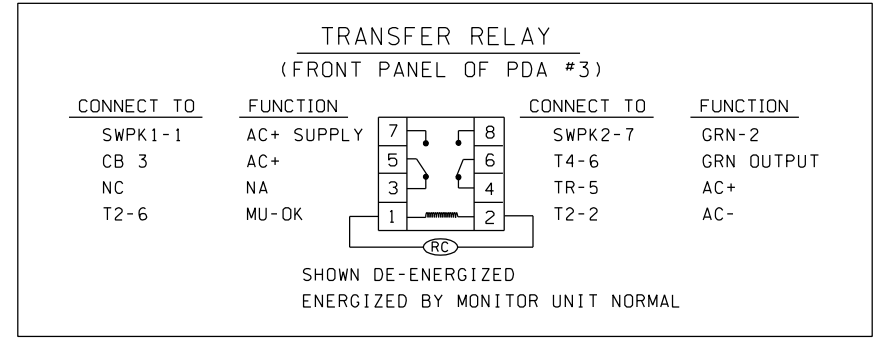
(REAR VIEW)



INSTALL MODEL 430 TRANSFER RELAY. WIRE AS SHOWN BELOW.

PDA #3 MODIFICATIONS

CONNECT:	FUNCTION
T2-8 TO T4-6	TR OUTPUT TO FIELD GRN 2
T2-6 TO MU-3	ENERGIZE TR WHEN MU IS NORMAL
T1-1, T1-2 TO SR-3	FIELD OUTPUT - SIGN ON
T1-3, T1-4 TO SR-4	FIELD OUTPUT - SIGN OFF
ADD TRANSFER RELAY #2 AS SHOWN.	



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DATE	7/1/2009										
PLOTTED BY	tranp										
DESIGNED BY											
ENTERED BY											
CHECKED BY											
PROJ. ENGR.											
REGIONAL ADM.											
REVISION											
DATE											
BY											
REGION NO.	10		STATE	WASH		FED.AID PROJ.NO.					
JOB NUMBER						LOCATION NO.					
CONTRACT NO.						DATE					
P.E. STAMP BOX						DATE					





MASTER DETAIL REVISED 08/09/06

CONNECTOR C1P AND C1S

PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION	PIN	CONNECT TO	FUNCTION
1	DC GRD	DC GROUND	27	NC	NA	53	DP 55	DET 15	79	DP 77/C4-6	DET37/CM1G
2	C6-1	SWPK1-RED	28	NC	NA	54	DP 56	DET 16	80	DP 78/C4-7	DET38/CM3R
3	C6-2	SWPK1-GRN	29	NC	NA	55	DP 57	DET 17	81	DP 79/C4-8	DET39/CM3Y
4	C6-3	SWPK2-RED	30	NC	NA	56	DP 58	DET 18	82	DP 80/C4-9	DET40/CM3G
5	C6-4	SWPK2-YEL	31	NC	NA	57	DP 59	DET 19	83	C5-1	DP REMOTE
6	C6-5	SWPK2-GRN	32	NC	NA	58	DP 60	DET 20	84	C5-2	NA
7	C6-6	SWPK3-RED	33	NC	NA	59	DP 61	DET 21	85	C5-3	DP TRAFFIC
8	C6-7	SWPK3-YEL	34	NC	NA	60	DP 62	DET 22	86	C5-4	DP CLOCK
9	C6-8	SWPK3-GRN	35	NC	NA	61	DP 63	DET 23	87	C5-5	DP TELEMETRY
10	NC	NA	36	NC	NA	62	DP 64	DET 24	88	C5-6	DP ECHO
11	NC	NA	37	C6-9	SWPK1-YEL	63	C4-1	CM2-RED	89	C5-7	DP CONFLICT
12	NC	NA	38	NC	NA	64	C4-2	CM2-YEL	90	C5-8	DP DET FAILED
13	NC	NA	39	DP 41	DET 1	65	C4-3	CM2-GRN	91	C5-9	DP RED L1
14	I15-4	INPUT GND	40	DP 42	DET 2	66	PC-3	POLICE CONTROL	92	DC GND	OUTPUT GND
15	NC	NA	41	DP 43	DET 3	67	DP 65	DET 25	93	C5-10	SIGN-AUTO/DP METER
16	NC	NA	42	DP 44	DET 4	68	DP 66	DET 26	94	C5-11	DP RED L2
17	NC	NA	43	DP 45	DET 5	69	DP 67	DET 27	95	C5-12	DP YEL L2
18	NC	NA	44	DP 46	DET 6	70	DP 68	DET 28	96	C5-13	DP GRN L2
19	NC	NA	45	DP 47	DET 7	71	DP 69	DET 29	97	C5-14	DP YEL L1
20	NC	NA	46	DP 48	DET 8	72	DP 70	DET 30	98	C5-15	DP GRN L1
21	NC	NA	47	DP 49	DET 9	73	DP 71	DET 31	99	C5-16	DP RED L3
22	NC	NA	48	DP 50	DET 10	74	DP 72	DET 32	100	C5-17	DEP YEL L3
23	NC	NA	49	DP 51	DET 11	75	DP 73	DET 33	101	C5-18	DP GRN L3
24	NC	NA	50	DP 52	DET 12	76	DP 74	DET 34	102	I15-3	DET RESET
25	NC	NA	51	DP 53	DET 13	77	DP 75/C4-4	DET35/CM1R	103	C6-10	WATCHDOG
26	NC	NA	52	DP 54	DET 14	78	DP 76/C4-5	DET36/CM1Y	104	DC GND	INPUT GND

P1 CONNECTOR - FEMALE INPUT FILE TO DISPLAY PANEL		
P1 PIN#	CONNECTION	FUNCTION
1	DP1	DET. 1
2	DP2	DET. 2
3	DP3	DET. 3
4	DP4	DET. 4
5	DP5	DET. 5
6	DP6	DET. 6
7	DP7	DET. 7
8	DP8	DET. 8
9	DP9	DET. 9
10	DP10	DET.10
11	DP11	DET.11
12	DP12	DET.12
13	DP13	DET.13
14	DP14	DET.14
15	DP15	DET.15
16	DP16	DET.16
17	DP17	DET.17
18	DP18	DET.18
19	DP19	DET.19
20	DP20	DET.20
21	DP21	DET.21
22	DP22	DET.22
23	DP23	DET.23
24	DP24	DET.24
25	DP25	DET.25
26	DP26	DET.26
27	DP27	DET.27
28	DP28	DET.28
29	DP29	DET.29
30	DP30	DET.30
31	DP31	DET.31
32	DP32	DET.32
33	DP33	DET.33
34	DP34	DET.34
35	DP35	DET.35
36	DP36	DET.36
37	DP37	DET.37
38	DP38	DET.38
39	DP39	DET.39
40	DP40	DET.40
41	NC	NA
42	NC	NA
43	NC	NA
44	NC	NA
45	NC	NA
46	NC	NA
47	NC	NA
48	NC	NA
49	+24 VDC	POWER
50	LOGIC GND	GROUND

P2 CONNECTOR - MALE DISPLAY PANEL TO C1		
P2 PIN#	CONNECTION	FUNCTION
1	DP41	DET. 1
2	DP42	DET. 2
3	DP43	DET. 3
4	DP44	DET. 4
5	DP45	DET. 5
6	DP46	DET. 6
7	DP47	DET. 7
8	DP48	DET. 8
9	DP49	DET. 9
10	DP50	DET.10
11	DP51	DET.11
12	DP52	DET.12
13	DP53	DET.13
14	DP54	DET.14
15	DP55	DET.15
16	DP56	DET.16
17	DP57	DET.17
18	DP58	DET.18
19	DP59	DET.19
20	DP60	DET.20
21	DP61	DET.21
22	DP62	DET.22
23	DP63	DET.23
24	DP64	DET.24
25	DP65	DET.25
26	DP66	DET.26
27	DP67	DET.27
28	DP68	DET.28
29	DP69	DET.29
30	DP70	DET.30
31	DP71	DET.31
32	DP72	DET.32
33	DP73	DET.33
34	DP74	DET.34
35	DP75	DET.35
36	DP76	DET.36
37	DP77	DET.37
38	DP78	DET.38
39	DP79	DET.39
40	DP80	DET.40
41	NC	NA
42	NC	NA
43	NC	NA
44	NC	NA
45	NC	NA
46	NC	NA
47	NC	NA
48	NC	NA
49	NC	NA
50	NC	NA

**SIGN SWITCH**

CONNECT TO	FUNCTION
C5-23	DC GND
SR-7	SR COIL
C5-10	AUTO METER

SHOWN IN AUTOMATIC MODE

NOTE: SIGN SWITCH SHALL BE 3-POSITION STATIONARY TYPE WITH 10 A CONTACT RATING.

**KEY TO ABBREVIATIONS**

CB = CIRCUIT BREAKER  
 CM = CURRENT MONITOR  
 DP = DISPLAY PANEL  
 MU = MONITOR UNIT  
 NA = NOT ASSIGNED  
 NC = NOT CONNECTED  
 PC = POLICE CONTROL SWITCH  
 SR = SIGN RELAY  
 SS = SIGN SWITCH  
 SWPK = SWITCH PACK  
 TR = TRANSFER RELAY

**C2 CONNECTOR TO F/O MODEM**

C2 PIN	DB25 (MALE)
K	2
L	3
N	7
D	
H	
M	

**MODEL 204 FLASHER**

CONNECT TO	FUNCTION	CONNECT TO	FUNCTION
T1-6	LOAD CIRCUIT # 2	T1-5	LOAD CIRCUIT # 1
AC -	AC NEUTRAL	GND	EARTH GROUND
NC	NO CONNECTION	T1-1	AC LINE

**SIGN RELAY**

CONNECT TO	FUNCTION	CONNECT TO	FUNCTION
SS-2	SIGN CONTROL	NC	NA
NC	NA	NC	NA
T2-7	AC+	T1-3	SIGN OFF FIELD
C5-24	+24 VDC	T1-1	SIGN ON FIELD

SHOWN DE-ENERGIZED (NOT METERING)

NOTE: RELAY SHALL OPERATE ON GROUND OUTPUT FROM 170 CONTROLLER. RELAY COIL SHALL DRAW LESS THAN 75 MILLIAMPERES. RELAY SHALL BE DPDT AS SHOWN AND HAVE CONTACT RATING NOT LESS THAN 10 AMPS CONTINUOUS DUTY. AC WIRING FROM SIGN RELAY TO PDA SHALL BE 14 AWG.

**POLICE CONTROL SWITCH**

CONNECT TO	FUNCTION
NC	NA
DC GND	DC GND
C1-66	POLICE CTRL

SHOWN IN ON MODE

NOTE: POLICE CONTROL SWITCH SHALL BE 2-POSITION STATIONARY TYPE WITH 10 A CONTACT RATING.

**C4 CONNECTOR (TO CURRENT MONITOR)**

PIN	CONNECTION	FUNCTION
1	C1-63	CM2-RED
2	C1-64	CM2-YEL
3	C1-65	CM2-GRN
4	C1-77	CM1-RED
5	C1-78	CM1-YEL
6	C1-79	CM1-GRN
7	C1-80	CM3-RED
8	C1-81	CM3-YEL
9	C1-82	CM3-GRN
10	C1-36	NA
11	NC	NA
12	NC	NA
13	NC	NA
14	NC	NA
15	NC	NA
16	NC	NA
17	C1-70	NA
18	C1-71	NA
19	C1-72	NA
20	NC	NA
21	C5-19	NA
22	C5-20	NA
23	DC GND	DC GROUND
24	TB1-1B	+24 VDC

**C5 CONNECTOR (TO DISPLAY PANEL)**

PIN	CONNECTION	FUNCTION
1	C1-83	DP -REMOTE
2	C1-84	DP -NA
3	C1-85	DP -STANDBY TRAFFIC
4	C1-86	DP -STANDBY CLOCK
5	C1-87	DP -TELEMETRY
6	C1-88	DP -ECHO
7	C1-89	DP -CONFLICT
8	C1-90	DP -DET. FAILED
9	C1-91	DP -RED LANE 1
10	C1-93	DP -METERING, SS-3
11	C1-94	DP -RED LANE 2
12	C1-95	DP -YELLOW LANE 2
13	C1-96	DP -GREEN LANE 2
14	C1-97	DP -YELLOW LANE 1
15	C1-98	DP -GREEN LANE 1
16	C1-99	DP -RED LANE 3
17	C1-100	DP -YELLOW LANE 3
18	C1-101	DP -GREEN LANE 3
19	NC	NA
20	NC	NA
21	NC	NA
22	NC	NA
23	DC GND	SS-1
24	TB1-2B	+24 VDC

**C6 CONNECTOR (TO PDA)**

PIN	CONNECTION	FUNCTION
1	C1-2	SWPK1-RED
2	C1-3	SWPK1-GRN
3	C1-4	SWPK2-RED
4	C1-5	SWPK2-YEL
5	C1-6	SWPK2-GRN
6	C1-7	SWPK3-RED
7	C1-8	SWPK3-YEL
8	C1-9	SWPK3-GRN
9	C1-37	SWPK1-YEL
10	C1-103	WATCHDOG MU
11	NC	NA
12	NC	NA
13	NC	NA
14	NC	NA
15	NC	NA
16	NC	NA
17	NC	NA
18	NC	NA
19	NC	NA
20	NC	NA
21	NC	NA
22	NC	NA
23	DC GND	DC GROUND
24	TB1-3B	+24 VDC

MODEL 334 CABINET DETAILS  
WITH FIBER OPTIC COMMUNICATION

SHEET 2 OF 3

FILE NAME	S:\414126\SCDIMISC\masterd\HOUSHE-MASTER\master detail_Expanded_Level1\Datastation.dgn	REGION NO.	STATE	FED.AID PROJ.NO.	Washington State Department of Transportation	Plot 5
TIME	2:41:24 PM	10	WASH			SHEET
DATE	7/1/2009				OF	
PLOTTED BY	tranp					
DESIGNED BY						
ENTERED BY						
CHECKED BY						
PROJ. ENGR.						
REGIONAL ADM.		CONTRACT NO.	LOCATION NO.	DATE	P.E. STAMP BOX	DATE
	REVISION		DATE	BY		