18 CHANNEL CONFLICT MONITOR
PROGRAMMING DETAIL
(remove jumpers and set switches as shown)

WD ENABLE ON OFF
SW2

REMOVE DIODE JUMPERS I-5,I-6,I-9,I-11,I-15,2-5,2-6,2-9,2-11,2-13,2-15,3-7,3-8,
3-10,3-12,3-16,4-7,4-8,4-10,4-12,4-14,4-16,5-9,5-11,5-13,5-16,6-9,6-11,6-13,6-15,7-10,7-12,
7-14,8-10,8-12,8-14,8-16,9-11,9-13,9-15,10-12,10-14,10-16,11-13,11-15,12-14,12-16,
13-15, AND 14-16.

18 CHANNEL PROGRAM CARD

YELLOW DISABLE

```
O10 O O10
O11 O O20
O12O O3O
O13O O4O
O14O O5O
O15O O6O
O16O O7O
O17O O8O
O18O O9O
```

COMPONENT SIDE

REMOVE JUMPERS AS SHOWN

INTERNAL DIP SWITCHES

ON →
- RF 2010
- RP DISABLE
- WD 1.0 SEC
- GY ENABLE
- SF#1 POLARITY
- LEDguard
- RF SSM
- FYA COMPACT
- FYA 1-9
- FYA 3-10
- FYA 5-11
- FYA 7-12

OPTIONS

FYA

ON →
1
2
3
4
5
6
7
8

SSM

ON →
9
10
11
12
13
14
15
16
17
18

SSM

■ = DENOTES POSITION OF SWITCH

NOTES:
1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
3. Ensure that Red Enable is active at all times during normal operation.
4. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.

2. Return controller to Factory Defaults before programming per this electrical detail.

3. Program phases 4 and 8 for Dual Entry.

4. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.

5. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.

EQUIPMENT INFORMATION

Controller..2070LX
Cabinet..332 w/ Aux
Software...Q-Free MAXTIME
Cabinet Mount.....................................Base
Output File Positions..........................18 With Aux. Output File
Load Switches Used...........................S1,S2,S3,S4,S5,S6,S7,S8,S9,S10,S11,S12, AUX S1, AUX S2,AUX S4, AUX 5
Phases Used.......................................1,2,2PED,3,4,4PED,5,6,6PED,8,8PED
Overlap "1"..*
Overlap "2"..*
Overlap "3"..*
Overlap "4"..*

*See overlap programming detail on sheet 2

SIGNAL HEAD HOOK-UP CHART

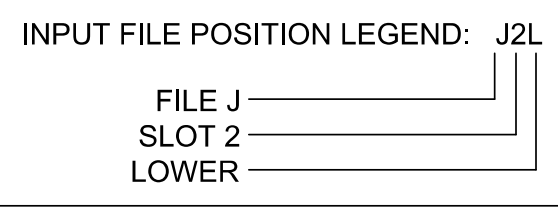| LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	P21,P22	4	4 PED	5	6	6 PED	7	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11	21,22,23	P21,P22	31	41,42	P41,P42	51	61,62,63	P61,P62	71	81,82	P81,P82	11	31	NU	51	71	NU
RED		128		101		134		107										
YELLOW	✱	129		✱ 102		✱ 135		✱ 108										
GREEN		130		103		136		109										
RED ARROW												A121	A124		A114	A101		
YELLOW ARROW												A122	A125		A115	A102		
FLASHING YELLOW ARROW												A123	A126		A116	A103		
GREEN ARROW	127			118		133		124										
✋		113		104		119		110										
🚶		115		106		121		112										

NU = Not Used

✱ Denotes install load resistor. See load resistor installation detail this sheet.

★ See pictorial of head wiring in detail this sheet.

INPUT FILE CONNECTION & PROGRAMMING CHART

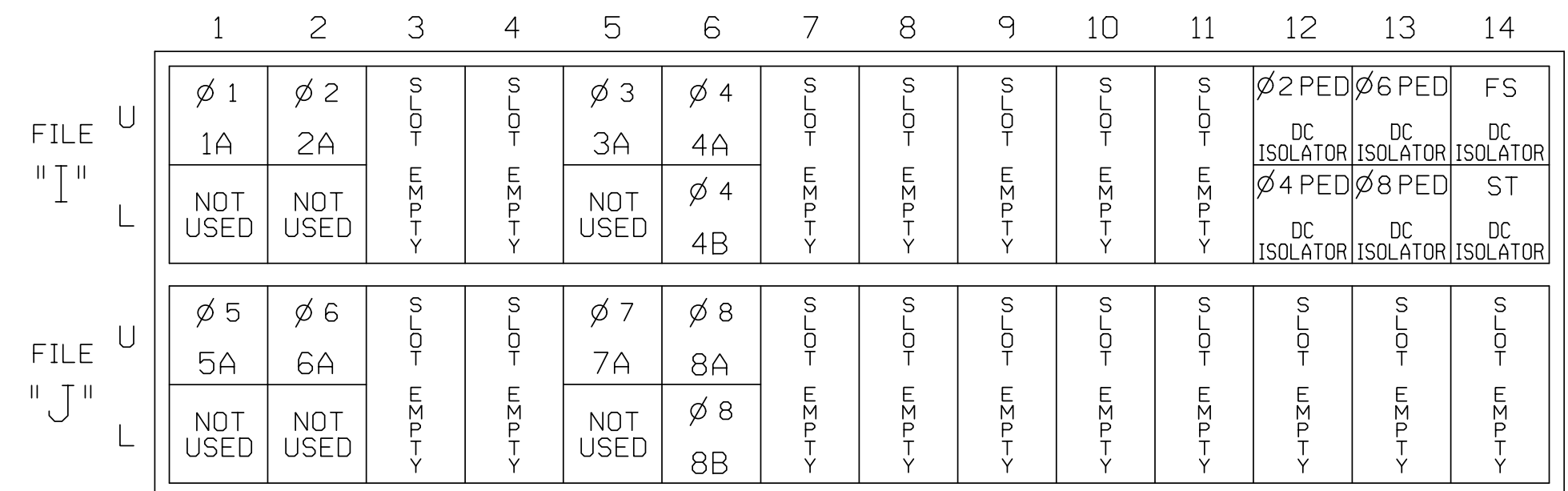| LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
1A	TB2-1,2	I1U	56	18	1 ★	1	15.0		X		X	
				-	29 ★	1	3.0		X		X	X
2A	TB2-5,6	I2U	39	1	2	2			X	X	X	
3A	TB4-5,6	I5U	58	20	7 ★	3	15.0		X		X	
				-	30 ★	8	3.0		X		X	
4A	TB4-9,10	I6U	41	3	8	4	5.0	2.0	X		X	X
4B	TB4-11,12	I6L	45	7	9	4			X		X	
5A	TB3-1,2	J1U	55	17	15 ★	5	15.0		X		X	
				-	31 ★	2	3.0		X		X	X
6A	TB3-5,6	J2U	40	2	16	6			X	X	X	
7A	TB5-5,6	J5U	57	19	21 ★	7	15.0		X		X	
				-	32 ★	4	3.0		X		X	
8A	TB5-9,10	J6U	42	4	22	8	5.0	2.0	X		X	
8B	TB5-11,12	J6L	46	8	23	8			X		X	
PED PUSH BUTTONS												
P21,P22	TB8-4,6	I12U	67	33	2	PED 2						
P41,P42	TB8-5,6	I12L	69	35	4	PED 4						
P61,P62	TB8-7,9	I13U	68	34	6	PED 6						
P81,P82	TB8-8,9	I13L	70	36	8	PED 8						

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

★ For the detectors to work as shown on the signal design plan, see the Vehicle Detector Setup Programming Detail for Alternate Phasing on sheet 2.

INPUT FILE POSITION LEGEND: J2L
- FILE J
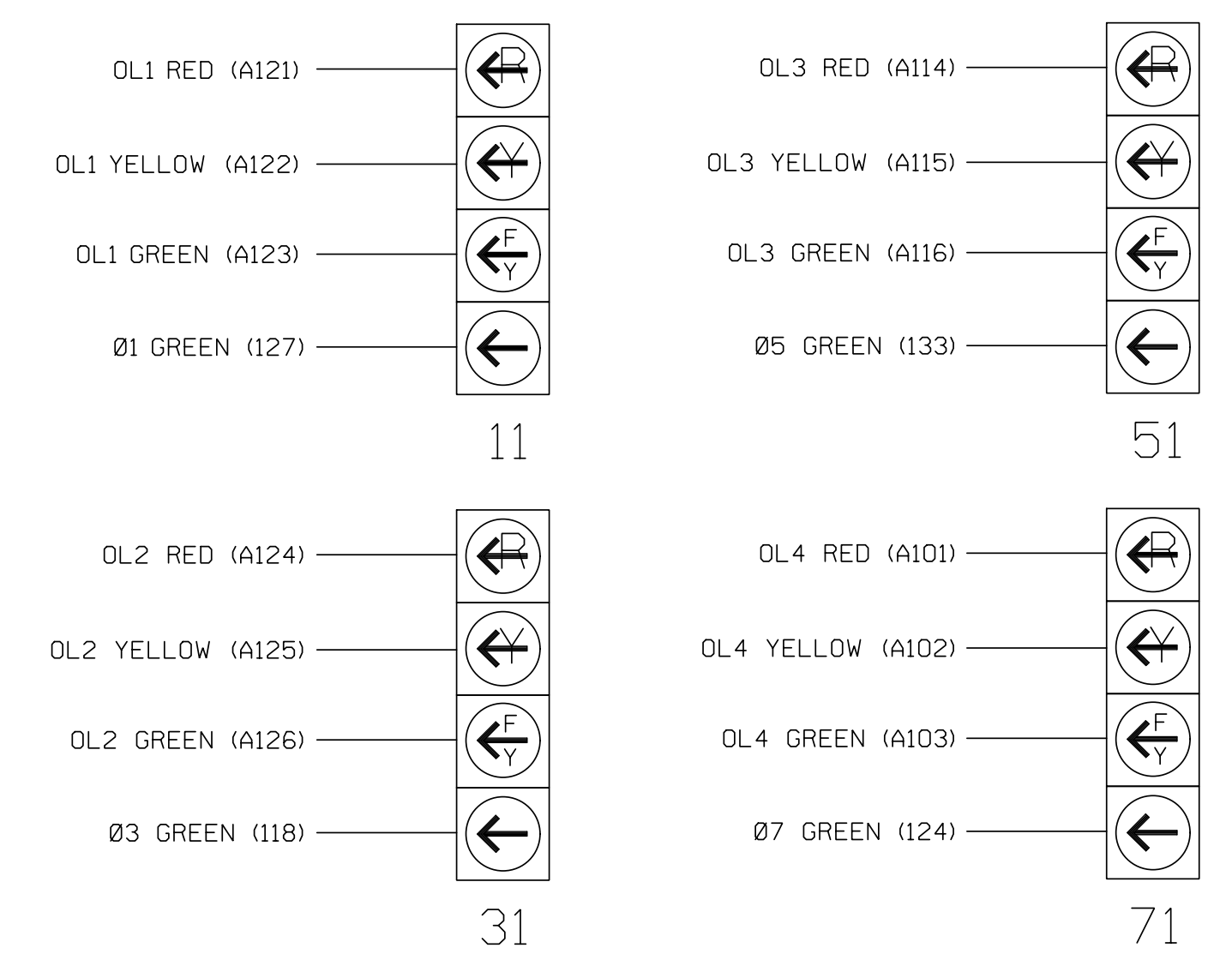- SLOT 2
- LOWER

INPUT FILE POSITION LAYOUT
(front view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I" U	Ø1 / 1A	Ø2 / 2A	SLOT EMPTY	SLOT EMPTY	Ø3 / 3A	Ø4 / 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø2PED DC ISOLATOR	Ø6PED DC ISOLATOR	FS DC ISOLATOR
FILE "I" L	NOT USED	NOT USED	EMPTY	EMPTY	NOT USED	Ø4 / 4B	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	Ø4PED DC ISOLATOR	Ø8PED DC ISOLATOR	ST DC ISOLATOR
FILE "J" U	Ø5 / 5A	Ø6 / 6A	SLOT EMPTY	SLOT EMPTY	Ø7 / 7A	Ø8 / 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
FILE "J" L	NOT USED	NOT USED	EMPTY	EMPTY	NOT USED	Ø8 / 8B	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

FYA SIGNAL WIRING DETAIL
(wire signal heads as shown)

OL1 RED (A121)
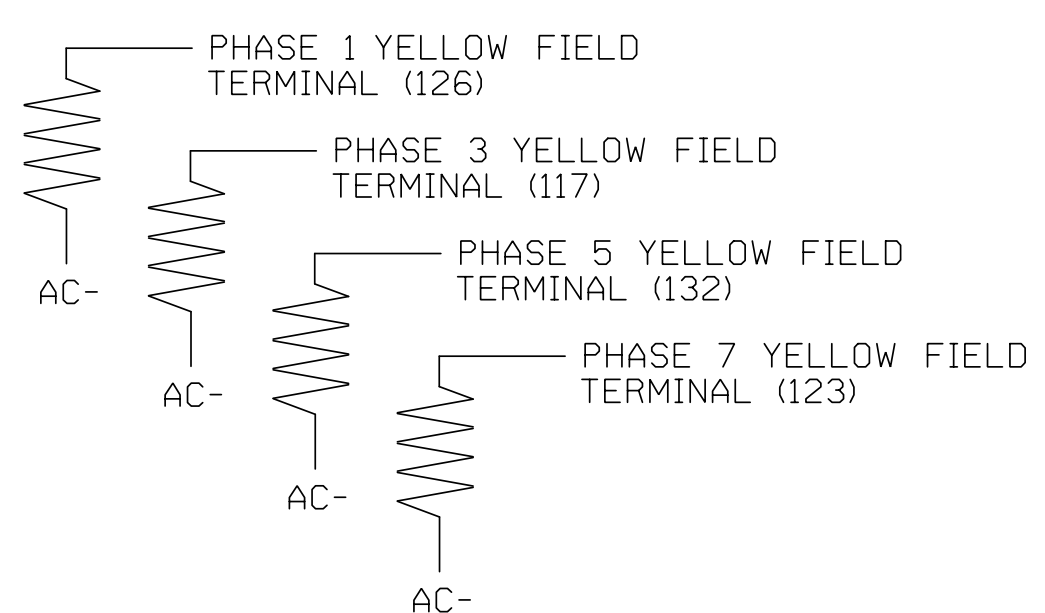OL1 YELLOW (A122)
OL1 GREEN (A123)
Ø1 GREEN (127)
11

OL3 RED (A114)
OL3 YELLOW (A115)
OL3 GREEN (A116)
Ø5 GREEN (133)
51

OL2 RED (A124)
OL2 YELLOW (A125)
OL2 GREEN (A126)
Ø3 GREEN (118)
31

OL4 RED (A101)
OL4 YELLOW (A102)
OL4 GREEN (A103)
Ø7 GREEN (124)
71

LOAD RESISTOR INSTALLATION DETAIL
(install resistors as shown below)

ACCEPTABLE VALUES

VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)

PHASE 1 YELLOW FIELD TERMINAL (126)
PHASE 3 YELLOW FIELD TERMINAL (117)
PHASE 5 YELLOW FIELD TERMINAL (132)
PHASE 7 YELLOW FIELD TERMINAL (123)
AC-

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 10-1325
DESIGNED: AUGUST 2023
SEALED: 04/29/2024
REVISED: N/A

Signal Upgrade - Final Design
Electrical Detail - Sheet 1 of 2

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared for:
NC Department of Transportation
Transportation Mobility and Safety Division
ITS & Signal Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SR 3448 (Pleasant Plains Road) at SR 3440 (McKee Road)

Division 10   Mecklenburg County   Matthews

PLAN DATE: August 2023	REVIEWED BY: SL Phillips
PREPARED BY: SP Pennington	REVIEWED BY:

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 032607
STACIE L. PHILLIPS

REVISIONS	INIT.	DATE

4/29/2024
DATE

SIG. INVENTORY NO. 10-1325