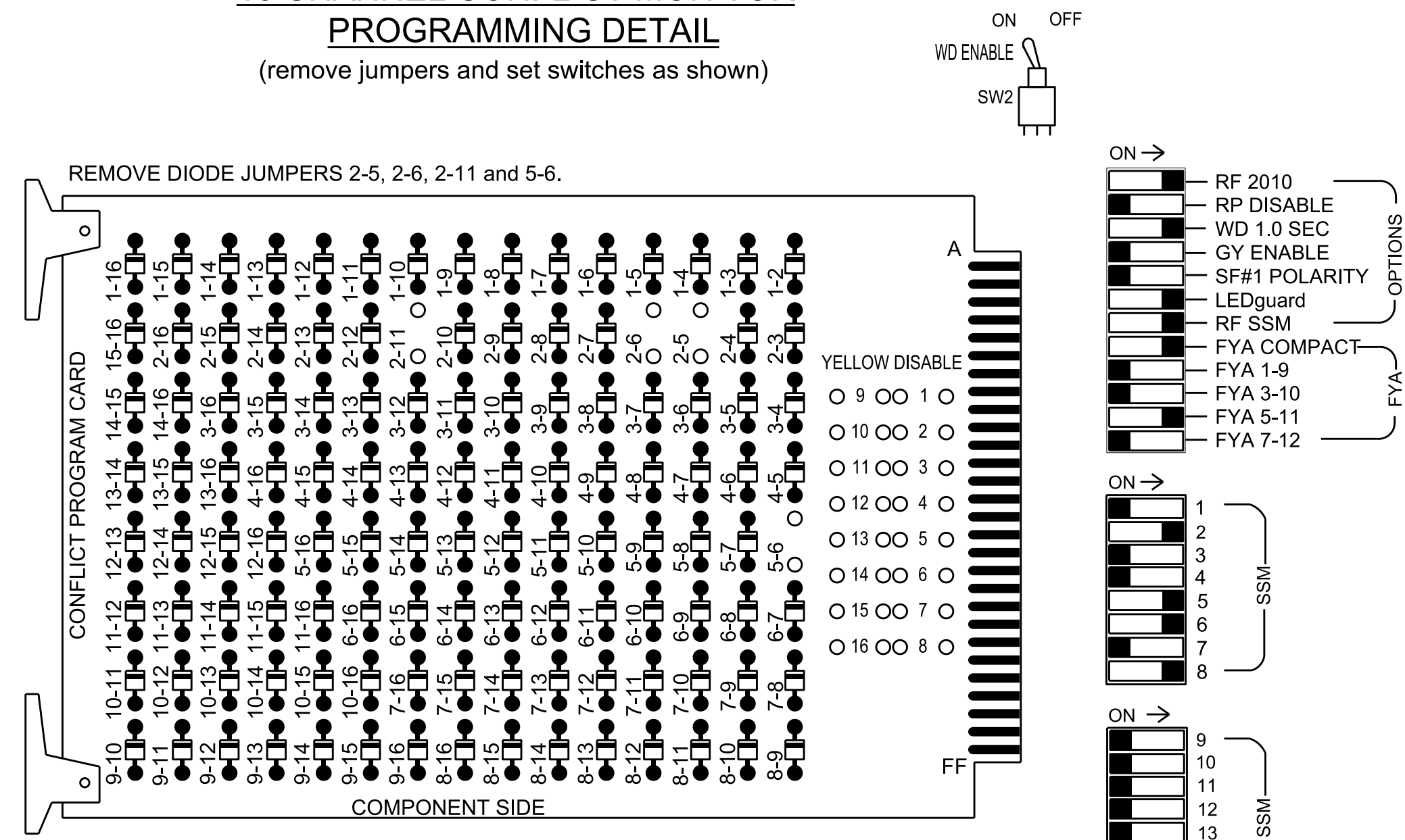


### 16 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE JUMPERS AS SHOWN

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.
3. Special cabinet wiring is required to utilize FYA COMPACT mode. See Ped Yellow Conflict Monitor Wiring Detail on this sheet.

### 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. Ensure that Red Enable is active at all times during normal operation. To prevent red failures on unused monitor channels, tie unused red monitor inputs 1,3,4,7,9,10,11, 12,13,14,15 & 16 to AC+ per the cabinet manufacturer's instructions.
3. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
4. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
5. The cabinet and controller are part of the NC 56 (Butner) CLS. Signal System #: D05-56\_Butner

### 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.....S2, S5, S6, S6P, S8  
 Phases Used.....2, 5, 6, 8  
 Overlap "1".....Not Used  
 Overlap "2".....Not Used  
 Overlap "3".....\*  
 Overlap "4".....Not Used

\*See overlap programming detail on sheet 2

### SIGNAL HEAD HOOK-UP CHART

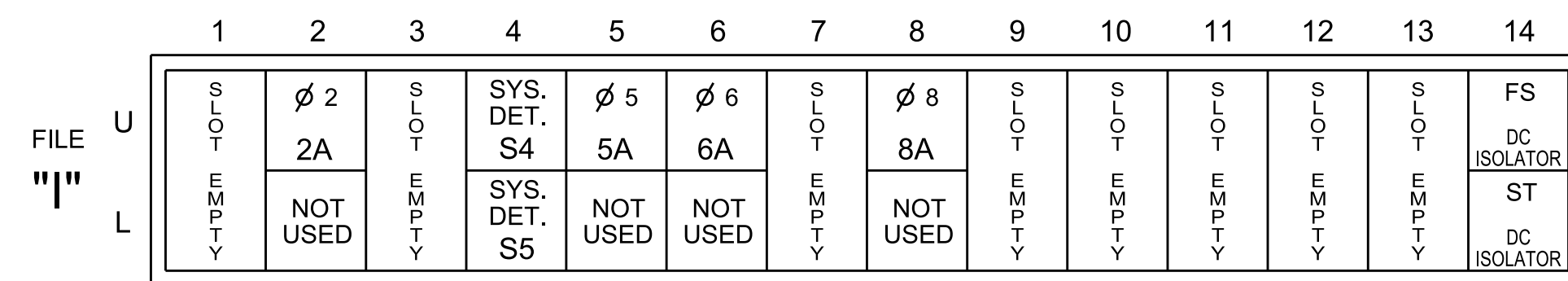
LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	11	15	7	8	16
PHASE	1	2	2 PED	3	4	4 PED	OL3	6	5 GRN	6 PED	7	8	8 PED
SIGNAL HEAD NO.	NU	21,22	NU	NU	NU	NU	51	61,62	51	NU	NU	81,82	NU
RED		128						134				107	
YELLOW		129						135				108	
GREEN												109	
RED ARROW								131					
YELLOW ARROW								132					
FLASHING YELLOW ARROW								133					
GREEN ARROW		130						136	120				*

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 POSITION LAYOUT

(front view)



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

FS = FLASH SENSE  
 ST = STOP TIME

! If present, remove jumper from I5-F to I5-W on rear of input file.

### 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
2A	TB21-3,4	I2U	39	1	2	2					X	
*S4	TB21-7,8	I4U	41	3	8	SYS						
*S5	TB23-7,8	I4L	45	7	9	SYS						
5A	TB21-9,10	I5U	55	17	15 *	5	15.0		X		X	
6A	TB21-11,12	I6U	40	2	16	6			X		X	
8A	TB22-1,2	I8U	42	4	22	8			X		X	

\*System detector only. Remove any assigned vehicle phase.

\* For the detectors to work as shown on the signal plan see the Detector Programming Detail for Alternate Phasing on Sheet 2 of this plan.

INPUT FILE POSITION LEGEND: J2L  
 FILE J  
 SLOT 2  
 LOWER

### PED YELLOW CONFLICT MONITOR WIRING DETAIL

(make cabinet wiring changes as shown below)

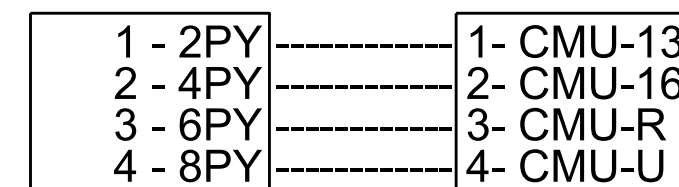
In order to use FYA COMPACT mode with the 16 or 18 Channel Monitor, the cabinet must be wired such that the (unused) Ped Yellow load switch outputs are wired to the conflict monitor as follows: From 6 PY (field term. 120) to chan. 10 green (monitor pin R).

Follow the instructions below to make appropriate connections:

- STEP 1: Fold down rear panel of output file.
- STEP 2: Find unused wiring harness from conflict monitor card edge connector (which should be tied and bundled together).
- STEP 3: Find the connector that correspond to the following conflict monitor card edge pins and solder wire to the appropriate terminal on the rear of the output file shown below:

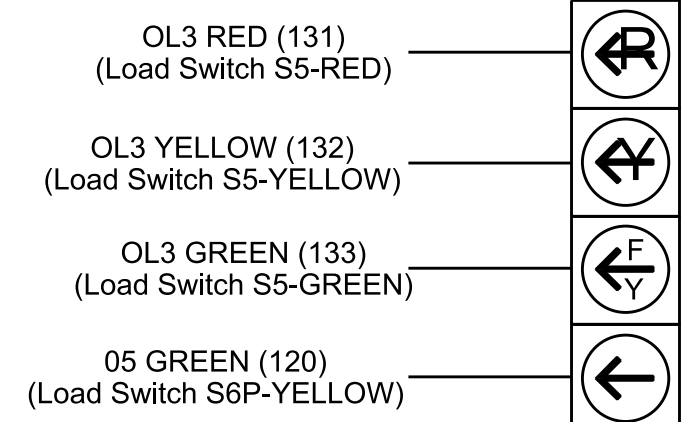
CMU-R -----6PY (term. 120)

NOTE: Some cabinet manufacturers use keyed connectors to accomplish this wiring configuration. If connectors are used, fold down the rear panel of the output file and find the set of 3 keyed connectors and connect them as shown below:



### FYA SIGNAL WIRING DETAIL

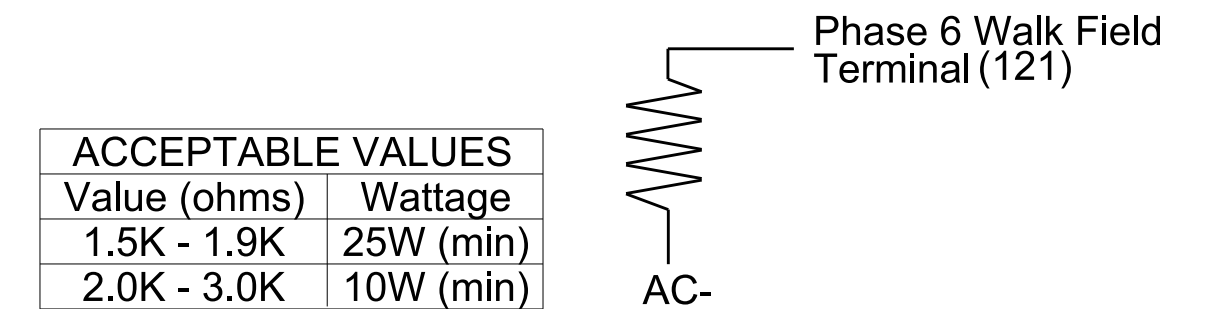
(wire signal heads as shown)



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### LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)



ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-2126  
 DESIGNED: February 2024  
 SEALED: 03/14/2024  
 REVISED: N/A

Electrical Detail - Sheet 1 of 2

Prepared in the Offices of:  
  
 750 N. Greenfield Pkwy, Garner, NC 27529

NC 56  
 at  
 I-85 NB Ramps

Division 5 Granville County Butner

PLAN DATE: March 2024 REVIEWED BY:  
 PREPARED BY: Sarah Kirkpatrick REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

DocuSigned by:  
 Ryan W. Hough  
 03/15/2024

SIG. INVENTORY NO. 05-2126

15-MAR-2024 14:55  
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