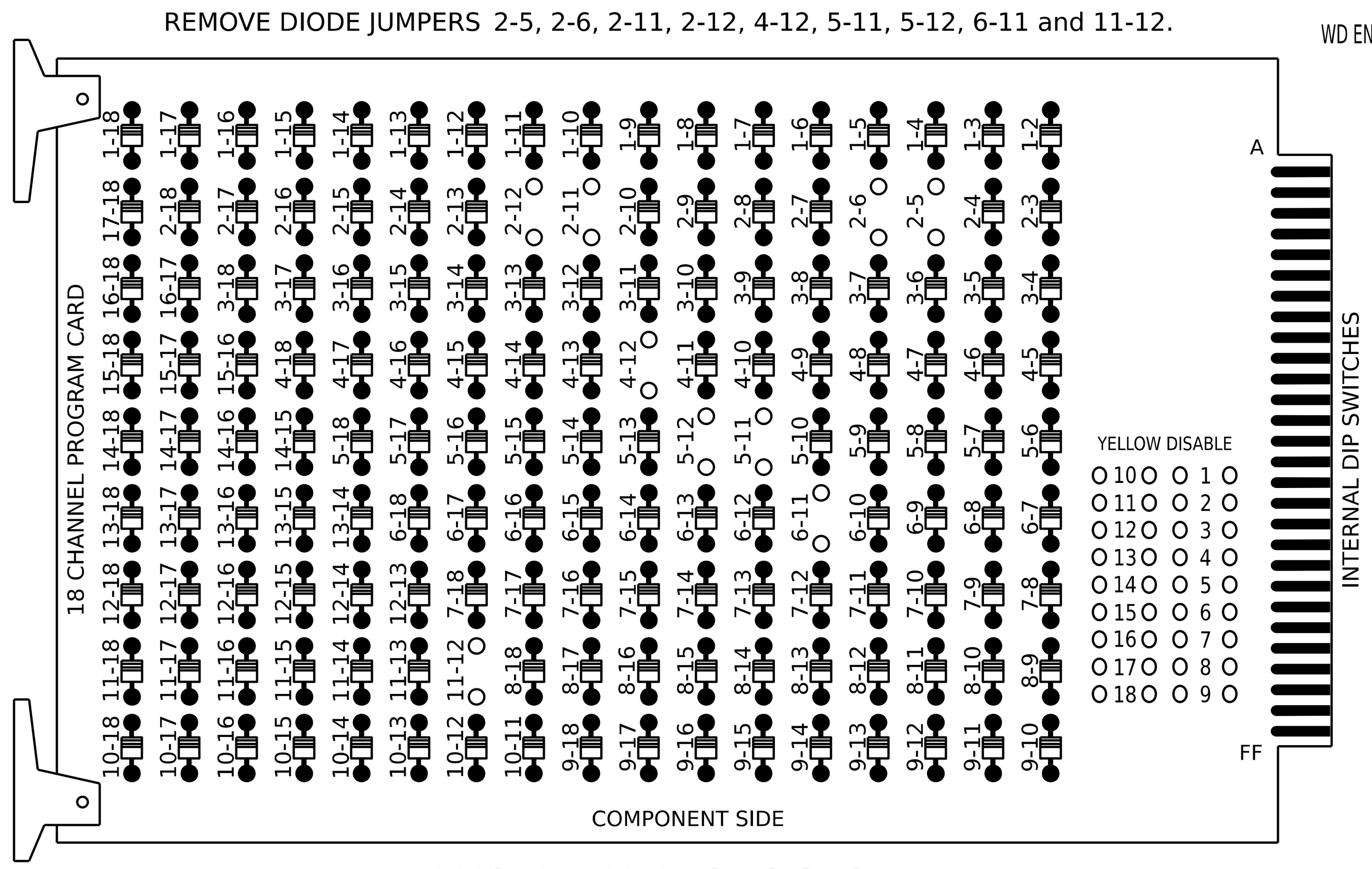
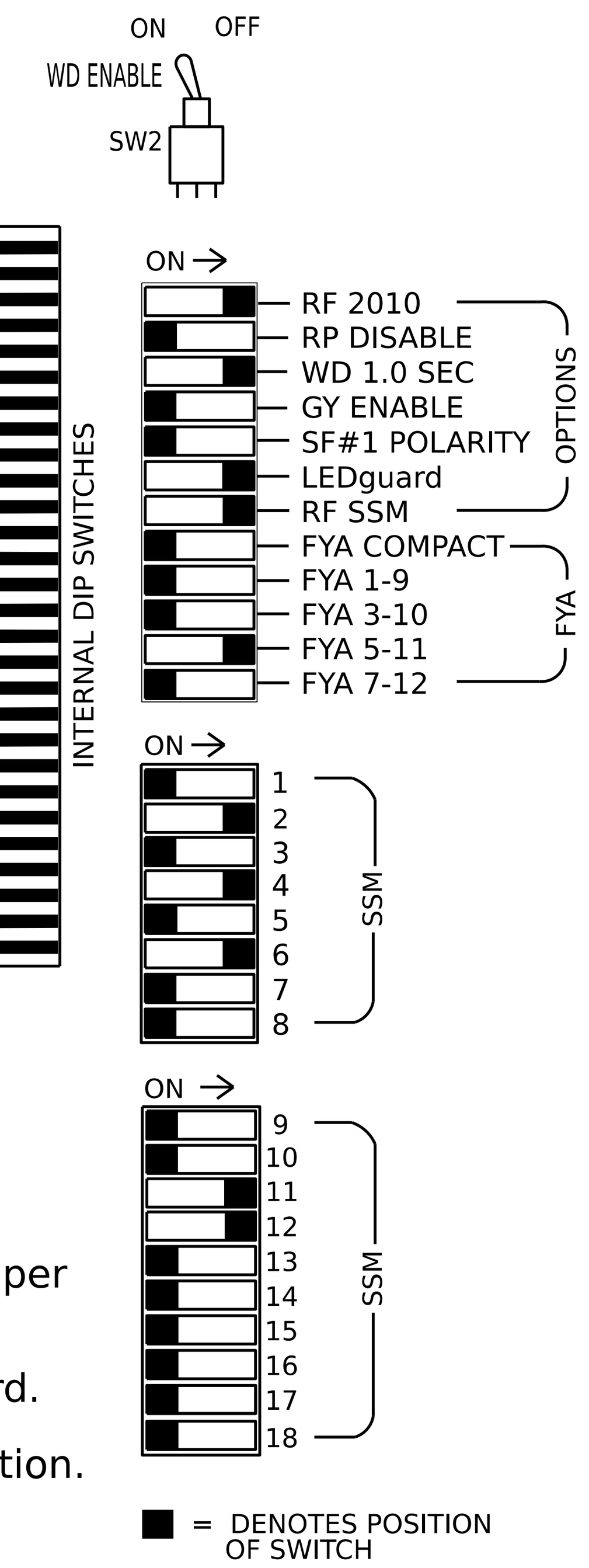
18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(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. Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
3. Ensure that the Red Enable is active at all times during normal operation.
4. Integrate monitor with Ethernet network in cabinet.

NOTES

1. To prevent "flash-conflict" problems, insert red flash program blocks for all vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
2. Program controller to start up in phases 2 and 6 Green.
3. Enable simultaneous gap-out feature for all phases.
4. The cabinet and controller are part of the Hickory City System.
5. Default the controller before programming this detail.

EQUIPMENT INFORMATION

Controller...................................... 2070
Cabinet... 332 w/ Aux
Software.. SE-PAC2070
Cabinet Mount............................... Base
Output File Positions..................... 18 With Aux. Output File
Load Switches Used...................... S2, S5, S7, S8, AUX S4, AUX S5
Phases Used.................................. 2, 4, 5, 6
Overlap "A".................................. Not Used
Overlap "B".................................. Not Used
Overlap "C".................................. *
Overlap "D".................................. *

*See overlap programming detail on sheet 2

SIGNAL HEAD HOOK-UP CHART

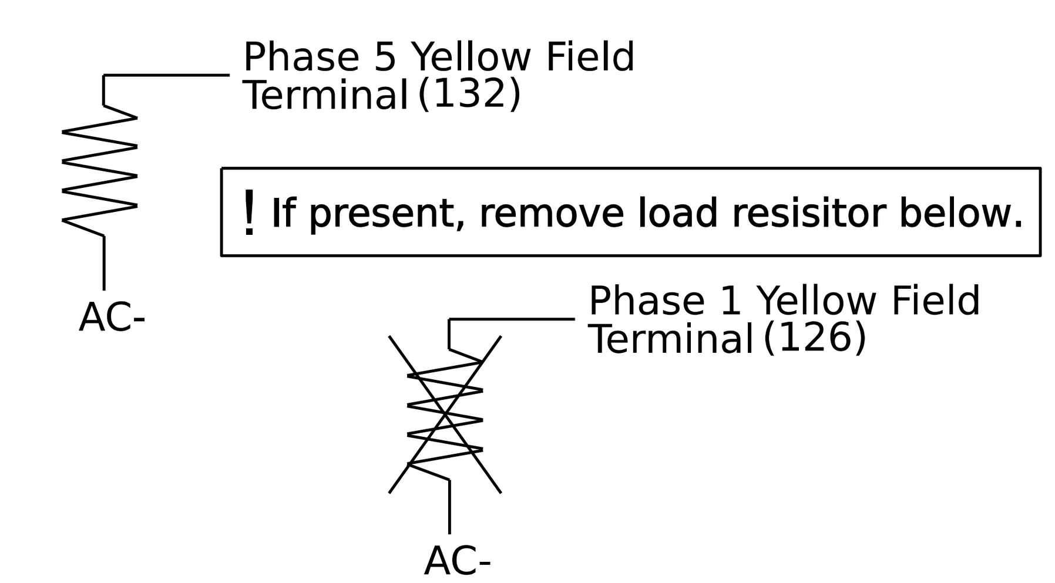
LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	21,22	NU	NU	41	NU	51★	61,62	NU	NU	NU	NU	NU	NU	NU	51★	42,43	NU
RED		128						134										
YELLOW		129					*	135										
GREEN		130						136										
RED ARROW					101											A114	A101	
YELLOW ARROW					102											A115	A102	
FLASHING YELLOW ARROW																A116		
GREEN ARROW					103		133										A103	
(hand symbol)																		
(walking person symbol)																		

NU = Not Used
*Denotes install load resistor. See LOAD RESISTOR INSTALLATION DETAIL this sheet.
★See pictorial of head wiring in detail this sheet.

LOAD RESISTOR INSTALLATION DETAIL

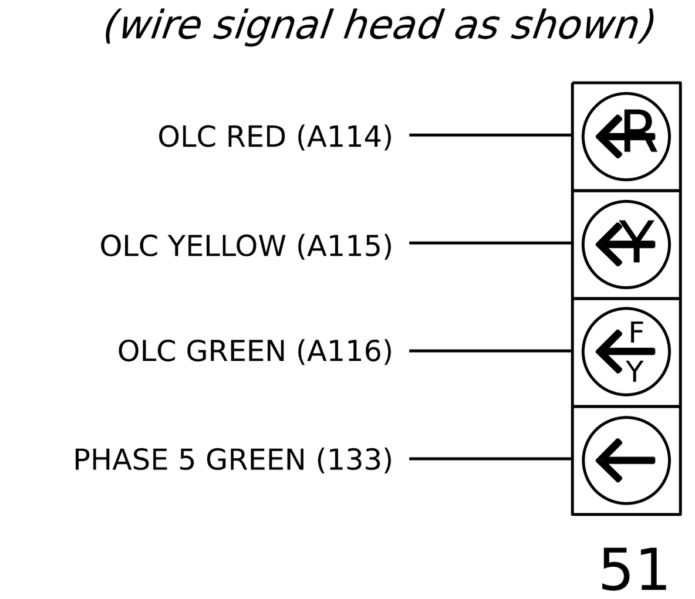
(install resistor as shown)

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



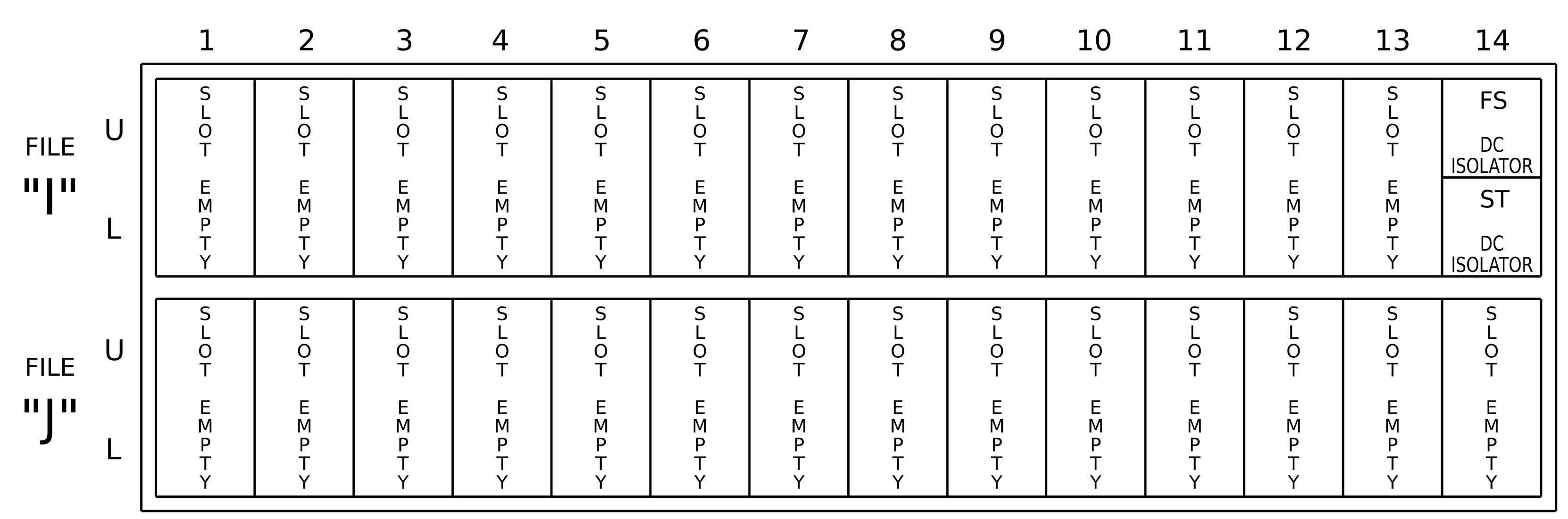
FYA SIGNAL WIRING DETAIL

(wire signal head as shown)



INPUT FILE POSITION LAYOUT

(front view)



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

FS = FLASH SENSE
ST = STOP TIME

SPECIAL DETECTOR NOTE

Install a multi-zone microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer-approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO INSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

1. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
2. ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
3. REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 12-0309T3
DESIGNED: January 2026
SEALED: 04/13/2026
REVISED: N/A

Electrical Detail - (TMP Phase 4) - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Electrical and Programming Details For:

I-40 EB Ramp at SR 1007 (Lenoir Rhyne Blvd. SE)

Prepared in the Offices of:
Transportation Mobility and Safety Division
ITS & Signals Management Section
State of North Carolina Department of Transportation
750 N. Greenfield Pkwy, Garner, NC 27529

Division 12 | Catawba County | Hickory

PLAN DATE: April 2026	REVIEWED BY:
PREPARED BY: Tim Langston	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031001 D. TODD JOYCE

DocuSigned by: D. Todd Joyce 04/14/2026 DATE

SIG. INVENTORY NO. 12-0309T3