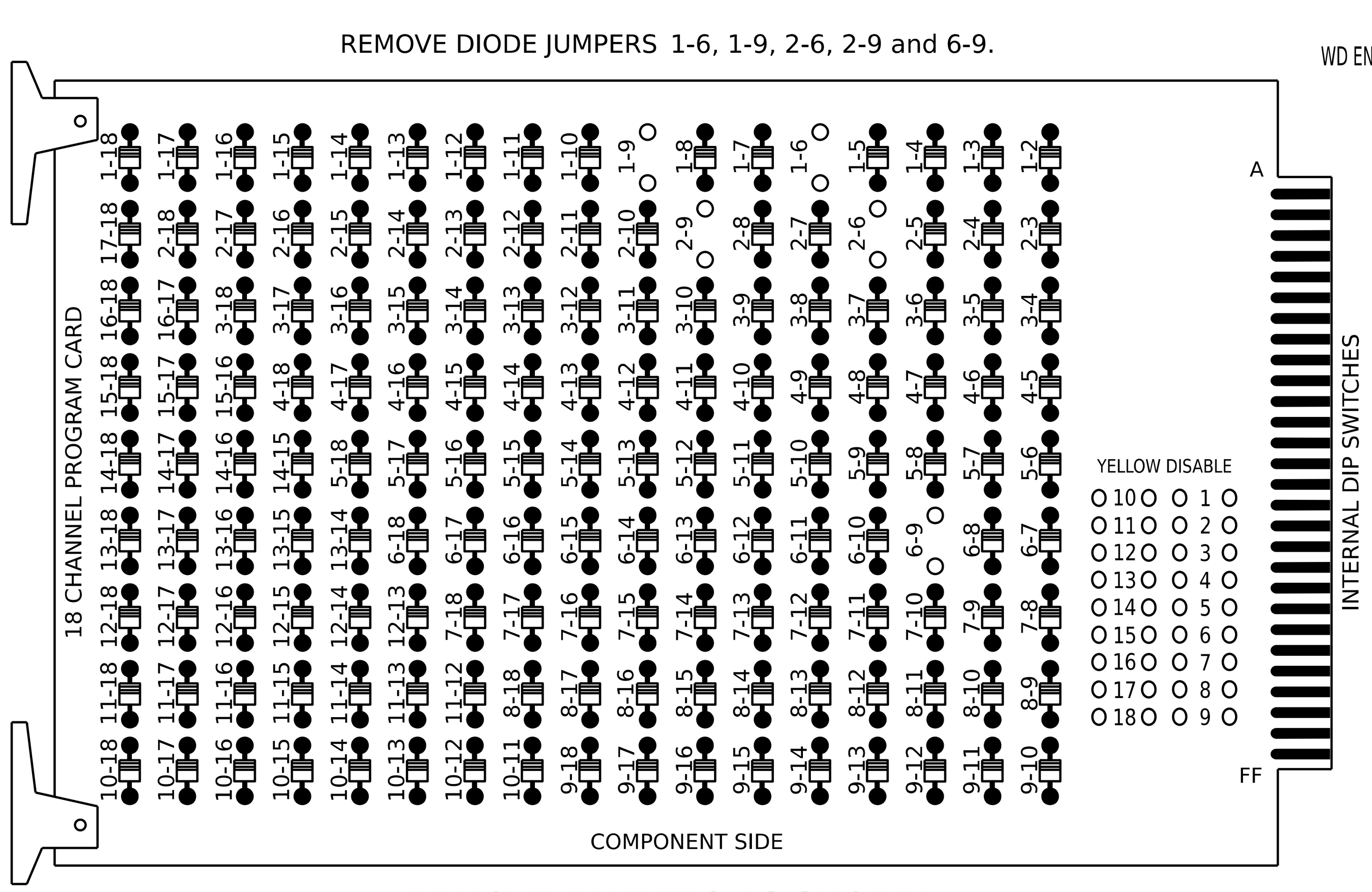
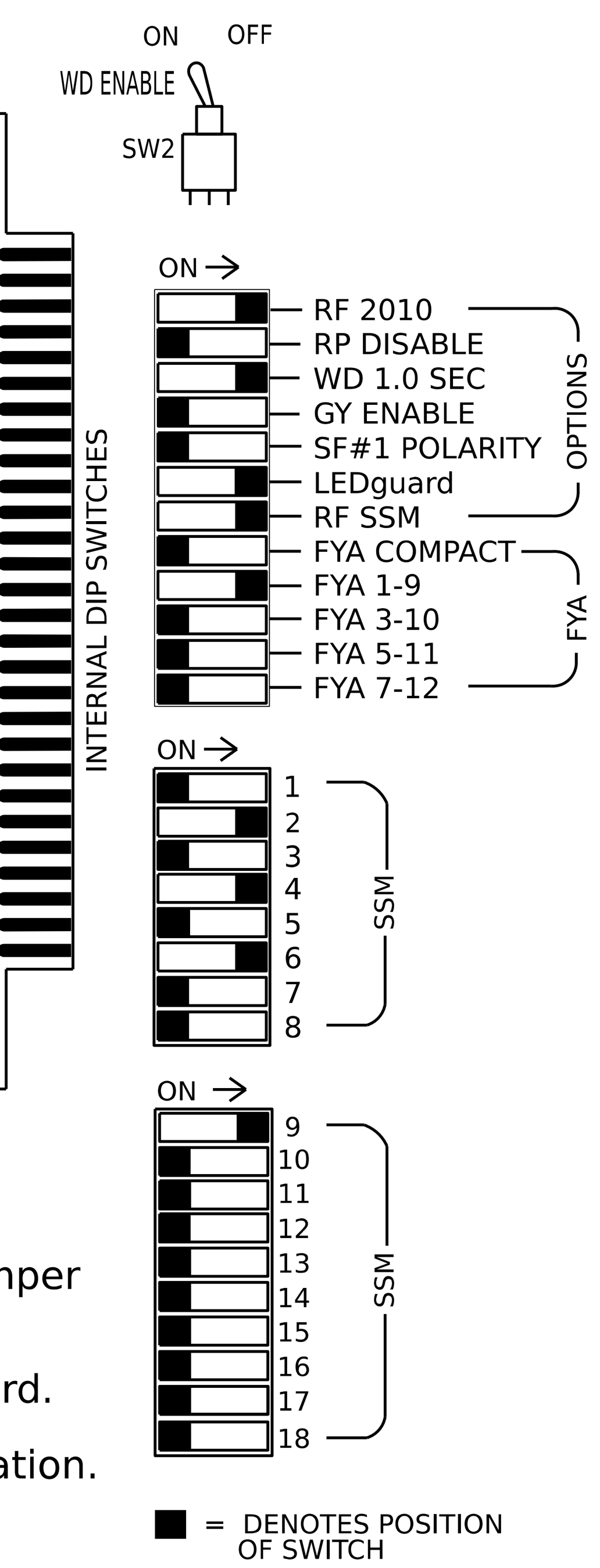
18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(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.

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......................	S1, S2, S5, S8, AUX S1
Phases Used.................................	1, 2, 4, 6
Overlap "A"..................................	*
Overlap "B"..................................	Not Used
Overlap "C"..................................	Not Used
Overlap "D"..................................	Not Used

*See overlap programming detail on sheet 2

PROJECT REFERENCE NO.	SHEET NO.
I-5716	Sig. 2.1

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.	11★	21	22	NU	NU	41,42	NU	NU	61	62	NU	NU	NU	NU	11★	NU	NU	NU	NU	NU
RED		128	128			101			134	134										
YELLOW	*	129	129			102			135	135										
GREEN			130			103			136											
RED ARROW															A121					
YELLOW ARROW															A122					
FLASHING YELLOW ARROW															A123					
GREEN ARROW	127	130								136										
(don't walk)																				
(walk)																				

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)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L														ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L														

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.

INIT & N.A. RESP PROGRAMMING DETAIL

(program controller as shown below)

1. From Main Menu select `3-PHASE DATA`
2. From PHASE DATA Submenu select `4-INIT & N.A. RESP+`

```
PHASE......1...2...3...4...5...6...7...8
 INITIAL   1   4   0   1   0   4   0   0
 NA RESP   0   1   0   2   0   1   0   0
 UPDT GRN  0   0   0   0   0   0   0   0
CODES.....0....1....2...3...4...5...6
 INIL   NONE INACT RED YEL GRN DRK G/DW
 NA RSP NONE  NA1  NA2 1&2 --- --- ---
                                    ***
```

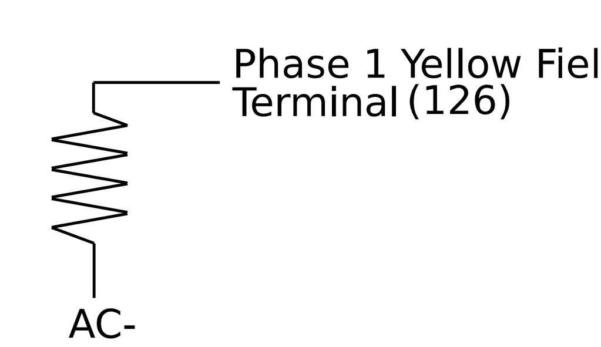
← Notice phases 3,5,7 & 8 not used!

INIT & N.A. RESP PROGRAMMING COMPLETE

LOAD RESISTOR INSTALLATION DETAIL

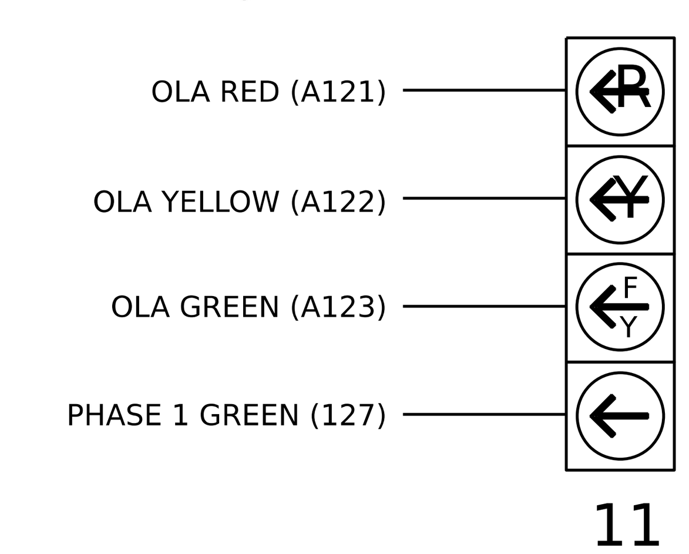
(install resistor as shown)

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)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 12-0309T1
DESIGNED: January 2026
SEALED: 04/13/2026
REVISED: N/A

Electrical Detail - (TMP Phase 2) - 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)

Division 12 Catawba County Hickory

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

REVISIONS	INIT.	DATE

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

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031001 D. TODD JOYCE

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

SIG. INVENTORY NO. 12-0309T1