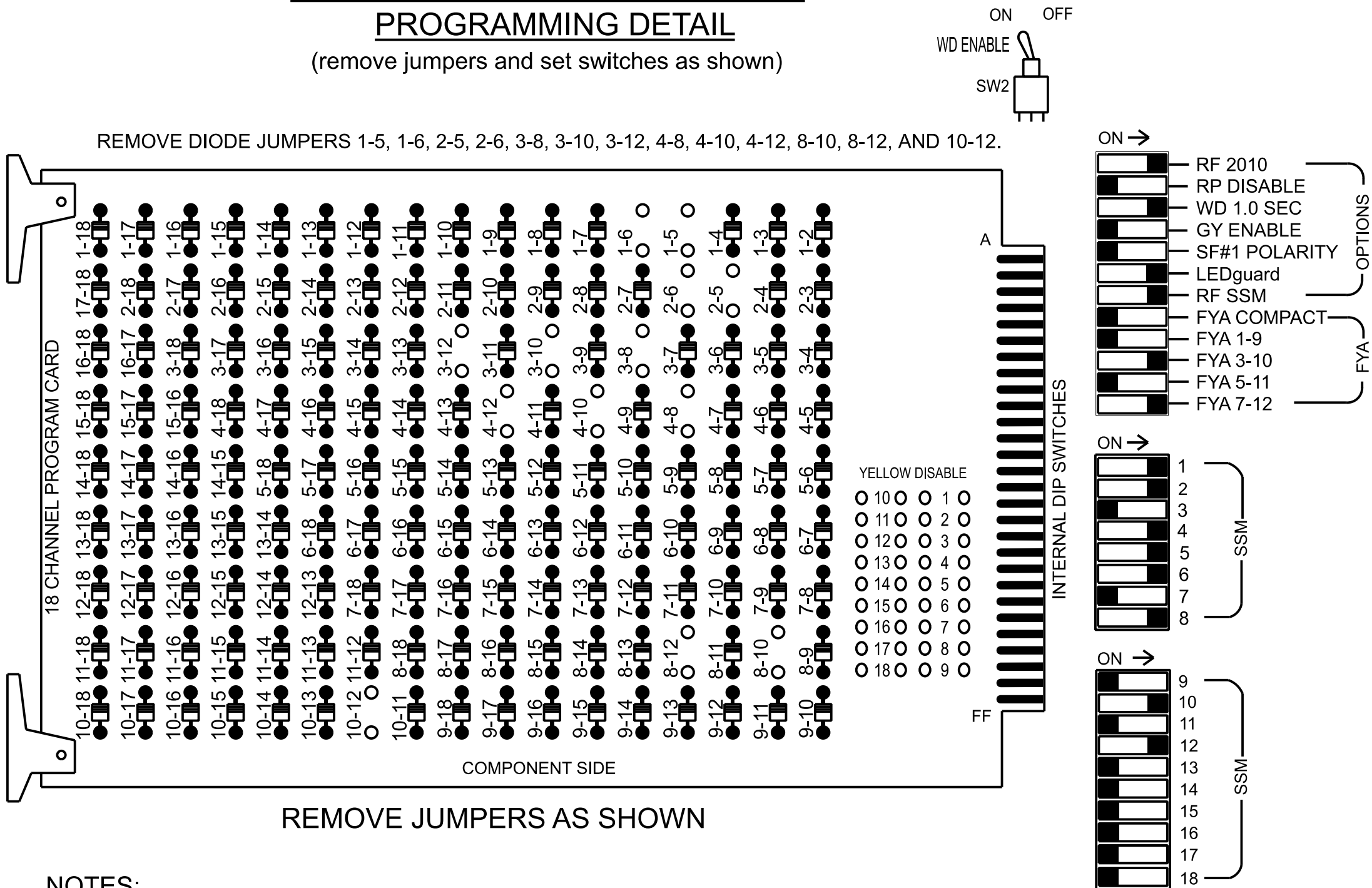


18 CHANNEL CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



NOTES

- 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 plan.
- Program phases 4 and 8 for Dual Entry.
- Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
- If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
- This cabinet and controller are part of the Signal System #: D13-24_Rutherforddon.

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, S4, S5, S7, S8, S11,
AUX S2, AUX S5
Phases Used.....1, 2, 3, 4, 5, 6, 8
Overlap "1".....Not Used
Overlap "2".....*
Overlap "3".....Not Used
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	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	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	11	21,22	NU	31	42,43	NU	43	51	61,62	NU	NU	81,82	NU	NU	31	NU	NU	41
RED		128			101				134			107						
YELLOW		129		*	102				135			108						
GREEN		130			103				136			109						
RED ARROW	125							131						A124			A101	
YELLOW ARROW	126						132	132						A125			A102	
FLASHING YELLOW ARROW														A126			A103	
GREEN ARROW	127			118			133	133										
⬇																		
⬇																		

NU = Not Used

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

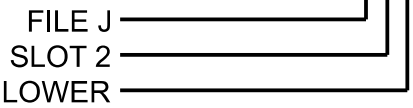
*See pictorial of head wiring in detail this sheet.

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	-	-	-	*	33	1	3.0		X		X	
2A	-	-	-	*	38	2			X		X	
3A	-	-	-	*	34	3	15.0		X		X	
4A	-	-	-	*	126	8	3.0		X		X	
4A	-	-	-	*	44	4			X		X	
4B	-	-	-	*	45	4			X		X	
5A	-	-	-	*	35	5			X		X	
5B	-	-	-	*	51	5	15.0		X		X	
6A	-	-	-	*	54	6			X		X	
8A	-	-	-	*	60	8			X		X	
8B	-	-	-	*	61	8			X		X	

*For Input Point numbers, see SDLC Non-Intrusive Detection Chart this sheet.

INPUT FILE POSITION LEGEND: J2L



INPUT FILE POSITION LAYOUT

(front view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	FS DC ISOLATOR ST DC ISOLATOR
FILE "J"	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T	S O T

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

FS = FLASH SENSE
ST = STOP TIME

SPECIAL DETECTOR NOTE

Install a multizone 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.

SDLC NON-INTRUSIVE DETECTION CHART

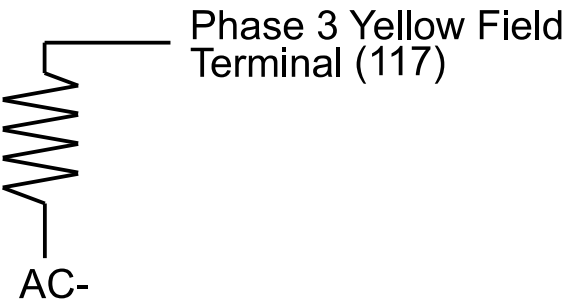
	Detector Rack #3		Detector Rack #4	
Input Point	Det # (Index)	Detector Zone	Det # (Index)	Detector Zone
1	33	1A	49	NU
2	34	3A	50	NU
3	35	5A	51	5B
4	36	NU	52	NU
5	37	NU	53	NU
6	38	2A	54	6A
7	39	NU	55	NU
8	40	NU	56	NU
9	41	NU	57	NU
10	42	NU	58	NU
11	43	NU	59	NU
12	44	4A	60	8A
13	45	4B	61	8B
14	46	NU	62	NU
15	47	NU	63	NU
16	48	NU	64	NU

NU = Not Used

LOAD RESISTOR INSTALLATION DETAIL

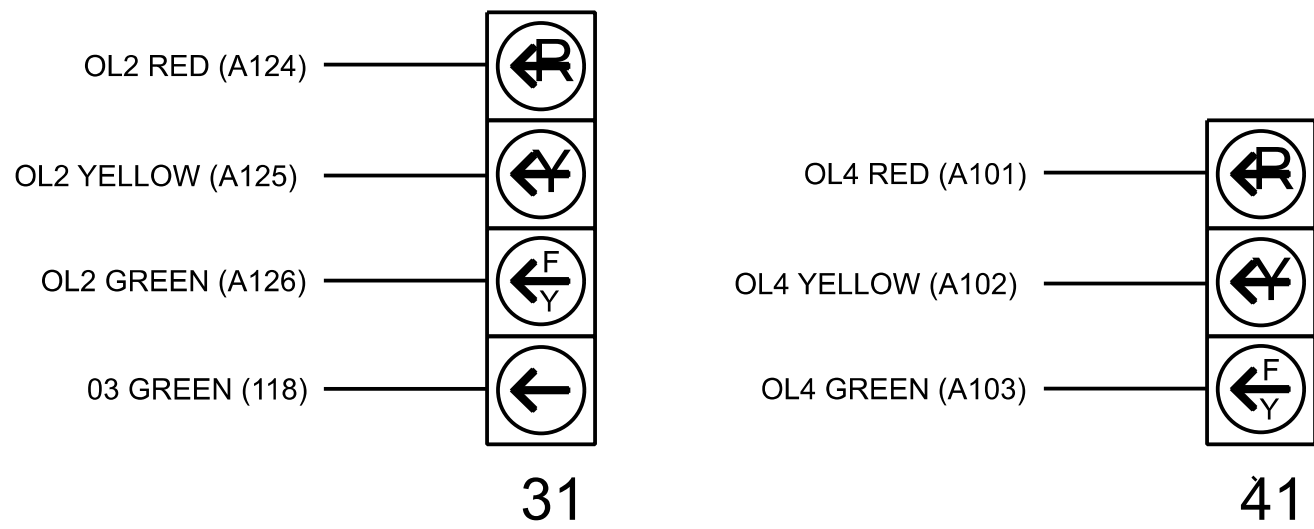
(install resistor as shown)

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



FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 13-0184T1
DESIGNED: FEBRUARY 2026
SEALED: 05/12/2026
REVISED:

Signal Upgrade -
Electrical Detail - Sheet 1 of 2
(Construction Phase 1)

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:		US 74 Alt (College Ave/Railroad Ave) at US 221 Alt-US 74 Bus (Charlotte Rd) Division 13 Rutherford County Rutherforddon		SEAL NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER W. T. SHAW R. SIMMONS
Prepared for the Offices of:		PLAN DATE: February 2026	REVIEWED BY: N. K. Vianich	REVISIONS INIT. DATE
		PREPARED BY: E.E. Tiller	REVIEWED BY: N. R. Simmons	
		Signature: <i>Natasha R. Simmons</i>		DATE: 5/12/2026
		750 N. Greenfield Pkwy, Garner, NC 27529		SIG. INVENTORY NO. 13-0184T1

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