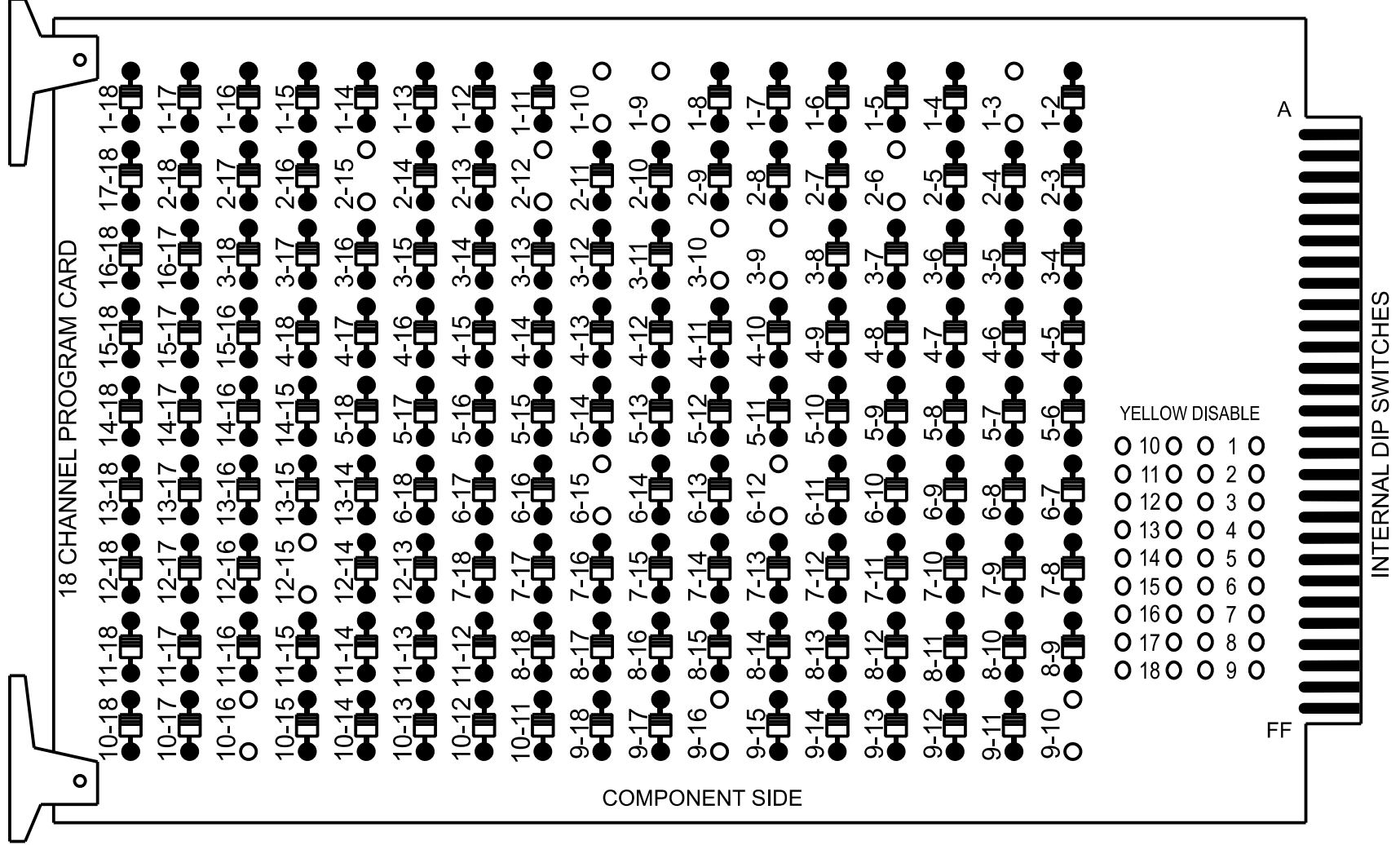


18 CHANNEL CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-3, 1-9, 1-10, 2-6, 2-12, 2-15, 3-9, 3-10, 6-12, 6-15, 9-10, 9-16, 10-16, and 12-15.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.

■ = DENOTES POSITION OF SWITCH

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 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.

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, S8, S9, S12, AUX S1, AUX S2, AUX S5
Phases Used.....2, 3, 3 PED, 4*, 6, 6 PED
Overlap "1".....**
Overlap "2".....**
Overlap "3".....Not Used
Overlap "4".....**

*Timing purposes only
**See overlap programming detail on sheet 2

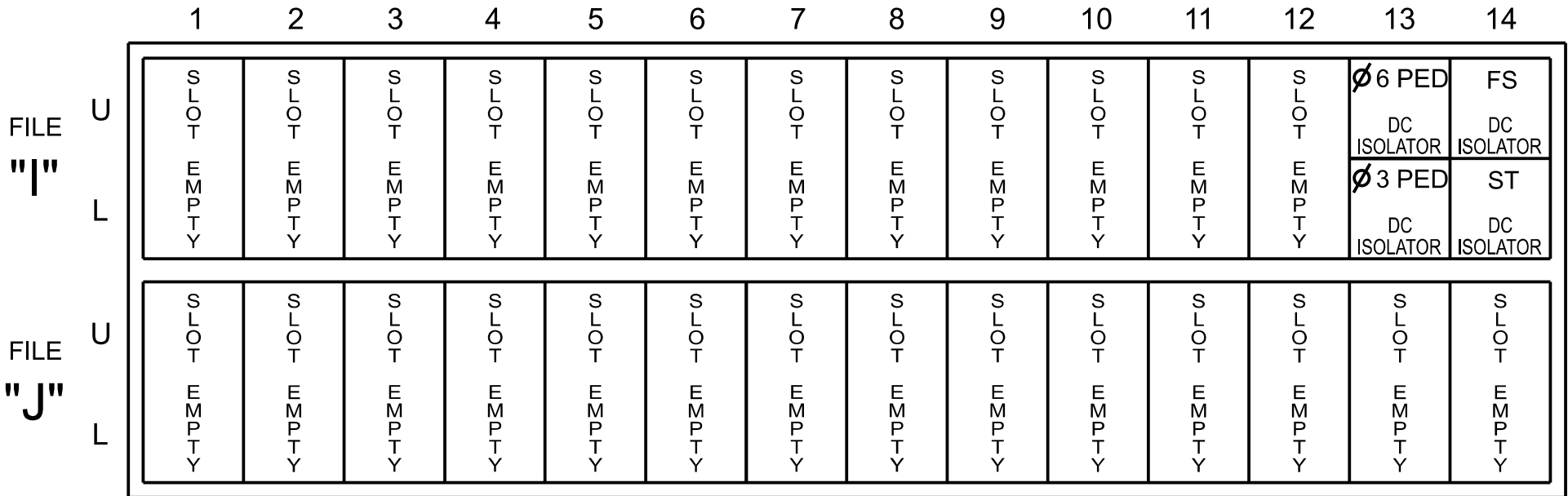
SIGNAL HEAD HOOK-UP CHART

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	OL7	2	2 PED	OL8	4	4 PED	5	6	6 PED	7	8	3 PED	OL1	OL2	SPARE	OL3	OL4	SPARE
SIGNAL HEAD NO.	41,42	22,23	NU	43	NC	NU	NU	61,62	P61, P62	NU	NU	P31,P32 P33,P34	41,42	43	NU	NU	21	NU
RED		128						134						A124				
YELLOW	*	129		*				135										
GREEN		130						136										
RED ARROW														A121			A101	
YELLOW ARROW														A122	A125		A102	
FLASHING YELLOW ARROW														A123	A126		A103	
GREEN ARROW	127			118														
Hand icon									119			110						
Walking person icon									121			112						

NU = Not Used
NC = Not Connected
* 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

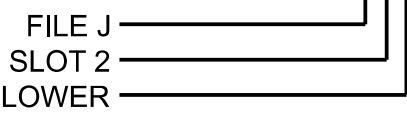
INPUT FILE CONNECTION & PROGRAMMING CHART

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	-	-	-	*	38	2			X		X	
2B	-	-	-	*	39	2			X		X	
4A	-	-	-	*	44	4	3.0		X		X	
4B	-	-	-	*	45	4			X		X	
6A	-	-	-	*	54	6			X		X	
PED PUSH BUTTONS												
P61,P62	TB8-7,9	I13U	68	34	6	PED 6						
P31,P32,P33,P34	TB8-8,9	I13L	70	36	8	PED 3						

*For Input Point numbers, see SDLC NON-INTRUSIVE DETECTION CHART this sheet.

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOT I13.

INPUT FILE POSITION LEGEND: J2L



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	NU	49	NU
2	34	NU	50	NU
3	35	NU	51	NU
4	36	NU	52	NU
5	37	NU	53	NU
6	38	2A	54	6A
7	39	2B	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	NU
13	45	4B	61	NU
14	46	NU	62	NU
15	47	NU	63	NU
16	48	NU	64	NU

NU = Not Used

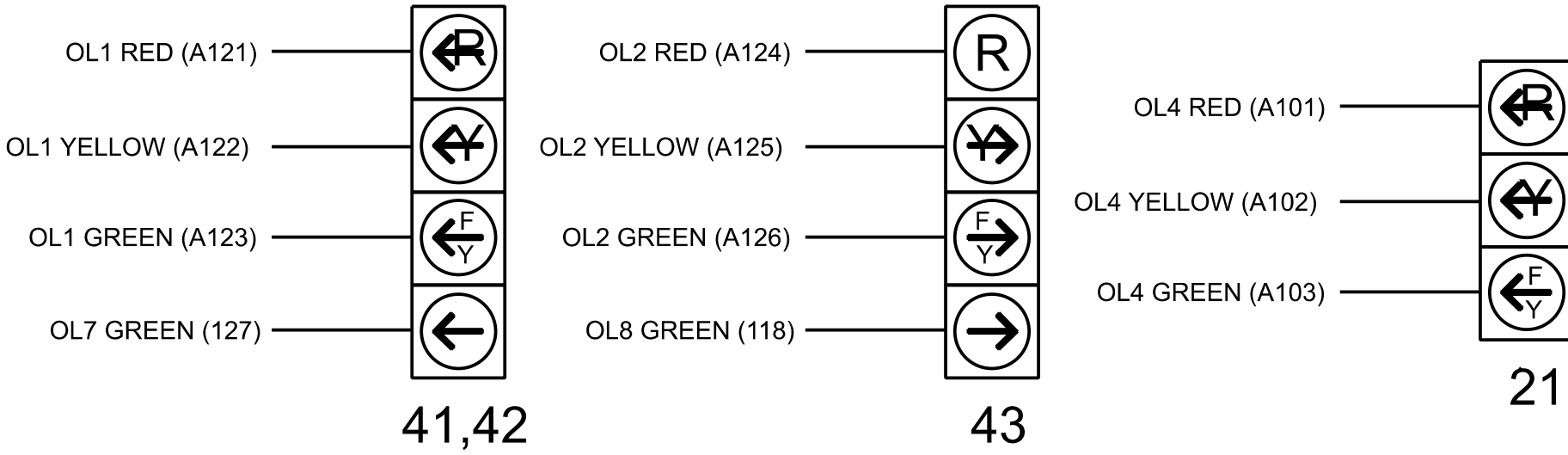
THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 13-0174
DESIGNED: FEBRUARY 2026
SEALED: 05/12/2026
REVISED:

HNTB

HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)

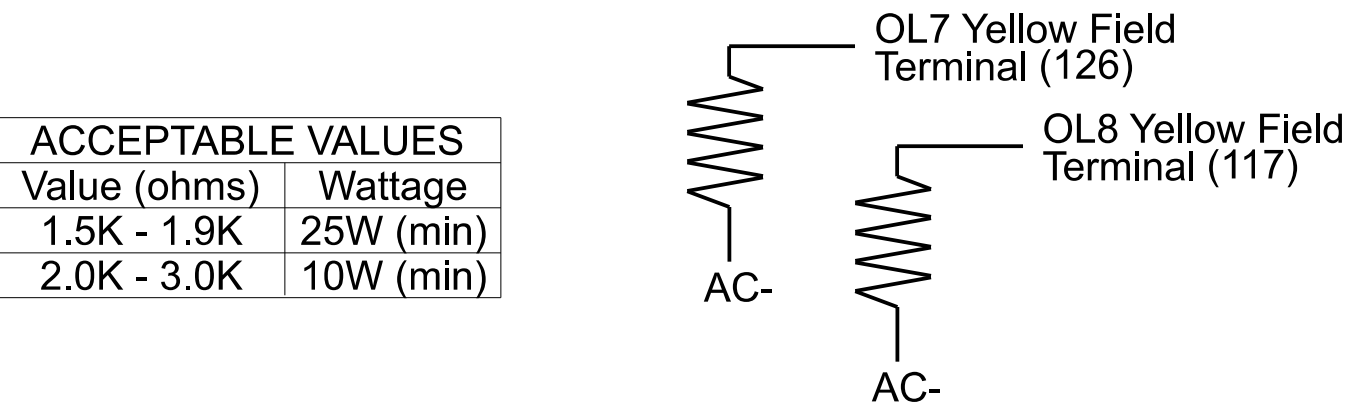


COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

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)

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

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:		US 221 Alt-US 74 Bus (Main St) at SR 1546 (Spindale St)		SEAL NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA R. SIMMONS	
Prepared for the Offices of:		Division 13 Rutherford County Spindale		5/12/2026	
PLAN DATE: February 2026		REVIEWED BY: N. K. Vianich		DATE	
PREPARED BY: E.E. Tiller		REVIEWED BY: N. R. Simmons		DATE	
REVISIONS		INIT.		DATE	
750 N. Greenfield Pkwy, Garner, NC 27529		Signature		DATE	
DocuSigned by:		Signature		DATE	
SIG. INVENTORY NO.		13-0174			