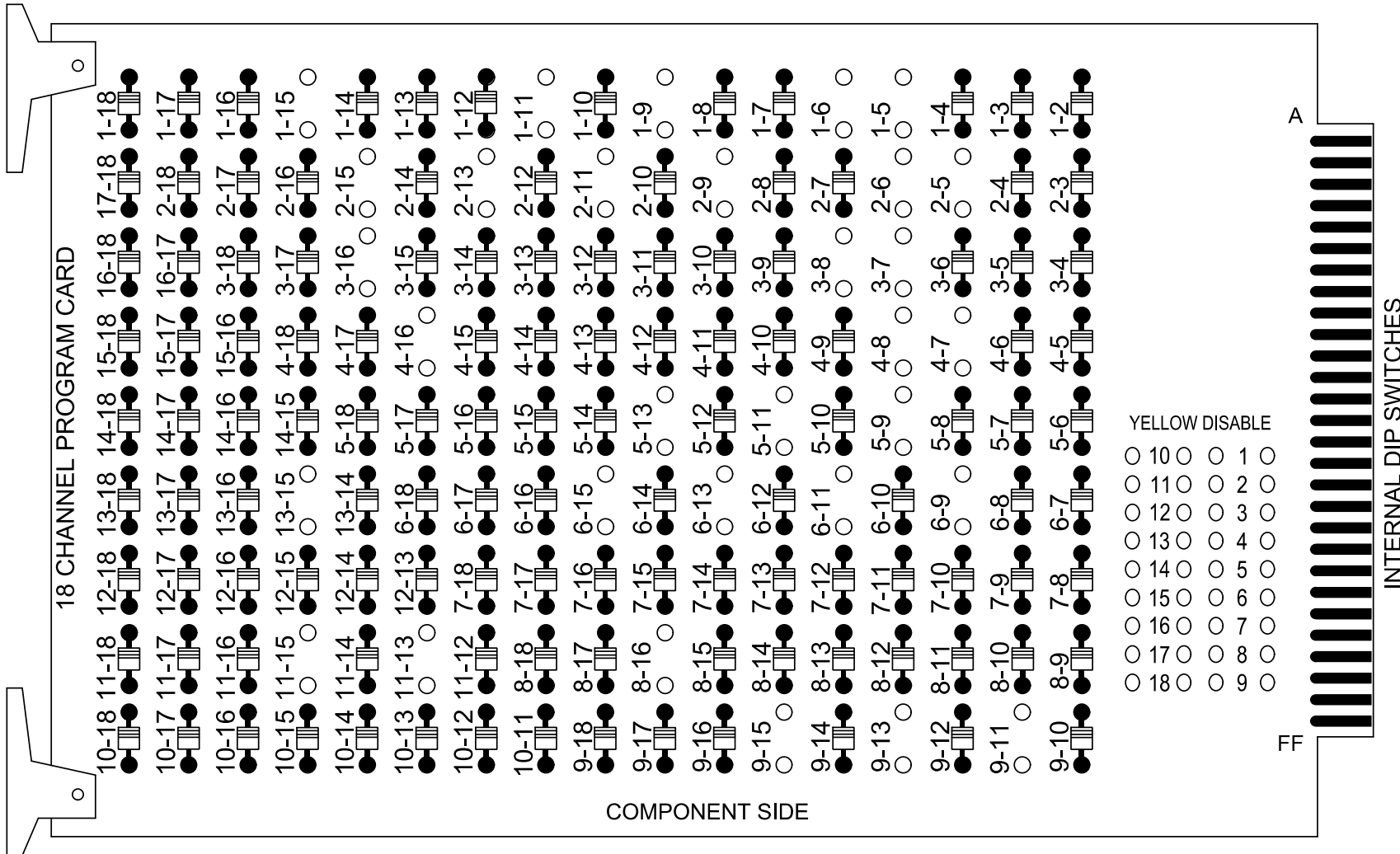


18 CHANNEL IP CONFLICT MONITOR
PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 1-15, 2-5, 2-6, 2-9, 2-11, 2-13, 2-15, 3-7, 3-8, 3-16,
4-7, 4-8, 4-16, 5-9, 5-11, 5-13, 6-9, 6-11,6-13, 6-15, 8-16, 9-11, 9-13, 9-15, 11-13, 11-15, and 13-15



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.
- Ensure that Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.

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 Plans.
- Program controller to start up in phase 2 Green No Walk and phase 6 Green No Walk.
- The cabinet and controller are part of the Concord Central System.

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,S3,S4,S5,S7,S8,S9,S10,
S11,S12,AUX S1,AUX S4

PHASES USED.....1,2,2PED,3,4,5,6,6PED,7,8,8PED
OVERLAP "1".....*
OVERLAP "2".....NOT USED
OVERLAP "3".....*
OVERLAP "4".....NOT USED
* See overlap programming detail on sheet 3.

INPUT FILE POSITION LAYOUT

(front view)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I" U	∅ 1	∅ 1	∅ 2	S T O P T I M E	∅ 3	∅ 4	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E
	1A	1B	2A		3A	4A								
FILE "J" U	NOT USED	NOT USED	∅ 2 2B	S T O P T I M E	NOT USED	NOT USED	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E
	∅ 5	∅ 5	∅ 6		∅ 7	∅ 8								
FILE "J" L	NOT USED	∅ 5	6A	S T O P T I M E	NOT USED	∅ 8	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E
	5A	5B	6A		7A	8A								
FILE "J" L	NOT USED	∅ 5	6B	S T O P T I M E	NOT USED	∅ 8	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E	S T O P T I M E
	5A	5B	6A		7A	8A								

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
1A	TB2-1,2	I1U	56	18	1 ★	1	15.0		X		X	
1B	TB2-5,6	I2U	39	1	29 ★	6	3.0		X		X	X
2A	TB2-9,10	I3U	63	29	4	2			X	X	X	
2B	TB2-11,12	I3L	76	42	5	2			X		X	
3A	TB4-5,6	I5U	58	20	7	3	3.0		X		X	
4A	TB4-9,10	I6U	41	3	8	4			X		X	
5A	TB3-1,2	J1U	55	17	15 ★	5	15.0		X		X	
5B	TB3-5,6	J2U	40	2	16	5	15.0		X		X	X
5C	TB3-7,8	J2L	44	6	17	5	15.0		X		X	
6A	TB3-9,10	J3U	64	30	18	6			X	X	X	
6B	TB3-11,12	J3L	77	43	19	6			X	X	X	
7A	TB5-5,6	J5U	57	19	21	7	3.0		X		X	
8A	TB5-9,10	J6U	42	4	22	8			X		X	
8B	TB5-11,12	J6L	46	8	23	8			X		X	
PED PUSH BUTTONS												
P21,P22	TB8-4,6	I12U	67	33	2	PED 2						
P61,P62	TB8-7,9	I13U	68	34	6	PED 6						
P81,P82	TB8-8,9	I13L	70	36	8	PED 8						

★ For the detectors to work as shown on the signal design plan, see the Vehicle Detector Setup Programming Detail for Alternate Phasing on sheet 3.

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

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.

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★	82	21,22	P21, P22	22	31	41,42,43	NU	42	51★	61,62	P61, P62	62	71,72	81,82	P81, P82	11★	NU
RED	★		128			101		★	134			107						
YELLOW			129			102			135			108						
GREEN			130			103			136			109						
RED ARROW					116							122				A121		A114
YELLOW ARROW		126		117	117			132				123	123			A122		A115
FLASHING YELLOW ARROW																A123		A116
GREEN ARROW	127	127			118	118		133	133			124	124					
Hand icon				113								119				110		
Walking person icon				115								121				112		

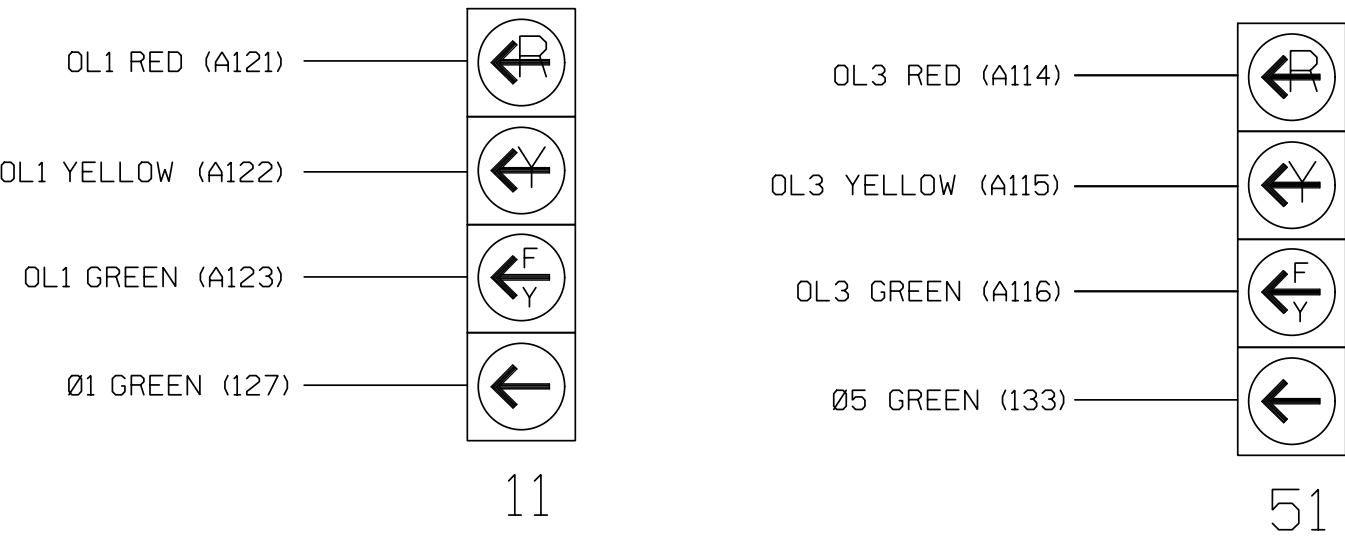
NU = Not Used

★ See pictorial of head wiring in detail this sheet.

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

FYA SIGNAL WIRING DETAIL

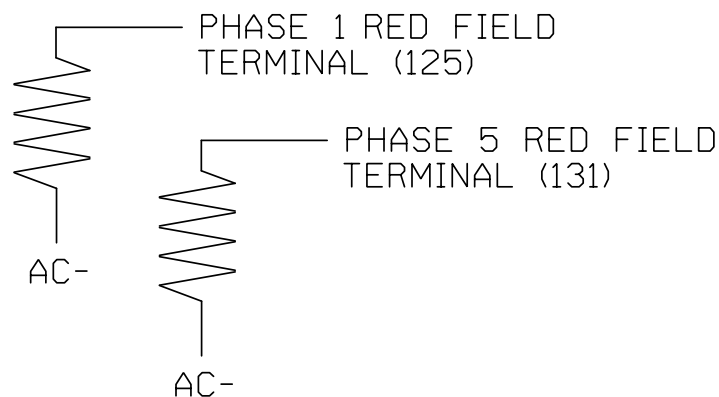
(wire signal heads as shown)



LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

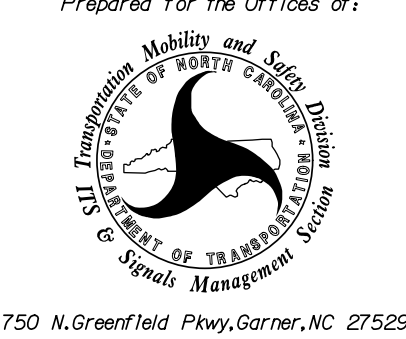
VALUE (ohms)	WATTAGE
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



Electrical Detail - Final Design
Sheet 1 of 3

Electrical and Programming Details For:

Prepared for the Offices of:



750 N.Greenfield Pkwy, Garner, NC 27529
(919) 677-2000

US 29 (Concord Parkway South)

at

SR 1414 (Rock Hill Church Road) and Union Church Cemetery Road

Division 10 Cabarrus County Concord

PLAN DATE: February 2025 REVIEWED BY: KP Baumann

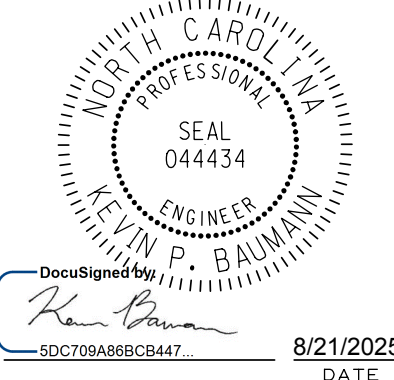
PREPARED BY: SP Pennington REVIEWED BY:

REVISIONS

INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL



DocuSigned by: Kevin P. Baumann
SDC708A9B8C8447
8/21/2025
DATE

SIG. INVENTORY NO. 10-0875