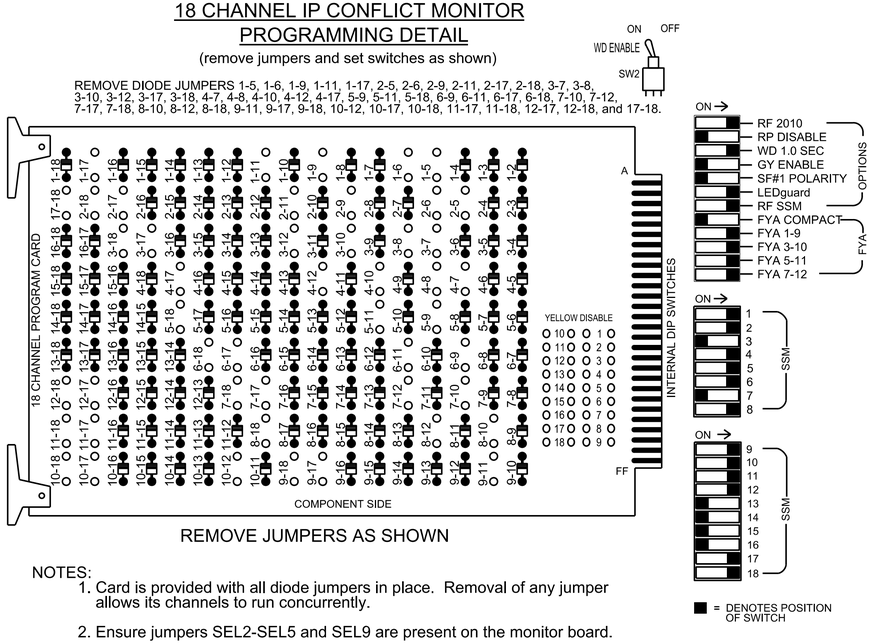
Docusign Envelope ID: 996831A4-A229-401E-B3E7-9B9D35618 9B2

PROJECT REFERENCE NO.	SHEET NO.
U-5798B	Sig. 2.1

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, 1-17, 2-5, 2-6, 2-9, 2-11, 2-17, 2-18, 3-7, 3-8, 3-10, 3-12, 3-17, 3-18, 4-7, 4-8, 4-10, 4-12, 4-17, 5-9, 5-11, 5-18, 6-9, 6-11, 6-17, 6-18, 7-10, 7-12, 7-17, 7-18, 8-10, 8-12, 8-18, 9-11, 9-17, 9-18, 10-12, 10-17, 10-18, 11-17, 11-18, 12-17, 12-18, and 17-18.



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 plan.
2. Program phases 4 and 8 for Dual Entry.
3. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
4. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
5. The cabinet and controller are part of the Fayetteville Signal 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,S4,S5,S7,S8,
S10,S11,AUX S1,AUX S2,
AUX S3,AUX S4,AUX S5,AUX S6
Phases Used.....1,2,3,4,5,6,7,8
Overlap "1".....*
Overlap "2".....*
Overlap "3".....*
Overlap "4".....*
Overlap "5".....*
Overlap "6".....*

*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	OL5	OL3	OL4	OL6
SIGNAL HEAD NO.	11★	82	21,22	NU	31★	41,42	NU	42	51★	61,62	NU	71★	81,82	NU	11★	31★	63★	51★	71★	23★
RED		*	128			101		*		134			107				A111			A104
YELLOW			129		*	102				135		*	108							
GREEN			130			103				136			109							
RED ARROW															A121	A124		A114	A101	
YELLOW ARROW		126						132							A122	A125	A112	A115	A102	A105
FLASHING YELLOW ARROW															A123	A126	A113	A116	A103	A106
GREEN ARROW	127	127			118			133	133			124								

NU = Not Used

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

★See pictorial of head wiring in detail on sheet 2.

FLASHER CIRCUIT MODIFICATION DETAIL

In order to ensure 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.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	ø 1	SLOT	SLOT	SLOT	ø 3	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	FS
		1A	EMPTY	EMPTY	EMPTY	3A	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	DC ISOLATOR
	L	NOT USED				NOT USED									ST
															DC ISOLATOR
FILE "J"	U	ø 5	SLOT	SLOT	SLOT	ø 7	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT
		5A	EMPTY	EMPTY	EMPTY	7A	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY
	L	NOT USED				NOT USED									

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

FS = FLASH SENSE
ST = STOP TIME

Note: Remove jumpers from I1-W to J4-W, I5-W to J8-W, J1-W to I4-W, and J5-W to I8-W if present.

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	_
				•	29★	6	--	---	X	_	X	_
3A	TB4-5,6	I5U	58	20	7★	3	15.0	---	X	_	X	_
				•	30★	8	3.0	---	X	_	X	_
5A	TB3-1,2	J1U	55	17	15★	5	15.0	---	X	_	X	_
				•	31★	2	--	---	X	_	X	_
7A	TB5-5,6	J5U	57	19	21★	7	15.0	---	X	_	X	_
				•	32★	4	3.0	---	X	_	X	_

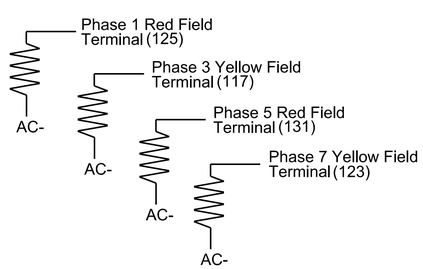
★ See detector programming detail for alternate phasing on sheet 3.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

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)



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.

For Detection Zone 1A, 3A, 5A and 7A, the equipment placement is typical for a NCDOT installation.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1131T1
DESIGNED: June 2025
SEALED: 6/12/2025
REVISED: _____

Signal Upgrade - Temporary Signal 1
Electrical Detail - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

SR 1102 (Gillis Hill Road)
at
SR 1112 (Stoney Point Road)

Division 6 Cumberland County Fayetteville

PLAN DATE: June 2025 REVIEWED BY: D. Drobny
PREPARED BY: S.G. Haynie REVIEWED BY: _____

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 029531 ENGINEER STEVEN G. HAYNIE

DocuSigned by: Steven G. Haynie 6/12/2025
DESIGNED SIGNATURE DATE

SIG. INVENTORY NO. 06-1131T1

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

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$$$$$$$$USERNAME$$$$