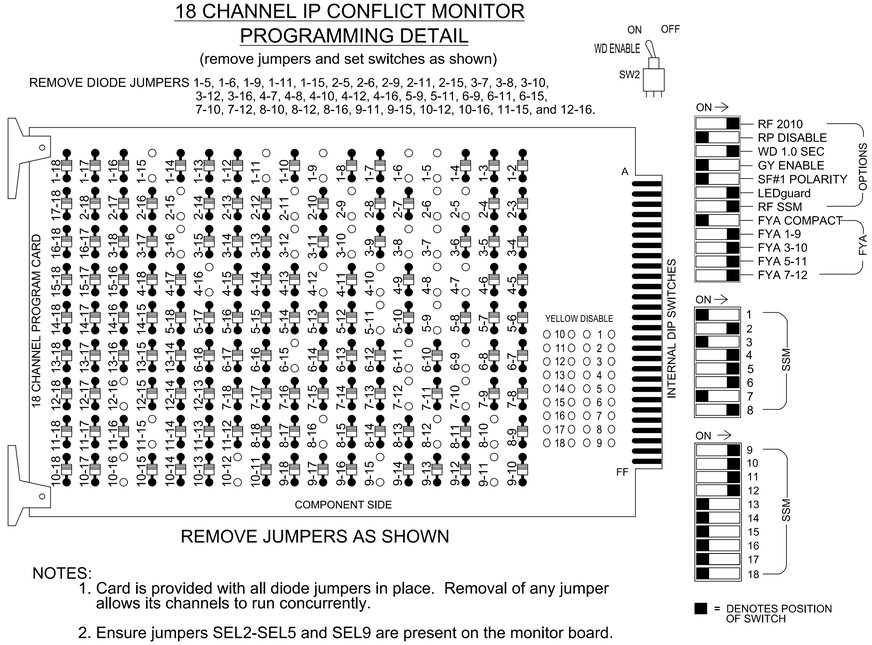
Docusign Envelope ID: 08F04D54-3808-4374-9082-CAF2AD65358D

PROJECT REFERENCE NO.	SHEET NO.
U-5797	Sig. 35.1

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, 1-15, 2-5, 2-6, 2-9, 2-11, 2-15, 3-7, 3-8, 3-10, 3-12, 3-16, 4-7, 4-8, 4-10, 4-12, 4-16, 5-9, 5-11, 6-9, 6-11, 6-15, 7-10, 7-12, 8-10, 8-12, 8-16, 9-11, 9-15, 10-12, 10-16, 11-15, and 12-16.



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 unused 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 Signal System #D06-17 Lumberton.

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, S9, S10, S11, S12, AUX S1, AUX S2, AUX S4, AUX S5
Phases Used.....1, 2, 3, 4, 5, 6, 6PED, 7, 8, 8PED
Overlap "1".....*
Overlap "2".....*
Overlap "3".....*
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★	41,42	NU	42	51★	61,62, 63	P61, P62	71★	81,82	P81, P82	11★	31★	NU	51★	71★	NU
RED		128			101			*	134			107							
YELLOW	*	129		*	102				135		*	108							
GREEN		130			103				136			109							
RED ARROW														A121	A124		A114	A101	
YELLOW ARROW							132							A122	A125		A115	A102	
FLASHING YELLOW ARROW														A123	A126		A116	A103	
GREEN ARROW	127			118			133	133			124								
✋										119			110						
🚶										121			112						

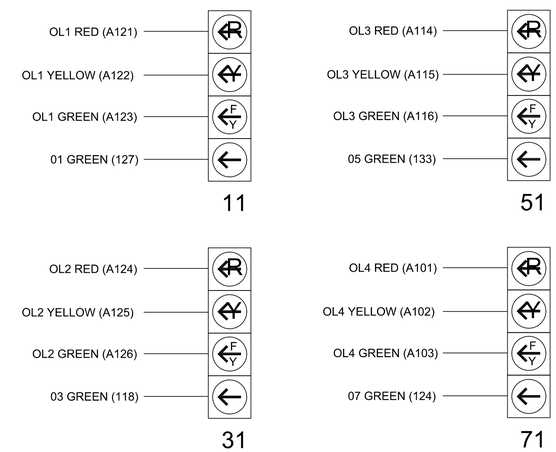
NU = Not Used

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

★See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



INPUT FILE POSITION LAYOUT

(front view)

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

MULTIZONE DETECTION

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

FS = FLASH SENSE
ST = STOP TIME

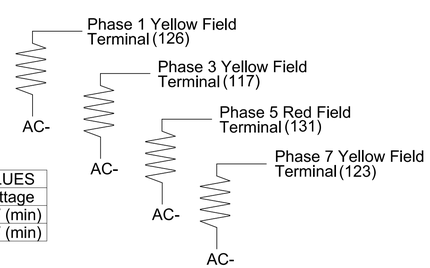
* Reflects the detector utilized in the "MAXTIME DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A, 3A, 5A & 7A" on Sheet 3.

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.

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)

INPUT FILE CONNECTION & PROGRAMMING CHART

	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE
PED PUSH BUTTONS						
P61,P62	TB8-7,9	I13U	68	34	6	PED 6
P81,P82	TB8-8,9	I13L	70	36	8	PED 8

NOTE:
INSTALL DC ISOLATOR IN INPUT FILE SLOT I13.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0757
DESIGNED: Feb 2025
SEALED: 2/10/2025
REVISED:

Final Design
Electrical Detail - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STV Engineers, Inc.
900 West Trade St., Suite 715
Charlotte, NC 28202
(704) 372-1885
NC License Number F-0991

ELECTRICAL AND PROGRAMMING DETAILS FOR:

SR 1997 (Fayetteville Road) at Farringdom Street

Division 6 Robeson County Lumberton

Prepared for the Offices of: Division of Highways, Traffic Engineering & Signals Management Section, State of North Carolina Department of Transportation, Mobility and Safety Division

750 N.Greenfield Pkwy,Garner,NC 27529

PLAN DATE:	Feb 2025	REVIEWED BY:	H.M. Surti
PREPARED BY:	J.C. Grimm	REVIEWED BY:	T.M. Moody

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 040329 ENGINEER TRENT M. MOODY

DocuSigned by: Trent Moody 2/10/2025
ASEA-DESIGN-STAFF
DATE

SIG. INVENTORY NO. 06-0757

1/31/2025
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