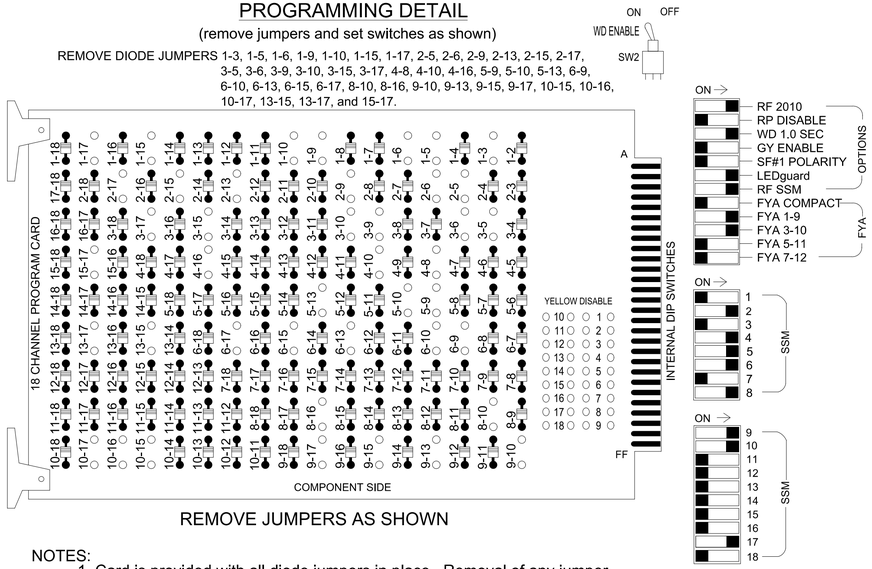
Docusign Envelope ID: BE8DFC57-5F2C-46C5-88C7-605D658A0FE3

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-5797 | Sig. 19.1 |

## 18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-3, 1-5, 1-6, 1-9, 1-10, 1-15, 1-17, 2-5, 2-6, 2-9, 2-13, 2-15, 2-17, 3-5, 3-6, 3-9, 3-10, 3-15, 3-17, 4-8, 4-10, 4-16, 5-9, 5-10, 5-13, 6-9, 6-10, 6-13, 6-15, 6-17, 8-10, 8-16, 9-10, 9-13, 9-15, 9-17, 10-15, 10-16, 10-17, 13-15, 13-17, and 15-17.




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 #D06-17 Lumberton US 301 and SR 1997 (Fayetteville Road).

## 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
S11, S12, AUX S1, AUX S2, AUX S3
Phases Used.....1, 2, 2PED, 4, 5, 6, 6PED, 8, 8PED
Overlap "1".....*
Overlap "2".....*
Overlap "3".....NOT USED
Overlap "4".....NOT USED
Overlap "5".....*
Overlap "7".....*

*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 | OL7 | 4 | 4 PED | 5 | 6 | 6 PED | 7 | 8 | 8 PED | OL1 | OL2 | OL5 | OL3 | OL4 | SPARE |
| SIGNAL HEAD NO. | 11★ | 21,22 | P21, P22 | 83★ | 41,42, 43 | NU | 51,52 | 61,62 | P61, P62 | NU | 81,82 | P81, P82 | 11★ | 83★ | 63★ | NU | NU | NU |
| RED | | 128 | | | 101 | | | 134 | | | 107 | | | A124 | A111 | | | |
| YELLOW | * | 129 | | * | 102 | | | 135 | | | 108 | | | | | | | |
| GREEN | | 130 | | | 103 | | | 136 | | | 109 | | | | | | | |
| RED ARROW | | | | | | | 131 | | | | | | A121 | | | | | |
| YELLOW ARROW | | | | | | | 132 | | | | | | A122 | A125 | A112 | | | |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | A123 | A126 | A113 | | | |
| GREEN ARROW | 127 | | | 118 | | | 133 | | | | | | | | | | | |
| ✋ | | | 113 | | | | | | 119 | | | 110 | | | | | | |
| 🚶 | | | 115 | | | | | | 121 | | | 112 | | | | | | |

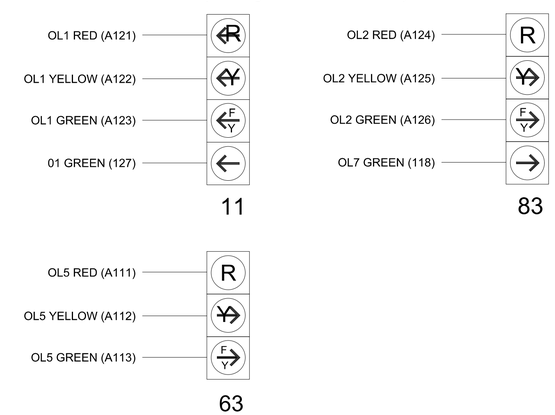
NU = Not Used

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

★See pictorial of head wiring in detail this sheet.

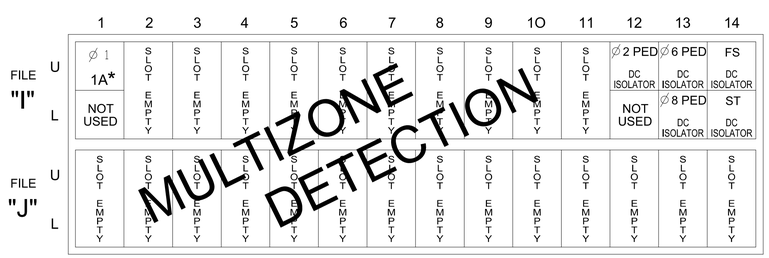
## FYA SIGNAL WIRING DETAIL

*(wire signal heads as shown)*




## INPUT FILE POSITION LAYOUT

(front view)




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 LOOP 1A" on Sheet 3.

## INPUT FILE CONNECTION & PROGRAMMING CHART

| PED PUSH BUTTONS | LOOP TERMINAL | INPUT FILE POS. | PIN NO. | INPUT POINT | DETECTOR NO. | CALL PHASE |
|---|---|---|---|---|---|---|
| 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 |

NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

## SPECIAL DETECTOR NOTE

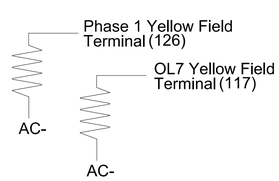
Install a multizone microwave detection system for vehicle detection. Perform installation according to manufacturer's directions and NCDOT engineer -approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-1388T
DESIGNED: Feb 2025
SEALED: 03/19/2025
REVISED:

## 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) |




## 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.

Temporary Design - TMP Phase III, Step 3
Electrical Detail - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

SR 1997 (Fayetteville Road) at Boomerang Drive/ Highland Avenue

Division 6 Robeson County Lumberton

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

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

Prepared for: Transportation Mobility and Safety Division, Traffic Engineering & Signals Management Section, STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 040329 ENGINEER TRENT M. MOODY

DocuSigned by: Trent Moody 03/19/2025
ENGINEERING SIGNATURE DATE

SIG. INVENTORY NO. 06-1388T

2/21/2025
24:\Projects\40185601\40185601_0001\50_Deliverables & Submittals\U-5797\Traffic\Signals\Temporary Signals\06-1388 (Fayetteville-Boomerang)\06138T_sm_ele_2024xxxx.dgn
LeonaR