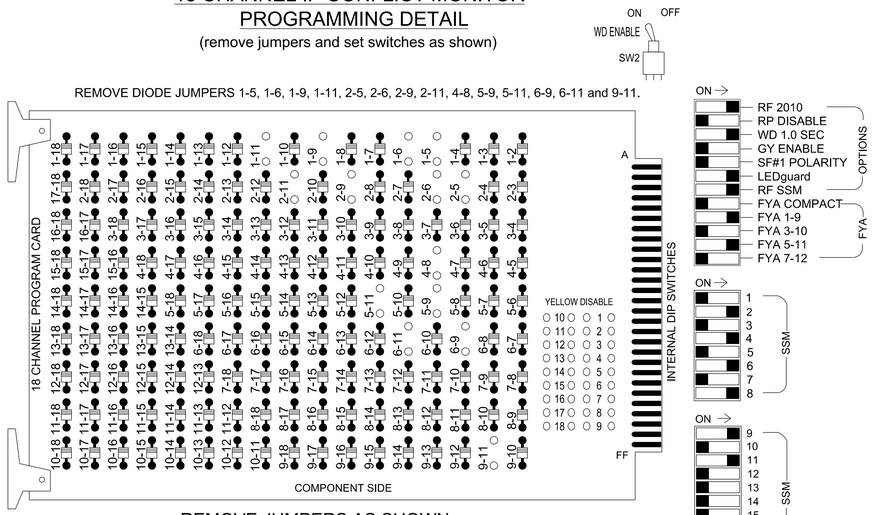
Docusign Envelope ID: 146ECB8F-98C7-44AB-94DA-73C983B75A42

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| R-5711 | Sig. 2.1 |

# 18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)




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 012-10 Troutman US 21/NC 115 Closed Loop 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, S5, S7, S8, S11, AUX S1, AUX S4
Phases Used.....1, 2, 4, 5, 6, 8
Overlap "1".....*
Overlap "2".....NOT USED
Overlap "3".....*
Overlap "4".....NOT USED

*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 | NU | 41,42 43 | NU | 51★ | 61,62 | NU | NU | 81,82 | NU | 11★ | NU | NU | 51★ | NU | NU |
| RED | | 128 | | | 101 | | | 134 | | | 107 | | | | | | | |
| YELLOW | * | 129 | | | 102 | | * | 135 | | | 108 | | | | | | | |
| GREEN | | 130 | | | 103 | | | 136 | | | 109 | | | | | | | |
| RED ARROW | | | | | | | | | | | | | A121 | | | A114 | | |
| YELLOW ARROW | | | | | | | | | | | | | A122 | | | A115 | | |
| FLASHING YELLOW ARROW | | | | | | | | | | | | | A123 | | | A116 | | |
| GREEN ARROW | 127 | | | | | | 133 | | | | | | | | | | | |
| ✋ | | | | | | | | | | | | | | | | | | |
| 🚶 | | | | | | | | | | | | | | | | | | |

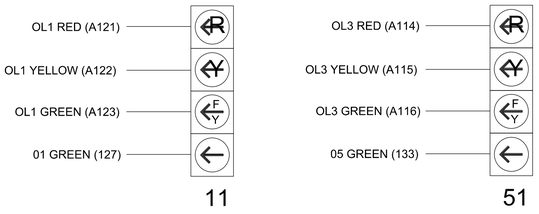
NU = Not Used

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

★See pictorial of head wiring in detail this sheet.

# FYA SIGNAL WIRING DETAIL

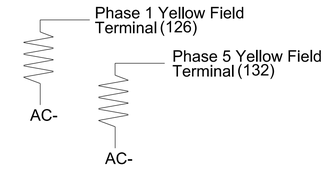
*(wire signal heads as shown)*




# 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 POSITION LAYOUT

(front view)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 1O | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FILE "I" | U | ø1 1A | ø2 2A | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | ø4 4A | ø4 4C | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | FS DC ISOLATOR |
| | L | NOT USED | NOT USED | | | | ø4 4B | NOT USED | | | | | | | ST DC ISOLATOR |
| FILE "J" | U | ø5 5A | ø6 6A | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | ø8 8A | ø8 8C | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY | SLOT EMPTY |
| | L | NOT USED | NOT USED | | | | ø8 8B | NOT USED | | | | | | | |

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 | |
| | | | | - | 29 | 6 | 3.0 | | X | | X | X |
| 2A | TB2-5,6 | I2U | 39 | 1 | 2 | 2 | | | X | X | X | |
| 4A | TB4-9,10 | I6U | 41 | 3 | 8 | 4 | | | X | | - | |
| 4B | TB4-11,12 | I6L | 45 | 7 | 9 | 4 | 5.0 | 2.0 | X | | X | X |
| 4C | TB6-1,2 | I7U | 65 | 31 | 10 | 4 | 15.0 | | X | | X | |
| 5A | TB3-1,2 | J1U | 55 | 17 | 15 | 5 | 15.0 | | X | | X | |
| | | | | - | 31 | 2 | 3.0 | | X | | X | X |
| 6A | TB3-5,6 | J2U | 40 | 2 | 16 | 6 | | | X | X | X | |
| 8A | TB5-9,10 | J6U | 42 | 4 | 22 | 8 | | | X | | - | |
| 8B | TB5-11,12 | J6L | 46 | 8 | 23 | 8 | 5.0 | 2.0 | X | | X | X |
| 8C | TB7-1,2 | J7U | 66 | 32 | 24 | 8 | 15.0 | | X | | X | |

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 12-1859
DESIGNED: Mar 2025
SEALED: 10/13/2025
REVISED: N/A

Electrical Detail - Sheet 1 of 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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CHARLOTTE, NC 28262
PHONE: 704-549-4260
NC LICENSE NO. F-1524
www.drmp.com

Electrical and Programming Details For:

US 21/NC 115 (S Main Street) at SR 2375 (Houston Rd)/ SR 1312 (Flower House Loop)

Division 12 | Iredell County | Troutman

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

| PLAN DATE: | March 2025 | REVIEWED BY: | BN Groome |
|---|---|---|---|
| PREPARED BY: | DJ White | REVIEWED BY: | LM Moon |

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

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 052936 ENGINEER BRITTANY N. GROOME

Signed by: Brittany Groome 10/13/2025
1E0934DE1594484...
DATE

SIG. INVENTORY NO. 12-1859

17-SEP-2025 11:41
R:\Projects\Traffic Signals\Design\Signals\12-1859E.dgn
Driver: AT_RAL_DWhite