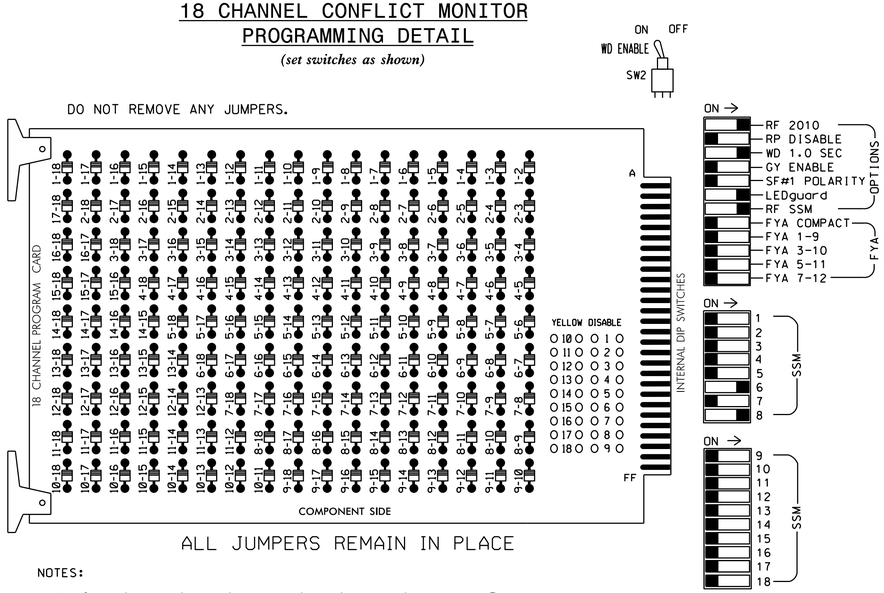
PROJECT REFERENCE NO.	SHEET NO.
U-5302	Sig. 7.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(set switches as shown)



ALL JUMPERS REMAIN IN PLACE

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 Red Enable is active at all times during normal operation.
4. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

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 Plans.
2. Program controller to start up in phases 2 and 6 Green/ Don't Walk.
3. Enable simultaneous gap-out feature for all phases.
4. Program phase 6 for volume density operation.
5. The cabinet and controller are part of the Raleigh Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
CABINET.....332 W/ AUX
SOFTWARE.....SE-PAC2070 ver 5.5 or later
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S8,S11
PHASES USED.....*2,*3,6,8
OVERLAP "A".....NOT USED
OVERLAP "B".....NOT USED
OVERLAP "C".....NOT USED
OVERLAP "D".....NOT USED

* Phase used for timing purposes only.

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	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	NC	NU	NC	NU	NU	NU	61	62	NU	NU	81,82, 83	NU	NU	NU	NU	NU	NU	NU
RED								134	134			107							
YELLOW								135	135										
GREEN									136										
RED ARROW																			
YELLOW ARROW												108							
GREEN ARROW								136				109							

NU = Not Used
NC = Not Connected

ALL RED FLASH STARTUP PROGRAMMING DETAIL

(program controller as shown below)

1. From Main Menu select [4 - UNIT DATA]
2. From UNIT DATA Submenu select [1 - STARTUP & MISC]

```
EPAC STARTUP & MISC
STARTUP TIME.:  6 (SEC) STATE: 2 (0-FL
RED REV/10...: 40 (TSEC)          1-RED
AUTO PED CLR.:  0 (0-NO  1-YES)   2-RAF)
STOP T RESET.:  0 (0-NO  1-YES)
SEQUENCE.....:  1 (1-19)
SPECIAL SEQ  :  0 (SEE HELP)
A-UP B-DN C-LT D-RT E-ENTER F-PRIOR MENU
```

STARTUP PROGRAMMING COMPLETE
PRESS 'F' TO RETURN TO UNIT DATA

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L														ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L														

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

FS = FLASH SENSE
ST = STOP TIME

REMOTE FLASH PROGRAMMING DETAIL

(program controller as shown below)

1. From Main Menu select [4 - UNIT DATA]
2. From UNIT DATA Submenu select [2 - REMOTE FLASH]
3. From FLASH Submenu select [1 - FLASH SETTINGS]

```
FLASH SETTINGS          TEST-A AS FLASH: 0

 LDSW: 123456789 0123456789 0123456789 012
 FLSH: 000000010 0100000000 0000000000 000
  ALT: 000000010 0000000000 0000000000 000

0-DARK   1-RED   2-YELLOW  3-STEADY YELLOW
A-UP  B-DN  C-LT  D-RT        F-PRIOR MENU
```

PRESS 'F' TO RETURN TO FLASH

4. From REMOTE FLASH Submenu select [2 - ENTRY/EXIT PHASES]

```
FLASH ENTRY/EXIT PHASES

     PHASES: 12345678 90123456
      ENTRY: 01000100 00000000
       EXIT: 01000100 00000000

0-DARK   1-RED   2-YELLOW  3-STEADY YELLOW
A-UP  B-DN  C-LT  D-RT        F-PRIOR MENU
```

REMOTE FLASH PROGRAMMING COMPLETE

SPECIAL DETECTOR NOTE

Install a non-intrusive 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.

INIT & N.A. RESP PROGRAMMING DETAIL

1. From Main Menu select [3 - PHASE DATA]
2. From PHASE DATA Submenu select [4 - INIT & N.A RESP]

Note Phases 1, 4, 5, and 7 NOT used! →

```
PHASE......1...2...3...4...5...6...7...8
 INITIAL   0   6   1   0   0   6   0   1
 NA RESP   0   1   0   2   0   1   0   2
 UPDT GRN  0   0   0   0   0   0   0   0

CODES.....0....1....2....3....4....5...6
 INITL   NONE INACT RED  YEL  GRN  DRK G/DW
 NA RSP  NONE NA1   NA2  1&2  ---  --- ---
                                      ***
```

INIT & N.A. RESP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1784T
DESIGNED: February 2025
SEALED: 03/27/2025
REVISED: N/A

Temporary Design (TMP Phase IV)
Electrical Detail

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 401 SB (Fayetteville Road)
at
SR 1374 (Farm Road)

Division 5 | Wake County | Raleigh

PLAN DATE: March 2025 | REVIEWED BY:
PREPARED BY: S.Kirkpatrick | REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared for the Offices of:
Traffic Engineering Mobility and Safety Division
State of North Carolina Department of Transportation
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036833 ENGINEER RYAN W. HOUGH

Signed by: Ryan W. Hough 03/28/2025
SIGNATURE | DATE
SIG. INVENTORY NO. 05-1784T

28-MAR-2025 07:59
pw:\\ncdot.bentley.com:ncdot-pw-01\Documents\NCDOT TSMO\Signal Design Section\Division_05\05-1784\Signals Management\0517841_sm_ele_20250328.dgn
sgkirkpatrick