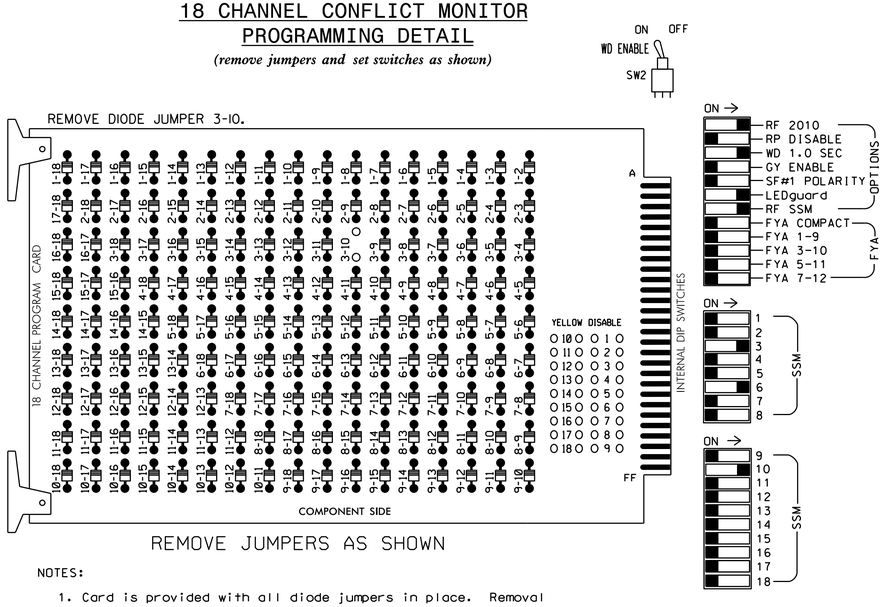
PROJECT REFERENCE NO.	SHEET NO.
U-5302	Sig.17.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



■ = DENOTES POSITION OF SWITCH

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.

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	Ø3 3A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L					NOT USED									ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	Ø6 6A	Ø6 6C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		Ø6 6B	NOT USED											

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

FS = FLASH SENSE
ST = STOP TIME

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, 7 and 8 NOT used! →

```
PHASE......1...2...3...4...5...6...7...8
 INITIAL   0   6   1   0   0   6   0   0
 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

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......S4,S8,AUX S2
PHASES USED.............*2,3,6
OVERLAP "A"............NOT USED
OVERLAP "B"............**
OVERLAP "C"............NOT USED
OVERLAP "D"............NOT USED
```

* Phase used for timing purposes only.
** See overlap programming detail on sheet 2.

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	DELAY TIME	EXTEND (STRETCH) TIME
3A	TB4-5,6	I5U	58	9	3		
6A	TB3-5,6	J2U	40	21	6		
6B	TB3-7,8	J2L	44	22	6		
6C	TB3-9,10	J3U	64	23	6		

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

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

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1813
DESIGNED: February 2025
SEALED: 03/27/2025
REVISED: N/A

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	31	NU	NU	NU	61,62, 63	NU	NU	NU	NU	NU	32	NU	NU	NU	NU
RED								134										
YELLOW								135										
GREEN																		
RED ARROW				116										A124				
YELLOW ARROW				117										A125				
GREEN ARROW				118				136						A126				

NU = Not Used
NC = Not Connected

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: 000100010 0000100000 0000000000 000
  ALT: 000100000 0000100000 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

Electrical Detail - Sheet 1 of 2

ELECTRICAL AND PROGRAMMING DETAILS FOR:

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

US 401 SB (Fayetteville Road) at U-Turn North of Purser Drive

Division 5 | Wake County | Raleigh

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

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 036833 ENGINEER RYAN W. HOUGH

Signed by: Ryan W. Hough
430320FAA2664C3
SIGNATURE | DATE 03/28/2025

SIG. INVENTORY NO. 05-1813

28-MAR-2025 09:54
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sgkirkpatrick