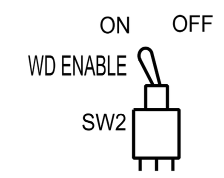
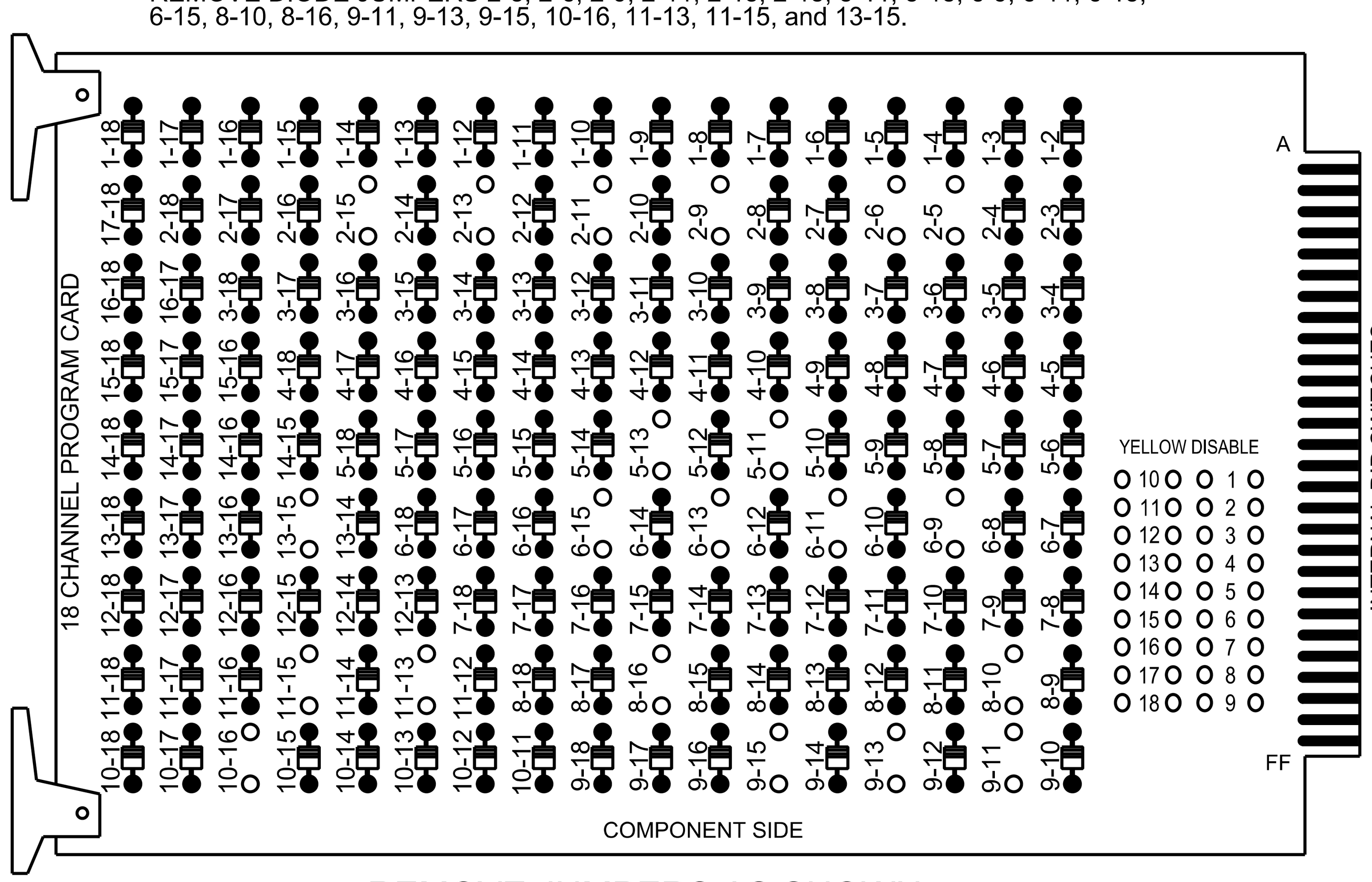
PROJECT REFERENCE NO.	SHEET NO.
U-5813	Sig. 17.1

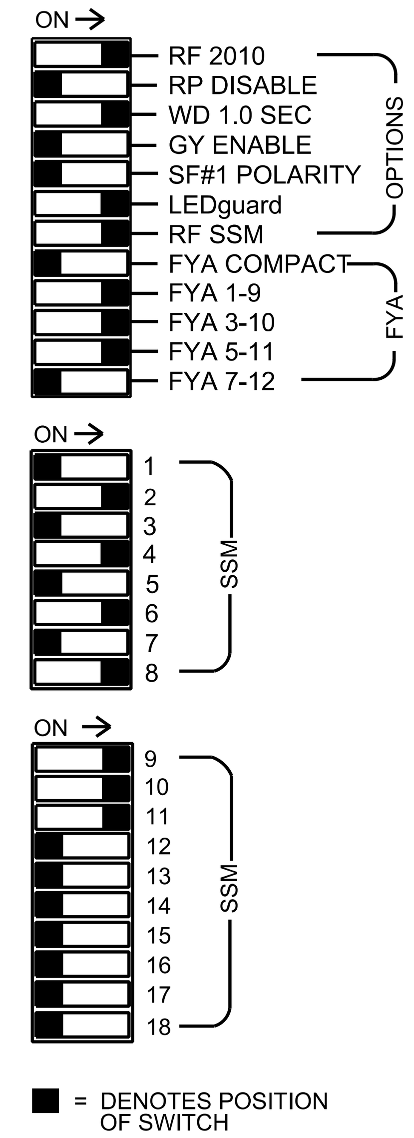
18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 2-5, 2-6, 2-9, 2-11, 2-13, 2-15, 5-11, 5-13, 6-9, 6-11, 6-13, 6-15, 8-10, 8-16, 9-11, 9-13, 9-15, 10-16, 11-13, 11-15, and 13-15.





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 plans.
2. Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
3. If this signal will be managed by an ATMS software, enable controller and detector logging for all enabled detectors used at this location.
4. The cabinet and controller are part of Signal System #D08-29_Asheboro, US 64 Bus-NC 49 (Asheboro).

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............................S2,S3,S7,S8,S9,S11,S12
AUX S1,AUX S2,AUX S4
Phases Used.......................................2,2 PED,5,6,6 PED,8,8 PED
Overlap "1"..*
Overlap "2"..*
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.	NU	21	22	P21, P22	NU	NU	NU	51★	61	62	P61, P62	NU	82,83	P81, P82	63★	81★	NU	51★	NU	NU
RED		128	128						134	134			107		A121					
YELLOW		129	129					*	135	135			108							
GREEN		130								136			109							
RED ARROW																A124		A114		
YELLOW ARROW															A122	A125		A115		
FLASHING YELLOW ARROW															A123	A126		A116		
GREEN ARROW			130					133	136											
(Don't Walk)				113							119			110						
(Walk)				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.

INPUT FILE POSITION LAYOUT

(front view)

FILE		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	SLOT EMPTY	ϕ 2 2A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ϕ2 PED DC ISOLATOR	ϕ6 PED DC ISOLATOR	FS DC ISOLATOR
	L		NOT USED										NOT USED	ϕ8 PED DC ISOLATOR	ST DC ISOLATOR
FILE "J"	U	ϕ 5 5A	ϕ 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ϕ 8 8A	ϕ 8 8C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	NOT USED				ϕ 8 8B	ϕ 8 8D							

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
2A	TB2-5,6	I2U	39	1	2	2			X		X	
5A	TB3-1,2	J1U	55	17	15★	5	15		X		X	
				-	31★	2			X		X	
6A	TB3-5,6	J2U	40	2	16	6			X		X	
8A	TB5-9,10	J6U	42	4	22	8			X		X	
8B	TB5-11,12	J6L	46	8	23	8			X		X	
8C	TB7-1,2	J7U	66	32	24	8	10		X		X	
8D	TB7-3,4	J7L	79	45	25	8	15		X		X	
PED PUSH BUTTONS												
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.

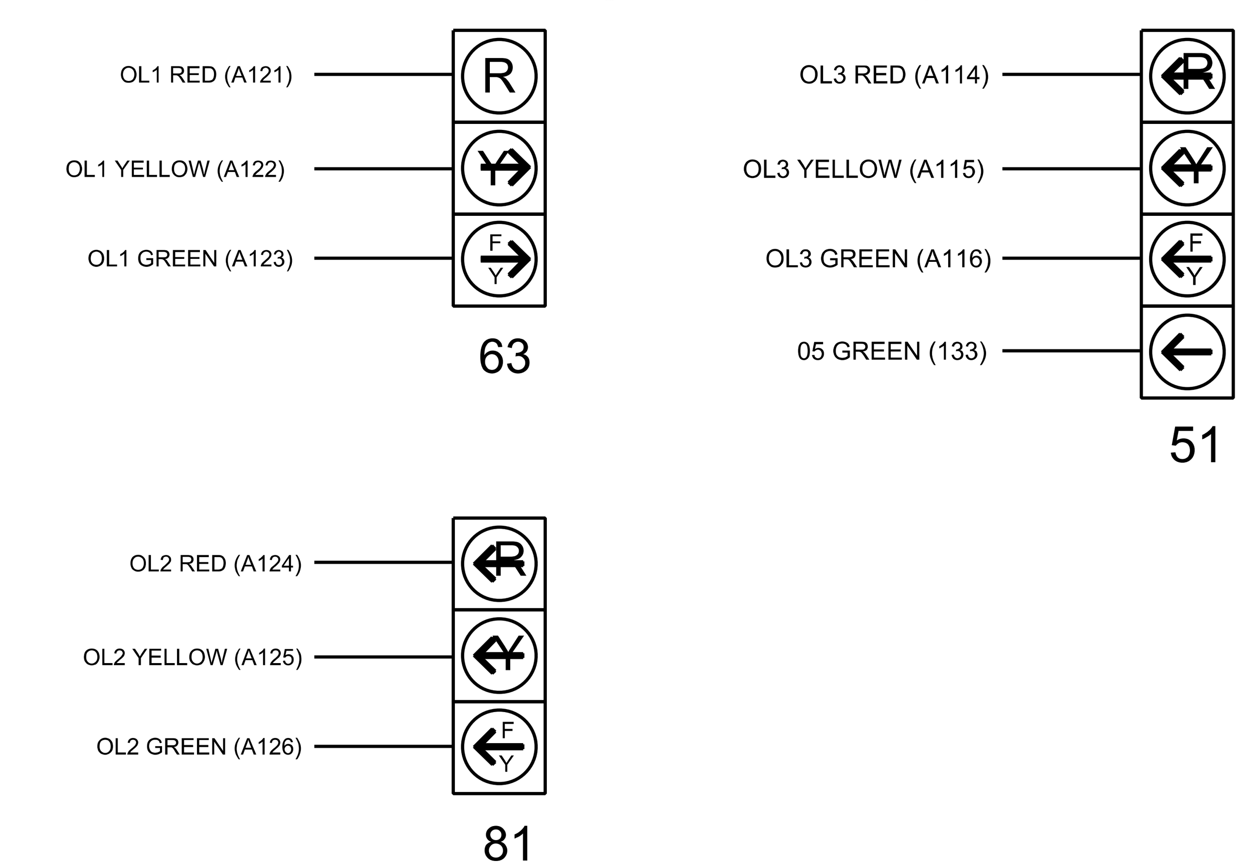
★ For the detectors to work as shown on the signal design plan, see the Detector Programming Detail for Alternate Phasing on Sheet 2.

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



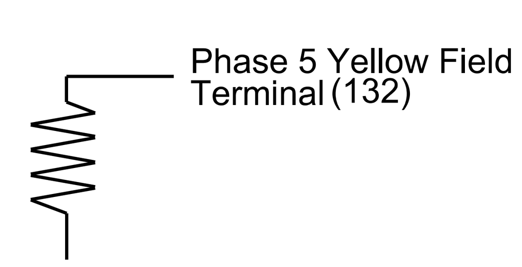
COUNTDOWN PEDESTRIAN SIGNAL OPERATION

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.

LOAD RESISTOR INSTALLATION DETAIL

(install resistor as shown)

ACCEPTABLE VALUES	
Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 08-0503
DESIGNED: AUGUST 2021
SEALED: 05/21/2024
REVISED:

HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

Signal Upgrade - Final Design
Electrical Detail - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared for the Offices of:
Transportation Mobility and Safety Division, ITS & Signals Management Section
750 N. Greenfield Pkwy, Garner, NC 27529

NC 49/SR 1713 (Albemarle Rd) at I-73-US 220 NB/I-74 WB Ramps

Division 8 | Randolph County | Asheboro

PLAN DATE:	August 2021	REVIEWED BY:	A.D. Klinksiek
PREPARED BY:	N.K. Vlanich	REVIEWED BY:	N.R. Simmons

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 031464 ENGINEER NATASHA R. SIMMONS

DocuSigned by:
Natasha R Simmons 5/21/2024
SIGNATURE DATE
F6DA88DF3AD445A...
SIG. INVENTORY NO. 08-0503