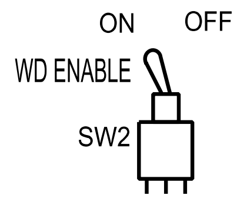
Docusign Envelope ID: C8AC5147-E963-8E30-83D3-1341ECB36C33

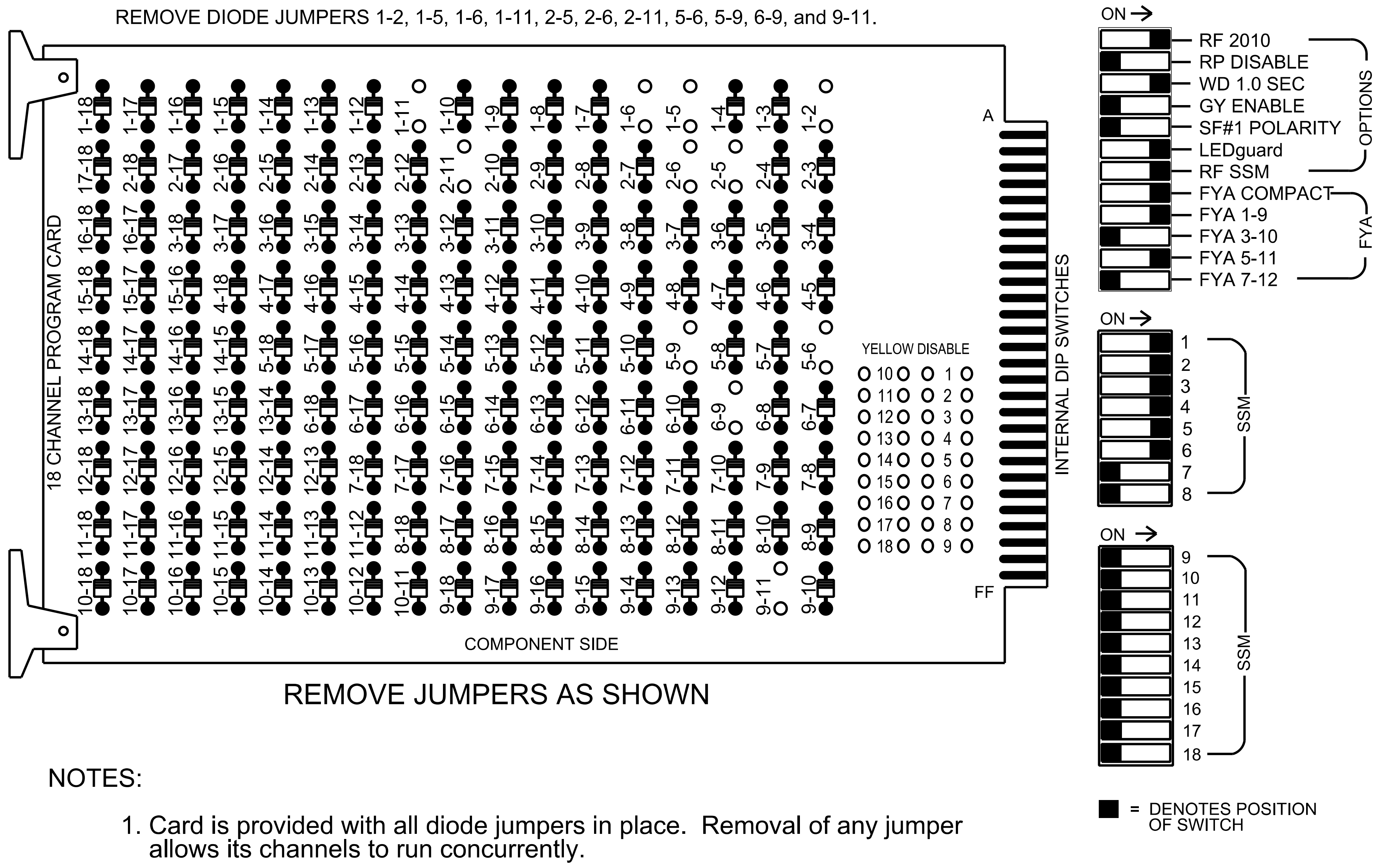
PROJECT REFERENCE NO.	SHEET NO.
R-5759	Sig. 2.1

18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)


ON
OFF
WD ENABLE
SW2

REMOVE DIODE JUMPERS 1-2, 1-5, 1-6, 1-11, 2-5, 2-6, 2-11, 5-6, 5-9, 6-9, and 9-11.


18 CHANNEL PROGRAM CARD
1-18 1-17 1-16 1-15 1-14 1-13 1-12 1-11 1-10 1-9 1-8 1-7 1-6 1-5 1-4 1-3 1-2
17-18 2-18 2-17 2-16 2-15 2-14 2-13 2-12 2-11 2-10 2-9 2-8 2-7 2-6 2-5 2-4 2-3
16-18 16-17 3-18 3-17 3-16 3-15 3-14 3-13 3-12 3-11 3-10 3-9 3-8 3-7 3-6 3-5 3-4
15-18 15-17 15-16 4-18 4-17 4-16 4-15 4-14 4-13 4-12 4-11 4-10 4-9 4-8 4-7 4-6 4-5
14-18 14-17 14-16 14-15 5-18 5-17 5-16 5-15 5-14 5-13 5-12 5-11 5-10 5-9 5-8 5-7 5-6
13-18 13-17 13-16 13-15 13-14 6-18 6-17 6-16 6-15 6-14 6-13 6-12 6-11 6-10 6-9 6-8 6-7
12-18 12-17 12-16 12-15 12-14 12-13 7-18 7-17 7-16 7-15 7-14 7-13 7-12 7-11 7-10 7-9 7-8
11-18 11-17 11-16 11-15 11-14 11-13 11-12 8-18 8-17 8-16 8-15 8-14 8-13 8-12 8-11 8-10 8-9
10-18 10-17 10-16 10-15 10-14 10-13 10-12 10-11 9-18 9-17 9-16 9-15 9-14 9-13 9-12 9-11 9-10
YELLOW DISABLE
10 11 12 13 14 15 16 17 18
1 2 3 4 5 6 7 8 9
A
FF
COMPONENT SIDE
INTERNAL DIP SWITCHES
ON →
RF 2010
RP DISABLE
WD 1.0 SEC
GY ENABLE
SF#1 POLARITY
LEDguard
RF SSM
OPTIONS
FYA COMPACT
FYA 1-9
FYA 3-10
FYA 5-11
FYA 7-12
FYA
ON →
1 2 3 4 5 6 7 8
SSM
ON →
9 10 11 12 13 14 15 16 17 18
SSM
■ = DENOTES POSITION OF SWITCH

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. ! Special cabinet wiring is required to utilize FYA COMPACT mode. See Ped Yellow Conflict Monitor Wiring Detail on sheet 2. !

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 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 detectors used at this location.

EQUIPMENT INFORMATION

Controller..2070LX
Cabinet...336
Software..Q-Free MAXTIME
Cabinet Mount.....................................Pole
Output File Positions...........................12
Load Switches Used............................S1,S2,S3,S4,S5,S7,S8,S9
Phases Used..1,2,3,4,5,6
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
CMU CHANNEL NO.	1	2	9	13	3			4		14	5	6	11	15	7	8	16
PHASE	OL1	2	1 GRN	2 PED	3			4		4 PED	OL3	6	5 GRN	6 PED	7	8	8 PED
SIGNAL HEAD NO.	11★	21,22	11★	NU	31	32	62	41	42	NU	51★	61,62	51★	NU	NU	NU	NU
RED		128			116	116		101	101			134					
YELLOW		129			117	117		102	102			135					
GREEN		130			118	118		103	103			136					
RED ARROW	125										131						
YELLOW ARROW	126						117				132						
FLASHING YELLOW ARROW	127										133						
✋																	
GREEN ARROW			114		118		118	103					120				
🚶				*										*			

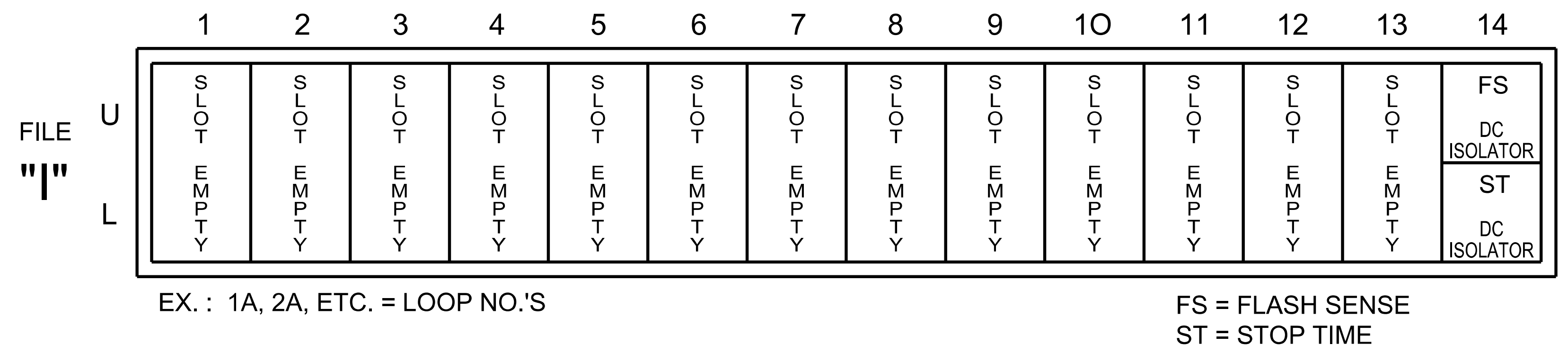
NU = Not Used

*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)


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

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

FS = FLASH SENSE
ST = STOP TIME

SPECIAL DETECTOR NOTE

Install a video 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.

INPUT FILE CONNECTION & PROGRAMMING CHART

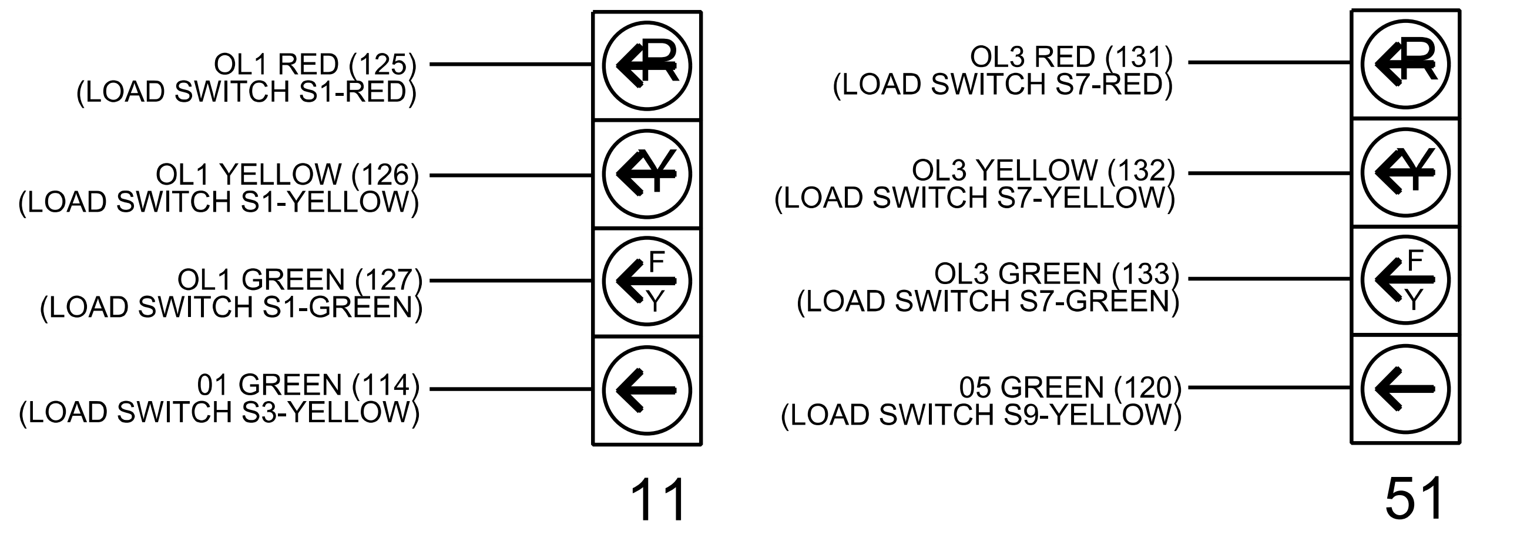
LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
1A	-	-	-	*	33	1	15.0		X		X	
				-	125	6	3.0		X		X	X
2A	-		-	*	38	2			X			
2B	-	-	-	*	39	2	5.0	2.0	X		X	X
3A	-	-	-	*	34	3	3.0		X		X	
3B	-	-	-	*	50	3	10.0		X		X	
4A	-	-	-	*	44	4			X		X	
5A	-	-	-	*	35	5	15.0		X		X	
				-	127	2	3.0		X		X	X
6A	-	-	-	*	54	6			X			
6B	-	-	-	*	55	6	5.0	2.0	X		X	X

*For Input Point numbers, see SDLC Non-Intrusive Detection Chart sheet 2.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

FYA SIGNAL WIRING DETAIL

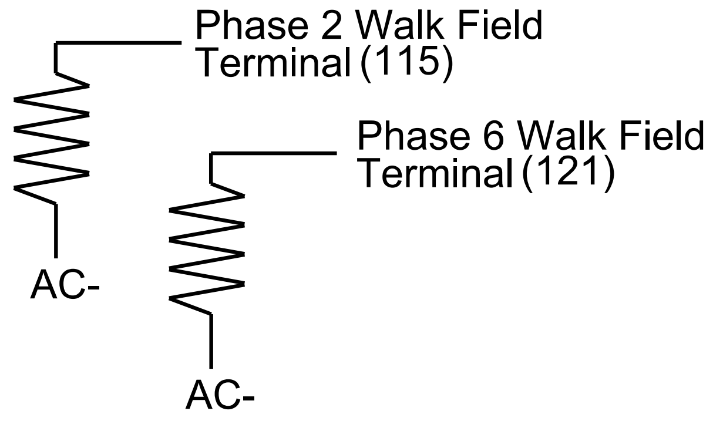
(wire signal heads as shown)


OL1 RED (125) (LOAD SWITCH S1-RED)
OL1 YELLOW (126) (LOAD SWITCH S1-YELLOW)
OL1 GREEN (127) (LOAD SWITCH S1-GREEN)
01 GREEN (114) (LOAD SWITCH S3-YELLOW)
11
OL3 RED (131) (LOAD SWITCH S7-RED)
OL3 YELLOW (132) (LOAD SWITCH S7-YELLOW)
OL3 GREEN (133) (LOAD SWITCH S7-GREEN)
05 GREEN (120) (LOAD SWITCH S9-YELLOW)
51
R
F
Y

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)

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


Phase 2 Walk Field Terminal (115)
AC-
Phase 6 Walk Field Terminal (121)
AC-

MAXTIME STARTUP AND SOFTWARE FLASH PROGRAMMING DETAIL

Front Panel
Main Menu >Controller >Unit

Web Interface
Home >Controller >Unit

Modify parameters as shown below and save changes.

Start Up Parameters

StartUp Clearance Hold
6

Unit Flash Parameters

All Red Flash Exit Time
6

HNTB
HNTB NORTH CAROLINA, P.C.
4000 Center at North Hills St
Suite 500
Raleigh, North Carolina 27609
NC License No: C-1554
(919) 546-8997

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 11-1080T1
DESIGNED: NOVEMBER 2023
SEALED: 08/05/2026
REVISED:

Signal Upgrade
Temporary Design 1
Electrical Detail - Sheet 1 of 2

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 115
at
US 421 Northbound Ramps/SR 2543
(CC Wright School Road)

Division 11 Wilkes County Wilkesboro

PLAN DATE:	November 2023	REVIEWED BY:	N.K. Vlanich
PREPARED BY:	E.E. Tiller	REVIEWED BY:	N.R. Simmons

REVISIONS	INIT.	DATE

SEAL
SEAL 031464
NATASHA R. SIMMONS

DocuSigned by:
Natasha R. Simmons
F6DA88DF3AD445A...

SIGNATURE	DATE
	8/5/2026

SIG. INVENTORY NO. 11-1080T1

$$$$SYSTIME$$$$
$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$