

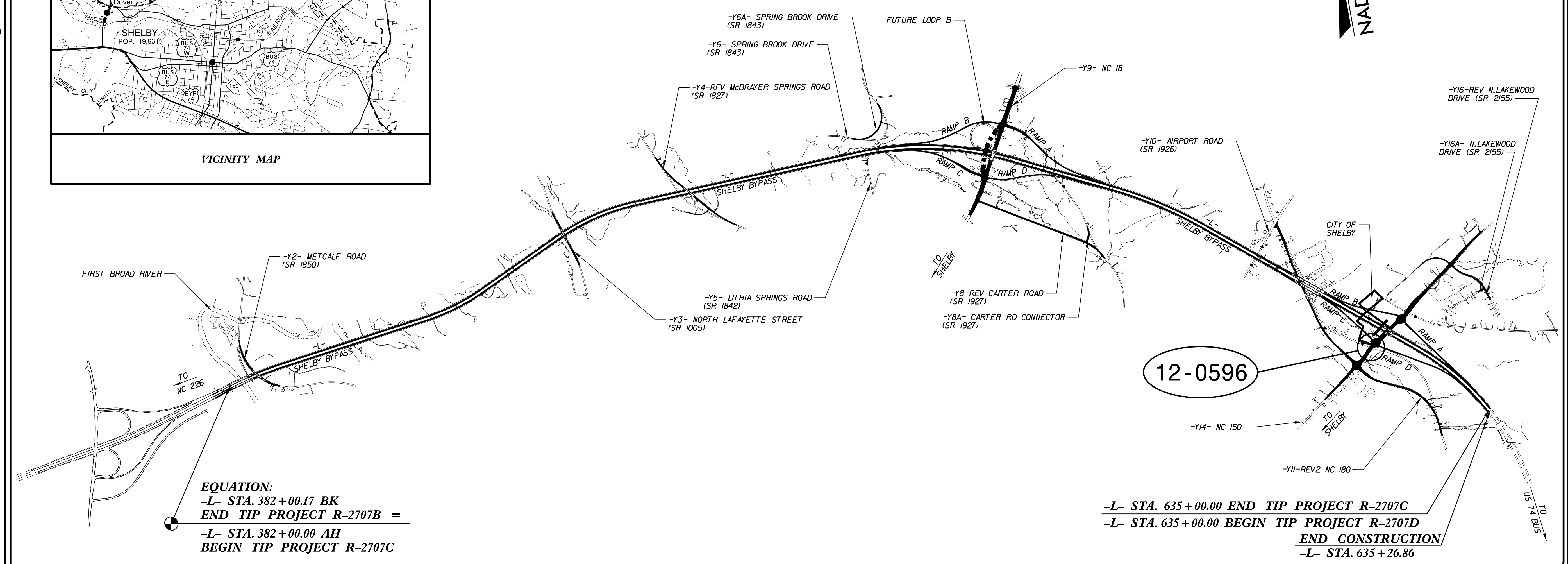
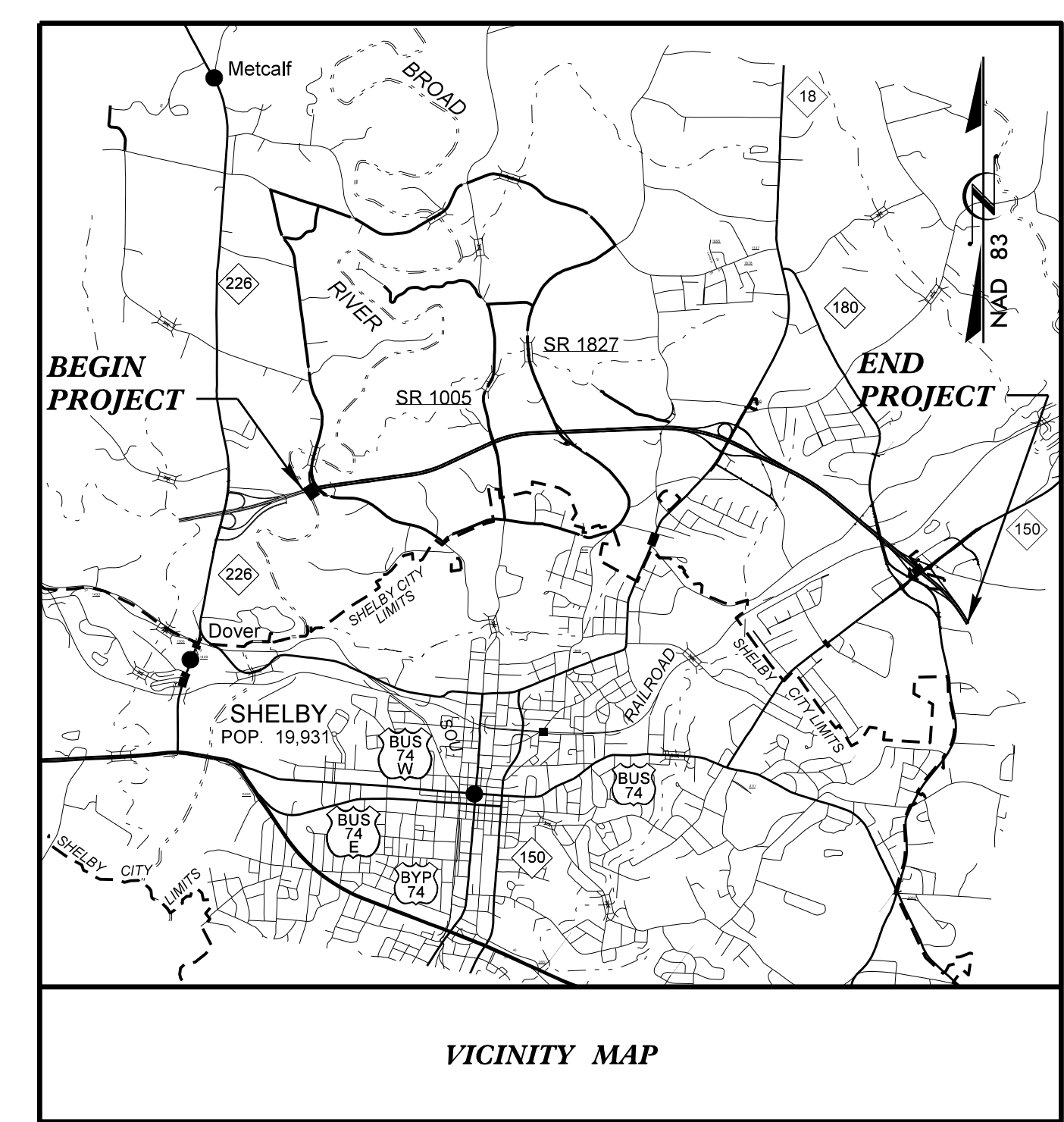
Project: R-2707C

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CLEVELAND COUNTY

**LOCATION: NC 150 (CHERRYVILLE ROAD) AT
NC 180 (NORTH POST ROAD) IN SHELBY**

TYPE OF WORK: TRAFFIC SIGNAL



Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.

Sheet #	Reference #	Index of Plans	Location/Description
Sig. 1.0	-----	Title Sheet	NC 150 (Cherryville Road) at NC 180 (North Post Road)
Sig. 2.0	12-0596T		

INTELLIGENT TRANSPORTATION AND SIGNALS UNIT

Contacts:

Tim Williams, PE - Western Region Signals Engineer
Zack Little, PE - Signal Equipment Design Engineer

Prepared in the Office of:
DIVISION OF HIGHWAYS
TRANSPORTATION MOBILITY AND SAFETY
DIVISION

750 N. Greenfield Parkway, Garner, NC 27529

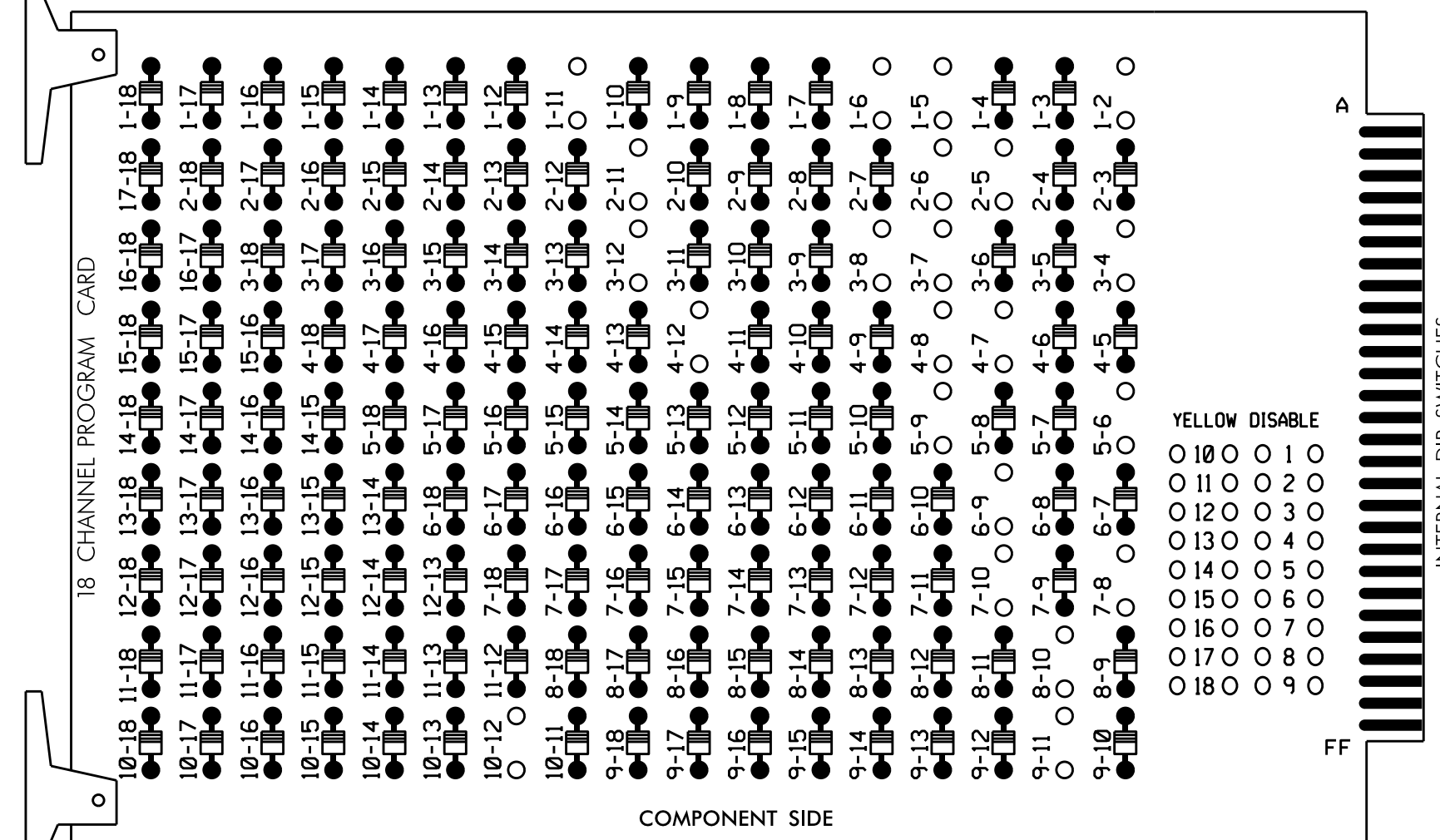
E:\N-2017\1452\Sigs\Sig1\Sig1.dgn Section:Western Region\Div-12\R-2707C\120596T1.sig.dgn_2017.madd.dgn

EDI MODEL 2018ECL-NC CONFLICT MONITOR

PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

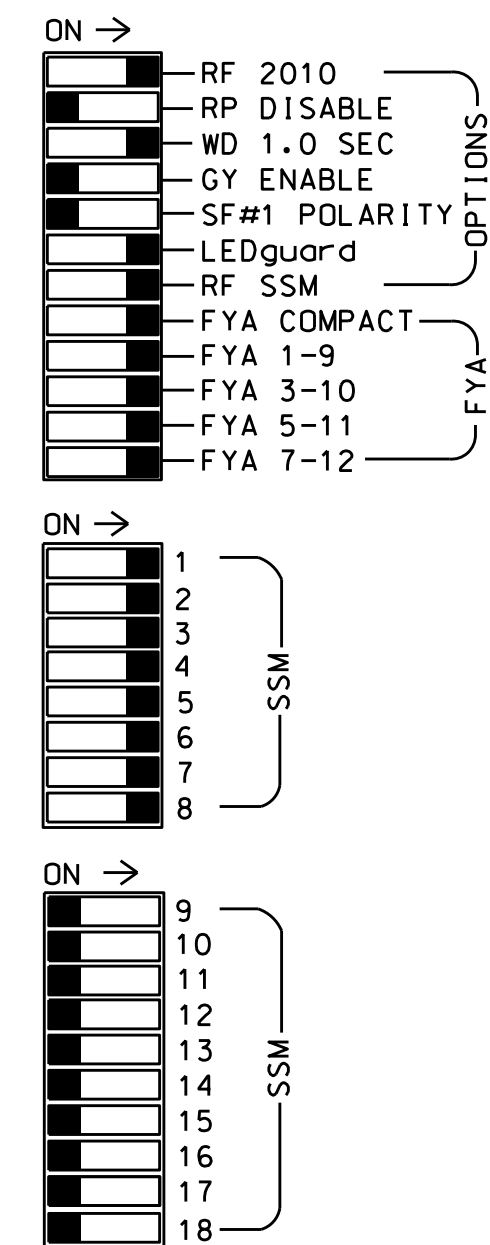
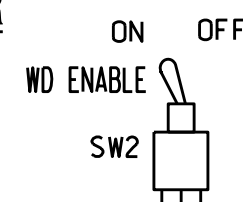
REMOVE DIODE JUMPERS 1-2, 1-5, 1-6, 1-11, 2-5, 2-6, 2-11, 3-4, 3-7, 3-8, 3-12, 4-7, 4-8, 4-12, 5-6, 5-9, 6-9, 7-8, 7-10, 8-10, 9-11 and 10-12.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that Red Enable is active at all times during normal operation.
- Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.
- Special cabinet wiring is required to utilize FYA COMPACT mode. See Ped Yellow Conflict Monitor Wiring Detail on this sheet.



■ = DENOTES POSITION OF SWITCH

NOTES

- 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.
- Program phases 4 and 8 for Dual Entry.
- Enable Simultaneous Gap-Out for all phases.
- Program phases 2 and 6 for Start Up In Green.
- Program phases 2 and 6 for Yellow Flash and overlaps 1 and 2 as Wag Overlaps.

EQUIPMENT INFORMATION

CONTROLLER.....2070
 CABINET.....336
 SOFTWARE.....ECONOLITE OASIS
 CABINET MOUNT.....POLE
 OUTPUT FILE POSITIONS...12
 LOAD SWITCHES USED.....S1,S2,S3,S4,S5,S6,S7,S8,S9,
 S10,S11,S12
 PHASES USED.....1,2,3,4,5,6,7,8
 OVERLAP "A".....1+2
 OVERLAP "B".....3+4
 OVERLAP "C".....5+6
 OVERLAP "D".....7+8

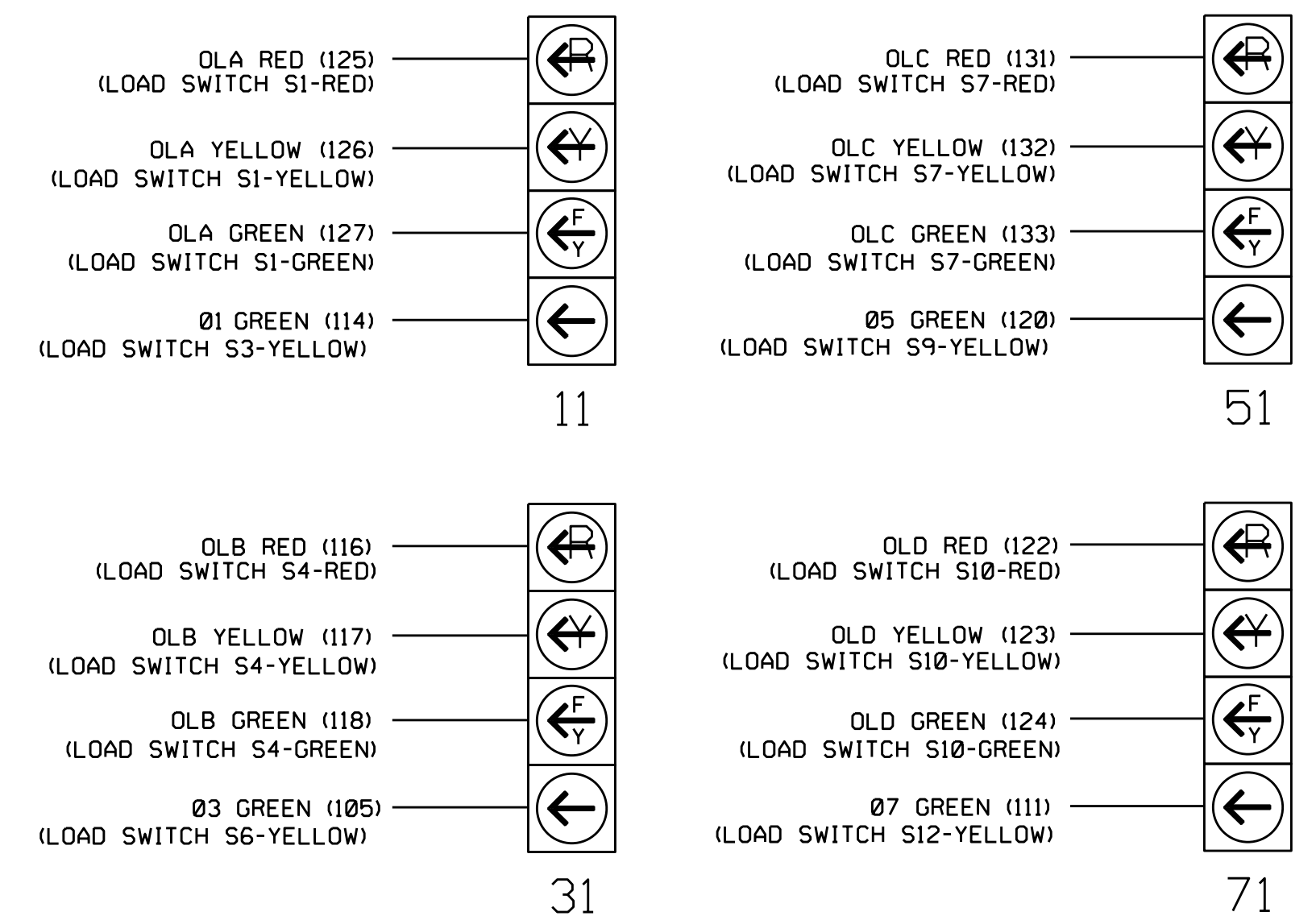
SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12				
CMU CHANNEL NO.	1	2	9	13	3	4	10	14	5	6	11	15	7	8	12	16
PHASE	OLA	2	1 GRN	2 PED	OLB	4	3 GRN	4 PED	OLC	6	5 GRN	6 PED	OLD	8	7 GRN	8 PED
SIGNAL HEAD NO.	11	21,22	11	NU	31	41,42	31	NU	51	61,62	51	NU	71	81,82	71	NU
RED		128				101			134							107
YELLOW		129				102			135							108
GREEN		130				103			136							109
RED ARROW	125				116			131								122
YELLOW ARROW	126				117			132								123
FLASHING YELLOW ARROW	127				118			133								124
GREEN ARROW			114				105			120						111
				*			*			*						*

* Denotes install load resistor. See load resistor installation detail on sheet 2.
 * See pictorial of head wiring in detail below.
 NOTE: Load Switches S1,S3,S4,S6,S7,S9,S10,S12 require output remapping.

4 SECTION FYA PPLT SIGNAL WIRING DETAIL

(wire signal heads as shown)

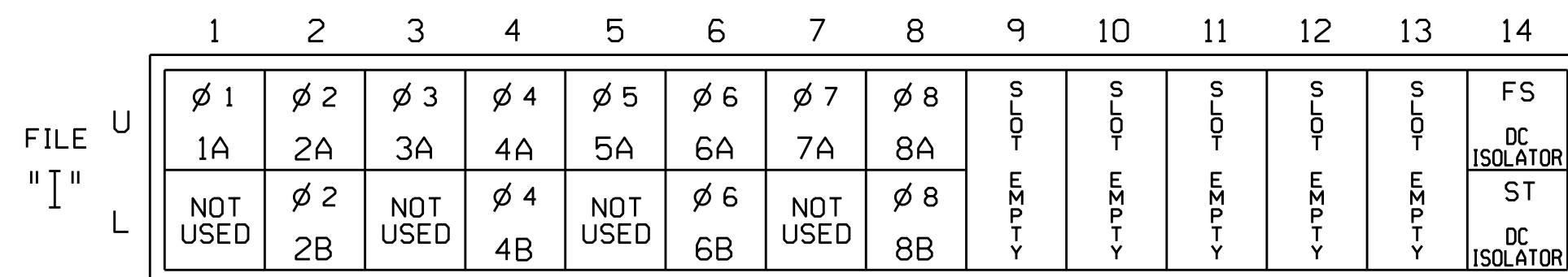


NOTE

- The sequence display for these signals require special logic and output remapping. See sheet 3 for programming instructions.

INPUT FILE POSITION LAYOUT

(front view)



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

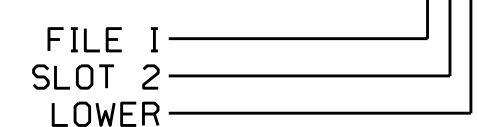
FS = FLASH SENSE
 ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A ¹	★	11U	56	18	1	1	Y	Y			15
	-	-	59	21	15	6	Y	Y			
2A	★	12U	39	1	2	2	Y	Y		2.2	
2B	★	12L	43	5	12	2	Y	Y			
3A ²	★	13U	58	20	3	3	Y	Y			15
	-	-	61	23	17	8	Y	Y			3
4A	★	14U	41	3	4	4	Y	Y		2.4	
4B	★	14L	45	7	14	4	Y	Y			
5A ³	★	15U	55	17	5	5	Y	Y			15
	-	-	63	25	32	2	Y	Y			
6A	★	16U	40	2	6	6	Y	Y		2.2	
6B	★	16L	44	6	16	6	Y	Y			
7A ⁴	★	17U	57	19	7	7	Y	Y			15
	-	-	65	27	34	4	Y	Y			3
8A	★	18U	42	4	8	8	Y	Y		2.4	
8B	★	18L	46	8	18	8	Y	Y			

- Add jumper from 11-F to 11-SP, on rear of input file.
- Add jumper from 13-F to 13-SP, on rear of input file.
- Add jumper from 15-F to 15-SP, on rear of input file.
- Add jumper from 17-F to 17-SP, on rear of input file.

INPUT FILE POSITION LEGEND: I2L



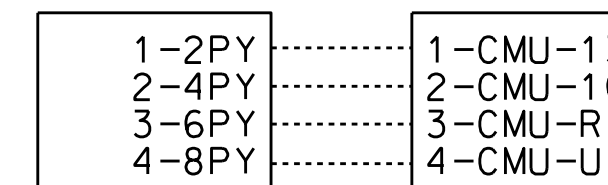
PED YELLOW CONFLICT MONITOR WIRING DETAIL

(FOR McCAIN CABINET ONLY)

In order to use FYA COMPACT mode on the 2018ECL-NC Monitor, the cabinet must be wired such that the (unused) Ped Yellow load switch outputs are wired to the conflict monitor as follows: From 2 PY (field term. 114) to chan. 9 green (monitor pin 13), from 4 PY (field term. 105) to chan. 9 yellow (monitor pin 16), from 6 PY (field term. 120) to chan. 10 green (monitor pin R), and from 8 PY (field term. 111) to chan. 10 yellow (monitor pin U).

This is accomplished through a keyed plug connection found on the inside panel of the output file.

Fold down rear panel of output file and find a set of 3 white Molex connectors. Plug together the two connectors labeled as shown below:



★ 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.

Electrical Detail - Temporary Design - Sheet 1 of 7

Electrical and Programming Details for: NC 150 (Cherryville Rd.) at NC 180 (North Post Rd.)

Prepared In the Offices of: [Logo]

Division 12 Cleveland County Shelby

PLAN DATE: February 2017 REVIEWED BY: T. Joyce

PREPARED BY: C. Strickland REVIEWED BY:

REVISIONS: [Table]

750 N. Greenfield Pkwy, Garner, NC 27529

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 12-0596T
 DESIGNED: January 2017
 SEALED: 2/20/2017
 REVISED:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL: [Professional Engineer Seal]

3/7/2017

SIG. INVENTORY NO. 12-0596T

OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

FROM MAIN MENU PRESS '8' (OVERLAPS), THEN '1' (VEHICLE OVERLAP SETTINGS).

```

PAGE 1: VEHICLE OVERLAP 'A' SETTINGS
PHASE:      |12345678910111213141516
VEH OVL PARENTS: |XX
VEH OVL NOT VEH: |
VEH OVL NOT PED: |
VEH OVL GRN EXT: |
STARTUP COLOR:  | _ RED _ YELLOW _ GREEN
FLASH COLORS:   | _ RED _ YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC).....0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
    
```

← NOTICE GREEN FLASH

PRESS '+'

```

PAGE 1: VEHICLE OVERLAP 'B' SETTINGS
PHASE:      |12345678910111213141516
VEH OVL PARENTS: |XX
VEH OVL NOT VEH: |
VEH OVL NOT PED: |
VEH OVL GRN EXT: |
STARTUP COLOR:  | _ RED _ YELLOW _ GREEN
FLASH COLORS:   | _ RED _ YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...N
GREEN EXTENSION (0-255 SEC).....0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
    
```

← NOTICE GREEN FLASH

PRESS '+'

```

PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
PHASE:      |12345678910111213141516
VEH OVL PARENTS: |XX
VEH OVL NOT VEH: |
VEH OVL NOT PED: |
VEH OVL GRN EXT: |
STARTUP COLOR:  | _ RED _ YELLOW _ GREEN
FLASH COLORS:   | _ RED _ YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...Y
GREEN EXTENSION (0-255 SEC).....0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
    
```

← NOTICE GREEN FLASH

PRESS '+'

```

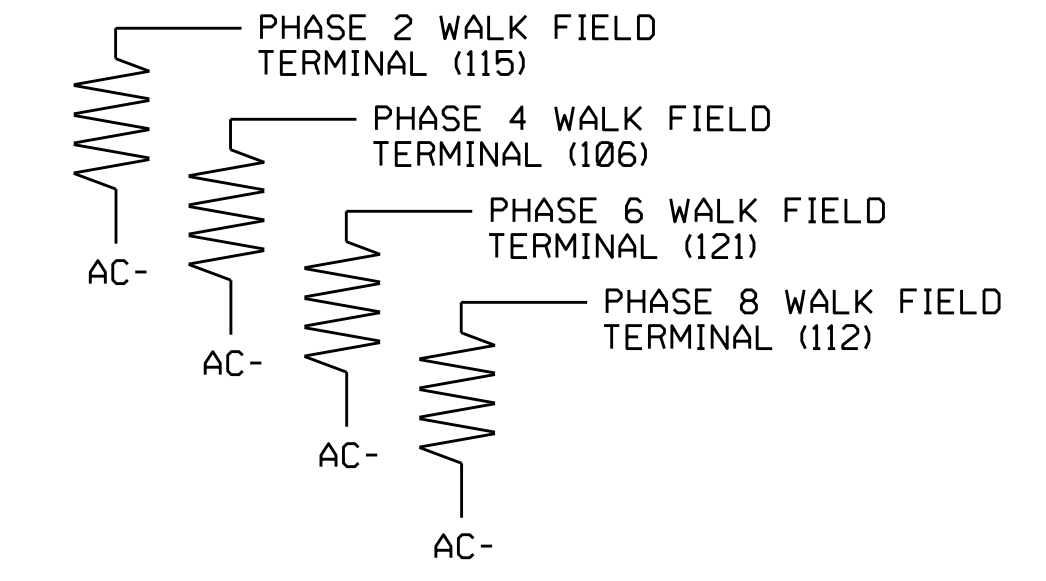
PAGE 1: VEHICLE OVERLAP 'D' SETTINGS
PHASE:      |12345678910111213141516
VEH OVL PARENTS: |XX
VEH OVL NOT VEH: |
VEH OVL NOT PED: |
VEH OVL GRN EXT: |
STARTUP COLOR:  | _ RED _ YELLOW _ GREEN
FLASH COLORS:   | _ RED _ YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...N
GREEN EXTENSION (0-255 SEC).....0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)...0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
    
```

← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

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)

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 12-0596T
 DESIGNED: January 2017
 SEALED: 2/20/2017
 REVISED:

Electrical Detail - Temporary Design - Sheet 2 of 7

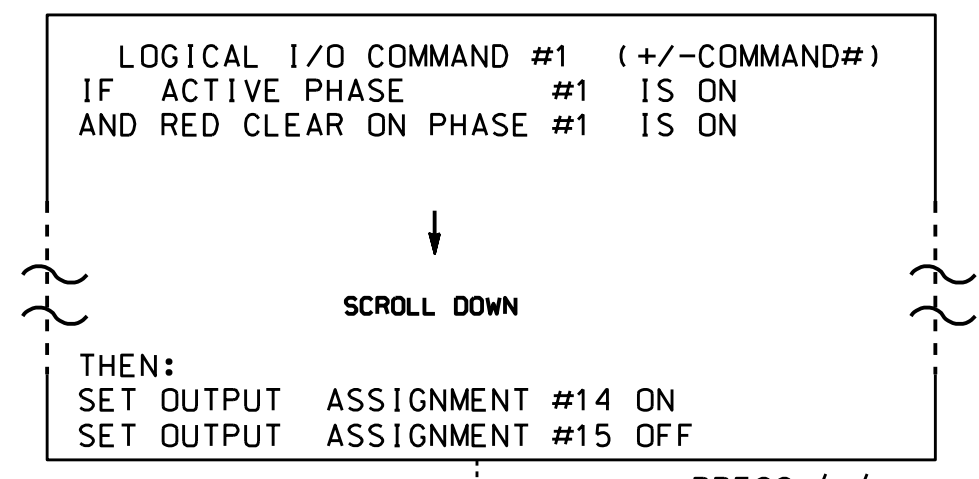
ELECTRICAL AND PROGRAMMING DETAILS FOR: Prepared In the Offices of: 	NC 150 (Cherryville Rd.) at NC 180 (North Post Rd.)		SEAL
	Division 12 PLAN DATE: February 2017 PREPARED BY: C. Strickland	Cleveland County Sheiby REVIEWED BY: T. Joyce	

06-MAR-2017 14:17
 C:\MITS\0115\Sig\01\work\hgr\oups\Sig_Maps\Strickland\20596_sml_e_xxr.dgn
 ceashr\ckland

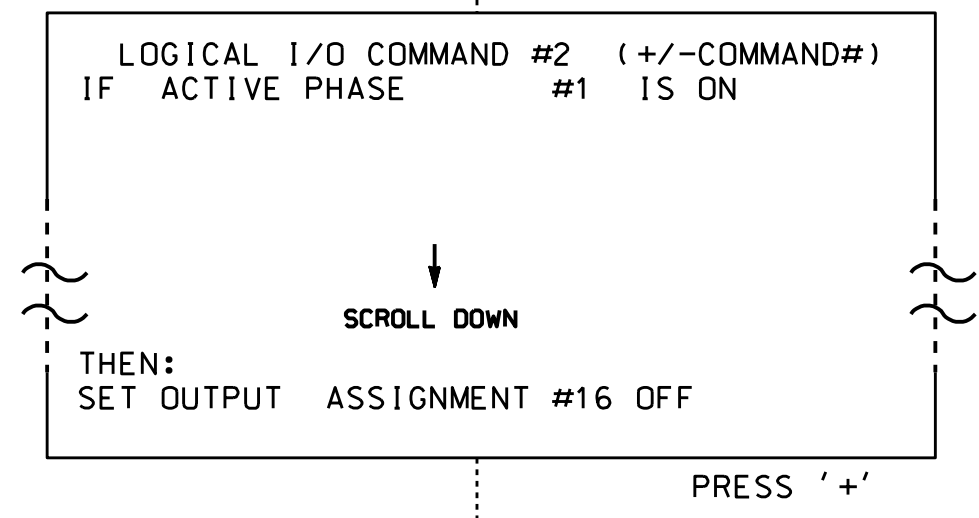
LOGICAL I/O PROCESSOR PROGRAMMING DETAIL TO PRODUCE SPECIAL FYA-PPLT SIGNAL SEQUENCE

(program controller as shown below)

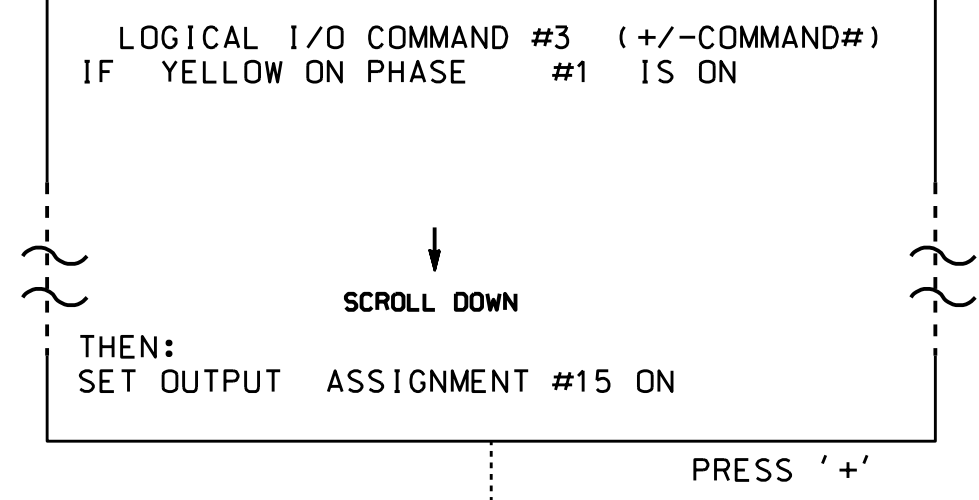
1. FROM MAIN MENU PRESS '2' (PHASE CONTROL), THEN '1' (PHASE CONTROL FUNCTIONS). SCROLL TO THE BOTTOM OF THE MENU AND ENABLE ACT LOGIC COMMANDS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12.
2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).



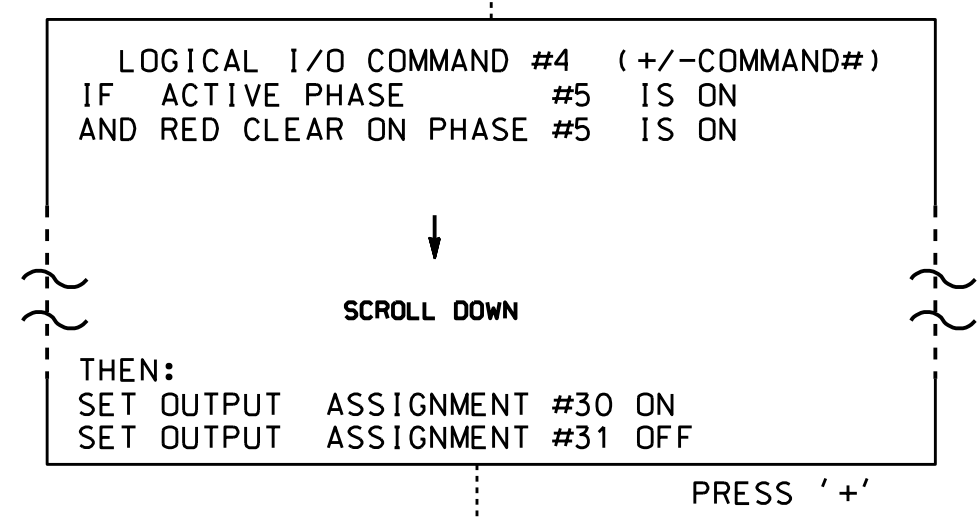
NOTE: LOGIC FOR PHASE 1 RED CLEAR WHEN TRANSITIONING FROM PHASE 1 TO PHASE 2 (HEAD 11).



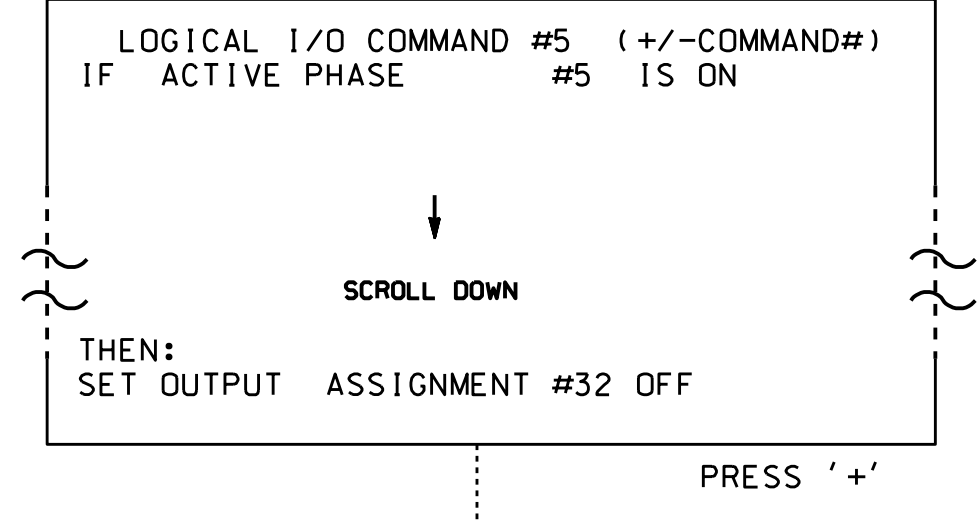
NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 1 (HEAD 11).



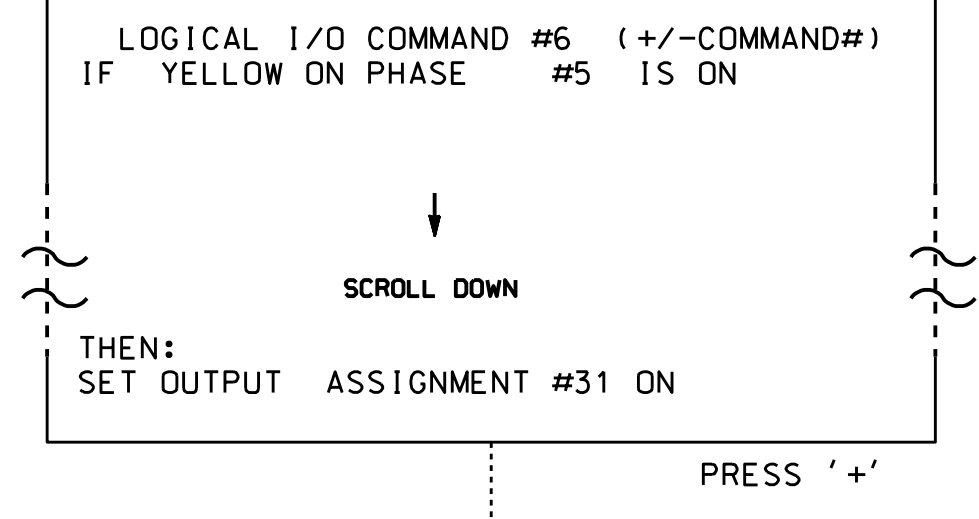
NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 1 (HEAD 11).



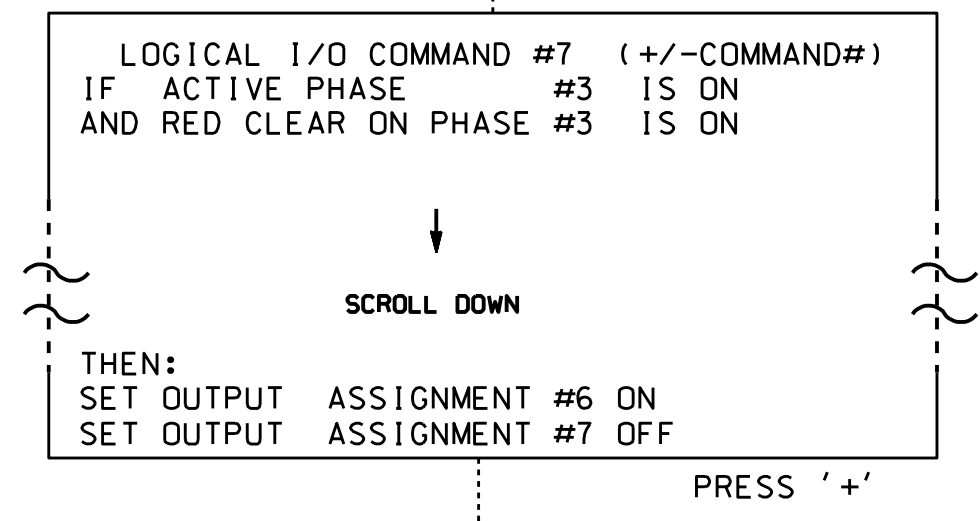
NOTE: LOGIC FOR PHASE 5 RED CLEAR WHEN TRANSITIONING FROM PHASE 5 TO PHASE 6 (HEAD 51).



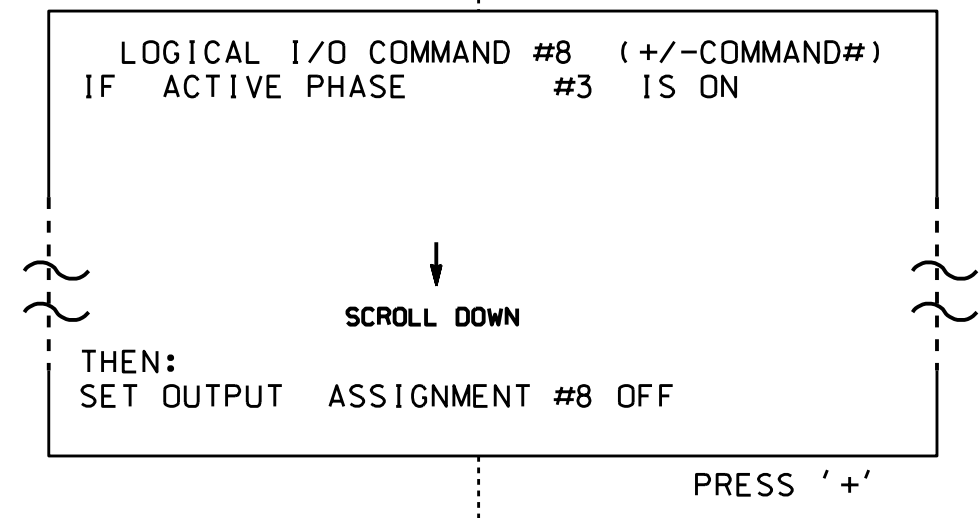
NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 5 (HEAD 51).



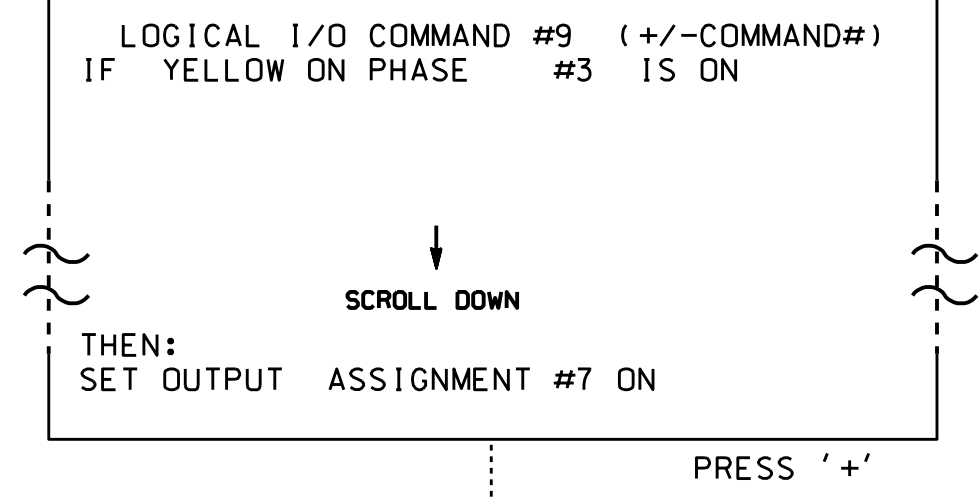
NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 5 (HEAD 51).



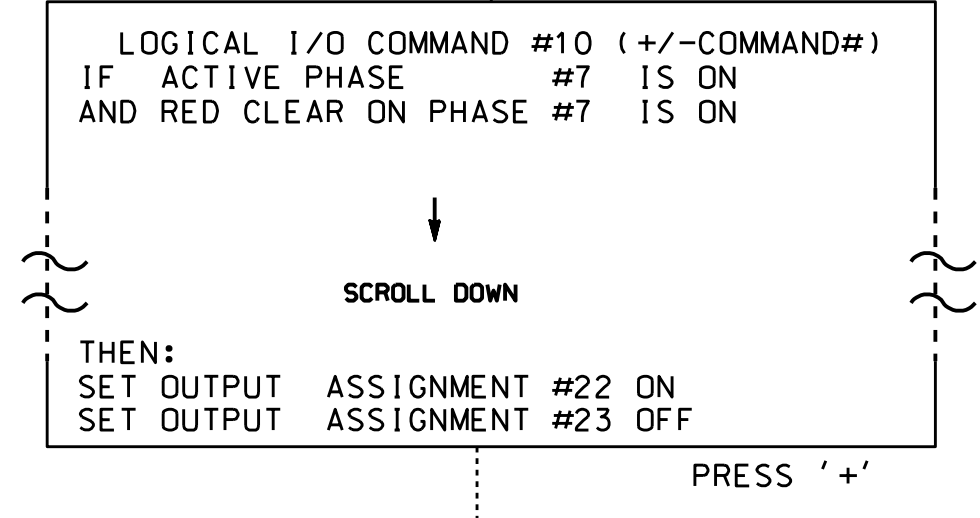
NOTE: LOGIC FOR PHASE 3 RED CLEAR WHEN TRANSITIONING FROM PHASE 3 TO PHASE 4 (HEAD 31).



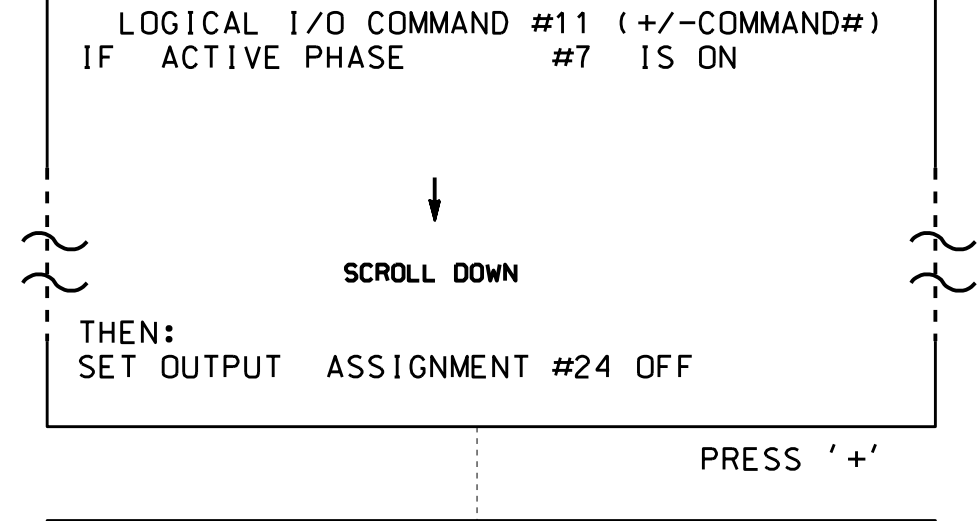
NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 3 (HEAD 31).



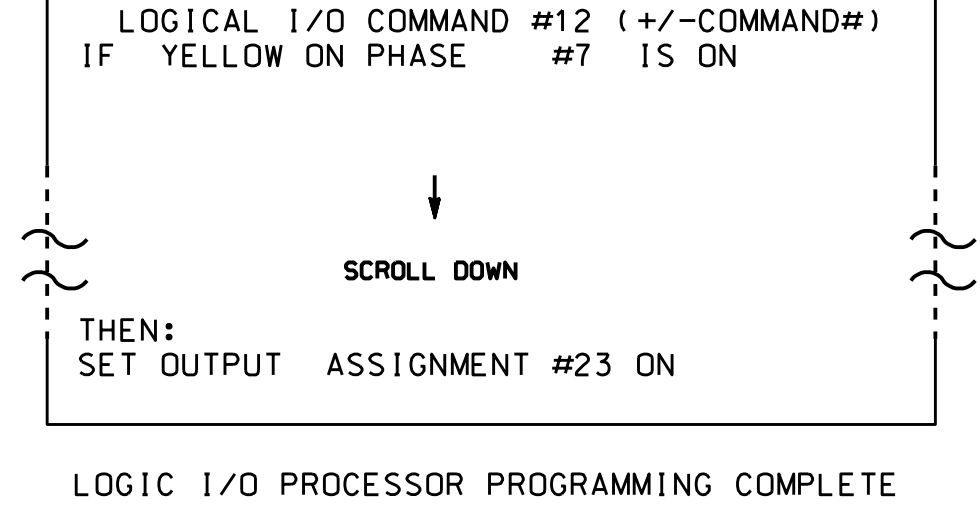
NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 3 (HEAD 31).



NOTE: LOGIC FOR PHASE 7 RED CLEAR WHEN TRANSITIONING FROM PHASE 7 TO PHASE 8 (HEAD 71).



NOTE: LOGIC FOR SWITCHING FLASHING YELLOW ARROW "OFF" DURING PHASE 7 (HEAD 71).



NOTE: LOGIC FOR YELLOW ARROW CLEARANCE FROM PHASE 7 (HEAD 71).

OUTPUT REFERENCE SCHEDULE

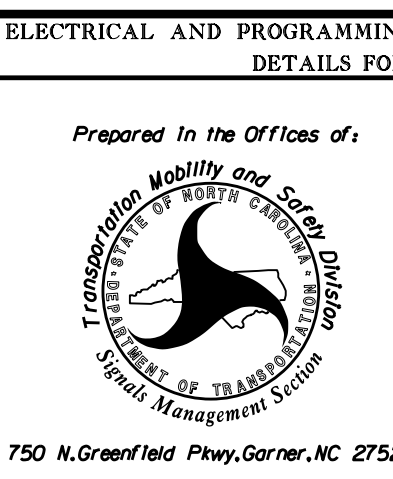
- OUTPUT 14 = Overlap A Red
- OUTPUT 15 = Overlap A Yellow
- OUTPUT 16 = Overlap A Green
- OUTPUT 6 = Overlap B Red
- OUTPUT 7 = Overlap B Yellow
- OUTPUT 8 = Overlap B Green
- OUTPUT 30 = Overlap C Red
- OUTPUT 31 = Overlap C Yellow
- OUTPUT 32 = Overlap C Green
- OUTPUT 22 = Overlap D Red
- OUTPUT 23 = Overlap D Yellow
- OUTPUT 24 = Overlap D Green
- OUTPUT 33 = Phase 1 Green
- OUTPUT 34 = Phase 5 Green
- OUTPUT 35 = Phase 3 Green
- OUTPUT 36 = Phase 7 Green

Note: All outputs shown above have been remapped. See sheets 4 through 7 of this electrical detail.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 12-0596T
DESIGNED: January 2017
SEALED: 2/20/2017
REVISED:

06-MAR-2017 14:17 C:\MITSUBISHI\SIGNALS\Work\hgr\oups\Sig_Maps\F11\ck\cmdr\20596_sml.ele_xxx.dgn

Electrical Detail - Temporary Design - Sheet 3 of 7

	<p>NC 150 (Cherryville Rd.) at NC 180 (North Post Rd.)</p>	<p>SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030530 JACOBARY M. LITTLE</p>
Prepared in the Offices of: 750 N. Greenfield Pkwy, Garner, NC 27529	Division 12 Cleveland County Shelby PLAN DATE: February 2017 REVIEWED BY: T. Joyce PREPARED BY: C. Strickland REVIEWED BY:	Documented by: Zachary M. Little 3/7/2017 0021EFD04F5341F DATE
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED SIG. INVENTORY NO. 12-0596T		

LOGIC I/O PROCESSOR PROGRAMMING COMPLETE

FYA SIGNAL OUTPUT REMAPPING ASSIGNMENT PROGRAMMING DETAIL FOR SIGNAL HEAD 11

(program controller as shown below)

STEP 1

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS), WITH CURSOR IN "OUTPUT ASSIGNMENT#" POSITION, ENTER "14"

```
PAGE:1 C1 PIN:16 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....14
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:16 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...1
SELECT COLOR(0=RED,1=YEL,2=GRN)...0
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:16 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....14
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

PRESS "+" KEY FOR OUTPUT 15

STEP 2

```
PAGE:1 C1 PIN:17 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....15
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:17 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...1
SELECT COLOR(0=RED,1=YEL,2=GRN)...1
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:17 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....15
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

PRESS "+" KEY FOR OUTPUT 16

STEP 3

```
PAGE:1 C1 PIN:18 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....16
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:18 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...1
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:18 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....16
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

PRESS "+" UNTIL OUTPUT 33 IS REACHED.

STEP 4

```
PAGE:1 C1 PIN:35 NOT ENABLED
OUTPUT ASSIGNMENT #.....33
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

THE OUTPUT IS SET AS "NOT ENABLED" BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE PHASE.

```
PAGE:1 C1 PIN:35 NOT ENABLED
SELECT VEHICLE PHASE (1-16)...1
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE PHASE' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

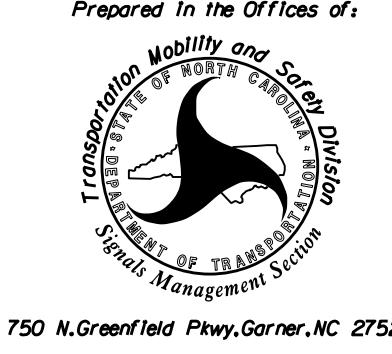
DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE PHASE' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:35 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....33
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
```

OUTPUT PROGRAMMING FOR HEAD 11 COMPLETE

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 12-0596T
DESIGNED: January 2017
SEALED: 2/20/2017
REVISED:

Electrical Detail - Temporary Design - Sheet 4 of 7

 <p>750 N. Greenfield Pkwy, Garner, NC 27529</p>	<p>Prepared In the Offices of:</p> <p>TRANSPORTATION MOBILITY AND SAFETY SOLUTIONS SIGNAL MANAGEMENT SERVICES</p>	<p>NC 150 (Cherryville Rd.) at NC 180 (North Post Rd.)</p>	<p>Division 12 Cleveland County Shelby</p> <p>PLAN DATE: February 2017 REVIEWED BY: T. Joyce</p> <p>PREPARED BY: C. Strickland REVIEWED BY:</p>	<p>SEAL</p> <p>STATE OF NORTH CAROLINA</p> <p>PROFESSIONAL ENGINEER</p> <p>SEAL 030530</p> <p>JACOBARY M. LITTLE</p>					
	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	DESCRIPTION				<p>INIT. DATE</p>	<p>DocuSign by: <i>Jacobary M. Little</i> 3/7/2017</p> <p>0021EFD04F5341F DATE</p> <p>SIG. INVENTORY NO. 12-0596T</p>
NO.	DATE	DESCRIPTION							

06-MAR-2017 14:18 C:\MITSAS\JLIS\SIGNAL\work\hgr\oups\sig\Map\511\ck\lanch\20596_sml_e_xxx.dgn

FYA SIGNAL OUTPUT REMAPPING ASSIGNMENT PROGRAMMING DETAIL FOR SIGNAL HEAD 31

(program controller as shown below)

STEP 1

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS), WITH CURSOR IN "OUTPUT ASSIGNMENT#" POSITION, ENTER "6"

```

PAGE:1 C1 PIN:7 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....6
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```

PAGE:1 C1 PIN:7 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...2
SELECT COLOR(0=RED,1=YEL,2=GRN)...0
    
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```

PAGE:1 C1 PIN:7 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....6
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

PRESS "+" KEY FOR OUTPUT 7

STEP 2

```

PAGE:1 C1 PIN:8 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....7
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```

PAGE:1 C1 PIN:8 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...2
SELECT COLOR(0=RED,1=YEL,2=GRN)...1
    
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```

PAGE:1 C1 PIN:8 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....7
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

PRESS "+" KEY FOR OUTPUT 8

STEP 3

```

PAGE:1 C1 PIN:9 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....8
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```

PAGE:1 C1 PIN:9 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...2
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
    
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```

PAGE:1 C1 PIN:9 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....8
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

PRESS "+" UNTIL OUTPUT 35 IS REACHED.

STEP 4

```

PAGE:1 C1 PIN:37 NOT ENABLED
OUTPUT ASSIGNMENT #.....35
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

THE OUTPUT IS SET AS "NOT ENABLED" BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE PHASE.

```

PAGE:1 C1 PIN:37 NOT ENABLED
SELECT VEHICLE PHASE (1-16)...3
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
    
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE PHASE' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE PHASE' AS SHOWN BELOW.

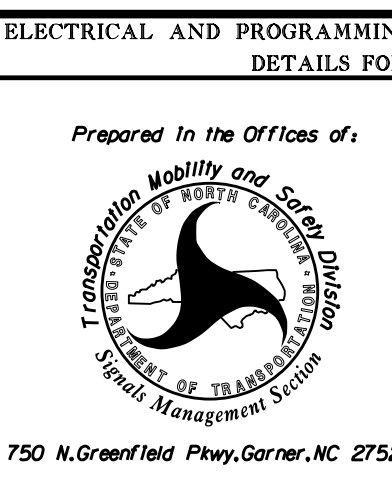
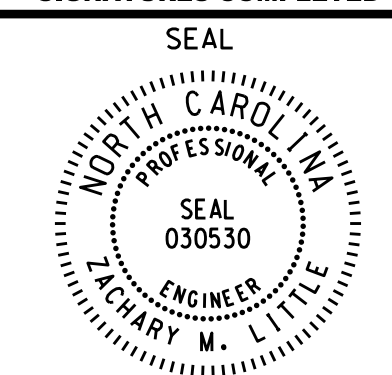
```

PAGE:1 C1 PIN:37 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....35
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....Y
DETECTOR RESET.....Y
ADVANCE BEACON.....Y
OUT OF PHASE FLASHER.....Y
CONTROLLER FLASH.....Y
RUN FREE.....Y
RESERVED.....Y
PREEMPT.....Y
SOFT PREEMPT.....Y
ANY PREEMPT.....Y
COORDINATION PLAN.....Y
OFFSET.....Y
PHASE CHECK.....Y
PHASE ON.....Y
PHASE NEXT.....Y
    
```

OUTPUT PROGRAMMING FOR HEAD 31 COMPLETE

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 12-0596T
DESIGNED: January 2017
SEALED: 2/20/2017
REVISED:

Electrical Detail - Temporary Design - Sheet 5 of 7

	PREPARED BY: C. Strickland REVIEWED BY: T. Joyce	NC 150 (Cherryville Rd.) at NC 180 (North Post Rd.)	Division 12 Cleveland County Sheiby	SEAL 
	REVISIONS INIT. DATE	SIGNED BY: <i>Zachary M. Little</i> DATE: 3/7/2017	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SIG. INVENTORY NO. 12-0596T

06-MAR-2017 1:4:19
 C:\MITS\0115\SIGNAL\work\hgr\output\sig_mgmt\strickland\2017\2017_03_07_sig_elec_xxx.dgn
 C:\MITS\0115\SIGNAL\work\hgr\output\sig_mgmt\strickland

FYA SIGNAL OUTPUT REMAPPING ASSIGNMENT PROGRAMMING DETAIL FOR SIGNAL HEAD 51

(program controller as shown below)

STEP 1

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS), WITH CURSOR IN "OUTPUT ASSIGNMENT#" POSITION, ENTER "30"

```
PAGE:1 C1 PIN:32 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....30
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:32 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...3
SELECT COLOR(0=RED,1=YEL,2=GRN)...0
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:32 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....30
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

PRESS "+" KEY FOR OUTPUT 31

STEP 2

```
PAGE:1 C1 PIN:33 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....31
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:33 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...3
SELECT COLOR(0=RED,1=YEL,2=GRN)...1
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:33 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....31
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

PRESS "+" KEY FOR OUTPUT 32

STEP 3

```
PAGE:1 C1 PIN:34 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....32
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:34 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...3
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:34 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....32
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

PRESS "+" TWICE TO REACH OUTPUT 34.

STEP 4

```
PAGE:1 C1 PIN:36 NOT ENABLED
OUTPUT ASSIGNMENT #.....34
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS "NOT ENABLED" BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE PHASE.

```
PAGE:1 C1 PIN:36 NOT ENABLED
SELECT VEHICLE PHASE (1-16)...5
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE PHASE' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE PHASE' AS SHOWN BELOW.


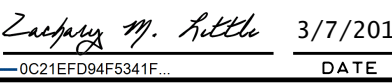
```
PAGE:1 C1 PIN:36 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....34
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

OUTPUT PROGRAMMING FOR HEAD 51 COMPLETE

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 12-0596T
DESIGNED: January 2017
SEALED: 2/20/2017
REVISED:

06-MAR-2017 14:50 S:\MITSUBISHI\SIGNAL\work\hgr\output\sig_Maps\strickland\201702096_sml_e_xxx.dgn

Electrical Detail - Temporary Design - Sheet 6 of 7

	DETAILS FOR: NC 150 (Cherryville Rd.) at NC 180 (North Post Rd.)	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
	Prepared in the Offices of:	Division 12 Cleveland County Sheiby
PLAN DATE: February 2017	REVIEWED BY: T. Joyce	DocuSigned by:  3/7/2017
PREPARED BY: C. Strickland	REVIEWED BY:	DATE
REVISIONS	INIT.	DATE
SIG. INVENTORY NO. 12-0596T		

FYA SIGNAL OUTPUT REMAPPING ASSIGNMENT PROGRAMMING DETAIL FOR SIGNAL HEAD 71

(program controller as shown below)

STEP 1

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS), WITH CURSOR IN "OUTPUT ASSIGNMENT#" POSITION, ENTER "22"

```
PAGE:1 C1 PIN:24 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....22
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:24 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...4
SELECT COLOR(0=RED,1=YEL,2=GRN)...0
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:24 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....22
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

PRESS "+" KEY FOR OUTPUT 23

STEP 2

```
PAGE:1 C1 PIN:25 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....23
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:25 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...4
SELECT COLOR(0=RED,1=YEL,2=GRN)...1
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:25 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....23
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

PRESS "+" KEY FOR OUTPUT 24

STEP 3

```
PAGE:1 C1 PIN:26 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....24
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS A VEHICLE PHASE BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE OVERLAP.

```
PAGE:1 C1 PIN:26 VEHICLE PHASE
SELECT VEHICLE OVERLAP (A=1,P=16)...4
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE OVERLAP' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE OVERLAP' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:26 VEHICLE OVERLAP
OUTPUT ASSIGNMENT #.....24
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

PRESS "+" UNTIL OUTPUT 36 IS REACHED.

STEP 4

```
PAGE:1 C1 PIN:38 NOT ENABLED
OUTPUT ASSIGNMENT #.....36
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

THE OUTPUT IS SET AS "NOT ENABLED" BY DEFAULT, THIS "Y" WILL REMAIN UNTIL THE OUTPUT IS CHANGED.
ENTER A "Y" FOR VEHICLE PHASE.

```
PAGE:1 C1 PIN:38 NOT ENABLED
SELECT VEHICLE PHASE (1-16)...7
SELECT COLOR(0=RED,1=YEL,2=GRN)...2
```

WHEN A 'Y' IS ENTERED FOR 'VEHICLE PHASE' THE SCREEN SHOWN ABOVE WILL APPEAR. ENTER DATA AS SHOWN. PRESS THE 'ENT' KEY AFTER INPUTTING DATA, THEN 'ESC'.

DISPLAY WILL NOW SHOW THE SPECIFIED OUTPUT ASSIGNED AS 'VEHICLE PHASE' AS SHOWN BELOW.

```
PAGE:1 C1 PIN:38 VEHICLE PHASE
OUTPUT ASSIGNMENT #.....36
FREQUENCY (0=DEFAULT) (0-25.5 HZ)...0.0
DUTY CYCLE (0=DEFAULT) (0 - 100%)...0
MODE (0=SOLID,1=FLASH)...0
SELECT ASSIGNMENT:
NOT ENABLED.....Y
VEHICLE PHASE.....Y
PEDESTRIAN PHASE.....Y
VEHICLE OVERLAP.....Y
PEDESTRIAN OVERLAP.....Y
WATCHDOG.....
DETECTOR RESET.....
ADVANCE BEACON.....
OUT OF PHASE FLASHER.....
CONTROLLER FLASH.....
RUN FREE.....
RESERVED.....
PREEMPT.....
SOFT PREEMPT.....
ANY PREEMPT.....
COORDINATION PLAN.....
OFFSET.....
PHASE CHECK.....
PHASE ON.....
PHASE NEXT.....
```

OUTPUT PROGRAMMING FOR HEAD 71 COMPLETE

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 12-0596T
DESIGNED: January 2017
SEALED: 2/20/2017
REVISED:

Electrical Detail - Temporary Design - Sheet 7 of 7

	DETAILS FOR: NC 150 (Cherryville Rd.) at NC 180 (North Post Rd.)	DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
	Prepared in the Offices of:	
PLAN DATE: February 2017	REVIEWED BY: T. Joyce	
PREPARED BY: C. Strickland	REVIEWED BY:	
REVISIONS	INIT. DATE	Documented by: <i>Zachary M. Little</i> 3/7/2017 0021EFD04F5341F
750 N. Greenfield Pkwy, Garner, NC 27529		SIG. INVENTORY NO. 12-0596T

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