09/08/99

TIP PROJECT: W-5806E

CONTRACT: DF00407

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5806E	1	

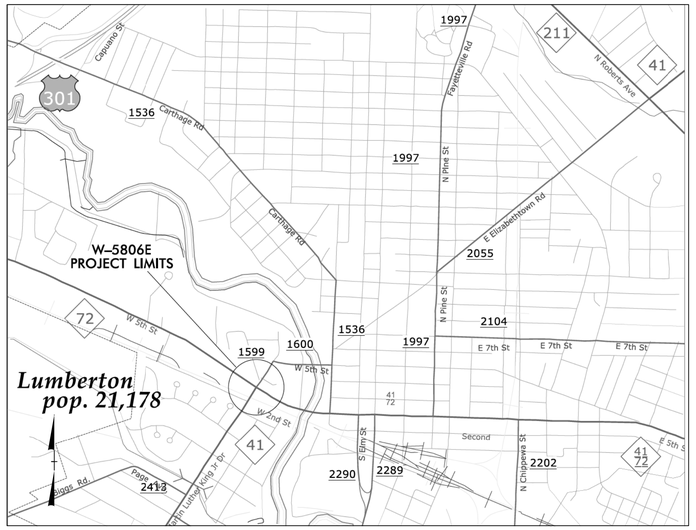
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
48951.1.6	HSIP-0041(116)	P.E.
48951.3.6	HSIP-0041(116)	CONSTRUCTION

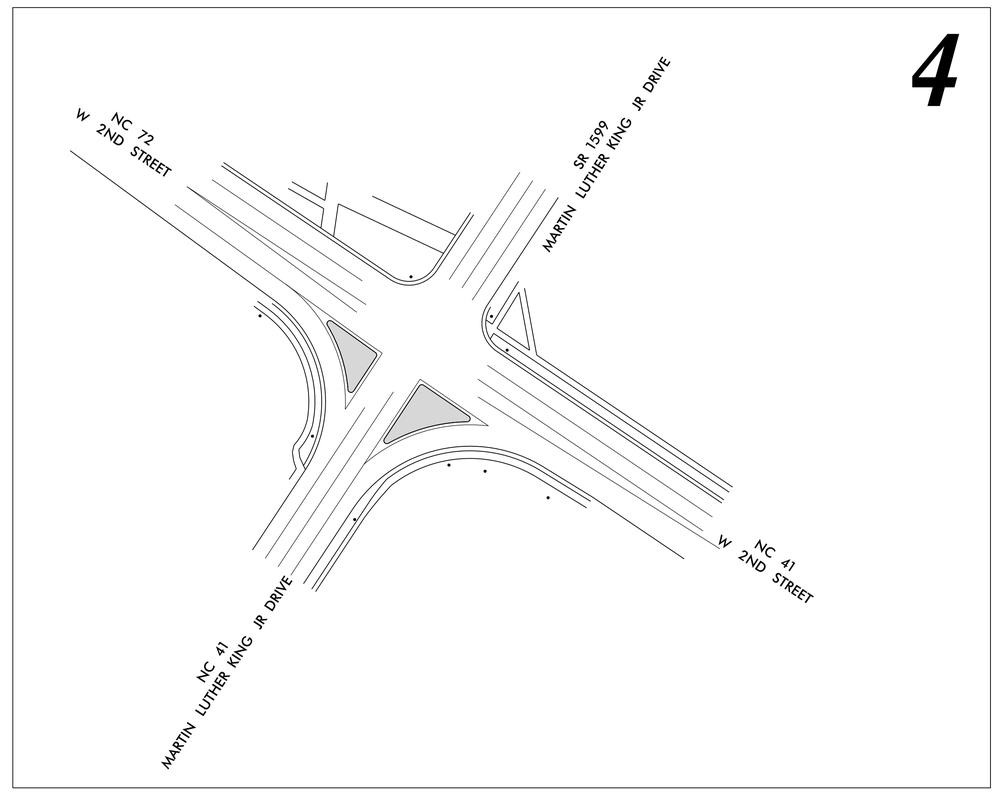
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

ROBESON COUNTY

LOCATION: NC 41 AT NC 72 AND SR 1599

TYPE OF WORK: PEDESTRIAN SIGNALS, CONCRETE ISLANDS AND PAVEMENT MARKINGS





GRAPHIC SCALES

10 5 0 10 20
PLANS

DESIGN DATA

ADT 2022 = 14000

Prepared in the Office of:
DIVISION OF HIGHWAYS
431 Transportation Drive Fayetteville, N.C., 28301

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NA

LETTING DATE:
JULY 20, 2022

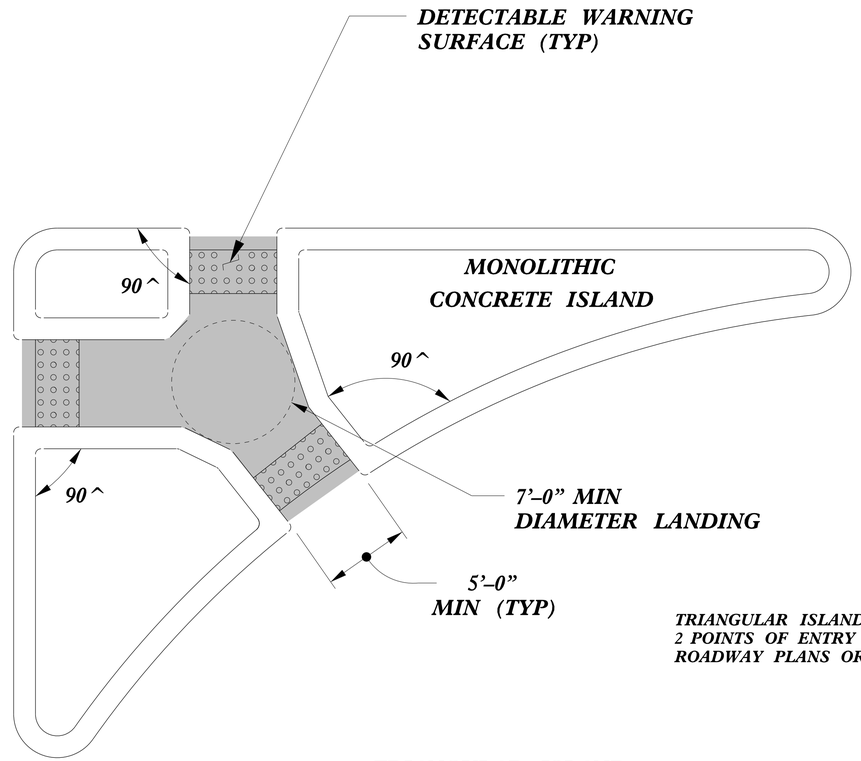
JOHN GAUTHIER
PROJECT ENGINEER

NEIL BUTLER
PROJECT DESIGN ENGINEER

17-JUN-2022 09:00
.\W-5806E_Rdy_tsh.dgn
$$$$USERNAME$$$$

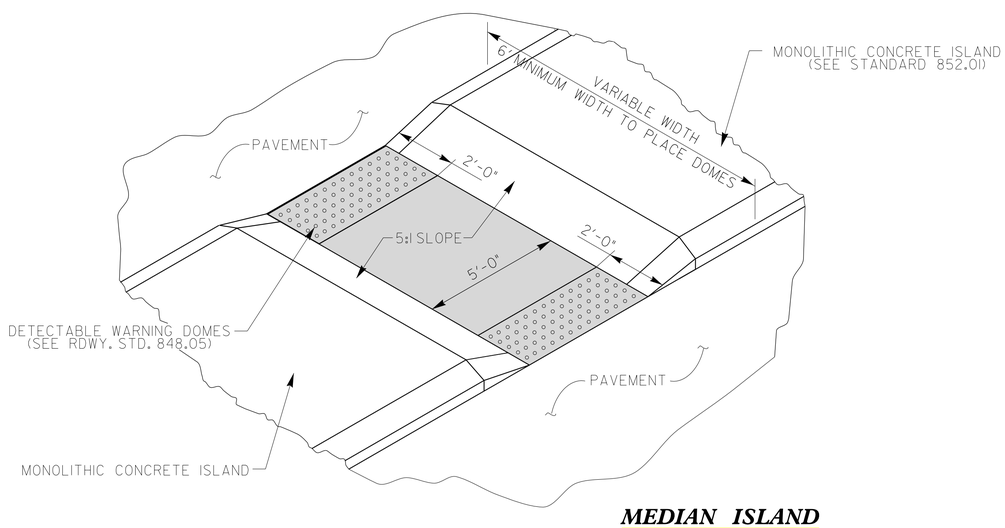
PROJECT REFERENCE NO.	SHEET NO.
W-5806E	2

PAY LIMITS FOR 2 OR 3 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF TRUNCATED DOMES)

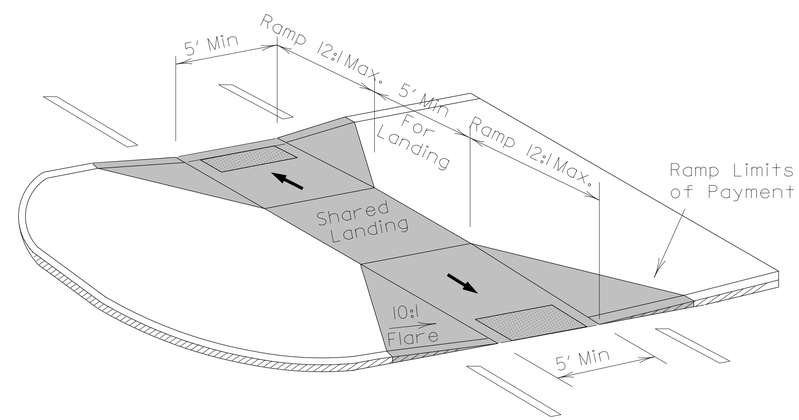


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY 2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

TRIANGULAR ISLAND WITH CUT THROUGH



MEDIAN ISLAND WITH CUT THROUGH



MEDIAN ISLAND CURB RAMPS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER Joel S. Howerton

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

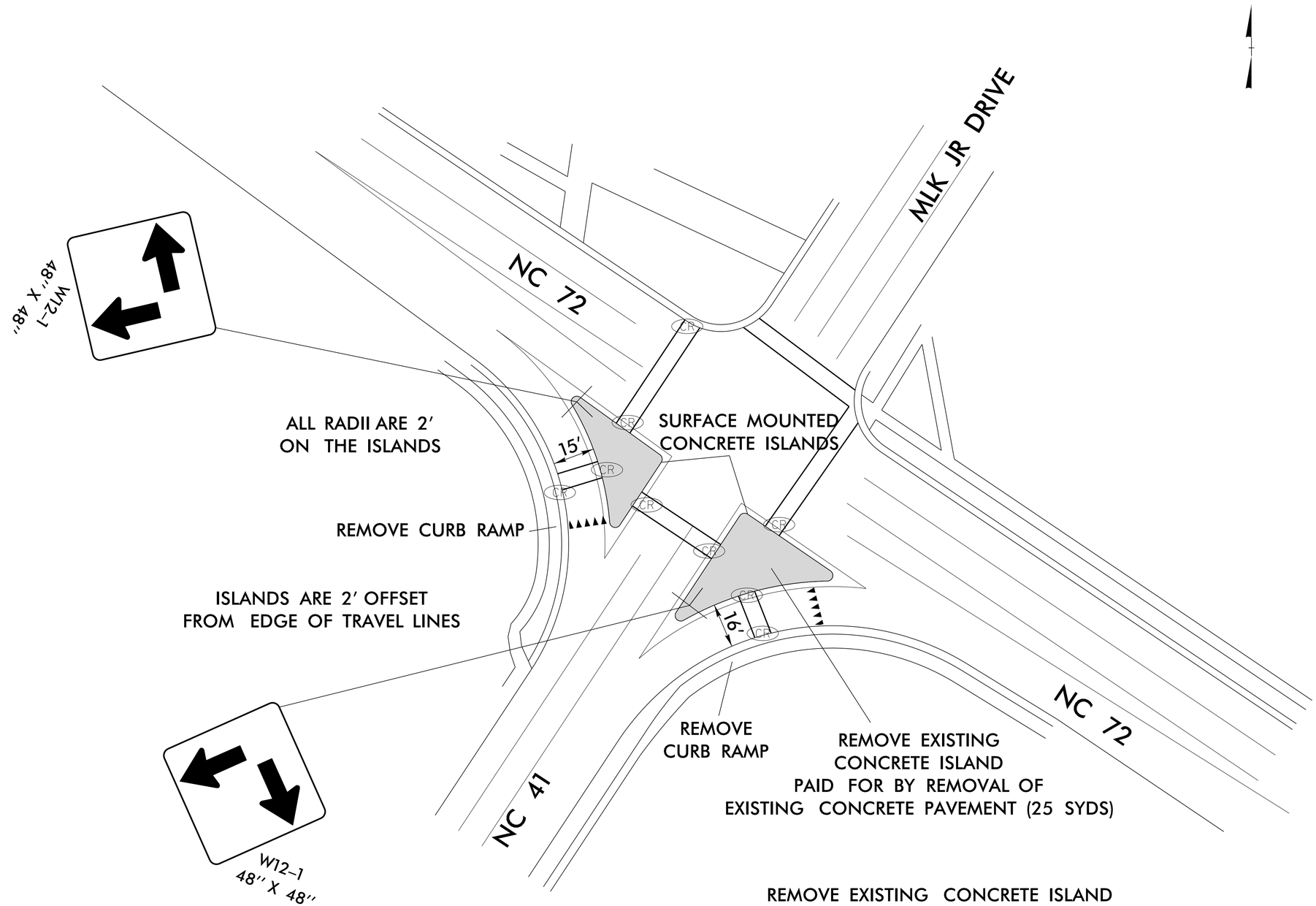
CURB RAMPS

Median or Turn Lane Islands

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC. :stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99
$$$$SYSTIME$$$$
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
W-5806E	4



REMOVE EXISTING CONCRETE ISLAND
AND PATCH ASPHALT BEFORE PLACING
SURFACE MOUNTED ISLANDS

REPLACE 2'x6" C&G AND SIDEWALK
AS DIRECTED BY ENGINEER

REVISIONS

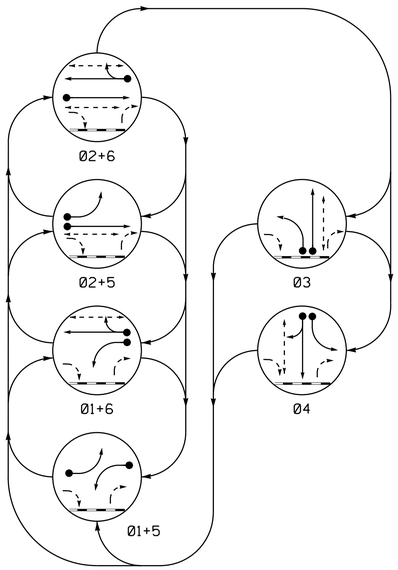
8/17/99

25-JUN-2022 19:26
s:\Traffic\Projects\W-5806E NC 41 at NC 72 Peds_RobCo\Roadway\W-5806E_Rdy_psh.dgn
$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
W-5806E	Sig.1.0

6 Phase
Fully Actuated
W/ Railroad Preemption
D06-24 NC 72 (Second Street) and Water Street

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

RAIL PREEMPT PHASES

(High Priority)

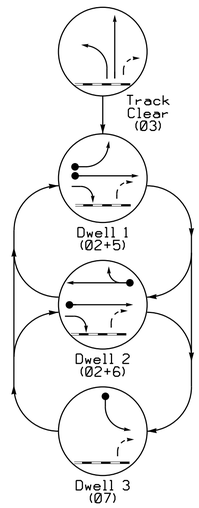


TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03	04	TRACK CLEAR	DWELL 1	DWELL 2	DWELL 3	FLASH
11	←	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21, 22	R	R	G	G	R	R	R	G	G	R	Y
31	R	R	R	R	G	R	G	R	R	R	R
32	R	R	R	R	G	R	G	R	R	R	R
41	R	R	R	R	R	G	R	R	R	R	R
42	R	R	R	R	R	G	R	R	R	R	R
51	←	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~	←	~~R~~	~~R~~	~~R~~
61, 62	R	G	R	G	R	R	R	R	G	R	Y
P21,P22	DW	DW	W	W	DW	DW	DW	DW	DW	DW	DRK
P31,P32	DW	DW	DW	DW	W	DW	DW	DW	DW	DW	DRK
P41,P42	DW	DW	DW	DW	DW	DW	W	DW	DW	DW	DRK
P61,P62	DW	W	DW	W	DW	DW	DW	DW	DW	DW	DRK

DETECTOR INSTALLATION CHART

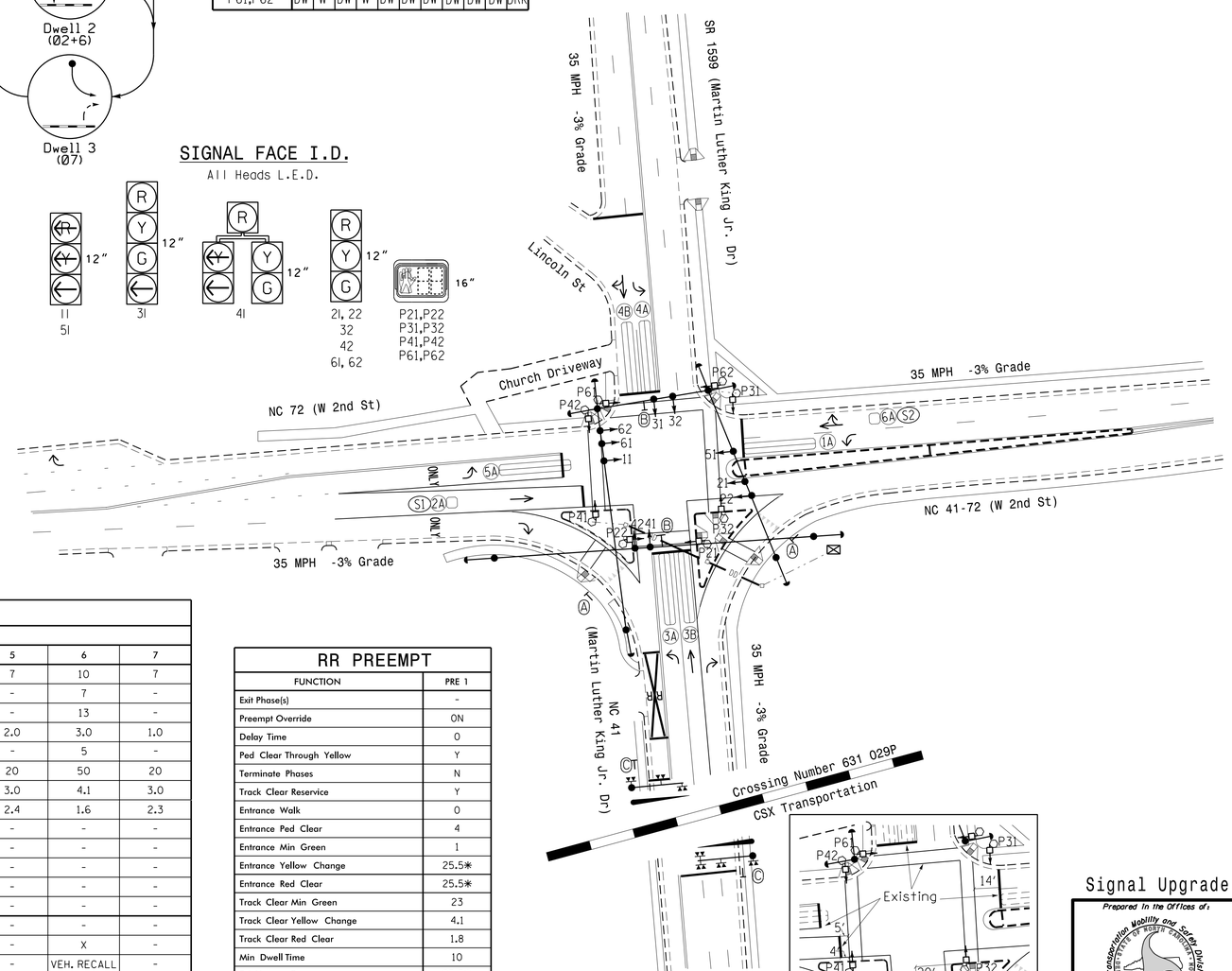
DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	X	1	Yes	-	-	-	N	-	X
2A/S1	6X6	70	EXIST	X	2	Yes	-	-	-	N	X	X
3A	6X40	0	2-4-2	X	3	Yes	-	3	-	N	-	X
3B	6X40	0	2-4-2	X	3	Yes	-	-	-	N	-	X
4A	6X40	0	2-4-2	X	4/7	Yes	-	3	-	N	-	X
4B	6X40	0	2-4-2	X	4	Yes	-	10	-	N	-	X
5A	6X40	+5	2-4-2	X	5	Yes	-	3	-	N	-	X
6A/S2	6X6	75	EXIST	X	6	Yes	-	-	-	N	X	X

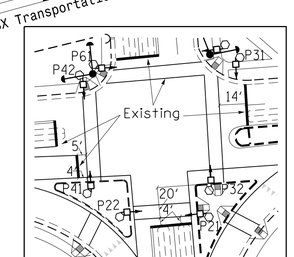
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 1 or phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Pavement markings are existing.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Program the controller to allow an Advance Walk movement before serving phase 2,3,4, and 6 vehicles phases.

SIGNAL FACE I.D.

All Heads L.E.D.





Stop Bar and Crosswalk Locations

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
N/A	Wheel Chair Ramp	
N/A	Railroad Tracks	
N/A	Railroad Cantilever	
N/A	Railroad Gate	
	Type II Signal Pedestal	
N/A	Curb Ramp	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ
Ⓑ	Left Arrow "ONLY" Sign (R3-5L)	Ⓑ
Ⓒ	"DO NOT STOP ON TRACKS" Sign (R8-8)	Ⓒ

TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7
Min Green *	7	10	7	7	7	10	7
Walk *	-	7	7	7	-	7	-
Ped Clear	-	7	14	10	-	13	-
Veh. Extension *	1.0	3.0	1.0	1.0	2.0	3.0	1.0
Advance Walk	-	4	5	4	-	5	-
Max 1 *	30	50	35	35	20	50	20
Yellow	3.0	4.1	4.1	4.1	3.0	4.1	3.0
Red Clear	2.6	1.4	1.6	1.6	2.4	1.6	2.3
Actuations B4 Add *	-	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-
Locking Detector	-	X	-	-	-	X	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-
Dual Entry	-	-	-	-	-	-	-
Simultaneous Gap	X	X	X	X	X	X	X

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

RR PREEMPT

FUNCTION	PRE 1
Exit Phase(s)	-
Preempt Override	ON
Delay Time	0
Ped Clear Through Yellow	Y
Terminate Phases	N
Track Clear Reservice	Y
Entrance Walk	0
Entrance Ped Clear	4
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Track Clear Min Green	23
Track Clear Yellow Change	4.1
Track Clear Red Clear	1.8
Min Dwell Time	10
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

* Allows normal phase times to be used.

This Intersection is designed for SIMUTANEOUS preemption.

Signal Upgrade Corr.File No. 06-18-54709

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 72/NC 41-72 (W 2nd St)
at
NC 41/SR 1599 (Martin Luther King Jr. Dr)

Division 6 Robeson County Lumberton

PLAN DATE: June 2022 REVIEWED BY: ZML
PREPARED BY: Jeff Spence REVIEWED BY:

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030530 ENGINEER ZACHARY M. LITTLE

DocuSigned by: Zachary M. Little 06/22/2022
DC21EFDMF5341F... DATE

SIG. INVENTORY NO. 06-0186

23-JUN-2022 12:02
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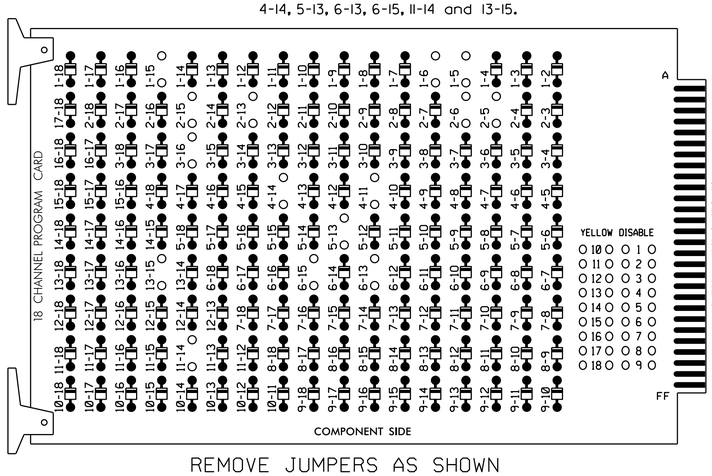
jrspence

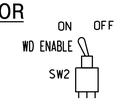
PROJECT REFERENCE NO.	SHEET NO.
W-5806E	Sig. 1.1

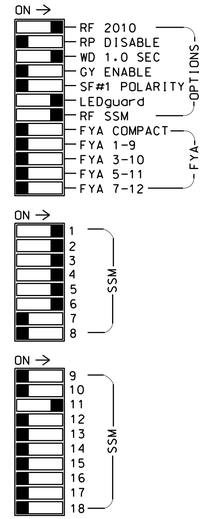
EDI MODEL 2018ECLip-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-15, 2-5, 2-6, 2-13, 2-15, 3-16, 4-11, 4-14, 5-13, 6-13, 6-15, 11-14 and 13-15.







■ = 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. Ensure that 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 and 6 Green.
3. If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
4. The cabinet and controller are part of the D06-24 NC 72 (Second Street) and Water Street Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070LX
CABINET.....332 W/AUX
SOFTWARE.....ECONOLITE ASC/3-2070
CABINET MOUNT.....BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED.....S1,S2,S3,S4,S5,S6,S7,S8, S9,S12,AUX S4
PHASES USED.....1,2,2 PED,3,3 PED,4,4 PED, 5,6,6PED,7
OVERLAP "A".....NOT USED
OVERLAP "B".....NOT USED
OVERLAP "C".....*
OVERLAP "D".....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	3 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	21,22	P21, P22	31	32	41,42	P41, P42	51	61,62	P61, P62	NC	NU	P31, P32	NU	NU	NU	41	NU	NU
RED		128		116	116	101			134								*		
YELLOW		129		117	117	102			135										
GREEN		130		118	118	103			136										
RED ARROW	125							131											
YELLOW ARROW	126							132									A115		
FLASHING YELLOW ARROW																			
GREEN ARROW	127			118				133									A116		
✋			113				104			119			110						
🚶			115				106			121			112						

NU = Not Used

NC = No Connection

* Denotes install load resistor. See load resistor installation detail this sheet.

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø 1 / 1A	Ø2/SYS / 2A/S1	SLOT	SLOT	SLOT	Ø4/Ø7 / 4A	SLOT	SLOT	Ø 3 / 3A	SLOT	SLOT	Ø2 PED / DC ISOLATOR	Ø6 PED / DC ISOLATOR	FS / DC ISOLATOR
	L	NOT USED	NOT USED	EMPTY	EMPTY	EMPTY	Ø 4 / 4B	EMPTY	EMPTY	Ø 3 / 3B	EMPTY	EMPTY	Ø4 PED / DC ISOLATOR	Ø3 PED / DC ISOLATOR	ST / DC ISOLATOR
FILE "J"	U	Ø 5 / 5A	Ø6/SYS / 6A/S2	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	SLOT	PRE1 / AC ISOLATOR
	L	NOT USED	NOT USED	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	EMPTY	NOT USED

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

FS = FLASH SENSE
ST = STOP TIME
PRE = PREEMPT

INPUT FILE CONNECTION & PROGRAMMING CHART

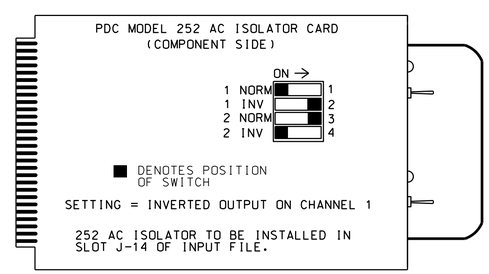
LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND TIME	DELAY TIME	ADDED INITIAL	DETECTOR TYPE
1A	TB2-1,2	I1U	56	1	1	YES				N
2A/S1	TB2-5,6	I2U	39	2	2/SYS	YES				N
3A	TB6-9,10	I9U	60	11	3	YES		3		N
3B	TB6-11,12	I9L	62	13	3	YES				N
4A	TB4-9,10	I6U	41	4	4/7	YES		3		N
4B	TB4-11,12	I6L	45	14	4	YES		10		N
5A	TB3-1,2	J1U	55	5	5	YES		3		N
6A/S2	TB3-5,6	J2U	40	6	6/SYS	YES				N
PED PUSH BUTTONS										
P21,P22	TB8-4,6	I12U	67	PED 2	2 PED					
P31,P32	TB8-8,9	I13L	70	PED 8	3 PED					
P41,P42	TB8-5,6	I12L	69	PED 4	4 PED					
P61,P62	TB8-7,9	I13U	68	PED 6	6 PED					

NOTE:
INSTALL DC ISOLATORS IN INPUT FILE SLOTS I12 AND I13.

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

PREEMPT 1 AC ISOLATOR (MODEL 252) OUTPUT PROGRAMMING DETAIL

(set DIP switches as shown below)



SETTING = INVERTED OUTPUT ON CHANNEL 1

252 AC ISOLATOR TO BE INSTALLED IN SLOT J-14 OF INPUT FILE.

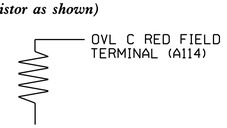
NOTE: IF ANOTHER MANUFACTURER TYPE OF AC ISOLATOR IS USED, OUTPUT PROGRAMMING IS LIKELY NOT TO EQUATE TO THAT SHOWN ABOVE.

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)



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.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0186
DESIGNED: June 2022
SEALED: 6/22/2022
REVISED: N/A

Electrical Detail - Sheet 1 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 72/NC 41-72 (W 2nd St)
at
NC 41/SR 1599
(Martin Luther King Jr. Dr)

Division 6 Robeson County Lumberton

PLAN DATE: June 2022 REVIEWED BY:
PREPARED BY: Zarrar Zafar REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Traffic Engineering Branch
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce 06/23/2022
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SIG. INVENTORY NO. 06-0186

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zzafar

PROJECT REFERENCE NO.	SHEET NO.
W-5806E	Sig. 1.2

ECONOLITE ASC/3-2070 LOGIC PROCESSOR PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select [1. CONFIGURATION]
2. From CONFIGURATION Submenu select [8. LOGIC PROCESSOR]
3. From the LOGIC PROCESSOR Submenu select [2. LOGIC STATEMENTS]

This logic statement prevents the controller from serving phase 7 at controller startup.

ENTER A "1" IN THE LP# FIELD, PRESS 'ENTER', AND PROGRAM AS SHOWN.

```
LP#:   1  COPY FROM:   1  ACTIVE:  M   (T/F)
IF    PMT PREEMPT ACTIVE    1     IS  OFF

THEN  CTR OMIT PHASE        7         ON


ELSE
```

LOGIC FOR OMITTING PHASE 7 AT STARTUP AND/OR WHEN NOT IN PREEMPT

1. From Main Menu select [1. CONFIGURATION]
2. From CONFIGURATION Submenu select [8. LOGIC PROCESSOR]
3. From the LOGIC PROCESSOR Submenu select [1. LOGIC STATEMENT CONTROL]

ENABLE LOGIC PROCESSOR STATEMENT 1 BY POSITIONING THE CURSOR OVER THE FIELD SHOWN BELOW AND USING THE TOGGLE KEY TO ENABLE IT.

```
LOGIC STATEMENT CONTROL
          1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6
LP 1-15   E . . . . . . . . . . . . . . .
LP 16-30  . . . . . . . . . . . . . . . .
LP 31-45  . . . . . . . . . . . . . . . .
LP 46-60  . . . . . . . . . . . . . . . .
LP 61-75  . . . . . . . . . . . . . . . .
LP 76-90  . . . . . . . . . . . . . . . .
```

END PROGRAMMING

ECONOLITE ASC/3-2070 OVERLAP PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select [2. CONTROLLER]
2. From CONTROLLER Submenu select [2. VEHICLE OVERLAPS]

Toggle Twice

OVERLAP C

Select TMG VEH OVLP [C] and 'NORMAL'

```
TMG VEH OVLP...[C] TYPE: .......NORMAL
  PHASES 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6
INCLUDED . . . X . . X . . . . . . . . .

LAG GRN 0.0 YEL 0.0 RED 0.0
```

END PROGRAMMING

ECONOLITE ASC/3-2070 CONTROLLER SEQUENCE PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select [1. CONFIGURATION]
2. From CONFIGURATION Submenu select [1. CONTROLLER SEQ]
3. From CONTROLLER SEQUENCE Submenu select

[1. PHASE RING SEQUENCE AND ASSIGNMENT]

Move the cursor to the SEQUENCE COMMANDS field, toggle to select "C" mode, enter phases in desired sequence.

```
CONTROLLER SEQUENCE [ 1]
SEQUENCE COMMANDS  .  HW ALT SEQ ENA.            NO
    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16
BC-   C  C  C  C  C  C  C  C  C  C  C  C  C  C  C  C
R1-  1  2  3  4  7  .  .  .  .  .  .  .  .  .  .  .
R2-  5  6  .  .  .  .  .  .  .  .  .  .  .  .  .  .
R3-  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
R4-  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

R1-R4=RING 1-4, DATA ENTRY, PHASES 1-16
BC=BARRIER CONTROL, VALUES: B,C
B=CURRENT GROUP RING BARRIER
C=COMPATIBILITY PROGRAMMED BY MAIN MENU 1-1-2
```

END SEQUENCE AND ASSIGNMENT PROGRAMMING

1. From Main Menu select [1. CONFIGURATION]
2. From CONFIGURATION Submenu select [1. CONTROLLER SEQ]
3. From CONTROLLER SEQUENCE Submenu select [2. PHASE COMPATIBILITY]

Program phase compatibility as shown below to ensure phases 3 and 7 cannot run concurrently.

```
PHASE COMPATIBILITY

          6 5 4 3 2 1 0 9 8 7 6 5 4 3 2
        1 . . . . . . . . . . X X . . .
        2 . . . . . . . . . . X X . .
        3 . . . . . . . . . . . . . .
        4 . . . . . . . . . . . . .
        5 . . . . . . . . . . .
        6 . . . . . . . . . .
        7 . . . . . . . . .
        8 . . . . . . . .
        9 . . . . . . .
       10 . . . . . .
       11 . . . . .
       12 . . . .
       13 . . .
       14 . .
       15 .
```

END COMPATIBILITY PROGRAMMING

ECONOLITE ASC/3-2070 PED 3 PROGRAMMING ASSIGNMENT DETAIL

(program controller as shown)

1. From Main Menu select [6. DETECTORS]
2. From DETECTOR Submenu select [3. PED DETECTOR INPUT ASSIGNMENT]

```
PED DET PHASE ASSIGNMENT MODE:  NTCIP

   PHASE  1   2   3   4   5   6   7   8
DETECTOR  0   2   8   4   0   6   0   0

   PHASE  9  10  11  12  13  14  15  16
DETECTOR  0   0   0   0   0   0   0   0
```

NOTICE PED DETECTOR 8 ASSIGNED TO PHASE 3

1. From Main Menu select [1. CONFIGURATION]
2. From CONFIGURATION Submenu select [3. LOAD SW ASSIGN]

```
LD SWITCH ASSIGN
    PHASE       DIMMING ---FLASH---
    /OVLP TYPE R Y G D PWR AUT TGR
1     1    V    . . . + A   R   .
2     2    V    . . . + A   Y   .
3     3    V    . . . + A   R   X
4     4    V    . . . + A   R   .
5     5    V    . . . - A   R   .
6     6    V    . . . - A   Y   X
7     7    V    . . . - A   R   .
8     8    V    . . . - A   R   X
9     1    O    . . . + A   R   X
10    2    O    . . . + A   R   X
11    3    O    . . . - A   R   .
12    4    O    . . . - A   R   .
13    2    P    . . . + A   .   .
14    4    P    . . . - A   .   .
15    6    P    . . . + A   .   .
16    3    P    . . . - A   .   .
```

NOTICE PHASE 3 PED ASSIGNED TO LD SWITCH 16

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0186
DESIGNED: June 2022
SEALED: 6/22/2022
REVISED: N/A

Electrical Detail - Sheet 2 of 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 72/NC 41-72 (W 2nd St)
at
NC 41/SR 1599
(Martin Luther King Jr. Dr)

Division 6 | Robeson County | Lumberton

PLAN DATE: June 2022 | REVIEWED BY:

PREPARED BY: Zarrar Zafar | REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce — A90CADFDBD4241D... 06/23/2022 DATE

SIG. INVENTORY NO. 06-0186

23-JUN-2022 08:21
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zzafar

PROJECT REFERENCE NO.	SHEET NO.
W-5806E	Sig. 1.3

ECONOLITE ASC/3-2070 RAILROAD PREEMPT PROGRAMMING DETAIL

(program controller as shown)

1. From Main Menu select [4. PREEMPTOR/TSP]
2. From PREEMPTOR/TSP/SCP Submenu select [1. PREEMPT PLAN 1-10]

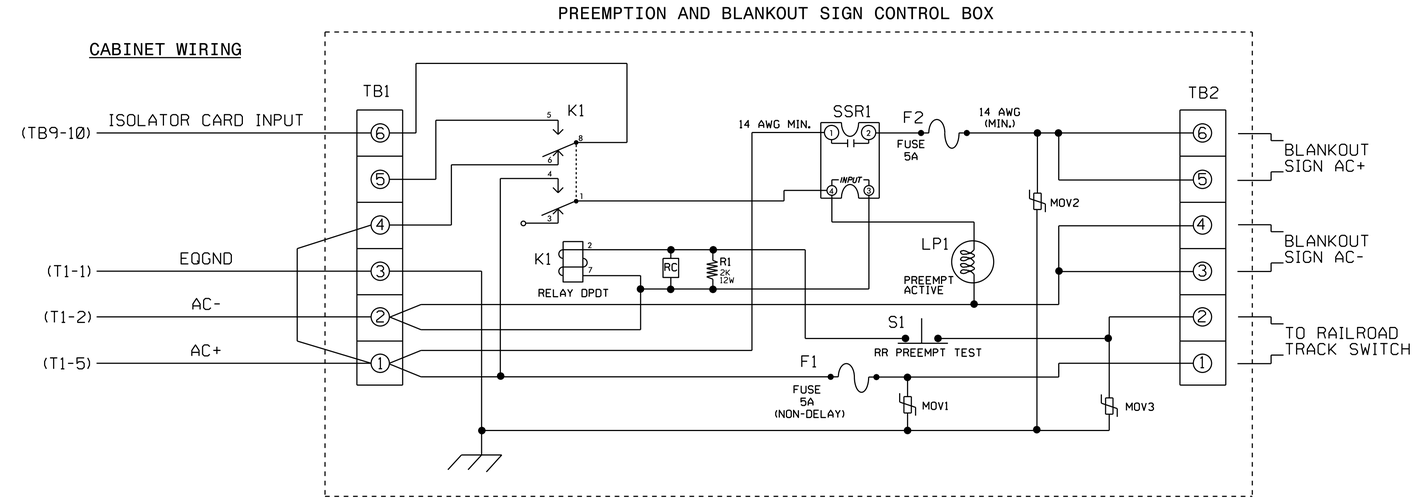
Place cursor in [ ] next to Preempt Plan and press 1. Then press the right cursor arrow and toggle the controller to YES. Next cursor down. This will select Railroad Preempt #1.

```
PREEMPT PLAN [  1]     ENABLE....YES
 VEH/PED 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6
 OVERLAP A B C D E F G H I J K L M N O P
TRKCLR V . . X . . . . . . . . . . . . .
TRKCLR O . . . . . . . . . . . . . . . .
ENA TRL  . . . . . . . . . . . . . . . .
DWEL VEH . . . . . . . . . . . . . . . .
DWEL PED . . . . . . . . . . . . . . . .
DWEL OLP . . . . . . . . . . . . . . . .
CYC VEH  . X . . X X X . . . . . . . . .
CYC PED  . . . . . . . . . . . . . . . .
CYC OLP  . . X . . . . . . . . . . . . .
EXIT PH  . . . . . . . . . . . . . . . .
EXIT CAL . . . . . . . . . . . . . . . .
SP FUNC  . . . . . . . . . . . . . . . .

ENABLE... YESIPMT OVRIDE.XIINTERLOCK. NO
DET LOCK... XIDELAY..    0IINHIBIT...  0
OVERIDE FL. .IDURATION   0ICLR-GRN... NO
TERM OLP.  NOIPC>YEL   YESITERM PH    NO
PED DARK.. NOITC RESRV YESIDWELL FL  OFF
LINK PMT....0IX FLCOLR REDIEXIT OPT. OFF
X TMG PLN...0IRE-SERV..  0IFLT TYPE.HARD
FREE DUR PMTIR1  NOIR2  NOIR3  NOIR4  NO
--TIMING-----WALKIPED CLIMN GRI YELI RED
ENTRANCE TM.    0I     4I    1I25.5I25.5
-----------MIN GRIEXT GRIMX GRI YELI RED
TRACK CLEAR    23I     0I    0I 4.1I 1.8
-----------MIN DLIPMTEXTIMX TMI YELI RED
DWL/CYC-EXIT   10I   0.0I    0I25.5I25.5
PMT ACTIVE OUT..ON   PMT ACT DWELL...NO
OTHER - PRI PMT.OFF  NON-PRI PMT.....OFF
INH EXT TIME... 0.0  PED PR RETURN...OFF
PRIORITY RETURN.OFF  QUEUE DELAY.... OFF
COND DELAY......OFF
PHASES     1   2   3   4   5   6   7   8
PR RTN%    0   0   0   0   0   0   0   0
PHASES     9  10  11  12  13  14  15  16
PR RTN%    0   0   0   0   0   0   0   0
```

RAILROAD PREEMPTION WIRING DETAIL

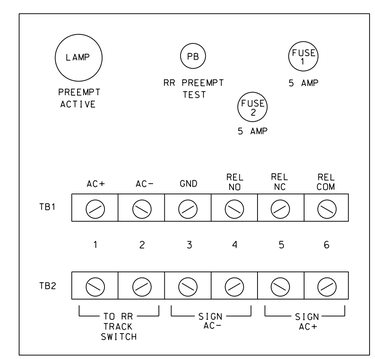
(wire as shown below)



NOTES

1. Relay K1 is shown in the energized (Preempt not active) normal operation state.
2. Relay K1 is a DPDT with 120VAC coil with octal base.
3. Relay SSR1 is a SPST (normally open) Solid State Relay with AC input and AC (25 amp) output.
4. AC Isolator Card shall activate preemption upon removal of AC+ from the input (as shown above). To accomplish this set invert dip switch on AC Isolator Card.
5. IMPORTANT!! A jumper must be added between input file terminals J14-E and J14-K if not already present. Also, terminal TB9-12 (on input panel) shall be connected to AC neutral (jumper may have to be added).

FRONT VIEW



THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 06-0186
DESIGNED: June 2022
SEALED: 6/22/2022
REVISED: N/A

Electrical Detail - Sheet 3 of 3

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ELECTRICAL AND PROGRAMMING DETAILS FOR:

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Prepared In the Offices of:
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750 N.Greenfield Pkwy,Garner,NC 27529

PLAN DATE:	June 2022	REVIEWED BY:	
PREPARED BY:	Zarrar Zafar	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 031001 ENGINEER D. TODD JOYCE

DocuSigned by: D. Todd Joyce A90CADEFB0D4241D 06/23/2022
DATE

SIG. INVENTORY NO. 06-0186

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