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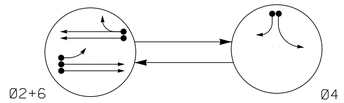
PROJECT REFERENCE NO.	SHEET NO.
R-3822/U-5725	SIG. 1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

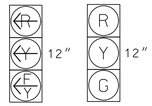
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4	PHASE FLASH
21	~~FY~~	~~R~~	~~Y~~
22, 23	G	R	Y
41, 42	R	G	R
61, 62	G	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



21 — 22, 23, 41, 42, 61, 62

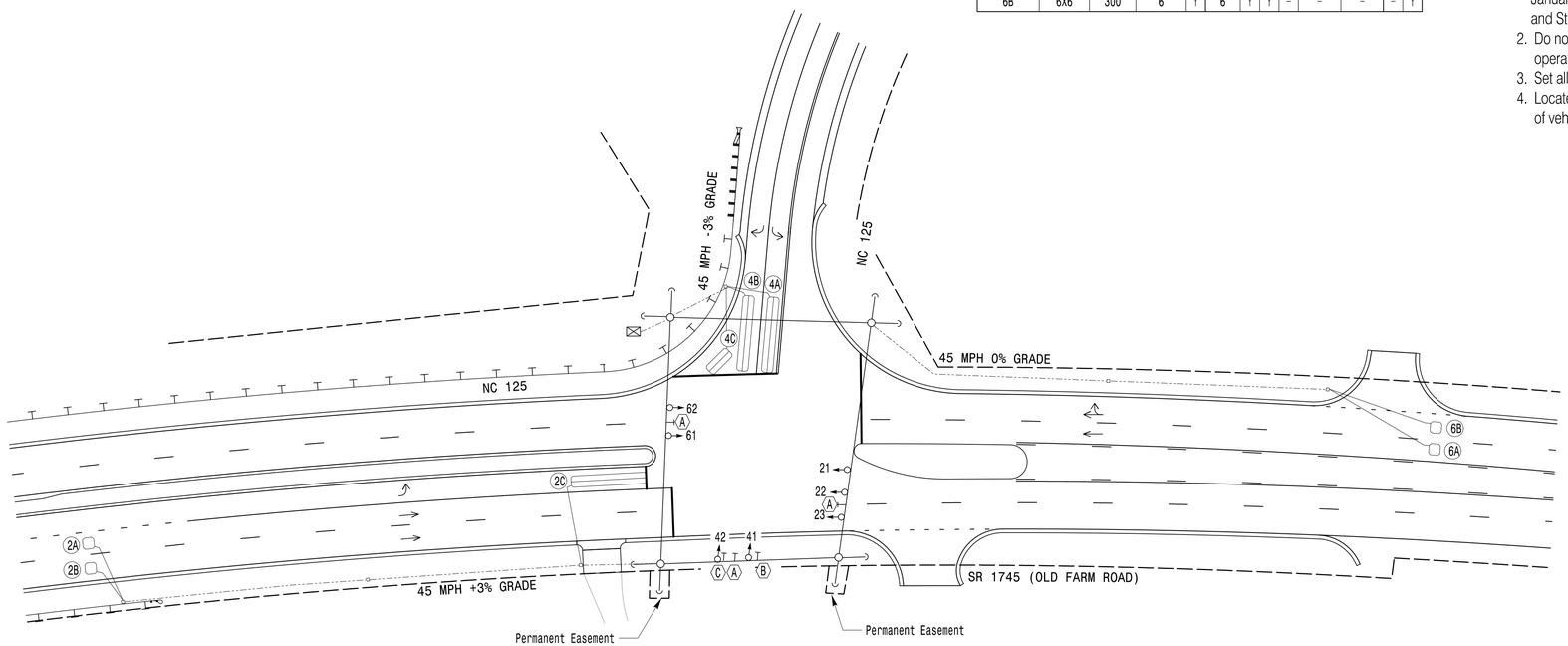
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	6	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	300	6	Y	2	Y	Y	-	-	-	-	Y
2C	6X40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
4B	6X40	0	2-4-2	Y	4	Y	Y	-	-	15	-	Y
4C	6X15	0	2-4-2	Y	4	Y	Y	-	-	15	-	Y
6A	6X6	300	6	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	300	6	Y	6	Y	Y	-	-	-	-	Y

2 PHASE
FULLY ACTUATED
(ISOLATED)

NOTES

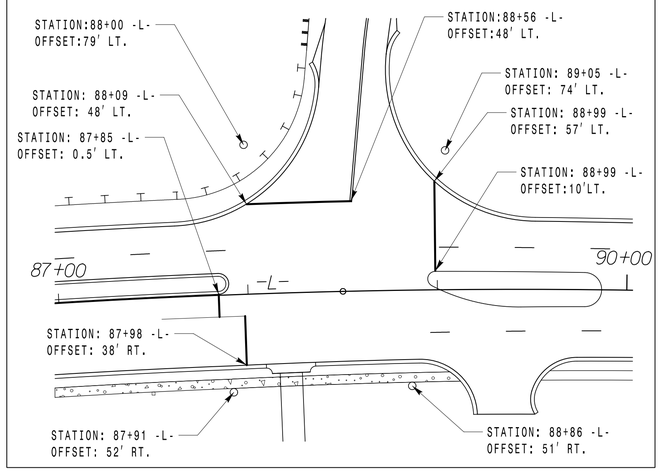
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.



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	→
Ⓐ	Street Sign (D-3)	Ⓐ
Ⓑ	Left Arrow "ONLY" Sign (R3-5L)	Ⓑ
Ⓒ	Right Arrow "ONLY" Sign (R3-5R)	Ⓒ

STOPLINE AND POLE LOCATION DIAGRAM



OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6
Min Green 1 *	12	7	12
Extension 1 *	6.0	2.0	6.0
Max Green 1 *	90	20	90
Yellow Clearance	4.5	3.0	4.5
Red Clearance	1.6	2.8	1.6
Walk 1 *	-	-	-
Don't Walk 1	-	-	-
Seconds Per Actuation *	1.5	-	1.5
Max Variable Initial *	34	-	34
Time Before Reduction *	15	-	15
Time To Reduce *	45	-	45
Minimum Gap	3.0	-	3.0
Recall Mode	MIN RECALL	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	YELLOW
Dual Entry	-	-	-
Simultaneous Gap	ON	ON	ON

* 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.

NEW INSTALLATION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared For:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 125/SR 1745 (OLD FARM ROAD) AT NC 125

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: FEBRUARY 2018 REVIEWED BY: SL PHILLIPS
PREPARED BY: SP PENNINGTON REVIEWED BY:

REVISIONS	INIT.	DATE

SCALE 0 40' 1"=40'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS

DocuSigned by: SLPh. 6/12/2018
SIGNATURE DATE

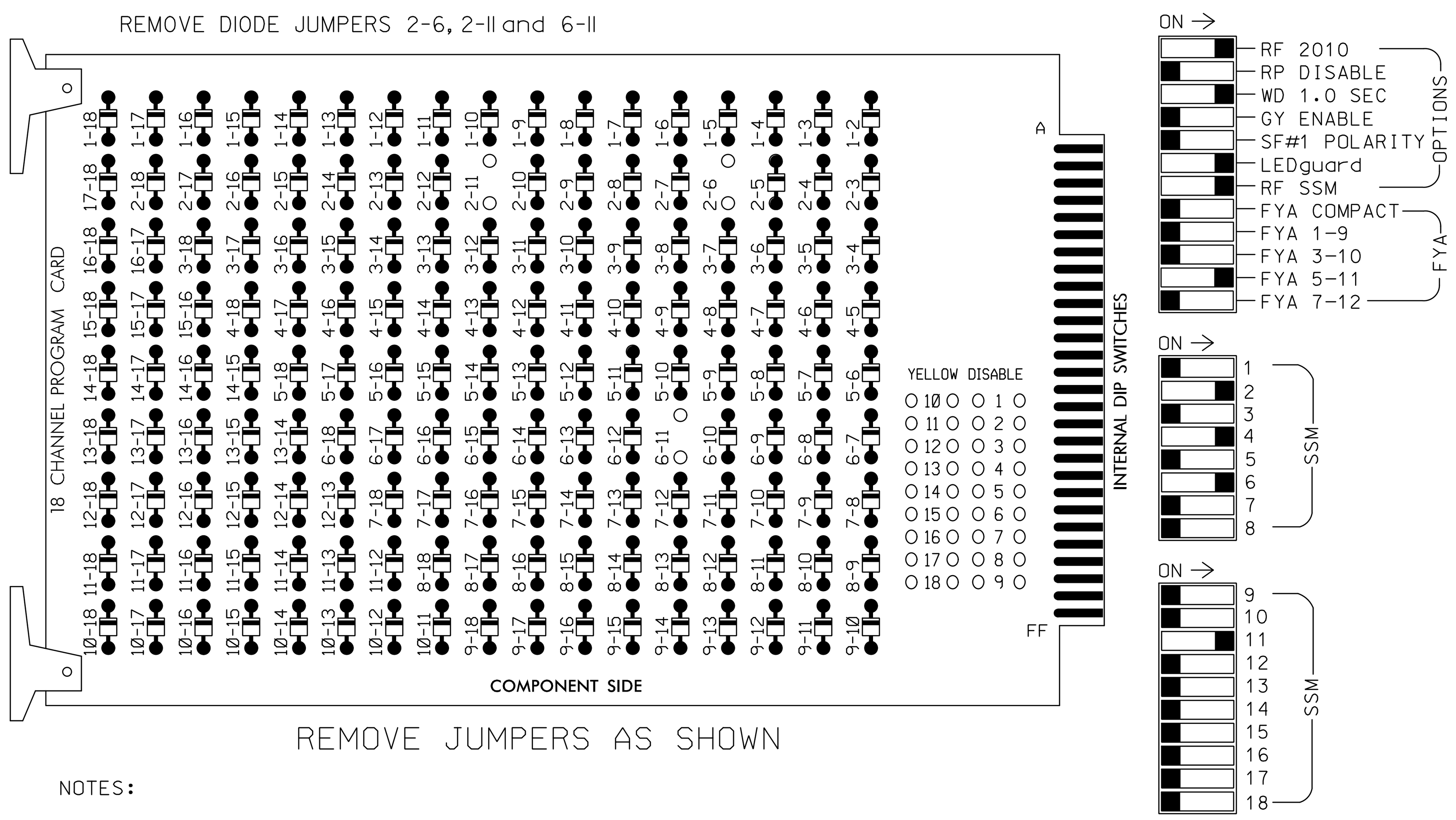
SIG. INVENTORY NO. 04-1434

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

6/12/2018 2:58:55 PM susan.pennington K:\RAL_TPTO_SIGNALS\401036392 R-3822-U-5725\#54 - Signal Design\260_010_U5725_R3822_ 041434_2018g.dgn

EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE JUMPERS 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.

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. Enable Simultaneous Gap-Out for all Phases.
3. Program phases 2 and 6 for Variable Initial and Gap Reduction.
4. Program phases 2 and 6 for Startup In Green.
5. Program phases 2 and 6 for Yellow Flash.

EQUIPMENT INFORMATION

CONTROLLER..............2070
CABINET.................332 W/ AUX
SOFTWARE................ECONOLITE OASIS
CABINET MOUNT...........BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED......S2,S5,S8,AUX S4
PHASES USED.............2,4,6
OVERLAP "A".............NOT USED
OVERLAP "B".............NOT USED
OVERLAP "C".............6
OVERLAP "D".............NOT USED

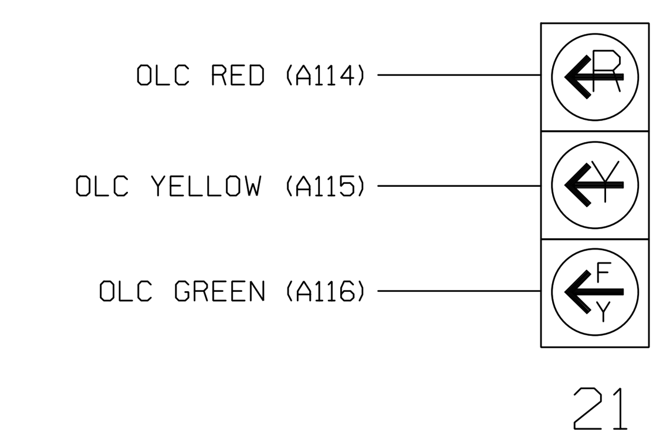
SIGNAL HEAD HOOK-UP CHART

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	22,23	NU	NU	41,42	NU	NU	61,62	NU	NU	NU	NU	NU	NU	NU	21★	NU	NU
RED		128			101			134										
YELLOW		129			102			135										
GREEN		130			103			136										
RED ARROW																A114		
YELLOW ARROW																A115		
FLASHING YELLOW ARROW																A116		
GREEN ARROW																		

NU = Not Used

FYA SIGNAL WIRING DETAIL

(wire signal head as shown)



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
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y			
2C	TB2-9,10	I3U	63	25	32	2	Y	Y	Y		3
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			15
4C	TB6-1,2	I7U	65	27	34	4	Y	Y			15
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

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	ø 2 2A	ø 2 2C	SLOT EMPTY	SLOT EMPTY	ø 4 4A	ø 4 4C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L		ø 2 2B	NOT USED			ø 4 4B	NOT USED							ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	ø 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		ø 6 6B												

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

FS = FLASH SENSE
ST = STOP TIME

OVERLAP PROGRAMMING DETAIL FOR DEFAULT PHASING

(program controller as shown below)

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

PRESS '+ TWICE'

```
 PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
 PHASE:            |12345678910111213141516
VEH OVL PARENTS:   |     X
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

OVERLAP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 04-1434
DESIGNED: FEBRUARY 2018
SEALED: 6/12/2018
REVISED: N/A

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

Electrical Detail

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 125/SR 1745 (OLD FARM ROAD) AT NC 125

Prepared For:
Transportation Mobility and Safety Division
ITS & Signals Management Section
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N.Greenfield Pkwy,Garner,NC 27529

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: FEBRUARY 2018	REVIEWED BY: SL PHILLIPS
PREPARED BY: SP PENNINGTON	REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

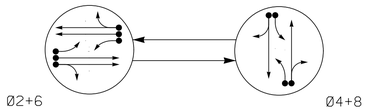
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS
DocuSigned by:
0C87A59ED60B437...
SIGNATURE 6/12/2018 DATE

SIG. INVENTORY NO. 04-1434

6/12/2018 2:58:56 PM susan.pennington K:\RAL_TPTO_SIGNALS\011036392 R-3822-U-5725\S4 - Signal Design\260_012_U5725_R3822_041434_2018e.dgn

PROJECT REFERENCE NO.	SHEET NO.
R-3822/U-5725	SIG. 3

PHASING DIAGRAM

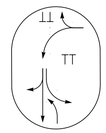


PHASING DIAGRAM DETECTION LEGEND

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

EV PREEMPT PHASES

(Medium Priority)



PRE 2
(Ø4+7)

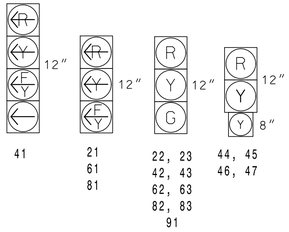
TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	PHASE PRE 2	PHASE FLASH
21	~~F~~	~~R~~	~~R~~	~~Y~~
22, 23	G	R	R	Y
41	~~R~~	~~F~~	—	~~R~~
42, 43	R	G	G	R
*44,45,46,47	FY	FY	R	Y
61	~~F~~	~~R~~	~~R~~	~~Y~~
62, 63	G	R	R	Y
81	~~R~~	~~F~~	~~R~~	~~R~~
82, 83	R	G	R	R
91	DRK	DRK	G	R

* Denotes Flashing Yellow for 8" signal face. See note #8.

SIGNAL FACE I.D.

All Heads L.E.D.



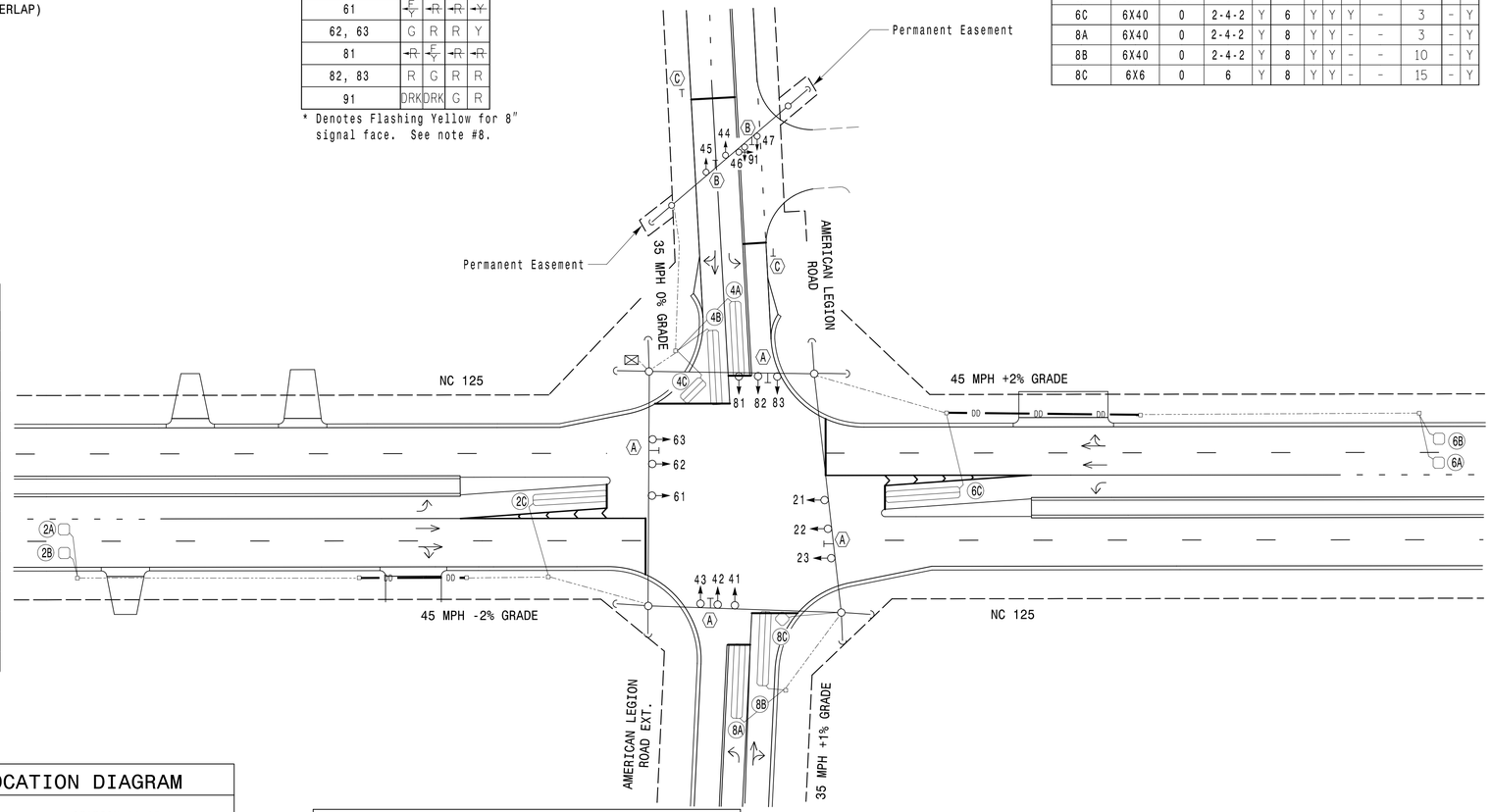
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	6	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	300	6	Y	2	Y	Y	-	-	-	-	Y
2C	6X40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
4B	6X40	0	2-4-2	Y	4	Y	Y	-	-	10	-	Y
4C	6X15	0	2-4-2	Y	4	Y	Y	-	-	15	-	Y
6A	6X6	300	6	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	300	6	Y	6	Y	Y	-	-	-	-	Y
6C	6X40	0	2-4-2	Y	6	Y	Y	Y	-	3	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	Y
8B	6X40	0	2-4-2	Y	8	Y	Y	-	-	10	-	Y
8C	6X6	0	6	Y	8	Y	Y	-	-	15	-	Y

2 PHASE FULLY ACTUATED W/EMERGENCY VEHICLE PREEMPTION (ISOLATED)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Set all detector units to presence mode.
3. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
4. Locate emergency vehicle preemption switch in Firestation.
5. The Division Traffic Engineer will determine the Delay before Preempt and Preempt Dwell Min Green time for the emergency vehicle preemption timing.
6. Clear signal heads 44, 45, 46 and 47 from flashing 8" yellow to steady 12" yellow and steady red during PRE 2.
7. Signal head 91 is dark during normal operation, steady red during clear before emergency preemption, green during emergency preemption dwell time, then clear to yellow and red.

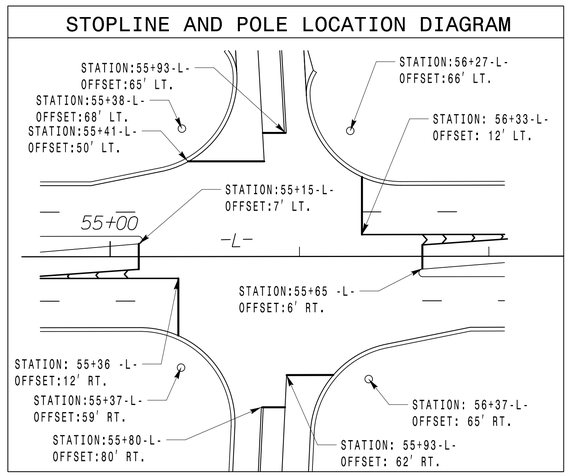


OASIS 2070 EV PREEMPT

FUNCTION	PRE 2
Interval 1 – Dwell Green	255
Interval 1 – Dwell Yellow	3.8
Interval 1 – Dwell Red	2.1
Interval 5 – Exit Green	1
Interval 5 – Yellow	0.0
Interval 5 – Red	0.0
Exit Phase(s)	2,6
Priority	MED
Delay Time	✻✻
Min Green Before Pre	1
Ped Clear Before Pre	19
Yellow Clear Before Pre	0.0*
Red Clear Before Pre	0.0*
Dwell Min Time	✻✻
Enable Backup Protection	N
Ped Clear Through Yellow	Y
Omit Overlaps	F

✻ Time defaults to time used for phase during normal operation
✻✻ See Note #7.

STOPLINE AND POLE LOCATION DIAGRAM



OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	12	7	12	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	90	30	90	30
Yellow Clearance	4.7	3.8	4.7	3.8
Red Clearance	1.9	2.4	1.9	2.4
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	1.5	-	1.5	-
Max Variable Initial *	34	-	34	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	45	-	45	-
Minimum Gap	3.0	-	3.0	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* 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.

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	
DD	Directional Drill	N/A
N/A	Right of Way	
	Directional Arrow	
Ⓐ	Street Sign (D-3)	Ⓐ
Ⓑ	"EMERGENCY SIGNAL" Sign (R10-13)	Ⓑ
Ⓒ	"STOP HERE ON RED" Sign (R10-6)	Ⓒ

NEW INSTALLATION

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

Prepared For:
Transportation Mobility and Safety Division
North Carolina Department of Transportation
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40' 1"=40'

NC 125 AT AMERICAN LEGION ROAD

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: FEBRUARY 2018 REVIEWED BY: SL PHILLIPS

PREPARED BY: SP PENNINGTON REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS

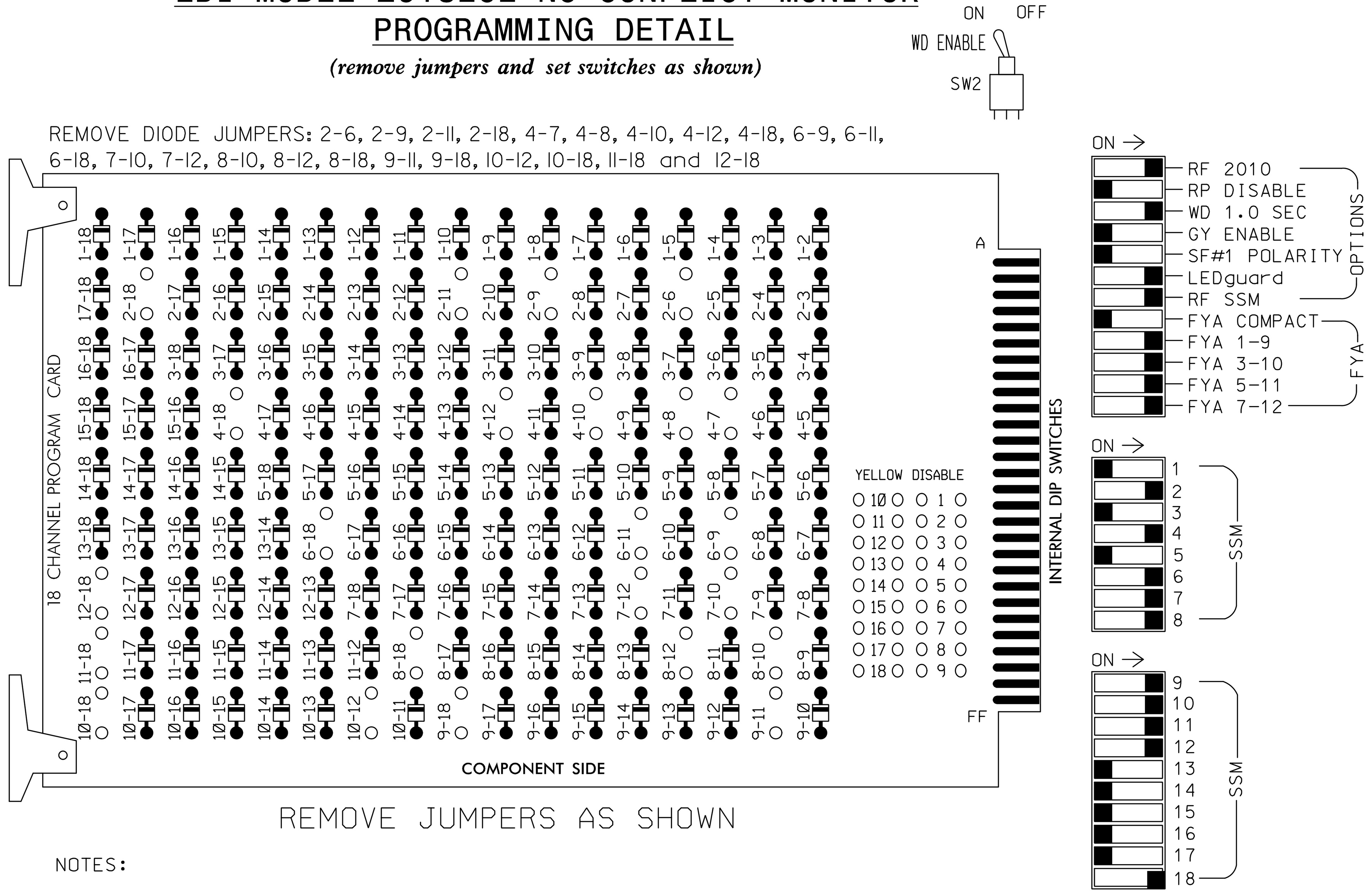
DocuSigned by: 6/12/2018
0C87A59ED60B437...
SIGNATURE DATE

SIG. INVENTORY NO. 04-1435

EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS: 2-6, 2-9, 2-11, 2-18, 4-7, 4-8, 4-10, 4-12, 4-18, 6-9, 6-11, 6-18, 7-10, 7-12, 8-10, 8-12, 8-18, 9-11, 9-18, 10-12, 10-18, 11-18 and 12-18



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. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

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 phases 4 and 8 for Dual Entry.
3. Enable Simultaneous Gap-Out for all Phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Startup In Green.
6. Program phases 2 and 6 for Yellow Flash, and overlaps 1 and 2 as Wag Overlaps.

EQUIPMENT INFORMATION

CONTROLLER.............2070
CABINET................332 W/ AUX
SOFTWARE...............ECONOLITE OASIS
CABINET MOUNT..........BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED......S2,S5,S8,S9✳✳,S10,S11,AUX S1,AUX S2, AUX S4,AUX S5,AUX S6
PHASES USED............2,4,6,6PED,7✳,8
OVERLAP "A"............2
OVERLAP "B"............4
OVERLAP "C"............6
OVERLAP "D"............7+8
OVERLAP "F"............2,4,6,8

✳ PHASE 7 USED ONLY DURING PREEMPT
✳✳ USED FOR EV PILOT LAMP

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	OLF
SIGNAL HEAD NO.	NU	22,23	NU	NU	42,43	NU	NU	62,63	PILOT LAMP	41	91	82,83	NU	61★	81★	NU	21★	41★	44,45 46,47
RED		128			101			134			122	107							A104
YELLOW		129			102			135	✳✳ #		123	108							A105
GREEN		130			103			136			124	109							
RED ARROW														A121	A124		A114	A101	
YELLOW ARROW														A122	A125		A115	A102	
FLASHING YELLOW ARROW														A123	A126		A116	A103	A106
GREEN ARROW										124									
(Don't Walk)																			
(Walk)																			

NU = Not Used

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

★ See pictorial of head wiring in detail this sheet.

\# Denotes 6 PED YELLOW used for pilot lamp operation. See sheet 3 for wiring detail.

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	Ø 2 2A	Ø 2 2C	SLOT EMPTY	SLOT EMPTY	Ø 4 4A	Ø 4 4C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L		Ø 2 2B	NOT USED			Ø 4 4B	NOT USED							ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	Ø 6 6A	Ø 6 6C	SLOT EMPTY	SLOT EMPTY	Ø 8 8A	Ø 8 8C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	NOT USED
	L		Ø 6 6B	NOT USED			Ø 8 8B	NOT USED							PRE2 AC ISOLATOR

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.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y			
2C	TB2-9,10	I3U	63	25	32	2	Y	Y	Y		3
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			10
4C	TB6-1,2	I7U	65	27	34	4	Y	Y			15
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
6C	TB3-9,10	J3U	64	26	36	6	Y	Y	Y		3
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3
8B	TB5-11,12	J6L	46	8	18	8	Y	Y			10
8C	TB7-1,2	J7U	66	28	38	8	Y	Y			15

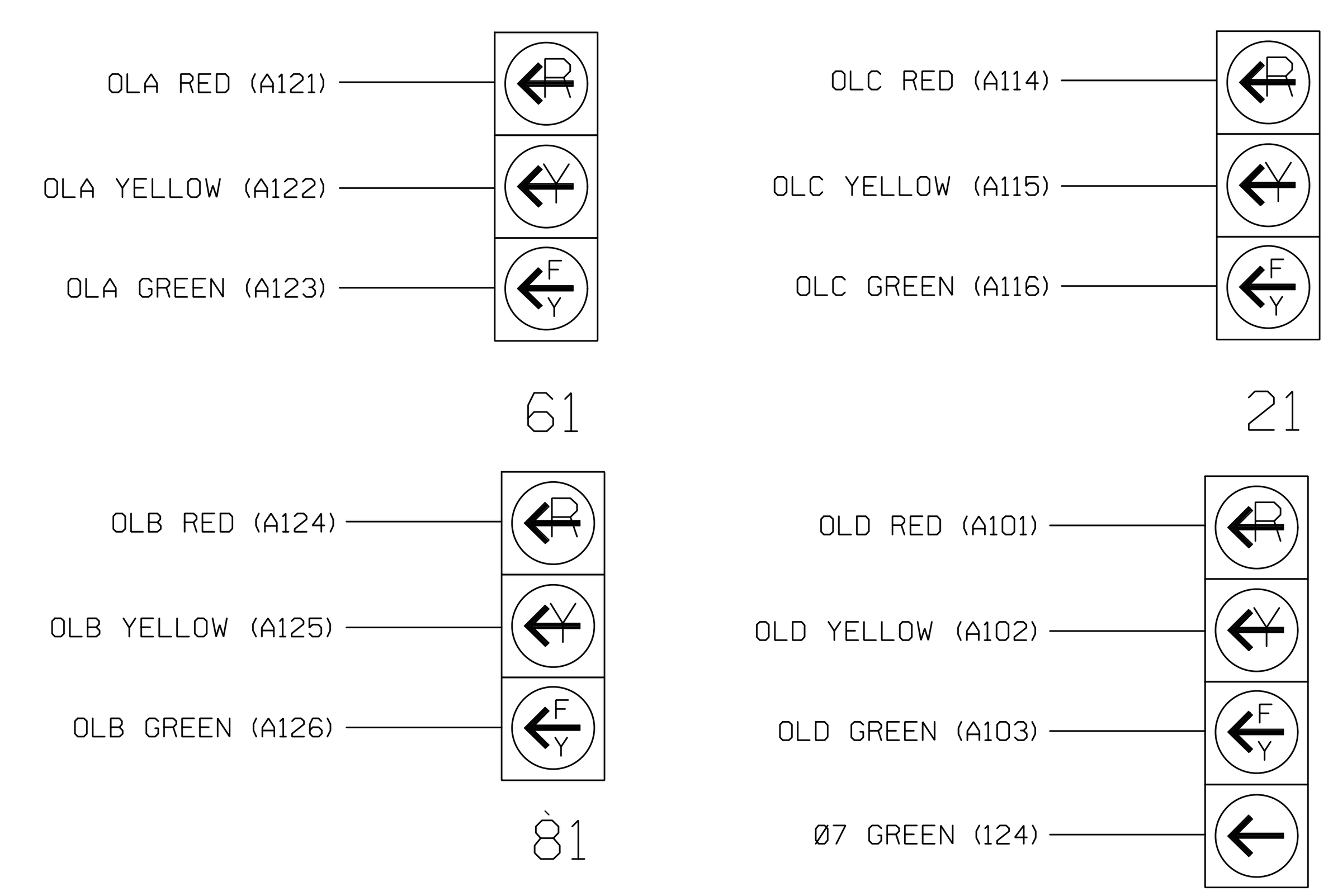
[1] Add jumper from J5-W to I8-W, on rear of input file.

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)

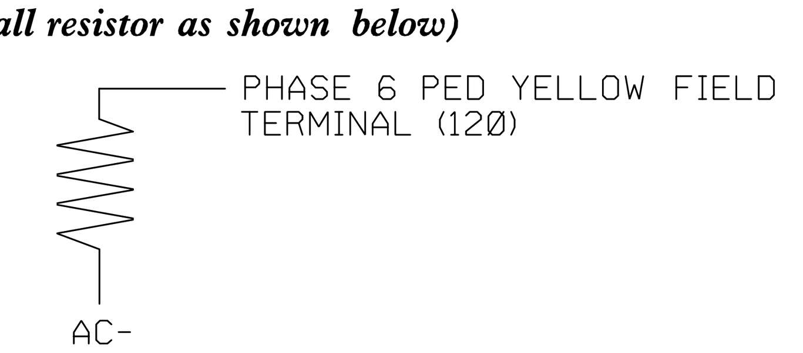


LOAD RESISTOR INSTALLATION DETAIL

(install resistor 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: 04-1435
DESIGNED: FEBRUARY 2018
SEALED: 6/12/2018
REVISED: N/A

Electrical Detail - Sheet 1 of 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared For: Transportation Mobility and Safety Division, ITS & Signals Management Section, State of North Carolina Department of Transportation

750 N.Greenfield Pkwy,Garner,NC 27529

NC 125
AT
AMERICAN LEGION ROAD

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE:	FEBRUARY 2018	REVIEWED BY:	SL PHILLIPS
PREPARED BY:	SP PENNINGTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS

DocuSigned by: 0C87A59ED60B437... 6/12/2018
SIGNATURE DATE

SIG. INVENTORY NO. 04-1435

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

PROJECT REFERENCE NO.	SHEET NO.
R-3822/U-5725	SIG. 5

LOGICAL I/O PROCESSOR PROGRAMMING DETAIL
TO PRODUCE SPECIAL FYA-PPLT SIGNAL SEQUENCE AND INDICATOR LAMP CONTROL

(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 AND 5

2. FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '3' (LOGICAL I/O PROCESSOR).

```
LOGICAL I/O COMMAND #1 (+/-COMMAND#)
IF  ACTIVE PHASE        #7  IS ON
AND RED CLEAR ON PHASE #7  IS ON
        SCROLL DOWN
THEN:
SET OUTPUT  ASSIGNMENT #39 ON
SET OUTPUT  ASSIGNMENT #40 OFF
```

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

PRESS '+'

```
LOGICAL I/O COMMAND #2 (+/-COMMAND#)
IF  ACTIVE PHASE        #7  IS ON
        SCROLL DOWN
THEN:
SET OUTPUT  ASSIGNMENT #41 OFF
```

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

PRESS '+'

```
LOGICAL I/O COMMAND #3 (+/-COMMAND#)
IF  YELLOW ON PHASE     #7  IS ON
        SCROLL DOWN
THEN:
SET OUTPUT  ASSIGNMENT #40 ON
```

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

PRESS '+'

```
LOGICAL I/O COMMAND #4  (+/-COMMAND#)
IF  INPUT   ASSIGNMENT #14 IS ON
OR  ACTIVE PREEPTION   #2  IS ON
        SCROLL DOWN
THEN:
SET OUTPUT  ASSIGNMENT #34 ON
```

NOTE: FIRE HOUSE PILOT LAMP LOGIC.

PRESS '+'

```
LOGICAL I/O COMMAND #5  (+/-COMMAND#)
IF  INPUT   ASSIGNMENT #14 IS OFF
AND ACTIVE PREEMPTION  #2  IS OFF
        SCROLL DOWN
THEN:
SET OUTPUT  ASSIGNMENT #34 OFF
```

NOTE: FIRE HOUSE PILOT LAMP LOGIC.

END OF PROGRAMMING

OUTPUT REFERENCE SCHEDULE

USE TO INTERPRET LOGIC PROCESSOR

OUTPUT 39 = Overlap D Red
OUTPUT 40 = Overlap D Yellow
OUTPUT 41 = Overlap D Green
INPUT 14 = Preempt 2
OUTPUT 34 = Phase 6 PED Yellow

PREEMPT ONLY PHASE OMIT NOTE

(program controller as shown below)

From Main Menu press '2' (Phase Control). Then '1' (Phase Control Functions). Program Phase 7 for 'Omit Phase' and Phases 2, 4, 6, 8 for 'Startup Calls'. This is to prevent Phase 7 from being served when not in Preempt.

FLASHER CIRCUIT MODIFICATION DETAIL

In order to ensure that signals flash concurrently on the Same approach, make the following flasher circuit changes:

1. On rear of PDA - remove wire from Term. T2-4 and terminate on T2-2.
2. On rear of PDA - remove wire from Term. T2-5 and terminate on T2-3.
3. Remove flasher unit 2.

The changes listed above ties all phases and overlaps to flasher unit 1.

OVERLAP PROGRAMMING DETAIL FOR DEFAULT PHASING

(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:| X
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:|   X
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:|     X
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

PRESS '+' TWICE

```
PAGE 1: VEHICLE OVERLAP 'F' SETTINGS
PHASE:          |12345678910111213141516
VEH OVL PARENTS:| X X X X
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

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: Ø4-1435
DESIGNED: FEBRUARY 2Ø18
SEALED: 6/12/2Ø18
REVISED: N/A

Electrical Detail - Sheet 2 of 4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared For: Transportation Mobility and Safety Division — State of North Carolina Department of Transportation — ITS & Signals Management Section

750 N.Greenfield Pkwy,Garner,NC 27529

NC 125
AT
AMERICAN LEGION ROAD

DIVISION 4	HALIFAX COUNTY	ROANOKE RAPIDS
PLAN DATE: FEBRUARY 2018	REVIEWED BY: SL PHILLIPS	
PREPARED BY: SP PENNINGTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS

DocuSigned by: 0C87A59ED60B437...

SIGNATURE | DATE 6/12/2018

SIG. INVENTORY NO. 04-1435

OVERLAP "F"
OUTPUT ASSIGNMENT PROGRAMMING DETAIL

(program controller as shown below)

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS). PRESS '+' UNTIL OUTPUT #37 IS REACHED.

```
PAGE:1  C1 PIN:83  NOT ENABLED
OUTPUT ASSIGNMENT #................37
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......................_
PEDESTRIAN PHASE...................._
VEHICLE OVERLAP....................Y
PEDESTRIAN OVERLAP.................._
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........................._
```

SCROLL DOWN TO VIEW ALL DATA

THIS ENTRY IS EXISTING BY DEFAULT

```
PAGE:1  C1 PIN:83  NOT ENABLED
SELECT VECHICLE OVERLAP(A1-4,P=16).....6
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' AFTER AFTER INPUTING DATA, THEN 'ESC'.

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

```
PAGE:1  C1 PIN:83  VEHICLE OVERLAP
OUTPUT ASSIGNMENT #................37
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......................_
PEDESTRIAN PHASE..................._
VEHICLE OVERLAP....................Y
PEDESTRIAN OVERLAP................._
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........................._
```

VEHICLE OVERLAP F (RED) LOAD SWITCH AUX S6

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS). PRESS '+' UNTIL OUTPUT #38IS REACHED.

```
PAGE:1  C1 PIN:84 NOT ENABLED
OUTPUT ASSIGNMENT #................38
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......................_
PEDESTRIAN PHASE..................._
VEHICLE OVERLAP....................Y
PEDESTRIAN OVERLAP................._
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........................._
```

SCROLL DOWN TO VIEW ALL DATA

THIS ENTRY IS EXISTING BY DEFAULT

```
PAGE:1  C1 PIN:83  NOT ENABLED
SELECT VECHICLE OVERLAP(A1-4,P=16).....6
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' AFTER AFTER INPUTING DATA, THEN 'ESC'.

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

```
PAGE:1  C1 PIN:84  VEHICLE OVERLAP
OUTPUT ASSIGNMENT #................38
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......................_
PEDESTRIAN PHASE..................._
VEHICLE OVERLAP....................Y
PEDESTRIAN OVERLAP................._
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........................._
```

VEHICLE OVERLAP F (GREEN) LOAD SWITCH AUX S6

FROM MAIN MENU PRESS '6' (OUTPUTS), THEN '1' (OUTPUT ASSIGNMENTS). PRESS '+' UNTIL OUTPUT #53 IS REACHED.

```
PAGE:1  C1 PIN:100  NOT ENABLED
OUTPUT ASSIGNMENT #................53
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......................_
PEDESTRIAN PHASE..................._
VEHICLE OVERLAP....................Y
PEDESTRIAN OVERLAP................._
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........................._
```

SCROLL DOWN TO VIEW ALL DATA

THIS ENTRY IS EXISTING BY DEFAULT

```
PAGE:1  C1 PIN:83  NOT ENABLED
SELECT VECHICLE OVERLAP(A1-4,P=16).....6
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' AFTER AFTER INPUTING DATA, THEN 'ESC'.

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

```
PAGE:1  C1 PIN:100  VEHICLE OVERLAP
OUTPUT ASSIGNMENT #................53
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......................_
PEDESTRIAN PHASE..................._
VEHICLE OVERLAP....................Y
PEDESTRIAN OVERLAP................._
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........................._
```

VEHICLE OVERLAP F (YELLOW) LOAD SWITCH AUX S6

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 04-1435
DESIGNED: FEBRUARY 2018
SEALED: 6/12/2018
REVISED: N/A

Electrical Detail - Sheet 3 of 4

ELECTRICAL AND PROGRAMMING DETAILS FOR:

NC 125
AT
AMERICAN LEGION ROAD

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: FEBRUARY 2018 REVIEWED BY: SL PHILLIPS
PREPARED BY: SP PENNINGTON REVIEWED BY:

REVISIONS	INIT.	DATE

Prepared For: Transportation Mobility and Safety Division, ITS & Signals Management Section, North Carolina Department of Transportation
750 N.Greenfield Pkwy,Garner,NC 27529

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS
DocuSigned by:
SIGNATURE DATE 6/12/2018

SIG. INVENTORY NO. 04-1435

6/12/2018 2:59:01 PM susan.pennington K:\RAL_TPTO_SIGNALS\011036392 R-3822-U-5725\S4 - Signal Design\260_026_U5725_R3822_041435_2018e3.dgn

EMERGENCY VEHICLE PREEMPTION PROGRAMMING DETAIL

(program controller as shown below)

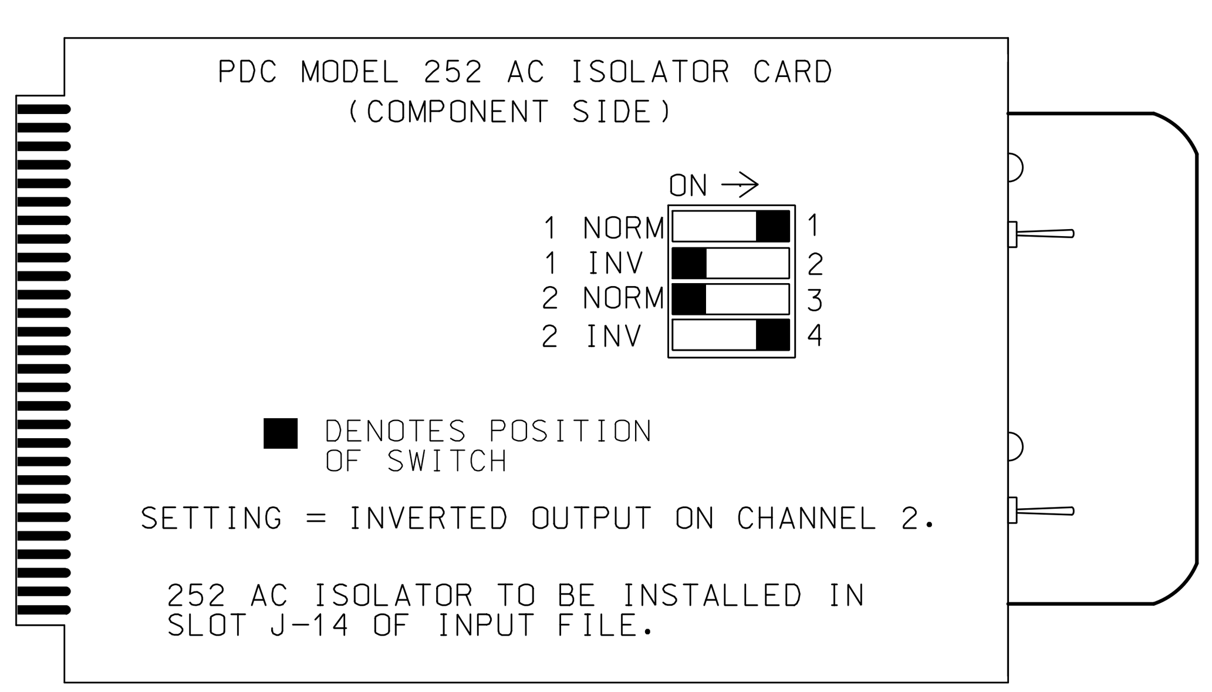
FROM MAIN MENU PRESS 'A' (PREEMPTION), THEN '1' (STANDARD PREEMPTIONS). PRESS THE "NEXT" KEY TO ADVANCE TO PREEMPT 2.

```
  PREEMPTION  #2  SETTINGS (NEXT:1-10)
INTERVAL/TIMING ¦  CLEAR/DWELL PHASES
  GRN YEL  RED  ¦12345678910111213141516
1  255 3.8  2.1 ¦   X  X
2   0  0.0  0.0 ¦
3   0  0.0  0.0 ¦
4   0  0.0  0.0 ¦
5   1  0.0  0.0 ¦ X   X
EXIT CALLS      ¦
             OPTIONS
PRIORITY (Y/N TO SELECT) ............MED
DELAY TIMER (0-255 SEC) .............*
MIN GREEN BEFORE PRE (0= DEFAULT)....1
PED CLEAR BEFORE PRE (0= DEFAULT)....19
YELLOW CLEAR BEFORE PRE (0= DEFAULT).0
RED CLEAR BEFORE PRE (0= DEFAULT)....0.0
DWELL MIN TIMER (0-255 SEC) .........*
DWELL MAX TIMER (0=OFF,1-255MIN) ....0
DWELL HOLD-OVER TIMER (0-255) .......0
LATCH CALL? .........................Y
LINK TO NEXT PREEMPT? ...............N
ENABLE BACKUP PROTECTION? ...........N
HOLD CLEAR 1 PHASES DURING DELAY? ...N
FAST GREEN FLASH DWELL PHASES? ......N
PED CLEARANCE THROUGH YELLOW? .......Y
INHIBIT OVERLAP GREEN EXTENSION? ....N
SERVICE DURING SOFTWARE FLASH? ......N
REST IN RED DURING DWELL INTERVAL? ..N
FLASH DWELL INTERVAL? ...............N
ALLOW PEDS IN DWELL INTERVAL? .......N
RE-TIME DWELL INTERVAL? .............N
OVERLAPS:                ¦ ABCDEFGHIJKLMNOP
DWELL INT FLASH YELLOW   ¦
OMIT OVERLAPS:           ¦      X
```

* DENOTES TIMING TO BE DETERMINED IN FIELD.

PREEMPT 2 AC ISOLATOR (MODEL 252) OUTPUT PROGRAMMING DETAIL

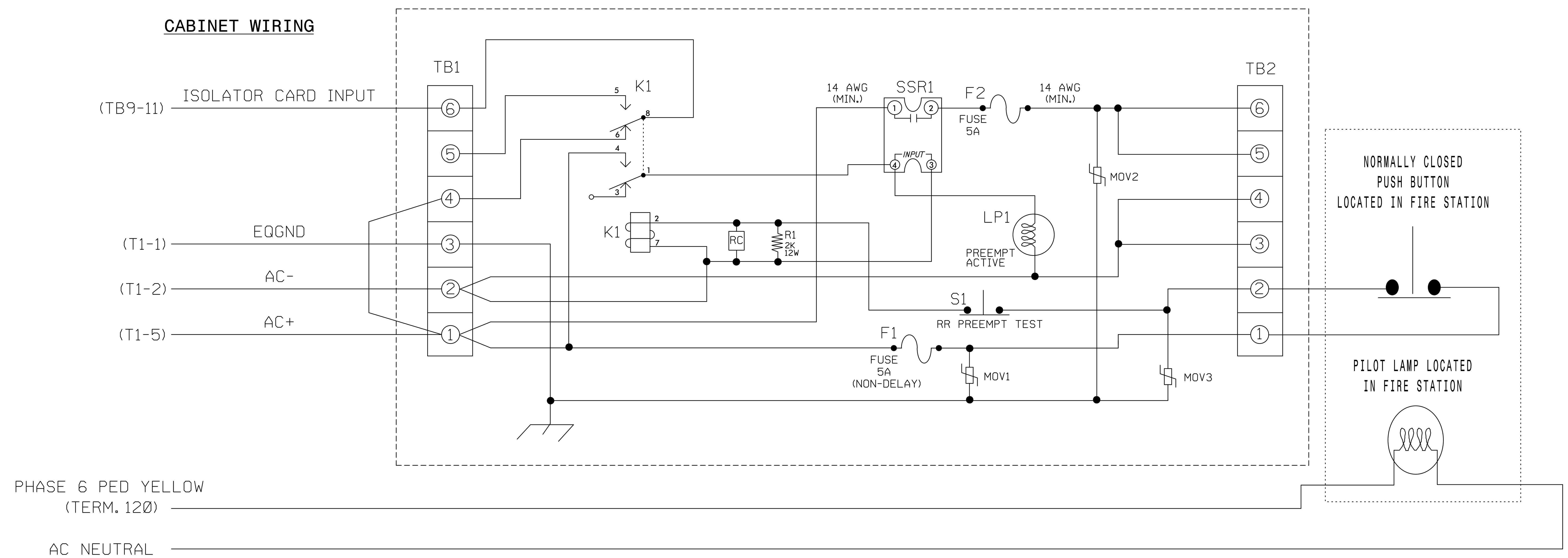
(set DIP switches as shown below)



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

EV Preemption Control Box Wiring Detail

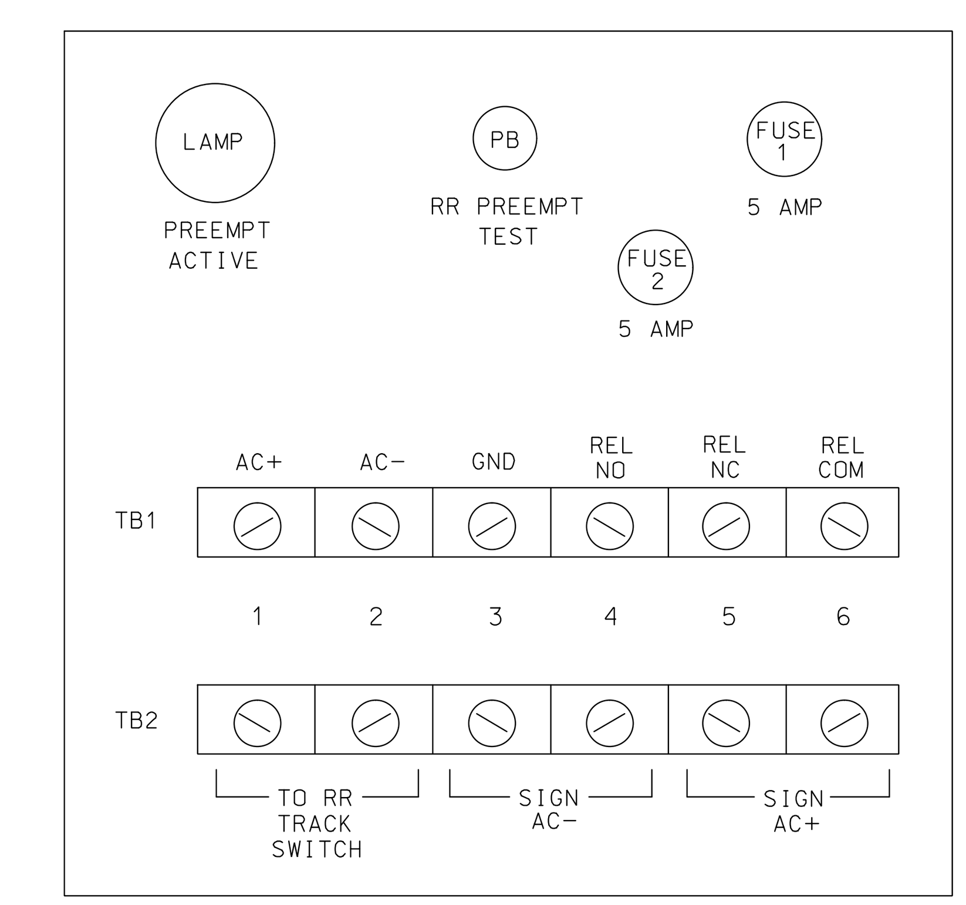
(wire as shown below)



NOTES

1. Relay K1 is shown in the energized (Preempt not active) normal operation state.
2. Relay 'K1' is an enclosed DPDT general purpose relay with a 120VAC coil, 10A contacts, and octal-style plug.
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!! 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: Ø4-1435
DESIGNED: FEBRUARY 2Ø18
SEALED: 6/12/2Ø18
REVISED: N/A

Electrical Detail - Sheet 4 of 4

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared For:
750 N.Greenfield Pkwy,Garner,NC 27529

NC 125
AT
AMERICAN LEGION ROAD

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE:	FEBRUARY 2018	REVIEWED BY:	SL PHILLIPS
PREPARED BY:	SP PENNINGTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

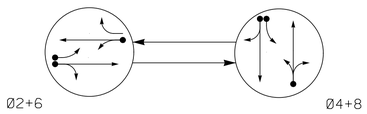
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS
DocuSigned by:
0C87A59ED60B437...
6/12/2018
SIGNATURE DATE

SIG. INVENTORY NO. 04-1435

PROJECT REFERENCE NO.	SHEET NO.
R3822/U-5725	SIG. 8

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

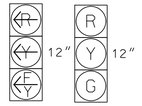
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	FLASH
21	~~F Y~~	~~R~~	~~Y~~
22, 23	G	R	Y
41	~~R~~	~~F Y~~	~~R~~
42, 43	R	G	R
62, 63	G	R	Y
82, 83	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



21
41

22, 23
42, 43
62, 63
82, 83

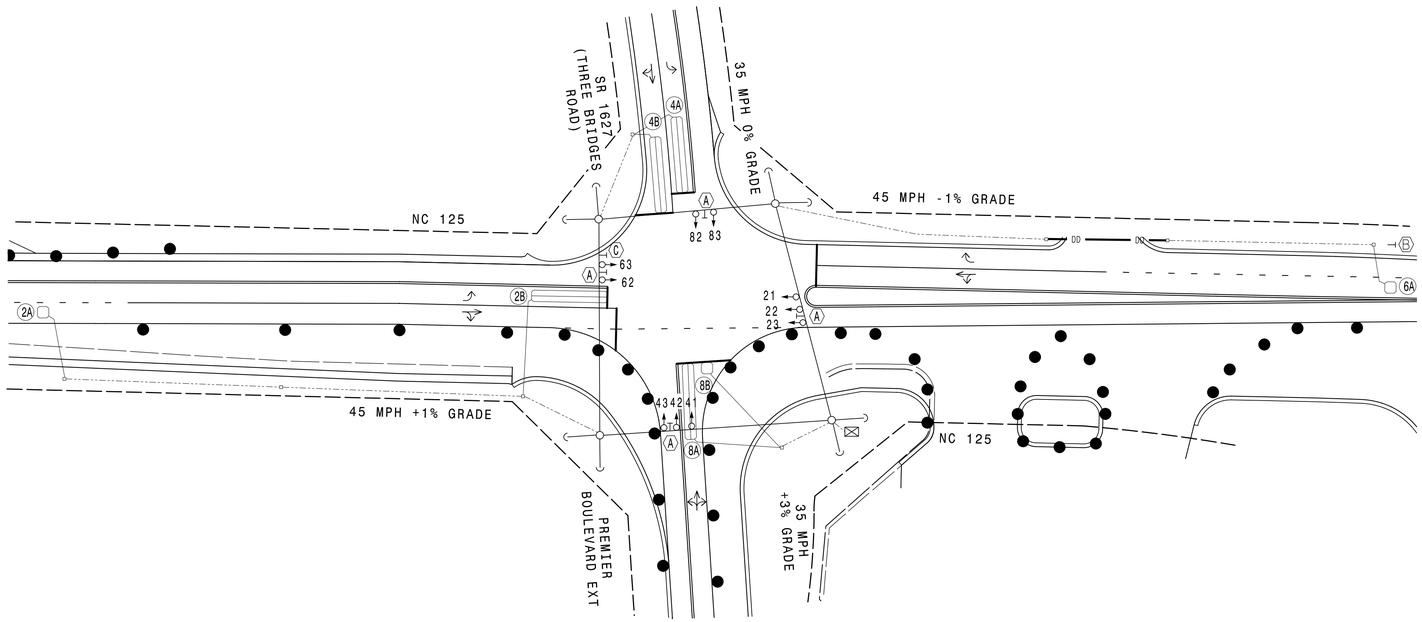
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	6	Y	2	Y	Y	-	-	-	-	Y
2B	6X40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	Y
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
4B	6X40	0	2-4-2	Y	4	Y	Y	-	-	10	-	Y
6A	6X6	300	6	Y	6	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	Y
8B	6X6	0	6	Y	8	Y	Y	-	-	10	-	Y

2 PHASE
FULLY ACTUATED
(NC 125 WIRELESS CLOSED LOOP SYSTEM)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
5. Pavement markings are existing.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
7. Closed loop system data: Channel number 1220.



LEGEND

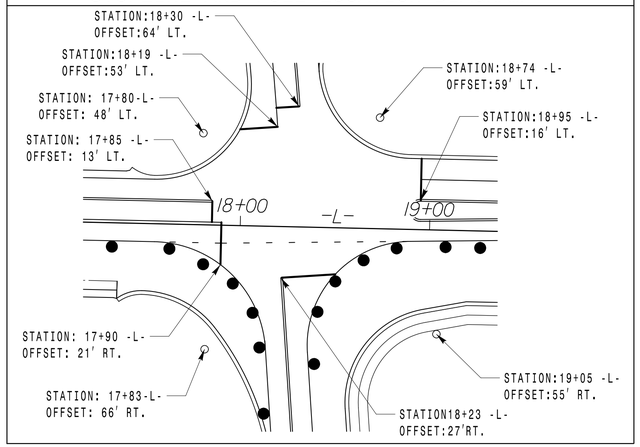
PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
DD	Directional Drill	N/A
N/A	Right of Way	
	Directional Arrow	
	Construction Zone Drums	
A	Street Sign (D3-1)	A
B	"RIGHT LANE MUST TURN RIGHT" Sign (R3-7R)	B
C	Right Arrow "ONLY" Sign (R3-5R)	C

OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	12	7	12	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	90	20	90	20
Yellow Clearance	4.6	3.8	4.6	3.8
Red Clearance	1.5	1.5	1.5	1.5
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Initial *	34	-	34	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	45	-	45	-
Minimum Gap	3.0	-	3.0	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* 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.

STOPLINE AND POLE LOCATION DIAGRAM



TEMPORARY DESIGN 1 - TC PLAN PHASE 2

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

Prepared For:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy.Garner,NC 27529

NC 125
AT
SR 1627 (THREE BRIDGES ROAD)/
PREMIER BOULEVARD EXT.

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE:	APRIL 2018	REVIEWED BY:	SL PHILLIPS
PREPARED BY:	SP PENNINGTON	REVIEWED BY:	

SCALE: 0 40' 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS

DocuSigned by: 6/12/2018
DCB7A5EFD9DB457...
SIGNATURE DATE

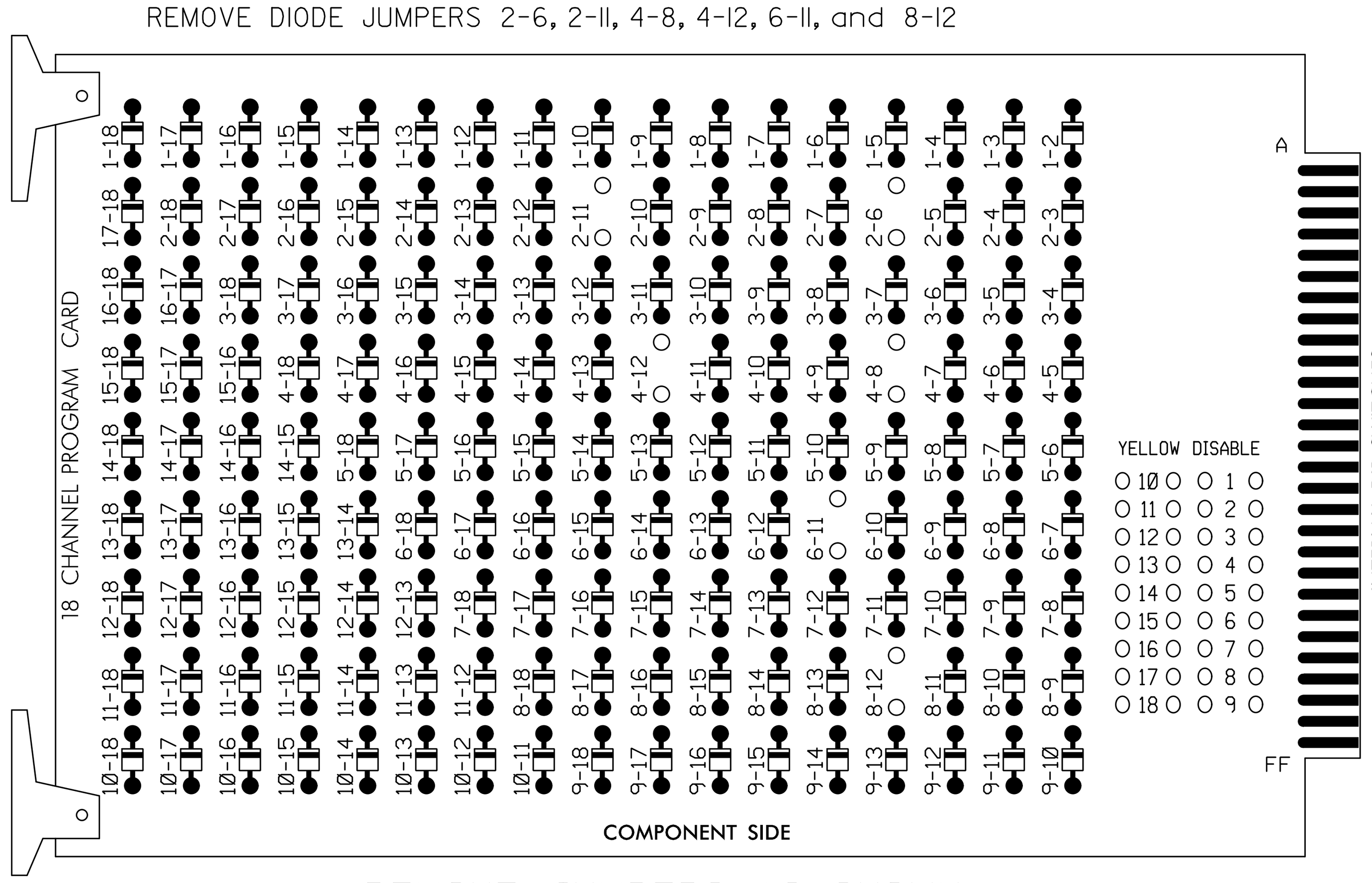
SIG. INVENTORY NO. 04-I220TI

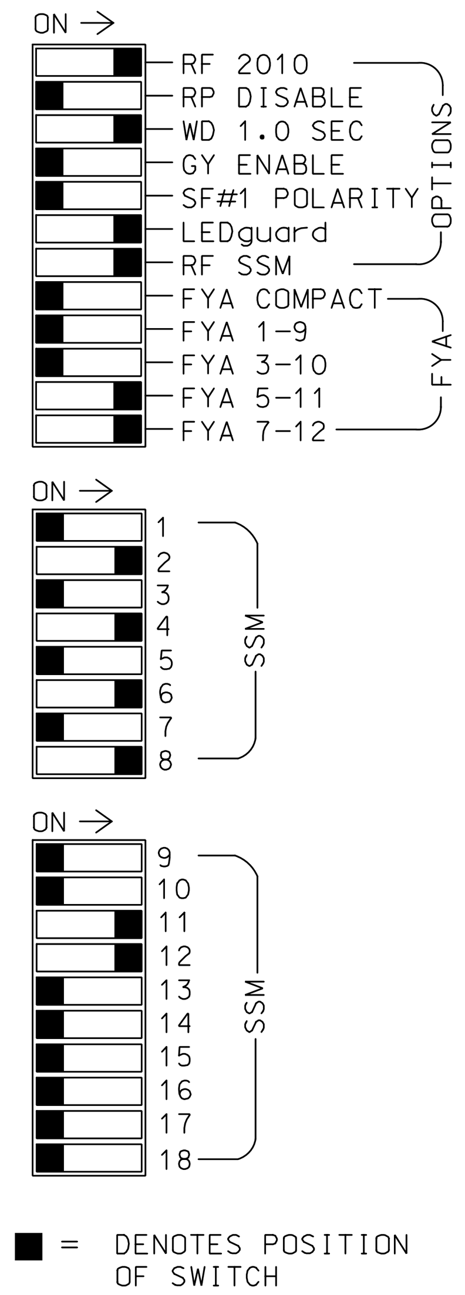
EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

ON OFF
WD ENABLE
SW2

REMOVE DIODE JUMPERS 2-6, 2-11, 4-8, 4-12, 6-11, and 8-12





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. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

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
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y	Y		3
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			10
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3
8B	TB5-11,12	J6L	46	8	18	8	Y	Y			10

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

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	ø 2 2A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ø 4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L		ø 2 2B				ø 4 4B								ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	ø 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	ø 8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		NOT USED				ø 8 8B								

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

FS = FLASH SENSE
ST = STOP TIME

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 phases 4 and 8 for Dual Entry.
3. Enable Simultaneous Gap-Out for all Phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Startup In Green.
6. Program phases 2 and 6 for Yellow Flash.
7. The cabinet and controller are part of the NC 125 Wireless Closed loop System.

EQUIPMENT INFORMATION

CONTROLLER..............2070
CABINET.................332 W/ AUX
SOFTWARE................ECONOLITE OASIS
CABINET MOUNT...........BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED......S2,S5,S8,S11,AUX S4,AUX S5
PHASES USED.............2,4,6,8
OVERLAP "A".............NOT USED
OVERLAP "B".............NOT USED
OVERLAP "C".............6
OVERLAP "D".............8

OVERLAP PROGRAMMING DETAIL

(program controller as shown below)

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

PRESS '+' TWICE

```
PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
PHASE:          |12345678910111213141516
VEH OVL PARENTS:|     X
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:|       X
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

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	22,23	NU	NU	42,43	NU	NU	62,63	NU	NU	82,83	NU	NU	NU	NU	21★	41★	NU
RED		128			101			134			107							
YELLOW		129			102			135			108							
GREEN		130			103			136			109							
RED ARROW																A114	A101	
YELLOW ARROW																A115	A102	
FLASHING YELLOW ARROW																A116	A103	
GREEN ARROW																		

NU = Not Used
★ See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)

FLASHER CIRCUIT MODIFICATION DETAIL

In order to ensure that signals flash concurrently on the Same approach, make the following flasher circuit changes:

1. On rear of PDA - remove wire from Term. T2-4 and terminate on T2-2.
2. On rear of PDA - remove wire from Term. T2-5 and terminate on T2-3.
3. Remove flasher unit 2.

The changes listed above ties all phases and overlaps to flasher unit 1.

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1220T1
DESIGNED: APRIL 2018
SEALED: 6/12/2018
REVISED: N/A

TEMPORARY DESIGN 1-TC PLAN PHASE 2 ELECTRICAL DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared For:
Transportation Mobility and Safety Division — State of North Carolina Department of Transportation — ITS & Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 125
AT
SR 1627 (THREE BRIDGES ROAD)/
PREMIER BOULEVARD EXT.

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: APRIL 2018	REVIEWED BY: SL PHILLIPS
PREPARED BY: SP PENNINGTON	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032607 STACIE L. PHILLIPS

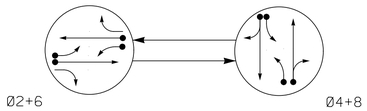
DocuSigned by: 0C87A59ED60B437...
SIGNATURE 6/12/2018 DATE

SIG. INVENTORY NO. 04-1220T1

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

PROJECT REFERENCE NO.	SHEET NO.
R3822/U-5725	SIG. 10

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

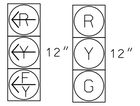
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	FLASH
21	~~FY~~	~~R~~	~~Y~~
22, 23	G	R	Y
41	~~R~~	~~FY~~	~~R~~
42, 43	R	G	R
61	~~FY~~	~~R~~	~~Y~~
62, 63	G	R	Y
81	~~R~~	~~FY~~	~~R~~
82, 83	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



21 22, 23
41 42, 43
61 62, 63
81 82, 83

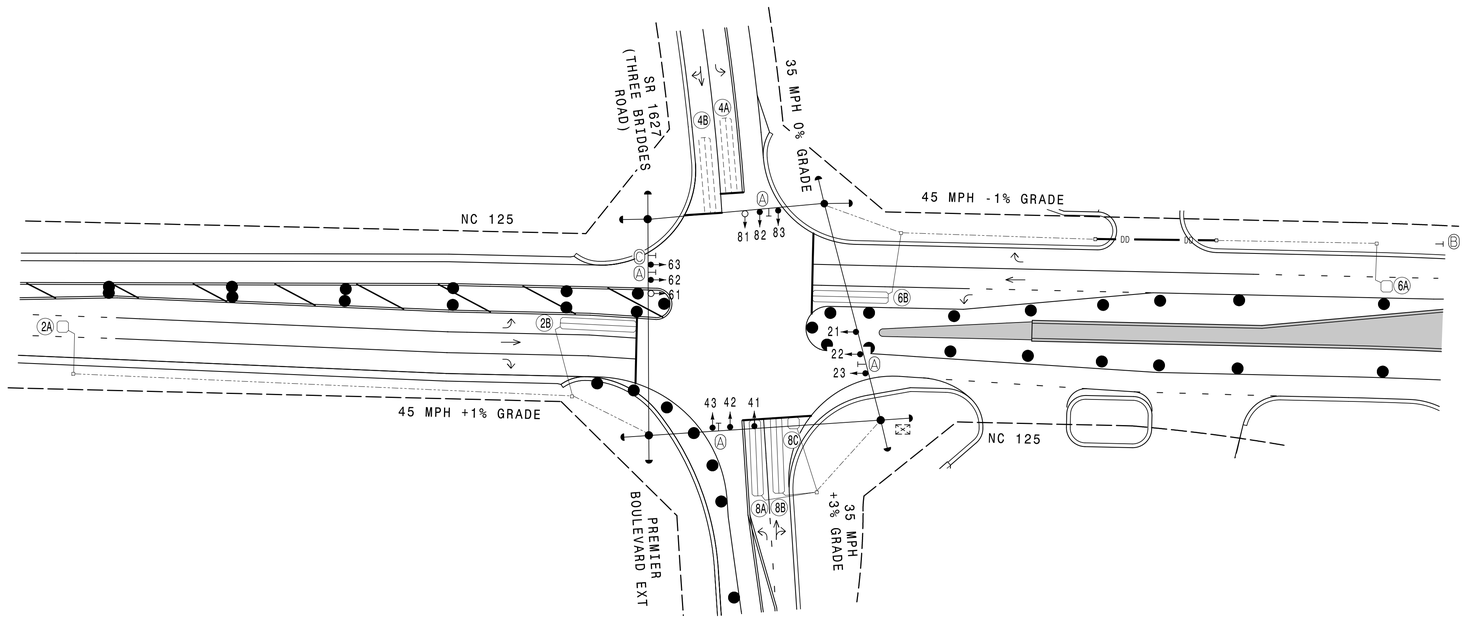
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	6	Y	2	Y	Y	-	-	-	-	-
2B	6X40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	3	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	10	-	-
6A	6X6	300	6	Y	6	Y	Y	-	-	-	-	-
6B	6X40	0	2-4-2	Y	6	Y	Y	Y	-	3	-	-
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	-
8B	6X40	0	2-4-2	Y	8	Y	Y	-	-	10	-	-
8C	6X6	0	6	Y	8	Y	Y	-	-	15	-	Y

2 PHASE
FULLY ACTUATED
(NC 125 WIRELESS CLOSED LOOP SYSTEM)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Reposition existing signal heads numbered 21, 22, 23, 41, 42, 43, 82 and 83.
5. Pavement markings are existing, unless otherwise shown.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
7. Closed loop system data: Channel number 1220.

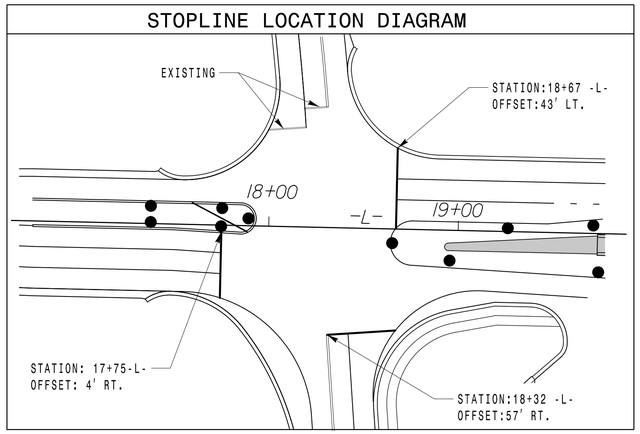


OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	12	7	12	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	90	20	90	20
Yellow Clearance	4.6	3.8	4.6	3.8
Red Clearance	1.3	2.1	1.3	2.1
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Initial *	34	-	34	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	45	-	45	-
Minimum Gap	3.0	-	3.0	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* 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.

STOPLINE LOCATION DIAGRAM



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	
DD	Directional Drill	N/A
N/A	Right of Way	
	Directional Arrow	
	Construction Zone Drums	
	Construction Zone	
A	Street Sign (D3-1)	A
B	"RIGHT LANE MUST TURN RIGHT" Sign (R3-7R)	B
C	Right Arrow "ONLY" Sign (R3-5R)	C

TEMPORARY DESIGN 2 - TC PLAN PHASE 3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared For: Transportation Mobility and Safety Division, North Carolina Department of Transportation, Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 125
AT
SR 1627 (THREE BRIDGES ROAD)/
PREMIER BOULEVARD EXT.

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: APRIL 2018 REVIEWED BY: SL PHILLIPS
PREPARED BY: SP PENNINGTON REVIEWED BY:

REVISIONS	INIT.	DATE

SCALE 0 40' 1"=40'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS

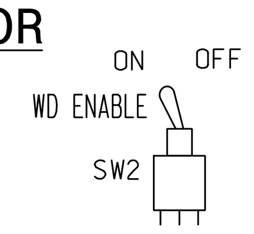
DocuSigned by: SLP
6/12/2018
SIGNATURE DATE

SIG. INVENTORY NO. 04-I220T2

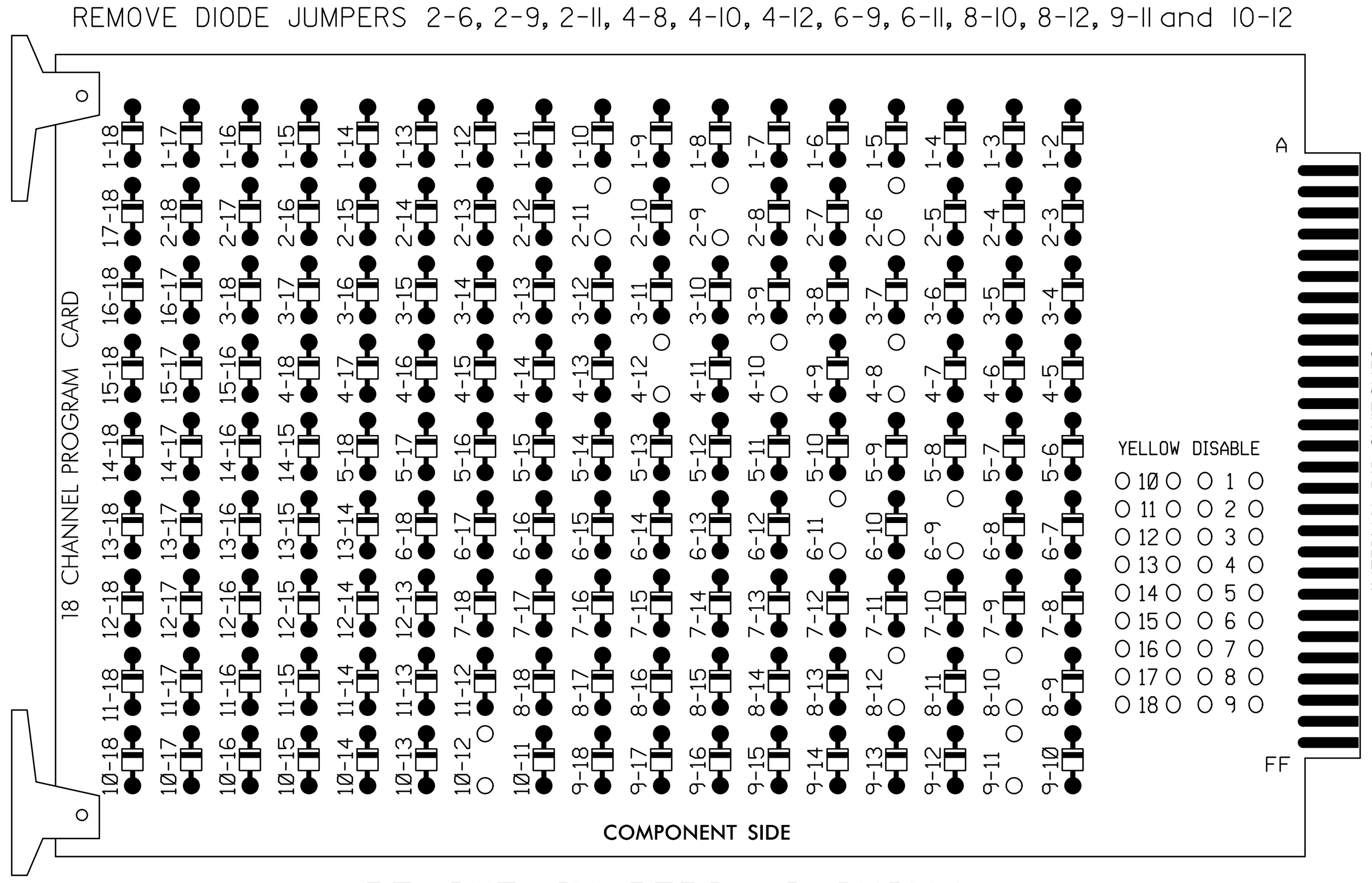
PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

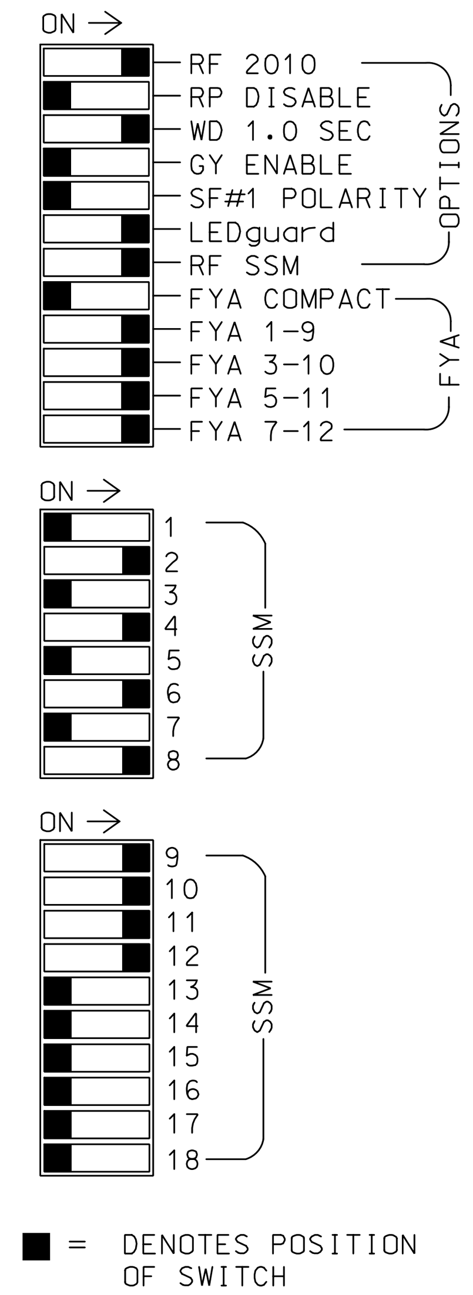
EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 2-6, 2-9, 2-11, 4-8, 4-10, 4-12, 6-9, 6-11, 8-10, 8-12, 9-11 and 10-12





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. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

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
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y	Y		3
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			10
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y	Y		3
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3
8B	TB5-11,12	J6L	46	8	18	8	Y	Y			10
8C	TB7-1,2	J7U	66	28	38	8	Y	Y			15

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

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	Ø 2 2A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L		Ø 2 2B				Ø 4 4B								ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	Ø 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 8 8A	Ø 8 8C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		Ø 6 6B				Ø 8 8B	NOT USED							

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

FS = FLASH SENSE
ST = STOP TIME

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 phases 4 and 8 for Dual Entry.
3. Enable Simultaneous Gap-Out for all Phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Startup In Green.
6. Program phases 2 and 6 for Yellow Flash, and overlaps 1 and 2 as Wag Overlaps.
7. The cabinet and controller are part of the NC 125 Wireless Closed loop System.

EQUIPMENT INFORMATION

CONTROLLER..............2070
CABINET.................332 W/ AUX
SOFTWARE................ECONOLITE OASIS
CABINET MOUNT...........BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED......S2,S5,S8,S11,AUX S1,AUX S2, AUX S4,AUX S5
PHASES USED.............2,4,6,8
OVERLAP "A".............2
OVERLAP "B".............4
OVERLAP "C".............6
OVERLAP "D".............8

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:¦ X
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:¦   X
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:¦     X
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:¦       X
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

SIGNAL HEAD HOOK-UP CHART

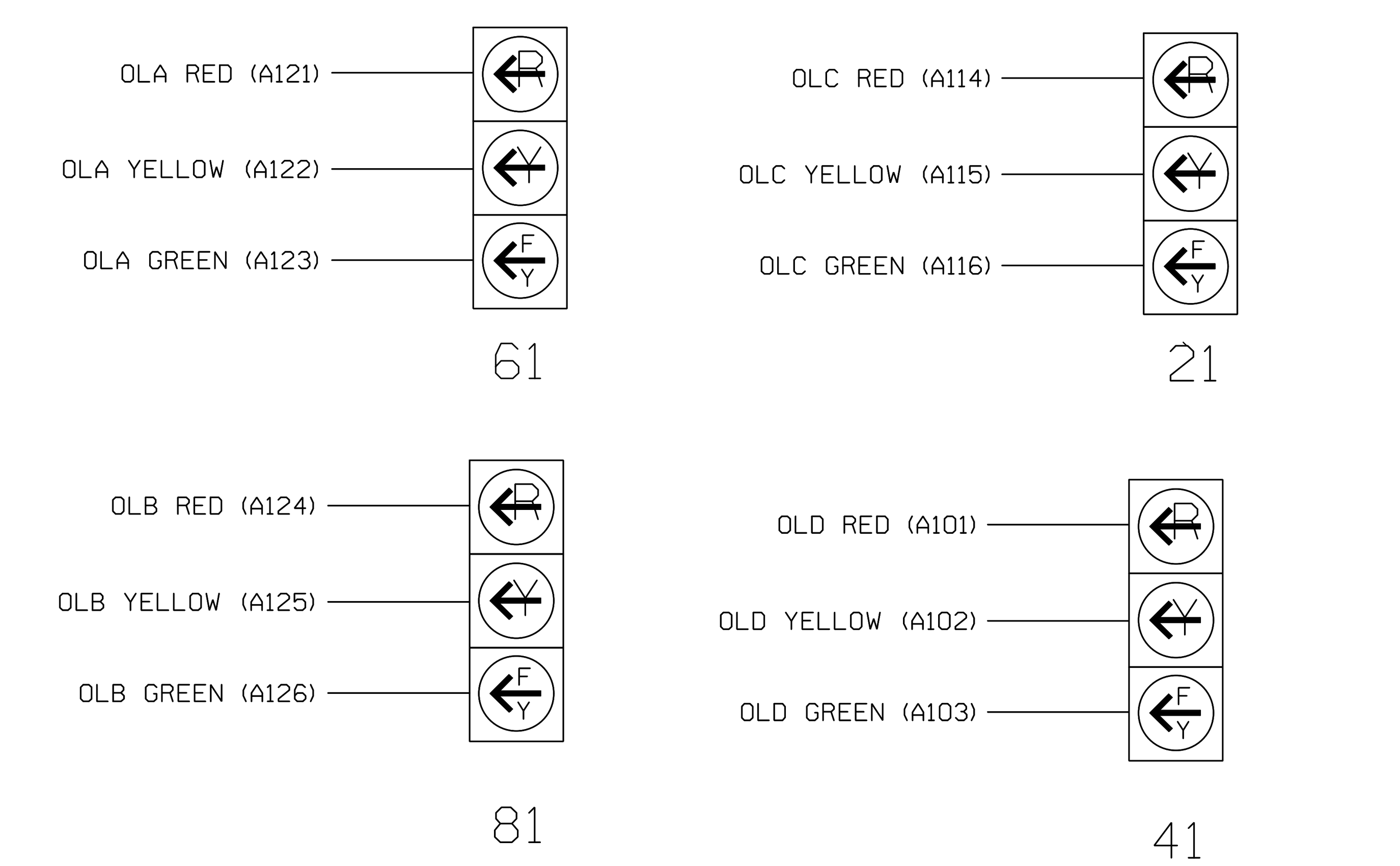
LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	22,23	NU	NU	42,43	NU	NU	62,63	NU	NU	82,83	NU	61 ★	81 ★	NU	21 ★	41 ★	NU
RED		128			101			134			107							
YELLOW		129			102			135			108							
GREEN		130			103			136			109							
RED ARROW													A121	A124		A114	A101	
YELLOW ARROW													A122	A125		A115	A102	
FLASHING YELLOW ARROW													A123	A126		A116	A103	
GREEN ARROW																		

NU = Not Used

★ See pictorial of head wiring in detail this sheet.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



FLASHER CIRCUIT MODIFICATION DETAIL

In order to ensure that signals flash concurrently on the Same approach, make the following flasher circuit changes:

1. On rear of PDA - remove wire from Term. T2-4 and terminate on T2-2.
2. On rear of PDA - remove wire from Term. T2-5 and terminate on T2-3.
3. Remove flasher unit 2.

The changes listed above ties all phases and overlaps to flasher unit 1.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 05-1220T2
DESIGNED: APRIL 2018
SEALED: 6/12/2018
REVISED: N/A

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

TEMPORARY DESIGN 2-TC PLAN PHASE 3 ELECTRICAL DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared For: STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION — Transportation Mobility and Safety Division — ITS & Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 125 AT SR 1627 (THREE BRIDGES ROAD)/ PREMIER BOULEVARD EXT.

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: APRIL 2018	REVIEWED BY: SL PHILLIPS
PREPARED BY: SP PENNINGTON	REVIEWED BY:

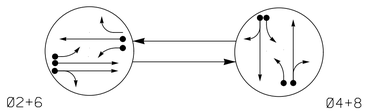
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS
DocuSigned by: 0C87A59ED60B437...
SIGNATURE 6/12/2018 DATE

SIG. INVENTORY NO. 04-1220T2

PROJECT REFERENCE NO.	SHEET NO.
R3822/U-5725	SIG. 12

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

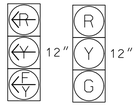
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	PHASE Ø4+8	FLASH
21	~~FY~~	~~R~~	~~Y~~
22, 23	G	R	Y
41	~~R~~	~~FY~~	~~R~~
42, 43	R	G	R
61	~~FY~~	~~R~~	~~Y~~
62, 63	G	R	Y
81	~~R~~	~~FY~~	~~R~~
82, 83	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



21 22, 23
41 42, 43
61 62, 63
81 82, 83

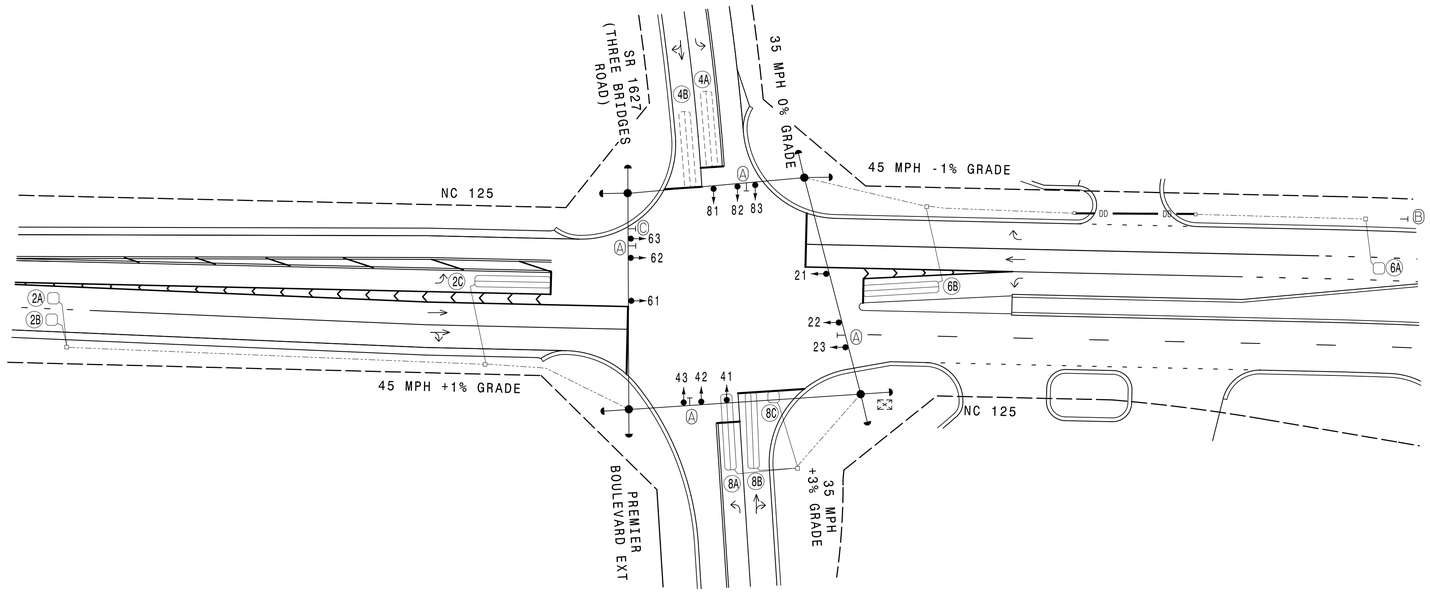
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

INDUCTIVE LOOPS					DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	6	Y	2	Y	Y	-	-	-	-	-
2B	6X6	300	6	Y	2	Y	Y	-	-	-	-	-
2C	6X40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	Y
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	3	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	10	-	-
6A	6X6	300	6	Y	6	Y	Y	-	-	-	-	-
6B	6X40	0	2-4-2	Y	6	Y	Y	Y	-	3	-	-
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	-
8B	6X40	0	2-4-2	Y	8	Y	Y	-	-	10	-	-
8C	6X6	0	6	Y	8	Y	Y	-	-	15	-	-

2 PHASE
FULLY ACTUATED
(NC 125 WIRELESS CLOSED LOOP SYSTEM)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Reposition existing signal heads numbered 21, 22, 41, 42, 43, 61, 62, 63, 81 and 83
5. Pavement markings are existing, unless otherwise shown.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
7. Closed loop system data: Channel number 1220.

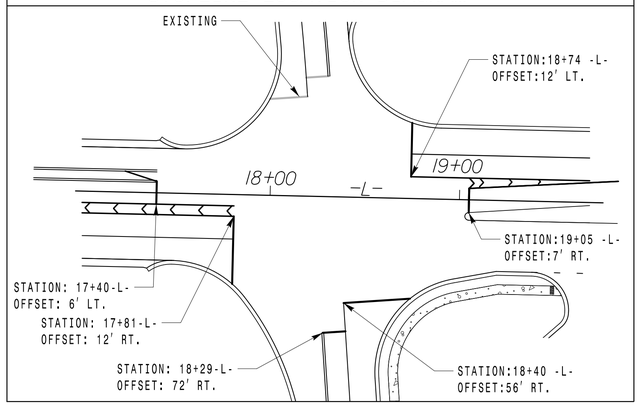


OASIS 2070 TIMING CHART

FEATURE	PHASE 2	PHASE 4	PHASE 6	PHASE 8
Min Green 1 *	12	7	12	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	90	20	90	20
Yellow Clearance	4.6	3.8	4.6	3.8
Red Clearance	1.9	2.4	1.9	2.4
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	1.5	-	2.5	-
Max Variable Initial *	34	-	34	-
Time Before Reduction *	15	-	15	-
Time To Reduce *	45	-	45	-
Minimum Gap	3.0	-	3.0	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* 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.

STOPLINE LOCATION DIAGRAM



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	
DD	Directional Drill	N/A
N/A	Right of Way	
	Directional Arrow	
A	Street Sign (D3-1)	A
B	"RIGHT LANE MUST TURN RIGHT" Sign (R3-7R)	B
C	Right Arrow "ONLY" Sign (R3-5R)	C

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

FINAL DESIGN

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared For: Transportation Mobility and Safety Division, Signal Design Section, NC DEPARTMENT OF TRANSPORTATION

750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40' 1"=40'

NC 125
AT
SR 1627 (THREE BRIDGES ROAD)/
PREMIER BOULEVARD EXT.

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: APRIL 2018 REVIEWED BY: SL PHILLIPS

PREPARED BY: SP PENNINGTON REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032607 STACIE L. PHILLIPS

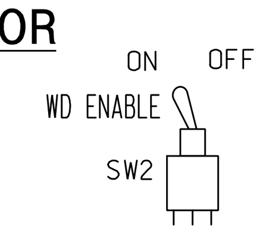
DocuSigned by: 6/12/2018
0C87A59E0608437...
SIGNATURE DATE

SIG. INVENTORY NO. 04-1220

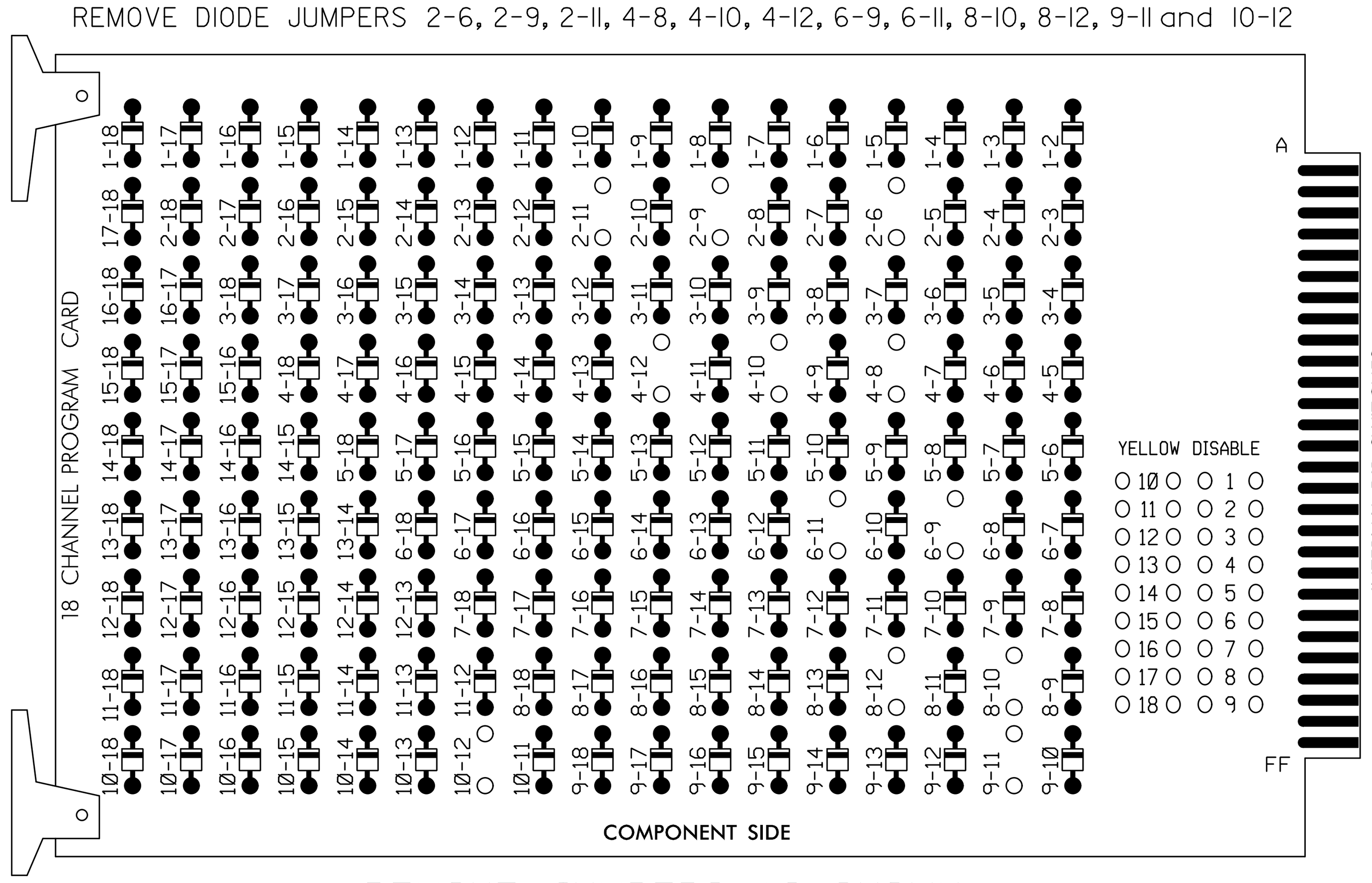
6/12/2018 2:59:12 PM susan.pennington K:\RAL_TPD_SIGNALS\W011036392 R-3822-U-5725\S4 - Signal Design\260_038_U5725_R3822 041220_2018.dgn

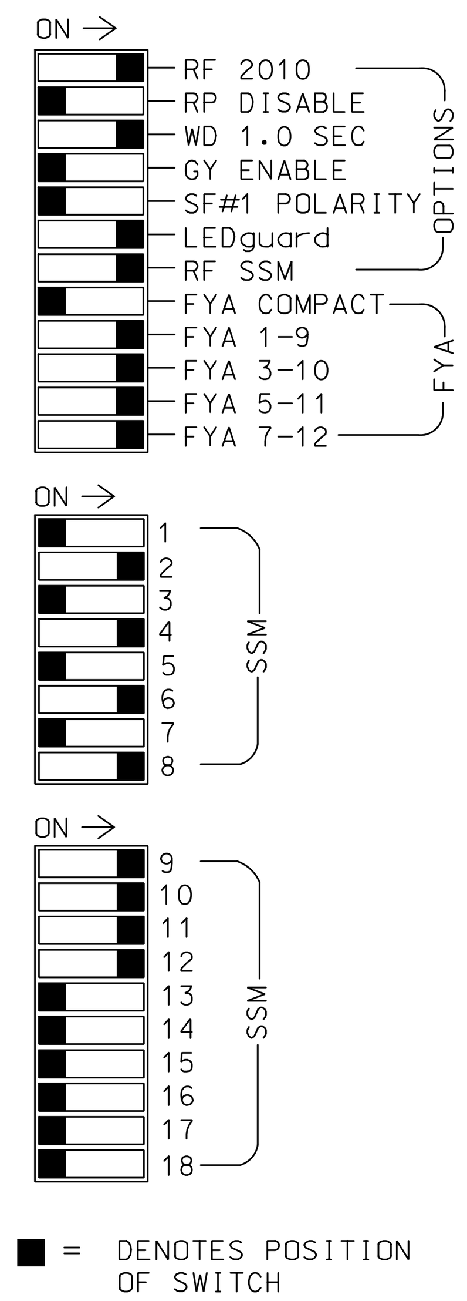
EDI MODEL 2018ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 2-6, 2-9, 2-11, 4-8, 4-10, 4-12, 6-9, 6-11, 8-10, 8-12, 9-11 and 10-12





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. Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

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 phases 4 and 8 for Dual Entry.
3. Enable Simultaneous Gap-Out for all Phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Startup In Green.
6. Program phases 2 and 6 for Yellow Flash, and overlaps 1 and 2 as Wag Overlaps.
7. The cabinet and controller are part of the NC 125 Wireless Closed loop System.

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S1Ø	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	1Ø	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	22,23	NU	NU	42,43	NU	NU	62,63	NU	NU	82,83	NU	61 ★	81 ★	NU	21 ★	41 ★	NU
RED		128			1Ø1			134			1Ø7							
YELLOW		129			1Ø2			135			1Ø8							
GREEN		13Ø			1Ø3			136			1Ø9							
RED ARROW													A121	A124		A114	A1Ø1	
YELLOW ARROW													A122	A125		A115	A1Ø2	
FLASHING YELLOW ARROW													A123	A126		A116	A1Ø3	
GREEN ARROW																		

NU = Not Used

★ See pictorial of head wiring in detail this sheet.

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
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y			
2C	TB2-9,1Ø	I3U	63	25	32	2	Y	Y	Y		3
4A	TB4-9,1Ø	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			1Ø
6A	TB3-5,6	J2U	4Ø	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y	Y		3
8A	TB5-9,1Ø	J6U	42	4	8	8	Y	Y			3
8B	TB5-11,12	J6L	46	8	18	8	Y	Y			1Ø
8C	TB7-1,2	J7U	66	28	38	8	Y	Y			15

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

EQUIPMENT INFORMATION

CONTROLLER..............2070
CABINET.................332 W/ AUX
SOFTWARE................ECONOLITE OASIS
CABINET MOUNT...........BASE
OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
LOAD SWITCHES USED......S2,S5,S8,S11,AUX S1, AUX S2, AUX S4,AUX S5
PHASES USED.............2,4,6,8
OVERLAP "A".............2
OVERLAP "B".............4
OVERLAP "C".............6
OVERLAP "D".............8

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	Ø 2 2A	Ø 2 2C	SLOT EMPTY	SLOT EMPTY	Ø 4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L		Ø 2 2B	NOT USED			Ø 4 4B								ST DC ISOLATOR
FILE "J"	U	SLOT EMPTY	Ø 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 8 8A	Ø 8 8C	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L		Ø 6 6B				Ø 8 8B	NOT USED							

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

FS = FLASH SENSE
ST = STOP TIME

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:| X
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:|   X
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:|     X
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:|       X
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
```

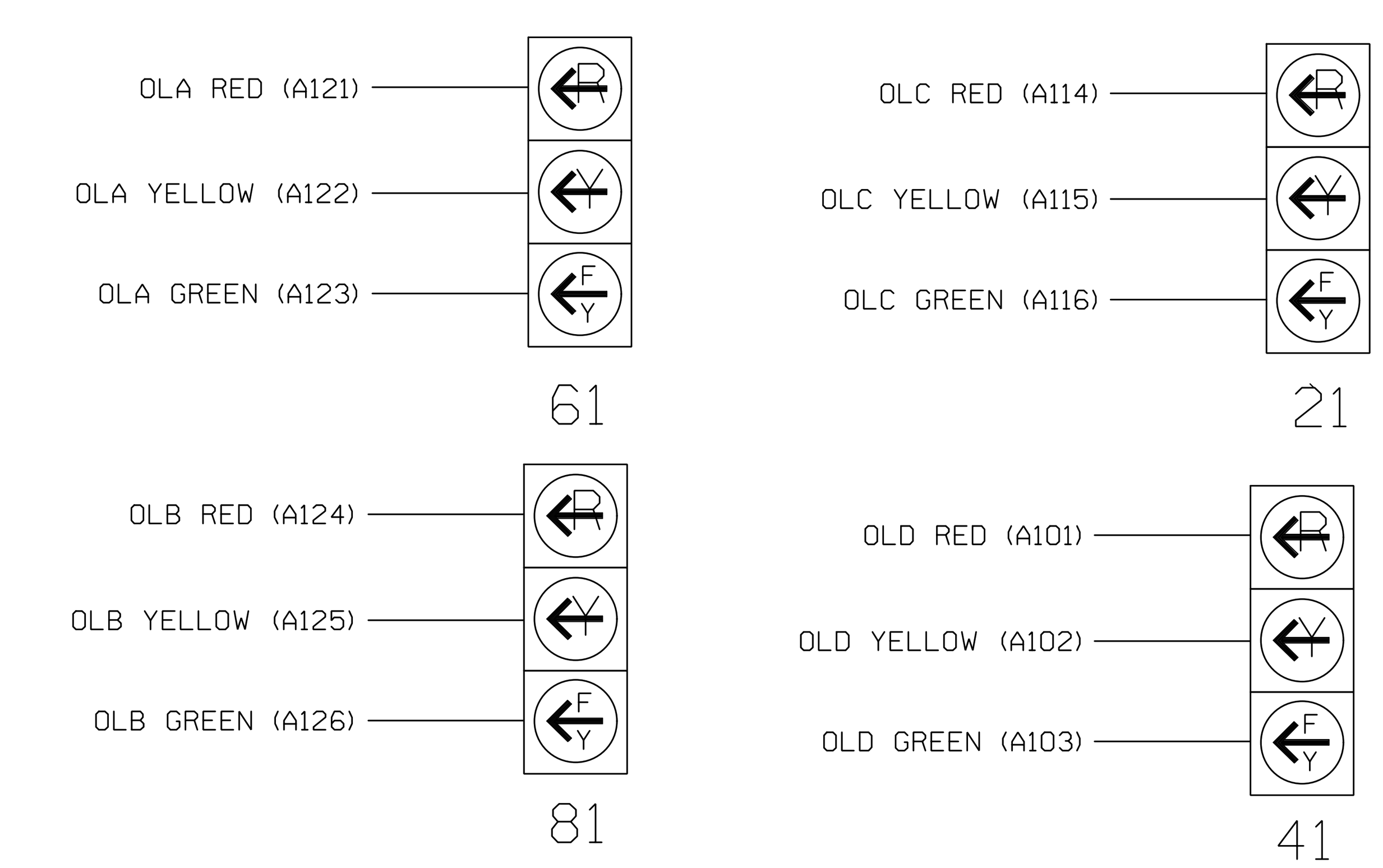
← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: Ø5-122Ø
DESIGNED: APRIL 2Ø18
SEALED: 6/12/2Ø18
REVISED: N/A

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



FLASHER CIRCUIT MODIFICATION DETAIL

In order to ensure that signals flash concurrently on the Same approach, make the following flasher circuit changes:

1. On rear of PDA - remove wire from Term. T2-4 and terminate on T2-2.
2. On rear of PDA - remove wire from Term. T2-5 and terminate on T2-3.
3. Remove flasher unit 2.

The changes listed above ties all phases and overlaps to flasher unit 1.

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

FINAL DESIGN ELECTRICAL DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ELECTRICAL AND PROGRAMMING DETAILS FOR:

Prepared For:
750 N.Greenfield Pkwy,Garner,NC 27529

NC 125
AT
SR 1627 (THREE BRIDGES ROAD)/
PREMIER BOULEVARD EXT.

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: APRIL 2018 REVIEWED BY: SL PHILLIPS
PREPARED BY: SP PENNINGTON REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 032607 ENGINEER STACIE L. PHILLIPS
DocuSigned by:
0C87A59ED60B437...
SIGNATURE 6/12/2018 DATE

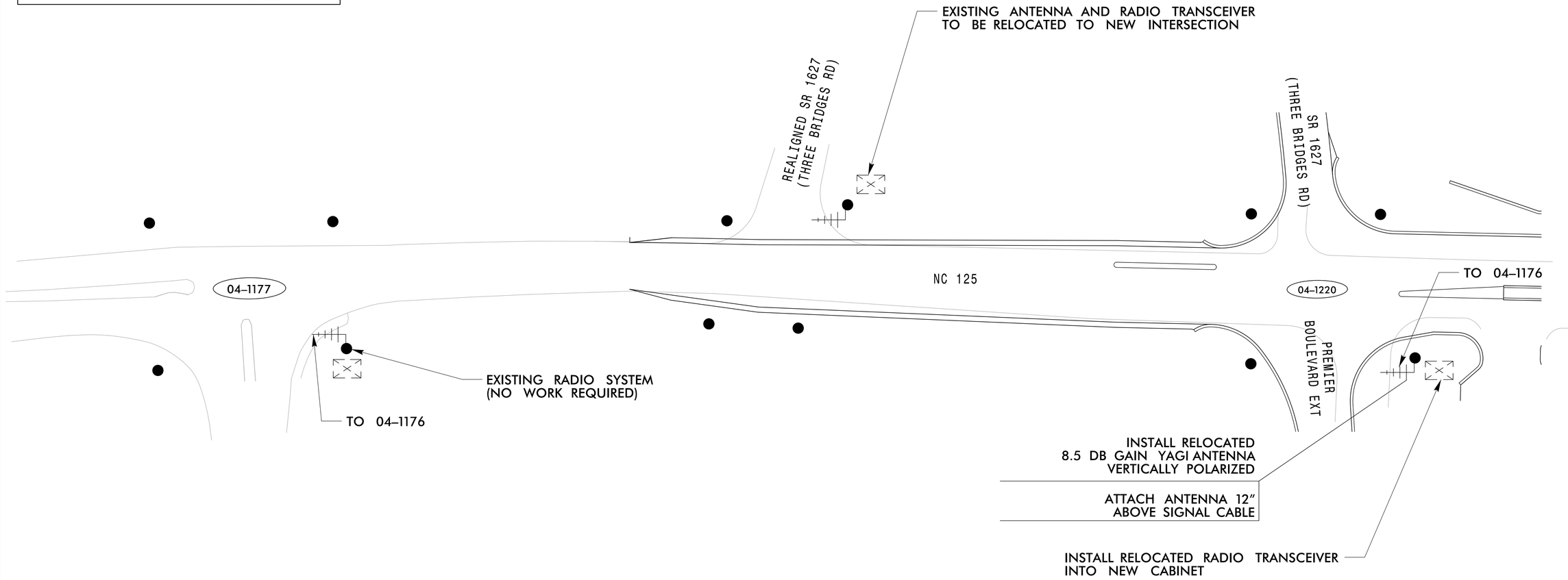
SIG. INVENTORY NO. 04-1220

K:\RAL_TPTO_SIGNALS\011036392 R-3822-U-5725\S4 - Signal Design\260_039_U5725_R3822_ 041220_2018_e1.dgn susan.pennington 2:59:13 PM 6/12/2018

PROJECT REFERENCE NO.	SHEET NO.
R3822/U-5725	SCP-1

LEGEND

- YAGI ANTENNA (DOUBLE) FOR REPEATER OPERATION
- YAGI ANTENNA (SINGLE)
- OMNI ANTENNA
- EXISTING CONTROLLER AND CABINET
- EXISTING MASTER CONTROLLER AND CABINET
- XX-XXXX SIGNAL INVENTORY NUMBER
- EXISTING WOOD POLE
- SP SIGNAL POLE
- EXISTING METAL POLE
- NEW OVERSIZED JUNCTION BOX
- EXISTING OVERSIZED JUNCTION BOX
- EXISTING CONDUIT
- NEW CONDUIT
- EXISTING COMMUNICATIONS CABLE



NOTES FOR WIRELESS COMMUNICATIONS:

1. INSTALL COAXIAL CABLE:
   A. ON WOOD POLES, REQUIRING A NEW RIGID GALVANIZED STEEL RISER, INSTALL A 2" RISER WITH WEATHERHEAD AND ROUTE THE COAXIAL CABLE TO THE ANTENNA.
   B. BETWEEN THE POINT OF EXITING THE RISER, METAL POLE OR MAST ARM AND THE ANTENNA, SECURE THE COAXIAL CABLE TO THE STRUCTURE USING 3/4" STAINLESS STEEL STRAPS EVERY 12".
2. IF AN EXISTING 2" SPARE RIGID GALVANIZED STEEL RISER IS AVAILABLE, INSTALL THE COAXIAL CABLE IN THE SPARE RISER AND SEAL RISER WITH HEAT SHRINK TUBING RETROFIT KIT.
3. INSTALL WIRELESS ANTENNA ON POLE WITH RF WARNING SIGN.
   (NOTE: RF WARNING SIGN NOT REQUIRED WHEN ANTENNA IS INSTALLED ON AN NCDOT–OWNED POLE.)
4. MAINTAIN PROPER CLEARANCE FROM ALL UTILITIES PER THE NATIONAL ELECTRICAL SAFETY CODE.
5. INSTALL WIRELESS SERIAL RADIO MODEM WITH EXTERIOR DISCONNECT SWITCH LOCATED ON CABINET.
   (NOTE: RF ANTENNA DISCONNECT SWITCH AND DECAL ARE NOT REQUIRED WHEN THE ANTENNA IS INSTALLED ON AN NCDOT–OWNED POLE.)
6. REFERENCE "WIRELESS RADIO ANTENNA TYPICAL DETAILS."

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

Prepared For:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

WIRELESS COMMUNICATIONS PLAN
NC 125 AT THREE BRIDGES ROAD

DIVISION 4 HALIFAX COUNTY ROANOKE RAPIDS

PLAN DATE: APRIL 2018 REVIEWED BY: KW SMITH

PREPARED BY: SP PENNINGTON

SCALE 0 40' 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

DocuSigned by: Kevin Smith 0686E04B3B0440F... 5/23/2018 DATE

CADD Filename: