### PROJECT REFERENCE NO. |Sig. 30.0| U-3308

## 2 Phase Fully Actuated Preemption

### OTES

- units to presence mode.
- Program all timing information into phase banks
- 6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.

- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing
- Pedestrian pedestals are conceptual and shown for

Metal Pole with Mastarm  $\bigcirc$ Optical Detector

ignal System)

- andard Drawings NCDOT" dated andard Specifications for ures" dated January 2012.
- gnal for late night on unless otherwise directed
- 1,2, and 3 unless otherwise noted.
- phases used.
- "Don't Walk" time.
- system. Shown locations of optical detectors are conceptual only.
- controller returns to normal operation.
- reference only. See sheets P1-P3 for location details.

	W/ EV P
	(Durham Si
	·
	NO
	110
1.	Refer to "Road Sta
	January 2012, "Sta
	Roads and Structur
2.	Do not program sig
	flashing operation
	by the Engineer.
3.	Set all detector u
4.	Program all timing

- 5. Set phase bank 3 maximum limit to 250 seconds for
- 7. Program pedestrian heads to countdown the flashing
- 8. This intersection features an optical preemption
- 9. Upon completion of Emergency Vehicle Preemption,
- values supersede these values.

10.
11.

# LEGEND

<u>PROPOSED</u>		<b>EXISTING</b>
$\bigcirc$	Traffic Signal Head	<b></b>
<b>O</b> ->	Modified Signal Head	N/A
$\rightarrow$	Sign	$\dashv$
<b>\( \frac{1}{4} \)</b>	Pedestrian Signal Head With Push Button & Sign	•
$\bigcirc$	Signal Pole with Guy	
S	ignal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
$\longrightarrow$	Directional Arrow	$\longrightarrow$
— DD —	Directional Drill	N/A
$\langle A \rangle$	Street Name Sign	

Type I Pushbutton Post

Type II Signal Pedesta

# Signal Upgrade - Final Design

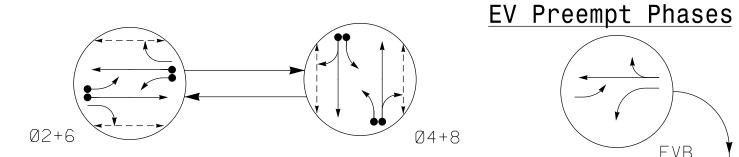


NC 55 (North Alston Avenue)

Taylor Street Division 5 Durham County Durham PLAN DATE: September 2014 REVIEWED BY: J Hochanadel

MyPDU

## PHASING DIAGRAM



2033 EV PREEMPTION

(SECONDS)

0

\*

2.0

**FUNCTION** 

MIN. PED. CLEAR BEFORE PREEMPT

\* See Timing Chart for Min Ped Clearance

\*\* Program Timing on Optical Detector Unit

MIN. GREEN BEFORE PREEMPT

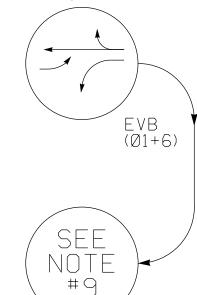
DELAY BEFORE PREEMPT

CLEARANCE TIME

PREEMPT EXTEND\*\*

PHASING DIAGRAM DETECTION LEGEND DETECTED MOVEMENT UNDETECTED MOVEMENT (OVERLAP) UNSIGNALIZED MOVEMENT

 $<\!\!--\!\!>$  PEDESTRIAN MOVEMENT



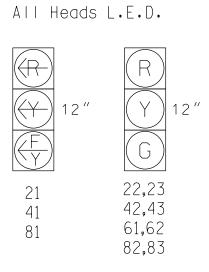
JL FIIASUS				
		L P	HAS	E
	SIGNAL FACE	Ø 2 + 6	Ø 4 + 8	E V B
EVB	11	<del>F</del> Y	<del></del>	4
(Ø1+6)	21	<del>-</del> F	<b>-</b> R	<b>₽</b>
	22,23	G	R	R
	41	<del></del>	F	<b>→</b>
FF	42,43	R	G	R
)TE	61,62	G	R	G
= 9	81	<del></del>	+ + + + + + + + + + + + + + + + + + +	<b>√</b>
	82,83	R	G	R
	P21,P22	W	DW	D١
	P41,P42	DW	W	D١

## SIGNAL FACE I.D.

P61,P62 | W | DW | DW | DRK

P81,P82 | DW | W | DW | DRK

TABLE OF OPERATION



P21**,**P22

P41,P42

P61,P62

P81,P82

	12"	21 41 81	R Y 12 G 22,23 42,43 61,62 82,83
--	-----	----------------	--

			203	TIMIN 33 SOFTWARE	G CHART w/2070 CONT			
PHASE	Ø1	Ø2	Ø4	Ø6	Ø8	OL2	OL3	OL4
MINIMUM INITIAL *	- SEC.	10 <b>SEC</b> .	7 <b>SEC</b> .	10 SEC.	7 <b>SEC</b> .	O SEC.	O SEC.	O SEC.
VEHICLE EXTENSION *	– SEC.	3.0 <b>SEC</b> .	2.0 <b>SEC</b> .	3.0 <b>SEC</b> .	2.0 <b>SEC</b> .			
YELLOW CHANGE INT.	3.8 <b>SEC</b> .	3.8 <b>SEC</b> .	3.3 <b>SEC</b> .	3.8 <b>SEC</b> .	3.3 <b>SEC</b> .	3.3 <b>SEC</b> .	3.8 <b>SEC</b> .	3.3 <b>SEC</b> .
RED CLEARANCE	3.3 <b>SEC</b> .	2.6 <b>SEC</b> .	2.6 <b>SEC</b> .	2.6 <b>SEC</b> .	2.6 <b>SEC</b> .	2.6 <b>SEC</b> .	2.6 <b>SEC</b> .	2.6 <b>SEC</b> .
MAXIMUM LIMIT *	- SEC.	50 <b>SEC</b> .	35 <b>SEC</b> .	50 <b>SEC</b> .	35 <b>SEC</b> .			
RECALL POSITION	NONE	VEH. RECALL	NONE	VEH. RECALL	NONE			
VEHICLE CALL MEMORY	NONE	YELLOW LOCK	NONE	YELLOW LOCK	NONE			
DOUBLE ENTRY	OFF	OFF	ON	OFF	ON			
WALK *	- SEC.	4 SEC.	4 SEC.	4 SEC.	4 SEC.			
FLASHING DON'T WALK	- SEC.	10 <b>SEC</b> .	16 <b>SEC</b> .	11 SEC.	16 <b>SEC</b> .			
MIN PED CLEARANCE	- SEC.	5 <b>SEC</b> .	8 <b>SEC</b> .	6 SEC.	8 <b>SEC</b> .			
TYPE 3 LIMIT	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.			
ALTERNATE EXTENSION	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.			
ADD PER VEHICLE *	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.			
MAXIMUM INITIAL *	- SEC.	- SEC.	- SEC.	- SEC.	- SEC.			
MAXIMUM GAP*	- SEC.	3 <b>.</b> 0 <b>SEC</b> .	2 <b>.</b> 0 <b>SEC</b> .	3 <b>.</b> 0 <b>SEC</b> .	2 <b>.</b> 0 <b>SEC</b> .			
REDUCE 0.1 SEC EVERY *	- SEC.	- SEC.	- SEC.	- SEC.	– SEC.			
MINIMUM GAP	- SEC.	3 . 0 <b>SEC</b> .	2 <b>.</b> O <b>SEC</b> .	3 . 0 <b>SEC</b> .	2 . O SEC.			

2033 SOFTWARE w/ 2070 CONTROLLER

LOOP & DETECTOR UNIT INSTALLATION CHART

3 SEC.

- SEC.

Metal Pole #10

See Loading Diagram
Sta. 49+05+/- -LALT49'+/- Rt.

- SEC. - SEC. -

- SEC. - SEC. -

- SEC. - SEC.

10 SEC.

Ž NEMA |

70 X

6×40 | 2-4-2 | 0 | X | - | 8 | 3 SEC.

Arm "A"-

Arm "B"

8B 6×40 2-4-2 0 X - 8 10 SEC.

PHASE DELAY

INDUCTIVE LOOPS

6×40 | 2-4-2 |

PEDESTRIAN DETECTION

Metal Pole #9

NC 55 (N. Alston Ave.)

46′ +/– Lt.

35 Mph

See Loading Diagram

Sta. 48 + 57 +/- -LALT-

| P61,P62 | N/A | N/A | N/A | X |

| P21,P22 | N/A | N/A | N/A | X|-| 2 |

| P41,P42 | N/A | N/A | X | - | 4 |

| P81.P82 | N/A | N/A | N/A | X|- | 8 |

LOOP NO.

DETECTOR PROGRAMMING

1025 Wade Avenue Raleigh, NC 27605 Tel:919-789-9977 Fax:919-789-9591

50 N.Greenfield Pkwy,Garner,NC 27529 PREPARED BY: C Lawson INIT. DATE

4/02/15 DATE SIG. INVENTORY NO.

SEAL