PHASING DIAGRAM DETECTION LEGEND

PEDESTRIAN MOVEMENT

EV Preempt Phases

EVB (Ø3+8)

DETECTED MOVEMENT UNDETECTED MOVEMENT (OVERLAP) UNSIGNALIZED MOVEMENT

#8

SIGNAL	FACE	I.D.
		_

P81,P82 | DW | W | DW | DRK

TABLE OF OPERATION

SIGNAL

FACE

31

41

42,43

62,63

81,82

P41,P42

P61,P62

PHASE

7 | 0 | \_ | F

-R -F - -R

R G R R

DW W DW DRK

| w | dw | dw | drk

| R | R | Y

All Heads L.E.D. \* See Note 10 \*\* See Note 11

LOOP & DETECTOR UNIT INSTALLATION CHART																					
DETECTOR PROGRAMMING																					
INDUCTIVE LOOPS					TIMING			ATTRIBUTES							LOOPS	STA	ATUS				
			DIST. FROM		U	TIMING 1 2			3	4	5 Z	6	7	8 H			ပ္ခ				
LOOP NO.	SIZE (ft)	TURNS	STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	DELAY		CARRY (STRETCH)		FULL TIME DELAY	PEDESTRIAN CALL	RESERVED	COUNT	EXTENSION	TYPE 3	CALLING	ALTERNATE	SYSTEM	NEW	EXISTING
2A	6×6	*	70	-	*	2	- SE	EC.	-	SEC.	_	_	-	-	Χ	_	Χ	_	-	-	*
4 A	6×40	*	0	-	*	4	3 SE	EC.	_	SEC.	_	_	-	_	Х	-	Х	_	-	-	*
4B	6×40	*	0	-	*	4	10 SE	EC.	-	SEC.	-	-	-	-	Х	-	Χ	-	-	-	*
6A	6×6	*	70	-	*	6	- SE	:C.	-	SEC.	-	-	-	_	Х	-	Х	-	-	-	*
8 A	6×40	*	0	*	-	8	3 SE	:C.	-	SEC.	-	_	-	-	Χ	-	Χ	-	-	-	*
8B	6×40	*	0	*	_	8	10 SE	C.	-	SEC.	_	_	_	_	Х	-	Х	_	-	-	*
PEDESTR	PEDESTRIAN DETECTION																				
P41,P42	N/A	N/A	N/A	X	-	4	– SE	EC.	-	SEC.	_	Χ	-	-	-	-	-	-	-	X	-
P61,P62	N/A	N/A	N/A	-	Χ	6	– SE	EC.	-	SEC.	_	Χ	-	-	-	-	-	-	-	-	X
P81,P82	N/A	N/A	N/A	Х	-	8	- SE	:C.	-	SEC.	_	Χ	-	-	-	-	-	_	-	Х	-

2033 SOFTWARE w/ 2070 CONTROLLER

\* Video Detection Zone

2033 EV PREEMPTION FUNCTION (SECONDS) DELAY BEFORE PREEMPT 0 MIN. PED. CLEAR BEFORE PREEMPT \* MIN. GREEN BEFORE PREEMPT CLEARANCE TIME

\* See Timing Chart for Min Ped Clearance

PREEMPT EXTEND\*\*

2.0

\*\* Program Timing on Optical Detector Unit

TIMING CHART 2033 SOFTWARE w/2070 CONTROLLER													
PHASE	Ø2		Ø3		Ø	4	Ø	6	Ø	8	OL4		
MINIMUM INITIAL *	10 sec.		- SEC.		7 <b>SEC</b> .		10 <b>SEC</b> .		7 <b>SEC</b> .		0	SEC.	
VEHICLE EXTENSION *	3.0	SEC.	_	SEC.	2.0	SEC.	3.0	SEC.	2.0	SEC.			
YELLOW CHANGE INT.	3.7	SEC.	4.4	SEC.	4.4	SEC.	3.7	SEC.	4.4	SEC.	4.4	SEC.	
RED CLEARANCE	1.8	SEC.	2.1	SEC.	1.4	SEC.	1.9	SEC.	1.4	SEC.	1.4	SEC.	
MAXIMUM LIMIT *	50	SEC.	35	SEC.	35	SEC.	50	SEC.	35	SEC.			
RECALL POSITION	VEH. RECALL		NONE		NONE		VEH. RECALL		NONE				
VEHICLE CALL MEMORY	YELLOW LOCK		NONE		NONE		YELLOW LOCK		NONE				
DOUBLE ENTRY	OFF		OFF		ON		0	FF	С	N			
WALK *	_	SEC.	_	SEC.	4	SEC.	4	SEC.	4	SEC.			
FLASHING DON'T WALK	_	SEC.	_	SEC.	19	SEC.	10	SEC.	20	SEC.			
MIN PED CLEARANCE	_	SEC.	_	SEC.	10	SEC.	5	SEC.	10	SEC.			
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*	3.0	SEC.	_	SEC.	2.0	SEC.	3.0	SEC.	2.0	SEC.			
REDUCE 0.1 SEC EVERY *	_	SEC.	_	SEC.	_	SEC.	_	SEC.	_	SEC.			
MINIMUM GAP	3.0	SEC.	_	SEC.	2.0	SEC.	3.0	SEC	2.0	SEC.			

P41,P42 P21,P22\*\*\* P61,P62 P81**,**P82 21<del>\*\*\*</del> 22,23 41<del>\*</del> 42,43 62,63 61<del>\*\*\*</del> 81,82<del>\*</del> NC 55 (N. Alston Ave.) +2% Grade — **PUE**: 35 Mph \_\_\_\_\_\_PUE ~ PUE PDE 21 22 23 23 □ (6A) < 35 Mph +3% Grade NC 55 (N. Alston Ave.)

U-3308

PROJECT REFERENCE NO.

2 Phase Fully Actuated W/ EV Preemption (Durham Signal System)

## **NOTES**

1. Refer to "Road Standard Drawings NCDOT" dated January 2012, "Standard Specifications for Roads and Structures" dated January 2012.

2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.

4. Set all detector units to presence mode.

5. Program all timing information into phase banks 1,2, and 3 unless otherwise noted.

6. Set phase bank 3 maximum limit to 250 seconds for phases used.

7. This intersection features an optical preemption system. Shown locations of optical detectors

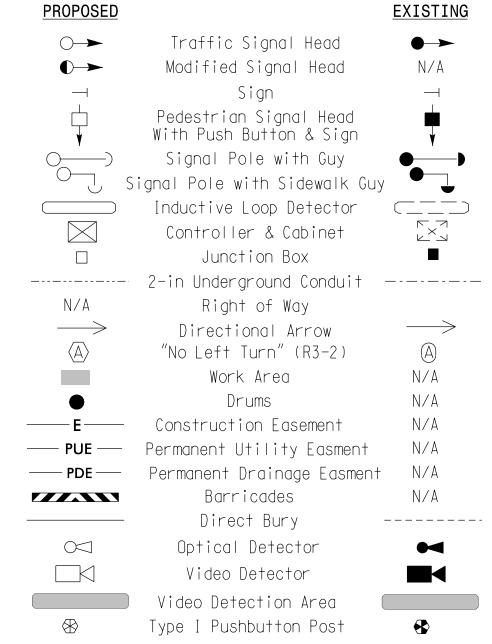
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

10. Reconnect and unbag signal heads #31, #41, #81, #82 and optical detector #10 during this phase of

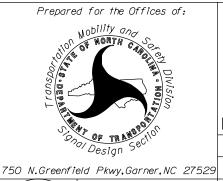
11. Signal heads #21 and #61 and pedestrian signal heads #P21 and #P22 to remain disconnected and bagged during this phase of construction.

12. Contractor shall adjust video detection zones as

LEGEND



Signal Upgrade - Temporary Design 5 (TMP Phase 1, Steps 11-21)



NC 55 (North Alston Avenue) Liberty St

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

INIT. DATE

MyPAL

SIG. INVENTORY NO. 05-1029T5

4/02/15 DATE

750 N.Greenfield Pkwy, Garner, NC 27529 PREPARED BY: R Drayton REVIEWED BY:

|Sig. 35.0|

are conceptual only.

8. Upon completion of Emergency Vehicle Preemption, controller returns to normal operation.

construction.

required.