#### PROJECT REFERENCE NO. |Sig. 13.0| U-3308

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

## NOTES

- to "Road Standard Drawings NCDOT" dated ary 2012, "Standard Specifications for and Structures" dated January 2012.
- ot program signal for late night ning operation unless otherwise directed he Engineer
- 1 may be lagged.

**PROPOSED** 

 $\bigcirc$ 

N/A

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- all detector units to presence mode.
- ram all timing information into phase banks and 3 unless otherwise noted.
- 6. Set phase bank 3 maximum limit to 250 seconds for phases used.
- 7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- 8. Program pedestrian heads to countdown the flashing "Don't Walk" time.
- 9. This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- 10. Upon completion of Emergency Vehicle Preemption, controller returns to normal operation.
- 11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- 12 Reconnect and unbag pedestrian signal head #P41 during this phase of construction.
- 13. Pedestrian signal head #P82 shall remain bagged and disconnected during this phase of construction.
- 14. Contractor shall adjust video detection zones as required

LEGEND

Traffic Signal Head

Modified Signal Head

Sign Pedestrian Signal Head With Push Button & Sign

Signal Pole with Guy ignal Pole with Sidewalk Guy

Inductive Loop Detector

Controller & Cabinet

Junction Box

2-in Underground Conduit

Right of Way Directional Arrow

Work Area

Drums

Construction Easement

Barricades

Direct Bury

Optical Detector

Video Detector

Video Detection Area

----Permanent Drainage Easement

**EXISTING** 

**-**

N/A

N/A

N/A

N/A

N/A N/A

\_\_\_\_\_

1.	Refer
	Januai
0	Roads
2.	Do not
	flash:
0	by the
3.	Phase
4.	Set a
5.	Progra
	1,2, 8
6	Sat nl

# 2033 SOFTWARE w/ 2070 CONTROLLER LOOP & DETECTOR UNIT INSTALLATION CHART DETECTOR PROGRAMMING

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	INDUCT	IVE LO	OPS										A٦	TRI	ВИТ	ES			PS	STA	TUS
								TIM	ING		1	2	3	4	5	6	7	8	LOOPS		
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	DEL	.AY	CA (STR	RRY ETCH)	FULL TIME DELAY	PEDESTRIAN CALL	RESERVED	COUNT	EXTENSION	TYPE 3	CALLING	ALTERNATE	SYSTEM L	NEW	EXISTING
1 /	6×40	*	0	_	\sqrt{\sq}\sqrt{\sq}}}}\sqrt{\sq}}}}}}}}\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	1	15	SEC.	-	SEC.	-	_	-	-	Χ	-	Χ	-	-	-	*
1 A	0 0 0 4 0	<u> </u>			*	6	_	SEC.	-	SEC.	-	-	-	-	Χ	-	Χ	-	-	-	*
2A	6×6	*	70	-	*	2	_	SEC.	-	SEC.	-	-	_	-	Χ	_	Χ	-	-	-	*
2B	6×40	*	0	*	-	2	_	SEC.	_	SEC.	-	_	_	-	Χ	_	Χ	-	-	*	-
4 A	6×40	*	0	*	-	4	10	SEC.	_	SEC.	-	_	_	-	Χ	-	Χ	-	-	*	-
6A	6×6	*	70	-	*	6	_	SEC.	-	SEC.	-	_	_	-	Χ	-	Χ	-	-	-	*
8.8	6×40	*	0	-	*	8	10	SEC.	-	SEC.	-	_	-	-	Χ	-	Χ	-	-	_	*
PEDES	STRIAN	DETECT	ION														_				_
P21,P22	N/A	N/A	N/A	<u> </u>	X	2	_	SEC.	-	SEC.	-	Χ	_	_	-	_	_	-	-	-	X

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

\* Video Detection Zone

### PHASING DIAGRAM DETECTION LEGEND

PHASING DIAGRAM

DETECTED MOVEMENT UNDETECTED MOVEMENT (OVERLAP) LINGTONAL TZED MOVEMENT

	UNSIGNALIZED MOVEMENT
$\leftarrow$ >	PEDESTRIAN MOVEMENT

2033 EV PREEMPTION							
FUNCTION	EVB (SECONDS)						
DELAY BEFORE PREEMPT	0						
MIN. PED. CLEAR BEFORE PREEMPT	*						
MIN. GREEN BEFORE PREEMPT	1						
CLEARANCE TIME	2						
PREEMPT EXTEND**	2.0						

\* See Timing Chart for Min Ped Clearance \*\* Program Timing on Optical Detector Unit

# SIGNAL FACE I.D.

TABLE OF OPERATION

SIGNAL

FACE

21

22,23

41,42

61,62

81,82

P21**;**P22

PHASE

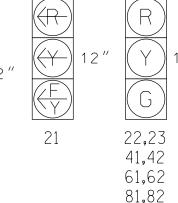
|DW| W |DW|DW|DRK

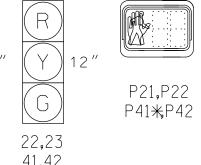
P41,P42 | DW | DW | W | DW | DRK

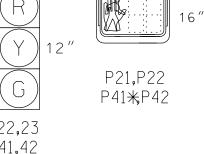
EV Preempt Phases

#10

All Heads L.E.D. \* See Note 12 \*\* See Note 13

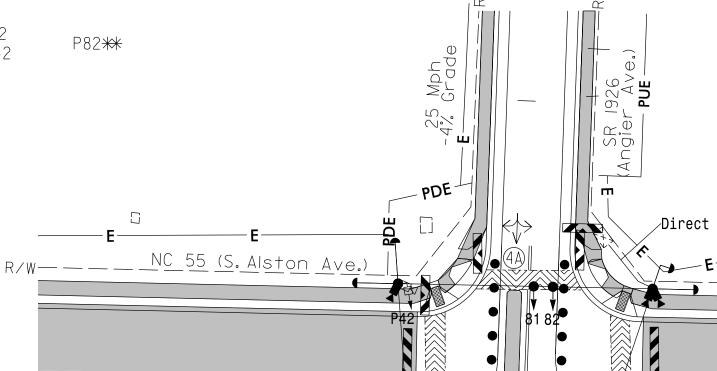












□(6A)< 2A -P22

NC 55 (S. Alston Ave.)

TIMING CHART 2033 SOFTWARE w/2070 CONTROLLER OL3 Ø8 MINIMUM INITIAL ' 1 () **SEC**. SEC. O SEC. 2.0 **SEC**. 3.0 **SEC**. 2.0 **SEC**. 3.0 **SEC**. VEHICLE EXTENSION YELLOW CHANGE INT. 2.1 **SEC**. 1.6 **SEC**. 1.8 **SEC**. 1.2 **SEC**. RED CLEARANCE 1.6 **SEC**. . 6 **SEC**. 50 **SEC**. 50 **SEC**. 35 **SEC**. 35 **SEC**. MAXIMUM LIMIT 15 **SEC**. VEH. RECALL VEH. RECALL NONE RECALL POSITION VEHICLE CALL MEMORY YELLOW LOCK YELLOW LOCK DOUBLE ENTRY OFF OFF ON 4 **SEC**. — SEC. 4 **SEC**. — SEC. — SEC. FLASHING DON'T WALK — SEC. 9 **SEC**. 21 **SEC**. — SEC. SEC. MIN PED CLEARANCE 5 **SEC**. — SEC. SEC. SEC. TYPE 3 LIMIT — SEC. SEC. - SEC. — SEC. SEC. ALTERNATE EXTENSION SEC. — SEC. SEC. - SEC. SEC. ADD PER VEHICLE SEC. — SEC. SEC. SEC. — SEC.

shown. Min Green for all other phases should not be lower than 4 seconds

SEC.

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SEC.

2 **.** O **SEC**.

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3 **.** 0 **SEC**.

3 . 0 **SEC**.

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. () SEC.

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3.0 SEC.

Signal Upgrade - Temporary Design 2 (TMP Phase I, Steps 11-21) Prepared for the Offices of:



+2% Grade

NC 55 (South Alston Avenue)

SR 1926 (Angier Avenue) Division 5 Durham County PLAN DATE: September 2014 | REVIEWED BY: J Hochanadel

INIT. DATE

1025 Wade Avenue

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

SEAL

MAXIMUM INITIAL

REDUCE 0.1 SEC EVERY \*

MAXIMUM GAP\*

SEC.

2 **.** 0 **SEC**.

SEC.

2 **.** O **SEC**.

Raleigh, NC 27605 Tel:919-789-9977

MyPAL DATE SIG. INVENTORY NO. 05-1026T2