PHASING DIAGRAM

Ø2+6

Ø4

PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+6	Ø4	FLASH
21	F/Y	R	Y
22,23	G	R	Y
42,43	R	G	R
62,63	G	R	Y
P61,P62	W	DW	DRK

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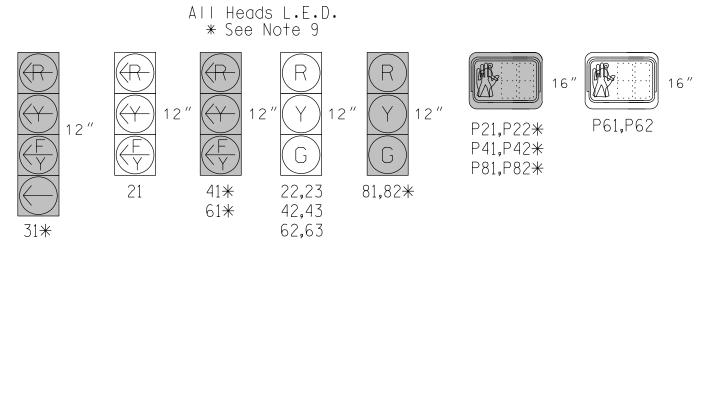### LOOP & DETECTOR UNIT INSTALLATION CHART

LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	DELAY	CARRY (STRETCH)	FULL TIME DELAY	PEDESTRIAN CALL	RESERVED	COUNT	EXTENSION	TYPE 3	CALLING	ALTERNATE	SYSTEM LOOPS	NEW	EXISTING
2A	6x6	✱	70	✱	-	2	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	✱
2B	6x40	✱	0	✱	-	2	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	✱
4A	6x40	✱	0	-	✱	4	3 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	✱
4B	6x40	✱	0	-	✱	4	10 SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	✱
6A	6x6	✱	70	✱	-	6	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	-	✱
PEDESTRIAN DETECTION																			
P61,P62	N/A	N/A	N/A	-	X	6	- SEC.	- SEC.	-	X	-	-	-	-	-	-	-	-	X

✱ Video Detection Zone

2 Phase
Fully Actuated
(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.
3. Set all detector units to presence mode.
4. Program all timing information into phase banks 1,2, and 3 unless otherwise noted.
5. Set phase bank 3 maximum limit to 250 seconds for phases used.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Disconnect and bag signal heads #31, #41, #61, #81, #82 and pedestrian signal heads #P21, #P22, #P41, #P42, #P81 and #P82 during this phase of construction.
10. Contractor shall adjust video detection zones as required.

SIGNAL FACE I.D.

All Heads L.E.D.
✱ See Note 9

31✱

21

41✱
61✱

22,23
42,43
62,63

81,82✱

P21,P22✱
P41,P42✱
P81,P82✱ 16"

P61,P62 16"

TIMING CHART
2033 SOFTWARE w/2070 CONTROLLER

PHASE	Ø2	Ø4	Ø6	OL3
MINIMUM INITIAL *	10 SEC.	7 SEC.	10 SEC.	0 SEC.
VEHICLE EXTENSION *	3.0 SEC.	2.0 SEC.	3.0 SEC.	
YELLOW CHANGE INT.	4.1 SEC.	3.0 SEC.	4.1 SEC.	4.1 SEC.
RED CLEARANCE	2.1 SEC.	2.3 SEC.	2.1 SEC.	2.1 SEC.
MAXIMUM LIMIT *	50 SEC.	35 SEC.	50 SEC.	
RECALL POSITION	VEH. RECALL	NONE	VEH. RECALL	
VEHICLE CALL MEMORY	YELLOW LOCK	NONE	YELLOW LOCK	
DOUBLE ENTRY	OFF	OFF	OFF	
WALK *	- SEC.	- SEC.	4 SEC.	
FLASHING DON'T WALK *	- SEC.	- SEC.	8 SEC.	
TYPE 3 LIMIT	- SEC.	- SEC.	- SEC.	
ALTERNATE EXTENSION	- SEC.	- SEC.	- SEC.	
ADD PER VEHICLE *	- SEC.	- SEC.	- SEC.	
MAXIMUM INITIAL *	- SEC.	- SEC.	- SEC.	
MAXIMUM GAP*	3.0 SEC.	2.0 SEC.	3.0 SEC.	
REDUCE 0.1 SEC EVERY *	- SEC.	- SEC.	- SEC.	
MINIMUM GAP	3.0 SEC.	2.0 SEC.	3.0 SEC.	

* 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	
N/A	Right of Way	
	Directional Arrow	
A	"No Left Turn" (R3-2)	A
B	"No Right Turn" (R3-1)	B
C	Left Arrow "ONLY" Sign (R3-5L)	C
D	Right Arrow "ONLY" Sign (R3-5R)	D
	Work Area	N/A
	Drums	N/A
	Construction Easement	N/A
PDE	Permanent Drainage Easement	N/A
	Barricades	N/A
	Direct Bury	
	Type II Signal Pedestal	
	Video Detector	
	Video Detection Area	

NC 98 (Holloway St.)
0% Grade
35 Mph
PUE
R/W

NC 55 (N. Alston Ave.)
PUE

35 Mph   +1% Grade   R/W

35 Mph   -4% Grade

NC 55 (N. Alston Ave.)

Signal Upgrade - Temporary Design 3 (TMP Phase 1, Steps 11-21)

Prepared for the Offices of:
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

NC 55 (North Alston Avenue)
at
US 70 - NC 98 (Holloway Street)
Division 5   Durham County

PLAN DATE: September 2014	REVIEWED BY: J Hochanadel
PREPARED BY: C Lawson	REVIEWED BY:

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
28430
ENGINEER
JEFFREY P. HOCHANADEL

REVISIONS	INIT.	DATE

4/02/15
DATE

SIG. INVENTORY NO. 05-1027T3

SCALE
0   40
1"=40'