PROJECT REFERENCE NO.	SHEET NO.
W-5705K	Sig. 1

PHASING DIAGRAM

PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

All Heads L.E.D.

TABLE OF OPERATION

SIGNAL FACE	PHASE						
	Ø2 DARK	ACTIVATION	STEADY YELLOW	ALL RED	Ø4 PED WALK	Ø4 PED CLEAR	FLASH
21, 22	DRK	FY	Y	R	R	FR*	Y
P41	DW	DW	DW	DW	W	DW	DRK
P81	DW	DW	DW	DW	W	DW	DRK

* Alternating Flash

Y - Steady Yellow
FY - Flashing Yellow
R - Steady Red
FR - Flashing Red
W - Walk
DW - Don't Walk
DRK - Dark

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

INDUCTIVE LOOPS						DETECTOR PROGRAMMING														
							TIMING		ATTRIBUTES									STATUS	
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE	DELAY	CARRY (STRETCH)	1 FULL TIME DELAY	2 PEDESTRIAN CALL	3 RESERVED	4 COUNT	5 EXTENSION	6 TYPE 3	7 CALLING	8 ALTERNATE	SYSTEM LOOPS	NEW	EXISTING
2A	6X6	4	70	X	-	6	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	X	-
2B	6X6	4	70	X	-	6	- SEC.	- SEC.	-	-	-	-	X	-	X	-	-	X	-
P41	N/A	N/A	N/A	X	-	4	- SEC.	- SEC.	-	X	-	-	-	-	-	-	-	X	-
P81	N/A	N/A	N/A	X	-	4	- SEC.	- SEC.	-	X	-	-	-	-	-	-	-	X	-

2 Phase Fully Actuated Pedestrian Hybrid Beacon (Durham Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
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. Set phase bank 3 maximum limit to 250 seconds for phases used.
5. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
6. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
7. Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
8. Pavement markings are existing unless otherwise shown.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Locate Pedestrian and Crosswalk advance signs in accordance with Table 2C-4 in Section 2C.05 of the 2009 MUTCD or as otherwise directed by the Engineer.

Proposed Metal Pole and Stop Line Locations

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	
Ⓐ	Pedestrian Warning Sign (W11-2) See Figure 1	Ⓐ
Ⓑ	"AHEAD" Sign (W16-9P) See Figure 1	Ⓑ
Ⓒ	"CROSSWALK - STOP ON RED" Sign (R10-23)	Ⓒ
Ⓓ	School Crossing Sign (S1-1)	Ⓓ
Ⓔ	Diagonal Arrow Sign (W16-7P)	Ⓔ
Ⓕ	"STOP" Sign (R1-1)	Ⓕ
Ⓖ	"STOP HERE ON RED" Sign (R10-6)	Ⓖ

Figure 1

TIMING CHART

2033 SOFTWARE w/ 2070 CONTROLLER

PHASE	Ø2	Ø4 PED	OL1
MINIMUM INITIAL *	10 SEC.	7 SEC.	5 xx SEC.
VEHICLE EXTENSION *	3.0 SEC.	- SEC.	
YELLOW CHANGE INT.	5.0 xx SEC.	3.0 + SEC.	3.8 ++ SEC.
RED CLEARANCE	8.8 ^ SEC.	- SEC.	- SEC.
MAXIMUM LIMIT *	20 SEC.	- SEC.	
RECALL POSITION	VEH. RECALL	NONE	
VEHICLE CALL MEMORY	YELLOW LOCK	NONLOCK	
DOUBLE ENTRY	OFF	OFF	
WALK *	- SEC.	7 SEC.	
FLASHING DON'T WALK	- SEC.	7 SEC.	
TYPE 3 LIMIT	- SEC.	- SEC.	
ALTERNATE EXTENSION	- SEC.	- SEC.	
ADD PER VEHICLE *	- SEC.	- SEC.	
MAXIMUM INITIAL *	- SEC.	- SEC.	
MAXIMUM GAP*	3.0 SEC.	- SEC.	
REDUCE 0.1 SEC EVERY *	- SEC.	- SEC.	
MINIMUM GAP	3.0 SEC.	- 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.

xx Serves as Flashing Yellow Time
^ Serves as the sum of the Steady Yellow Time and All Red Time
+ Serves as the Flashing Red Time that continues after the Pedestrian Change Interval terminates
++ Serves as the Steady Yellow Time

New Installation

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of: Transportation Mobility and Safety Division, Signal Design Section, 750 N.Greenfield Pkwy,Garner,NC 27529

Pedestrian Hybrid Beacon on SR 1327 (N. Gregson Street) at Lamond Avenue

Division 5 Durham County Durham

PLAN DATE: March 2017 REVIEWED BY:
PREPARED BY: C.E. Carter REVIEWED BY:

SCALE 0 20 1"=20'

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 036833 ENGINEER RYAN W. HOUGH

DocuSigned by: Ryan W. Hough 4/27/2017
E3D3D3BAA9B4A7... DATE

SIG. INVENTORY NO. 05-0335

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