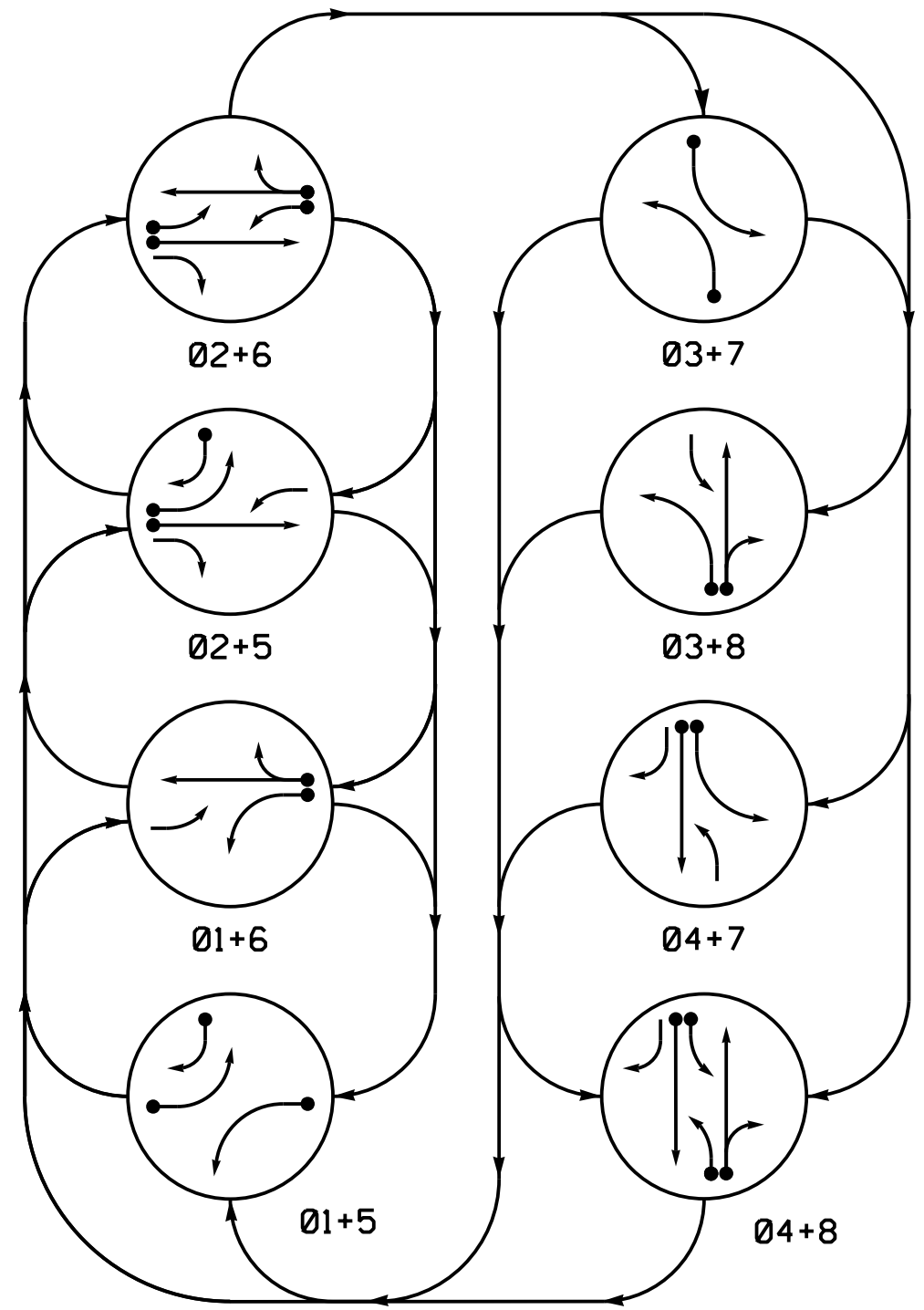
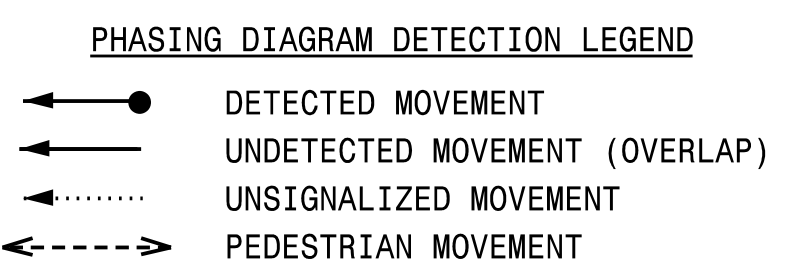
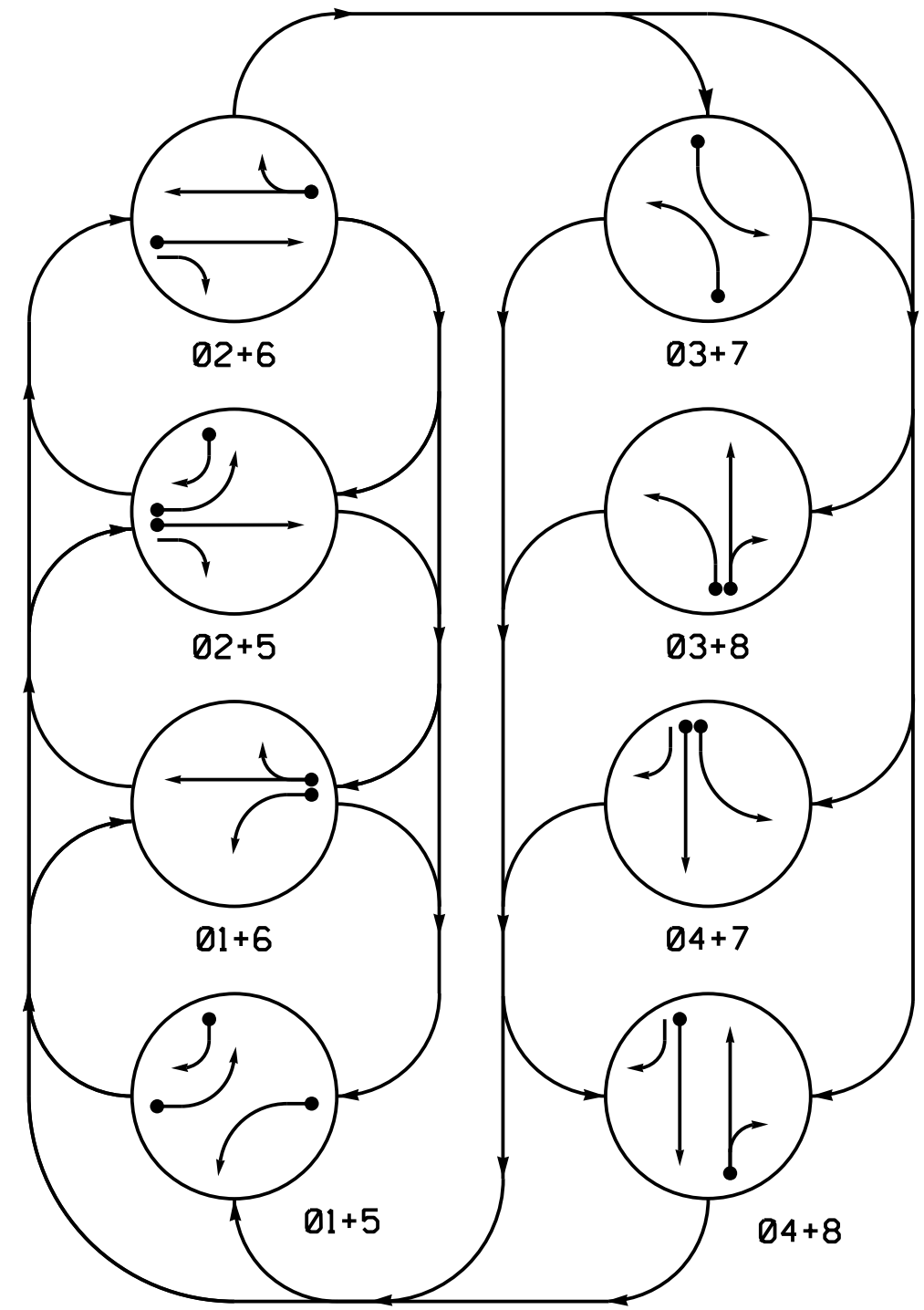


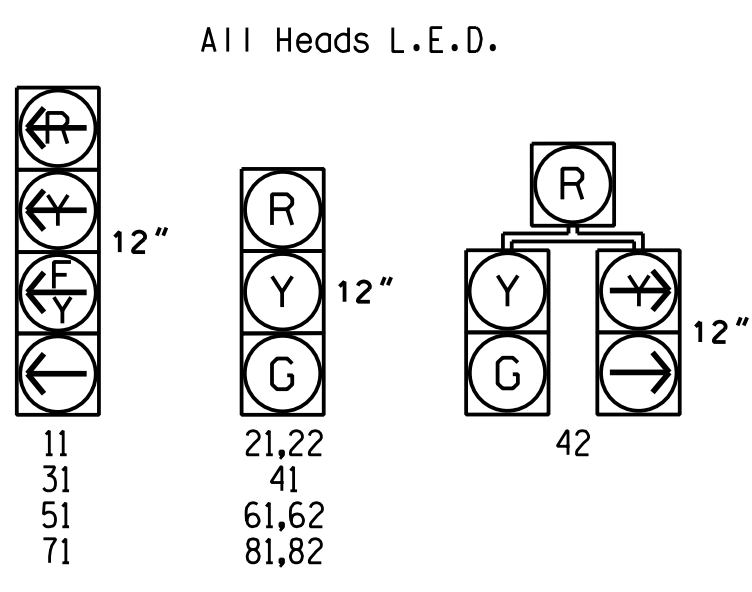
DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



SIGNAL FACE I.D.



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8
11	-	-	F	F	R	R	R	Y
21,22	R	R	G	G	R	R	R	Y
31	R	R	R	R	-	-	F	Y
41	R	R	R	R	R	G	G	R
42	R	R	R	R	R	G	G	R
51	-	F	F	F	R	R	R	Y
61,62	R	G	R	G	R	R	R	Y
71	R	R	R	R	-	F	F	R
81,82	R	R	R	R	R	G	G	R

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8
11	-	-	R	R	R	R	R	Y
21,22	R	R	G	G	R	R	R	Y
31	R	R	R	R	-	-	R	R
41	R	R	R	R	R	G	G	R
42	R	R	R	R	R	G	G	R
51	-	-	R	R	R	R	R	Y
61,62	R	G	R	G	R	R	R	Y
71	R	R	R	R	-	-	R	R
81,82	R	R	R	R	R	G	G	R

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

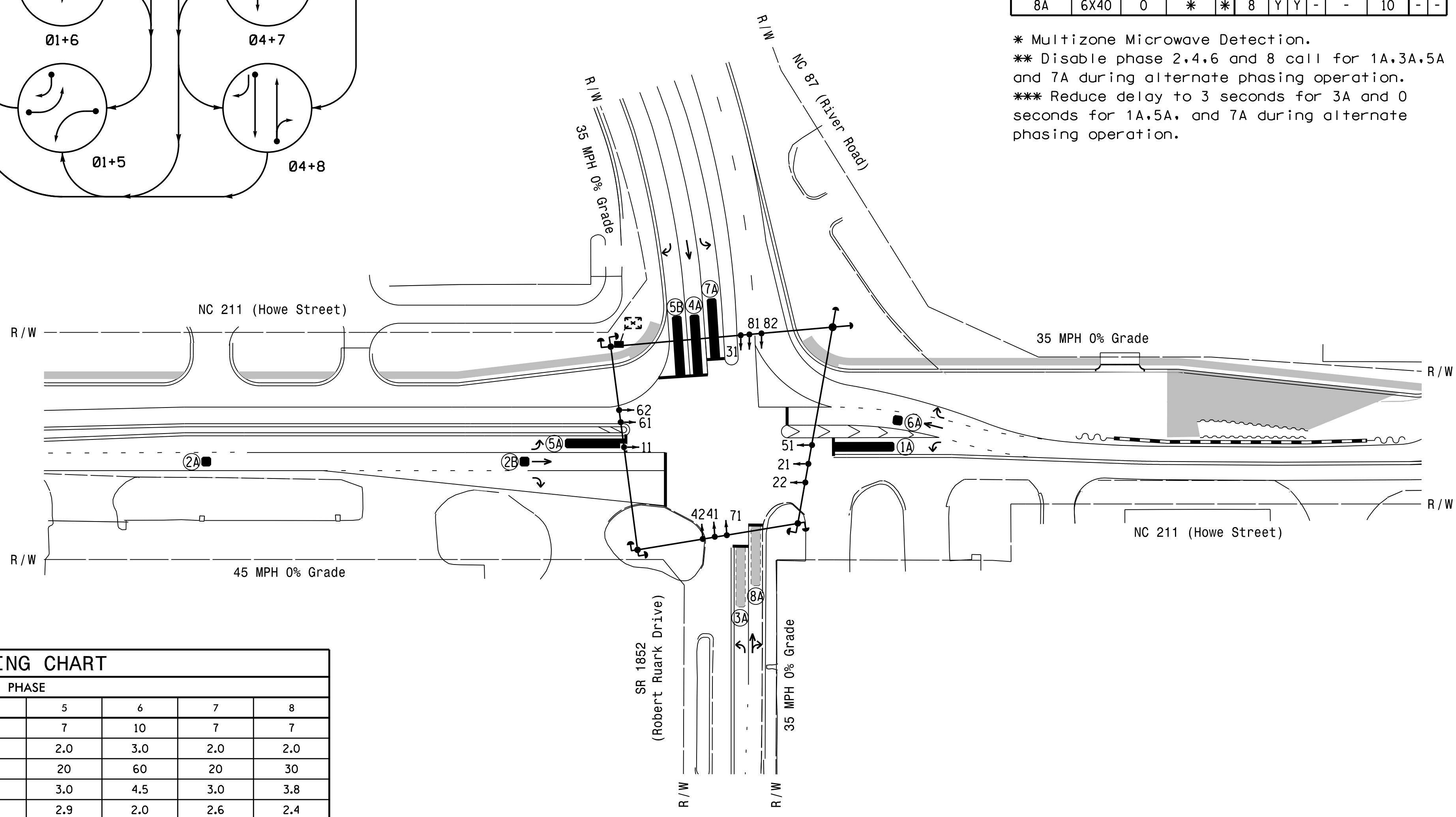
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING				SYSTEM LOOP	NEW CARD
					PHASE	CALLING	EXTENSION	STRETCH TIME		
1A	6X40	0	*	*	1	Y	Y	-	***15	-
2A	6X6	300	*	*	2	Y	Y	-	1.6	-
2B	6X6	90	*	*	2	Y	Y	-	-	-
3A	6X40	0	*	*	3	Y	Y	-	***15	-
4A	6X40	0	*	*	4	Y	Y	-	-	-
5A	6X40	0	*	*	5	Y	Y	-	***15	-
5B	6X40	0	*	*	5	Y	Y	-	15	-
6A	6X6	70	*	*	6	Y	Y	-	-	-
7A	6X40	0	*	*	7	Y	Y	-	***15	-
8A	6X40	0	*	*	8	Y	Y	-	10	-

* Multizone Microwave Detection.
 ** Disable phase 2,4,6 and 8 call for 1A,3A,5A and 7A during alternate phasing operation.
 *** Reduce delay to 3 seconds for 3A and 0 seconds for 1A,5A, and 7A during alternate phasing operation.

8 Phase Fully Actuated (NC 133 Closed Loop System)

NOTES

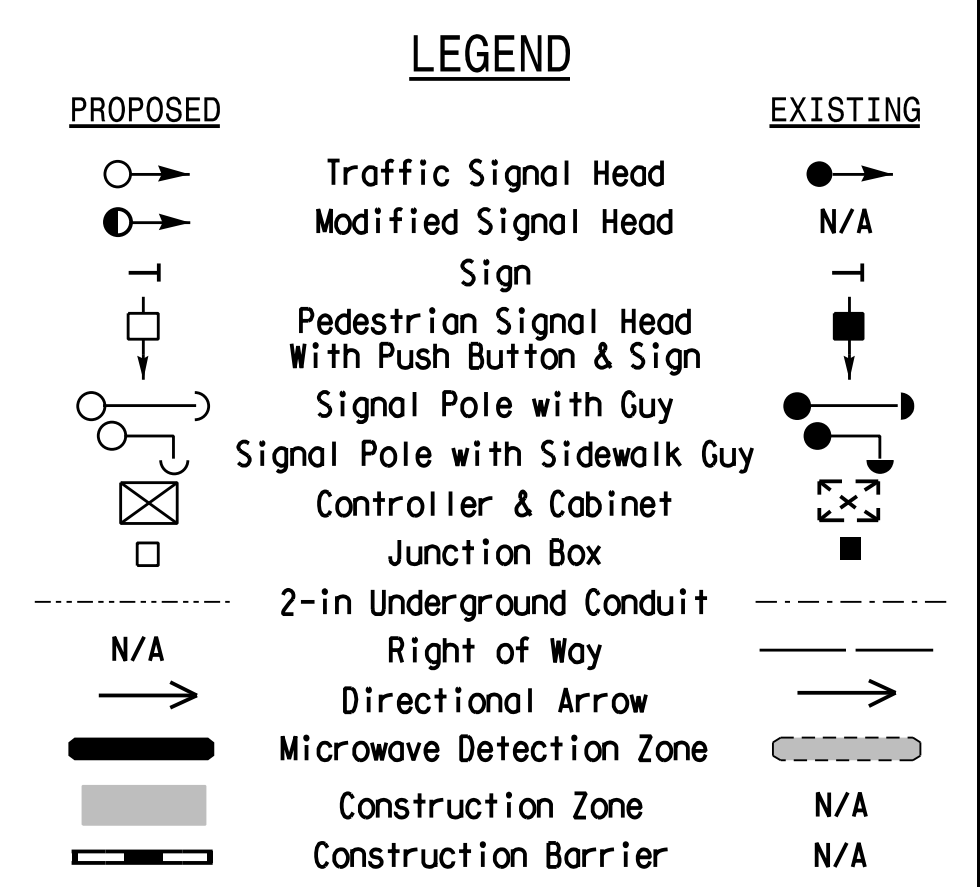
- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or 5 may be lagged.
- Phase 3 and/or 7 may be lagged.
- Reposition existing signal heads numbered 41,42,61,62 and 71.
- Set all detector units to presence mode.
- The Division Traffic Engineer will determine the hours of use for each phasing plan.
- Incorporate Microwave Detection system for vehicle detection.
- Provide the Engineer with the Manufacturer's approved Microwave Detection locations and mounting heights to obtain detection zones as shown.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset #: 0215.



OASIS 2070 TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green 1 *	7	12	7	7	7	10	7	7
Extension 1 *	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
Max Green 1 *	20	60	20	30	20	60	20	30
Yellow Clearance	3.0	4.5	3.0	3.8	3.0	4.5	3.0	3.8
Red Clearance	2.8	2.0	3.2	2.4	2.9	2.0	2.6	2.4
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	-	-	-	-	-	-	-
Max Variable Initial *	-	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	ON	-	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

* 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.



Signal Upgrade
 Temporary Design 3
 Construction Phase 1b

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

 Prepared for: TRANSPORTATION MOBILITY AND SAFETY DIVISION DEPARTMENT OF TRANSPORTATION Signal Design Section 750 N. Greenfield Pkwy, Garner, NC 27529	NC 211 (Howe Street) at NC 87 (River Road)/ SR 1852 (Robert Ruark Drive)		SEAL Natasha R. Simmons ENGINEER No. 031464
	Division 03 Brunswick Co. Southport PLAN DATE: June 2017 REVIEWED BY: A.D. Klinksiek PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons	REVISIONS INIT. DATE SIGNATURE DATE SIG. INVENTORY NO. 03-0215T3	

HNTB
 HNTB NORTH CAROLINA, P.C.
 343 E. Six Forks Road, Suite 200
 Raleigh, North Carolina 27609
 NC License No: C-1554
 (919) 546-8997