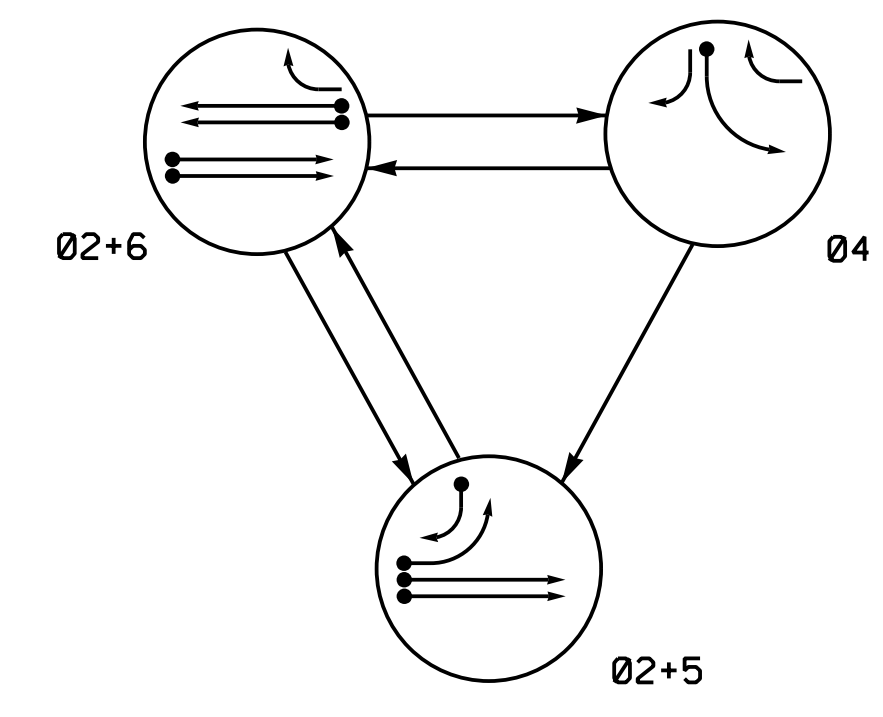


**PHASING DIAGRAM**

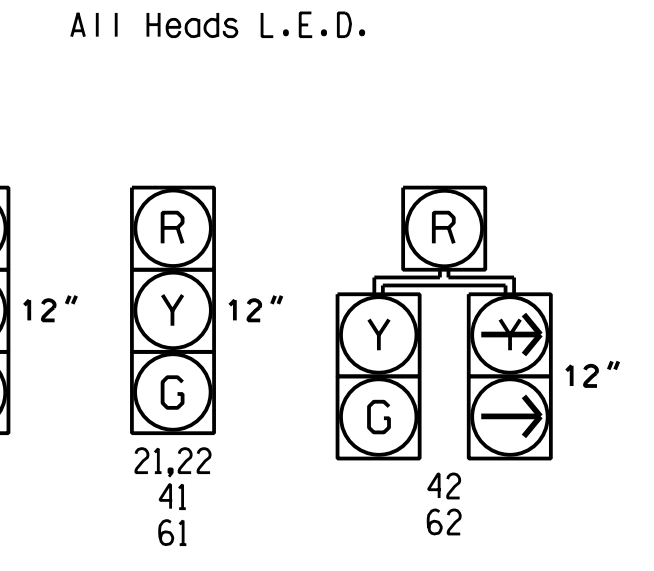


**PHASING DIAGRAM DETECTION LEGEND**

- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UN SIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE			
	02+5	02+6	04	FLASH
21,22	G	G	R	Y
41	R	R	G	R
42	R	R	G	R
51	-	R	R	R
61	R	G	R	Y
62	R	G	R	Y

**SIGNAL FACE I.D.**



**OASIS 2070 LOOP & DETECTOR INSTALLATION CHART**

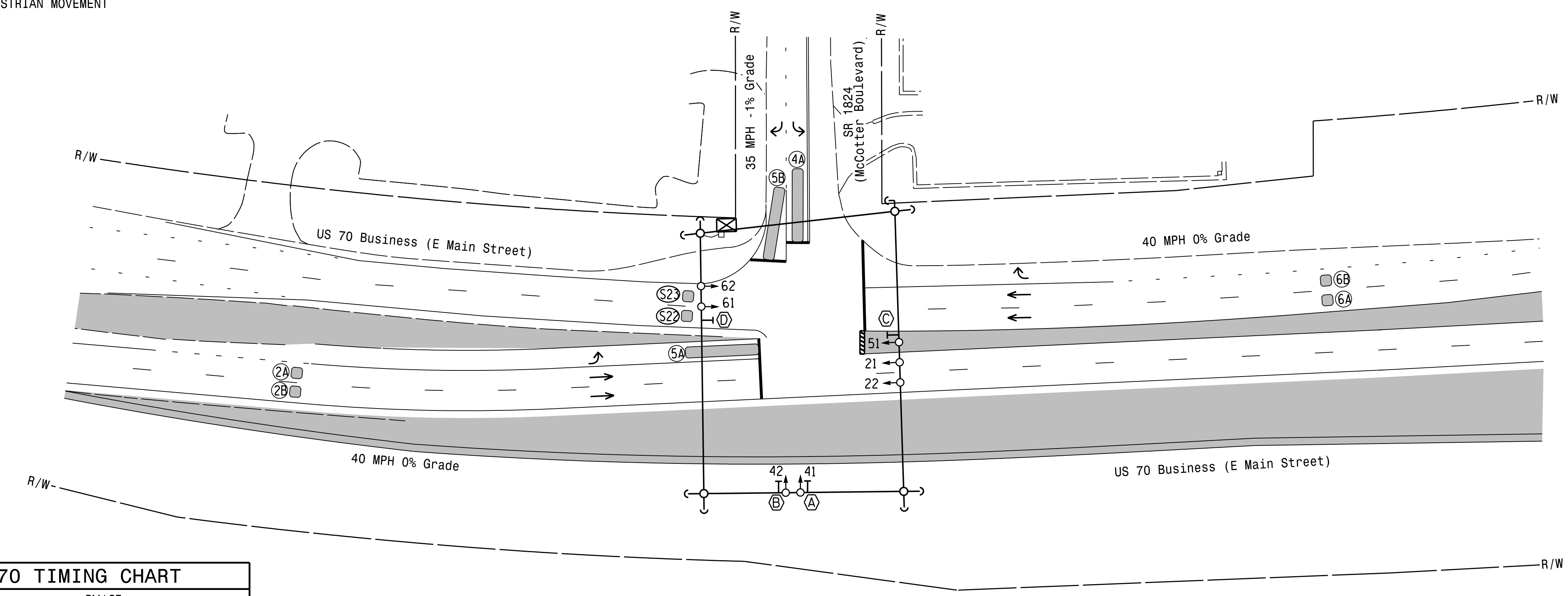
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING					SYSTEM LOOP	NEW CARD	
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME			DELAY TIME
2A	6X6	250	*	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	250	*	Y	2	Y	Y	-	-	-	-	Y
4A	6X40	0	*	Y	4	Y	Y	-	-	3	-	Y
5A	6X40	0	*	Y	5	Y	Y	-	-	-	-	Y
5B	6X40	0	*	Y	5	Y	Y	-	-	15	-	Y
6A	6X6	250	*	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	250	*	Y	6	Y	Y	-	-	-	-	Y
S22	6X6	+100	*	Y	-	-	-	-	-	-	-	Y
S23	6X6	+100	*	Y	-	-	-	-	-	-	-	Y

\* Multizone Microwave Detection

3 Phase Fully Actuated Havelock US 70 Business CLS

**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 5 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- The cabinet should be designed to include Auxiliary Output file for future use.
- 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.
- Signal system data: Controller Asset #0649



**LEGEND**

PROPOSED	EXISTING
○→ Traffic Signal Head	●→ Traffic Signal Head
○→ Modified Signal Head	N/A
○→ Pedestrian Signal Head With Push Button & Sign	N/A
○→ Signal Pole with Guy	●→ Signal Pole with Guy
○→ Signal Pole with Sidewalk Guy	●→ Signal Pole with Sidewalk Guy
□→ Inductive Loop Detector	□→ Inductive Loop Detector
□→ Controller & Cabinet	□→ Controller & Cabinet
□→ Junction Box	□→ Junction Box
--- 2-in Underground Conduit	--- 2-in Underground Conduit
N/A Right of Way	N/A Right of Way
→ Directional Arrow	→ Directional Arrow
○ Metal Strain Pole	○ Metal Strain Pole
▬ Microwave Detection Zone	▬ Microwave Detection Zone
▬ Construction Zone	N/A
▬ Construction Barricade	N/A
(A) Left Arrow "ONLY" Sign (R3-5L)	(A) Left Arrow "ONLY" Sign (R3-5L)
(B) Right Arrow "ONLY" Sign (R3-5R)	(B) Right Arrow "ONLY" Sign (R3-5R)
(C) "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	(C) "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)
(D) No U-turn Sign (R3-4)	(D) No U-turn Sign (R3-4)

FEATURE	PHASE			
	2	4	5	6
Min Green 1 *	12	7	7	12
Extension 1 *	6.0	2.0	2.0	6.0
Max Green 1 *	90	20	15	90
Yellow Clearance	4.2	3.0	3.0	4.2
Red Clearance	1.0	2.4	2.3	1.1
Red Revert	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	1.5	-	-	1.5
Max Variable Initial *	29	-	-	29
Time Before Reduction *	15	-	-	15
Time To Reduce *	45	-	-	45
Minimum Gap	3.0	-	-	3.0
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	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 1  
Construction Phase 1, Step 3

**DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED**

	US 70 Business (E Main Street) at SR 1824 (McCotter Boulevard)		
	Prepared for: TRANSPORTATION MOBILITY AND SAFETY GROUP UNIVERSITY OF NORTH CAROLINA STATE OF NORTH CAROLINA SIGNAL DESIGN SECTION	Division 02 Craven Co. Havelock PLAN DATE: March 2018 REVIEWED BY: A.D. Klinsky PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons	
750 N. Greenfield Pkwy, Garner, NC 27529 SCALE: 0 40 1"=40'	REVISIONS:	INITI. DATE:	DocuSigned by: Natasha R. Simmons DATE: 12/7/2018 SIG. INVENTORY NO. 02-0649T1

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