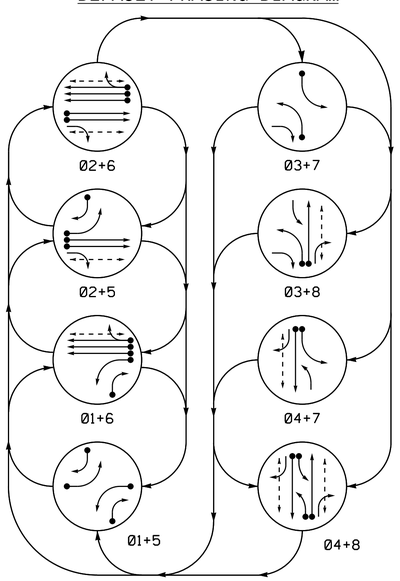
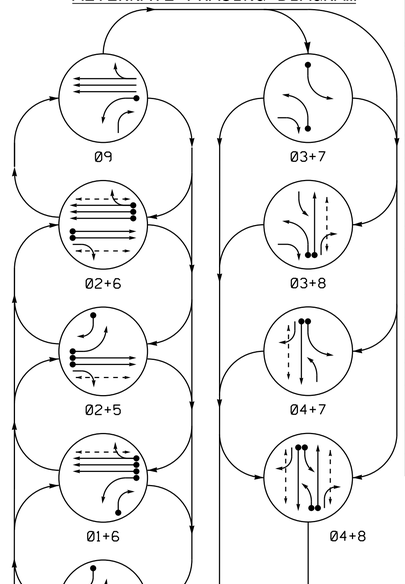
PROJECT REFERENCE NO.	SHEET NO.
U-5746	Sig. 3.0

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	FLASH
12	←	←	R	R	R	R	R	R	R
21	R	R	G	G	R	R	R	R	R
22	R	R	G	G	R↘	R↘	R	R	R
31	R	R	R	R	←	←	F Y	F Y	R
41, 42	R	R	R	R	R	R	G	G	R
43	→	R	→	R	R	R	F Y	F Y	R
52	←	R	←	R	R	R	R	R	R
61, 62, 63	R	G	R	G	R	R	R	R	R
71	R	R	R	R	←	F Y	←	F Y	R
81, 82	R	R	R	R	R	G	R	G	R
83	→	→	R	R	R	F Y	R	F Y	R
P21, P22	DW	DW	W	W	DW	DW	DW	DW	DRK
P41, P42	DW	DW	DW	DW	DW	DW	W	W	DRK
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DRK
P81, P82	DW	DW	DW	DW	DW	W	DW	W	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	09	03+7	03+8	04+7	04+8	FLASH
12	←	←	R	R	←	R	R	R	R	R
21	R	R	G	G	R	R	R	R	R	R
22	R	R	G	G	R	R↘	R↘	R	R	R
31	R	R	R	R	R	←	←	F Y	F Y	R
41, 42	R	R	R	R	R	R	R	G	G	R
43	→	R	→	R	R	R	R	F Y	F Y	R
52	←	R	←	R	R	R	R	R	R	R
61, 62, 63	R	G	R	G	G	R	R	R	R	R
71	R	R	R	R	R	←	F Y	←	F Y	R
81, 82	R	R	R	R	R	R	G	R	G	R
83	→	→	R	R	→	R	F Y	R	F Y	R
P21, P22	DW	DW	W	W	DW	DW	DW	DW	DW	DRK
P41, P42	DW	DW	DW	DW	DW	DW	W	W	DW	DRK
P61, P62	DW	W	DW	W	W	DW	DW	DW	DW	DRK
P81, P82	DW	DW	DW	DW	DW	DW	W	DW	W	DRK

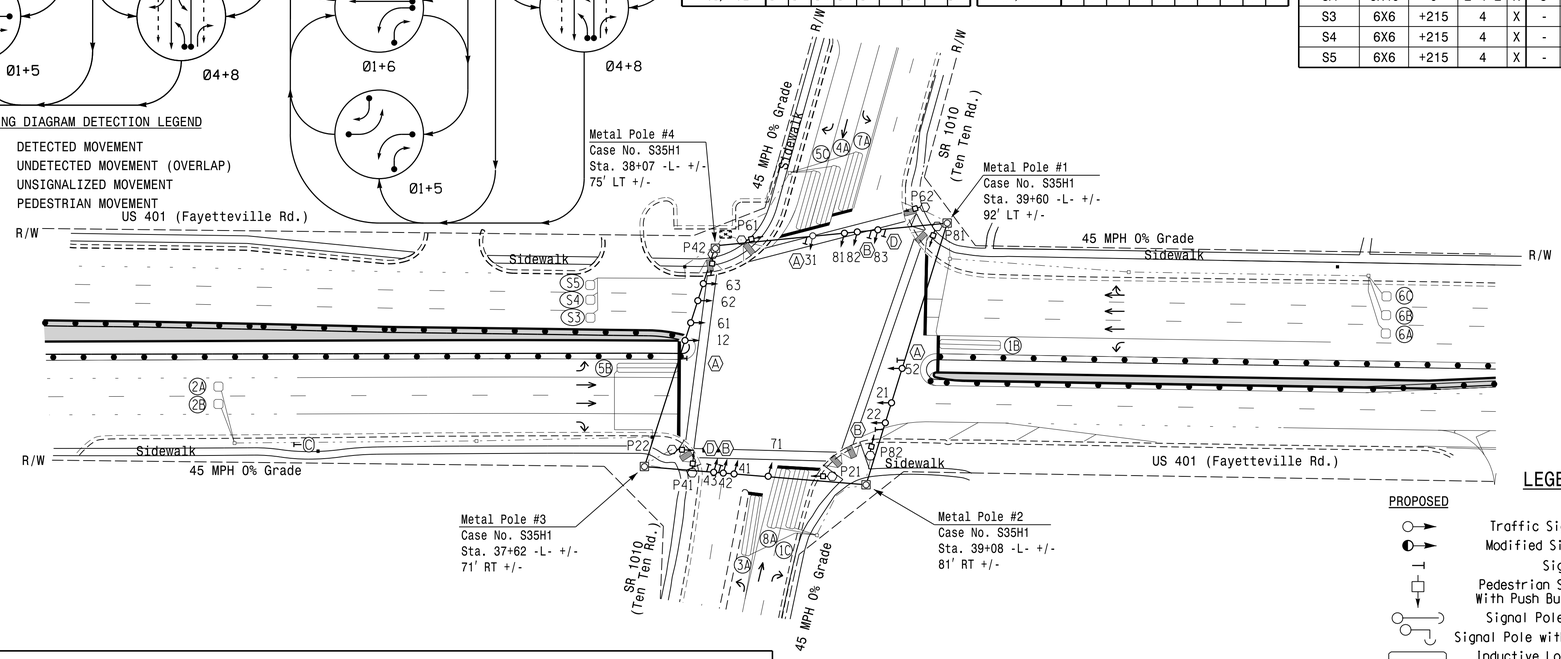
MAXTIME DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1B	6X40	0	2-4-2	X	1/9	-	-	X	-	X	-	-
1C	6X40	0	2-4-2	X	1	15.0	-	X	-	X	-	X
2A	6X6	300	5	X	2	-	-	X	X	X	-	-
2B	6X6	300	5	X	2	-	-	X	X	X	-	-
3A	6X40	0	2-4-2	X	3	15.0	-	X	-	X	-	-
					8	-	-	X	-	X	-	-
4A	6X40	0	2-4-2	X	4	-	-	X	-	X	-	-
5B	6X40	0	2-4-2	X	5	-	-	X	-	X	-	-
5C	6X40	0	2-4-2	X	5	15.0	-	X	-	X	-	X
6A	6X6	300	5	X	6	-	-	X	-	X	-	-
6B	6X6	300	5	X	6	-	-	X	-	X	-	-
6C	6X6	300	5	X	6	-	-	X	-	X	-	X
7A	6X40	0	2-4-2	X	7	15.0	-	X	-	X	-	-
					4	3.0	-	X	-	X	-	-
8A	6X40	0	2-4-2	X	8	-	-	X	-	X	-	-
S3	6X6	+215	4	X	-	-	-	X	-	X	-	-
S4	6X6	+215	4	X	-	-	-	X	-	X	-	-
S5	6X6	+215	4	X	-	-	-	X	-	X	-	X

8 Phase
Fully Actuated
(US 401 Closed Loop System #29)
Signal System #: D05-09_Garner

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "DON'T WALK" time only.
8. The Division Traffic Engineer will determine the hours of use for each phasing plan.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. To provide a leading pedestrian interval on phase 4, program FYA heads numbered 31 and 43 to delay for 7 seconds after the start of phase 4 WALK interval. See Electrical Details for Programming.
11. To provide a leading pedestrian interval on phase 8, program FYA heads numbered 71 and 83 to delay for 7 seconds aafetr the start of phase 8 WALK interval. See Electrical Details for Programming.



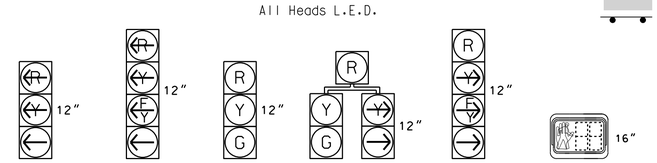
MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8	9	OL 7	OL 8
Walk *	–	14	–	14	–	14	–	14	–		
Ped Clear *	–	23	–	32	–	26	–	37	–		
Min Green	7	12	7	7	7	12	7	7	7		
Passage *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0	2.0		
Max 1 *	25	90	15	45	25	90	15	45	25		
Yellow Change	3.0	4.5	3.0	4.5	3.0	4.5	3.0	4.5	3.0	3.0	4.5
Red Clear	4.3	2.2	3.5	2.6	4.2	2.2	3.4	2.6	4.3	4.3	2.2
Added Initial *	–	1.5	–	–	–	1.5	–	–	–		
Maximum Initial *	–	34	–	–	–	34	–	–	–		
Time Before Reduction *	–	15	–	–	–	15	–	–	–		
Time To Reduce *	–	30	–	–	–	30	–	–	–		
Minimum Gap	–	3.0	–	–	–	3.0	–	–	–		
Advance Walk	–	7	–	**	–	7	–	***	–		
Non Lock Detector	X	–	X	X	X	–	X	X	X		
Vehicle Recall	–	MIN RECALL	–	–	–	MIN RECALL	–	–	–		
Dual Entry	–	–	–	X	–	–	–	X	–		

* 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.
** See Note 10.
*** See Note 11.

SIGNAL FACE I.D.

All Heads L.E.D.



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	
	Type II Signal Pedestal	
	Metal Strain Pole	
	Construction Zone	
	Construction Zone Drums	

SIGNS

PROPOSED		EXISTING
Ⓐ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓐ
Ⓑ	Right Arrow "ONLY" Sign (R3-5R)	Ⓑ
Ⓒ	"Right Lane Must Turn Right" Sign (R3-7)	Ⓒ
Ⓓ	"RIGHT TURN SIGNAL" Sign (R10-10R)	Ⓓ

Signal Upgrade -
Temporary Design 2 (TMP Phase 2)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SCALE 0 50 1"=50'

US 401 (Fayetteville Rd.)
at
SR 1010 (Ten-Ten Rd.)

Division 5 Wake County Fuquay-Varina

PLAN DATE: July 2024 REVIEWED BY:
PREPARED BY: I.O. Umozurike REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 026486 ENGINEER ROBERT J. ZIEMBA

Docusigned by:
SIGNATURE 08/12/2024 DATE

SIG. INVENTORY NO. 05-0184T2

12-AUG-2024 10:51
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