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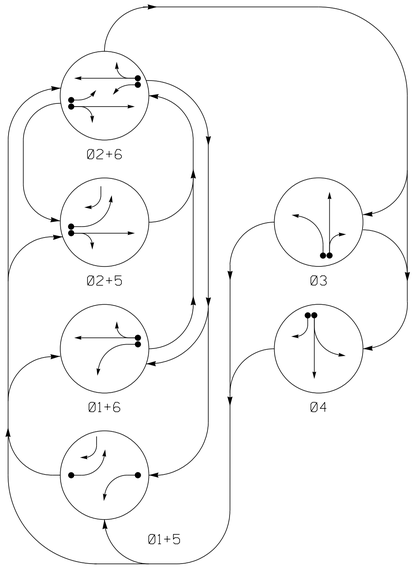
PROJECT REFERENCE NO.	SHEET NO.
I-5986B	SIG-8.0

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

All Heads L.E.D.

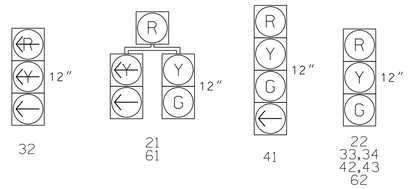


TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	FLASH
21	←R	R	↖G	G	R	R	Y
22	R	R	G	G	R	R	Y
32	←R	←R	←R	←R	←	←R	←R
33,34	R	R	R	R	G	R	R
41	R	R	R	R	R	G←	R
42,43	R	R	R	R	R	G	R
61	←R	↖G	R	G	R	R	Y
62	R	G	R	G	R	R	Y

ASC/3 DETECTOR INSTALLATION CHART

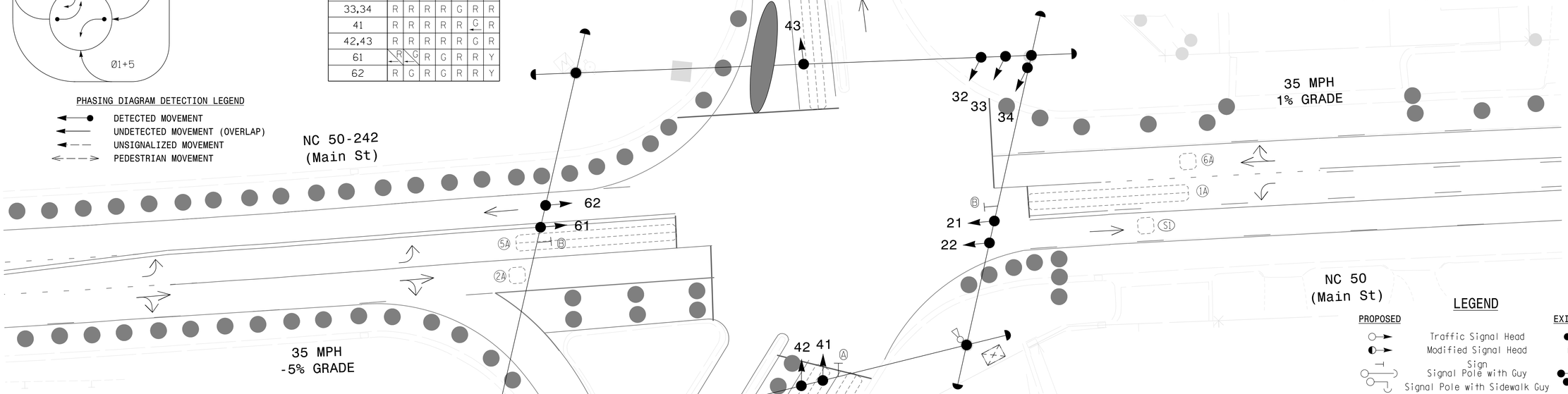
DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X60	0	EXIST	X	1	Yes	-	15	-	N	-	-
					6	Yes	-	-	-	N	-	-
2A	6X6	70	EXIST	X	2	Yes	-	-	-	N	-	-
3A	6X6	0	EXIST	X	DISCONNECT & ABANDON							
3B	6X6	0	EXIST	X	3	Yes	-	-	-	N	-	-
3C	6X6	0	EXIST	X	3	Yes	-	5	-	N	-	-
4A	6X60	0	EXIST	X	4	Yes	-	-	-	N	-	-
4B	6X40	0	*	X	4	Yes	-	15	-	N	-	-
5A	6X60	0	EXIST	X	5	Yes	-	15	-	N	-	-
					2	Yes	-	-	-	N	-	-
6A	6X6	70	EXIST	X	6	Yes	-	-	-	N	-	-
S1	6X6	+95	EXIST	X	-	No	-	-	-	N	X	-

*Microwave Detection Zone

6 Phase
Fully Actuated
Signal System #D04-20 Benson
NC 50-242 (Main St)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Enable Backup Protect for phase 2+6 to allow the controller to clear from phase 2+6 to phase 1 and/or 5 by progressing through all red display.
4. The order of phase 3 and phase 4 may be reversed.
5. Repositition existing signal heads numbered 22,62.
6. Set all detector units to presence mode.
7. Pavement markings are existing.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values superseded these values.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Out of Pavement Detection Zone	
	Out of Pavement Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
A	Combined Through and Left Arrow Sign (R3-6L)	A
B	"LEFT TURN YIELD ON GREEN" Sign (R10-12)	B
C	"YIELD" Sign (R1-2)	C

ASC/3 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green *	7	10	7	7	7	10
Walk *	-	-	-	-	-	-
Ped Clear	-	-	-	-	-	-
Veh. Extension *	1.0	3.0	1.0	1.0	1.0	3.0
Max 1 *	15	45	30	25	20	45
Yellow	3.0	4.1	3.8	3.6	3.0	3.8
Red Clear	3.3	1.9	2.1	2.3	2.9	2.5
Red Revert	2.0	5.0	2.0	2.0	2.0	5.0
Actuations B4 Add *	-	-	-	-	-	-
Seconds /Actuation *	-	-	-	-	-	-
Max Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Locking Detector	-	X	-	-	-	X
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	X	X	X	X	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.

$$$$$$SYS TIME$$$$$
$$$$$$SYS DATE$$$$$
$$$$$$DGN NAME$$$$$

Signal Upgrade - Temp 1 (TMP Phase 1)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SCALE 0 20 1" = 20'

NC 50-242 (Main St)
at
I-95 NB Ramps/S Walton Dr

Division 4 Johnston County Benson

PLAN DATE: March 2021 REVIEWED BY: A Donald
PREPARED BY: K M Cory REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 038970 ENGINEER KELLY M CORY

DocuSigned: Kelly M Cory E2F270FFB1C142E... 4/26/2021
SIGNATURE DATE

SIG. INVENTORY NO. 04-0209TI