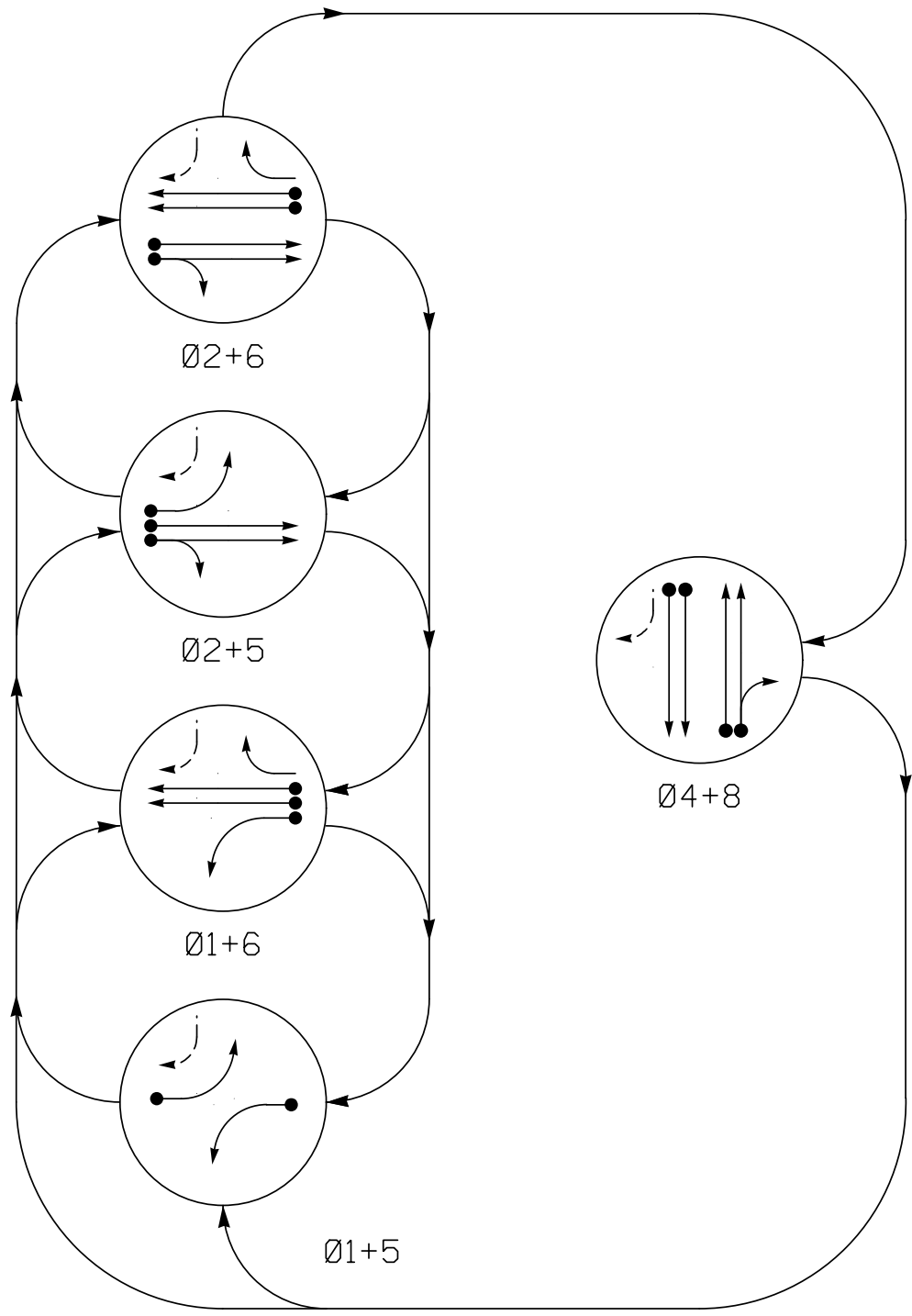


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

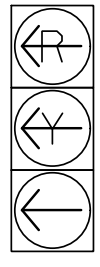
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

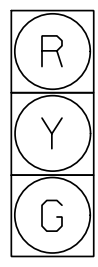
SIGNAL FACE	PHASE					
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 4 + 8	F
11	←	←	→	→	→	→
21, 22	R	R	G	G	R	R
41, 42	R	R	R	R	G	R
51	←	→	←	→	→	→
61, 62	R	G	R	G	R	R
63	R	→	R	→	R	R
81, 82	R	R	R	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.

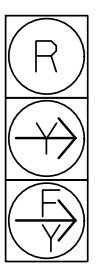


11
51



12"

21, 22
41, 42
61, 62
81, 82



12"

63

RADAR DETECTION SYSTEM

FUNCTION	SENSOR 1 - (2A)	SENSOR 2 - (6A)
Channel	1	2
Phase	2	6
Direction of Travel	EB	WB
Detection Zone (ft)	500 - 100	500 - 100
Enable Speed	Y	Y
Speed Range (mph)	35 - 100	35 - 100
Enable Estimated Time of Arrival	Y	Y
Estimated Time of Arrival (sec)	2.5 - 6.5	2.5 - 6.5

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
1A	6X40	0	*	*	1	3	-	X	-	X
4A	6X40	0	*	*	4	-	-	X	-	X
4B	6X40	0	*	*	4	-	-	X	-	X
5A	6X40	0	*	*	5	3	-	X	-	X
8A	6X40	0	*	*	8	3	-	X	-	X
8B	6X40	0	*	*	8	10	-	X	-	X
8C	6X40	0	*	*	8	15	-	X	-	X

* Multi-zone Microwave Detection Zone

5 Phase
Fully Actuated
Signal System #D06-18 Lumberton
NC 211 (N. Roberts Avenue)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Reposition existing signal heads numbered 41, 42 and 81.
- Set all detector units to presence mode.
- This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

LEGEND

PROPOSED

- Traffic Signal Head
- Modified Signal Head
- 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
- Right of Way
- Directional Arrow
- Microwave Detection Zone
- Construction Zone

EXISTING

- N/A
- N/A
- N/A
- N/A
- N/A
- N/A
- N/A
- N/A
- N/A
- N/A
- N/A
- N/A
- N/A

- "YIELD" Sign (R1-2)
- No Left Turn/No U-Turn Sign (R3-18)

MAXTIME TIMING CHART						
FEATURE	PHASE					
	1	2	4	5	6	8
Walk *	-	-	-	-	-	-
Ped Clear *	-	-	-	-	-	-
Min Green	7	12	7	7	12	7
Passage *	2.0	2.0	2.0	2.0	2.0	2.0
Max 1 *	20	90	30	20	90	30
Yellow Change	3.0	4.6	3.9	3.0	4.6	3.8
Red Clear	2.4	1.5	2.1	2.4	1.6	2.0
Added Initial *	-	-	-	-	-	-
Maximum Initial *	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Advance Walk	-	-	-	-	-	-
Non Lock Detector	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.

Signal Upgrade
Temporary Design 2 - TMP Phase III, Step 3

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

NC 211 (N. Roberts Avenue)
at
SR 1997 (Fayetteville Road)
Division 6 Robeson County Lumberton
PLAN DATE: Feb 2025 REVIEWED BY: H.M. Surti
PREPARED BY: R.L. Aristondo REVIEWED BY: T.M. Woody
REVISIONS
INIT. DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED
SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
RENT M. MOODY
2/10/2025
DATE
SIG. INVENTORY NO. 06-017012