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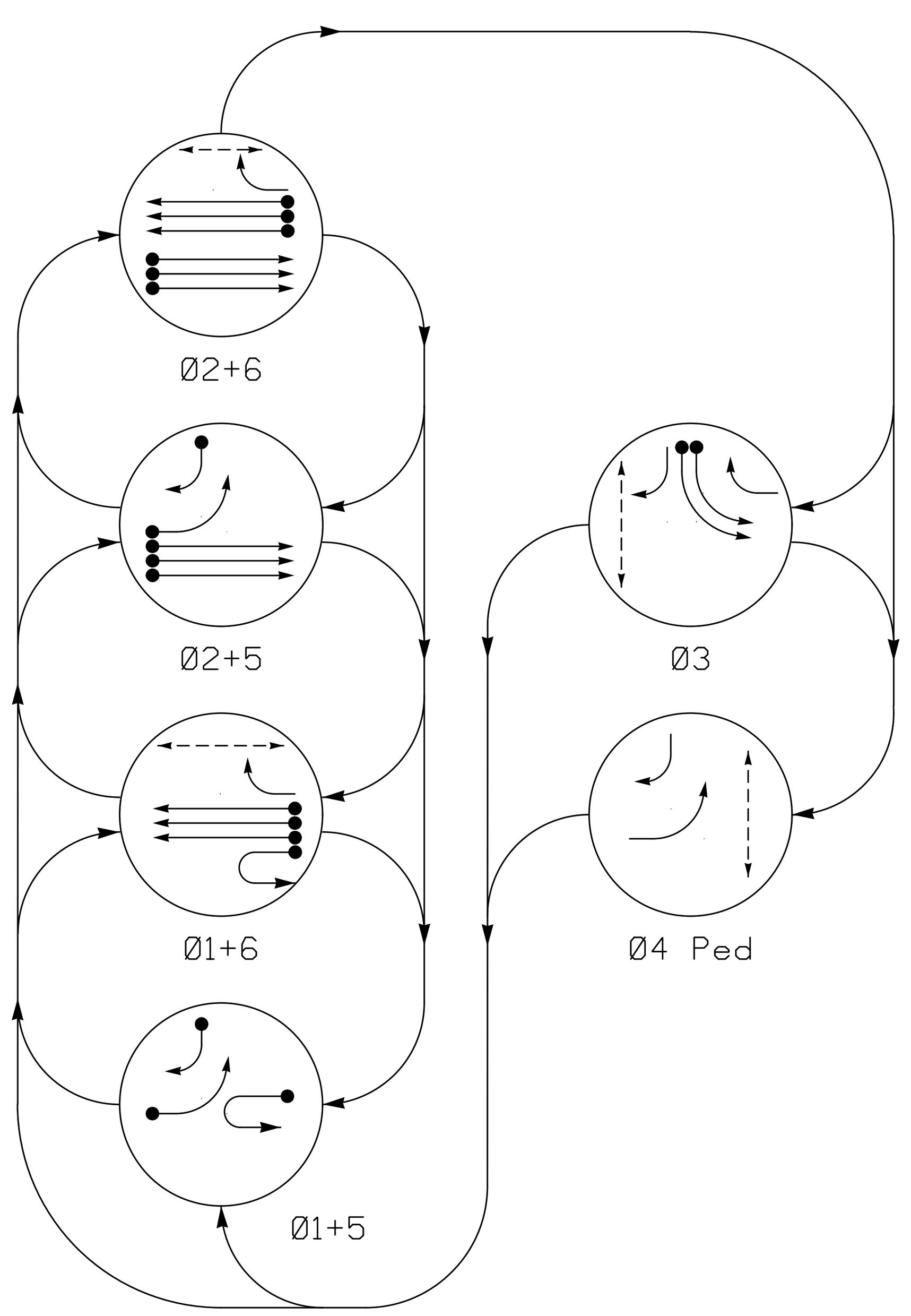
PROJECT REFERENCE NO.	SHEET NO.
U-5797	Sig. 27.0

6 Phase
Fully Actuated
Signal System #D06-17 Lumberton
US 301/SR 1997 (Fayetteville Road)

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

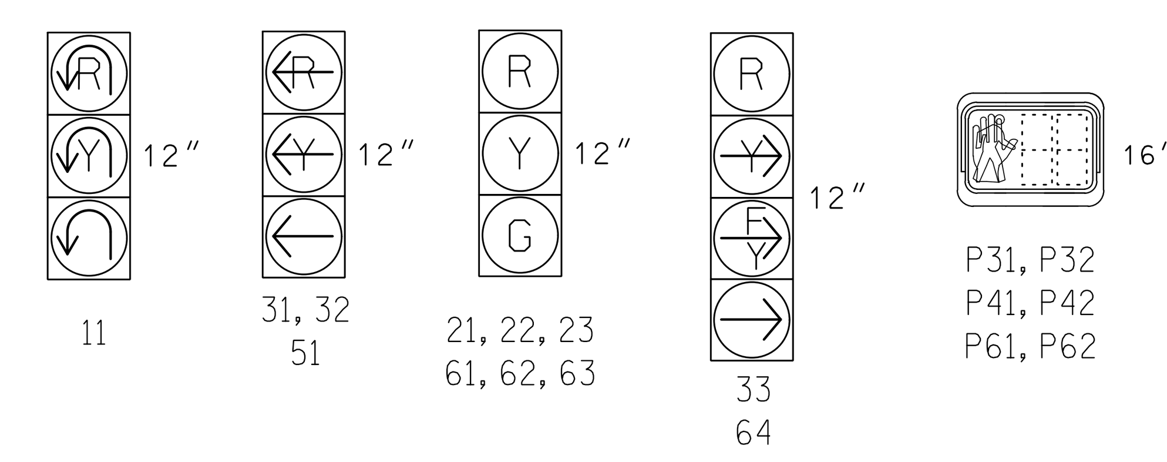
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4 PED	FLASH
11	↶	↶	↶R	↶R	↶R	↶R	↶R
21, 22, 23	R	R	G	G	R	R	R
31, 32	←R	←R	←R	←R	←	←R	←R
33	→	R	→	R	F/Y→	→	R
51	←	←R	←	←R	←R	←	←R
61, 62, 63	R	G	R	G	R	R	R
64	R	F/Y→	R	F/Y→	→	R	R
P31, P32	DW	DW	DW	DW	W	DW	DRK
P41, P42	DW	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



MAXTIME DETECTOR INSTALLATION CHART

DETECTOR LOOP/ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A	6X40	0	✳	✳	1	15	-	X	-	X	-	✳
3A	6X40	0	✳	✳	3	-	-	X	-	X	-	✳
3B	6X40	0	✳	✳	3	-	-	X	-	X	-	✳
5A	6X40	0	✳	✳	5	15	-	X	-	X	-	✳
5B	6X40	0	✳	✳	5	15	-	X	-	X	-	✳

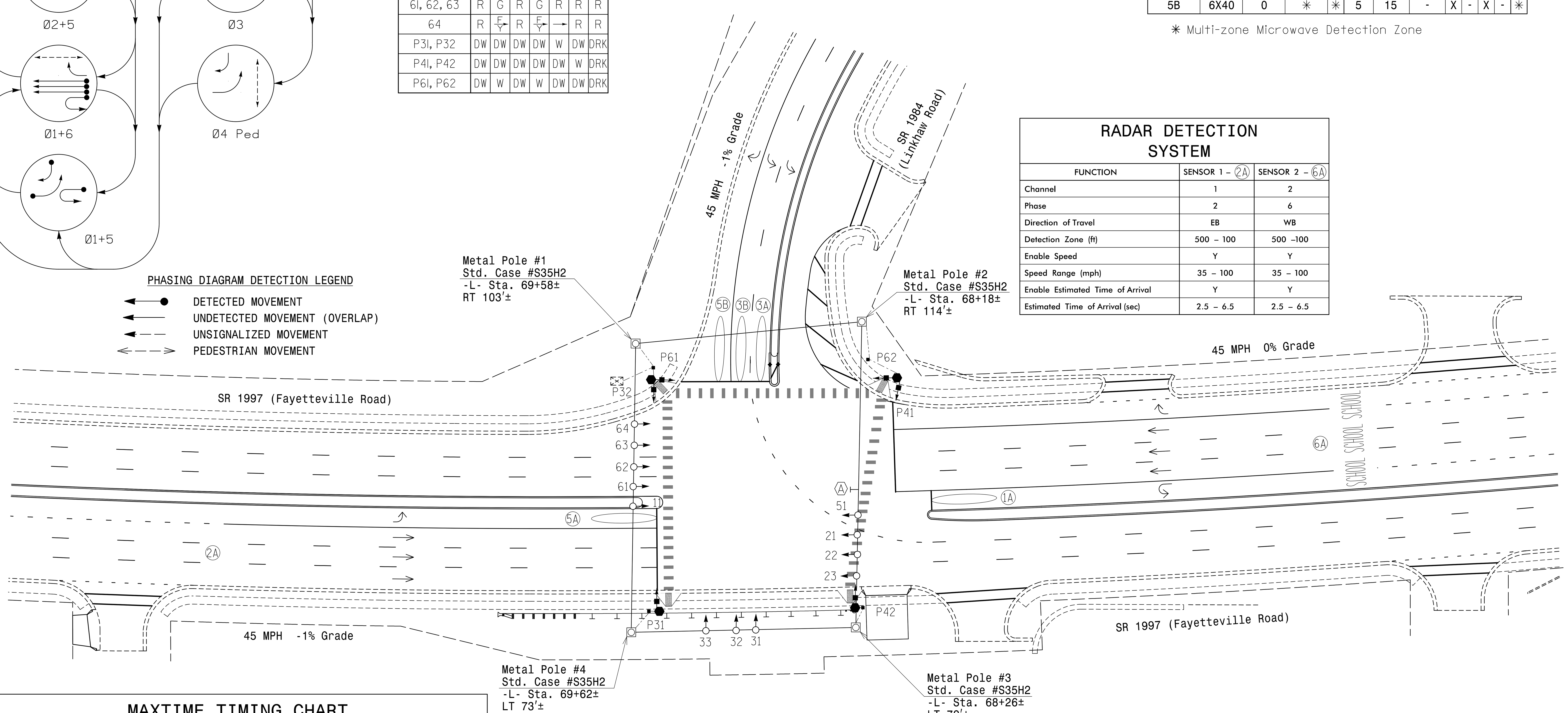
✳ Multi-zone Microwave Detection Zone

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

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. Set all detector units to presence mode.
5. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
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.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	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	
	Microwave Detection Zone	
	Type II Signal Pedestal	
	Metal Strain Pole	
N/A	Guardrail	
N/A	Curb Ramp	
(A)	"U-Turn Yield to Right Turn" Sign (R10-16)	(A)

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	3	4 (PED)	5	6
Walk *	–	–	14	13	–	14
Ped Clear *	–	–	31	31	–	31
Min Green	7	12	7	7	7	12
Passage *	2.0	2.0	2.0	–	2.0	2.0
Max 1 *	20	90	30	39	20	90
Yellow Change	3.0	4.6	3.0	3.0	3.0	4.6
Red Clear	3.3	2.2	3.7	1.0	3.4	2.2
Added Initial *	–	–	–	–	–	–
Maximum Initial *	–	–	–	–	–	–
Time Before Reduction *	–	–	–	–	–	–
Time To Reduce *	–	–	–	–	–	–
Minimum Gap	–	–	–	–	–	–
Advance Walk	–	–	7	6	–	7
Non Lock Detector	X	–	–	X	X	–
Vehicle Recall	–	MIN RECALL	–	–	–	MIN RECALL
Dual Entry	–	–	–	–	–	–

* 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.

6/11/2025
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LeonArR

Signal Upgrade - Final Design

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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

SR 1997 (Fayetteville Road)
at
SR 1984 (Linkhaw Road)

Division 6	Robeson County	Lumberton	
PLAN DATE:	June 2025	REVIEWED BY:	H.M. Surti
PREPARED BY:	J.C. Grimm	REVIEWED BY:	T.M. Moody

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 040329 ENGINEER TRENT M. MOODY

DocuSigned by: Trent Moody 6/11/2025
45EA1D4836704E0... SIGNATURE DATE

SIG. INVENTORY NO. 06-0537