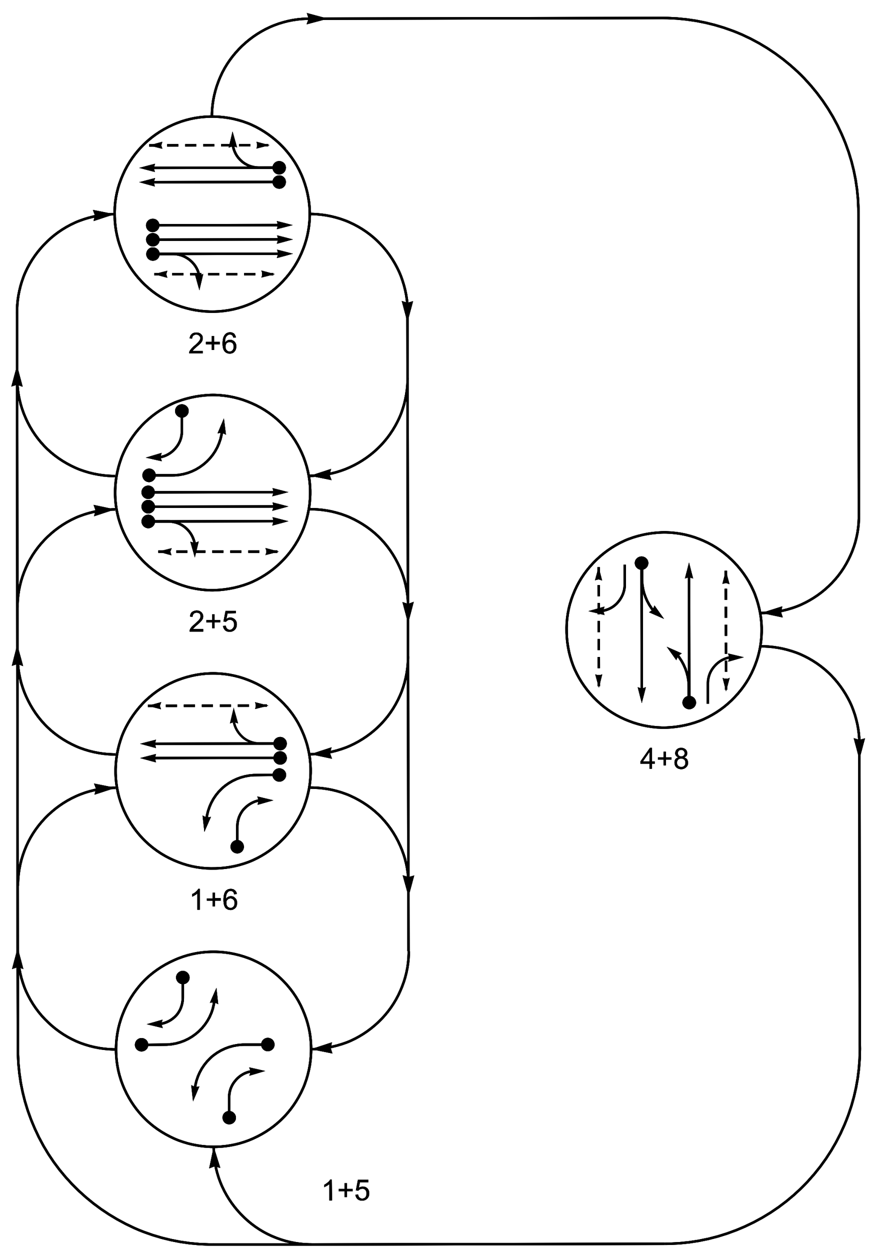
PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE 1+5	1+6	2+5	2+6	4+8	FLASH
11	←	←	←R	←R	←R	←R
21, 22, 23	R	R	G	G	R	R
41, 42	R	R	R	R	G	R
43	→	R	→	R	F/Y→	R
51	←	←R	←	←R	←R	←R
61, 62	R	G	R	G	R	R
81, 82	R	R	R	R	G	R
83	→	→	R	R	F/Y→	R
P21, 22	DW	DW	W	W	DW	DRK
P41, 42	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DRK
P81, P82	DW	DW	DW	DW	W	DRK

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

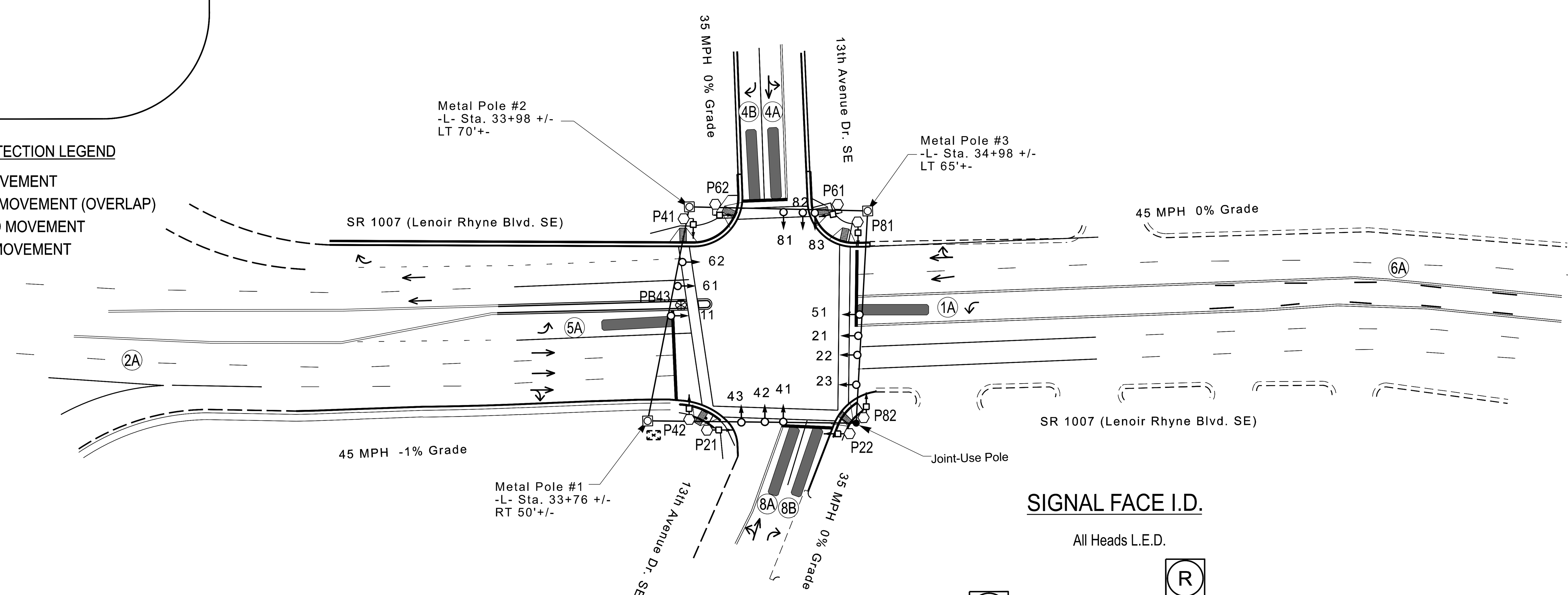
						DETECTOR PROGRAMMING														
						ASSIGNED PHASE	TIMING		OPERATION MODE 0	1	2	3	4	5	6	7	SWITCH	SYSTEM LOOPS	STATUS	
LOOP NO.	SIZE (FT)	TURNS	DIST. FROM STOP LINE (FT)	NEW	EXISTING		DELAY	EXTEND (STRETCH)	VEHICLE	PEDESTRIAN	1 CALL	STOP A	STOP B	PROT/PER LEFT	PROT/PER THROUGH	AND			NEW	EXISTING
1A	*	*	0	-	X	1	3.0	-	X	-	-	-	-	-	-	-	-	-	-	X
4A	*	*	0	-	X	4	3.0	-	X	-	-	-	-	-	-	-	-	-	-	X
4B	*	*	0	-	X	4	15.0	-	X	-	-	-	-	-	-	-	-	-	-	X
5A	*	*	0	-	X	5	-	-	X	-	-	-	-	-	-	-	-	-	-	X
8A	*	*	0	-	X	8	3.0	-	X	-	-	-	-	-	-	-	-	-	-	X
8B	*	*	0	-	X	8	15.0	-	X	-	-	-	-	-	-	-	-	-	-	X

* Multi -Zone Microwave Detection

5 Phase
Fully Actuated
Hickory City Signal System

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. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
5. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
6. Set all detector units to presence mode.
7. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

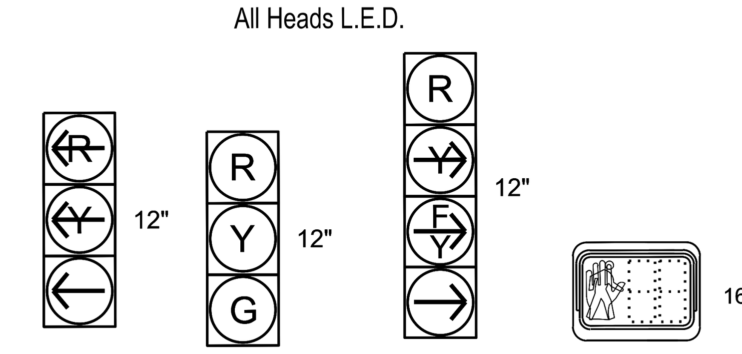


LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	Type I Pedestrian Signal Head	
	Type II Pedestrian Signal Head	
	Metal Strain Poles	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
X-UC	2-in Underground Conduit	UC
N/A	Right of Way	
	Directional Arrow	
	Curb Ramp	
	Non- Intrusive Detection Zone	

SIGNAL FACE I.D.

All Heads L.E.D.



11	21, 22, 23	43	P21, P22
51	41, 42	83	P41, P42
	61, 62		P61, P62
	81, 82		P81, P82

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green*	7	12	7	7	12	7
Passage Gap*	2.0	2.0	2.0	2.0	2.0	2.0
Maximum Green*	15	90	25	15	90	25
Yellow Change	3.0	4.6	3.8	3.0	4.6	3.8
Red Clear	2.6	1.5	2.5	3.2	1.5	2.5
Walk*	-	14	13	-	12	14
Pedestrian Clear	-	18	24	-	9	24
Advance Walk	-	7	6	-	5	7
Added Initial*	-	-	-	-	-	-
Maximum Initial*	-	-	-	-	-	-
Time Before Reduction*	-	-	-	-	-	-
Time To Reduce*	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	LOCK	NON-LOCK
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	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.

Microwave Detection

FUNCTION	SENSOR 1 (2A)			SENSOR 2 (6A)		
Channel	1			1		
Phase	2			6		
Direction of Travel	SB			NB		
Type	Priority			Priority		
Level	1	2	Queue	1	2	Queue
Discovery Zone (ft)	>= 750	<750	-	>= 750	<750	-
Range	900-100	600-100	150-100	900-100	600-100	150-100
Enable Speed	Y	Y	Y	Y	Y	Y
Speed Range(mph)	35-100	35-100	1-35	35-100	35-100	1-35
Enable Estimated Time of Arrival	Y	Y	N	Y	Y	N
Estimated Time of Arrival (sec)	2.5-10.0	2.5-6.5	-	2.5-10.0	2.5-10.0	-

Signal Upgrade - Final

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in 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 1007 (Lenoir -Rhyne Blvd) at SR 2267 (13th Avenue Drive SE)

Division 12 Catawba County Hickory

PLAN DATE:	January 2026	REVIEWED BY:	R. N. Zinser
PREPARED BY:	Adja Fall	REVIEWED BY:	

SCALE 0 50
1" = 50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 043914
RICHARD N. ZINSER

DocuSigned by: R. Nicholas Zinser
E13889734722485
DATE 04/09/2026

SIG. INVENTORY NO. 12-1218