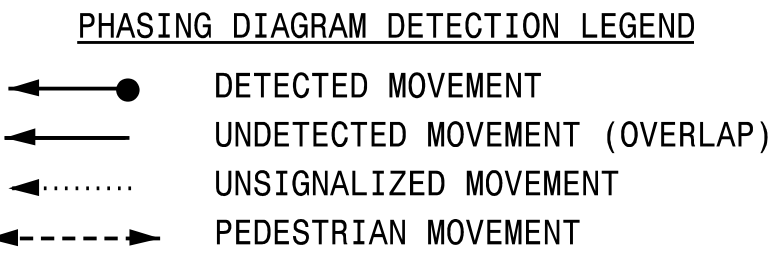
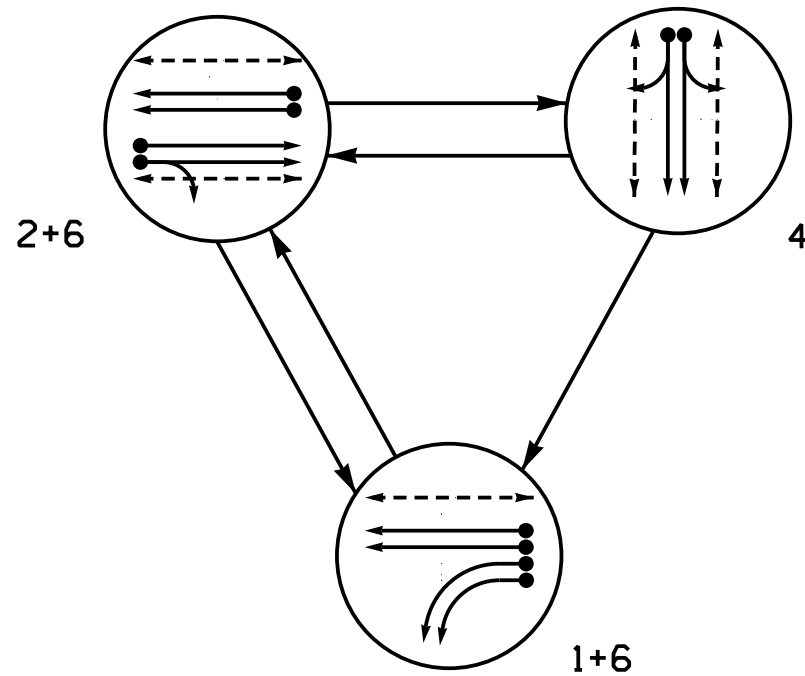
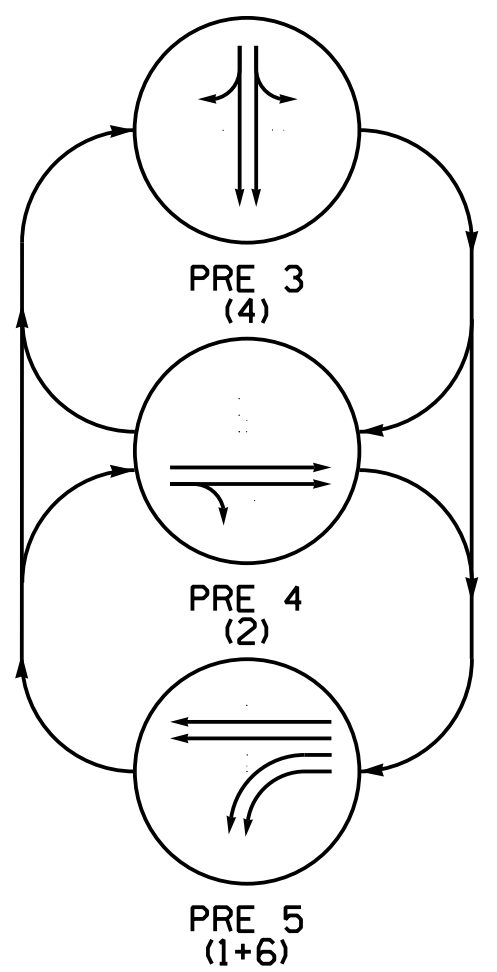


PHASING DIAGRAM



EV PREEMPT PHASES
(Medium Priority)



SIGNAL FACE	PHASE						
	1 + 6	2 + 6	4	PRE 3	PRE 4	PRE 5	FLASH
11,12	—	—	—	—	—	—	—
21	R	↑	R	R	↑	R	R
22	R	G	R	R	G	R	R
41,42	R	R	G	G	R	R	R
61	G	G	R	R	R	G	R
62	↑	↑	R	R	R	↑	R
P21,P22	DW	W	DW	DW	DW	DRK	
P41,P42	DW	DW	W	DW	DW	DRK	
P43,P44	DW	DW	W	DW	DW	DRK	
P61,P62	W	W	DW	DW	DW	DRK	

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR PROGRAMMING													
						ASSIGNED PHASE	TIMING		OPERATION MODE										STATUS
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOP LINE (ft)	NEW	EXISTING		DELAY	EXTEND (STRETCH)	VEHICLE	PEDESTRIAN	1 CALL	STOP A	STOP B	PROPPER	LEFT TURN	THROUGH	AND	SWITCH	
1A	6x40	2-4-2	0	X	-	1	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
1B	6x40	2-4-2	0	X	-	1	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
2A	6x6	3	70	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
2B	6x6	3	70	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
4A	6x40	2-4-2	0	X	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
4B	6x40	2-4-2	0	X	-	4	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
4C	6x6	3	0	X	-	4	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
6A	6x6	3	70	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -
6B	6x6	3	70	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X -

3 Phase with EVP
Fully Actuated
Hickory City Signal System

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 may be lagged.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- This intersection features accessible pedestrian signals utilizing percussive tone walk indications and/or speech messages.
- This intersection features an optical preemption system. Shown locations of optical detectors are conceptual only.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Hickory Signal System Data: Controller Asset #0316.

SE-PAC Preemption			
FUNCTION	PRE 3	PRE 4	PRE 5
MIN GRN / WLK	1	1	1
EXIT PHASES	4	2	1+6
DELAY	0.0	0.0	0.0
MXCALL	120	120	120
SEL PED CLR	24	10	12
SEL YEL / 10	0*	0*	0*
SEL RED / 10	0*	0*	0*
TRACK GREEN	0	0	0
TRK PED CLR	0	0	0
TRK YEL / 10	0	0	0
TRK RED / 10	0	0	0
DWELL GRN	7	10	10
RET PED CLR	0	0	0
RET YEL / 10	0*	0*	0*
RET RED / 10	0*	0*	0*
PREEMPT EXTEND**	2.0	2.0	2.0

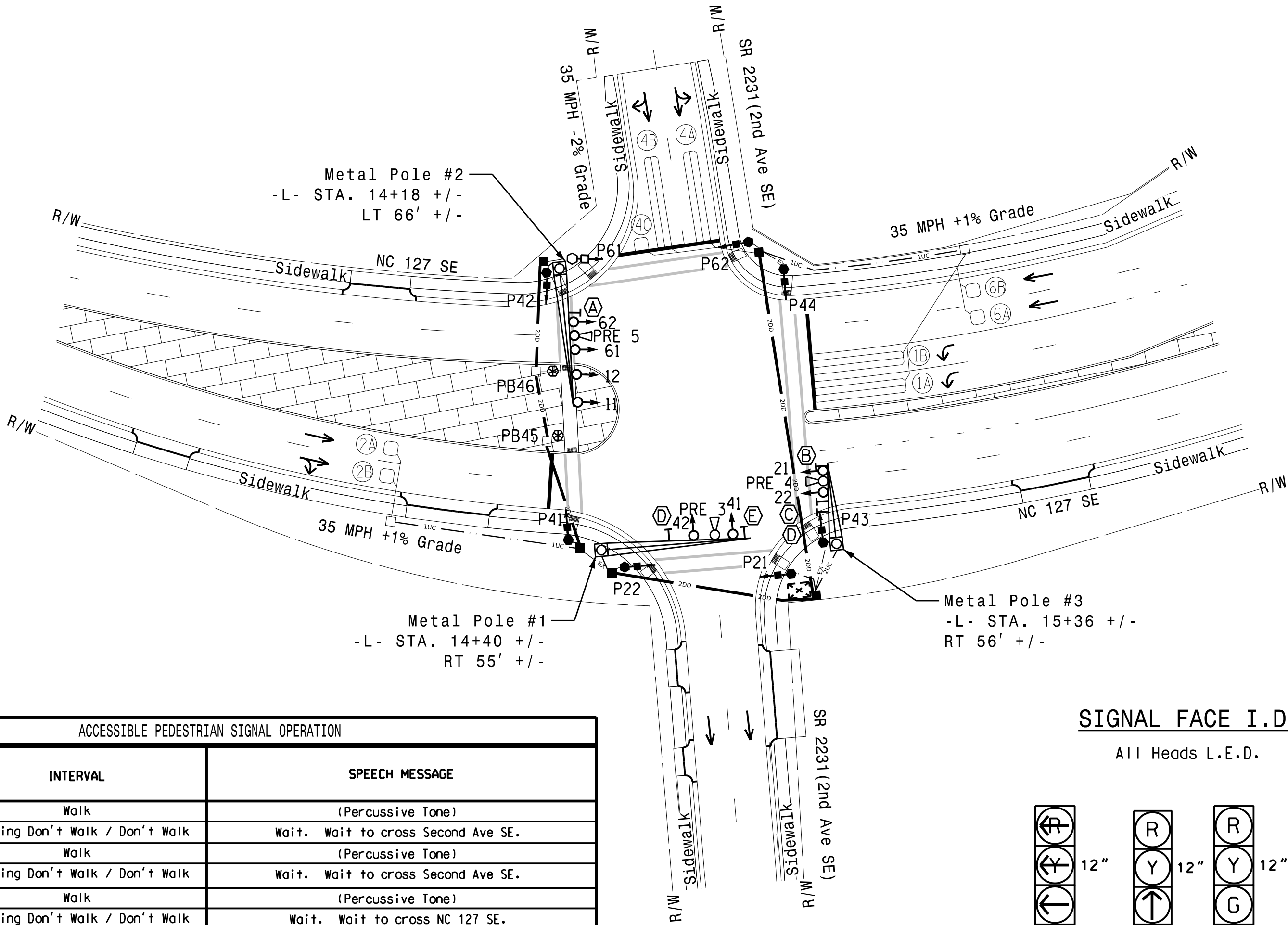
* Time defaults to time used for phase during normal operation.
** Program Timing on Optical Detection Unit.

SE-PAC 2070 TIMING CHART

FEATURE	PHASE			
	1	2	4	6
Min Green *	7	10	7	10
Passage Gap *	2.0	3.0	2.0	3.0
Maximum Green *	40	40	40	40
Yellow Change	3.0	3.8	4.0	3.8
Red Clear	3.3	2.2	2.7	2.2
Walk *	-	7	7	7
Pedestrian Clear	-	12	25	14
Advance Walk *	-	7	6	7
Added Initial *	-	1.5	-	1.5
Maximum Initial *	-	11	-	11
Time Before Reduction *	-	15	-	15
Time To Reduce *	-	30	-	30
Minimum Gap	-	3.0	-	3.0
Recall Mode	-	MIN RECALL	-	MIN RECALL
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

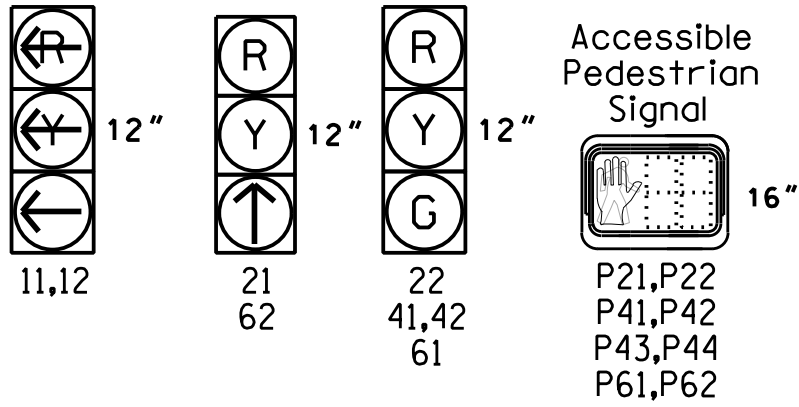
* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

ACCESSIBLE PEDESTRIAN SIGNAL OPERATION			
SIGNAL FACE	VOICE	TONES	INTERVAL
P21	X	-	Walk
	X	-	Flashing Don't Walk / Don't Walk
P22	-	X	Walk
	X	-	Flashing Don't Walk / Don't Walk
P41	-	X	Walk
	X	-	Flashing Don't Walk / Don't Walk
P42	X	-	Walk
	X	-	Flashing Don't Walk / Don't Walk
P43	X	-	Walk
	X	-	Flashing Don't Walk / Don't Walk
P44	-	X	Walk
	X	-	Flashing Don't Walk / Don't Walk
PB45	-	X	Walk
	X	-	Flashing Don't Walk / Don't Walk
PB46	X	-	Walk
	X	-	Flashing Don't Walk / Don't Walk
P61	X	-	Walk
	X	-	Flashing Don't Walk / Don't Walk
P62	-	X	Walk
	X	-	Flashing Don't Walk / Don't Walk



SIGNAL FACE I.D.

All Heads L.E.D.



PROPOSED	EXISTING

Signal Upgrade - Final Design

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

	NC 127 SE at SR 2231 (2nd Ave SE)			
	Division 12	Catawba County		Hickory
	PLAN DATE: October 2023	REVIEWED BY: N.K. Vlanich		
	PREPARED BY: E.E. Tiller	REVIEWED BY: N.R. Simmons		
REVISIONS		INIT.	DATE	
0				
1"=40'				

DocuSigned by:
Natasha R. Simmons 9/6/2024
SIGNATURE DATE
SIG. INVENTORY NO. 12-0945

HNTB

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