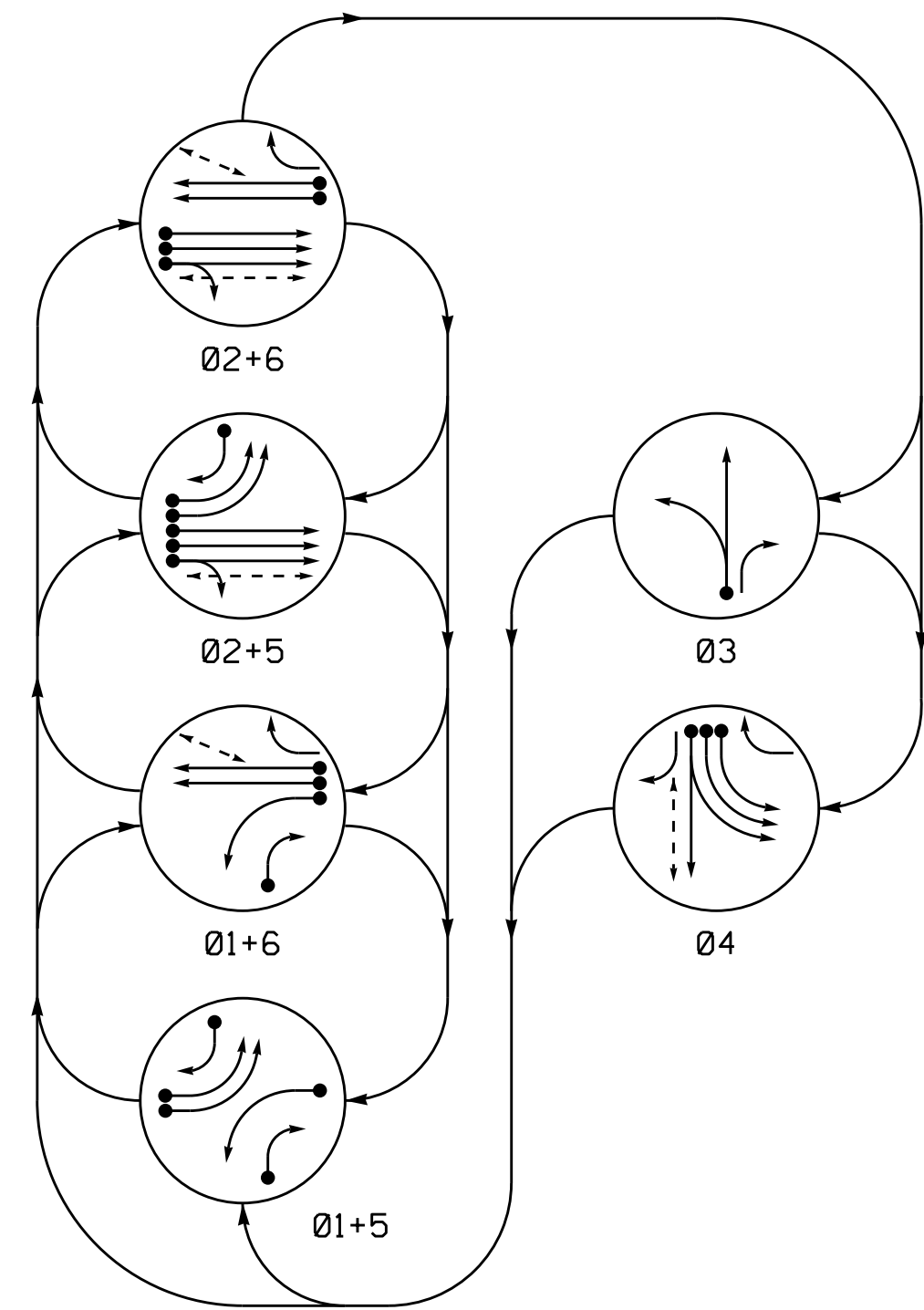


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- ←• DETECTED MOVEMENT
- ← UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ←→ PEDESTRIAN MOVEMENT

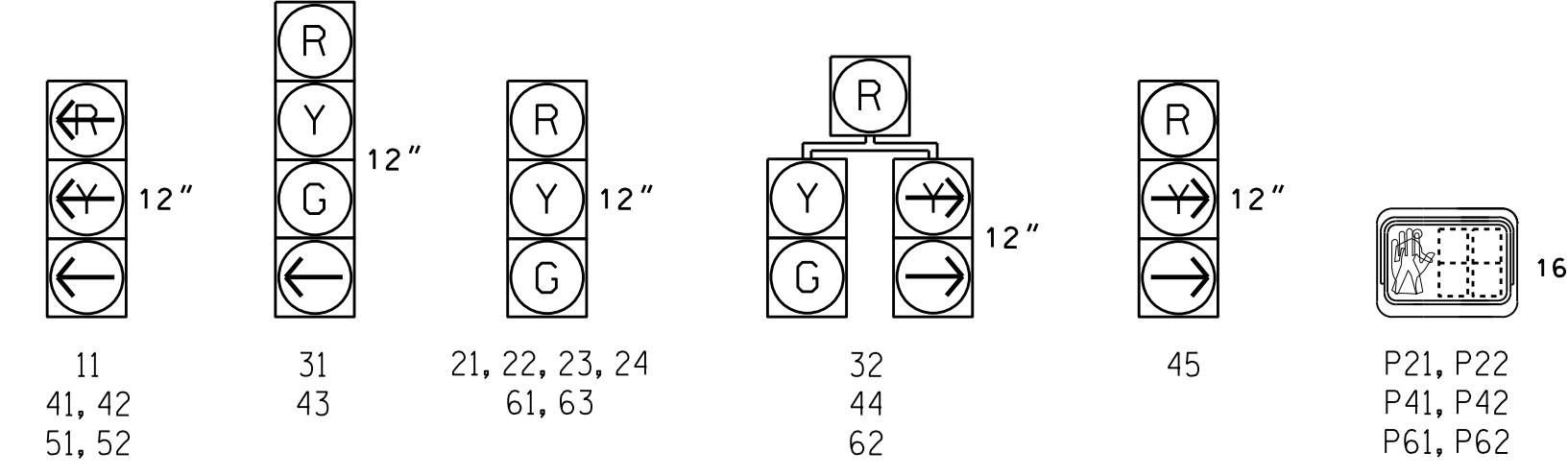
SIGNAL FACE	PHASE						FLASH
	01+5	01+6	02+5	02+6	03	04	
11	←	←	←	←	←	←	
21, 22, 23, 24	R	R	G	G	R	R	Y
31	R	R	R	R	G	R	R
32	R	R	R	R	G	R	R
41, 42	←	←	←	←	←	←	←
43	R	R	R	R	R	G	R
44	R	R	R	R	R	G	R
45	←	R	←	R	←	R	←
51, 52	←	←	←	←	←	←	←
61, 63	R	G	R	G	R	R	Y
62	R	G	R	G	R	R	Y
P21, P22	DW	DW	W	W	DW	DW	DRK
P41, P42	DW	DW	DW	DW	DW	W	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

LOOP NO.	INDUCTIVE LOOPS			DETECTOR PROGRAMMING																
	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	TIMING		OPERATION MODE							STATUS				
							DELAY	EXTEND (STRETCH)	VEHICLE	PEDESTRIAN	1 CALL	STOP A	STOP B	PROFILER THROUGH	PROFILER THROUGH AND	SWITCH	SYSTEM LOOPS	NEW	EXISTING	
1A	6X40	2-4-2	0	X	-	1	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
1B	6X60	2-4-2	0	X	-	1	15 SEC.	- SEC.	-	-	-	-	-	-	-	-	-	-	X	-
2A	6X6	6	300	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
2B	6X6	6	300	X	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
3A	6X60	2-4-2	0	X	-	3	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4A	6X40	2-4-2	0	X	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4B	6X40	2-4-2	0	X	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
4C	6X40	2-4-2	0	X	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5A	6X40	2-4-2	0	X	-	5	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5B	6X40	2-4-2	0	X	-	5	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
5C	6X40	2-4-2	0	X	-	5	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6A	6X6	4	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-
6B	6X6	4	300	X	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	-	X	-

SIGNAL FACE I.D.

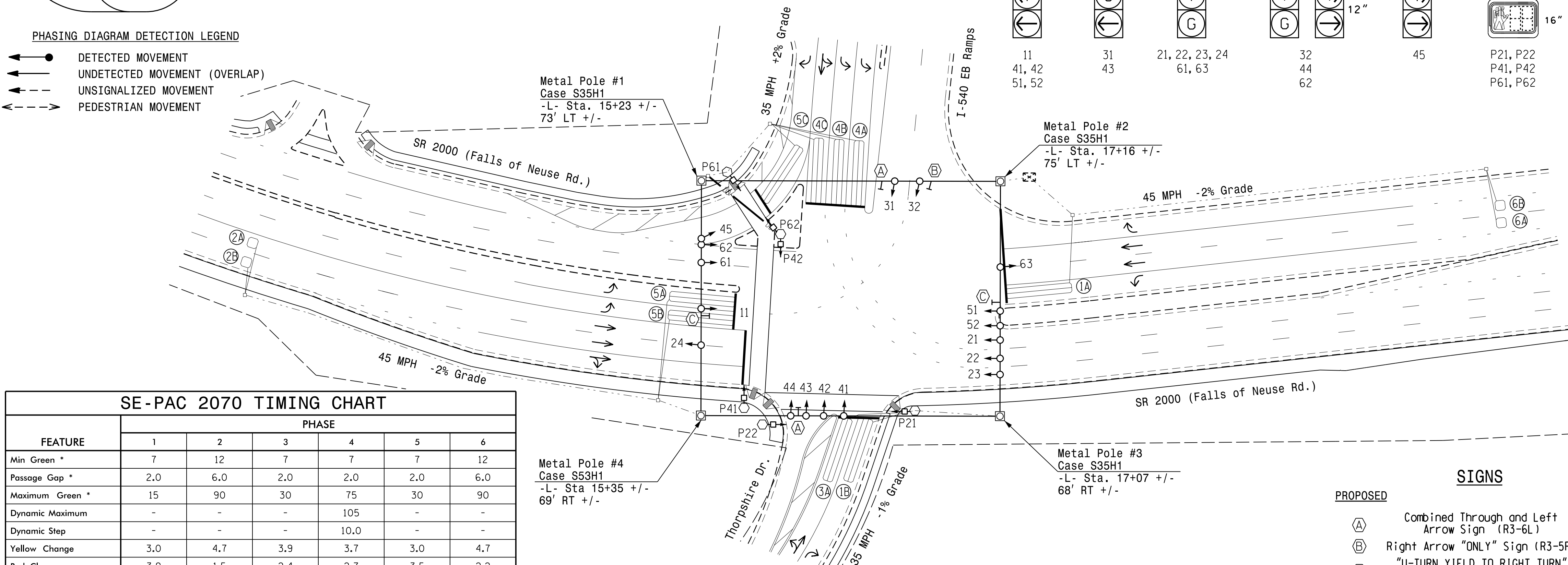
All Heads L.E.D.



6 Phase Fully Actuated (Raleigh Signal System)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- 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.
- Phase 4 and phase 6 pedestrian timing is designed as a 2 stage crossing when crossing the median island. The FDW time shown is only intended to get a pedestrian to/from the island during a single crossing. Install R10-3d signs as appropriate.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



FEATURE	PHASE					
	1	2	3	4	5	6
Min Green *	7	12	7	7	7	12
Passage Gap *	2.0	6.0	2.0	2.0	2.0	6.0
Maximum Green *	15	90	30	75	30	90
Dynamic Maximum	-	-	-	105	-	-
Dynamic Step	-	-	-	10.0	-	-
Yellow Change	3.0	4.7	3.9	3.7	3.0	4.7
Red Clear	3.9	1.5	2.4	2.7	3.5	2.2
Advance Walk *	-	4	-	4	-	-
Walk *	-	7	-	7	-	4
Pedestrian Clear	-	15	-	21	-	7
Added Initial *	-	1.5	-	-	-	1.5
Maximum Initial *	-	34	-	-	-	34
Time Before Reduction *	-	20	-	-	-	20
Time To Reduce *	-	40	-	-	-	40
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON

ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

SIGNAL FACE	VOICE TONES	INTERVAL	SPEECH MESSAGE
P21, P22	- X	Walk	(Percussive Tone)
	X -	Flashing Don't Walk / Don't Walk	Wait, Wait to cross Thorpshire.
P41	- X	Walk	(Percussive Tone)
	X -	Flashing Don't Walk / Don't Walk	Wait, Wait to cross Falls of Neuse.
P42	- X	Walk	Falls of Neuse. Walk sign is on to cross Falls of Neuse.
	X -	Flashing Don't Walk / Don't Walk	Wait, Wait to cross Falls of Neuse.
P61	- X	Walk	(Percussive Tone)
	X -	Flashing Don't Walk / Don't Walk	Wait, Wait to cross I-540 Ramp.
P62	- X	Walk	I-540 Ramp. Walk sign is on to cross I-540 Ramp.
	X -	Flashing Don't Walk / Don't Walk	Wait, Wait to cross I-540 Ramp.

PROPOSED	EXISTING
[Symbol]	Traffic Signal Head
[Symbol]	Modified Signal Head
[Symbol]	Signal
[Symbol]	Pedestrian Signal Head With Push Button & Sign
[Symbol]	Signal Pole with Guy
[Symbol]	Signal Pole with Sidewalk Guy
[Symbol]	Inductive Loop Detector
[Symbol]	Controller & Cabinet
[Symbol]	Junction Box
[Symbol]	2-in Underground Conduit
[Symbol]	Right of Way
[Symbol]	Directional Arrow
[Symbol]	Curb Ramp
[Symbol]	Metal Strain Pole
[Symbol]	Type I Pushbutton Post
[Symbol]	Type II Signal Pedestal

PROPOSED	EXISTING
(A)	Combined Through and Left Arrow Sign (R3-6L)
(B)	Right Arrow "ONLY" Sign (R3-5R)
(C)	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)

* 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 - Final Design

Prepared in the Offices of:

 750 N. Greenfield Hwy, Garner, NC 27529

SR 2000 (Falls of Neuse Rd.) at I-540 EB Ramps and Thorpshire Dr.

Division 5 Wake County Raleigh
 PLAN DATE: January 2023 REVIEWED BY:
 PREPARED BY: J.A. Lohr REVIEWED BY:
 REVISIONS: INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

01/03/2023
 05-2035

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