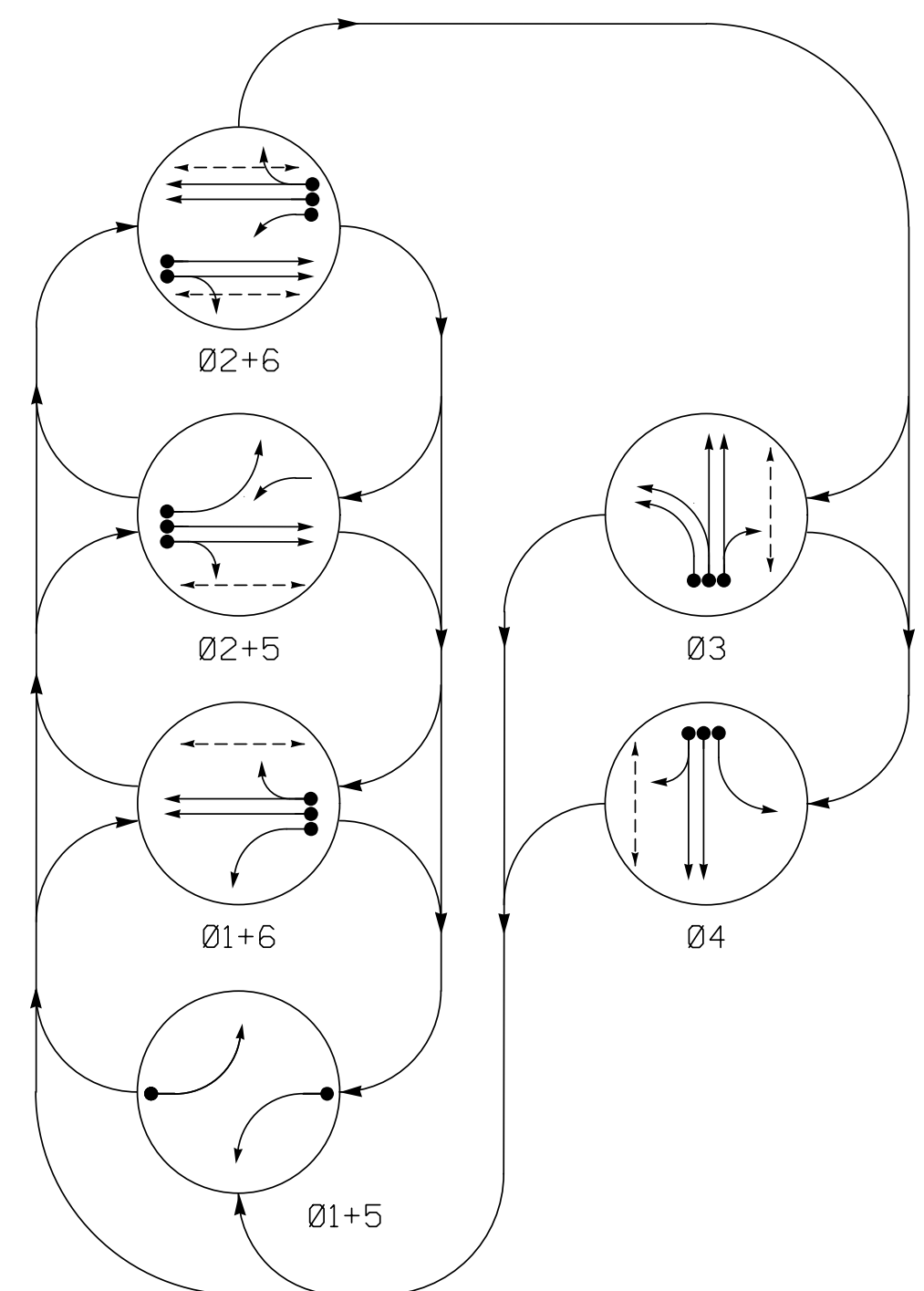
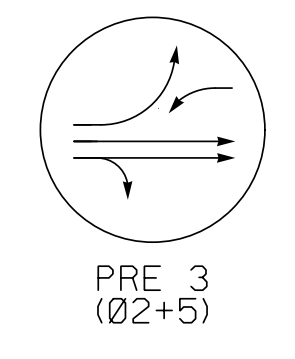


**DEFAULT PHASING DIAGRAM**



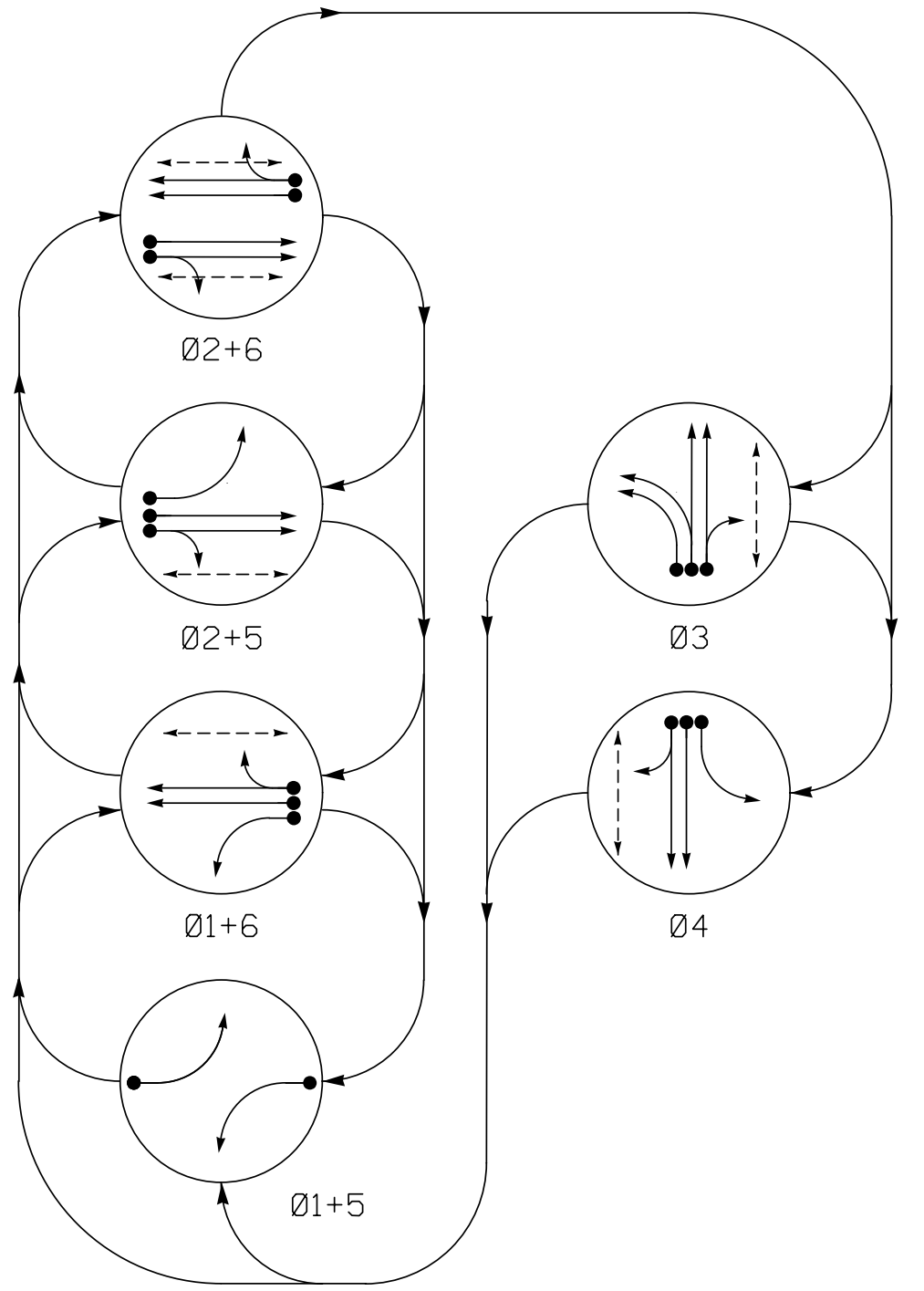
**DEFAULT PHASING EV PREEMPT PHASES (Medium Priority)**



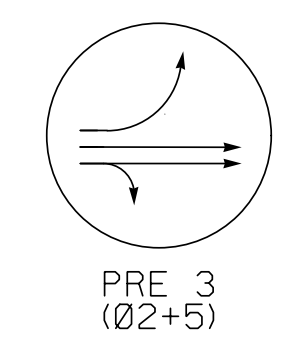
**DEFAULT PHASING TABLE OF OPERATION**

SIGNAL FACE	PHASE									
	01+5	01+6	02+5	02+6	03	04	PRE 3	FLASH		
11	←	←	←	←	←	←	←	←	←	←
21, 22	R	R	G	G	R	R	G	Y		
31	R	R	R	R	G	R	R	R		
32	R	R	R	R	G	R	R	R		
41	R	R	R	R	G	R	R	R		
42	R	R	R	R	G	R	R	R		
51	←	←	←	←	←	←	←	←		
61, 62	R	G	R	G	R	R	Y			
P21, P22	DW	DW	W	W	DW	DW	DRK			
P31, P32	DW	DW	DW	DW	W	DW	DRK			
P41, P42	DW	DW	DW	DW	W	DW	DRK			
P61, P62	DW	W	DW	W	DW	DW	DRK			

**ALTERNATE PHASING DIAGRAM**



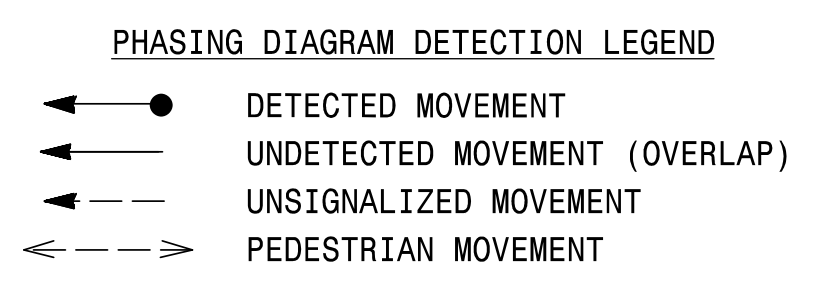
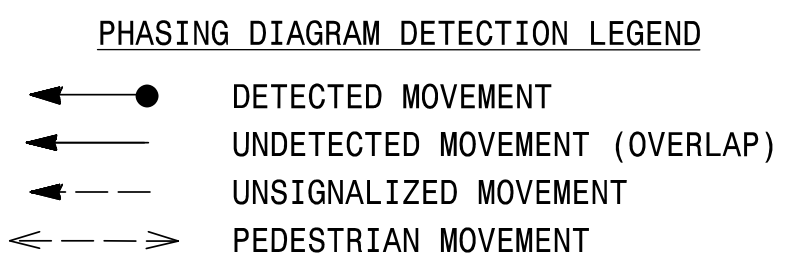
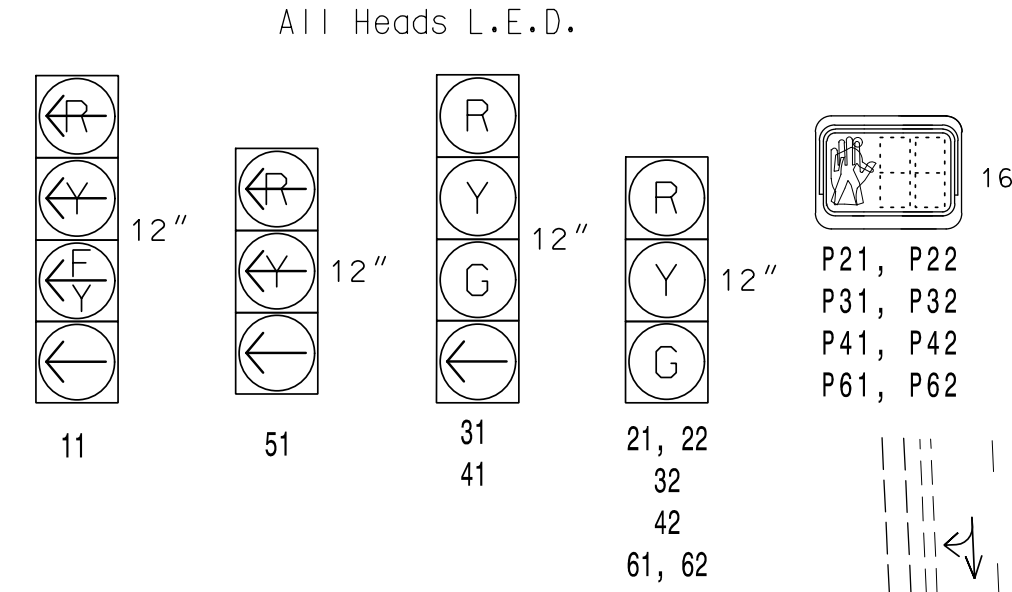
**ALTERNATE PHASING EV PREEMPT PHASES (Medium Priority)**



**ALTERNATE PHASING TABLE OF OPERATION**

SIGNAL FACE	PHASE									
	01+5	01+6	02+5	02+6	03	04	PRE 3	FLASH		
11	←	←	←	←	←	←	←	←	←	←
21, 22	R	R	G	G	R	R	G	Y		
31	R	R	R	R	G	R	R	R		
32	R	R	R	R	G	R	R	R		
41	R	R	R	R	G	R	R	R		
42	R	R	R	R	G	R	R	R		
51	←	←	←	←	←	←	←	←		
61, 62	R	G	R	G	R	R	Y			
P21, P22	DW	DW	W	W	DW	DW	DRK			
P31, P32	DW	DW	DW	DW	W	DW	DRK			
P41, P42	DW	DW	DW	DW	W	DW	DRK			
P61, P62	DW	W	DW	W	DW	DW	DRK			

**SIGNAL FACE I.D.**



**DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X60	0	2-4-2	-	1	Yes	-	3	-	N	-	X
2A	6X6	300	EXIST	-	2	Yes	-	-	-	N	-	X
2B	6X6	300	EXIST	-	2	Yes	-	-	-	X	N	-
3A	6X60	0	2-4-2	-	3	Yes	-	-	-	N	-	X
3B	6X60	0	2-4-2	-	3	Yes	-	-	-	N	-	X
3C	6X60	0	2-4-2	-	3	Yes	-	-	-	N	-	X
4A	6X60	+5	2-4-2	-	4	Yes	-	-	-	N	-	X
4B	6X60	0	2-4-2	-	4	Yes	-	-	-	N	-	X
4C	6X60	0	2-4-2	-	4	Yes	-	-	-	N	-	X
5A	6X40	0	2-4-2	-	5	Yes	-	-	-	N	-	X
6A	6X6	70	EXIST	-	6	Yes	-	-	-	N	-	X
6B	6X6	70	EXIST	-	6	Yes	-	-	-	N	-	X

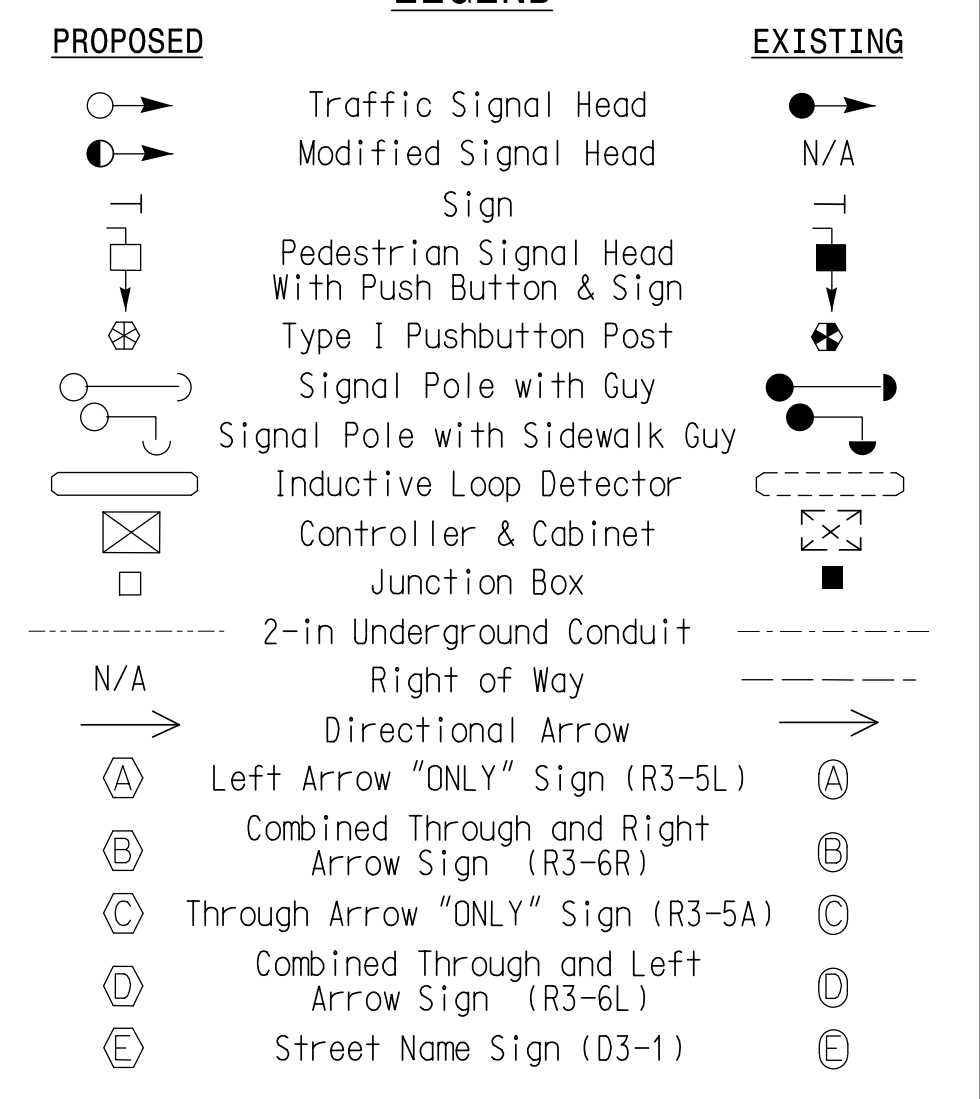
# Disable Phase call for loop during Alternate Phasing Operation.

**6 Phase Fully Actuated w/ Emergency Vehicle Preemption Gastonia 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.
- In the event of loop replacement, refer to the current ITS and Signal Design Manual and submit a Plan of Record to the Signal Design Section.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- The City Engineer or their representative will determine the hours of use for each phasing plan.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
- Install new cabinet on the existing cabinet foundation.
- All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
- Install GPS emergency preemption system per manufacturer's instructions to achieve preemption needed, as shown in phasing diagram.
- City system data:  
Controller Asset: #0030

**LEGEND**



**TIMING CHART**

FEATURE	PHASE					
	1	2	3	4	5	6
Min Green *	7	12	7	7	7	12
Walk *	-	7	7	7	-	7
Ped Clear	-	18	22	25	-	24
Veh. Extension *	1.0	6.0	2.0	2.0	2.0	3.0
Max I *	15	45	30	30	15	45
Yellow	3.0	4.2	4.4	4.4	3.0	4.2
Red Clear	2.6	2.0	1.9	2.1	2.9	2.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-
Seconds / Actuation *	-	1.5	-	-	-	-
Max Initial *	-	34	-	-	-	-
Time Before Reduction *	-	15	-	-	-	-
Time To Reduce *	-	30	-	-	-	-
Minimum Gap	-	3.0	-	-	-	-
Locking Detector	-	X	-	-	-	X
Recall Position	-	MIN RECALL	-	-	-	MIN RECALL
Dual Entry	-	-	-	-	-	-
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.

**EV PREEMPT**

FUNCTION	PRE 3
Exit Phase(s)	2+6
Preempt Override	OFF
Delay Time	0
Ped Clear Through Yellow	Y
Terminate Phases	N
Entrance Walk	1
Entrance Ped Clear	255*
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Minimum Dwell Time	7
Preempt Input Extension Time **	2
Preempt Max Time	120
Exit Yellow Change	25.5*
Exit Red Clear	25.5*

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

**Signal Upgrade**

Prepared For: **US 29/74 (Franklin Boulevard) at NC 274 (Bessemer City Road) / SR 2466 (Garrison Boulevard)**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips

PREPARED BY: DM Curri REVIEWED BY: KP Baumann

REVISIONS: \_\_\_\_\_ INIT. DATE

Scale: 1" = 40'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Seal: NORTH CAROLINA PROFESSIONAL ENGINEER KEVIN P. BAUMANN SEAL 044434

Signature: \_\_\_\_\_ DATE: 3/11/2022

SIG. INVENTORY NO. 12-0030

PLANS PREPARED IN THE OFFICE OF:  
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