

PHASING DIAGRAM

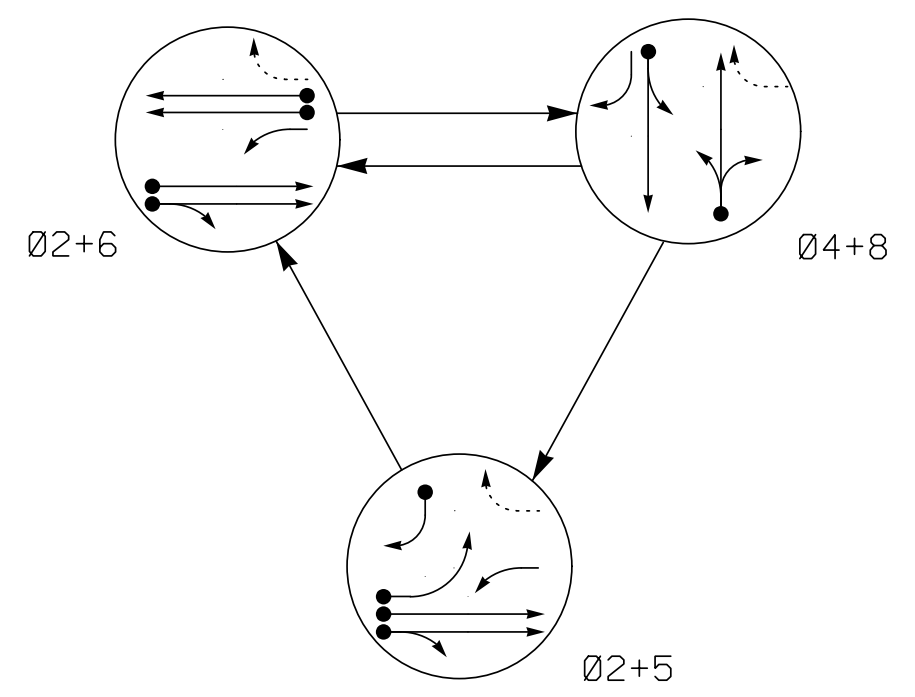


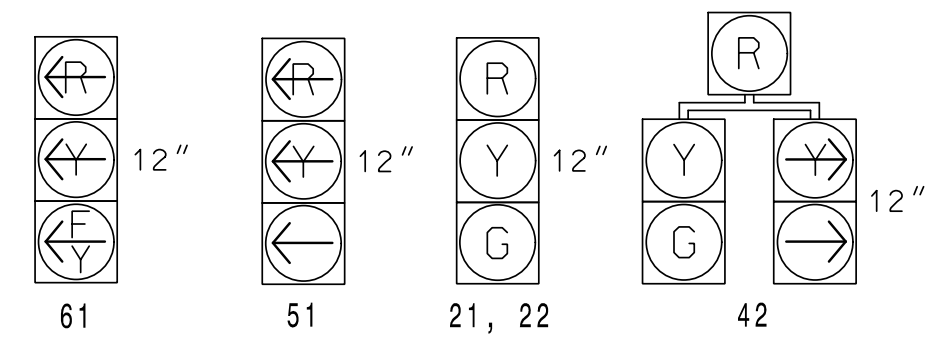
TABLE OF OPERATION

SIGNAL FACE	PHASE			
	Ø 2+5	Ø 2+6	Ø 4+8	FLASH
21, 22	G	G	R	Y
41, 43	R	R	G	R
42	R	R	G	R
51	F	F	R	R
61	F	F	R	R
62, 63	R	G	R	Y
81, 82	R	R	G	R
SIGN 'F'	*	*	*	OFF

* Changeable Trailblazer Sign controlled remotely

SIGNAL FACE I.D.

All Heads L.E.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
2A	6X6	420	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	420	EXIST	-	2	Yes	-	-	X	N	-	X
4A	6X60	0	2-4-2	-	4	Yes	-	-	-	N	-	X
5A	6X60	0	2-4-2	-	5	Yes	-	-	-	N	-	X
5B	6X60	0	2-4-2	-	5	Yes	-	15	-	N	-	X
6A	6X6	420	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	420	EXIST	-	6	Yes	-	-	X	N	-	X
8A	EXIST	0	EXIST	-	8	Yes	-	3	-	N	-	X
8B	6X40	EXIST	2-4-2	-	8	Yes	-	3	-	N	-	X
8C	6X6	EXIST	EXIST	-	8	Yes	-	15	-	N	-	X

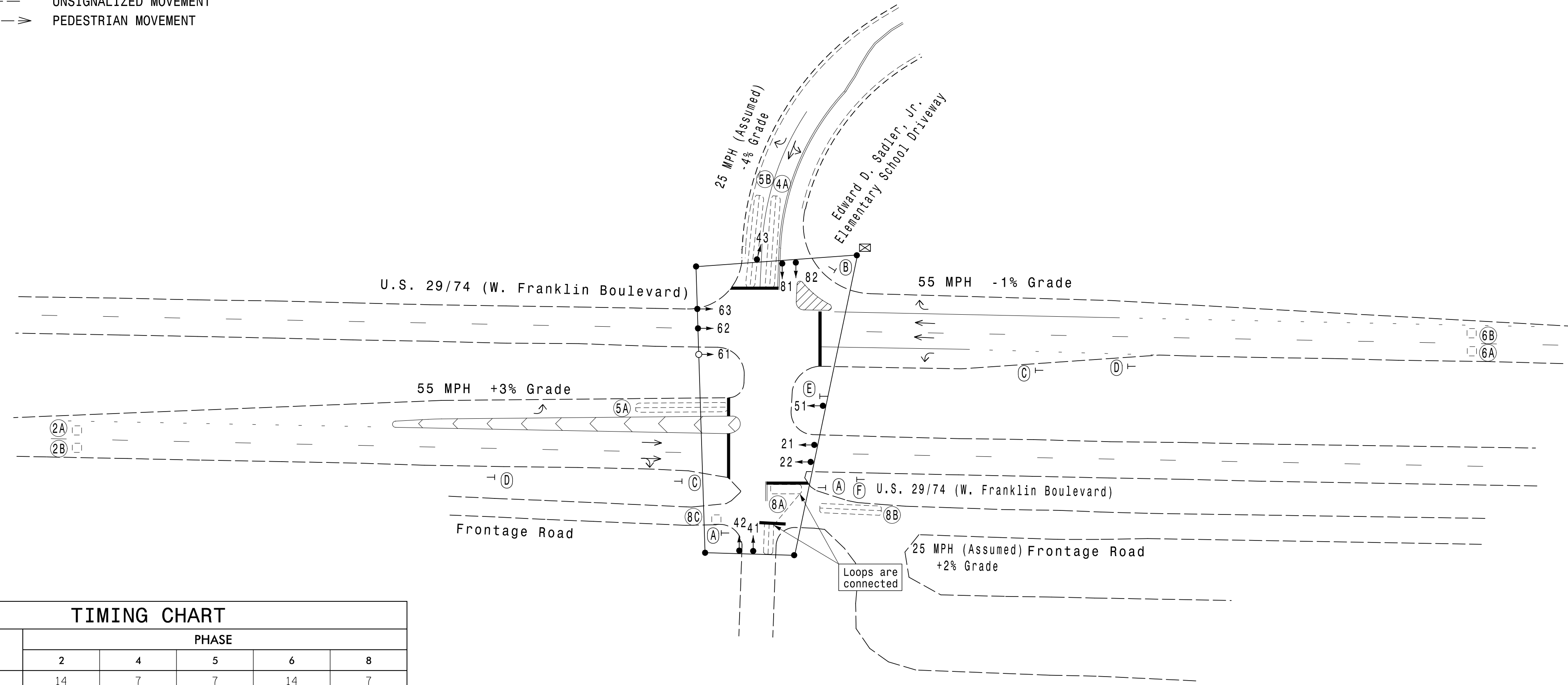
3 Phase Fully Actuated Gastonia Signal System

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. Reposition existing signal heads numbered 62, 63.
5. Set all detector units to presence mode.
6. 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.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Pavement markings are existing.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
10. Install new cabinet on the existing cabinet foundation.
11. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
12. Existing signal heads 61 and 62 have been relabeled to 62 and 63, respectively.
13. City system data: Controller Asset # 1715

PHASING DIAGRAM DETECTION LEGEND

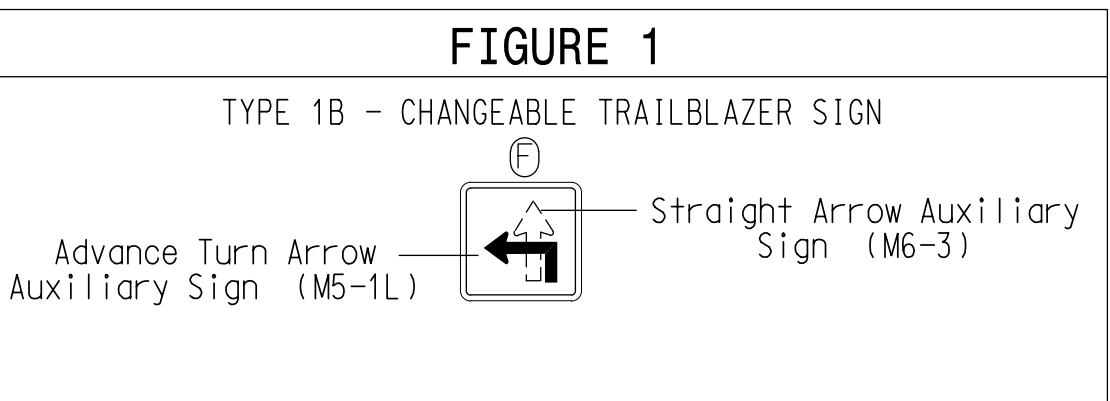
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT



TIMING CHART

FEATURE	PHASE				
	2	4	5	6	8
Min Green *	14	7	7	14	7
Walk *	-	-	-	-	-
Ped Clear	-	-	-	-	-
Veh. Extension *	6.0	1.0	1.0	6.0	3.0
Max 1 *	90	30	20	90	30
Yellow	5.3	3.4	3.0	5.3	3.4
Red Clear	2.5	3.2	2.9	2.5	3.2
Red Revert	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-
Seconds / Actuation *	1.5	-	-	1.5	-
Max Initial *	46	-	-	46	-
Time Before Reduction *	15	-	-	15	-
Time To Reduce *	40	-	-	40	-
Minimum Gap	3.4	-	-	3.4	-
Locking Detector	X	-	-	X	-
Recall Position	MIN. RECALL	-	-	MIN. RECALL	-
Dual Entry	-	X	-	-	X
Simultaneous Gap	X	X	X	X	X

* 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.



LEGEND

PROPOSED	EXISTING
○ Traffic Signal Head	● N/A
○ Modified Signal Head	○ N/A
○ Sign	○ N/A
○ Pedestrian Signal Head	○ N/A
○ Signal Pole with Guy	○ N/A
○ Signal Pole with Sidewalk Guy	○ N/A
○ Inductive Loop Detector	○ N/A
○ Controller & Cabinet	○ N/A
○ Junction Box	○ N/A
○ 2-in Underground Conduit	○ N/A
○ Right of Way	○ N/A
○ Directional Arrow	○ N/A
(A) "STOP" Sign (R1-1)	(A) N/A
(B) "YIELD" Sign (R1-2)	(B) N/A
(C) "DO NOT ENTER" Sign (R5-1)	(C) N/A
(D) "WRONG WAY" Sign (R5-1A)	(D) N/A
(E) "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	(E) N/A
(F) Type 1B Changeable Trailblazer sign (See Figure 1)	(F) N/A

Signal Upgrade

Prepared For: **U.S. 29/74 (W. Franklin Boulevard) at Edward D. Sadler, Jr. Elementary School / Frontage Road**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips

PREPARED BY: DM Curri REVIEWED BY: KP Baumann

REVISIONS: _____

SCALE: 1" = 50'

3/9/2022 11:14:25 AM DanHelleCurri

PLANS PREPARED IN THE OFFICE OF: **Kimley-Horn**

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Seal of Kevin P. Baumann, Professional Engineer, No. 044434

DocuSigned by: **Kevin P. Baumann** 3/11/2022

SIG. INVENTORY NO. 12-1715