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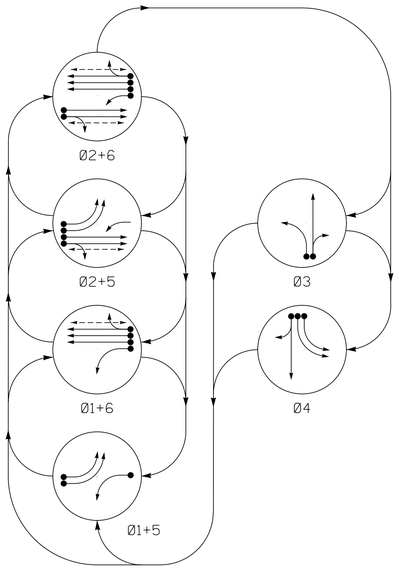
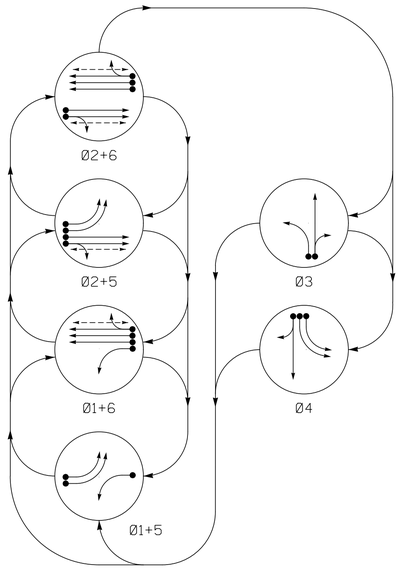
PROJECT REFERENCE NO.	SHEET NO.
C-5703	Sig.97.0

DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	FLASH
11	↚	↚	~~Y~~	~~Y~~	~~R~~	~~R~~	~~Y~~
21, 22	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	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	↚	~~R~~
43, 44	R	R	R	R	R	G	R
51, 52	↚	~~R~~	↚	~~R~~	~~R~~	~~R~~	~~R~~
61, 62, 63	R	G	R	G	R	R	Y
P21, P22	DW	DW	W	W	DW	DW	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK

ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	FLASH
11	↚	↚	~~R~~	~~R~~	~~R~~	~~R~~	~~Y~~
21, 22	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	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	↚	~~R~~
43, 44	R	R	R	R	R	G	R
51, 52	↚	~~R~~	↚	~~R~~	~~R~~	~~R~~	~~R~~
61, 62, 63	R	G	R	G	R	R	Y
P21, P22	DW	DW	W	W	DW	DW	DRK
P61, P62	DW	W	DW	W	DW	DW	DRK

DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	SYSTEM LOOP	NEW CARD
1A	6X40	+10	2-4-2	-	1	Yes	-	5*	-	N	-	X
					6#	Yes	-	-	-	G	-	X
2A	6X6	355	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	355	EXIST	-	2	Yes	-	-	X	N	-	X
3A	6X40	0	2-4-2	-	3	Yes	-	-	-	N	-	X
3B	6X40	0	2-4-2	-	3	Yes	-	-	-	N	-	X
4A	6X40	0	2-4-2	-	4	Yes	-	-	-	N	-	X
4B	6X40	0	2-4-2	-	4	Yes	-	-	-	N	-	X
4C	6X40	0	2-4-2	-	4	Yes	-	-	-	N	-	X
5A	6X40	+10	2-4-2	-	5	Yes	-	-	-	N	-	X
5B	6X40	+10	2-4-2	-	5	Yes	-	-	-	N	-	X
6A	6X6	355	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	355	EXIST	-	6	Yes	-	-	X	N	-	X
6C	6X6	355	EXIST	-	6	Yes	-	-	X	N	-	X

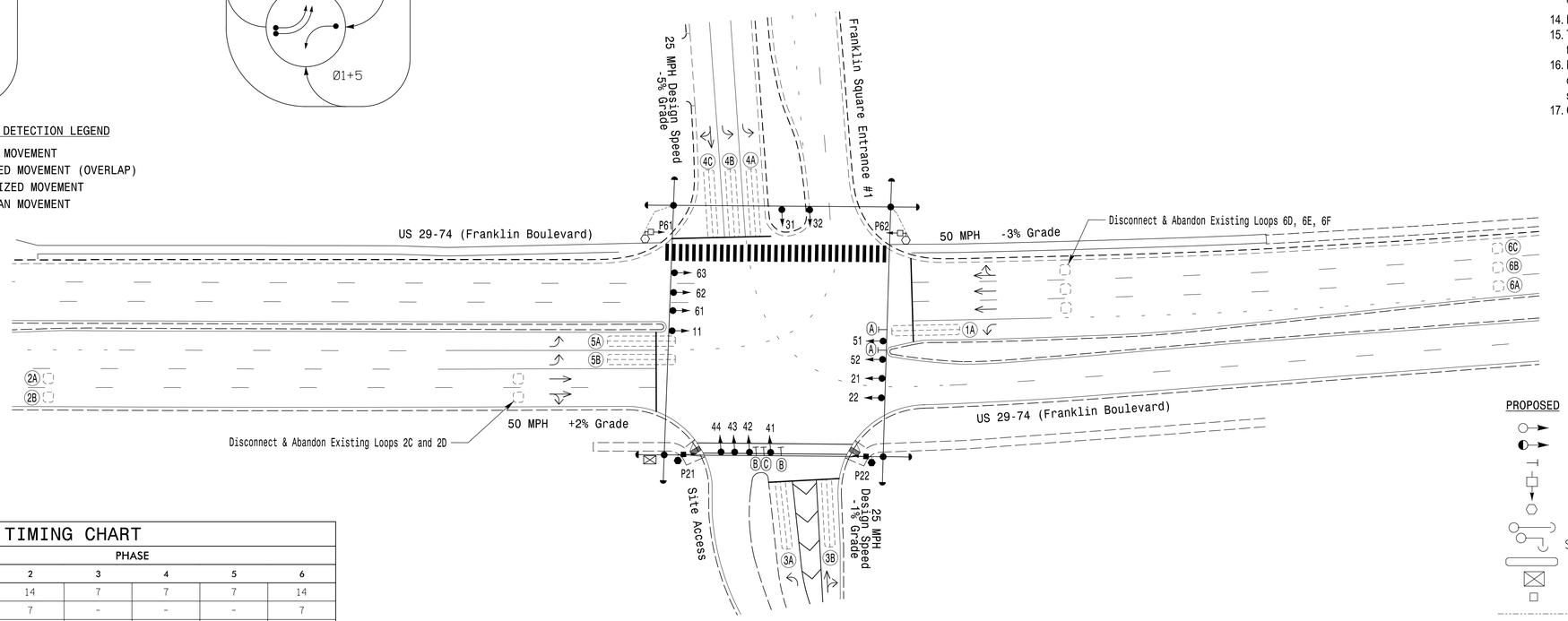
* Disable delay during Alternate Phasing Operation.
\# Disable phase call for loop during Alternate Phasing Operation.

6 Phase Fully-Actuated with Alternate Phasing Operation Gastonia Signal System

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 1 and/or phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. Disconnect & abandon existing loops 2C, 2D, 6D, 6E, and 6F.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Install new cabinet on existing cabinet foundation.
9. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
10. All proposed pedestrian signal heads shall be black in color. See Project Special Provisions for details.
11. All proposed pedestrian pedestals and pushbutton posts shall be black in color. See Project Special Provisions for details.
12. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
13. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
14. Pavement markings are existing.
15. The City Engineer or their representative will determine the hours of use for each phasing plan.
16. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
17. City system data:
    Controller Asset #1105

PHASING DIAGRAM DETECTION LEGEND

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



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Type II Signal Pedestal	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
N/A	Curb Ramp	
A	Left Turn Signal Sign (R10-10L)	A
B	Left Arrow "ONLY" Sign (R3-5L)	B
C	Street Sign (D3-1)	C

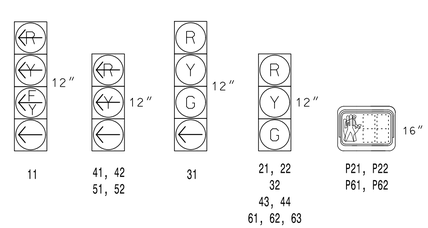
TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green *	7	14	7	7	7	14
Walk *	-	7	-	-	-	7
Ped Clear	-	23	-	-	-	41
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0
Max 1 *	20	60	25	25	20	60
Yellow	3.0	5.1	3.2	3.5	3.0	5.1
Red Clear	3.6	1.8	3.3	3.2	3.7	1.8
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-
Seconds /Actuation *	-	1.5	-	-	-	1.0
Max Initial *	-	40	-	-	-	40
Time Before Reduction *	-	15	-	-	-	15
Time To Reduce *	-	30	-	-	-	30
Minimum Gap	-	3.1	-	-	-	3.1
Locking Detector	-	X	-	-	-	X
Recall Position	-	MIN RECALL	-	-	-	MIN RECALL
Dual Entry	-	-	-	-	-	-
Simultaneous Gap	X	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.

SIGNAL FACE I.D.

All Heads L.E.D.



Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared For: Transportation Mobility and Safety Division, State of North Carolina, Department of Transportation, Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

US 29-74 (Franklin Blvd.) at Franklin Square Entrance #1 / Site Access

Division 12 Gaston County Gastonia

PLAN DATE:	May 2021	REVIEWED BY:	SL Phillips
PREPARED BY:	DM Curri	REVIEWED BY:	KP Baumann

SCALE 0 40 1"=40'

REVISIONS	INIT.	DATE

SEAL NORTH CAROLINA PROFESSIONAL SEAL 044434 ENGINEER KEVIN P. BAUMANN

DocuSigned by: 5B6B6A6B6BA7... SIGNATURE 3/11/2022 DATE

SIG. INVENTORY NO. 12-1105

PLANS PREPARED IN THE OFFICE OF:
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Raleigh, NC 27601
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\\kimley-horn.com\SE_RAL1\RAL_TPTO_ITS\01036569 Gastonia Signal Systems\Signals\54 - Signal Design\121105-2021.dgn 11:12:31 AM Danielle.Curri 3/9/2022