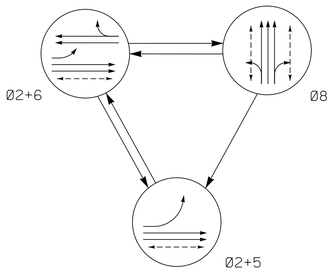
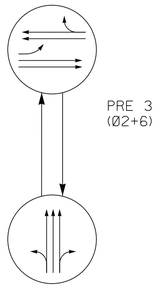
PROJECT REFERENCE NO.	SHEET NO.
C-5703	Sig.15.0

3 Phase Pre-Timed w/ Alternate Phasing Operation and Emergency Vehicle Preemption Gastonia Signal System

DEFAULT PHASING DIAGRAM



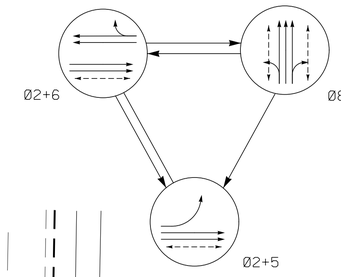
DEFAULT EV PREEMPT PHASES



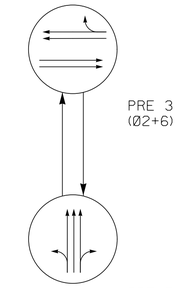
DEFAULT TABLE OF OPERATION

SIGNAL FACE	PHASE Ø2+5	Ø2+6	Ø8	PRE 3	PRE 5	FLASH
21, 22	G	G	R	G	R	Y
51	←	~~F~~ Y	~~R~~	~~F~~	~~R~~	~~Y~~
61, 62	R	G	R	G	R	Y
81, 82	R	R	G	R	G	R
P21, P22	W	W	DW	DW	DW	DRK
P81, P82 P83, P84	DW	DW	W	DW	DW	DRK

ALTERNATE PHASING DIAGRAM



ALTERNATE EV PREEMPT PHASES



ALTERNATE TABLE OF OPERATION

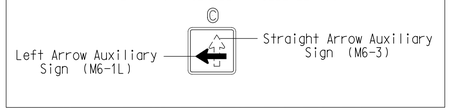
SIGNAL FACE	PHASE Ø2+5	Ø2+6	Ø8	PRE 3	PRE 5	FLASH
21, 22	G	G	R	G	R	Y
51	←	~~R~~	~~R~~	~~R~~	~~R~~	~~Y~~
61, 62	R	G	R	G	R	Y
81, 82	R	R	G	R	G	R
P21, P22	W	W	DW	DW	DW	DRK
P81, P82 P83, P84	DW	DW	W	DW	DW	DRK

PHASING DIAGRAM DETECTION LEGEND

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

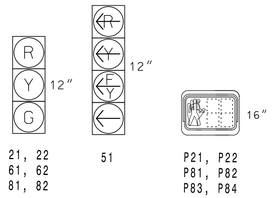
FIGURE 1

TYPE 1A- CHANGEABLE TRAILBLAZER SIGN



SIGNAL FACE I.D.

All Heads L.E.D.



TIMING CHART

FEATURE	PHASE 2	5	6	8
Min Green *	10	7	10	7
Walk *	7	-	-	7
Ped Clear	12	-	-	18
Veh. Extension *	-	-	-	-
Max 1 *	60	15	60	25
Yellow	3.8	3.0	3.8	3.8
Red Clear	1.2	1.8	1.2	1.9
Red Revert	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-
Seconds /Actuation *	-	-	-	-
Max Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Locking Detector	-	-	-	-
Recall Position	PED / MAX	MAX RECALL	MAX RECALL	PED / MAX
Dual Entry	-	-	-	-
Simultaneous Gap	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.

EV PREEMPT

FUNCTION	PRE 3	PRE 5
Exit Phase(s)	2+6	8
Preempt Override	OFF	OFF
Delay Time	0	0
Ped Clear Through Yellow	Y	Y
Terminate Phases	N	N
Entrance Walk	1	1
Entrance Ped Clear	255*	255*
Entrance Min Green	1	1
Entrance Yellow Change	25.5*	25.5*
Entrance Red Clear	25.5*	25.5*
Minimum Dwell Time	7	7
Preempt Input Extension Time **	2	2
Preempt Max Time	120	120
Exit Yellow Change	25.5*	25.5*
Exit Red Clear	25.5*	25.5*

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

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. Set all detector units to presence mode.
4. Install new cabinet on a new cabinet foundation.
5. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
6. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
7. Phase 5 may be lagged.
8. Existing phase 4 has been changed to phase 8 on this plan. Change all signal heads, pedestrian signal heads, pedestrian push buttons, and loops as needed to achieve the phasing shown.
9. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
10. Pavement markings are existing.
11. The City Engineer or their representative will determine the hours of use for each phasing plan.
12. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
13. Install GPS emergency preemption system per manufacturer's instructions to achieve preemption needed, as shown in phasing diagram.
14. Rewire all intersection equipment to new cabinet.
15. All proposed pedestrian signal heads shall be black in color. See Project Special Provisions for details.
16. City system data:
    Controller Asset: #0039

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Sign	
	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	
(A)	No Left Turn Sign (R3-2)	(A)
(B)	No Right Turn Sign (R3-1)	(B)
(C)	Type 1A Changeable Trailblazer sign (See Figure 1)	(C)
(D)	Street Name Sign (D3-1)	(D)
(E)	One Way Sign (R6-1)	(E)
(F)	Left "TURNING VEHICLES" Yield "TO" Pedestrians Sign (R10-15L)	(F)

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared For: Transportation Mobility and Safety Division, NORTH CAROLINA DEPARTMENT OF TRANSPORTATION, Signal Design Section

750 N.Greenfield Pkwy,Garner,NC 27529

PLANS PREPARED IN THE OFFICE OF:
Kimley»Horn
NC License #F-0102
421 Fayetteville Street, Suite 600
Raleigh, NC 27601
(919) 677-2000

US 29-74-NC 274
(E. Franklin Boulevard)
at
US 321 N (York Street)

Division 12 Gaston County Gastonia

PLAN DATE:	May 2021	REVIEWED BY:	SL Phillips
PREPARED BY:	CF Davis	REVIEWED BY:	KP Baumann

SCALE 0 20 1"=20'

REVISIONS	INIT.	DATE

NORTH CAROLINA PROFESSIONAL SEAL 044434 ENGINEER KEVIN P. BAUMANN

DocuSigned by: 3/11/2022
SIGNATURE DATE

SIG. INVENTORY NO. 12-0039