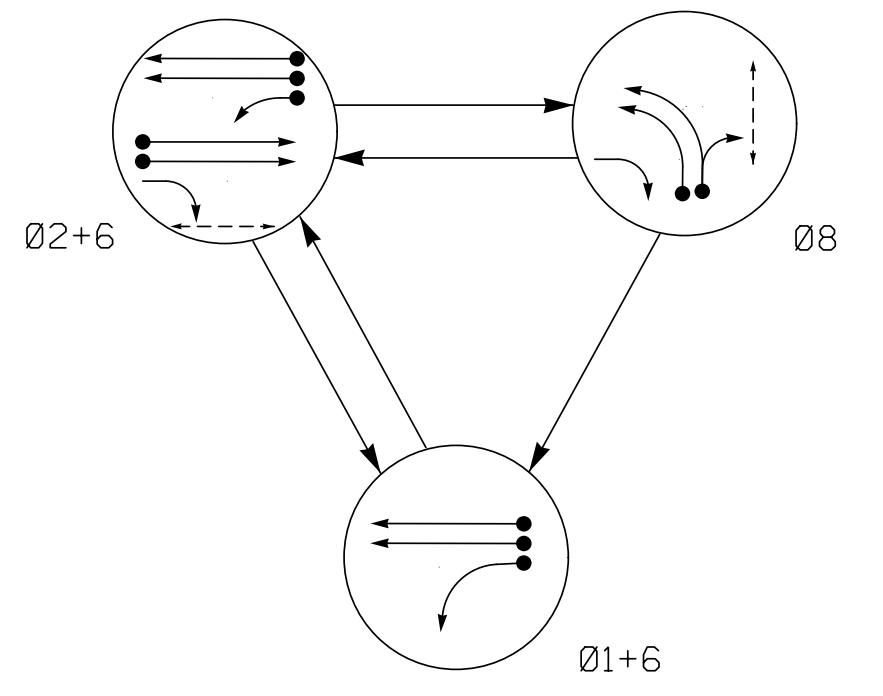


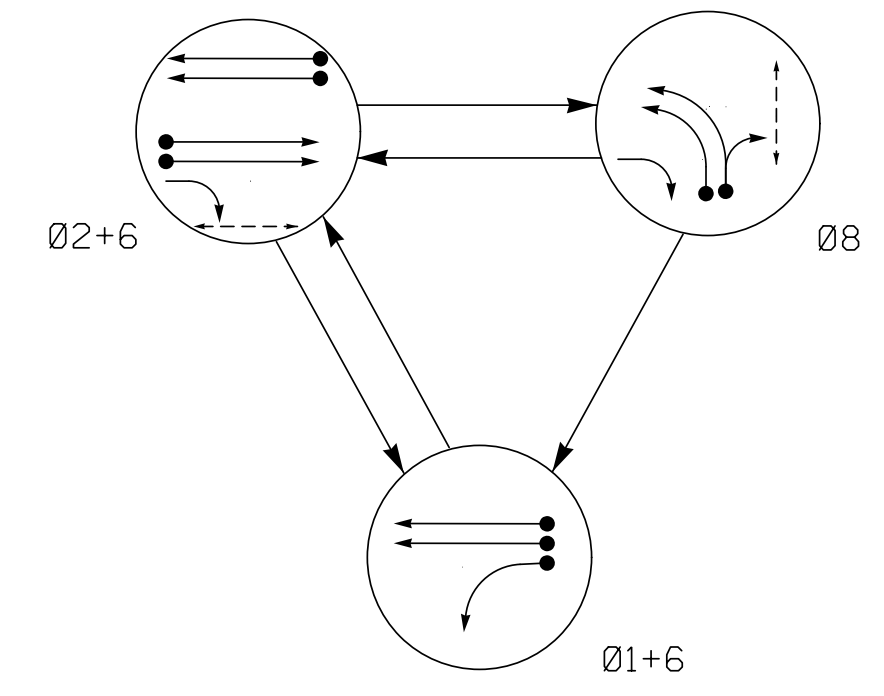
DEFAULT PHASING DIAGRAM



DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE			
	Ø 1+6	Ø 2+6	Ø 8	FLASH
11	←	←	←	←
21	R	G	R	Y
22	R	G	R	Y
61, 62	G	G	R	Y
81, 82	R	R	G	R
P21, P22	DW	W	DW	DRK
P81, P82	DW	DW	W	DRK

ALTERNATE PHASING DIAGRAM



ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE			
	Ø 1+6	Ø 2+6	Ø 8	FLASH
11	←	←	←	←
21	R	G	R	Y
22	R	G	R	Y
61, 62	G	G	R	Y
81, 82	R	R	G	R
P21, P22	DW	W	DW	DRK
P81, P82	DW	DW	W	DRK

DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	USE ADDED INITIAL	TYPE	LOOP	NEW CARD
1A	6X60	0	2-4-2	-	1	Yes	-	10*	-	N	-	X
2A	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	300	EXIST	-	2	Yes	-	-	X	N	-	X
6A	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	300	EXIST	-	6	Yes	-	-	X	N	-	X
8A	6X20	0	EXIST	-	8	Yes	-	3	-	N	-	X
8B	6X20	+5	EXIST	-	8	Yes	-	5	-	N	-	X

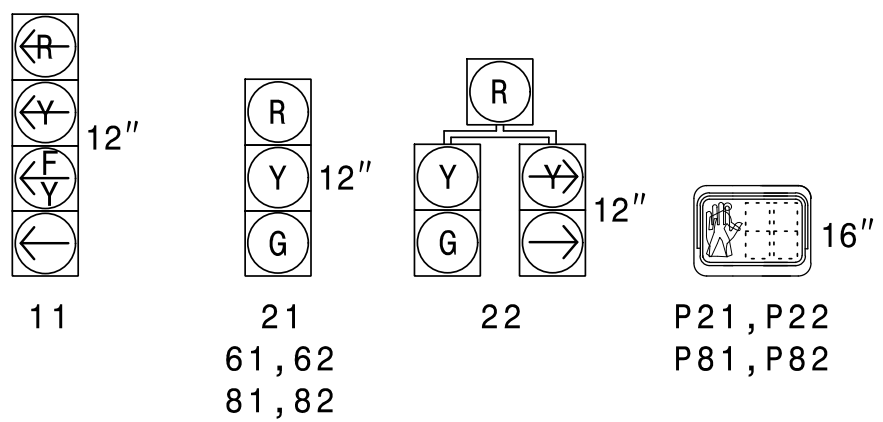
* Disable Delay during Alternate Phasing operation.
Disable Phase call for loop during Alternate Phasing operation.

PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

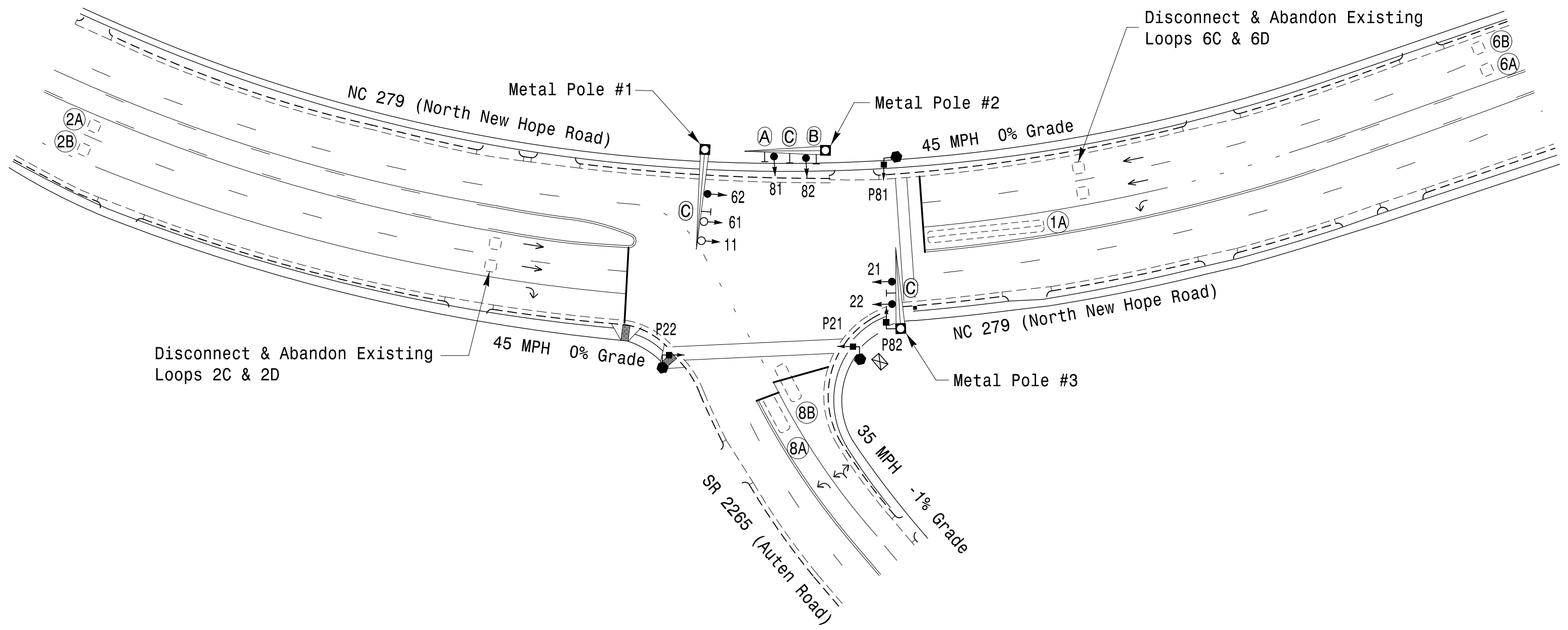
All Heads L.E.D.



TIMING CHART

FEATURE	PHASE			
	1	2	6	8
Min Green *	7	12	12	7
Walk *	-	7	-	7
Ped Clear	-	22	-	17
Veh. Extension *	1.0	6.0	6.0	2.0
Max I *	15	60	60	30
Yellow	3.0	4.5	4.5	3.0
Red Clear	3.6	2.3	2.3	3.6
Red Revert	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-
Seconds / Actuation *	-	1.5	1.5	-
Max Initial *	-	34	34	-
Time Before Reduction *	-	15	15	-
Time To Reduce *	-	30	30	-
Minimum Gap	-	3.0	3.0	-
Locking Detector	-	X	X	-
Recall Position	-	MIN RECALL	MIN RECALL	-
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.



3 Phase Fully Actuated w/ Alternate Phasing Operation 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 may be lagged.
- Reposition existing signal head numbered 62.
- 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.
- Disconnect and abandon existing loops 2C, 2D, 6C, & 6D.
- 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.
- Reconnect lead-in cable to separate loops 2A, 2B, 6A, & 6B, as shown.
- Do NOT install backplates on Metal Pole #1.
- 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.
- City system data:
Controller Asset #0173.

LEGEND

- | | | | |
|--|---|--|---|
| | Proposed Traffic Signal Head | | Existing Traffic Signal Head |
| | Proposed Modified Signal Head | | Existing Modified Signal Head |
| | Proposed Pedestrian Signal Head | | Existing Pedestrian Signal Head |
| | Proposed Type II Signal Pedestal | | Existing Type II Signal Pedestal |
| | Proposed Metal Pole with Mastarm | | Existing Metal Pole with Mastarm |
| | Proposed Inductive Loop Detector | | Existing Inductive Loop Detector |
| | Proposed Controller & Cabinet | | Existing Controller & Cabinet |
| | Proposed Junction Box | | Existing Junction Box |
| | Proposed Underground Conduit | | Existing Underground Conduit |
| | Proposed Directional Arrow | | Existing Directional Arrow |
| | Proposed Left Arrow "ONLY" Sign (R3-5L) | | Existing Left Arrow "ONLY" Sign (R3-5L) |
| | Proposed Dual Turn Arrows Sign (R3-18) | | Existing Dual Turn Arrows Sign (R3-18) |
| | Proposed Street Name Sign (D3-1) | | Existing Street Name Sign (D3-1) |

Signal Upgrade

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

Prepared For:
TRANSFORMATION MOBILITY AND SAFETY DIVISION
DEPARTMENT OF TRANSPORTATION
SIGNAL DESIGN SECTION

750 N. Greenfield Pkwy, Garner, NC 27529
SCALE: 0 50
1" = 50'

NC 279 (North New Hope Road) at SR 2265 (Auten Road)			
Division 12	Gaston County	Gastonia	
PLAN DATE: May 2021	REVIEWED BY: SL Phillips		
PREPARED BY: EE Dogbe	REVIEWED BY: KP Baumann		
REVISIONS	INIT.	DATE	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Seal of the State of North Carolina Professional Engineer
KEVIN P. BAUMANN
SEAL 044434
DATE: 3/11/2022
SIGNED BY: [Signature]
DATE: [Blank]
SIGNED BY: [Blank]
DATE: [Blank]