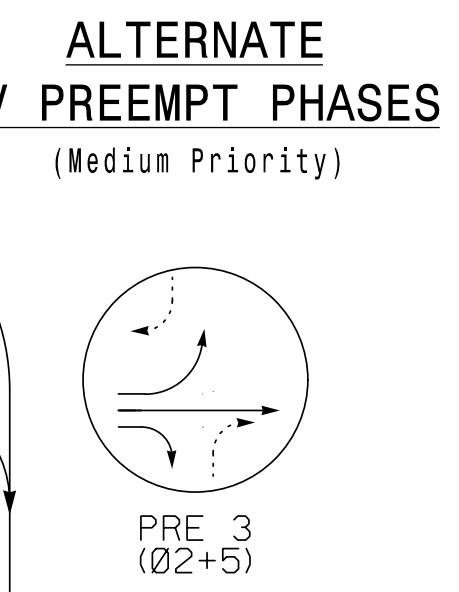
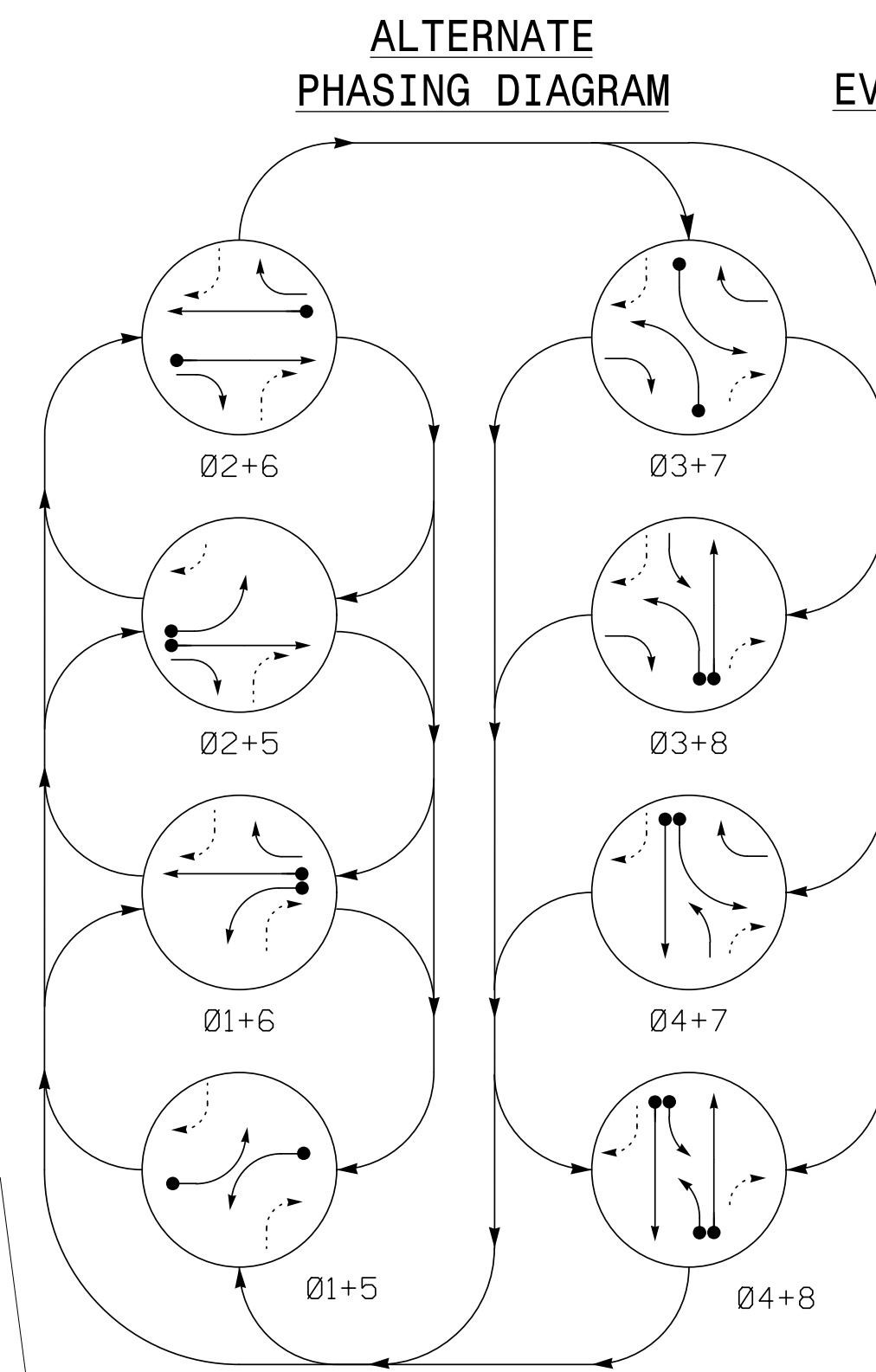


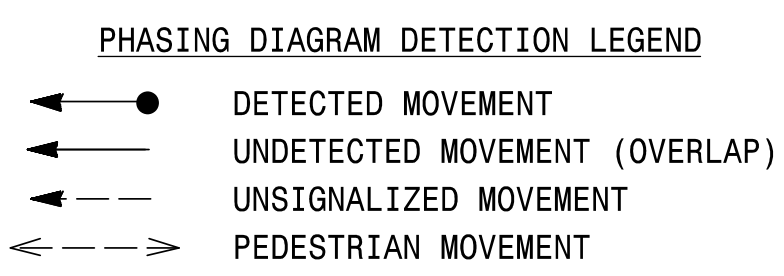
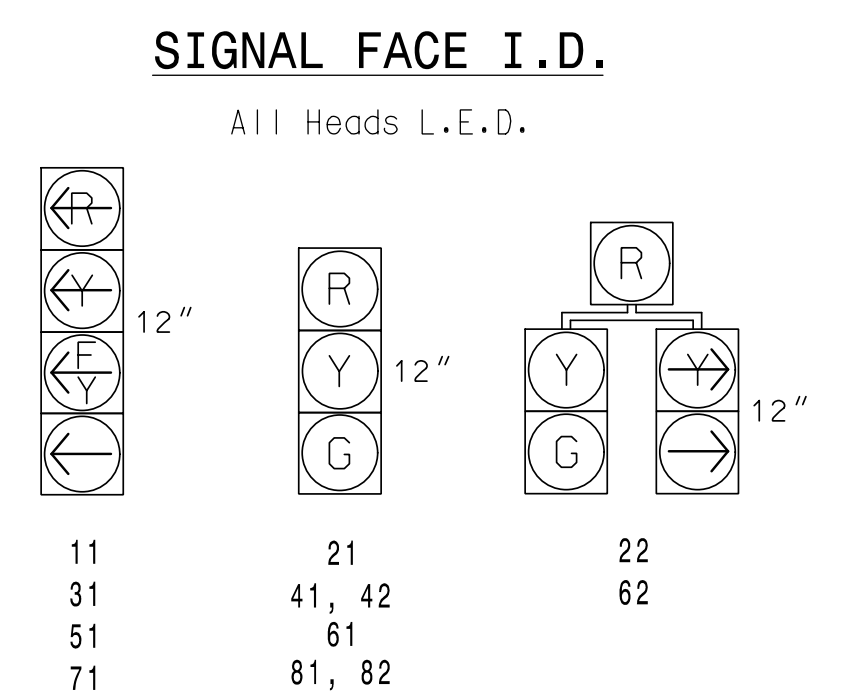
DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE															
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	P	F	W	P	F	W	P	F
11	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
21	R	R	G	G	R	R	R	R	G	Y						
22	R	R	G	G	R	R	R	R	G	Y						
31	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
41, 42	R	R	R	R	R	R	R	R	G	R	R					
51	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
61	R	G	R	G	R	R	R	R	R	Y						
62	R	G	R	G	R	R	R	R	R	Y						
71	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
81, 82	R	R	R	R	R	R	R	R	G	R	R					



ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE															
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	P	F	W	P	F	W	P	F
11	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
21	R	R	G	G	R	R	R	R	G	Y						
22	R	R	G	G	R	R	R	R	G	Y						
31	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
41, 42	R	R	R	R	R	R	R	R	G	R	R					
51	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
61	R	G	R	G	R	R	R	R	R	Y						
62	R	G	R	G	R	R	R	R	R	Y						
71	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←	←
81, 82	R	R	R	R	R	R	R	R	G	R	R					

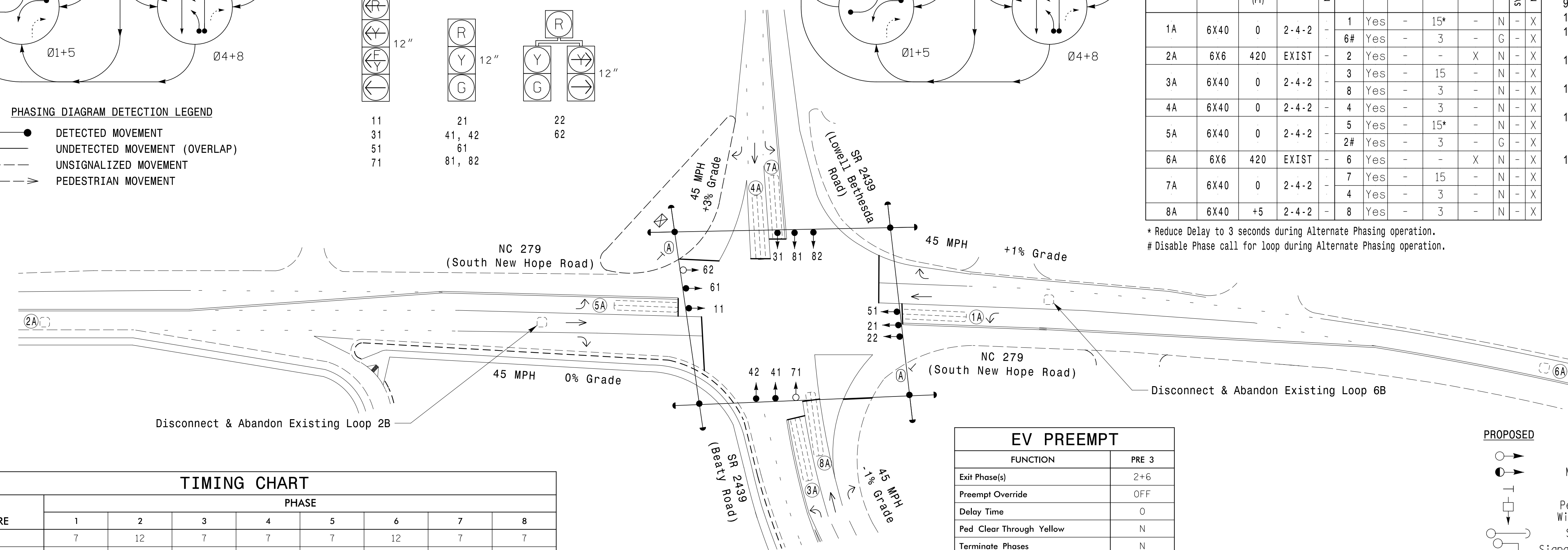


DETECTOR INSTALLATION CHART

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	6X40	0	2-4-2	-	1	Yes	-	15*	-	N	-	X
2A	6X6	420	EXIST	-	2	Yes	-	-	X	N	-	X
3A	6X40	0	2-4-2	-	3	Yes	-	15	-	N	-	X
4A	6X40	0	2-4-2	-	4	Yes	-	3	-	N	-	X
5A	6X40	0	2-4-2	-	5	Yes	-	15*	-	N	-	X
6A	6X6	420	EXIST	-	2#	Yes	-	3	-	G	-	X
7A	6X40	0	2-4-2	-	7	Yes	-	15	-	N	-	X
8A	6X40	+5	2-4-2	-	8	Yes	-	3	-	N	-	X

8 Phase Fully Actuated w/ Alternate Phasing Operation and 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.
 - Phase 3 and/or phase 7 may be lagged.
 - Set all detector units to presence mode.
 - 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 2B and 6B
 - 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.
 - Existing signal heads 42 & 43 have been relabeled to 41 & 42, respectively.
 - Existing loops 4A & 4B have been relabeled to 7A & 4A, respectively.
 - Existing GPS emergency preemption system per manufacturer's instructions to achieve preemption needed, as shown in phasing diagram.
 - City of system data:
Controller Asset #0357.

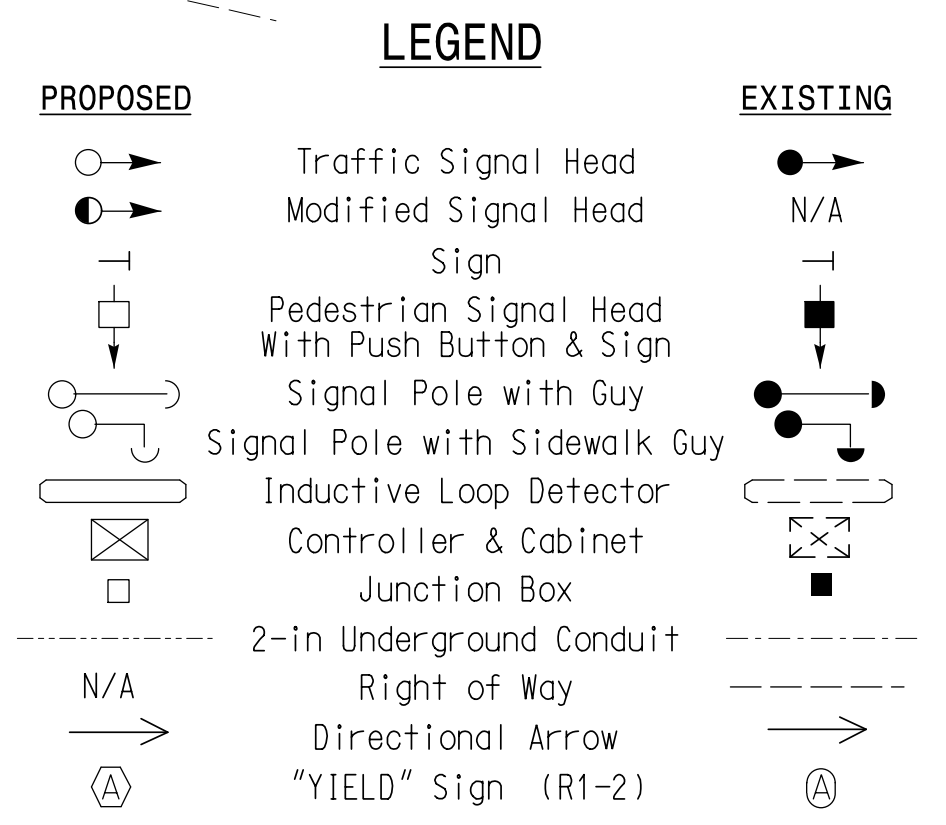


TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Walk *	-	-	-	-	-	-	-	-
Ped Clear	-	-	-	-	-	-	-	-
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max 1 *	20	50	15	30	20	50	15	30
Yellow	3.0	4.5	3.0	4.6	3.0	4.5	3.0	4.6
Red Clear	3.3	1.9	2.8	1.5	2.9	1.9	2.1	1.5
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	-	-	-	-	-	-	-	-
Seconds / Actuation *	-	2.5	-	-	-	2.5	-	-
Max Initial *	-	46	-	-	-	46	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	5.1	-	-	-	5.1	-	-
Locking Detector	-	X	-	-	-	X	-	-
Recall Position	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Dual Entry	-	-	-	X	-	-	-	X
Simultaneous Gap	X	X	X	X	X	X	X	X

EV PREEMPT

FUNCTION	PRE 3
Exit Phase(s)	2+6
Preempt Override	OFF
Delay Time	0
Ped Clear Through Yellow	N
Terminate Phases	N
Entrance Walk	0
Entrance Ped Clear	0
Entrance Min Green	1
Entrance Yellow Change	25.5*
Entrance Red Clear	25.5*
Minimum Dwell Time	10
Preempt Input Extension Time **	2
Preempt Max Time	75
Exit Yellow Change	25.5*
Exit Red Clear	25.5*



Signal Upgrade

Prepared For: **NC 279 (South New Hope Road) at SR 2439 (Beaty Road / Lowell Bethesda Road)**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips

PREPARED BY: DM Curri REVIEWED BY: KP Baumann

REVISIONS: _____

INIT. DATE

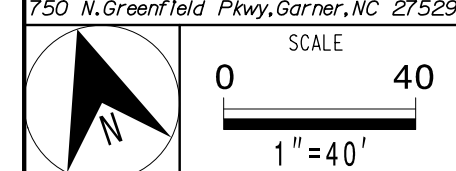
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

Signature: _____ DATE: 3/11/2022

SIG. INVENTORY NO. 12-0357

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



3/9/2022 11:14:31 AM Don'tell,Curri ***K:\meyer-horn.com\SE_RAL\MRAL_TIP\DK-115\011036569_Gastonia Signal System9_Signal\SW4 - Signal Design\0120357-2021.dgn

* 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.

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