PROJECT REFERENCE NO.	SHEET NO.
C-5703	Sig.104.0

DEFAULT PHASING DIAGRAM

Ø2+6

Ø2+5

Ø1+6

Ø1+5

Ø3

Ø4
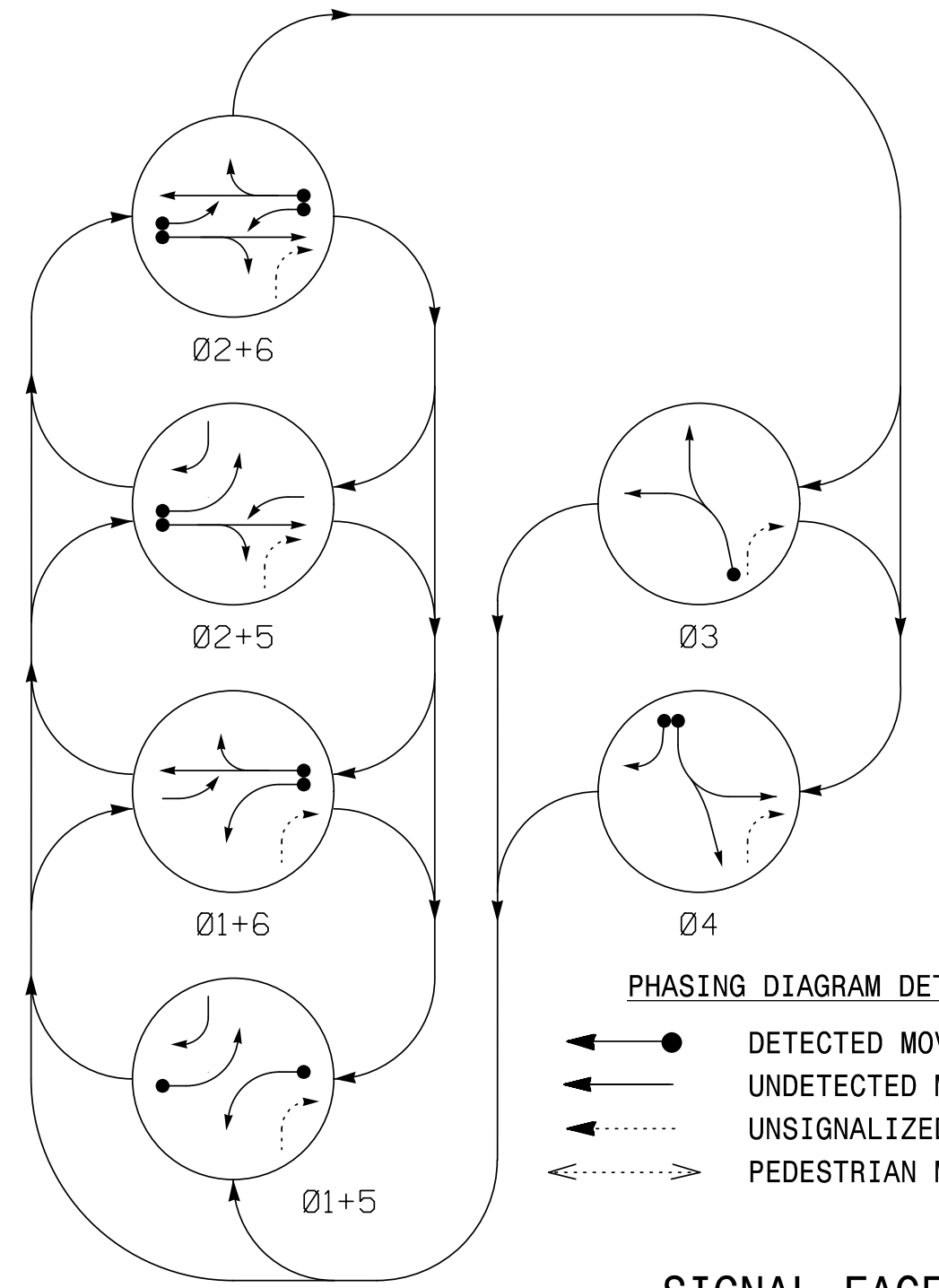
DEFAULT PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE					
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	FLASH
11	←	↑	↑	→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	R	R	R	R	R	G	R
42	R	R	R	R	R	G	R
51	←	↑	↑	→R	→R	→R	Y
61,62	R	G	R	G	R	R	Y

ALTERNATE PHASING DIAGRAM

Ø2+6

Ø2+5

Ø1+6

Ø1+5

Ø3

Ø4
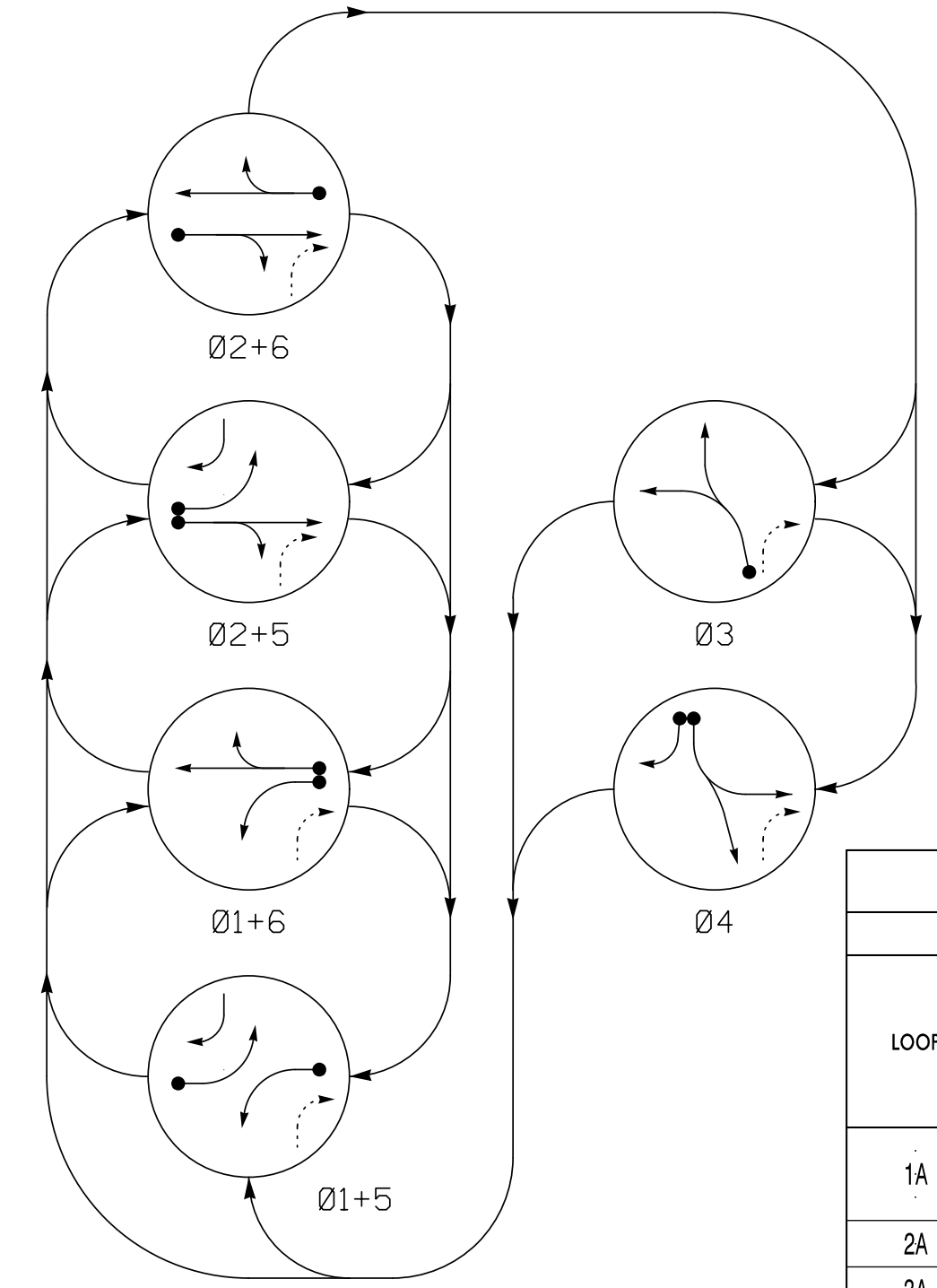
ALTERNATE PHASING TABLE OF OPERATION

SIGNAL FACE	PHASE					
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3	Ø4	FLASH
11							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	R	R	R	R	R	G	R
42	R	R	R	R	R	G	R
51		→R		→R	→R	→R	Y
61,62	R	G	R	G	R	R	Y

6 Phase
Fully Actuated w/
Alternate Phasing Operation
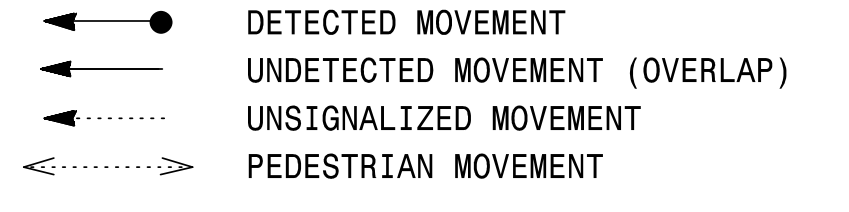## Gastonia Signal System

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 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. 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. The City Engineer or their representative will determine the hours of use for each phasing plan.
10. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
11. Install new cabinet on the existing cabinet foundation.
12. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
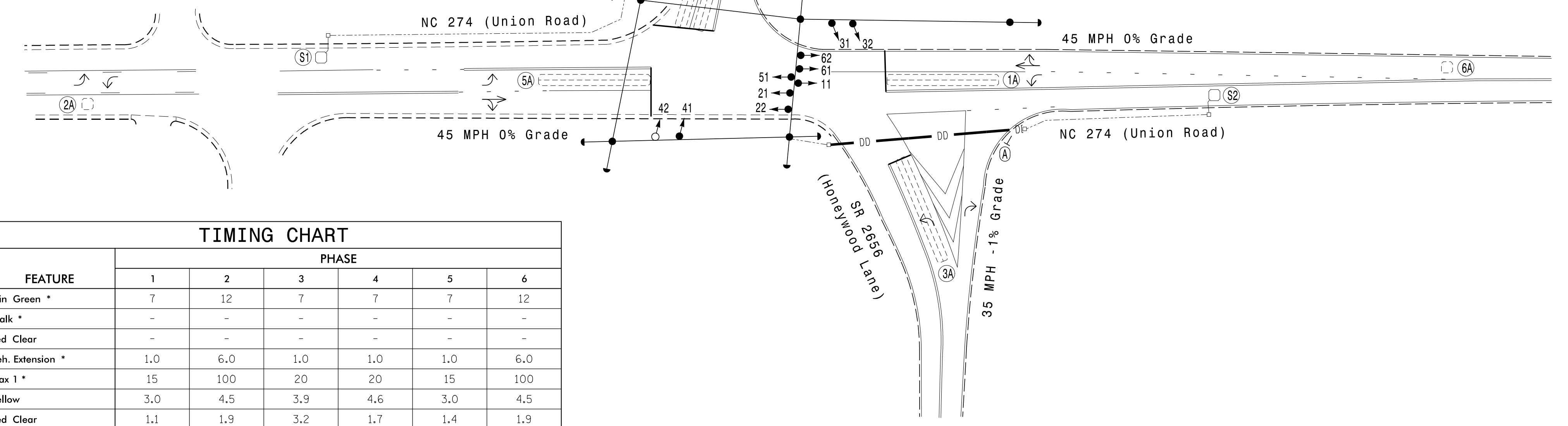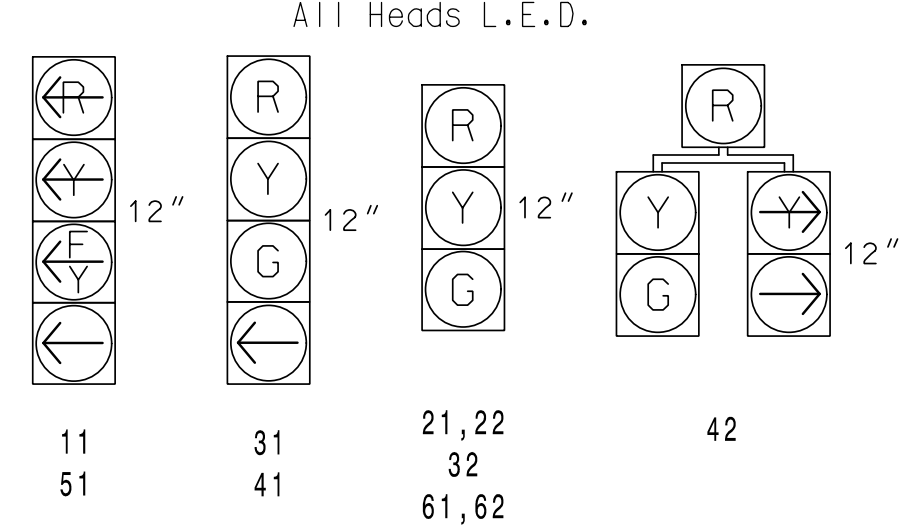13. City of system data:
    Controller Asset #1304.

PHASING DIAGRAM DETECTION LEGEND

— DETECTED MOVEMENT
← UNDETECTED MOVEMENT (OVERLAP)
···· UNSIGNALIZED MOVEMENT
⇠ PEDESTRIAN MOVEMENT

SIGNAL FACE I.D.

All Heads L.E.D.

11
51

31
41

21,22
32
61,62

42

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	6X60	0	2-4-2	–	1	Yes	–	15 *	–	N	–	X
					6#	Yes	–	3	–	G	–	X
2A	6X6	300	EXIST		2	Yes	–	–	X	N	–	X
3A	6X60	0	2-4-2	–	3	Yes	–	3	–	N	–	X
4A	6X60	0	2-4-2	–	4	Yes	–	3	–	N	–	X
4B	6X60	0	2-4-2	–	4	Yes	–	15	–	N	–	X
5A	6X60	0	2-4-2	–	5	Yes	–	15 *	–	N	–	X
					2#	Yes	–	3	–	G	–	X
6A	6X6	300	EXIST		6	Yes	–	–	X	N	–	X
S1	6X6	+300	6	X	–	No	–	–	–	N	X	X
S2	6X6	+300	6	X	–	No	–	–	–	N	X	X

* Reduce delay to 3 sec. during Alternate phasing operation.
\# Disable Phase call for loop during Alternate Phasing operation.

NC 274 (Union Road)

SR 2200 (Gaston Day School Road)

SR 2656 (Honeywood Lane)

40 MPH -1% Grade
45 MPH 0% Grade
45 MPH 0% Grade
35 MPH -1% Grade

TIMING CHART

FEATURE	PHASE					
	1	2	3	4	5	6
Min Green *	7	12	7	7	7	12
Walk *	–	–	–	–	–	–
Ped Clear	–	–	–	–	–	–
Veh. Extension *	1.0	6.0	1.0	1.0	1.0	6.0
Max 1 *	15	100	20	20	15	100
Yellow	3.0	4.5	3.9	4.6	3.0	4.5
Red Clear	1.1	1.9	3.2	1.7	1.4	1.9
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Actuations B4 Add *	–	–	–	–	–	–
Seconds /Actuation *	–	2.5	–	–	–	2.5
Max Initial *	–	34	–	–	–	34
Time Before Reduction *	–	20	–	–	–	20
Time To Reduce *	–	35	–	–	–	35
Minimum Gap	–	3.0	–	–	–	3.0
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.

LEGEND

PROPOSED | | EXISTING
| Traffic Signal Head |
| Modified Signal Head | N/A
| Sign |
| Pedestrian Signal Head With Push Button & 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 |
Ⓐ | "YIELD" Sign (R1-2) | Ⓐ
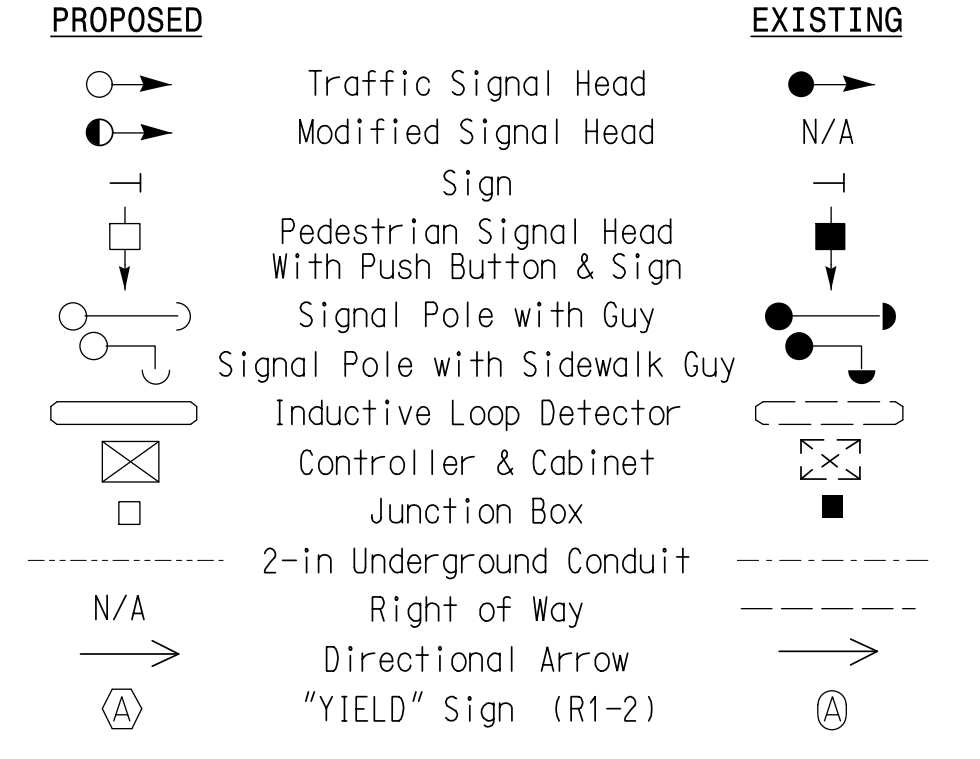
Signal Upgrade

NC 274 (Union Road)
at
SR 2200 (Gaston Day School Road) / SR 2656 (Honeywood Lane)

Division 12   Gaston County   Gastonia

PLANS PREPARED IN THE OFFICE OF:

Kimley»Horn

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(919) 677-2000

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

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

REVISIONS	INIT.	DATE

SEAL 044434

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SIGNATURE   3/11/2022
DATE

SIG. INVENTORY NO.   12-1304