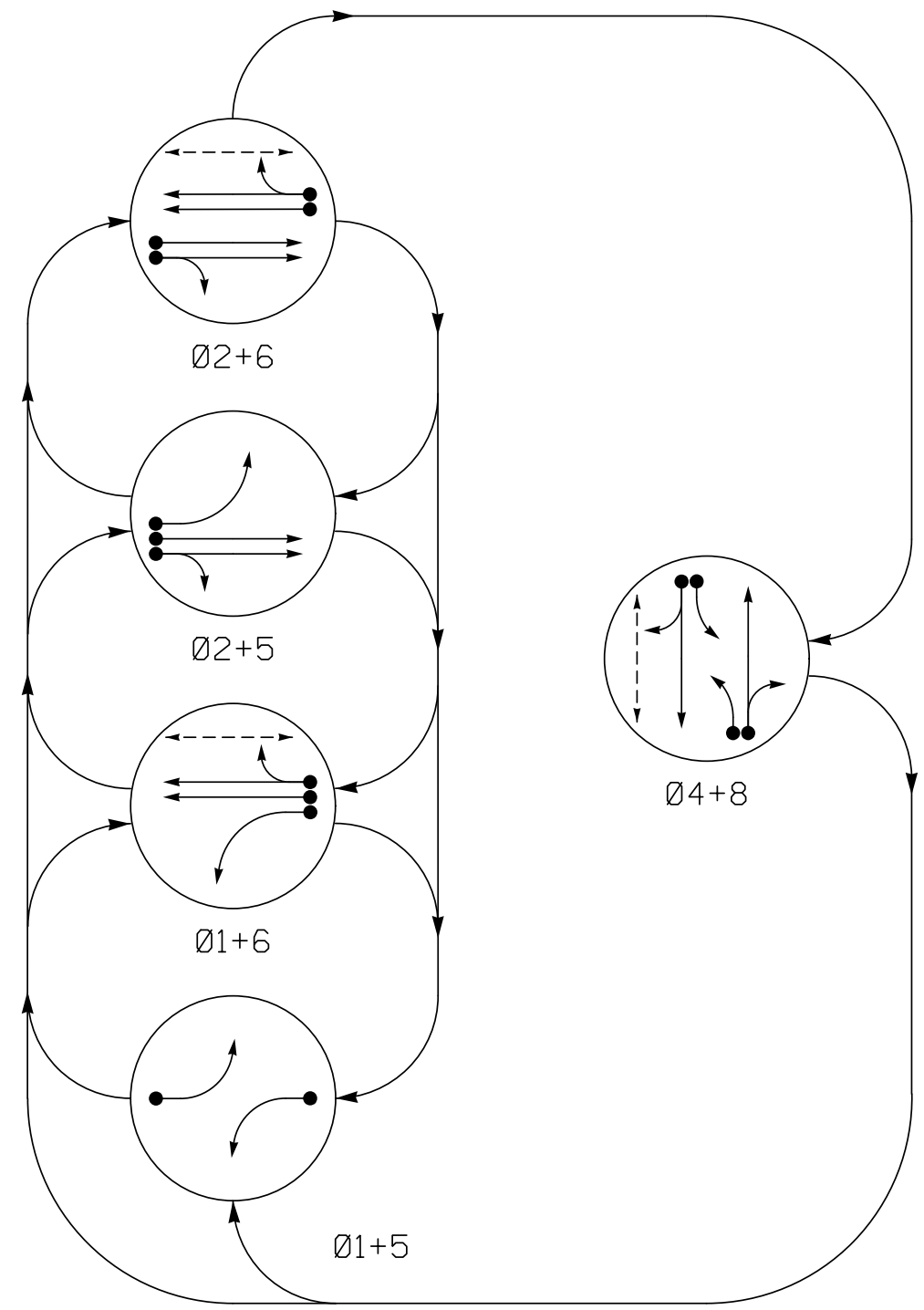


5 Phase Fully Actuated Gastonia Signal System

PHASING DIAGRAM



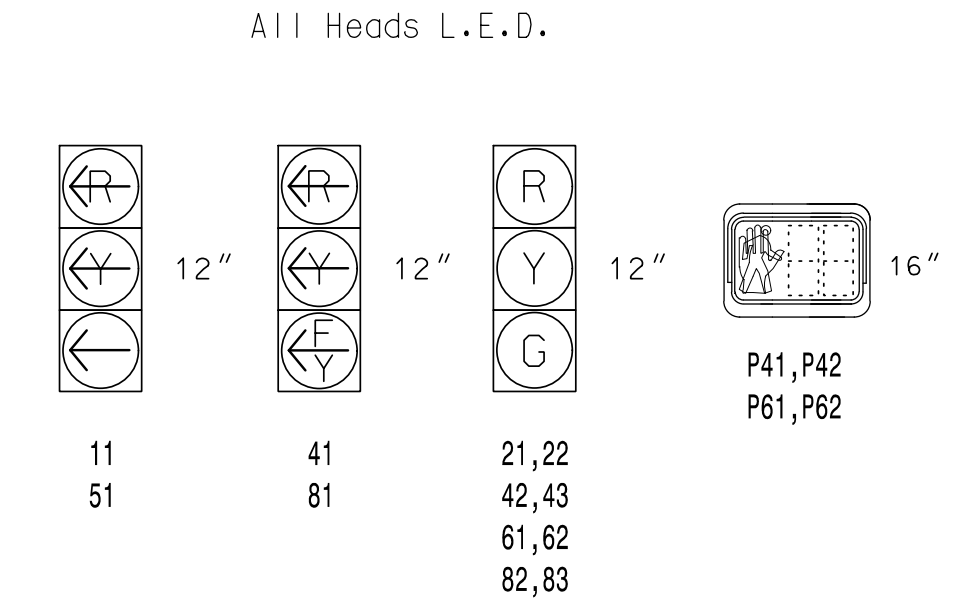
PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE						
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	W	DRK
11	←	←	→	→	←	→	→
21,22	R	R	G	G	R	Y	
41	←	←	→	→	←	→	→
42,43	R	R	R	R	G	R	
51	←	←	→	→	←	→	→
61,62	R	G	R	G	R	Y	
81	←	←	→	→	←	→	→
82,83	R	R	R	R	G	R	
P41,P42	DW	DW	DW	DW	W	DRK	
P61,P62	DW	W	DW	W	DW	DRK	

SIGNAL FACE I.D.



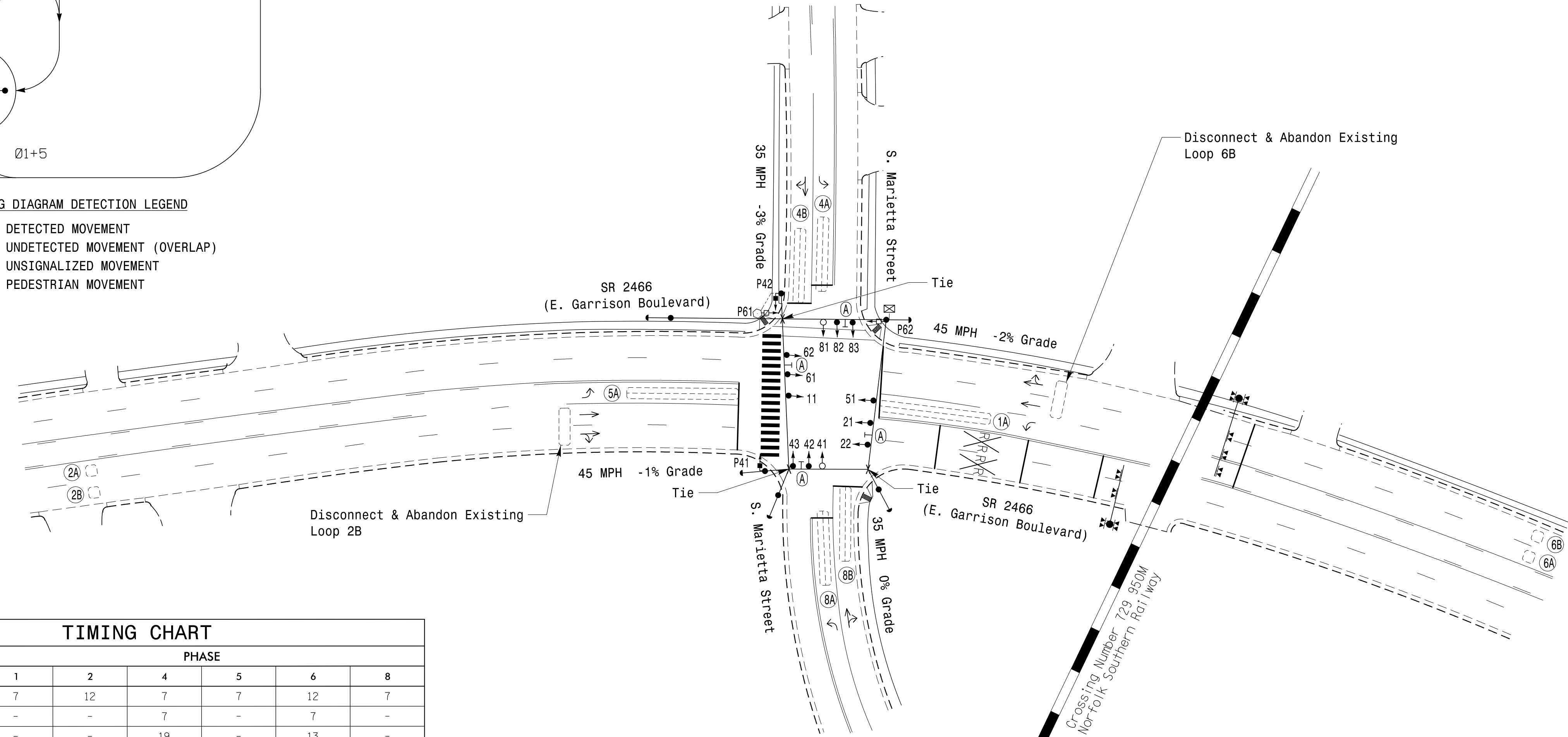
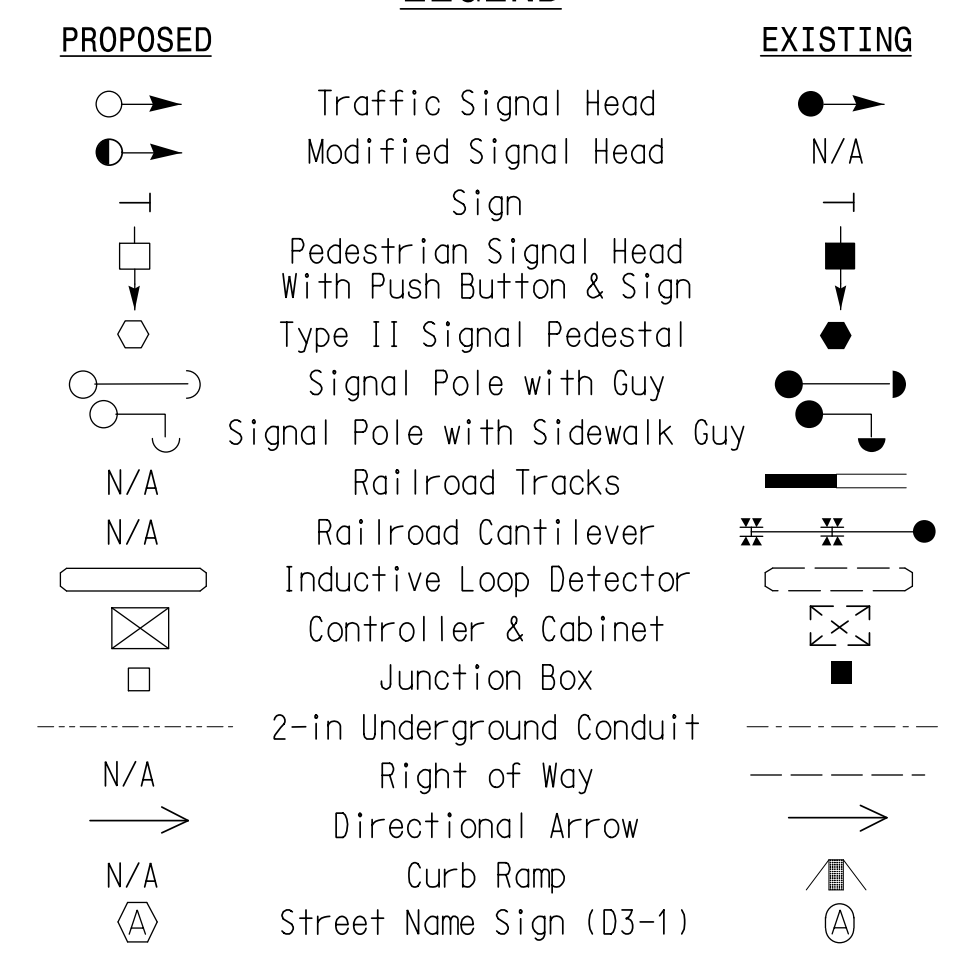
DETECTOR INSTALLATION CHART

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	-	-	-	N	-	X
2A	6X6	345	EXIST	-	2	Yes	-	-	X	N	-	X
2B	6X6	345	EXIST	-	2	Yes	-	-	X	N	-	X
4A	6X40	+5	2-4-2	-	4	Yes	-	-	-	N	-	X
4B	6X40	0	2-4-2	-	4	Yes	-	-	-	N	-	X
5A	6X60	0	2-4-2	-	5	Yes	-	-	-	N	-	X
6A	6X6	345	EXIST	-	6	Yes	-	-	X	N	-	X
6B	6X6	345	EXIST	-	6	Yes	-	-	X	N	-	X
8A	6X60	+5	2-4-2	-	8	Yes	-	-	-	N	-	X
8B	6X60	0	2-4-2	-	8	Yes	-	-	-	N	-	X

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. Reposition existing signal heads numbered 42, 43, 82, & 83.
5. 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.
6. Set all detector units to presence mode.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
9. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
10. Pavement markings are existing.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
12. Disconnect and abandon existing loops 2B & 6B.
13. Install new cabinet on the existing cabinet foundation.
14. All new cabinets and base extenders shall be black in color. See Project Special Provisions for details.
15. Reconnect lead-in cable to separate loops 2A, 2B, 6A & 6B, as shown.
16. Existing signal heads 41, 42, 81, & 82 have been relabeled to 42, 43, 82, & 83, respectively.
17. All proposed pedestrian signal heads shall be black in color. See Project Special Provisions for details.
18. All proposed pedestrian pedestals and pushbutton posts shall be black in color. See Project Special Provisions for details.
19. City of system data:
Controller Asset #0633.

LEGEND



TIMING CHART

FEATURE	PHASE						
	1	2	4	5	6	8	
Min Green *	7	12	7	7	12	7	
Walk *	-	-	7	-	7	-	
Ped Clear	-	-	19	-	13	-	
Veh. Extension *	2.0	6.0	2.0	1.0	6.0	2.0	
Max I *	15	55	30	15	55	30	
Yellow	3.0	4.6	4.1	3.0	4.7	4.1	
Red Clear	1.9	1.0	2.0	2.3	1.0	2.0	
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	
Actuations B4 Add *	-	-	-	-	-	-	
Seconds / Actuation *	-	1.5	-	-	1.5	-	
Max Initial *	-	39	-	-	39	-	
Time Before Reduction *	-	15	-	-	15	-	
Time To Reduce *	-	30	-	-	30	-	
Minimum Gap	-	3.8	-	-	4.8	-	
Locking Detector	-	X	-	-	X	-	
Recall Position	-	MIN RECALL	-	-	MIN RECALL	-	
Dual Entry	-	-	X	-	-	X	
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 Upgrade

Prepared For:

 750 N. Greenfield Pkwy, Garner, NC 27529
 NC License #0102
 421 Fayetteville Street, Suite 600
 Raleigh, NC 27601
 (919) 617-2000

**SR 2466 (E. Garrison Boulevard)
at
S. Marietta Street**

Division 12 Gaston County Gastonia

PLAN DATE: May 2021 REVIEWED BY: SL Phillips

PREPARED BY: CF Davis REVIEWED BY: KP Baumann

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

Discussed by:

 DATE: 3/11/2022

SIG. INVENTORY NO. 12-0633