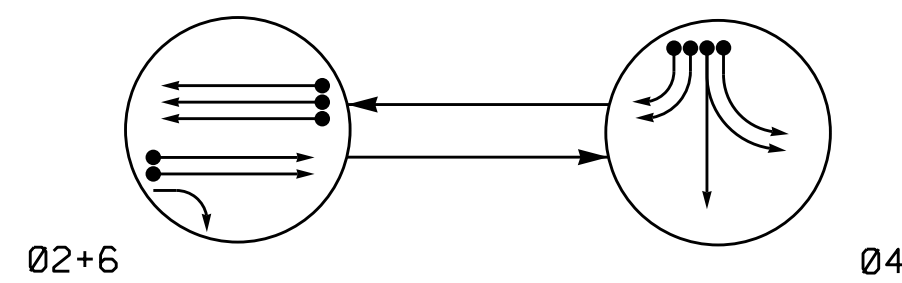


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

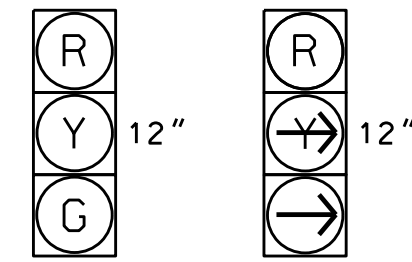
- ← DETECTED MOVEMENT
- ← UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ← -- --> PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE		
	02+6	04	FLASH
21, 22	G	R	Y
41, 42	R	G	R
43, 44	R	---	R
61, 62, 63	G	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



21, 22
41, 42
61, 62, 63

43, 44

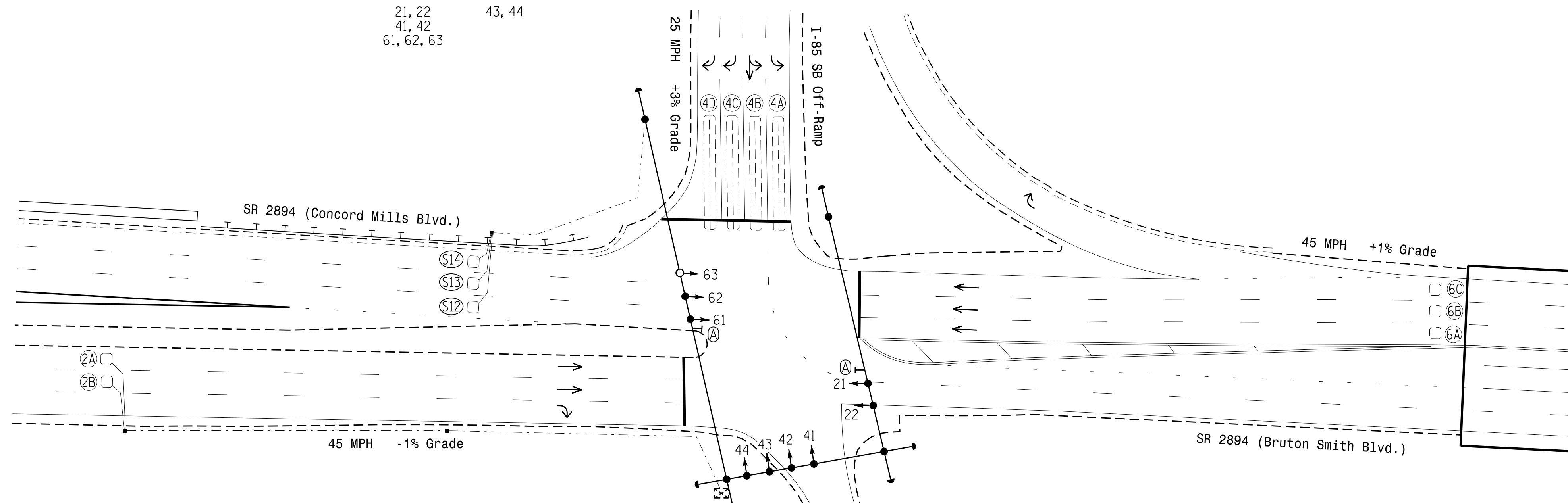
ASC/3 DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING				TYPE	SYSTEM LOOP	NEW CARD
					PHASE	CALLING	EXTEND TIME	DELAY TIME			
2A	6X6	300	4	Y	2	Yes	-	-	S	-	-
2B	6X6	300	4	Y	2	Yes	-	-	S	-	-
4A	6X60	+5	2-4-2	-	4	Yes	-	-	S	-	-
4B	6X60	+5	2-4-2	-	4	Yes	-	-	S	-	-
4C	6X60	+5	2-4-2	-	4	Yes	-	15	S	-	-
4D	6X60	+5	2-4-2	-	4	Yes	-	15	S	-	-
6A	6X6	300	4	-	6	Yes	-	-	S	-	-
6B	6X6	300	4	-	6	Yes	-	-	S	-	-
6C	6X6	300	4	-	6	Yes	-	-	S	-	-
S12	6X6	+200	4	Y	-	-	-	-	N	Y	-
S13	6X6	+200	4	Y	-	-	-	-	N	Y	-
S14	6X6	+200	4	Y	-	-	-	-	N	Y	-

2 Phase Fully Actuated Concord City Signal System

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Reposition existing signal heads numbered 61 and 62.
- Reposition existing signs "A".
- Set all detector units to presence mode.
- In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset #: 1522



FEATURE	PHASE		
	2	4	6
Min Green *	12	7	12
Walk *	-	-	-
Ped Clear	-	-	-
Veh. Extension *	6.0	1.0	6.0
Max I *	90	25	90
Yellow	4.6	3.1	4.6
Red Clear	1.7	3.1	1.7
Red Revert	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 *	45	-	45
Minimum Gap	3.0	-	3.0
Locking Detector	X	-	X
Recall Position	VEH. RECALL	-	VEH. RECALL
Dual Entry	-	-	-
Simultaneous Gap	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 | ● → N/A |
| ● → Modified Signal Head | ○ → N/A |
| ⊥ Sign | ⊥ N/A |
| ⊥ Pedestrian Signal Head With Push Button & Sign | ⊥ N/A |
| ○ ⊥ Signal Pole with Guy | ● ⊥ N/A |
| ○ ⊥ Signal Pole with Sidewalk Guy | ● ⊥ N/A |
| ⊠ Inductive Loop Detector | ⊠ N/A |
| □ Controller & Cabinet | □ N/A |
| □ Junction Box | □ N/A |
| --- 2-in Underground Conduit | --- N/A |
| N/A Right of Way | N/A Right of Way |
| → Directional Arrow | → N/A |
| (A) No Left Turn Sign (R3-2) | (A) N/A |

Signal Upgrade - Final Design

Prepared in the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

SR 2894 (Concord Mills Blvd./ Bruton Smith Blvd.)
at
I-85 SB Ramps

Division 10 Cabarrus County Concord

PLAN DATE: August 2017 REVIEWED BY: T.J. Williams

PREPARED BY: R.N. Zinser REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

9/25/2017

DATE

SIG. INVENTORY NO. 10-1522