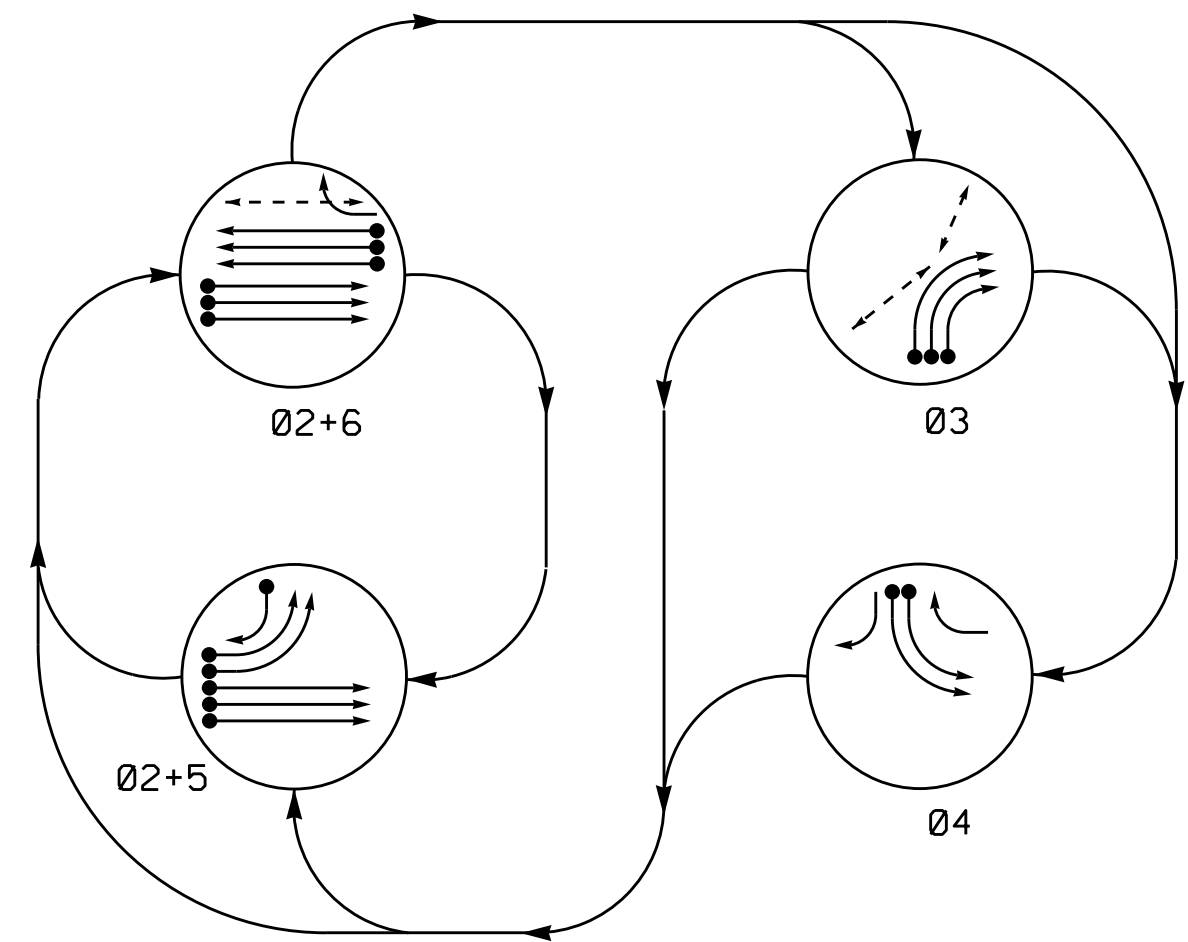


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

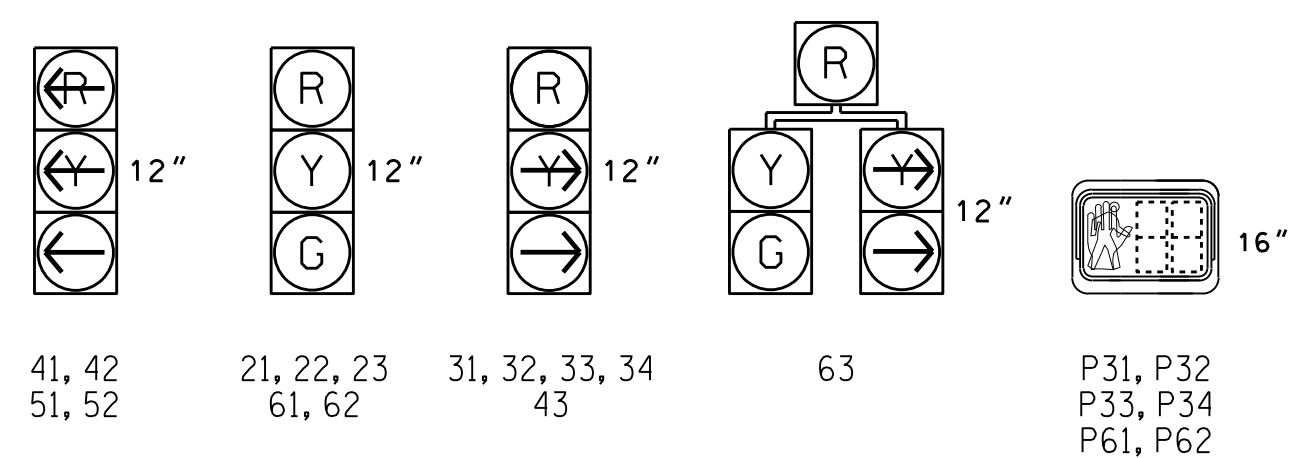
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ⤴ PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE				
	Ø2+5	Ø2+6	Ø3	Ø4	FLYOVER
21, 22, 23	G	G	R	R	Y
31, 32, 33, 34	R	R	---	R	R
41, 42	R	R	R	---	R
43	---	R	R	---	R
51, 52	---	R	R	---	R
61, 62	R	G	R	R	Y
63	R	G	R	---	Y
P31, P32	DW	DW	W	DW	DRK
P33, P34	DW	DW	W	DW	DRK
P61, P62	DW	W	DW	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.

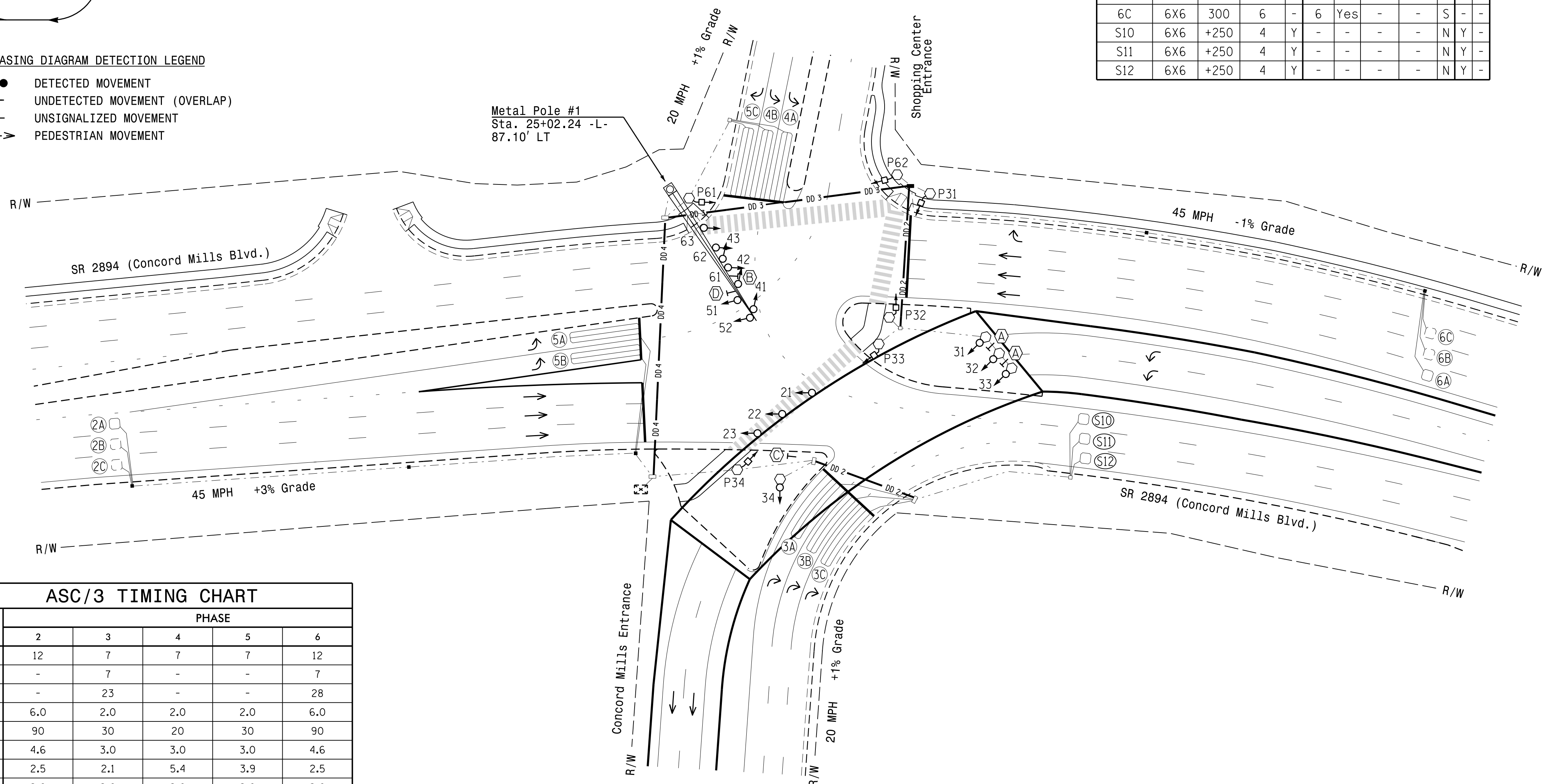


ASC/3 DETECTOR INSTALLATION CHART											
DETECTOR						PROGRAMMING					
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTEND TIME	DELAY TIME	TYPE	SYSTEM LOOP	NEW CARD
2A	6X6	300	4	Y	2	Yes	-	-	S	-	-
2B	6X6	300	4	-	2	Yes	-	-	S	-	-
2C	6X6	300	4	-	2	Yes	-	-	S	-	-
3A	6X40	0	2-4-2	Y	3	Yes	-	-	S	-	-
3B	6X40	0	2-4-2	Y	3	Yes	-	-	S	-	-
3C	6X40	0	2-4-2	Y	3	Yes	-	-	S	-	-
4A	6X40	0	2-4-2	Y	4	Yes	-	-	S	-	-
4B	6X40	0	2-4-2	Y	4	Yes	-	-	S	-	-
5A	6X40	0	2-4-2	Y	5	Yes	-	-	S	-	-
5B	6X40	0	2-4-2	Y	5	Yes	-	-	S	-	-
5C	6X40	0	2-4-2	Y	5	Yes	-	15	S	-	-
6A	6X6	300	6	Y	6	Yes	-	-	S	-	-
6B	6X6	300	6	-	6	Yes	-	-	S	-	-
6C	6X6	300	6	-	6	Yes	-	-	S	-	-
S10	6X6	+250	4	Y	-	-	-	-	N	Y	-
S11	6X6	+250	4	Y	-	-	-	-	N	Y	-
S12	6X6	+250	4	Y	-	-	-	-	N	Y	-

4 Phase Fully Actuated Concord Mills Blvd. CLS

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Signal heads 21, 22, and 23 shall be attached to the bridge flyover as shown.
6. Set all detector units to presence mode.
7. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
8. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
9. Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for pushbutton location details.
10. See Pavement Marking Plans for stop bar and crosswalk locations.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
12. Closed loop system data: Controller Asset #: 1732



FEATURE	PHASE				
	2	3	4	5	6
Min Green *	12	7	7	7	12
Walk *	-	7	-	-	7
Ped Clear	-	23	-	-	28
Veh. Extension *	6.0	2.0	2.0	2.0	6.0
Max 1 *	90	30	20	30	90
Yellow	4.6	3.0	3.0	3.0	4.6
Red Clear	2.5	2.1	5.4	3.9	2.5
Red Revert	2.0	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 *	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	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                            | ● Traffic Signal Head                        |
| ○ Modified Signal Head                           | N/A  |
| ○ Pedestrian Signal Head With Push Button & Sign | ○ Pedestrian Signal Head                     |
| ○ Signal Pole with Guy                           | ○ Signal Pole with Sidewalk Guy              |
| ○ Inductive Loop Detector                        | ○ Inductive Loop Detector                    |
| ○ Controller & Cabinet                           | ○ Junction Box                               |
| ○ Oversized Junction Box                         | ○ Junction Box                               |
| --- 2-in Underground Conduit                     | --- 2-in Underground Conduit                 |
| --- Directional Drill                            | N/A  |
| --- Right of Way                                 | --- Right of Way                             |
| --- Directional Arrow                            | --- Directional Arrow                        |
| ○ Metal Pole with Mastarm                        | ○ Metal Pole with Mastarm                    |
| ○ Type II Signal Pedestal                        | ○ Type II Signal Pedestal                    |
| ○ "NO TURN ON RED" Sign (R10-11)                 | ○ "NO TURN ON RED" Sign (R10-11)             |
| ○ No Left Turn Sign (R3-2)                       | ○ No Left Turn Sign (R3-2)                   |
| ○ No Right Turn Sign (R3-1)                      | ○ No Right Turn Sign (R3-1)                  |
| ○ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)     | ○ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16) |

Signal Upgrade - Final Design

SR 2894 (Concord Mills Blvd.) at Concord Mills Exit / Shopping Center Entrance

Division 10 Cabarrus County Concord

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

PREPARED BY: R.N. Zinser REVIEWED BY:

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE: 1" = 40'

REVISIONS: INIT. DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL: R.N. Zinser, Professional Engineer, License No. 043914

DATE: 9/25/2017

SIG. INVENTORY NO. 10-1732

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