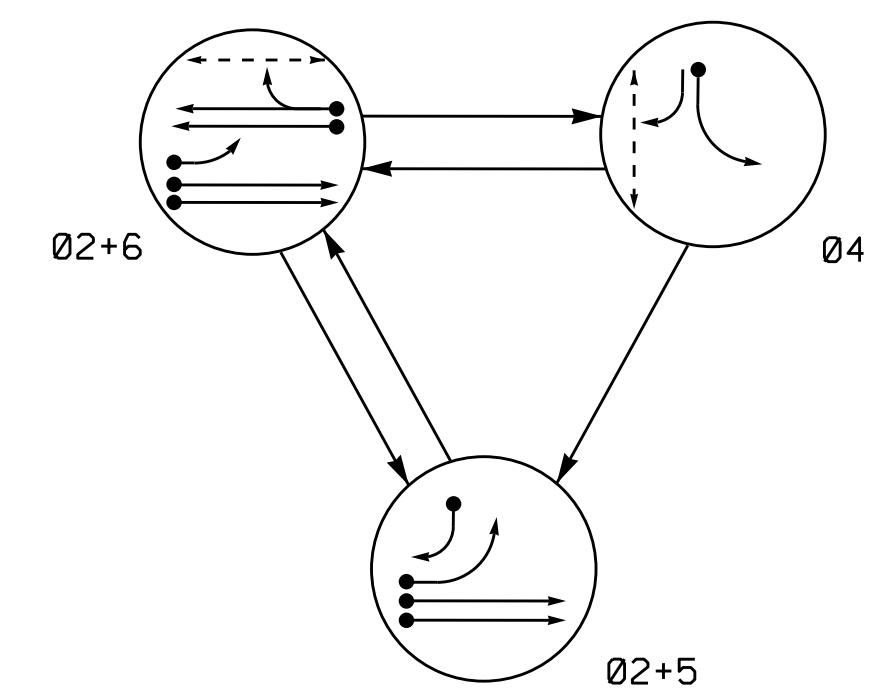


3 Phase Fully Actuated Asheville Signal System

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

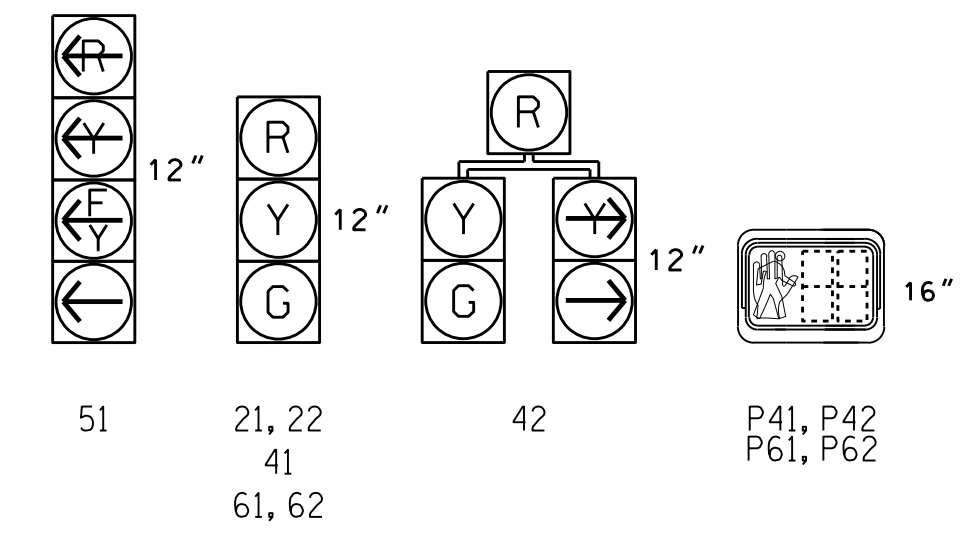
- ◀● DETECTED MOVEMENT
- ◀ UNDETECTED MOVEMENT (OVERLAP)
- ◀--- UNSIGNALIZED MOVEMENT
- ◀- - - PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE			
	02+5	02+6	04	FLS/HS
21, 22	G	G	R	Y
41	R	R	G	R
42	R	R	G	R
51	-	-	-	-
61, 62	R	G	R	Y
P41, P42	DW	DW	W	DRK
P61, P62	DW	W	DW	DRK

SIGNAL FACE I.D.

All Heads L.E.D.

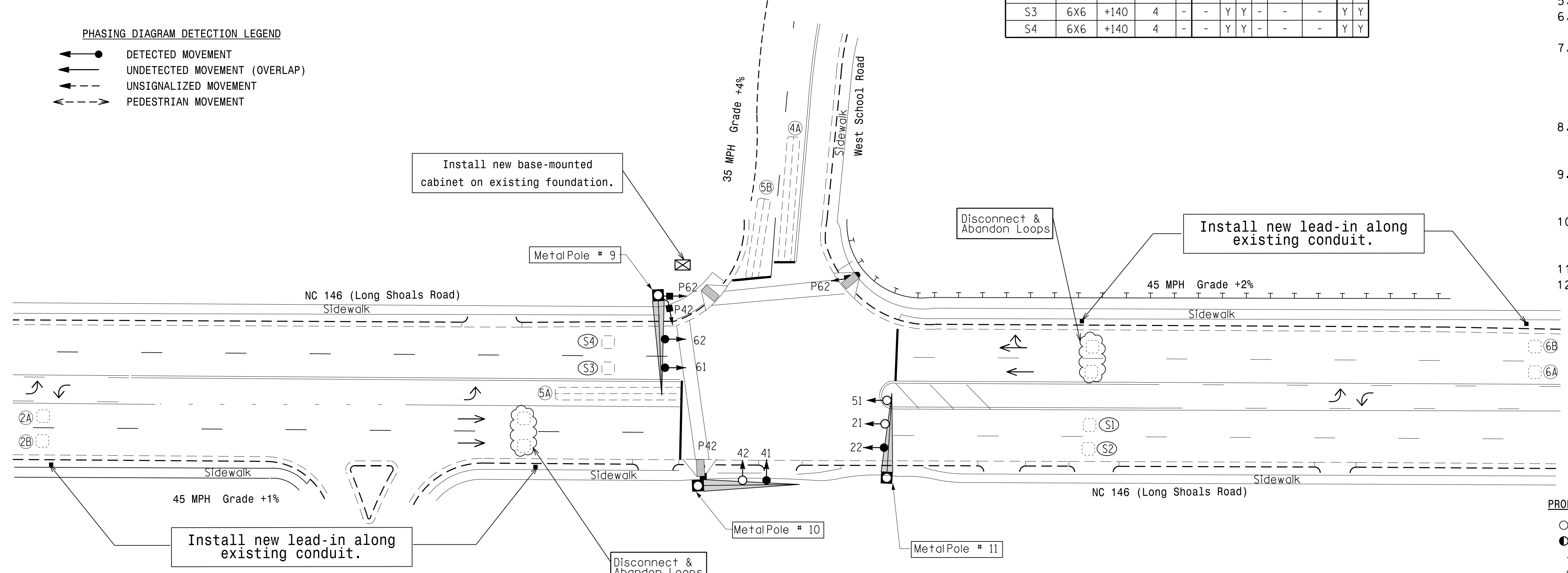


OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	300	5	-	2	Y	Y	-	-	-	-	Y
2B	6X6	300	5	-	2	Y	Y	-	-	-	-	Y
4A	6X6	0	2-4-2	-	4	Y	Y	-	-	-	-	Y
5A	6X6	0	2-4-2	-	5	Y	Y	Y	-	-	15	Y
5B	6X40	0	2-4-2	-	5	Y	Y	-	-	-	10	Y
6A	6X6	300	5	-	6	Y	Y	-	-	-	-	Y
6B	6X6	300	5	-	6	Y	Y	-	-	-	-	Y
S1	6X6	+140	4	-	-	Y	Y	-	-	-	-	Y
S2	6X6	+140	4	-	-	Y	Y	-	-	-	-	Y
S3	6X6	+140	4	-	-	Y	Y	-	-	-	-	Y
S4	6X6	+140	4	-	-	Y	Y	-	-	-	-	Y

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. Reposition head numbered 22.
5. Abandon existing loops as shown.
6. Set all detector units to presence mode.
7. 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.
8. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
9. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
10. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
11. Pavement markings are existing.
12. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



OASIS 2070 TIMING CHART

FEATURE	PHASE			
	2	4	5	6
Min Green 1 *	12	7	7	12
Extension 1 *	2.0	1.0	1.0	2.0
Max Green 1 *	90	45	20	90
Yellow Clearance	4.4	3.0	3.0	4.4
Red Clearance	1.5	2.6	2.6	1.5
Red Revert	2.0	2.0	2.0	2.0
Walk 1 *	-	7	-	7
Don't Walk 1	-	16	-	13
Seconds Per Actuation *	1.8	-	-	1.8
Max Variable Initial *	34	-	-	34
Time Before Reduction *	15	-	-	15
Time To Reduce *	40	-	-	40
Minimum Gap	3.0	-	-	3.0
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

\* 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  |
| ⊥ Sign   | ⊥ Sign   |
| ○ ⊥ Pedestrian Signal Head With Push Button & Sign | ⊥ Pedestrian Signal Head With Push Button & Sign |
| ○ ⊥ Signal Pole with Guy                           | ● ⊥ Signal Pole with Guy                         |
| ○ ⊥ Signal Pole with Sidewalk Guy                  | ● ⊥ Signal Pole with Sidewalk Guy                |
| ▭ Inductive Loop Detector                          | ▭ Inductive Loop Detector                        |
| ⊠ Controller & Cabinet                             | ⊠ Controller & Cabinet                           |
| □ Junction Box                                     | □ Junction Box                                   |
| --- 2-in Underground Conduit                       | --- 2-in Underground Conduit                     |
| N/A Right of Way                                   | --- Right of Way                                 |
| N/A Directional Arrow                              | → Directional Arrow                              |
| N/A Guardrail                                      | ⊥ Guardrail                                      |
| ○ Metal Pole with Mastarm                          | ○ Metal Pole with Mastarm                        |

Signal Upgrade

750 N. Greenfield Pkwy, Garner, NC 27529

Division 13 Buncombe County Asheville

PLANNED BY: M. Mahbooba

REVIEWED BY: P. Alexander

DATE: June 2016

SCALE: 1"=30'

**NC 146 (Long Shoals Road) at West School Road**

Division 13 Buncombe County Asheville

PLANNED BY: M. Mahbooba

REVIEWED BY: P. Alexander

DATE: June 2016

SCALE: 1"=30'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

J. G. Williams

ENGINEER

024393

DATE: 9/1/2016

SIG. INVENTORY NO. 13-0710

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 mambooba