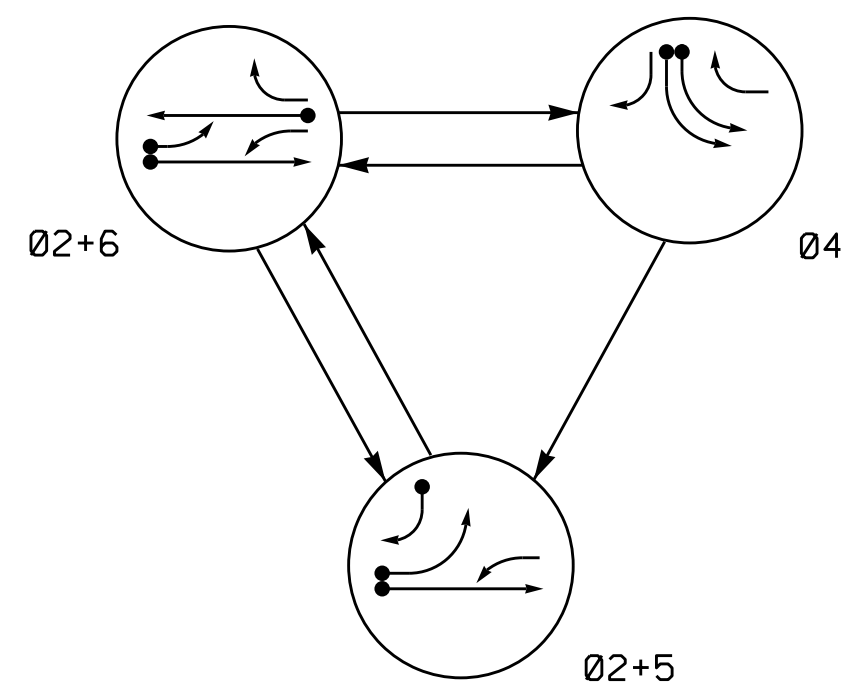
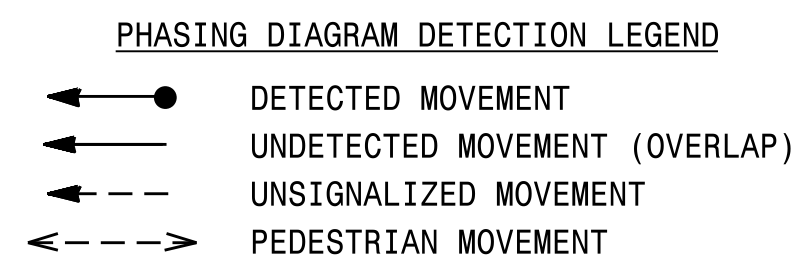


PHASING DIAGRAM

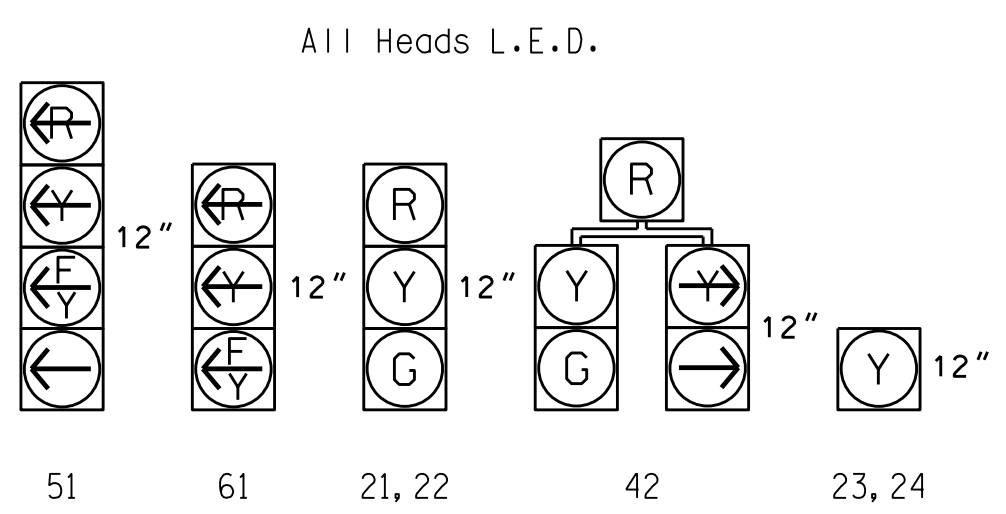


| SIGNAL FACE | PHASE |       |     |     |
|-------------|-------|-------|-----|-----|
|             | Ø 2+5 | Ø 2+6 | Ø 4 | Ø 5 |
| 21, 22      | G     | G     | R   | Y   |
| 41          | R     | R     | G   | R   |
| 42          | R     | R     | G   | R   |
| 51          | Y     | Y     | R   | Y   |
| 61          | Y     | Y     | R   | Y   |
| 62          | R     | G     | R   | Y   |
| 63          | R     | G     | R   | Y   |

| SIGNAL FACE | INTERVAL |     |
|-------------|----------|-----|
|             | 1        | 2   |
| 23          | ON       | OFF |
| 24          | OFF      | ON  |



SIGNAL FACE I.D.

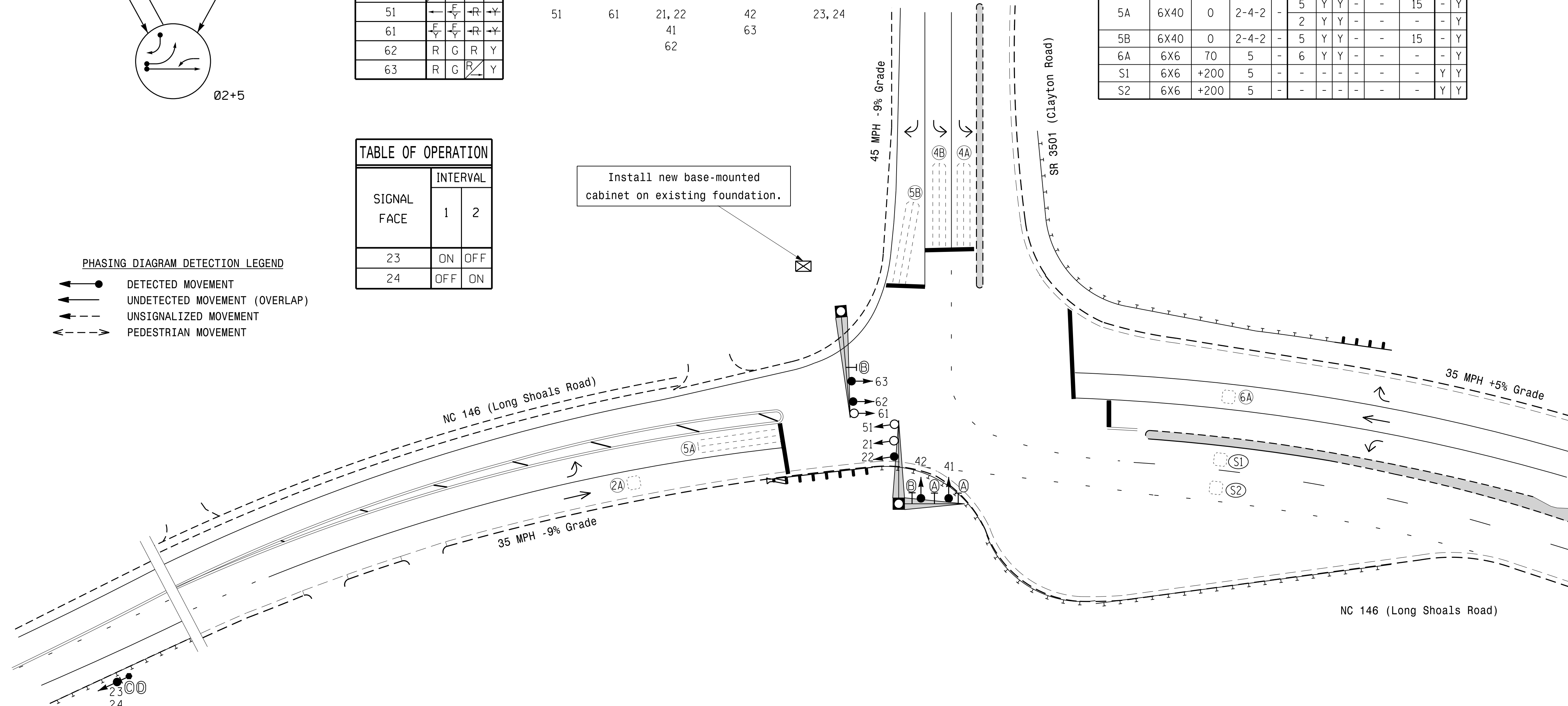


| OASIS 2070 LOOP & DETECTOR INSTALLATION CHART |           |                            |       |          |                      |         |           |                 |             |          |              |
|---|-----------|----------------------------|-------|----------|----------------------|---------|-----------|-----------------|-------------|----------|--------------|
| LOOP  | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | DETECTOR PROGRAMMING |         |           |                 | SYSTEM LOOP | NEW CARD |              |
|   |           |                            |       |          | PHASE                | CALLING | EXTENSION | FULL TIME DELAY |             |          | STRETCH TIME |
| 2A  | 6X6       | 70                         | 5     | -        | 2                    | Y       | Y         | -               | -           | -        | Y            |
| 4A  | 6X40      | 0                          | 2-4-2 | -        | 4                    | Y       | Y         | -               | -           | -        | Y            |
| 4B  | 6X40      | 0                          | 2-4-2 | -        | 4                    | Y       | Y         | -               | -           | -        | Y            |
| 5A  | 6X40      | 0                          | 2-4-2 | -        | 5                    | Y       | Y         | -               | -           | 15       | Y            |
| 5B  | 6X40      | 0                          | 2-4-2 | -        | 5                    | Y       | Y         | -               | -           | 15       | Y            |
| 6A  | 6X6       | 70                         | 5     | -        | 6                    | Y       | Y         | -               | -           | -        | Y            |
| S1  | 6X6       | +200                       | 5     | -        | -                    | -       | -         | -               | -           | -        | Y            |
| S2  | 6X6       | +200                       | 5     | -        | -                    | -       | -         | -               | -           | -        | Y            |

3 Phase Fully Actuated Asheville Signal System

NOTES

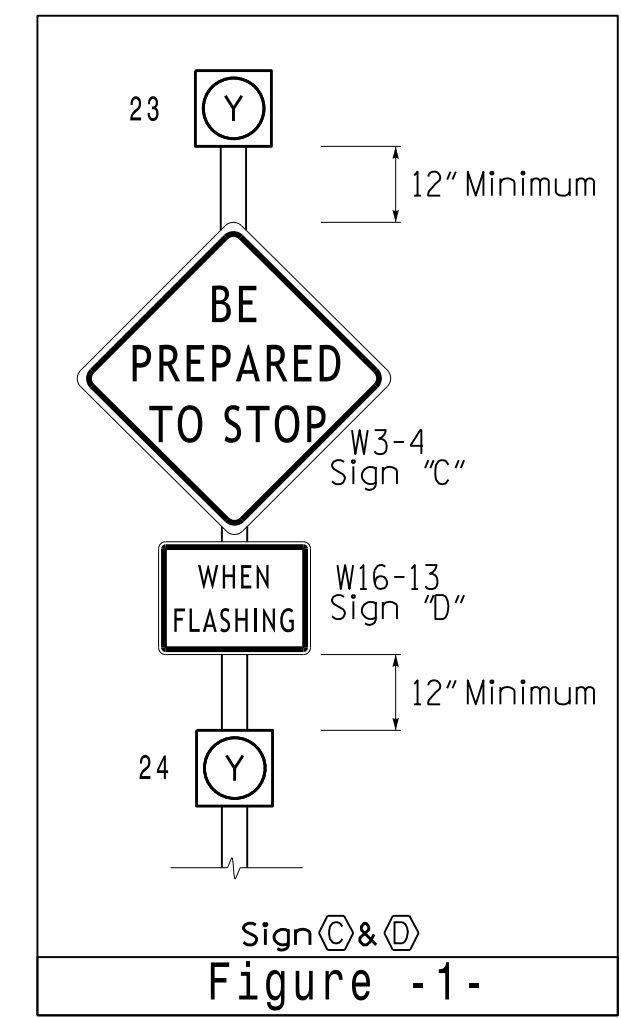
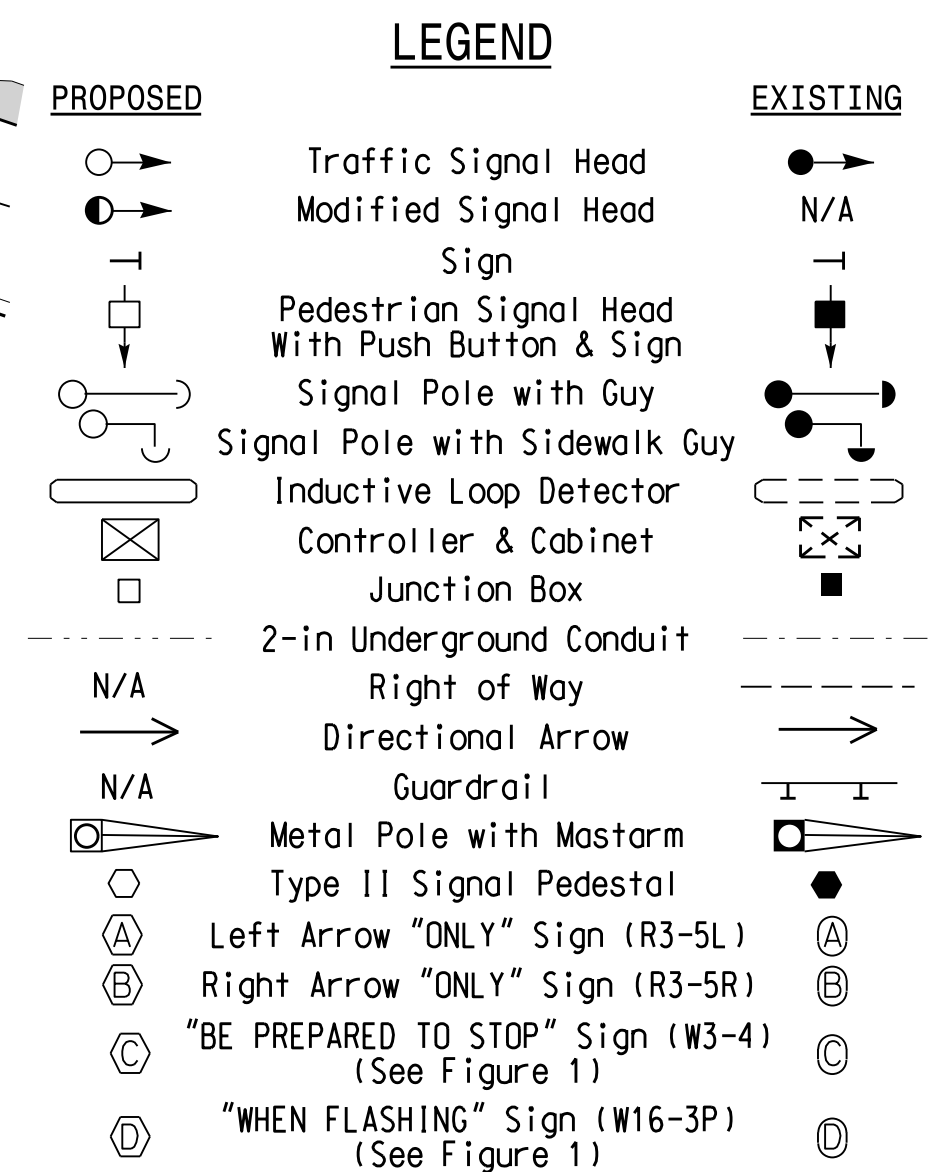
- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 5 may be lagged.
- Reposition existing signal heads numbered #. 22, 62 & 63
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Flash beacon 23 and 24 during phase 2 yellow and phase 2 red intervals. (See Electrical Details).



Install new base-mounted cabinet on existing foundation.

| FEATURE                 | PHASE      |     |     |            |
|-------------------------|------------|-----|-----|------------|
|                         | 2          | 4   | 5   | 6          |
| Min Green 1 *           | 10         | 7   | 7   | 10         |
| Extension 1 *           | 3.0        | 2.0 | 2.0 | 3.0        |
| Max Green 1 *           | 50         | 25  | 25  | 50         |
| Yellow Clearance        | 4.6        | 3.3 | 3.3 | 4.6        |
| Red Clearance           | 2.8        | 3.4 | 3.5 | 2.8        |
| Red Revert              | 2.0        | 2.0 | 2.0 | 2.0        |
| Walk 1 *                | -          | -   | -   | -          |
| Don't Walk 1            | -          | -   | -   | -          |
| Seconds Per Actuation * | -          | -   | -   | -          |
| Max Variable Initial *  | -          | -   | -   | -          |
| Time Before Reduction * | -          | -   | -   | -          |
| Time To Reduce *        | -          | -   | -   | -          |
| Minimum Gap             | -          | -   | -   | -          |
| 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.



Signal Upgrade

Prepared in the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

NC 146 (Long Shoals Road) at SR 3501 (Clayton Road)

Division 13 Buncombe County Asheville

PLAN DATE: May 2016 REVIEWED BY: P. Alexander

PREPARED BY: M. Mahbooba REVIEWED BY:

REVISIONS: INIT. DATE

SEAL: 024393

DocuSigned by: J. Williams 9/19/2016

SIG. INVENTORY NO. 13-0729

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 mmahbooba