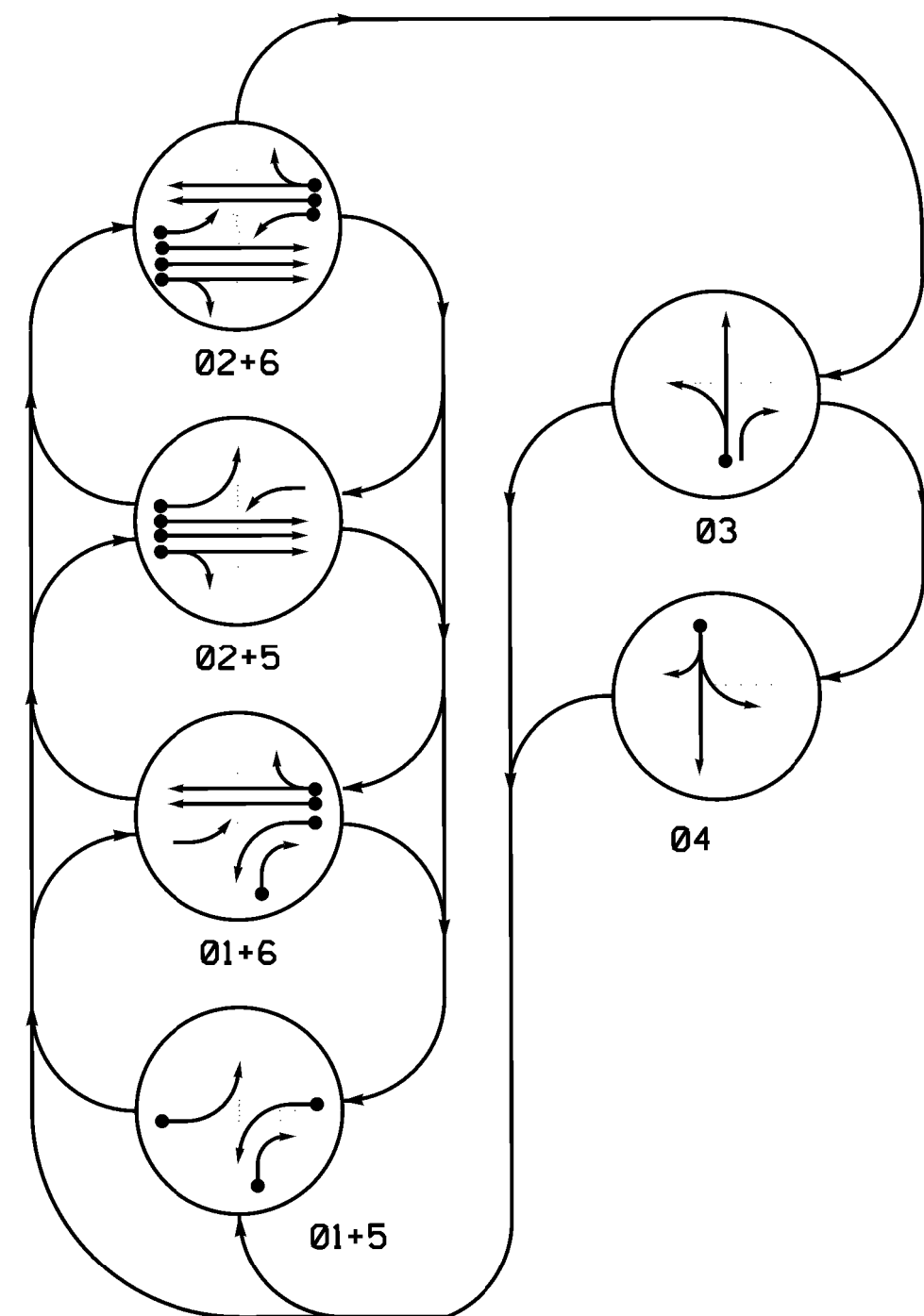


PHASING DIAGRAM



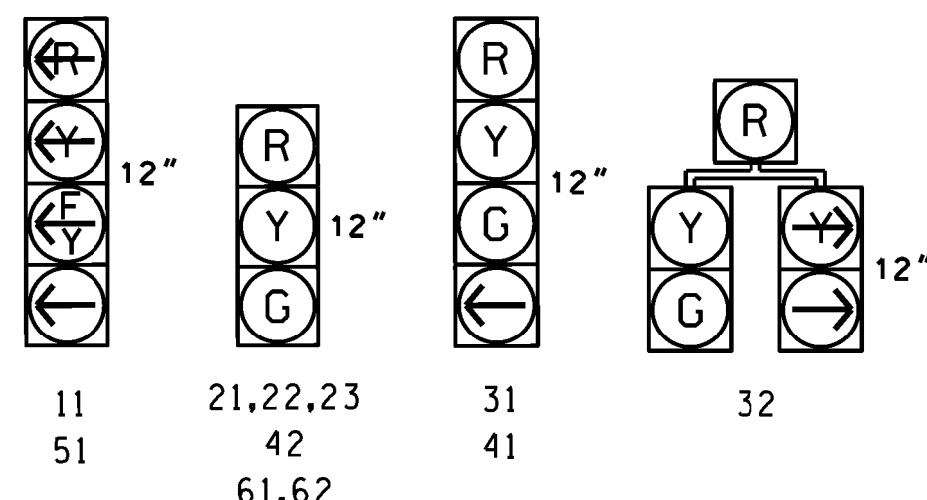
PHASING DIAGRAM DETECTION LEGEND

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

| SIGNAL FACE | PHASE | | | | | |
|-------------|-------|------|------|------|----|----|
| | 01+5 | 01+6 | 02+5 | 02+6 | 03 | 04 |
| 11 | - | - | F | F | R | R |
| 21,22,23 | R | R | G | G | R | R |
| 31 | R | R | R | R | G | R |
| 32 | R | R | R | R | G | R |
| 41 | R | R | R | R | G | R |
| 42 | R | R | R | R | G | R |
| 51 | - | F | - | F | R | R |
| 61,62 | R | G | R | G | R | Y |

SIGNAL FACE I.D.

All Heads L.E.D.

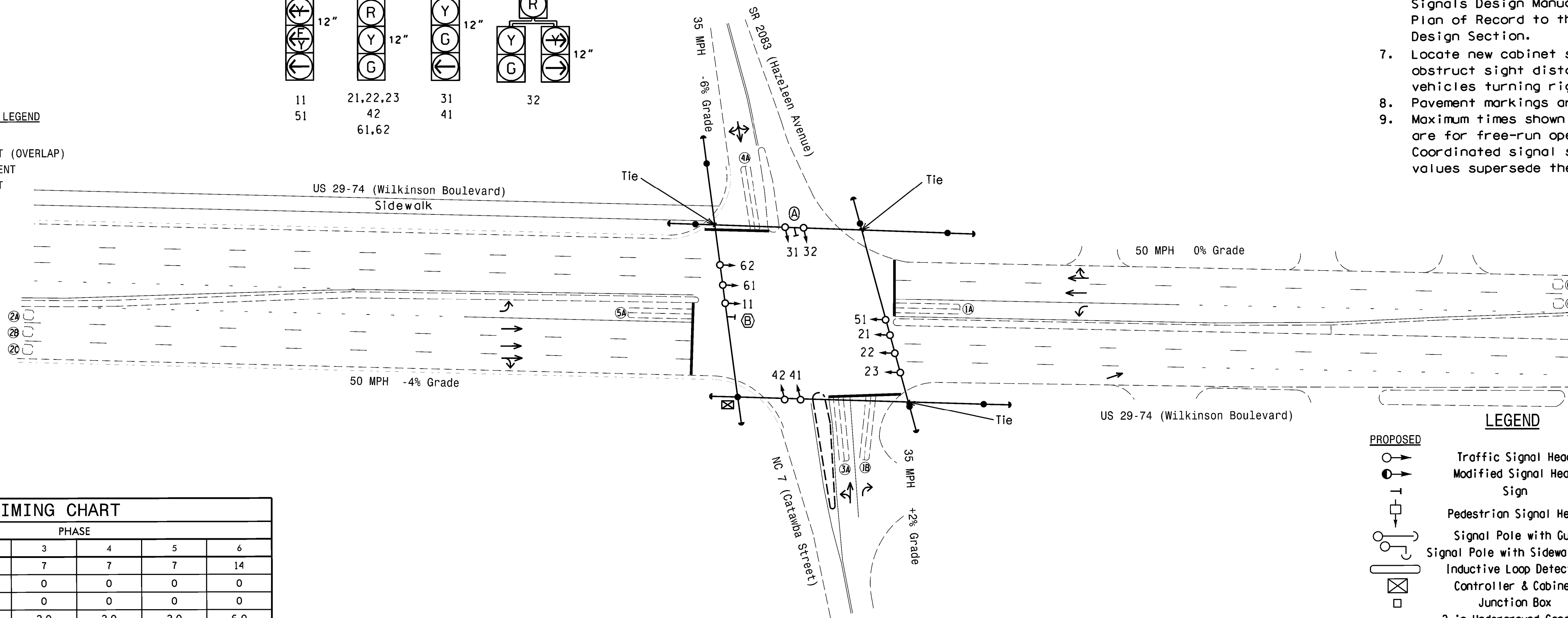


| ASC/3 DETECTOR INSTALLATION CHART | | | | | | | | | | | |
|-----------------------------------|-----------|----------------------------|-------|----------|-------------|---------|-------------|------------|-------------------|------|-------------|
| DETECTOR | | | | | PROGRAMMING | | | | | | |
| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PHASE | CALLING | EXTEND TIME | DELAY TIME | USE ADDED INITIAL | TYPE | SYSTEM LOOP |
| 1A | 6X40 | 0 | 2-4-2 | - | 1 | Yes | - | 15 | - | S | X |
| 1B | 6X40 | 0 | 2-4-2 | - | 6 | Yes | - | 15 | - | G | X |
| 2A | 6X6 | 405 | 4 | - | 2 | Yes | - | - | X | N | X |
| 2B | 6X6 | 405 | 4 | - | 2 | Yes | - | - | X | N | X |
| 2C | 6X6 | 405 | 4 | - | 2 | Yes | - | - | X | N | X |
| 3A | 6X40 | 0 | 2-4-2 | - | 3 | Yes | - | - | - | S | X |
| 4A | 6X40 | 0 | 2-4-2 | - | 4 | Yes | - | 10 | - | S | X |
| 5A | 6X40 | 0 | 2-4-2 | - | 5 | Yes | - | 15 | - | S | X |
| 6A | 6X6 | 405 | 4 | - | 2 | Yes | - | 3 | - | G | X |
| 6B | 6X6 | 405 | 4 | - | 6 | Yes | - | - | X | N | X |

6 Phase Fully Actuated Belmont Signal System

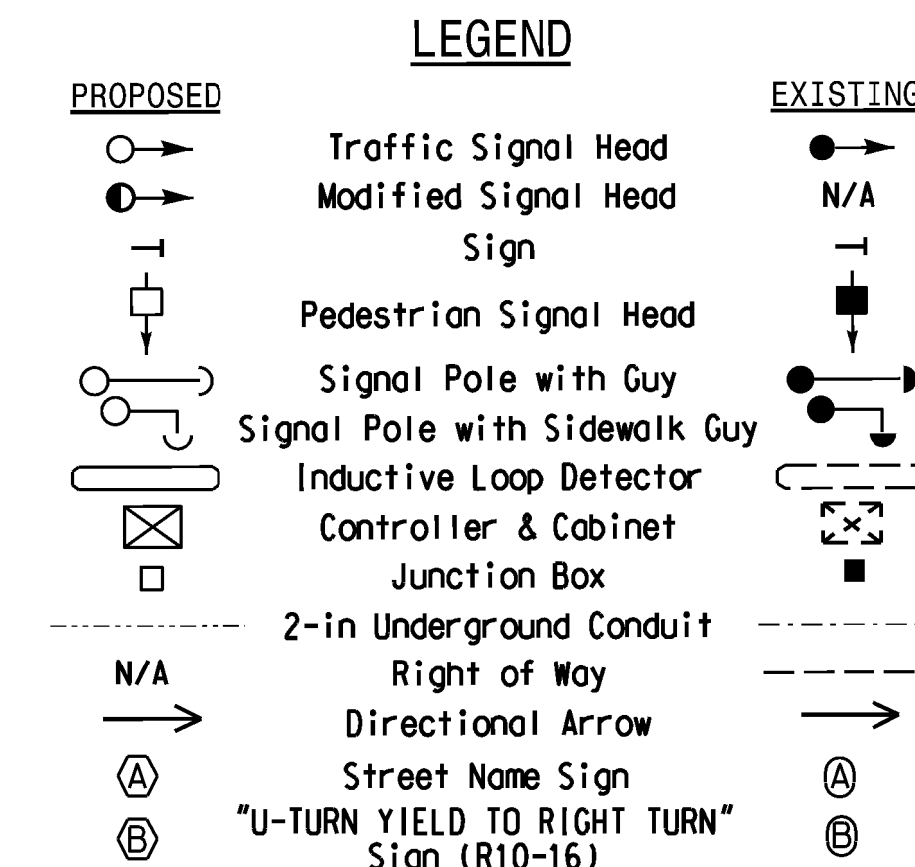
NOTES

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. The order of phase 3 and phase 4 may be reversed.
5. Set all detector units to presence mode.
6. 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.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Pavement markings are existing.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



| FEATURE | ASC/3 TIMING CHART | | | | | |
|-------------------------|--------------------|-------------|-----|-----|-----|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Min Green * | 7 | 14 | 7 | 7 | 7 | 14 |
| Walk * | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped Clear | 0 | 0 | 0 | 0 | 0 | 0 |
| Veh. Extension * | 2.0 | 6.0 | 2.0 | 2.0 | 2.0 | 6.0 |
| Max I * | 20 | 90 | 30 | 30 | 20 | 90 |
| Yellow | 3.0 | 5.2 | 3.7 | 4.3 | 3.0 | 5.2 |
| Red Clear | 2.6 | 1.4 | 2.2 | 1.9 | 2.6 | 1.4 |
| Actuations B4 Add * | - | 0 | - | - | - | 0 |
| Seconds / Actuation * | - | 1.5 | - | - | - | 1.5 |
| Max Initial * | - | 45 | - | - | - | 45 |
| Time Before Reduction * | - | 15 | - | - | - | 15 |
| Time To Reduce * | - | 30 | - | - | - | 30 |
| Minimum Gap | - | 3.4 | - | - | - | 3.4 |
| Locking Detector | - | X | - | - | - | X |
| Recall Position | - | VEH. RECALL | - | - | - | VEH. RECALL |
| Dual Entry | - | - | - | - | - | - |
| 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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

| | | | | |
|---|--|---|-------------------------|----------|
| Prepared in the Office of: NC FIRM LICENSE No: P-0339 504 Meadowlands Drive Hillsborough, NC 27278 (919) 732-3883 (919) 732-6676 (FAX) | | US 29-74 (Wilkinson Boulevard) at NC 7 (Catawba Street) / SR 2083 (Hazeleen Avenue) Division 12 Gaston County Belmont | | SEAL |
| | | PLAN DATE: December 2018 PREPARED BY: M. Parker | REVIEWED BY: E. Sirgany | |

\$\$\$\$\$\$CITY OF BELMONT\$\$\$\$\$\$
 \$\$\$\$\$\$COUNTY OF GASTON\$\$\$\$\$\$
 \$\$\$\$\$\$STATE OF NORTH CAROLINA\$\$\$\$\$\$
 \$\$\$\$\$\$EDWARD W. SIRGANY, P.E.\$\$\$\$\$\$

REVISIONS: _____ INIT. DATE _____
 2/7/2019
 DATE
 SIG. INVENTORY NO. 12-0997