

| PROJECT REFERENCE NO. | SHEET NO.  |
|-----------------------|------------|
| U-5797                | \$ig. 19.0 |

5 Phase  
Fully Actuated  
#D06-17 Lumberton US 301 and  
SR 1997 (Fayetteville Road)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- The Divison Traffic Engineer will determine the hours of use for each phasing plan.
- This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

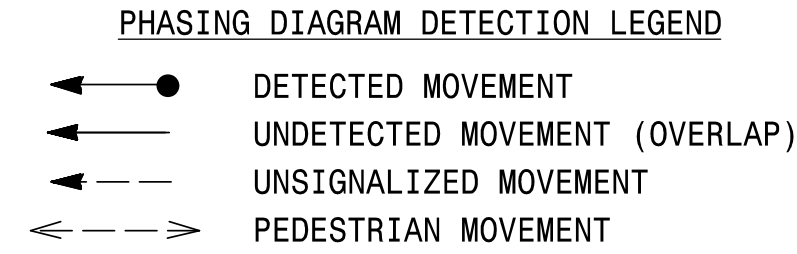
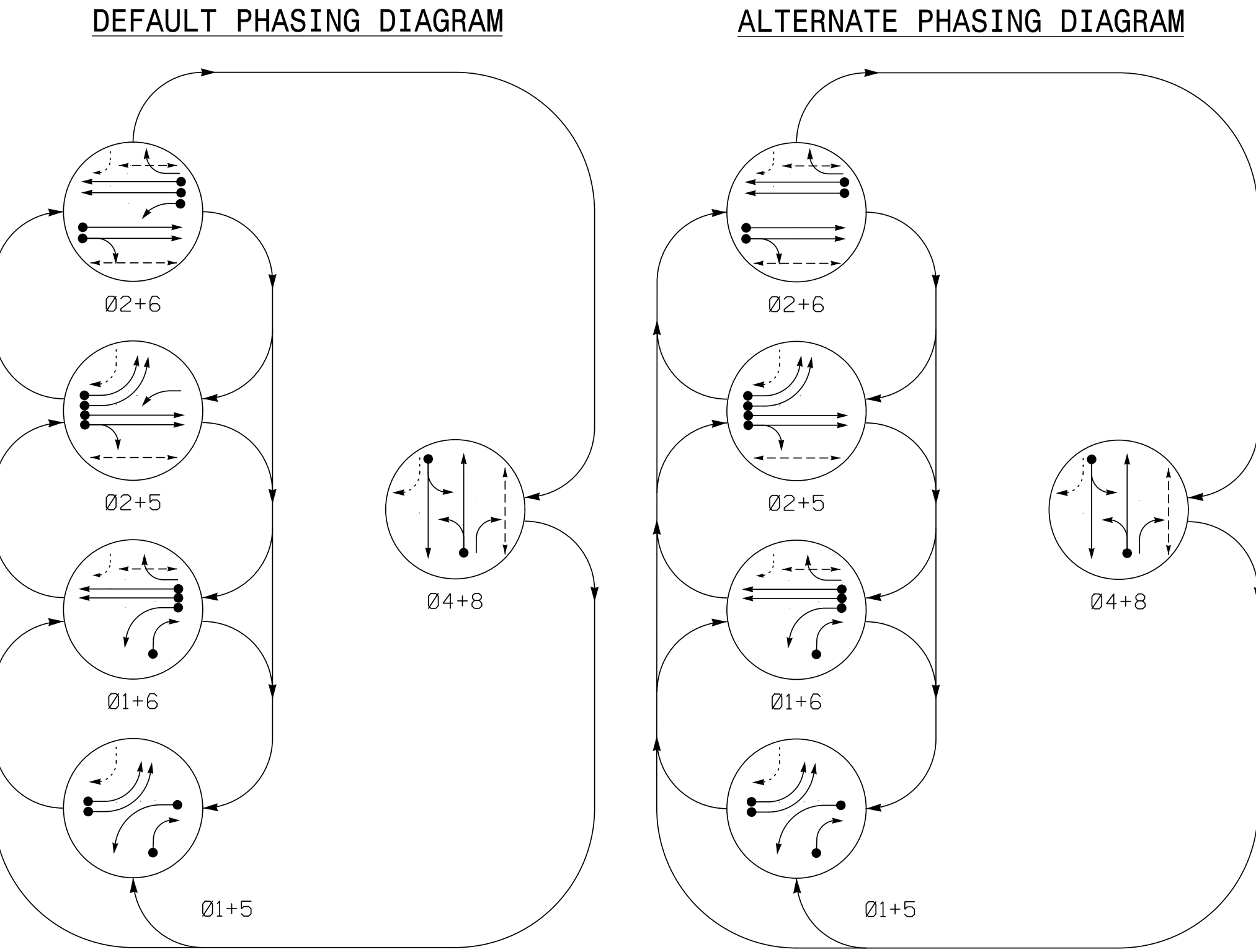
| MAXTIME DETECTOR INSTALLATION CHART |           |                            |       |          |             |            |             |        |               |      |          |
|-------------------------------------|-----------|----------------------------|-------|----------|-------------|------------|-------------|--------|---------------|------|----------|
| DETECTOR                            |           |                            |       |          | PROGRAMMING |            |             |        |               |      |          |
| LOOP                                | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | CALL PHASE  | DELAY TIME | EXTEND TIME | EXTEND | ADDED INITIAL | CALL | NEW CARD |
| 1A                                  | 6X40      | 0                          | *     | *        | 1           | 15**       | -           | X      | -             | X    | *        |
| 1B                                  | 6X40      | 0                          | *     | *        | 6#          | -          | -           | X      | -             | X    | *        |
| 4A                                  | 6X40      | 0                          | *     | *        | 1           | 15         | -           | X      | -             | X    | *        |
| 5A                                  | 6X40      | 0                          | *     | *        | 4           | 3          | -           | X      | -             | X    | *        |
| 5B                                  | 6X40      | 0                          | *     | *        | 5           | -          | -           | X      | -             | X    | *        |
| 8A                                  | 6X40      | 0                          | *     | *        | 5           | -          | -           | X      | -             | X    | *        |
|                                     |           |                            |       |          | 8           | 3          | -           | X      | -             | X    | *        |

\* Multi-zone Microwave Detection Zone  
\*\* Disable Delay During Alternate Phasing  
# Disable Phase Call for Loop During Alternate Phasing

| RADAR DETECTION SYSTEM           |                 |                 |
|----------------------------------|-----------------|-----------------|
| FUNCTION                         | SENSOR 1 - (2A) | SENSOR 1 - (6A) |
| Channel                          | 1               | 2               |
| Phase                            | 2               | 6               |
| Direction of Travel              | SB              | NB              |
| Detection Zone (ft)              | 200 - 70        | 200 - 70        |
| Enable Speed                     | Y               | Y               |
| Speed Range (mph)                | 25 - 100        | 25 - 100        |
| Enable Estimated Time of Arrival | Y               | Y               |
| Estimated Time of Arrival (sec)  | 2.5 - 5.5       | 2.5 - 5.5       |

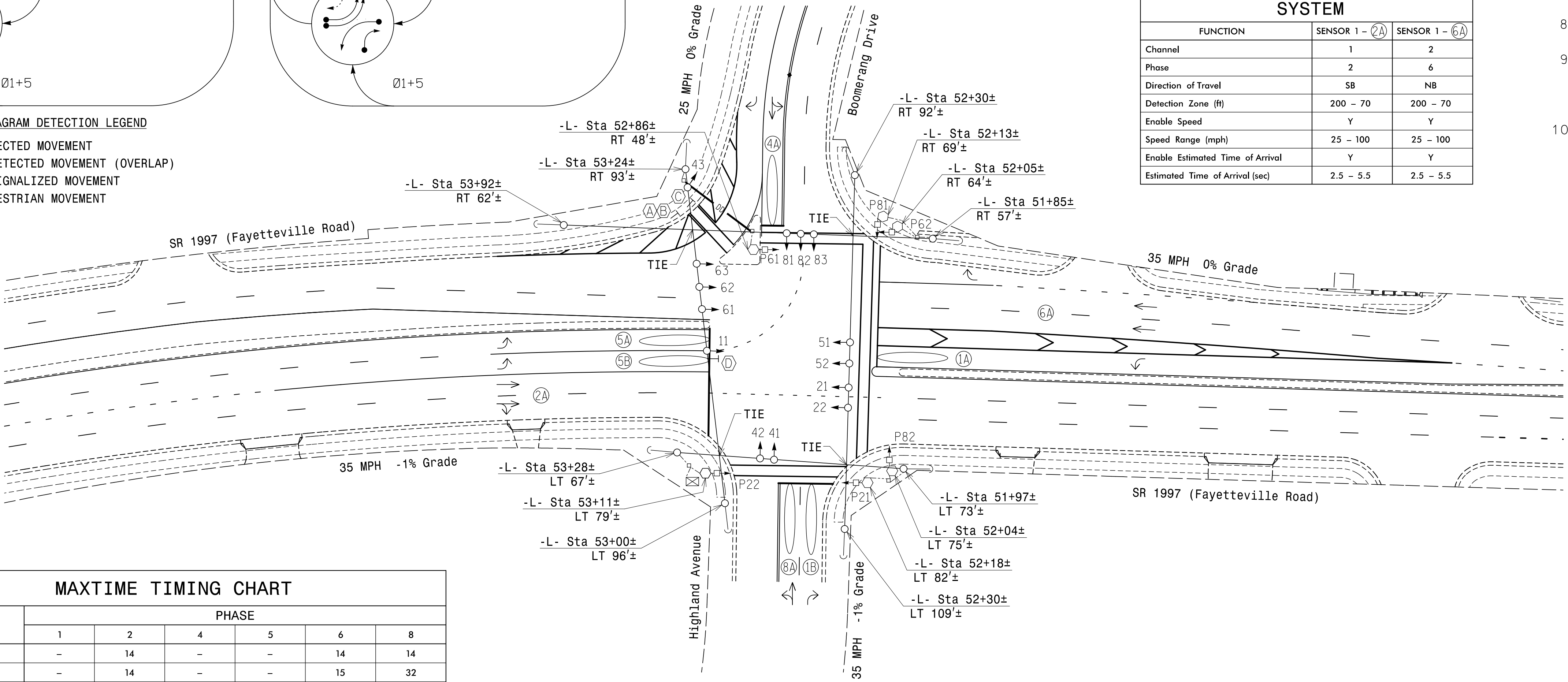
| DEFAULT PHASING TABLE OF OPERATION |         |         |         |         |         |     |
|------------------------------------|---------|---------|---------|---------|---------|-----|
| SIGNAL FACE                        | PHASE   |         |         |         |         |     |
|                                    | Ø 1 + 5 | Ø 1 + 6 | Ø 2 + 5 | Ø 2 + 6 | Ø 4 + 8 | F L |
| 11                                 | ←       | ←       | ←       | ←       | ←       | ←   |
| 21,22                              | R       | R       | G       | G       | R       | R   |
| 41,42,43                           | R       | R       | R       | R       | G       | R   |
| 51,52                              | ←       | ←       | ←       | ←       | ←       | ←   |
| 61,62                              | R       | G       | R       | G       | R       | R   |
| 63                                 | R       | ←       | ←       | ←       | R       | R   |
| 81,82                              | R       | R       | R       | R       | G       | R   |
| 83                                 | →       | →       | R       | R       | ←       | R   |
| P21,P22                            | DW      | DW      | W       | W       | DW      | DRK |
| P61,P62                            | DW      | W       | DW      | W       | DW      | DRK |
| P81,P82                            | DW      | DW      | DW      | DW      | W       | DRK |

| ALTERNATE PHASING TABLE OF OPERATION |         |         |         |         |         |     |
|--------------------------------------|---------|---------|---------|---------|---------|-----|
| SIGNAL FACE                          | PHASE   |         |         |         |         |     |
|                                      | Ø 1 + 5 | Ø 1 + 6 | Ø 2 + 5 | Ø 2 + 6 | Ø 4 + 8 | F L |
| 11                                   | ←       | ←       | ←       | ←       | ←       | ←   |
| 21,22                                | R       | R       | G       | G       | R       | R   |
| 41,42,43                             | R       | R       | R       | R       | G       | R   |
| 51,52                                | ←       | ←       | ←       | ←       | ←       | ←   |
| 61,62                                | R       | G       | R       | G       | R       | R   |
| 63                                   | R       | ←       | ←       | ←       | R       | R   |
| 81,82                                | R       | R       | R       | R       | G       | R   |
| 83                                   | →       | →       | R       | R       | ←       | R   |
| P21,P22                              | DW      | DW      | W       | W       | DW      | DRK |
| P61,P62                              | DW      | W       | DW      | W       | DW      | DRK |
| P81,P82                              | DW      | DW      | DW      | DW      | W       | DRK |



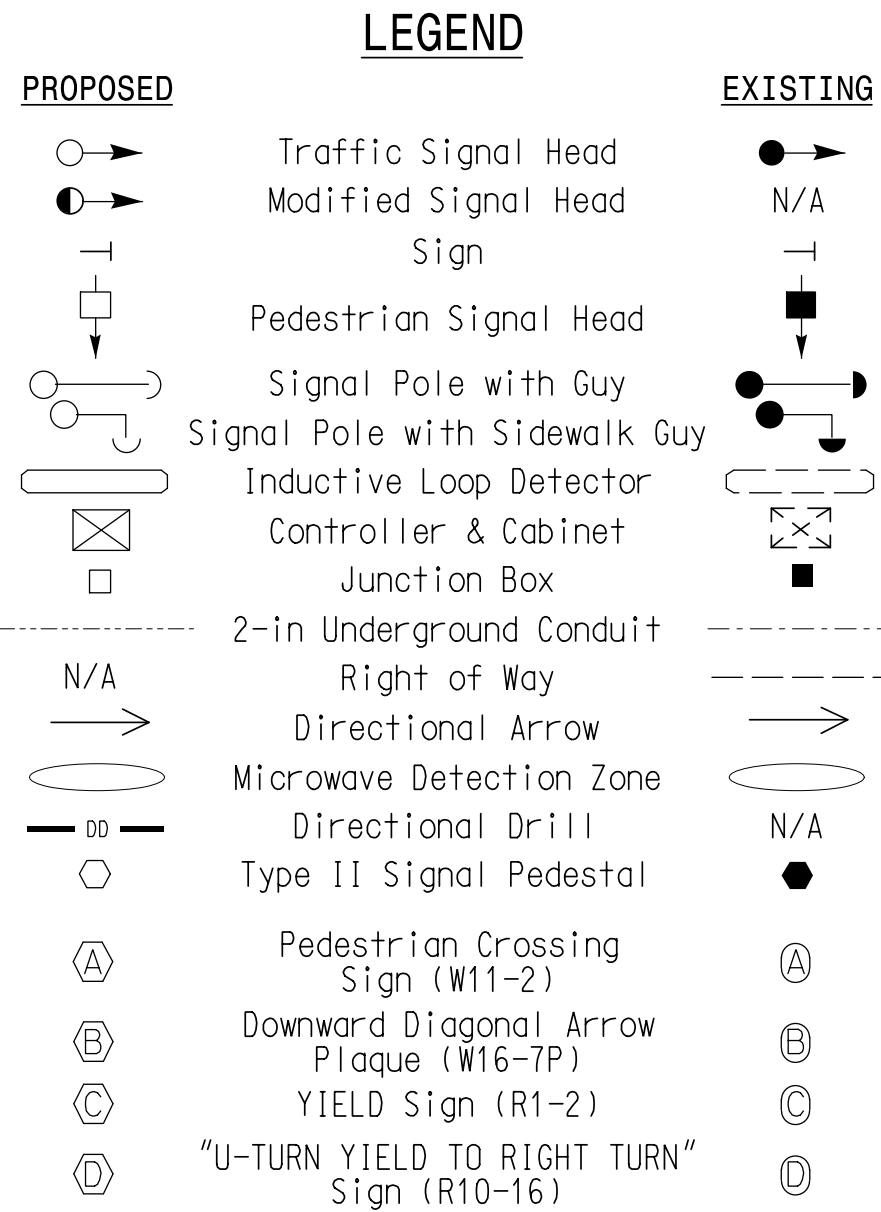
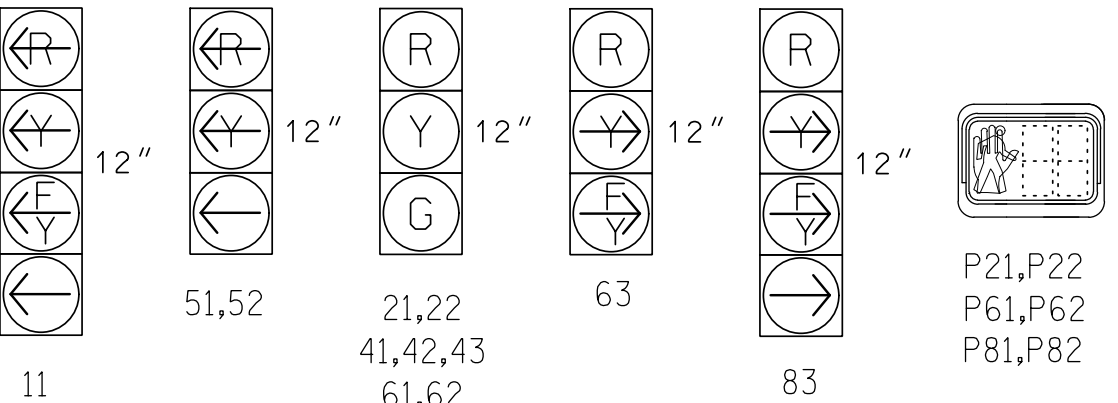
| MAXTIME TIMING CHART    |       |            |     |     |            |     |
|-------------------------|-------|------------|-----|-----|------------|-----|
| FEATURE                 | PHASE |            |     |     |            |     |
|                         | 1     | 2          | 4   | 5   | 6          | 8   |
| Walk *                  | -     | 14         | -   | -   | 14         | 14  |
| Ped Clear *             | -     | 14         | -   | -   | 15         | 32  |
| Min Green               | 7     | 10         | 7   | 7   | 10         | 7   |
| Passage *               | 2.0   | 2.0        | 2.0 | 2.0 | 2.0        | 2.0 |
| Max 1 *                 | 20    | 90         | 30  | 20  | 90         | 30  |
| Yellow Change           | 3.0   | 3.9        | 3.2 | 3.0 | 3.9        | 3.9 |
| Red Clear               | 3.1   | 2.3        | 3.5 | 3.2 | 2.3        | 2.8 |
| Added Initial *         | -     | -          | -   | -   | -          | -   |
| Maximum Initial *       | -     | -          | -   | -   | -          | -   |
| Time Before Reduction * | -     | -          | -   | -   | -          | -   |
| Time To Reduce *        | -     | -          | -   | -   | -          | -   |
| Minimum Gap             | -     | -          | -   | -   | -          | -   |
| Advance Walk            | -     | 7          | -   | -   | 7          | 7   |
| Non Lock Detector       | X     | -          | X   | X   | -          | X   |
| Vehicle Recall          | -     | MIN RECALL | -   | -   | MIN RECALL | -   |
| Dual Entry              | -     | -          | 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.



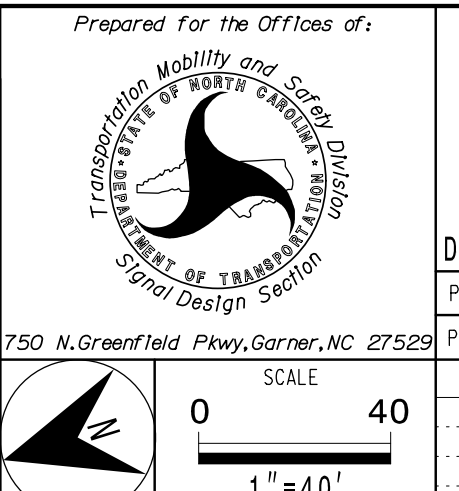
SIGNAL FACE I.D.

All Heads L.E.D.



New Installation  
Temporary Design - TMP Phase III, Step 3

STV Engineers, Inc.  
900 West Trade St., Suite 715  
Charlotte, NC 28202  
(704) 372-1885  
NC License Number F-0991



SR 1997 (Fayetteville Road)  
at  
Boomerang Drive/  
Highland Avenue  
Robeson County Lumberton

Division 6

PLAN DATE: Feb 2025

PREPARED BY: J.C. Grimm

REVIEWED BY: H.M. Surti

REVIEWED BY: T.M. Moody

REVISIONS

INIT. DATE

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

SEAL

NORTH CAROLINA  
PROFESSIONAL  
ENGINEER

SEAL 040329

3/19/2025

SIG. INVENTORY NO. 06-1388T