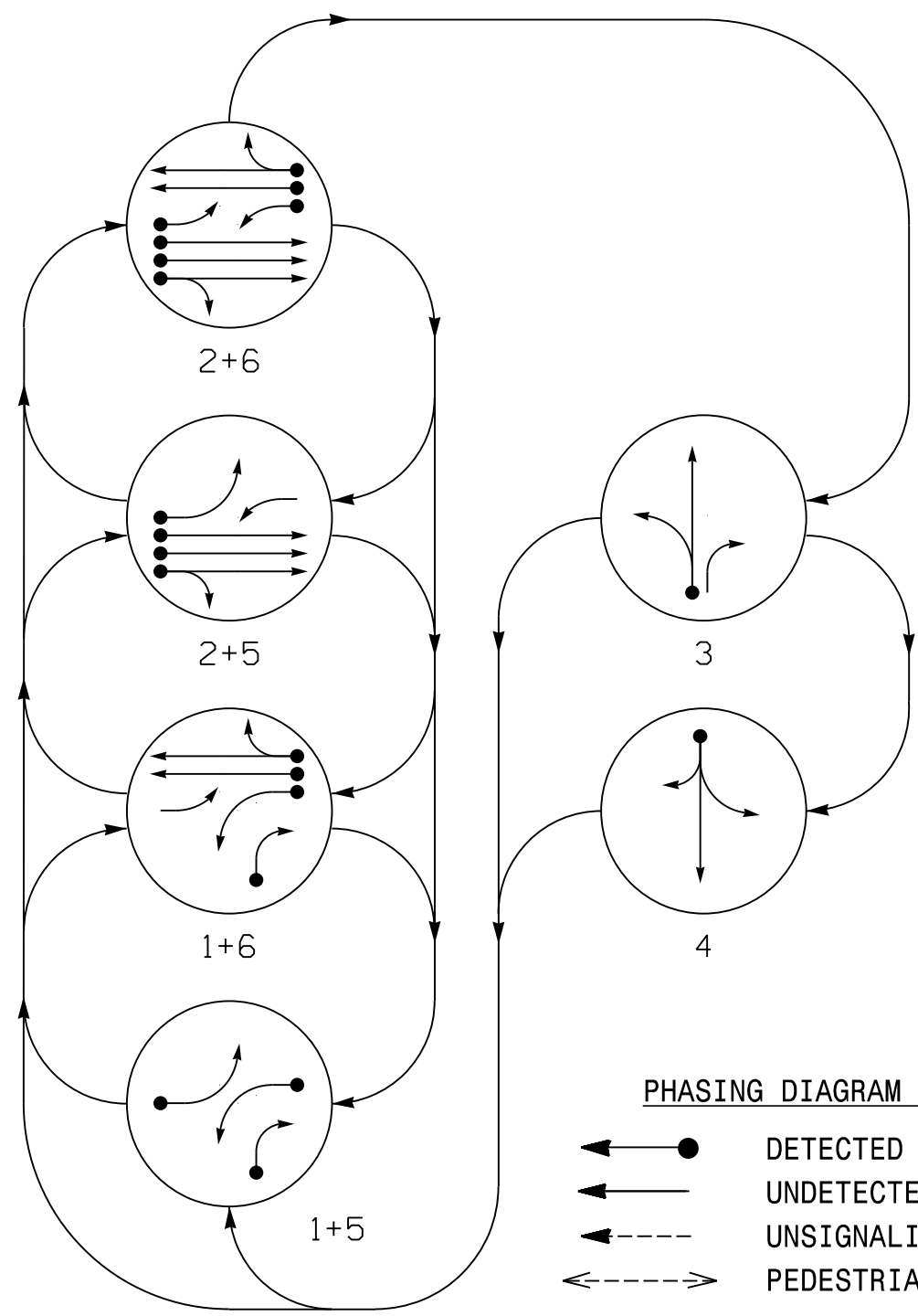


PHASING DIAGRAM

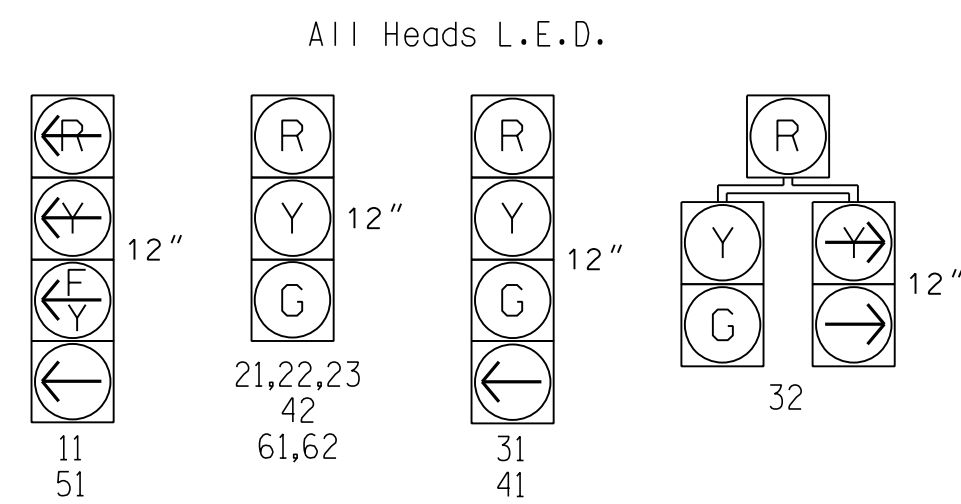


PHASING DIAGRAM DETECTION LEGEND

- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ←--- PEDESTRIAN MOVEMENT

| SIGNAL FACE | PHASE |     |     |     |   |   |
|-------------|-------|-----|-----|-----|---|---|
|             | 1+5   | 1+6 | 2+5 | 2+6 | 3 | 4 |
| 11          | ←     | ←   | ←   | ←   | ← | ← |
| 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          | ←     | ←   | ←   | ←   | ← | ← |
| 61,62       | R     | G   | R   | G   | R | R |

SIGNAL FACE I.D.



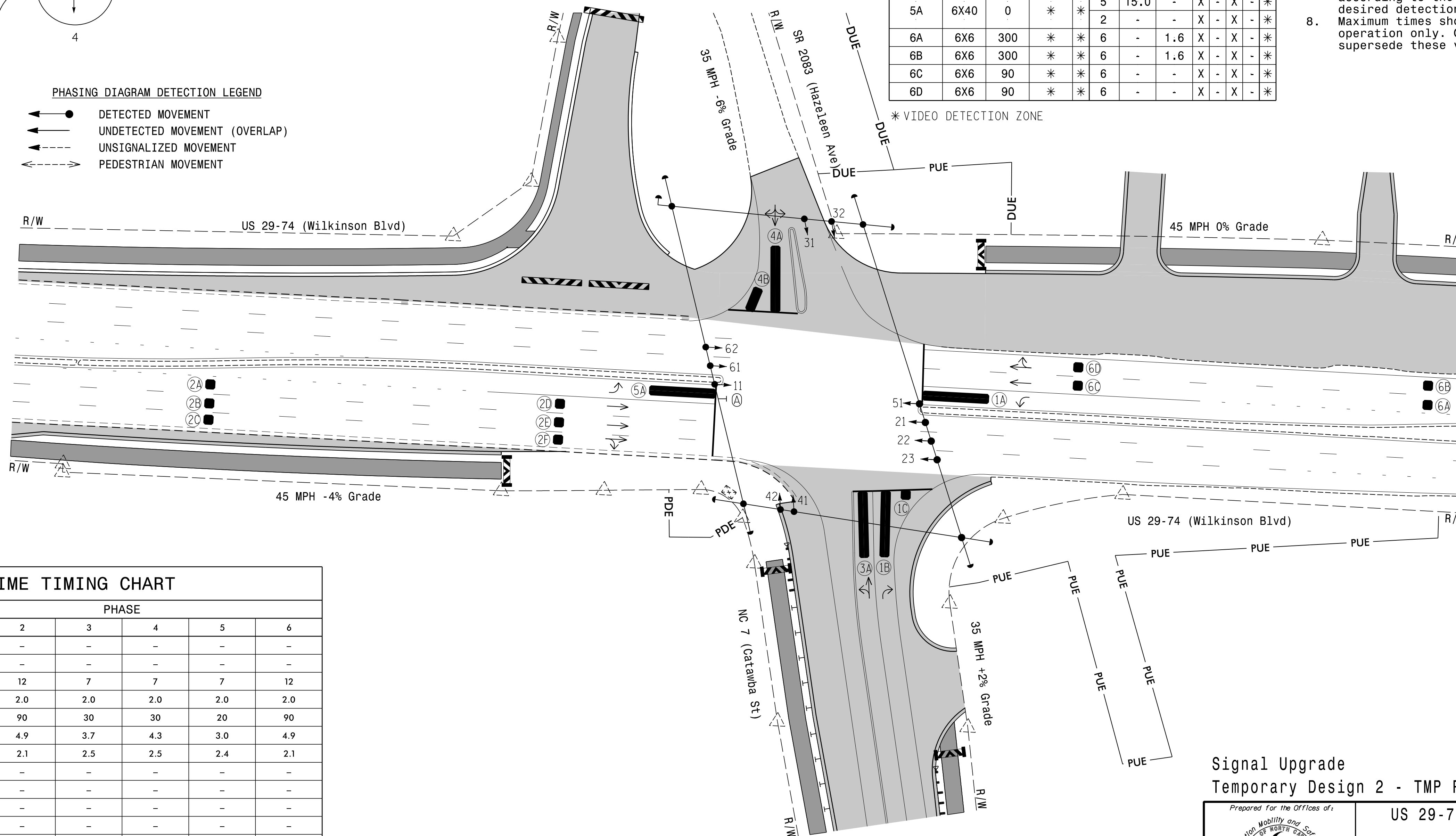
MAXTIME DETECTOR INSTALLATION CHART

| ZONE | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PROGRAMMING |            |             |        |               |      |                    |          |
|------|-----------|----------------------------|-------|----------|-------------|------------|-------------|--------|---------------|------|--------------------|----------|
|      |           |                            |       |          | CALL PHASE  | DELAY TIME | EXTEND TIME | EXTEND | ADDED INITIAL | CALL | DELAY DURING GREEN | NEW CARD |
| 1A   | 6X40      | 0                          | *     | *        | 1           | 15.0       | -           | X      | -             | X    | -                  | *        |
| 1B   | 6X40      | 0                          | *     | *        | 1           | 15.0       | -           | X      | -             | X    | -                  | *        |
| 1C   | 6X6       | 0                          | *     | *        | 1           | 15.0       | -           | X      | -             | X    | -                  | *        |
| 2A   | 6X6       | 300                        | *     | *        | 2           | -          | 1.6         | X      | -             | X    | -                  | *        |
| 2B   | 6X6       | 300                        | *     | *        | 2           | -          | 1.6         | X      | -             | X    | -                  | *        |
| 2C   | 6X6       | 300                        | *     | *        | 2           | -          | 1.6         | X      | -             | X    | -                  | *        |
| 2D   | 6X6       | 90                         | *     | *        | 2           | -          | -           | X      | -             | X    | -                  | *        |
| 2E   | 6X6       | 90                         | *     | *        | 2           | -          | -           | X      | -             | X    | -                  | *        |
| 2F   | 6X6       | 90                         | *     | *        | 2           | -          | -           | X      | -             | X    | -                  | *        |
| 3A   | 6X40      | 0                          | *     | *        | 3           | 3.0        | -           | X      | -             | X    | -                  | *        |
| 4A   | 6X40      | 0                          | *     | *        | 4           | 10.0       | -           | X      | -             | X    | -                  | *        |
| 4B   | 6X15      | 0                          | *     | *        | 4           | 10.0       | -           | X      | -             | X    | -                  | *        |
| 5A   | 6X40      | 0                          | *     | *        | 5           | 15.0       | -           | X      | -             | X    | -                  | *        |
| 6A   | 6X6       | 300                        | *     | *        | 6           | -          | 1.6         | X      | -             | X    | -                  | *        |
| 6B   | 6X6       | 300                        | *     | *        | 6           | -          | 1.6         | X      | -             | X    | -                  | *        |
| 6C   | 6X6       | 90                         | *     | *        | 6           | -          | -           | X      | -             | X    | -                  | *        |
| 6D   | 6X6       | 90                         | *     | *        | 6           | -          | -           | X      | -             | X    | -                  | *        |

6 Phase Fully Actuated (Belmont Signal System)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specification 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.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Reposition existing signal head numbered 32.
- This intersection uses video 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.



| FEATURE                 | PHASE |            |     |     |     |            |
|-------------------------|-------|------------|-----|-----|-----|------------|
|                         | 1     | 2          | 3   | 4   | 5   | 6          |
| Walk *                  | -     | -          | -   | -   | -   | -          |
| Ped Clear               | -     | -          | -   | -   | -   | -          |
| Min Green *             | 7     | 12         | 7   | 7   | 7   | 12         |
| Passage *               | 2.0   | 2.0        | 2.0 | 2.0 | 2.0 | 2.0        |
| Max 1 *                 | 20    | 90         | 30  | 30  | 20  | 90         |
| Yellow Change           | 3.0   | 4.9        | 3.7 | 4.3 | 3.0 | 4.9        |
| Red Clear               | 2.3   | 2.1        | 2.5 | 2.5 | 2.4 | 2.1        |
| Added Initial *         | -     | -          | -   | -   | -   | -          |
| Maximum Initial *       | -     | -          | -   | -   | -   | -          |
| Time Before Reduction * | -     | -          | -   | -   | -   | -          |
| Time To Reduce *        | -     | -          | -   | -   | -   | -          |
| Minimum Gap             | -     | -          | -   | -   | -   | -          |
| Advance Walk            | -     | -          | -   | -   | -   | -          |
| Non Lock Detector       | X     | -          | X   | X   | X   | -          |
| Vehicle Recall          | -     | MIN RECALL | -   | -   | -   | MIN RECALL |
| Dual Entry              | -     | -          | -   | -   | -   | -          |

\* 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.

| PROPOSED  | EXISTING |
|---|----------|
| ○→ Traffic Signal Head                            | ●→ N/A   |
| ○→ Modified Signal Head                           | ○→ N/A   |
| ○→ Sign   | ○→ N/A   |
| ○→ Pedestrian Signal Head With Push Button & Sign | ○→ N/A   |
| ○→ Signal Pole with Guy                           | ○→ N/A   |
| ○→ Signal Pole with Sidewalk Guy                  | ○→ N/A   |
| ○→ Inductive Loop Detector                        | ○→ N/A   |
| ○→ Controller & Cabinet                           | ○→ N/A   |
| ○→ Junction Box                                   | ○→ N/A   |
| ○→ 2-in Underground Conduit                       | ○→ N/A   |
| ○→ Right of Way                                   | ○→ N/A   |
| ○→ Directional Arrow                              | ○→ N/A   |
| ○→ Utility Easment                                | ○→ N/A   |
| ○→ Drainage Easment                               | ○→ N/A   |
| ○→ Guardrail                                      | ○→ N/A   |
| ○→ Construction Zone                              | ○→ N/A   |
| ○→ Non-Intrusive Detection Zone                   | ○→ N/A   |
| ○→ Pedestrian Barricade                           | ○→ N/A   |
| ○→ Barricade                                      | ○→ N/A   |
| ○→ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)     | ○→ N/A   |

Signal Upgrade Temporary Design 2 - TMP Phase I Step 3

US 29-74 (Wilkinson Blvd) at NC 7 (Catawba St) / SR 2083 (Hazeleen Avenue)

Division 12 Gaston County Belmont

PLAN DATE: August 2025 REVIEWED BY: DT Sears

PREPARED BY: WP Erickson-Jones REVIEWED BY:

REVISIONS

| NO. | DATE | INIT. | DATE |
|-----|------|-------|------|
|     |      |       |      |

Scale: 1" = 40'

8/1/2025

David J. Sears

09183285741E

SIGNATURE DATE

SIG. INVENTORY NO. 12-099712

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UNIVERSITY OF NORTH CAROLINA

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Signal Design Section

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