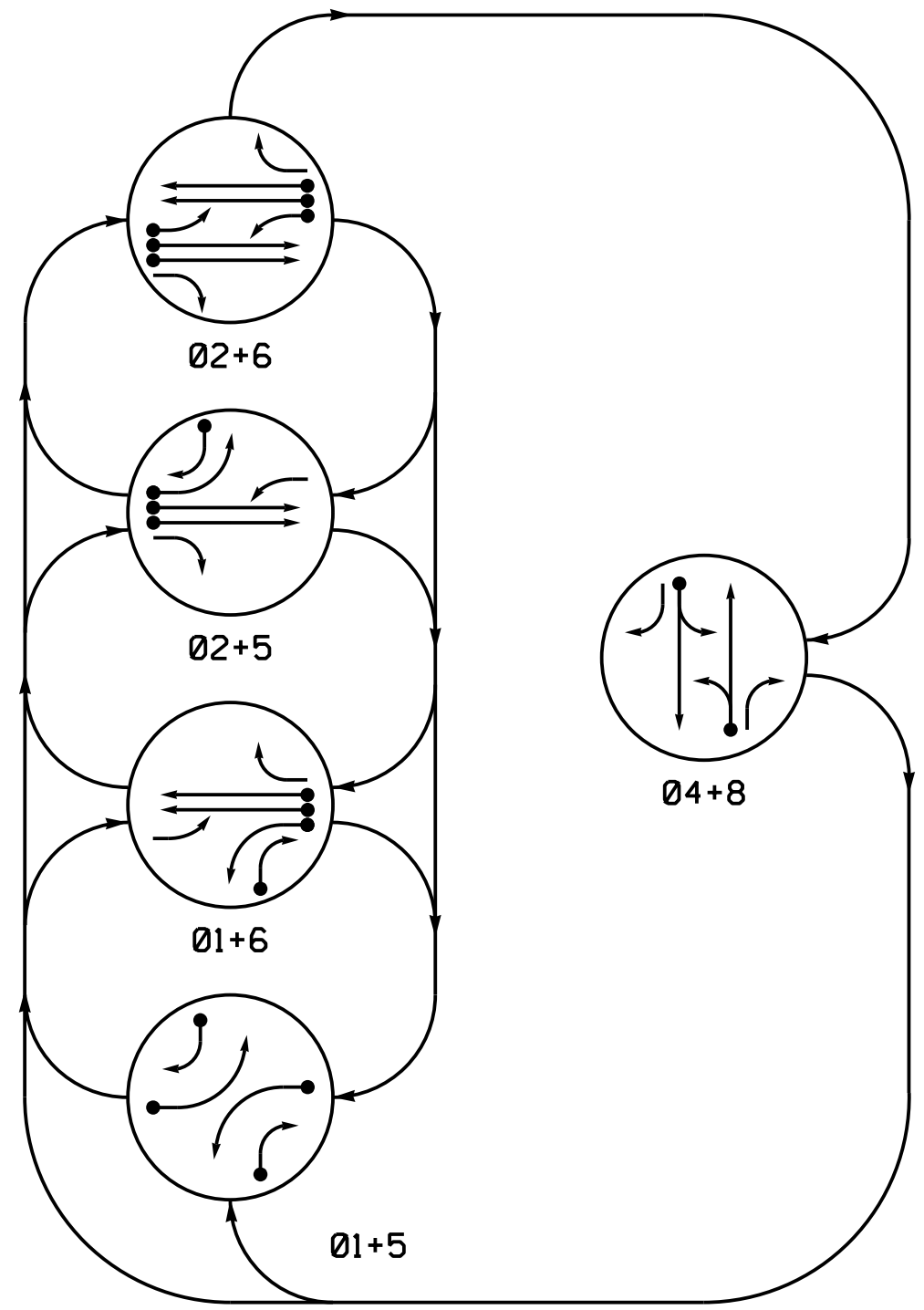
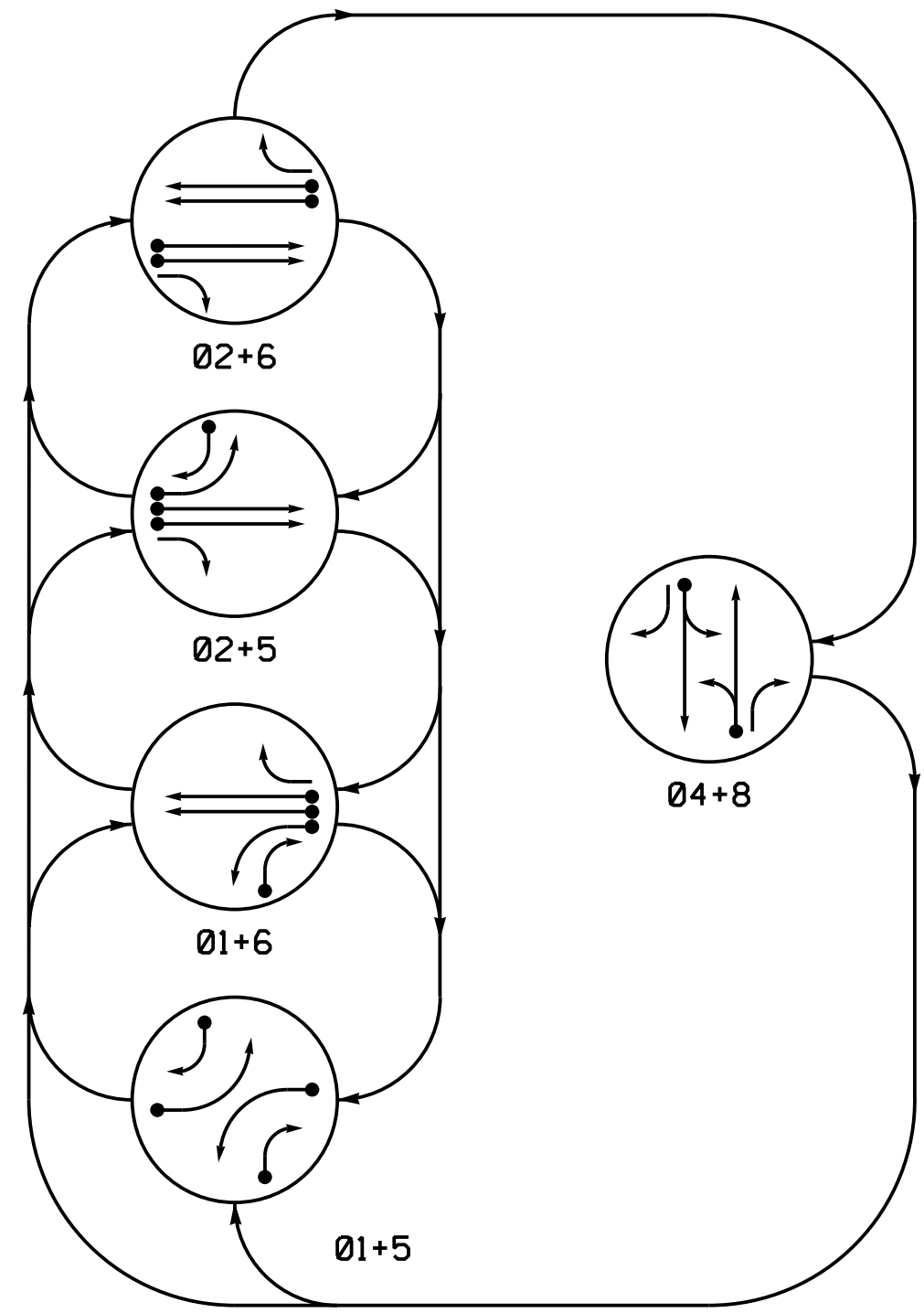


DEFAULT PHASING DIAGRAM



ALTERNATE PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

DEFAULT PHASING TABLE OF OPERATION

| SIGNAL FACE | PHASE |      |      |      |      |   | FLASH |
|-------------|-------|------|------|------|------|---|-------|
|             | 01+5  | 01+6 | 02+5 | 02+6 | 04+8 |   |       |
| 11          |       |      |      |      |      |   |       |
| 21,22       | R     | R    | G    | G    | R    | Y |       |
| 41          | R     | R    | R    | R    | G    | R |       |
| 42          | R     | R    | R    | R    | G    | R |       |
| 51          |       |      |      |      |      |   |       |
| 61,62       | R     | G    | R    | G    | R    | Y |       |
| 81,82       | R     | R    | R    | R    | G    | R |       |
| 83          | F     | F    | R    | R    | F    | R |       |

ALTERNATE PHASING TABLE OF OPERATION

| SIGNAL FACE | PHASE |      |      |      |      |   | FLASH |
|-------------|-------|------|------|------|------|---|-------|
|             | 01+5  | 01+6 | 02+5 | 02+6 | 04+8 |   |       |
| 11          |       |      |      |      |      |   |       |
| 21,22       | R     | R    | G    | G    | R    | Y |       |
| 41          | R     | R    | R    | R    | G    | R |       |
| 42          | R     | R    | R    | R    | G    | R |       |
| 51          |       |      |      |      |      |   |       |
| 61,62       | R     | G    | R    | G    | R    | Y |       |
| 81,82       | R     | R    | R    | R    | G    | R |       |
| 83          | F     | F    | R    | R    | F    | R |       |

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | DETECTOR PROGRAMMING |         |           |              | LOOP SYSTEM | NEW CARD |            |
|------|-----------|----------------------------|-------|----------|----------------------|---------|-----------|--------------|-------------|----------|------------|
|      |           |                            |       |          | PHASE                | CALLING | EXTENSION | STRETCH TIME |             |          | DELAY TIME |
| 1A   | 6X40      | 0                          | *     | *        | 1                    | Y       | Y         | -            | ***10       | -        | Y          |
| 1B   | 6X40      | 0                          | *     | *        | **6                  | Y       | Y         | -            | 3           | -        | Y          |
| 2A   | 6X6       | 300                        | *     | *        | 2                    | Y       | Y         | -            | -           | -        | Y          |
| 2B   | 6X6       | 300                        | *     | *        | 2                    | Y       | Y         | -            | -           | -        | Y          |
| 4A   | 6X40      | 0                          | *     | *        | 4                    | Y       | Y         | -            | -           | -        | Y          |
| 5A   | 6X40      | 0                          | *     | *        | 5                    | Y       | Y         | -            | ***10       | -        | Y          |
| 5B   | 6X40      | 0                          | *     | *        | **2                  | Y       | Y         | -            | 3           | -        | Y          |
| 6A   | 6X6       | 300                        | *     | *        | 6                    | Y       | Y         | -            | -           | -        | Y          |
| 6B   | 6X6       | 300                        | *     | *        | 6                    | Y       | Y         | -            | -           | -        | Y          |
| 8A   | 6X40      | 0                          | *     | *        | 8                    | Y       | Y         | -            | -           | -        | Y          |

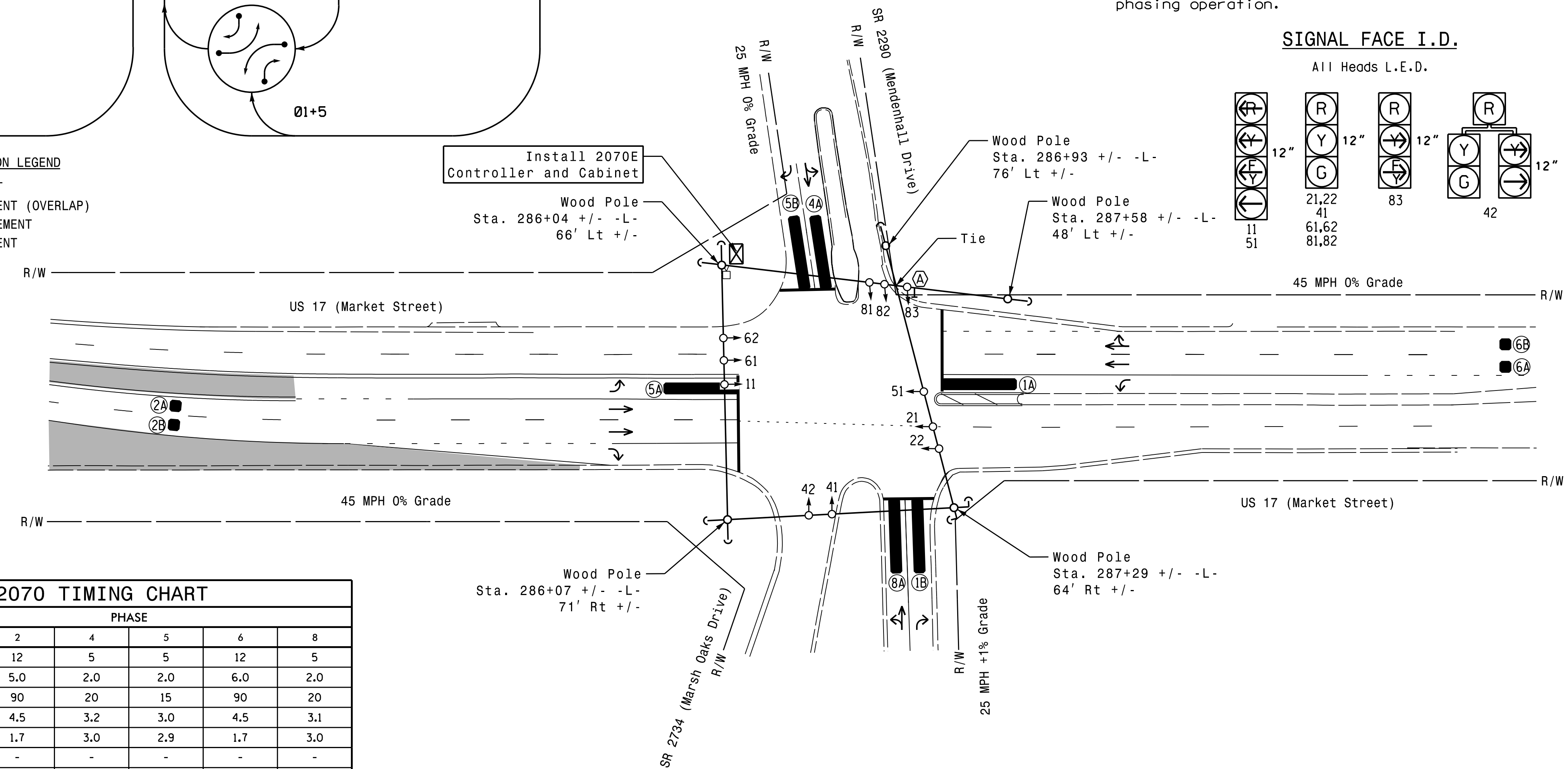
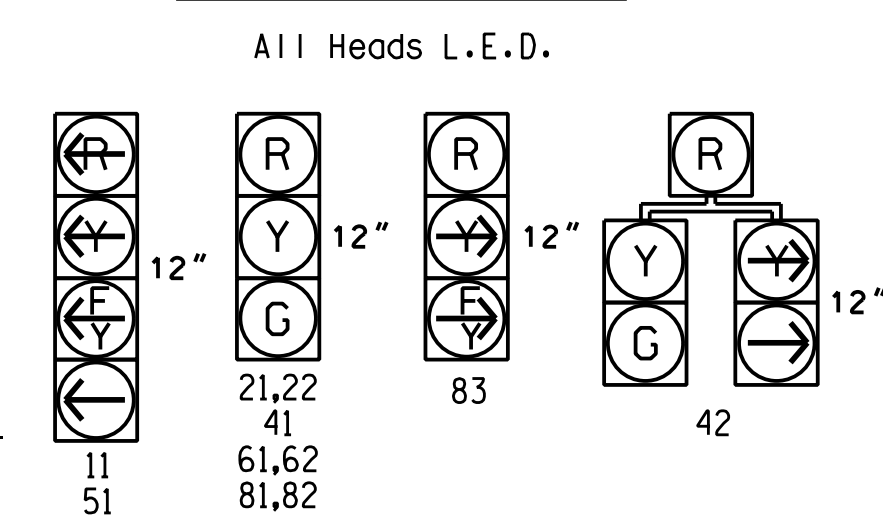
- \* Multizone Microwave Detection
- \*\* Disable phase 2 or 6 call for loops 1A and 5A during alternate phasing operation.
- \*\*\* Reduce delay to 3 seconds during alternate phasing operation.

5 Phase Fully Actuated Wilmington 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 5 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
6. The Division Traffic Engineer will determine the hours of use for each phasing plan.
7. Incorporate Microwave Detection system for vehicle detection.
8. Provide the Engineer with the Manufacturer's approved Microwave Detection locations and mounting heights to obtain detection zones as shown.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
10. Signal system data: Controller Asset #1027

SIGNAL FACE I.D.



OASIS 2070 TIMING CHART

| FEATURE                 | PHASE |            |     |     |            |     |
|-------------------------|-------|------------|-----|-----|------------|-----|
|                         | 1     | 2          | 4   | 5   | 6          | 8   |
| Min Green 1 *           | 5     | 12         | 5   | 5   | 12         | 5   |
| Extension 1 *           | 2.0   | 5.0        | 2.0 | 2.0 | 6.0        | 2.0 |
| Max Green 1 *           | 15    | 90         | 20  | 15  | 90         | 20  |
| Yellow Clearance        | 3.0   | 4.5        | 3.2 | 3.0 | 4.5        | 3.1 |
| Red Clearance           | 2.6   | 1.7        | 3.0 | 2.9 | 1.7        | 3.0 |
| Walk 1 *                | -     | -          | -   | -   | -          | -   |
| Don't Walk 1            | -     | -          | -   | -   | -          | -   |
| Seconds Per Actuation * | -     | 1.5        | -   | -   | 1.5        | -   |
| Max Variable Initial *  | -     | 34         | -   | -   | 34         | -   |
| Time Before Reduction * | -     | 15         | -   | -   | 15         | -   |
| Time To Reduce *        | -     | 30         | -   | -   | 30         | -   |
| Minimum Gap             | -     | 3.0        | -   | -   | 3.0        | -   |
| Recall Mode             | -     | MIN RECALL | -   | -   | MIN RECALL | -   |
| Vehicle Call Memory     | -     | YELLOW     | -   | -   | YELLOW     | -   |
| Dual Entry              | -     | -          | ON  | -   | -          | ON  |
| Simultaneous Gap        | ON    | ON         | 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                                      |
| ○ → Pedestrian Signal Head        | N/A                                      |
| ○ → Signal Pole with Sign         | ○ → Signal Pole with 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                         |
| →                                 | → Directional Arrow                      |
| — DD —                            | — DD — Directional Drill                 |
| ■                                 | ■ Microwave Detection Zone               |
| ■                                 | ■ Construction Zone                      |
| ⓐ                                 | ⓐ "RIGHT TURN MUST YIELD TO U-TURN" Sign |

Signal Upgrade  
Temporary Design 1  
Construction Phase I

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

|  |  |  |   |          |
|--|--|--|---|----------|
|  | Prepared for:<br>TRANSPORTATION MOBILITY AND SAFETY DIVISION<br>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION<br>SIGNAL DESIGN SECTION<br>750 N. Greenfield Pkwy, Cary, NC 27529 |  | US 17 (Market Street) at<br>SR 2734 (Marsh Oaks Drive) /<br>SR 2290 (Mendenhall Drive)<br>Division 03 New Hanover Co. Wilmington<br>PLAN DATE: February 2018 REVIEWED BY: A.D. Klinksiek<br>PREPARED BY: A.H. Thornburg REVIEWED BY: N.R. Simmons | SEAL<br> |
|  | HNTB NORTH CAROLINA, P.C.<br>343 E. Six Forks Road, Suite 200<br>Raleigh, North Carolina 27609<br>NC License No: C-1554<br>(919) 546-8997                                      |  |   |          |