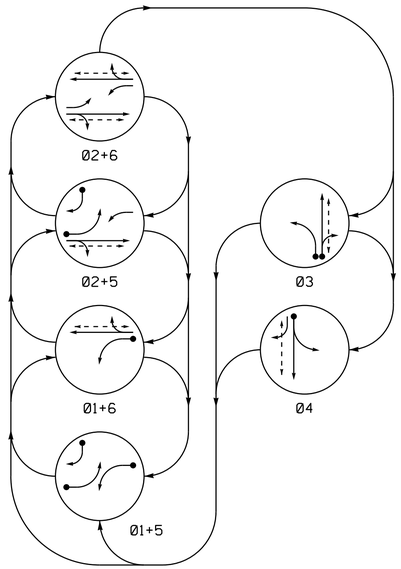
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4715 B | Sig. 178.0 |

## PHASING DIAGRAM




PHASING DIAGRAM DETECTION LEGEND

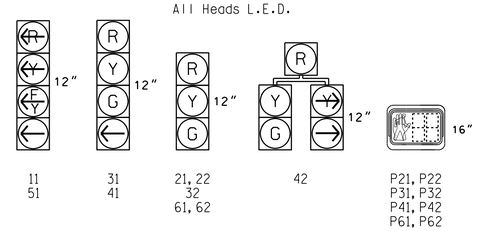
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

## TABLE OF OPERATION

| SIGNAL FACE | PHASE 01+5 | 01+6 | 02+5 | 02+6 | 03 | 04 | FLASH |
|---|---|---|---|---|---|---|---|
| 11 | ← | ← | F Y | F Y | R | R | Y |
| 21, 22 | R | R | G | G | R | R | Y |
| 31 | R | R | R | R | G ← | R | R |
| 32 | R | R | R | R | G | R | R |
| 41 | R | R | R | R | R | G ← | R |
| 42 | R → | R | R → | R | R | G | R |
| 51 | ← | F Y | ← | F Y | R | R | Y |
| 61, 62 | R | G | R | G | R | R | Y |
| P21, P22 | DW | DW | W | W | DW | DW | DRK |
| P31, P32 | DW | DW | DW | DW | W | DW | DRK |
| P41, P42 | DW | DW | DW | DW | DW | W | DRK |
| P61, P62 | DW | W | DW | W | DW | DW | DRK |

## SIGNAL FACE I.D.

All Heads L.E.D.



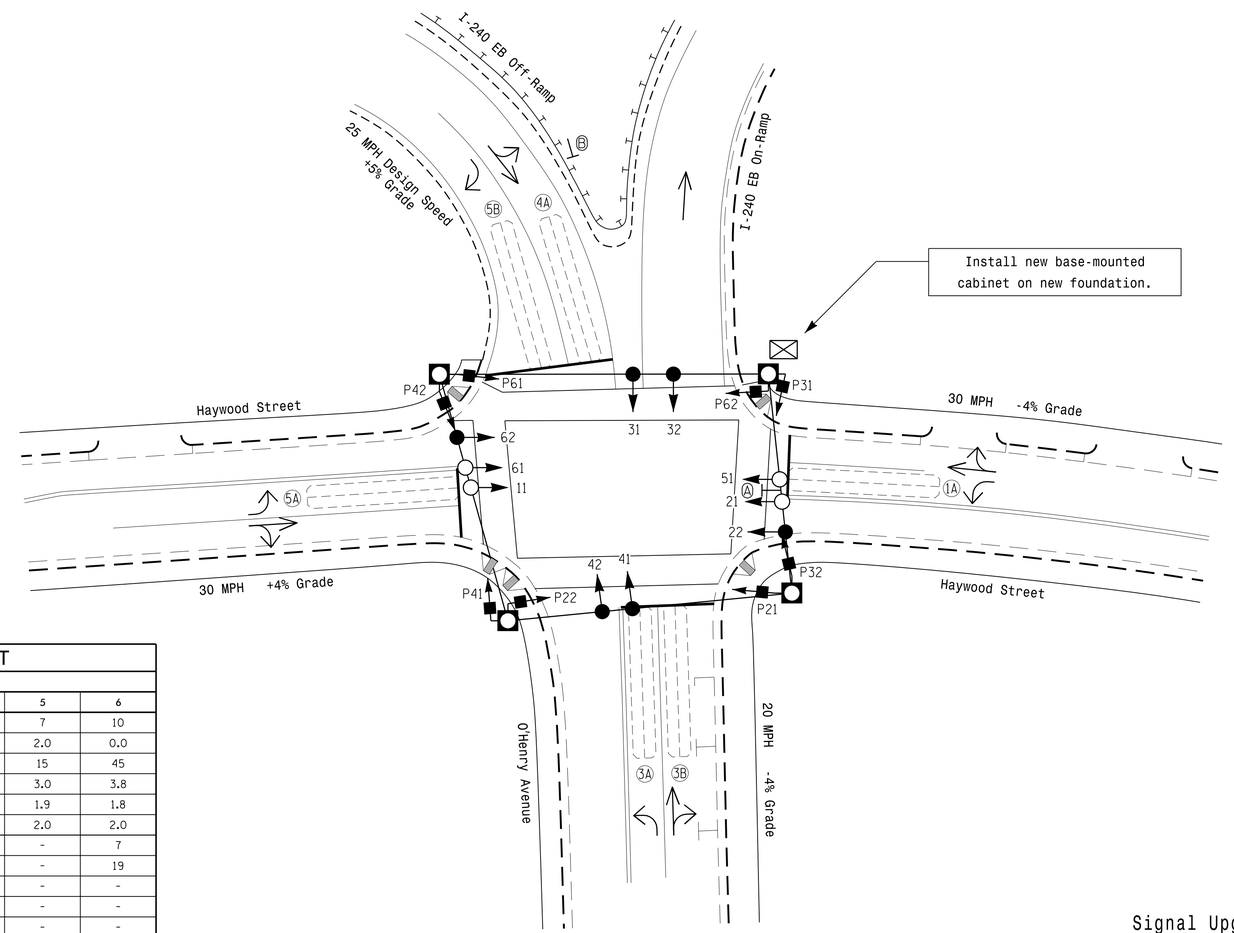

## OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

| INDUCTIVE LOOPS | | | | | DETECTOR PROGRAMMING | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PHASE | CALLING | EXTENSION | FULL TIME DELAY | STRETCH TIME | DELAY TIME | SYSTEM LOOP | NEW CARD |
| 1A | 6X40 | 0 | 2-4-2 | - | 1 | Y | Y | - | - | 15 | - | Y |
| 3A | 6X40 | 0 | 2-4-2 | - | 3 | Y | Y | - | - | 3 | - | Y |
| 3B | 6X40 | 0 | 2-4-2 | - | 3 | Y | Y | - | - | 10 | - | Y |
| 4A | 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 |

6 Phase
Semi-Actuated
Asheville Signal System

## NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
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. Reposition existing signal heads numbered 22 and 62.
6. Set all detector units to presence mode.
7. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
8. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
9. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
10. Pavement markings are existing.
11. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.




## LEGEND

| PROPOSED | | EXISTING |
|---|---|---|
| | Traffic Signal Head | |
| | Modified Signal Head | N/A |
| | Sign | |
| | Pedestrian Signal Head With Push Button & Sign | |
| | Signal Pole with Guy | |
| | Signal Pole with Sidewalk Guy | |
| | Inductive Loop Detector | |
| | Controller & Cabinet | |
| | Junction Box | |
| | 2-in Underground Conduit | |
| N/A | Right of Way | |
| | Directional Arrow | |
| | Metal Strain Pole | |
| N/A | Guardrail | |
| N/A | Curb Ramp | |
| A | "YIELD TO PEDESTRIANS WITHIN CROSSWALK" Sign | A |
| B | "DO NOT ENTER" Sign (R5-1) | B |

## OASIS 2070 TIMING CHART

| FEATURE | PHASE 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Min Green 1 * | 7 | 10 | 7 | 7 | 7 | 10 |
| Extension 1 | 2.0 | 0.0 | 2.0 | 2.0 | 2.0 | 0.0 |
| Max Green 1 * | 15 | 45 | 25 | 25 | 15 | 45 |
| Yellow Clearance | 3.0 | 3.8 | 3.0 | 3.0 | 3.0 | 3.8 |
| Red Clearance | 1.9 | 1.8 | 1.9 | 2.1 | 1.9 | 1.8 |
| Red Revert | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Walk 1 * | - | 7 | 7 | 7 | - | 7 |
| Don't Walk 1 | - | 14 | 9 | 11 | - | 19 |
| Seconds Per Actuation * | - | - | - | - | - | - |
| Max Variable Initial * | - | - | - | - | - | - |
| Time Before Reduction * | - | - | - | - | - | - |
| Time To Reduce * | - | - | - | - | - | - |
| Minimum Gap | - | - | - | - | - | - |
| Recall Mode | - | MAX/PED RECALL | - | - | - | MAX/PED RECALL |
| Vehicle Call Memory | - | - | - | - | - | - |
| Dual Entry | - | - | - | - | - | - |
| 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.

Signal Upgrade

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

# Haywood Street at O'Henry Ave./I-240 EB Ramps

Division 13 Buncombe County Asheville

PLAN DATE: June 2016 REVIEWED BY: T.J. Williams
PREPARED BY: R.N. Zinser REVIEWED BY:

SCALE 0 20 1"=20'

| REVISIONS | INIT. | DATE |
|---|---|---|
| | | |

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 043914 ENGINEER RICHARD N. ZINSER

DocuSigned by: Richard N. Zinser 8/22/2016
F13B9973472248F DATE
SIG. INVENTORY NO. 13-0992

13-SEP-2016 10:43
S:\TTSAGM\TS Signals\Signal Design Section\Western Region\Oly-13\U-4715B (Asheville Signal System)\Signal Designs\13-0992\130992_sig_dsn_2016mmdd.dgn
rnzinser