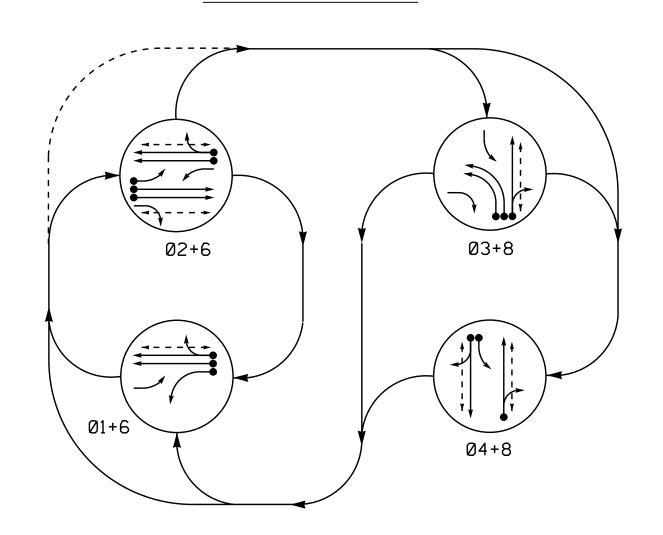
### PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

DETECTED MOVEMENT

←−−> PEDESTRIAN MOVEMENT

UNSIGNALIZED MOVEMENT

UNDETECTED MOVEMENT (OVERLAP)

| TABLE OF OPERATION |                  |                 |                |                  |                |  |  |  |
|--------------------|------------------|-----------------|----------------|------------------|----------------|--|--|--|
|                    | PHASE            |                 |                |                  |                |  |  |  |
| SIGNAL<br>FACE     | Ø<br>1<br>+<br>6 | Ø2+6            | Ø 3<br>+ 8     | Ø<br>4<br>+<br>8 | FLASH          |  |  |  |
| 11                 | •                | <del>-</del> F- | ₩              | <del></del>      | <del>≺</del> ¥ |  |  |  |
| 21                 | ₽                | -<br>F<br>Y     | <del>√</del> R | <del>≺R</del>    | <del>≺</del>   |  |  |  |
| 22                 | R                | G               | R              | R                | Υ              |  |  |  |
| 23                 | R                | G               | R/             | R                | Υ              |  |  |  |
| 31, 32             | <del>∢R</del>    | <del>∢R</del>   | <b>←</b>       | <del>∢R</del>    | <del>≺R</del>  |  |  |  |
| 41, 42             | R                | R               | R              | G                | R              |  |  |  |
| 43                 | <del></del>      | <del>∢R</del>   | <del>F</del>   | ₹                | <del>≺R</del>  |  |  |  |
| 61, 62             | G                | G               | R              | R                | Υ              |  |  |  |
| 81, 82             | R                | R               | G              | G                | R              |  |  |  |
| P21, P22           | DW               | W               | DW             | DW               | DRK            |  |  |  |
| P41, P42           | DW               | DW              | DW             | W                | DRK            |  |  |  |
| P61, P62           | W                | W               | DW             | DW               | DRK            |  |  |  |
| P81, P82           | DW               | DW              | W              | W                | DRK            |  |  |  |

| P61, P62   | W    | W  | DW |
|------------|------|----|----|
| P81, P82   | DW   | DW | W  |
| W - Walk   |      |    |    |
| DW - Don't | Walk | (  |    |

DRK – Dark

# SIGNAL FACE I.D. All Heads L.E.D. 12" R Y 12" 22 41, 42 P21, P22 P41, P42 23 P61, P62 61, 62 81, 82 P81, P82

| 11     | NDUCTI       | VE LOC                              | )PS   | DETECTOR PROGRAMMING |       |         |           |                 |                 |               |             |          |
|--------|--------------|-------------------------------------|-------|----------------------|-------|---------|-----------|-----------------|-----------------|---------------|-------------|----------|
| LOOP   | SIZE<br>(FT) | DISTANCE<br>FROM<br>STOPBAR<br>(FT) | TURNS | NEW LOOP             | PHASE | CALLING | EXTENSION | FULL TIME DELAY | STRETCH<br>TIME | DELAY<br>TIME | SYSTEM LOOP | NEW CARD |
| 1 A    | 6X40         | +5                                  | 2-4-2 |                      | 1     | Υ       | Υ         | -               | -               | 15            | •           | Y        |
| 1 A    | 0.40         | +5                                  | Z-4-Z | _                    | 6     | Υ       | Υ         | -               | -               | -             | -           | Υ        |
| 2A, 2B | 6X6          | 70                                  | 4     | -                    | 2     | Υ       | Υ         | -               | -               | _             | -           | Υ        |
| 2C     | 6X40         | +5                                  | 2-4-2 | -                    | 2     | Υ       | Υ         | -               | -               | _             | -           | Υ        |
| 3A     | 6X40         | 0                                   | 2-4-2 | -                    | 3     | Υ       | Υ         | -               | -               | 3             | -           | Υ        |
| 3B     | 6X40         | 0                                   | 2-4-2 | -                    | 3     | Υ       | Υ         | -               | -               | -             | -           | Υ        |
| 4A     | 6X40         | 0                                   | 2-4-2 | -                    | 4     | Υ       | Υ         | -               | -               | 3             | -           | Υ        |
| 4B     | 6X40         | 0                                   | 2-4-2 | -                    | 4     | Υ       | Υ         | -               | -               | 10            | -           | Υ        |
| 6A,6B  | 6X6          | 70                                  | 4     | -                    | 6     | Υ       | Υ         | -               | -               | -             | -           | Υ        |
| 8.8    | 6X40         | 0                                   | 2-4-2 | -                    | 8     | Υ       | Υ         | -               | _               | 10            | -           | Υ        |

# 4 Phase Fully Actuated (High Point 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 may be lagged.
- 4. Phase 3 may be lagged.
- 5. Reposition existing signal heads numbered 41, 42, 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

Traffic Signal Head

Modified Signal Head

Sign

Pedestrian Signal Head

Signal Pole with Guy Signal Pole with Sidewalk Guy Inductive Loop Detector Controller & Cabinet Junction Box 2-in Underground Conduit

> Right of Way Directional Arrow Type I Pushbutton Post Curb Ramp

|       |        |              |     |                | Barron - 1% Grac | P41 P82  P22 P21 P21 P21 P21 P21 P21 P21 P21 P21 |
|-------|--------|--------------|-----|----------------|------------------|--|
| UAS18 | 5 2070 | TIMIN<br>PHA |     | <del>1</del> 1 |                  | (Willard St. 1836)                               |
| 1     | 2      | 3            | 4   | 6              | 8                |  |
| 7     | 10     | 7            | 7   | 10             | 7                |  |
| 2.0   | 3.0    | 2.0          | 2.0 | 3.0            | 2.0              | (Willard   |
| 15    | 60     | 15           | 30  | 60             | 30               |  |
| 3.0   | 3 9    | 3.0          | 4 7 | 3.9            | 4 7              |  |

|                         | OASI  | S 2070      | TIMIN | IG CHAF | RT          |     |  |  |  |
|-------------------------|-------|-------------|-------|---------|-------------|-----|--|--|--|
|                         | PHASE |             |       |         |             |     |  |  |  |
| FEATURE                 | 1     | 2           | 3     | 4       | 6           | 8   |  |  |  |
| Min Green 1 *           | 7     | 10          | 7     | 7       | 10          | 7   |  |  |  |
| Extension 1 *           | 2.0   | 3.0         | 2.0   | 2.0     | 3.0         | 2.0 |  |  |  |
| Max Green 1 *           | 15    | 60          | 15    | 30      | 60          | 30  |  |  |  |
| Yellow Clearance        | 3.0   | 3.9         | 3.0   | 4.7     | 3.9         | 4.7 |  |  |  |
| Red Clearance           | 3.2   | 2.4         | 2.9   | 2.4     | 2.4         | 2.4 |  |  |  |
| Red Revert              | 2.0   | 2.0         | 2.0   | 2.0     | 2.0         | 2.0 |  |  |  |
| Walk 1 *                | -     | 7           | -     | 4       | 7           | 4   |  |  |  |
| Don't Walk 1            | -     | 18          | -     | 28      | 12          | 26  |  |  |  |
| Seconds Per Actuation * | -     | -           | -     | -       | -           | -   |  |  |  |
| Max Variable Initial *  | -     | -           | -     | -       | -           | -   |  |  |  |
| Time Before Reduction * | _     | -           | -     | -       | -           | -   |  |  |  |
| Time To Reduce *        | -     | -           | -     | -       | -           | -   |  |  |  |
| Minimum Gap             | -     | -           | -     | -       | -           | -   |  |  |  |
| Recall Mode **          | -     | SOFT RECALL | -     | -       | SOFT RECALL | -   |  |  |  |
| Vehicle Call Memory     | -     | YELLOW      | -     | -       | YELLOW      | -   |  |  |  |
| Dual Entry              | -     | -           | -     | -       | -           | 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. \*\* May be changed to Min Recall by Time of Day at discretion of City Traffic Engineer.

|                         | OASI | S 2070       | TIMIN | G CHAF | RT          |     |
|-------------------------|------|--------------|-------|--------|-------------|-----|
|                         |      |              |       |        |             |     |
| FEATURE                 | 1    | 2            | 3     | 4      | 6           | 8   |
| Min Green 1 *           | 7    | 10           | 7     | 7      | 10          | 7   |
| Extension 1 *           | 2.0  | 3.0          | 2.0   | 2.0    | 3.0         | 2.0 |
| Max Green 1 *           | 15   | 60           | 15    | 30     | 60          | 30  |
| Yellow Clearance        | 3.0  | 3 <b>.</b> 9 | 3.0   | 4.7    | 3.9         | 4.7 |
| Red Clearance           | 3.2  | 2.4          | 2.9   | 2.4    | 2.4         | 2.4 |
| Red Revert              | 2.0  | 2.0          | 2.0   | 2.0    | 2.0         | 2.0 |
| Walk 1 *                | -    | 7            | -     | 4      | 7           | 4   |
| Don't Walk 1            | -    | 18           | -     | 28     | 12          | 26  |
| Seconds Per Actuation * | -    | -            | -     | -      | -           | -   |
| Max Variable Initial *  | -    | -            | -     | -      | -           | -   |
| Time Before Reduction * | -    | -            | -     | -      | -           | -   |
| Time To Reduce *        | -    | -            | -     | -      | -           | -   |
| Minimum Gap             | -    | -            | -     | -      | -           | -   |
| Recall Mode **          | -    | SOFT RECALL  | -     | -      | SOFT RECALL | -   |
| Vehicle Call Memory     | -    | YELLOW       | -     | -      | YELLOW      | -   |
| Dual Entry              | -    | -            | -     | -      | -           | ON  |
| Simultaneous Gap        | ON   | ON           | ON    | ON     | ON          | ON  |

### Signal Upgrade



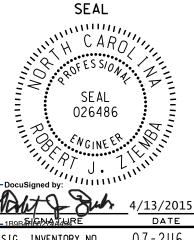
Barrow Road SR 1836 (Willard Dairy Road)

Division 7 Guilford County PREPARED BY: R.N. Zinser PLAN DATE: May 2014 750 N.Greenfield Pkwy.Garner.NC 27529 PREPARED BY: L. Blount REVIEWED BY: INIT. DATE REVISIONS

<u>PROPOSED</u>

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**O**->



<u>EXISTING</u>

SIG. INVENTORY NO.