

PHASING DIAGRAM

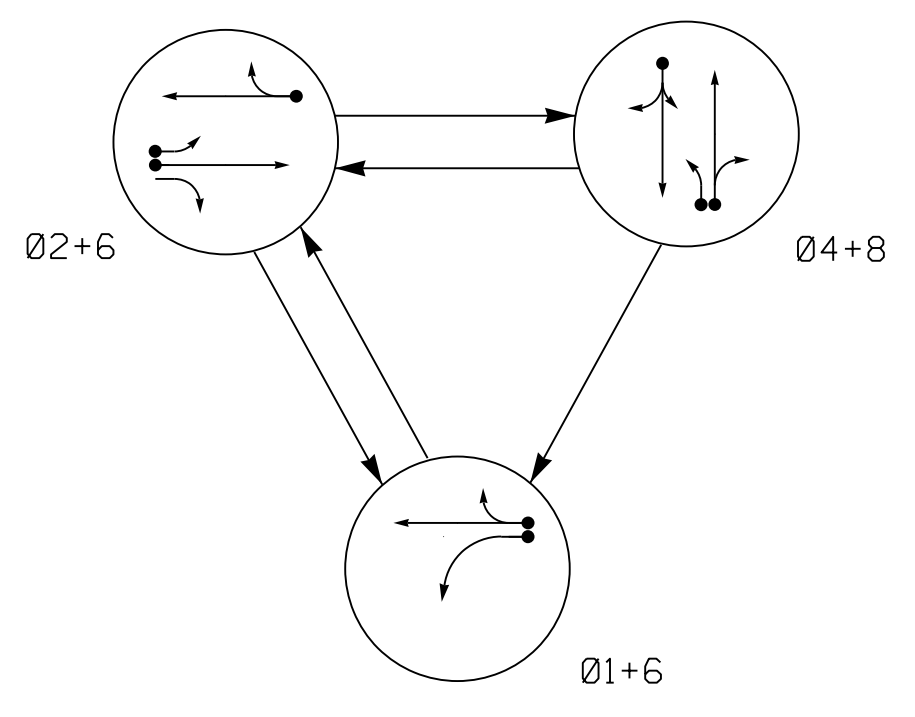
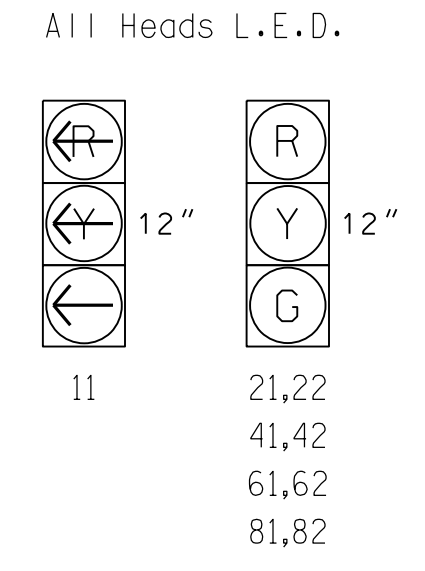


TABLE OF OPERATION

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

SIGNAL FACE I.D.



OASIS 2070 DETECTOR INSTALLATION CHART

| ZONE | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | DETECTOR PROGRAMMING | | | | | | | | |
|------|-----------|----------------------------|----------------------|-------|---------|-----------|--------------|------------|--------|----------|---|
| | | | NEW ZONE | PHASE | CALLING | EXTENSION | STRETCH TIME | DELAY TIME | SYSTEM | NEW CARD | |
| 1A | 6X40 | 0 | Y | 1 | Y | Y | - | - | 3 | - | - |
| 2A | 6X6 | 300 | Y | 2 | Y | Y | - | 1.6 | - | - | - |
| 2B | 6X6 | 90 | Y | 2 | Y | Y | - | - | - | - | - |
| 2C | 6X40 | 0 | Y | 2 | Y | Y | - | - | - | - | - |
| 4A | 6X40 | 0 | Y | 4 | Y | Y | - | - | 10 | - | - |
| 6A | 6X6 | 300 | Y | 6 | Y | Y | - | 1.6 | - | - | - |
| 6B | 6X6 | 90 | Y | 6 | Y | Y | - | - | - | - | - |
| 8A | 6X40 | 0 | Y | 8 | Y | Y | - | - | 3 | - | - |
| 8B | 6X40 | 0 | Y | 8 | Y | Y | - | - | - | - | - |

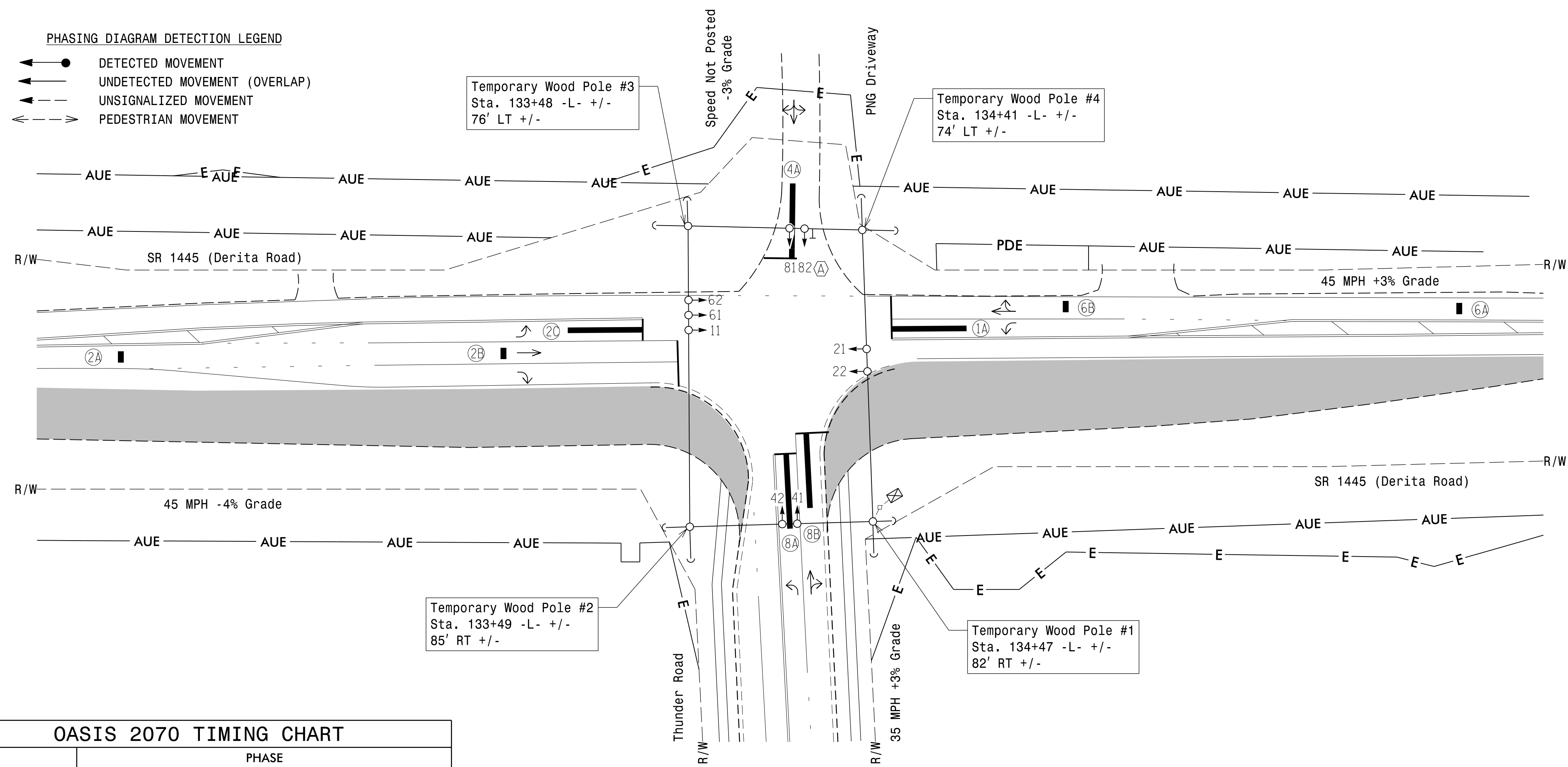
3 Phase Fully Actuated Concord City Signal System

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012, "Standard Specifications for Roads and Structures" dated January 2012, and all applicable sections of the latest version of the generic Project Special Provisions.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Enable Backup Protect for phase 6 to allow the controller to clear from phase 2+6 to phase 1+6 by progressing through an all red display.
- Install backplates for all signal heads.
- Set all detector units to presence mode.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset #2010.
- Reuse existing video detection system for temporary signals. Relocate equipment as necessary.
- Remove existing metal signal poles and foundations.
- Remove existing wireless communication equipment and return to the City of Concord.

PHASING DIAGRAM DETECTION LEGEND

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



OASIS 2070 TIMING CHART

| FEATURE | PHASE | | | | |
|-------------------------|-------|------------|-----|------------|-----|
| | 1 | 2 | 4 | 6 | 8 |
| Min Green 1 * | 7 | 12 | 7 | 12 | 7 |
| Extension 1 * | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Max Green 1 * | 20 | 90 | 30 | 90 | 30 |
| Yellow Clearance | 3.0 | 4.9 | 3.3 | 4.3 | 3.7 |
| Red Clearance | 2.6 | 1.3 | 2.0 | 1.3 | 2.1 |
| Red Revert | 2.0 | 2.0 | 2.0 | 5.0 | 2.0 |
| Walk 1 * | - | - | - | - | - |
| Don't Walk 1 | - | - | - | - | - |
| Seconds Per Actuation * | - | - | - | - | - |
| Max Variable Initial * | - | - | - | - | - |
| Time Before Reduction * | - | - | - | - | - |
| Time To Reduce * | - | - | - | - | - |
| Minimum Gap | - | - | - | - | - |
| Recall Mode | - | MIN RECALL | - | MIN RECALL | - |
| Vehicle Call Memory | - | YELLOW | - | YELLOW | - |
| Dual Entry | - | - | ON | - | ON |
| Simultaneous Gap | 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 Traffic Signal Head | | Existing Traffic Signal Head |
| | Proposed Modified Signal Head | | Existing Modified Signal Head |
| | Proposed Pedestrian Signal Head | | Existing Pedestrian Signal Head |
| | Proposed Signal Pole with Guy | | Existing Signal Pole with Guy |
| | Proposed Video Detection Zone | | Existing Video Detection Zone |
| | Proposed Controller & Cabinet | | Existing Controller & Cabinet |
| | Proposed Junction Box | | Existing Junction Box |
| | Proposed 2-in Underground Conduit | | Existing 2-in Underground Conduit |
| | Proposed Right of Way | | Existing Right of Way |
| | Proposed Directional Arrow | | Existing Directional Arrow |
| | Proposed "NO TURN ON RED" Sign (R10-11a) | | Existing "NO TURN ON RED" Sign (R10-11a) |
| | Proposed Construction Zone | | Existing Construction Zone |
| | Proposed Construction Easement | | Existing Construction Easement |
| | Proposed Aerial Utility Easement | | Existing Aerial Utility Easement |
| | Proposed Permanent Drainage Easement | | Existing Permanent Drainage Easement |

Signal Upgrade-Temporary Design 1-TCP Phase I DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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SR 1445 (Derita Road) at Thunder Road / PNG Driveway

Division 10 Cabarrus County Concord

PLAN DATE: March 2016 REVIEWED BY: C.L. Kalencik

PREPARED BY: S W Cox REVIEWED BY:

Courtney L. Kalencik
Professional Engineer
No. 040715

7/7/2016

SCALE: 0 40
1" = 40'

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