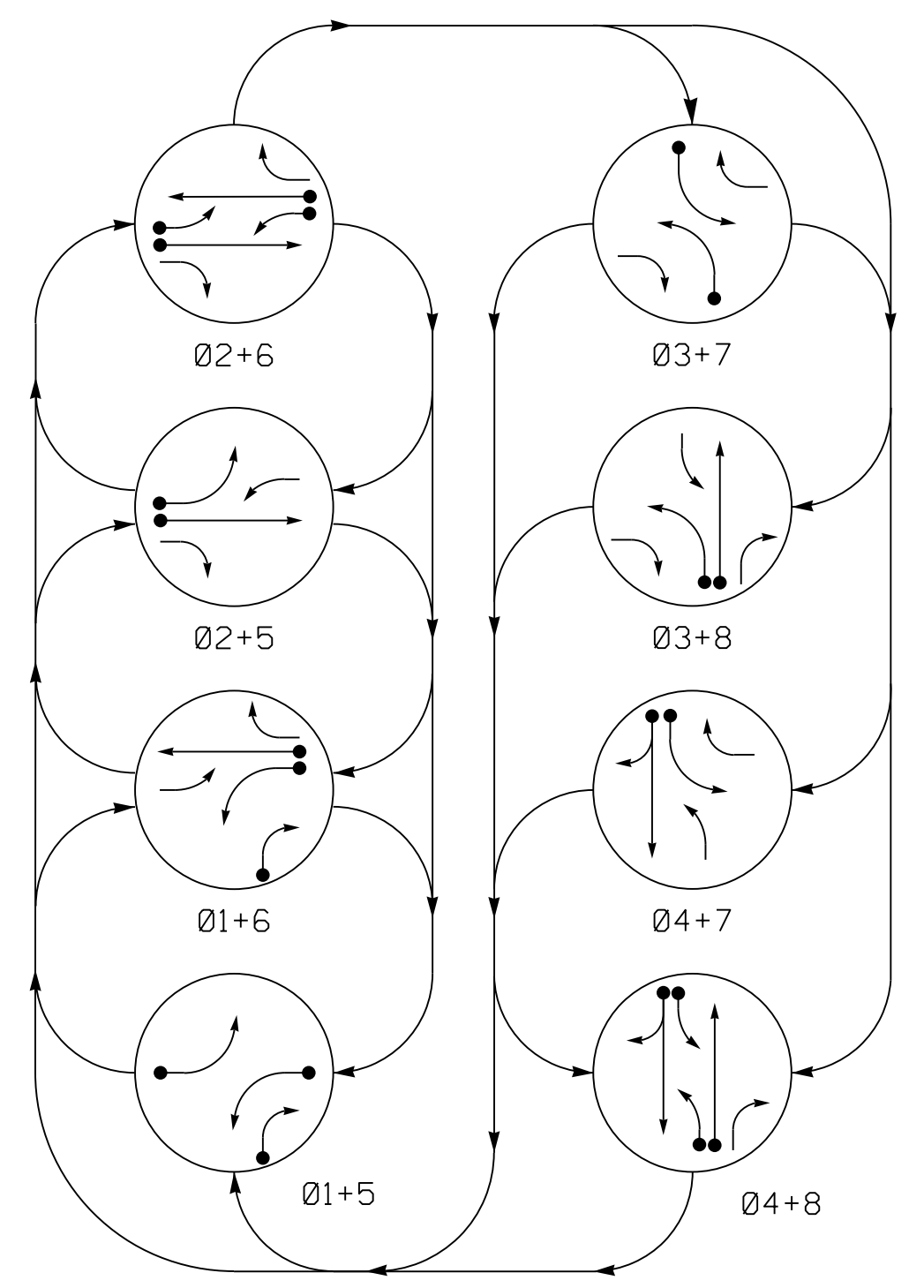


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

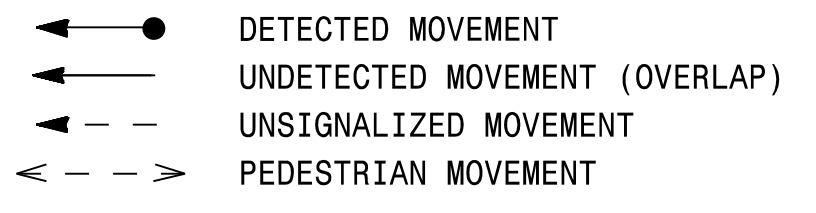
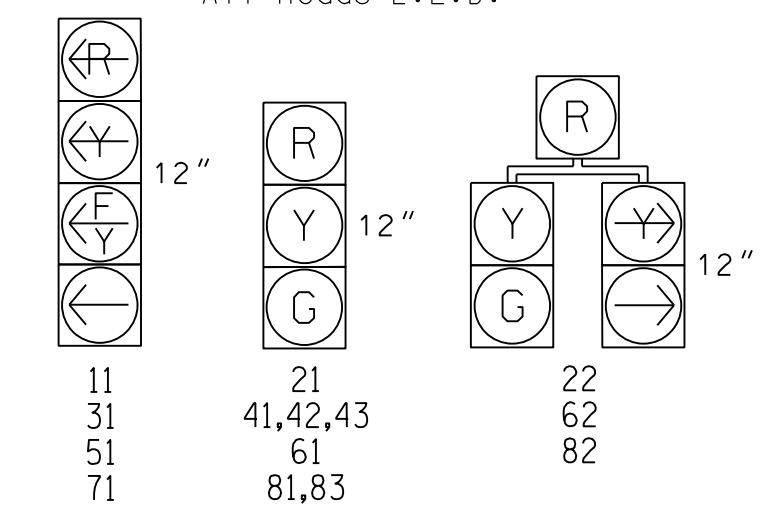


TABLE OF OPERATION

| SIGNAL FACE | PHASE | | | | | | | |
|-------------|-------|------|------|------|------|------|------|-------|
| | 01+5 | 02+5 | 02+6 | 03+7 | 03+8 | 04+7 | 04+8 | F L H |
| 11 | ← | ← | ← | ← | ← | ← | ← | Y |
| 21 | R | R | G | G | R | R | R | Y |
| 22 | R | R | G | G | R | R | R | Y |
| 31 | ← | ← | ← | ← | ← | ← | ← | Y |
| 41,42,43 | R | R | R | R | R | R | R | G |
| 51 | ← | ← | ← | ← | ← | ← | ← | Y |
| 61 | R | G | R | G | R | R | R | Y |
| 62 | R | G | R | G | R | R | R | Y |
| 71 | ← | ← | ← | ← | ← | ← | ← | Y |
| 81,83 | R | R | R | R | R | G | R | G |
| 82 | R | R | R | R | R | G | R | G |

SIGNAL FACE I.D.
All Heads L.E.D.



ASC/3 DETECTOR INSTALLATION CHART

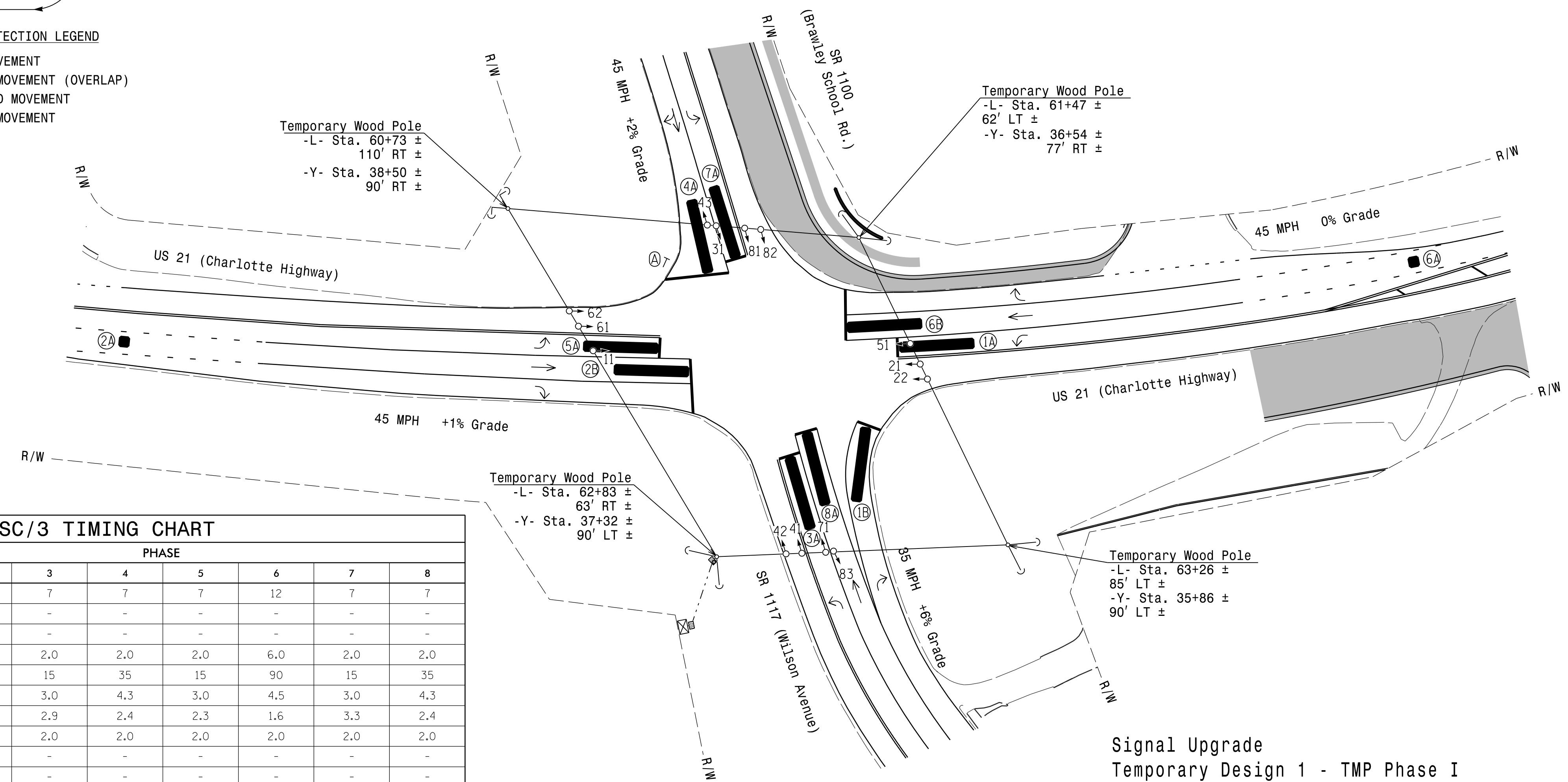
| LOOP | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW LOOP | PROGRAMMING | | | | | | | |
|------|-----------|----------------------------|-------|----------|-------------|---------|-------------|------------|-------------------|------|-------------|----------|
| | | | | | PHASE | CALLING | EXTEND TIME | DELAY TIME | USE ADDED INITIAL | TYPE | SYSTEM LOOP | NEW CARD |
| 1A | 6X40 | 0 | * | * | 1 | Yes | - | 15 | - | N | - | * |
| | | | | | 6 | Yes | - | 3 | - | G | - | * |
| 1B | 6X40 | 0 | * | * | 1 | Yes | - | 15 | - | N | - | * |
| 2A | 6X6 | 300 | * | * | 2 | Yes | - | - | - | N | - | * |
| 2B | 6X40 | 0 | * | * | 2 | Yes | 2.0 | 5 | - | G | - | * |
| 3A | 6X40 | 0 | * | * | 3 | Yes | - | 15 | - | N | - | * |
| | | | | | 8 | Yes | - | 3 | - | N | - | * |
| 4A | 6X40 | 0 | * | * | 4 | Yes | - | 10 | - | N | - | * |
| 5A | 6X40 | 0 | * | * | 5 | Yes | - | 15 | - | N | - | * |
| 6A | 6X6 | 300 | * | * | 6 | Yes | - | 3 | - | N | - | * |
| 6B | 6X40 | 0 | * | * | 6 | Yes | 2.0 | 5 | - | G | - | * |
| 7A | 6X40 | 0 | * | * | 7 | Yes | - | 15 | - | N | - | * |
| | | | | | 4 | Yes | - | 3 | - | N | - | * |
| 8A | 6X40 | 0 | * | * | 8 | Yes | - | - | - | N | - | * |

* Video Detection Area

8 Phase Fully Actuated Isolated

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- Set all detector units to presence mode.
- This intersection features a video detection system. Detectors should be placed to ensure the desired operation parameters are achieved.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.

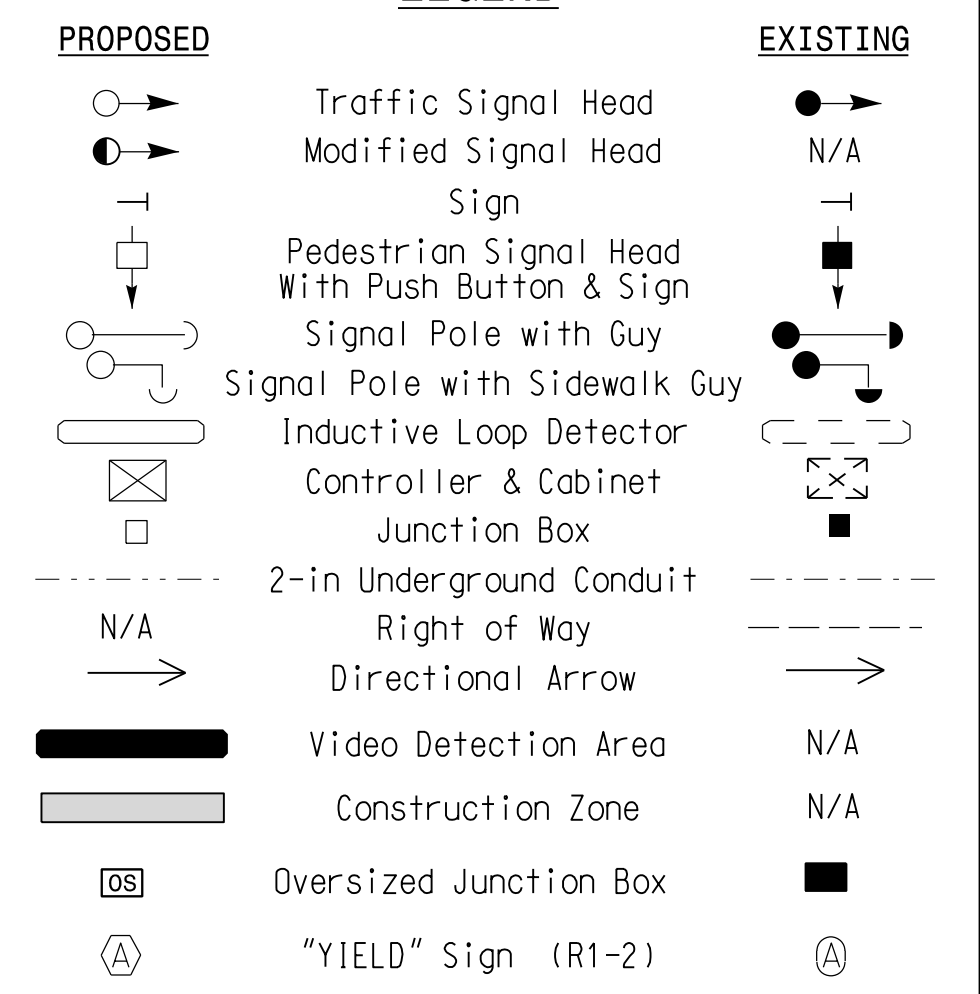


ASC/3 TIMING CHART

| FEATURE | PHASE | | | | | | | |
|-------------------------|-------|-------------|-----|-----|-----|-------------|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Min Green * | 7 | 12 | 7 | 7 | 7 | 12 | 7 | 7 |
| Walk * | - | - | - | - | - | - | - | - |
| Ped Clear | - | - | - | - | - | - | - | - |
| Veh. Extension * | 2.0 | 6.0 | 2.0 | 2.0 | 2.0 | 6.0 | 2.0 | 2.0 |
| Max I * | 15 | 90 | 15 | 35 | 15 | 90 | 15 | 35 |
| Yellow | 3.0 | 4.5 | 3.0 | 4.3 | 3.0 | 4.5 | 3.0 | 4.3 |
| Red Clear | 2.8 | 1.6 | 2.9 | 2.4 | 2.3 | 1.6 | 3.3 | 2.4 |
| Red Revert | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| Actuations B4 Add * | - | - | - | - | - | - | - | - |
| Seconds / Actuation * | - | - | - | - | - | - | - | - |
| Max Initial * | - | - | - | - | - | - | - | - |
| Time Before Reduction * | - | 15 | - | - | - | 15 | - | - |
| Time To Reduce * | - | 30 | - | - | - | 30 | - | - |
| Minimum Gap | - | 3.0 | - | - | - | 3.0 | - | - |
| Locking Detector | - | X | - | - | - | X | - | - |
| Recall Position | - | VEH. RECALL | - | - | - | VEH. RECALL | - | - |
| Dual Entry | - | - | - | X | - | - | - | X |
| Simultaneous Gap | X | X | X | X | X | X | X | X |

* 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



**Signal Upgrade
Temporary Design 1 - TMP Phase I**

Stantec
Stantec Consulting Services Inc.
801 Jones Franklin Road-Suite 300
Raleigh, NC 27606
Tel. (919) 851-6866
Fax. (919) 851-7024
www.stantec.com
License No. F-0672

Prepared for the Offices of:
Transportation Mobility and Safety Division
North Carolina Department of Transportation
Signal Design Section
750 N. Greenfield Pkwy, Garner, NC 27526
SCALE: 0 40
1" = 40'

**US 21 (Charlotte Highway) at
SR 1100 (Brawley School Road)
/ SR 1117 (Wilson Avenue)**
Division 12 Iredell County Mooresville
PLAN DATE: May 2022 REVIEWED BY: E D Harris
PREPARED BY: J. Hambricht REVIEWED BY: R M Nuncy

SEAL
PROFESSIONAL ENGINEER
SEAL 042678
DERRICK A. WALLER
DocuSigned by:
Derrick Waller 3/22/2023
DATE
SIG. INVENTORY NO. 12-136911

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

3/22/2023 10:00 AM C:\Users\jhambricht\OneDrive\Documents\Signal Design\12-136911.dgn User: daniel.liber