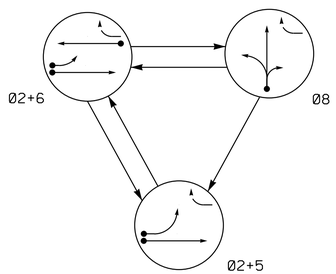
DocuSign Envelope ID: 9C2EDF91-AF92-4193-89AD-18C52899CFC3

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| I-5987B | Sig 10.0 |

## PHASING DIAGRAM




PHASING DIAGRAM DETECTION LEGEND

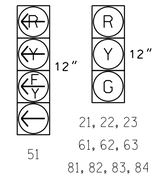
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

## TABLE OF OPERATION

| SIGNAL FACE | PHASE 02+5 | PHASE 02+6 | PHASE 08 | FLASH |
|---|---|---|---|---|
| 21, 22, 23 | G | G | R | Y |
| 51 | ← | F Y | R | Y |
| 61, 62, 63 | R | G | R | Y |
| 81, 82, 83, 84 | R | R | G | R |

## SIGNAL FACE I.D.

All Heads L.E.D.




## ASC/3 DETECTOR INSTALLATION CHART

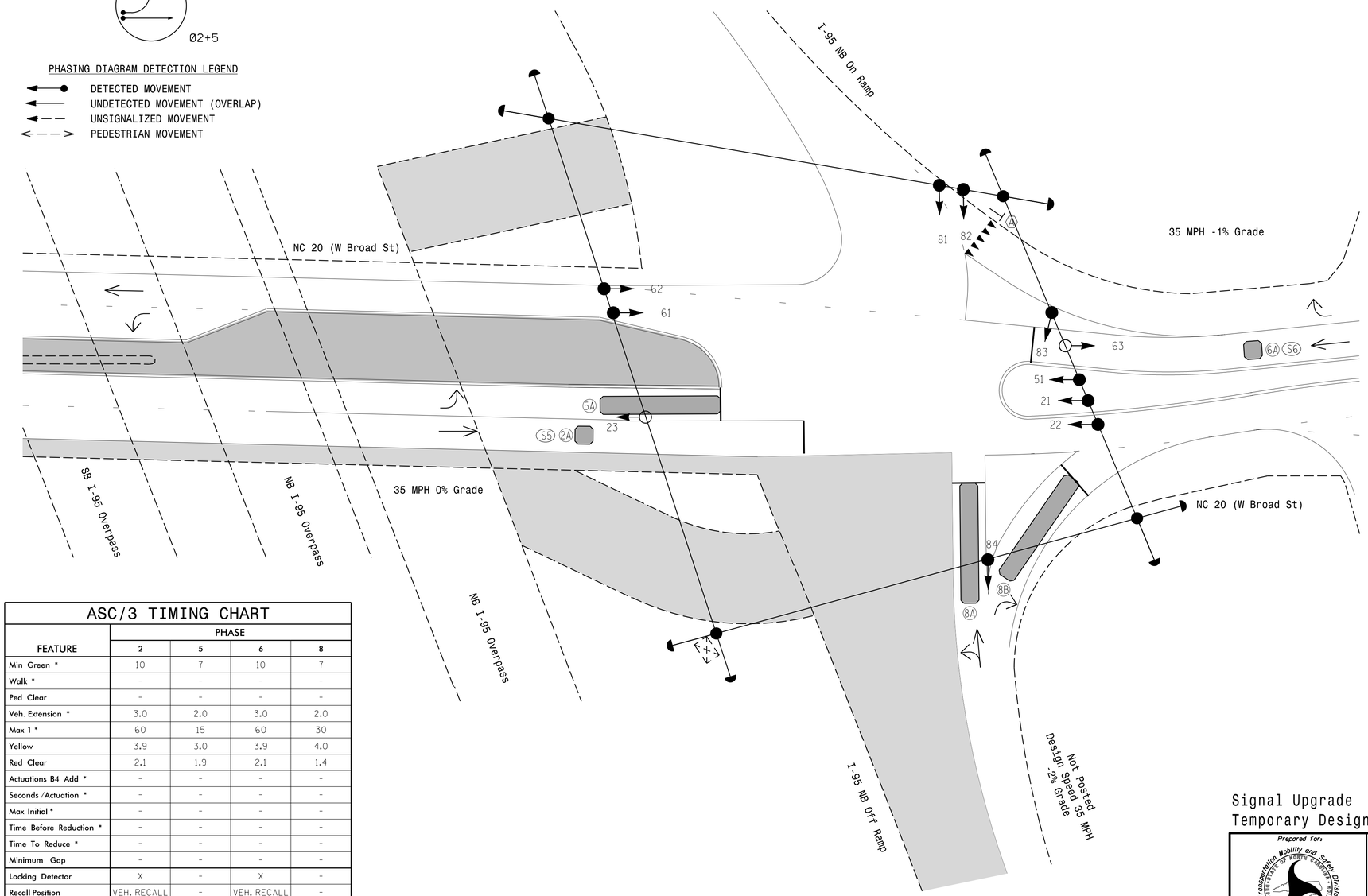
| DETECTOR | | | | | PROGRAMMING | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ZONE | SIZE (FT) | DISTANCE FROM STOPBAR (FT) | TURNS | NEW ZONE | PHASE | CALLING | EXTEND TIME | DELAY TIME | USE ADDED INITIAL | TYPE | SYSTEM LOOP | NEW CARD |
| 2A/S5 | 6X6 | 70 | * | * | 2 | Yes | - | - | - | N | X | * |
| 5A | 6X40 | 0 | * | * | 5 | Yes | - | 15 | - | N | - | * |
| | | | | | 2 | Yes | - | - | - | N | - | * |
| 6A/S6 | 6X6 | 70 | * | * | 6 | Yes | - | - | - | N | X | * |
| 8A | 6X40 | 0 | * | * | 8 | Yes | - | - | - | N | - | * |
| 8B | 6X40 | 0 | * | * | 8 | Yes | - | 15 | - | N | - | * |

* Multizone Microwave Detection Zone

## 3 Phase
## Fully Actuated
## D06-21 St. Pauls

## 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 5 may be lagged.
4. Set all detector units to presence mode.
5. Reposition existing signal heads numbered 81, 82, 83 and 84.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
7. This intersection uses multi-zone microwave detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
8. Closed loop system data: Controller Asset #1366.
9. Contractor shall remove and relocate wireless radio/antenna, as required, in order to maintain CLS communication during construction.




## ASC/3 TIMING CHART

| FEATURE | PHASE 2 | PHASE 5 | PHASE 6 | PHASE 8 |
|---|---|---|---|---|
| Min Green * | 10 | 7 | 10 | 7 |
| Walk * | - | - | - | - |
| Ped Clear | - | - | - | - |
| Veh. Extension * | 3.0 | 2.0 | 3.0 | 2.0 |
| Max 1 * | 60 | 15 | 60 | 30 |
| Yellow | 3.9 | 3.0 | 3.9 | 4.0 |
| Red Clear | 2.1 | 1.9 | 2.1 | 1.4 |
| Actuations B4 Add * | - | - | - | - |
| Seconds /Actuation * | - | - | - | - |
| Max Initial * | - | - | - | - |
| Time Before Reduction * | - | - | - | - |
| Time To Reduce * | - | - | - | - |
| Minimum Gap | - | - | - | - |
| Locking Detector | X | - | X | - |
| Recall Position | VEH. RECALL | - | VEH. RECALL | - |
| Dual Entry | - | - | - | - |
| Simultaneous Gap | 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

| 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 | |
| | "YIELD" Sign (R1-2) | |
| | Microwave Detection Zone | N/A |
| | Construction Zone | N/A |
| | Shark's Teeth Yield Line | N/A |

Signal Upgrade
Temporary Design 3 - (TMP Phase 2.2)

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

Prepared for: Transportation Mobility and Safety Division, Signal Design Section, Department of Transportation, State of North Carolina
750 N.Greenfield Pkwy,Garner,NC 27529

RAMEY KEMP ASSOCIATES
8210 University Executive Park Drive Suite 220 Charlotte, North Carolina 28262
Phone: 704-549-4202 | www.rameykemp.com | NC License No. C-0910

SCALE 0 20 1"=20'

NC 20 (W. Broad St.)
at
I-95 NB Ramps

Division 6 Robeson County St. Pauls

PLAN DATE: February 2022 REVIEWED BY: WJ Hamilton
PREPARED BY: TS Popelka RKA PROJ. NO.: 21273 (040)

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

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 32396 ENGINEER WILLIAM J. HAMILTON

DocuSigned by: William J. Hamilton
ASSISTANT ENGINEER
SIGNATURE 02/25/2022 DATE

SIG. INVENTORY NO. 06-1366T3

2/24/2022
R:\21273_D06_I5987B_sig_dsn_2021mmdd.dgn
User:tWendt