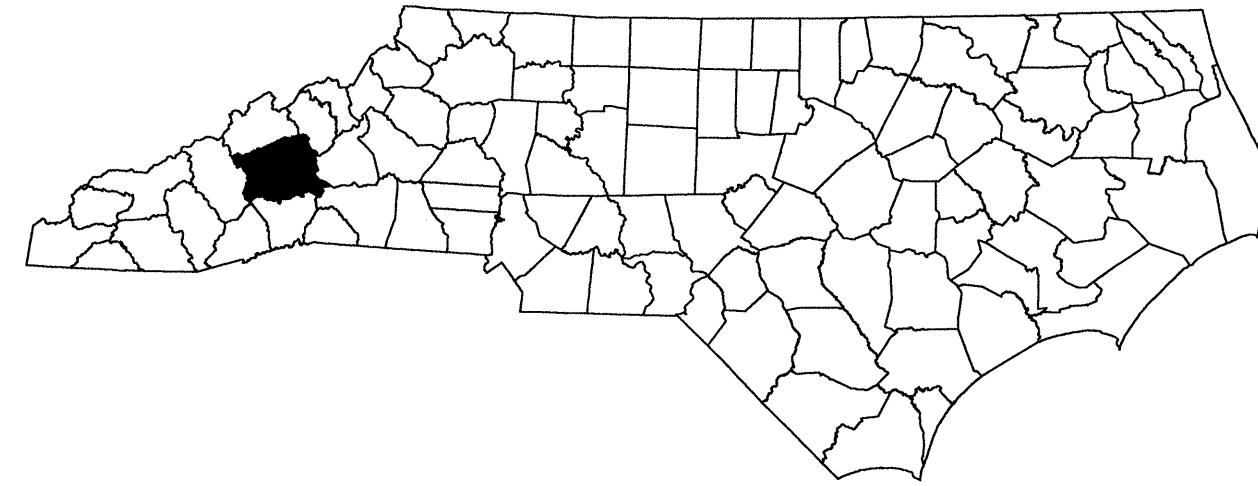


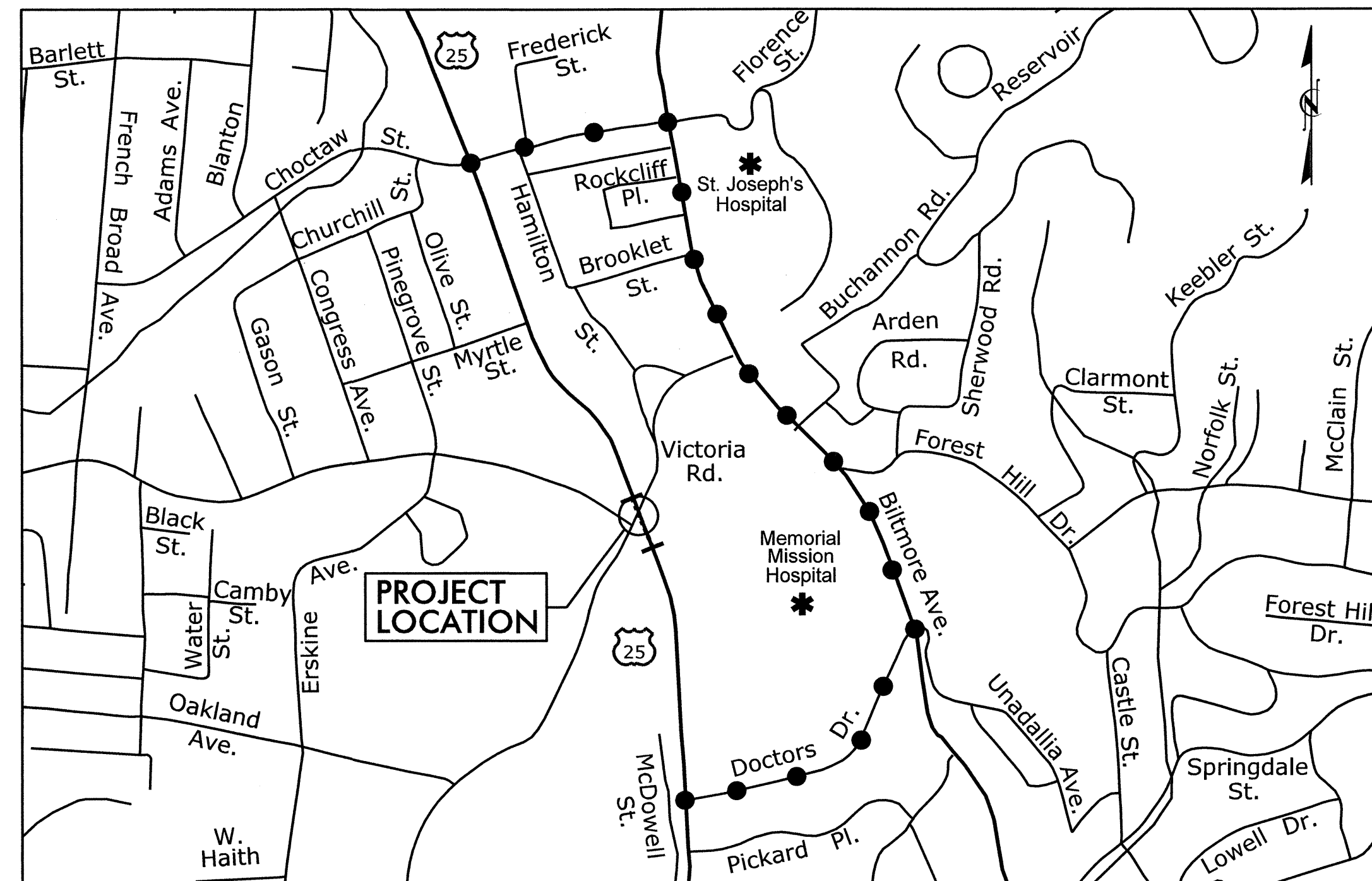
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**BUNCOMBE COUNTY**



**LOCATION: TUNNEL ON US 25 (MCDOWELL ST.) UNDER VICTORIA ROAD**



DETOUR ROUTE

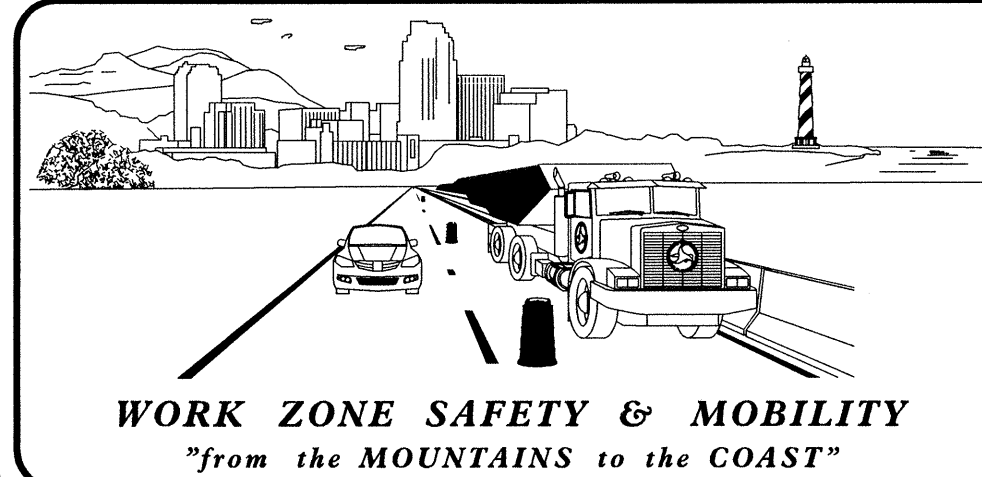
<b>INDEX OF SHEETS</b>	
SHEET NO.	TITLE
TMP-1	TITLE SHEET AND INDEX OF SHEETS
TMP-1A	ROADWAY STANDARD DRAWINGS & LEGEND
TMP-1B	GENERAL NOTES
TMP-1C	PHASING
TMP-2	US 25 (MCDOWELL ST.) OFF-SITE DETOUR SIGNING
TMP-3	US 25 (MCDOWELL ST.) TYPICAL SECTIONS

PLAN PREPARED BY:

**HDR** HDR Engineering, Inc. of the Carolinas  
3733 National Drive, Suite 207 Raleigh, N.C. 27612  
N.C.B.E.L.S. License Number: F-0116

- D. WAINWRIGHT, P.E. *PROJECT MANAGER*
- MICHELLE WARD, P.E. *TRAFFIC CONTROL PROJECT ENGINEER*
- MICHELLE WARD, P.E. *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
- W. WEATHERLY, E.I. *TRAFFIC CONTROL DESIGN ENGINEER*

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**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. *STATE TRAFFIC MANAGEMENT ENGINEER*

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*TRAFFIC CONTROL DESIGN ENGINEER*



SEAL  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
MICHELLE WARD  
033789  
1/11/13

**U-4014**

**PROJECT:**

SHEET NO.  
TMP-1

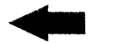




## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY-DRUM










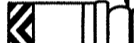

## LEGEND

### GENERAL




-  DIRECTION OF TRAFFIC FLOW
-  DIRECTION OF PEDESTRIAN TRAFFIC FLOW
-  EXIST. PVMT.
-  NORTH ARROW
-  PROPOSED PVMT.

-  WORK AREA




### TRAFFIC CONTROL DEVICES

-  BARRICADE (TYPE III)
-  CONE
-  DRUM     SKINNY DRUM     TUBULAR MARKER
-  TEMPORARY CRASH CUSHION
-  FLASHING ARROW PANEL (TYPE C)
-  FLAGGER
-  LAW ENFORCEMENT
-  TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
-  CHANGEABLE MESSAGE SIGN

### TEMPORARY SIGNING

-  PORTABLE SIGN
-  STATIONARY SIGN
-  STATIONARY OR PORTABLE SIGN




### SIGNALS

-  EXISTING
-  PROPOSED
-  TEMPORARY

### PAVEMENT MARKINGS

-  EXISTING LINES
-  TEMPORARY LINES


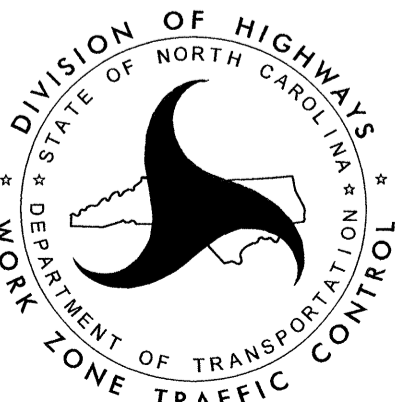
### PAVEMENT MARKERS

-  CRYSTAL/CRYSTAL
-  CRYSTAL/RED
-  YELLOW/YELLOW

### PAVEMENT MARKING SYMBOLS

-  PAVEMENT MARKING SYMBOLS

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		<h2 style="margin: 0;">ROADWAY STANDARD DRAWINGS &amp; LEGEND</h2>
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## GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATIONS MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR AS DIRECTED BY THE ENGINEER.

### TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

<u>ROAD NAMES</u>	<u>DAY &amp; TIME RESTRICTIONS</u>
SOUTHBOUND US 25 (MCDOWELL ST.)	MONDAY-SUNDAY: 7:00 AM TO 7:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

- | <u>ROAD NAMES</u>                              |
|------------------------------------------------|
| NORTHBOUND AND SOUTHBOUND US 25 (MCDOWELL ST.) |
- 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
  - 2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31ST TO 7:00 P.M. JANUARY 2ND. IF NEW YEARS DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OF MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
  - 3) FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
  - 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
  - 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
  - 6) FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
  - 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY AND 7:00 P.M. MONDAY.
  - 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
  - 9) FOR THE BELE CHERE FESTIVAL HELD THE LAST FULL WEEKEND OF JULY IN DOWNTOWN ASHEVILLE, BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE THE BELE CHERE FESTIVAL UNTIL 7:00 P.M. THE MONDAY AFTER THE BELE CHERE FESTIVAL.

C) DO NOT CLOSE ROADS AS FOLLOWS:

<u>ROAD NAMES</u>	<u>DAY AND TIME RESTRICTIONS</u>
US 25 (MCDOWELL ST.)	MONDAY-SUNDAY: 7:00AM TO 7:00PM

### TRAFFIC PATTERN ALTERATIONS

D) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

### SIGNING

E) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THEN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

F) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

G) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

H) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC CONTROL DEVICES

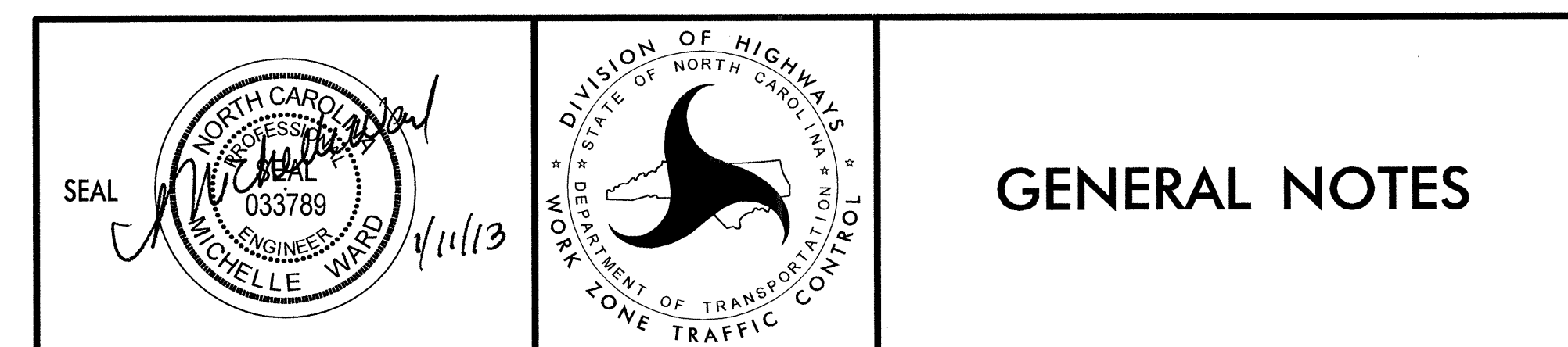
I) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

### MISCELLANEOUS

J) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY IS BLOCKED BY CONSTRUCTION ACTIVITIES.

PLACE BARRICADES TO CLOSE SIDEWALK ON THE SIDE THE CONTRACTOR IS WORKING, WITH "SIDEWALK CLOSED" SIGN (R9-9). PEDESTRIAN TRAFFIC MAY CROSS TO OPPOSITE SIDE OF US 25 (MCDOWELL ST) TO CONTINUE THROUGH TUNNEL, AS DIRECTED BY THE ENGINEER.

K) MAINTAIN ACCESS TO LAW ENFORCEMENT AND EMERGENCY SERVICE PERSONNEL THROUGH TUNNEL AT ALL TIMES.



# PHASING

NOTES: MAINTAIN ACCESS TO PEDESTRIANS THROUGH TUNNEL AT ALL TIMES, ALONG WEST SIDE OF US 25 (MCDOWELL ST.)

LANE CLOSURES MAY BE USED FOR DELIVERY OF MATERIALS AND EQUIPMENT, IF NEEDED.

EQUIPMENT MAY BE STORED BEHIND NORTHBOUND OUTSIDE LANE CLOSURE DURING NON-WORKING HOURS. (SEE TYPICAL 2 ON SHEET TMP-3)

STEP 1: INSTALL ADVANCE WARNING SIGNS ON US 25 (MCDOWELL ST.) AS REQUIRED IN GENERAL NOTES. (SEE SHEET TMP-1B)

STEP 2: USING RSD 1101.03, SHEET 1 OF 9, AND SHEET TMP-2, INSTALL ROAD CLOSURE AND DETOUR SIGNS, PLACE TYPE III BARRICADES TO CLOSE US 25 (MCDOWELL ST.) TO THROUGH TRAFFIC AND DETOUR TRAFFIC OFF-SITE.

NOTE: INSTALL TYPE III BARRICADES TO CLOSE US 25 AT THE FIRST DRIVEWAY NORTH & SOUTH OF THE TUNNEL TO MAINTAIN ACCESS TO THE PROPERTY.

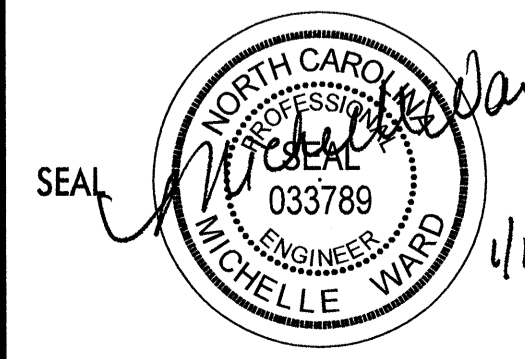
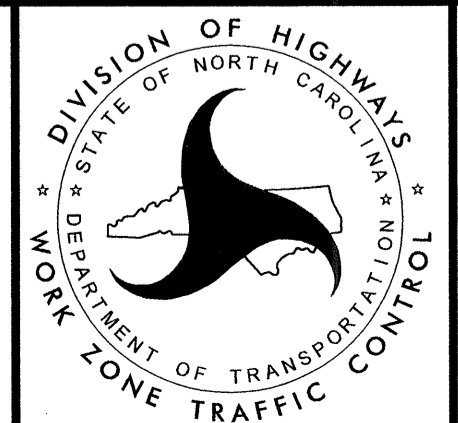
STEP 3: AWAY FROM TRAFFIC, WORK IN A CONTINUOUS MANNER TO COMPLETE ALL CONSTRUCTION ACTIVITIES (STRUCTURE/TUNNEL REPAIRS RETAINING WALLS, VENEER, ETC.) DURING NIGHTLY ROAD CLOSURES. (SEE TYPICAL 1 ON SHEET TMP-3)

NOTE: REMOVE OR COVER OFF-SITE DETOUR SIGNS, REMOVE BARRICADES, AND RETURN TRAFFIC TO THE ALLOWABLE TRAFFIC PATTERN, AT THE END OF THE WORK PERIOD. (SEE TYPICAL 2 ON SHEET TMP-3)

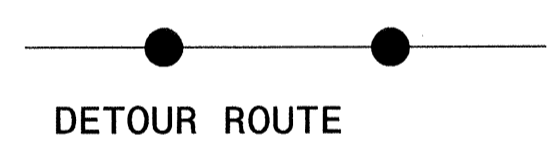
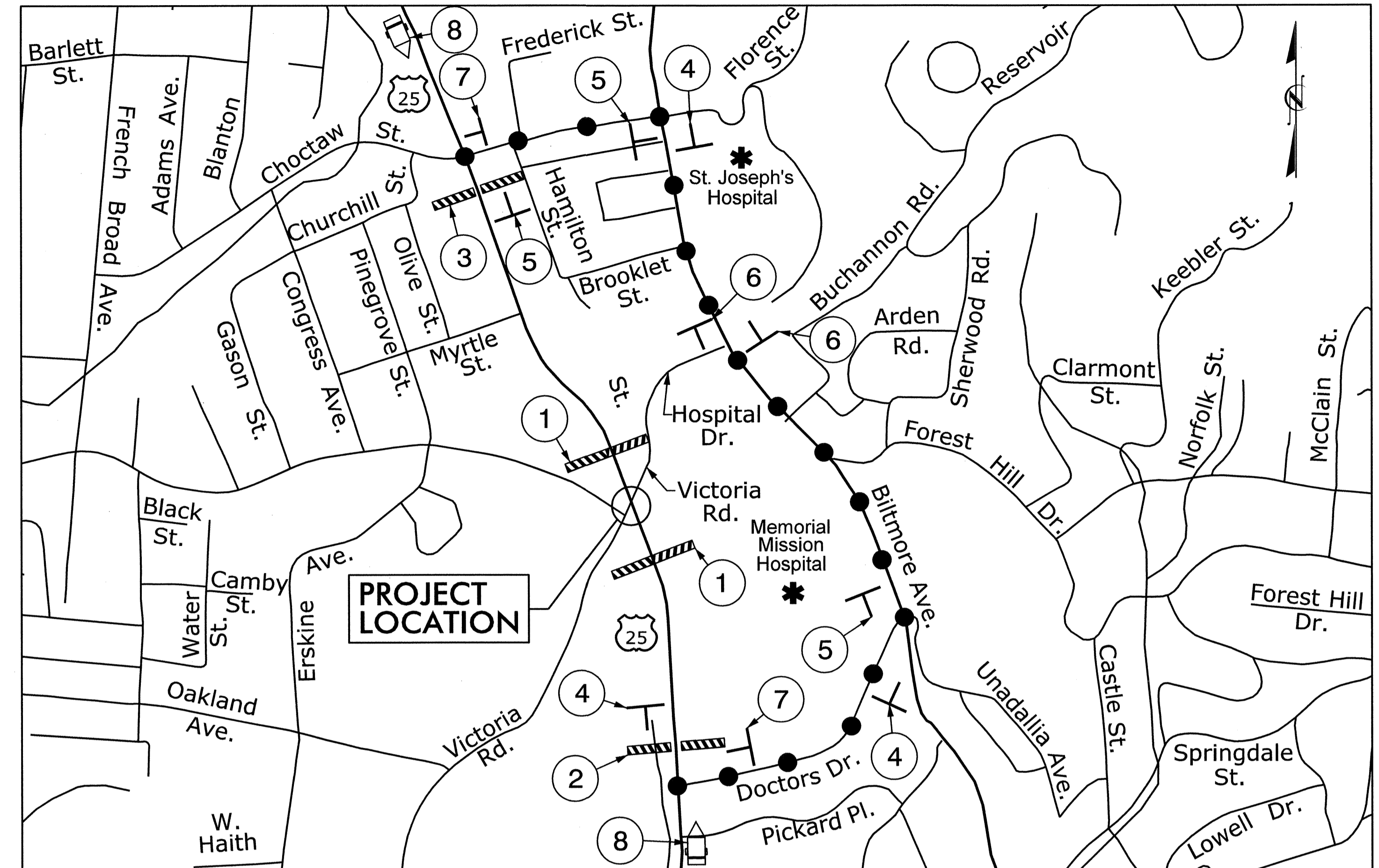
REPEAT STEPS 2 AND 3 UNTIL ALL CONSTRUCTION IS COMPLETE.

STEP 4: ONCE ALL CONSTRUCTION IS COMPLETE, REMOVE OFF-SITE DETOUR SIGNS AND ALL REMAINING TRAFFIC CONTROL DEVICES.

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		<h2 style="margin: 0;">PHASING</h2>
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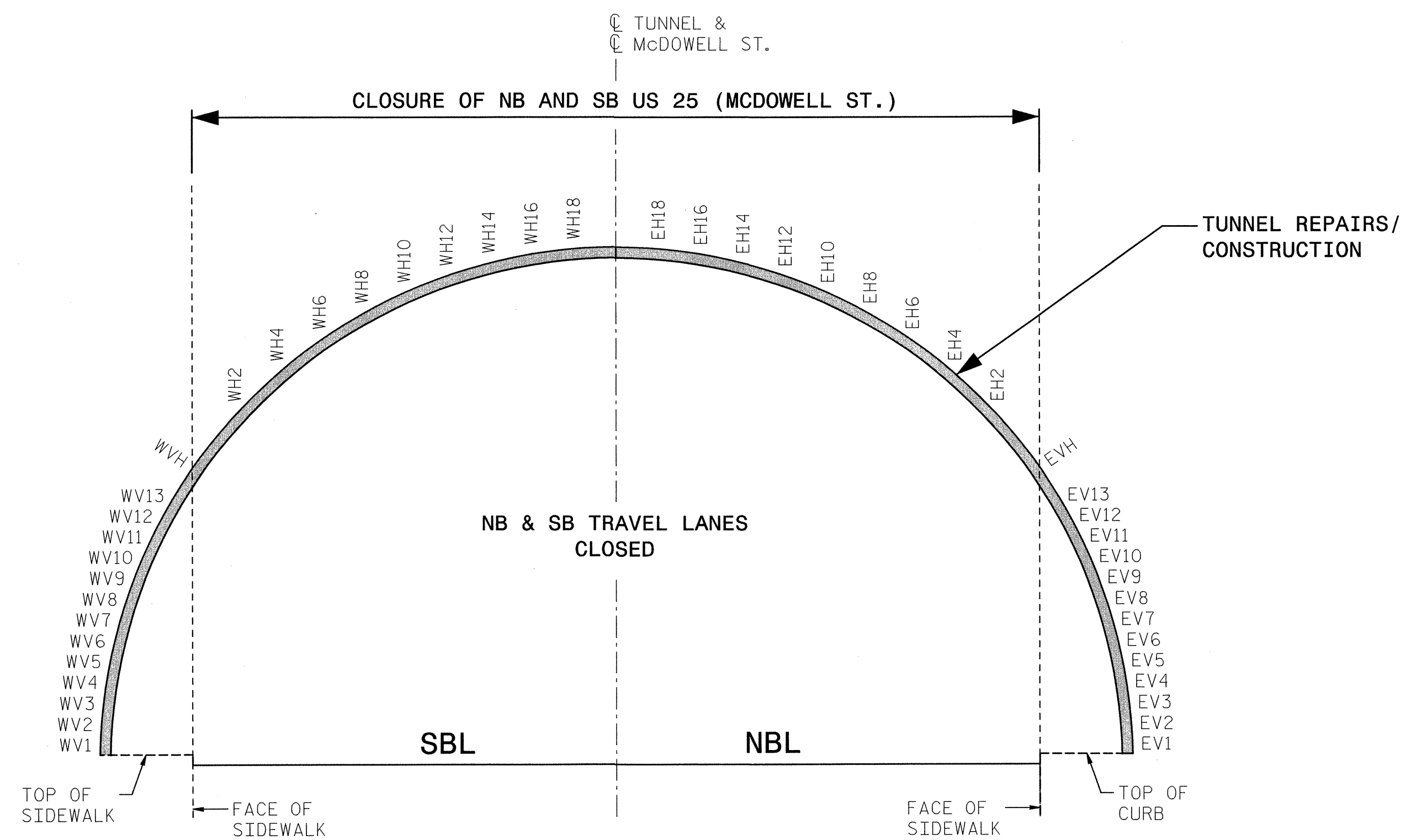


REFER TO RSD 1101.03, SHEET 1 OF 9, FOR ADDITIONAL SIGN AND BARRICADE PLACEMENT.

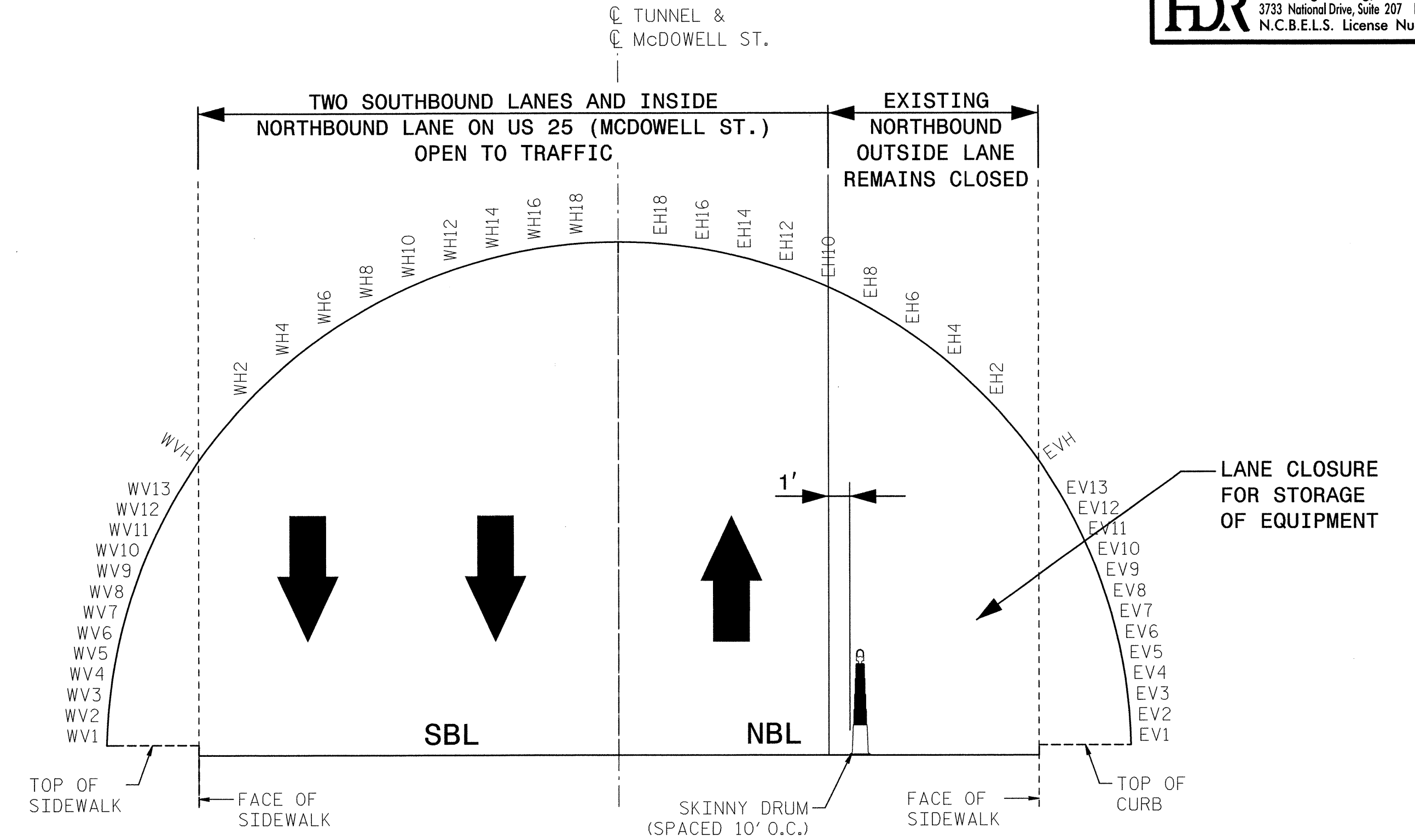
<p>R11-2 48" x 30"</p> <p>TYPE III BARRICADE(S)</p>													
<p>R11-4 60" x 30"</p> <p>TYPE III BARRICADE</p>	<p>R11-4 60" x 30"</p> <p>TYPE III BARRICADE</p>												
<p>DETOUR M4-8 24" x 12"</p> <p>M1-4</p> <p>M6-1 21" x 15"</p> <p>4</p>	<p>DETOUR M4-8 24" x 12"</p> <p>M1-4</p> <p>M6-1 21" x 15"</p> <p>5</p>												
<p>DETOUR M4-8 24" x 12"</p> <p>M1-4</p> <p>M6-3 21" x 15"</p> <p>6</p>	<p>END DETOUR M4-8 A 24" x 18"</p> <p>M1-4</p> <p>7</p>												
<table border="1"> <tr> <th>MESSAGE NO. 1</th> <th>MESSAGE NO. 2</th> </tr> <tr> <td>ROAD CLOSED 7PM-7AM</td> <td>FOLLOW DETOUR ROUTE</td> </tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>TO BE UTILIZED DURING THE DAY WHEN US 25 WILL BE CLOSED THAT NIGHT</p> <p>8</p>	MESSAGE NO. 1	MESSAGE NO. 2	ROAD CLOSED 7PM-7AM	FOLLOW DETOUR ROUTE	<p>ADDITIONAL CMS MESSAGES TO BE DISPLAYED AS DIRECTED BY THE ENGINEER:</p> <table border="1"> <tr> <th>MESSAGE NO. 1</th> <th>MESSAGE NO. 2</th> </tr> <tr> <td>US 25 TO CLOSE</td> <td>TONIGHT 7 PM TO 7 AM</td> </tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>TO BE UTILIZED DURING THE DAY WHEN US 25 WILL BE CLOSED THAT NIGHT</p> <table border="1"> <tr> <th>MESSAGE NO. 1</th> <th>MESSAGE NO. 2</th> </tr> <tr> <td>US 25 OPEN TO TRAFFIC</td> <td></td> </tr> </table> <p>CHANGEABLE MESSAGE SIGN</p> <p>TO BE SHOWN AT NIGHT WHEN US 25 IS OPEN TO TRAFFIC</p>	MESSAGE NO. 1	MESSAGE NO. 2	US 25 TO CLOSE	TONIGHT 7 PM TO 7 AM	MESSAGE NO. 1	MESSAGE NO. 2	US 25 OPEN TO TRAFFIC	
MESSAGE NO. 1	MESSAGE NO. 2												
ROAD CLOSED 7PM-7AM	FOLLOW DETOUR ROUTE												
MESSAGE NO. 1	MESSAGE NO. 2												
US 25 TO CLOSE	TONIGHT 7 PM TO 7 AM												
MESSAGE NO. 1	MESSAGE NO. 2												
US 25 OPEN TO TRAFFIC													

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		<p>US 25 (MCDOWELL ST) OFF-SITE DETOUR SIGNING</p>
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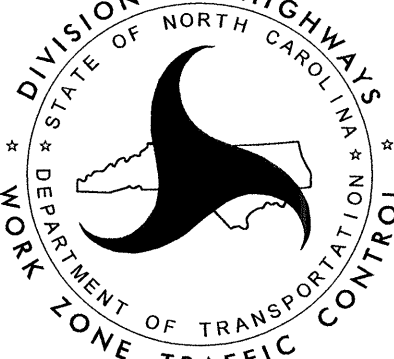


**TYPICAL 1:**  
 DETOUR NB & SB OFF-SITE  
 DURING NIGHTLY CLOSURES  
 FOR TUNNEL REPAIRS/CONSTRUCTION



**TYPICAL 2:**  
 ALLOWABLE TRAFFIC PATTERN  
 DURING NON-WORKING HOURS

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		<p>US 25 (MCDOWELL ST.)          TYPICAL SECTIONS</p>
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