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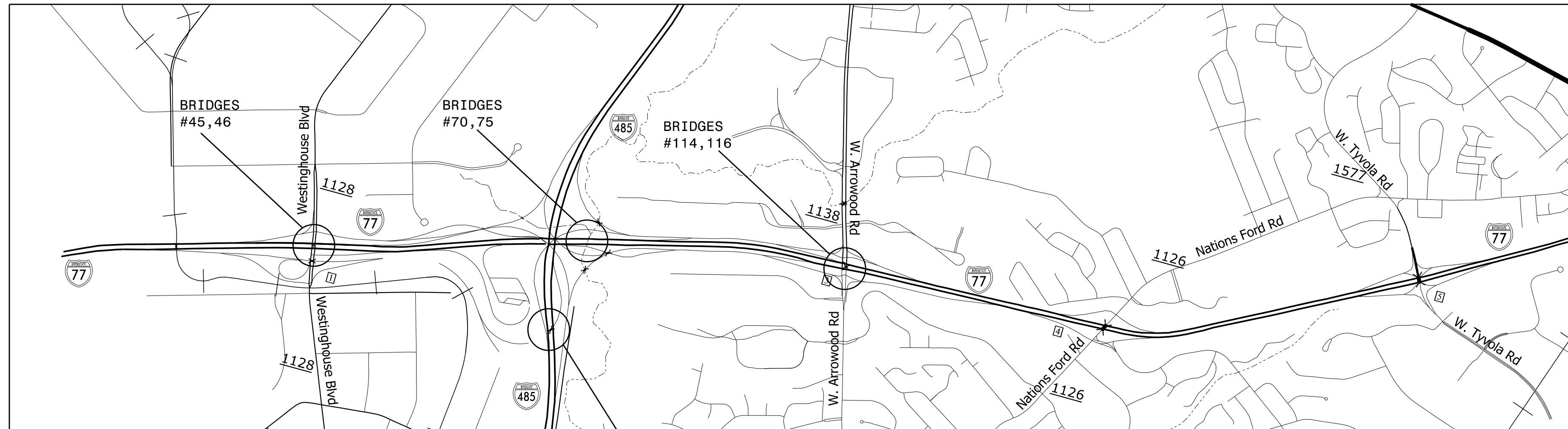
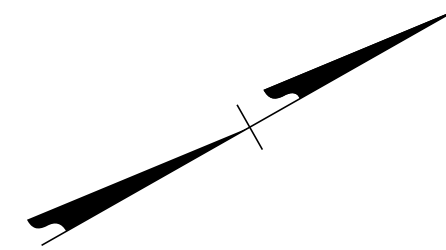
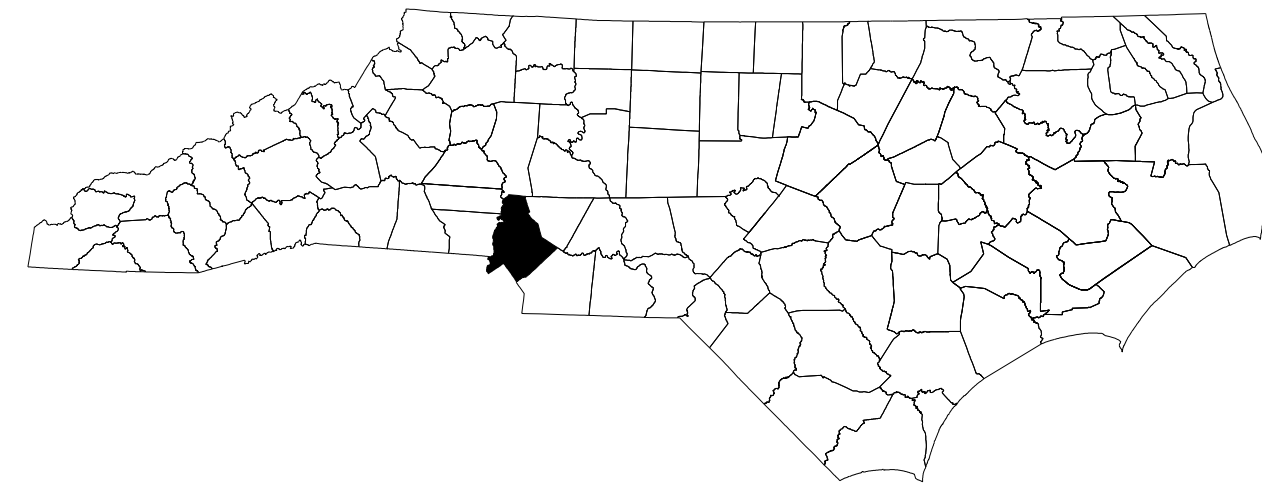
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**MECKLENBURG COUNTY**



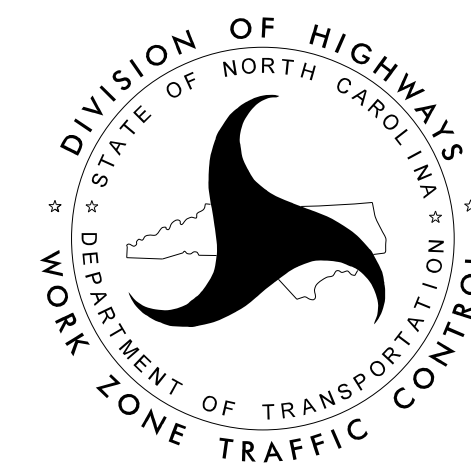
LOCATION: I-77 NORTHBOUND AND SOUTHBOUND FROM THE  
SC/NC STATE LINE TO SR 1577 W. TYVOLA RD.

TYPE OF WORK: PAVEMENT RESURFACING AND BRIDGE PRESERVATION  
(EPOXY OVERLAY SYSTEM, DECK CRACK SEALING, JOINT  
DEMOLITION, AND PAINTING)



**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  
J. S. KITE, JR, P.E. — TRAFFIC CONTROL PROJECT ENGINEER  
R. M. GARRETT — TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
K. E. DAIS — TRAFFIC CONTROL DESIGN ENGINEER



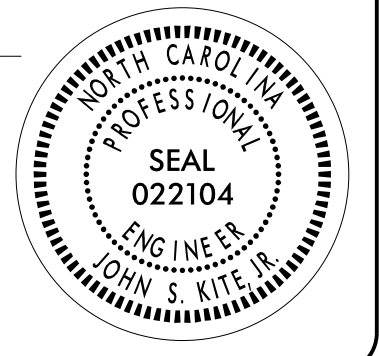
**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, MANAGEMENT STRATEGIES, AND LEGEND
TMP-2	GENERAL NOTES
TMP-3	OPERATIONAL GUIDELINES AND PHASING
TMP-4	MAP OF RAMPS TO BE CLOSED DURING PAVEMENT RESURFACING
TMP-5	SHORT TERM CLOSURE AND DETOUR OF INTERSTATE / FREEWAY RAMPS

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APPROVED:   
DATE: 8/16/2016

SEAL



SHEET NO.  
TMP-1

**I-5768**

**TIP PROJECT:**

## 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	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMP
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING

## MANAGEMENT STRATEGIES

THIS PROJECT WILL RESURFACE APPROXIMATELY 5 MILES OF INTERSTATE 77 IN THE NORTHBOUND AND SOUTHBOUND DIRECTIONS AND REHABILITATE 7 BRIDGES WITHIN THE PROJECT LIMITS. ALSO, BRIDGE BEAM ENDS WILL BE PAINTED, AFFECTING TRAFFIC ON ROADWAYS UNDERNEATH I-77.

FOR THE BRIDGE DECK REHABILITATIONS TRAFFIC WILL BE MAINTAINED BY TEMPORARY SHORT TERM LANE CLOSURES. FOR BRIDGE BEAM PAINTING WORK REQUIRING THE CONTRACTOR TO ACCESS THE BRIDGE FROM UNDERNEATH, TRAFFIC WILL BE MAINTAINED ON -Y- LINES BY TEMPORARY SHORT TERM LANE CLOSURES AND/OR FLAGGERS.

DURING PAVEMENT RESURFACING TRAFFIC WILL BE MAINTAINED BY TEMPORARY SHORT TERM LANE CLOSURES.

TIME RESTRICTIONS WILL BE USED TO LIMIT THE AMOUNT OF DRIVER DELAY DURING LANE CLOSURES.

## LEGEND

### GENERAL

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

WORK AREA

### SIGNALS

P  
O  
R  
T

### TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

CONE

DRUM SKINNY DRUM

TEMPORARY CRASH CUSHION

FLASHING ARROW BOARD

FLAGGER

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

CHANGEABLE MESSAGE SIGN

### TEMPORARY SIGNING

PORTABLE SIGN

STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

### PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

### TEMPORARY PAVEMENT MARKING

#### 4" PAINT

PA WHITE EDGELINE  
PB YELLOW EDGELINE  
PC 10 FT. WHITE SKIP

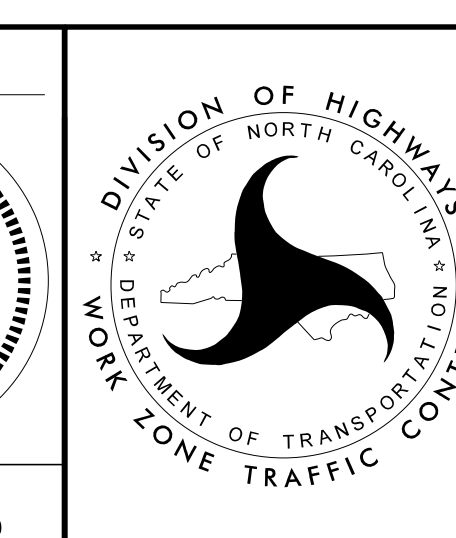
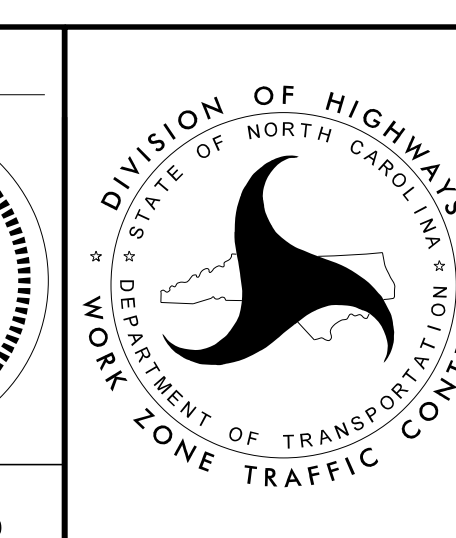
#### 4" COLD APPLIED PLASTIC - TYPE IV REMOVABLE TAPE

CA WHITE EDGELINE  
CB YELLOW EDGELINE  
CC 10 FT. WHITE SKIP

APPROVED:   
DATE: 8/19/2016

DocuSigned by:  
Steve Kite  
E27CE30E10FC442...

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ROADWAY STANDARD  
DRAWINGS, MANAGEMENT  
STRATEGIES & LEGEND

# GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
I-5768	TMP-2

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. MODIFICATION 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 CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

### TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
I-77 (MAINLINE AND RAMPS)	6:00 AM - 9:00 PM (MONDAY - FRIDAY) 8:00 AM - 8:00 PM (SATURDAY AND SUNDAY)
SR 1128 (WESTINGHOUSE BLVD.) SR 1138 (ARROWOOD RD.)	8:00 AM - 8:00 PM MONDAY - FRIDAY

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

ROAD NAME
I-77 (MAINLINE AND RAMPS)

### HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNLLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31st TO 9:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 9:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  
  
IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
9. FOR ANY FOOTBALL GAME AT THE BANK OF AMERICA STADIUM OR BASKETBALL AT THE TIME WARNER CABLE ARENA, FROM THREE (3) HOURS BEFORE THE GAME UNTIL THREE (3) HOURS AFTER THE GAME.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-77 (RAMPS)	MONDAY - SUNDAY 6:00 AM - 11:00 PM

D) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
I-77 (MAINLINE AND RAMPS), SR 1128, SR 1138	ANYTIME

E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- F) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.  
  
WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- I) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- J) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- K) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON I-77.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- L) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:  
  
BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.  
  
BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.  
  
BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- M) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

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

P) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING 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.

Q) 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.

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

S) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC CONTROL DEVICES

- T) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- U) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- V) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

### PAVEMENT MARKINGS AND MARKERS

W) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
I-77 (MAINLINE AND RAMPS)	PAINT	TEMPORARY RAISED
I-77 (BRIDGE DECKS)	COLD APPLIED PLASTIC	TEMPORARY RAISED
	TYPE IV-REMOVABLE TAPE	



X) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

Y) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

Z) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

### MISCELLANEOUS

AA) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

<p>APPROVED: <i>Steve Kite</i> E27CE30E1DFC442</p> <p>DATE: 9/1/2016</p>			<h2 style="margin: 0;">GENERAL NOTES</h2>
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I-77 RESURFACING / PAVING OPERATIONAL GUIDELINES

FOR ANY RESURFACING / PAVING OPERATIONS PERFORMED OUTSIDE OF ANY ESTABLISHED LANE CLOSURE, THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN ACCORDANCE WITH DIVISIONS 10, 11, AND 12 OF THE 2012 STANDARD SPECIFICATIONS, TMP-4, TMP-5, AND THE FOLLOWING PROVISIONS:

1) PAVING LIFT REQUIREMENTS AND TIME LIMITATIONS

FOR PAVING LIFTS 2.0" OR LESS, BRING ALL NEWLY RESURFACED LANES TO THE SAME STATION AND ELEVATION WITHIN 24 HOURS. IF NOT BROUGHT UP TO THE SAME STATION AND ELEVATION WITHIN 24 HOURS, THE CONTRACTOR SHALL PLACE PORTABLE "UNEVEN PAVEMENT" SIGNS IN ADVANCE OF THE UNEVEN PAVEMENT AND SPACED EVERY 1/2 MILE ALONG THE SECTION OF UNEVEN PAVEMENT. ONCE MITIGATED, ALL PORTABLE "UNEVEN PAVEMENT" SIGNS SHALL BE REMOVED. NO ADDITIONAL COMPENSATION WILL BE MADE FOR THESE SIGNS.

FOR PAVING LIFTS GREATER THAN 2.0", BRING ALL NEWLY RESURFACED LANES TO THE SAME STATION AND ELEVATION BY THE END OF EACH WORK DAY UNLESS THE CONTRACTOR UTILIZES THE NOTCHED WEDGE PAVING METHODS AS DESCRIBED BELOW.

FAILURE TO COMPLY WITH THE FOLLOWING REQUIREMENTS WILL RESULT IN A SUSPENSION OF ALL OTHER OPERATIONS UNTIL ALL LANES OF TRAFFIC ARE BROUGHT TO THE SAME STATION AND ELEVATION:

- A. DURING PAVING OPERATIONS, ANY PAVING LIFT GREATER THAN 2.0" FOR ASPHALT SURFACE COURSE MIXES SHALL BE MITIGATED BY HAVING AN APPROVED WEDGE APPARATUS ON THE PAVER THAT SHAPES THE EDGE 1.0" VERTICALLY AND THE REMAINING AT A MAXIMUM SLOPE STEEPNESS OF 2:1. FOR INTERMEDIATE AND BASE COURSE MIXES, USE AN APPROVED WEDGE DEVICE THAT SHAPES THE EDGE WITH A MAXIMUM SLOPE STEEPNESS OF 2:1. THE MAXIMUM PAVING LIFT ALLOWED TO USE THIS METHOD IS 3.0".
- B. AT THE END OF THE WORK DAY, THE CONTRACTOR SHALL PLACE PORTABLE "UNEVEN PAVEMENT" SIGNS IN ADVANCE OF THE UNEVEN PAVEMENT AND SPACED EVERY 1/2 MILE ALONG THE SECTION OF UNEVEN PAVEMENT. ONCE MITIGATED, ALL PORTABLE "UNEVEN PAVEMENT" SIGNS SHALL BE REMOVED. NO ADDITIONAL COMPENSATION WILL BE MADE FOR THESE SIGNS.
- C. IN THE NEXT DAY'S PAVING OPERATION AND NOT EXCEEDING 24 HOURS, THE CONTRACTOR SHALL BRING THE ADJACENT LANE TO THE SAME STATION AND ELEVATION BEFORE ANY FURTHER PAVING TAKES PLACE ON THE PROJECT.

2) PROJECT REQUIREMENTS

FAILURE TO COMPLY WITH THE FOLLOWING REQUIREMENTS WILL RESULT IN A SUSPENSION OF ALL OTHER OPERATIONS:

- 1. CONTRACTOR SHALL MILL AND PAVE LANES IN AN ORDER SUCH THAT WATER WILL NOT ACCUMULATE.
- 2. TRAFFIC CONTROL FOR THE MILLING AND/OR PAVING OF RAMPS SHALL BE DONE ACCORDING TO ROADWAY STANDARD DRAWING 1101.02, SHEETS 9 & 10 UNLESS OTHERWISE APPROVED TO BE CLOSED BY THE ENGINEER. IF APPROVED, CONTRACTOR WILL PROVIDE PLANS AND DEVICES FOR THE DETOUR AT NO ADDITIONAL COST TO THE DEPARTMENT.
- 3. IF MILLED AREAS ARE NOT PAVED BACK WITHIN 24 HOURS, THE CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING PORTABLE SIGNS TO WARN DRIVERS OF THE CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO, "ROUGH ROAD" (W8-8), "UNEVEN LANES" (W8-11), AND "GROOVED PAVEMENT" (W8-15) WITH A MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DUAL INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK.

\*\* RSD DENOTES NCDOT 2012 ROADWAY STANDARD DRAWINGS

PHASING

STEP 1:

USING RSD 1101.01, SHEET 1 OF 3, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON I-77 NORTHBOUND AND SOUTHBOUND.

STEP 2:

USING RSD 1101.02, SHEETS 4, 8, 9 & 10 OF 15:

COMPLETE PAVEMENT REHABILITATION ON I-77 UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE. FOR THE RAMPS THAT REQUIRE COMPLETE CLOSURE, REFER TO TMP-4 AND TMP-5 AND INTERMEDIATE CONTRACT TIMES. CLOSING RAMPS ONE AT A TIME, COMPLETE THE PAVEMENT REHABILITATION FOR:

I-77 AT SR 1138 (ARROWOOD RD.) OFF RAMP  
 I-77 AT SR 1164 (NATIONS FORD RD.) ON RAMPS  
 I-77 AT SR 1164 (NATIONS FORD RD.) OFF RAMPS

PLACE TEMPORARY PAVEMENT MARKINGS ON ALL NEWLY RESURFACED PAVEMENT BY THE END OF THE DAY'S OPERATION.

COMPLETE SURFACE DECK PREPARATION AND EPOXY OVERLAY ON BRIDGES NO. 45, 46, 70, 75 114, 116, AND 658 (I-77 N RAMP TO I-485). INSTALL TEMPORARY COLD APPLIED PLASTIC PAVEMENT MARKINGS ON BRIDGE DECKS BY THE END OF THE DAY'S OPERATION. SEE INTERMEDIATE CONTRACT TIMES.

COMPLETE BRIDGE DECK JOINT REPAIRS.

USE STD 1101.02, SHEET 3 AND 7 OF 15, ON SR 1138 (W. ARROWOOD RD.) AND SR 1128 (WESTINGHOUSE BLVD.) TO COMPLETE BRIDGE PAINTING WORK ON BRIDGES 45, 46, 114, AND 116.

USE STD 1101.02, SHEETS 4 AND 8 OF 15, ON I-485 TO COMPLETE BRIDGE PAINTING WORK ON BRIDGE 658.

STEP 3:

USING RSD 1101.02, SHEETS 4, 8, 9, & 10 OF 15, COMPLETE FINAL LAYER OF SURFACE COURSE.

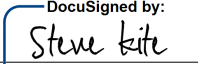
STEP 4:

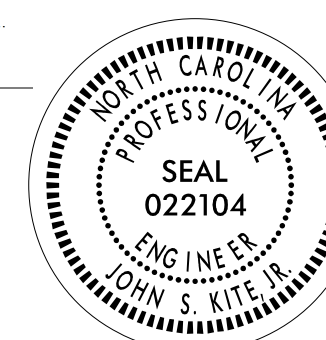
USING RSD 1101.02, SHEET 4 & 13 OF 15, AS NECESSARY, INSTALL FINAL PAVEMENT MARKINGS AND FINAL PAVEMENT MARKERS IN THE FINAL TRAFFIC PATTERN ON I-77 MAINLINE AND RAMPS.

STEP 5:

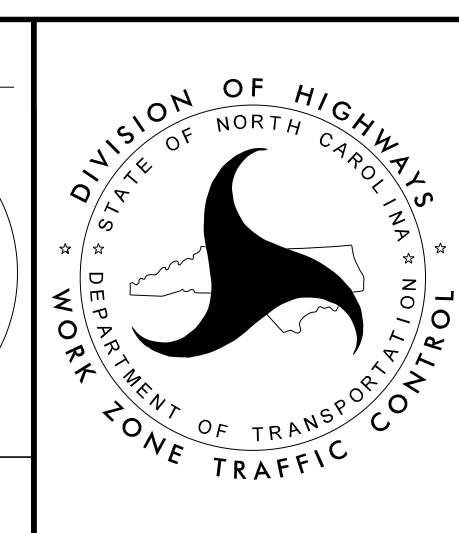
REMOVE ALL TEMPORARY TRAFFIC CONTROL DEVICES.

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APPROVED:   
 DATE: 8/16/2016



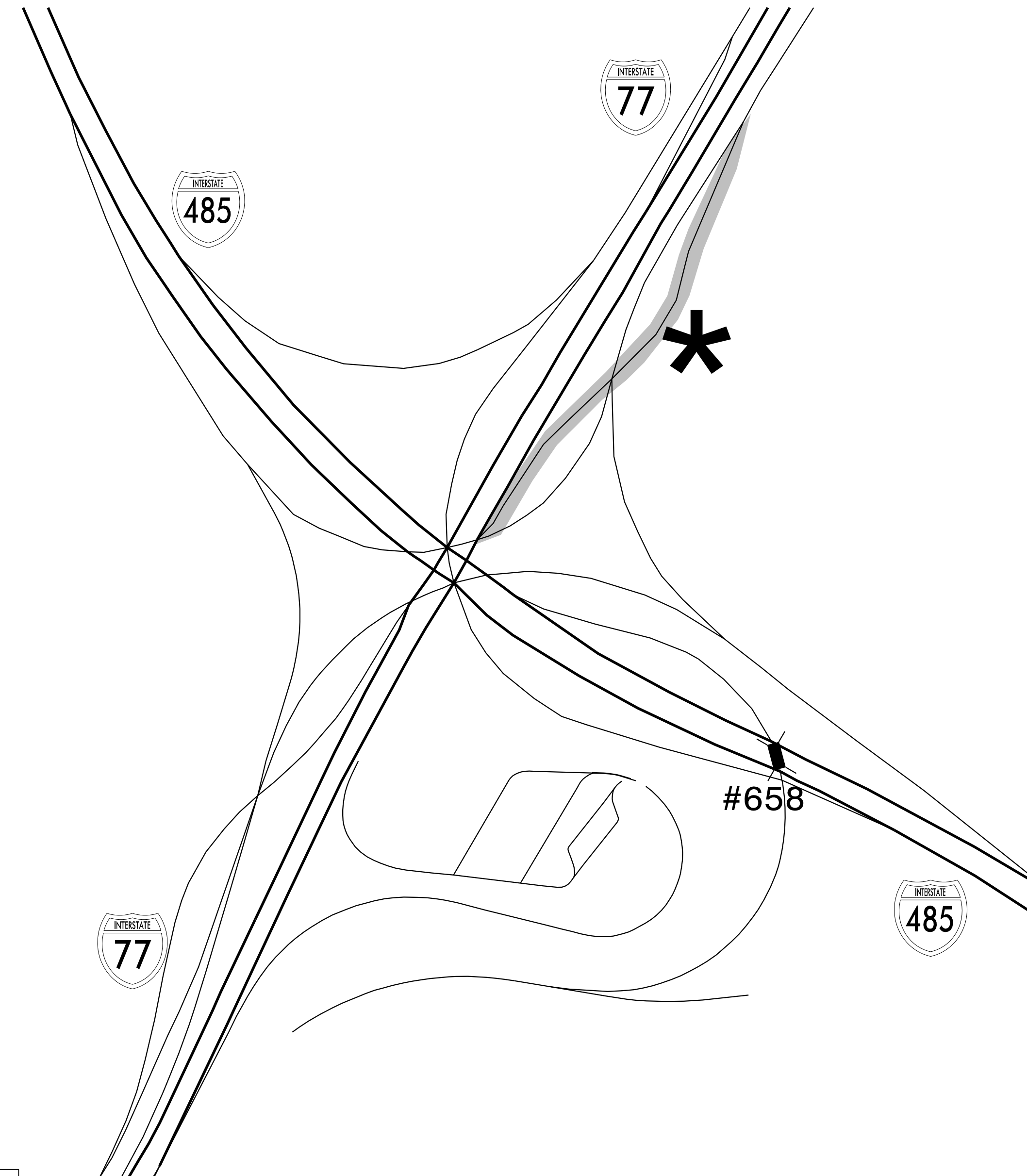
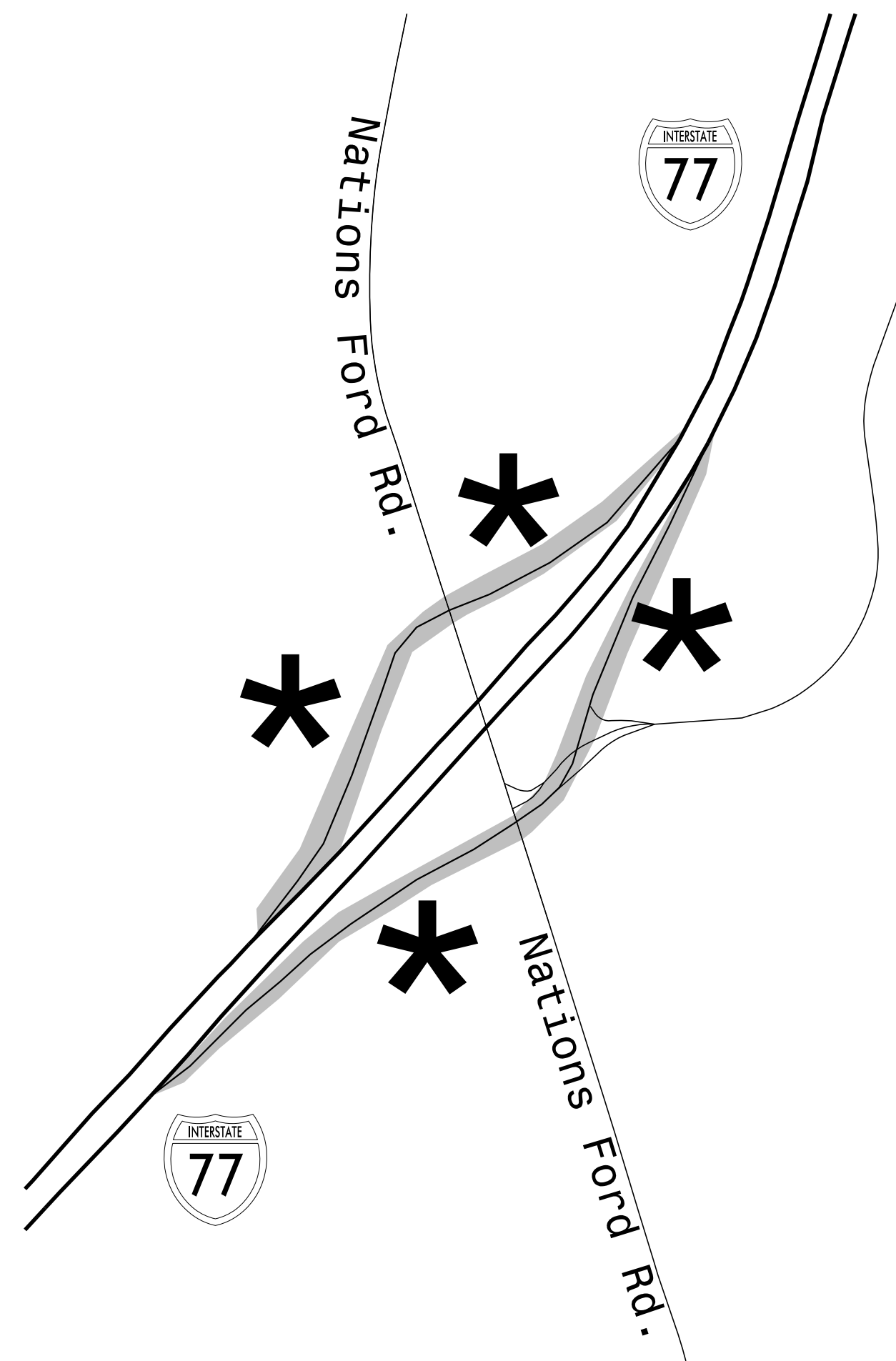
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**OPERATIONAL GUIDELINES  
 AND PHASING**

# Nations Ford

# I-485



### NOTES

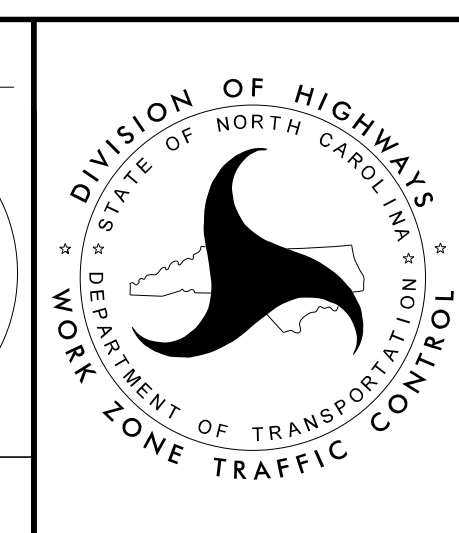
1. \* DENOTES RAMP THAT REQUIRES RAMP CLOSURE FOR PAVEMENT RESURFACING.
2. SEE TMP-5 FOR TRAFFIC DETOUR USING NEXT INTERCHANGE.
3. CLOSE ONE RAMP AT A TIME.
4. SEE INTERMEDIATE CONTRACT TIME SPECIAL PROVISIONS FOR TIME RESTRICTIONS OF RAMP CLOSURES.

APPROVED: *Steve Kite*  
DocuSigned by:  
E270E38E1DFC442...

DATE: 8/16/2016

SEAL  
022104  
ENGINEER  
JOHN S. KITE, II

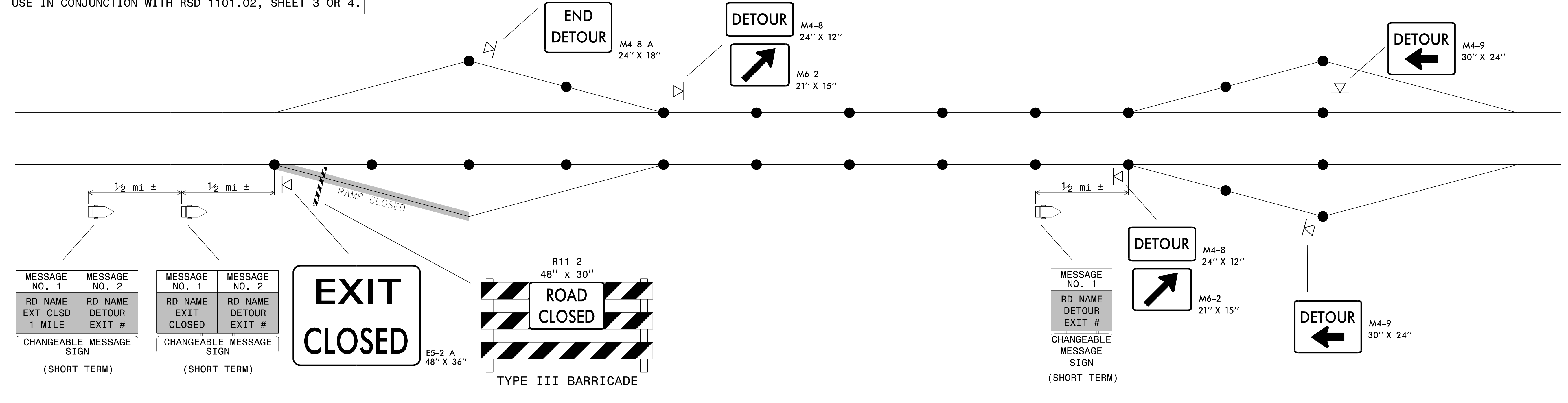
**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



MAP OF RAMPS TO  
BE CLOSED DURING  
PAVEMENT RESURFACING

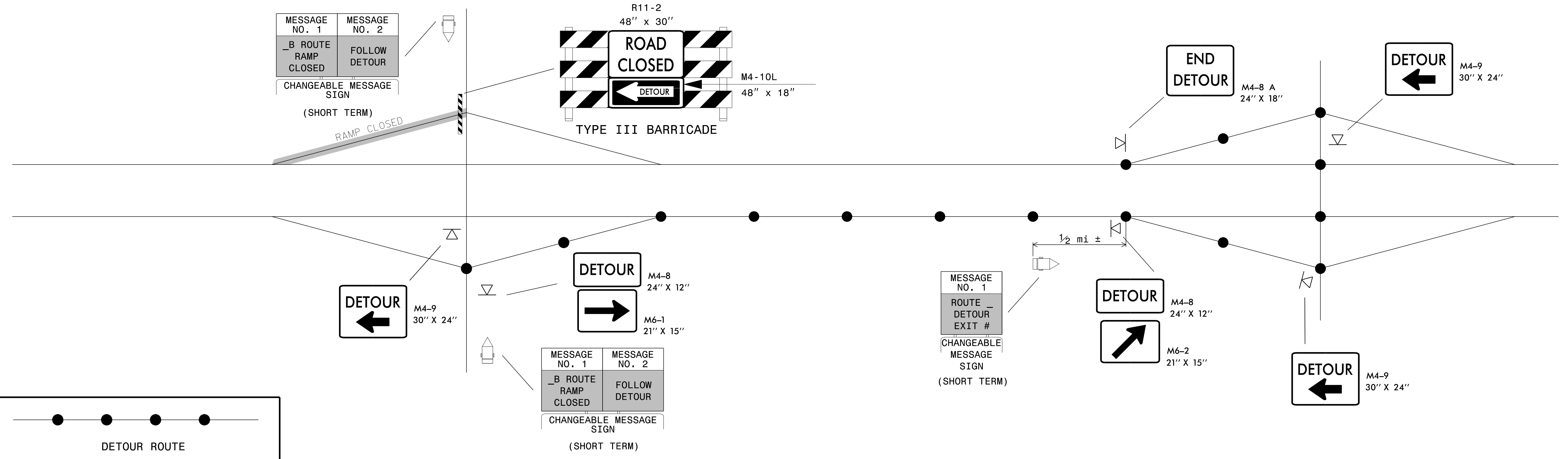
## SHORT TERM CLOSURE AND DETOUR OF OFF-RAMP TO ADJACENT INTERCHANGE

USE IN CONJUNCTION WITH RSD 1101.02, SHEET 3 OR 4.



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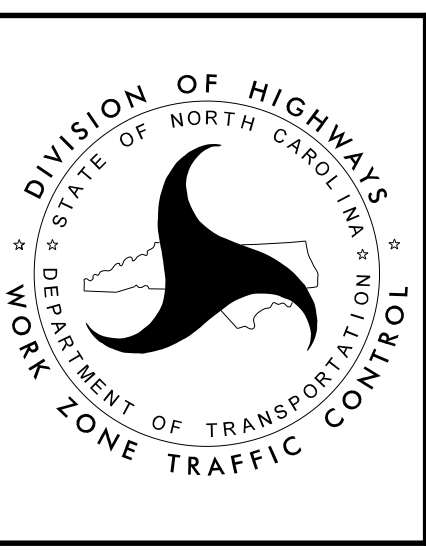


**GENERAL NOTES:**

1. THIS DRAWING IS INTENDED FOR USE DURING SHORT TERM CLOSURES OF INTERSTATE AND FREEWAY RAMPS.
2. RAMP CLOSURES SHALL BE APPROVED BY THE ENGINEER.
3. IF RAMP CLOSURE RESTRICTIONS APPLY, SEE SPECIAL PROVISION, "INTERMEDIATE CONTRACT TIMES AND LIQUIDATED DAMAGES".
4. ADDITIONAL CHANGEABLE MESSAGE SIGNS AND POSSIBLE DETOUR SIGNS MAY BE NECESSARY FOR MORE COMPLEX CLOSURES/DETOURS. COMPENSATION FOR ADDITIONAL DEVICES SHALL BE MADE BASED ON THE UNIT BID PRICE FOR THE RESPECTIVE DEVICE.

APPROVED: *Steve Kite*  
 DATE: 8/16/2016

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 UNLESS ALL SIGNATURES COMPLETED



**SHORT TERM CLOSURE  
 AND DETOUR OF  
 INTERSTATE/FREEWAY  
 RAMPS**

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