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ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - CONTRACT STANDARDS AND DEVELOPMENT UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 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
1145.01	BARRICADES
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
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
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1253.01	RAISED PAVEMENT MARKERS - SNOWPLOWABLE
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

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

TEMPORARY PAVEMENT MARKING

<u>SYMBOL</u>	<u>DESCRIPTION</u>
	<u>WORK ZONE PERFORMANCE (4")</u>
Z2	10 FT. WHITE SKIP
Z5	YELLOW DOUBLE CENTER
	<u>WORK ZONE PERFORMANCE (6")</u>
Z6	3FT.-9FT./SP WHITE MINISKIP
Z7	10 FT. WHITE SKIP
Z8	WHITE SOLID LINE
Z9	YELLOW SOLID LINE

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

<u>SYMBOL</u>	<u>DESCRIPTION</u>
Z11	WHITE GORELINE

<u>SYMBOL</u>	<u>DESCRIPTION</u>
QP	MERGE ARROW

<u>SYMBOL</u>	<u>DESCRIPTION</u>
MI	CRYSTAL & RED

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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APPROVED: DATE: 11/9/2018			ROADWAY STANDARD DRAWINGS, LEGEND & TEMPORARY PAVEMENT MARKING SCHEDULE
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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. 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-40 AND ALL RAMPS	12:00 P.M. (NOON) FRIDAY TO 12:00 A.M. (MIDNIGHT) MONDAY (PHASE 6 ONLY)
US 64 (AT EXIT 168)	6:00 A.M. TO 6:00 P.M., MONDAY THRU SUNDAY

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

ROAD NAME

I-40 AND ALL RAMPS
US 64 (EXIT 168)

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 12:00 P.M. DECEMBER 30TH TO 12:00 A.M. JANUARY 3RD. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 12:00 A.M. THE FOLLOWING WEDNESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 12:00 P.M. THURSDAY AND 12:00 A.M. TUESDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 12:00 P.M. FRIDAY TO 12:00 A.M. WEDNESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 12:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 12:00 A.M. TWO DAYS AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 12:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 12:00 A.M. THE WEDNESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 12:00 P.M. FRIDAY AND 12:00 A.M. WEDNESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 12:00 P.M. TUESDAY TO 12:00 A.M. THE FOLLOWING TUESDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 12:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 12:00 A.M. THE FOLLOWING WEDNESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
I-40 AND ALL RAMPS US 64 (EXIT 168)	MONDAY-SUNDAY 5:00AM - 12:00AM	15 MINUTES/TRAFFIC SHIFTS

D) 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

- E) 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.
- F) 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.
- G) 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.
- H) 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.
- I) 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.
- J) PROVIDE A MINIMUM OF 2 MILES BETWEEN LANE CLOSURES, MEASURED FROM THE END OF ONE CLOSURE TO THE FIRST SIGN OF THE NEXT LANE CLOSURE.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- K) 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.
- L) 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) 1000 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

M) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

- N) 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.
- O) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

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

PROVIDE SIGNING REQUIRED FOR THE ALTERNATE ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

P) 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.

- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- R) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 1000 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC BARRIER

S) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY BARRIER AGAINST THE TRAFFIC FLOW BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

T) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

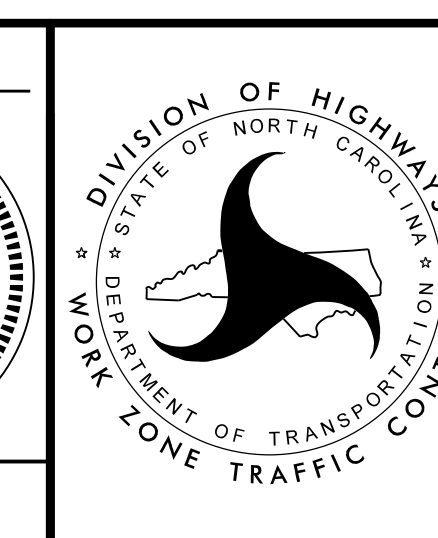
TRAFFIC CONTROL DEVICES

- U) 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), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

APPROVED: *Michael T. Reppa*
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DATE: 11/9/2018

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**TRANSPORTATION
OPERATIONS
PLAN**

GENERAL NOTES (CONT'D)

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
I-40	WORK ZONE PERFORMANCE	TEMPORARY RAISED
I-40	REMOVABLE TAPE (TEMPORARY PATTERNS ON NEW CONCRETE SURFACES ONLY)	TEMPORARY RAISED

- W) 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.
- X) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- Y) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

- Z) LAW ENFORCEMENT SHALL BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AS DIRECTED BY THE ENGINEER.

LOCAL NOTES

- 1) COORDINATE WITH THE ENGINEER, TRAFFIC MANAGEMENT CENTER (TMC) AND EMERGENCY SERVICE PERSONNEL REGARDING ALL TRAFFIC ALTERATIONS.
- 2) COORDINATE WITH THE ENGINEER TO ENSURE THAT THE OVERSIZE/OVERWEIGHT PERMIT UNIT IS AWARE OF ONGOING TRAFFIC OPERATIONS AND CLEAR ROADWAY WIDTHS THROUGHOUT CONSTRUCTION.
- 3) IF NOT INSTALLING PROPOSED GUARDRAIL/GUIDERAIL, ADJUST EXISTING OR TEMPORARY GUARDRAIL/GUIDERAIL AS REQUIRED TO MAINTAIN PROPER GUARDRAIL HEIGHT WHEN CONDUCTING ANY OPERATIONS (SUCH AS SHOULDER RECONSTRUCTION OR WEDGING ON I-40) THAT WILL RESULT IN THE PAVEMENT ELEVATION TO BE HIGHER THAN EXISTING.
- 4) DO NOT REMOVE EXISTING CABLE GUIDERAIL AT THE PROPOSED CROSSOVER LOCATIONS UNTIL READY TO CONSTRUCT PROPOSED CROSSOVERS. ONCE THE EXISTING CABLE GUIDERAIL IS REMOVED, THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE CROSSOVER CONSTRUCTION AND TEMPORARY GUARDRAIL INSTALLATION IN ORDER TO PROVIDE MEDIAN CROSSOVER PROTECTION.
- 5) FOR RESURFACING IN SEGMENT 1, MILL I-40 EB & WB LANES FROM -L- STA 865+00 EASTWARD UNTIL REACHING FULL-DEPTH PAVEMENT (FROM PROJECT I-5765), OR AS DIRECTED BY THE ENGINEER.
- 6) WORK IN THIS SEGMENT IS DESCRIBED PLACING 2-LANE/2-WAY TRAFFIC ON THE EASTBOUND SIDE FIRST. IF TRAFFIC IS ELECTED TO BE PLACED ON THE WESTBOUND SIDE FIRST THEN PHASING WOULD BE MIRRORED WITH RESPECT TO TRAFFIC DIRECTION AND WORK AREA.
- 7) AFTER REMOVING MEDIAN CROSSOVER PAVEMENT, MILL MEDIAN SHOULDERS TO SPECIFIED CROSS-SLOPES ON ROADWAY PLANS, OR AS DIRECTED BY THE ENGINEER.
- 8) WHEN REMOVING MEDIAN CROSSOVERS, INSTALL NEW CABLE GUIDERAIL ANCHORS WITH CABLE GUIDERAIL.
- 9) WHEN INSTALLING TEMPORARY OR PERMANENT GUARDRAIL, LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW. EACH TIME I-40 TRAFFIC IS SHIFTED TO A NEW TRAFFIC PATTERN, RELAP GUARDRAIL IN THE NEW DIRECTION OF TRAFFIC FLOW. INSTALL APPROPRIATE GUARDRAIL END TREATMENT BASED ON TRAFFIC DIRECTION.
- 10) USE REMOVABLE TAPE IN SEGMENT 3 ON I-40 BRIDGES. WHEN USING REMOVABLE TAPE, INSTALL TEMPORARY RAISED MARKERS HALF-ON/HALF-OFF TAPE AT 20' SPACING TO HOLD TAPE IN PLACE.
- 11) PHASE 2, STEP 10 DECK WORK ON BRIDGE #290018 MAY BE PERFORMED AT ANY TIME FROM PHASE 1 THROUGH PHASE 5.

MANAGEMENT STRATEGY

THE FOLLOWING LISTED STRATEGIES DERIVE FROM DETAILED DESIGN LEVEL ASSESSMENTS OF THE WORK ZONE IMPACTS CONDUCTED DURING THE DEVELOPMENTAL STAGES OF THIS TRANSPORTATION MANAGEMENT PLAN (TMP).

RECOMMENDED MANAGEMENT STRATEGIES RELATIVE TO THIS TMP ARE AS FOLLOWS:

I-40 - SEGMENTS 1 & 5

EASTBOUND AND WESTBOUND I-40 TRAFFIC WILL BE MAINTAINED USING A CONTINUOUS LANE CLOSURE (WITH SHIFTS) FOR THE ENTIRE CONSTRUCTION OF SEGMENTS 1 & 5. EASTBOUND AND WESTBOUND TRAFFIC WILL BE MAINTAINED ON ITS RESPECTIVE SIDE DURING CONSTRUCTION.


I-40 SEGMENTS 2 THROUGH 4

- EASTBOUND AND WESTBOUND I-40 TRAFFIC WILL BE MAINTAINED USING A CONTINUOUS LANE CLOSURE (WITH SHIFTS) TO REBUILD OUTSIDE SHOULDER(S) AND CONSTRUCT MEDIAN CROSSOVERS FOR 2-LANE/2-WAY DIVIDED LONG-TERM PATTERN.
- EASTBOUND AND WESTBOUND I-40 TRAFFIC WILL BE PLACED IN A 2-LANE/2-WAY DIVIDED LONG-TERM PATTERN (ON THE SIDE OF I-40 WITH THE REBUILT OUTSIDE SHOULDER) USING MEDIAN CROSSOVERS FOR CONSTRUCTION AWAY FROM TRAFFIC OF THE OPPOSITE SIDE.
- SEGMENT 2 WORK UTILIZING MEDIAN CROSSOVERS WILL HAVE RAMP CLOSURES OPPOSITE THE 2-LANE/2-WAY TRAFFIC PATTERN. WORK DURING THE RAMP CLOSURES WILL BE PERFORMED UNDER AN INTERMEDIATE CONTRACT TIME (ICT).
- DECK WORK ON BRIDGE #290018 WILL BE PERFORMED USING NIGHTLY LANE CLOSURES ON US 64.

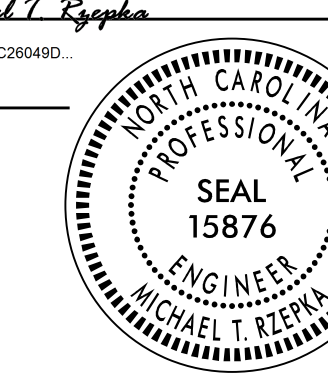
I-40 ALL SEGMENTS

EASTBOUND AND WESTBOUND I-40 TRAFFIC WILL BE MAINTAINED USING EXTENDED WEEKDAY LANE CLOSURES TO PLACE THE FINAL SURFACE LAYER, FINAL MARKINGS/MARKERS AND RUMBLE STRIPS. RETURN EASTBOUND AND WESTBOUND I-40 TRAFFIC TO EXISTING PATTERN DURING WEEKENDS.

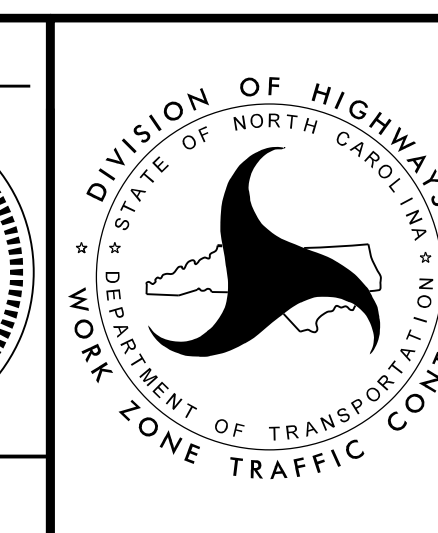
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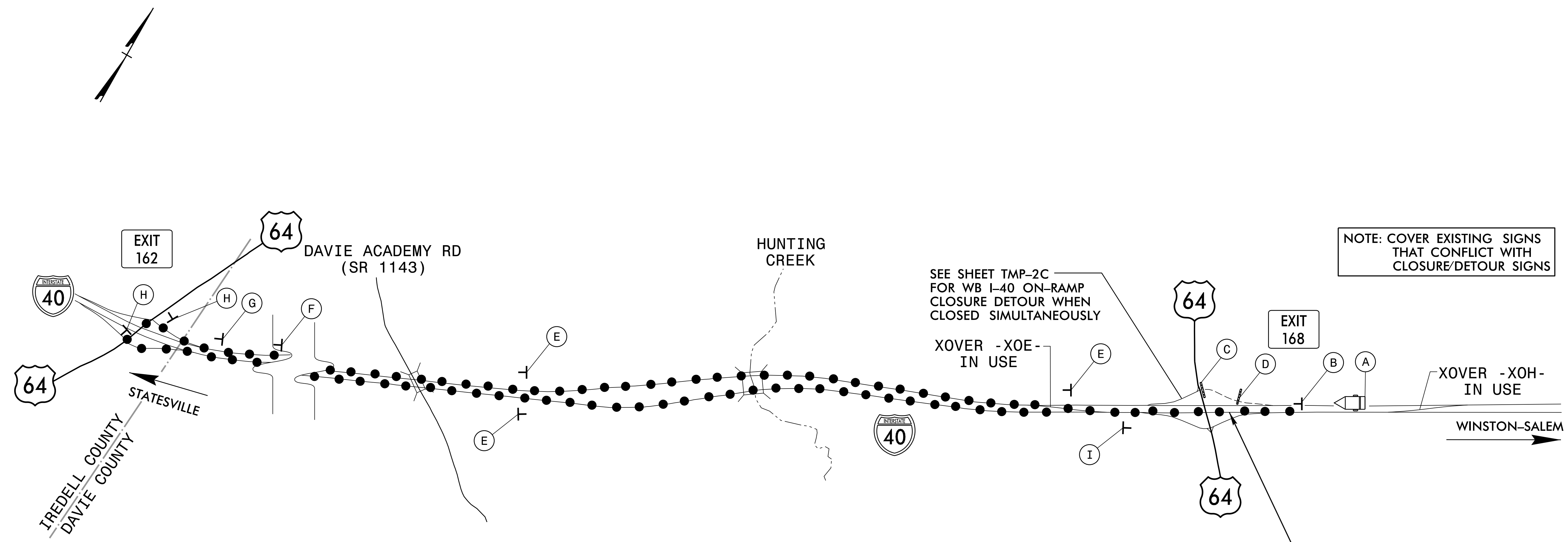
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**TRANSPORTATION
OPERATIONS
PLAN**



MESSAGES AS SHOWN OR AS DIRECTED BY THE ENGINEER

DELINEATE WITH DRUMS

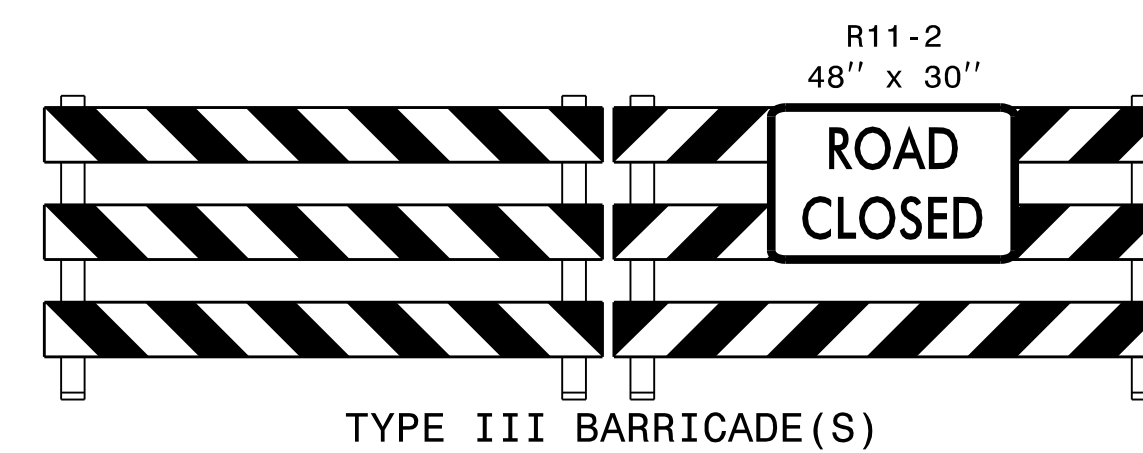
MESSAGE NO. 1	MESSAGE NO. 2
EXIT 168 CLOSED	USE EXIT 162

CHANGEABLE MESSAGE SIGN

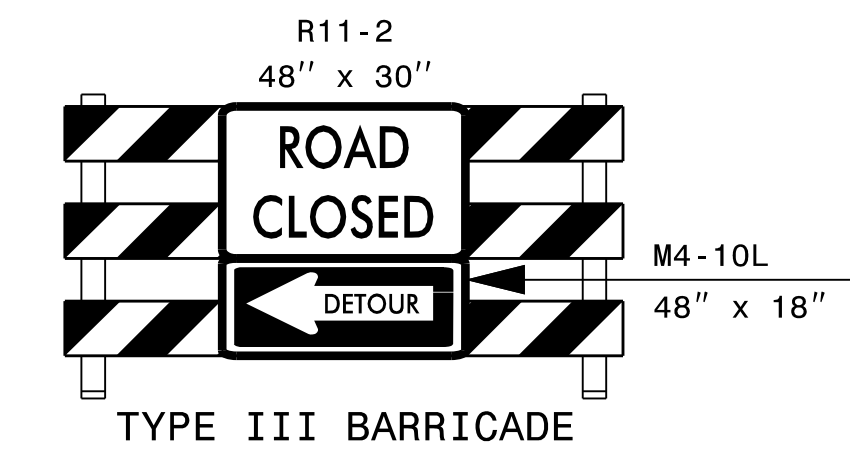
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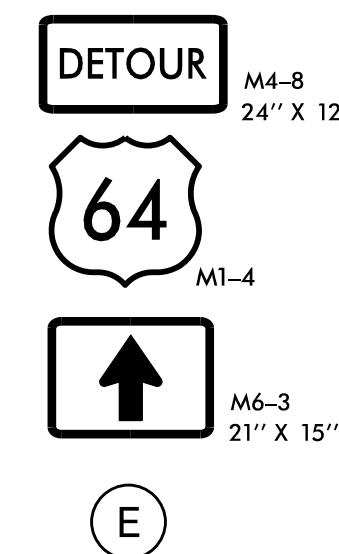
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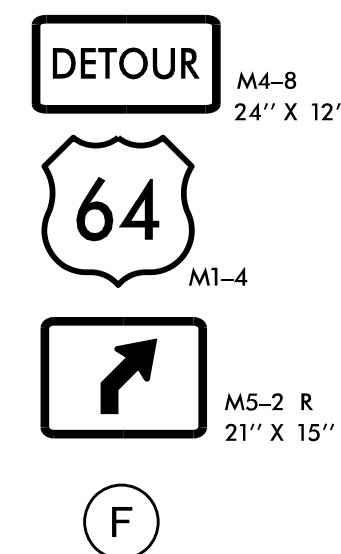
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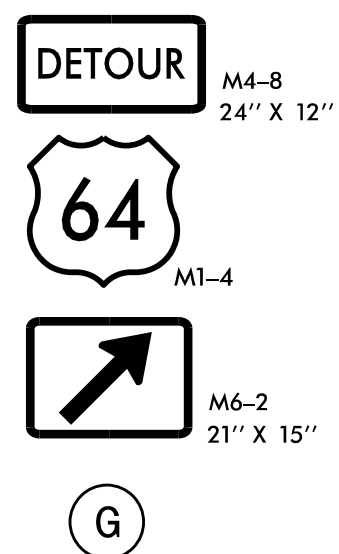
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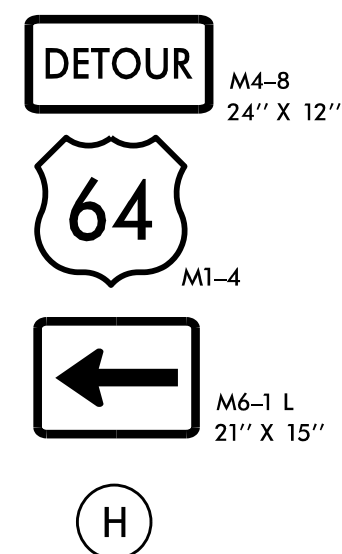
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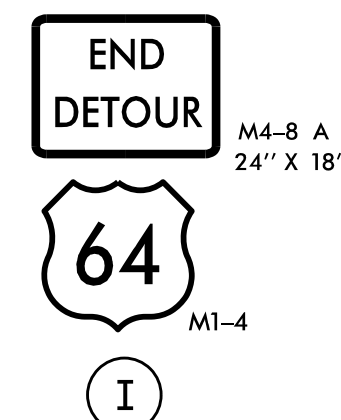
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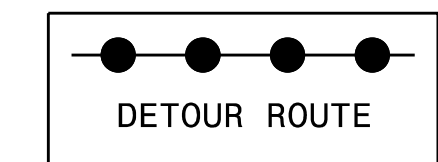
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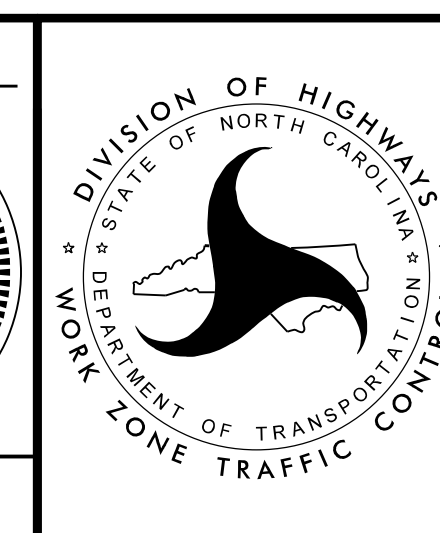
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APPROVED: *Michael T. Rzepka*
DATE: 11/9/2018

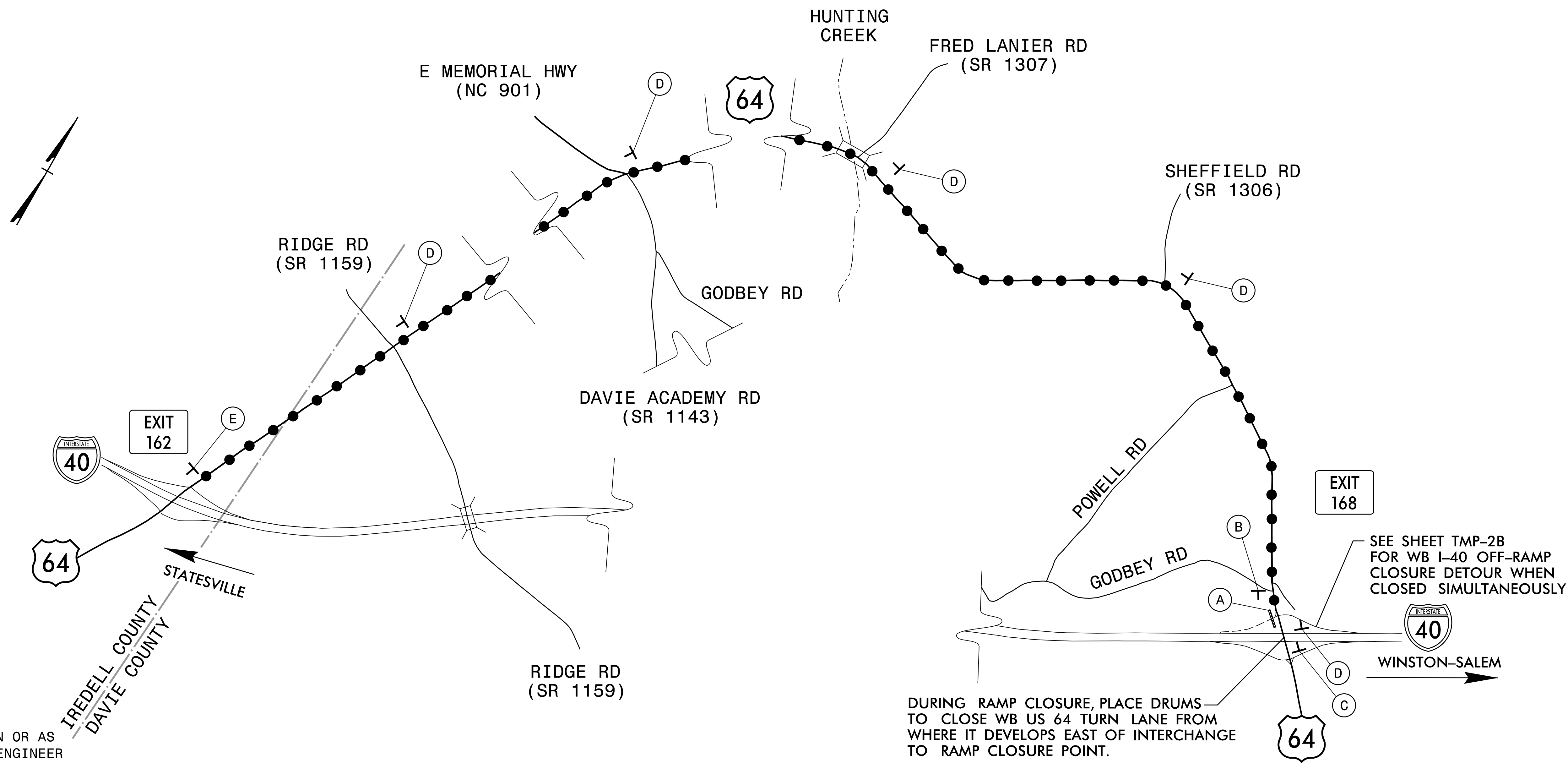
PROFESSIONAL SEAL 15876
MICHAEL T. RZEPKA

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DETOUR FOR WB I-40 OFF-RAMP CLOSURE

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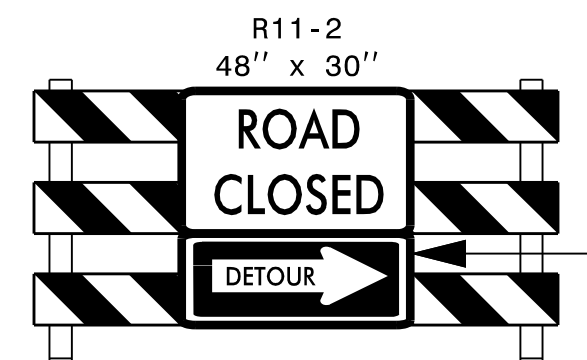


MESSAGES AS SHOWN OR AS DIRECTED BY THE ENGINEER

MESSAGE NO. 1	MESSAGE NO. 2
EXIT 168 CLOSED	USE EXIT 162

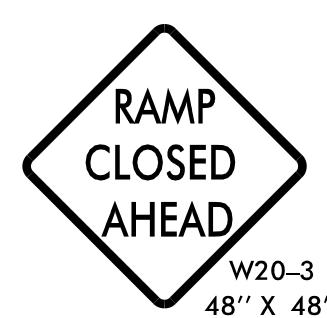
CHANGEABLE MESSAGE SIGN

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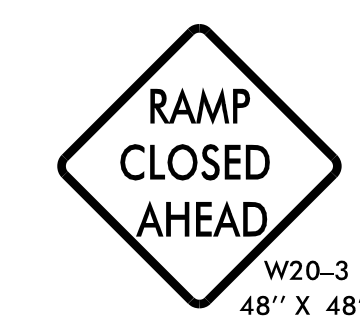


TYPE III BARRICADE

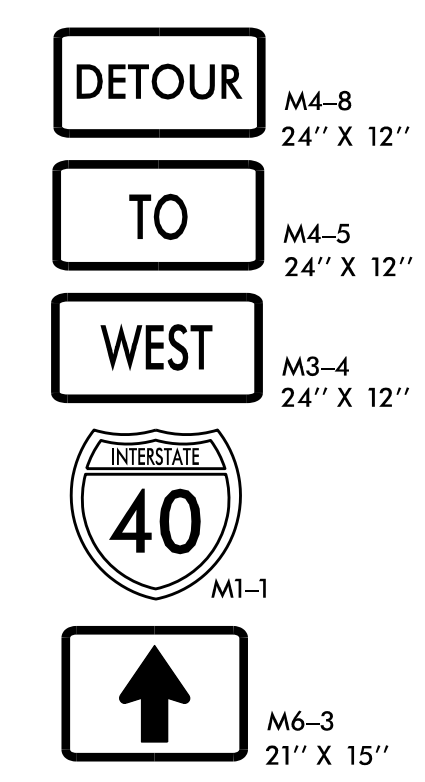
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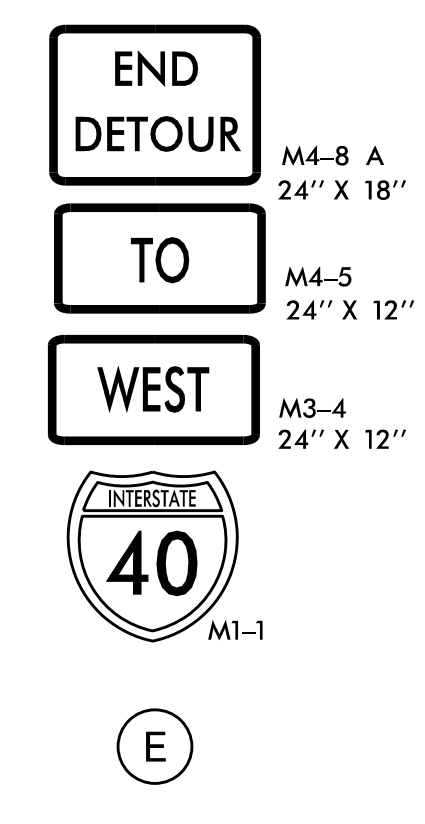
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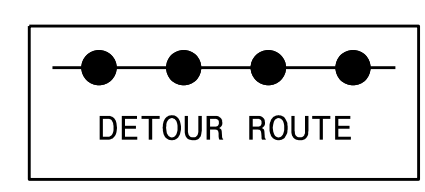


(D)



(E)

NOTE: COVER EXISTING SIGNS THAT CONFLICT WITH CLOSURE/DETOUR SIGNS

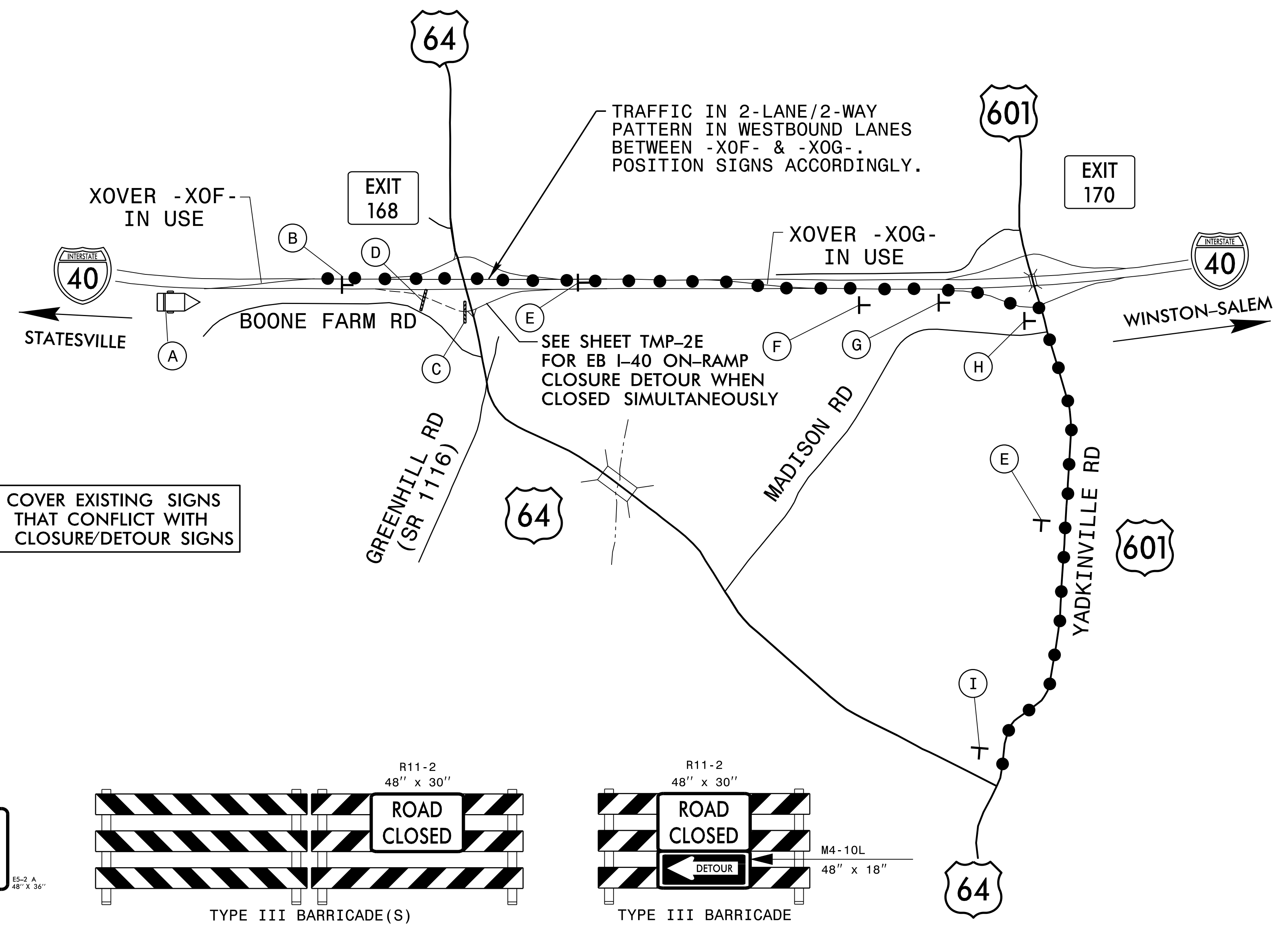
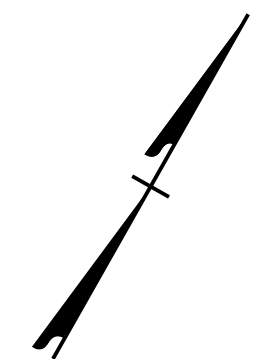


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APPROVED: *Michael T. Rzepka*
 DATE: 11/9/2018

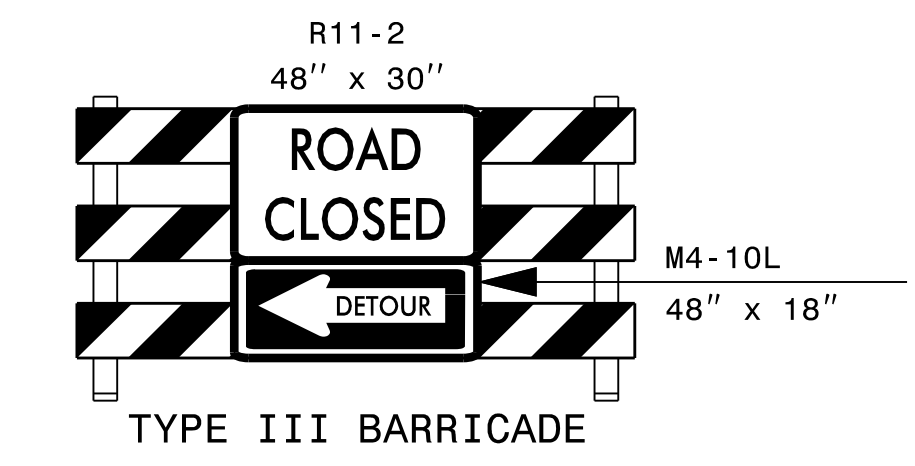
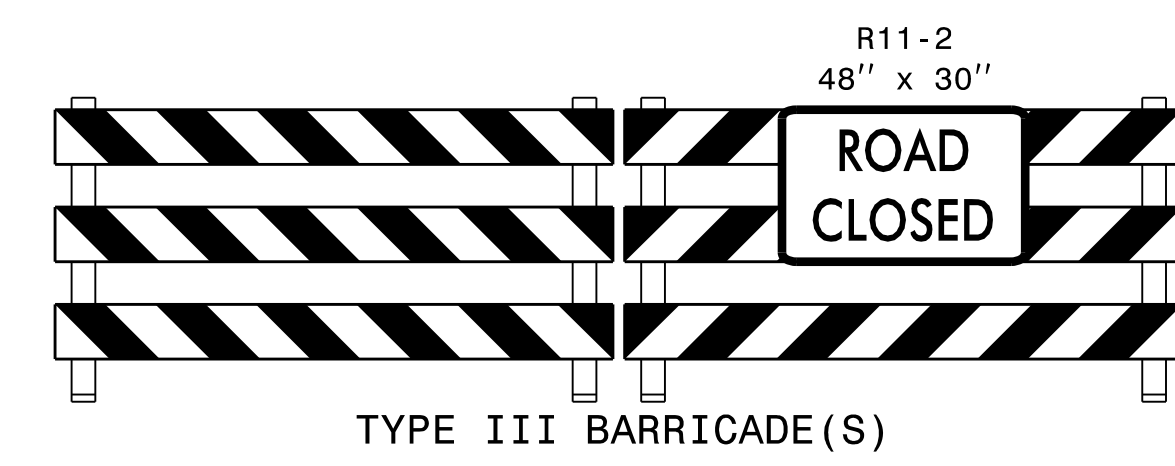
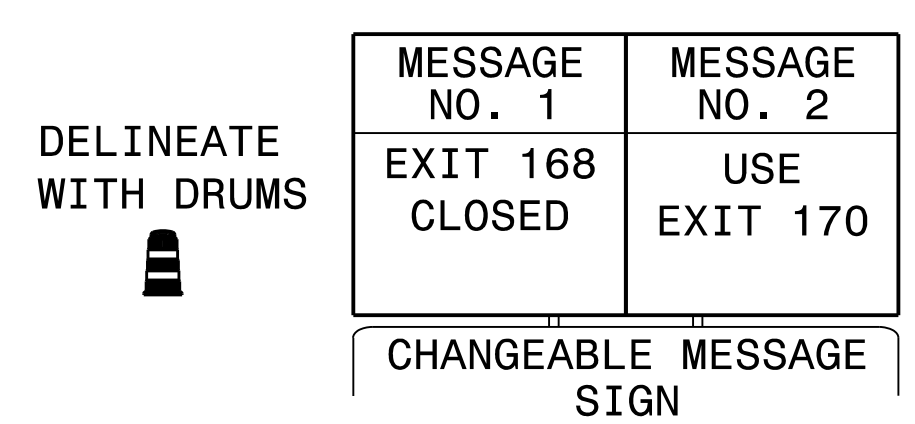
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DETOUR FOR WB I-40 ON-RAMP CLOSURE



NOTE: COVER EXISTING SIGNS THAT CONFLICT WITH CLOSURE/DETOUR SIGNS

MESSAGES AS SHOWN OR AS DIRECTED BY THE ENGINEER

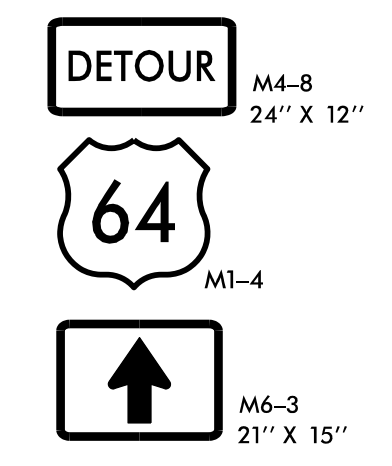


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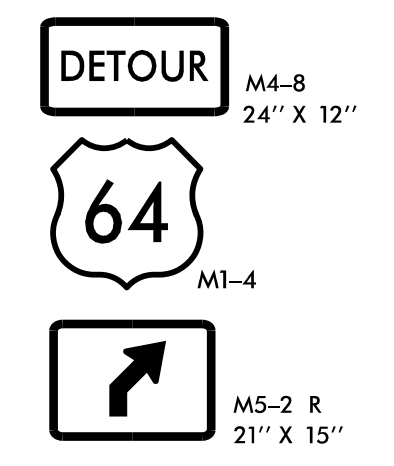
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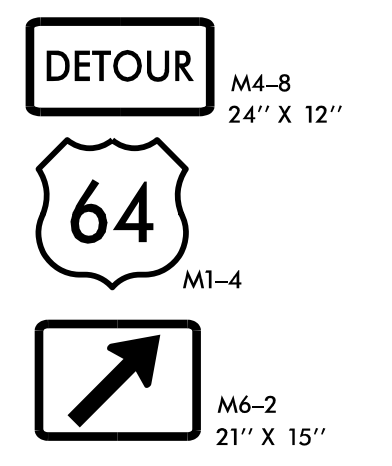
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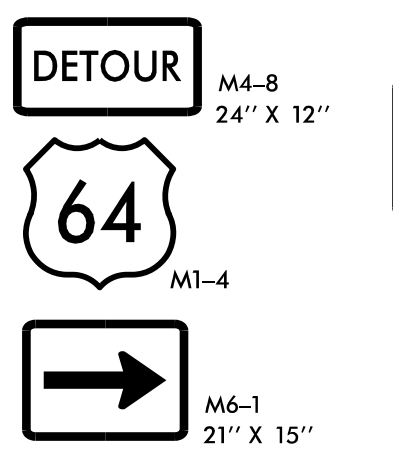
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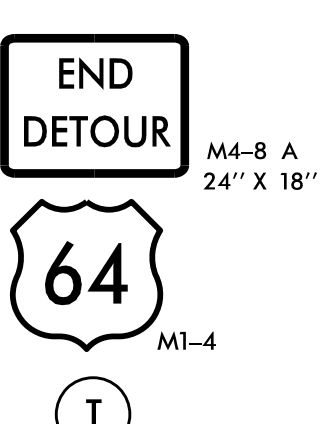
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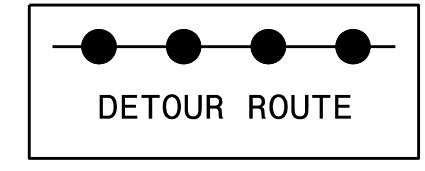
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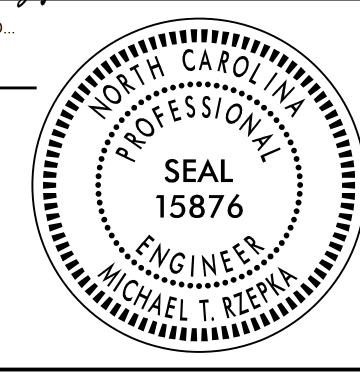
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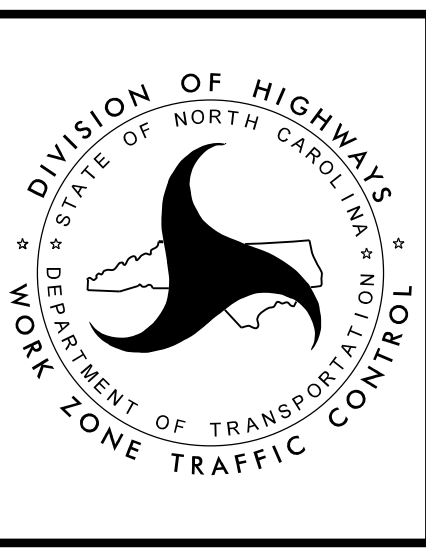
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 DATE: 11/9/2018

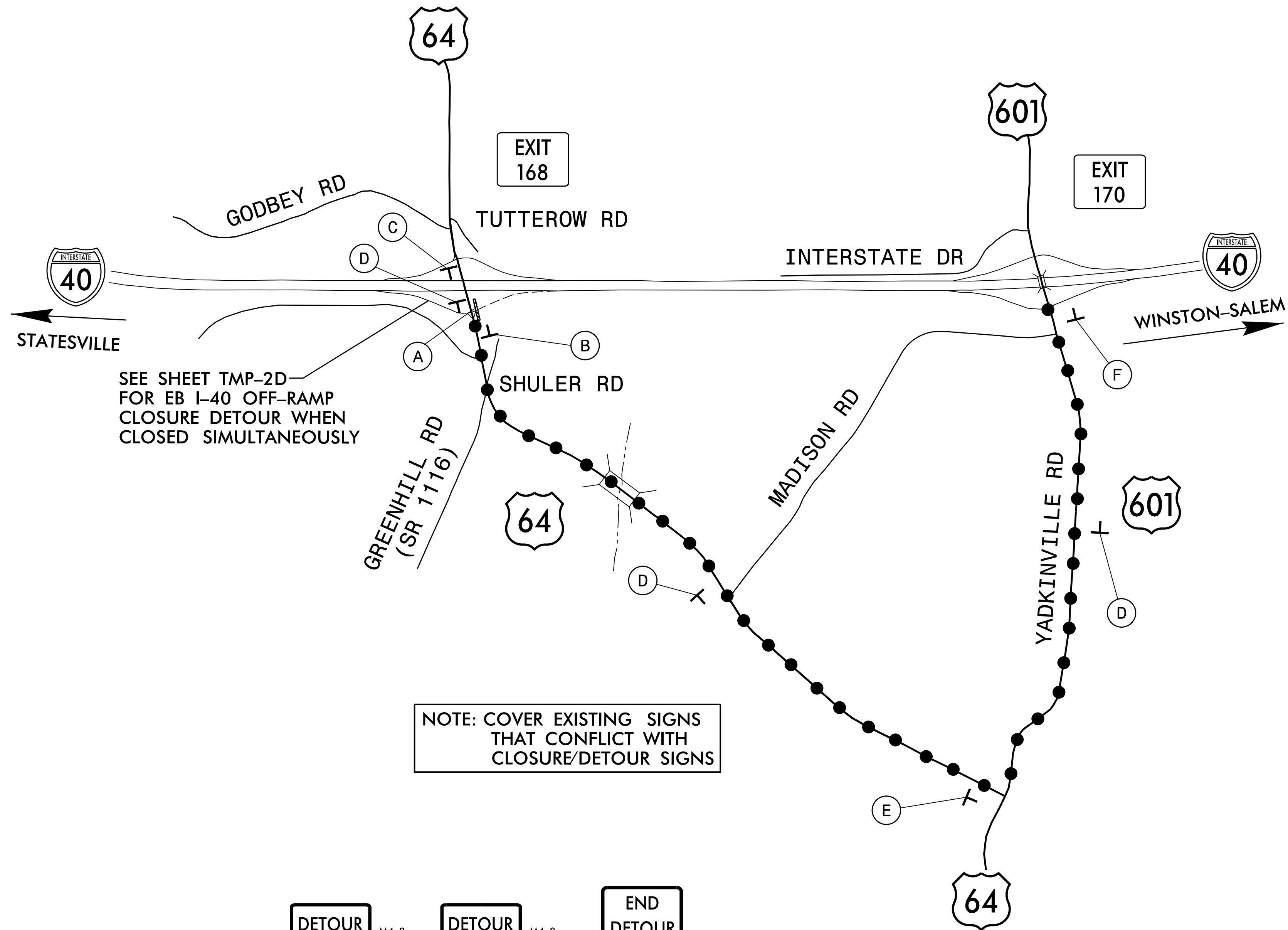
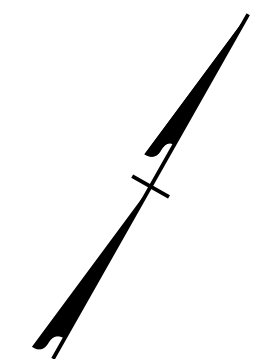
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 Michael T. Repp
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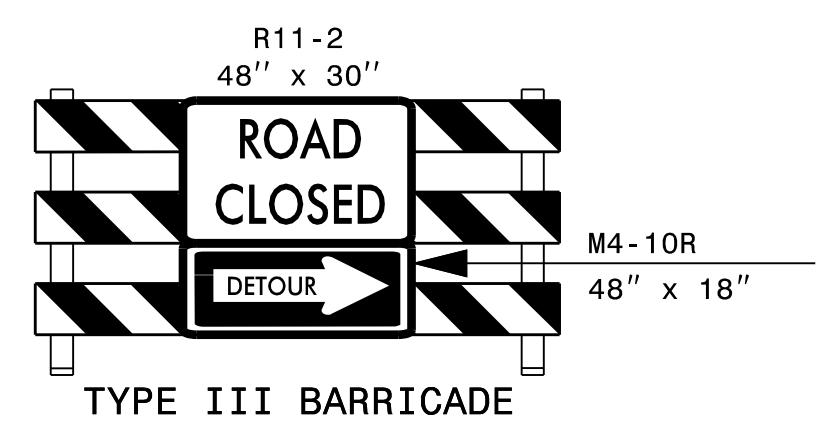


**DETOUR FOR
 EB I-40 OFF-RAMP
 CLOSURE**

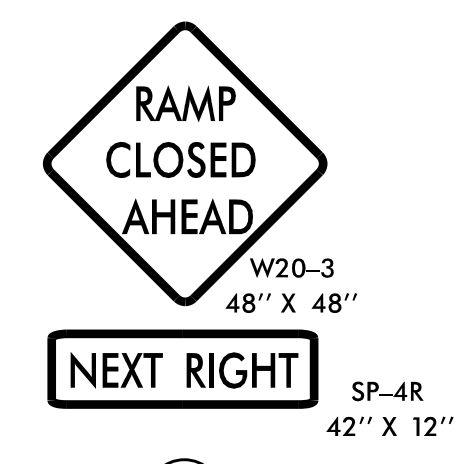


SEE SHEET TMP-2D FOR EB I-40 OFF-RAMP CLOSURE DETOUR WHEN CLOSED SIMULTANEOUSLY

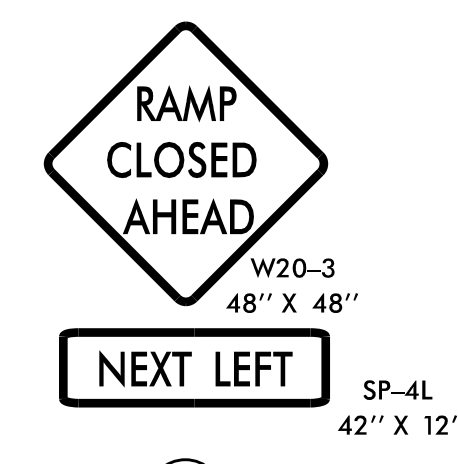
NOTE: COVER EXISTING SIGNS THAT CONFLICT WITH CLOSURE/DETOUR SIGNS



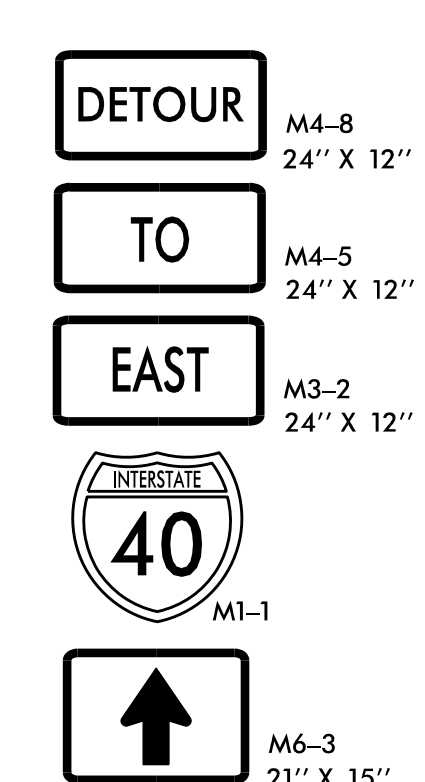
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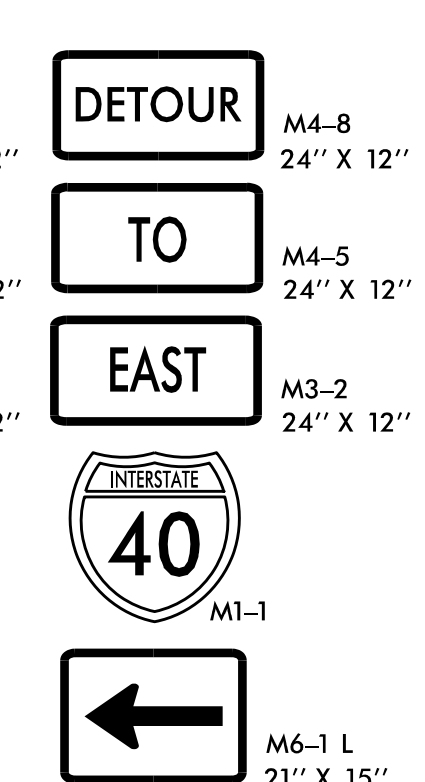
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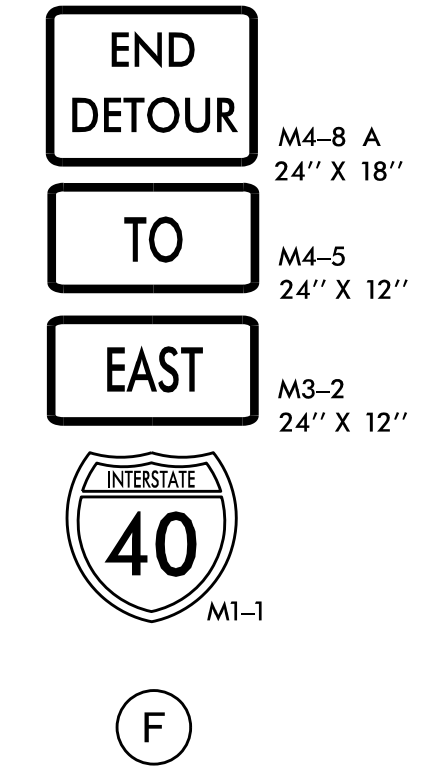
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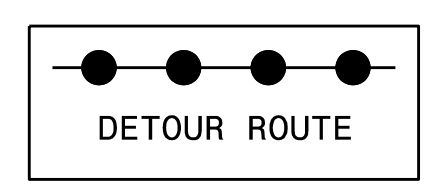
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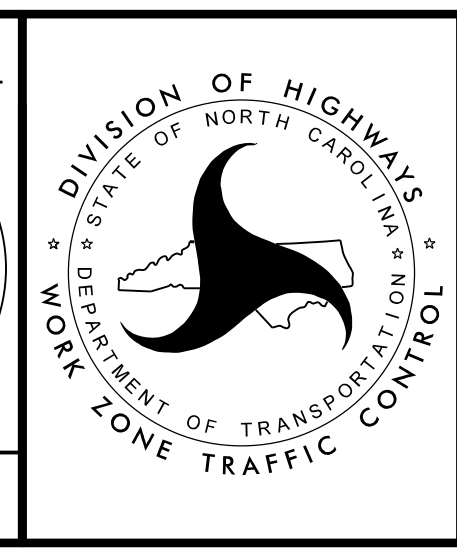


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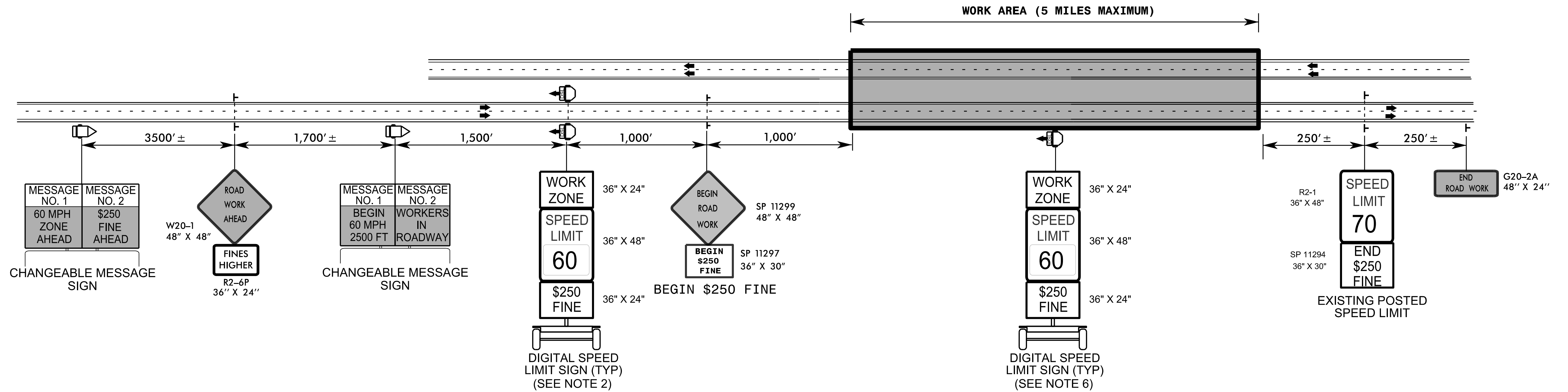


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APPROVED: *Michael T. Riepp*
DATE: 11/9/2018
NORTH CAROLINA PROFESSIONAL SEAL 15876
MICHAEL T. RIEPP
ENGINEER
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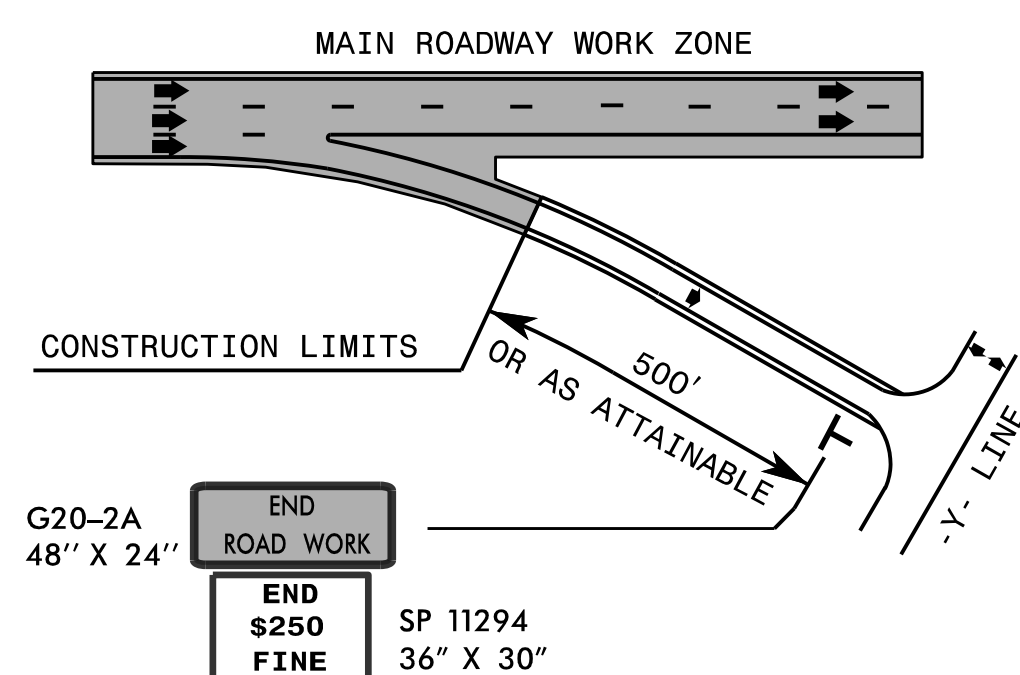
DETOUR FOR
EB I-40 ON-RAMP
CLOSURE



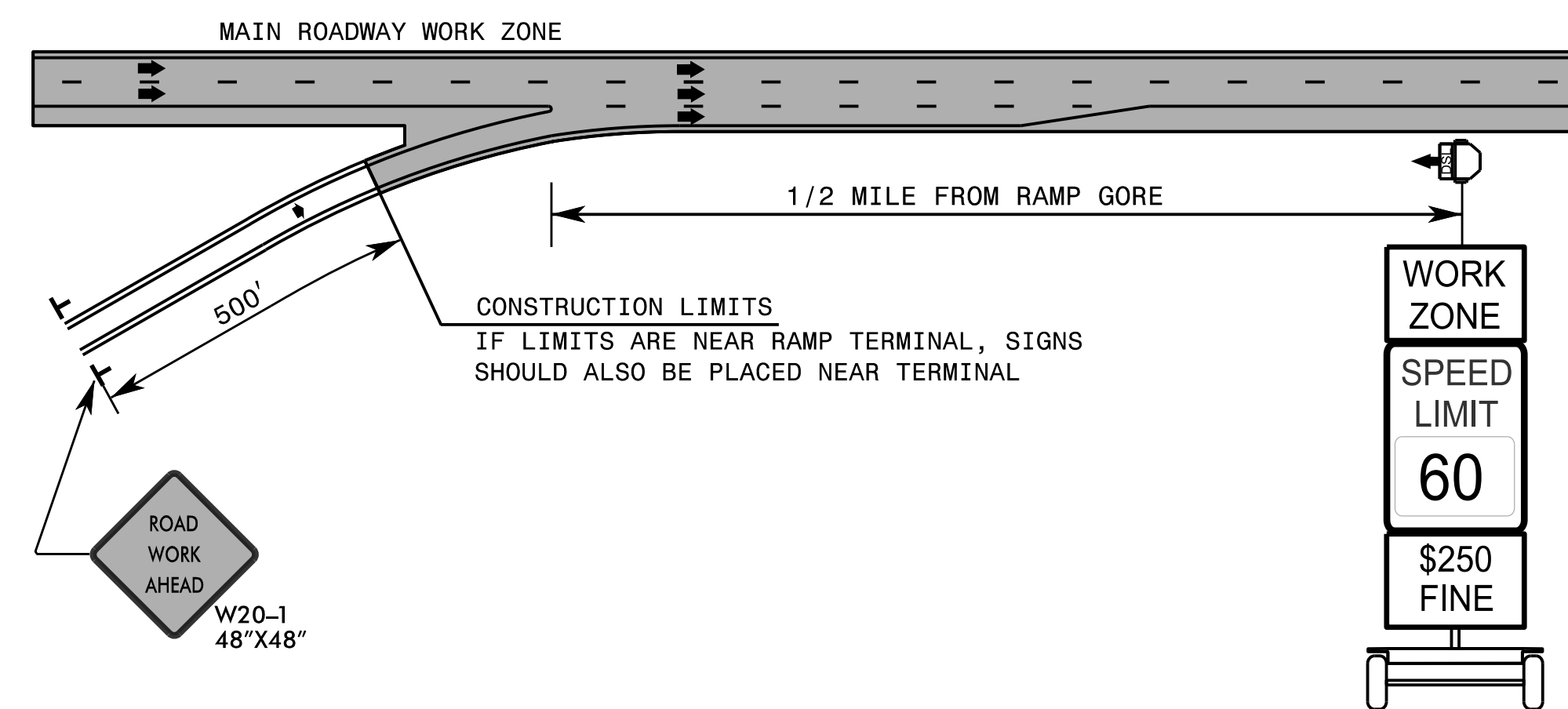
NOTES

1. THE SPEED LIMITS DISPLAYED WITHIN THE ACTIVE WORK AREA MAY VARY BETWEEN 60 MPH AND 70 MPH, DEPENDENT UPON ROAD WORK CONDITIONS AND THE EXISTING SPEED LIMIT. 60 MPH IS ONLY DISPLAYED DURING ACTIVE LANE CLOSURE OPERATIONS.
2. AT THE FIRST DIGITAL SPEED LIMIT LOCATION, PLACE A DIGITAL SPEED LIMIT SIGN ON BOTH THE INSIDE AND OUTSIDE SHOULDERS, UNLESS DIRECTED OTHERWISE BY THE ENGINEER WHEN THERE IS NOT ENOUGH ROOM ON THE INSIDE SHOULDER DUE TO NARROW MEDIAN AND PERMANENT MEDIAN BARRIER. AT SUBSEQUENT LOCATIONS DOWNSTREAM, PLACE A SINGLE DIGITAL SPEED LIMIT SIGN ON THE OUTSIDE SHOULDER
3. THE ENGINEER MAY DETERMINE TO INSTALL THE DIGITAL SPEED LIMIT SIGNS ON THE OUTSIDE SHOULDER OR ON THE MEDIAN SIDE IF THE SIGNS ARE NOT HIGHLY VISIBLE TO ALL MOTORISTS.
4. THE MAXIMUM ACTIVE WORK AREA IS 5 MILES.
5. THE DIGITAL SPEED LIMIT SIGNS TAKE PRECEDENCE OVER EXISTING SPEED LIMIT SIGNS. ALL EXISTING SPEED LIMIT SIGNS SHALL BE COVERED OR REMOVED.
6. THE DIGITAL SPEED LIMITS SIGNS WILL BE INSTALLED (TRAILER MOUNTED OR STATIONARY MOUNTED) IN ADVANCE AND SPACED APPROXIMATELY 1.5 MILES THROUGHOUT THE ACTIVE WORK AREA, UNLESS DIRECTED OTHERWISE.
7. NCDOT HAS SOLE AUTHORITY OF THE SPEED LIMITS DISPLAYED ON THE DIGITAL SPEED LIMIT SIGNS.
8. THE WORK ZONE VARIABLE SPEED LIMIT AND THE \$250 SPEEDING PENALTY ARE SEPARATE ORDINANCES THAT MUST BE SIGNED BY THE STATE TRAFFIC ENGINEER TO BE VALID AND ENFORCEABLE. WITHOUT A SIGNED ORDINANCE, THE SPEED LIMIT ON A FACILITY SHALL REMAIN UNCHANGED.
9. WHEN LANE CLOSURES ARE INSTALLED AT THE BEGINNING OF THE PROJECT LIMITS, THE LANE CLOSURE SIGNS ARE TO BE ADJUSTED TO AVOID SIGN OVERLAP/CLUTTER.

EXIT RAMP

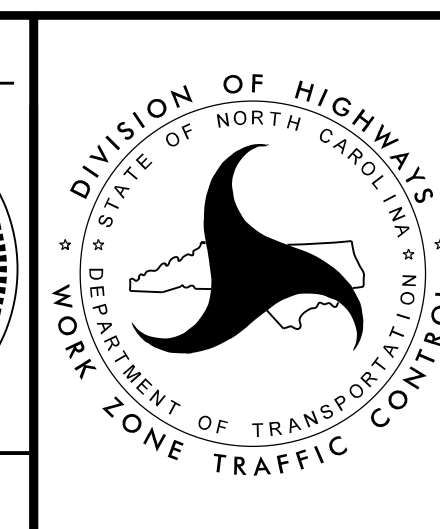


ENTRANCE RAMP



APPROVED: *Michael T. Repka*
DocuSigned by: Michael T. Repka
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 DATE: 11/9/2018

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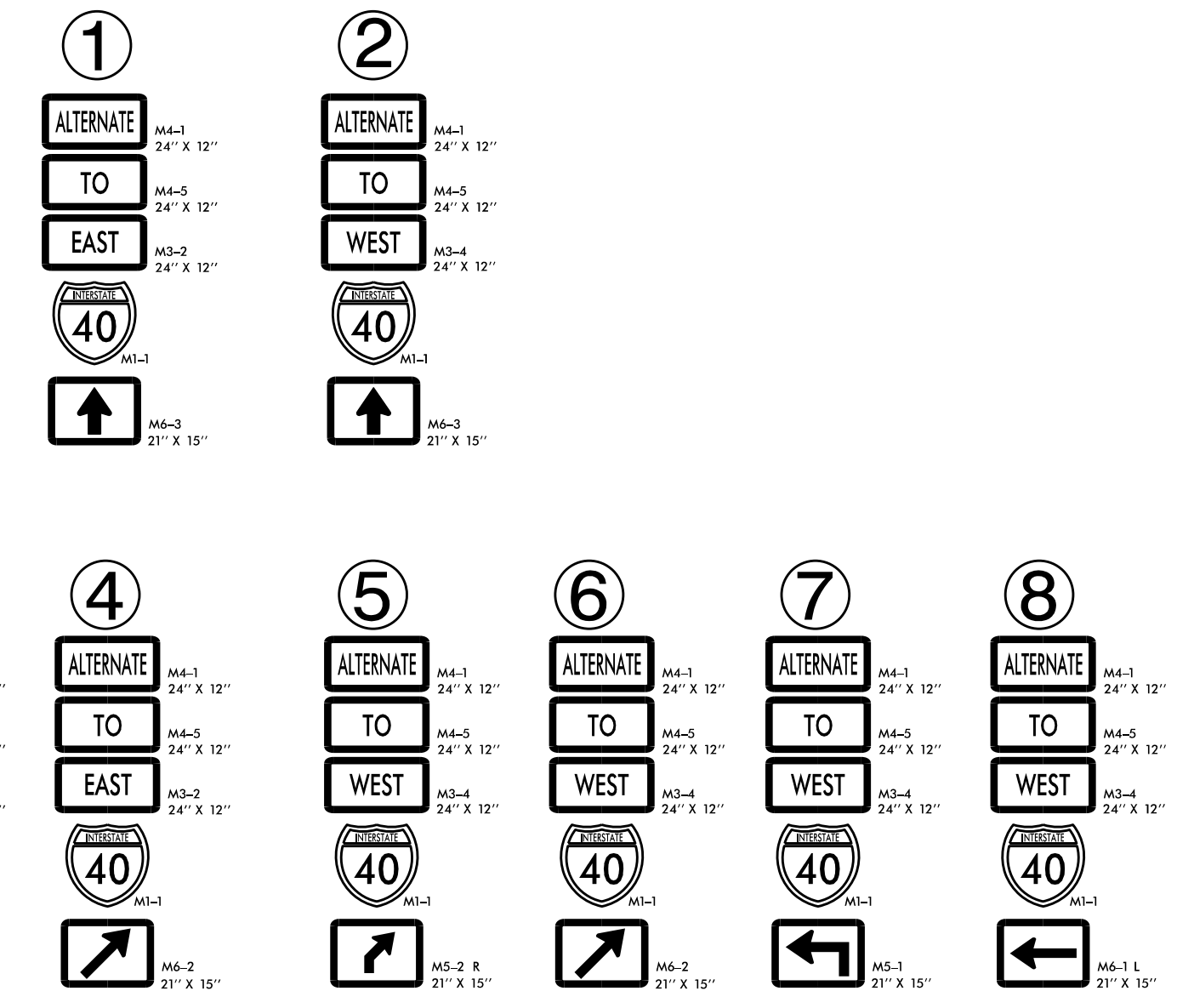
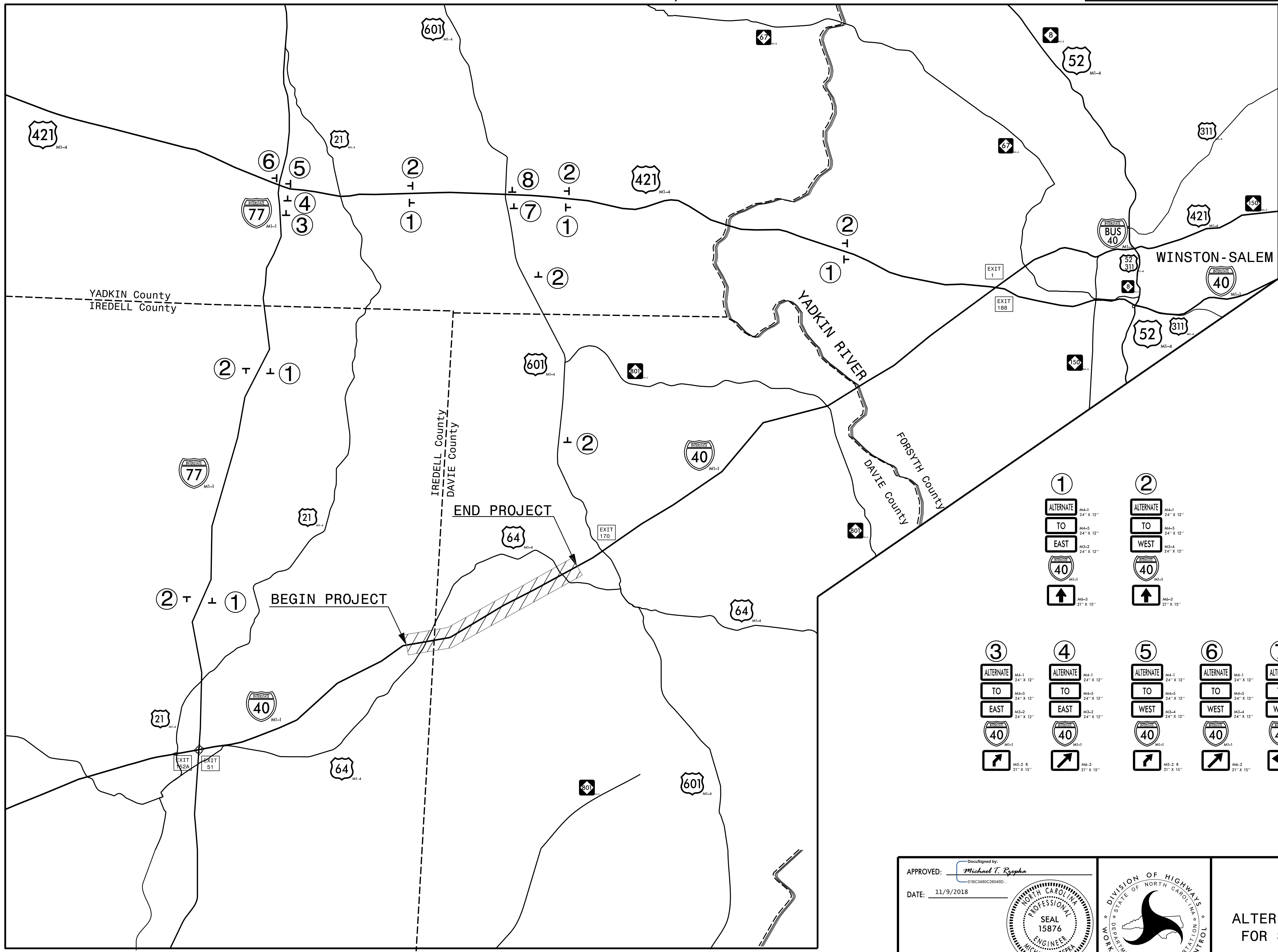


**WORK ZONE "VARIABLE"
 SPEED LIMIT REDUCTION
 USING DIGITAL SPEED
 LIMIT SIGNS**

PROJECT VICINITY MAP: YADKIN COUNTY, FORSYTH COUNTY, IREDELL COUNTY, DAVIE COUNTY

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

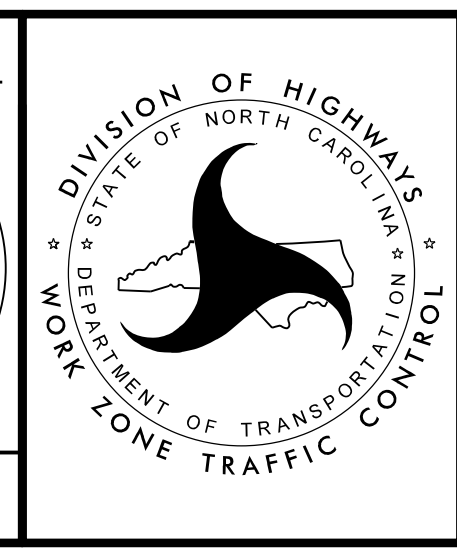
PROJ. REFERENCE NO.	SHEET NO.
I-5823	TMP-2G



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APPROVED: *Michael T. Reppa*
DATE: 11/9/2018

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**ALTERNATE ROUTE SIGNS
FOR SMART WORK ZONE**

PHASING

HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PROJ. REFERENCE NO.	SHEET NO.
I-5823	TMP-3

NOTES: - PROJECT IS DIVIDED INTO FIVE SEGMENTS. EACH SEGMENT CORRESPONDS TO A COMPLETE PHASE. SEGMENTS WILL BE COMPLETED IN ORDER (SEGMENT 1, THEN SEGMENT 2, AND ENDING WITH SEGMENT 5). UNLESS STATED ELSEWHERE IN THE PHASING, OR AT THE DIRECTION OF THE ENGINEER, EACH SEGMENT SHALL BE COMPLETED BEFORE PROCEEDING TO THE NEXT SEGMENT. (SEE SHEET TMP-4 OVERVIEW)
- 'RSD' REFERS TO NCDOT ROADWAY STANDARD DRAWINGS
- IN EACH PHASE FROM PHASE 1 THROUGH PHASE 5, CONTINUOUS LANE CLOSURES WILL BE USED TO COMPLETE THE ENTIRE PHASE. HOWEVER, AT THE DIRECTION OF THE ENGINEER, GENERAL NOTE 'A' MAY BE USED.
- REFER TO ROADWAY PLANS FOR MEDIAN CROSSOVER LOCATIONS AND DETAILS.
- ALL ASPHALT WORK IS UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE IN PHASES 1 THROUGH 5.
- SEE LOCAL NOTES 1 & 2.

PRIOR TO WORK BEGINNING IN SEGMENT 1, PHASE 1, INSTALL ADVANCED WORK ZONE WARNING SIGNS AND "WORK ZONE" SPEED LIMIT REDUCTION SIGNS ON I-40 AND APPLICABLE RAMPS ACCORDING TO RSD 1101.01 (SHEET 1 OF 3) AND SHEET TMP-2F. PLACE CHANGEABLE MESSAGE SIGNS (CMS) ON I-40 IN ADVANCE OF THE WORK ZONE SIGNS, AS DIRECTED BY THE ENGINEER. INSTALL ALTERNATE ROUTE SIGNS ON I-77 AND US 421 AS SHOWN SHEET TMP-2G, OR AS DIRECTED BY THE ENGINEER.

SEGMENT 1 WORK INCLUDES PHASE 1 (SEE SHEET TMP-4 OVERVIEW)

UPON BEGINNING PHASE 1, STEP 1, TRAFFIC WILL REMAIN IN A SINGLE LANE PATTERN IN EACH DIRECTION UNTIL CONSTRUCTION IS COMPLETE ON ITS RESPECTIVE SIDE IN PHASE 1, STEP 4. MAINTAIN ACCESSES TO/FROM RAMPS AT THE US 601 INTERCHANGE AT ALL TIMES.

PHASE 1

NOTE: SHOULDER RECONSTRUCTION/WIDENING IN PHASE 1, STEPS 1 & 2 MAY EXTEND INTO SEGMENT 2, AS DIRECTED BY THE ENGINEER.

STEP 1 (SEE SHEET TMP-5, DETAIL 1)

USING RSD 1101.02 (SHEETS 4, 9 & 10 OF 14), PLACE I-40 EASTBOUND AND WESTBOUND TRAFFIC IN THE EXISTING MEDIAN LANES AND CLOSE OUTSIDE LANES.

BEHIND LANE CLOSURES, RECONSTRUCT OUTSIDE SHOULDERS FROM -L- STA 853+19± TO STA 865+00± (OR EAST LIMIT AS DIRECTED BY THE ENGINEER) (SEE LOCAL NOTE 3).

BACKFILL OUTSIDE SHOULDERS BY THE END OF EACH WORK PERIOD, IF APPLICABLE (SEE GENERAL NOTES 'K' & 'L').

WORK IN A CONTINUOUS MANNER UNTIL ALL OF THE OUTSIDE SHOULDER WORK IN BOTH DIRECTIONS IS COMPLETED FOR SEGMENT 1 IN PHASE 1, STEP 1.

STEP 2 (REFER TO SHEETS TMP-5, DETAILS 2 & 2A; TMP-6, DETAILS 6 & 7)

USING RSD 1101.02 (SHEET 4 OF 14), MASK CONFLICTING WHITE EDGELINE, PLACE TEMPORARY MARKINGS AND SHIFT I-40 EASTBOUND AND WESTBOUND TRAFFIC INTO THE EXISTING OUTSIDE LANES/RECONSTRUCTED SHOULDERS AND CLOSE MEDIAN LANES.

BEHIND LANE CLOSURES, CONSTRUCT THE FOLLOWING (SEE LOCAL NOTES 3 & 4):

- RECONSTRUCT/WIDEN I-40 EASTBOUND AND WESTBOUND MEDIAN SHOULDERS FROM -L- STA 853+19± TO STA 865+00± (OR EAST LIMIT AS DIRECTED BY THE ENGINEER)
- MEDIAN CROSSOVERS -XOG- & -XOH- AND KEEP CLOSED. (OPTIONAL: MAY ALSO CONSTRUCT -XOE- & -XOF- USING MEDIAN LANE CLOSURE, AS DIRECTED BY THE ENGINEER).
- CONCRETE PAVEMENT REMOVAL AND REPLACEMENT IN THE EASTBOUND AND WESTBOUND MEDIAN LANES IN THE FOLLOWING SEQUENCE:
 - A) MAINTAIN TRAFFIC IN A ONE-LANE, ONE-WAY PATTERN IN THE OUTSIDE LANE/RECONSTRUCTED SHOULDER IN EACH DIRECTION.
 - B) INSTALL PCB.
 - C) REMOVE AND REPLACE CONCRETE PAVEMENT IN THE MEDIAN LANES (REFER TO ROADWAY PLANS FOR LOCATIONS)
 - D) REMOVE AND RESET PCB FOR NEXT WORK AREA, AS DIRECTED BY THE ENGINEER.
 - E) REPEAT UNTIL ALL OF THE CONCRETE PAVEMENT REMOVAL AND REPLACEMENT WORK IS COMPLETED FOR SEGMENT 1 IN EASTBOUND AND WESTBOUND MEDIAN LANES.
- RESURFACE MEDIAN LANES/SHOULDERS UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE FROM -L- STA 853+19± TO STA 865+00± (REFER TO ROADWAY PLANS). PLACE TEMPORARY MARKINGS FOR STEP 3 TRAFFIC PATTERN.
- MILL/RESURFACE MEDIAN LANES/SHOULDERS FROM -L- STA 865+00± TO STA 868+00± (SEE LOCAL NOTE 5)

STEP 3 (REFER TO SHEETS TMP-5, DETAILS 3 & 3A; TMP-6, DETAILS 8 & 9)

USING RSD 1101.02 (SHEET 4 OF 14), TIE PAVEMENT MARKINGS AND PLACE I-40 EASTBOUND AND WESTBOUND TRAFFIC IN THE COMPLETED MEDIAN LANES/SHOULDERS AND CLOSE OUTSIDE LANES/SHOULDERS.

BEHIND LANE CLOSURES, CONSTRUCT THE FOLLOWING (SEE LOCAL NOTE 3):

- CONCRETE PAVEMENT REMOVAL AND REPLACEMENT IN THE EASTBOUND AND WESTBOUND OUTSIDE LANES IN THE FOLLOWING SEQUENCE:
 - A) MAINTAIN TRAFFIC IN A ONE-LANE, ONE-WAY PATTERN IN THE MEDIAN LANE/SHOULDER IN EACH DIRECTION.
 - B) INSTALL PCB.
 - C) REMOVE AND REPLACE CONCRETE PAVEMENT IN THE OUTSIDE LANES (REFER TO ROADWAY PLANS FOR LOCATIONS)
 - D) REMOVE AND RESET PCB FOR NEXT WORK AREA, AS DIRECTED BY THE ENGINEER.
 - E) REPEAT UNTIL ALL OF THE CONCRETE PAVEMENT REMOVAL AND REPLACEMENT WORK IS COMPLETED FOR SEGMENT 1 IN EASTBOUND AND WESTBOUND OUTSIDE LANES.
- RESURFACE OUTSIDE LANES/SHOULDERS UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE FROM -L- STA 853+19± TO STA 865+00± (REFER TO ROADWAY PLANS). PLACE TEMPORARY MARKINGS AND MARKERS FOR STEP 4 TRAFFIC PATTERN.
- MILL/RESURFACE OUTSIDE LANES/SHOULDERS FROM -L- STA 865+00± TO STA 868+00± (SEE LOCAL NOTE 5)

STEP 4 (REFER TO SHEET TMP-5, DETAILS 4 & 5)

USING RSD 1101.02 (SHEET 4 OF 14), TIE PAVEMENT MARKINGS AND PLACE I-40 EASTBOUND AND WESTBOUND TRAFFIC IN THE COMPLETED OUTSIDE LANES AND CLOSE MEDIAN LANES.

BEHIND LANE CLOSURES, MASK CONFLICTING MARKINGS AND PLACE TEMPORARY YELLOW EDGELINES.

REMOVE LANE CLOSURES AND OPEN I-40 BOTH DIRECTIONS TO EXISTING TRAFFIC PATTERNS.

SEGMENT 2 WORK INCLUDES PHASE 2 (SEE SHEET TMP-4 OVERVIEW)

PRIOR TO WORK BEGINNING IN SEGMENT 2, RELOCATE, AS NECESSARY, ADVANCED WORK ZONE WARNING SIGNS AND "WORK ZONE" SPEED LIMIT REDUCTION SIGNS ON I-40 AND APPLICABLE RAMPS ACCORDING TO RSD 1101.01 (SHEET 1 OF 3) AND SHEET TMP-2F. RELOCATE, AS NECESSARY, CHANGEABLE MESSAGE SIGNS (CMS) ON I-40 IN ADVANCE OF THE WORK ZONE SIGNS, AS DIRECTED BY THE ENGINEER.

UPON BEGINNING PHASE 2, STEP 1, TRAFFIC WILL REMAIN IN A SINGLE LANE PATTERN IN EACH DIRECTION UNTIL CONSTRUCTION IS COMPLETE ON ITS RESPECTIVE SIDE IN PHASE 2, STEP 9.

PHASE 2 (SEE LOCAL NOTE 6)

NOTE: SHOULDER RECONSTRUCTION/WIDENING IN PHASE 2 MAY EXTEND INTO SEGMENT 3, AS DIRECTED BY THE ENGINEER.

STEP 1 (REFER TO SHEET TMP-7, DETAIL 1A; SHEET TMP-8, DETAILS 8 & 9)

USING RSD 1101.02 (SHEET 4 OF 14), PLACE I-40 EASTBOUND AND WESTBOUND TRAFFIC IN THE EXISTING MEDIAN LANE AND CLOSE OUTSIDE LANE IN EACH DIRECTION.

BEHIND LANE CLOSURES, RECONSTRUCT I-40 EASTBOUND AND WESTBOUND OUTSIDE SHOULDERS FROM -L- STA 775+72± TO STA 853+19± (SEE LOCAL NOTE 3).

USING RSD 1101.02 (SHEET 9 OF 14), CONSTRUCT ADDITIONAL 4' WIDTH OF PAVED SHOULDER ALONG EASTBOUND AND WESTBOUND I-40 ON-RAMPS (AT US 64, EXIT 168).

BACKFILL OUTSIDE SHOULDER BY THE END OF EACH WORK PERIOD, IF APPLICABLE (SEE GENERAL NOTES 'K' & 'L').

STEP 2 (REFER TO SHEET TMP-7, DETAIL 2)

USING RSD 1101.02 (SHEET 4 OF 14), PLACE TEMPORARY MARKINGS AND SHIFT I-40 EASTBOUND TRAFFIC TO OUTSIDE LANE/SHOULDER. PLACE WESTBOUND TRAFFIC IN THE EXISTING OUTSIDE LANE AND CLOSE MEDIAN LANE IN BOTH DIRECTIONS.

BEHIND LANE CLOSURES, CONSTRUCT MEDIAN CROSSOVERS -XOE- & -XOF-, IF NOT COMPLETED PREVIOUSLY (SEE ROADWAY PLANS FOR LOCATIONS).

STEP 3

INSTALL AND COVER DETOUR SIGNS FOR PHASE II, STEP 4 TRAFFIC PATTERN (SEE SHEETS TMP-2B & 2C).

COMPLETE WORK ON PHASE 2, STEP 4 THROUGH STEP 8 IN SIXTY (60) CONSECUTIVE CALENDAR DAYS.

STEP 4 (REFER TO SHEET TMP-7, DETAIL 3; SHEET TMP-8, DETAIL 9)

USING RSD 1101.02 (SHEETS 4 & 9 OF 14), COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER TO PLACE I-40 TRAFFIC IN A TWO-LANE/TWO-WAY PATTERN (DIVIDED BY PCB) IN THE EASTBOUND LANES:

- MASK CONFLICTING MARKINGS AND PLACE MARKINGS ON OUTSIDE LANE/SHOULDER FOR EASTBOUND TRAVEL LANE AND TIE TO EXISTING MARKINGS. PLACE TEMPORARY MARKINGS FOR EASTBOUND I-40 ON-RAMP.
- SHIFT EASTBOUND TRAFFIC TO OUTSIDE LANE/SHOULDER. SHIFT ON-RAMP TRAFFIC TO PARALLEL ENTRANCE.
- INSTALL PCB FOR TWO-LANE/TWO-WAY PATTERN.
- MASK CONFLICTING MARKINGS AND PLACE TEMPORARY PAVEMENT MARKINGS IN EASTBOUND MEDIAN LANE AND CROSSOVERS -XOE- AND -XOH-.
- USING RSD 1101.03 (SHEET 4 OF 9), SHIFT WESTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON CROSSOVERS AND IN EXISTING EASTBOUND MEDIAN LANE. CLOSE WESTBOUND LANES.
- CLOSE WESTBOUND EXIT AND ENTRANCE RAMPS AT US 64 INTERCHANGE (EXIT 168). UNCOVER DETOUR SIGNS, INSTALLED IN PHASE II, STEP 3, AND DETOUR RAMP TRAFFIC USING OFFSITE DETOURS (SEE SHEETS TMP-2B & 2C).

STEP 5 (REFER TO SHEET TMP-7, DETAIL 3)

AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING FOR I-40 WESTBOUND LANES FROM -L- STA 775+72± TO STA 853+91± (SEE ROADWAY PLANS):

- RECONSTRUCT/WIDEN MEDIAN SHOULDER.
- REPLACE CONCRETE SLABS
- RESURFACE PAVEMENT UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE
- RESURFACE WESTBOUND ON-RAMP AND OFF-RAMP AT US 64 INTERCHANGE (EXIT 168).
- REMOVE AND REPLACE GUARDRAIL AS REQUIRED
- PERFORM BRIDGE SUBSTRUCTURE RESTORATION WORK ON US 64 BRIDGE OVER THE WESTBOUND LANES OF I-40 (BRIDGE #290018) (SEE STRUCTURE PLANS).
- PLACE TEMPORARY PAVEMENT MARKINGS FOR PHASE 2, STEP 6 TWO-LANE/TWO-WAY DIVIDED TRAFFIC PATTERN IN WESTBOUND LANES AND ON-RAMP.

INSTALL AND COVER DETOUR SIGNS FOR PHASE 2, STEP 6 TRAFFIC PATTERN (SEE SHEETS TMP-2D & 2E).

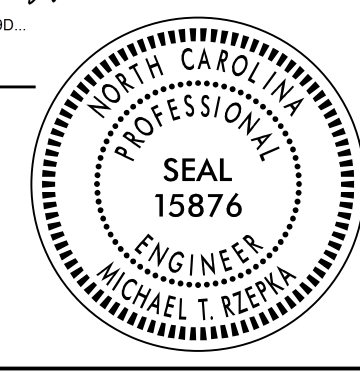
STEP 6 (REFER TO SHEET TMP-7, DETAIL 4; SHEET TMP-8, DETAIL 8)

USING RSD 1101.02 (SHEETS 4 AND 9 OF 14), MAINTAIN I-40 TRAFFIC IN SINGLE LANE PATTERNS IN EACH DIRECTION AND COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER:

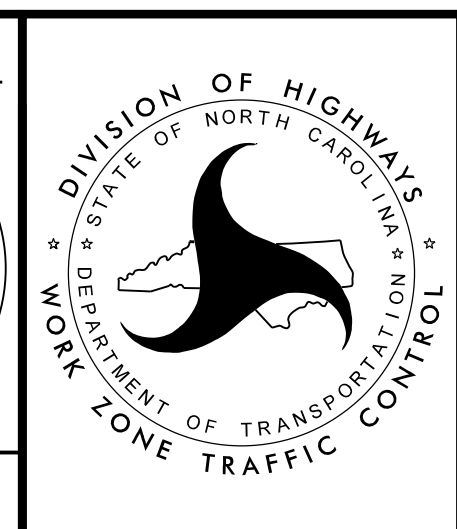
- SHIFT I-40 WESTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON WESTBOUND OUTSIDE LANE/SHOULDER AND TIE TEMPORARY MARKINGS TO EXISTING. COVER/REMOVE DETOUR SIGNS, INSTALLED IN PHASE I, STEP 4, AND REOPEN WESTBOUND ENTRANCE (TEMPORARY PARALLEL) AND EXIT RAMPS AT US 64 (EXIT 168).
- RESET PCB FROM EASTBOUND I-40 SIDE TO WESTBOUND I-40 SIDE.
- PLACE TEMPORARY MARKINGS ON CROSSOVERS -XOF- AND -XOG-
- USING RSD 1101.03 (SHEET 4 OF 9), SHIFT EASTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON CROSSOVERS AND IN EXISTING WESTBOUND MEDIAN LANE/SHOULDER. CLOSE EASTBOUND LANES.
- CLOSE EASTBOUND EXIT AND ENTRANCE RAMPS AT US 64 INTERCHANGE (EXIT 168). UNCOVER DETOUR SIGNS, INSTALLED IN PHASE 2, STEP 5, AND DETOUR RAMP TRAFFIC USING OFFSITE DETOURS (SEE SHEETS TMP-2D & 2E).

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APPROVED: *Michael T. Reppa*
DATE: 11/9/2018



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PROJ. REFERENCE NO.	SHEET NO.
I-5823	TMP-3A

STEP 7 (REFER TO SHEET TMP-7, DETAIL 4; SHEET TMP-8, DETAIL 8)

AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING FOR I-40 EASTBOUND LANES FROM -L- STA 775+72± TO STA 853+91± (SEE ROADWAY PLANS):

- RECONSTRUCT/WIDEN MEDIAN SHOULDER.
- REPLACE CONCRETE SLABS
- RESURFACE PAVEMENT UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE
- RESURFACE EASTBOUND ON-RAMP AND OFF-RAMP AT US 64 INTERCHANGE (EXIT 168).
- REMOVE AND REPLACE GUARDRAIL AS REQUIRED
- PERFORM BRIDGE SUBSTRUCTURE RESTORATION WORK ON US 64 BRIDGE OVER THE EASTBOUND LANES OF I-40 (BRIDGE #290018) (SEE STRUCTURE PLANS).
- PLACE TEMPORARY MARKINGS AND MARKERS IN FINAL PATTERN. DRUM-OFF MEDIAN LANE.

STEP 8 (REFER TO SHEET TMP-7, DETAIL 5)

USING RSD 1101.02 (SHEETS 4 & 9 OF 14), COMPLETE THE FOLLOWING FOR I-40 EASTBOUND TRAFFIC:

- MAINTAIN SINGLE LANE PATTERN AND SHIFT I-40 EASTBOUND TRAFFIC TO EASTBOUND OUTSIDE LANE AND TIE TEMPORARY MARKINGS TO EXISTING LANE MARKINGS
- COVER/REMOVE DETOUR SIGNS, INSTALLED IN PHASE 2, STEP 5, AND REOPEN EASTBOUND ENTRANCE AND EXIT RAMPS AT US 64 INTERCHANGE (EXIT 168).

STEP 9 (REFER TO SHEET TMP-7, DETAILS 5 THRU 8)

USING RSD 1101.02 (SHEETS 4, 9 & 10 OF 14), COMPLETE THE FOLLOWING FOR I-40 EASTBOUND AND WESTBOUND TRAFFIC:

- A) REMOVE CROSSOVERS -XOG- & -XOH- AND INSTALL/RESET MEDIAN CABLE GUIDERAIL (SEE LOCAL NOTES 7 & 8).
- B) REMOVE PCB AND REPLACE WITH DRUMS (WESTBOUND). OPEN I-40 EASTBOUND LANES TO EXISTING 2- LANE PATTERN.
- C) MASK CONFLICTING PAVEMENT MARKINGS AND PLACE TEMPORARY MARKINGS AND MARKERS IN FINAL PATTERN IN WESTBOUND LANES.
- D) OPEN WESTBOUND TRAFFIC TO EXISTING 2-LANE PATTERN.

STEP 10 (SEE LOCAL NOTE 11)

USING RSD 1101.02 (SHEET 7 OF 14), PERFORM BRIDGE DECK RESTORATION WORK ON US 64 BRIDGE OVER I-40 (BRIDGE #290018) (SEE STRUCTURE PLANS).

PLACE PAVEMENT MARKINGS OBLITERATED DURING DECK WORK WITH TEMPORARY MARKINGS IN THEIR ORIGINAL LOCATIONS UNTIL FINAL MARKINGS ARE INSTALLED IN PHASE 6.

SEGMENT 3 WORK INCLUDES PHASE 3 (SEE SHEET TMP-4 OVERVIEW)

PRIOR TO WORK BEGINNING IN SEGMENT 3, RELOCATE, AS NECESSARY, ADVANCED WORK ZONE WARNING SIGNS AND "WORK ZONE" SPEED LIMIT REDUCTION SIGNS ON I-40 AND APPLICABLE RAMPS ACCORDING TO RSD 1101.01 (SHEET 1 OF 3) AND SHEET TMP-2F. RELOCATE, AS NECESSARY, CHANGEABLE MESSAGE SIGNS (CMS) ON I-40 IN ADVANCE OF THE WORK ZONE SIGNS, AS DIRECTED BY THE ENGINEER.

UPON BEGINNING PHASE 3, STEP 1, TRAFFIC WILL REMAIN IN A SINGLE LANE PATTERN IN EACH DIRECTION UNTIL CONSTRUCTION IS COMPLETE ON ITS RESPECTIVE SIDE IN PHASE 2, STEP 8.

PHASE 3
(SEE LOCAL NOTE 6)

NOTE: SHOULDER RECONSTRUCTION/WIDENING IN PHASE 3 MAY EXTEND INTO SEGMENT 4, AS DIRECTED BY THE ENGINEER.

STEP 1 (REFER TO SHEET TMP-7, DETAIL 1)

USING RSD 1101.02 (SHEET 4 OF 14), PLACE I-40 EASTBOUND TRAFFIC IN THE EXISTING MEDIAN LANE AND CLOSE OUTSIDE LANE.

BEHIND LANE CLOSURE, RECONSTRUCT I-40 EASTBOUND OUTSIDE SHOULDER FROM -L- STA 635+39± TO STA 775+72± (SEE LOCAL NOTE 3).

BACKFILL OUTSIDE SHOULDER BY THE END OF EACH WORK PERIOD, IF APPLICABLE (SEE GENERAL NOTES 'K' & 'L').

STEP 2 (REFER TO SHEET TMP-7, DETAIL 2)

USING RSD 1101.02 (SHEET 4 OF 14), PLACE TEMPORARY MARKINGS AND SHIFT I-40 EASTBOUND TRAFFIC TO OUTSIDE LANE/SHOULDER. PLACE WESTBOUND TRAFFIC IN THE EXISTING OUTSIDE LANE AND CLOSE MEDIAN LANE IN BOTH DIRECTIONS.

BEHIND LANE CLOSURES, CONSTRUCT MEDIAN CROSSOVERS -XOC- & -XOD- (SEE ROADWAY PLANS FOR LOCATIONS).

STEP 3 (REFER TO SHEET TMP-7, DETAIL 3)

USING RSD 1101.02 (SHEET 4 OF 14), COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER TO PLACE I-40 TRAFFIC IN A TWO-LANE/TWO-WAY PATTERN (DIVIDED BY PCB) IN THE EASTBOUND LANES (SEE LOCAL NOTES 9 & 10):

- INSTALL PCB FOR TWO-LANE/TWO-WAY PATTERN.
- RELAP EXISTING GUARDRAIL ALONG EASTBOUND MEDIAN LANE AND INSTALL APPROPRIATE GUARDRAIL END TREATMENTS BASED ON TRAFFIC DIRECTION.
- MASK CONFLICTING MARKINGS AND PLACE TEMPORARY PAVEMENT MARKINGS IN EASTBOUND MEDIAN LANE AND CROSSOVERS -XOC- AND -XOF-.
- USING RSD 1101.03 (SHEET 4 OF 9), SHIFT WESTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON CROSSOVERS AND IN EXISTING EASTBOUND MEDIAN LANE. CLOSE WESTBOUND LANES.

STEP 4 (REFER TO SHEET TMP-7, DETAIL 3)

AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING FOR I-40 WESTBOUND LANES FROM -L- STA 635+39± TO STA 775+72± (SEE ROADWAY PLANS):

- REMOVE EXISTING BRIDGE AND CONSTRUCT PROPOSED BRIDGE #32
- RECONSTRUCT OUTSIDE SHOULDER.
- RECONSTRUCT/WIDEN MEDIAN SHOULDER.
- REPLACE CONCRETE SLABS
- RESURFACE PAVEMENT UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE
- REMOVE AND REPLACE GUARDRAIL AS REQUIRED (SEE LOCAL NOTE 9)
- PLACE TEMPORARY PAVEMENT MARKINGS FOR PHASE 3, STEP 5 TWO-LANE/TWO-WAY DIVIDED TRAFFIC PATTERN IN WESTBOUND LANES (SEE LOCAL NOTE 10).

STEP 5 (REFER TO SHEET TMP-7, DETAIL 4)

USING RSD 1101.02 (SHEET 4 OF 14), MAINTAIN I-40 TRAFFIC IN SINGLE LANE PATTERNS IN EACH DIRECTION AND COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER:

- SHIFT I-40 WESTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON WESTBOUND OUTSIDE LANE/SHOULDER AND TIE TEMPORARY MARKINGS TO EXISTING.
- RESET PCB FROM EASTBOUND I-40 SIDE TO WESTBOUND I-40 SIDE.
- PLACE TEMPORARY MARKINGS ON CROSSOVERS -XOD- AND -XOE-
- USING RSD 1101.03 (SHEET 4 OF 9), SHIFT EASTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON CROSSOVERS AND IN EXISTING WESTBOUND MEDIAN LANE/SHOULDER. CLOSE EASTBOUND LANES.

STEP 6 (REFER TO SHEET TMP-7, DETAIL 4)

AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING FOR I-40 EASTBOUND LANES FROM -L- STA 635+39± TO STA 775+72± (SEE ROADWAY PLANS):

- REMOVE EXISTING BRIDGE AND CONSTRUCT PROPOSED BRIDGE #29
- RECONSTRUCT/WIDEN MEDIAN SHOULDER.
- REPLACE CONCRETE SLABS
- RESURFACE PAVEMENT UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE
- REMOVE AND REPLACE GUARDRAIL AS REQUIRED
- PLACE TEMPORARY MARKINGS AND MARKERS IN FINAL PATTERN (SEE LOCAL NOTE 10)

STEP 7 (REFER TO SHEET TMP-7, DETAIL 5)

USING RSD 1101.02 (SHEET 4 OF 14), MAINTAIN SINGLE LANE PATTERN AND SHIFT I-40 EASTBOUND TRAFFIC TO EASTBOUND OUTSIDE LANE AND TIE TEMPORARY MARKINGS TO EXISTING LANE MARKINGS.

STEP 8 (REFER TO SHEET TMP-7, DETAILS 5 THRU 8)

USING RSD 1101.02 (SHEET 4 OF 14), COMPLETE THE FOLLOWING FOR I-40 EASTBOUND AND WESTBOUND TRAFFIC:

- A) REMOVE CROSSOVERS -XOE- & -XOF- AND INSTALL/RESET MEDIAN CABLE GUIDERAIL (SEE LOCAL NOTE 7 & 8).
- B) RELAP WESTBOUND MEDIAN GUARDRAIL AND INSTALL APPROPRIATE GUARDRAIL END TREATMENTS BASED ON TRAFFIC DIRECTION (SEE LOCAL NOTE 9), AND OPEN I-40 EASTBOUND LANES TO EXISTING 2-LANE PATTERN.
- C) REMOVE PCB AND REPLACE WITH DRUMS (WESTBOUND)
- D) MASK CONFLICTING PAVEMENT MARKINGS AND PLACE TEMPORARY MARKINGS AND MARKERS IN FINAL PATTERN IN WESTBOUND LANES.
- E) OPEN WESTBOUND TRAFFIC TO EXISTING 2-LANE PATTERN.

SEGMENT 4 WORK INCLUDES PHASE 4 (SEE SHEET TMP-4 OVERVIEW)

PRIOR TO WORK BEGINNING IN SEGMENT 4, RELOCATE, AS NECESSARY, ADVANCED WORK ZONE WARNING SIGNS AND "WORK ZONE" SPEED LIMIT REDUCTION SIGNS ON I-40 AND APPLICABLE RAMPS ACCORDING TO RSD 1101.01 (SHEET 1 OF 3) AND SHEET TMP-2F. RELOCATE, AS NECESSARY, CHANGEABLE MESSAGE SIGNS (CMS) ON I-40 IN ADVANCE OF THE WORK ZONE SIGNS, AS DIRECTED BY THE ENGINEER.

UPON BEGINNING PHASE 4, STEP 1, TRAFFIC WILL REMAIN IN A SINGLE LANE PATTERN IN EACH DIRECTION UNTIL CONSTRUCTION IS COMPLETE ON ITS RESPECTIVE SIDE IN PHASE 2, STEP 8.

PHASE 4
(SEE LOCAL NOTE 6)

NOTE: SHOULDER RECONSTRUCTION/WIDENING IN PHASE 4 MAY EXTEND INTO SEGMENT 5, AS DIRECTED BY THE ENGINEER.

STEP 1 (REFER TO SHEET TMP-7, DETAIL 1)

USING RSD 1101.02 (SHEET 4 OF 14), PLACE I-40 EASTBOUND TRAFFIC IN THE EXISTING MEDIAN LANE AND CLOSE OUTSIDE LANE.

BEHIND LANE CLOSURE, RECONSTRUCT I-40 EASTBOUND OUTSIDE SHOULDER FROM -L- STA 541+40± TO STA 635+39± (SEE LOCAL NOTE 3).

BACKFILL OUTSIDE SHOULDER BY THE END OF EACH WORK PERIOD, IF APPLICABLE (SEE GENERAL NOTES 'K' & 'L').

STEP 2 (REFER TO SHEET TMP-7, DETAIL 2)

USING RSD 1101.02 (SHEET 4 OF 14), PLACE TEMPORARY MARKINGS AND SHIFT I-40 EASTBOUND TRAFFIC TO OUTSIDE LANE/SHOULDER. PLACE WESTBOUND TRAFFIC IN THE EXISTING OUTSIDE LANE AND CLOSE MEDIAN LANE IN BOTH DIRECTIONS.

BEHIND LANE CLOSURES, CONSTRUCT MEDIAN CROSSOVERS -XOA- & -XOB- (SEE ROADWAY PLANS FOR LOCATIONS).

STEP 3 (REFER TO SHEET TMP-7, DETAIL 3)

USING RSD 1101.02 (SHEET 4 OF 14), COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER TO PLACE I-40 TRAFFIC IN A TWO-LANE/TWO-WAY PATTERN (DIVIDED BY PCB) IN THE EASTBOUND LANES (SEE LOCAL NOTE 9):

- INSTALL PCB FOR TWO-LANE/TWO-WAY PATTERN.
- MASK CONFLICTING MARKINGS AND PLACE TEMPORARY PAVEMENT MARKINGS IN EASTBOUND MEDIAN LANE AND CROSSOVERS -XOA- AND -XOD-.
- USING RSD 1101.03 (SHEET 4 OF 9), SHIFT WESTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON CROSSOVERS AND IN EXISTING EASTBOUND MEDIAN LANE. CLOSE WESTBOUND LANES.

STEP 4 (REFER TO SHEET TMP-7, DETAIL 3)

AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING FOR I-40 WESTBOUND LANES FROM -L- STA 541+40± TO STA 635+39± (SEE ROADWAY PLANS):

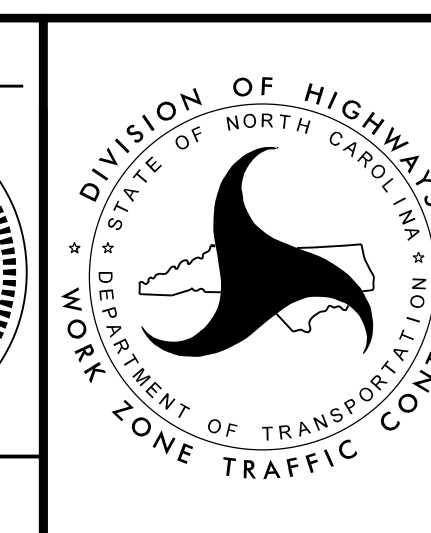
- RECONSTRUCT OUTSIDE SHOULDER.
- RECONSTRUCT/WIDEN MEDIAN SHOULDER.
- REPLACE CONCRETE SLABS
- RESURFACE PAVEMENT UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE
- REMOVE AND REPLACE GUARDRAIL AS REQUIRED
- PLACE TEMPORARY PAVEMENT MARKINGS FOR PHASE 4, STEP 5 TWO-LANE/TWO-WAY DIVIDED TRAFFIC PATTERN IN WESTBOUND LANES.

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APPROVED: *Michael T. Rzepka*
DATE: 11/9/2018

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PROJ. REFERENCE NO.	SHEET NO.
I-5823	TMP-3B

STEP 5 (REFER TO SHEET TMP-7, DETAIL 4)

USING RSD 1101.02 (SHEET 4 OF 14), MAINTAIN I-40 TRAFFIC IN SINGLE LANE PATTERNS IN EACH DIRECTION AND COMPLETE THE FOLLOWING IN A CONTINUOUS MANNER:

- SHIFT I-40 WESTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON WESTBOUND OUTSIDE LANE/SHOULDER AND TIE TEMPORARY MARKINGS TO EXISTING.
- RESET PCB FROM EASTBOUND I-40 SIDE TO WESTBOUND I-40 SIDE.
- PLACE TEMPORARY MARKINGS ON CROSSOVERS -XOB- AND -XOC-
- USING RSD 1101.03 (SHEET 4 OF 9), SHIFT EASTBOUND TRAFFIC TO TEMPORARY ONE-LANE PATTERN ON CROSSOVERS AND IN EXISTING WESTBOUND MEDIAN LANE/SHOULDER. CLOSE EASTBOUND LANES.

STEP 6 (REFER TO SHEET TMP-7, DETAIL 4)

AWAY FROM TRAFFIC, COMPLETE THE FOLLOWING FOR I-40 EASTBOUND LANES FROM -L- STA 541+40± TO STA 635+39± (SEE ROADWAY PLANS):

- RECONSTRUCT/WIDEN MEDIAN SHOULDER.
- REPLACE CONCRETE SLABS
- RESURFACE PAVEMENT UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE
- REMOVE AND REPLACE GUARDRAIL AS REQUIRED
- PLACE TEMPORARY MARKINGS AND MARKERS IN FINAL PATTERN

STEP 7 (REFER TO SHEET TMP-7, DETAIL 5)

USING RSD 1101.02 (SHEET 4 OF 14), MAINTAIN SINGLE LANE PATTERN AND SHIFT I-40 EASTBOUND TRAFFIC TO EASTBOUND OUTSIDE LANE AND TIE TEMPORARY MARKINGS TO EXISTING LANE MARKINGS.

STEP 8 (REFER TO SHEET TMP-7, DETAILS 5 THRU 8)

USING RSD 1101.02 (SHEET 4 OF 14), COMPLETE THE FOLLOWING FOR I-40 WESTBOUND TRAFFIC:

- A) REMOVE CROSSOVERS -XOA, -XOB-, -XOC- & -XOD-. INSTALL/RESET MEDIAN CABLE GUIDERAIL AT CROSSOVER LOCATIONS (SEE LOCAL NOTE 7 & 8).
- B) REMOVE PCB AND REPLACE WITH DRUMS (WESTBOUND). OPEN I-40 EASTBOUND LANES TO EXISTING 2-LANE PATTERN
- C) MASK CONFLICTING PAVEMENT MARKINGS AND PLACE TEMPORARY MARKINGS AND MARKERS IN FINAL PATTERN IN WESTBOUND LANES
- D) OPEN WESTBOUND TRAFFIC TO EXISTING 2-LANE PATTERN.

SEGMENT 5 WORK INCLUDES PHASE 5 (SEE SHEET TMP-4 OVERVIEW)

PRIOR TO WORK BEGINNING IN SEGMENT 5, RELOCATE, AS NECESSARY, ADVANCED WORK ZONE WARNING SIGNS AND "WORK ZONE" SPEED LIMIT REDUCTION SIGNS ON I-40 AND APPLICABLE RAMPS ACCORDING TO RSD 1101.01 (SHEET 1 OF 3) AND SHEET TMP-2F. RELOCATE, AS NECESSARY, CHANGEABLE MESSAGE SIGNS (CMS) ON I-40 IN ADVANCE OF THE WORK ZONE SIGNS, AS DIRECTED BY THE ENGINEER.

UPON BEGINNING PHASE 5, STEP 1, TRAFFIC WILL REMAIN IN A SINGLE LANE PATTERN IN EACH DIRECTION UNTIL CONSTRUCTION IS COMPLETE ON ITS RESPECTIVE SIDE IN PHASE 5, STEP 4.

PHASE 5

STEP 1 (SEE SHEET TMP-5, DETAIL 1)

USING RSD 1101.02 (SHEETS 4, 9 & 10 OF 14), PLACE I-40 EASTBOUND AND WESTBOUND TRAFFIC IN THE EXISTING MEDIAN LANES AND CLOSE OUTSIDE LANES.

BEHIND LANE CLOSURES, RECONSTRUCT OUTSIDE SHOULDERS FROM -L- STA 513+50± TO STA 541+40± (SEE LOCAL NOTE 3).

BACKFILL OUTSIDE SHOULDERS BY THE END OF EACH WORK PERIOD, IF APPLICABLE (SEE GENERAL NOTES 'K' & 'L').

WORK IN A CONTINUOUS MANNER UNTIL ALL OF THE OUTSIDE SHOULDER WORK IN BOTH DIRECTIONS IS COMPLETED FOR SEGMENT 5 IN PHASE 5, STEP 1.

STEP 2 (REFER TO SHEETS TMP-5, DETAILS 2 & 2A; TMP-6, DETAILS 6 & 7; TMP-9)

USING RSD 1101.02 (SHEET 4 OF 14), MASK CONFLICTING WHITE EDGELINE, PLACE TEMPORARY MARKINGS AND SHIFT I-40 EASTBOUND AND WESTBOUND TRAFFIC INTO THE EXISTING OUTSIDE LANES/RECONSTRUCTED SHOULDERS AND CLOSE MEDIAN LANES.

BEHIND LANE CLOSURES, CONSTRUCT THE FOLLOWING (SEE LOCAL NOTE 3):

- RECONSTRUCT/WIDEN I-40 EASTBOUND AND WESTBOUND MEDIAN SHOULDERS FROM -L- STA 513+50± TO STA 541+40±
- CONCRETE PAVEMENT REMOVAL AND REPLACEMENT IN THE EASTBOUND AND WESTBOUND MEDIAN LANES IN THE FOLLOWING SEQUENCE:
 - A) MAINTAIN TRAFFIC IN A ONE-LANE, ONE-WAY PATTERN IN THE OUTSIDE LANE/RECONSTRUCTED SHOULDER IN EACH DIRECTION.
 - B) INSTALL PCB.
 - C) REMOVE AND REPLACE CONCRETE PAVEMENT IN THE MEDIAN LANES (REFER TO ROADWAY PLANS FOR LOCATIONS)
 - D) REMOVE AND RESET PCB FOR NEXT WORK AREA, AS DIRECTED BY THE ENGINEER.
 - E) REPEAT UNTIL ALL OF THE CONCRETE PAVEMENT REMOVAL AND REPLACEMENT WORK IS COMPLETED FOR SEGMENT 5 IN EASTBOUND AND WESTBOUND MEDIAN LANES.
- BEHIND PCB, RECONSTRUCT MEDIAN LANE/SHOULDER FOR TIE-IN GRADE TO EXISTING FROM -L- STA 519+00± TO STA 522+00±
- RESURFACE MEDIAN LANES/SHOULDERS UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE FROM -L- STA 522+00± TO STA 541+40± (REFER TO ROADWAY PLANS). PLACE TEMPORARY MARKINGS FOR STEP 3 TRAFFIC PATTERN.
- REMOVE EXISTING AND INSTALL PROPOSED GUARDRAIL AS REQUIRED (SEE ROADWAY PLANS)

STEP 3 (REFER TO SHEETS TMP-5, DETAILS 3 & 3A; TMP-6, DETAILS 8 & 9; TMP-10)

USING RSD 1101.02 (SHEETS 4, 9 & 10 OF 14), TIE PAVEMENT MARKINGS AND SHIFT I-40 EASTBOUND AND WESTBOUND TRAFFIC IN THE COMPLETED MEDIAN LANES/SHOULDERS AND CLOSE OUTSIDE LANES/SHOULDERS.

BEHIND LANE CLOSURES, CONSTRUCT THE FOLLOWING (SEE LOCAL NOTE 3):

- CONCRETE PAVEMENT REMOVAL AND REPLACEMENT IN THE EASTBOUND AND WESTBOUND OUTSIDE LANES IN THE FOLLOWING SEQUENCE:
 - A) MAINTAIN TRAFFIC IN A ONE-LANE, ONE-WAY PATTERN IN THE MEDIAN LANE/SHOULDER IN EACH DIRECTION.
 - B) INSTALL PCB.
 - C) REMOVE AND REPLACE CONCRETE PAVEMENT IN THE OUTSIDE LANES (REFER TO ROADWAY PLANS FOR LOCATIONS)
 - D) REMOVE AND RESET PCB FOR NEXT WORK AREA, AS DIRECTED BY THE ENGINEER.
 - E) REPEAT UNTIL ALL OF THE CONCRETE PAVEMENT REMOVAL AND REPLACEMENT WORK IS COMPLETED FOR SEGMENT 5 IN EASTBOUND AND WESTBOUND OUTSIDE LANES.
- BEHIND PCB, RECONSTRUCT OUTSIDE LANE/SHOULDER FOR TIE-IN GRADE TO EXISTING FROM -L- STA 519+00± TO STA 522+00±
- RESURFACE OUTSIDE LANES/SHOULDERS UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE FROM -L- STA 522+00± TO STA 541+40± (REFER TO ROADWAY PLANS). PLACE TEMPORARY MARKINGS AND MARKERS FOR STEP 4 TRAFFIC PATTERN.
- REMOVE EXISTING AND INSTALL PROPOSED GUARDRAIL AS REQUIRED (SEE ROADWAY PLANS)

STEP 4 (REFER TO SHEET TMP-5, DETAILS 4 & 5)

USING RSD 1101.02 (SHEET 4 OF 14), TIE PAVEMENT MARKINGS AND PLACE I-40 EASTBOUND AND WESTBOUND TRAFFIC IN THE COMPLETED OUTSIDE LANES AND CLOSE MEDIAN LANES.

BEHIND LANE CLOSURES, MASK CONFLICTING MARKINGS AND PLACE TEMPORARY YELLOW EDGELINES.

REMOVE LANE CLOSURES AND OPEN I-40 BOTH DIRECTIONS TO EXISTING TRAFFIC PATTERNS.

PHASE 6

PRIOR TO WORK BEGINNING IN PHASE 6, RELOCATE, AS NECESSARY, ADVANCED WORK ZONE WARNING SIGNS AND "WORK ZONE" SPEED LIMIT REDUCTION SIGNS ON I-40 AND APPLICABLE RAMPS ACCORDING TO RSD 1101.01 (SHEET 1 OF 3) AND SHEET TMP-2F. RELOCATE, AS NECESSARY, CHANGEABLE MESSAGE SIGNS (CMS) ON I-40 IN ADVANCE OF THE WORK ZONE SIGNS, AS DIRECTED BY THE ENGINEER.

NOTE: PHASE 6, STEP 1 MAY BE PERFORMED USING AN EXTENDED WEEKDAY LANE CLOSURE, FROM MONDAY 12:00AM (MIDNIGHT) TO FRIDAY 12:00PM (NOON). TRAFFIC MUST BE RETURNED TO FOUR-LANE/TWO-WAY PATTERN BY 12:00 PM (NOON) EACH FRIDAY. REPEAT UNTIL PHASE 6, STEP 1 IS COMPLETE.

STEP 1

USING RSD 1101.02 (SHEETS 4, 9 & 10 OF 14), COMPLETE THE FOLLOWING IN SEGMENTS 1 THROUGH 5:

- PAVE FINAL LAYER OF SURFACE COURSE
- PLACE FINAL PAVEMENT MARKINGS AND FINAL MARKERS
- MILL RUMBLE STRIPS INTO MEDIAN AND OUTSIDE SHOULDERS

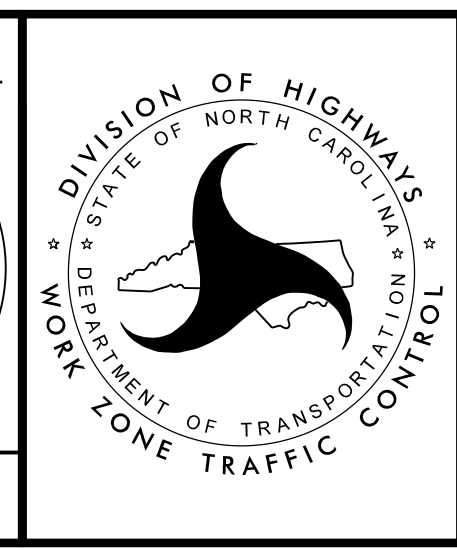
STEP 2

REMOVE ALL TRAFFIC CONTROL DEVICES WITHIN THE PROJECT LIMITS.

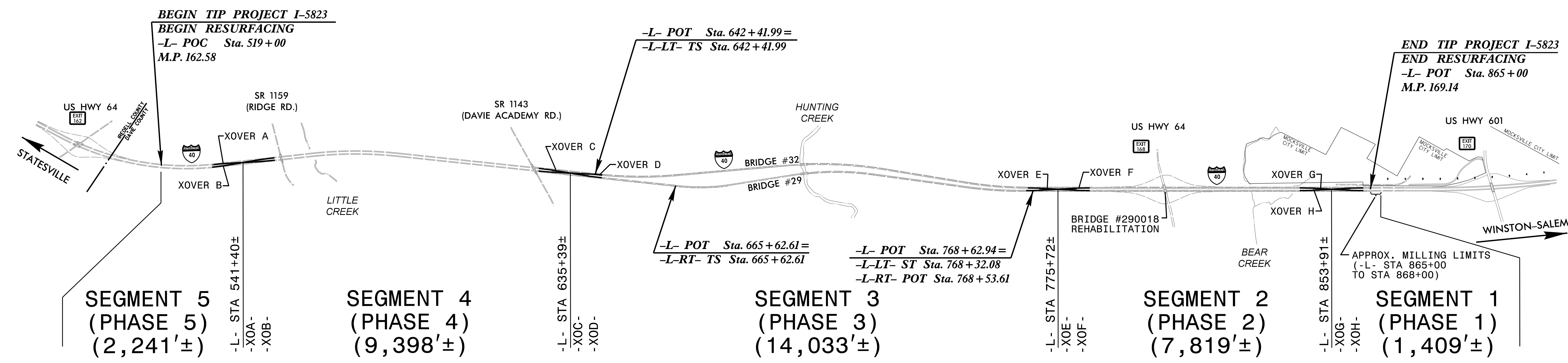
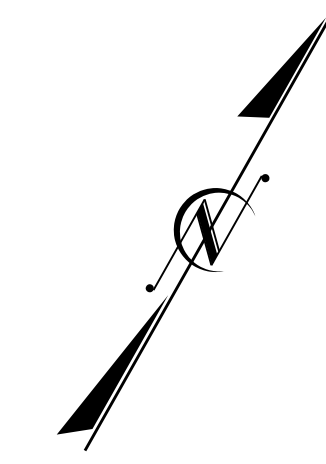
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APPROVED: *Michael T. Ryepka*
DATE: 11/9/2018

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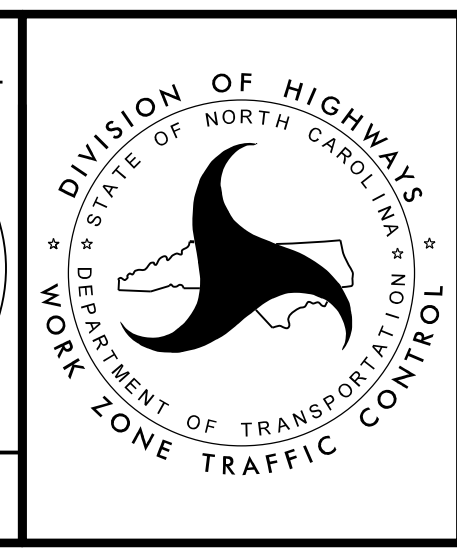
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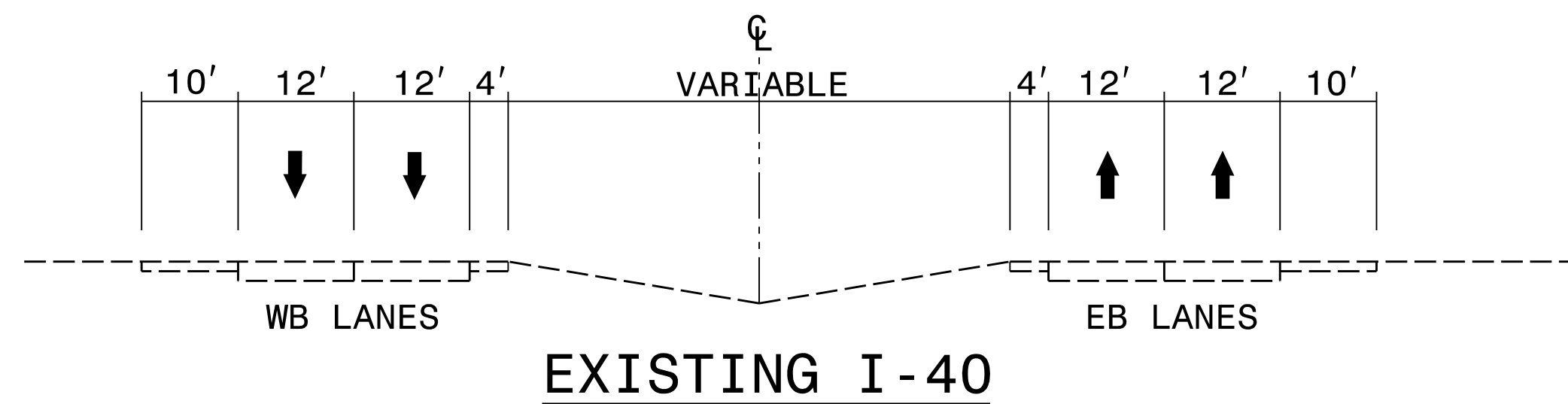
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APPROVED: *Michael T. Riepp*
 DATE: 11/9/2018

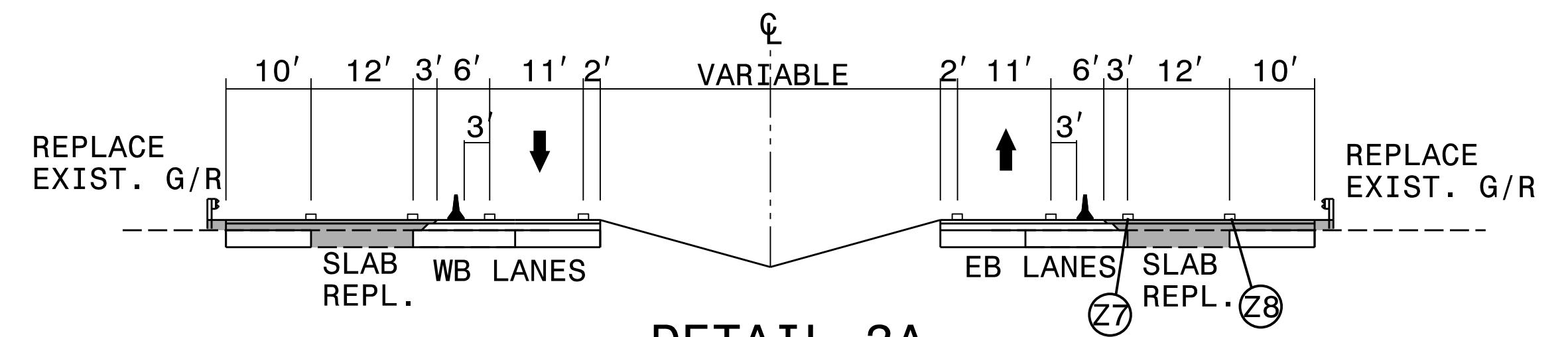
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**



PROJECT OVERVIEW

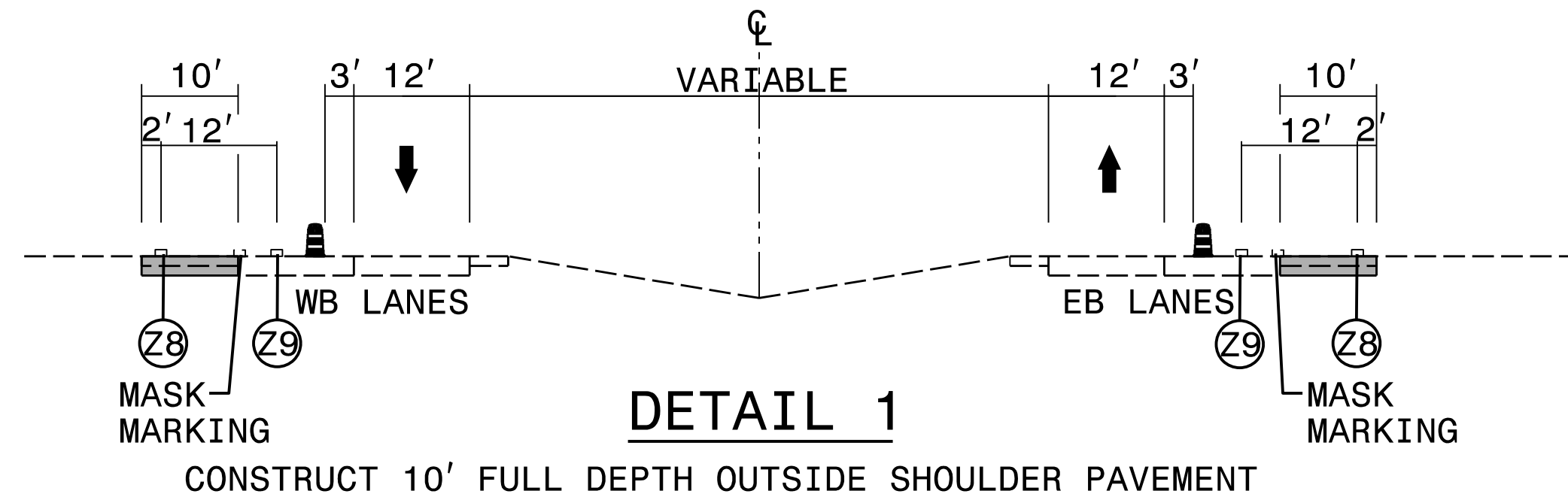


EXISTING I-40



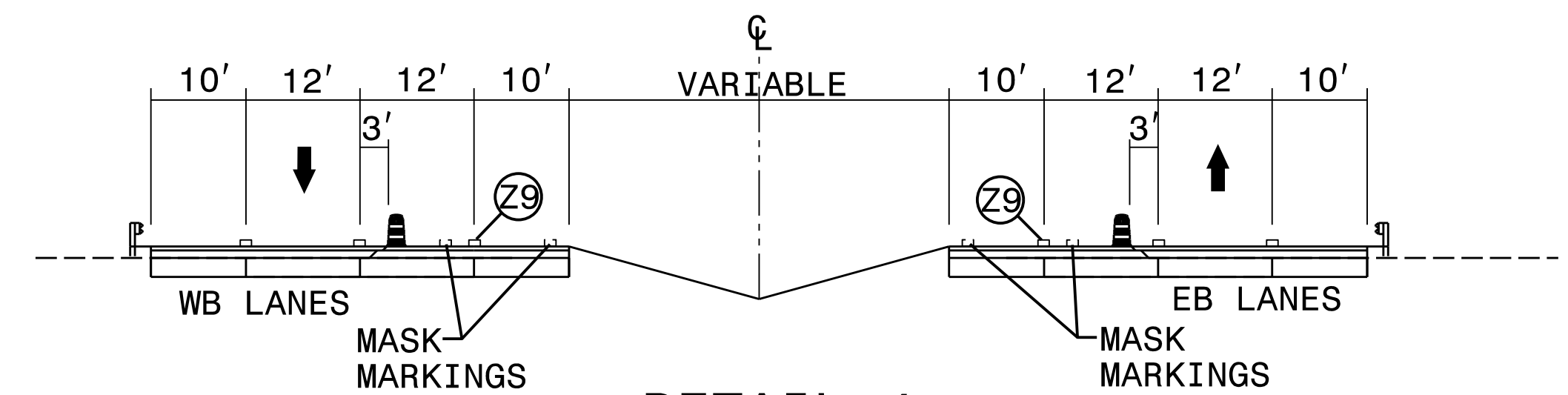
DETAIL 3A

SLAB REPLACEMENT IN OUTSIDE LANES
 (CONCURRENT WITH DETAIL 3)



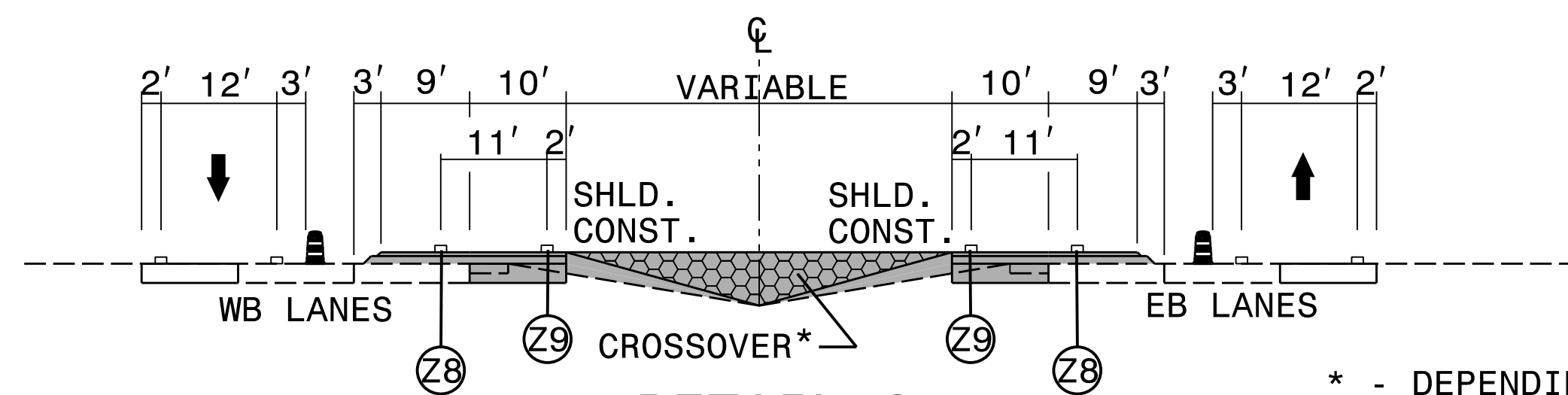
DETAIL 1

CONSTRUCT 10' FULL DEPTH OUTSIDE SHOULDER PAVEMENT



DETAIL 4

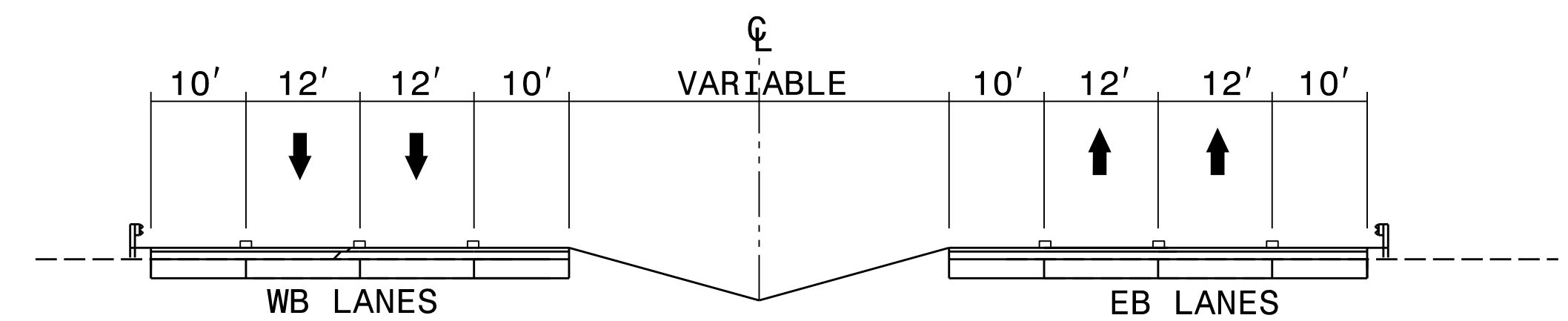
SHIFT TRAFFIC TO COMPLETE PLACEMENT
 OF TEMPORARY MARKINGS



DETAIL 2

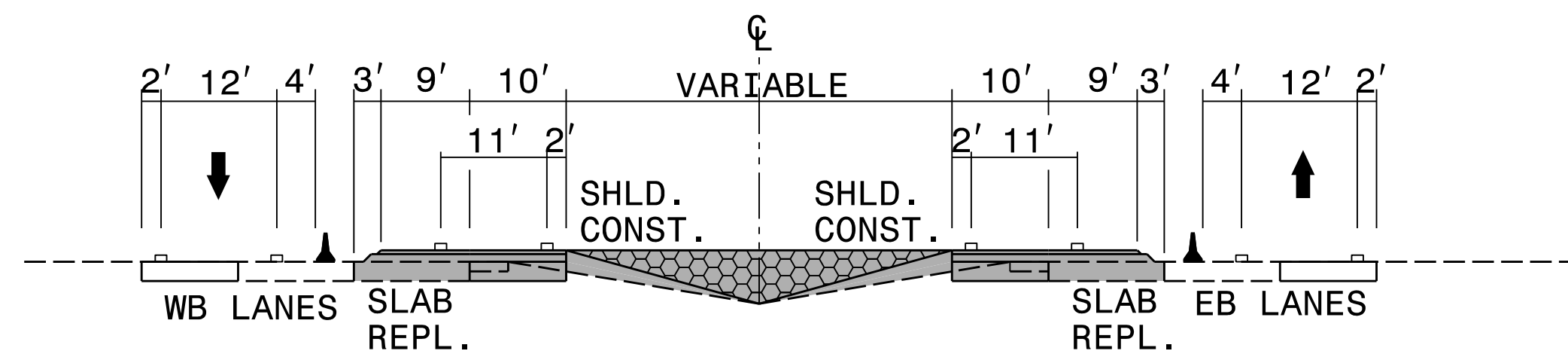
CONSTRUCT 10' FULL DEPTH MEDIAN SHOULDER PAVEMENT
 AND MEDIAN LANE/SHOULDER RESURFACING (4.5")
 THROUGH FIRST LAYER OF SURFACE COURSE

* - DEPENDING ON CONSTRUCTION SEQUENCE,
 MAY CONSTRUCT CROSSOVERS FOR
 SEGMENT 2, WHILE TRAFFIC IS IN
 DETAIL 2 PATTERN, AS DIRECTED BY
 THE ENGINEER



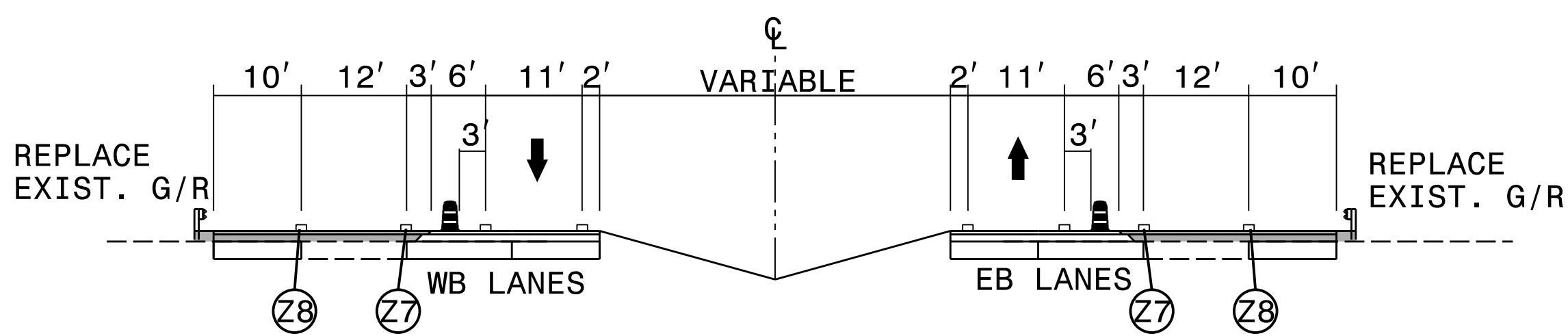
DETAIL 5

EXISTING PATTERN



DETAIL 2A

SLAB REPLACEMENT IN MEDIAN LANES
 (CONCURRENT WITH DETAIL 2)



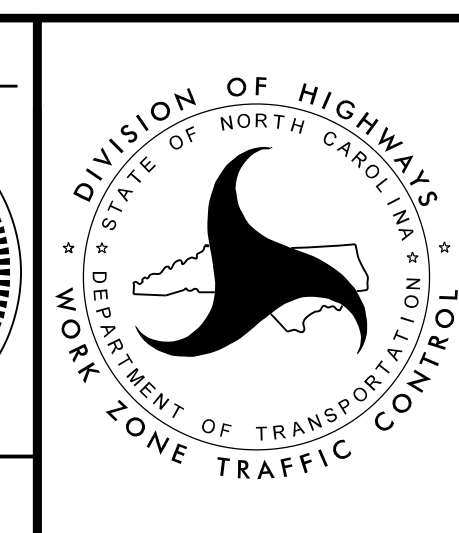
DETAIL 3

OUTSIDE LANE/SHOULDER RESURFACING (4.5")
 THROUGH FIRST LAYER OF SURFACE COURSE

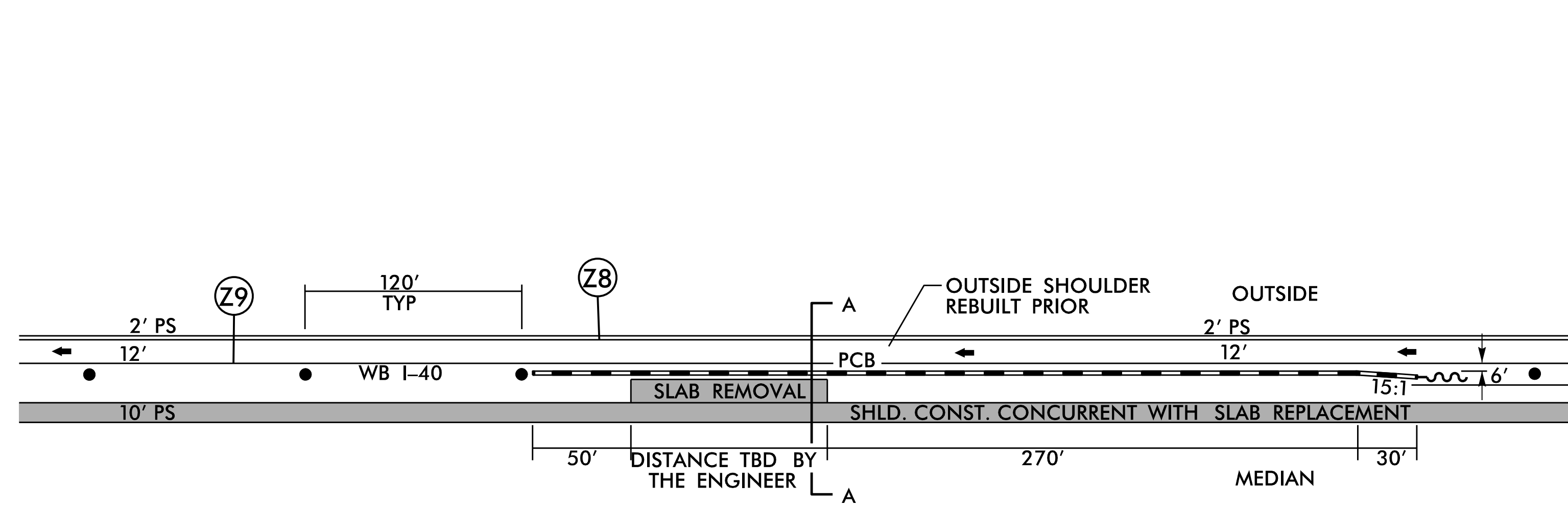
APPROVED: *Michael T. Rzepka*
 DATE: 11/9/2018

PROFESSIONAL ENGINEER
 SEAL 15876
 MICHAEL T. RZEPKA

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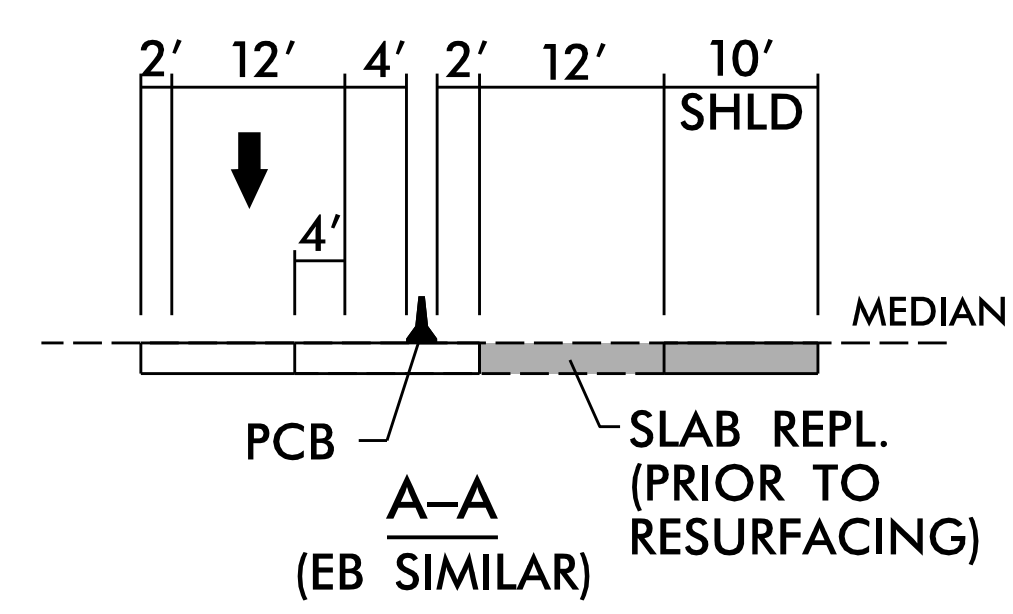


**SEGMENTS 1 & 5
 TYPICALS**

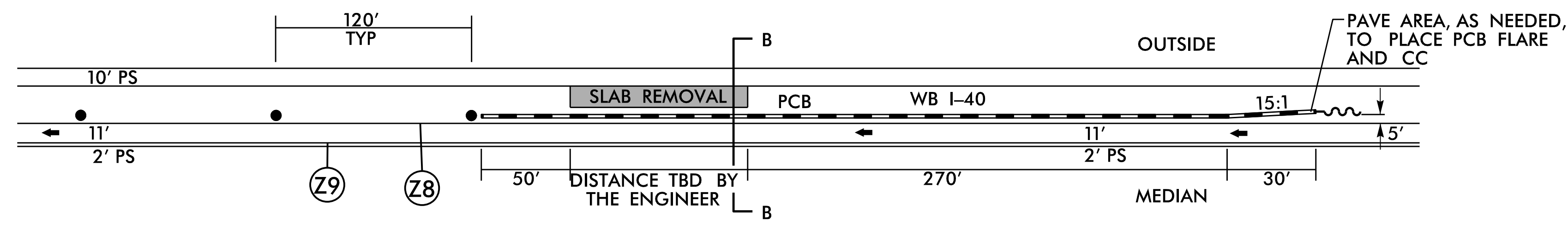


DETAIL 6

TYPICAL SETUP FOR SLAB REPLACEMENT – MEDIAN LANE (EB SIMILAR)

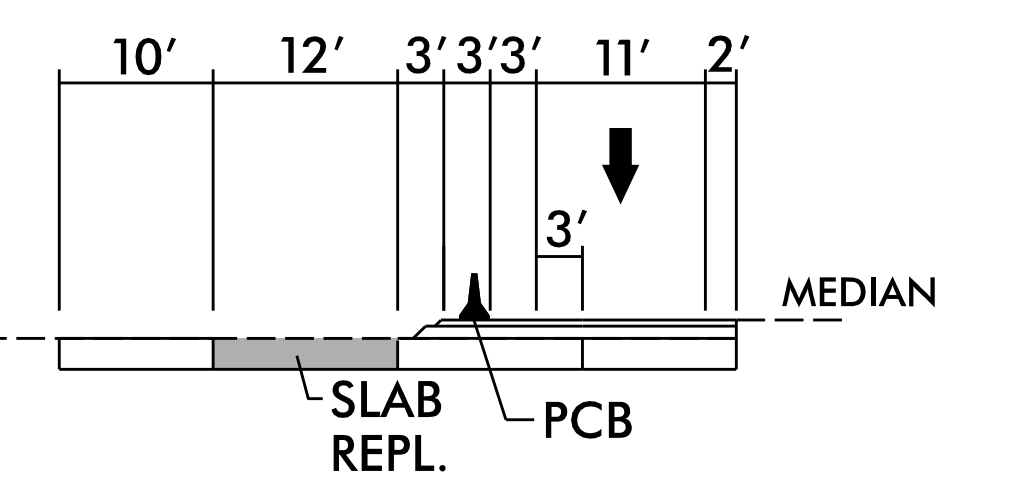


A-A (EB SIMILAR)

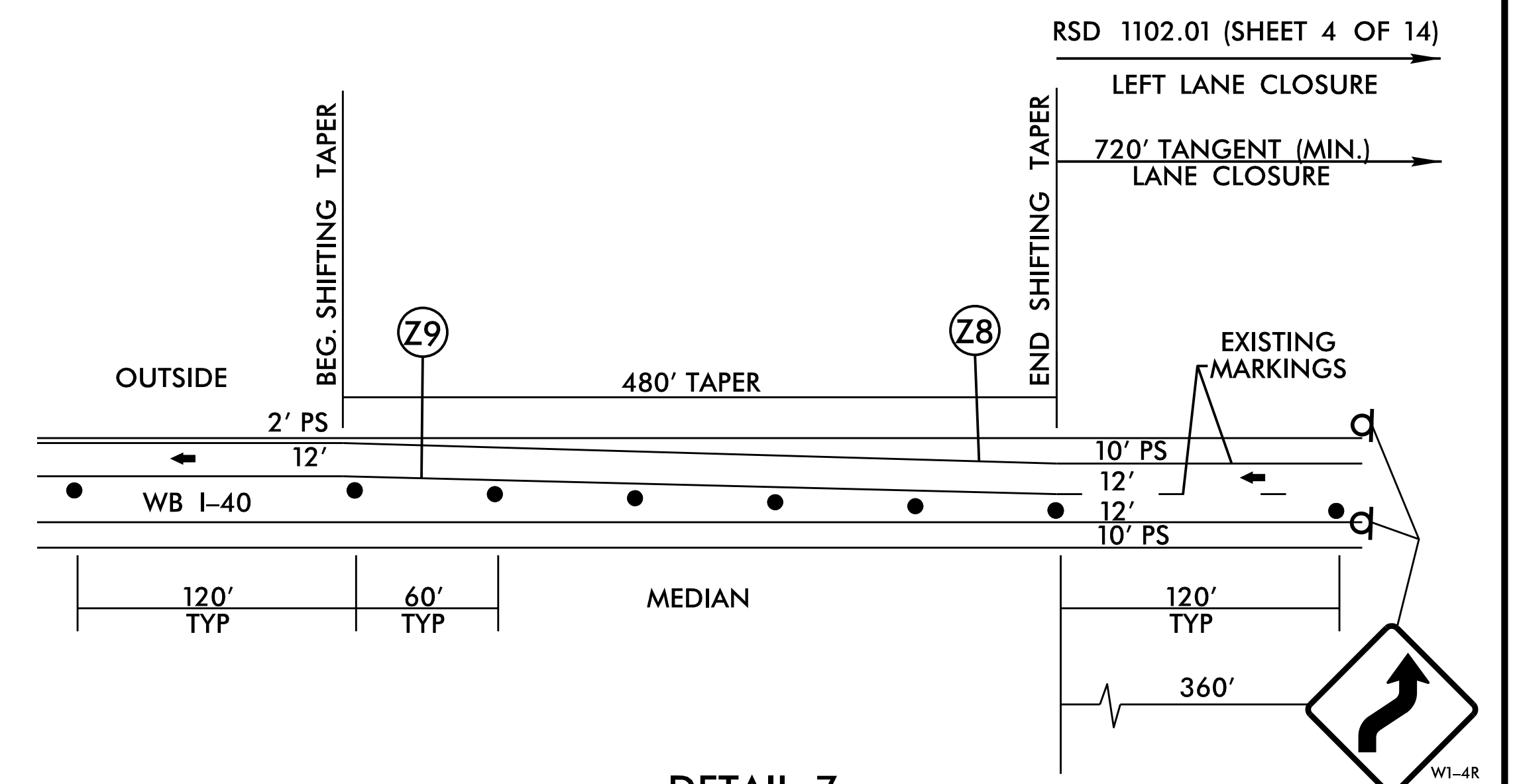


DETAIL 8

TYPICAL SETUP FOR SLAB REPLACEMENT – OUTSIDE LANE (EB SIMILAR)

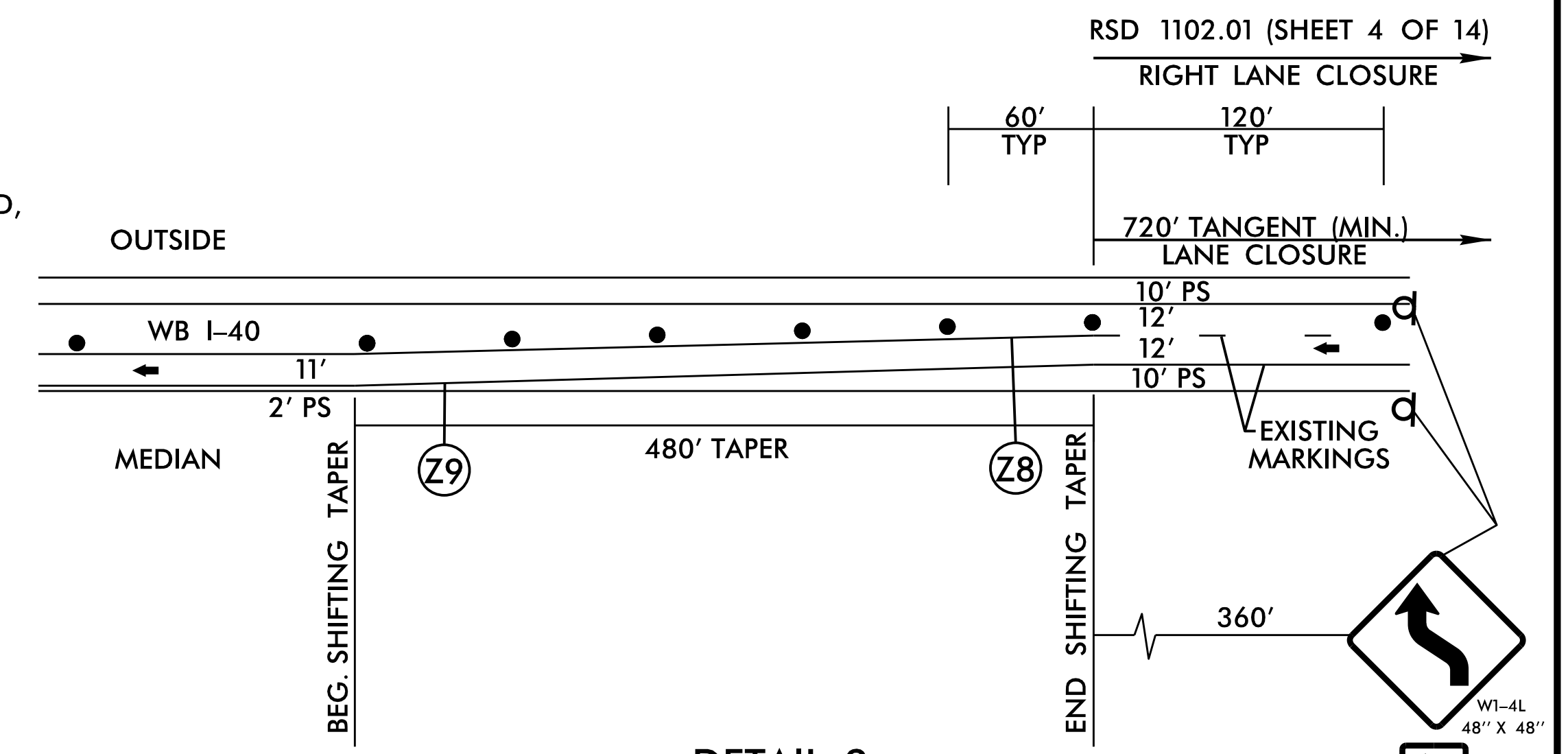


B-B (EB SIMILAR)



DETAIL 7

SHIFT TO/FROM OUTSIDE SHOULDER FOR MEDIAN LANE /SHLD. WORK IN SEGMENTS 1 & 5 (EB SIMILAR)

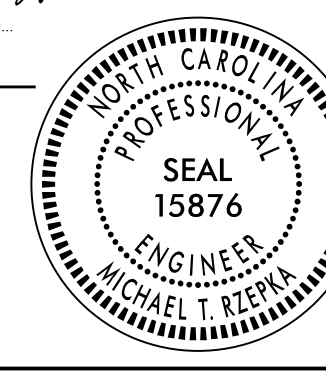


DETAIL 9

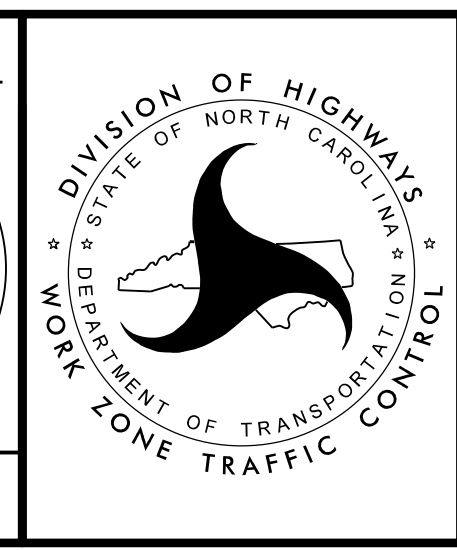
SHIFT TO/FROM MEDIAN SHOULDER FOR OUTSIDE LANE /SHLD. WORK IN SEGMENTS 1 & 5 (EB SIMILAR)

11/9/2018
 c:\pwworking\king\ecost01\d022355\15823_tmp_seg_1_5_dtl_slabs&shiffrs.dgn
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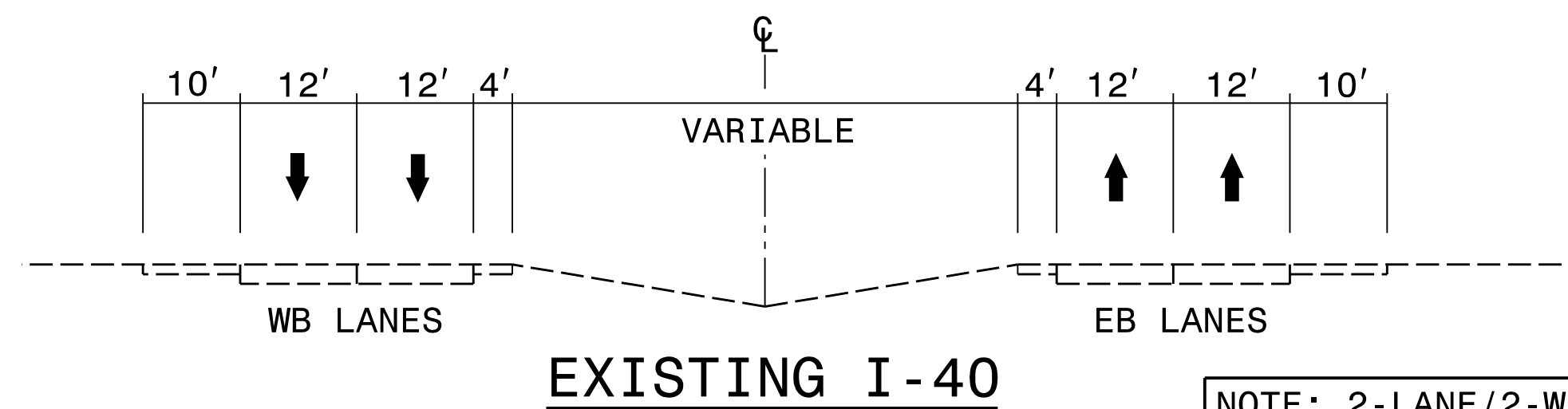
APPROVED: *Michael T. Raspa*
 DATE: 11/9/2018



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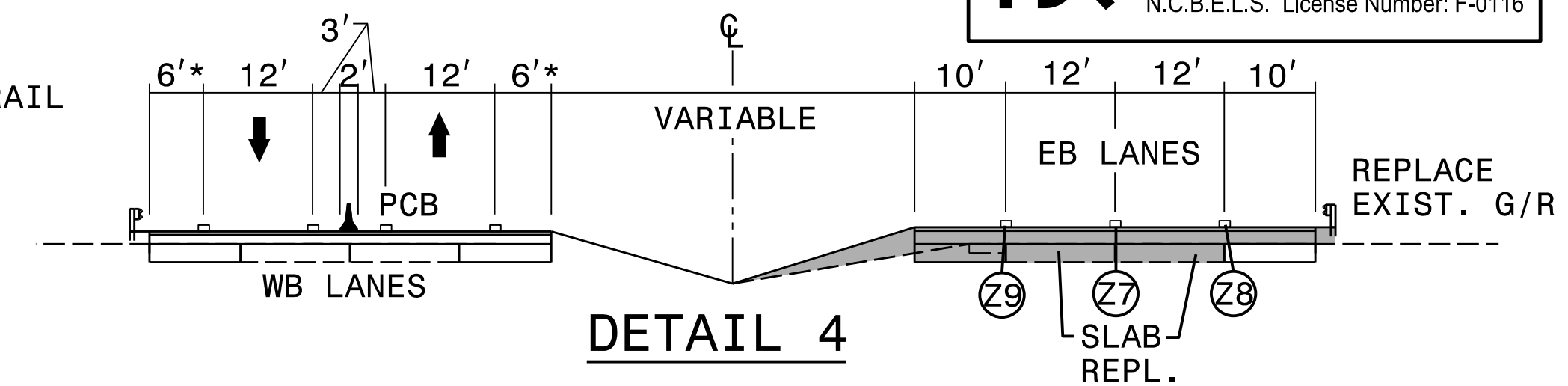


SEGMENTS 1 & 5 LANE SHIFT DETAIL FOR MEDIAN SHLD. CONST., SLAB REMOVAL AND RESURFACING

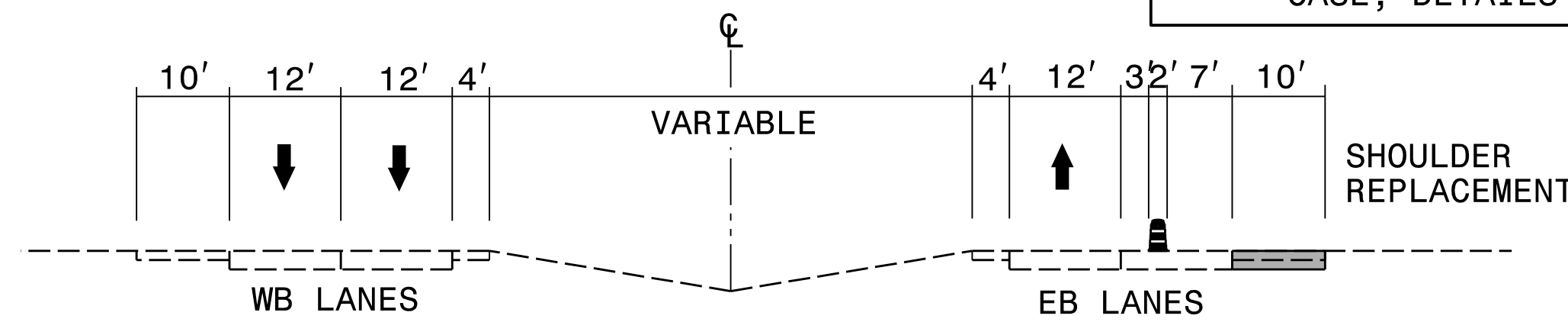


NOTE: 2-LANE/2-WAY PATTERN SHOWN FIRST IN EB LANES. MAY PLACE 2-LANE/2-WAY PATTERN IN WB LANES FIRST, IN WHICH CASE, DETAILS WOULD BE MIRRORED

* 8' TO BRIDGE RAIL ON BRIDGE 29

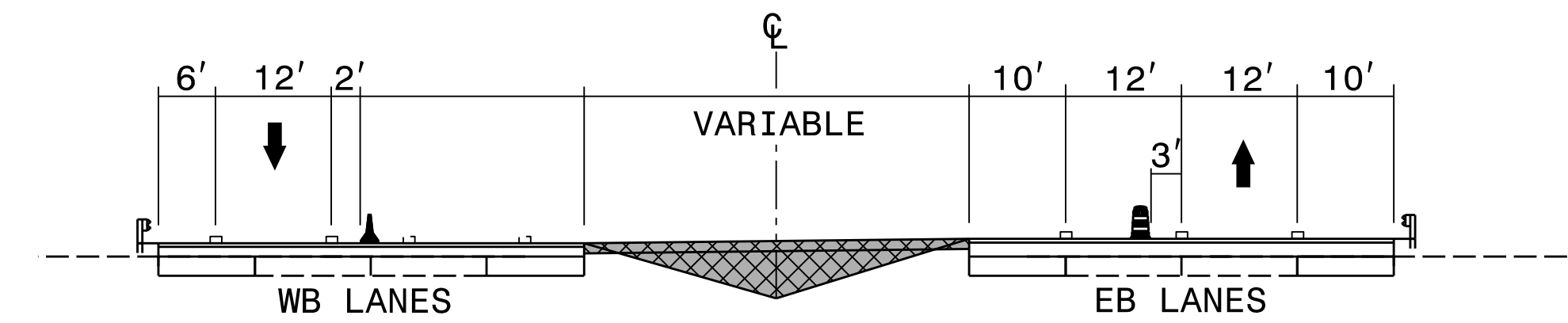


SHIFT ALL TRAFFIC TO WB LANES (EB TRAFFIC VIA SINGLE LANE CROSSOVER) FOR CONTINUOUS 2L/2W DIVIDED PATTERN (COMPLETE ALL CONSTRUCTION TASKS ON EB LANES EXCEPT FOR FINAL LAYER OF SURFACE COURSE, FINAL MARKINGS/MARKERS & RUMBLE STRIPS)



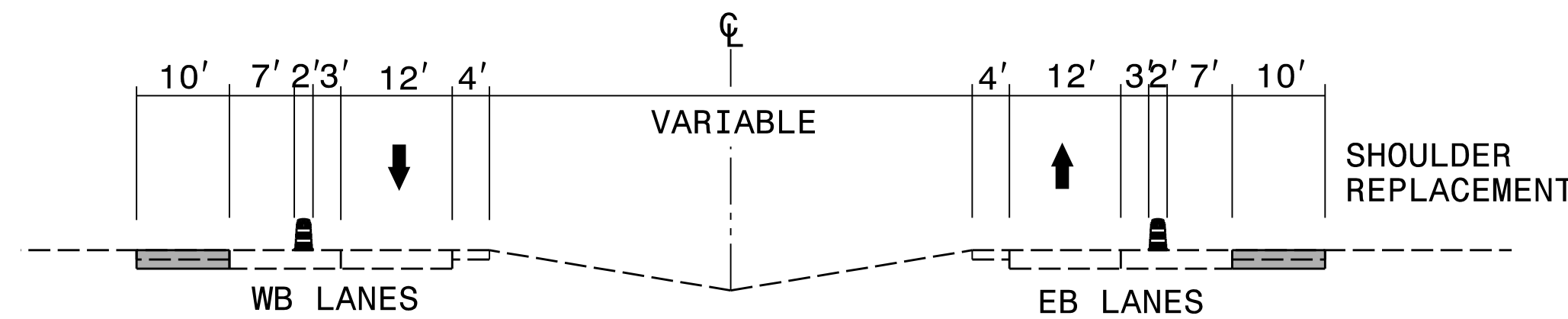
DETAIL 1

CONSTRUCT 10' FULL DEPTH SHOULDER PAVEMENT (EASTBOUND)



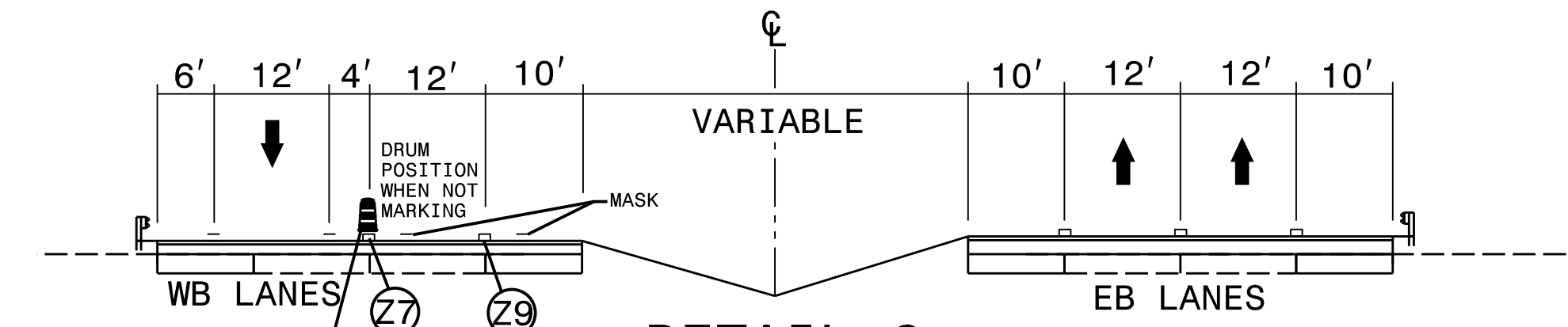
DETAIL 5

SHIFT EB TRAFFIC TO EB OUTSIDE LANE AND REMOVE CROSSOVERS



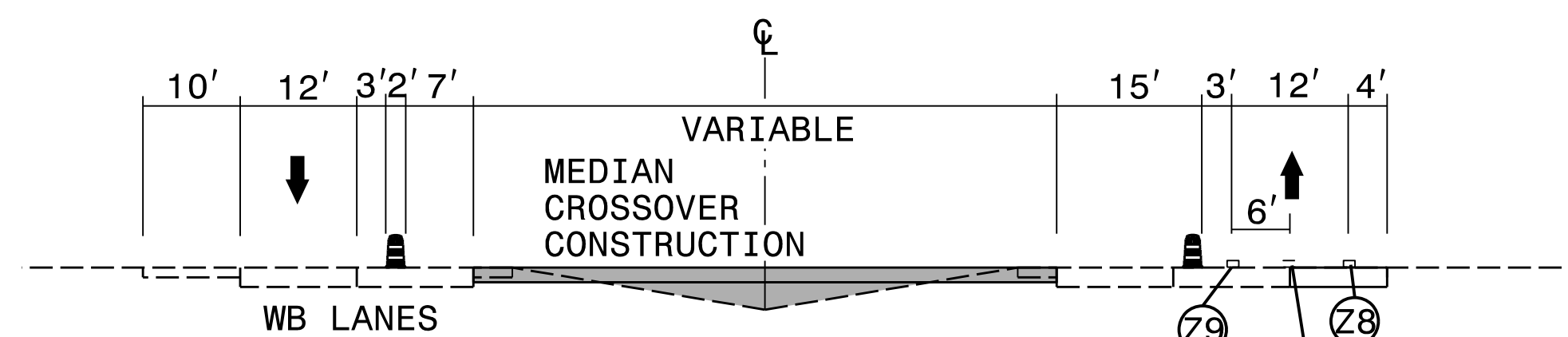
DETAIL 1A

CONSTRUCT 10' FULL DEPTH SHOULDER PAVEMENT (EASTBOUND & WESTBOUND) SEGMENT 2 ONLY



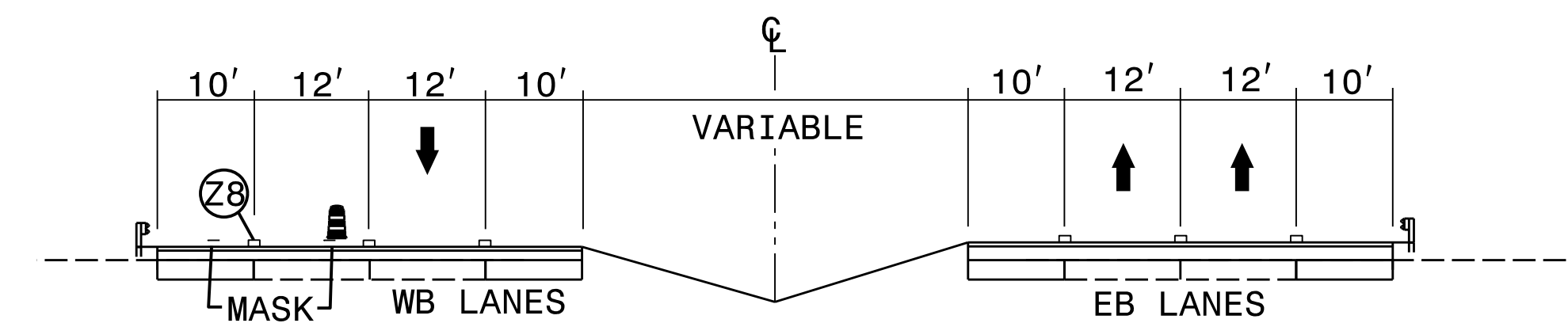
DETAIL 6

OPEN EB LANES TO EXISTING PATTERN AND PLACE WB SKIP AND YELLOW EDGELINE



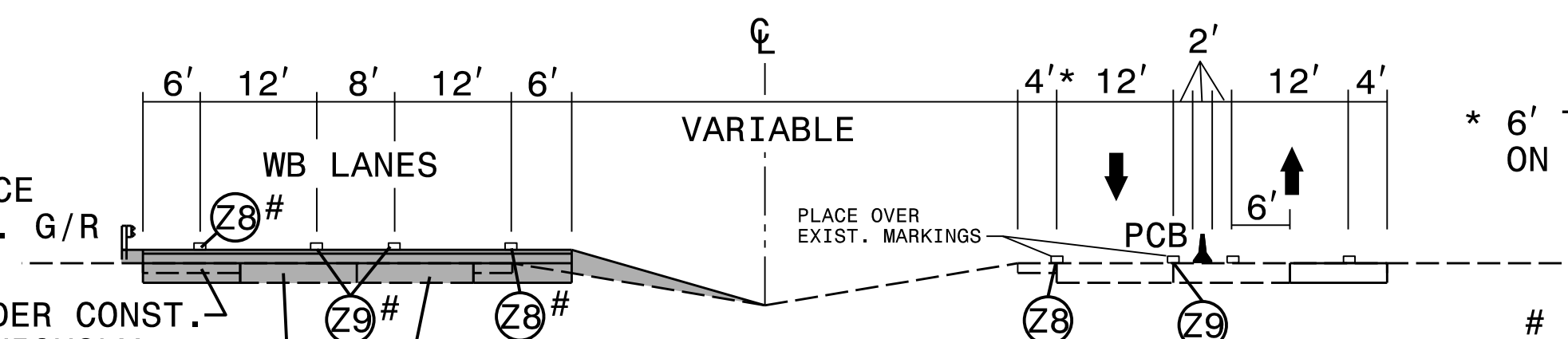
DETAIL 2

CONSTRUCT MEDIAN CROSSOVERS



DETAIL 7

SHIFT WB TRAFFIC TO MEDIAN LANE AND PLACE WHITE EDGELINE

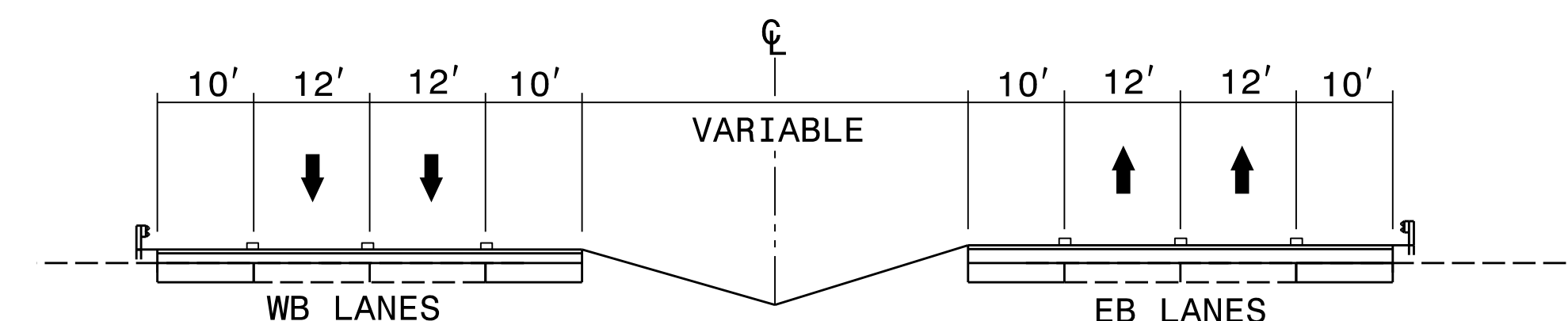


DETAIL 3

SHIFT WB TRAFFIC TO EB MEDIAN LANE VIA SINGLE LANE CROSSOVER FOR CONTINUOUS 2L/2W DIVIDED PATTERN (COMPLETE ALL CONSTRUCTION TASKS ON WB LANES EXCEPT FOR FINAL LAYER OF SURFACE COURSE, FINAL MARKINGS/MARKERS & RUMBLE STRIPS)

* 6' TO BRIDGE RAIL ON BRIDGE 32

ON BRIDGE 29, USE REMOVABLE TAPE WITH TEMPORARY RAISED MARKERS INSTALLED HALF-ON/HALF-OFF TAPE (SEGEMENT 3)



DETAIL 8

EXISTING PATTERN

11/9/2018 c:\pwworking\hdc\022355\15823_tmp_seg 2_3_4_.tpps.dgn 12:03 PM

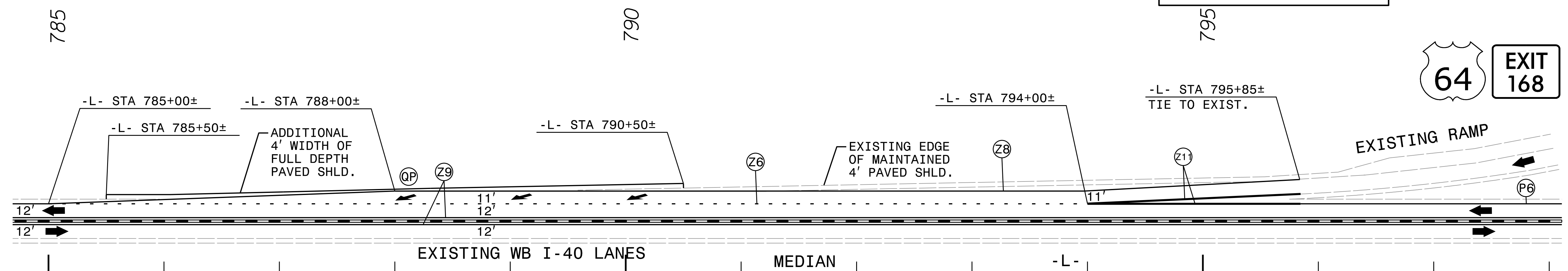
APPROVED: *Michael T. Riepp*
DATE: 11/9/2018

PROFESSIONAL ENGINEER
SEAL 15876
MICHAEL T. RIEPP

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

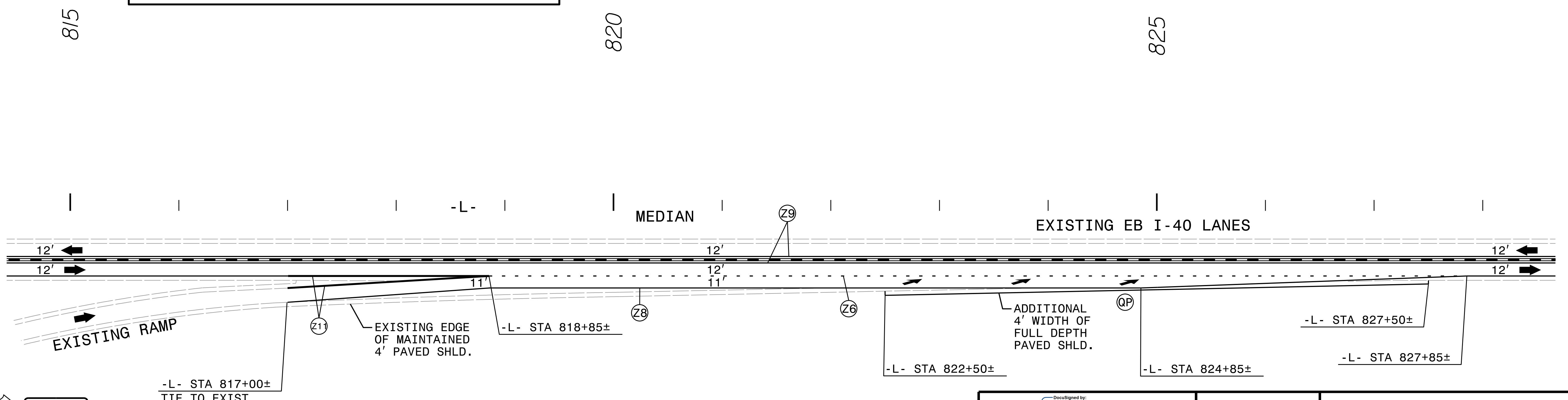
SEGMENTS 2 - 4
TYPICALS



DETAIL 8

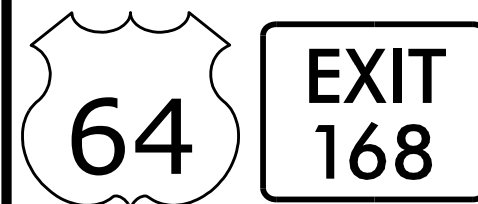
TEMPORARY PARALLEL ON-RAMP
FROM US 64 (RAMP B)

NOTE: SEE SHEET TMP-7, DETAIL 3 FOR 2-WAY PATTERN SHOWN.
IF TRAFFIC IS SHIFTED TO 2-WAY PATTERN ON NEWLY
CONSTRUCTED/RESURFACED I-40 SIDE (TMP-7, DETAIL 4),
ADJUST RAMP MARKINGS ACCORDINGLY.



DETAIL 9

TEMPORARY PARALLEL ON-RAMP
FROM US 64 (RAMP D)

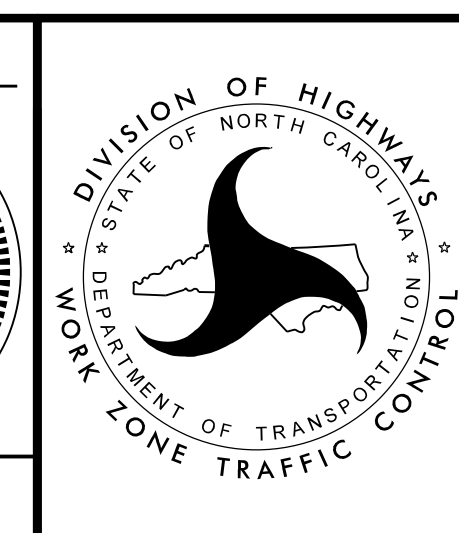


APPROVED: *Michael T. Rzepka*
DATE: 11/9/2018

DocuSigned by:
Michael T. Rzepka
018C3480C28049D...

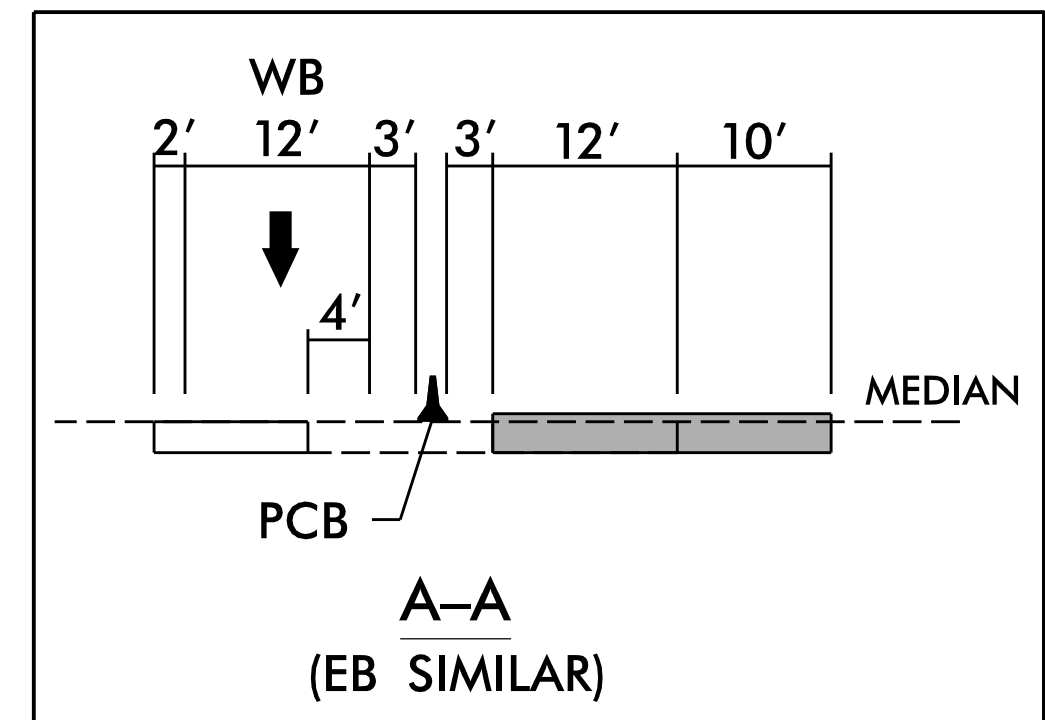
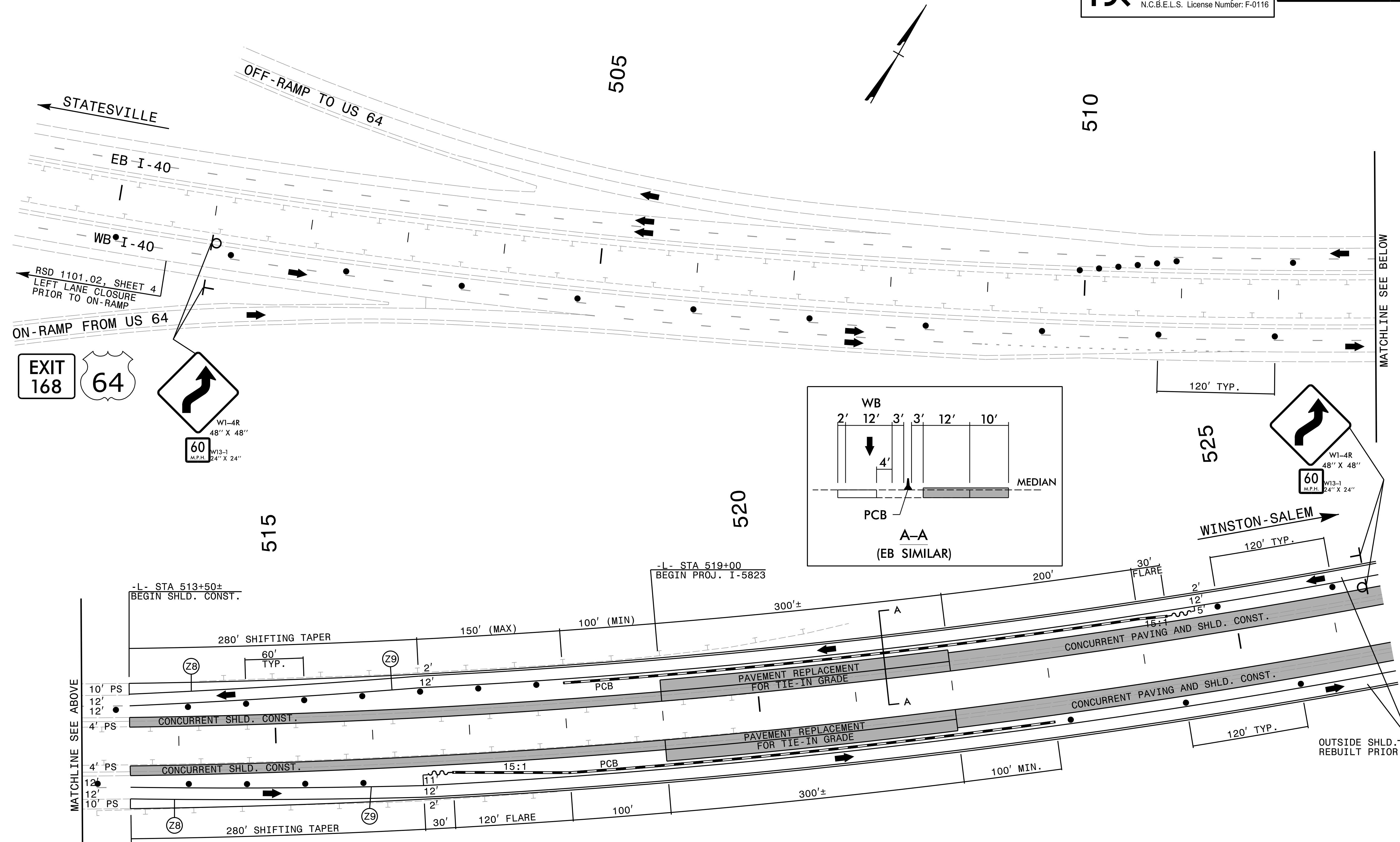
PROFESSIONAL ENGINEER
SEAL 15876
MICHAEL T. RZEPKA

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SEGMENT 2
TEMPORARY ON-RAMP
PATTERNS

11/9/2018
c:\pwworking\king\ecost\01\4022355\5823_tmp_seg 2.on ramps_dtl.dgn
12:11:11 PM



MATCHLINE SEE ABOVE

MATCHLINE SEE BELOW

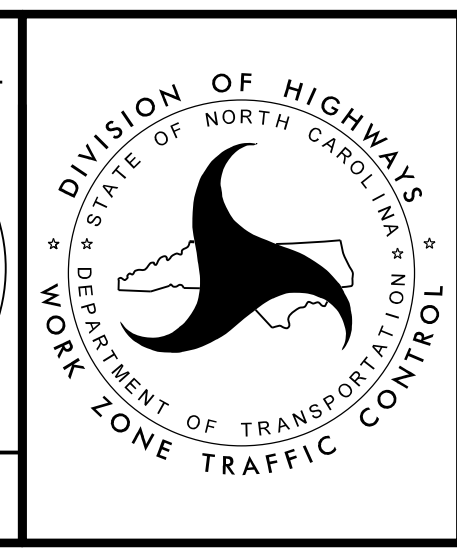
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12:16:16 PM

APPROVED: *Michael T. Rzepka*
 DATE: 11/9/2018

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PROFESSIONAL ENGINEER
 SEAL 15876
 MICHAEL T. RZEPKA

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SEGMENT 5
BEGIN PROJECT LIMIT
DETAIL FOR PAVEMENT
REPLACEMENT FOR
TIE-IN GRADE
(INSIDE LANE)



STATESVILLE

OFF-RAMP TO US 64

505

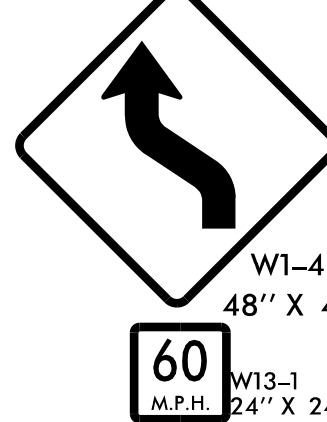
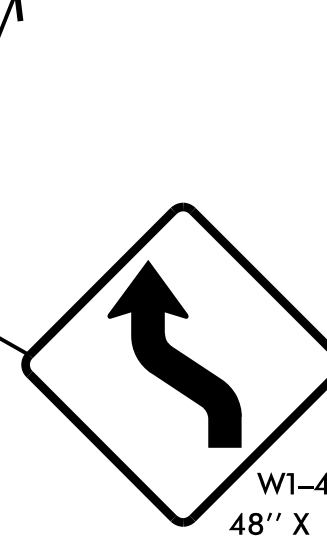
510

EB I-40

WB I-40

RSD 1101.02, SHEET 4
RIGHT LANE CLOSURE
PRIOR TO ON-RAMP

ON-RAMP FROM US 64



515

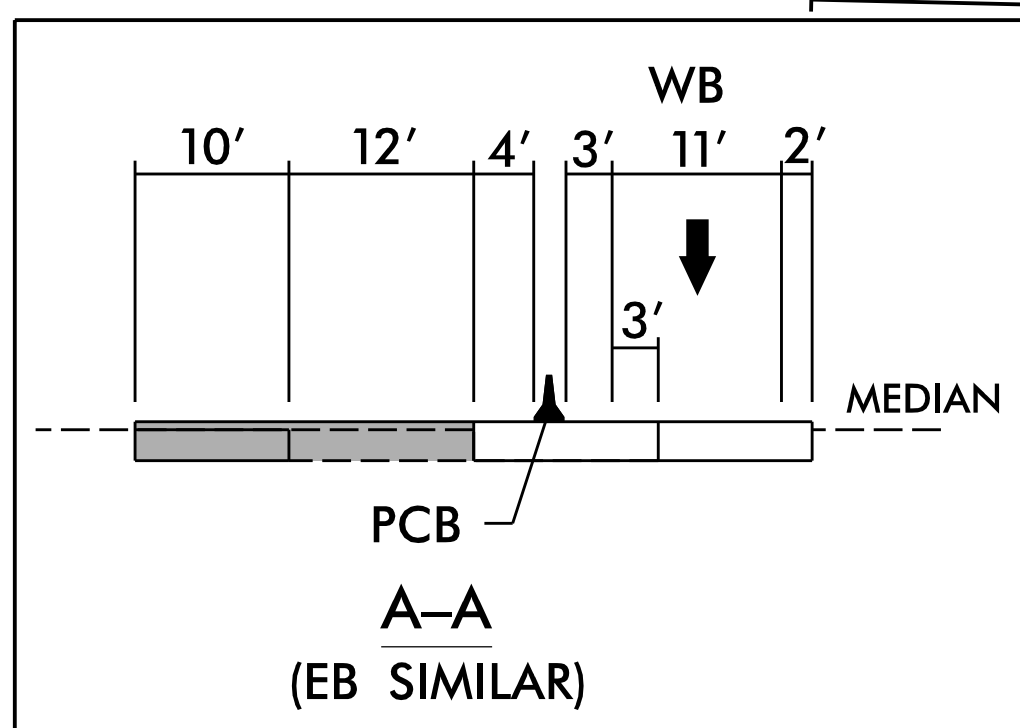
-L- STA 505+00±

60' TYP.

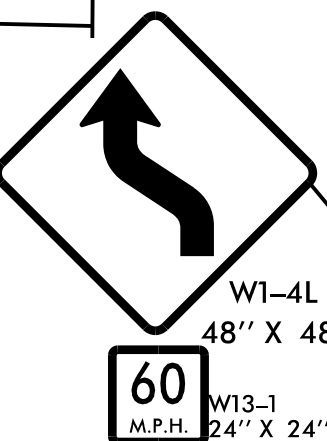
300' RAMP TAPER

30' TYP.

MATCHLINE SEE BELOW



525



WINSTON-SALEM

-L- STA 519+00
BEGIN PROJ. I-5823

-L- STA 513+50±
BEGIN SHLD. CONST.

280' SHIFTING TAPER

150' (MAX)

100' (MIN)

300'±

PAVEMENT REPLACEMENT
FOR TIE-IN GRADE

CONCURRENT PAVING

MATCHLINE SEE ABOVE

10' PS
12'
12'

4' PS
12'
12'
10' PS

Z8

Z9

Z8

Z9

280' SHIFTING TAPER

30'

120' FLARE

100'

300'±

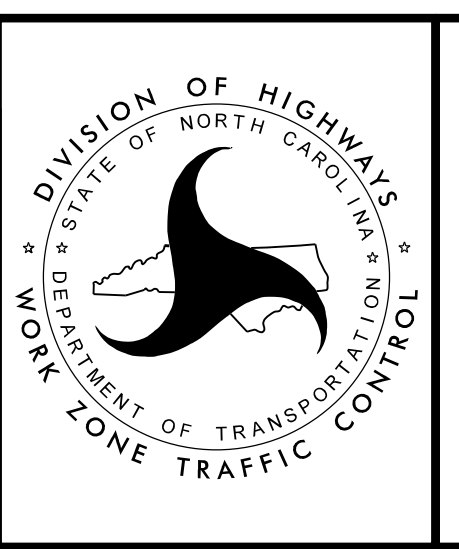
PAVEMENT REPLACEMENT
FOR TIE-IN GRADE

CONCURRENT PAVING

120' TYP.

100' MIN.

APPROVED: Michael T. Rzepka
DATE: 11/9/2018
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15876
MICHAEL T. RZEPKA
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SEGMENT 5
BEGIN PROJECT LIMIT
DETAIL FOR PAVEMENT
REPLACEMENT FOR
TIE-IN GRADE
(OUTSIDE LANE)

11/9/2018
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12:11:21 PM