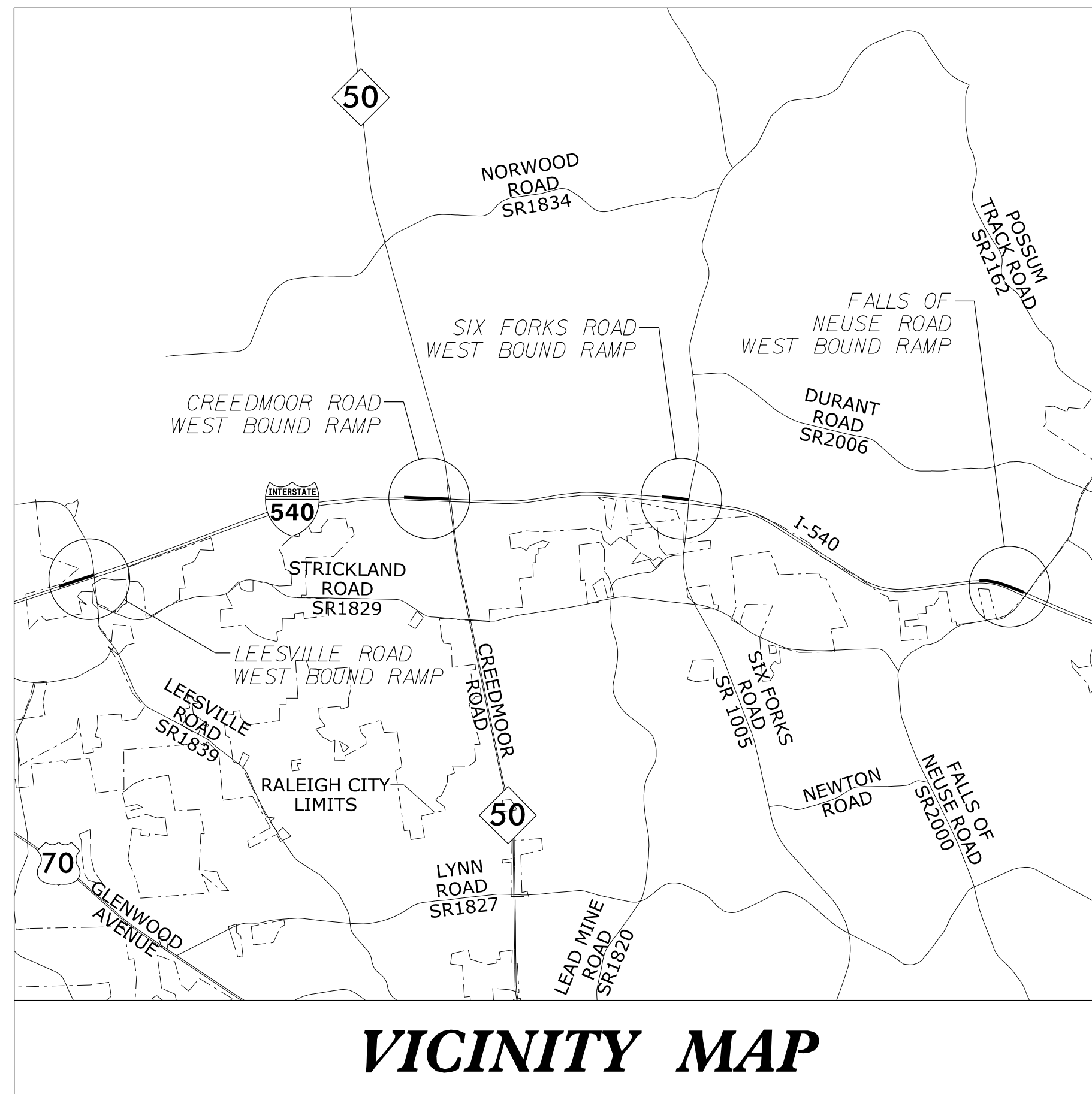
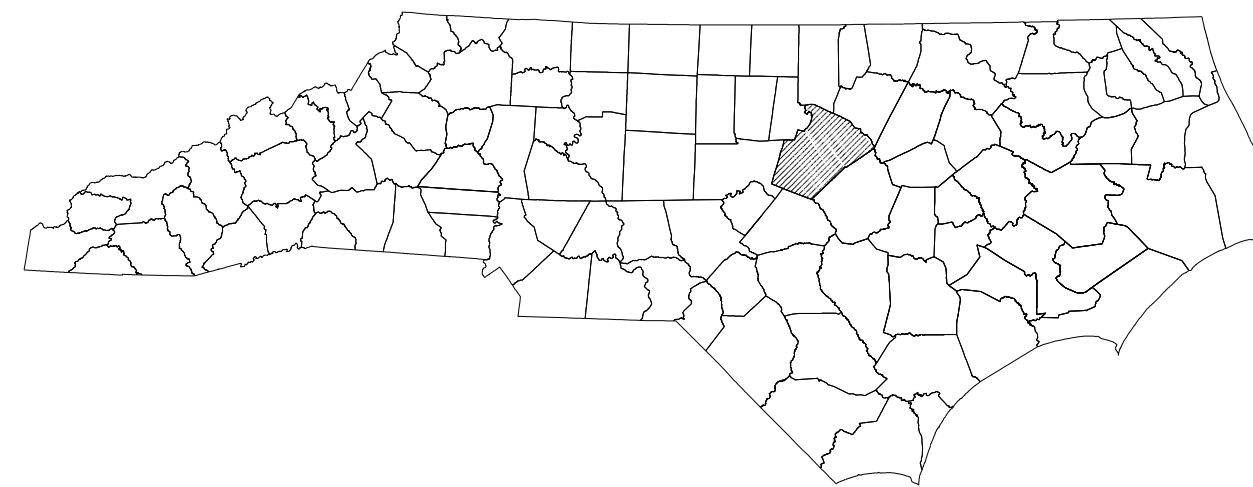


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY



PLAN PREPARED FOR N.C.D.O.T. BY:
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

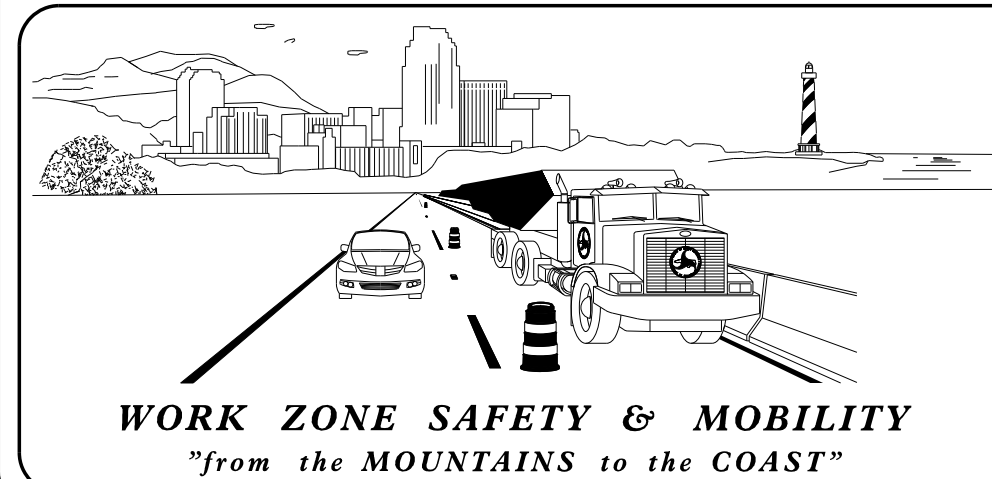
INDEX OF SHEETS

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TMP-32	-RB4- (FALLS OF NEUSE ROAD WESTBOUND I-540 ON-RAMP) PHASE I DETAIL

SHEET NO.

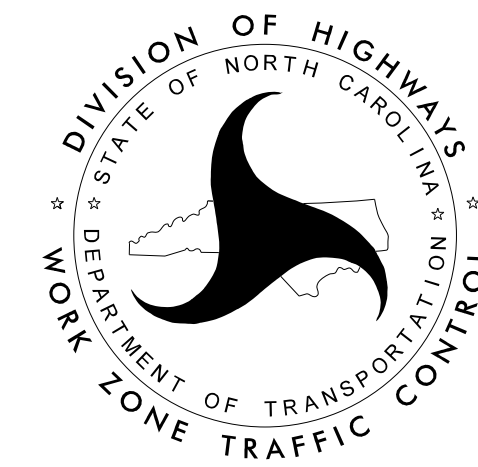
TMP-1

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N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2145

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
DAVID BISSETTE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
HELEN SHYU, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
ALLA LYUDMIRSKAYA TRAFFIC CONTROL DESIGN ENGINEER



J. TODD BROOKS, P.E.
TRAFFIC CONTROL PROJECT ENGINEER

IAN BERDEAU, E.I.
TRAFFIC CONTROL PROJECT DESIGN ENGINEER

J. ABRAHAM WILES
TRAFFIC CONTROL DESIGN ENGINEER

APPROVED:
DATE: 7/7/2016

SEAL

TIP PROJECT: I-5710

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:

STD. NO.	TITLE
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
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
1205.03	PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

TEMPORARY PAVEMENT

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- SKINNY DRUM
- TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- PORTABLE CONCRETE BARRIER (P.C.B.)
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

PAVEMENT MARKING LINES: PAINT

- 10 FT. WHITE SKIP LINE (6")
- 3'-9' MINI SKIP LINE (6")
- WHITE GORELINE (12")
- WHITE STOPBAR (24")
- WHITE EDGE LINE (6")
- YELLOW EDGE LINE (6")

PAVEMENT MARKING SYMBOLS AND CHARACTERS:

- MERGE ARROW PAINT

PAVEMENT MARKERS:

- TEMPORARY RAISED PAVEMENT MARKERS CRYSTAL/RED

24-MAY-2016 16:58 C:\Users\jacob\Documents\Roadway\WCDOT\1-540 Ramp Metering\Traffic\TrafficControl\TCPN-5710-TC-TCF-01A.dgn WILEZ054 AT DUS30009

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: DATE: 5/24/2016 SEAL			ROADWAY STANDARD DRAWINGS & LEGEND
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MANAGEMENT STRATEGIES

PROJ. REFERENCE NO. I-5710	SHEET NO. TMP-1B
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PROJECT WILL INSTALL RAMP METER SIGNALING EQUIPMENT AND ASSOCIATED SIGNS AND MARKINGS ON WESTBOUND ENTRANCE RAMPS TO I-540 AT THE LEESVILLE ROAD, CREEDMOOR ROAD, SIX FORKS ROAD AND FALLS OF NEUSE ROAD INTERCHANGES. TO FACILITATE RAMP METER OPERATIONS, PROJECT WILL WIDEN THE WESTBOUND ENTRANCE RAMP PAVEMENT AT ALL LOCATIONS EXCEPT SIX FORKS ROAD WHERE THE RAMP HAS ALREADY BEEN WIDENED. THE DEPARTMENT HAS A CRITICAL NEED TO COLLECT UP-TO-DATE TRAFFIC DATA PRIOR TO COMPLETING CONSTRUCTION AND COMMENCING OPERATION OF THE RAMP METERS. THE DEPARTMENT NEEDS TO USE THE DETECTION LOOPS AND RAMP METER CABINETS AND CONTROLLERS TO COLLECT THIS EARLY TRAFFIC DATA. TO THAT END, CONSTRUCTION WILL BE PHASED TO PROVIDE FOR INSTALLATION OF DETECTION LOOPS AND RAMP METER CONTROLLERS AND CABINETS AS EARLY AS POSSIBLE AT THE FOLLOWING INTERCHANGES AND PRIOR TO COMPLETION OF ALL ROADWAY CONSTRUCTION WORK ON THIS PROJECT: LEESVILLE ROAD, CREEDMOOR ROAD AND SIX FORKS ROAD. SUBJECT TO THE ENGINEER'S APPROVAL, THE CONTRACTOR MAY BE ALLOWED TO BEGIN LIMITED ROAD CONSTRUCTION WORK AT THE FALLS OF NEUSE ROAD INTERCHANGE WHILE WORK IS UNDERWAY AT THE OTHER THREE INTERCHANGES PROVIDED THAT IT DOES NOT DELAY EARLY INSTALLATION OF THE DESIGNATED RAMP METER SIGNAL EQUIPMENT NEEDED FOR UPFRONT DATA COLLECTION AT THE OTHER THREE INTERCHANGES.

CONSTRUCTION WILL BE PERFORMED AWAY FROM TRAFFIC ON THE RAMPS WHENEVER POSSIBLE BEHIND SHOULDER CLOSURES. FOR THE FALLS OF NEUSE ROAD ON-RAMP ONLY, PORTABLE CONCRETE BARRIER (P.C.B) WILL BE INSTALLED ON THE NORTH SIDE OF THE RAMP DUE TO THE INSTALLATION OF THE MSE RETAINING WALL; THE CREEDMOOR ROAD AND LEESVILLE ROAD RAMPS WILL USE DRUMS FOR SHOULDER CLOSURES AND TEMPORARY LANE CLOSURES. WHERE THERE ARE TWO EXISTING LANES ON THE RAMP, THE CONTRACTOR WILL BE ALLOWED DURING NON-PEAK PERIODS TO CLOSE THE RAMP LANE ADJACENT TO ACTIVE CONSTRUCTION ALONG WITH THE CORRESPONDING UPSTREAM LEFT TURN LANE OF THE NORTHBOUND DUAL LEFT FROM THE CROSSING STREET. CERTAIN ACTIVITIES, PARTICULARLY THOSE WITHIN THE EXISTING RAMP PAVEMENT, WILL REQUIRE TEMPORARY RAMP CLOSURES AND DETOURING OF RAMP TRAFFIC TO AN ADJACENT I-540 INTERCHANGE, EITHER DURING AN OVERNIGHT PERIOD OR FOR A SINGLE WEEKEND, TO EXPEDITE CONSTRUCTION AND MINIMIZE WORKER AND MOTORIST EXPOSURE TO HAZARDS. ONLY ONE RAMP CLOSURE AND DETOUR WILL BE PERMITTED AT ANY GIVEN TIME.

- * FOR THE FALLS OF NEUSE ROAD ON-RAMP, OVERNIGHT RAMP CLOSURES AND DETOURS WILL BE USED FOR THE INSTALLATION AND SUBSEQUENT REMOVAL OF P.C.B., MILLING AND WEDGING OF EXISTING PAVEMENT, PAVING THE FINAL SURFACE LAYER AND INSTALLING FINAL PAVEMENT MARKINGS.
- * FOR THE CREEDMOOR ROAD AND LEESVILLE ROAD ON-RAMPS, A SINGLE WEEKEND RAMP CLOSURE AND DETOUR WILL BE USED FOR EACH LOCATION TO EXPEDITIOUSLY PERFORM ALL PAVEMENT WIDENING, GUARDRAIL WORK, MILLING, WEDGING AND RESURFACING, UP TO BUT NOT INCLUDING THE FINAL SURFACE LAYER, AND TEMPORARY PAVEMENT MARKINGS. FILL MATERIAL WILL BE PLACED AND GRADING WILL BE PERFORMED AS MUCH AS POSSIBLE AWAY FROM TRAFFIC PRIOR TO THE WEEKEND RAMP CLOSURES.
- * FOR THE SIX FORKS ROAD ON-RAMP, AN OVERNIGHT RAMP CLOSURE AND DETOUR WILL ONLY BE USED TO INSTALL LOOP DETECTORS AND PAVEMENT MARKINGS (STOP BARS).
- * CONSTRUCTION ALONG SINGLE-LANE PORTIONS OF RAMPS IN THE VICINITY OF AND DOWNSTREAM OF GORE AREAS WILL REQUIRE CLOSURES OF THE ADJACENT RIGHT LANE OF I-540 WB DURING OFF-PEAK HOURS AND WILL BE PERFORMED IN CONJUNCTION WITH CLOSURE OF THE RAMP. THERE IS INSUFFICIENT ROOM TO MAINTAIN RAMP TRAFFIC WHEN PERFORMING CONSTRUCTION WHERE THE RAMP AND I-540 MAINLINE CONVERGE.

CONSTRUCTION WILL BE STAGED TO PLACE FILL, PERFORM GRADING AND GRADED SHOULDER WIDENING FIRST. FOR THE FALLS OF NEUSE ROAD ON-RAMP, THE MSE RETAINING WALL CONSTRUCTION WOULD ALSO OCCUR BEHIND P.C.B. IN THE FIRST STAGE. NEXT WOULD BE THE PAVEMENT WIDENING, THE MILLING AND WEDGING OF THE EXISTING PAVEMENT AND INSTALLATION OF THE RAMP METER SIGNAL EQUIPMENT. THE FINAL STAGE WILL INCLUDE PAVING OF THE FINAL SURFACE LAYER AND INSTALLATION OF THE FINAL SIGNS AND PAVEMENT MARKINGS AND COMPLETION OF ANY REMAINING RAMP METER SIGNAL CONSTRUCTION.

P.C.B. AND TEMPORARY SHORING WILL BE INSTALLED ALONG THE NORTH SIDE OF THE FALLS OF NEUSE ON-RAMP TO FACILITATE CONSTRUCTION OF THE MSE RETAINING WALL AND WIDENING ON THE NORTH SIDE. THE LENGTH OF THE TWO-LANE PORTION OF THIS RAMP AND THE LENGTH OF THE MERGE FROM TWO LANES TO ONE WILL BE MAINTAINED IN CURRENT CONDITIONS TO PRESERVE EXISTING RAMP CAPACITY. WORK REQUIRING USE OF P.C.B. ON THE FALLS OF NEUSE ROAD RAMP WILL BE PERFORMED UNDER AN INTERMEDIATE CONTRACT TIME (ICT) TO MINIMIZE THE LENGTH OF TIME RAMP TRAFFIC IS EXPOSED TO THE P.C.B. LOOP DETECTORS WILL BE INSTALLED IN THE WESTBOUND LANES OF I-540 UPSTREAM OF EACH OF THE FOUR WESTBOUND RAMPS USING TEMPORARY OFF-PEAK LANE CLOSURES. LOOP DETECTORS WILL BE INSTALLED ON THE TWO-LANE PORTION OF THE ON-RAMPS USING EITHER TEMPORARY RAMP LANE CLOSURES DURING OFF-PEAK HOURS OR A SINGLE OVERNIGHT RAMP CLOSURE. SIGNAL PEDESTALS AND EQUIPMENT CABINETS WILL BE INSTALLED USING OFF-PEAK SHOULDER OR LANE CLOSURES ON THE RAMPS. ALL OTHER SIGNAL WORK IS EXPECTED TO OCCUR ON THE SHOULDER WITHOUT THE NEED TO CLOSE THE ADJACENT LANE OF TRAFFIC. THE RAMP METER SIGNALS WILL REMAIN DARK AND WILL NOT BE PLACED INTO OPERATION UNTIL ALL CONSTRUCTION WORK HAS BEEN COMPLETED AT ALL FOUR LOCATIONS.

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:

<u>ROAD NAME</u>	<u>DAY AND TIME RESTRICTIONS</u>
I - 540	MONDAY THROUGH SUNDAY FROM 6:00 AM TO 9:00 PM
LEESVILLE ROAD	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM
NC 50-CREEDMOOR ROAD	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM
SIX FORKS ROAD	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM AND FROM 4:00 PM TO 7:00 PM
FALLS OF NEUSE ROAD	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM AND FROM 4:00 PM TO 7:00 PM
-RB1- LEESVILLE ROAD WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM
-RB2- CREEDMOOR ROAD WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM
-RB3- SIX FORKS ROAD WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM AND FROM 4:00 PM TO 7:00 PM
-RB4- FALLS OF NEUSE WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 6:00 AM TO 10:00 AM AND FROM 4:00 PM TO 7:00 PM

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WILE2054 AT DUS300019

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

<p>APPROVED: <small>DocuSigned by: 8E5B7B90A2A2466</small></p> <p>DATE: 8/1/2016</p> <p style="text-align: center;">SEAL</p>			<p>TRANSPORTATION OPERATIONS PLAN</p>
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GENERAL NOTES – CONT.

PROJ. REFERENCE NO.	SHEET NO.
I-5710	TMP-1C

TIME RESTRICTIONS - CONT.

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

ROAD NAME

I-540

LEESVILLE ROAD

NC-50 CREEDMOOR ROAD

SIX FORKS ROAD

FALLS OF NEUSE ROAD

-RB1- LEESVILLE ROAD WB ENTRANCE RAMP

-RB2- CREEDMOOR ROAD WB ENTRANCE RAMP

-RB3- SIX FORKS ROAD WB ENTRANCE RAMP

-RB4- FALLS OF NEUSE ROAD WB ENTRANCE RAMP

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 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.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.
- 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.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 9:00 P.M. MONDAY.
- 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.
- FOR NORTH CAROLINA STATE FAIR, BETWEEN THE HOURS OF 6:00 A.M. THE FIRST THURSDAY OF THE WEEK OF THE NORTH CAROLINA STATE FAIR AND 9:00 P.M. THE MONDAY AFTER THE NORTH CAROLINA STATE FAIR.

C) DO NOT CLOSE ROADS AS FOLLOWS:

ROAD NAME

-RB1- LEESVILLE ROAD WB ENTRANCE RAMP

-RB2- CREEDMOOR ROAD WB ENTRANCE RAMP

-RB3- SIX FORKS ROAD WB ENTRANCE RAMP

-RB4- FALLS OF NEUSE ROAD WB ENTRANCE RAMP

DAY AND TIME RESTRICTIONS

MONDAY THROUGH SUNDAY
FROM 6:00 AM TO 9:00 PM

MONDAY THROUGH SUNDAY
FROM 6:00 AM TO 9:00 PM

MONDAY THROUGH SUNDAY
FROM 6:00 AM TO 9:00 PM

MONDAY THROUGH SUNDAY
FROM 6:00 AM TO 9:00 PM

D) DO NOT CONDUCT SINGLE VEHICLE HAULING OF EARTH MATERIALS AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS WILL BE ALLOWED:

ROAD NAME

-RB1- LEESVILLE ROAD WB ENTRANCE RAMP

-RB2- CREEDMOOR ROAD WB ENTRANCE RAMP

-RB3- SIX FORKS ROAD WB ENTRANCE RAMP

-RB4- FALLS OF NEUSE ROAD WB ENTRANCE RAMP

DAY AND TIME RESTRICTIONS

MONDAY THROUGH FRIDAY
FROM 3:00 PM TO 10:00 AM

SATURDAY AND SUNDAY
FROM 7:00 PM TO 9:00 AM

MONDAY THROUGH FRIDAY
FROM 3:00 PM TO 10:00 AM

SATURDAY AND SUNDAY
FROM 7:00 PM TO 9:00 AM

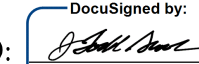
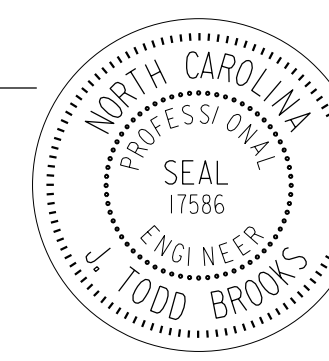
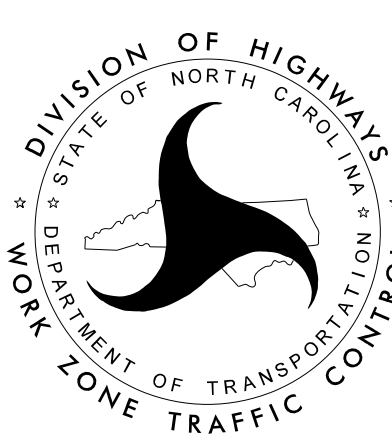
MONDAY THROUGH FRIDAY
FROM 3:00 PM TO 10:00 AM

SATURDAY AND SUNDAY
FROM 7:00 PM TO 9:00 AM

MONDAY THROUGH FRIDAY
FROM 3:00 PM TO 10:00 AM

SATURDAY AND SUNDAY
FROM 7:00 PM TO 9:00 AM

29-AUG-2016 10:20
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WILE2054 AT DUS300019

<p>APPROVED:  DATE: 8/29/2016</p> <p>SEAL</p> 		<p style="text-align: center;">TRANSPORTATION OPERATIONS PLAN</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		

GENERAL NOTES – CONT.

PROJ. REFERENCE NO.	SHEET NO.
I-5710	TMP-1D

E) DO NOT CONDUCT MULTI-VEHICLE HAULING OF EARTH MATERIALS AS FOLLOWS; INGRESS AND EGRESS FROM RAMPS WILL BE ALLOWED:

ROAD NAME	DAY AND TIME RESTRICTIONS
-RB1- LEESVILLE ROAD WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 3:00 PM TO 10:00 AM SATURDAY AND SUNDAY FROM 7:00 PM TO 9:00 AM
-RB2- CREEDMOOR ROAD WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 3:00 PM TO 10:00 AM SATURDAY AND SUNDAY FROM 7:00 PM TO 9:00 AM
-RB3- SIX FORKS ROAD WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 3:00 PM TO 10:00 AM SATURDAY AND SUNDAY FROM 7:00 PM TO 9:00 AM
-RB4- FALLS OF NEUSE ROAD WB ENTRANCE RAMP	MONDAY THROUGH FRIDAY FROM 3:00 PM TO 10:00 AM SATURDAY AND SUNDAY FROM 7:00 PM TO 9:00 AM

F) 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

- G) 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.
- H) 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.
- I) 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.
- J) 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.
- K) 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.
- L) DO NOT INSTALL MORE THAN 1/2 MILE OF LANE CLOSURE ON I-540 MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- M) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON I-540.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- N) 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.
- O) 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) A MINIMUM OF 200 FT IN ADVANCE OF THE UNEVEN AREA ON I-540 ENTRANCE RAMPS.

TRAFFIC PATTERN ALTERATIONS

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

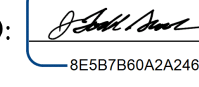


SIGNING

- Q) 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.
- R) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRANSPORTATION MANAGEMENT PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRANSPORTATION MANAGEMENT PLANS.
- S) 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.
- T) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- U) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 350 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

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<p>APPROVED:  DATE: 8/29/2016</p> <p>SEAL</p> 		<p>TRANSPORTATION OPERATIONS PLAN</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		

GENERAL NOTES – CONT.

PROJ. REFERENCE NO.	SHEET NO.
I-5710	TMP-1E

TRAFFIC BARRIER

V) 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.

W) 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

X) 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 (DRUM), 1135 (CONES) AND 1180 (SKINNY-DRUM) FOR ADDITIONAL REQUIREMENTS.

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

Z) 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

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

ROAD NAME	MARKING	MARKER
-RB1- LEESVILLE ROAD WB ENTRRANCE RAMP	PAINT	TEMPORARY RAISED
-RB2- CREEDMOOR ROAD WB ENTRRANCE RAMP	PAINT	TEMPORARY RAISED
-RB3- SIX FORKS ROAD WB ENTRRANCE RAMP	PAINT	TEMPORARY RAISED
-RB4- FALLS OF NEUSE ROAD WB ENTRRANCE RAMP	PAINT	TEMPORARY RAISED

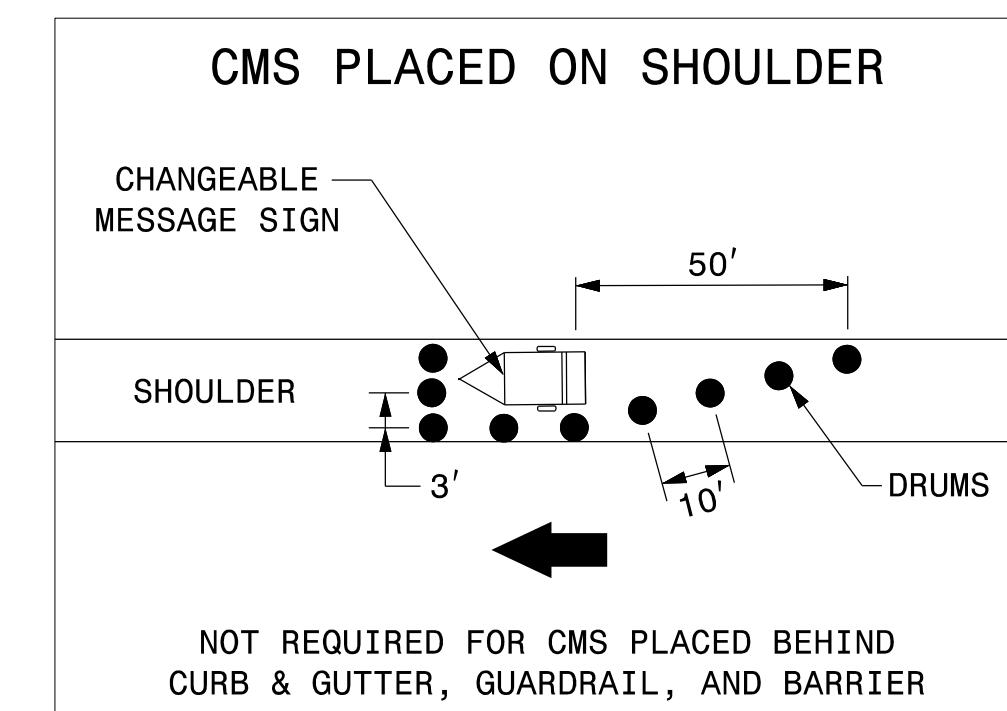
BB) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

LOCAL NOTES


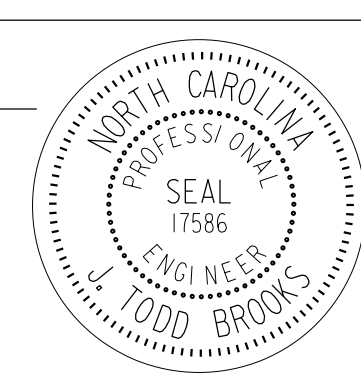

LN-1) NOTIFY THE CITY OF RALEIGH TRAFFIC SIGNAL MANAGER CHRIS JEFFERSON AT 919-996-4064 A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO IMPLEMENTING LANE CLOSURES AND RAMP CLOSURES. CITY FORCES WILL REVISE TRAFFIC SIGNAL TIMING PLANS AS NEEDED DUE TO LANE CLOSURES, RAMP CLOSURES, AND RAMP DETOURS.

LN-2) WHEN PLACING CMS ON A SHOULDER ADJACENT TO OPEN TRAVEL LANE, USE TYPICAL SHOWN BELOW FOR DEVICES TO DELINEATE CMS.



LN-3) DO NOT CLOSE AND DETOUR MORE THAN ONE RAMP DURING ANY WORK PERIOD.

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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

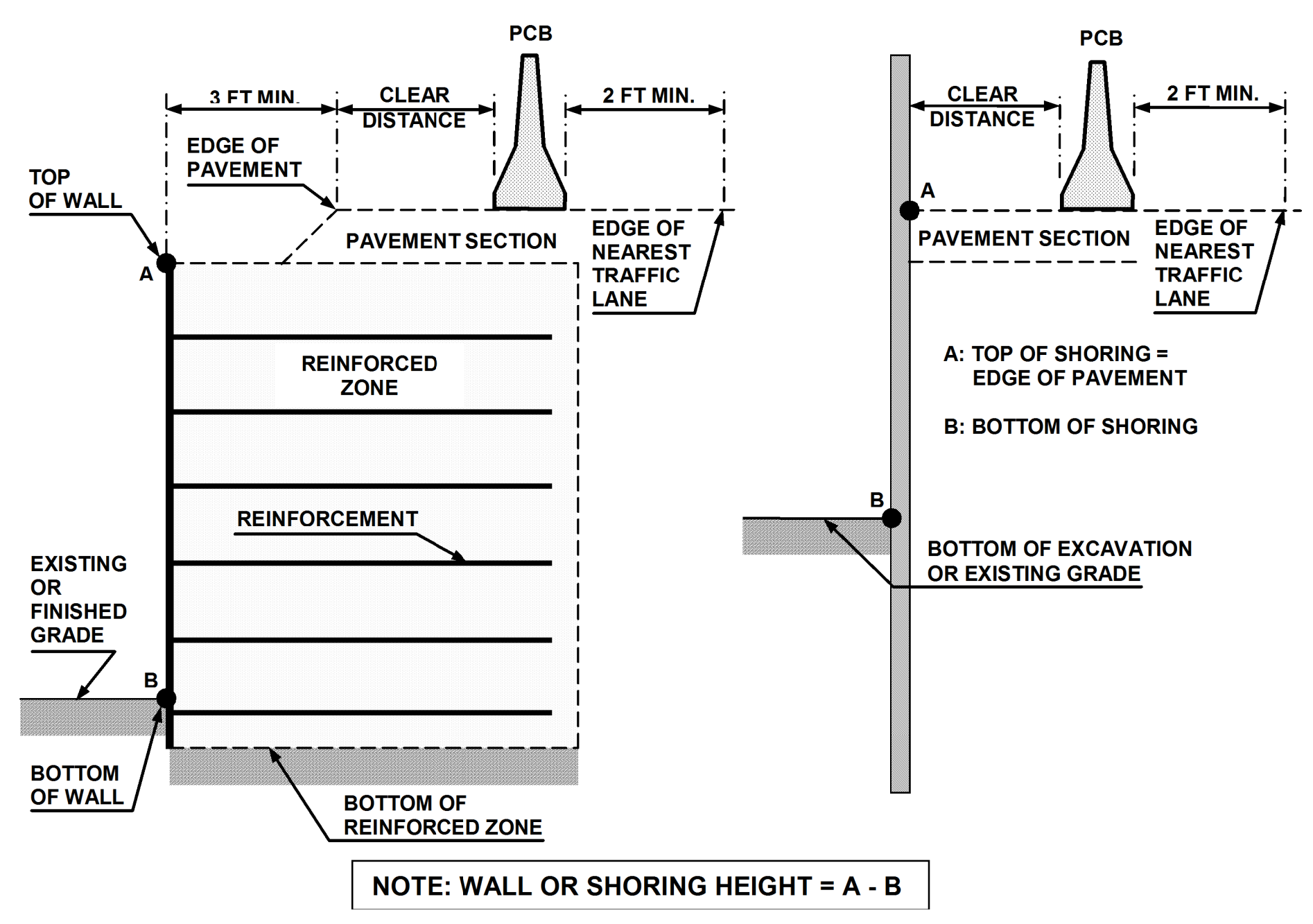


FIGURE A

NOTES

- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).
- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.
- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.
- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
	>56	32	36	42	45	47	51	
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
50-56		26	26	28	32	35	38	
>56	26	27	29	32	36	38		
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

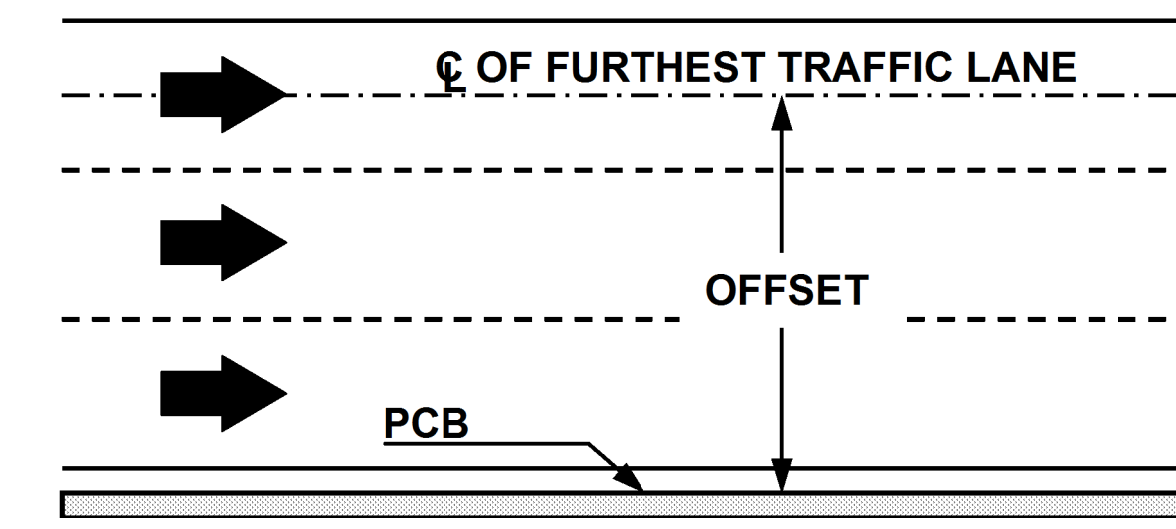
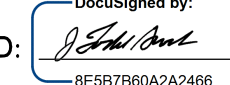
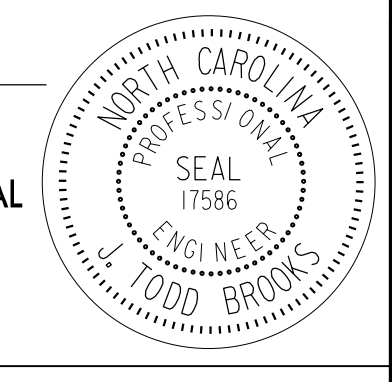
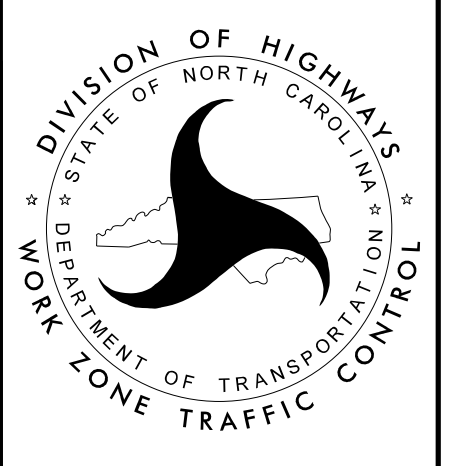


FIGURE B

APPROVED:  DATE: 5/24/2016 SEAL: 		PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		

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TEMPORARY SHORING NO.1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION -RB4- 8+50+/-, 16 FT LEFT, TO STATION -RB4- 14+00+/-, 20 FT LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = N/A

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION -RB4- 8+50+/-, 16 FT LEFT, TO STATION -RB4- 14+00+/-, 20 FT LEFT.

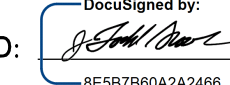
AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION -RB4- 8+50+/-, 16 FT LEFT, TO STATION -RB4- 14+00+/-, 20 FT LEFT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

IT MAY BE PREFERRED TO USE A TEMPORARY SOIL NAIL WALL FOR TEMPORARY SHORING FROM STATION -RB4- 8+50+/-, 16 FT LEFT, TO STATION -RB4- 14+00+/-, 20 FT LEFT. FOR TEMPORARY SOIL NAIL WALLS, SEE TEMPORARY SOIL NAIL WALLS PROVISION.

SEE SHEET TMP-32 FOR CORRESPONDING TRANSPORTATION MANAGEMENT PLAN SHEET

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTC SECTION ON MAY 9, 2016 AND SEALED BY A PROFESSIONAL ENGINEER, JINYOUNG PARK, PE, LICENSE # 032171.

6/22/2016
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<p>APPROVED:  DATE: 6/27/2016</p> <p>SEAL</p> 		<p>TEMPORARY SHORING NOTES</p>
<p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</p>		

SIGN NUMR: T100
 TYPE: F Ground
 QUANTITY: 1

BACKG. COLOR: White
 COPY COLOR: Black

DESIGN BY: DME
 PROJECT ID:

CHK BY:
 DIV:

STD #: \$STN
 DATE: Aug 02, 2011

N. C. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 TRAFFIC ENGINEERING BRANCH
 SIGNING DEPARTMENT



SIGN WIDTH: 1'-9"
 HEIGHT: 1'-9"
 TOTAL AREA: 3.1 Sq.Ft.

MAT'L: 0.063" ALUMINUM

BORDER TYPE: RECESSED

RECESS: 0.38"

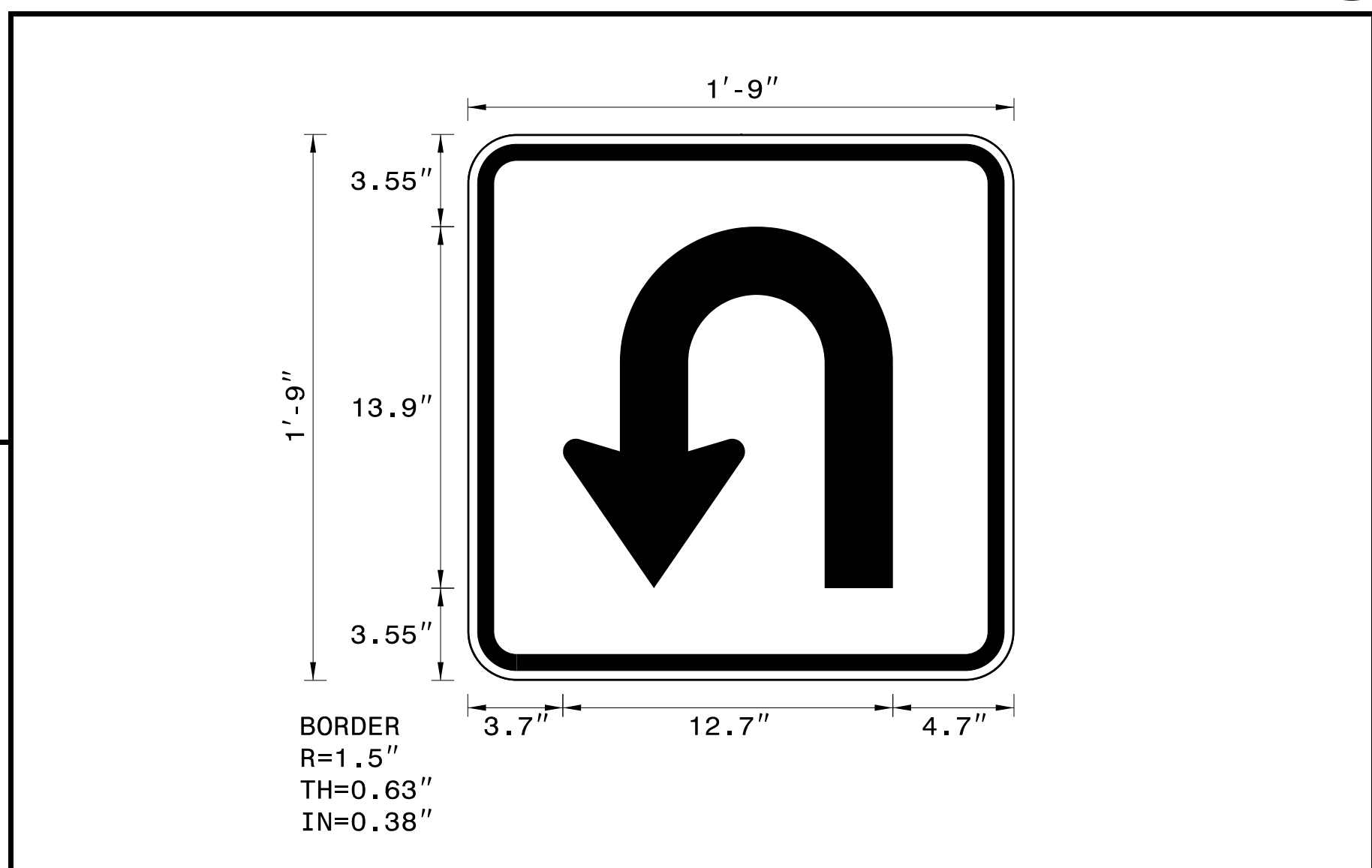
WIDTH: 0.63"

RADII: 1.5"

NO. Z BARS:

LENGTH:

SYMBOL	X	Y	WID	HT
u arrow	3.7	3.5	12.7	13.9



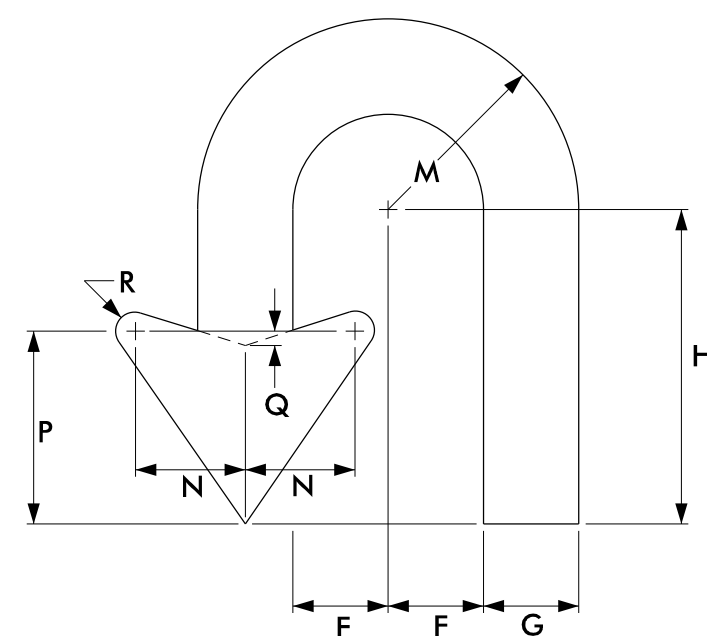
USE NOTES: 2,5

- Legend and border shall be direct applied Grade A reflective sheeting.
- Legend and border shall be direct applied Non-reflective sheeting.
- Shields shall be Grade A reflective sheeting on 0.032" aluminum and demountable.
- Background shall be Grade B reflective sheeting.
- Background shall be Grade C reflective sheeting.
- Center arrow(s) vertically on sign.

REFER TO THE FOLLOWING SHEETS FOR INSTALLATION OF SIGN T-100:

- TMP-8
- TMP-15
- TMP-17
- TMP-29
- TMP-30

Arrow Details



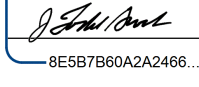
ARROW DIMENSIONS (INCHES)	F	G	H	M	N	P	Q	R
	2.625	2.625	8.659	5.25	3	5.25	0.375	0.5

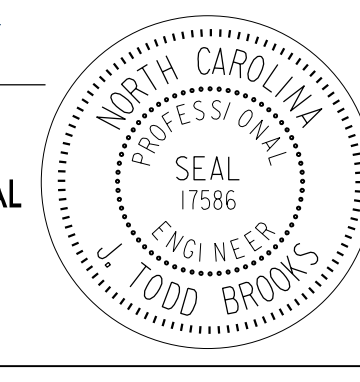
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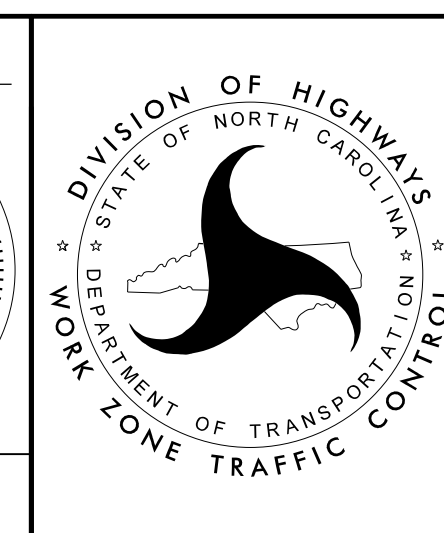
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5/24/2016 0:11:50 Production\Production\Trans\NCDOT\I-540 Ramp Metering\Traffic\TrafficControl\TCP\I-5710_TC_TCP_02B.dgn User:MLL2054

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: 
 DATE: 5/24/2016

SEAL 



SPECIAL SIGN DETAIL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PHASING

PROJ. REFERENCE NO. I-5710	SHEET NO. TMP-3
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NOTE: ONLY ONE RAMP CLOSURE AND DETOUR WILL BE PERMITTED AT ANY GIVEN TIME. SIMULTANEOUS CLOSURE AND DETOUR OF TWO OR MORE RAMPS IS PROHIBITED.

STEP 1 - CONTINUED:

CREEDMOOR ROAD WB ON-RAMP -RB2- (CONT.)

USING RSD 1101.01, INSTALL ADVANCE WORK ZONE WARNING SIGNS ON I-540 WESTBOUND LANES, ON THE EXIT RAMPS FROM I-540 TO LEESVILLE ROAD, TO CREEDMOOR ROAD AND TO SIX FORKS ROAD, AND ON LEESVILLE ROAD, CREEDMOOR ROAD AND SIX FORKS ROAD.

PHASE I

THE OBJECTIVE OF PHASE I, STEP 1 IS TO PERFORM AS MUCH WORK AS POSSIBLE IN ADVANCE OF PHASE I, STEPS 2 AND 3, TO MINIMIZE THE AMOUNT OF CONSTRUCTION THAT MUST BE PERFORMED DURING WEEKEND RAMP CLOSURES PHASE I, STEPS 2 AND 3.

STEP 1:

LEESVILLE ROAD WB ON-RAMP -RB1-

USING THE DETAILS ON TMP-4 AND TMP-5, TEMPORARILY CLOSE THE LEFT LANE OF -RB1- LEESVILLE ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM LEESVILLE ROAD NB, THEN PLACE FILL MATERIAL, PERFORM GRADING AND WIDEN THE EXISTING GRADED SHOULDER UP TO THE EDGE AND ELEVATION OF THE EXISTING PAVED SHOULDER ALONG THE SOUTH SIDE OF RAMP -RB1-. [SEE SECTION A-A ON TMP-4]. PROVIDE FLAGGERS AND FLAGGER AHEAD SIGNS AS DIRECTED BY THE ENGINEER TO HELP CONSTRUCTION VEHICLES TO ENTER RAMP LANE FROM CLOSED LANE AND WORK AREA.

USING THE DETAILS ON TMP-6 AND TMP-7, TEMPORARILY CLOSE THE RIGHT LANE OF -RB1- LEESVILLE ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM LEESVILLE ROAD NB, THEN PLACE FILL MATERIAL, PERFORM GRADING AND CONSTRUCT EMBANKMENT UP TO THE EDGE AND ELEVATION OF THE EXISTING PAVED SHOULDER ALONG THE NORTH SIDE OF THE RAMP. [SEE SECTIONS A-A AND B-B ON TMP-6]. PROVIDE FLAGGERS AND FLAGGER AHEAD SIGNS AS DIRECTED BY THE ENGINEER TO HELP CONSTRUCTION VEHICLES TO ENTER RAMP LANE FROM CLOSED LANE AND WORK AREA.

INSTALL AND COVER WARNING SIGNS AND DETOUR SIGNS IN PREPARATION FOR UPCOMING -RB1- LEESVILLE ROAD WB ON-RAMP CLOSURES AND DETOURS AS SHOWN ON TMP-8 THRU TMP-10. [SEE LOCAL NOTE LN-1]

DURING A SINGLE OVERNIGHT PERIOD, MILL THE EXISTING RAMP PAVEMENT IN THE VICINITY OF THE I-540 GORE AREA FROM STA 3+50 -RB1- TO STA 8+75 -RB1- AS FOLLOWS:

- USE THE DETAILS ON TMP-8 THRU TMP-10, TO CLOSE THE -RB1- LEESVILLE ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-10 FOR A SINGLE OVERNIGHT PERIOD.
- CLOSE THE ADJACENT RIGHT LANE OF I-540 WESTBOUND USING RSD 1101.02, SHEET 4.
- ONCE THE RAMP AND ADJACENT RIGHT LANE OF WESTBOUND I-540 ARE CLOSED, MILL THE EXISTING RAMP PAVEMENT.
- REPLACE EXISTING PAVEMENT MARKINGS OBLITERATED BY MILLING AND REOPEN RAMP AND RIGHT LANE OF WESTBOUND I-540 TO TRAFFIC BY END OF THE OVERNIGHT WORK PERIOD.

CREEDMOOR ROAD WB ON-RAMP -RB2-

USING THE DETAILS ON TMP-11 AND TMP-12, TEMPORARILY CLOSE THE LEFT LANE OF -RB2- CREEDMOOR ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM CREEDMOOR ROAD NB, THEN PLACE FILL MATERIAL, PERFORM GRADING AND WIDEN THE EXISTING GRADED SHOULDER UP TO THE EDGE AND ELEVATION OF THE EXISTING PAVED SHOULDER ALONG THE SOUTH SIDE OF RAMP -RB2-. [SEE SECTION A-A ON TMP-11]. PROVIDE FLAGGERS AND FLAGGER AHEAD SIGNS AS DIRECTED BY THE ENGINEER TO HELP CONSTRUCTION VEHICLES TO ENTER RAMP LANE FROM CLOSED LANE AND WORK AREA.

USING THE DETAILS ON TMP-13 AND TMP-14, TEMPORARILY CLOSE THE RIGHT LANE OF -RB2- CREEDMOOR ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM CREEDMOOR ROAD NB, THEN PLACE FILL MATERIAL, PERFORM GRADING AND CONSTRUCT EMBANKMENT UP TO THE EDGE AND ELEVATION OF THE EXISTING PAVED SHOULDER ALONG THE NORTH SIDE OF THE RAMP. [SEE SECTIONS A-A AND B-B ON TMP-13]. PROVIDE FLAGGERS AND FLAGGER AHEAD SIGNS AS DIRECTED BY THE ENGINEER TO HELP CONSTRUCTION VEHICLES TO ENTER RAMP LANE FROM CLOSED LANE AND WORK AREA.

INSTALL AND COVER WARNING SIGNS AND DETOUR SIGNS IN PREPARATION FOR UPCOMING -RB2- CREEDMOOR ROAD WB ON-RAMP CLOSURES AND DETOURS AS SHOWN ON TMP-15 THRU TMP-17. [SEE LOCAL NOTE LN-1]

DURING A SINGLE OVERNIGHT PERIOD, MILL THE EXISTING RAMP PAVEMENT IN THE VICINITY OF THE I-540 GORE AREA FROM STA 0+00 -RB2- TO STA 9+05 -RB2- AS FOLLOWS:

- USE THE DETAILS ON TMP-15 THRU TMP-17, TO CLOSE THE -RB2- CREEDMOOR ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-17 FOR A SINGLE OVERNIGHT PERIOD.
- CLOSE THE ADJACENT RIGHT LANE OF I-540 WESTBOUND USING RSD 1101.02, SHEET 4.
- ONCE THE RAMP AND ADJACENT RIGHT LANE OF WESTBOUND I-540 ARE CLOSED, MILL THE EXISTING RAMP PAVEMENT.

REPLACE EXISTING PAVEMENT MARKINGS OBLITERATED BY MILLING AND REOPEN RAMP AND RIGHT LANE OF WESTBOUND I-540 TO TRAFFIC BY END OF THE OVERNIGHT WORK PERIOD.

I-540 WESTBOUND AT -RB1-, -RB2- AND -RB3-

WORKING BEHIND SHOULDER CLOSURES ON WESTBOUND I-540 [SEE RSD NO. 1101.04], DIRECTIONAL DRILL CONDUIT BENEATH I-540 WEST AND INSTALL JUNCTIONS BOXES AT EACH END OF BORE AT THE LEESVILLE ROAD, CREEDMOOR ROAD AND SIX FORKS ROAD INTERCHANGES [SEE ITS PLANS].

INSTALL LOOP DETECTORS IN THE WESTBOUND LANES OF I-540 UPSTREAM OF -RB1-, -RB2- AND -RB3- ON-RAMP GORES AT THE LEESVILLE ROAD, CREEDMOOR ROAD AND SIX FORKS ROAD INTERCHANGES AS FOLLOWS [SEE ITS PLANS]:

- USE RSD 1101.02, SHEET 8, TO CLOSE THE RIGHT AND CENTER LANES OF I-540 WESTBOUND AND INSTALL LOOPS IN THE CLOSED RIGHT AND CENTER LANES.
- USE RSD 1101.02, SHEET 4, TO CLOSE THE LEFT LANE OF I-540 WESTBOUND AND INSTALL THE LOOP WITHIN THE CLOSED LEFT LANE.

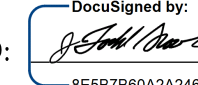
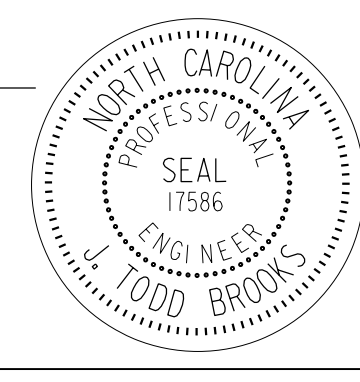
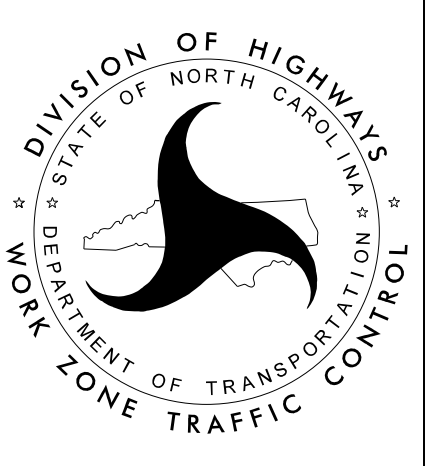
THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE I, STEP 2 WITHIN A SINGLE WEEKEND PERIOD BETWEEN 9:00 PM FRIDAY AND 6:00 AM THE FOLLOWING MONDAY. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

STEP 2: UNCOVER ROAD CLOSURE AND DETOUR SIGNS AND PLACE DRUMS AND BARRICADES TO TEMPORARILY CLOSE -RB1- LEESVILLE ROAD WB ON-RAMP AS SHOWN ON TMP-8 THRU TMP-10. DETOUR -RB1- RAMP TRAFFIC TO ADJACENT CREEDMOOR ROAD INTERCHANGE VIA I-540 EB AS SHOWN ON TMP-10.

WITH -RB1- CLOSED TO TRAFFIC, PERFORM THE FOLLOWING WORK:

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STEP 2 - CONTINUED FROM SHEET TMP-3

- CONSTRUCT PROPOSED WIDENING ON NORTH SIDE OF RAMP -RB1- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM STA 8+75 -RB1- TO STA 14+70 -RB1-.
- CONSTRUCT GUARDRAIL ALONG NORTH SIDE OF RAMP [SEE ROADWAY PLANS].
- WEDGE AND RESURFACE EXISTING RAMP PAVEMENT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM STA 8+75 -RB1- TO STA 14+70 -RB1-.
- PLACE TEMPORARY MARKINGS (PAINT) IN PROPOSED FINAL PATTERN.

REMOVE DRUMS AND BARRICADES, REOPEN -RB1- TO TRAFFIC, THEN COVER OR REMOVE ROAD CLOSURE AND DETOUR SIGNING.

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE I, STEP 3 WITHIN A SINGLE WEEKEND PERIOD BETWEEN 9:00 PM FRIDAY AND 6:00 AM THE FOLLOWING MONDAY. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

STEP 3: UNCOVER ROAD CLOSURE AND DETOUR SIGNS AND PLACE DRUMS AND BARRICADES TO TEMPORARILY CLOSE -RB2- CREEDMOOR ROAD WB ON-RAMP AS SHOWN ON TMP-15 THRU TMP-17. DETOUR -RB2- RAMP TRAFFIC TO ADJACENT SIX FORKS ROAD INTERCHANGE VIA I-540 EB AS SHOWN ON TMP-17.

WITH -RB2- CLOSED TO TRAFFIC, PERFORM THE FOLLOWING WORK:

- CONSTRUCT PROPOSED WIDENING ON NORTH SIDE OF RAMP -RB2- UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM STA 9+05 -RB2- TO STA 13+50 -RB2-.
- CONSTRUCT GUARDRAIL ALONG NORTH SIDE OF RAMP [SEE ROADWAY PLANS].
- WEDGE AND RESURFACE EXISTING RAMP PAVEMENT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM STA 9+05 -RB2- TO STA 13+50 -RB2-.
- PLACE TEMPORARY MARKINGS (PAINT) IN PROPOSED FINAL PATTERN.

REMOVE DRUMS AND BARRICADES, REOPEN -RB2- TO TRAFFIC, THEN COVER OR REMOVE ROAD CLOSURE AND DETOUR SIGNING.

STEP 4:

LEESVILLE ROAD WB ON-RAMP -RB1-

WORKING BEHIND SHOULDER CLOSURES ON WESTBOUND ON-RAMP -RB1- [SEE RSD NO. 1101.04], CONSTRUCTION THE FOLLOWING RAMP METER SIGNAL EQUIPMENT, INCLUDING INSTALLATION OF ELECTRICAL SERVICE, ALONG THE RAMP -RB1- [SEE ITS PLANS]:

- DIRECTIONAL DRILL CONDUITS BENEATH -RB1- AND INSTALL JUNCTIONS BOXES AT EACH END OF BORE.
- INSTALL UNDERGROUND CONDUIT AND JUNCTION BOXES ALONG SOUTH SIDE OF RAMP -RB1-.
- CONSTRUCT FOUNDATIONS FOR PROPOSED CONTROLLER CABINET AND SIGNAL PEDESTALS.
- INSTALL RAMP METER CONTROLLER AND CABINET AND PEDESTALS ON FOUNDATIONS ONCE FOUNDATIONS HAVE CURED.

USING THE DETAILS ON TMP-4 THROUGH TMP-7, ALTERNATELY CLOSE ONE LANE ON -RB1- LEESVILLE ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM LEESVILLE ROAD NB, THEN INSTALL PROPOSED LOOP DETECTORS IN CLOSED LANE. [SEE LOCAL NOTE LN-1]

STEP 4 - CONTINUED:

CREEDMOOR ROAD WB ON-RAMP -RB2-

WORKING BEHIND SHOULDER CLOSURES ON WESTBOUND ON-RAMP -RB2- [SEE RSD NO. 1101.04], CONSTRUCTION THE FOLLOWING RAMP METER SIGNAL EQUIPMENT, INCLUDING INSTALLATION OF ELECTRICAL SERVICE, ALONG THE RAMP -RB2- [SEE ITS PLANS]:

- DIRECTIONAL DRILL CONDUITS BENEATH -RB2- AND INSTALL JUNCTION BOXES AT EACH END OF BORE.
- INSTALL UNDERGROUND CONDUIT AND JUNCTION BOXES ALONG SOUTH SIDE OF RAMP -RB2-.
- CONSTRUCT FOUNDATIONS FOR PROPOSED CONTROLLER CABINET AND SIGNAL PEDESTALS.
- INSTALL RAMP METER CONTROLLER AND CABINET AND PEDESTALSON FOUNDATIONS ONCE FOUNDATIONS HAVE CURED.

USING THE DETAILS ON TMP-11 THROUGH TMP-14, ALTERNATELY CLOSE ONE LANE ON -RB2- CREEDMOOR ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM CREEDMOOR ROAD NB, THEN INSTALL PROPOSED LOOP DETECTORS IN CLOSED LANE. [SEE LOCAL NOTE LN-1]

SIX FORKS ROAD WB ON-RAMP -RB3-

WORKING BEHIND SHOULDER CLOSURES ON WESTBOUND ON-RAMP -RB3- [SEE RSD NO. 1101.04], CONSTRUCT THE FOLLOWING RAMP METER SIGNAL EQUIPMENT, INCLUDING INSTALLATION OF ELECTRICAL SERVICE, ALONG THE RAMP -RB3- [SEE ITS PLANS]:

- DIRECTIONAL DRILL CONDUITS BENEATH -RB3- AND INSTALL JUNCTION BOXES AT EACH END OF BORE.
- INSTALL UNDERGROUND CONDUIT AND JUNCTION BOXES ALONG NORTH SIDE OF RAMP -RB3-.
- CONSTRUCT FOUNDATIONS FOR PROPOSED CONTROLLER CABINET AND SIGNAL PEDESTALS.
- INSTALL RAMP METER CONTROLLER AND CABINET AND PEDESTALSON FOUNDATION ONCE FOUNDATIONS HAVE CURED.

INSTALL UNDERGROUND CONDUITS IN ISLAND BETWEEN THE RIGHT TURN LANE AND LEFT TURN LANES ONTO RAMP -RB3-.

INSTALL PROPOSED LOOP DETECTORS ON SIX FORKS ROAD WB ON-RAMP -RB3- [SEE ITS PLANS AND SIGNING AND DELINEATION PLANS], USING ONE OF THE FOLLOWING METHODS [SEE LOCAL NOTE LN-1]:

- USE THE DETAILS ON TMP-11 THROUGH TMP-14, ALTERNATELY CLOSE ONE LANE ON RAMP -RB3- ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM SIX FORKS ROAD NB DURING NON-PEAK HOURS
- USE THE DETAILS ON TMP-15 THRU TMP-17, TO CLOSE THE -RB3- SIX FORKS ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-17, FOR A SINGLE OVERNIGHT WORK PERIOD.

(CONTINUED ON SHEET TMP-3B)

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STEP 4 - CONTINUED:

I-540 AT FALLS OF NEUSE ROAD WB ON-RAMP -RB4-

USING RSD 1101.01, INSTALL ADVANCE WORK ZONE WARNING SIGNS ON I-540 WESTBOUND LANES, FALLS OF NEUSE ROAD, ON THE EXIT RAMP FROM I-540 TO FALLS OF NEUSE ROAD, ON FALLS VALLEY DRIVE AND ON THORPSHIRE DRIVE.

STEP 5: USING THE DETAILS ON TMP-25 AND TMP-26, TEMPORARILY CLOSE THE LEFT LANE OF -RB4- FALLS OF NEUSE ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM FALLS OF NEUSE ROAD NB, THEN PLACE FILL MATERIAL, PERFORM GRADING AND WIDEN THE EXISTING GRADED SHOULDER UP TO THE EDGE AND ELEVATION OF THE EXISTING PAVED SHOULDER ALONG THE SOUTH SIDE OF RAMP -RB4-. PROVIDE FLAGGERS AND FLAGGER AHEAD SIGNS AS DIRECTED BY THE ENGINEER TO HELP CONSTRUCTION VEHICLES TO ENTER RAMP LANE FROM CLOSED LANE AND WORK AREA.

USING THE DETAILS ON TMP-27 AND TMP-28, TEMPORARILY CLOSE THE RIGHT LANE OF -RB4- FALLS OF NEUSE ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM FALLS OF NEUSE ROAD NB, THEN CONSTRUCT TEMPORARY PAVEMENT BETWEEN EXISTING PAVED SHOULDER AND EXISTING GUARDRAIL ALONG NORTH SIDE OF RAMP -RB4- FROM STA 14+00 TO STA 15+00 TO FACILITATE P.C.B. INSTALLATION IN STEP 6.

INSTALL AND COVER WARNING SIGNS AND DETOUR SIGNS IN PREPARATION FOR UPCOMING -RB4- FALLS OF NEUSE ROAD WB ON-RAMP CLOSURES AND DETOURS AS SHOWN ON TMP-29 THRU TMP-31. [SEE LOCAL NOTES LN-1 AND LN-3]

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE I, STEPS 6 THROUGH 9 WITHIN 90 CALENDAR DAYS. [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES]

STEP 6: USE THE DETAILS ON TMP-29 THRU TMP-31 TO CLOSE THE -RB4- FALLS OF NEUSE ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-31 FOR A SINGLE OVERNIGHT PERIOD AND PERFORM THE FOLLOWING WORK TO INSTALL P.C.B. ON RAMP -RB4- TRAFFIC AS SHOWN ON TMP-32 [SEE LOCAL NOTES LN-1 AND LN-3]:

- INSTALL PORTABLE CONCRETE BARRIER (P.C.B.) ALONG THE NORTH SIDE OF RAMP -RB4- AND TIE APPROACH END OF P.C.B. TO EXISTING GUARDRAIL AS SHOWN ON TMP-32 [SEE SECTION A-A, STEP A].
- PLACE DRUMS TO CLOSE EXISTING SHOULDER ON NORTH SIDE OF RAMP -RB4- AND TO DELINEATE APPROACH END OF P.C.B. AS SHOWN ON TMP-32.
- REMOVE BARRICADES REOPEN RAMP AND DISCONTINUE RAMP DETOUR BY END OF OVERNIGHT WORK PERIOD.

STEP 7: WORKING AWAY FROM TRAFFIC AND BEHIND P.C.B., INSTALL TEMPORARY SHORING ALONG NORTH SIDE OF RAMP -RB4- FROM STA 8+50 -RB4- TO STA 14+00 -RB4- AS SHOWN ON SEE TMP-32. [SEE SECTION A-A, STEP A ON TMP-32].

ONCE TEMPORARY SHORING HAS BEEN INSTALLED, CONSTRUCT PROPOSED M.S.E. RETAINING WALL ON NORTH SIDE OF RAMP -RB4- FROM STA 7+00 -RB4- TO STA 14+00 -RB4-. [SEE TMP-32 AND SECTION A-A, STEP A]

UPON COMPLETION OF RETAINING WALL, REMOVE TEMPORARY SHORING AND CONSTRUCT PROPOSED PAVEMENT WIDENING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE, CONSTRUCT GUARDRAIL ON NORTH SIDE OF RAMP -RB4- FROM STA 6+05 -RB4- TO STA 14+00 -RB4- [SEE TMP-32 AND SECTION A-A, STEP B AND SEE ROADWAY PLANS].

CONSTRUCT PROPOSED ITS UNDERGROUND CONDUITS, JUNCTION BOXES, SIGNAL PEDESTAL FOUNDATION AND CONTROLLER CABINET FOUNDATION ON THE NORTH SIDE OF RAMP AS MUCH AS POSSIBLE BEHIND P.C.B. [SEE ITS PLANS]

STEP 8: USE THE DETAILS ON TMP-29 THRU TMP-31 TO CLOSE THE -RB4- FALLS OF NEUSE ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-31 FOR A SINGLE OVERNIGHT PERIOD AND PERFORM THE FOLLOWING WORK [SEE LOCAL NOTES LN-1 AND LN-3]:

STEP 8 - CONTINUED:

- REMOVE P.C.B. PREVIOUSLY INSTALLED ALONG THE NORTH SIDE OF RAMP -RB4- AND REPLACE P.C.B. WITH DRUMS SPACED 50 FT APART.
- COMPLETE GUARDRAIL TO WHICH P.C.B. WAS TEMPORARILY TIED.
- REMOVE BARRICADES REOPEN RAMP AND DISCONTINUE RAMP DETOUR BY END OF OVERNIGHT WORK PERIOD.

STEP 9: USE THE DETAILS ON TMP-29 THRU TMP-31 TO CLOSE THE -RB4- FALLS OF NEUSE ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-31 FOR A SINGLE OVERNIGHT PERIOD AND PERFORM THE FOLLOWING WORK TO SHIFT RAMP -RB4- TRAFFIC INTO FINAL PATTERN USING TEMPORARY MARKINGS [SEE LOCAL NOTES LN-1 AND LN-3]:

- WEDGE EXISTING PAVEMENT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE.
- REVISE PAVEMENT MARKINGS ON -RB4- TO PROPOSED FINAL PATTERN USING TEMPORARY MARKINGS [SEE PAVEMENT MARKING PLANS].
- REMOVE BARRICADES REOPEN RAMP AND DISCONTINUE RAMP DETOUR BY END OF OVERNIGHT WORK PERIOD.

STEP 10: WORKING BEHIND SHOULDER CLOSURES ON WESTBOUND I-540 [SEE RSD NO. 1101.04], DIRECTIONAL DRILL CONDUIT BENEATH I-540 WEST AND INSTALL JUNCTIONS BOXES AT EACH END OF BORE [SEE ITS PLANS].

INSTALL LOOP DETECTORS IN THE WESTBOUND LANES OF I-540 UPSTREAM OF ON-RAMP GORE AS FOLLOWS [SEE ITS PLANS]:

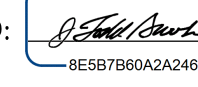


- USE RSD 1101.02, SHEET 8, TO CLOSE THE RIGHT AND CENTER LANES OF I-540 WESTBOUND AND INSTALL LOOPS IN THE CLOSED RIGHT AND CENTER LANES.
- USE RSD 1101.02, SHEET 4, TO CLOSE THE LEFT LANE OF I-540 WESTBOUND AND INSTALL THE LOOP WITHIN THE CLOSED LEFT LANE.

WORKING BEHIND SHOULDER CLOSURES ON WESTBOUND ON-RAMP -RB4- [SEE RSD NO. 1101.04], CONSTRUCT THE FOLLOWING RAMP METER SIGNAL EQUIPMENT ALONG RAMP -RB4- [SEE ITS PLANS]:

- DIRECTIONAL DRILL CONDUITS BENEATH -RB4- AND THE I-540 WB EXIT LOOP AND INSTALL JUNCTION BOXES AT EACH END OF BORES.
- INSTALL UNDERGROUND CONDUIT AND JUNCTION BOXES ALONG SOUTH SIDE OF RAMP -RB4- AND THE I-540 EXIT LOOP.
- INSTALL CONTROLLER CABINET AND PEDESTALS ON FOUNDATIONS ONCE FOUNDATIONS HAVE CURED.

USING THE DETAILS ON TMP-25 THROUGH TMP-28, ALTERNATELY CLOSE ONE LANE ON -RB4- FALLS OF NEUSE ROAD WB ON-RAMP ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM FALLS OF NEUSE ROAD NB, THEN INSTALL PROPOSED LOOP DETECTORS IN CLOSED LANE. [SEE LOCAL NOTE LN-1]

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PHASE II

STEP 1:

LEESVILLE ROAD WB ON-RAMP -RB1-

WORKING BEHIND A SHOULDER CLOSURE OR TEMPORARY RIGHT LANE CLOSURE ON NORTHBOUND LEESVILLE ROAD AND SHOULDER CLOSURES ON THE I-540 WESTBOUND OFF-RAMP, PERFORM THE FOLLOWING ITS CONSTRUCTION [SEE ITS PLANS]:

- INSTALL PROPOSED CCTV CAMERA ASSEMBLY (POLE, POLE-MOUNTED CABINET AND CAMERA) IN THE NORTHWEST CORNER OF THE INTERSECTION OF LEESVILLE ROAD AND THE OFF-RAMP FROM I-540 WESTBOUND [SEE RSD 1101.02, SHEET 3 AND RSD 1101.04].
- DIRECTIONAL DRILL CONDUITS BENEATH THE OFF-RAMP AND INSTALL JUNCTIONS BOXES AT EACH END OF BORE [SEE RSD 1101.04].

USE THE DETAILS ON TMP-8 THRU TMP-10 , TO CLOSE THE -RB1- LEESVILLE ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-10 AND RSD NO. 1101.02, SHEET 4 TO CLOSE ADJACENT RIGHT LANE OF WESTBOUND I-540 AND, DURING A SINGLE OVERNIGHT WORK PERIOD, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS AND PERMANENT SIGNS ON RAMP -RB1- FROM STA 3+50 -RB1- TO STA 14+70 -RB1-. [SEE SIGNING AND DELINEATION PLANS] [SEE LOCAL NOTE LN-1]

CREEDMOOR ROAD WB ON-RAMP -RB2-

USE THE DETAILS ON TMP-15 THRU TMP-17 , TO CLOSE THE -RB2- CREEDMOOR ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-17 AND RSD NO. 1101.02, SHEET 4 TO CLOSE ADJACENT RIGHT LANE OF WESTBOUND I-540 AND, DURING A SINGLE OVERNIGHT WORK PERIOD, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS AND PERMANENT SIGNS ON RAMP -RB2- FROM STA 0+00 -RB2- TO STA 13+50 -RB2-. [SEE SIGNING AND DELINEATION PLANS] [SEE LOCAL NOTE LN-1]

SIX FORKS ROAD WB ON-RAMP -RB3-

WORKING BEHIND SHOULDER CLOSURES ON WESTBOUND ON-RAMP -RB3- [SEE RSD NO 1101.04], INSTALL PROPOSED CCTV CAMERA POLE, CAMERA ASSEMBLY AND POLE-MOUNTED CABINET IN THE NW CORNER OF THE INTERSECTION OF SIX FORKS ROAD AND RAMP -RB3-.

INSTALL PROPOSED LOOP DETECTORS, PLACE FINAL PAVEMENT MARKINGS AND INSTALL PERMANENT SIGNS ON SIX FORKS ROAD WB ON-RAMP -RB3- [SEE ITS PLANS AND SIGNING AND DELINEATION PLANS], USING ONE OF THE FOLLOWING METHODS [SEE LOCAL NOTE LN-1]:

- USE THE DETAILS ON TMP-11 THROUGH TMP-14, ALTERNATELY CLOSE ONE LANE ON RAMP -RB3- ALONG WITH THE CORRESPONDING LANE OF THE UPSTREAM DUAL LEFT TURN FROM SIX FORKS ROAD NB DURING NON-PEAK HOURS
- USE THE DETAILS ON TMP-15 THRU TMP-17, TO CLOSE THE *RB3- SIX FORKS ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-17, FOR A SINGLE OVERNIGHT WORK PERIOD.

STEP 1 - CONTINUED:

FALLS OF NEUSE ROAD WB ON-RAMP -RB4-

WORKING BEHIND EXISTING GUARDRAIL ALONG EAST AND WEST SIDES OF FALLS OF NEUSE ROAD NORTH OF I-540, INSTALL PROPOSED UNDERGROUND CONDUIT, INCLUDING DIRECTIONAL DRILL UNDER FALLS OF NEUSE ROAD, AND INSTALL COMMUNICATIONS CABLE TO THE EXISTING CCTV CAMERA CABINET AT THE NORTHEAST END OF THE BRIDGE OVER I-540. [SEE ITS PLANS]

USE THE DETAILS ON TMP-29 THRU TMP-31 , TO CLOSE THE -RB4- FALLS OF NEUSE ROAD WB ON-RAMP AND DETOUR RAMP TRAFFIC AS SHOWN ON TMP-31 AND RSD NO. 1101.02, SHEET 4 TO CLOSE ADJACENT RIGHT LANE OF WESTBOUND I-540 AND, DURING A SINGLE OVERNIGHT WORK PERIOD, PERFORM THE FOLLOWING WORK [SEE LOCAL NOTES LN-1 AND LN-3]:

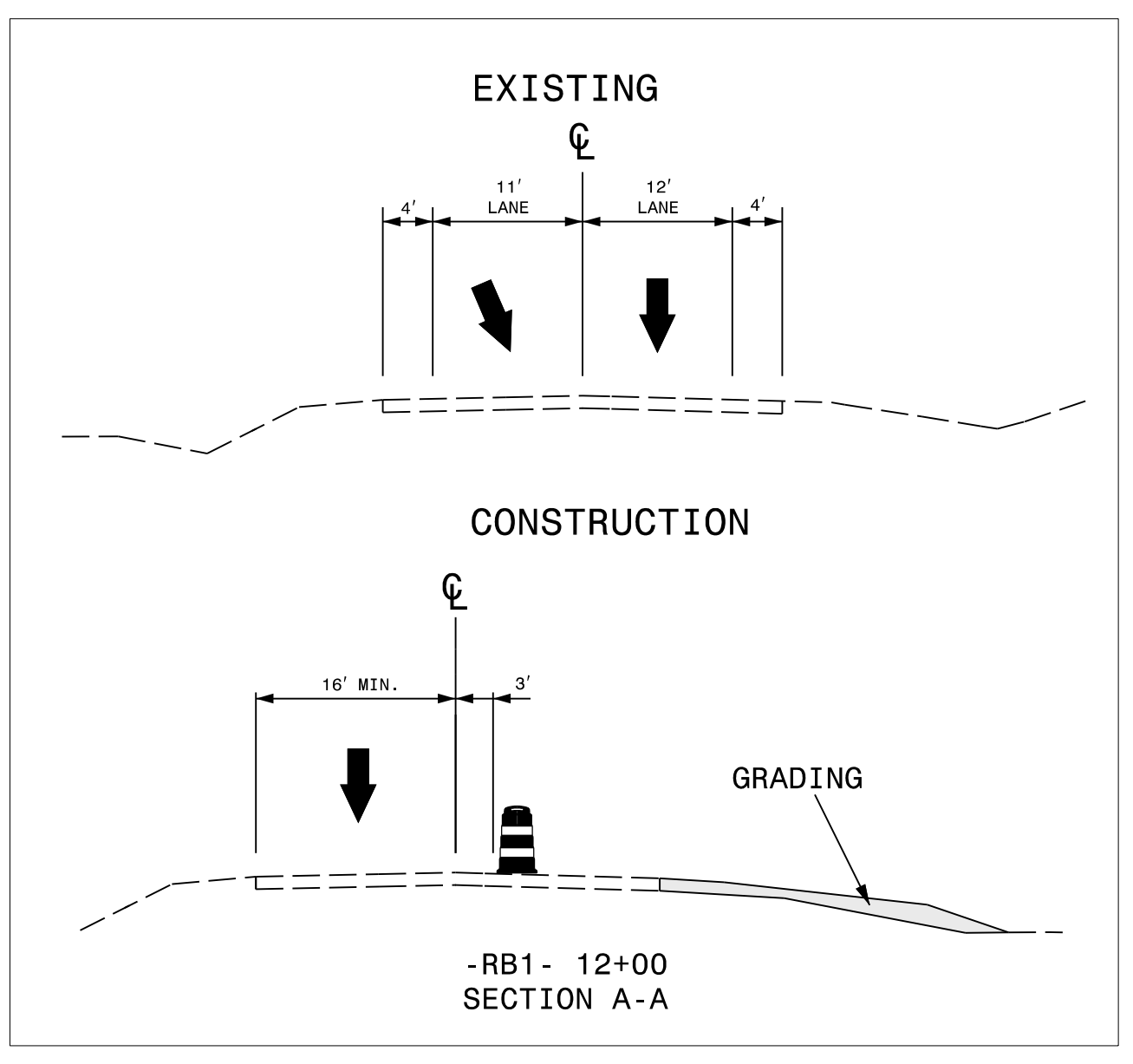
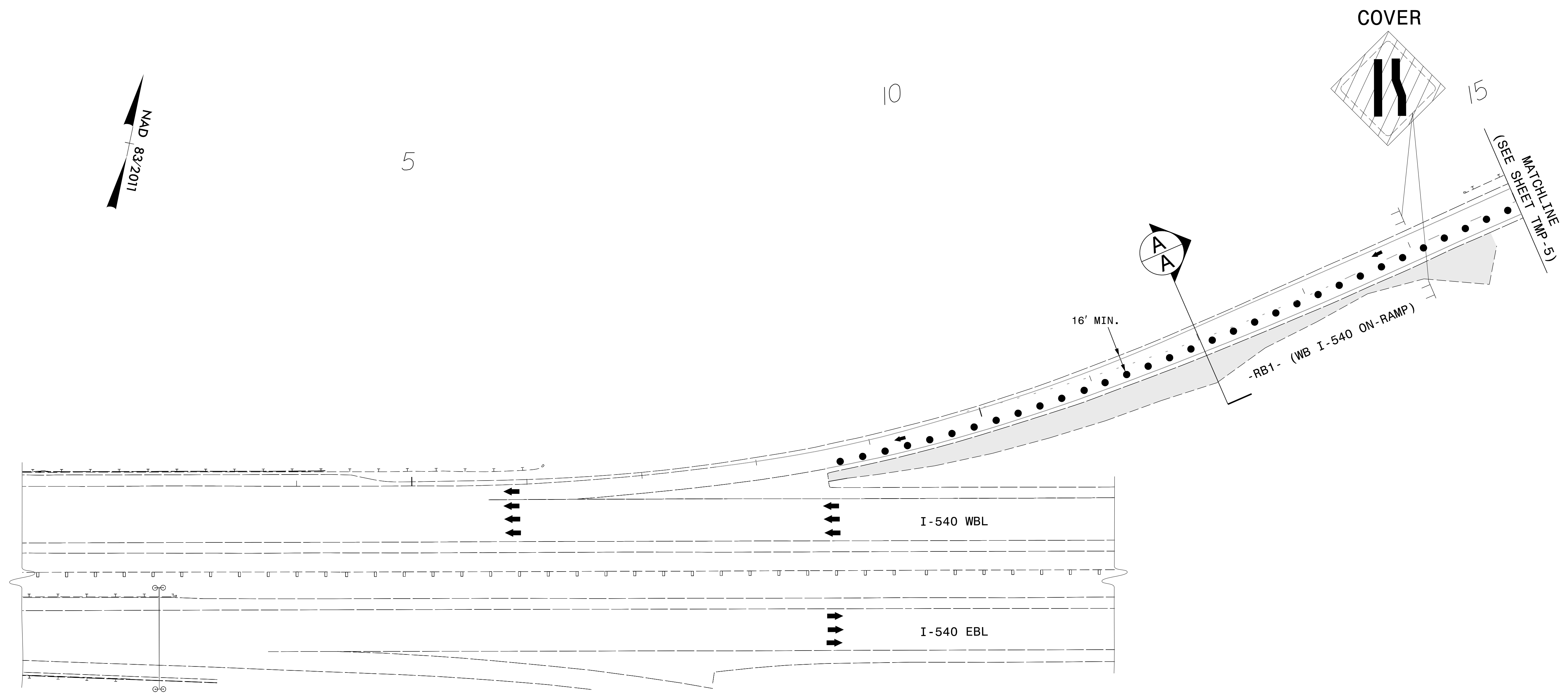
- MILL THE EXISTING RAMP PAVEMENT IN THE VICINITY OF THE I-540 GORE AREA FROM STA 2+50 -RB4- TO STA 5+50 -RB4-
- PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS AND PERMANENT SIGNS ON RAMP -RB4- FROM STA 2+50 -RB4- TO STA 14+00 -RB4-.
- PLACE FINAL PAVEMENT MARKINGS AND INSTALL PERMANENT SIGNS ON RAMP *RB4- [SEE SIGNING AND DELINEATION PLANS]

STEP 2: ACTIVATE -RB1-, -RB2-, -RB3- AND -RB4- RAMP METER SIGNALS ONCE ALL CONSTRUCTION HAS BEEN COMPLETED ON ALL FOUR RAMPS AND ALL SIGNALS ARE READY FOR ACTIVATION.

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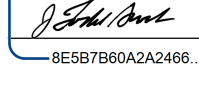
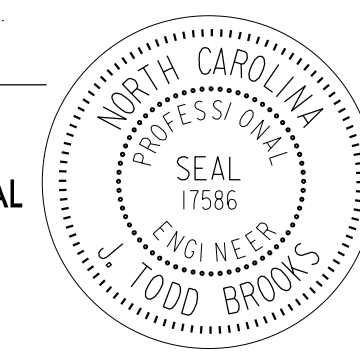
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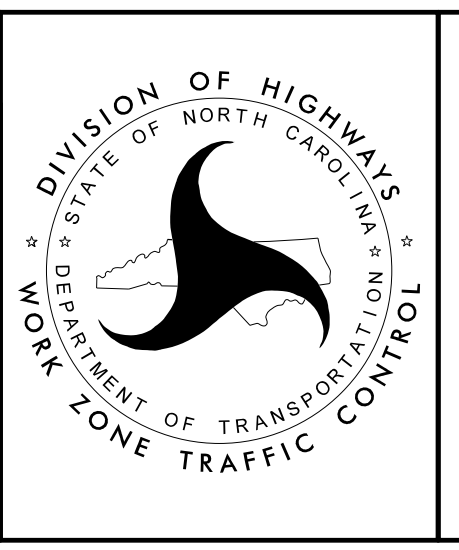
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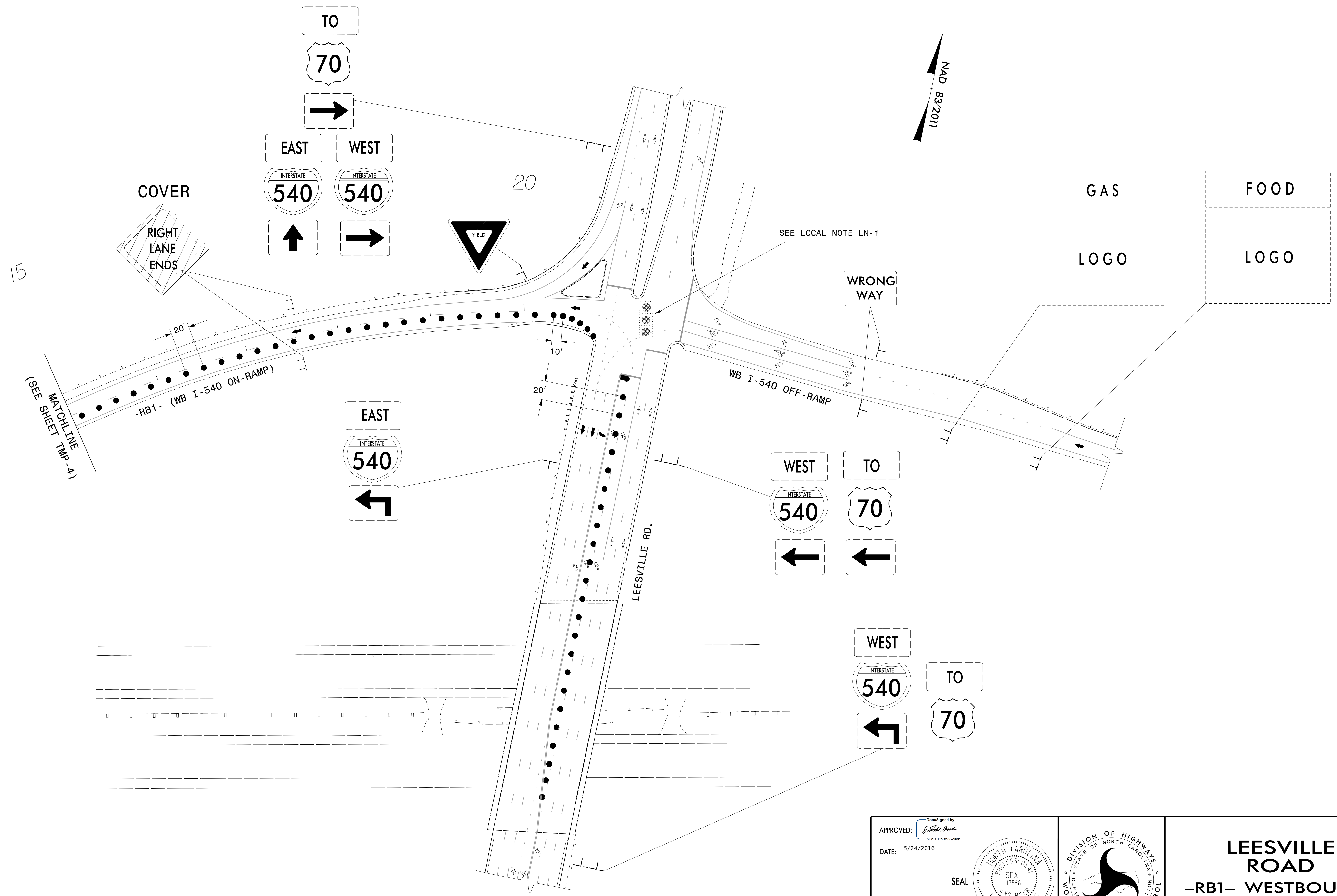
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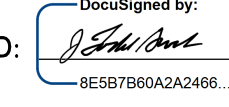
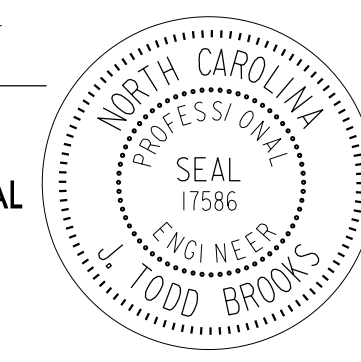
LEESVILLE ROAD
-RB1- WESTBOUND ON-RAMP LEFT LANE CLOSURE

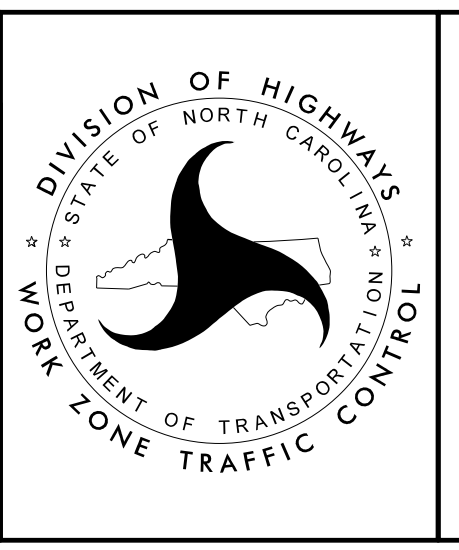
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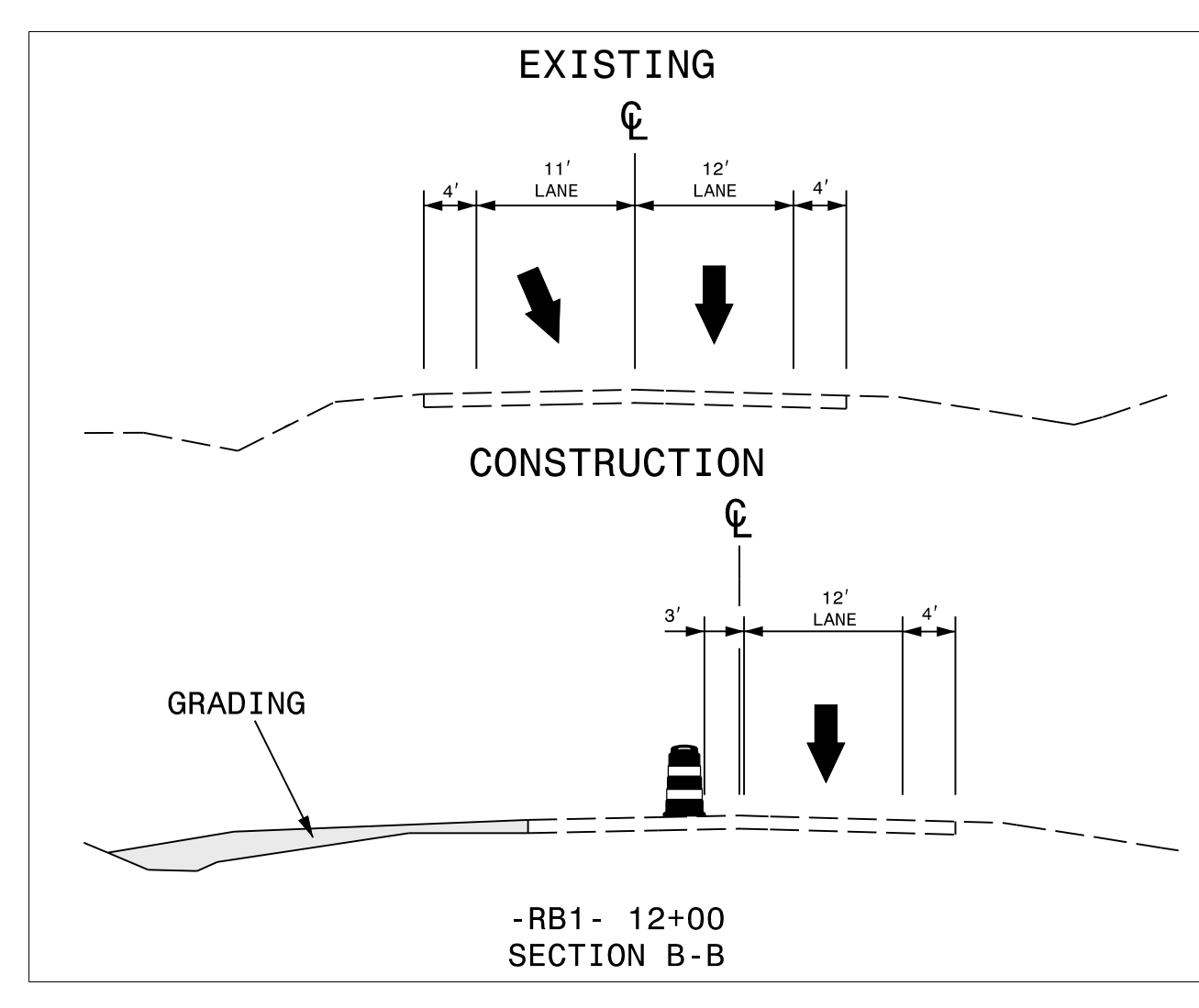
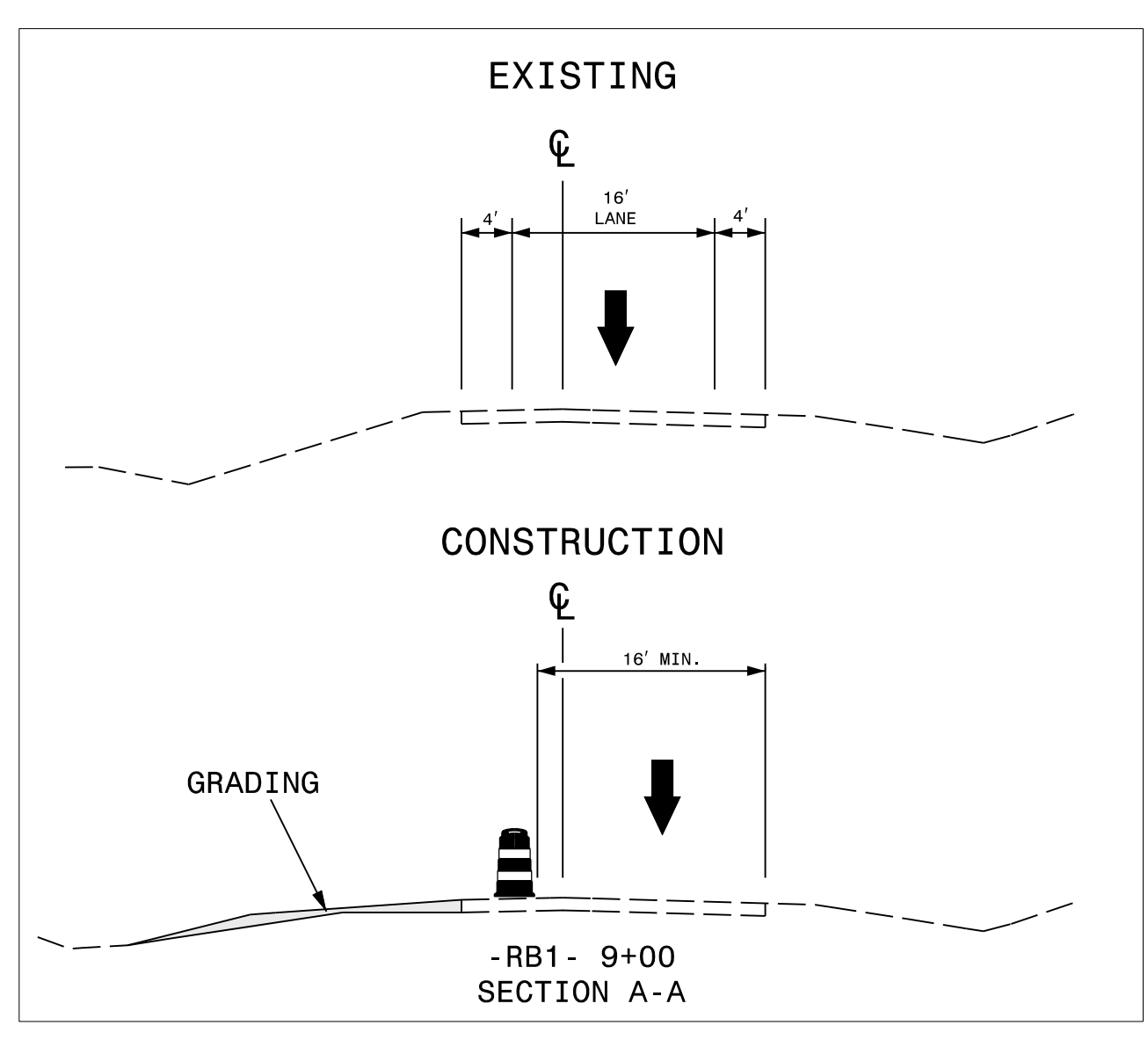
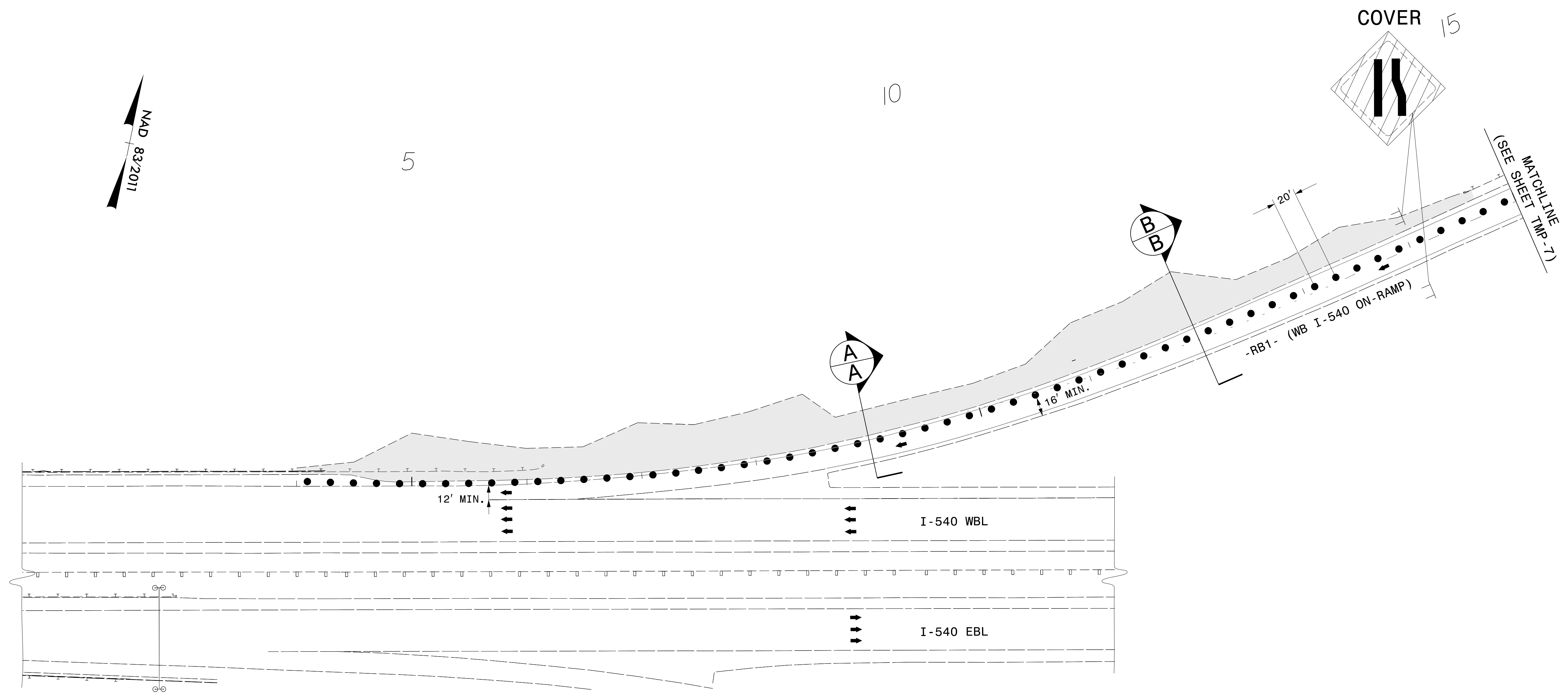
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 MLE2034 AT DUS300019

ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: 
 DATE: 5/24/2016
 SEAL


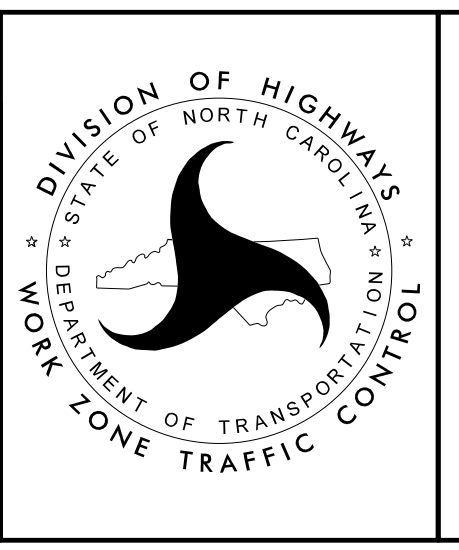


LEESVILLE ROAD
-RB1- WESTBOUND
ON-RAMP LEFT
LANE CLOSURE



APPROVED: *[Signature]*
 DATE: 5/24/2016

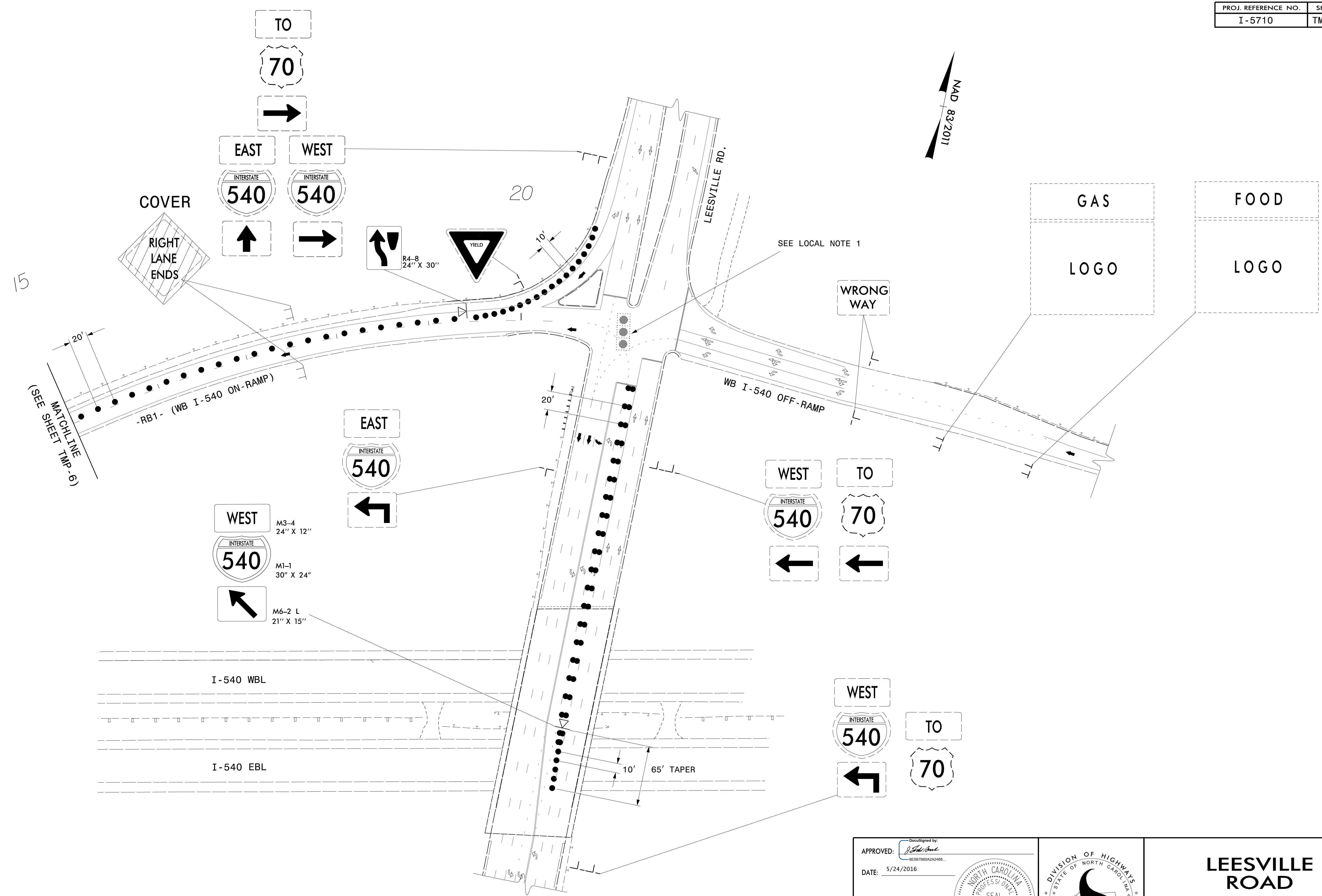
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LEESVILLE ROAD
-RB1- WESTBOUND ON-RAMP RIGHT LANE CLOSURE

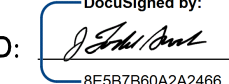

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

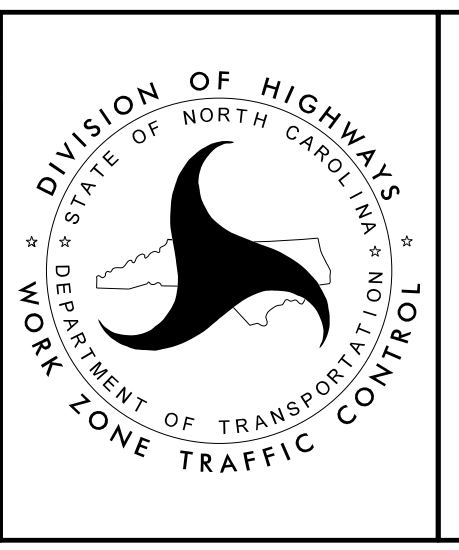
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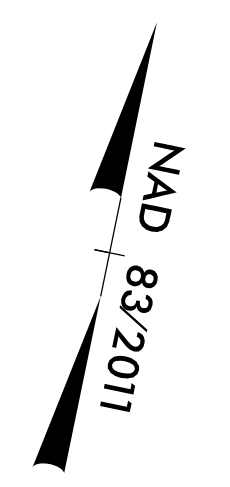
ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: 
 DATE: 5/24/2016
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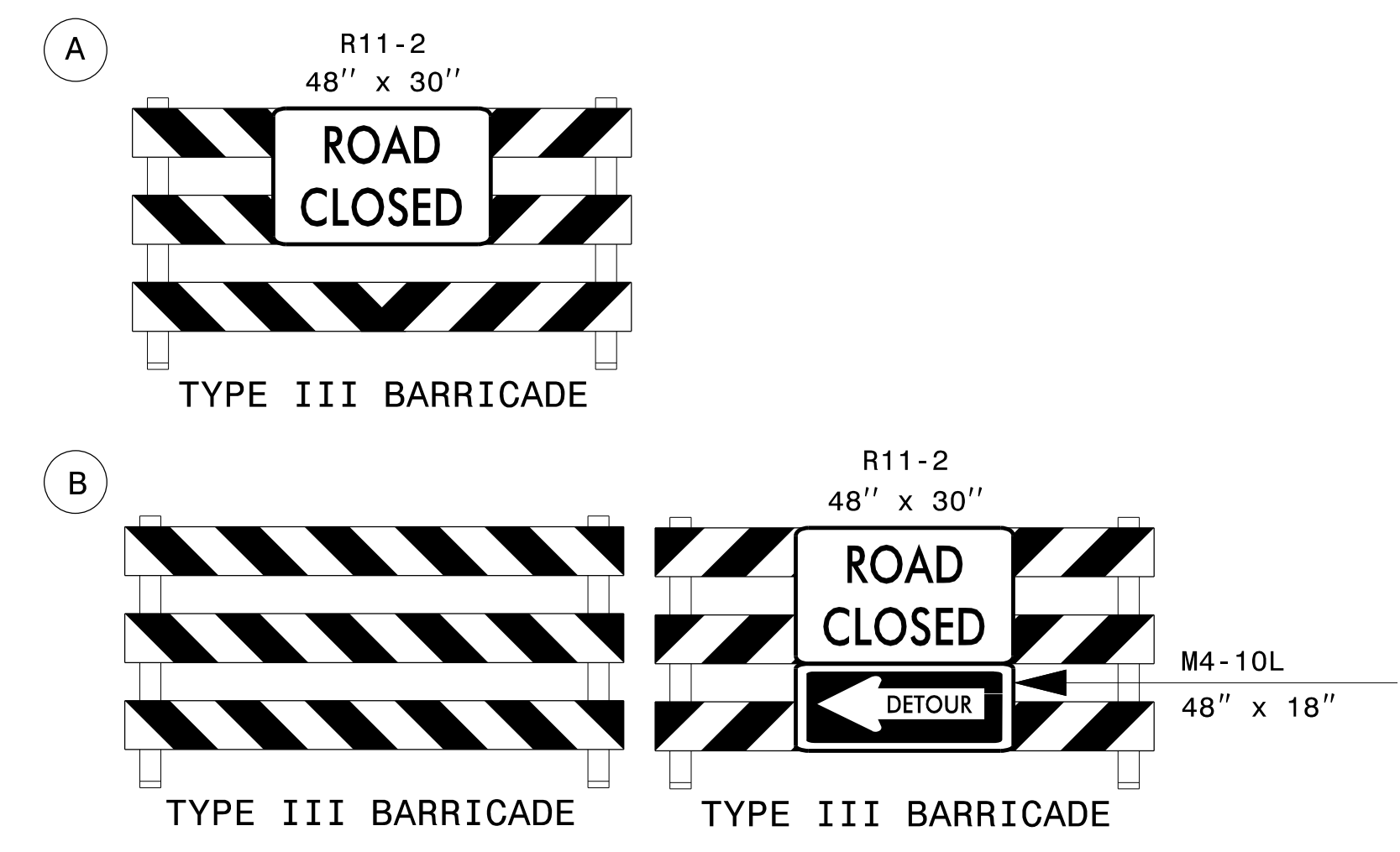
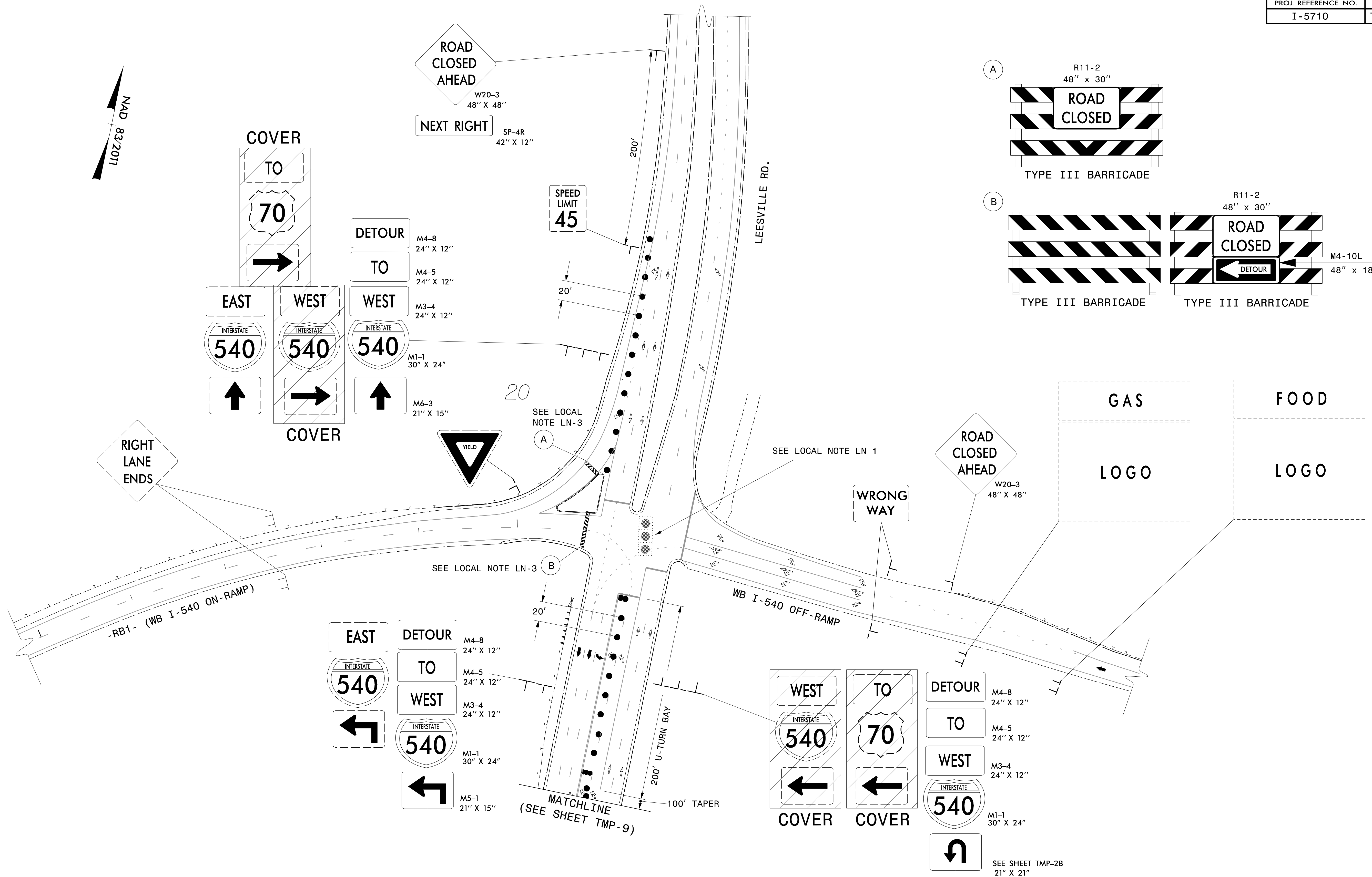


LEESVILLE ROAD
-RB1- WESTBOUND ON-RAMP RIGHT LANE CLOSURE

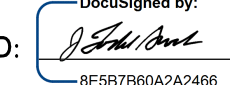
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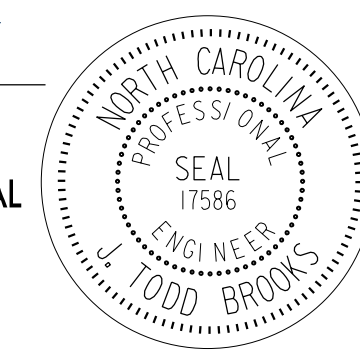


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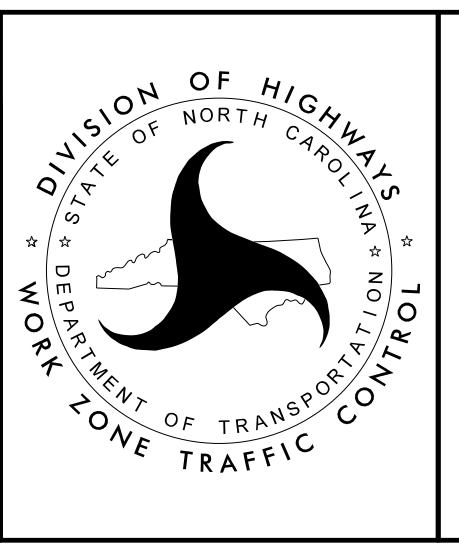


SEE TMP-10 FOR OFFSITE
DETOUR DETAILS

APPROVED: 
DATE: 5/24/2016

SEAL 

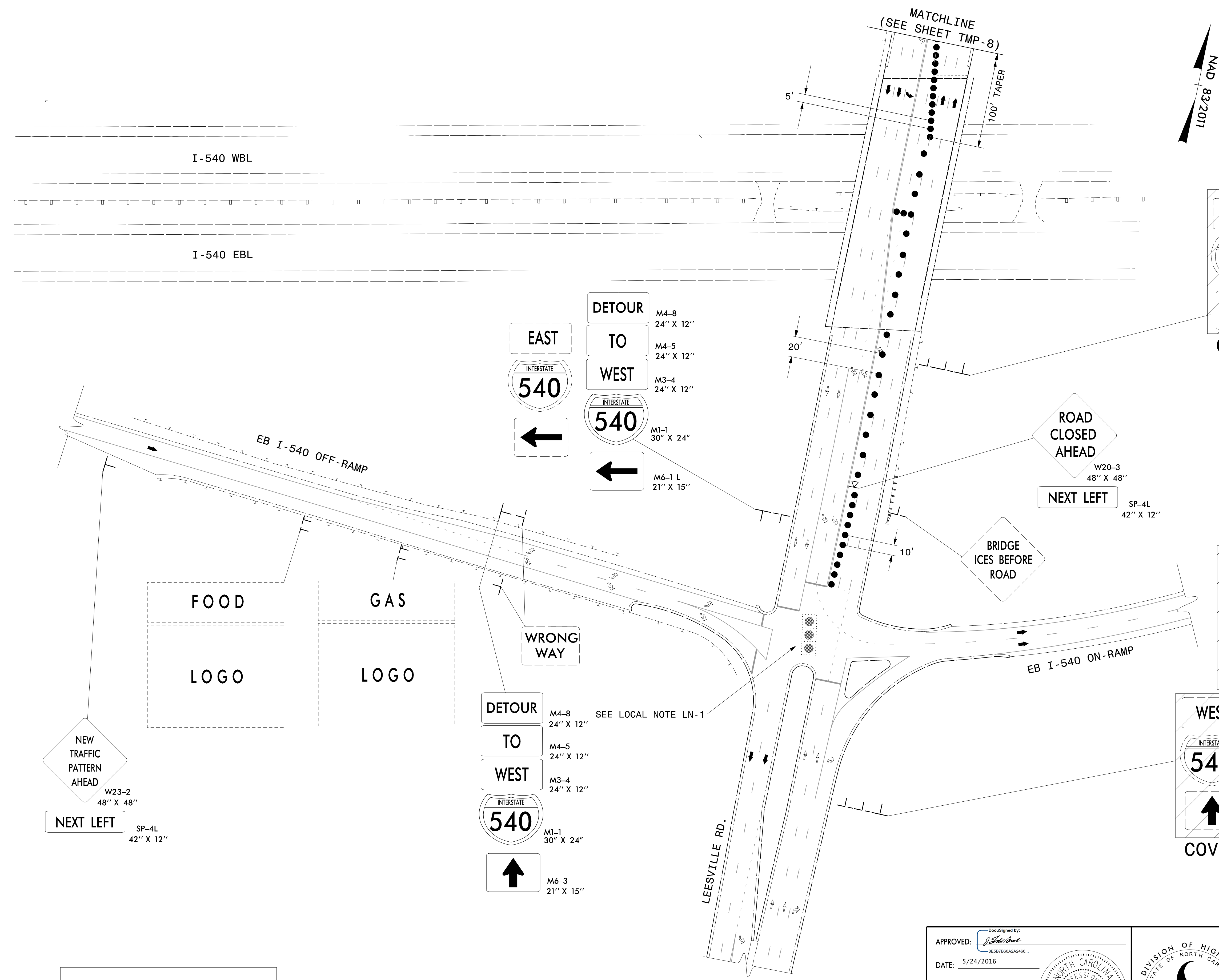
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



LEESVILLE ROAD
-RB1- WESTBOUND ON-RAMP FULL CLOSURE

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBES #F-0326

24-MAY-2016 16:59 \\n\opspor\c\loc\Boc\away\NCDOT\I-540 Ramp Metering\TrafficControl\TCPN\I-5710_TC_TCP_08.dgn
MIL2034 AT DUS300019



DETOUR TO WEST

WEST
INTERSTATE 540
←

TO
70

COVER COVER

DETOUR TO WEST

DETOUR M4-8 24" X 12"
TO M4-5 24" X 12"
WEST M3-4 24" X 12"
INTERSTATE 540 M1-1 30" X 24"
LEFT LANE M5-4 24" X 18"

DETOUR TO WEST

EAST
INTERSTATE 540
←

DETOUR M4-8 24" X 12"
TO M4-5 24" X 12"
WEST M3-4 24" X 12"
INTERSTATE 540 M1-1 30" X 24"
← M6-1 L 21" X 15"

ROAD CLOSED AHEAD
W20-3 48" X 48"

NEXT LEFT
SP-4L 42" X 12"

COVER TO 70

COVER
TO
70
↑

DETOUR TO WEST

DETOUR M4-8 24" X 12"
TO M4-5 24" X 12"
WEST M3-4 24" X 12"
INTERSTATE 540 M1-1 30" X 24"
→ M6-1 R 21" X 15"

DETOUR TO WEST

DETOUR M4-8 24" X 12"
TO M4-5 24" X 12"
WEST M3-4 24" X 12"
INTERSTATE 540 M1-1 30" X 24"
↑ M6-3 21" X 15"

SEE LOCAL NOTE LN-1

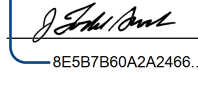
NEW TRAFFIC PATTERN AHEAD
W23-2 48" X 48"

NEXT LEFT
SP-4L 42" X 12"

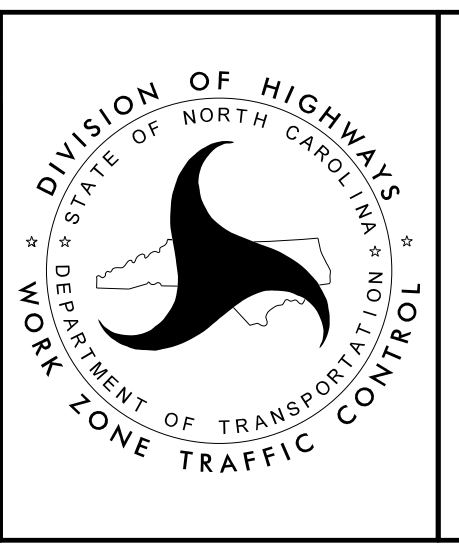
FOOD LOGO

GAS LOGO

WRONG WAY

APPROVED: 
DATE: 5/24/2016

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 17586
TODD BROOKS

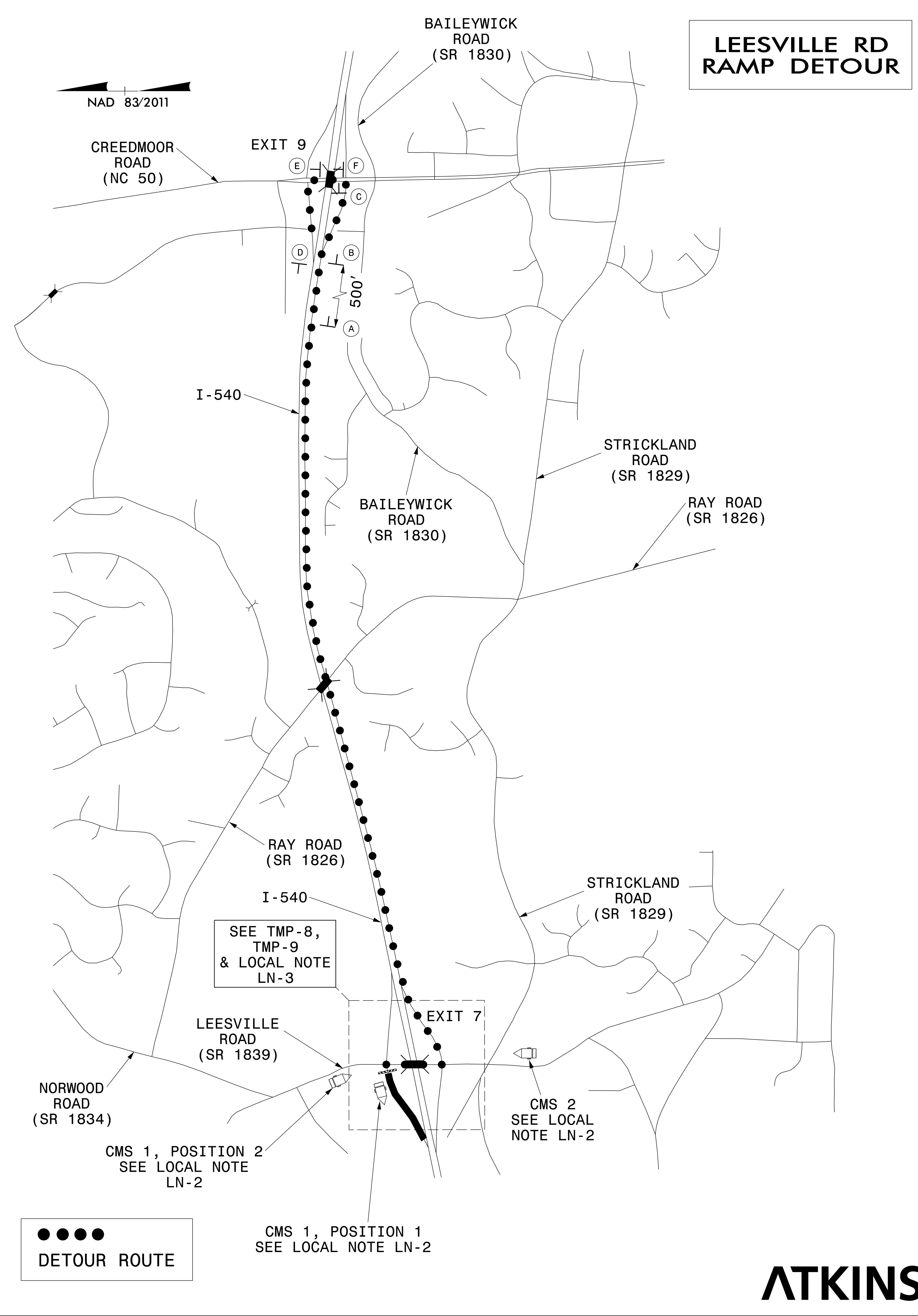


LEESVILLE ROAD
-RB1- WESTBOUND ON-RAMP FULL CLOSURE

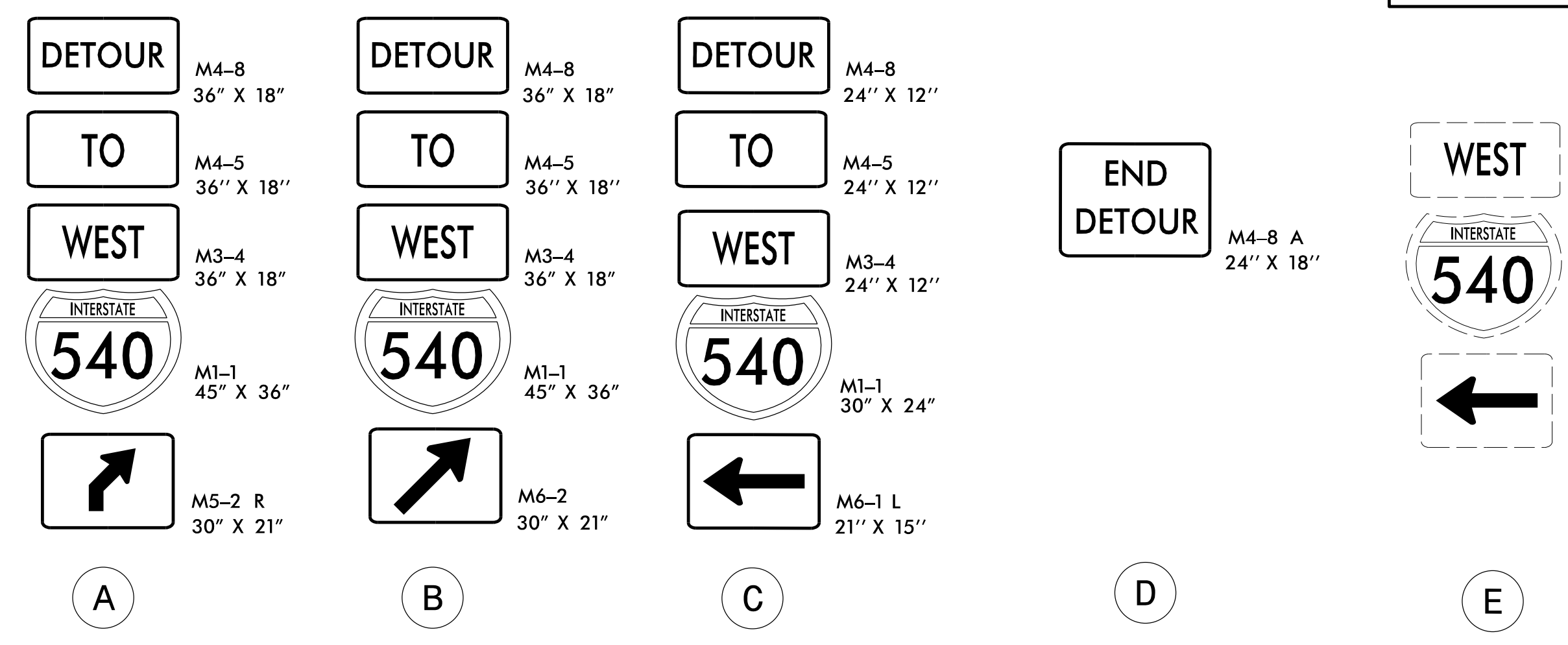
SEE TMP-10 FOR OFFSITE DETOUR DETAILS

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

24-MAY-2016 16:59
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MILEZ034 AT DUS300019



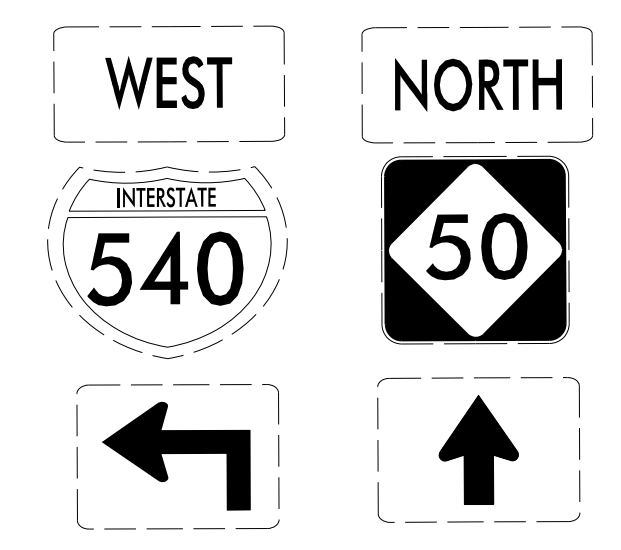
LEESVILLE RD RAMP DETOUR



ONE WEEK PRIOR TO OVERNIGHT RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
OVERNITE RAMP CLOSURE	___ DAY mmm dd 9PM - 6AM

CHANGEABLE MESSAGE SIGN
CMS 1, POSITION 1



F

DISPLAY MONDAY PRIOR TO WEEKEND RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
WEEKEND RAMP CLOSURE	9PM FRI TO 6AM MON

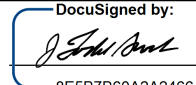
CHANGEABLE MESSAGE SIGN
CMS 1, POSITION 1

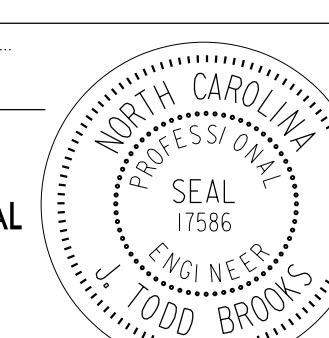
DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
I-540 W RAMP CLOSED	USE 540 EAST TO EXIT 9

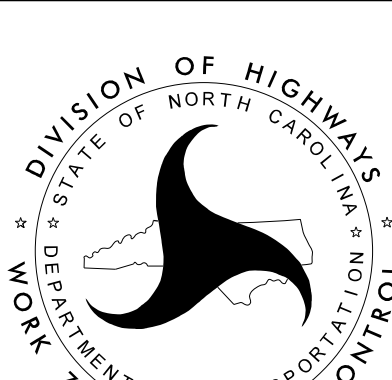
CHANGEABLE MESSAGE SIGN
CMS 1, POSITION 2 & CMS 2

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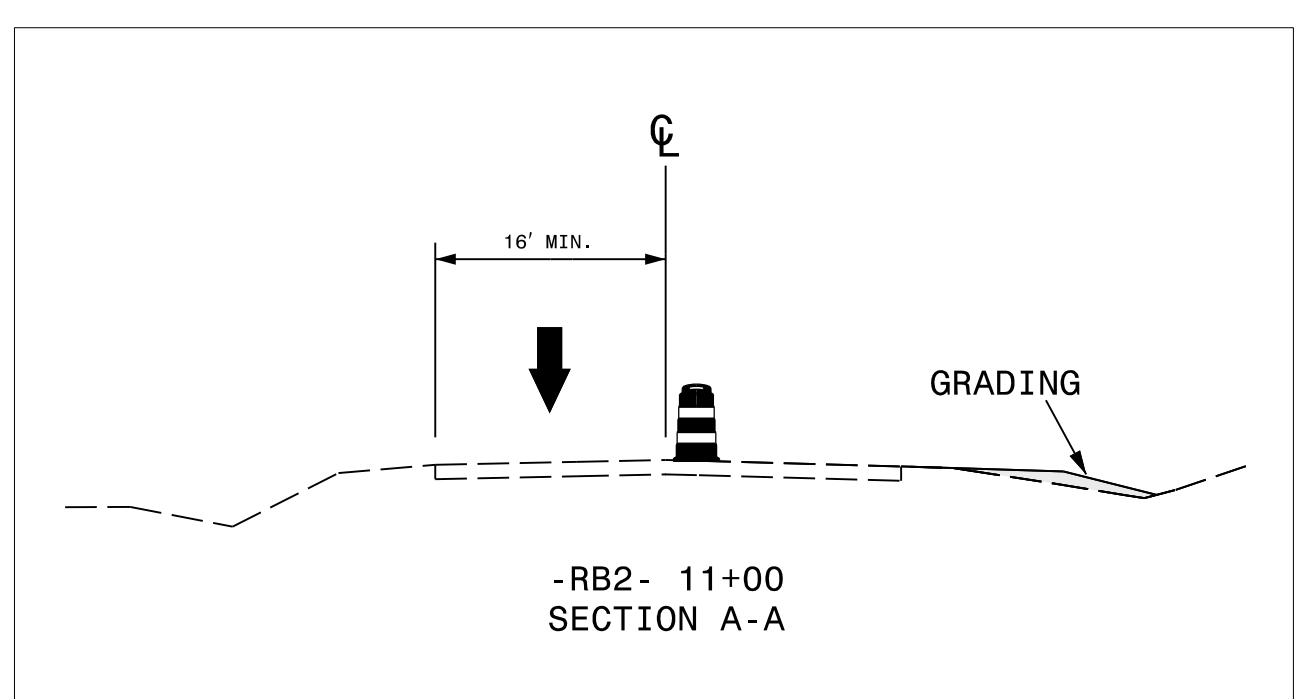
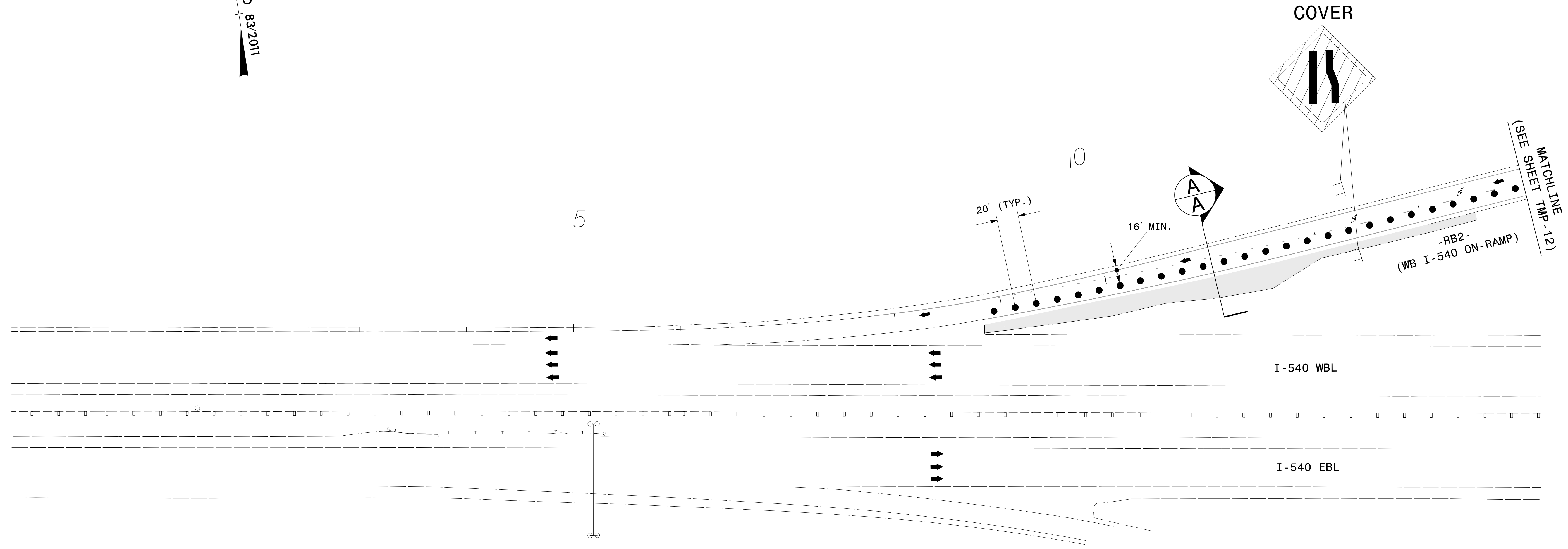
APPROVED: 
DATE: 5/24/2016

SEAL


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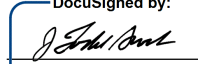


DIVISION OF HIGHWAYS
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

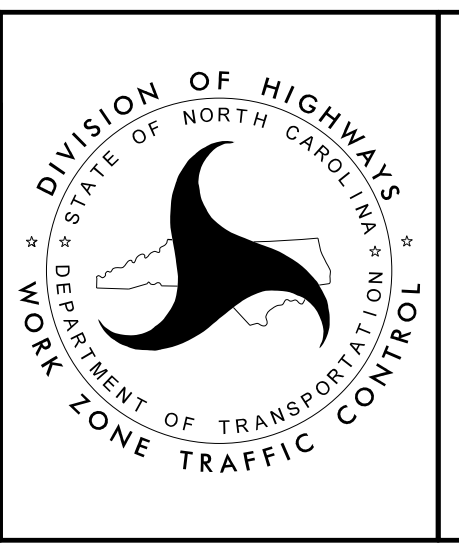
LEESVILLE ROAD
-RB1- WESTBOUND ON-RAMP DETOUR



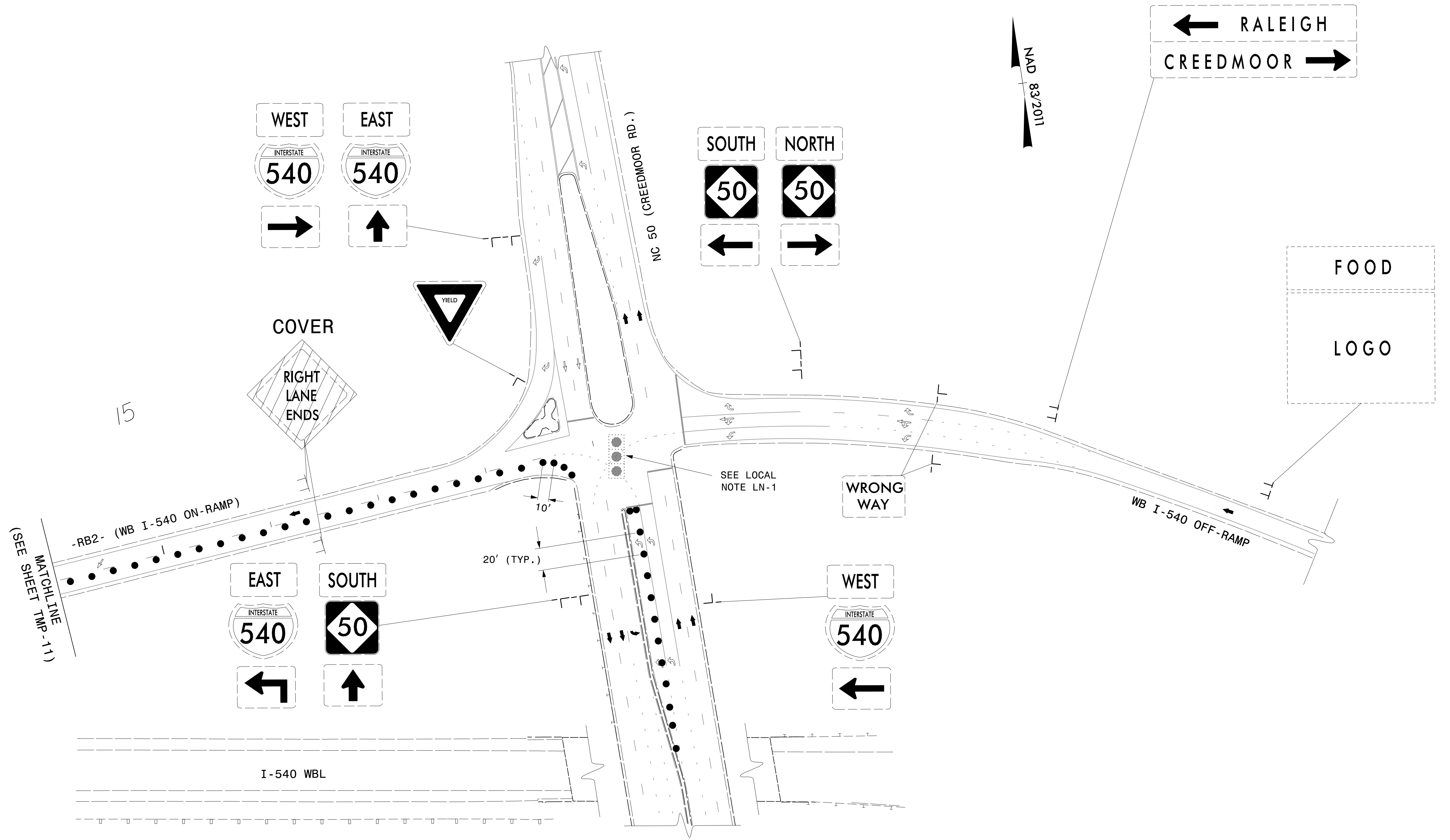
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ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

APPROVED: 
 DATE: 5/24/2016
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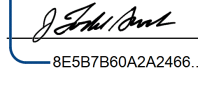
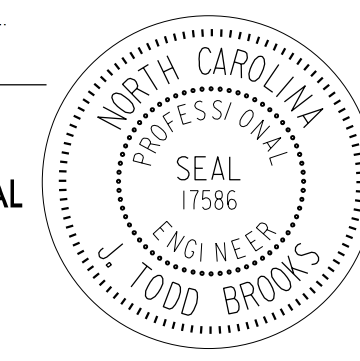


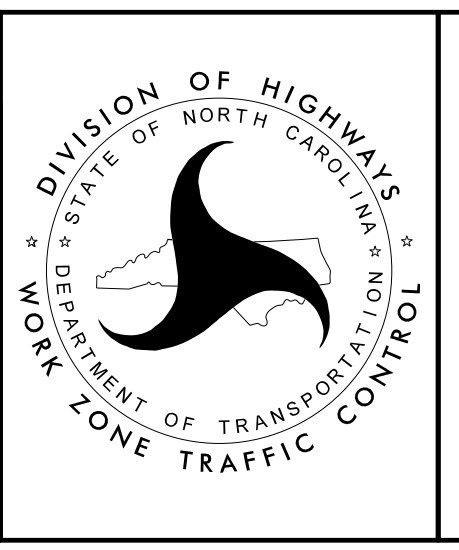
CREEDMOOR ROAD
-RB2- WESTBOUND ON-RAMP LEFT LANE CLOSURE



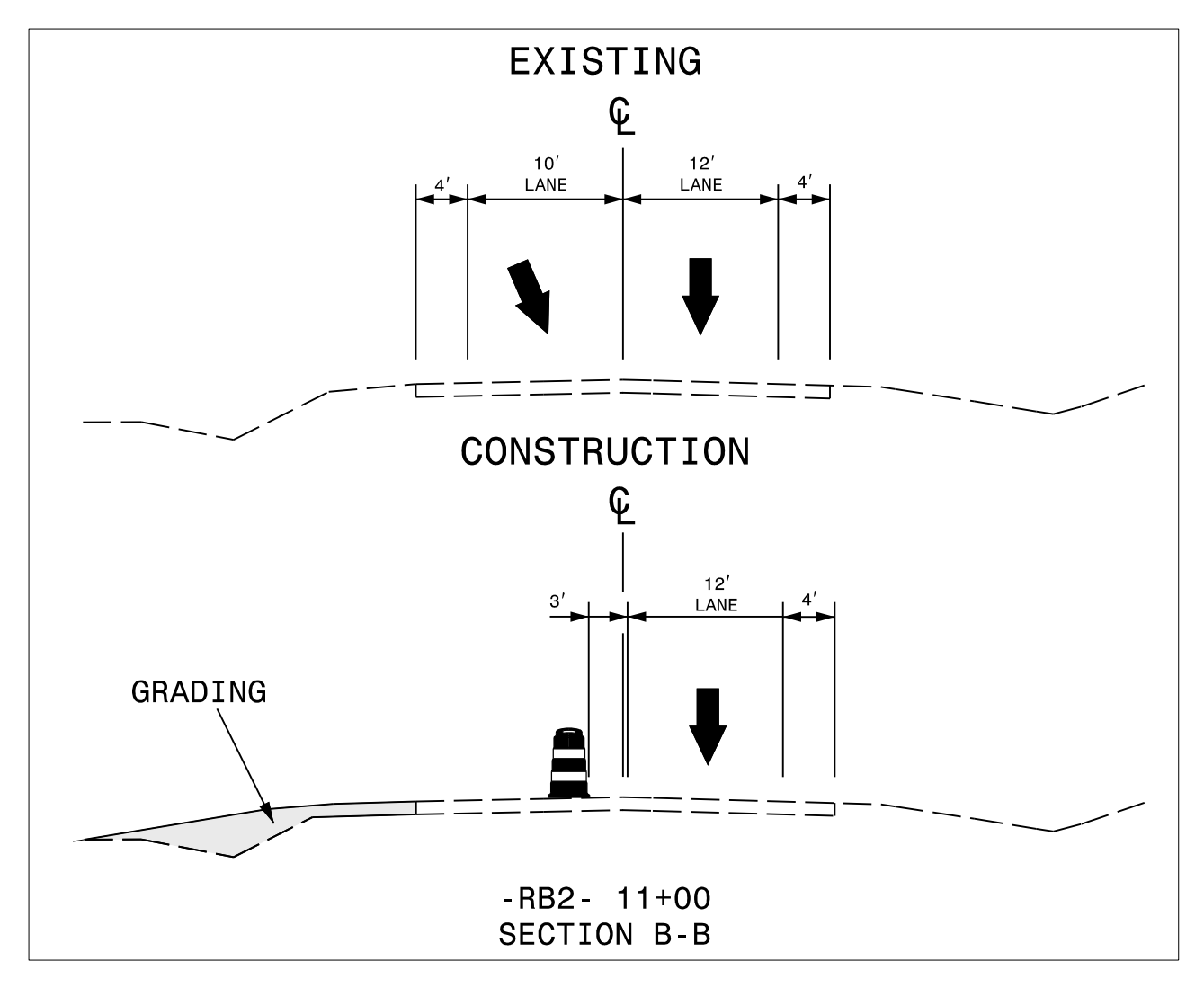
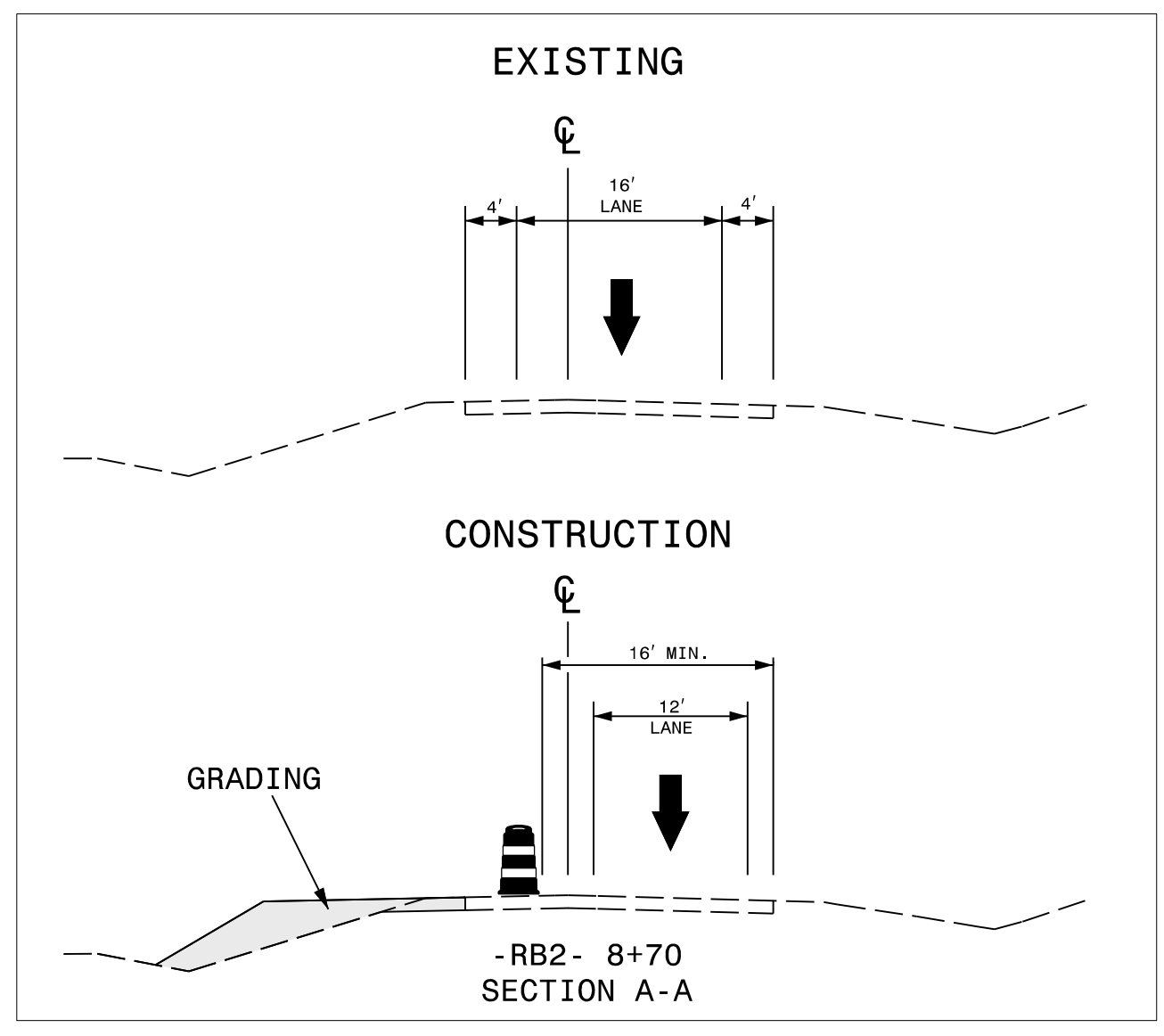
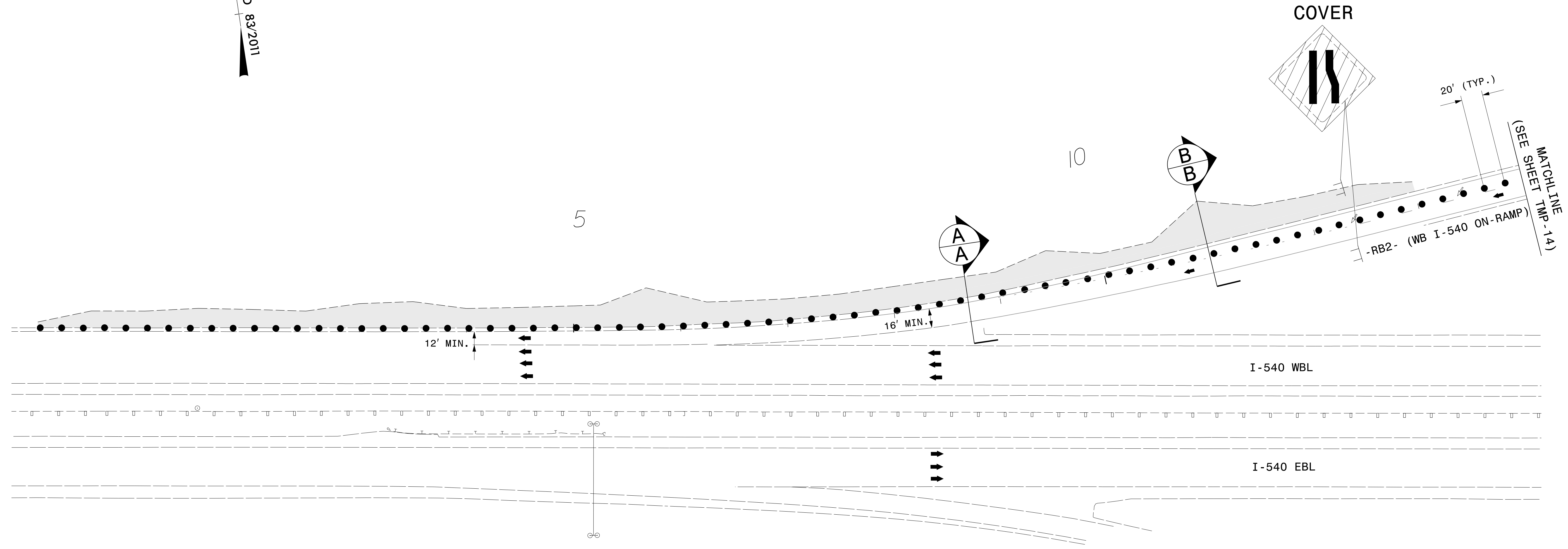
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 MLE2034 AT DUS300019

ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: 
 DATE: 5/24/2016
 SEAL


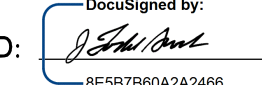


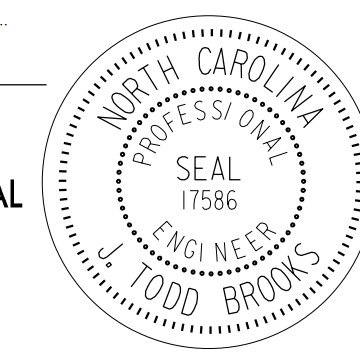
CREEDMOOR ROAD
-RB2- WESTBOUND ON-RAMP LEFT LANE CLOSURE



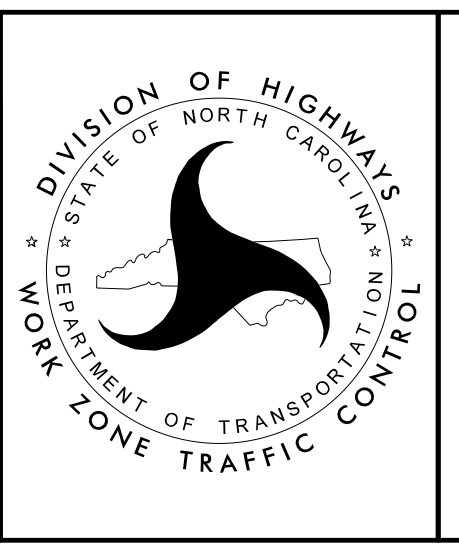
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

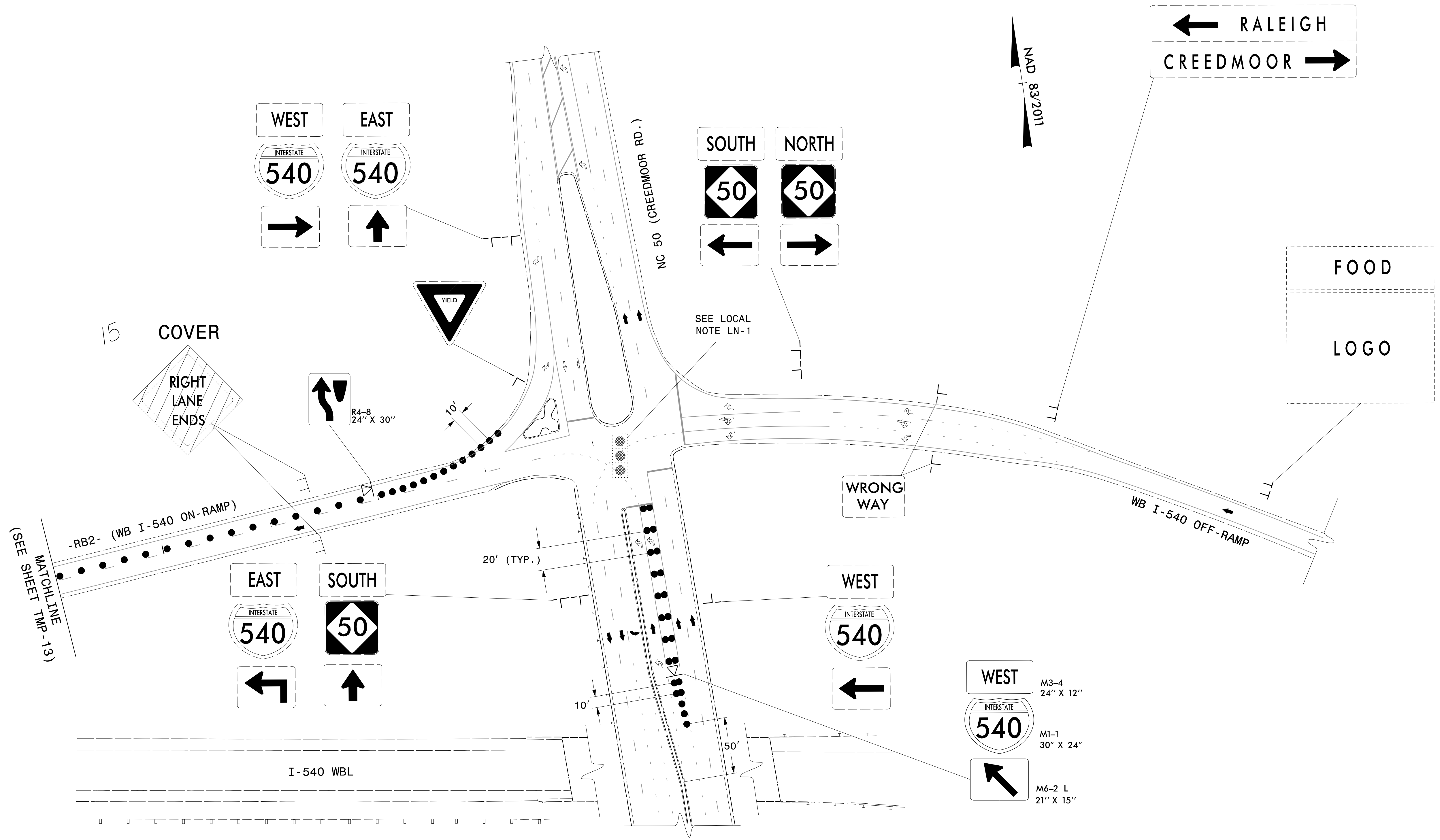
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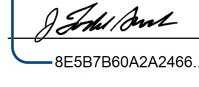



CREEDMOOR ROAD
-RB2- WESTBOUND ON-RAMP RIGHT LANE CLOSURE

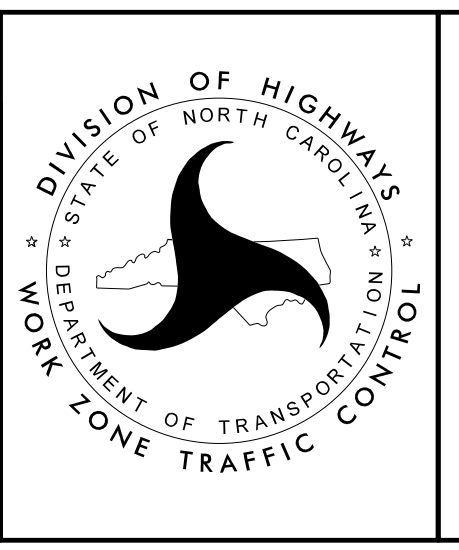


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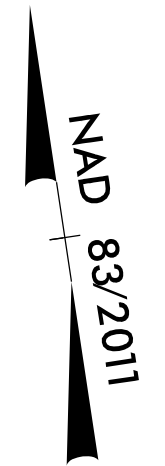
ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: 
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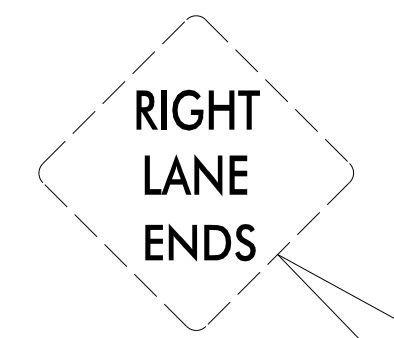


CREEDMOOR ROAD
-RB2- WESTBOUND ON-RAMP RIGHT LANE CLOSURE



DETOUR TO WEST WEST 540 COVER EAST 540

M4-8 24" X 12"
M4-5 24" X 12"
M3-4 24" X 12"
M1-1 30" X 24"
M6-3 21" X 15"



SEE LOCAL NOTE LN-3

-RB2- (WB I-540 ON-RAMP)

SEE LOCAL NOTE LN-3

EAST SOUTH DETOUR TO WEST WEST 540

M4-8 24" X 12"
M4-5 24" X 12"
M3-4 24" X 12"
M1-1 30" X 24"
M5-1 21" X 15"

MATCHLINE (SEE SHEET TMP-16)

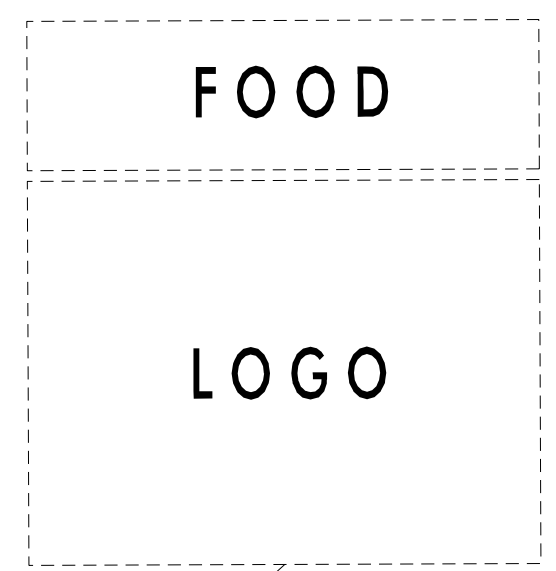
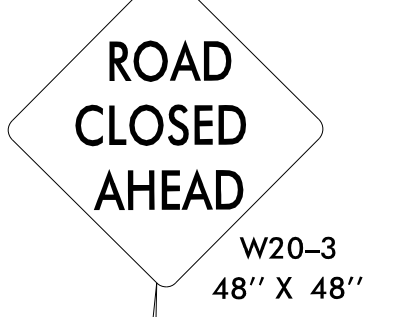
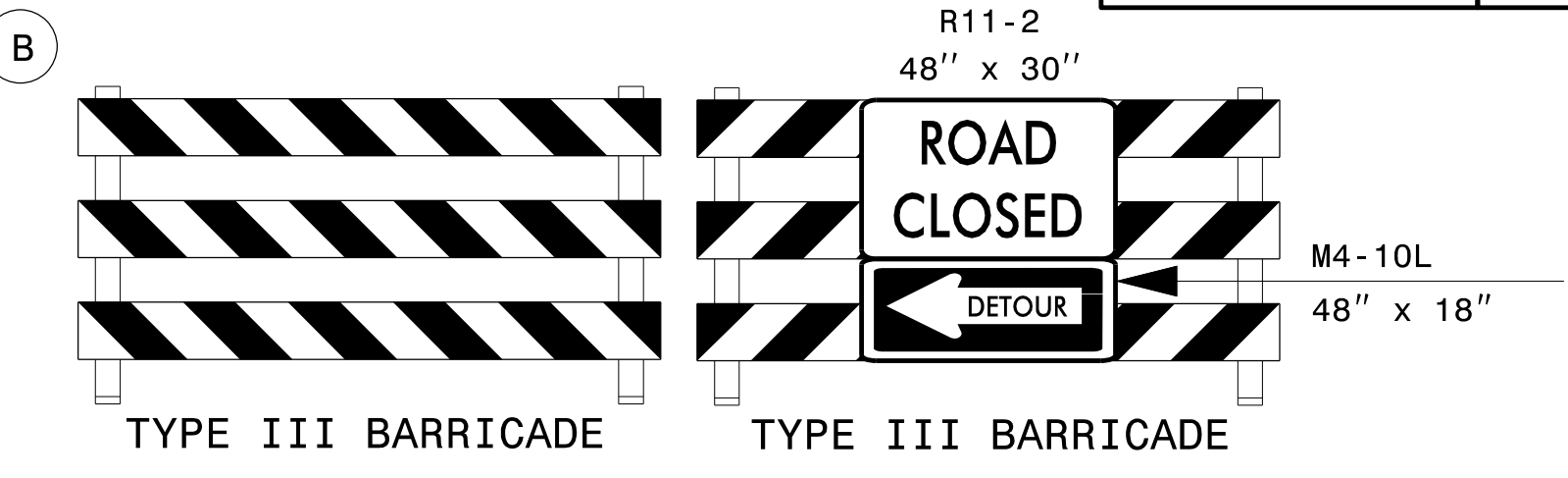
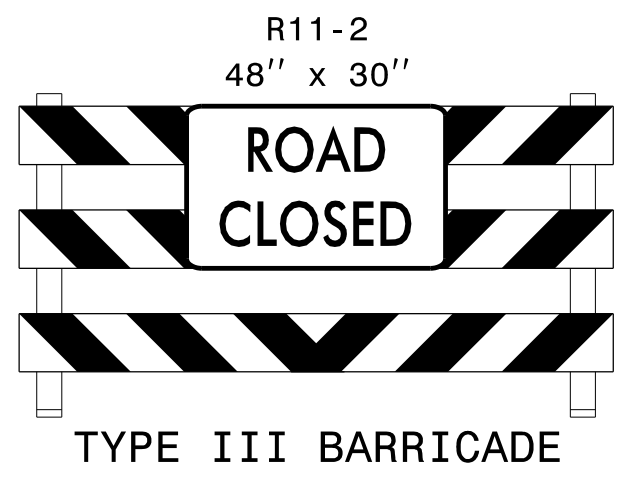
SOUTH NORTH 50 50

SEE LOCAL NOTE LN-1



COVER WEST DETOUR TO WEST WEST 540

M4-8 24" X 12"
M4-5 24" X 12"
M3-4 24" X 12"
M1-1 30" X 24"
SEE SHEET 21" X 21"



SEE TMP-17 FOR OFFSITE DETOUR DETAILS

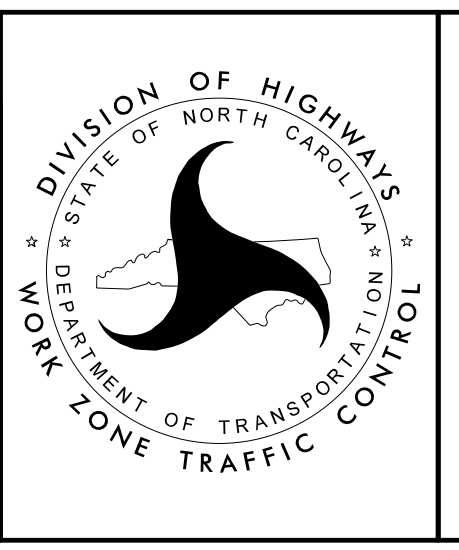
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ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 (919) 876-6888 NCBEES #F-0326

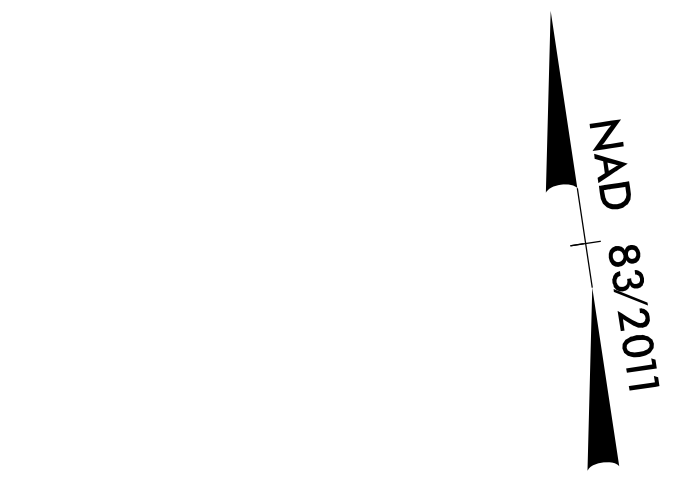
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DATE: 5/24/2016

SEAL

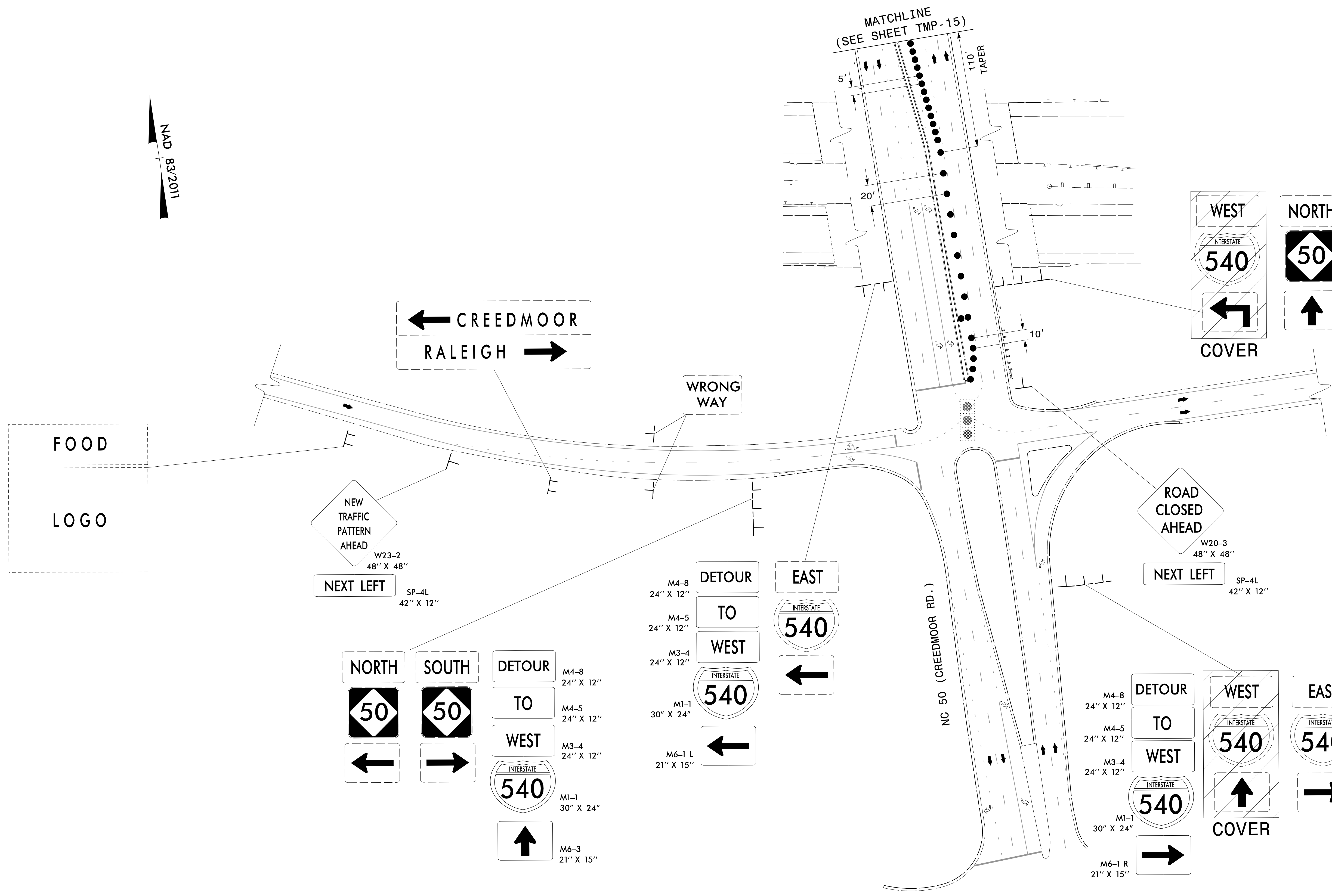
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



CREEDMOOR ROAD
-RB2- WESTBOUND ON-RAMP FULL CLOSURE



MATCHLINE
(SEE SHEET TMP-15)



- DETOUR M4-8 24" X 12"
- TO M4-5 24" X 12"
- WEST M3-4 24" X 12"
- INTERSTATE 540 M1-1 30" X 24"
- LEFT LANE M5-4 24" X 18"

FOOD
LOGO

NEW TRAFFIC PATTERN AHEAD
W23-2 48" X 48"
NEXT LEFT SP-4L 42" X 12"

- NORTH 50
- SOUTH 50
- DETOUR M4-8 24" X 12"
- TO M4-5 24" X 12"
- WEST M3-4 24" X 12"
- INTERSTATE 540 M1-1 30" X 24"
- ↑ M6-3 21" X 15"

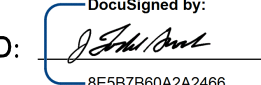
- DETOUR M4-8 24" X 12"
- TO M4-5 24" X 12"
- WEST M3-4 24" X 12"
- INTERSTATE 540 M1-1 30" X 24"
- ← M6-1 L 21" X 15"
- EAST INTERSTATE 540
- ←

ROAD CLOSED AHEAD
W20-3 48" X 48"
NEXT LEFT SP-4L 42" X 12"

- DETOUR M4-8 24" X 12"
- TO M4-5 24" X 12"
- WEST M3-4 24" X 12"
- INTERSTATE 540 M1-1 30" X 24"
- ↑ COVER
- M6-1 R 21" X 15"
- EAST INTERSTATE 540
-

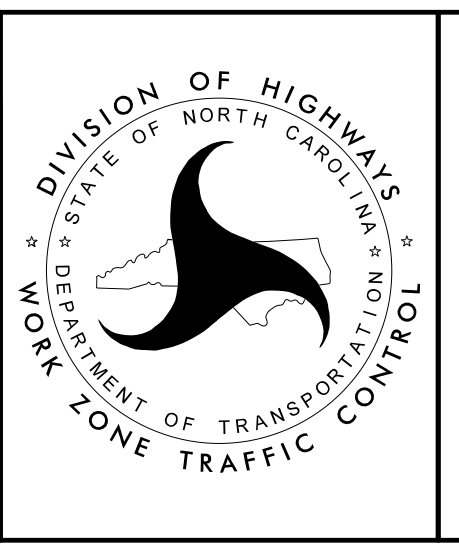
SEE TMP-17 FOR OFFSITE
DETOUR DETAILS

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

APPROVED: 
DATE: 5/24/2016

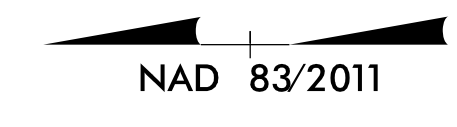
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
TODD BROOKS
17586

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

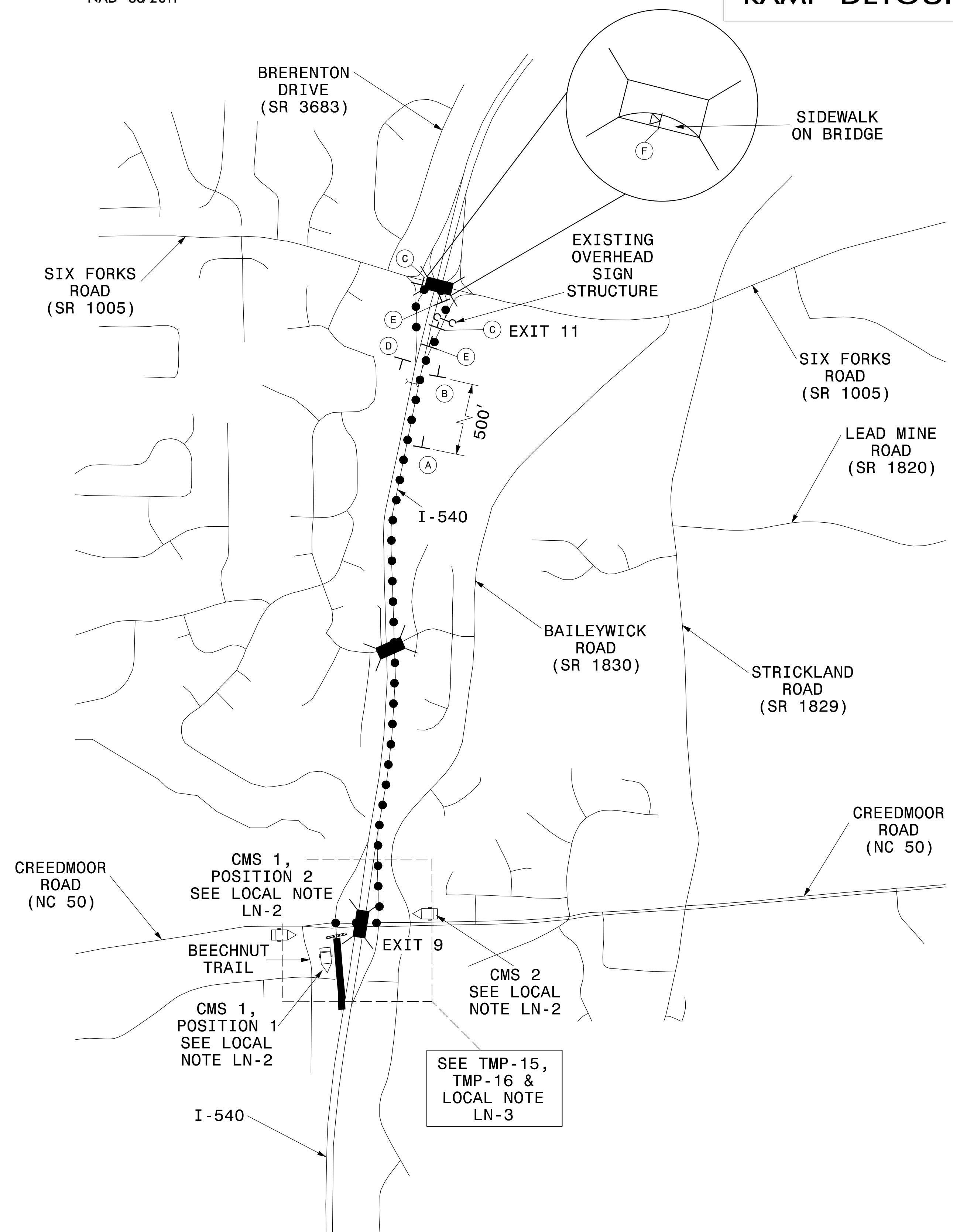


CREEDMOOR ROAD
-RB2- WESTBOUND
ON-RAMP FULL
CLOSURE

24-MAY-2016 16:59
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MILEZ034 AT DUS300019



CREEDMOOR RD RAMP DETOUR



●●●●●
DETOUR ROUTE

<p>DETOUR M4-8 36" X 18"</p> <p>TO M4-5 36" X 18"</p> <p>WEST M3-4 36" X 18"</p> <p>INTERSTATE 540 M1-1 45" X 36"</p> <p>↗ M5-2 R 30" X 21"</p> <p>(A)</p>	<p>DETOUR M4-8 36" X 18"</p> <p>TO M4-5 36" X 18"</p> <p>WEST M3-4 36" X 18"</p> <p>INTERSTATE 540 M1-1 45" X 36"</p> <p>↗ M6-2 30" X 21"</p> <p>(B)</p>	<p>DETOUR M4-8 24" X 12"</p> <p>TO M4-5 24" X 12"</p> <p>WEST M3-4 24" X 12"</p> <p>INTERSTATE 540 M1-1</p> <p>↖ M6-2 21" X 15"</p> <p>(C)</p>	<p>END</p> <p>DETOUR M4-8 A 24" X 18"</p> <p>(D)</p>
--	--	--	---

ONE WEEK PRIOR TO OVERNIGHT RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
OVERNITE RAMP CLOSURE	__ __ DAY mmm dd 9PM - 6AM

CHANGEABLE MESSAGE SIGN

CMS 1, POSITION 1

DISPLAY MONDAY PRIOR TO WEEKEND RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
WEEKEND RAMP CLOSURE	9PM FRI TO 6AM MON

CHANGEABLE MESSAGE SIGN

CMS 1, POSITION 1

<p>DETOUR M4-8 24" X 12"</p> <p>TO M4-5 24" X 12"</p> <p>WEST M3-4 24" X 12"</p> <p>INTERSTATE 540 M1-1 30" X 24"</p> <p>LEFT LANE M5-4 24" X 18"</p> <p>(E)</p>	<p>DETOUR M4-8 24" X 12"</p> <p>TO M4-5 24" X 12"</p> <p>WEST M3-4 24" X 12"</p> <p>INTERSTATE 540 M1-1 30" X 24"</p> <p>↻ SEE SHEET TMP-2B 21" X 21"</p> <p>(F)</p>
--	--

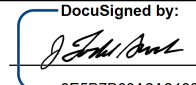
DURING RAMP CLOSURE

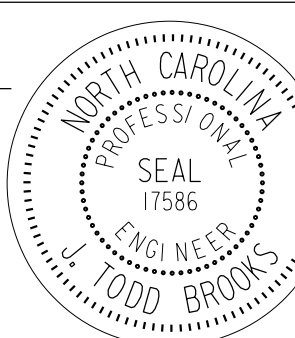
MESSAGE NO. 1	MESSAGE NO. 2
540 WEST RAMP CLOSED	USE 540 EAST TO EXIT 11

CHANGEABLE MESSAGE SIGN

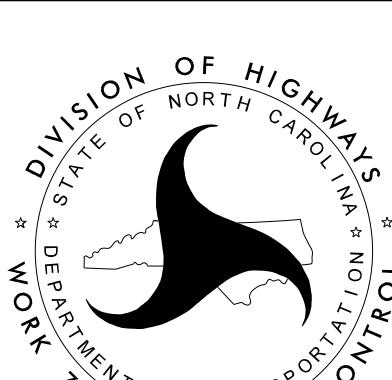
CMS 1, POSITION 2 & CMS 2

24-MAY-2016 16:59 C:\Temp\Roadway\NCDOT\I-540 Ramp Metering\Traffic\TrafficControl\TCP\I-5710-TC-TCP_17.dgn MILE0054 AT DUS30009

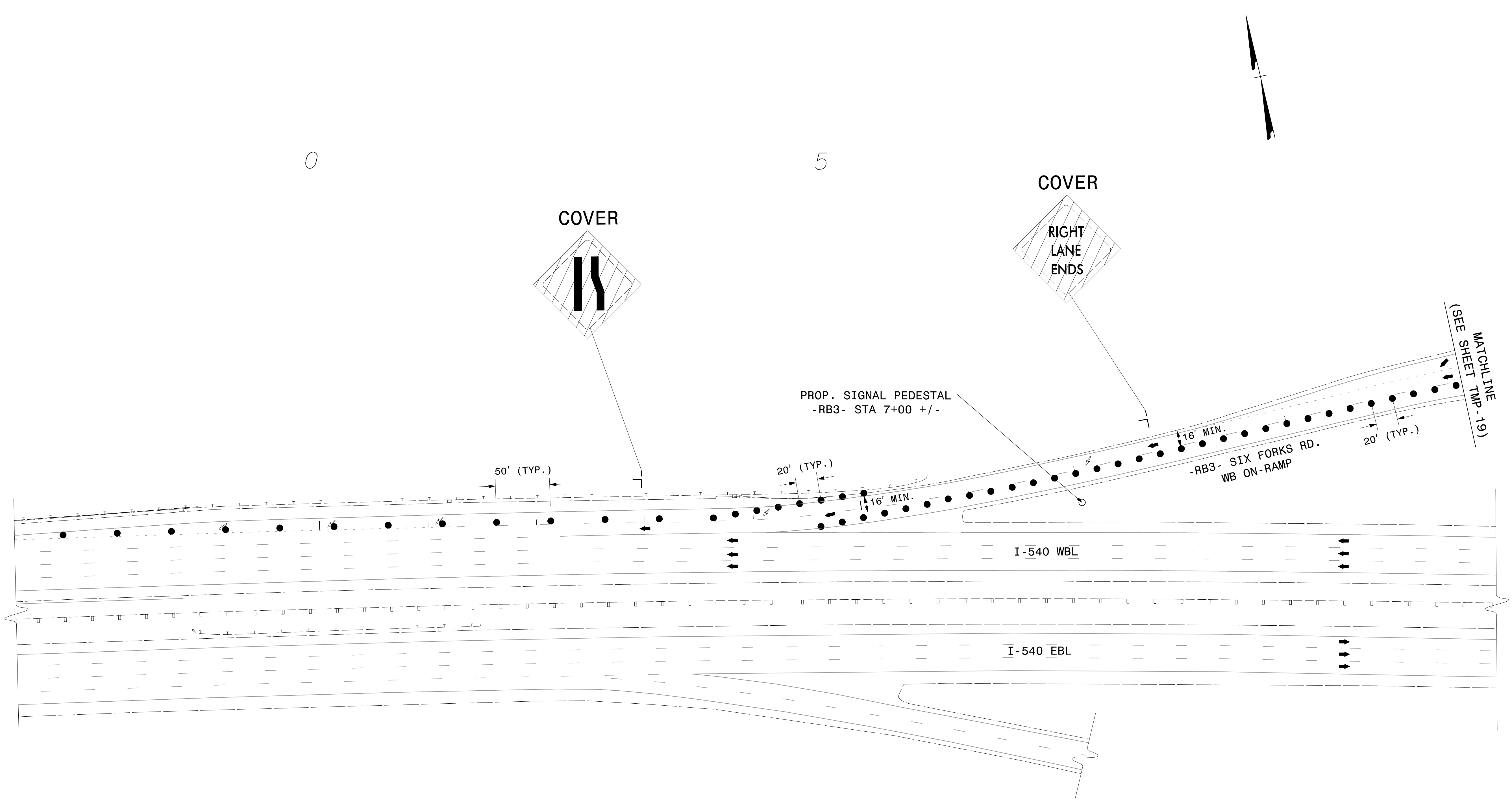
APPROVED: 
DATE: 5/24/2016

SEAL


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

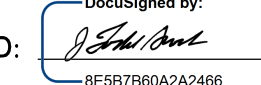
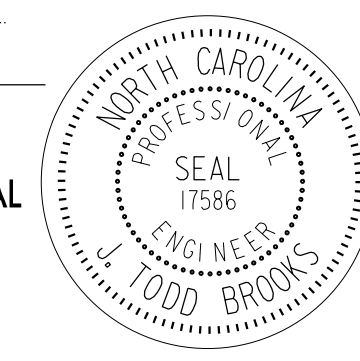

DIVISION OF HIGHWAYS
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

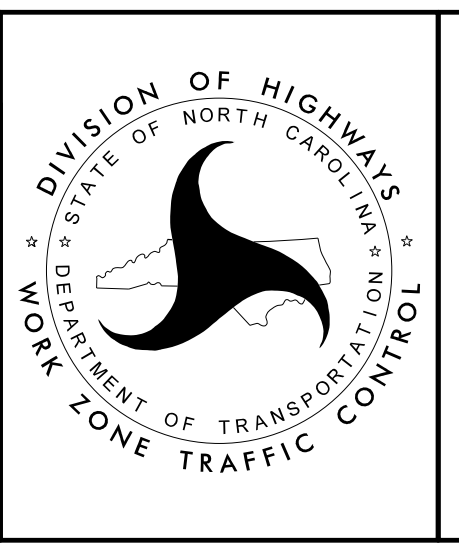
CREEDMOOR ROAD
-RB2- WESTBOUND ON-RAMP DETOUR



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 MLE2034 AT DUS300019

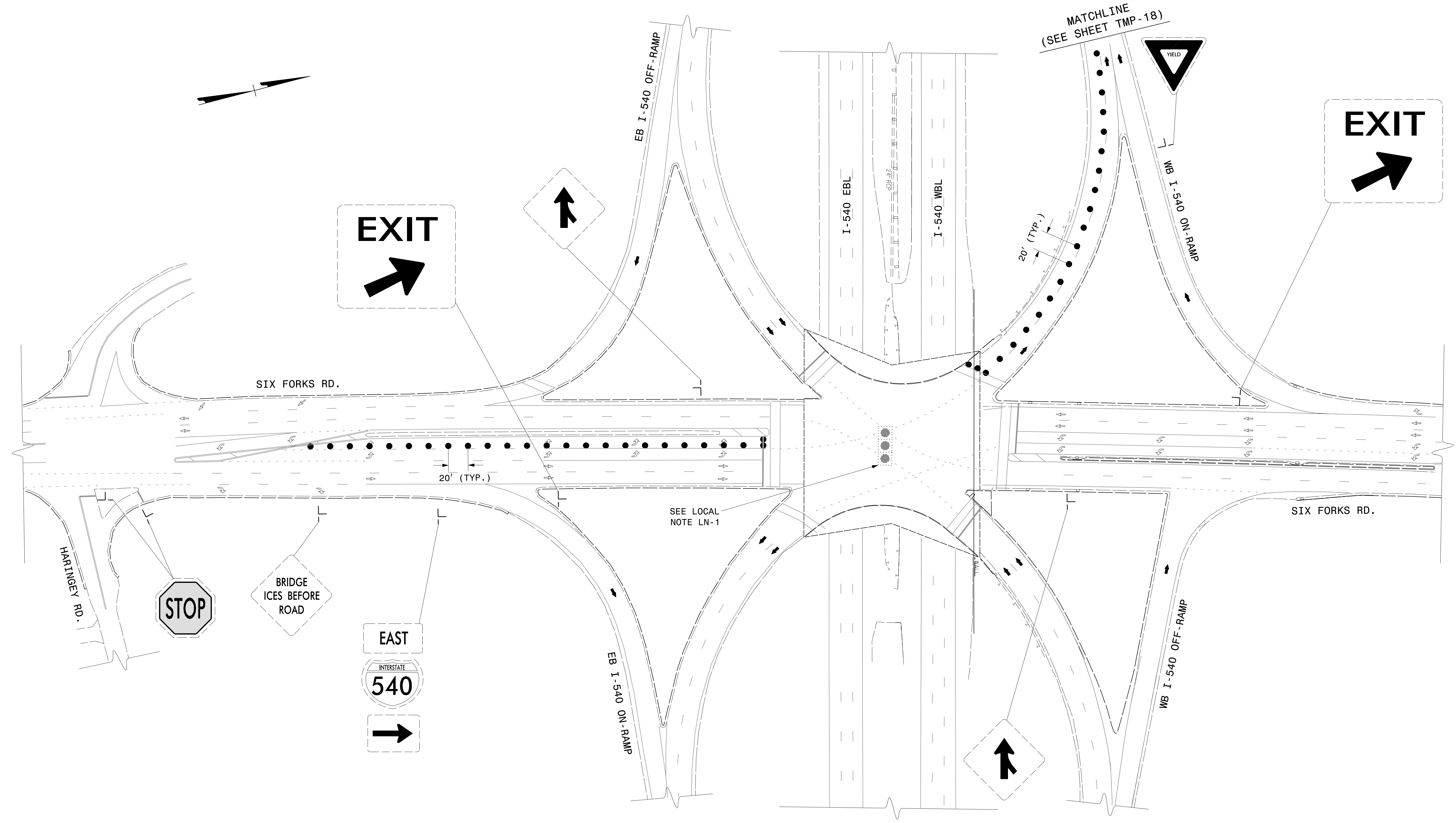
ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: 
 DATE: 5/24/2016
 SEAL




SIX FORKS ROAD
-RB3- WESTBOUND
ON-RAMP LEFT
LANE CLOSURE

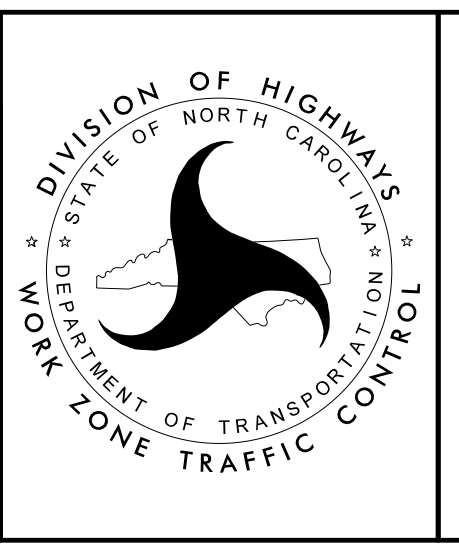
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



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 MLE2034 AT DUS300019

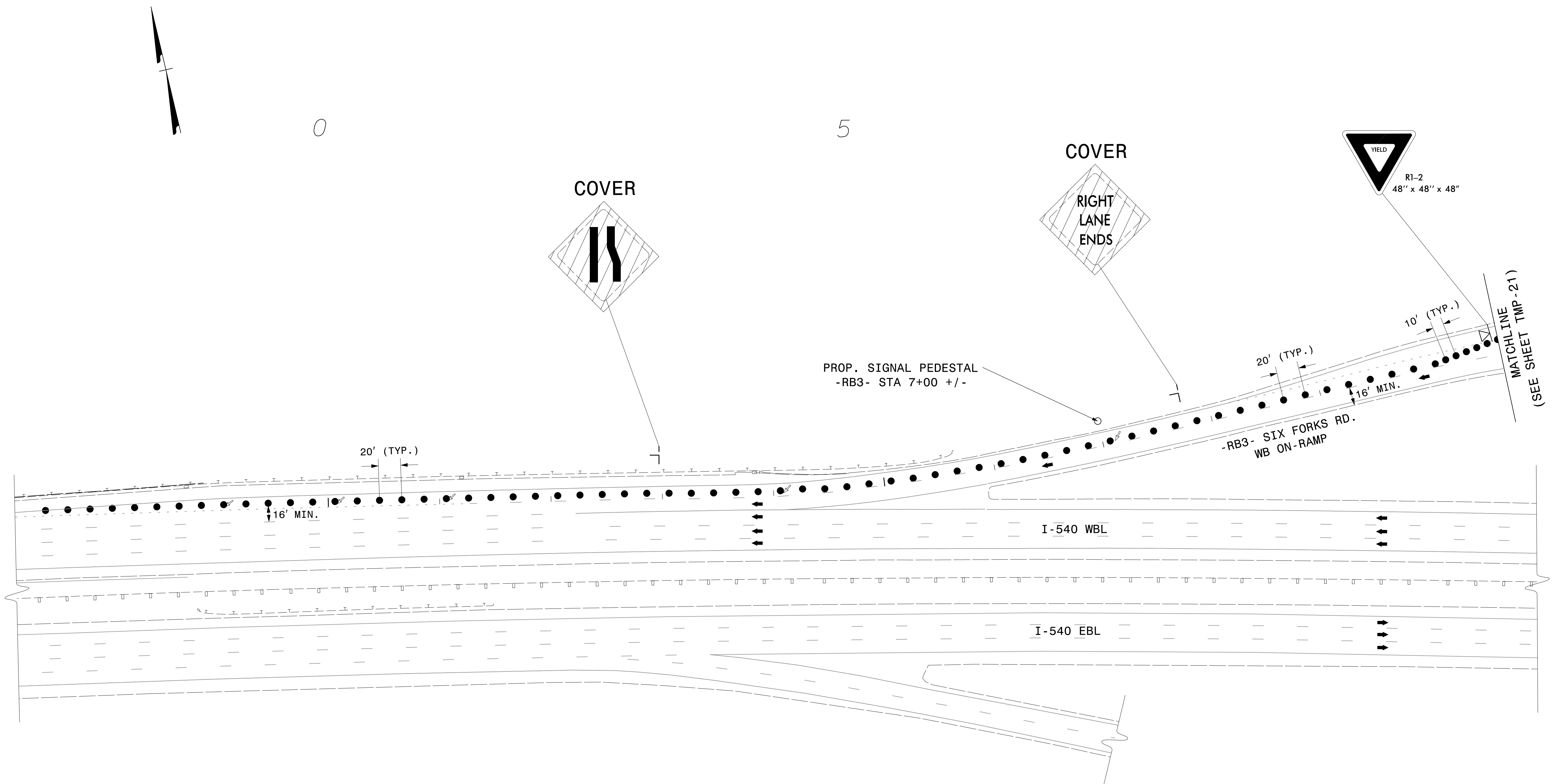
ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

APPROVED: *[Signature]*
 DATE: 5/24/2016
 SEAL
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 17586
 ENGINEER
 TODD BROOKS



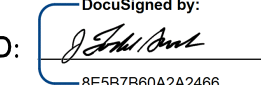
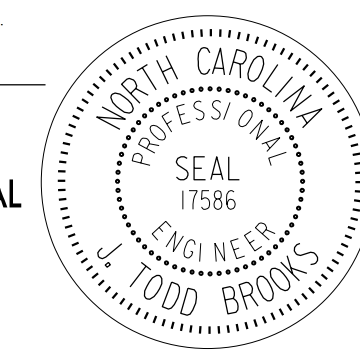
SIX FORKS ROAD
-RB3- WESTBOUND
ON-RAMP LEFT
LANE CLOSURE

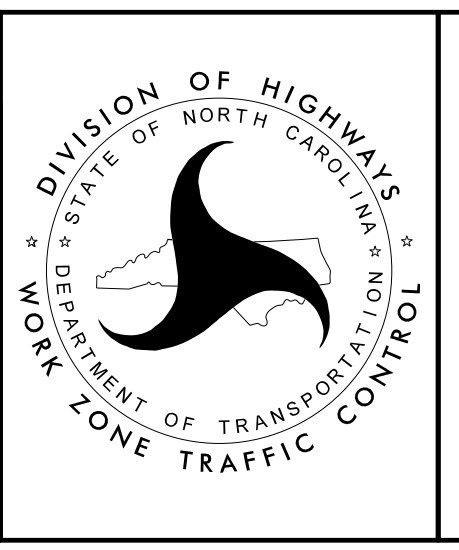
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



24-MAY-2016 16:59
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 MLE2034 AT DUS300019

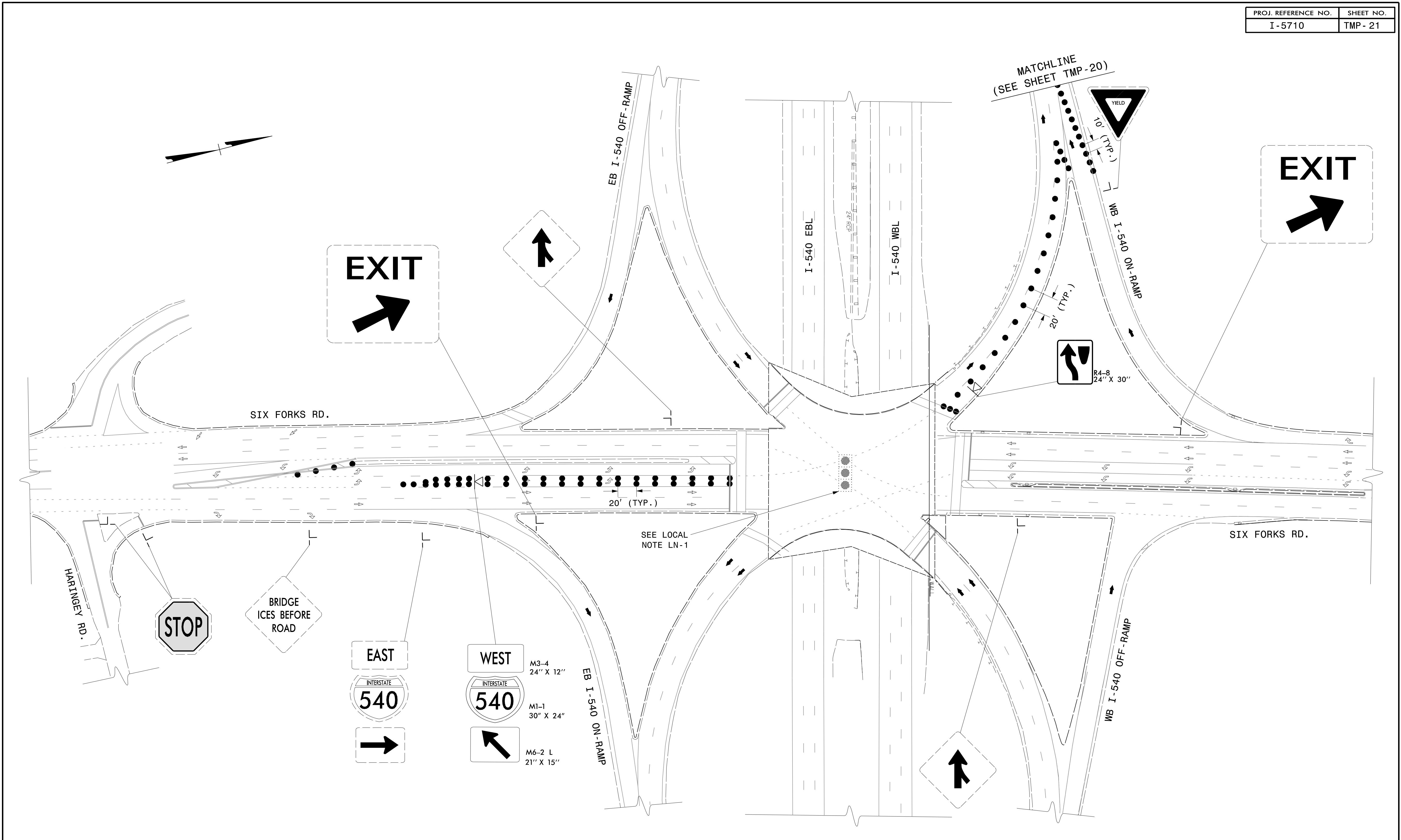
ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

APPROVED: 
 DATE: 5/24/2016
 SEAL



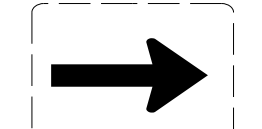

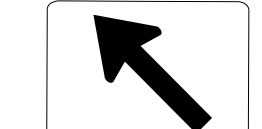


SIX FORKS ROAD
-RB3- WESTBOUND ON-RAMP RIGHT LANE CLOSURE

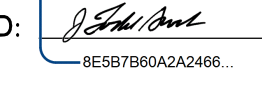

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

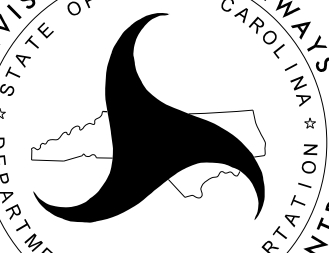


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 MLE2034 AT DUS300019

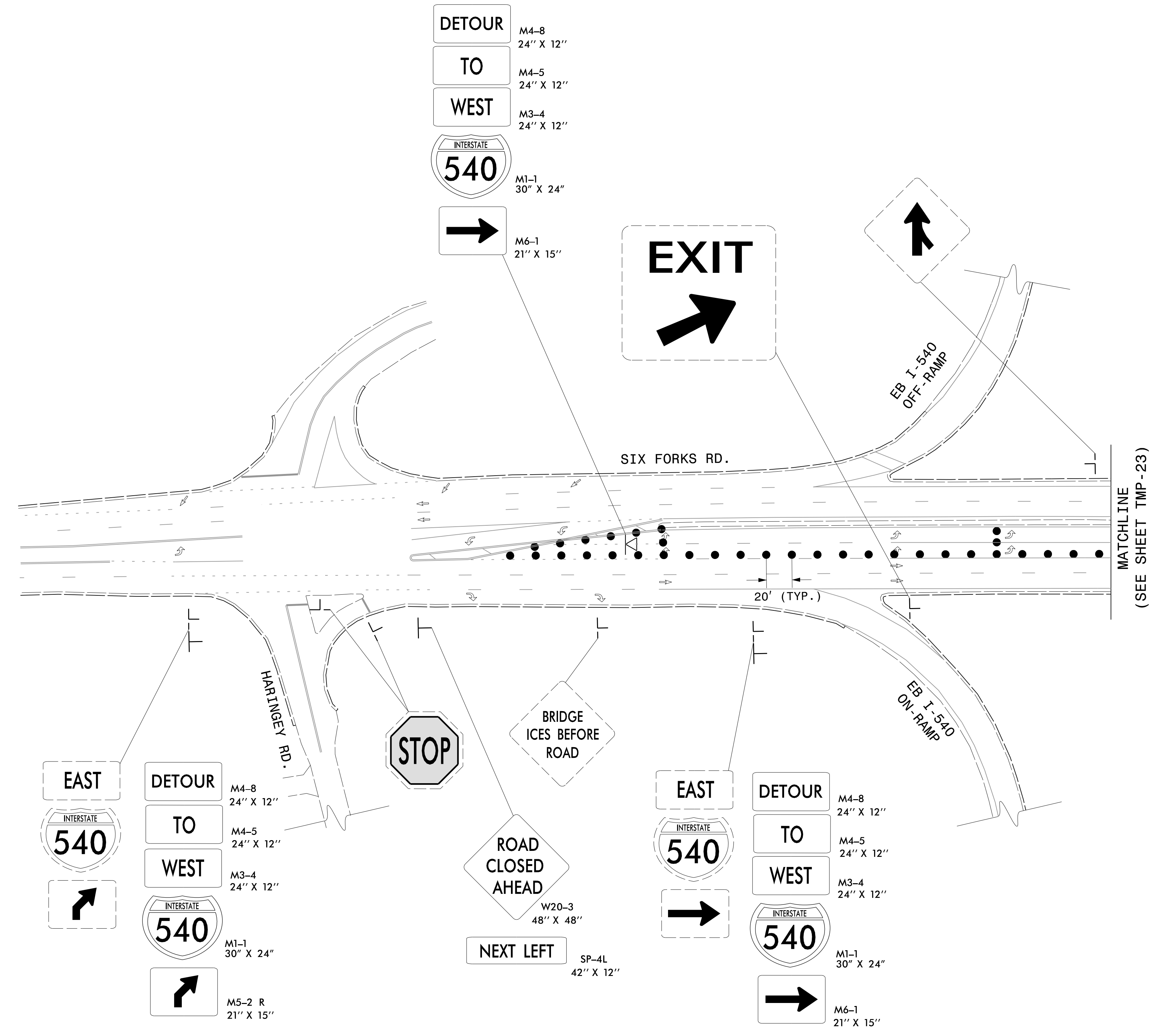
EAST  	WEST  
M3-4 24" X 12"	M1-1 30" X 24"
M6-2 L 21" X 15"	

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

APPROVED: 
 DATE: 5/24/2016
 SEAL


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


SIX FORKS ROAD
-RB3- WESTBOUND
ON-RAMP RIGHT
LANE CLOSURE

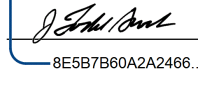


MATCHLINE
(SEE SHEET TMP-23)

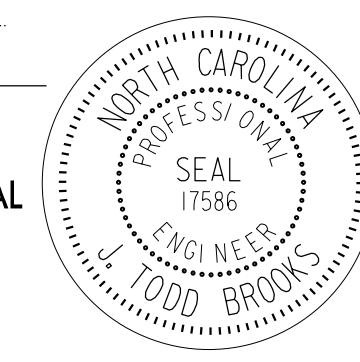
SEE TMP-24 FOR
OFFSITE DETOUR DETAILS

24-MAY-2016 16:59
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MILEZ034 AT DUS300019

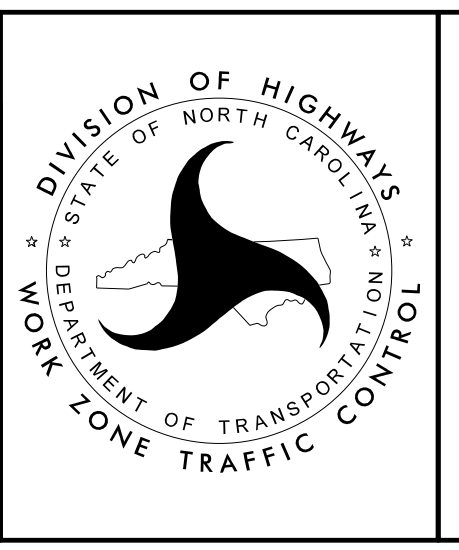
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

APPROVED: 
DATE: 5/24/2016

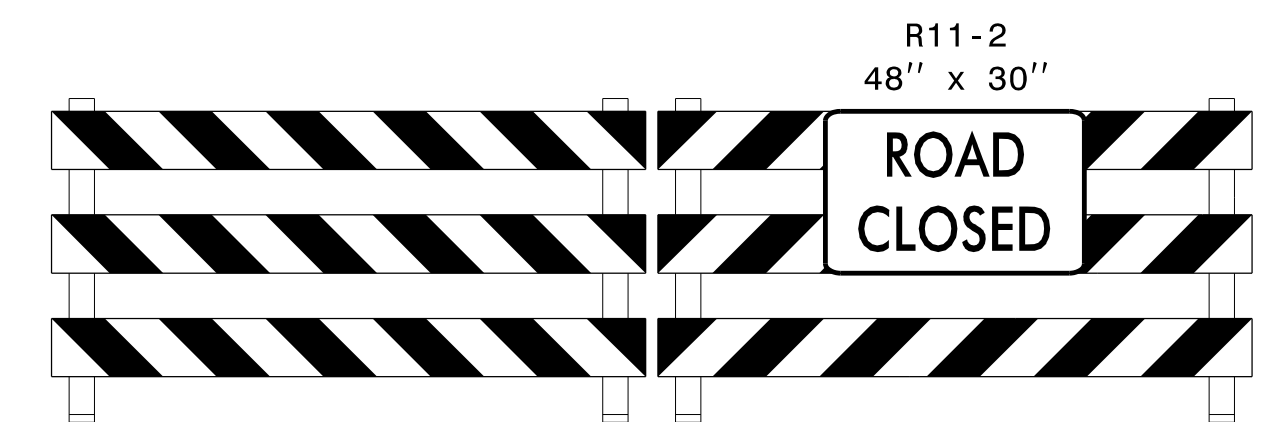
SEAL



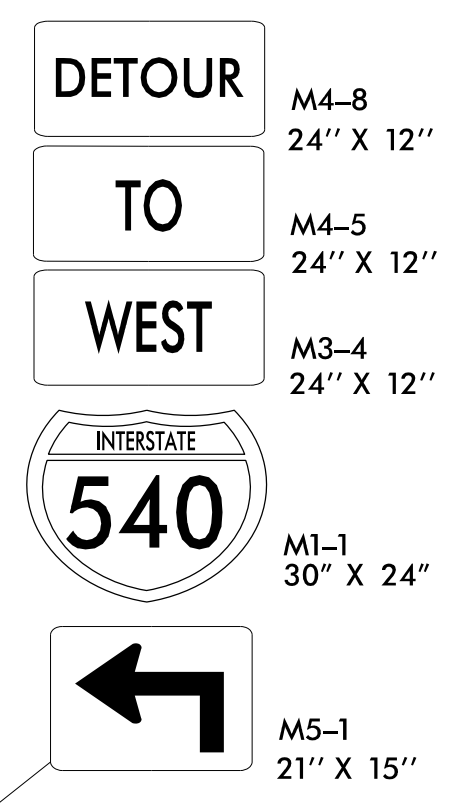
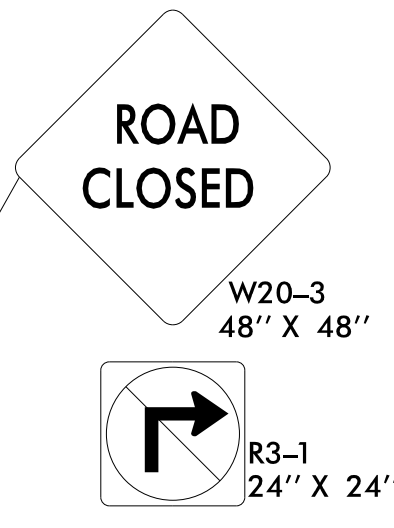
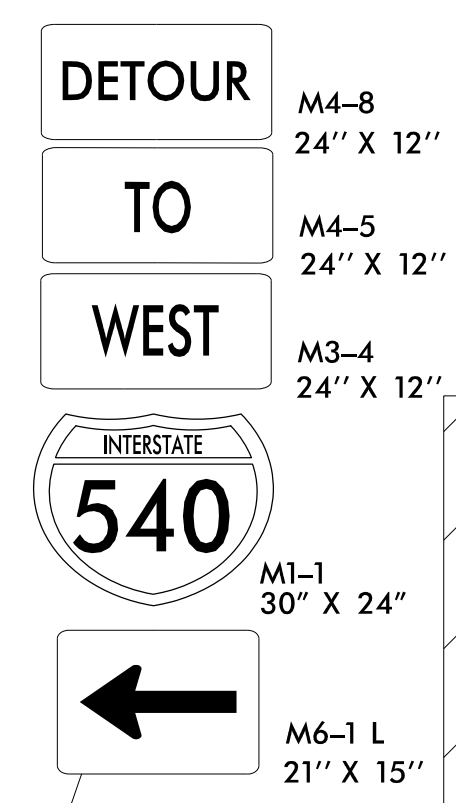
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



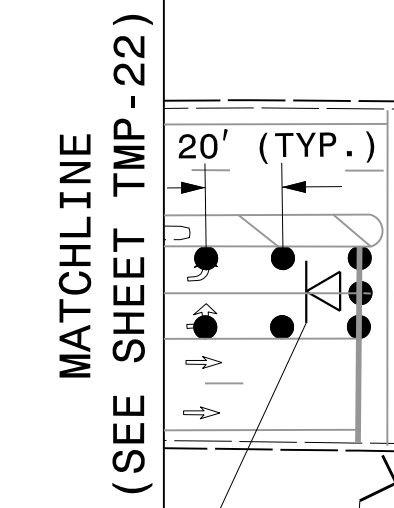
**SIX FORKS
ROAD**
-RB3- WESTBOUND
ON-RAMP
FULL CLOSURE



TYPE III BARRICADE(S)
SEE LOCAL NOTE LN-3



CMS NO.1
POSITION 2
(REFER TO SHEET
TMP-24)

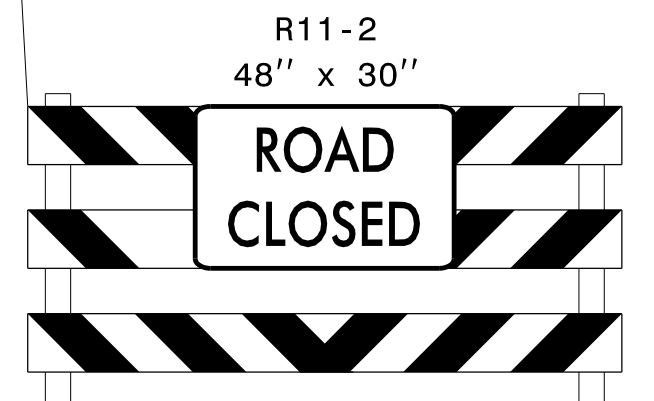


MATCHLINE
(SEE SHEET TMP-22)

SEE LOCAL
NOTE LN-1

20' (TYP.)

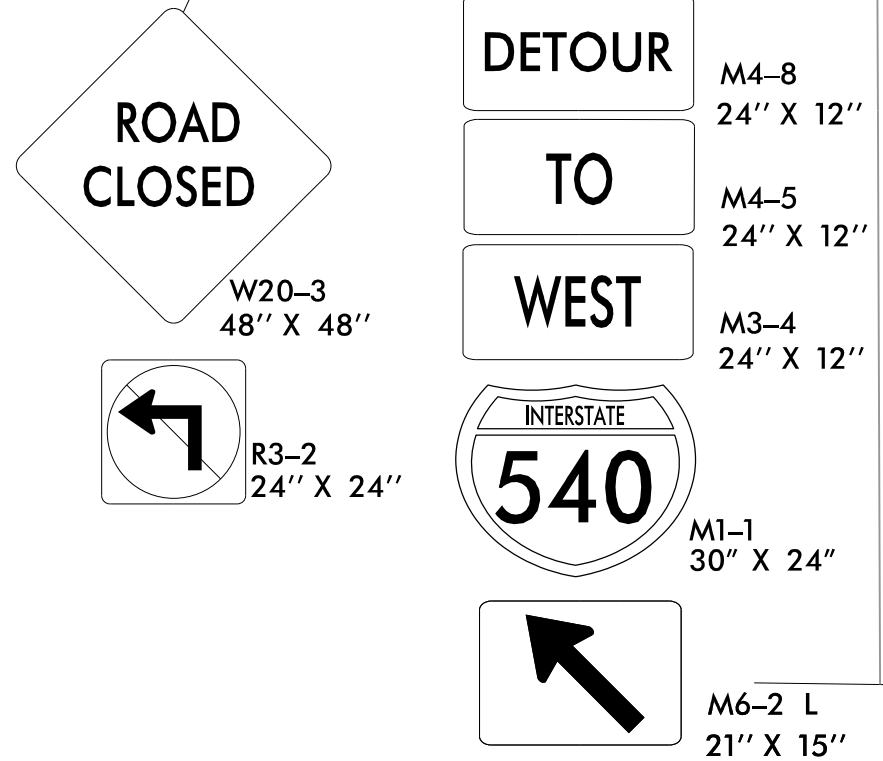
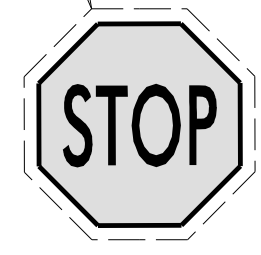
SIX FORKS RD.



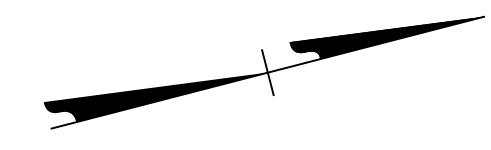
TYPE III BARRICADE
SEE LOCAL NOTE LN-3

WB I-540 OFF-RAMP

BREKETON DR.

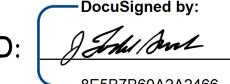



SEE TMP-24 FOR
OFFSITE DETOUR DETAILS



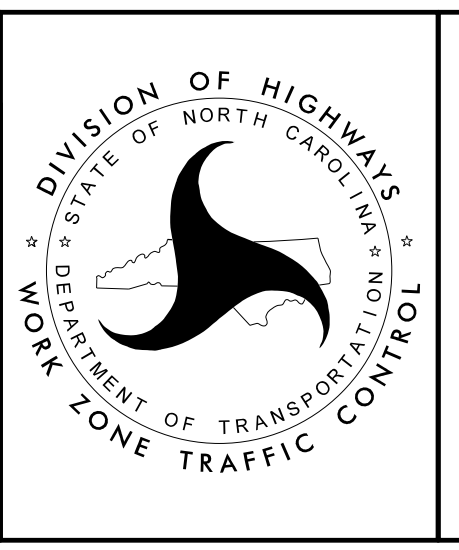
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MILEZ034 AT DUS300019

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

APPROVED: 
DATE: 5/24/2016

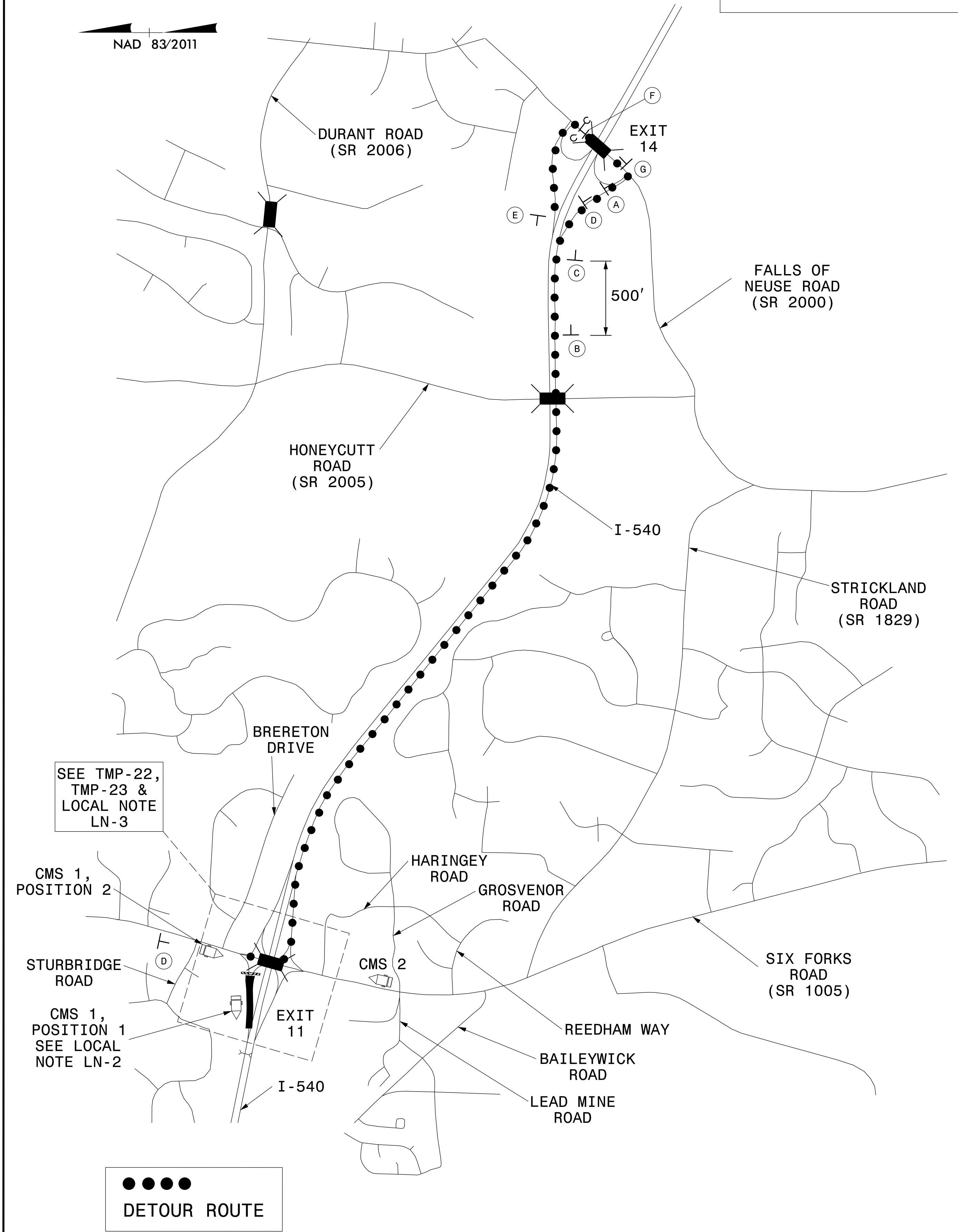
SEAL


DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



SIX FORKS ROAD
-RB3- WESTBOUND
ON-RAMP
FULL CLOSURE

SIX FORKS RD RAMP DETOUR



DETOUR TO WEST	M4-8 24" X 12"	DETOUR TO WEST	M4-8 36" X 18"	DETOUR TO WEST	M4-8 36" X 18"	DETOUR TO WEST	M4-8 24" X 12"	END DETOUR	M4-8 A 24" X 18"
TO WEST	M4-5 24" X 12"	TO WEST	M4-5 36" X 18"	TO WEST	M4-5 36" X 18"	TO WEST	M4-5 24" X 12"	E	
INTERSTATE 540	M3-4 24" X 12"	INTERSTATE 540	M3-4 36" X 18"	INTERSTATE 540	M3-4 36" X 18"	INTERSTATE 540	M3-4 24" X 12"		
←	M1-1 30" X 24"	↗	M1-1 45" X 36"	↗	M1-1 45" X 36"	↗	M1-1 30" X 24"		
←	M6-1 L 21" X 15"	↗	M5-2 R 30" X 21"	↗	M6-2 30" X 21"	LEFT LANE	M5-4 24" X 18"		
A		B		C		D			

ONE WEEK PRIOR TO OVERNIGHT RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
OVERNITE RAMP CLOSURE	___ DAY mmm dd 9PM - 6AM

CHANGEABLE MESSAGE SIGN

CMS 1, POSITION 1

DURING RAMP CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
WEST RAMP CLOSED	USE 540 EAST TO EXIT 14

CHANGEABLE MESSAGE SIGN

CMS 1, POSITION 2 & CMS 2

F

G

24-MAY-2016 16:59
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 MLE2034 AT DUS30009

APPROVED:

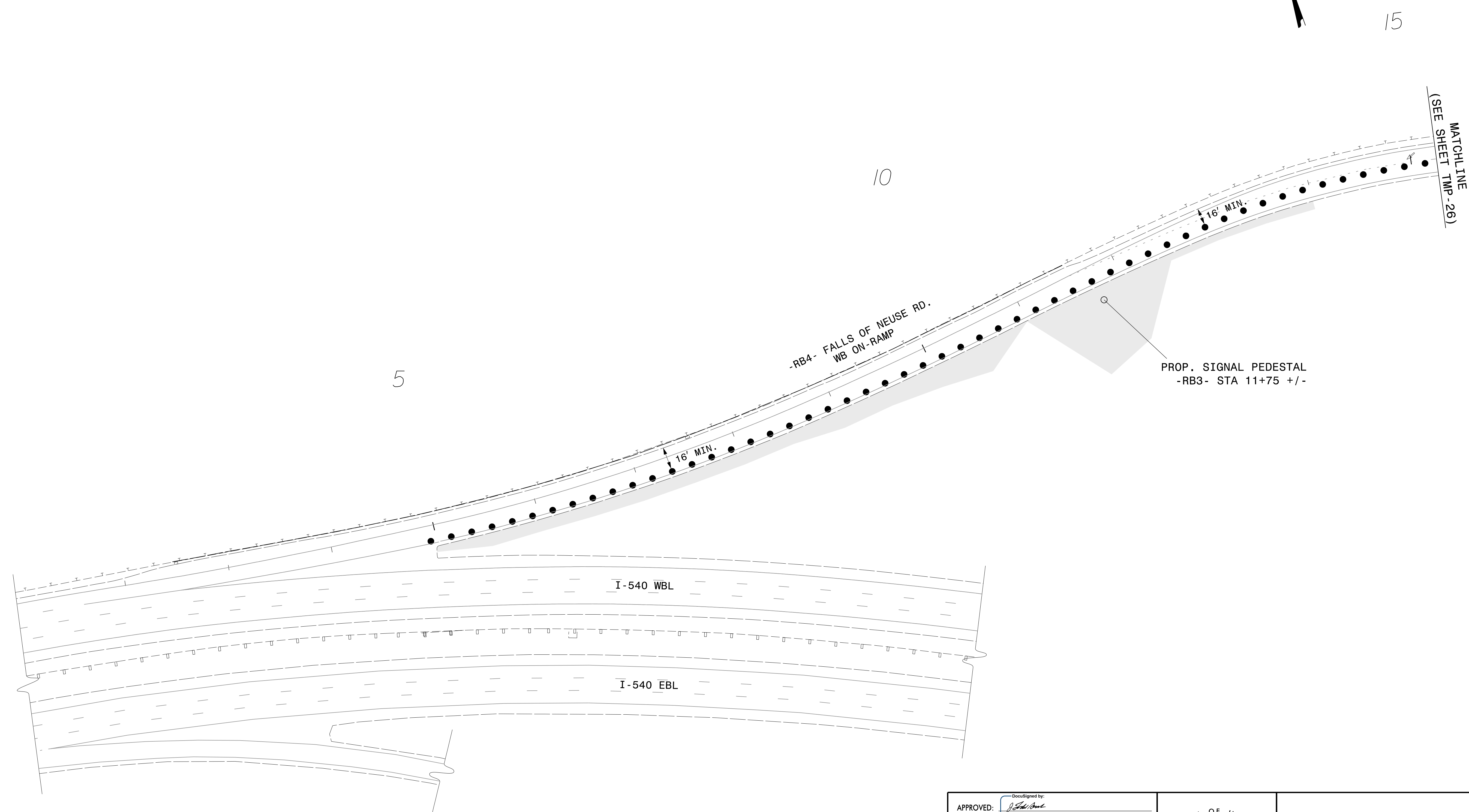
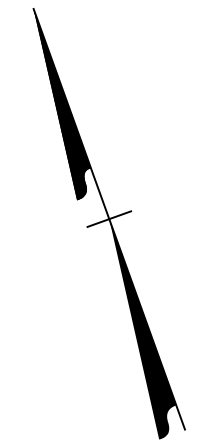
DATE: 5/24/2016

SEAL

SIX FORKS ROAD

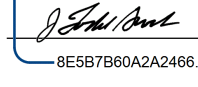
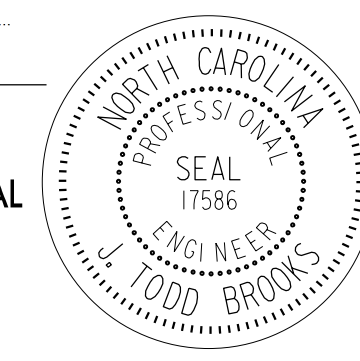
-RB3- WESTBOUND ON-RAMP DETOUR

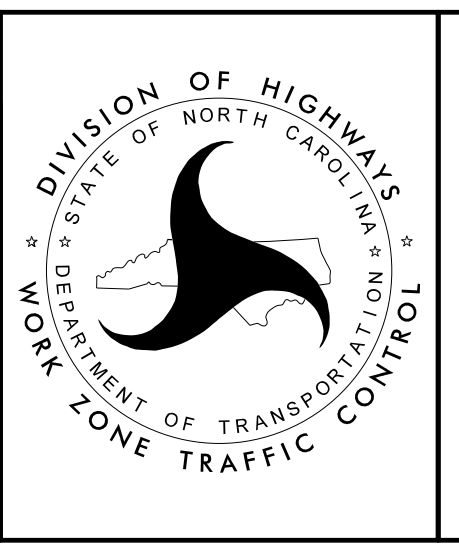
PROJ. REFERENCE NO.	SHEET NO.
I-5710	TMP-25



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 MLE2034 AT DUS300019

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

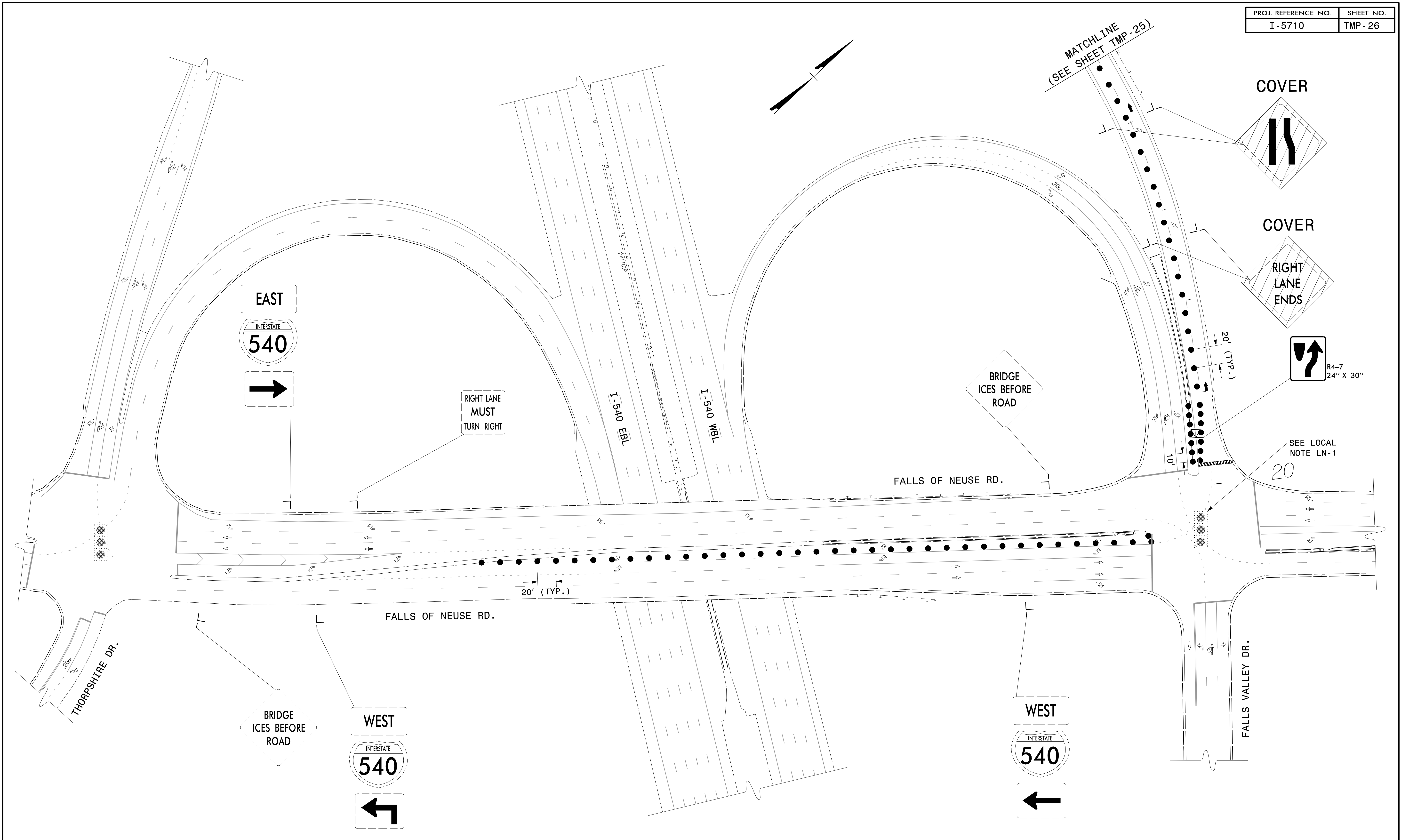
APPROVED: 
 DATE: 5/24/2016
 SEAL




FALLS OF NEUSE ROAD
-RB4- WESTBOUND ON-RAMP LEFT LANE CLOSURE

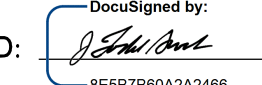
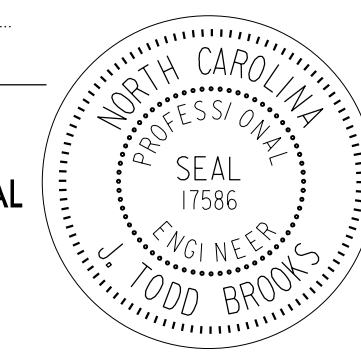
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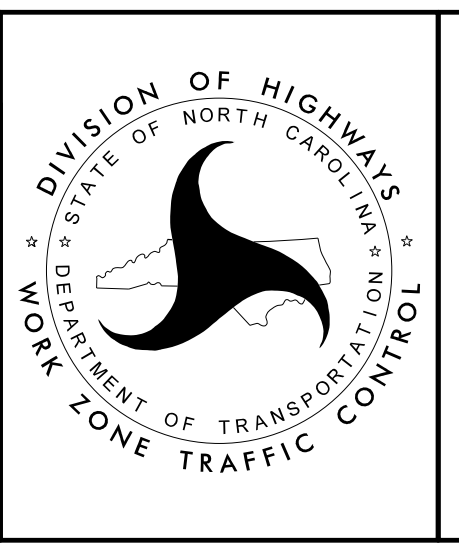
PROJ. REFERENCE NO.	SHEET NO.
I-5710	TMP-26



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 MLE2034 AT DUS300019

ATKINS
 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBES #F-0326

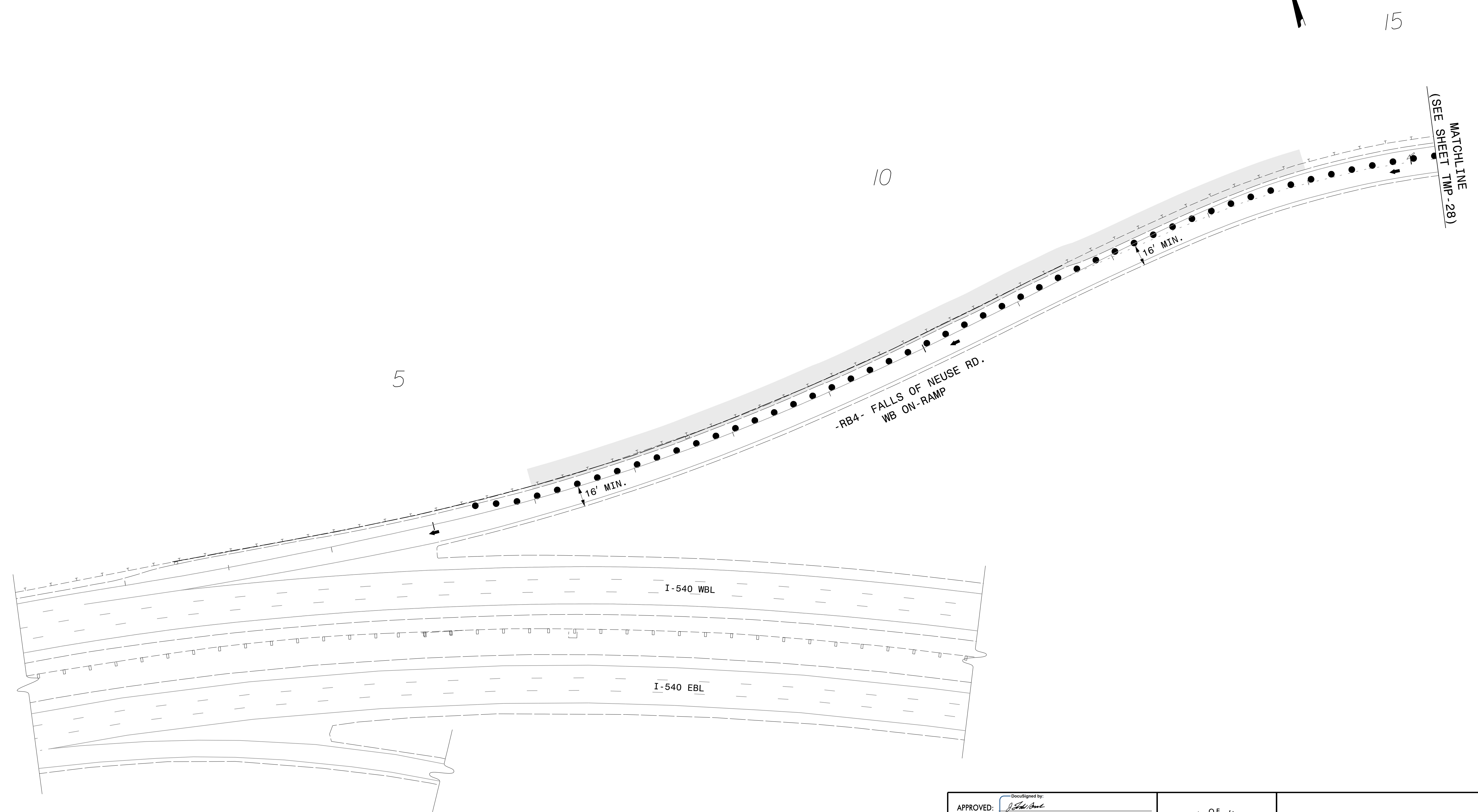
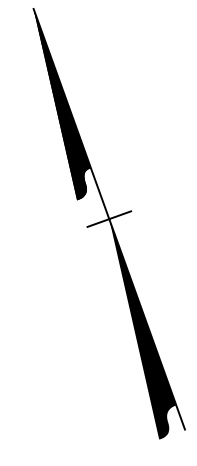
APPROVED: 
 DATE: 5/24/2016
 SEAL: 



FALLS OF NEUSE ROAD
-RB4- WESTBOUND ON-RAMP LEFT LANE CLOSURE

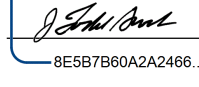
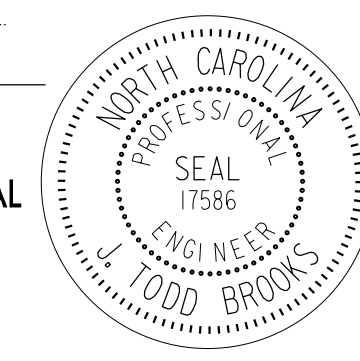
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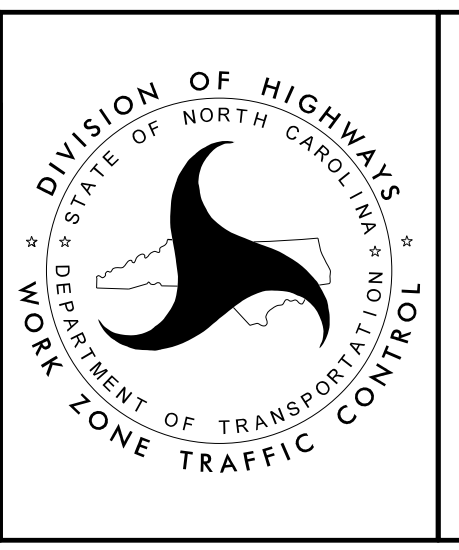
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I-5710	TMP-27



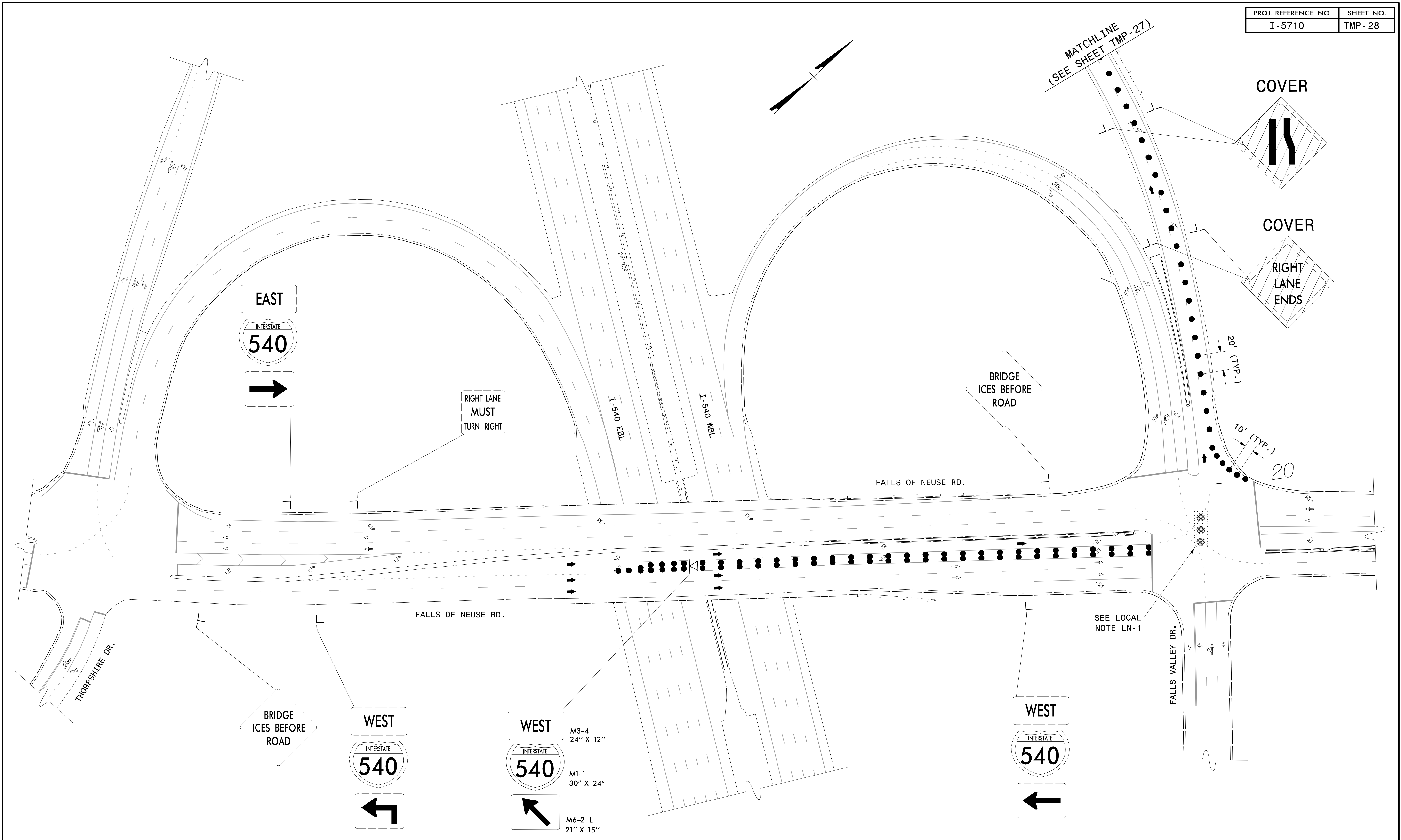
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 MLE2034 AT DUS300019

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

APPROVED: 
 DATE: 5/24/2016
 SEAL




FALLS OF NEUSE ROAD
-RB4- WESTBOUND ON-RAMP RIGHT LANE CLOSURE



24-MAY-2016 16:59
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 MLEZ034 AT DUS300019

EAST
INTERSTATE
540
→

RIGHT LANE
MUST
TURN RIGHT

BRIDGE
ICES BEFORE
ROAD

COVER
K


COVER
RIGHT
LANE
ENDS

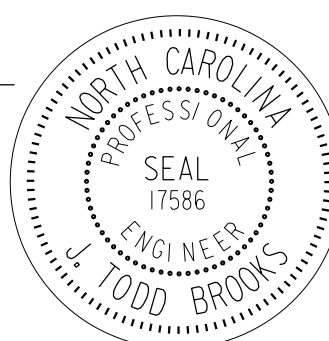
BRIDGE
ICES BEFORE
ROAD

WEST
INTERSTATE
540
←

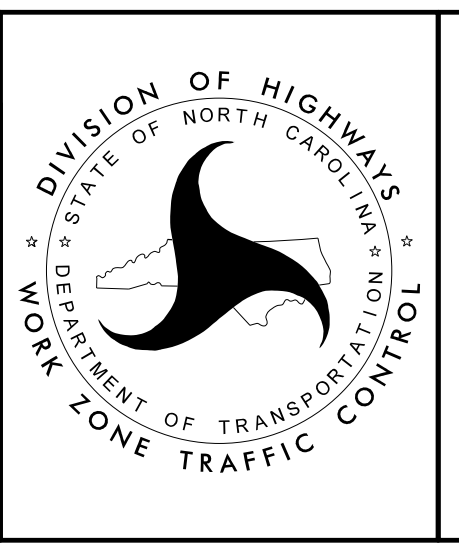
WEST
M3-4
24" X 12"
M1-1
30" X 24"
M6-2 L
21" X 15"
←

WEST
INTERSTATE
540
←

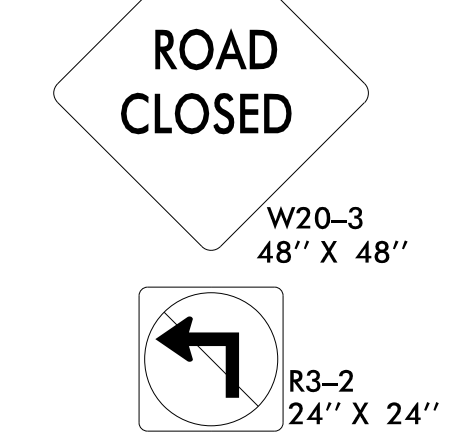
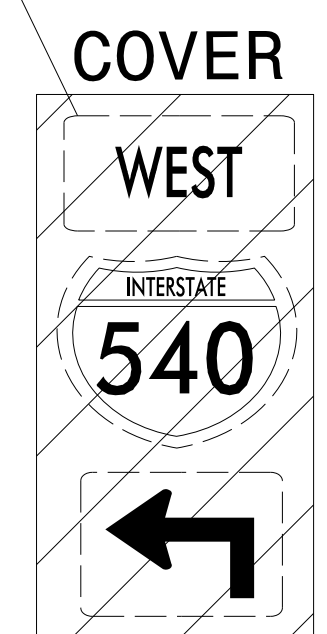
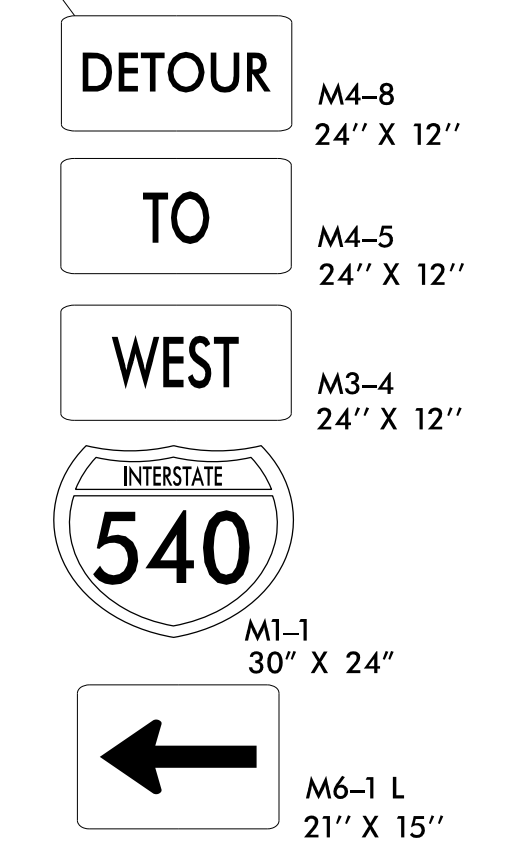
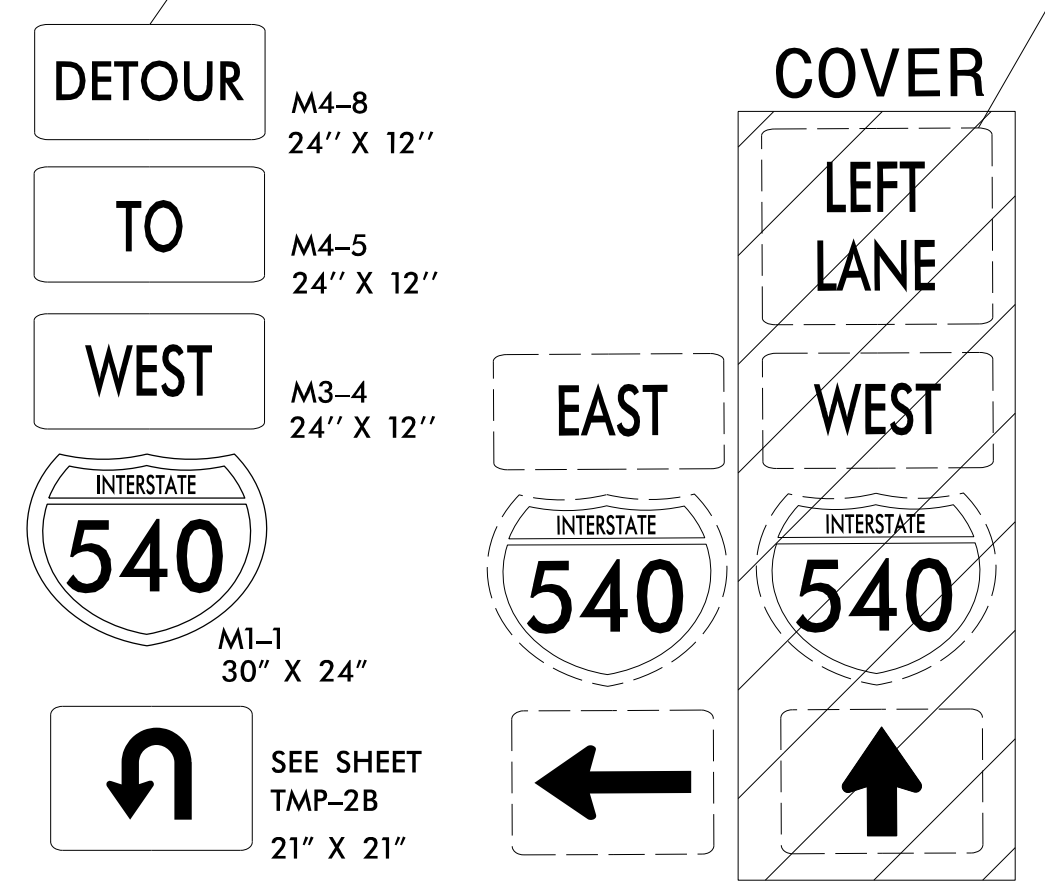
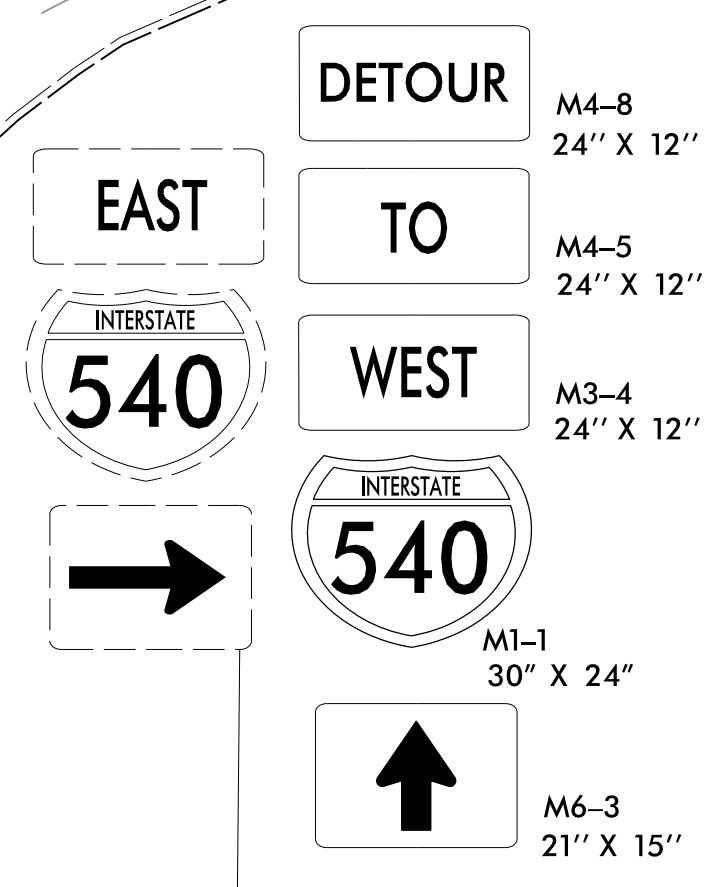
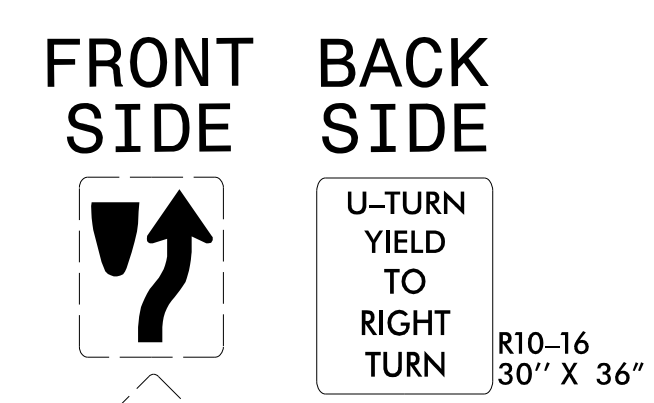
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 DATE: 5/24/2016

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**FALLS OF NEUSE
ROAD**
 -RB4- WESTBOUND
 ON-RAMP RIGHT
 LANE CLOSURE



SEE TMP-31 FOR OFFSITE DETOUR DETAILS

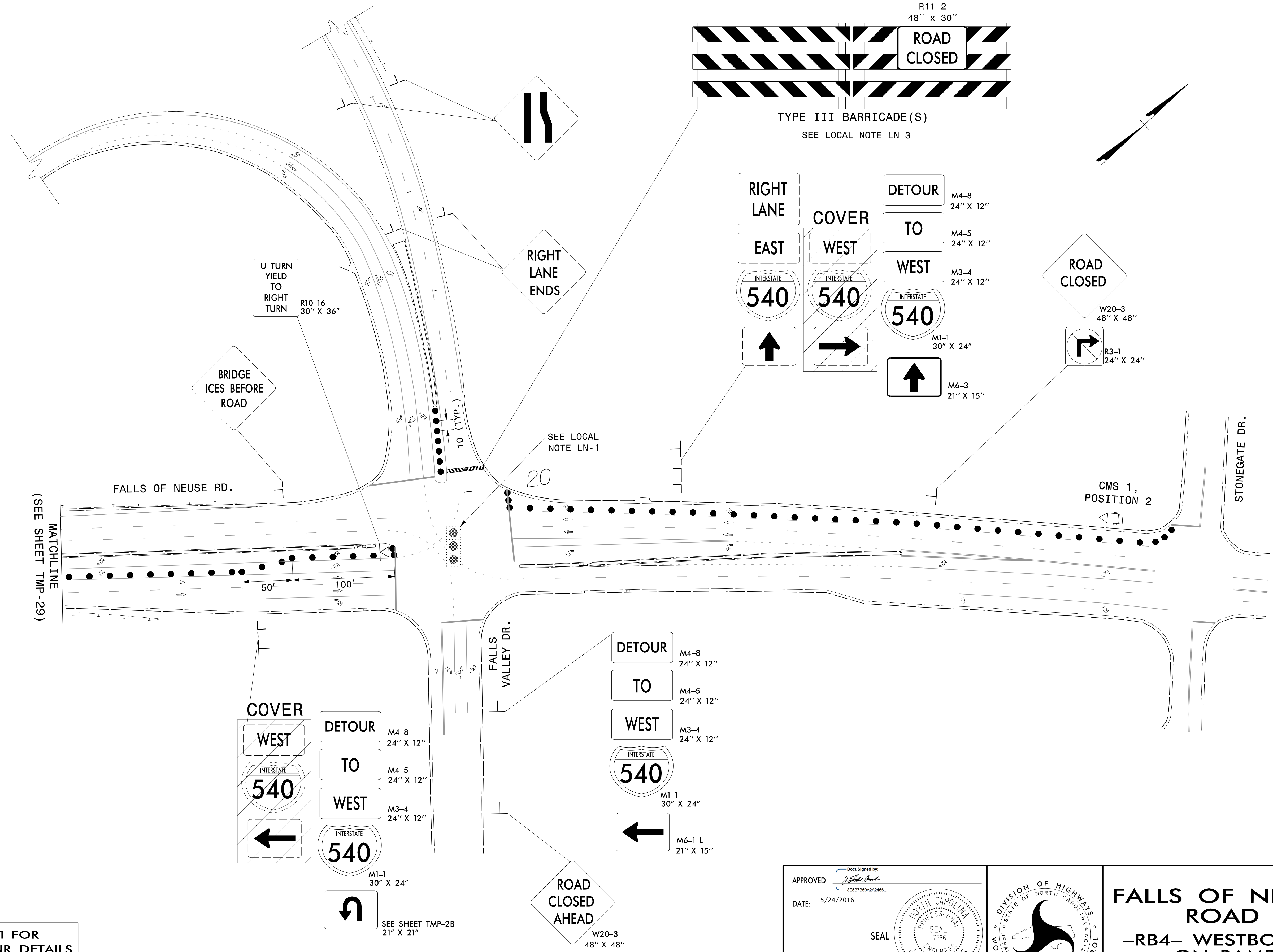
ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 (919) 876-6888 NCBEES #F-0326

APPROVED:
 DATE: 5/24/2016
 SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 17586
 TODD BROOKS

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

FALLS OF NEUSE ROAD
 -RB4- WESTBOUND ON-RAMP FULL CLOSURE

24-MAY-2016 16:59 M:\GIS\Projects\2016\Roadway\NCDOT\I-540 Ramp Metering\TrafficControl\TCPN-I-5710-TC-TC-29.dgn MLE2034 AT DUS300019



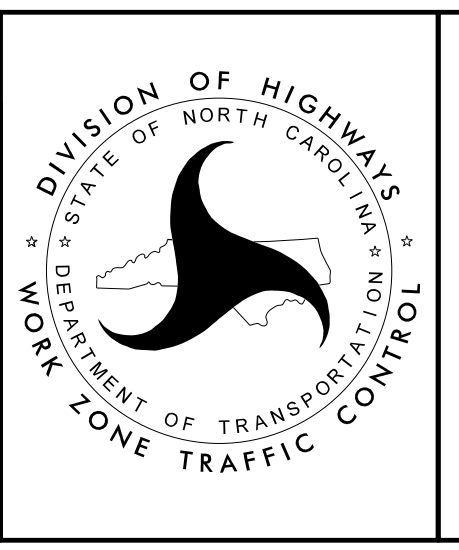
SEE TMP-31 FOR
OFFSITE DETOUR DETAILS

ATKINS 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
(919) 876-6888 NCBEES #F-0326

APPROVED: *[Signature]*
DATE: 5/24/2016

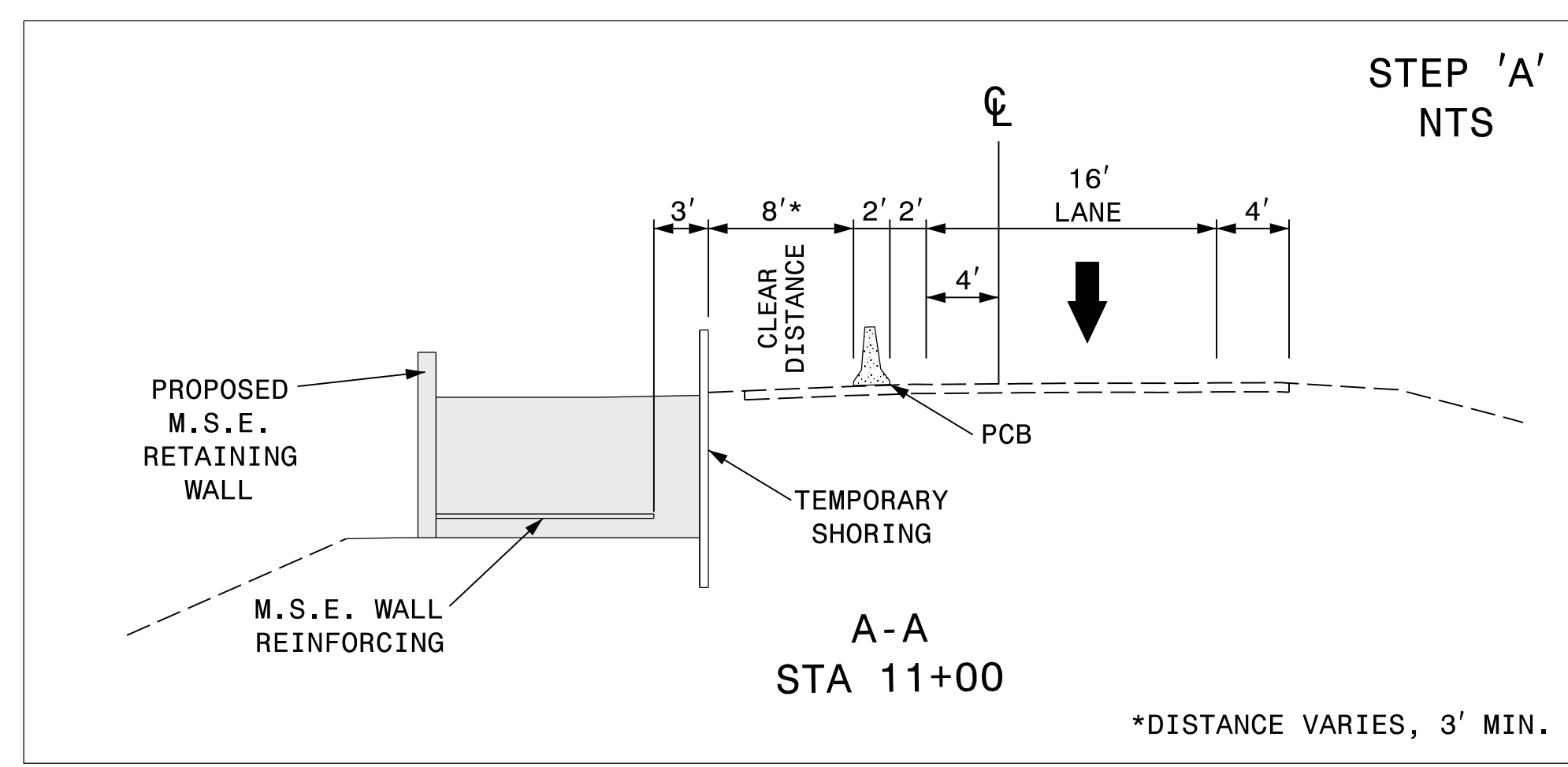
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NORTH CAROLINA
PROFESSIONAL
ENGINEER
17586
TODD BROOKS

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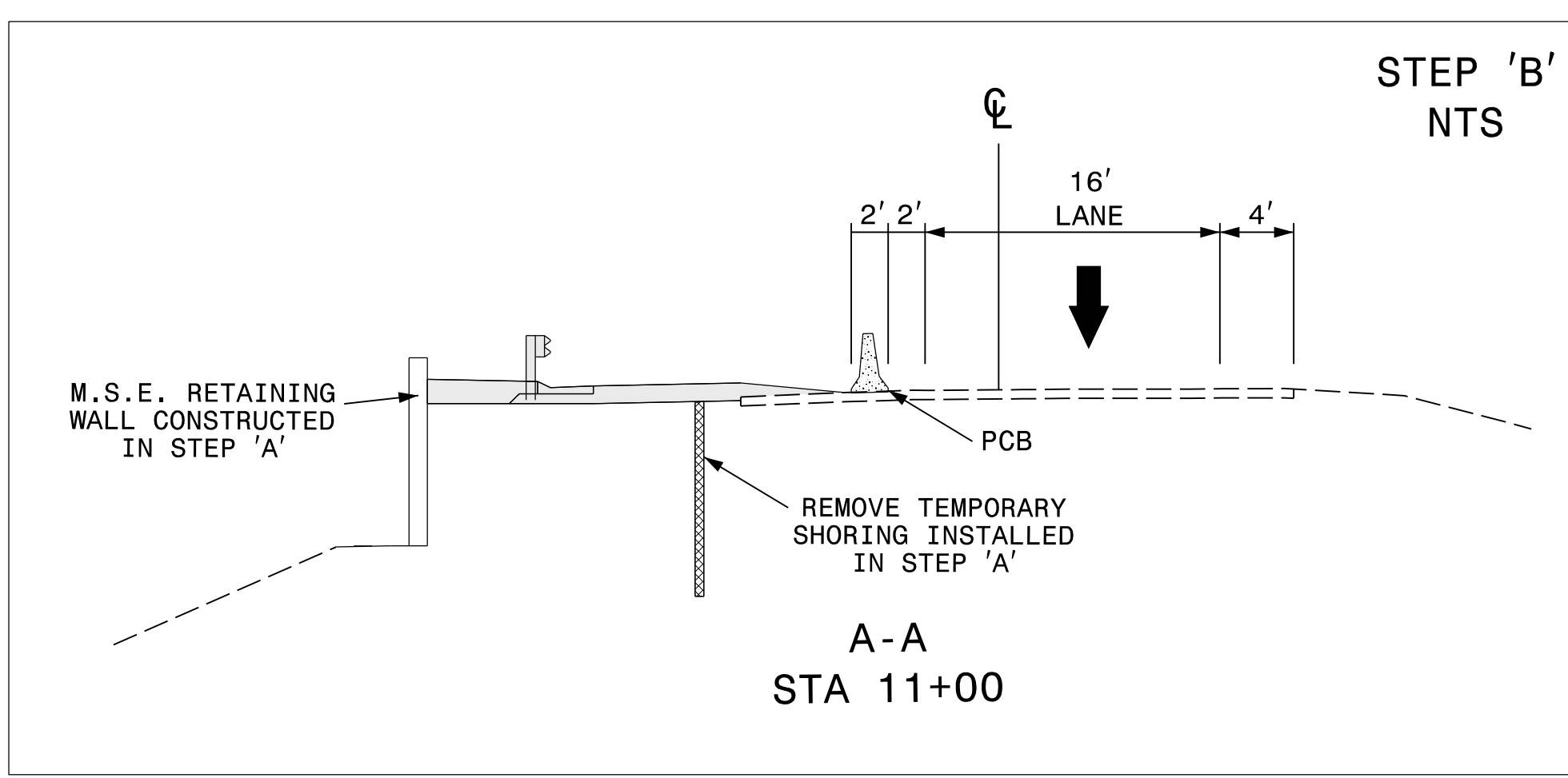
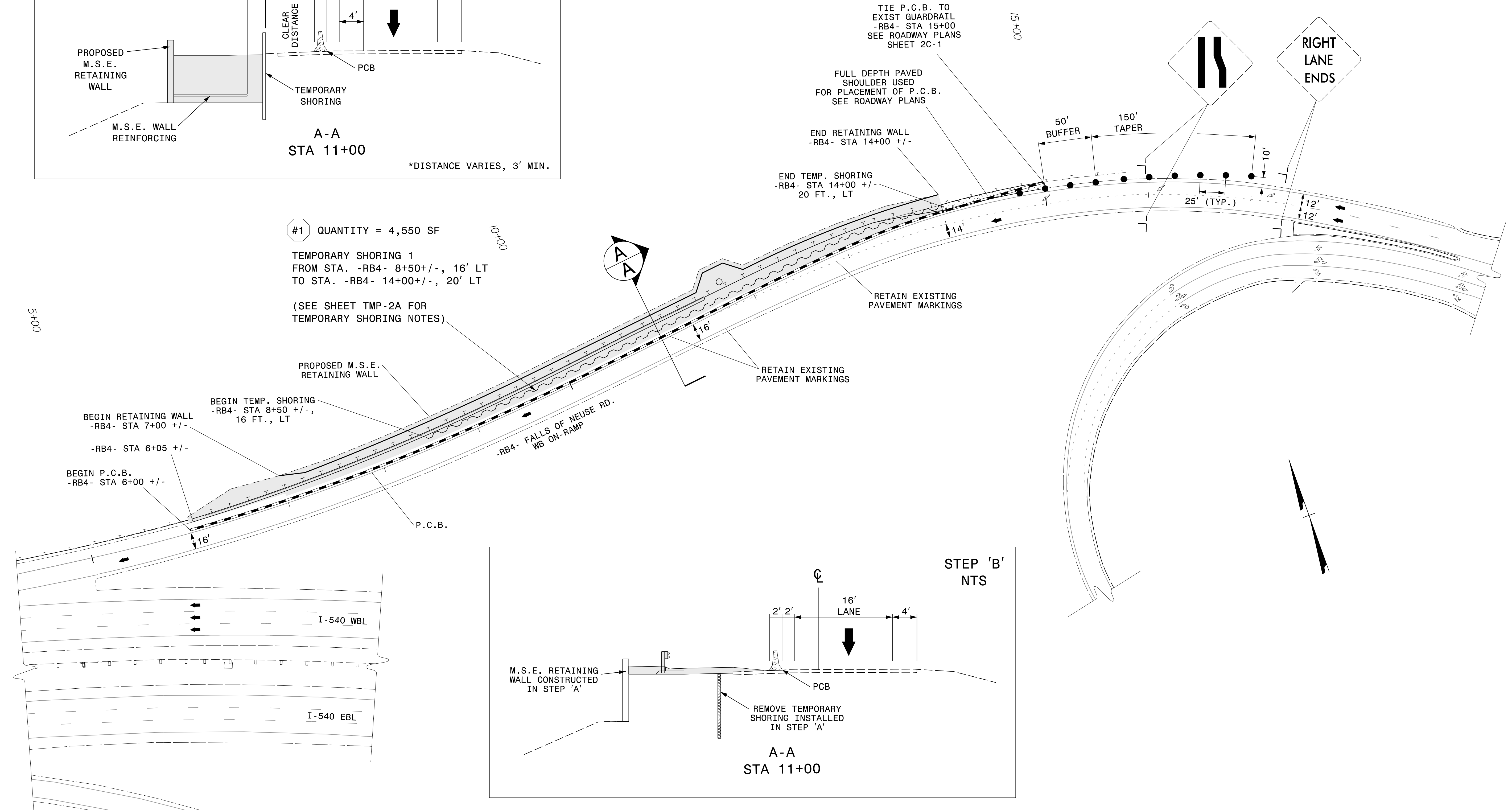
**FALLS OF NEUSE
ROAD
-RB4- WESTBOUND
ON-RAMP
FULL CLOSURE**

24-MAY-2016 16:59
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MILEZ034 AT DUS300019



*DISTANCE VARIES, 3' MIN.

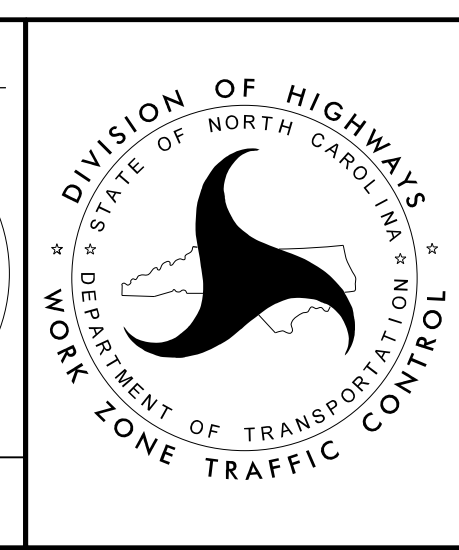
#1 QUANTITY = 4,550 SF
 TEMPORARY SHORING 1
 FROM STA. -RB4- 8+50 +/-, 16' LT
 TO STA. -RB4- 14+00 +/-, 20' LT
 (SEE SHEET TMP-2A FOR
 TEMPORARY SHORING NOTES)



07-JUL-2016 08:41
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WILE2054

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 1616 EAST MILLBROOK ROAD, SUITE 310
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 SEAL 17586
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FALLS OF NEUSE ROAD
-RB4- WESTBOUND ON-RAMP
PHASE I DETAIL

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