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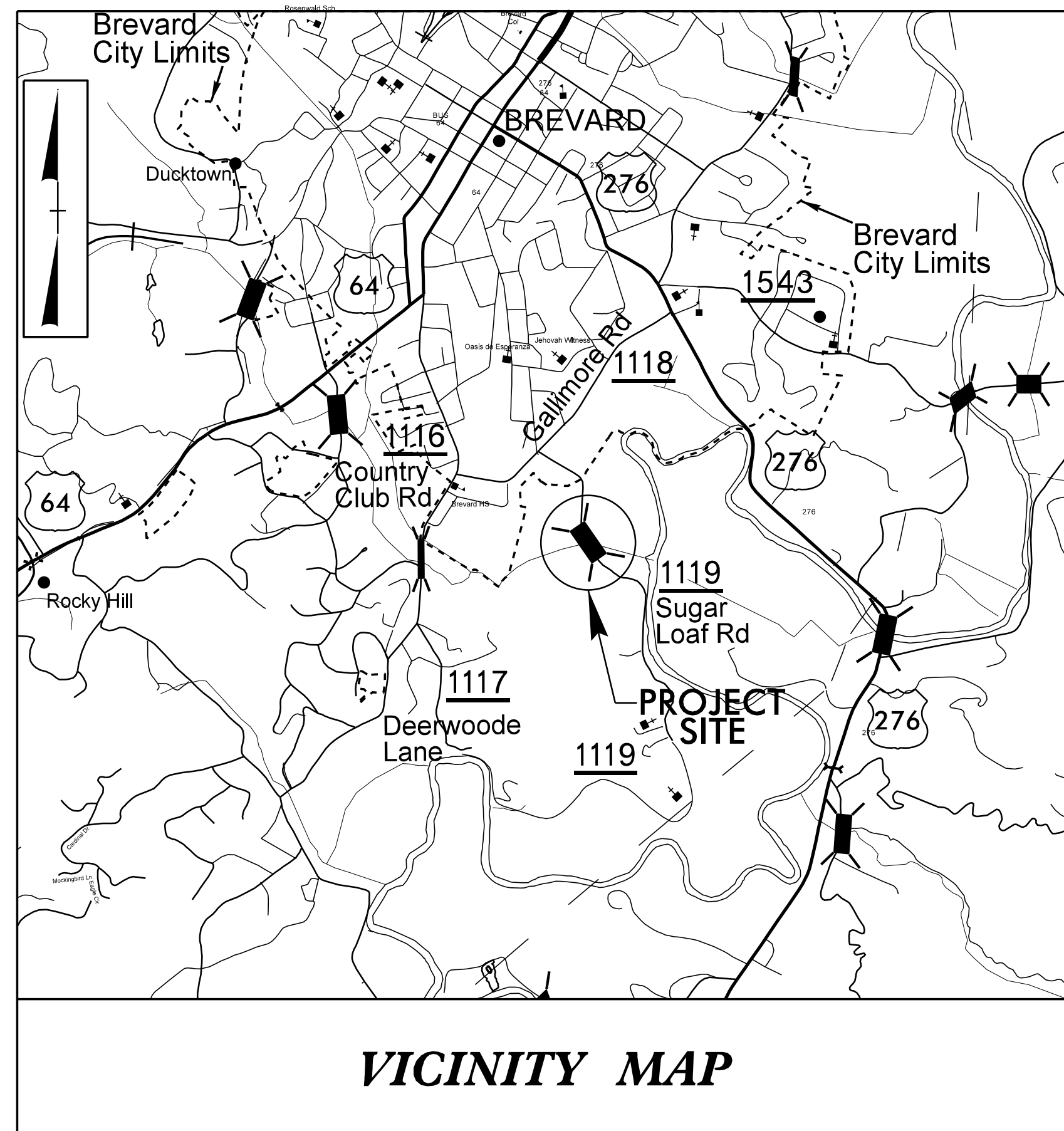
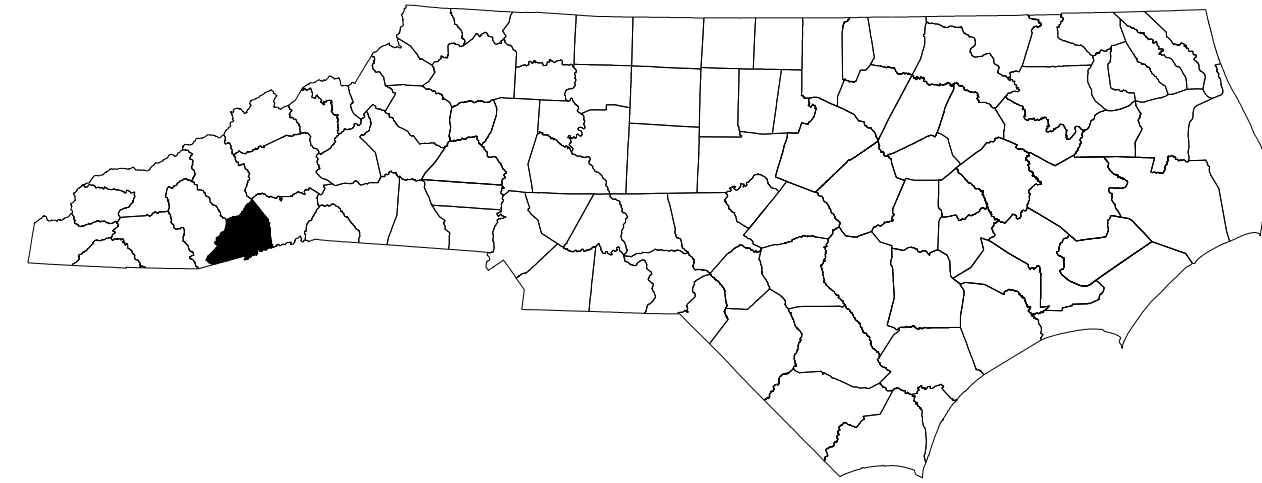
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**TRANSYLVANIA COUNTY**



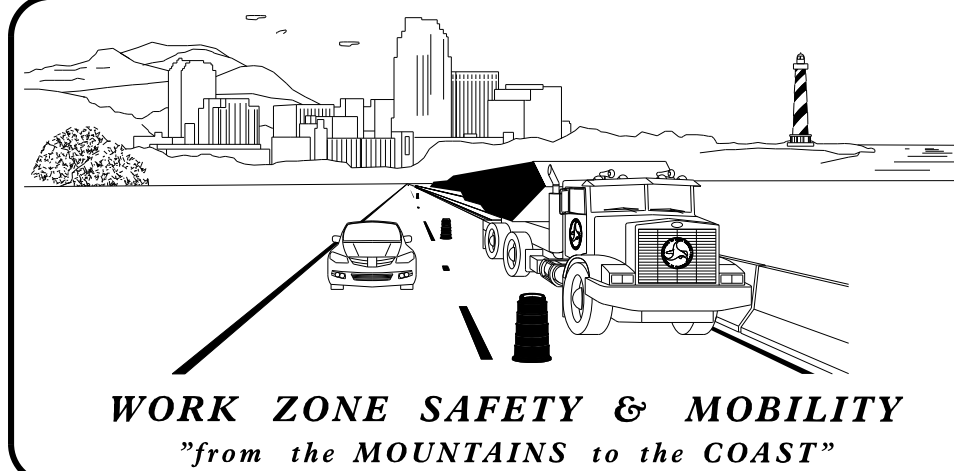
**LOCATION: BRIDGE NO.13 OVER  
NICHOLSON CREEK ON SR  
1119 (SUGAR LOAF RD)**

**TYPE OF WORK: GRADING, DRAINAGE,  
PAVING, AND  
STRUCTURE**

**VICINITY MAP**

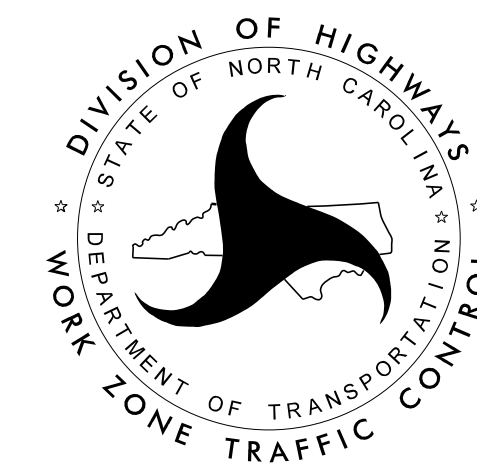
<b>INDEX OF SHEETS</b>	
<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES AND LOCAL NOTES)
TMP-2	TEMPORARY TRAFFIC CONTROL PHASING
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE 1 DETAIL
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE 2 DETAIL

SHEET NO.  
TMP-1



**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
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APPROVED: Barry C. Smith  
DATE: 9/16/2015

SEAL

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Division:

**TIP PROJECT: B-4822**

# ROADWAY STANDARD DRAWINGS

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

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

# LEGEND

## GENERAL

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

## TEMPORARY PAVEMENT MARKING

DESCRIPTION	PAY ITEM
PA WHITE EDGELINE (2X)	PAINT (4")
PI YELLOW DOUBLE CENTER LINE (2X)	PAINT (4")

## TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM    SKINNY DRUM    TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER

## TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

## PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

## PAVEMENT MARKERS

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

## PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

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 Raleigh, NC 27609-5210  
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APPROVED: Barry C. Smith DATE: 9/16/2013

## ROADWAY STANDARD DRAWINGS & LEGEND

## 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 UNDESIRABLE 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.

### LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) 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.
- B) 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.
- C) 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.
- D) 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.
- E) 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.

### PAVEMENT EDGE DROP OFF REQUIREMENTS

- F) 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.

- G) 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) 100 ft IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

### TRAFFIC PATTERN ALTERATIONS

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

### SIGNING

- I) 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.
- J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- K) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 100 ft IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC BARRIER

- L) 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.

- M) 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

- M) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- N) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- O) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
SR 1119 (SUGAR LOAF ROAD)	PAINT	TEMPORARY RAISED

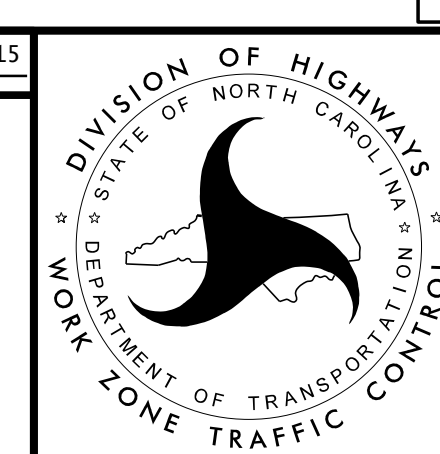
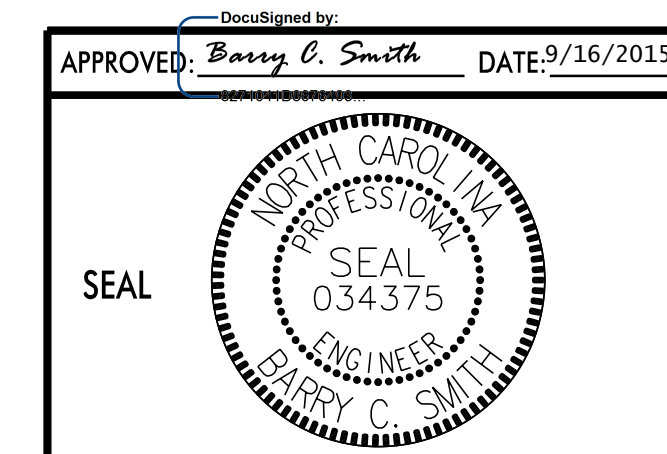
- P) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

- Q) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

### MISCELLANEOUS

- S) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAY'S TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 100 ft AND 200 ft RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.



# PHASING

NOTE: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.

## PHASE 1

## PHASE 2

WORKING IN A CONTINUOUS MANNER COMPLETE THE FOLLOWING IN PHASE 1 STEPS 1 AND 2:

WORKING IN A CONTINUOUS MANNER COMPLETE THE FOLLOWING WORK IN PHASE 2 STEPS 1 AND 2.

STEP 1: INSTALL "ROAD WORK AHEAD" AND "END ROAD WORK" SIGNS (SEE ROADWAY STANDARD DRAWING 1101.01, SHEET 3 OF 3). INSTALL "SHOULDER WORK" SIGN AND CHANNELIZING DEVICES (DRUMS) TO CLOSE SHOULDER ALONG EXISTING -L- FROM -L- STA. 10+75 +/- TO -L- STA. 19+85 +/- (SEE ROADWAY STANDARD DRAWING 1101.04, SHEET 1 OF 1).

STEP 1: USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHEET 1 OF 15 AND FLAGGERS AS NEEDED, COMPLETE THE FOLLOWING:

REMOVE PCB FROM RIGHT SHOULDER OF EXISTING ROAD FROM -L- STA. 13+70 +/- TO -L- STA. 15+15 +/-.

STEP 2: USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHEET 1 OF 15 AND FLAGGERS AS NEEDED, COMPLETE THE FOLLOWING:

GRADE AND PAVE/WEDGE AS NECESSARY FROM -L- STA. 10+75 TO 14+00 +/- AND FROM -L- STA. 18+00 +/- TO -L- STA. 19+85 TO TIE REMAINING PORTION OF EXISTING SR 1119 TO THE NEWLY CONSTRUCTED PORTION (-L STA. 14+00 +/- TO 18+00 +/-) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AS SHOWN ON TMP-4.

CONSTRUCT TEMPORARY PAVEMENT OFF RIGHT EDGE OF EXISTING ROAD FROM -L- STA. 14+73 +/- TO -L- STA. 15+15 +/- (SEE TMP-3).

REMOVE EXISTING PAVEMENT MARKINGS AS NECESSARY AND PLACE TEMPORARY PAVEMENT MARKINGS FROM -L- STA. 10+75 TO -L- STA. 19+85 TYING TO EXISTING PAVEMENT MARKINGS AT -L- STA. 10+75 AND -L- STA. 19+85.

INSTALL PORTABLE CONCRETE BARRIER IN THE LOCATIONS SHOWN ON TMP-3 FROM -L- STA. 13+70 +/- TO EXISTING BRIDGE RAIL.

SHIFT TRAFFIC ON SR 1119 INTO FINAL TWO-LANE, TWO-WAY TRAFFIC PATTERN.

STEP 3: BEHIND CHANNELIZING DEVICES (DRUMS) AND TEMP PCB, COMPLETE THE FOLLOWING:

CONSTRUCT PROPOSED STRUCTURE INCLUDING WINGWALLS.

STEP 2: INSTALL CHANNELIZING DEVICES (DRUMS) TO CLOSE THE SHOULDER ALONG THE LEFT SIDE OF -L- FROM STA. 12+00 +/- TO STA. 13+60 +/- AND STA. 18+30 +/- TO STA. 19+15 +/- . INSTALL TYPE III BARRICADES TO PREVENT ACCESS TO THE OLD SUGAR LOAF ROAD (SEE TMP-4).

PERFORM GRADING TO THE RIGHT OF EXISTING PAVEMENT AND SHOULDER CLOSURES FROM -L- STA. 10+75 +/- TO -L- STA. 19+85 +/- . INCLUDE RIGHT SIDE SHOULDERS FROM -L- STA. 10+75 +/- TO -L- STA. 19+85 +/- , AND LEFT SIDE SHOULDERS FROM -L- STA. 14+00 +/- TO -L- STA. 18+00 +/- AS SHOWN ON TMP-3.

STEP 3: BEHIND CHANNELIZING DEVICES (DRUMS) AND BARRICADE:

FINISH ALL GRADING OF PROPOSED LEFT SIDE SHOULDERS FROM -L- STA. 10+75 TO -L- STA. 14+00 +/- AND FROM -L- STA. 18+00 +/- TO 19+85.

PAVE PROPOSED ROADWAY INCLUDING PAVED SHOULDERS UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM -L- STA. 14+00 +/- TO -L- STA. 18+00 +/- AS SHOWN ON TMP-3. INSTALL ALL GUARDRAIL.

TIE EXISTING DRIVEWAYS ON THE LEFT OF -L- TO NEW SUGAR LOAF ROAD LOCATION.

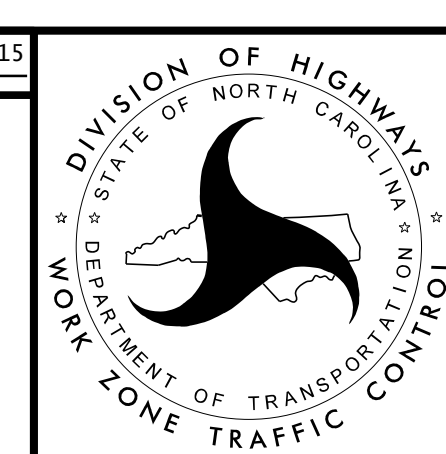
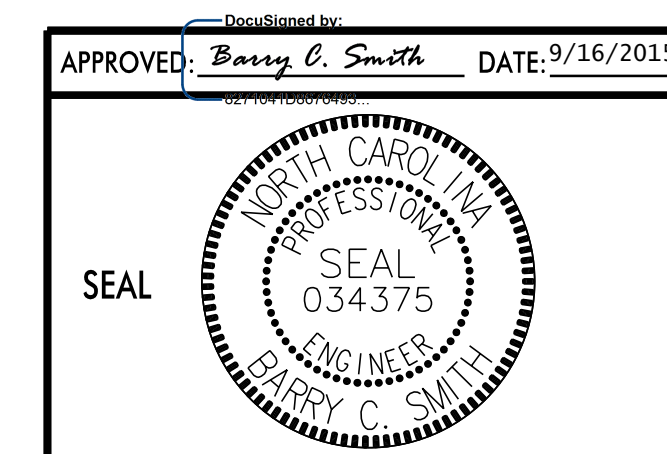
REMOVE STRUCTURE, WINGWALLS, AND PAVEMENT FROM EXISTING SUGAR LOAF ROAD.

STEP 4: USING ROADWAY STANDARD DRAWING NUMBER 1101.02, SHEET 1 OF 15 AND FLAGGERS AS NEEDED, COMPLETE THE FOLLOWING:

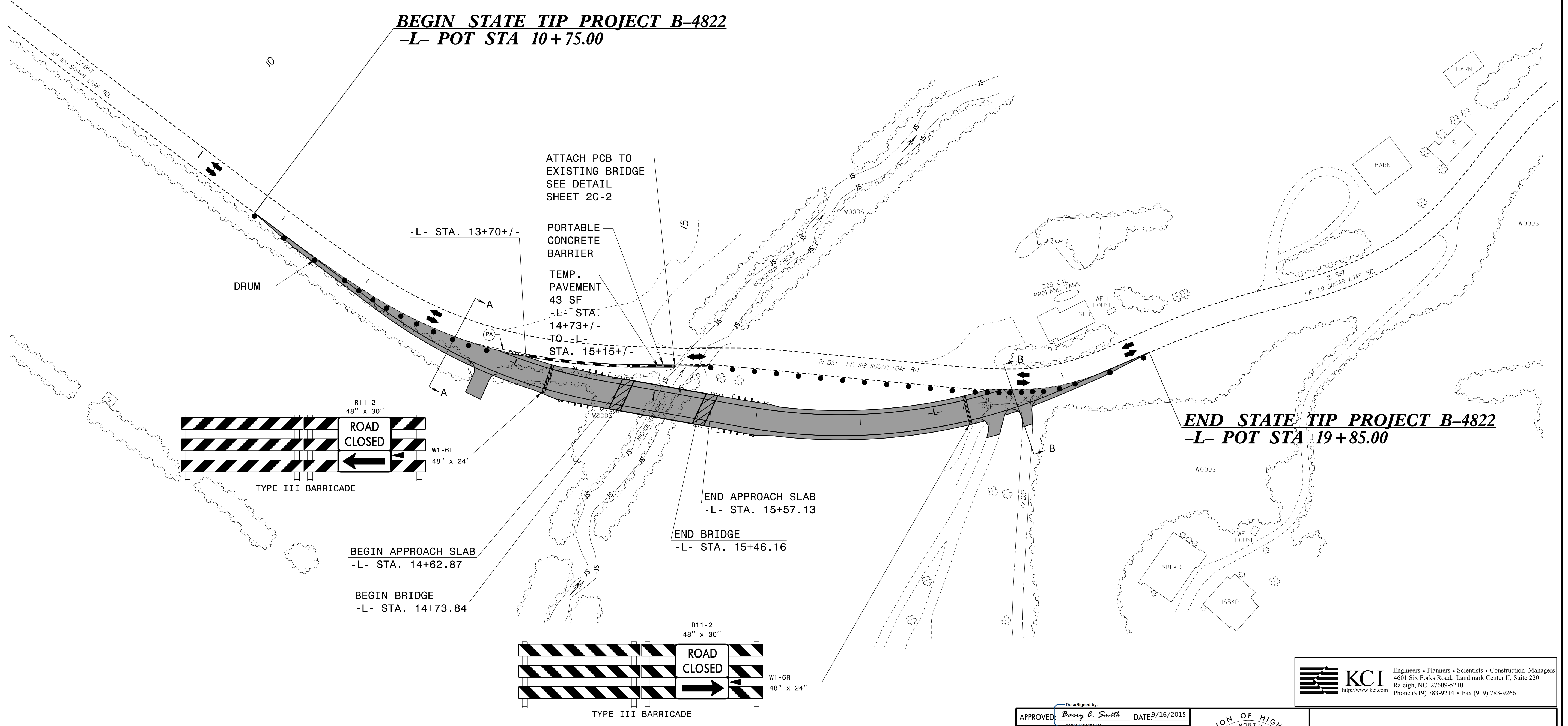
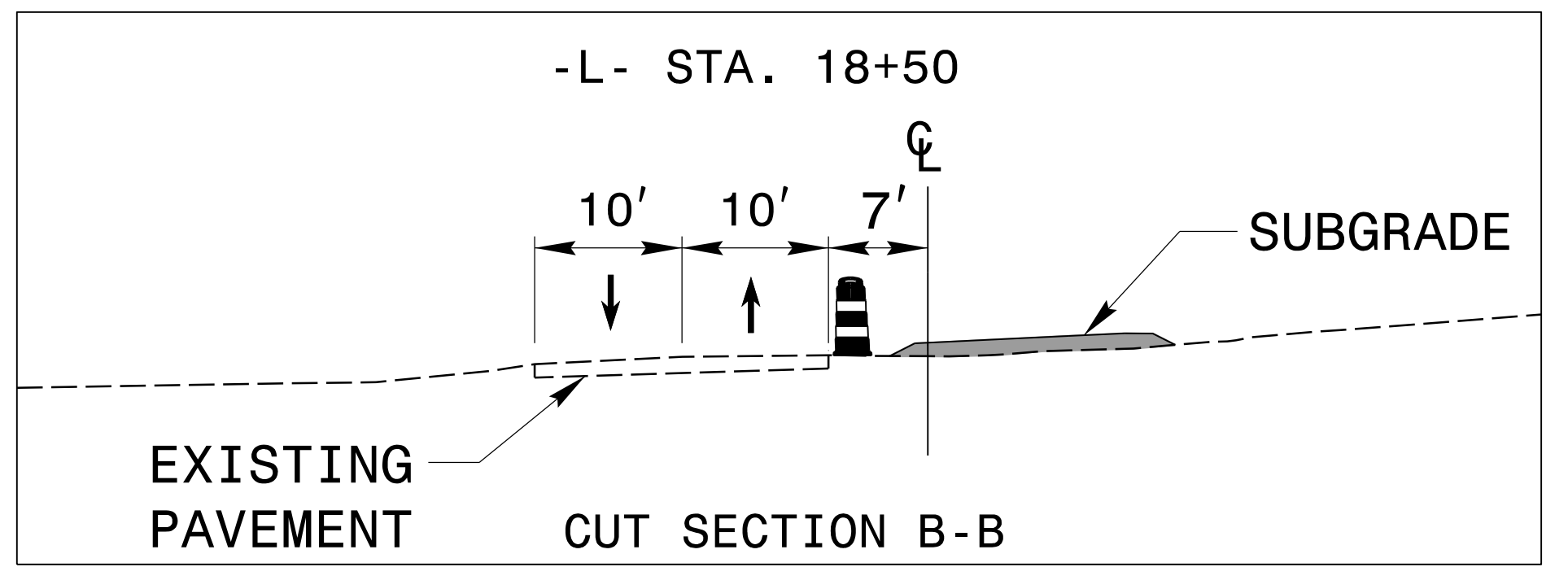
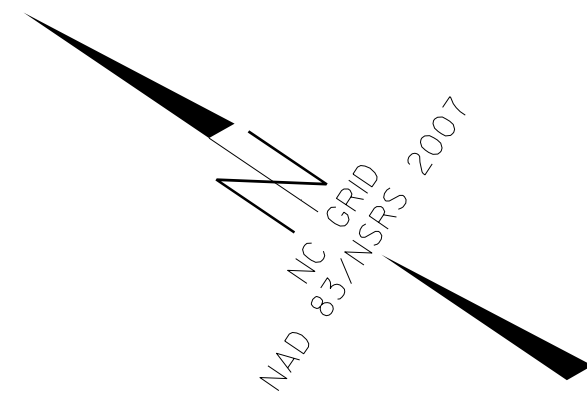
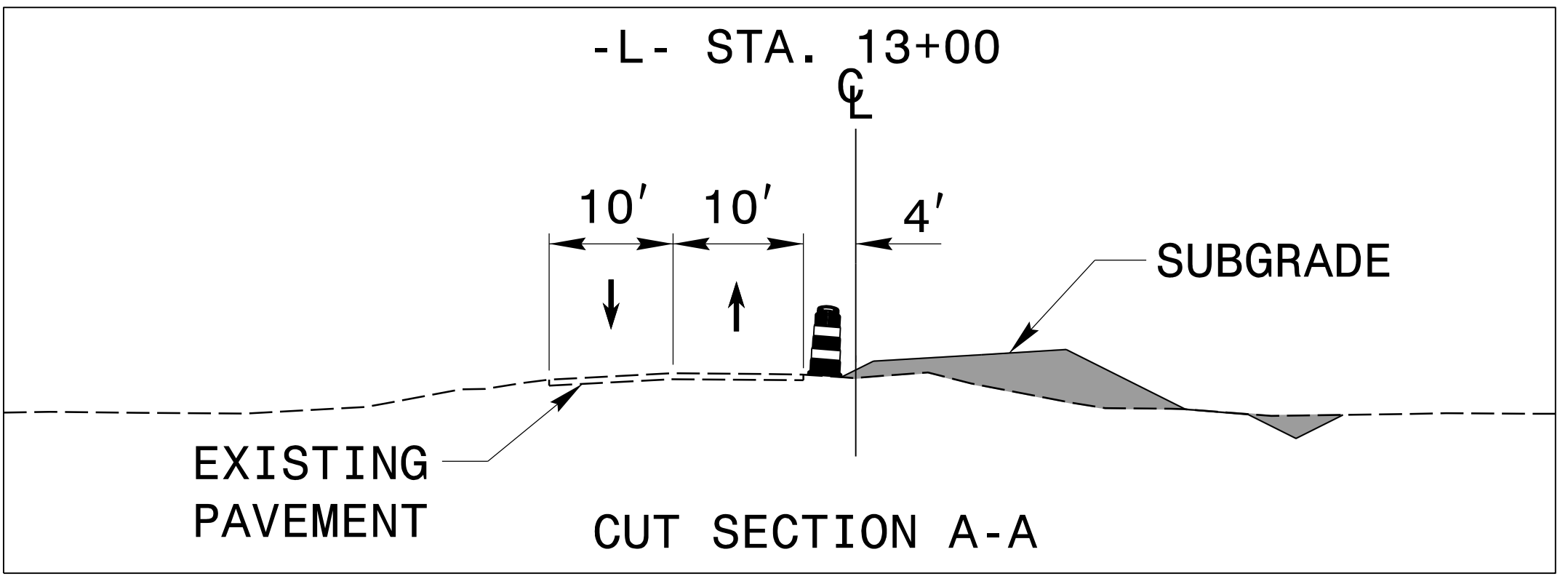
PAVE FINAL SURFACE LAYER OF PROPOSED -L- AND PLACE FINAL PAVEMENT MARKINGS AND MARKERS IN THE FINAL TRAFFIC PATTERN FROM -L- STA. 10+75 TO -L- STA. 19+85.

STEP 5: REMOVE ALL ADVANCED WORK ZONE WARNING SIGNS AND CHANNELIZING MARKERS.

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**PHASING**

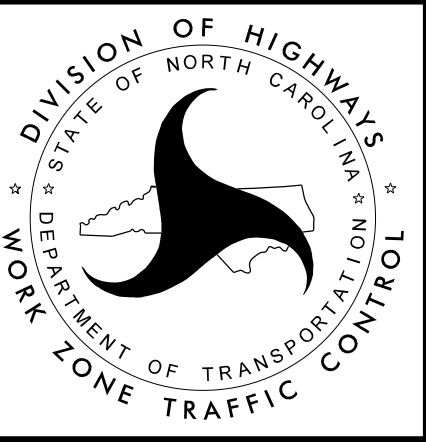


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NOTE: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.

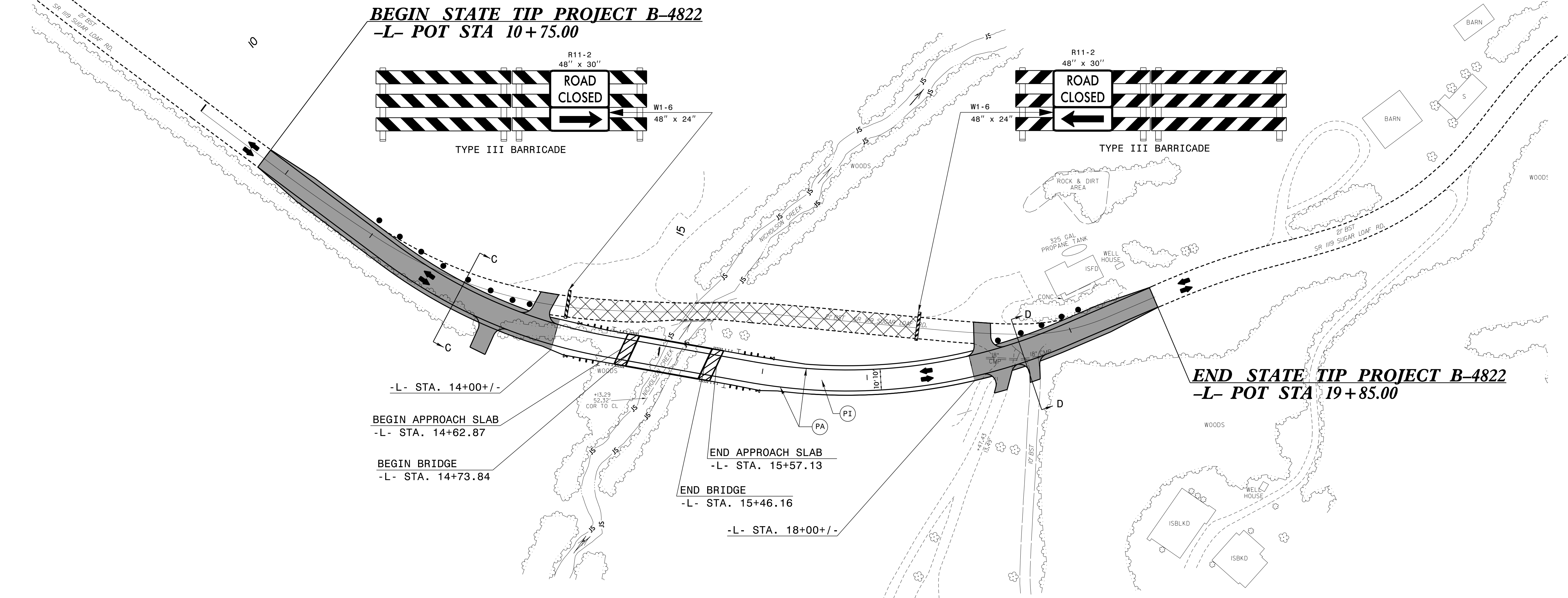
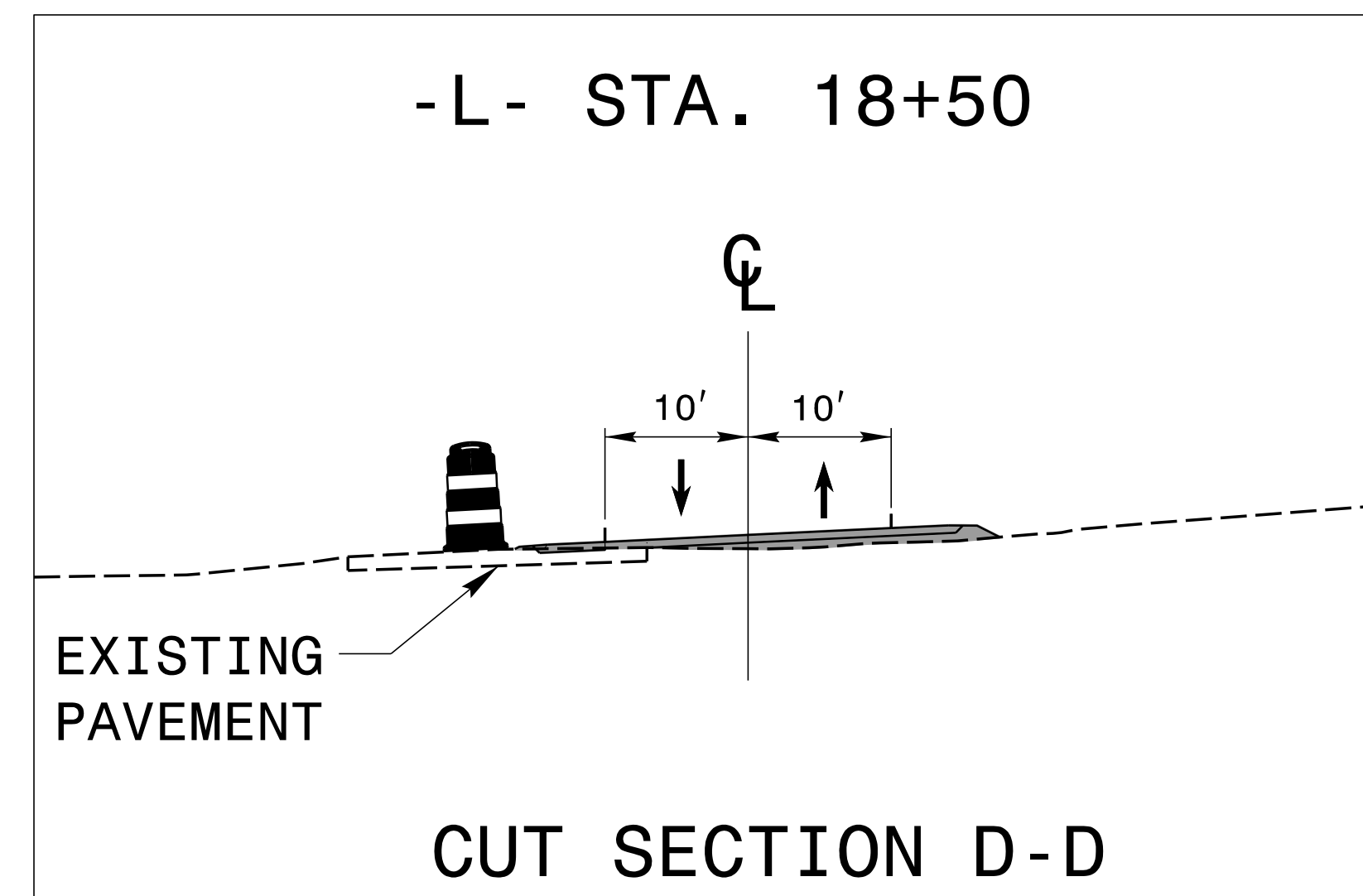
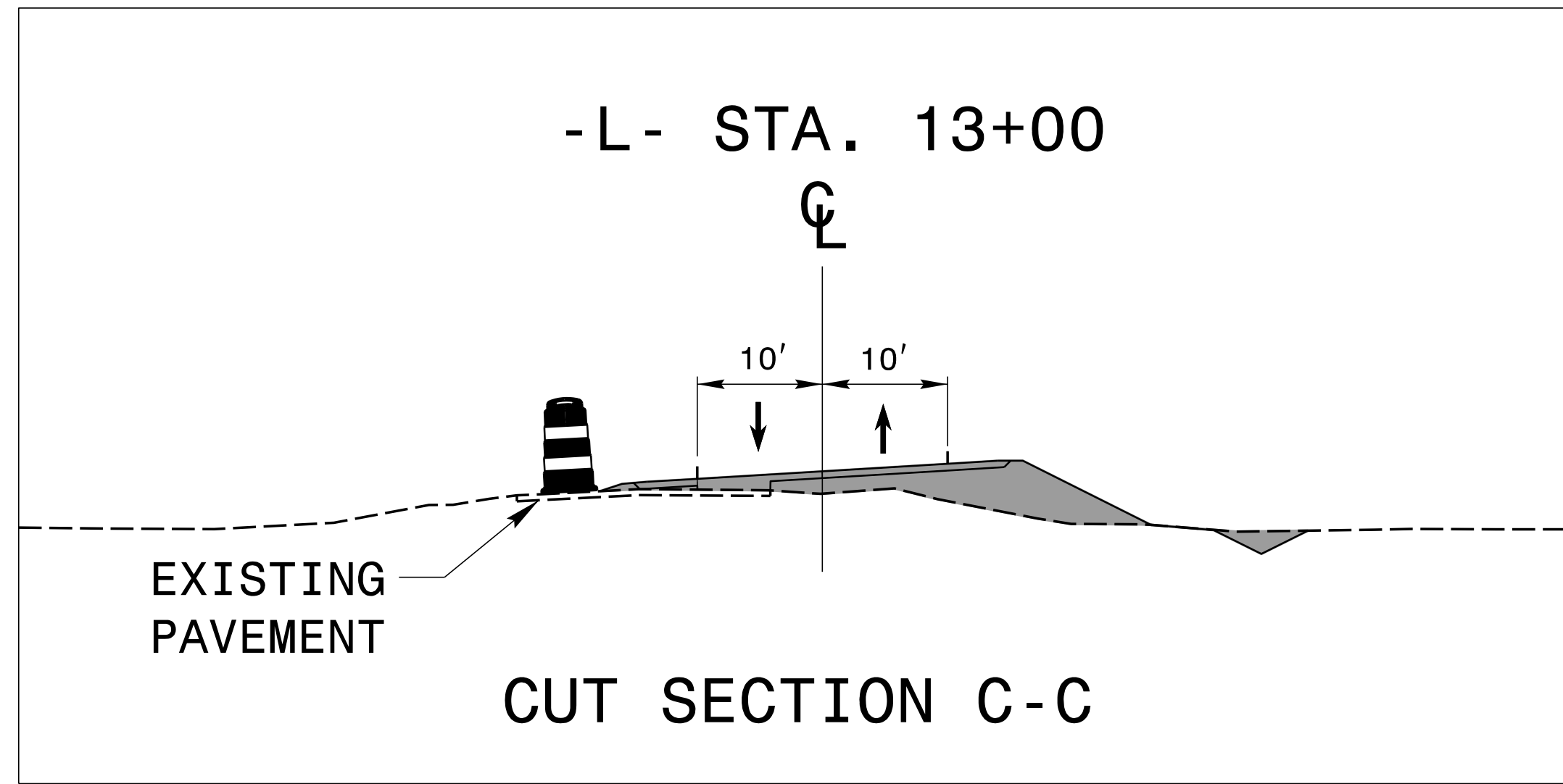
APPROVED *Barry C. Smith* DATE: 9/16/2015

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**TEMPORARY TRAFFIC CONTROL PHASE 1 DETAIL**

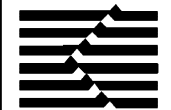


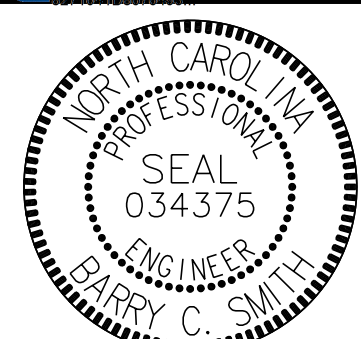
**BEGIN STATE TIP PROJECT B-4822**  
**-L- POT STA 10+75.00**


**END STATE TIP PROJECT B-4822**  
**-L- POT STA 19+85.00**

NOTE: MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES.

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APPROVED: *Barry C. Smith* DATE: 9/16/2015  



 DIVISION OF HIGHWAYS  
 STATE OF NORTH CAROLINA  
 WORK ZONE TRAFFIC CONTROL

**TEMPORARY TRAFFIC CONTROL**  
**PHASE 2 DETAIL**