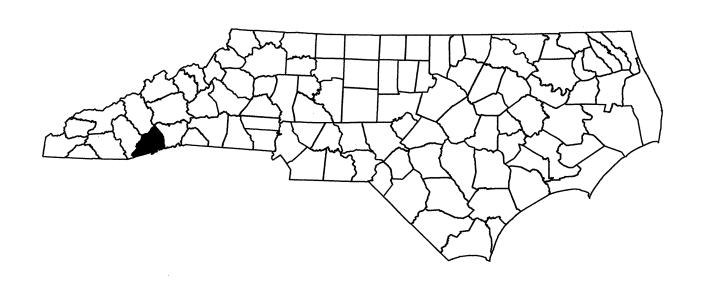
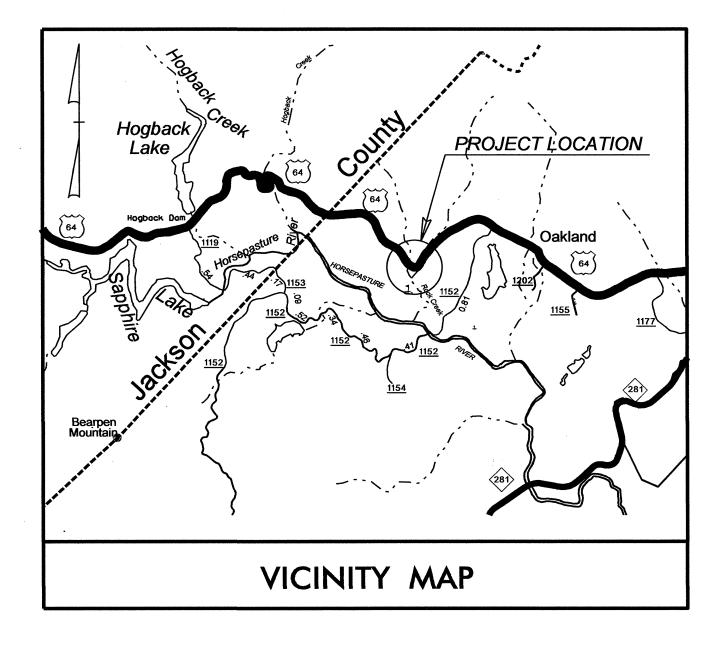
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

TRANSYLVANIA COUNTY





BRIDGE NO. 27 ON US 64 OVER ROCKY CREEK. **LOCATION:**

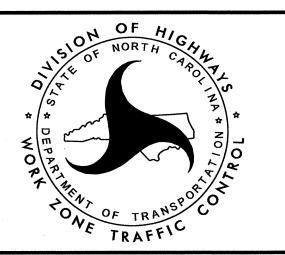
WORK ZONE SAFETY & MOBILITY "from the MOUNTAINS to the COAST"

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

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

G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER J. W. GILSTRAP _ TRAFFIC CONTROL PROJECT DESIGN ENGINEER

S. N. GREEN TRAFFIC CONTROL DESIGN ENGINEER



INDEX OF SHEETS

SHEET NO.	<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 AND PROJECT NOTES: GENERAL NOTES AND LOCAL NOTES		
TMP-2	TEMPORARY SHORING DATA		
TMP-3	TEMPORARY TRAFFIC CONTROL PHASE I AND DETAIL		
TMP-4	TEMPORARY TRAFFIC CONTROL PHASE II AND DETAIL		
TMP-5	TEMPORARY TRAFFIC CONTROL PHASE III AND DETAIL		

APPROVED:_ DATE:_ SEAL

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.	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SINGS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

----- EXIST. PVMT. NORTH ARROW

---- PROPOSED PVMT.

WORK AREA

REMOVAL

PROPOSED CONSTRUCTION

TRAFFIC CONTROL DEVICES

BARRICADE (TYPE III)

DRUM SKINNY DRUM STUBULAR MARKER

TEMPORARY CRASH CUSHION

FLAGGER

LAW ENFORCEMENT

TRUCK MOUNTED ATTENUATOR (TMA)

TEMPORARY SIGNING

PORTABLE SIGN

STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

PAVEMENT MARKINGS

——EXISTING LINES

----TEMPORARY LINES

PAVEMENT MARKERS

CRYSTAL/CRYSTAL

YELLOW/YELLOW

CRYSTAL/RED

TEMPORARY PAVEMENT MARKING

4" PAINT

WHITE EDGELINE DOUBLE YELLOW CENTER LINE

TEMPORARY MARKERS
MH YELLOW & YELLOW

APPROVED:_ _ DATE:_

ROADWAY STANDARD DRAWINGS & LEGEND

TRANSPORTATION OPERATIONS

CONSTRUCTION

REMOVE AND REPLACE EXISTING STRUCTURE
WITH CULVERT ALONG THE EXISTING ROADWAY
ALIGNMENT AS SHOWN IN THE CONSTRUCTION PLANS.

TMP DESIGN PARAMETERS

TRAFFIC WILL BE DETOURED ON-SITE DURING THE CONSTRUCTION PERIOD.

GENERAL NOTES

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

- E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

- H) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- I) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.
- J) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

L) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SHEET NO.

TMP-1B

PROJ. REFERENCE NO.

B-5010

SIGNING

- N) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
1. ALL ROADS	PAINT	TEMPORARY
		RAISED

- S) 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 (6) MONTHS AS DIRECTED BY THE ENGINEER.
- T) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

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 AS DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME

DAY AND TIME RESTRICTIONS

1. US 64

MONDAY THRU FRIDAY 6:00AM - 9:00AM 4:00PM - 7:00PM

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

ROAD NAME

1. US 64

HOLIDAY

- 1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATE UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- 2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 6:00 a.m. DECEMBER 31st TO 7:00 p.m. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 p.m. THE FOLLOWING TUESDAY.
- 3. FOR EASTER, BETWEEN THE HOURS OF 6:00 a.m. THURSDAY AND 7:00 p.m. MONDAY.
- 4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 a.m. FRIDAY TO 7:00 p.m. TUESDAY.
- 5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 a.m. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 p.m. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN BETWEEN THE HOURS OF 6:00 a.m. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 p.m. THE TUESDAY AFTER INDEPENDENCE DAY.

- 6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 a.m. FRIDAY AND 7:00 p.m. TUESDAY.
- 7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 a.m. TUESDAY TO 7:00 p.m. MONDAY.
- 8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 a.m. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 p.m. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME

DAY AND TIME RESTRICTIONS

4:00PM - 7:00PM

DURATION AND OPERATION

1. US 64 MONDAY THRU FRIDAY 6:00AM - 9:00AM

15 MINUTES
TRAFFIC
OPERATIONS

SEAL SEAL GETTILITIES OF STATE OF STATE



TRANSPORTATION
OPERATIONS AND
PROJECT NOTES

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 14+60 +/- -L-, 48 FT. LEFT TO STATION 14+80 +/- -L-, 41 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/SFGROUNDWATER ELEVATION = 2975 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 14+60 +/- -L-, 48 FT. LEFT TO STATION 14+80 +/- -L-, 41 FT. LEFT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING.

AT THE CONTRACTORS'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING, SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

TEMPORARY SHORING NO.2:

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 13+20 +/- -L-, 86 FT. LEFT TO STATION 13+81 +/- -L-, 97 FT. LEFT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

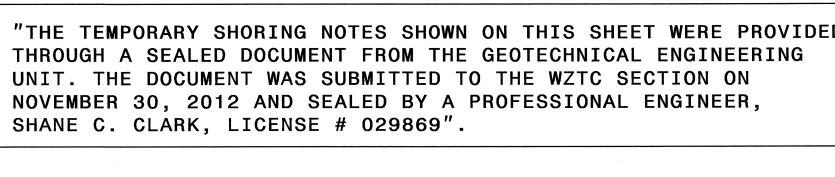
UNIT WEIGHT, γ = 120 LB/CF FRICTION ANGLE, ϕ = 30 DEGREES COHESION, c = 0 LB/SF GROUNDWATER ELEVATION = 2984 FT

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 13+20 +/- -L-, 86 FT. LEFT TO STATION 13+81 +/- -L-, 97 FT. LEFT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE CANTILEVER, BRACED and/or ANCHORED SHORING FOR TEMPORARY SHORING.

AT THE CONTRACTORS'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING, SEE STANDARD DRAWING NO. 1801.02 FOR STANDARD TEMPORARY WALLS.

"THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED





TEMPORARY SHORING DATA

TYPE III BARRICADE

PHASE I

NOTE: RETURN TRAFFIC TO THE EXISTING PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE STATED IN THE PHASING OR DIRECTED BY THE ENGEINEER.

COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANES.

STEP 1: - CONTRACTOR SHALL INSTALL ALL ADVANCE WORK ZONE WARNING SIGNS. (SEE ROADWAY STANDARD DRAWING NO. 1101.01, SHEET 3 OF 3).

STEP 2: - CONSTRUCT AS MUCH AS POSSIBLE, AWAY FROM TRAFFIC, PROPOSED DETOUR (-NORDET-), TEMPORARY SHORING AND TEMPORARY DRAINAGE FROM STATION 12+00 +/- -NORDET- TO STATION 14+25 +/- -NORDET- UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE CONSTRUCTION PLANS).

> NOTE: IF REQUIRED, USE ROADWAY STANDARD DRAWING NO. 1101.06, SHEET 1 OF 1 FOR BLASTING OPERATIONS, AS DIRECTED BY THE ENGINEER.

NOTE: TMA WILL BE REQUIRED UNTIL GUARDRAIL INSTALLATION CAN BE COMPLETED.

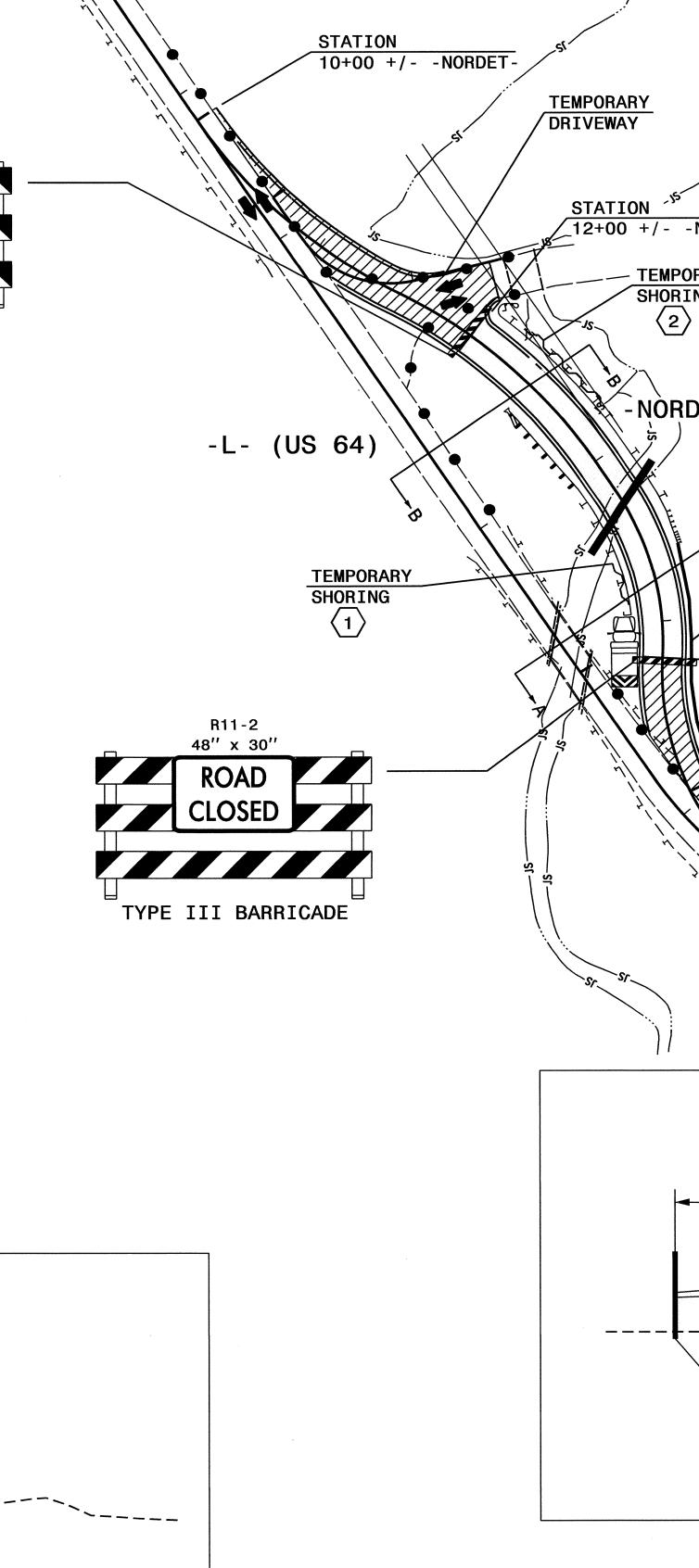
- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 15:

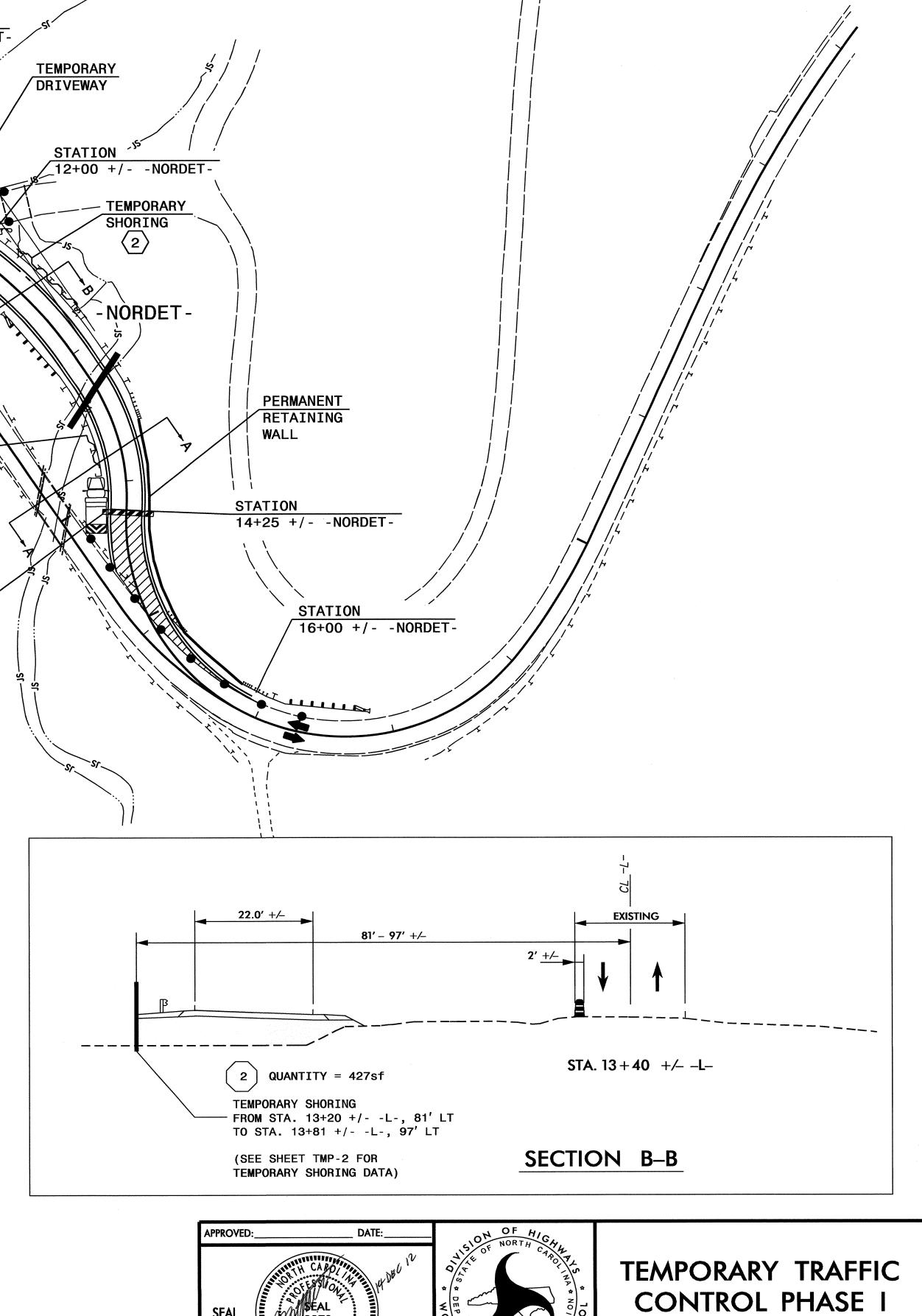
-- CONSTRUCT PROPOSED DETOUR (-NORDET-), FROM STATION 10+00 +/--NORDET- TO STATION 12+00 +/- -NORDET- AND FROM STATION 14+25 +/--NORDET- TO STATION 16+00 +/- -NORDET-, UP TO THE EDGE AND ELEVATION OF EXISTING. (SEE CONSTRUCTION PLANS).

NOTE: IF REQUIRED, USE ROADWAY STANDARD DRAWING NO. 1101.06, SHEET 1 OF 1 FOR BLASTING OPERATIONS, AS DIRECTED BY THE ENGINEER.

-- CONSTRUCT TEMPORARY DRIVEWAY AND TIE-IN TO DETOUR, UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE CONSTRUCTION PLANS).

NOTE: UTILIZE DRUMS TO MAINTAIN ACCESS TO DRIVEWAY (-DRIVE-) DURING CONSTRUCTION.





SEAL

PROJ. REFERENCE NO.

B-5010

AND DETAIL

SHEET NO.

TMP-3

14-DEC-2012 08:29 \\dot\dfsroot0\\proj\ sngreen AT TE265817

PERMANENT RETAINING

 $\begin{bmatrix} 1 \end{bmatrix}$ QUANTITY = 120sf

(SEE SHEET TMP-2 FOR

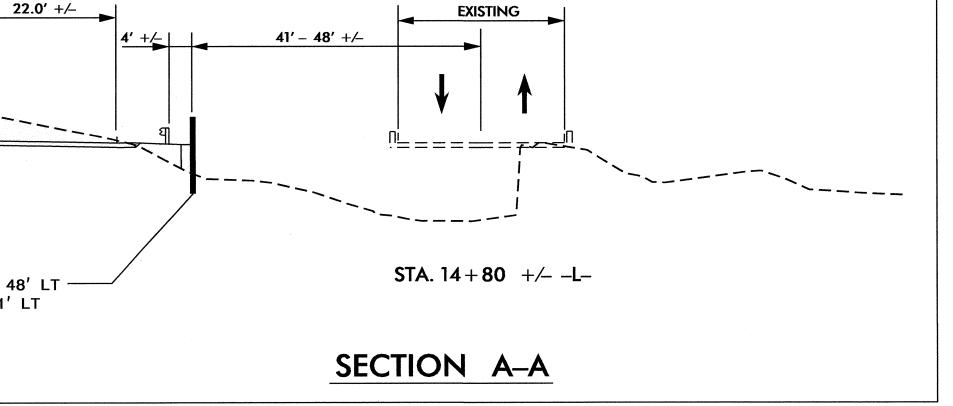
TEMPORARY SHORING DATA)

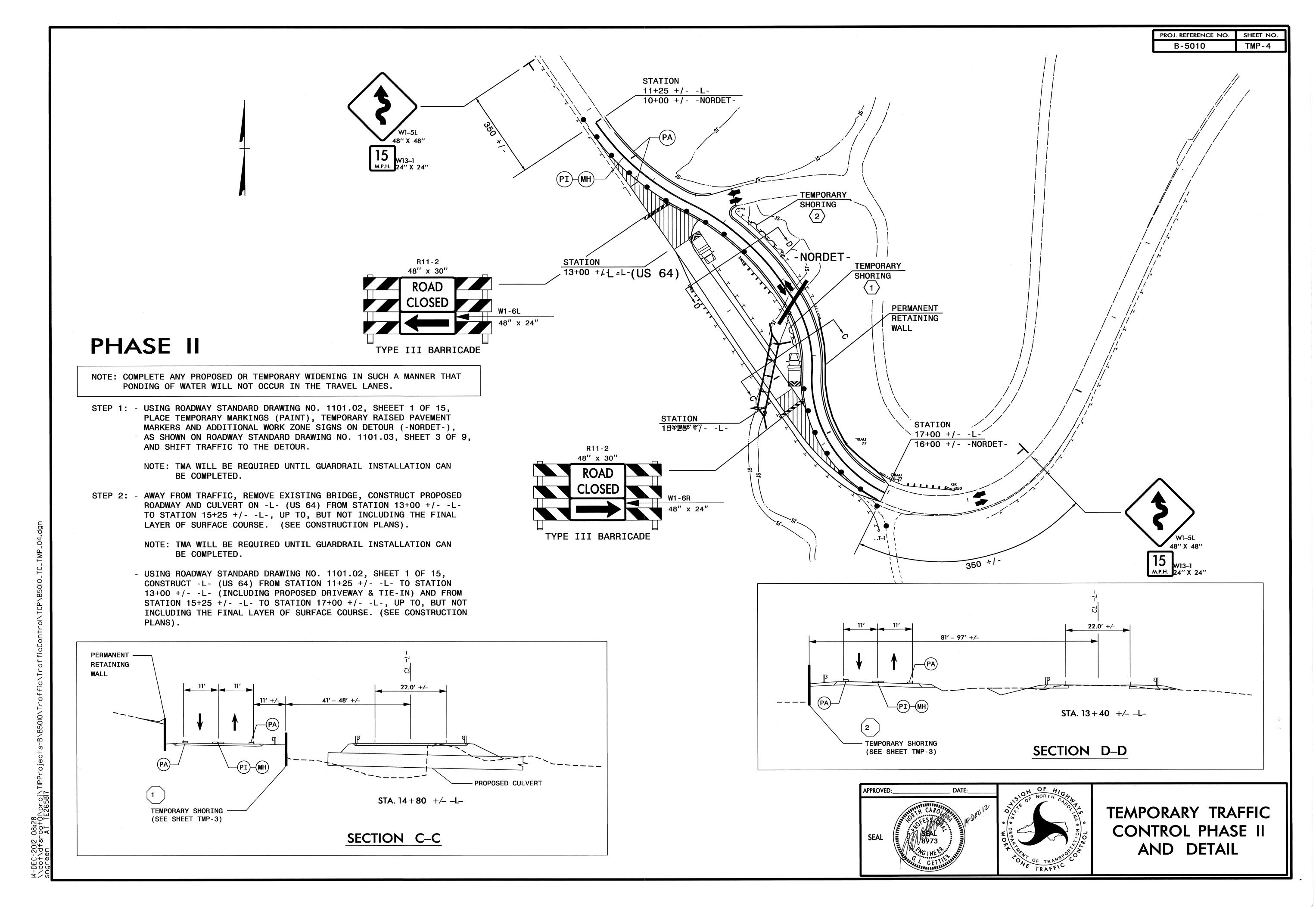
FROM STA. 14+60 +/- -L-, 48' LT

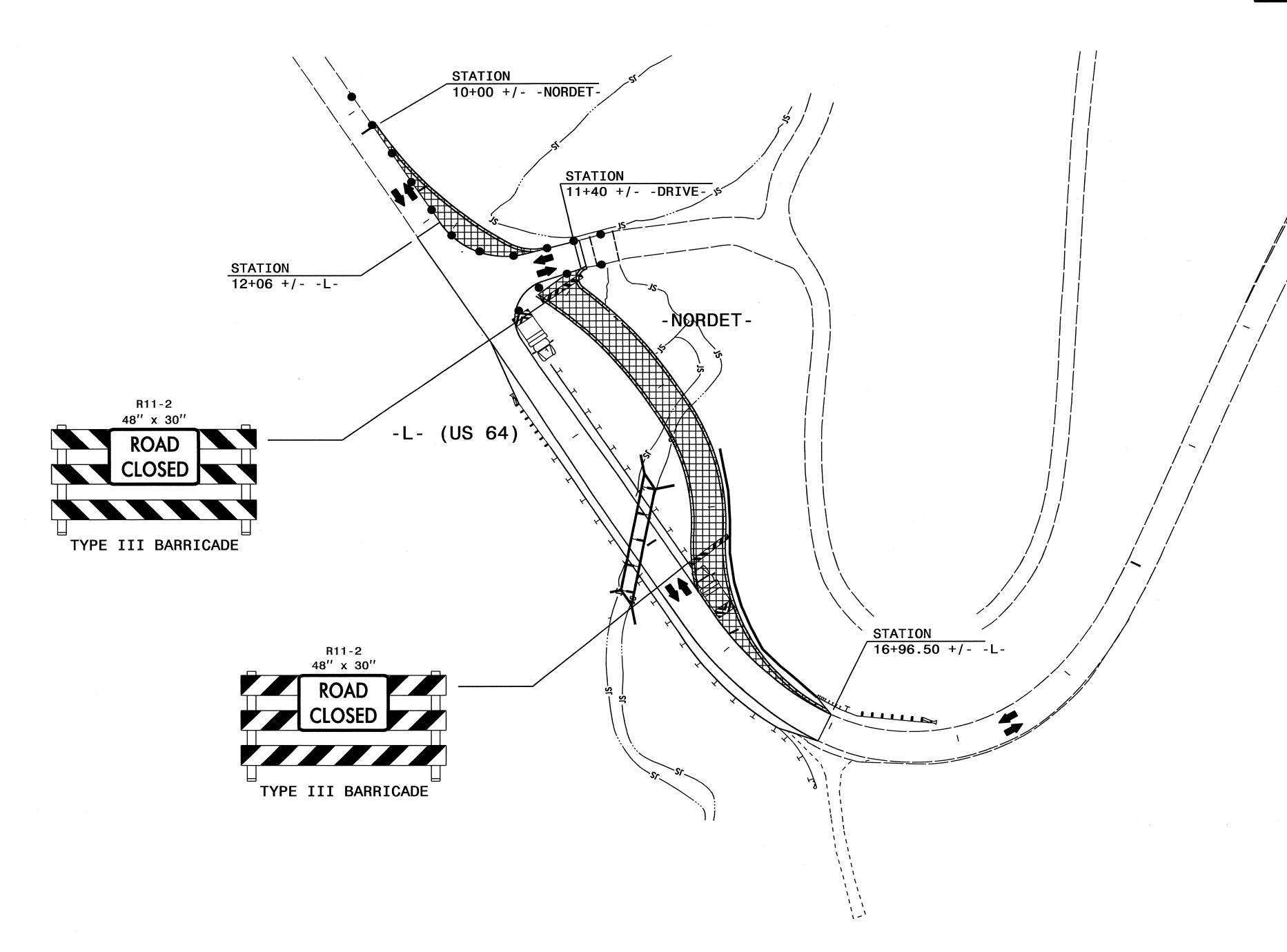
TO STA. 14+80 +/- -L-, 41' LT

TEMPORARY SHORING

WALL

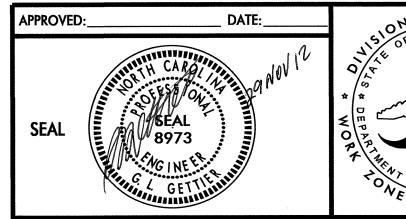


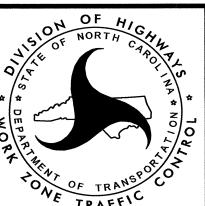




PHASE III

- STEP 1: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEEET 1 OF 15, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS ON PROPOSED US 64 (-L-), AND SHIFT TRAFFIC TO FINAL PATTERN. (SEE FINAL PAVEMENT MARKING PLANS).
 - NOTE: TMA WILL BE REQUIRED UNTIL GUARDRAIL INSTALLATION CAN BE COMPLETED.
- STEP 2: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 15, REMOVE TEMPORARY DETOUR PAVEMENT AND TEMPORARY DRAINAGE AND COMPLETE ANY REMAINING CONSTRUCTION OF US 64 (-L). (SEE CONSTRUCTION PLANS).
- STEP 3: USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 15, PLACE THE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS AND OPEN TO FINAL TRAFFIC PATTERN. (SEE CONSTRUCTION PLANS AND FINAL PAVEMENT MARKING PLANS).





TEMPORARY TRAFFIC CONTROL PHASE III AND DETAIL