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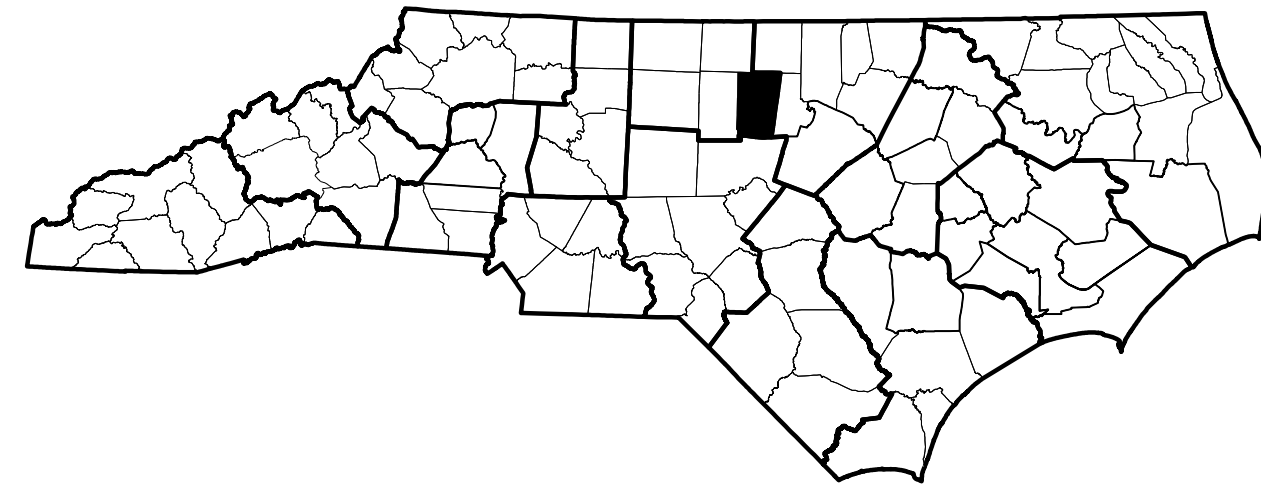
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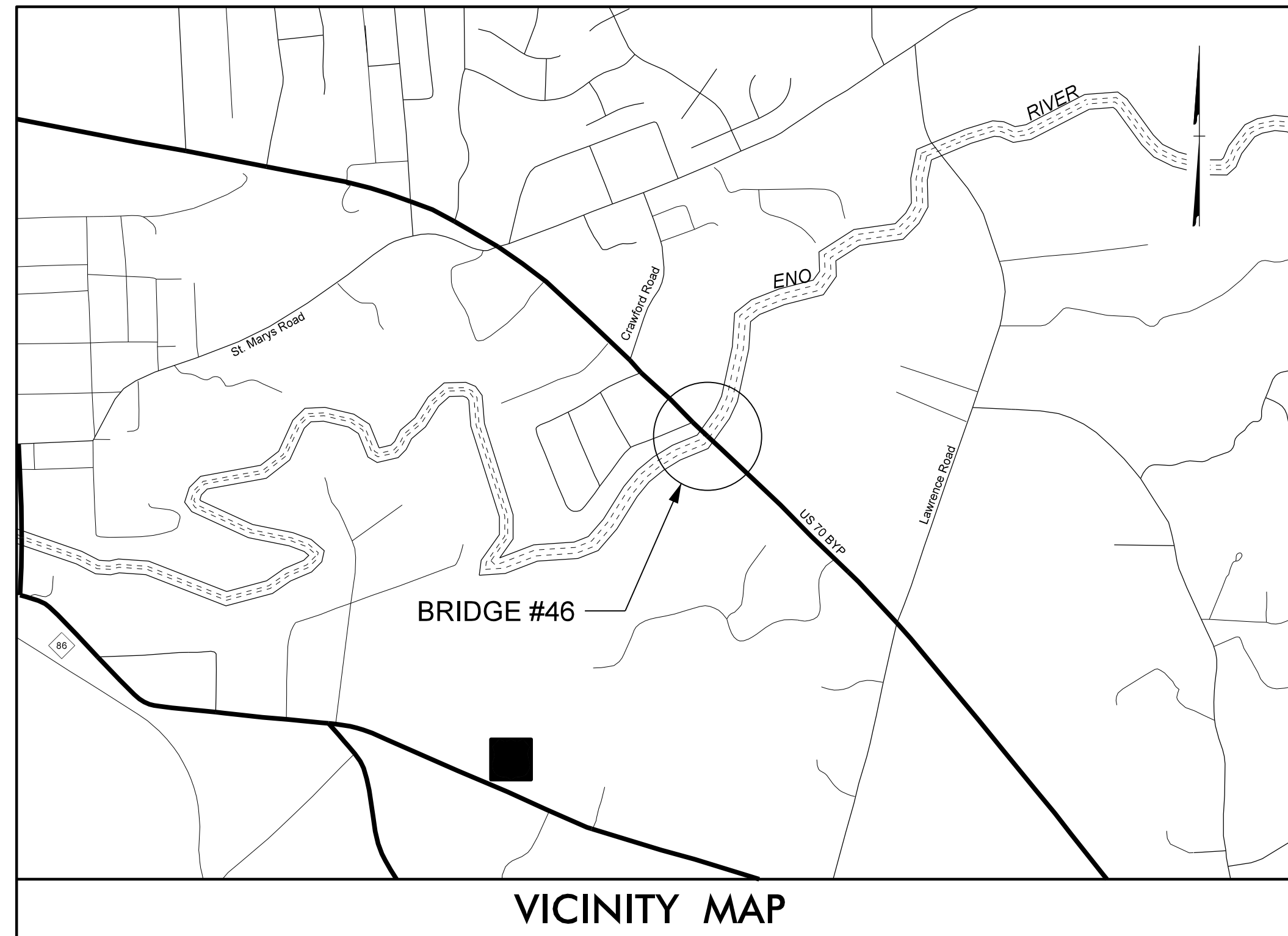
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

ORANGE COUNTY



LOCATION: BRIDGE No. 46 OVER ENO RIVER ON US 70 BYPASS
TYPE OF WORK: GRADING, DRAINAGE, PAVING, CULVERT
EXTENSION, AND STRUCTURE



VICINITY MAP

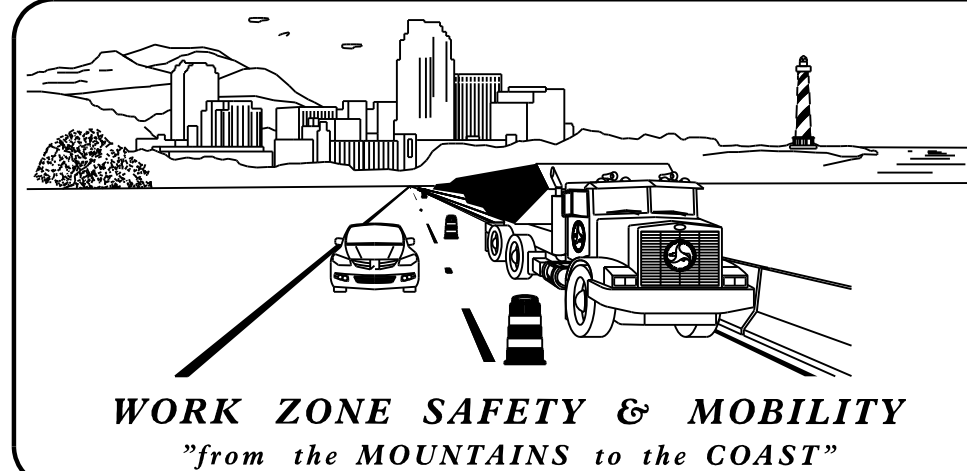
INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, INDEX OF SHEETS, AND MANAGEMENT STRATEGIES
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, PAVEMENT MARKING SCHEDULE, AND LEGEND
TMP-1B	GENERAL NOTES
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TMP-3	TEMPORARY TRAFFIC CONTROL PHASING
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TMP-6	SR 1706 (RIVERSIDE DRIVE) DETOUR ROUTE
TMP-6A	SR 1706 (RIVERSIDE DRIVE) SPECIAL SIGN DESIGN

MANAGEMENT STRATEGIES

- CONSTRUCT ON-SITE DETOUR FOR US 70 BYPASS USING TEMPORARY LANE CLOSURES, FLAGGING OPERATIONS, AND CONSTRUCTION AWAY FROM TRAFFIC.
- CONSTRUCT PROPOSED US 70 BYPASS BRIDGE AND ROADWAY USING ON-SITE DETOUR OF US 70 BYPASS TRAFFIC, LANE CLOSURES, AND A ROAD CLOSURE/DETOUR OF RIVERSIDE DRIVE ACCESS TO US 70 BYPASS.

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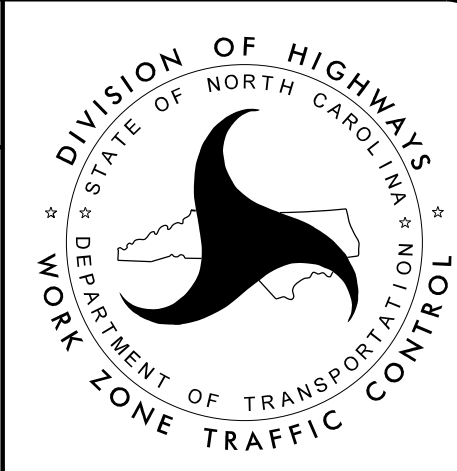
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 713-2800 FAX: (919) 771-2745

JOE HUMMER, P.E., PHD **STATE TRAFFIC MANAGEMENT ENGINEER**

KENNETH THORNEWELL, P.E. **TRAFFIC CONTROL PROJECT ENGINEER**

JUSTIN BEAVER, P.E. **TRAFFIC CONTROL PROJECT DESIGN ENGINEER**

ALLA LYUDMIRSKAYA **TRAFFIC CONTROL DESIGN ENGINEER**



Stantec
Stantec Consulting Services Inc.
801 Jones Franklin Road, Suite 300
Raleigh, NC 27606
Tel. 919.851.6866
Fax. 919.851.7024
www.stantec.com
License No. F-0672

JAY WOOLARD, PE SENIOR TRANSPORTATION ENGINEER

REGINA MUNCEY, PE TRANSPORTATION ENGINEER

BRANDON WRIGHT TRANSPORTATION INTERN

2/6/2019

DocuSigned by:
Regina M. Muncey
C\FE51B52245FA

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

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
1101.06	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
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 - DIVIDED AND UNDIVIDED ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS TYPES
1262.01	GUARDRAIL END DELINEATION

TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
<u>PAINT PAVEMENT MARKING LINES (4")</u>	
(PA)	WHITE EDGELINE
(PI)	YELLOW DOUBLE CENTER
<u>COLD APPLIED PLASTIC PAVEMENT MARKING LINES</u>	
<u>TYPE 4 - REMOVABLE TAPE (4")</u>	
(CA)	WHITE EDGELINE
(CI)	YELLOW DOUBLE CENTER

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- EXIST. PVMT.
- PROPOSED PVMT.
- NORTH ARROW
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- PAVEMENT REMOVAL

PAVEMENT MARKINGS

- EXISTING LINES
- WHITE EDGE LINE
- YELLOW EDGE LINE
- BROKEN LANE LINES
- MINISKIP LANE LINES
- DOUBLE YELLOW LINES
- GORELINE
- STOP BAR

PAVEMENT MARKING SYMBOLS

- EXISTING PAVEMENT MARKING SYMBOLS (HOLLOW)
- PAVEMENT MARKING SYMBOLS
- PAVEMENT MARKING ALPHANUMERIC CHARACTERS

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN
- TEMPORARY CRASH CUSHION
- PORTABLE CONCRETE BARRIER

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

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

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Stantec Consulting Services Inc.
801 Jones Franklin Road
Suite 300
Raleigh, NC 27606
Tel. 919.851.6866
Fax. 919.851.7024
www.stantec.com
License No. F-0672

2/6/2019

DocuSigned by:
Regina M. Muncey
C7F551B922454FA

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

TRANSPORTATION MANAGEMENT
PHASING CONCEPT

**ROADWAY STANDARD
DRAWINGS, PAVEMENT MARKING
SCHEDULE, AND LEGEND**

GENERAL NOTES

PROJ. REFERENCE NO. B-4962	SHEET NO. TMP-1B
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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 UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 70 BYP	6:00 A.M.-9:00 A.M. MONDAY THRU FRIDAY 4:00 P.M.-7:00 P.M. MONDAY THRU FRIDAY

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

ROAD NAME	HOLIDAY
US 70 BYP.	
	<ol style="list-style-type: none"> 1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES 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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- C) 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.
- D) 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.
- E) 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.

LANE AND SHOULDER CLOSURE REQUIREMENTS (CONT.)

- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRANSPORTATION MANAGEMENT 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.
- G) 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.
- H) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPEN 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.
- J) 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) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- L) 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.
- M) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRANSPORTATION MANAGEMENT PLANS.
- N) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

AND

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- O) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- P) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

- Q) 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) FOR ADDITIONAL REQUIREMENTS.
- R) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

PAVEMENT MARKINGS AND MARKERS



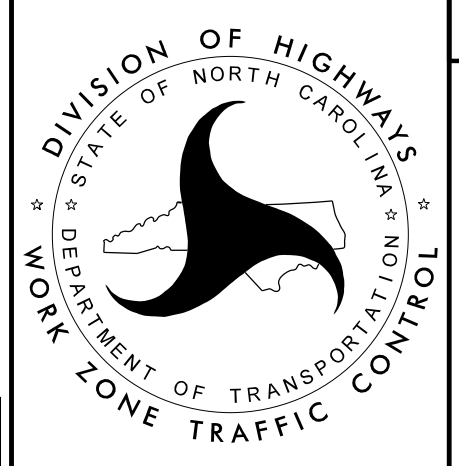
- S) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
US 70 BYPASS	PAINT	TEMPORARY RAISED
RIVERSIDE DRIVE	PAINT	TEMPORARY RAISED
BRIDGE DECK	COLD APPLIED PLASTIC, TYPE 4	TEMPORARY RAISED
- T) 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.
- U) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- V) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

- W) 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) (500' FT) AND (1000' FT) RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.
- X) MAINTAIN VEHICULAR ACCESS TO ALL DRIVEWAYS DURING THE LIFE OF THE CONTRACT, UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER. USE INCIDENTAL STONE WHEN NECESSARY.
- Y) ALL DIMENSIONS AND STATIONS IN THE TRANSPORTATION MANAGEMENT PLAN AND PHASING ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- Z) COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE.
- AA) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 662-4320 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.
- BB) MAINTAIN EXISTING GUARDRAIL UNTIL PROPOSED FILL SLOPES ARE COMPLETED TO THE POINT THAT FIELD CONDITIONS NO LONGER MEET GUARDRAIL WARRANTS AS DIRECTED BY THE ENGINEER.
- CC) MAINTAIN ALL EXISTING SIGNING ON PROJECT (WARNING, REGULATORY AND GUIDE SIGNS). WHERE CONSTRUCTION AFFECTS THE LOCATION OF A SIGN, RELOCATE AS NECESSARY, OR INSTALL REPLACEMENT SUCH THAT THE FUNCTION OF THE SIGN IS MAINTAINED AT ALL TIMES. DURING RELOCATION OF STOP SIGNS PROVIDE FLAGGERS WITH "FLAGGER AHEAD" (W20-7a) AND "BE PREPARED TO STOP" (W3-4) SIGNS AS NECESSARY TO MAINTAIN INTERSECTION TRAFFIC.

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 Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. 919.851.6866 Fax. 919.851.7024 www.stantec.com License No. F-0672	2/6/2019  DocuSigned by: Regina M. Muncey C1FE51B822454FA		TRANSPORTATION MANAGEMENT PHASING CONCEPT <h2 style="margin: 0;">GENERAL NOTES</h2>
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TEMPORARY SHORING LOCATION NO. ① SEE SHEET TMP-5
ESTIMATED QUANTITY = 389 SQ. FT.

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

DESIGN TEMPORARY SHORING FROM STATION 14+87 +/- -LDET-, 18 FT. RT. TO STATION 15+34 +/- -LDET-, 18 FT. RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 30$
 COHESION, $c = 0$ PSF
 GROUNDWATER ELEVATION = 480 FT.

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

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 14+87 +/- -LDET-, 18 FT. RT. TO STATION 15+34 +/- -LDET-, 18 FT. RT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 14+87 +/- -LDET-, 18 FT. RT. TO STATION 15+34 +/- -LDET-, 18 FT. RT MAY NOT PENETRATE BELOW ELEVATION 495 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS, OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 14+87 +/- -LDET-, 18 FT. RT. TO STATION 15+34 +/- -LDET-, 18 FT. RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO. ② SEE SHEET TMP-5
ESTIMATED QUANTITY = 395 SQ. FT.

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

DESIGN TEMPORARY SHORING FROM STATION 17+53 +/- -LDET-, 18 FT. RT. TO STATION 18+00 +/- -LDET-, 18 FT. RT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 60$ PCF
 FRICTION ANGLE, $\phi = 30$
 COHESION, $c = 0$ PSF
 GROUNDWATER ELEVATION = 480 FT.

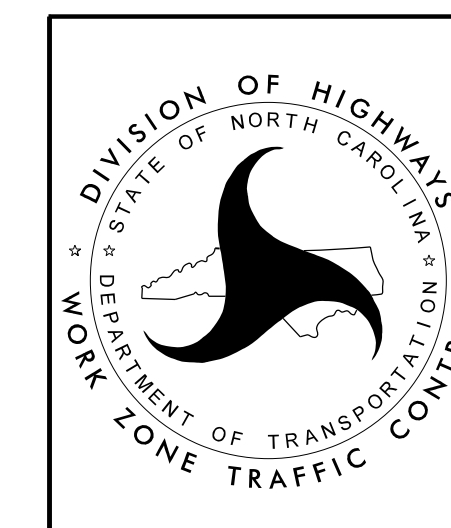
BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 17+53 +/- -LDET-, 18 FT. RT. TO STATION 18+00 +/- -LDET-, 18 FT. RT. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 17+53 +/- -LDET-, 18 FT. RT. TO STATION 18+00 +/- -LDET-, 18 FT. RT MAY NOT PENETRATE BELOW ELEVATION 505 FT. DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS, OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 17+53 +/- -LDET-, 18 FT. RT. TO STATION 18+00 +/- -LDET-, 18 FT. RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THOROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEER. THE DOCUMENT WAS SUBMITTED TO WZTC ON AUGUST 23, 2018 AND SEALED BY A PROFESSIONAL ENGINEER, DAVID L. TEAGUE, LICENSE #027869.



TRANSPORTATION MANAGEMENT
PHASING CONCEPT

TEMPORARY
SHORING
NOTES

PHASE I (TMP-4)

STEP 1:

PRIOR TO ANY WORK OPERATIONS, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON -L- (US 70 BYPASS) AND SR 1706 (RIVERSIDE DRIVE) PER ROADWAY STANDARD DRAWING 1101.01, SHEET 3 OF 3.

STEP 2:

- AWAY FROM TRAFFIC:
- BEGIN THE CONSTRUCTION OF -LDET- INCLUDING TEMPORARY STRUCTURE OVER ENO RIVER. CLOSE THE WESTBOUND LANE OF US 70 BYPASS AS NEEDED, USING FLAGGING OPERATION PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 14.
 - REMOVE EXISTING GUARDRAIL FROM -L- STA. 12+47.60 (LT) TO -L- STA. 15+10.50 (LT). INSTALL TEMP. GREU-TL-3 ANCHOR UNIT (FACE OF ANCHOR UNIT AT APPROX. -L- STA. 14+60.50).
 - CONSTRUCT EXTENSION OF EXISTING 4'X6' CULVERT AT -L- STA. 14+63±(SEE ROADWAY PLANS).

THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN PHASE I-STEP 3 USING WEEKEND ROAD CLOSURE (FRIDAY 7:00 P.M. TO THE FOLLOWING MONDAY 6:00 A.M.). [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES].

STEP 3:

- IN A CONTINUOUS OPERATION, USING A FLAGGING OPERATION PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 14:
- CONSTRUCT TIE-IN OF -LDET- TO EXISTING US 70 BYPASS
 - INSTALL TEMPORARY PAVEMENT MARKINGS ALONG -LDET- PER TMP-5 AND SIGNING FOR TEMPORARY ONSITE DETOUR PER ROADWAY STANDARD DRAWING 1101.03, SHEET 3 OF 9
 - SHIFT TRAFFIC ONTO PROPOSED -LDET- IN PHASE II PATTERN
 - CLOSE -L- AND SR 1706 (RIVERSIDE DRIVE) EASTERN ACCESS TO US 70 BYPASS USING ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9 AND SHEET TMP-6.

PHASE II (TMP-5)

STEP 1:

- WITH TRAFFIC ON -LDET-:
- INSTALL SHORING LOCATIONS NO. 1 AND NO. 2
 - REMOVE EXISTING -L- (US 70 BYPASS) STRUCTURE OVER ENO RIVER
 - CONSTRUCT -L- (US 70 BYPASS) PROPOSED ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND STRUCTURE OVER ENO RIVER AWAY FROM TRAFFIC, USING FLAGGING OPERATION TO CLOSE EASTBOUND LANE OF -LDET- AS NEEDED PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 14.
 - CONSTRUCT PARTIAL SECTION OF PROPOSED GUARDRAIL FROM BRIDGE TO -L- STA. 19+98± LT. INSTALL TEMP. GREU-TL-3 ANCHOR UNIT (FACE OF ANCHOR UNIT AT APPROX. -L- STA. 20+48± LT).
 - CONSTRUCT -Y- (RIVERSIDE DR) PROPOSED ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

THE CONTRACTOR SHALL COMPLETE THE WORK REQUIRED IN PHASE II-STEP 2 USING WEEKEND ROAD CLOSURE (FRIDAY 7:00 P.M. TO THE FOLLOWING MONDAY 6:00 A.M.). [SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES].

STEP 2:

- IN A CONTINUOUS OPERATION, USING A FLAGGING OPERATION PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 14:
- CONSTRUCT TIE-IN OF -LDET- TO -L- (US 70 BYPASS)
 - INSTALL TEMPORARY PAVEMENT MARKINGS IN THE FINAL PATTERN PER PAVEMENT MARKING PLANS AND INSTALL FINAL SIGNING PER SIGNING PLAN
 - SHIFT TRAFFIC ONTO PROPOSED -L- (US 70 BYPASS) IN FINAL PATTERN AND OPEN SR 1706 (RIVERSIDE DRIVE) EASTERN ACCESS
 - COMPLETE GUARDRAIL INSTALLATION FROM -L- STA. 20+25± TO -L- STA. 20+50±
 - CLOSE -LDET-

PHASE III

STEP 1:

- WITH TRAFFIC ON -L- (US 70 BYPASS):
- REMOVE SHORING LOCATIONS NO.1 AND NO.2, AS NEEDED.
 - REMOVE -LDET- STRUCTURE OVER ENO RIVER AND ROADWAY.
 - CONSTRUCT REMAINDER OF -L- (US 70 BYPASS) PROPOSED GUARDRAIL, USING FLAGGING OPERATION TO CLOSE WESTBOUND LANE OF -L- AS NEEDED PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 14.

STEP 2:

IN A CONTINUOUS OPERATION, USING A FLAGGING OPERATION PER ROADWAY STANDARD DRAWING 1101.02, SHEET 1 OF 14:

PLACE FINAL LAYER OF SURFACE COURSE AND FINAL PAVEMENT MARKINGS PER THE PAVEMENT MARKING PLAN (PMP) ON US 70 BYPASS AND SR 1706 (RIVERSIDE DRIVE).

STEP 3:


REMOVE ALL TRAFFIC CONTROL DEVICES AND WORK ZONE ADVANCE WARNING SIGNS.

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Raleigh, NC 27606
Tel. 919.851.6866
Fax. 919.851.7024
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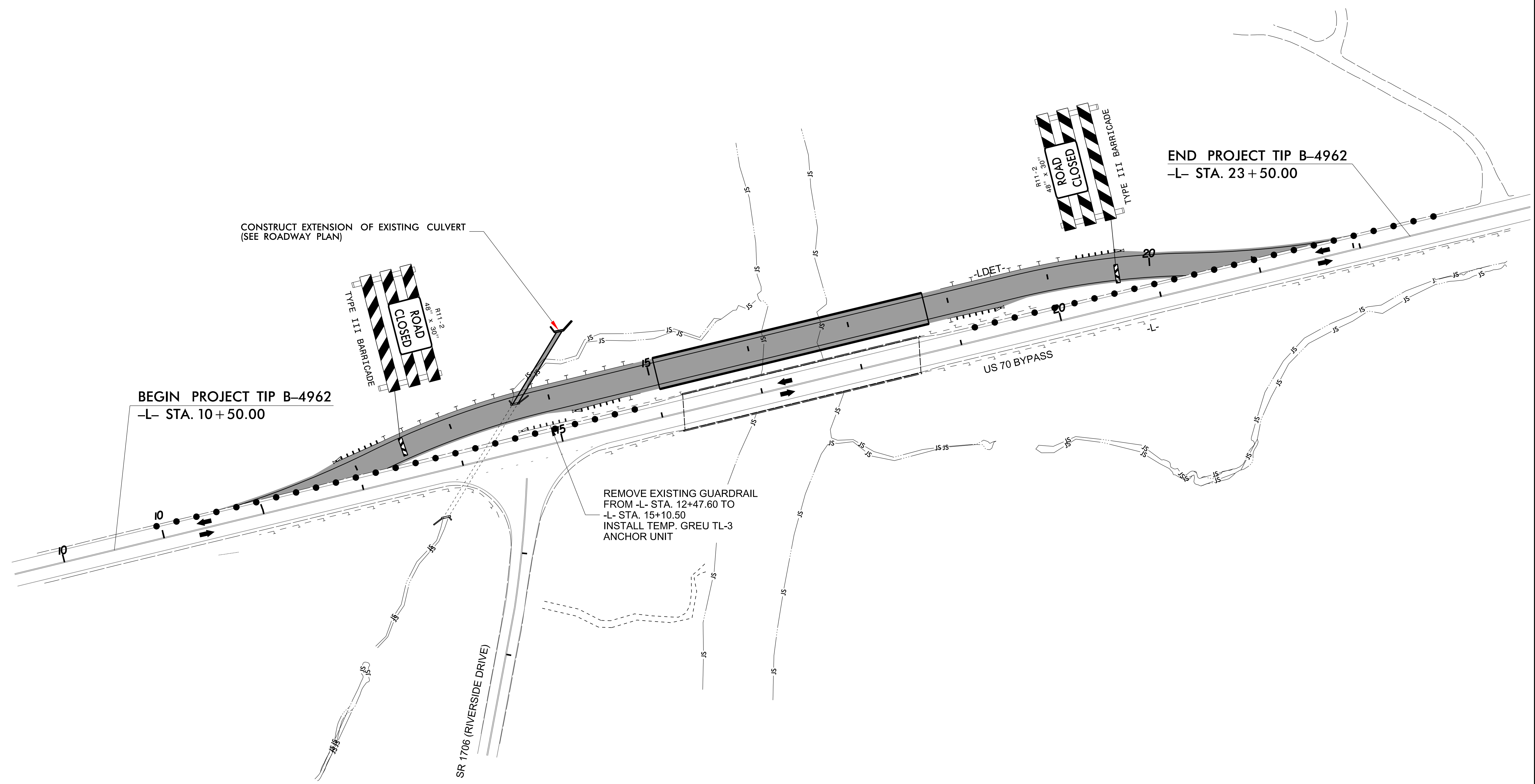
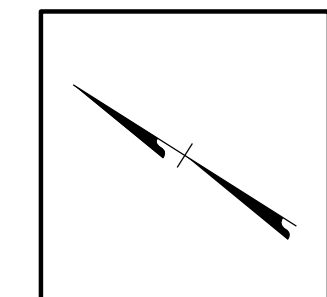
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DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

TRANSPORTATION MANAGEMENT
PHASING CONCEPT

PHASING



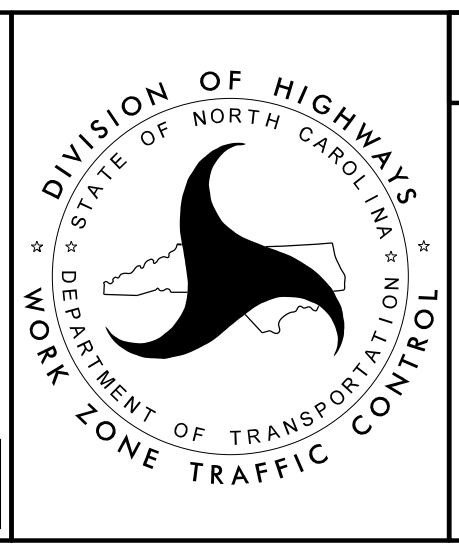
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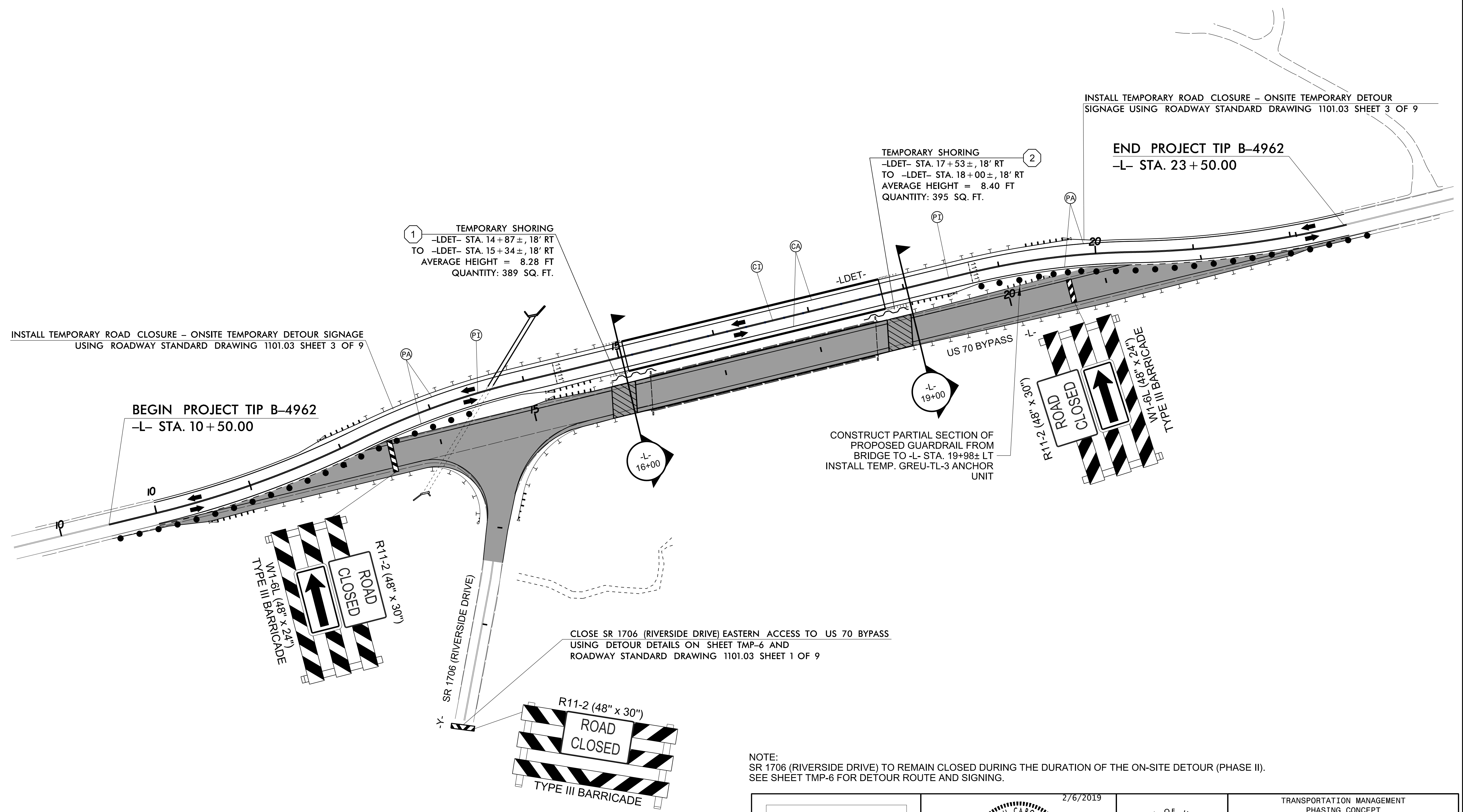
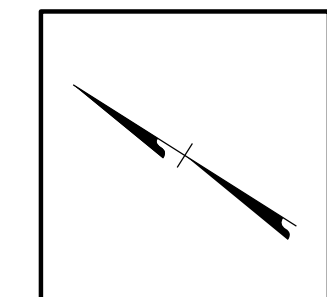
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TRANSPORTATION MANAGEMENT
PHASING CONCEPT

**US 70 BYPASS -L-
PHASE I**



INSTALL TEMPORARY ROAD CLOSURE – ONSITE TEMPORARY DETOUR SIGNAGE USING ROADWAY STANDARD DRAWING 1101.03 SHEET 3 OF 9

BEGIN PROJECT TIP B-4962
-L- STA. 10+50.00

1 TEMPORARY SHORING
-LDET- STA. 14+87±, 18' RT
TO -LDET- STA. 15+34±, 18' RT
AVERAGE HEIGHT = 8.28 FT
QUANTITY: 389 SQ. FT.

2 TEMPORARY SHORING
-LDET- STA. 17+53±, 18' RT
TO -LDET- STA. 18+00±, 18' RT
AVERAGE HEIGHT = 8.40 FT
QUANTITY: 395 SQ. FT.

INSTALL TEMPORARY ROAD CLOSURE – ONSITE TEMPORARY DETOUR SIGNAGE USING ROADWAY STANDARD DRAWING 1101.03 SHEET 3 OF 9

END PROJECT TIP B-4962
-L- STA. 23+50.00

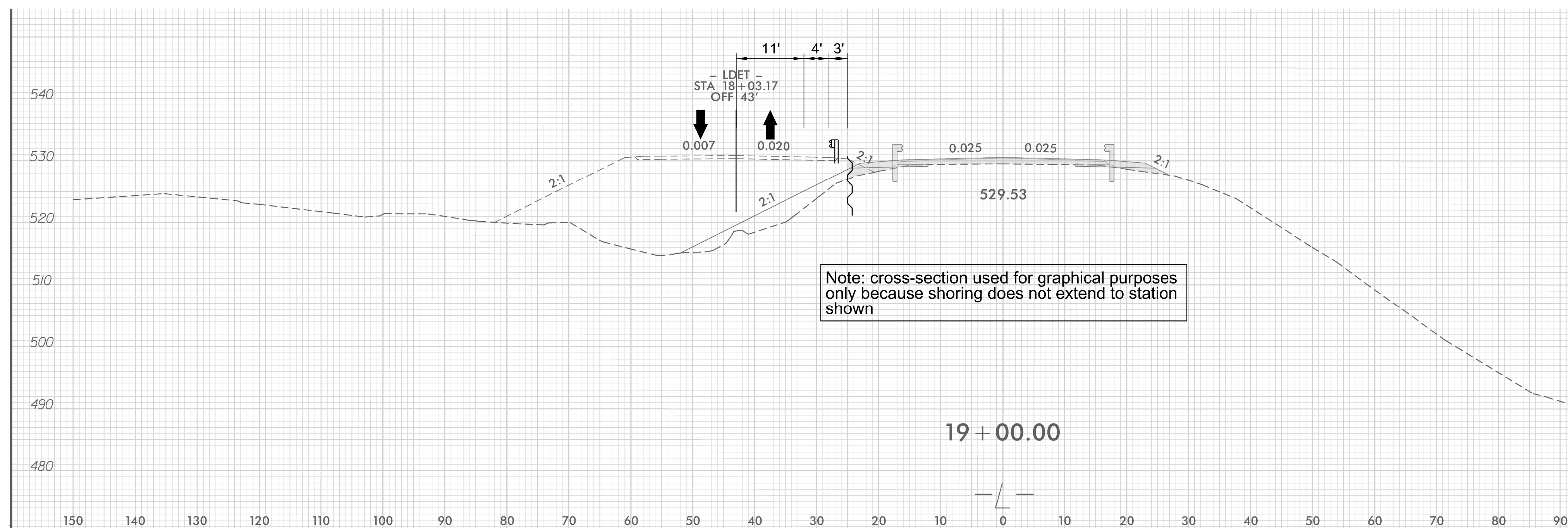
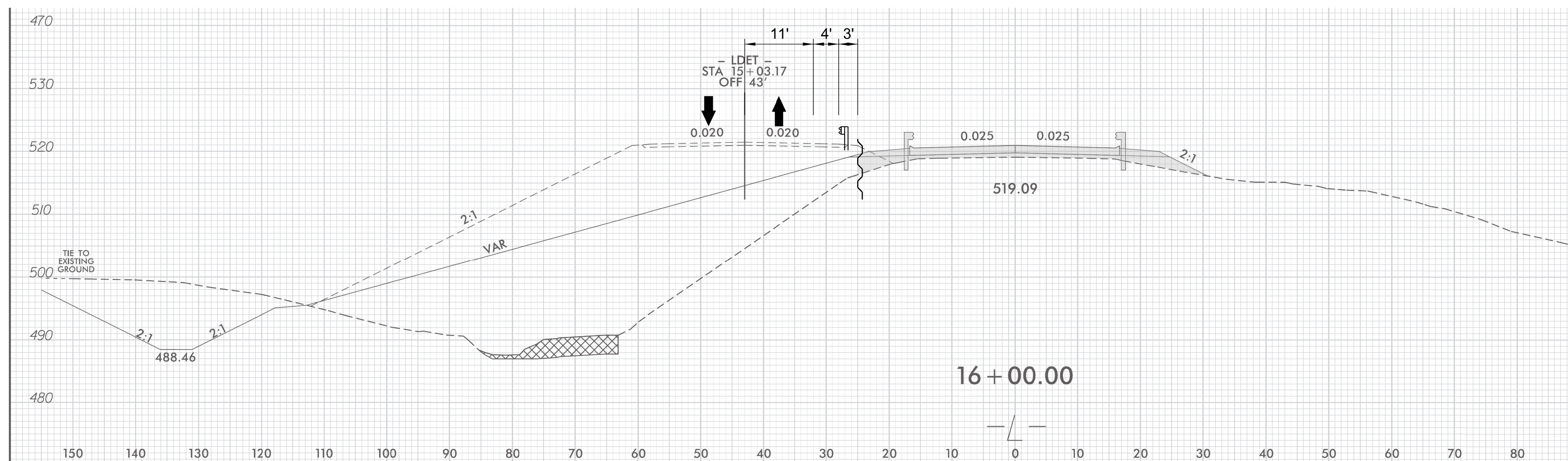
CONSTRUCT PARTIAL SECTION OF PROPOSED GUARDRAIL FROM BRIDGE TO -L- STA. 19+98± LT
INSTALL TEMP. GREU-TL-3 ANCHOR UNIT

CLOSE SR 1706 (RIVERSIDE DRIVE) EASTERN ACCESS TO US 70 BYPASS USING DETOUR DETAILS ON SHEET TMP-6 AND ROADWAY STANDARD DRAWING 1101.03 SHEET 1 OF 9

NOTE:
SR 1706 (RIVERSIDE DRIVE) TO REMAIN CLOSED DURING THE DURATION OF THE ON-SITE DETOUR (PHASE II).
SEE SHEET TMP-6 FOR DETOUR ROUTE AND SIGNING.

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			<p>US 70 BYPASS -L- PHASE II</p>



Note: cross-section used for graphical purposes only because shoring does not extend to station shown

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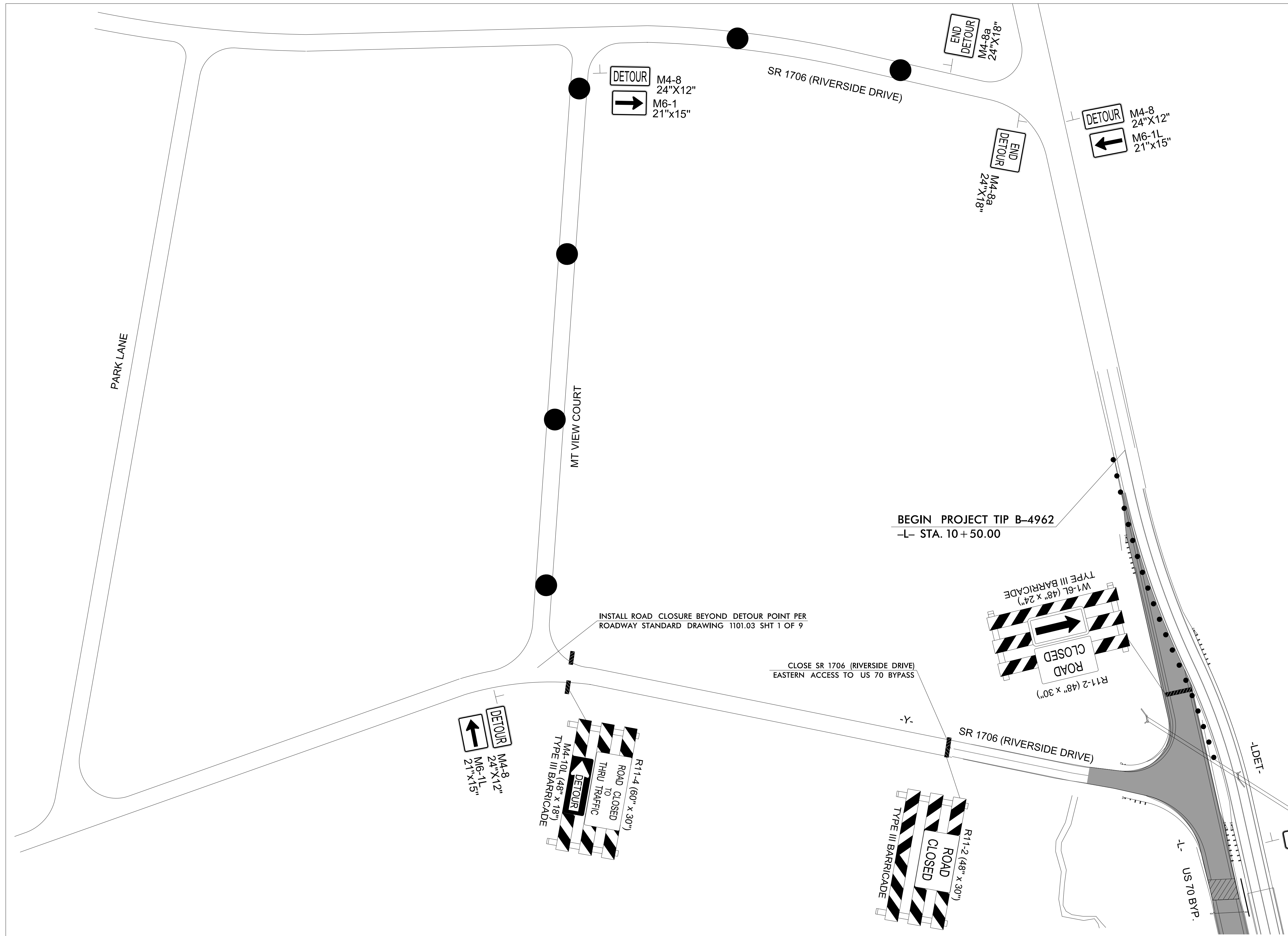
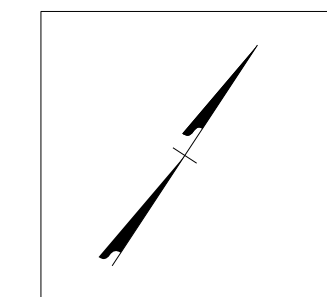
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**PHASE II
SHORING CUT SECTIONS**



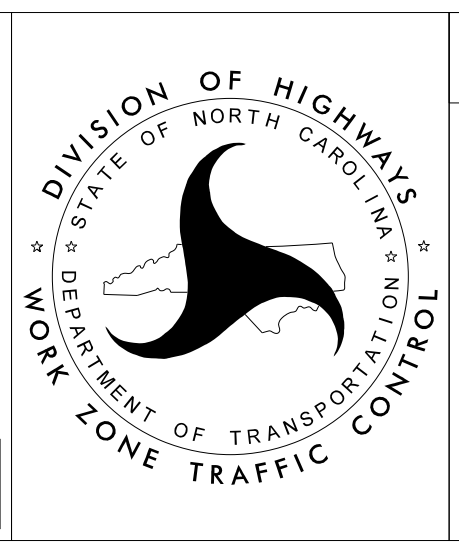
● = DETOUR ROUTE

NOTE:
SR 1706 (RIVERSIDE DRIVE) TO REMAIN CLOSED DURING THE DURATION OF THE ON-SITE DETOUR (PHASE II).
ACCESS WILL BE PROVIDED BY THE WESTERN ACCESS OF SR 1706 (RIVERSIDE DRIVE) TO US 70 BYPASS.

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 Suite 300
 Raleigh, NC 27606
 Tel. 919.851.6866
 Fax. 919.851.7024
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TRANSPORTATION MANAGEMENT PHASING CONCEPT

SR 1706 (RIVERSIDE DRIVE) DETOUR ROUTE

SIGN NUMBER: SD-1

TYPE: STATIONARY
QUANTITY: SEE PLANS

SIGN WIDTH: 4'-0"
HEIGHT: 1'-0"
TOTAL AREA: 4.0 Sq.Ft.

BORDER TYPE: RECESSED
RECESS: 0.375"
WIDTH: 0.44"
RADII: 1.5"

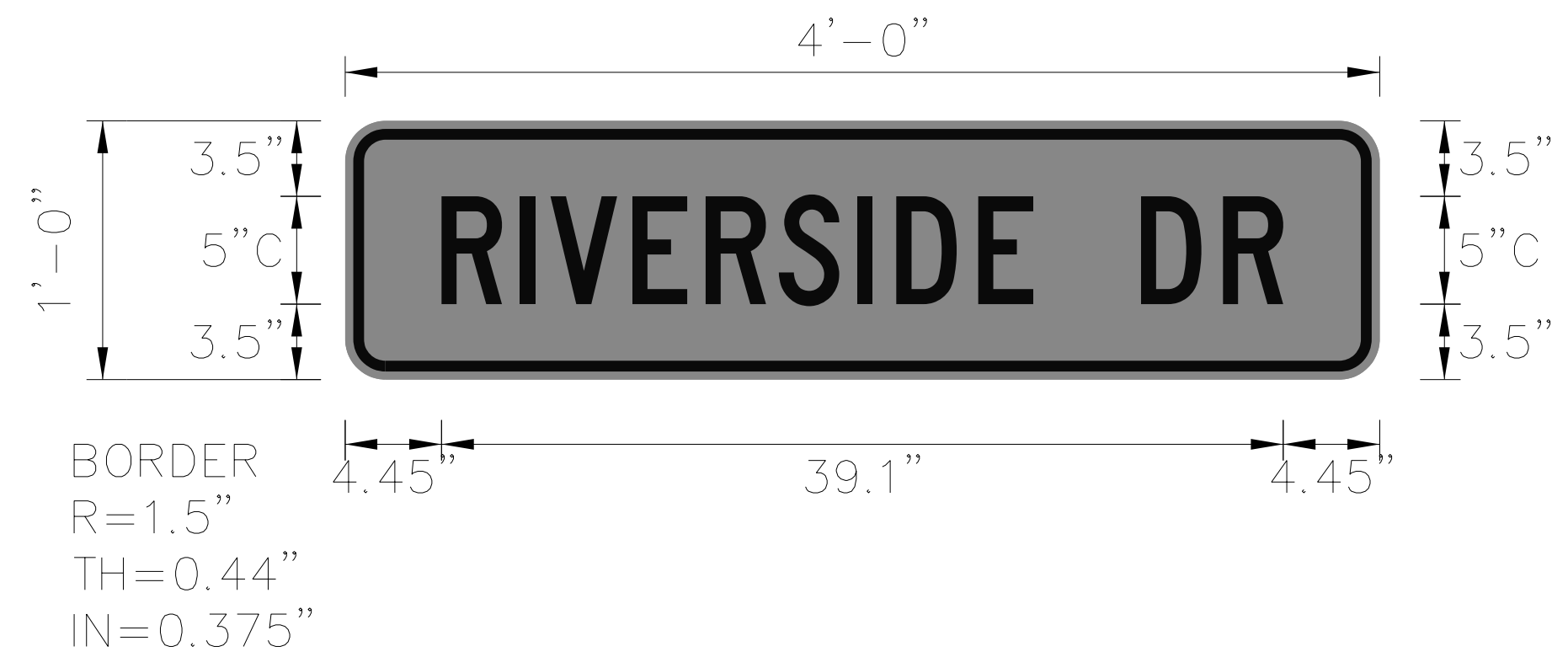
No. Z BARS:
LENGTH:

BACKG COLOR: Orange
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.125" (3.2 mm) ALUMINUM

PROJECT ID: B-4962 **CHECKED BY: RMM** **DIVISION: 7**
DESIGN BY: JH
LOCATION: Location Description **DATE: Aug 21, 2018**



- NOTES:**
1. Legend and border shall be shall be direct applied, non-reflective, black sheeting.
 2. Background shall be Grade "B", fluorescent orange, reflective sheeting.

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter spacings are to start of next letter														Series/Size	
	R	I	V	E	R	S	I	D	E	D	R				Text Length
	4.5	3.7	1.4	3.8	3.4	3.4	3.7	1.8	3.8	2.6	5	3.8	2.8	4.5	C 2000
															39.1

FILENAME: Traffic Control Sign Designs

NORTH CAROLINA D.O.T. SIGN DETAIL

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			<p>SR 1706 (RIVERSIDE DRIVE) SPECIAL SIGN DESIGN</p>