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PROJECT REFERENCE NO.

15BPR.28

SHEET NO.

TMP-2

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# LEGEND

## 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 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
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
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1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED ATTENUATOR
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)

### GENERAL

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

### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

### SIGNALS

- EXISTING
- PROPOSED

### TRAFFIC CONTROL DEVICES

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

### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

### PAVEMENT MARKERS

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

### TEMPORARY PAVEMENT MARKINGS

- PA - PAINT - WHITE EDGELINE (4")
- PC - PAINT - 10FT, WHITE SKIP (4")
- PI - PAINT - YELLOW, DOUBLE CENTER (4")
- P2 - PAINT - WHITE STOPBAR (24")

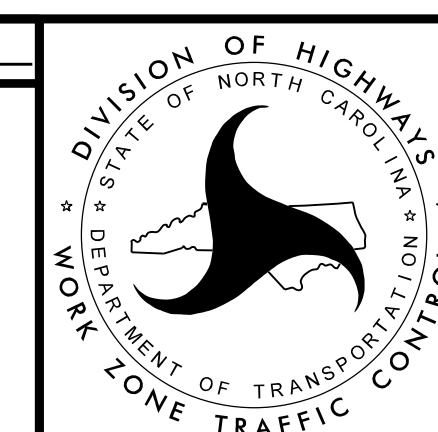
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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DocuSigned by:  
*George L. Gettier*  
E:159C8835E  
10/3/2018

SEAL



**ROADWAY STANDARD  
DRAWINGS & LEGEND**



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### TIME RESTRICTIONS

A) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 23A	6:00 A.M. - 9:00 A.M. AND 4:00 P.M. - 6:00 P.M. M - F	15 MIN. FOR FLAGGING, TRAFFIC OPERATIONS, SHIFTING TRAFFIC

B) 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

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 A DIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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 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.

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 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.

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) OF 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) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

### TRAFFIC PATTERN

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" (W8-1) SIGNS 200 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

### TRAFFIC BARRIER

O) 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.

### 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 SEE R.S.D. SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

Q) 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

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

ROAD NAME	MARKING	MARKER
US 23A	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 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.

### MISCELLANEOUS

V) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

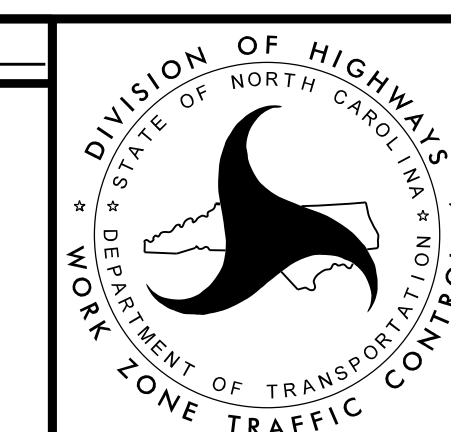
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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DocuSigned by:  
*George L. Gettier*  
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10/3/2018

SEAL



TRAFFIC OPERATIONS  
PLAN



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PROJECT REFERENCE NO.	SHEET NO.
15BPR.28	TMP-3A
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## TRANSPORTATION OPERATIONS

### CONSTRUCTION

BRIDGE AND APPROACH SLAB: SCARIFICATION, HYDRO-DEMOLITION AND REPAIRS TO BRIDGE DECKS, LATEX MODIFIED OVERLAY, OTHER REPAIRS TO BRIDGE - JOINTS, SHOTCRETE, CONCRETE REPAIRS, STEEL PAINTING, AND OTHER WORK AS SHOWN IN STRUCTURE PLANS, ASPHALT MILLING AND PAVING.

### TMP DESIGN CONCEPT

INSTALL ADVANCE WARNING CONSTRUCTION SIGNING ALONG SR 1318, SR 1346, AND US 23A.

USING FLAGGERS, ALONG WITH DRUMS OR SKINNY DRUMS, CONTRACTOR MAY PERFORM ANY MINOR WORK THAT WILL NOT INTERFERE WITH TRAFFIC IN ADJACENT LANE.

INSTALL TEMPORARY MARKINGS, PORTABLE TRAFFIC SIGNALS, AND DRUMS OR WATER-FILLED BARRIER, TO CLOSE ONE-HALF OF BRIDGE. PERFORM ALL WORK REQUIRED.

REPEAT PROCESS OF LANE CLOSURE FOR REMAINING HALF OF BRIDGE.

PLACE FINAL PAVEMENT MARKINGS AND OPEN BRIDGE TO FINAL HIGHWAY PATTERN.

## TRAFFIC CONTROL PLAN PHASING

### TRAFFIC CONTROL PLAN PHASING

NOTE: PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ALONG EXISTING SR 1318, SR 1346, US 23A, AND ALL OTHER Y-LINES (SEE ROADWAY STANDARD DRAWING (R.S.D.) NO. 1101.01, SHEETS 1 AND 3).

CONTRACTOR MAY PERFORM ANY WORK AWAY FROM TRAFFIC AT ANY TIME.

CONTRACTOR MAY ELECT TO PERFORM WORK FIRST ON EITHER HALF OF STRUCTURE.

#### **PHASE 1: (MINOR PRELIMINARY WORK)**

##### STEP 1:

USING FLAGGERS AS NECESSARY, PLACE DRUMS OR SKINNY DRUMS TO CLOSE ONE LANE TO PERFORM ANY WORK WITHIN THE LANE THAT DOES NOT INTERFERE WITH TRAFFIC IN ADJACENT LANE. REMOVE LANE CLOSURE WHEN WORK IS COMPLETE OR AT THE END OF EACH DAY. (SEE STRUCTURE PLANS, AND R.S.D. 1101.02, SHEET 1 OF 14).

##### STEP 2:

REPEAT PROCESS AS NECESSARY. (SEE STRUCTURE PLANS, AND R.S.D. 1101.02, SHEET 1 OF 14).

#### **PHASE 2:**

##### STEP 1:

USE FLAGGERS AS NECESSARY, INSTALL DRUMS OR WATER-FILLED BARRIER, AND PORTABLE TRAFFIC SIGNALS, TO CLOSE HALF OF THE STRUCTURE. PERFORM SCARIFICATION, HYDRO-DEMOLITION, LATEX MODIFIED CONCRETE OVERLAY, ASPHALT MILLING AND PAVING, AND ANY OTHER WORK REQUIRED IN THE CLOSED LANE. (SEE STRUCTURE PLANS, AND TMP-4 OR 5).

##### STEP 3:

REPEAT PROCESS (STEP 1) FOR OTHER HALF OF BRIDGE, REVISING TEMPORARY MARKINGS, TEMPORARY SIGNS, PORTABLE TRAFFIC SIGNALS, AND DRUMS OR WATER-FILLED BARRIER PLACEMENT. (SEE STRUCTURE PLANS, AND TMP-5 OR (4). WHEN WORK IS COMPLETE, REMOVE ALL WATER-FILLED BARRIER OR DRUMS, SIGNS AND PORTABLE TRAFFIC SIGNALS. USE FLAGGERS TO PLACE TEMPORARY PAVEMENT MARKINGS ON BRIDGE, AND ASPHALT IN FINAL PATTERN (SAME AS EXISTING ROADWAY). OPEN ROADWAY AND STRUCTURE TO TWO-WAY, TWO-LANE TRAFFIC. (SEE R.S.D. 1101.02 SHEET 12 OF 14, R.S.D. 1205.01 SHEETS 1 AND 2 OF 2, R.S.D. 1250.01 SHEETS 1 AND 2 OF 3, AND R.S.D. 1253.01).

#### **PHASE 3:**

##### STEP 1:

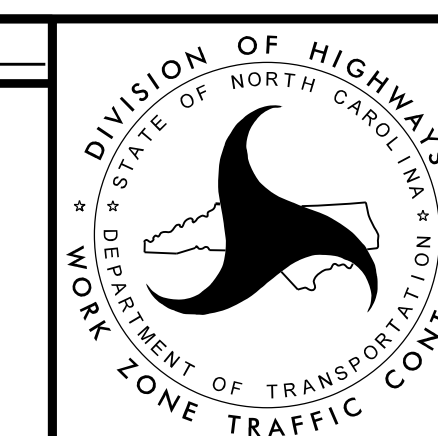
COMPLETE ALL REMAINING WORK. PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON BRIDGE, AND ASPHALT IN FINAL PATTERN (SAME AS EXISTING ROADWAY). (SEE R.S.D. 1101.02 SHEET 11 OF 14, R.S.D. 1205.01 SHEETS 1 AND 2 OF 2, R.S.D. 1250.01 SHEETS 1 AND 2 OF 3, AND R.S.D. 1253.01).

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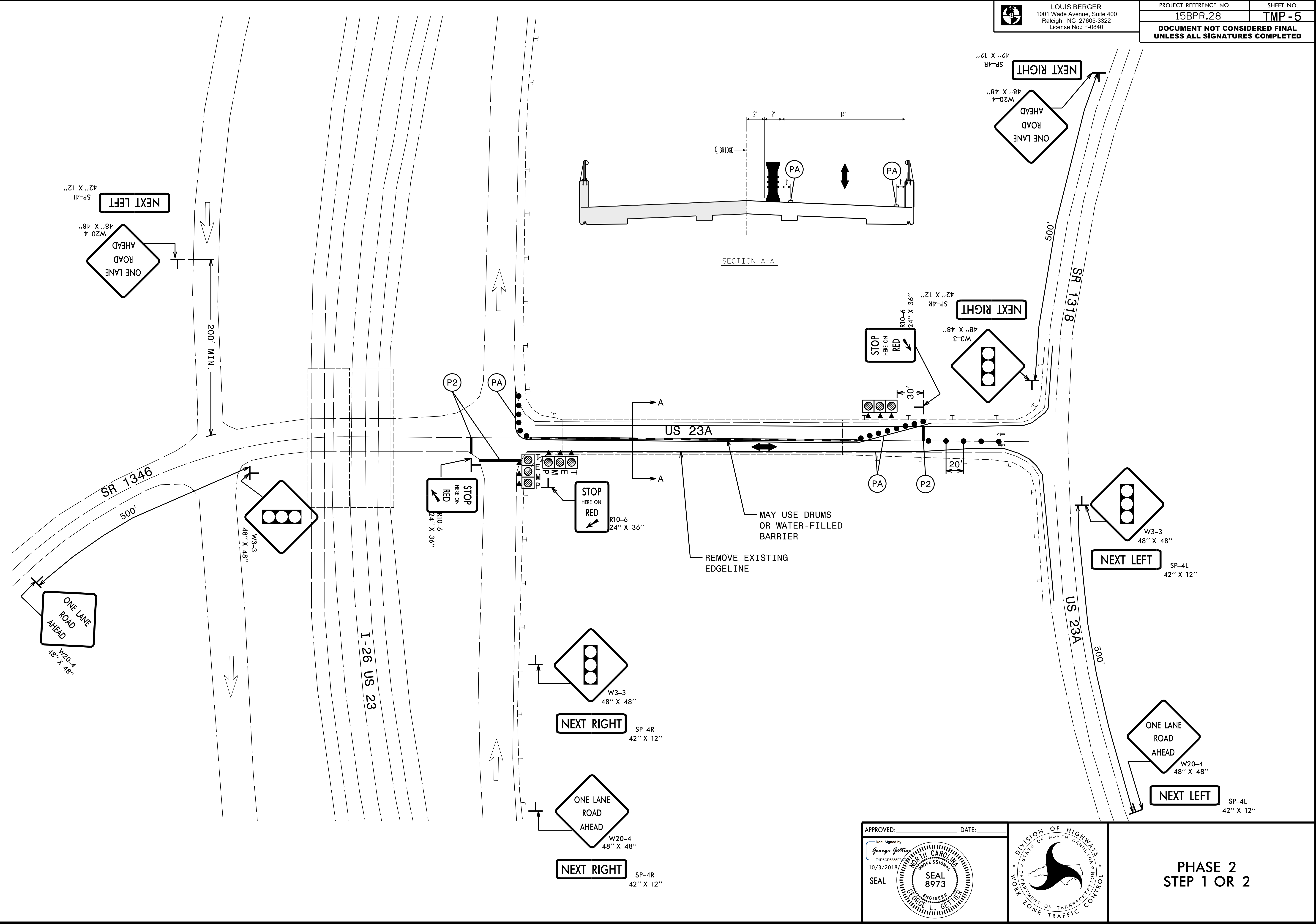
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*George Gettier*  
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**TRAFFIC OPERATIONS  
PLAN**

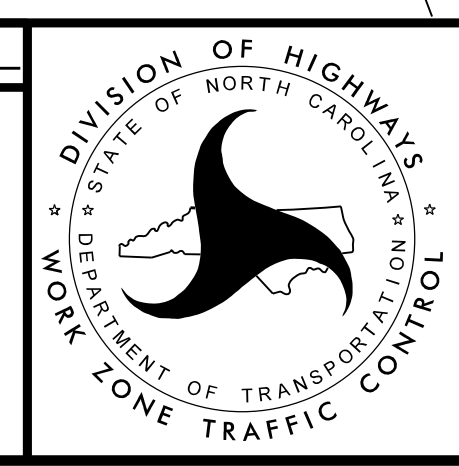


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Seal of George L. Gettler, Professional Engineer, License No. E106063556, dated 10/3/2018.

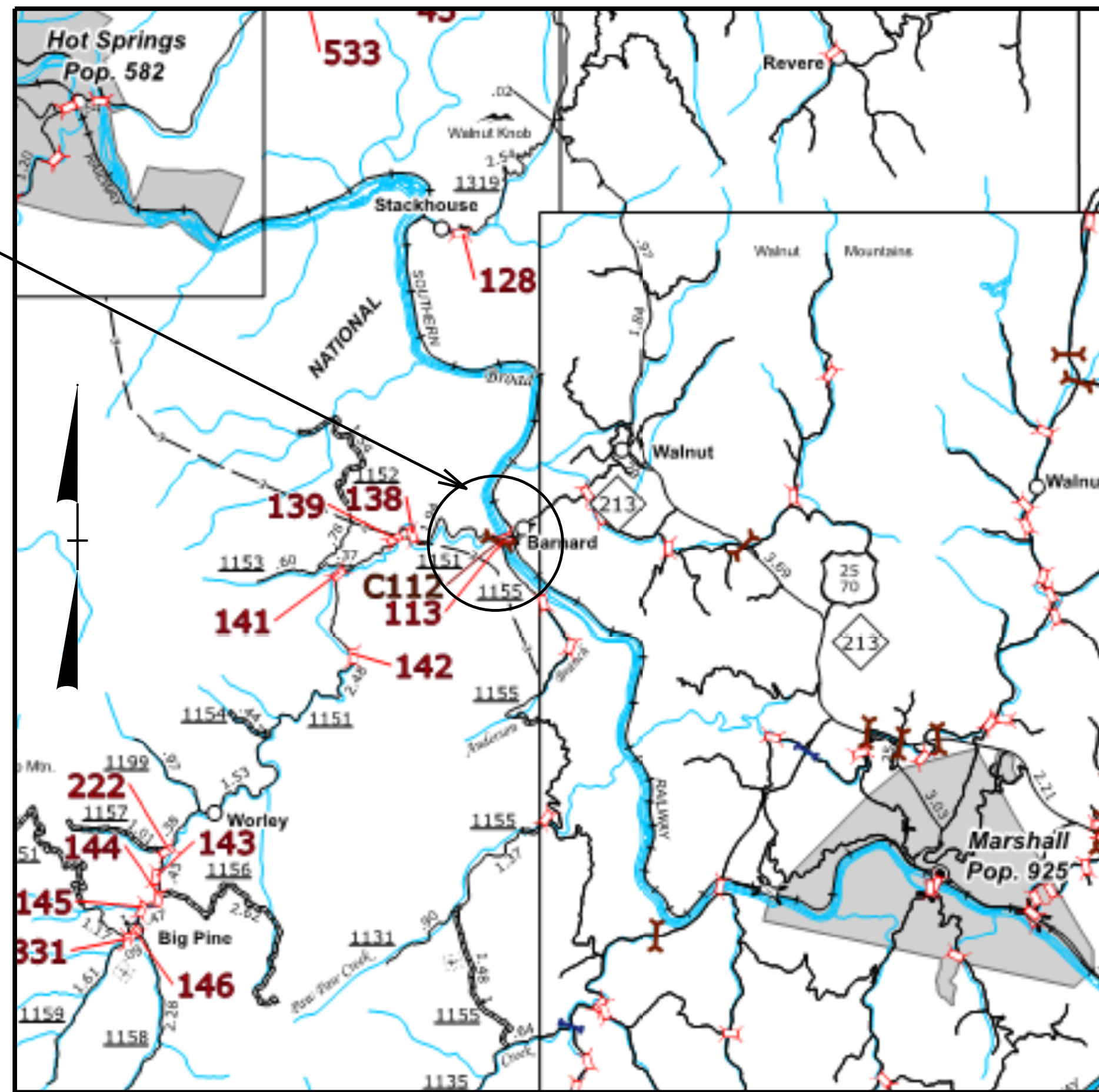
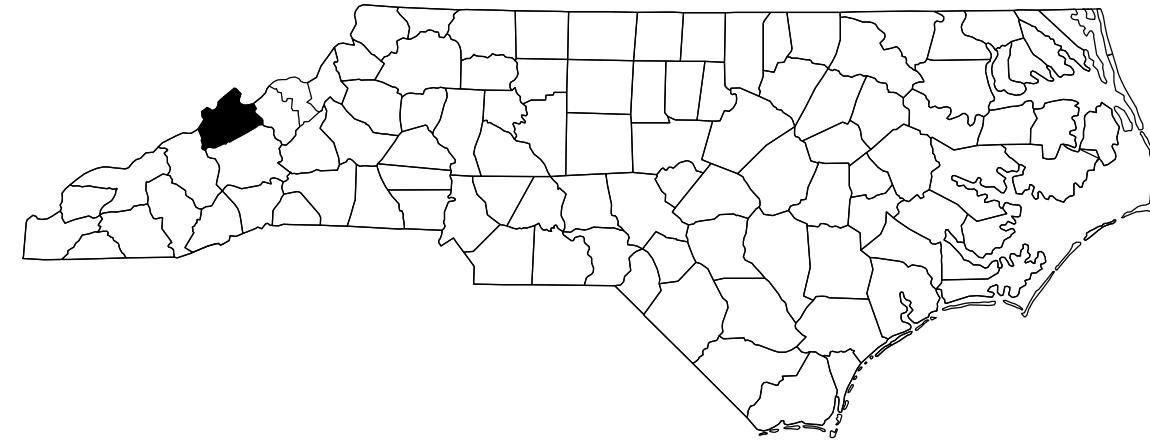


**PHASE 2  
STEP 1 OR 2**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**MADISON COUNTY**



VICINITY MAP NTS

**BRIDGE #113 ON SR 1151 OVER FRENCH BROAD RIVER AT BARNARD**

**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-2	ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-3, 3A	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES AND TEMPORARY TRAFFIC CONTROL PHASING)
TMP-4 THRU TMP-5	TEMPORARY TRAFFIC CONTROL PHASE 2 DETAILS

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) 771-2745

JOSEPH E. HUMMER, PE STATE TRAFFIC MANAGEMENT ENGINEER  
GEORGE L. GETTIER, PE TRAFFIC CONTROL PROJECT ENGINEER  
GEORGE L. GETTIER, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER



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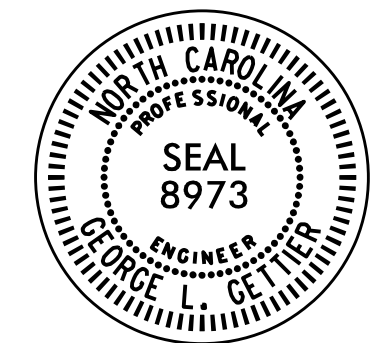
FARZIN ASEFNIA, PE  
PROJECT ENGINEER

GEORGE L. GETTIER, PE  
PROJECT DESIGN ENGINEER

APPROVED: \_\_\_\_\_  
DATE: \_\_\_\_\_

DocuSigned by:  
George Gettier  
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10/3/2018

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# LEGEND

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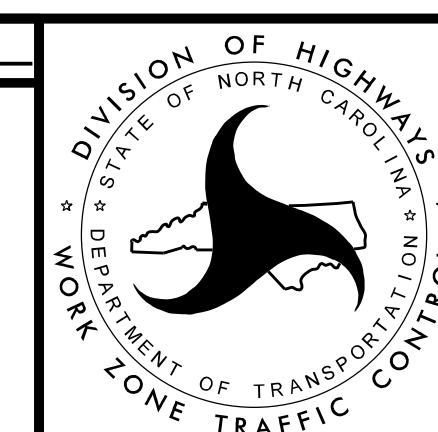
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DocuSigned by:  
George L. Gettier  
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10/3/2018  
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**ROADWAY STANDARD  
DRAWINGS & LEGEND**



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15BPR.28 TMP-3

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## 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 A DIVIDED 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.
- 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 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.
- 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 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.
- 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) OF 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) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

## TRAFFIC PATTERN

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" (W8-1) SIGNS 200 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

## TRAFFIC BARRIER

O) 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.

## 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 SEE R.S.D. SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- Q) 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

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

ROAD NAME	MARKING	MARKER
SR 1151	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 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.

## MISCELLANEOUS

V) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

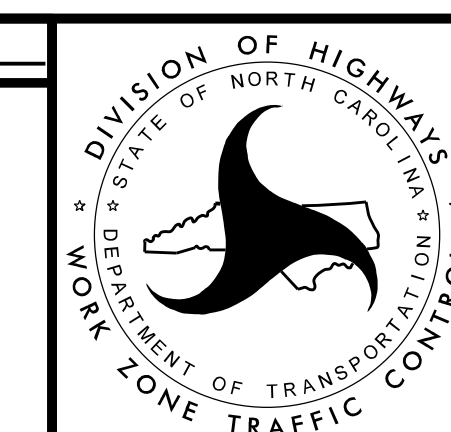
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APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

DocuSigned by:  
*George L. Gettier*  
E:159C8835E  
10/3/2018

SEAL



TRAFFIC OPERATIONS  
PLAN



LOUIS BERGER  
1001 Wade Avenue, Suite 400  
Raleigh, NC 27605-3322  
License No.: F-0840

PROJECT REFERENCE NO.	SHEET NO.
15BPR.28	TMP-3A
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## TRANSPORTATION OPERATIONS

### CONSTRUCTION

BRIDGE AND APPROACH SLAB: SCARIFICATION, HYDRO-DEMOLITION AND REPAIRS TO BRIDGE DECKS, LATEX MODIFIED OVERLAY, OTHER REPAIRS TO BRIDGE - JOINTS, SHOTCRETE, CONCRETE REPAIRS, STEEL PAINTING, AND OTHER WORK AS SHOWN IN STRUCTURE PLANS.

### TMP DESIGN CONCEPT

INSTALL ADVANCE WARNING CONSTRUCTION SIGNING ALONG SR 1151 AND SR 1155.

USING FLAGGERS, ALONG WITH DRUMS OR SKINNY DRUMS, CONTRACTOR MAY PERFORM ANY MINOR WORK THAT WILL NOT INTERFERE WITH TRAFFIC IN ADJACENT LANE.

INSTALL TEMPORARY MARKINGS, PORTABLE TRAFFIC SIGNALS, AND DRUMS, SKINNY DRUMS OR WATER-FILLED BARRIER, CLOSE ONE-HALF OF BRIDGE. PERFORM ALL WORK REQUIRED BEHIND BARRIER.

REPEAT PROCESS OF LANE CLOSURE FOR REMAINING HALF OF BRIDGE.

PLACE FINAL PAVEMENT MARKINGS AND OPEN BRIDGE TO FINAL HIGHWAY PATTERN.

## TRAFFIC CONTROL PLAN PHASING

### TRAFFIC CONTROL PLAN PHASING

NOTE: PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ALONG EXISTING SR 1151 AND SR 1155. (SEE ROADWAY STANDARD DRAWING (R.S.D.) NO. 1101.01, SHEET 1 AND 3).

CONTRACTOR MAY PERFORM ANY WORK AWAY FROM TRAFFIC AT ANY TIME.

CONTRACTOR MAY ELECT TO PERFORM WORK FIRST ON EITHER HALF OF STRUCTURE.

### PHASE 1: (MINOR PRELIMINARY WORK)

#### STEP 1:

USING FLAGGERS AS NECESSARY, PLACE DRUMS OR SKINNY DRUMS TO CLOSE ONE LANE TO PERFORM ANY WORK WITHIN THE LANE THAT DOES NOT INTERFERE WITH TRAFFIC IN ADJACENT LANE. REMOVE LANE CLOSURE WHEN WORK IS COMPLETE, OR AT THE END OF EACH DAY. (SEE STRUCTURE PLANS, AND R.S.D. 1101.02, SHEET 1 OF 14).

#### STEP 2:

REPEAT PROCESS AS NECESSARY. (SEE STRUCTURE PLANS, AND R.S.D. 1101.02, SHEET 1 OF 14).

### PHASE 2:

#### STEP 1:

USE FLAGGERS AS NECESSARY, INSTALL DRUMS, SKINNY DRUMS OR WATER-FILLED BARRIER AND PORTABLE TRAFFIC SIGNALS, TO CLOSE HALF OF THE STRUCTURE. PERFORM SCARIFICATION, HYDRO-DEMOLITION, LATEX MODIFIED CONCRETE OVERLAY, ASPHALT MILLING AND PAVING, AND ANY OTHER WORK THAT SHOULD TAKE PLACE IN THE CLOSED LANE. (SEE STRUCTURE PLANS, AND TMP-4 (OR 5)).

#### STEP 2:

REPEAT PROCESS (STEPS 1 AND 2) FOR OTHER HALF OF BRIDGE, REVISING TEMPORARY MARKINGS, TEMPORARY SIGNS, PORTABLE TRAFFIC SIGNALS, DRUMS, SKINNY DRUMS, OR WATER-FILLED BARRIER PLACEMENT. (SEE STRUCTURE PLANS, AND TMP-5 (OR 4)). WHEN WORK IS COMPLETE, REMOVE ALL WATER-FILLED BARRIER OR DRUMS, SIGNS AND PORTABLE TRAFFIC SIGNALS. USE FLAGGERS TO PLACE TEMPORARY PAVEMENT MARKINGS ON BRIDGE AND ASPHALT IN FINAL PATTERN (SAME AS EXISTING ROADWAY). OPEN ROADWAY AND STRUCTURE TO TWO-WAY, TWO-LANE TRAFFIC. (SEE R.S.D. 1101.02 SHEET 12 OF 14, R.S.D. 1205.01 SHEETS 1 AND 2 OF 2, R.S.D. 1250.01 SHEETS 1 AND 2 OF 3, AND R.S.D. 1253.01).

### PHASE 3:

#### STEP 1:

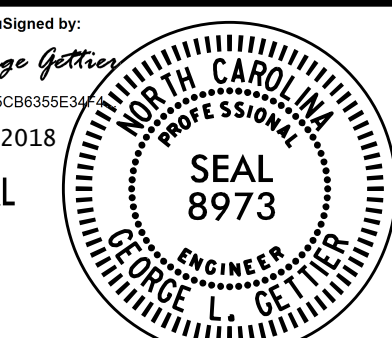
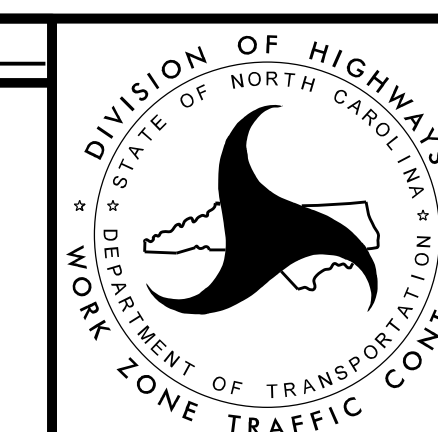
COMPLETE ALL REMAINING WORK. PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON BRIDGE AND ASPHALT IN FINAL PATTERN (SAME AS EXISTING ROADWAY). (SEE R.S.D. 1101.02 SHEET 11 OF 14, R.S.D. 1205.01 SHEETS 1 AND 2 OF 2, R.S.D. 1250.01 SHEETS 1 AND 2 OF 3, AND R.S.D. 1253.01).

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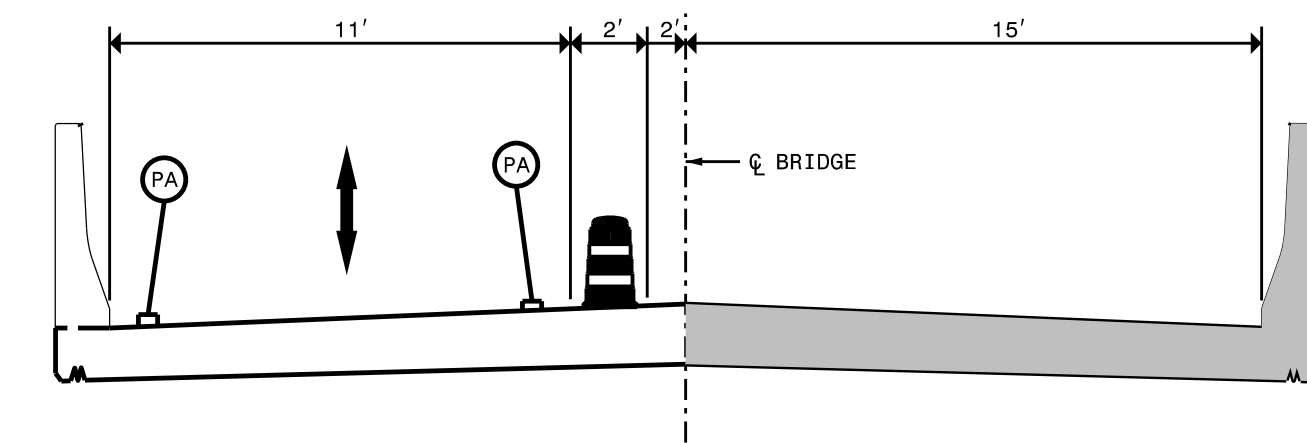
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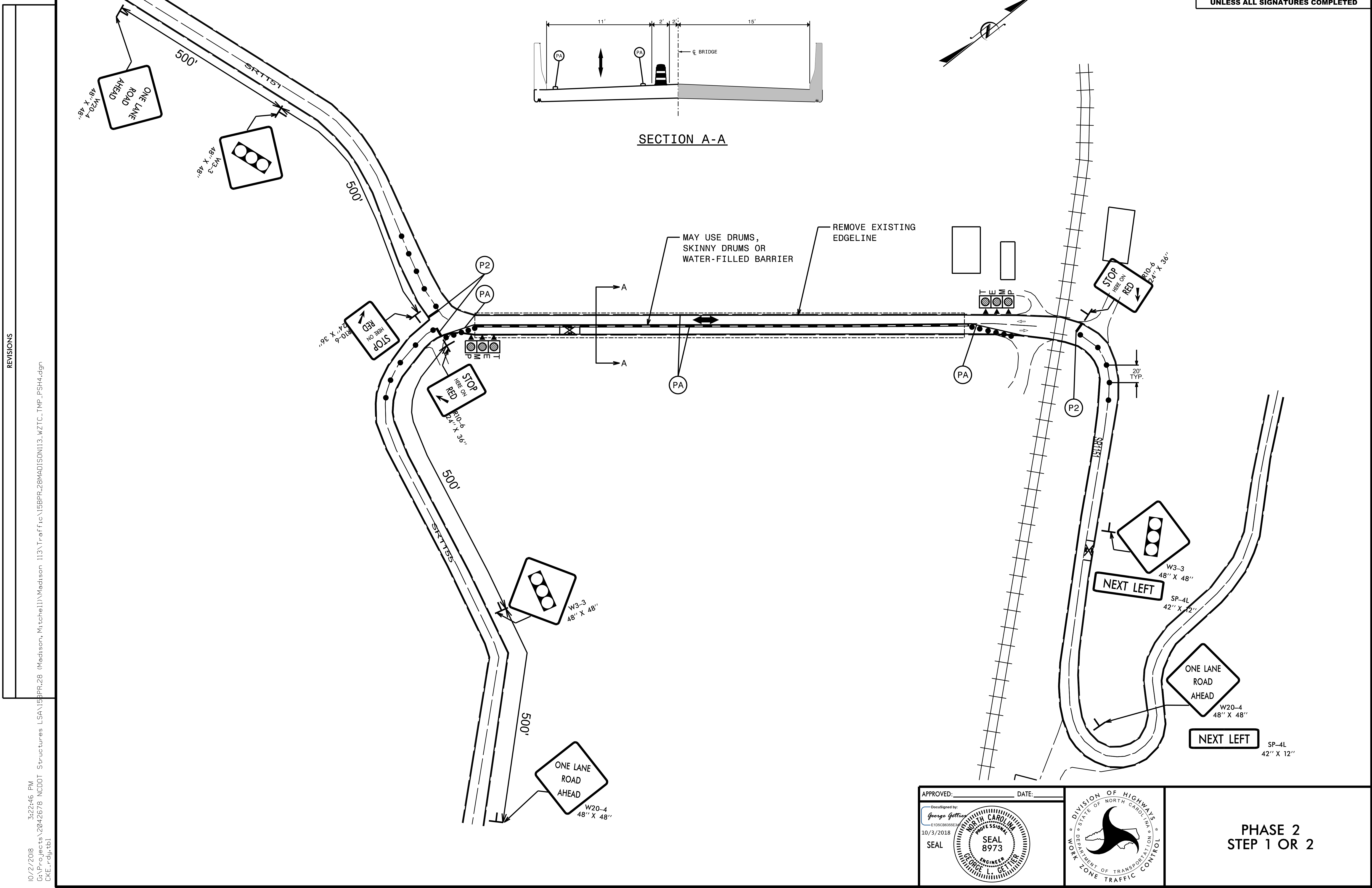
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*George Gettier*  
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10/3/2018  
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**TRAFFIC OPERATIONS  
PLAN**

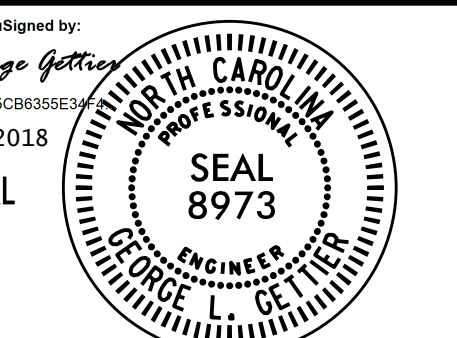



SECTION A-A

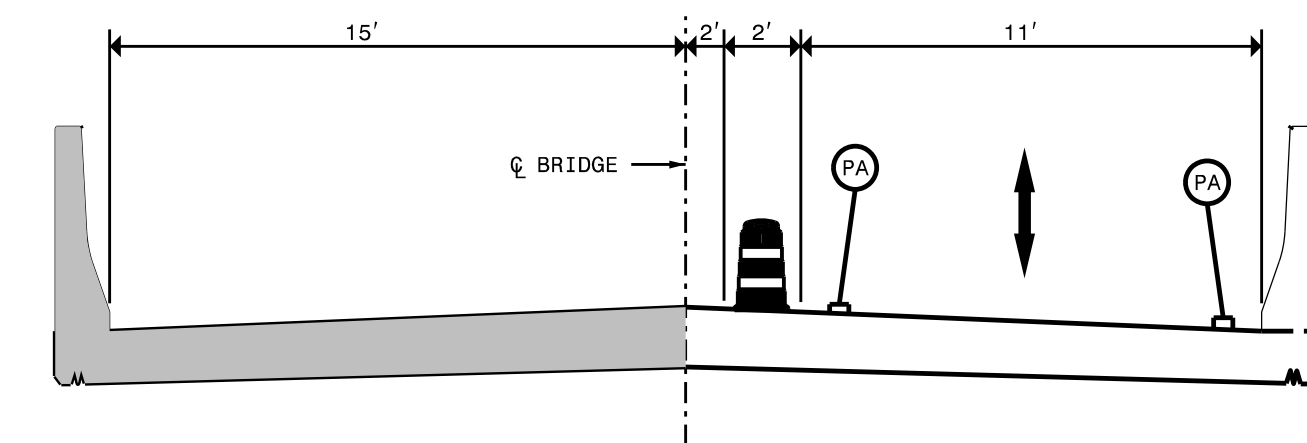


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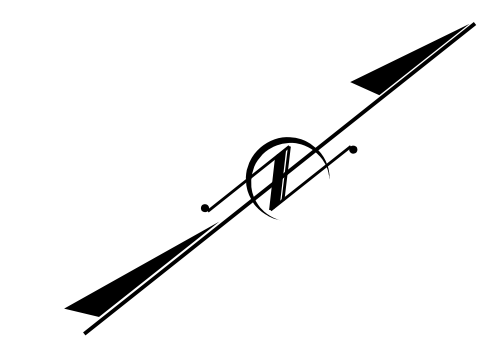
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APPROVED: _____ DATE: _____ Documented by: <i>George L. Gettler</i> E105CBK355E 10/3/2018 SEAL			PHASE 2 STEP 1 OR 2
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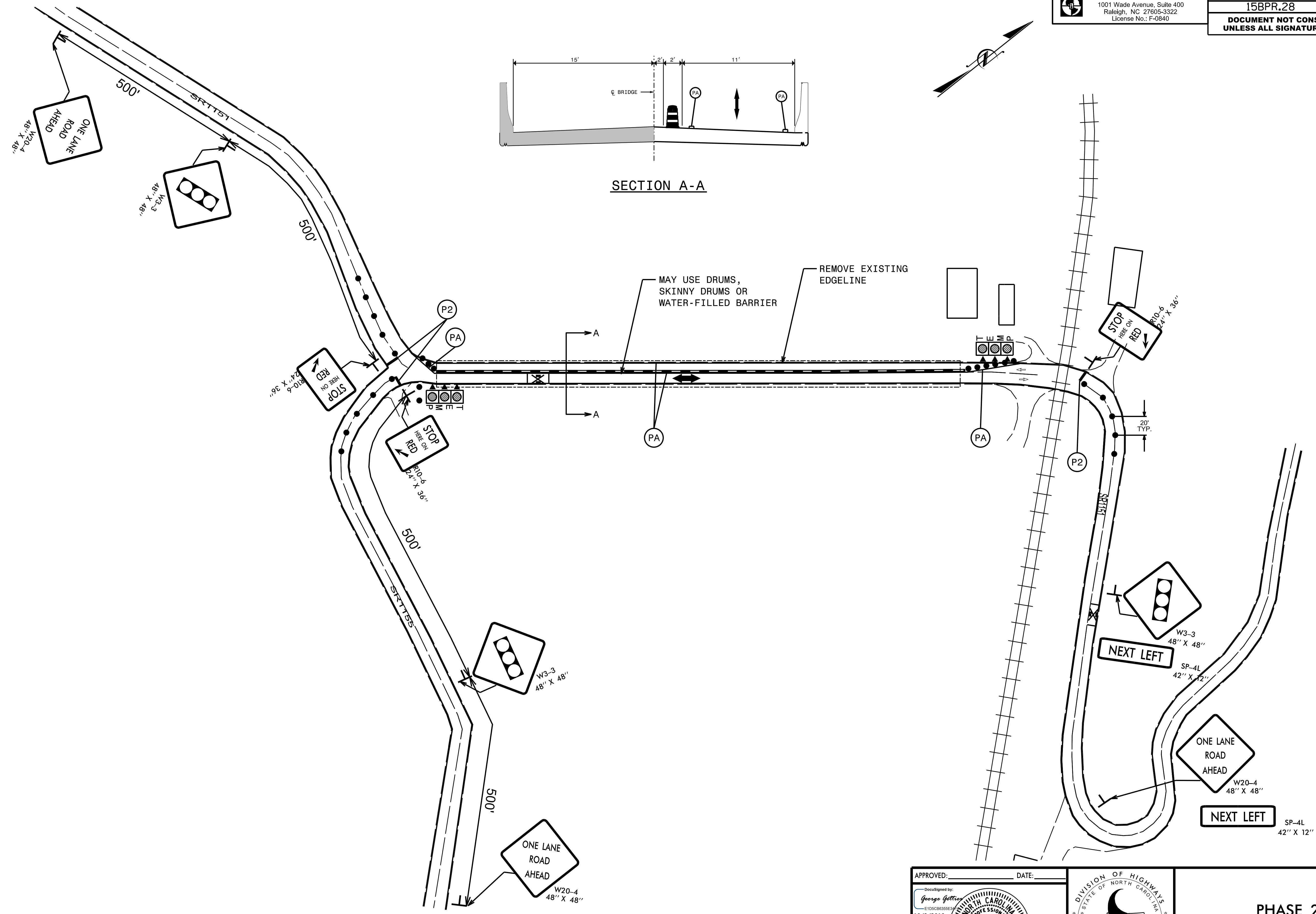


SECTION A-A



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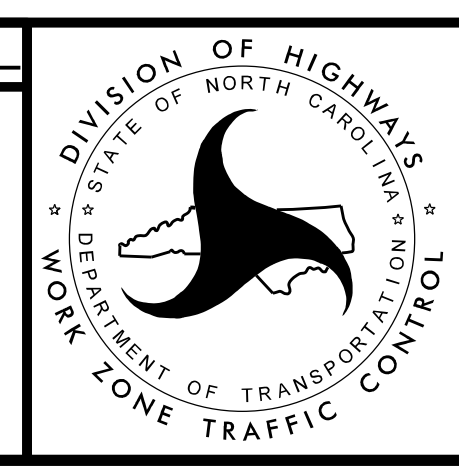
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Documented by:  
*George L. Gettler*  
E105CBK355E  
10/3/2018

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**PHASE 2  
STEP 1 OR 2**

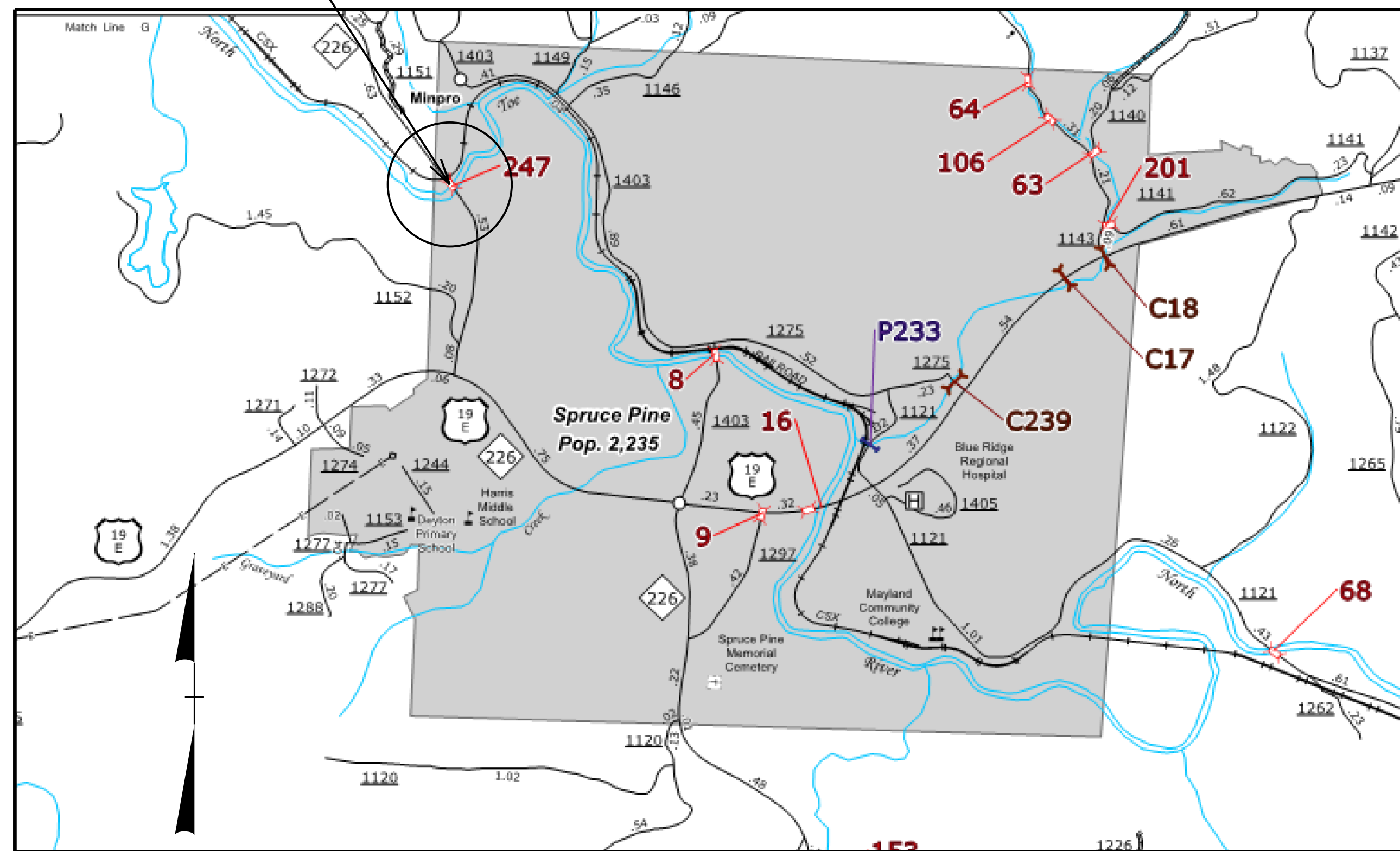
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**MITCHELL COUNTY**



PROJECT



VICINITY MAP NTS

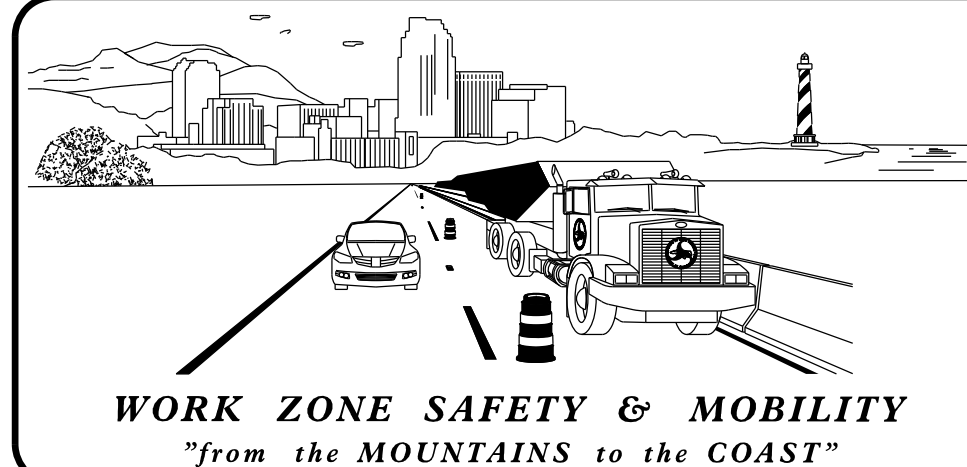
**BRIDGE #247 ON NC 226 BYPASS OVER NORTH TOE RIVER  
AND CSX RAILROAD BETWEEN SR 1152 AND EXISTING NC 226**

**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP AND INDEX OF SHEETS
TMP-2	ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-3, 3A	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, AND LOCAL NOTES AND TEMPORARY TRAFFIC CONTROL PHASING)
TMP-4 THRU TMP-13	TEMPORARY TRAFFIC CONTROL PHASE II, STEPS 1-3, DETAILS

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) 771-2745

JOSEPH E. HUMMER, PE STATE TRAFFIC MANAGEMENT ENGINEER  
GEORGE L. GETTIER, PE TRAFFIC CONTROL PROJECT ENGINEER  
GEORGE L. GETTIER, PE TRAFFIC CONTROL PROJECT DESIGN ENGINEER



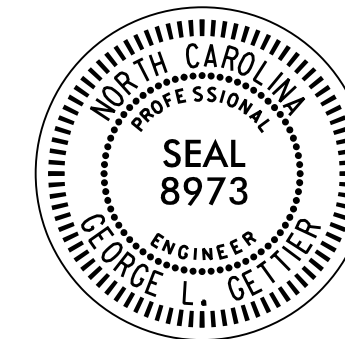
Prepared In the Office of:  
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License No.: F-0840

**FARZIN ASEFNIA, PE**  
PROJECT ENGINEER

**GEORGE L. GETTIER, PE**  
PROJECT DESIGN ENGINEER

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*George Gettier*  
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SHEET NO.

TMP-2

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## LEGEND

### 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 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
1101.11	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
1160.01	TEMPORARY CRASH CUSHIONS
1165.01	TRUCK MOUNTED ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)

#### GENERAL

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

#### TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

#### TRAFFIC CONTROL DEVICES

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

#### PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

#### PAVEMENT MARKERS

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

#### TEMPORARY PAVEMENT MARKINGS

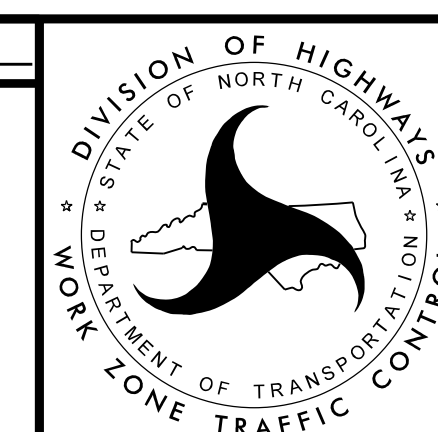
- PA - PAINT - WHITE EDGELINE (4")
- PC - PAINT - 10FT, WHITE SKIP (4")
- PI - PAINT - YELLOW DOUBLE CENTER (4")
- P2 - PAINT - WHITE STOPBAR (24")

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George Gettier  
E105CB385E3E  
10/3/2018  
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**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 DUPLICATES 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 DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

### ROAD NAME

NC 226

### HOLIDAY

- 1) FOR ANY UNEXPECTED OCCURANCE 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 6:00 P.M. JANUARY 2nd. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 P.M. THE FOLLOWING TUESDAY.
- 3) FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 6:00 P.M. MONDAY.
- 4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
- 5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 6:00 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 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- 6) FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 6:00 P.M. TUESDAY.
- 7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 6:00 P.M. MONDAY.
- 8) FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS

B) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
NC 226	6:00 A.M. - 9:00 A.M. AND 4:00 P.M. - 6:00 P.M. M - F	15 MIN. FOR FLAGGING, TRAFFIC OPERATIONS, SHIFTING TRAFFIC

C) 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

- D) 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.
- E) 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.
- F) 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 DRWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- G) 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.
- H) 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.
- I) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

## TRAFFIC PATTERN ALTERATIONS

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

## SIGNING

- K) 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.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

## TRAFFIC PATTERN

M) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" (W8-1) SIGNS 200 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

## TRAFFIC BARRIER

N) 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.

O) 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 R.S.D. 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

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 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

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

ROAD NAME	MARKING	MARKER
NC 226	PAINT	TEMPORARY RAISED

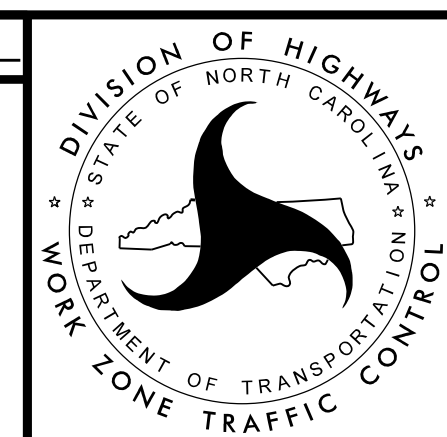
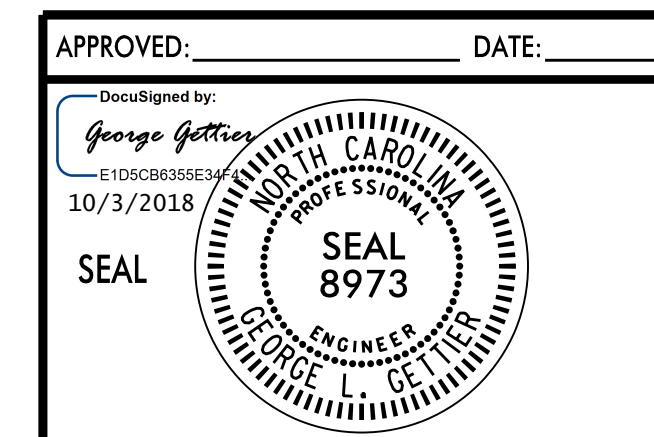
S) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

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.

## MISCELLANEOUS

V) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.



TRAFFIC OPERATIONS  
DRAWINGS & LEGEND

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## TRANSPORTATION OPERATIONS

### CONSTRUCTION

BRIDGE AND APPROACH SLAB: SCARIFICATION, HYDRO-DEMOLITION AND REPAIRS TO BRIDGE DECKS, LATEX MODIFIED OVERLAY, OTHER REPAIRS TO BRIDGE - JOINTS, SHOTCRETE, CONCRETE REPAIRS, STEEL PAINTING, AND OTHER WORK AS SHOWN IN STRUCTURE PLANS.  
ASPHALT MILLING AND PAVING.

### TMP DESIGN CONCEPT

INSTALL ADVANCE WARNING CONSTRUCTION SIGNING ALONG BOTH DIRECTIONS OF US64.

USING DRUMS OR SKINNY DRUMS. CLOSE INSIDE LANE IN ONE DIRECTION, OUTSIDE LANE IN OPPOSITE DIRECTION. (MAY PERFORM ANY WORK AT THIS TIME THAT WILL NOT INTERFERE WITH TRAFFIC IN ADJACENT LANE).

INSTALL TEMPORARY MARKINGS FOR LANE SHIFTS, AND PORTABLE CONCRETE BARRIER TO CLOSE ONE-HALF OF BRIDGE. PERFORM ALL WORK REQUIRED BEHIND BARRIER. REMOVE LANE SHIFTS WHEN WORK IS COMPLETE ON HALF OF BRIDGE.

REPEAT PROCESS OF LANE CLOSURES AND LANE SHIFTS, FOR REMAINING HALF OF BRIDGE.

PLACE FINAL PAVEMENT MARKINGS AND OPEN BRIDGE TO FINAL FOUR-LANE, DIVIDED HIGHWAY PATTERN.

## TRAFFIC CONTROL PLAN PHASING

### TRAFFIC CONTROL PLAN PHASING

NOTE: PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ALONG EXISTING NC 226 AND ALL OTHER Y-LINES (SEE ROADWAY STANDARD DRAWING (R.S.D.) NO. 1101.01, SHEET 2 OF 3).

CONTRACTOR MAY PERFORM ANY WORK AWAY FROM TRAFFIC AT ANY TIME.

CONTRACTOR MAY ELECT TO PERFORM WORK FIRST ON EITHER HALF OF STRUCTURE.

### PHASE 1: (MINOR PRELIMINARY WORK)

#### STEP 1:

USING FLAGGERS AS NECESSARY, PLACE DRUMS OR SKINNY DRUMS TO CLOSE ONE LANE TO PERFORM ANY WORK WITHIN THE LANE THAT DOES NOT INTERFERE WITH TRAFFIC IN ADJACENT LANE(S). REMOVE LANE CLOSURE WHEN WORK IS COMPLETE.  
(SEE STRUCTURE PLANS, AND R.S.D. 1101.02, SHEET 3 OF 14).

#### STEP 2:

REPEAT PROCESS AS NECESSARY. (SEE STRUCTURE PLANS, AND R.S.D. 1101.02, SHEET 3 OF 14).

#### STEP 3:

REMOVE CONCRETE MEDIAN, USING LANE CLOSURES. (SEE R.S.D. 1101.02, SHEET 3 OF 14.)

### PHASE 2: (WORK BEHIND PORTABLE CONCRETE BARRIER)

#### STEP 1:

PLACE DRUMS OR SKINNY-DRUMS TO CLOSE NC 226 INSIDE LANE, IN ONE DIRECTION, AND OUTSIDE LANE IN OPPOSITE DIRECTION, BEGINNING AT INTERSECTION WITH US 19E, AND EXTENDING NORTH TO WHERE FOUR LANE BECOMES TWO LANES. USING FLAGGERS AS NECESSARY, PLACE TEMPORARY MARKINGS, AND REMOVE CONFLICTING MARKINGS TO INSTALL LANE SHIFTS TO CLOSE HALF OF THE BRIDGE, ENABLING WORK ON ONE-HALF OF BRIDGE BEHIND PORTABLE CONCRETE BARRIER. (SEE TMP-4-13, AND STRUCTURE PLANS).

#### STEP 2:

USE FLAGGERS AS NECESSARY, INSTALL PORTABLE CONCRETE BARRIER, CLOSING HALF OF THE STRUCTURE. PERFORM SCARIFICATION, HYDRO-DEMOLITION, LATEX MODIFIED CONCRETE OVERLAY, ASPHALT MILLING AND PAVING, AND ANY OTHER WORK THAT SHOULD TAKE PLACE BEHIND THE BARRIER. (SEE STRUCTURE PLANS, AND TMP-4-13).

#### STEP 3:

REPEAT PROCESS (STEPS 1 AND 2) FOR OTHER HALF OF BRIDGE, REVISING DRUM LANE CLOSURES, TEMPORARY MARKINGS, TEMPORARY SIGNS, AND PORTABLE CONCRETE BARRIER PLACEMENT. (SEE STRUCTURE PLANS, AND TMP-4-13). WHEN WORK IS COMPLETE, REMOVE ALL PORTABLE CONCRETE BARRIER, DRUMS AND LANE SHIFT SIGNING. PLACE TEMPORARY PAVEMENT MARKINGS ON BRIDGE, APPROACH SLABS, AND ASPHALT APPROACHES IN FINAL PATTERN (SAME AS EXISTING ROADWAY). (SEE R.S.D. 1101.02 SHEET 12 OF 14, R.S.D. 1205.01 SHEETS 1 AND 2 OF 2, R.S.D. 1250.01 SHEETS 1 AND 2 OF 3, AND R.S.D. 1253.01).

### PHASE 3:

#### STEP 1:

COMPLETE ALL REMAINING WORK. PLACE FINAL PAVEMENT MARKINGS AND MARKERS ON BRIDGE, APPROACH SLABS, AND ASPHALT IN FINAL PATTERN (SAME AS EXISTING ROADWAY). (SEE R.S.D. 1101.02 SHEET 12 OF 14, R.S.D. 1205.01 SHEETS 1 AND 2 OF 2, R.S.D. 1250.01 SHEETS 1 AND 2 OF 3, AND R.S.D. 1253.01).

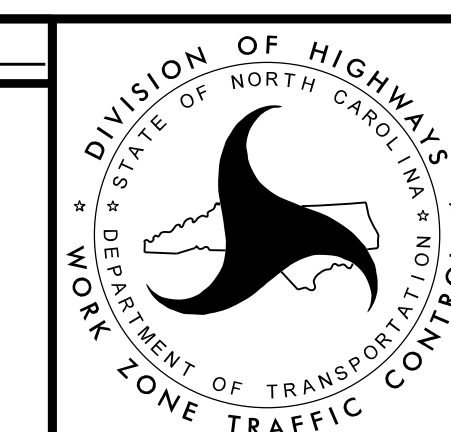
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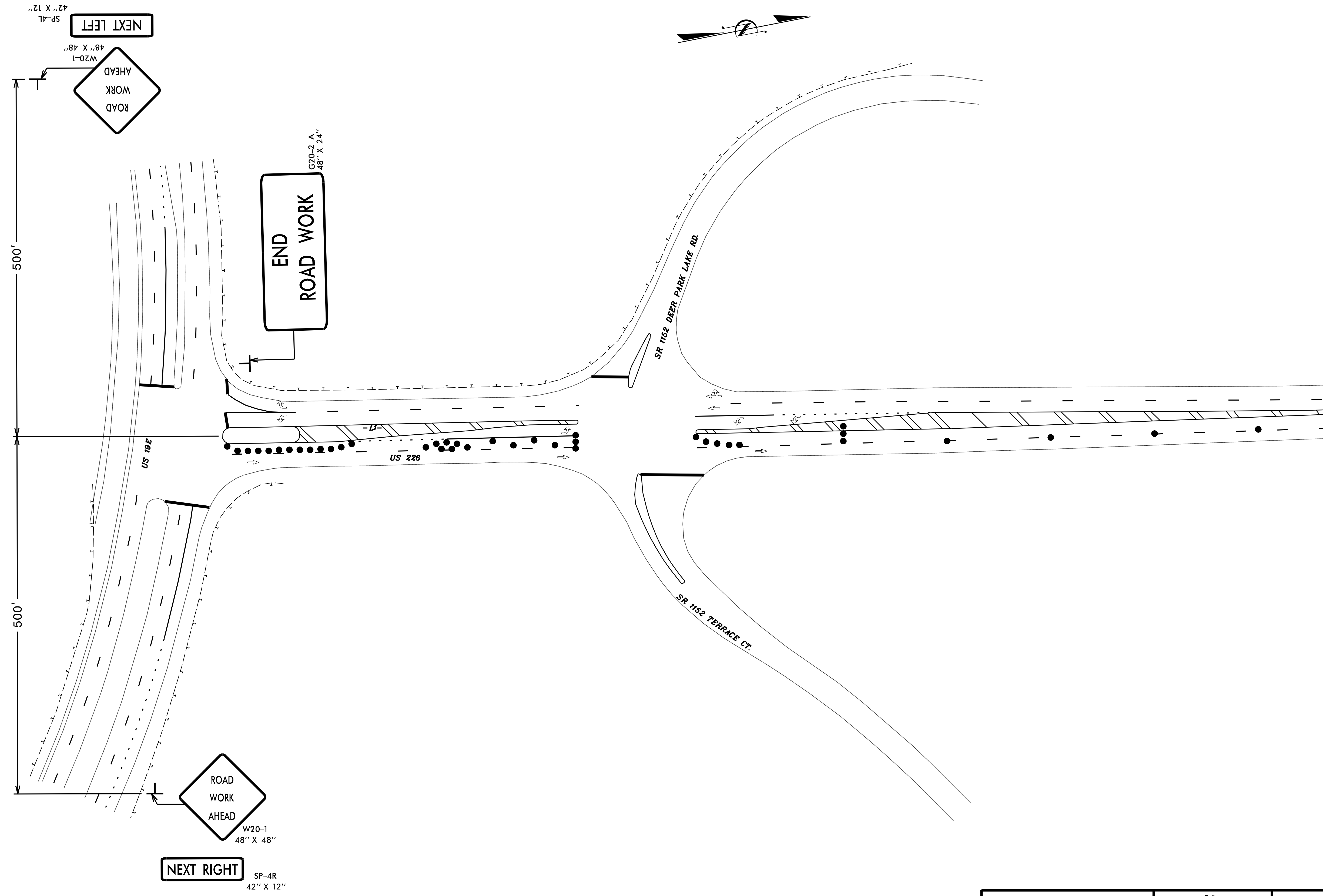
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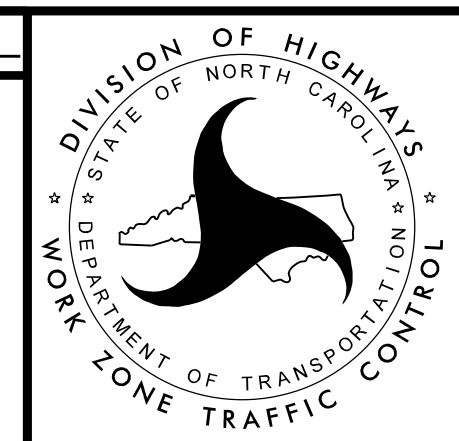
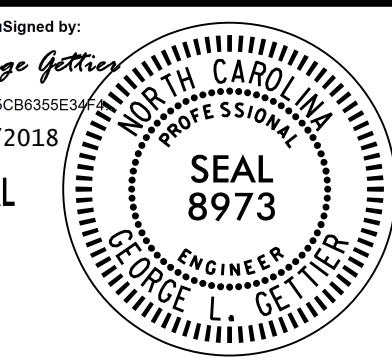
**TRAFFIC OPERATIONS  
PLAN**

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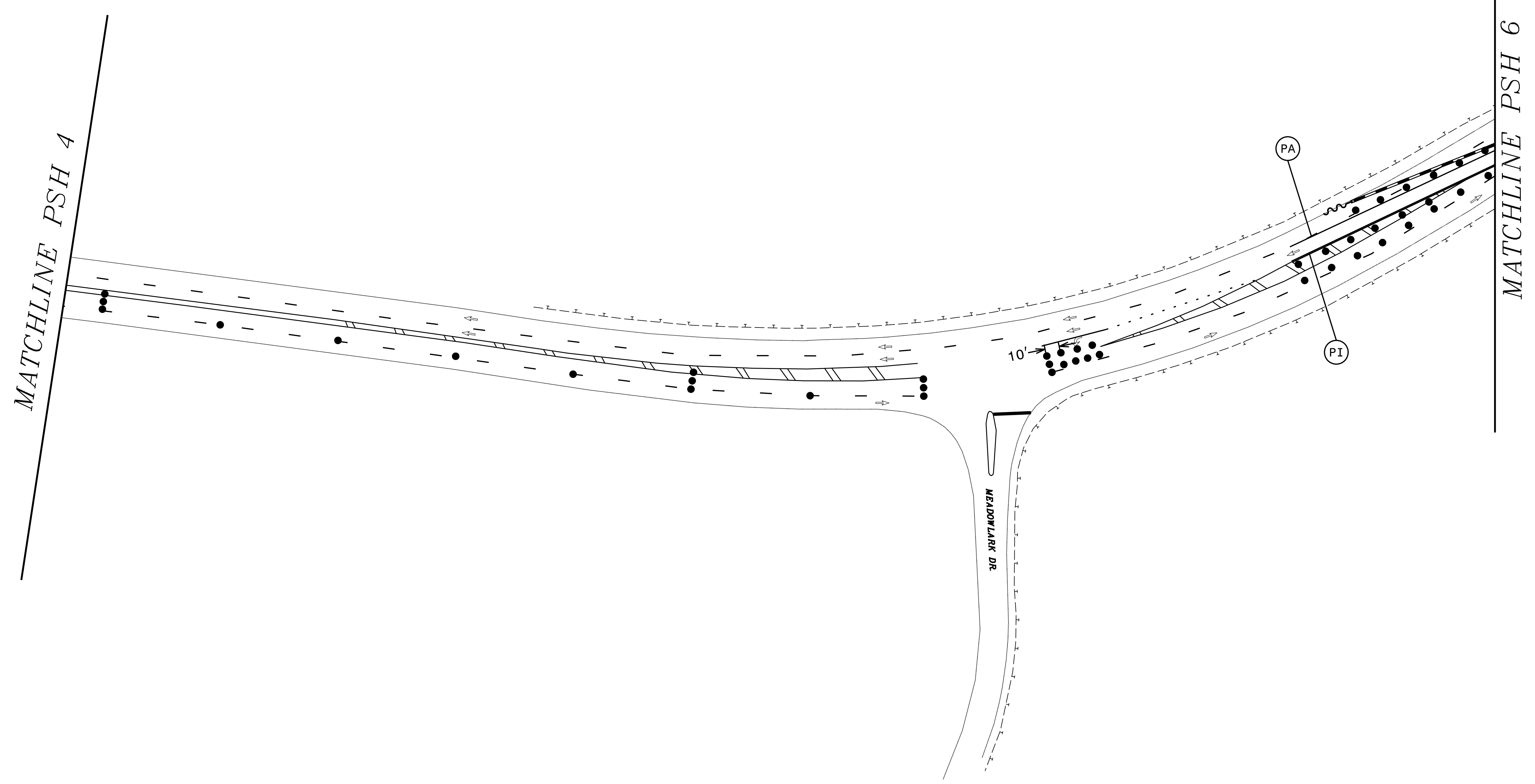


**PHASE 2  
 STEPS 1 AND 2  
 WEST HALF REHAB**



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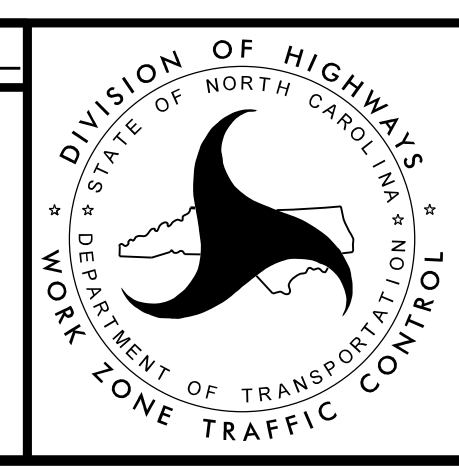
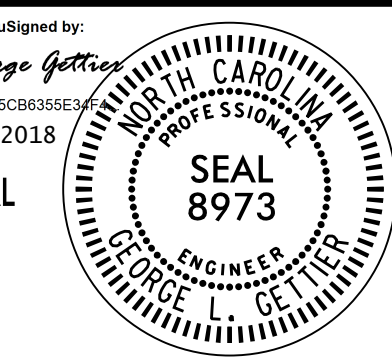
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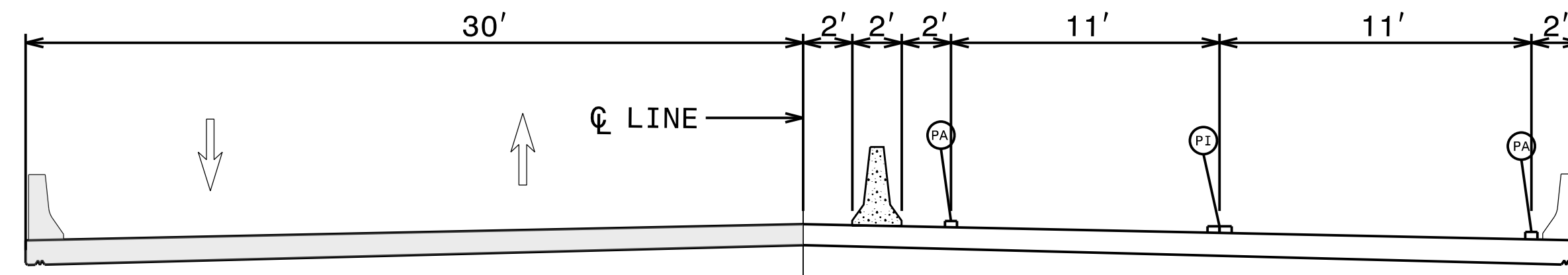


**PHASE 2  
 STEPS 1 AND 2  
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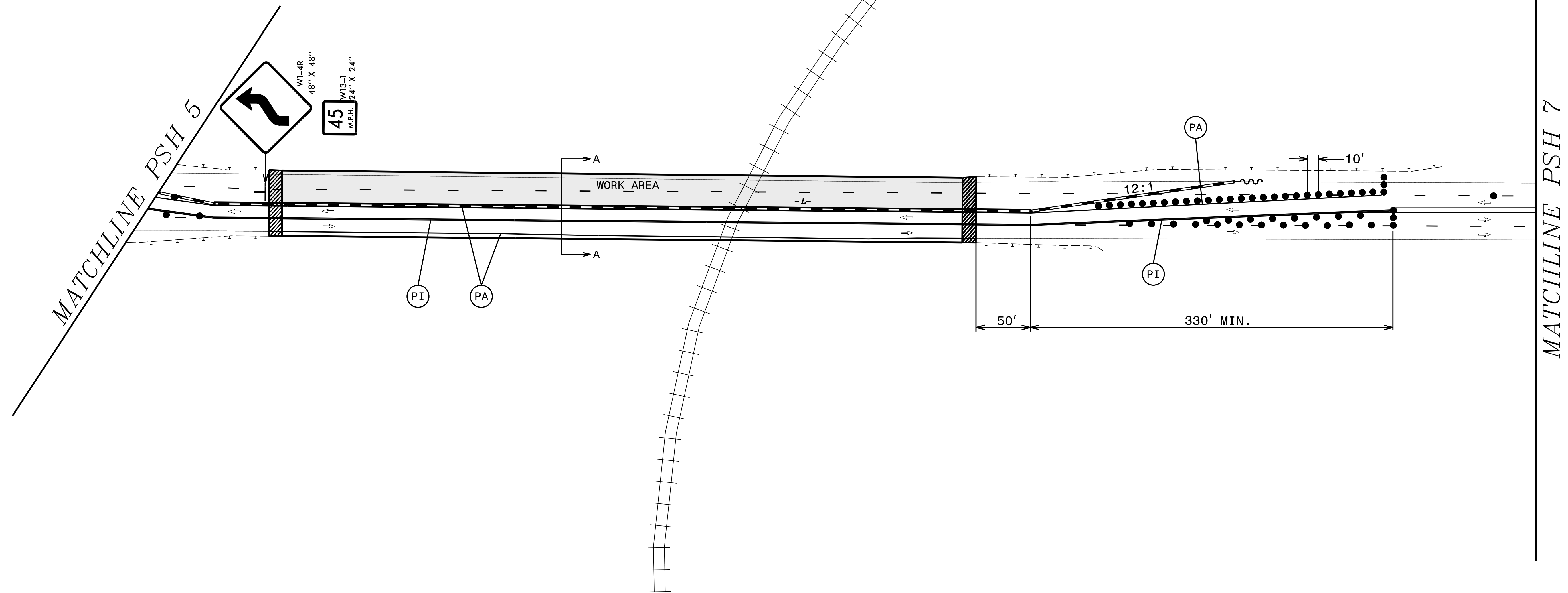
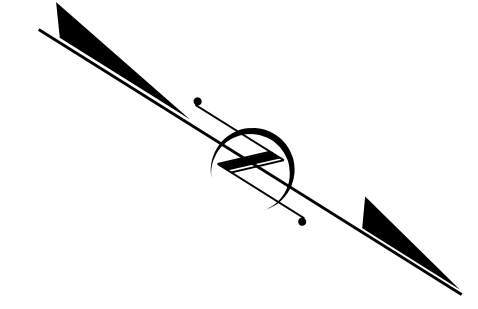


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SECTION A-A



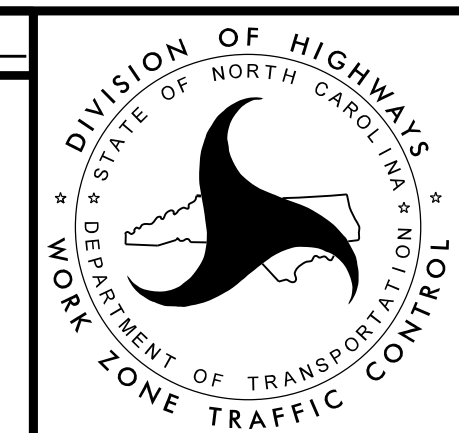
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**PHASE 2  
STEPS 1 AND 2  
EAST HALF REHAB**



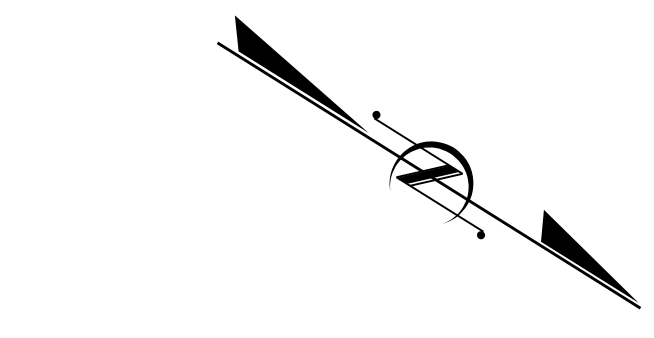
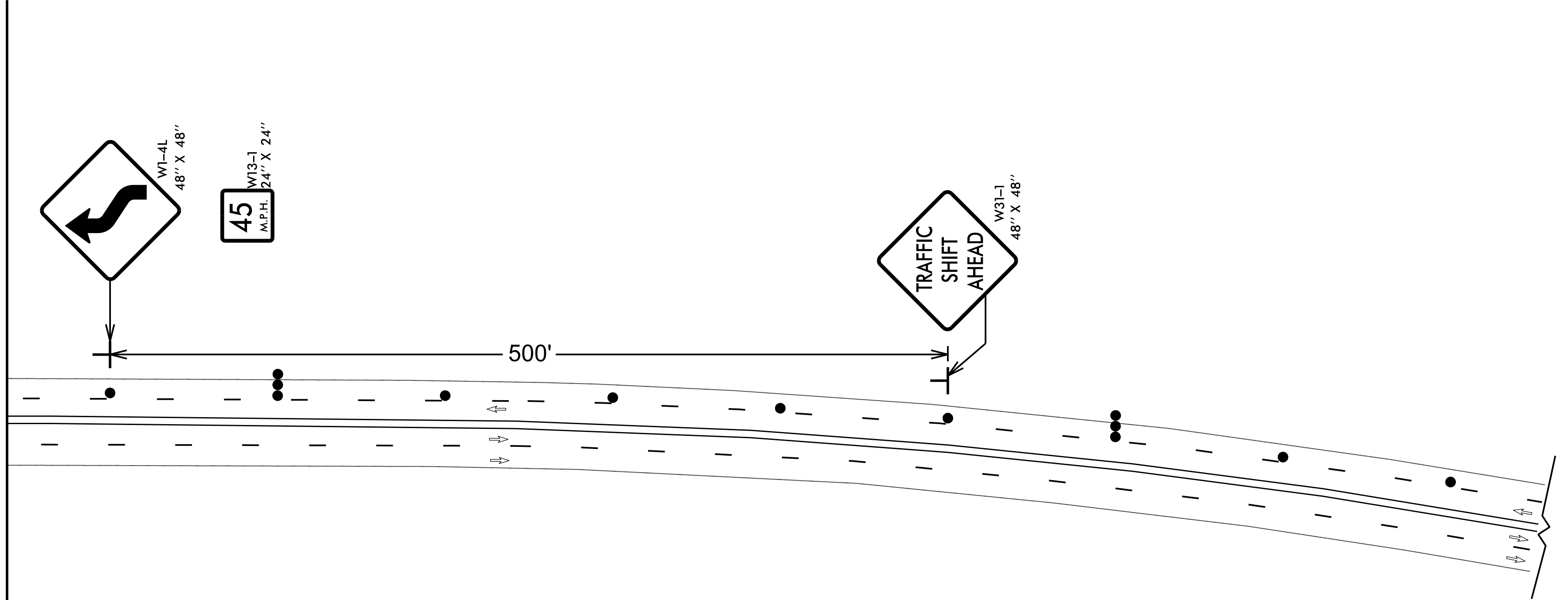
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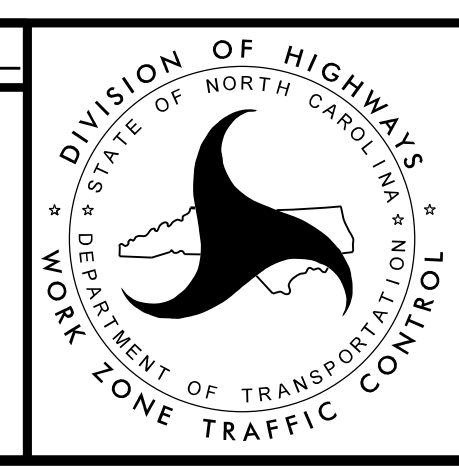


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**PHASE 2  
STEPS 1 AND 2  
WEST HALF REHAB**



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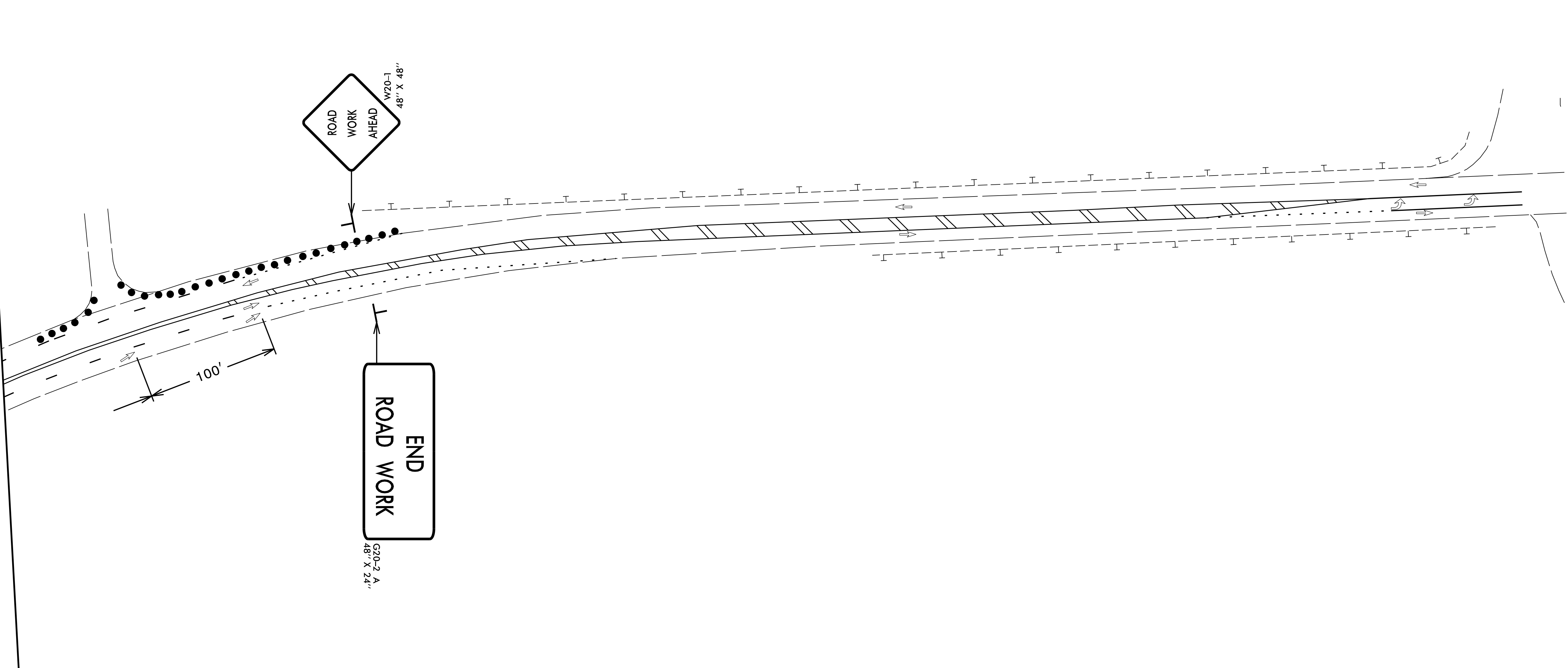
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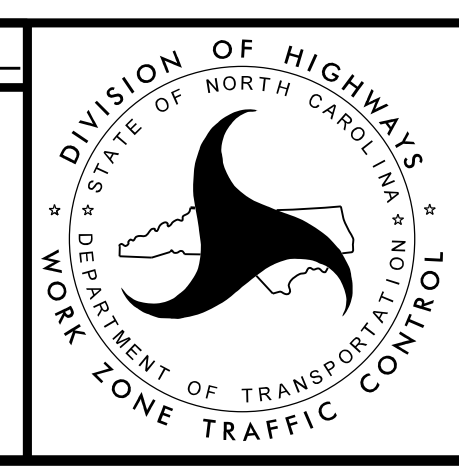
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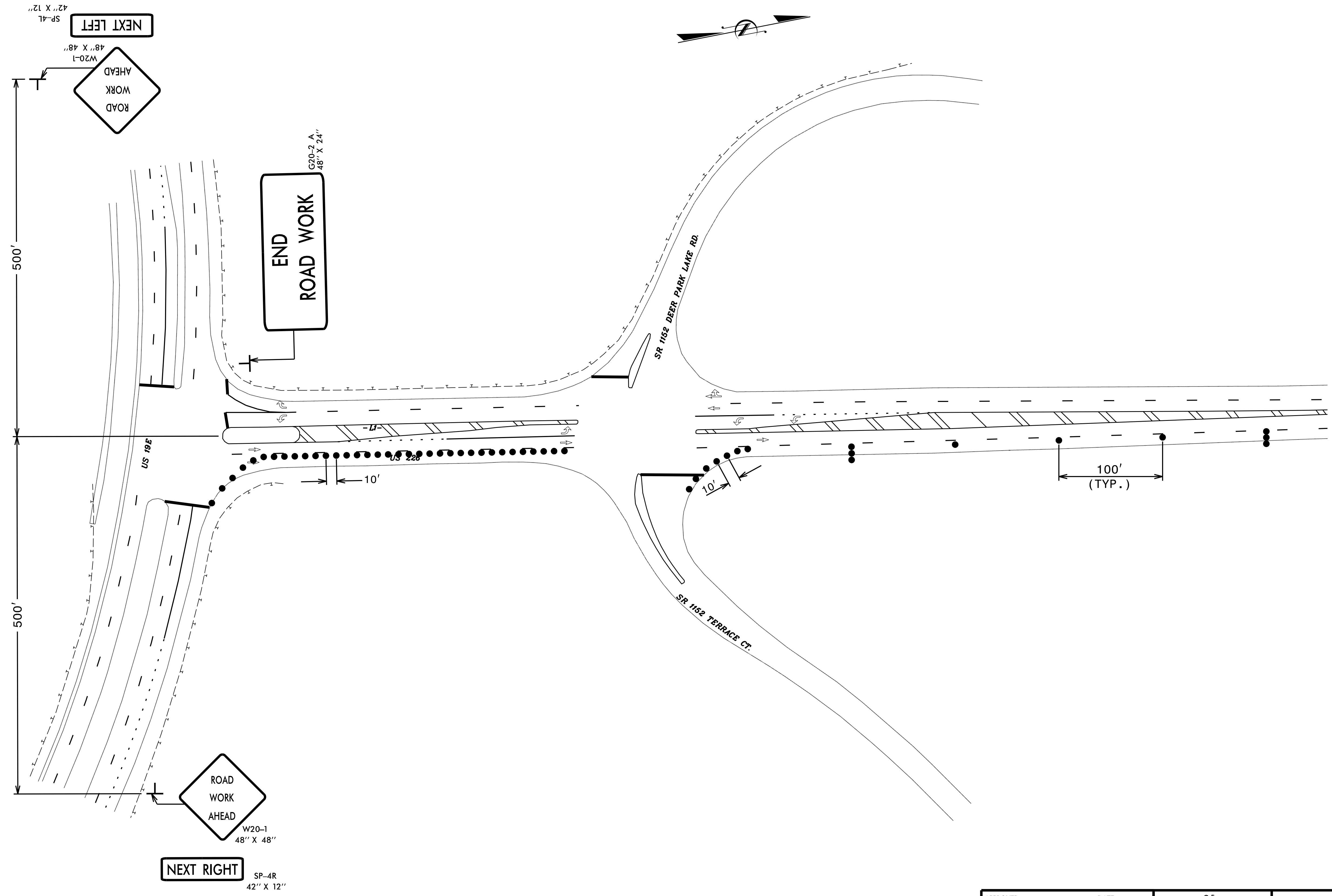
**PHASE 2  
STEPS 1 AND 2  
WEST HALF REHAB**



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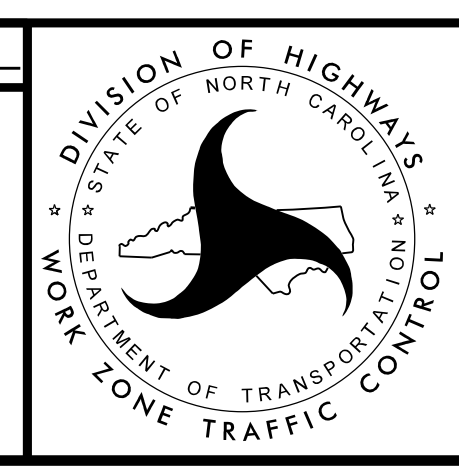


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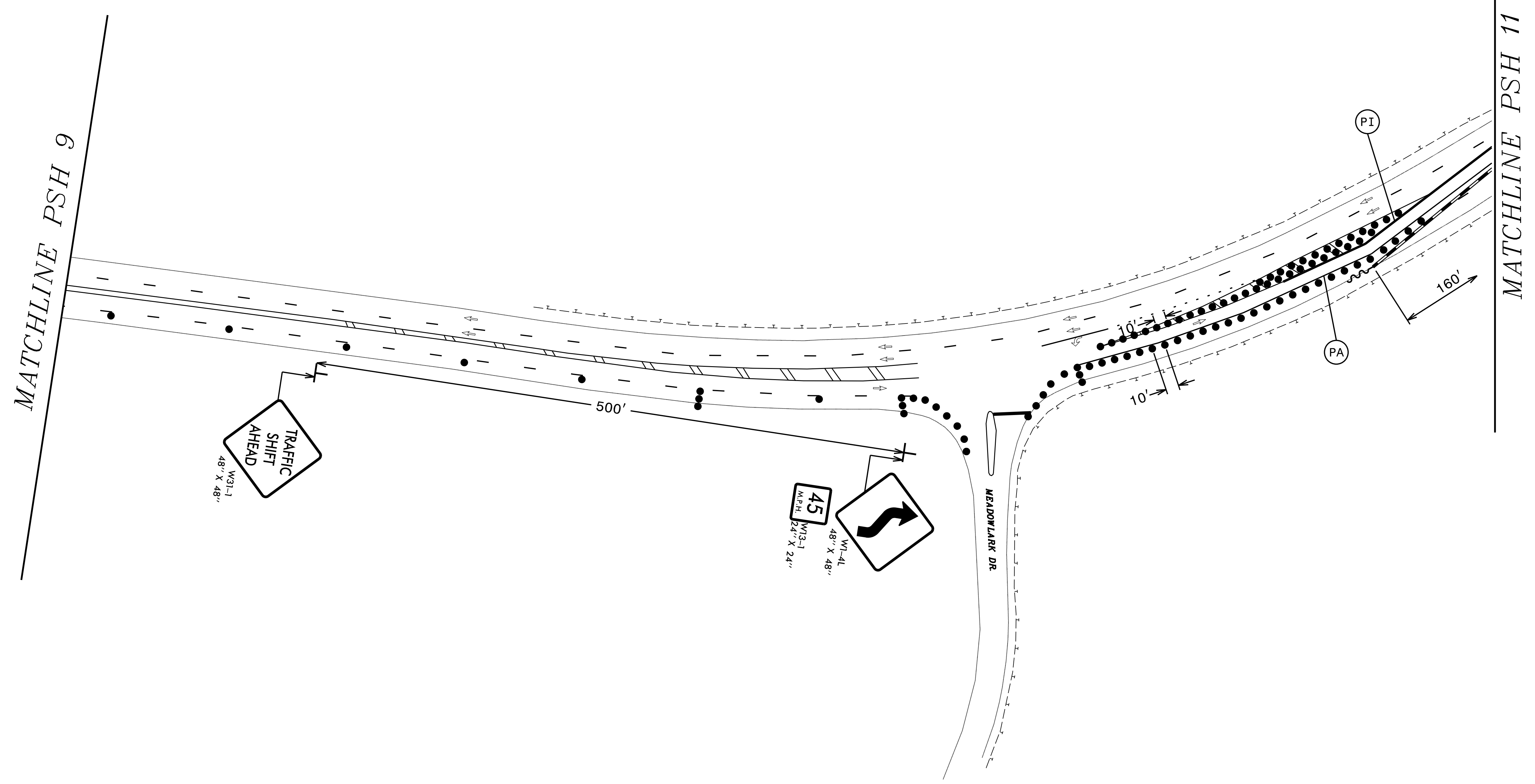


**PHASE 2  
STEPS 1 AND 2  
EAST HALF REHAB**



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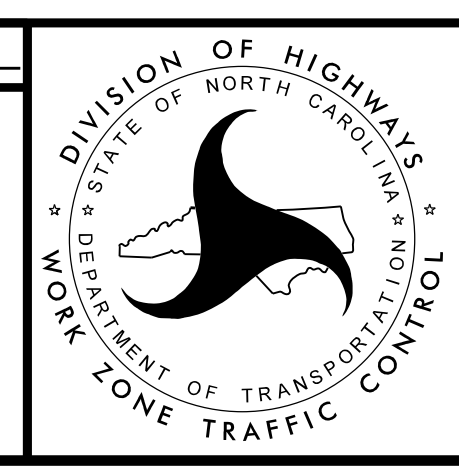
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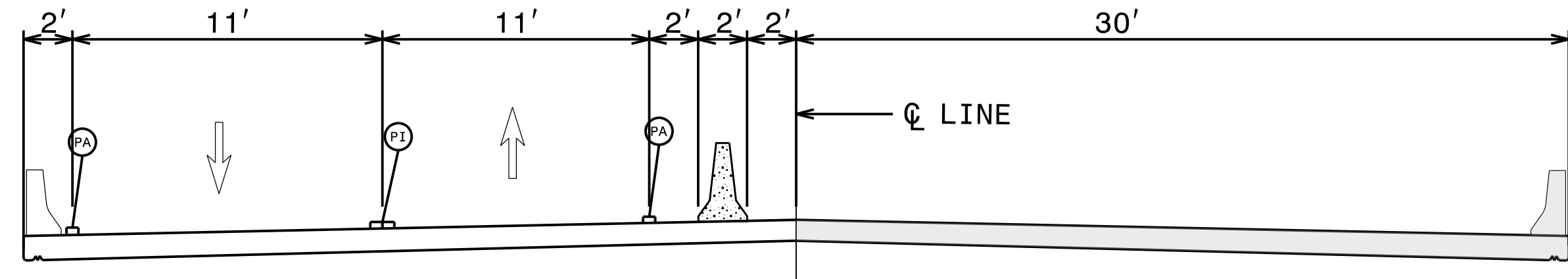
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STEPS 1 AND 2  
EAST HALF REHAB**



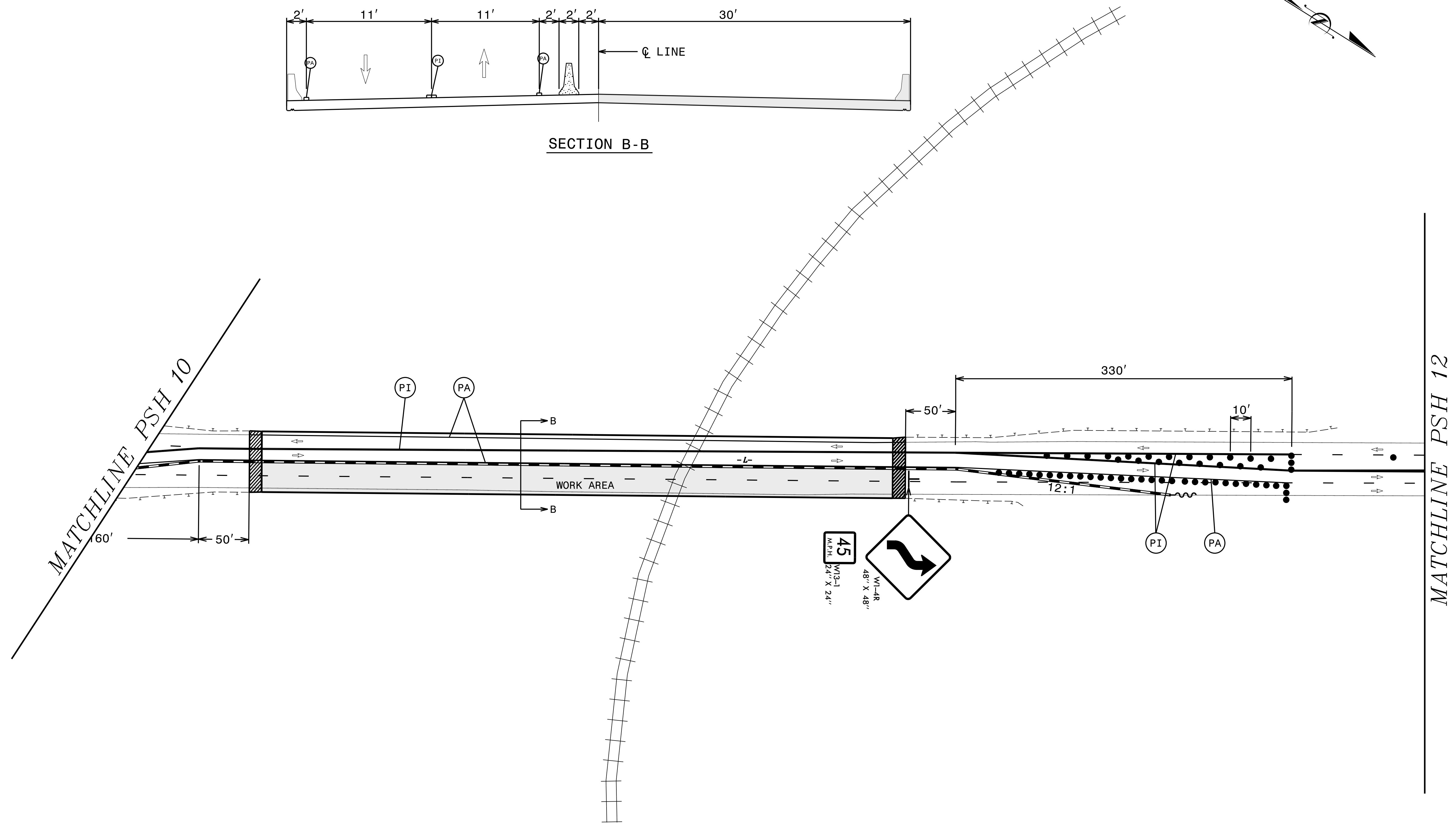


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**SECTION B-B**

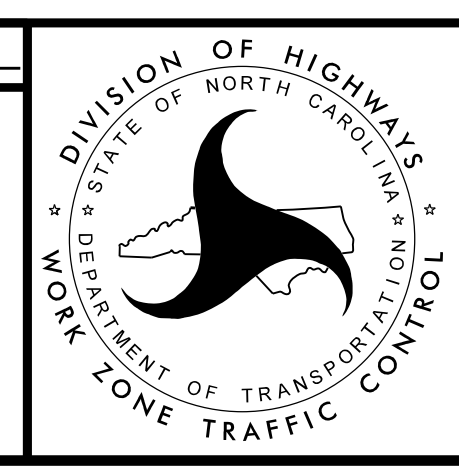


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**PHASE 2  
STEPS 1 AND 2  
EAST HALF REHAB**





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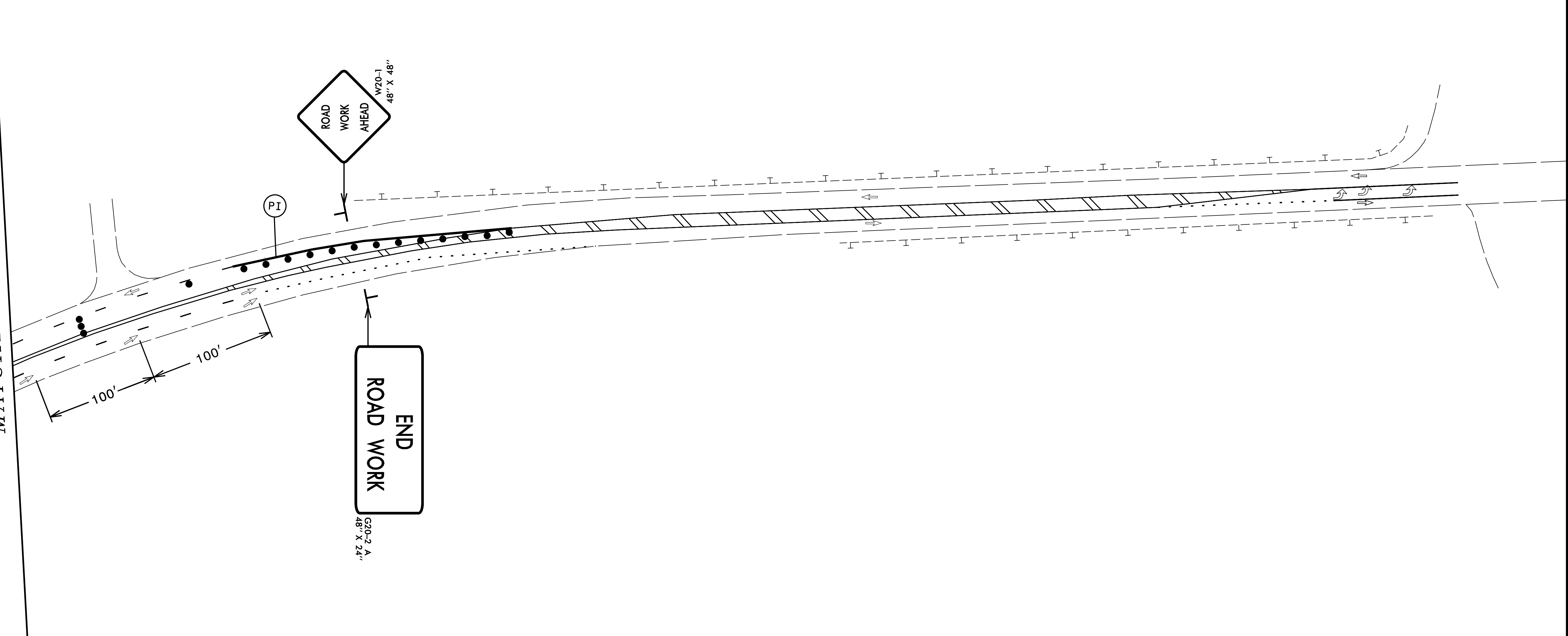
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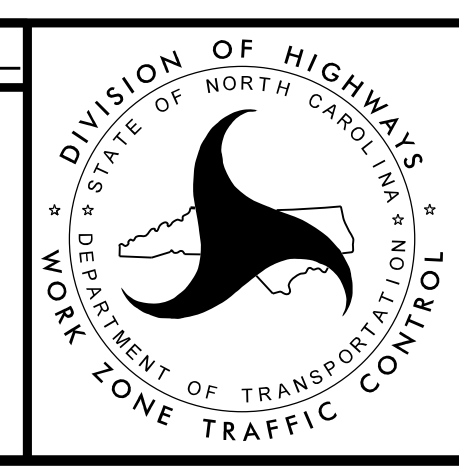
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**PHASE 2  
STEPS 1 AND 2  
EAST HALF REHAB**