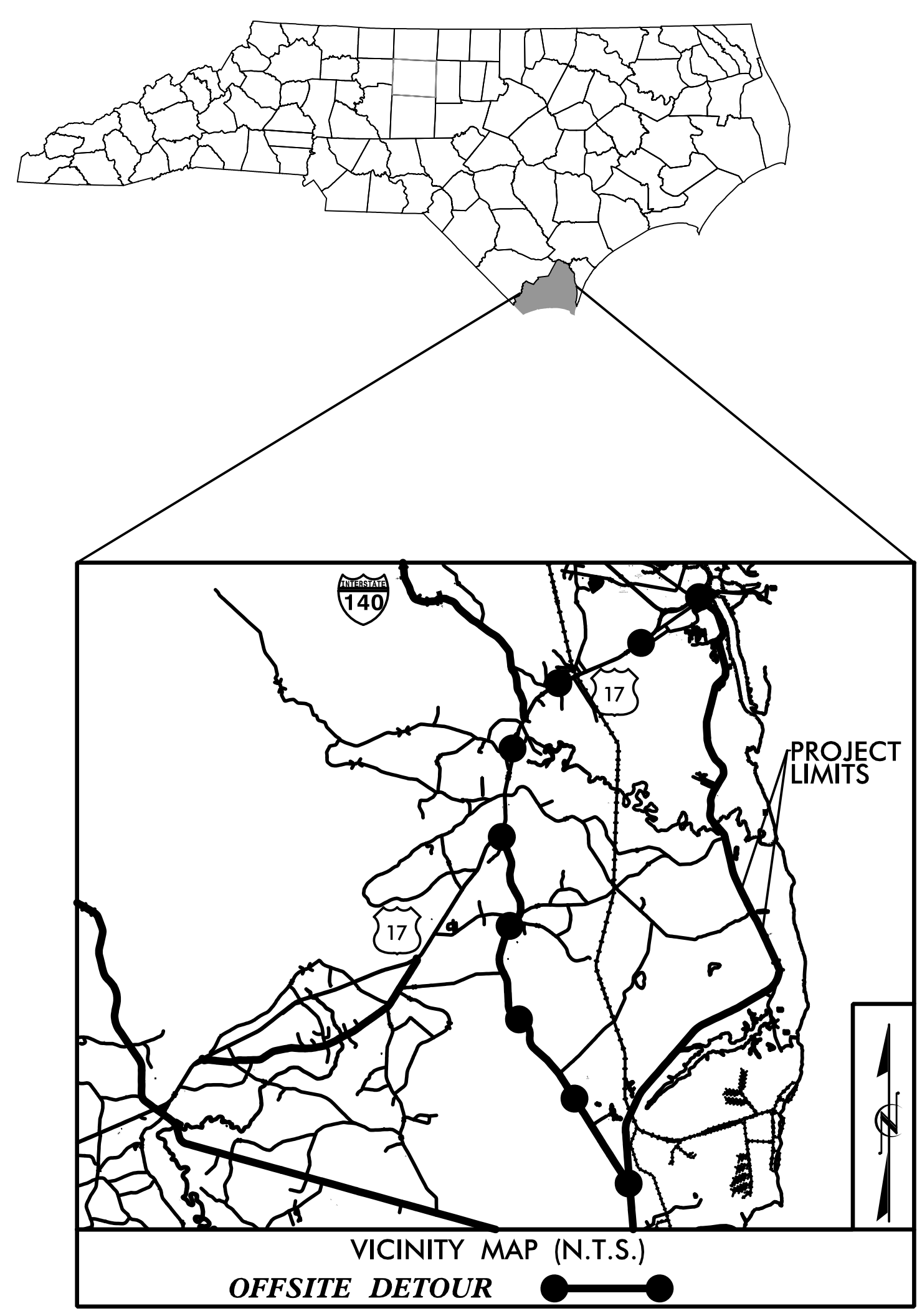


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**  
**BRUNSWICK COUNTY**



**LOCATION: REPLACE BRIDGE OVER SAND HILL CREEK  
ON NC 133 (RIVER RD)**  
**TYPE OF WORK: DRAINAGE, GRADING, PAVING, AND STRUCTURES**

**INDEX OF SHEETS**

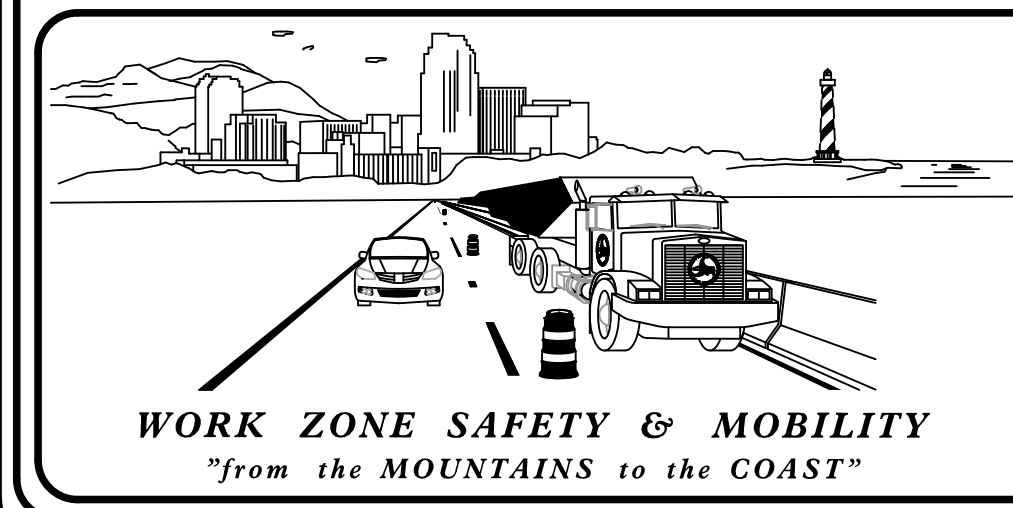
<u>SHEET NO.</u>	<u>TITLE</u>
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	GENERAL NOTES AND PHASING
TMP-2	DETOUR
TMP-2A	SIGN LEGEND

SHEET NO.  
TMP-1

**BR-0139**

**TIP PROJECT:**

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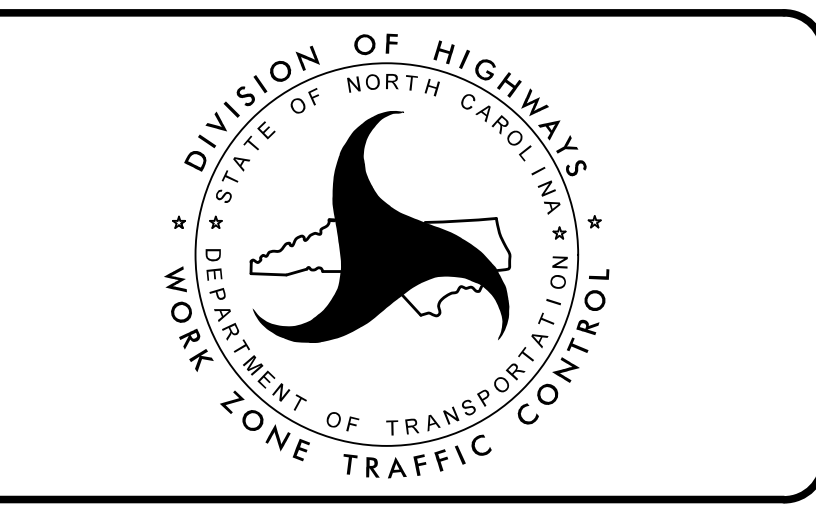
**PLANS PREPARED BY:**

H. SHYU, P.E.  
PROJECT ENGINEER

G. RODRIGUEZ, E.I.  
PROJECT DESIGN ENGINEER

**NCDOT CONTACTS:**

S. D. MATHIS, P.E.  
DIV TRAFFIC ENGINEER



**HNTB**

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NC License No: C-1554

**APPROVED:** *Helen Shyu*

**DATE:** 6/26/2024

**SEAL**

6/24/2024  
TCP\BRO139\_tc\_TMP-01.dgn  
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## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" CONTRACT STANDARDS AND DEVELOPMENT UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C. DATED JAN 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1180.01	SKINNY DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKING - INTERSECTIONS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

## LEGEND

### GENERAL

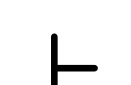
 NORTH ARROW


### TRAFFIC CONTROL DEVICES

 BARRICADE (TYPE III)

 PORTABLE CHANGEABLE MESSAGE SIGN

### TEMPORARY SIGNING

 STATIONARY SIGN

 STATIONARY OR PORTABLE SIGN

### PAVEMENT MARKINGS

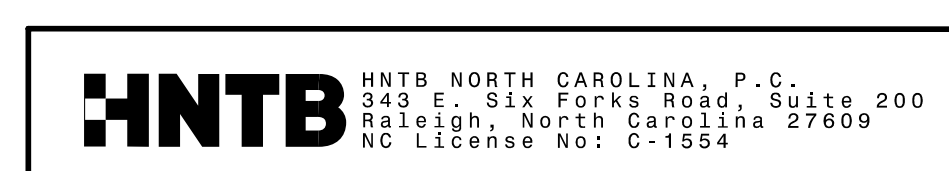
<u>DESCRIPTION</u>	<u>PAY ITEM</u>
<u>PAVEMENT MARKING LINES</u>	
WHITE EDGELINE YELLOW DOUBLE CENTER LINE	PAINT (4")
<u>THERMOPLASTIC (4", 90 MIL)</u>	
WHITE EDGELINE 2 FT. - 6 FT. /SP WHITE MINISKIP YELLOW DOUBLE CENTER LINE	
<u>POLYUREA (4", 20 MIL)</u>	
WHITE EDGELINE YELLOW DOUBLE CENTER LINE	

NOTE: FOR EACH PAINT PAVEMENT MARKING ITEM, REFER TO GENERAL NOTES FOR NUMBER OF APPLICATIONS.


### PAVEMENT MARKERS

YELLOW & YELLOW	TEMPORARY RAISED MARKERS
YELLOW & YELLOW	PERMANENT RAISED MARKERS

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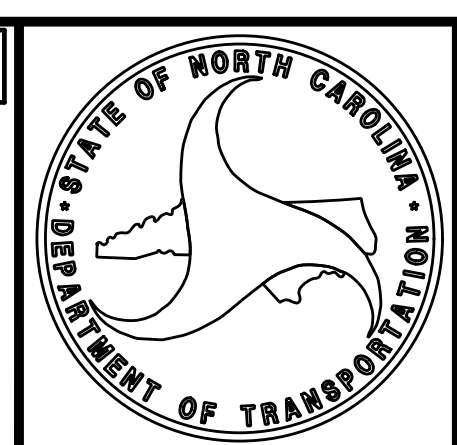


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APPROVED:    
DocuSigned by:  
Helen Shyu  
09199791652

DATE: 6/26/2024

NORTH CAROLINA  
PROFESSIONAL  
SEAL  
042517  
ENGINEER  
HELEN SHYU



TRANSPORTATION  
MANAGEMENT PLAN  
ROADWAY STANDARD  
DRAWINGS AND  
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 THE DUPLICATE OR UNDESIRABLE OVERLAPPING OF DEVICES. MODIFICATIONS MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

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

**LANE AND SHOULDER CLOSURE REQUIREMENTS**

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING 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.
- C) 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.

**PAVEMENT EDGE DROP OFF REQUIREMENTS**

- D) 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.

- E) 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**

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

**SIGNING**

- G) 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.
- H) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.  
  
PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN ON TMP-2 AND TMP-2A.
- I) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.  
  
COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

**TRAFFIC CONTROL DEVICES**

- K) 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 STRUCTURAL SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- L) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

**PAVEMENT MARKINGS AND MARKERS**

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

ROAD NAME	MARKING	MARKER
-L- NC 133(RIVER ROAD)	PAINT	TEMP RAISED
- N) 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.
- O) THE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- P) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.
- Q) INSTALL PROPOSED PAVEMENT MARKINGS AND PROPOSED PAVEMENT MARKERS ON FINAL LAYER OF PAVEMENT AS FOLLOWS:
 

ROAD NAME	MARKING	MARKER
-L- NC 133(RIVER ROAD)	THERMO (ROAD) POLYUREA (BRIDGE)	PERMANENT RAISED PERMANENT RAISED

**MISCELLANEOUS**

- R) COORDINATE WITH BRUNSWICK COUNTY EMERGENCY MANAGEMENT SERVICES AND BRUNSWICK COUNTY SCHOOLS TRANSPORTATION BEFORE CONSTRUCTION BEGINS.
- S) NC 133 IS A PRIMARY HURRICANE EVACUATION ROUTE AND A PRIMARY NUCLEAR EVACUATION ROUTE. PLEASE SEE BR-0139 DETOUR TECH MEMO DATED 04/05/22 FOR ADDITIONAL DETAILS REGARDING COORDINATION AND IMPACTS.
- T) COORDINATE WITH DIVISON REGARDING NOTIFICATION OF FUNSTON ROAD CLOSURE TO RESIDENTS.

**PHASING**

**NOTES:**

REPLACE MARKINGS AND RETURN TO THE CURRENT TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

MAINTAIN VEHICULAR ACCESS TO ALL RESIDENCES AND BUSINESSES DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

COMPLETE ANY PROPOSED WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE. THIS MAY REQUIRE A COMBINATION OF INSTALLATION OF PROPOSED PIPES, TEMPORARY PIPES, STEEL PLATES, TEMPORARY MEDIAN, AND OUTSIDE DITCHES.

PAVE PROPOSED CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE IN ALL PHASES UNTIL STATED TO INSTALL FINAL LAYER IN THE PHASING.

THE TERM RSD DENOTES "ROADWAY STANDARD DRAWINGS".

**PHASE I**

PRIOR TO ANY CONSTRUCTION OPERATIONS, PLACE AND COVER OFF-SITE DETOUR SIGNS AS SHOWN ON TMP-2 AND IN ACCORDANCE WITH RSD 1101.03 (SHEET 1 OF 9). INSTALL ADVANCE WARNING SIGNS ON -L- AND FUNSTON ROAD IN ACCORDANCE WITH RSD 1101.01 (SHEET 3 OF 3)

**PHASE II**

**STEP 1:**

UNCOVER DETOUR SIGNS ON TMP-2 AND 2A, CLOSE -L- (NC 133/RIVER RD) TO TRAFFIC AND ACCESS TO -Y1-. AWAY FROM TRAFFIC, CONSTRUCT PROPOSED BRIDGE, CULVERT, -L- FROM STA 14+20+/- TO 38+25+/-, AND -Y1-. (SEE ROADWAY PLANS)

**STEP 2:**

USING FLAGGERS AS NEEDED TO MAINTAIN ACCESS TO DRIVEWAYS, CONSTRUCT -L- FROM STA 12+50+/- TO 14+20+/- AND STA 38+25+/- TO STA 40+20+/- . PER RSD 1205.01, PLACE TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS. (SEE ROADWAY PLANS)

**PHASE III**

COMPLETE BRIDGE AND CULVERT. CONSTRUCT FINAL LAYER OF SURFACE COURSE AND PLACE FINAL PAVEMENT MARKINGS AND MARKERS IN ACCORDANCE WITH RSD 1205.01, 1205.02, 1205.04, 1205.12, 1250.01, AND 1251.01. REMOVE TRAFFIC CONTROL DEVICES AND OPEN ROADS TO TRAFFIC.

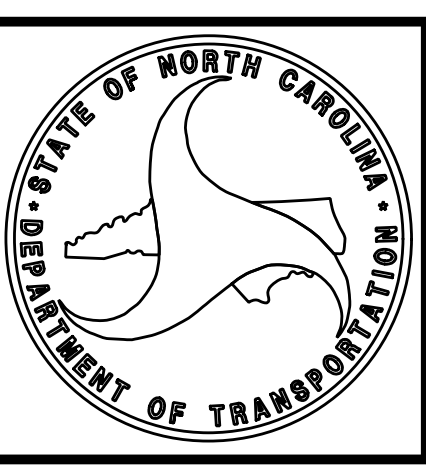
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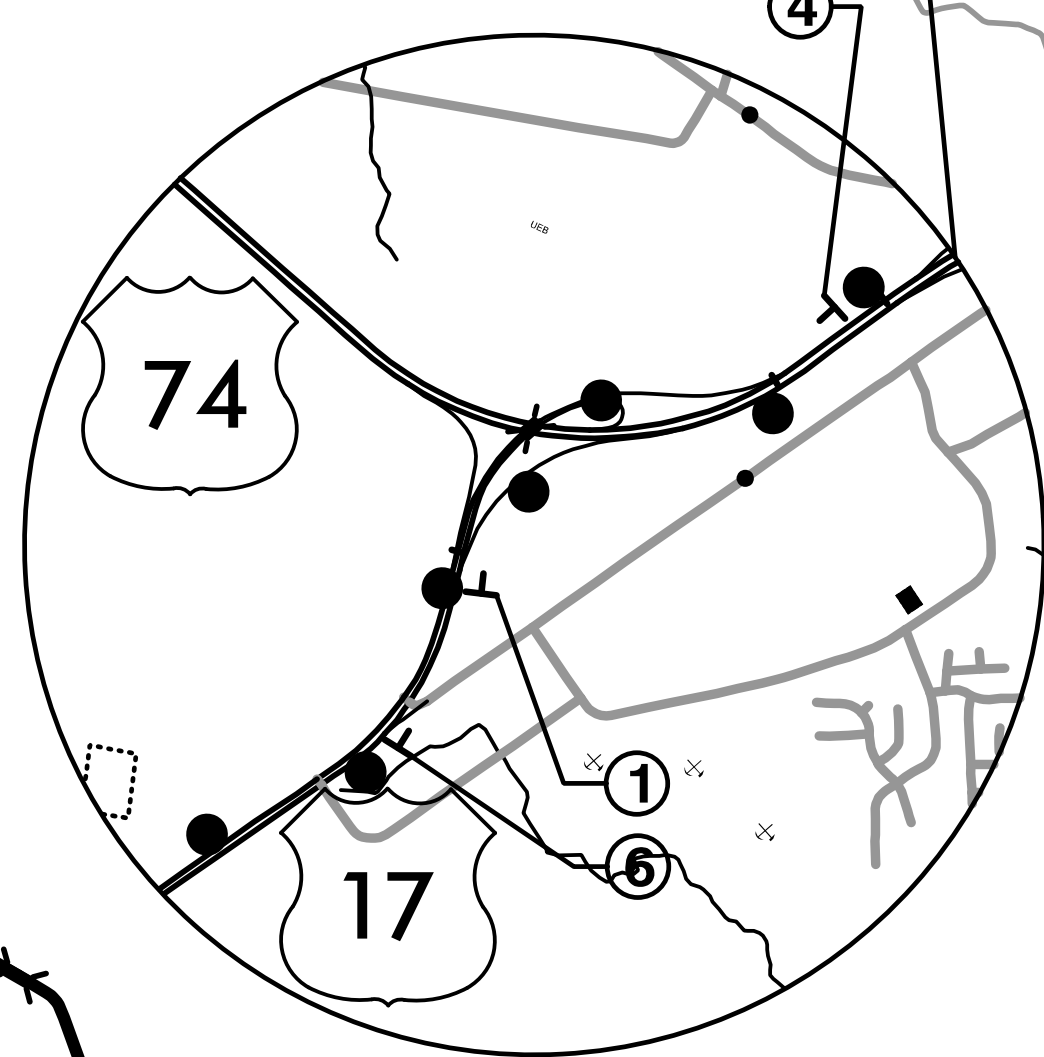
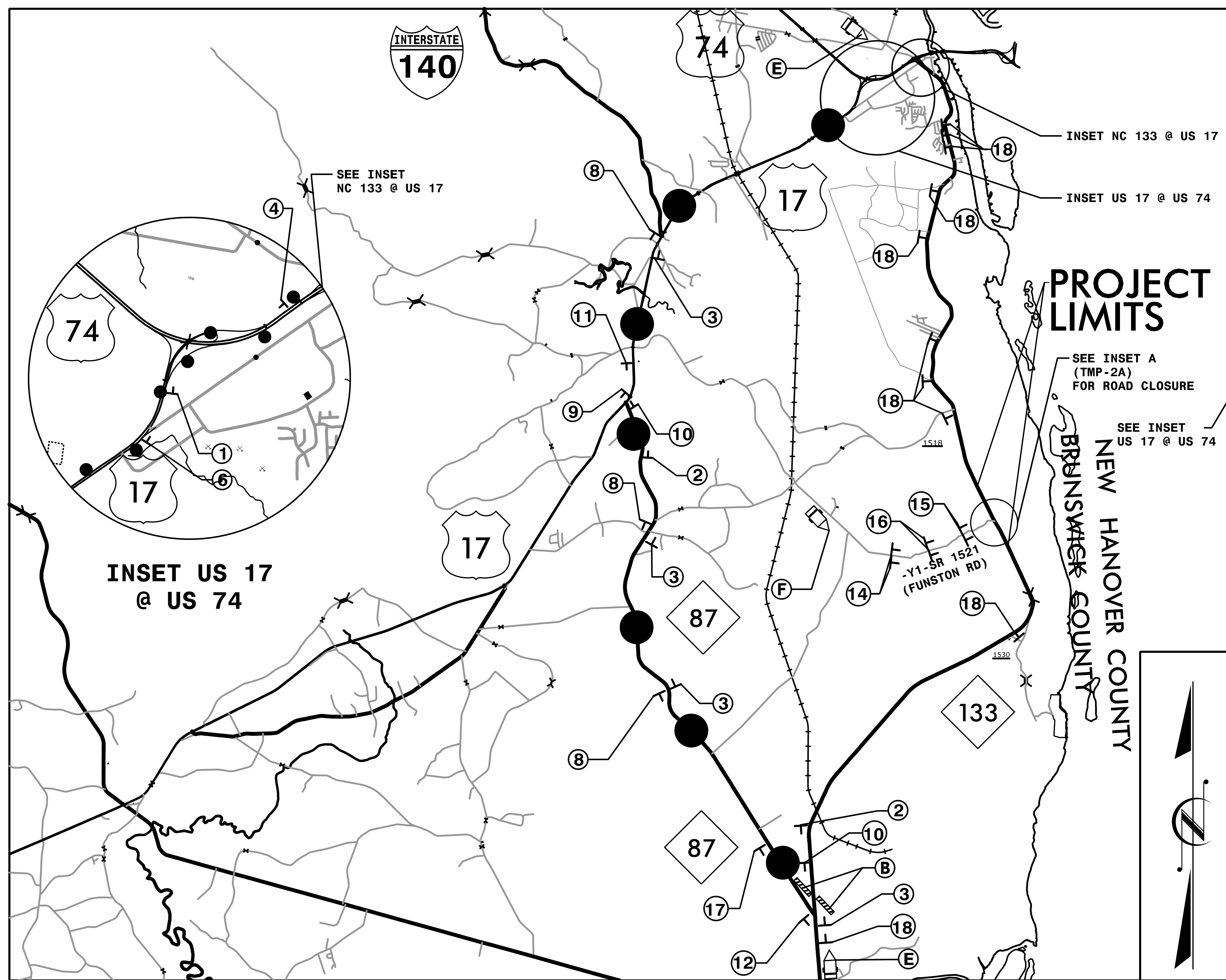
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042517  
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HELEN SHYU



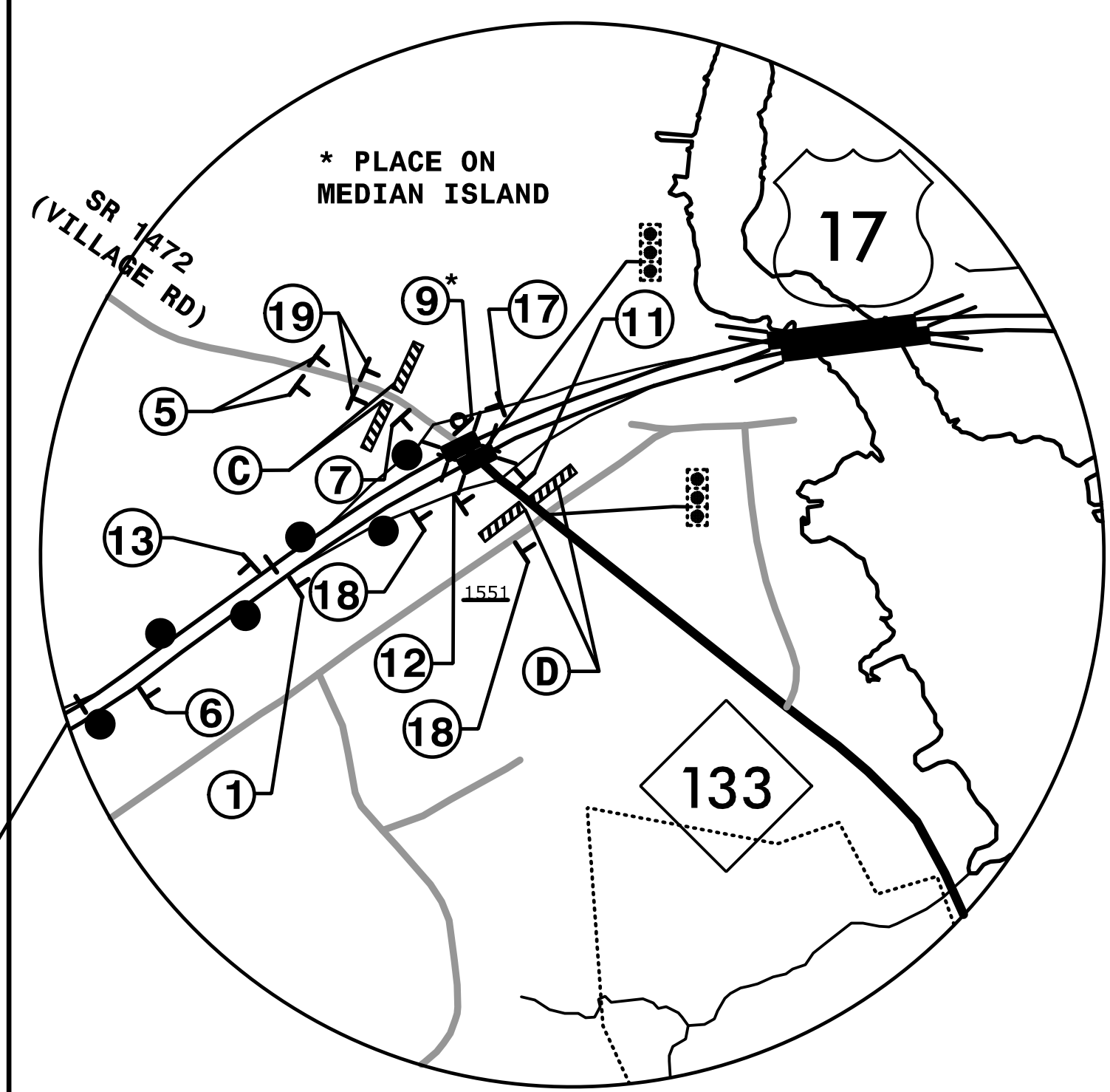
TRANSPORTATION  
MANAGEMENT PLAN

**GENERAL NOTES  
AND PHASING**





**INSET US 17 @ US 74**

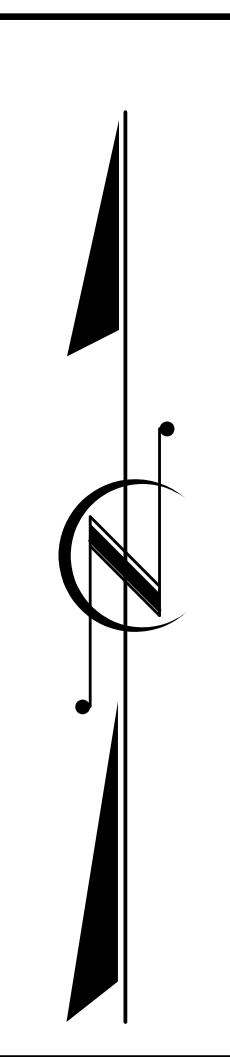


**INSET NC 133 @ US 17**

**PROJECT LIMITS**

SEE INSET A (TMP-2A) FOR ROAD CLOSURE

SEE INSET US 17 @ US 74



**VICINITY MAP (N.T.S.)**

**OFFSITE DETOUR** ● ● ● ●

SEE RSD 1101.03 (SHEET 1 OF 9) FOR DISTANCES OF ADVANCE WORK ZONE SIGNS AND PORTABLE CHANGEABLE MESSAGE SIGNS.

SEE SHEET TMP-2A FOR SIGN LEGEND



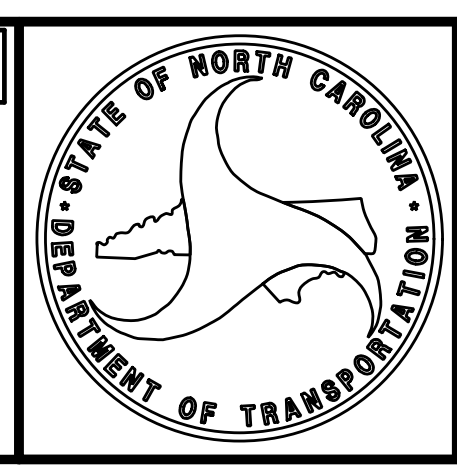
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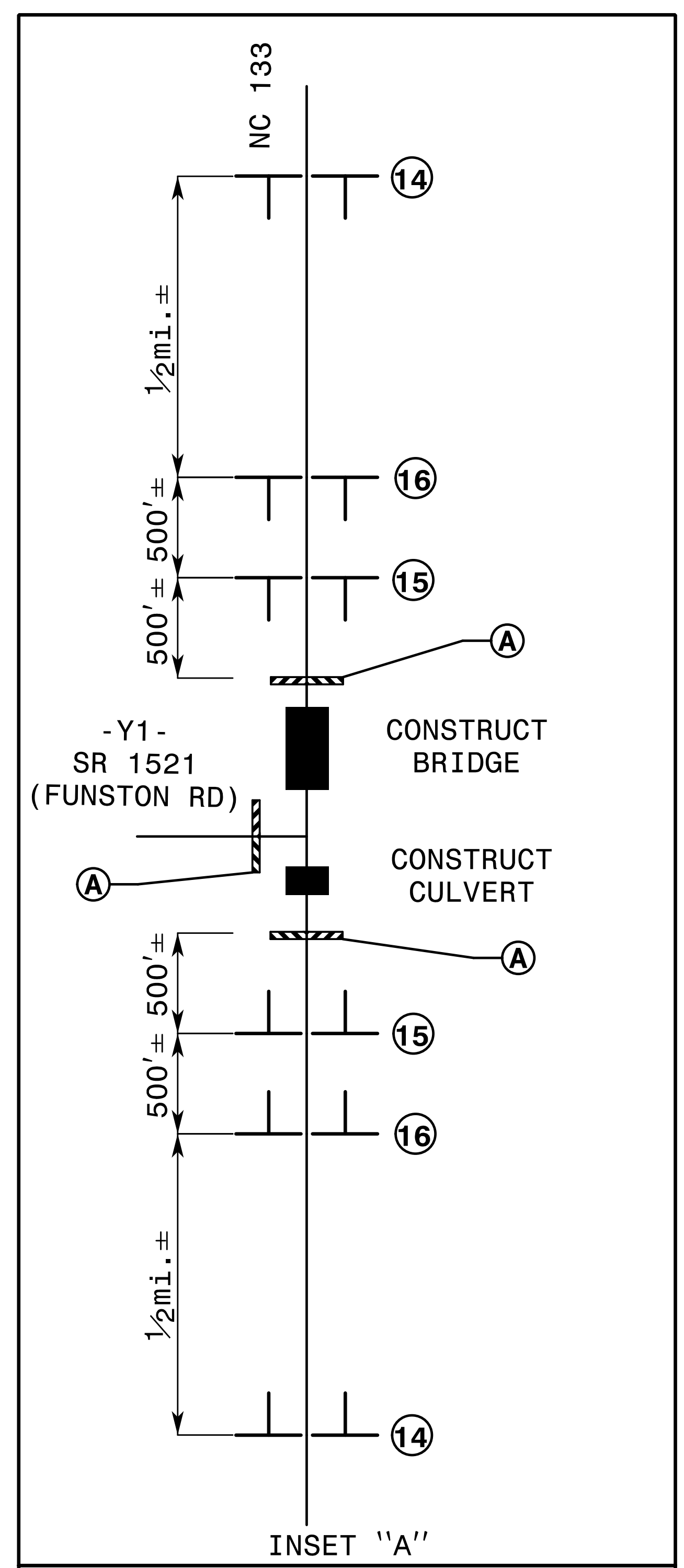
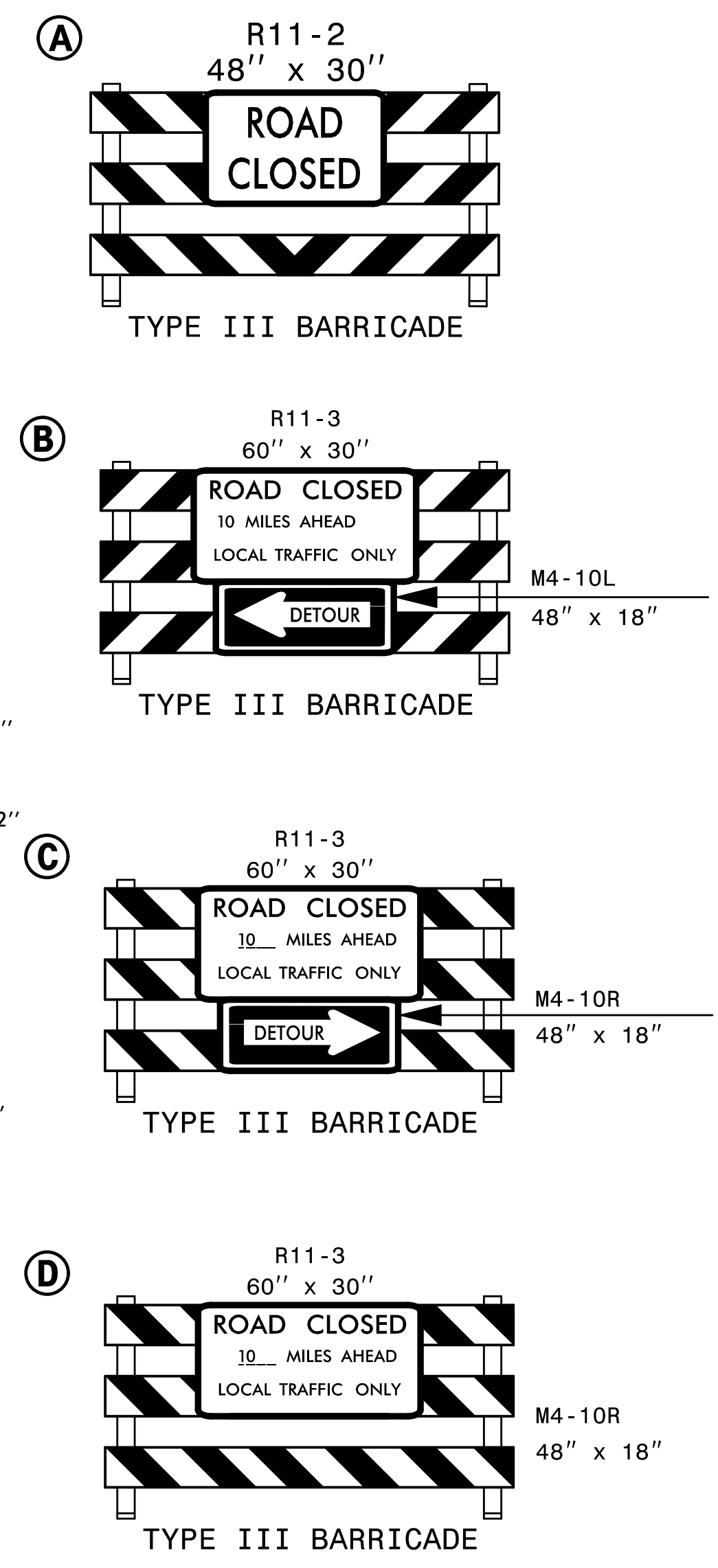
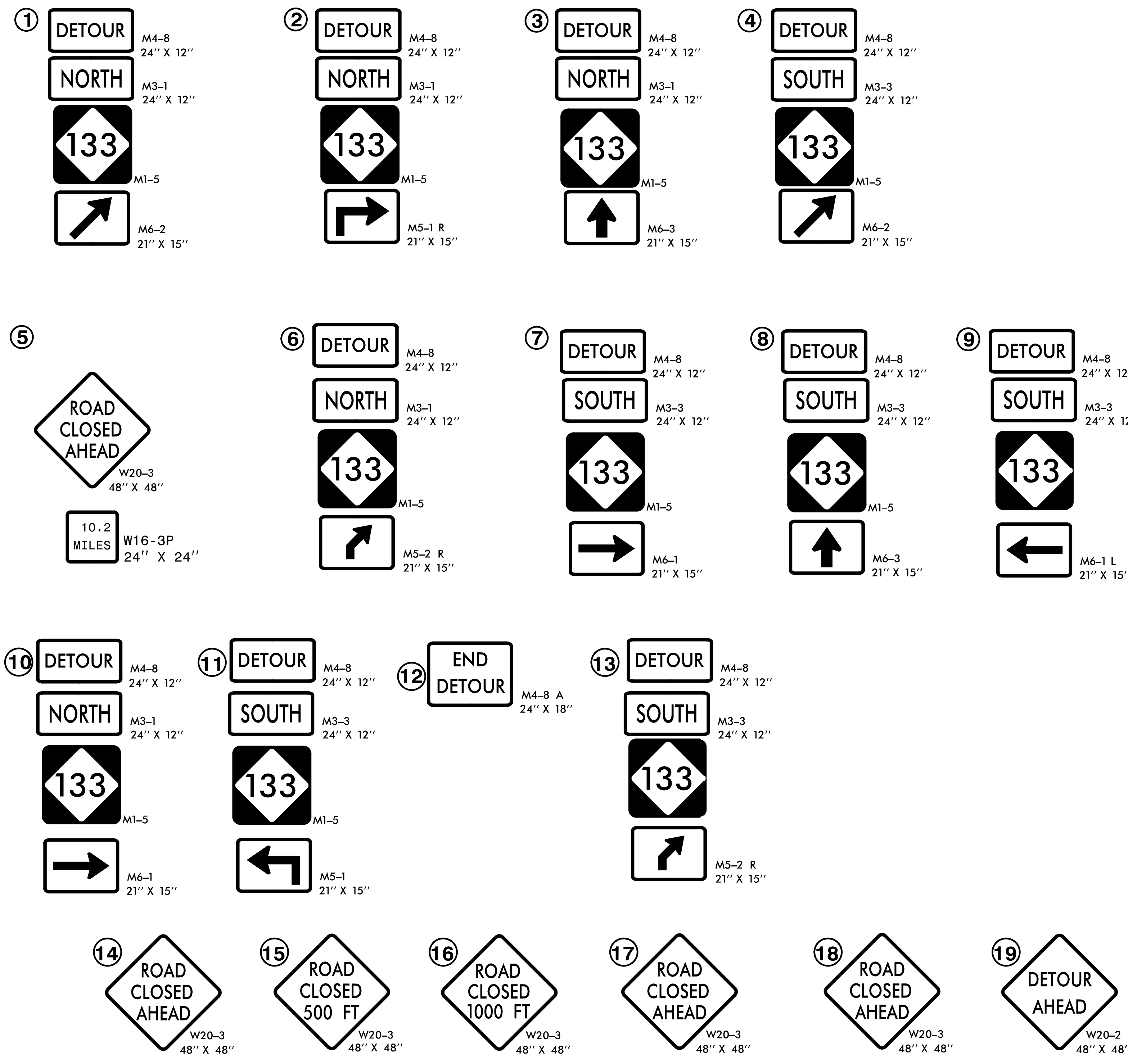
ENGINEER HELEN SHYU



TRANSPORTATION MANAGEMENT PLAN

DETOUR

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REFER TO ROADWAY STANDARD DRAWING 1101.03, SHEET 1 OF 9 FOR DISTANCES OF ADVANCE WORK ZONE SIGNS AND PORTABLE CHANGEABLE MESSAGE SIGNS.

**E** INSTALL 7 DAYS BEFORE ROAD CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
NC 133	STARTING
WILL BE	(DAY)
CLOSED	(TIME)

CHANGEABLE MESSAGE SIGN

**F** REMAIN FOR AT LEAST 14 DAYS AFTER ROAD CLOSURE BEGINS

MESSAGE NO. 1	MESSAGE NO. 2
NC 133	FOLLOW
CLOSED	POSTED
10 MI	DETOUR

CHANGEABLE MESSAGE SIGN

**F** MESSAGE DURING CLOSURE:

MESSAGE NO. 1	MESSAGE NO. 2
NC 133	USE
ACCESS	NC 87
CLOSED	

CHANGEABLE MESSAGE SIGN

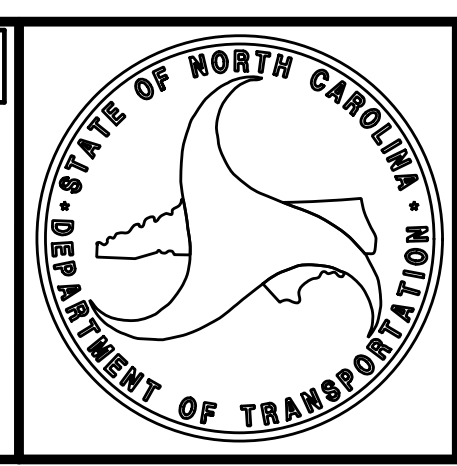
**SP-4L** NEXT LEFT 42" X 12"  
**SP-4R** NEXT RIGHT 42" X 12"

SEE RSD 1101.03 (SHEET 1 OF 9) FOR DISTANCES OF ADVANCE WORK ZONE SIGNS AND PORTABLE CHANGEABLE MESSAGE SIGNS.

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APPROVED: *Helen Shyu*  
NORTH CAROLINA PROFESSIONAL SEAL 042517  
ENGINEER HELEN SHYU

DATE: 6/26/2024



TRANSPORTATION MANAGEMENT PLAN  
SIGN LEGEND

