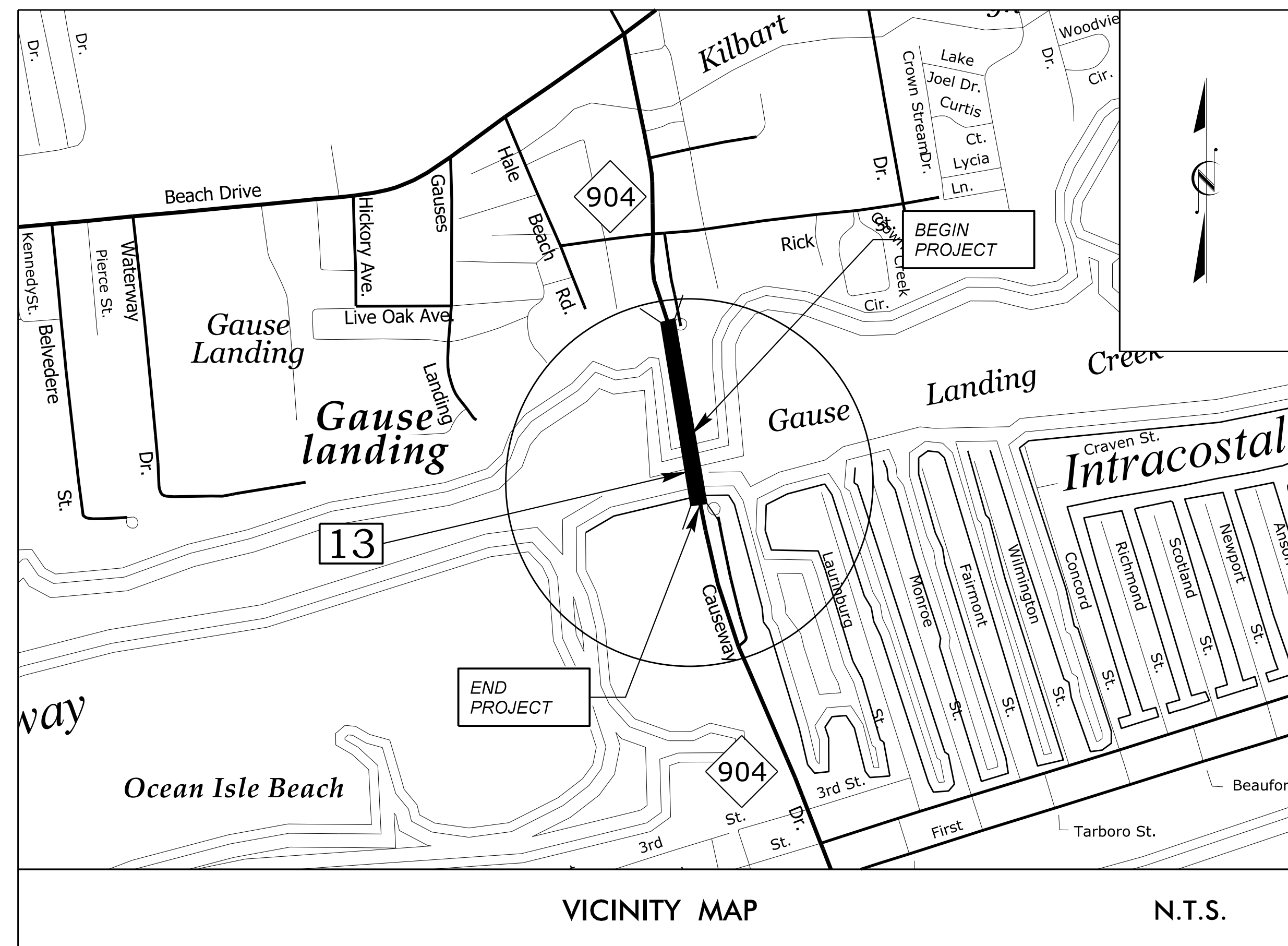
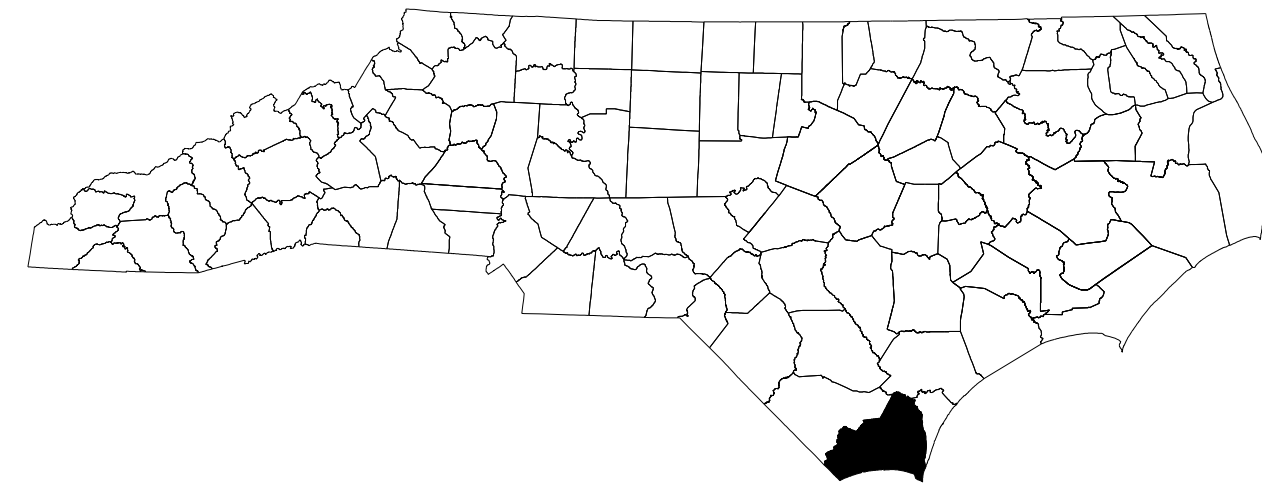


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**BRUNSWICK COUNTY**



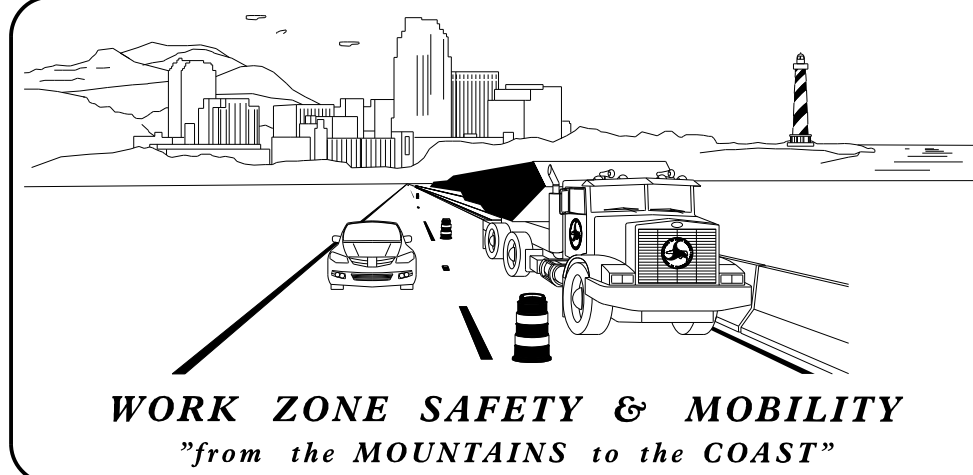
**INDEX OF SHEETS**

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-1B	GENERAL NOTES
TMP-1C	PHASING NOTES & TMP TYPICAL SECTIONS

SHEET NO.

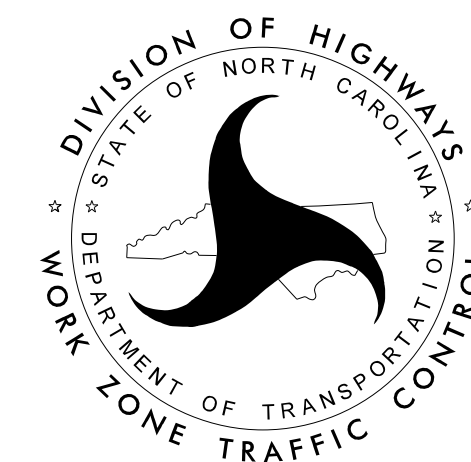
TMP-1

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**PLANS PREPARED BY:**  
JACOB H. DUKE, P.E.  
WORK ZONE TRAFFIC CONTROL ENGINEER

**NCDOT CONTACTS:**  
J.S. (STEVE) KITE, P.E.  
PROJECT ENGINEER  
MATT SPRINGER, P.E.  
PROJECT DESIGN ENGINEER



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301 Fayetteville Street  
Suite 1500, Raleigh, NC 27601  
Jacob H. Duke, P.E. No. 043777  
Firm License #: C-1506

**APPROVED:** *Jacob H. Duke*  
DocuSigned by: Jacob H. Duke  
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**DATE:** 11/18/2019



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







**PROJECT: 15BPR.24**

# ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - 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
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.03	PAVEMENT MARKINGS - EXITS AND ENTRANCE RAMPS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS - TYPES
1264.02	OBJECT MARKERS - INSTALLATION

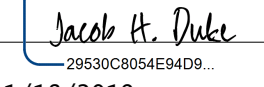
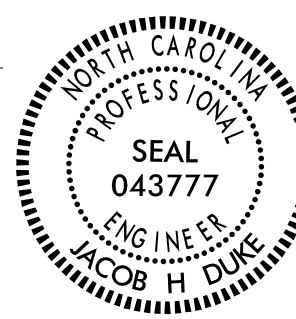

# LEGEND

-  DIRECTION OF TRAFFIC FLOW
-  DRUM
-  PORTABLE SIGN
-  STATIONARY SIGN
-  STATIONARY OR PORTABLE SIGN
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  CHANGEABLE MESSAGE SIGN
-  FLAGGER
-  FLASHING ARROW BOARD (TYPE C) (96"X48" MIN.) "CAUTION MODE"
-  WORK AREA

## FINAL PAVEMENT MARKINGS [MATERIAL]

- C1 - WHITE EDGELINE (4") [CAP]
- C13 - DOUBLE YELLOW CENTERLINE (4") [CAP]

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# GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
15BPR.24	TMP-1B
Kisinger Campo & Associates Corp. 301 Fayetteville Street Suite 1500, Raleigh, NC 27601 Jacob H. Duke, PE No. 043777 Firm License #: C-1506	

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT 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
NC 904/CAUSEWAY DRIVE	WEEK BEFORE MEMORIAL DAY TO WEEK AFTER LABOR DAY (SUMMER) 5:00 A.M. TO 9:00 P.M. MONDAY THRU THURSDAY AND FRIDAY 5:00 A.M. TO SUNDAY 9:00 P.M.
	WEEK AFTER LABOR DAY TO WEEK BEFORE MEMORIAL DAY (OFF SEASON) 6:00 A.M. TO 9:00 A.M. AND 4:00 P.M. TO 7:00 P.M. MONDAY THRU THURSDAY AND FRIDAY 6:00 A.M. TO SUNDAY 7:00 P.M.

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

ROAD NAME	HOLIDAY
NC 904/CAUSEWAY DRIVE	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 5:00 A.M. FRIDAY TO 9:00 P.M. TUESDAY.  5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 5:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE DAY AFTER INDEPENDENCE DAY.  IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 5:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.  6. FOR LABOR DAY, BETWEEN THE HOURS OF 5:00 A.M. FRIDAY AND 9:00 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.

**GENERAL NOTES**

- C) ALL TRAFFIC CONTROL SETUP, MAINTENANCE AND BREAKDOWN/REMOVAL SHALL ADHERE TO THE STANDARDS AND SPECIFICATIONS SET FORTH BY THE MOST RECENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL (MUTCD), THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) STANDARDS AND SPECIFICATIONS AND ROADWAY STANDARD DRAWINGS.
- D) THE CONTRACT SHALL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS AND DRIVEWAYS ENTERING THIS PROJECT.
- E) THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES BEFORE BEGINNING CONSTRUCTION BY CONTACTING THE NORTH CAROLINA ONE CALL CENTER (1-800-632-4949).
- F) THE CONTRACTOR SHALL COORDINATE THE FINAL PAVEMENT MARKING LAYOUT WITH ALL LONGITUDINAL PAVEMENT JOINTS ON THE FINAL SURFACE LAYER PRIOR TO PAVING.
- G) PERFORM WORK ONLY WHEN WEATHER AND VISIBILITY CONDITIONS ALLOW SAFE OPERATIONS.
- H) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF ANY OPEN TRAVELWAY UNLESS HAULING OPERATIONS IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.
- I) ALL PEDESTRIAN TRAFFIC SHALL BE MAINTAINED DURING THE LIFE OF THE PROJECT. INCLUDING ANY CROSSWALKS, SIDEWALKS, SIDE STREETS AND DRIVEWAYS.

**LANE AND SHOULDER CLOSURE REQUIREMENTS**

- J) 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.
- K) 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.
- L) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- M) 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.
- N) 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.
- O) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON NC 940/CAUSEWAY DRIVE.

**PAVEMENT EDGE DROP OFF REQUIREMENTS**

- P) 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) 500FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

**TRAFFIC PATTERN ALTERATIONS**

- Q) NOTIFY THE ENGINEER AND DIVISION THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.
- DIVISION 3 NCDOT CONTACT INFORMATION FOR CLOSURES ON BRIDGE #13:
- FRANK GRANDA - TRANSPORTATION SUPERVISOR  
OFFICE:(910) 371-2372  
CELL:(910) 470-3927

**SIGNING**

- R) 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.
- S) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- T) AT THE END OF EACH WORK PERIOD, FOR MAINTENANCE OF TRAFFIC WHERE NECESSARY, INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500FT IN ACCORDANCE OF THE CONDITION. THE CONTRACTOR SHALL FEATHER ALL TRANSVERSE JOINTS.

**TRAFFIC CONTROL DEVICES**

- U) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- V) THE CONTRACTOR SHALL PROVIDE CHANGEABLE MESSAGE BOARDS AS DIRECTED BY THE ENGINEER TO ADVISE MOTORISTS OF UPCOMING WORK AT LEAST (7) SEVEN CALENDAR DAYS IN ADVANCE OF THE WORK AND RETAIN THESE MESSAGE BOARDS ON THE PROJECT WITH UPDATED MESSAGING THROUGHOUT THE DURATION OF THE PROJECT. SEE TMP-1C FOR DETAILS.
- W) PLACE PORTABLE CHANGEABLE MESSAGE SIGNS OUTSIDE OF TRAVELWAY AT LOCATIONS DETERMINED BY THE ENGINEER. ADJUST AND RELOCATE MESSAGE BOARDS AS NECESSARY OR AS DIRECTED BY THE ENGINEER.

**PAVEMENT MARKINGS AND MARKERS**

- X) REVIEW AND RECORD EXISTING PAVEMENT MARKINGS AND MARKERS PRIOR TO MILLING AND DECK RESURFACING. USE THE RECORD OF EXISTING PAVEMENT MARKINGS AND MARKERS IN CONJUNCTION WITH THE BRIDGE PLANS AND THE MOST RECENT VERSION OF THE ROADWAY STANDARD DRAWINGS TO REESTABLISH THE PROPOSED PAVEMENT MARKINGS AND MARKERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- Y) REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS, SYMBOLS AND CHARACTERS OBLITERATED BY WORK WITH TEMPORARY PAINT IN ACCORDANCE WITH SECTION 1205 OF THE LATEST VERSION OF THE NCDOT STANDARD SPECIFICATION BY THE END OF EACH WORK DAY AT NO COST TO THE DEPARTMENT.
- Z) PERFORM THE NECESSARY LAYOUT TO TIE IN EITHER TEMPORARY OR PERMANENT PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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## PHASING NOTES

PERFORM ALL WORK AS SHOWN IN THE CONTRACT AND BRIDGE PLANS IN ACCORDANCE WITH ALL COAST GUARD REGULATIONS & REQUIREMENTS

ALL LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE NCDOT STANDARD SPECIFICATIONS, STANDARD DRAWINGS AND THE TRAFFIC MANAGEMENT PLAN.

### PHASING:

USE NCDOT RSD 1101.01 SHEET 3 OF 3 TO INSTALL ADVANCED WARNING SIGNS AND DEVICES.

#### PHASE 1:

**NOTE:** AT THE END OF EACH WORK PERIOD, REMOVE ALL SIGNS, DEVICES AND FLAGGING OPERATIONS AND REOPEN THE BRIDGE AND ROADWAY TO TRAFFIC.

**STEP 1:** USE NCDOT RSD 1101.02 SHEET 1 OF 14 TO INSTALL SIGNS, DEVICES AND A FLAGGING OPERATION TO CLOSE THE RIGHT LANE OF BRIDGE #13 AND ITS APPROACHES.

**STEP 2:** PERFORM ALL WORK PER BRIDGE PLANS.

REPEAT STEPS 1 THRU 2 UNTIL ALL WORK IS COMPLETE.

#### PHASE 2:

**NOTE:** AT THE END OF EACH WORK PERIOD, REMOVE ALL SIGNS, DEVICES AND FLAGGING OPERATIONS AND REOPEN THE BRIDGE AND ROADWAY TO TRAFFIC.

**STEP 1:** USE NCDOT RSD 1101.02 SHEET 1 OF 14 TO INSTALL SIGNS, DEVICES AND A FLAGGING OPERATION TO CLOSE THE LEFT LANE OF BRIDGE #13 AND ITS APPROACHES.

**STEP 2:** PERFORM ALL WORK PER BRIDGE PLANS.

REPEAT STEPS 1 THRU 2 UNTIL ALL WORK IS COMPLETE.

#### PHASE 3:

**STEP 1:** COMPLETE ALL APPROACH ROADWAY WORK, TIE-INS AND ASSOCIATED ITEMS.

## PCMS MESSAGES

PCMS MESSAGE  
ONE WEEK  
PRIOR TO LANE CLOSURES

MESSAGE NO. 1	MESSAGE NO. 2
LANE CLOSURES	MM/DD ## AM TO ## PM

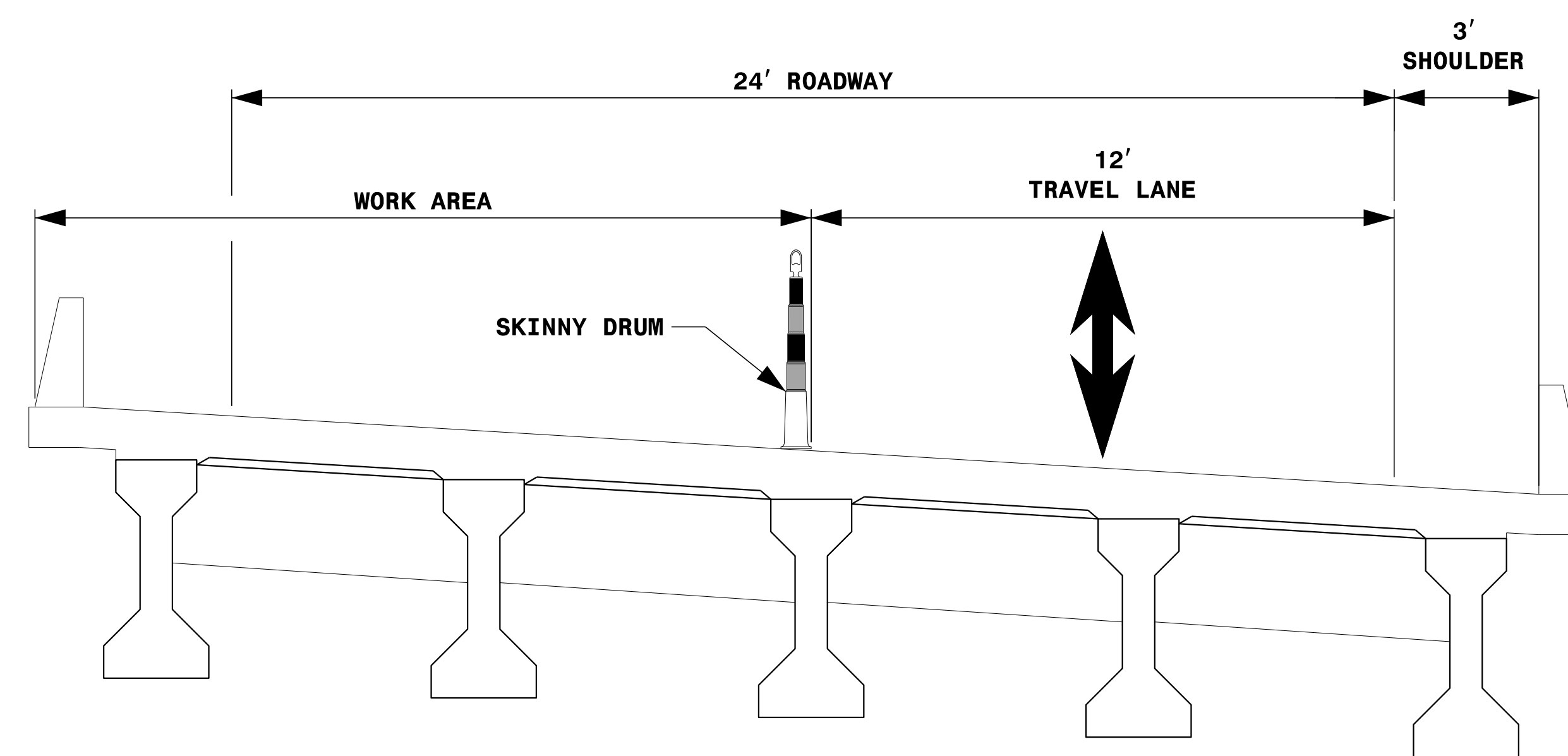
CHANGEABLE MESSAGE SIGN

PCMS MESSAGE  
DURING  
LANE CLOSURES

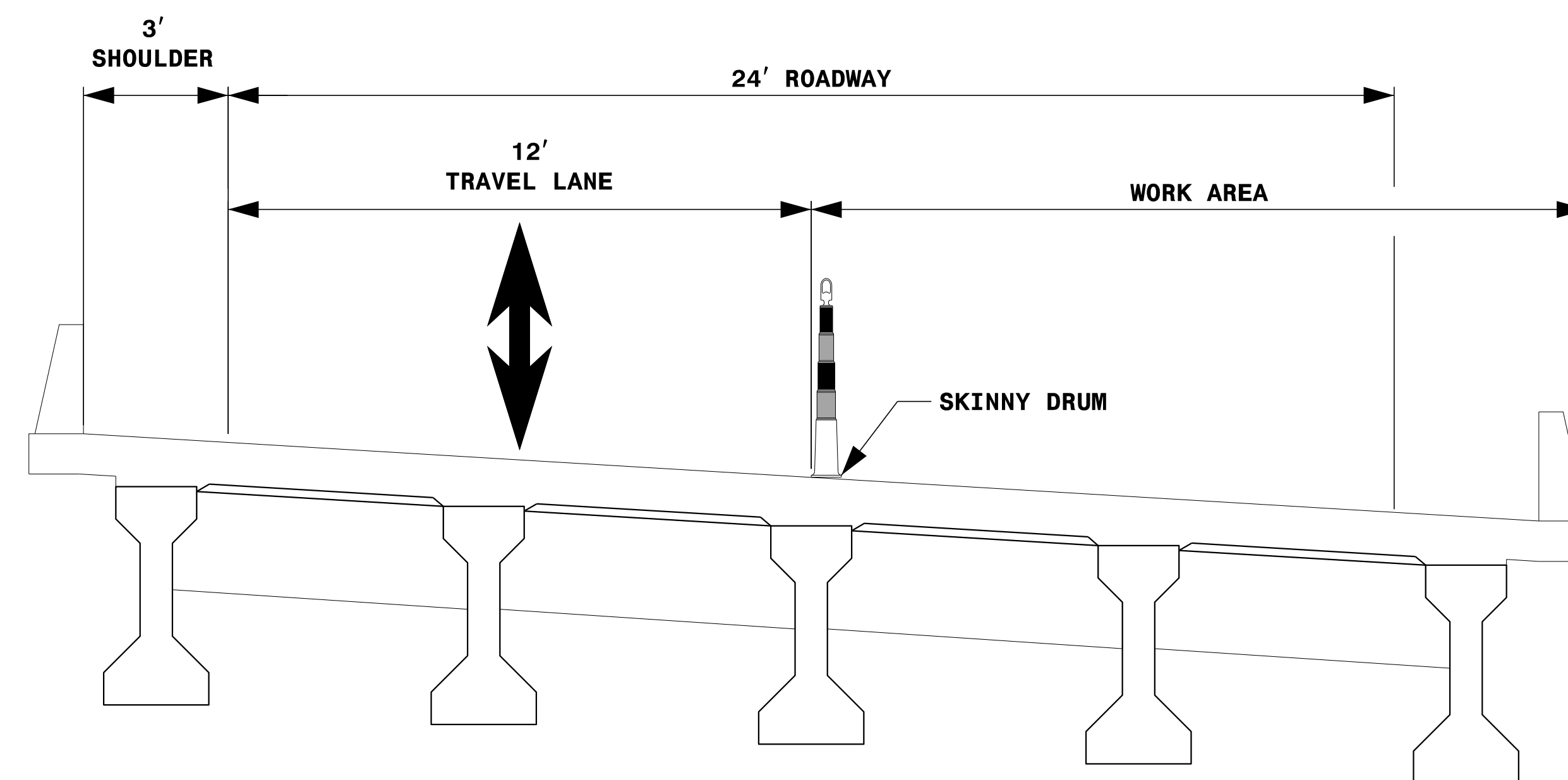
MESSAGE NO. 1	MESSAGE NO. 2
LANE CLOSURES	STAY ALERT

CHANGEABLE MESSAGE SIGN

PROVIDE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL BE USED AT LEAST (7) SEVEN CALENDAR DAYS IN ADVANCE OF THE WORK AND RETAIN THESE MESSAGE BOARDS ON THE PROJECT WITH UPDATED MESSAGING THROUGHOUT THE DURATION OF THE PROJECT AND SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE WORK ZONE. SEE ABOVE FOR TIMING AND MESSAGES. PCMS LOCATION CAN BE CHANGED AT THE APPROVAL OF THE ENGINEER.



**PHASE 1**  
**TMP TYPICAL SECTION (BRIDGE #13)**

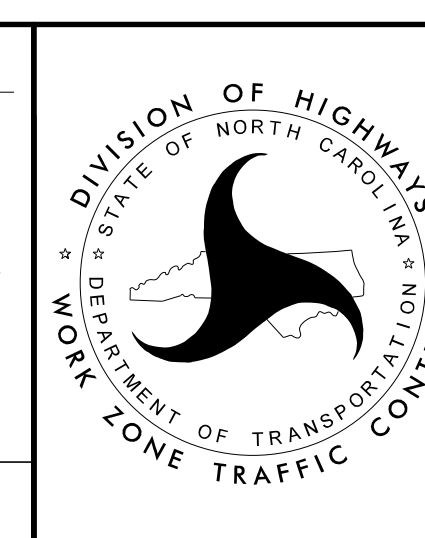


**PHASE 2**  
**TMP TYPICAL SECTION (BRIDGE #13)**

APPROVED: *Jacob H. Duke*  
DATE: 11/18/2019

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PHASING NOTES