# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. SHEET NO. **B-4168** TCP-1

# PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

# JONES COUNTY

## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| STD. NO. | TITLE   |
|----------|---|
| 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                          |
| 1135.01  | CONES   |
| 1145.01  | BARRICADES  |
| 1150.01  | FLAGGERS DEVICES                                  |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS        |
| 1205.02  | PAVEMENT MARKINGS - 2 LANE AND MULTILANE ROADWAYS |
| 1205.04  | PAVEMENT MARKINGS - INTERSECTIONS                 |
| 1205.12  | PAVEMENT MARKINGS - BRIDGES                       |
| 1250.01  | PAVEMENT MARKER SPACING                           |
| 1251.01  | RAISED PAVEMENT MARKERS - TEMPORARY AND PERMANENT |
| 1261.01  | GUARDRAIL AND BARRIER DELINEATOR SPACING          |
| 1261.02  | GUARDRAIL AND BARRIER DELINEATOR TYPES            |
| 1262.01  | GUARDRAIL END DELINEATION                         |
|          |   |

# INDEX OF SHEETS

| SHEET NO. | TITLE  |
|-----------|--|
| TCP-1     | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, INDEX OF SHEETS AND PHASING        |
| TCP-2     | PROJECT NOTES  |
| TCP-3     | DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS |
| PM-1      | PAVEMENT MARKING SCHEDULE  |

## **PHASING**

### PHASE I

INSTALL ADVANCE WARNING SIGNS ON SR 1319 AND SR 1002. (SEE TCP-3 AND LOCAL NOTE NO. 2) USING ROADWAY STANDARD DRAWING 1101.02 SHEET 1 OF 9, INSTALL LANE CLOSURES AND COMPLETE THE FOLLOWING: -RESURFACE SR 1319 FROM NC 41 TO SR 1002. -RESURFACE SR 1002 FROM SR 1319 TO NC 41.

-PLACE FINAL PAINT PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS ON SAME. (SEE LOCAL NOTE NO. 5)

REMOVE ADVANCE WARNING SIGNS. STEP 3.

NOTIFY THE ENGINEER 21 DAYS PRIOR TO ROAD CLOSURE. STATE FORCES WILL INSTALL DETOUR SIGNING OFF THE PROJECT LIMITS.

### PHASE II

ENSURE DETOUR SIGNING OFF THE PROJECT LIMITS IS INSTALLED PRIOR TO ROAD CLOSURE, AS DIRECTED BY THE ENGINEER. USING ROADWAY STANDARD DRAWING 1101.03 SHEET 1 OF 9 AND ROADWAY STANDARD DRAWING 1145.01 SHEET 1 OF 1 CLOSE NC 41 AND PLACE TRAFFIC ON DETOUR. (SEE LOCAL

NOTES NO. 1 AND 2) CONSTRUCT THE FOLLOWING WITHIN THE ROAD CLOSURE: (SEE STEP 2. LOCAL NOTES NO. 3 AND 4)

-REMOVE THE EXISTING STRUCTURE. -CONSTRUCT THE PROPOSED STRUCTURE

-CONSTRUCT THE PROPOSED ROADWAY SECTION -L- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE FROM STA. 13+00+/- TO STA. 16+53+/- AND FROM STA. 18+08+/- TO

STA. 21+50+/-. PLACE THE FINAL LAYER OF SURFACE COURSE AND APPLY THE STEP 3. FINAL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON -L-FROM STA. 13+00+/- TO STA. 21+50+/-. (SEE LOCAL NOTE NO. 5)

REMOVE ALL BARRICADES, ROAD CLOSED SIGNS AND DETOUR STEP 4. SIGNS AND OPEN NC 41 TO THROUGH TRAFFIC. (SEE LOCAL NOTE NO. 1)

# **LEGEND**

#### **GENERAL**

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

PROPOSED PVMT. ----- EXIST. PVMT.

**WORK AREA** 

REMOVAL OF EXISTING PAVEMENT

### TRAFFIC CONTROL DEVICES

T TYPE I BARRICADE

TYPE III BARRICADE

CONE

SKINNY DRUM

FLASHING ARROW PANEL (TYPE C)

— STATIONARY SIGN

STATIONARY OR PORTABLE SIGN

→ CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

POLICE

**FLAGGER** 

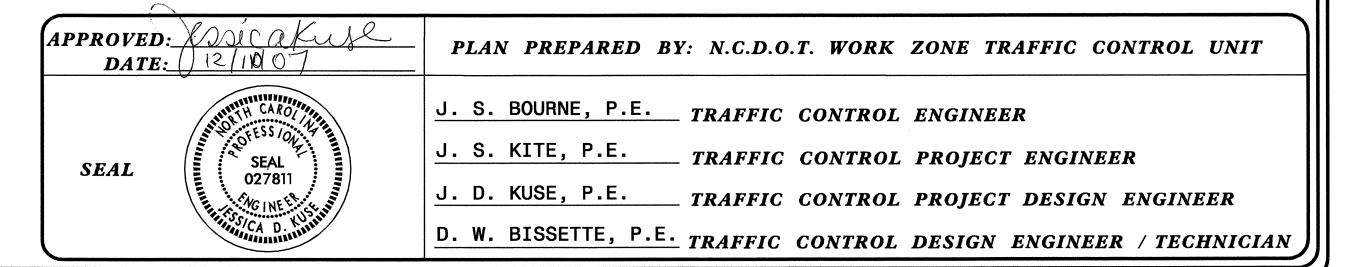
#### PAVEMENT MARKINGS

CRYSTAL/CRYSTAL PAVEMENT MARKER

YELLOW/YELLOW PAVEMENT MARKER

CRYSTAL/RED PAVEMENT MARKER

PAVEMENT MARKING SYMBOLS



# 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 DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR 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.
- D) 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.
- E) DO NOT INSTALL MORE THAN ONE MILE OF LANE CLOSURE ON ALL ROADS MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.
- F) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON ALL ROADS.

#### PAVEMENT EDGE DROP OFF REQUIREMENTS

G) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS 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.

H) 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 EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

#### TRAFFIC PATTERN ALTERATIONS

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

#### SIGNING

- J) INSTALL ADVANCE WORK ZONE WARNING SIGNS NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- K) STATE FORCES WILL BE RESPONSIBLE FOR PERMANENT SIGNING.
- L) STATE FORCES WILL BE RESPONSIBLE FOR DETOUR SIGNING OFF THE PROJECT LIMITS.
- L) PROVIDE DETOUR SIGNING WITHIN THE PROJECT LIMITS.
- M) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- N) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

#### TRAFFIC CONTROL DEVICES

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

#### PAVEMENT MARKINGS AND MARKERS

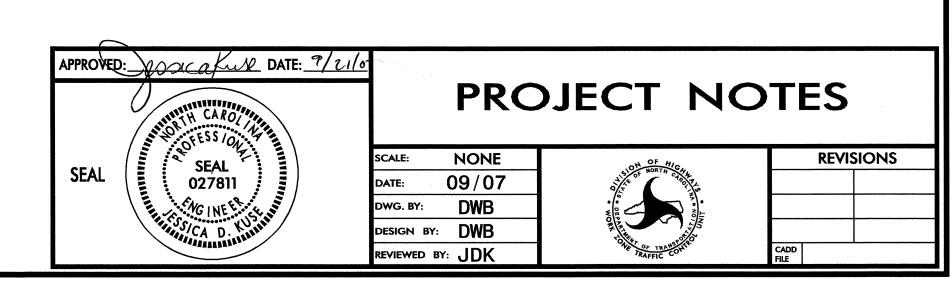
Q) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

| ROAD NAME        | MARKING              | MARKER            |
|------------------|----------------------|-------------------|
| NC 41 (ASPHALT)  | PAINT                | RAISED REFLECTIVE |
| NC 41 (CONCRETE) | COLD APPLIED PLASTIC | RAISED REFLECTIVE |
| SR 1002          | PAINT                | RAISED REFLECTIVE |
| SR 1319          | PAINT                | RAISED REFLECTIVE |

- R) PLACE TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE. PLACE THE SECOND APPLICATION OF PAINT UPON SUFFICIENT DRYING TIME OF THE FIRST.
- S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

# LOCAL NOTES

- 1. INSTALL SIGNS BEFORE THE BARRICADES WHEN CLOSING THE ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE THE SIGNS WHEN OPENING THE ROADWAY TO TRAFFIC. INSTALL/REMOVE SIGNS AND BARRICADES WITHIN THE SAME CALENDAR DAY.
- 2. ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- 3. MAINTAIN DRIVEWAY ACCESS WITHIN PROJECT LIMITS USING INCIDENTAL STONE.
- 4. USE FLAGGERS AS NEEDED TO MAINTAIN LOCAL TRAFFIC WITHIN ROAD CLOSURE. FLAGGING WILL BE INCIDENTAL TO THE COST OF THE CONTRACT.
- 5. REAPPLY PAVEMENT MARKINGS UP TO 100' BEYOND CONSTRUCTION LIMITS IF NEEDED TO REPAIR DAMAGE AND/OR TRACKING FROM CONSTRUCTION.



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PROJ. REFERENCE NO. SHEET NO. B-4168 TCP-3

HIGHWAYS

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DIVISION

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RALEIGH

RECOMMENDED MINIMUM SIGN SPACING POSTED SPEED LIMIT  $\otimes$ (M.P.H.)

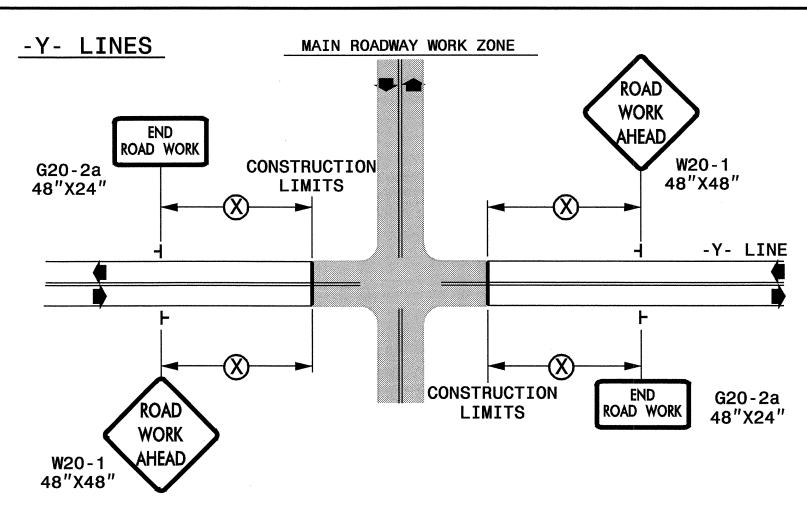
TRANSPORTATION CAROLINA NORTH **OF** 0F STATE DEPT.

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)

**END** 

ROAD WORK G20-2a 48"X24"

TWO-WAY UNDIVIDED \*\* (L-LINES)



### **GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.

**END** 

ROAD WORK G20-2a 48"x24"

- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.

**HIGHWAY WORK ZONE** 

CONSTRUCTION LIMITS-

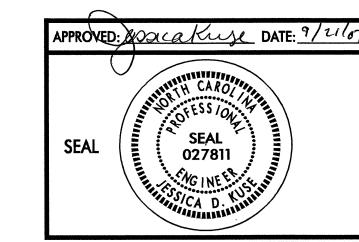
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

## **LEGEND**

├ STATIONARY SIGN

■ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1



≤ 50

≥ 55

500'

1000'

| DETAIL   | DRAV | VING | FOR | TWO-V | VAY  |
|----------|------|------|-----|-------|------|
| UNDIVID  |      |      |     |       |      |
| ADVANCED | WORK | ZONE | WAR | INING | SIGN |

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**REVISIONS** 7\_98 | 10/01 10-98 03/04 11/04 01/01