STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

SHEET NO. B - 4 2 9 1

PLAN FOR PROPOSED TRAFFIC CONTROL, MARKING & DELINEATION

TRANSYLVANIA COUNTY

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" -PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 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
1101.11	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	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - ISLANDS
1205.11	PAVEMENT MARKINGS - RAILROAD CROSSINGS
1250.01	RAISED PAVEMENT MARKERS INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATORS INSTALLATION SPACING
1261.02	GUARDRAIL & BARRIER DELINEATORS TYPES AND MOUNTING
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

SHEET NO.	<u>TITLE</u>
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2	GENERAL NOTES
TCP-3	PHASING
TCP-4	PHASE I DETAILS
TCP-5	PHASE II DETAILS

LEGEND

GENERAL

DIRECTION OF TRAFFIC FLOW

NORTH ARROW

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

WORK AREA

REMOVAL OF EXISTING PAVEMENT

TRAFFIC CONTROL DEVICES

TYPE III BARRICADE

CONE

DRUM 🔘 SKINNY DRUM

FLASHING ARROW PANEL (TYPE C)

─ STATIONARY SIGN

PORTABLE SIGN

STATIONARY OR PORTABLE SIGN

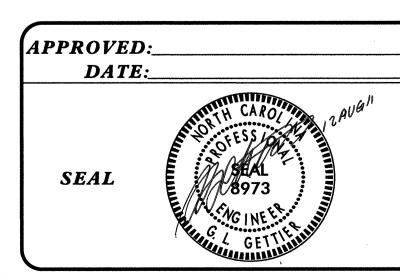
- CRASH CUSHION

CHANGEABLE MESSAGE SIGN

TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

POLICE

- FLAGGER



PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT

J. S.. BOURNE, PE TRAFFIC CONTROL ENGINEER

G. L. GETTIER, PE TRAFFIC CONTROL PROJECT ENGINEER

J. W. GILSTRAP TRAFFIC CONTROL PROJECT DESIGN ENGINEER

_ TRAFFIC CONTROL DESIGN ENGINEER

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 AS DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT STOP TRAFFIC AS FOLLOWS:

DAY AND TIME ROAD NAME RESTRICTIONS

DURATION AND OPERATION

1. ALL ROADS

NONE

30 MINUTES MAX./ TRAFFIC OPS/GIRDER PLACEMENT

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.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

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.

- 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 OPENED TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

K) NOTIFY THE ENGINEER TWENTY ONE (21) 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) STATE FORCES WILL BE RESPONSIBLE FOR PROVIDING PERMANENT SIGNING.
- N) STATE FORCES WILL BE RESPONSIBLE FOR PROVIDING SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.
- O) STATE FORCES WILL COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- P) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

- T) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS DESCRIBED ON THE PAVEMENT MARKING PLANS.
- U) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME

MARKING

MARKER

TEMPORARY RAISED

1. ALL ROADS PAINT

- 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.
- W) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

APPROVED: NONE 1/2010 DWG. BY: DESIGN BY: KPB REVIEWED BY: JWG

GENERAL NOTES

KPB

REVISIONS

13-JAN-2010 06:49 \\dot\dfsroot0|\Pr

PROJ. REFERENCE NO. SHEET NO.

B-4291
TCP-3

PHASING

PHASE I

STEP 1: - CONTRACTOR SHALL PLACE ADVANCE WORK ZONE WARNING SIGNS ALONG
SR 1504 (-L-) AND SR 1518 (-Y-) AS SHOWN ON RSD 1101.01, SHEET 3 OF 3.

STEP 2: - CONTRACTOR, USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 15:

-- SHALL INSTALL TEMPORARY GUARDRAIL ON THE SOUTH SIDE OF THE EXISTING ROADWAY AS SHOWN ON SHEET TCP-4 AND THE ROADWAY PLANS.

STEP 3: - CONTRACTOR SHALL:

-- CONSTRUCT AS MUCH AS POSSIBLE OF THE PROPOSED -L- ROADWAY UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, AND INCLUDING THE PROPOSED STRUCTURE, AWAY FROM TRAFFIC FROM STA. 15+41 +/- -L- TO STA. 22+83+/- -L- (SEE SHEET TCP-4 AND THE CONSTRUCTION PLANS).

NOTE: UTILIZE DRUMS TO MAINTAIN ACCESS TO DRIVEWAY RIGHT OF STA. 19+50 +/- -L-DURING CONSTRUCTION (SEE SHEET TCP-4).

- -- CONSTRUCT THE PROPOSED -L- ROADWAY UP TO THE EDGE AND ELEVATION OF EXISTING FROM STA. 13+28 -L- TO STA. 15+41 +/- -L- AND STA. 22+83 +/- -L- TO STA. 25+30 -L- USING LANE CLOSURES PER ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 15 (SEE SHEET TCP-4 AND THE CONSTRUCTION PLANS).
- -- COMPLETE CONSTRUCTION OF THE NEW GUARDRAIL (EXCEPT A PORTION OF THE GUARDRAIL LEFT OF STA. 20+75 +/- -L-) USING LANE CLOSURES PER ROADWAY STANDARD DRAWING NO. 1101.02 SHEET 1 OF 15. PLACE A TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) IMMEDIATELY PRIOR TO SHIFTING TRAFFIC TO THE PATTERN SHOWN ON SHEET TCP-5, TO PROTECT THE APPROACH END OF THE BRIDGE.
- -- BEGIN CONSTRUCTION OF -Y- FROM STA. 12+40 -Y- TO STA. 13+60 +/- -Y- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE USING LANE CLOSURES PER ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 15 (SEE SHEET TCP-4 AND THE CONSTRUCTION PLANS).

PHASE II

CONTRACTOR SHALL COMPLETE PHASE II, STEPS 1 & 2 IN FIVE CALENDAR DAYS. SEE INTERMEDIATE CONTRACT TIME SPECIAL PROVISION.

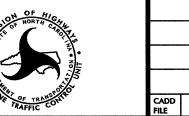
STEP 1: - CONTRACTOR SHALL:

- -- CONSTRUCT THE -L- TIE-INS USING PAVING AND WEDGING OPERATIONS UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM STA. 13+28 -L- TO STA. 15+41 +/- -L- AND FROM STA. 22+83 +/- -L- TO STA. 25+30 -L- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 15 (SEE SHEET TCP-5 AND THE CONSTRUCTION PLANS).
- -- INSTALL TEMPORARY PAVEMENT MARKINGS (PAINT) & TEMPORARY RAISED PAVEMENT MARKERS ON -L- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 15 AND SHIFT TRAFFIC TO THE NEW PATTERN AS SHOWN ON SHEET TCP-5. NOTE: INSTALL DRUMS TO KEEP LEFT TURN LANE CLOSED.
- STEP 2: CONTRACTOR, USING ROADWAY STANDARD NO. 1101.03 SHEETS 1 & 2 OF 9, AND USING THE DETOUR ROUTE SHOWN ON SHEET TCP-5:
 - -- SHALL CONSTRUCT -Y- FROM STA. 12+40 +/- -Y- TO STA. 14+30 +/- -Y- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.
 - -- SHALL INSTALL TEMPORARY PAVEMENT MARKINGS (PAINT) & TEMPORARY RAISED PAVEMENT MARKERS ON -Y-, REMOVE DRUMS AT -L- TURN LANE THEN OPEN TO THE FINAL TRAFFIC PATTERN.
- STEP 3: CONTRACTOR, USING ROADWAY STANDARD DRAWING NOS. 1101.02, SHEETS 1 & 2 OF 15, AND/OR 1101.04 SHEET 1 OF 1 (SEE CONSTRUCTION PLANS AND SHEET TCP-5):
 - -- SHALL COMPLETE GUARDRAIL INSTALLATION BEGUN IN PHASE I, STEP 3.
 - -- SHALL DEMO/REMOVE EXISTING BRIDGE AND ROADWAY AND COMPLETE ANY REMAINING GRADING, DRAINAGE AND LANDSCAPING.
- STEP 4: CONTRACTOR, USING ROADWAY STANDARD DRAWING NO. 1101.02 SHEETS 1 & 2 OF 15:
 - -- SHALL PAVE THE FINAL LAYER OF SURFACE COURSE ON ALL ROADS, THEN INSTALL FINAL PAVEMENT MARKINGS AND PAVEMENT MARKERS AS DESCRIBED ON THE PAVEMENT MARKING PLANS (SEE CONSTRUCTION PLANS).
- STEP 5: CONTRACTOR SHALL REMOVE ANY REMAINING TRAFFIC CONTROL DEVICES.



PHASING

DATE: 8/2011
DWG. BY: KPB
DESIGN BY: KPB
REVIEWED BY: JWG



REVISIONS

