

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
B-4 4 5 9	TCP-1

**PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
CHATHAM COUNTY**

B-4459

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 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
1101.04	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 AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2	GENERAL NOTES
TCP-3 & TCP-3A	PHASE I
TCP-4	PHASE II
TCP-5	WORK ZONE WARNING SIGNS

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT. EXIST. PVMT.
 - WORK AREA
 - REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
 - TYPE II BARRICADE
 - 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
- PAVEMENT MARKINGS**
- CRYSTAL/CRYSTAL PAVEMENT MARKER
 - YELLOW/YELLOW PAVEMENT MARKER
 - CRYSTAL/RED PAVEMENT MARKER
 - PAVEMENT MARKING SYMBOLS

TIP PROJECT:

08-JAN-2010 10:49
V:\JW\Projects\TIP\Projects-B\B4459\TrafficControl\TCP\B-4459-TC-TCP-1.dgn
S:\Green

APPROVED: DATE:	PLAN PREPARED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT
SEAL 	J.S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER G.L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER J.W. GILSTRAP TRAFFIC CONTROL PROJECT DESIGN ENGINEER S. GREEN TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
B-4459	TCP-2

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 UNDESIRABLE 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:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
1. NC 42 (-L-)	NONE	30 MINUTES MAX. / TRAFFIC OPERATIONS

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 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.

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 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) 350 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) PROVIDE PERMANENT SIGNING.

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 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.

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 SHOWN IN THE PAVEMENT MARKING PLAN.

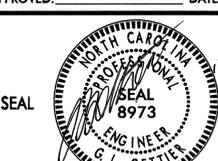
R) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
1. ASPHALT SURFACE	PAINT	TEMPORARY
2. PROPOSED BRIDGE	PAINT	TEMPORARY

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.

APPROVED: _____	DATE: _____	GENERAL NOTES		
	SCALE: NONE		REVISIONS	
	DATE: 11/09			
	DWG. BY: SNG			
	DESIGN BY: SNG			
REVIEWED BY: JWG	CADD FILE			

08-JAN-2010 10:48 AM C:\p09\TIP\Projects\B\4459\TrafficControl\TCP\B-4459_TC-TCP_2.dgn

PHASE I

PHASE I (CONT.)

NOTES: RETURN TRAFFIC TO THE EXISTING PATTERN AT THE END OF EACH WORK DAY UNLESS OTHERWISE STATED IN THE PHASING OR DIRECTED BY THE ENGINEER.

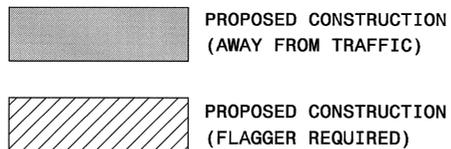
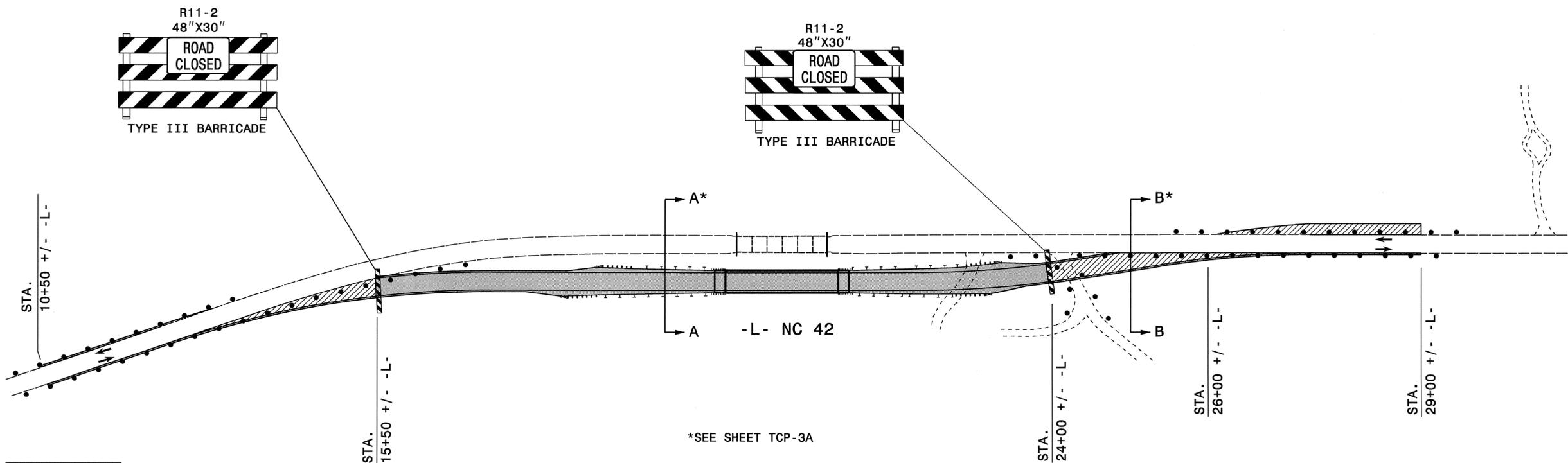
COMPLETE ANY PROPOSED OR TEMPORARY WIDENING IN SUCH A MANNER THAT PONDING OF WATER WILL NOT OCCUR IN THE TRAVEL LANE.

CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE PHASE I, STEP 3 IN ONE WORK PERIOD.

STEP 3: - USING ROADWAY STANDARD DRAWING No. 1101.02, SHEET 1 OF 9:

- STEP 1: - CONTRACTOR SHALL INSTALL ALL ADVANCE WORK ZONE WARNING SIGNS. (SEE SHEET TCP-5).
- STEP 2: - CONSTRUCT, AWAY FROM TRAFFIC (WITH TEMPORARY SLOPES OF 2:1 AS REQUIRED), PROPOSED NC 42 (-L-), BRIDGE AND APPROACHES FROM STATION 15+50 +/- -L- TO STATION 24+00 +/- -L- UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE CONSTRUCTION PLANS).
- USING ROADWAY STANDARD DRAWING No. 1101.02, SHEET 1 OF 9:
- CONSTRUCT PROPOSED NC 42 (-L-) FROM STATION 10+50 +/- -L- TO STATION 15+50 +/- -L-, UP TO THE EDGE AND ELEVATION OF THE EXISTING. (SEE CONSTRUCTION PLANS).
 - CONSTRUCT AS MUCH AS POSSIBLE, (WITH TEMPORARY SLOPES OF 2:1 AS REQUIRED) PROPOSED NC 42 (-L-), FROM STATION 24+00 +/- -L- TO STATION 26+00 +/- -L- UP TO, BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE CONSTRUCTION PLANS).
 - CONSTRUCT PROPOSED WIDENING NC 42 (-L-) FROM STATION 26+00 +/- -L- TO STATION 29+00 +/- -L-, UP TO THE EDGE AND ELEVATION OF EXISTING. (SEE CONSTRUCTION PLANS).

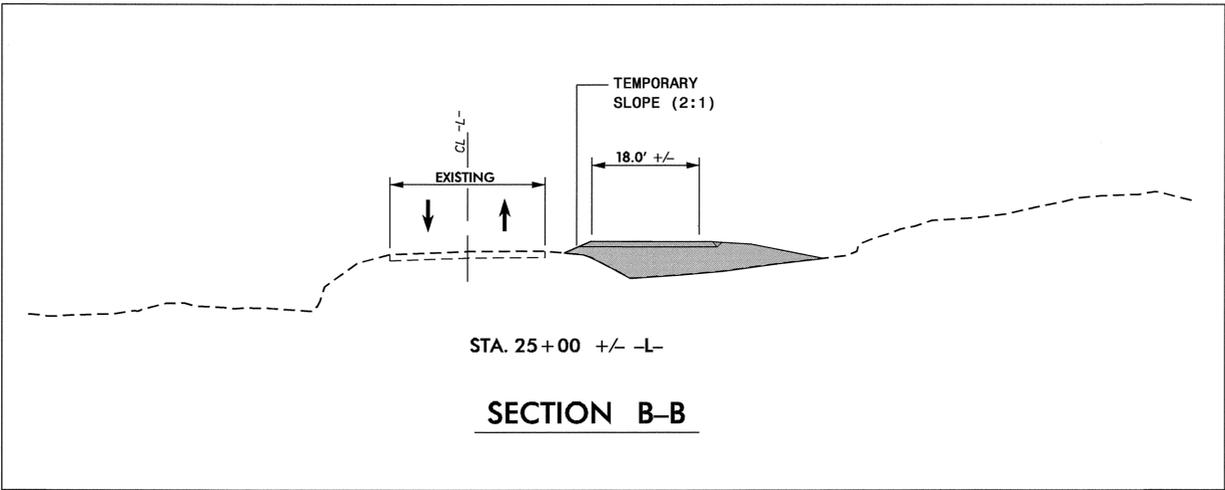
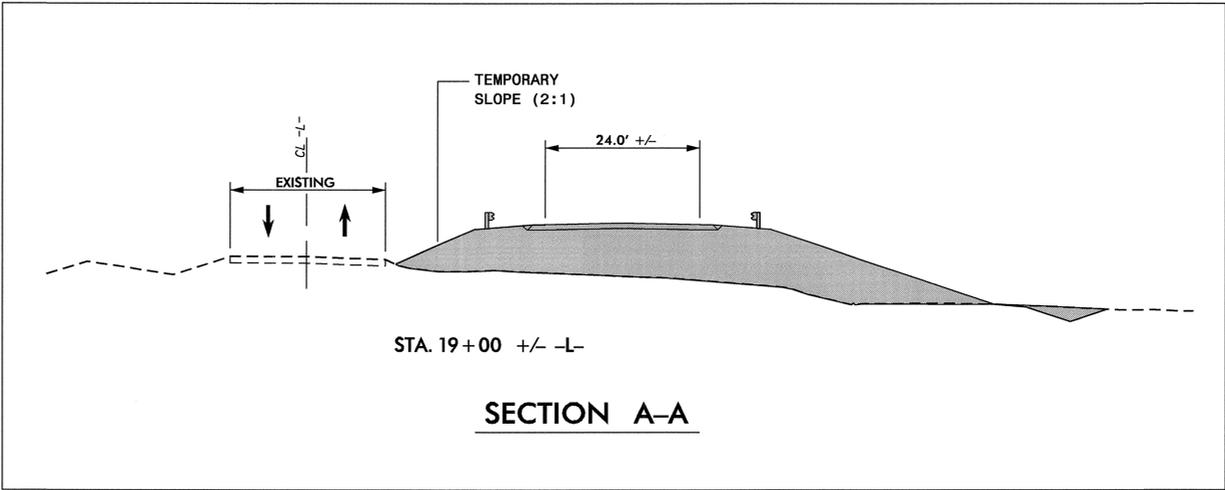
- CONSTRUCT (UTILIZING PAVING & WEDGING OPERATIONS) PROPOSED NC 42 (-L-) TIE-INS FROM STATION 10+50 +/- -L- TO STATION 15+50 +/- -L- AND FROM STATION 24+00 +/- -L- TO STATION 29+00 +/- -L-, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. (SEE CONSTRUCTION PLANS).
- PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY MARKERS ON PROPOSED NC 42 (-L-) PER PAVEMENT MARKING PLAN AND SHIFT TRAFFIC TO FINAL PATTERN. (SEE CONSTRUCTION PLANS, PAVEMENT MARKING PLANS AND SHEET TCP-4).



*SEE SHEET TCP-3A

APPROVED: _____ DATE: _____	PHASE I										
	SCALE: NONE										
	DATE: 11/09		<table border="1"> <tr><th colspan="2">REVISIONS</th></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	REVISIONS							
	REVISIONS										
DESIGN BY: SNG											
REVIEWED BY: JWG											

PROJ. REFERENCE NO.	SHEET NO.
B-4459	TCP-3A



08-JAN-2010 10:18
 \\do\dfs\roo\01\PC\01\TrafficControl\TCP\B-4459_TC-TCP_3.dgn
 Sngreen AT 12/24/13

APPROVED: _____ DATE: _____

SEAL

PHASE I

SCALE: NONE		REVISIONS	
DATE: 11/09			
DWG. BY: SNG			
DESIGN BY: SNG			
REVIEWED BY: JWG			

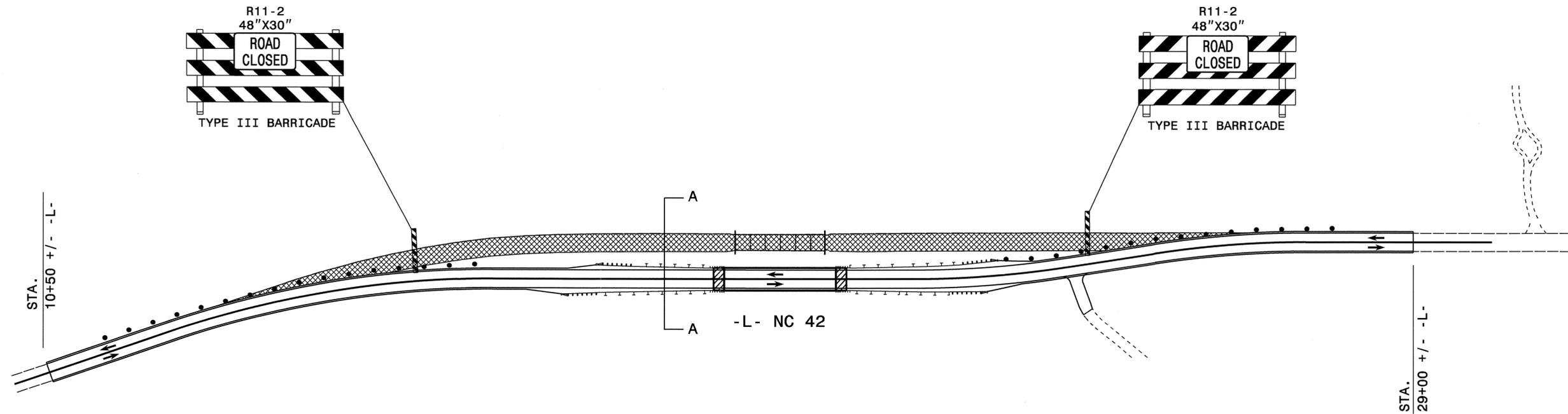
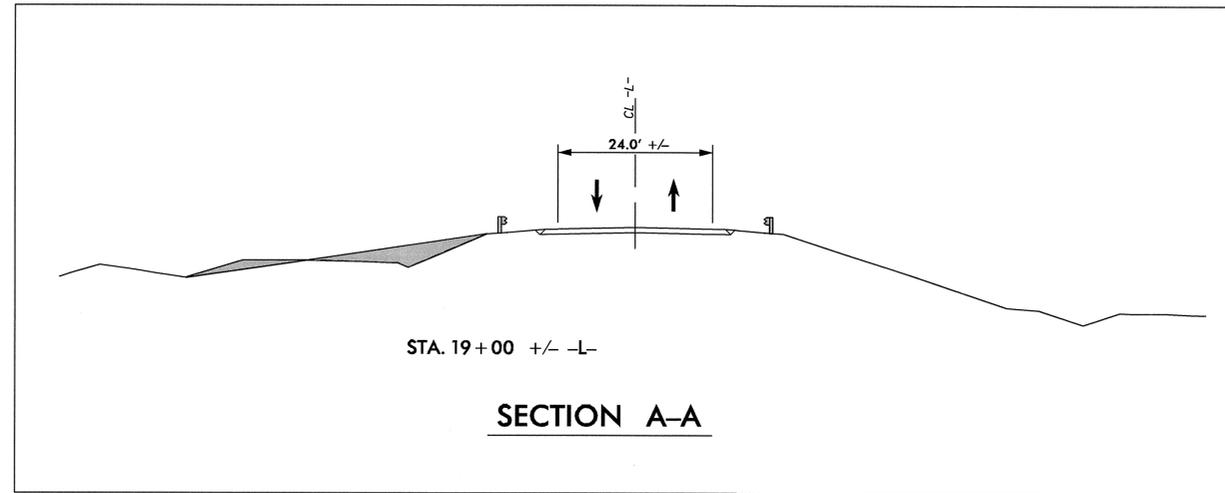
CARD FILE

PHASE II

STEP 1: - USING ROADWAY STANDARD DRAWING No. 1101.02, SHEET 1 OF 9:

- REMOVE EXISTING BRIDGE AND PAVEMENT AND COMPLETE ANY REMAINING CONSTRUCTION OF -L-. (SEE CONSTRUCTION PLANS).
- PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS AND PERMANENT RAISED MARKERS PER PAVEMENT MARKING PLAN FROM STATION 10+50 +/- -L- TO STATION 29+00 +/- -L-. (SEE CONSTRUCTION PLANS, PAVEMENT MARKING PLANS).

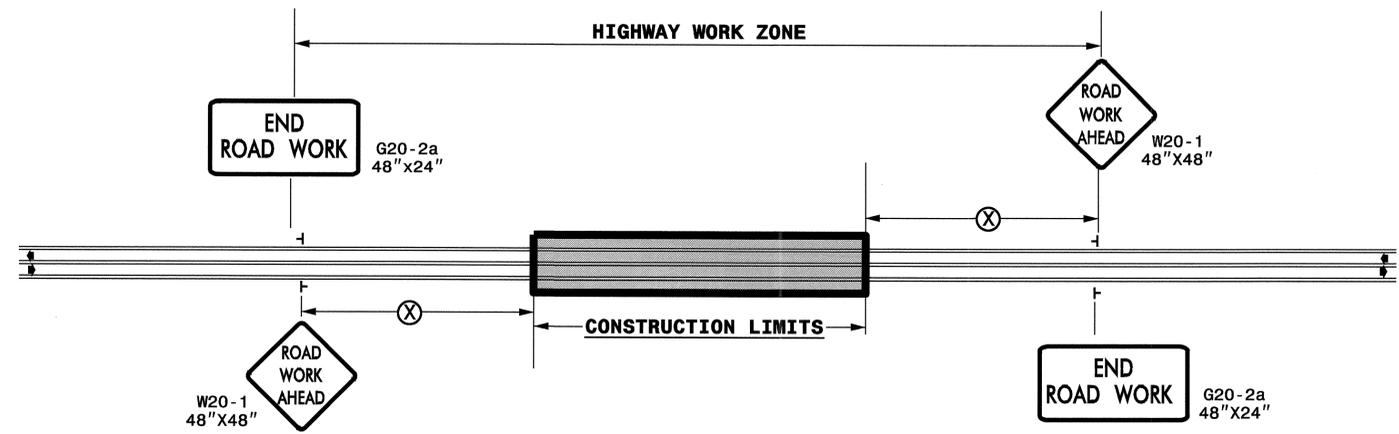
STEP 2: - REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN TO FINAL TRAFFIC PATTERN.



 AREA TO BE REMOVED

APPROVED: _____ DATE: _____	PHASE II	
		
SCALE: NONE		REVISIONS
DATE: 11/09		
DWG. BY: SNG		
DESIGN BY: SNG		
REVIEWED BY: JWG		CADD FILE

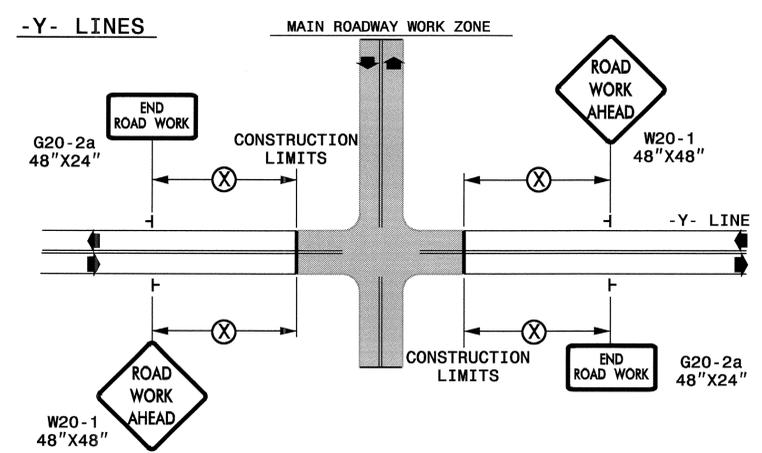
TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	500'
≥ 55	1000'

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

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



DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

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.
- 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.
- 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

APPROVED: _____	DATE: _____
<p>DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS</p>	
SCALE: NONE	REVISIONS
DATE: _____	7-98 10/01
DWG. BY: _____	10-98 03/04
DESIGN BY: _____	01/01 11/04
REVIEWED BY: _____	CADD FILE

08-JAN-2010 10:49
 C:\p01\proj\01\TrafficControl\TCP\B-4459_TC-TCP-5.dgn
 sngpr@n.