

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
B-3453	TCP-1

**PLAN FOR PROPOSED
TRAFFIC CONTROL, MARKING & DELINEATION
EDGECOMBE & HALIFAX COUNTIES**

B-3453

TIP PROJECT:

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - ROADWAY DESIGN UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JANUARY 2002 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
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
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 - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-2	PROJECT NOTES: GENERAL NOTES
TCP-3	PROJECT NOTES: LOCAL NOTES TEMPORARY PAVEMENT MARKING SCHEDULE
TCP-4	PHASING
TCP-5 THROUGH TCP-8	PHASE I AND PHASE II
TCP-9	DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE SIGNS
TCP-10	TEMPORARY SHOULDER CLOSURES (REPLACEMENT DETAIL FOR RSD 1101.04)
TCP-11	DRUM DETAIL (REPLACEMENT DETAIL FOR RSD 1130.01)
TCP-12	BARRICADES - TYPE III (REPLACEMENT DETAIL FOR RSD 1145.01)
TCP-13	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS
PM-1	FINAL PAVEMENT MARKING SCHEDULE
PM-2 THROUGH PM-3	FINAL PAVEMENT MARKING PLANS

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT. EXIST. PVMT.
 - WORK AREA
 - WEDGING
 - REMOVAL OF EXISTING PAVEMENT
 - REMOVAL OF EXISTING EMBANKMENT
- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
 - TYPE II BARRICADE
 - TYPE III BARRICADE
 - CONE
 - DRUM
 - FLASHING ARROW PANEL (TYPE C)
 - TYPE 'B' WARNING LIGHT
 - STATIONARY SIGN
 - PORTABLE SIGN
 - STATIONARY OR PORTABLE SIGN
 - WARNING FLAGS
 - CRASH CUSHION
 - CHANGEABLE MESSAGE SIGN
 - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
 - POLICE
 - FLAGGER
 - SHORING
 - PCB
- PAVEMENT MARKINGS**
- YELLOW/YELLOW PAVEMENT MARKER
 - CRYSTAL/RED PAVEMENT MARKER
 - PAVEMENT MARKING SYMBOLS

<p>PLAN PREPARED FOR N.C.D.O.T. BY:</p> <p>R.W. PORTER JR, P.E. PROJECT ENGINEER</p> <p>G.F. KOGUT, P.E. DESIGN ENGINEER</p> <p>G.F. KOGUT, P.E. DESIGN TECHNICIAN</p>	<p>MA Engineering CONSULTANTS, INC. 598 East Chatham Street, Suite 127, Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221</p>	<p>APPROVED: </p> <p>DATE: 01-05-07</p>	<p>PLAN REVIEWED BY: N.C.D.O.T. TRAFFIC CONTROL, MARKING & DELINEATION SECTION</p> <p>J.S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER</p> <p>J.S. KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER</p> <p>J.D. KUSE, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER</p> <p>D.W. BISSETTE, P.E. TRAFFIC CONTROL DESIGN ENGINEER / TECHNICIAN</p>
<p>SEAL</p>			

PROJECT NOTES

GENERAL NOTES

A) ADAPT THE TRAFFIC CONTROL PLANS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

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.

TIME RESTRICTIONS

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

ROAD NAME

ALL ROADS

HOLIDAY

1. FOR ANY EVENT THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 4:00 P.M. DECEMBER 31ST TO 8:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A SATURDAY OR A SUNDAY, THEN UNTIL 8:00 A.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 4:00 P.M. THURSDAY AND 8:00 A.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY TO 8:00 A.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 4:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A SATURDAY OR SUNDAY, THEN BETWEEN THE HOURS OF 4:00 P.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 4:00 P.M. FRIDAY TO 8:00 A.M. TUESDAY.
7. FOR THANKSGIVING, BETWEEN THE HOURS OF 4:00 P.M. TUESDAY TO 8:00 A.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 4:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 A.M. THE FOLLOWING MONDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC OR CLOSE ROADS AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
US 301	MON. - SUN. 6:00 AM TO 12:00 AM MIDNIGHT

D) DO NOT STOP TRAFFIC FOR MORE THAN 30 MINUTES AS FOLLOWS:

OPERATION	ROAD NAME
PLACING GIRDERS	ALL ROADS

LANE CLOSURE REQUIREMENTS

E) 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.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 FT (12m) 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.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT (1.5m) 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.

H) 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.

I) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.

J) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15' OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) 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" ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

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

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

L) DO NOT EXCEED A DIFFERENCE OF 1.5 inches IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE AND A MINIMUM OF ONCE EVERY MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

M) NOTIFY THE ENGINEER 21 CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

N) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.

O) CONTRACTOR WILL BE RESPONSIBLE FOR PERMANENT SIGNING WITHIN THE PROJECT LIMITS.

P) INSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

Q) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) 500' IN ADVANCE OF THE UNEVEN AREA.

R) INSTALL BLACK ON ORANGE "BUMP" SIGNS (W8-1) 500' IN ADVANCE OF THE UNEVEN AREA.

TRAFFIC BARRIER

S) INSTALL MOVABLE/PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE MOVABLE/PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION, PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

ONCE MOVABLE/PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE MOVABLE/PORTABLE CONCRETE BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET MOVABLE/PORTABLE CONCRETE BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

T) PROTECT THE APPROACH END OF PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED IMPACT ATTENUATOR OR A TEMPORARY CRASH CUSHION. OFFSET THE APPROACH END OF PORTABLE CONCRETE BARRIER A MINIMUM OF 40' FROM ONCOMING TRAFFIC OR PROTECT AT ALL TIMES BY A TEMPORARY CRASH CUSHION.

INSTALL PORTABLE CONCRETE BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE PORTABLE CONCRETE BARRIER AGAINST THE TRAFFIC FLOW, BEGINNING WITH THE DOWNSTREAM SIDE OF TRAFFIC.

INSTALL AND SPACE DRUMS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH) TO CLOSE OR KEEP CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

TRAFFIC CONTROL DEVICES

U) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT, EXCEPT 10' ON-CENTER IN RADII, AND 3' OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.

V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN (R11-2) ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
1. ALL ROADS	THERMOPLASTIC	RAISED REFLECTIVE
2. BRIDGE DECK	POLYUREA	RAISED REFLECTIVE

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

ROAD NAME	MARKING	MARKER
1. ALL ROADS	PAINT	TEMPORARY RAISED REFLECTIVE
2. BRIDGE DECK	TAPE	TEMPORARY RAISED REFLECTIVE

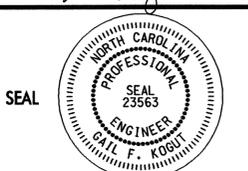
Y) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

Z) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.

AA) PLACE TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE THE SECOND APPLICATION OF PAINT UPON AMPLE DRYING TIME OF THE FIRST, AS DETERMINED BY THE ENGINEER.

MISCELLANEOUS

BB) PLACE DRUMS TO DELINEATE EXISTING ISLANDS AFTER REMOVAL AND TO DELINEATE PROPOSED ISLANDS BEFORE INSTALLATION.

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PROJECT NOTES CONTINUED

LOCAL NOTES

- 1) DO NOT UNDERCUT MORE MATERIAL THAN CAN BE BACKFILLED IN ONE DAYS OPERATION.
- 2) DO NOT DISTURB FORCE MAIN SANITARY SEWER.
- 3) CONTRACTOR TO MAINTAIN TEMPORARY DITCH AND TBDI TO ENSURE DRAINAGE OF TRAVEL LANES.
- 4) DO NOT STOP TRAFFIC FOR MORE THAN 15 MINUTES AS FOLLOWS:

OPERATION	ROAD NAME
SHIFTING TRAFFIC	ALL ROADS

TEMPORARY PAVEMENT MARKING SCHEDULE

Pavement Marking Schedule
TIP Project # B-3453

SYMBOL	DESCRIPTION	PAY ITEM QUANTITY	TOTAL
INTERMEDIATE PAVEMENT MARKINGS			
REMOVABLE TAPE (4")			
RA	WHITE EDGELINE	926 LF	
RI	YELLOW DOUBLE CENTER	926 LF	
		TOTAL	1852 LF
PAINT (4")			
PA	WHITE EDGELINE (2X)	10948 LF	
PD	2 FT. WHITE MINISKIP (2X)	33 LF	
PE	WHITE SOLID LANE LINE (2X)	350 LF	
PI	YELLOW DOUBLE CENTER (2X)	10764 LF	
		TOTAL	22095 LF
MARKERS			
TEMPORARY RAISED PAVEMENT MARKERS			
MH	YELLOW & YELLOW	184 EA	
MI	CRYSTAL & RED	10 EA	
		TOTAL	194 EA

NOTES:

FOR EACH PAINT PAVEMENT MARKING ITEM:
 1X IMPLIES A SINGLE APPLICATION,
 2X IMPLIES TWO (2) APPLICATIONS, AND
 3X IMPLIES THREE (3) APPLICATIONS

REFER TO ROADWAY STANDARD DRAWING NOS.1250.01
 AND 1251.01 FOR THE PLACEMENT OF TEMPORARY
 PAVEMENT MARKERS.

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APPROVED: <i>David F. Kobb</i> DATE: 01-10-03 	<h2 style="margin: 0;">PROJECT NOTES</h2>														
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PHASING

PHASE I

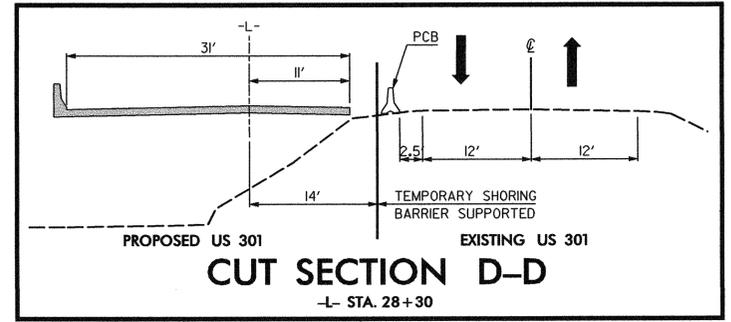
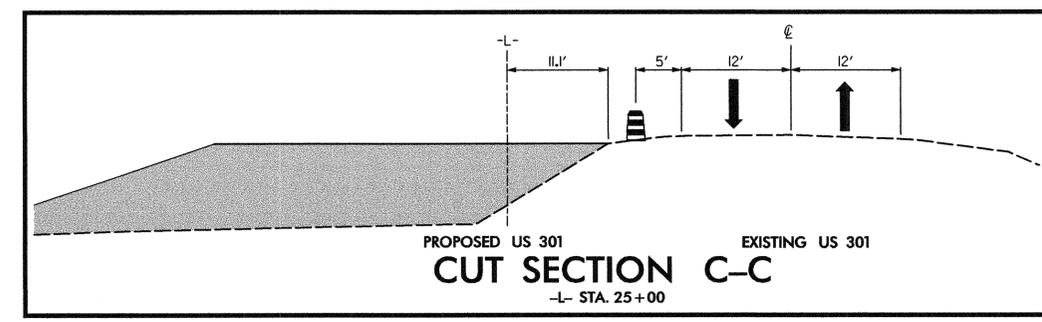
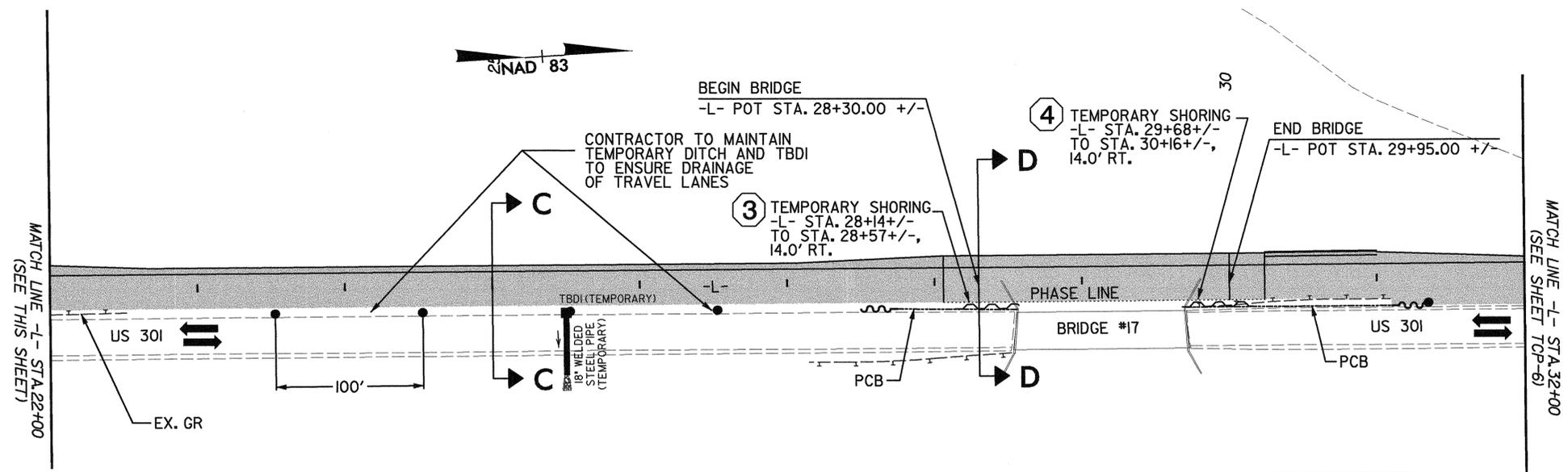
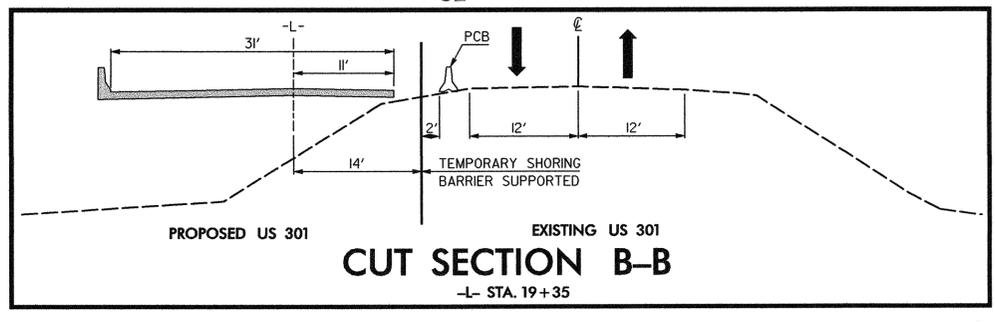
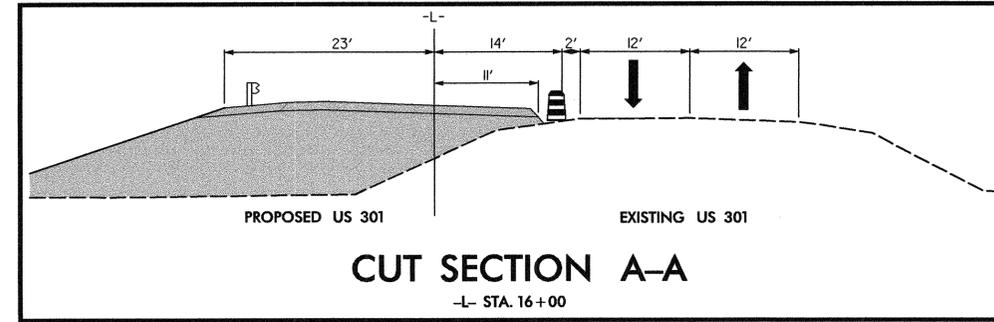
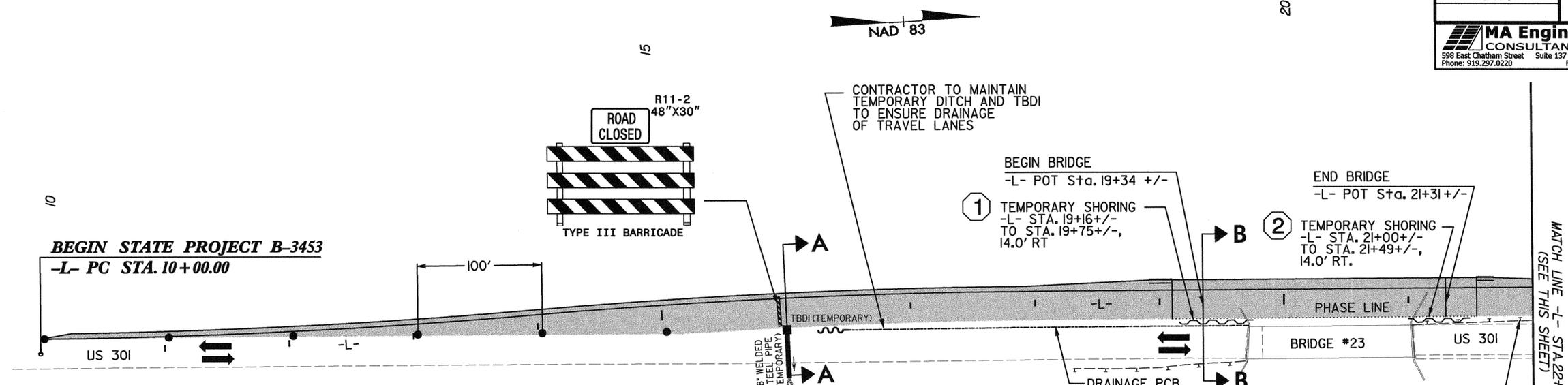
- STEP 1) INSTALL ADVANCE WARNING SIGNS ON US 301. (SEE TCP-9)
- STEP 2) AWAY FROM TRAFFIC, UNDERCUT UNSUITABLE MATERIAL AND BACKFILL FROM -L- STA. 31+00 +/- LT. TO -L- STA. 38+00 +/- LT. (SEE ROADWAY PLANS AND LOCAL NOTE #1.)
- USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7) AND FLAGGERS, INSTALL PORTABLE CONCRETE BARRIER AND TEMPORARY CRASH CUSHIONS AS FOLLOWS:
- DRAINAGE PORTABLE CONCRETE BARRIER -L- STA. 16+25 +/- RT. TO -L- STA. 19+71 +/- RT. (SEE TCP-5)
 PORTABLE CONCRETE BARRIER -L- STA. 27+50 +/- RT. TO -L- STA. 28+56 +/- RT. (SEE TCP-5)
 PORTABLE CONCRETE BARRIER -L- STA. 29+70 +/- RT. TO -L- STA. 31+10 +/- RT. (SEE TCP-5)
- USING REPLACEMENT DETAIL FOR RSD NO. 1101.04 (SEE TCP-10), BEGIN WIDENING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:
- L- STA. 10+00 +/- LT. TO -L- STA. 19+34 +/- LT. (SEE TCP-5)
 -L- STA. 29+95 +/- LT. TO -L- STA. 36+40 +/- LT. (SEE TCP-6)
- USING REPLACEMENT DETAIL FOR RSD NO. 1101.04 (SEE TCP-10), CONSTRUCT EMBANKMENT UP TO EDGE AND ELEVATION OF EXISTING US 301 SHOULDER BREAK POINT AT THE FOLLOWING LOCATION:
- L- STA. 21+30 +/- LT. TO -L- STA. 28+30 +/- LT. (SEE TCP-5)
- USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7), INSTALL TEMPORARY TRAFFIC BEARING DROP INLETS AND TEMPORARY 18" WELDED STEEL PIPES BY BORING AND JACKING. (SEE TCP-5 AND TCP-6 AND LOCAL NOTES 2 AND 3)
- STEP 3) AWAY FROM TRAFFIC, INSTALL TEMPORARY SHORING AS FOLLOWS: (SEE TCP-5 AND TCP-5A)
- TEMPORARY SHORING FROM -L- STA. 19+16 +/- RT. TO -L- STA. 19+75 +/- RT.
 TEMPORARY SHORING FROM -L- STA. 21+00 +/- RT. TO -L- STA. 21+49 +/- RT.
 TEMPORARY SHORING FROM -L- STA. 28+14 +/- RT. TO -L- STA. 28+57 +/- RT.
 TEMPORARY SHORING FROM -L- STA. 29+68 +/- RT. TO -L- STA. 30+16 +/- RT.
- CONSTRUCT TEMPORARY WORK BRIDGE ON THE WEST SIDE OF PROPOSED BRIDGE #23 AS SHOWN IN THE STRUCTURE PLANS.
- STEP 4) USING REPLACEMENT DETAIL FOR RSD NO. 1101.04 (SEE TCP-10), COMPLETE WIDENING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:
- L- STA. 10+00 +/- LT. TO -L- STA. 19+34 +/- LT. (SEE TCP-5)
 -L- STA. 29+95 +/- LT. TO -L- STA. 36+40 +/- LT. (SEE TCP-6)
- MAINTAIN TRAFFIC IN EXISTING PATTERN. CONSTRUCT 31' IN CLEAR ROADWAY WIDTH OF PROPOSED BRIDGE AT -L- STA. 19+34 +/- AND 31' IN CLEAR ROADWAY WIDTH OF PROPOSED BRIDGE AT -L- STA. 28+30 +/- . (SEE TCP-5 AND STRUCTURE PLANS)
- USING REPLACEMENT DETAIL FOR RSD NO. 1101.04 (SEE TCP-10), CONSTRUCT PAVED SHOULDER UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -L- STA. 37+50 +/- LT. TO -L- STA. 42+00 +/- LT. AND CONSTRUCT DRIVEWAYS AT -L- STA. 37+75 +/- LT. AND -L- STA. 40+15 +/- LT. OBLITERATE PAVEMENT INCLUDING ISLAND REMOVAL FROM -L- 36+50 +/- LT. TO -L- STA. 42+00 +/- LT. (SEE TCP-6)
- STEP 5) USING REPLACEMENT DETAIL FOR RSD NO. 1101.04 (SEE TCP-10), COMPLETE WIDENING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATION:
- L- STA. 21+30 +/- LT. TO -L- STA. 28+30 +/- LT. (SEE TCP-5)
- MAINTAIN TRAFFIC IN EXISTING PATTERN. INSTALL PROPOSED GUARDRAIL ON LEFT SIDE OF PROPOSED US 301 AT LOCATIONS AS SHOWN ON THE ROADWAY PLANS.

PHASE II

- STEP 1) USING REPLACEMENT STANDARD FOR RSD 1101.04 (SEE TCP-10), INSTALL SHORING FOR PHASE II AS FOLLOWS: (SEE TCP-7 AND TCP-7A)
- TEMPORARY SHORING FROM -L- STA. 19+10 +/- RT. TO -L- STA. 19+34 +/- RT.
 TEMPORARY SHORING FROM -L- STA. 21+31 +/- RT. TO -L- STA. 21+55 +/- RT.
 TEMPORARY SHORING FROM -L- STA. 28+06 +/- RT. TO -L- STA. 28+30 +/- RT.
 TEMPORARY SHORING FROM -L- STA. 30+00 +/- RT. TO -L- STA. 30+24 +/- RT.
- AWAY FROM TRAFFIC AND USING REPLACEMENT STANDARD FOR RSD 1101.04 (SEE TCP-10), INSTALL PORTABLE CONCRETE BARRIER FOR PHASE II AS FOLLOWS: (SEE TCP-7)
- DRAINAGE PORTABLE CONCRETE BARRIER INCLUDING TEMPORARY CRASH CUSHION FROM -L- STA. 15+50 +/- RT. TO -L- STA. 19+10 +/- RT.
 ANCHORED PORTABLE CONCRETE BARRIER FROM -L- STA. 19+10 +/- RT. TO -L- STA. 21+55 RT.
 DRAINAGE PORTABLE CONCRETE BARRIER FROM -L- STA. 21+55 +/- RT. TO -L- STA. 28+06 +/- RT.
 ANCHORED PORTABLE CONCRETE BARRIER FROM -L- STA. 28+06 +/- RT. TO -L- STA. 30+24 RT.
 DRAINAGE PORTABLE CONCRETE BARRIER INCLUDING TEMPORARY CRASH CUSHION FROM -L- STA. 30+24 +/- RT. TO -L- STA. 31+73 +/- RT.
- STEP 2) USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7) WITH FLAGGERS AND ROADWAY STANDARD DRAWING NO. 1101.04, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) FROM -L- STA. 16+00 +/- TO -L- STA. 33+50 +/- (SEE TCP-7 AND TCP-8)
- STEP 3) USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7) AND FLAGGERS, WEDGE UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE UNDER TRAFFIC AT THE FOLLOWING LOCATIONS:
- L- STA. 10+00 +/- TO -L- STA. 16+00 +/- (SEE TCP-7)
 -L- STA. 33+50 +/- TO -L- STA. 42+00 +/- (SEE TCP-8)
- USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7), CONVERT TBDI AT -L- STA. 33+50 +/- RT. TO JUNCTION BOX.
- STEP 4) SWITCH TRAFFIC TO PHASE II PATTERN AND USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7) AS NEEDED PLACE REMAINING PAVEMENT MARKINGS FOR THE PHASE II PATTERN AT THE FOLLOWING LOCATIONS:
- L- STA. 10+00 +/- TO -L- STA. 16+00 +/- (SEE TCP-7)
 -L- STA. 33+50 +/- TO -L- STA. 42+00 +/- (SEE TCP-8)
- USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7) AND FLAGGERS, INSTALL ADDITIONAL DRAINAGE PORTABLE CONCRETE BARRIER AND RESET TEMPORARY CRASH CUSHIONS AT THE FOLLOWING LOCATION:
- L- STA. 14+50 +/- -L- STA. 15+50 +/- RT. (SEE TCP-7)
- STEP 5) AWAY FROM TRAFFIC, REMOVE SHORING INSTALLED FOR PHASE I EXCAVATION.
- USING REPLACEMENT STANDARD FOR RSD 1101.04 (SEE TCP-10), CONSTRUCT ACCESS POINT FOR CONSTRUCTION VEHICLES FROM -L- STA. 22+25 +/- TO -L- STA. 24+55 +/- AS SHOWN ON TCP-7.
- AWAY FROM TRAFFIC, REMOVE EXISTING BRIDGES AND COMPLETE CONSTRUCTION OF REMAINING WIDTH OF PROPOSED BRIDGES AT -L- STA. 19+34 +/- AND -L- STA. 28+30 +/- . (SEE TCP-7 AND TCP-8)
- AWAY FROM TRAFFIC, REMOVE TEMPORARY PIPES AND OBLITERATE PAVEMENT ON EXISTING US 301 AS SHOWN ON TCP-7 AND TCP 8.
- AWAY FROM TRAFFIC, COMPLETE DRAINAGE, WIDENING, AND NEW CONSTRUCTION UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:
- L- STA. 14+50 +/- RT. TO -L- STA. 19+34 +/- RT. (SEE TCP-7)
 -L- STA. 21+30 +/- RT. TO -L- STA. 28+30 +/- RT. (SEE TCP-7)
 -L- STA. 29+95 +/- RT. TO -L- STA. 36+00 +/- RT. (SEE TCP-8)
- AWAY FROM TRAFFIC, INSTALL PROPOSED GUARDRAIL ON RIGHT SIDE OF PROPOSED US 301 AT LOCATIONS AS SHOWN ON THE ROADWAY PLANS.
- STEP 6) USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7) WITH FLAGGERS AND USING REPLACEMENT DETAIL FOR RSD NO. 1101.04 (SEE TCP-10), REMOVE PCB AND PLACE SURFACE COURSE.
- USING ROADWAY STANDARD DRAWING NO. 1101.02 (SHEET 1 OF 7) WITH FLAGGERS AND USING REPLACEMENT DETAIL FOR RSD NO. 1101.04 (SEE TCP-10), INSTALL FINAL MARKINGS AND MARKERS (SEE PM-1 THROUGH PM-3)

APPROVED: <i>David F. Kopt</i> DATE: 01-28-07 	<h2 style="margin: 0;">PHASING</h2>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td>SCALE:</td> <td>NONE</td> </tr> <tr> <td>DATE:</td> <td>01-20-03</td> </tr> <tr> <td>DWG. BY:</td> <td>GFK</td> </tr> <tr> <td>DESIGN BY:</td> <td>GFK</td> </tr> <tr> <td>REVIEWED BY:</td> <td>RWP</td> </tr> </table>	SCALE:	NONE	DATE:	01-20-03	DWG. BY:	GFK	DESIGN BY:	GFK	REVIEWED BY:	RWP
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LEGEND	
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	WEDGING
	REMOVAL OF EXISTING PAVEMENT
	SHORING
	PCB

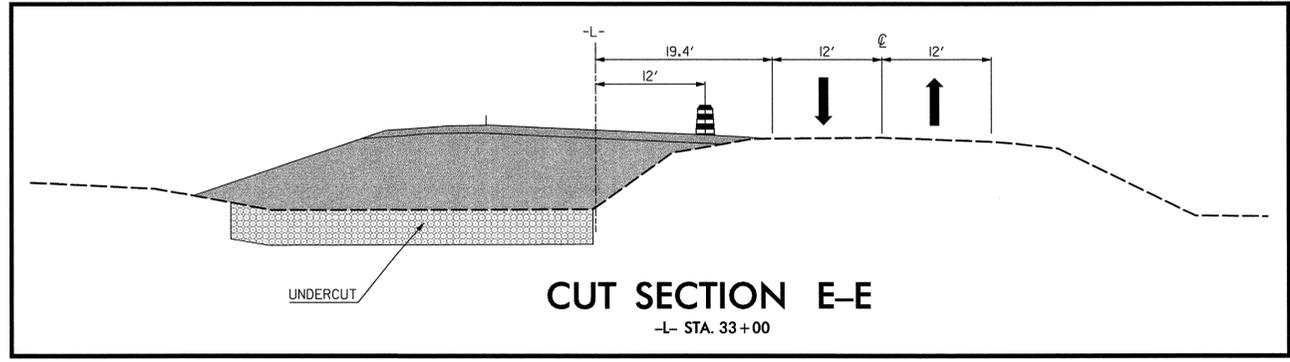
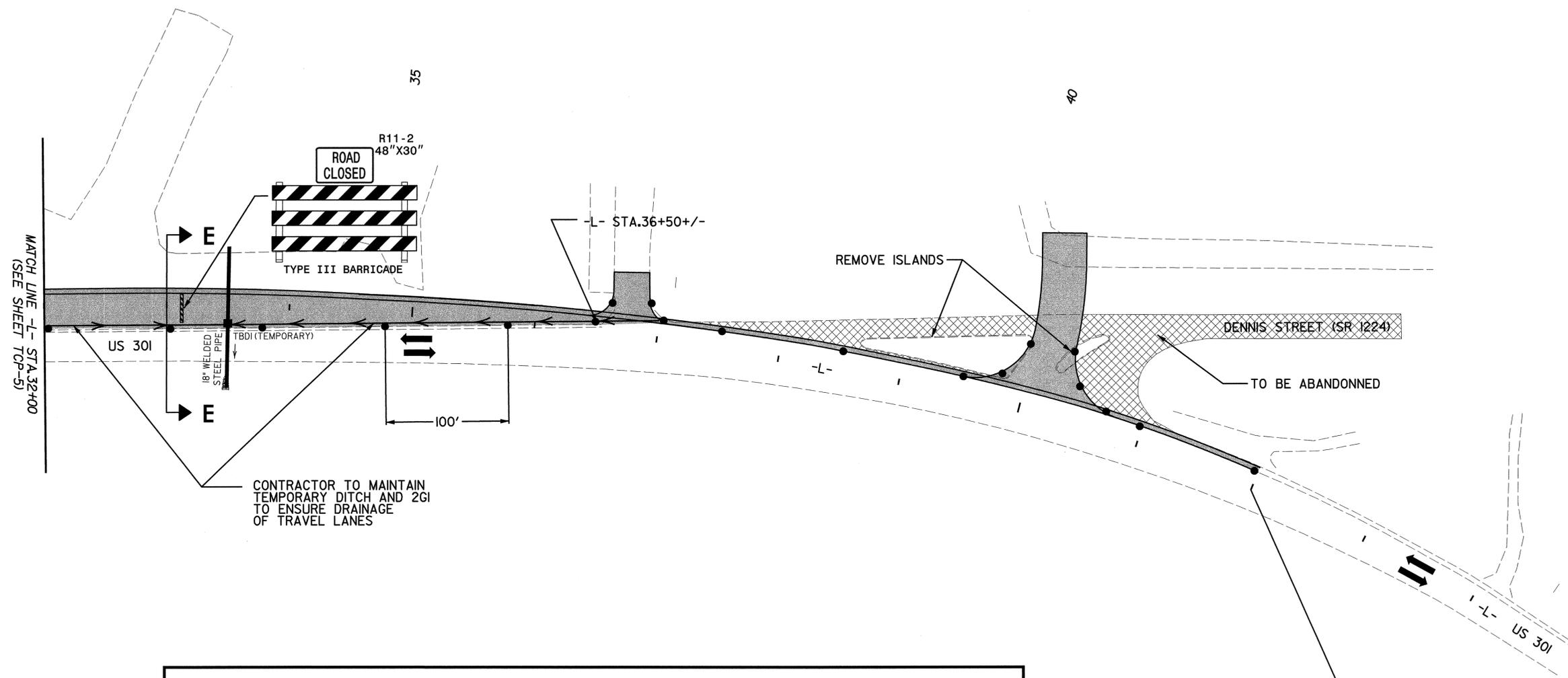
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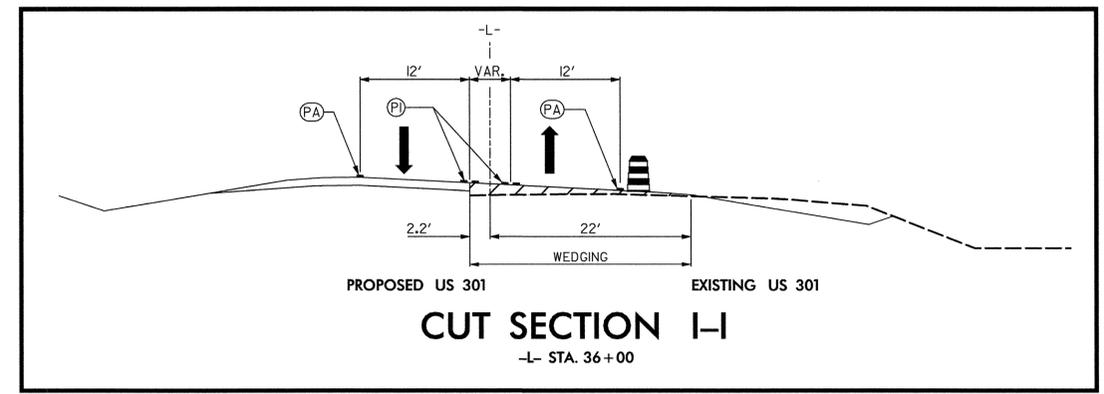
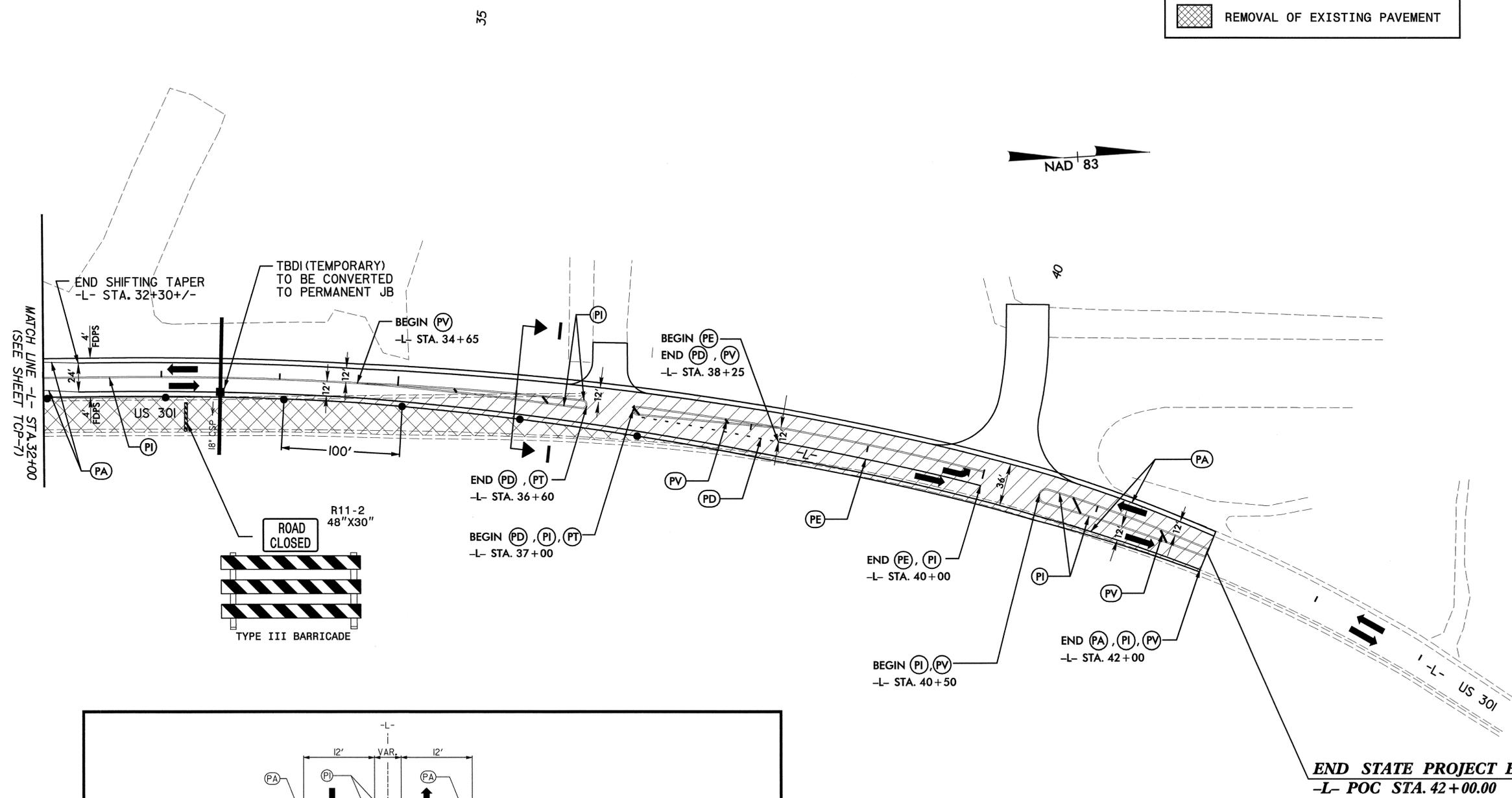
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	WORK AREA		SHORING
	WEDGING		PCB
	REMOVAL OF EXISTING PAVEMENT		



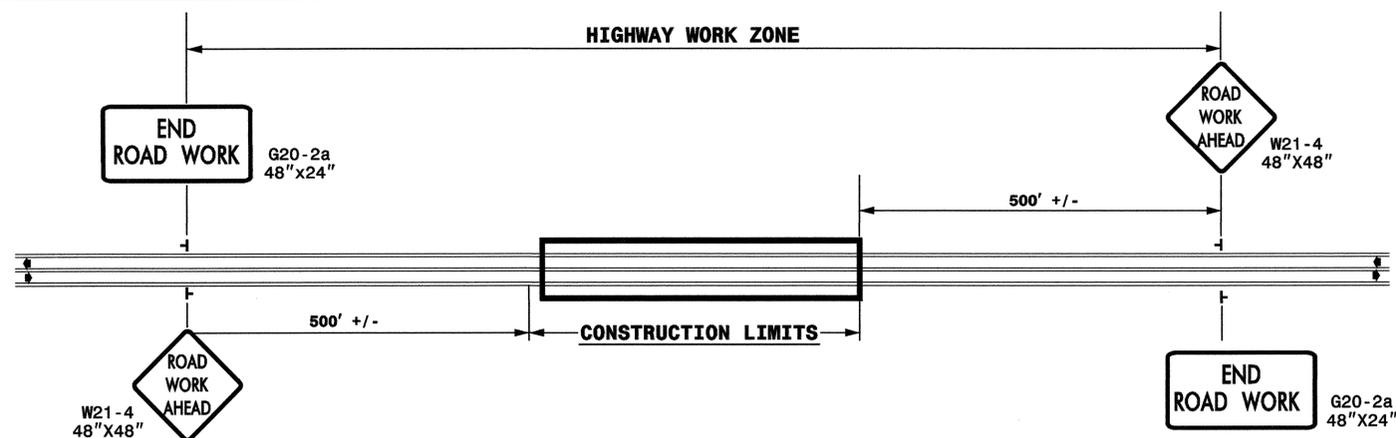
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SEE TCP-3 FOR PAVEMENT MARKING SCHEDULE.
SHEET 4 OF 4

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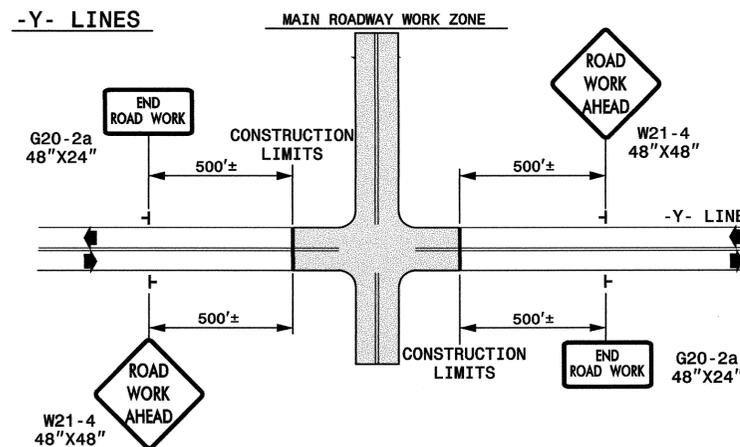
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TWO-WAY UNDIVIDED WORK ZONE (L-LINES)



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

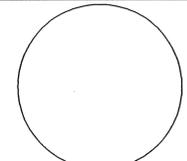
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, 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.

LEGEND

┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

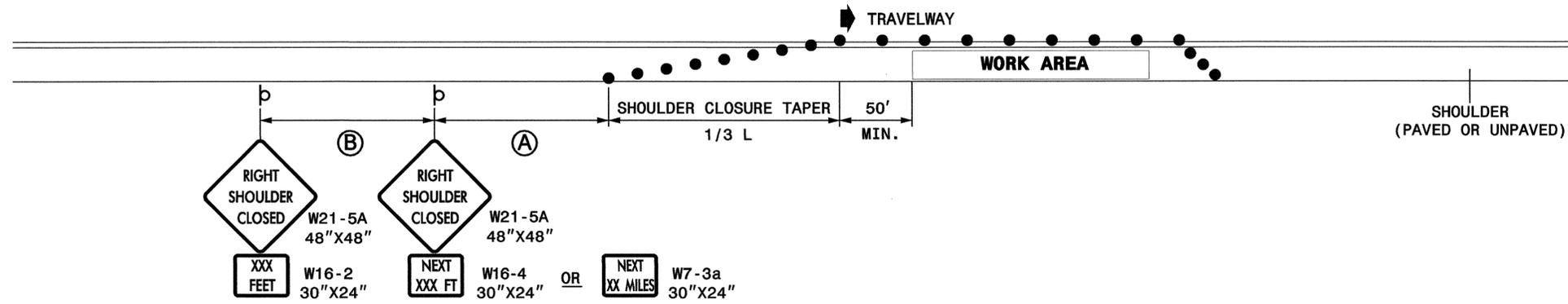
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SEAL 	SCALE: NONE	REVISIONS
	DATE: 7-98	10/01
	DWG. BY:	10-98 03/04
	DESIGN BY:	01/01
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

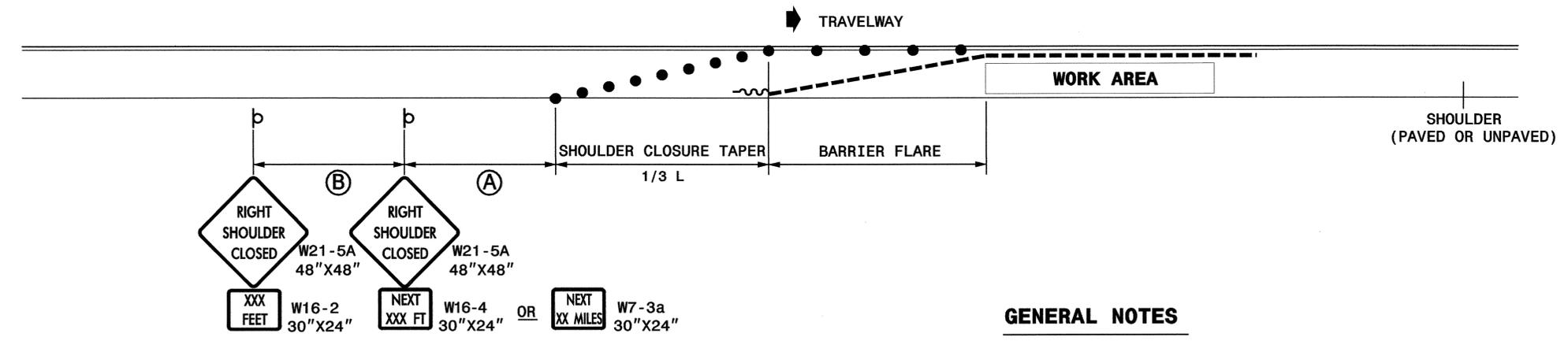
1-05

ENGLISH STANDARD DRAWING FOR
TEMPORARY SHOULDER CLOSURES

SHOULDER CLOSURES UTILIZING DRUMS



SHOULDER CLOSURES UTILIZING TEMPORARY BARRIER



GENERAL NOTES

- PLACE SHOULDER CLOSURE SIGNS ON THE SAME SIDE AS THE SHOULDER THAT IS CLOSED.
- PLACE DRUMS IN THE SHOULDER TAPER AT THE MAXIMUM SPACING EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MAXIMUM SPACING OF DRUMS ALONG THE WORK AREA AND BARRIER FLARE IS EQUAL IN FEET TO 2 TIMES THE POSTED SPEED LIMIT.
- FLARE THE APPROACH END OF PORTABLE CONCRETE BARRIER BEYOND THE SHOULDER AND USE A CRASH CUSHION FOR PROTECTION IF THE EXPOSED END OF THE BARRIER IS WITHIN THE "CLEAR ZONE".
- USE STATIONARY SIGNS FOR LONG TERM OPERATIONS (LONGER THAN 3 DAYS).
- REFER TO STD. 1101.11 SHEETS 1, 3, & 4, FOR "L" DISTANCE, BARRIER FLARE RATES, AND SIGN SPACING.

LEGEND

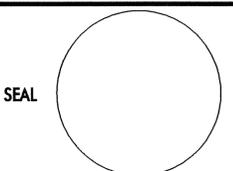
- ~ TEMPORARY CRASH CUSHION
- - - PORTABLE CONCRETE BARRIER
- DRUM
- ⊔ STATIONARY OR PORTABLE SIGN
- ➔ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1
1101D04

SHEET 1 OF 1
1101D04

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

ENGLISH STANDARD DRAWING FOR
TEMPORARY SHOULDER CLOSURES

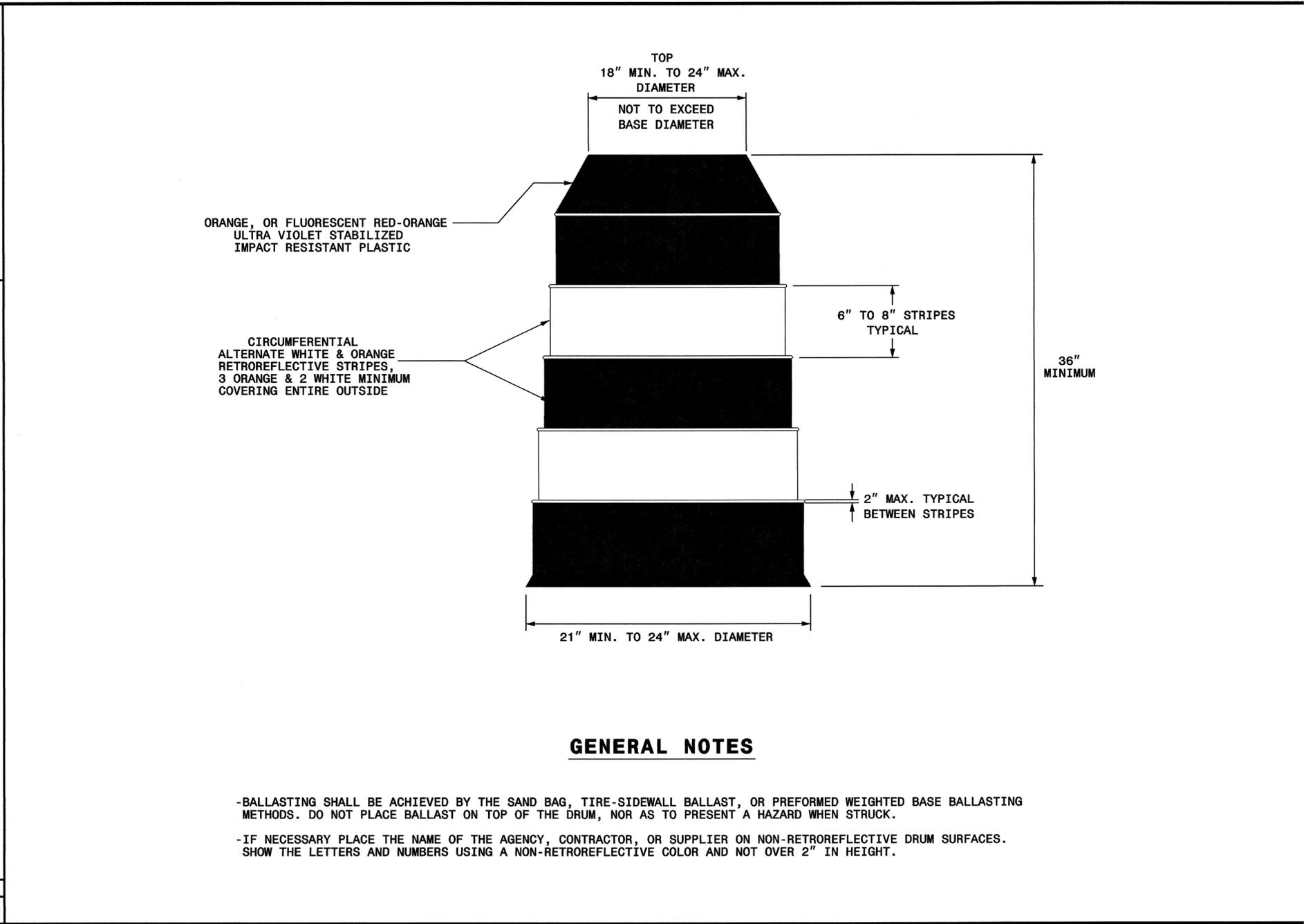
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		DATE: 11/04	
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DESIGN BY: MMM			
REVIEWED BY: MMM			

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

ENGLISH STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130D01



GENERAL NOTES

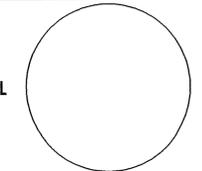
- BALLASTING SHALL BE ACHIEVED BY THE SAND BAG, TIRE-SIDEWALL BALLAST, OR PREFORMED WEIGHTED BASE BALLASTING METHODS. DO NOT PLACE BALLAST ON TOP OF THE DRUM, NOR AS TO PRESENT A HAZARD WHEN STRUCK.
- IF NECESSARY PLACE THE NAME OF THE AGENCY, CONTRACTOR, OR SUPPLIER ON NON-RETROREFLECTIVE DRUM SURFACES. SHOW THE LETTERS AND NUMBERS USING A NON-RETROREFLECTIVE COLOR AND NOT OVER 2" IN HEIGHT.

STATE OF
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ENGLISH STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130D01

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

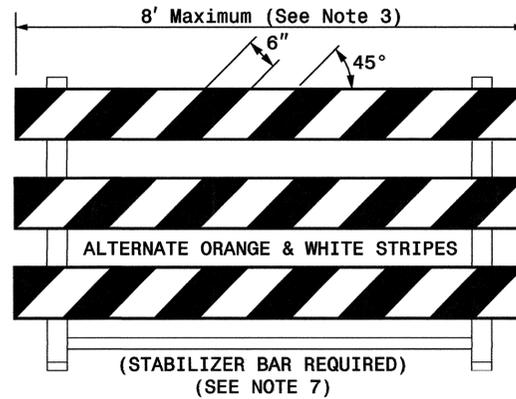
1-05

ENGLISH STANDARD DRAWING FOR
BARRICADES
 TYPE-III

SHEET 1 OF 1

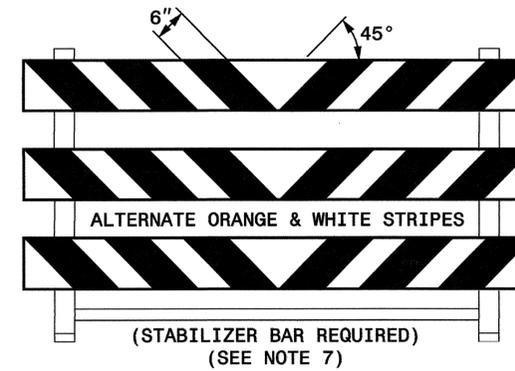
1145D01

TYPE III BARRICADE



TYPE III BARRICADE

END-OF-ROADWAY APPLICATIONS



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

1-05

ENGLISH STANDARD DRAWING FOR
BARRICADES
 TYPE-III

SHEET 1 OF 1

1145D01

GENERAL NOTES

- 1) HORIZONTAL RAILS FOR TYPE-III BARRICADES MAY BE HOLLOW/CORRUGATED EXTRUDED RIGID POLYOLEFIN, HIGH DENSITY POLYETHYLENE, OR OTHER NCDOT APPROVED RAILS. BARRICADE RAILS OF FRANGIBLE PLASTICS SUCH AS PVC MAY NOT BE USED. IF APPROVED PLASTIC TYPE RAILS ARE USED, THEY MUST BE FLAME TREATED BY THE MANUFACTURER SO THAT REFLECTIVE SHEETING MAY ADHERE PROPERLY.
- 2) BARRICADES AND BARRICADE RAILS ARE APPROVED AS A SINGLE UNIT.
- 3) BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 8 FT UNLESS NCHRP 350 CRASH TESTED AND NCDOT APPROVED.
- 4) ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE.
- 5) SIGNS MOUNTED ON BARRICADES SHOULD NOT COVER MORE THAN 50 PERCENT OF THE TOP TWO RAILS OR 33 PERCENT OF THE TOTAL AREA OF THE THREE RAILS.
- 6) USE TYPE VII, VIII OR IX SHEETING ON BOTH SIDES OF THE RAILS.
- 7) BARRICADE MUST BE NCHRP 350 AND NCDOT APPROVED WITH STABILIZER BAR OR ADEQUATE LATERAL BRACING.
- 8) ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.
- 9) BARRICADES USED TO CLOSE A ROADWAY SHALL EXTEND ACROSS THE ENTIRE ROADWAY. WHERE LOCAL TRAFFIC MUST BE MAINTAINED, THEY MAY BE PLACED IN A STAGGERED PATTERN.
- 10) STRIPES ON WORK ZONE BARRICADE RAILS SHALL BE ALTERNATE ORANGE AND WHITE RETROREFLECTIVE STRIPES, SLOPED DOWNWARD TOWARDS THE SIDE WHICH TRAFFIC IS TO PASS OR TURN IN DETOURING. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES. USE RED AND WHITE STRIPES FOR PERMANENT BARRICADES.
- 11) SEE APPROVED PRODUCTS LIST FOR MANUFACTURERS OF APPROVED BARRICADES.
- 12) PLACE MANUFACTURER'S NAME AND FEDERAL HIGHWAY ADMINISTRATION'S NCHRP 350 APPROVAL LETTER NUMBER ON BARRICADE.
- 13) USE SANDBAGS PLACED ON THE LOWER PART OF THE FRAME FOR BALLASTING. DO NOT PLACE SANDBAGS ON TOP OF A STRIPED RAIL. DO NOT BALLAST BARRICADES BY HEAVY OBJECTS SUCH AS ROCKS, CHUNKS OF CONCRETE OR OTHER ITEMS THAT WOULD CAUSE DAMAGE IF THE BARRICADE IS STRUCK BY A VEHICLE.

APPROVED: _____	DATE: _____	REPLACEMENT DETAIL FOR RSD 1145.01	
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DESIGN BY: MMM			
REVIEWED BY: MMM			

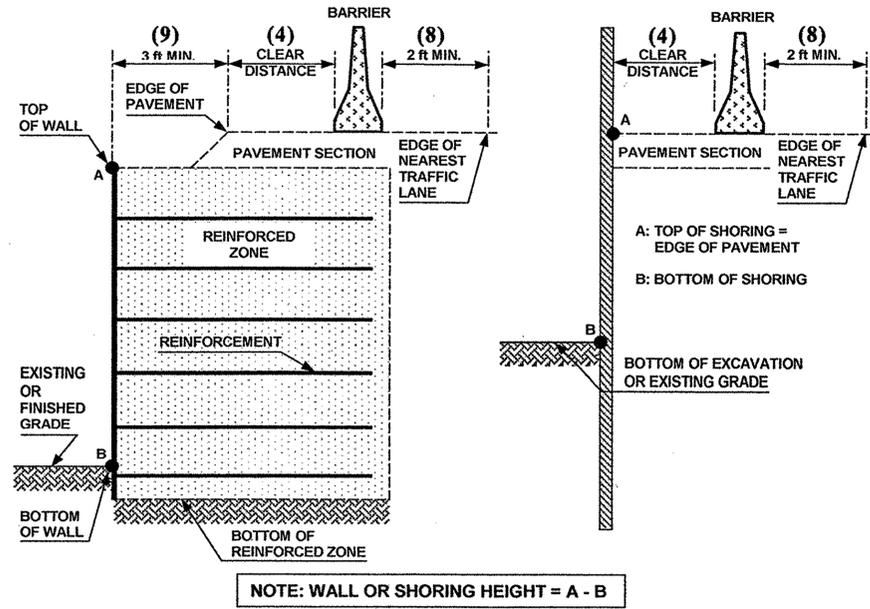


FIGURE A

NOTES

- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE.
- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED PCB, ANCHORED PCB OR AN OREGON BARRIER FROM THE TABLE SHOWN IN FIGURE B. FOR TRAFFIC LANES AND PORTABLE CONCRETE BARRIER LOCATED ABOVE AND BEHIND TEMPORARY SHORING, THE FOLLOWING ARE DEFINED AS:

CLEAR DISTANCE - HORIZONTAL DISTANCE FROM THE BACK FACE OF THE BARRIER TO THE EDGE OF PAVEMENT FOR TEMPORARY MSE WALL OR TO THE FACE OF NON-ANCHORED TEMPORARY SHORING AS SHOWN IN FIGURE A.

OFFSET - HORIZONTAL DISTANCE FROM THE FRONT FACE OF THE BARRIER TO CENTERLINE OF THE FURTHEST TRAFFIC LANE AS SHOWN IN FIGURE B FOR 3 TRAFFIC LANES.
- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET AN UNANCHORED PCB AGAINST THE TRAFFIC SIDE OF THE SHORING AND DESIGN SHORING FOR TRAFFIC IMPACT OR USE THE "SURCHARGE CASE WITH TRAFFIC IMPACT" FOR THE STANDARD TEMPORARY SHORING.
- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: [HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/WZTC/DESRES/ENGLISH/DESRESENG.HTML](http://www.ncdot.org/DOH/PRECONSTRUCT/WZTC/DESRES/ENGLISH/DESRESENG.HTML)
- UNLESS NOTED OTHERWISE ON THE PLANS, SET PORTABLE CONCRETE BARRIER WITH A MINIMUM DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A.
- FOR PORTABLE CONCRETE BARRIER ABOVE AND BEHIND TEMPORARY MSE WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.
- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200' IN LENGTH AND WET OR DRY PAVEMENT.

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset (4) ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
	44-50	31	35	41	43	46	49	
	50-56	32	36	42	44	47	50	
	>56	32	36	42	45	47	51	
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
26-32		24	25	27	28	32	35	
32-38		24	26	27	30	33	36	
38-44		25	26	28	30	34	37	
44-50	26	26	28	32	35	37		
50-56	26	26	28	32	35	38		
>56	26	27	29	32	36	38		
Anchored PCB or Oregon Barrier	Asphalt	All Offsets (4)	24 for All Design Speeds					
Anchored PCB or Oregon Barrier	Concrete (including bridge approach slabs)	All Offsets (4)	12 for All Design Speeds					

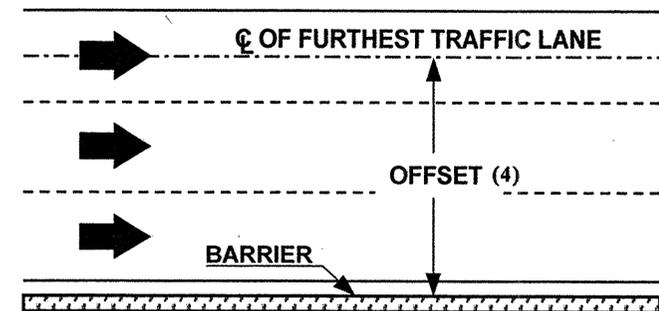
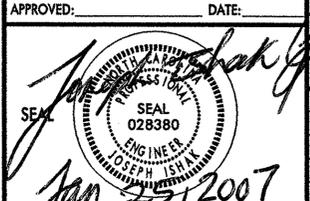


FIGURE B

APPROVED: 	DATE: <u>Jan 25 2007</u>	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS	
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	DATE: 1/07		
	DWG. BY: JI		
	DESIGN BY: JI		
REVIEWED BY: JI			

25-JAN-2007 12:53
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