

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
R - 2409B	TCP-1

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

R-2409B

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
1101.06	WARNING SIGNS FOR BLASTING ZONES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1150.01	FLAGGERS
1160.01	TEMPORARY CRASH CUSHION
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

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LEGEND

- GENERAL**
- ← DIRECTION OF TRAFFIC FLOW
 - ↑ NORTH ARROW
 - PROPOSED PVMT. - - - - - EXIST. PVMT.
 - WORK AREA
 - ▨ REMOVAL OF EXISTING PAVEMENT
- TRAFFIC CONTROL DEVICES**
- I TYPE I BARRICADE
 - II TYPE II BARRICADE
 - ▨ TYPE III BARRICADE
 - ▲ CONE
 - DRUM
 - ⊙ FLASHING ARROW PANEL (TYPE C)
 - ⊙ TYPE 'B' WARNING LIGHT
 - T STATIONARY SIGN
 - ▽ PORTABLE SIGN
 - ⊙ STATIONARY OR PORTABLE SIGN
 - ⚠ WARNING FLAGS
 - ~ 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

\$\$\$\$\$ SYSTEM \$\$\$\$\$
\$\$\$\$\$ USER \$\$\$\$\$

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SCALE: NONE
DATE:
DWG. BY: MDG
DESIGN BY: DAJ
REVIEWED BY: RMS

APPROVED: *R. M. Schuler*
DATE: 3/13/06

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SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 26980
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PROJECT NOTES

PROJ. REFERENCE NO.	SHEET NO.
R-2409B	TCP-2

GENERAL NOTES

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.

- 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.

TIME RESTRICTIONS

- B) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
1. -L- (US 64)	NONE
2. -Y- (RACQUET CLUB DRIVE)	NONE

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

ROAD NAME
1. -L- (US 64)
2. -Y- (RACQUET CLUB DRIVE)

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATE UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S DAY, BETWEEN THE HOURS OF 6:00 A.M. DECEMBER 31ST TO 9:00 A.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON SATURDAY OR SUNDAY, THEN UNTIL 9:00 A.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 9:00 A.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 A.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 P.M. THE DAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A SATURDAY OR SUNDAY, THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 9:00 A.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 9:00 A.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY AND 9:00 A.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 9:00 A.M. THE FOLLOWING MONDAY AFTER THE WEEK OF CHRISTMAS DAY.
9. FOR THE MOUNTAIN GLORY FESTIVAL, BETWEEN THE HOURS OF 6:00 A.M. AND 11:00 P.M. THE SECOND SATURDAY OF OCTOBER.
10. FOR LEAF SEASON, BETWEEN THE HOURS OF 6 A.M. TO 6 P.M., MONDAY THRU SUNDAY, FROM OCTOBER 1ST THRU NOVEMBER 1ST.

- D) DO NOT STOP TRAFFIC FOR MORE THAN 10 MINUTES AS FOLLOWS:

ROAD NAME	OPERATION
-L- (US 64)	SHIFTING TRAFFIC
-L- (US 64)	BLASTING AND DEBRIS REMOVAL/CLEAN UP
-Y- (RACQUET CLUB DRIVE)	BLASTING AND DEBRIS REMOVAL/CLEAN UP

LOCAL NOTES

TRAFFIC BARRIER

- Q) INSTALL PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE 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 PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE PORTABLE CONCRETE BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE 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.

- R) 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 (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

OFFSET THE APPROACH END OF THE 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 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

- S) 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.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 64	POLYUREA	SNOWPLOWABLE
RACQUET CLUB DR.	POLYUREA	NONE

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

ROAD NAME	MARKING	MARKER
US 64	PAINT	RAISED
RACQUET CLUB DR.	PAINT	NONE

- V) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

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

- X) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON AMPLE DRYING TIME, AS DETERMINED BY THE ENGINEER.

- E) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER.

- F) 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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 40 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.

- H) 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.

- I) 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.

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

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 1½" 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 EVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- M) NOTIFY THE ENGINEER TWENTY ONE (21) CALANDER DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATIONS.

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) PROVIDE PERMANENT SIGNING.

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

APPROVED: DATE: 8/2/00

PROJECT NOTES

SCALE: NONE

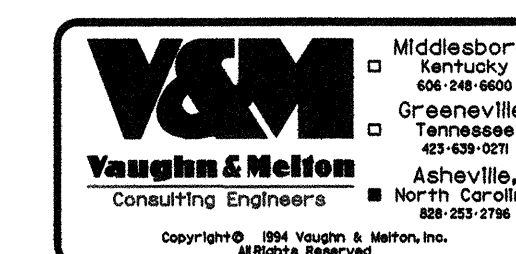
DATE:

DWG. BY: MDG

DESIGN BY: DAJ

REVIEWED BY:

REVISIONS



\$\$\$\$\$ SYSTEM \$\$\$\$\$\$
\$\$\$\$\$ USER NAME \$\$\$\$\$\$

PROJECT PHASING

PHASE I

* STEP 1:

ERECT WORK ZONE ADVANCE WARNING SIGNS USING DETAIL DRAWINGS FOR WORK ZONE SIGNS (SEE TCP-9) AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", SECTION 6.

* STEP 2:

MAINTAIN TRAFFIC ON EXISTING US 64 THROUGHOUT PHASE 1. PERFORM STEP 2 IN A CONTINUOUS OPERATION

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, GRADE RIGHT SIDE DITCH AND SHOULDER, AND PLACE TEMPORARY PAVEMENT TO MAINTAIN TWO 10' LANES WITH 2' SHOULDER AND PORTABLE CONCRETE BARRIER. OBLITERATE EXISTING PAVEMENT MARKINGS AND REMOVE PAVEMENT MARKERS. PLACE TEMPORARY MARKINGS (PAINT) AND TEMPORARY PAVEMENT MARKERS ACCORDING TO ROADWAY STANDARD NOS. 1205.01, 1205.02, 1250.01 AND 1251.01. MAINTAIN TRAFFIC ON TWO 10-FOOT (MINIMUM) LANES.

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, INSTALL PORTABLE CONCRETE BARRIER (PCB) WITH TRAFFIC FLOW ALONG THE SOUTHERN EDGE (EASTBOUND) OF EXISTING U.S. 64. FROM:

STA. 11+30 -L- TO STA. 37+95 -L- (SEE DETAIL I-D, TCP-5)

* STEP 3:

DURING BLASTING OPERATIONS, ERECT WARNING SIGNS AND TEMPORARILY STOP TRAFFIC IN BOTH DIRECTIONS USING ROADWAY STANDARD NO. 1101.06, AND FLAGGERS.

CONSTRUCT GRADING AND ROADWAY DITCH ON THE SOUTH SIDE OF U.S. 64 FROM APPROXIMATELY:

STA. 37+00 -L- TO STA. 32+40 -L- (SEE DETAIL 1-C, TCP-5)

CONSTRUCT GRADING, ROADWAY DITCHES, AND PROPOSED U.S. 64 UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM APPROXIMATELY:

STA. 32+40 -L- TO STA. 23+25 -L- & STA. 22+25 -L- TO 13+50 -L- (SEE DETAILS 1-A, 1-B & 1-C, TCP-4 & TCP-5)

PROCEED UP-GRADE IN A WESTERLY DIRECTION WITH PAVEMENT, GRADING, GUARDRAIL, AND DRAINAGE CONSTRUCTION. WORK MUST ONLY ADVANCE TO THE WEST ONCE DRAINAGE CAN BE MAINTAINED DOWNSTREAM IN THE EXISTING DITCH ON THE SOUTH SIDE OF EXISTING U.S. 64, AND IN THE DITCHES OF PROPOSED U.S. 64. REGRADE THE EXISTING DITCH ON THE SOUTH SIDE OF EXISTING U.S. 64 WHERE NECESSARY.

CONSTRUCT CULVERT EXTENSION, TEMPORARY 15" CROSS DRAIN PIPE, GUARDRAIL ON THE SOUTH SIDE, AND SPECIAL LATERAL 'V' DITCH AT APPROXIMATELY:

STA. 32+95 -L- (SEE DETAIL 1-C, TCP-5)

CONSTRUCT SIDE DRAIN PIPE, SIDE ROAD DITCHES, AND AS MUCH OF PROPOSED RACQUET CLUB DRIVE AS POSSIBLE UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE (WITHOUT AFFECTING EXISTING DITCH ON THE SOUTH SIDE OF EXISTING U.S. 64) FROM APPROXIMATELY:

STA. 11+82 -Y- TO STA. 10+80 -Y- (SEE DETAIL 1-C, TCP-5) TEMPORARILY GRADE THE DITCH AT THE EXIT OF THE SIDE DRAIN PIPE TO DRAIN INTO THE TEMPORARY CROSS DRAIN FOR DRAINAGE THROUGH PHASE II.

CONSTRUCT SPECIAL LATERAL 'V' DITCH AT APPROXIMATELY STA. 27+85 -L-, RT.

CONSTRUCT, BUT BLOCK FLOW INTO NEW MDI DURING PHASE I, AND CONSTRUCT AS MUCH OF THE NEW CROSS PIPE AS POSSIBLE WITHOUT ENCROACHING ONTO EXISTING U.S. 64 AT STA. 27+68.59 -L-, RT.

DUE TO THE DIFFERENCE IN GRADE OF THE PROPOSED ROADWAY, CONSTRUCT A TEMPORARY DITCH (TWO-FOOT MINIMUM DEPTH) WITH TEMPORARY ROCK SILT CHECKS AT 30' O/C, ON THE NORTH SIDE OF PROPOSED U.S. 64 THAT TIES TO THE EXISTING DITCH AND CROSS PIPE ON THE SOUTH SIDE OF EXISTING U.S. 64 FROM APPROXIMATELY:

STA. 27+80 -L- TO STA. 26+15 -L- (SEE DETAIL 1-B, TCP-4)

BUILD A MINIMUM OF 24 FEET OF PAVEMENT FOR PROPOSED U.S. 64 UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE, TO PROVIDE A MINIMUM OF TWO 10-FOOT LANES IN PHASE II FROM APPROXIMATELY:

STA. 28+00 -L- TO STA. 26+30 -L- (SEE DETAIL 1-B, TCP-4)

CONSTRUCT SPECIAL LATERAL 'V' DITCH AT APPROXIMATELY STA. 23+54 -L-, RT.

IN ORDER TO MAINTAIN EXISTING DRAINAGE PATTERNS, CONSTRUCT A TEMPORARY DITCH (TWO-FOOT MINIMUM DEPTH) WITH TEMPORARY ROCK SILT CHECKS AT 30' O/C ON THE NORTH SIDE OF PROPOSED U.S. 64 THAT TIES TO THE PROPOSED MDI ON THE SOUTH SIDE OF PROPOSED U.S. 64 FROM APPROXIMATELY:

STA. 22+96 -L- TO STA. 22+30 -L- (SEE DETAIL 1-B, TCP-4)

* STEP 4:

BUILD NEW MDI AND CONSTRUCT THE CULVERT EXTENSION AT STA. 22+77.71 -L- RT.

REMOVE THE TEMPORARY DITCH FROM PHASE 1, STEP 3 AND CONSTRUCT A NEW TEMPORARY DITCH (TWO-FOOT MINIMUM DEPTH) WITH TEMPORARY ROCK SILT CHECKS AT 30' O/C ON THE NORTH SIDE OF PROPOSED U.S. 64 THAT TIES TO THE EXISTING DITCHES ON THE SOUTH SIDE OF EXISTING U.S. 64 FROM APPROXIMATELY:

STA. 23+25 -L- TO STA. 22+30 -L- (SEE DETAIL 1-E, TCP-5)

BUILD A MINIMUM OF 24 FEET OF PAVEMENT FOR PROPOSED U.S. 64 UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE, TO PROVIDE A MINIMUM OF TWO 10-FOOT LANES IN PHASE II FROM APPROXIMATELY:

STA. 23+25 -L- TO STA. 22+25 -L- (SEE DETAIL 1-E, TCP-5)

PHASE II

* STEP 1:

TEMPORARILY MAINTAIN TRAFFIC ON EXISTING U.S. 64 WHILE PERFORMING THE FOLLOWING WORK. BEFORE SHIFTING TRAFFIC ONTO SOUTHERN TWO-LANE SECTION OF THE NEW ROADWAY, USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, BUILD THE PROPOSED ROADWAY TIES TO EXISTING U.S. 64 AND THE TIE TO NATURE VIEW LANE UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM APPROXIMATELY:

STA. 37+00 -L- TO STA. 32+40 -L- AND STA. 14+28 -L- TO STA. 10+50 -L- (SEE DETAILS 2-A & 2-C, TCP-7 & TCP-8)

PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN EACH TIE LOCATION IN ORDER TO MAINTAIN DRAINAGE. FOLLOW MILLING IMMEDIATELY WITH PAVING OPERATION TO MINIMIZE LANE CLOSURE TIME.

* STEP 2:

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) ACCORDING TO ROADWAY STANDARD NOS. 1205.01 AND 1205.02. PLACE DRUMS ALONG THE NORTHERN EDGE OF THE TEMPORARY WESTBOUND LANE OF NEW U.S. 64 FROM:

STA. 37+00 -L- TO STA. 30+14 -L- AND STA. 20+49 -L- TO STA. 10+50 (SEE DETAILS 2-A, 2-B & 2-C, TCP-7 & TCP-8)

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, REMOVE THE PORTABLE CONCRETE BARRIER (PCB) FROM EXISTING U.S. 64 AND INSTALL THE PCB WITH TRAFFIC FLOW ON PROPOSED U.S. 64 FROM:

STA. 19+69 -L- TO STA. 30+65 -L- (SEE DETAILS 2-B & 2-C, TCP 7 & TCP-8)

* STEP 3:

INSTALL TYPE III BARRICADES (SEE DETAILS 2-A, 2-C & 2-D, TCP-7 & TCP-8) AND CLOSE THE EXISTING SECTION OF U.S. 64 USING ROADWAY STANDARD NO. 1101.03, SHEET 2 OF 9. MAINTAIN TRAFFIC BY SHIFTING BOTH LANES AS FAR AS POSSIBLE TO THE SOUTH SIDE OF THE NEW ROADWAY USING TWO 10-FOOT (MINIMUM) LANES. MAINTAIN THE EXISTING SPEED LIMIT OF 20 MPH.

AS SOON AS POSSIBLE AFTER SHIFTING TRAFFIC, USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, CONSTRUCT THE TIE TO RACQUET CLUB DRIVE UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE, AND TEMPORARY PAVEMENT MARKINGS (PAINT) FROM:

STA. 10+48 -Y- TO STA. 10+80 -Y- (SEE DETAILS 2-C & 3-A, TCP-8 & PM-2)

PRIOR TO COMPLETING THE TIE TO -Y-, GRADE THE EXISTING DITCH ON THE SOUTH SIDE OF U.S. 64 TO DRAIN INTO THE PROPOSED DITCH ON THE WEST SIDE OF RACQUET CLUB DRIVE.

PROCEEDING UP-GRADE IN A WESTERLY DIRECTION, STARTING AT THE EASTERN END OF THE PROJECT, BUILD THE REMAINING SECTIONS OF THE PROPOSED ROADWAY, ALL DRAINAGE, GUARDRAIL, AND GRADING ON THE NORTH SIDE OF THE NEW ROADWAY.

WORK MUST ONLY ADVANCE TO THE WEST ONCE DRAINAGE CAN BE MAINTAINED DOWNSTREAM IN THE DITCHES OF PROPOSED U.S. 64.

REMOVE OLD GUARDRAIL AS REQUIRED. SCARIFY AND REMOVE SECTIONS OF THE OLD PAVEMENT THAT ARE OUTSIDE OF THE GRADING LIMITS.

CONSTRUCT GUARDRAIL AND THE BERM DITCH ON THE NORTH SIDE OF PROPOSED U.S. 64 FROM APPROXIMATELY:

STA. 35+00 -L- TO STA. 32+66 -L- (SEE DETAIL 2-C, TCP-8)

CONSTRUCT THE REMAINING NORTHERN SECTION OF THE CROSS PIPE AND OUTLET PROTECTION AT STA. 27+66 -L-. REMOVE THE EXISTING CROSS PIPE. GRADE FINAL DITCH AND OPEN THE MDI TO FLOW AS SOON AS POSSIBLE TO MAINTAIN DRAINAGE.

CONSTRUCT THE REMAINING SECTIONS OF PROPOSED U.S. 64, FINAL DITCHES AND GRADING FROM:

STA. 28+00 -L- TO STA. 26+15 -L- AND STA. 23+25 -L- TO STA. 22+25 -L- (SEE DETAIL 2-B, TCP-7)

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, REMOVE THE PORTABLE CONCRETE BARRIER AGAINST TRAFFIC FLOW AND REPLACE WITH DRUMS AT 40-FOOT SPACING FROM:

STA. 30+65 -L- TO STA. 19+69 -L-

REMOVE THE EXISTING 18" CMP CROSS PIPE AT APPROXIMATELY STA. 20+95 -L-, LT.

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, REMOVE THE OLD GUARDRAIL, AND CONSTRUCT THE NEW GUARDRAIL AND GRADING ON THE NORTHERN AND SOUTHERN SIDES OF PROPOSED U.S. 64 FROM APPROXIMATELY:

STA. 14+07 -L- TO STA. 11+10 -L- (SEE DETAIL 2-A, TCP-7)

COMPLETE ALL FINAL GRADING WITHIN THE PROJECT LIMITS.

PHASE III

* STEP 1:

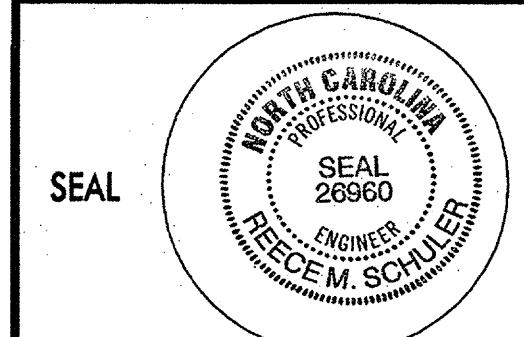
REMOVE TYPE III BARRICADES AND DETOUR SIGNING FOR -L-. USING DRUMS, MAINTAIN TWO-LANE, TWO-WAY TRAFFIC ON NEW U.S. 64.

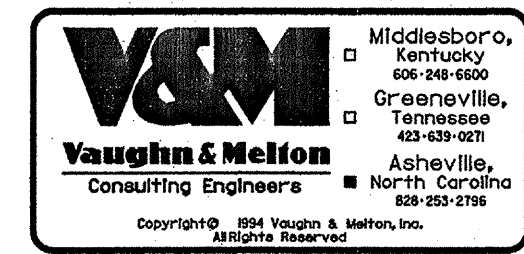
* STEP 2:

USING ROADWAY STANDARD NO. 1101.02, SHEET 1 OF 7, AND FLAGGERS, PLACE THE FINAL LAYER OF SURFACE COURSE, FINAL PAVEMENT MARKINGS (POLYUREA), AND PAVEMENT MARKERS ON THE ENTIRE PROJECT IN COMPLIANCE WITH ROADWAY STANDARD NOS. 1205.01, 1205.02, 1250.01 AND 1253.01. (SEE DETAILS 3-B & 3-C, PM-2)

* STEP 3:

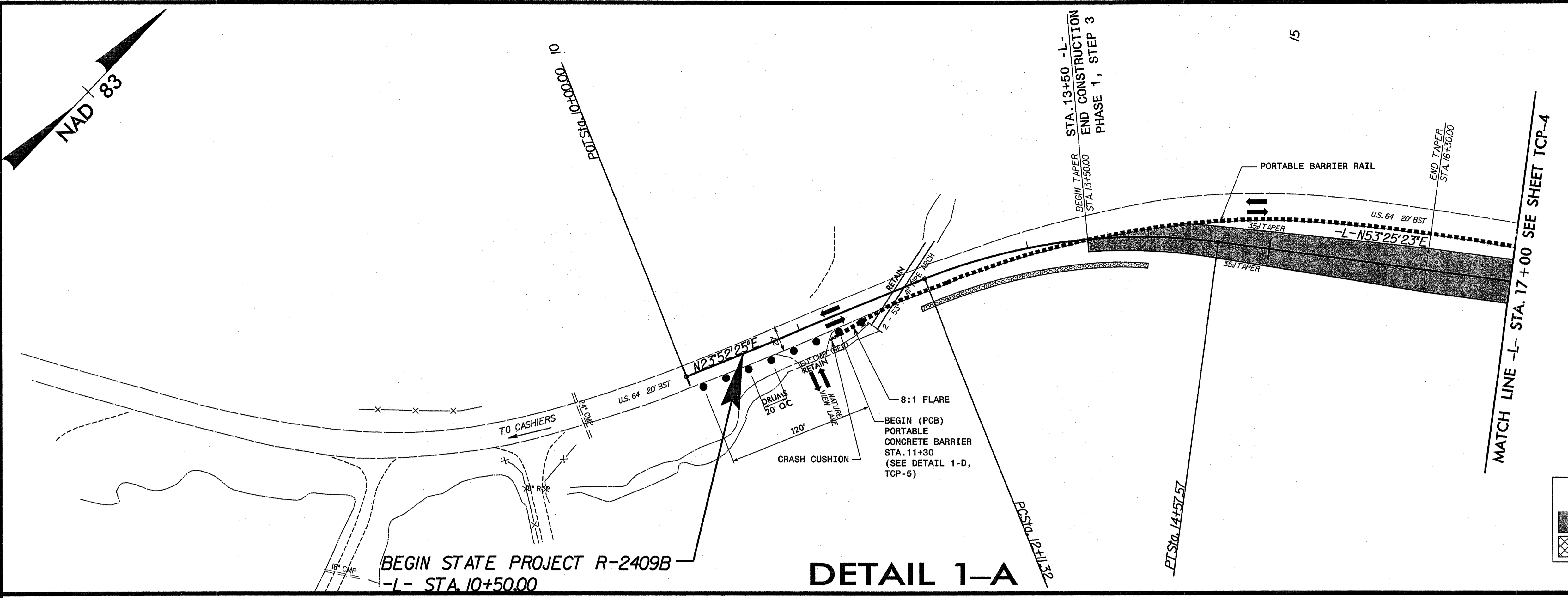
REMOVE ADVANCE WARNING SIGNING AND OPEN ALL LANES TO TRAFFIC.

APPROVED: <i>[Signature]</i> DATE: 3/15/02 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">SCALE: NONE</td> <td style="width: 50%;">REVISIONS</td> </tr> <tr> <td>DATE:</td> <td></td> </tr> <tr> <td>DWG. BY: MDG</td> <td></td> </tr> <tr> <td>DESIGN BY: DAJ</td> <td></td> </tr> <tr> <td>REVIEWED BY: RMS</td> <td></td> </tr> </table>	SCALE: NONE	REVISIONS	DATE:		DWG. BY: MDG		DESIGN BY: DAJ		REVIEWED BY: RMS	
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REVIEWED BY: RMS											



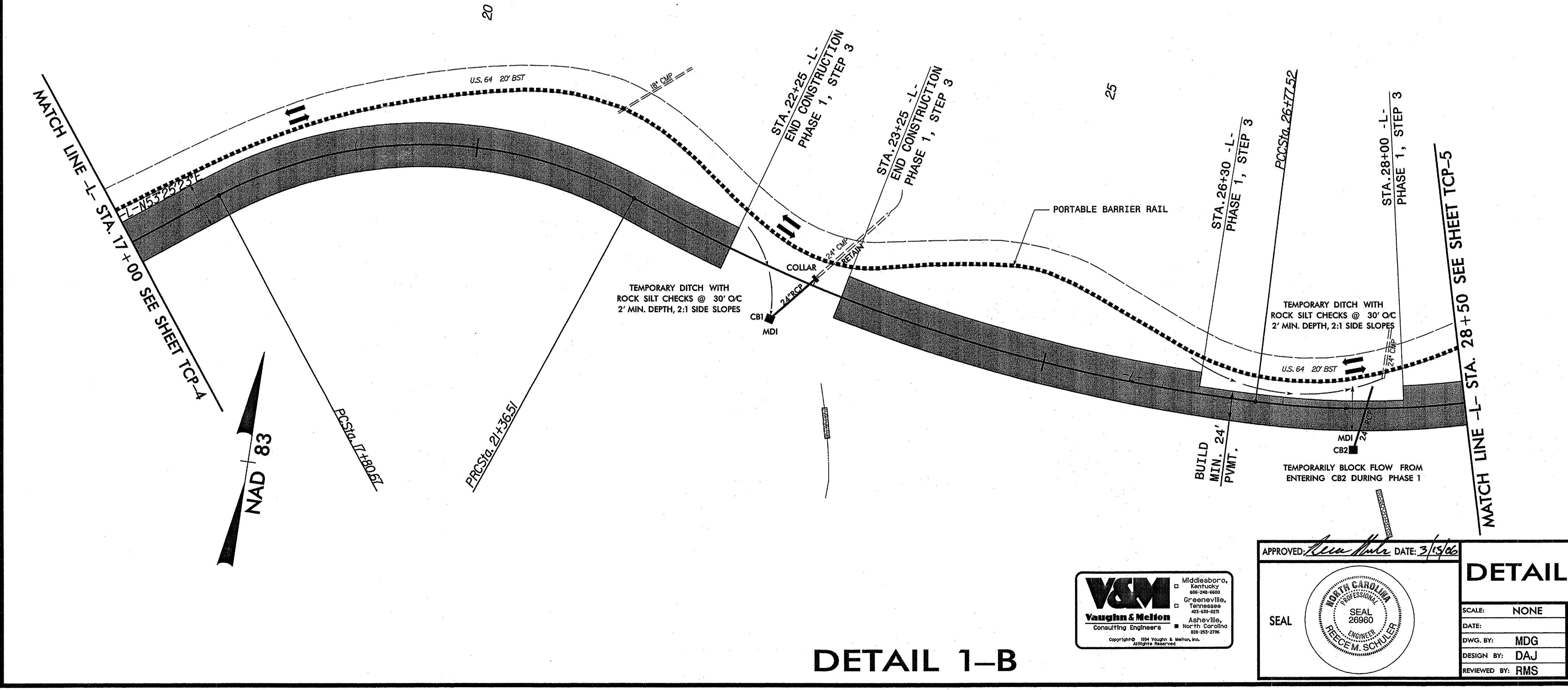
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PROJECT REFERENCE NO. R-2409B	SHEET NO. TCP-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



LEGEND

	PROP. CONSTRUCTION
	SCARIFY / PAVEMENT REMOVAL



V&M
Vaughn & Melton
Consulting Engineers
Middlesboro, Kentucky
Greeneville, Tennessee
Asheville, North Carolina

APPROVED: *[Signature]* DATE: 3/15/06

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
RECEIVED
REC'D M. SCHAUER

DETAILS "1-A" & "1-B"

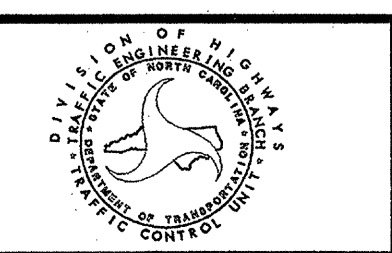
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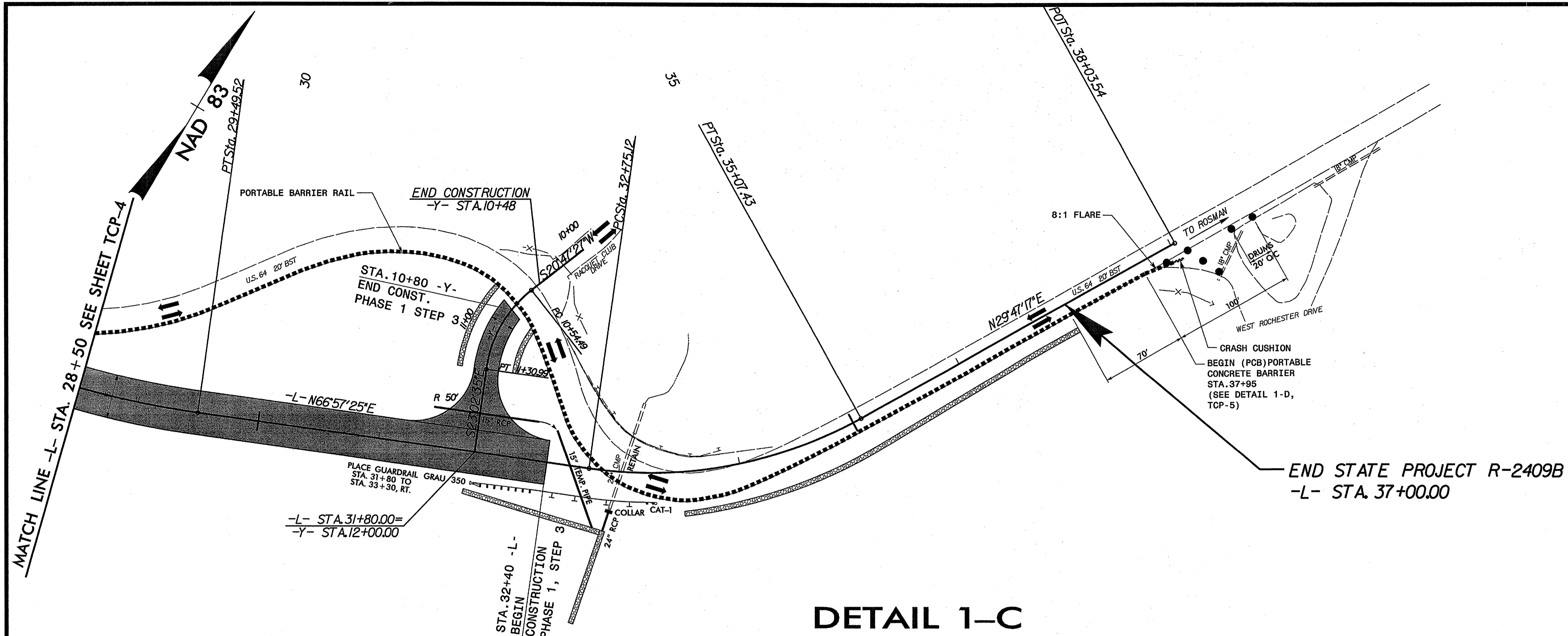
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REVISIONS

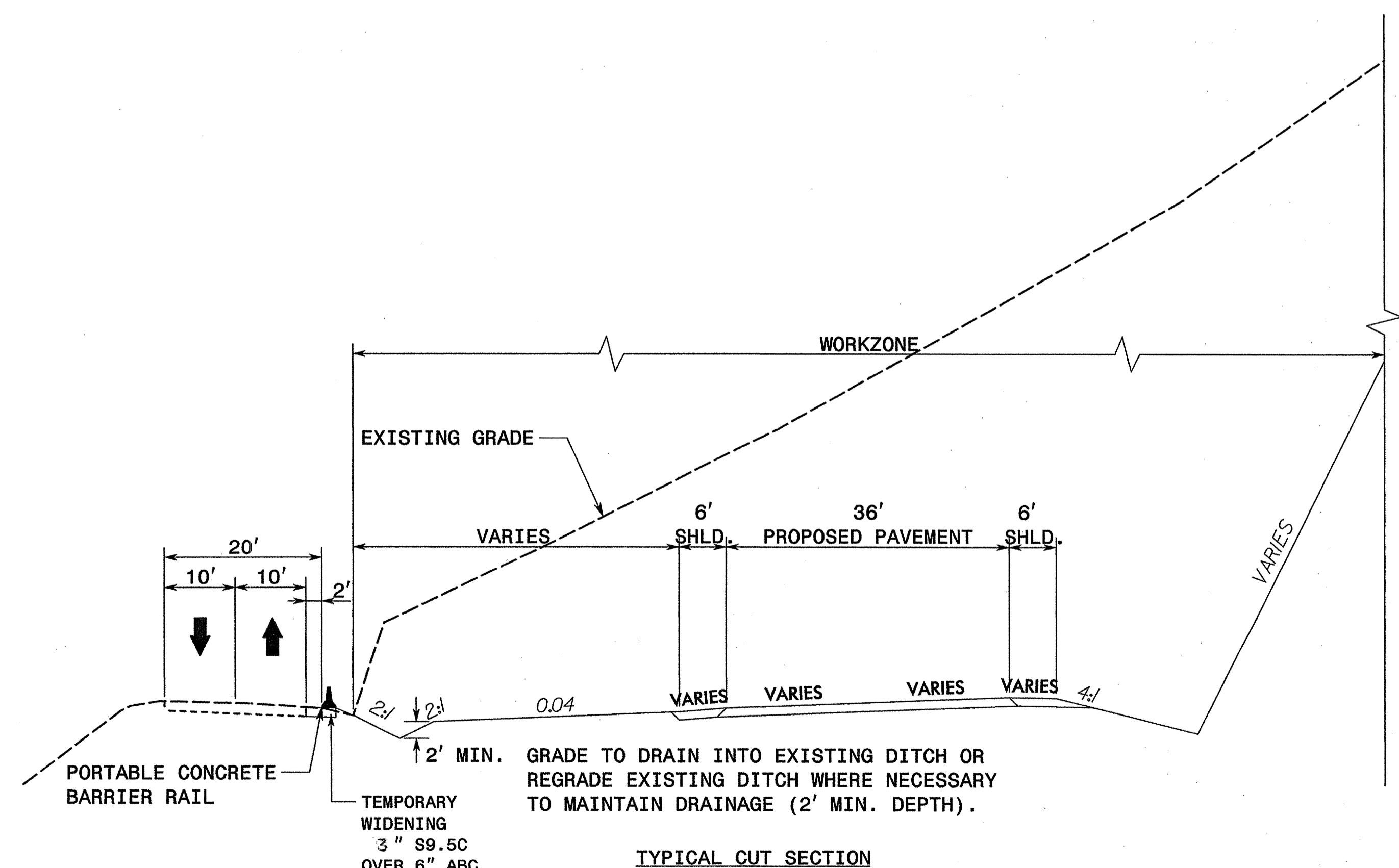
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PROJECT REFERENCE NO.	SHEET NO.
R-2409B	TCP-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



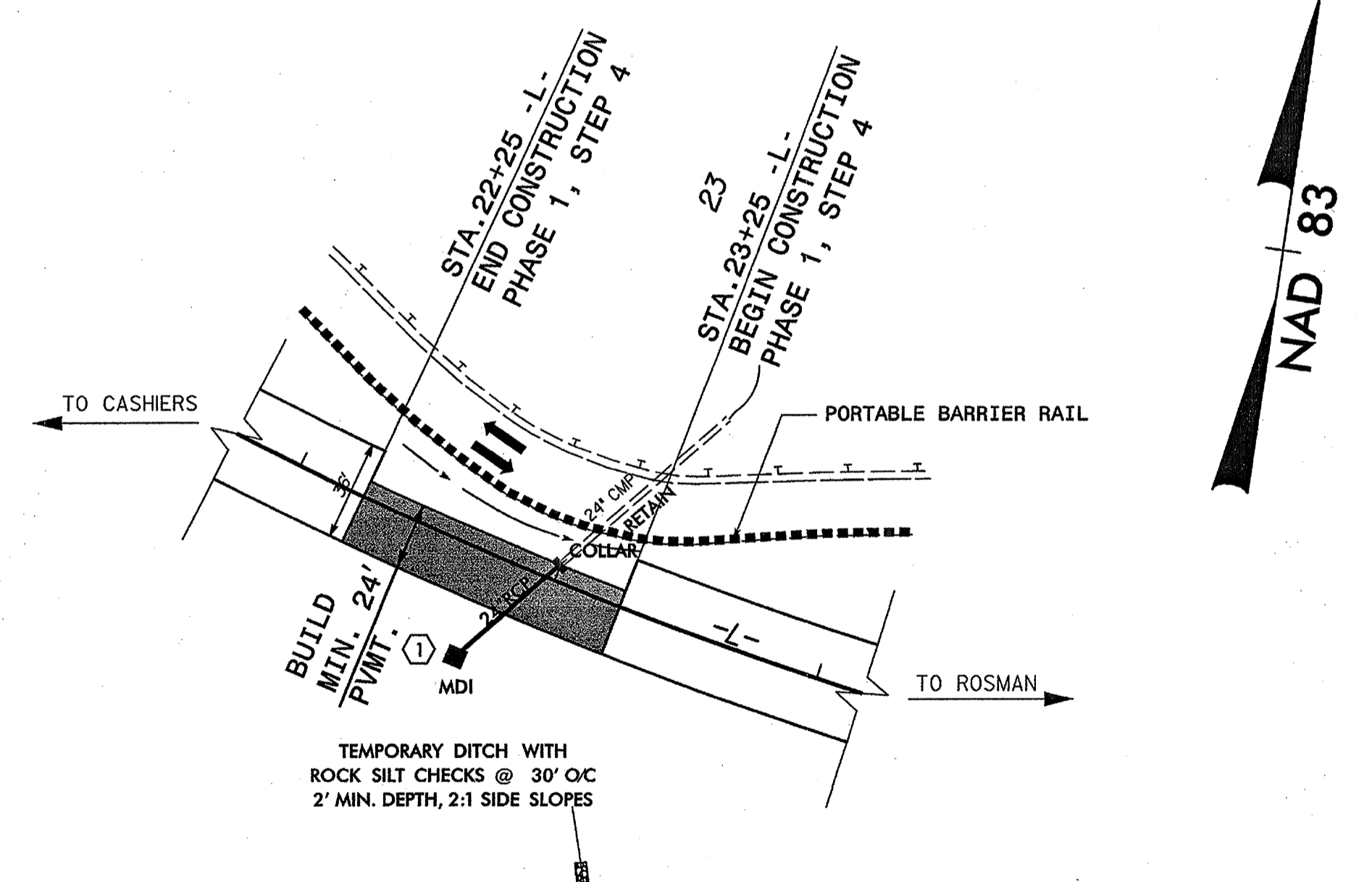
DETAIL 1-C

LEGEND	
	PROP. CONSTRUCTION
	SCARIFY / PAVEMENT REMOVAL

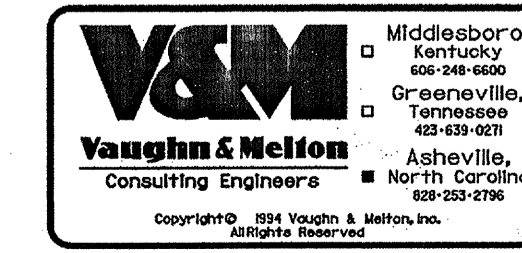


DETAIL 1-D

OBLITERATE EXISTING MARKINGS, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND MAINTAIN TRAFFIC ON TWO 9'(MIN.) LANES.



DETAIL 1-E



APPROVED *[Signature]* DATE: 3/13/06

SEAL

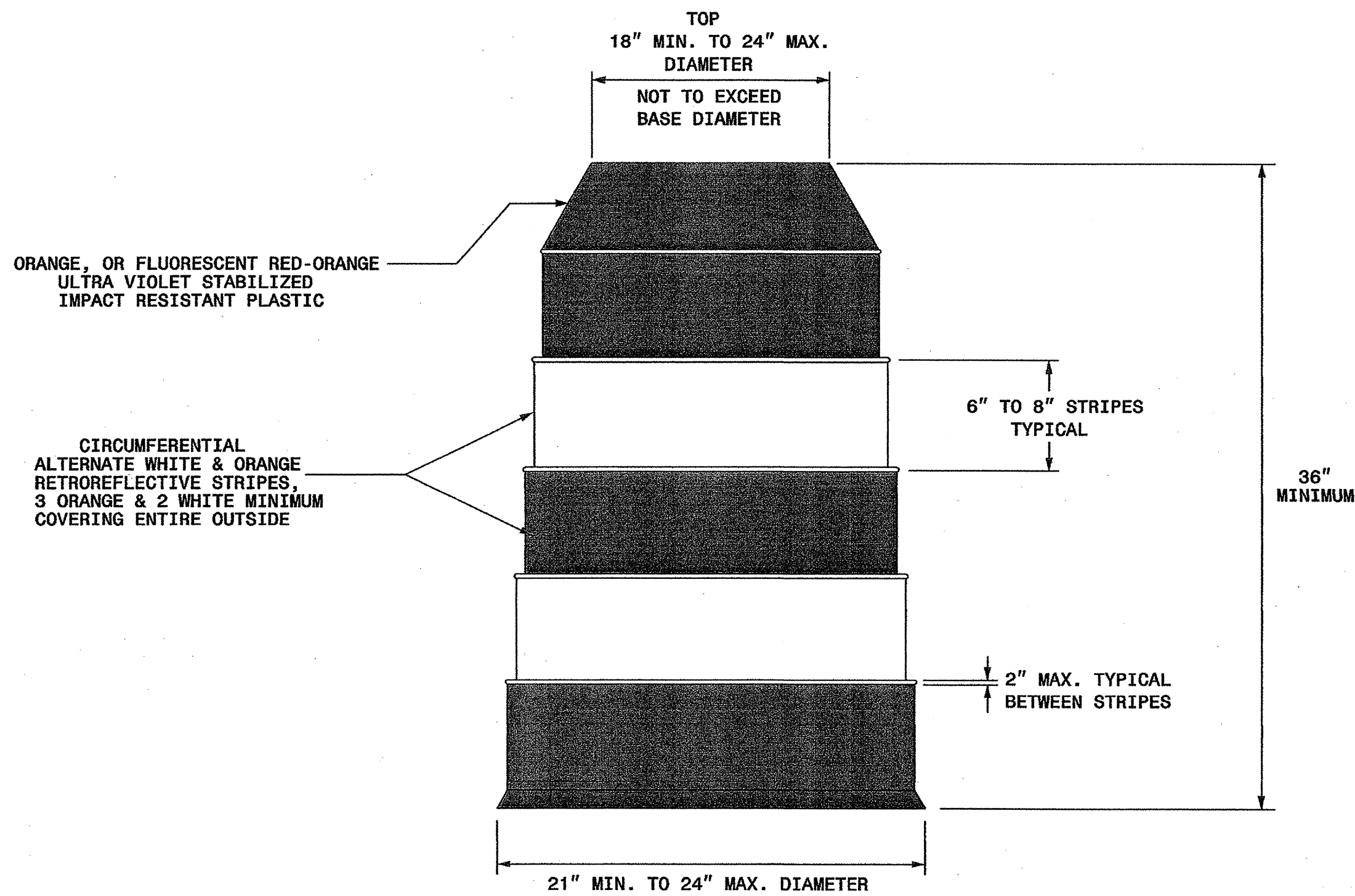
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REVIEWED BY:	RMS		

***** SYSTEMS *****
***** 01/03/06 *****
***** 09:54 *****
***** C:\P\2409B\2409B.DWG *****
***** PLOT *****
***** 03/13/06 *****
***** 09:54 *****
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***** PLOT *****

PROJECT REFERENCE NO. R-2409B	SHEET NO. TCP-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

STATE OF
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
DRUMS



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.

SHEET 1 OF 1
1130D01

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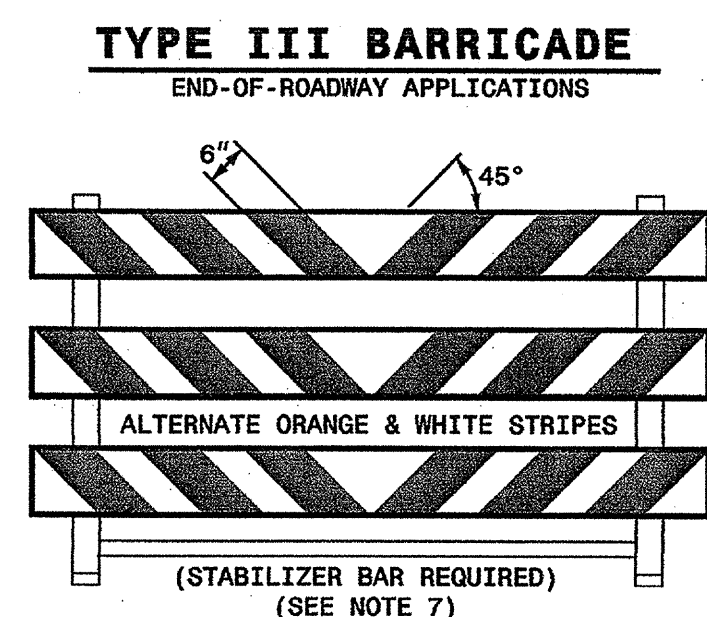
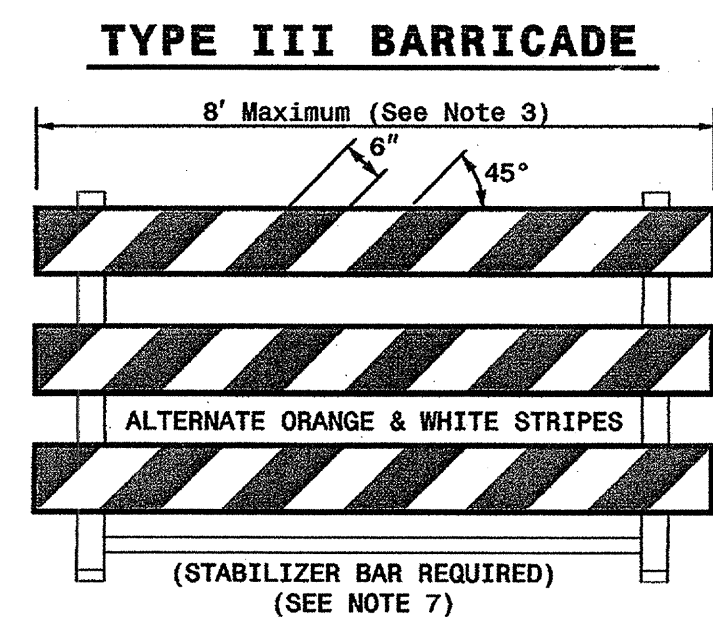
ENGLISH STANDARD DRAWING FOR
DRUMS

SHEET 1 OF 1
1130D01

DETAIL 1-F
REPLACEMENT DETAIL FOR RSD 1130.01

STATE OF
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ENGLISH STANDARD DRAWING FOR
BARRICADES
TYPE-III



GENERAL NOTES

- 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.
- BARRICADES AND BARRICADE RAILS ARE APPROVED AS A SINGLE UNIT.
- BARRICADE SHALL BE LIMITED TO A MAXIMUM LENGTH OF 8 FT UNLESS NCHRP 350 CRASH TESTED AND NCDOT APPROVED.
- ONLY NCDOT APPROVED COMPOSITE AND ROLL-UP SIGNS MAY BE MOUNTED ON THE BARRICADE.
- 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.
- USE TYPE VII, VIII OR IX SHEETING ON BOTH SIDES OF THE RAILS.
- BARRICADE MUST BE NCHRP 350 AND NCDOT APPROVED WITH STABILIZER BAR OR ADEQUATE LATERAL BRACING.
- ASSEMBLY OF THE GENERIC BARRICADES MUST BE SELF CERTIFIED BY THE ASSEMBLER.
- 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.
- 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.
- SEE APPROVED PRODUCTS LIST FOR MANUFACTURERS OF APPROVED BARRICADES.
- PLACE MANUFACTURER'S NAME AND FEDERAL HIGHWAY ADMINISTRATION'S NCHRP 350 APPROVAL LETTER NUMBER ON BARRICADE.
- 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.

SHEET 1 OF 1
1145D01

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RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
BARRICADES
TYPE-III

SHEET 1 OF 1
1145D01

DETAIL 1-G
REPLACEMENT DETAIL FOR RSD 1145.01

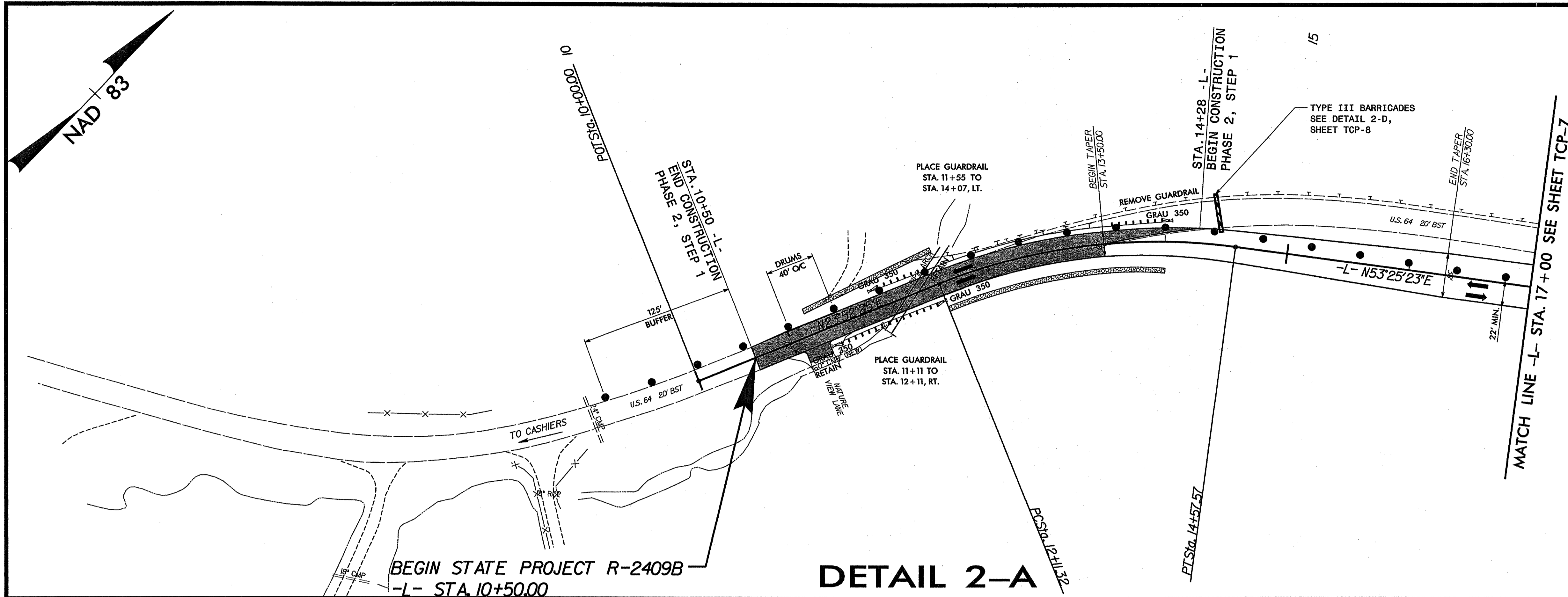
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SEAL

DETAILS "1-F" & "1-G"

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DATE:		
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DESIGN BY: DAJ		
REVIEWED BY: RMS		

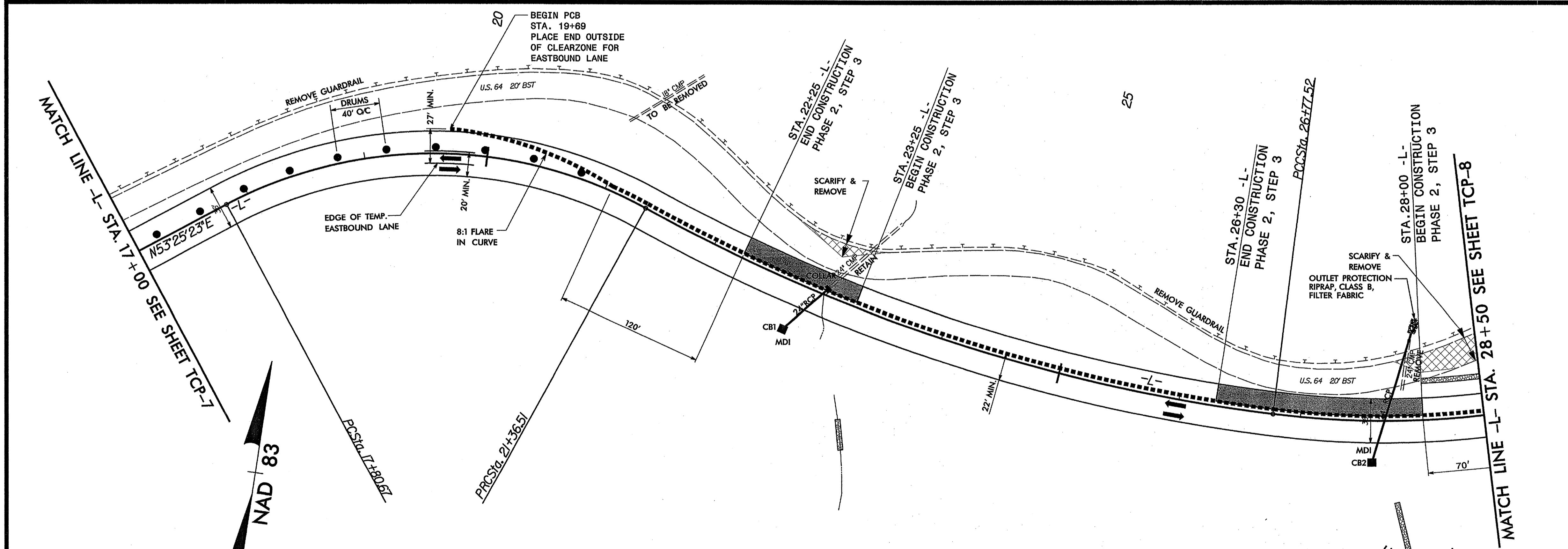
PROJECT REFERENCE NO. R-2409B	SHEET NO. TCP-7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



LEGEND

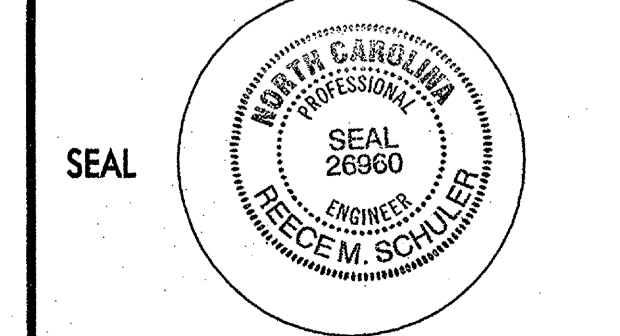
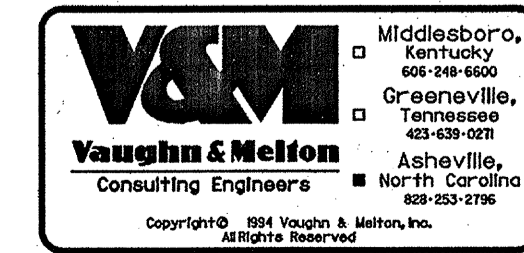
	PROP. CONSTRUCTION
	SCARIFY / PAVEMENT REMOVAL

DETAIL 2-A



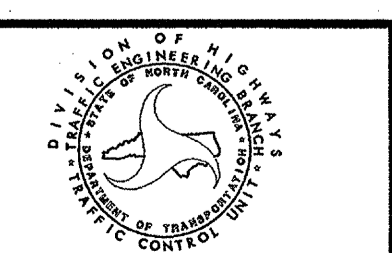
DETAIL 2-B

APPROVED: *[Signature]* DATE: 3/15/06



DETAILS "2-A" & "2-B"

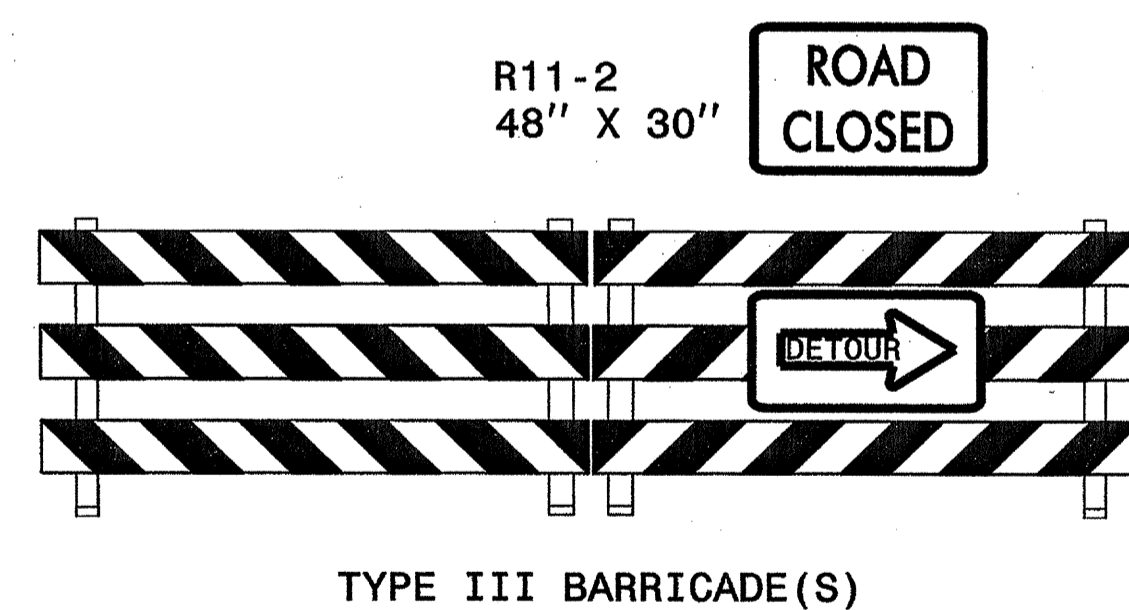
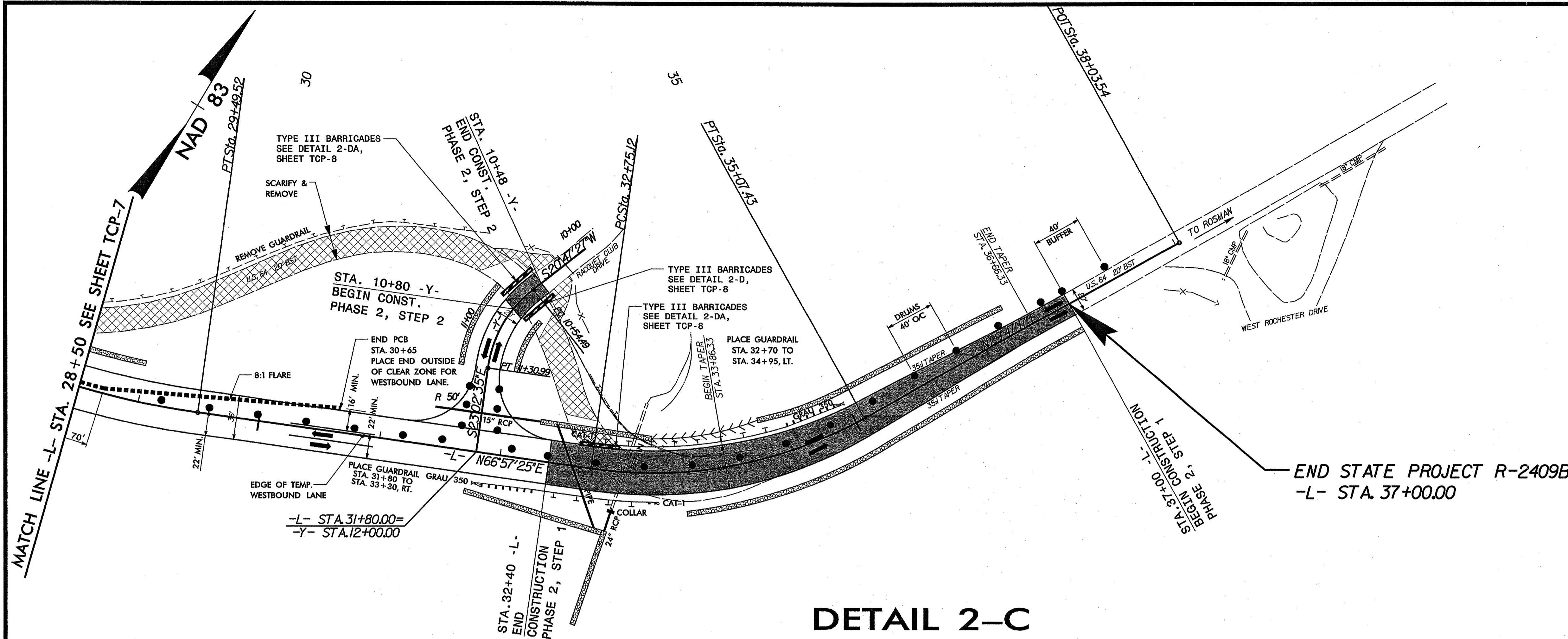
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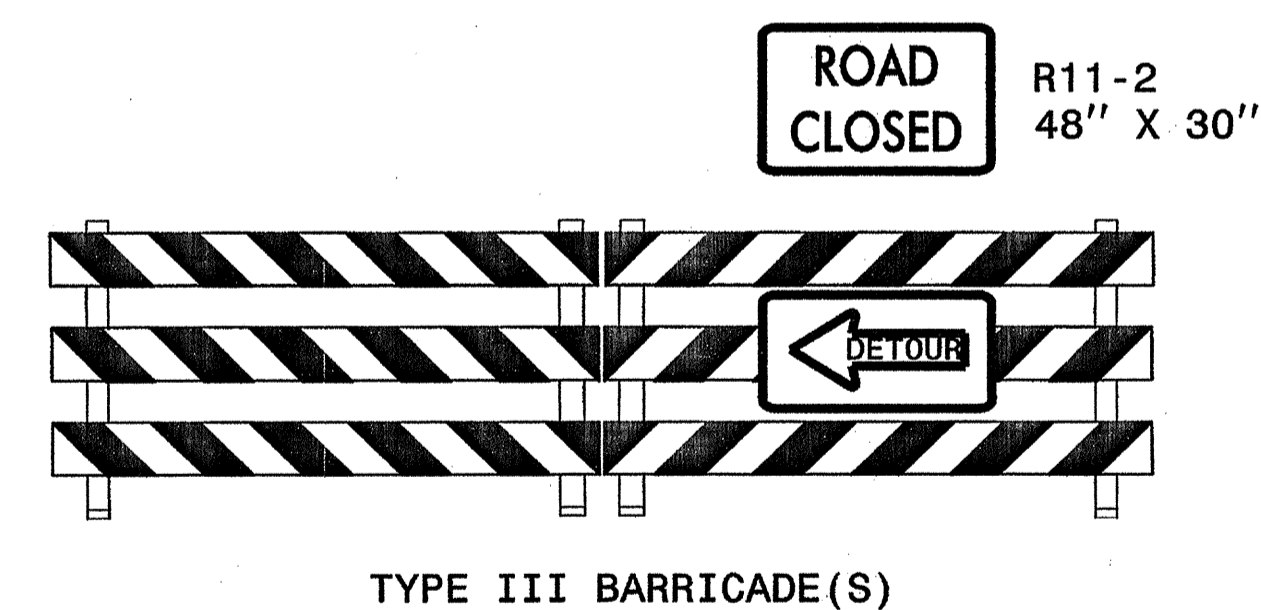
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PROJECT REFERENCE NO. R-2409B	SHEET NO. TCP-8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

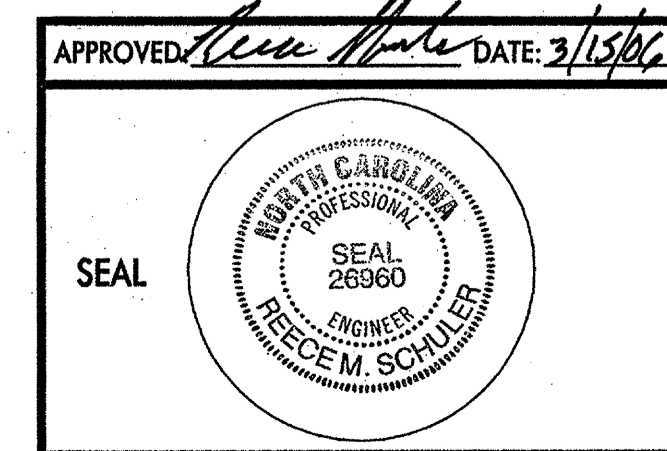
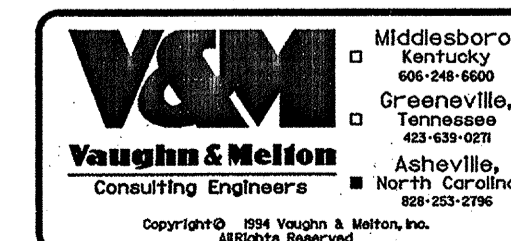


DETAIL 2-D



DETAIL 2-DA

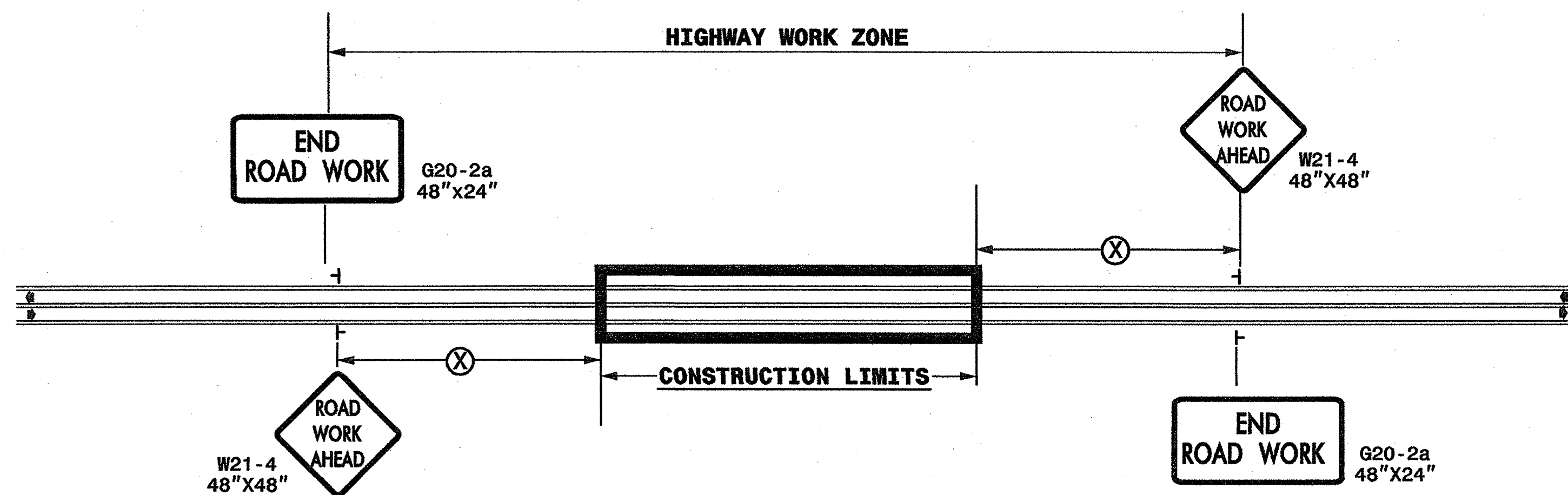
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DETAILS "2-C", "2-D" & "2-DA"

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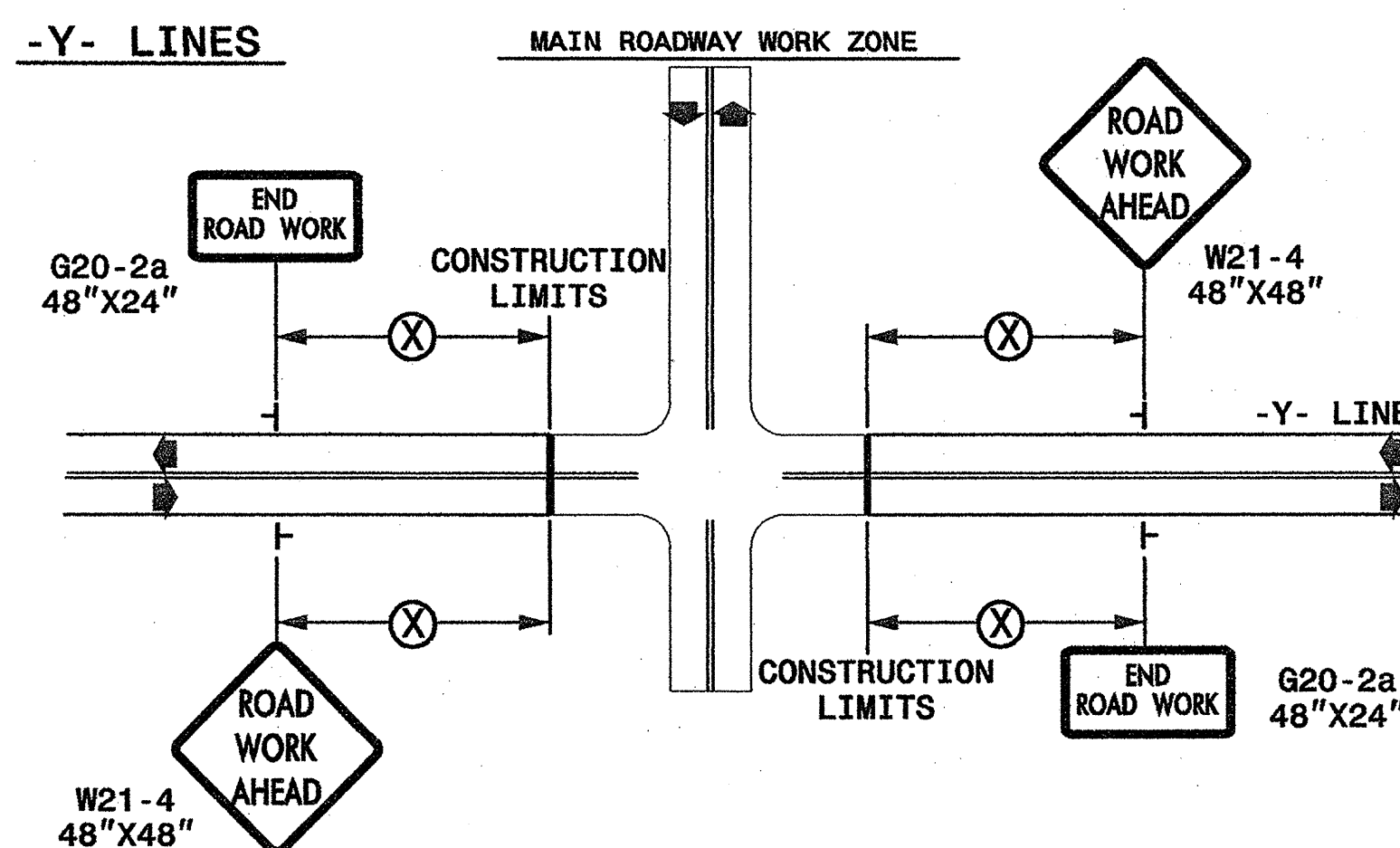
TWO-WAY UNDIVIDED ** (L-LINES)



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

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



DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

GENERAL NOTES

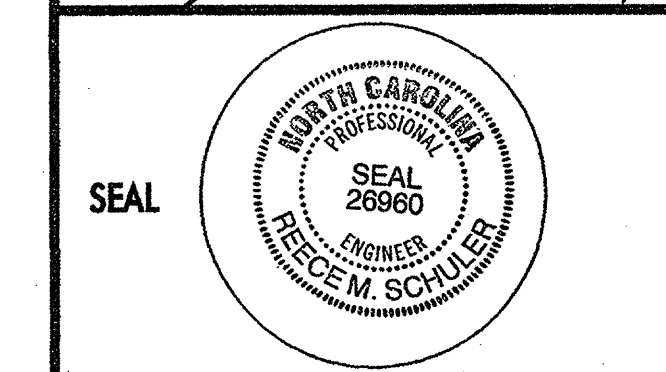
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS,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

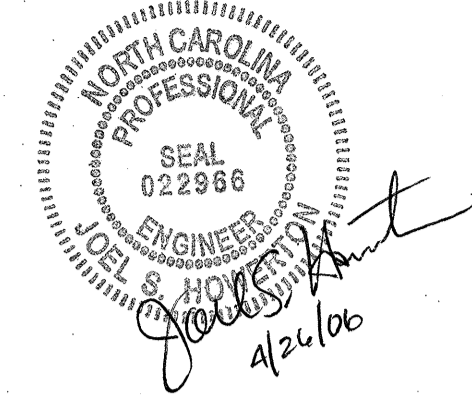
SHEET 1 OF 1

APPROVED: *[Signature]* DATE: 10/30/98

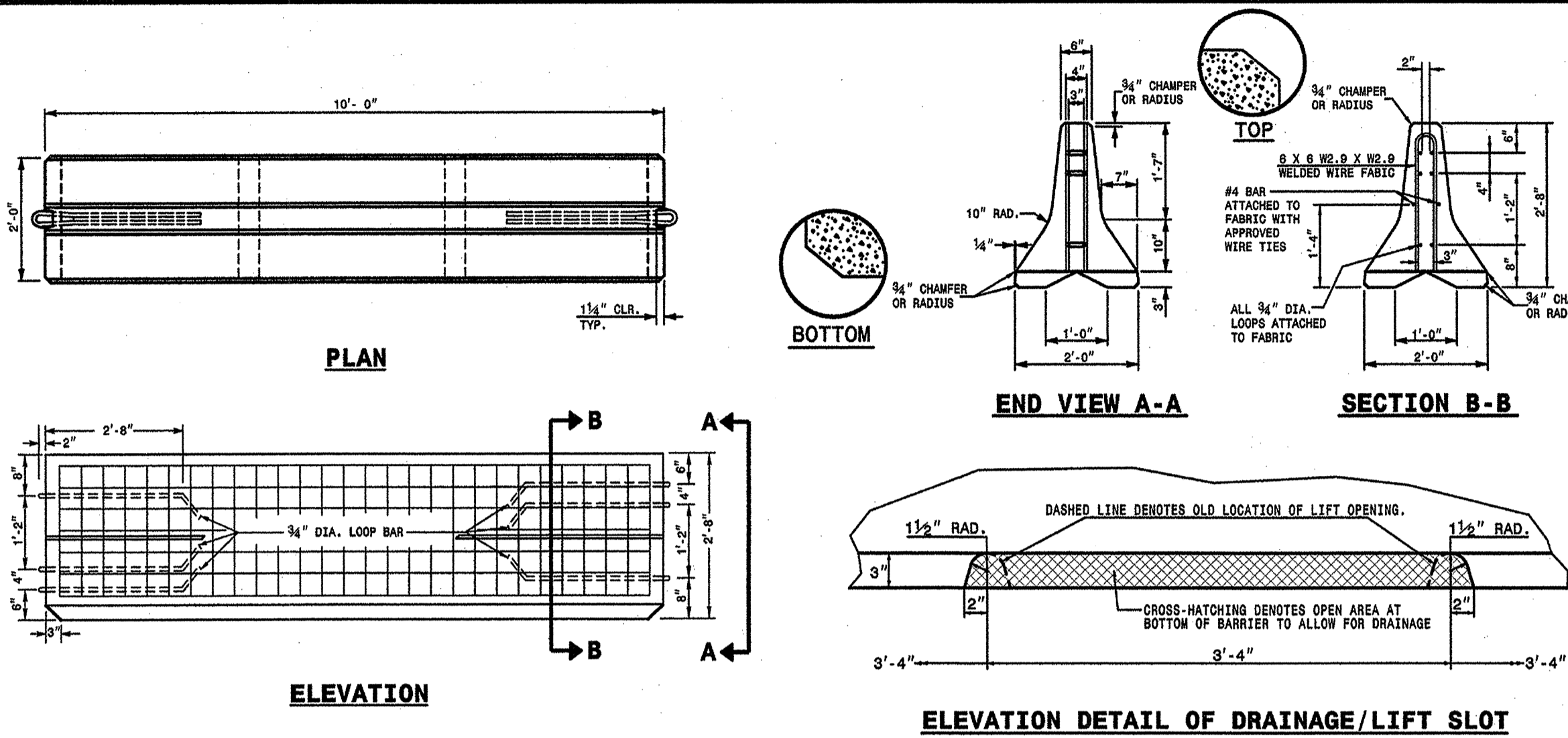


DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS	
SCALE: NONE	REVISIONS
DATE:	7-98 10/01
DWG. BY:	10-98 03/04
DESIGN BY:	01/01 11/04
REVIEWED BY:	

SYSTEMS
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RALEIGH, N.C.

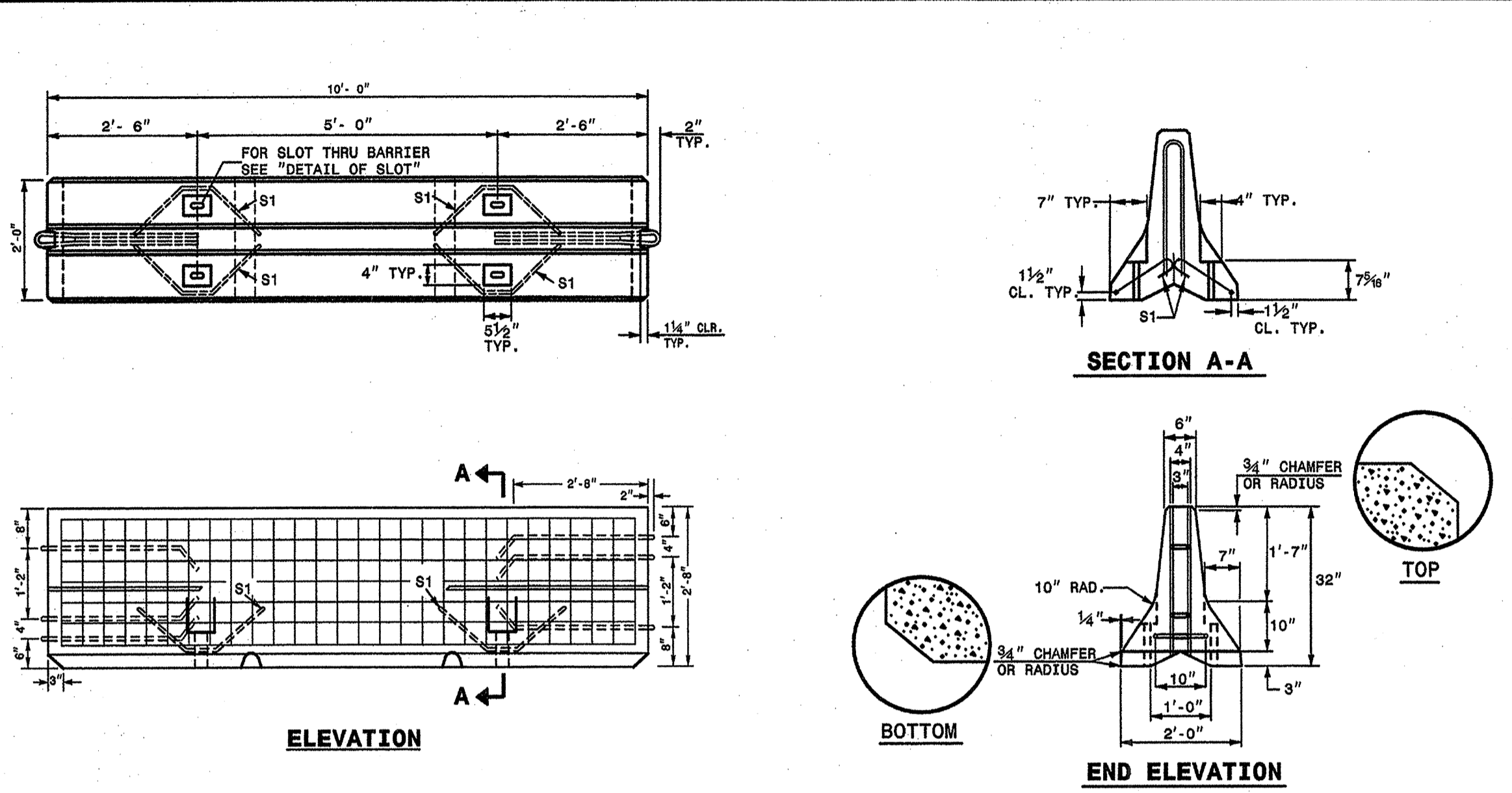


GENERAL NOTES

- THE DRAINAGE/LIFT SLOT SHOWN IS A MODIFICATION OF THE LIFT OPENINGS, ALL OTHER DESIGN CRITERIA SUCH AS REINFORCEMENT BARS ETC. ARE THE SAME AS SHOWN ON THE STANDARD DRAWING.
- BARRIER WITH DRAINAGE/LIFT SLOT IS INTENDED TO BE USED IN AREAS WHERE ROADWAY SURFACE WATER RUNOFF CAUSES EXCESS FLOODING ADJACENT TO THE TEMPORARY BARRIER. INSTALL THE BARRIER AS SHOWN IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
- DRAINAGE/SLOT CAN BE USED WITH ANCHORED "PORTABLE CONCRETE BARRIER".

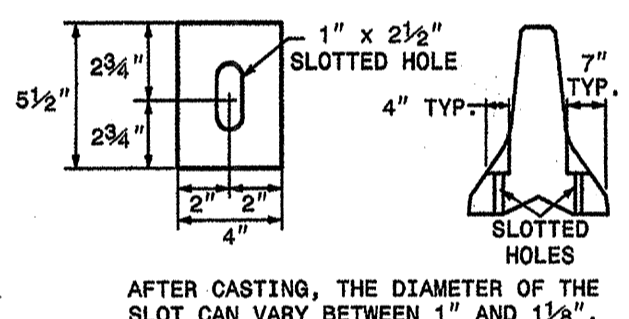
SHEET 1 OF 4
1170D01

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RALEIGH, N.C.



NOTE: REFER TO STD. DWG. 1170.01-SHEET 4 FOR METHODS OF ANCHORING TEMPORARY BARRIER.

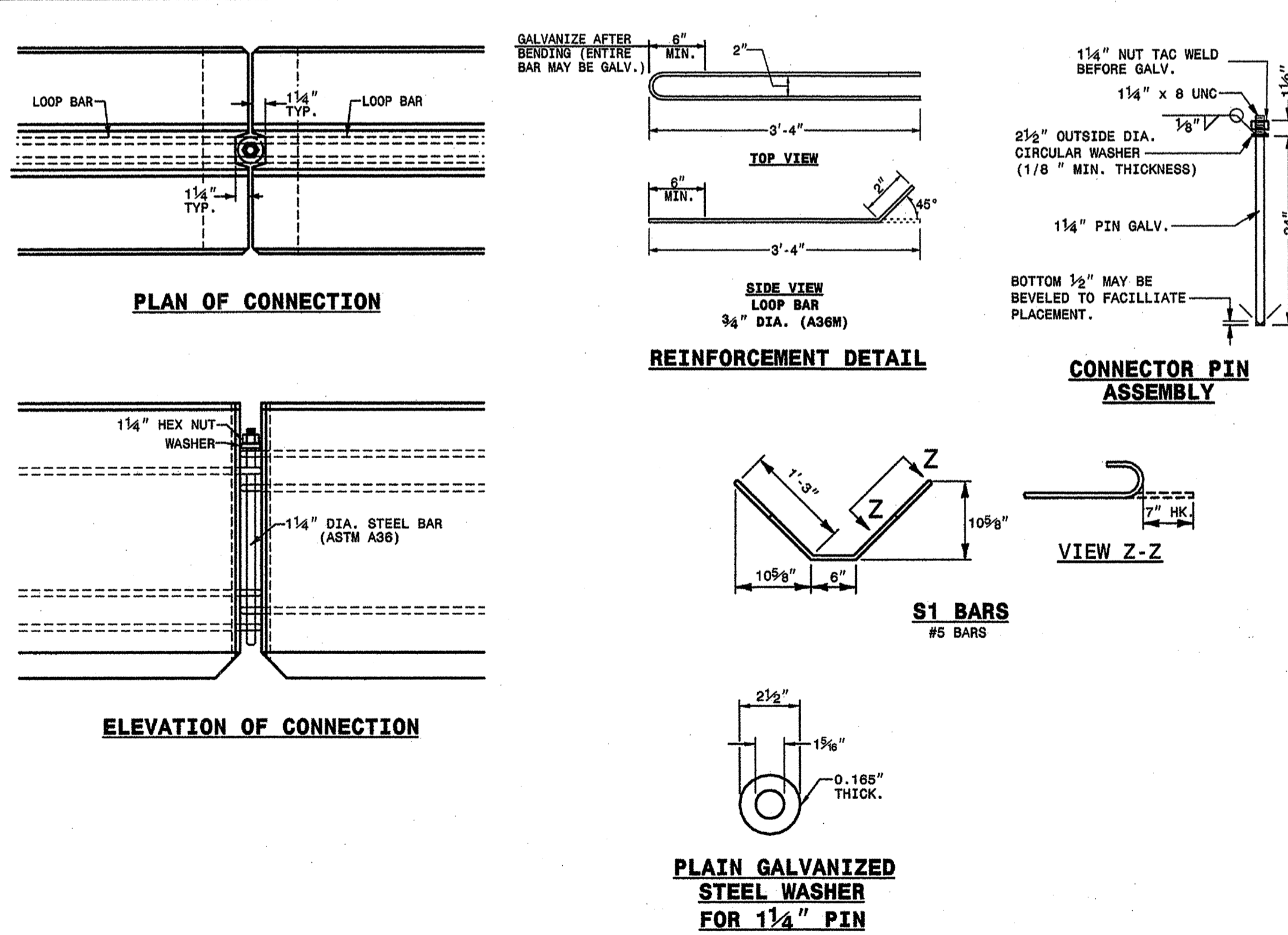
DETAIL OF SLOT



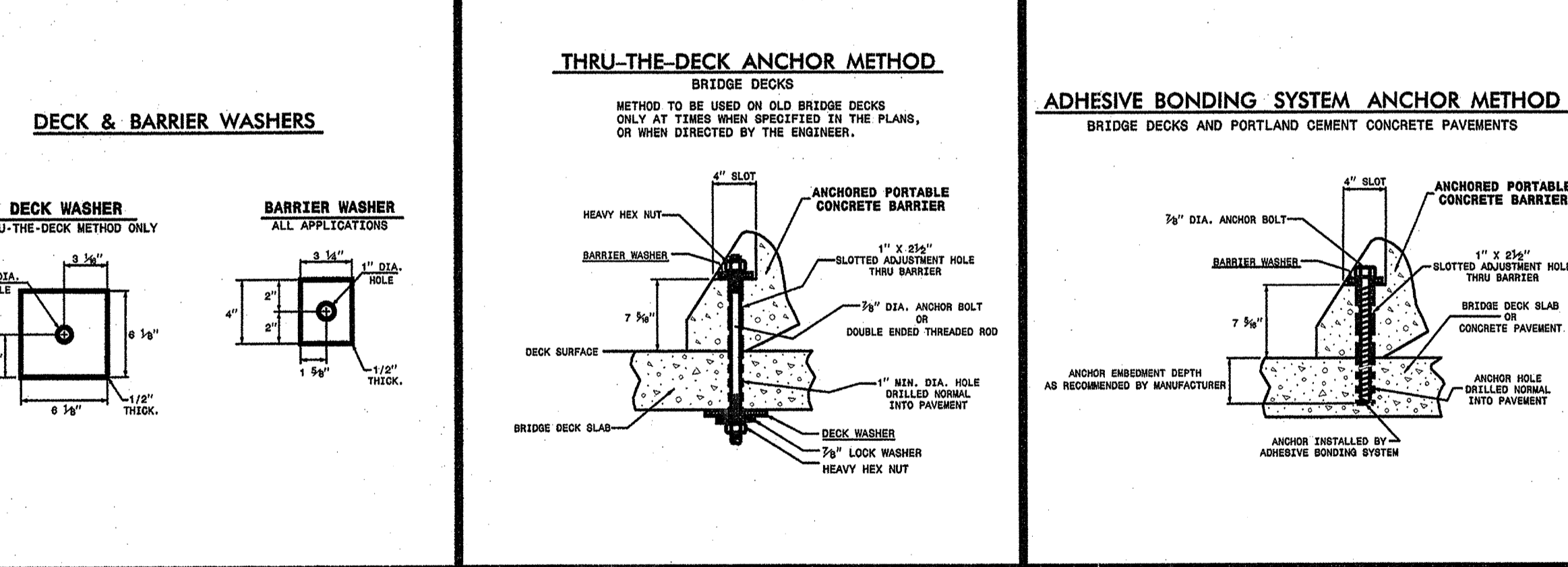
AFTER CASTING, THE DIAMETER OF THE SLOT CAN VARY BETWEEN 1" AND 1 3/8".

SHEET 2 OF 4
1170D01

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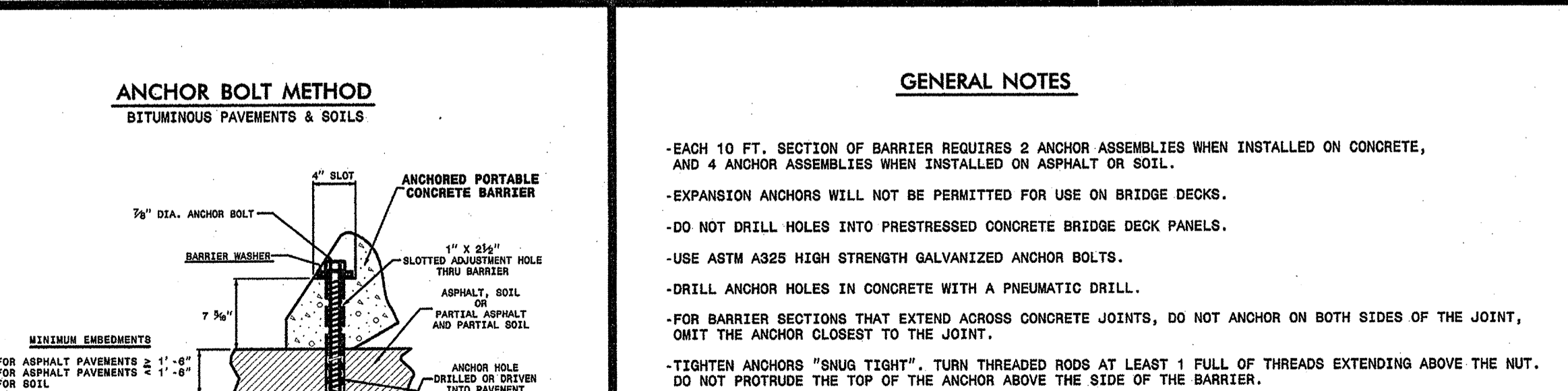
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.



GENERAL NOTES

- EACH 10 FT. SECTION OF BARRIER REQUIRES 2 ANCHOR ASSEMBLIES WHEN INSTALLED ON CONCRETE, AND 4 ANCHOR ASSEMBLIES WHEN INSTALLED ON ASPHALT OR SOIL.
- EXPANSION ANCHORS WILL NOT BE PERMITTED FOR USE ON BRIDGE DECKS.
- DO NOT DRILL HOLES INTO PRESTRESSED CONCRETE BRIDGE DECK PANELS.
- USE ASTM A325 HIGH STRENGTH GALVANIZED ANCHOR BOLTS.
- DRILL ANCHOR HOLES IN CONCRETE WITH A PNEUMATIC DRILL.
- FOR BARRIER SECTIONS THAT EXTEND ACROSS CONCRETE JOINTS, DO NOT ANCHOR ON BOTH SIDES OF THE JOINT, OMIT THE ANCHOR CLOSEST TO THE JOINT.
- TIGHTEN ANCHORS "SNUG TIGHT". TURN THREADED RODS AT LEAST 1 FULL OF THREADS EXTENDING ABOVE THE NUT. DO NOT PROTRUDE THE TOP OF THE ANCHOR ABOVE THE SIDE OF THE BARRIER.
- COAT ANCHORS USED WITH THE ADHESIVE BONDING ANCHORING SYSTEM WITH A DEBONDING AGENT SO THE ANCHORS CAN BE EASILY REMOVED. DO NOT REDUCE THE STRENGTH OF THE ANCHOR SYSTEM WITH THE DEBONDING AGENT.
- ONCE REMOVED, COMPLETELY FILL ANCHOR HOLES WITH AN APPROVED, NON-SHRINK, NON-METALLIC GROUT, OR AS DIRECTED BY THE ENGINEER.

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SHEET 3 OF 4
1170D01

SHEET 4 OF 4
1170D01

SHEET 4 OF 4
1170D01

STATE OF NORTH CAROLINA
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ENGLISH DETAIL DRAWING FOR
PORTABLE CONCRETE BARRIER

SHEET 3 OF 4
1170D01

STATE OF NORTH CAROLINA
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
PORTABLE CONCRETE BARRIER
ANCHORING METHODS

SHEET 4 OF 4
1170D01

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