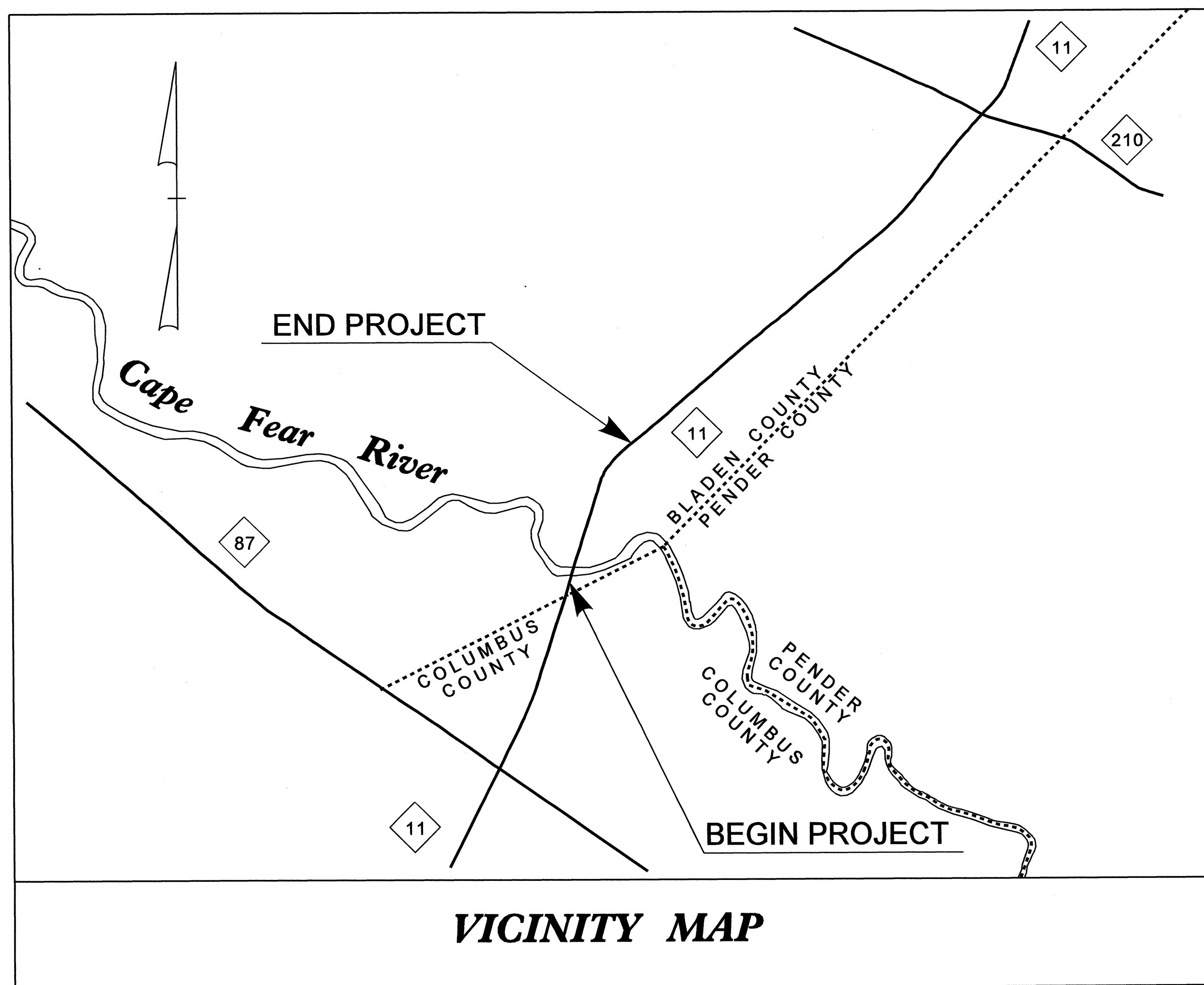
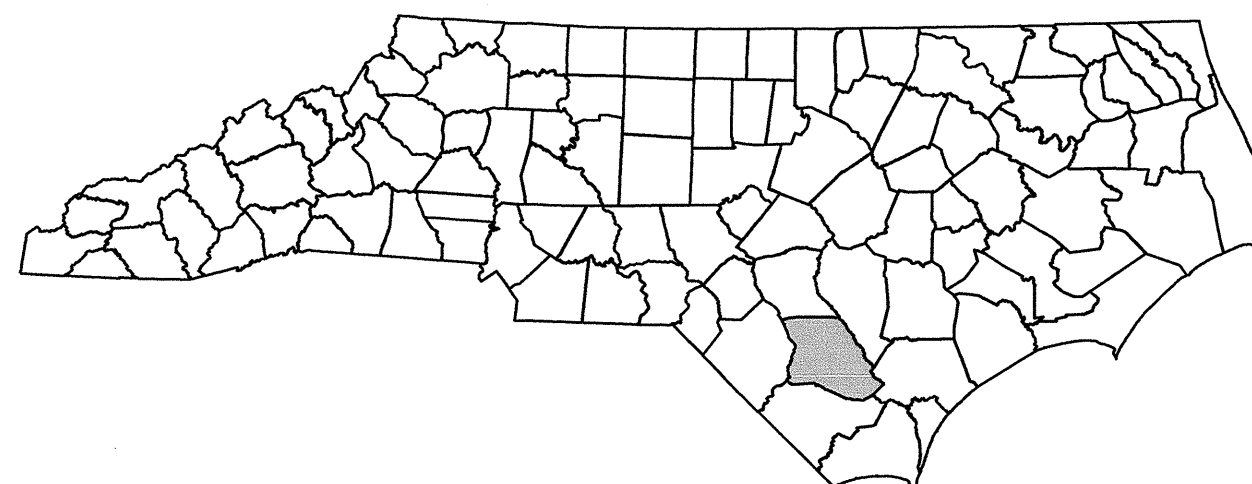


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

BLADEN COUNTY



VICINITY MAP

INDEX OF SHEETS

| SHEET NO. | TITLE |
|------------------|--|
| TMP-1 | TITLE SHEET, LEGEND AND INDEX OF SHEETS |
| TMP-1A | LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND PROJECT PHASING |
| TMP-1B | TRANSPORTATION OPERATIONS PLAN (CONSISTS OF GENERAL NOTES) |
| TMP-2A | PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS |
| TMP-2B | TEMPORARY SHORING DATA |
| TMP-3 THRU TMP-7 | PHASE I DETAILS |

LEGEND

GENERAL

- ← DIRECTION OF TRAFFIC FLOW
- EXIST. PVMT.
- ↑ NORTH ARROW
- PROPOSED PVMT.
- WORK AREA

TRAFFIC CONTROL DEVICES

- ▨ BARRICADE (TYPE III)
- DRUM
- ~ TEMPORARY CRASH CUSHION
- ~ TEMPORARY SHORING
- ~ TEMPORARY SHORING (SOIL FABRIC WALL)
- ▬ PORTABLE CONCRETE BARRIER

TEMPORARY SIGNING

- ⊥ STATIONARY SIGN

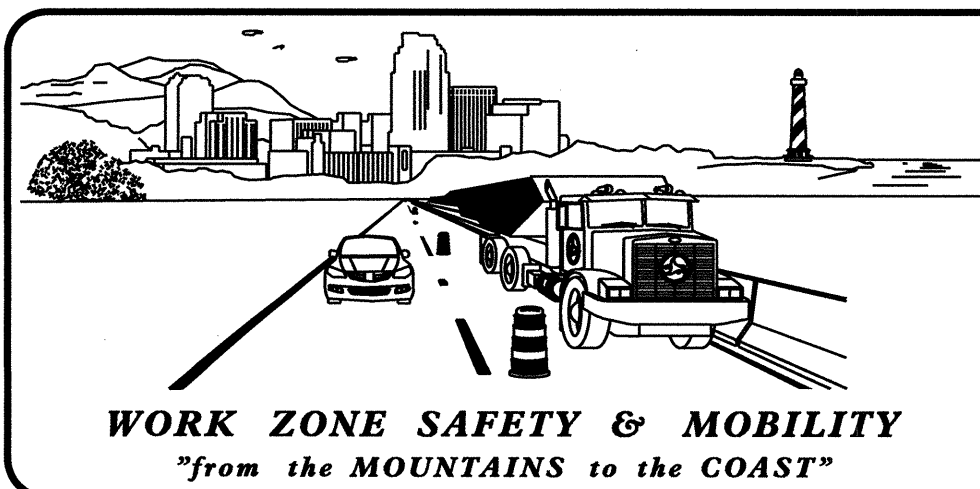
TEMPORARY PAVEMENT MARKING

- 4" PAINT**
- PA WHITE EDGELINE
 - PI YELLOW DOUBLE CENTER LINE
- 4" COLD APPLIED (TYPE IV)**
- CA WHITE EDGELINE
 - CI YELLOW DOUBLE CENTER LINE

TEMPORARY RAISED PAVEMENT MARKERS

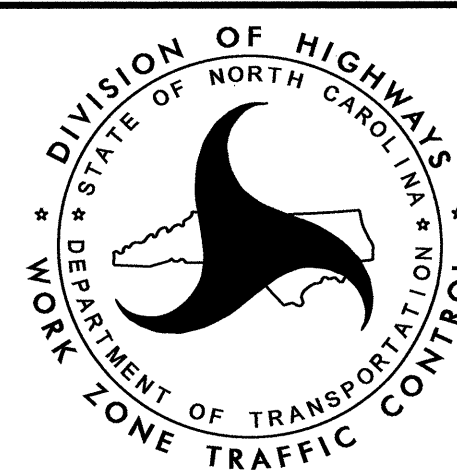
- MH YELLOW/YELLOW
- MI CRYSTAL/RED

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N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
J. S. KITE, P.E. TRAFFIC CONTROL PROJECT ENGINEER
D. A. PARKER TRAFFIC CONTROL PROJECT DESIGN ENGINEER
JOYNER - RICHARDSON TRAFFIC CONTROL DESIGN TECHNICIAN - ENGINEER



APPROVED: *John S. Kite*
DATE: *May 7, 2012*

SEAL

TIP PROJECT: B-4028

SHEET NO.
TMP-1

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN 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:

PROJECT PHASING

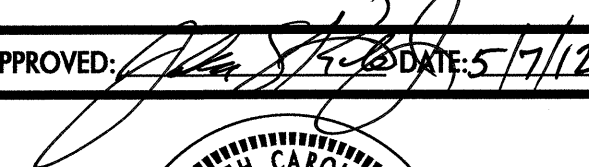
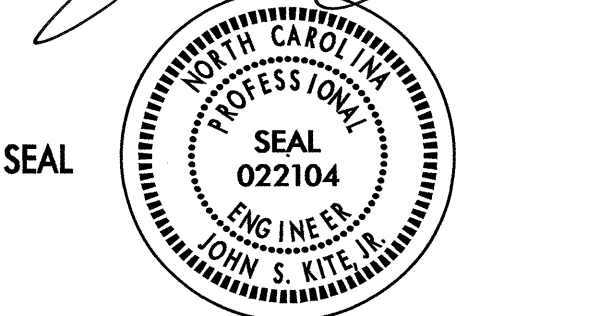
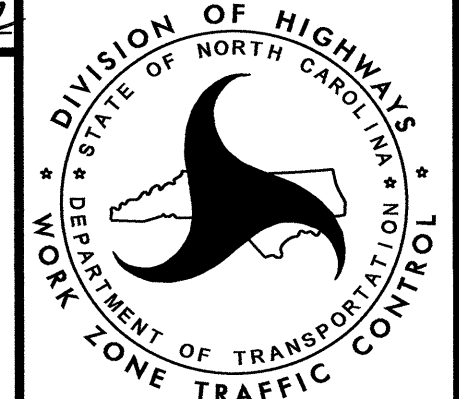
PHASE I

- STEP 1**
- INSTALL WORK ZONE ADVANCE WARNING SIGNS. SEE RSD 1101.01.
- STEP 2**
- BEHIND EXISTING GUARDRAIL, BEGIN PROPOSED BRIDGE CONSTRUCTION AND GRADING UP TO THE APPROXIMATE ELEVATION OF THE EXISTING SHOULDER. (SEE TMP-3 THRU TMP-7)
- STEP 3**
- USING RSD 1101.02, SHEET 1 OF 15, CONSTRUCT TEMPORARY PAVEMENT AND INSTALL PORTABLE CONCRETE BARRIER (PCB) AND CRASH CUSHIONS AND REMOVE EXISTING GUARDRAIL AS DETAILED ON SHEETS TMP-3 THRU TMP-6.
- REMOVE EXISTING GURADRAIL
- STEP 4**
- USING FLAGGERS WHERE NEEDED, INSTALL TEMPORARY SHORING IN THE FOLLOWING LOCATIONS:
-L- STA 22+45+/- TO 22+90+/- (31 FT RT) (SEE TMP-4)
-L- STA 35+29+/- TO 35+60+/- (24 FT RT) (SEE TMP-4)
-L- STA 48+73+/- TO 54+48+/- (28 FT RT) (SEE TMP-5 & TMP-6) (TEMPORARY FABRIC WALL)
- STEP 5**
- USING RSD 1101.02, SHEET 1 OF 15 AND/OR WORKING BEHIND PCB, COMPLETE PROPOSED BRIDGES AND APPROACHES UP TO, BUT NOT INCLUDING, THE FINAL LAYER OF SURFACE COURSE. SEE TMP-3 THRU TMP-7.
- STEP 6**
- PLACE TEMPORARY PHASE II PAVEMENT MARKINGS/MARKERS AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH THE EXISTING TRAFFIC PATTERN. USE 2 APPLICATIONS OF PAINT ON ASPHALT APPROACHES AND 1 APPLICATION OF PAINT ON CONCRETE BRIDGE DECKS.

PHASE II

- STEP 1**
- WORKING IN A CONTINUOUS MANNER TO COMPLETE IN A SINGLE WORK PERIOD, SHIFT NC 11 TRAFFIC IN THE FOLLOWING SEQUENCE:
A) USING FLAGGERS, PLACE ALL TRAFFIC IN A 1L, 2W PATTERN IN THE EXISTING NB LANE.
B) WITH ALL TRAFFIC IN THE EXISTING NB LANE, TIE IN THE PROPOSED SB LANE OF THE NEW ROAD AND INSTALL A DOUBLE YELLOW CENTERLINE.
C) HAVE FLAGGERS DIRECT TRAFFIC TO NEWLY CONSTRUCTED -L- IN A 1L, 2W PATTERN IN THE PROPOSED SB LANE.
D) WITH ALL TRAFFIC IN SB LANE, TIE IN PROPOSED NB LANE OF THE NEW ROAD AND TIE IN THE DOUBLE YELLOW CENTERLINE.
E) ENSURE ALL TRAFFIC CONTROL DEVICES ON NC 11 ARE CORRECT AND OPEN LANES TO 2L, 2W TRAFFIC PATTERN.
- STEP 2**
- USING FLAGGERS WHERE NECESSARY, CONSTRUCT RIGHT SIDE SLOPE, PAVEMENT REMOVAL, AND BRIDGE DEMOLITION.
- STEP 3**
- USING FLAGGERS, PLACE FINAL LAYER OF SURFACE COURSE.
- STEP 4**
- USING FLAGGERS, PLACE FINAL PAVEMENT MARKINGS AND MARKERS.
- STEP 5**
- REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES.

| 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 |
| 1170.01 | PORTABLE CONCRETE BARRIER |
| 1180.01 | SKINNY-DRUM |
| 1261.01 | GUARDRAIL & BARRIER DELINEATOR SPACING |
| 1261.02 | GUARDRAIL & BARRIER DELINEATOR TYPES |
| 1262.01 | GUARDRAIL END DELINEATION |
| 1264.01 | OBJECT MARKERS |

| | | |
|---|---|--|
| APPROVED:  DATE: 5/7/12  |  | ROADWAY STANDARD DRAWINGS AND PROJECT PHASING |
|---|---|--|

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRE OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- A) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- B) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- D) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- E) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

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

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

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- F) 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) IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- H) 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.
- I) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC BARRIER

- J) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION PROCEED IN A CONTINUOUS MANNER TO COMPLETE THE PROPOSED WORK IN THAT LOCATION UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE.

TRAFFIC BARRIER (CONT'D)

- J) (CONT'D)
ONCE TEMPORARY BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE TEMPORARY BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE / RESET TEMPORARY BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

INSTALL TEMPORARY BARRIER WITH THE TRAFFIC FLOW BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE TEMPORARY 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 THE SECTION OF THE ROADWAY CLOSED UNTIL THE TEMPORARY BARRIER CAN BE PLACED OR AFTER THE TEMPORARY BARRIER IS REMOVED.

- K) PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER AT ALL TIMES DURING THE INSTALLATION AND REMOVAL OF THE BARRIER BY EITHER A TRUCK MOUNTED ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO 1101.05)

| POSTED SPEED LIMIT | MINIMUM OFFSET |
|--------------------|----------------|
| 40 OR LESS | 15 FT |
| 45 - 50 | 20 FT |
| 55 | 25 FT |
| 60 MPH or HIGHER | 30 FT |

TRAFFIC CONTROL DEVICES

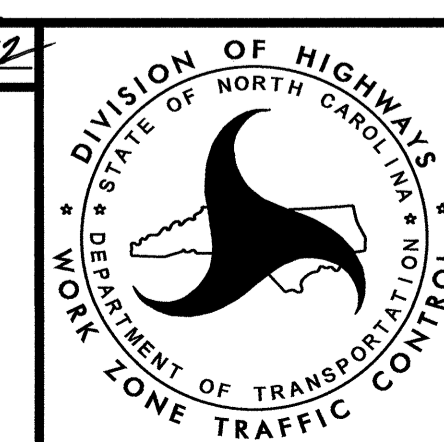
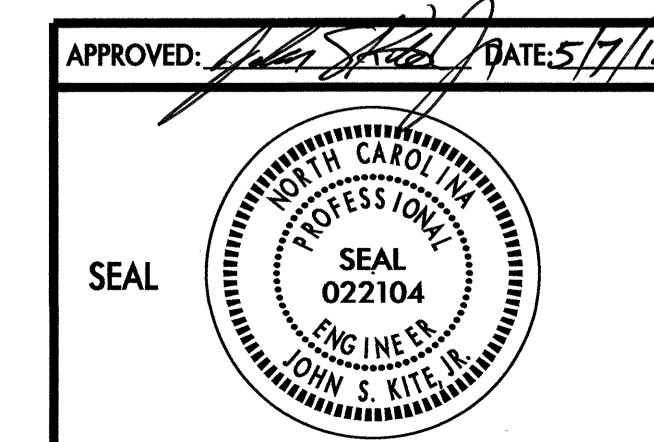
- L) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- M) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- N) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

| ROAD NAME | MARKING | MARKER |
|------------------|------------------------|-------------|
| NC 11 | PAINT (2 APPLICATIONS) | TEMP RAISED |
| CONCRETE BRIDGES | PAINT (1 APPLICATION) | TEMP RAISED |

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



**TRANSPORTATION
OPERATIONS PLAN**

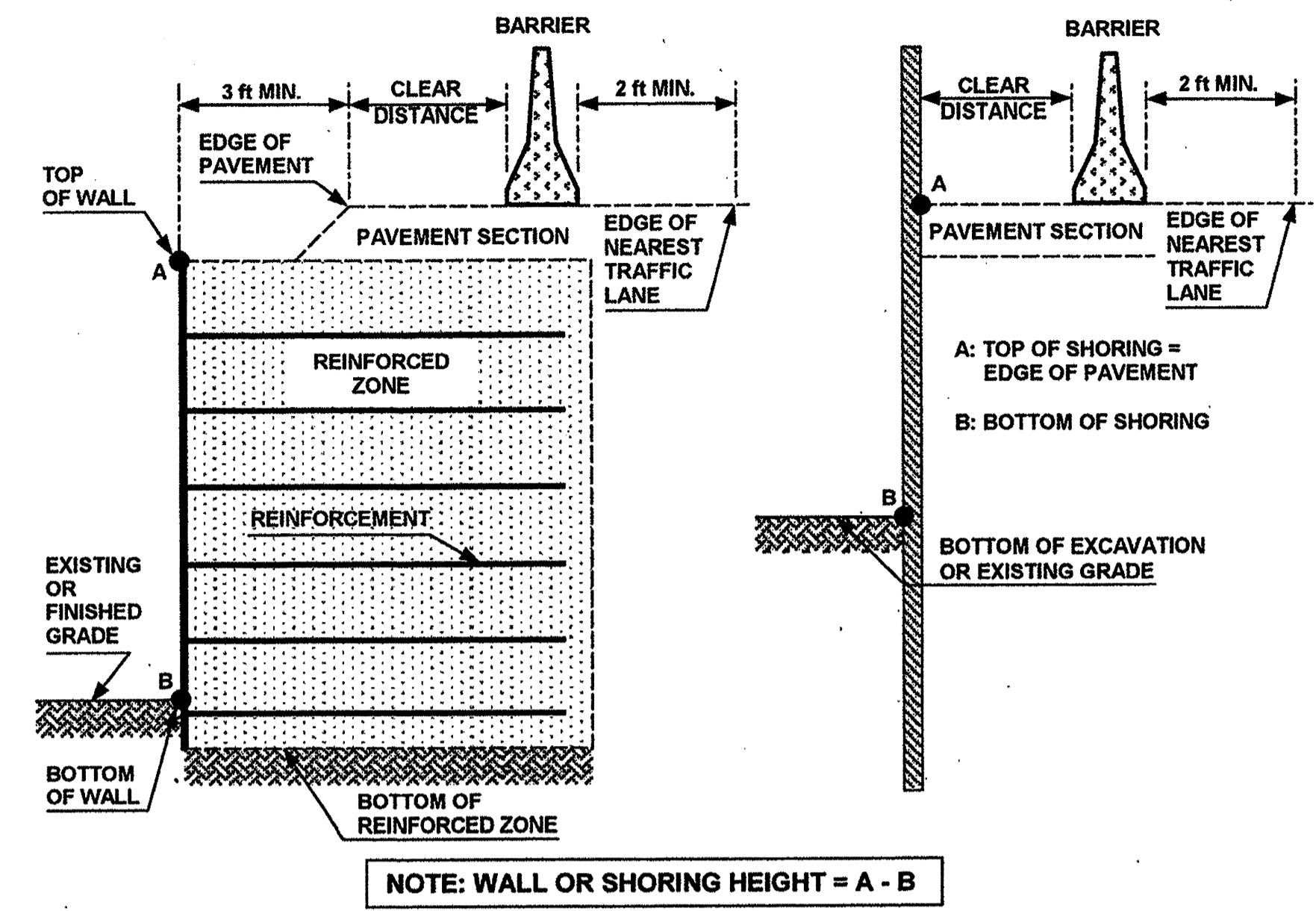


FIGURE A

NOTES

- 1- REFER TO THE TRAFFIC CONTROL PLANS FOR SHORING LOCATIONS AND SOIL PARAMETERS.
- 2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR MORE INFORMATION ABOUT TEMPORARY SHORING, MEASUREMENT AND PAYMENT.
- 3- PROVIDE PORTABLE CONCRETE BARRIER TO PROTECT TEMPORARY SHORING IF SHORING IS LOCATED WITHIN THE CLEAR ZONE AS DEFINED IN THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 4- 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.
- 5- 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. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.
- 7- USE OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH DETAIL DRAWING AND SPECIAL PROVISION OBTAINED FROM: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.
- 8- 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.
- 9- 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.
- 10- 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 * 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 | 24 for All Design Speeds | | | | | | |
| Anchored PCB or Oregon Barrier | Concrete (including bridge approach slabs) | All Offsets | 12 for All Design Speeds | | | | | | |

* See Figure Below

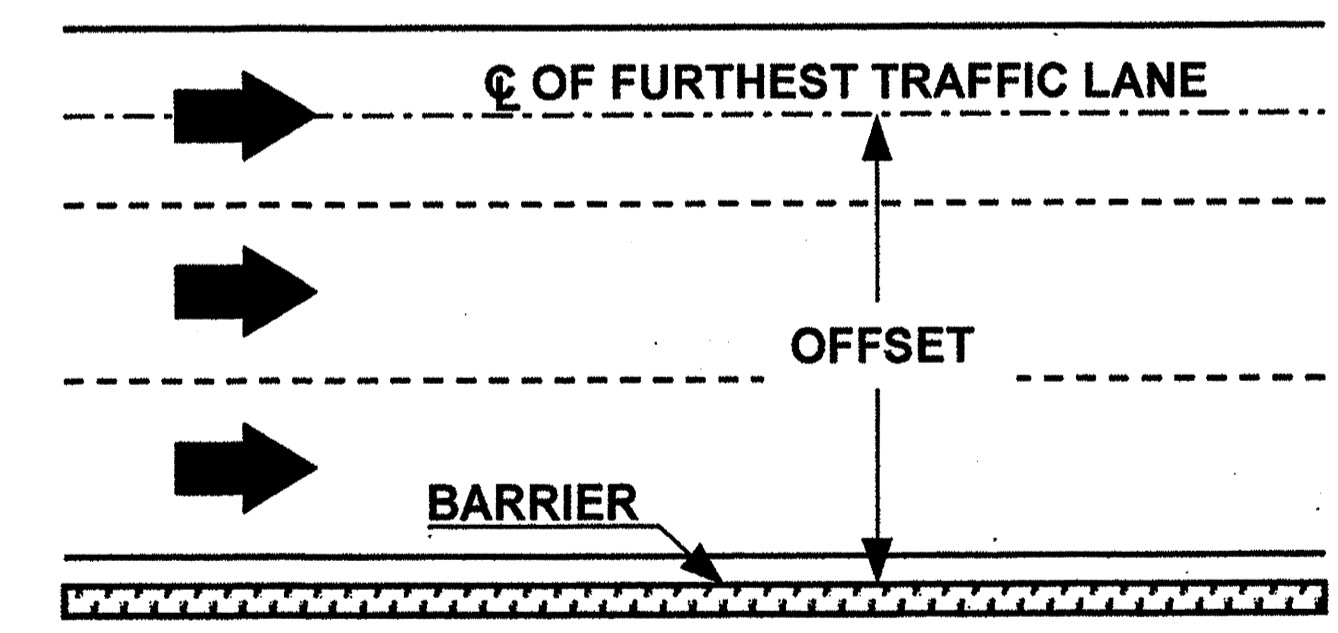


FIGURE B

| | | | |
|-----------------|-------------|--|--|
| APPROVED: _____ | DATE: _____ | | PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS |
| | | | |

TEMPORARY SHORING DATA

| | |
|---------------------|-----------|
| PROJ. REFERENCE NO. | SHEET NO. |
| B-4028 | TMP-2B |

TEMPORARY SHORING LOCATION NO 1
-L- STA 22+45+/- TO 22+90+/- (31' RT)

ESTIMATED QUANTITY = 247.5 SF

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 22+45± -L-, 31 FT RIGHT, TO STATION 22+90±-L-, 31 FT RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND WATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUND WATER ELEVATION = 40 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 22+45± -L-, 31 FT RIGHT, TO STATION 22+90± -L-, 31 FT RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 22+45± -L-, 31 FT RIGHT, TO STATION 22+90±-L-, 31 FT RIGHT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 22+45± -L-, 31 FT RIGHT, TO STATION 22+90±-L-, 31 FT RIGHT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO 2
-L- STA 35+29+/- TO 35+60+/- (24' RT)

ESTIMATED QUANTITY = 71.3 SF

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 35+29± -L-, 24 FT RIGHT, TO STATION 35+60±-L-, 24 FT RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND WATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUND WATER ELEVATION = 9 FT ±

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 35+29± -L-, 24 FT RIGHT, TO STATION 35+60±-L-, 24 FT RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DO NOT USE A TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 35+29± -L-, 24 FT RIGHT, TO STATION 35+60±-L-, 24 FT RIGHT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 35+29± -L-, 24 FT RIGHT, TO STATION 35+60±-L-, 24 FT RIGHT. SEE STANDARD DRAWING NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

TEMPORARY SHORING LOCATION NO 3
-L- STA 48+73+/- TO 54+48+/- (28' RT)

ESTIMATED QUANTITY = 2300 SF

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 48+73± -L-, 28 FT RIGHT, TO STATION 54+48±-L-, 28 FT RIGHT, FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUND WATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
 FRICTION ANGLE (ϕ) = 30 DEGREES
 COHESION (c) = 0 LB/SF
 GROUND WATER ELEVATION = 9 FT ±

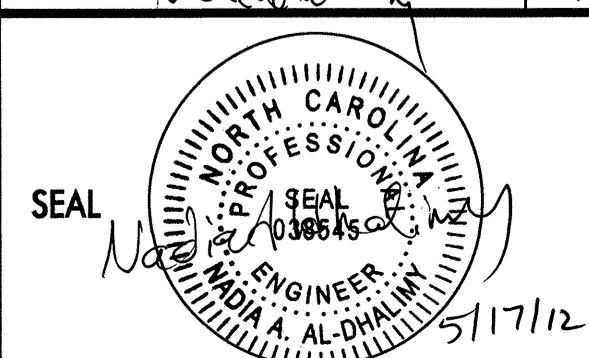

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 48+73± -L-, 28 FT RIGHT, TO STATION 54+48±-L-, 28 FT RIGHT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

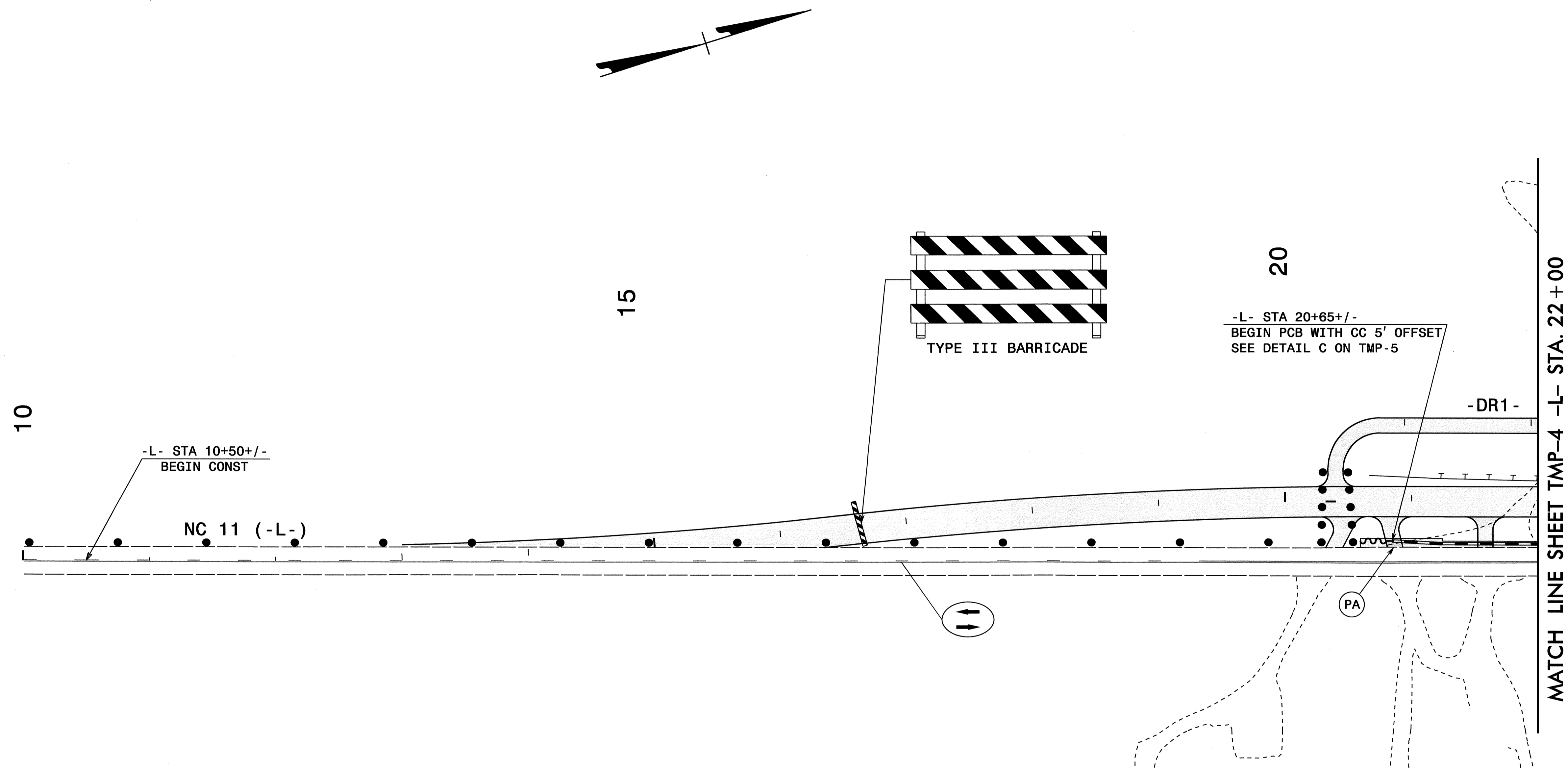
DO NOT USE CANTILEVER, BRACED AND/OR ANCHORED SHORING FOR TEMPORARY SHORING FROM STATION 48+73± -L-, 28 FT RIGHT, TO STATION 54+48±-L-, 28 FT RIGHT.

AT THE CONTRACTOR'S OPTION, USE A STANDARD TEMPORARY WALL FOR TEMPORARY SHORING FROM STATION 48+73± -L-, 28 FT RIGHT, TO STATION 54+48±-L-, 28 FT RIGHT. SEE STANDARD DRAWING NO. 1802.02 FOR STANDARD TEMPORARY WALLS.

WHEN BACKFILL FOR BRIDGE APPROACH FILLS OVERLAPS WITH THE REINFORCED ZONE OF TEMPORARY WALLS, USE SHORING BACKFILL OR BACKFILL MATERIAL REQUIRED FOR BRIDGE APPROACH FILLS, WHICHEVER IS BETTER, IN THE REINFORCED ZONE OF TEMPORARY WALLS.

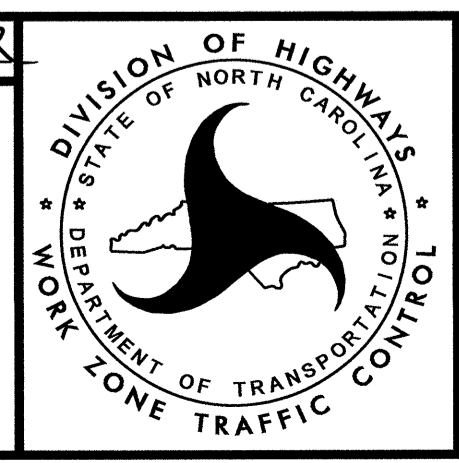
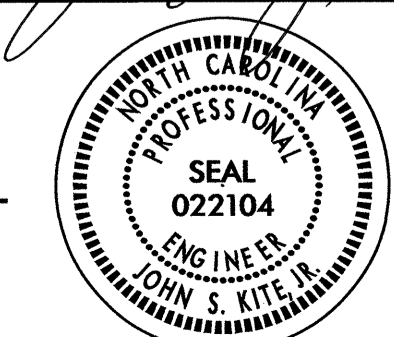
I7-MAY-2012 11:26 \\dot\dfsroot\proj\TipProjects\B\4028\Traffic\TrafficControl\top\b4028.tc.tmp_02.dgn derichardson AT TE248376

| | | |
|---|---|--|
| APPROVED: <i>N. Al-Dhiny</i> DATE: 5/17/12  |  | <h2 style="margin: 0;">TEMPORARY SHORING DATA</h2> |
|---|---|--|



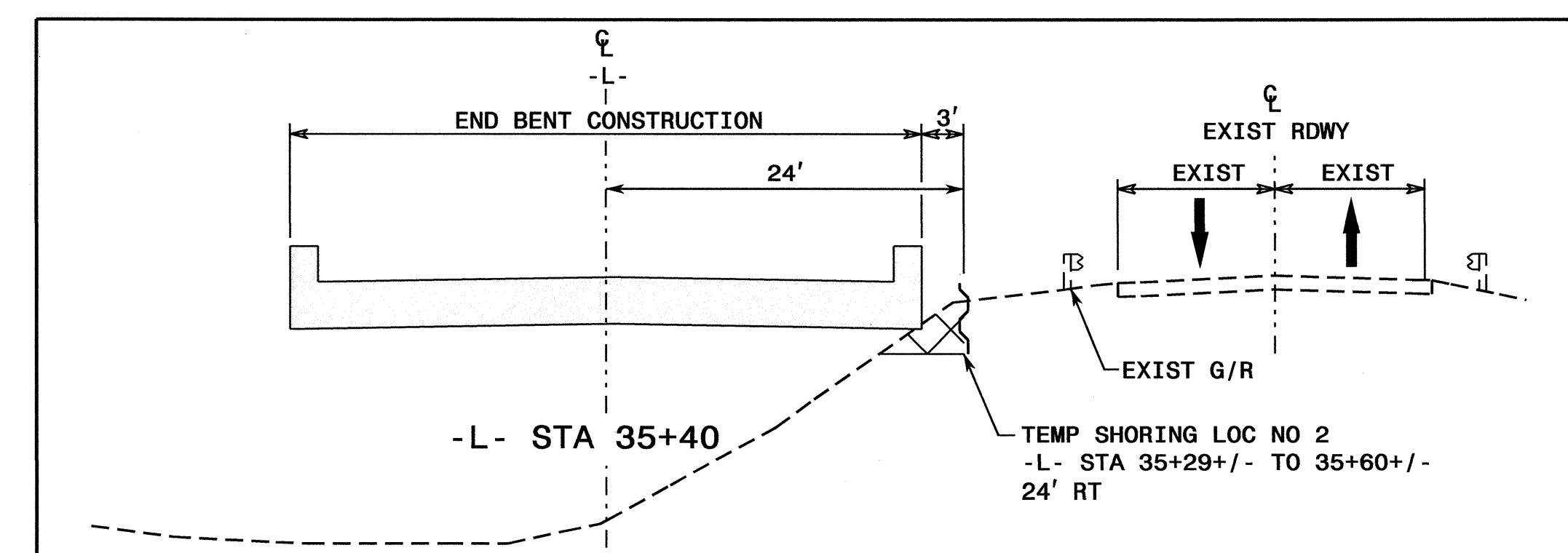
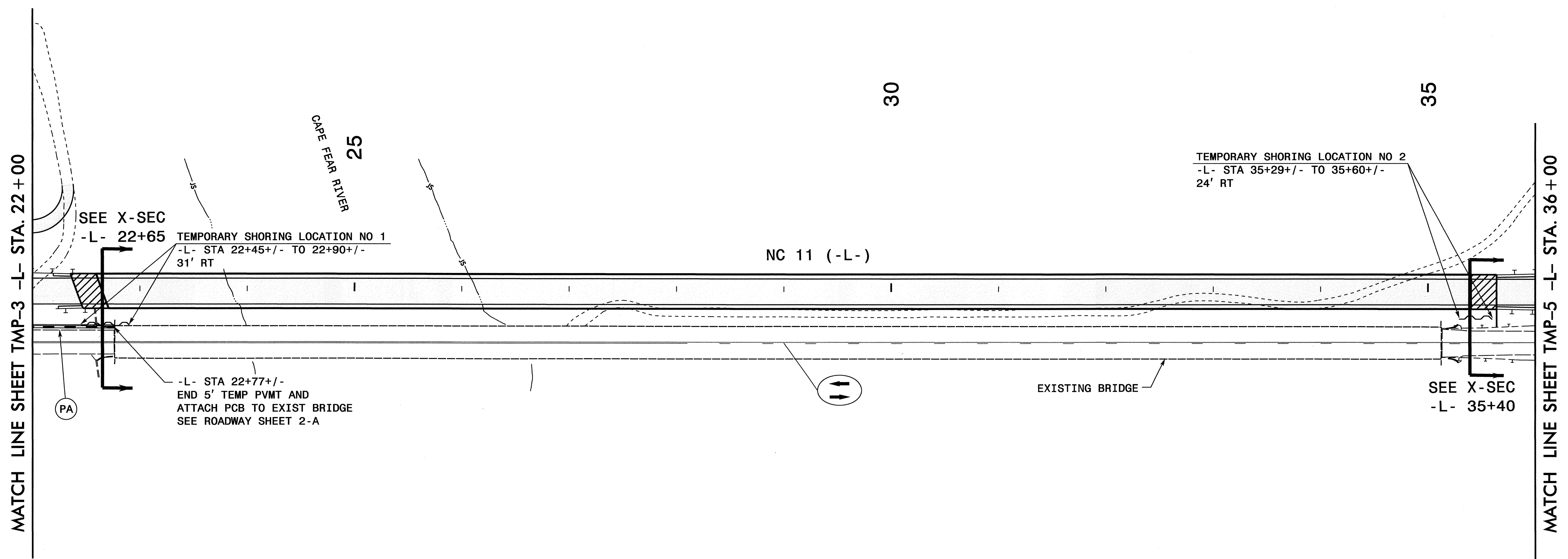
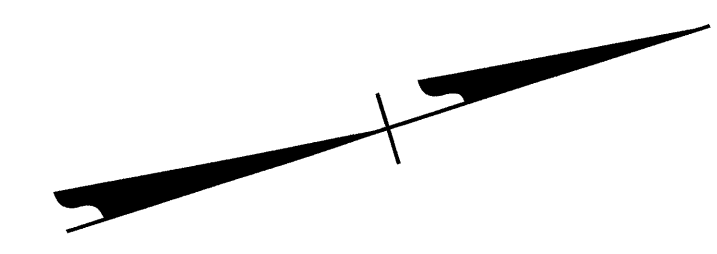
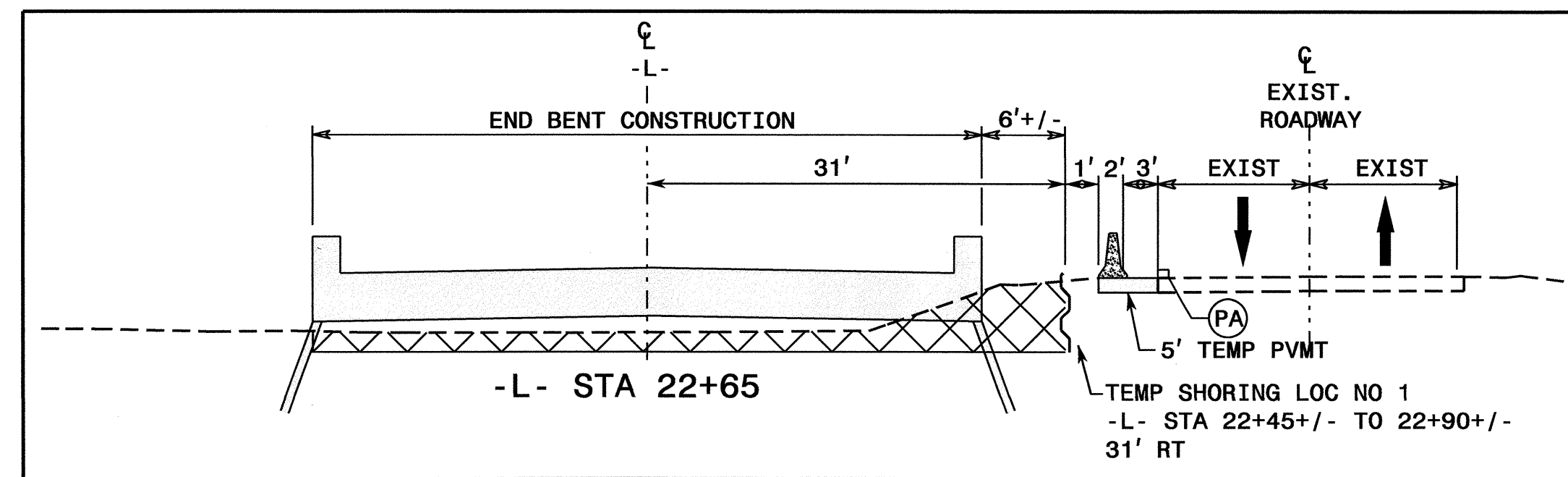
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 derichardson AT E248376

APPROVED: *[Signature]* DATE: 5/7/12



PHASE I
 CONSTRUCTION OF PROPOSED
 ROADWAY & BRIDGES

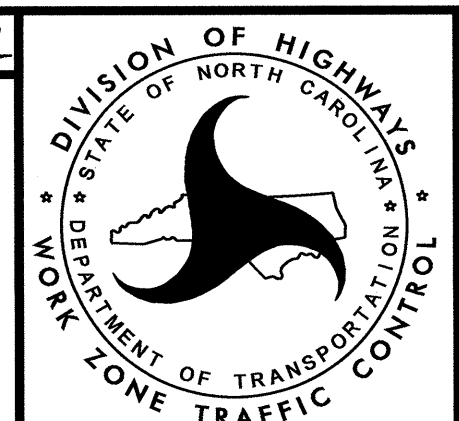
NOTE - SEE TMP-2B FOR TEMPORARY SHORING NOTES



APPROVED: *[Signature]* DATE: 5/7/12

SEAL

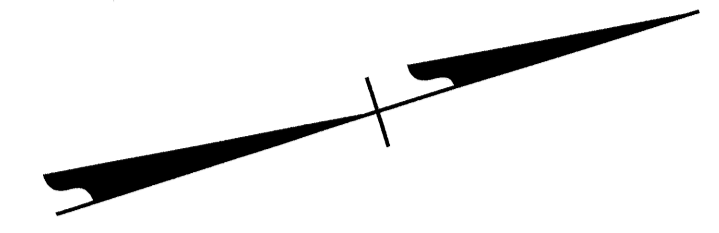
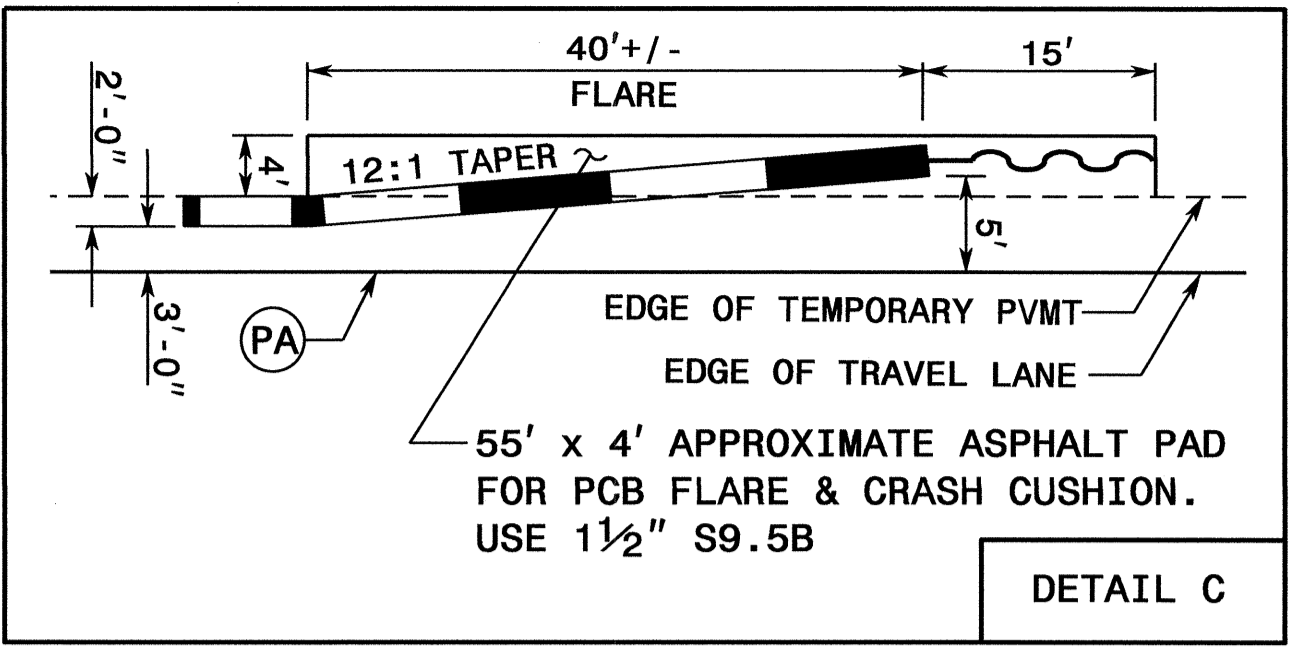
PROFESSIONAL ENGINEER
SEAL 022104
JOHN S. KITTE JR.



PHASE I
CONSTRUCTION OF PROPOSED
ROADWAY & BRIDGES

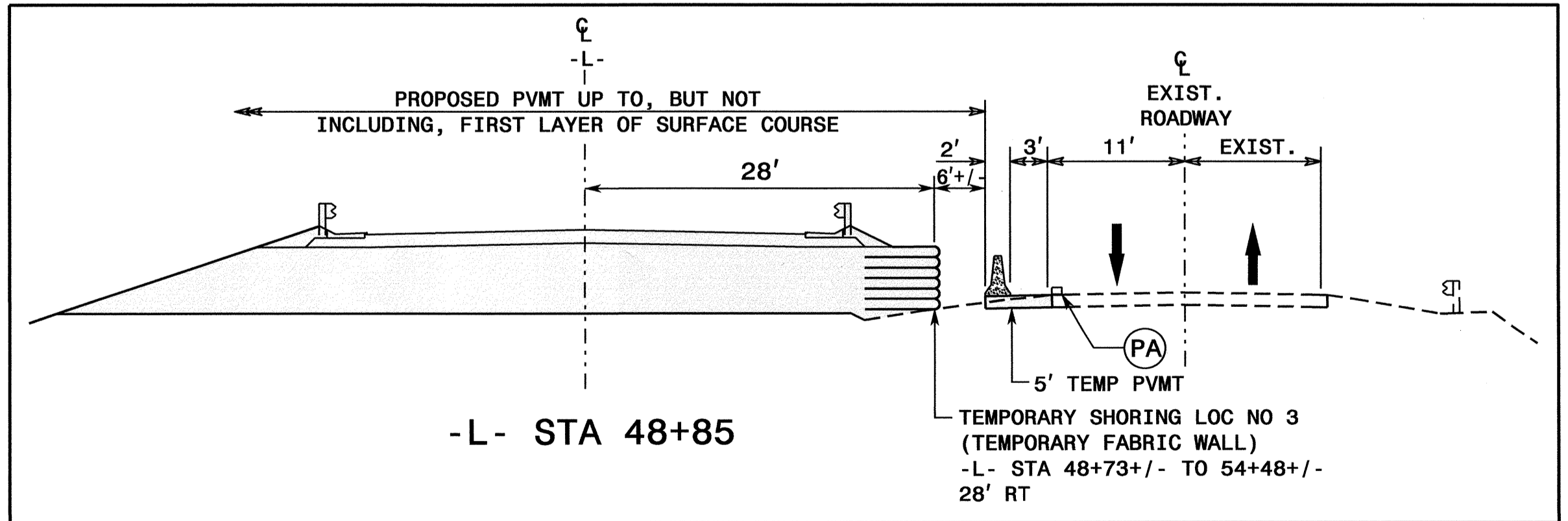
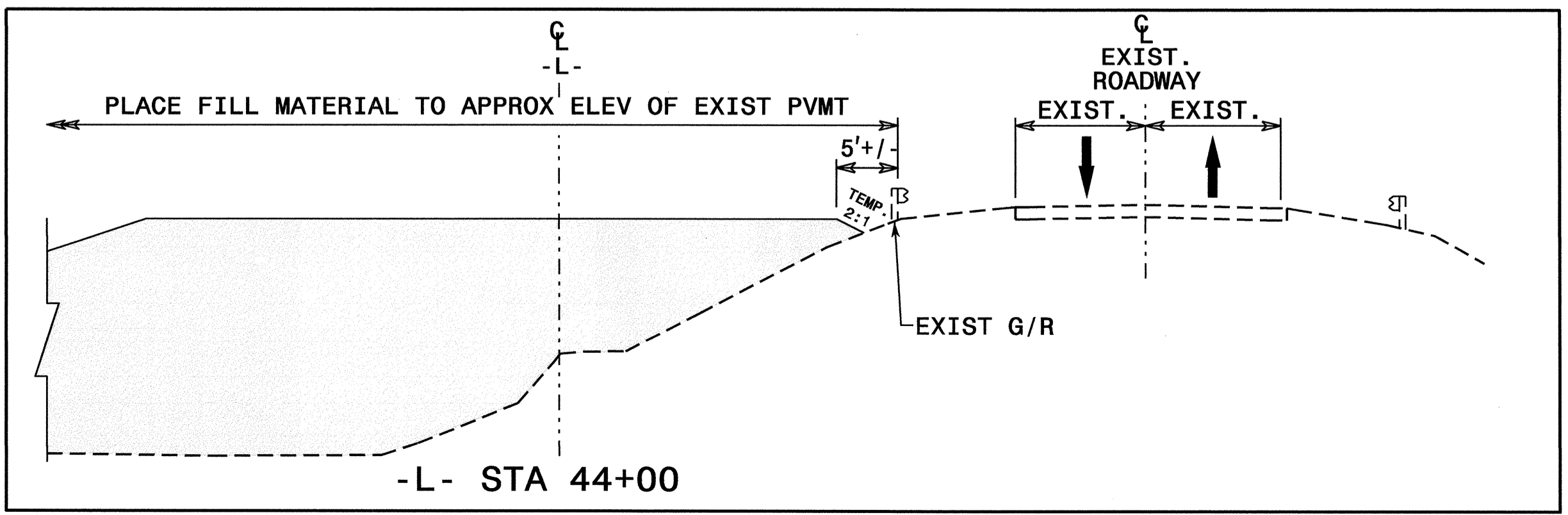
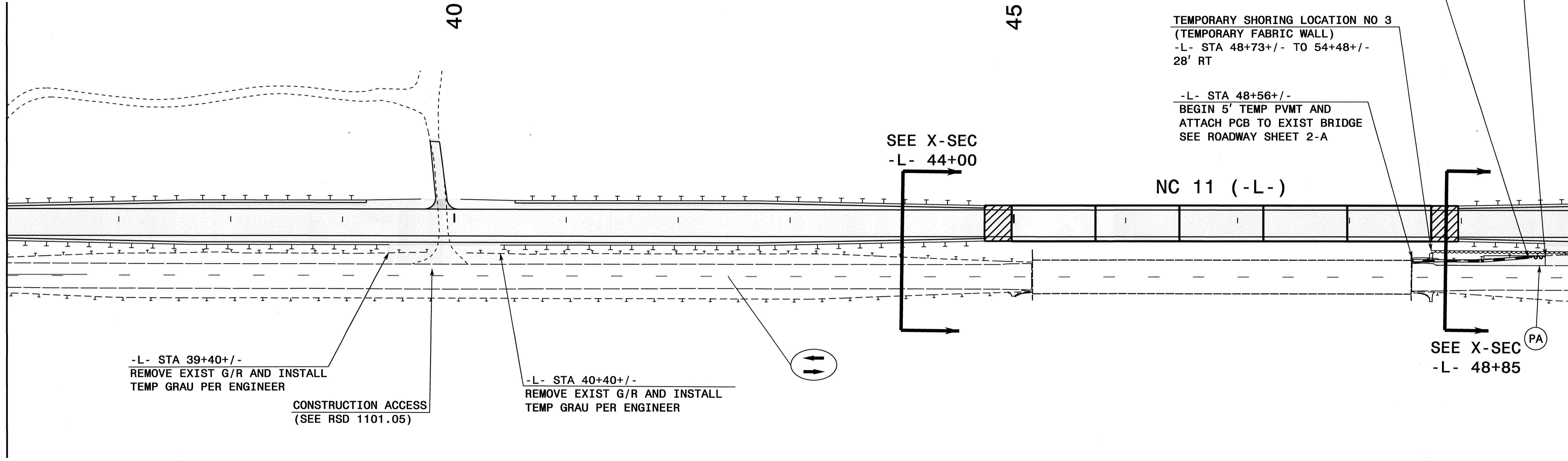
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NOTE - SEE TMP-2B FOR TEMPORARY SHORING NOTES



MATCH LINE SHEET TMP-4 -L- STA. 36+00

MATCH LINE SHEET TMP-6 -L- STA. 50+00

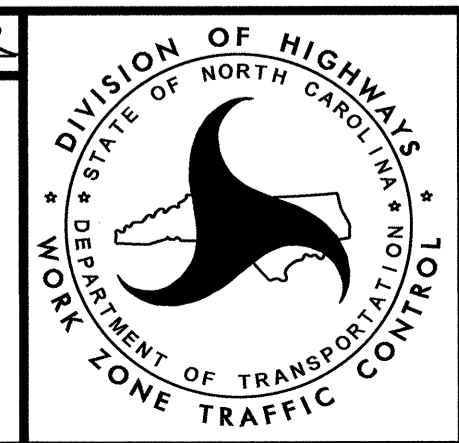


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derichardson AT TEL248376

APPROVED: *[Signature]* DATE: 5/7/12

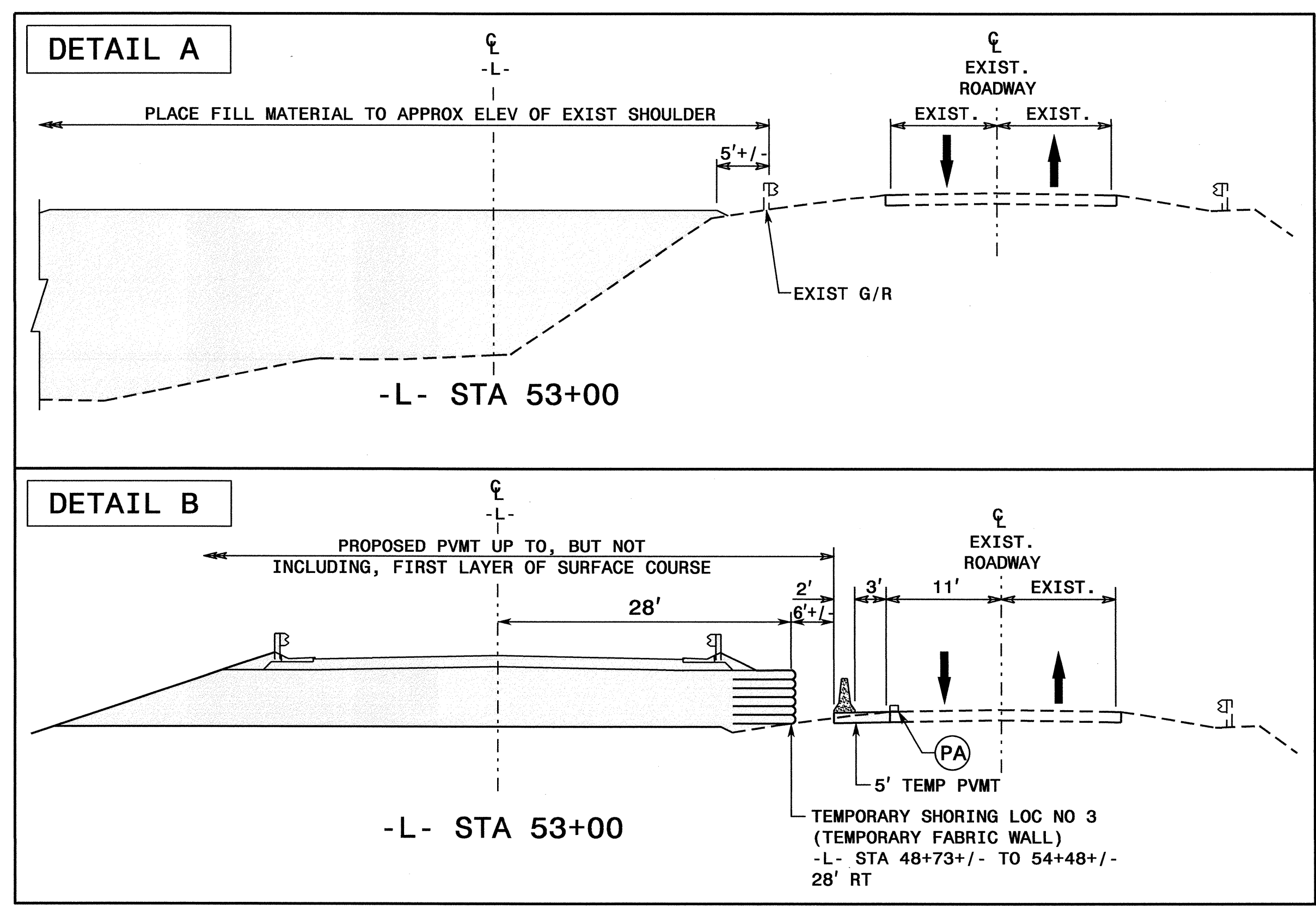
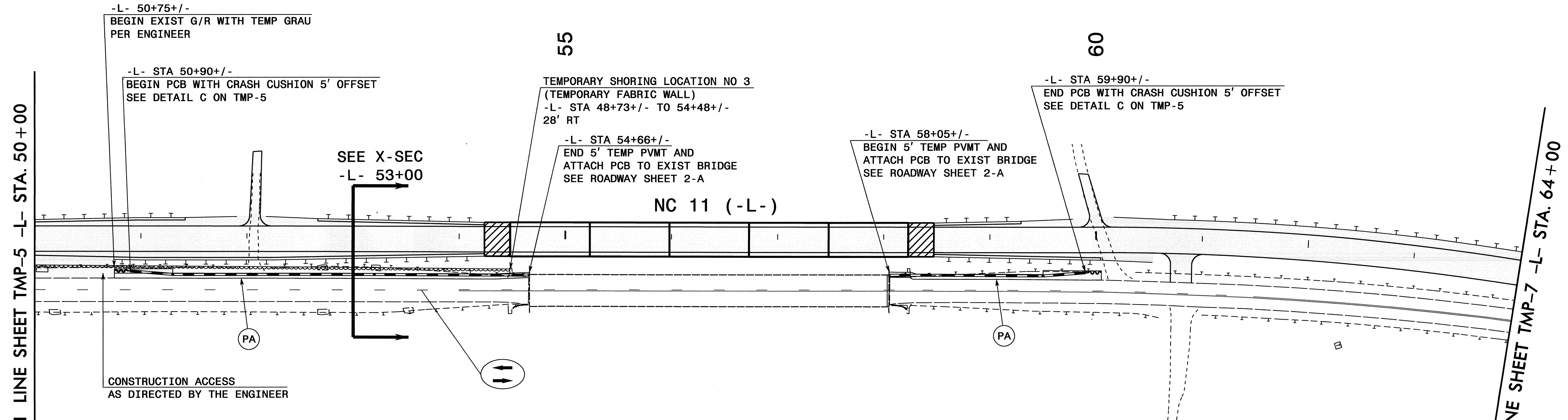
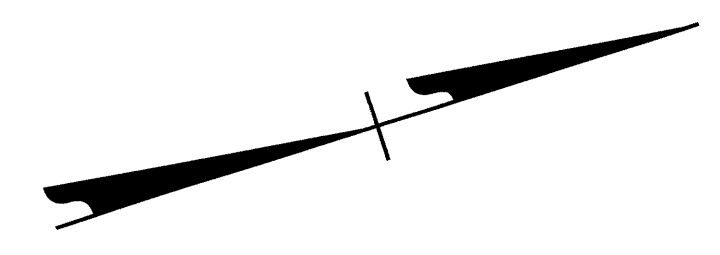
SEAL

PROFESSIONAL ENGINEER
SEAL 022104
JOHN S. KITE, JR.



PHASE I
CONSTRUCTION OF PROPOSED
ROADWAY & BRIDGES

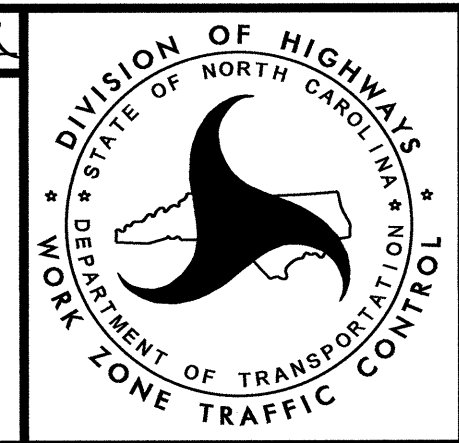
NOTE - SEE TMP-2B FOR TEMPORARY SHORING NOTES



NOTE
 LEAVE EXISTING GUARDRAIL IN PLACE UNTIL PROPOSED FILL IS BROUGHT UP TO THE APPROXIMATE ELEVATION OF THE EXISTING ROAD (SEE DETAIL A). THEN REMOVE EXISTING GUARDRAIL AND REPLACE WITH DRUMS/PCB AND COMPLETE APPROACH WORK (SEE DETAIL B).

APPROVED: *[Signature]* DATE: 5/1/12

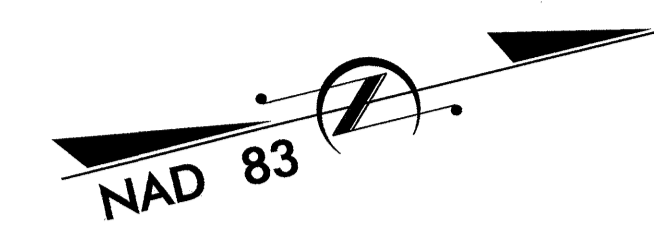
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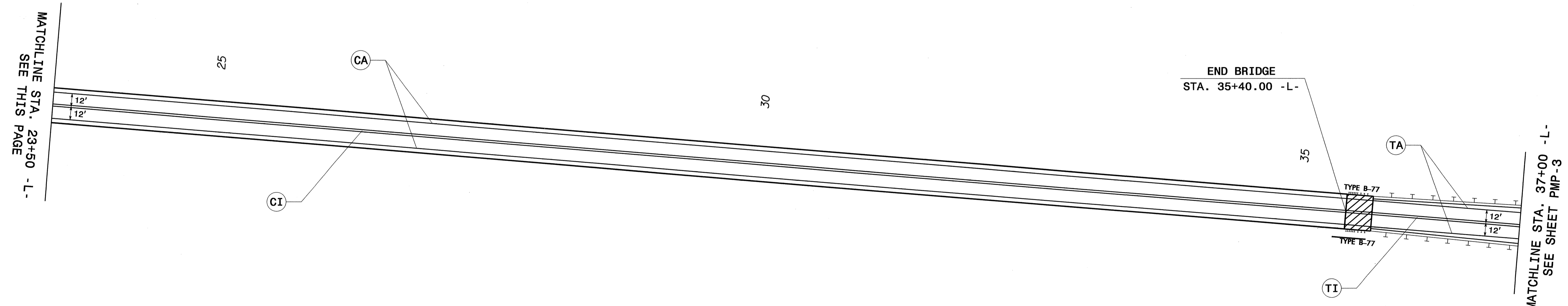
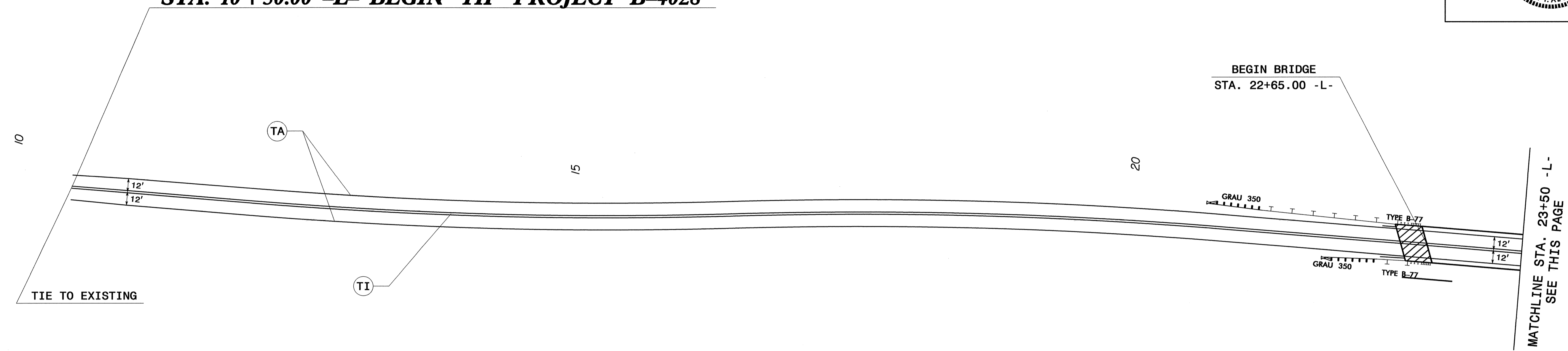
PHASE I
 CONSTRUCTION OF PROPOSED
 ROADWAY & BRIDGES

07-MAY-2012 13:56
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 derichardson AT TE248376

| | |
|------------------------------|--------------------|
| TIP NO. B-4028 | SHEET NO. PMP-2 |
| APPROVED: <i>[Signature]</i> | |
| DATE: 4/26/12 | |
| SEAL | |
| | |



STA. 10+50.00 -L- BEGIN TIP PROJECT B-4028



| SYMBOL AND PAVEMENT MARKING LEGEND | |
|------------------------------------|--------------------------------|
| THERMOPLASTIC | COLD APPLIED PLASTIC |
| (TA) WHITE EDGE LINE (4") | (CA) WHITE EDGE LINE (4") |
| (TI) YELLOW DOUBLE CENTER (4") | (CI) YELLOW DOUBLE CENTER (4") |

PROPOSED PAVEMENT MARKINGS

25-Apr-2012 12:05 PM C:\Users\meaton\AppData\Local\Temp\12277908\CA\B4028\Traffic\Signing\CADD\PM\B4028.BPMP_psh1.dgn