

CONTRACT: 202743 PROJECT: R-5207B

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

STATE PROJECT REFERENCE NO. R-5207B		SHEET NO. TCP-1
STATE WBS NO. 45393.3.3	F.A. PROJ. NO.	DESCRIPTION PE

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 July 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER 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
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
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1250.01	PAVEMENT MARKER SPACING
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1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
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INDEX OF SHEETS

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TEMP. PAVEMENT MARKING SCHEDULE

SYMBOL	PAY ITEM DESCRIPTION	QUANTITY	TOTAL
PAVEMENT MARKINGS			
PAINT(24")			
P4	WHITE STOPBAR (2X)	370 LF	
		TOTAL	370 LF
PAINT(4")			
PA	WHITE EDGELINE (2X)	29690 LF	
PB	YELLOW EDGELINE (1X)	245 LF	
PD	2 FT. WHITE MINISKIP (2X)	109 LF	
PE	WHITE SOLID LANE LINE (2X)	668 LF	
PF	10 FT. YELLOW SKIP (2X)	62 LF	
PH	YELLOW SINGLE CENTER (2X)	248 LF	
PI	YELLOW DOUBLE CENTER (2X)	31644 LF	
		TOTAL	62666 LF
PAINT(12")			
PV	YELLOW DIAGONAL (1X)	344 LF	
		TOTAL	344 LF
PAINTMARKING SYMBOLS			
QA	LEFT TURN ARROW (1X)	7 EA	
QB	RIGHT TURN ARROW (1X)	4 EA	
QE	COMBO. STRAIGHT/RIGHT (1X)	5 EA	
		TOTAL	16 EA
MARKERS			
TEMPORARY RAISED PAVEMENT MARKERS			
MH	YELLOW & YELLOW	200 EA	
MI	CRYSTAL & RED	33 EA	
		TOTAL	233 EA

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

LEGEND

- GENERAL**
- DIRECTION OF TRAFFIC FLOW
 - NORTH ARROW
 - PROPOSED PVMT. EXIST. PVMT.
 - WORK AREA
 - REMOVAL OF EXISTING PAVEMENT
 - TEMPORARY PAVEMENT


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

PAVEMENT MARKINGS

- CRYSTAL/CRYSTAL PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- CRYSTAL/RED PAVEMENT MARKER
- PAVEMENT MARKING SYMBOLS

100% SUBMITTAL

<p>APPROVED: _____ DATE: _____</p>	<p>PLAN PREPARED FOR N.C.D.O.T. BY: SSEPI</p>	<p style="font-size: small;">1025 Wade Avenue Raleigh, NC 27605 Tel: 919-788-9977 Fax: 919-788-9591</p>
<p>SEAL</p> 	<p>CLIFTON T. REGISTER, PE PROJECT ENGINEER MATTHEW COPPLE, PE DESIGN ENGINEER</p>	

GENERAL NOTES

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 UNDESIRE 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

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 1006 (HOWARD GAP RD)	MON.- FRI. 7:30AM - 8:30AM SCHOOL DAYS MON.- FRI. 2:45PM - 3:45PM SCHOOL DAYS SAT. 8:00PM - MON. 6:00AM

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

ROAD NAME
SR 1006 (HOWARD GAP RD)

HOLIDAY

- FOR ANY EVENT THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 8:00PM DECEMBER 31st TO 6:00AM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A SATURDAY OR A SUNDAY, THEN UNTIL 6:00AM THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 8:00PM THURSDAY AND 6:00AM MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 8:00PM FRIDAY TO 6:00 A.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 8:00PM THE DAY BEFORE INDEPENDENCE DAY AND 6:00AM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A SATURDAY OR SUNDAY, THEN BETWEEN THE HOURS OF 8:00PM THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00AM THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 8:00PM FRIDAY AND 6:00AM TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 8:00PM TUESDAY TO 6:00AM MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 8:00PM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00AM THE FOLLOWING MONDAY AFTER THE WEEK OF CHRISTMAS.

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

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 1006 (HOWARD GAP RD)	MON. - FRI. 2:45PM - 3:45PM SCHOOL DAYS MON.- FRI. 7:30AM - 8:30AM SCHOOL DAYS SAT. 8:00PM - MON. 6:00AM

D) DO NOT STOP TRAFFIC FOR MORE THAN 15 MINUTES AS FOLLOWS:

ROAD NAME	OPERATIONS
SR 1006 (HOWARD GAP RD)	SHIFTING TRAFFIC

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.

LANE AND SHOULDER CLOSURE REQUIREMENTS

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, OR AS DIRECTED BY THE ENGINEER.

G) 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.

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 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.

K) DO NOT INSTALL MORE THAN 1/2 MILE OF LANE CLOSURE ON SR 1006 (HOWARD GAP RD) MEASURED FROM THE BEGINNING OF THE MERGE TAPER TO THE END OF THE LANE CLOSURE.

L) DO NOT INSTALL MORE THAN 2 SIMULTANEOUS LANE CLOSURES, IN ANY ONE DIRECTION, ON SR 1006 (HOWARD GAP RD).

M) DO NOT INSTALL MORE THAN 1 ROAD CLOSURE, AT ANY GIVEN TIME, ON SR 1006 (HOWARD GAP RD).

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

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

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

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

O) 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

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

SIGNING

Q) 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.

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.

R) STATE FORCES WILL BE RESPONSIBLE FOR PERMANENT SIGNING.

S) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.

T) THE CONTRACTOR WILL COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.

U) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

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

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

TRAFFIC CONTROL DEVICES

Y) WHEN USING ROADWAY STANDARD NO. 1101.02, CONES MAY BE USED IN LIEU OF DRUMS ON SR 1006 (HOWARD GAP RD)

Z) 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.

AA) 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

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

ROAD NAME	MARKING	MARKER
SR 1006 (HOWARD GAP RD)	THERMOPLASTIC	SNOWPLOWABLE
-Y13- (BROOKSIDE CAMP RD)	THERMOPLASTIC	SNOWPLOWABLE
-Y17- (NAPLES RD)	THERMOPLASTIC	SNOWPLOWABLE
REMAINING -Y- LINES	THERMOPLASTIC	NONE

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

ROAD NAME	MARKING	MARKER
ALL ROADS	PAINT	TEMPORARY RAISED

DD) PLACE AT LEAST TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE ON NEW ASPHALT PAVEMENT. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

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

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

GG) 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 SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

TEMPORARY / FINAL SIGNALS

HH) NOTIFY THE ENGINEER TWO (2) MONTHS BEFORE A TRAFFIC SIGNAL INSTALLATION BY OTHERS IS REQUIRED.

II) SHIFT AND REVISE ALL SIGNAL HEADS AS SHOWN ON THE SIGNAL PLANS.

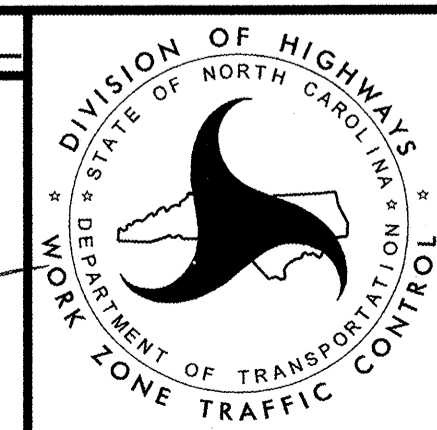
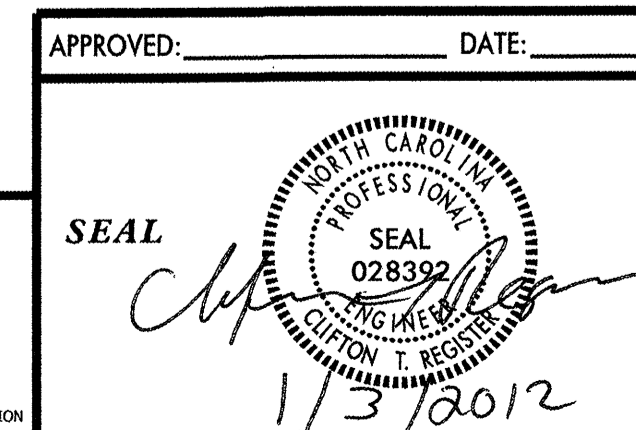
MISCELLANEOUS

JJ) IN THE EVENT A TIE-IN CANNOT BE MADE IN ONE DAYS TIME, BRING THE TIE-IN AREA TO AN APPROPRIATE ROADWAY ELEVATION, AS DETERMINED BY THE ENGINEER. PLACE BLACK ON ORANGE "LOOSE GRAVEL" SIGNS (W8-7) AND BLACK ON ORANGE "PAVEMENT ENDS" SIGNS (W8-3) 500 FT AND 1000 FT RESPECTIVELY IN ADVANCE OF THE UNEVEN AREAS. USE DRUMS TO DELINEATE THE EDGE OF ROADWAY ALONG UNPAVED AREAS.

LOCAL NOTES

THE FOLLOWING LOCAL NOTES APPLY ONLY AT THE TIMES THEY ARE REFERENCED IN THE PLANS.

- MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.
- DO NOT CLOSE HOWARD GAP ROAD FROM -L- STA 313+50 +/- TO STA 323+50 +/- (AREA 6A AND 6B) BETWEEN AUGUST 25TH AND JUNE 7TH.



PROJECT NOTES

TEMPORARY SHORING NO. 1

PROJ. REFERENCE NO.	SHEET NO.
R-5207B	TCP-2A

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

DO NOT USE A TEMPORARY MSE WALL STA 244+14 +/- -L-, 24FT RIGHT, TO STA 244+29.00 +/- -L-, 24 FT +/- RIGHT

WHEN USING CONTRACTOR DESIGNED SHORING, USE THE FOLLOWING SOIL PARAMETERS:
UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma = 60$ PCF
FRICTION ANGLE, $\phi = 30$ DEGREES
COHESION, $c = 0$ PSF

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 244+14.00 +/- -L-, 24 FT +/- RIGHT, TO STATION 244+29.00 +/- -L-, 24 FT +/- RIGHT MAY NOT PENETRATE BELOW ELEVATION 2266 FT DUE TO THE PRESENCE OF AN OBSTRUCTION, VERY DENSE OR HARD SOIL, WEATHERED OR HARD ROCK. SEE SUBSURFACE INFORMATION FOR ADDITIONAL DETAILS.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM STATION 244+17.00 +/- -L-, 24 FT +/- RIGHT, TO STATION 244+29.00 +/- -L-, 24 FT +/- RIGHT. THE TEMPORARY SHORING PROVISION DOES NOT APPLY TO ANCHORED TEMPORARY SHORING. IF ANCHORED SHORING IS PROPOSED, SUBMIT WORKING DRAWINGS, DESIGN CALCULATIONS AND AN ANCHORED TEMPORARY SHORING PROVISION FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH ARTICLE 105-2 OF THE STANDARD SPECIFICATIONS.

FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

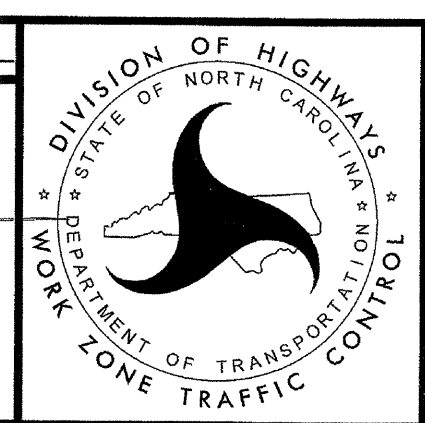
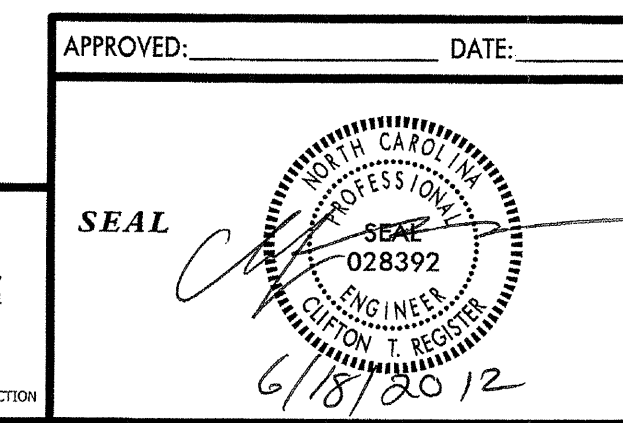
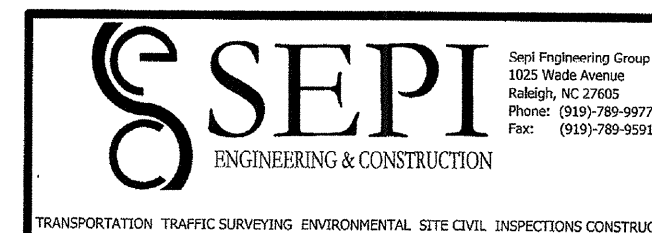
FOR PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING. THE INFORMATION PROVIDED FOR DESIGN AND WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. SEE SUBSURFACE INVENTORY REPORTS FOR ANY ADDITIONAL INFORMATION.

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION. SEE SUBSURFACE INVENTORY REPORTS FOR ANY ADDITIONAL INFORMATION.

WHEN BACKFILL FOR REINFORCED ZONE OF A TEMPORARY MSE WALL, USE EITHER SHORING BACKFILL OR THE MATERIAL SPECIFIED THE REINFORCED BRIDGE APPROACH FILL, WHICHEVER IS BETTER, IN THE REINFORCED ZONE.

NOTE: THE TEMPORARY SHORING NOTES ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS PROVIDED TO DIVISION 14 DESIGN CONSTRUCTION ENGINEER ON JUNE 15, 2012 AND SEALED BY PROFESSIONAL ENGINEER SHANE C. CLARK, P.E. 029869



TEMPORARY SHORING
NOTES

PHASE I

AT END OF EACH WORK DAY REPLACE ANY EXISTING PAVEMENT MARKING OBLITERATED DURING CONSTRUCTION OPERATION WITH TEMPORARY MARKING (PAINT) AND OPEN ALL LANES TO TRAFFIC.

STEP 1. INSTALL ADVANCE WARNING SIGNS ON -L- LINE AND ALL -Y- LINES. SEE TCP-23

STEP 2. WITH TRAFFIC IN EXISTING PATTERN AND USING RDWY STD. 1101.02, SHEET 1 OF 15, BEGIN CONSTRUCTION OF DRAINAGE, WEDGING AND WIDENING OF -L- UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE AS FOLLOWS:

- L- STA 180+38+/- TO -L- STA. 192+90+/-
- L- STA 196+10+/- TO -L- STA. 206+50+/-
- L- STA 208+90+/- TO -L- STA. 236+50+/-
- L- STA 237+50+/- TO -L- STA. 240+00+/-
- L- STA 248+00+/- TO -L- STA. 256+00+/-
- L- STA 302+70+/- TO -L- STA. 313+50+/-
- L- STA 318+00+/- TO -L- STA. 323+50+/-
- L- STA 323+50+/- TO -L- STA. 353+50+/-
- L- STA 355+00+/- TO -L- STA. 373+00+/-

STEP 3. CONSTRUCT AREAS 1 THRU 8 AS FOLLOWS:
THE SEQUENCE OF ROAD CLOSURES WILL BE DETERMINED BY THE ENGINEER
MAINTAIN TRAFFIC IN EXISTING PATTERN UNLESS STATED OTHERWISE

AREA 1A -L- STA. 192+90+/- TO -L- STA. 196+10+/- (ROUNDABOUT)

A. WHILE MAINTAINING TRAFFIC IN EXISTING PATTERN USING RDWY STD 1101.02, SHEET 1 OF 15, WHILE WORKING A CONTINUOUS MANNER, CONSTRUCT ROUNDABOUT AND APPROACHES FROM -L- 192+90+/- TO -L- 196+10+/- AND -Y13- 10+80+/- TO -Y13- 14+40+/- . UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE.

AREA 1A STEPS B THRU D SHALL BE COMPLETED IN ONE DAY

- B. USING FLAGGER AND FLAGGING SYMBOL SIGNS TO MAINTAIN TRAFFIC THROUGH THE INTERSECTION REMOVE AND DISPOSE OF EXISTING SIGNAL AT THE INTERSECTION OF HOWARD GAP ROAD (-L-) AND BROOKSIDE CAMP ROAD (-Y13-).
- C. INSTALL PROPOSED SIGNING REQUIRED FOR OPERATION OF ROUNDABOUT. SEE SIGNING PLANS.
- D. OPEN HOWARD GAP ROAD (-L-) AND BROOKSIDE CAMP RD. (-Y13-) TO TRAFFIC UTILIZING PROPOSED ROUNDABOUT.
- E. WITH TRAFFIC IN NEW PATTERN AND USING RDWY STD 1101.02, SHEET 1 OF 15 REMOVE EXISTING BROOKSIDE CAMP RD FROM -Y13- 10+80+/- TO -Y13- 14+40+/- . (-Y13) ON BOTH APPROACHES TO THE INTERSECTION. SEE TCP-7.

AREA 1B -L- STA. 206+50+/- TO -L- STA. 208+90+/- (0' TO 2'+/- CUT)

A. USING RDWY STD 1101.02, SHEET 1 OF 15, INSTALL TEMPORARY PAVEMENT FROM -L- STA 206+50 +/- TO -L- STA 208+90 +/- . SEE TCP -8

AREA 1B STEPS B THRU D SHALL BE COMPLETED IN ONE DAY

- B. USING FLAGGER AND FLAGGING SYMBOL SIGNS MAINTAIN TRAFFIC USING RDWY STD. 1101.02, SHEET 1 OF 15, WHILE WORKING IN A CONTINUOUS MANNER, SHIFT TRAFFIC TO THE RIGHT TO A 1-LANE 2-WAY OPERATION AND CONSTRUCT THE LEFT SIDE OF THE -L- LINE FROM STA. 206+50 TO STA. 208+90 UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE.
- C. USING FLAGGER AND FLAGGING SYMBOL SIGNS MAINTAIN TRAFFIC USING RDWY STD. 1101.02, SHEET 1 OF 15, WHILE WORKING IN A CONTINUOUS MANNER, SHIFT TRAFFIC TO THE LEFT TO A 1-LANE 2-WAY OPERATION AND CONSTRUCT THE RIGHT SIDE OF THE -L- LINE FROM STA. 206+50 TO STA. 208+90 UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE.
- D. INSTALL TEMPORARY PAVEMENT MARKINGS AND OPEN -L- LINE (HOWARD GAP RD.) TO TWO-LANE TWO-WAY TRAFFIC.

AREA 2 -L- STA. 236+50+/- TO -L- STA. 237+50+/- (SEE TCP-9). (0' TO 2'+/- CUT)

- A. SHIFT TRAFFIC TO THE LEFT AND CONSTRUCT THE RIGHT SIDE OF THE -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM -L- STA. 236+50+/- TO -L- STA. 237+50+/- .
- B. SHIFT TRAFFIC TO THE RIGHT AND CONSTRUCT THE LEFT SIDE OF THE -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM -L- STA. 236+50+/- TO -L- STA. 237+50+/- .
- C. INSTALL TEMPORARY PAVEMENT MARKING IN FINAL PATTERN AND OPEN -L- LINE (HOWARD GAP RD.) TO TWO-LANE TWO-WAY TRAFFIC. SEE TCP-10.

AREA 3 -L- STA. 240+00+/- TO -L- STA. 248+00+/- (SEE TCP-9 & 10)

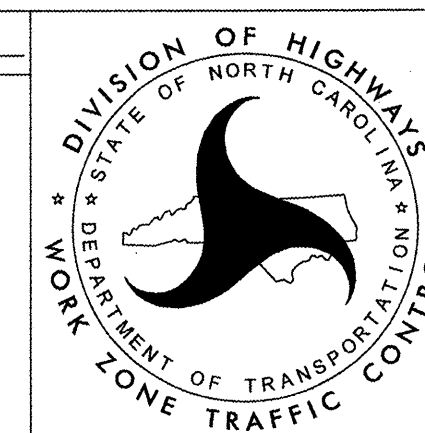
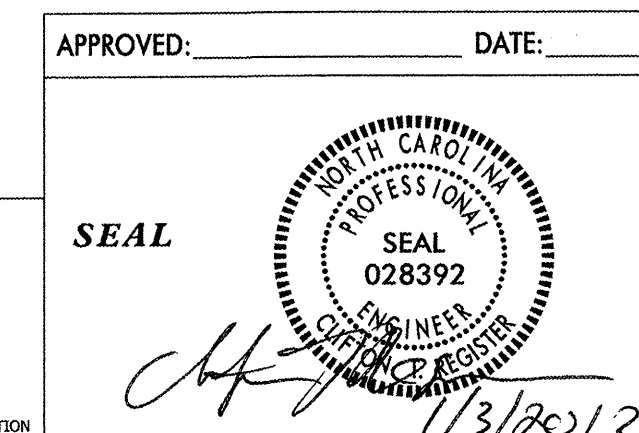
- A. USING RDWY STD 1101.02, SHEET 1 OF 15, INSTALL TEMPORARY SHORING FROM -L- STA. 244+14 +/- TO STA. 244+29 +/- . SEE TCP-24.
- B. CONSTRUCT -Y16- AND TIE TEMPORARILY INTO THE EXISTING HOWARD GAP ROA, SHIFT -Y16- TRAFFIC ON TO -Y16- .
- C. USING RDWY STD 1101.02, SHEET 1 OF 15, CONSTRUCT PROPOSED BRIDGE, AS MUCH OF PROPOSED GUARDRAILS AS POSSIBLE, AND APPROACHES UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE TYING INTO EXISTING -L- LINE EOP ELEVATION FROM -L- STA. 240+00+/- TO -L- STA. 248+00+/- . USE TMIA TO PROTECT GUARDRAIL ENDS AS NEEDED UNTIL FINAL END TREATMENT IS INSTALLED.
- D. USING RDWY STD 1101.02, SHEET 1 OF 15, INSTALL TEMPORARY MARKING IN FINAL PATTERN AND SHIFT TRAFFIC TO NEW ALIGNMENT AND CLOSE EXISTING BRIDGE AND APPROACHES TO TRAFFIC. SEE TCP-10
- E. WITH TRAFFIC IN NEW PATTERN AND USING RDWY STD. 1101.02, SHEET 1 OF 15, REMOVE EXISTING BRIDGE AND ROADWAY APPROACHES.

AREA 4 -L- STA. 256+00+/- TO -L- STA. 286+00+/- (SEE TCP-11 THRU 14)

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING WORK IN PHASE I, AREA 4, STEPS F THRU I IN 5 CONSECUTIVE DAYS. (SEE SPECIAL PROVISIONS)

WITH TRAFFIC IN EXISTING PATTERN AND USING RDWY STD 1101.02, SHEET 1 OF 15, CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE:

- A. INSTALL NEW SIGNAL POLES AND ADJUST SIGNALS AND CONSTRUCT WIDENING OF -L- AND -Y17- INTERSECTION (SEE TCP-11 & SIGNAL PLANS)
- B. CONSTRUCT WIDENING AND NEW LOCATION OF -L- FROM -L- STA. 256+00+/- TO -L- STA 283+00+/- TYING INTO EXISTING ROADWAY ELEVATION.
- C. CONSTRUCT AS MUCH OF PROPOSED GUARDRAIL AS POSSIBLE. USE TMIA TO PROTECT GUARDRAIL ENDS AS NEEDED UNTIL FINAL ENDS TREATMENT IS INSTALLED.
- D. USING RDWY STD 1101.02, SHEET 1 OF 15, INSTALL TEMPORARY MARKINGS IN FINAL PATTERNS AND SHIFT TRAFFIC TO NEW ALIGNMENT.
- E. USING RDWY STD 1101.02, SHEET 1 OF 15, FLAGGER(S) AND FLAGGER SYMBOL SIGNS CONSTRUCT WEDGING AND COMPLETE ALL WIDENING
- F. INSTALL DETOUR SIGNS. SEE TCP-20
- G. USING RDWY STD 1101.03, SHEET 1 OF 9, CLOSE -L- LINE (HOWARD GAP RD.) BETWEEN -L- STA. 283+00+/- AND -L- STA. 286+00+/- (0' TO 5' FILL) (SEE TCP-12) AND DETOUR TRAFFIC USING NAPLES RD. AND US 25.
- H. WITH -L- CLOSED AND WORKING IN A CONTINUOUS MANNER, CONSTRUCT -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM -L- STA. 283+00+/- TO -L- STA. 286+00+/- AND INSTALL TEMPORARY PAVEMENT MARKING.
- I. OPEN -L- LINE (HOWARD GAP RD.) TO TWO-LANE TWO-WAY TRAFFIC IN NEW ALIGNMENT AND REMOVE EXISTING ROADWAY.



PHASING

AREA 5 -L- STA. 286+00+/- TO -L- STA. 302+70+/-

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING WORK IN PHASE I, AREA 5, STEPS F THRU H IN 45 CONSECUTIVE DAYS. (SEE SPECIAL PROVISIONS)

- WITH TRAFFIC IN EXISTING PATTERN AND USING RDWY STD 1101.02, SHEET 1 OF 15, CONSTRUCT THE FOLLOWING:
- A. CONSTRUCT WIDENING AND NEW LOCATION OF -L- FROM -L- STA 286+00 +/- TO -L- STA 302+70 +/- AND -Y18- TYING INTO EXISTING ROADWAY ELEVATION.
 - B. USING RDWY STD 1101.02, SHEET 1 OF 15, CONSTRUCT WEDGING, WIDENING AND NEW LOCATION UP TO FINAL END TREATMENT
-L- STA 286+00 +/- TO -L- STA 289+00 +/-
-L- STA 291+00 +/- TO -L- STA 298+50 +/-
-Y18-
 - C. OPEN -Y18- TO TRAFFIC
 - D. CONSTRUCT AS MUCH OF PROPOSED GUARDRAIL AS POSSIBLE. USE TMIA TO PROTECT GUARDRAIL ENDS AS NEEDED UNTIL FINAL END TREATMENT IS INSTALLED.
 - E. INSTALL DETOUR SIGNS. SEE TCP-20.
 - F. USING RDWY STD 1101.03, SHEET 1 OF 9, CLOSE -L- LINE (HOWARD GAP RD.) BETWEEN
-L- STA. 289+00+/- AND -L- STA. 291+00+/- (TCP 15 Inset "A")
-L- STA. 298+50+/- AND -L- STA. 302+70+/- (TCP 15, INSET "B")
AND DETOUR TRAFFIC USING NAPLES RD. AND US 25. SEE TCP-20.
 - G. WITH -L- CLOSED AND WORKING IN A CONTINUOUS MANNER, CONSTRUCT -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM:
-L- STA 289+00+/- TO -L- STA. 291+00+/-
-L- STA 298+50+/- TO -L- STA 302+70+/-
AND INSTALL TEMPORARY PAVEMENT MARKING.
 - H. OPEN -L- LINE (HOWARD GAP RD.) TO TWO-LANE TWO-WAY TRAFFIC IN NEW ALIGNMENT AND REMOVE EXISTING ROADWAY. SEE TCP-16

AREA 6A -L- STA. 313+50+/- TO -L- 318+00+/- (SEE TCP 17) (0' TO 4' FILL)

AREA 6B -L- STA. 321+00+/- TO -L- 323+50+/- (SEE TCP-17) (0' TO 4' CUT)

HOWARD GAP ROAD, AREA 6A AND 6B, SHALL NOT BE CLOSED DURING THE SCHOOL YEAR FROM AUGUST 25TH THROUGH JUNE 7TH.
CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS
THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING WORK IN PHASE I, AREA 6A, STEPS B THRU D IN 10 CONSECUTIVE DAYS. (SEE SPECIAL PROVISIONS)
THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING WORK IN PHASE I, AREA 6B, STEPS F THRU G IN 10 CONSECUTIVE DAYS. (SEE SPECIAL PROVISIONS)

- A. INSTALL DETOUR SIGNS. SEE TCP-21.
- B. USING RDWY STD 1101.03, SHEET 1 OF 9, CLOSE -L- LINE (HOWARD GAP RD.) BETWEEN -L- STA. 313+50+/- AND -L- STA. 318+00+/- AND DETOUR TRAFFIC USING PATTY'S CHAPEL RD. AND JACKSON RD. SEE DETOUR 2 ON TCP-21.
- C. WITH -L- CLOSED AND WORKING IN A CONTINUOUS MANNER, CONSTRUCT -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM -L- STA. 313+50+/- TO -L- STA. 318+00+/- AND INSTALL TEMPORARY PAVEMENT MARKING. SEE TCP-17.
- D. OPEN -L- LINE (HOWARD GAP RD.) TO TWO-LANE TWO-WAY TRAFFIC.
- E. USING RDWY STD 1101.02, SHEET 1 OF 15, INSTALL PROPOSED GUARDRAIL FROM STA. 314+20+/- TO -L- STA. 317+80+/-.
- F. USING RDWY STD 1101.03, SHEET 1 OF 9, CLOSE -L- LINE (HOWARD GAP RD.) BETWEEN -L- STA. 321+00+/- AND -L- STA. 323+50+/- AND DETOUR TRAFFIC USING PATTY'S CHAPEL RD. AND JACKSON RD. SEE DETOUR 2 ON TCP-21.
- G. WITH -L- CLOSED AND WORKING IN A CONTINUOUS MANNER, CONSTRUCT -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM -L- STA. 321+00+/- TO -L- STA. 323+50+/- AND INSTALL TEMPORARY PAVEMENT MARKING.
- H. OPEN -L- LINE (HOWARD GAP RD.) TO TWO-LANE TWO-WAY TRAFFIC.

AREA 7 -L- STA. 353+50+/- TO -L- STA. 355+00+/- (SEE TCP-18) (0' TO 2.5+/- CUT)

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING WORK IN PHASE I, AREA 7, STEPS B THRU D IN 10 CONSECUTIVE DAYS. (SEE SPECIAL PROVISIONS)

- A. INSTALL DETOUR SIGNS. SEE TCP-21.
- B. USING RDWY STD 1101.03, SHEET 1 OF 9, CLOSE -L- LINE (HOWARD GAP RD.) BETWEEN -L- STA. 353+50+/- AND -L- STA. 355+00+/- AND DETOUR TRAFFIC USING PATTY'S CHAPEL RD. AND JACKSON RD. SEE DETOUR 2 ON TCP-21.
- C. WITH -L- CLOSED AND WORKING IN A CONTINUOUS MANNER, CONSTRUCT -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE FROM -L- STA. 353+50+/- TO -L- STA. 355+00+/- AND INSTALL TEMPORARY PAVEMENT MARKING.
- D. OPEN -L- LINE (HOWARD GAP RD.) TO TWO-LANE TWO-WAY TRAFFIC.

AREA 8 -L- STA. 373+00+/- TO -L- STA. 376+40+/- (SEE TCP-19) (0' TO 4+/- FILL)

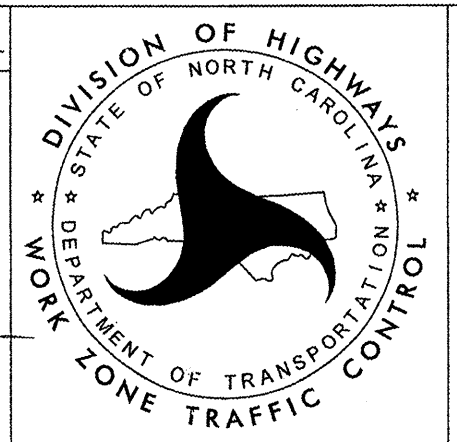
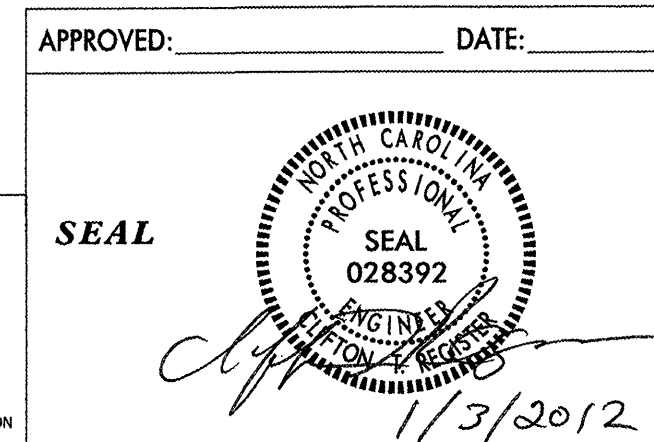
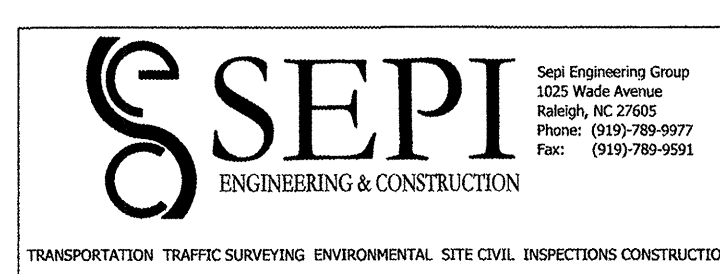
THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING WORK IN PHASE I, AREA 8, STEPS B THRU D IN 90 CONSECUTIVE DAYS. (SEE SPECIAL PROVISIONS)

- A. INSTALL DETOUR SIGNS. SEE TCP-21.
- B. USING RDWY STD 1101.03, SHEET 1 OF 9, CLOSE -L- LINE (HOWARD GAP RD.) TO TRAFFIC BETWEEN -L- STA. 373+00+/- AND -L- STA. 376+40+/-.
- C. WITH -L- CLOSED AND WORKING IN A CONTINUOUS MANNER, CONSTRUCT PROPOSED CULVERT AT -L- STA. 374+00+/- AND CONSTRUCT -L- LINE UP TO BUT NOT INCLUDING THE FINAL SURFACE COURSE.
- D. INSTALL TEMPORARY PAVEMENT MARKING AND OPEN ROADWAY TO TWO LANE TWO WAY TRAFFIC.

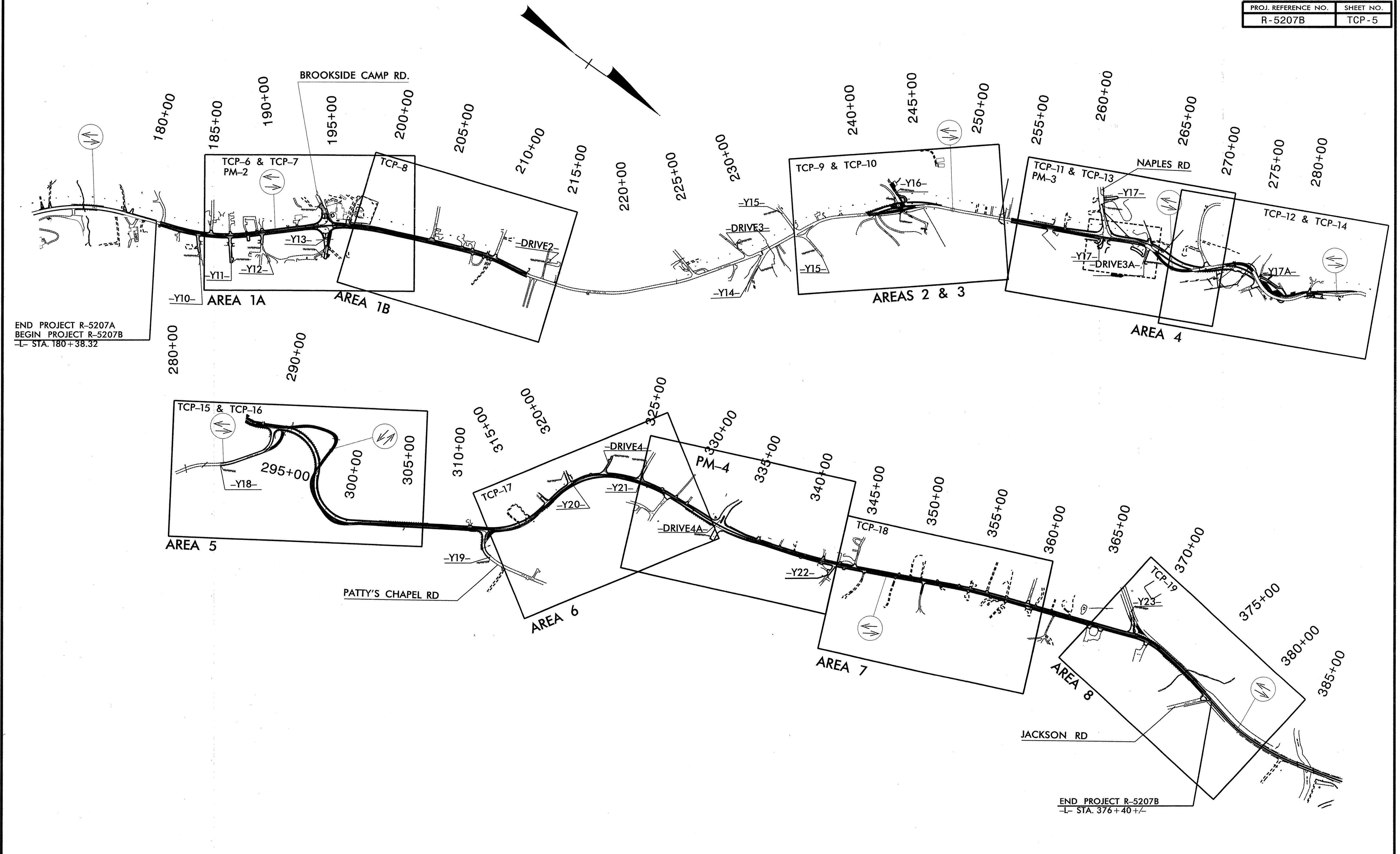
PHASE II

USING RDWY STD 1101.02, SHEET 1 OF 15, CONSTRUCT THE FOLLOWING:

- CONSTRUCT THE FINAL LAYER OF SURFACE COURSE
- INSTALL FINAL PAVEMENT MARKING AND MARKERS
- OPEN ALL LANES TO FINAL TRAFFIC PATTERN



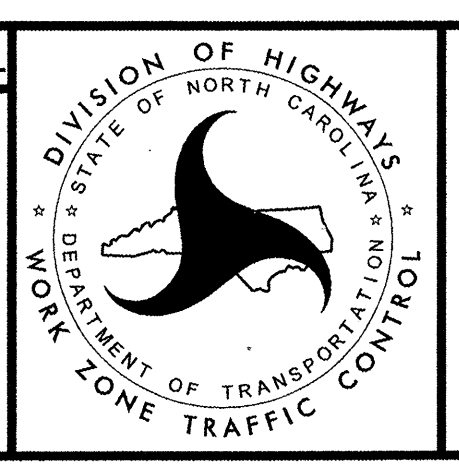
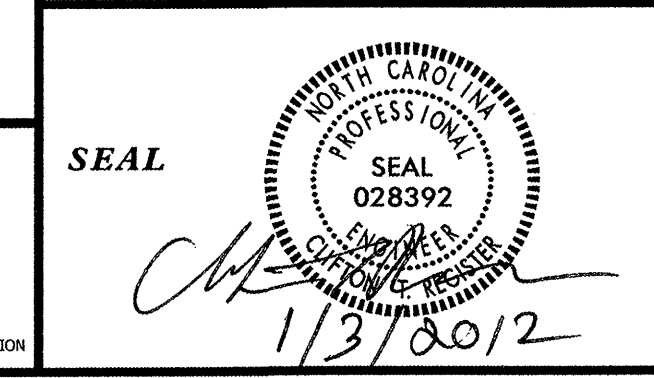
PHASING



END PROJECT R-5207A
 BEGIN PROJECT R-5207B
 -L- STA. 180+38.32

END PROJECT R-5207B
 -L- STA. 376+40+/-

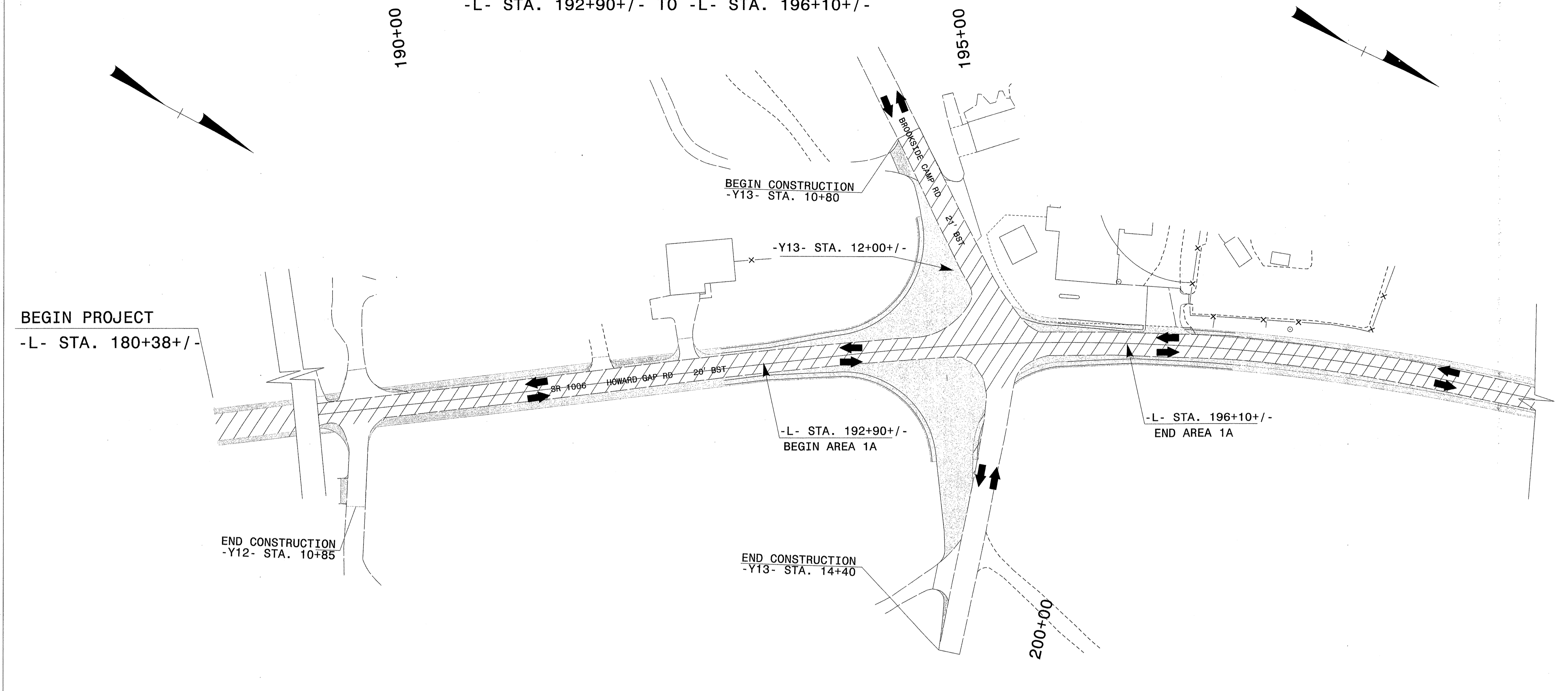
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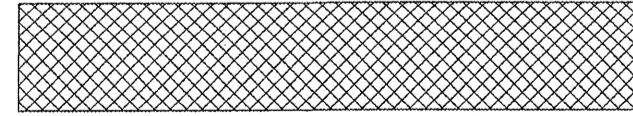
PHASE I
 OVERVIEW

AREA 1A

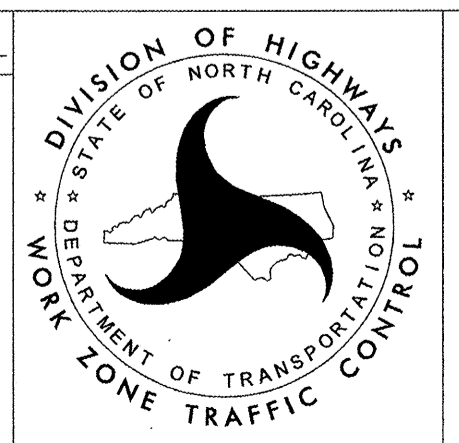
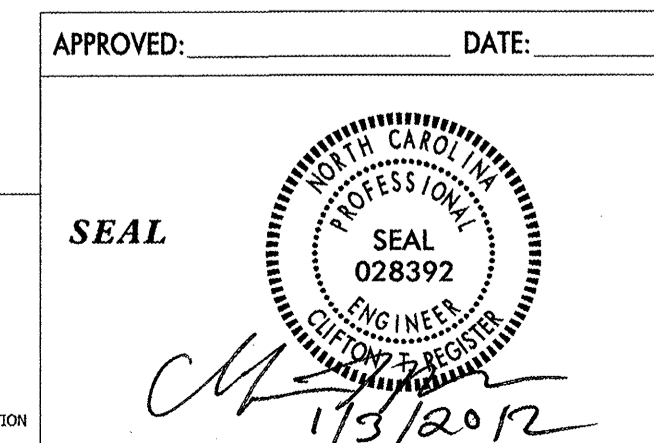
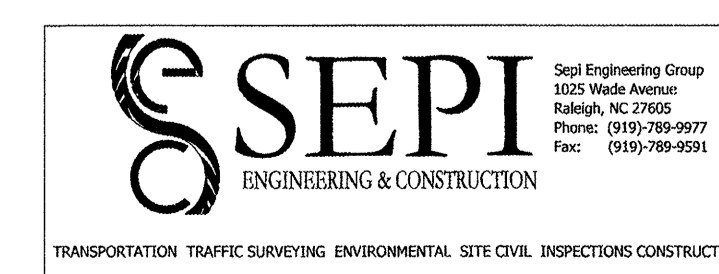
-L- STA. 192+90+/- TO -L- STA. 196+10+/-



LEGEND

-  WEDGING
-  WORK AREA
(WIDENING & NEW ALIGNMENT)
-  REMOVAL OF EXISTING PAVEMENT

SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.

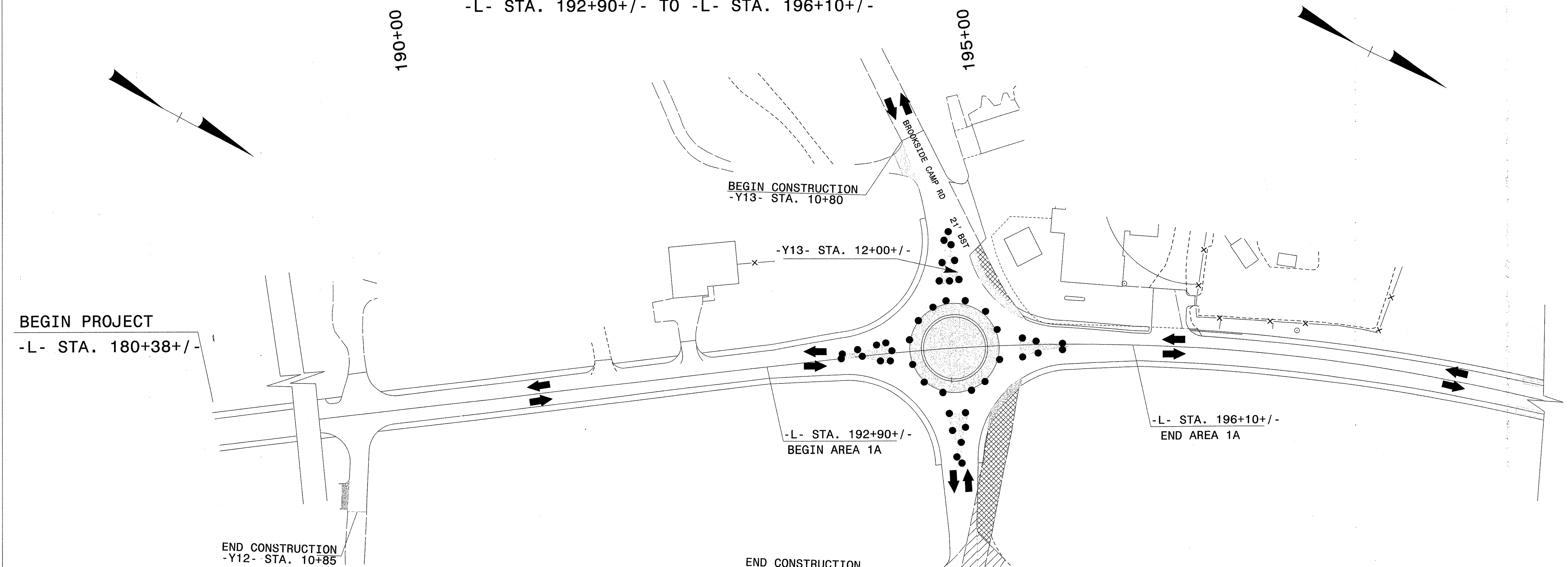


PHASE I
AREA 1A

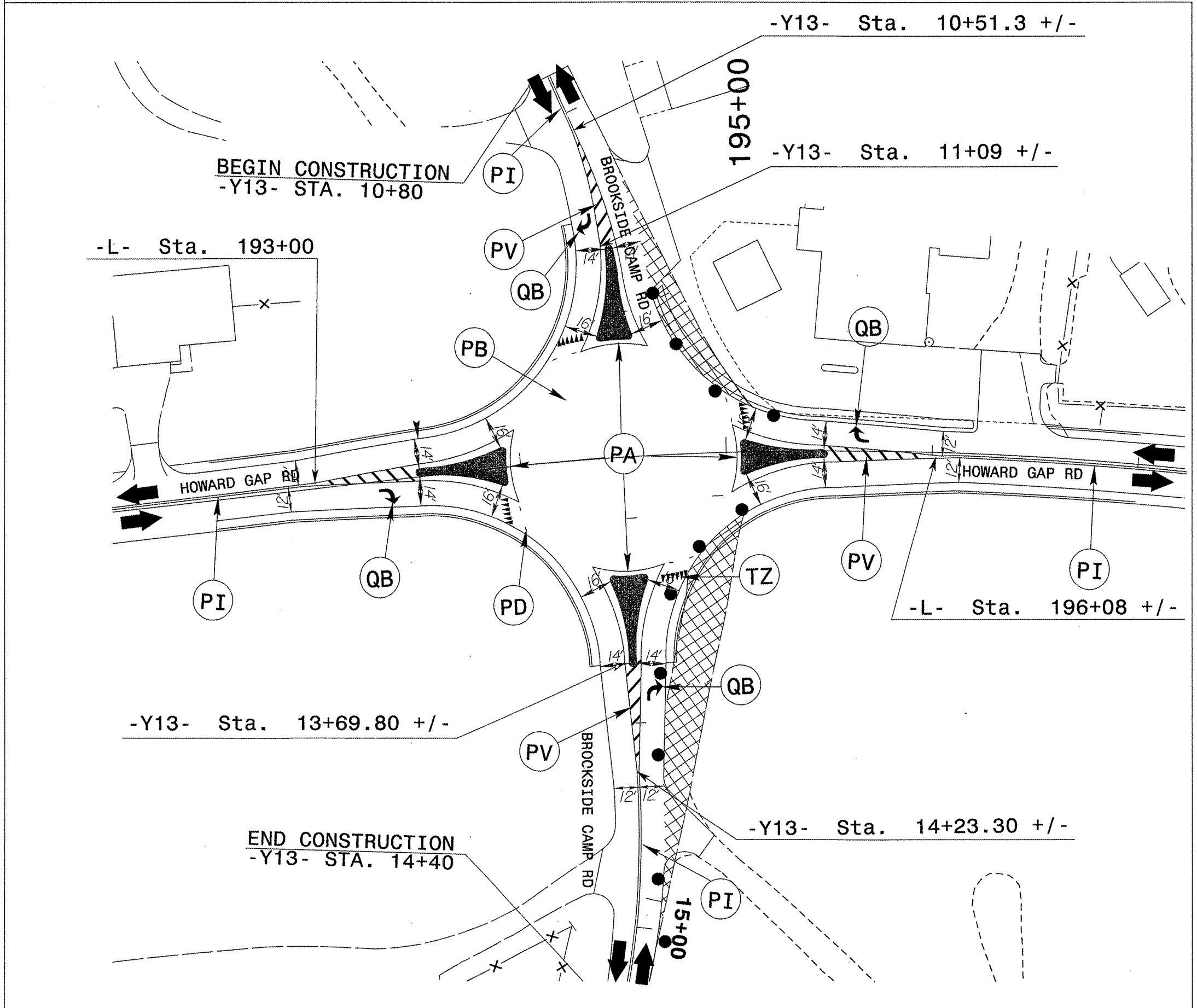
AREA 1A

PROJ. REFERENCE NO.	SHEET NO.
R-5207B	TCP-7

-L- STA. 192+90+/- TO -L- STA. 196+10+/-


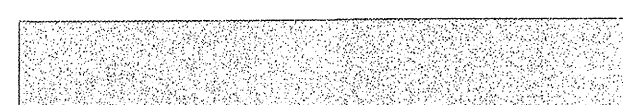
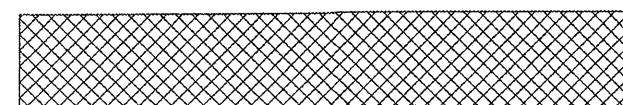


TEMP PAVEMENT MARKING FOR ROUNDABOUT




SEE LOCAL NOTE:
 1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.

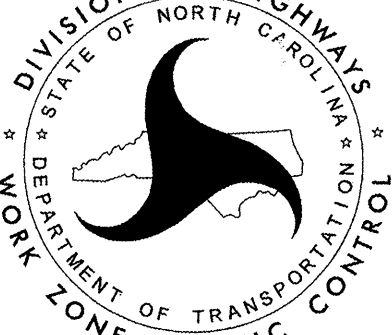
LEGEND

	WEDGING
	WORK AREA (WIDENING & NEW ALIGNMENT)
	REMOVAL OF EXISTING PAVEMENT

SEPI
 ENGINEERING & CONSTRUCTION
Seppi Engineering Group
 1025 White Avenue
 Raleigh, NC 27605
 Phone: (919) 789-9977
 Fax: (919) 789-9591

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 028392
 ENGINEER
 NORTH CAROLINA
 REGISTERED PROFESSIONAL ENGINEER

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL



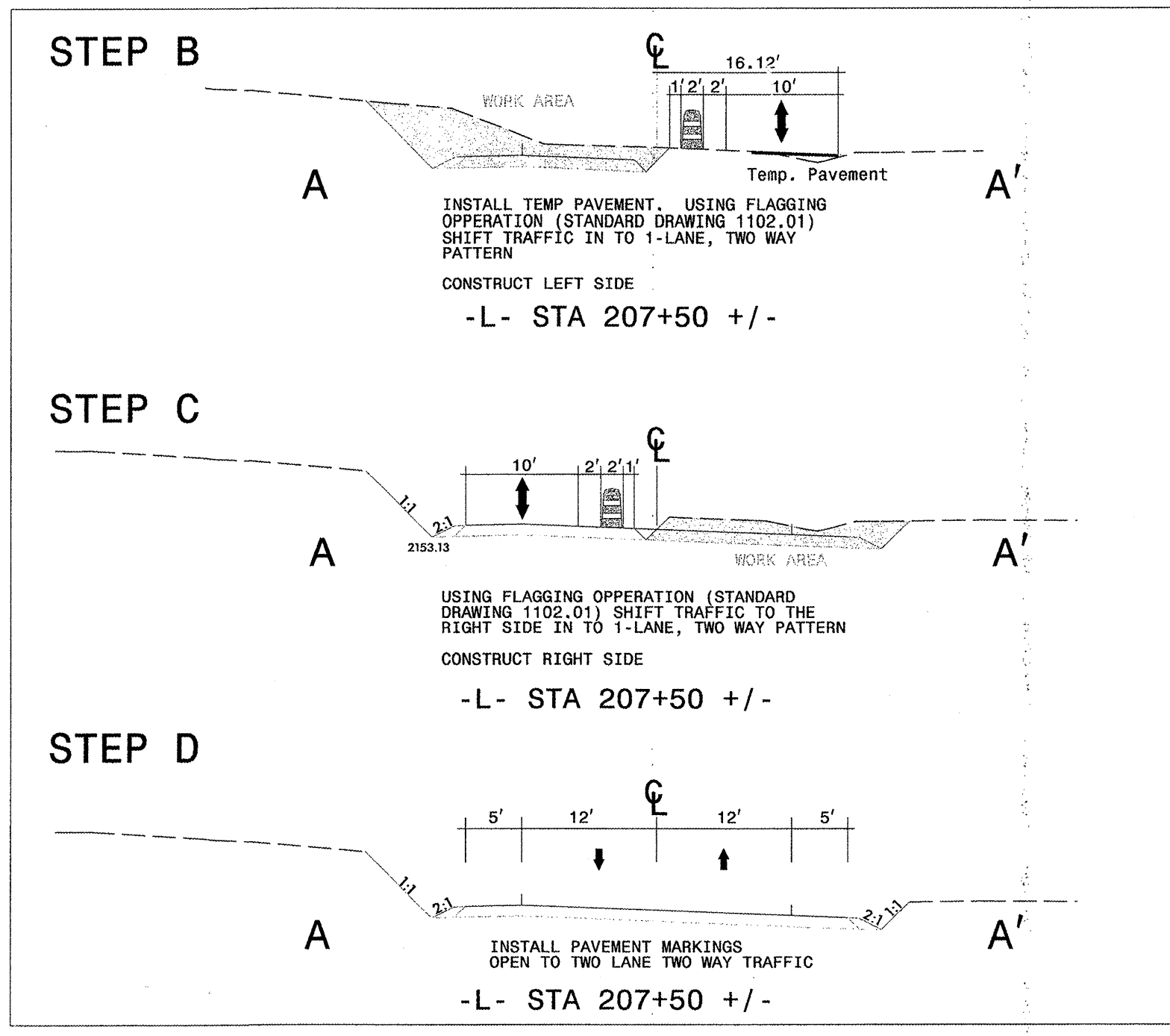
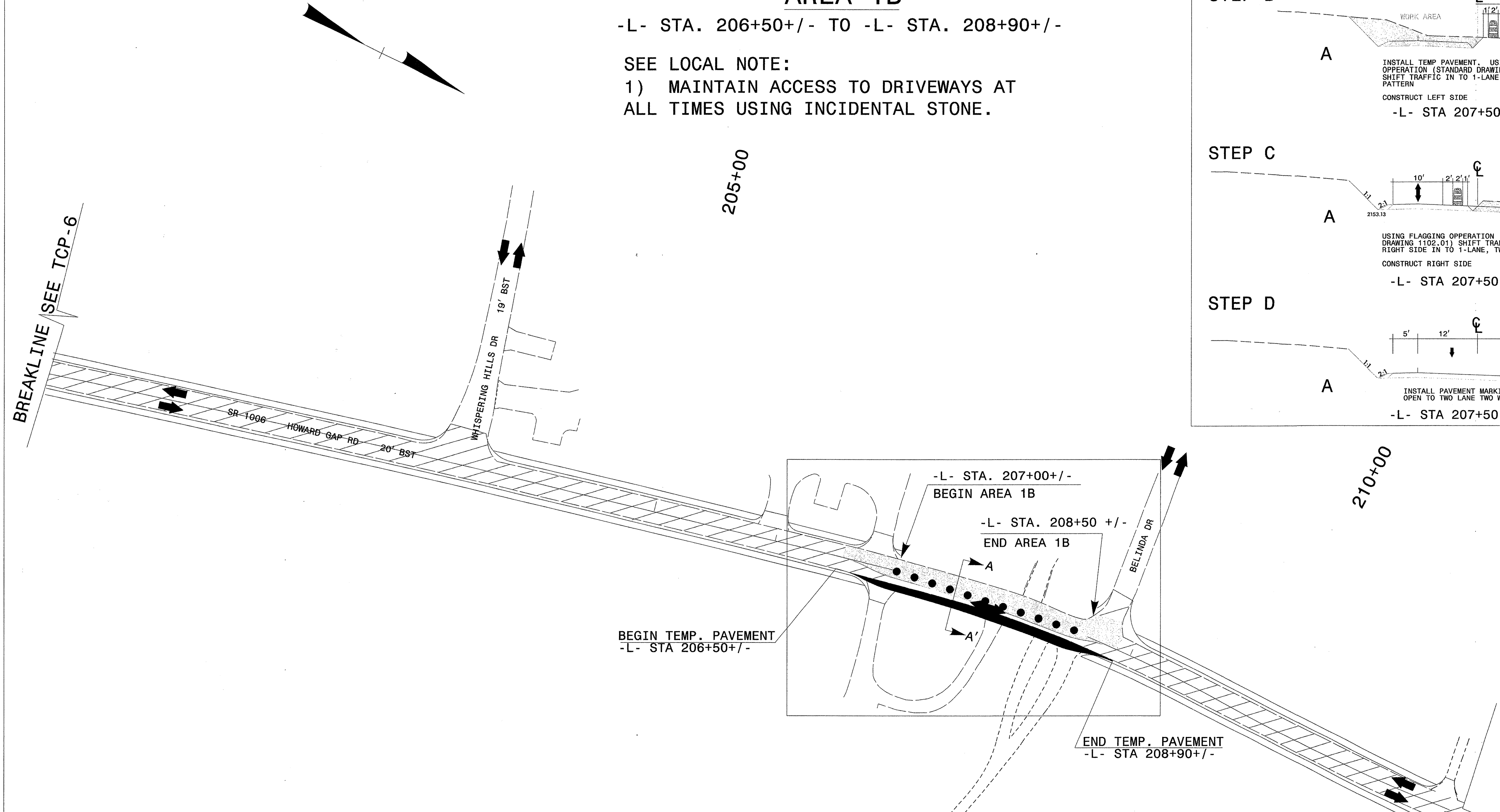
PHASE I
 AREA 1A

Handwritten signature and date: 1/13/2012

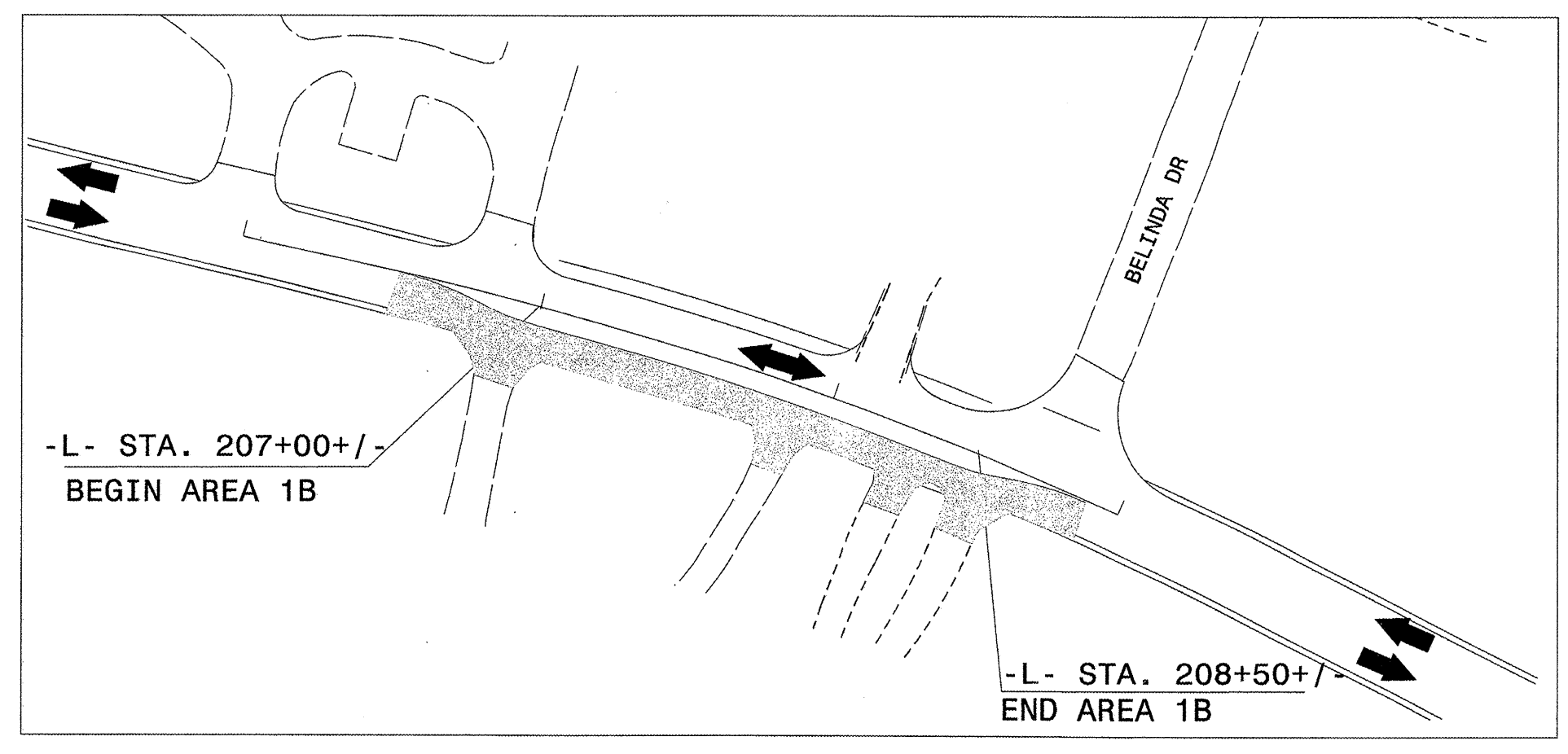
AREA 1B

-L- STA. 206+50+/- TO -L- STA. 208+90+/-

SEE LOCAL NOTE:
 1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.



STEP C
 -L- STA. 206+50+/- AND -L- STA. 208+90+/-



LEGEND

- WEDGING
- WORK AREA (WIDENING & NEW ALIGNMENT)
- TEMPORARY PAVEMENT

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Sepl Engineering Group
 3025 Wells Avenue
 Raleigh, NC 27605
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 Fax: (919) 789-9591

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SM 1/3/2012

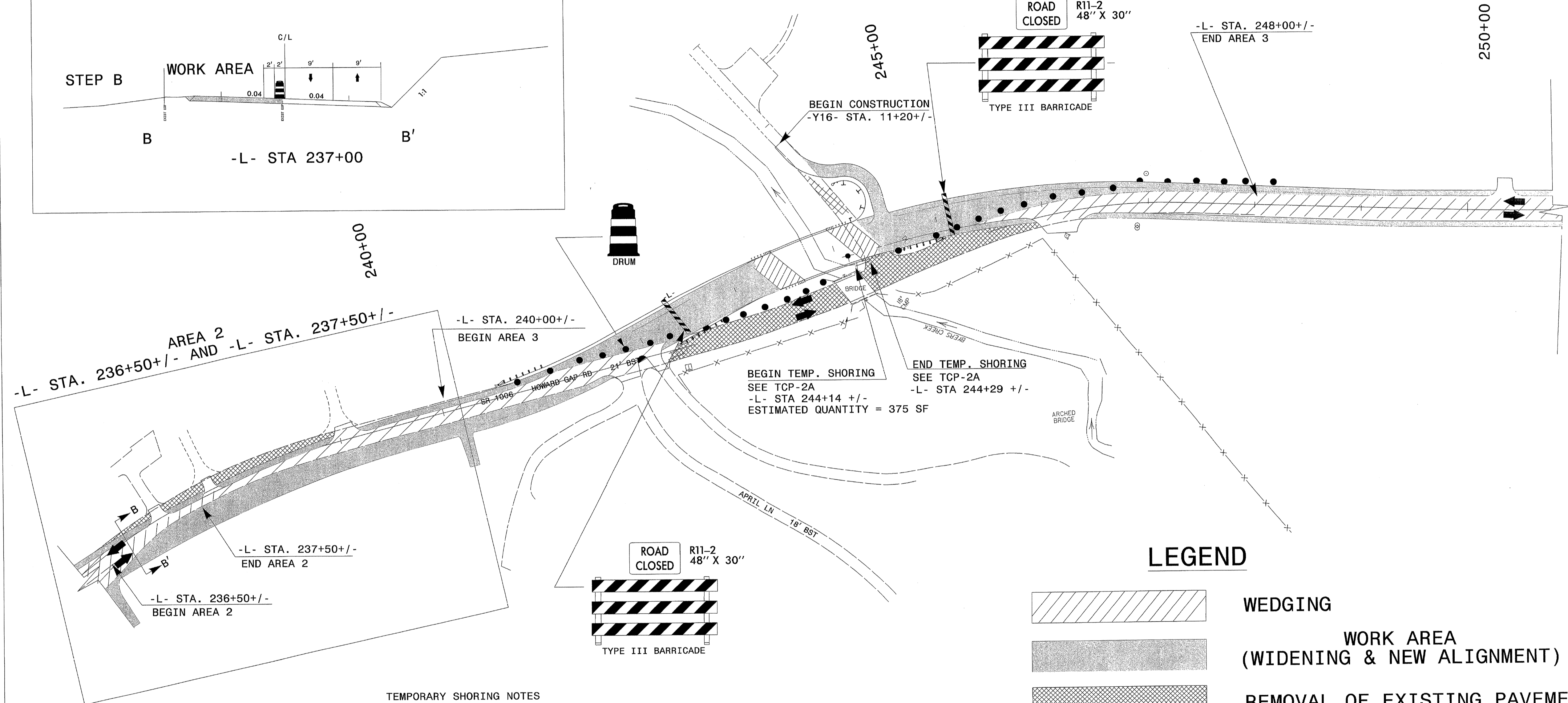
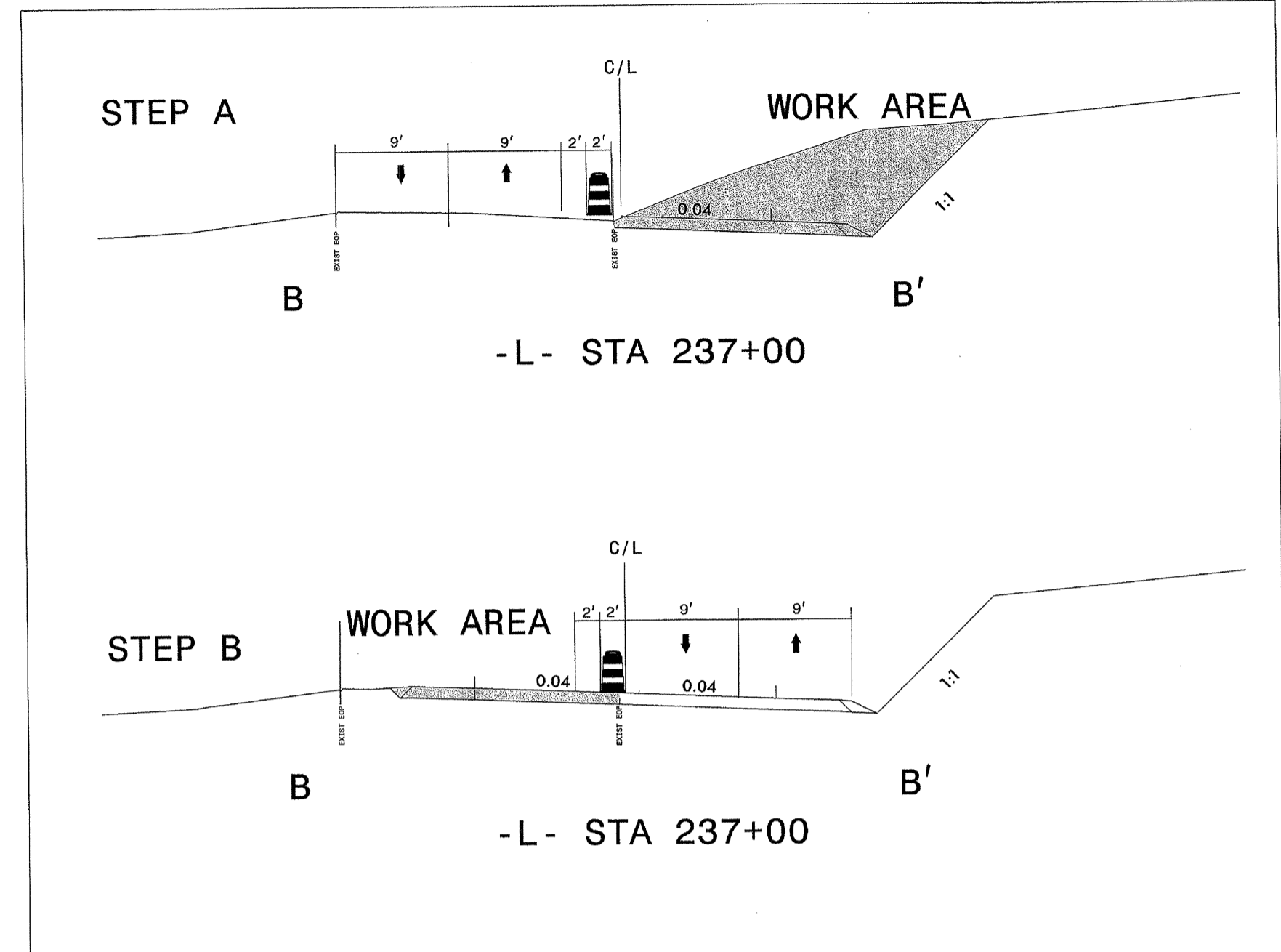
PHASE I
 AREA 1B

AREA 2

-L- STA. 236+50+/- TO -L- STA. 237+50+/-

AREA 3

-L- STA. 240+00+/- TO -L- STA. 248+00+/-



LEGEND

- WEDGING
- WORK AREA (WIDENING & NEW ALIGNMENT)
- REMOVAL OF EXISTING PAVEMENT

TEMPORARY SHORING NOTES

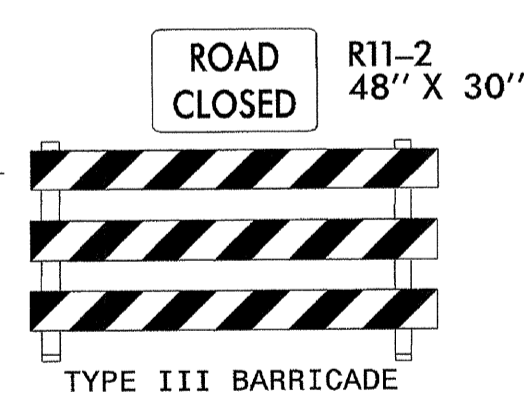
FOR TEMPORARY SHORING, SHEE TEMPORARY SHORING SPECIAL PROVISION AND TCP-2A

USE TEMPORARY SHORING FROM -L- STA 244+14 +/- TO STA 244+29 +/-.

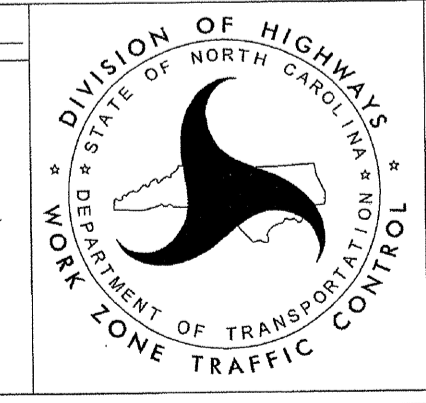
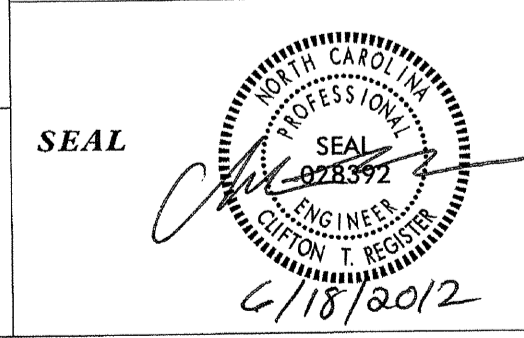
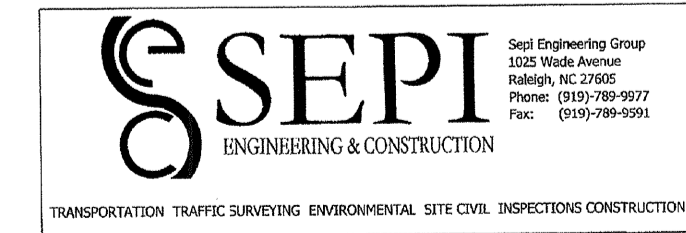
TEMPORARY SHORING DESIGN TO BE PROVIDED BY OTHERS

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURNING CONSTRUCTION.

SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.



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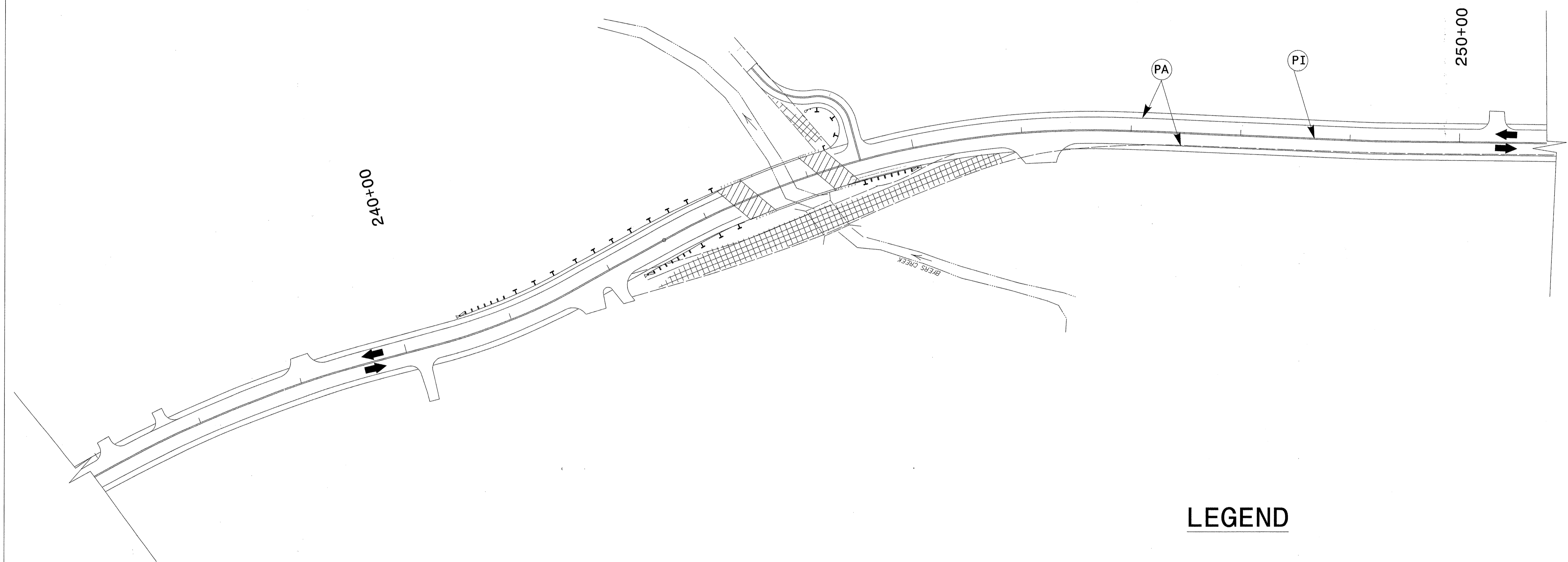


PHASE I
AREA 2 & 3

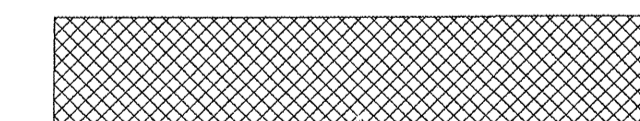
6/18/2012

AREA 3

-L- STA. 240+00+/- TO -L- STA. 248+00+/-



LEGEND



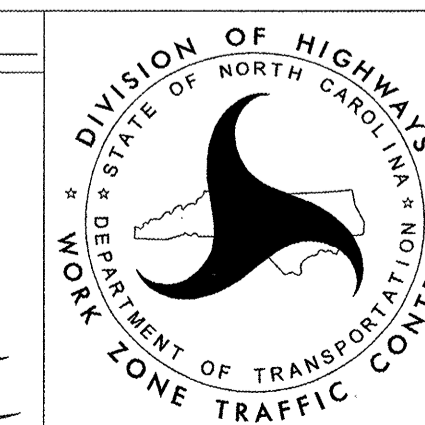
REMOVAL OF EXISTING PAVEMENT

SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.



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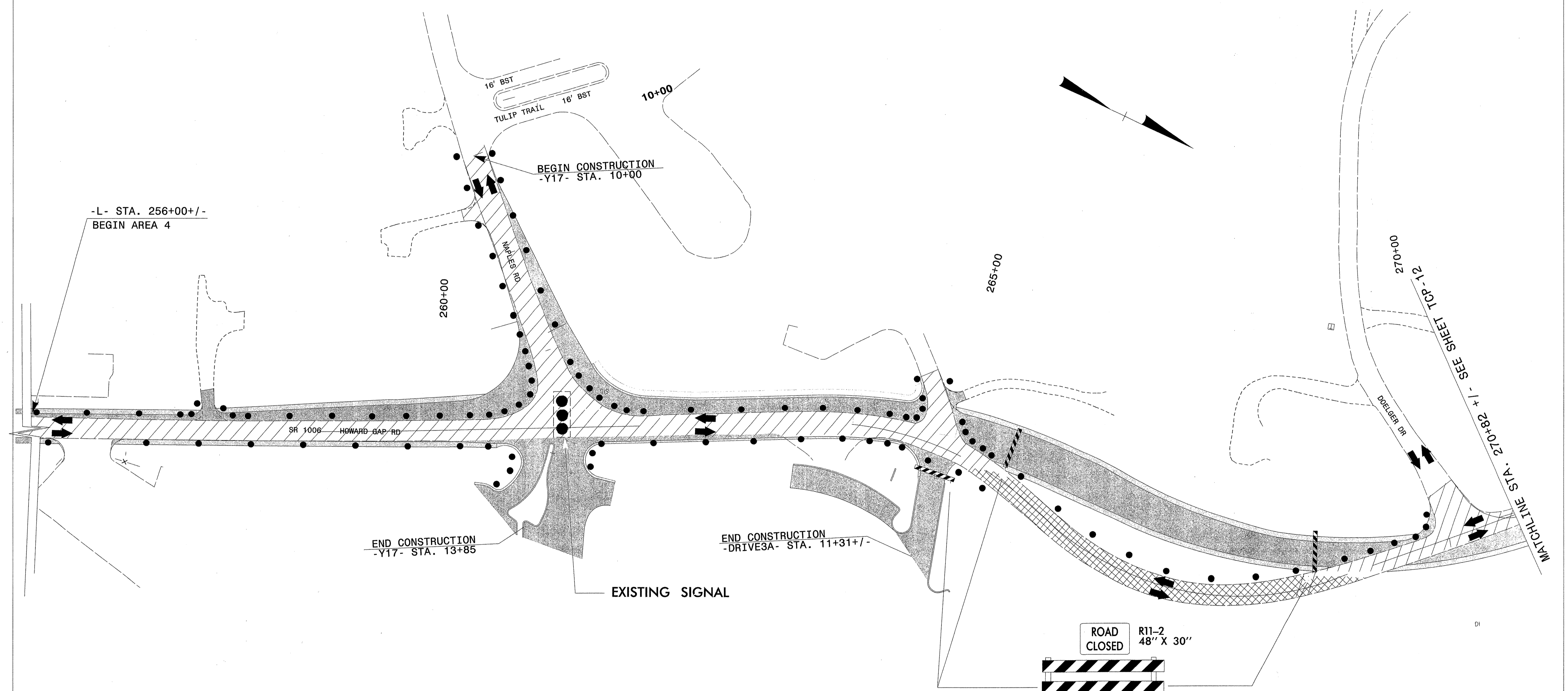
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PHASE I
AREA 3

AREA 4

-L- STA. 256+00+/- TO -L- STA. 286+00+/-



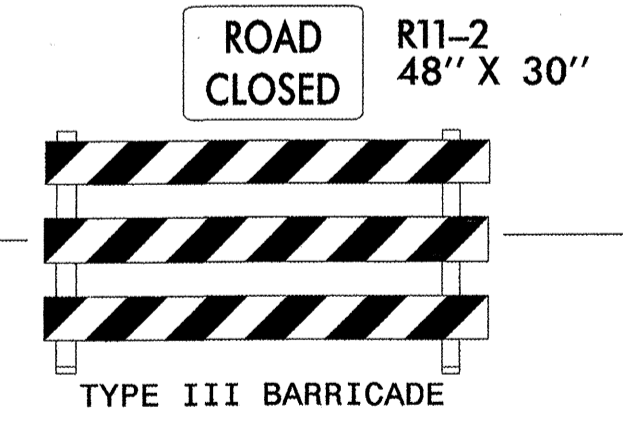
BEGIN CONSTRUCTION
-Y17- STA. 10+00

-L- STA. 256+00+/-
BEGIN AREA 4

END CONSTRUCTION
-Y17- STA. 13+85

END CONSTRUCTION
-DRIVE3A- STA. 11+31+/-

EXISTING SIGNAL



LEGEND

- WEDGING
- WORK AREA
(WIDENING & NEW ALIGNMENT)
- REMOVAL OF EXISTING PAVEMENT

SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.

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TRANSPORTATION TRAFFIC SURVEYING ENVIRONMENTAL SITE CIVIL INSPECTIONS CONSTRUCTION

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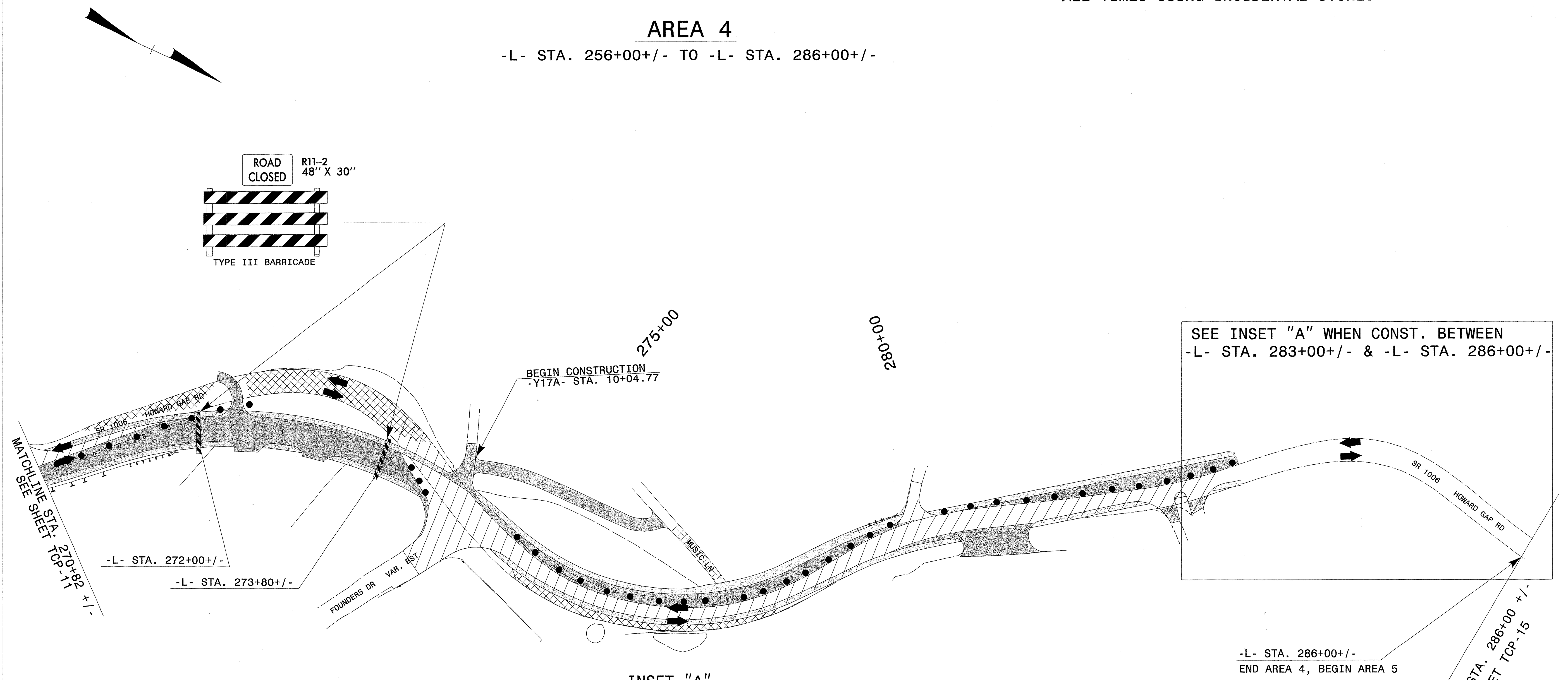
SEAL

PHASE I
AREA 4D

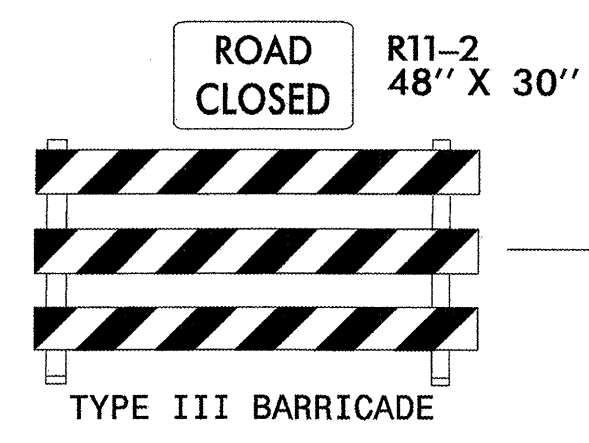
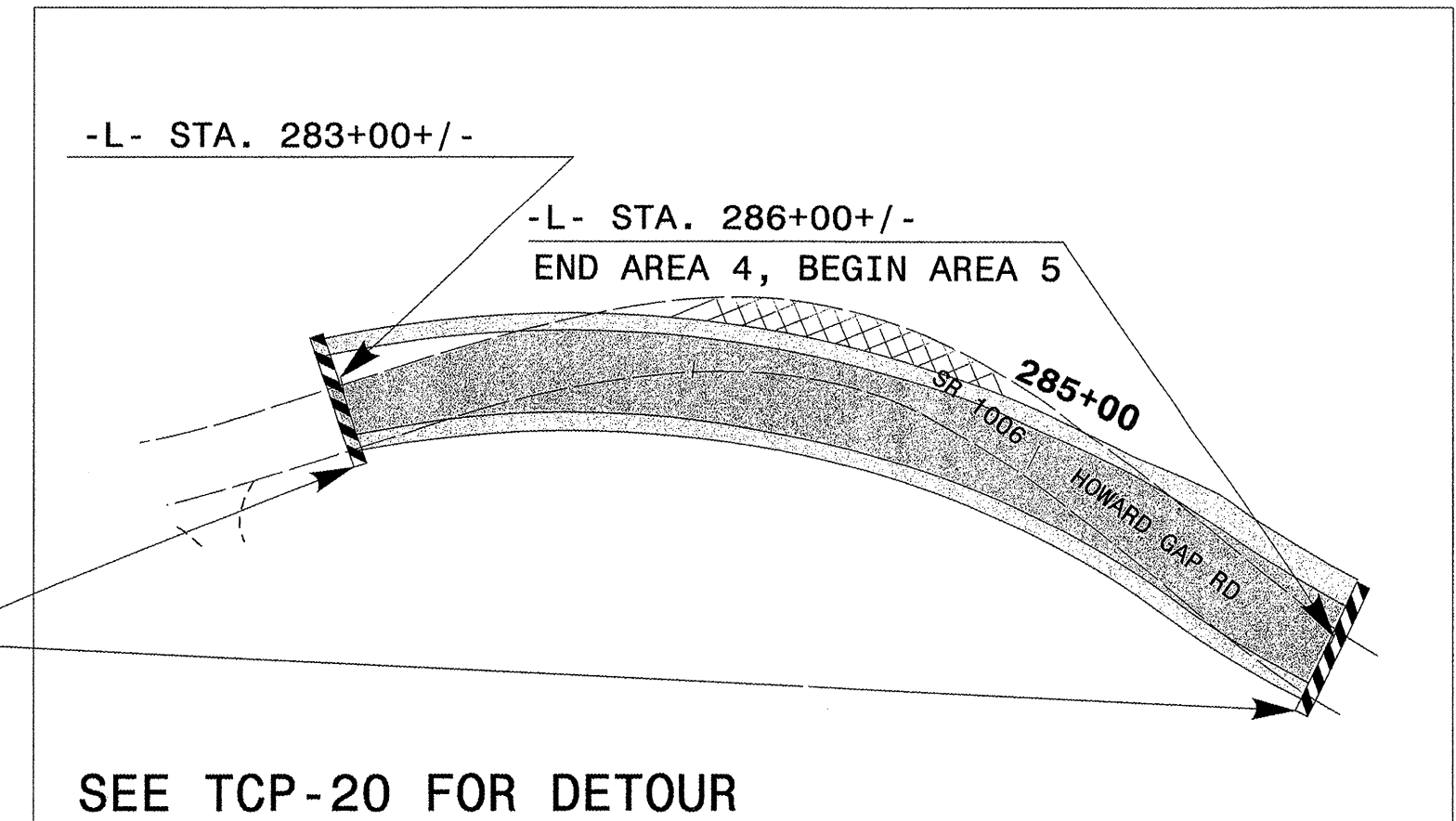
SEE LOCAL NOTE:
 1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.

AREA 4

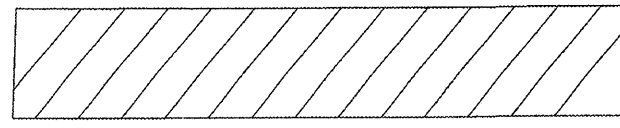


-L- STA. 256+00+/- TO -L- STA. 286+00+/-



INSET "A"



LEGEND

-  WEDGING
-  WIDENING & NEW ALIGNMENT
-  REMOVAL OF EXISTING PAVEMENT

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 3125 Wedde Avenue
 Raleigh, NC 27605
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 Fax: (919) 789-9291

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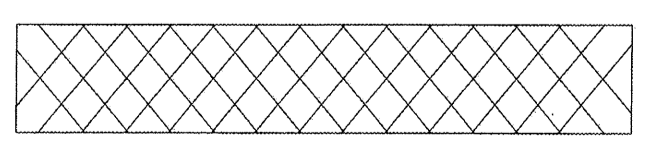
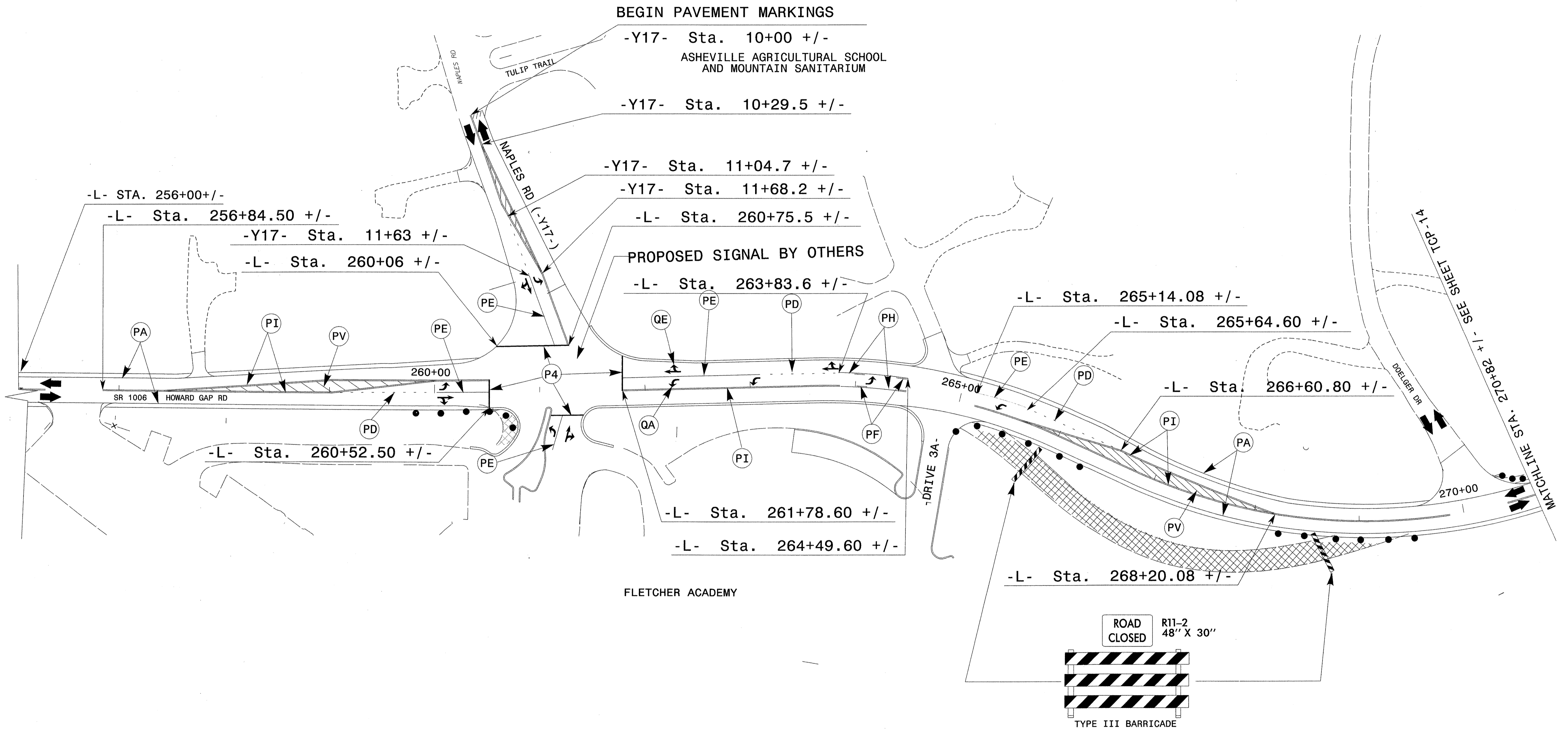
PROFESSIONAL ENGINEER
 SEAL 028392
 1/13/2012

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

PHASE I
 AREA 4

AREA 4

-L- STA. 256+00 +/- TO -L- STA. 286+00 +/-



REMOVAL OF EXISTING PAVEMENT

SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.

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1000 Woods Avenue
Raleigh, NC 27605
Phone: (919) 789-9077
Fax: (919) 789-9591

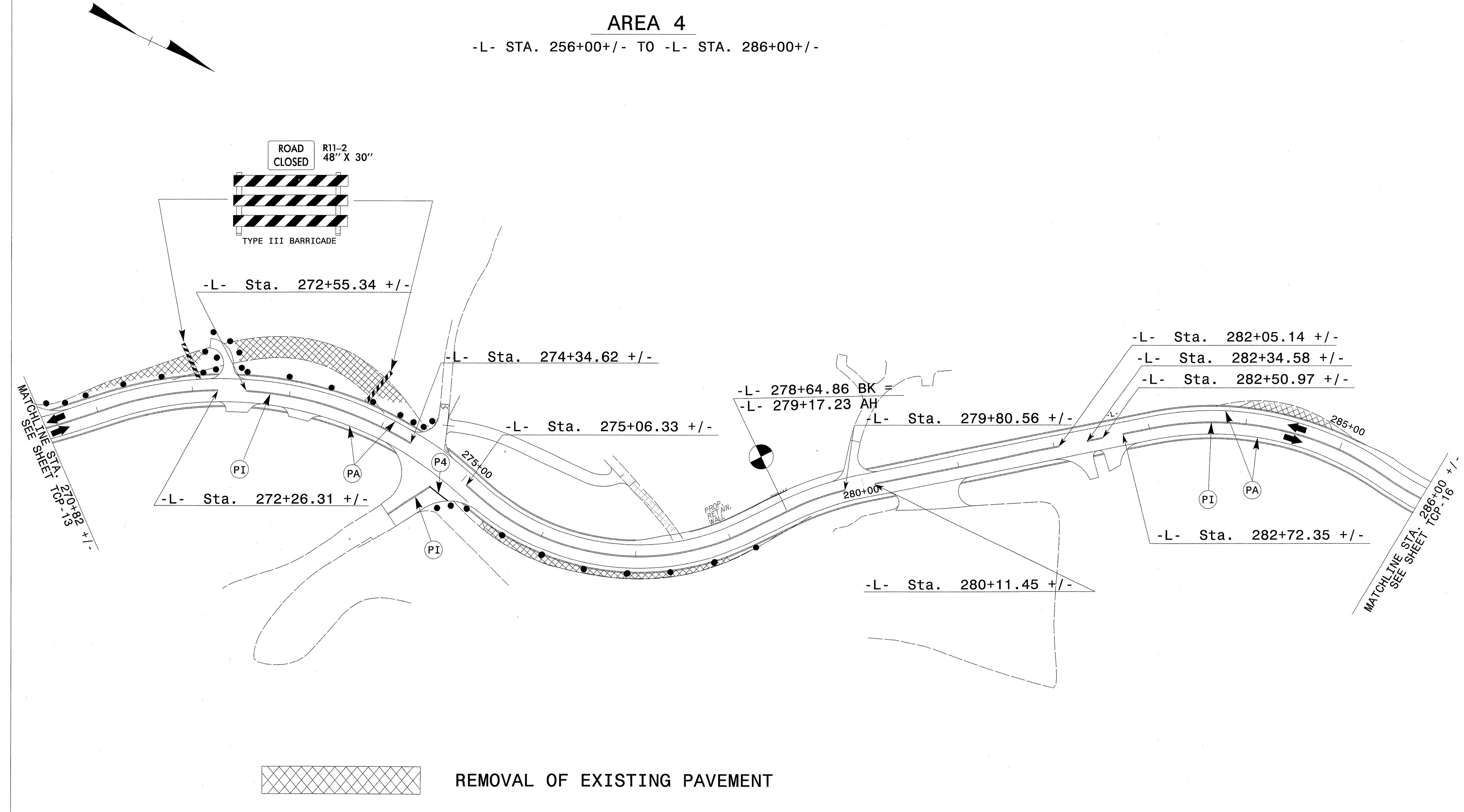
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SEAL

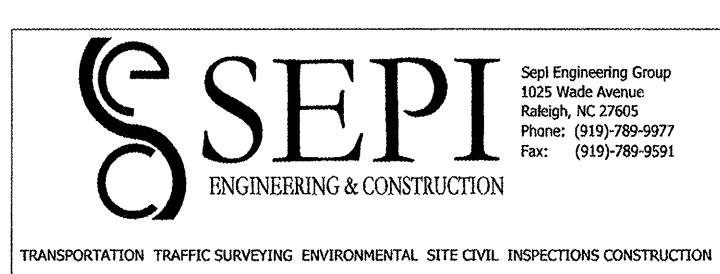
PHASE I
AREA 4

AREA 4

-L- STA. 256+00+/- TO -L- STA. 286+00+/-

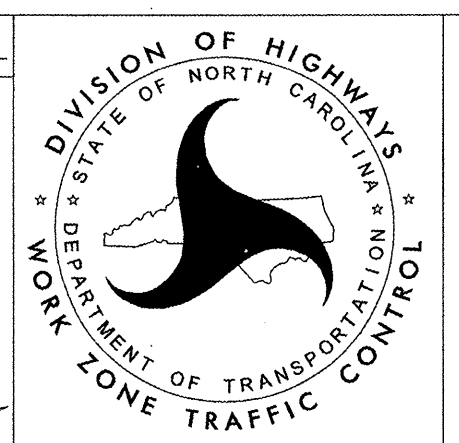


REMOVAL OF EXISTING PAVEMENT



APPROVED: _____ DATE: _____

SEAL



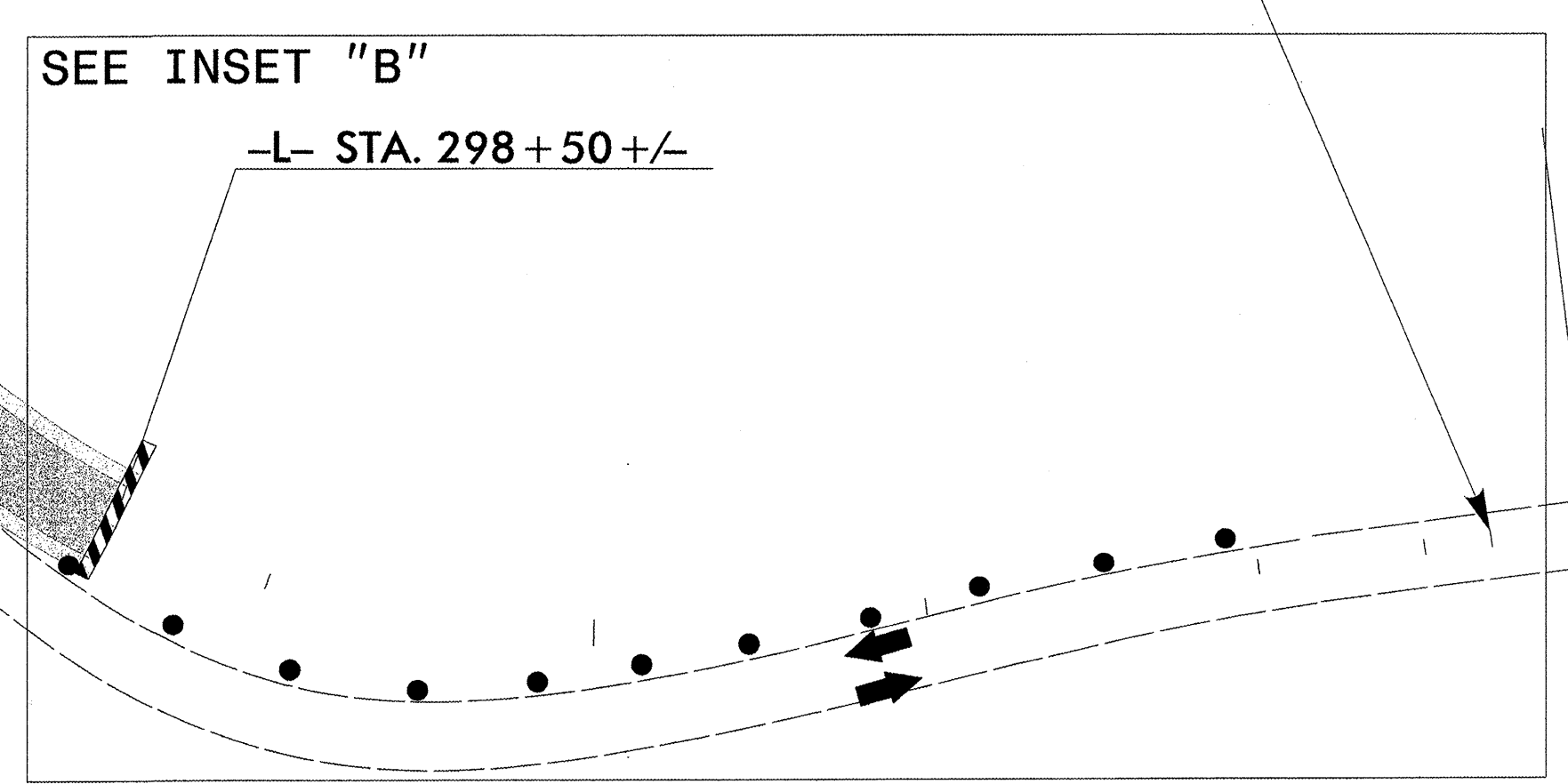
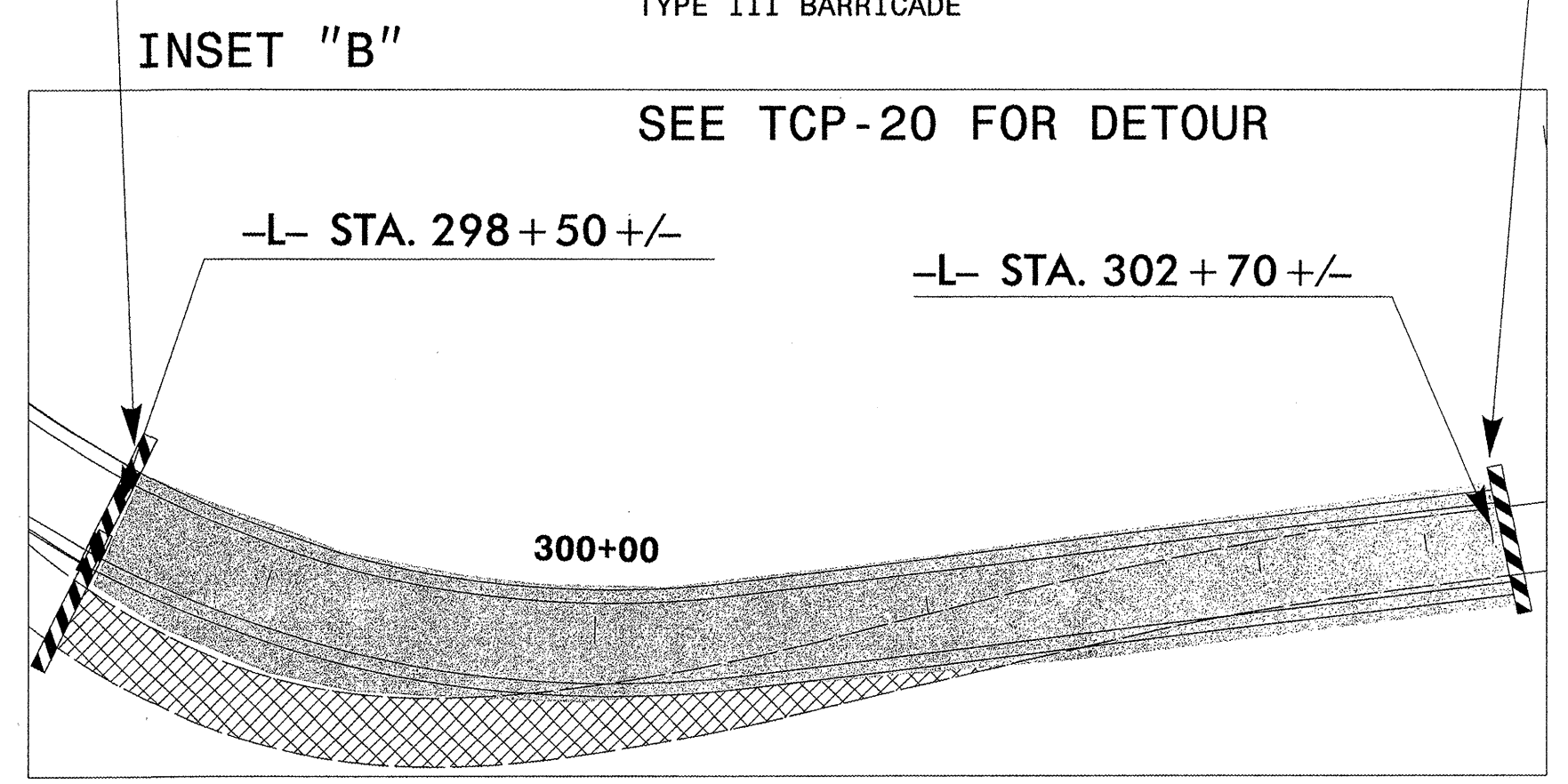
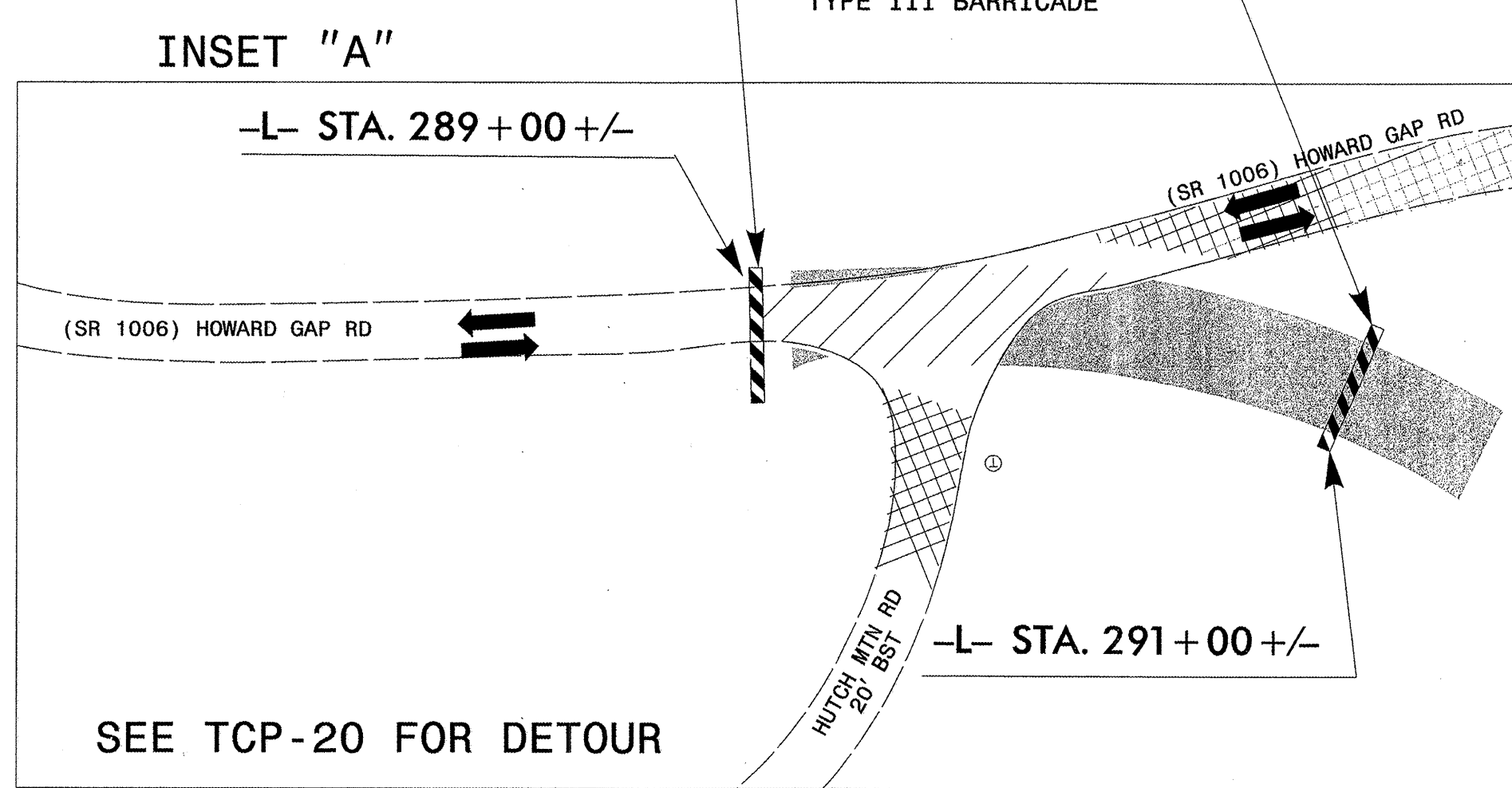
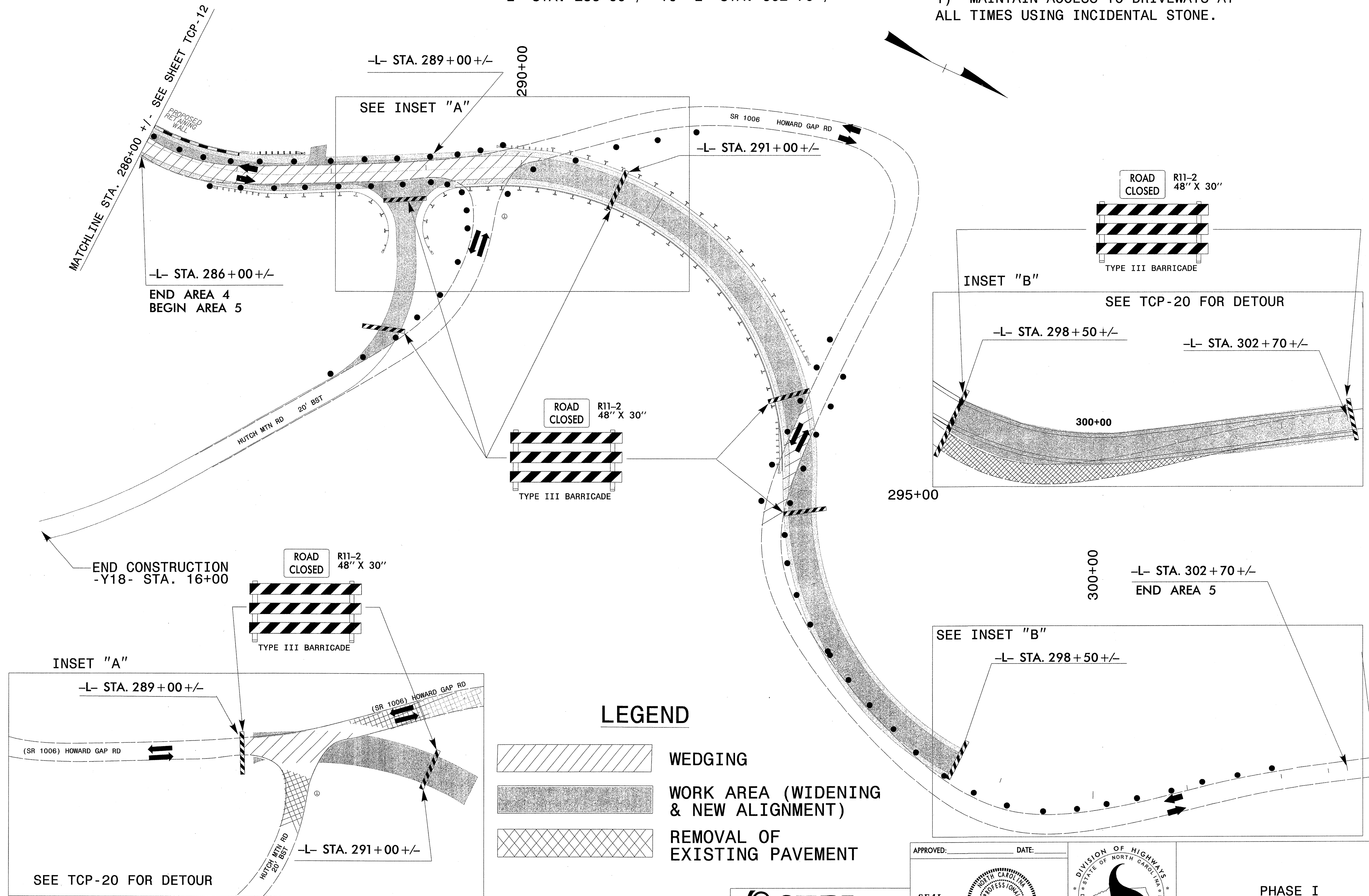
**PHASE I
AREA 4**

AREA 5

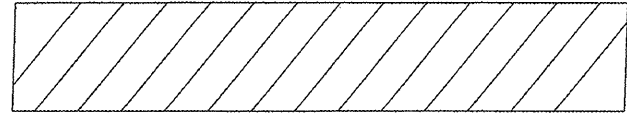


-L- STA. 286+00+/- TO -L- STA. 302+70+/-

PROJ. REFERENCE NO.	SHEET NO.
R-5207B	TCP-15

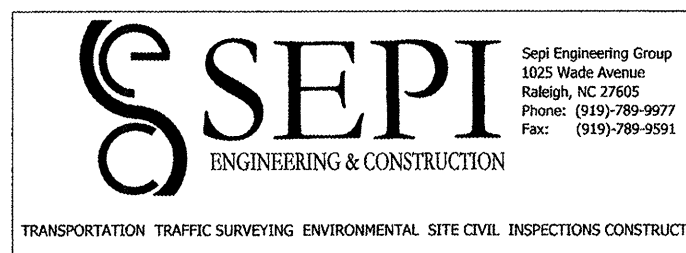
SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.



LEGEND

-  WEDGING
-  WORK AREA (WIDENING & NEW ALIGNMENT)
-  REMOVAL OF EXISTING PAVEMENT

APPROVED: _____ DATE: _____

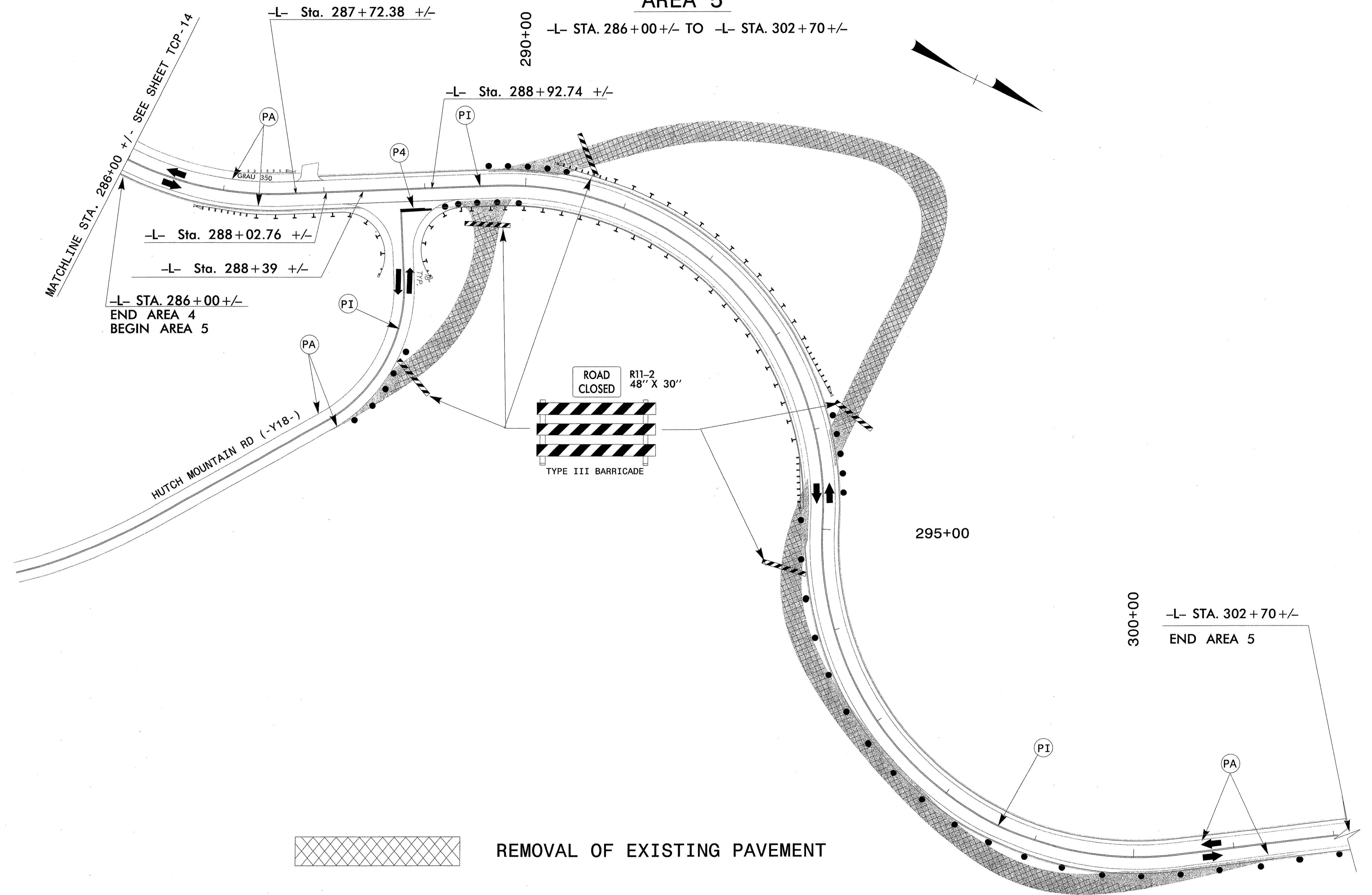


SEAL
1/3/2012



PHASE I
AREA 5

AREA 5



REMOVAL OF EXISTING PAVEMENT

SEPI
 ENGINEERING & CONSTRUCTION
TRANSPORTATION TRAFFIC SURVEYING ENVIRONMENTAL SITE CIVIL INSPECTIONS CONSTRUCTION

APPROVED: _____ DATE: _____

SEAL
 028392
 ENGINEER
 CUSTOMER SERVICE

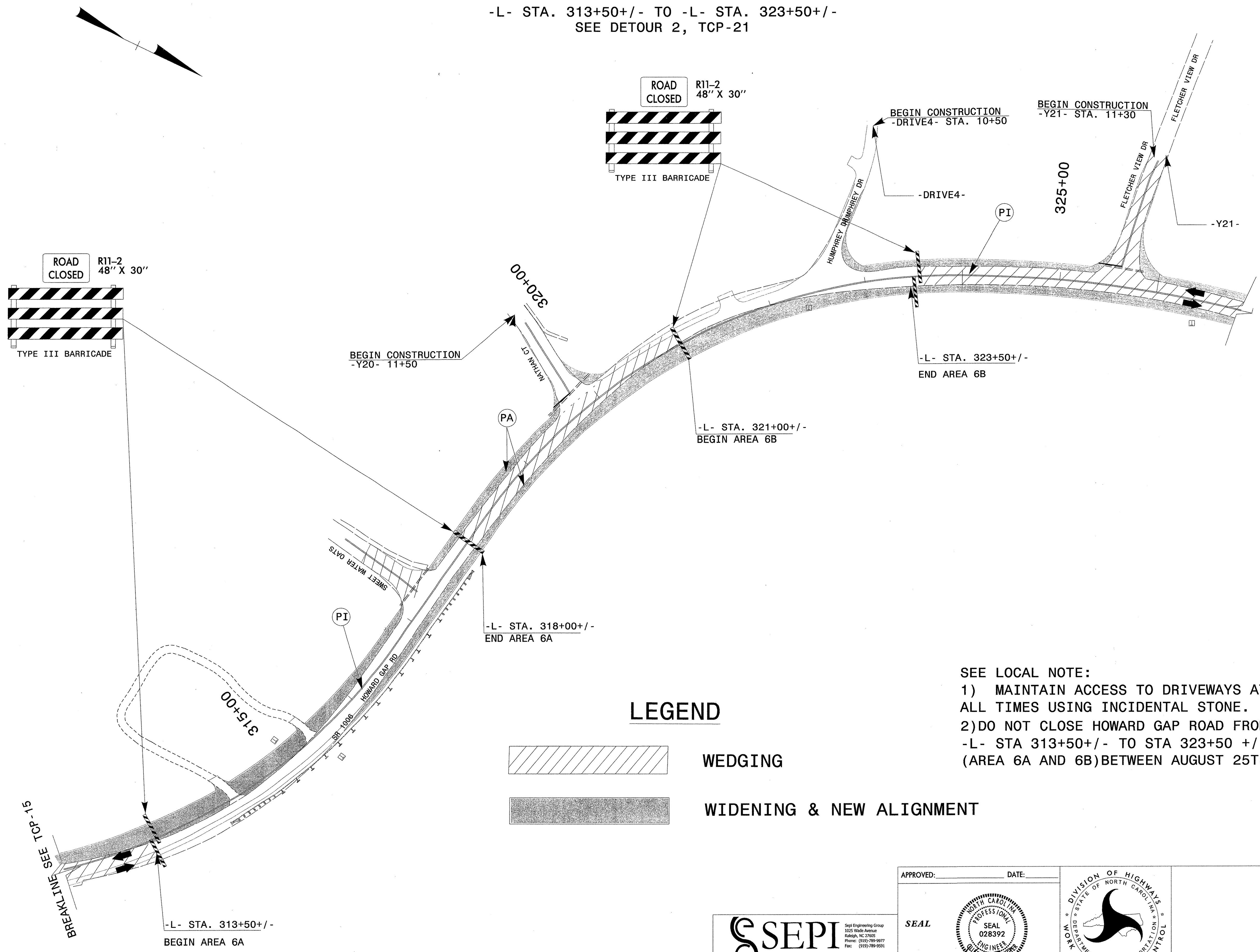
[Signature]
 1/3/2012

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

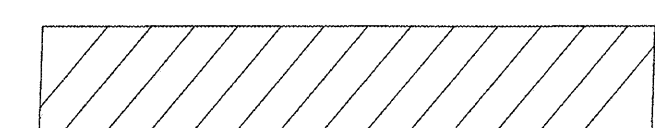
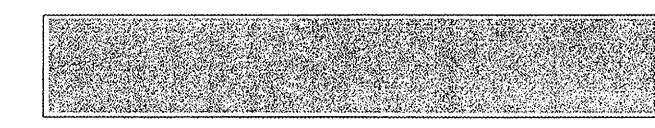
PHASE I
 AREA 5

AREA 6

-L- STA. 313+50+/- TO -L- STA. 323+50+/-
SEE DETOUR 2, TCP-21



LEGEND

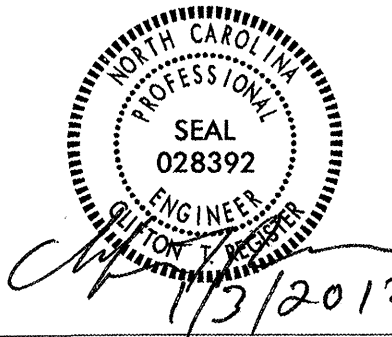
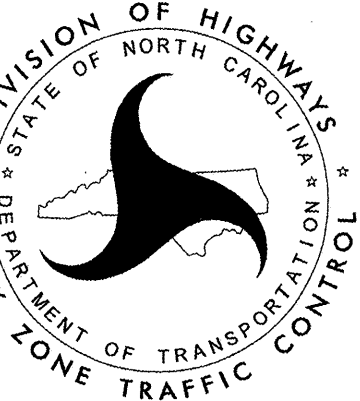
-  WEDGING
-  WIDENING & NEW ALIGNMENT

SEE LOCAL NOTE:
 1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.
 2) DO NOT CLOSE HOWARD GAP ROAD FROM -L- STA 313+50+/- TO STA 323+50 +/- (AREA 6A AND 6B) BETWEEN AUGUST 25TH AND JUNE 7TH.

SEPI
 ENGINEERING & CONSTRUCTION
Sept Engineering Group
 3125 Wicks Avenue
 Raleigh, NC 27605
 Phone: (919) 789-9577
 Fax: (919) 789-9591

APPROVED: _____ DATE: _____

SEAL

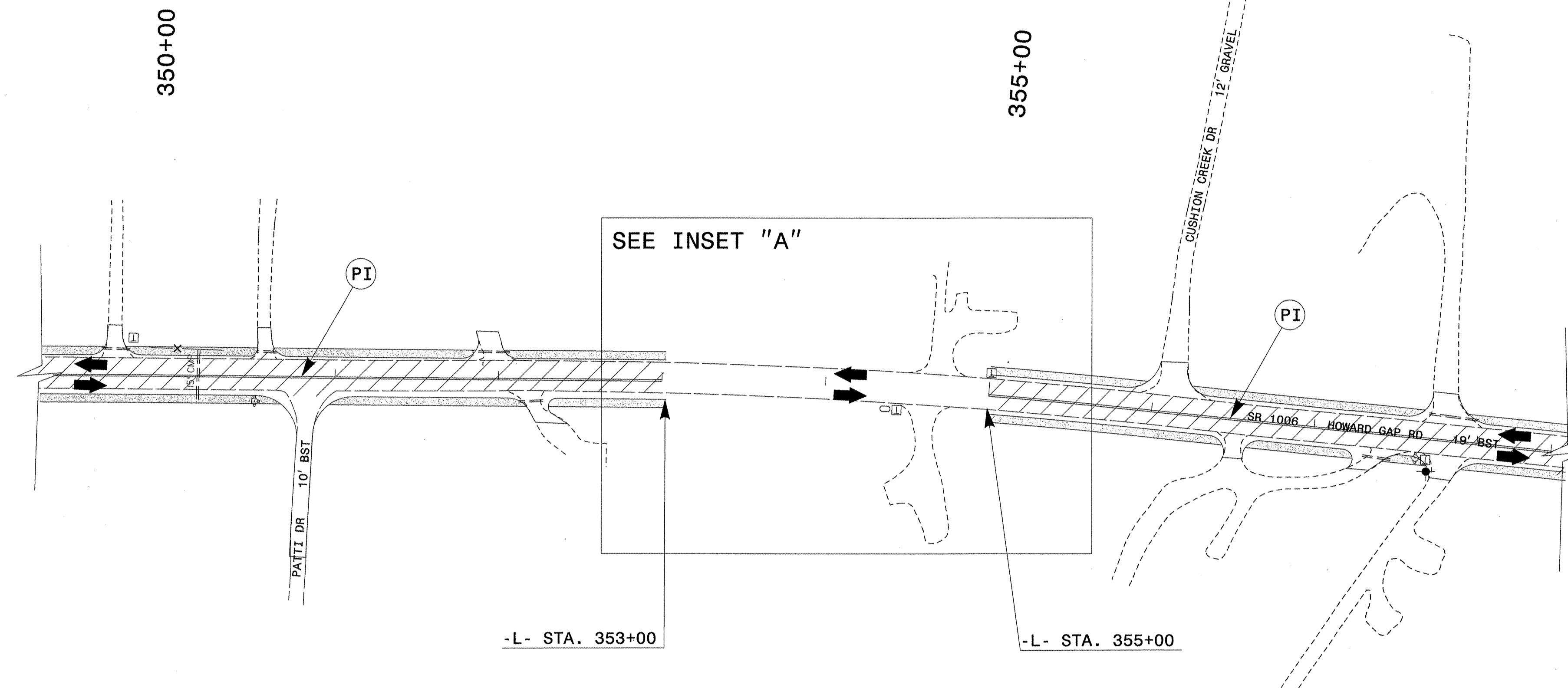



DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

PHASE I
 AREA 6

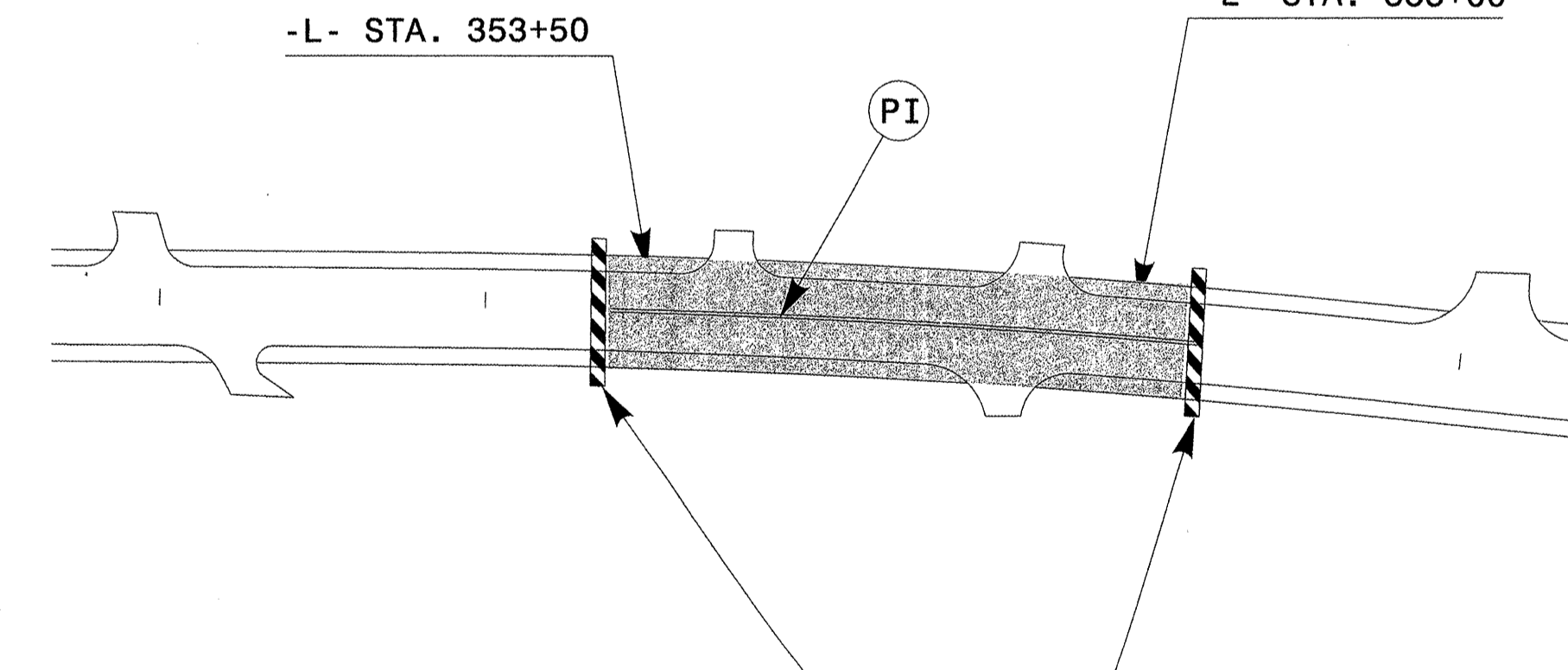
AREA 7

-L- STA. 353+50+/- TO -L- STA. 355+00+/-



INSET "A"

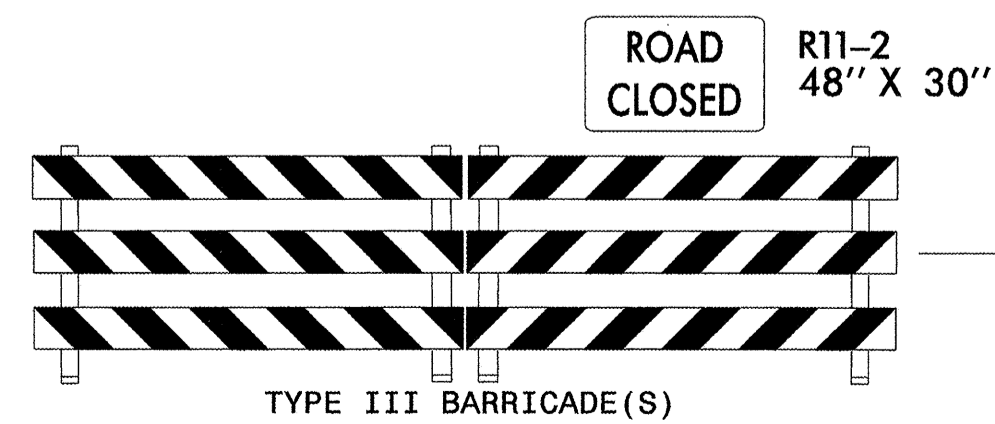
CLOSE HOWARD GAP ROAD AND CONSTRUCT
-L- STA 353+50 TO STA 355+00
SEE DETOUR 2, TCP-21



LEGEND

- WEDGING
- WORK AREA
(WIDENING & NEW ALIGNMENT)

SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.

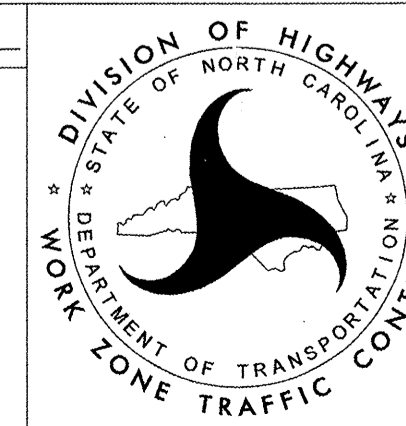


TYPE III BARRICADE(S)



APPROVED: _____ DATE: _____

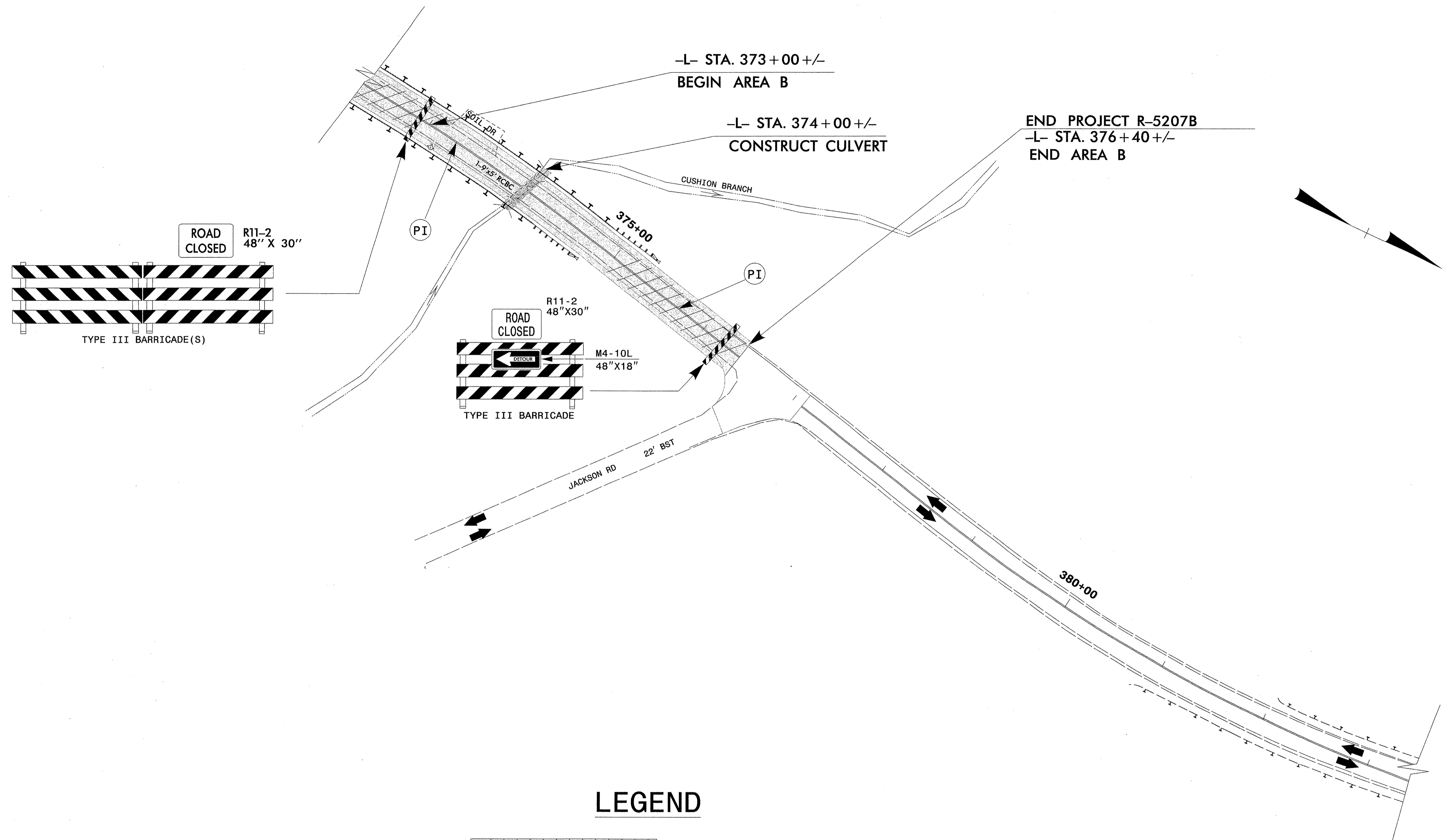
SEAL



PHASE I
AREA 7

AREA 8

-L- STA. 373+00+/- TO -L- STA. 376+40+/-
SEE DETOUR 2, TCP-21



LEGEND

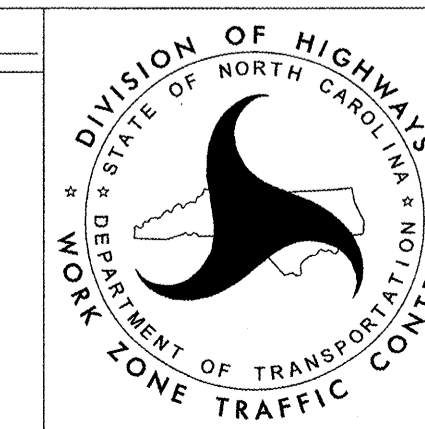
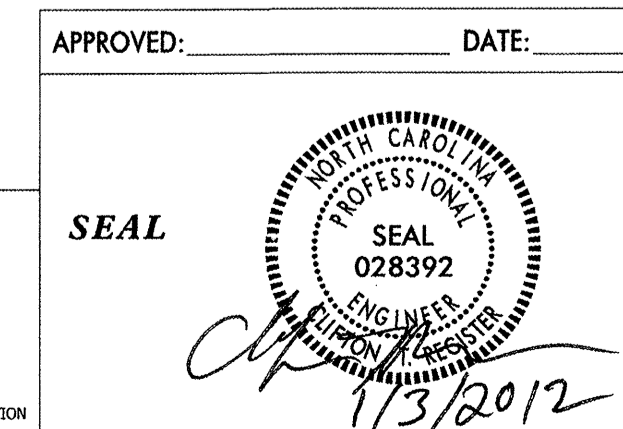


WEDGING

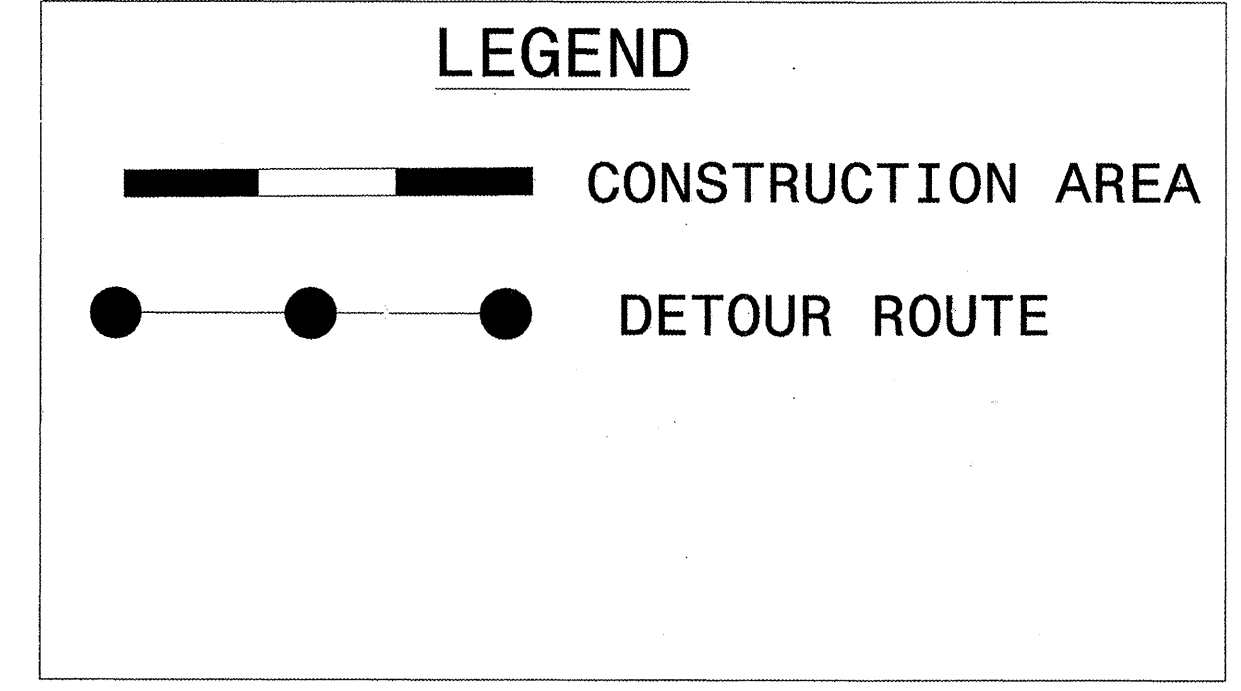
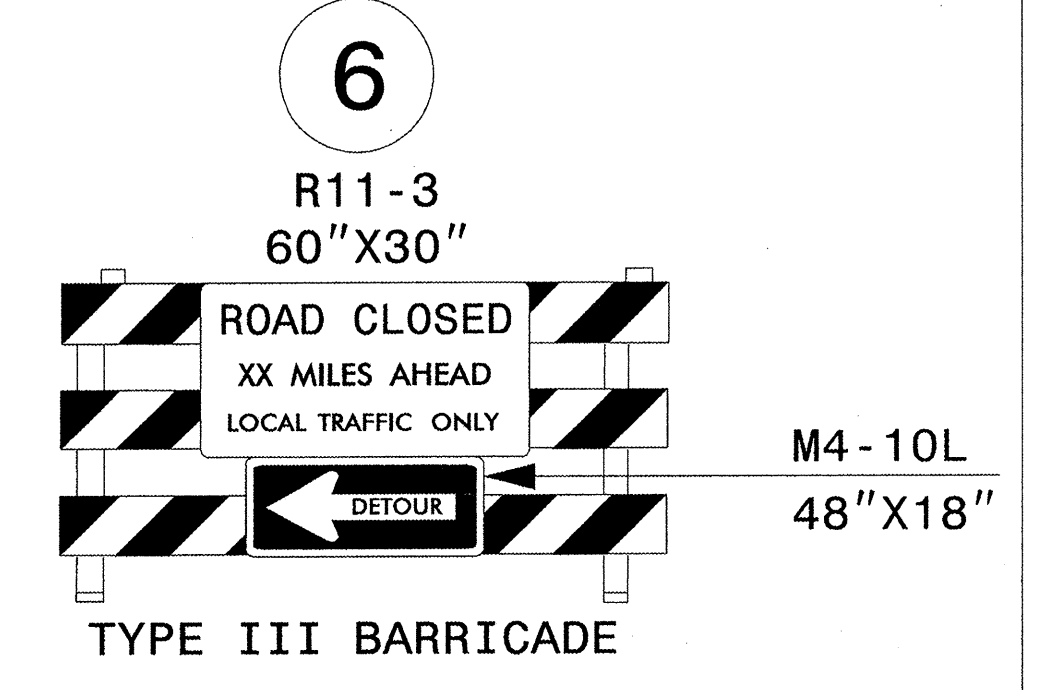
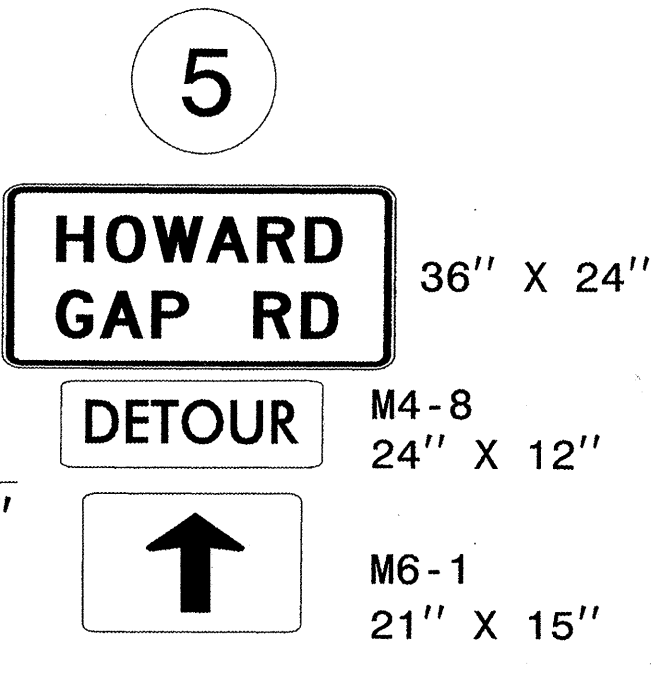
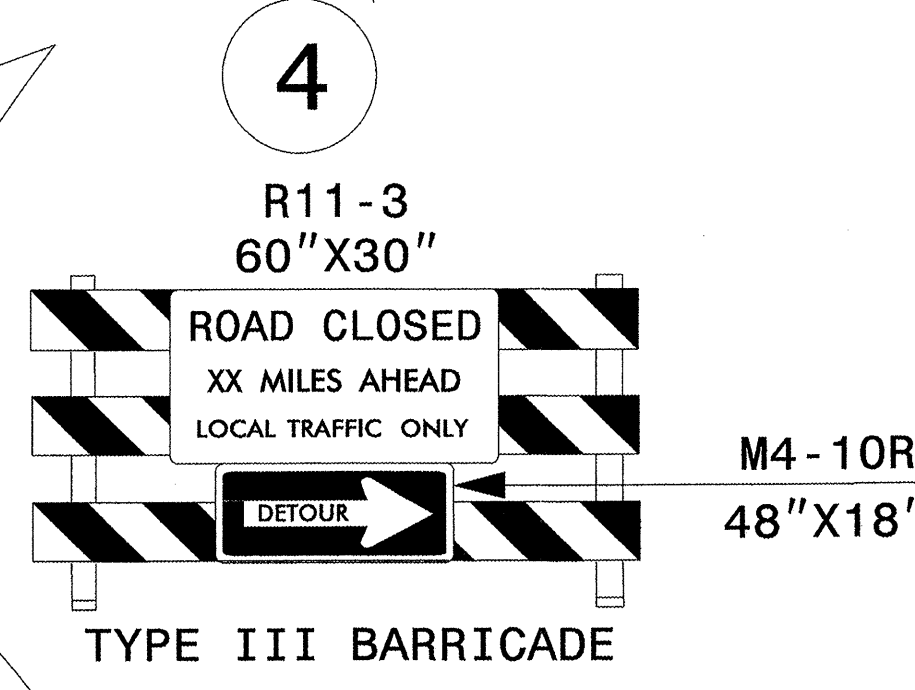
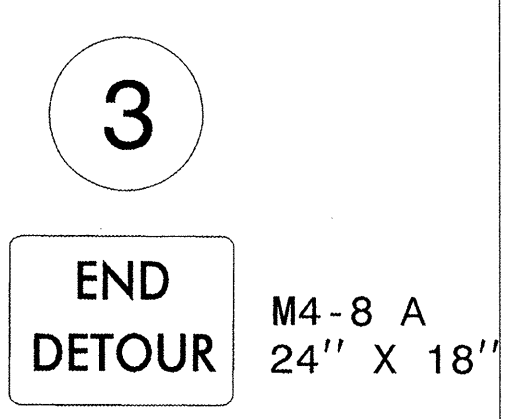
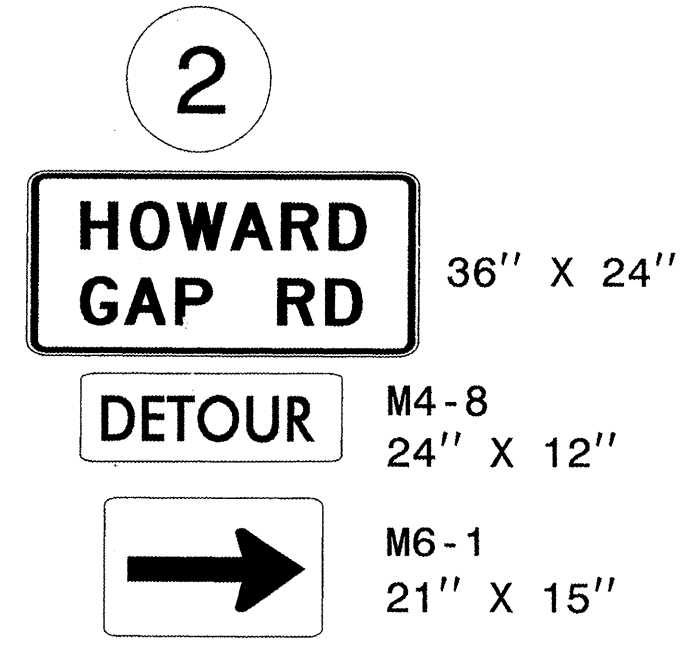
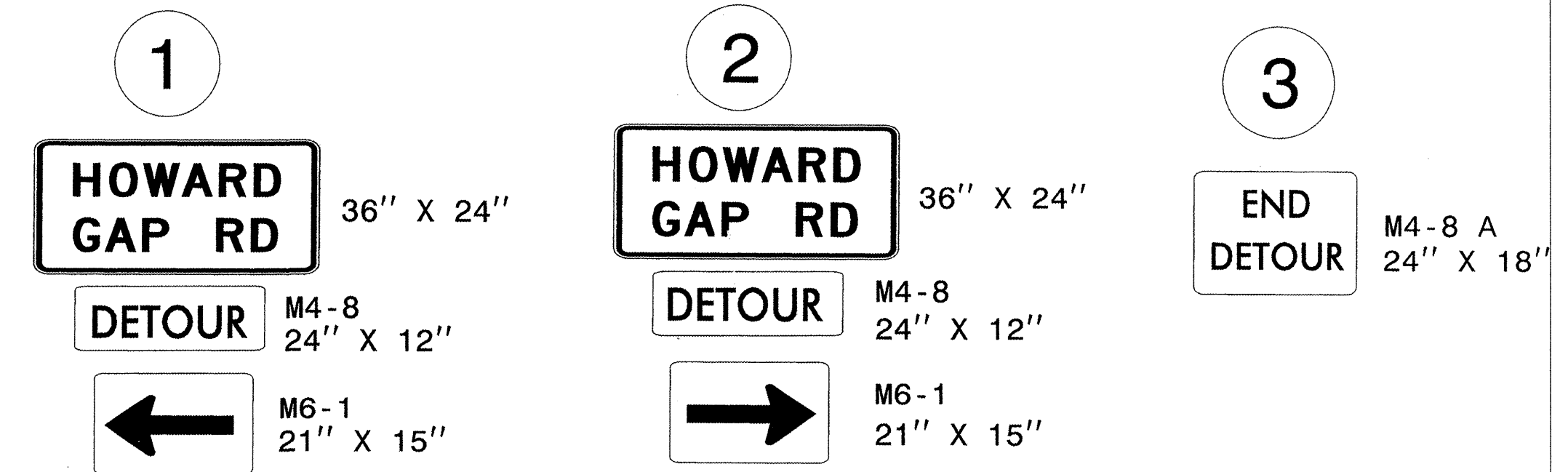
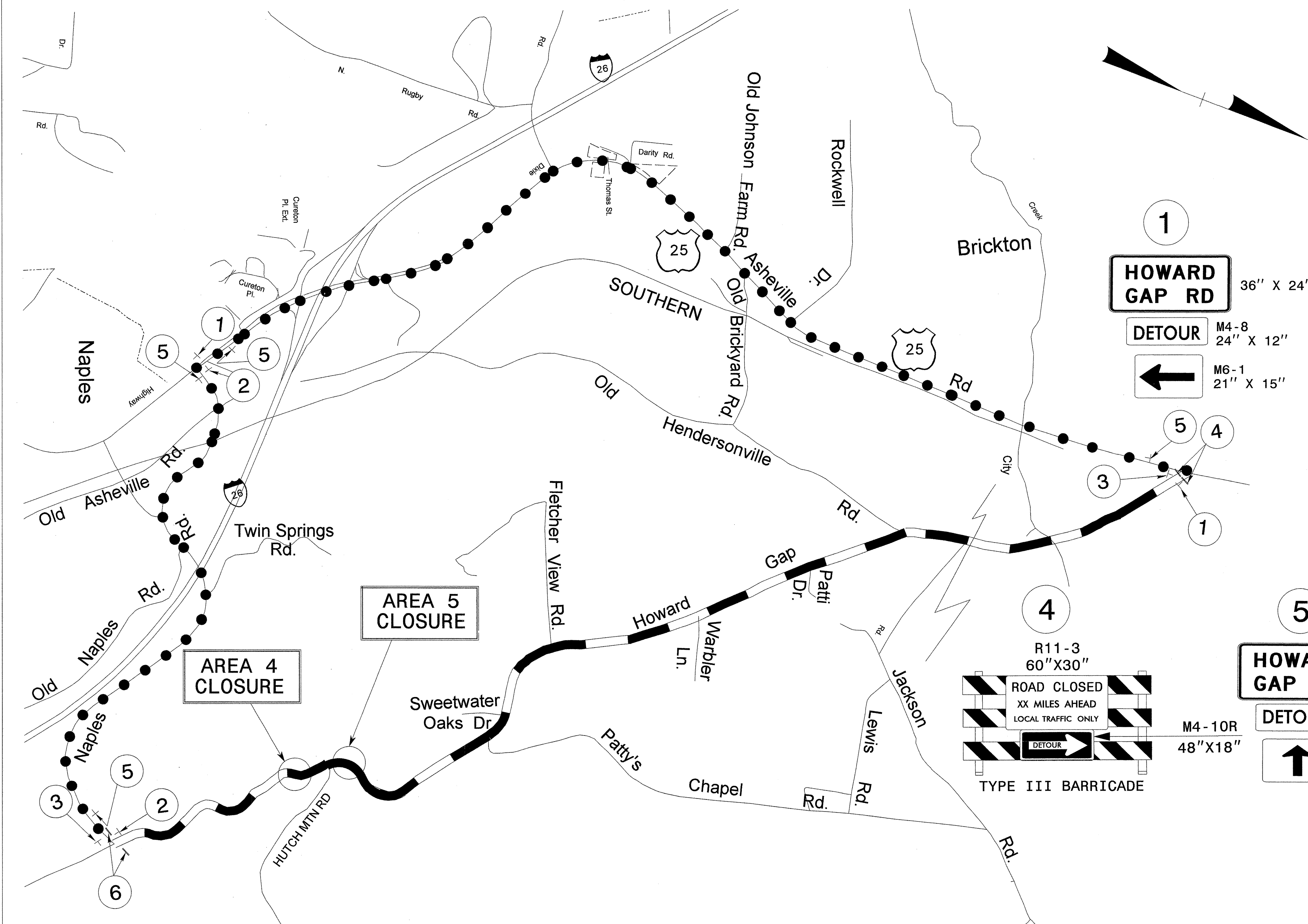


**WORK AREA
(WIDENING & NEW ALIGNMENT)**

SEE LOCAL NOTE:
1) MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES USING INCIDENTAL STONE.



**PHASE I
AREA 8**



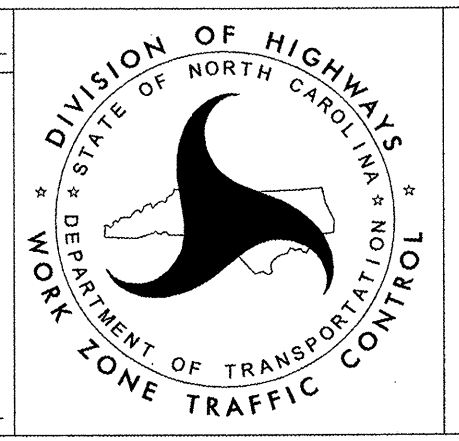
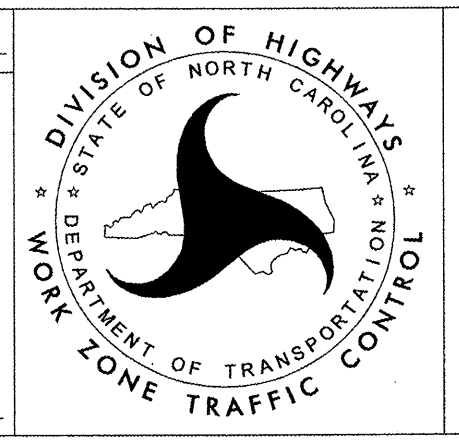
SEE RDWY STD. 1101.03, SHEETS 1 AND 2 OF 9 FOR ADDITIONAL SIGNS

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ENGINEERING & CONSTRUCTION
1025 Wells Avenue
Raleigh, NC 27605
Phone: (919) 789-9877
Fax: (919) 789-9591

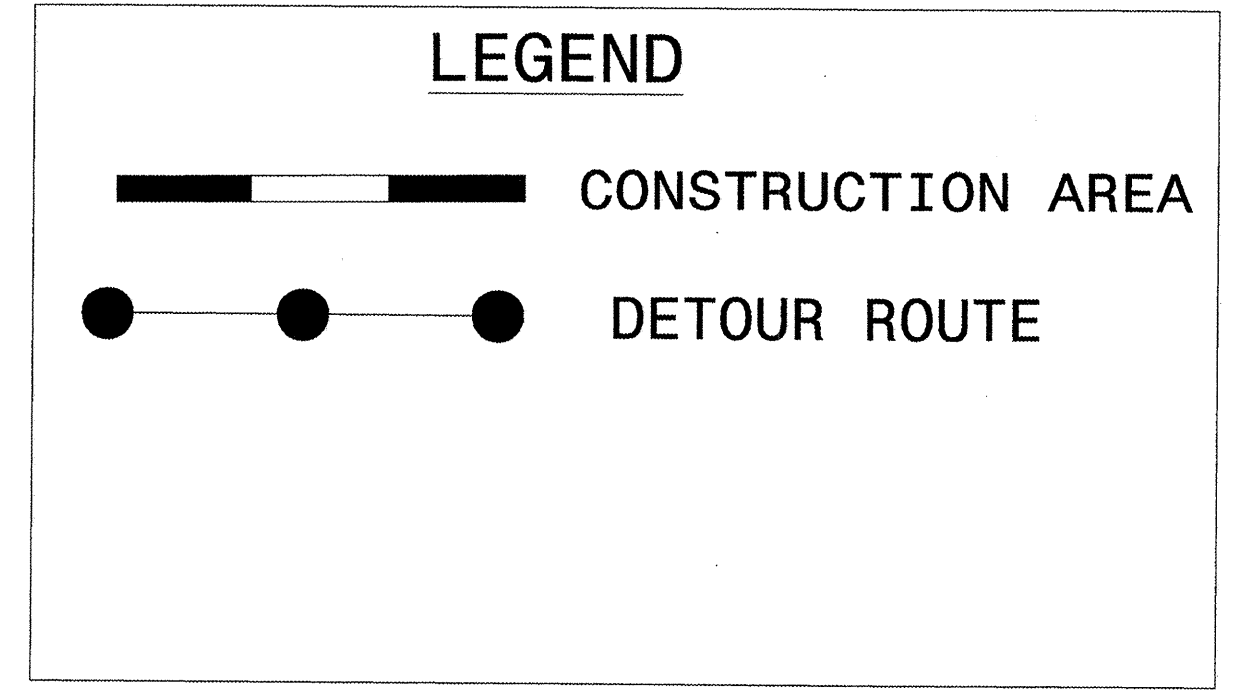
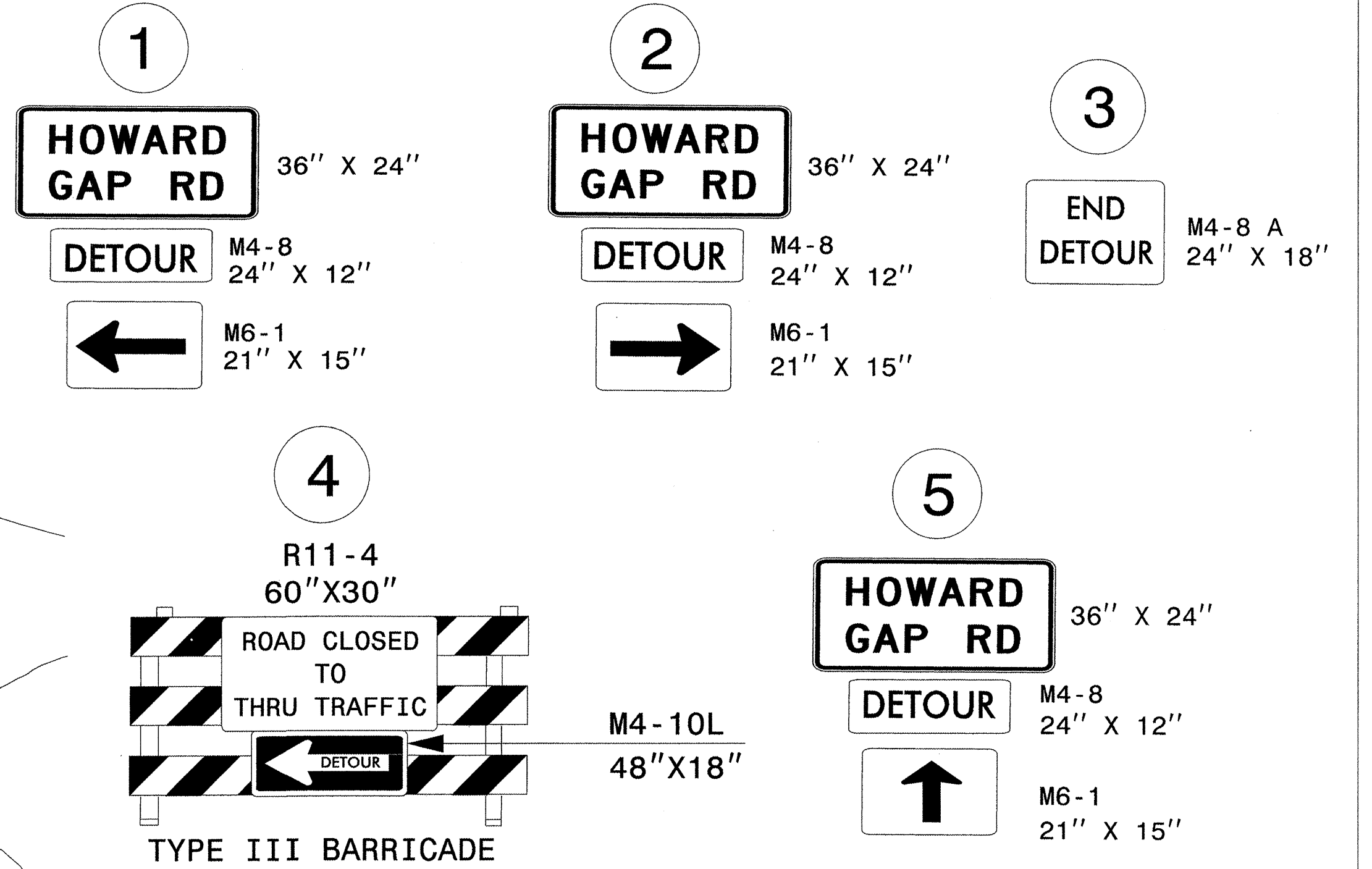
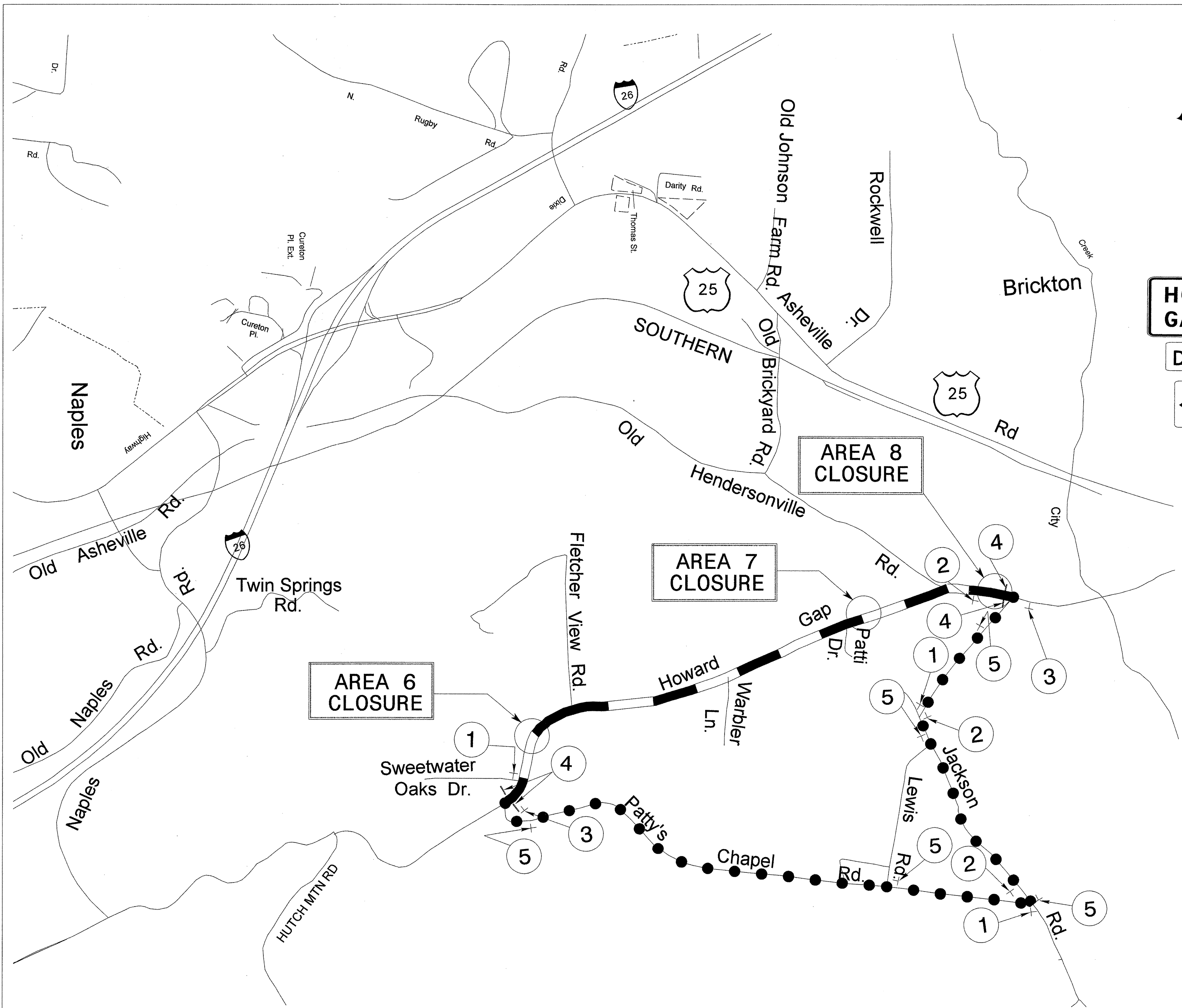
APPROVED: _____ DATE: _____

SEAL

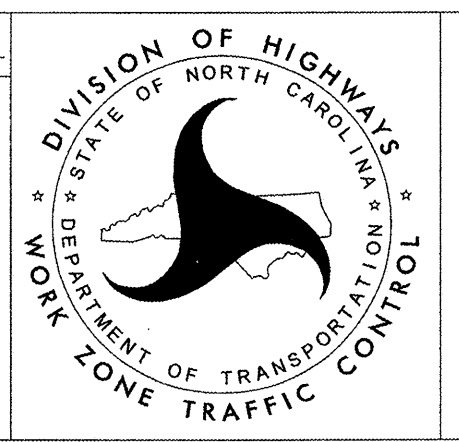
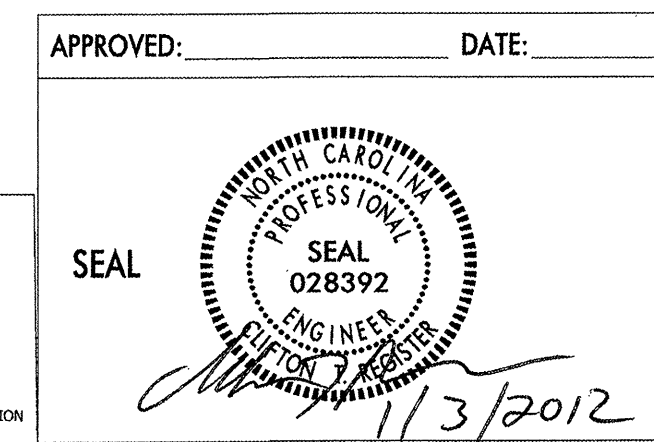
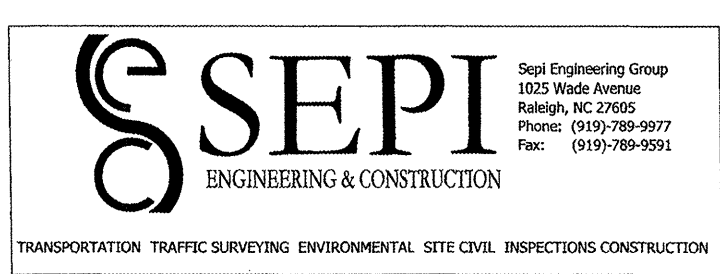
[Signature] 1/3/2012



**HOWARD GAP RD
DETOUR 1**



SEE RDWY STD. 1101.03, SHEETS 1 AND 2 OF 9 FOR ADDITIONAL SIGNS



**HOWARD GAP RD
DETOUR 2**

SIGN NUMBER: name	BACKG COLOR: Fluorescent Orange	DESIGN BY: R. DRAYTON	CHECKED BY: T. REGISTER	DATE: Jun 02, 2011																																																	
TYPE: STATIONARY	COPY COLOR: Black	PROJECT ID: R-5207B	DIV: 14																																																		
QUANTITY: SEE PLANS	<table border="1"> <thead> <tr> <th>SYMBOL</th> <th>X</th> <th>Y</th> <th>WID</th> <th>HT</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	SYMBOL	X	Y	WID	HT																																															
SYMBOL	X	Y	WID	HT																																																	
SIGN WIDTH: 36" HEIGHT: 24" TOTAL AREA: 6.0 Sq.Ft.																																																					
BORDER TYPE: INSET RECESS: 0.38" WIDTH: 0.63" RADII: 1.5"																																																					
NO. Z BARS: LENGTH:	MAT'L: 0.125" (3.2 mm) ALUMINUM 0.079" COMPOSITE																																																				

USE NOTES: 1 & 2

- Legend and border shall be direct applied black non-reflective sheeting.
- Background shall be Type VII, VIII or IX (prismatic) fluorescent orange retroreflective sheeting.

BORDER
R=1.5"
TH=0.63"
IN=0.38"

Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter locations are panel edge to lower left corner

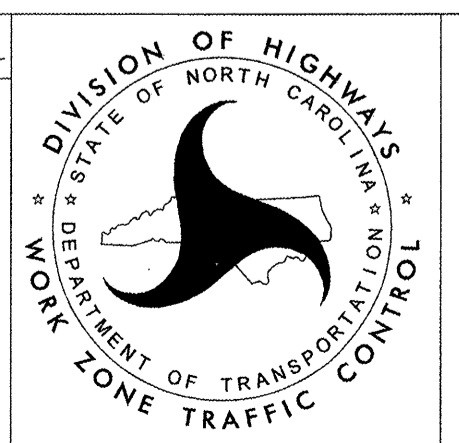
Letter locations are panel edge to lower left corner											Series/Size
H	O	W	A	R	D						Text Length
4.9	9.5	13.7	18.7	23.3	27.7						C 2000
											26.2
G	A	P		R	D						Text Length
4.9	9	13.7	17	23	27.4						C 2000
											25.9

FILENAME: Howard Gap Rd Sign Design SEPI ENGINEERING & CONSTRUCTION SIGN DETAIL



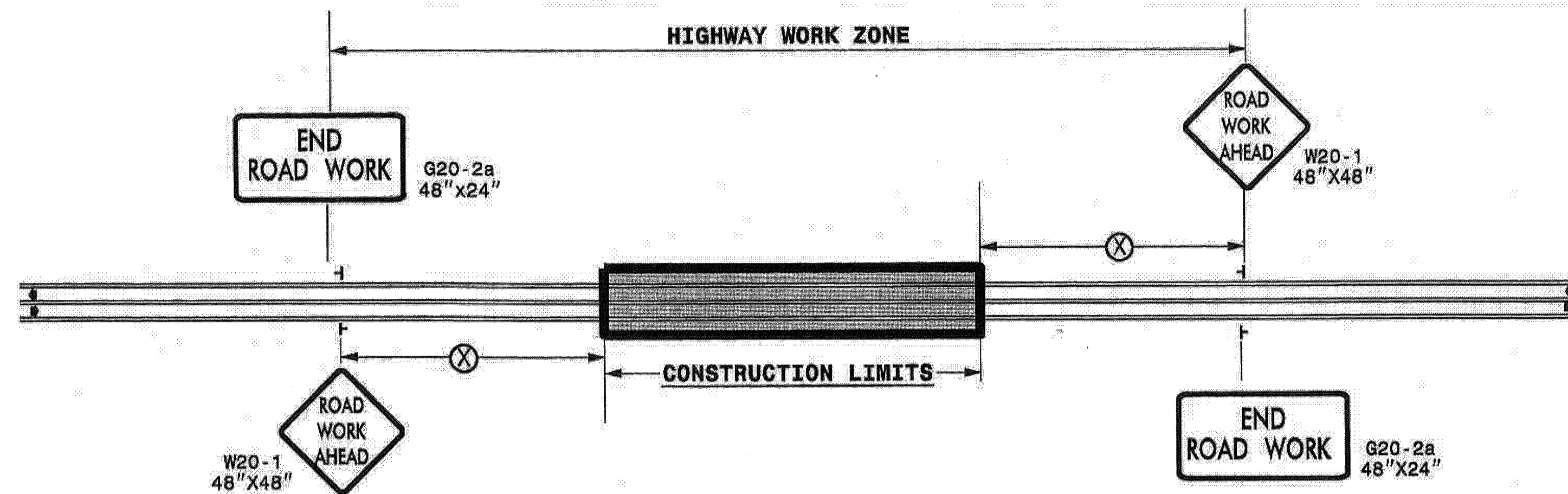
APPROVED: _____ DATE: _____

SEAL



SIGN LAYOUT FOR
HOWARD GAP RD

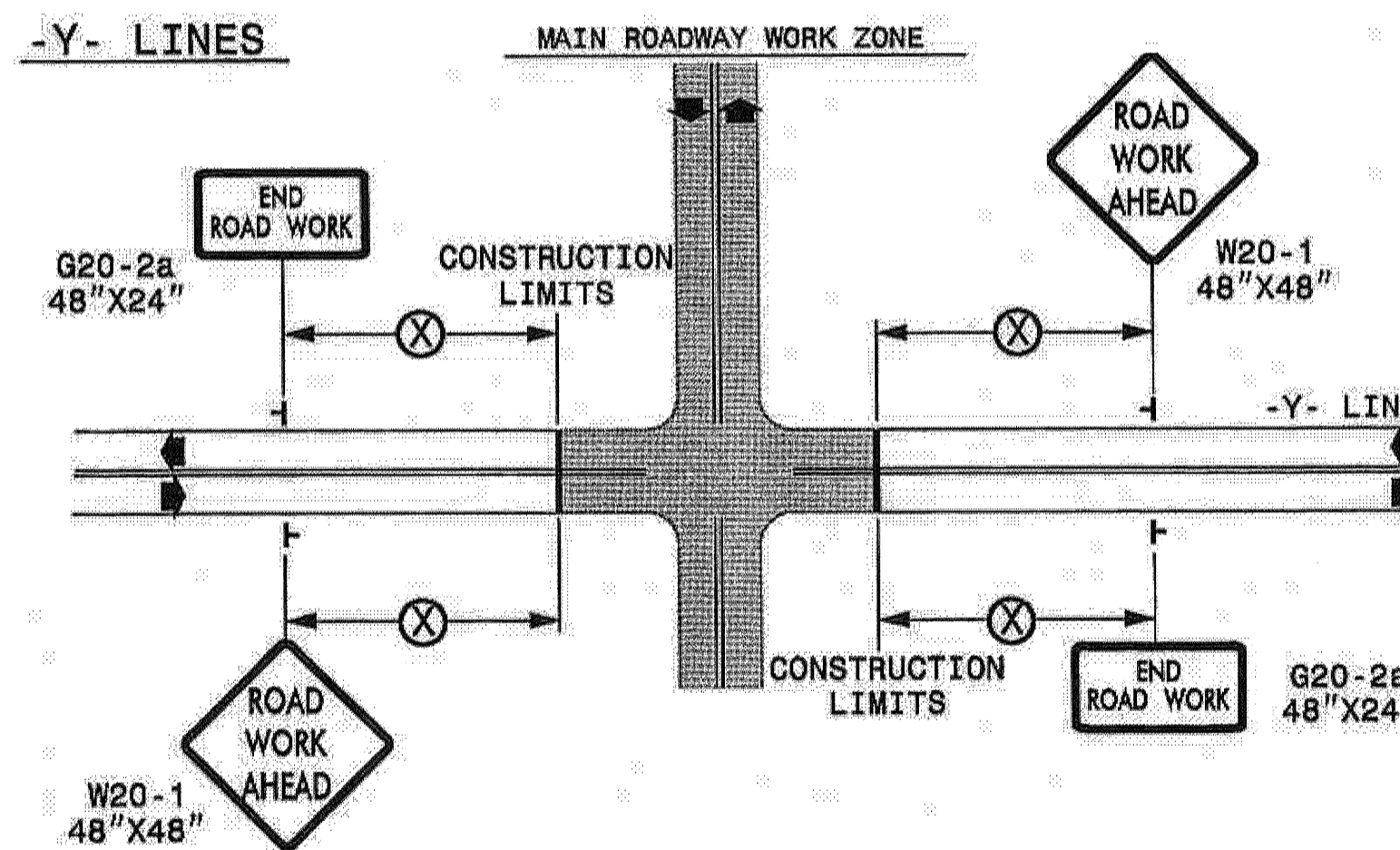
TWO-WAY UNDIVIDED ** (L-LINES)



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

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

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



GENERAL NOTES

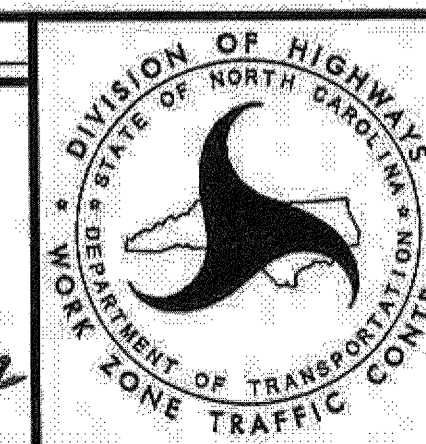
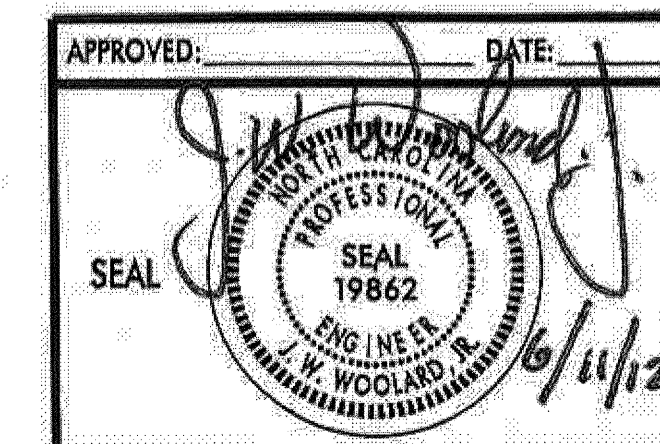
- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS,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

DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

SHEET 1 OF 1



DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS
WORK ZONE WARNING SIGNS

I:\JUN-2012\1608
 C:\Data\vd
 I:\woolard AT TE24740
 I:\woolard..._Ur-ban_Frwys.dgn

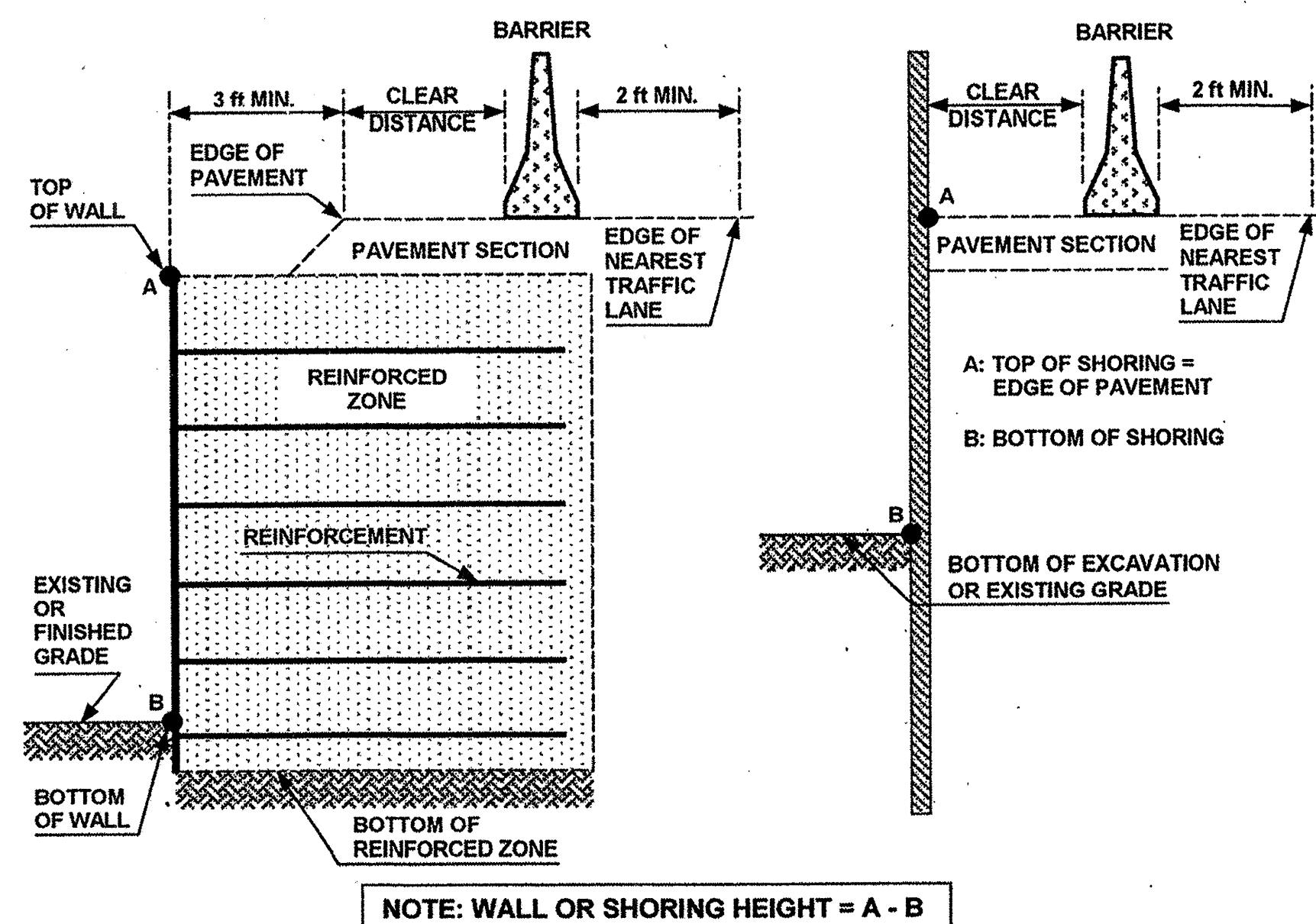


FIGURE A

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. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 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. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).
- 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: WORK ZONE TRAFFIC CONTROL UNIT WEB PAGE.
- 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 * 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

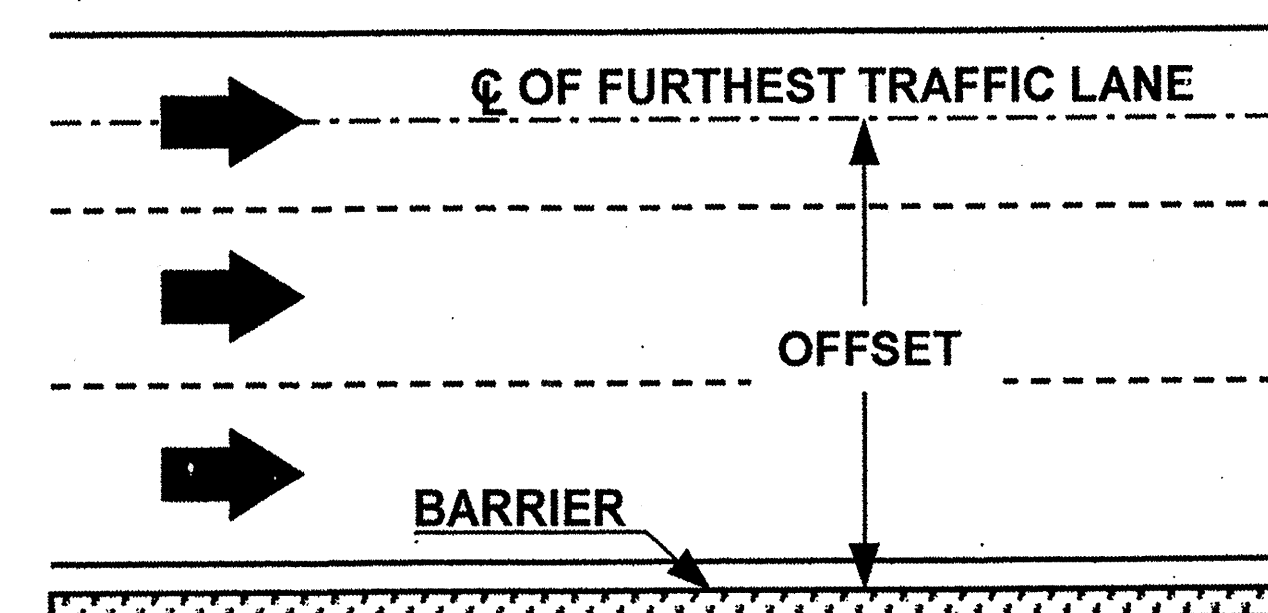


FIGURE B

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