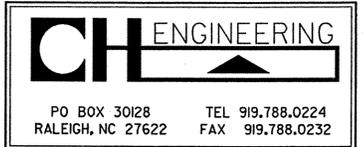


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

STATE PROJECT REFERENCE NO. R-2911B	SHEET NO. TCP-1
---	--------------------



LEGEND

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

- TRAFFIC CONTROL DEVICES**
- TYPE I BARRICADE
 - TYPE II BARRICADE
 - TYPE III BARRICADE
 - CONE
 - DRUM SKINNY DRUM
 - FLASHING ARROW PANEL (TYPE C)
 - STATIONARY SIGN
 - PORTABLE SIGN
 - STATIONARY OR PORTABLE SIGN
 - CRASH CUSHION
 - CHANGEABLE MESSAGE SIGN
 - TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)

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

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS"- PROJECT SERVICES UNIT-N.C. DEPARTMENT OF TRANSPORTATION-RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD 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
1115.01	FLASHING ARROW PANELS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
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
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

SHEET NO.	TITLE
TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND AND INDEX OF SHEETS
TCP-1A	TEMPORARY PAVEMENT MARKING SCHEDULE
TCP-2 & TCP-2A	PROJECT NOTES
TCP-2B	SHORING DATA SHEET
TCP-3	PROJECT PHASING AND LOCAL NOTES
TCP-4 & TCP-5	PHASE I OVERVIEWS
TCP-6 - TCP-10	PHASE I DETAIL DRAWINGS
TCP-11 & TCP-12	PHASE II OVERVIEWS
TCP-13 - TCP-19	PHASE II DETAIL DRAWINGS
TCP-20 & TCP-21	PHASE III OVERVIEWS
TCP-22 - TCP-25	PHASE III DETAIL DRAWINGS
TCP-26 & TCP-27	INTERSECTION & DRIVEWAY TYPICAL DETAILS
TCP-28	DETAIL DRAWING FOR TWO-WAY UNDIVIDED & URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS
TCP-29	PCB AT TEMPORARY SHORING LOCATIONS
PM-1	FINAL PAVEMENT MARKING SCHEDULE
PM-2 THRU PM-8	FINAL PAVEMENT MARKING PLANS
SD-1	SPECIAL SIGN DESIGN

R-2911B

TIP PROJECT:

6/26/2008 C:\Documents and Settings\rearily\Desktop\TCP\2911b-rc-TCP01.dgn USERNAME

PLAN REVIEWED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT	APPROVED: <i>Harold B. Early</i> DATE: 4-26-08	PLAN PREPARED FOR NCDOT BY:
<i>J. S. Bourne, PE</i> TRAFFIC CONTROL ENGINEER	SEAL 	<i>T. R. Hepler, PE</i> QC ENGINEER
<i>J. S. Kite, PE</i> TRAFFIC CONTROL PROJECT ENGINEER		<i>R. B. Early, PE</i> PROJECT ENGINEER
<i>J. D. Kuse, PE</i> TRAFFIC CONTROL PROJ. DESIGN ENGINEER		<i>J. A. Phillips</i> PROJECT DESIGNER
<i>R. M. Garrett</i> TRAFFIC CONTROL DESIGN ENGINEER		

TEMPORARY PAVEMENT MARKING SCHEDULE

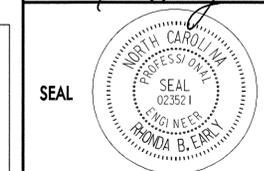
SYMBOL	DESCRIPTION	PAY ITEM/ QUANTITY BREAKDOWN	TOTAL QUANTITY
PAVEMENT MARKING LINES			
COLD APPLIED PLASTIC (4") - TYPE 4 REMOVABLE TAPE			
			1140 LF
CA	WHITE EDGELINE	570 LF	
CI	YELLOW DOUBLE CENTER LINE	570 LF	
PAINT (4")			
			242895 LF
PA	WHITE EDGELINE (2X)	115614 LF	
PB	YELLOW EDGELINE (2X)	4530 LF	
PC	10 FT WHITE SKIP (2X)	23230 LF	
PD	2 FT WHITE MINISKIP (2X)	1713 LF	
PE	WHITE SOLID LANE LINE (2X)	10900 LF	
PI	YELLOW DOUBLE CENTER LINE (2X)	86908 LF	
PAINT (8")			
			2296 LF
PS	WHITE DIAGONAL (2X)	150 LF	
PV	YELLOW DIAGONAL (2X)	2146 LF	
PAINT (24")			
			1680 LF
P4	WHITE STOPBAR (2X)	1680 LF	
PAINT MARKING SYMBOLS			
			222 EA
QA	LEFT TURN ARROW (2X)	76 EA	
QB	RIGHT TURN ARROW (2X)	34 EA	
QC	STRAIGHT ARROW (2X)	100 EA	
QE	STRAIGHT / RIGHT COMBO (2X)	12 EA	
PAINT MARKING CHARACTERS			
			16 EA
QI	ALPHA / NUMERIC CHARACTER (2X)	16 EA	
TEMPORARY RAISED PAVEMENT MARKERS			
			757 EA
MA	YELLOW & YELLOW	242 EA	
MB	CRYSTAL & RED	515 EA	

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



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APPROVED: *[Signature]* DATE: 6/30/08



TEMPORARY PAVEMENT MARKING SCHEDULE

SCALE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE



REVISIONS

REVISIONS

6/30/2008
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USER: JAP

PROJECT NOTES

PROJ. REFERENCE NO.	SHEET NO.
R-2911B	TCP-2

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.

TIME RESTRICTIONS

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

ROAD NAME	DAY AND TIME RESTRICTIONS
US 70 (-L-)	MONDAY - FRIDAY 6:00 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM

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

ROAD NAME

US 70 (-L-)

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 PM DECEMBER 31st TO 6:00 AM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 AM THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 7:00 PM THURSDAY AND 6:00 AM MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 PM FRIDAY TO 6:00 AM TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 PM THE DAY BEFORE INDEPENDENCE DAY AND 6:00 AM THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 PM THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 AM THE TUESDAY AFTER INDEPENDENCE DAY.

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

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) 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.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- G) 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.
- H) DO NOT INSTALL MORE THAN ONE LANE CLOSURE, IN ANY ONE DIRECTION, ON US 70 (-L-).
- I) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT OF BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL AND BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- J) 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.
- K) 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) 500' IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- M) INSTALL ADVANCE WORK ZONE WARNING SIGNS NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- N) PROVIDE PERMANENT SIGNING.
- O) PROVIDE DETOUR SIGNING WITHIN THE PROJECT LIMITS.
- P) COVER OR REMOVE ALL DETOUR SIGNS WITHIN/OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- R) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 500' IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

REVISIONS

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APPROVED: <i>[Signature]</i> DATE: 6-26-08	GENERAL NOTES	REVISIONS						
	SCALE: NONE DATE: 3/28/08 DWG. BY: JAP DESIGN BY: JAP REVIEWED BY: RBE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50px; height: 20px;"> </td><td style="width: 50px; height: 20px;"> </td></tr> <tr><td style="width: 50px; height: 20px;"> </td><td style="width: 50px; height: 20px;"> </td></tr> <tr><td style="width: 50px; height: 20px;"> </td><td style="width: 50px; height: 20px;"> </td></tr> </table>						

TRAFFIC BARRIER

S) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRAFFIC CONTROL 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 TRAFFIC CONTROL PLANS OR AS DIRECTED BY THE ENGINEER.

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

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 TRAFFIC CONTROL PLANS, TEMPORARY BARRIER IS PROTECTING 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.

T) PROTECT THE APPROACH END OF THE 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.

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

- U) 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. WHEN SKINNY DRUMS ARE ALLOWED, REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.
- V) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.
- W) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 70 (-L-)	THERMOPLASTIC	SNOWPLOWABLE
-Y- LINES	THERMOPLASTIC	SNOWPLOWABLE

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

ROAD NAME	MARKING	MARKER
US 70 (-L-)	PAINT	TEMPORARY RAISED REFLECTIVE
-Y- LINES	PAINT	TEMPORARY RAISED REFLECTIVE

- Z) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- AA) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

BB) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

CC) TRACE THE EXISTING AND PROPOSED MONOLITHIC ISLAND LOCATIONS WITH PROPER COLOR PAVEMENT MARKINGS PRIOR TO REMOVAL AND INSTALLATION. PLACE DRUMS TO DELINEATE ANY EXISTING AND PROPOSED MONOLITHIC ISLANDS AFTER REMOVAL AND BEFORE INSTALLATION.

TEMPORARY / FINAL SIGNALS

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

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

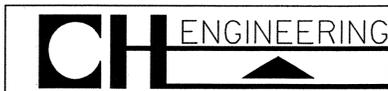
MISCELLANEOUS

FF) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS, AS DIRECTED BY THE ENGINEER.

GG) CONTRACTOR SHALL COORDINATE WITH CONTRACTORS ON ADJACENT PROJECTS R-2911A AND R-2911C TO AVOID CONFLICTS AND MAINTAIN CLEAR COMMUNICATION TO ENSURE SAFETY OF MOTORIST ESPECIALLY WITH THE USE OF SIGNING, DEVICES AND/OR TRAFFIC SHIFTS AT/OR NEAR THE END/BEGINNING OF PROJECT.

REVISIONS

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RALEIGH, NC 27622 FAX 919.788.0232

APPROVED: *Handwritten Signature* DATE: 6-26-08



GENERAL NOTES

SCALE:
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE



REVISIONS

PROJ. REFERENCE NO.	SHEET NO.
R-2911B	TCP-2A B

TEMPORARY SHORING DATA

TEMPORARY SHORING NO. 1 (SEE SHEET TCP-8)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

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

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 136+20.00+/- -L-, ALONG CENTERLINE OF -L-, TO STATION 137+30.00+/- -L-, ALONG CENTERLINE OF -L-, 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

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 136+20.00+/- -L-, ALONG CENTERLINE OF -L-, TO STATION 137+30.00+/- -L-, ALONG CENTERLINE OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

TEMPORARY SHORING NO. 2 (SEE SHEET TCP-8)

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING SPECIAL PROVISION.

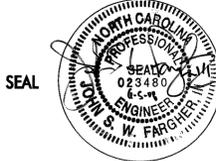
FOR CONTRACTOR DESIGNED SHORING, SURVEY THE SHORING LOCATION TO DETERMINE EXISTING ELEVATIONS AND ACTUAL DESIGN HEIGHTS BEFORE BEGINNING DESIGN.

WHEN USING CONTRACTOR DESIGNED SHORING FROM STATION 139+10.00+/- -L-, ALONG CENTERLINE OF -L-, TO STATION 139+50.00+/- -L-, ALONG CENTERLINE OF -L-, 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

NO SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF THE TEMPORARY SHORING FROM STATION 139+10.00+/- -L-, ALONG CENTERLINE OF -L-, TO STATION 139+50.00+/- -L-, ALONG CENTERLINE OF -L-. THE INFORMATION PROVIDED FOR DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

FOR PORTABLE CONCRETE BARRIERS ABOVE AND BEHIND TEMPORARY SHORING, USE AN NCDOT PORTABLE CONCRETE BARRIER (UNANCHORED OR ANCHORED) OR AN OREGON TALL F-SHAPE CONCRETE BARRIER IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

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APPROVED: _____	DATE: _____	SHORING DATA SHEET	
	SCALE: NONE		REVISIONS
	DATE: 06/08		
	DWG. BY: RMG		
	DESIGN BY: RMG		
REVIEWED BY: JDK			<small>CADD FILE</small>

PROJECT PHASING

PROJ. REFERENCE NO. R-2911B SHEET NO. TCP-3

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

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

USING TEMPORARY PIPE AND INCIDENTAL STONE AS NECESSARY, MAINTAIN VEHICULAR ACCESS TO ALL DRIVEWAYS DURING THE LIFE OF THE CONTRACT UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE CHANGEABLE MESSAGE SIGNS DURING VARIOUS STAGES OF CONSTRUCTION AT THE DISCRETION OF THE ENGINEER TO ADEQUATELY INFORM MOTORISTS OF CHANGING WORK ZONE CONDITIONS.

PHASE I

STEP 1 PRIOR TO ANY CONSTRUCTION OPERATIONS, PLACE WORK ZONE ADVANCED WARNING SIGNS ON -L- (US 70) AND ALL -Y- LINES IN ACCORDANCE WITH NCDOT DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS. (SEE SHEET TCP-28.)

STEP 2 USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT THE TEMPORARY WIDENING ON -L- FROM STA 134+74+/- TO STA 137+06+/- AND FROM STA 139+34+/- TO STA 141+34+/- . INSTALL PCB AND CRASH CUSHIONS. SEE SHEET TCP-8.

STEP 3 AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF PROPOSED EASTBOUND (EB) STRUCTURE AND APPROACHES FROM STA. 136+22+/- TO STA. 139+51+/- AND TEMPORARY SIGNAL AT -Y7-. (SEE SHEETS TCP-5, TCP-8, TCP-10, AND STRUCTURE PLANS) INSTALL TEMPORARY SHORING FROM STA. 136+20+/- -L- TO STA. 137+30+/- -L- AND FROM STA. 139+10+/- -L- TO STA. 139+50+/- -L- IN CONJUNCTION WITH THIS CONSTRUCTION (TCP-8). INSTALL PIPE AT STA. 163+00 +/- -L-, USING TRENCHLESS CONSTRUCTION. (SEE SHEET TCP-9)

USING RSD 1101.03 (SHEETS 1 & 2 OF 9), CLOSE -Y6- TO THRU TRAFFIC AND CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:

- * -L-(EB) FROM STA. 166+00+/- TO STA. 173+00+/- (SEE NOTE LN-2)
- * -Y6- FROM STA. 10+34+/- TO STA. 11+70+/-

AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:

- * -L-(EB) FROM STA. 16+50+/- TO STA. 54+00+/-
- * -L-(EB) FROM STA. 56+20+/- TO STA. 136+22+/-
- * -L-(EB) FROM STA. 139+51+/- TO STA. 166+00+/-
- * -L-(EB) FROM STA. 173+00 +/- TO STA. 177+00+/-

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT PROPOSED -L-(EB) UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT FROM STA. 177+00+/- TO STA. 180+50+/- AND FROM STA. 182+00+/- TO STA. 187+75+/- . (SEE SHEET TCP-10) (SEE NOTE LN-4.)

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT THE FOLLOWING TEMPORARY/ TRANSITIONAL PAVEMENT TO MATCH EDGE AND ELEVATION OF ADJACENT PAVEMENT:

- * -L- MEDIAN CROSS-OVERS (ALL) (TRANSITIONAL GRADE)
- * -L-(EB) FROM STA. 177+00+/- TO STA. 187+75+/- (TEMP. PAVEMENT) (SEE NOTE LN-4.)

USING RSD 1101.02 (SHEET 1 OF 9) AND FLAGGERS, CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:

- * -L-(EB) FROM STA. 14+65+/- TO STA. 16+50+/-
- * -L-(EB) FROM STA. 54+00+/- TO STA. 56+20+/-
- * -Y1- FROM -L-(EB) TO STA. 11+13+/- (SEE NOTE LN-1.)
- * -Y- FROM -L-(EB) TO STA. 10+30+/- (SEE NOTE LN-1.)
- * -Y5- FROM -L-(WB) TO STA. 14+87+/- (SEE NOTE LN-1.)
- * -Y7- FROM -L-(EB) TO STA. 10+03+/- (SEE NOTE LN-1.)
- * -L- (EB) FROM STA. 179+75+/- TO STA. 182+23+/- (LN-1)

STEP 4 COMPLETE BRIDGE CONSTRUCTION AND TEMPORARY SIGNAL INSTALLATION BEGUN IN STEP 2. KEEP SIGNAL COVERED UNTIL ACTIVATED.

PHASE I (CONTINUED)

INSTALL TEMPORARY GUARDRAIL ON -L- (EB) FROM STA. 122+25+/- TO STA. 126+50+/- .

PLACE TEMPORARY (PAINT) PAVEMENT MARKINGS AND MARKERS ON -Y5- AND SHIFT TRAFFIC TO NEW -Y5- ALIGNMENT & TIE INTO EXISTING -L- (SEE SHEET TCP-8)

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT TEMPORARY PAVEMENT FROM STA. 16+00+/- -L- TO STA. 20+00+/- -L-. (SEE SHEET TCP-6)

STEP 5 PLACE TEMPORARY (PAINT) PAVEMENT MARKINGS AND MARKERS ON THE EASTBOUND SIDE OF -L- IN A TWO-LANE, TWO-WAY PATTERN AND USING FLAGGERS AND TEMPORARY CROSSEOVERS, SHIFT TRAFFIC FROM EXISTING -L- TO THE PROPOSED EASTBOUND LANES AND PLACE TEMPORARY PAVEMENT MARKINGS ON -Y- LINES. (SEE SHEETS TCP-11 THRU TCP-18.) (LN-3 & LN-5) ACTIVATE TRAFFIC SIGNAL PRIOR TO SHIFTING TRAFFIC. OPEN RELOCATED -Y6- TO TRAFFIC. TYPE III BARRICADES ARE TO REMAIN IN PLACE UNTIL OLD -Y6- IS REMOVED. (SEE SHEET TCP-17)

PHASE II

STEP 1 WITH TRAFFIC IN A TWO-LANE TWO-WAY PATTERN ON THE EASTERN SIDE OF -L-, BEGIN WB -L- DRAINAGE INSTALLATION AND CONSTRUCTION OF PROPOSED WESTBOUND STRUCTURE AND APPROACHES FROM STA. 136+39+/- TO STA. 139+68+/- .

BEGIN PROPOSED SIGNAL INSTALLATION AT -Y7- (SEE SIGNAL PLANS).

STEP 2 AWAY FROM TRAFFIC, CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE:

- * -L- (WB) FROM STA. 16+00+/- TO STA. 79+94+/-
- * -L- (WB) FROM STA. 81+80+/- TO STA. 136+36+/-
- * -L- (WB) FROM STA. 139+87+/- TO STA. 144+50+/-
- * -L- (WB) FROM STA. 146+50+/- TO STA. 180+29+/-
- * -L- (WB) FROM STA. 182+10+/- TO STA. 187+75+/-

USING RSD 1101.02 (SHEET 1 OF 9), CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE INCLUDING TEMPORARY PAVEMENT MARKINGS AND MARKERS:

- * -L- (WB) FROM STA. 79+94+/- TO STA. 81+80+/-
- * -L- (WB) FROM STA. 144+50+/- TO STA. 146+50+/-
- * -L- (WB) FROM STA. 180+29+/- TO STA. 186+30+/-
- * -Y3- FROM -L- (WB) STA. 12+52+/-
- * -Y4- FROM -Y3- TO STA. 11+00+/-
- * OBLITERATE OLD -Y6- PAVEMENT AS SHOWN IN THE ROADWAY PLANS.

STEP 3 COMPLETE BRIDGE CONSTRUCTION AND SIGNAL INSTALLATION BEGUN IN STEP 1.

STEP 4 PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS ON THE WB SIDE OF -L- IN FINAL PATTERN. (SEE SHEETS PM-1 THRU PM-8)

STEP 5 USING FLAGGERS, SHIFT WB TRAFFIC TO OUTSIDE LANE OF PROPOSED WB SIDE OF -L-. ACTIVATE SIGNAL IN PROPOSED PATTERN PRIOR TO SHIFT. (SEE SHEETS TCP-22 THRU TCP-24)

PHASE III

STEP 1 USING RSD 1101.02 (SHEET 1 OF 9), KEEP -L- (EB & WB) TRAFFIC IN THE OUTSIDE LANES FROM STA. 10+00+/- TO STA. 177+00+/- , AND CONSTRUCT THE FOLLOWING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE. (SEE SHEETS TCP-20 THRU TCP-22):

- * -L- (MEDIAN) FROM STA. 10+00+/- TO STA. 19+50+/- (INCLUDING PAVEMENT REMOVAL)
- * -L- (MEDIAN) FROM STA. 29+90+/- TO STA. 34+04+/-
- * -L- (MEDIAN) FROM STA. 53+20+/- TO STA. 57+05+/-
- * -L- (MEDIAN) FROM STA. 79+94+/- TO STA. 83+37+/-
- * -L- (MEDIAN) FROM STA. 143+44+/- TO STA. 147+90+/-
- * -L- (MEDIAN) REMOVE TEMPORARY GUARDRAIL STA. 122+25+/- TO STA. 126+50+/-

PHASE III (CONTINUED)

STEP 2 USING RSD 1101.02 (SHEET 1 OF 9), FLAGGERS AND ALTERNATING LANE CLOSURES, CONSTRUCT -L- FROM STA. 177+00+/- TO STA. 187+74+/- IN LIFTS UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE. REMOVE TEMPORARY PAVEMENT AND MEDIAN CROSSOVER FROM STA. 177+00+/- TO STA. 194+50+/- . SEE SHEETS TCP-22 THRU TCP-25.

STEP 3 WITH TRAFFIC IN THE OUTSIDE LANES, CONSTRUCT THE INSIDE LANES OF -L- (EB & WB), ISLANDS, AND MEDIAN CROSS-OVERS UP TO AND INCLUDING THE FINAL LAYER OF SURFACE COURSE, THERMOPLASTIC PAVEMENT MARKINGS AND SNOWPLOWABLE PAVEMENT MARKERS AS SHOWN ON SHEETS PM-1 THRU PM-8.

SHIFT -L- (EB AND WB) TRAFFIC TO INSIDE LANES. USING RSD 1101.02, PLACE THE FINAL LAYER OF SURFACE COURSE ON OUTSIDE LANES OF -L- (EB AND WB) FROM STA. 10+00 TO STA. 199+46+/- . PLACE THERMOPLASTIC PAVEMENT MARKINGS AND SNOWPLOWABLE MARKERS AS SHOWN ON SHEETS PM-1 THRU PM-8.

USING RSD 1101.02, PLACE THE FINAL LAYER OF SURFACE COURSE, CONSTRUCT ISLANDS ON -Y- LINES AS SHOWN ON CONSTRUCTION PLANS AND PLACE THERMOPLASTIC PAVEMENT MARKINGS AND SNOWPLOWABLE MARKERS ON THE FOLLOWING -Y- LINES (SEE SHEETS PM-1 THRU PM-7):

- * -Y- STA. 10+30+/- TO STA. 12+11+/-
- * -Y1- STA. 11+13+/- TO STA. 12+57+/-
- * -Y3- STA. 10+41+/- TO STA. 12+52+/-
- * -Y4- STA. 10+00+/- TO STA. 11+00+/-
- * -Y5- STA. 10+39+/- TO STA. 14+87+/-
- * -Y6- STA. 10+34+/- TO STA. 11+70+/-
- * -Y7- STA. 10+03+/- TO STA. 12+53+/-

STEP 4 REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN -L- AND -Y- LINES TO PROPOSED PATTERN.

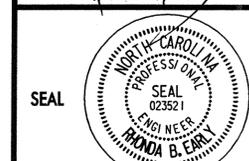
LOCAL NOTES

- LN-1 REPLACE PAVEMENT MARKING IN EXISTING PATTERN BY END OF WORK DAY.
- LN-2 USING TRENCHLESS CONSTRUCTION, INSTALL 72" STRUCTURAL STEEL PLATE PIPE AT STA 163+00+/- . DIVERT FLOW AND FILL EXISTING PIPE WITH FLOWABLE FILL. (SEE ROADWAY PLANS.)
- LN-3 PLACE PAVEMENT MARKING FOR 11' LANES AS SPECIFIED ON SHEETS TCP-12 AND TCP-18.
- LN-4 INSTALL TEMPORARY DRAINAGE AS SHOWN ON SHEET TCP-10.
- LN-5 USE TEMPORARY GRAU-350 UNTIL PERMANENT MEDIAN ATTENUATOR CAN BE INSTALLED FROM STA. 134+37.19 (MED. LT) AND 134.87.19 (MED. LT) AND STA. 141+02.81 TO STA. 141+52.81 (MED. LT).



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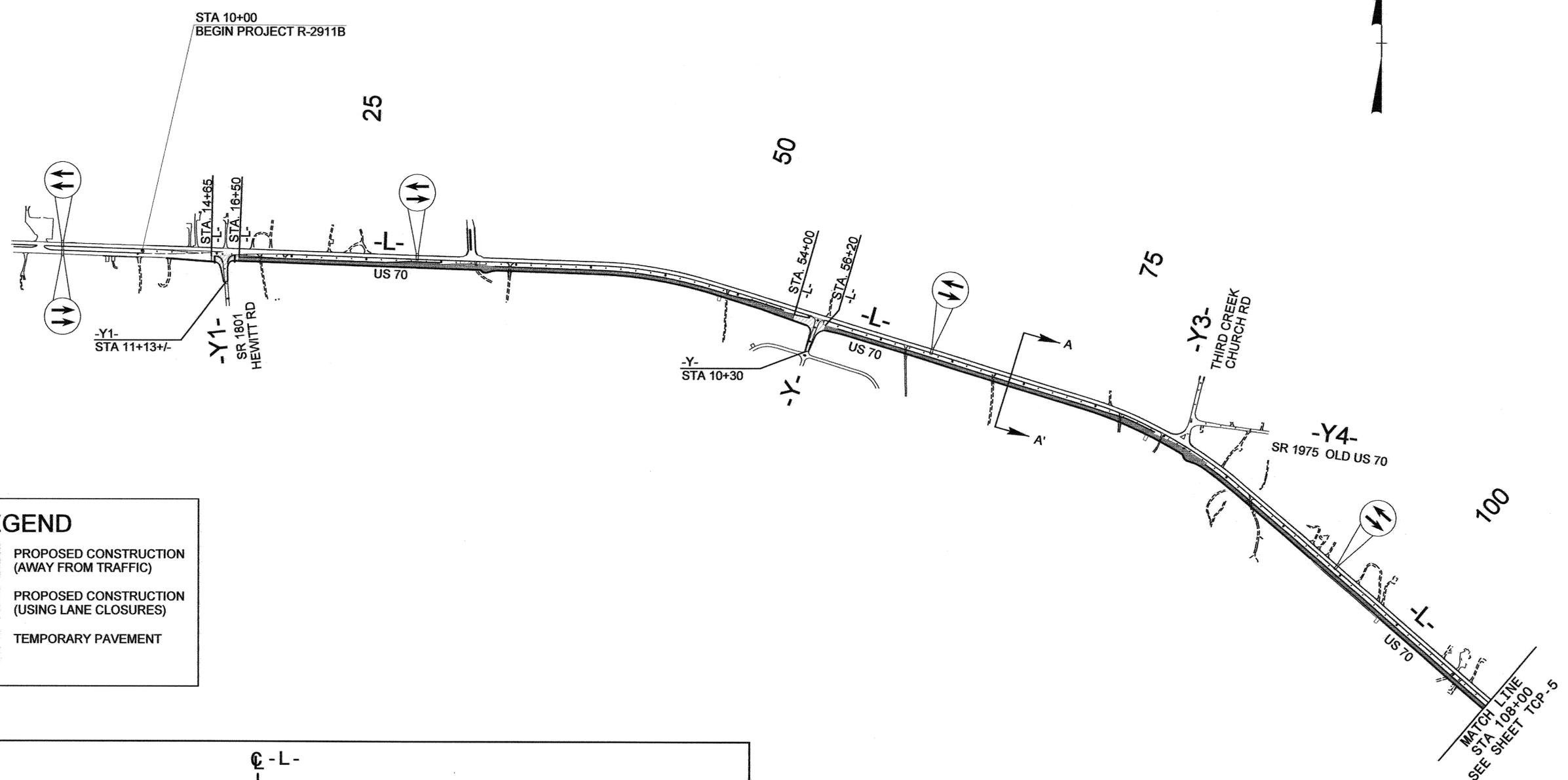


PROJECT PHASING & LOCAL NOTES

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DATE: 3/28/08	
DWG. BY: JAP	
DESIGN BY: JAP	
REVIEWED BY: RBE	

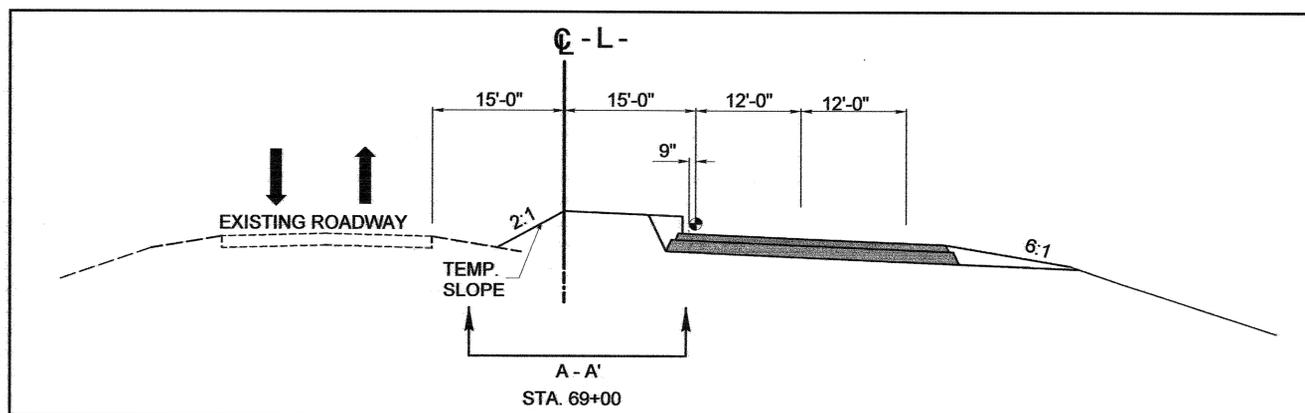
REVISIONS

6/26/2008 C:\Documents and Settings\rearily\Desktop\TCP\vr2911b_fc_tcp03.dgn USERNAME



LEGEND

- PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
- PROPOSED CONSTRUCTION (USING LANE CLOSURES)
- TEMPORARY PAVEMENT



NOTE:
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

REVISIONS

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCIN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

SHEET 1 OF 2

CH ENGINEERING

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APPROVED: *[Signature]* DATE: 5-28-08

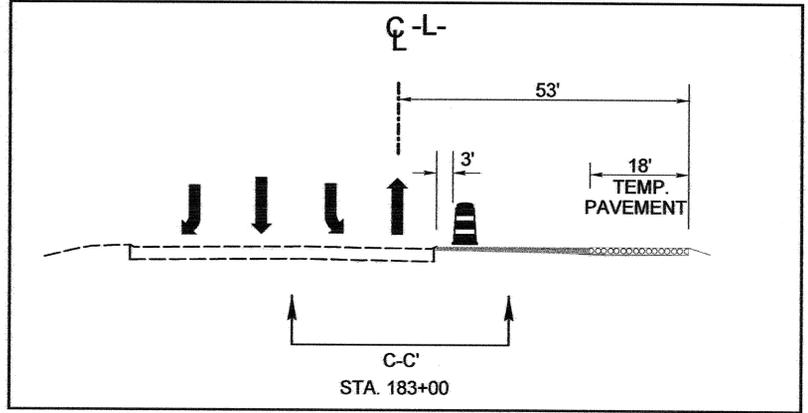
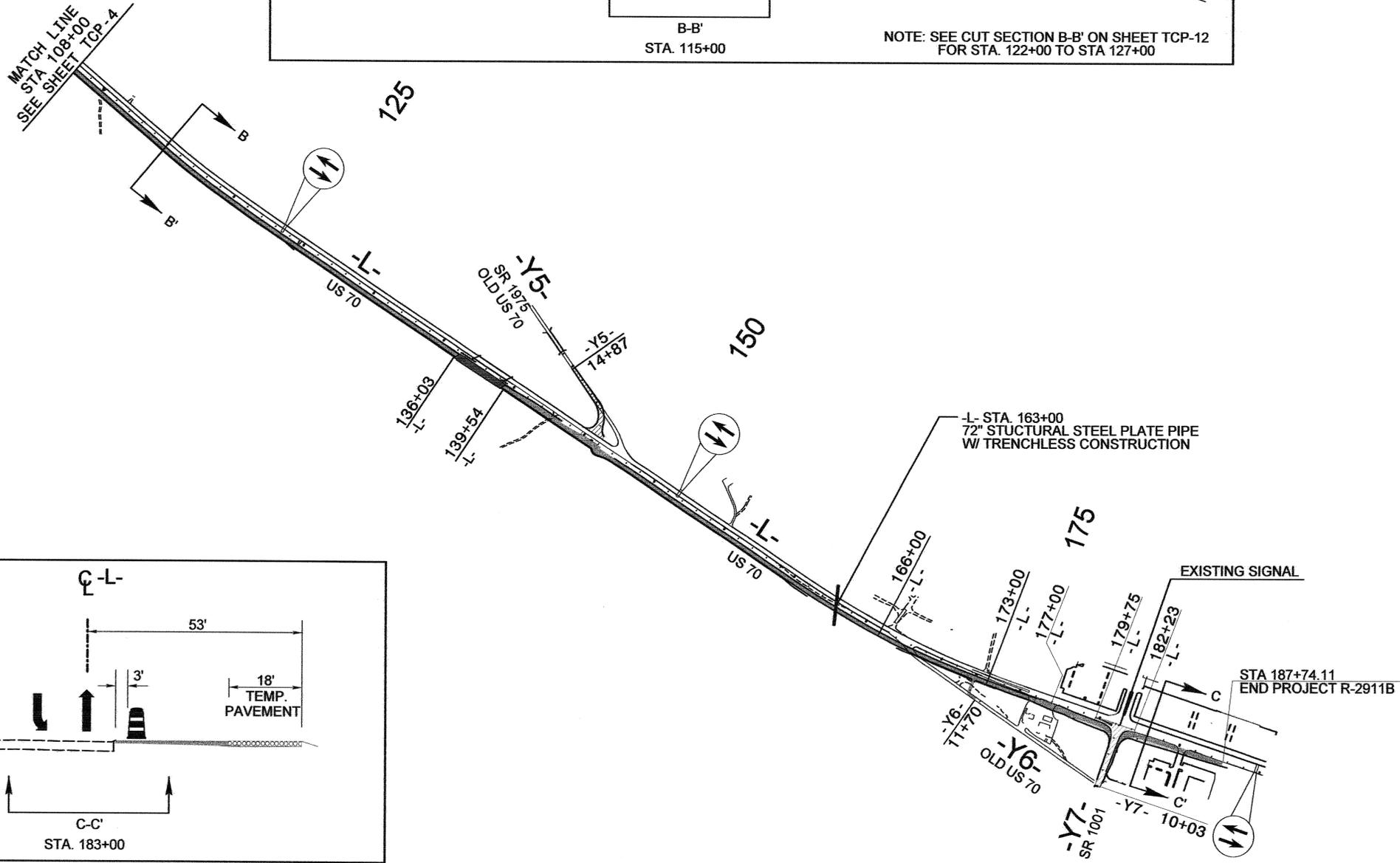
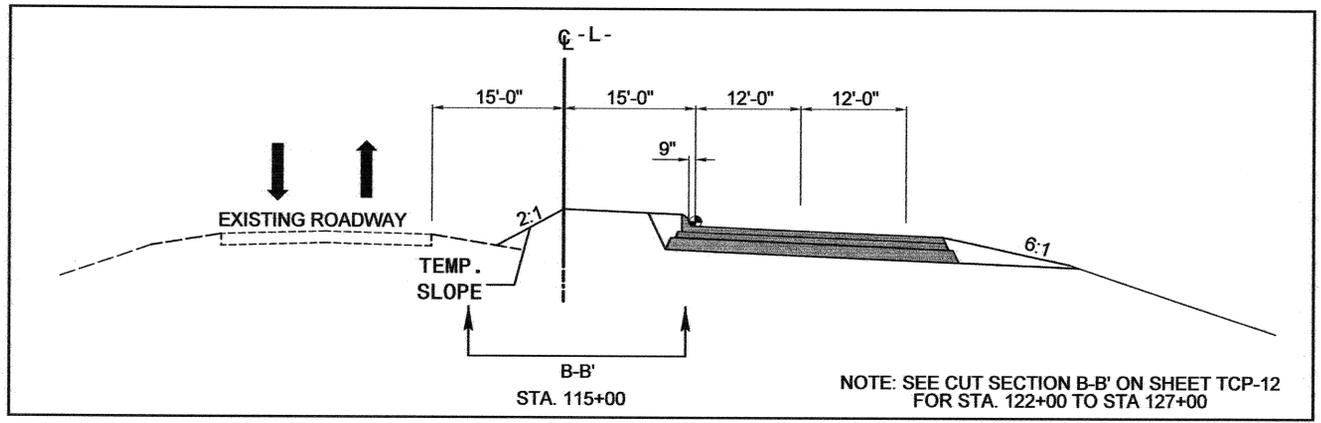
SEAL

**TRAFFIC CONTROL
PHASE 1 OVERVIEW**

SCALE: 1" = 400'
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE

NO.	DESCRIPTION	DATE

CAAD FILE



LEGEND

	PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
	PROPOSED CONSTRUCTION (USING LANE CLOSURES)
	TEMPORARY PAVEMENT

NOTE:
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING

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APPROVED: *Ronda B. Emly* DATE: 5-28-08

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 023521
RONDA B. EMLY

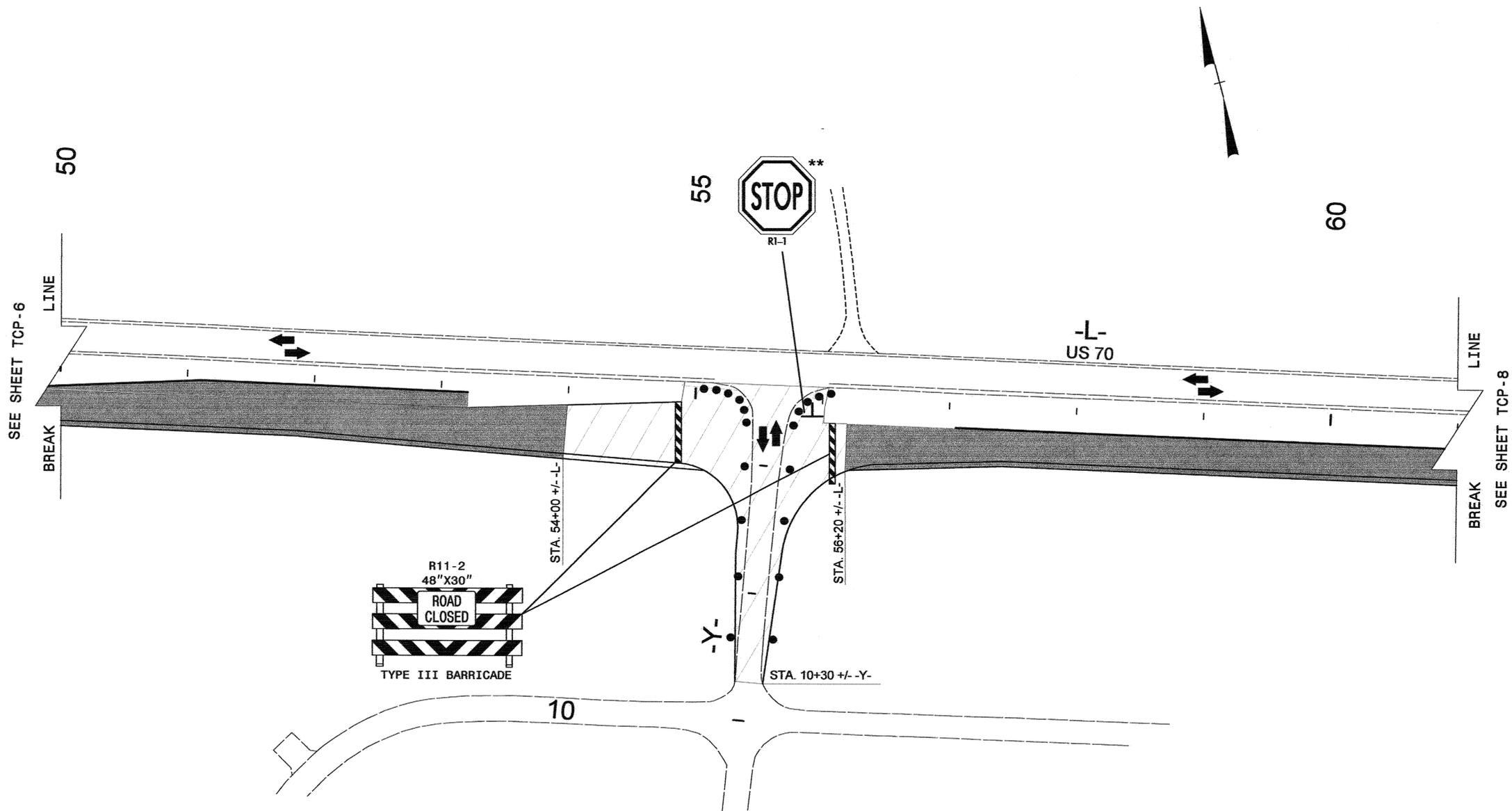
SHEET 2 OF 2

**TRAFFIC CONTROL
PHASE I OVERVIEW**

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DATE: 3/28/08		
DWG. BY: JAP		
DESIGN BY: JAP		
REVIEWED BY: RBE		

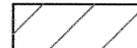
REVISIONS

SYSTEM: DGN
USER: JAP



REVISIONS

LEGEND

-  PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
-  PROPOSED CONSTRUCTION (USING LANE CLOSURES)

** NOTE:
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

SHEET 2 OF 5



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APPROVED: *[Signature]* DATE: 5-28-08



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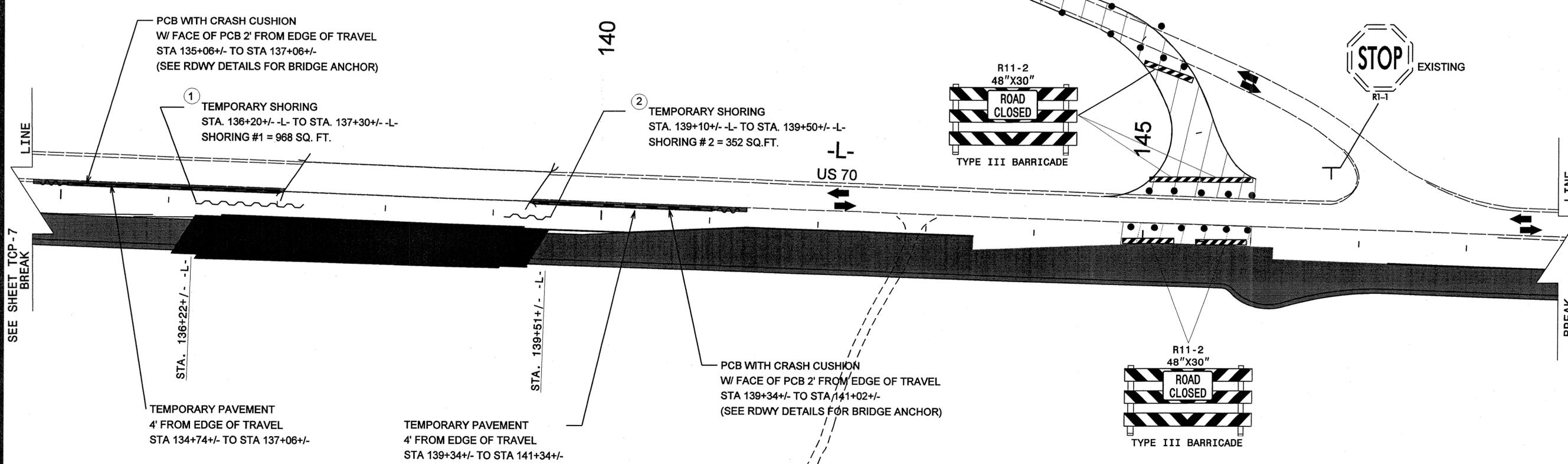
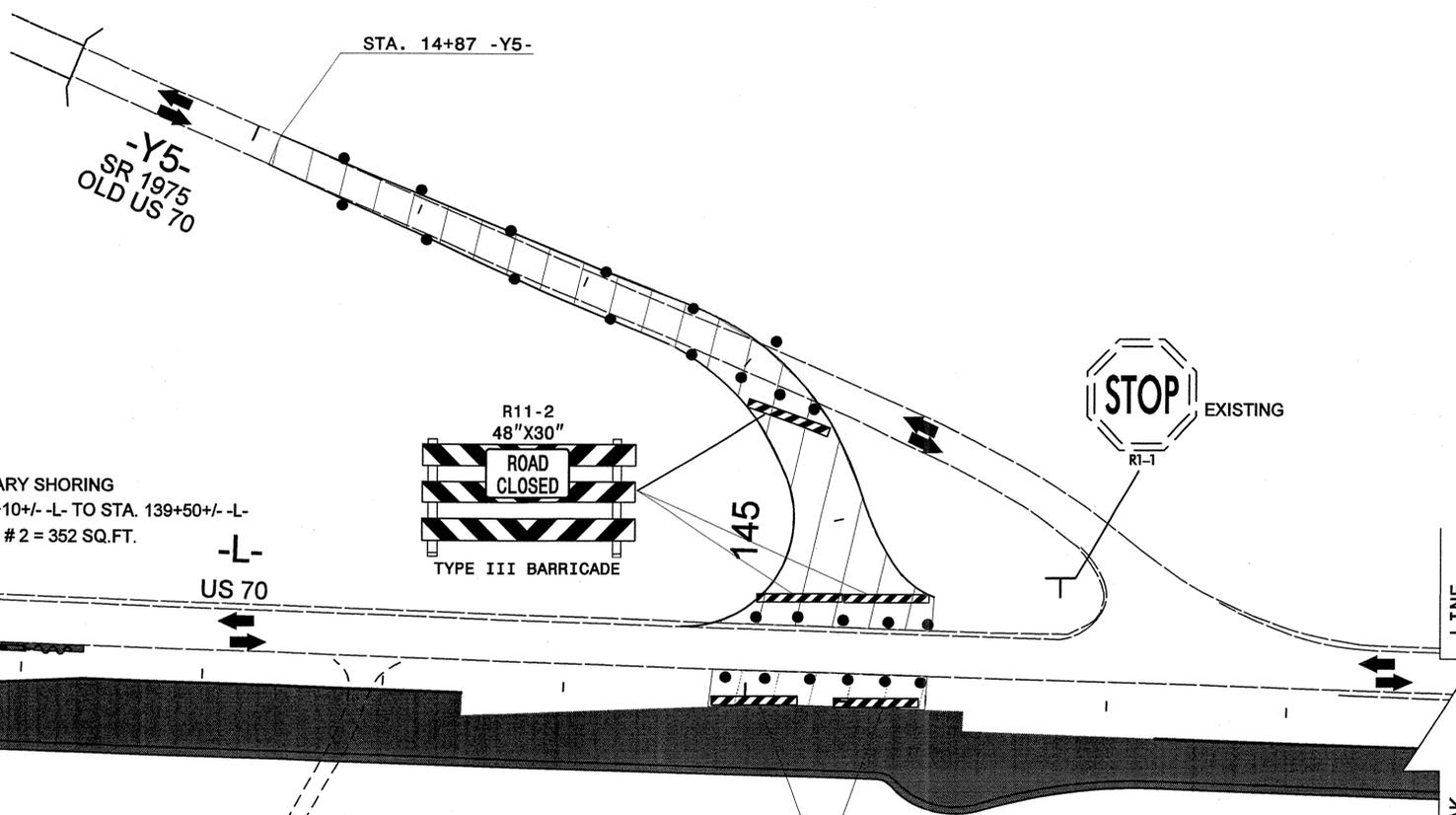
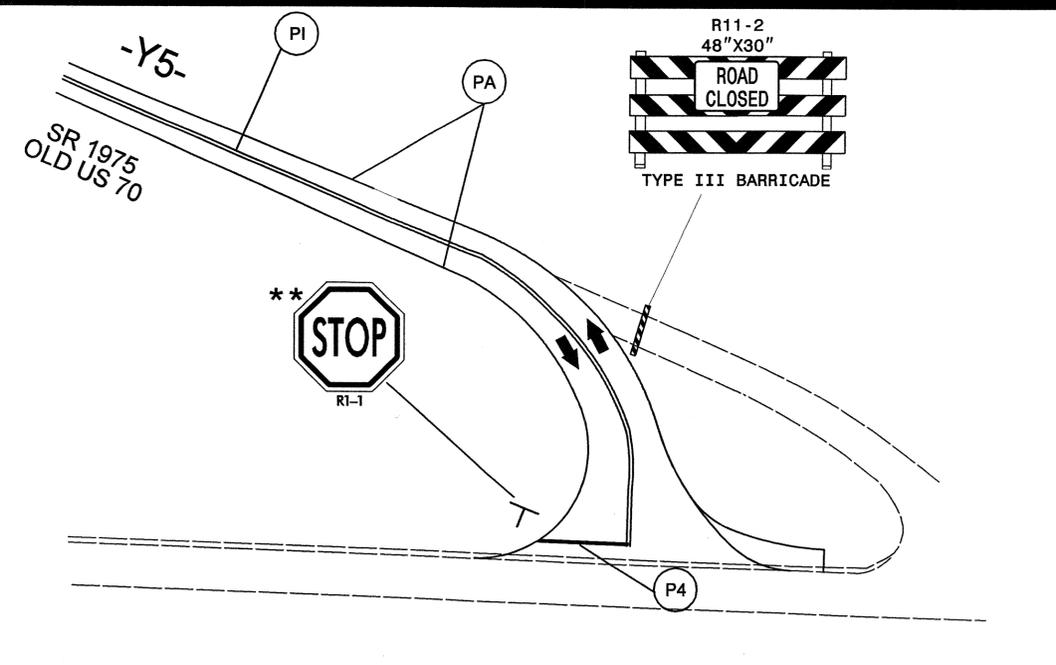
**PHASE I
DETAIL**

SCALE: 1" = 50'
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE



REVISIONS	

\$\$\$SYTIME\$\$\$
\$\$\$DCN\$\$\$
\$\$\$USERNAME\$\$\$



LEGEND	
	PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
	PROPOSED CONSTRUCTION (USING LANE CLOSURES)

** NOTE:
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.

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APPROVED: *[Signature]* DATE: 6-26-08

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NORTH CAROLINA
PROFESSIONAL ENGINEER
023521
RANDA B. EARL

SHEET 3 OF 5

**PHASE I
DETAIL**

SCALE: 1" = 50'		REVISIONS
DATE: 3/28/08		
DESIGN BY: JAP		
REVIEWED BY: RBE		

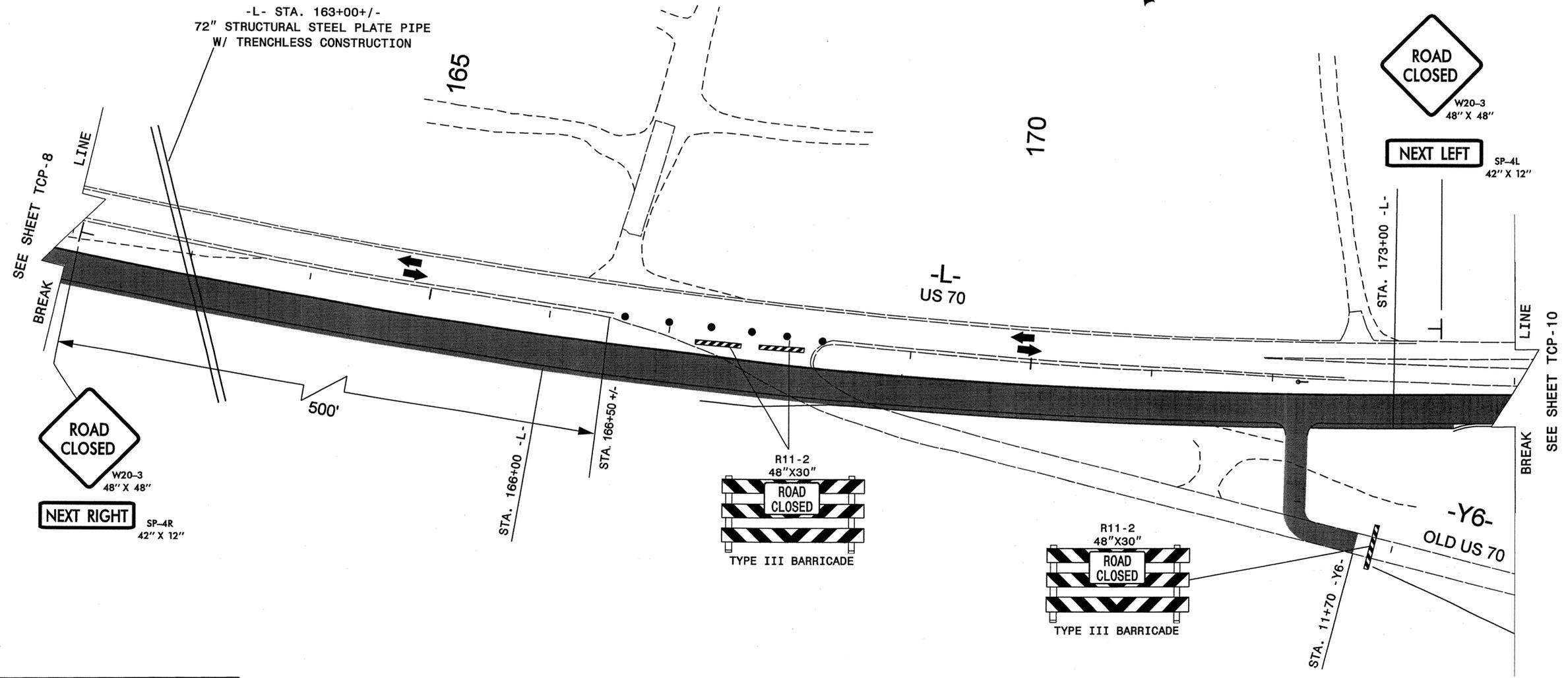
6/26/2008 C:\Documents and Settings\rearily\Desktop\TCP\2911b_fc_tcp08_p103.dgn

REVISIONS

SEE SHEET TCP-7
BREAK

SEE SHEET TCP-9
BREAK

REVISIONS



LEGEND

PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)

NOTE:
SEE SHEETS TCP- 26 & TCP-27 FOR -Y- LINE AND DRIVEWAY TYPICAL DETAILS.

SHEET 4 OF 5

6/26/2008 C:\Documents and Settings\rearily\Desktop\TCP\2911b.tc_tcp09.plt4.dgn USER:REAME

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APPROVED: *Ronda B. Early* DATE: 6-26-08

SEAL:

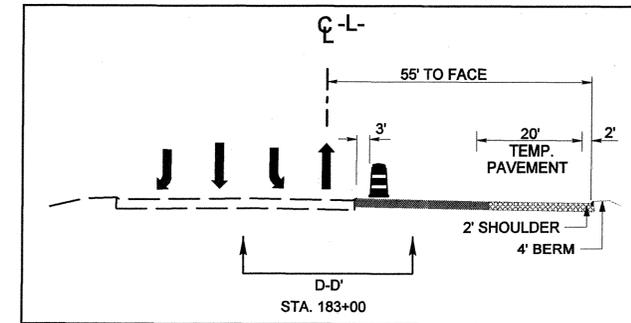
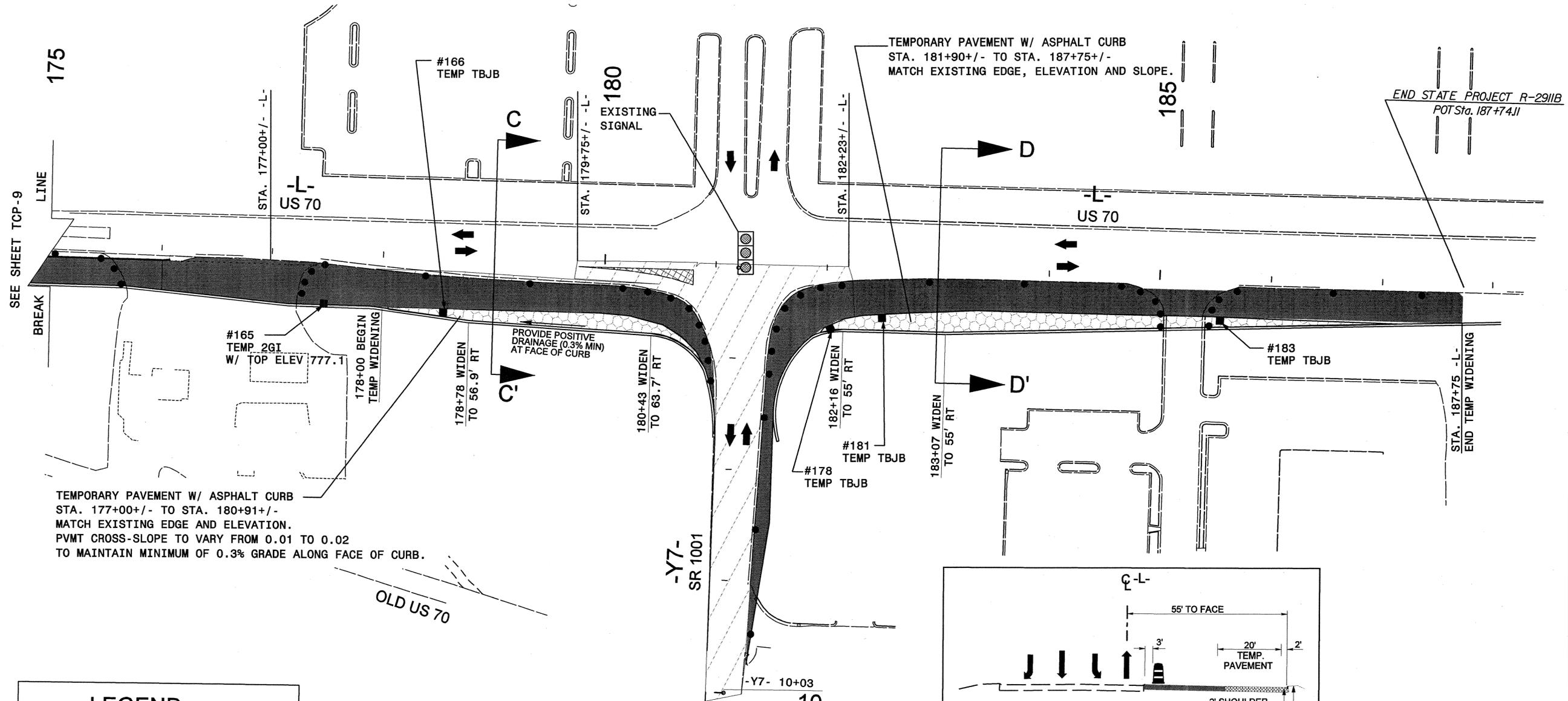
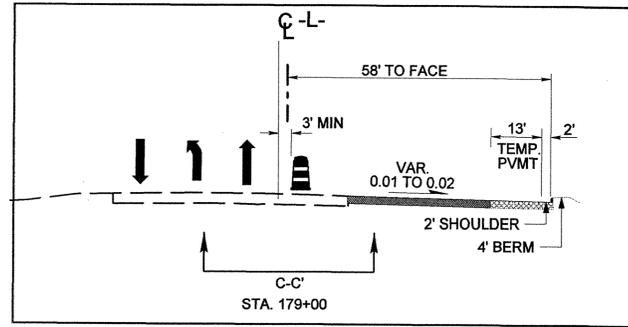
PHASE I DETAIL

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DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE

REVISIONS

CADD FILE

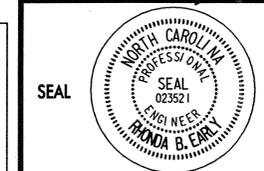
NOTE:
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.



SHEET 5 OF 5

APPROVED: *Charles S. Chapp* DATE: 4-20-08

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<p>PHASE I DETAIL</p>		REVISIONS	
SCALE: 1" = 50'	DATE: 3/28/08		
DWG. BY: JAP	DESIGN BY: JAP		
REVIEWED BY: RBE			

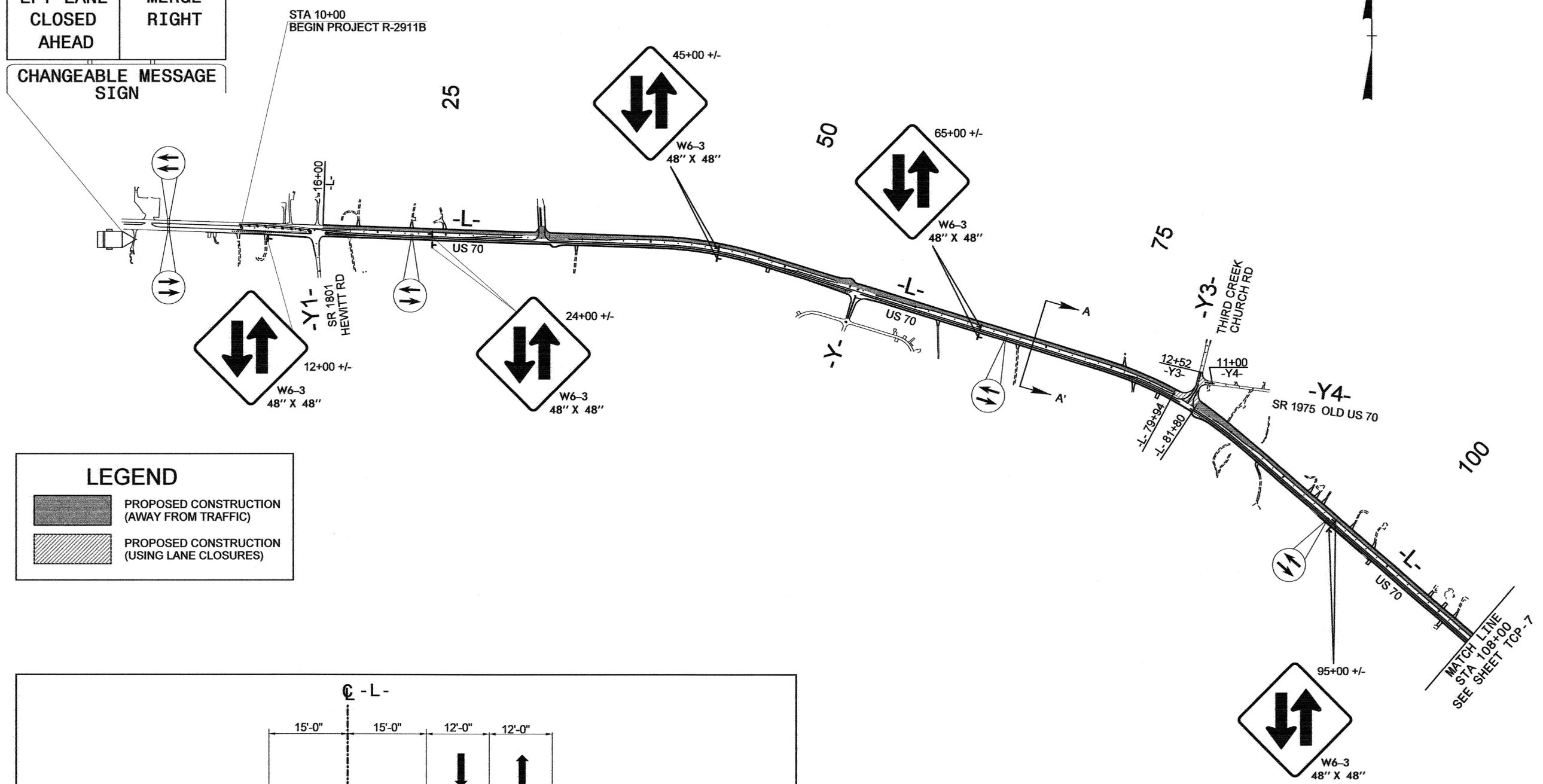
REVISIONS

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NOTE:
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

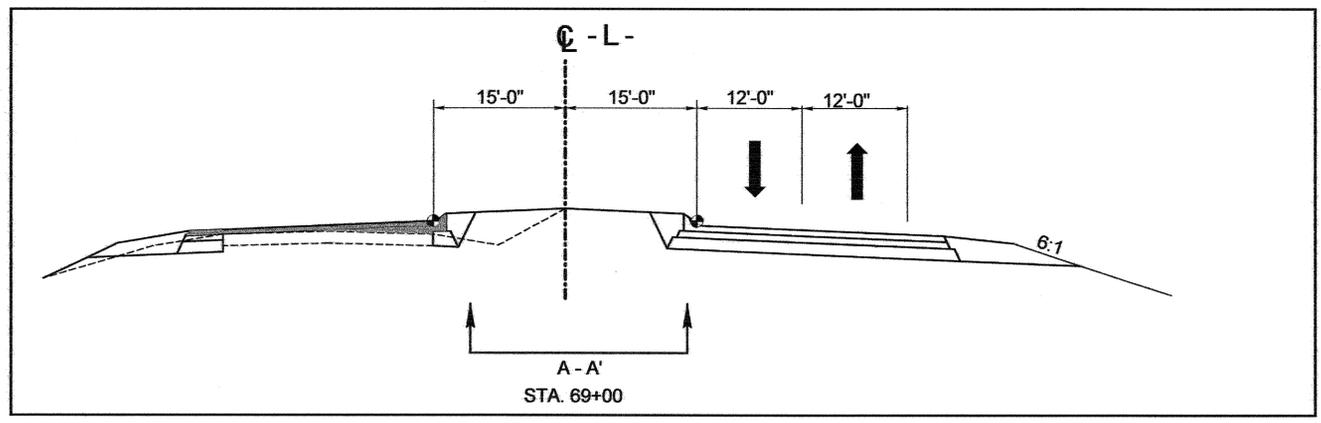
MESSAGE NO. 1	MESSAGE NO. 2
LFT LANE CLOSED AHEAD	MERGE RIGHT

CHANGEABLE MESSAGE SIGN



LEGEND

- PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
- PROPOSED CONSTRUCTION (USING LANE CLOSURES)



NOTE:
TWO ADDITIONAL CHANGEABLE MESSAGE SIGNS HAVE BEEN INCLUDED IN THE ESTIMATE TO BE USED AS DIRECTED BY THE ENGINEER.

CH ENGINEERING

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APPROVED: *[Signature]* DATE: 5-22-08

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NORTH CAROLINA PROFESSIONAL ENGINEER
FRANDA B. EMERY

SHEET 1 OF 2

TRAFFIC CONTROL PHASE II OVERVIEW

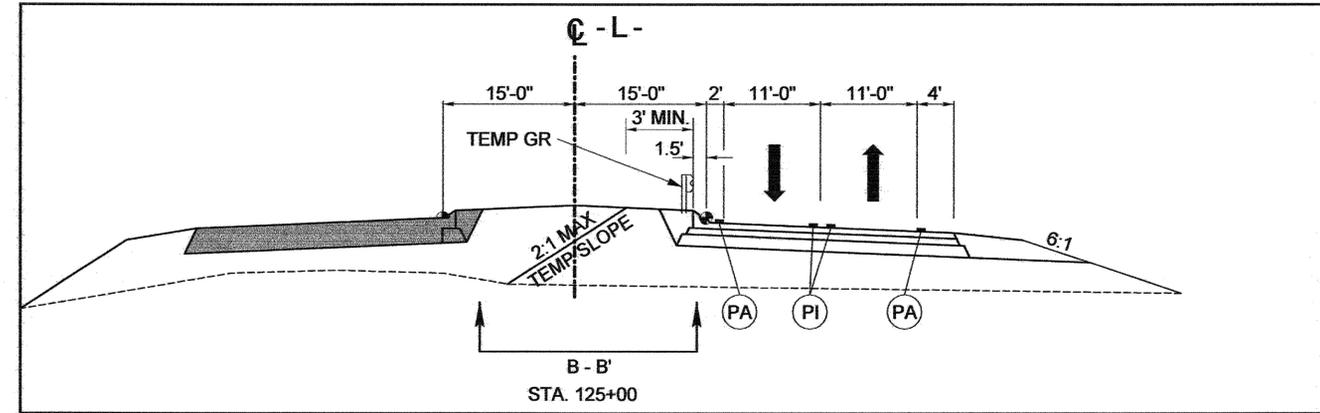
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DATE: 3/28/08
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REVIEWED BY: RBE

REVISIONS

CRG FILE

REVISIONS

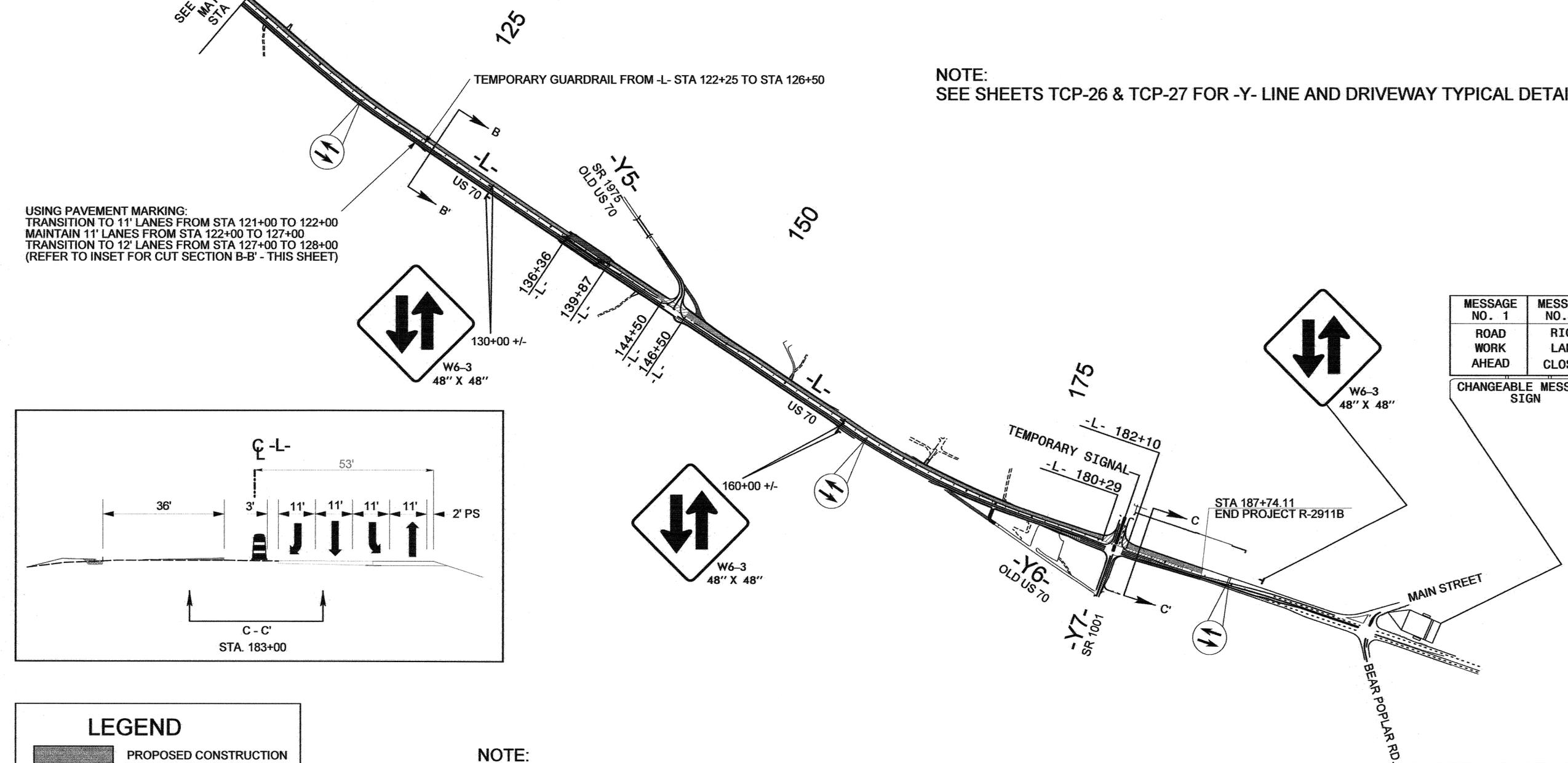
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$JULSERVAVE\$\$\$\$\$



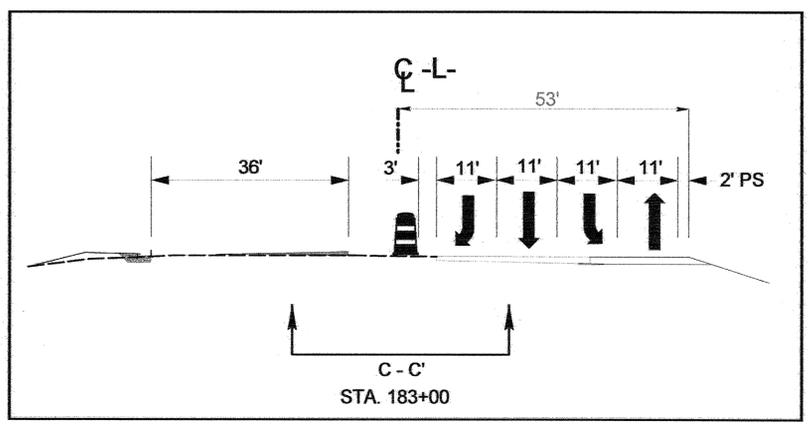
SEE SHEET TCP-6
MATCH LINE
STA 106+00

USING PAVEMENT MARKING:
TRANSITION TO 11' LANES FROM STA 121+00 TO 122+00
MAINTAIN 11' LANES FROM STA 122+00 TO 127+00
TRANSITION TO 12' LANES FROM STA 127+00 TO 128+00
(REFER TO INSET FOR CUT SECTION B-B' - THIS SHEET)

NOTE:
SEE SHEETS TCP-26 & TCP-27 FOR -Y- LINE AND DRIVEWAY TYPICAL DETAILS.



MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK AHEAD	RIGHT LANE CLOSED
CHANGEABLE MESSAGE SIGN	



LEGEND

	PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
	PROPOSED CONSTRUCTION (USING LANE CLOSURES)
	TEMPORARY PAVEMENT

NOTE:
TWO ADDITIONAL CHANGEABLE MESSAGE SIGNS HAVE BEEN INCLUDED IN THE ESTIMATE TO BE USED AS DIRECTED BY THE ENGINEER.

SHEET 2 OF 2

CH ENGINEERING

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APPROVED: *[Signature]* DATE: 5-28-08

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
FRANDA B. EARLY
023521

TRAFFIC CONTROL PHASE II OVERVIEW

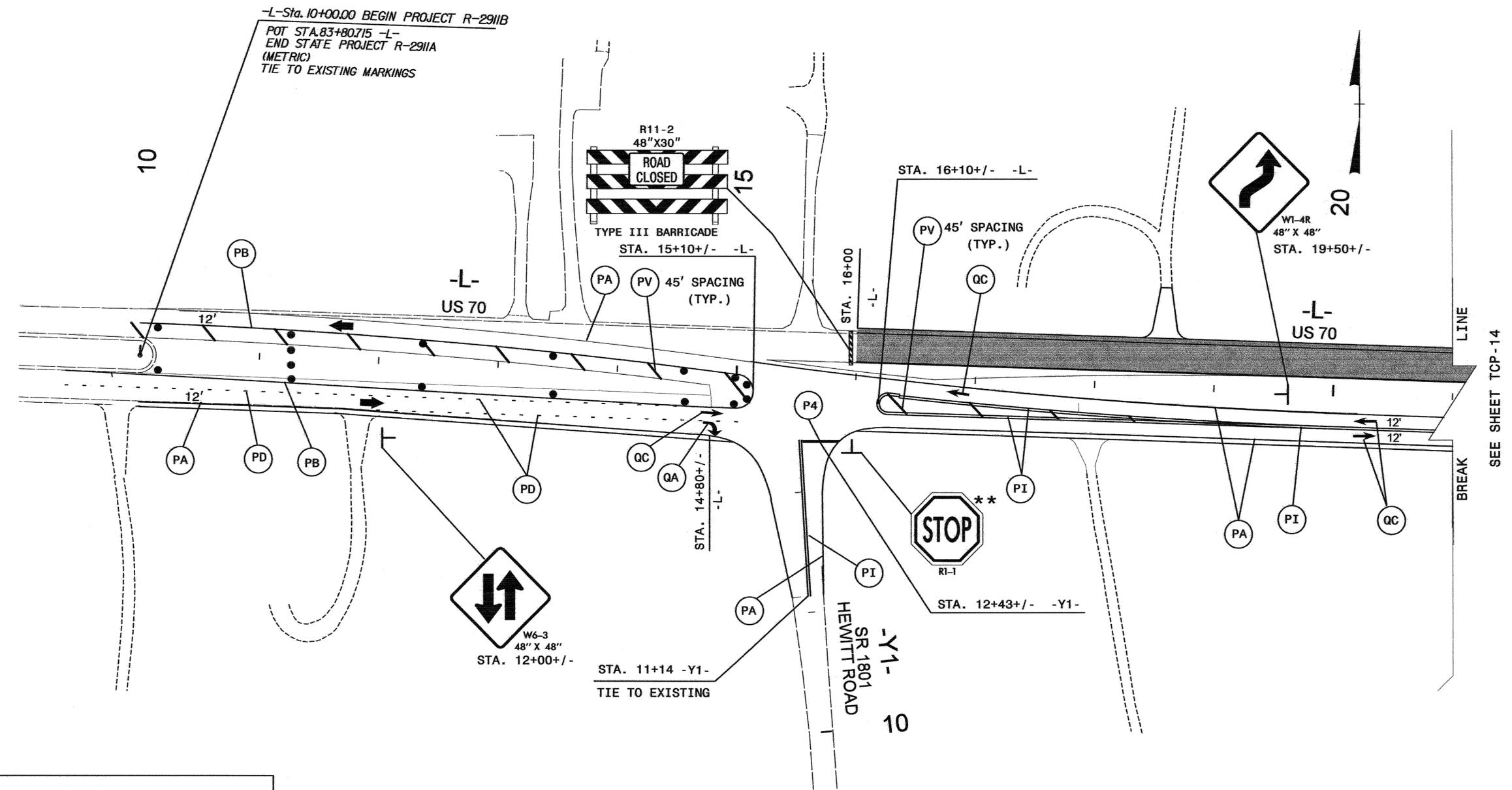
SCALE: 1" = 400'
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE

REVISIONS

REVISIONS

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

NOTE:
STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



LEGEND

 PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)

** NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING

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APPROVED: *[Signature]* DATE: 5-23-08

SEAL: 

PHASE II DETAIL

SCALE: 1" = 50'
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE

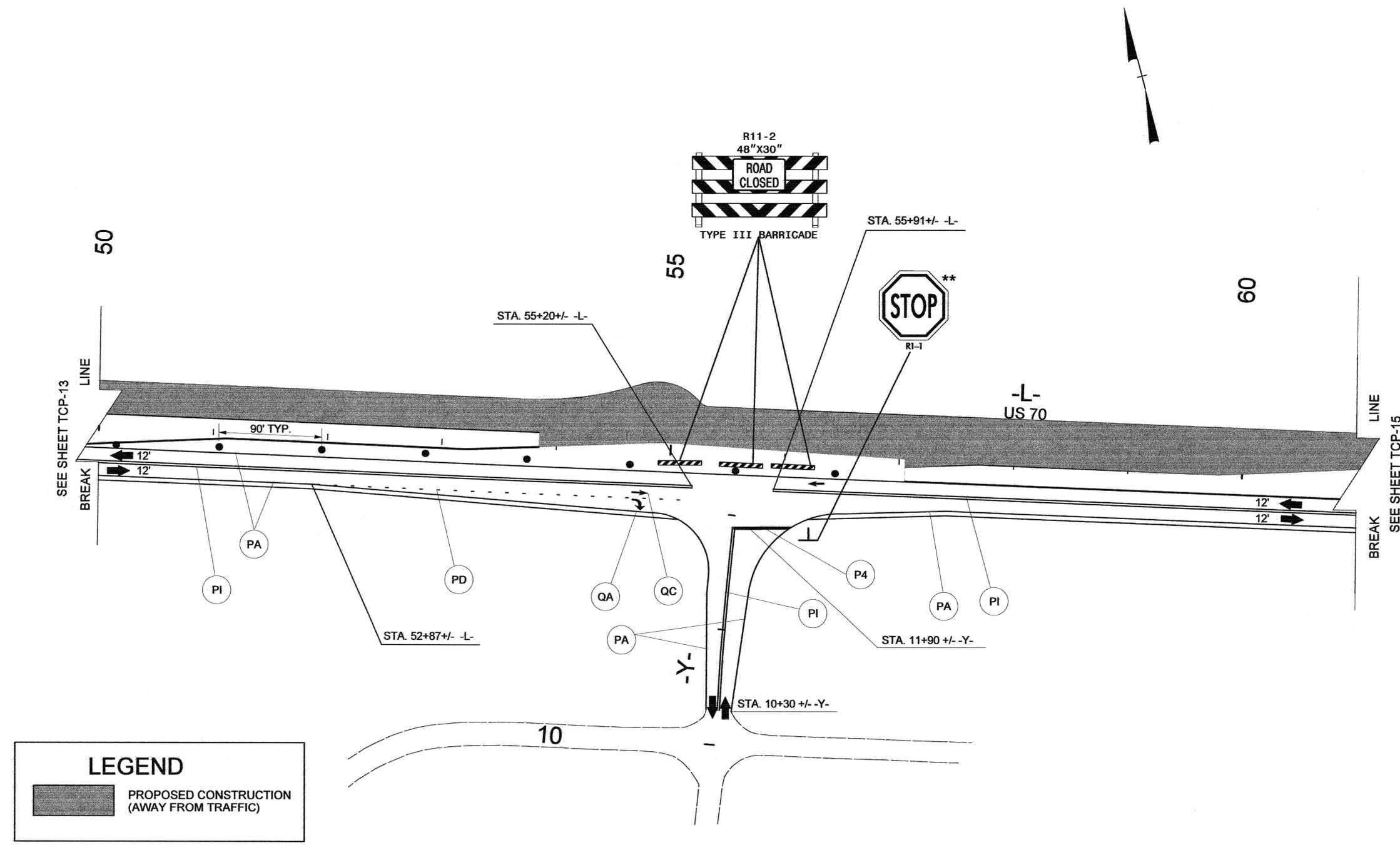
REVISIONS

SEE SHEET TCP-14

REVISIONS

SYSTEMS DGN
PLT
DATE

NOTE:
STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



LEGEND

PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)

** NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING

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APPROVED: *[Signature]* DATE: 5-28-08

SEAL

SHEET 2 OF 7

**PHASE II
DETAIL**

SCALE: 1" = 50'
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE

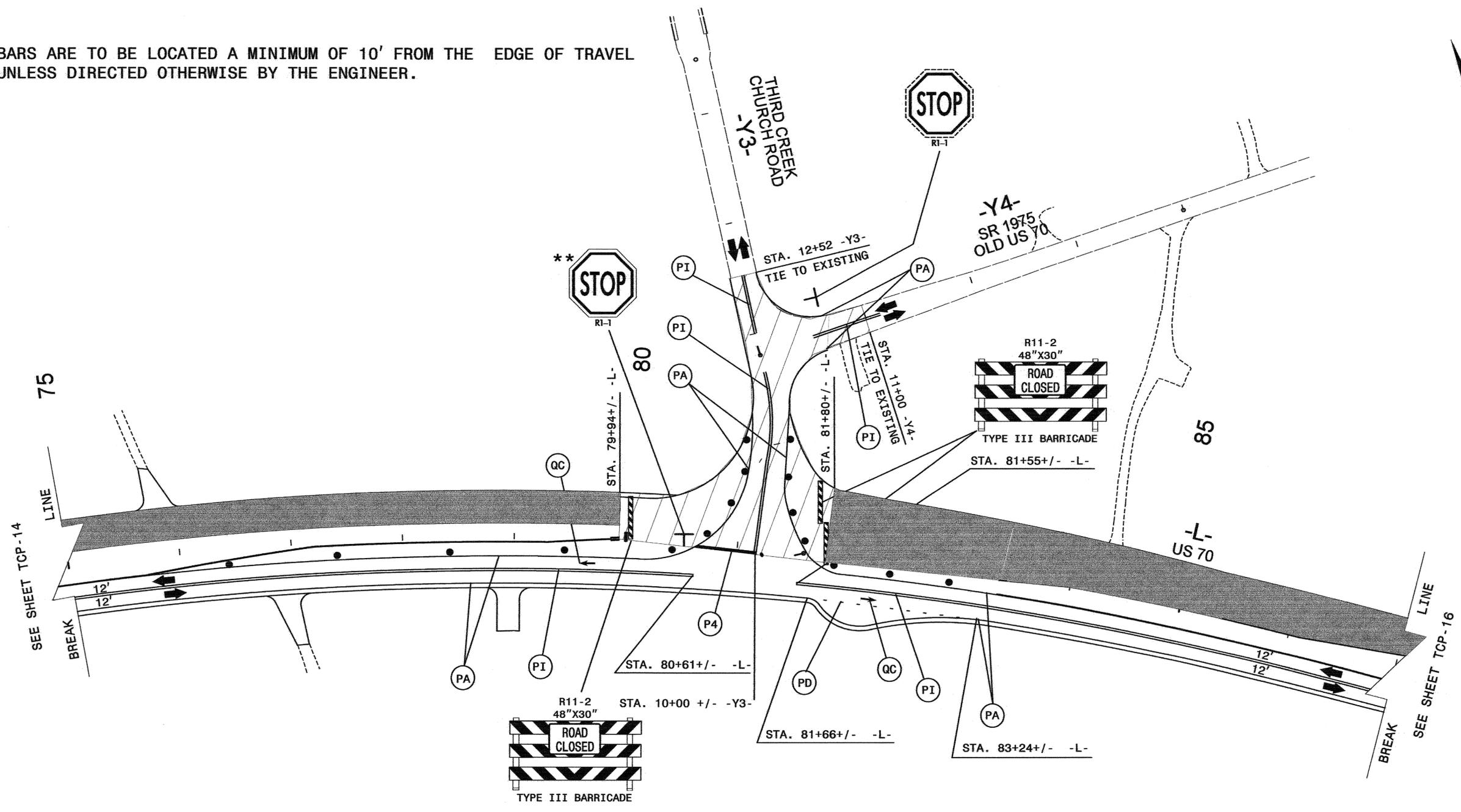
REVISIONS

CADD FILE

REVISIONS

SYSTEMS
DRAWING
USER NAME

NOTE:
STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



REVISIONS

LEGEND

	PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
	PROPOSED CONSTRUCTION (USING LANE CLOSURES)

** NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING

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APPROVED: *[Signature]* DATE: 5-28-08

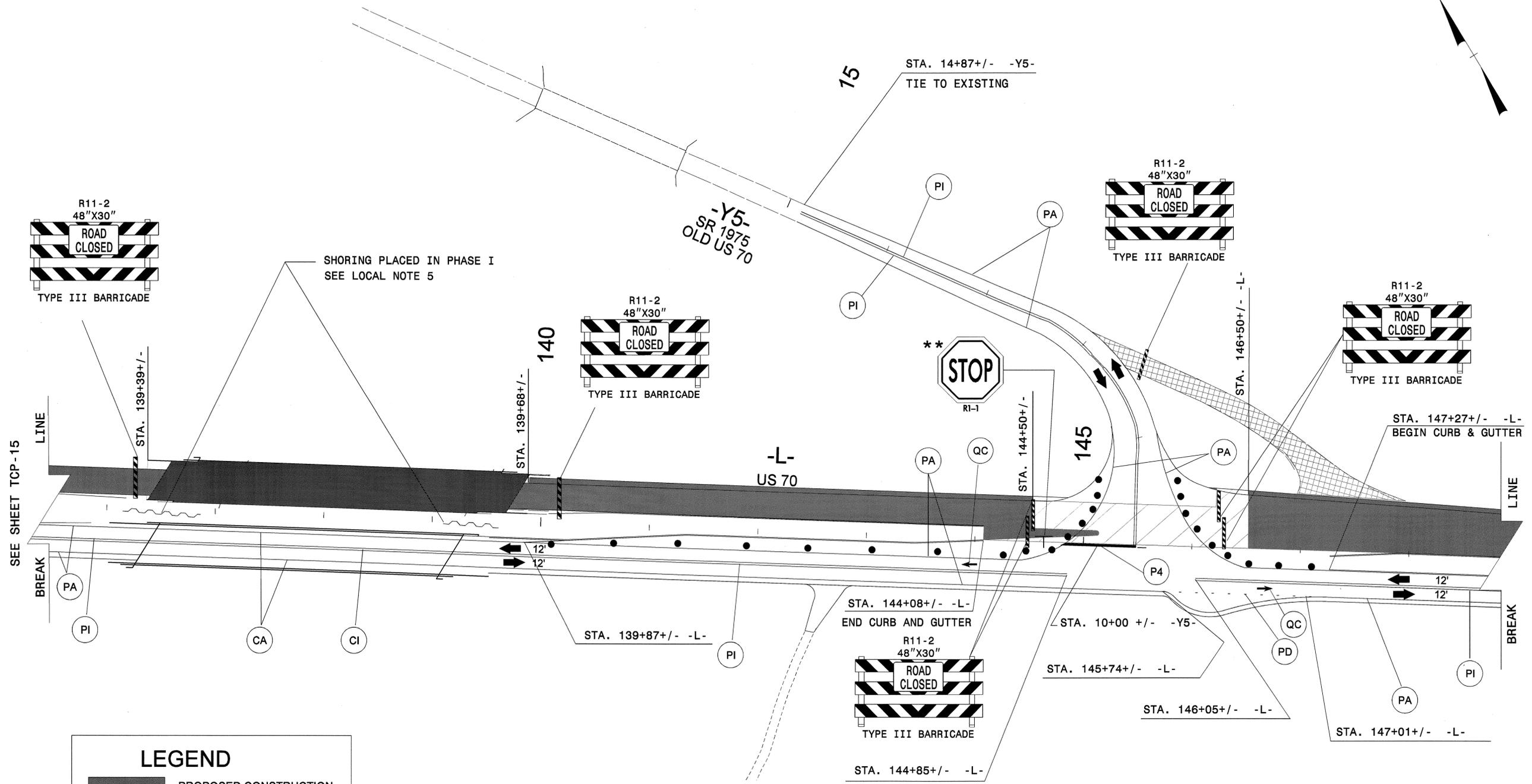
SEAL

PHASE II DETAIL

SCALE: 1" = 50'		REVISIONS
DATE: 3/28/08		
DWG. BY: JAP		
DESIGN BY: JAP		
REVIEWED BY: RBE		

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

NOTE:
STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



REVISIONS

LEGEND

- PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
- REMOVE EXISTING PAVEMENT
- PROPOSED CONSTRUCTION (USING LANE CLOSURES)

** NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING

PO BOX 30128 TELE 919.788.0224
RALEIGH, NC 27622 FAX 919.788.0232

APPROVED: *[Signature]* DATE: 6/30/08

SEAL:

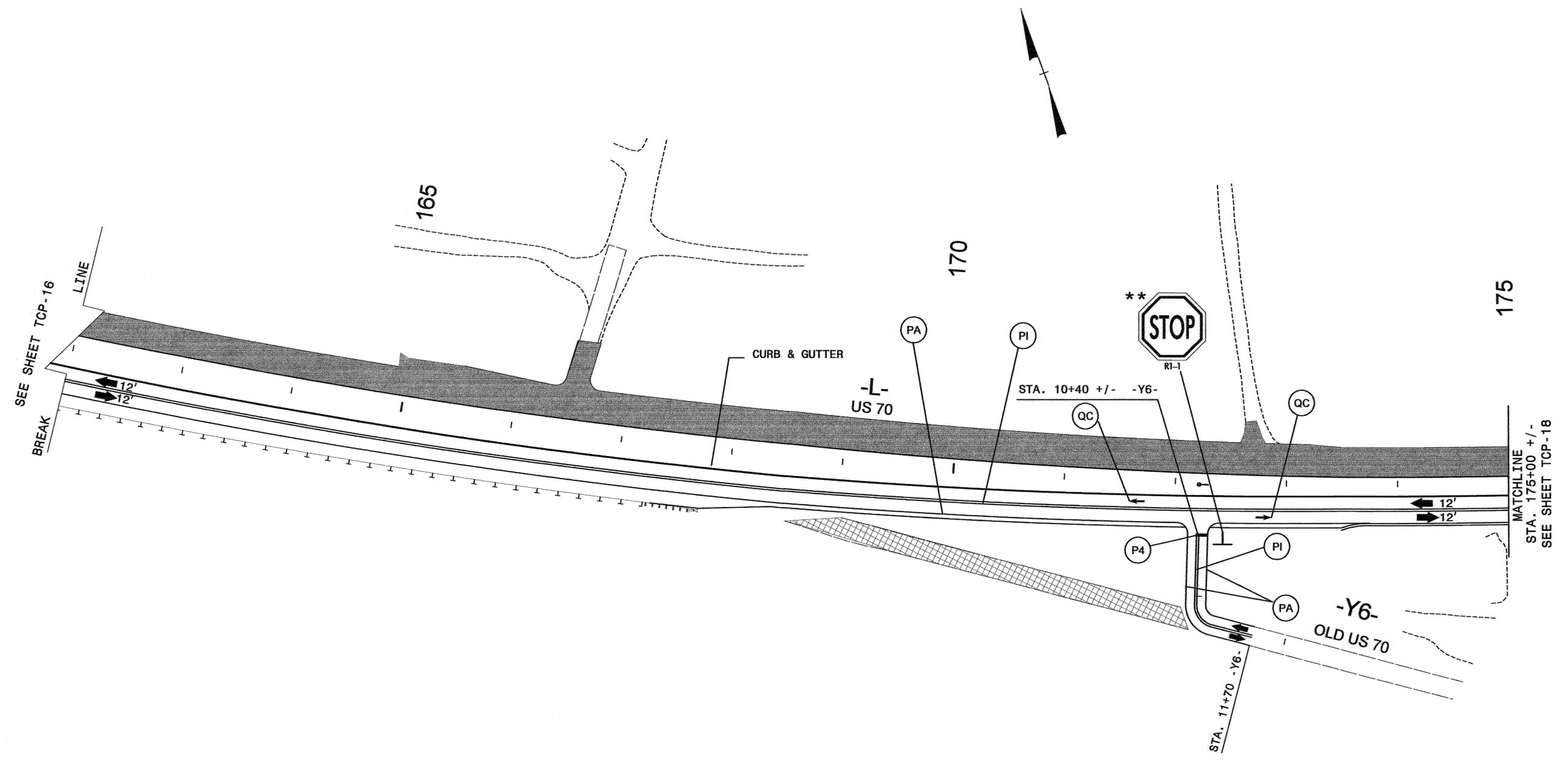
SHEET 4 OF 7

**PHASE II
DETAIL**

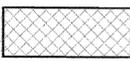
SCALE: 1" = 50'		REVISIONS
DATE: 3/28/08		
DWG. BY: JAP		
DESIGN BY: JAP		
REVIEWED BY: RBE		

6/30/2008 R:\R2911B\TCP-16\TCP-16.dgn

NOTE:
 STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



REVISIONS

LEGEND	
	PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
	REMOVE EXISTING PAVEMENT

**NOTE:
 SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
 SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

SHEET 5 OF 7

CH ENGINEERING
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 RALEIGH, NC 27622 FAX 919.788.0232

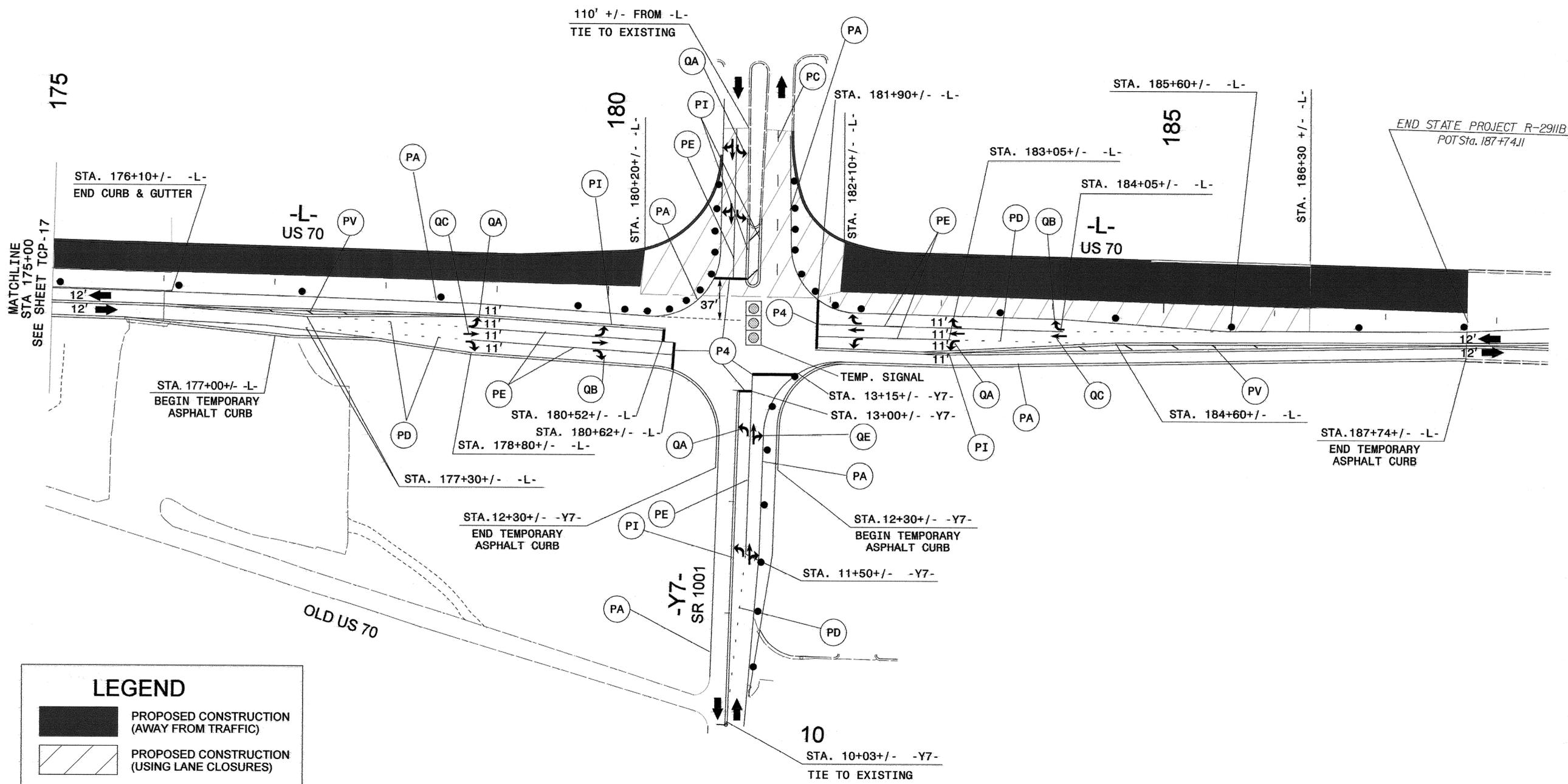
APPROVED: *[Signature]* DATE: 3-28-08
 SEAL


PHASE II DETAIL

SCALE: 1" = 50'		REVISIONS
DATE: 3/28/08		
DWG. BY: JAP		
DESIGN BY: JAP		
REVIEWED BY: RBE		

\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$DCN\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

NOTE:
STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



LEGEND

- PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
- PROPOSED CONSTRUCTION (USING LANE CLOSURES)

NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING

PO BOX 30128 TELE 919.788.0224
RALEIGH, NC 27622 FAX 919.788.0232

APPROVED: *Ronda B. Early* DATE: 4-19-08

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL (07-357)
RONDA B. EARLY

PHASE II DETAIL

SCALE: 1" = 50'

DATE: 3/28/08

DWG. BY: JAP

DESIGN BY: JAP

REVIEWED BY: RBE

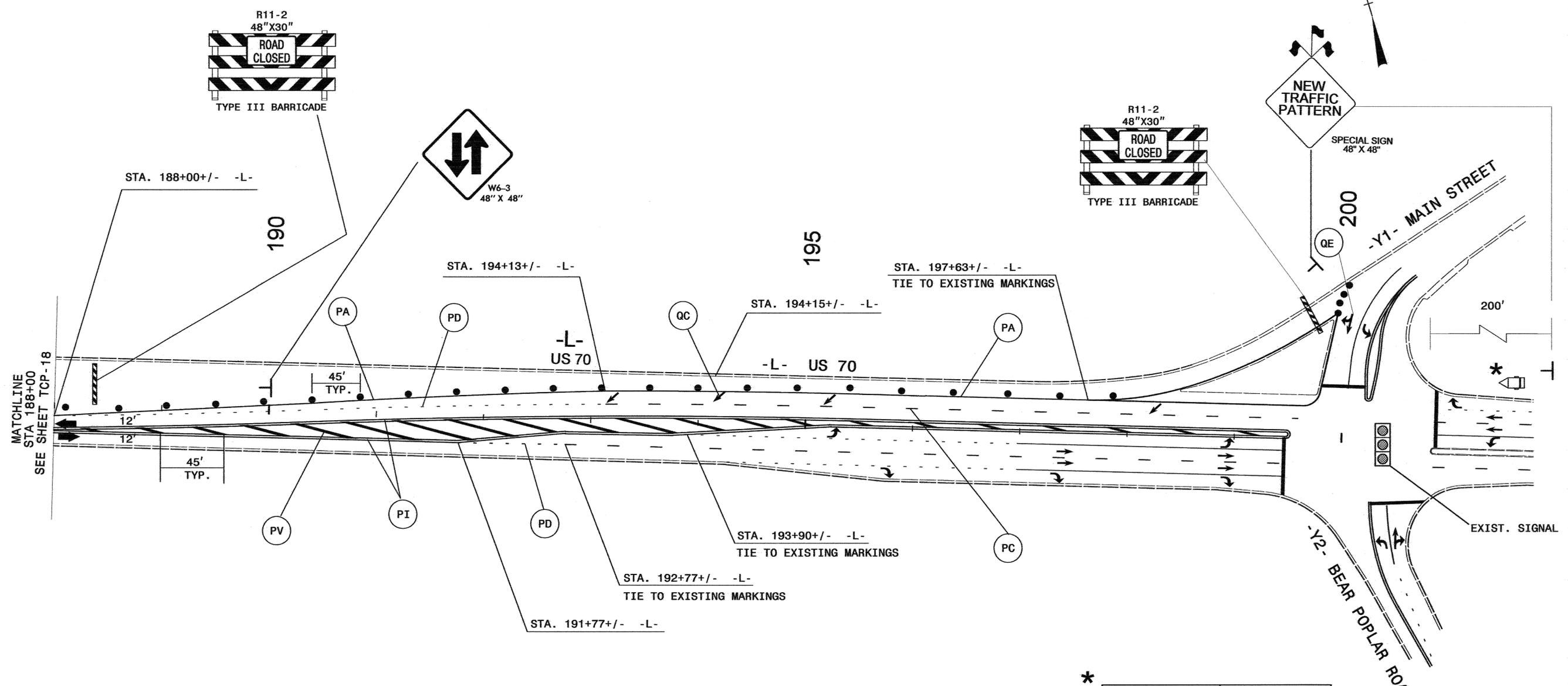
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NO.	DESCRIPTION

CADD FILE

REVISIONS

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DATE\$\$\$\$\$
\$\$\$\$\$SYTIME\$\$\$\$\$



*

MESSAGE NO. 1	MESSAGE NO. 2
RHT LANE CLOSED 800 FT	MERGE LEFT

CHANGEABLE MESSAGE SIGN

SHEET 7 OF 7

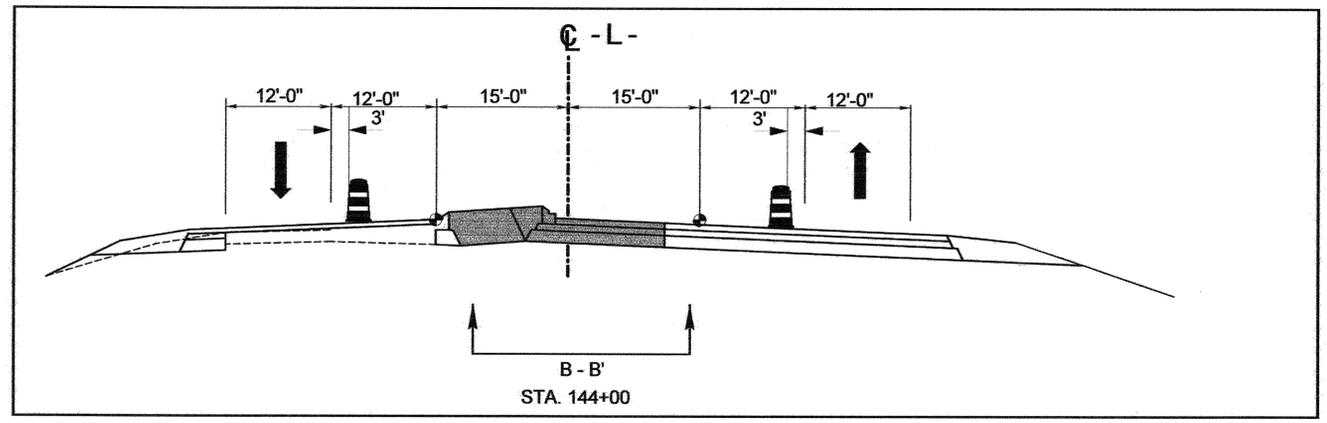
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SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING
PO BOX 30128 TELE 919.788.0224
RALEIGH, NC 27622 FAX 919.788.0232

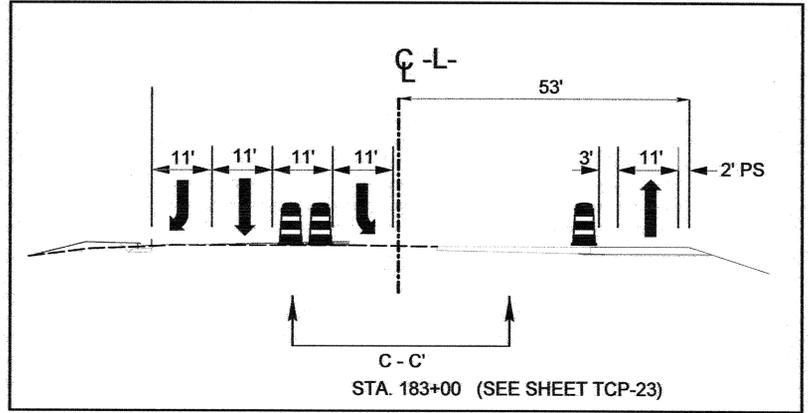
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DATE: 3/28/08	DWG. BY: JAP	DESIGN BY: JAP	REVIEWED BY: RBE									

REVISIONS

SYSTEMS
USER NAME

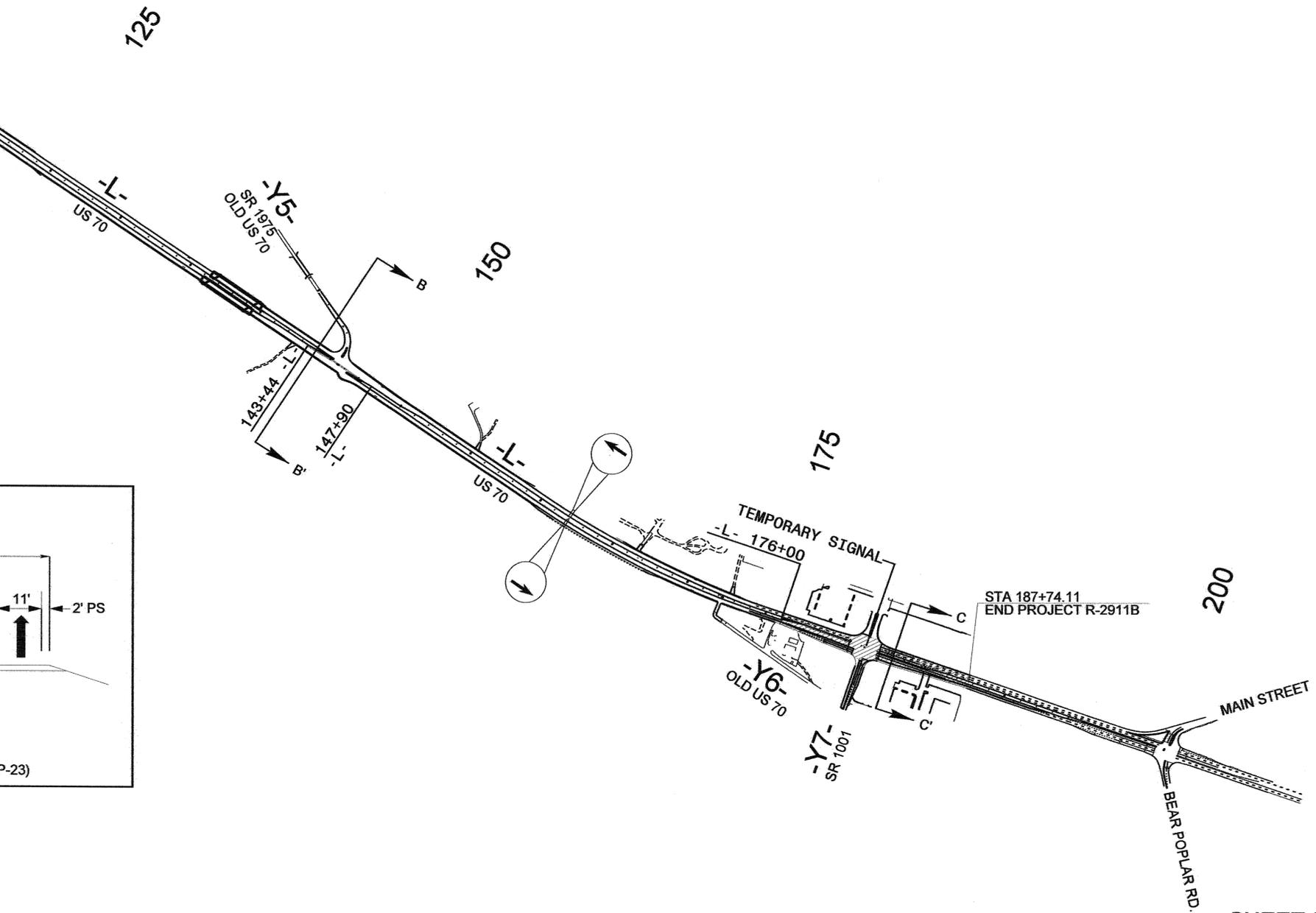


MATCH LINE
STA 108+00
SEE SHEET TCP-19



LEGEND

- PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
- PROPOSED CONSTRUCTION (USING LANE CLOSURES)



REVISIONS

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

CH ENGINEERING

PO BOX 30128 TELE 919.788.0224
RALEIGH, NC 27622 FAX 919.788.0232

APPROVED: *Rhonda B. Early* DATE: 5-28-08

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
SEAL
023521
RHONDA B. EARLY

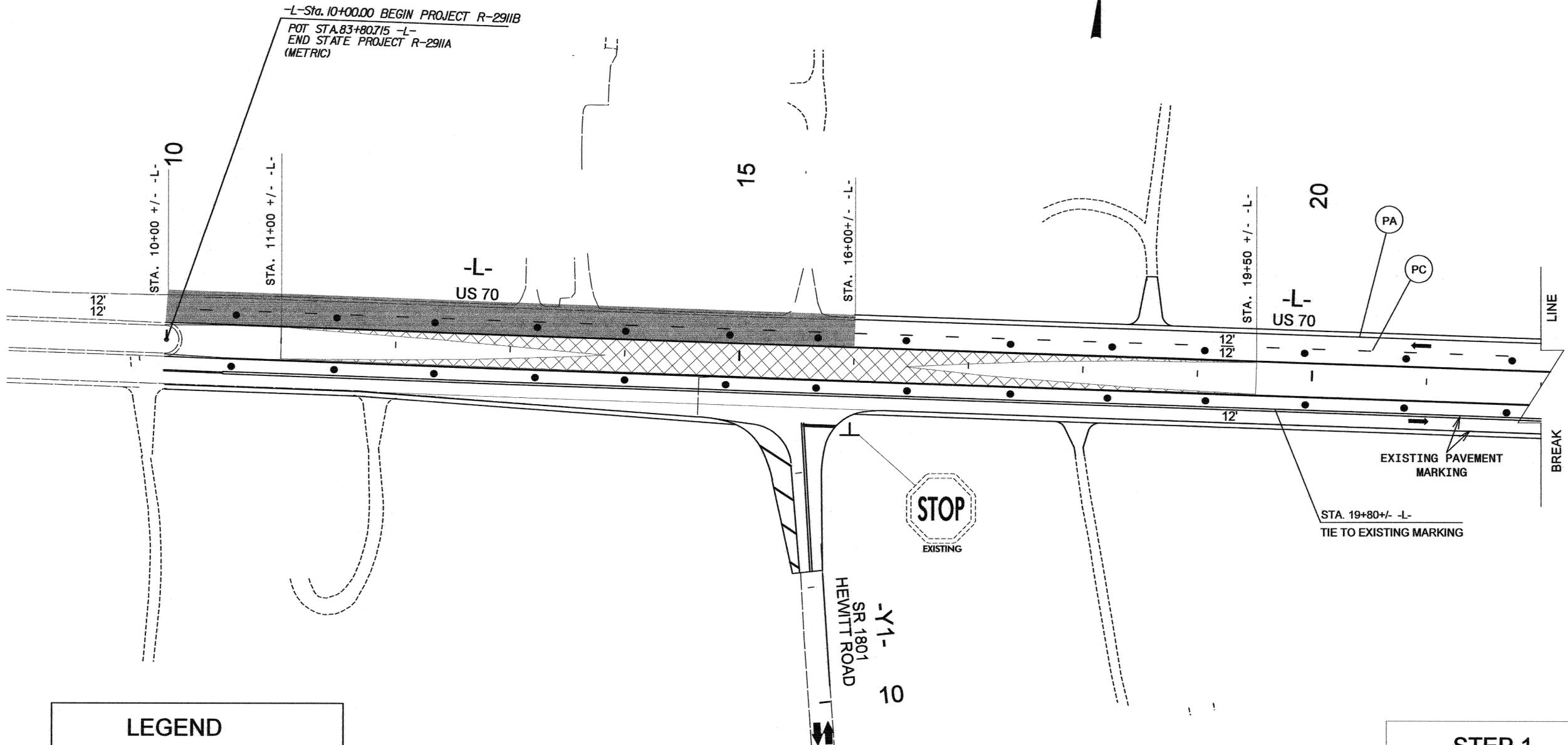
SHEET 2 OF 2

**TRAFFIC CONTROL
PHASE III OVERVIEW**

SCALE: 1" = 400'		REVISIONS
DATE: 3/28/08		
DWG. BY: JAP		
DESIGN BY: JAP		
REVIEWED BY: RBE		

CADD FILE

NOTE:
 SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
 SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.



REVISIONS

LEGEND

	PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
	REMOVE EXISTING PAVEMENT

STEP 1
 WB/EB TRAFFIC IN OUTSIDE LANES

NOTE:
 STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL
 LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

CH ENGINEERING

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 RALEIGH, NC 27622 FAX 919.788.0232

APPROVED: *Ronda B. Early* DATE: 5-28-08

SEAL



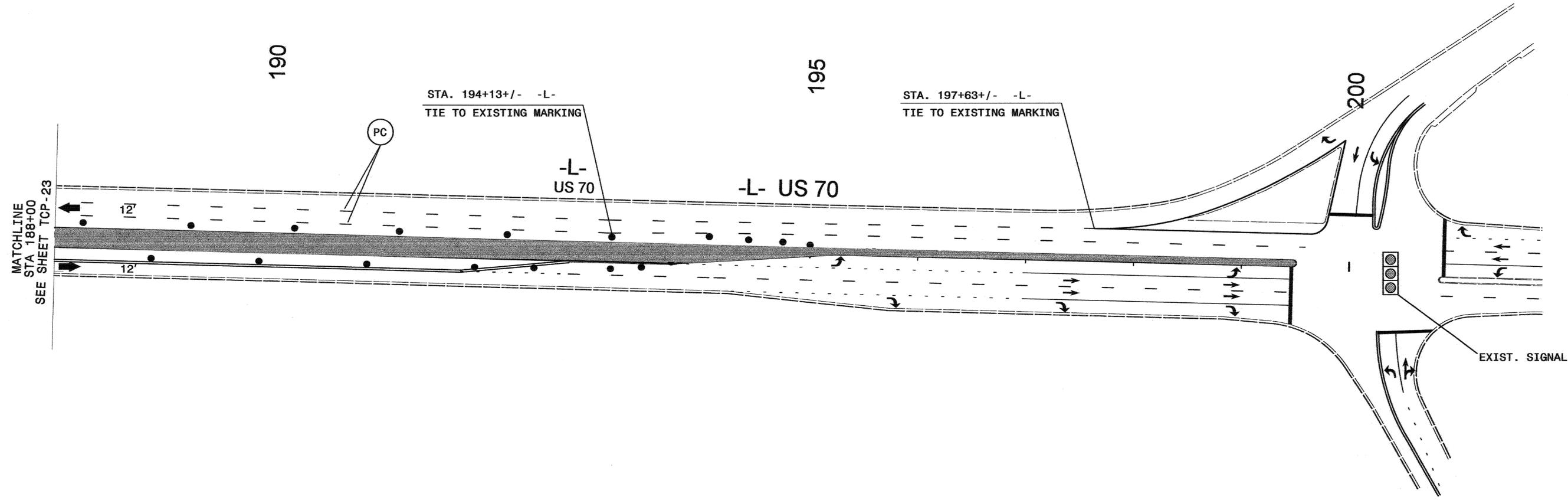
SHEET 1 OF 4

**PHASE III
 DETAIL**

SCALE: 1" = 50'		REVISIONS
DATE: 3/28/08		
DWG. BY: JAP		
DESIGN BY: JAP		
REVIEWED BY: RBE		

\$\$\$SYTIME\$\$\$
 \$\$\$DCN\$\$\$
 \$\$\$USERNAME\$\$\$

NOTE:
STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.



REVISIONS

LEGEND

 PROPOSED CONSTRUCTION

STEP 1
WB/EB TRAFFIC IN OUTSIDE LANES

SHEET 3 OF 4

NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

CH ENGINEERING

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RALEIGH, NC 27622 FAX 919.788.0232

APPROVED: *Ronda B. Early* DATE: 3-28-08

SEAL

**PHASE III
DETAIL**

SCALE: 1" = 50'
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE

NO.	DESCRIPTION

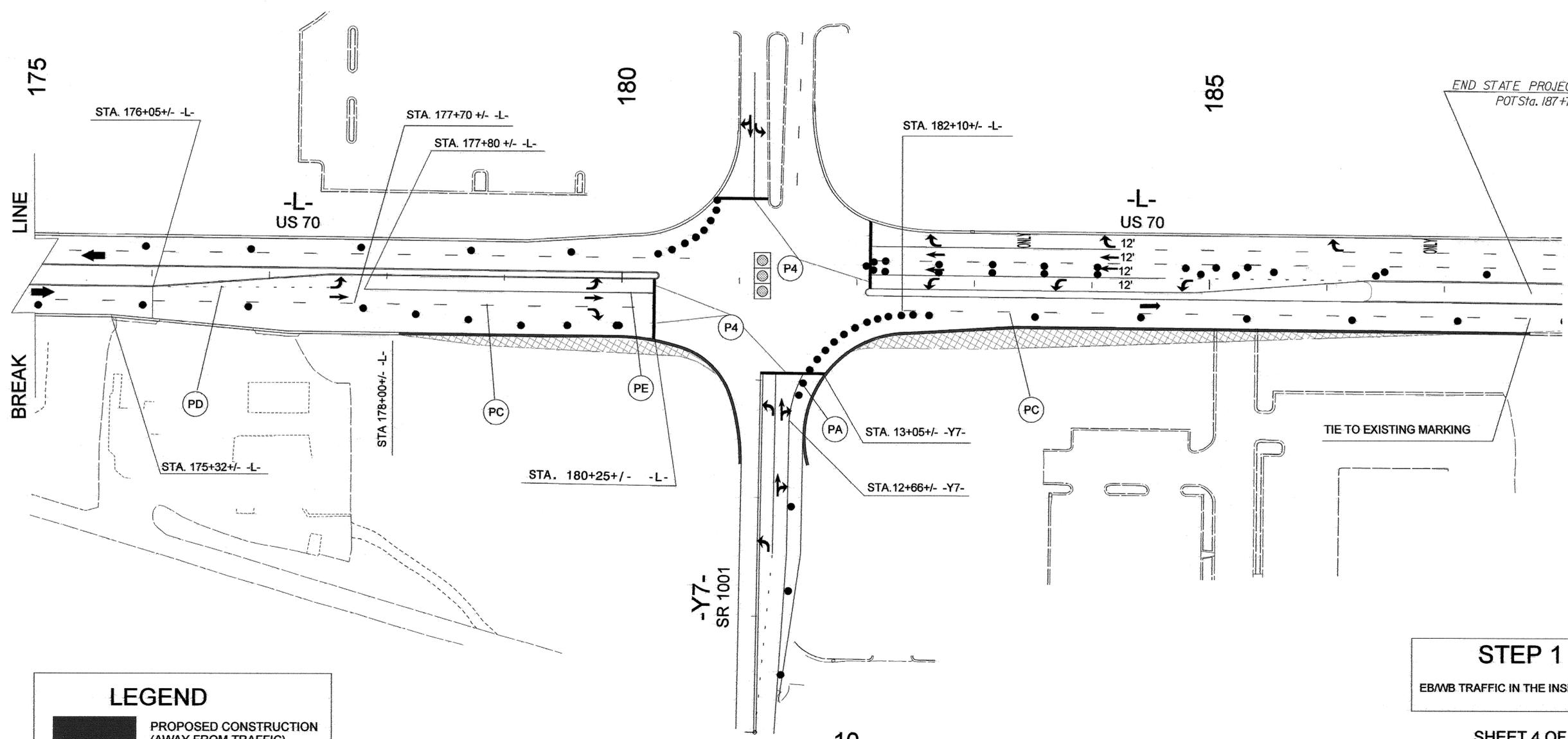
CADD FILE

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$BDGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

NOTE:
STOP BARS ARE TO BE LOCATED A MINIMUM OF 10' FROM THE EDGE OF TRAVEL LANE UNLESS DIRECTED OTHERWISE BY THE ENGINEER.

NOTE:
SEE SHEET TCP-1A FOR TEMPORARY PAVEMENT MARKING SCHEDULE.
SEE SHEETS TCP-26 & TCP-27 FOR Y-LINE AND DRIVEWAY TYPICAL DETAILS.

NOTE:
WHEN FLAGGERS / POLICE ARE NOT PRESENT AT INTERSECTION, THE CONTRACTOR SHALL MAINTAIN TRAFFIC IN ONE THRU LANE W/ RIGHT AND LEFT TURN LANES OPEN FOR PROPER SIGNAL LOOP DETECTION. (SEE DETAIL FOR POSSIBLE DRUM PLACEMENT FOR LEFT THRU LANE CLOSURE.)



END STATE PROJECT R-2911B
POT Sta. 187+74.11

LEGEND

- PROPOSED CONSTRUCTION (AWAY FROM TRAFFIC)
- REMOVE EXISTING PAVEMENT

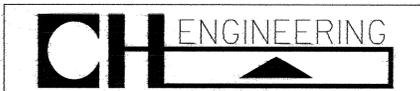
STEP 1
EB/WB TRAFFIC IN THE INSIDE LANES

SHEET 4 OF 4

**PHASE III
DETAIL**

REVISIONS

MESSAGE #####
DCN #####
USER NAME



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RALEIGH, NC 27622 FAX 919.788.0232

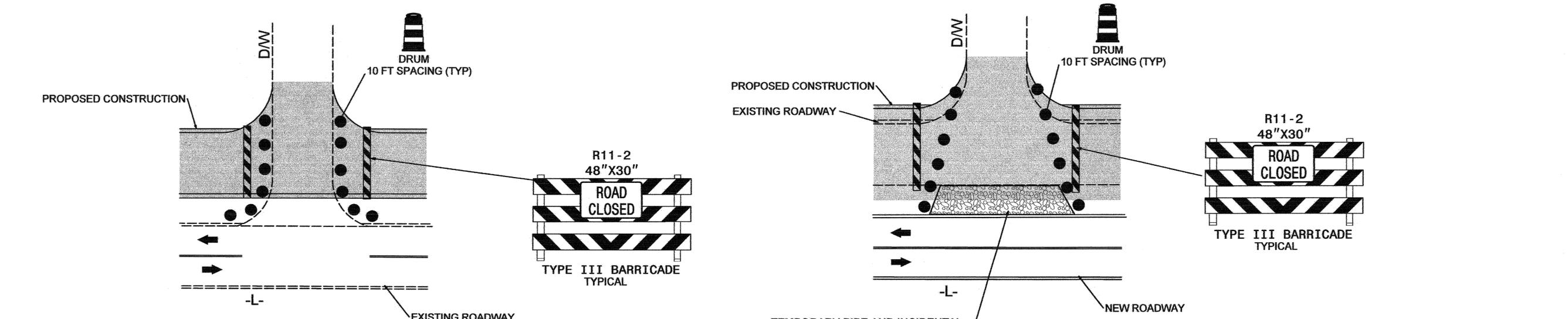
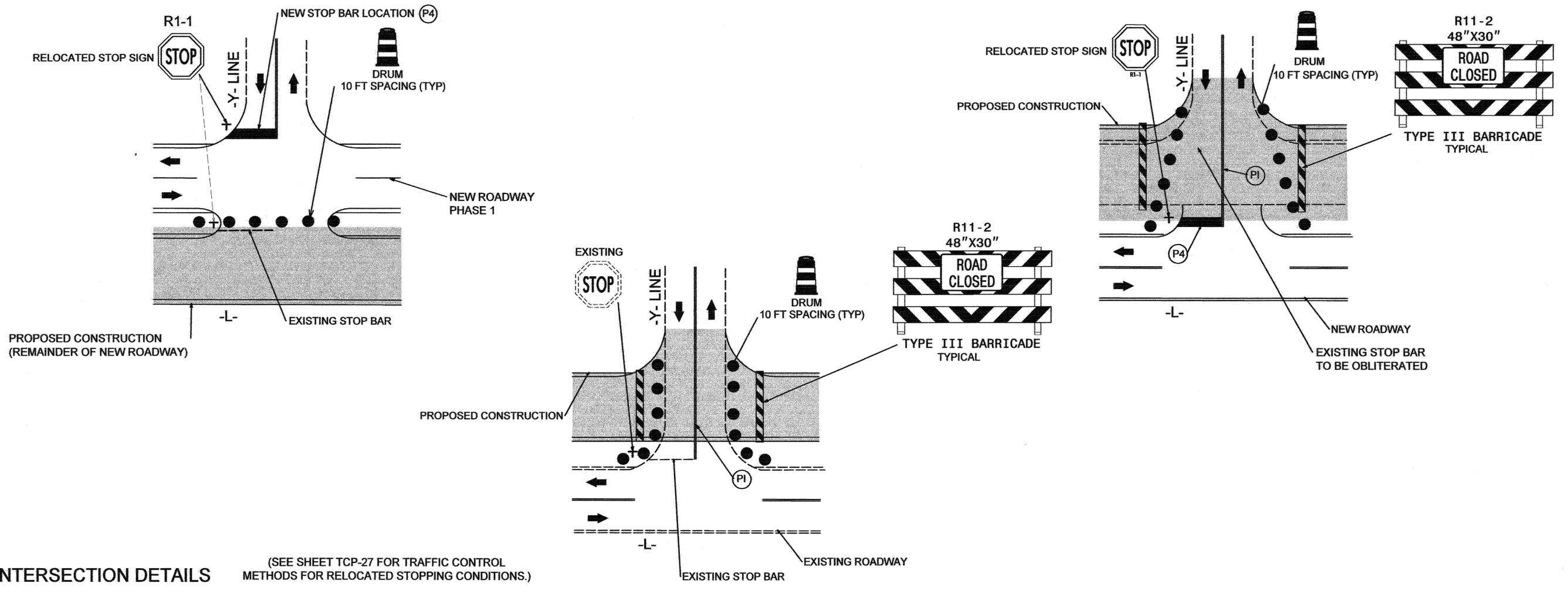
APPROVED: *Shonda B. Early* DATE: 6-19-08



SCALE: 1" = 50'
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE



REVISIONS	



TEMPORARY PIPE AND INCIDENTAL STONE TO BE PLACED AS NECESSARY TO MAINTAIN DW ACCESS

CH ENGINEERING

PO BOX 30128 TELE 919.788.0224
RALEIGH, NC 27622 FAX 919.788.0232

APPROVED: *[Signature]* DATE: 5-28-08

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 023521
FRANDA B. EARLY

INTERSECTION & DRIVEWAY TYPICAL DETAILS

SCALE: NONE
DATE: 3/28/08
DWG. BY: JAP
DESIGN BY: JAP
REVIEWED BY: RBE

REVISIONS

NO.	DESCRIPTION

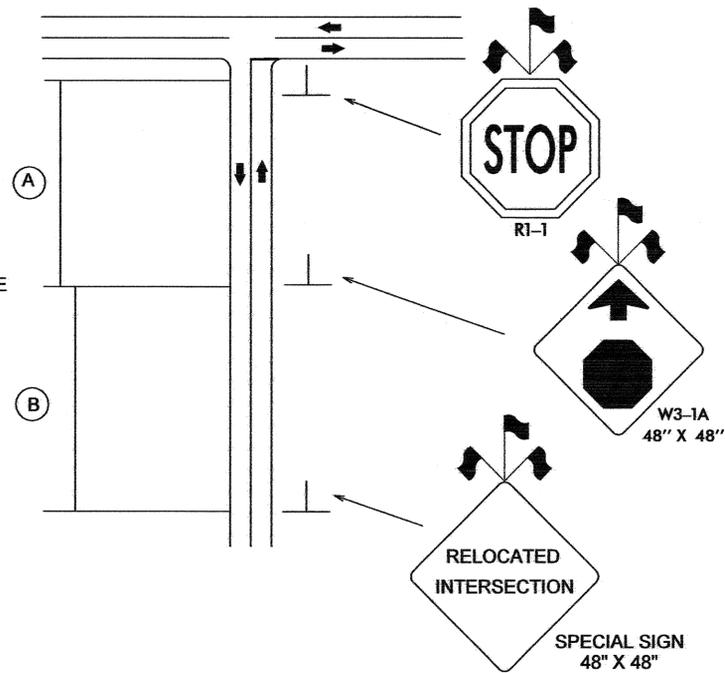
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REVISIONS

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
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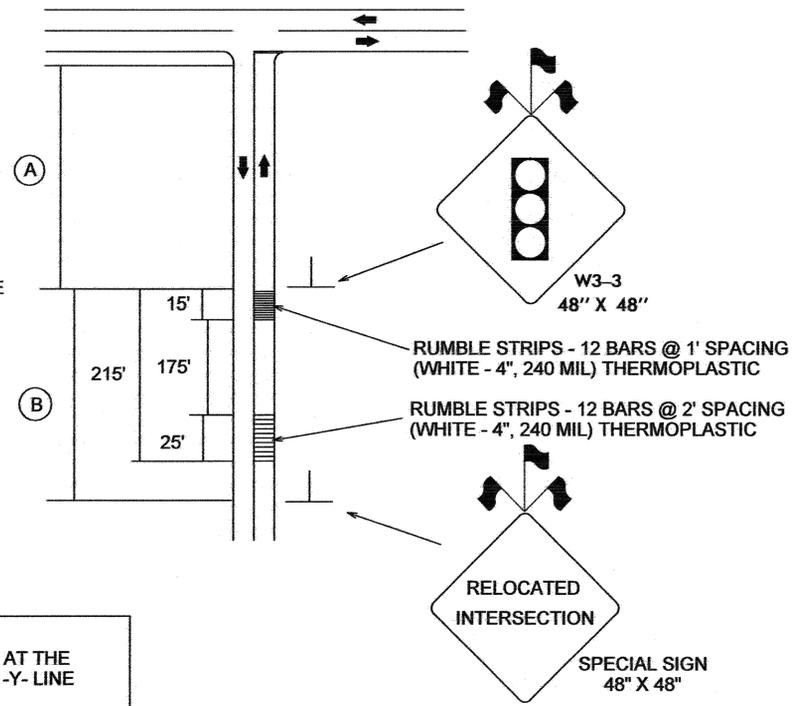
TO BE USED AT THE FOLLOWING -Y- LINE
-Y3-

TRAFFIC CONTROL TREATMENT FOR NEW STOP LOCATION FOR MEDIUM VOLUME ROAD



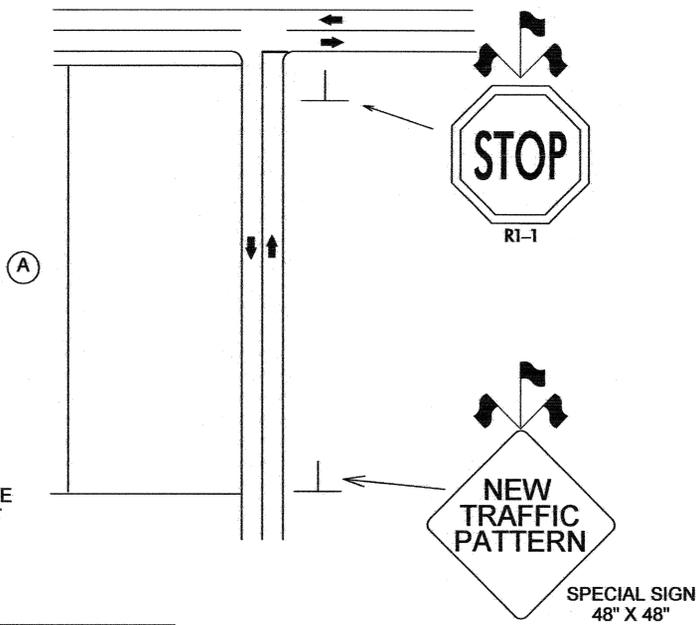
REFER TO RSD 1101.11 SHEET 4 OF 4 FOR ADVANCE WARNING SPACING CHART

TRAFFIC CONTROL TREATMENT FOR NEW STOPLIGHT LOCATION FOR HIGH VOLUME ROAD



REFER TO RSD 1101.11 SHEET 4 OF 4 FOR ADVANCE WARNING SPACING CHART

TRAFFIC CONTROL TREATMENT FOR NEW STOP LOCATION FOR LOW VOLUME ROAD



REFER TO RSD 1101.11 SHEET 4 OF 4 FOR ADVANCE WARNING SPACING CHART

TO BE USED AT THE FOLLOWING -Y- LINE
-Y7-

TO BE USED AT THE FOLLOWING -Y- LINES
-Y- -Y1-
-Y2- -Y5-

REVISIONS

\$\$\$SYTIME\$\$\$
\$\$\$DCN\$\$\$
\$\$\$USERNAME\$\$\$

CH ENGINEERING
PO BOX 30128 TELE 919.788.0224
RALEIGH, NC 27622 FAX 919.788.0232

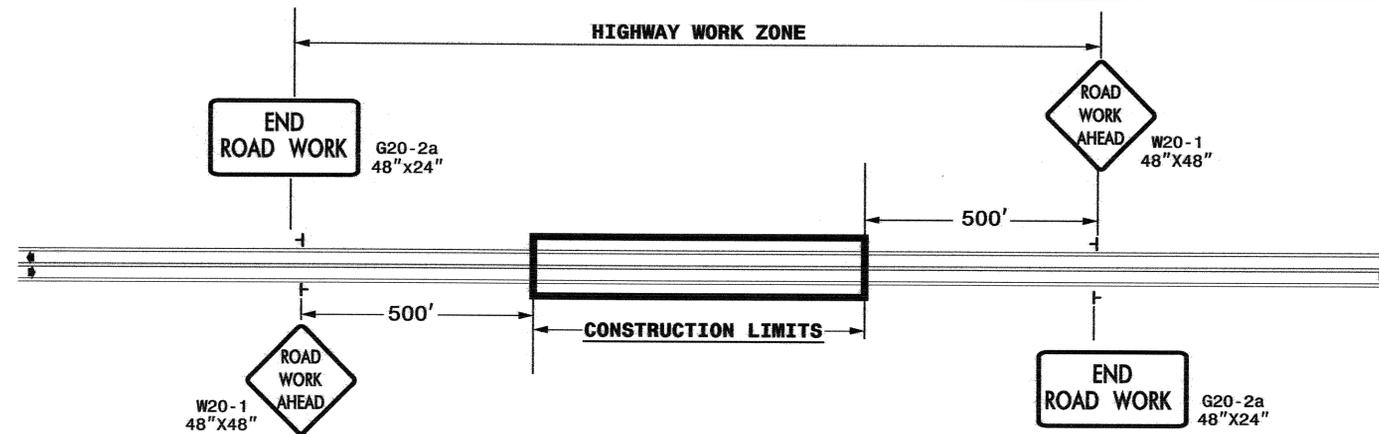
APPROVED: *Frank A. Early* DATE: 5-28-08
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
FRANK A. EARLY

INTERSECTION TYPICAL DETAILS

SCALE: NONE		REVISIONS
DATE: 3/28/08		
DWG. BY: JAP		
DESIGN BY: JAP		
REVIEWED BY: RBE		

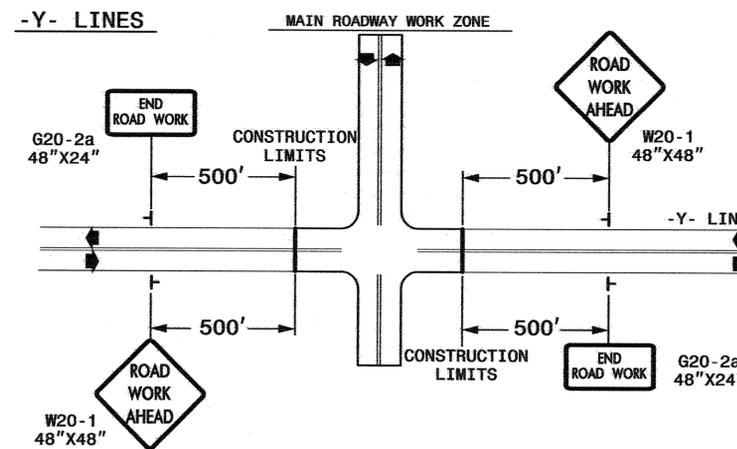
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TWO-WAY UNDIVIDED ** (L-LINES)



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

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



DETAIL DRAWING FOR
TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

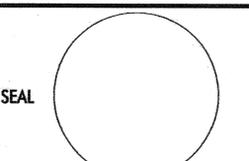
GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

- ┆ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

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

\$\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$\$\$\$PLANT\$\$\$\$\$
 \$\$\$\$\$\$DESIGN\$\$\$\$\$
 \$\$\$\$\$\$CONSTRUCTION\$\$\$\$\$
 \$\$\$\$\$\$OPERATION\$\$\$\$\$

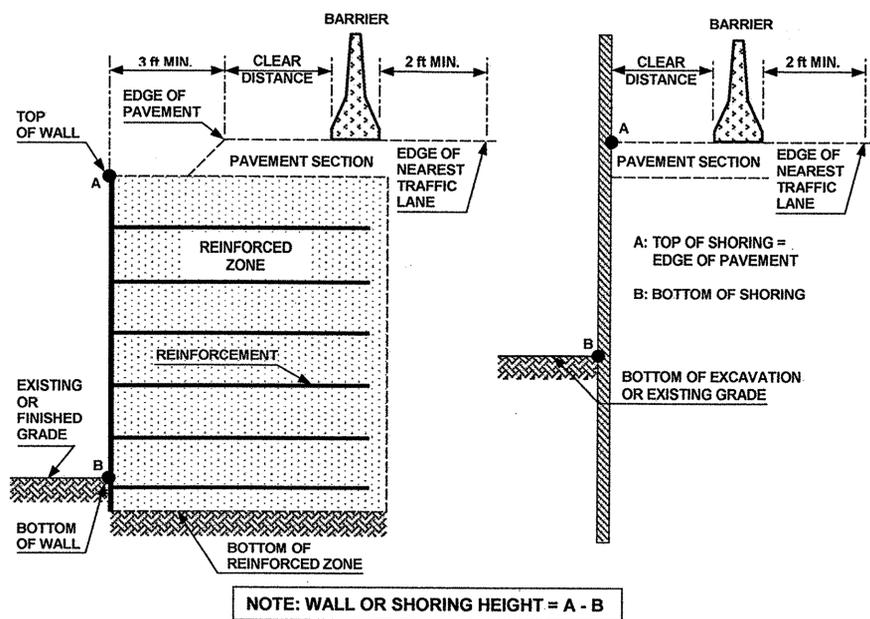


FIGURE A

NOTES

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

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

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

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * 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

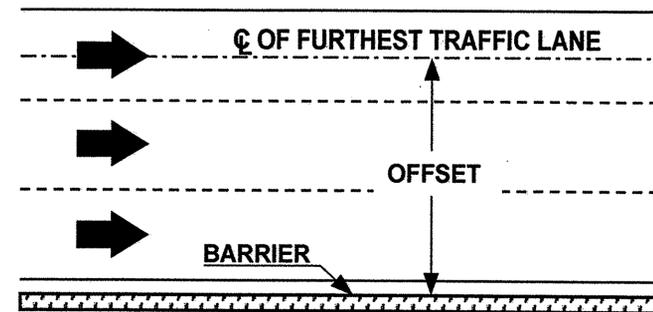
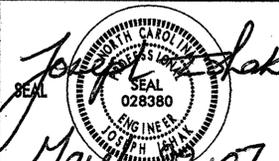


FIGURE B

APPROVED: _____ DATE: _____	PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS			REVISIONS				
 March 22, 2007				NONE DATE: 3/07 DWG. BY: JI DESIGN BY: JI REVIEWED BY: JI	<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>			

22-MAR-2007 10:44 \\DOT\DFSROOT\GROUPS-WZTCCC\share\stds_in_progress\barrier\std.dgn
 mgarratt AT WZTCC22291