

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO. R-2320G SHEET NO. TCP-1

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

**LEGEND**

**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
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUMS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
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
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  - CRYSTAL/RED PAVEMENT MARKER
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R-2320G

TIP PROJECT:

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<p>PLAN REVIEWED BY: WORK ZONE TRAFFIC CONTROL UNIT</p> <p>J. S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER</p> <p>G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER</p> <p>J. W. GILSTRAP TRAFFIC CONTROL PROJ. DESIGN ENGINEER</p> <p>TRAFFIC CONTROL DESIGN ENGINEER</p> <p>TRAFFIC CONTROL DESIGN TECHNICIAN</p>	<p>APPROVED: <i>Michael T. Rzepka</i></p> <p>DATE: 1-3-08</p> <p>SEAL</p>	<p>PLAN PREPARED FOR N.C.D.O.T. BY:</p> <p>M. T. RZEPKA, P.E. PROJECT ENGINEER</p> <p>G. E. PARKER DESIGN ENGINEER</p> <p>G. E. PARKER DESIGN TECHNICIAN</p>	<p>KO &amp; ASSOCIATES, P.C. Consulting Engineers 521 KINGDOM WAY, SUITE 300 RALEIGH, N.C. 27607 (919) 852-0266</p>
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# GENERAL NOTES

# PROJECT NOTES

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PROJ. REFERENCE NO.	SHEET NO.
R-2320G	TCP-2

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 UNDESIRED 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 52	7:00AM - 9:00AM MONDAY - FRIDAY 3:00PM - 6:00PM MONDAY - FRIDAY
NC 138	3:00PM - 6:00PM MONDAY - FRIDAY

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

ROAD NAME

US 52

HOLIDAY

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

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

- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 P.M. FRIDAY AND 7:00 A.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 P.M. TUESDAY TO 7:00 A.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 P.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 A.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.
- FOR MOTORCYCLE RALLY OCCURRING AT MYRTLE BEACH BETWEEN 6:00PM THE DAY BEFORE THE START AND 7:00AM THE DAY AFTER THE END OF THE MOTORCYCLE RALLY.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
US 52	7:00AM - 9:00AM MONDAY - FRIDAY 3:00PM - 6:00PM MONDAY - FRIDAY	15 MINUTES FOR TRAFFIC SHIFTS 15 MINUTES FOR TRAFFIC SHIFTS
NC 138	3:00PM - 6:00PM MONDAY - FRIDAY	15 MINUTES FOR TRAFFIC SHIFTS

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

LANE AND SHOULDER CLOSURE REQUIREMENTS

E) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED, OR AS DIRECTED BY THE ENGINEER.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 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.

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.

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.

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 WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

J) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

K) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS 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.

APPROVED: <i>Michael T. Rieppel</i> DATE: 1-3-08	<b>PROJECT NOTES</b>	
	SCALE: NONE	
	DATE: 12-07	
	DWG. BY: B.L.M.	
	DESIGN BY: G.E.P.	
REVIEWED BY: M.T.R.	REVISIONS	



# PROJECT NOTES

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PROJ. REFERENCE NO. R-2320G	SHEET NO. TCP-3
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## GENERAL NOTES (CONT'D)

- L) 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 (WB-11) 500FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- N) 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.
- O) PROVIDE PERMANENT SIGNING.
- P) PROVIDE DETOUR SIGNING WITHIN AND OFF THE PROJECT LIMITS.
- Q) COVER OR REMOVE ALL DETOUR SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN A DETOUR IS NOT IN OPERATION.
- R) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

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 A HAZARD, OR AS DIRECTED BY THE ENGINEER.

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

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

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

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

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 RADIUS, 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, DRUMS, 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
ALL	POLYUREA	PERMANT RAISED

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

ROAD NAME	MARKING	MARKER
ALL STRUCTURES	PAINT COLD APPLIED PLASTIC TYPE 4 - REMOVABLE TAPE	TEMPORARY RAISED TEMPORARY RAISED

- 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.

TEMPORARY / FINAL SIGNALS

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

MISCELLANEOUS

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

APPROVED: <i>Michael T. Kemp</i> DATE: 1-23-08		<b>PROJECT NOTES (CONT'D)</b>	
SEAL 	SCALE: NONE		REVISIONS
	DATE: 12-07		
	DWG. BY: B.L.M.		
	DESIGN BY: G.E.P.		
REVIEWED BY: M.T.R.		CADD FILE	

# PHASE I PHASING

STEP 1: - INSTALL WORK ZONE SIGNS ALONG EXISTING US 52 & NC 138 (-L-/-L REV.) AND ALL -Y- LINES AS SHOWN ON SHEET TCP-38.

- CONTRACTOR SHALL INSTALL CHANGEABLE SIGNS (CMS) ON THE PROJECT AS DIRECTED BY THE ENGINEER.

CONTRACTOR MAY WORK PHASE I, STEPS 2 AND 3 SIMULTANEOUSLY.

STEP 2: - AWAY FROM TRAFFIC, BEGIN CONSTRUCTION UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE (INCLUDING STRUCTURES, CURB & GUTTER AND ALL DRAINAGE) IN THE FOLLOWING LOCATIONS:  
 (SEE ROADWAY PLANS AND PHASE I, DETAIL 1, SHEETS TCP-7 THRU TCP-11)

-L REV-	FROM -L REV.-	STA. 41+50±	TO -L- REV.-	STA. 74+27±
-L-	FROM -L-	STA. 74+84±	TO -L-	STA. 85+50±
-L-	FROM -L-	STA. 87+00±	TO -L-	STA. 100+50±
-L-	FROM -L-	STA. 102+00±	TO -L-	STA. 163+00±
-Y-	FROM -Y-	STA. 9+42±	TO -Y-	STA. 11+50±
-Y4-	FROM -Y4-	STA. 15+00±	TO -Y4-	STA. 21+00±
-Y5-	FROM -Y5-	STA. 13+50±	TO -Y5-	STA. 21+74±
-Y8-	FROM -Y8-	STA. 13+10±	TO -Y8-	STA. 16+69±
SR 2	FROM SR 2	STA. 10+00±	TO SR 2	STA. 17+55±
SR 3	FROM SR 3	STA. 10+00±	TO SR 3	STA. 32+25±

- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9:

- PAVE/WEDGE (UNIFORM THICKNESS) EXISTING US 52 UP TO WITHIN THICKNESS OF FINAL SURFACE COURSE (1.5"±) AT THE LEFT EDGE OF PAVEMENT FROM -L REV.- STA. 38+50± TO -L REV.- STA. 40+50±. USING ASPHALT SMOOTHLY TRANSITION FROM EXISTING PAVEMENT ONTO AND OFF OF WEDGED SECTION. (SEE TYPICAL SECTION A-A', SHEET TCP-7)

- BEGIN CONSTRUCTION UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT ELEVATION IN THE FOLLOWING LOCATIONS:

-L REV.- FROM -L- REV.- STA. 35+00± TO -L- REV.- STA. 41+50± (SEE ROADWAY PLANS AND PHASE I, DETAIL 1, SHEET TCP-7)

-Y- FROM -Y- STA. 11+50± TO -Y- STA. 18+50 (SEE ROADWAY PLANS AND PHASE I, DETAIL 1, SHEET TCP-7)

-Y5- FROM -Y5- STA. 10+35± TO -Y5- STA. 13+50± (SEE ROADWAY PLANS AND PHASE I, DETAIL 1, SHEET TCP-10)

- AWAY FROM TRAFFIC, BEGIN INSTALLATION OF PROPOSED SIGNALS AT THE INTERSECTIONS OF PROPOSED US 52 (-L-) AND US 52 BUS (-Y-) AND PROPOSED US 52 (-L-) AND PROPOSED NC 138 (-Y5-) FOR FINAL TRAFFIC PATTERNS. (SEE SIGNAL PLANS AND SHEETS PM-2 AND PM-6)

- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 AND 3 OF 9:

- CONSTRUCT TEMPORARY PAVEMENT LEFT OF EXISTING NC 138 (-L-) FROM -L- STA. 164+50± TO -L- STA. 187+62±. (SEE ROADWAY PLANS AND PHASE I, DETAIL 2, SHEETS TCP-12 THRU TCP-14).

- PAVE/WEDGE AS NECESSARY EXISTING NC 138 (-L-) AND CONSTRUCT PROPOSED WIDENING LEFT OF EXISTING NC 138 (-L-) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE (INCLUDING PROPOSED CURB AND GUTTER AND PROPOSED DRAINAGE) FROM -L- STA. 187+62± TO -L- STA. 192+61± (SEE ROADWAY PLANS AND PHASE I, DETAIL 2, SHEET TCP-14).

- MAY BEGIN CONSTRUCTION OF PROPOSED WIDENING RIGHT OF EXISTING NC 138 (-L-) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE (INCLUDING PROPOSED CURB AND GUTTER AND PROPOSED DRAINAGE) FROM -L- STA. 187+62± TO -L- STA. 192+61± (SEE ROADWAY PLANS AND PHASE I, DETAIL 2, SHEET TCP-14).

CONSTRUCTION OF PHASE I, STEP 3 [PROPOSED SOUTHSIDE RD (-Y4-) AND PROPOSED QUAIL RIDGE ROAD (-Y3-)] MAY BE CONSTRUCTED AT THE CONTRACTOR'S DISCRETION, HOWEVER, CONSTRUCTION MUST BE COMPLETED PRIOR TO CONSTRUCTION OF PHASE II, STEP 5.

STEP 3: - CONSTRUCT PROPOSED -Y4- (SR 1906, SOUTHSIDE RD.), -Y3- (SR 1907, QUAIL RIDGE RD.) AND -L- (US 52) ACCORDING TO THE FOLLOWING SEQUENCE:

A. USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 OR ROADWAY STANDARD DRAWING NO. 1101.04, INSTALL AND COVER ALL ROAD CLOSURE AND DETOUR SIGNING AS SHOWN ON SHEET TCP-35.

COMPLETE THE WORK REQUIRED OF PHASE I, STEPS 3B AND 3C IN 120 CALENDAR DAYS (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES)

B. - UNCOVER DETOUR SIGNS AND USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEETS 1 AND 2 OF 9, CLOSE EXISTING SOUTHSIDE RD. BETWEEN -Y4- STA. 4+61± AND -Y4- STA. 24+50±. CONSTRUCT -Y4- (SR 1906, SOUTHSIDE RD.) AND -L- (US 52), INCLUDING PROPOSED DRAINAGE, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y4- STA. 4+61± TO -Y4- STA. 24+50± AND FROM -L- STA. 100+50± TO -L- STA. 102+00±. (SEE ROADWAY PLANS AND DETAIL 3, SHEET TCP-15).

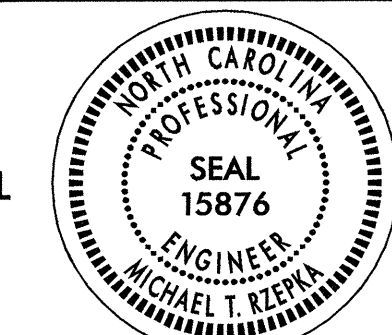
- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, CONSTRUCT -Y4- (SR 1906, SOUTHSIDE RD.) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y4- STA. 24+50± TO -Y4- STA. 26+50±, INCLUDING QUAIL RIDGE RD. (SR 1907). (SEE ROADWAY PLANS AND DETAIL 3, SHEET TCP-15).

C. - PLACE INTERMEDIATE PAVEMENT MARKING AND MARKERS FOR A TWO-LANE, TWO-WAY TRAFFIC PATTERN AND OPEN -Y4- (SR 1906, SOUTHSIDE RD.) TO TRAFFIC. (SEE DETAIL 4, SHEET TCP-16)

D. - USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEETS 1 OF 9, CLOSE -Y3- (SR 1907, QUAIL RIDGE RD.) AT -Y3- STA. 13+00± TO TRAFFIC. CONSTRUCT -Y3- (SR 1907, QUAIL RIDGE RD.), PROPOSED TURN-AROUND, INCLUDING END OF ROAD MARKERS AND -L- (US 52), INCLUDING PROPOSED DRAINAGE, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y3- STA. 13+00± TO -Y3- STA. 17+50± AND FROM -L- STA. 85+50± TO -L- STA. 87+00±. (SEE ROADWAY PLANS AND DETAIL 5, SHEET TCP-17).  
 [USING DRUMS AND TYPE III BARRICADES MAINTAIN ACCESS TO DRIVEWAY AT -Y3- STA. 15+00± DURING CONSTRUCTION.] (SEE DETAIL 5, SHEET TCP-17)

NOTE: -Y3- (SR 1907, QUAIL RIDGE RD.) SHALL REMAIN CLOSED UNTIL COMPLETION OF PHASE II, STEP 5A.

STEP 4: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 AND 3 OF 9, WORKING IN ONE CONTINUOUS OPERATION PLACE INTERMEDIATE PAVEMENT MARKING AND MARKERS AND SHIFT NC 138 TRAFFIC INTO INTERMEDIATE TRAFFIC PATTERN ON TEMPORARY/PROPOSED WIDENING LEFT SIDE OF EXISTING NC 138 FROM -L- STA. 164+50± TO -L- STA. 192+74±. (SEE DETAIL 6, SHEETS TCP-18 THRU TCP-20)

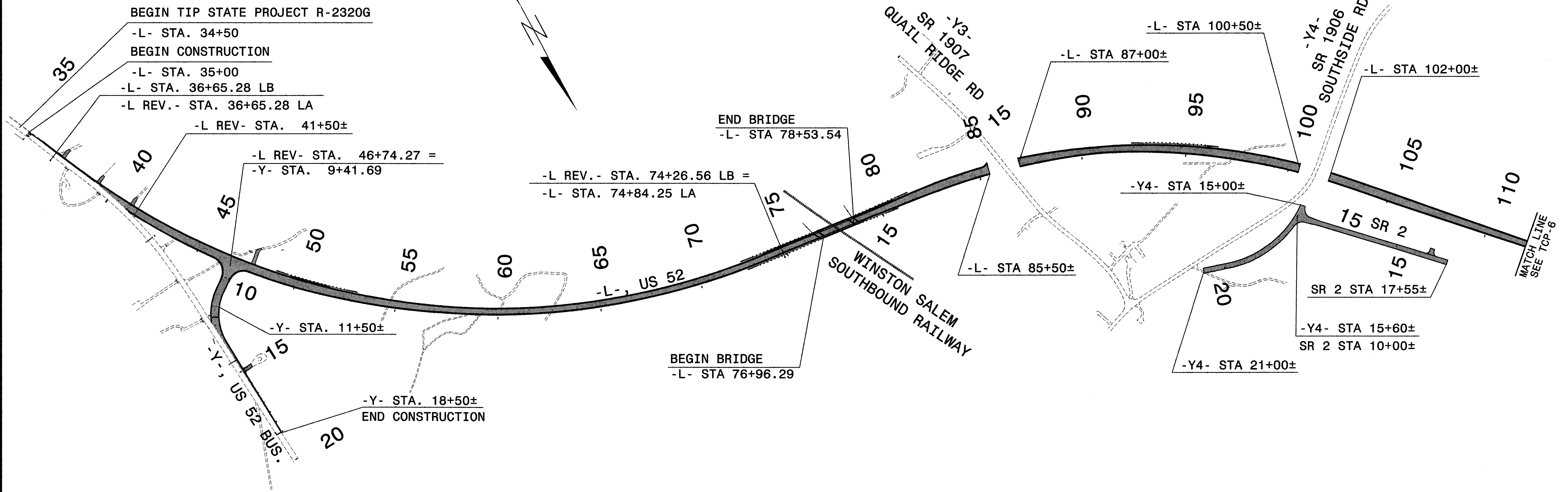
APPROVED: <i>Michael T. Rieppel</i> DATE: 1-3-09 	<h2 style="margin: 0;">PHASE I PHASING</h2>					
SCALE: NONE DATE: DWG. BY: G.E.P. DESIGN BY: G.E.P. REVIEWED BY: M.T.R.	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">REVISIONS</th> </tr> <tr> <td style="height: 20px;"> </td> </tr> <tr> <td style="height: 20px;"> </td> </tr> <tr> <td style="height: 20px;"> </td> </tr> <tr> <td style="height: 20px;"> </td> </tr> </table>	REVISIONS				
REVISIONS						



# PHASE I OVERVIEW

**KO & ASSOCIATES, P.C.**  
 Consulting Engineers  
 5121 KINGDOM WAY, SUITE 100 RALEIGH, N.C. 27607  
 (919) 851-6066

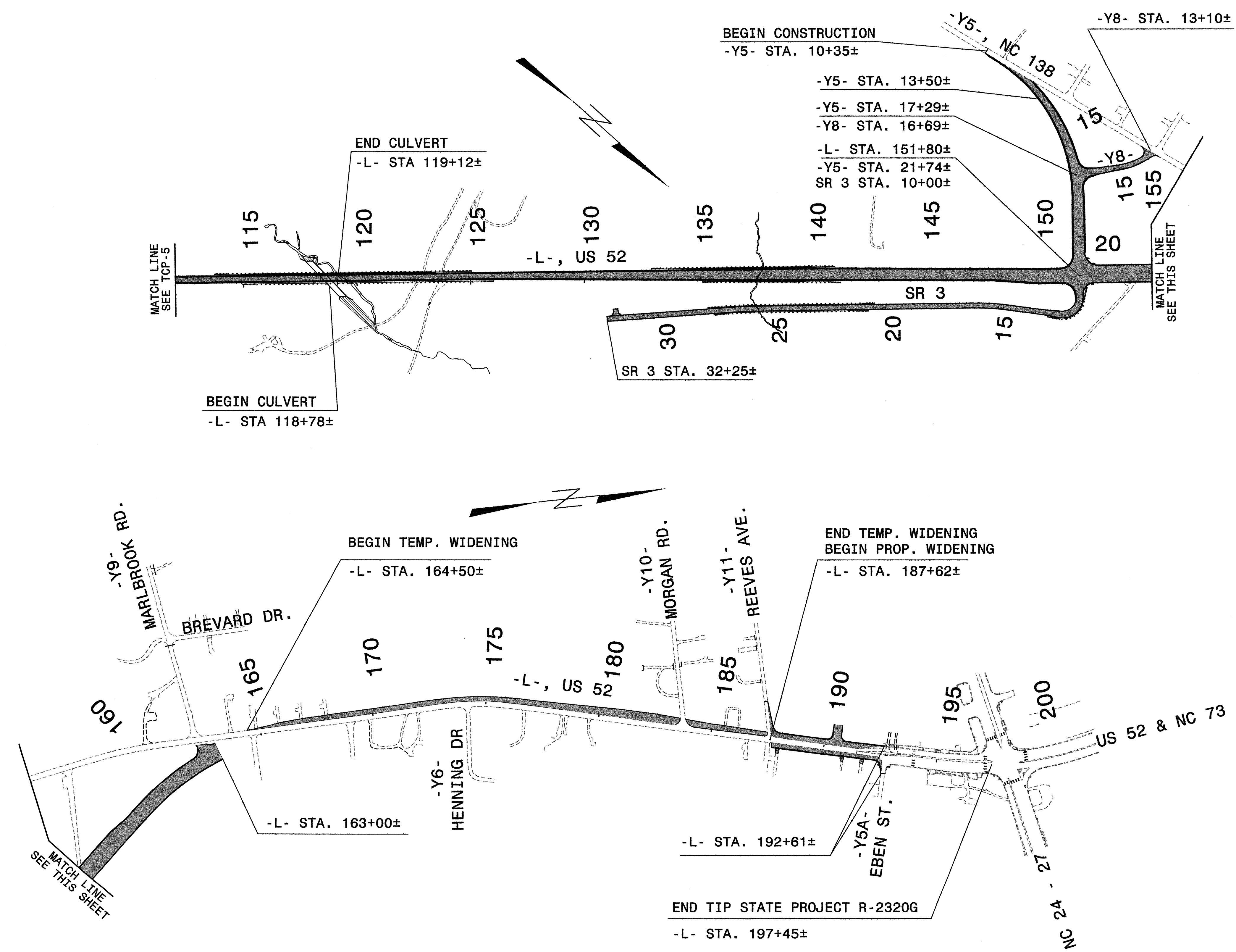
PROJ. REFERENCE NO.	SHEET NO.
R-2320G	TCP-5



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 12/10/2007 09:55:34 AM

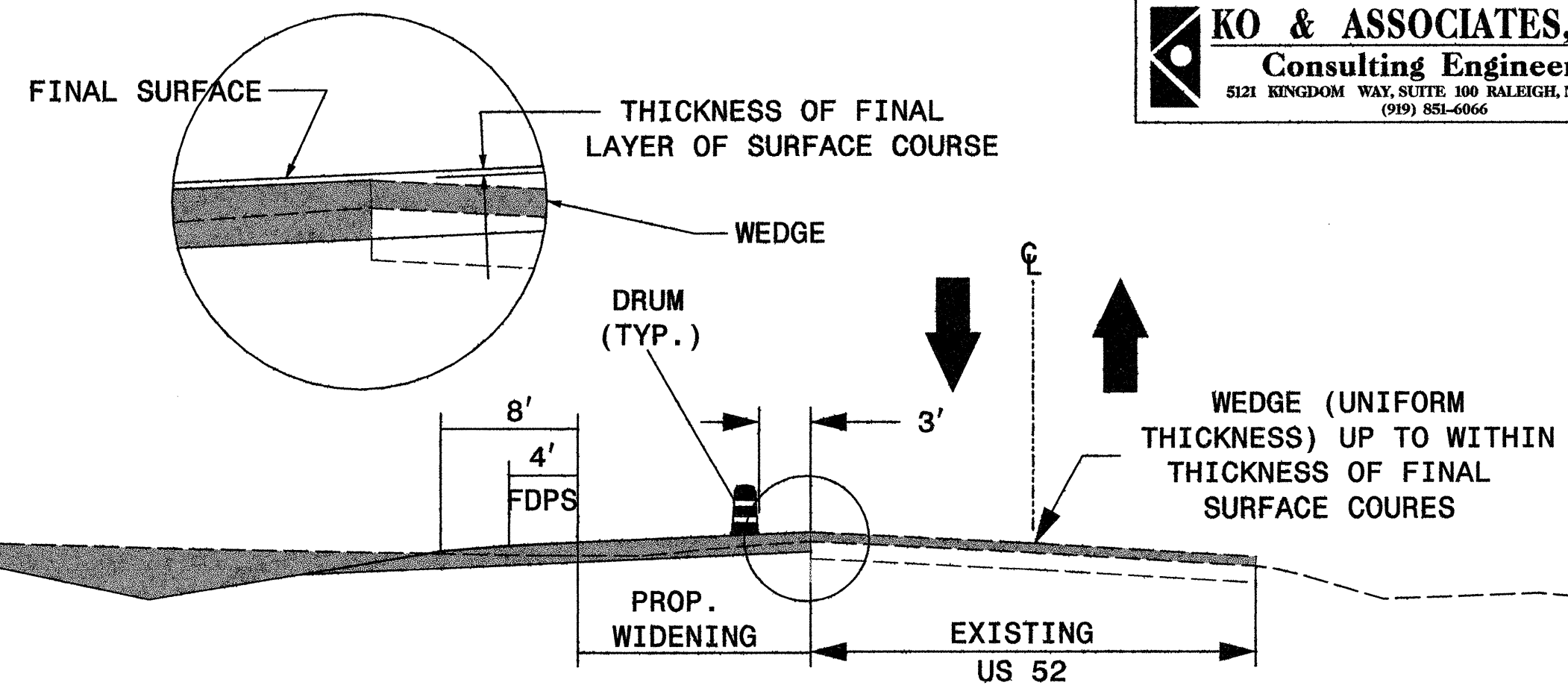
APPROVED: <i>Michael R. Joseph</i> DATE: 1-3-08	<b>PHASE I OVERVIEW</b>	
SEAL 	SCALE: NONE	
	DATE: 12-07	
	DWG. BY: B.L.M.	
	DESIGN BY: G.E.P.	
REVIEWED BY: M.S.A.	REVISIONS	CADD FILE

# PHASE I OVERVIEW



APPROVED: <i>Michael T. Kieper</i> DATE: 1-3-08	<b>PHASE I OVERVIEW (CONT'D)</b>	
	SCALE: NONE	
	DATE: 12-07	
	DWG. BY: B.L.M.	
	DESIGN BY: G.E.P.	
REVIEWED BY: M.S.A.	REVISIONS	



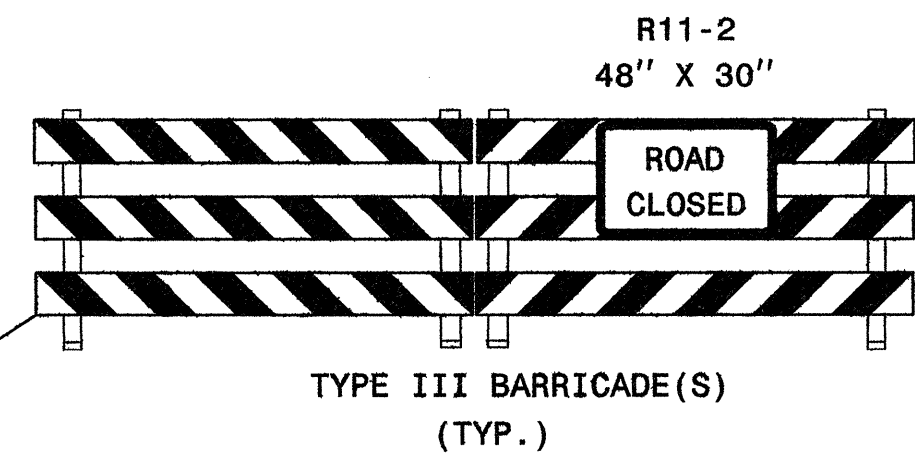
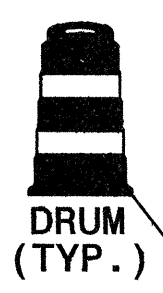


**TYPICAL SECTION A-A'**  
 (-L REV.- STA. 40+00 ±)

35  
 BEGIN TIP STATE PROJECT R-2320G  
 -L- STA. 34+50  
 BEGIN CONSTRUCTION  
 -L- STA. 35+00  
 -L- STA. 36+65.28 LB  
 -L REV.- STA. 36+65.28 LA

-L REV.- STA. 46+74.27 =  
 -Y- STA. 9+41.69

-L- STA. 41+50±



-L-, US 52

BREAK LINE  
 SEE SHEET TCP-8

EXIST. US 52

-Y-  
 US 52 BUS.

10

-Y- STA. 11+50±

15

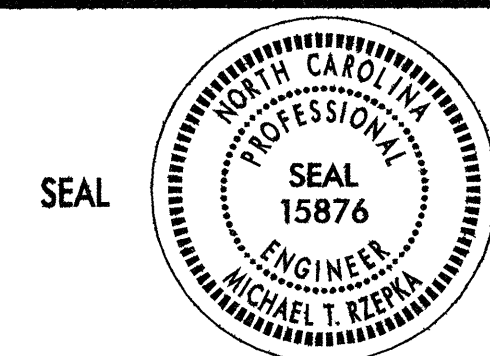
55'± (TYP.)  
 -Y- STA. 18+50±  
 END CONSTRUCTION

-Y-, US 52 BUS.

MATCH LINE  
 THIS SHEET

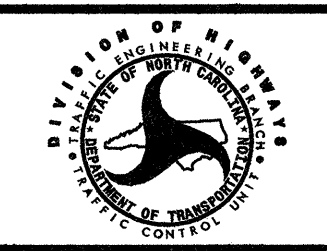
MATCH LINE  
 THIS SHEET

APPROVED: *Michael T. Remy* DATE: 12-08



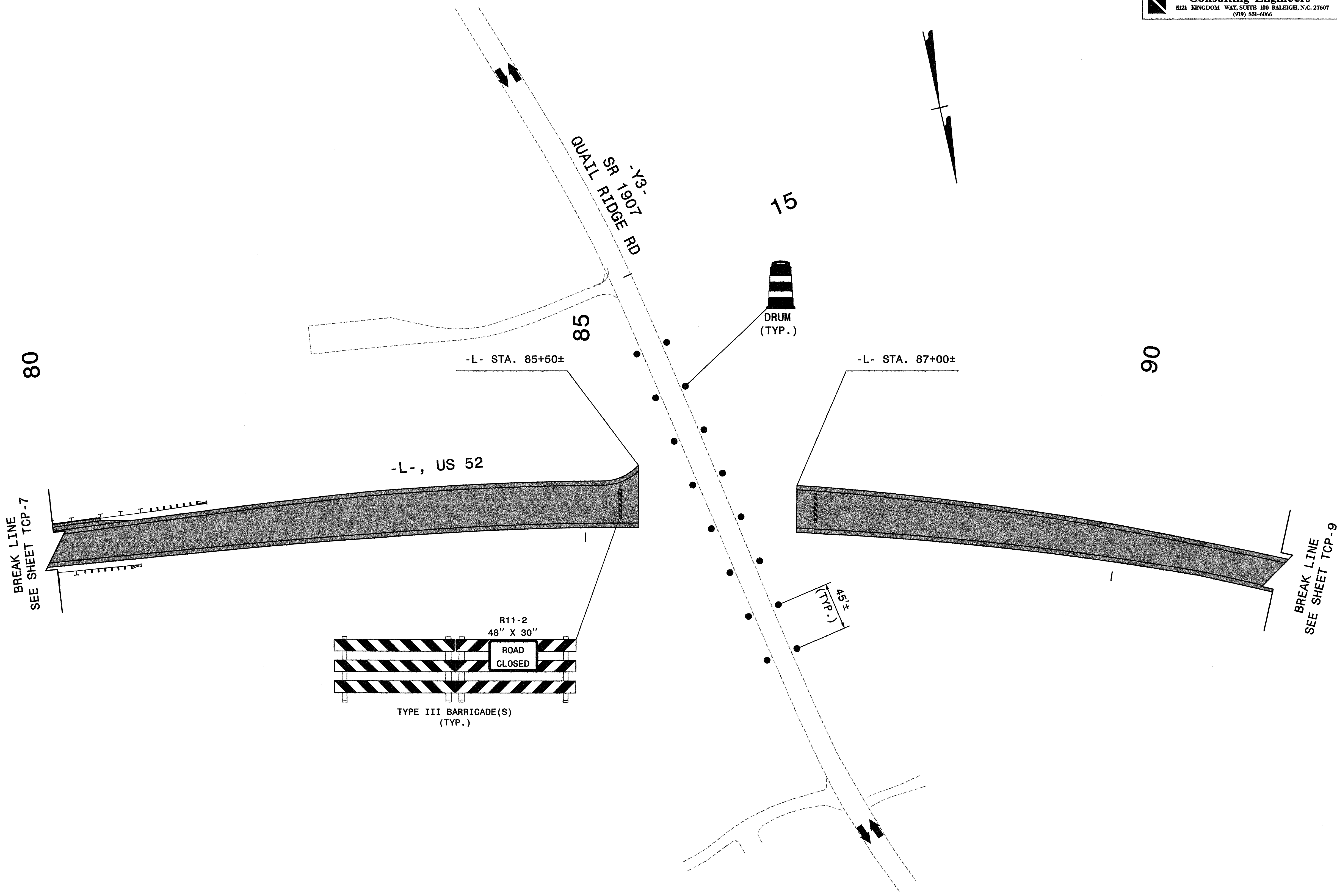
PHASE I, DETAIL 1

SCALE: NONE  
 DATE: 12-07  
 DWG. BY: G.E.P.  
 DESIGN BY: G.E.P.  
 REVIEWED BY: M.T.R.



REVISIONS	

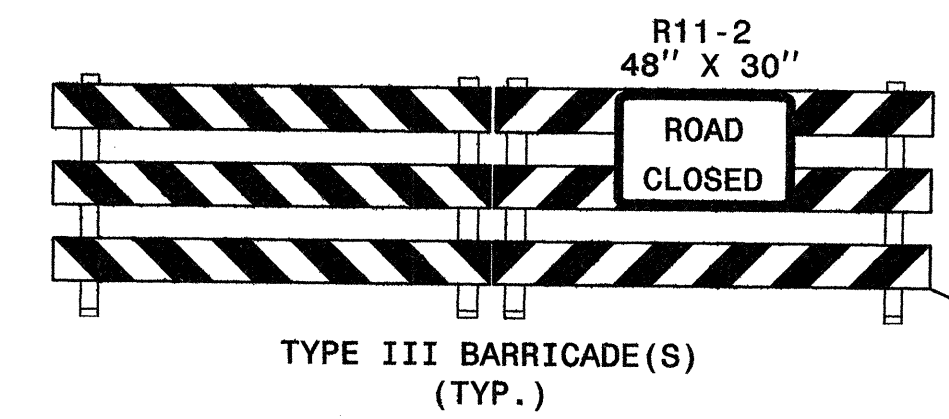
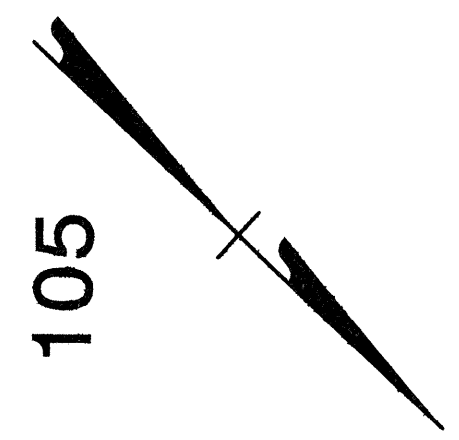
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 12/10/2007 09:25:41 AM



APPROVED: <i>Michael T. Wierpa</i> DATE: 1-3-08	<b>PHASE I, DETAIL 1 (CONT'D)</b>								
SEAL  SEAL 15876 MICHAEL T. WIERPA ENGINEER NORTH CAROLINA	SCALE: NONE	 DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA TRANSPORTATION							
	DATE: 12-07		<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS					
	REVISIONS								
DWG. BY: G.E.P.	<table border="1"> <tr> <td>CADD FILE</td> </tr> </table>	CADD FILE							
CADD FILE									
DESIGN BY: G.E.P.									
REVIEWED BY: M.T.R.									

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 12/10/2007 09:51:34 AM





TYPE III BARRICADE(S)  
(TYP.)

100  
-L- STA. 100+50±

-L- STA. 102+00±

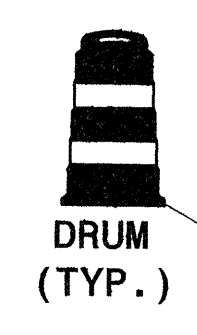
-L-, US 52

BREAK LINE  
SEE SHEET TCP-10

BREAK LINE  
SEE SHEET TCP-8

-L-, US 52

-Y4- STA. 15+00±  
15



DRUM  
(TYP.)

SR 2

15

-SR 2 STA. 17+55±

-Y4-  
SR 1906  
SOUTHSIDE RD.

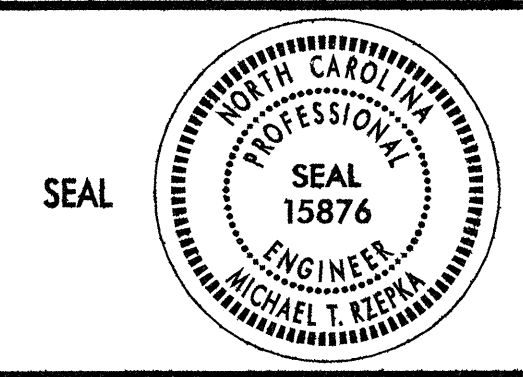
-Y4- STA. 15+60±  
SR 2 STA. 10+00±

45±  
(TYP.)

-Y4- STA. 21+00±

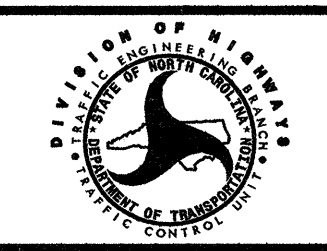
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APPROVED: *Michael T. Keenan* DATE: 12-07

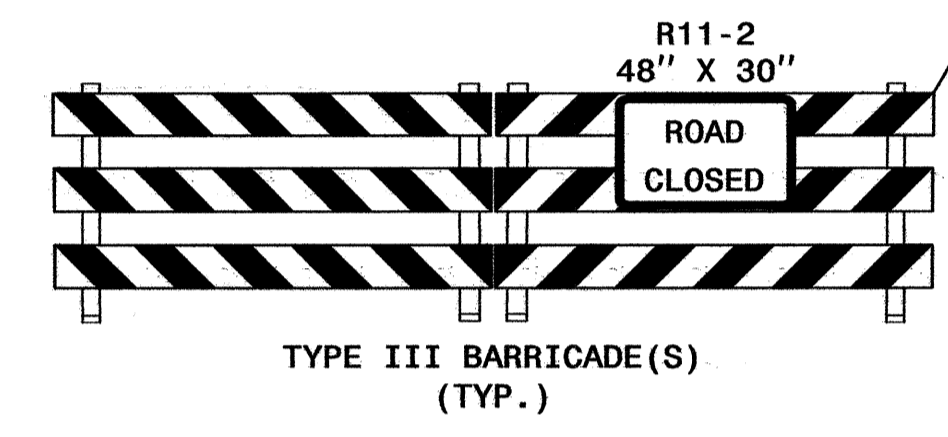
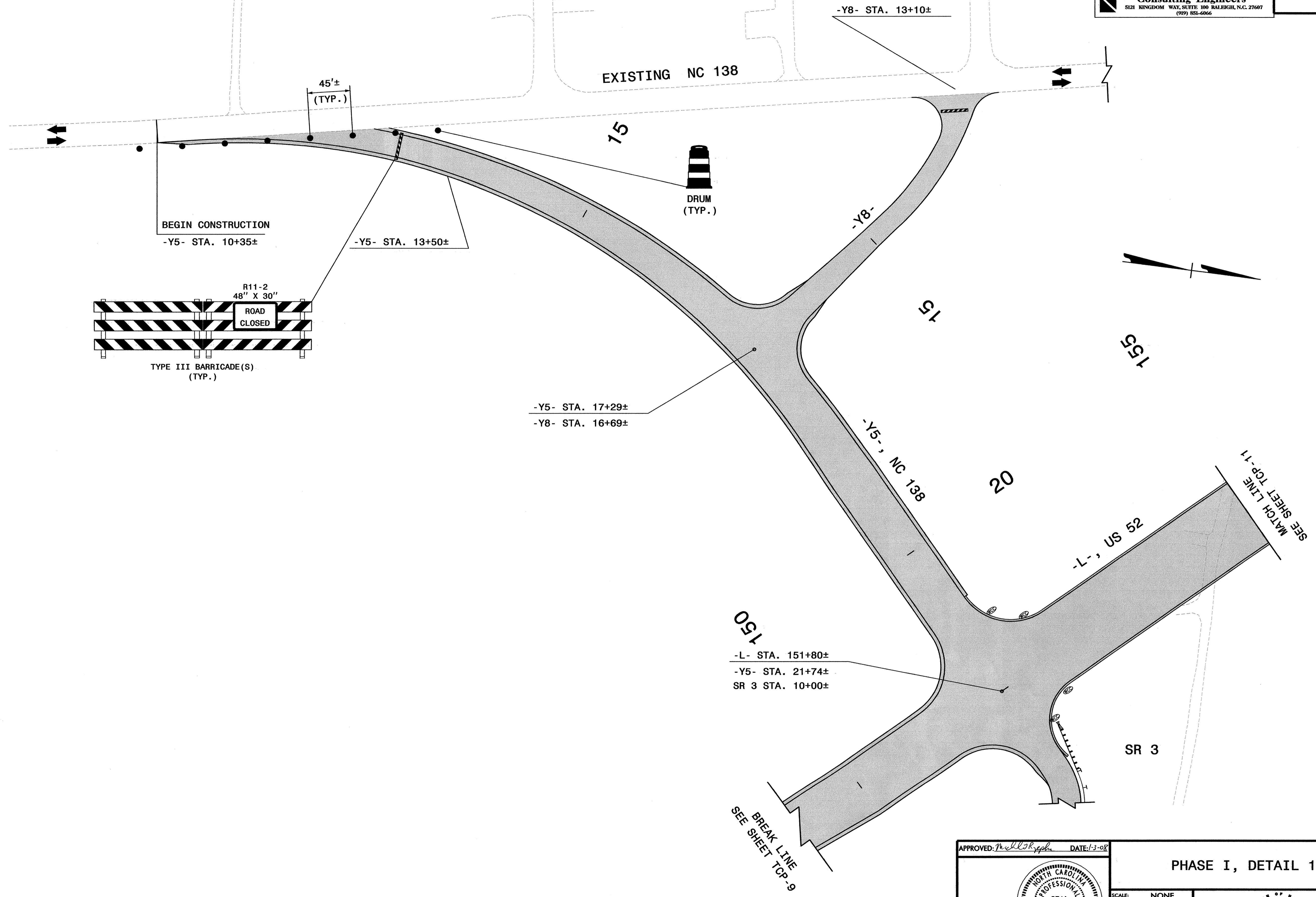


PHASE I, DETAIL 1 (CONT'D)

SCALE: NONE  
 DATE: 12-07  
 DWG. BY: G.E.P.  
 DESIGN BY: G.E.P.  
 REVIEWED BY: M.T.R.



REVISIONS



-Y5- STA. 17+29±  
 -Y8- STA. 16+69±

-L- STA. 151+80±  
 -Y5- STA. 21+74±  
 SR 3 STA. 10+00±

APPROVED: *Michael T. Rzepka* DATE: 1-3-08

SEAL

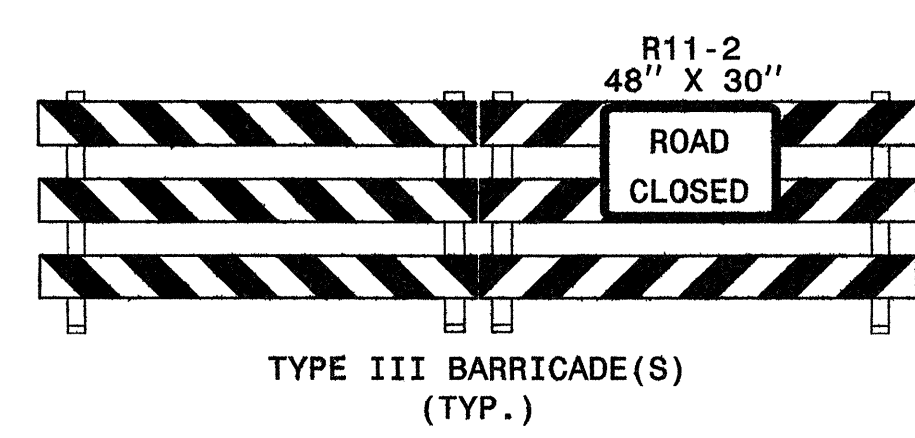
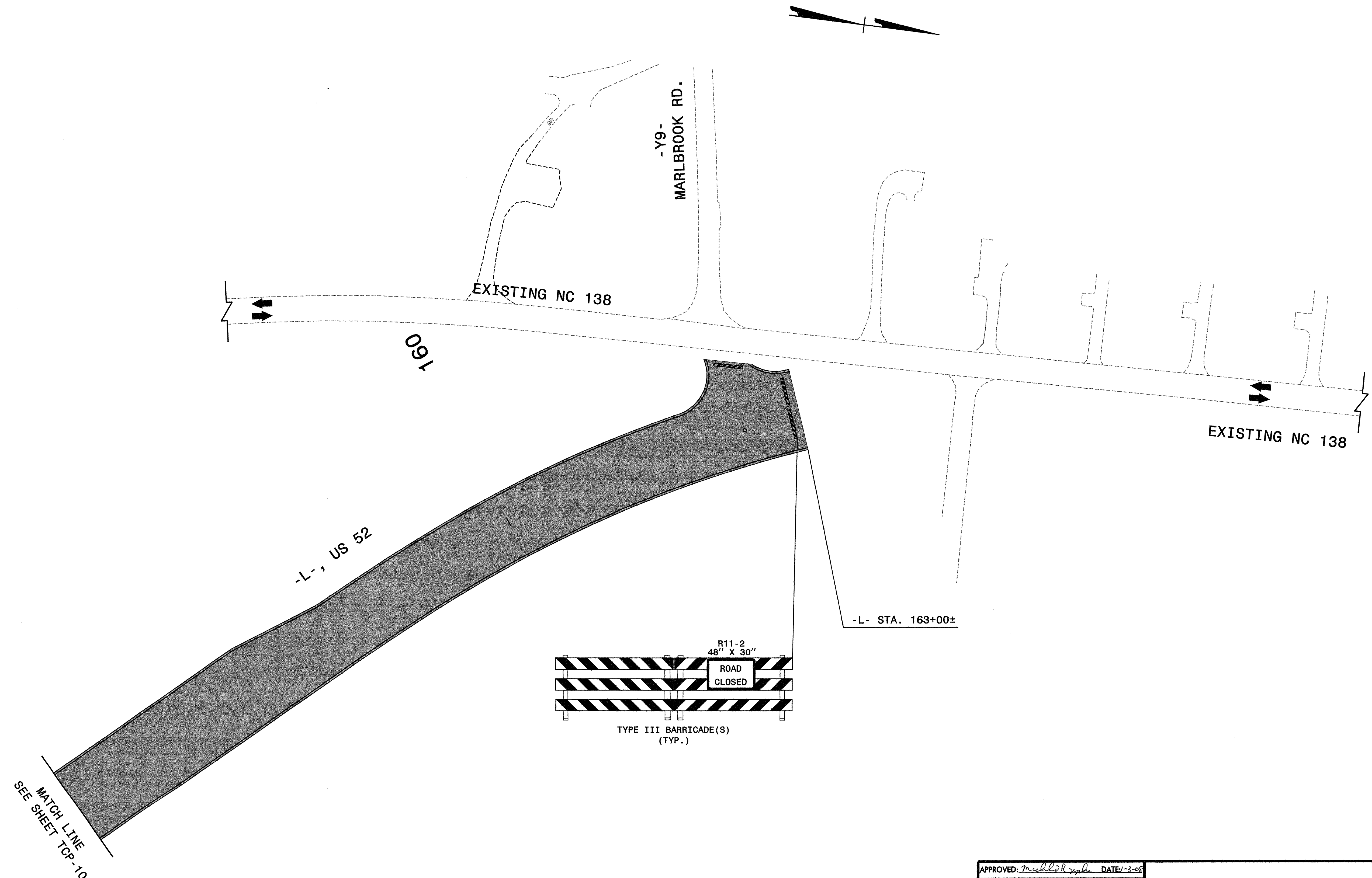
**PHASE I, DETAIL 1 (CONT'D)**

SCALE: NONE		REVISIONS _____ _____ _____ _____ _____
DATE: 12-07		
DWG. BY: G.E.P.		
DESIGN BY: G.E.P.		
REVIEWED BY: M.T.R.		

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 12/11/2007 10:27:59 AM



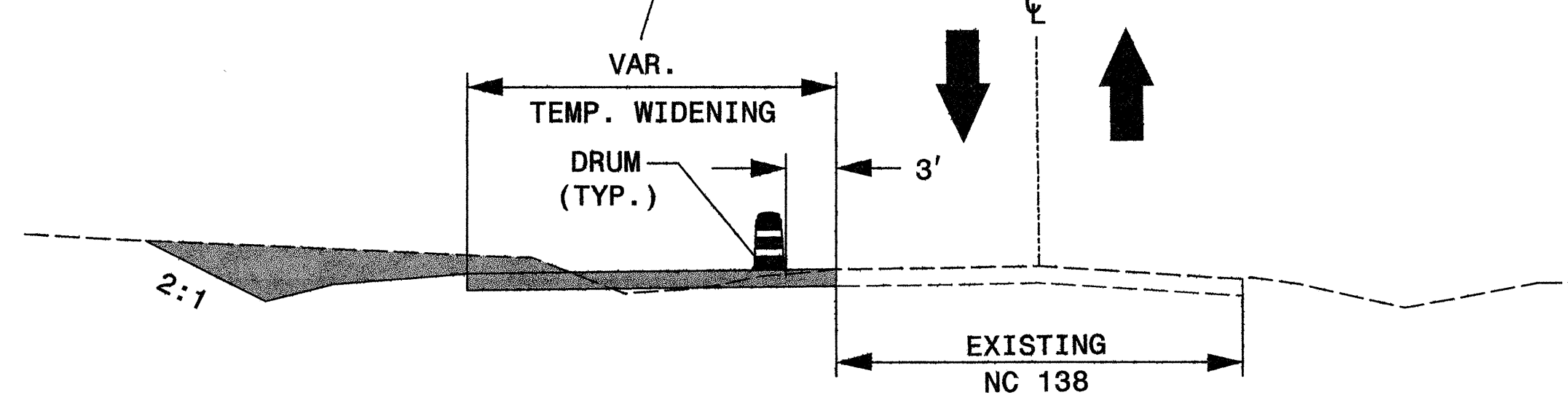


MATCH LINE  
 SEE SHEET TCP-10

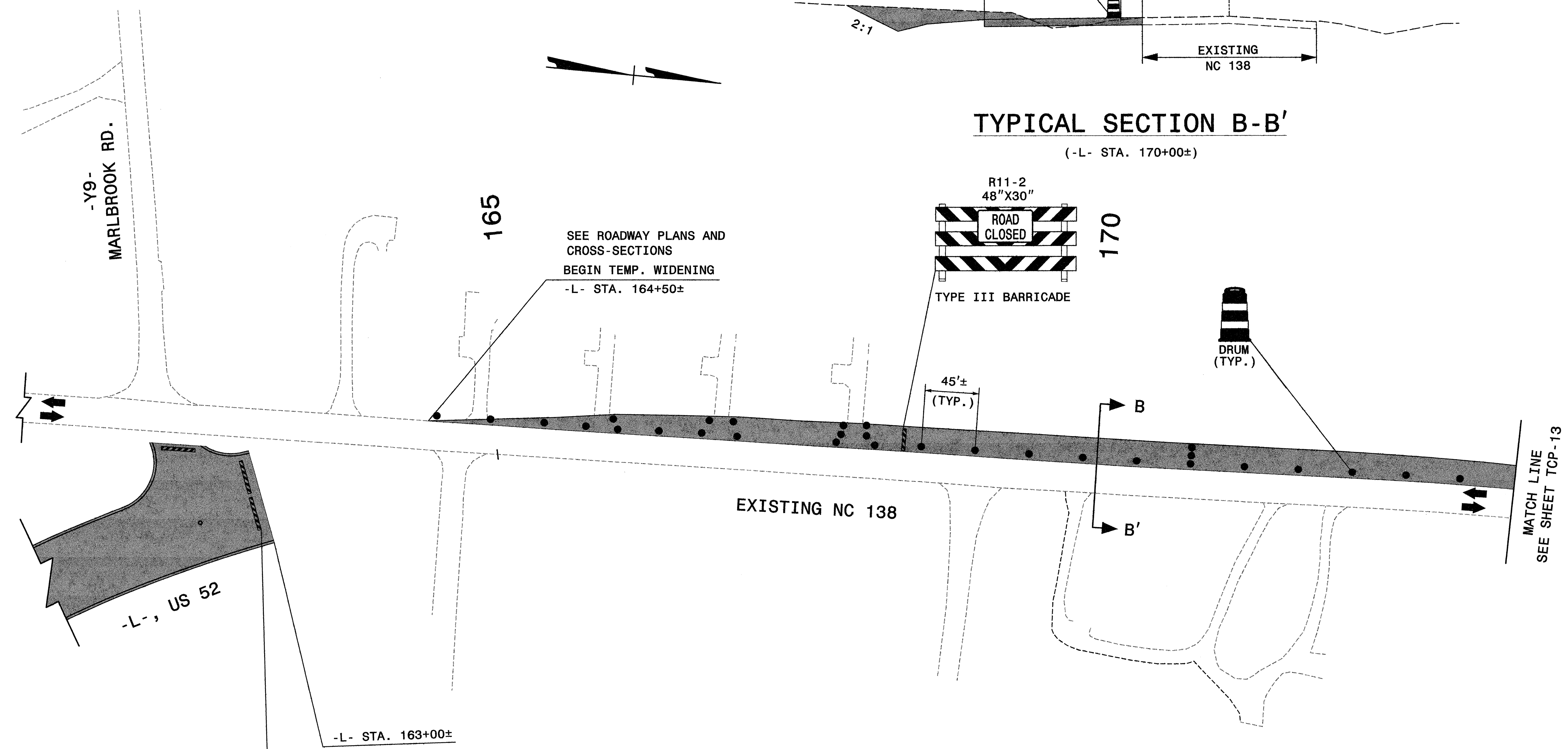
APPROVED: <i>Michael T. Kewka</i> DATE: 12-3-07	<b>PHASE I, DETAIL 1 (CONT'D)</b>	
	SCALE: NONE	
	DATE: 12-07	
	DWG. BY: G.E.P.	
	DESIGN BY: G.E.P.	
REVIEWED BY: M.T.R.	REVISIONS	

P:\T\F\2320g\_kov\2320gTrafficControl\TCP\001\h-2320g\_top1\_ph\_def.dgn  
 12/11/2007 10:42:03 AM

SEE ROADWAY PLANS AND CROSS-SECTIONS



**TYPICAL SECTION B-B'**  
 (-L- STA. 170+00±)



-Y9-  
MARLBROOK RD.

165

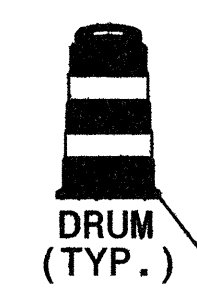
SEE ROADWAY PLANS AND CROSS-SECTIONS  
 BEGIN TEMP. WIDENING  
 -L- STA. 164+50±

R11-2  
48" X 30"



TYPE III BARRICADE

170



DRUM  
(TYP.)

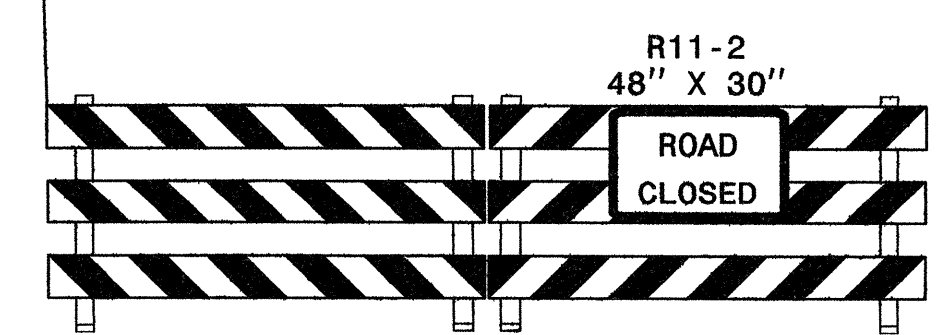
45'±  
(TYP.)

EXISTING NC 138

MATCH LINE  
 SEE SHEET TCP-13

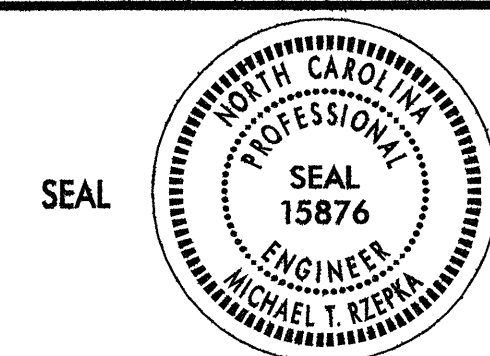
-L-, US 52

-L- STA. 163+00±



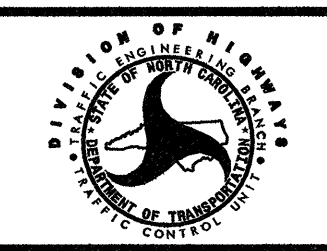
TYPE III BARRICADE(S)  
(TYP.)

APPROVED: *Michael T. Rzepka* DATE: 1-3-08



**PHASE I, DETAIL 2**

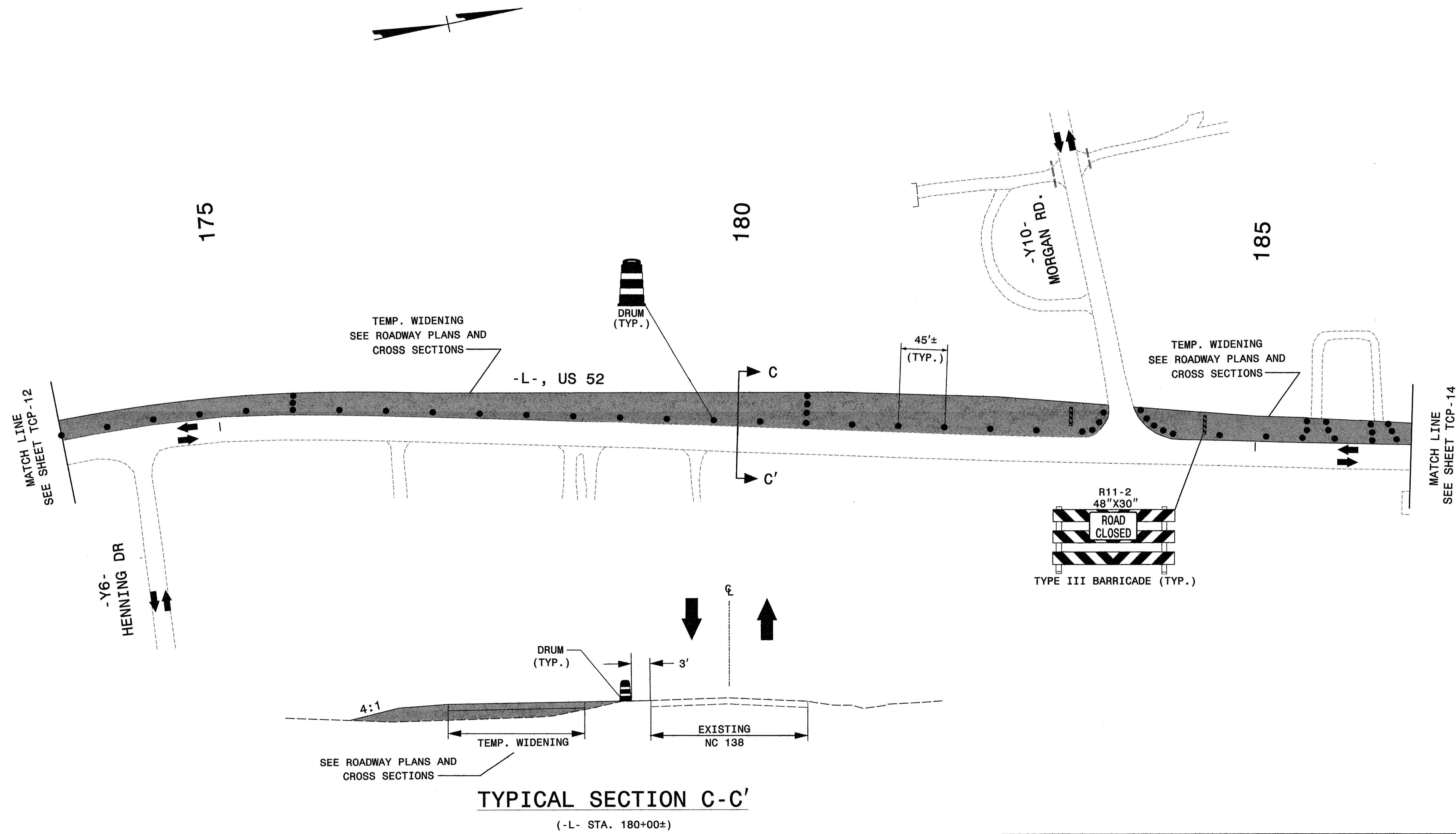
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 DATE: 12-07  
 DWG. BY: G.E.P.  
 DESIGN BY: G.E.P.  
 REVIEWED BY: M.T.R.



REVISIONS

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 12/10/2007 03:56:03 PM



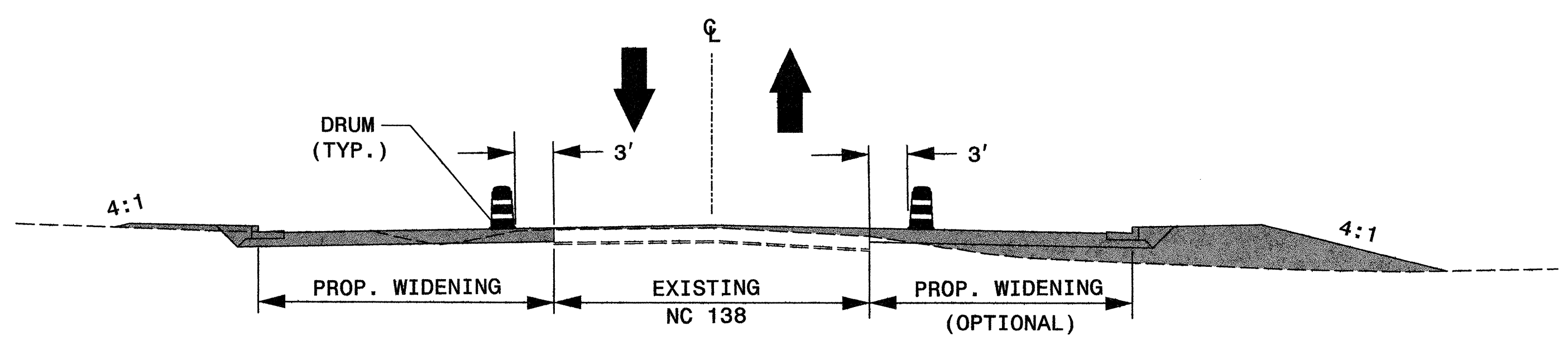
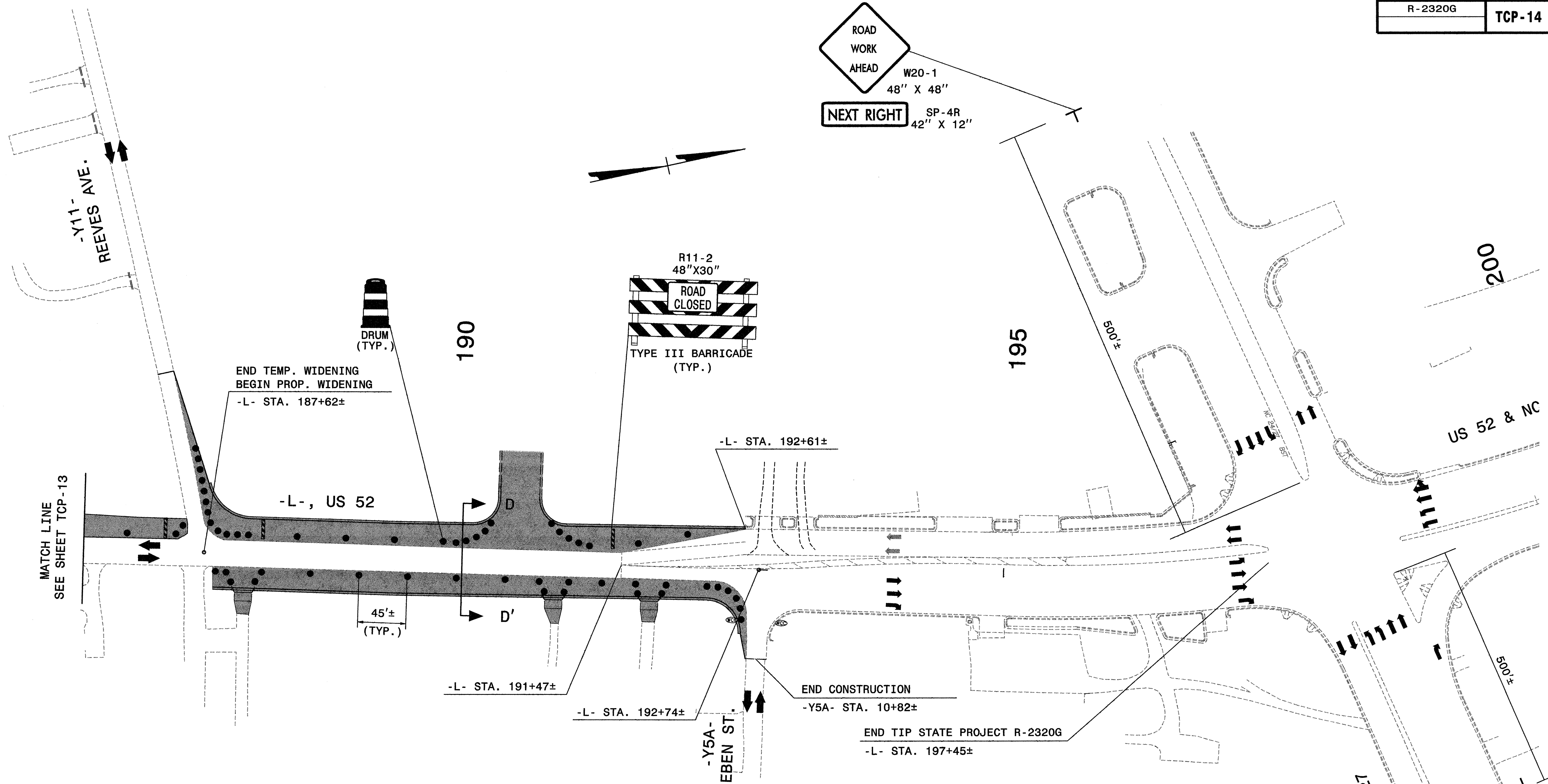


APPROVED: *Michael T. Rzepka* DATE: 1-3-08

**PHASE I, DETAIL 2 (CONT'D)**

SEAL 	SCALE: NONE		REVISIONS
	DATE: 12-07		
	DWG. BY: G.E.P.		
	DESIGN BY: G.E.P.		
REVIEWED BY: M.T.R.			CADD FILE:

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 12/11/2007 10:52:47 AM



**TYPICAL SECTION D-D'**  
(-L- STA. 190+00±)

APPROVED: *M. T. R.* DATE: 1-3-08

SEAL  
  
 MICHAEL T. REPPA  
 ENGINEER  
 NO. 15876  
 STATE OF NORTH CAROLINA

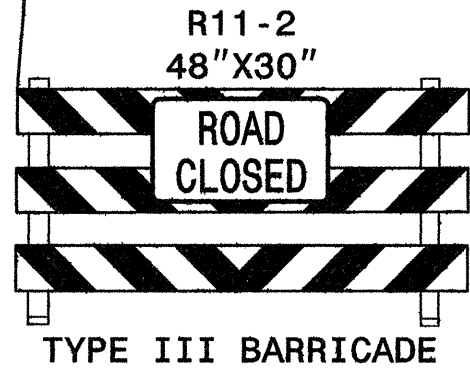
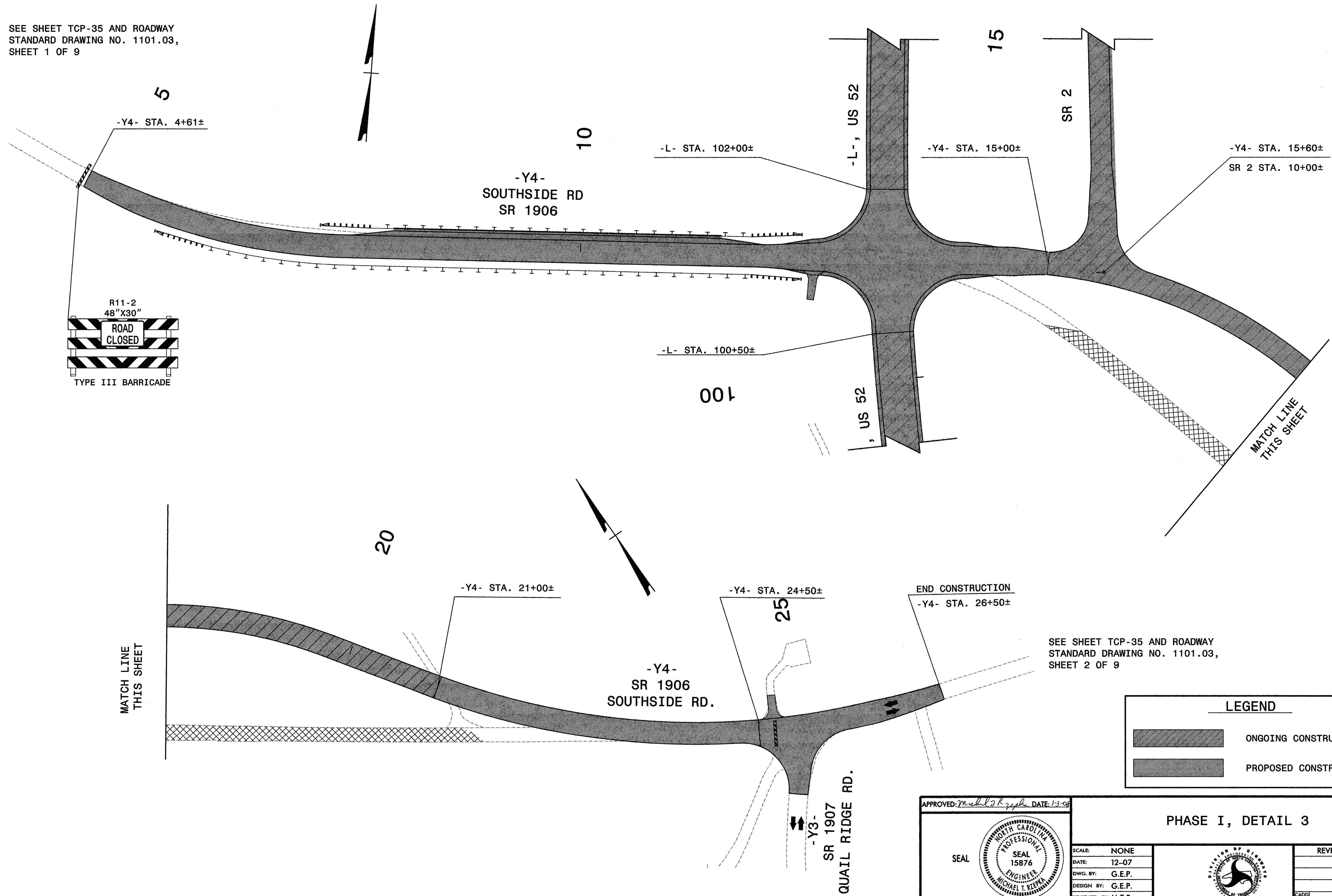
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SCALE:	NONE		
DATE:	12-07		
DWG. BY:	G.E.P.		
DESIGN BY:	G.E.P.		
REVIEWED BY:	M.T.R.		
CADD FILE:			

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 12/11/2007 10:54:08 AM

Plans prepared by:  
**KO & ASSOCIATES, P.C.**  
 Consulting Engineers  
 321 KINGDOM WAY, SUITE 8100  
 RALEIGH, N.C. 27607  
 For Division of Highways



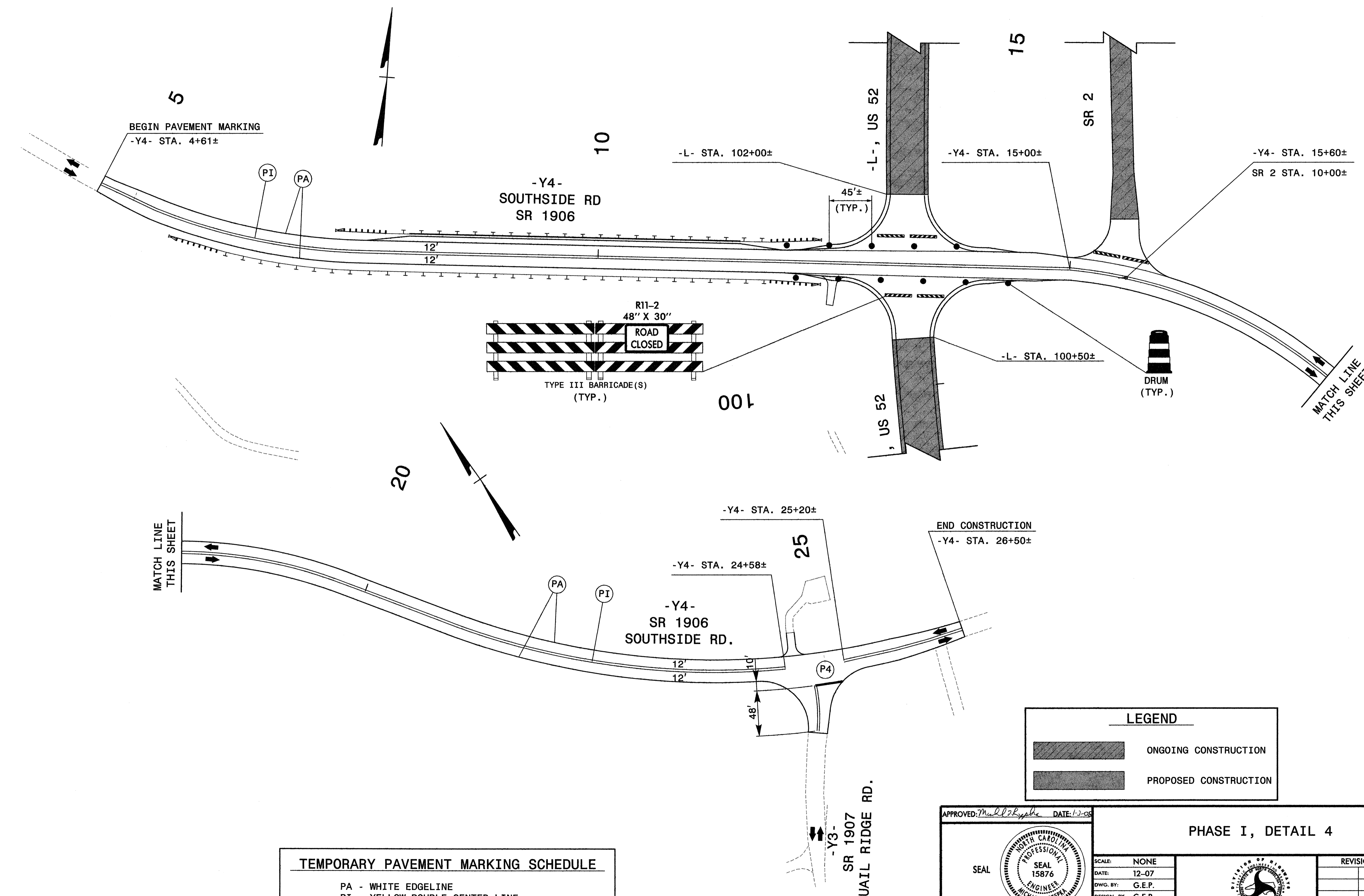
SEE SHEET TCP-35 AND ROADWAY  
 STANDARD DRAWING NO. 1101.03,  
 SHEET 1 OF 9



LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

APPROVED: <i>Michael T. Rizka</i> DATE: 12-07-07	<b>PHASE I, DETAIL 3</b>	
SEAL 		
SCALE: NONE		REVISIONS
DATE: 12-07		
DWG. BY: G.E.P.		
DESIGN BY: G.E.P.		
REVIEWED BY: M.T.R.		CADD FILE

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 12/10/2007 04:44:20 PM



MATCH LINE  
THIS SHEET

MATCH LINE  
THIS SHEET

TEMPORARY PAVEMENT MARKING SCHEDULE	
PA	WHITE EDGELINE
PI	YELLOW DOUBLE CENTER LINE
P4	WHITE STOPBAR

LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 1-3-08

SEAL

**PHASE I, DETAIL 4**

SCALE: NONE		REVISIONS
DATE: 12-07		
DWG. BY: G.E.P.		
DESIGN BY: G.E.P.		
REVIEWED BY: M.T.R.		CADD FILE

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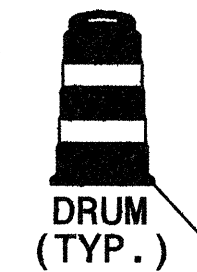


\* QUAIL RIDGE RD. (-Y3-/SR 1907) TO REMAIN CLOSED UNTIL PROPOSED US 52 (-L-) IS OPEN IN PHASE II, STEP 5A.

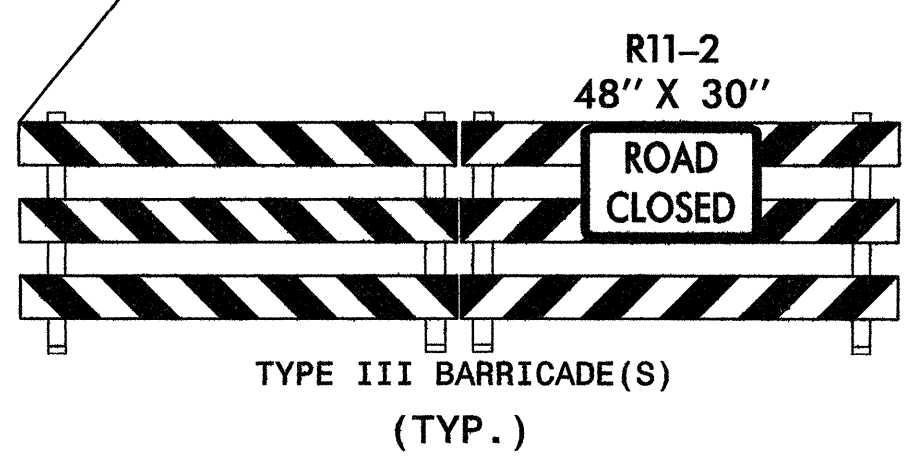
SEE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 1 OF 9

-Y3-  
SR 1907  
QUAIL RIDGE RD

BEGIN CONSTRUCTION  
-Y3- STA. 13+00±



45'±  
(TYP.)



DURING CONSTRUCTION, MAINTAIN ACCESS TO DRIVEWAY. USE DRUMS TO DELINEATE EDGE OF TRAVELWAY UNTIL PAVEMENT HAS BEEN PLACED.

-L- STA. 87+00±

-L- STA. 86+00±

-Y3- STA. 17+59±

-L- STA. 85+50±

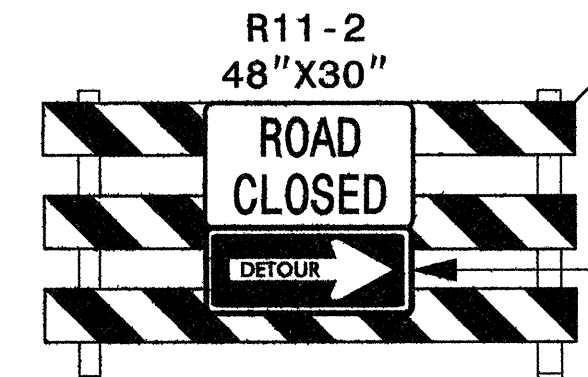
-L- US 52

SEE SIGNING PLANS



W14-2  
30" X 30"

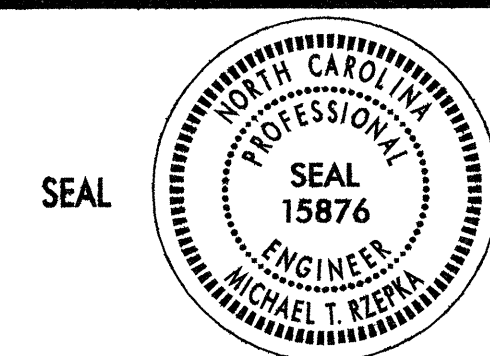
-Y4-  
SR 1906  
SOUTH SIDE RD.



TYPE III BARRICADE (TYP.)

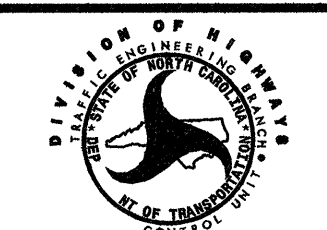
LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

APPROVED: *Michael T. Riemka* DATE: 12-08



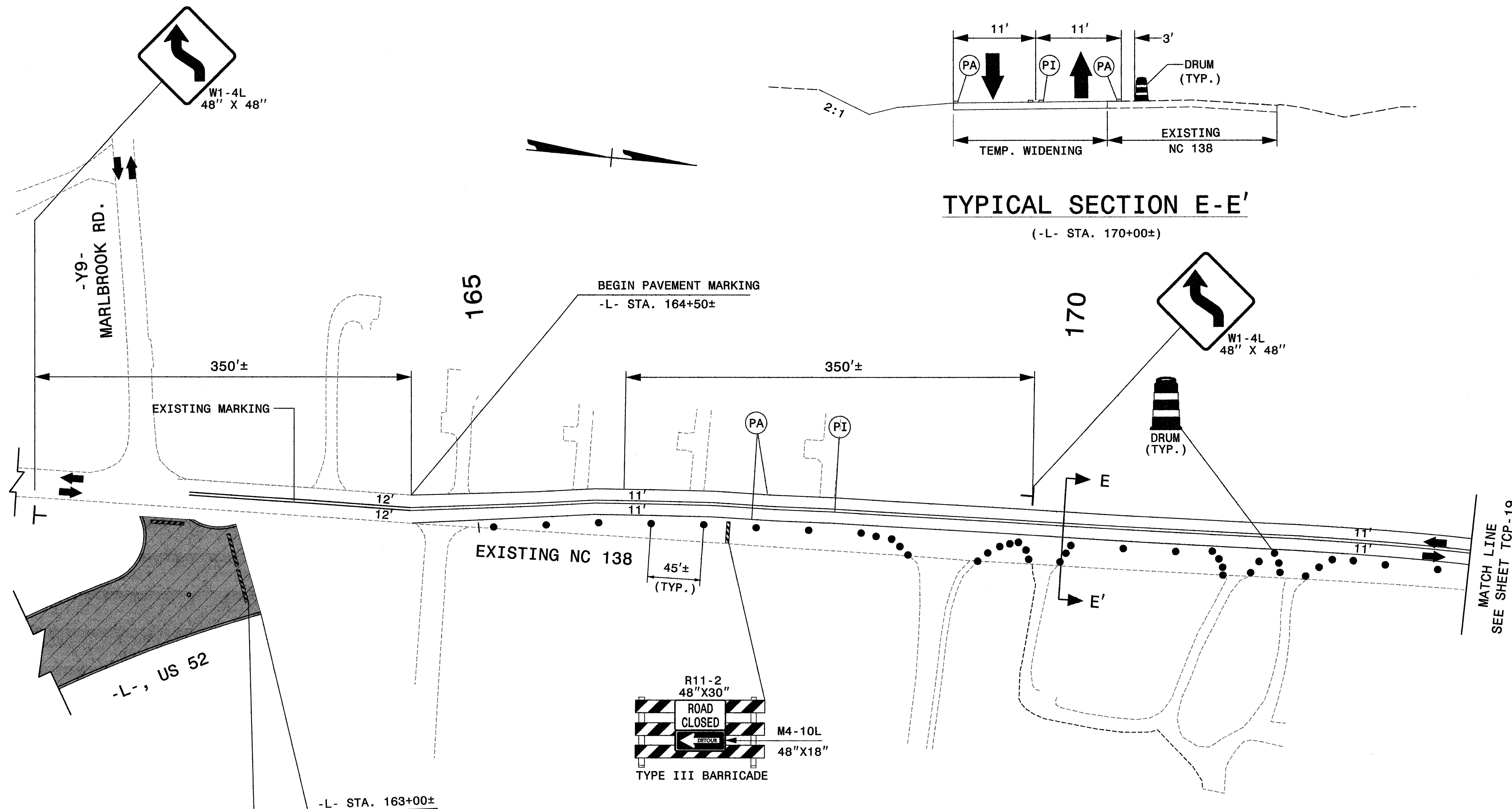
PHASE I, DETAIL 5

SCALE: NONE  
 DATE: 12-07  
 DWG. BY: G.E.P.  
 DESIGN BY: G.E.P.  
 REVIEWED BY: M.T.R.

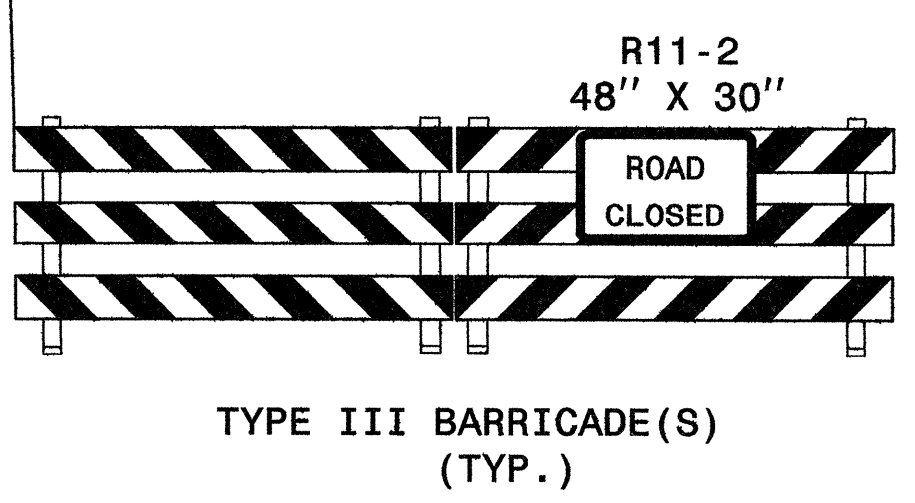
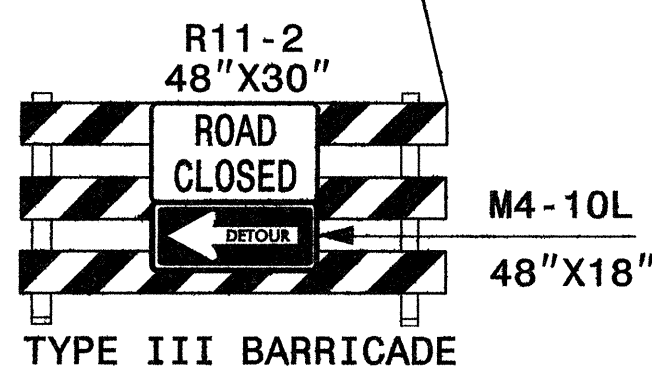


REVISIONS

P:\ATPV\2320g\_kv\2320gTrafficControl\CPV000\R-2320G\_Tcp17\_p1.dwg  
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**TYPICAL SECTION E-E'**  
 (-L- STA. 170+00±)



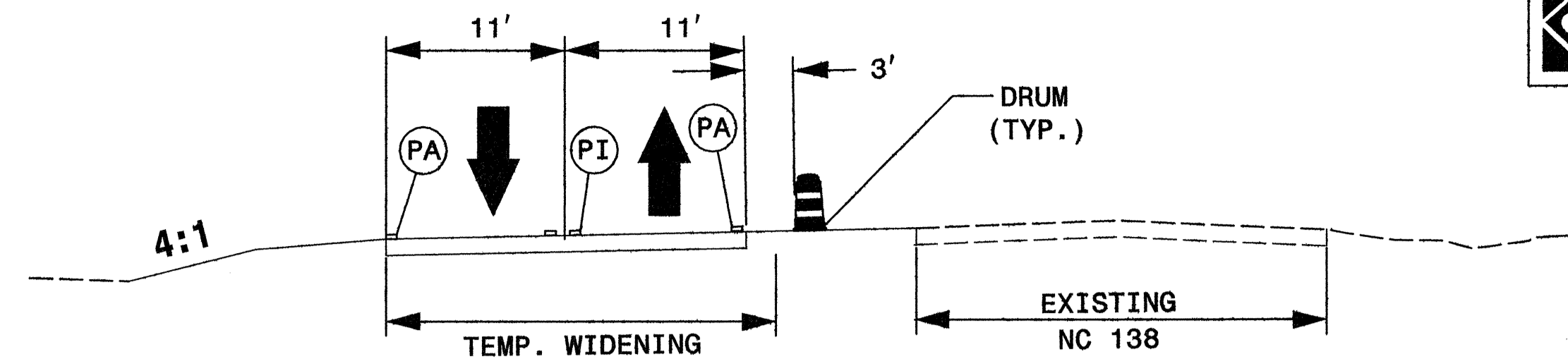
TEMPORARY PAVEMENT MARKING SCHEDULE	
PA	WHITE EDGELINE
PI	YELLOW DOUBLE CENTER LINE

LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

APPROVED: <i>Michael T. Renna</i> DATE: 12-08	<b>PHASE I, DETAIL 6</b>									
SEAL 	SCALE: NONE	REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>								
DATE: 12-07										
DESIGN BY: G.E.P.										
REVIEWED BY: M.T.R.										

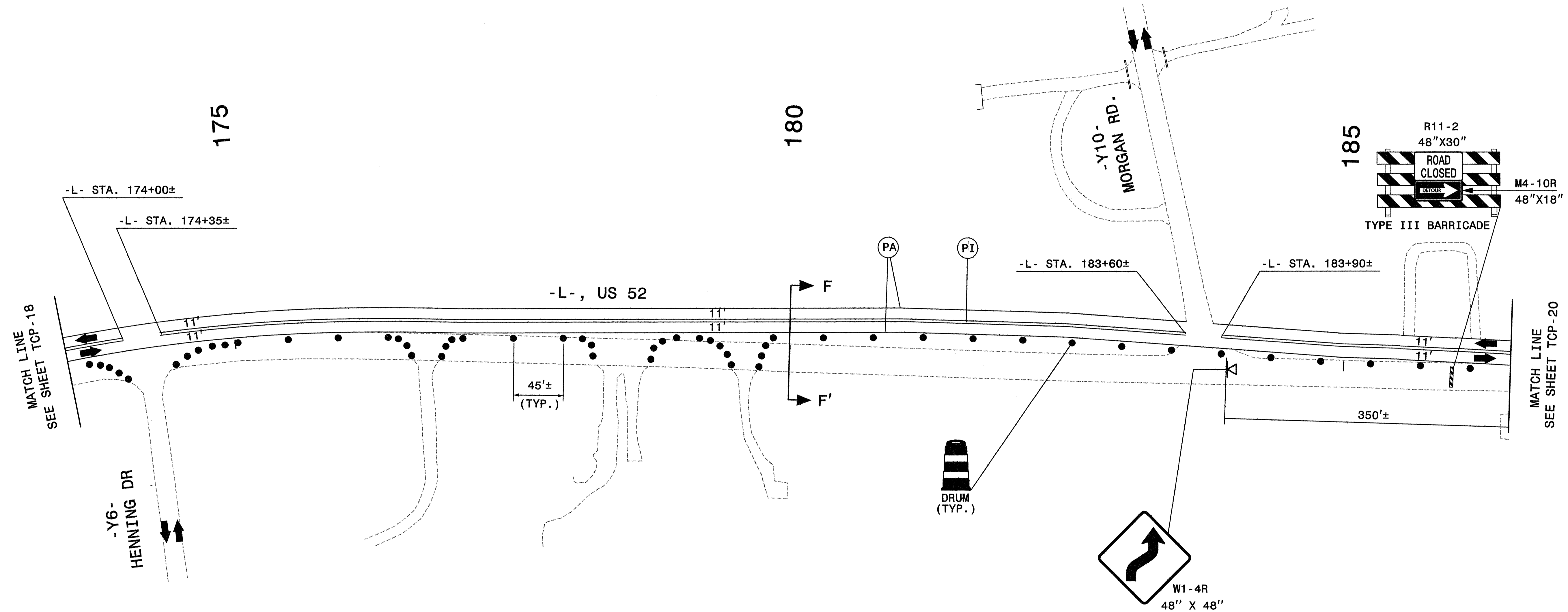
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 12/10/2007 04:44:46 PM





**TYPICAL SECTION F-F'**

(-L- STA. 180+00±)



MATCH LINE  
SEE SHEET TCP-18

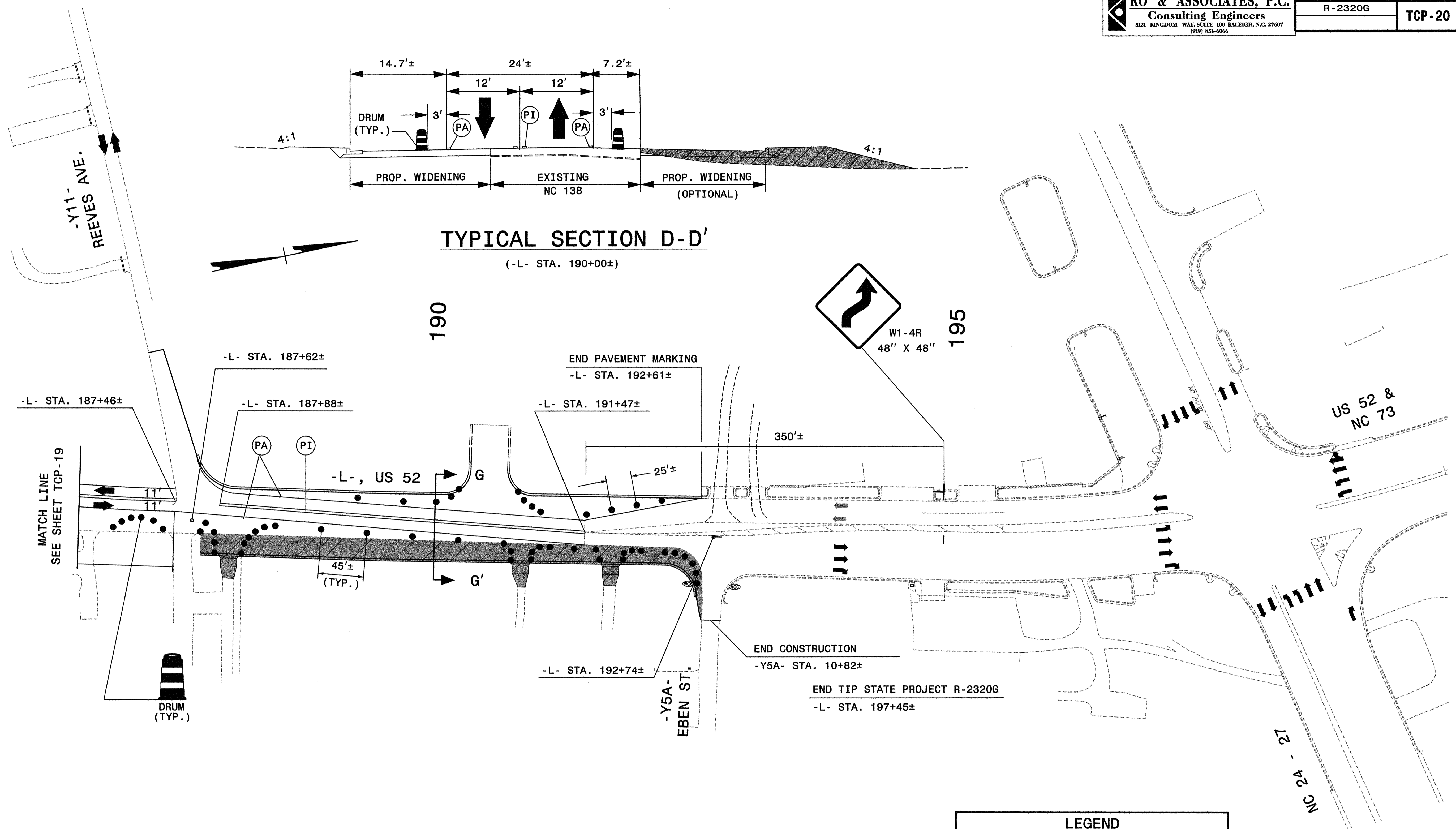
MATCH LINE  
SEE SHEET TCP-20

LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

TEMPORARY PAVEMENT MARKING SCHEDULE	
PA	- WHITE EDGELINE
PI	- YELLOW DOUBLE CENTER LINE

APPROVED: <i>Michael T. Rzepka</i> DATE: 1-3-08	<b>PHASE I, DETAIL 6 (CONT'D)</b>	
SEAL 	SCALE: NONE	
	DATE: 12-07	
	DWG. BY: G.E.P.	
	DESIGN BY: G.E.P.	
REVIEWED BY: M.T.R.	REVISIONS	

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 12/11/2007 11:56:46 AM



**TYPICAL SECTION D-D'**  
 (-L- STA. 190+00±)

END PAVEMENT MARKING  
 -L- STA. 192+61±

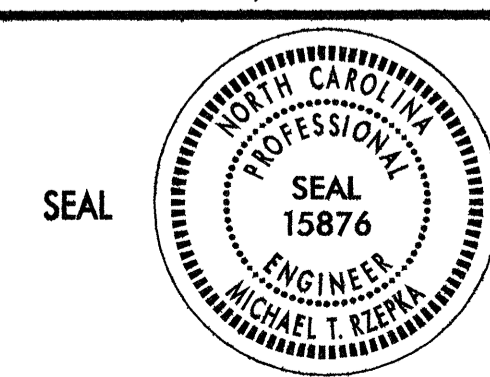
END CONSTRUCTION  
 -Y5A- STA. 10+82±

END TIP STATE PROJECT R-2320G  
 -L- STA. 197+45±

TEMPORARY PAVEMENT MARKING SCHEDULE	
PA	- WHITE EDGELINE
PI	- YELLOW DOUBLE CENTER LINE

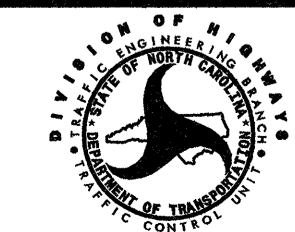
LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

APPROVED: *Michael R. Ryznar* DATE: 1-2-08



**PHASE I, DETAIL 6 (CONT'D)**

SCALE: NONE  
 DATE: 12-07  
 DWG. BY: G.E.P.  
 DESIGN BY: G.E.P.  
 REVIEWED BY: M.T.R.



REVISIONS	

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# PHASE II PHASING

STEP 1: - CONTINUE ALL WORK STARTED IN PHASE I.

STEP 2: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 & 3 OF 9, CONSTRUCT, AS MUCH AS POSSIBLE, UTILIZING A TEMPORARY SLOPE OF 2:1 AS REQUIRED, THE RIGHT SIDE OF PROPOSED US 52/NC 138 (-L-) WIDENING FOR A TWO-LANE SECTION (MINIMUM OF 29') FROM -L- STA. 163+00± TO -L- STA. 192+74±, HENNING DR. (-Y6-), AND EBEN ST. (-Y5A-) (INCLUDING ALL DRIVEWAYS, PROPOSED CURB & GUTTER AND ALL DRAINAGE) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE. (SEE ROADWAY PLANS AND PHASE II, DETAIL 1, SHEETS TCP-24 THRU TCP-26)

- COMPLETE CONSTRUCTION UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE (INCLUDING CURB & GUTTER AND ALL DRAINAGE) IN THE FOLLOWING LOCATIONS WHICH WAS STARTED IN PHASE I, STEP 2:

- L- FROM -L- STA. 151+00± TO -L- STA. 163+00±
- Y5- FROM -Y5- STA. 13+50± TO -Y5- STA. 21+74±
- Y8- FROM -Y8- STA. 13+10± TO -Y8- STA. 16+69±

- PLACE PORTABLE CONCRETE BARRIER (PCB), INTERMEDIATE PAVEMENT MARKING AND MARKERS, AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH TRAFFIC, FOR AN INTERMEDIATE TWO-WAY, TWO-LANE PATTERN ON NEWLY COMPLETED RIGHT SIDE OF PROPOSED US 52(-L-) WIDENING, US 52 (-L-), PROPOSED NC 138 (-Y5-) AND PROPOSED OAKHURST RD. (Y8-) IN THE FOLLOWING LOCATIONS: (REFER TO PHASE II, DETAIL 2, SHEETS TCP-27 THRU TCP-30)

- L- FROM -L- STA. 151+80± TO -L- STA. 192+74±
- Y5- FROM -Y5- STA. 13+50± TO -Y5- STA. 21+74±
- Y8- FROM -Y8- STA. 13+25± TO -Y8- STA. 16+41±

- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 OR ROADWAY STANDARD DRAWING NO. 1101.04, INSTALL AND COVER ALL ROAD CLOSURE AND DETOUR SIGNING AS SHOWN ON SHEET TCP-36

CONTRACTOR SHALL WORK PHASE II, STEPS 3 AND 4 SIMULTANEOUSLY.

STEP 3: - CONSTRUCTION OF PROPOSED MORGAN ROAD (SR 1903/-Y10-)

WORKING IN A CONTINUOUS MANNER, COMPLETE THE WORK OF PHASE II, STEP 3A IN ONE WORK PERIOD.

A. USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 1 & 3 OF 9, COMPLETE CONSTRUCTION OF PROPOSED TIE-INS OF NC 138 (-Y5) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y5- STA. 10+35± TO -Y5- STA. 13+50±, BEGUN IN PHASE I, STEP 2.

PLACE REMAINDER OF TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS ON NEWLY COMPLETED PROPOSED NC 138 (-Y5-), HENNING DRIVE (-Y6-), EBEN ST. (-Y5A-), OAKHURST RD. (-Y8-) AND PROPOSED RIGHT SIDE WIDENING OF US 52 (-L-) FROM -L- STA. 151+00± TO -L- STA. 192+74±, AND SHIFT TRAFFIC TO INTERMEDIATE TRAFFIC PATTERN. (SEE PHASE II, DETAIL 2, SHEETS TCP-27 THRU TCP-30)

SIMULTANEOUSLY, UNCOVER ALL ROAD CLOSURE AND DETOUR SIGNING SHOWN ON SHEET TCP-36 AND USING TYPE III BARRICADES CLOSE MORGAN RD. (-Y10-) AS SHOWN ON SHEET TCP-30.

B. WORKING IN A CONTINUOUS MANNER, CONSTRUCT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE IN THE FOLLOWING LOCATIONS (SEE SHEET TCP-30):

- Y10- FROM STA. 10+75± TO STA. 12+16±
- L- FROM STA. 182+00± TO STA. 187+71±

C. PLACE INTERMEDIATE PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS FOR A TWO-LANE, TWO-WAY PATTERN ON MORGAN RD.

USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, REMOVE PORTABLE CONCRETE BARRIER FROM -L- STA. 182+80± TO -L- STA. 185+30± AND ADJUST PCB TAPER AS SHOWN ON PHASE II, DETAIL 3, SHEET TCP-31.

REMOVE TYPE III BARRICADES AND OPEN MORGAN RD. (SR1903/-Y10-) TO TRAFFIC. (SEE PHASE II, DETAIL 3, SHEET TCP-31)

STEP 4: - BEHIND PCB CONSTRUCT LEFT SIDE WIDENING OF US 52 (-L-) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE FROM -L- STA. 163+00± TO -L- STA. 182+00 (INCLUDING ALL DRIVEWAYS, PROPOSED CURB AND GUTTER AND PROPOSED DRAINAGE). SEE PHASE II, DETAIL 2, SHEETS TCP-28 THRU TCP-30.

- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, CONSTRUCT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS (SEE ROADWAY PLANS AND PHASE II, DETAIL 2, SHEETS TCP-27, TCP-28 AND TCP-30):

- OAKHURST RD. (SR2008/-Y8-) FROM STA. 12+00± TO STA. 13+10±
- TURN-AROUND ON EXISTING NC 138
- CURVE SECTION/ACCESS TO ELM TREE RD. (SR 2010)
- REEVES AVE. (-Y11-) FROM STA. 10+50± TO STA. 12+11±

- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9, CONSTRUCT MARLBROOK DR. (-Y9-) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y9- STA. 15+10± TO -Y9- STA. 17+20±. AT THE END OF EACH DAY'S OPERATION, PLACE AGGREGATE BASE COURSE, INCIDENTAL STONE OR ASPHALT BASE COURSE AND BINDER COURSE TO MAINTAIN ACCESS. USE DRUMS TO DELINEATE THE TRAVEL WAY DURING CONSTRUCTION ON AGGREGATE BASE COURSE/INCIDENTAL STONE AND INTERMEDIATE PAVEMENT MARKINGS (PAINT) ON ASPHALT. (SEE ROADWAY PLANS AND SHEET TCP-28)

- COMPLETE CONSTRUCTION UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE (INCLUDING STRUCTURES, CURB & GUTTER AND ALL DRAINAGE) IN THE FOLLOWING LOCATIONS BEGUN IN PHASE I, STEP 2:

- L REV- FROM -L REV- STA. 41+50± TO -L REV- STA. 74+27±
- L- FROM -L- STA. 74+84± TO -L- STA. 85+50±
- L- FROM -L- STA. 87+00± TO -L- STA. 100+50±
- L- FROM -L- STA. 102+00± TO -L- STA. 151+00±
- SR 2 FROM SR 2 STA. 10+00± TO SR 2 STA. 17+55±
- SR 3 FROM SR 3 STA. 10+00± TO SR 3 STA. 32+25±

- INSTALL END OF ROAD MARKERS FOR PROPOSED TURN-AROUND ON EXISTING NC 138, PERMANENT SIGNS, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT ON ASPHALT AND REMOVABLE TAPE ON STRUCTURES) AND TEMPORARY RAISED PAVEMENT MARKERS, AS MUCH AS POSSIBLE WITHOUT INTERFERING WITH TRAFFIC.

- COMPLETE INSTALLATION OF PROPOSED SIGNALS AT THE INTERSECTIONS OF US 52 (-L-) AND US 52 BUS. (-Y-) AND US 52 (-L-) AND NC 138 (-Y5-) BEGUN IN PHASE I, STEP 2 FOR FINAL TRAFFIC PATTERN. (SEE SIGNAL PLANS AND SHEETS PM-2 AND PM-6)

- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 OF 9 OR ROADWAY STANDARD DRAWING NO. 1101.04, INSTALL AND COVER ALL ROAD CLOSURE AND DETOUR SIGNING AS SHOWN ON SHEETS TCP-32, TCP-33, TCP-34 AND TCP-37.

PHASE I, STEP 3 [CONSTRUCTION OF PROPOSED SOUTHSIDE RD. (-Y4-) AND PROPOSED QUAIL RIDGE RD. (-Y3-)] SHALL BE COMPLETED PRIOR TO BEGINNING STEP 5.

COMPLETE THE WORK REQUIRED OF PHASE II, STEPS 5A & 5B IN 5 CALENDAR DAYS (SEE SPECIAL PROVISIONS AND LIQUIDATED DAMAGES)

STEP 5: - CONSTRUCT PROPOSED -Y- TIE-IN WITH EXISTING US 52 AND OPEN ENTIRE PROJECT TO FINAL TRAFFIC PATTERN ACCORDING TO THE FOLLOWING SEQUENCE:

A. USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 & 3 OF 9,

- CONSTRUCT PROPOSED TIE-IN OF US 52 (-L REV-) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AND PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS FROM -L- STA. 35+00± TO -L REV- STA. 41+50± (SEE SHEET PM-2).

- REMOVE EXISTING PAVEMENT MARKINGS/MARKERS AND PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED PAVEMENT MARKERS ON BOTH SIDES OF PROPOSED US 52 (-L-) FOR FINAL TRAFFIC PATTERN FROM -L- STA. 151+00± TO -L- STA. 192+74±.

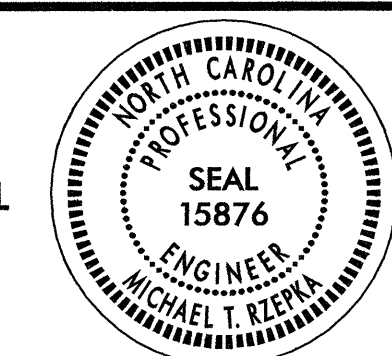

ACTIVATE PROPOSED TRAFFIC SIGNAL AT INTERSECTION OF PROPOSED US 52 (-L-) AND PROPOSED NC 138 (-Y5-) AND OPEN ENTIRE PROJECT TO FINAL TRAFFIC PATTERN (SEE SIGNAL PLANS AND SHEETS PM-2 THRU PM-9).

SIMULTANEOUSLY, UNCOVER ALL ROAD CLOSURE AND DETOUR SIGNING SHOWN ON SHEET TCP-32, TCP-33 AND TCP-37 AND USING TYPE III BARRICADES CLOSE EXISTING US 52 (-Y-). INSTALL AN ADDITIONAL TYPE III BARRICADES AT -Y- STA. 14+90± AND UTILIZING DRUMS DELINEATE THE TRAVEL WAY TO MAINTAIN ACCESS TO DRIVEWAY DURING CONSTRUCTION (SEE SHEET TCP-32). PLACE THE PROPOSED SIGNAL AT THE INTERSECTION OF PROPOSED US 52 (-L-) AND PROPOSED US 52 BUSINESS (-Y-) ON FLASH UNTIL -Y- IS OPENED.

B. CONSTRUCT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE, PLACE TEMPORARY PAVEMENT MARKINGS (PAINT) AND TEMPORARY RAISED MARKERS FROM -Y- STA. 11+50± TO -Y- STA. 18+50± (SEE SHEET TCP-32), ACTIVATE THE PROPOSED SIGNAL AT THE INTERSECTION OF PROPOSED US 52 (-L-) AND PROPOSED US 52 BUSINESS (-Y-) AND OPEN PROPOSED -Y- TO TRAFFIC (SEE ROADWAY PLANS, SIGNAL PLANS AND SHEET PM-2).

STEP 6: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1 & 3 OF 9, COMPLETE CONSTRUCTION OF REMAINDER OF PROJECT (SEE ROADWAY PLANS)

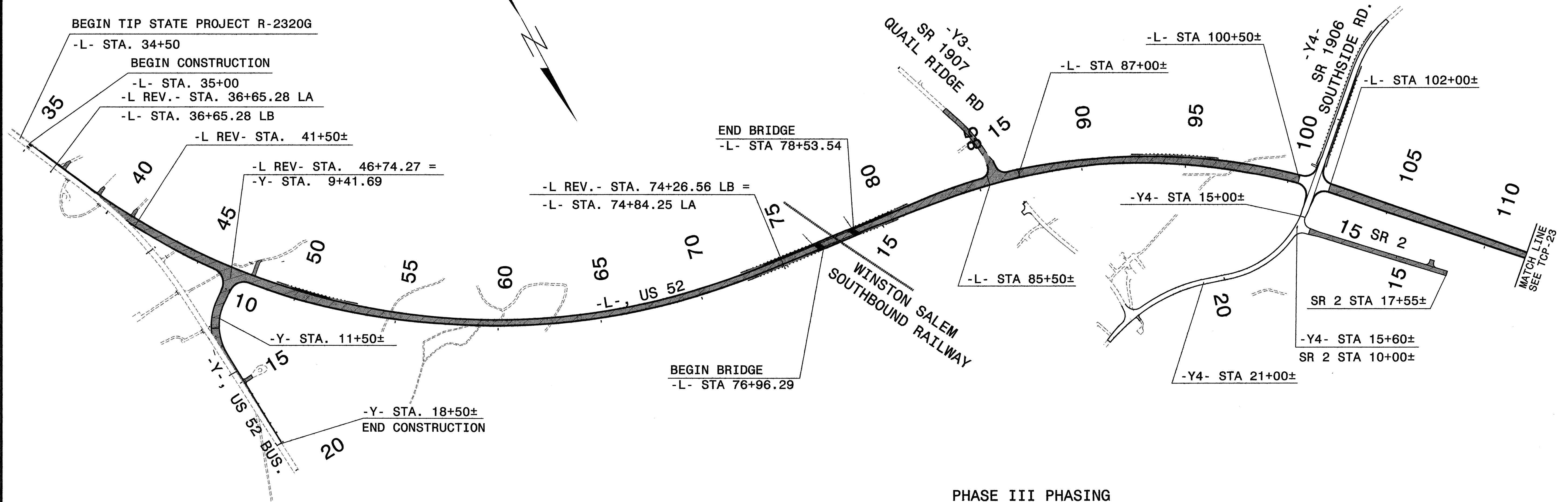
STEP 7: - USING TYPE III BARRICADES, CLOSE -Y4- (SR 1906, SOUTHSIDE RD.) BETWEEN -Y4- STA. 28+25± AND -Y4- STA. 33+50±. REMOVE EXISTING -Y4- (SR 1906, SOUTHSIDE RD.) PAVEMENT AND CONSTRUCT PROPOSED TURN-AROUNDS, INCLUDING END OF ROAD MARKERS, AS SHOWN IN ROADWAY PLANS.

APPROVED: <i>Michael R. Zappa</i> DATE: 1-3-08		<b>PHASE II PHASING</b>	
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	DWG. BY: G.E.P.		
	DESIGN BY: G.E.P.		
	REVIEWED BY: M.T.R.		CADD FILE

# PHASE II OVERVIEW

**KO & ASSOCIATES, P.C.**  
 Consulting Engineers  
 5121 KINGDOM WAY, SUITE 100 RALEIGH, N.C. 27607  
 (919) 851-6066

PROJ. REFERENCE NO.	SHEET NO.
R-2320G	TCP-22



## PHASE III PHASING

- STEP 1:**
- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 1, 3 & 5 OF 9:
  - PLACE FINAL LAYER OF SURFACE COURSE ON PROPOSED US 52 (-L-/-L REV.-), ALL -Y- LINES AND BOTH SERVICE ROADS. (SEE ROADWAY PLANS)
  - RESURFACE EXISTING NC 138 (-L-) FROM END OF THE PROJECT TO THE BEGINNING OF THE EXISTING CONCRETE ISLAND TO COVER THE EXISTING PAVEMENT MARKINGS.
  - PLACE FINAL PAVEMENT MARKINGS (POLYUREA) AND INSTALL PERMANENT RAISED MARKERS ON US 52 (-L-/-L REV.-), ALL -Y- LINES AND BOTH SERVICE ROADS (SEE SHEETS PM-1 THRU PM-9).
  - OPEN US 52 (-L-/-L REV.-), ALL -Y- LINES AND BOTH SERVICE ROADS (SEE SHEETS PM-1 THRU PM-9).
- STEP 2:**
- REMOVE ALL TRAFFIC CONTROL DEVICES.

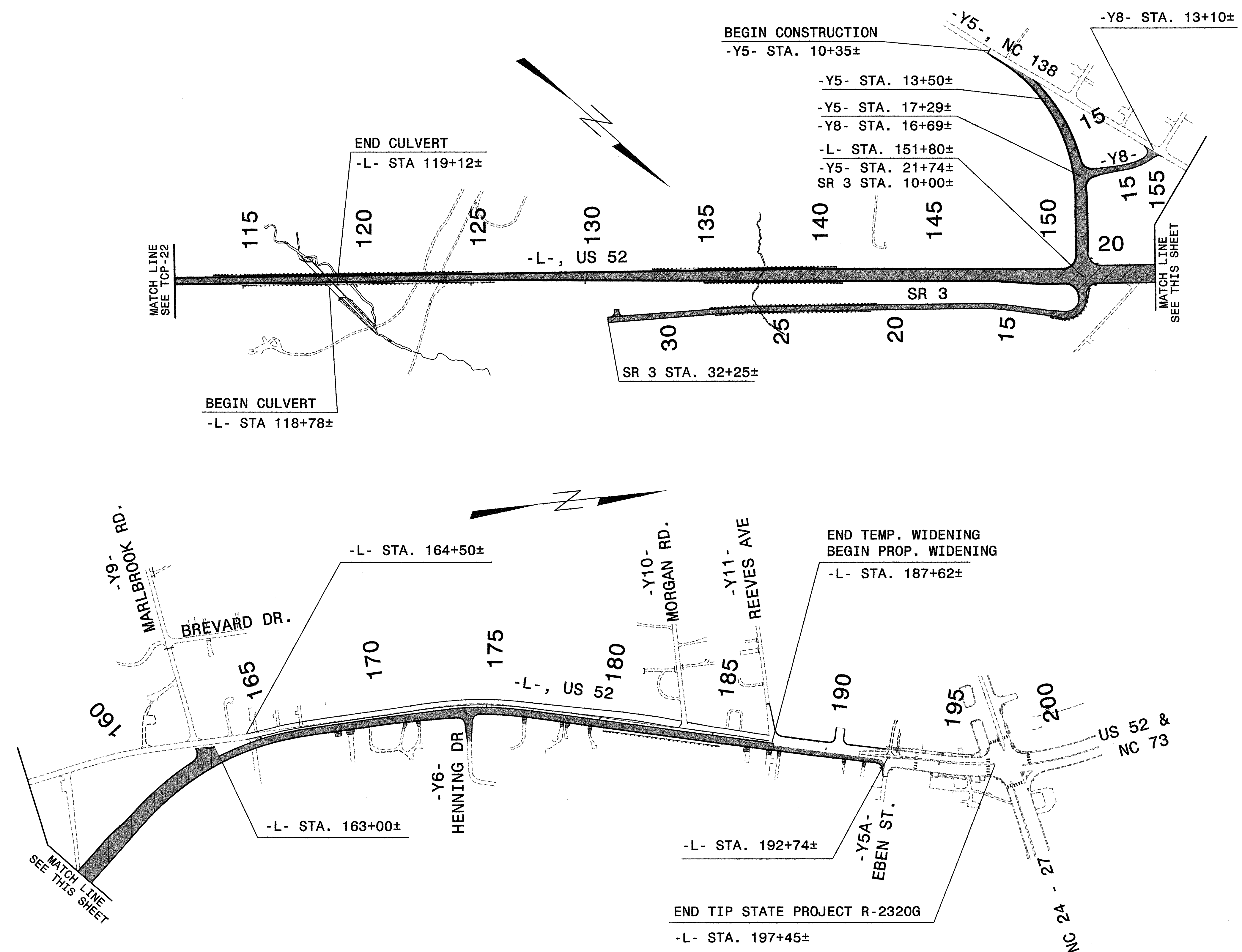
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APPROVED: <i>Michael K. Kappa</i> DATE: 1-3-08	<b>PHASE II OVERVIEW</b>	
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	DWG. BY: B.L.M.	
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# PHASE II OVERVIEW



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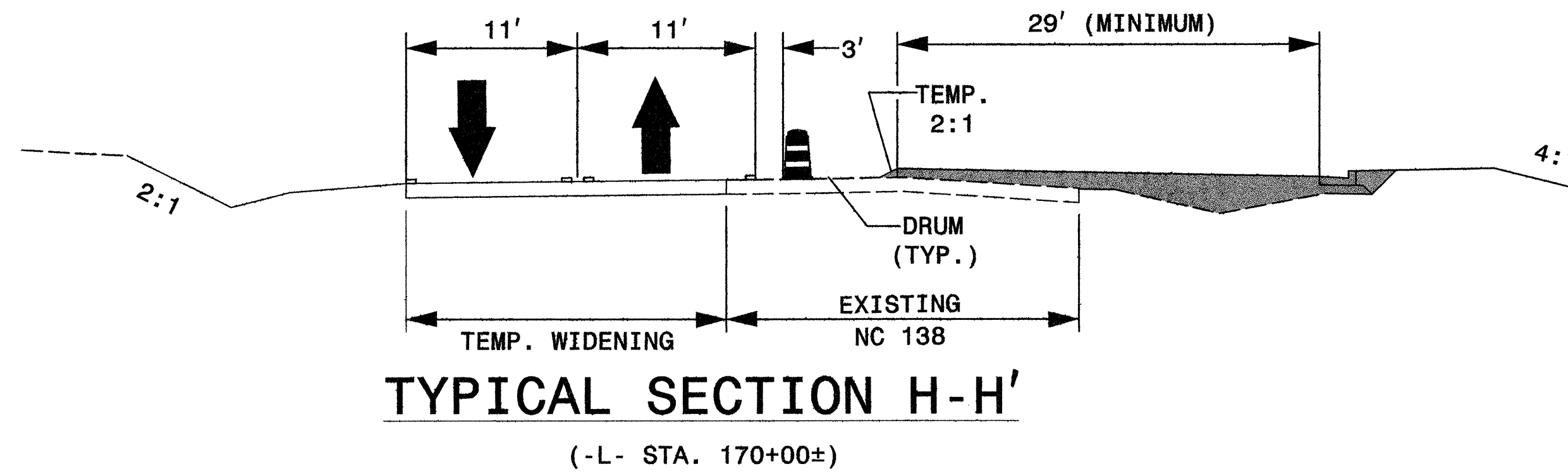
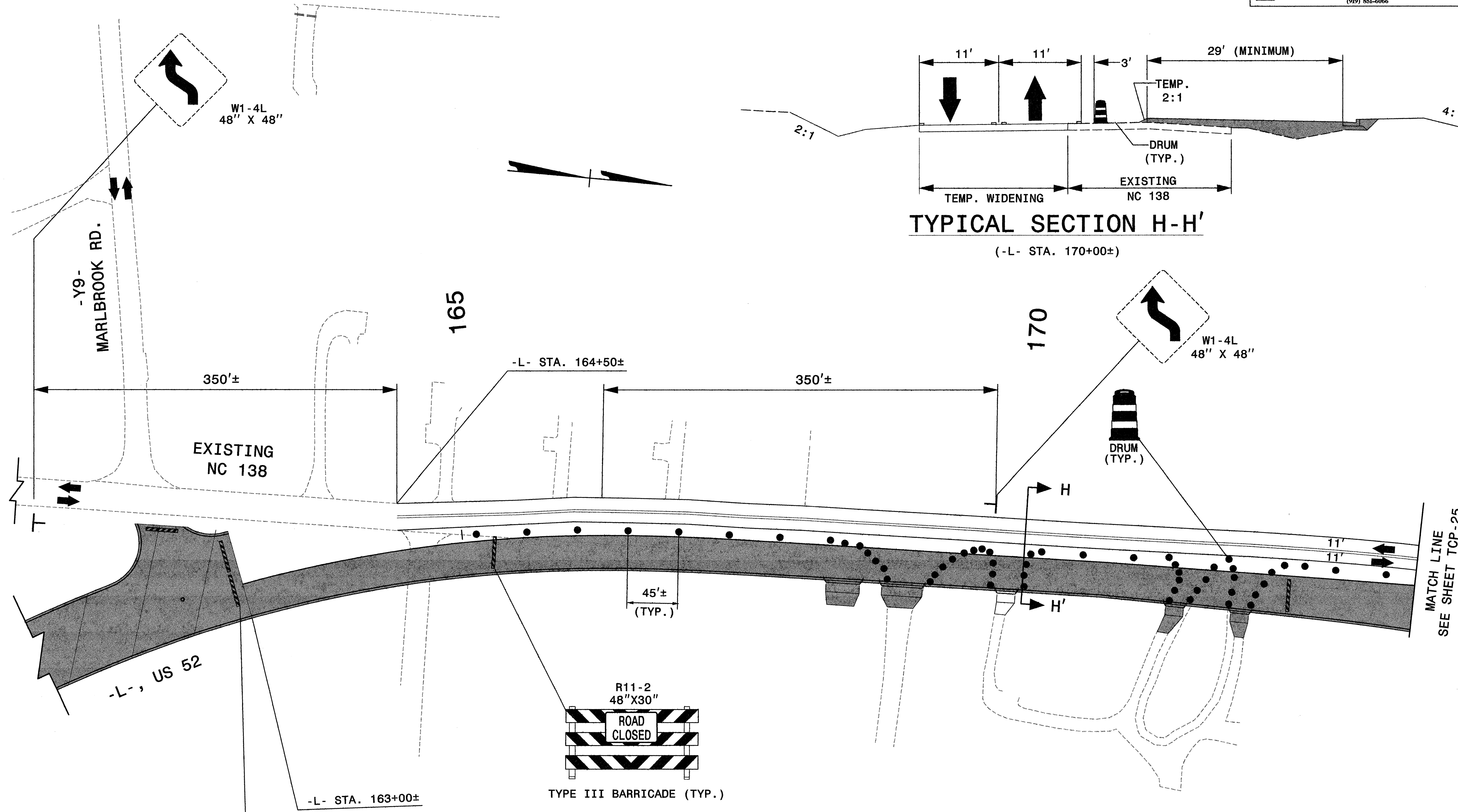
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APPROVED: *Michael T. Reeves* DATE: 1-3-08

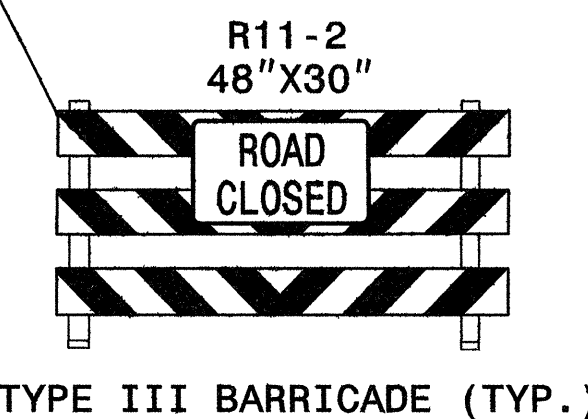
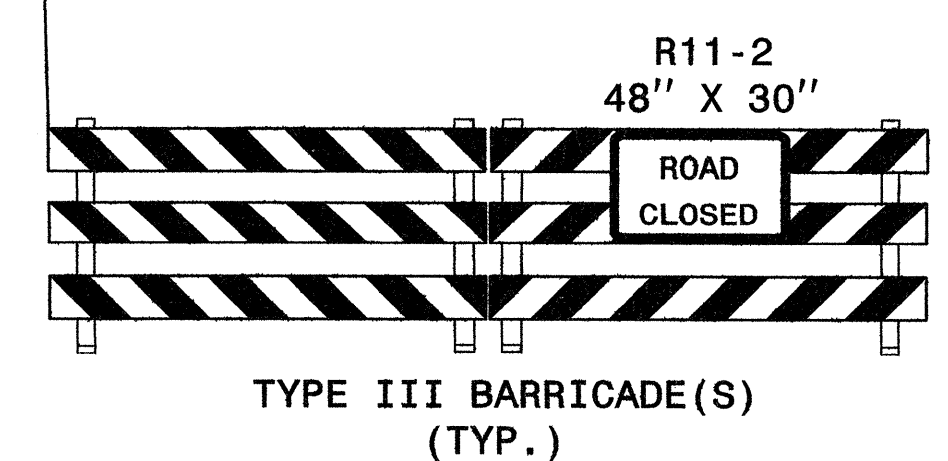
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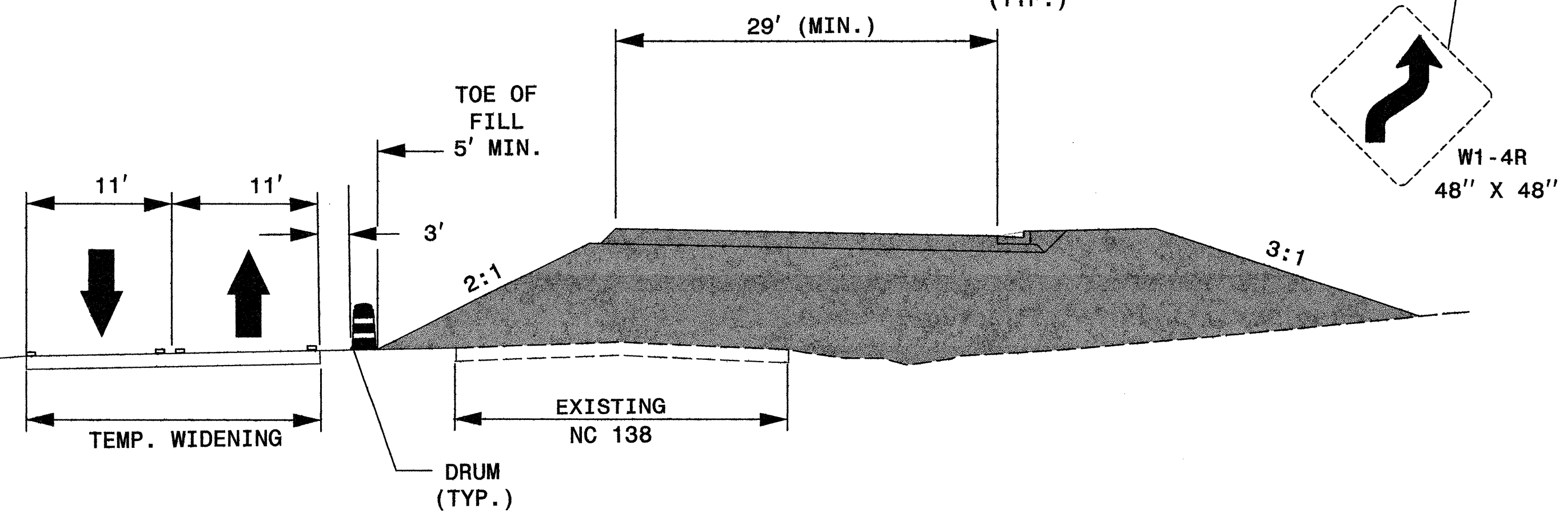
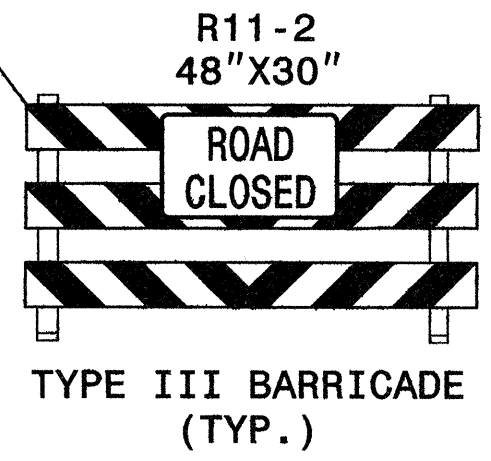
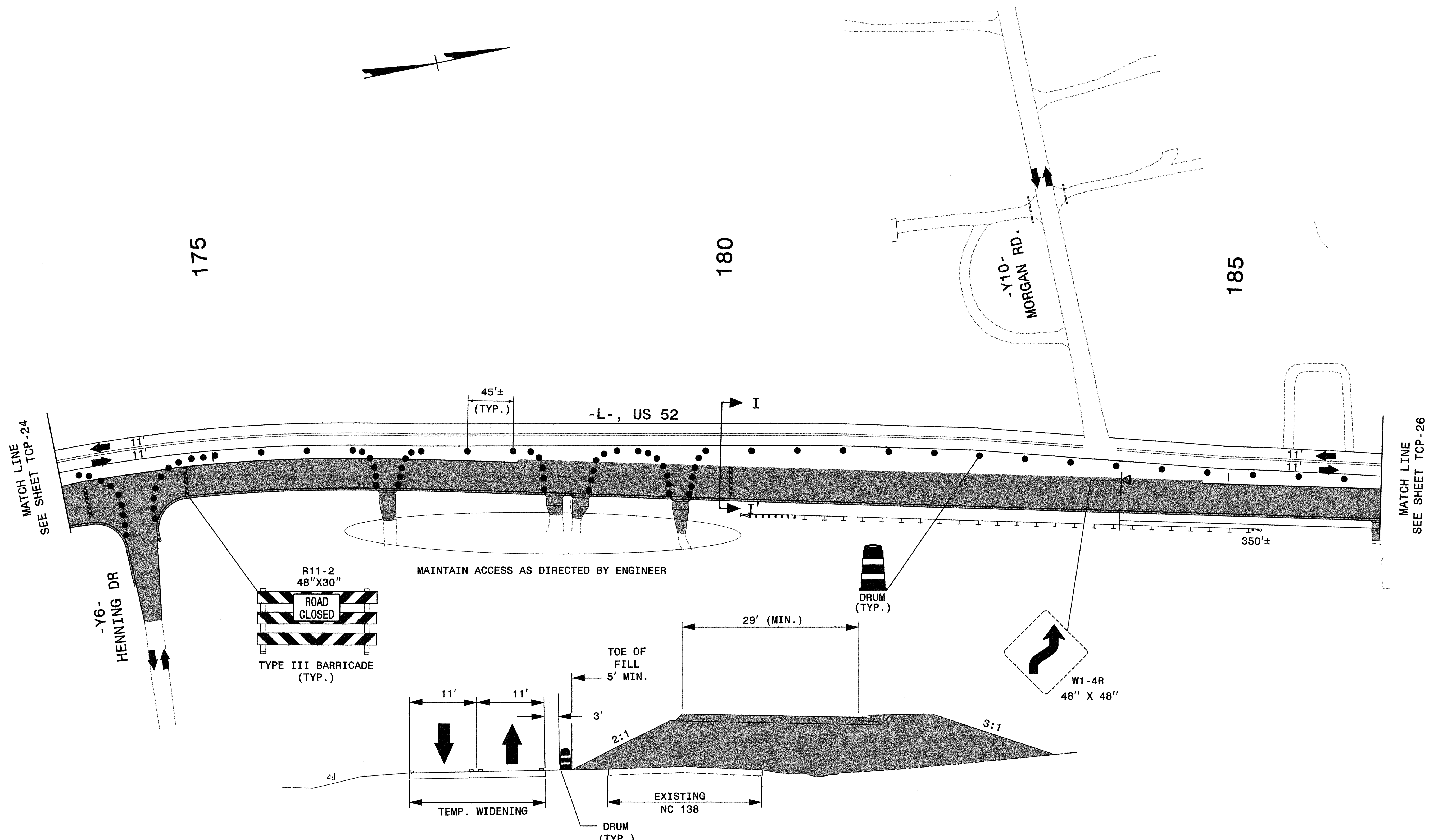
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APPROVED: <i>Michael T. Rieker</i> DATE: 12-07-08	<b>PHASE II, DETAIL 1</b>	
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**TYPICAL SECTION I-I'**  
 (-L- STA. 180+00±)

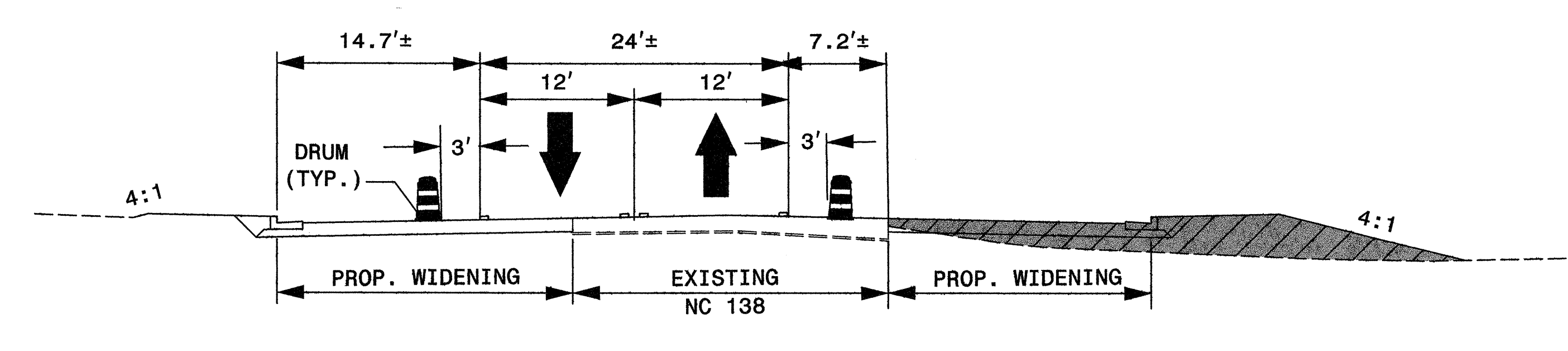
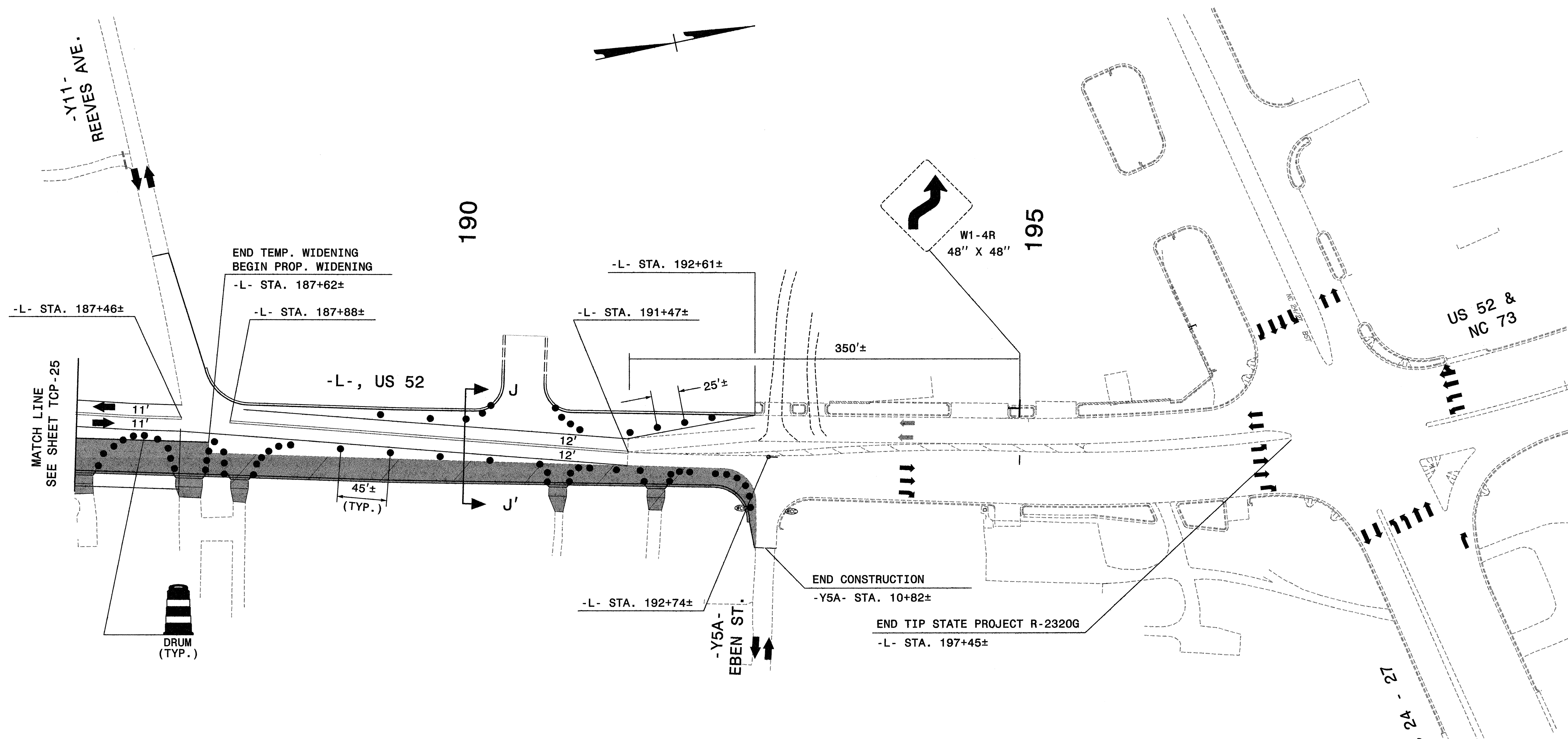
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APPROVED: *Michael T. Kemp* DATE: 12-07

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**TYPICAL SECTION J-J'**  
 (-L- STA. 190+00±)

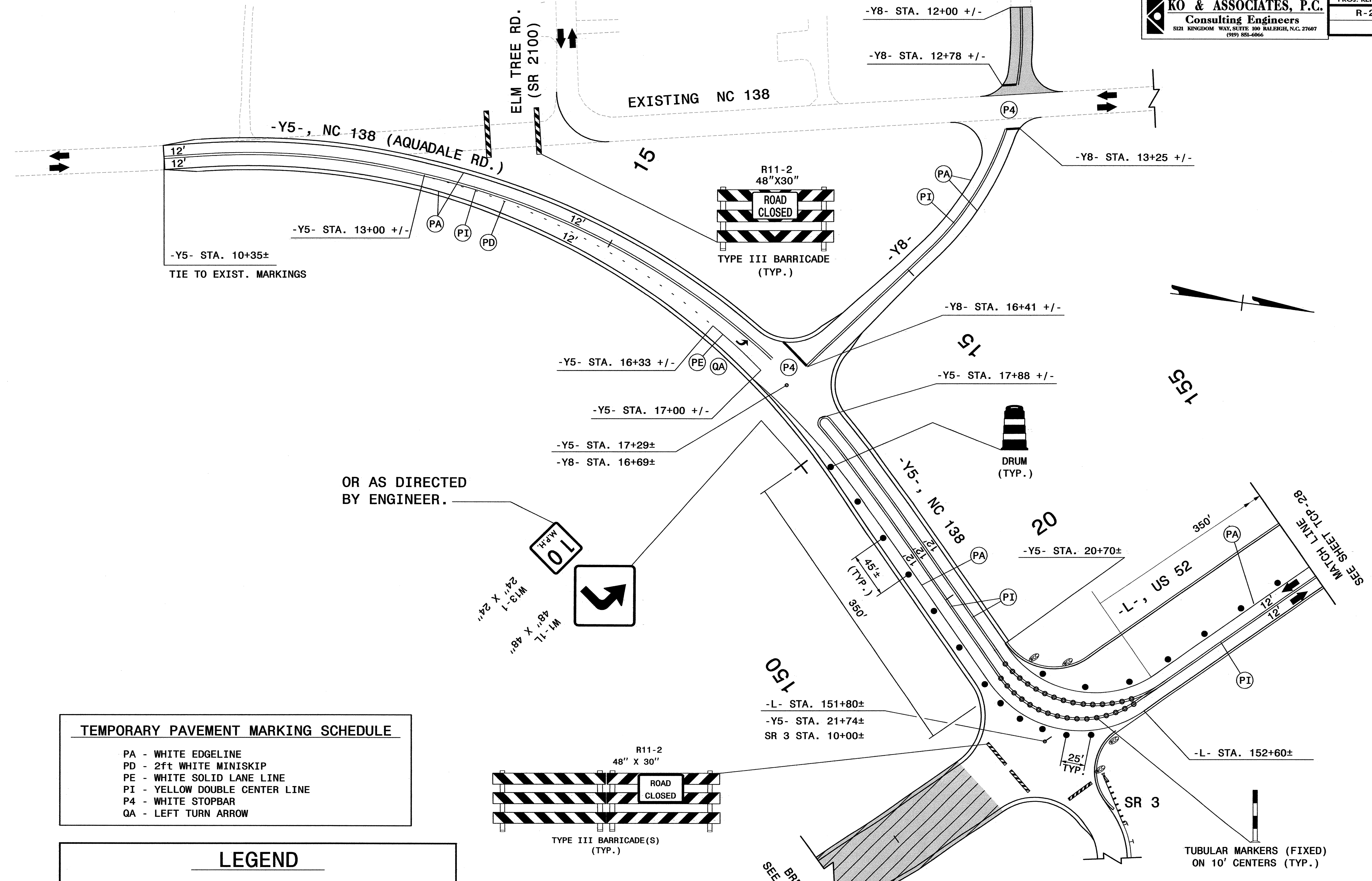
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	ONGOING CONSTRUCTION
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APPROVED: <i>Michael T. Szepka</i> DATE: 1-3-08	<b>PHASE II, DETAIL 1 (CONT'D)</b>	
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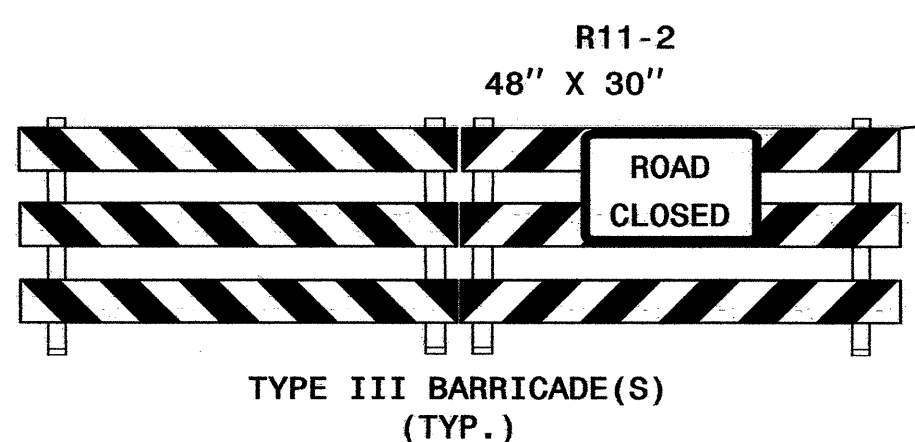




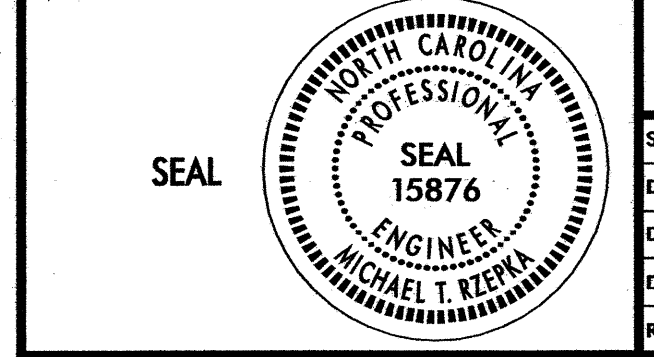
OR AS DIRECTED  
BY ENGINEER.

TEMPORARY PAVEMENT MARKING SCHEDULE	
PA	WHITE EDGELINE
PD	2ft WHITE MINISKIP
PE	WHITE SOLID LANE LINE
PI	YELLOW DOUBLE CENTER LINE
P4	WHITE STOPBAR
QA	LEFT TURN ARROW

LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION



APPROVED: *Michael T. Wierpa* DATE: 1-7-08

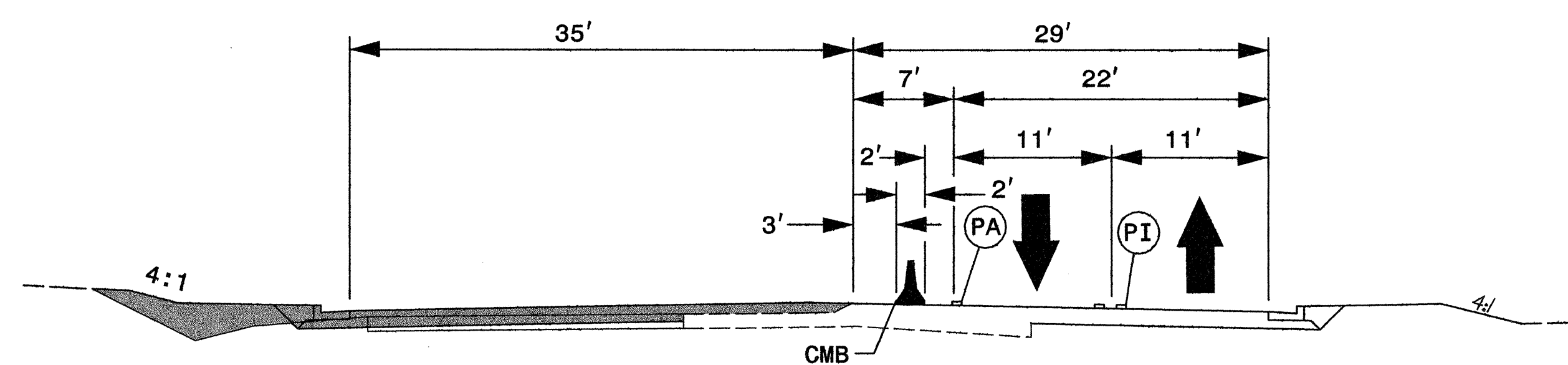


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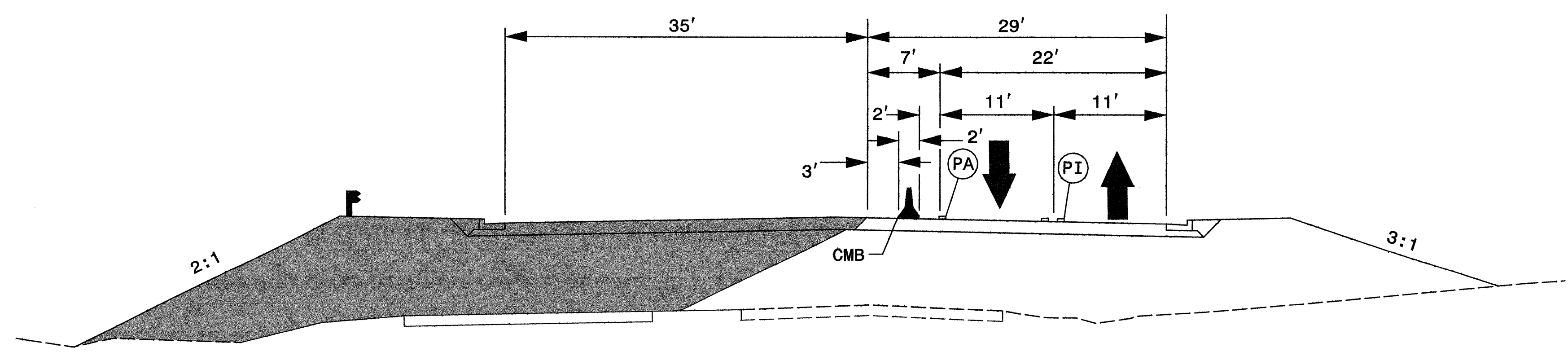
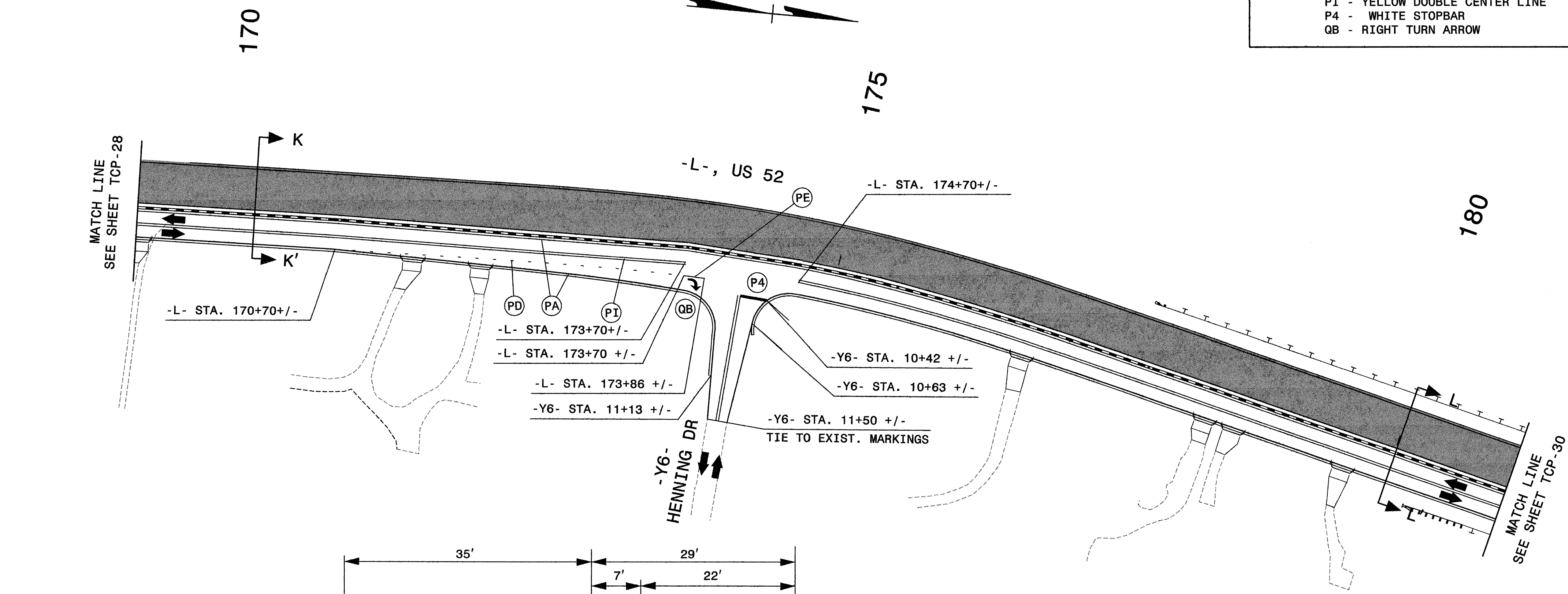




**TYPICAL SECTION K-K'**

(-L- STA. 170+00±)

TEMPORARY PAVEMENT MARKING SCHEDULE	
PA	- WHITE EDGELINE
PD	- 2ft. WHITE MINISKIP
PE	- WHITE SOLID LANE LINE
PI	- YELLOW DOUBLE CENTER LINE
P4	- WHITE STOPBAR
QB	- RIGHT TURN ARROW



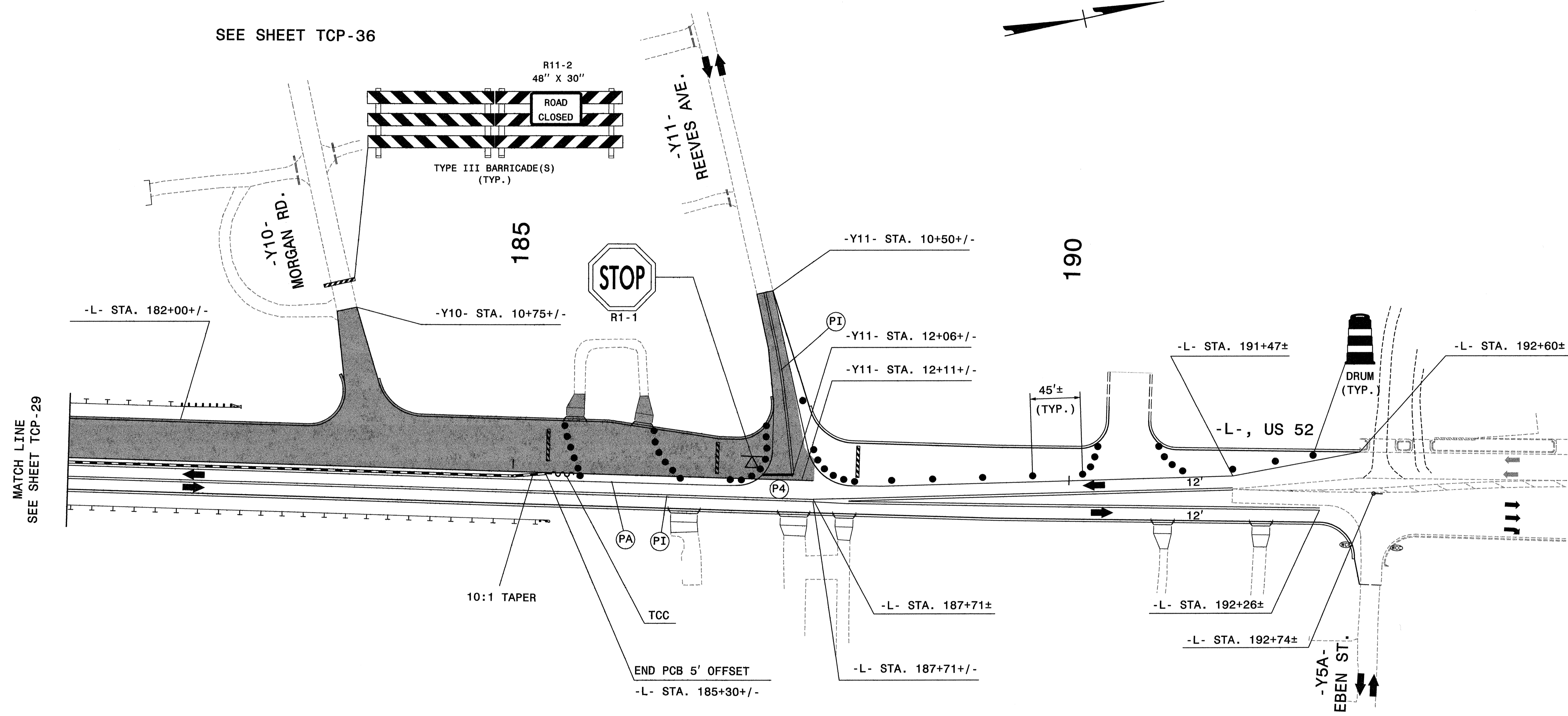
**TYPICAL SECTION L-L'**

(-L- STA. 180+00±)

LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

APPROVED: <i>Michael T. Rizka</i> DATE: 12-07-08	<b>PHASE II, DETAIL 2 (CONT'D)</b>									
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LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

TEMPORARY PAVEMENT MARKING SCHEDULE
PA - WHITE EDGELINE
PI - YELLOW DOUBLE CENTER LINE
P4 - WHITE STOPBAR

APPROVED: *Michael T. Rzepka* DATE: 1-3-08

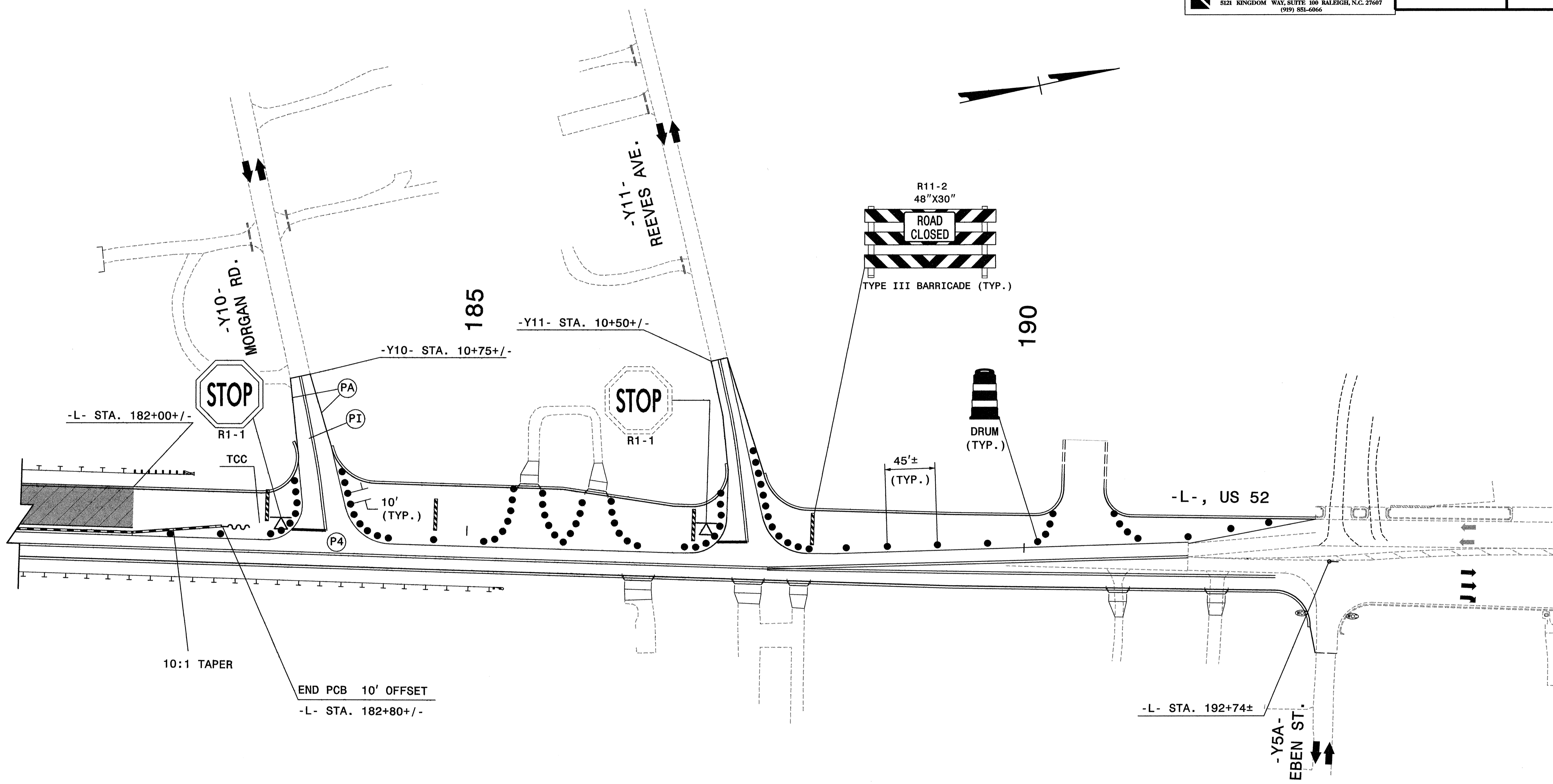
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TEMPORARY PAVEMENT MARKING SCHEDULE	
PA	- WHITE EDGELINE
PI	- YELLOW DOUBLE CENTER LINE
P4	- WHITE STOPBAR

LEGEND	
	ONGOING CONSTRUCTION
	PROPOSED CONSTRUCTION

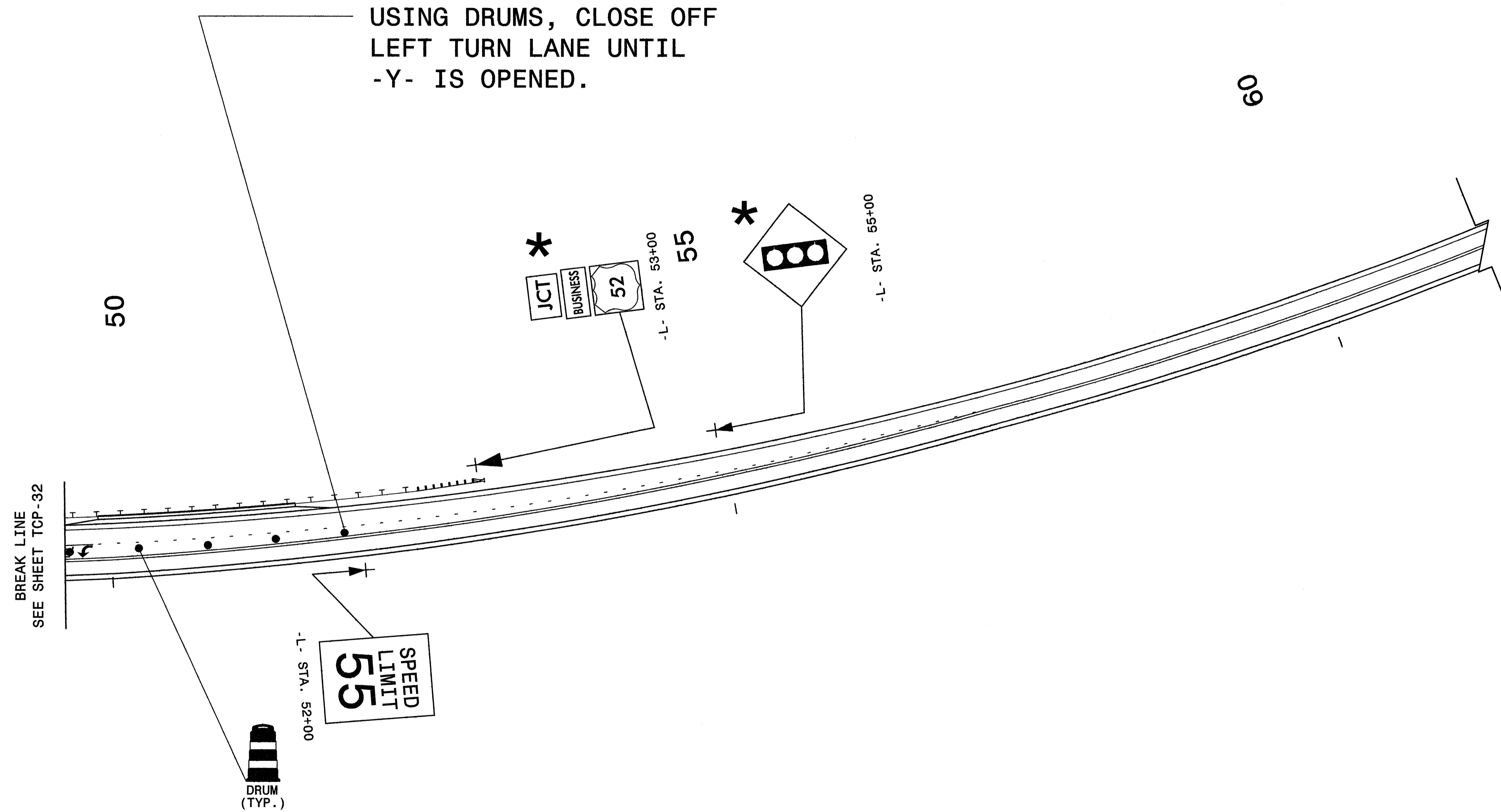
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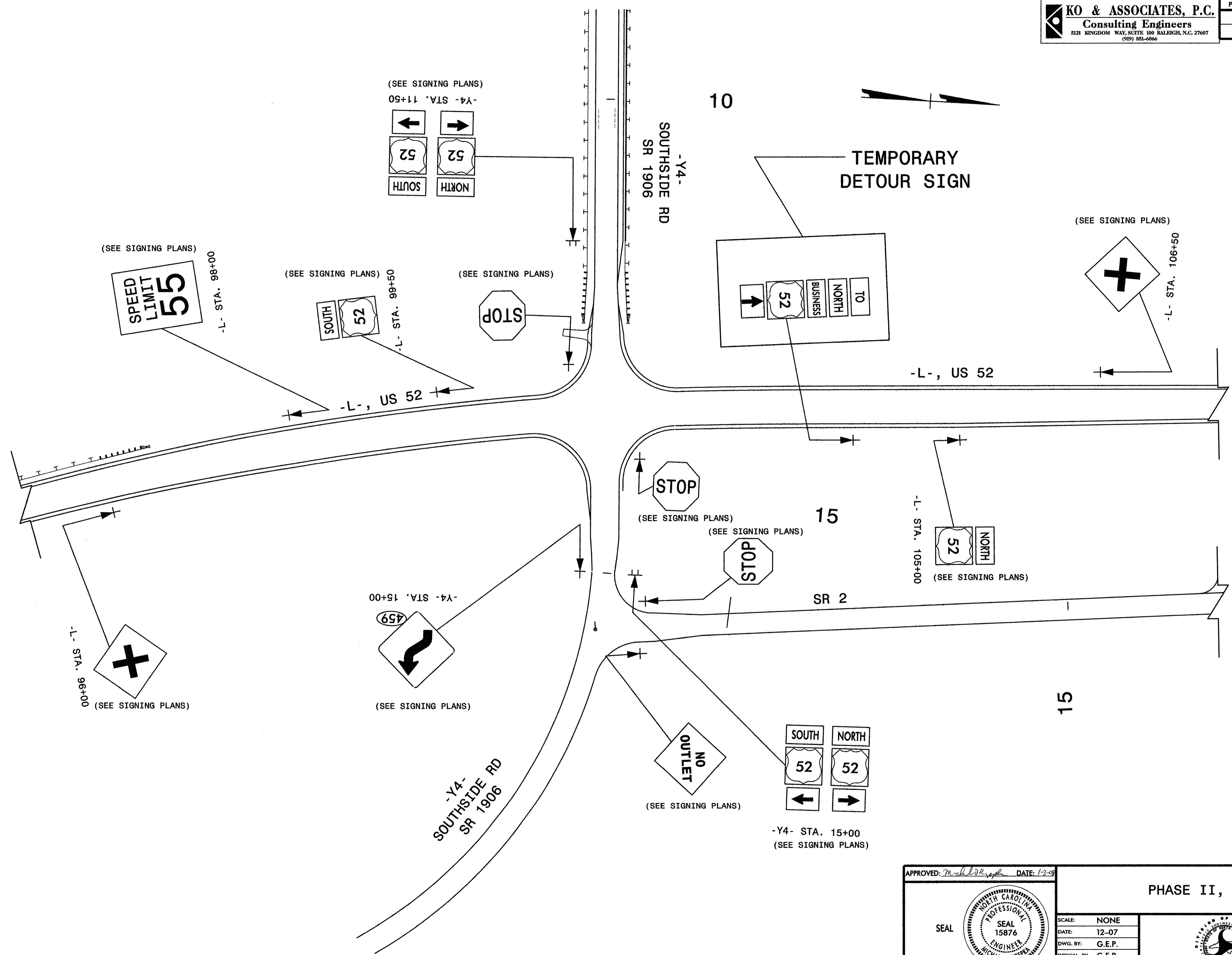


\* COVER PROPOSED SIGNS UNTIL  
 -Y- IS OPENED.  
 (SEE SIGNING PLANS)

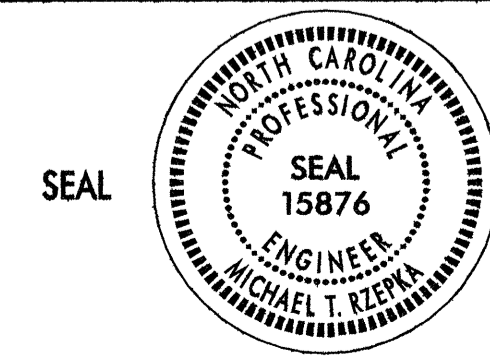


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APPROVED: <i>Michael R. Rzepka</i> DATE: 1-3-08	<b>PHASE II, DETAIL 4</b>					
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	DATE: 12-07					
	DESIGN BY: G.E.P.					
	REVIEWED BY: M.T.R.					
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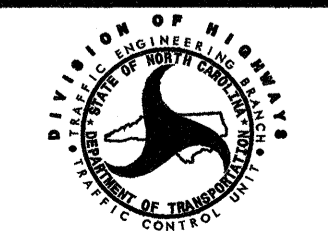


APPROVED: *Michael R. Rzepka* DATE: 1-3-08



**PHASE II, DETAIL 4**

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 DATE: 12-07  
 DWG. BY: G.E.P.  
 DESIGN BY: G.E.P.  
 REVIEWED BY: M.T.R.



REVISIONS	

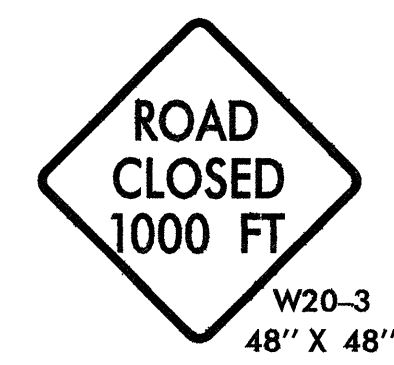
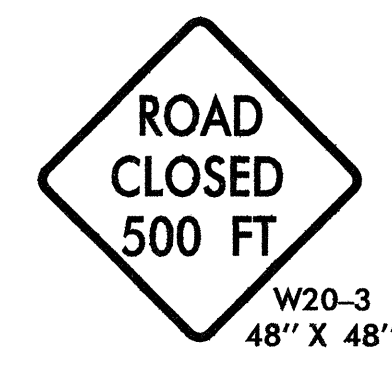
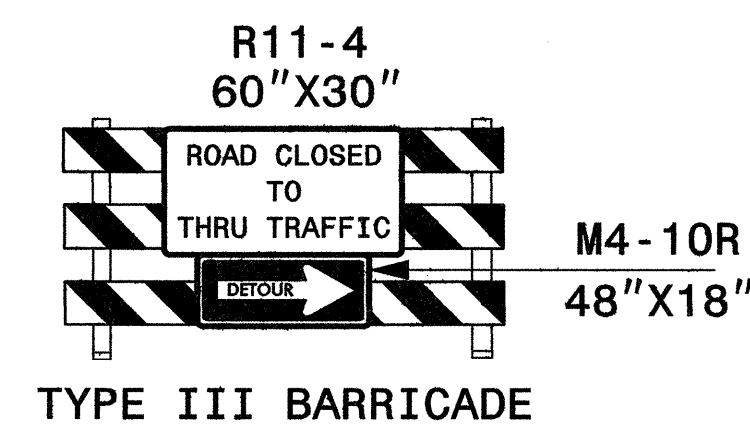
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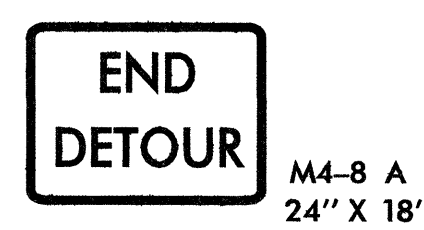
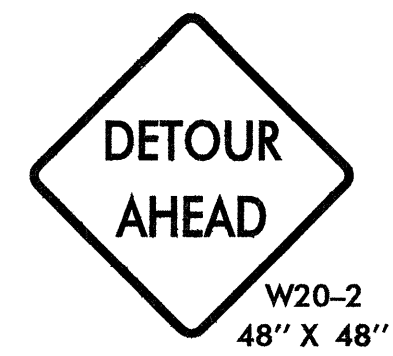




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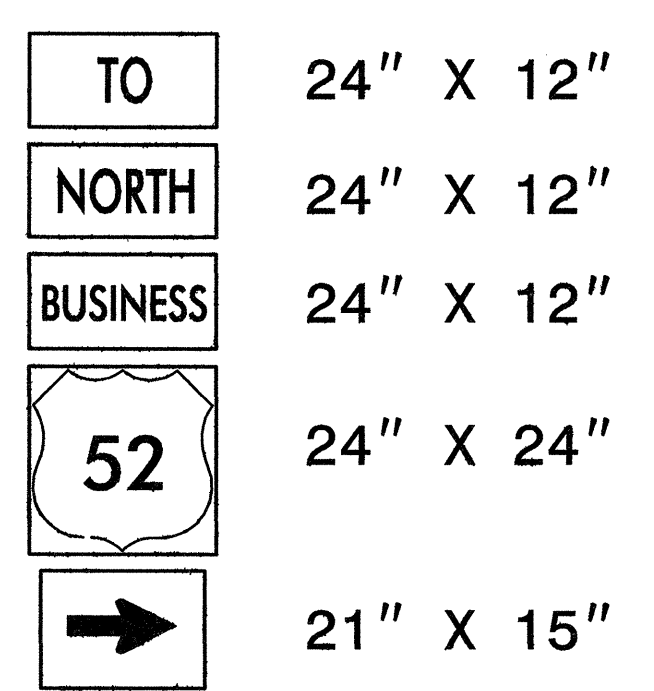
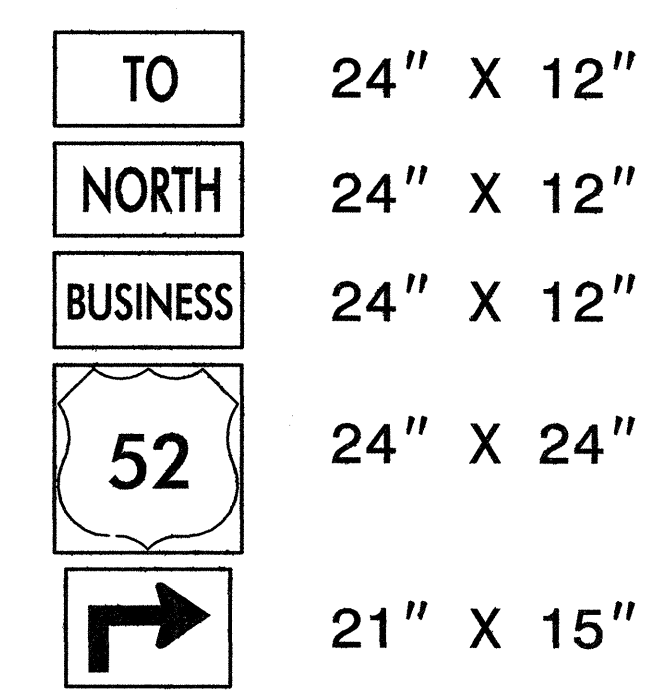
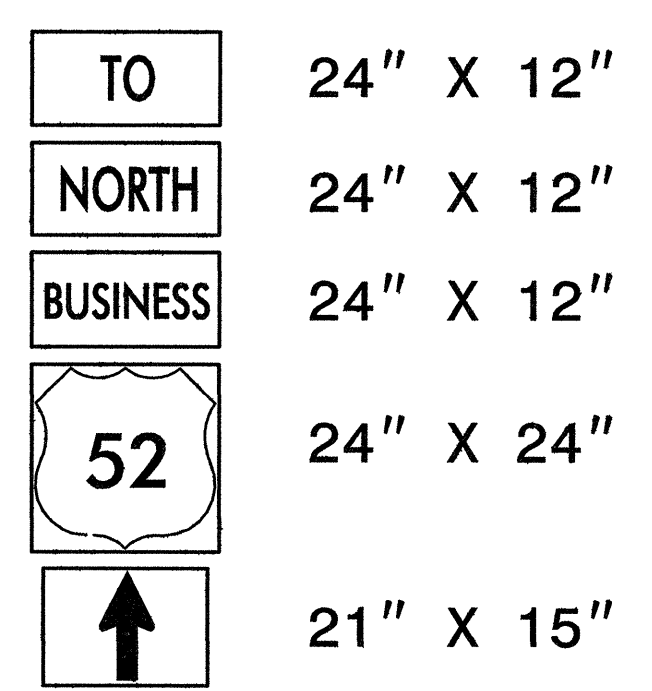
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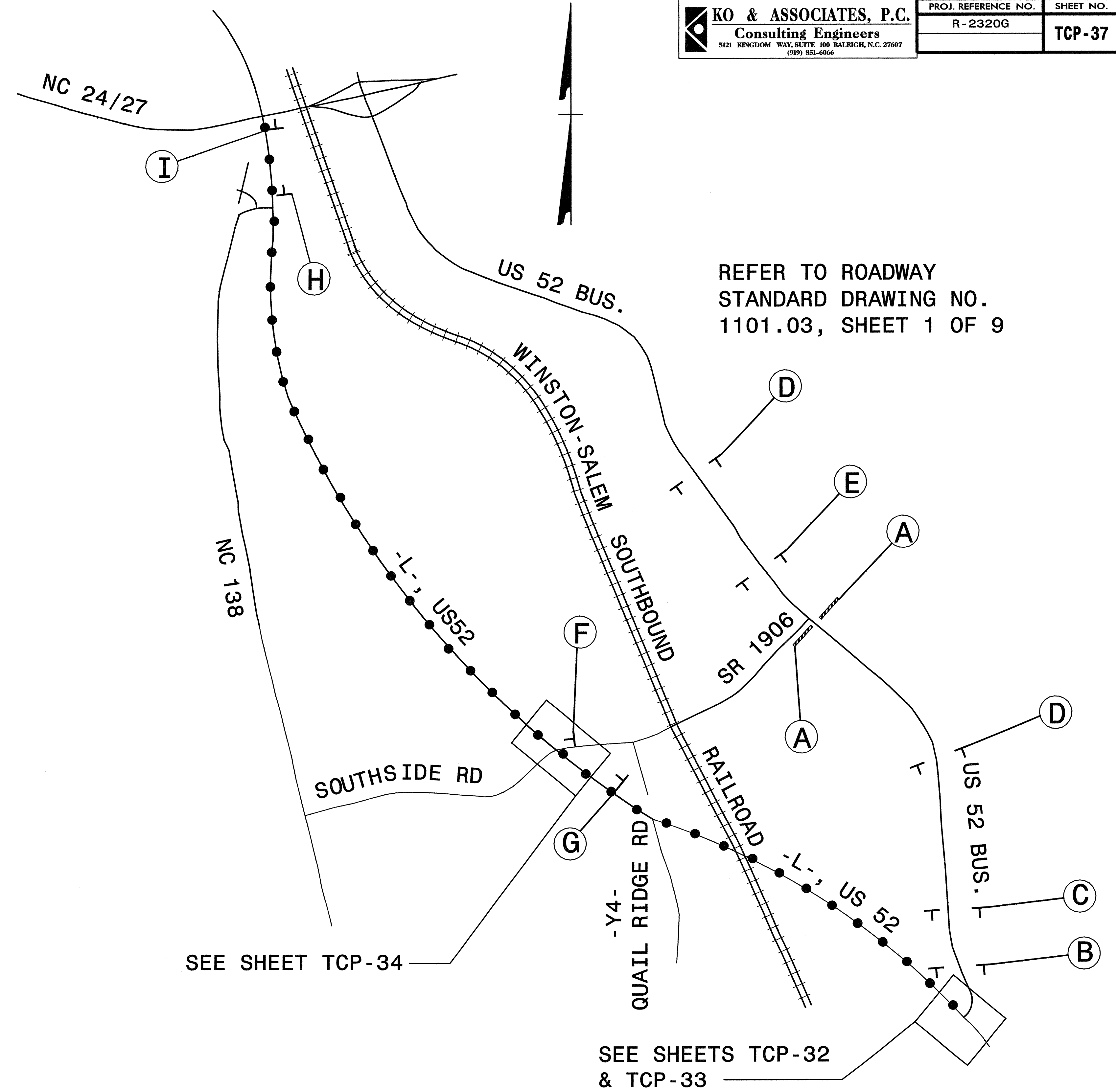
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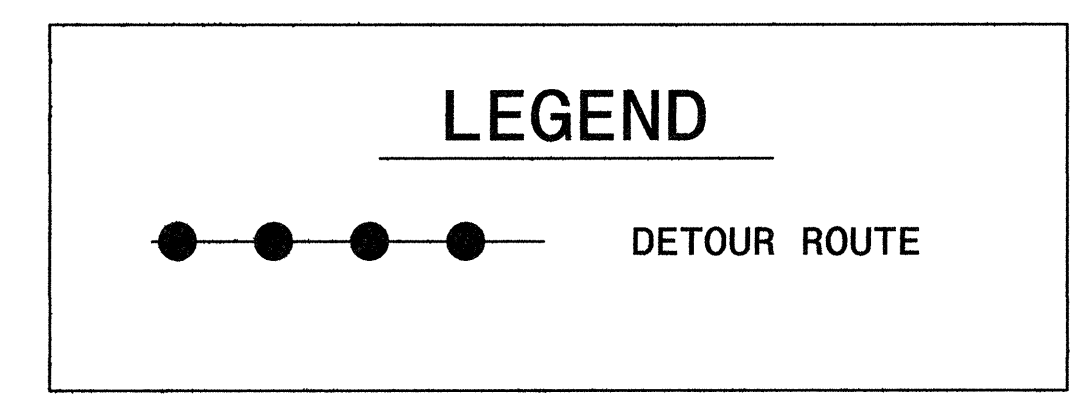
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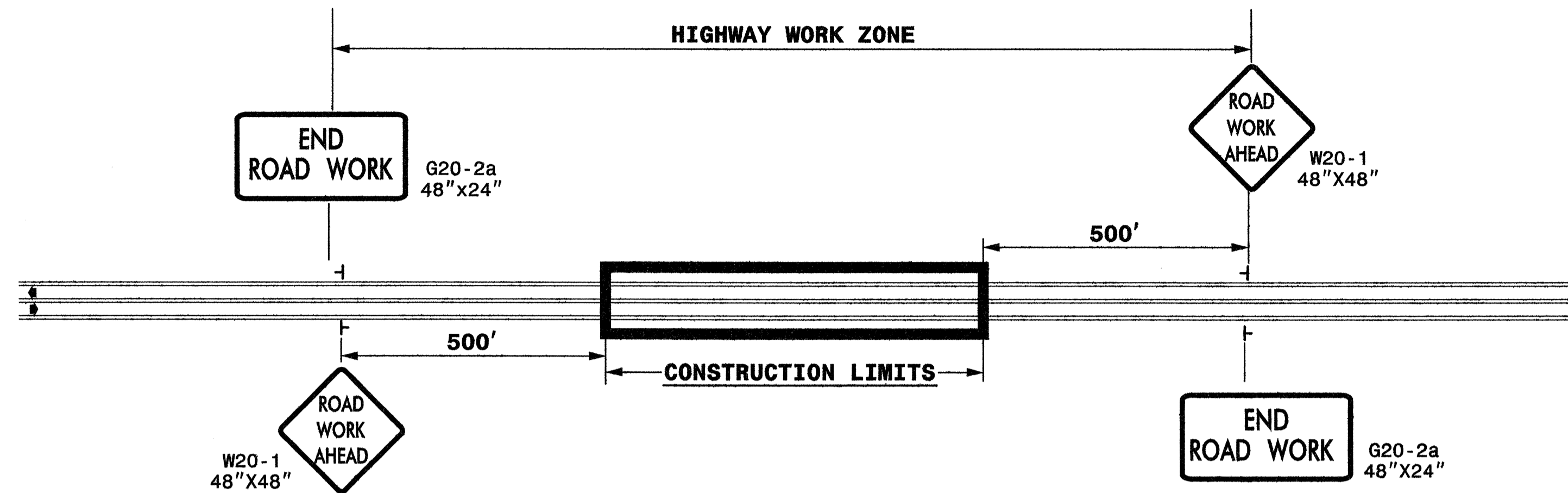


REFER TO ROADWAY  
STANDARD DRAWING NO.  
1101.03, SHEET 1 OF 9



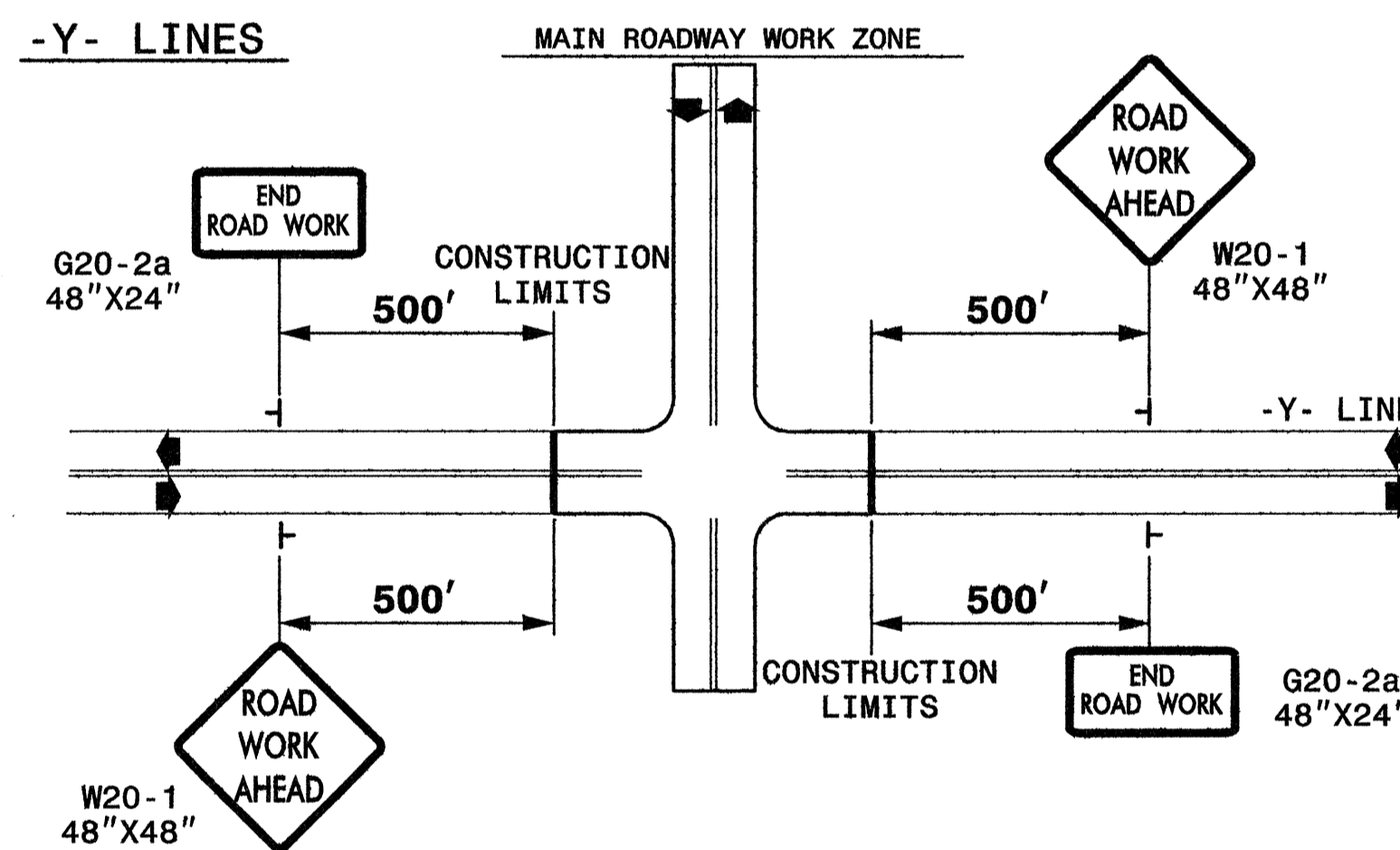
APPROVED: <i>Michael T. Rieker</i> DATE: 1/28/08	<b>-Y-, US 52 BUSINESS DETOUR DETAIL</b>	
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	DATE:	
	DWG. BY: G.E.P.	
	DESIGN BY: G.E.P.	
REVIEWED BY: M.T.R.	REVISIONS	

**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: <i>Michael T. Rzepka</i> DATE: 1-3-08	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS							
	SCALE: NONE							
	DATE: 12-07							
	DWG. BY: B.L.M.							
	DESIGN BY: G.E.P.							
REVIEWED BY: M.T.R.	REVISIONS	<table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>						