

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



STATE PROJECT REFERENCE NO.

U - 2519DA

SHEET NO.

TCP-1

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

U-2519DA

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "METRIC 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
1145.01	TYPE III 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
1205.03	PAVEMENT MARKINGS - INTERCHANGES
1205.06	PAVEMENT MARKINGS - THRU LANE DROPS
1205.08	PAVEMENT MARKINGS - SYMBOLS & WORD MESSAGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS (TEMPORARY & PERMANENT)
1253.01	SNOWPLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION
1264.01	OBJECT MARKERS
1264.02	PLACEMENT OF OBJECT MARKERS
1267.01	FLEXIBLE DELINEATOR INSTALLATION
1267.02	FLEXIBLE DELINEATOR SPACING
1267.03	FLEXIBLE DELINEATOR-INTERCHANGES

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LEGEND

GENERAL

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

TRAFFIC CONTROL DEVICES

- TYPE I BARRICADE
- TYPE II BARRICADE
- TYPE III BARRICADE
- CONE
- DRUM
- FLASHING ARROW PANEL (TYPE C)
- TYPE 'B' WARNING LIGHT
- STATIONARY SIGN
- PORTABLE SIGN
- STATIONARY OR PORTABLE SIGN
- WARNING FLAGS
- CRASH CUSHION
- CHANGEABLE MESSAGE SIGN
- TRUCK MOUNTED IMPACT ATTENUATOR (TMIA)
- POLICE
- FLAGGER

PAVEMENT MARKINGS

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

TIP PROJECT

6/8/2011 P:\TRAFFIC\U-2519DA\000\ rev Jun 2011\U-2519DA_TC_TCP01.TSH.dgn Florence & Hutcheson

PLAN REVIEWED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT		APPROVED: DATE: 6-9-11	PLAN PREPARED FOR N.C.D.O.T. BY:
J. S. BOURNE, P.E.	WORK ZONE TRAFFIC CONTROL ENGINEER	SEAL	M. T. RZEPKA, PE PROJECT ENGINEER
S. KITE, PE	TRAFFIC CONTROL PROJECT ENGINEER		G. E. PARKER DESIGN ENGINEER
D. PARKER	TRAFFIC CONTROL PROJ. DESIGN ENGINEER		G. E. PARKER DESIGN TECHNICIAN
D. RICHARDSON	TRAFFIC CONTROL DESIGN ENGINEER		
N/A	TRAFFIC CONTROL DESIGN TECHNICIAN		



TEMPORARY PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION
<u>PAINT (100mm)</u>	
PA	WHITE EDGELINE 2X
PC	3.0m WHITE SKIP 2X
PB	YELLOW EDGELINE 2X
PD	0.5m WHITE MINISKIP 2X
 <u>PAINT (300mm)</u>	
P1	WHITE GORELINE 2X
 <u>REMOVABLE TAPE (100mm)</u>	
RA	WHITE EDGELINE
RC	3.0m WHITE SKIP
RB	YELLOW EDGELINE
 <u>PAINT SYMBOL</u>	
QC	STRAIGHT ARROW 2X
 <u>TEMPORARY RAISED MARKER</u>	
MI	CRYSTAL & RED

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

2/11/2011 P:\V\Projects\U-2519DA\100% rev feb 2011\U-2519DA-TC-TCP02-TPM.dgn Ko & Associates, P.C.

APPROVED: <i>Michael T. Repas</i> DATE: 2-11-11 SEAL 	<h3>TEMPORARY PAVEMENT MARKING SCHEDULE</h3>						
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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 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
ALL AMERICAN FREEWAY (SR 1007)	MONDAY THROUGH FRIDAY 5:30 AM TO 8:30 AM AND 4:30 PM TO 6:00 PM

THESE TIME RESTRICTIONS DO NOT APPLY WHEN ALL-AMERICAN FREEWAY TRAFFIC IS IN A LONG TERM TWO-LANE TWO-WAY TRAFFIC PATTERN. NO LANE CLOSURES WILL BE PERMITTED ON ALL-AMERICAN DURING THAT TIME PERIOD EXCEPT FULL CLOSURE FOR OVERHEAD GIRDE INSTALLATION.

B) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	OPERATION
BRAGG BLVD. (NC 24/87)	MONDAY THROUGH SUNDAY 5:00 AM TO 12:00 MIDNIGHT	OVERHEAD GIRDER INSTALLATION
ALL AMERICAN FREEWAY (SR 1007)	MONDAY THROUGH SUNDAY 4:00 AM TO 10:00 PM	OVERHEAD GIRDER INSTALLATION PIPE INSTALLATION AT -Y1- STA. 26+89±

NOTIFY ENGINEER 14 CALENDAR DAYS PRIOR TO STOPPING/DETOURING TRAFFIC ON ALL-AMERICAN FREEWAY OR BRAGG BLVD.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) 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.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5m OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 1.5m 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 3m 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.

F) 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.

PAVEMENT EDGE DROP OFF REQUIREMENTS

G) 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 50mm ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 75mm 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.

H) DO NOT EXCEED A DIFFERENCE OF 40mm IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 30mm. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 150m IN ADVANCE AND A MINIMUM OF ONCE EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

I) NOTIFY THE ENGINEER FOURTEEN (14) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

PROJECT NOTES

SIGNING

J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 31m FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

K) PROVIDE PERMANENT SIGNING.

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

TRAFFIC BARRIER

M) 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 EQUAL IN METERS TO 2/3rds 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.

N) 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 TEMPORARY BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS:

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	4.6m
45 - 50	6m
55	7.6m
60 MPH or HIGHER	9m

TRAFFIC CONTROL DEVICES

O) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN EQUAL IN METERS TO 2/3rds THE POSTED SPEED LIMIT (MPH), EXCEPT 3m ON-CENTER IN RADIUS, AND 1m 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.

P) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

Q) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES, DRUMS, PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 150m CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.



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PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
OUTER LOOP (-L-) ALL AMERICAN FREEWAY (-Y1-) ALL STRUCTURES	THERMOPLASTIC (WIDE MARKINGS) THERMOPLASTIC POLYUREA	SNOWPLOWABLE SNOWPLOWABLE RAISED

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

ROAD NAME	MARKING	MARKER
ALL ROADS EXISTING STRUCTURES	PAINT COLD APPLIED PLASTIC (TYPE IV)	TEMPORARY RAISED TEMPORARY RAISED

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

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

V) TRACE THE EDGE OF PROPOSED MONOLITHIC ISLANDS WITH THE PROPER COLOR PAVEMENT MARKING PRIOR TO INSTALLATION OF A PROPOSED MONOLITHIC ISLAND.

W) 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.

MISCELLANEOUS

X) POLICE MAY BE USED TO MAINTAIN/DIRECT TRAFFIC, AS DIRECTED BY THE ENGINEER.

APPROVED: <i>Michael J. Verma</i> DATE: 6-9-11	PROJECT NOTES							
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TEMPORARY SHORING NOTES



PROJ. REFERENCE NO. U-2519DA	SHEET NO. TCP-3A
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Temporary Shoring No. 1

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM -Y1- STA. 19+61± 39.4 m.± RIGHT TO -Y1- STA. 19+86 ± 39.4 m.± RIGHT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -Y1- STA. 19+61± 39.4 m.± RIGHT TO -Y1- STA. 19+86 ± 39.4 m.± RIGHT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 18.8$ kN/m³
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 9.4$ kN/m³
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ kPa

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

QUANTITY = 50.0 SM

Temporary Shoring No.2

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE STANDARD SHORING FROM -Y1- STATION 19+40 +/-, 28.6 m RIGHT, TO -Y1- STATION 19+52 +/-, 32.3 m RIGHT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -Y1- STATION 19+40 +/-, 28.6 m RIGHT, TO -Y1- STATION 19+52 +/-, 32.3 m RIGHT. DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 18.8$ kN/m³
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 9.4$ kN/m³
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ kPa

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

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM -Y1- STATION 19+40 +/-, 28.6 m RIGHT, TO -Y1- STATION 19+52 +/-, 32.3 m RIGHT. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION.

QUANTITY = 63.0 SM

Temporary Shoring No. 5

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE STANDARD SHORING FROM -Y1- STA. 20+10 +/-, 21 m LEFT, TO -Y1- STATION 20+30 +/-, 21 m LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -Y1- STA. 20+10 +/-, 21 m LEFT, TO -Y1- STATION 20+30 +/-, 21 m LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 18.8$ kN/m³
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 9.4$ kN/m³
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ kPa

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

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.

IT MAY BE PREFERRED OR NECESSARY TO ANCHOR TEMPORARY SHORING FROM -Y1- STA. 20+10 +/-, 21 m LEFT, TO -Y1- STATION 20+30 +/-, 21 m LEFT. FOR ANCHORED TEMPORARY SHORING, SEE ANCHORED TEMPORARY SHORING PROVISION.

QUANTITY = 90.0 SM

Temporary Shoring No. 3

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM -Y1- STA. 19+83± 4.8 m ± RIGHT TO -Y1- STA. 19+95± 4.8 m ± RIGHT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -Y1- STA. 19+83± 4.8 m ± RIGHT TO -Y1- STA. 19+95± 4.8 m ± RIGHT. DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 18.8$ kN/m³
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 9.4$ kN/m³
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ kPa

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

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.

QUANTITY = 30.0 SM

Temporary Shoring No. 4

FOR TEMPORARY SHORING, SEE TEMPORARY SHORING PROVISION.

DO NOT USE A TEMPORARY MSE WALL FROM -Y1- STA. 19+82± 4.9 m ± LEFT TO -Y1- STA. 19+95± 4.7 m ± LEFT.

WHEN USING CONTRACTOR DESIGNED SHORING FROM -Y1- STA. 19+82± 4.9 m ± LEFT TO -Y1- STA. 19+95± 4.7 m ± LEFT, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:

UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 18.8$ kN/m³
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma' = 9.4$ kN/m³
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ kPa

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

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.

QUANTITY = 32.5 SM

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APPROVED: <i>James R. Batts, Jr.</i> DATE: 6/9/11 	<h2 style="margin: 0;">TEMPORARY SHORING NOTES</h2>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: 8px;">SCALE:</td> <td>NONE</td> </tr> <tr> <td style="font-size: 8px;">DATE:</td> <td>06/11</td> </tr> <tr> <td style="font-size: 8px;">DWG. BY:</td> <td></td> </tr> <tr> <td style="font-size: 8px;">DESIGN BY:</td> <td></td> </tr> <tr> <td style="font-size: 8px;">REVIEWED BY:</td> <td></td> </tr> </table>	SCALE:	NONE	DATE:	06/11	DWG. BY:		DESIGN BY:		REVIEWED BY:	
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Florence & Hutcheson
 CONSULTING ENGINEERS
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 NC License No: F-0258

PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-4

LEGEND

PROPOSED CONSTRUCTION

END CONSTRUCTION
 -RP2B- STA. 12+40 ±

END CONSTRUCTION
 -COL1- STA. 35+30 ±
 -RP1BD- STA. 35+07 ±

-RP2B- STA. 14+60±
 END PAVING

-RP1BD- STA. 42+80±
 END PAVING

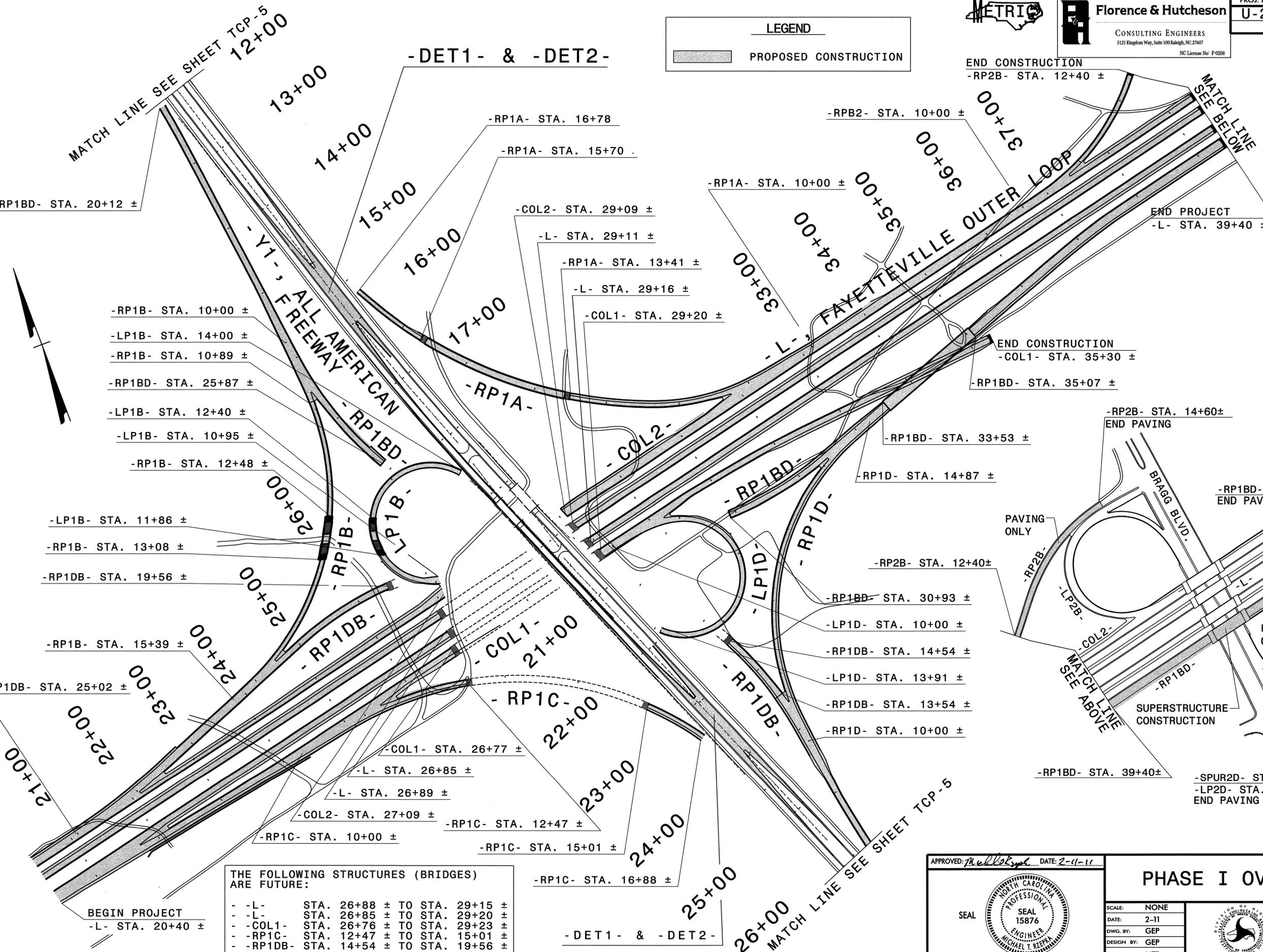
PAVING ONLY

PAVING ONLY

SUPERSTRUCTURE CONSTRUCTION

-RP1BD- STA. 39+40±

-SPUR2D- STA. 10+42±
 -LP2D- STA. 12+47±
 END PAVING



THE FOLLOWING STRUCTURES (BRIDGES) ARE FUTURE:

- L- STA. 26+88 ±	TO STA. 29+15 ±
- L- STA. 26+85 ±	TO STA. 29+20 ±
- COL1- STA. 26+76 ±	TO STA. 29+23 ±
- RP1C- STA. 12+47 ±	TO STA. 15+01 ±
- RP1DB- STA. 14+54 ±	TO STA. 19+56 ±

BEGIN PROJECT
 -L- STA. 20+40 ±

APPROVED: *Michael T. Riepl* DATE: 2-11-11

SEAL

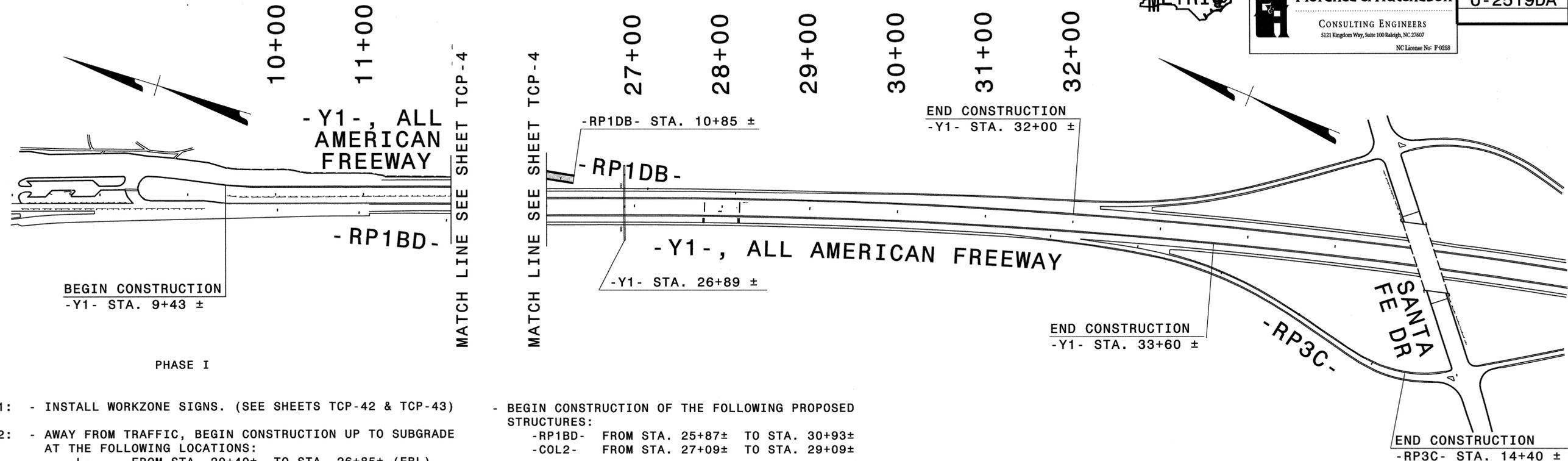
PHASE I OVERVIEW

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 DESIGN BY: GEP
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REVISIONS

2/11/2011
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 Ko & Associates, P.C.



PHASE I

STEP 1: - INSTALL WORKZONE SIGNS. (SEE SHEETS TCP-42 & TCP-43)

STEP 2: - AWAY FROM TRAFFIC, BEGIN CONSTRUCTION UP TO SUBGRADE AT THE FOLLOWING LOCATIONS:

- L- FROM STA. 20+40± TO STA. 26+85± (EBL)
- L- FROM STA. 29+16± TO STA. 39+40± (EBL)
- L- FROM STA. 20+40± TO STA. 26+89± (WBL)
- L- FROM STA. 29+11± TO STA. 39+40± (WBL)
- COL1- FROM STA. 20+40± TO STA. 26+77±
- COL1- FROM STA. 29+20± TO STA. 35+30±
- COL2- FROM STA. 20+40± TO STA. 27+09±
- RP1C- FROM STA. 10+00± TO STA. 12+47±
- RP1C- FROM STA. 15+01± TO STA. 16+88±
- LP1D- FROM STA. 10+00± TO STA. 13+91±
- RP1DB- FROM STA. 13+54± TO STA. 14+54±
- RP1DB- FROM STA. 19+56± TO STA. 25+02±
- RP1B- FROM STA. 10+89± TO STA. 12+48±
- RP1B- FROM STA. 13+08± TO STA. 15+39±

- AWAY FROM TRAFFIC, BEGIN CONSTRUCTION UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:

- COL2- FROM STA. 29+09± TO STA. 39+40±
- RP1A- FROM STA. 10+00± TO STA. 13+41±
- RP1A- FROM STA. 15+70± TO STA. 16+78±
- RP2B- FROM STA. 10+00± TO STA. 12+40±
- RP1BD- FROM STA. 20+12± TO STA. 25+87±
- RP1BD- FROM STA. 30+93± TO STA. 33+53±
- RP1BD- FROM STA. 35+07± TO STA. 39+40±
- RP1B- FROM STA. 10+00± TO STA. 10+89±
- LP1B- FROM STA. 10+95± TO STA. 11+86±
- LP1B- FROM STA. 12+40± TO STA. 14+00±
- RP1DB- FROM STA. 10+85± TO STA. 13+54±
- RP1D- FROM STA. 10+00± TO STA. 14+87±

- AWAY FROM TRAFFIC, BEGIN CONSTRUCTION OF PROPOSED STRUCTURES AT THE FOLLOWING LOCATIONS:

- RP1A- FROM STA. 13+41± TO STA. 15+70±
- RP1B- FROM STA. 12+48± TO STA. 13+08±
- RP1BD- FROM STA. 33+53± TO STA. 35+07±
- LP1B- FROM STA. 11+86± TO STA. 12+40±

- BEGIN CONSTRUCTION OF THE FOLLOWING PROPOSED STRUCTURES:

- RP1BD- FROM STA. 25+87± TO STA. 30+93±
- COL2- FROM STA. 27+09± TO STA. 29+09±

USING RSD 1101.02, SHEET 3, INSTALL TEMPORARY SHORING FOR THE MAINTENANCE OF TRAFFIC ADJACENT TO -Y1- IN THE FOLLOWING LOCATIONS FOR INTERIOR BENT CONSTRUCTION (SEE TCP-3A FOR TEMPORARY SHORING NOTES):

FOR -RP1BD- BENT 4:

- Y1- STA. 19+40±, 28.6M RT. TO -Y1- STA. 19+47±, 24.1M RT.
- Y1- STA. 19+47±, 24.1M RT. TO -Y1- STA. 19+52±, 32.3M RT.

FOR -RP1BD- BENT 5:

- Y1- STA. 19+83± TO 19+95±, 4.8M RT.
- Y1- STA. 19+82± TO 19+95±, 4.7M LT.

FOR -RP1BD- BENT 6:

- Y1- STA. 20+10± TO 20+30±, 21M LT.

FOR -COL2- BENT 3:

- Y1- STA. 19+61± TO 19+86±, 39.4M RT.

-RP1BD- BENTS 5 AND 6 AND -COL2- BENT 4 MAY BE COMPLETED PRIOR TO, BUT NO LATER THAN PHASE I, STEP 8. -RP1BD- BENT 4 AND -COL2- BENT 3 MAY BE COMPLETED PRIOR TO, BUT NO LATER THAN PHASE II, STEP 4.

FOR -RP1BD- AND -COL2- GIRDER INSTALLATION OVER -Y1-, STOP DETOUR ALL -Y1- TRAFFIC, AS DIRECTED BY THE ENGINEER, BETWEEN THE HOURS OF 10:00 P.M. AND 4:00 A.M. NOTIFY THE ENGINEER 14 CALENDAR DAYS PRIOR TO THIS OPERATION. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

-RP1BD- AND -COL2- GIRDER INSTALLATION OVER -Y1- MAY BE COMPLETED PRIOR TO, BUT NO LATER THAN PHASE IV, STEP 1.

- AWAY FROM TRAFFIC, BEGIN PROPOSED PAVING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS:

- RP2B- FROM STA. 12+40± TO STA. 14+60±
- RP1BD- FROM STA. 39+40± TO STA. 42+80±
- LP2D- FROM -RP1BD- TO -LP2D- STA. 14+07±
- SPUR2D- FROM -LP2D- TO -SPUR2D- STA. 10+42±

- AWAY FROM TRAFFIC AND USING OVERNIGHT ROAD CLOSURES, BEGIN CONSTRUCTION OF PROPOSED -RP1BD- SUPERSTRUCTURE OVER BRAGG BLVD. (SEE TCP-20A FOR OFFSITE DETOUR) (SEE ICT FOR LIQUIDATED DAMAGES)

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

- CONSTRUCT -DET1- UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE FROM -DET1- STA. 10+00± TO -DET1- STA. 14+63± AND FROM -DET1- STA. 18+07± TO -DET1- STA. 23+03±. (SEE SHEETS TCP-8 THRU TCP-11 AND ROADWAY PLAN SHEETS 2-AL THRU 2-AO)

- CONSTRUCT -DET2- UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE FROM -DET2- STA. 10+00± TO -DET2- STA. 13+66± AND FROM -DET2- STA. 19+00± TO -DET2- STA. 23+01±. (SEE SHEETS TCP-8 THRU TCP-11 AND ROADWAY PLAN SHEETS 2-AL THRU 2-AO)

REMOVE LANE CLOSURES AT THE END OF EACH WORKDAY.

STEP 4: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, INSTALL PROPOSED DRAINAGE PIPES AND/OR REMOVE EXISTING PIPES CROSSING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) AS SHOWN IN ROADWAY PLANS. REMOVE LANE CLOSURES AT THE END OF EACH WORKDAY.

FOR THE PIPE INSTALLATION AT -Y1- STA. 26+89±, STOP/DETOUR TRAFFIC AS DIRECTED BY THE ENGINEER, BETWEEN THE HOURS OF 10:00 P.M. AND 4:00 A.M. NOTIFY THE ENGINEER 14 CALENDAR DAYS PRIOR TO THIS OPERATION. (SEE INTERMEDIATE CONTRACT TIME AND LIQUIDATED DAMAGES)

LEGEND

PROPOSED CONSTRUCTION

APPROVED: *Michael T. Zepka* DATE: 6-9-11

SEAL

PHASE I OVERVIEW (CONT.) AND PHASING

SCALE: NONE		REVISIONS
DATE: 6-11		
DWG. BY: GEP		
DESIGN BY: GEP		
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PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-6

STEP 5: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9:

- STRENGTHEN EXISTING SHOULDERS AT THE FOLLOWING LOCATIONS: (SEE SHEETS TCP-7 THRU TCP-13)

- Y1- FROM STA. 9+43± TO STA. 13+00± (SBL) (MEDIAN)
- Y1- FROM STA. 17+60± TO STA. 19+12± (SBL) (MEDIAN)
- Y1- FROM STA. 19+53± TO STA. 21+05± (SBL) (MEDIAN)
- Y1- FROM STA. 26+00± TO STA. 34+30± (SBL) (MEDIAN)
- Y1- FROM STA. 26+00± TO STA. 32+50± (NBL) (MEDIAN)
- Y1- FROM STA. 16+25± TO STA. 22+38± (SBL) (OUTSIDE)

- CONSTRUCT 1.2m OF PROPOSED MEDIAN WIDENING UP TO EXISTING EDGE OF PAVEMENT ELEVATION AT THE FOLLOWING LOCATIONS: (SEE SHEETS TCP-7 AND TCP-8)

- Y1- FROM STA. 9+43± TO STA. 13+00± (NBL)

REMOVE LANE CLOSURES AT THE END OF EACH WORKDAY.

STEP 6: - PLACE 2-LANE, 2-WAY TRAFFIC ON -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND LANES AS SHOWN ON SHEETS TCP-14 THRU TCP-20 ACCORDING TO THE FOLLOWING SEQUENCE:

- a) - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PLACE -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND TRAFFIC INTO THE OUTSIDE LANE FROM -Y1- STA 13+00± TO -Y1- STA 26+30±.
- b) - PLACE PORTABLE CONCRETE BARRIER FROM -Y1- STA. 17+00± TO -Y1- STA. 25+90± ALONG THE CENTER OF EXISTING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND LANES AS SHOWN ON SHEETS TCP-16 THRU TCP-18.
 - PLACE PAVEMENT MARKING LINES AND SYMBOLS ON -DET1- AND SOUTHBOUND LANES OF -Y1-, (SR 1007, ALL AMERICAN FREEWAY) AS SHOWN ON SHEETS TCP-14 THRU TCP-17 WHICH DO NOT INTERFERE WITH -Y1- NORTHBOUND TRAFFIC.
 - INSTALL TEMPORARY GUARDRAIL IN MEDIAN FROM -Y1- STA. 19+56± TO -Y1- STA. 21+36± AS SHOWN ON SHEET TCP-16 AND ROADWAY SHEET 2-AN.
- c) - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PLACE -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND TRAFFIC INTO EXISTING NORTHBOUND OUTSIDE LANE. PAVE/WEDGE EXISTING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND MEDIAN LANE AND 1.2 INSIDE SHOULDER UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM -Y1- STA. 9+43± TO -Y1- STA. 16+67± AND FROM -Y1- STA. 22+00± TO -Y1- STA. 32+50±. PLACE REMAINING PORTABLE CONCRETE BARRIER FROM -Y1- STA. 13+20± TO -Y1- STA. 17+00±. (SEE SHEET TCP-15)
- d) - USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 4 OF 9, SHIFT -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND TRAFFIC ONTO -DET1- AND INSIDE LANE OF -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND LANES FROM -Y1- STA. 10+74± TO -Y1- STA. 32+50± AS SHOWN ON SHEETS TCP-14 THRU TCP-20.
- e) - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PAVE/WEDGE EXISTING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND OUTSIDE LANE(S) UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM -Y1- STA. 9+43± TO -Y1- STA. 16+67± AND FROM -Y1- STA. 22+00± TO -Y1- STA. 32+50±.
- f) - COMPLETE PLACEMENT OF PAVEMENT MARKING LINES AND SYMBOLS AND TRAFFIC CONTROL DEVICES SHOWN ON SHEETS TCP-14 THRU TCP-20. (SEE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 4 OF 9)

STEP 7: - AWAY FROM TRAFFIC, PLACE PORTABLE CONCRETE BARRIER ALONG EXISTING OUTSIDE EDGE OF PAVEMENT OF -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND LANE FROM -Y1- STA. 11+05± TO -Y1- STA. 16+16± AND FROM -Y1- STA. 22+00± TO -Y1- STA. 32+30±. (SEE SHEETS TCP-14 THRU TCP-20)

STEP 8: - BEHIND PORTABLE CONCRETE BARRIER AND WITH -Y1-, (SR 1007, ALL AMERICAN FREEWAY) TRAFFIC ON THE -DET1- ALIGNMENT:

- CONSTRUCT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE AT THE FOLLOWING LOCATIONS: (SEE ROADWAY PLANS AND PHASE I, DETAIL II, SHEETS TCP-14 THRU TCP-20)

- Y1- FROM STA. 11+05± TO STA. 16+67± (NBL OUTSIDE WIDENING)
- Y1- FROM STA. 22+00± TO STA. 32+00± (NBL OUTSIDE WIDENING)
- RP1A- FROM STA. 16+78± TO STA. 18+07±
- LP1D- FROM STA. 13+91± TO STA. 14+69±
- RP1DB- FROM STA. 8+85± TO STA. 10+85±

- CONSTRUCT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND LANES FULL WIDTH (INCLUDING EXISTING BRIDGE WIDENING AND OVERLAY) FROM -Y1- STA. 16+67± TO -Y1- STA. 22+00±.

- COMPLETE -RP1BD- BENTS 5 AND 6 AND -COL2- BENT 4.

6/9/2011 P:\TRAFFIC\U-2519DA\100: rev Jun 2011\U-2519DA_TC_TCP06.phiov.dgn Florence & Hutcheson

APPROVED: <i>Michael T. Rzewna</i> DATE: 6-9-11	PHASE I PHASING (CONT.)						
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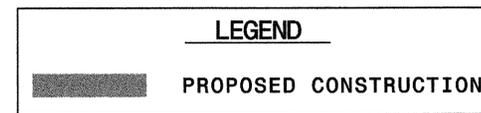
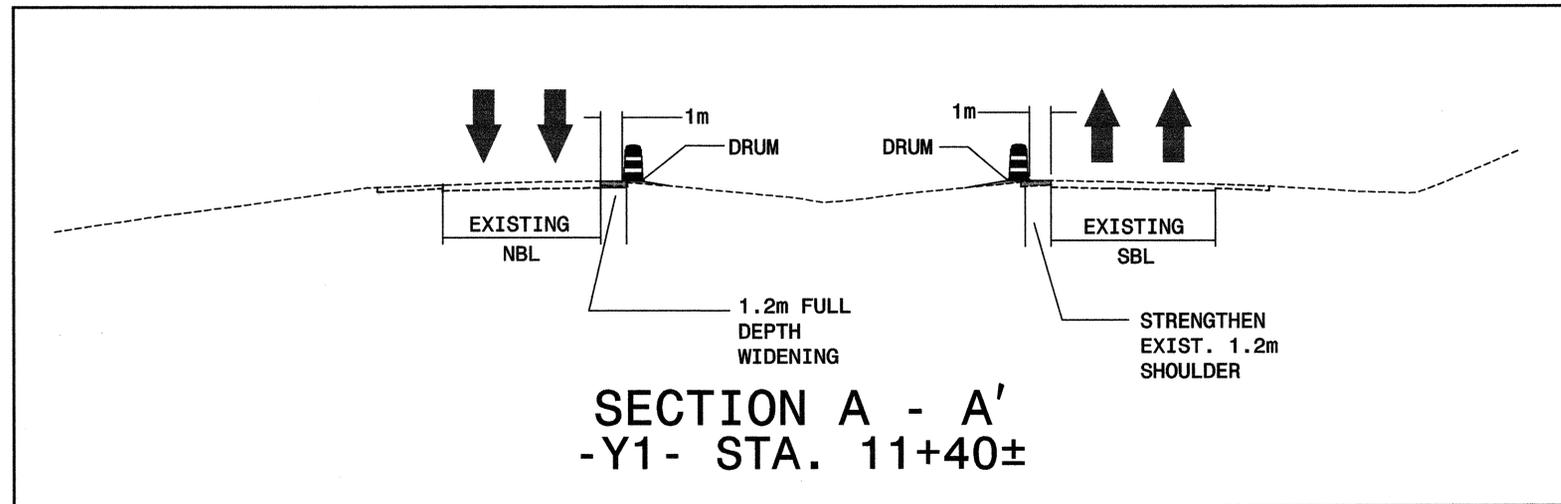
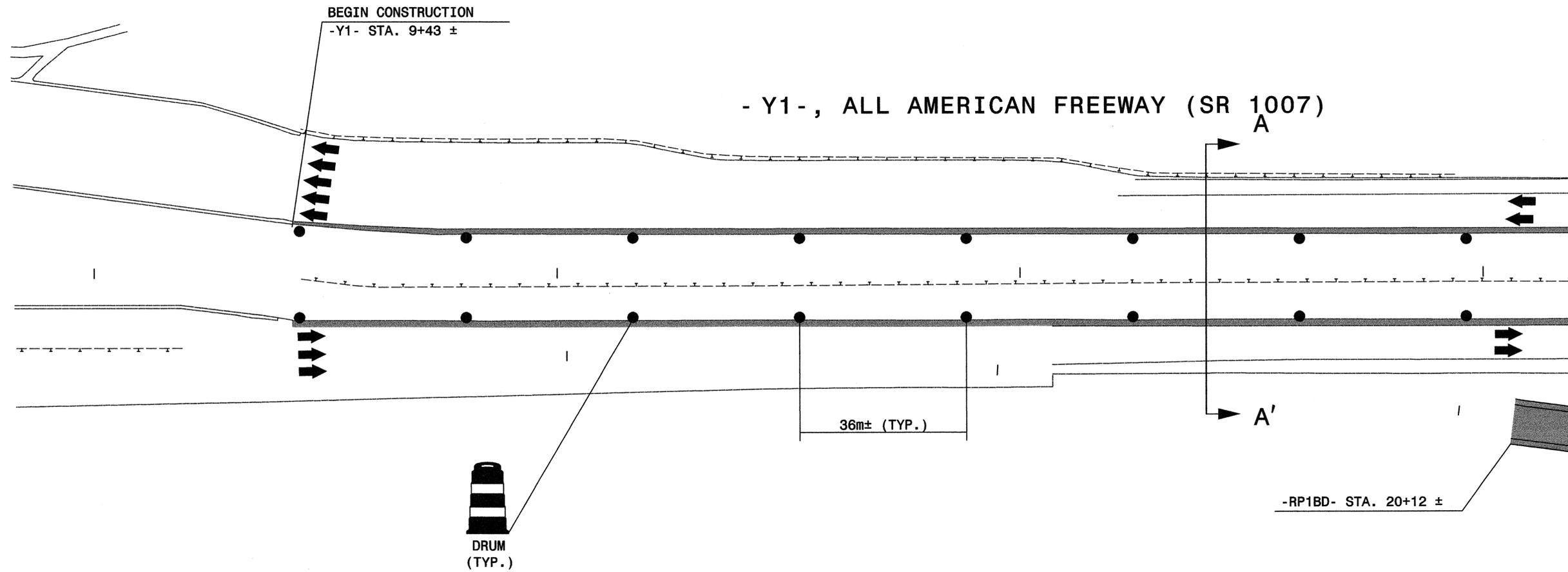
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U-2519DA	TCP-7

9+00

10+00

11+00

12+00



APPROVED: *Michael T. Rzepka* DATE: 10-10-08



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PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-8

13+00

14+00

15+00

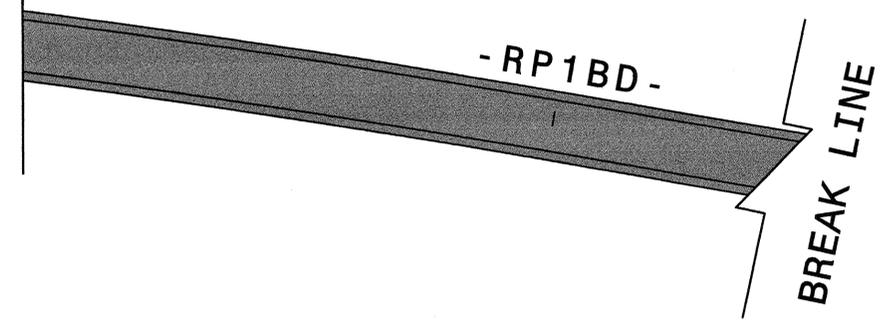
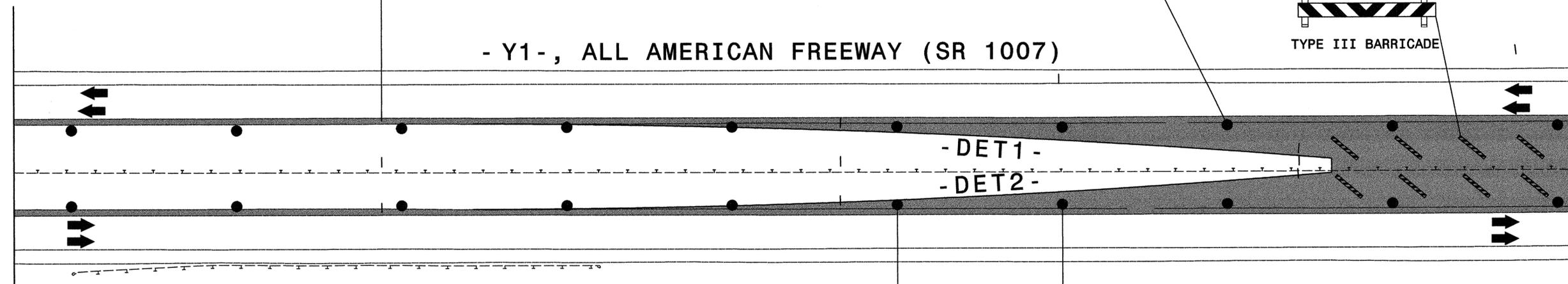
-Y1- STA. 13+00 ±
 -DET1- STA. 10+00 ±
 -DET2- STA. 10+00 ±



- Y1 - , ALL AMERICAN FREEWAY (SR 1007)

MATCH LINE SEE SHEET TCP-7

MATCH LINE SEE THIS SHEET



36m± (TYP.)

MATCH LINE SEE THIS SHEET

MATCH LINE SEE SHEET TCP-9

-Y1- , ALL AMERICAN FREEWAY (SR 1007)
 -Y1- STA. 16+67 ±
 -DET2- STA. 13+66 ±



-Y1- STA. 16+25 ±

LEGEND	
	PROPOSED CONSTRUCTION

APPROVED: *Michael T. Rzeska* DATE: 10-10-08



**PHASE I
 DETAIL 1**

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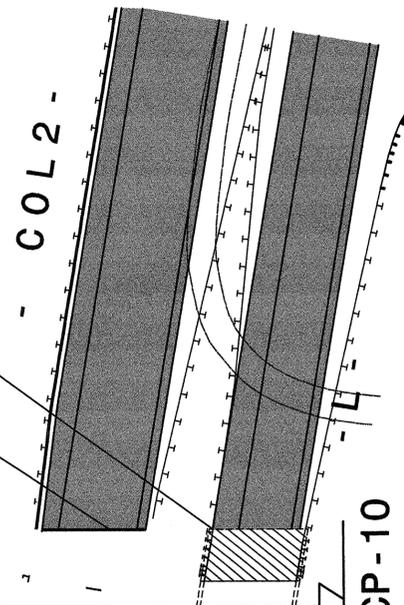
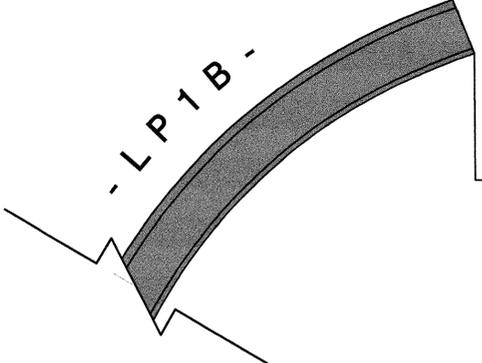
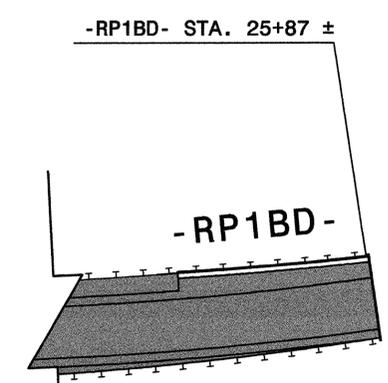
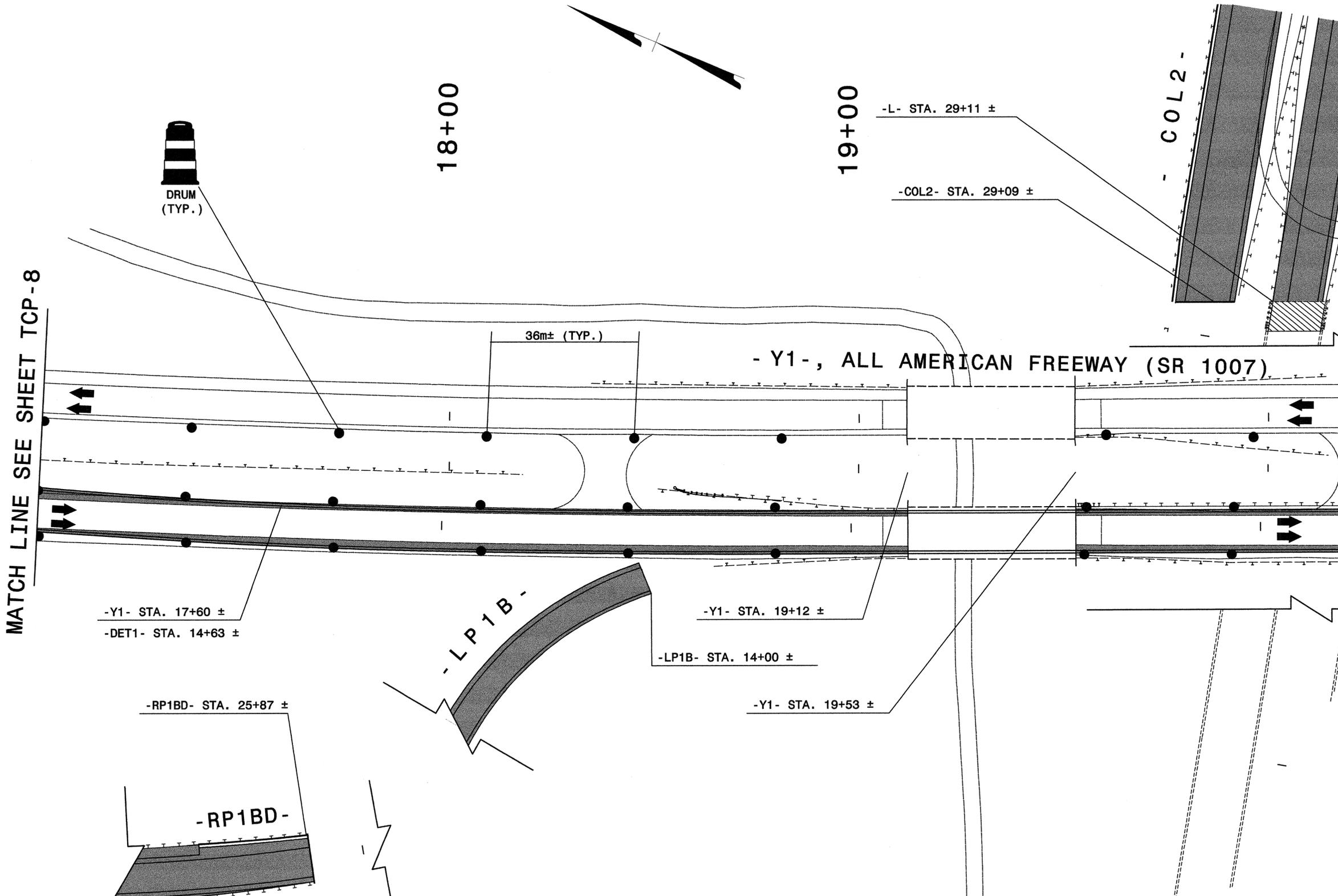


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PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-9

MATCH LINE SEE SHEET TCP-8

MATCH LINE SEE SHEET TCP-10



LEGEND	
	PROPOSED CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08

SEAL

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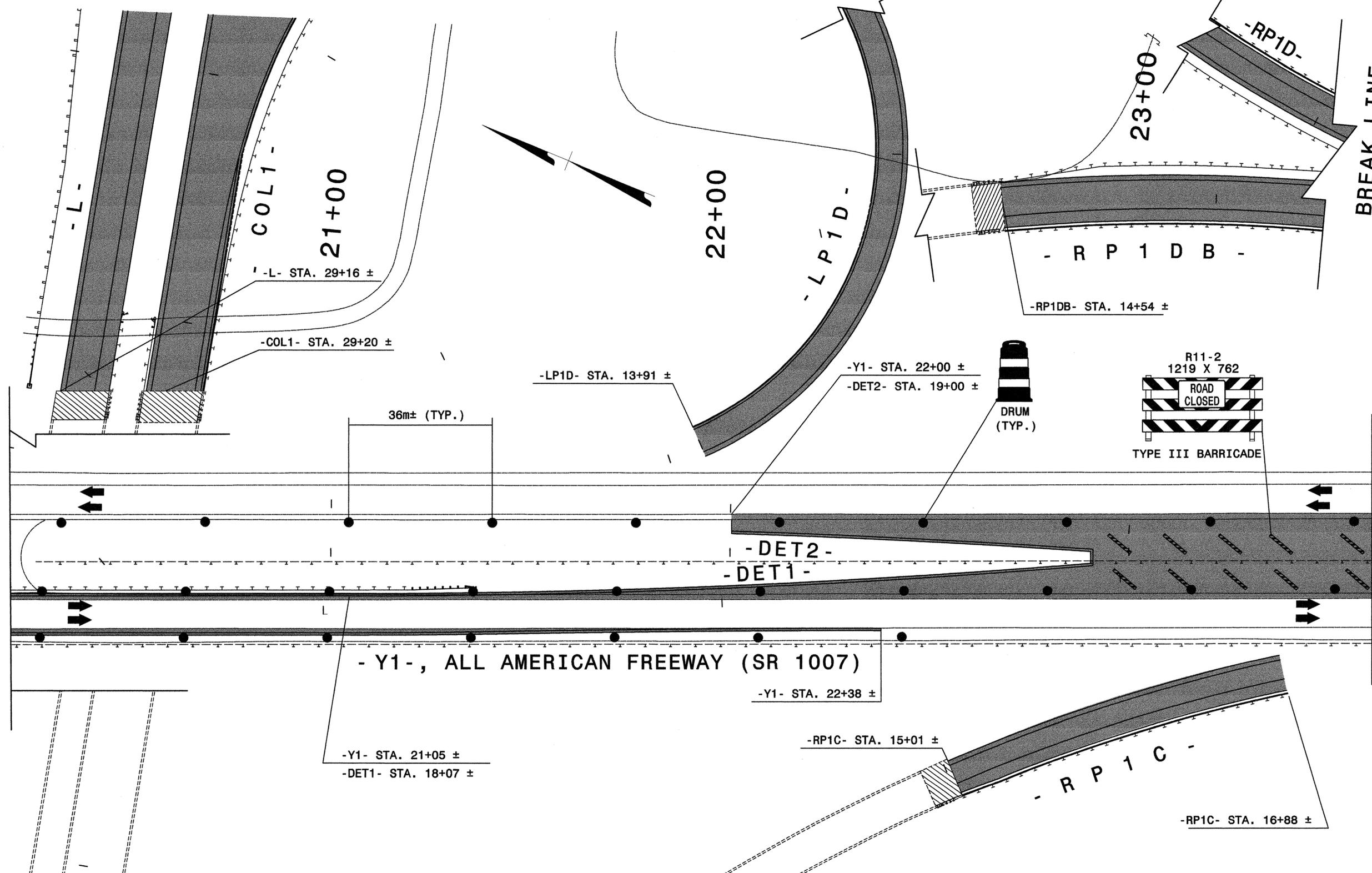


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PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-10

MATCH LINE SEE SHEET TCP-9

MATCH LINE SEE SHEET TCP-11



10/9/2008
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LEGEND

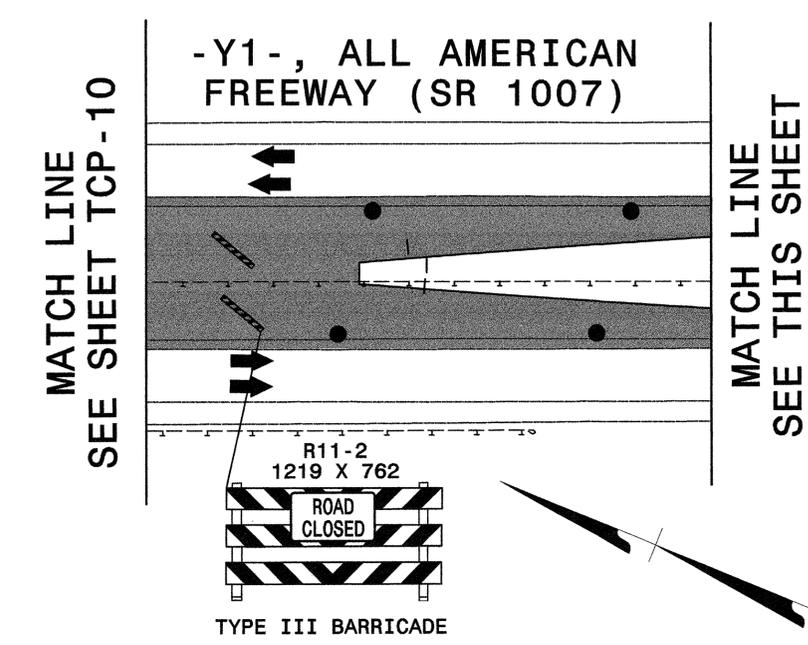
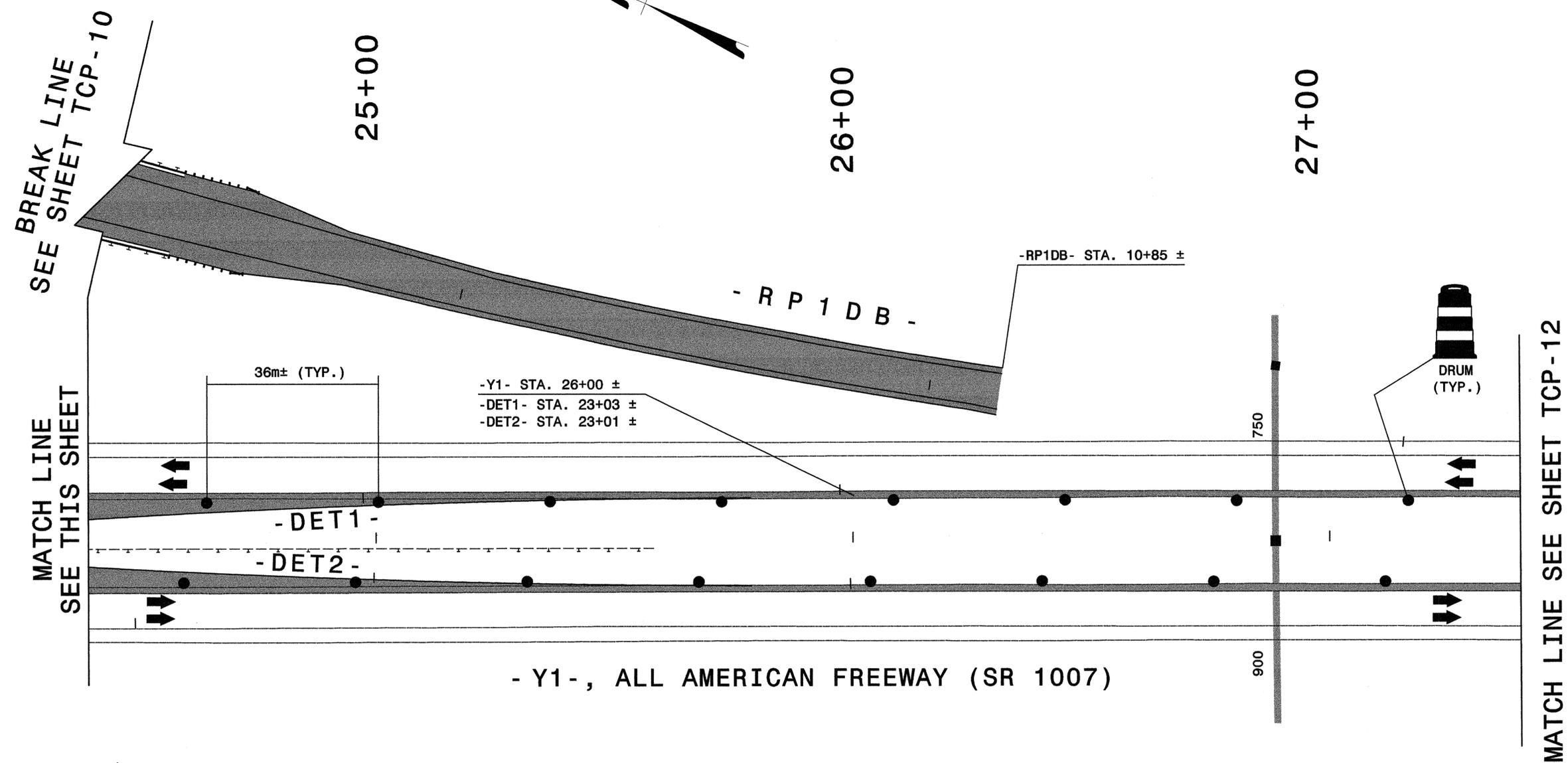
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APPROVED: *Michael T. Rzewna* DATE: 10-10-08

SEAL

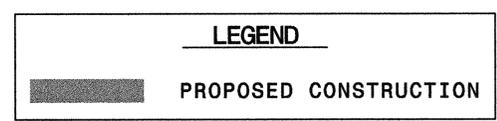
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DATE: 10-08		
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DESIGN BY: BLM		
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- Y1 -, ALL AMERICAN FREEWAY (SR 1007)

- Y1 -, ALL AMERICAN FREEWAY (SR 1007)



APPROVED: <i>Michael T. Rzepka</i> DATE: 10-10-08	<p>PHASE I DETAIL 1</p>	REVISIONS									
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PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-12

28+00

29+00

30+00

MATCH LINE SEE SHEET TCP-11

MATCH LINE SEE SHEET TCP-13



36m± (TYP.)

- Y1-, ALL AMERICAN FREEWAY (SR 1007)

LEGEND

PROPOSED CONSTRUCTION

APPROVED: *Michael T. Kierman* DATE: 6-9-11



PHASE I
 DETAIL 1

SCALE: NONE
 DATE: 6-11
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REVISIONS	



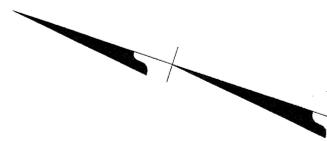
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PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-13

31+00

32+00

33+00



MATCH LINE SEE SHEET TCP-12

36m± (TYP.)

END CONSTRUCTION
 -Y1- STA. 32+00±

-Y1- STA. 32+50±

- Y1 - , ALL AMERICAN FREEWAY , (SR 1007)



DRUM
(TYP.)

- R P 3 C -

END CONSTRUCTION
 -Y1- STA. 33+60±

-Y1- STA. 34+30±

10/9/2008
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LEGEND	
	PROPOSED CONSTRUCTION

APPROVED: *Michael Rzepka* DATE: 10-10-08



**PHASE I
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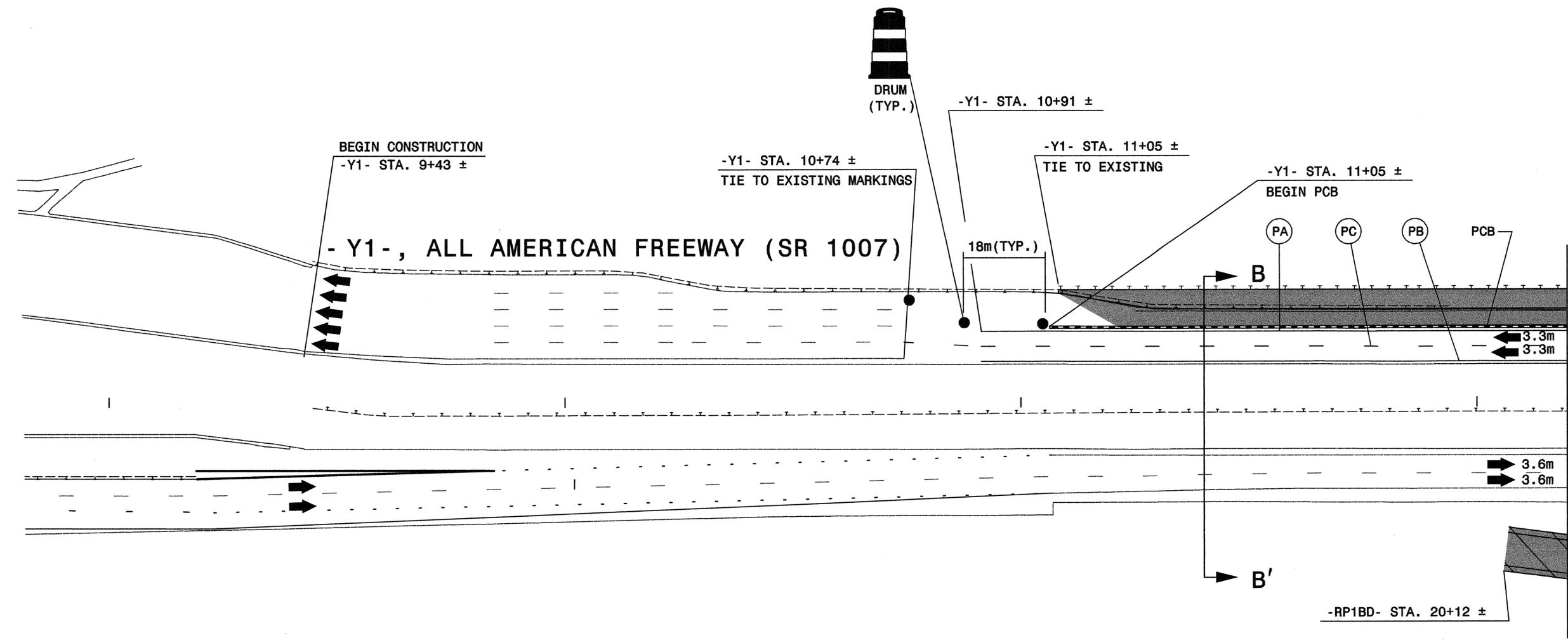
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U-2519DA	TCP-14

9+00

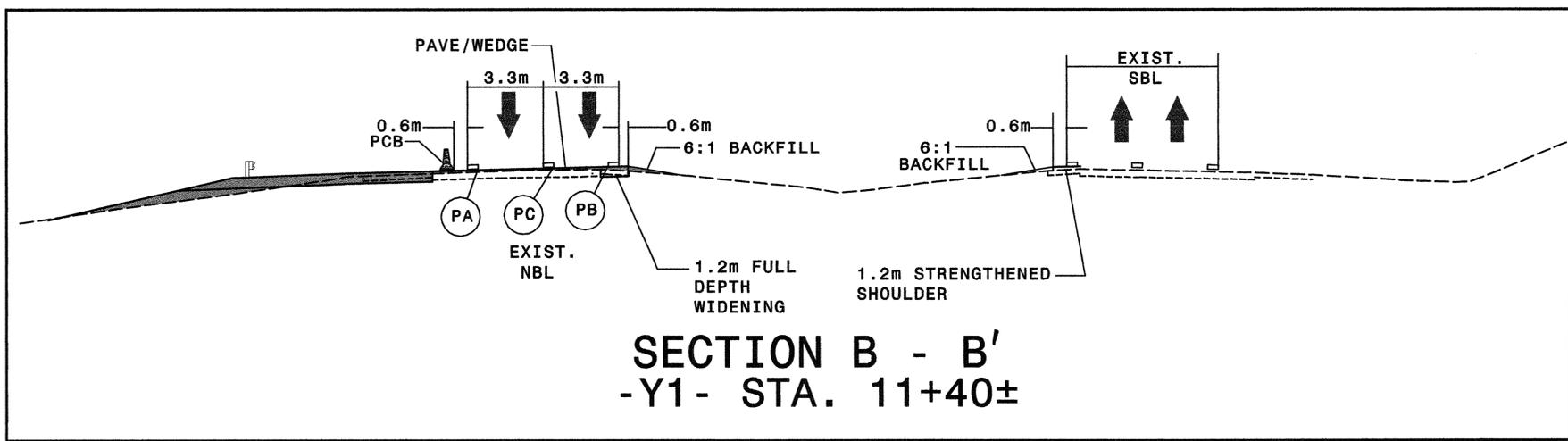
10+00

11+00

12+00



MATCH LINE SEE SHEET TCP-15



SECTION B - B'
-Y1- STA. 11+40±

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Zepka* DATE: 10-10-08



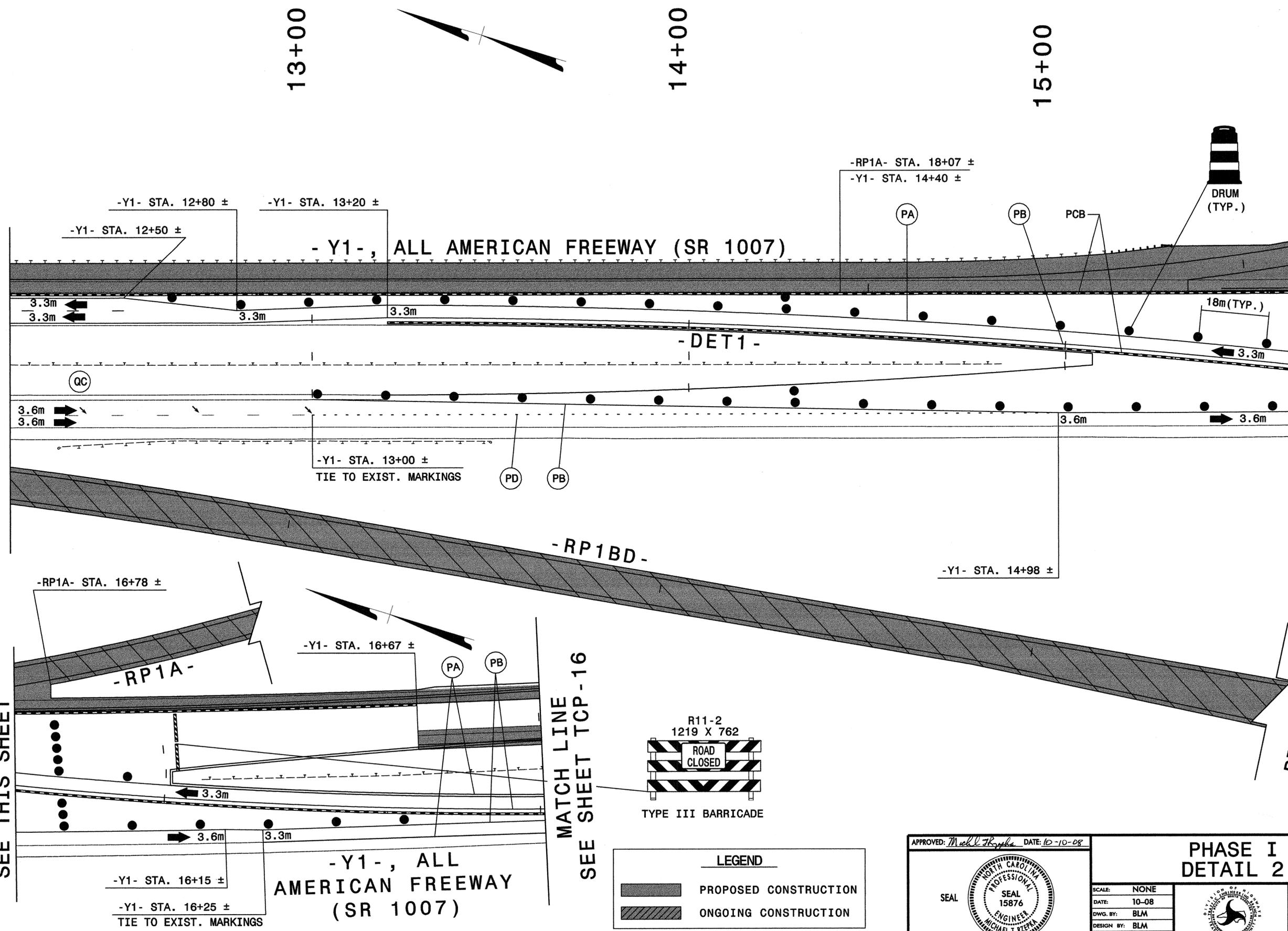
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MATCH LINE SEE SHEET TCP-14

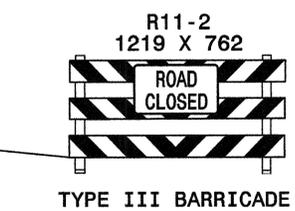
MATCH LINE SEE THIS SHEET



MATCH LINE SEE THIS SHEET

MATCH LINE SEE SHEET TCP-16

BREAK LINE



LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael Rzepka* DATE: 10-10-08



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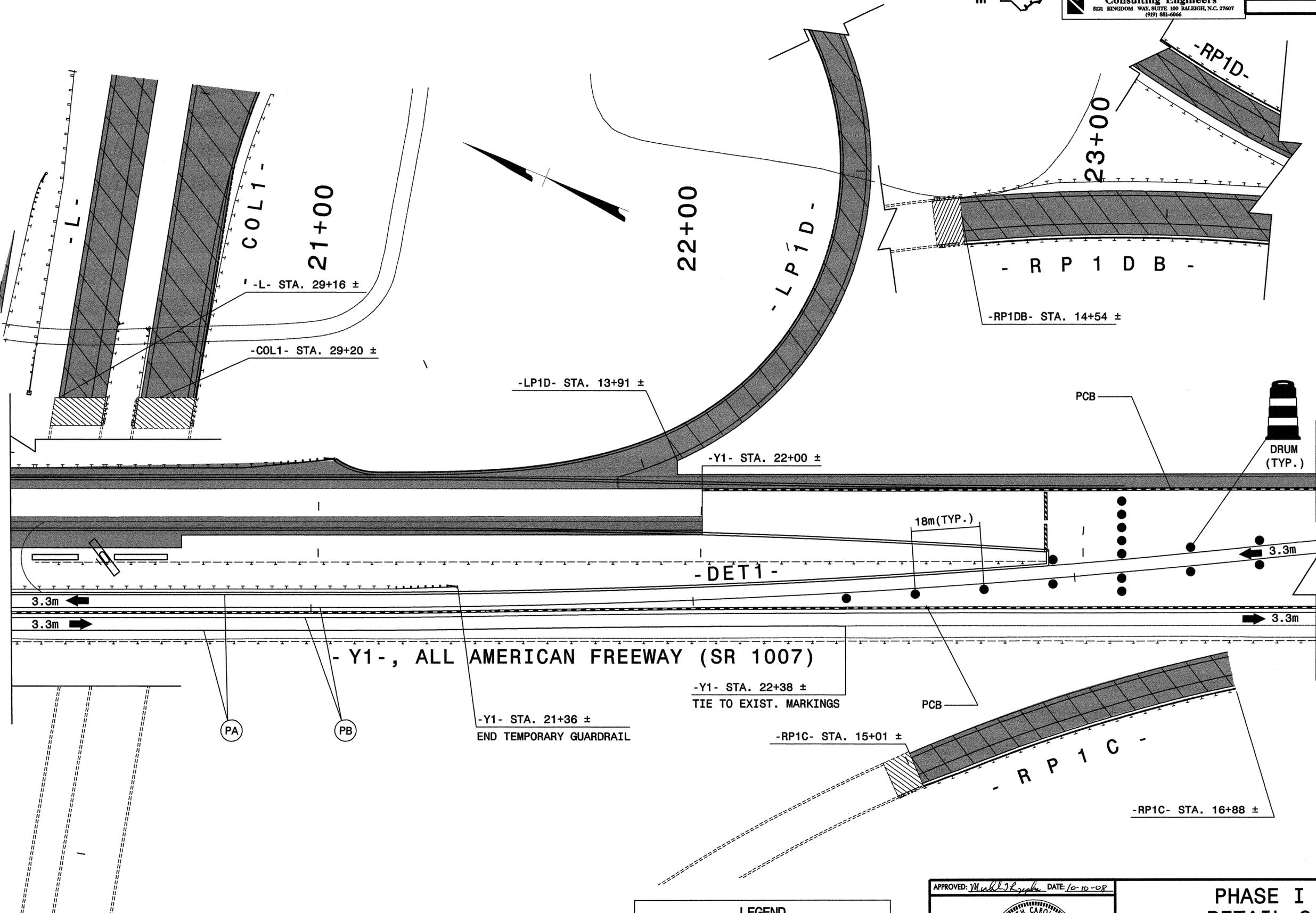


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 (919) 881-0966

PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-17

MATCH LINE SEE SHEET TCP-16

BREAK LINE SEE SHEET TCP-18



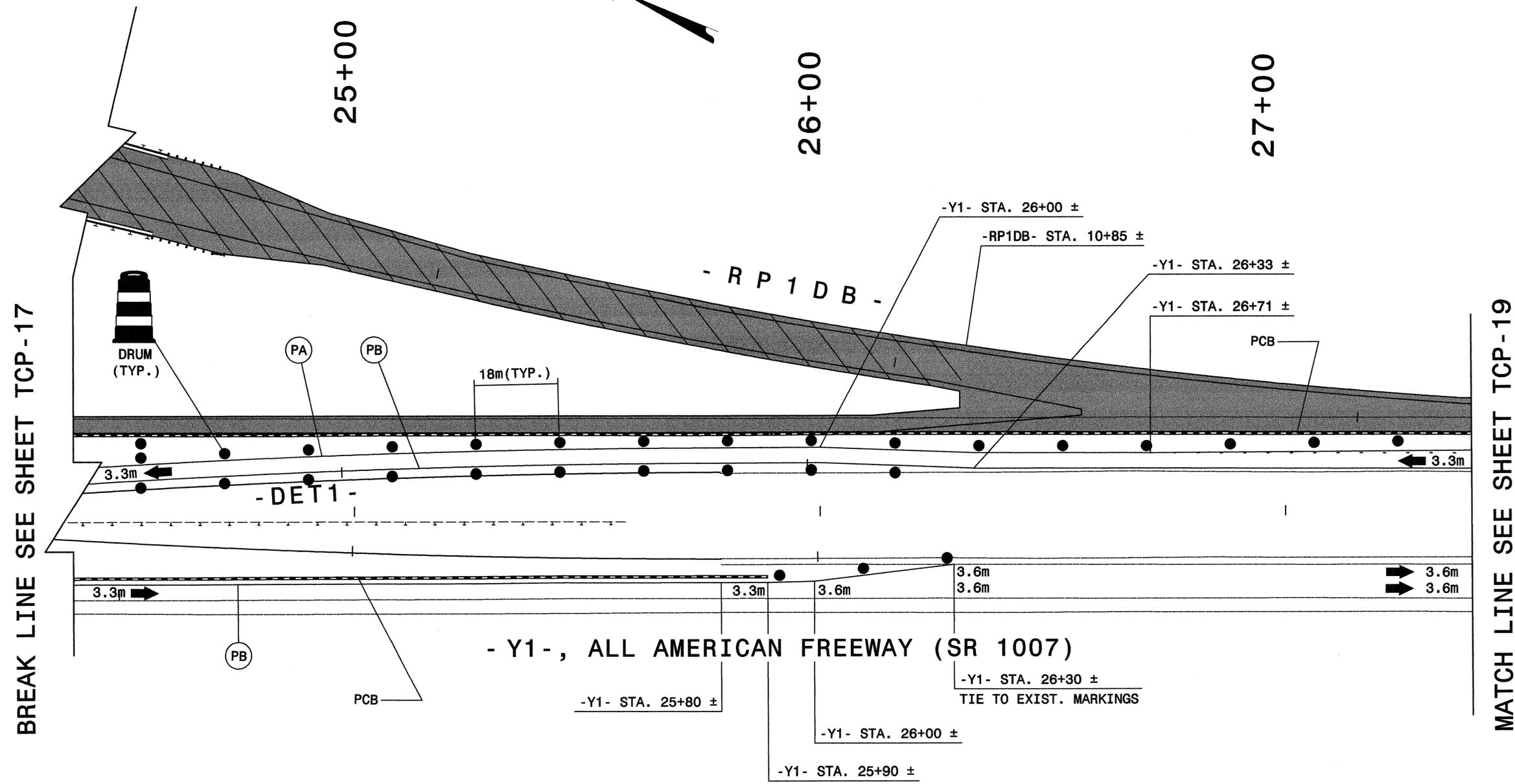
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 KO & Associates, P.C.

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08

SEAL

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SCALE: NONE	DATE: 10-08		CARD
DWG. BY: BLM	DESIGN BY: BLM		FILE
REVIEWED BY: MTR			



BREAK LINE SEE SHEET TCP-17

MATCH LINE SEE SHEET TCP-19

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: <i>Michael T. Rzepka</i> DATE: 10-10-08	PHASE I DETAIL 2									
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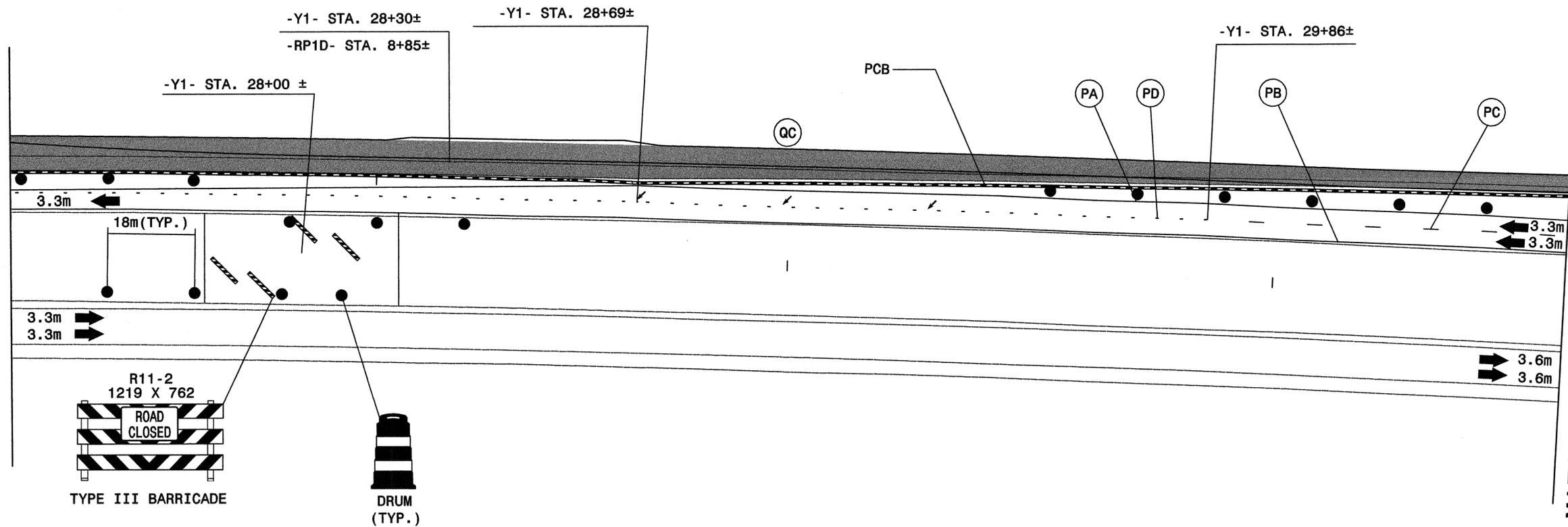
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 (919) 851-0866

PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-19

MATCH LINE SEE SHEET TCP-18



MATCH LINE SEE SHEET TCP-20

LEGEND	
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APPROVED: *Michael Rzepka* DATE: 10-10-08

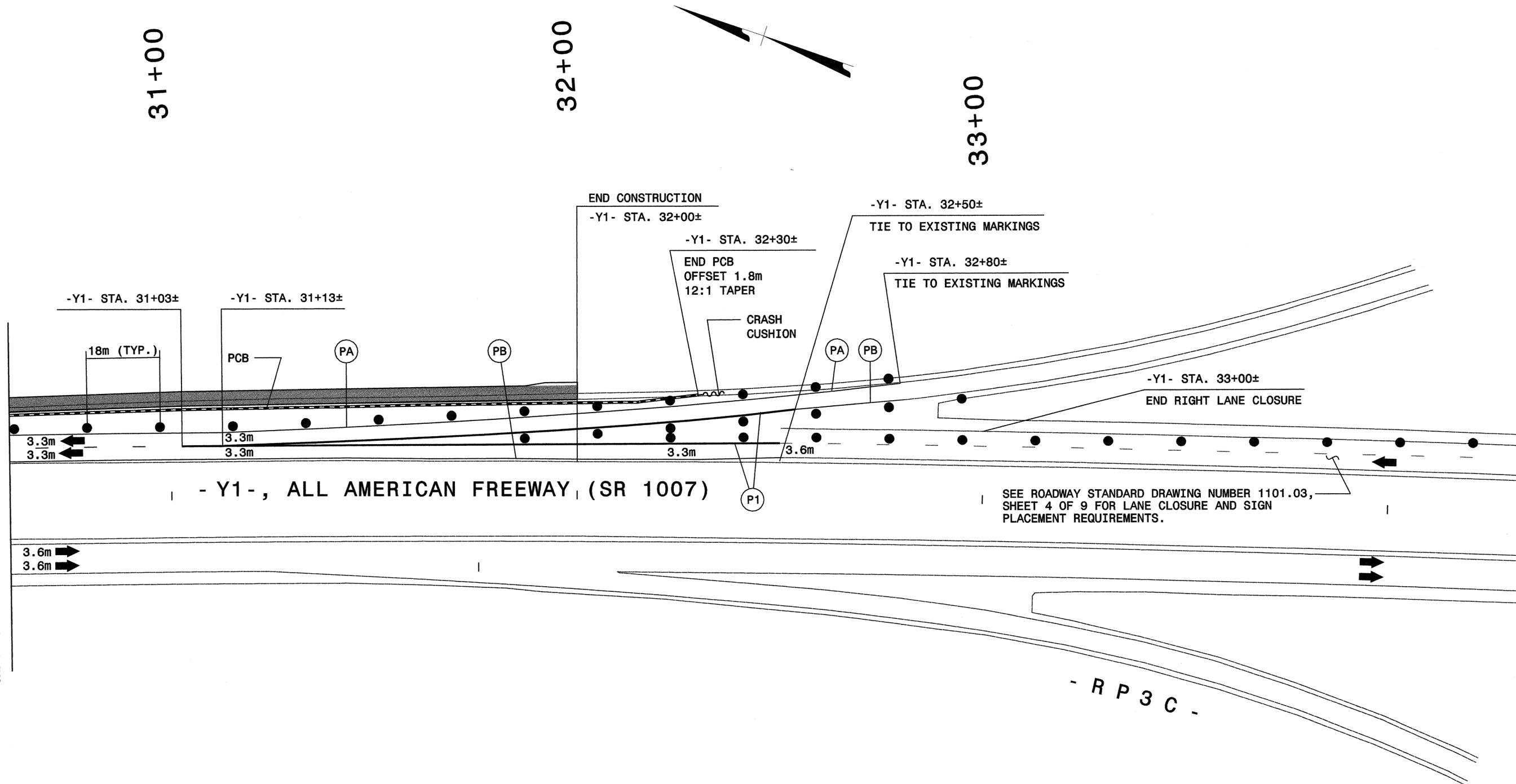
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MATCH LINE SEE SHEET TCP-19



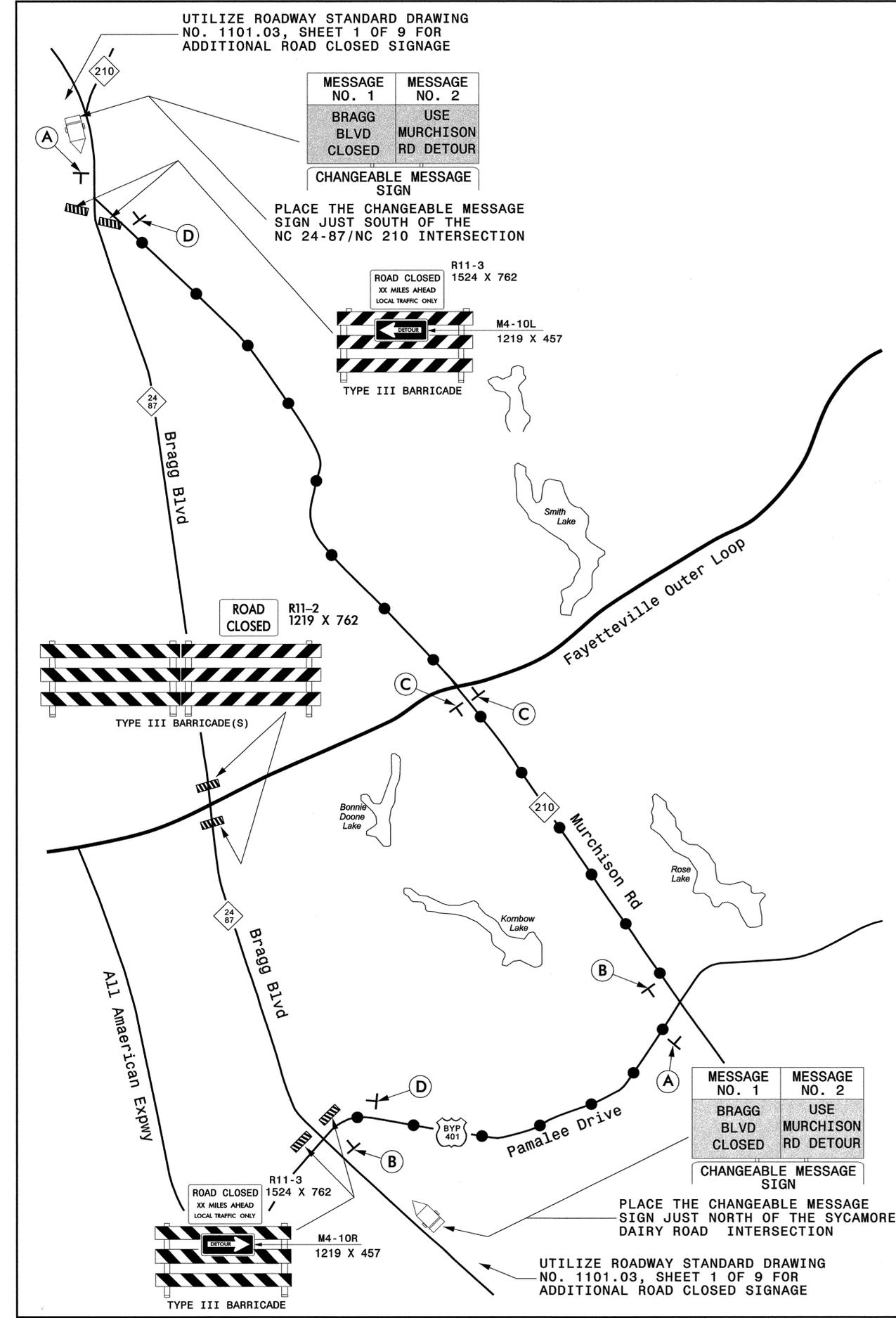
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LEGEND
 PROPOSED CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08



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DESIGN BY: BLM	REVIEWED BY: MTR		
DWG. BY: BLM			



SIGN NUMBER: name TYPE: D BACKG COLOR: Orange COPY COLOR: Black

QUANTITY: 8

SIGN WIDTH: 2'-0" HEIGHT: 1'-8" TOTAL AREA: 3.3 Sq.Ft.

BORDER TYPE: FLUSH RECESS: 0.47" WIDTH: 0.63" RADII: 1.5"

NO. Z BARS: LENGTH: MAT'L: 0.063" (1.6 mm) ALUMINUM 0.080" (2.0 mm) ALUMINUM 0.125" (3.2 mm) ALUMINUM

DESIGN BY: TMA CHECKED BY: PDG PROJECT ID: X-00028/U-2519E DIV: 6 DATE: July 16, 2008

NOTES:
1. Legend and border shall be direct applied Type VII, VIII or IX reflective sheeting.
2. Background shall be Type VII, VIII OR IX reflective sheeting.

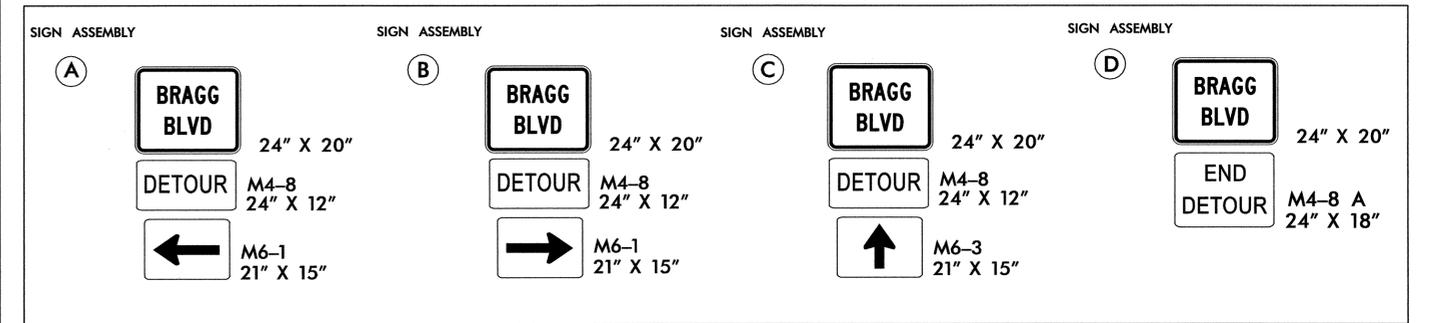
Spacing Factor is 1 unless specified otherwise

LETTER POSITIONS

Letter widths are shown

Letter	Width	Series/Size	Text Length
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R	2.2	C 2000	10.5
A	2.6		
G	2.2		
G	2.2		
B	2.2		
L	2		
V	2.5		
D	2.2		

FILENAME: Off-site Detour Sign Designs NORTH CAROLINA D.O.T. SIGN DETAIL



NOTE:
1. ALL DETOUR SIGN LOCATIONS ARE APPROXIMATE. FINAL PLACEMENT AS DIRECTED BY ENGINEER.

APPROVED: *[Signature]* DATE: 2-11-11

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15876 MICHAEL T. RZEPKA

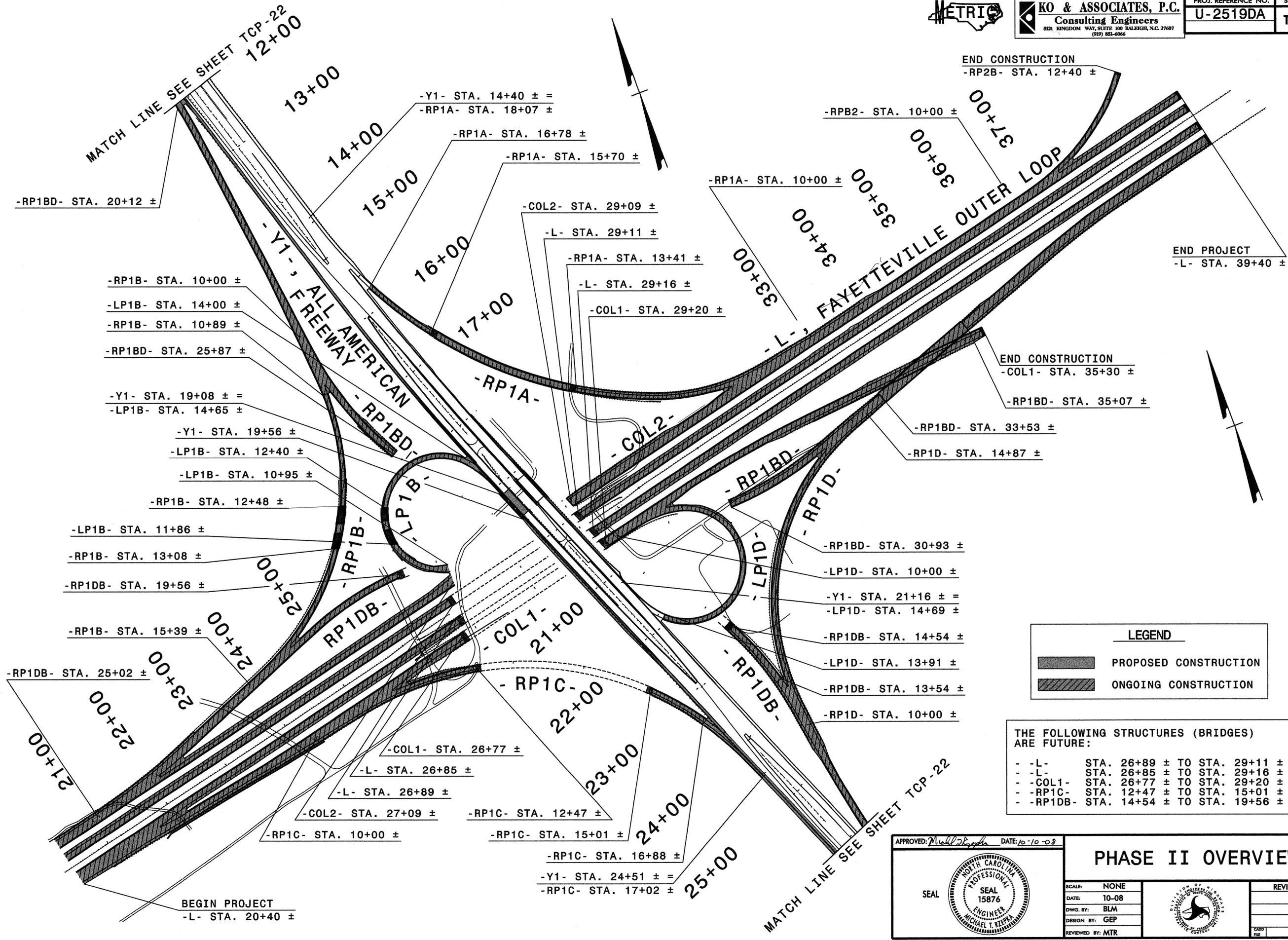
OFFSITE DETOUR SIGNING

SCALE: NONE DATE: 2-11 DWG. BY: GEP DESIGN BY: GEP REVIEWED BY: MTR

REVISIONS

CADD FILE

2/11/2011 P:\1101\offsite\U-2519DA\100% rev feb 2011\U-2519DA.TC.TCP20A.dgn KO & Associates, P.C.



END CONSTRUCTION
 -RP2B- STA. 12+40 ±

END PROJECT
 -L- STA. 39+40 ±

END CONSTRUCTION
 -COL1- STA. 35+30 ±

-RP1BD- STA. 33+53 ±
 -RP1D- STA. 14+87 ±

-RP1BD- STA. 30+93 ±

-LP1D- STA. 10+00 ±

-Y1- STA. 21+16 ± =
 -LP1D- STA. 14+69 ±

-RP1DB- STA. 14+54 ±

-LP1D- STA. 13+91 ±

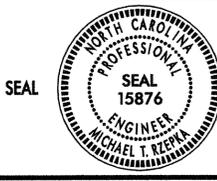
-RP1DB- STA. 13+54 ±

-RP1D- STA. 10+00 ±

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

THE FOLLOWING STRUCTURES (BRIDGES) ARE FUTURE:	
-L-	STA. 26+89 ± TO STA. 29+11 ±
-L-	STA. 26+85 ± TO STA. 29+16 ±
-COL1-	STA. 26+77 ± TO STA. 29+20 ±
-RP1C-	STA. 12+47 ± TO STA. 15+01 ±
-RP1DB-	STA. 14+54 ± TO STA. 19+56 ±

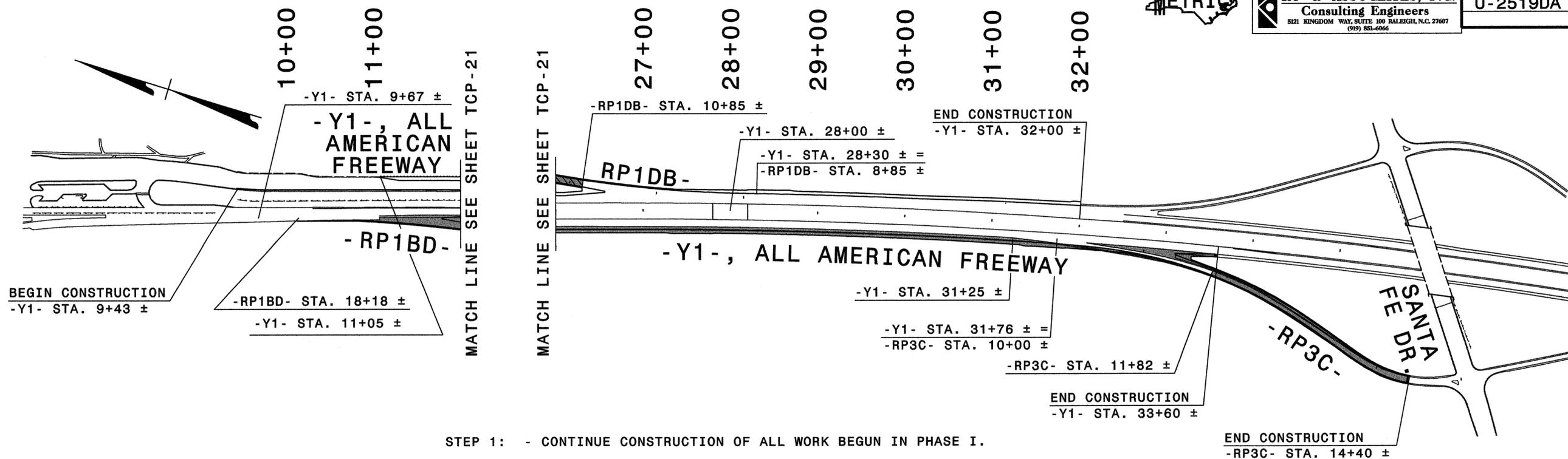
APPROVED: *Michael T. Rzepa* DATE: 10-10-08



PHASE II OVERVIEW

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- STEP 1: - CONTINUE CONSTRUCTION OF ALL WORK BEGUN IN PHASE I.
- STEP 2: - PLACE 3-LANE, 2-WAY TRAFFIC ON -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND LANES AS SHOWN ON SHEETS TCP-24 THRU TCP-31 ACCORDING TO THE FOLLOWING SEQUENCE:
- a) - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, REMOVE PORTABLE CONCRETE BARRIER AND OUTSIDE EDGELINE ALONG EXISTING NORTHBOUND LANES FROM -Y1- STA. 10+91± TO -Y1- STA. 12+50±
 - AWAY FROM TRAFFIC, REMOVE PORTABLE CONCRETE BARRIER ALONG EXISTING NORTHBOUND LANES FROM -Y1- STA. 12+50± TO -Y1- STA. 16+67± AND FROM -Y1- STA. 22+00± TO -Y1- STA. 32+30±.
 - PLACE PAVEMENT MARKING LINES AND SYMBOLS ON -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND LANES FROM -Y1- STA. 10+74± TO -Y1- STA. 32+30± WHICH CAN BE PLACED WITHOUT INTERFERING WITH -Y1-, (SR 1007, ALL AMERICAN FREEWAY) TRAFFIC. (SEE SHEETS TCP-23 THRU TCP-29)
 - b) - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PLACE -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND TRAFFIC INTO OUTSIDE LANE(S) FROM -Y1- STA. 11+05± TO -Y1- STA. 32+00±. PLACE PORTABLE CONCRETE BARRIER FROM -Y1- STA. 13+00± TO -Y1- STA. 26+00± ALONG INSIDE NORTHBOUND EDGELINE AS SHOWN ON SHEETS TCP-25 THRU TCP-28. PLACE PORTABLE CONCRETE BARRIER FROM -Y1- STA. 19+00± TO -Y1- STA. 20+65± ALONG OUTSIDE SOUTHBOUND EDGELINE (-DET2-) AS SHOWN ON SHEET TCP-26 & TCP-27.
 - c) - REMOVE PORTABLE CONCRETE BARRIER LOCATED ALONG -DET1- AND THE CENTER OF EXISTING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND LANES.
 - d) - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PLACE -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND TRAFFIC INTO THE OUTSIDE LANE FROM -Y1- STA. 9+43± TO -Y1- STA. 33+60±. PAVE/WEDGE EXISTING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) INSIDE LANE AND 1.2m INSIDE SHOULDER UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM -Y1- STA. 9+43± TO -Y1- STA. 15+00± AND FROM -Y1- STA. 23+00± TO -Y1- STA. 33+60±.

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: <i>Michael T. Rzepka</i> DATE: 10-10-08		<h3>PHASE II OVERVIEW (CONT.) AND PHASING</h3>																
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PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-23

- e) - USING ROADWAY STANDARD DRAWING NO. 1101.01, SHEET 3 OF 9, PLACE -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND TRAFFIC INTO THE INSIDE LANE FROM -Y1- STA. 9+43± TO -Y1- STA. 33+60±. PAVE/WEDGE EXISTING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) OUTSIDE LANE UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE FROM -Y1- STA. 9+43± TO -Y1- STA. 15+00± AND FROM -Y1- STA. 23+00± TO -Y1- STA. 33+60±.
- f) - USING ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 4 OF 9, SHIFT -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND TRAFFIC ONTO -DET2- AND INSIDE LANE OF -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND FROM -Y1- STA. 13+00± TO -Y1- STA. 26+83± AS SHOWN ON SHEETS TCP-24 THRU TCP-27.
- g) - COMPLETE PLACEMENT OF PAVEMENT MARKING LINES AND SYMBOLS AND TRAFFIC CONTROL DEVICES SHOWN ON SHEETS TCP-24 THRU TCP-30. (SEE ROADWAY STANDARD DRAWING NO. 1101.03, SHEET 4 OF 9)

STEP 5: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEETS 3 AND 7 OF 9:

- PAVE/WEDGE EXISTING RAMP "C" AT SANTA FE DRIVE (-RP3C-) AND CONSTRUCT PROPOSED WIDENING ON BOTH SIDES UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -RP3C- STA. 11+82± TO -RP3C- STA. 14+40±. (SEE PHASE II, DETAIL 1, SHEET TCP-31)
 - CONSTRUCT OUTSIDE WIDENING OF -Y1- (SR 1007, ALL AMERICAN FREEWAY) UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE FROM -Y1- STA. 31+25± TO -Y1- STA. 33+60± AND -RP3C- FROM -RP3C- STA. 10+00± TO -RP3C- STA. 11+82±. (SEE PHASE II, DETAIL 1, SHEETS TCP-30 AND TCP-31)
- REMOVE LANE CLOSURES AT THE END OF EACH WORKDAY.

- STEP 3: - AWAY FROM TRAFFIC, PLACE PORTABLE CONCRETE BARRIER ALONG EXISTING OUTSIDE EDGE OF PAVEMENT OF -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND LANE FROM -Y1- STA. 10+78± TO -Y1- STA. 16+00± AND FROM -Y1- STA. 22+91± TO -Y1- STA. 26+83±. (SEE SHEETS TCP-24 THRU TCP-28)
- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PLACE PORTABLE CONCRETE BARRIER ALONG EXISTING OUTSIDE EDGE OF PAVEMENT OF -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND LANE FROM -Y1- STA. 26+83± TO -Y1- STA. 31+25±. (SEE SHEETS TCP-28 THRU TCP-30)

STEPS 4 AND 5 MAY BE CONSTRUCTED CONCURRENTLY

- STEP 4: - BEHIND PORTABLE CONCRETE BARRIER AND WITH -Y1-, (SR 1007, ALL AMERICAN FREEWAY) TRAFFIC ON THE -DET2- ALIGNMENT.
- CONSTRUCT UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE AT THE FOLLOWINGS: (SEE ROADWAY PLANS AND PHASE I, DETAIL 1, SHEETS TCP-24 THRU TCP-30)

- Y1- FROM STA. 9+67± TO STA. 19+08± (SBL OUTSIDE WIDENING)
- Y1- FROM STA. 19+56± TO STA. 31+25± (SBL OUTSIDE WIDENING)
- RP1BD- FROM STA. 18+18± TO STA. 20+12±
- LP1B- FROM STA. 14+00± TO STA. 14+65±
- RP1C- FROM STA. 16+88± TO STA. 17+02±

- CONSTRUCT WIDENING AND OVERLAY OF EXISTING -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND STRUCTURE FROM -Y1- STA. 19+08± TO -Y1- STA. 19+56±. (SEE STRUCTURE AND ROADWAY PLANS)
- COMPLETE CONSTRUCTION OF -RP1BD- BENT 4 AND -COL2- BENT 3.

APPROVED: *Michael T. Diepp* DATE: 6-9-11



PHASE II PHASING (CONT.)

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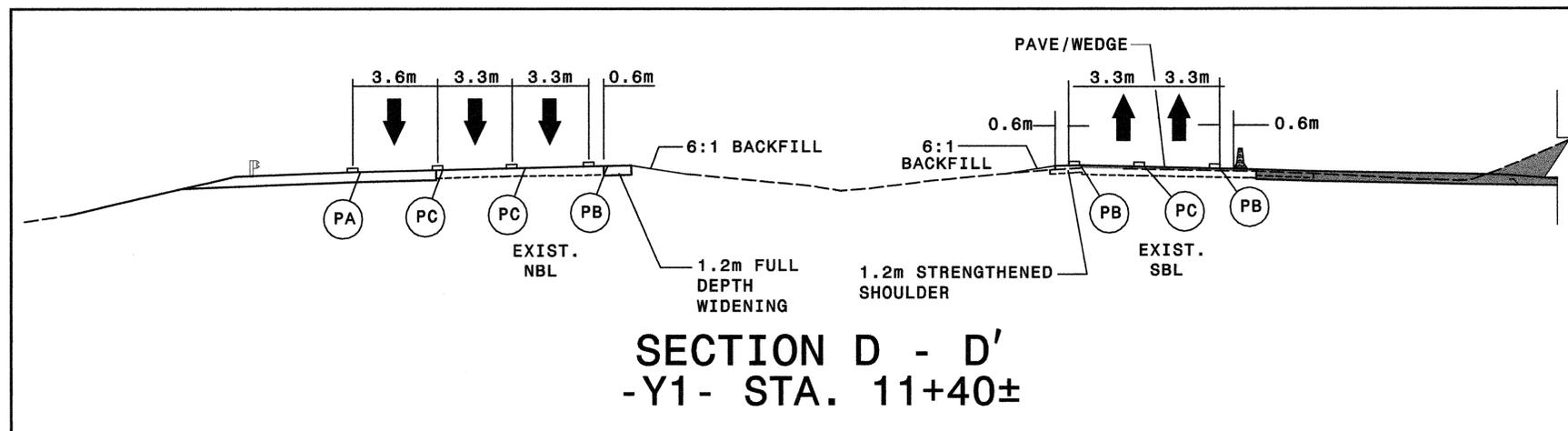
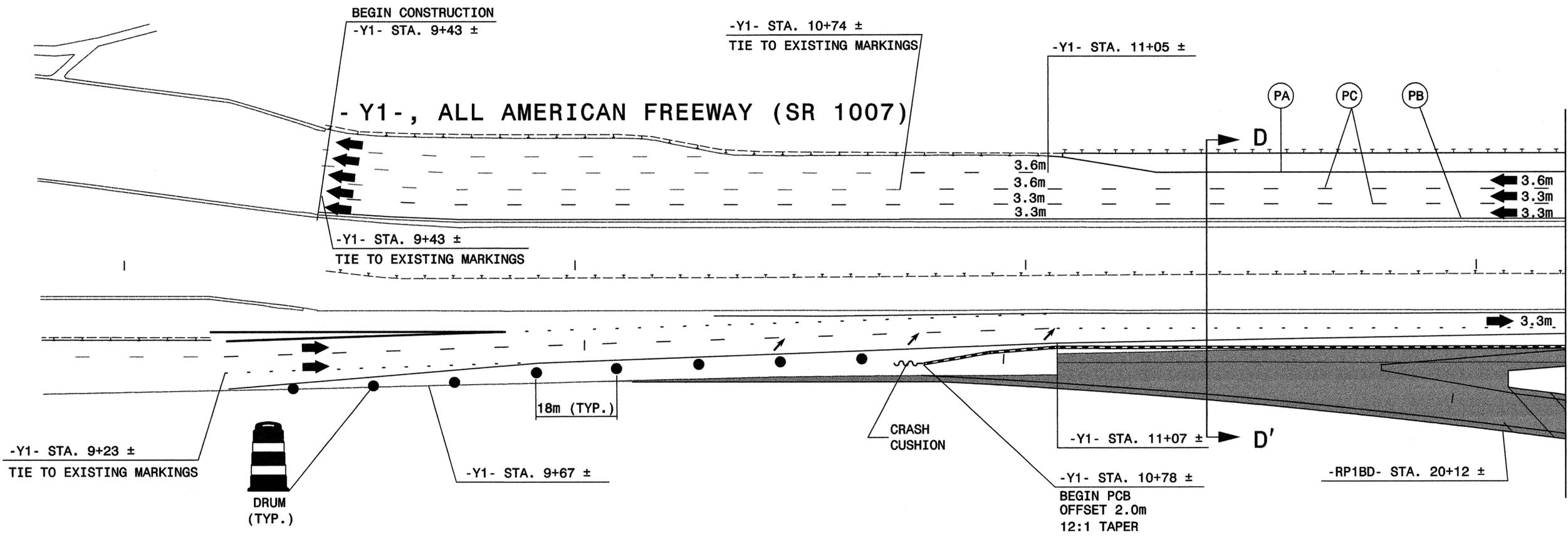
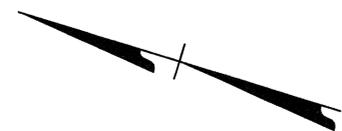


9+00

10+00

11+00

12+00



LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08



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13+00

14+00

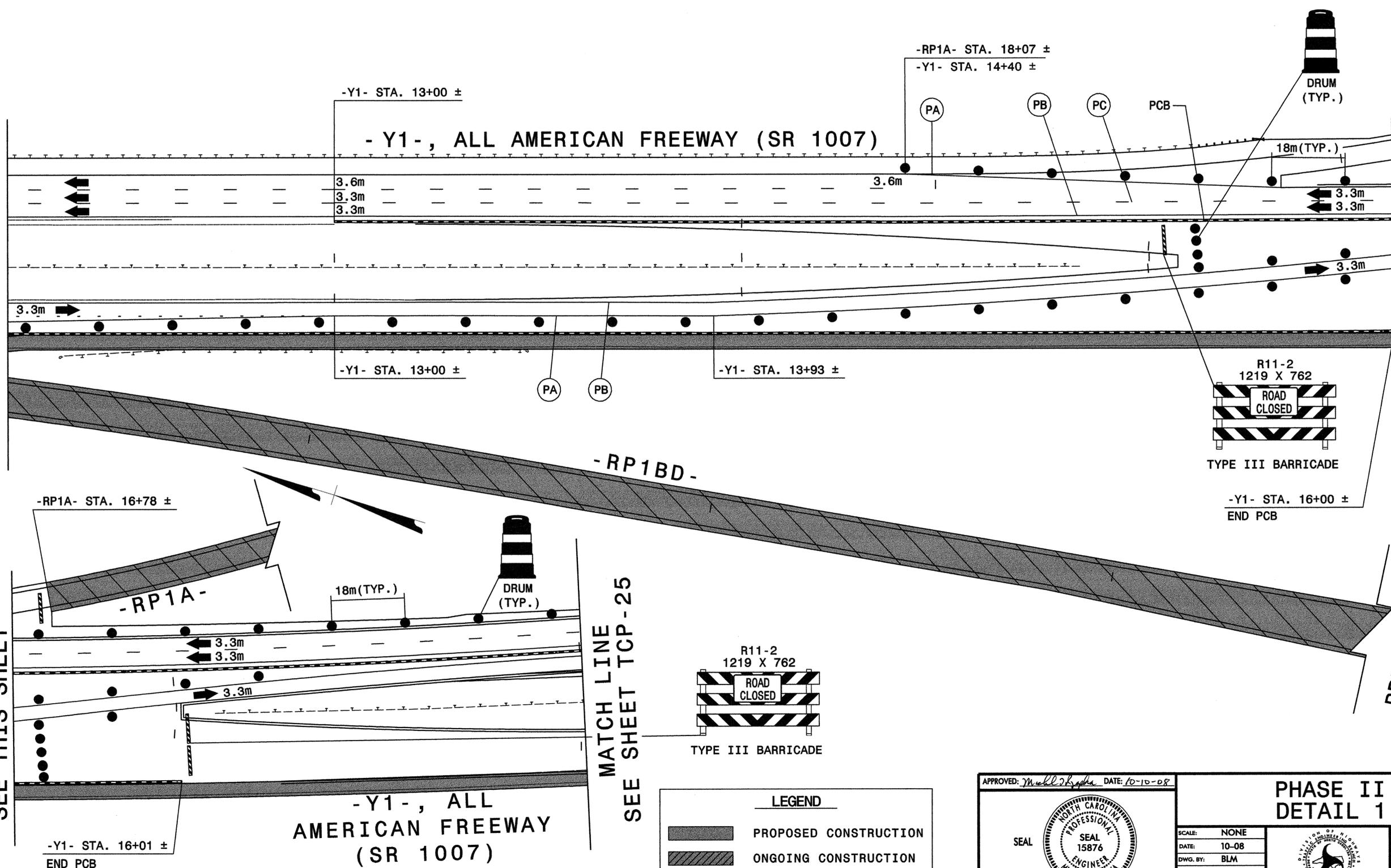
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MATCH LINE SEE SHEET TCP-24

MATCH LINE SEE THIS SHEET

MATCH LINE SEE THIS SHEET

BREAK LINE

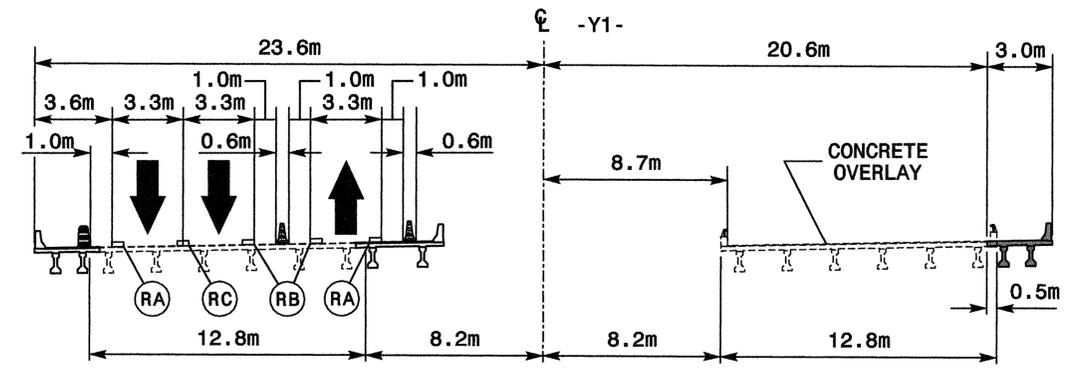


LEGEND	
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APPROVED: *Michael T. Kizem* DATE: 10-10-08



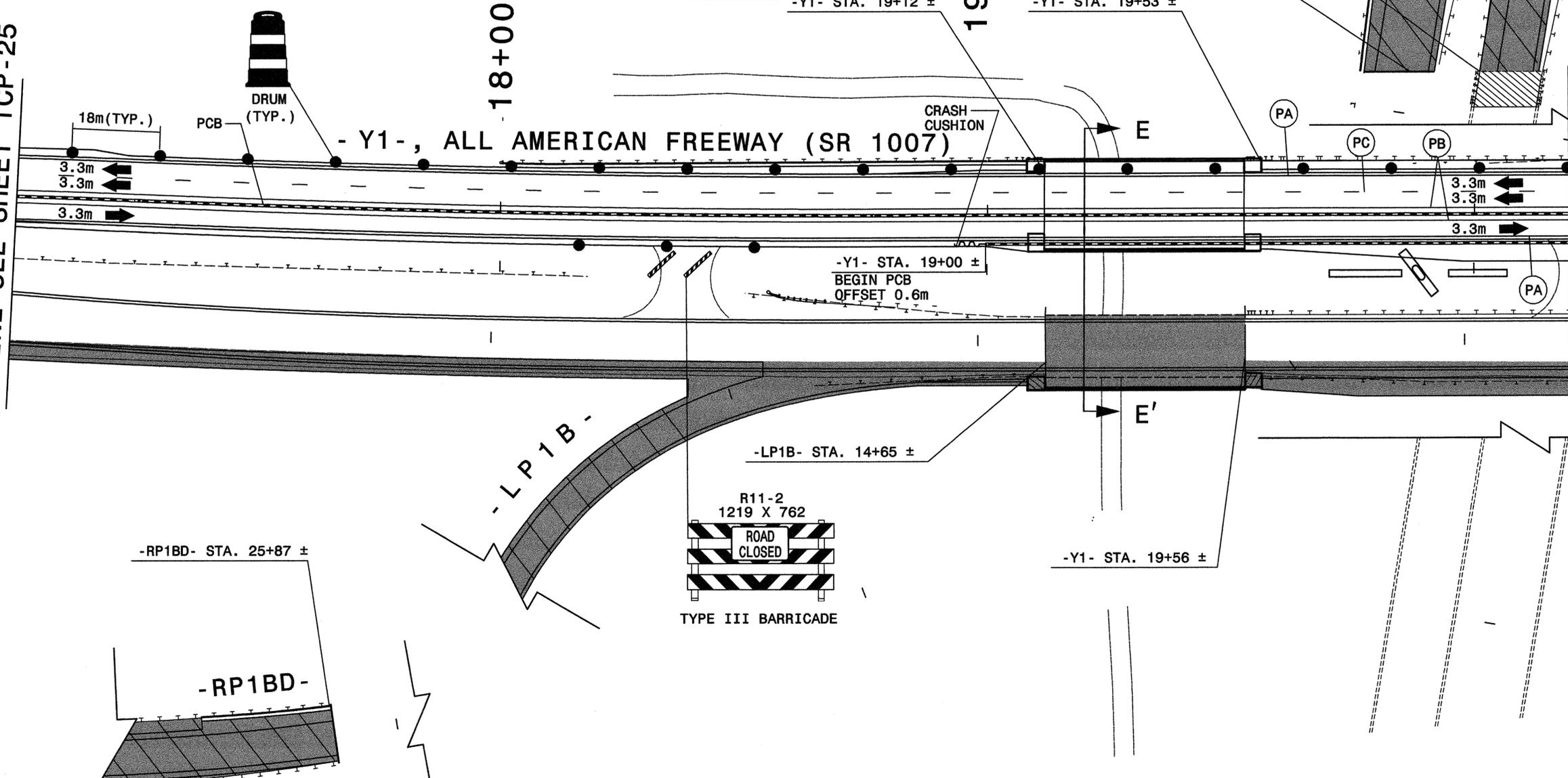
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SECTION E - E'
-Y1- STA. 19+20±

MATCH LINE SEE SHEET TCP-25

MATCH LINE SEE SHEET TCP-27



- Y1-, ALL AMERICAN FREEWAY (SR 1007)



LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08



**PHASE II
 DETAIL 1**

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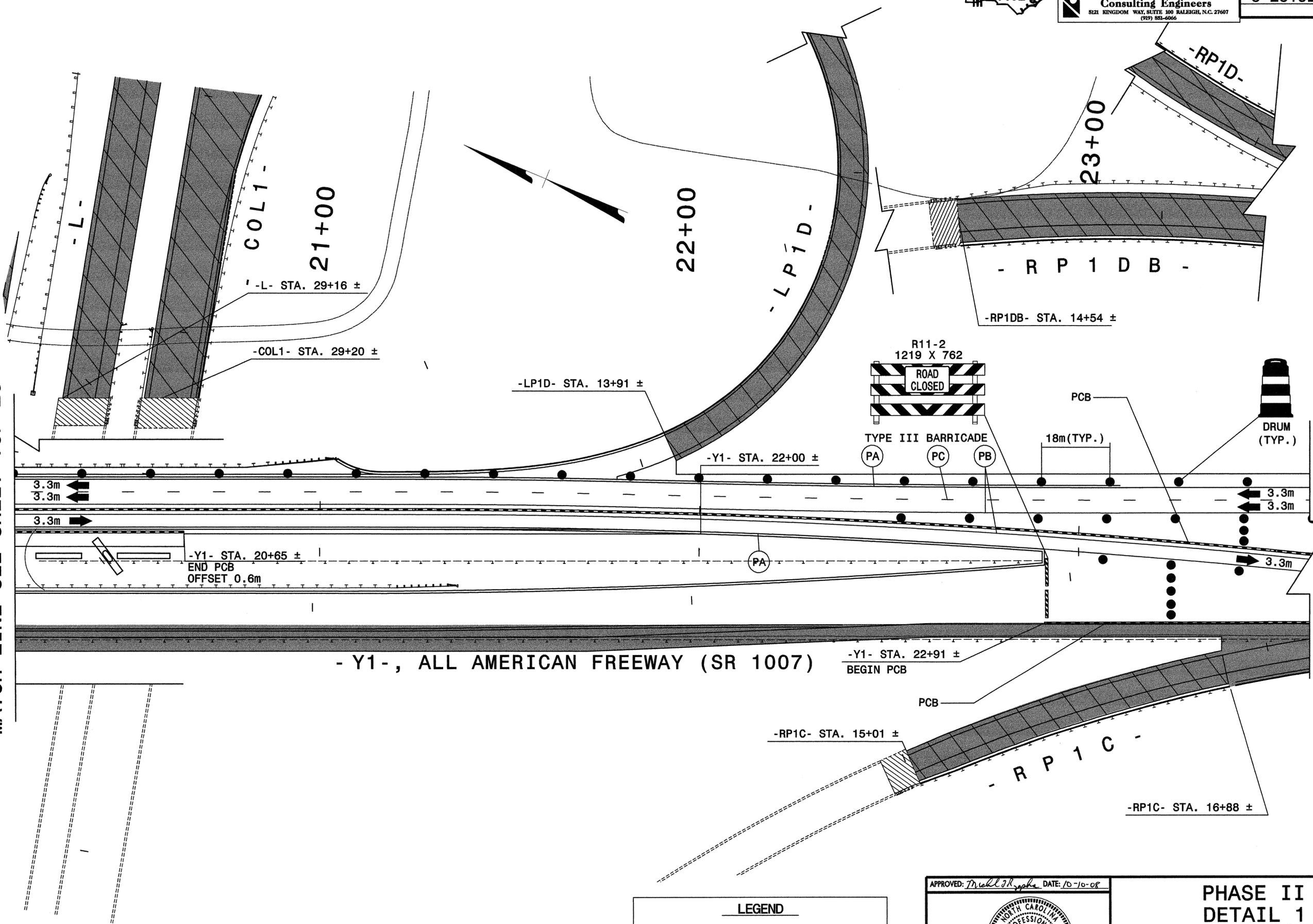


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 (919) 851-6066

PROJ. REFERENCE NO. U-2519DA	SHEET NO. TCP-27
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MATCH LINE SEE SHEET TCP-26

BREAK LINE SEE SHEET TCP-28



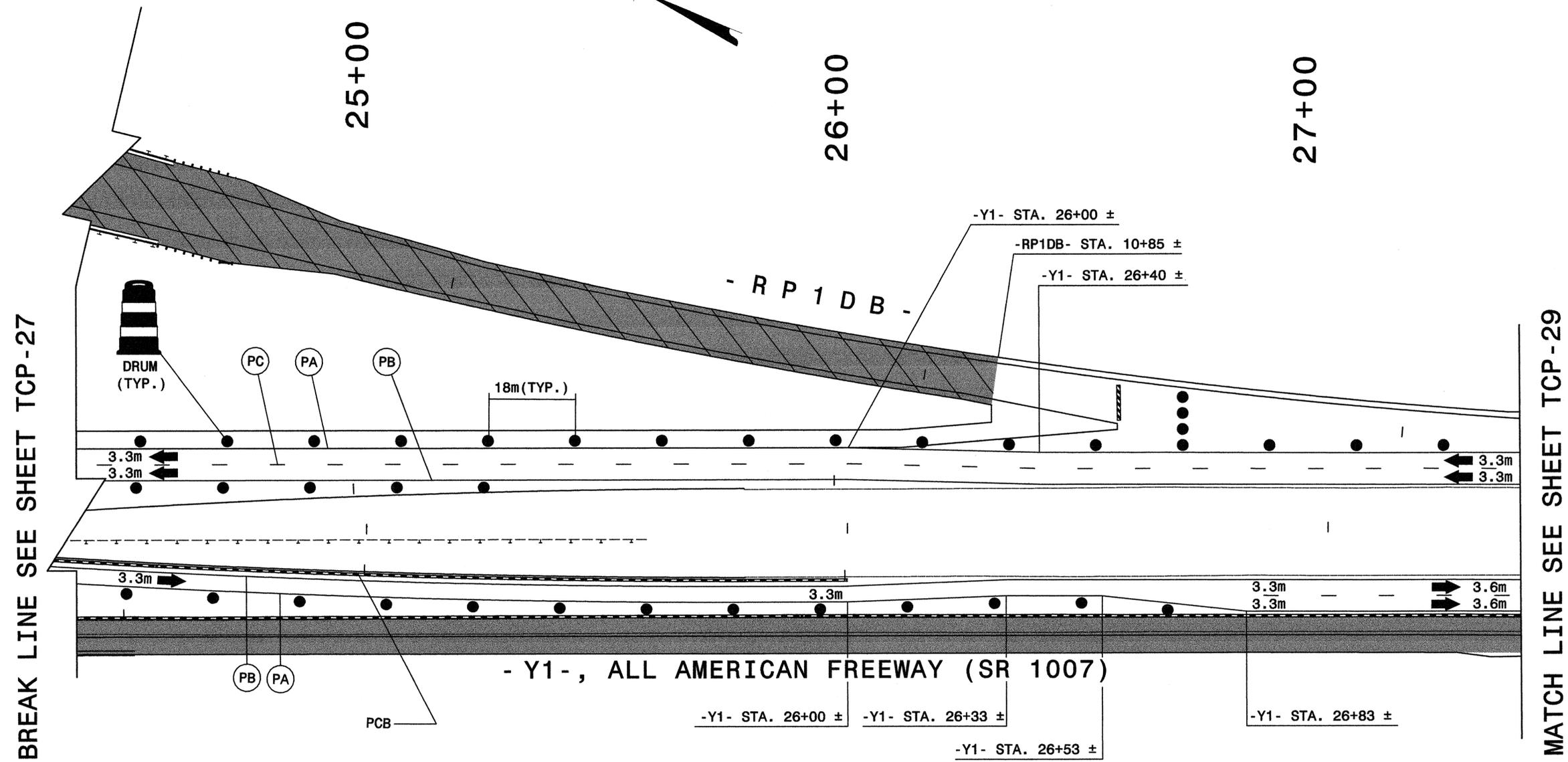
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	PROPOSED CONSTRUCTION
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APPROVED: *Michael T. Zepke* DATE: 10-10-08

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REVIEWED BY: MTR		

10/09/2008
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 KO & Associates, P.C.



BREAK LINE SEE SHEET TCP-27

MATCH LINE SEE SHEET TCP-29

- Y1 -, ALL AMERICAN FREEWAY (SR 1007)

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08



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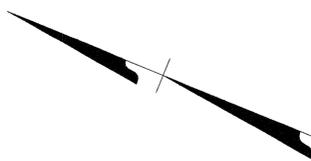
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 (919) 881-6066

PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-29

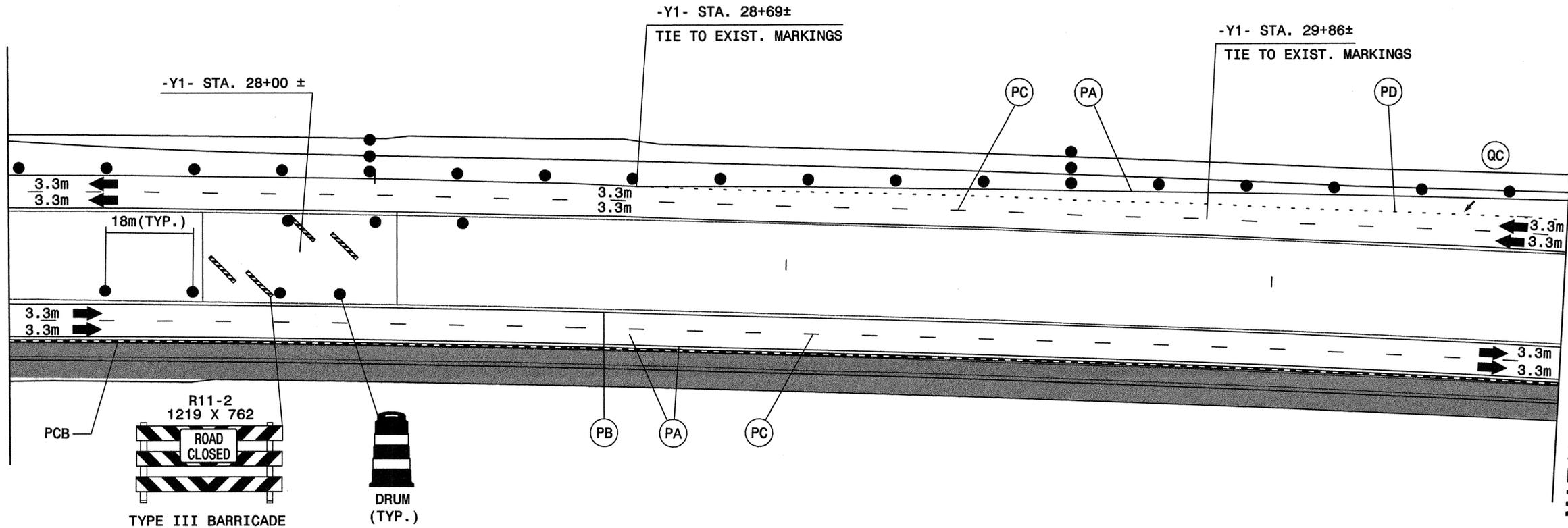
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30+00



MATCH LINE SEE SHEET TCP-28



MATCH LINE SEE SHEET TCP-30

10/09/2008
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 KO & Associates, P.C.

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Azewka* DATE: 10-10-08

SEAL

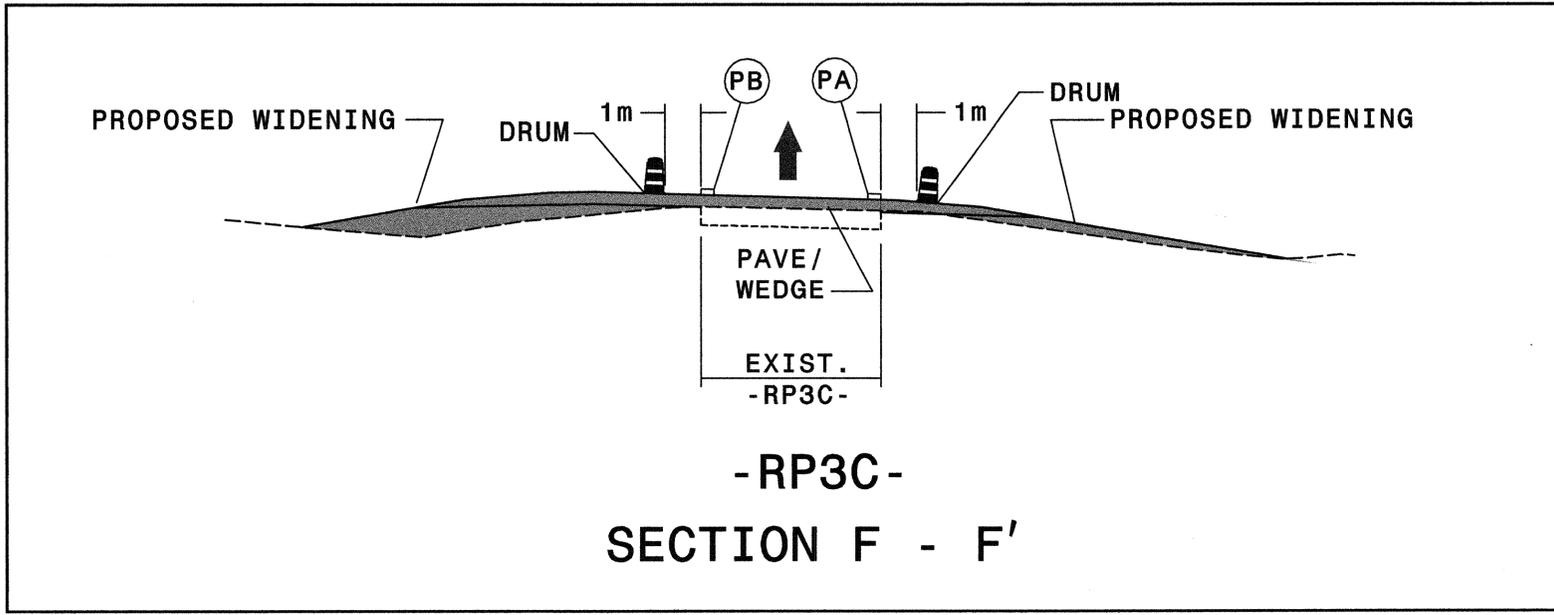
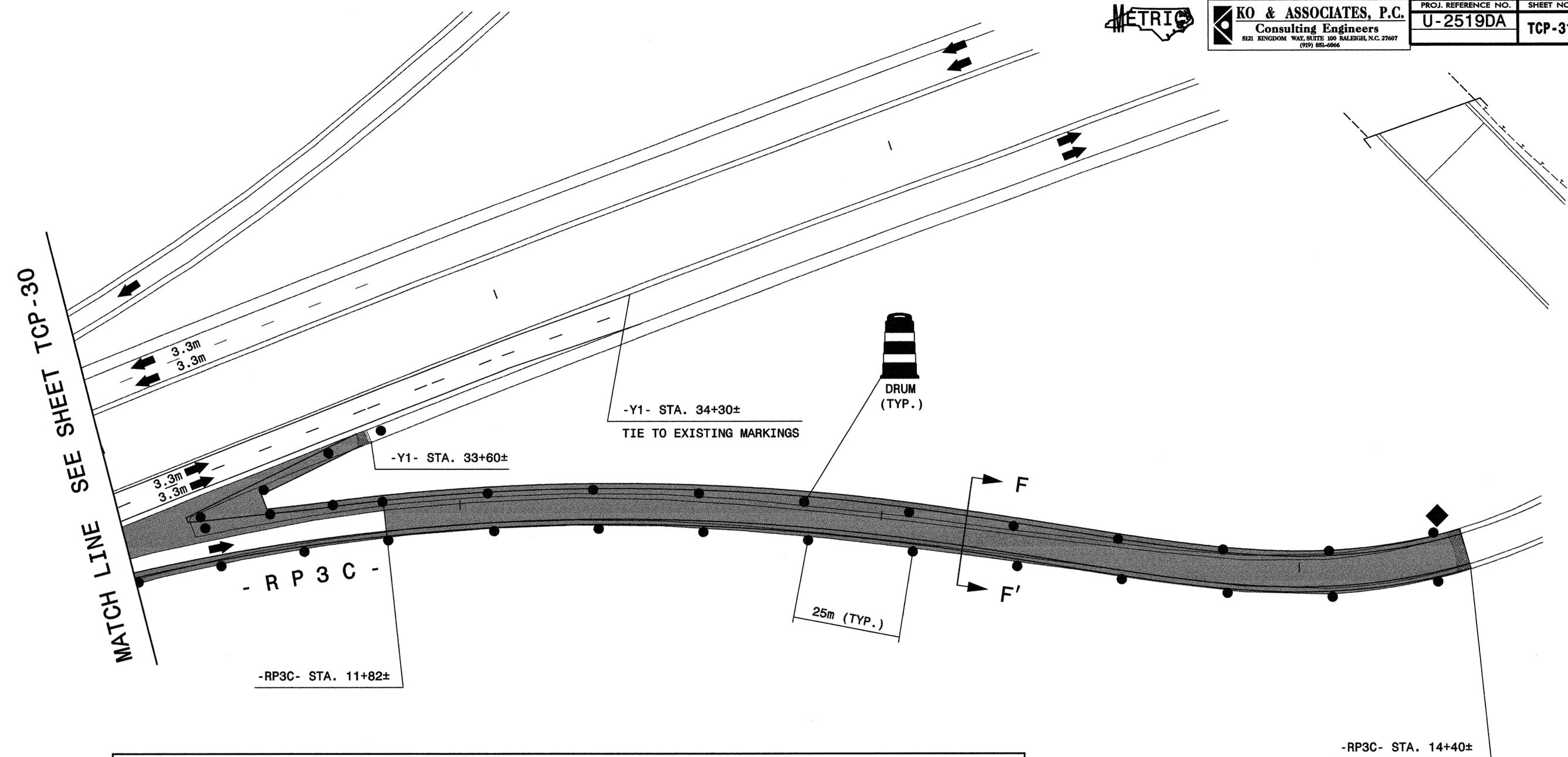
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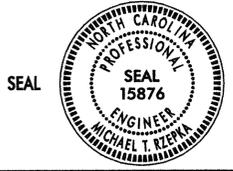
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U-2519DA	TCP-31



LEGEND

	PROPOSED CONSTRUCTION
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APPROVED: *Michael T. Rzepka* DATE: 10-10-08



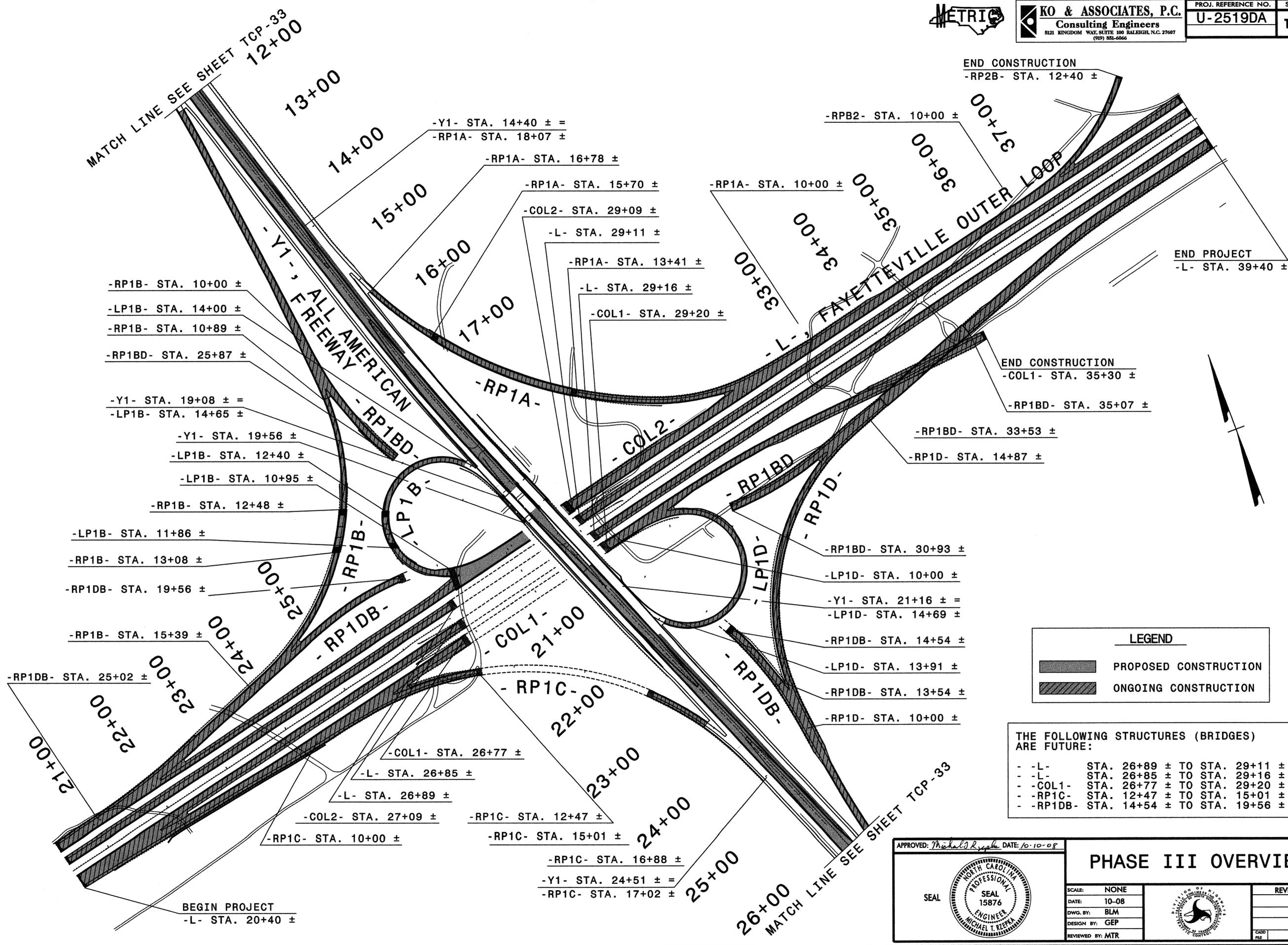
**PHASE II
DETAIL 1**

SCALE:	NONE
DATE:	10-08
DWG. BY:	BLM
DESIGN BY:	BLM
REVIEWED BY:	MTR



REVISIONS

10/9/2008
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 KO & Associates, P.C.



10/10/2008
 R:\02007\U-2519DA_TC_TCP32_phillov.dgn
 Ko & Associates, P.C.

LEGEND

	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

THE FOLLOWING STRUCTURES (BRIDGES) ARE FUTURE:

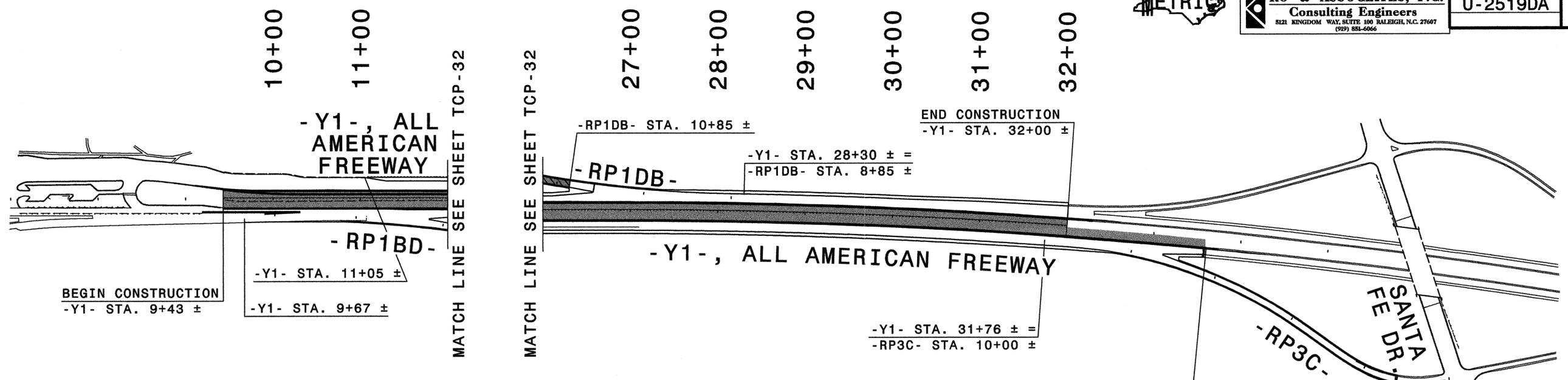
-L-	STA. 26+89 ± TO STA. 29+11 ±
-L-	STA. 26+85 ± TO STA. 29+16 ±
-COL1-	STA. 26+77 ± TO STA. 29+20 ±
-RP1C-	STA. 12+47 ± TO STA. 15+01 ±
-RP1DB-	STA. 14+54 ± TO STA. 19+56 ±

APPROVED: *Michael R. Zepka* DATE: 10-10-08

SEAL

PHASE III OVERVIEW

SCALE:	NONE		REVISIONS <table border="1"> <tr><td> </td><td> </td></tr> </table>										
DATE:	10-08												
DWG. BY:	BLM												
DESIGN BY:	GEP												
REVIEWED BY:	MTR												



PHASE III

- STEP 1: - CONTINUE CONSTRUCTION OF ALL WORK BEGUN IN PHASE I.
- STEP 2: - AWAY FROM TRAFFIC, REMOVE PORTABLE CONCRETE BARRIER FROM ALONG -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND OUTSIDE LANE FROM -Y1- STA. 10+78± TO -Y1- STA. 16+01± AND FROM -Y1- STA. 22+91± TO -Y1- STA. 26+53±
- USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, CONTINUE REMOVING PORTABLE CONCRETE BARRIER FROM -Y1- STA. 26+53± TO -Y1- STA. 31+25±.
- REMOVE LANE CLOSURES AT THE END OF EACH WORKDAY.
- STEP 3: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PLACE -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND TRAFFIC INTO THE EXISTING OUTSIDE LANE FROM -Y1- STA. 9+43± TO -Y1- STA. 34+13±. PLACE PORTABLE CONCRETE BARRIER AND PAVEMENT MARKING LINES ON -Y1-, (SR 1007, ALL AMERICAN FREEWAY) SOUTHBOUND LANES AS SHOWN ON SHEETS TCP-34 THRU TCP-40.
- STEP 4: - AWAY FROM TRAFFIC, REMOVE PORTABLE CONCRETE BARRIER ALONG -DET2- FROM -Y1- STA. 22+00± TO -Y1- STA. 26+00±.
- STEP 5: - USING ROADWAY STANDARD DRAWING NO. 1101.02, SHEET 3 OF 9, PLACE PORTABLE CONCRETE BARRIER ALONG -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND MEDIAN EDGE LINE FROM -Y1- STA. 9+43± TO -Y1- STA. 13+00± AND FROM -Y1- STA. 22+00± TO -Y1- STA. 32+15±.
- REMOVE LANE CLOSURES AT THE END OF EACH WORKDAY.
- STEP 5: - BEHIND PCB, COMPLETE CONSTRUCTION OF -Y1-, (SR 1007, ALL AMERICAN FREEWAY) MEDIAN WIDENING UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE, ALL REQUIRED MEDIAN DRAINAGE, AND GUARDRAIL AT THE FOLLOWING LOCATIONS:

- Y1- FROM STA. 9+43± TO STA. 19+08± (SBL)
- Y1- FROM STA. 19+56± TO STA. 33+60± (SBL)
- Y1- FROM STA. 9+43± TO STA. 19+12± (NBL)
- Y1- FROM STA. 19+56± TO STA. 32+00± (NBL)

LEGEND

- PROPOSED CONSTRUCTION
- ONGOING CONSTRUCTION

APPROVED: *Michael T. Arzena* DATE: 10-10-08

SEAL

PHASE III OVERVIEW (CONT.) AND PHASING

SCALE: NONE		REVISIONS
DATE: 10-08		
DWG. BY: BLM		
DESIGN BY: GEP		
REVIEWED BY: MTR		

10/10/2008 R:\Rev002\U-2519DA_TC_TCP33.phillov.dgn Ko & Associates, P.C.



KO & ASSOCIATES, P.C.
 Consulting Engineers
 5121 KINGDOM WAY, SUITE 100 RALEIGH, N.C. 27607
 (919) 881-0066

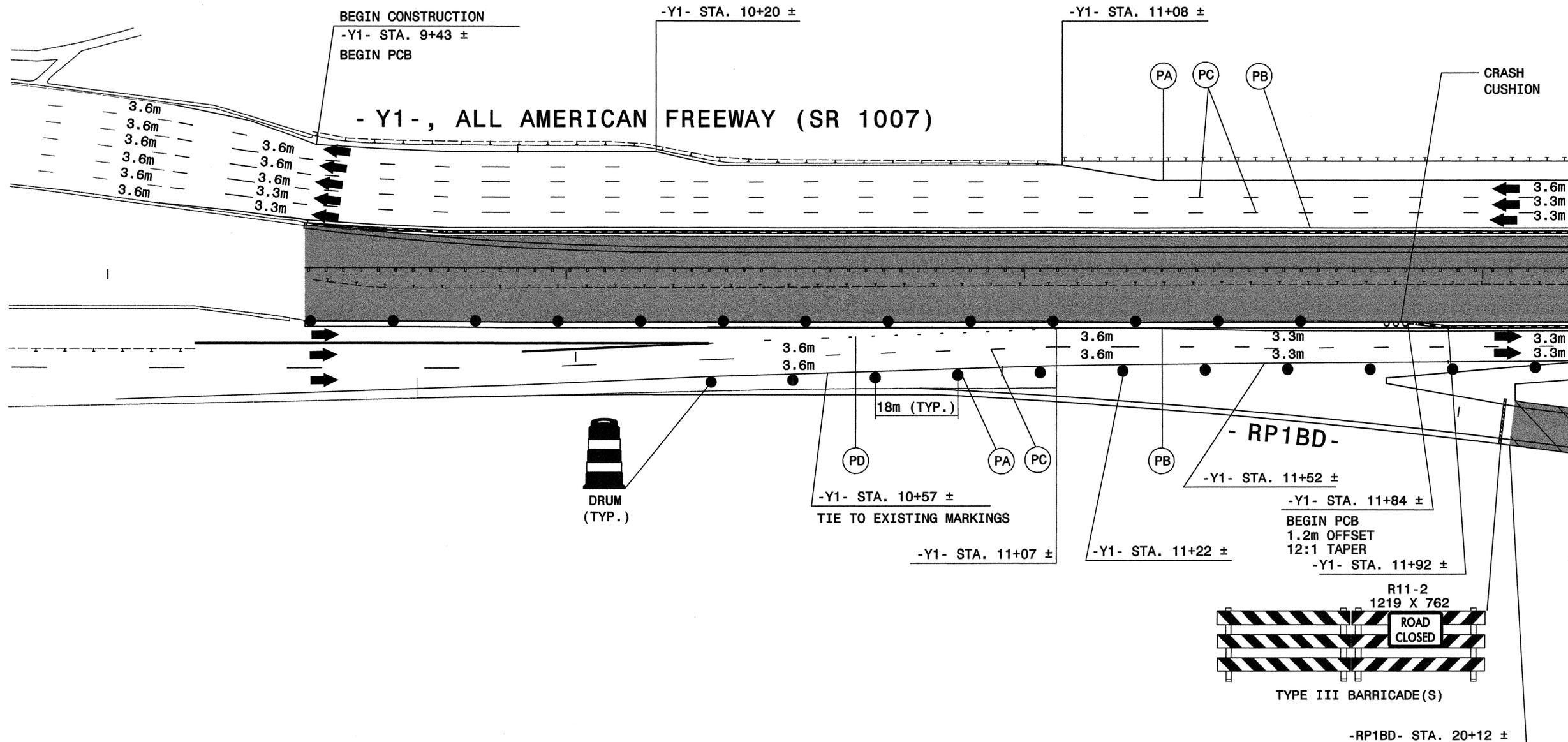
PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-34

9+00

10+00

11+00

12+00



MATCH LINE SEE SHEET TCP-35

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Siepp* DATE: 10-10-08



PHASE III DETAIL 1

SCALE: NONE
 DATE: 10-08
 DWG. BY: BLM
 DESIGN BY: BLM
 REVIEWED BY: MTR



REVISIONS	

10/10/2008
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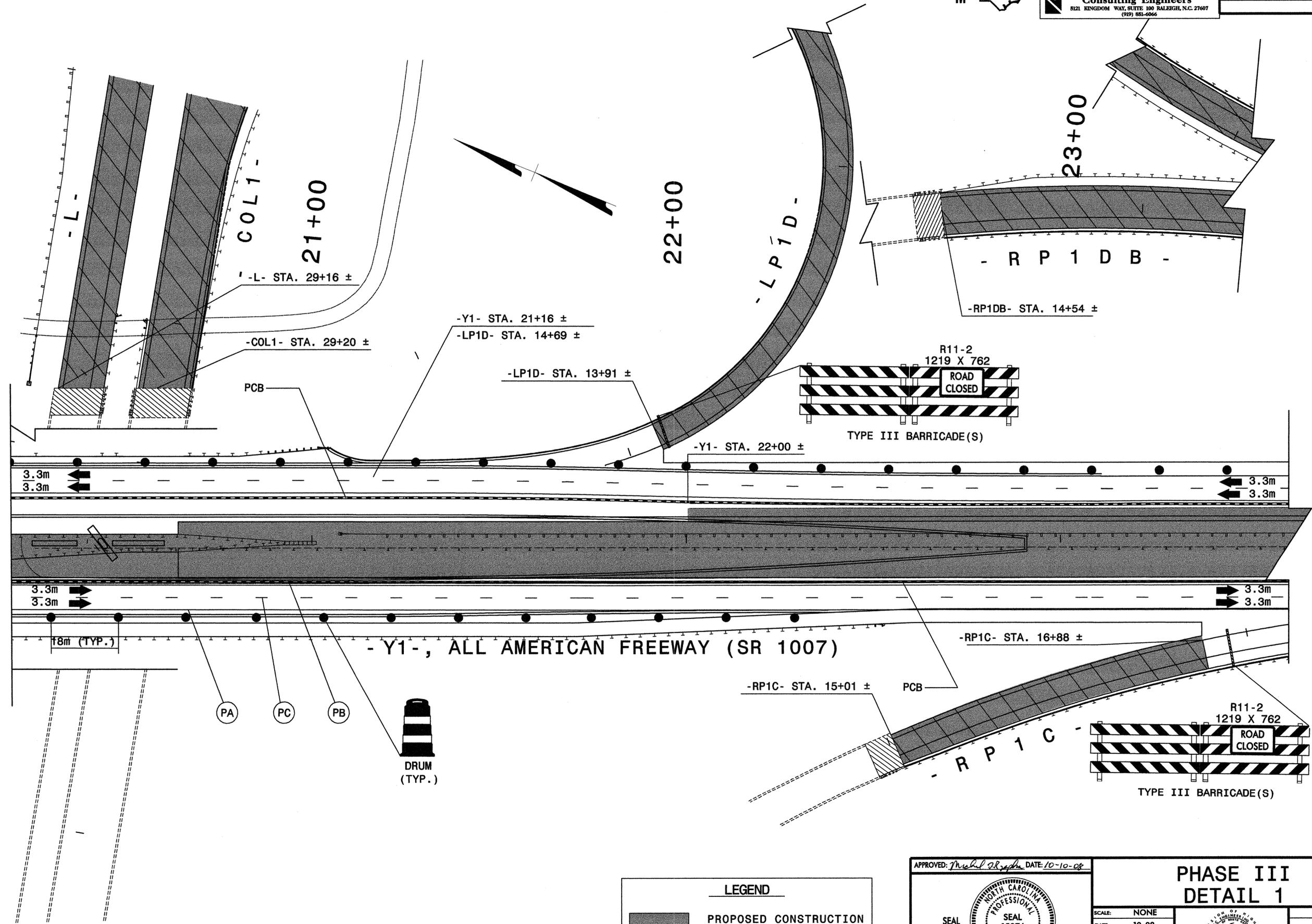


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 Consulting Engineers
 5121 KINGDOM WAY, SUITE 100 RALEIGH, N.C. 27607
 (919) 881-6966

PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-37

MATCH LINE SEE SHEET TCP-36

BREAK LINE SEE SHEET TCP-38



- Y1 -, ALL AMERICAN FREEWAY (SR 1007)

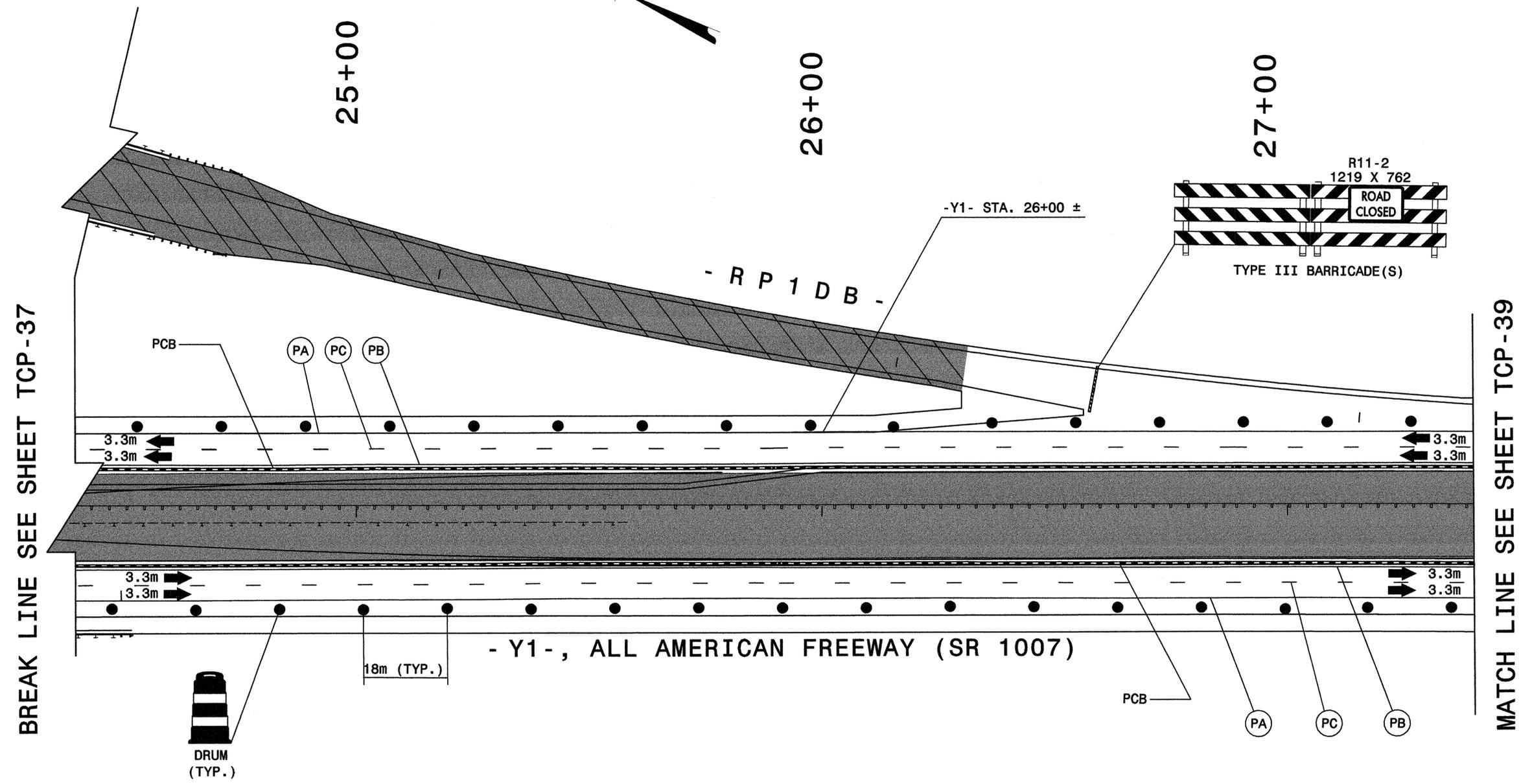
LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08

SEAL

<p>PHASE III DETAIL 1</p>		REVISIONS	
SCALE: NONE	DATE: 10-08		
DWG. BY: BLM	DESIGN BY: BLM		
REVIEWED BY: MTR			

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BREAK LINE SEE SHEET TCP-37

MATCH LINE SEE SHEET TCP-39

LEGEND	
	PROPOSED CONSTRUCTION
	ONGOING CONSTRUCTION

APPROVED: *Michael Rzepka* DATE: 10-10-08

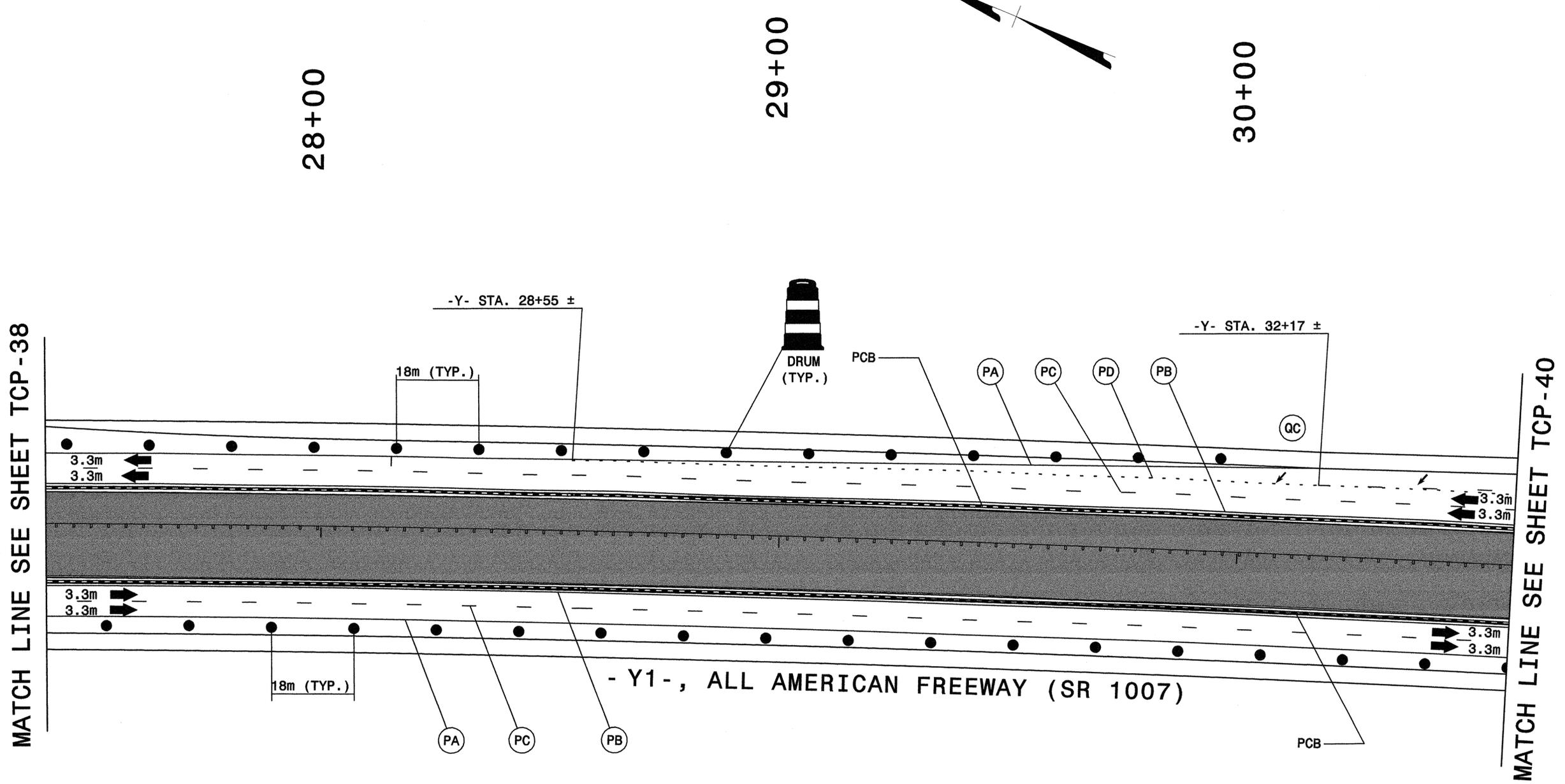


**PHASE III
 DETAIL 1**

SCALE: NONE
 DATE: 10-08
 DWG. BY: BLM
 DESIGN BY: BLM
 REVIEWED BY: MTR



REVISIONS	



MATCH LINE SEE SHEET TCP-38

MATCH LINE SEE SHEET TCP-40

LEGEND

PROPOSED CONSTRUCTION

APPROVED: *Michael T. Rzewnia* DATE: 10-10-08

SEAL



**PHASE III
DETAIL 1**

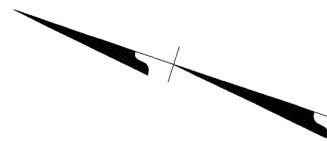
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DATE: 10-08		
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DESIGN BY: BLM		
REVIEWED BY: MTR		



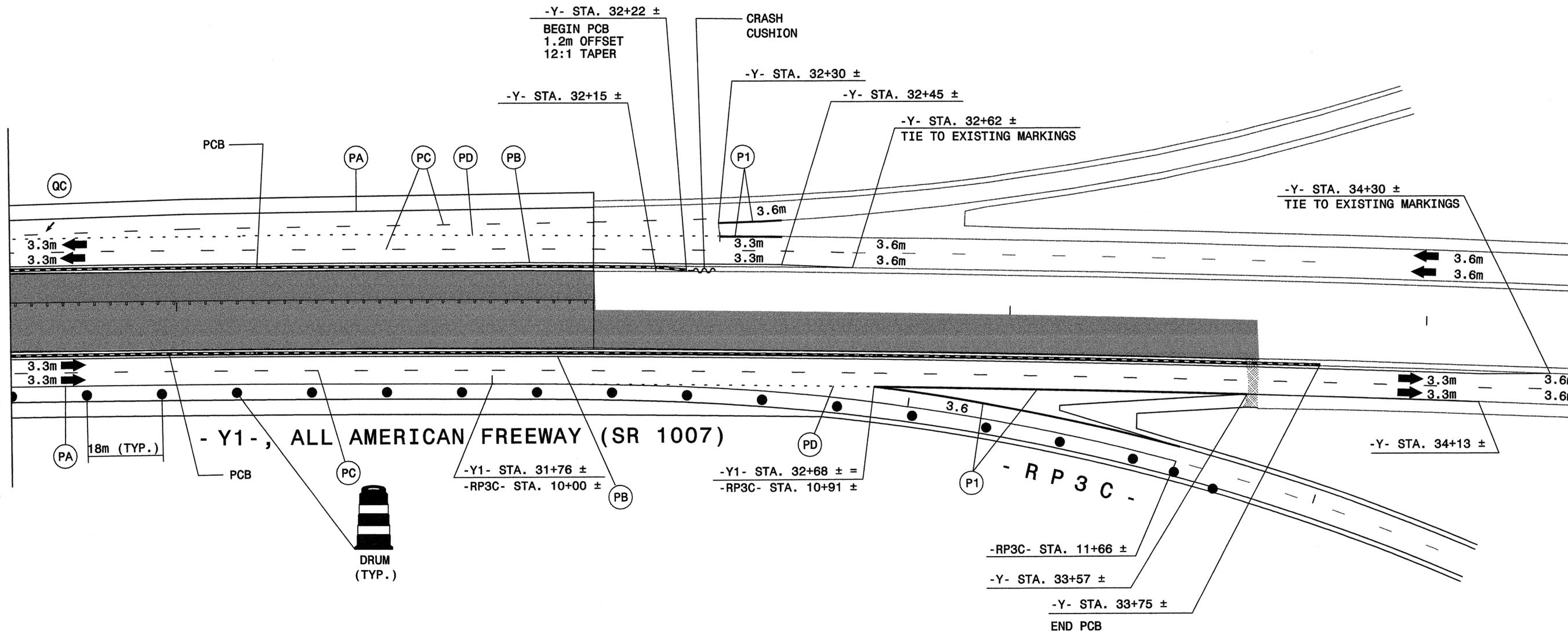
31+00

32+00

33+00



MATCH LINE SEE SHEET TCP-39



LEGEND

PROPOSED CONSTRUCTION

APPROVED: *Michael T. Rzepka* DATE: 10-10-08

SEAL

**PHASE III
DETAIL 1**

SCALE: NONE		<table border="1"> <tr> <th colspan="2">REVISIONS</th> </tr> <tr> <td> </td> <td> </td> </tr> </table>	REVISIONS									
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DWG. BY: BLM												
DESIGN BY: BLM												
REVIEWED BY: MTR												

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Florence & Hutcheson
CONSULTING ENGINEERS
5121 Kingdom Way, Suite 100 Raleigh, NC 27607
NC License No. F-0258

PROJ. REFERENCE NO.	SHEET NO.
U-2519DA	TCP-41

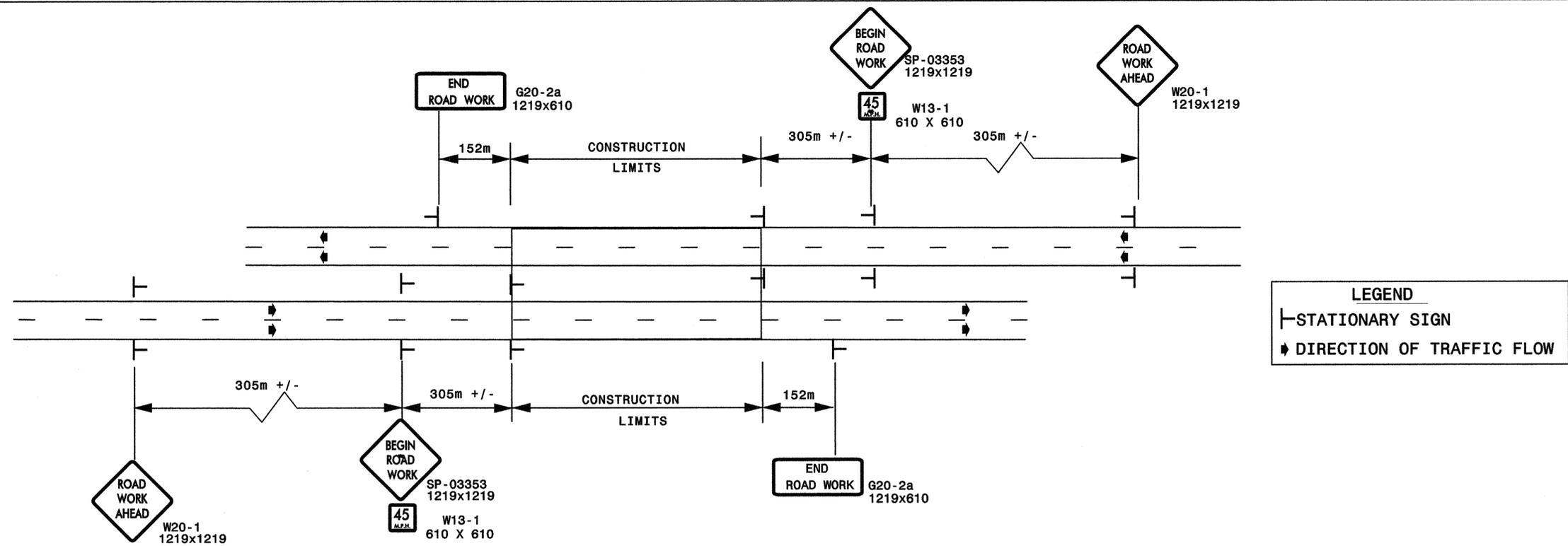
PHASE IV

- STEP 1: - COMPLETE CONSTRUCTION OF ALL WORK BEGUN IN PHASE I.
- STEP 2: - AWAY FROM TRAFFIC, PLACE THE FINAL LAYER OF SURFACE COURSE AND THE FINAL PAVEMENT MARKING AND MARKERS AT THE FOLLOWING LOCATIONS: (SEE SHEETS PM-2 THRU PM-13)
- COL2- FROM STA. 29+09± TO STA. 39+40±
 - RP1A- FROM STA. 10+00± TO STA. 13+41±
 - RP1A- FROM STA. 15+70± TO STA. 16+78±
 - RP2B- FROM STA. 10+00± TO STA. 14+60±
 - RP1BD- FROM STA. 20+12± TO STA. 25+87±
 - RP1BD- FROM STA. 30+93± TO STA. 33+53±
 - RP1BD- FROM STA. 35+07± TO STA. 42+80±
 - RP1B- FROM STA. 10+00± TO STA. 10+89±
 - LP1B- FROM STA. 10+95± TO STA. 11+86±
 - LP1B- FROM STA. 12+40± TO STA. 14+00±
 - RP1DB- FROM STA. 10+85± TO STA. 13+54±
 - RP1D- FROM STA. 10+00± TO STA. 14+87±
 - LP2D- FROM -RP1BD- TO -LP2D- STA. 12+47±
 - SPUR2D- FROM -LP2D- TO -SPUR2D- STA. 10+42±
- STEP 3: - USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEETS 3, 6 & 7 OF 9, REMOVE PORTABLE CONCRETE BARRIER FROM ALONG -Y1-, (SR 1007, ALL AMERICAN FREEWAY) NORTHBOUND AND SOUTHBOUND MEDIAN EDGE LINES.
(SEE SHEETS TCP-34 THRU TCP-40)
- STEP 4: - USING ROADWAY STANDARD DRAWINGS NO. 1101.02, SHEETS 3, 6 & 7 OF 9, PLACE THE FINAL LAYER OF SURFACE COURSE AND THE FINAL PAVEMENT MARKING AND MARKERS AT THE FOLLOWING LOCATIONS: (SEE SHEETS PM-2 THRU PM-13)
- Y1- FROM STA. 9+43± TO STA. 19+08± (SBL)
 - Y1- FROM STA. 19+53± TO STA. 33+60± (SBL)
 - Y1- FROM STA. 9+43± TO STA. 19+12± (NBL)
 - Y1- FROM STA. 19+56± TO STA. 32+00± (NBL)
 - RP1BD- FROM STA. 18+18± TO STA. 20+12±
 - LP1B- FROM STA. 14+00± TO STA. 14+65±
 - RP1C- FROM STA. 16+88± TO STA. 17+02±
 - RP1A- FROM STA. 16+78± TO STA. 18+07±
 - LP1D- FROM STA. 14+54± TO STA. 14+69±
 - RP1DB- FROM STA. 8+85± TO STA. 10+85±
 - RP3C- FROM STA. 10+00± TO STA. 14+40±
- REMOVE LANE CLOSURES AT THE END OF EACH WORKDAY.
- STEP 5: - REMOVE ALL TRAFFIC CONTROL DEVICES AND OPEN ALL APPLICABLE RAMPS AND LOOPS.

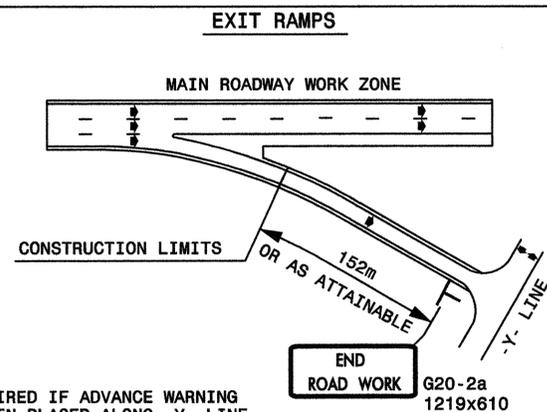
2/11/2011
D:\T\offic\U-2519DA\00%_Rev_feb_2011\U-2519DA_TC_TCP4LPHIVPHASING.dgn
Ko & Associates, P.C.

APPROVED: <i>Michael T. Rzepka</i> DATE: 2-11-11	PHASE IV PHASING									
	SCALE: NONE									
	DATE: 2-11									
	DESIGN BY: GEP									
	REVIEWED BY: MTR									
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REVISIONS										

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

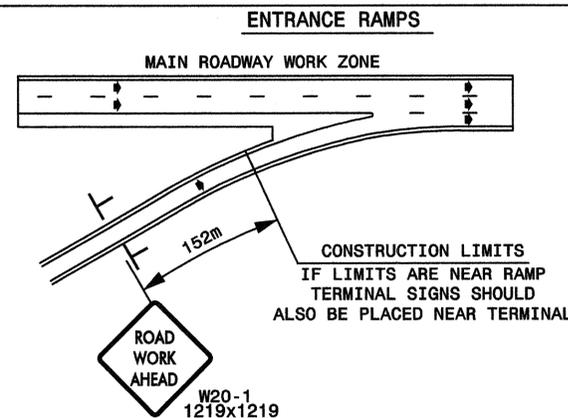


DETAIL B

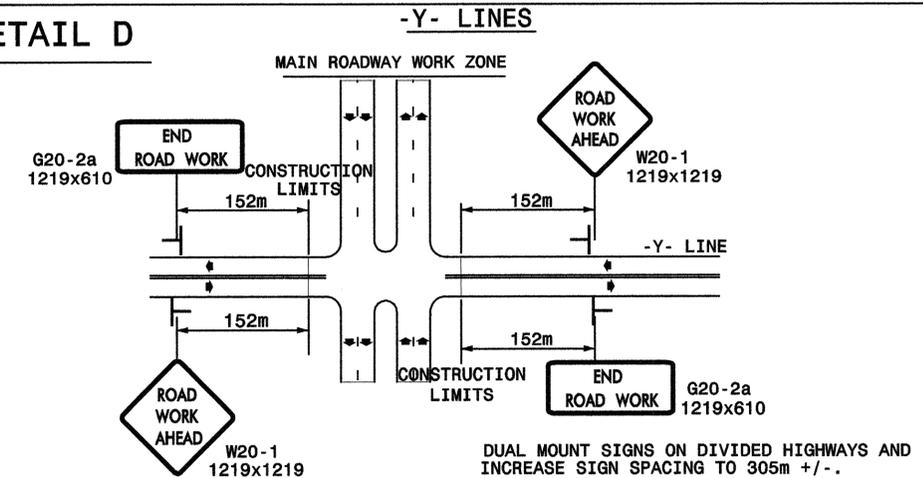


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

DETAIL C



DETAIL D



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 1.4Kg STEEL U-CHANNEL POST OR 90mm X 90mm WOOD POST FOR ALL WORK ZONE SIGNS. 1.4Kg 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 1.4Kg STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 1.4Kg 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.

APPROVED: <i>Michael T. Rzepka</i> DATE: 10-10-08	DETAIL DRAWING FOR FREEWAYS ADVANCE WORK ZONE WARNING SIGNS										
	SCALE: NONE										
	DATE: 10-08										
	DWG. BY: BLM										
	REVIEWED BY: MTR										
REVISIONS		<table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	DESCRIPTION						
NO.	DATE	DESCRIPTION									

10/9/2008 10:41:01 AM C:\office\U-2519da\rev\001\FreeWAYS_4lanes_or_greater_Met.dgn KO & Associates, P.C.



SP 03353

SIGN NUMBER: SP-03353 BACKG COLOR: Fluorescent Orange
 TYPE: A COPY COLOR: Black
 QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 1219mm
 HEIGHT: 1219mm
 TOTAL AREA: 1.5 Sq.m

BORDER TYPE: FLUSH
 RECESS: 13mm
 WIDTH: 19mm
 RADII: 35mm

NO. Z BARS: N/A
 LENGTH: N/A

MAT'L:

USE NOTES: 2, 4
 1. Legend and border shall be direct applied Type VII reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type VII reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type VII reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

BORDER
 R=35mm
 TH=19mm
 IN=13mm

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
											Text Length
561	139	122	139	64	100	561					C180
	R	O	A	D							563
588	130	136	145	100	588						C180
	W	O	R	K							511
567	167	144	139	100	567						C180
											550

Spacing Factor is 1 unless specified otherwise
 FILENAME: COPY
 NORTH CAROLINA D.O.T. SIGN DETAIL

SP 03350

SIGN NUMBER: SP-03350 BACKG COLOR: White
 TYPE: D COPY COLOR: Black
 QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 1219mm
 HEIGHT: 762mm
 TOTAL AREA: 0.9 Sq.m

BORDER TYPE: FLUSH
 RECESS: 6mm
 WIDTH: 10mm
 RADII: 38mm

NO. Z BARS: N/A
 LENGTH: N/A

MAT'L:

USE NOTES: 2, 4
 1. Legend and border shall be direct applied Type III reflective sheeting.
 2. Legend and border shall be direct applied non-reflective sheeting.
 3. Shields shall be Type III reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
 4. Background shall be Type III reflective sheeting.
 5. Background shall be Type I reflective sheeting.
 6. Center arrow(s) vertically on sign.
 7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

BORDER
 R=38mm
 W=10mm
 IN=6mm

LETTER POSITIONS

Letter spacings are to start of next letter											Series/Size
											Text Length
384	133	117	110	89	384						C152
	S	P	E	E	D	I	N	G			450
202	118	117	104	104	117	54	117	85	202		C152
	P	E	N	A	L	T	Y				816
248	117	104	110	123	86	86	97	248			C152
											723

Spacing Factor is 1 unless specified otherwise
 FILENAME: ZSHAK
 NORTH CAROLINA D.O.T. SIGN DETAIL

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

DETAIL DRAWING FOR
 WORK ZONE SIGNS
 \$250 PENALTY SIGN

GENERAL NOTES FOR THE "BEGIN ROAD WORK" SIGN

- SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS
- WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL A ON SHEET TCP-13.

GENERAL NOTES FOR THE "\$250 SPEEDING PENALTY" SIGN

- SIGN SP-03350 "\$250 SPEEDING PENALTY" IS USED ONLY WHEN ORDINANCED BY THE TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH.
- SIGN SP-03350 "\$250 SPEEDING PENALTY" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS
- WHEN USED, MOUNT SIGN SP-03350 "\$250 SPEEDING PENALTY" BELOW SIGN R2-1 "SPEED LIMIT XX" (SEE DETAIL A ON SHEET TCP-?) AND SIGN W21-4 "ROAD WORK AHEAD" (SEE DETAIL C ON SHEET TCP-?).

APPROVED: *Michael R. Keph* DATE: 10-10-08

SEAL

DETAIL DRAWING FOR
 ADVANCED WORK ZONE WARNING
 SIGN DESIGNS

SCALE: NONE		REVISIONS
DATE: 10-08		
DWG. BY: BLM		
DESIGN BY: BLM		
REVIEWED BY: MTR		

CADD FILE

10/9/2008 10:41:04 AM C:\Users\m2519da\Documents\Sign-Designs-Met.dgn
 KO & Associates, P.C.