

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE PROJECT REFERENCE NO.	SHEET NO.
B-3826	TCP-1

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

B-3826

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS - MOUNTING HEIGHT & LATERAL CLEARANCE
1110.02	PORTABLE WORK ZONE SIGNS - MOUNTING HEIGHT & LATERAL CLEARANCE
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION - REFLECTIVE END TREATMENT
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR - DELINEATION
1170.01	PORTABLE CONCRETE BARRIER
1180.01	SKINNY DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.12	PAVEMENT MARKINGS - BRIDGES
1250.01	PAVEMENT MARKER SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT & TEMPORARY
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

INDEX OF SHEETS

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TCP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, PAVEMENT MARKING SCHEDULE AND INDEX OF SHEETS
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TCP-3	PROJECT PHASING
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TCP-8	WIDE LOAD SIGNS
TCP-9	SIGN DESIGNS

PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION	PAY ITEM	QUANTITY BREAKDOWN	TOTAL QUANTITY
<u>PAVEMENT MARKING LINES</u>				
PA	WHITE EDGELINE	PAINT (4")	5700 LF	7096 LF
PI	YELLOW DOUBLE CENTER LINE		1396 LF	
P4	WHITE STOPBAR	PAINT (24")	92 LF	92 LF
RA	WHITE EDGELINE	COLD APPLIED PLASTIC, TYPE 4 (4")	1060 LF	1060 LF
R3	WHITE STOPBAR	COLD APPLIED PLASTIC, TYPE 4 (24")	17 LF	17 LF
<u>PAVEMENT MARKERS</u>				
MP	CRYSTAL & CRYSTAL	TEMP. PVMT. MARKER	104 EA	104 EA

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:

SYSTEMS
USER

PLAN REVIEWED BY: N.C.D.O.T. WORK ZONE TRAFFIC CONTROL UNIT	APPROVED:
J.S. BOURNE, P.E. TRAFFIC CONTROL ENGINEER	DATE: 5-1-07
G. L. GETTIER, P.E. TRAFFIC CONTROL PROJECT ENGINEER	SEAL
JESSE GILSTRAP TRAFFIC CONTROL PROJ. DESIGN ENGINEER	
KEN BROADWELL TRAFFIC CONTROL DESIGN ENGINEER	

PLAN PREPARED FOR N.C.D.O.T. BY:	106 EAST MILLBROOK ROAD, SUITE 310 RALEIGH, NORTH CAROLINA 27609 PHONE: (919) 876-6883
J.T. BROOKS, P.E. PROJECT ENGINEER	
J.T. BROOKS, P.E. DESIGN ENGINEER	
J.A. WILES DESIGN TECHNICIAN	

GENERAL NOTES

PROJ. REFERENCE NO.	SHEET NO.
B-3826	TCP-2

ADAPT THE TRAFFIC CONTROL PLANS, WHEN DIRECTED BY THE ENGINEER, TO MEET FIELD CONDITIONS TO PROVIDE SAFE AND EFFICIENT TRAFFIC MOVEMENT. CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS AND ROADWAY DETAILS ARE NOT ATTAINABLE, OR RESULT IN DUPLICATE, OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING OR REMOVAL OF DEVICES.

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

TIME RESTRICTIONS

- A) DO NOT STOP TRAFFIC FOR MORE THAN 30 MINUTES OR, AS DIRECTED BY THE ENGINEER, DURING UNEXPECTED OCCURENCES THAT CREATE UNUSUALLY HIGH TRAFFIC VOLUMES AS FOLLOWS:

ROAD NAME	OPERATION
-L- SR 1331	TRAFFIC SHIFTS & BARRIER INSTALLATION

- B) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR OTHERWISE DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- 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 40 FT 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.
- E) 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.

- 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.
- G) DO NOT WORK SIMULTANEOUSLY, ON BOTH SIDES OF AN OPEN TRAVELWAY, WITHIN THE SAME LOCATION, ON A TWO-LANE, TWO-WAY ROAD.
- H) DO NOT PERFORM WORK INVOLVING HEAVY EQUIPMENT WITHIN 15 FT OF THE EDGE OF TRAVELWAY WHEN WORK IS BEING PERFORMED BEHIND A LANE CLOSURE ON THE OPPOSITE SIDE OF THE TRAVELWAY.
- I) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- J) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING ROADWAY IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS A DROP-OFF AS FOLLOWS:
- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- K) DO NOT EXCEED A DIFFERENCE OF 1.5 inches IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 500 FT IN ADVANCE OF THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- M) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 100 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- WHEN NO WORK IS BEING CONDUCTED FOR A PERIOD LONGER THAN ONE WEEK, REMOVE OR COVER ALL ADVANCE WORK ZONE WARNING SIGNS, AS DIRECTED BY THE ENGINEER, AT NO COST TO THE DEPARTMENT.
- N) STATE FORCES WILL BE RESPONSIBLE FOR PERMANENT SIGNING.
- O) PROVIDE WIDE LOAD SIGNING WITHIN AND OFF THE PROJECT LIMITS.
- P) COVER OR REMOVE ALL WIDE LOAD SIGNS WITHIN AND OFF THE PROJECT LIMITS WHEN NOT IN OPERATION.
- Q) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC BARRIER

- R) INSTALL MOVABLE/PORTABLE CONCRETE BARRIER ACCORDING TO THE TRAFFIC CONTROL PLANS A MAXIMUM OF TWO (2) WEEKS PRIOR TO BEGINNING WORK IN ANY LOCATION. ONCE MOVABLE/PORTABLE CONCRETE 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.

ONCE MOVABLE/PORTABLE CONCRETE BARRIER IS INSTALLED AT ANY LOCATION AND NO WORK IS PERFORMED BEHIND THE MOVABLE/PORTABLE CONCRETE BARRIER FOR A PERIOD LONGER THAN TWO (2) MONTHS, REMOVE/RESET MOVABLE/PORTABLE CONCRETE BARRIER AT NO COST TO THE DEPARTMENT UNLESS OTHERWISE STATED IN THE TRAFFIC CONTROL PLANS, BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

- S) 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 MOVEABLE/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
LESS THAN 50 MPH	20 FT
50 MPH OR HIGHER	30 FT

INSTALL MOVABLE / PORTABLE CONCRETE BARRIER WITH THE TRAFFIC FLOW, BEGINNING WITH THE UPSTREAM SIDE OF TRAFFIC. REMOVE MOVABLE/PORTABLE CONCRETE 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 CLOSED THE SECTION OF THE ROADWAY UNTIL THE BARRIER CAN BE PLACED OR AFTER BARRIER IS REMOVED.

TRAFFIC CONTROL DEVICES

- T) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY, WHEN LANE CLOSURES ARE NOT IN EFFECT.
- U) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY. STAGGER OR OVERLAP BARRICADES TO ALLOW FOR INGRESS OR EGRESS.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
1. ALL ROADS	PAINT	NONE

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

ROAD NAME	MARKING	MARKER
1. ALL ROADS	PAINT/COLD APPLIED PLASTIC, TYPE 4	TEMPORARY RAISED

- X) PLACE AT LEAST TWO APPLICATIONS OF PAINT PAVEMENT MARKINGS ON THE FINAL WEARING SURFACE ON NEW ASPHALT PAVEMENT. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.
- Y) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- Z) REPLACE ANY PAVEMENT MARKINGS THAT HAVE BEEN DAMAGED BY THE END OF EACH DAY'S OPERATION.
- AA) PLACE AT LEAST TWO APPLICATIONS OF PAINT ON NEW ASPHALT WITH TEMPORARY TRAFFIC PATTERNS WHICH WILL REMAIN IN PLACE OVER THREE (3) MONTHS. PLACE ADDITIONAL APPLICATIONS OF PAINT UPON SUFFICIENT DRYING TIME, AS DETERMINED BY THE ENGINEER.

TEMPORARY / FINAL SIGNALS

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

MISCELLANEOUS

- CC) ENGINEER WILL NOTIFY THE OVERSIZE/OVERWEIGHT PERMIT UNIT AT 919-733-4740 (MS. TAMMY C. DENNING AND/OR MS. GWEN HOBBY) THIRTY (30) DAYS PRIOR TO TRAFFIC BEING PLACED IN THE ONE-LANE, TWO-WAY TRAFFIC PATTERN WITH SIGNALS AND WHEN THE PROJECT IS OPEN TO FINAL PATTERN.
- DD) REMOVE CONFLICTING PAVEMENT MARKINGS.

APPROVED: <i>[Signature]</i> DATE: 5-1-07	PROJECT NOTES									
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	DATE: 5/1/07									
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REVISIONS										

PBS&J 1616 EAST MILLBROOK ROAD, SUITE 310
 RALEIGH, NORTH CAROLINA 27609
 PHONE: (919) 876-6888

SYSTEMS: DGN
 USER: NAME

PHASING

PROJ. REFERENCE NO. SHEET NO.

B-3826

TCP-3

PHASE I

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

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

PRIOR TO CONSTRUCTION, INSTALL ADVANCE WORK ZONE WARNING SIGNS ("ROAD WORK AHEAD" AND "END ROAD WORK" ONLY) AS SHOWN ON SHEET TCP-7.

STEP 1: USING RSD 1101.02, SHEET 1 OF 9:

- CONSTRUCT -DETOUR- ON THE RIGHT SIDE OF SR 1331 -L- (INCLUDING ALL DRAINAGE) AND TEMPORARY GUARDRAIL ALONG RIGHT SIDE OF -DETOUR- [SEE CONSTRUCTION PLANS AND SHEET TCP-4].
 - NOTE: INSTALL DRUMS AND TYPE III BARRICADES TO KEEP DETOUR CLOSED TO TRAFFIC.
 - INSTALL BUT DO NOT ACTIVATE TEMPORARY TRAFFIC SIGNAL (SEE SIGNAL PLANS).
- USING RSD 1101.02, SHEET 1 OF 9, AND RSD 1101.04, INSTALL AND COVER THE FOLLOWING SIGNING IN PREPARATION FOR TRAFFIC PATTERN SWITCH IN PHASE I, STEP 2:
- OFF-SITE SIGNS PROHIBITING OVERSIZE LOADS AS SHOWN ON TCP-8.
 - ALL ADDITIONAL WARNING SIGNS AND CMS'S AS SHOWN ON TCP-7.

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE I, STEP 2 IN ONE WORK PERIOD.

STEP 2: USING RSD 1101.02, SHEET 1 OF 9, AND TEMPORARY TRAFFIC SIGNAL, SHIFT TRAFFIC TO PHASE II TRAFFIC PATTERN [SEE TCP-5] AS FOLLOWS:

- UNCOVER OFF-SITE SIGNS PROHIBITING OVERSIZE LOADS AND SIGNS FOR ONE-LANE, TWO-WAY OPERATION INSTALLED IN PHASE I, STEP 1. ACTIVATE CMS'S INSTALLED IN PHASE I, STEP 1. [SEE TCP-7 AND TCP 8]
- ACTIVATE TEMPORARY TRAFFIC SIGNAL.
- NOTE: THE CONTRACTOR SHALL UTILIZE THE TEMPORARY SIGNAL, AS DIRECTED BY THE ENGINEER, FOR LANE/ROAD CLOSURES. HOWEVER, DRUMS SHALL BE USED TO DELINEATE THE TRAVEL WAY UNTIL TEMPORARY PAVEMENT MARKINGS & MARKERS ARE PLACED/INSTALLED.
- INSTALL PCB (ANCHORED) ALONG LEFT SIDE OF -DETOUR-. PROTECT ENDS OF PCB WITH TMIAS, AS DIRECTED BY THE ENGINEER, UNTIL CRASH CUSHIONS HAVE BEEN INSTALLED.
- USING RSD 1205.12, PLACE TEMPORARY PAVEMENT MARKINGS, AND INSTALL TEMPORARY RAISED PAVEMENT MARKERS, AND OPEN -DETOUR- TO PHASE II TEMPORARY ONE-LANE, TWO-WAY TRAFFIC PATTERN.

PHASE II

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

STEP 1: USING RSD 1101.02, SHEET 1 OF 9 AND TEMPORARY TRAFFIC SIGNAL, COMPLETE THE FOLLOWING AS SHOWN ON TCP-5 AND CONSTRUCTION PLANS:

- REMOVE EXISTING BRIDGE
- CONSTRUCT LEFT SIDE OF PROPOSED CORED-SLAB BRIDGE AND APPROACHES UP THROUGH FINAL LAYER OF SURFACE COURSE
- CONSTRUCT THE PORTION OF PROPOSED -L- THAT CORRESPONDS TO PORTION OF BRIDGE BEING CONSTRUCTED UP THROUGH FINAL LAYER OF SURFACE COURSE FROM STA 9+72+/- -L- TO STA 12+61+/- -L-.
- CONSTRUCT TEMPORARY PAVEMENT WIDENING (LEFT SIDE) UP TO EDGE AND ELEVATION OF PROPOSED PAVEMENT FROM STA 9+72+/- -L- TO STA 12+00+/- -L-.
- INSTALL TEMPORARY GUARDRAIL ON RIGHT SIDE OF CORED SLAB BRIDGE.

THE CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE WORK IN PHASE II, STEP 2 IN ONE WORK PERIOD.

STEP 2: USING THE TEMPORARY TRAFFIC SIGNAL TO MAINTAIN ONE-LANE, TWO-WAY TRAFFIC PATTERN, SHIFT TRAFFIC FROM -DETOUR- TO PHASE III TRAFFIC PATTERN [SEE TCP-6 AND CONSTRUCTION PLANS] ON NEWLY COMPLETED LEFT "HALF" OF CORED SLAB BRIDGE AS FOLLOWS:

- PLACE TEMPORARY PAVEMENT MARKINGS AND TEMPORARY RAISED PAVEMENT MARKERS ON SR 1331 -L- AND ON SR 1348 -Y1-.
- PLACE DRUMS SPACED 10' C-C IN LOCATION OF TEMPORARY GUARDRAIL AND TMIAS ON THE RIGHT SIDE OF -L- AT EACH END OF THE NEW BRIDGE UNTIL REMAINDER OF TEMPORARY GUARDRAIL CAN BE INSTALLED.
- SHIFT SR 1331 -L- TRAFFIC FROM PHASE II -DETOUR- TO PHASE III ONE-LANE, TWO-WAY TRAFFIC PATTERN ACROSS COMPLETED PORTION OF NEW BRIDGE.
- INSTALL REMAINDER OF TEMPORARY GUARDRAIL.
- INSTALL DRUMS AND TYPE III BARRICADES TO CLOSE -DETOUR- TO TRAFFIC.

PHASE III

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

STEP 1: USING TEMPORARY SIGNAL [SEE TCP-6 AND CONSTRUCTION PLANS]:

- MILL AND CONSTRUCT -Y1- UP THROUGH FINAL LAYER OF SURFACE COURSE.
- REMOVE -DETOUR-.
- CONSTRUCT REMAINDER (RIGHT SIDE) OF BRIDGE AND APPROACHES UP THROUGH FINAL LAYER OF SURFACE COURSE.

STEP 2: USING TEMPORARY SIGNAL, COMPLETE THE FOLLOWING [SEE TCP-6 AND CONSTRUCTION PLANS]:

- REMOVE TEMPORARY GUARDRAIL ON -L- AND IMMEDIATELY REPLACE WITH DRUMS SPACED 10 FT C-C TO KEEP TRAFFIC IN A ONE-LANE, TWO-WAY PATTERN.
- COMPLETE ANY REMAINING CONSTRUCTION OF -L- (RIGHT SIDE) UP THROUGH FINAL LAYER OF SURFACE COURSE.

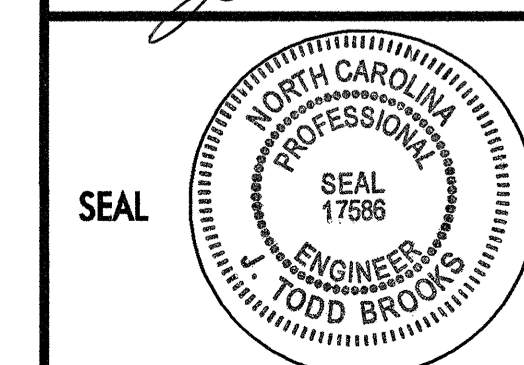
STEP 3: USING RSD NO. 1101.02, SHEET 1 OF 9 AND TEMPORARY SIGNAL, REMOVE TEMPORARY MARKINGS AND PLACE FINAL PAVEMENT MARKINGS ON -L-. USE DRUMS TO DELINEATE THE TRAVEL WAY AND MAINTAIN ONE-LANE, TWO-WAY PATTERN UNTIL FINAL PAVEMENT MARKINGS & MARKERS HAVE BEEN PLACED.

STEP 4: DEACTIVATE AND REMOVE TEMPORARY SIGNALS. REMOVE SIGNING ASSOCIATED WITH TEMPORARY SIGNAL AND OFF-SITE WIDE-LOAD PROHIBITION SIGNS. OPEN ALL LANES TO FINAL TRAFFIC PATTERN.

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USER: JTB

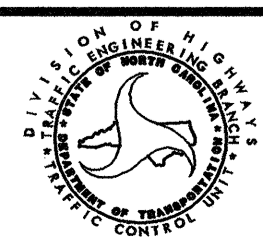
PBSJ 1616 EAST MILLBROOK ROAD, SUITE 310
RALEIGH, NORTH CAROLINA 27609
PHONE: (919) 876-6888

APPROVED: *[Signature]* DATE: 5-1-07



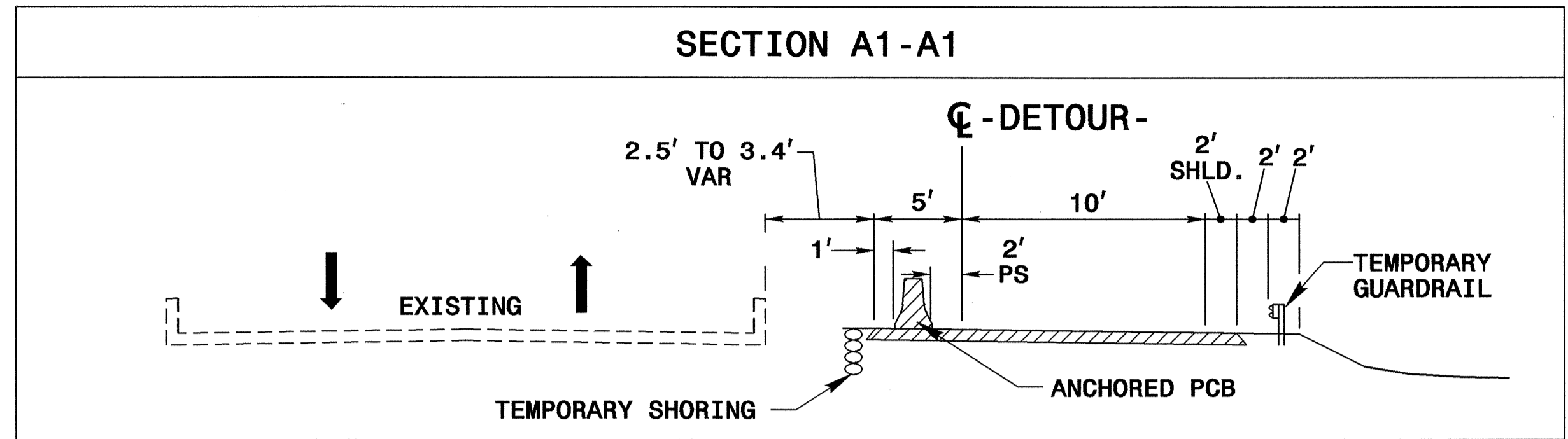
PHASING

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DWG. BY: JTB
DESIGN BY: JTB
REVIEWED BY: JAW

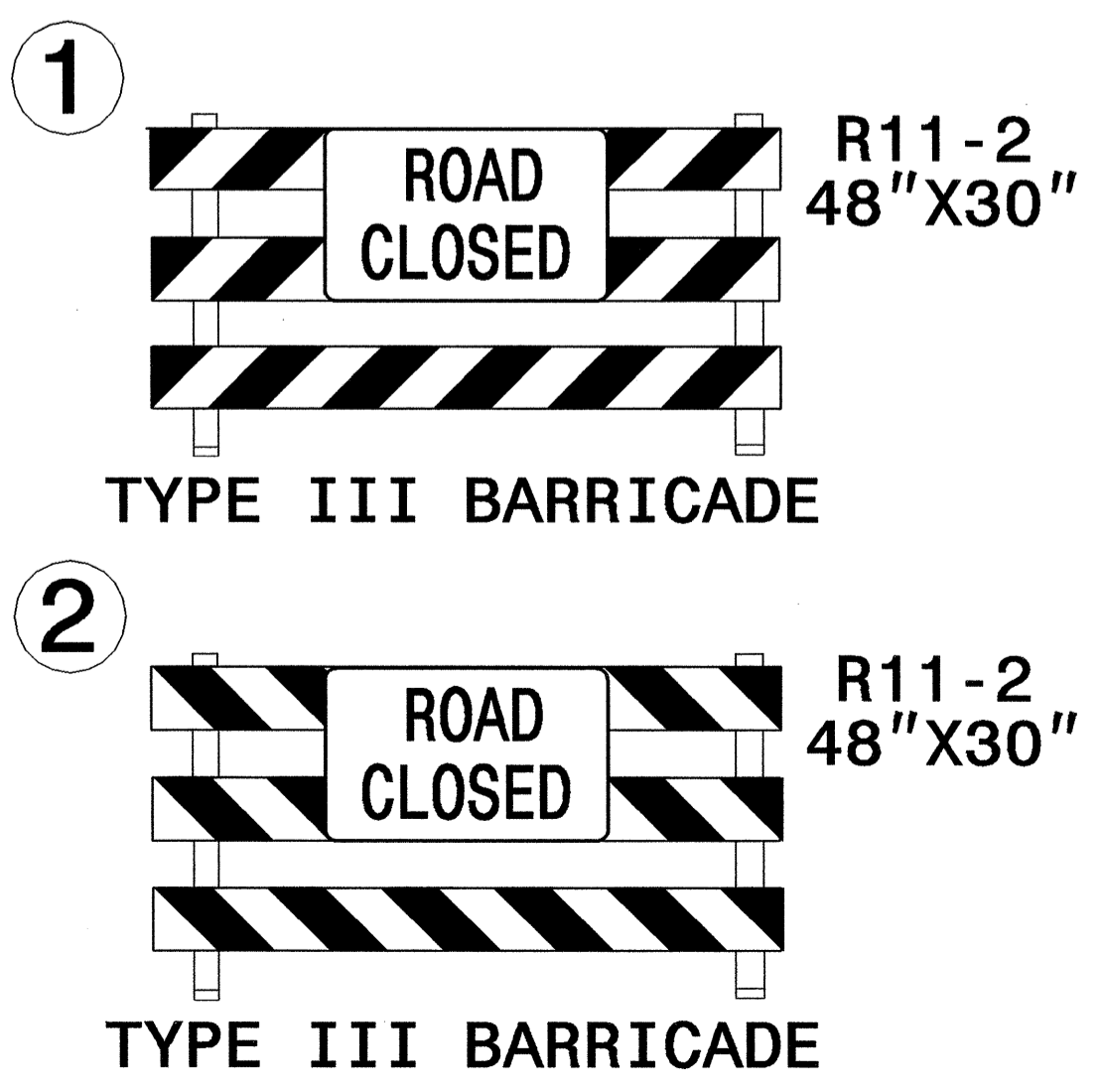
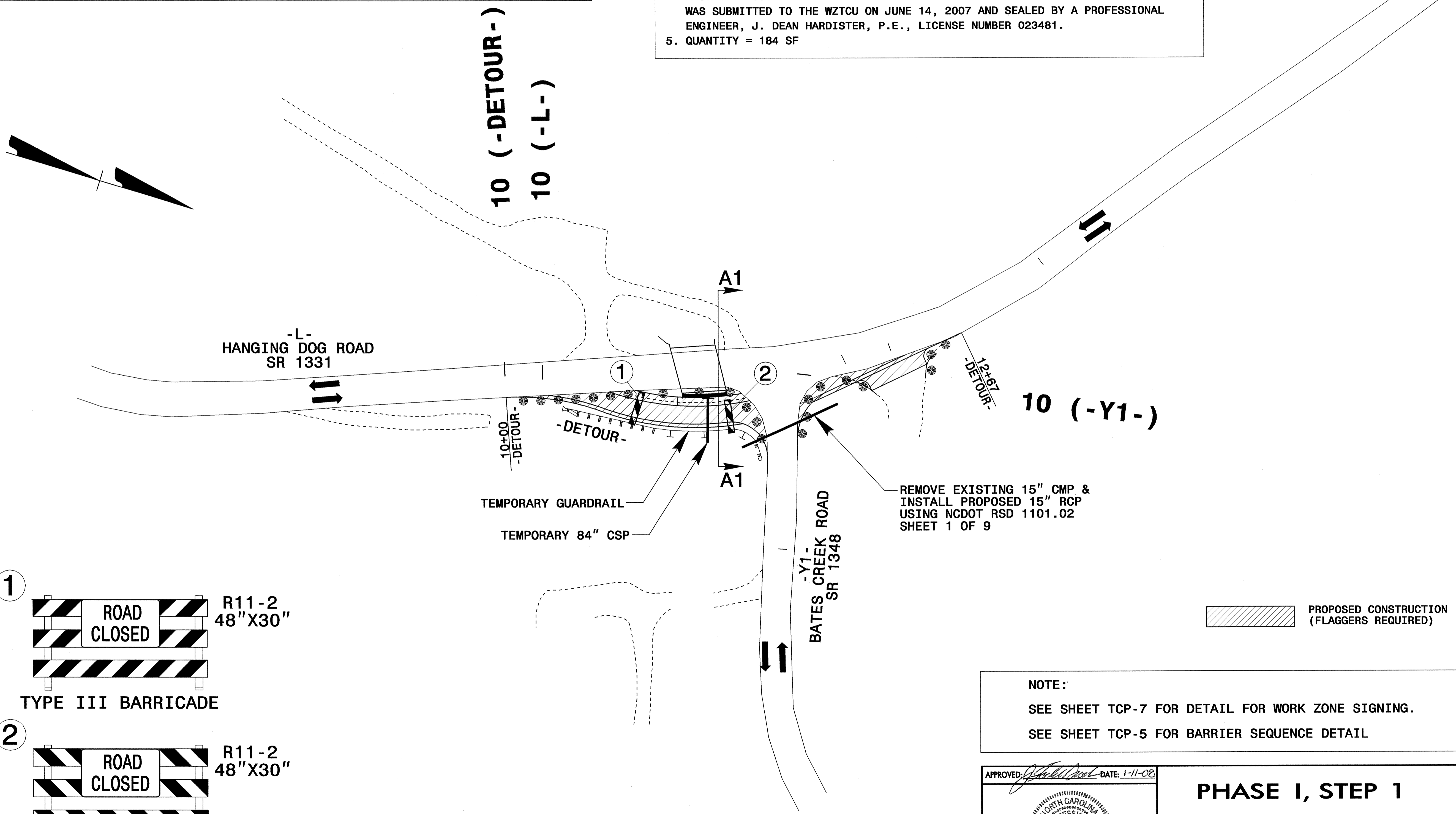


REVISIONS	

CADD FILE



- FOR TEMPORARY SHORING
1. SEE TEMPORARY SHORING SPECIAL PROVISION.
 2. USE TEMPORARY MSE WALL FROM STA. 11+02.70 -DET-, 5 FT LEFT TO STA. 11+28.95 -DET-, 5 FT LEFT; DO NOT USE STANDARD TEMPORARY SHORING.
 3. WHEN USING CONTRACTOR DESIGN SHORING, DESIGN SHORING FOR THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
 UNIT WEIGHT OF SOIL ABOVE WATER TABLE, $\gamma = 120$ PCF
 UNIT WEIGHT OF SOIL BELOW WATER TABLE, $\gamma = 60$ PCF
 FRICTION ANGLE, $\phi = 30$ DEGREES
 COHESION, $c = 0$ PSF
 4. THE TEMPORARY SHORING NOTES SHOWN ON THIS SHEET WERE PROVIDED THROUGH A SEALED DOCUMENT FROM THE GEOTECHNICAL ENGINEERING UNIT. THE DOCUMENT WAS SUBMITTED TO THE WZTCU ON JUNE 14, 2007 AND SEALED BY A PROFESSIONAL ENGINEER, J. DEAN HARDISTER, P.E., LICENSE NUMBER 023481.
 5. QUANTITY = 184 SF



NOTE:
 SEE SHEET TCP-7 FOR DETAIL FOR WORK ZONE SIGNING.
 SEE SHEET TCP-5 FOR BARRIER SEQUENCE DETAIL

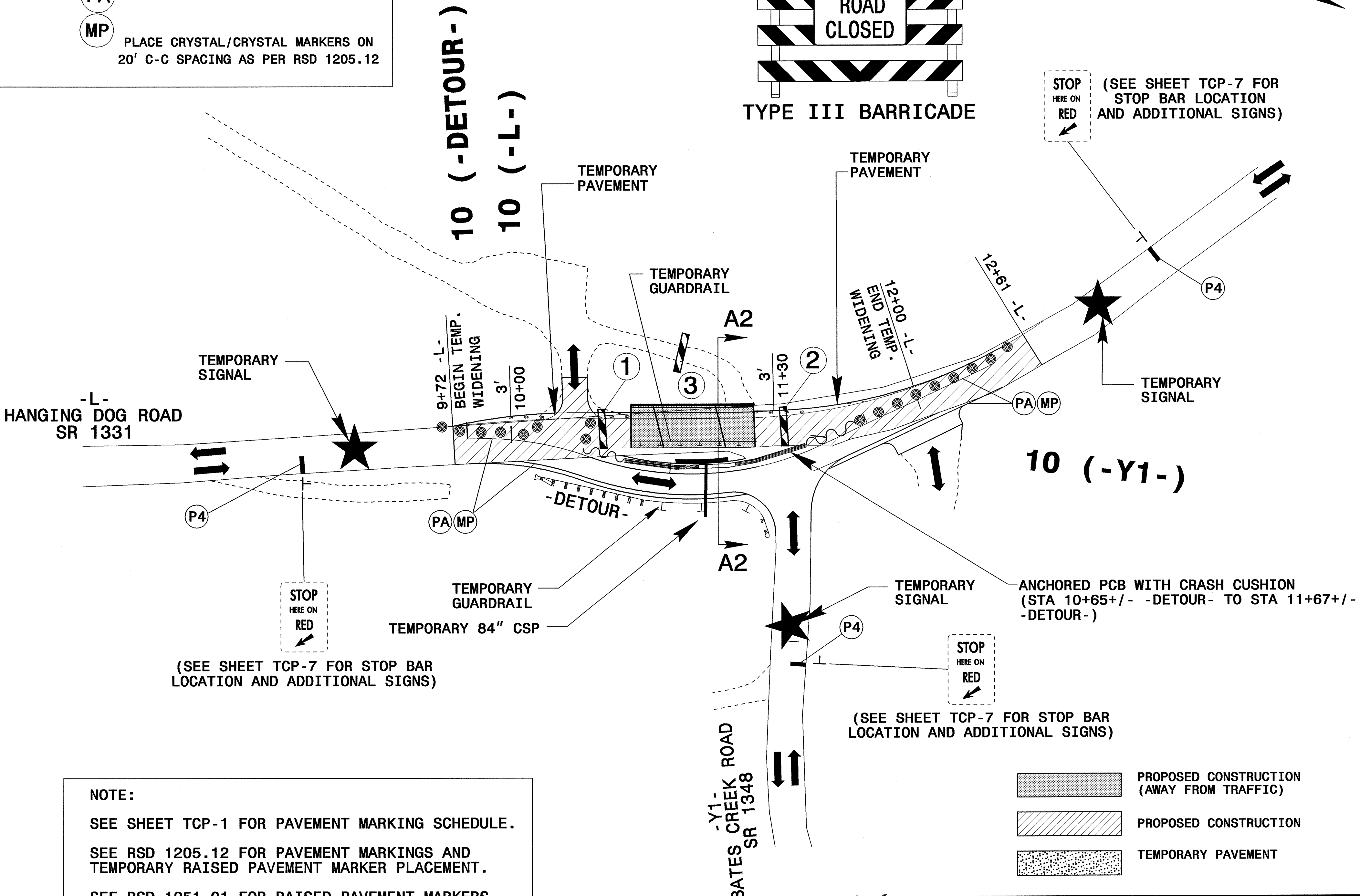
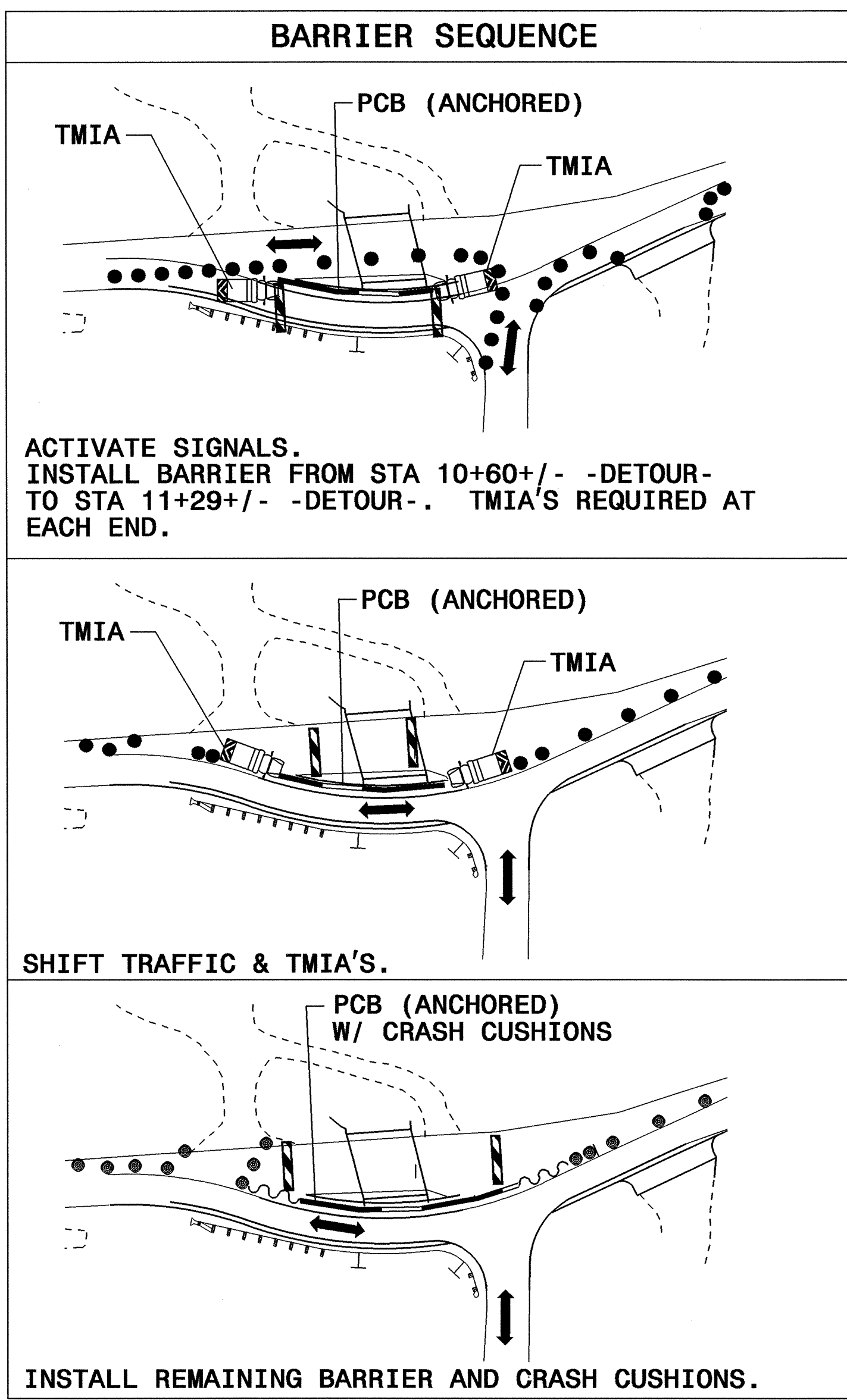
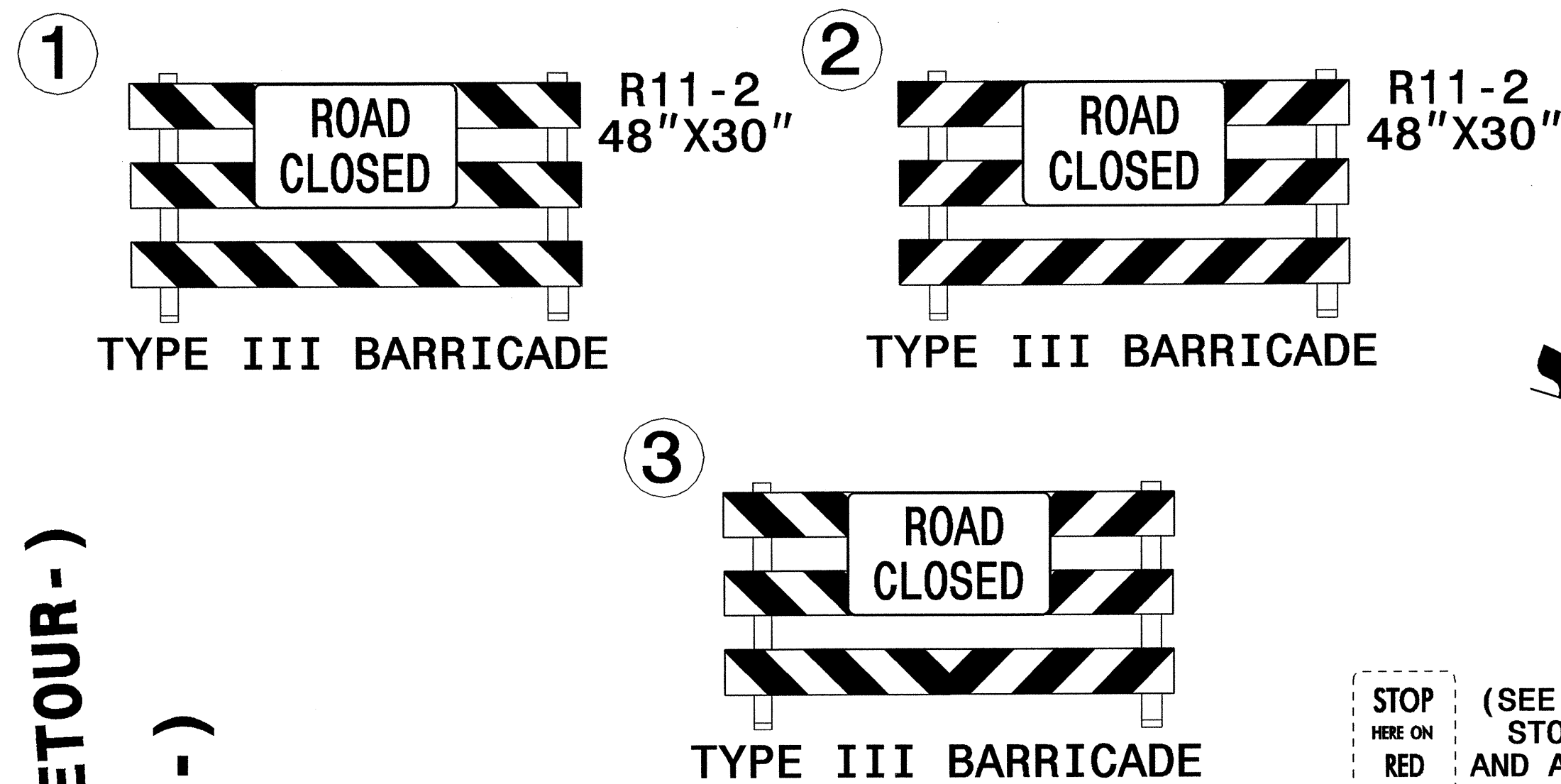
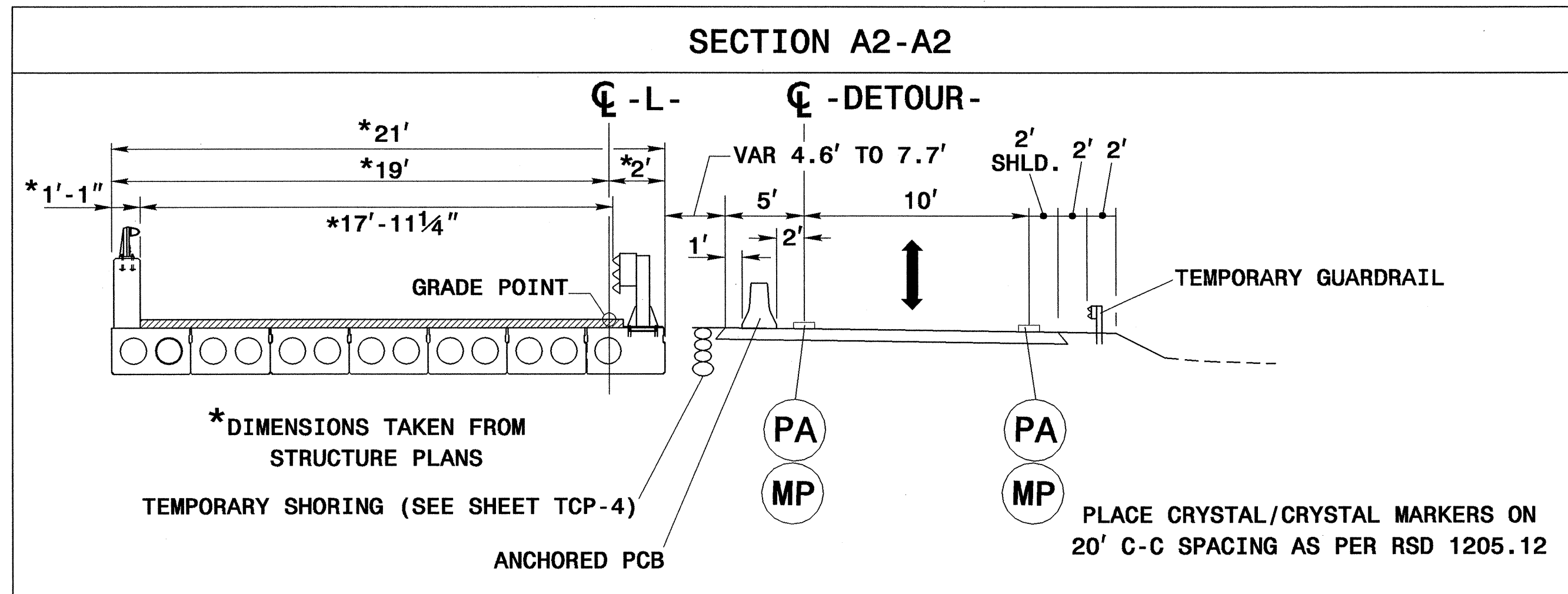
APPROVED: *[Signature]* DATE: 1-11-08

SEAL: *[Professional Engineer Seal for Todd Brooks, License 17586]*

PHASE I, STEP 1

SCALE: 1" = 30'		REVISIONS
DATE: 5/07		
DWG. BY: JTB		
DESIGN BY: JTB		
REVIEWED BY: JAW		

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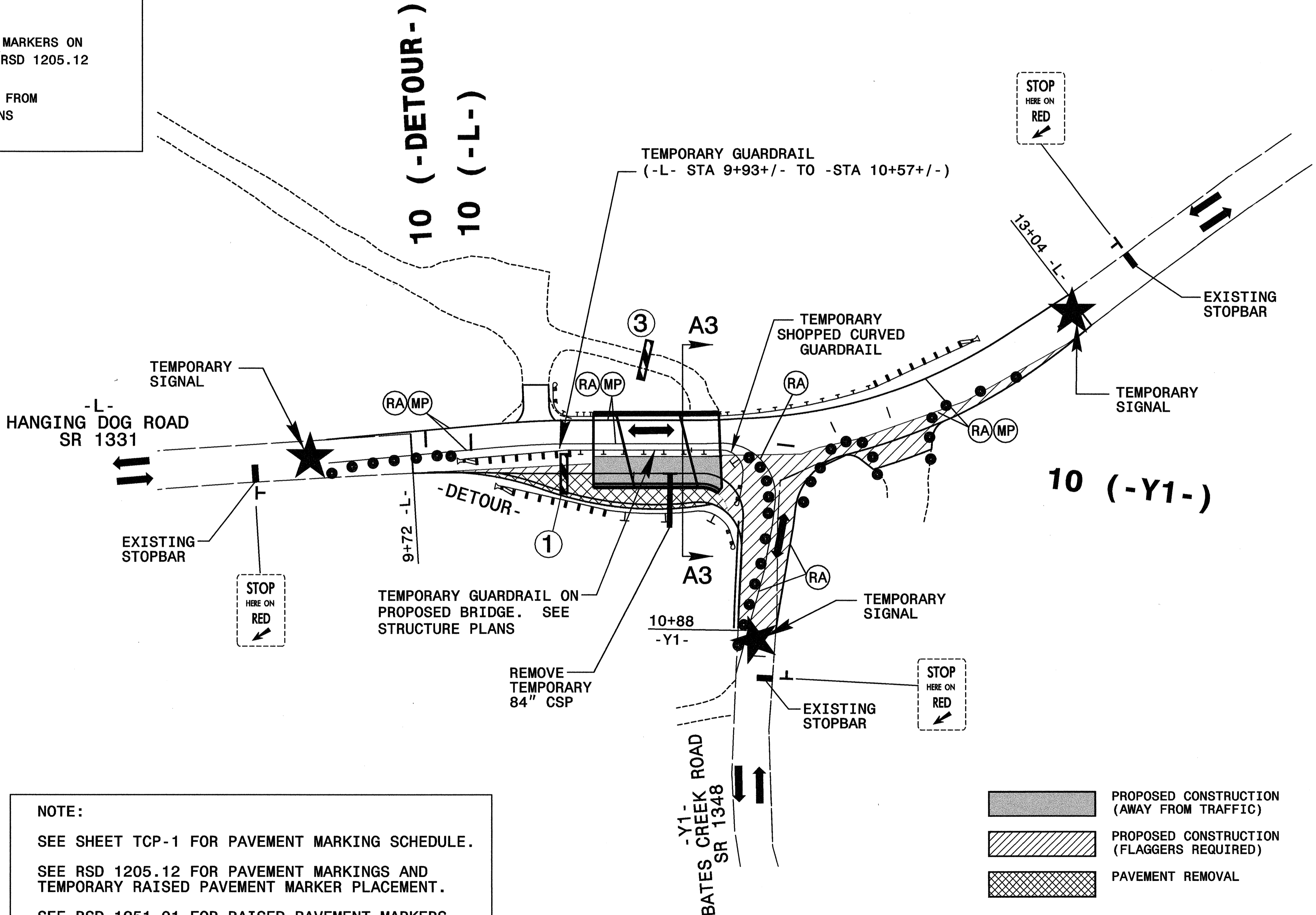
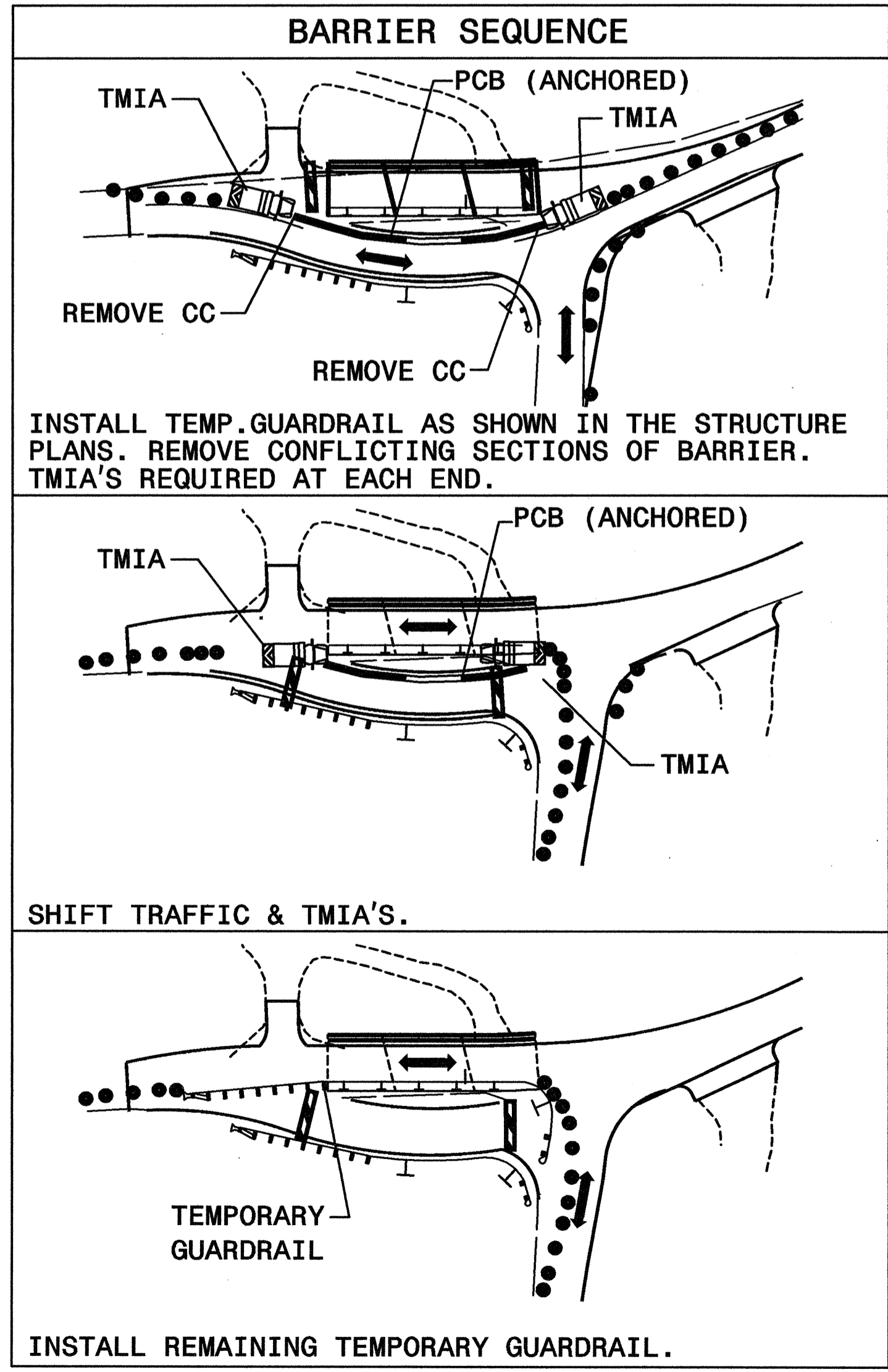
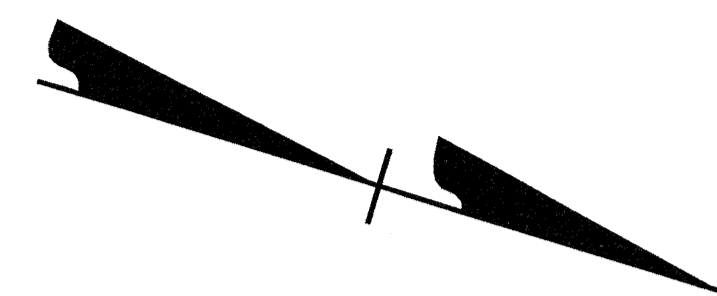
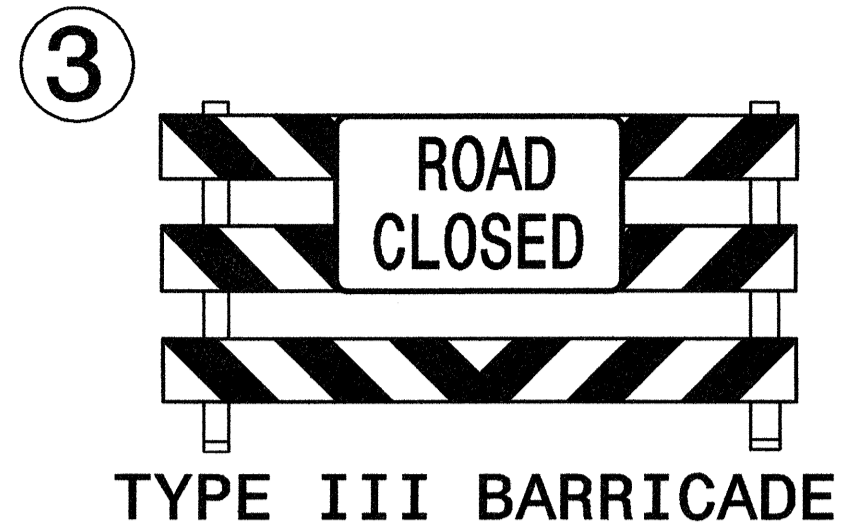
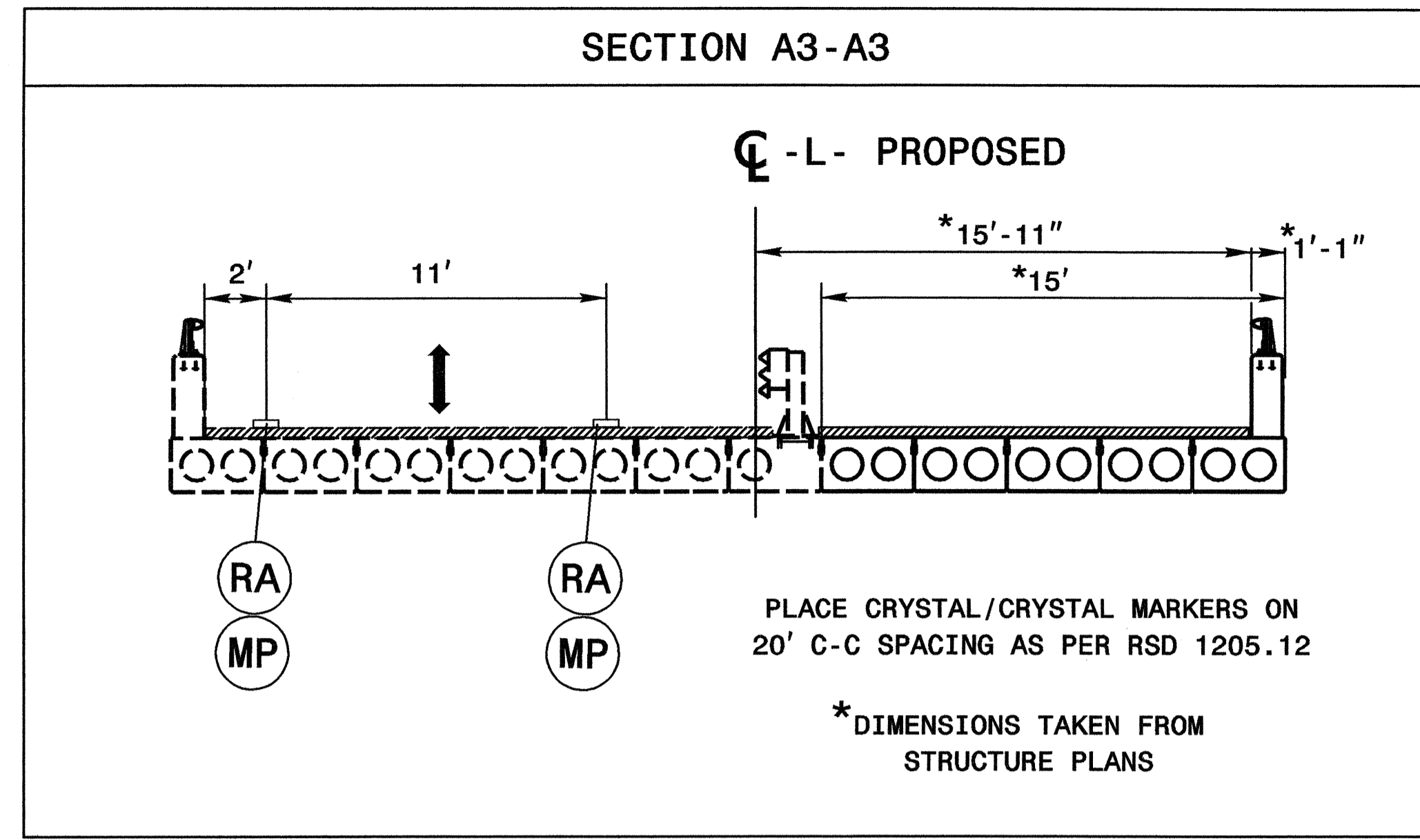
APPROVED: *[Signature]* DATE: 1-10-08

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER TODD BROOKS

PHASE I, STEP 2
PHASE II, STEP 1

SCALE: 1" = 30'	REVISIONS
DATE: 5/107	
DWG. BY: JTB	
DESIGN BY: JTB	
REVIEWED BY: JAW	

09-JAN-2008 16:45
H:\Trans\ncdot\B3826\TrafficControl\B3826_te_tcp05.dgn
12:054 AT



NOTE:

SEE SHEET TCP-1 FOR PAVEMENT MARKING SCHEDULE.

SEE RSD 1205.12 FOR PAVEMENT MARKINGS AND TEMPORARY RAISED PAVEMENT MARKER PLACEMENT.

SEE RSD 1251.01 FOR RAISED PAVEMENT MARKERS.

APPROVED: *[Signature]* DATE: 5-7-07

SEAL

PHASE II, STEP 2

PHASE III

SCALE: 1" = 30'

DATE: 5/07

DWG. BY: JTB

DESIGN BY: JTB

REVIEWED BY: JAW

REVISIONS

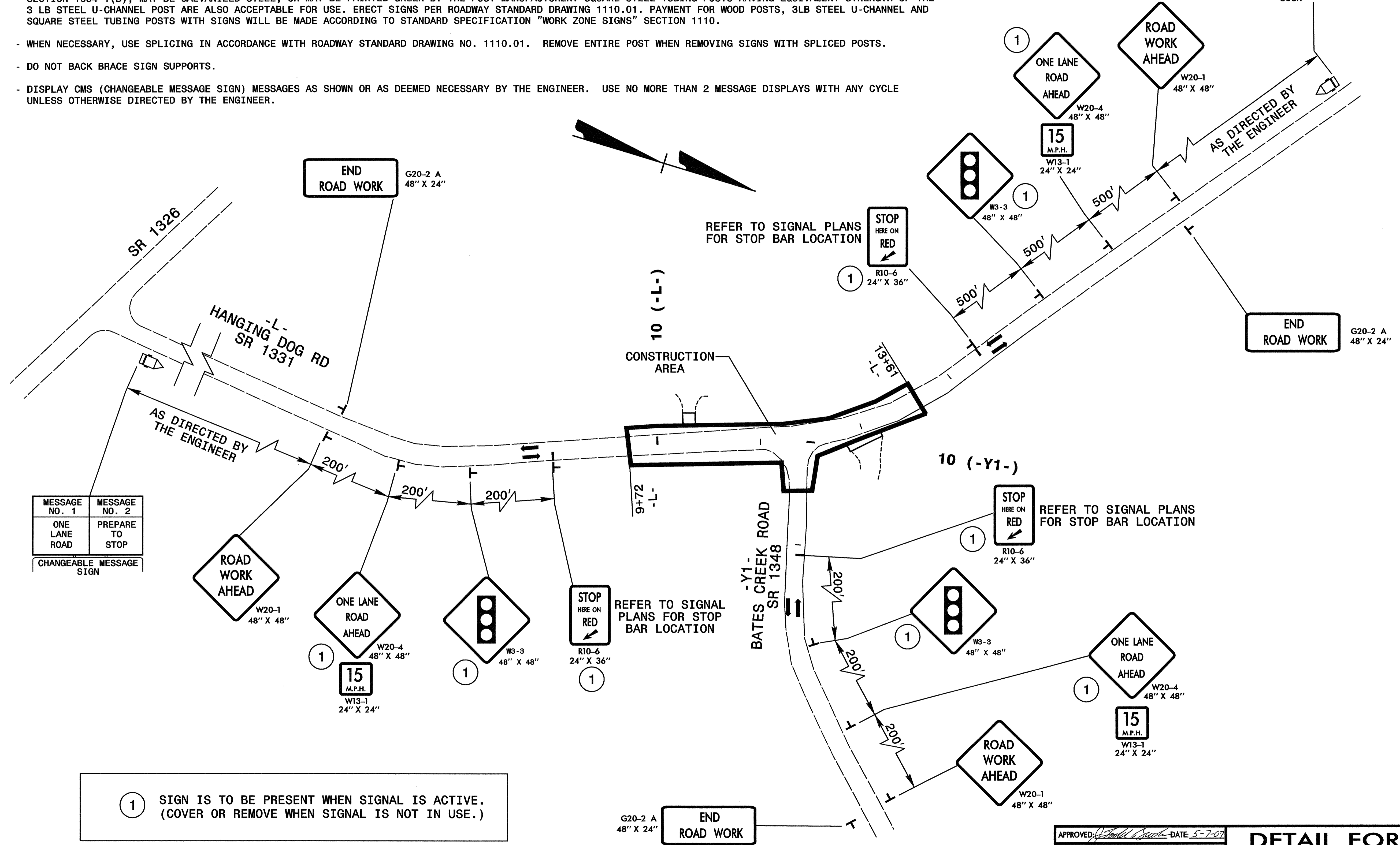
CADD FILE

SYSTEM: D:\PROJECTS\B-3826\TCP-6.DWG
USER: JTB

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.
- 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.
- DISPLAY CMS (CHANGEABLE MESSAGE SIGN) MESSAGES AS SHOWN OR AS DEEMED NECESSARY BY THE ENGINEER. USE NO MORE THAN 2 MESSAGE DISPLAYS WITH ANY CYCLE UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

MESSAGE NO. 1	MESSAGE NO. 2
ONE LANE ROAD	PREPARE TO STOP
CHANGEABLE MESSAGE SIGN	



MESSAGE NO. 1	MESSAGE NO. 2
ONE LANE ROAD	PREPARE TO STOP
CHANGEABLE MESSAGE SIGN	

① SIGN IS TO BE PRESENT WHEN SIGNAL IS ACTIVE.
(COVER OR REMOVE WHEN SIGNAL IS NOT IN USE.)

APPROVED: *[Signature]* DATE: 5-7-07

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
TODD BROOKS

DETAIL FOR WORK ZONE SIGNING

SCALE: 1" = 50'

DATE: 5/07

DWG. BY: JTB

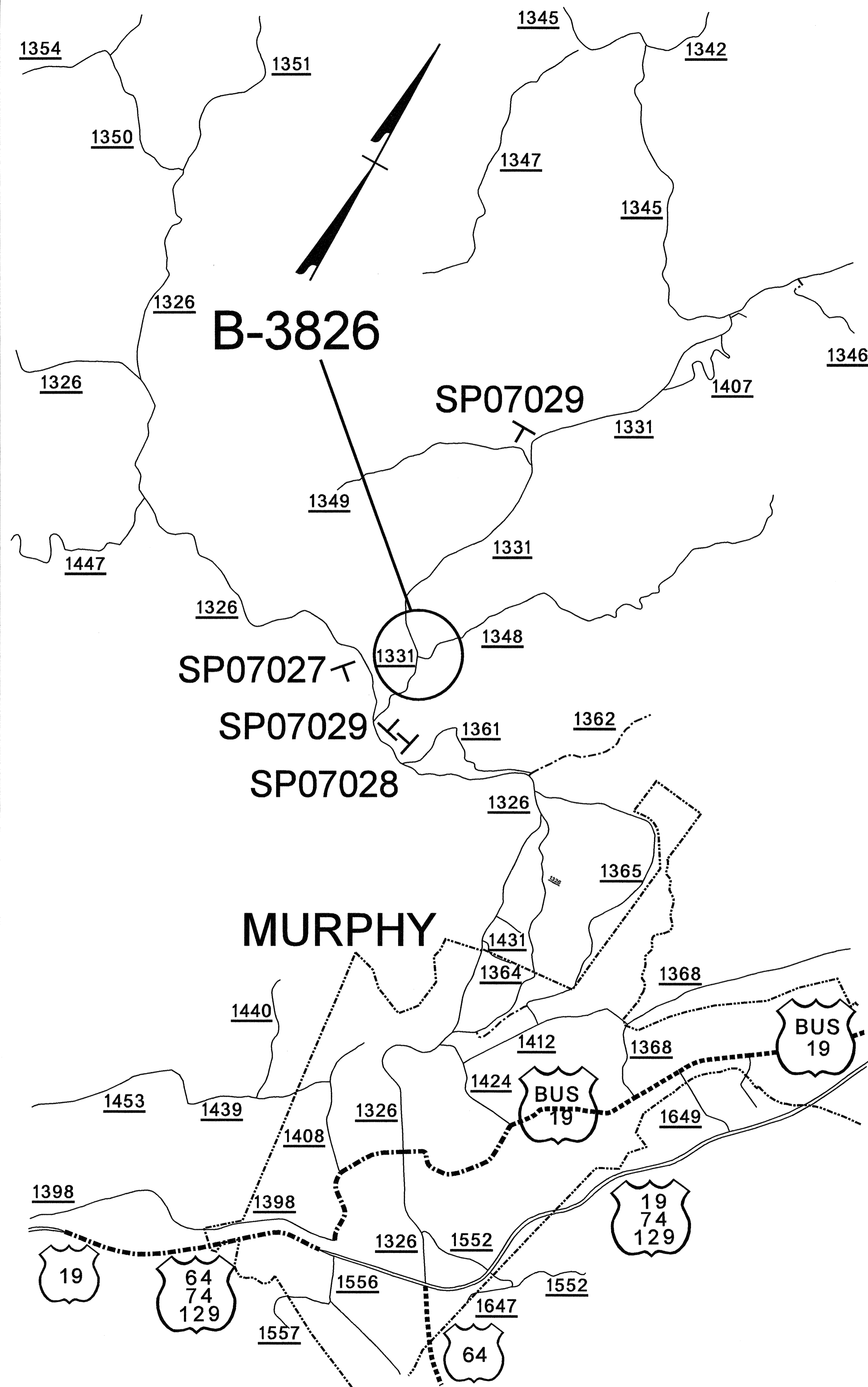
DESIGN BY: JTB

REVIEWED BY: JAW

REVISIONS

CADD FILE

SYSTEMTIME: 5/7/07 10:00:00 AM
DGN: JTB
USER: JTB



**NO OVERSIZE LOAD
NEXT LEFT**

SP07027

**NO OVERSIZE LOAD
NEXT RIGHT**

SP07028

**NO OVERSIZE LOAD
16' HORIZONTAL CLEARANCE**

SP07105

SEE SHEET TCP-9 FOR
SIGN DETAILS

SYSTEM TIME: 5/1/07 10:00 AM
USER: JTB

APPROVED: *[Signature]* DATE: 5-1-07

SEAL

**WIDE LOAD
SIGNS**

SCALE:			REVISIONS
DATE:	5/1/07		
DWG. BY:	JTB		
DESIGN BY:	JTB		
REVIEWED BY:	JAW		

N. C. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 TRAFFIC ENGINEERING BRANCH
 DESIGN DEPARTMENT

SIGN NUMBER: SP07027 BACKG COLOR: Fluorescent Orange
 TYPE: D COPY COLOR: Black
 QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 78"
 HEIGHT: 24"
 TOTAL AREA: 13.0 Sq.Ft.
 BORDER TYPE: FLUSH
 RECESS: 0.38"
 WIDTH: 0.63"
 RADIUS: 1.5"
 NO. Z BARS: MAT'L: 0.125" (3.2 mm) ALUMINUM
 LENGTH: 0.079" COMPOSITE

DESIGN BY: R. HENNEIN CHECKED BY:
 PROJECT ID: B-3826 DIV: 14 DATE: Feb 08, 2007

**NO OVERSIZE LOAD
NEXT LEFT**

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

USE NOTES:
 1. Legend and border shall be direct applied non-reflective sheeting.
 2. Background shall be Type VII, VIII, or IX (prismatic) retroreflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size			
H	O	V	E	R	S	I	Z	E	L	O	A	D			Text Length			
5.6	4.6	3.5	6	4.3	4.6	4.1	4.1	4.4	1.9	4.4	3.1	6	3.8	4.3	4.7	3.4	5.6	C 2000
66.8															66.8			
																		C 2000
21.1	4.7	3.6	3.9	3.1	6	3.9	4.1	3.4	3.1	21.1							35.7	

Spacing Factor is 1 unless specified otherwise
 FILENAME: SP07027 NORTH CAROLINA D.O.T. SIGN DETAIL

N. C. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 TRAFFIC ENGINEERING BRANCH
 DESIGN DEPARTMENT

SIGN NUMBER: SP07028 BACKG COLOR: Fluorescent Orange
 TYPE: D COPY COLOR: Black
 QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 78"
 HEIGHT: 24"
 TOTAL AREA: 13.0 Sq.Ft.
 BORDER TYPE: FLUSH
 RECESS: 0.38"
 WIDTH: 0.63"
 RADIUS: 1.5"
 NO. Z BARS: MAT'L: 0.125" (3.2 mm) ALUMINUM
 LENGTH: 0.079" COMPOSITE

DESIGN BY: R. HENNEIN CHECKED BY:
 PROJECT ID: B-3826 DIV: 14 DATE: Feb 08, 2007

**NO OVERSIZE LOAD
NEXT RIGHT**

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

USE NOTES:
 1. Legend and border shall be direct applied non-reflective sheeting.
 2. Background shall be Type VII, VIII, or IX (prismatic) retroreflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size			
H	O	V	E	R	S	I	Z	E	L	O	A	D			Text Length			
5.6	4.6	3.5	6	4.3	4.6	4.1	4.1	4.4	1.9	4.4	3.1	6	3.8	4.3	4.7	3.4	5.6	C 2000
66.8															66.8			
																		C 2000
19.3	4.7	3.6	3.9	3.1	6	4.4	2	4.6	4.2	3.1	19.3						38.5	

Spacing Factor is 1 unless specified otherwise
 FILENAME: SP07028 NORTH CAROLINA D.O.T. SIGN DETAIL

N. C. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 TRAFFIC ENGINEERING BRANCH
 DESIGN DEPARTMENT

SIGN NUMBER: SP07105 BACKG COLOR: Fluorescent Orange
 TYPE: D COPY COLOR: Black
 QUANTITY: 1

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 102"
 HEIGHT: 24"
 TOTAL AREA: 17.0 Sq.Ft.
 BORDER TYPE: FLUSH
 RECESS: 0.38"
 WIDTH: 0.63"
 RADIUS: 1.5"
 NO. Z BARS: MAT'L: 0.125" (3.2 mm) ALUMINUM
 LENGTH: 0.079" COMPOSITE

DESIGN BY: R. HENNEIN CHECKED BY:
 PROJECT ID: B-3826 DIV: 14 DATE: Apr 24, 2007

**NO OVERSIZE LOAD
16' HORIZONTAL CLEARANCE**

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

USE NOTES:
 1. Legend and border shall be direct applied non-reflective sheeting.
 2. Background shall be Type VII, VIII, or IX (prismatic) retroreflective sheeting.

LETTER POSITIONS

Letter spacings are to start of next letter															Series/Size											
H	O	V	E	R	S	I	Z	E	L	O	A	D			Text Length											
17.6	4.6	3.5	6	4.3	4.6	4.1	4.1	4.4	1.9	4.4	3.1	6	3.8	4.3	4.7	3.4	17.6	C 2000								
93.4															93.4											
																		C 2000								
4.3	2.2	4	1	6	4.3	4.5	4.2	1.7	4.1	4.5	4	3.3	4.5	3.1	6	4.3	3.7	3.5	4.5	3.6	4.5	4.3	4.3	3.1	4.3	93.4

Spacing Factor is 1 unless specified otherwise
 FILENAME: SP07028 original NORTH CAROLINA D.O.T. SIGN DETAIL

APPROVED: *[Signature]* DATE: 5-1-07

WIDE LOAD DETOUR SIGNS

SCALE: NONE
 DATE: 5/107
 DWG. BY: RH
 DESIGN BY: RH
 REVIEWED BY:

SEAL
 NORTH CAROLINA PROFESSIONAL ENGINEER
 SEAL 17536
 TODD BROOKS

REVISIONS

CADD FILE

SYSTEM: \$DSCN\$
 USER: \$USER\$