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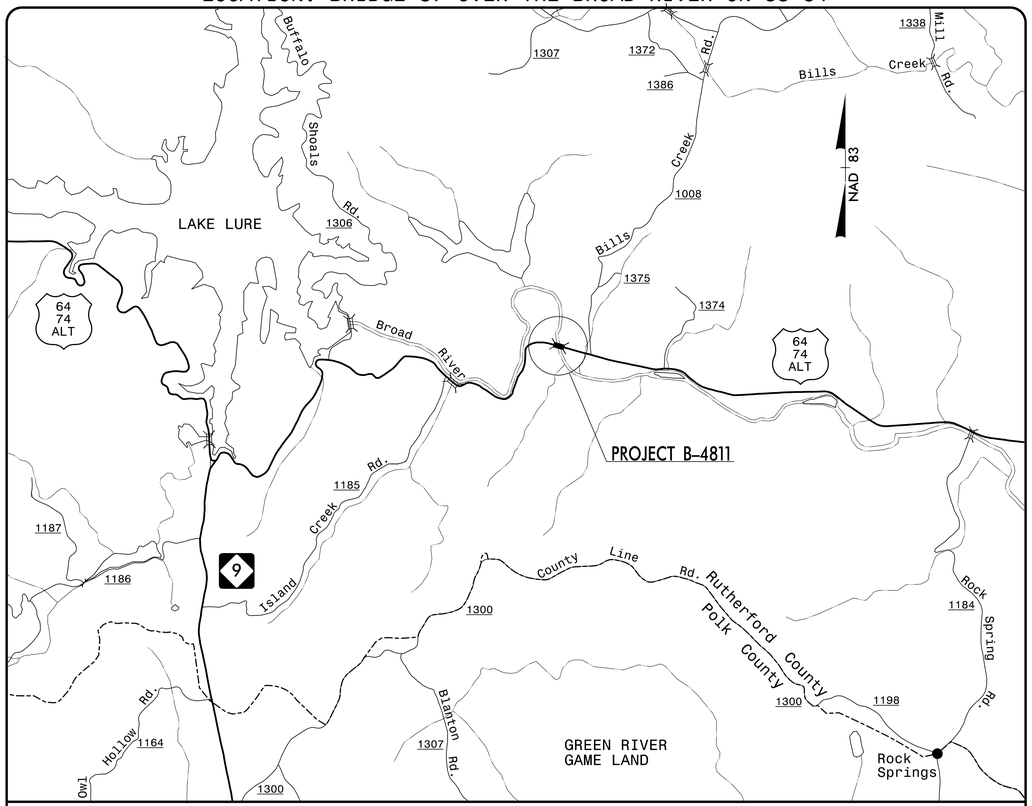
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

RUTHERFORD COUNTY

LOCATION: BRIDGE 87 OVER THE BROAD RIVER ON US 64



VICINITY MAP

INDEX OF SHEETS

SHEET NO.
TMP-1

B-4811

TIP PROJECT:

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. — *STATE TRAFFIC MANAGEMENT ENGINEER*
J. W. WOOLARD, P.E. — *TRAFFIC CONTROL PROJECT ENGINEER*
L. D. STOUCHKO, P.E. — *TRAFFIC CONTROL PROJECT DESIGN ENGINEER*
S. B. COATS — *TRAFFIC CONTROL DESIGN ENGINEER*

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

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APPROVED: DocuSigned by: Lori D. Stouchko 902CBD1B918146C...

DATE: 12/15/2015

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

12/15/2015
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PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE 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
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1170.01	POSITIVE PROTECTION
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)
- WORK AREA
- REMOVAL
- USER DEFINED (IF NEEDED)
- USER DEFINED (IF NEEDED)

SIGNALS

EXISTING PROPOSED TEMPORARY (TEMP)

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

PA - WHITE EDGELINE (PAINT) - 4"
PI - YELLOW DOUBLE CENTER (PAINT) - 4"
CA(IV) - WHITE EDGELINE (COLD APPLIED PLASTIC) - 4"
CI(IV) - YELLOW DOUBLE CENTER (COLD APPLIED PLASTIC) - 4"
C2(IV) - WHITE STOP BAR (COLD APPLIED PLASTIC) - 24"

APPROVED: DocuSigned by: Lori D. Stouchko 902CB01891814 6C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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

ROADWAY STANDARD DRAWINGS & LEGEND

12/15/2015
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PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-1B

TRANSPORTATION OPERATIONS

CONSTRUCTION

REALIGNMENT OF US 64/74 ALT INCLUDING NEW BRIDGE AND ROADWAY APPROACHES. REMOVAL OF EXISTING STRUCTURE AND PAVEMENT.

TMP DESIGN PARAMETERS

UTILIZE FLAGGERS, SIGNAGE, TRAFFIC CONTROL DEVICES, AND TEMPORARY SIGNALS FOR REALIGNMENT OF US 64/74 ALT. TRAFFIC WILL BE SHIFTED TO A ONE-LANE, TWO-WAY TRAFFIC PATTERN DURING CONSTRUCTION.

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
US 64/74 ALT (-L-)	MONDAY THRU FRIDAY 7:00 A.M. - 9:00 A.M. 4:00 P.M. - 6:00 P.M.

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

ROAD NAME
US 64/74 ALT (-L-)

HOLIDAY

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

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 6:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 6:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION & OPERATION
US 64/US 74 ALT	MONDAY THRU FRIDAY 7:00 A.M. - 9:00 A.M.	15 MINUTES FOR TRAFFIC SHIFTS, PAVEMENT TIE-INS, PAVEMENT MARKING TIE-INS

LANE AND SHOULDER CLOSURE REQUIREMENTS

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

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

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

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

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

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

J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 350 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

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

TRAFFIC BARRIER

N) INSTALL TEMPORARY BARRIER ACCORDING TO THE TRANSPORTATION MANAGEMENT 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 TRANSPORTATION MANAGEMENT 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 TRANSPORTATION MANAGEMENT PLANS, TEMPORARY BARRIER IS PROTECTING A HAZARD, OR AS DIRECTED BY THE ENGINEER.

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

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

O) 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 ATTENUATOR (MAXIMUM 72 HOURS) OR A TEMPORARY CRASH CUSHION.

   PROTECT THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER FROM ONCOMING TRAFFIC AT ALL TIMES BY A TEMPORARY CRASH CUSHION UNLESS THE APPROACH END OF MOVABLE/PORTABLE CONCRETE BARRIER IS OFFSET FROM ONCOMING TRAFFIC AS FOLLOWS OR AS SHOWN IN THE PLANS: (SEE ALSO RSD 1101.05)

POSTED SPEED LIMIT	MINIMUM OFFSET
40 OR LESS	15 FT
45 - 50	20 FT
55	25 FT
60 MPH or HIGHER	30 FT

TRAFFIC CONTROL DEVICES

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

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
US 64/74 ALT	PAINT	TEMPORARY
US 64/74 ALT	COLD APPLIED (IV)	TEMPORARY
RAINBOW CIRCLE	COLD APPLIED (IV)	N/A

R) 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.

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

T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

U) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS SHOWN IN FINAL PAVEMENT MARKING PLAN.

APPROVED: DocuSigned by: Lori D. Stouchko 902CBD1B9181446C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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

TRANSPORTATION OPERATIONS PLAN

12/15/2015
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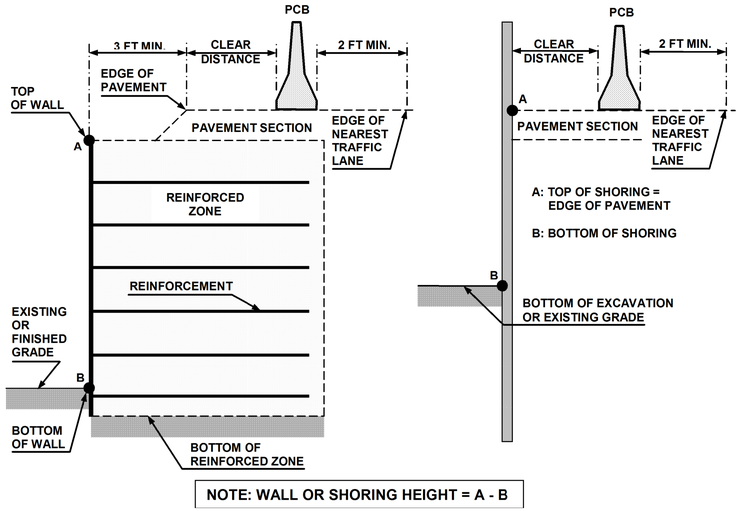

NOTE: WALL OR SHORING HEIGHT = A - B

FIGURE A

NOTES

1- REFER TO THE TRAFFIC CONTROL PLANS FOR TEMPORARY SHORING LOCATIONS AND NOTES.

2- REFER TO THE "TEMPORARY SHORING" PROJECT SPECIAL PROVISION FOR INFORMATION ABOUT TEMPORARY SHORING AND PORTABLE CONCRETE BARRIER (PCB).

3- PCB IS REQUIRED IF TEMPORARY SHORING IS LOCATED WITHIN THE CLEAR ZONE IN ACCORDANCE WITH THE AASHTO ROADSIDE DESIGN GUIDE. DO NOT PLACE BARRIER DIRECTLY ON ANY SURFACE OTHER THAN ASPHALT OR CONCRETE. (CONTACT NCDOT PAVEMENT MANAGEMENT UNIT FOR APPLICABLE PAVEMENT DESIGN).

4- BASED ON THE CLEAR DISTANCE, OFFSET, DESIGN SPEED AND PAVEMENT TYPE, CHOOSE AN UNANCHORED OR ANCHORED PCB FROM THE TABLE SHOWN IN FIGURE B. CLEAR DISTANCE IS DEFINED AS SHOWN IN FIGURE A AND OFFSET IS DEFINED AS SHOWN IN FIGURE B.

5- AT THE CONTRACTOR'S OPTION OR IF THE MINIMUM REQUIRED CLEAR DISTANCE IS NOT AVAILABLE, SET PCB NEXT TO AND UP AGAINST THE TRAFFIC SIDE OF THE TEMPORARY SHORING EXCEPT FOR BARRIER ABOVE TEMPORARY WALLS. PCB WITH THE MINIMUM REQUIRED CLEAR DISTANCE IS REQUIRED ABOVE TEMPORARY WALLS.

6- USE NCDOT PORTABLE CONCRETE BARRIER (PCB) IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1170.01 AND SECTION 1170 OF THE STANDARD SPECIFICATIONS.

7- PCB REQUIREMENTS FOR TEMPORARY WALLS APPLY TO TEMPORARY MECHANICALLY STABILIZED EARTH (MSE) WALLS AND TEMPORARY SOIL NAIL WALLS.

8- SET PCB WITH A MINIMUM HORIZONTAL DISTANCE OF 2 FT BETWEEN THE FRONT FACE OF THE BARRIER AND THE EDGE OF THE NEAREST TRAFFIC LANE AS SHOWN IN FIGURE A UNLESS OTHERWISE SHOWN IN THE PLANS AND OR AS APPROVED BY THE ENGINEER.

9- FOR PCB ABOVE AND BEHIND TEMPORARY WALLS, PROVIDE A MINIMUM DISTANCE OF 3 FT BETWEEN THE EDGE OF PAVEMENT AND THE WALL FACE AS SHOWN IN FIGURE A. IF THESE MINIMUM REQUIRED DISTANCES ARE NOT AVAILABLE, CONTACT THE ENGINEER.

10- TABLE SHOWN IN FIGURE B IS BASED ON NCDOT RESEARCH PROJECT NO. 2005-010 WITH VEHICLE TYPE USED FOR NCHRP 350 CRASH TESTS. BARRIER DEFLECTIONS AND RESULTING MINIMUM REQUIRED CLEAR DISTANCES MIGHT VARY SIGNIFICANTLY FOR LARGER HEAVIER VEHICLES, RUNS OF BARRIER LESS THAN 200 FT IN LENGTH AND WET OR DRY PAVEMENT.

PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-2

MINIMUM REQUIRED CLEAR DISTANCE, inches

Barrier Type	Pavement Type	Offset * ft	Design Speed, mph					
			<30	31-40	41-50	51-60	61-70	71-80
Unanchored PCB	Asphalt	<8	24	26	29	32	36	40
		8-14	26	28	31	35	38	42
		14-20	27	29	34	36	39	43
		20-26	28	31	35	38	40	44
		26-32	29	32	36	39	42	45
		32-38	30	34	38	41	43	46
		38-44	31	34	41	43	45	48
		44-50	31	35	41	43	46	49
		50-56	32	36	42	44	47	50
		>56	32	36	42	45	47	51
	Concrete	<8	17	18	21	22	25	26
		8-14	19	20	23	25	26	29
		14-20	22	22	24	26	28	31
		20-26	23	24	26	27	30	34
		26-32	24	25	27	28	32	35
		32-38	24	26	27	30	33	36
		38-44	25	26	28	30	34	37
		44-50	26	26	28	32	35	37
		50-56	26	26	28	32	35	38
		>56	26	27	29	32	36	38
Anchored PCB	Asphalt	All Offsets	24 for All Design Speeds					
Anchored PCB	Concrete (including bridge approach slabs)	All Offsets	12 for All Design Speeds					

* See Figure Below

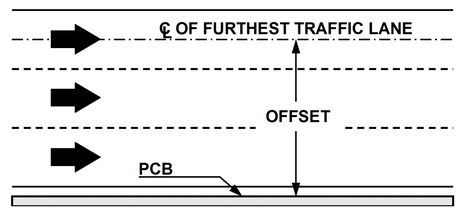

FIGURE B

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DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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

PORTABLE CONCRETE BARRIER AT TEMPORARY SHORING LOCATIONS

PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-2A

SHORING LOCATION NO.	FROM STATION AND OFFSET	TO STATION AND OFFSET	ESTIMATED AVERAGE HEIGHT	ESTIMATED MAXIMUM HEIGHT	SHORING LOCATION TYPE
NO. 1	STA. 12+50.00+/- -L- 6.0 FT. RT.	STA. 13+47.00+/- -L- 19.8 FT. RT.	3.8 FT.	5.5 FT.	ROADWAY
	STA. 13+47.00+/- -L- 19.8 FT. RT.	STA. 13+99.00+/- -L- 26.0 FT. RT.	6.3 FT.	9.0 FT.	ROADWAY
	STA. 13+99.00+/- -L- 26.0 FT. RT.	STA. 14+18.00+/- -L- 26.0 FT. RT.	8.6 FT.	9.0 FT.	ROADWAY
NO. 2	STA. 16+59.00+/- -L- 25.4 FT. RT.	STA. 16+82.00+/- -L- 25.1 FT. RT.	8.8 FT.	9.0 FT.	ROADWAY
	STA. 16+82.00+/- -L- 25.1 FT. RT.	STA. 17+25.00+/- -L- 18.8 FT. RT.	4.8 FT.	9.0 FT.	ROADWAY
	STA. 17+25.00+/- -L- 18.8 FT. RT.	STA. 18+50.00+/- -L- 2.1 FT. LT.	2.6 FT.	3.0 FT.	ROADWAY

TEMPORARY SHORING NOTES

SHORING LOCATION NO. 1

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 12+50.00 +/- -L-, 6.0 FT RT. TO STATION 13+47.00 +/- -L-, 19.8 FT RT, FROM STATION 13+47.00 +/- -L-, 19.8 FT RT. TO STATION 13+99.00 +/- -L-, 26.0 FT RT, AND FROM STATION 13+99.00 +/- -L-, 26.0 FT RT. TO STATION 14+18.00 +/- -L-, 26.0 FT RT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 850 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 12+50.00 +/- -L-, 6.0 FT RT. TO STATION 13+47.00 +/- -L-, 19.8 FT RT, FROM STATION 13+47.00 +/- -L-, 19.8 FT RT. TO STATION 13+99.00 +/- -L-, 26.0 FT RT, AND FROM STATION 13+99.00 +/- -L-, 26.0 FT RT. TO STATION 14+18.00 +/- -L-, 26.0 FT RT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 12+50.00 +/- -L-, 6.0 FT RT. TO STATION 13+47.00 +/- -L-, 19.8 FT RT, FROM STATION 13+47.00 +/- -L-, 19.8 FT RT. TO STATION 13+99.00 +/- -L-, 26.0 FT RT, AND FROM STATION 13+99.00 +/- -L-, 26.0 FT RT. TO STATION 14+18.00 +/- -L-, 26.0 FT RT. MAY NOT PENETRATE BELOW ELEVATION 835 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 12+50.00 +/- -L-, 6.0 FT RT. TO STATION 13+47.00 +/- -L-, 19.8 FT RT, FROM STATION 13+47.00 +/- -L-, 19.8 FT RT. TO STATION 13+99.00 +/- -L-, 26.0 FT RT, AND FROM STATION 13+99.00 +/- -L-, 26.0 FT RT. TO STATION 14+18.00 +/- -L-, 26.0 FT RT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

SHORING LOCATION NO. 2

FOR TEMPORARY SHORING AND POSITIVE PROTECTION FOR TEMPORARY SHORING, SEE PLANS AND TEMPORARY SHORING PROVISION.

BEFORE BEGINNING TEMPORARY SHORING DESIGN OR CONSTRUCTION, SURVEY EXISTING GROUND ELEVATIONS IN THE VICINITY OF SHORING LOCATIONS TO DETERMINE ACTUAL SHORING HEIGHTS.

DESIGN TEMPORARY SHORING FROM STATION 16+59.00 +/- -L-, 25.4 FT RT. TO STATION 16+82.00 +/- -L-, 25.1 FT RT, FROM STATION 16+82.00 +/- -L-, 25.1 FT RT. TO STATION 17+25.00 +/- -L-, 18.8 FT RT, AND FROM STATION 17+25.00 +/- -L-, 18.8 FT RT. TO STATION 18+50.00 +/- -L-, 2.1 FT LT. FOR THE FOLLOWING ASSUMED SOIL PARAMETERS AND GROUNDWATER ELEVATION:

UNIT WEIGHT (γ) = 120 LB/CF
FRICTION ANGLE (ϕ) = 30 DEGREES
COHESION (c) = 0 LB/SF
GROUNDWATER ELEVATION = 855 FT

LIMITED SUBSURFACE INFORMATION IS AVAILABLE IN THE VICINITY OF TEMPORARY SHORING FROM STATION 16+59.00 +/- -L-, 25.4 FT RT. TO STATION 16+82.00 +/- -L-, 25.1 FT RT, FROM STATION 16+82.00 +/- -L-, 25.1 FT RT. TO STATION 17+25.00 +/- -L-, 18.8 FT RT, AND FROM STATION 17+25.00 +/- -L-, 18.8 FT RT. TO STATION 18+50.00 +/- -L-, 2.1 FT LT. THE INFORMATION PROVIDED FOR TEMPORARY SHORING DESIGN WAS ASSUMED AND MAY NOT BE APPLICABLE TO THE ACTUAL SITE CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

DRIVEN PILING FOR TEMPORARY SHORING FROM STATION 16+59.00 +/- -L-, 25.4 FT RT. TO STATION 16+82.00 +/- -L-, 25.1 FT RT, FROM STATION 16+82.00 +/- -L-, 25.1 FT RT. TO STATION 17+25.00 +/- -L-, 18.8 FT RT, AND FROM STATION 17+25.00 +/- -L-, 18.8 FT RT. TO STATION 18+50.00 +/- -L-, 2.1 FT LT. MAY NOT PENETRATE BELOW ELEVATION 844 FT DUE TO OBSTRUCTIONS, VERY DENSE OR HARD SOIL, BOULDERS OR WEATHERED OR HARD ROCK.

AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING FOR TEMPORARY SHORING FROM STATION 16+59.00 +/- -L-, 25.4 FT RT. TO STATION 16+82.00 +/- -L-, 25.1 FT RT, FROM STATION 16+82.00 +/- -L-, 25.1 FT RT. TO STATION 17+25.00 +/- -L-, 18.8 FT RT, AND FROM STATION 17+25.00 +/- -L-, 18.8 FT RT. TO STATION 18+50.00 +/- -L-, 2.1 FT LT. SEE STANDARD DETAIL NO. 1801.01 FOR STANDARD TEMPORARY SHORING.

APPROVED: Digitally signed by Shiping Yang DDDCBEE5EA8E4D4...
DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 031361 ENGINEER SHIPING YANG

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

TEMPORARY SHORING NOTES

12/15/2015
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Userscoots

PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-3

TEMPORARY TRAFFIC CONTROL PHASING

NOTE: BEFORE BEGINNING CONSTRUCTION THE CONTRACTOR SHALL PLACE ADVANCE WORK ZONE WARNING SIGNS ALONG -L- LINE (US 64/74 ALT), BILLS CREEK RD. (SR 1008), PHEASANT ST., AND RAINBOW CIR. (SEE RSD 1101.01, SHEET 3 OF 3)

PHASE I

STEP 1. USING RSD 1101.02 (SHEET 1 OF 15), CONSTRUCT TEMPORARY PAVEMENT UP TO EXISTING EDGE OF PAVEMENT ELEVATIONS AS FOLLOWS (SEE TMP-3 AND TMP-4):

- STA. 12+25+/- -L- TO STA. 14+20+/- -L-
- STA. 16+60+/- -L- TO STA. 18+75+/- -L-

- USING RSD 1101.02 (SHEET 1 OF 15), WIDEN -L- LINE UP TO EXISTING EDGE OF PAVEMENT ELEVATIONS AS FOLLOWS (SEE CONSTRUCTION PLANS, TMP-3, AND TMP-4):
  - STA. 18+75+/- -L- TO STA. 22+00+/- -L-
- USING RSD 1101.02 (SHEET 1 OF 15), PLACE PORTABLE CONCRETE BARRIER (ANCHORED AND UNANCHORED) AS SHOWN ON TMP-5 AND TMP-6.

STEP 2. AWAY FROM TRAFFIC, CONSTRUCT -L- LINE, INCLUDING NEW BRIDGE AND ROADWAY APPROACHES, SHORING, AND DRAINAGE, UP TO BASE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS, TMP-5, AND TMP-6):

- STA. 12+50+/- -L- TO STA. 18+75+/- -L-
- USING RSD 1101.02 (SHEET 1 OF 15), WIDEN -L- LINE UP TO EXISTING EDGE OF PAVEMENT ELEVATIONS AS FOLLOWS (SEE CONSTRUCTION PLANS, TMP-5, AND TMP-6):
  - STA. 10+45+/- -L- TO STA. 12+50+/- -L-
- USING RSD 1101.02 (SHEET 1 OF 15), INSTALL TEMPORARY SIGNALS, BUT DO NOT ACTIVATE (SEE SIGNAL PLANS AND TMP-7).

PHASE II

STEP 1. USING RSD 1101.02 (SHEET 1 OF 15), RESET AND PLACE UNANCHORED PORTABLE CONCRETE BARRIER AS FOLLOWS (SEE TMP-7):

- STA. 12+20+/- -L- TO STA. 19+05+/- -L-
- USING RSD 1101.02 (SHEET 1 OF 15), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AS SHOWN ON TMP-7.
- USING RSD 1101.02 (SHEET 1 OF 15), INSTALL TEMPORARY WARNING SIGNS FOR TEMPORARY SIGNALS AS SHOWN ON TMP-7.
- ACTIVATE TEMPORARY SIGNALS, SEE SIGNAL PLANS.
- SHIFT TRAFFIC FROM A TWO-LANE, TWO WAY PATTERN TO A ONE-LANE, TWO WAY TRAFFIC PATTERN.

ICT - 21 DAYS

CONTRACTOR SHALL WORK IN A CONTINUOUS MANNER TO COMPLETE THE FOLLOWING IN PHASE II, STEPS 2 THRU 3 IN 21 CALENDAR DAYS. (SEE INTERMEDIATE CONTRACT TIME AND SPECIAL PROVISIONS).

NOTE: GENERAL NOTE "A" IS NOT APPLICABLE DURING STEPS 2 AND 3.

STEP 2. AWAY FROM TRAFFIC, CONSTRUCT -L- LINE UP TO BASE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS, TMP-7, AND TMP-8):

- STA. 12+10+/- -L- TO STA. 14+15+/- -L-
- STA. 16+70+/- -L- TO STA. 18+75+/- -L-
- COMPLETE DRAINAGE AS SHOWN ON TMP-7.
- INSTALL PROPOSED GUARDRAIL AS SHOWN ON TMP-7.

STEP 3. USING RSD 1101.02 (SHEET 1 OF 15), REMOVE UNANCHORED PORTABLE CONCRETE BARRIER.

- USING RSD 1101.02 (SHEET 1 OF 15), PAVE UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:
- STA. 10+00+/- -L- TO STA. 22+00+/- -L-
- USING RSD 1101.02 (SHEET 1 OF 15), PLACE TEMPORARY PAVEMENT MARKINGS AND MARKERS AS FOLLOWS (SEE TMP-9):
- STA. 10+00+/- -L- TO STA. 22+00+/- -L-
- USING RSD 1101.02 (SHEET 1 OF 15), RESET UNANCHORED PORTABLE AS FOLLOWS (SEE TMP-9):
- STA. 13+15+/- -L- TO STA. 17+85+/- -L-
- DEACTIVATE TEMPORARY SIGNALS, SEE SIGNAL PLANS.
- SHIFT TRAFFIC FROM A ONE-LANE, TWO WAY PATTERN TO A TWO-LANE, TWO WAY TRAFFIC PATTERN.

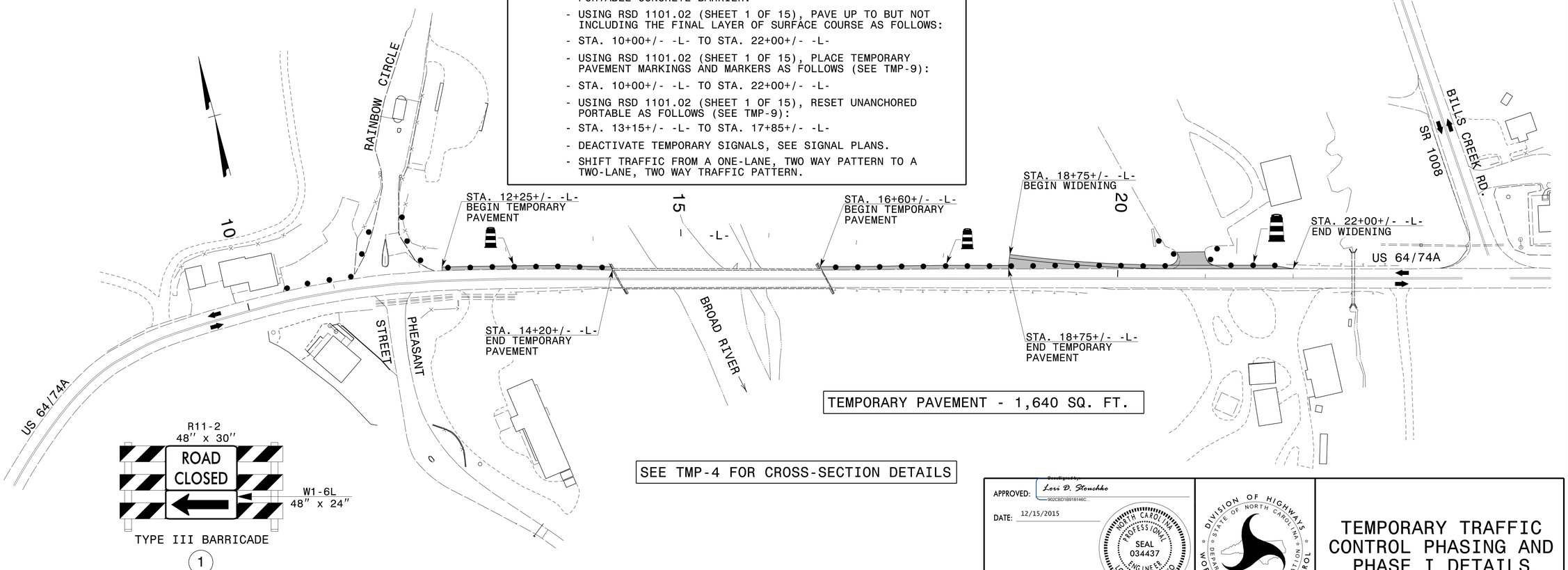
PHASE III

STEP 1. USING RSD 1101.02 (SHEET 1 OF 15), CONSTRUCT -L- LINE, INCLUDING DRAINAGE, PROPOSED GUARDRAIL, AND DRIVEWAYS, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS (SEE CONSTRUCTION PLANS, AND TMP-9):

- STA. 10+50+/- -L- TO STA. 13+00+/- -L-
- STA. 18+00+/- -L- TO STA. 21+64+/- -L-
- USING FLAGGERS, OBLITERATE EXISTING BRIDGE AS SHOWN ON TMP-9.

STEP 2. USING RSD 1101.02 (SHEET 1 OF 15), REMOVE UNANCHORED PORTABLE CONCRETE BARRIER.

- USING RSD 1101.02 (SHEET 1 OF 15), PAVE THE FINAL LAYER OF SURFACE COURSE AS FOLLOWS:
- STA. 10+00+/- -L- TO STA. 22+00+/- -L-
- USING RSD 1101.02 (SHEET 1 OF 15), PLACE FINAL PAVEMENT MARKINGS AND MARKERS (SEE FINAL PAVEMENT MARKING PLAN).



TEMPORARY PAVEMENT - 1,640 SQ. FT.

SEE TMP-4 FOR CROSS-SECTION DETAILS

TYPE III BARRICADE

(1)

APPROVED: Lori D. Stouchko
902CBD1B9181446C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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

TEMPORARY TRAFFIC CONTROL PHASING AND PHASE I DETAILS

12/15/2015
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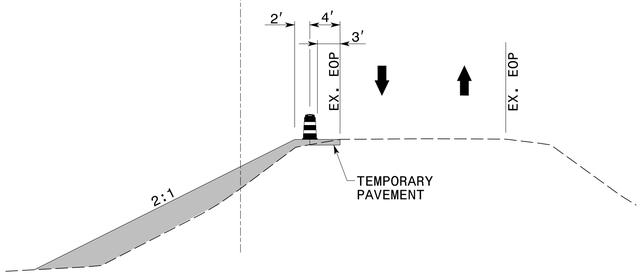
Userscoots

PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-4

℄
STA. 18+00 -L-



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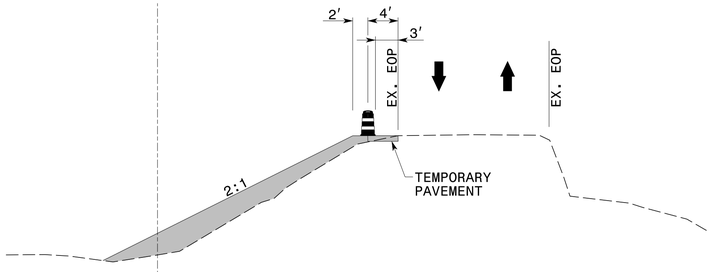
STA. 16+75 -L-



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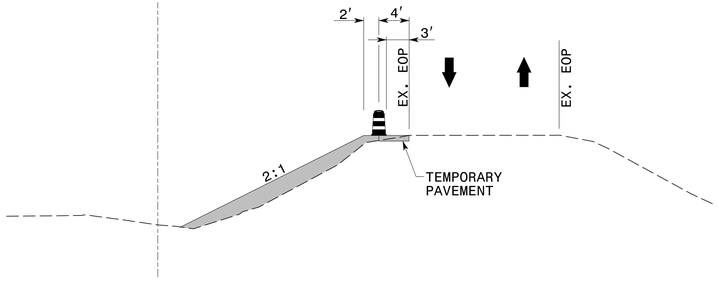
STA. 14+00 -L-



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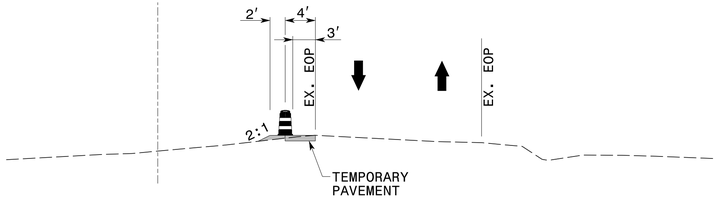
STA. 13+00 -L-



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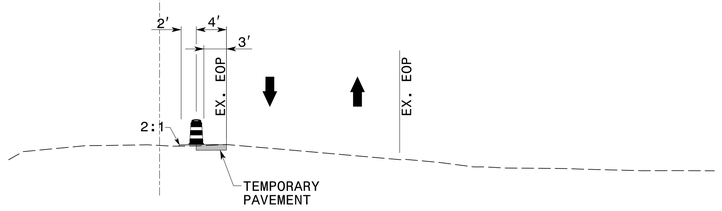
STA. 12+25 -L-



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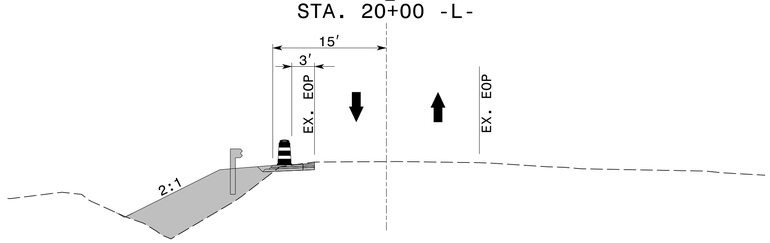
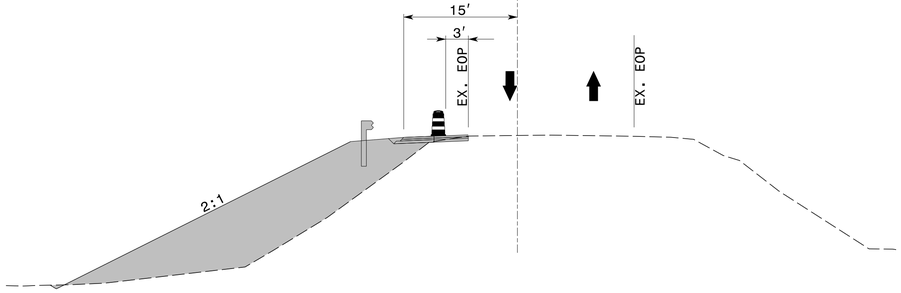
STA. 20+00 -L-



℄
STA. 19+50 -L-



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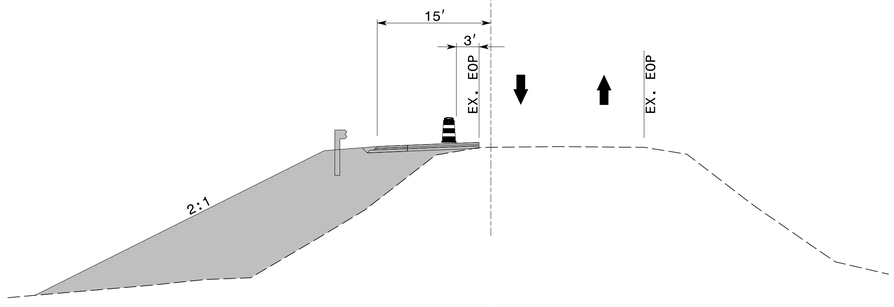
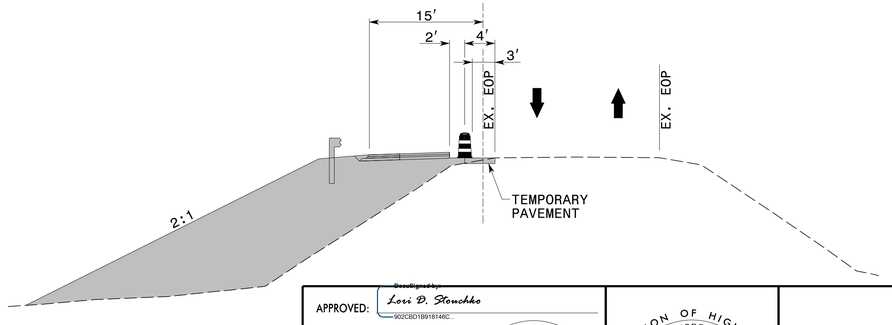
STA. 19+00 -L-



℄
STA. 18+75 -L-



APPROVED: DocuSigned by: Lori D. Stouchko 902CBD1B9181446C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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

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PHASE I CROSS-SECTIONS

12/15/2015
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PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-5

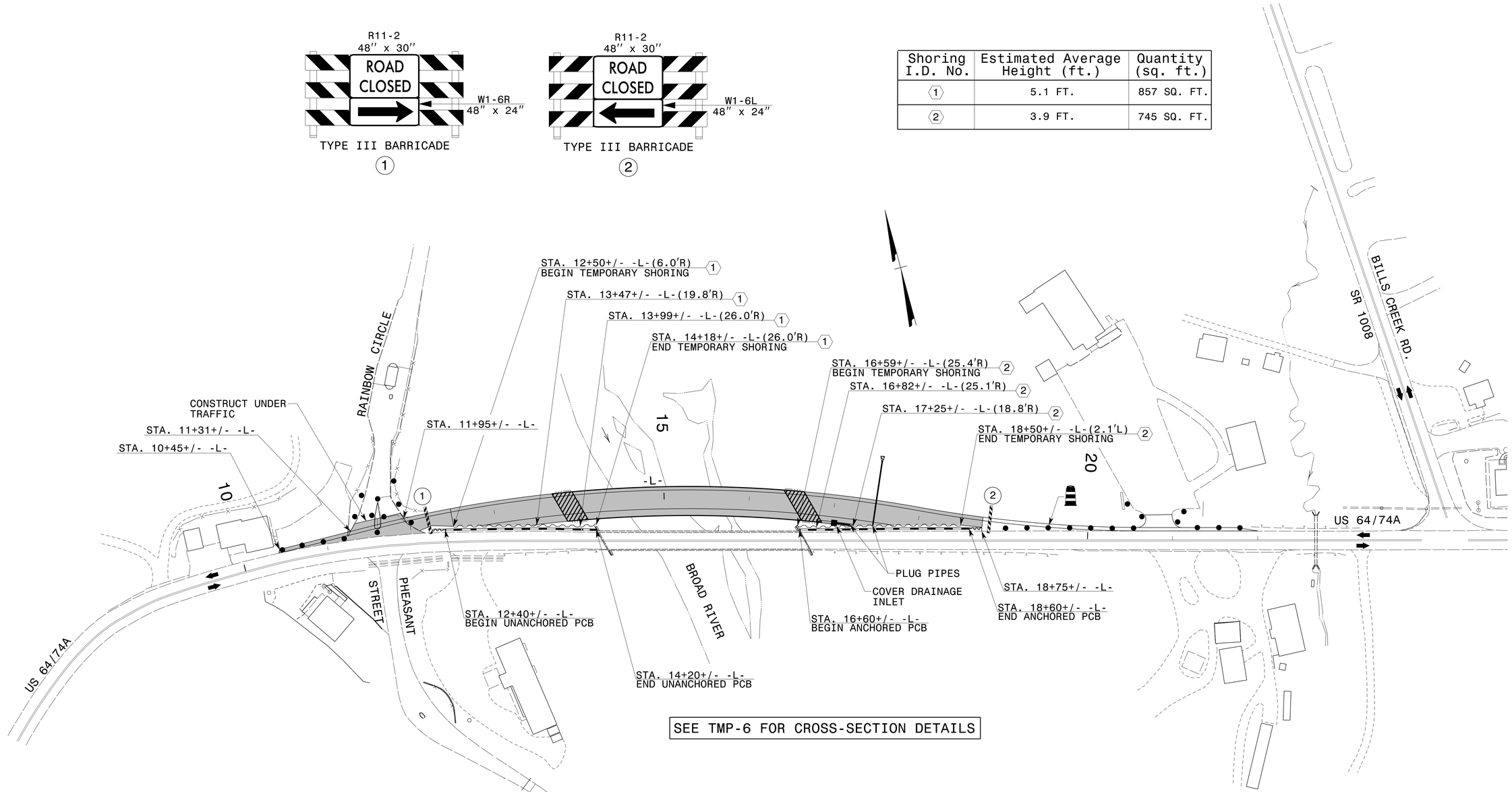
TYPE III BARRICADE

(1)

TYPE III BARRICADE

(2)

Shoring I.D. No.	Estimated Average Height (ft.)	Quantity (sq. ft.)
(1)	5.1 FT.	857 SQ. FT.
(2)	3.9 FT.	745 SQ. FT.



SEE TMP-6 FOR CROSS-SECTION DETAILS

APPROVED: Lori D. Stouchko
902CBD1B9181446C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE I DETAILS

12/15/2015
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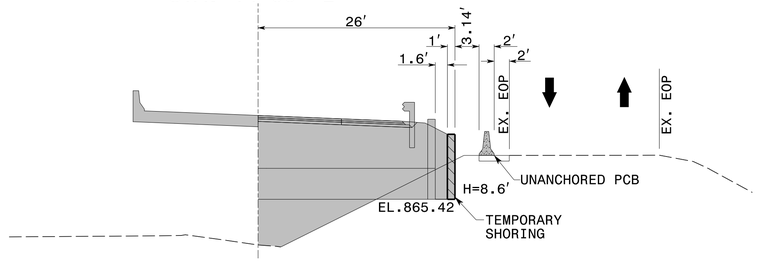
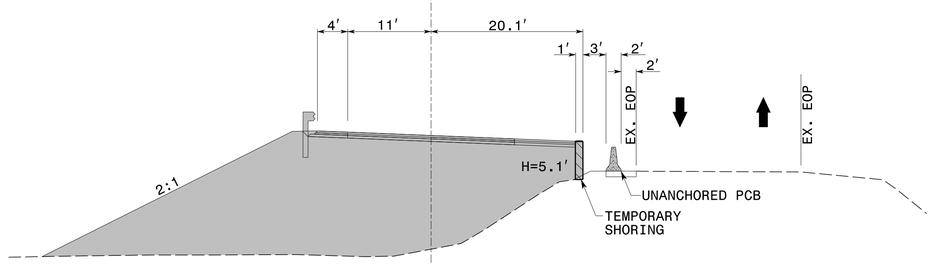
PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-6

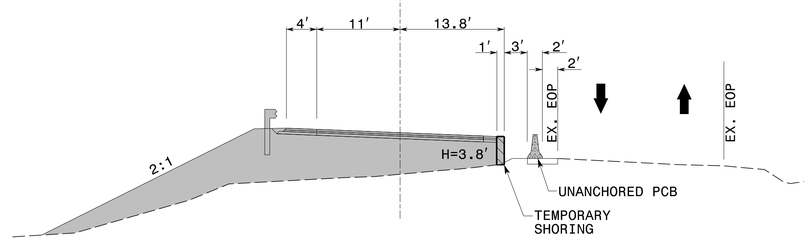
STA. 14+00 -L-



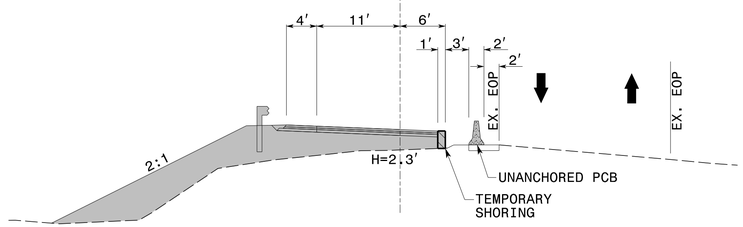
STA. 13+50 -L-



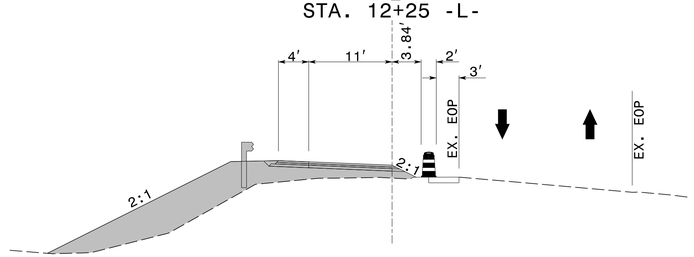
STA. 13+00 -L-



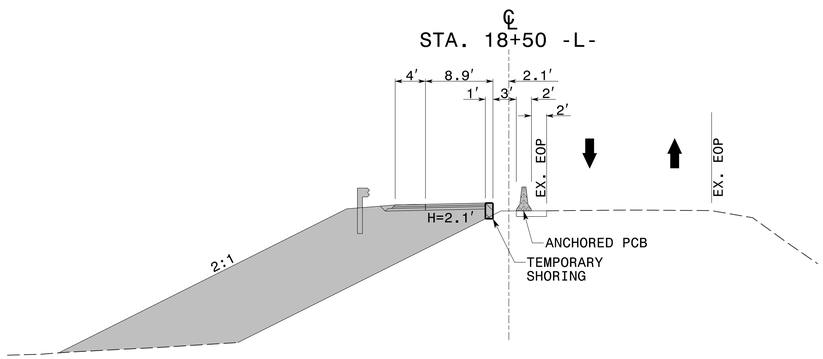
STA. 12+50 -L-



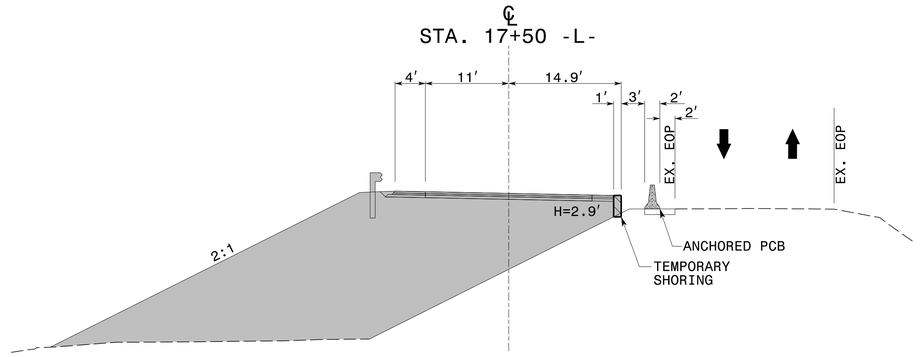
STA. 12+25 -L-



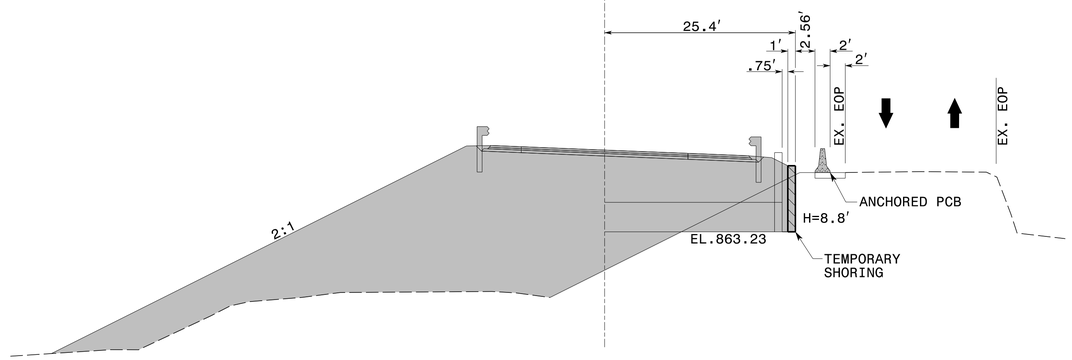
STA. 18+50 -L-



STA. 17+50 -L-



STA. 16+75 -L-



APPROVED: Lori D. Stouchko
DocuSigned by:
902CBD1B9181146C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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PHASE I CROSS-SECTIONS

12/15/2015
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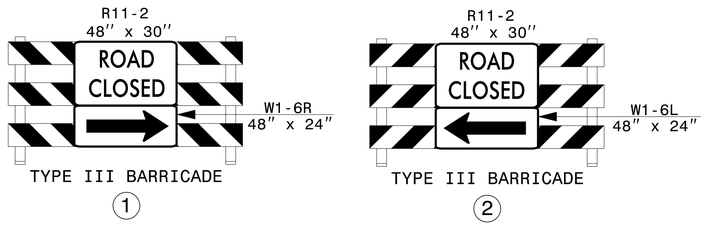
User:tscoats

PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-7



TYPE III BARRICADE

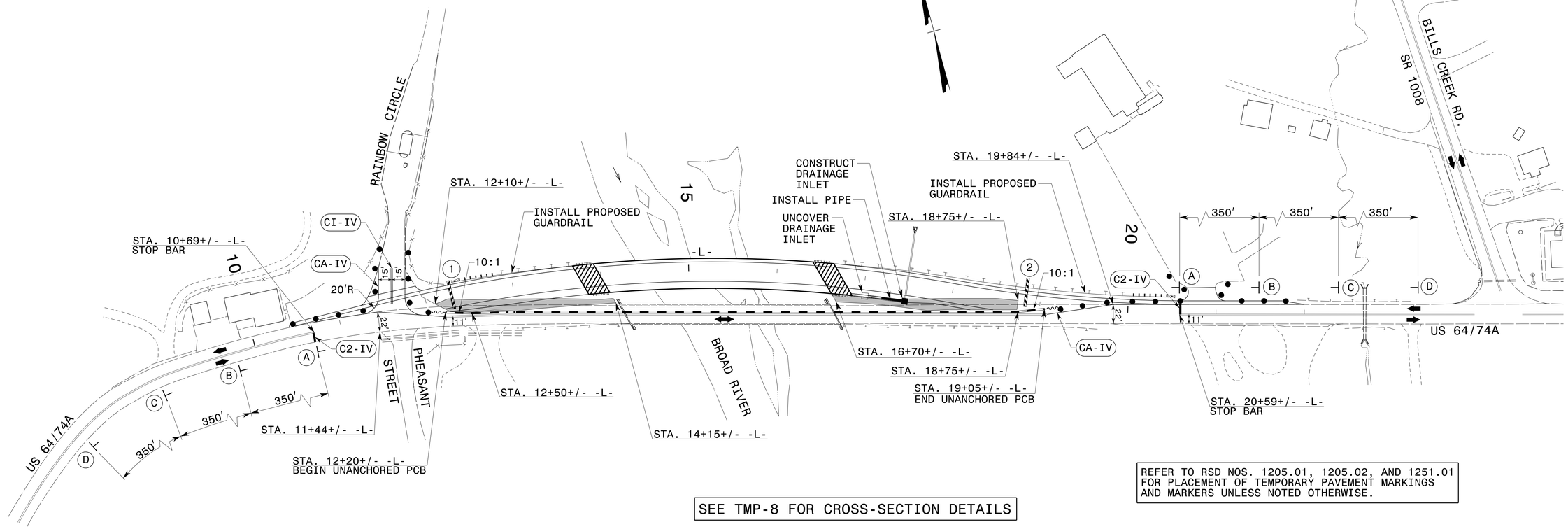
(1)

TYPE III BARRICADE

(2)

TEMPORARY PAVEMENT MARKING LEGEND

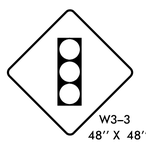
CA-IV	COLD APPLIED PLASTIC (TYPE 4) - WHITE EDGELINE - (4")
CI-IV	COLD APPLIED PLASTIC (TYPE 4) - YELLOW DOUBLE CENTER - (4")
C2-IV	COLD APPLIED PLASTIC (TYPE 4) - WHITE STOP BAR - (24")



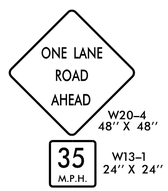
REFER TO RSD NOS. 1205.01, 1205.02, AND 1251.01 FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS AND MARKERS UNLESS NOTED OTHERWISE.

SEE TMP-8 FOR CROSS-SECTION DETAILS

(A)

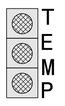


(B)



(C)

(D)



STA. 11+44+/- -L-
STA. 19+84+/- -L-

APPROVED: Lori D. Stouchko
DocuSigned by:
902CBD1B9181146C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D. STOUCHKO

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PHASE II DETAILS

12/15/2015
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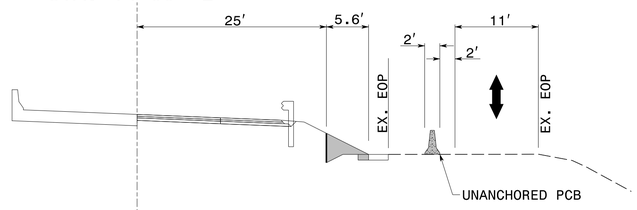
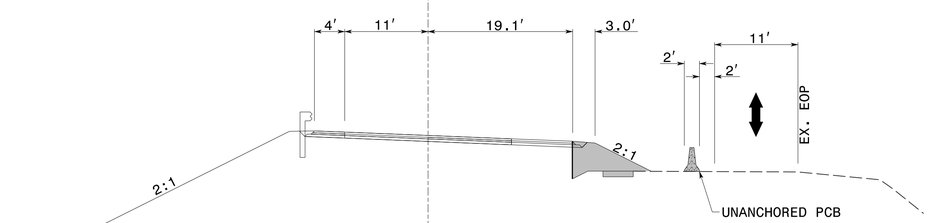
User:scoats

PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-8

STA. 14+00 -L-

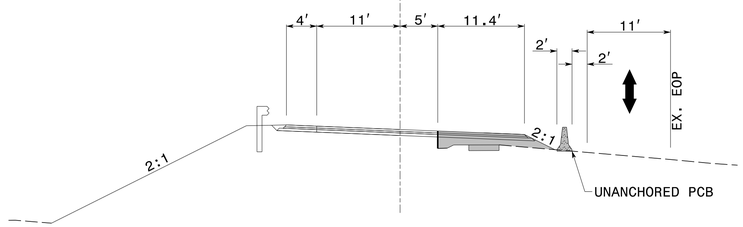


STA. 13+50 -L-

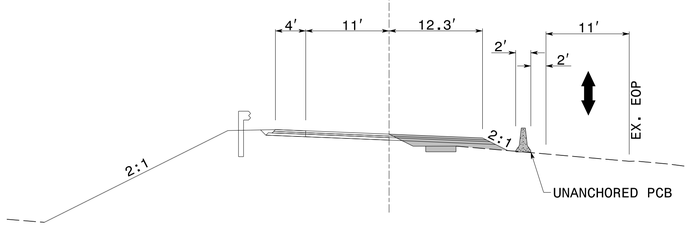


STA. 13+00 -L-

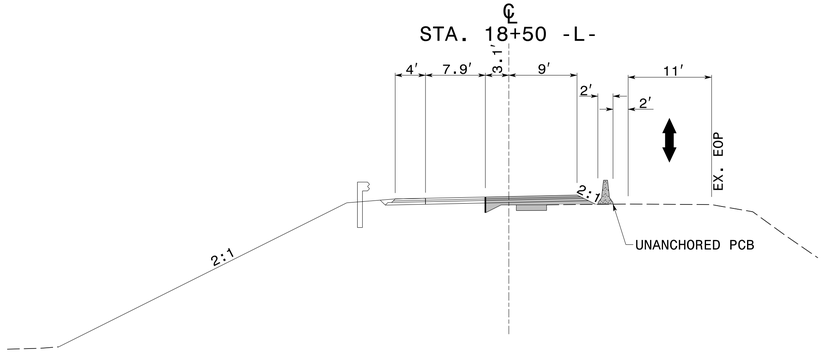
STA. 12+50 -L-



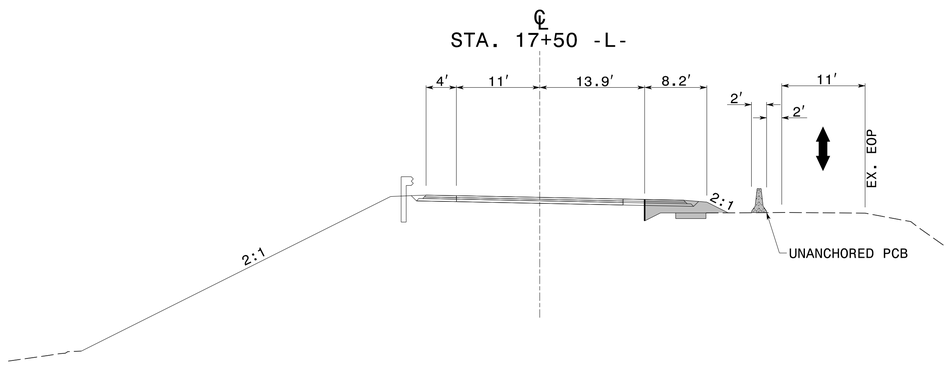
STA. 12+25 -L-



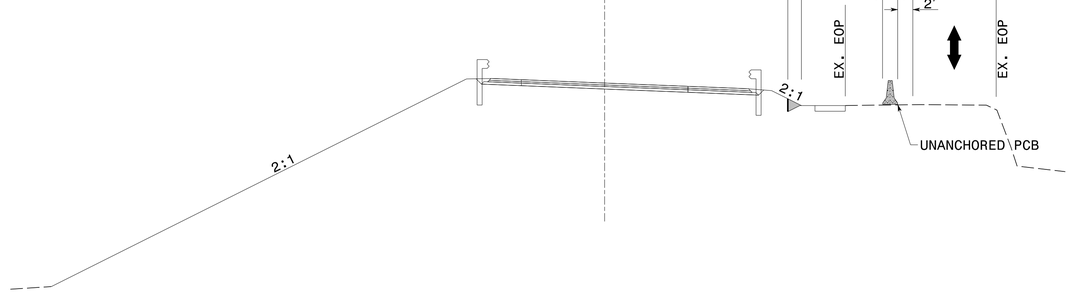
STA. 18+50 -L-



STA. 17+50 -L-



STA. 16+75 -L-



APPROVED: Docu Signed by: Lori D. Stouchko 902CBD1B9181446C...

DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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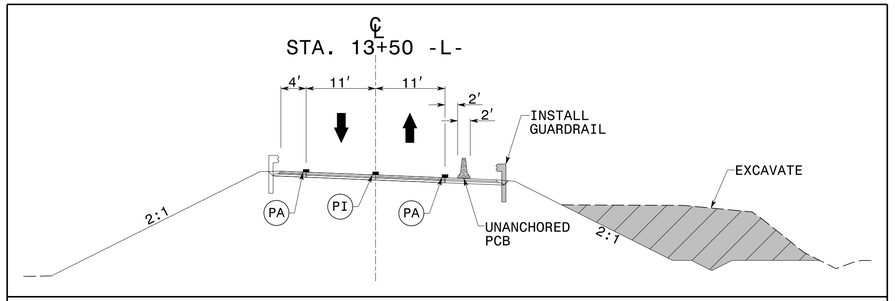
DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

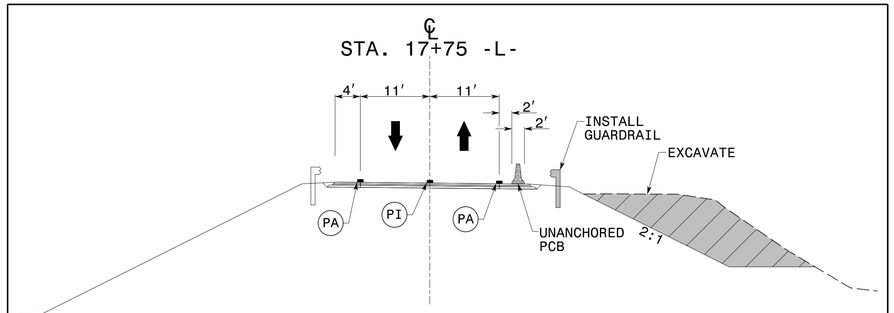
PHASE II CROSS-SECTIONS

12/15/2015
P:\tipprojects-b\b4811\traffic\trafficcontrol\tcp\B4811_TC_PH2_TMP08.dgn
User:scodts

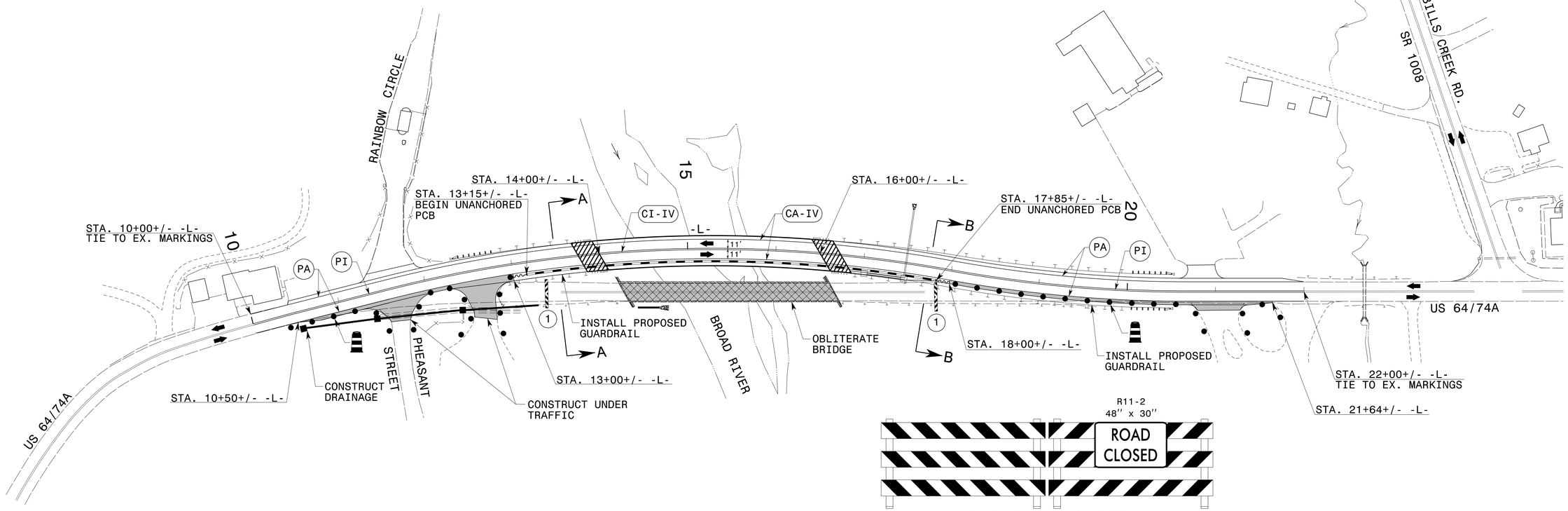
PROJ. REFERENCE NO.	SHEET NO.
B-4811	TMP-9



SECTION A-A



SECTION B-B



R11-2
48" x 30"

TYPE III BARRICADE(S)

1

REFER TO RSD NOS. 1205.01, 1205.02, 1205.12, 1251.01, AND 1251.02 FOR PLACEMENT OF TEMPORARY PAVEMENT MARKINGS AND MARKERS UNLESS NOTED OTHERWISE.

TEMPORARY PAVEMENT MARKING LEGEND

PA	PAINT - WHITE EDGELINE - (4")
PI	PAINT - YELLOW DOUBLE CENTER - (4")
CA-IV	COLD APPLIED PLASTIC (TYPE 4) - WHITE EDGELINE - (4")
CI-IV	COLD APPLIED PLASTIC (TYPE 4) - YELLOW DOUBLE CENTER - (4")

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DATE: 12/15/2015

NORTH CAROLINA PROFESSIONAL SEAL 034437 ENGINEER LORI D STOUCHKO

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PHASE III DETAILS

12/15/2015
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