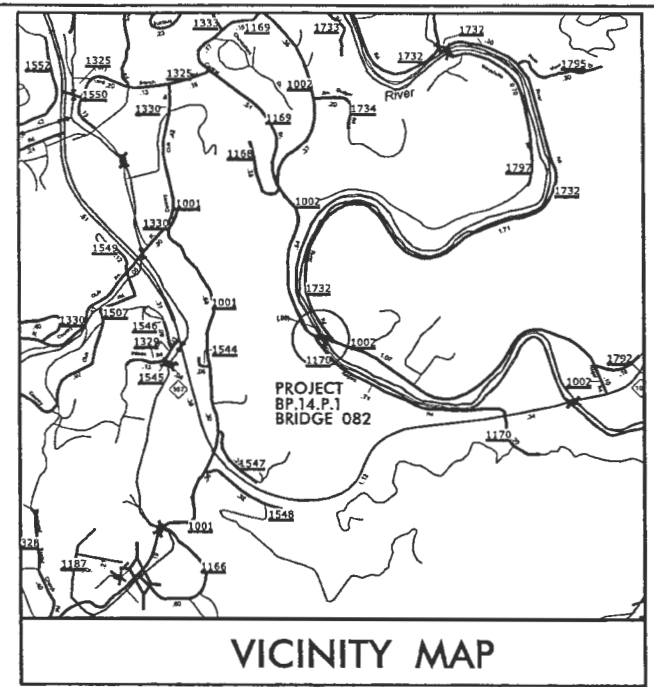


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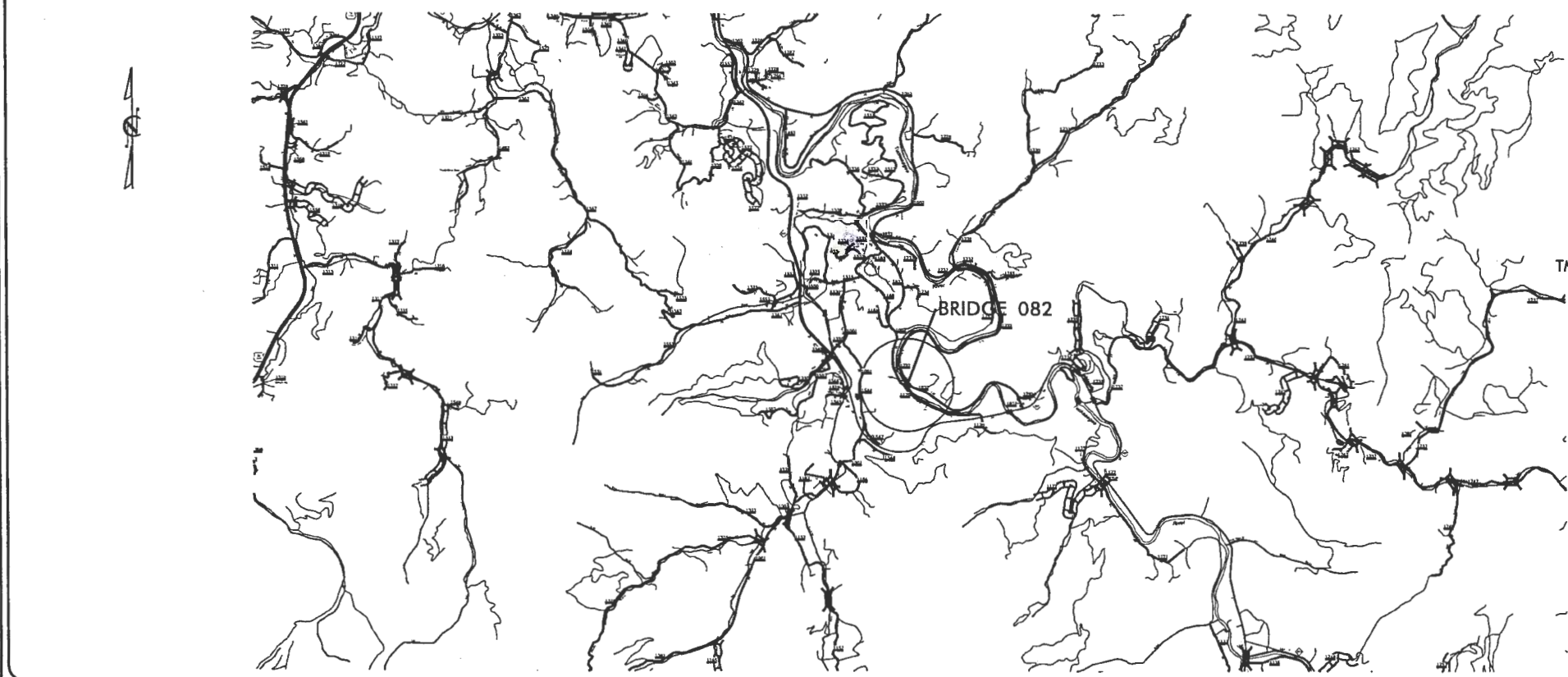


VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
JACKSON COUNTY

LOCATION: BRIDGE 082 ON S.R.1002 OVER TUCKASEGEE RIVER
50 FT. NORTH OF JUNCTION OF SR 1002 AND SR 1732

TYPE OF WORK: BRIDGE DECK REPLACEMENT AND
ROADWAY APPROACHES, INCLUDING GUARDRAIL




STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.		1	
WBS NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.14.P.1		PE	
17BP.14.P.1		CONST.	

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1	TITLE SHEET
R-1	ROADWAY PLAN & PROFILE
S-2	BRIDGE LOCATION SKETCH
S-3	EXIST. BRIDGE DEMO. PLANS & DETAILS (1 OF 2)
S-4	EXIST. BRIDGE DEMO. PLANS & DETAILS (2 OF 2)
S-5	BRIDGE GENERAL DRAWING
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S-8	PLAN OF SPANS
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S-10	VERTICAL CONCRETE BARRIER RAIL
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S-12	BEARING REPLACEMENT
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S-14	BRIDGE RATING SCHEDULE
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S-16	BRIDGE APPROACH SLAB PLAN
S-17	BRIDGE APPROACH SLAB DETAILS
TMP-1 THRU SN	TRAFFIC CONTROL PLANS STANDARD NOTES

PROJECT LENGTH



PREPARED IN THE OFFICE OF:
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FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N.A.

LETTING DATE: OCTOBER 27, 2011

NCDOT CONTACT: MIKE SUMMERS
BRIDGE MANAGEMENT PROJECT MANAGER

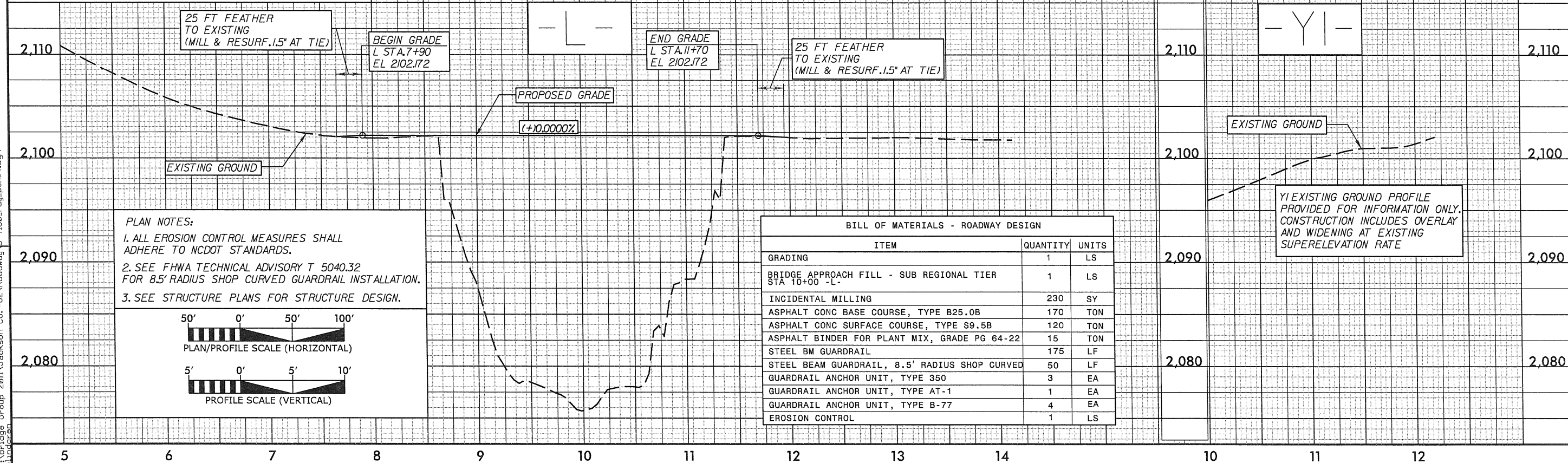
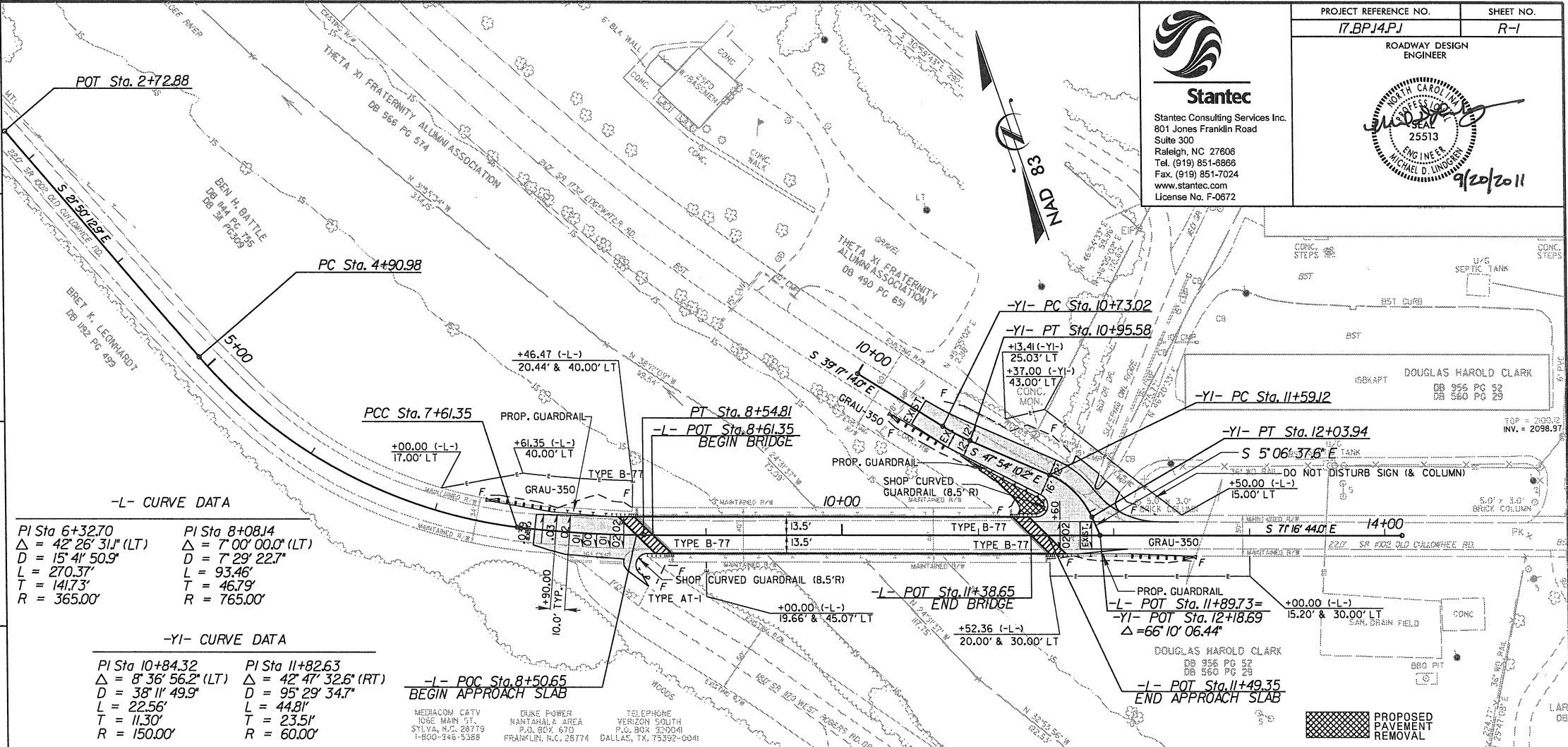
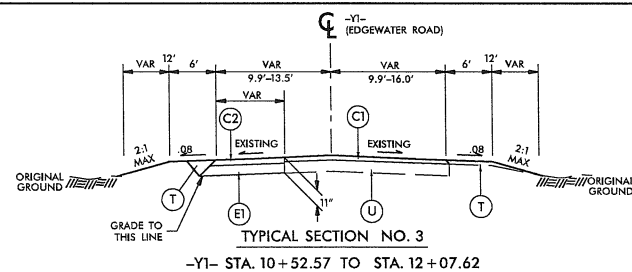


SEAL
20208
10/18/11
ERIC B. NELSON, JR.
ENGINEER
RICK NELSON, PE
DESIGN ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

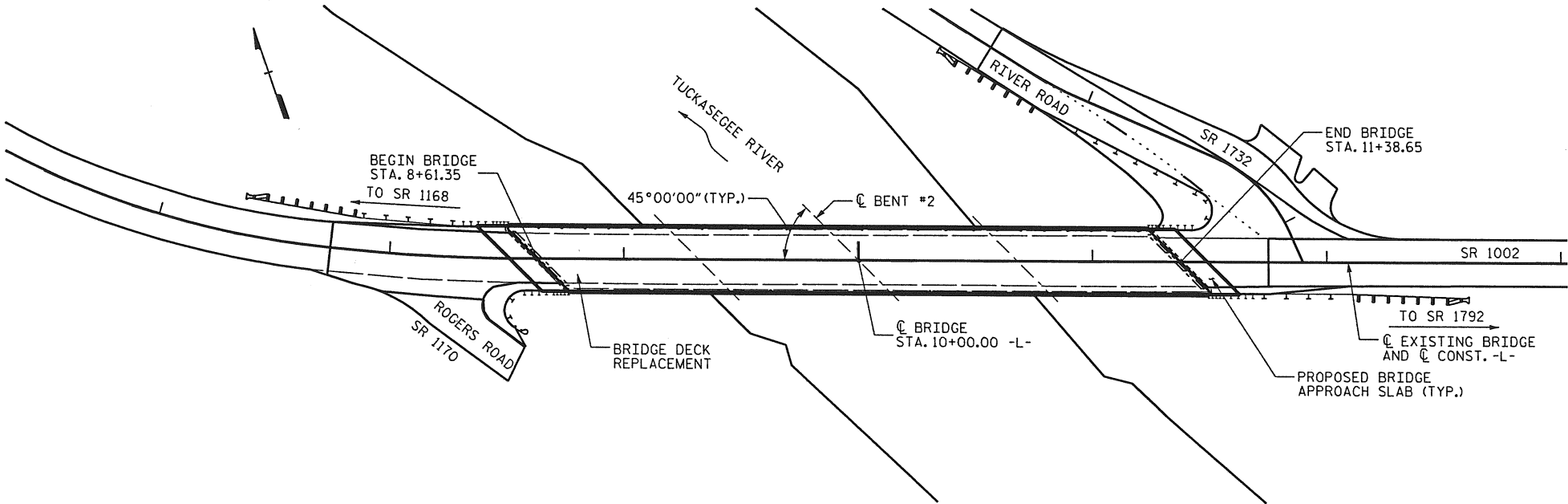


NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



BILL OF MATERIALS - ROADWAY DESIGN		
ITEM	QUANTITY	UNITS
GRADING	1	LS
BRIDGE APPROACH FILL - SUB REGIONAL TIER STA 10+00 -L-	1	LS
INCIDENTAL MILLING	230	SY
ASPHALT CONC BASE COURSE, TYPE B25.0B	170	TON
ASPHALT CONC SURFACE COURSE, TYPE S9.5B	120	TON
ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	15	TON
STEEL BM GUARDRAIL	175	LF
STEEL BEAM GUARDRAIL, 8.5' RADIUS SHOP CURVED	50	LF
GUARDRAIL ANCHOR UNIT, TYPE 350	3	EA
GUARDRAIL ANCHOR UNIT, TYPE AT-1	1	EA
GUARDRAIL ANCHOR UNIT, TYPE B-77	4	EA
EROSION CONTROL	1	LS

BENCH MARK: PROJECT DATUM - TOP OF EXISTING END BENT CAP @ END BENT 2 ELEVATION 2099.667



BRIDGE 490082 ON SR 1002

LOCATION: BRIDGE 490082, SR 1002 OVER TUCKASEGEE RIVER 50 FEET NORTH OF JUNCTION SR 1732

NOTES:

ASSUMED LIVE LOAD = HL 93 OR ALTERNATE LOADING (DECK SLAB ONLY).

DIMENSIONS SHOWN IN THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE AND ARE APPROXIMATE. DIMENSIONS ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND MUST BE FIELD VERIFIED. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE DATA SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS FOUND AT THE PROJECT SITE.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

THIS BRIDGE DECK SLAB REPLACEMENT HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

EXISTING STRUCTURAL STEEL IS ASSUMED TO CONFORM TO ASTM A7 WITH A MINIMUM YIELD STRENGTH OF 33,000 PSI.

FOR PAINTING EXISTING STRUCTURES, SEE SPECIAL PROVISIONS.

REMOVABLE FORMS MAY BE USED IN LIEU OF METAL STAY-IN-PLACE FORMS IN ACCORDANCE WITH ARTICLE 420-3 OF THE STANDARD SPECIFICATIONS.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

ALL METALLIZED SURFACES SHALL RECEIVE A SEAL COATING AS SPECIFIED IN THE SPECIAL PROVISION FOR THERMAL SPRAYED COATINGS (METALLIZATION).

ALL FALSEWORK AND FORMS FOR THE CAST-IN-PLACE DECK SLAB CONTINUOUS UNIT SHALL REMAIN IN PLACE UNTIL THE ENTIRE UNIT IS CAST AND CURED.

FOR POLLUTION CONTROL, SEE SPECIAL PROVISIONS FOR PAINTING EXISTING STRUCTURES.

FOR PLACING LOAD ON STRUCTURE MEMBERS, SEE SPECIAL PROVISIONS.

FOR FORMS FOR CONCRETE BRIDGE DECKS, SEE SPECIAL PROVISIONS.

FOR CURING CONCRETE, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR VERTICAL CONCRETE BARRIER RAIL, SEE SPECIAL PROVISIONS.

NO KNOWN UTILITY CONFLICTS.

NEEDLE BEAMS WILL NOT BE ALLOWED UNLESS OTHERWISE CALLED FOR ON THE PLANS OR APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

	REMOVAL OF EXISTING STRUCTURE AT STA. 10+00.00	REINFORCED CONCRETE DECK SLAB (SAND LIGHTWEIGHT CONC.)	GROOVING BRIDGE FLOORS	CLASS AA CONCRETE (BRIDGE)	CLASS A CONCRETE (BRIDGE)	BRIDGE APPROACH SLABS STA. 10+00.00	REINFORCING STEEL (BRIDGE)	VERTICAL CONCRETE BARRIER RAIL	ELASTOMERIC BEARINGS	EVAZOTE JOINT SEALS	CLEANING AND PAINTING BRIDGE #82	POLLUTION CONTROL	SPAN JACKING BRIDGE #82
	LUMP SUM	SQ. FT.	SQ. FT.	CU. YDS.	CU. YDS.	LUMP SUM	LBS	LIN. FT.	EACH	LUMP SUM	LUMP SUM	LUMP SUM	EACH
SUPERSTRUCTURE		8,028	6,579	2.5		LUMP SUM		546.8	8	LUMP SUM	LUMP SUM	LUMP SUM	2
END BENT NO. 1					2.2		378						
END BENT NO. 2					2.2		378						
TOTAL	LUMP SUM	8,028	6,579	2.5	4.4	LUMP SUM	756	546.8	8	LUMP SUM	LUMP SUM	LUMP SUM	2

PROJECT NO. WBS 17BP.14.P.1

JACKSON COUNTY

STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
BRIDGE INDEX SHEET,
LOCATION SKETCH
AND TOTAL
BILL OF MATERIAL
DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
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2			4			TOTAL SHEETS 17

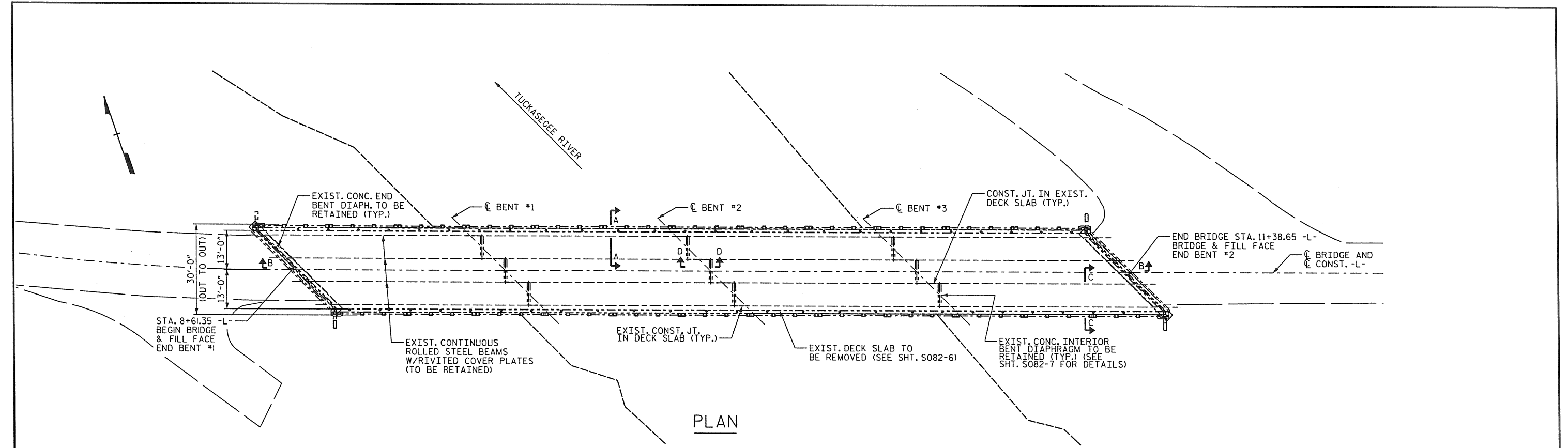


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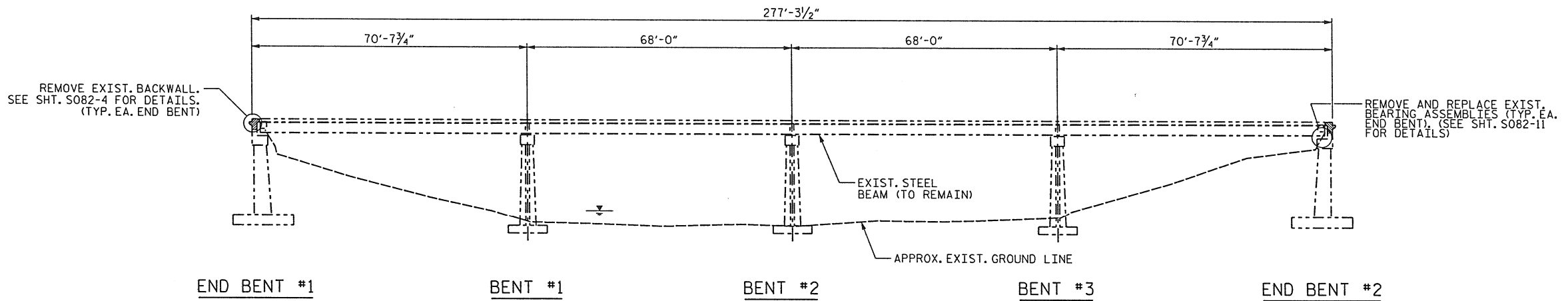
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CHECKED BY : J. T. KELVINGTON DATE : 8-26-11

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PLAN



SECTION B-B

ELEVATION

SECTION ALONG C BRIDGE

NOTES:

DIMENSIONS SHOWN IN THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE AND ARE APPROXIMATE.

REMOVE EXISTING STRUCTURES IN ACCORDANCE WITH SECTION 402 OF THE STANDARD SPECIFICATIONS EXCEPT AS NOTED HEREIN.

THE CONTRACTOR SHALL EXERCISE CARE TO ENSURE THAT EXISTING STRUCTURAL ELEMENTS THAT ARE TO REMAIN IN PLACE ARE UNDAMAGED BY DEMOLITION ACTIVITIES. ALL DAMAGE TO EXISTING STRUCTURAL ELEMENTS THAT ARE TO REMAIN SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO COST TO THE DEPARTMENT.

EXISTING CONCRETE DIAPHRAGMS AT INTERIOR BENTS AND END BENTS SHALL BE LEFT INTACT UNLESS IT IS DETERMINED DURING BRIDGE DEMOLITION THAT EXISTING CONCRETE IN THESE STRUCTURES IS UNSOUND. REMOVE ALL UNSOUND CONCRETE AT THE ENGINEER'S DIRECTION TO COMPETENT MATERIAL. NO SEPARATE PAYMENT FOR THIS WORK SHALL BE MADE. ALL COSTS FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS AA CONCRETE.

ALL EXISTING CONCRETE REMOVED FROM INTERIOR AND END BENT DIAPHRAGMS SHALL BE REPLACED WITH CLASS AA CONCRETE.

VOLUME OF CLASS AA CONCRETE SHALL BE THE AMOUNT NECESSARY TO RECONSTRUCT EXISTING BENT DIAPHRAGMS FROM THE TOP OF RETAINED DIAPHRAGM SURFACES TO THE BOTTOM OF THE DECK SLAB.

RETAIN AND CLEAN BY SAND BLASTING ALL EXISTING REINFORCING STEEL THAT PROJECTS FROM DIAPHRAGMS INTO THE DECK SLAB.

BEND EXISTING DIAPHRAGM REINFORCEMENT AS NECESSARY TO FIT INTO THE PROPOSED DECK.

ALL REINFORCING STEEL EXPOSED IN ABUTMENT BACKWALLS AND WING WALLS SHALL BE CUT FLUSH AT THE SAW CUT LINE AND DISCARDED.

SAW CUTS ON EXISTING BACKWALLS AND WINGS SHALL BE AT LEAST 1" IN DEPTH.

THE CONTRACTOR AT HIS OPTION MAY SAW COMPLETELY THROUGH EXISTING BACKWALLS AND WINGS WHEN MAKING SAW CUTS.

FOR HALF SECTIONS A-A & C-C THROUGH THE EXISTING SUPERSTRUCTURE, SEE SHT. S082-6.

FOR SECTION D-D, SEE SHT. S082-7.

PROJECT NO. WBS 17BP.14.P.1

JACKSON COUNTY

STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

EXISTING BRIDGE
DEMOLITION PLANS
AND DETAILS
(SHEET 1 OF 2)

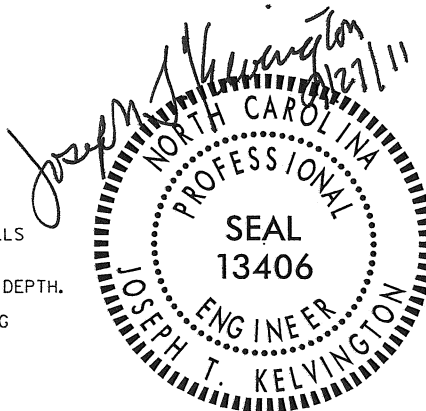
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BRIDGE NO. 490082

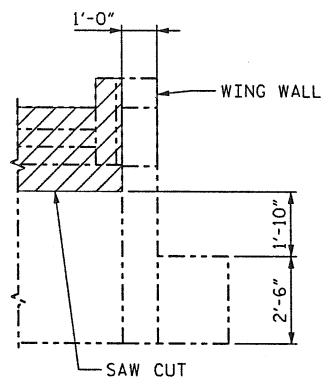
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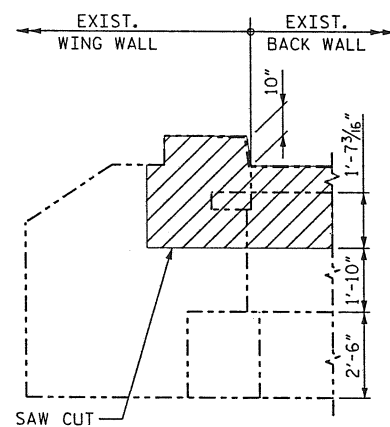
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CHECKED BY : J. T. KELVINGTON DATE : 8-26-11

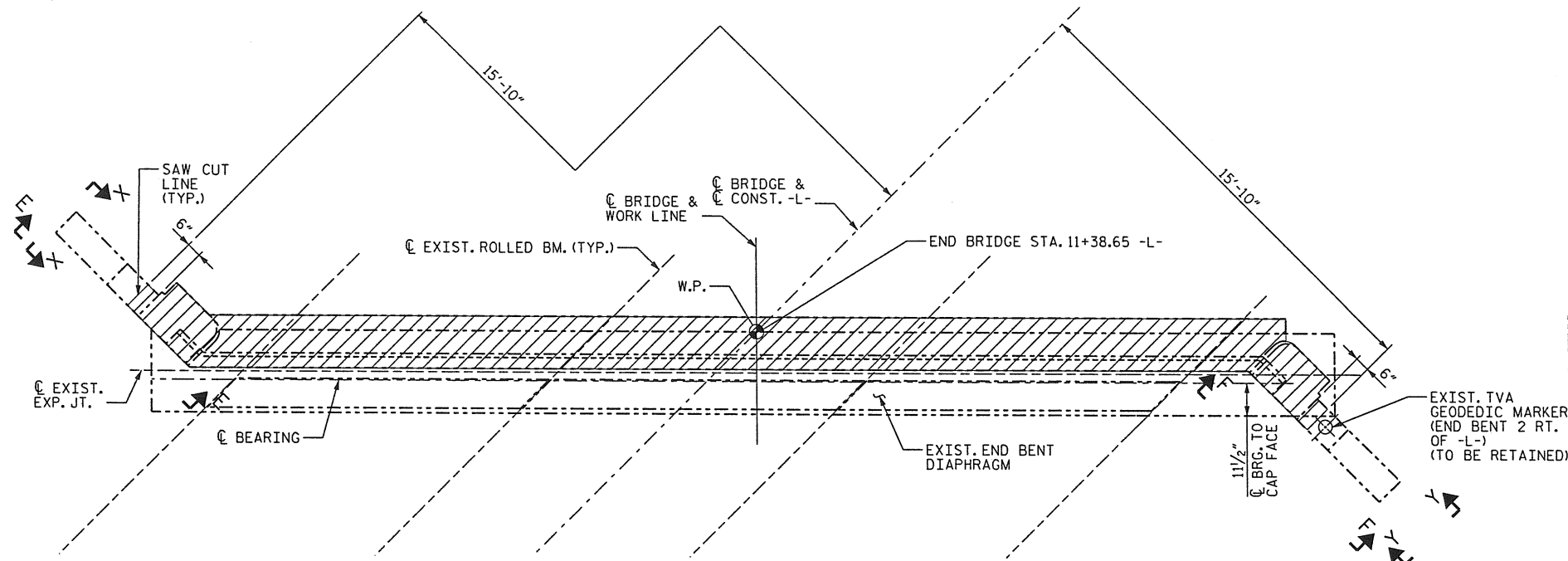




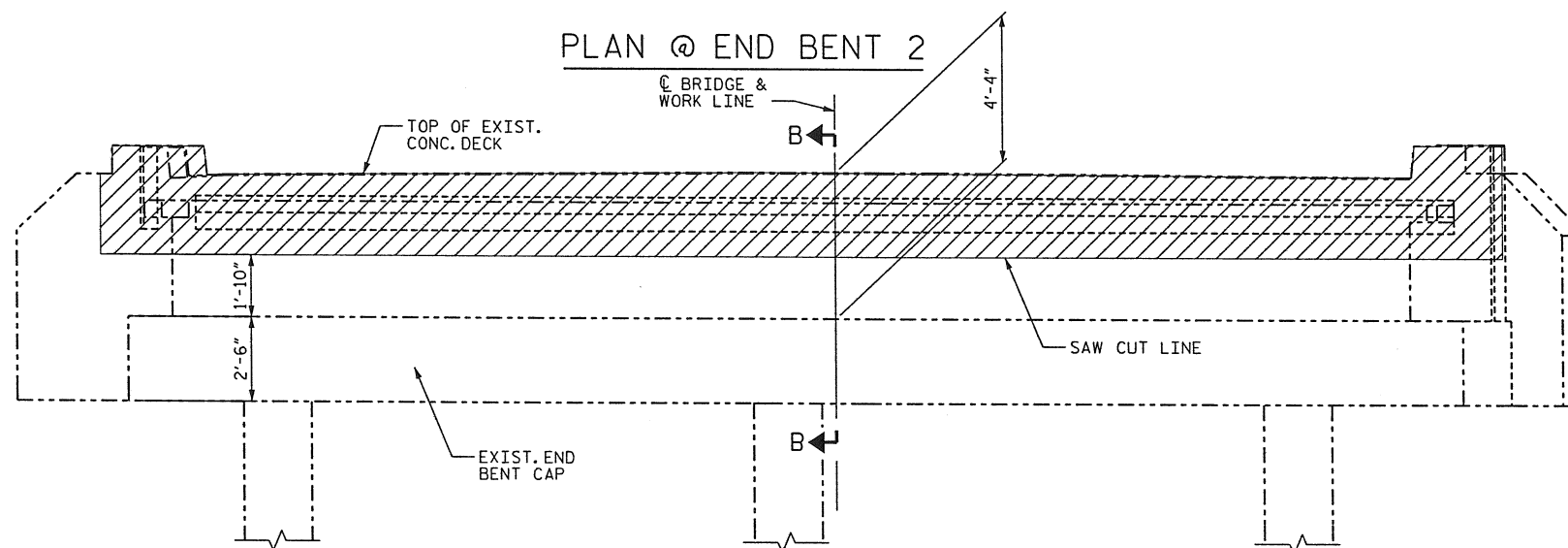
VIEW X-X



VIEW E-E

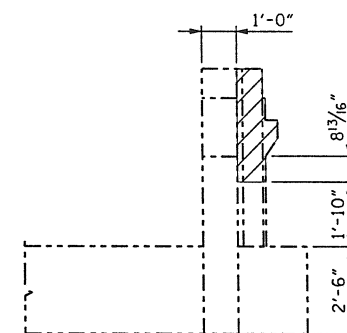
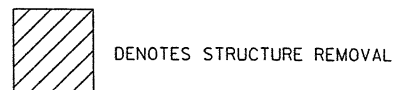


PLAN @ END BENT 2

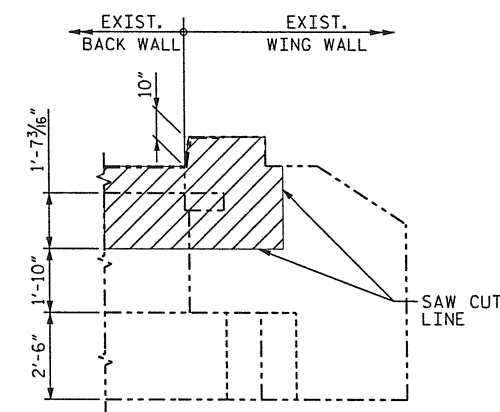


ELEVATION

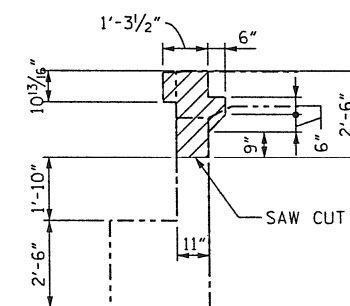
NOTES:
DETAILS SHOWN ARE END BENT 2. END BENT 1
DETAILS ARE SIMILAR, BUT REVOLVED ABOUT C BRIDGE



VIEW Y-Y



VIEW F-F



SECTION B-B

PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-



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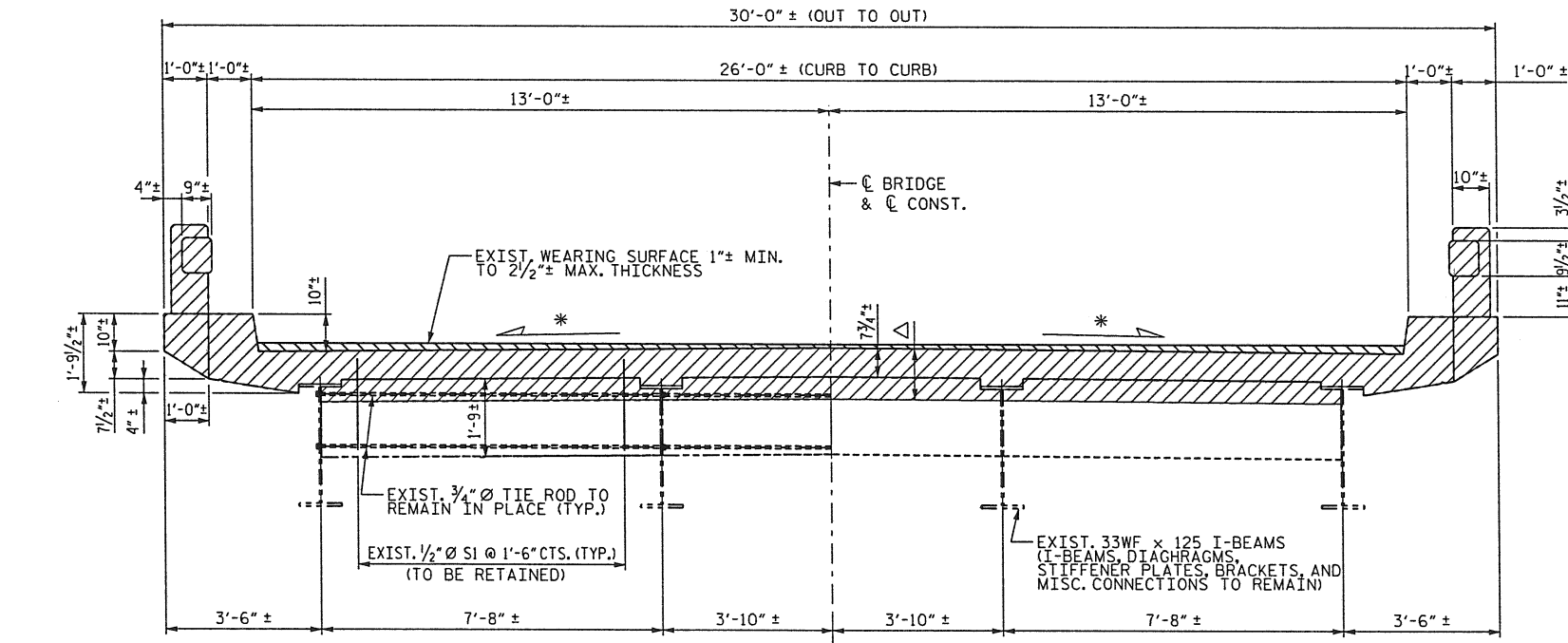


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
EXISTING BRIDGE DEMOLITION
PLANS AND DETAILS
(SHEET 2 OF 2)

DECK REPLACEMENT FOR
BRIDGE NO. 490082

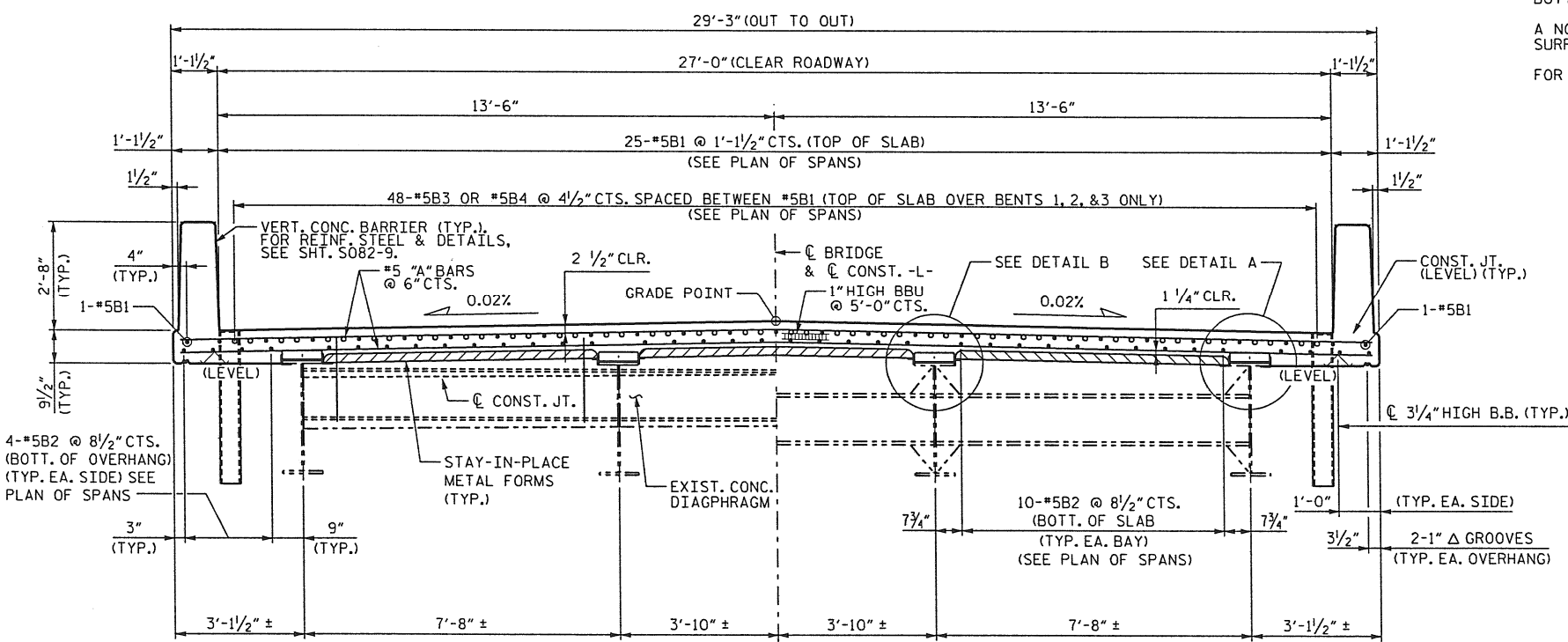
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- EXIST. STRUCTURE TO BE REMOVED
REMOVE EXIST. DETERIORATED CONC. TO SOUND MATERIAL. RETAIN EXIST. SI BARS.
* EXIST. CONC. DECK SURFACE - 1/2" DROP FROM C BRIDGE TO OUTSIDE EDGE OF DECK. SLOPE VARIES.

EXISTING BRIDGE TYPICAL SECTION



PROPOSED BRIDGE TYPICAL SECTION

- DENOTES CONTINUOUS REINFORCEMENT (5 BAR RUNS)
• DENOTES NON-CONTINUOUS REINFORCEMENT OVER BENTS

NOTES:

EXISTING STRUCTURE DIMENSIONS SHOWN IN THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE AND ARE APPROXIMATE.

PROVIDE 1 1/4" HIGH BEAM BOLSTERS (BB) AT 4'-0" CTS. ATOP THE METAL STAY-IN-PLACE FORMS TO SUPPORT THE BOTTOM MAT OF 'A' BARS.

LONGITUDINAL STEEL MAY BE SHIFTED SLIGHTLY, AS NECESSARY, TO AVOID INTERFERENCE WITH PIPE DRAINS.

BARRIER RAIL IN THE CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THE UNIT HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

TOP OF FLOOR DRAIN TO BE SET 3/8" BELOW SURFACE OF SLAB.

4 - 1/2" SQUARE LUGS TO BE GLUED TO THE PVC PLASTIC PIPE AT EQUAL SPACES AROUND THE PIPE DRAIN APPROXIMATELY 4" FROM THE TOP OF THE PIPE.

*5 G1 BAR MAY BE SHIFTED SLIGHTLY, AS NECESSARY, TO CLEAR REINFORCING STEEL.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

BOLT SIZE FOR DECK DRAIN SUPPORTS TO BE 5/8" MINIMUM DIA.

STAINLESS STEEL WORM DRIVE HOSE CLAMP SHALL BE COMMERCIAL QUALITY.

THE 6" DIA. PVC PIPE AND FITTINGS SHALL BE SCHEDULE 40 AND CONFORM TO ASTM D1785.

ALL SUPERSTRUCTURE CONCRETE SHALL BE SAND LIGHTWEIGHT CONCRETE.

FOR SAND LIGHTWEIGHT CONCRETE, SEE SPECIAL PROVISIONS.

METAL STAY-IN-PLACE FORMS SHALL BE MODIFIED TO PREVENT THE ACCUMULATION OF CONCRETE IN THE FLUTES. A SHEET METAL COVER HAS BEEN DETAILED IN THE PLANS TO MEET THIS REQUIREMENT. THE CONTRACTOR MAY PROPOSE ALTERNATIVE DETAILS SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

USE OF STYROFOAM OR OTHER BUOYANT MATERIALS TO DISPLACE CONCRETE IN FORM FLUTES WILL NOT BE PERMITTED.

FIELD WELDING TO EXISTING STRUCTURAL STEEL BEAMS OR COVER PLATES WILL NOT BE PERMITTED UNLESS NOTED IN THE PLANS.

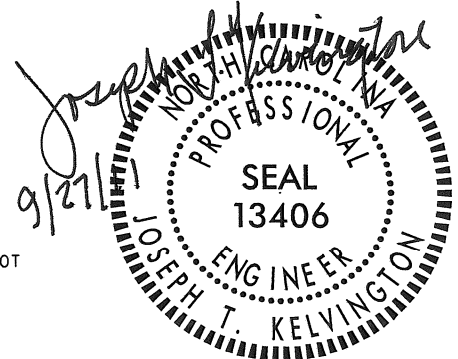
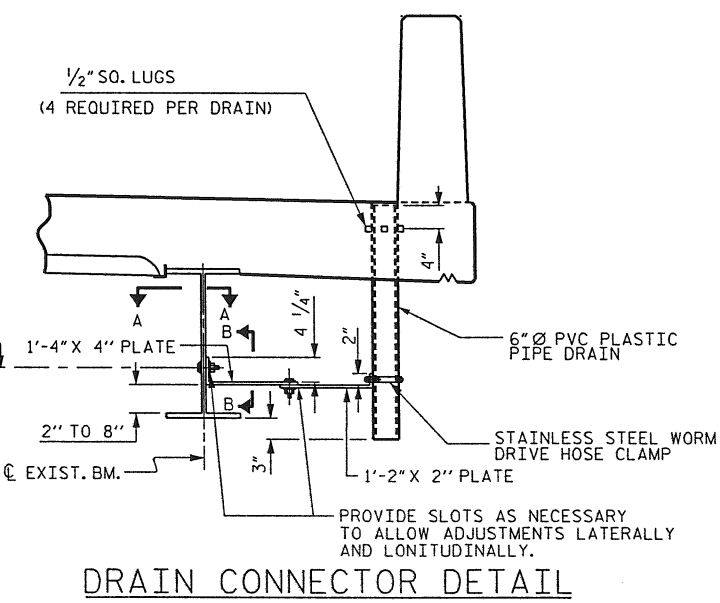
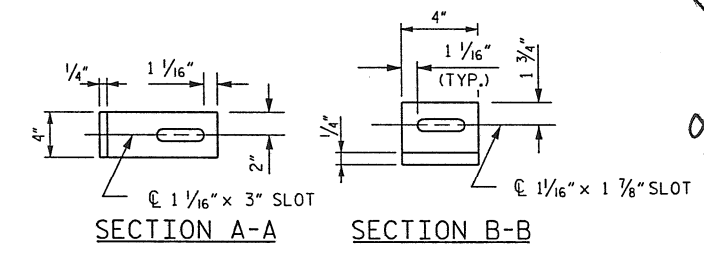
SUPPORT ANGLES FOR METAL STAY-IN-PLACE FORMS SHALL BE SET IN POSITION WITH THE USE OF BRACKET ASSEMBLIES AS SHOWN IN THE PLANS. THE CONTRACTOR MAY PROPOSE AN ALTERNATE SUPPORT SYSTEM SUBJECT TO REVIEW AND APPROVAL BY THE ENGINEER.

DECK DRAIN SUPPORT ANGLES AND BRACKET ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS.

CONCRETE PLACED FOR RECONSTRUCTION OF INTERIOR BENT DIAPHRAGMS BETWEEN EXISTING CONCRETE SURFACES AND THE BOTTOM OF THE DECK SLAB SHALL BE MEASURED AND PAID FOR AS CLASS AA CONCRETE.

A NOMINAL DIMENSION OF 6" HAS BEEN ASSUMED FOR THE VERTICAL OFFSET BETWEEN EXISTING INTERIOR BENT DIAPHRAGM SURFACES AND THE BOTTOM OF THE DECK SLAB AS THE BASIS FOR CALCULATION OF THE QUANTITIES SHOWN IN THE PLANS.

FOR DETAIL "A" AND DETAIL "B", SEE SHT. S082-7.



PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PROPOSED BRIDGE TYPICAL SECTION					
DECK REPLACEMENT FOR BRIDGE NO. 490082					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
SHEET NO. S-6					TOTAL SHEETS 17



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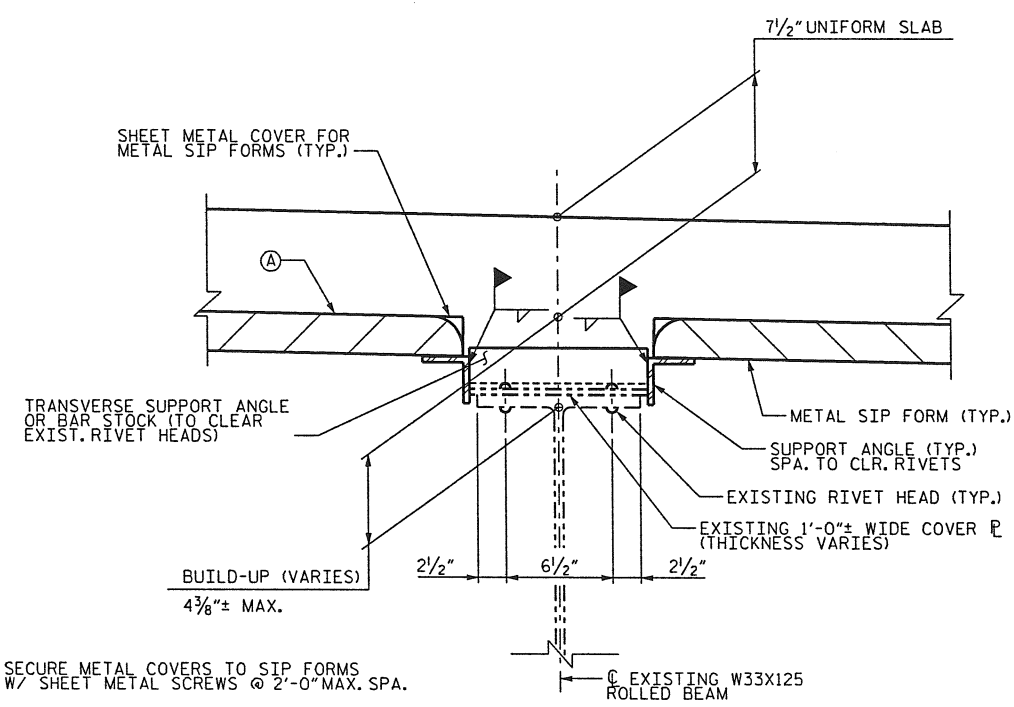
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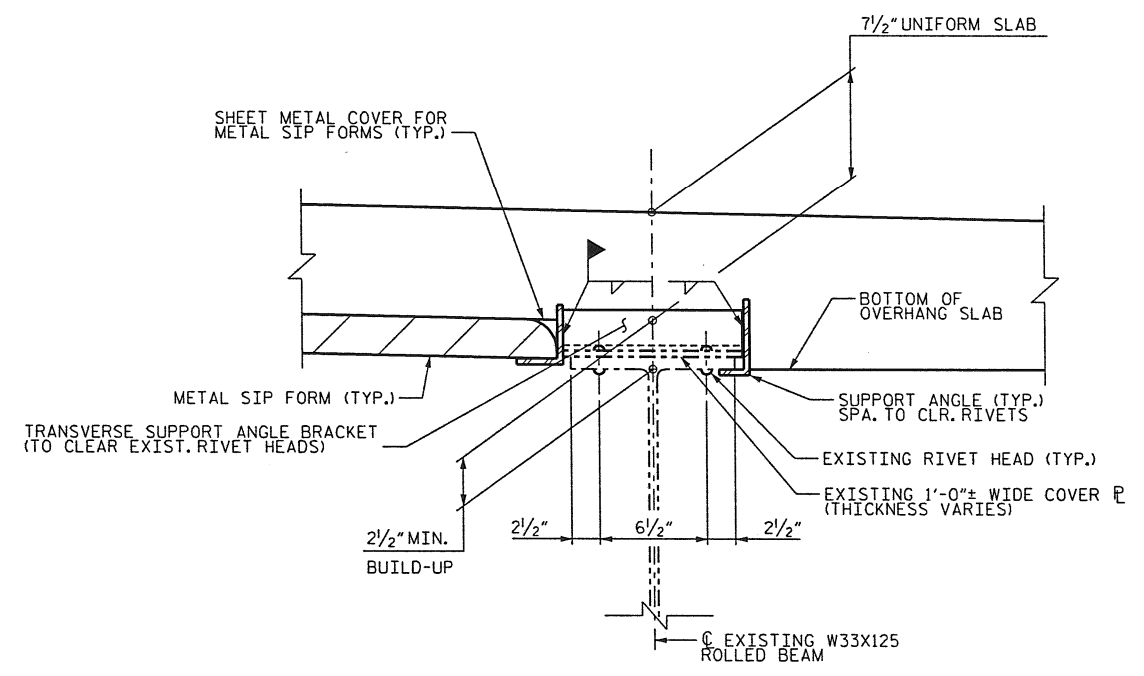


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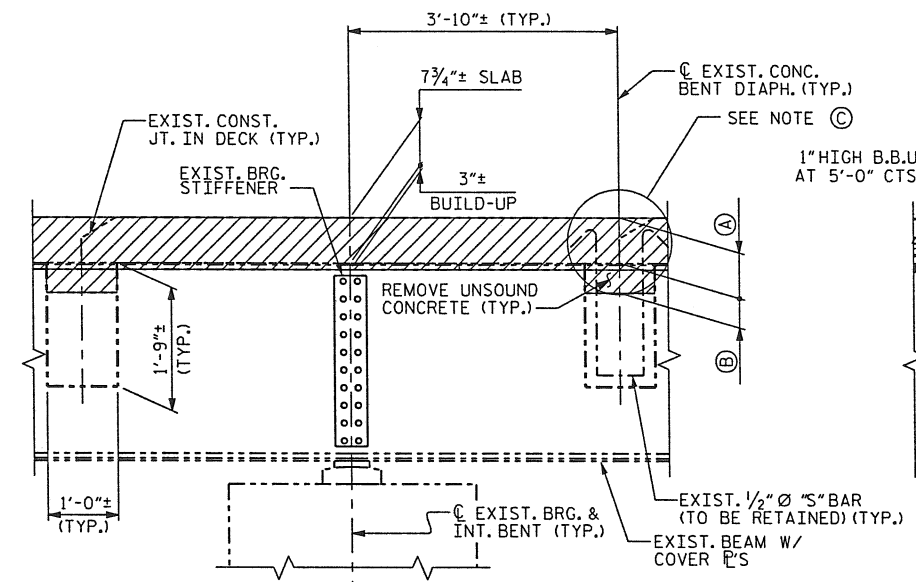
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DETAIL "B"



DETAIL "A"

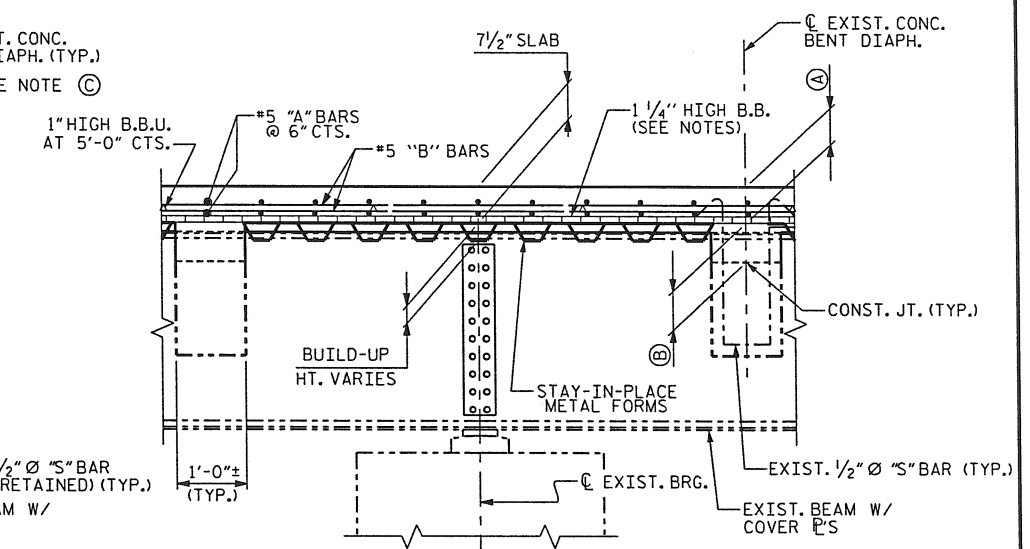


SECTION D-D

- (A) EXISTING DECK SLAB REMOVAL TO BE PAID FOR AS REMOVAL OF EXISTING STRUCTURE.
- (B) EXISTING CONCRETE DIAPHRAGM REMOVAL ONLY AS REQUIRED TO TAKE OUT UNSOUND CONCRETE. TO BE MEASURED AND PAID FOR AS CLASS AA CONCRETE.
- (C) EXISTING CONSTRUCTION JOINT IN DECK SLAB AT DIAPH. C AND BREAKS ALONG C EXIST. BEAM, EXISTING TRANSVERSE AND LONGITUDINAL DECK REINFORCEMENT PENETRATES THIS JOINT.

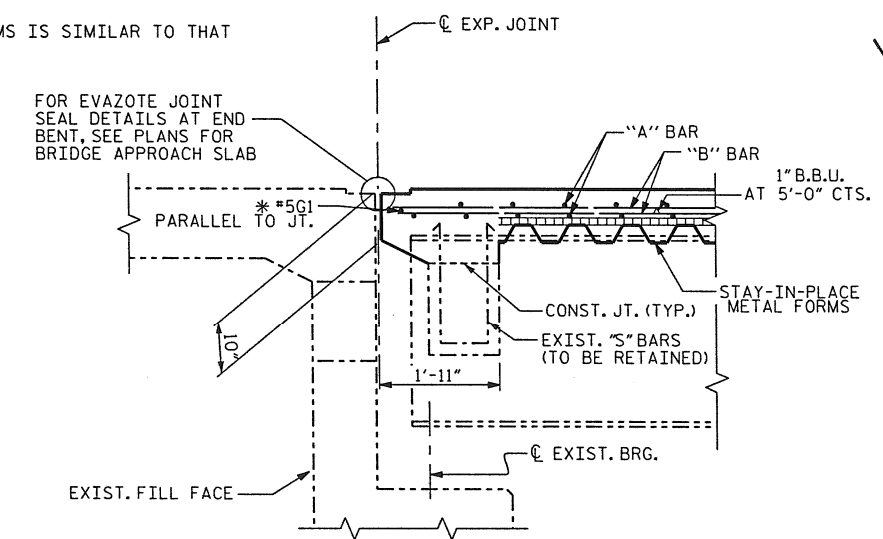
STRUCTURE TO BE REMOVED.

CONCRETE REMOVAL @ END BENT DIAPHRAGMS IS SIMILAR TO THAT SHOWN FOR INTERIOR BENT DIAPHRAGMS.



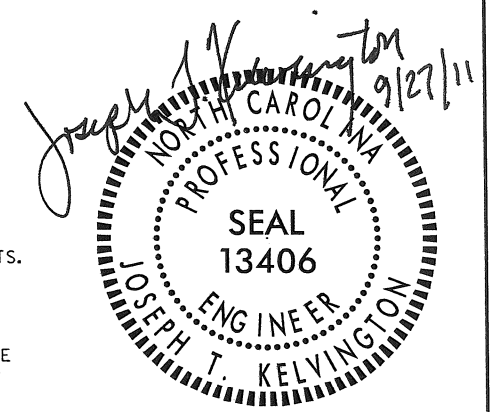
SECTION D-D

- (A) REINFORCED CONCRETE DECK SLAB (SAND LIGHT WEIGHT CONC.)
- (B) EXIST. CONCRETE DIAPHRAGM REPAIR (SAND LIGHT WEIGHT CONC.) TO BE MEASURED AND PAID FOR AS CLASS AA CONCRETE



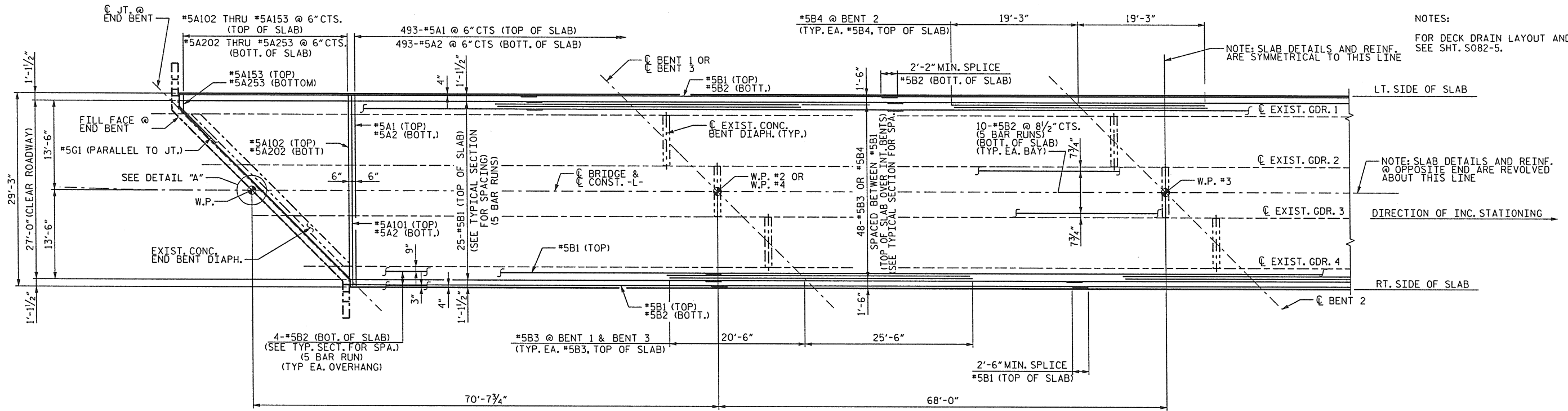
TYP. SECTION THRU DIAPHRAGM @ END BENTS

#5G1 BAR MAY BE SHIFTED SLIGHTLY, AS NECESSARY, TO CLEAR REINFORCING STEEL.



PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
PROPOSED BRIDGE TYPICAL SECTION DETAILS					
DECK REPLACEMENT FOR BRIDGE NO. 490082					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
TOTAL SHEETS					17



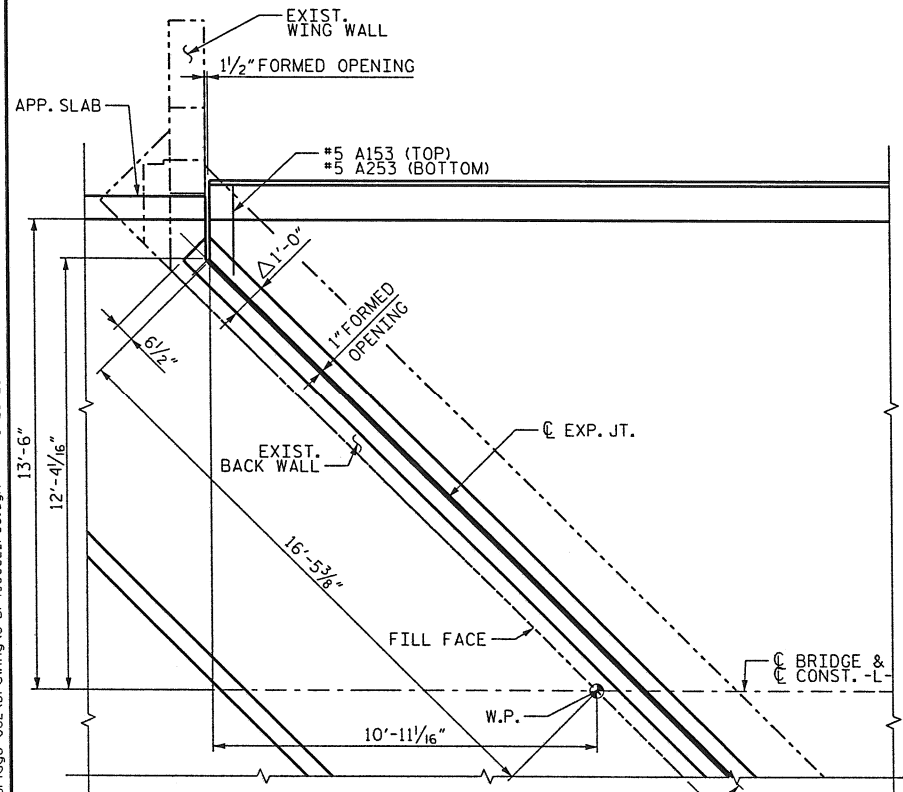
NOTES:
FOR DECK DRAIN LAYOUT AND DETAILS, SEE SHT. S082-5.

NOTE: SLAB DETAILS AND REINF. @ OPPOSITE END ARE REVOLVED ABOUT THIS LINE

HALF-PLAN

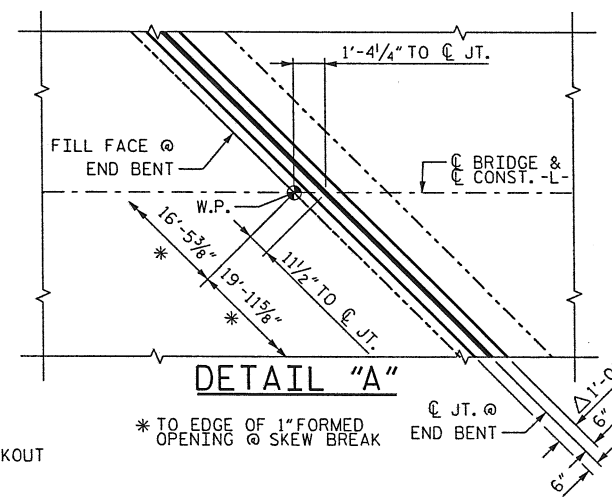
FOR REINF. IN CONCRETE BARRIER, SEE S082-9

NOTE: CONCRETE DECK SLAB SHALL BE CAST CONTINUOUSLY ACROSS THE LENGTH OF THE BRIDGE. CONTRACTOR MAY USE SET RETARDER OR A POURING SEQUENCE AS DEEMED NECESSARY TO ENSURE THAT CONCRETE REMAINS PLASTIC IN INTERIOR BENT REGIONS DURING THE LIFE OF THE POUR.



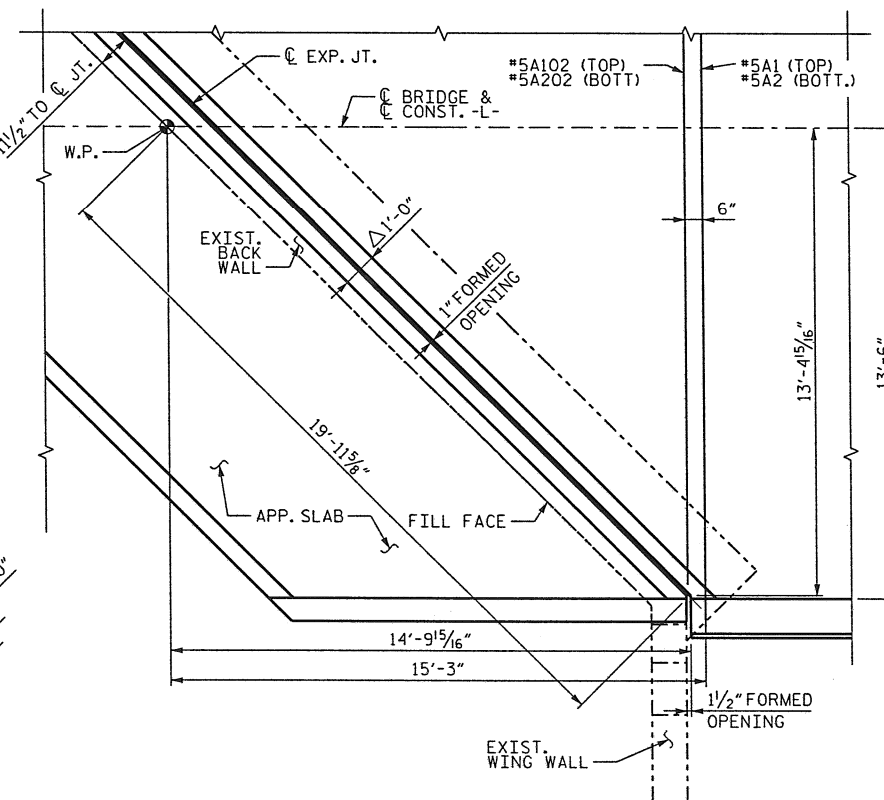
PARTIAL DECK PLAN

END BENT 1 LT. SIDE, END BENT 2 RT. SIDE



DETAIL "A"

* TO EDGE OF 1" FORMED OPENING @ SKEW BREAK



PARTIAL DECK PLAN

END BENT 1 RT. SIDE, END BENT 2 LT. SIDE



PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

HALF PLAN OF SPANS

DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS						SHEET NO. S-8
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1			3			TOTAL SHEETS 17
2			4			



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CHECKED BY: J. T. KELVINGTON DATE: 8-26-11

Structures\Bridge Group 2011\Jackson Co. #82\Bridge 082\Drawing\DEFLECTION.dgn 9/27/2011 2:05:34 PM tdudeck

BEAMS 1, 4

	SPAN A										SPAN B										SPAN C										SPAN D														
TENTH POINTS	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0
DEFLEC.DUE TO WEIGHT OF SLAB **	0.00	-0.26	-0.46	-0.60	-0.66	-0.65	-0.57	-0.43	-0.26	-0.10	0.00	0.00	0.01	-0.04	-0.13	-0.22	-0.27	-0.26	-0.21	-0.12	-0.04	0.00	0.00	-0.04	-0.12	-0.21	-0.26	-0.27	-0.22	-0.13	-0.04	0.01	0.00	0.00	0.00	-0.10	-0.26	-0.43	-0.57	-0.65	-0.66	-0.60	-0.46	-0.26	0.00
DEFLEC.DUE TO WT.OF BARRIER RAIL	0.00	-0.05	-0.08	-0.11	-0.12	-0.12	-0.10	-0.08	-0.05	-0.02	0.00	0.00	0.00	-0.01	-0.02	-0.04	-0.05	-0.05	-0.04	-0.02	-0.01	0.00	0.00	-0.01	-0.02	-0.04	-0.05	-0.05	-0.04	-0.02	-0.01	0.00	0.00	0.00	0.00	-0.02	-0.05	-0.08	-0.10	-0.12	-0.12	-0.11	-0.08	-0.05	0.00
TOTAL DEAD LOAD DEFLECTION	0.00	-5/16"	-9/16"	-1 1/16"	-3/4"	-3/4"	-1 1/16"	-1/2"	-5/16"	-1/8"	0.00	0.00	9/16"	-1/16"	-1/8"	-1/4"	-5/16"	-5/16"	-1/4"	-1/8"	-1/16"	0.00	0.00	-1/16"	-1/8"	-1/4"	-5/16"	-5/16"	-1/4"	-1/8"	-1/16"	9/16"	0.00	0.00	0.00	-1/8"	-5/16"	-1/2"	-1 1/16"	-3/4"	-3/4"	-1 1/16"	-9/16"	-5/16"	0.00

** INCLUDES SLAB, BUILDUP, AND STAY-IN-PLACE FORMS
ALL VALUES ARE IN INCHES (DECIMAL FORM), EXCEPT "TOTAL DEAD LOAD DEFLECTION"
WHICH IS GIVEN IN INCHES (FRACTIONAL FORM).
DEFLECTIONS SHOWN AS NEGATIVE INDICATES A DOWNWARD DIRECTION

BEAMS 2,3

	SPAN A											SPAN B											SPAN C											SPAN D										
TENTH POINTS	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0
DEFLEC.DUE TO WEIGHT OF SLAB **	0.00	-0.23	-0.41	-0.53	-0.59	-0.58	-0.51	-0.39	-0.23	-0.09	0.00	0.00	0.01	-0.04	-0.13	-0.21	-0.25	-0.25	-0.19	-0.11	-0.03	0.00	0.00	-0.03	-0.11	-0.19	-0.25	-0.25	-0.21	-0.13	-0.04	0.01	0.00	0.00	-0.09	-0.23	-0.39	-0.51	-0.58	-0.59	-0.53	-0.41	-0.23	0.00
DEFLEC.DUE TO WT.OF BARRIER RAIL	0.00	-0.04	-0.08	-0.10	-0.11	-0.11	-0.10	-0.07	-0.04	-0.02	0.00	0.00	0.00	-0.01	-0.02	-0.04	-0.05	-0.05	-0.04	-0.02	-0.01	0.00	0.00	-0.01	-0.02	-0.04	-0.05	-0.05	-0.04	-0.02	-0.01	0.00	0.00	0.00	-0.02	-0.04	-0.07	-0.10	-0.11	-0.11	-0.10	-0.08	-0.04	0.00
TOTAL DEAD LOAD DEFLECTION	0.00	-¼"	-½"	-⅝"	-11⁄16"	-11⁄16"	-⅝"	-7⁄16"	-¼"	-1⁄8"	0.00	0.00	9⁄16"	-1⁄16"	-1⁄8"	-¼"	-5⁄16"	-5⁄16"	-¼"	-1⁄8"	-1⁄16"	0.00	0.00	-1⁄16"	-1⁄8"	-¼"	-5⁄16"	-5⁄16"	-¼"	-1⁄8"	-1⁄16"	9⁄16"	0.00	0.00	-1⁄8"	-¼"	-7⁄16"	-⅝"	-11⁄16"	-11⁄16"	-⅝"	-1⁄2"	-¼"	0.00

** INCLUDES SLAB, BUILDUP, AND STAY-IN-PLACE FORMS
ALL VALUES ARE IN INCHES (DECIMAL FORM), EXCEPT "TOTAL DEAD LOAD DEFLECTION"
WHICH IS GIVEN IN INCHES (FRACTIONAL FORM).
DEFLECTIONS SHOWN AS NEGATIVE INDICATES A DOWNWARD DIRECTION

ESTIMATED DEAD LOAD DEFLECTION TABLE FOR BEAMS



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CHECKED BY : J. T. KELVINGTON DATE : 8-26-11



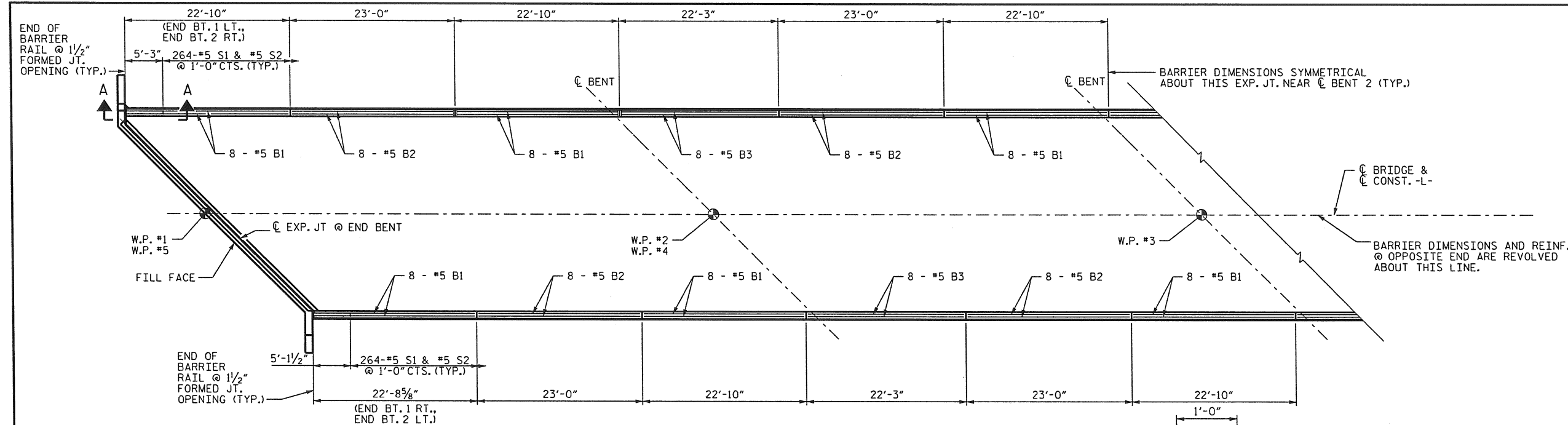
PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DEAD LOAD DEFLECTIONS

DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-9
2			4			TOTAL SHEETS 17



NOTES

BARRIER RAILS SHALL BE CAST W/ CLASS AA SAND LIGHTWEIGHT CONCRETE.
FOR SAND LIGHTWEIGHT CONCRETE, SEE SPECIAL PROVISIONS.

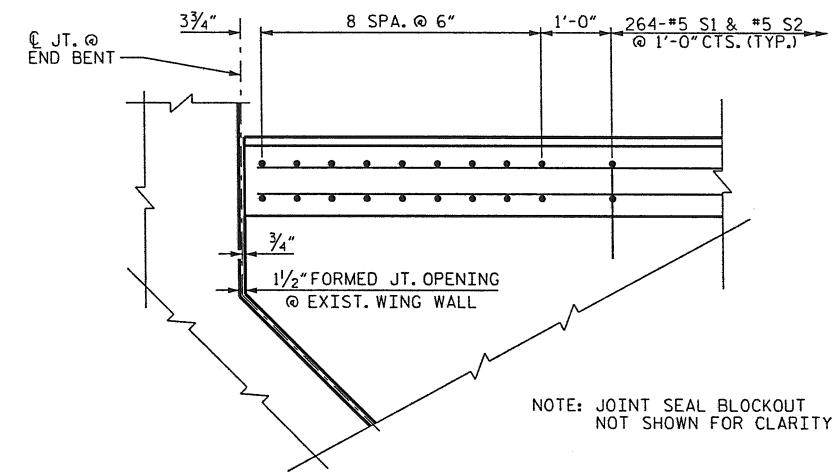
THE #5 S3 BARS SHALL BE INSTALLED USING AN ADHESIVE ANCHORING SYSTEM. THE YIELD LOAD FOR THE #5 S3 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

FOR SECTION A-A, SEE SHT. S082-10.

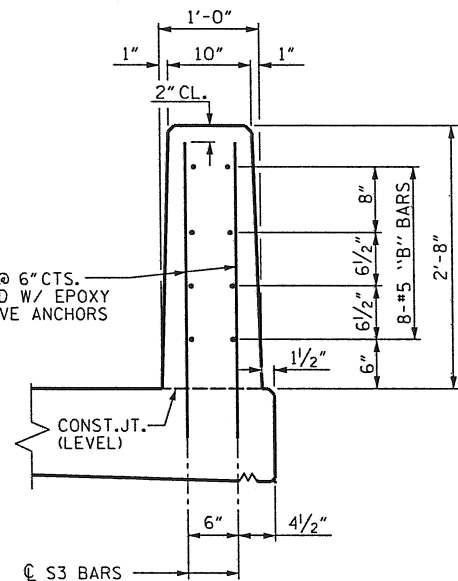
FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. TESTING OF ADHESIVELY ANCHORED DOWELS IS NOT REQUIRED.

PLAN

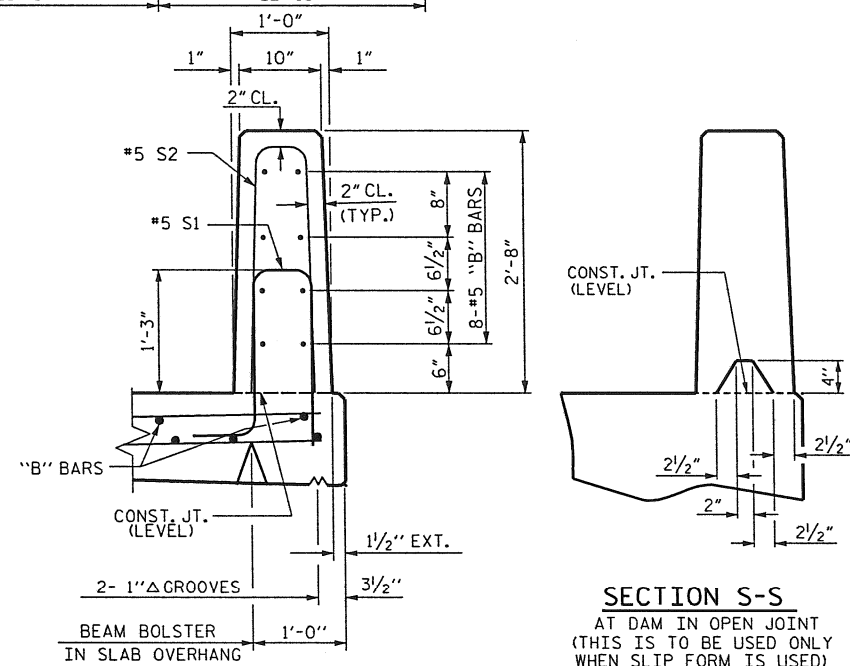


PLAN - END BENT 1 (LT. SIDE)
END BENT 2 (RT. SIDE)

END OF RAIL DETAILS

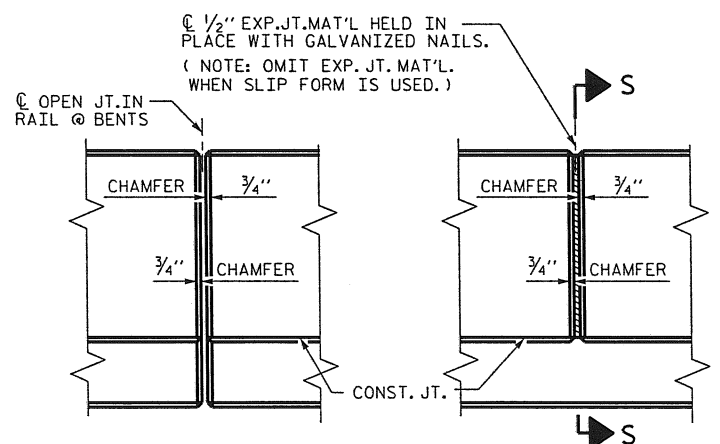


END VIEW



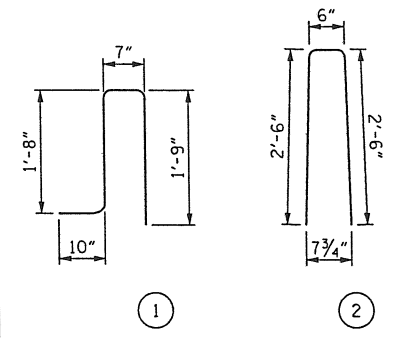
SECTION S-S
AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY
WHEN SLIP FORM IS USED)

SECTION THRU RAIL



ELEVATION AT EXPANSION JOINTS
BARRIER RAIL DETAILS

BAR TYPES

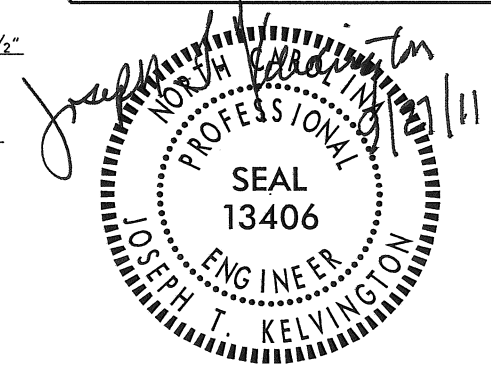


ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

FOR VERTICAL CONCRETE BARRIER RAIL ONLY					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	96	#5	STR	22'-4"	2236
* B2	64	#5	STR	22'-6"	1502
* B3	32	#5	STR	21'-9"	726
* S1	528	#5	1	4'-10"	2662
* S2	528	#5	2	5'-6"	3029
* S3	72	#5	STR	3'-2"	238

* EPOXY COATED REINFORCING STEEL	10,393 LBS.
CLASS AA CONCRETE	49.5 CU. YDS.
VERTICAL CONCRETE BARRIER RAIL	546.8 LIN. FT.



PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

VERTICAL CONCRETE BARRIER RAIL

DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.
S-10
TOTAL SHEETS
17

356550 PM belliot 9/26/2011 082\Bridg 082\Drawing\9-9P490082.VC8R2.dgn



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CHECKED BY: J. T. KELVINGTON DATE: 8-26-11

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A $\frac{1}{4}$ " HOLD DOWN PLATE AND 4 - $\frac{7}{8}$ " \varnothing BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE $\frac{7}{8}$ " \varnothing GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

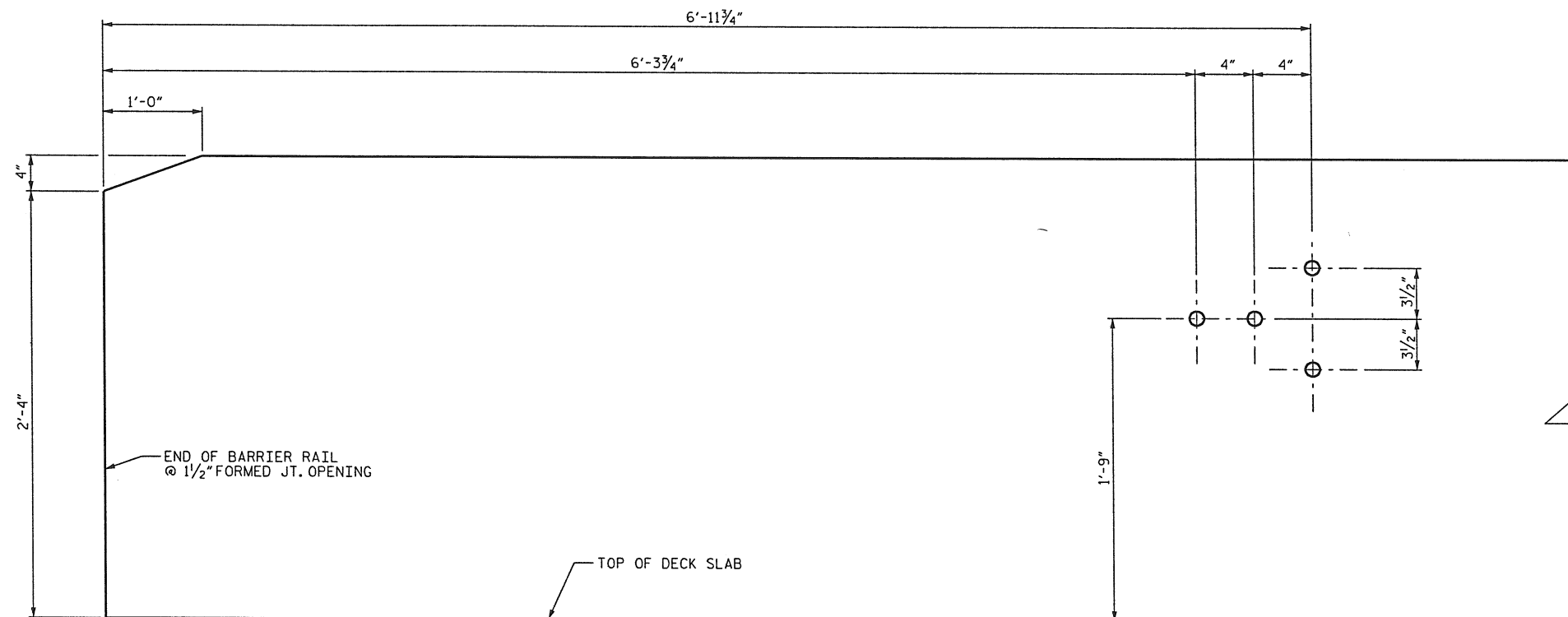
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR VERTICAL CONCRETE BARRIER RAIL.

THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.

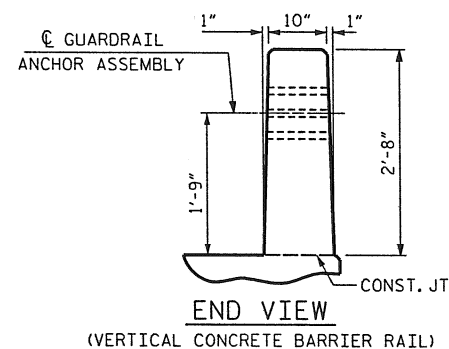
THE $1\frac{1}{4}$ " \varnothing HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



GUARDRAIL ANCHORAGE BOLT LOCATIONS

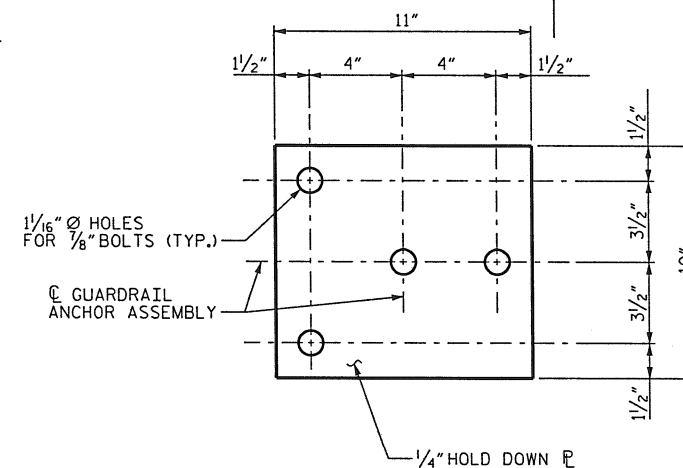
ALL OTHER CORNERS SIMILAR

SECTION A-A

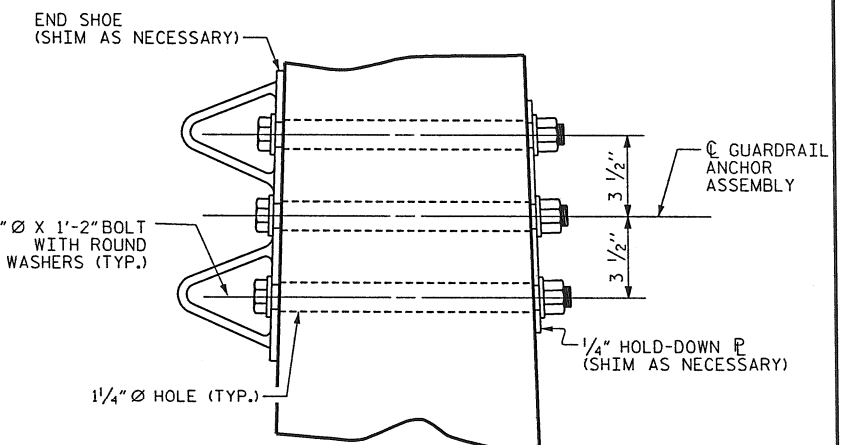


END VIEW

(VERTICAL CONCRETE BARRIER RAIL)



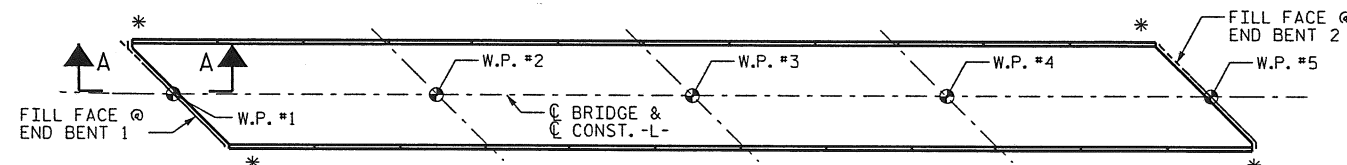
PLAN



END VIEW

GUARDRAIL ANCHOR ASSEMBLY DETAILS

LOCATION OF GUARDRAIL ANCHOR AT END POST



PLAN

SKETCH SHOWING POINTS OF ATTACHMENT

* LOCATION OF GUARDRAIL ATTACHMENT

PROJECT NO. WBS 17BP.14.P.1

JACKSON COUNTY

STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GUARDRAIL ANCHORAGE
DETAILS

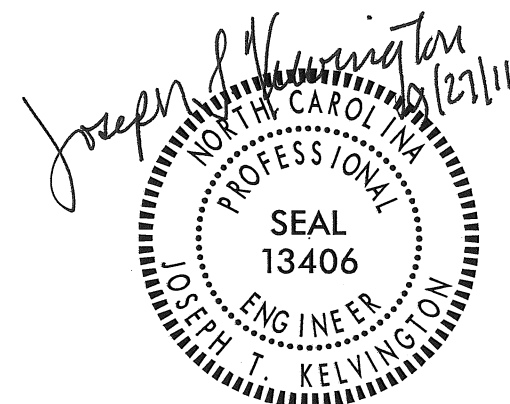
DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-11
2			4			
TOTAL SHEETS 17						



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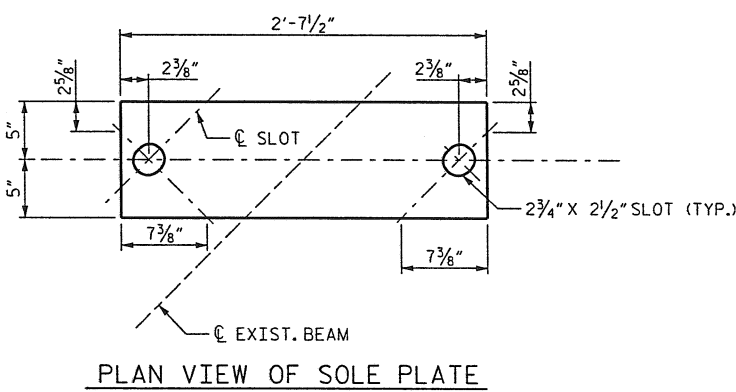
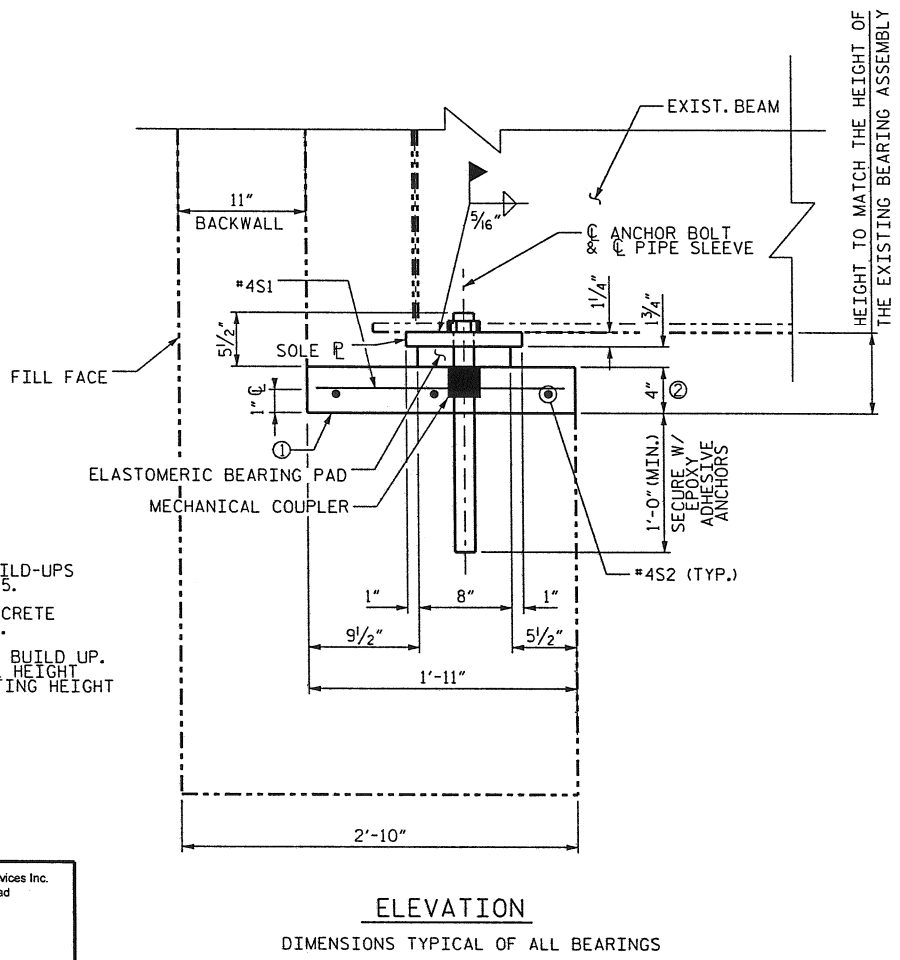
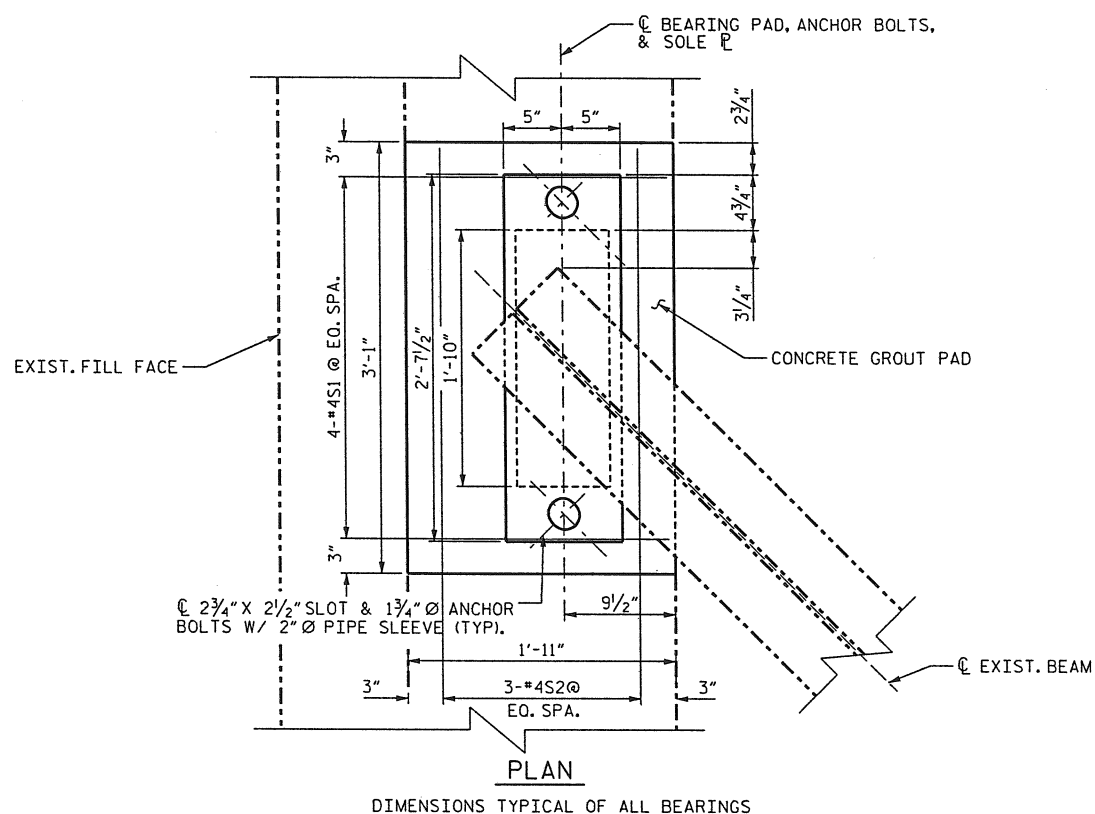
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NOTES

THE 2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PLASTIC PIPE. THE PVC PLASTIC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785.

THE PAYMENT FOR THE PIPE SLEEVES SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.

THE SOLE PLATE SHALL BE AASHTO M270 GRADE 36W AND SHALL BE GALVANIZED. ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM A449. NUTS SHALL MEET THE REQUIREMENTS OF AASHTO M291-DH OR AASHTO M292-2H. WASHERS SHALL MEET THE REQUIREMENTS OF AASHTO M293. SHOP DRAWINGS ARE NOT REQUIRED FOR ANCHOR BOLTS, NUTS AND WASHERS. SHOP INSPECTION IS REQUIRED.

WHEN FIELD WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMPERATURE INDICATING WAX PENS, OR OTHER SUITABLE MEANS, TO ENSURE THAT THE TEMPERATURE OF THE SOLE PLATE DOES NOT EXCEED 300°F. TEMPERATURES ABOVE THIS MAY DAMAGE THE ELASTOMER.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

EXISTING REBAR MAY BE CUT WHEN DRILLING HOLES FOR ANCHOR BOLTS.

CONCRETE BRIDGE SEAT BUILD-UPS, BEARING PADS, AND SOLE PLATES SHALL BE FURNISHED TO MATCH THE TOTAL HEIGHT OF EXISTING BEARING ASSEMBLIES @ EACH LOCATION @ EACH END BENT.

CONTRACTOR SHALL VERIFY HEIGHTS OF EXISTING BEARINGS @ EA. LOCATION PRIOR TO JACKING BRIDGE SPAN.

FOR SPAN JACKING, SEE SPECIAL PROVISIONS.

CONTRACTOR SHALL RAISE EXISTING BEAMS A MINIMUM OF 1" AND A MAXIMUM OF 2" TO REPLACE BEARINGS.

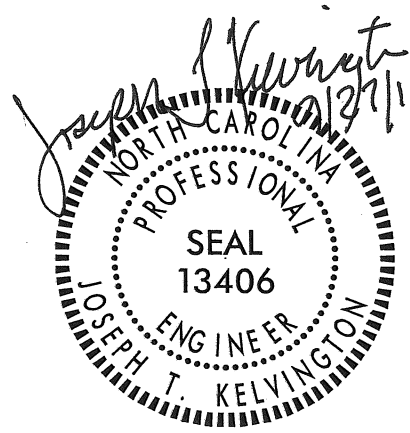
ALTERNATIVES FOR BEARING REPLACEMENT TO THOSE SHOWN IN THE PLANS MAY BE SUBMITTED FOR REVIEW AND ACCEPTANCE BY THE DEPARTMENT.

FOR S1 AND S2 BARS SEE SHT. S-15.

INSTALLATION PROCEDURE

- 1.) RAISE SPAN @ END BENT.
- 2.) REMOVE EXISTING BRG. ASSEMBLIES.
- 3.) INSTALL ANCHOR BOLTS W/ MECHANICAL COUPLER
- 4.) CAST CONCRETE PAD.
- 5.) SET ELASTOMERIC PAD & SOLE PLATE
- 6.) LOWER EXISTING BEAM ON BRG. ASSEMBLY.
- 7.) INSERT PIPE SLEEVES, SET ANCHOR BOLT EXTENSIONS AND WASHERS.
- 8.) TORQUE NUTS AND BURR PROJECTING ANCHOR BOLT THREADS.

PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-



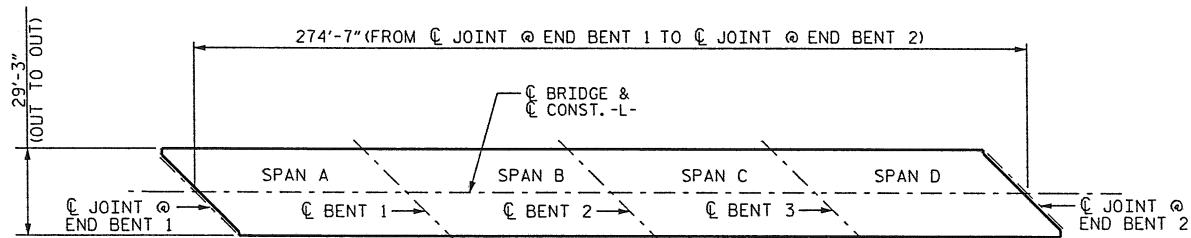
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BEARING DETAILS					
DECK REPLACEMENT FOR BRIDGE NO. 490082					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
SHEET NO. S-12					TOTAL SHEETS 17



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REINFORCING BAR SCHEDULE													
SPAN 'A' THRU 'D'													
NON-EPOXY COATED REINFORCING STEEL							* EPOXY COATED REINFORCING STEEL						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT		BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
A2	495	5	STR.	28'-11"	14,929		*A1	493	5	STR.	28'-11"	14,869	
A202	2	5	STR.	27'-6"	57		*A101	2	5	STR.	27'-5"	57	
A203	2	5	STR.	27'-0"	56		*A102	2	5	STR.	26'-11"	56	
A204	2	5	STR.	26'-6"	55		*A103	2	5	STR.	26'-5"	55	
A205	2	5	STR.	26'-0"	54		*A104	2	5	STR.	25'-11"	54	
A206	2	5	STR.	25'-6"	53		*A105	2	5	STR.	25'-5"	53	
A207	2	5	STR.	25'-0"	52		*A106	2	5	STR.	24'-11"	52	
A208	2	5	STR.	24'-6"	51		*A107	2	5	STR.	24'-5"	51	
A209	2	5	STR.	24'-0"	50		*A108	2	5	STR.	23'-11"	50	
A210	2	5	STR.	23'-6"	49		*A109	2	5	STR.	23'-5"	49	
A211	2	5	STR.	23'-0"	48		*A110	2	5	STR.	22'-11"	48	
A212	2	5	STR.	22'-6"	47		*A111	2	5	STR.	22'-5"	47	
A213	2	5	STR.	22'-0"	46		*A112	2	5	STR.	21'-11"	46	
A214	2	5	STR.	21'-6"	45		*A113	2	5	STR.	21'-5"	45	
A215	2	5	STR.	21'-0"	44		*A114	2	5	STR.	20'-11"	44	
A216	2	5	STR.	20'-6"	43		*A115	2	5	STR.	20'-5"	43	
A217	2	5	STR.	20'-0"	42		*A116	2	5	STR.	19'-11"	42	
A218	2	5	STR.	19'-6"	41		*A117	2	5	STR.	19'-5"	41	
A219	2	5	STR.	19'-0"	40		*A118	2	5	STR.	18'-11"	39	
A220	2	5	STR.	18'-6"	39		*A119	2	5	STR.	18'-5"	38	
A221	2	5	STR.	18'-0"	38		*A120	2	5	STR.	17'-11"	37	
A222	2	5	STR.	17'-6"	37		*A121	2	5	STR.	17'-5"	36	
A223	2	5	STR.	17'-0"	35		*A122	2	5	STR.	16'-11"	35	
A224	2	5	STR.	16'-6"	34		*A123	2	5	STR.	16'-5"	34	
A225	2	5	STR.	16'-0"	33		*A124	2	5	STR.	15'-11"	33	
A226	2	5	STR.	15'-6"	32		*A125	2	5	STR.	15'-5"	32	
A227	2	5	STR.	15'-0"	31		*A126	2	5	STR.	14'-11"	31	
A228	2	5	STR.	14'-6"	30		*A127	2	5	STR.	14'-5"	30	
A229	2	5	STR.	14'-0"	29		*A128	2	5	STR.	13'-11"	29	
A230	2	5	STR.	13'-6"	28		*A129	2	5	STR.	13'-5"	28	
A231	2	5	STR.	13'-0"	27		*A130	2	5	STR.	12'-11"	27	
A232	2	5	STR.	12'-6"	26		*A131	2	5	STR.	12'-5"	26	
A233	2	5	STR.	12'-0"	25		*A132	2	5	STR.	11'-11"	25	
A234	2	5	STR.	11'-6"	24		*A133	2	5	STR.	11'-5"	24	
A235	2	5	STR.	11'-0"	23		*A134	2	5	STR.	10'-11"	23	
A236	2	5	STR.	10'-6"	22		*A135	2	5	STR.	10'-5"	22	
A237	2	5	STR.	10'-0"	21		*A136	2	5	STR.	9'-11"	21	
A238	2	5	STR.	9'-6"	20		*A137	2	5	STR.	9'-5"	20	
A239	2	5	STR.	9'-0"	19		*A138	2	5	STR.	8'-11"	19	
A240	2	5	STR.	8'-6"	18		*A139	2	5	STR.	8'-5"	18	
A241	2	5	STR.	8'-0"	17		*A140	2	5	STR.	7'-11"	17	
A242	2	5	STR.	7'-6"	16		*A141	2	5	STR.	7'-5"	15	
A243	2	5	STR.	7'-0"	15		*A142	2	5	STR.	6'-11"	14	
A244	2	5	STR.	6'-6"	14		*A143	2	5	STR.	6'-5"	13	
A245	2	5	STR.	6'-0"	13		*A144	2	5	STR.	5'-11"	12	
A246	2	5	STR.	5'-6"	11		*A145	2	5	STR.	5'-5"	11	
A247	2	5	STR.	5'-0"	10		*A146	2	5	STR.	4'-11"	10	
A248	2	5	STR.	4'-6"	9		*A147	2	5	STR.	4'-5"	9	
A249	2	5	STR.	4'-0"	8		*A148	2	5	STR.	3'-11"	8	
A250	2	5	STR.	3'-6"	7		*A149	2	5	STR.	3'-5"	7	
A251	2	5	STR.	3'-0"	6		*A150	2	5	STR.	2'-11"	6	
A252	2	5	STR.	2'-6"	5		*A151	2	5	STR.	2'-5"	5	
A253	2	5	STR.	2'-0"	4		*A152	2	5	STR.	1'-11"	4	
							*A153	2	5	STR.	1'-5"	3	
B2	190	5	STR.	56'-7"	11,213								
							*B1	135	5	STR.	56'-7"	7,967	
							*B2	96	5	STR.	39'-5"	3,947	
							*B3	48	5	STR.	32'-7"	1,631	
							*G1	2	5	STR.	36'-6"	76	
TOTAL NON-EPOXY REINFORCING STEEL 57,825 LBS.						* TOTAL EPOXY REINFORCING STEEL 30,084 LBS.							



LAYOUT FOR COMPUTING AREA
OF REINFORCED CONCRETE DECK SLAB
(SQ. FT. = 8,027.8)

— SUPERSTRUCTURE BILL OF MATERIAL —			
	SAND LIGHT WEIGHT CLASS AA CONCRETE	REINFORCING STEEL	EPOXY COATED REINFORCING STEEL
	(CU.YDS.)	(LBS.)	(LBS.)
SPAN 'A' THRU 'D'	206.0	27,741	30,084
TOTALS**	206.0	27,741	30,084

** QUANTITIES FOR BARRIER RAIL ARE NOT INCLUDED

SUPERSTRUCTURE REINFORCING STEEL
LENGTHS ARE BASED ON THE
FOLLOWING MINIMUM SPLICE LENGTHS

BAR SIZE	SUPERSTRUCTURE EXCEPT APPROACH SLABS, PARAPET, AND BARRIER RAIL		APPROACH SLABS		PARAPET AND BARRIER RAIL
	EPOXY COATED	UNCOATED	EPOXY COATED	UNCOATED	
#4	2'-0"	1'-9"	2'-0"	1'-9"	2'-9"
#5	2'-6"	2'-2"	2'-6"	2'-2"	3'-5"
#6	3'-0"	2'-7"	3'-10"	2'-7"	4'-4"
#7	5'-3"	3'-6"			
#8	6'-10"	4'-7"			

GROOVING BRIDGE FLOORS

APPROACH SLABS	---	SQ.FT.
BRIDGE DECK	6,579	SQ.FT.
TOTAL	6,579	SQ.FT.

PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
BILL OF MATERIAL

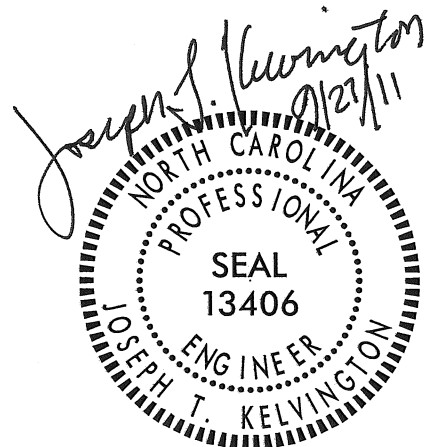
DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS						SHEET NO. S-13
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1			3			TOTAL SHEETS 17
2			4			



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DRAWN BY : B. J. ELLIOT DATE : 8-26-11
CHECKED BY : J. T. KELVINGTON DATE : 8-26-11



LOAD FACTOR RATING (LFR) SUMMARY FOR STEEL GIRDERS

LEVEL	VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING #	MINIMUM RATING FACTORS (RF)	TONS = W x RF	DISTRIBUTION FACTORS (DF)	INVENTORY LEVEL				OPERATING LEVEL			
							MOMENT		SHEAR		MOMENT		SHEAR	
							RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)
DESIGN LOAD	H15	15.00	1	2.24	33.63	1.39	2.24	1	EL,ER	27.20	2.76	2	I	0.00
LEGAL LOAD RATING	SINGLE VEHICLE (SV)	SNSH		2.47	33.39	1.39	2.47	1	EL,ER	27.20	3.06	2	I	0.00
		SNGARBS2		1.87	37.34	1.39	1.87	1	EL,ER	27.20	2.13	2	I	0.00
		SNAGRIS2		1.78	39.12	1.39	1.78	1	EL,ER	27.20	1.96	2	I	0.00
		SNCOTTS3		1.24	33.90	1.39	1.24	1	EL,ER	27.20	1.52	2	I	0.00
		SNAGGRS4		1.05	36.66	1.39	1.05	1	EL,ER	27.20	1.23	2	I	0.00
		SNS5A		1.04	36.80	1.39	1.04	1	EL,ER	27.20	1.23	2	I	0.00
		SNS6A		1.03	41.25	1.39	1.03	1	EL,ER	27.20	1.23	2	I	0.00
		SNS7B	2	0.91	38.30	1.39	0.91	1	EL,ER	27.20	1.08	2	I	0.00
	TRUCK TRACTOR SEMI-TRAILER (TTST)	TNAGRIT3		1.17	38.77	1.39	1.17	1	EL,ER	27.20	1.33	2	I	0.00
		TNT4A		1.16	38.35	1.39	1.16	1	EL,ER	27.20	1.31	2	I	0.00
		TNT6A		0.96	40.05	1.39	0.96	1	EL,ER	27.20	1.13	2	I	0.00
		TNT7A		0.97	40.69	1.39	0.97	1	EL,ER	27.20	1.12	2	I	0.00
		TNT7B		0.99	41.39	1.39	0.99	1	EL,ER	27.20	1.07	2	I	0.00
		TNAGRIT4		0.95	40.84	1.39	0.95	1	EL,ER	27.20	1.04	2	I	0.00
		TNAGT5A		0.90	40.68	1.39	0.90	1	EL,ER	27.20	1.02	2	I	0.00
		TNAGT5B		0.88	39.75	1.39	0.88	1	EL,ER	27.20	0.99	2	I	0.00

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	RATING LEVEL	A ₁	A ₂
	INVENTORY	1.3	2.17
	OPERATING	1.3	1.3

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE INVENTORY AND OPERATING LEVEL.

COMMENTS:

CONTROLLING LOAD RATING

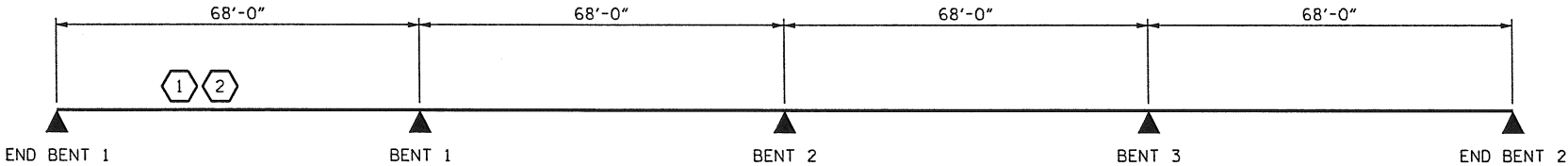
1 DESIGN LOAD RATING (H15)

2 LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER

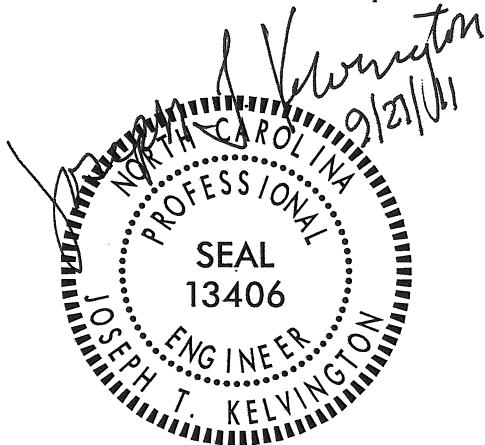


LFR SUMMARY



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CHECKED BY : J. T. KELVINGTON DATE : 8-26-11



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JACKSON COUNTY
STATION: 10+00.00 -L-

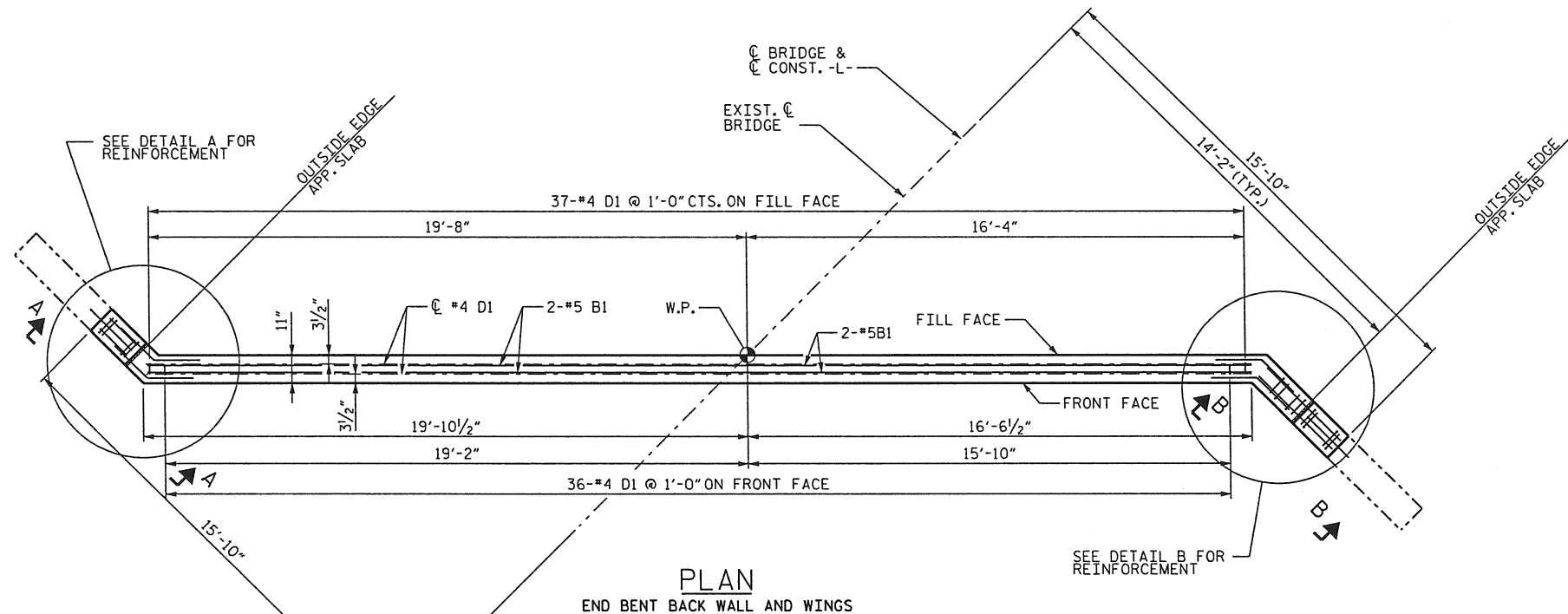
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE RATING SCHEDULE

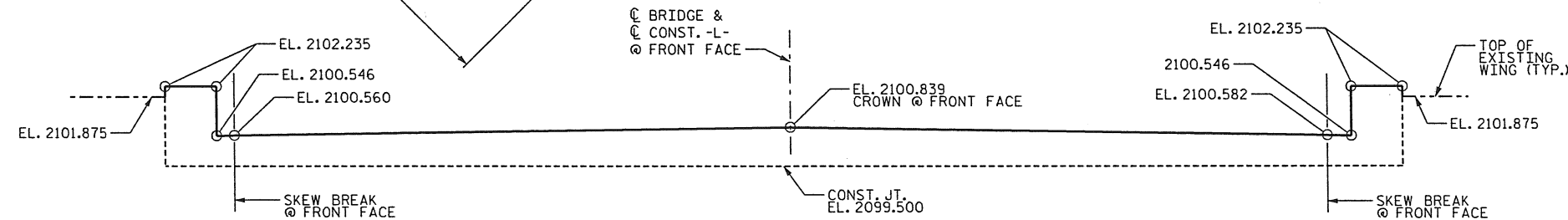
DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS						SHEET NO. S-14
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 17
2			4			

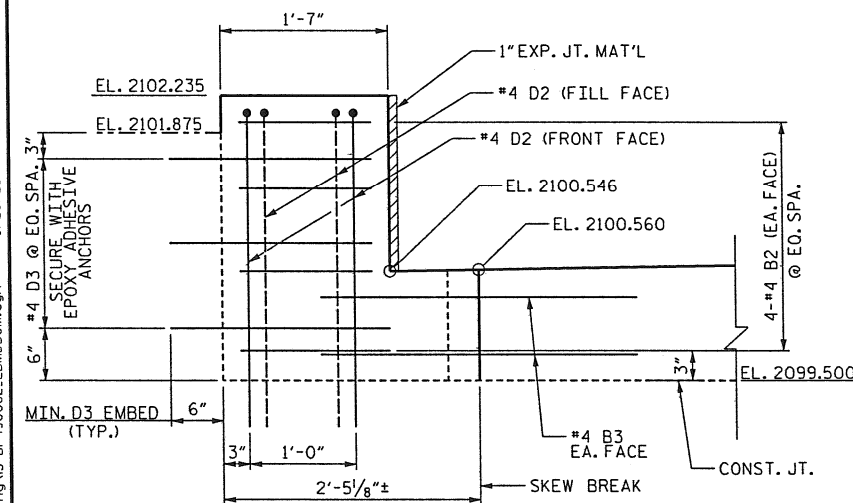
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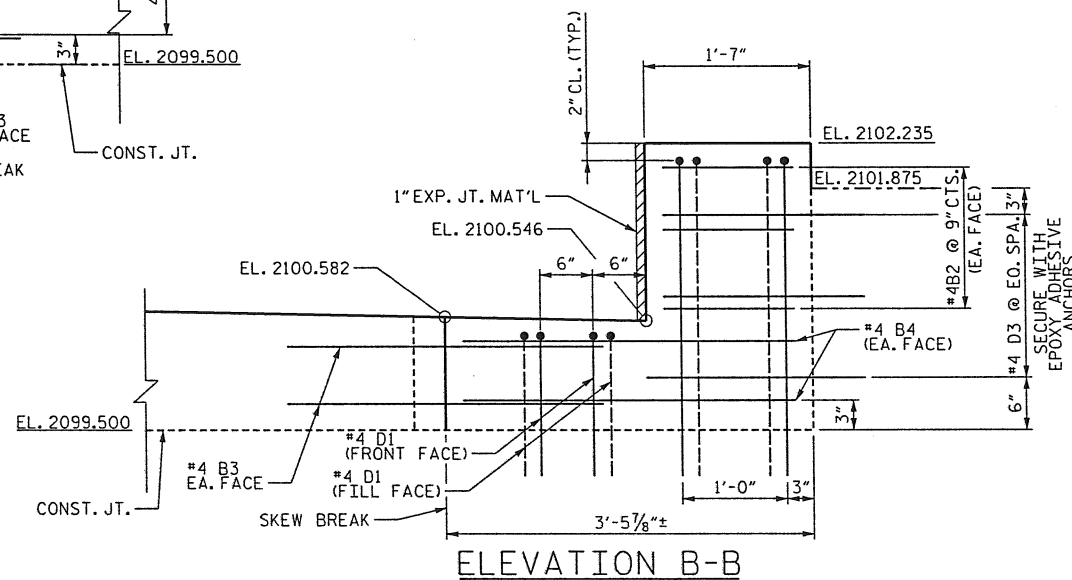
PLAN
END BENT BACK WALL AND WINGS



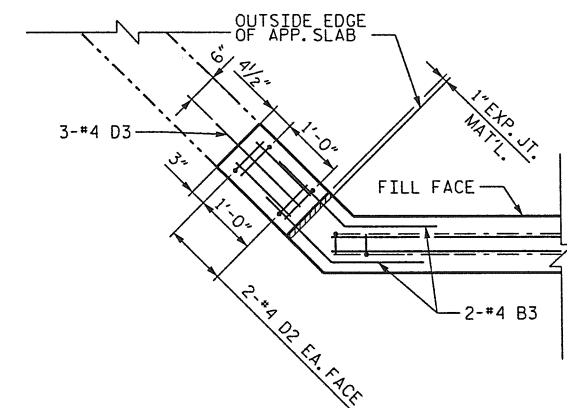
ELEVATION



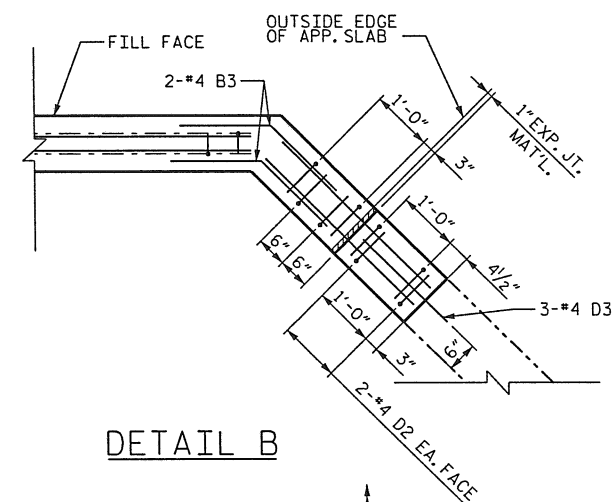
ELEVATION A-A



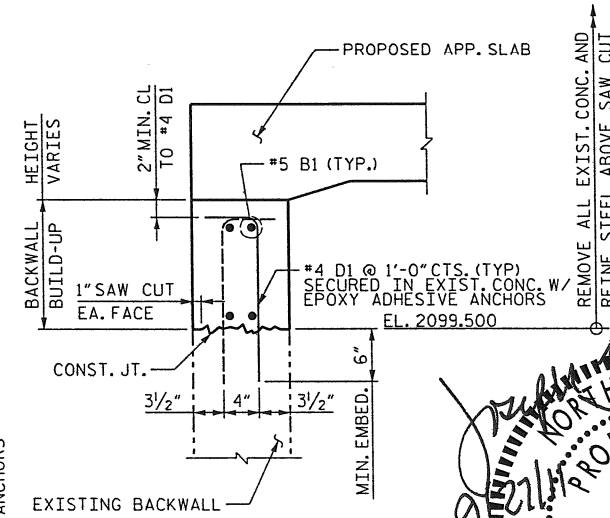
ELEVATION B-B



DETAIL A

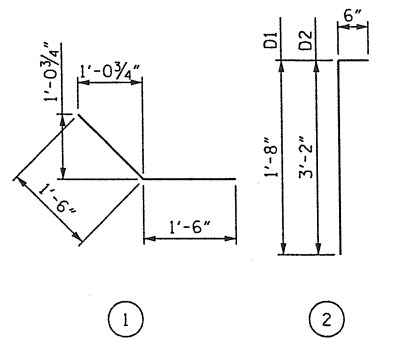


DETAIL B



SECTION C-C

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL

FOR ONE END BENT

FOR VERTICAL CONCRETE BARRIER RAIL ONLY

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#5	STR	18'-8"	156
B2	14	#4	STR	1'-3"	12
B3	8	#5	1	3'-0"	25
B4	4	#4	STR	3'-1"	8
D1	77	#4	2	2'-2"	112
D2	8	#4	2	3'-8"	20
D3	6	#4	STR	1'-11"	8
S1	16	#4	STR	1'-7"	15
S2	12	#4	STR	2'-9"	22

REINFORCING STEEL 378 LBS.

CLASS A CONC. BREAK-DOWN

BACKWALL	1.9 CU. YDS.
BRIDGE SEAT BUILD-UP	0.3 CU. YDS.
TOTAL CLASS A CONC.	2.2 CU. YDS.

NOTES:
FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS.
TESTING OF ADHESIVELY ANCHORED DOWELS IS NOT REQUIRED.
FOR BRIDGE SEAT BUILD-UP DETAILS, SEE SHT. S-12.

PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
END BENT MODIFICATION
DETAILS &
BILL OF MATERIAL
DECK REPLACEMENT FOR
BRIDGE NO. 490082

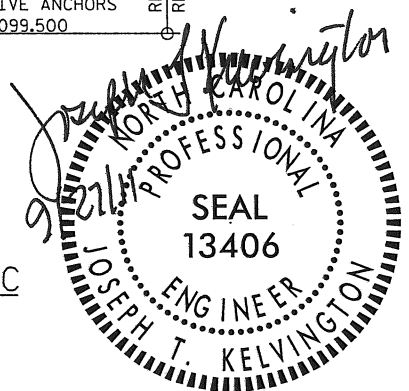
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TOTAL SHEETS 17

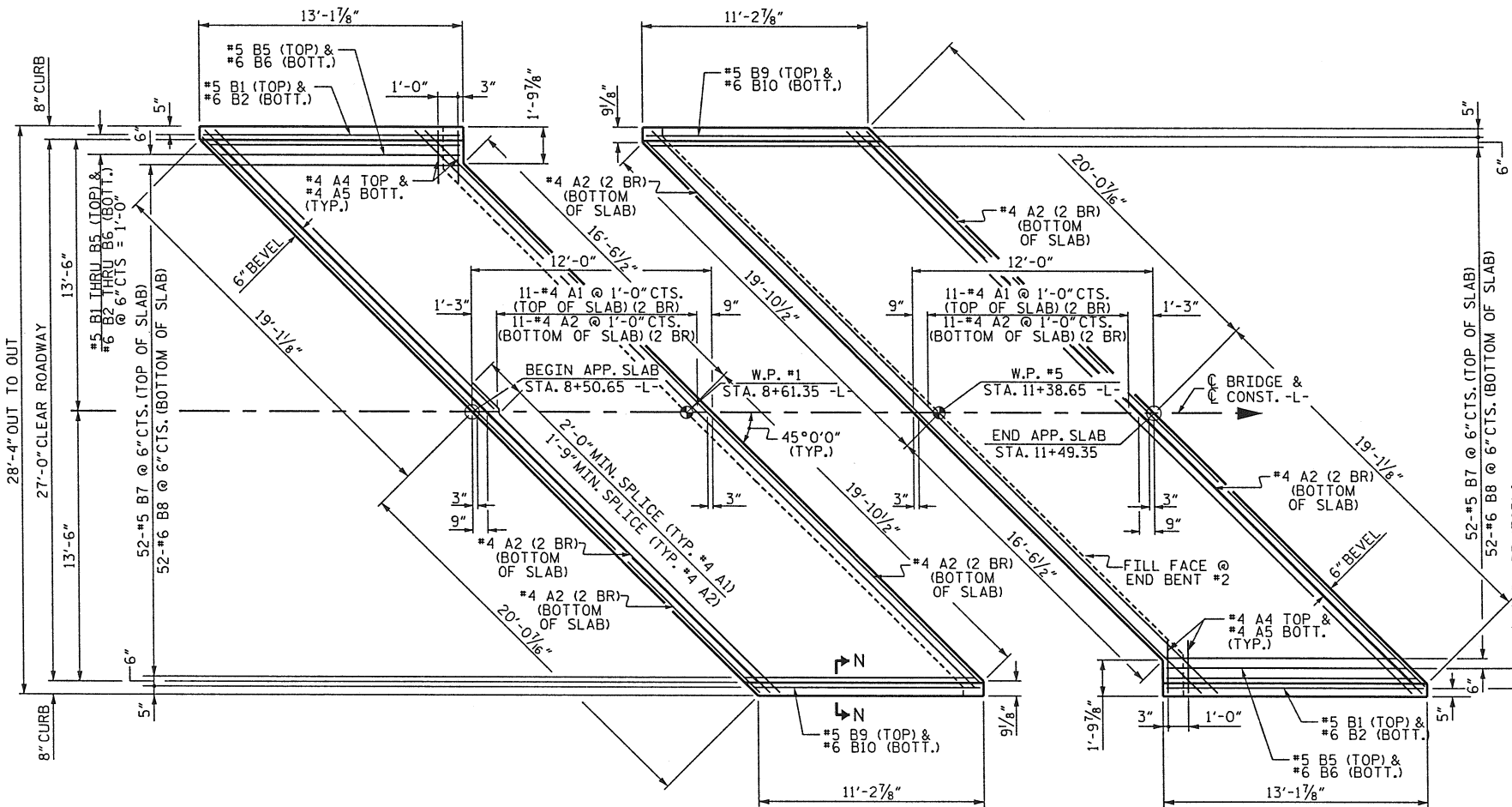


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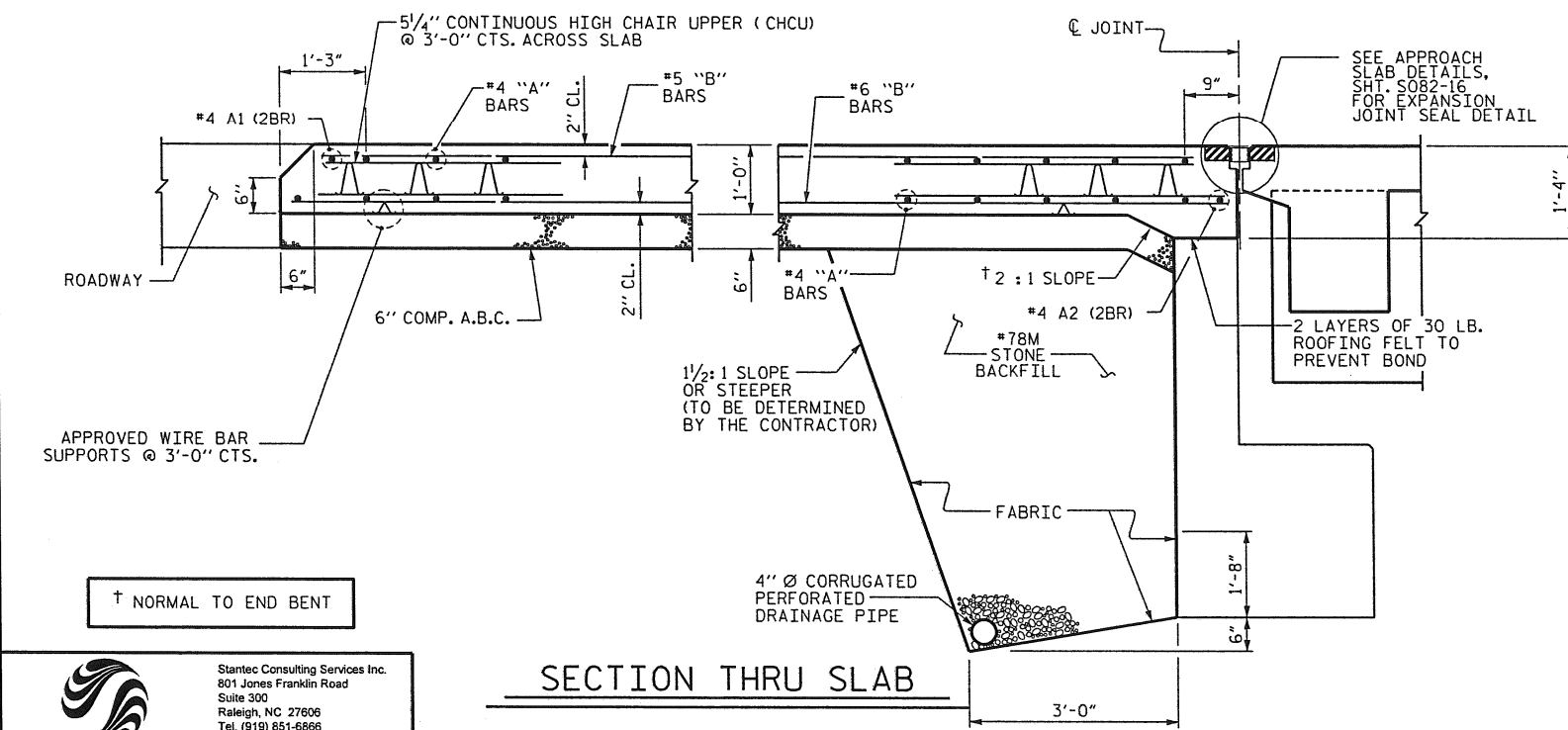
structures\bridge Group 2011\Jackson Co. *82\bridge 082\Drawing\4-BP490082-AS.dgn 9/26/2011 3:57:40 PM belliot



PLAN @ END BENT #1

PLAN @ END BENT #2

DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS
2BR DENOTES 2 BAR RUN



SECTION THRU SLAB

NOTES

FOR BRIDGE APPROACH FILL INCLUDING FABRIC, 4"Ø DRAINAGE PIPE, AND #78M STONE BACKFILL, SEE ROADWAY STANDARD DRAWINGS.

FABRIC SHALL BE TYPE I ENGINEERING FABRIC IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

#78M STONE BACKFILL (CLASS V SELECT MATERIAL) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

#78M STONE BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF BACKWALL FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

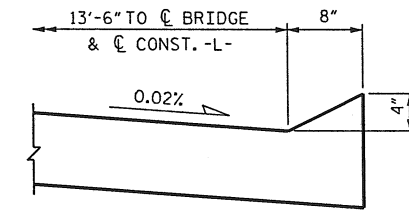
FOR THE 4"Ø DRAINAGE PIPE OUTLET(S), SEE ROADWAY STANDARD DRAWINGS.

THE CONTRACTOR MAY USE 4" TYPE B-25.0B ASPHALT CONCRETE BASE COURSE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE BASE COURSE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB.

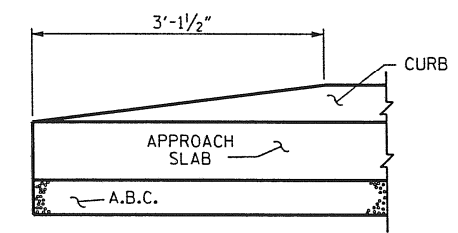
THE CONTRACTOR MAY USE 5" CLASS "A" CONCRETE BASE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE CONCRETE BASE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB. THE CONCRETE SHALL BE FINISHED TO A SMOOTH SURFACE AND A LAYER OF 30 LB ROOFING FELT SHALL BE PLACED BETWEEN THE CONCRETE BASE AND THE APPROACH SLAB TO PREVENT BOND. THE APPROACH SLAB SHALL NOT BE CAST UNTIL THE CONCRETE BASE HAS REACHED AN AGE OF THREE CURING DAYS.

APPROACH SLAB GROOVING IS NOT REQUIRED.

2BR DENOTES 2 BAR RUN.



SECTION N-N



END OF CURB WITHOUT SHOULDER BERM GUTTER

CURB DETAILS

BILL OF MATERIAL						
FOR ONE APPROACH SLAB (2 REQ'D)						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
*A1	24	#4	STR	20'-10"	334	
A2	26	#4	STR	20'-8"	359	
*A4	2	#4	STR	3'-0"	4	
A5	2	#4	STR	3'-0"	4	
*B1	1	#5	STR	12'-9"	13	
B2	1	#6	STR	12'-9"	19	
*B3	1	#5	STR	12'-0"	13	
B4	1	#6	STR	12'-6"	19	
*B5	1	#5	STR	11'-6"	12	
B6	1	#6	STR	12'-0"	18	
*B7	52	#5	STR	10'-5"	565	
B8	52	#6	STR	11'-4"	885	
*B9	1	#5	STR	11'-3"	12	
B10	1	#6	STR	11'-3"	17	
REINFORCING STEEL					LBS.	1321
*EPOXY COATED REINFORCING STEEL					LBS.	953
CLASS AA CONCRETE					C. Y.	13.3

PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

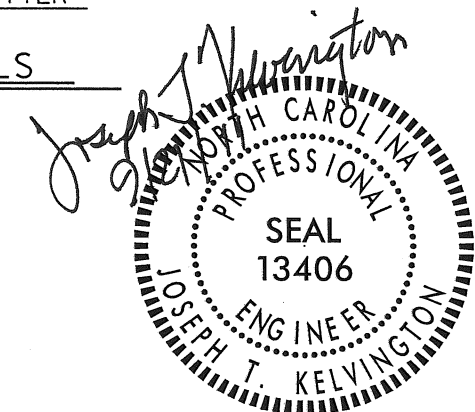
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2			4			

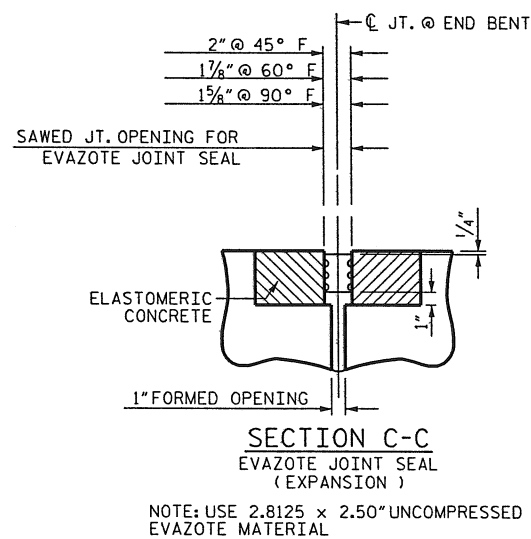
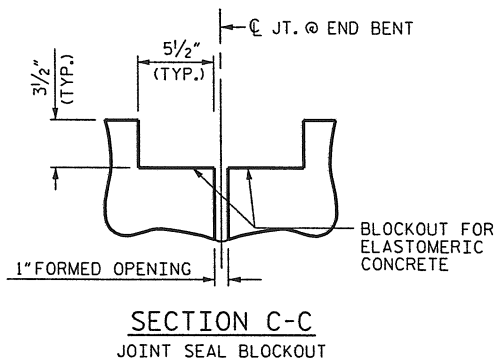
TOTAL SHEETS 17

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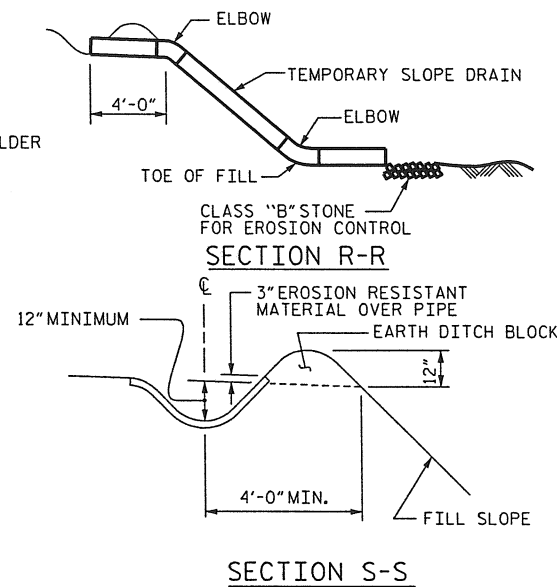
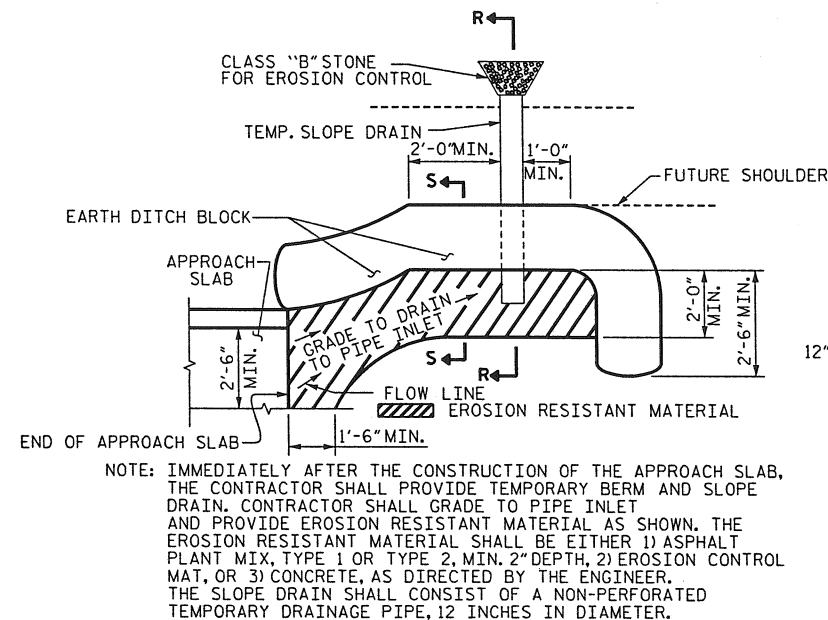




ELASTOMERIC CONCRETE	
END BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
1	9.8
2	9.8
TOTAL	19.6

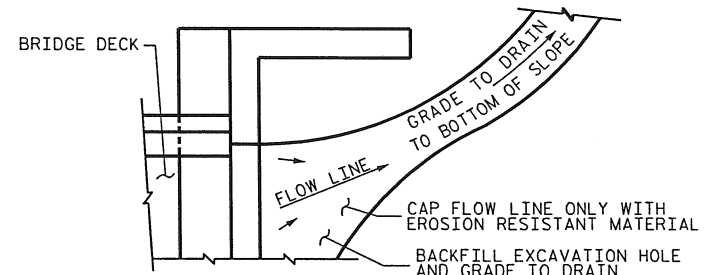
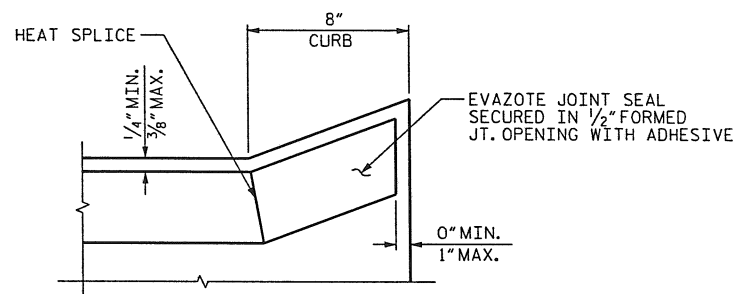
* BASED ON THE MINIMUM BLOCKOUT SHOWN.

NOTES:
FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.
FOR EVAZOTE JOINT SEALS, SEE SPECIAL PROVISIONS.



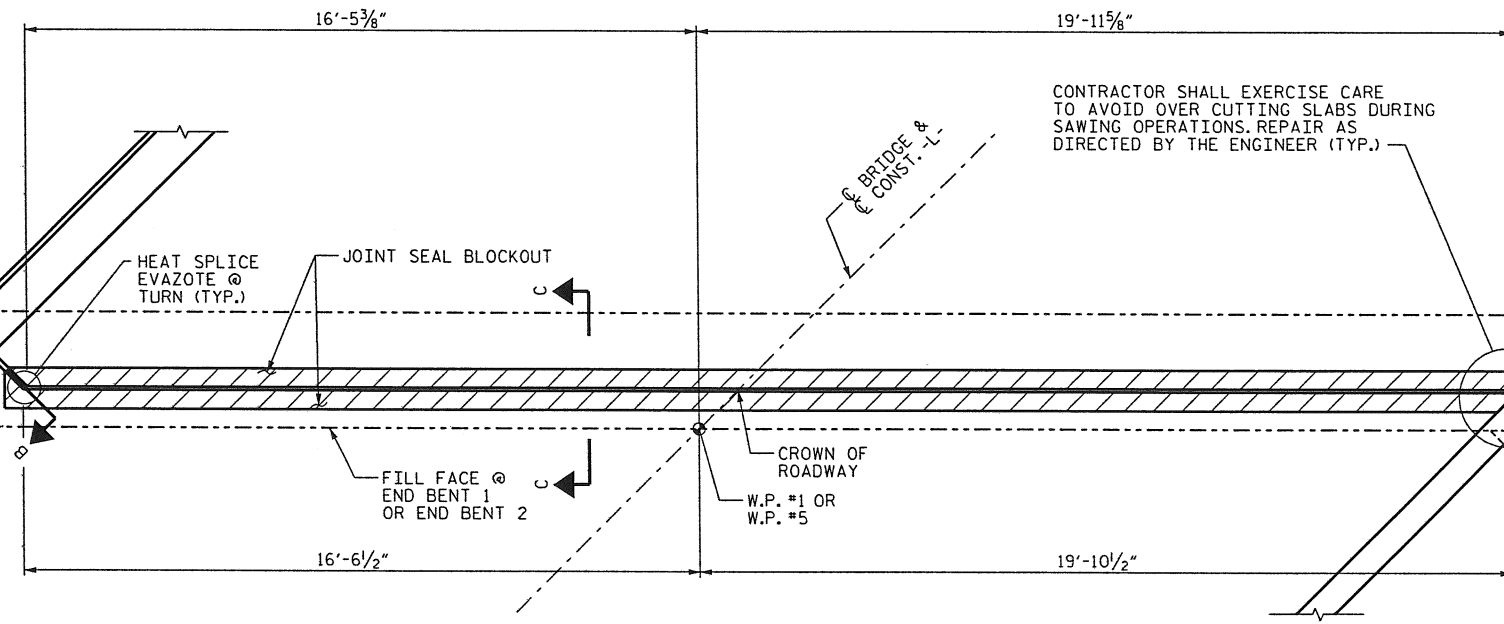
TEMPORARY BERM AND SLOPE DRAIN DETAILS

(TO BE USED WHEN SHOULDER BERM GUTTER IS REQUIRED)



NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS ROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

TEMPORARY DRAINAGE DETAIL



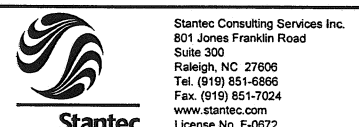
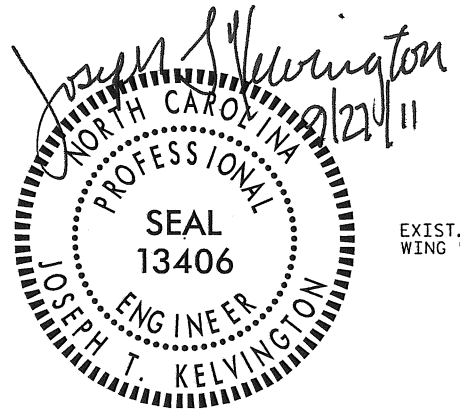
JOINT SEAL BLOCKOUT PLAN

FOR DETAILS NOT SHOWN, SEE SHT. S082-8.

PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD
BRIDGE APPROACH
SLAB DETAILS
DECK REPLACEMENT FOR
BRIDGE NO. 490082

REVISIONS						SHEET NO. S-17
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 17
2			4			



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DRAWN BY: J. L. HENNEKES DATE: 8-26-11
CHECKED BY: J. T. KELVINGTON DATE: 8-26-11

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STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	- - - - -	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	- - - - -	SEE PLANS
IMPACT ALLOWANCE	- - - - -	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	-	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	-	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	-	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	- -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	- - - - -	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	- - - - -	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	- - - - -	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	- - - -	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	- - - - -	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2006 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE. ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED

FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER. DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS. WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0". EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED. WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:


METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB. METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

PROJECT NO. WBS 17BP.14.P.1
JACKSON COUNTY
STATION: 10+00.00 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
BRIDGE NO. 082 ON SR 1002 OVER TUCKASEGEE RIVER					
DECK REPLACEMENT FOR BRIDGE NO. 490082					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS



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DRAWN BY : J. L. HENNEKES DATE : 8-26-11
CHECKED BY : J. T. KELVINGTON DATE : 8-26-11

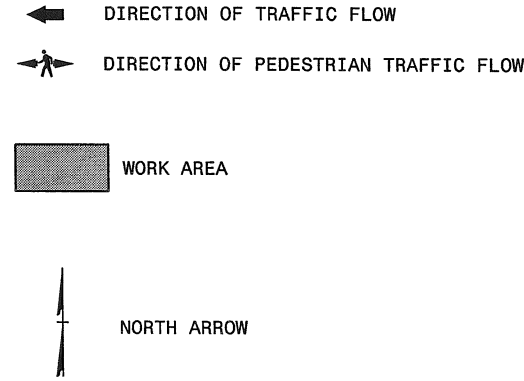
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ROADWAY STANDARD DRAWINGS

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:

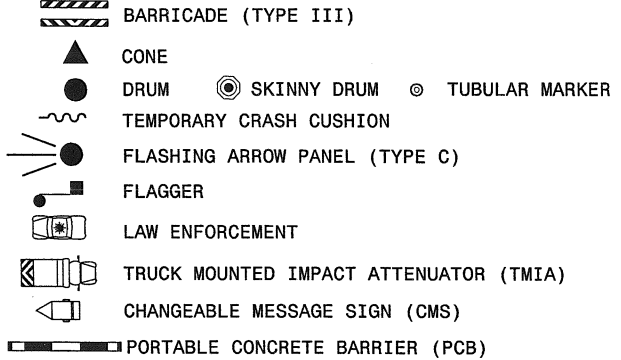
STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGING DEVICES
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS
1250.01	PAVEMENT MARKER SPACING
1253.01	SNOWFLOWABLE RAISED PAVEMENT MARKERS
1261.01	GUARDRAIL & BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL & BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

GENERAL

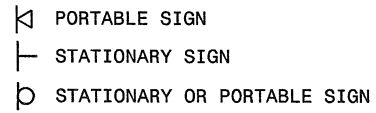


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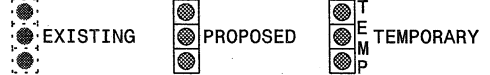
TRAFFIC CONTROL DEVICES



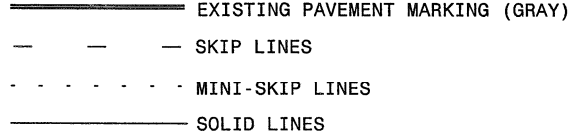
TEMPORARY SIGNING



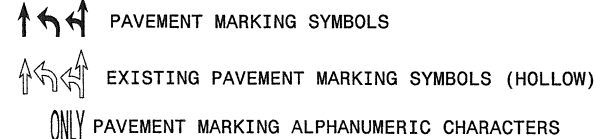
SIGNALS



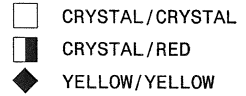
PAVEMENT MARKINGS



PAVEMENT MARKING SYMBOLS



PAVEMENT MARKERS



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APPROVED: _____ DATE: _____

ROADWAY STANDARD DRAWINGS
&
LEGEND

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GENERAL NOTES

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

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.

ROAD CLOSURES

- A) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.
- B) PROVIDE SIGNING AND DEVICES FOR ROAD CLOSURES ACCORDING TO THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE ALL SIGNS AND DEVICES FOR ROAD CLOSURES WHEN NOT IN EFFECT.
- C) PROVIDE OFFSITE DETOUR ROUTE SIGNING AS SHOWN IN THE TRAFFIC MANAGEMENT PLAN. COVER OR REMOVE OFFSITE DETOUR SIGNING WHEN THE DETOUR IS NOT IN OPERATION.
- D) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- E) WHEN CLOSING A ROADWAY OR DRIVEWAY PLACE TYPE III BARRICADES COMPLETELY ACROSS THE ROADWAY OR FROM CURB TO CURB. ATTACH BARRICADE MOUNTED "ROAD CLOSED" SIGN R11-2 AT ALL CLOSURE LOCATIONS. IF LOCAL TRAFFIC IS TO BE MAINTAINED STAGGER THE BARRICADES TO ALLOW ACCESS.
- F) INSTALL SIGNS BEFORE BARRICADES WHEN CLOSING A ROADWAY TO TRAFFIC. REMOVE BARRICADES BEFORE SIGNS WHEN OPENING A ROADWAY TO TRAFFIC. INSTALL/REMOVE ROAD CLOSURE SIGNS AND BARRICADES IN A CONTINUOUS OPERATION AND WITHIN THE SAME CALENDAR DAY.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- G) LANE CLOSURES ARE REQUIRED WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN ANY PORTION OF A TRAVEL LANE. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- H) INSTALL ALL LANE CLOSURES ACCORDING TO THE PLANS, ROADWAY STANDARD DRAWINGS (1101.02), OR AS DIRECTED BY THE ENGINEER.
- I) 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. COVER OR LAY DOWN SIGNS, AND TURN OFF ARROW PANEL AND MESSAGE BOARDS.
- J) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 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 OR A LANE CLOSURE IS INSTALLED.
- K) 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 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

PAVEMENT MARKINGS AND MARKERS

- L) RECORD ALL LOCATIONS AND TYPES OF EXISTING PAVEMENT MARKINGS AS THEY WILL BE REPLACED IN THE SAME MANNER ON THE NEW SURFACE.
- M) UPON COMPLETION OF ALL OTHER CONSTRUCTION OPERATIONS INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	PAVEMENT MARKER
SR-1002	PAINT	SNOWPLOWABLE

MISCELLANEOUS

- N) DIMENSIONS SHOWN IN PLAN ARE APPROXIMATE (+/-); FIELD ADJUST AS NECESSARY OR AS DIRECTED BY THE ENGINEER.
- O) MAINTAIN DRIVEWAY ACCESS AT ALL TIMES, UNLESS OTHERWISE DIRECTED BY ENGINEER.
- P) ENSURE THE OVERSIZE/OVERWEIGHT PERMIT UNIT (919) 733-4740 HAS BEEN ADVISED OF THE ONGOING TRAFFIC OPERATIONS THROUGH THE DIVISION OFFICE.

PROJ. REFERENCE NO.	SHEET NO.
17BP.14.P.1	TMP-2

TRAFFIC CONTROL PHASING

JACKSON CO. BRIDGE #82

STEP 1:
INSTALL DETOUR AND ROAD CLOSURE SIGNING AND CLOSE SR 1002 (OLD CULLOWHEE RD) AS SHOWN ON SHEET TMP-3.

STEP 2:
WITH SR 1002 CLOSED CONSTRUCT BRIDGE WORK AND ROADWAY APPROACH WORK.

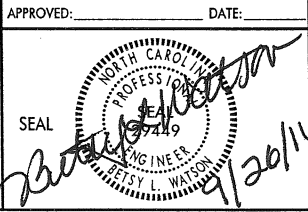
REPLACE EXISTING PAVEMENT MARKINGS.

STEP 3:
UPON COMPLETION OF THE BRIDGE AND ROADWAY WORK REMOVE THE ROAD CLOSURE AND OPEN SR 1002 TO TRAFFIC.

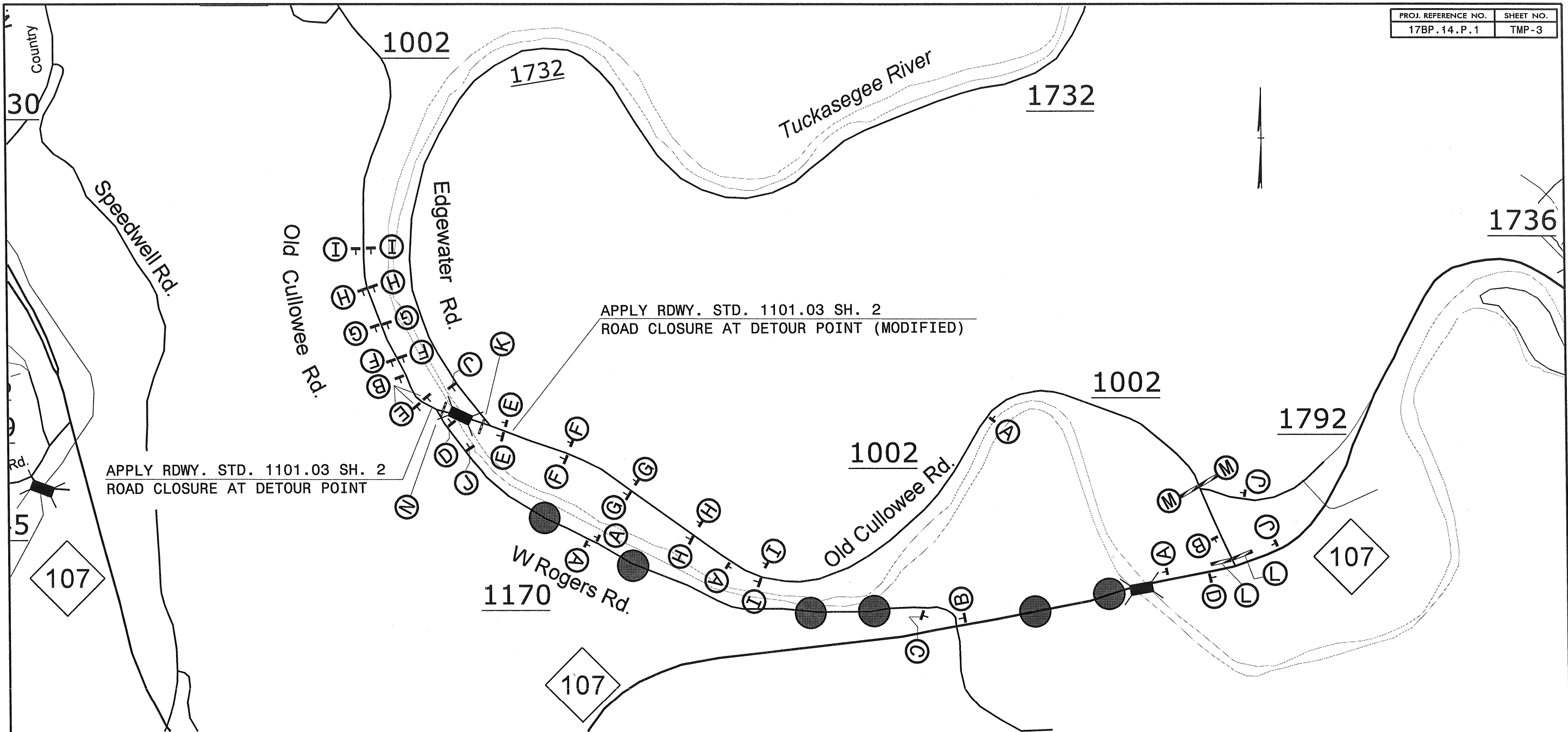
A FLAGGING OPERATION PER ROADWAY STANDARD DRAWING 1101.02 SHEET 1 MAY BE USED ON SR 1002 TO COMPLETE WORK ITEMS SUCH AS FINAL PAVEMENT MARKINGS OR MARKERS.



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GENERAL NOTES
&
TRAFFIC CONTROL PHASING



<p>(A) DETOUR M4-8 24" X 12" M6-3 21" X 15"</p>	<p>(B) DETOUR M4-8 24" X 12" M6-1 21" X 15"</p>	<p>(C) DETOUR M4-8 24" X 12" M6-1 L 21" X 15"</p>	<p>(D) END DETOUR M4-8 A 24" X 18"</p>	<p>(K) TYPE III BARRICADE(S) R11-2 48"X30" ROAD CLOSED</p>	<p>(L) TYPE III WING BARRICADE R11-4 60"X30" ROAD CLOSED TO THRU TRAFFIC M4-10L 48"X18" DETOUR</p>	<p>(M) TYPE III WING BARRICADE R11-3 60"X30" ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY</p>
<p>(E) STOP R1-1 TEMP.</p>	<p>(F) W3-1A 48" X 48"</p>	<p>(G) ROAD CLOSED 1000 FT W20-3 48" X 48"</p>	<p>(H) DETOUR AHEAD W20-2 48" X 48"</p>	<p>(I) ROAD CLOSED AHEAD W20-3 48" X 48"</p>	<p>(J) ROAD CLOSED W20-3 48" X 48"</p>	<p>SP-4R 48" X 12" NEXT RIGHT</p>

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APPROVED: _____ DATE: _____

SEAL:

JACKSON CO. BRIDGE #82

ROAD CLOSURE & DETOUR ROUTE

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