

PROJECT: BP-5500L

CONTRACT: DF00077



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

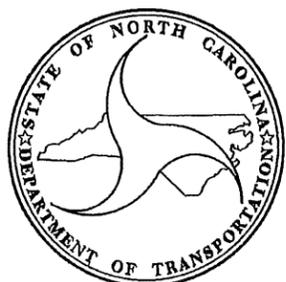
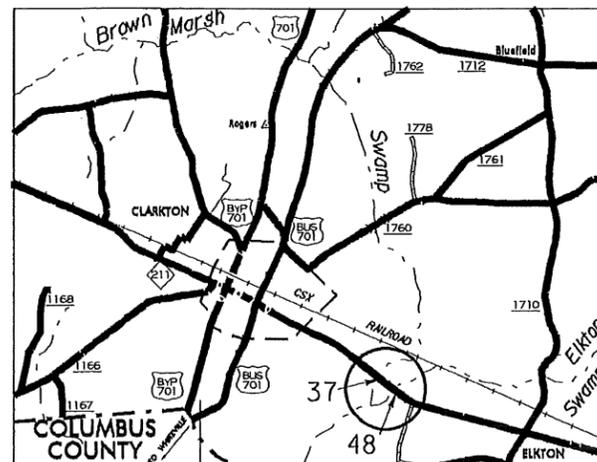
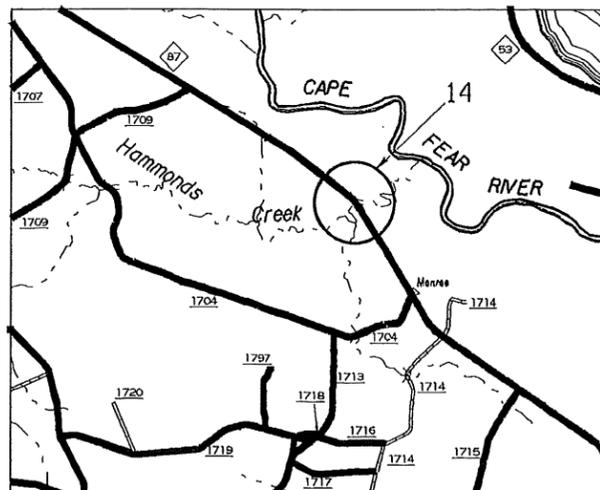
BLADEN & CUMBERLAND COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SUBJECT NO.	TOTAL SHEETS
N.C.	BP-5500L	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50070.1.1		P.E.	
50070.3.FD12	BRSTP-0087(32)	CONST.	

LOCATION: BLADEN COUNTY:
BRIDGE #14 ON NC 87 OVER HAMMOND CREEK.
BRIDGE #37 ON NC 211 OVER BROWN MARSH SWAMP.
BRIDGE #48 ON NC 211 OVER ELKTON SWAMP CREEK.

CUMBERLAND COUNTY:
BRIDGE #220 ON SR2299 (WEST RUSSELL ST.) OVER BLOUNT'S CREEK
BRIDGE #221 ON SR2299 (EAST RUSSELL ST.) OVER BLOUNT'S CREEK

TYPE OF WORK: BRIDGE PRESERVATION - SUBSTRUCTURE AND DECK REPAIR OF EXISTING BRIDGE STRUCTURES.



DESIGN DATA

BLADEN COUNTY
#14 ADT 2012 = 3,700
#37 ADT 2010 = 1,800
#48 ADT 2010 = 1,800

CUMBERLAND COUNTY
#220 ADT 2011 = 18,500
#221 ADT 2011 = 18,500

PROJECT LENGTH

BLADEN COUNTY
BRIDGE #14 = 0.03 MILE
BRIDGE #37 = 0.02 MILE
BRIDGE #48 = 0.02 MILE

CUMBERLAND COUNTY
BRIDGE #220 = 0.02 MILE
BRIDGE #221 = 0.02 MILE

Prepared in the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

RICK NELSON, P.E.
PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

LETTING DATE:
SEPTEMBER 24, 2014

Timothy M. Sherrill
NORTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
NO. 18565
TIMOTHY M. SHERRILL
08/25/14
TIMOTHY M. SHERRILL, P.E.
PROJECT DESIGN ENGINEER

PROJECT: BP-5500L

CONTRACT: DF00077



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BLADEN & CUMBERLAND COUNTIES

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP-5500L	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50070.1.1		P.E.	
50070.3.FD12	BRSTP-0087(32)	CONST.	

LOCATION: BLADEN COUNTY:

BRIDGE #14 ON NC 87 OVER HAMMOND CREEK.
BRIDGE #37 ON NC 211 OVER BROWN MARSH SWAMP.
BRIDGE #48 ON NC 211 OVER ELKTON SWAMP CREEK.

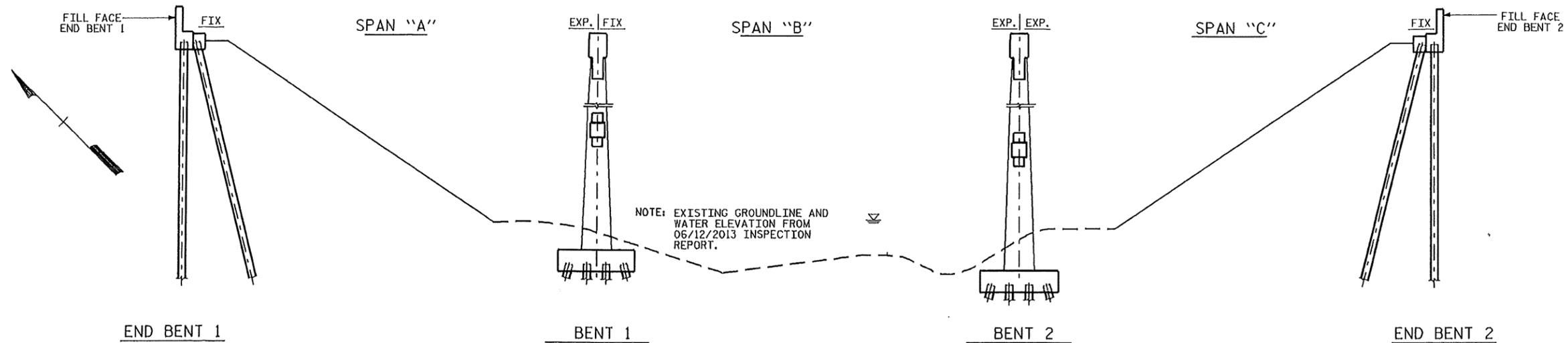
CUMBERLAND COUNTY:

BRIDGE #220 ON SR2299 (WEST RUSSELL ST.) OVER BLOUNT'S CREEK
BRIDGE #221 ON SR2299 (EAST RUSSELL ST.) OVER BLOUNT'S CREEK

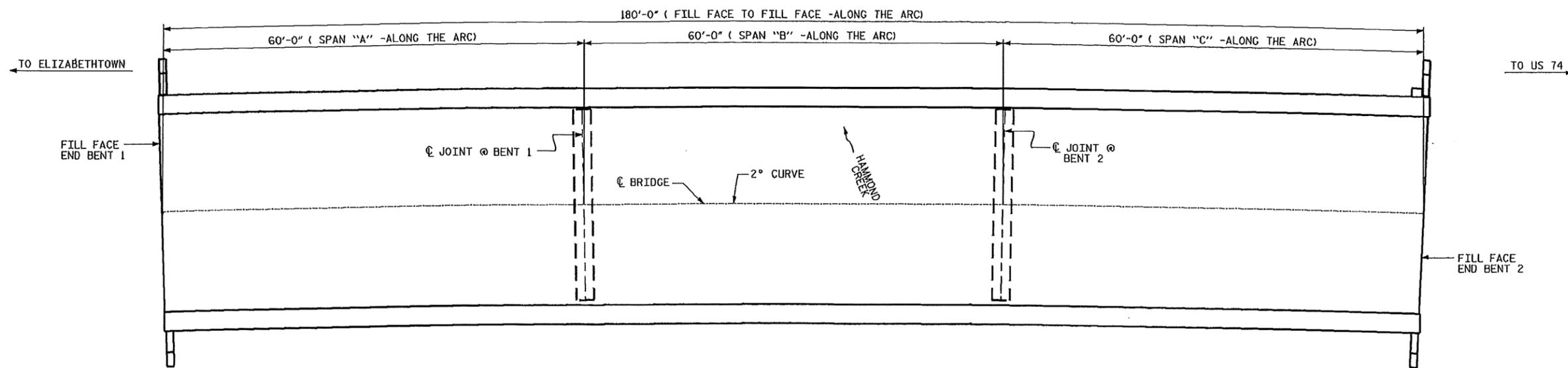
TYPE OF WORK: BRIDGE PRESERVATION - SUBSTRUCTURE AND DECK REPAIR OF EXISTING BRIDGE STRUCTURES (ALL BRIDGES)

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
1	TITLE SHEET
1A	INDEX OF SHEETS
S-1 THRU S-8	BLADEN 14
S-9 THRU S-19	BLADEN 37
S-20 THRU S-25	BLADEN 48
S-26 THRU S-30	CUMBERLAND 220
S-31 THRU S-35	CUMBERLAND 221



PROFILE ALONG C BRIDGE



PLAN

SCOPE OF WORK:

- PARTIALLY REMOVE BRIDGE DECK CONCRETE, USING SCARIFICATION AND HYDRO-DEMOLITION METHODS.
- OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE.
- EXISTING JOINT DEMOLITION.
- RECONSTRUCT BRIDGE DECK JOINTS AND INSTALL NEW FOAM JOINT SEALS.
- GROOVE CONCRETE BRIDGE DECK.
- MILL APPROACH PAVEMENT.
- PLACE NEW APPROACH PAVEMENT ASPHALT.
- CLEAN AND PAINT SUPERSTRUCTURE STEEL.

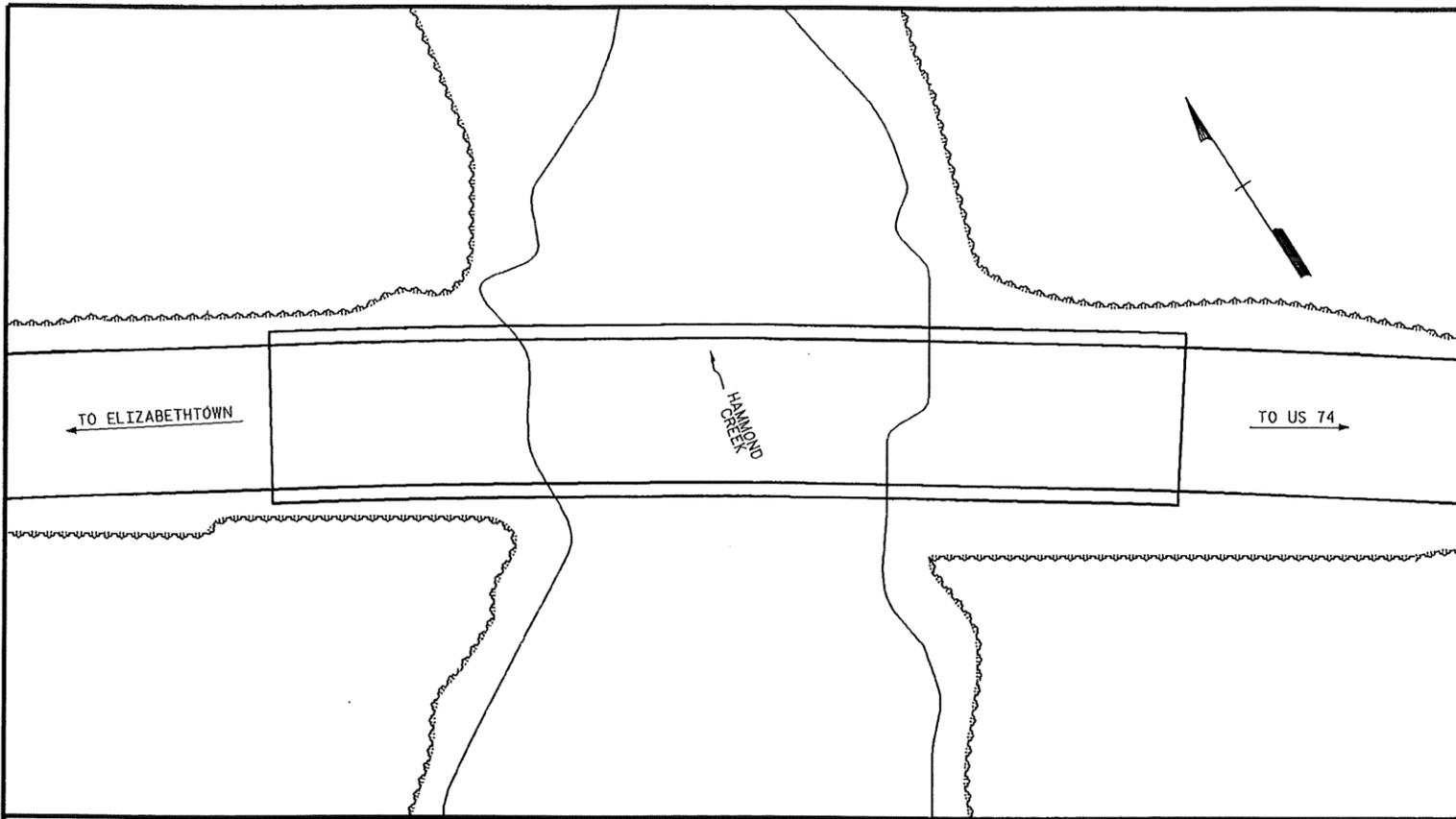
PROJECT NO. BP5500-L
BLADEN COUNTY
 BRIDGE NO. 14

SHEET 1 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING					
BRIDGE 14 ON NC 87 OVER HAMMOND CREEK					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-1
					TOTAL SHEETS 35



DRAWN BY : S. J. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014



LOCATION SKETCH

NOTES

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF BRIDGE.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

FOR "SCARIFYING BRIDGE DECK", "HYDRO-DEMOLITION OF BRIDGE DECK", AND "CLASS II SURFACE PREPARATION" SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE MANAGING HYDRO-DEMOLITION WATER SPECIAL PROVISION.

FOR OVERLAY OF BRIDGE WITH "LATEX MODIFIED CONCRETE", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

FOR "PAINTING EXISTING STRUCTURE", 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 "BRIDGE JOINT DEMOLITION", SEE SPECIAL PROVISIONS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

DURING CONSTRUCTION, BERMS OR APPROPRIATE MEASURES SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT FLOW OR MIGRATE INTO ACTIVE TRAVEL LANES.

TRAFFIC CONTROL WILL BE PROVIDED BY NCDOT DIVISION 6. THE CONTRACTORS WORK SHALL BE SCHEDULED AND COORDINATED WITH DIVISION 6, SO THAT PROPER TRAFFIC CONTROL MEASURES ARE IMPLEMENTED PRIOR TO THE CONTRACTOR BEGINNING ANY WORK. DIVISION 6 SHALL BE NOTIFIED 2 WEEKS PRIOR TO ANTICIPATED START OF CONSTRUCTION. DIVISION 6 SHALL BE GIVEN A MINIMUM OF 48 HOURS NOTICE FOR CHANGES IN TRAFFIC CONTROL.

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION SQ.YDS.	LATEX MODIFIED CONCRETE OVERLAY	PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY	FOAM JOINT SEALS	CLEANING & REPAINTING OF BRIDGE #14	PAINTING CONTAINMENT FOR BRIDGE #14	POLLUTION CONTROL	BRIDGE JOINT DEMOLITION	HYDRO-DEMOLITION OF BRIDGE DECK	SCARIFYING BRIDGE DECK
SQ.YDS.	TONS	TON	SQ. FT.	SQ.YDS.	C.Y.	SQ.YDS.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	SQ. FT.	SQ.YDS.	SQ.YDS.
311	28	1.7	4,434	12.9	35.5	553.6	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	51.3	553.6	553.6

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 14

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

BRIDGE 14 ON NC 87
 OVER HAMMOND CREEK

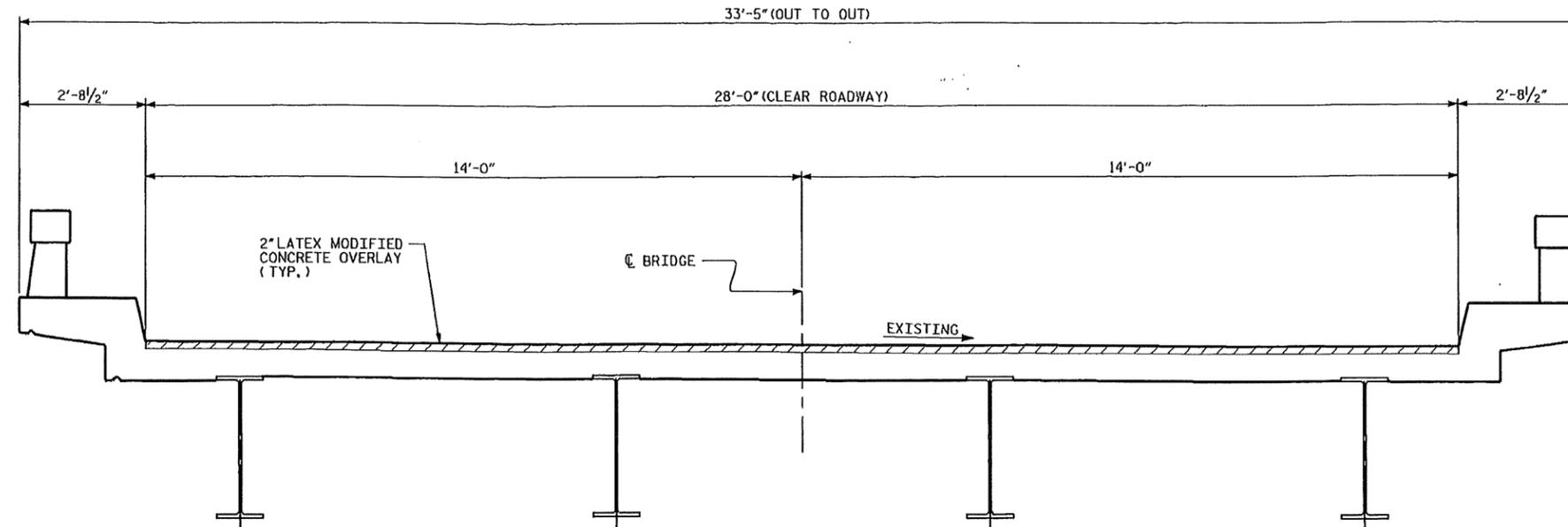
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	SHEET NO.
1			3			S-2
2			4			TOTAL SHEETS 35



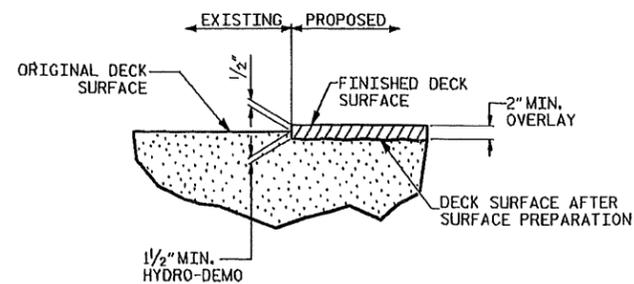
DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

NOTE:

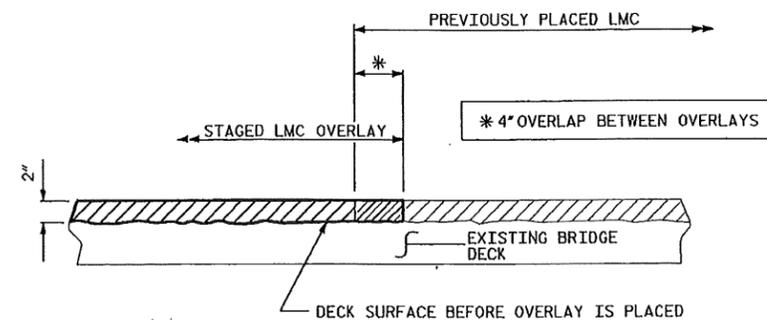
STAGING OF LATEX MODIFIED CONCRETE (LMC) OVERLAY IS NOT INDICATED ON PLANS. IN THE EVENT STAGED CONSTRUCTION IS UTILIZED OR IF LONGITUDINAL JOINTS ARE NECESSARY, LONGITUDINAL CONSTRUCTION JOINTS OF LMC SHALL BE LOCATED ALONG CENTERLINE OR EDGE OF TRAVEL LANES. WHEN PREPARING THE SURFACE FOR LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE HYDR-DEMOLITIONED FOR A DISTANCE OF 4-INCHES FROM THE LMC EDGE. NEW LMC SHALL BE PLACED IN THE 4-INCH OVERLAP, AS PART OF NEW LMC STAGE PLACEMENT.



TYPICAL SECTION



DETAIL FOR LATEX MODIFIED CONCRETE OVERLAY



SECTION THRU DECK
STAGED LMC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. BP-5500L
BLADEN COUNTY
BRIDGE NO. 14

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-3	
TYPICAL SECTION & LATEX MODIFIED CONCRETE DETAILS						TOTAL SHEETS 35	
REVISIONS						SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE	S-3	
1			3			TOTAL SHEETS	
2			4			35	

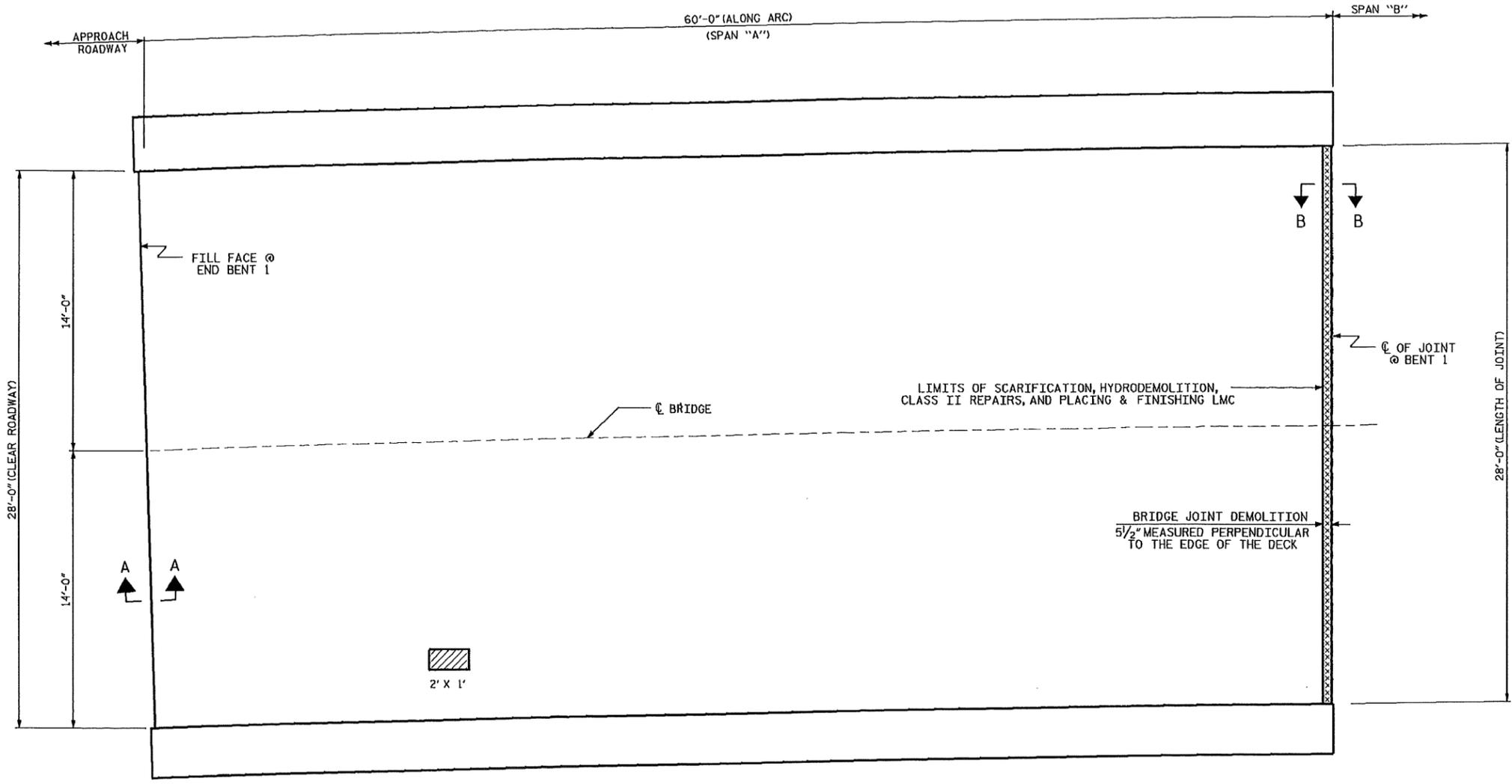


DRAWN BY : S. T. SANDOR DATE : 08/2014
CHECKED BY : R. WEISZ DATE : 08/2014

SUMMARY OF QUANTITIES FOR SPAN "A"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	185.1 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	185.1 SY	
CLASS II SURFACE PREPARATION	0.2 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	12.83 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP, BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "A"
(SEE SHEET S-7 FOR SECTIONS A-A AND B-B.)

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 14

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN "A"**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			35



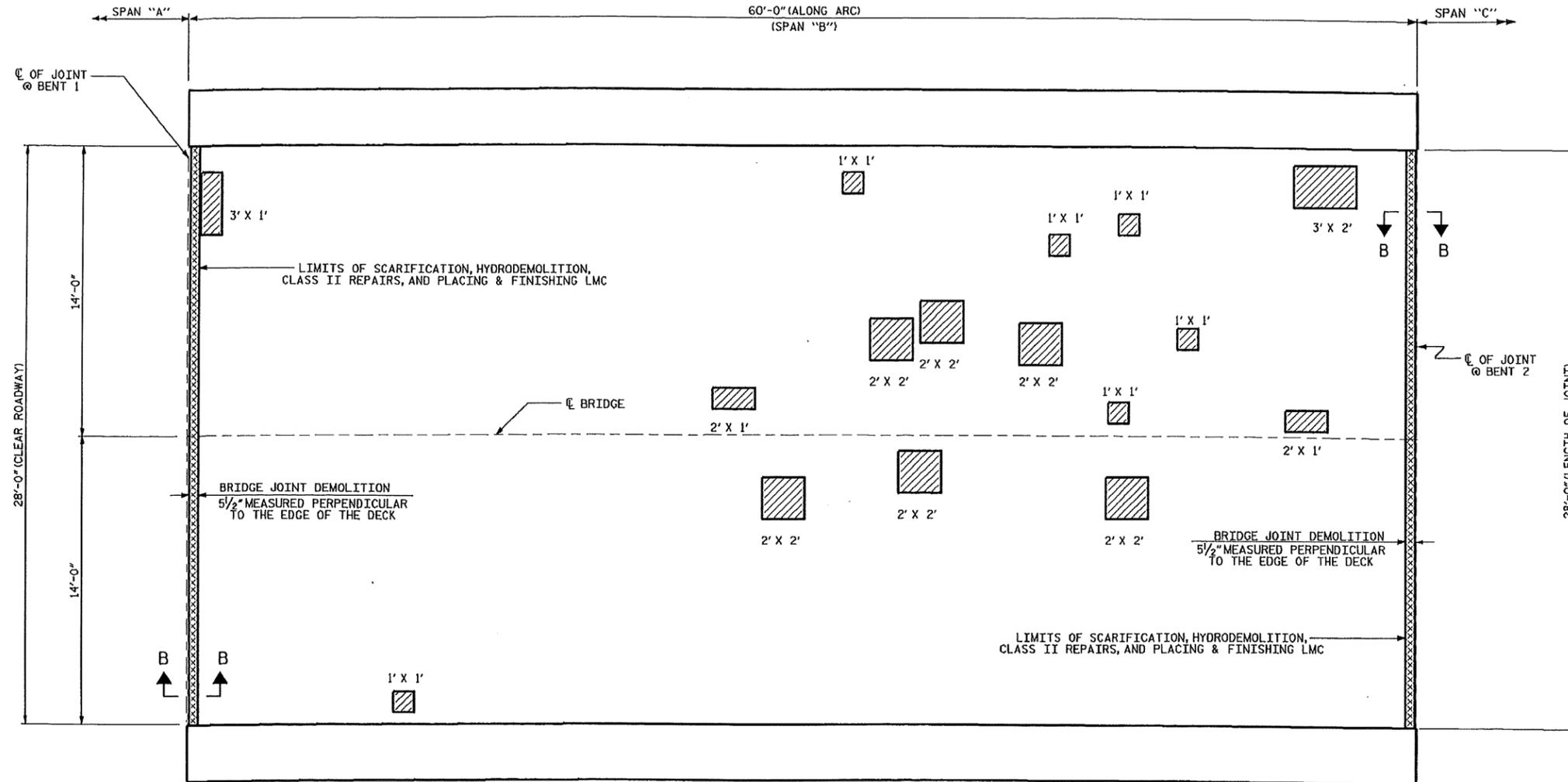
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SUMMARY OF QUANTITIES FOR SPAN "B"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	183.4 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	183.4 SY	
CLASS II SURFACE PREPARATION	4.8 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	25.66 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP, BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "B"
(SEE SHEET S-7 FOR SECTION B-B.)

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 14

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN "B"

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-5
1			3			TOTAL SHEETS
2			4			35



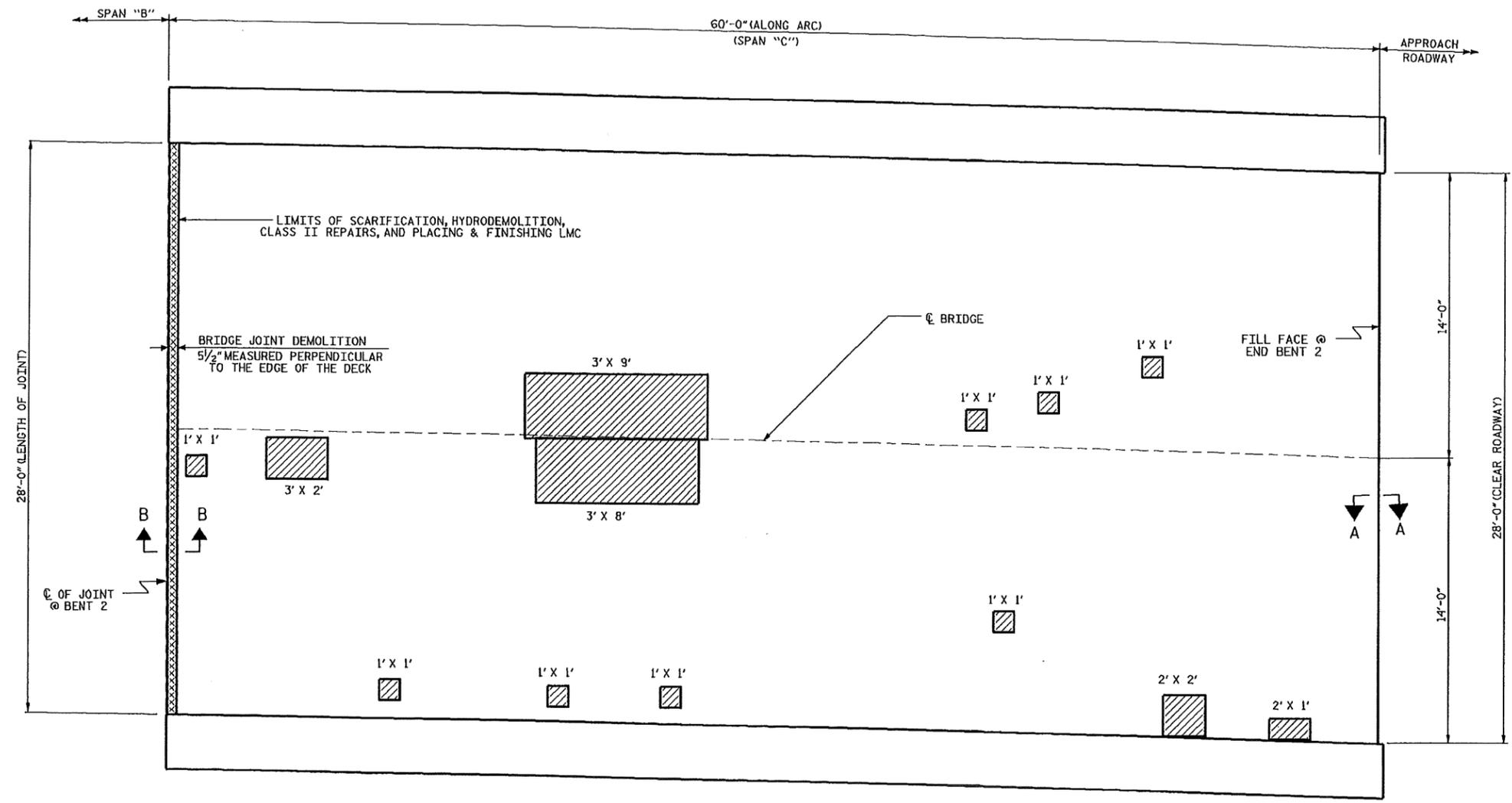
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 CHECKED BY : R. WEISZ DATE : 08/2014

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SUMMARY OF QUANTITIES FOR SPAN "C"

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	185.1 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	185.1 SY	
CLASS II SURFACE PREPARATION	7.9 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
JOINT DEMOLITION	12.83 SF	

PAYMENT FOR CLASS II AND CLASS III SURFACE PREP, BASED UPON SQUARE FEET OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING HYDRO-DEMOLITION OF BRIDGE DECK, SEE "OVERLAY SURFACE PREPARATION" SPECIAL PROVISION.



-  SCARIFYING BRIDGE DECK
-  APPROX. AREA CLASS II SURFACE PREPARATION
-  BRIDGE JOINT DEMOLITION

SPAN "C"
(SEE SHEET S-7 FOR SECTIONS A-A AND B-B.)

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 14

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

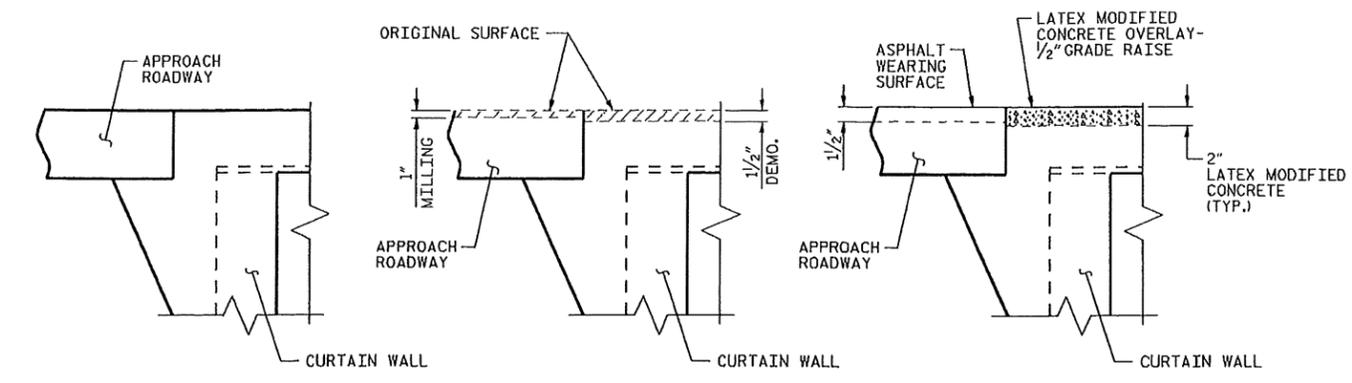
SURFACE PREPARATION
 SPAN "C"

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			5-6
2			4			35



DRAWN BY : S. T. SANDOR DATE : 08/2014
 CHECKED BY : R. WETZ DATE : 08/2014

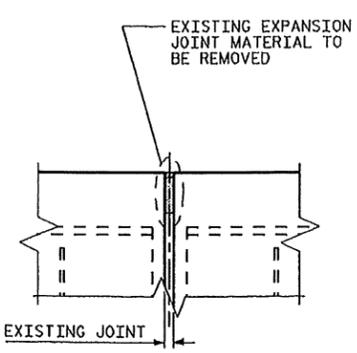
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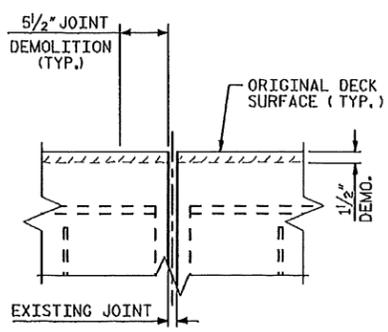
SECTION A-A
(EXISTING)

SECTION A-A
(MINIMUM EXISTING DEMOLITION)

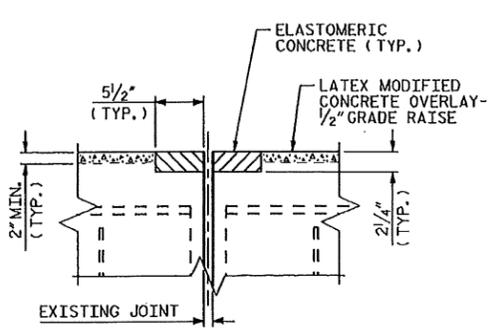
SECTION A-A
(PROPOSED)



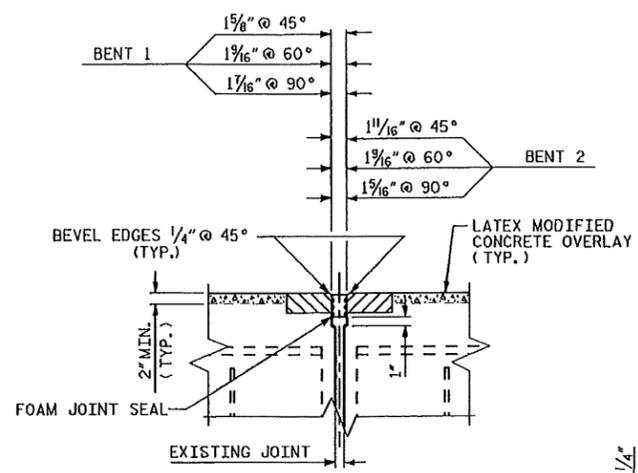
SECTION B-B
(EXISTING)



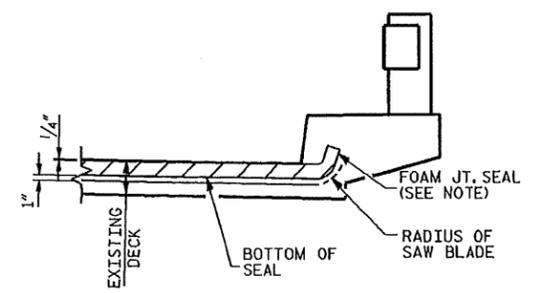
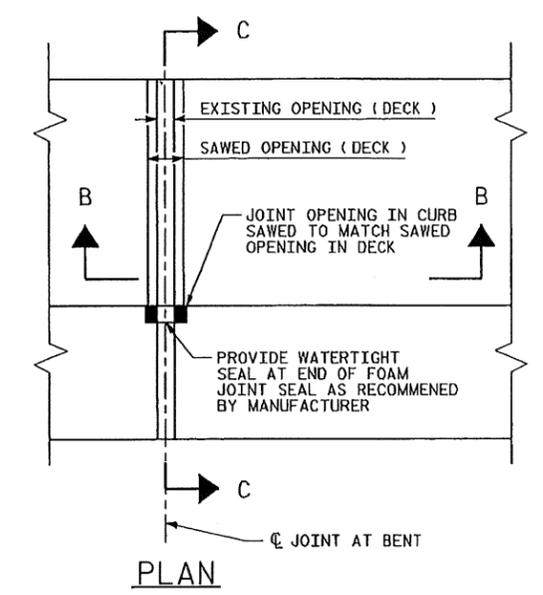
SECTION B-B
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION B-B
(PROPOSED JOINT PRE-SAWED DIMENSIONS)



SECTION B-B
(PROPOSED FOAM JOINT SEAL)



SECTION C-C
JOINT SEAL DETAILS AT BENT

NOTES:
 FOR "FOAM JOINT SEALS" SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.
 THE CONTRACTOR SHALL FIELD VERIFY EXISTING JOINT WIDTHS PRIOR TO JOINT DEMOLITION AND NOTIFY THE ENGINEER IF WIDTHS VARY SIGNIFICANTLY FROM PLANS.

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED

HYDRO-DEMOLITION OR EXCAVATION OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE. DEMOLISH BRIDGE JOINT TO THE NECESSARY DEPTH, SUCH AS ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE SUBSTRATE, NOT LATEX MODIFIED CONCRETE.

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 14

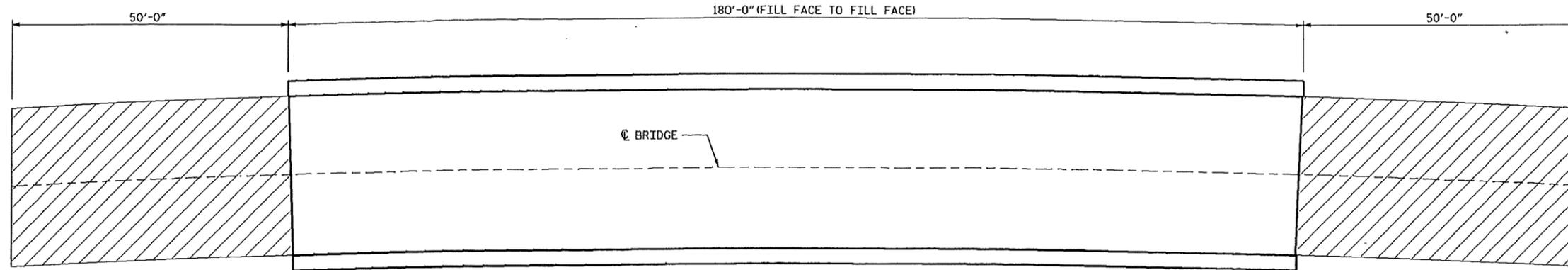
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS 35

DRAWN BY : S. T. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014



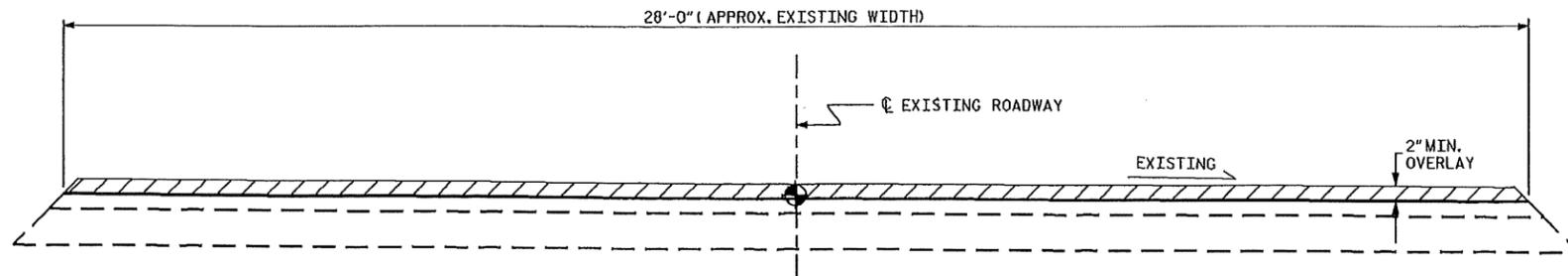
NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.



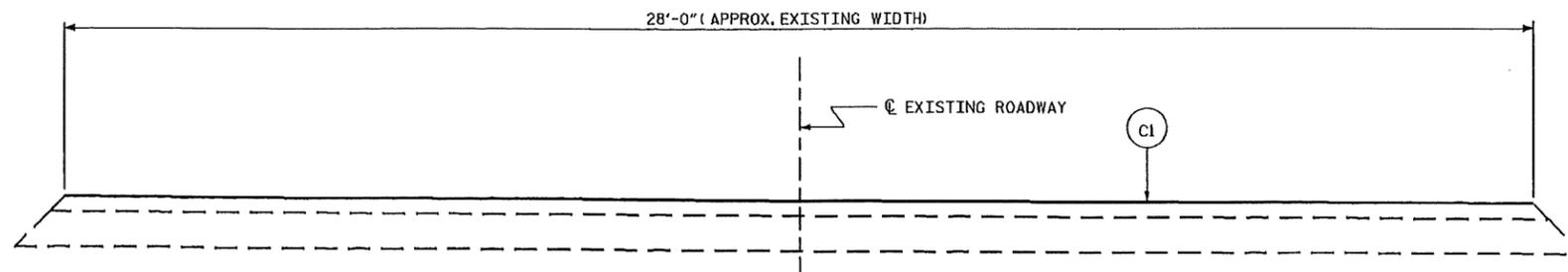
PLAN

 INCIDENTAL MILLING



TYPICAL ROADWAY MILLING SECTION

CI PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.



TYPICAL PROPOSED ROADWAY SECTION

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 14

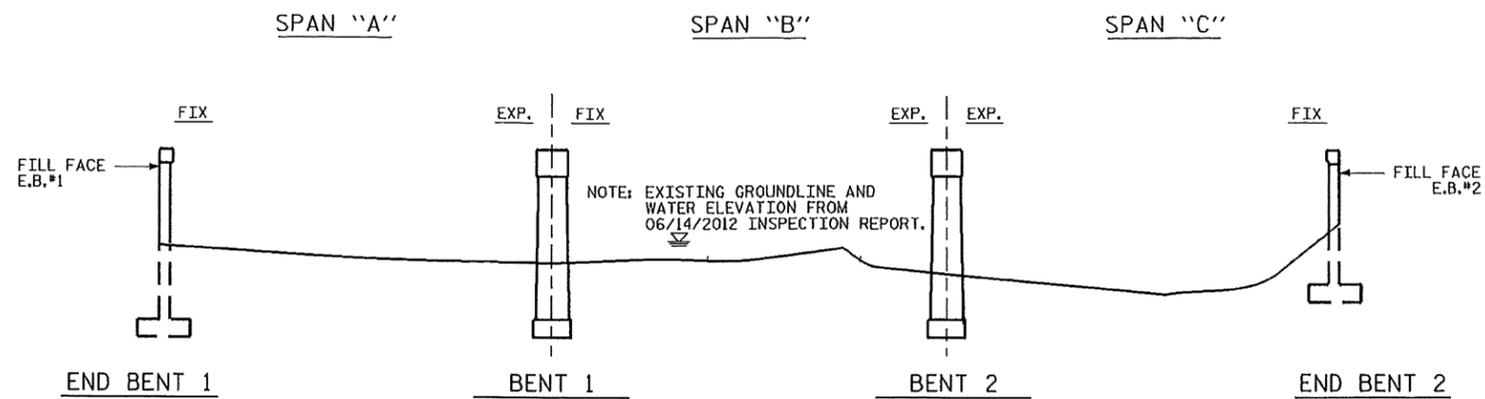
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

APPROACH MILLING
 AND TYPICAL ROADWAY
 SECTIONS

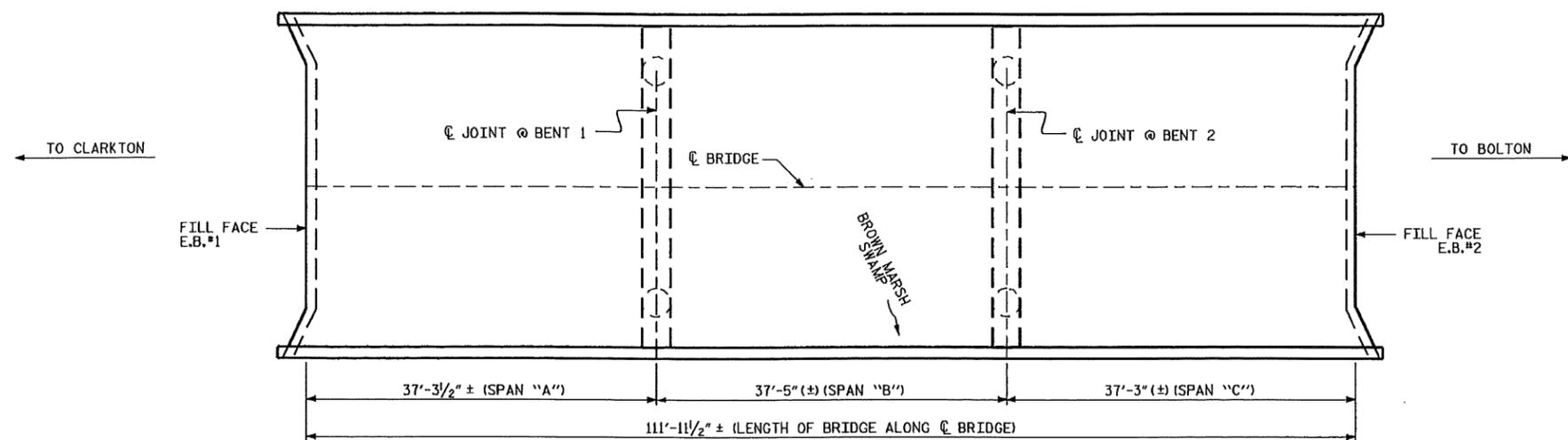
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			35



DRAWN BY : S. T. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014



SECTION ALONG CL BRIDGE



PLAN

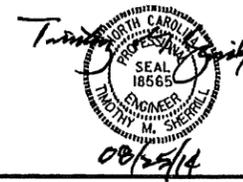
SCOPE OF WORK:

- BLASTING AND CLEANING OF BRIDGE DECK.
- APPLICATION OF EPOXY OVERLAY SYSTEM.
- EXISTING JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL NEW JOINT SEALS.
- MILL APPROACH PAVEMENT.
- PLACE NEW APPROACH PAVEMENT ASPHALT.
- CLEAN AND PAINT SUPERSTRUCTURE STEEL.
- SUBSTRUCTURE CONCRETE REPAIR.

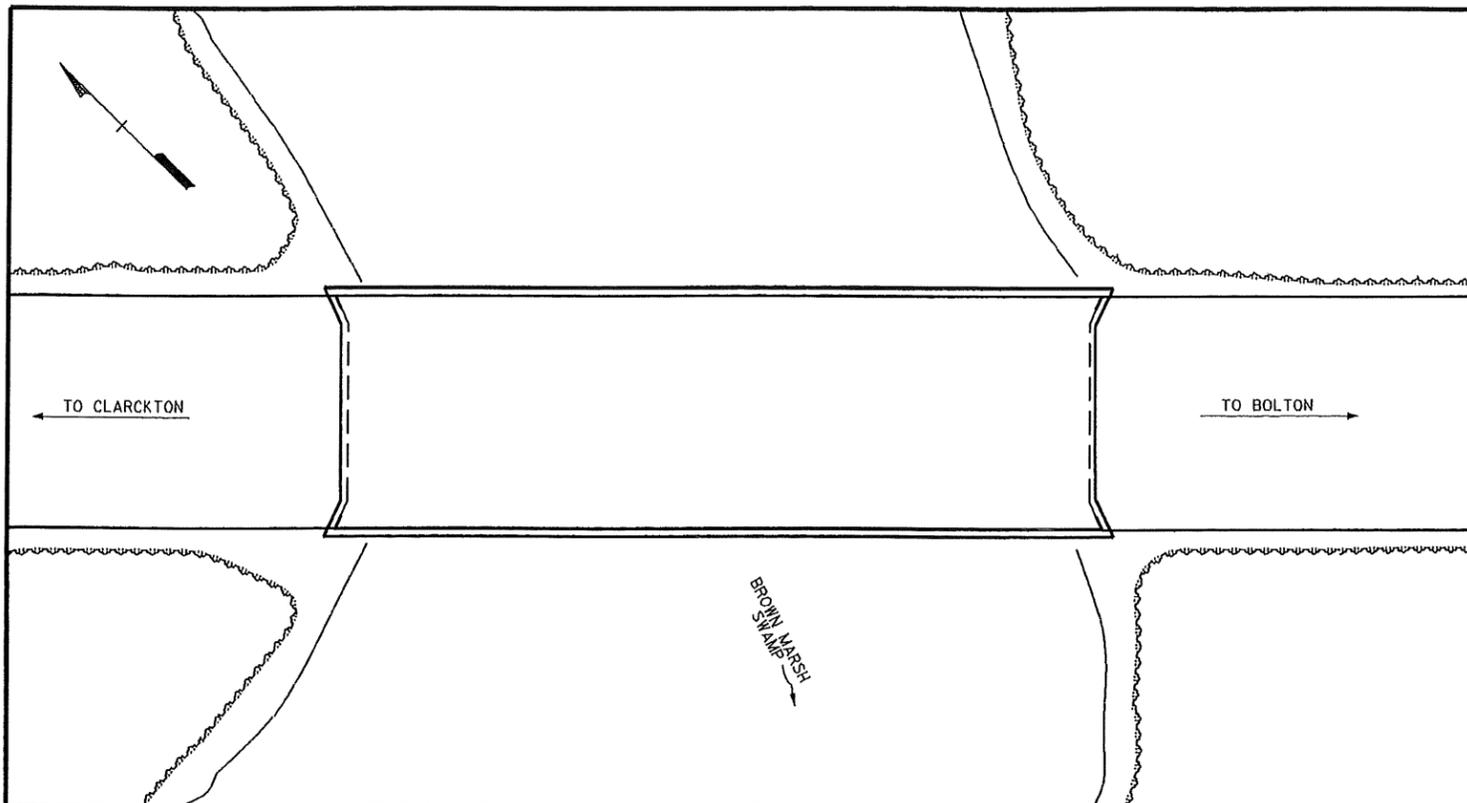
PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

SHEET 1 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
GENERAL DRAWING					
BRIDGE 37 ON NC 211 OVER BROWN MARSH SWAMP					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S-9
					TOTAL SHEETS 35



DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014



LOCATION SKETCH

NOTES

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF BRIDGE.

FOR "CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM", SEE SPECIAL PROVISIONS.

FOR "OVERLAY OF BRIDGE WITH EPOXY OVERLAY SYSTEM", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

FOR "PAINTING EXISTING STRUCTURE", 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 "BRIDGE JOINT DEMOLITION", SEE SPECIAL PROVISIONS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

TRAFFIC CONTROL WILL BE PROVIDED BY NCDOT DIVISION 6. THE CONTRACTORS WORK SHALL BE SCHEDULED AND COORDINATED WITH DIVISION 6, SO THAT PROPER TRAFFIC CONTROL MEASURES ARE IMPLEMENTED PRIOR TO THE CONTRACTOR BEGINNING ANY WORK. DIVISION 6 SHALL BE NOTIFIED 2 WEEKS PRIOR TO ANTICIPATED START OF CONSTRUCTION. DIVISION 6 SHALL BE GIVEN A MINIMUM OF 48 HOURS NOTICE FOR CHANGES IN TRAFFIC CONTROL.

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	FOAM JOINT SEALS	CLEANING & REPAINTING OF BRIDGE #37	PAINTING CONTAINMENT FOR BRIDGE #37	POLLUTION CONTROL	CONCRETE REPAIRS	BRIDGE JOINT DEMOLITION	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM
SO. YDS.	TON	TON	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	CU. FT.	SQ. FT.	SQ. FT.	SQ. FT.
189	17	1	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	2.8	62.5	1	3,753

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

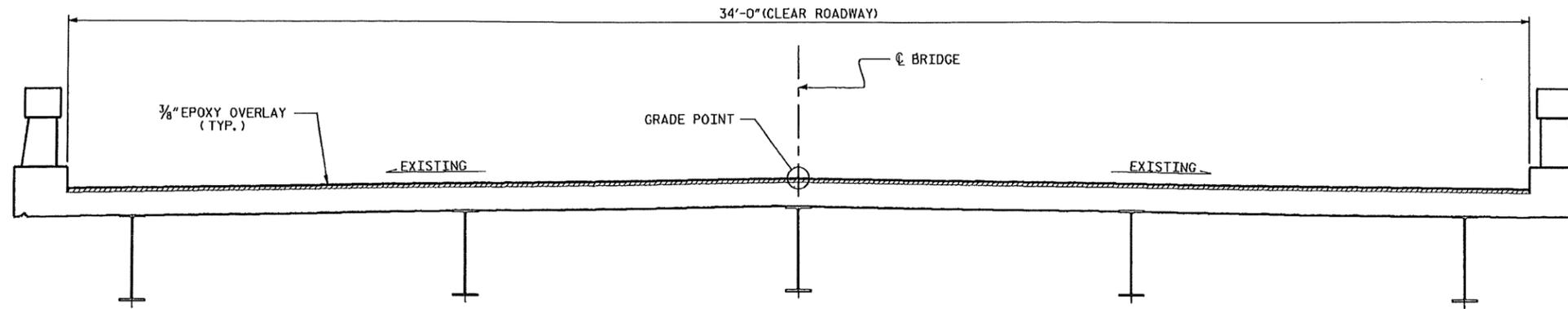
GENERAL DRAWING

BRIDGE 37 ON NC 211
 OVER
 BROWN MARSH SWAMP

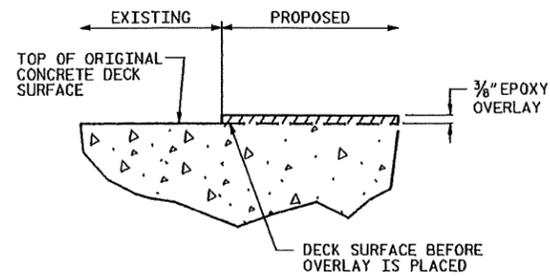
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-10
1			3			TOTAL SHEETS
2			4			35



DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : B. WEISZ DATE : 08/2014



TYPICAL SECTION



DETAIL FOR EPOXY OVERLAY

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION &
 EPOXY OVERLAY DETAIL

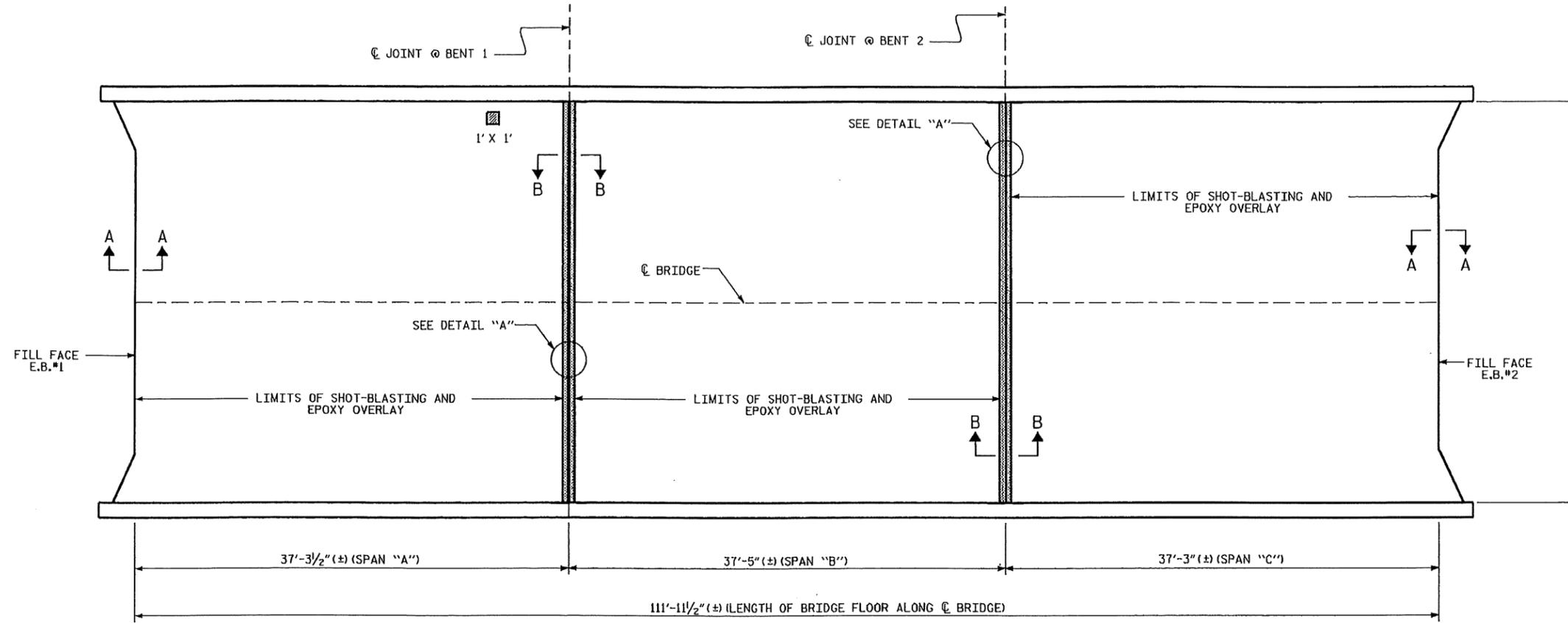
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			35
2			4			

T. Sandor
 NORTH CAROLINA
 PROFESSIONAL ENGINEER
 NO. 18562
 INDUSTRY M. SHERRELL
 08/25/14

DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

SUMMARY OF QUANTITIES

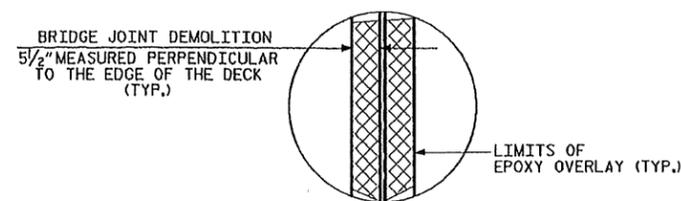
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1.0 SF	
CLASS III SURFACE PREPARATION	0.0 SF	
JOINT DEMOLITION	62.5 SF	



- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PLAN

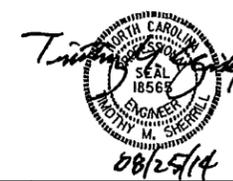
(SEE SHEET S-13 FOR SECTIONS A-A AND B-B.)



DETAIL "A"

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

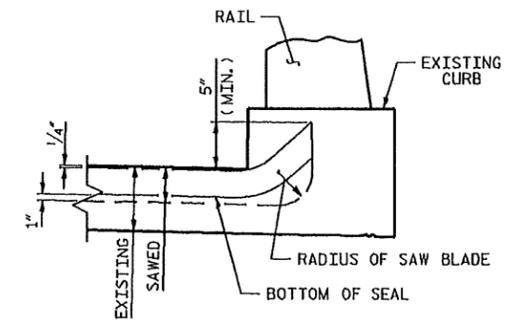
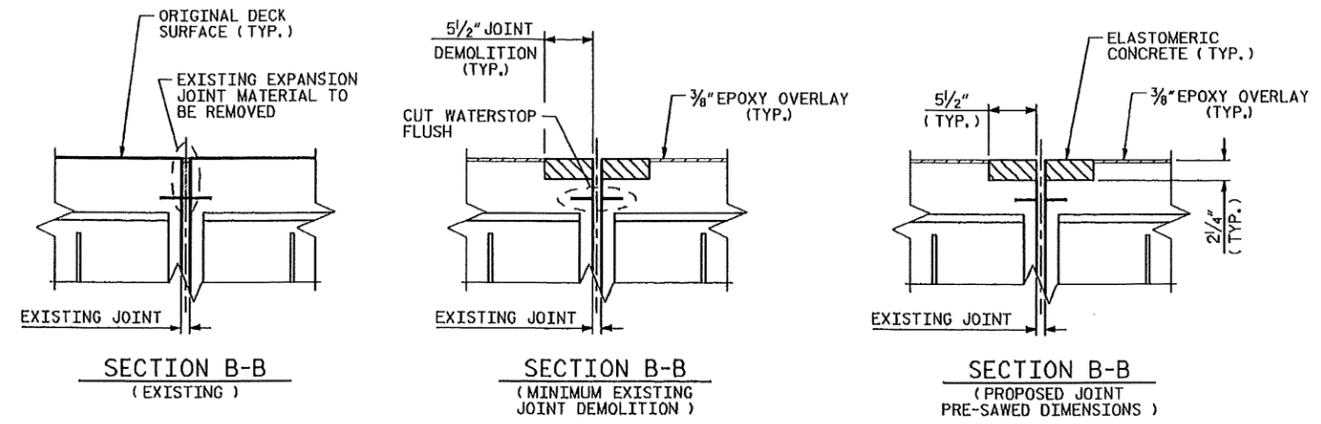
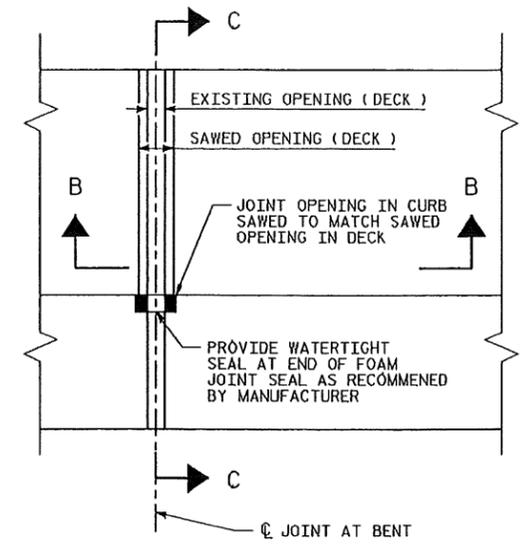
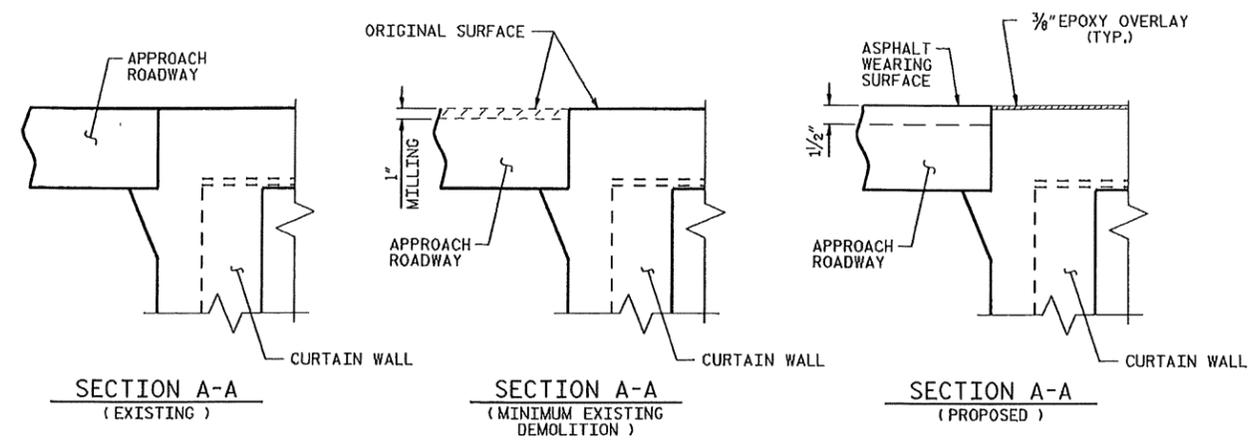
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 AND
 EPOXY OVERLAY



REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-12
1			3			TOTAL SHEETS
2			4			35

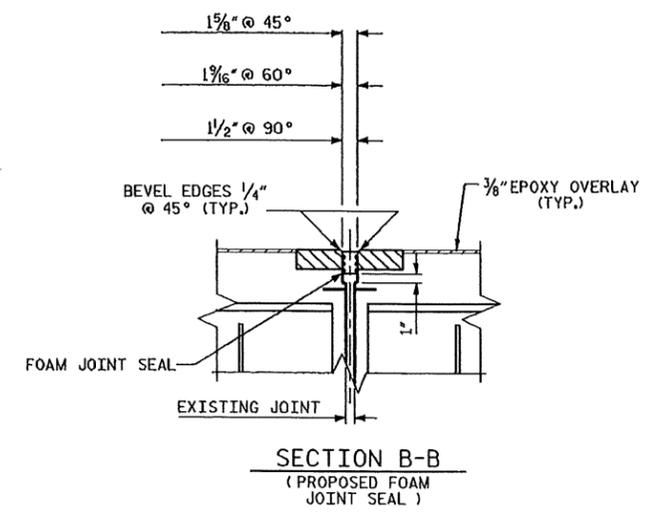
DRAWN BY : S. J. SANDOR DATE : 08/2014
 CHECKED BY : B. WEISZ DATE : 08/2014

NOTES:
 FOR "FOAM JOINT SEALS" SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.



IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED

REMOVAL OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE.



PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

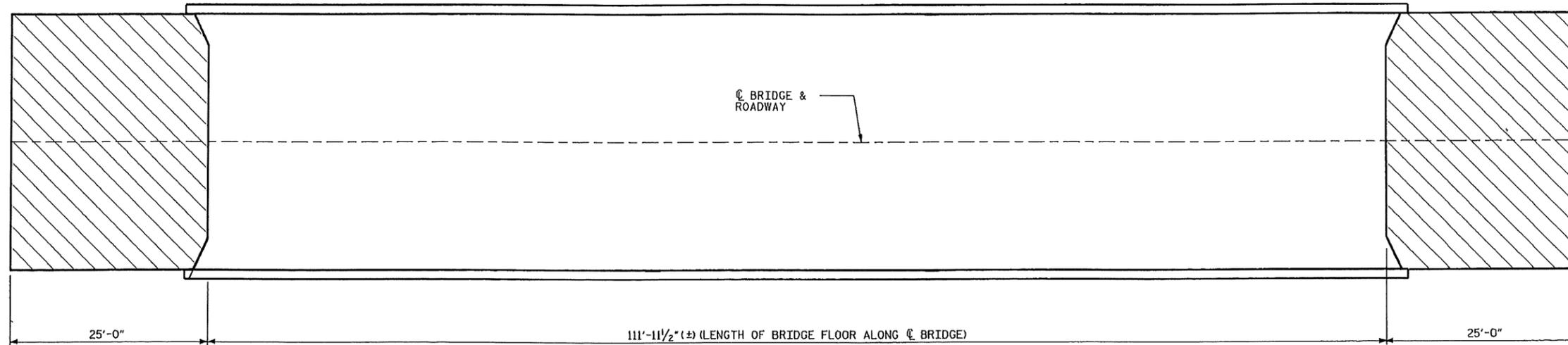
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-13	
JOINT DETAILS						TOTAL SHEETS 35	
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				



DRAWN BY: S. T. SANDOR DATE: 08/2014
 CHECKED BY: R. WEISZ DATE: 08/2014

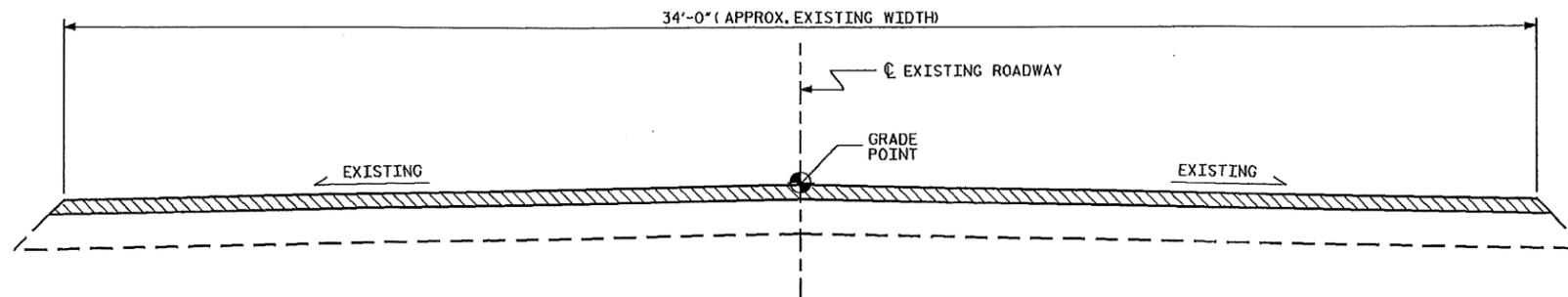
NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.



PLAN

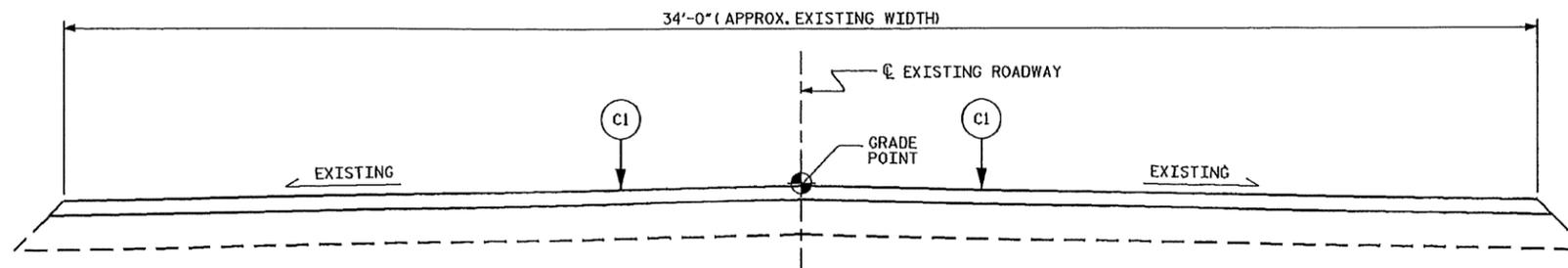
 INCIDENTAL MILLING



TYPICAL ROADWAY MILLING SECTION

(MILL TO APPROX. 1/2" DEPTH)

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.



TYPICAL PROPOSED ROADWAY SECTION

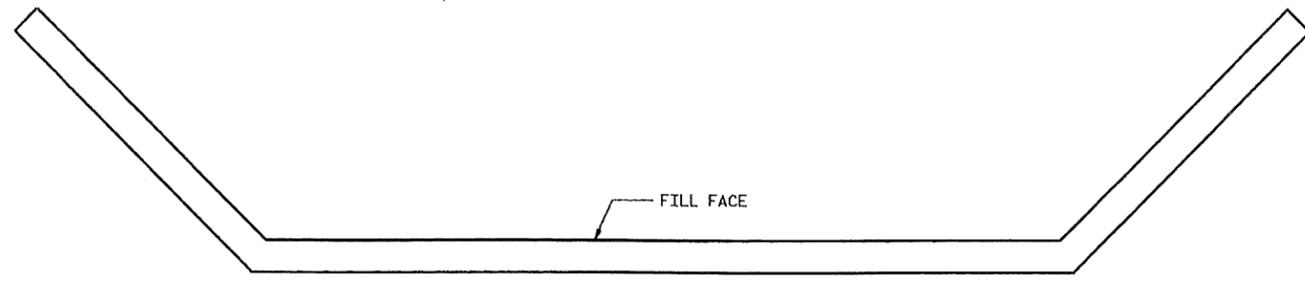
PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 TYPICAL SECTION &
 EPOXY OVERLAY DETAIL



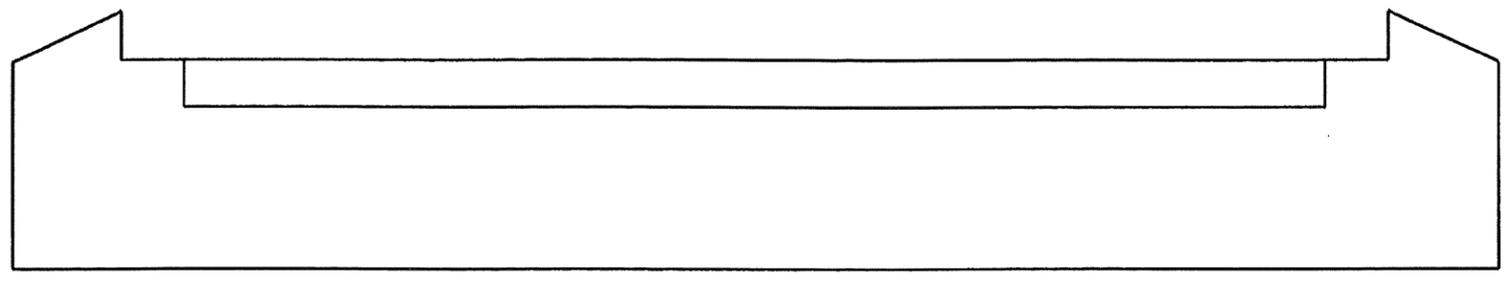
DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			14
2			4			35



PLAN

-  CONCRETE REPAIR
-  SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



ELEVATION

NOTE:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR STRUCTURE REPAIRS, SEE SHEET S-19.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE END BENT CAP.

REPAIR QUANTITY TABLE				
REPAIRS END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
	AREA SF.	VOLUME CF.	AREA SF.	VOLUME CF.
CONCRETE REPAIRS				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
BACKWALL (VERTICAL FACE)	0.0	0.0		
CONCRETE REPAIRS	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
BACKWALL		0.0		
EPOXY COATING		SQ. FT.		LN. FT.
TOP OF CAP		0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

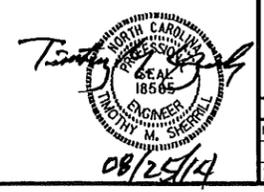
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE END BENT PRIOR TO BEGINNING WORK.

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

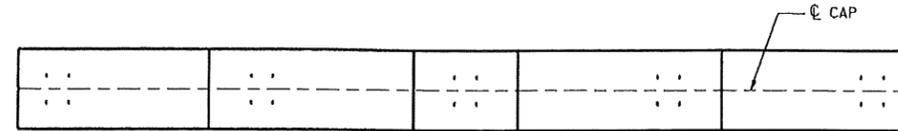
END BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			15
2			4			35



DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

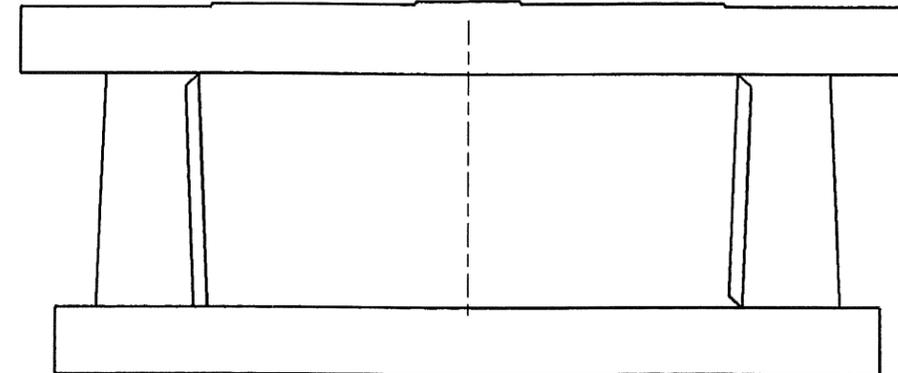
SPAN B
SPAN A



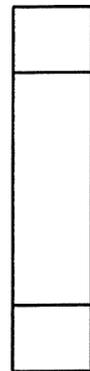
PLAN TOP OF CAP



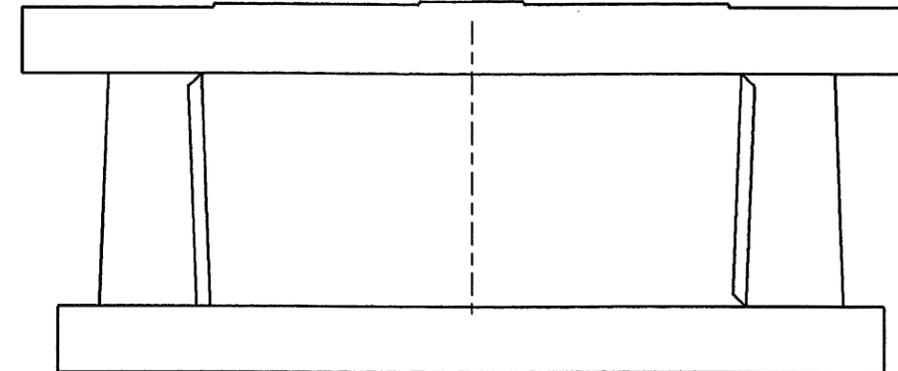
END VIEW
SOUTH END



ELEVATION
EAST FACE

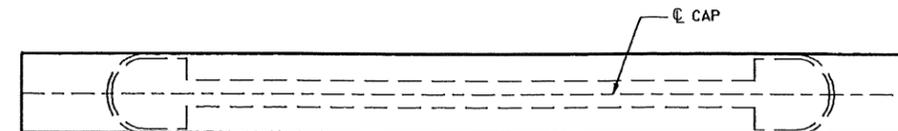


END VIEW
NORTH END



ELEVATION
WEST FACE

SPAN B
SPAN A



PLAN BOTTOM OF CAP

-  CONCRETE REPAIR
-  SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTE:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR STRUCTURE REPAIRS, SEE SHEET S-19.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE BENT CAP.

REPAIR QUANTITY TABLE				
REPAIRS BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF.	VOLUME CF.	AREA SF.	VOLUME CF.
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN (VERTICAL FACE)	0.0	0.0		
CONCRETE REPAIRS	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.		LN. FT.
TOP OF CAP		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE BENT PRIOR TO BEGINNING WORK.

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

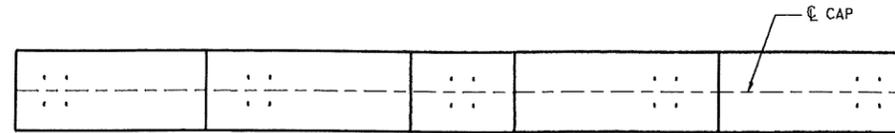
BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-16
2			4			35



DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

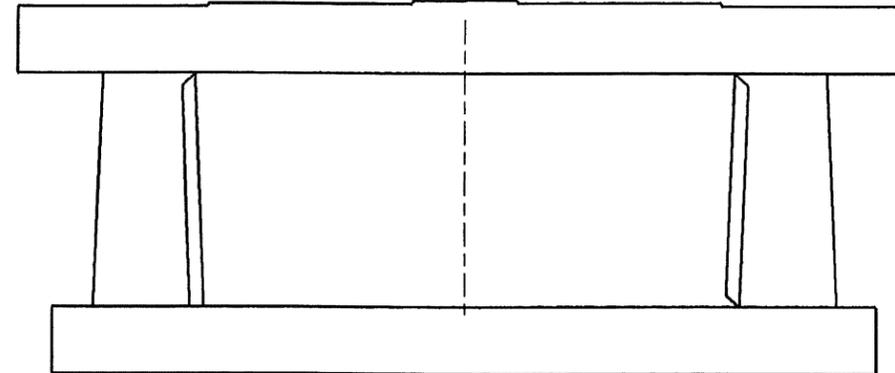
SPAN C
SPAN B



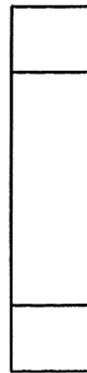
PLAN TOP OF CAP



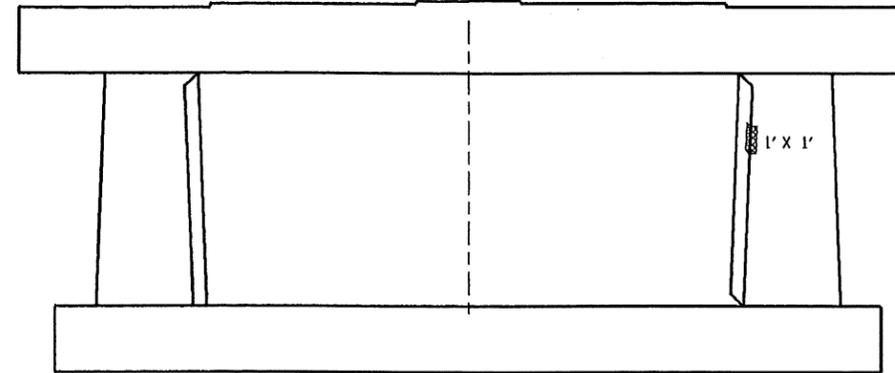
END VIEW
SOUTH END



ELEVATION
EAST FACE

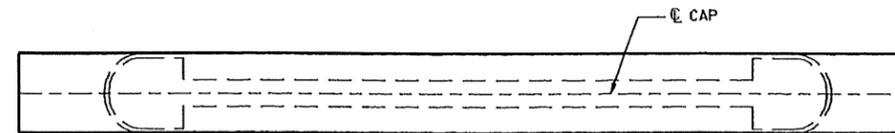


END VIEW
NORTH END



ELEVATION
WEST FACE

SPAN C
SPAN B



PLAN BOTTOM OF CAP

- CONCRETE REPAIR
- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

NOTE:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

FOR STRUCTURE REPAIRS, SEE SHEET S-19.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE BENT CAP.

REPAIR QUANTITY TABLE				
REPAIRS BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF.	VOLUME CF.	AREA SF.	VOLUME CF.
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN (VERTICAL FACE)	1.0	0.3		
CONCRETE REPAIRS	1.0	0.3		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.		LN. FT.
TOP OF CAP		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT, SEE REPAIR DETAILS.

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BENT 2

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-17
1			3			TOTAL SHEETS
2			4			35



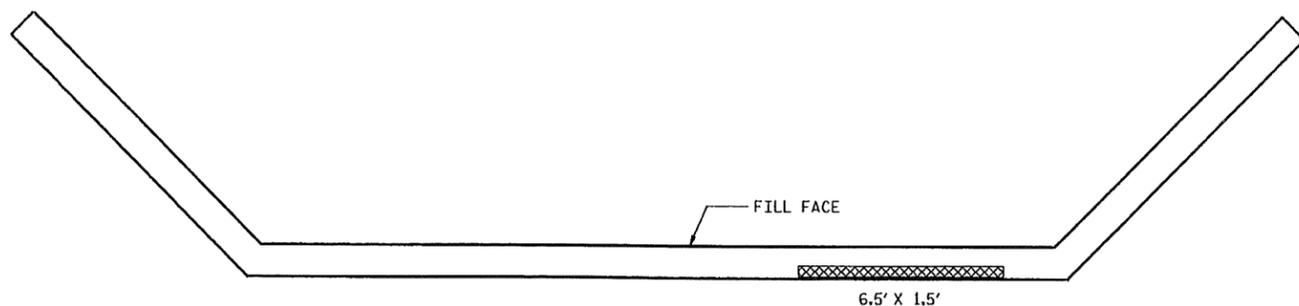
DRAWN BY : S. T. SANDOR DATE : 08/2014
 CHECKED BY : R. WETSZ DATE : 08/2014

NOTE:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

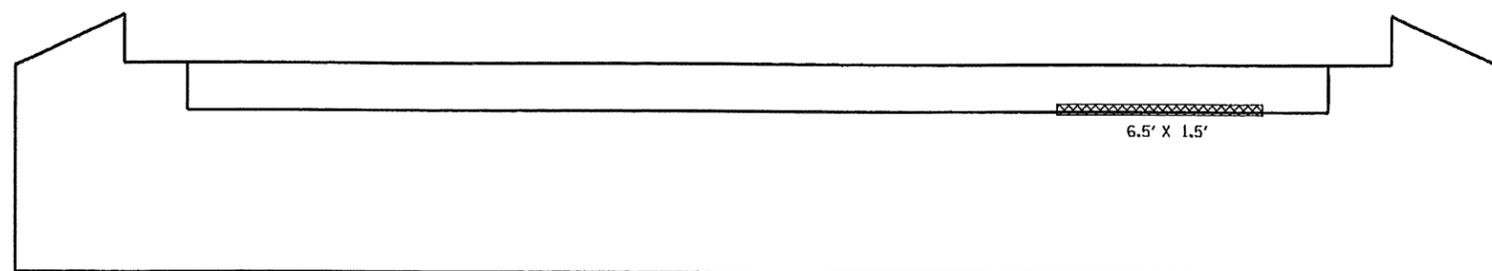
FOR STRUCTURE REPAIRS, SEE SHEET S-19.

EPOXY COATING SHALL BE APPLIED TO THE TOP FACE OF THE END BENT CAP.



PLAN

-  CONCRETE REPAIR
-  SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION



ELEVATION

REPAIR QUANTITY TABLE				
REPAIRS END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF.	VOLUME CF.	AREA SF.	VOLUME CF.
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
BACKWALL (VERTICAL FACE)	9.8	2.5		
CONCRETE REPAIRS	9.8	2.5		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
BACKWALL		0.0		
EPOXY COATING		SQ. FT.		LN. FT.
TOP OF CAP		0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CL TO SAWCUT. SEE REPAIR DETAILS.

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

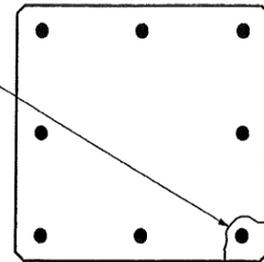
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REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			S-18
2			4			35



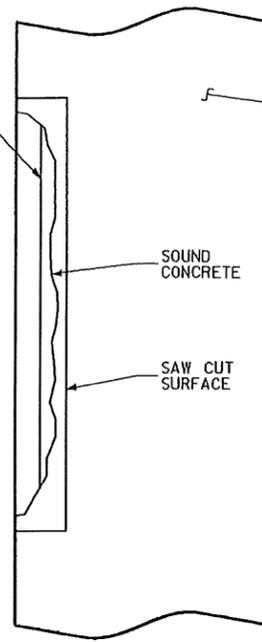
DRAWN BY : S. T. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

REMOVE BACK TO SOUND CONCRETE AND REPAIR. (IF REPAIRS ARE REQUIRED COMPLETELY AROUND COLUMN, ONE SIDE OF COLUMN IS TO BE REPAIRED AT A TIME.)



SECTION

EXISTING "B" BAR



EXISTING COLUMN

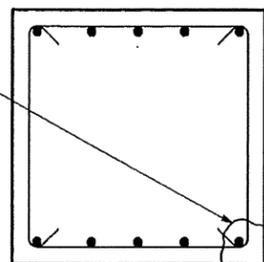
SOUND CONCRETE

SAW CUT SURFACE

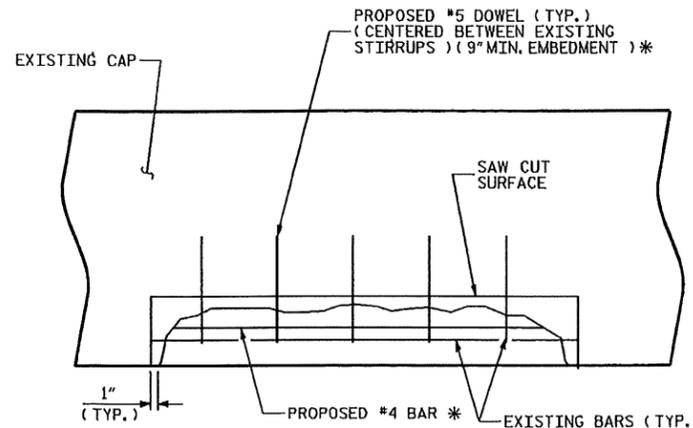
ELEVATION

COLUMN CORNER REPAIR

REMOVE BACK TO SOUND CONCRETE AND REPAIR



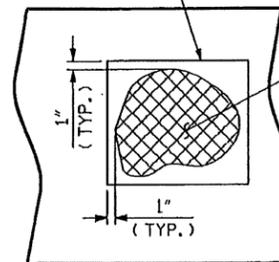
SECTION



ELEVATION

CAP CORNER REPAIR

SAW CUT (TYP.)



REPAIR AREA AFTER UNSOUND CONCRETE HAS BEEN REMOVED

FACE REPAIR

TYPICAL SUBSTRUCTURE REPAIR DETAIL

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISION.

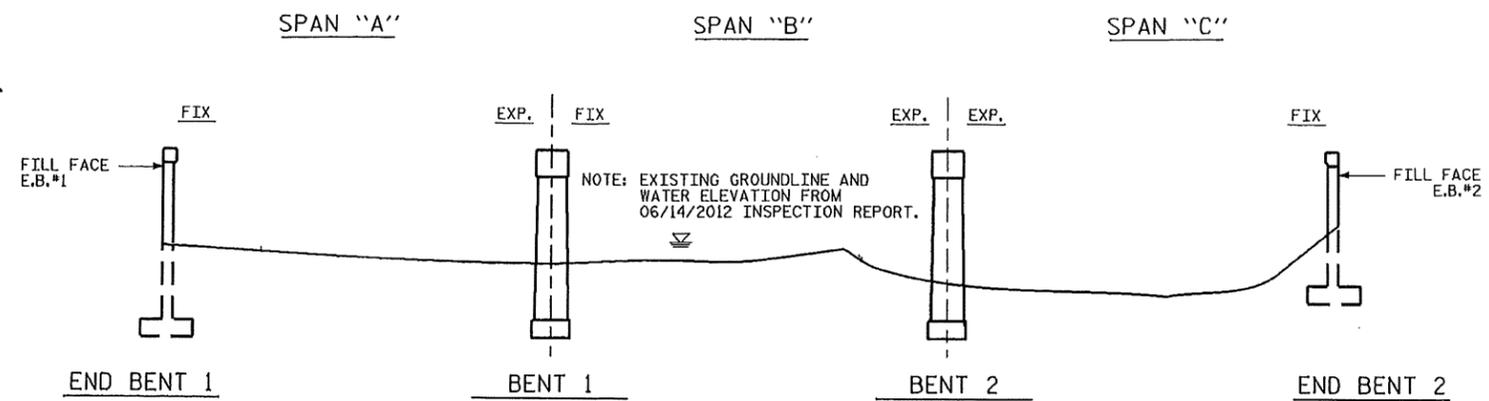
* THESE DOWELS AND BARS WILL BE REQUIRED AT THE LOCATIONS DESIGNATED BY THE ENGINEER.

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 37

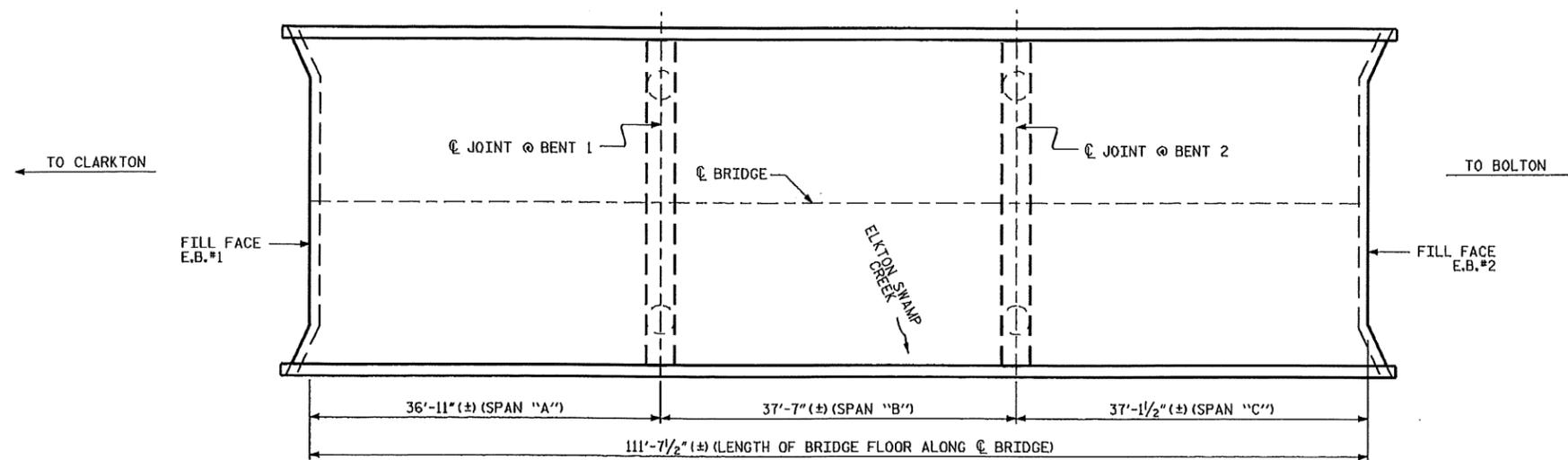
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-19
CONCRETE REPAIR DETAILS						TOTAL SHEETS 35
REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			



DRAWN BY : S. T. SANDOR DATE : 08/14
 CHECKED BY : T. SHERRILL DATE : 08/14



SECTION ALONG C BRIDGE



PLAN

SCOPE OF WORK:

- BLASTING AND CLEANING OF BRIDGE DECK.
- APPLICATION OF EPOXY OVERLAY SYSTEM.
- EXISTING JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL NEW JOINT SEALS.
- MILL APPROACH PAVEMENT.
- PLACE NEW APPROACH PAVEMENT ASPHALT.
- CLEAN AND PAINT SUPERSTRUCTURE STEEL.

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 48

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

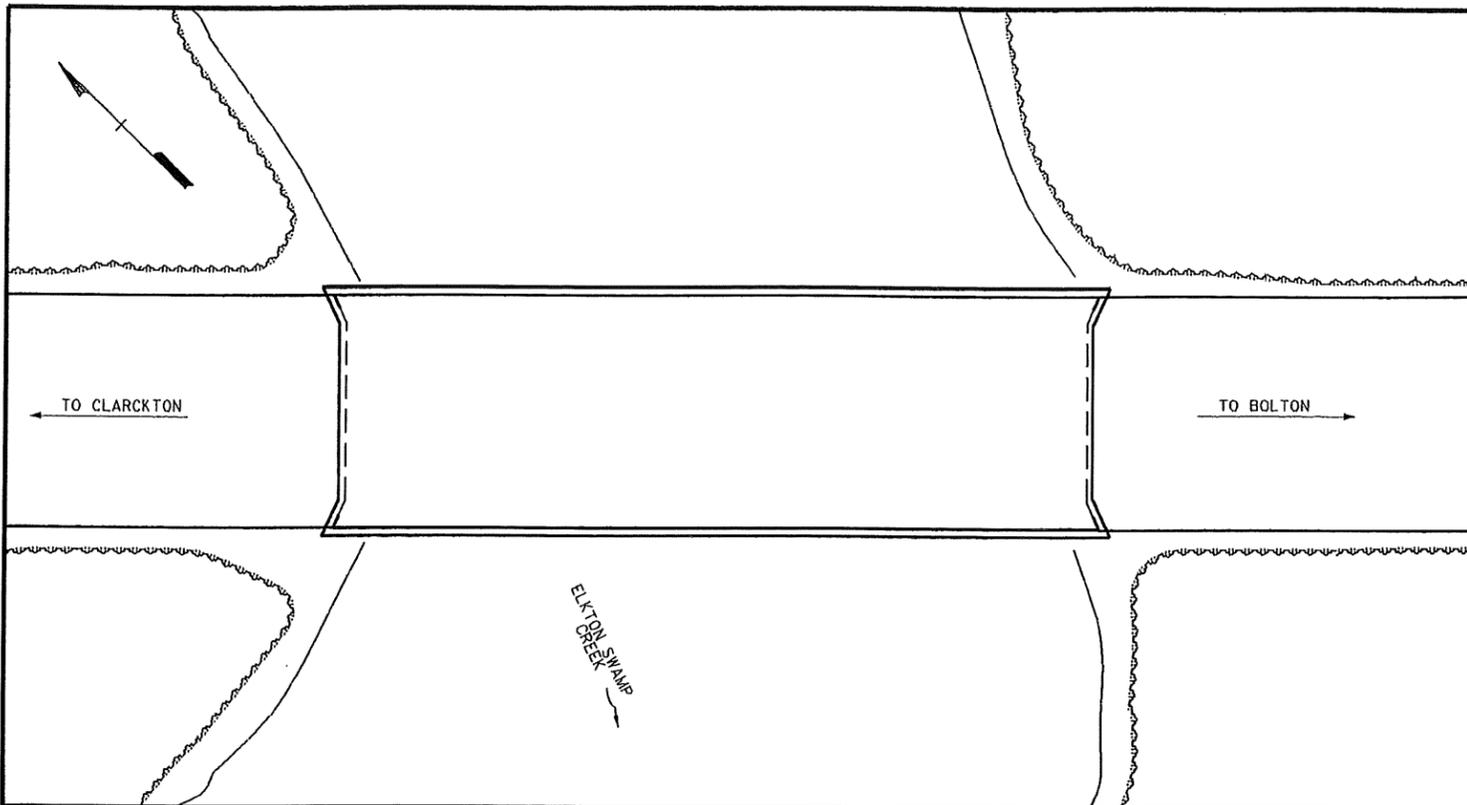
GENERAL DRAWING

BRIDGE 48 ON NC 211
 OVER
 ELKTON SWAMP CREEK



DRAWN BY : S. J. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-20
1			3			TOTAL SHEETS
2			4			35



LOCATION SKETCH

NOTES

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF BRIDGE.

FOR "CONCRETE DECK REPAIR FOR EPOXY OVERLAY SYSTEM", SEE SPECIAL PROVISIONS.

FOR "OVERLAY OF BRIDGE WITH EPOXY OVERLAY SYSTEM", SEE SPECIAL PROVISIONS.

FOR "FOAM JOINT SEALS", SEE SPECIAL PROVISIONS.

FOR "ELASTOMERIC CONCRETE", SEE SPECIAL PROVISIONS.

FOR "PAINTING EXISTING STRUCTURE", 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 "BRIDGE JOINT DEMOLITION", SEE SPECIAL PROVISIONS.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

TRAFFIC CONTROL WILL BE PROVIDED BY NCDOT DIVISION 6. THE CONTRACTORS WORK SHALL BE SCHEDULED AND COORDINATED WITH DIVISION 6, SO THAT PROPER TRAFFIC CONTROL MEASURES ARE IMPLEMENTED PRIOR TO THE CONTRACTOR BEGINNING ANY WORK. DIVISION 6 SHALL BE NOTIFIED 2 WEEKS PRIOR TO ANTICIPATED START OF CONSTRUCTION. DIVISION 6 SHALL BE GIVEN A MINIMUM OF 48 HOURS NOTICE FOR CHANGES IN TRAFFIC CONTROL.

TOTAL BILL OF MATERIAL

INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	FOAM JOINT SEALS	CLEANING & REPAINTING OF BRIDGE #48	PAINTING CONTAINMENT FOR BRIDGE #48	POLLUTION CONTROL	BRIDGE JOINT DEMOLITION	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY SYSTEM
SQ.YDS.	TON	TON	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	SQ. FT.	SQ.FT.	SQ. FT.
189	17	1	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	62.5	1	3,742

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 48

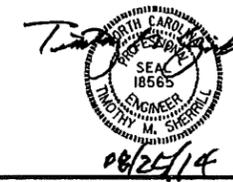
SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

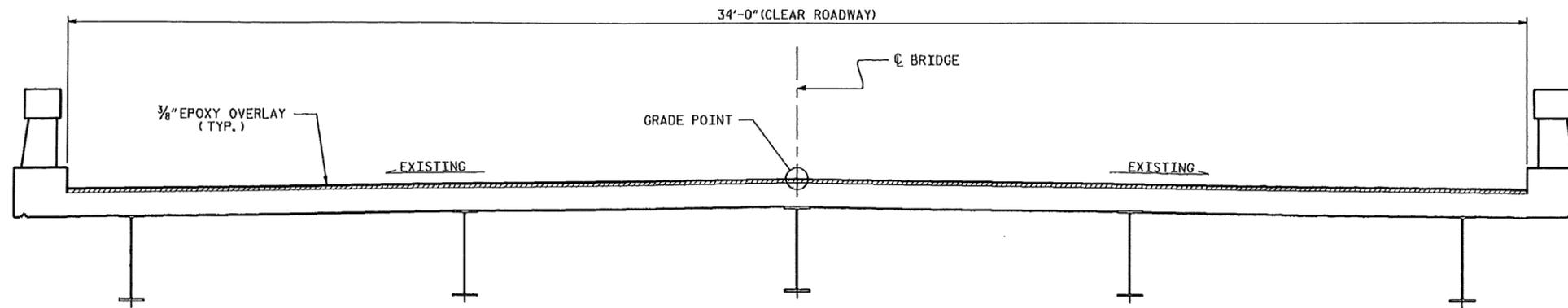
GENERAL DRAWING

BRIDGE 48 ON NC 211
 OVER
 ELKTON SWAMP CREEK

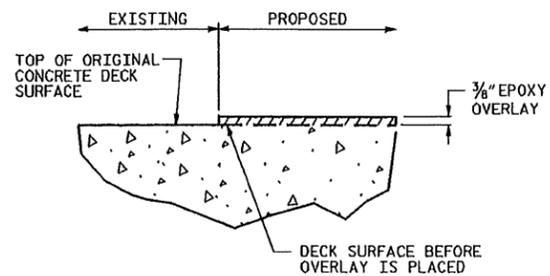
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-21
1			3			TOTAL SHEETS
2			4			35



DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014



TYPICAL SECTION



DETAIL FOR EPOXY OVERLAY

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 48

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

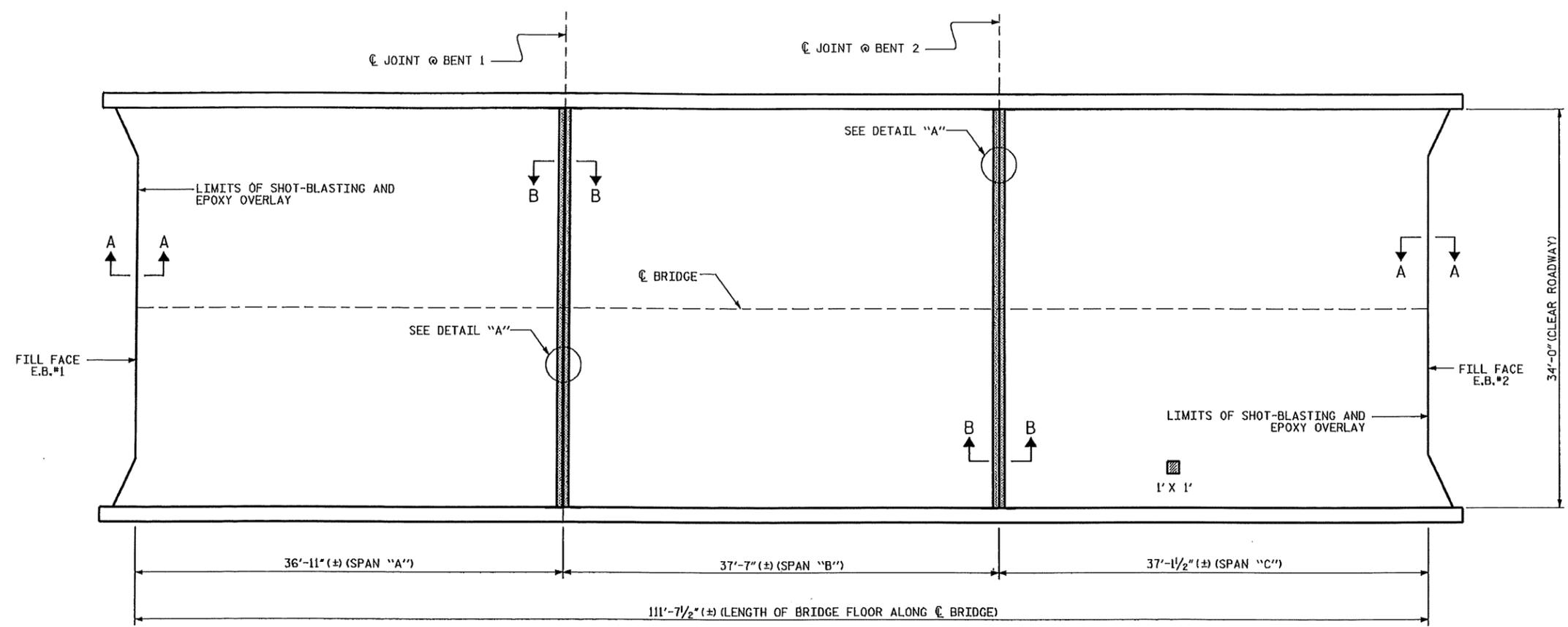
TYPICAL SECTION &
 EPOXY OVERLAY DETAIL

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-22
1			3			TOTAL SHEETS
2			4			35



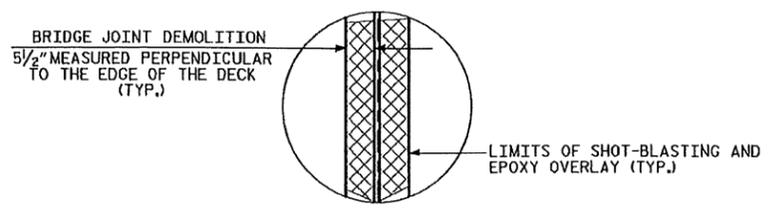
DRAWN BY : S. I. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	1.0 SF	
CLASS III SURFACE PREPARATION	0.0 SF	
JOINT DEMOLITION	62.5 SF	



	CONCRETE DECK REPAIR FOR EPOXY OVERLAY
	EPOXY OVERLAY
	BRIDGE JOINT DEMOLITION

PLAN
(SEE SHEET S-24 FOR SECTIONS A-A AND B-B)



DETAIL "A"

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 48

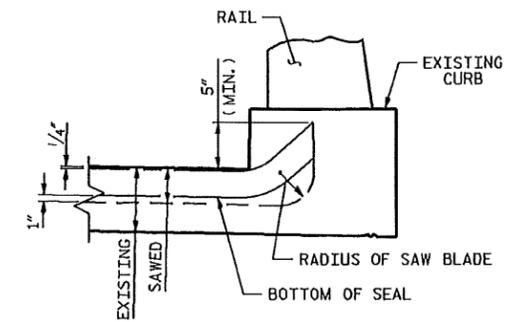
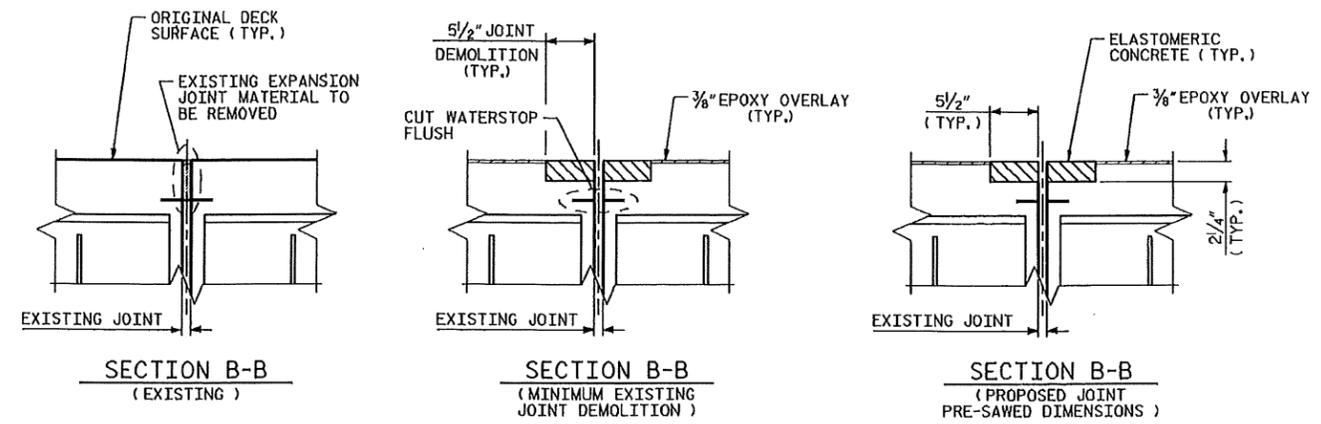
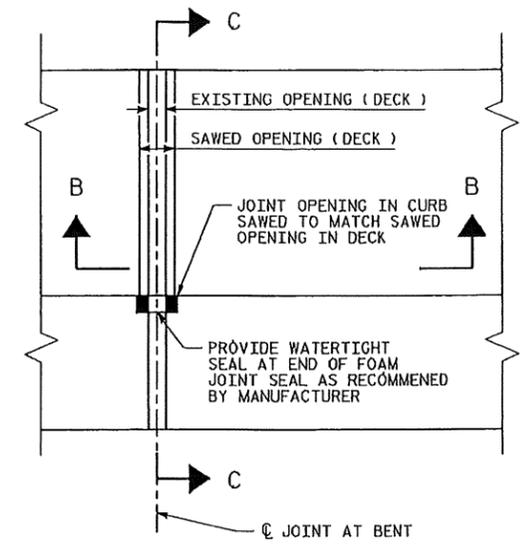
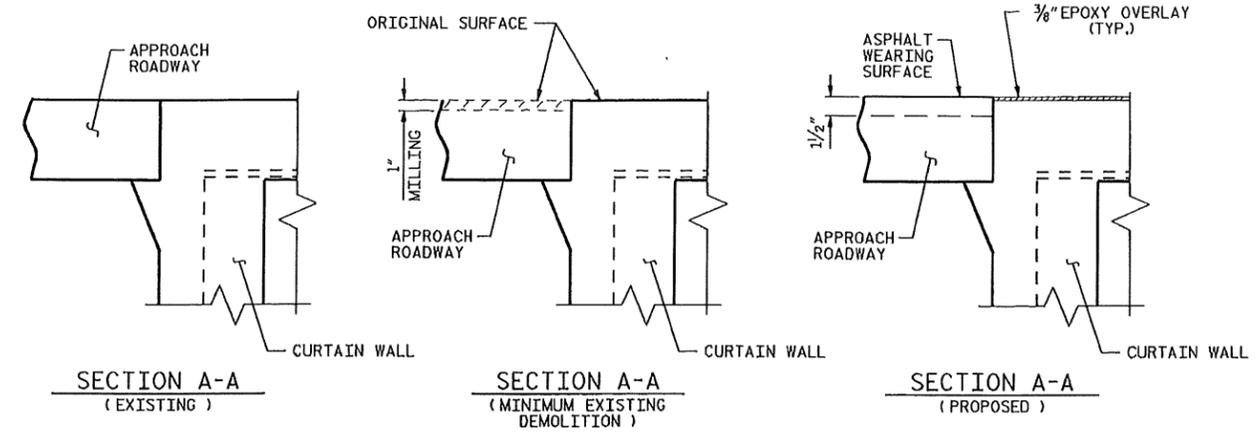
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 AND
 EPOXY OVERLAY



DRAWN BY : S. I. SANDOR DATE : 05/2014
 CHECKED BY : TIM SHERRILL DATE : 06/2014

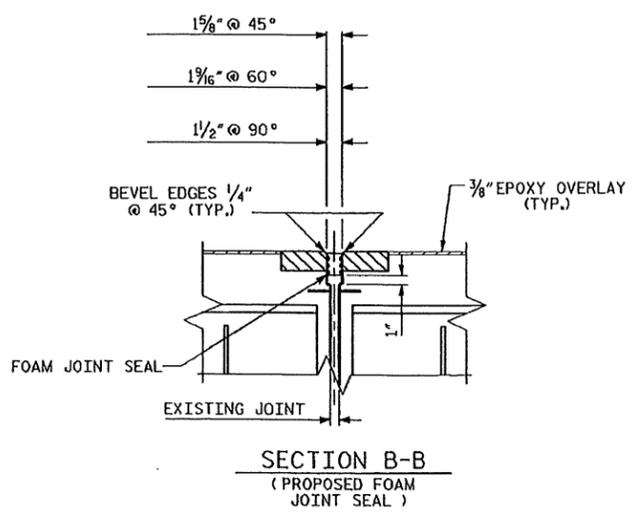
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-23
2			4			35

NOTES:
 FOR "FOAM JOINT SEALS" SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.
 NOMINAL UNCOMPRESSED SEAL WIDTH OF FOAM JOINT SEAL SHALL BE 2".
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.



IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE WATERSTOP SHALL BE REMOVED

REMOVAL OF CONCRETE AT THE EXISTING JOINT SHALL RESULT IN THE BOTTOM OF THE EXCAVATION BEING REASONABLY FLAT, TO PROVIDE SUFFICIENT SUBSTRATE FOR PLACEMENT AND SUPPORT OF ELASTOMERIC OR REPAIR CONCRETE.



JOINT SEAL DETAILS AT BENT

PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 48

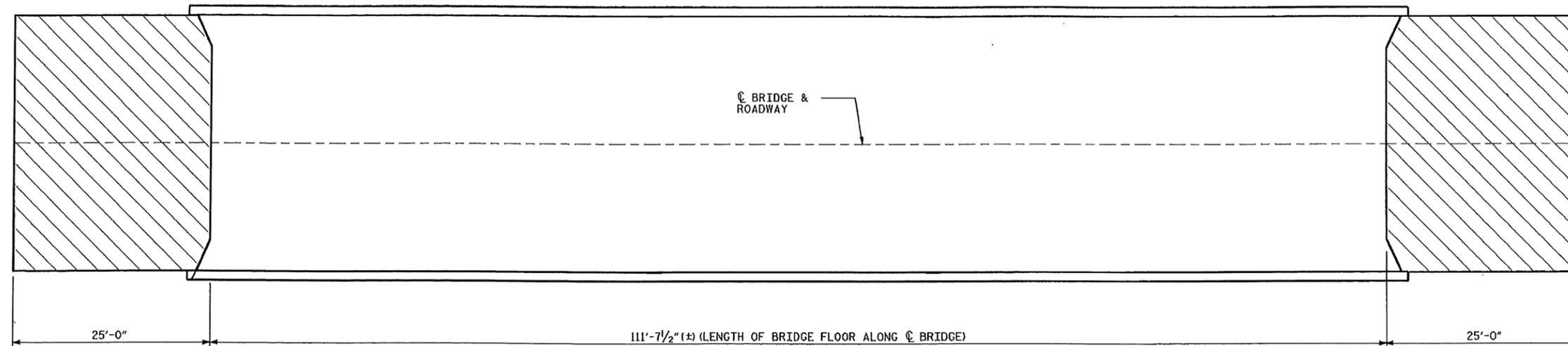
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-24
					TOTAL SHEETS 35

Timothy M. Sheerill
 ENGINEER
 08/25/14

DRAWN BY: S. T. SANDOR DATE: 08/2014
 CHECKED BY: R. WEISZ DATE: 08/2014

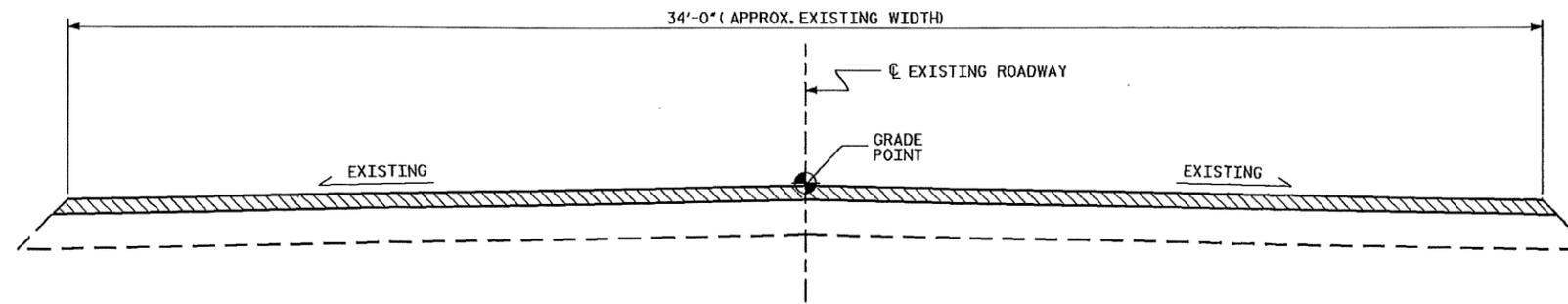
NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.



PLAN

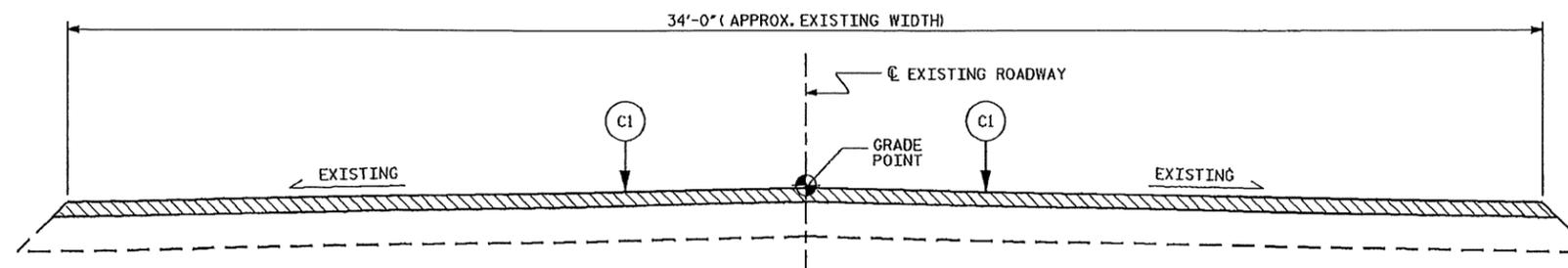
INCIDENTAL MILLING



TYPICAL ROADWAY MILLING SECTION

(MILL TO APPROX. 1/2" DEPTH)

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.



TYPICAL PROPOSED ROADWAY SECTION

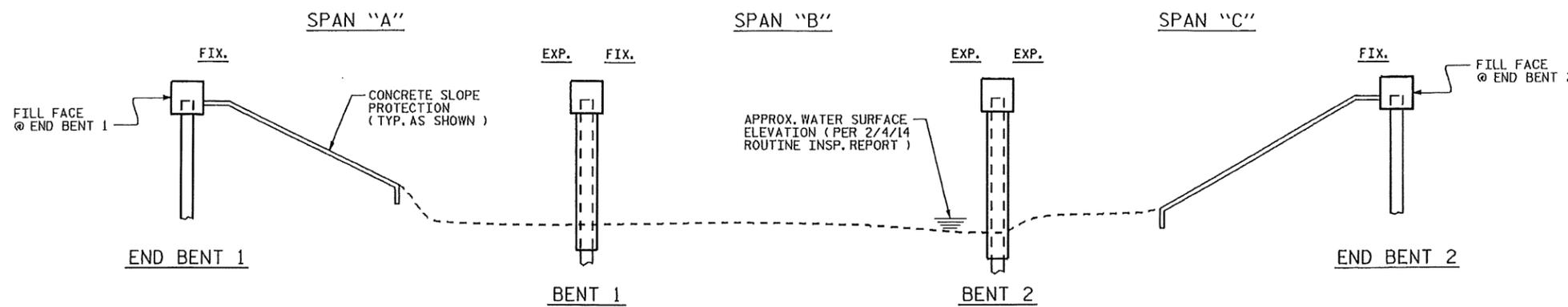
PROJECT NO. BP-5500L
BLADEN COUNTY
 BRIDGE NO. 48

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**TYPICAL SECTION &
 EPOXY OVERLAY DETAIL**



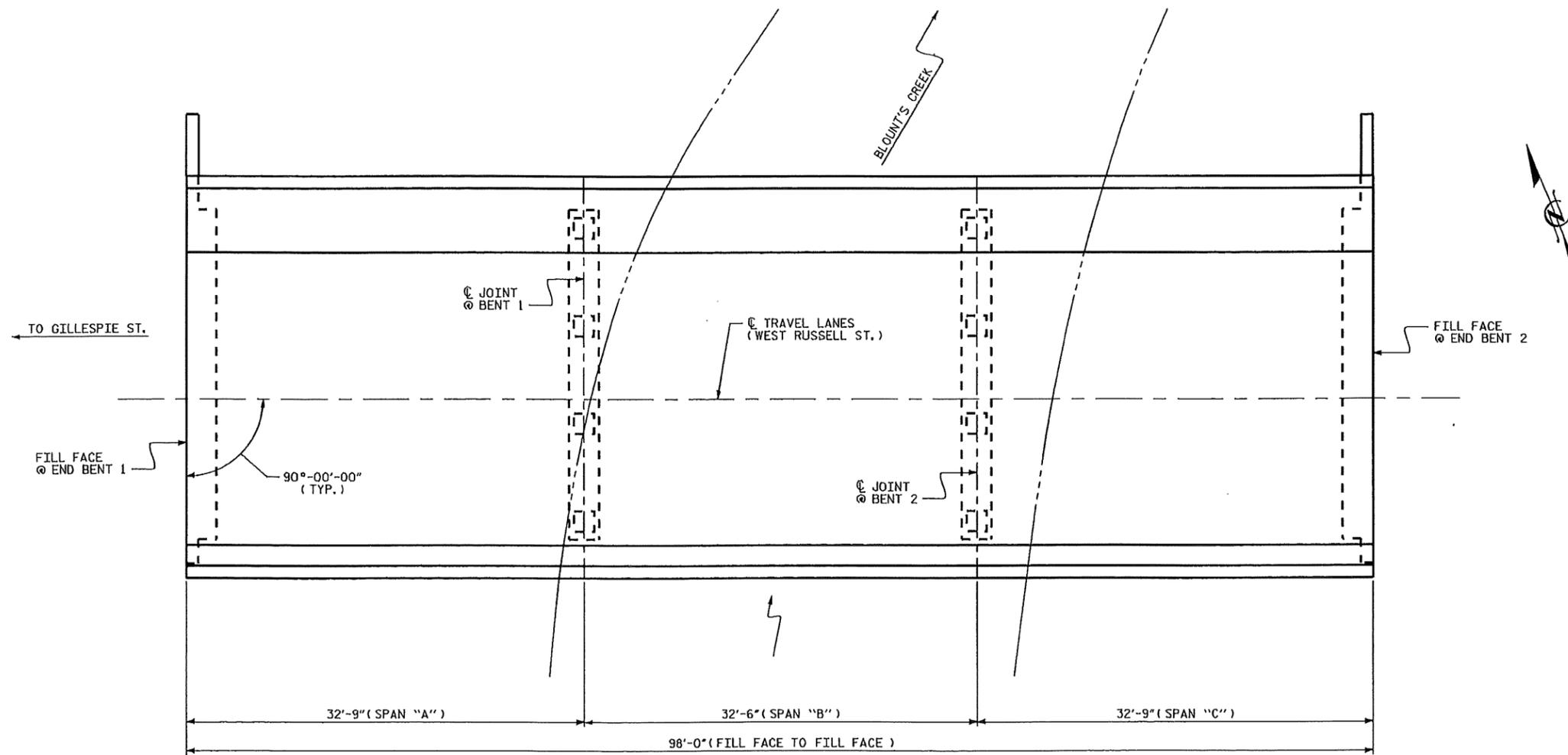
DRAWN BY : S. T. SANDOR DATE : 08/2014
 CHECKED BY : R. WEISZ DATE : 08/2014

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			25
2			4			35



- SCOPE OF WORK:**
- BLASTING AND CLEANING OF BRIDGE DECK.
 - APPLICATION OF EPOXY OVERLAY SYSTEM.
 - EXISTING JOINT DEMOLITION.
 - INSTALL NEW POURABLE JOINT SEALS.
 - MILL APPROACH PAVEMENT.
 - PLACE NEW APPROACH PAVEMENT ASPHALT.
 - CLEAN AND PAINT SUPERSTRUCTURE STEEL.

SECTION ALONG DOWNSTREAM EDGE OF BRIDGE
(SECTIONS TAKEN AT RIGHT ANGLES)



PLAN
(PILES NOT SHOWN FOR CLARITY)

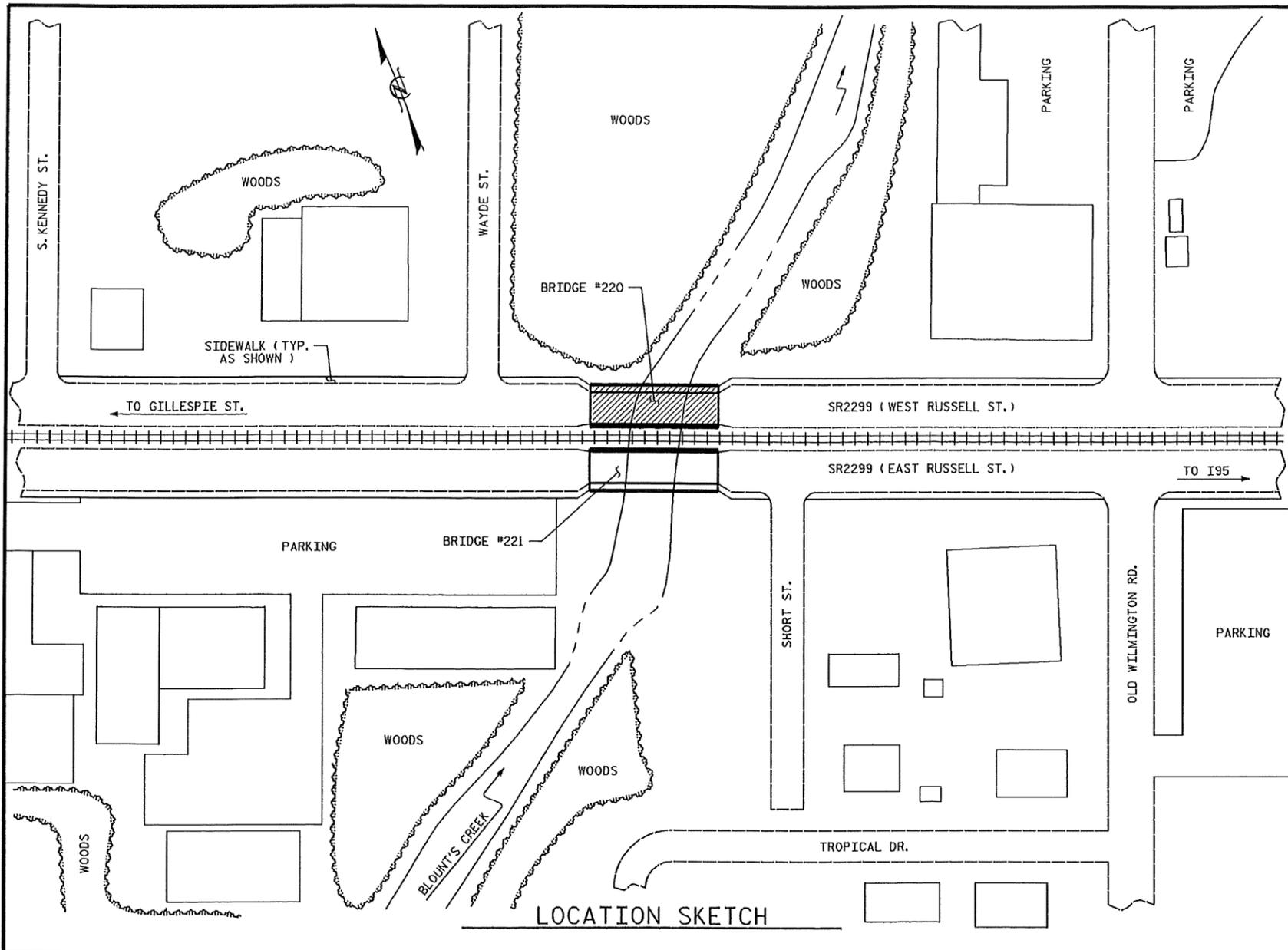
PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 220
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 BRIDGE 220 ON SR2299
 (WEST RUSSELL ST.) OVER
 BLOUNT'S CREEK



DRAWN BY : P.C. BREWER / S.T.S. DATE : 8/14
 CHECKED BY : D.N. SNOKE / R. WEISZ DATE : 8/14

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-26
1			3			TOTAL SHEETS
2			4			35



NOTES:

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE MANAGING HYDRO-DEMOLITION WATER SPECIAL PROVISION.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.

FOR "EPOXY OVERLAY SYSTEM", SEE SPECIAL PROVISIONS.

FOR "PAINTING EXISTING STRUCTURE", 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.

TRAFFIC CONTROL WILL BE PROVIDED BY NCDOT DIVISION 6. THE CONTRACTOR'S WORK SHALL BE SCHEDULED AND COORDINATED WITH DIVISION 6, SO THAT PROPER TRAFFIC CONTROL MEASURES ARE IMPLEMENTED PRIOR TO THE CONTRACTOR BEGINNING ANY WORK. DIVISION 6 SHALL BE NOTIFIED 2 WEEKS PRIOR TO ANTICIPATED START OF CONSTRUCTION. DIVISION 6 SHALL BE GIVEN A MINIMUM OF 48 HOURS NOTICE FOR CHANGES IN TRAFFIC CONTROL.

TOTAL BILL OF MATERIAL						
INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	CLEANING & REPAINTING OF BRIDGE #220	PAINTING CONTAINMENT FOR BRIDGE #220	POLLUTION CONTROL	EPOXY OVERLAY SYSTEM
SQ. YDS.	TON	TON	LUMP SUM	LUMP SUM	LUMP SUM	SQ. FT.
169	15	1	LUMP SUM	LUMP SUM	LUMP SUM	2,352

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 220

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 Raleigh

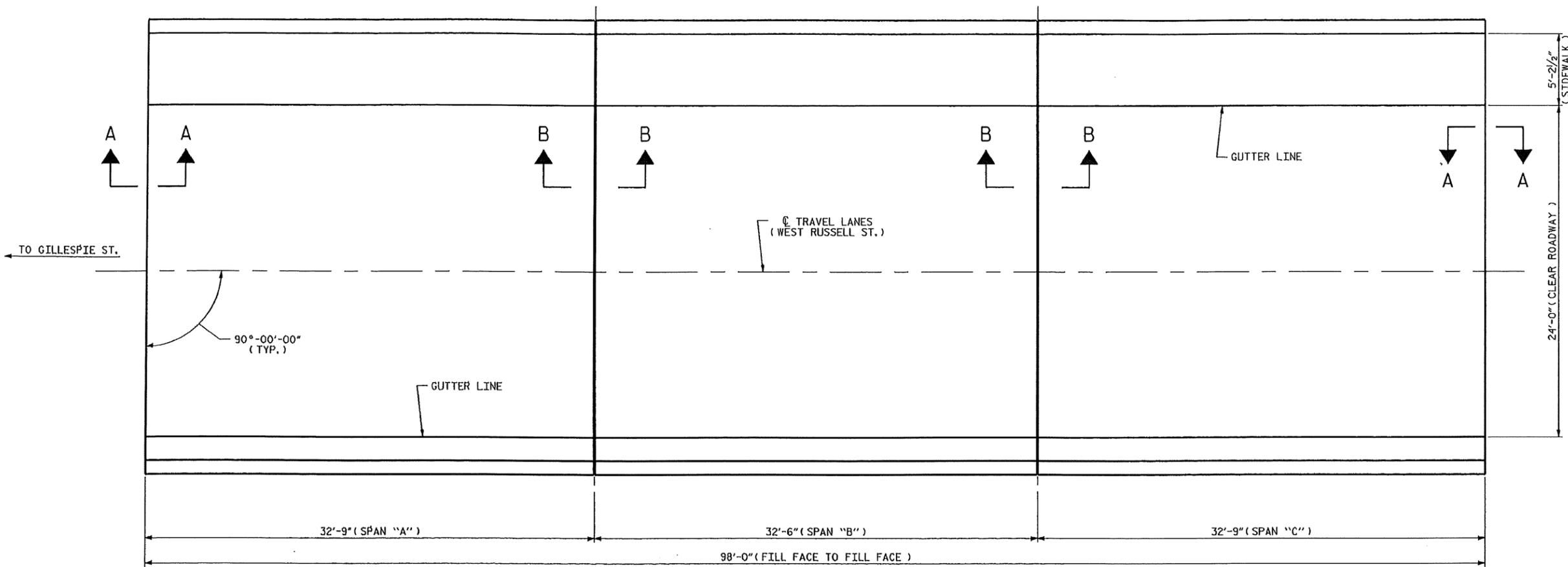
GENERAL DRAWING

BRIDGE 220 ON SR2299
 (WEST RUSSELL ST.) OVER
 BLOUNT'S CREEK

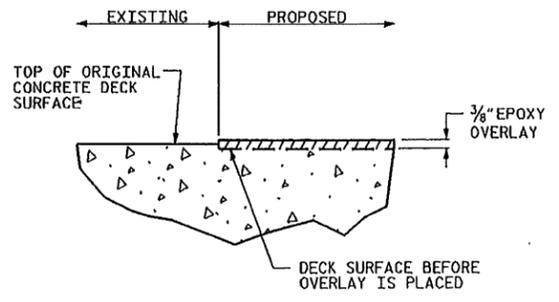
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-27
1			3			TOTAL SHEETS
2			4			35

DRAWN BY : P.C. BREWER / S.I.S. DATE : 8/14
 CHECKED BY : D.N. SNOKE / R. WEKSZ DATE : 8/14

Timothy M. Sheppard
 ENGINEER
 08/25/14



PLAN OF SPANS



DETAIL FOR EPOXY OVERLAY

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 220

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

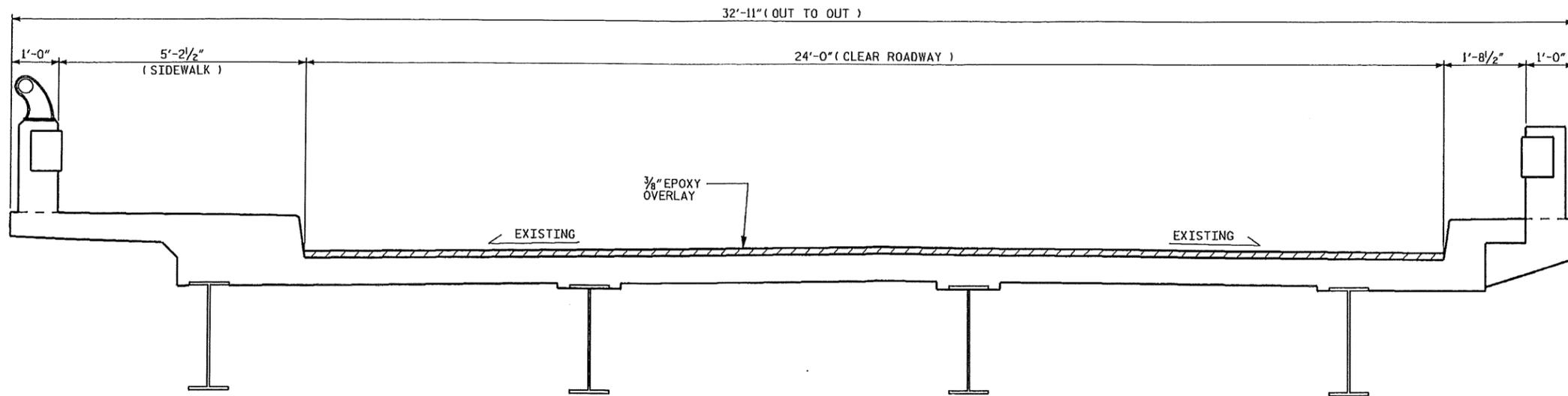
PLAN OF SPANS

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-28
1			3			TOTAL SHEETS
2			4			35

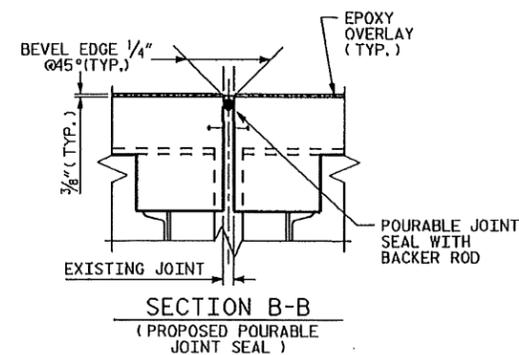
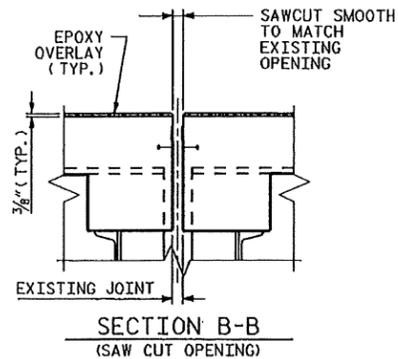
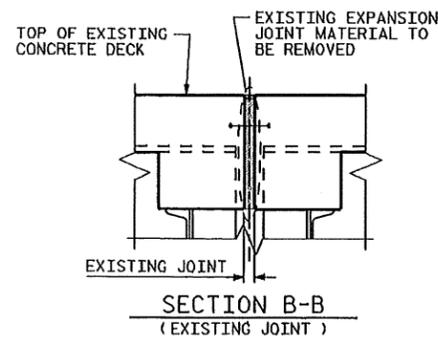


DRAWN BY : P.C. BREWER / S.T.S. DATE : 8/14
 CHECKED BY : D.N. SNOKE / R. WEISZ DATE : 8/14

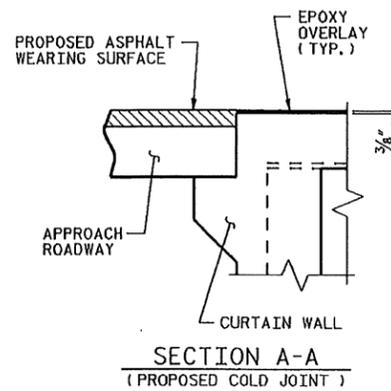
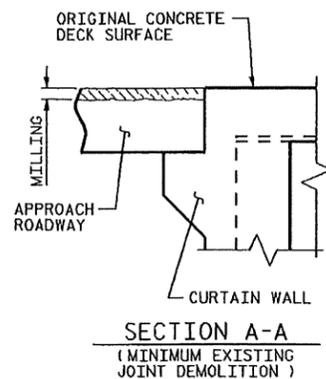
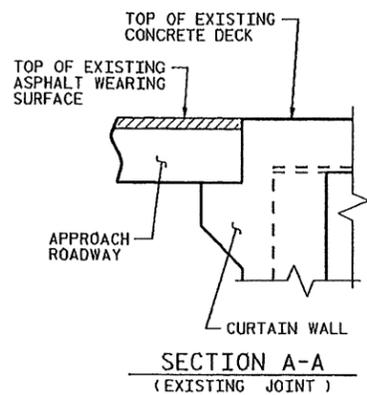
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 664ndor



TYPICAL SECTION



NOTE:
POURABLE JOINT SEAL TO BE INSTALLED ACCORDING TO THE STANDARD SPECIFICATIONS AND SHALL BE INCLUDED IN THE PAYMENT FOR OTHER ITEMS.



PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 220

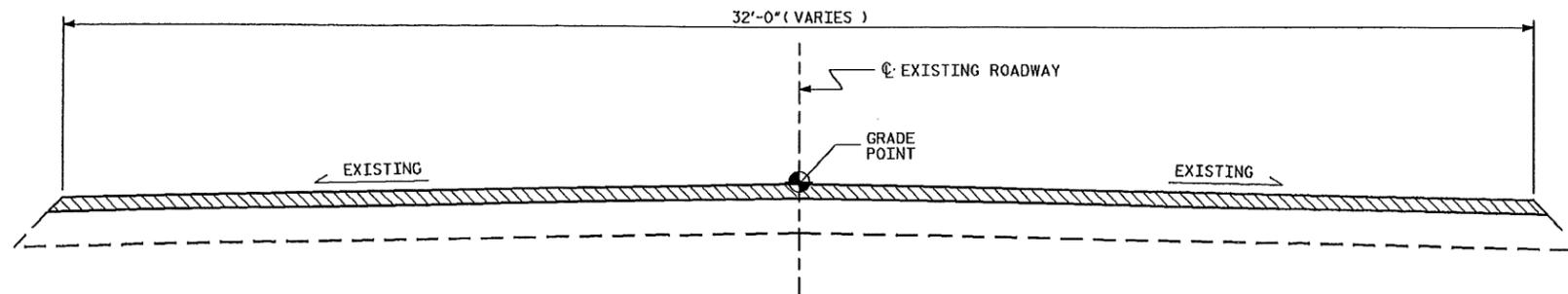
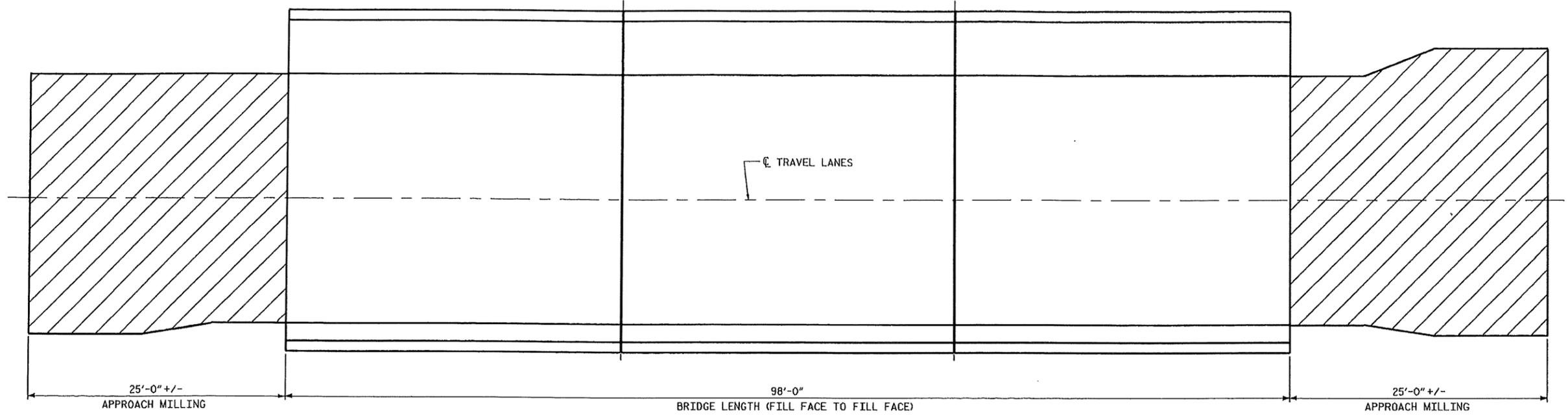
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 Raleigh

TYPICAL SECTION
 &
 JOINT DETAILS

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-29
1			3			TOTAL SHEETS
2			4			35



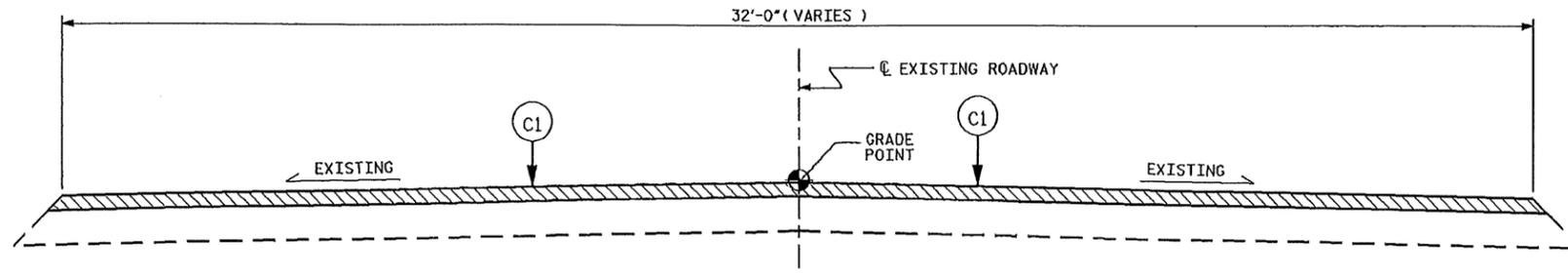
DRAWN BY : P.C. BREWER DATE : 6/14
 CHECKED BY : D.M. SNOKE DATE : 6/14



TYPICAL ROADWAY MILLING SECTION

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.

NOTE:
 INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE BRIDGE DECK, AS SHOWN. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.



TYPICAL PROPOSED ROADWAY SECTION

(MILL TO APPROX. 1/2" DEPTH)

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 220

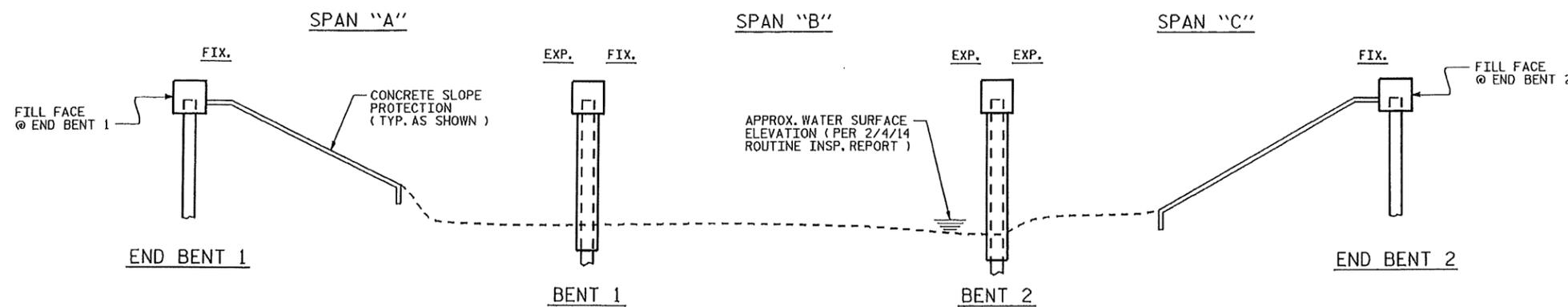
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

INCIDENTAL MILLING

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-30
1			3			TOTAL SHEETS
2			4			35

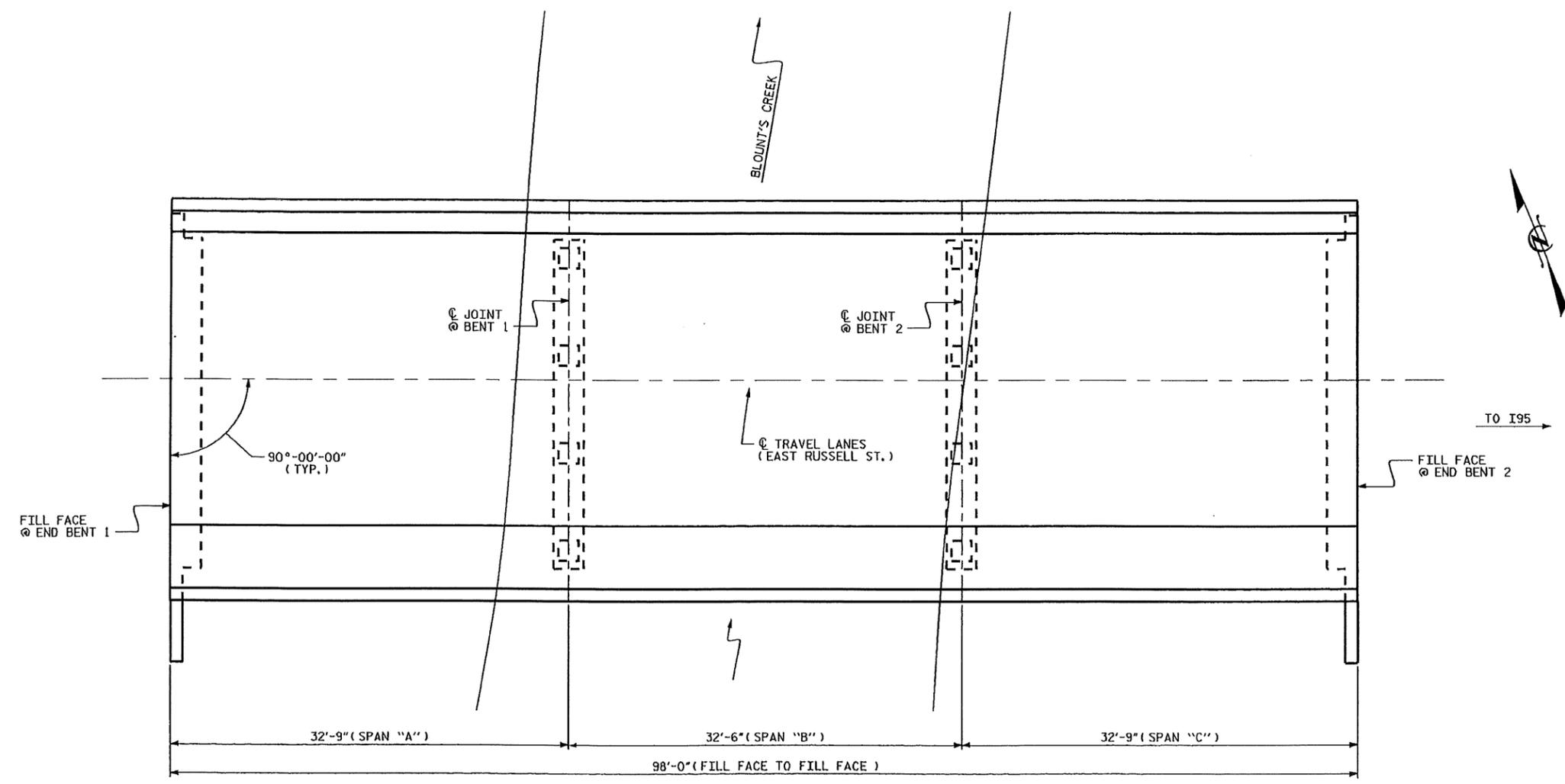


DRAWN BY : D. SNOKE / S. T. SANDOR DATE : 8/14
 CHECKED BY : R. WETSZ DATE : 8/14



- SCOPE OF WORK:**
- BLASTING AND CLEANING OF BRIDGE DECK.
 - APPLICATION OF EPOXY OVERLAY SYSTEM.
 - EXISTING JOINT DEMOLITION.
 - INSTALL NEW POURABLE JOINT SEALS.
 - MILL APPROACH PAVEMENT.
 - PLACE NEW APPROACH PAVEMENT ASPHALT.
 - CLEAN AND PAINT SUPERSTRUCTURE STEEL.

SECTION ALONG DOWNSTREAM EDGE OF BRIDGE
(SECTIONS TAKEN AT RIGHT ANGLES)

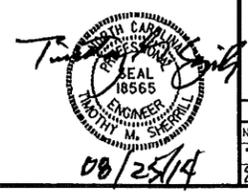


PLAN
(PILES NOT SHOWN FOR CLARITY)

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
BRIDGE NO. 221

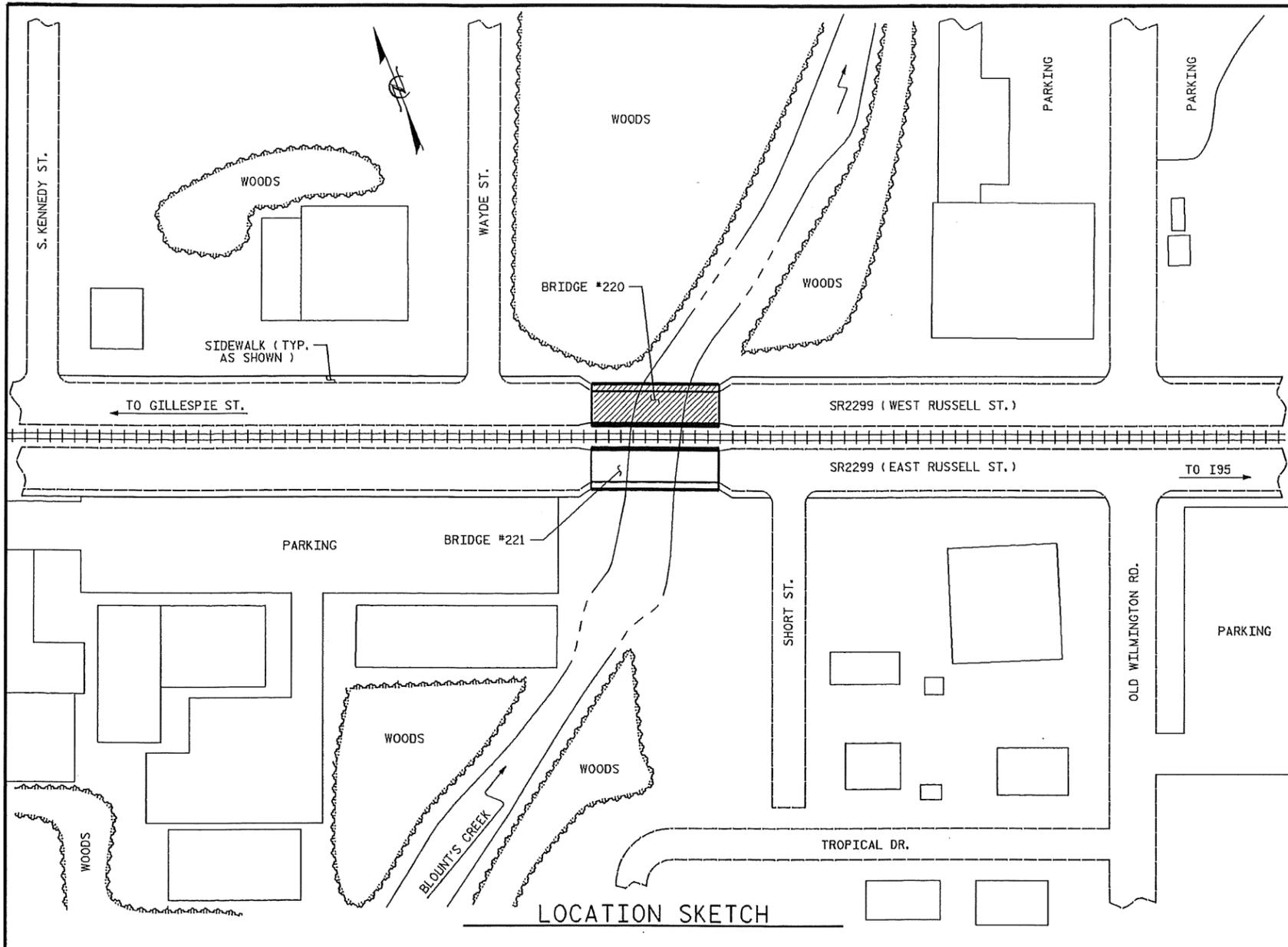
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
BRIDGE 221 ON SR2299
(EAST RUSSELL ST.) OVER
BLOUNT'S CREEK



DRAWN BY : P.C. BREWER / S.I.S. DATE : 8/14
CHECKED BY : D.N. SNOKE / R. WEISZ DATE : 8/14

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-31
1			3			TOTAL SHEETS
2			4			35



NOTES:

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IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

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EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATION OF BRIDGE DECK.

LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT BOTH ENDS OF THE BRIDGE.

FOR "EPOXY OVERLAY SYSTEM", SEE SPECIAL PROVISIONS.

FOR "PAINTING EXISTING STRUCTURE", 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.

TRAFFIC CONTROL WILL BE PROVIDED BY NCDOT DIVISION 6. THE CONTRACTORS WORK SHALL BE SCHEDULED AND COORDINATED WITH DIVISION 6, SO THAT PROPER TRAFFIC CONTROL MEASURES ARE IMPLEMENTED PRIOR TO THE CONTRACTOR BEGINNING ANY WORK. DIVISION 6 SHALL BE NOTIFIED 2 WEEKS PRIOR TO ANTICIPATED START OF CONSTRUCTION. DIVISION 6 SHALL BE GIVEN A MINIMUM OF 48 HOURS NOTICE FOR CHANGES IN TRAFFIC CONTROL.

LOCATION SKETCH

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 221

SHEET 2 OF 2

TOTAL BILL OF MATERIAL						
INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	CLEANING & REPAINTING OF BRIDGE #221	PAINTING CONTAINMENT FOR BRIDGE #221	POLLUTION CONTROL	EPOXY OVERLAY SYSTEM
SQ. YDS.	TON	TON	LUMP SUM	LUMP SUM	LUMP SUM	SQ. FT.
169	15	1	LUMP SUM	LUMP SUM	LUMP SUM	2,352

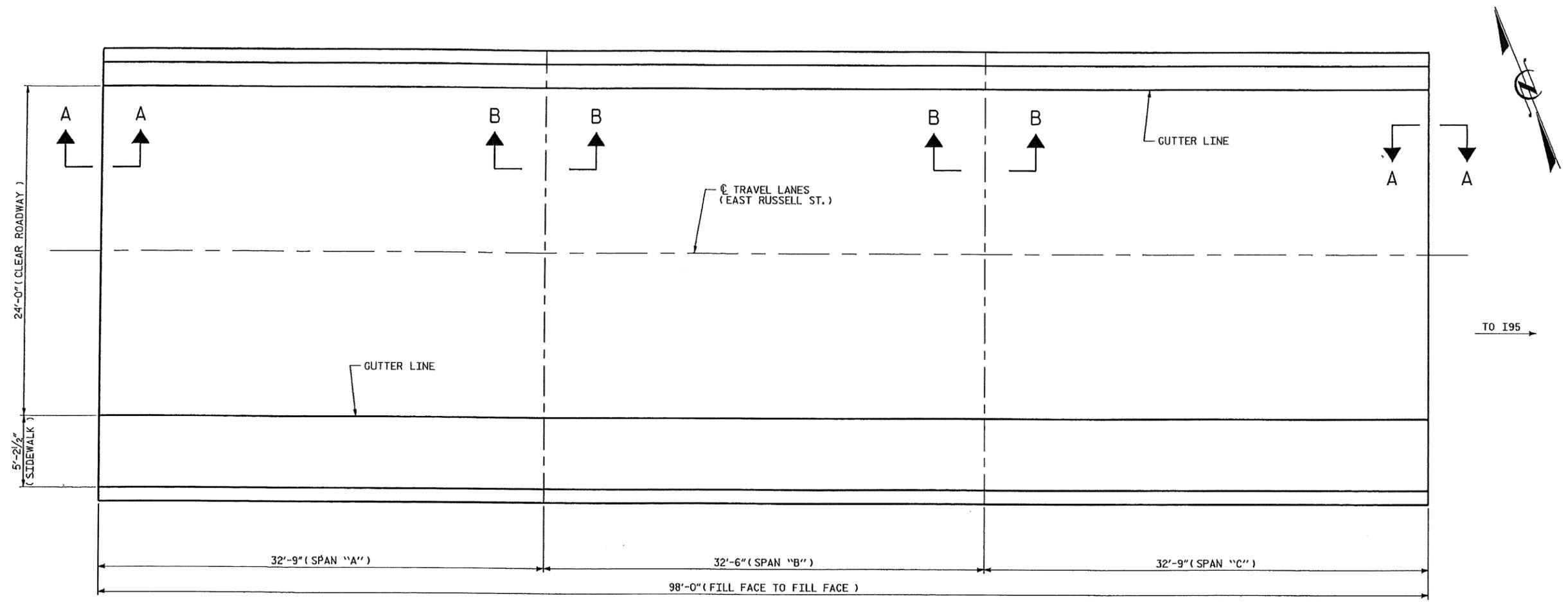
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 BRIDGE 221 ON SR2299
 (EST RUSSELL ST.) OVER
 BLOUNT'S CREEK

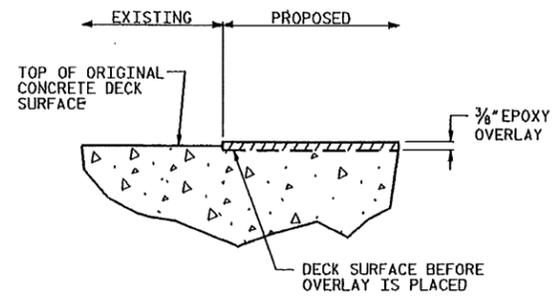
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-32
1			3			TOTAL SHEETS
2			4			35



DRAWN BY : P.C. BREWER / S.I.S. DATE : 8/14
 CHECKED BY : D.N. SNOKE / R. WEISZ DATE : 8/14



PLAN OF SPANS



DETAIL FOR EPOXY OVERLAY

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 221

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

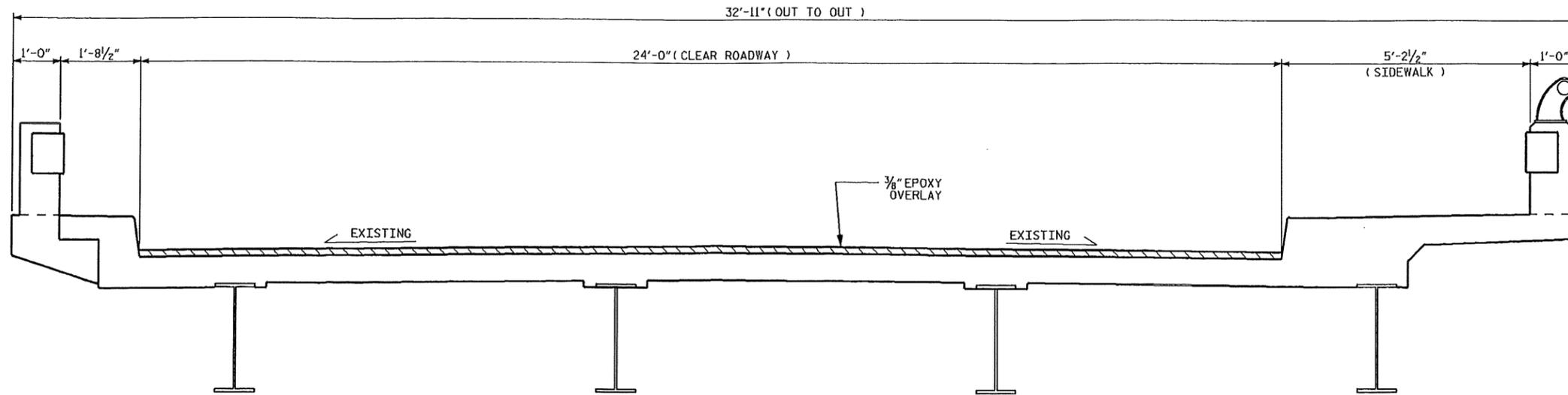
PLAN OF SPANS



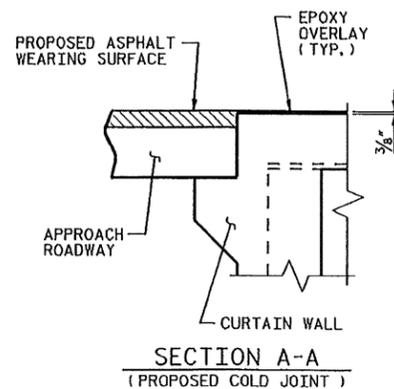
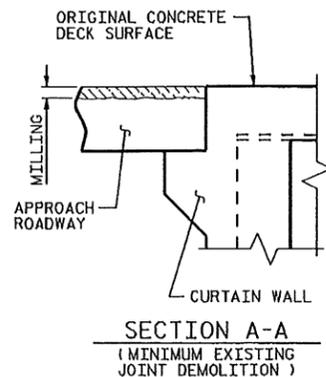
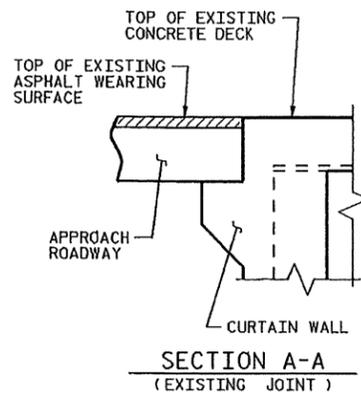
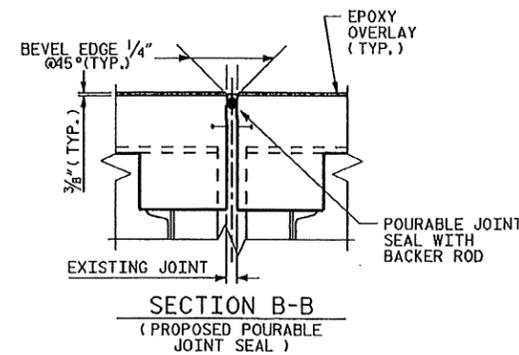
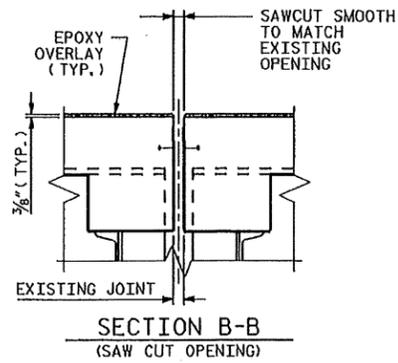
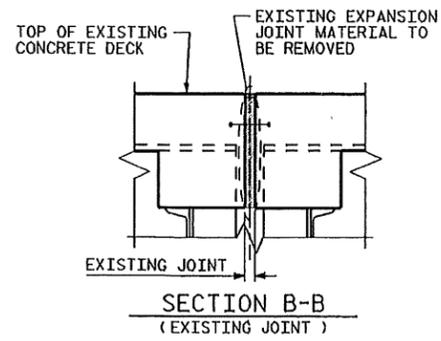
DRAWN BY : P.C. BREWER / S.T.S. DATE : 8/14
 CHECKED BY : D.N. SNOKE / R. WEISZ DATE : 8/14

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-33
1			3			TOTAL SHEETS
2			4			35

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TYPICAL SECTION



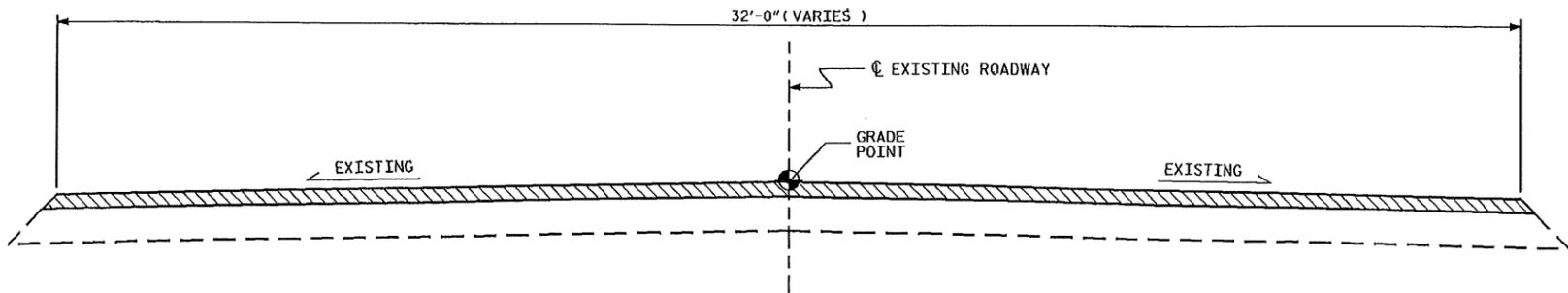
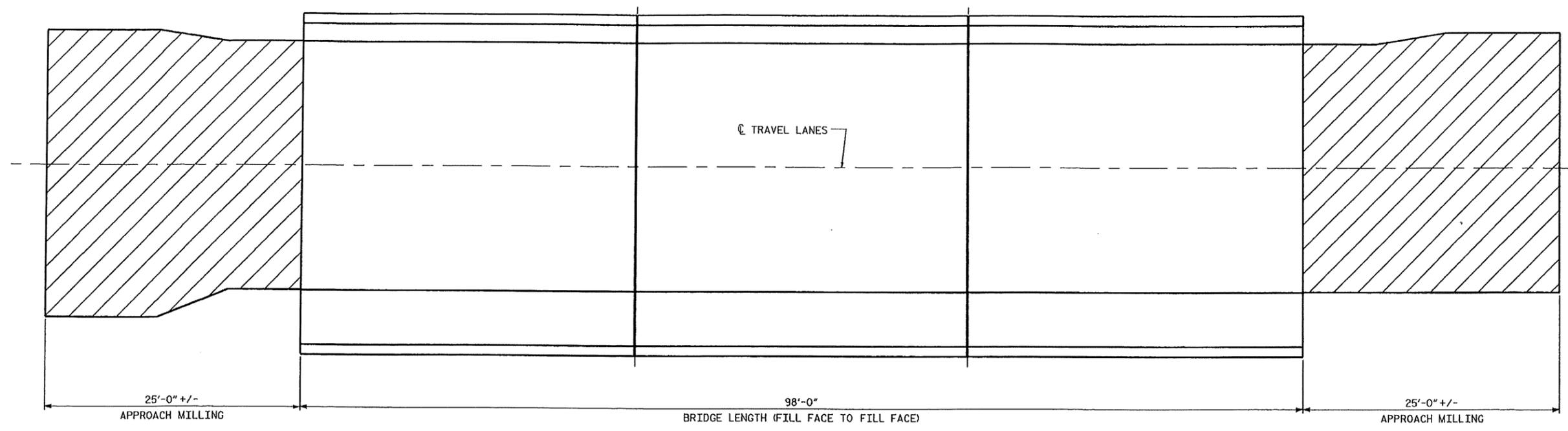
NOTE:
POURABLE JOINT SEAL TO BE INSTALLED ACCORDING TO THE STANDARD SPECIFICATIONS AND SHALL BE INCLUDED IN THE PAYMENT FOR OTHER ITEMS.

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 221

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S-34
TYPICAL SECTION & JOINT DETAILS						
REVISIONS						TOTAL SHEETS 35
NO.	BY	DATE	NO.	BY	DATE	
1			3			
2			4			

08/25/14
 NORTH CAROLINA
 SEAL
 18568
 ENGINEER
 JOHNNY M. SHERRELL

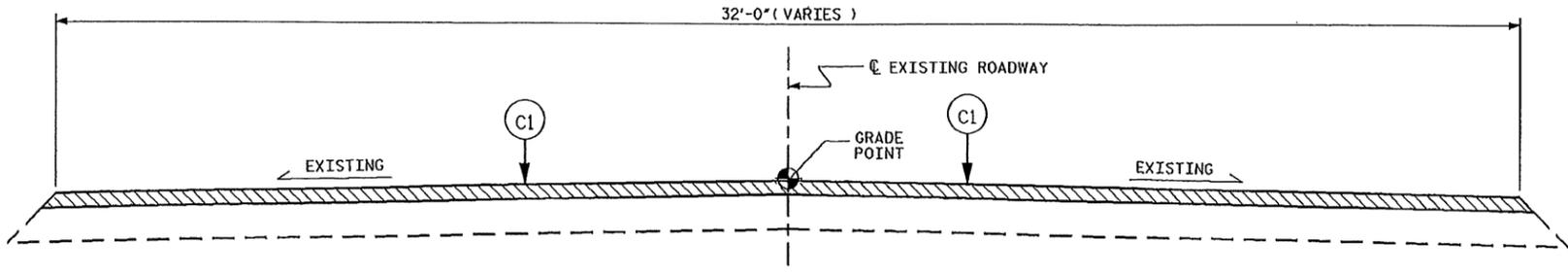
DRAWN BY : P.C. BREWER DATE : 6/14
 CHECKED BY : D.M. SNOKE DATE : 6/14



TYPICAL ROADWAY MILLING SECTION

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.

NOTE:
 INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION TO THE BRIDGE DECK. AS SHOWN, NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.



TYPICAL PROPOSED ROADWAY SECTION

(MILL TO APPROX. 1/2" DEPTH)

PROJECT NO. BP-5500L
CUMBERLAND COUNTY
 BRIDGE NO. 221

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

INCIDENTAL MILLING

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-35
1			3			TOTAL SHEETS
2			4			35

DRAWN BY : D. SNOKE / S. T. SANDOR DATE : 8/14
 CHECKED BY : R. WEISZ DATE : 8/14

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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 2012 "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 ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS 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.

ENGLISH

JANUARY, 1990

STD. NO. SN