PROJECT: 15BPR.125.3

CONTRACT NO.: C204488

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.125.3	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
15BPR.125.1	–	P.E.
15BPR.125.3	–	CONST.

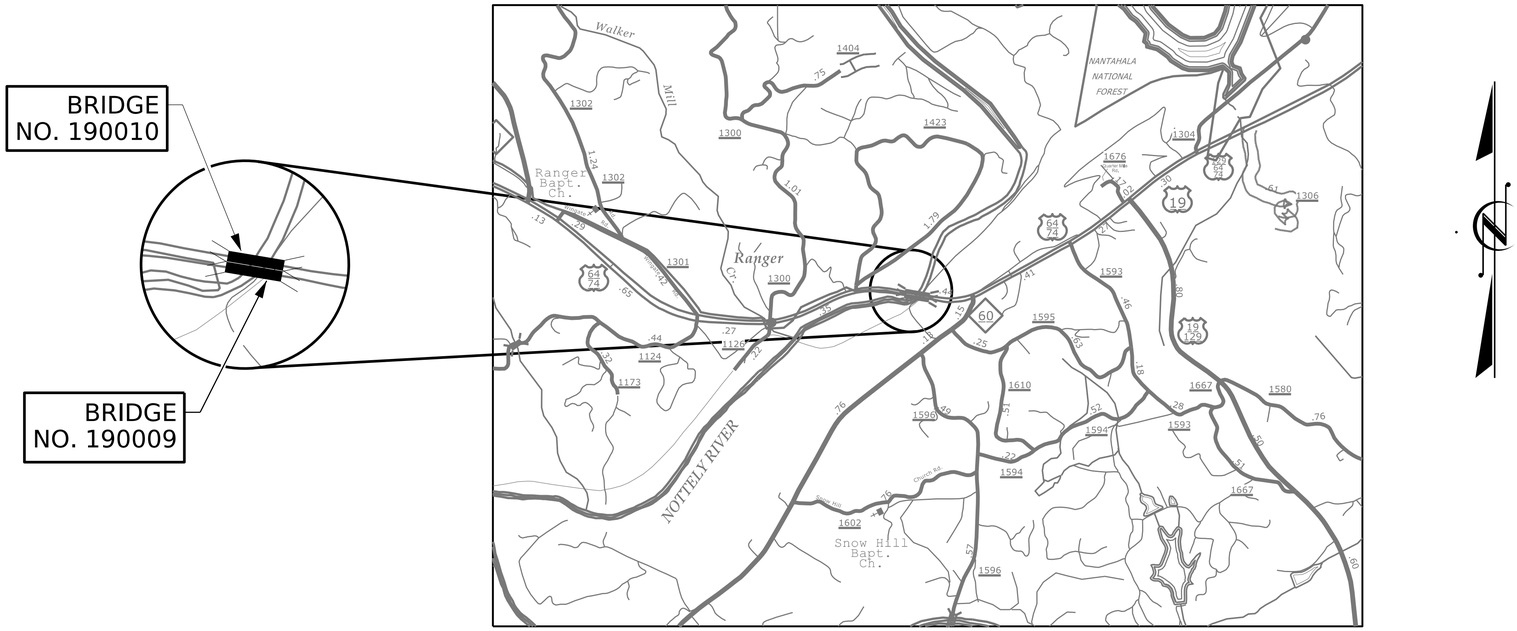
STATE OF NORTH CAROLINA

DIVISION OF HIGHWAYS

CHEROKEE COUNTY

LOCATION: *BRIDGE NO. 190009 ON US 64 & US 74 EBL OVER NOTTELY RIVER AND GRAVEL RD.*
BRIDGE NO. 190010 ON US 64 & US 74 WBL OVER NOTTELY RIVER AND GRAVEL RD.

TYPE OF WORK: *BRIDGE PRESERVATION – ASPHALT MILLING & REPAVING, LATEX MODIFIED CONCRETE – EARLY STRENGTH (LMC–ES) OVERLAY, DECK REPAIR, FOAM JOINT SEALS FOR PRESERVATION, LINK SLAB FOR RESERVATION, REPAIRS TO PRESTRESSED CONCRETE GIRDERS, CLEANING AND PAINTING EXISTING WEATHERING STEEL, CLEANING AND PAINTING EXISTING STRUCTURE, CLEANING AND PAINTING EXISTING BEARING WITH HRCSA, EPOXY COATING CONCRETE GIRDER ENDS, EPOXY COATING AND DEBRIS REMOVAL FROM TOP OF END BENT AND BENT CAPS, SUBSTRUCTURE REPAIR.*



DESIGN DATA

BRIDGE NO. 190009 ADT (2019) = 8,000
BRIDGE NO. 190010 ADT (2019) = 8,000

PROJECT LENGTH

BRIDGE NO. 190009 – 0.069 MILE
BRIDGE NO. 190010 – 0.073 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610

2018 STANDARD SPECIFICATIONS

LETTING DATE :

OCTOBER 17, 2023

ADAM COLE, P.E.
PROJECT ENGINEER

KRISHNA SEDAI, P.E.
PROJECT DESIGN ENGINEER

PROJECT: 15BPR.125.3

CONTRACT NO.: C204488

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CHEROKEE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.125.3	1A	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
15BPR.125.1		P.E.
15BPR.125.3		CONST.

LOCATION: BRIDGE No. 190009 ON US 64 & US 74 EBL OVER NOTTELY RIVER AND GRAVEL RD.
BRIDGE No. 190010 ON US 64 & US 74 WBL OVER NOTTELY RIVER AND GRAVEL RD.

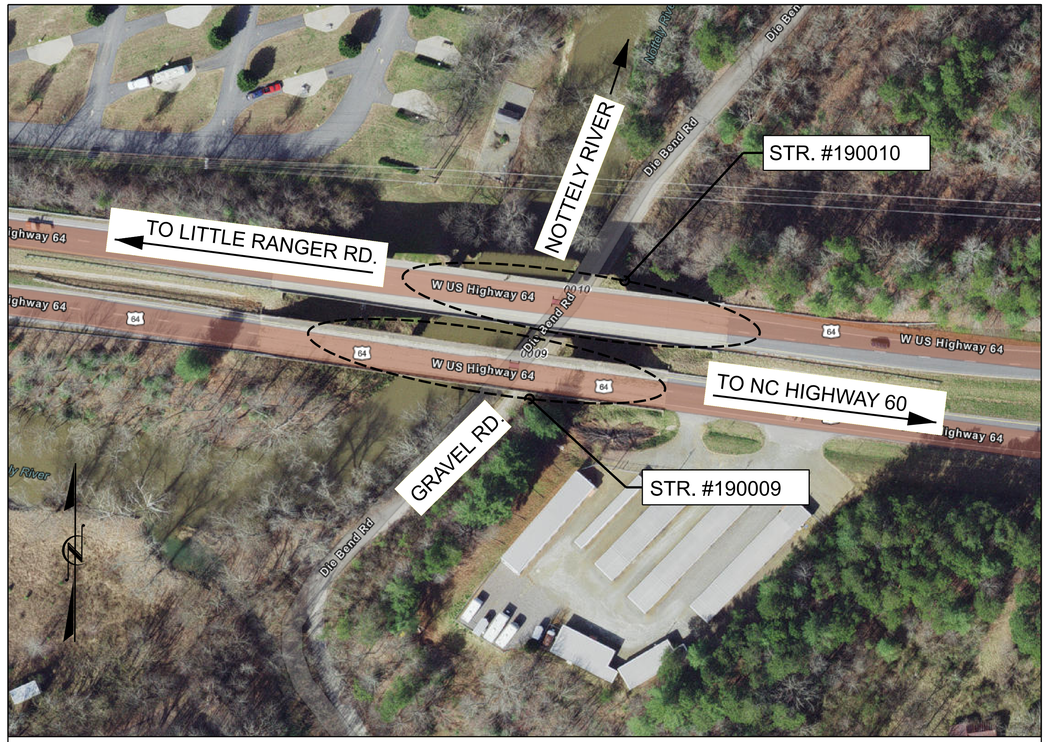
INDEX OF STRUCTURES SHEETS

STATE OF NORTH CAROLINA ★ DEPARTMENT OF TRANSPORTATION ★

TYPE OF WORK:

BRIDGE PRESERVATION – ASPHALT MILLING & REPAVING, LATEX MODIFIED CONCRETE – EARLY STRENGTH (LMC–ES) OVERLAY, DECK REPAIR, FOAM JOINT SEALS FOR PRESERVATION, LINK SLAB FOR PRESERVATION, REPAIRS TO PRESTRESSED CONCRETE GIRDERS, CLEANING AND PAINTING EXISTING WEATHERING STEEL, CLEANING AND PAINTING EXISTING STRUCTURE, CLEANING AND PAINTING EXISTING BEARING WITH HRCSA, EPOXY COATING CONCRETE GIRDER ENDS, EPOXY COATING AND DEBRIS REMOVAL FROM TOP OF END BENT AND BENT CAPS, SUBSTRUCTURE REPAIR.

Prepared in the Office of:
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610



LOCATION SKETCH

BRIDGE COORDINATES		
BRIDGE No.	LATITUDE	LONGITUDE
190009	35°-01'-38.51"	84°-06'-53.32"
190010	35°-01'-39.08"	84°-06'-52.94"

NOTES

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE 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.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

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

WORK ON THE BRIDGE(S) SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USE PLATFORM NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECTIAL PROVISIONS.

ANY DAMAGE TO EXISTING REINFORING STEEL, DURING CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

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

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

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

THE CONTRACTOR MUST COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM THE HYDRO-DEMOLITION PROCESS, SEE LMC OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.

THE LMC CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK DURING HYDRO-DEMOLITION.

FOR PLACING AND FINISHING LATEX MODIFIED CONCRETE - EARLY STRENGTH, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE - EARLY STRENGTH, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR LINK SLAB FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

FOR REPAIRS TO PRESTRESSED CONCRETE GIRDERS, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING WEATHERING STEEL STRUCTURES, SEE SPECIAL PROVISIONS.

FOR PAINTING CONTAINMENT AND POLLUTION CONTROL, SEE PAINTING EXISTING STRUCTURE SPECIAL PROVISIONS.

FOR STEEL BEARING KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR BEAM REPAIR - PLATING, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE EPOXY COATING AND DEBRIS REMOVAL SPECIAL PROVISION.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE. THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

CONTRACTOR SHALL DETERMINE EXTENT OF WORKING AREA, STAGING PROCESS AND INSTALL COVER □ ASSEMBLY AS NECESSARY TO MEET THE REQUIREMENTS OF TRAFFIC MANAGEMENT PLANS.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OF ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEMS SHOWN BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THESE ITEMS, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	SQ. YDS.
2	SPLICING OF PRESTRESSING STRAND	EACH

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009, 190010

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F7941509F49F...

09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCHES AND NOTES

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

9/15/2023
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TOTAL BILL OF MATERIAL

BRIDGE NO.	INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS AA CONCRETE	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	LATEX MODIFIED CONCRETE OVERLAY - EARLY STRENGTH	PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY - EARLY STRENGTH	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	CLEANING AND PAINTING EXISTING WEATHERING STEEL FOR BRIDGE NO...	CLEANING AND REPAINTING OF BRIDGE NO...
	SQ. YDS.	TON	TON	SQ. FT.	CU. YD.	LUMP SUM	SQ. YDS.	CU. YDS.	SQ. YDS.	CU. FT.	CU. FT.	LN. FT.	LUMP SUM	LUMP SUM
190009	378.0	40	5	10,227	17.5	LUMP SUM	67.1	85.2	1,361.0	-	145.6	1.5	-	LUMP SUM
190010	445.0	40	5	14,540	26.8	LUMP SUM	-	111.1	1,776.0	2.0	46.4	1.3	LUMP SUM	-
TOTAL	823.0	80	10	24,767	44.3	LUMP SUM	67.1	196.3	3,137.0	2.0	192.0	2.8	LUMP SUM	LUMP SUM

TOTAL BILL OF MATERIAL CONTINUED

BRIDGE NO.	PAINTING CONTAINMENT FOR BRIDGE NO...	FOAM JOINT SEALS FOR PRESERVATION	ELASTOMERIC CONCRETE FOR PRESERVATION	REPAIRS TO PRESTRESSED CONCRETE GIRDERS	BEAM REPAIR PLATING	BRIDGE JOINT DEMOLITION	EPOXY COATING	EPOXY COATING CONCRETE GIRDER ENDS	LINK SLAB FOR PRESERVATION	HYDRO-DEMOLITION OF BRIDGE DECK	SCARIFYING BRIDGE DECK	CLEANING & PAINTING EXISTING BEARINGS WITH HIGH RATIO CALCIUM SULFONATE	STEEL BEARING KEEPER ANGLER ASSEMBLY
	LUMP SUM	LN. FT.	CU. FT.	CU. FT.	LBS.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	EACH	EACH
190009	LUMP SUM	68.0	17.0	-	96.1	68.0	476.0	-	782.0	1,361.0	1,361.0	50	5
190010	LUMP SUM	160.0	40.0	1.1	-	160.0	500.0	698.7	1,028.0	1,776.0	1,776.0	-	-
TOTAL	LUMP SUM	228.0	57.0	1.1	96.1	228.0	976.0	698.7	1,810.0	3,137.0	3,137.0	50	5

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009, 190010

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai EA6F7941150F497...

09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOTAL BILL OF MATERIAL

DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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

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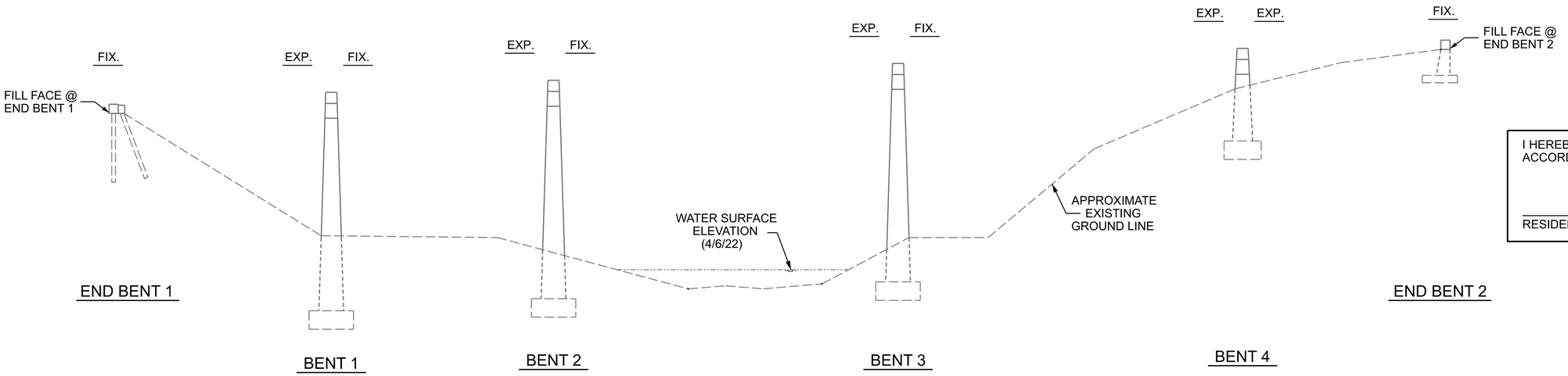
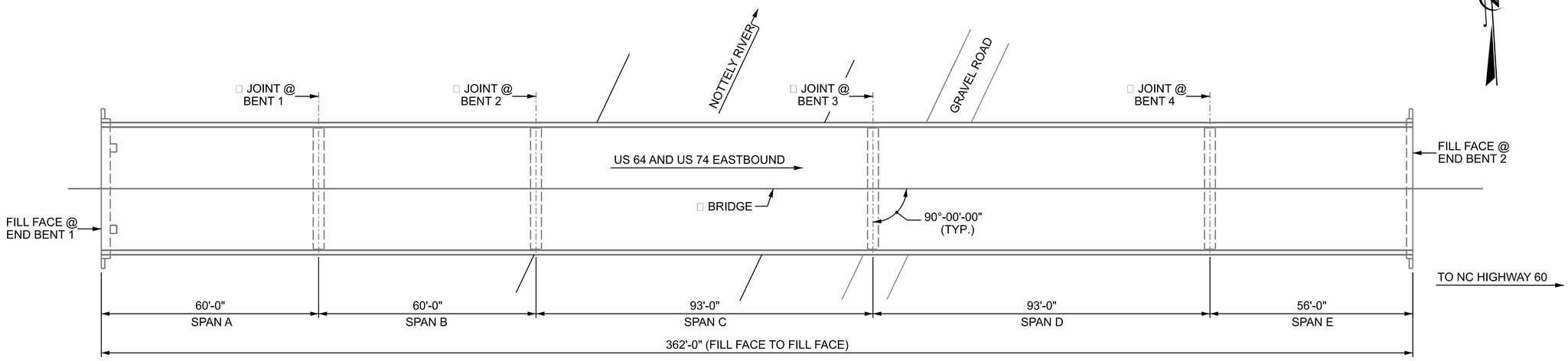


SECTION ALONG □ BRIDGE



PLAN

SCOPE OF WORK

PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND HYDRO-DEMOLITION METHODS.

OVERLAY PREPARED TOP OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE - EARLY STRENGTH (LMC-ES).

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINT AT BENTS.

REMOVE EXISTING JOINT SYSTEM AND INSTALL LINK SLAB AT BENTS.

GROOVE LMC BRIDGE DECK.

CLEAN, REPAIR AND PAINT EXISTING STRUCTURAL STEEL BEAMS.

CLEAN AND PAINT EXISTING STEEL BEARINGS WITH HRCSA.

REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.

EPOXY RESIN INJECTION OF CONCRETE CRACKS.

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.

PROPERLY PREPARE SPALLED AREAS IN EXISTING END BENT AND BENTS AND PERFORM SHOTCRETE AND CONCRETE REPAIRS.

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/6/2022.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.

I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER DATE

NORTH CAROLINA PROFESSIONAL SEAL 35647 ENGINEER ADAM A. COLE
Docusigned by: 02EE938FA8674D6...
09/15/2023

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai EA6F7941508F497...
09/15/2023

DRAWN BY : A. SORSENGINH DATE : 5/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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9/15/2023
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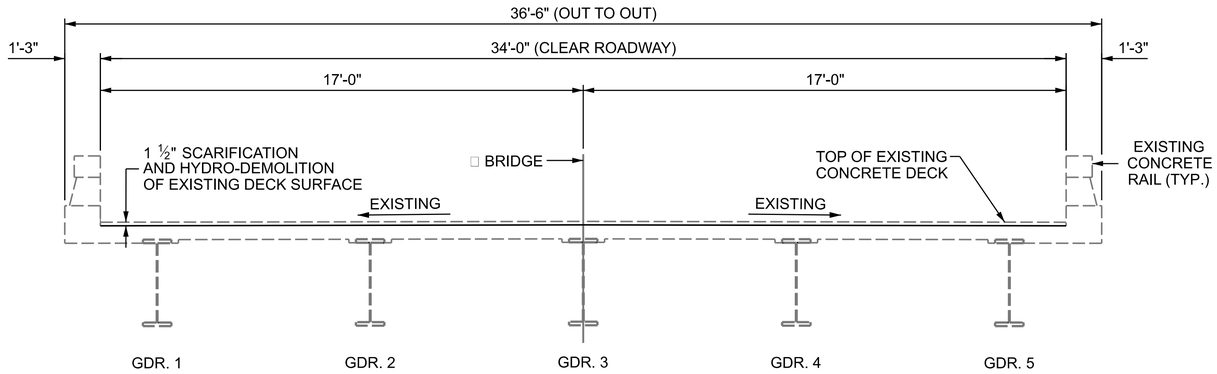
PROJECT NO. 15BPR.125.3
CHEROKEE COUNTY
BRIDGE NO. 190009

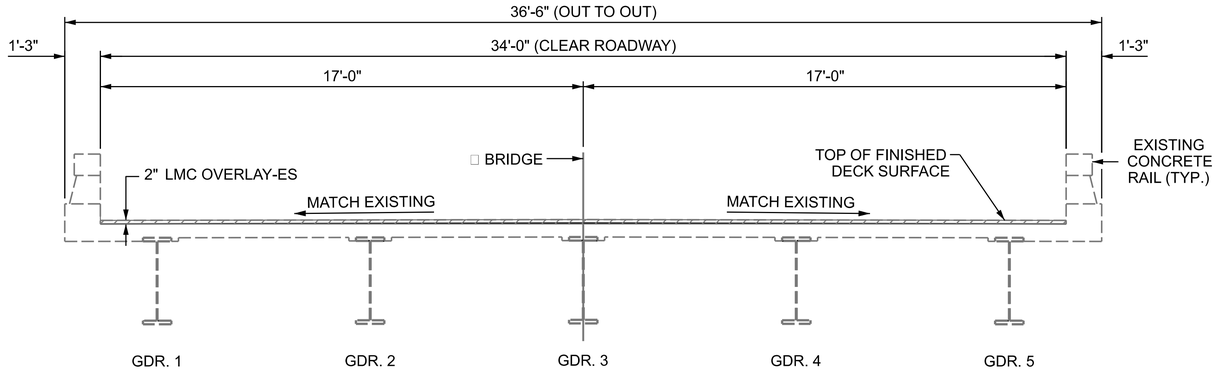
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON
US 64 & US 74 EBL
OVER NOTTELY RIVER AND
GRAVEL RD.

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-01
1			3			TOTAL SHEETS
2			4			25



TYPICAL SECTION
(EXISTING)

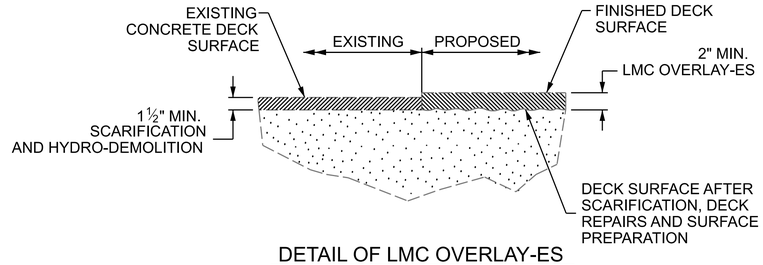


TYPICAL SECTION
(PROPOSED)

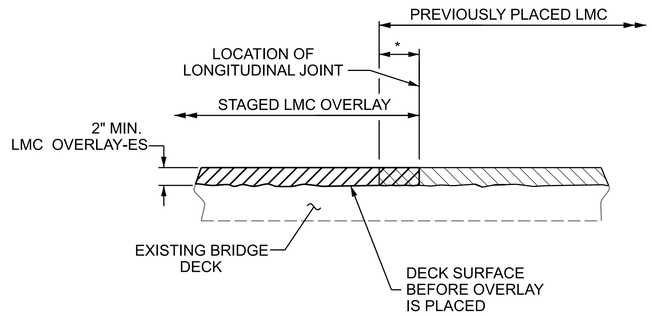
NOTES:

WHEN PREPARING THE SURFACE FOR LMC OVERLAY ADJACENT TO A PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE REMOVED FOR A DISTANCE OF 4 INCHES FROM THE LMC EDGE. THE SURFACE OF THE NEW STAGE AREA, ALONG WITH THE 4 INCH OVERLAY AREA, SHALL BE PREPARED AS PER THE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS. NEW LMC SHALL BE PLACED IN THE 4 INCH OVER LAP, AS PART OF NEW LMC STAGE PLACEMENT.

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND LMC PLACEMENT.



DETAIL OF LMC OVERLAY-ES



SECTION THRU DECK

STAGED LMC OVERLAY-ES JOINT

* 4" OVERLAP BETWEEN OVERLAYS

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & SURFACE PREPARATION DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai
EA6F794100BF4B7...
09/15/2023

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-02
1			3			TOTAL SHEETS
2			4			25

DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

9/15/2023
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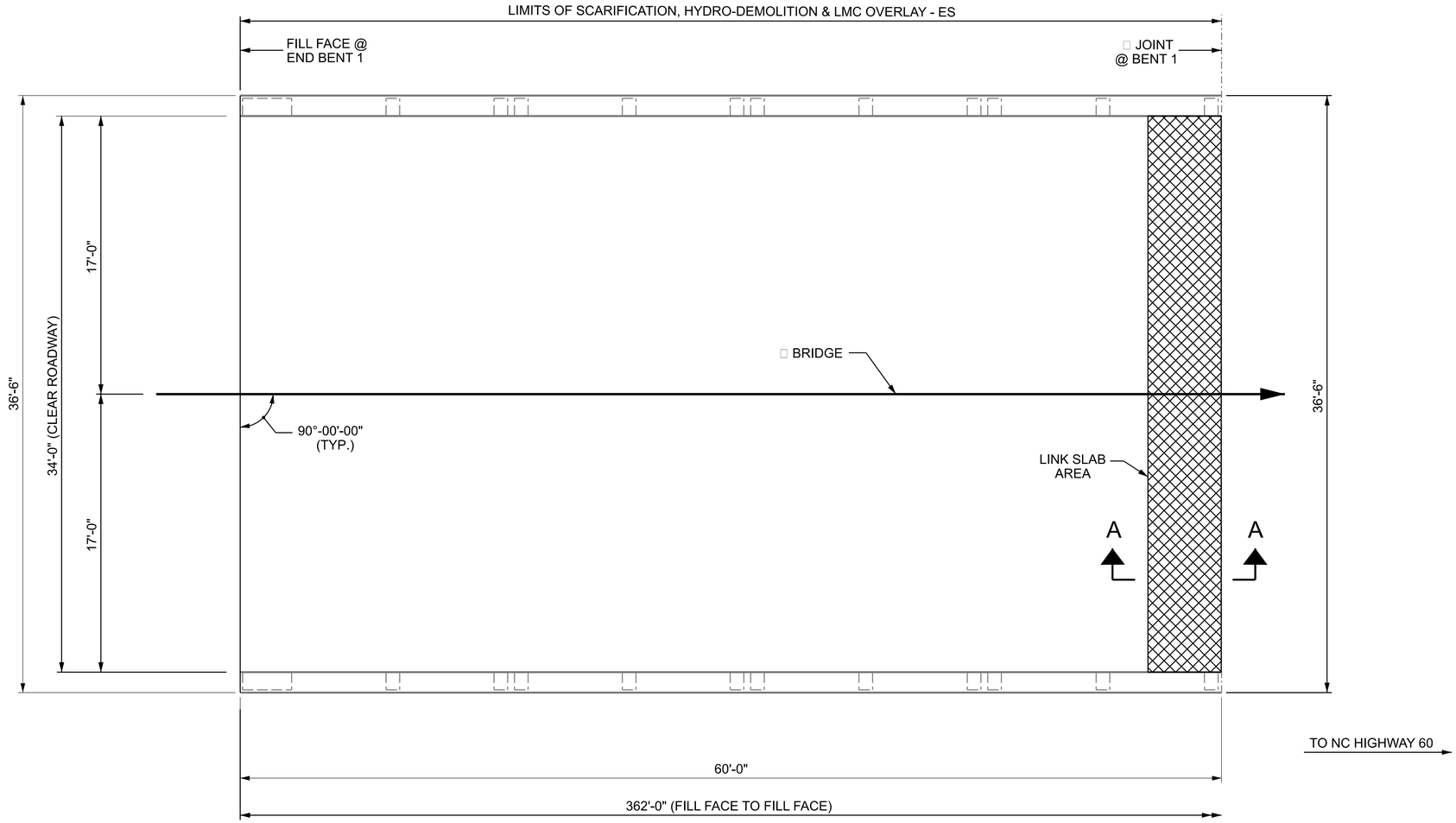
BRIDGE JOINT DEMOLITION

CLASS II SURFACE PREPARATION

LINK SLAB AREA

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	SPAN A	
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	227.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	227.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY - ES	14.2 CU. YDS.	
PLACING & FINISHING LATEX MODIFIED CONCRETE OVERLAY - ES	227.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	1677.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	153.0 SQ. FT.	



SPAN A

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE - EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC. SEE STAGED LMC OVERLAY - ES JOINT DETAIL.

FOR LMC OVERLAY - ES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SECTION A-A, SEE LINK SLAB FOR PRESERVATION DETAILS SHEET.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN A

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai
09/15/2023

DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-03
1			3			TOTAL SHEETS
2			4			25

9/15/2023
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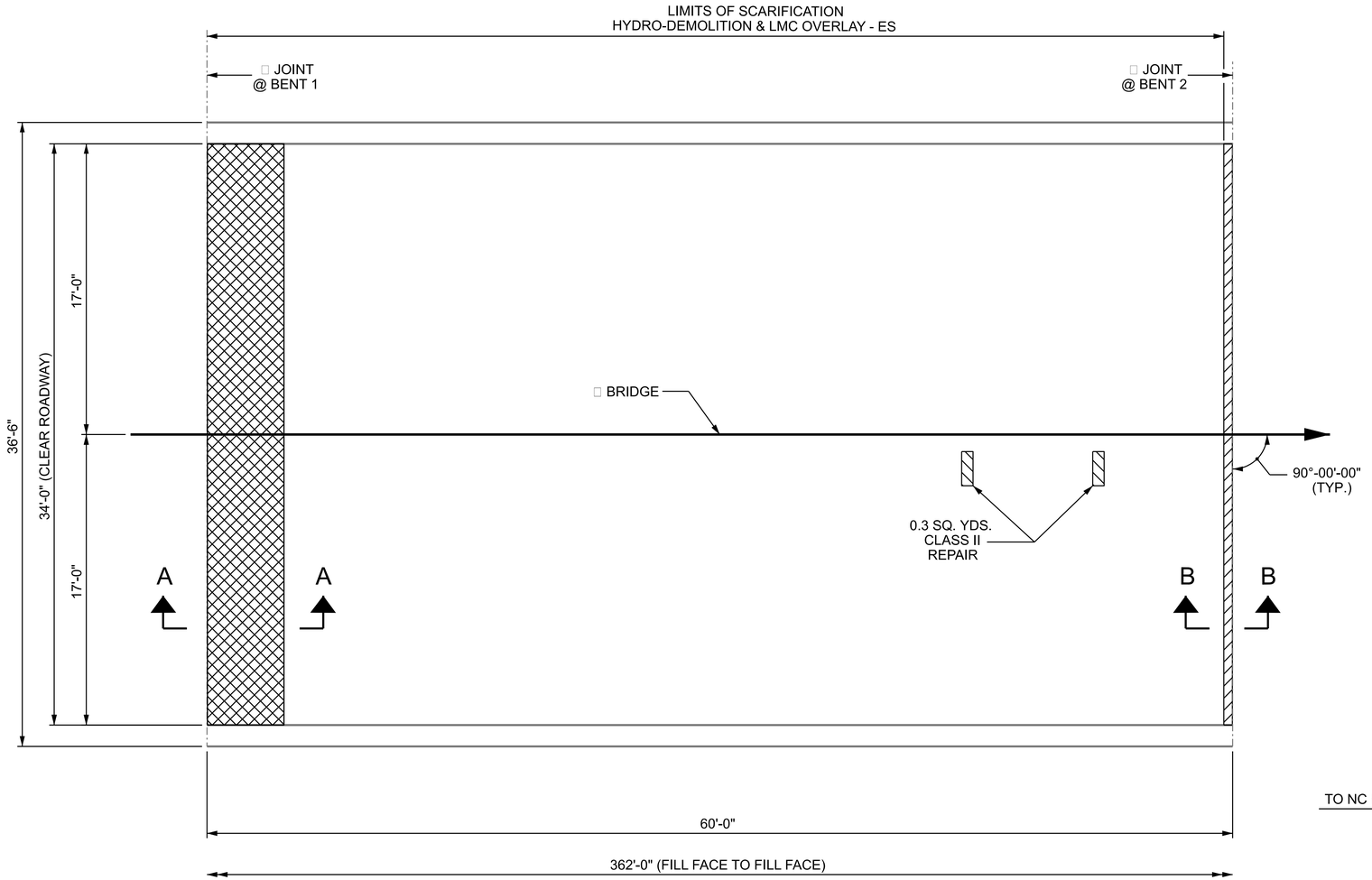
BRIDGE JOINT DEMOLITION

CLASS II SURFACE PREPARATION

LINK SLAB AREA

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIR	SPAN B	
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	225.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	225.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.3 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY - ES	14.1 CU. YDS.	
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY - ES	225.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	1661.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	153.0 SQ. FT.	



TO NC HIGHWAY 60

SPAN B

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE - EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC. SEE STAGED LMC OVERLAY JOINT DETAIL.

FOR LMC OVERLAY - ES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SECTION A-A, SEE LINK SLAB FOR PRESERVATION DETAILS SHEET.

FOR SECTION B-B, SEE JOINT DETAILS SHEET.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 5

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai
EA6F7941500F497...
09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN B

DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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2			4			25

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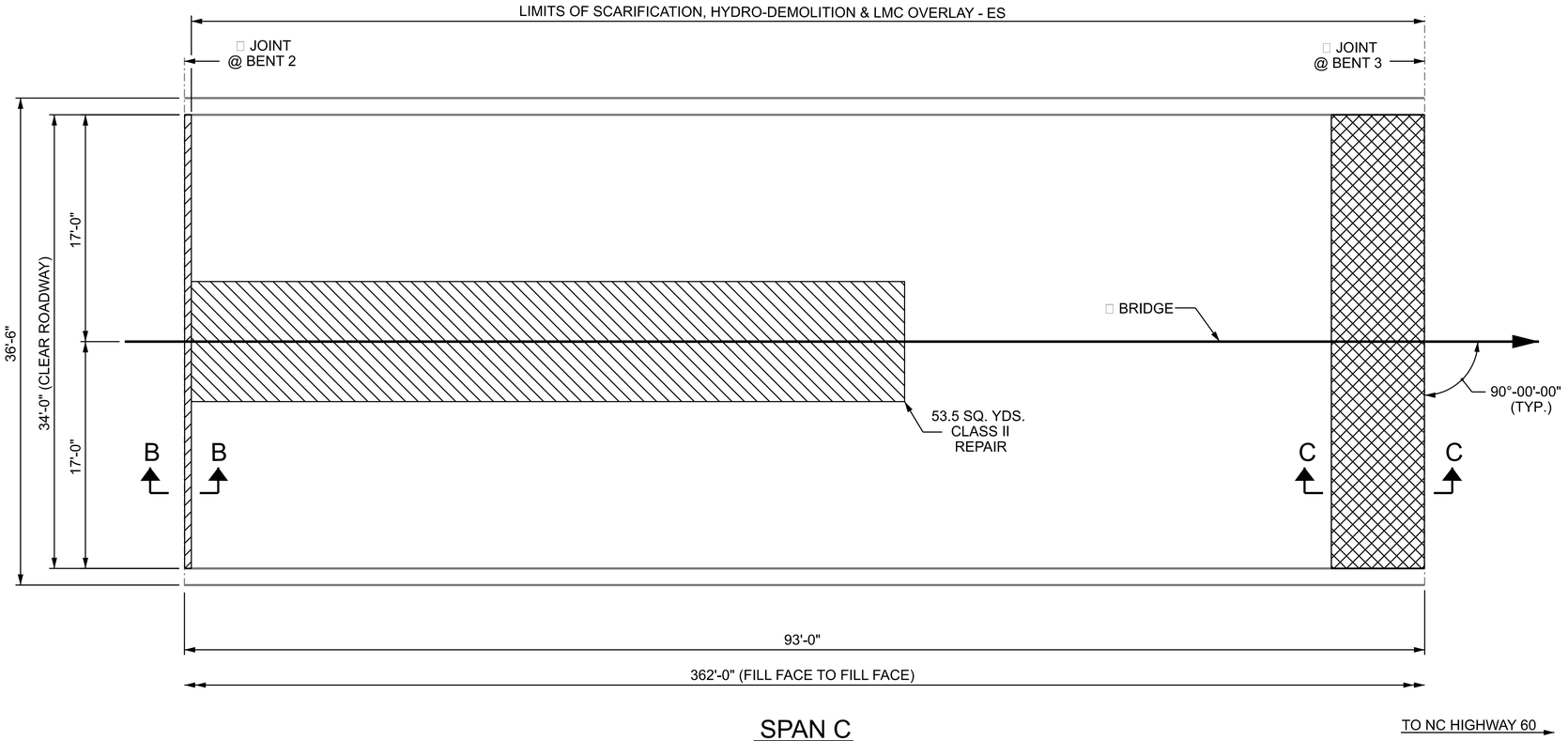
BRIDGE JOINT DEMOLITION

CLASS II SURFACE PREPARATION

LINK SLAB AREA



AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIR	SPAN C	
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	350.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	350.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	53.5 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY - ES	21.9 CU. YDS.	
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY - ES	350.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	2609.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	238.0 SQ. FT.	

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

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

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE - EARLY STRENGTH, SEE SPECIAL PROVISIONS.

PREVIOUSLY PLACED LMC OVERLAY AT STAGED EDGES SHALL BE DEMOLISHED BACK A MINIMUM OF 4 INCHES AND RECAST WITH LMC. SEE STAGED LMC OVERLAY - ES JOINT DETAIL.

FOR LMC OVERLAY - ES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE JOINT DETAILS SHEET.

FOR SECTION C-C, SEE LINK SLAB FOR PRESERVATION DETAILS SHEET.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 3 OF 5

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai EA6F7941D0A74B1... 09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN C

REVISIONS						SHEET NO.
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DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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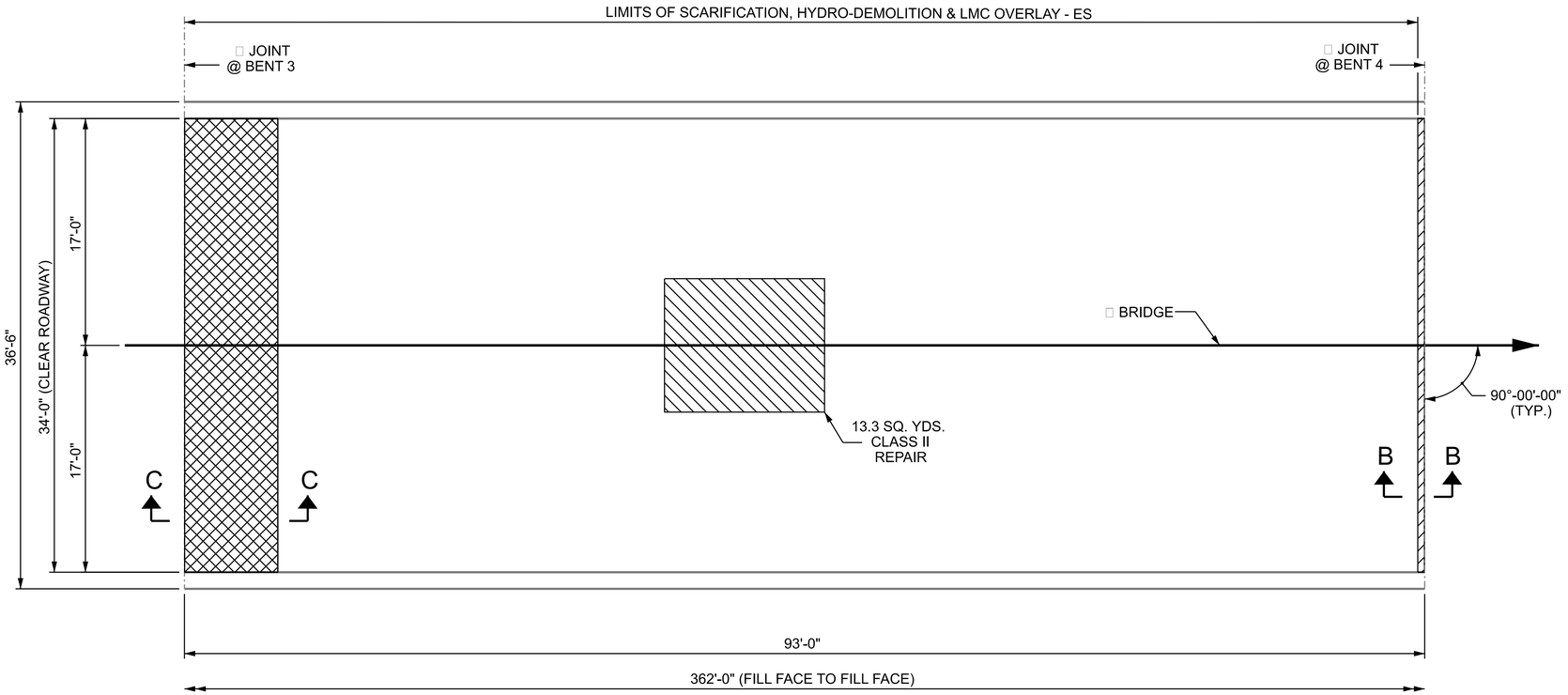
BRIDGE JOINT DEMOLITION

CLASS II SURFACE PREPARATION

LINK SLAB AREA

AS-BUILT REPAIR QUANTITY TABLE		
TOP OF DECK REPAIR	SPAN D	
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	350.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	350.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	13.3 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY - ES	21.9 CU. YDS.	
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY - ES	350.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	2609.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	238.0 SQ. FT.	



SPAN D

TO NC HIGHWAY 60

NOTES

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FOR LMC OVERLAY - ES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE JOINT DETAILS SHEET.

FOR SECTION C-C, SEE LINK SLAB FOR PRESERVATION DETAILS SHEET.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 4 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN D

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai
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09/15/2023

DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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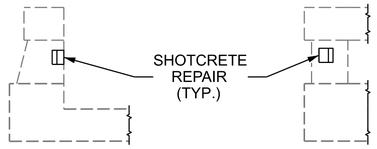
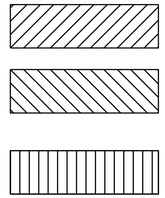
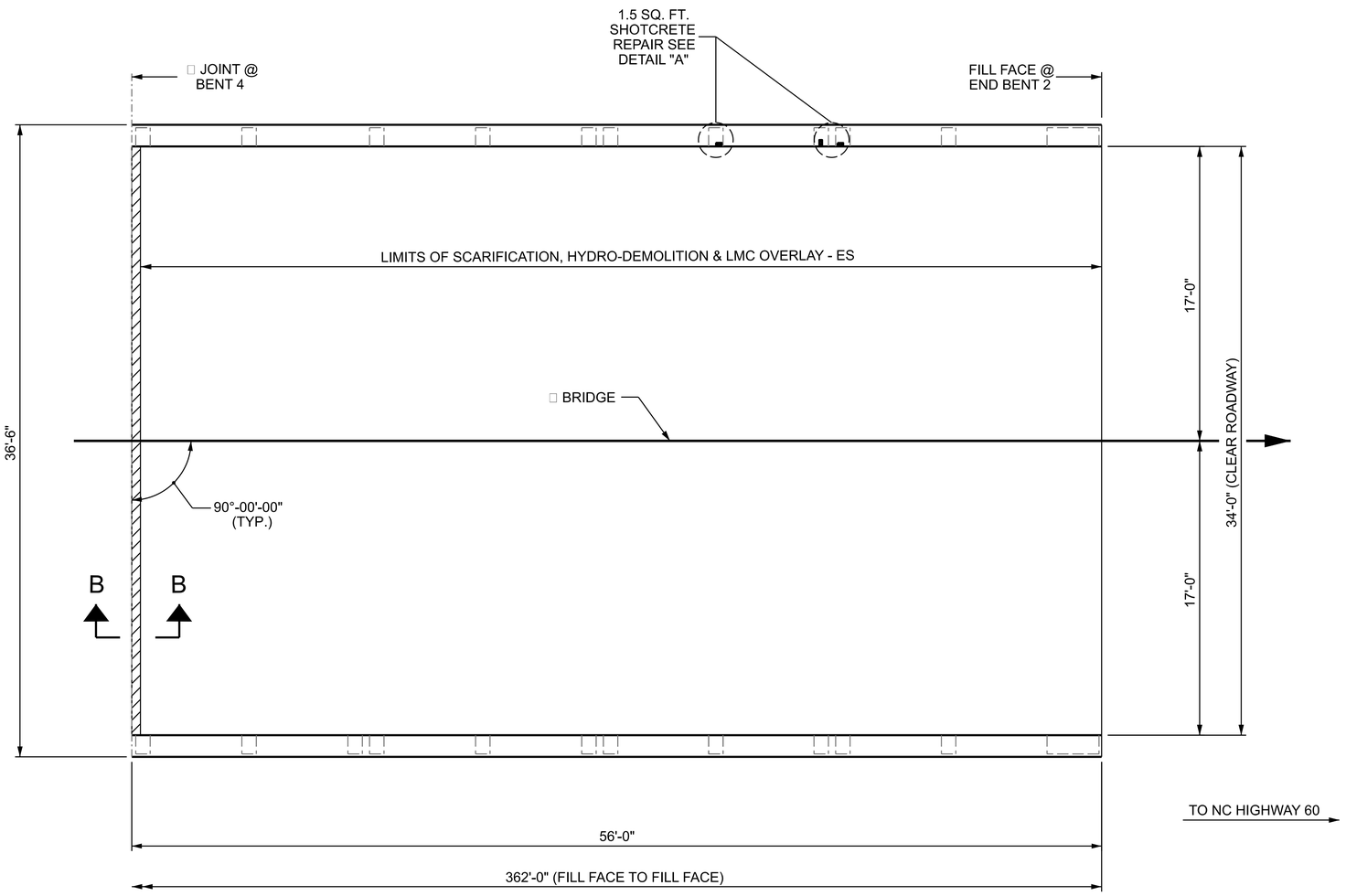




AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	SPAN E			
	ESTIMATE		ACTUAL	
SCARIFYING BRIDGE DECK	209.0 SQ. YDS.			
HYDRO-DEMOLITION OF BRIDGE DECK	209.0 SQ. YDS.			
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.			
LATEX MODIFIED CONCRETE OVERLAY - ES	13.1 CU. YDS.			
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY - ES	209.0 SQ. YDS.			
GROOVING BRIDGE FLOORS	1671.0 SQ. FT.			
SHOTCRETE REPAIRS	AREA SQ.FT.	VOL. CU.FT.	AREA SQ.FT.	VOL. CU.FT.
CONCRETE RAIL POSTS	1.5	0.8	0.0	0.0

" DETAIL A "
(3 @ RAIL POSTS)



SPAN E

NOTES

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FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE - EARLY STRENGTH, SEE SPECIAL PROVISIONS.

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FOR LMC OVERLAY - ES SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE JOINT DETAILS SHEET.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN E

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai
EA6F7941500F4B7...
09/15/2023

DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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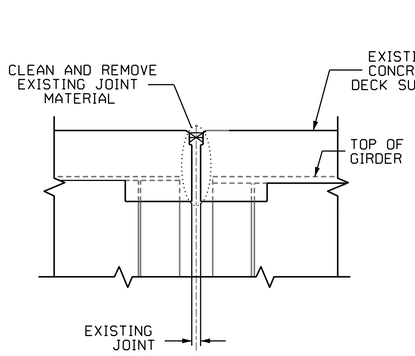
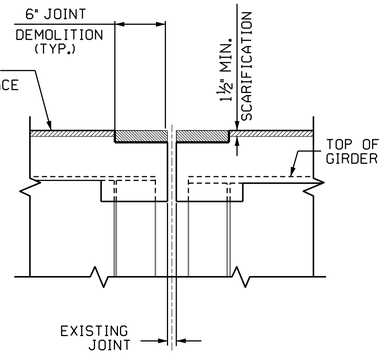
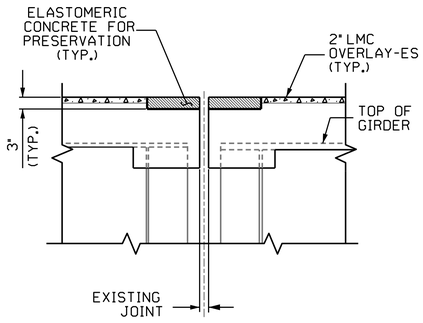


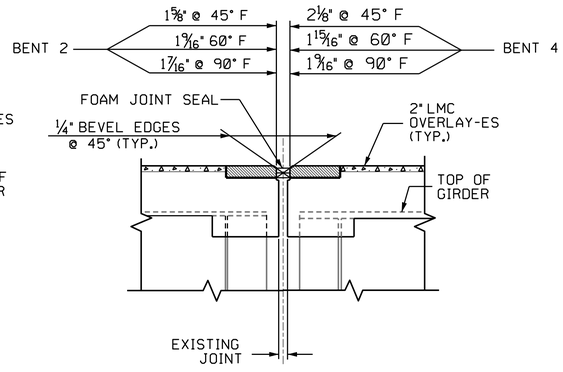
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION

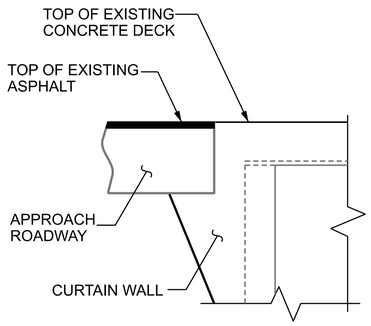


PROPOSED PRE-SAWED JOINT

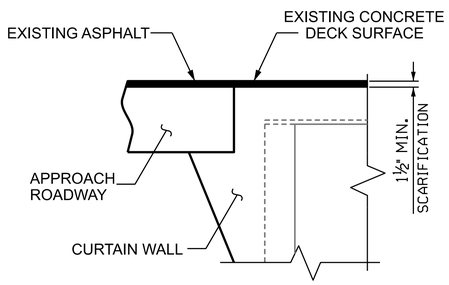


PROPOSED FOAM JOINT SEAL

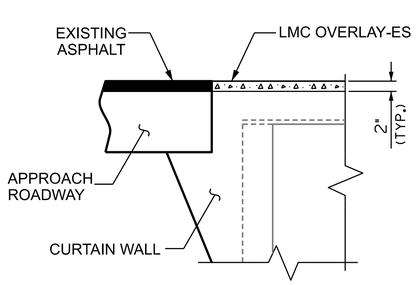
SECTION B-B



EXISTING COLD JOINT

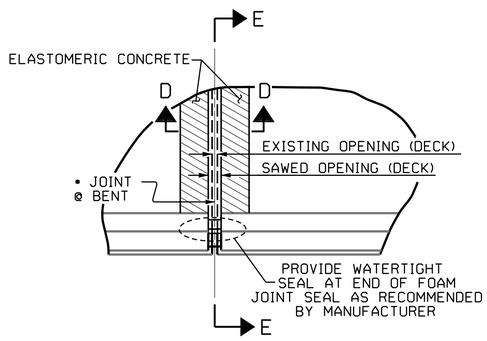


MINIMUM EXISTING JOINT DEMOLITION

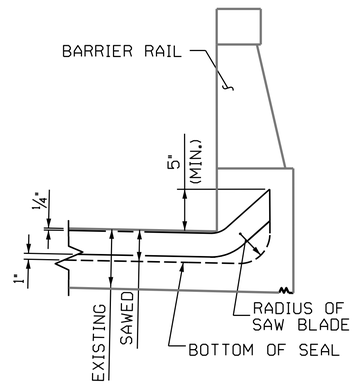


PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS



PLAN (@ BENT)



SECTION E-E

JOINT SEAL DETAILS

JOINT REPAIR QUANTITY TABLE			
	BRIDGE JOINT DEMOLITION	FOAM JOINT SEALS FOR PRESERVATION	ELASTOMERIC CONCRETE FOR PRESERVATION
BENT 2	34.0 SQ. FT.	34.0 LF	8.5 CU. FT.
BENT 4	34.0 SQ. FT.	34.0 LF	8.5 CU. FT.
• TOTAL	68.0 SQ. FT.	68.0 LF	17.0 CU. FT.

• BASED ON THE MINIMUM BLOCKOUT SHOWN.

NOTES

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN DETAIL BY MORE THAN ¼", NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE LMC OVERLAY IS COMPLETE.

THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO DROP ANY MATERIAL BELOW THE BRIDGE WITHOUT PROTECTIVE DEVICES BELOW TO CATCH THE MATERIAL. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.

DURING THE JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE BACKER ROD FOR THE EXISTING JOINT SIZE AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL OR ELASTOMERIC CONCRETE SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE OR ELASTOMERIC CONCRETE.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODARI

Docusigned by: Krishna P. Sodari
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09/15/2023

DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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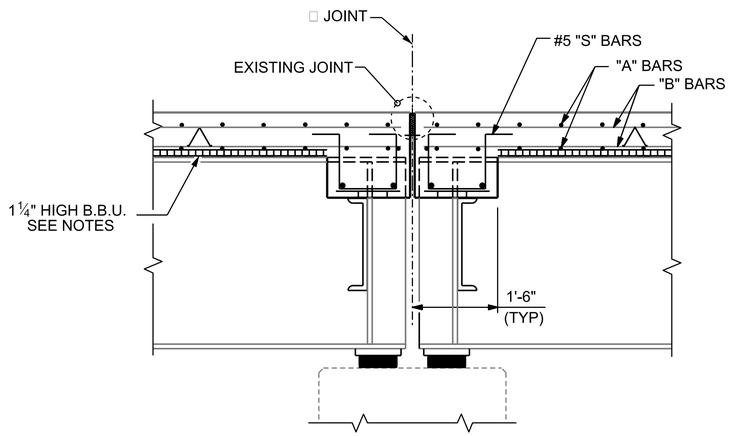
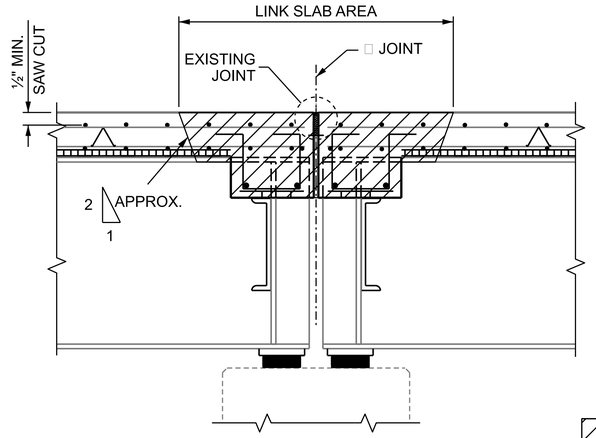




EXISTING SECTION AT BENT

SECTIONS A-A & C-C

SPLICE LENGTHS		
BAR SIZE	EPOXY COATED	UNCOATED
#4	2'-0"	1'-9"
#5	2'-6"	2'-2"
#6	3'-0"	2'-7"

BILL OF MATERIAL

LINK SLAB AT BENT 1						LINK SLAB AT BENT 3					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A	20	#5	STR	33'-8"	702	* A	31	#5	STR	33'-8"	1089
A	20	#5	STR	33'-8"	702	A	31	#5	STR	33'-8"	1089
* B	67	#6	STR	8'-8"	872	* B	67	#6	STR	13'-8"	1375
B	67	#6	STR	8'-8"	872	B	67	#6	STR	13'-8"	1375
REINFORCING STEEL				LBS.	1574	REINFORCING STEEL				LBS.	2464
* EPOXY COATED REINFORCING STEEL				LBS.	1574	* EPOXY COATED REINFORCING STEEL				LBS.	2464
CLASS AA CONCRETE				C.Y.	7.0	CLASS AA CONCRETE				C.Y.	10.5

EXISTING CONCRETE OF DEMOLITION FOR LINK SLAB CONSTRUCTION

NEW CONCRETE WORK FOR JOINT REPLACEMENT

NOTES

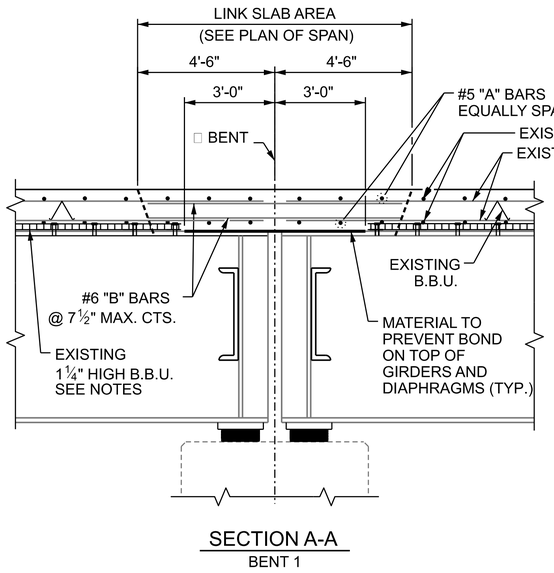
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF JOINT REPAIR.

FOR ESTIMATED LINK SLAB FOR PRESERVATION QUANTITIES, SEE PLAN OF SPAN SHEETS.

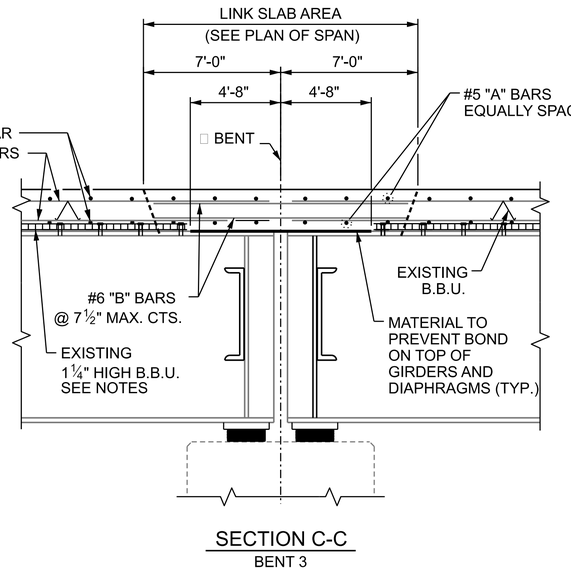
FOR LINK SLAB FOR PRESERVATION, SEE SPECIAL PROVISIONS.

CONSTRUCTION SEQUENCE

1. CLOSE WORK AREA ACCORDING TO TRAFFIC MANAGEMENT PLANS.
2. MARK OUT PROPOSED LINK SLAB AREA AND REMOVE EXISTING JOINT MATERIAL.
3. SAW CUT ½" DEEP PERIMETER OF PROPOSED LINK SLAB AREA.
4. BEGIN FULL DEPTH DEMOLITION OF PROPOSED LINK SLAB AREA, BEING CAREFUL NOT TO DAMAGE EXISTING REINFORCING STEEL, BEAM FLANGES, OR STAY-IN-PLACE FORMS. DEMOLISH EDGES OF LINK SLAB AREA AT A 2:1 RATIO, AS SHOWN.
5. REMOVE DEMOLITIONED MATERIALS AND CLEAN LINK SLAB AREA.
6. REMOVE SHEAR STUDS/STIRRUPS WITHIN THE LINK SLAB AREA.
7. REPAIR EXISTING REINFORCING STEEL THAT WAS DAMAGED DURING DEMOLITION.
8. PLACE BOND BREAKER MATERIAL WITHIN THE LINK SLAB AREA.
9. PLACE ADDITIONAL REINFORCING STEEL AS SHOWN.
10. PLACE NEW CONCRETE FOLLOWING THE LINK SLAB FOR PRESERVATION SPECIAL PROVISION. AS AN ALTERNATIVE, THE CONTRACTOR CAN USE LMC MATERIAL FOR THE LINK SLAB, FOLLOWING THE LATEX MODIFIED CONCRETE - EARLY STRENGTH BRIDGE DECK OVERLAY SPECIAL PROVISION.
11. AFTER PROPOSED DECK OVERLAY WORK HAS CURED, SAW CUT CONTROL LINES AND FILL WITH SEALER MATERIAL.

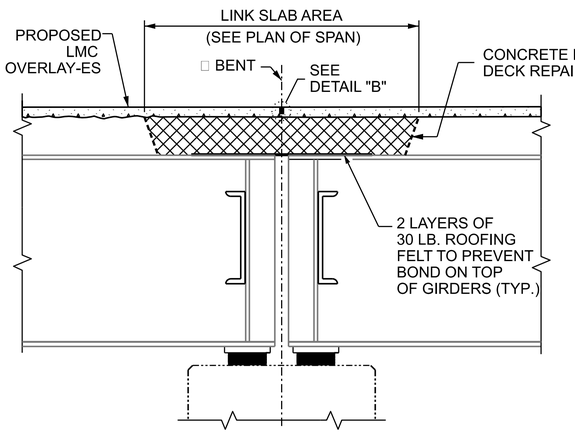


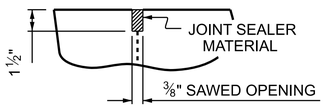
SECTION A-A
BENT 1



SECTION C-C
BENT 3

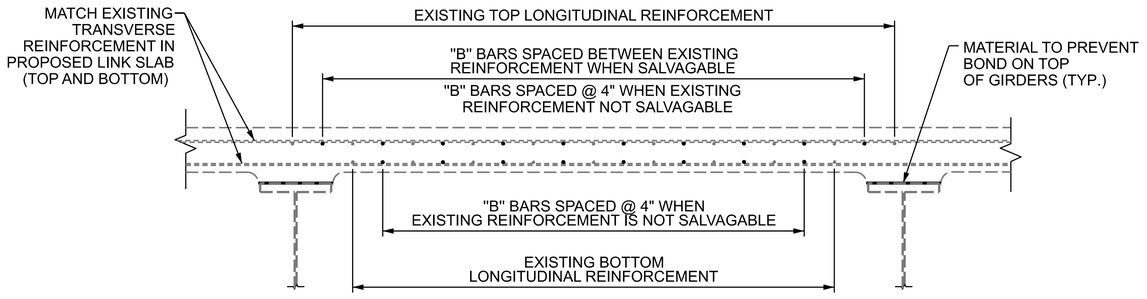
PROPOSED SECTION AT BENT





DETAIL "B"

A 1½" DEEP CONTRACTION JOINT AT BENT CONTROL LINE SHALL BE SAWN WITHIN 24 HOURS OF POURING THE LINK SLAB AND OVERLAY. THE JOINT SHALL BE FILLED WITH JOINT SEALER MATERIAL. THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TYPE B LOW MODULUS SILICONE SEALANT. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.



REINFORCEMENT DETAILS

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LINK SLAB FOR PRESERVATION JOINT DETAILS

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai EA6F7941508F497...
09/15/2023

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-09
1			3			TOTAL SHEETS
2			4			25

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DRAWN BY : A. SORSENGINH DATE : 9/2020
CHECKED BY : S. A. HERNANDEZ DATE : 9/2020
DESIGN ENGINEER OF RECORD: A. SORSENGINH DATE : 9/2020

9/15/2023
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SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

TN — TIGHTEN NUT

RW — REPLACE WASHER

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR SHALL SAWCUT 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 UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PRIOR TO CLEANING AND PAINTING, REPLACE AND/OR TIGHTEN MISSING NUTS AND WASHERS. PAYMENT FOR THE WASHERS AND NUTS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

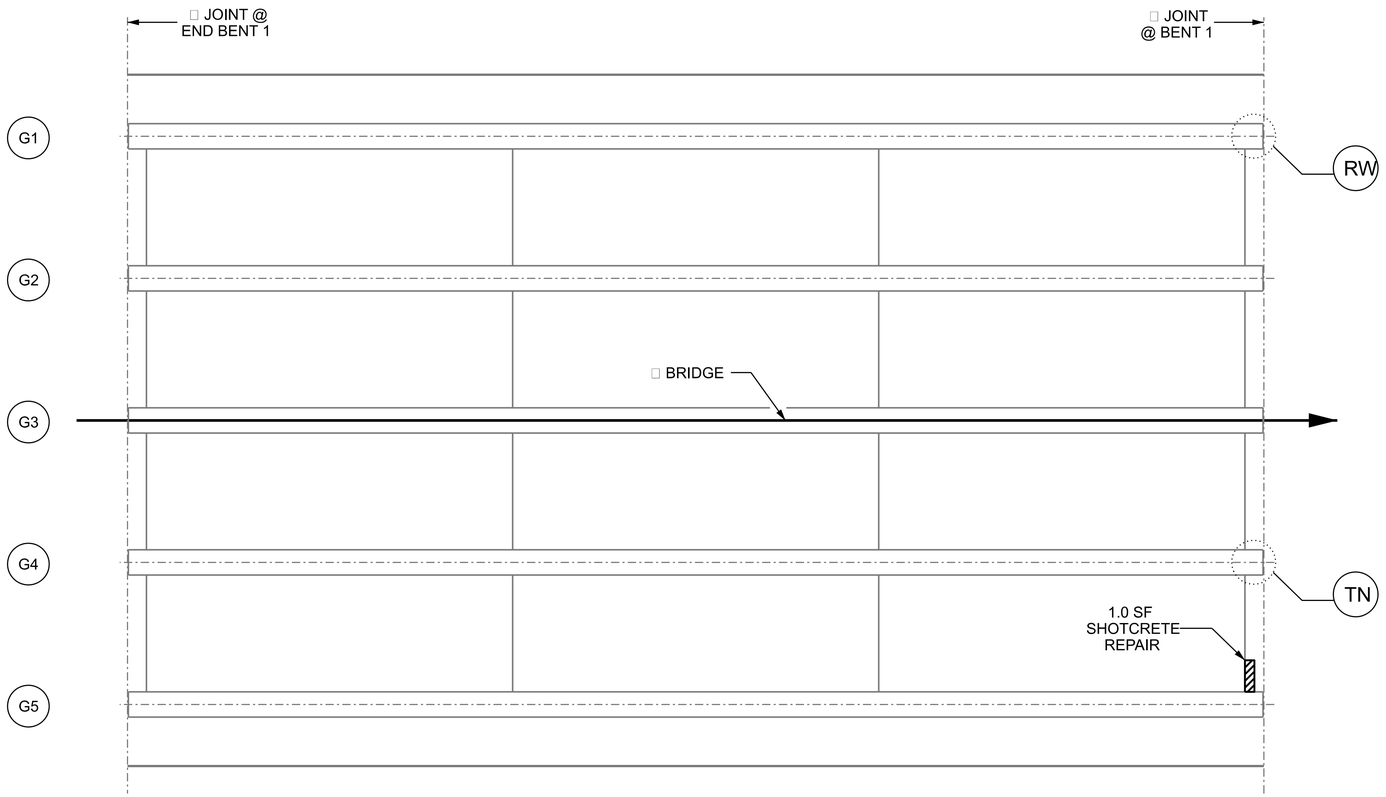
AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN A

	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGM	1.0	0.5		

OTHER REPAIRS	ESTIMATE	ACTUAL

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



SPAN A

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 5

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-10
1			3			TOTAL SHEETS
2			4			25

DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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9/15/2023
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BEAM REPAIR QUANTITY TABLE

STEEL PLATES		STIFFENER		STEEL BEARING KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0.0		0.0		3	

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR SHALL SAWCUT 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 UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PRIOR TO CLEANING AND PAINTING, REPLACE AND/OR TIGHTEN MISSING NUTS AND WASHERS. PAYMENT FOR THE WASHERS AND NUTS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR STEEL BEARING KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR STEEL BEARING KEEPER ANGLE ASSEMBLY DETAILS, SEE "STEEL BEARING KEEPER ANGLE ASEMBLY DETAILS" SHEET.

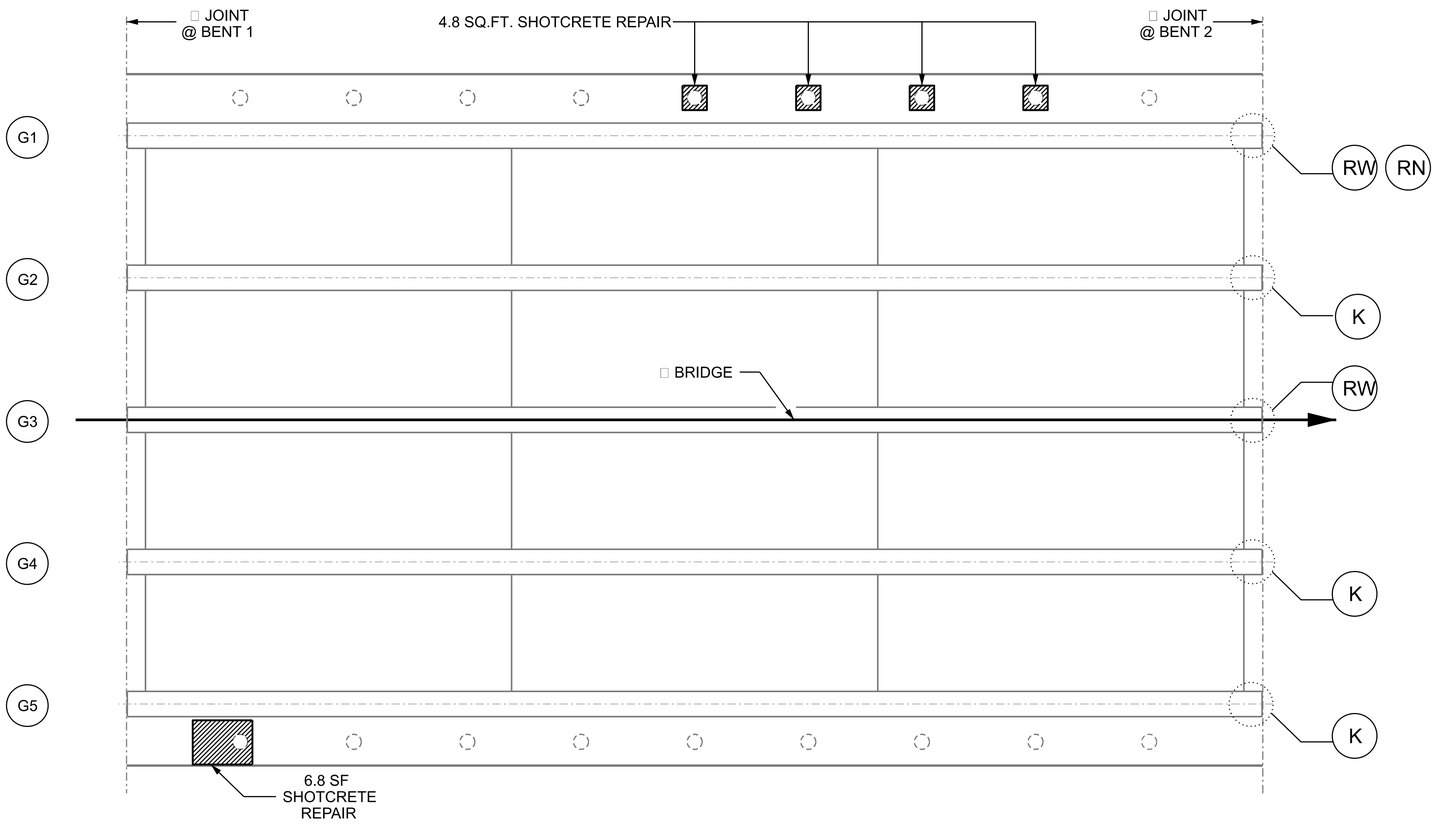
AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN B

	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	11.6	5.8		
DIAPHRAGM	0.0	0.0		

OTHER REPAIRS	ESTIMATE	ACTUAL

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



SPAN B

SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

RN — REPLACE NUT

RW — REPLACE WASHER

K — STEEL BEARING KEEPER ANGLE ASSEMBLY

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN B

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai
09/15/2023

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-11
1			3			TOTAL SHEETS
2			4			25

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DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

9/15/2023
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BEAM REPAIR QUANTITY TABLE

STEEL PLATES		STIFFENER		STEEL DIAPHRAGM	
LBS.		LBS.		LBS.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0.0		15.3		0.0	

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	REPAIR TYPE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "F"
C	1	BENT 2	S	9"	4¾"				

SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

RN — REPLACE NUT

RW — REPLACE WASHER

S — STIFFENER REPAIR

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR SHALL SAWCUT 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 UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PRIOR TO CLEANING AND PAINTING, REPLACE AND/OR TIGHTEN MISSING NUTS AND WASHERS. PAYMENT FOR THE WASHERS AND NUTS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR STIFFENER REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BEAM REPAIR - PLATING, SEE SPECIAL PROVISIONS.

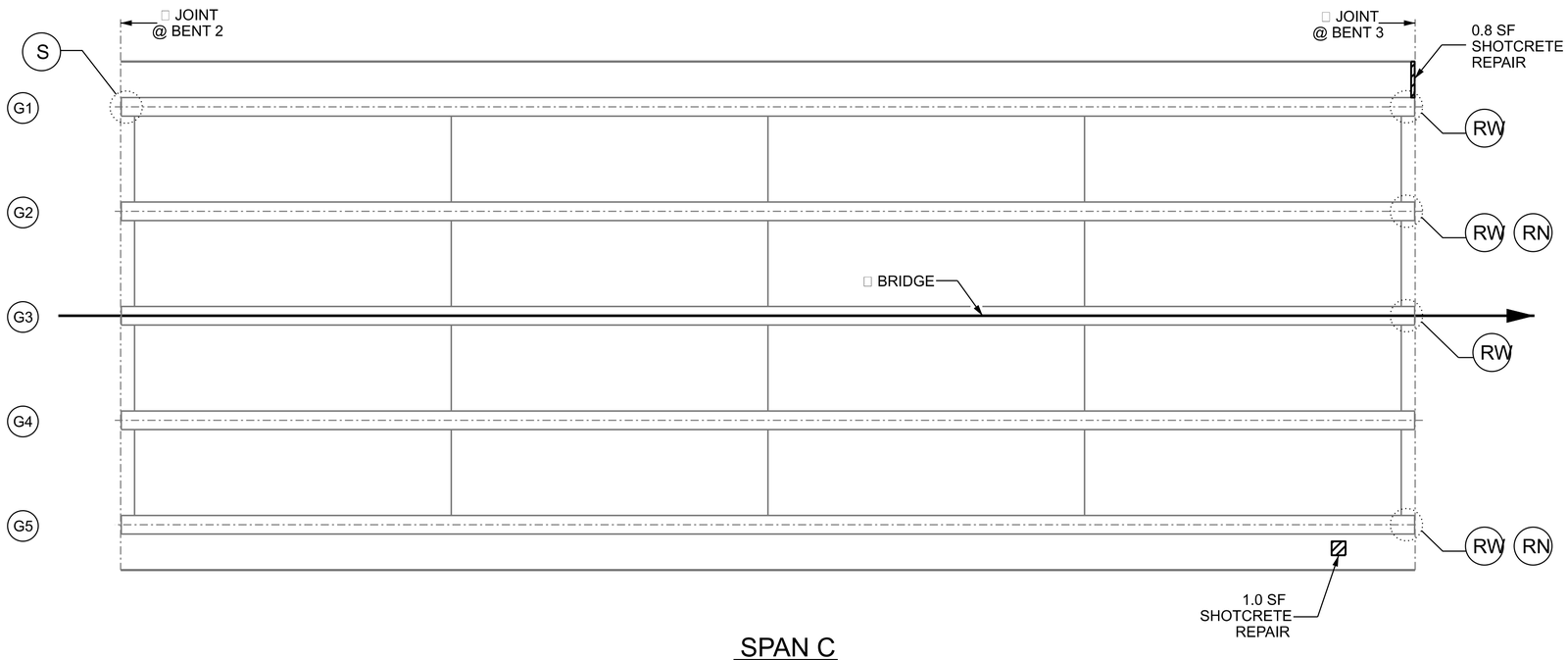
AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN C

	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	1.8	0.9		
DIAPHRAGM	0.0	0.0		

OTHER REPAIRS	ESTIMATE	ACTUAL

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



SPAN C

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 3 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN C

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai
EA6F7941509F497...
09/15/2023

DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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2			4			25

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BEAM REPAIR QUANTITY TABLE

STEEL PLATES		STIFFENER		STEEL BEARING KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
0.0		25.0		1	

SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

RN — REPLACE NUT

RW — REPLACE WASHER

S — STIFFENER REPAIR

K — STEEL BEARING KEEPER ANGLE ASSEMBLY

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR SHALL SAWCUT 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 UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PRIOR TO CLEANING AND PAINTING, REPLACE AND/OR TIGHTEN MISSING NUTS AND WASHERS. PAYMENT FOR THE WASHERS AND NUTS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR STIFFENER REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BEAM REPAIR - PLATING, SEE SPECIAL PROVISIONS.

FOR STEEL BEARING KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR STEEL BEARING KEEPER ANGLE ASSEMBLY DETAILS, SEE "STEEL BEARING KEEPER ANGLE ASEMBLY DETAILS" SHEET.

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN D

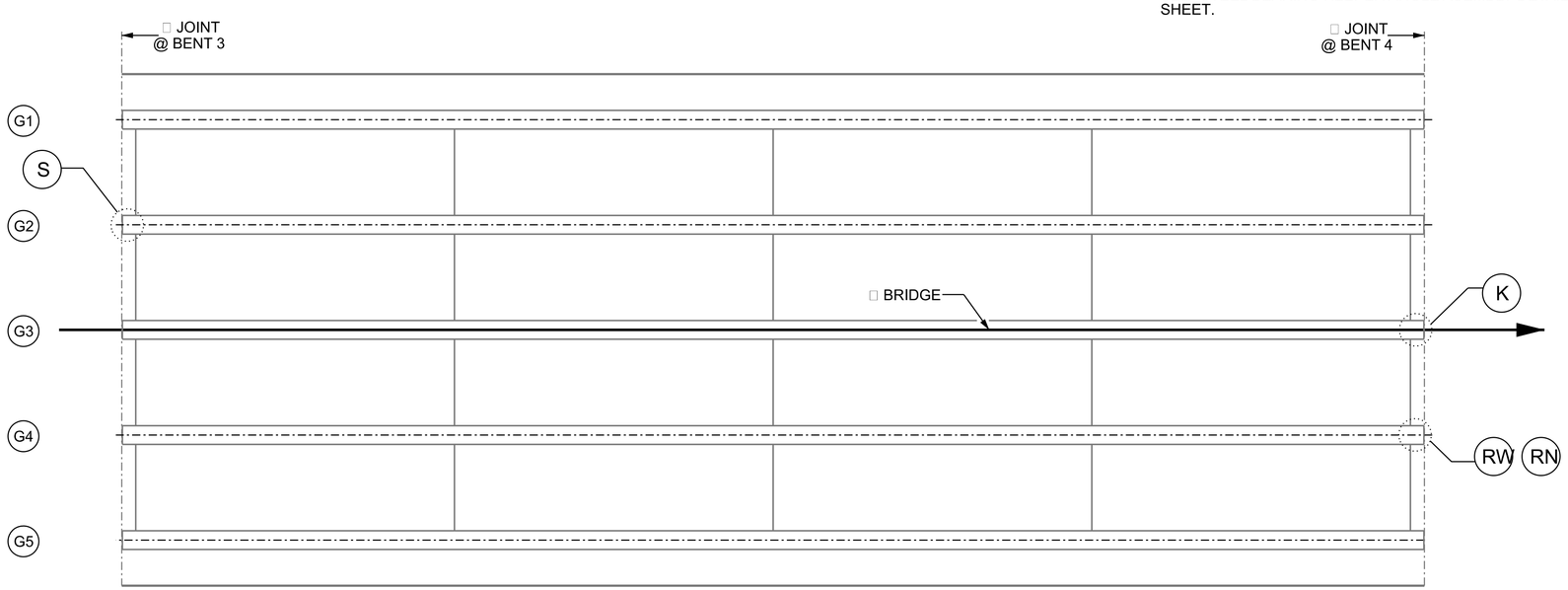
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGM	0.0	0.0		

OTHER REPAIRS	ESTIMATE	ACTUAL

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	REPAIR TYPE	DIM ``A"	DIM ``B"	DIM ``C"	DIM ``D"	DIM ``E"	DIM ``F"
D	2	BENT 3	S	8"	4½"				



SPAN D

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 4 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN D

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai
09/15/2023

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-13
1			3			TOTAL SHEETS
2			4			25

DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILA HERNANDEZ DATE : 6/2022

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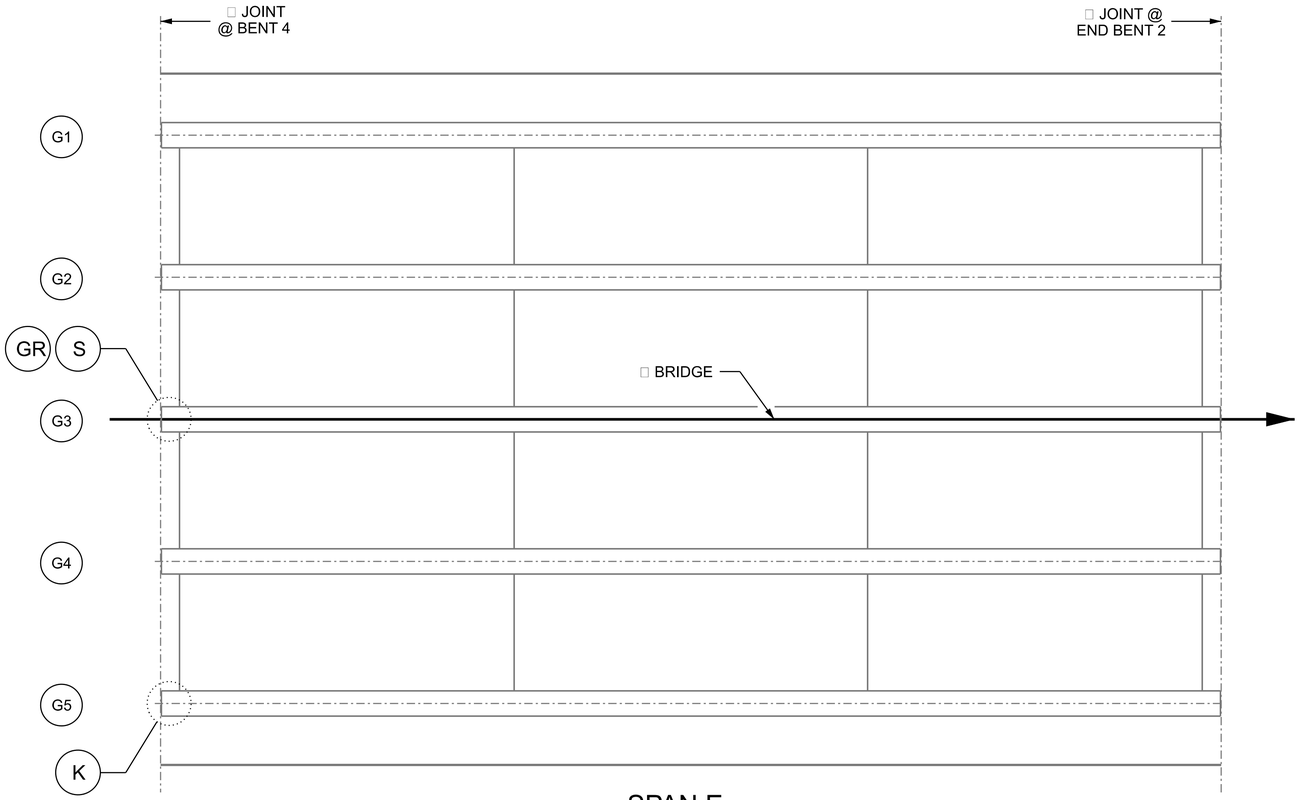
BEAM REPAIR QUANTITY TABLE

STEEL PLATES		STIFFENER		STEEL BEARING KEEPER ANGLE ASSEMBLY	
LBS.		LBS.		EA.	
ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
43.8		12.0		1	

ANTICIPATED BEAM REPAIR LOCATIONS

SPAN	BEAM	LOCATION	REPAIR TYPE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "F"
E	3	BENT 4	S	4"	4"				



SPAN E

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN E

	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGM	0.0	0.0		

OTHER REPAIRS	ESTIMATE	ACTUAL

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR SHALL SAWCUT 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 UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PRIOR TO CLEANING AND PAINTING, REPLACE AND/OR TIGHTEN MISSING NUTS AND WASHERS. PAYMENT FOR THE WASHERS AND NUTS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR STIFFENER REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

FOR BEAM REPAIR - PLATING, SEE SPECIAL PROVISIONS.

FOR STEEL BEARING KEEPER ANGLE ASSEMBLY, SEE SPECIAL PROVISIONS.

FOR STEEL BEARING KEEPER ANGLE ASSEMBLY DETAILS, SEE "STEEL BEARING KEEPER ANGLE ASEMBLY DETAILS" SHEET.

FOR END OF GIRDER REPAIR, SEE "BEAM PLATING REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

GR — GIRDER END REPAIR

S — STIFFENER REPAIR

K — STEEL BEARING KEEPER ANGLE ASSEMBLY

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai

09/15/2023

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PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN E

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

SHEET NO. S1-14

TOTAL SHEETS 25

DRAWN BY : A. SORSENGINH DATE : 6/2022

CHECKED BY : S. AGUILA HERNANDEZ DATE : 6/2022

9/15/2023
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NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

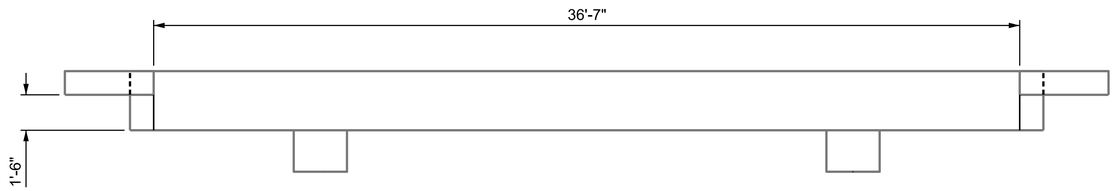
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

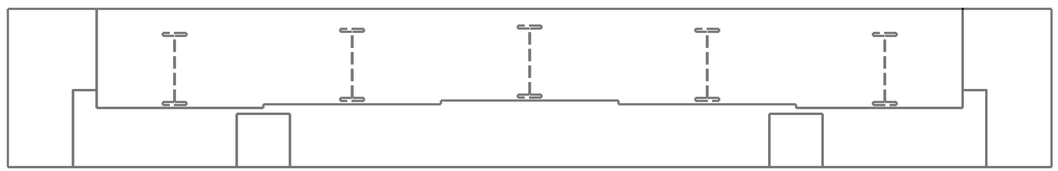
AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	0.0	0.0		
WING	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.	LIN. FT.	
CURTAIN WALL		0.0		
CAP		0.0		
EPOXY COATING		SQ. FT.	SQ. FT.	
TOP OF BENT CAP		52.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.



PLAN



ELEVATION

CONCRETE REPAIR AREA

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F7941506F487...

09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-15
1			3			TOTAL SHEETS
2			4			25

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DRAWN BY : A. SORSENGINH DATE : 6/2022

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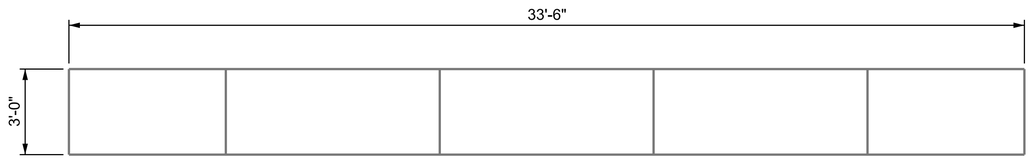


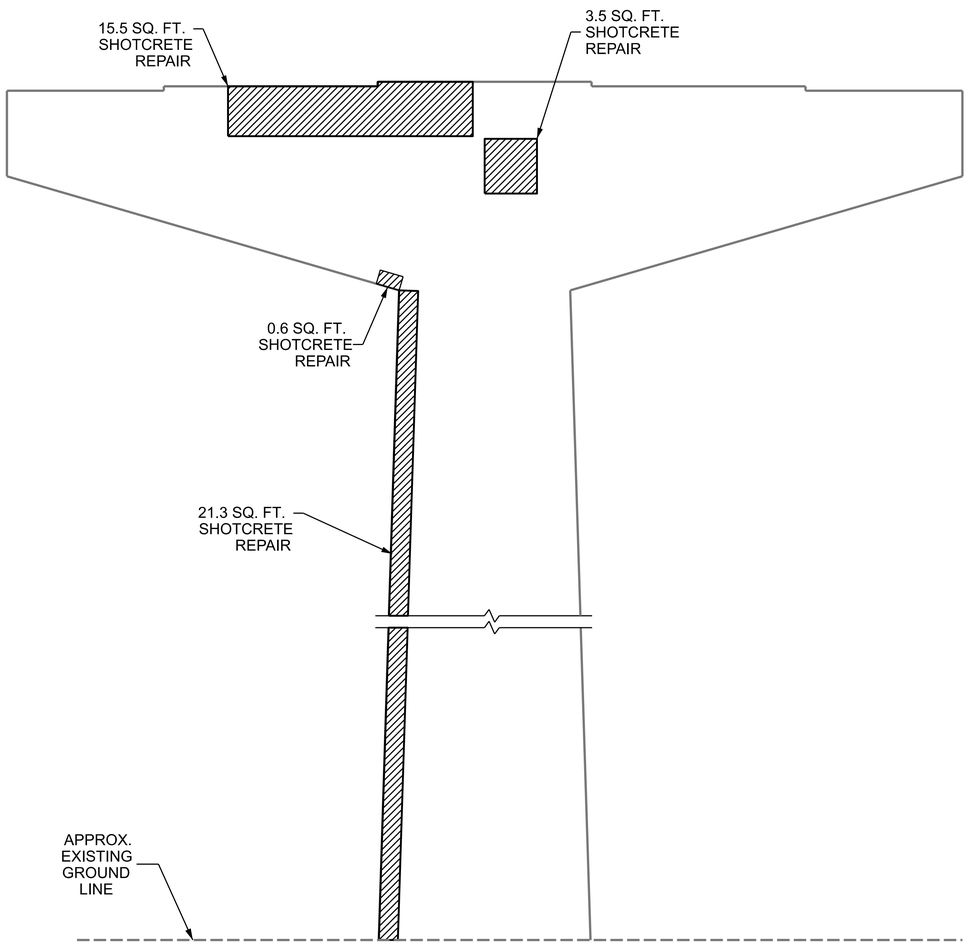
SPAN B
SPAN A

CONCRETE REPAIR AREA

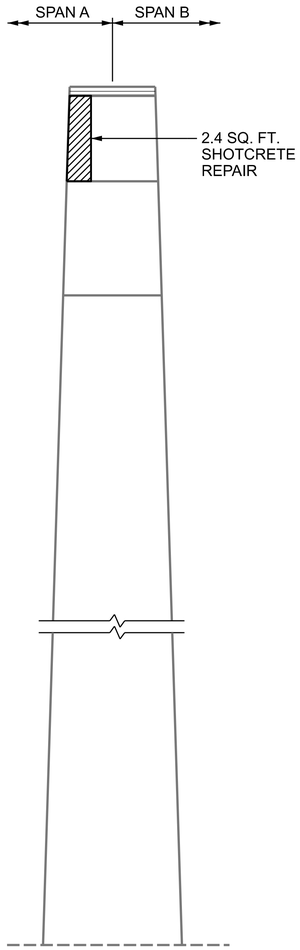
SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PLAN - TOP OF CAP



ELEVATION - SPAN A VIEW



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SPAN A FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	21.4	10.7		
COLUMN	21.3	10.7		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.	SQ. FT.	
TOP OF BENT CAP		93.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE ``TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai EA6F7041150F49F...

09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1
SPAN A FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-16
1			3			TOTAL SHEETS
2			4			25

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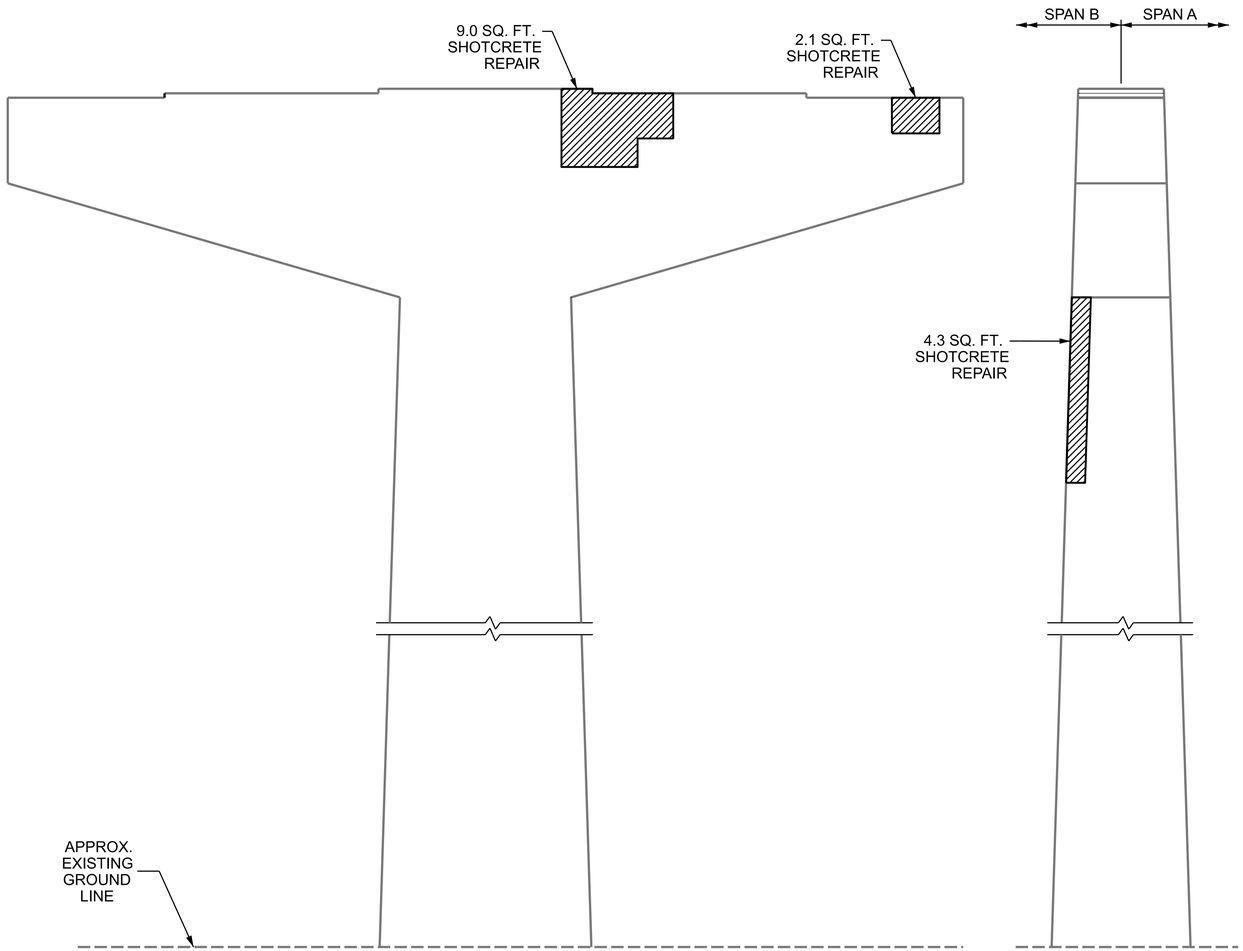
PLAN - BOTTOM OF CAP



ELEVATION - SPAN B VIEW

END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	11.1	5.6		
COLUMN	4.3	2.2		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE ``TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES:

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR CAP AND COLUMN REPAIR DETAILS, SEE " TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1
SPAN B FACE

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by:
Krishna P. Sedai
EA6F7941150F4EF...
09/15/2023

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CHECKED BY : S. AGUILA HERNANDEZ DATE : 6/2022

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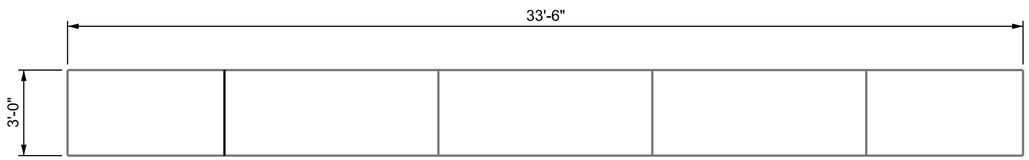


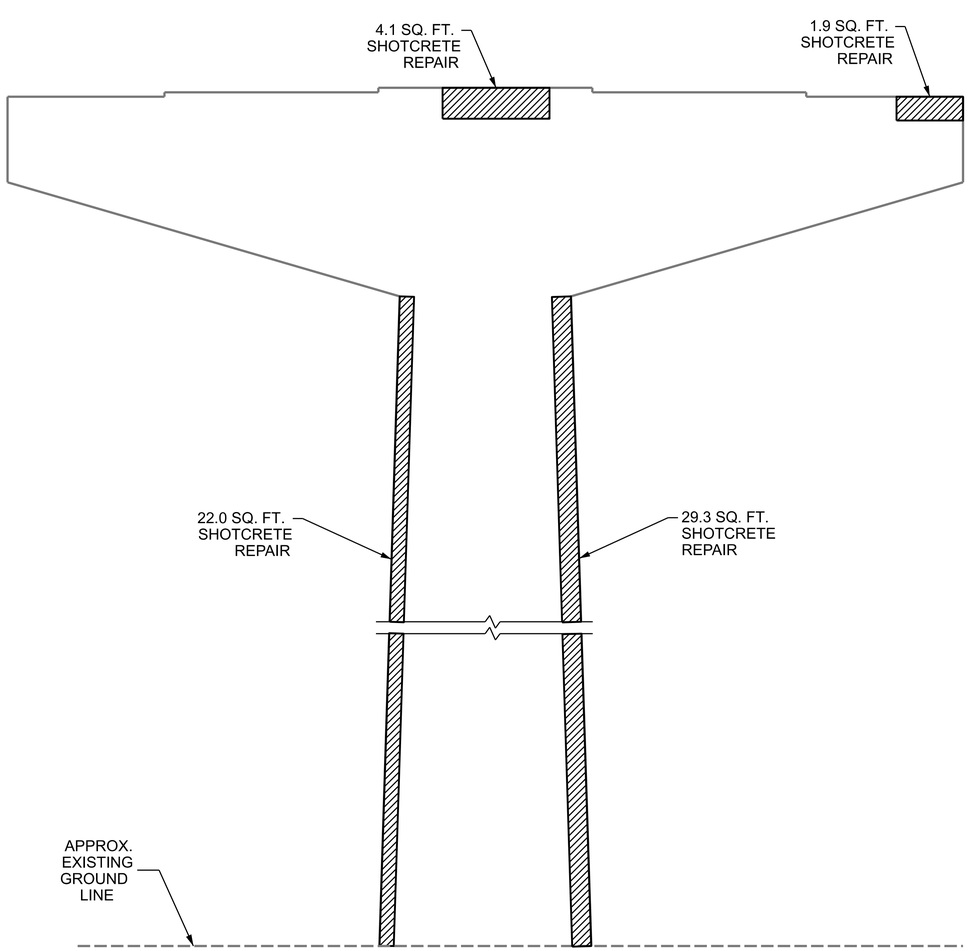
SPAN C
SPAN B

CONCRETE REPAIR AREA

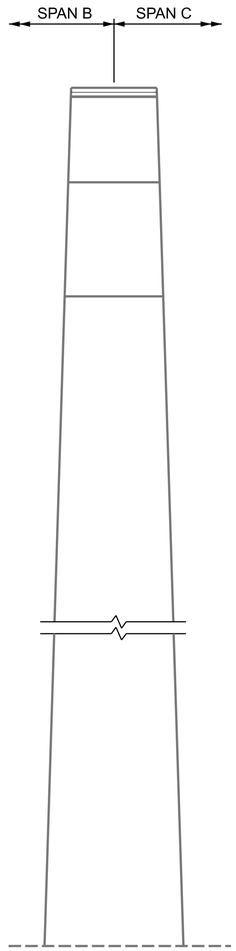
SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PLAN - TOP OF CAP



ELEVATION - SPAN B VIEW



END VIEW
(RIGHT SIDE)

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	6.0	3.0		
COLUMN	51.3	25.7		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.	SQ. FT.	
TOP OF BENT CAP		93.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE ``TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai
09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2
SPAN B FACE

DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

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1			3			TOTAL SHEETS
2			4			25

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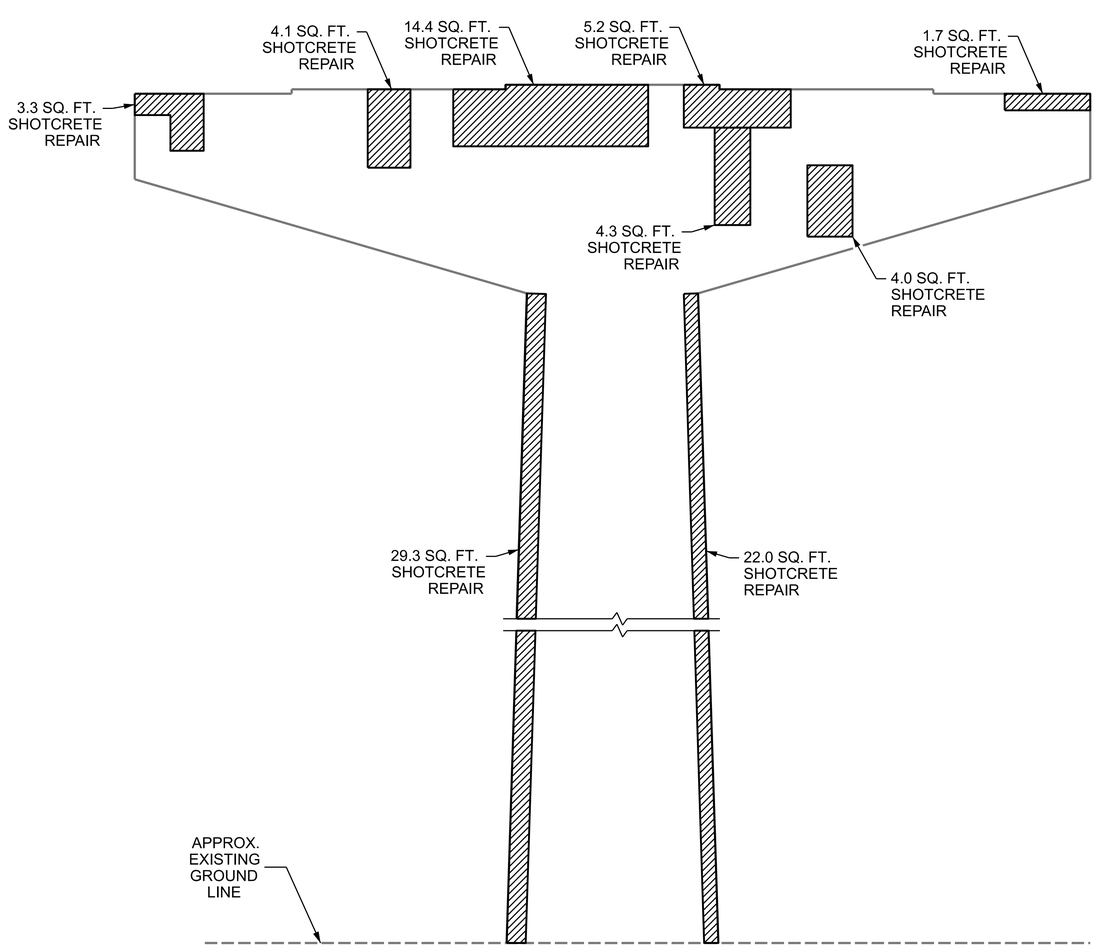
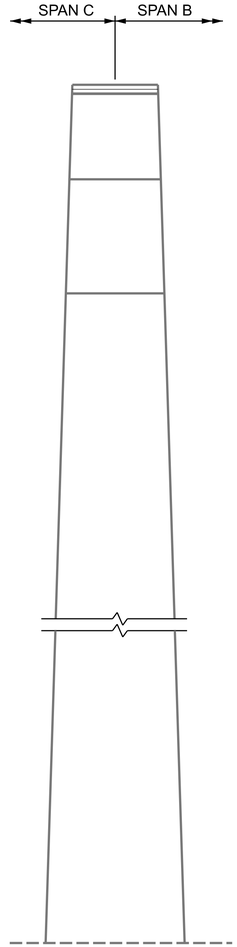
PLAN - BOTTOM OF CAP



ELEVATION - SPAN C VIEW



END VIEW
(RIGHT SIDE)

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SPAN C FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	37.0	18.5		
COLUMN	51.3	25.7		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE ``TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR CAP AND COLUMN REPAIR DETAILS, SEE " TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2
SPAN C FACE

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai EA6F7041150F49D...
09/15/2023

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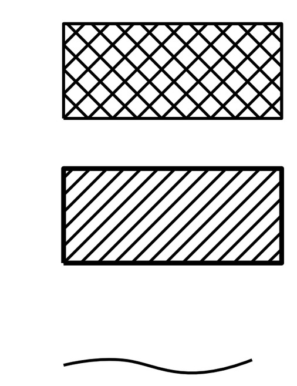
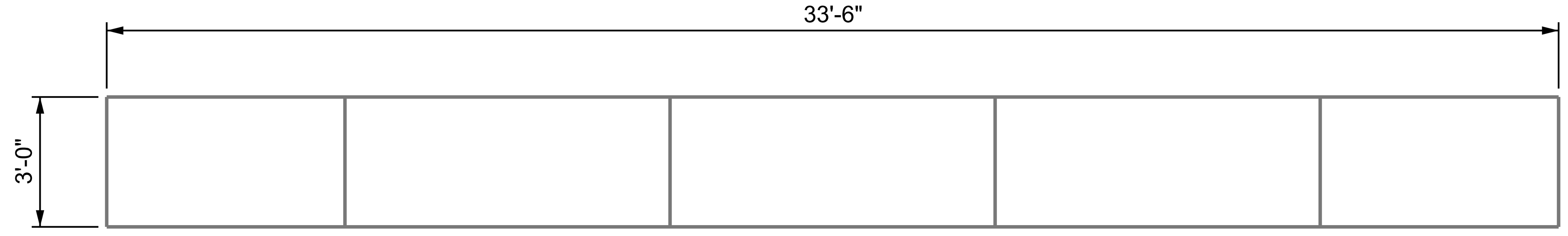
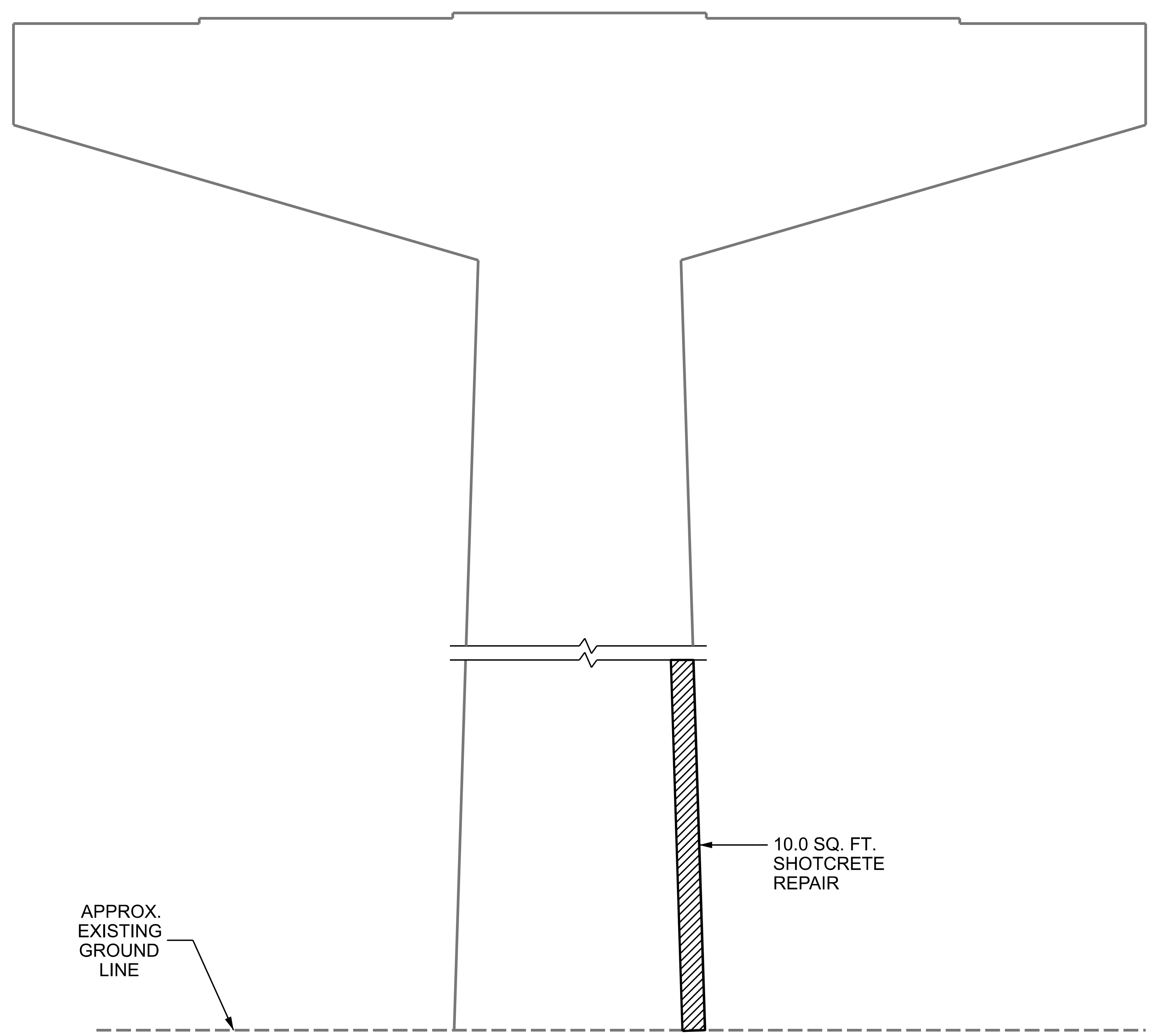
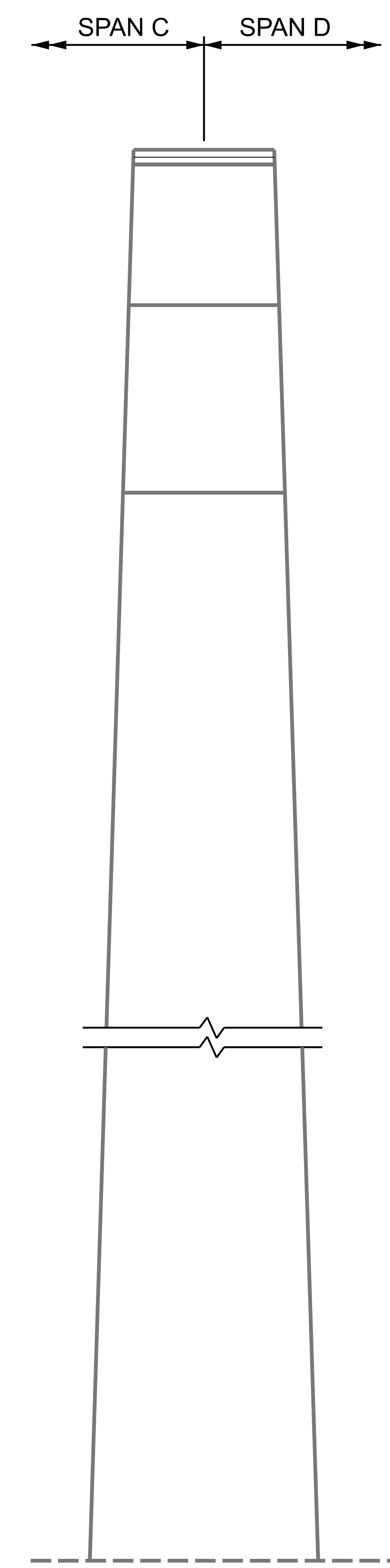




PLAN - TOP OF CAP



ELEVATION - SPAN C VIEW



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 SPAN C FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	10.0	5.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.	SQ. FT.	
TOP OF BENT CAP		93.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE ``TYPICAL CAP AND COLUMN REPAIR DETAILS'' SHEET.

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SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3
SPAN C FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-20
1			3			TOTAL SHEETS
2			4			25

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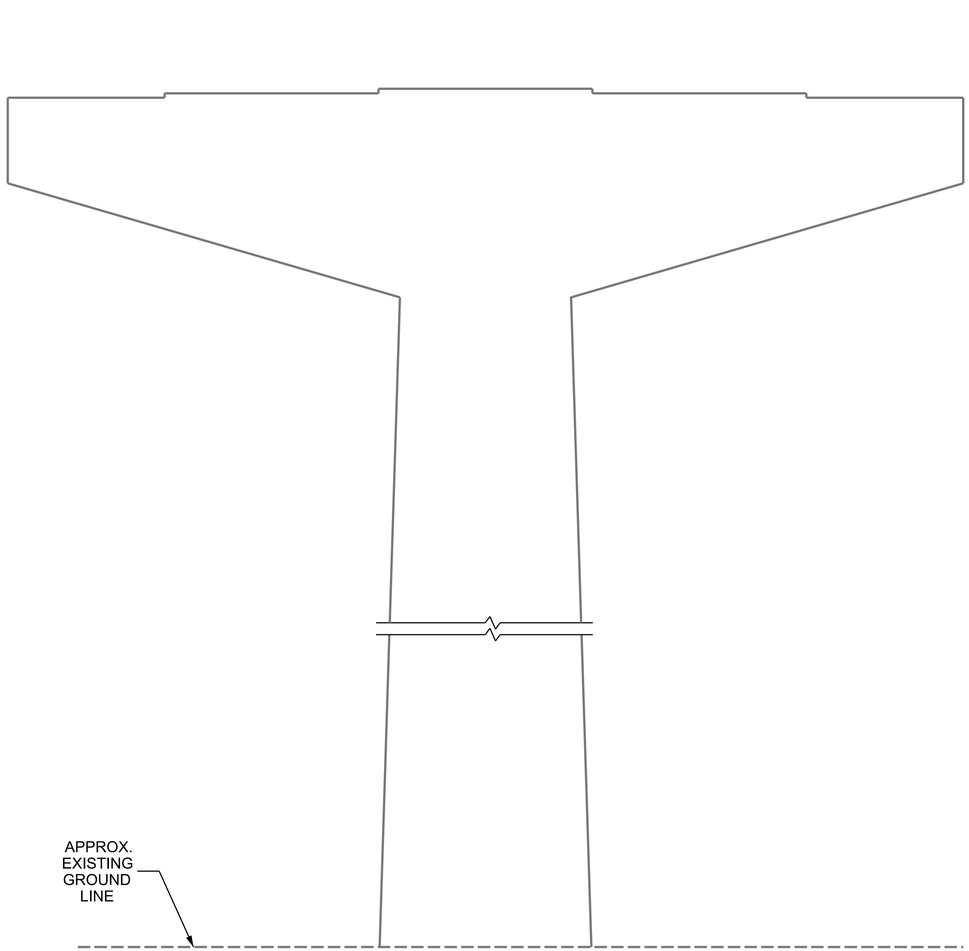
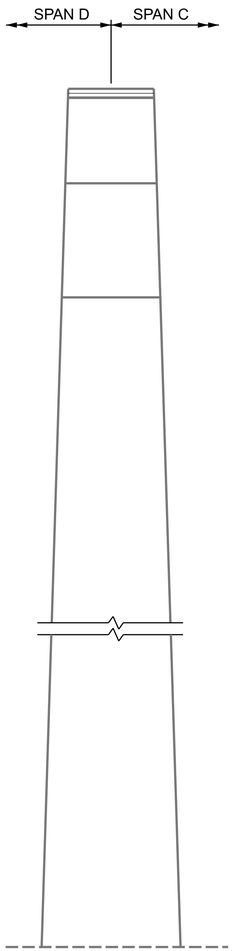
SPAN D
SPAN C

PLAN - BOTTOM OF CAP



ELEVATION - SPAN D VIEW



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 SPAN D FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE ``TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR CAP AND COLUMN REPAIR DETAILS, SEE " TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai
09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 3
SPAN D FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-21
1			3			TOTAL SHEETS
2			4			25

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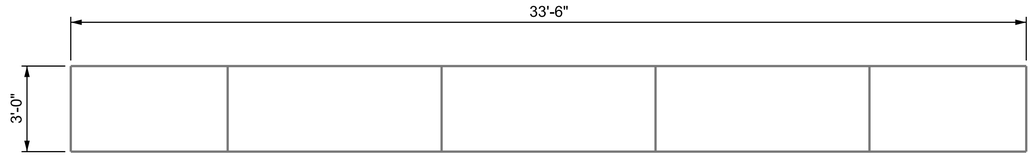


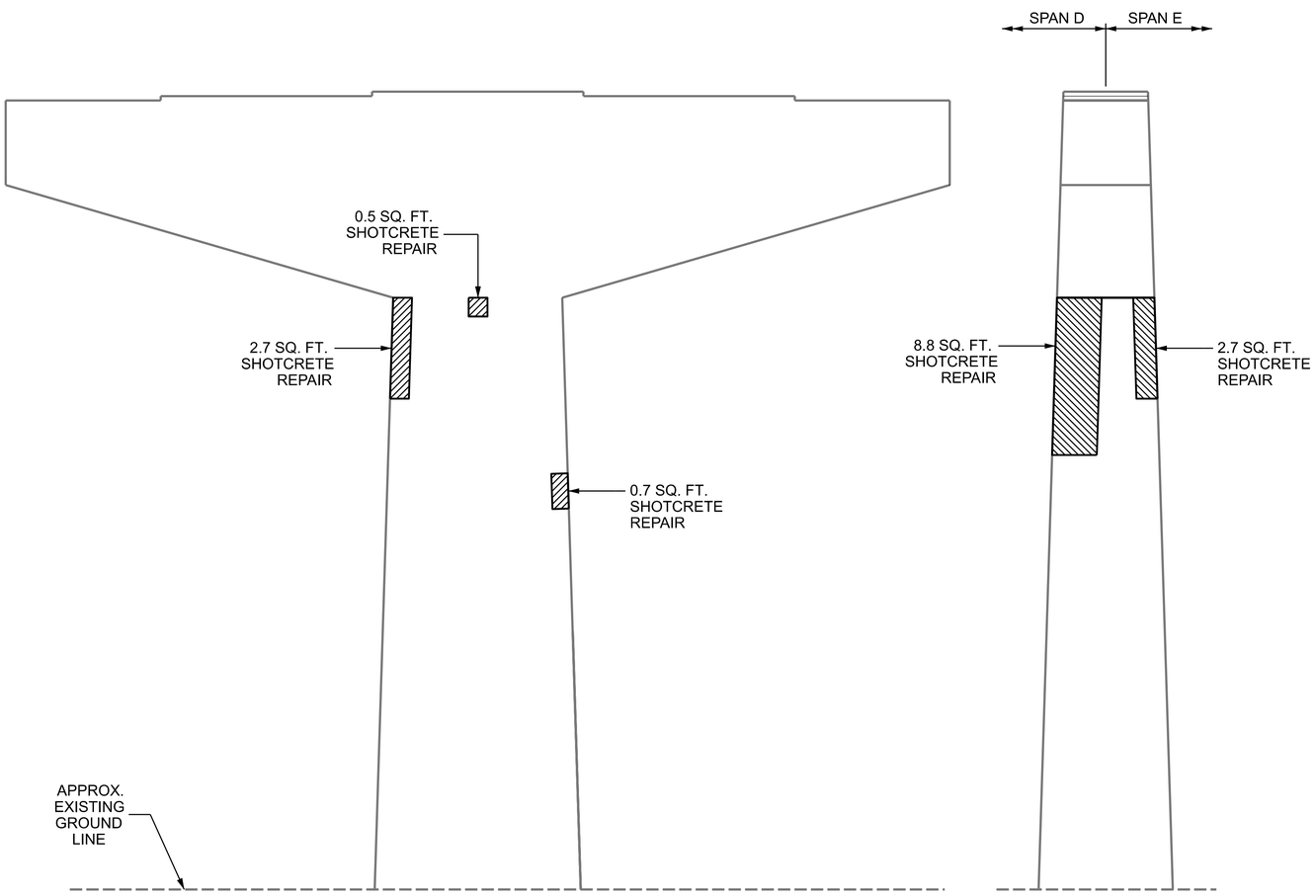
SPAN E
SPAN D

CONCRETE REPAIR AREA

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PLAN - TOP OF CAP



ELEVATION - SPAN D VIEW

END VIEW
(RIGHT SIDE)

AS-BUILT REPAIR QUANTITY TABLE

BENT 4 SPAN D FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.5	0.3		
COLUMN	14.9	7.5		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.	SQ. FT.	
TOP OF BENT CAP		93.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE ``TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.125.3

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by:
Krishna P. Sedai
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09/15/2023

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 4
SPAN D FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-22
1			3			TOTAL SHEETS
2			4			25

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILA HERNANDEZ DATE : 6/2022

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