PROJECT: 15BPR.61

CONTRACT NO.: C204488

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.61	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
15BPR.61	–	P.E.
15BPR.61	–	CONST.

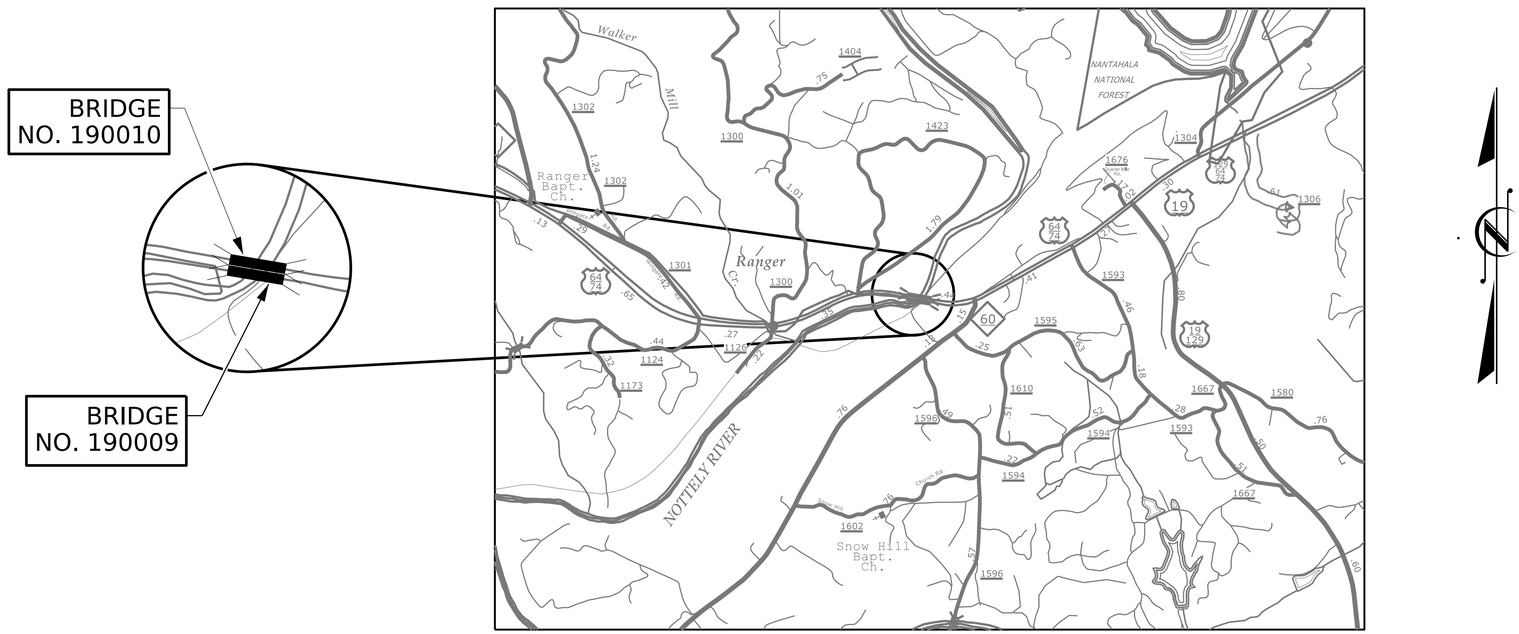
STATE OF NORTH CAROLINA

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 (LMC) 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.*



DESIGN DATA	PROJECT LENGTH
BRIDGE NO. 190009 ADT (2019) = 8,000	BRIDGE NO. 190009 – 0.069 MILE
BRIDGE NO. 190010 ADT (2019) = 8,000	BRIDGE NO. 190010 – 0.073 MILE

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

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

2018 STANDARD SPECIFICATIONS

LETTING DATE :

FEBRUARY 21, 2023

ADAM COLE, P.E.
PROJECT ENGINEER

KRISHNA SEDAI, P.E.
PROJECT DESIGN ENGINEER

PROJECT: 15BPR.61

CONTRACT NO.: C204488

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CHEROKEE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.61	1A	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
15BPR.61		P.E.
15BPR.61		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.

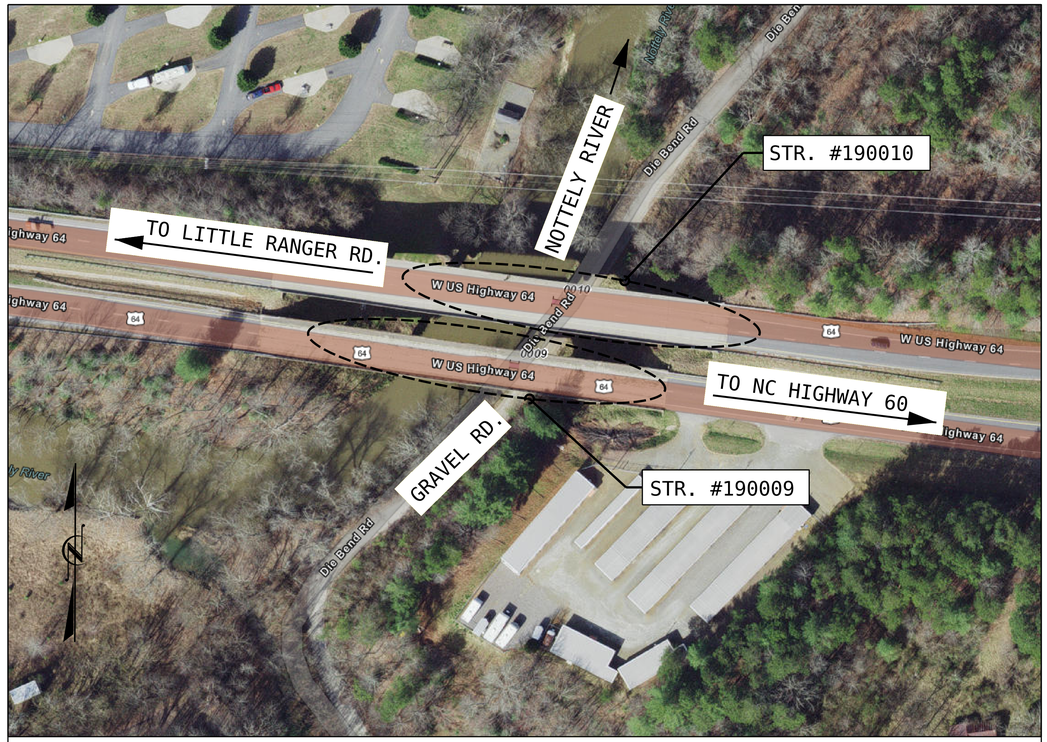
INDEX OF STRUCTURES SHEETS

STATE OF NORTH CAROLINA ☆ DEPARTMENT OF TRANSPORTATION ☆

TYPE OF WORK:

BRIDGE PRESERVATION – ASPHALT MILLING & REPAVING, LATEX MODIFIED CONCRETE (LMC) 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, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR OVERLAY OF BRIDGE WITH LATEX MODIFIED CONCRETE, 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.61**

CHEROKEE COUNTY

BRIDGE NO. **190009, 190010**

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Digitally signed by Krishna P. Sedai

EA6F794150BF4B7...

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

12/8/2022
R:\15BPR61\Structures\Final Plans\400_005_15BPR61_SMU_LS_01.dgn
ksedai

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	PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	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.61

CHEROKEE COUNTY

BRIDGE NO. 190009, 190010

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

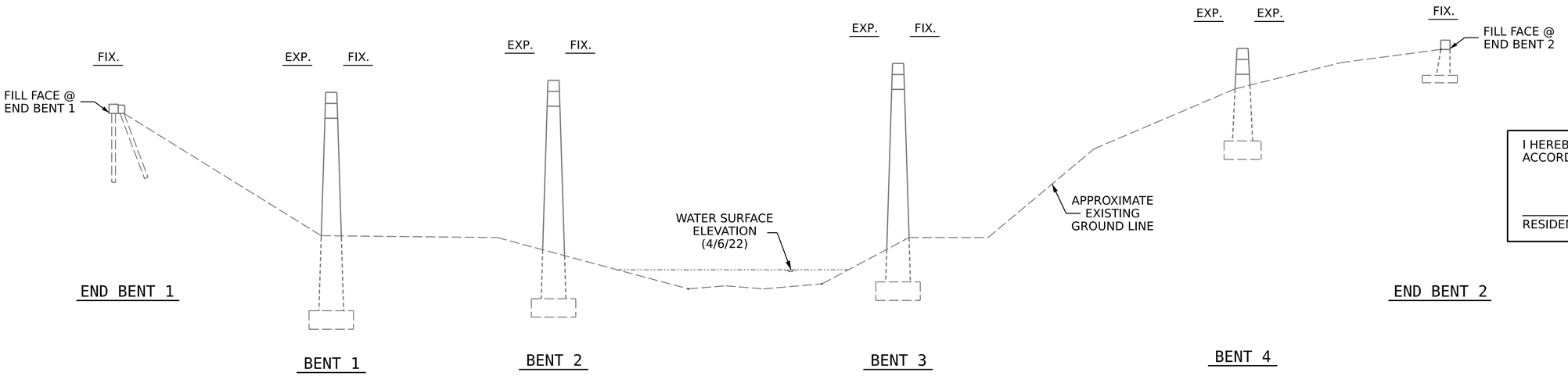
TOTAL BILL OF MATERIAL

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

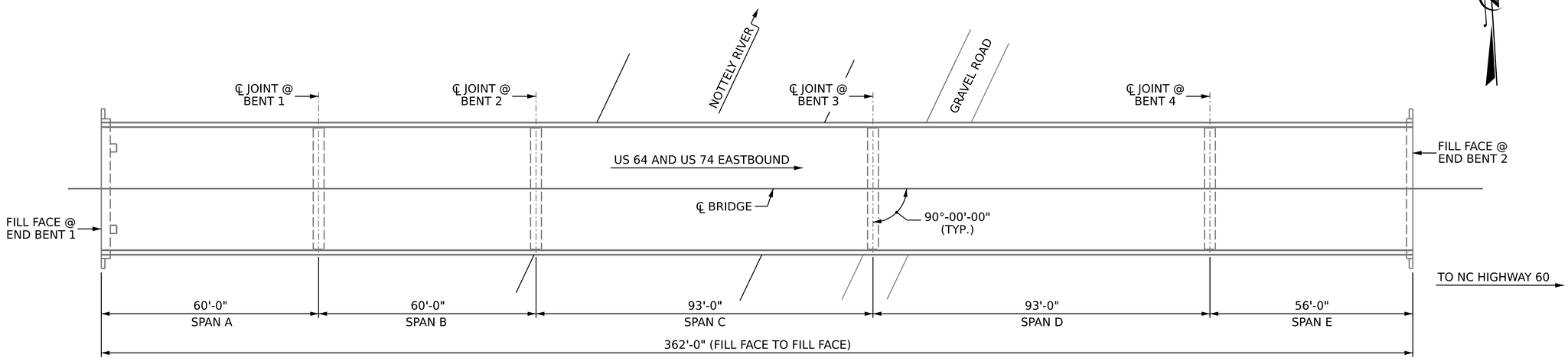
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

12/8/2022
R:\15BPR61\Structures\FinalPlans\400_007_15BPR61_SMU_BM_02.dgn
ksedal



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 (LMC).

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

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 35647 ENGINEER ADAM A. COLE
Docusigned by: 02EE938FAB674C5...

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: EA6F794150BF4B7...

PROJECT NO. 15BPR.61
CHEROKEE COUNTY
BRIDGE NO. 190009

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

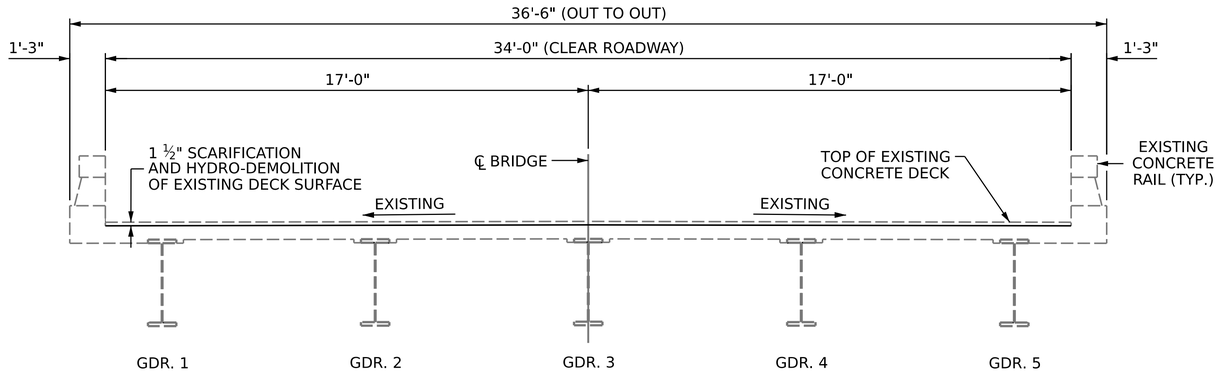
GENERAL DRAWING
FOR BRIDGE ON
US 64 & US 74 EBL
OVER NOTTELY RIVER AND
GRAVEL RD.

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

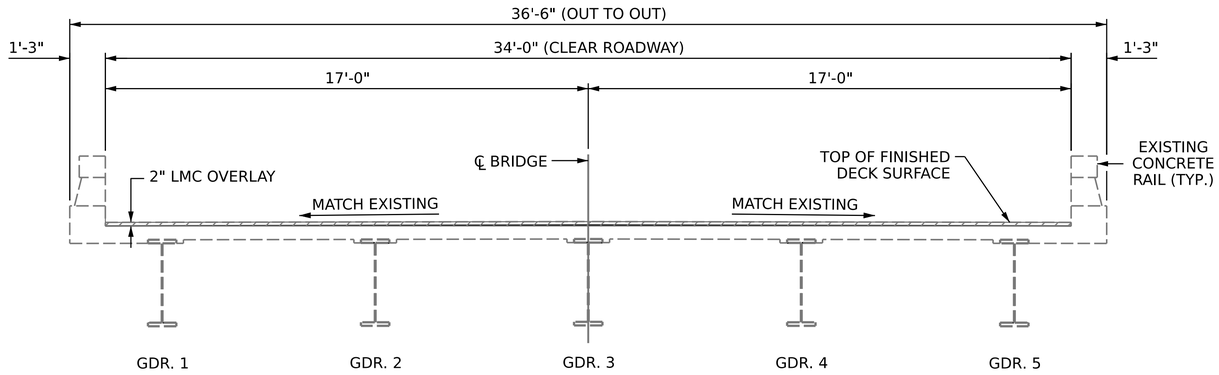
DRAWN BY : A. SORSENGINH DATE : 5/2022
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\FinalPlans\401_001_15BPR61_SMU_GD_S01_190009.dgn
ksedal



TYPICAL SECTION
(EXISTING)

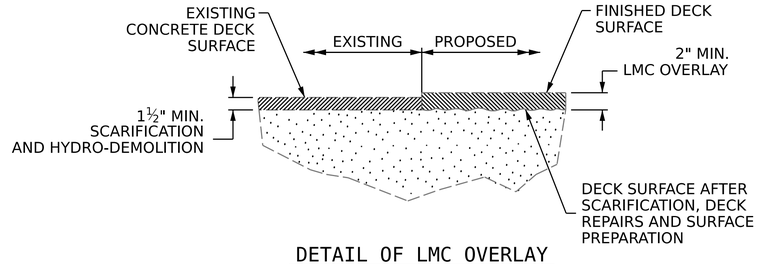


TYPICAL SECTION
(PROPOSED)

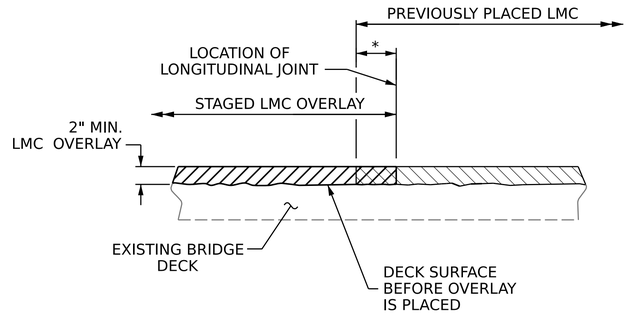
NOTES:

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



SECTION THRU DECK

STAGED LMC OVERLAY JOINT

* 4" OVERLAP BETWEEN OVERLAYS

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190009

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F704150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & SURFACE PREPARATION DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-02
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. AGUILAR HERNANDEZ DATE : 6/2022

12/8/2022
R:\15BPR61\Structures\Final Plans\401_003_15BPR61_SMU_TS_S02_190009.dgn
ksedai

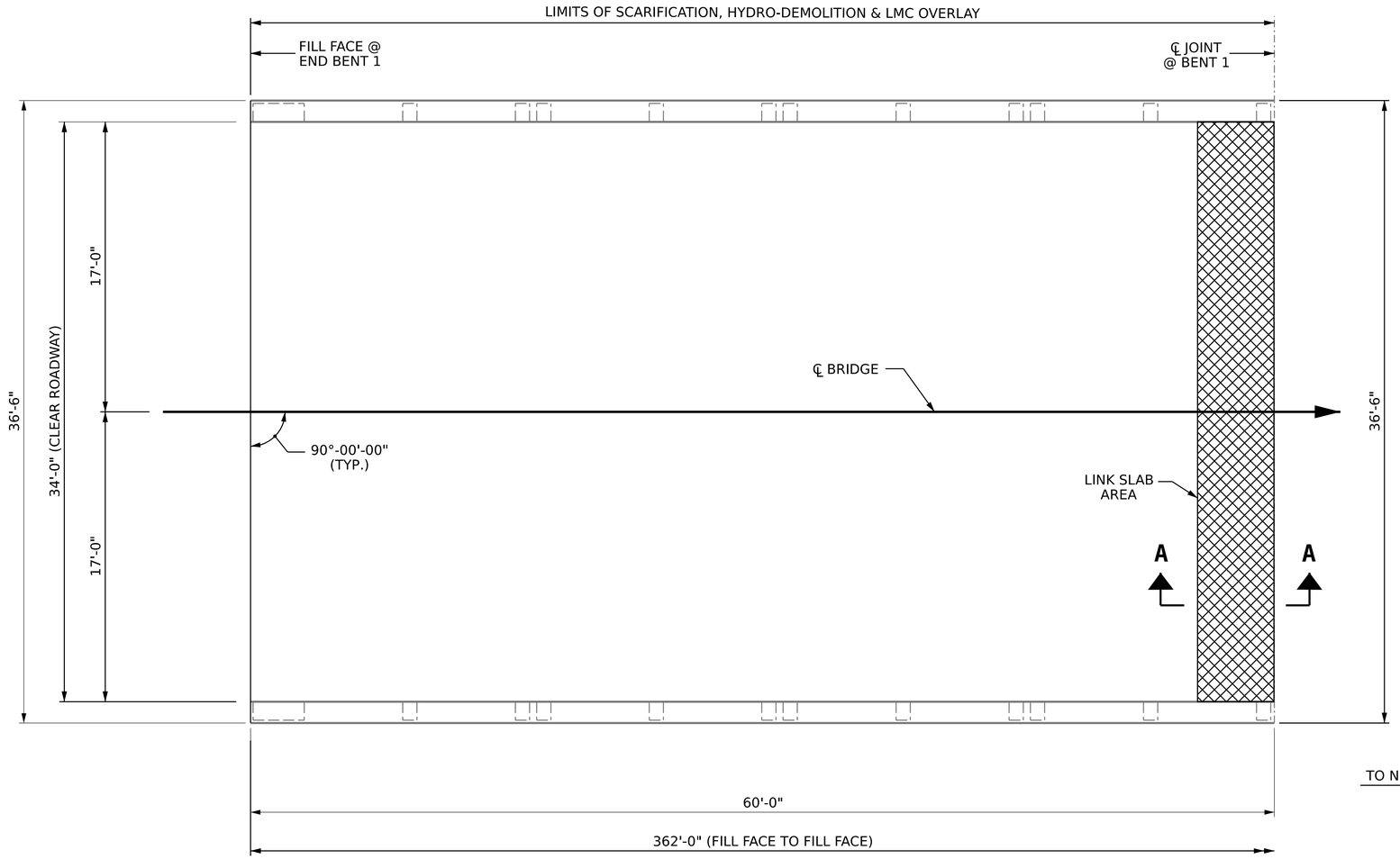
BRIDGE JOINT DEMOLITION

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	14.2 CU. YDS.	
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	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, 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 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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN A

DRAWN BY : A. SORSENGINH DATE : 6/2022

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

12/8/2022
R:\15BPR61\Structures\Final Plans\401_005_15BPR61_SMU_DSR_S03_190009.dgn
ksedal

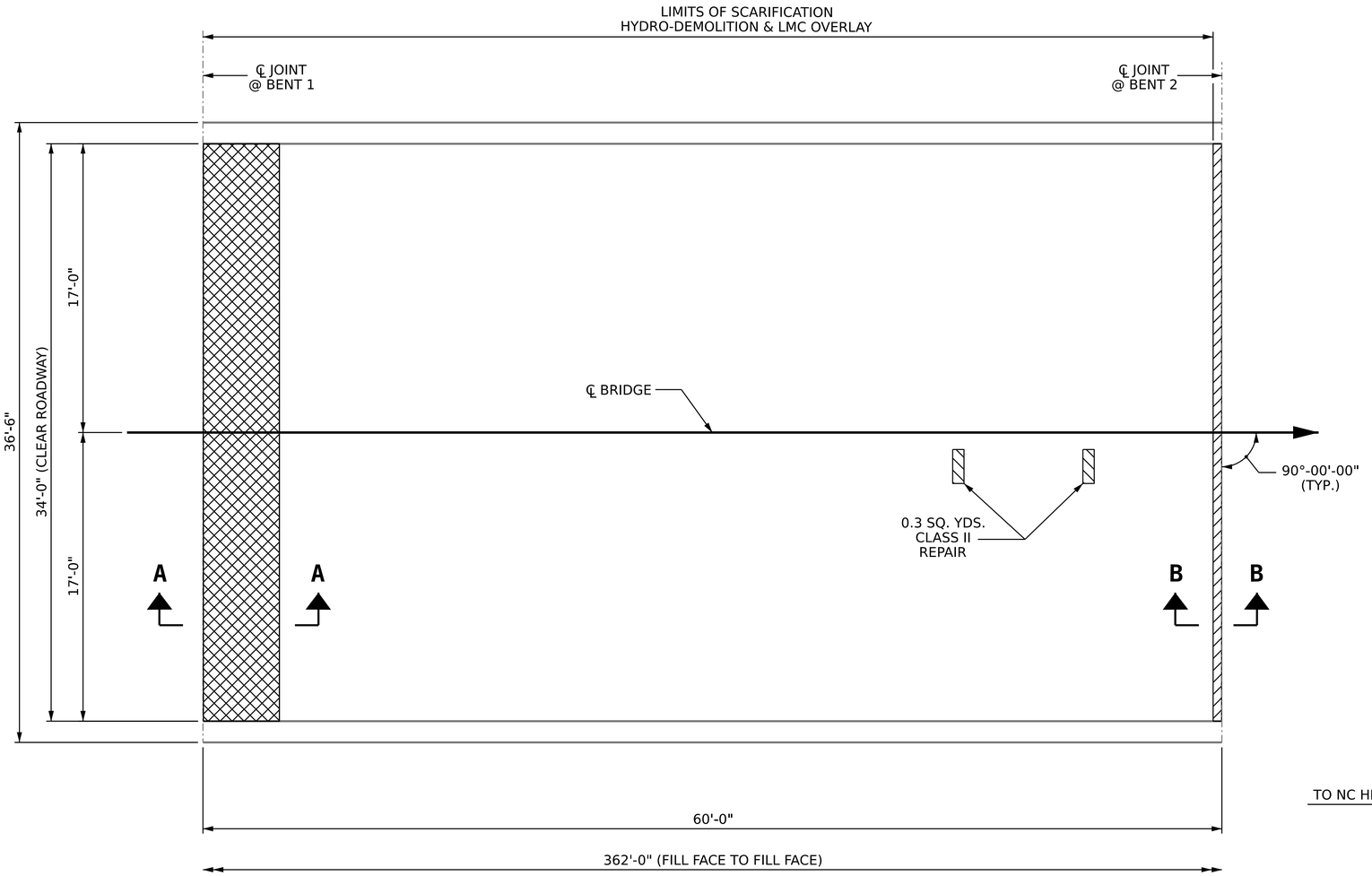
BRIDGE JOINT DEMOLITION

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	14.1 CU. YDS.	
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	225.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	1661.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	153.0 SQ. FT.	



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, 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 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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-04
1			3			TOTAL SHEETS
2			4			25

DRAWN BY : A. SORSENGINH DATE : 6/2022

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

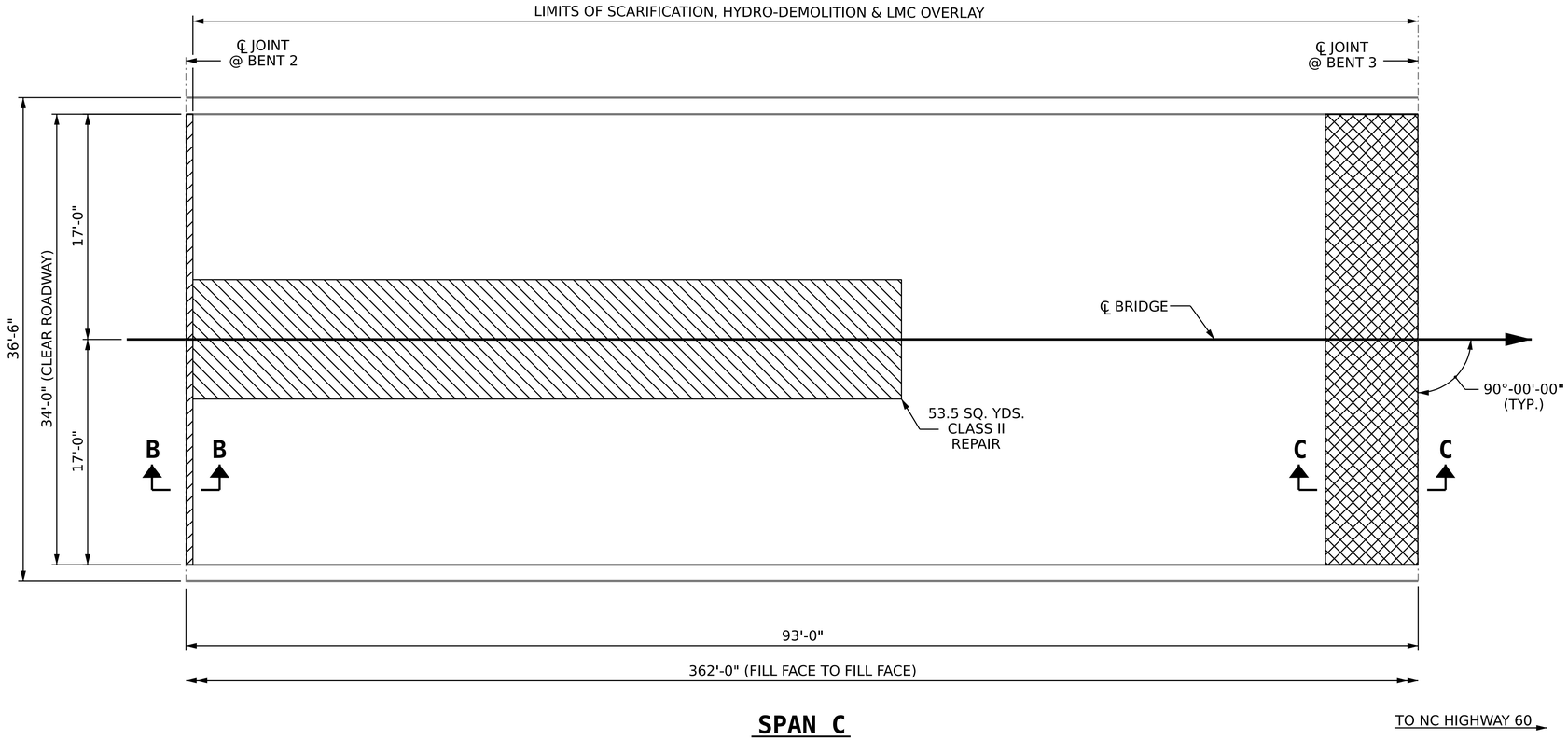
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\Final Plans\401_007_15BPR61_SMU_DSR_S04_190009.dgn
ksedal

BRIDGE JOINT DEMOLITION

CLASS II SURFACE PREPARATION

LINK SLAB AREA



SPAN C

TO NC HIGHWAY 60

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	21.9 CU. YDS.	
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	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, 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 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.61**

CHEROKEE COUNTY

BRIDGE NO. **190009**

SHEET 3 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Docusigned by: Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-05
1			3			TOTAL SHEETS
2			4			25

DRAWN BY : A. SORSENGINH DATE : 6/2022

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\FinalPlans\401_009_15BPR61_SMU_DSR_S05_190009.dgn
kseda1

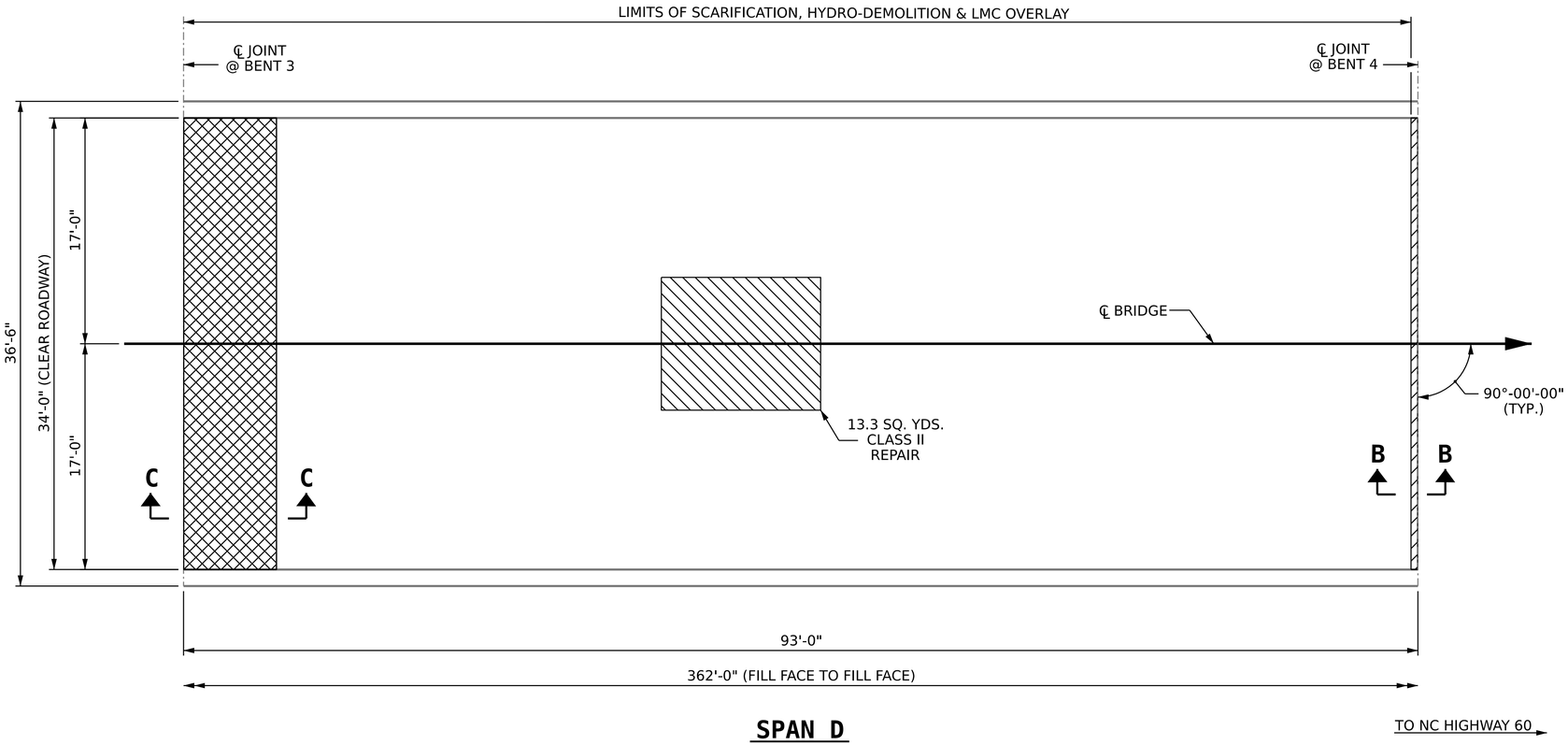
AS-BUILT REPAIR QUANTITY TABLE

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	21.9 CU. YDS.	
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	350.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	2609.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	238.0 SQ. FT.	

BRIDGE JOINT DEMOLITION

CLASS II SURFACE PREPARATION

LINK SLAB AREA



SPAN D

TO NC HIGHWAY 60

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, 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 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.61**

CHEROKEE COUNTY

BRIDGE NO. **190009**

SHEET 4 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Docusigned by: Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN D

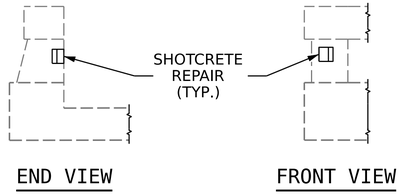
DRAWN BY : A. SORSENGINH DATE : 6/2022

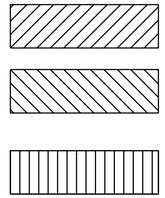
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-06
1			3			TOTAL SHEETS
2			4			25

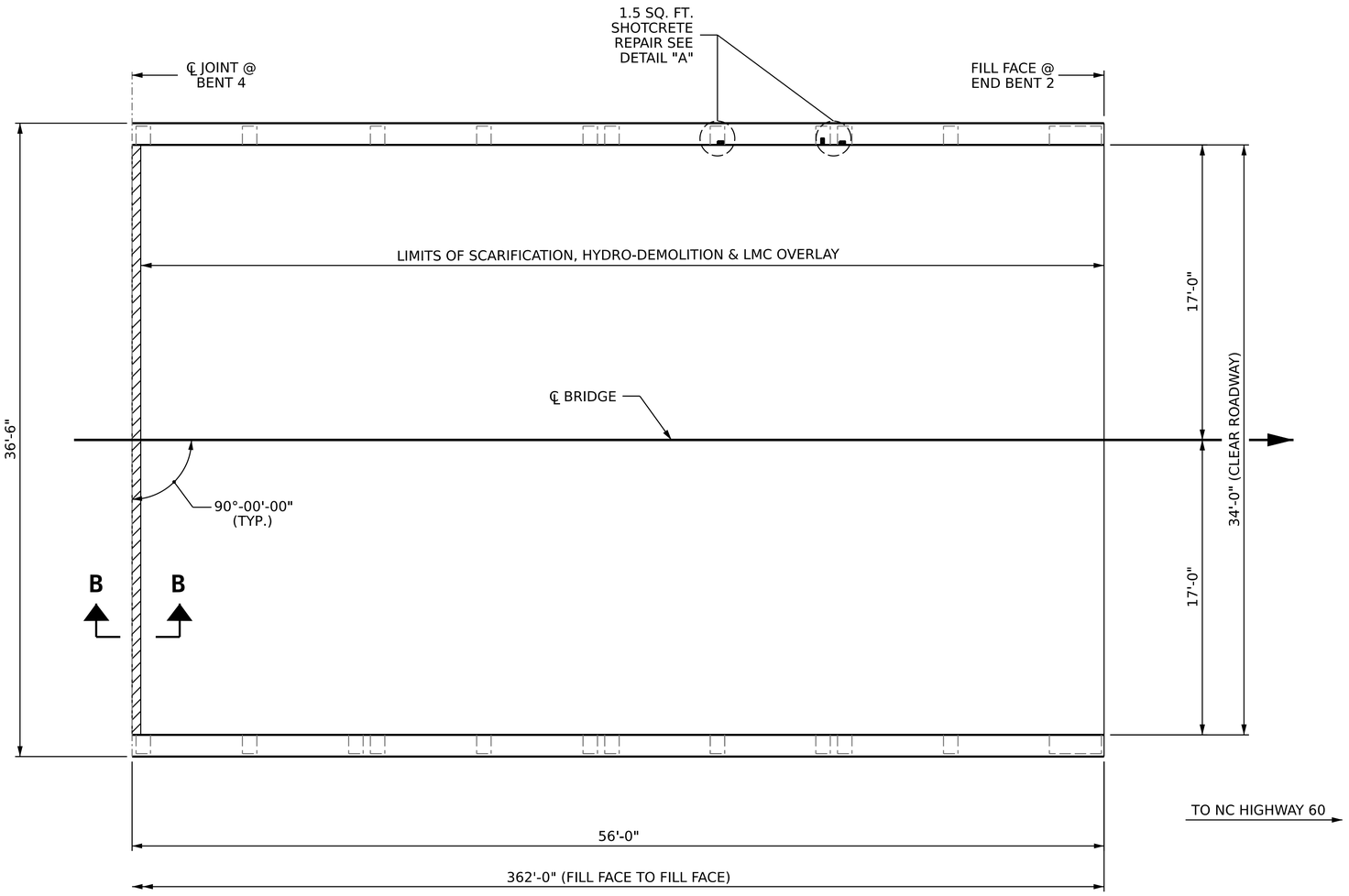
12/8/2022
R:\15BPR61\Structures\FinalPlans\401_011_15BPR61_SMU_DSR_S06_190009.dgn
ksedal





" DETAIL A "

(3 @ RAIL POSTS)



SPAN E

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	13.1 CU. YDS.			
PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY	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

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, 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 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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 5 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPAN E

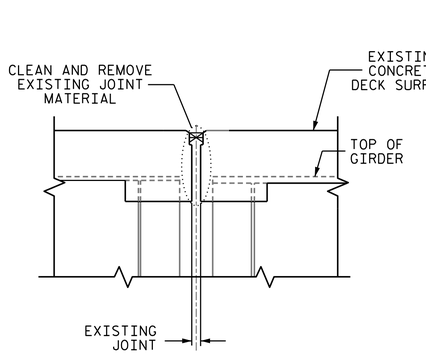
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-07
1			3			TOTAL SHEETS
2			4			25

DRAWN BY : A. SORSENGINH DATE : 6/2022

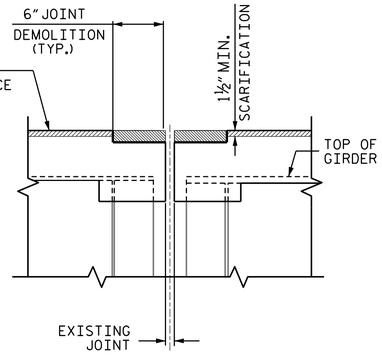
CHECKED BY : S. AGUILAR HERNANDEZ DATE : 6/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

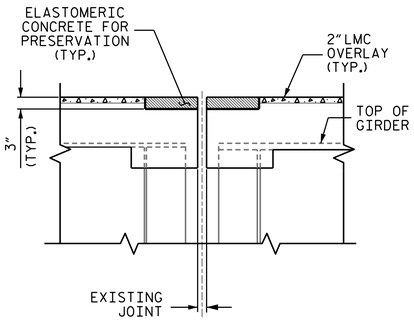
12/8/2022
R:\15BPR61\Structures\Final Plans\401_013_15BPR61_SMU_DSR_S07_190009.dgn
ksedal



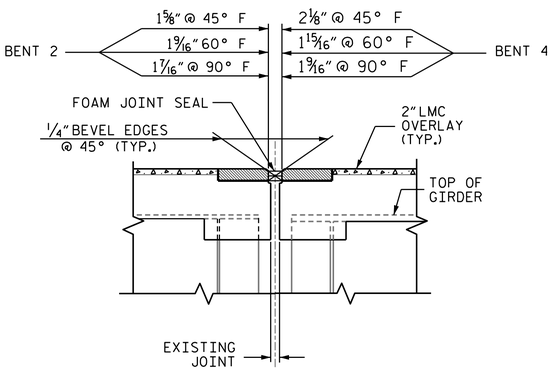
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED PRE-SAWED JOINT



PROPOSED FOAM JOINT SEAL

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.

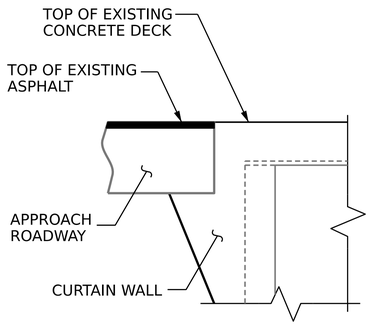
THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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.

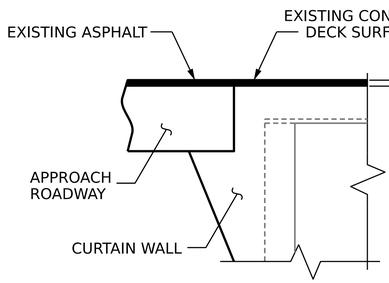
FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

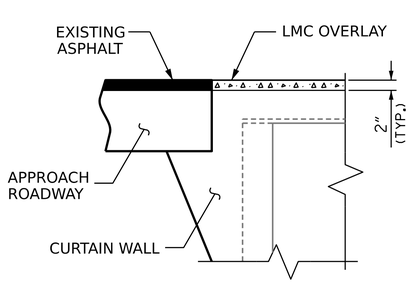
SECTION B-B



EXISTING COLD JOINT

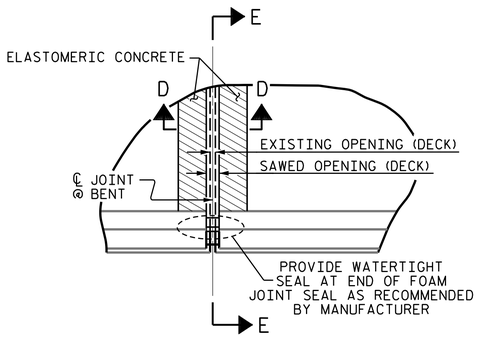


MINIMUM EXISTING JOINT DEMOLITION

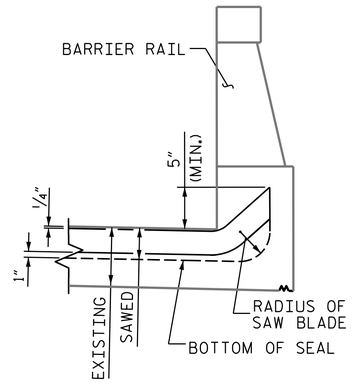


PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS



PLAN (@ BENT)



SECTION E-E

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.

JOINT SEAL DETAILS

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

12/8/2022
R:\15BPR61\Structures\FinalPlans\401_015_15BPR61_SMU_JT_S08_190009.dgn

PROJECT NO. 15BPR.61
CHEROKEE COUNTY
BRIDGE NO. 190009

SHEET 1 OF 2

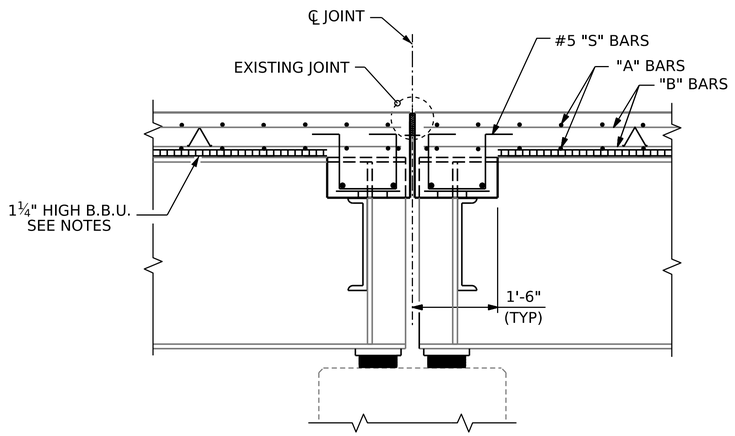
12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F794150BF4B7...

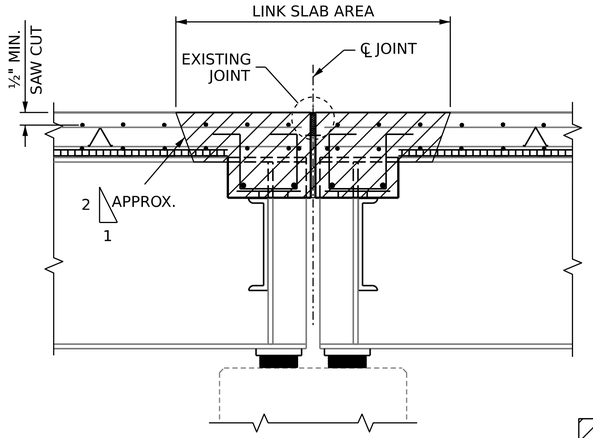
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-08
1			3			TOTAL SHEETS
2			4			25





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

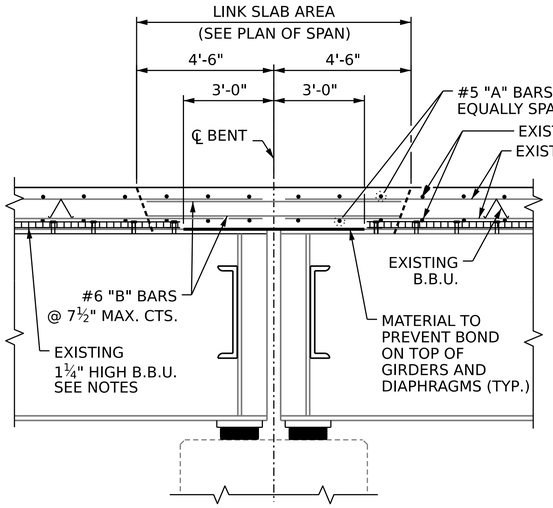
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF JOINT REPAIR.

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

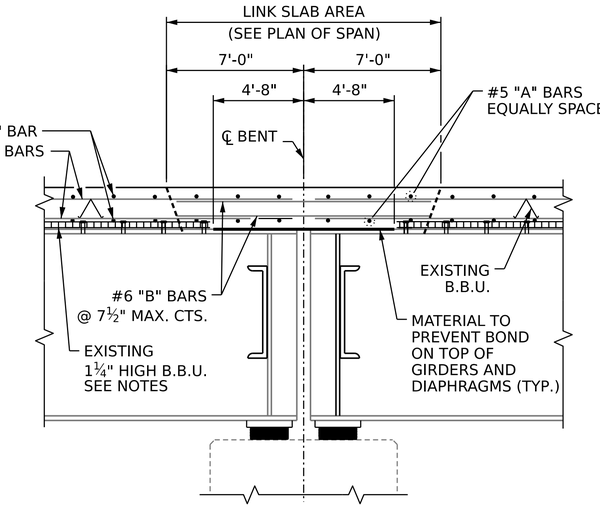
FOR LINK SLAB FOR PRESERVATION, SEE SPECIAL PROVISIONS.

CONSTRUCTION SEQUENCE

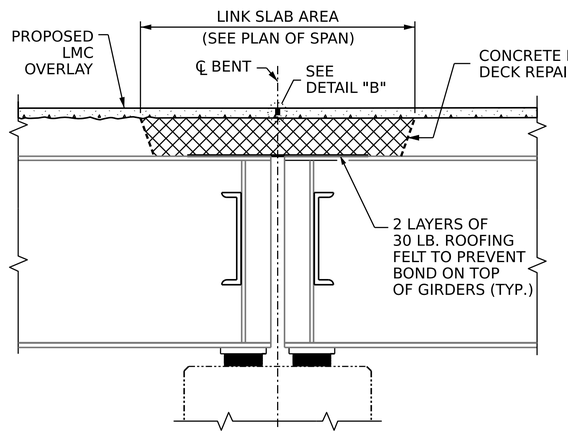
1. CLOSE WORK AREA ACCORDING TO TRAFFIC MANAGEMENT PLANS.
2. MARK OUT PROPOSED LINK SLAB AREA AND REMOVE EXISTING JOINT MATERIAL.
3. SAW CUT ½" DEEP PERIMETER OF PROPOSED LINK SLAB AREA.
4. BEGIN FULL DEPTH DEMOLITION OF PROPOSED LINK SLAB AREA, BEING CAREFUL NOT TO DAMAGE EXISTING REINFORCING STEEL, 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 CONCRETE WORK FOR JOINT REPLACEMENT SPECIAL PROVISION. AS AN ALTERNATIVE, THE CONTRACTOR CAN USE LMC MATERIAL FOR THE LINK SLAB, FOLLOWING THE LATEX MODIFIED CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.
11. AFTER PROPOSED DECK OVERLAY WORK HAS CURED, SAW CUT CONTROL LINES AND FILL WITH SEALER MATERIAL.



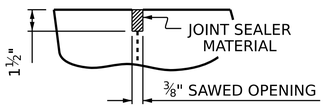
SECTION A-A
BENT 1



SECTION C-C
BENT 3

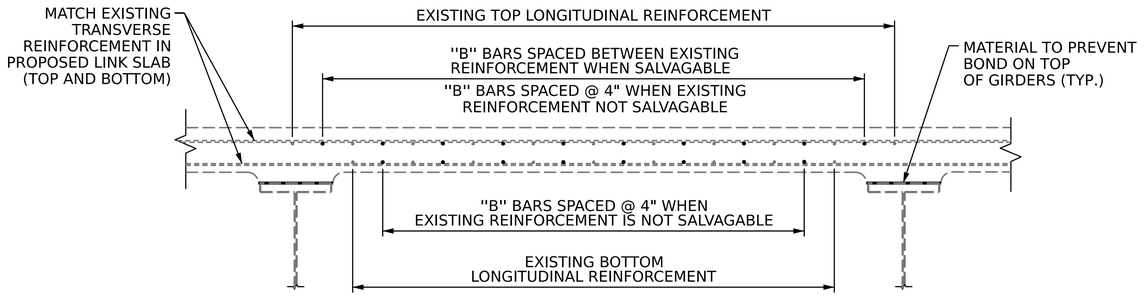


PROPOSED SECTION AT BENT



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

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI
Krishna P. Sodai
EA6F794150BF4B7...

PROJECT NO. 15BPR.61
CHEROKEE COUNTY
BRIDGE NO. 190009
SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LINK SLAB FOR PRESERVATION JOINT DETAILS

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

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\FinalPlans\401_017_15BPR61_SMU_JT_S09_190009.dgn
ksedal

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.

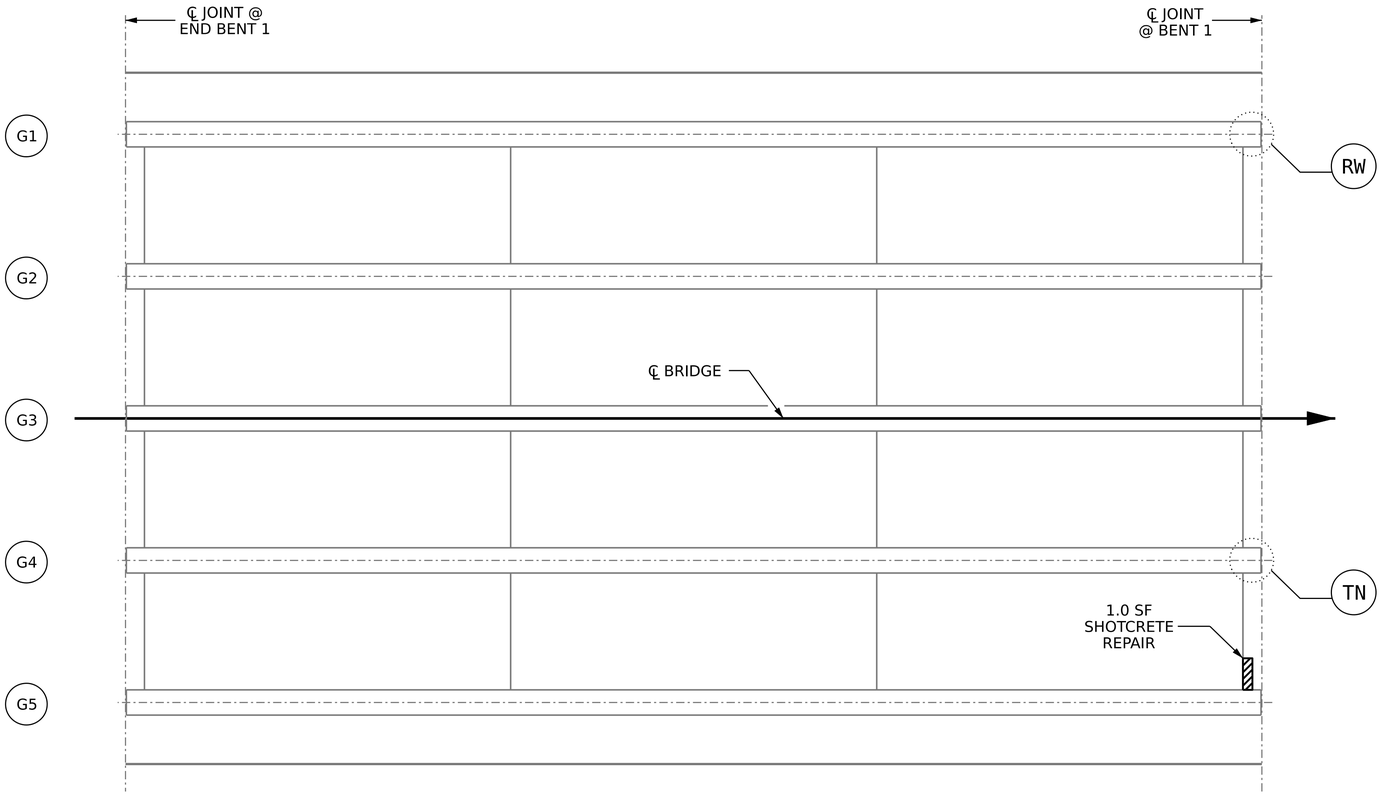
AS-BUILT REPAIR QUANTITY TABLE

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\Final Plans\401_019_15BPR61_SMU_DUR_S10_190009.dgn
ksedai

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.

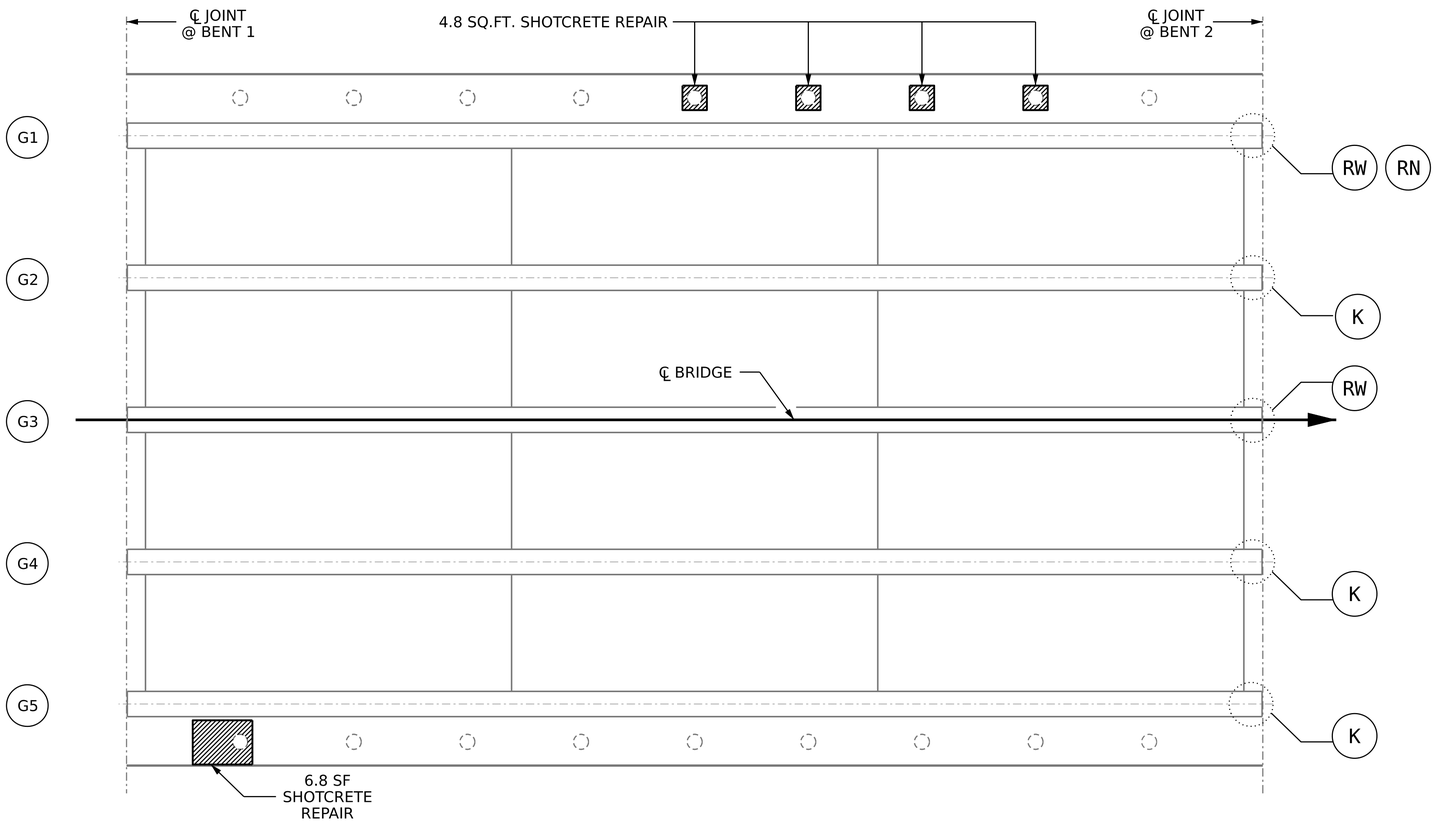
AS-BUILT REPAIR QUANTITY TABLE

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN B

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

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\Final Plans\401_021_15BPR61_SMU_DUR_S11_190009.dgn
ksedai

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.

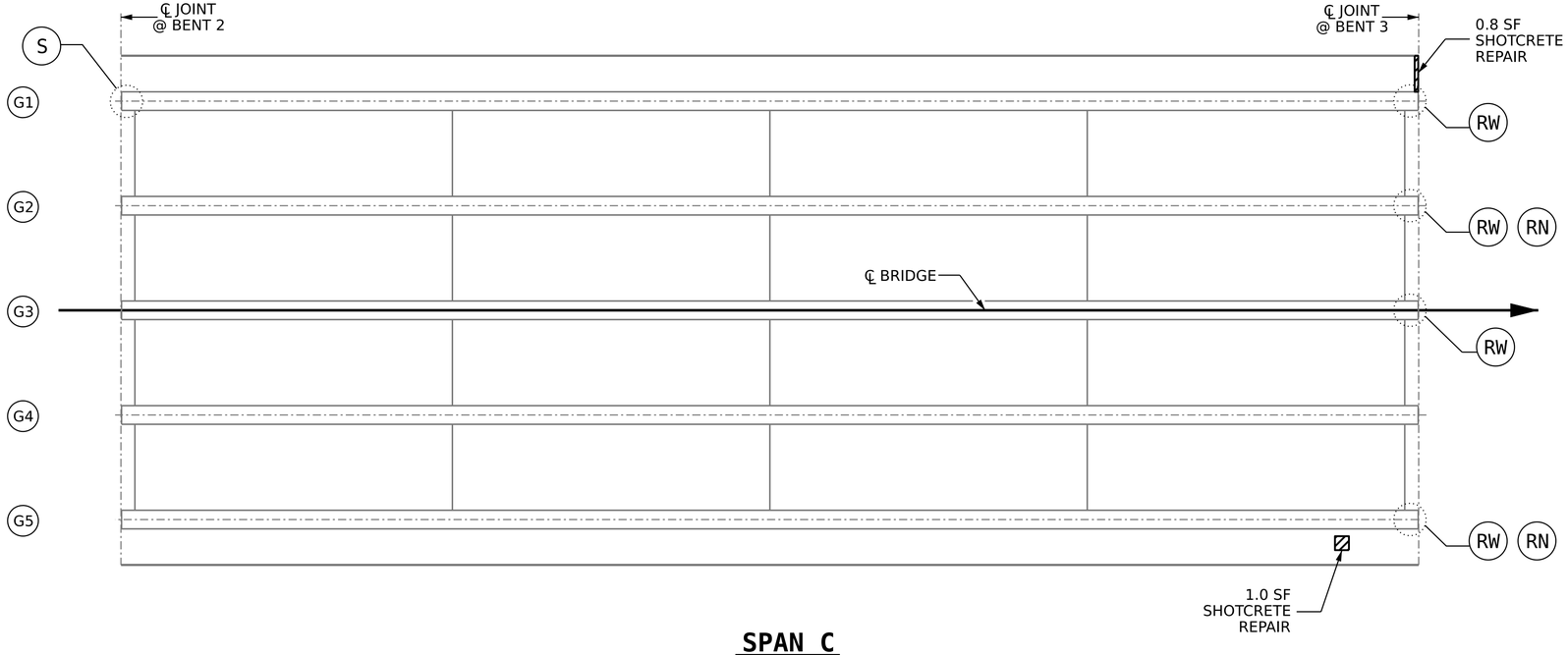
AS-BUILT REPAIR QUANTITY TABLE

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 3 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN C

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI
Krishna P. Sodai
EA6F794150BF4B7...

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-12
1			3			TOTAL SHEETS
2			4			25

12/8/2022
R:\15BPR61\Structures\Final Plans\401_023_15BPR61_SMU_DUR_S12_190009.dgn
ksedai

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	

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"				

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.

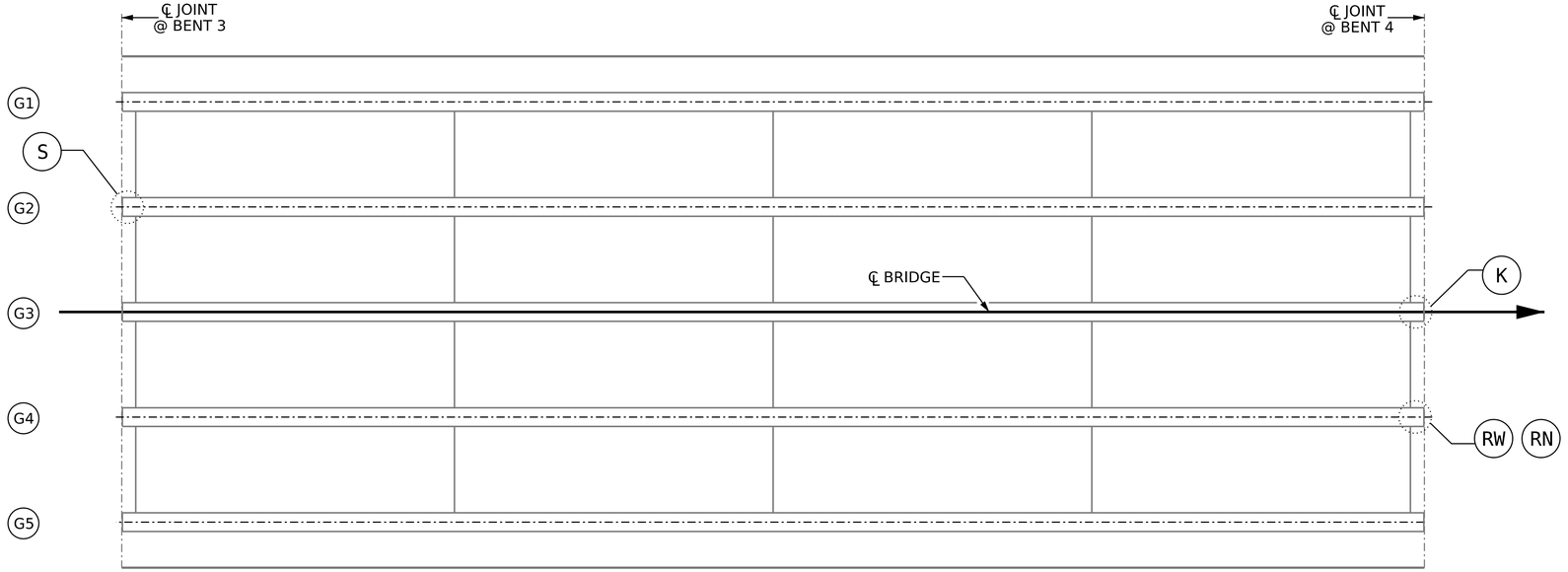
AS-BUILT REPAIR QUANTITY TABLE

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.



SPAN D

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 4 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-13
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

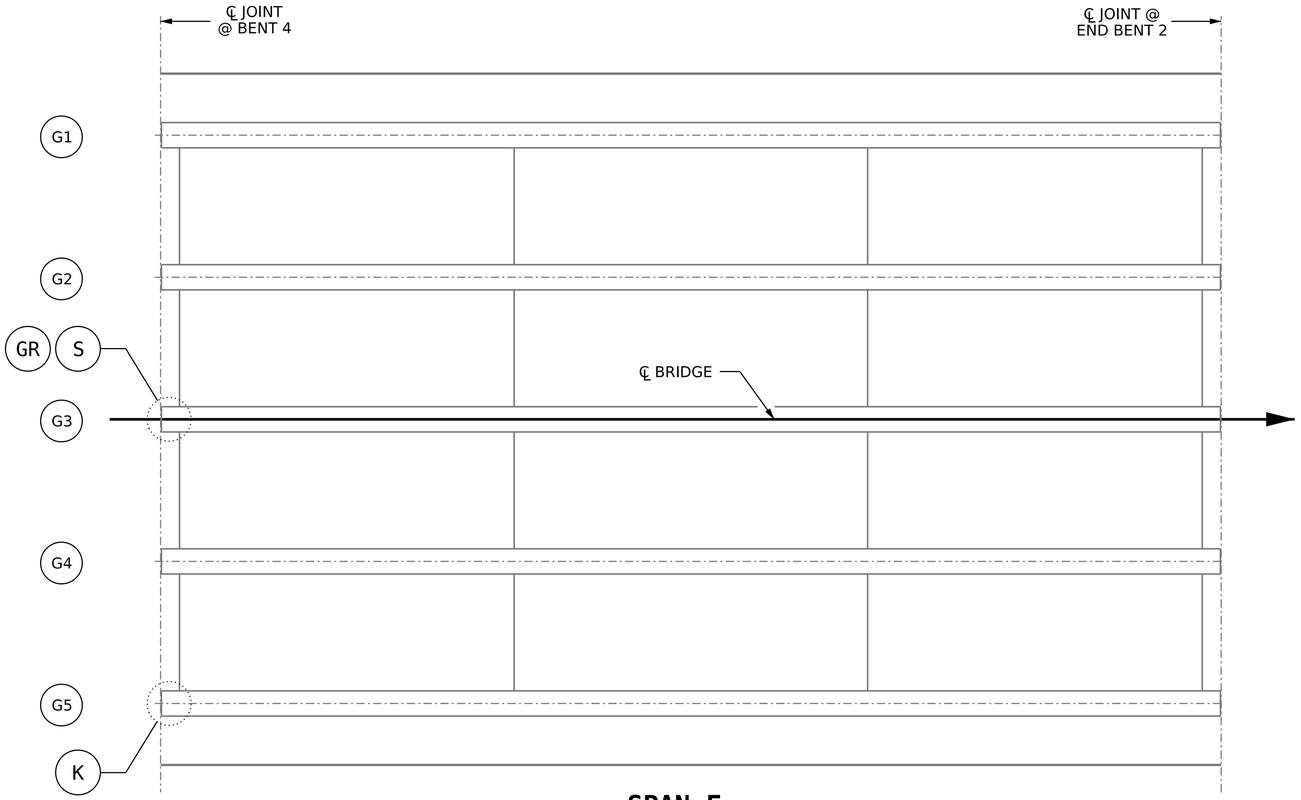
12/8/2022
R:\15BPR61\Structures\Final Plans\401_025_15BPR61_SMU_DUR_S13_190009.dgn
kseda1

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

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 5 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK UNDERSIDE REPAIR SPAN E

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-14
1			3			TOTAL SHEETS
2			4			25

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

12/8/2022
R:\15BPR61\Structures\FinalPlans\401_027_15BPR61_SMU_DUR_S14_190009.dgn
ksedai

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.

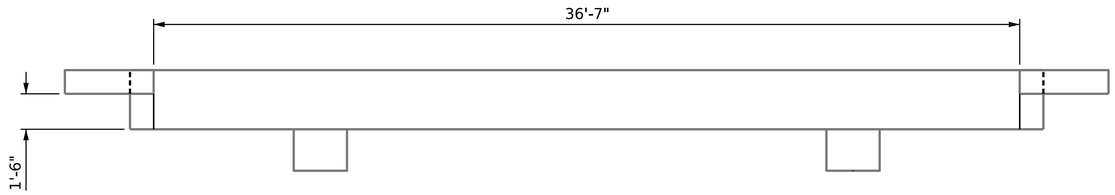
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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.

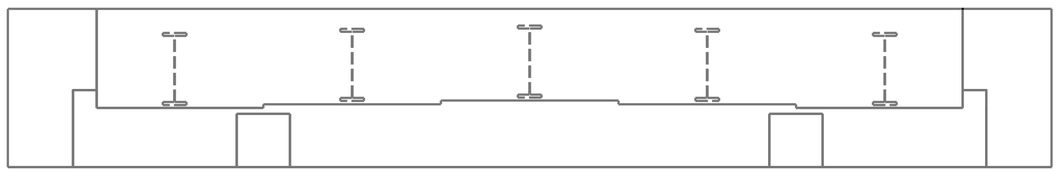
AS-BUILT REPAIR QUANTITY TABLE

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

E4AF794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

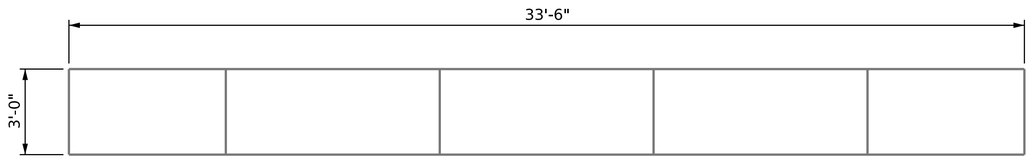
END BENT 1

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

12/8/2022
R:\15BPR61\Structures\Final Plans\401_029_15BPR61_SMU_EB1_S15_190009.dgn
ksedai



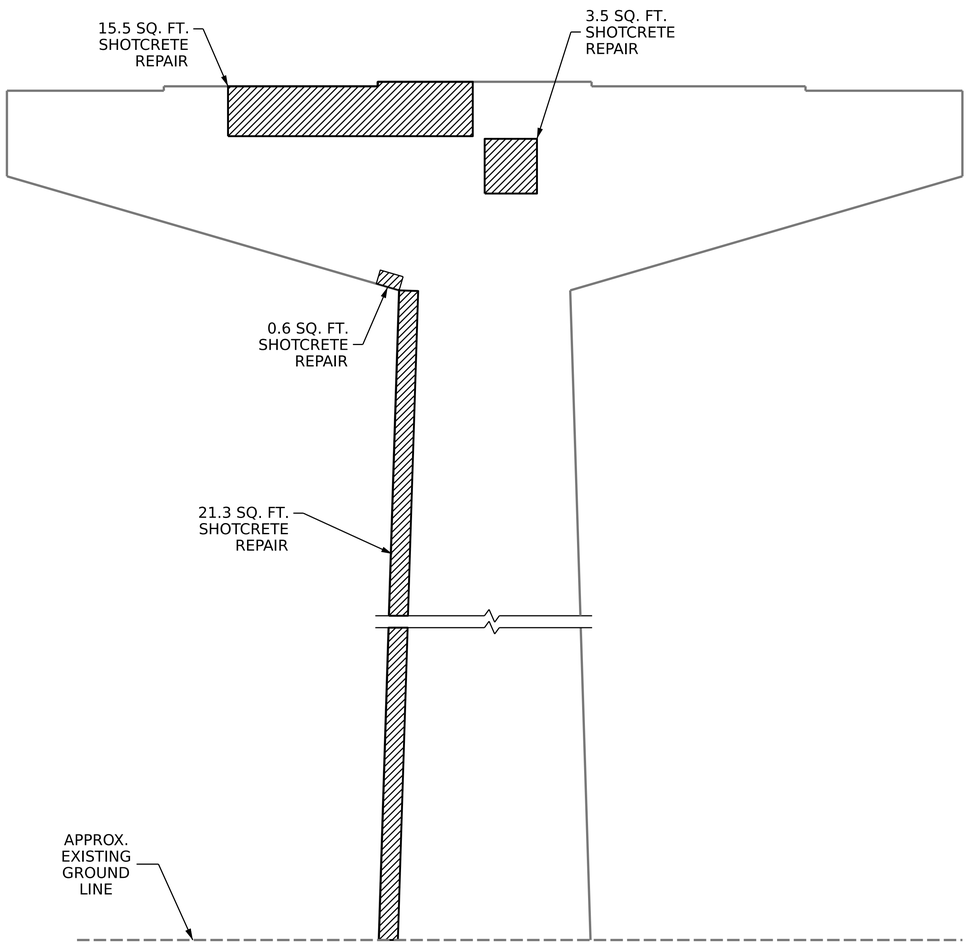
SPAN B
SPAN A

CONCRETE REPAIR AREA

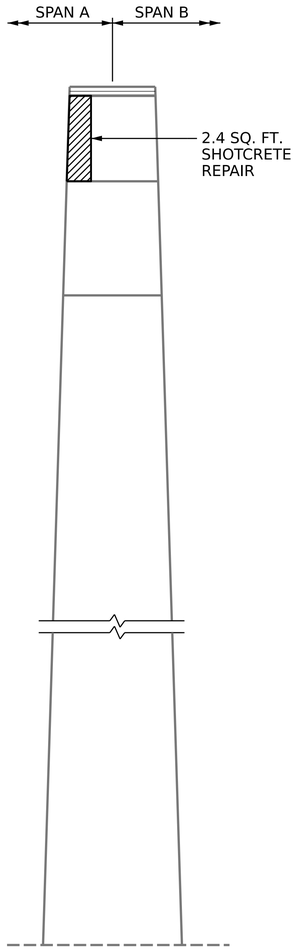
SHOTCRETE REPAIR AREA

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Digitally signed by Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1
SPAN A FACE

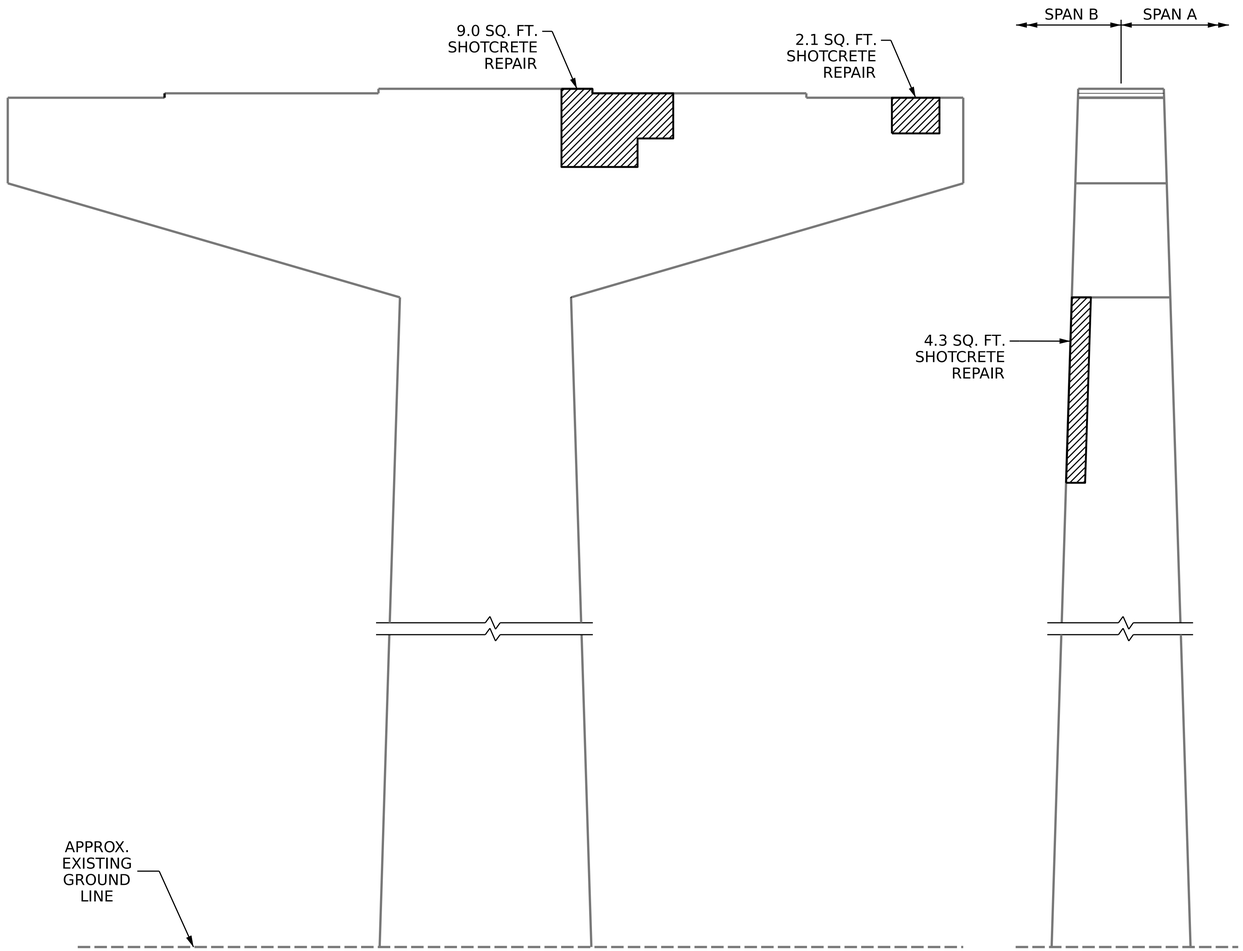
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-16
1			3			TOTAL SHEETS
2			4			25

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

R:\15BPR61\Structures\FinalPlans\401_031_15BPR61_SMU_B1A_S16_190009.dgn
ksedal

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:

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 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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1
SPAN B FACE

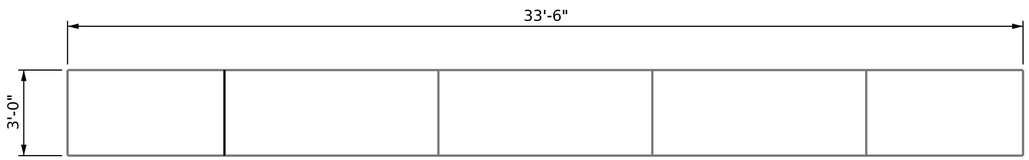
DRAWN BY : A. SORSENGINH DATE : 6/2022

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

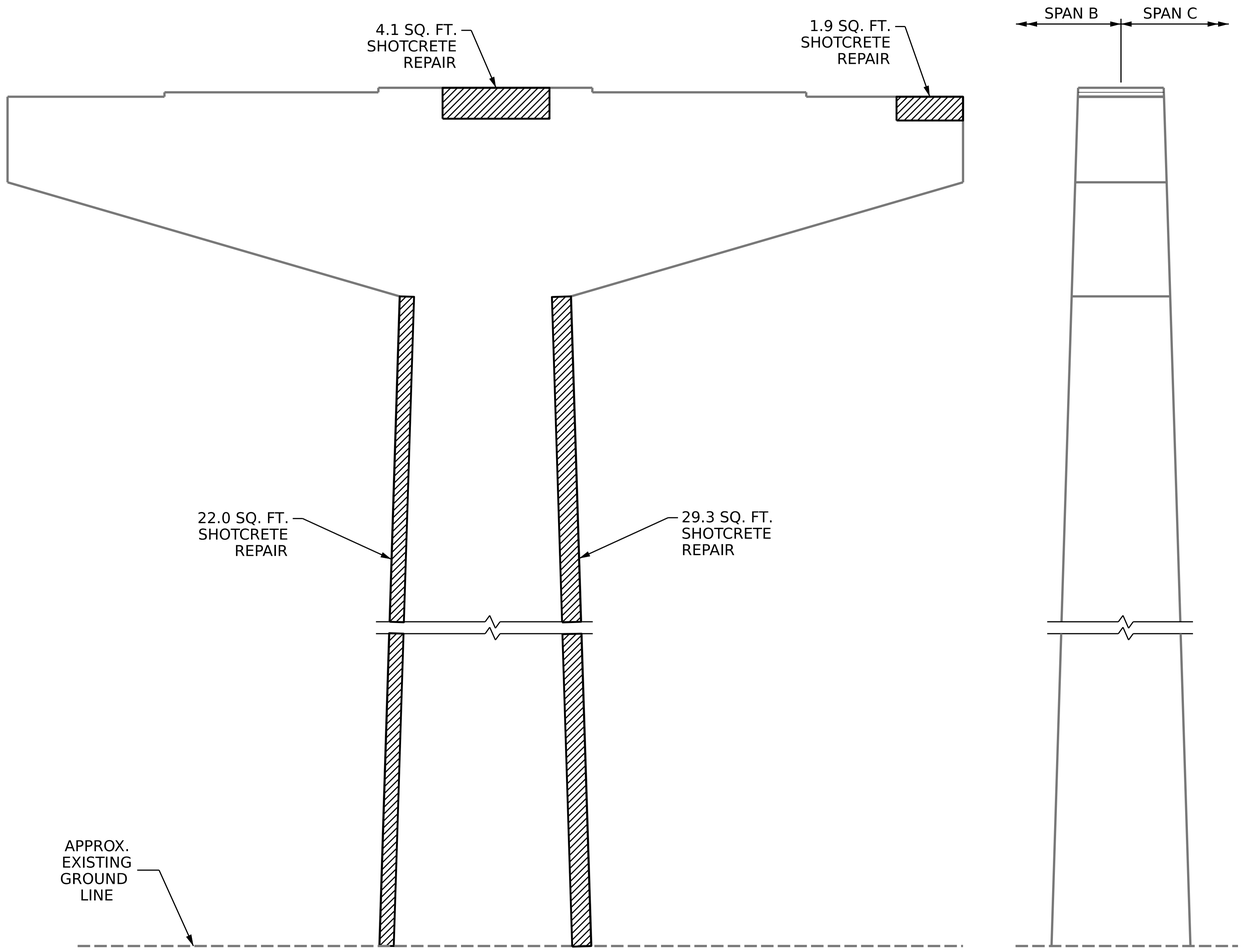
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-17
1			3			TOTAL SHEETS
2			4			25

R:\15BPR61\Structures\Final Plans\401_033_15BPR61_SMU_BIB_S17_190009.dgn
ksedal



SPAN C
SPAN B

PLAN - TOP OF CAP



ELEVATION - SPAN B VIEW

END VIEW
(RIGHT SIDE)

CONCRETE REPAIR AREA

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

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.

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2
SPAN B FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-18
1			3			TOTAL SHEETS
2			4			25

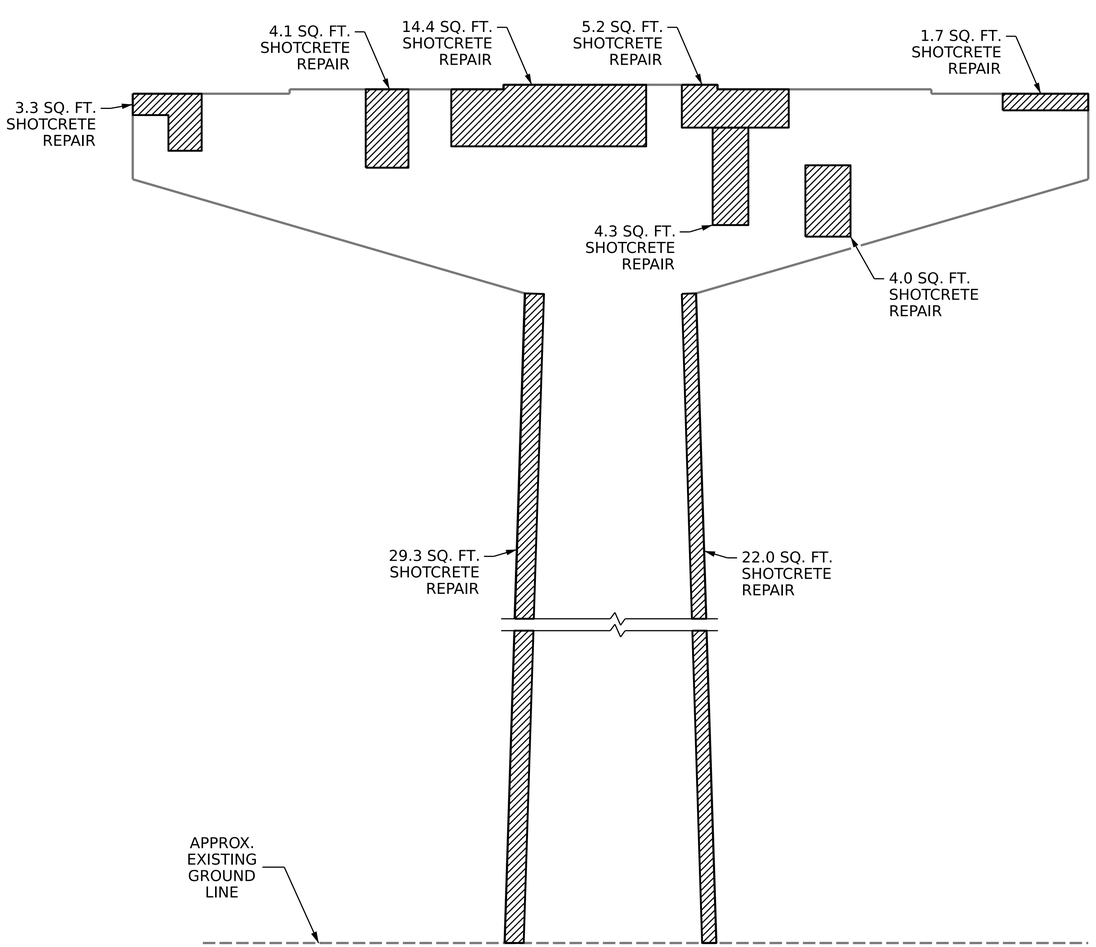
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

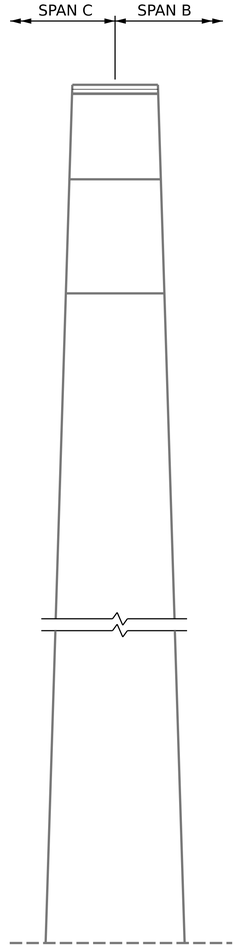
R:\15BPR61\Structures\FinalPlans\401_035_15BPR61_SMU_B2B_S18_190009.dgn
ksedal

SPAN C
SPAN B

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.

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 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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Digitally signed by Krishna P. Sedai

E46F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

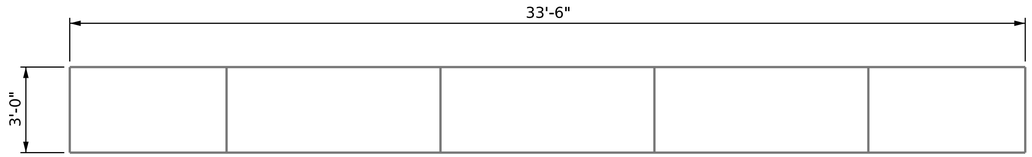
BENT 2
SPAN C FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-19
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

R:\15BPR61\Structures\FinalPlans\401_037_15BPR61_SMU_B2C_S19_190009.dgn
ksedai



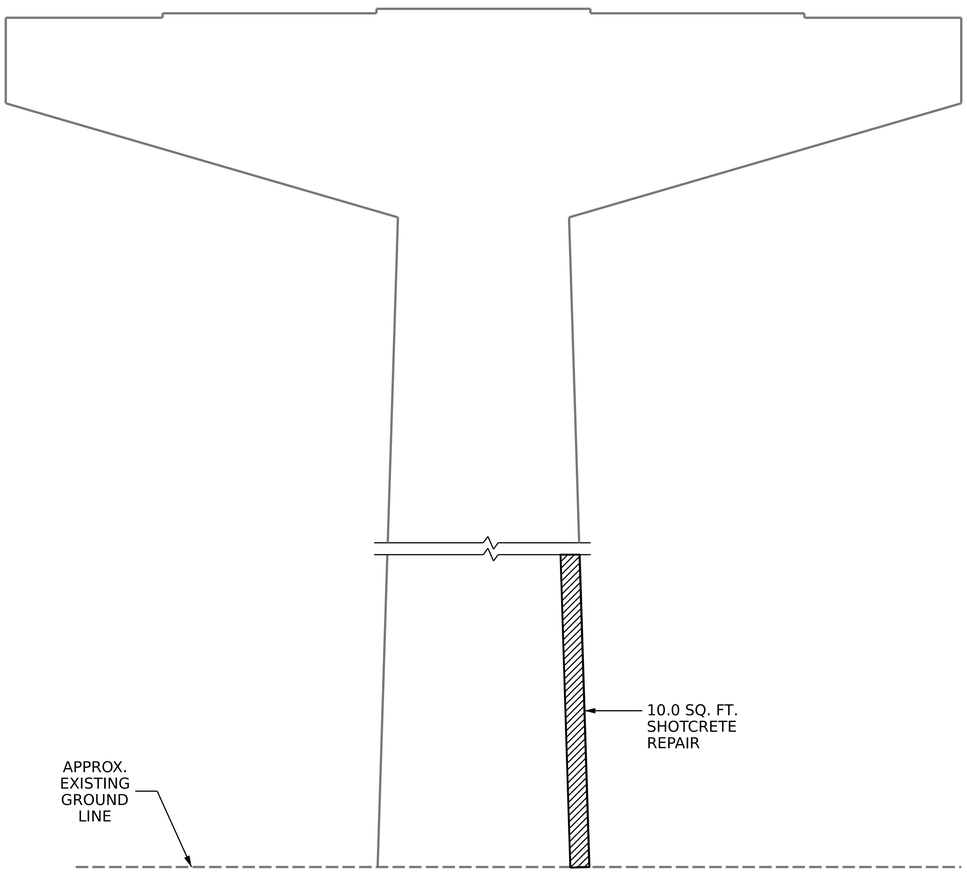
SPAN D
SPAN C

CONCRETE REPAIR AREA

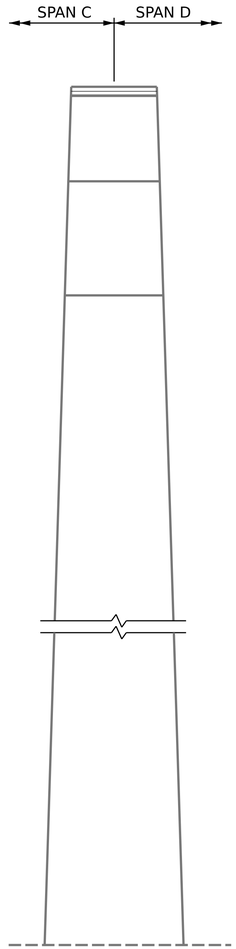
SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

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.

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

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

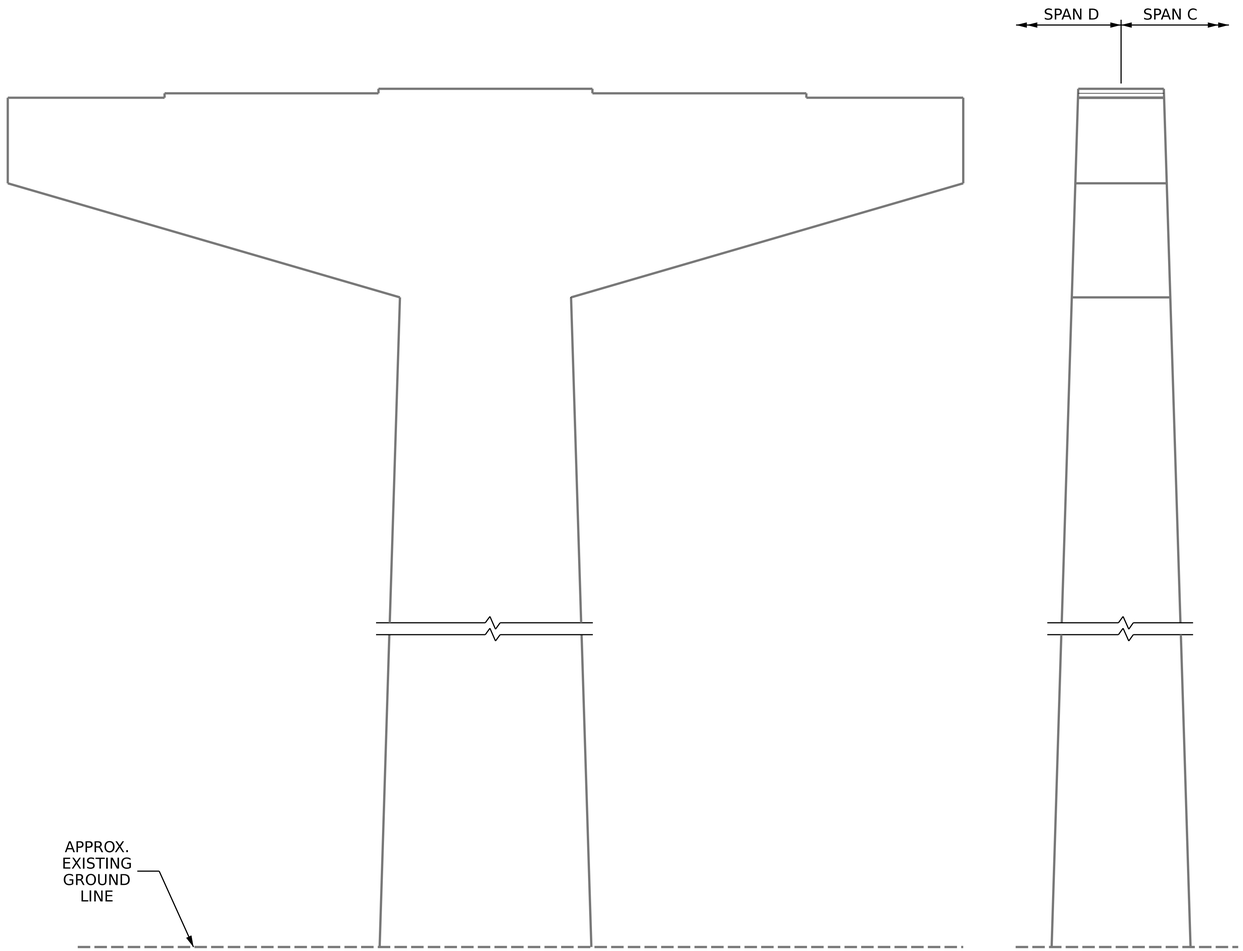
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

R:\15BPR61\Structures\Final Plans\401_039_15BPR61_SMU_B3C_S20_190009.dgn
ksedai

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.

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 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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

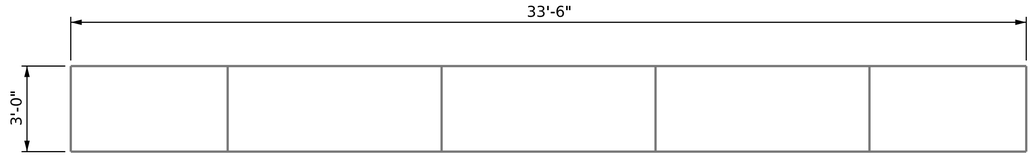
BENT 3
SPAN D FACE

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

R:\15BPR61\Structures\FinalPlans\401_041_15BPR61_SMU_B3D_S21_190009.dgn
ksedal



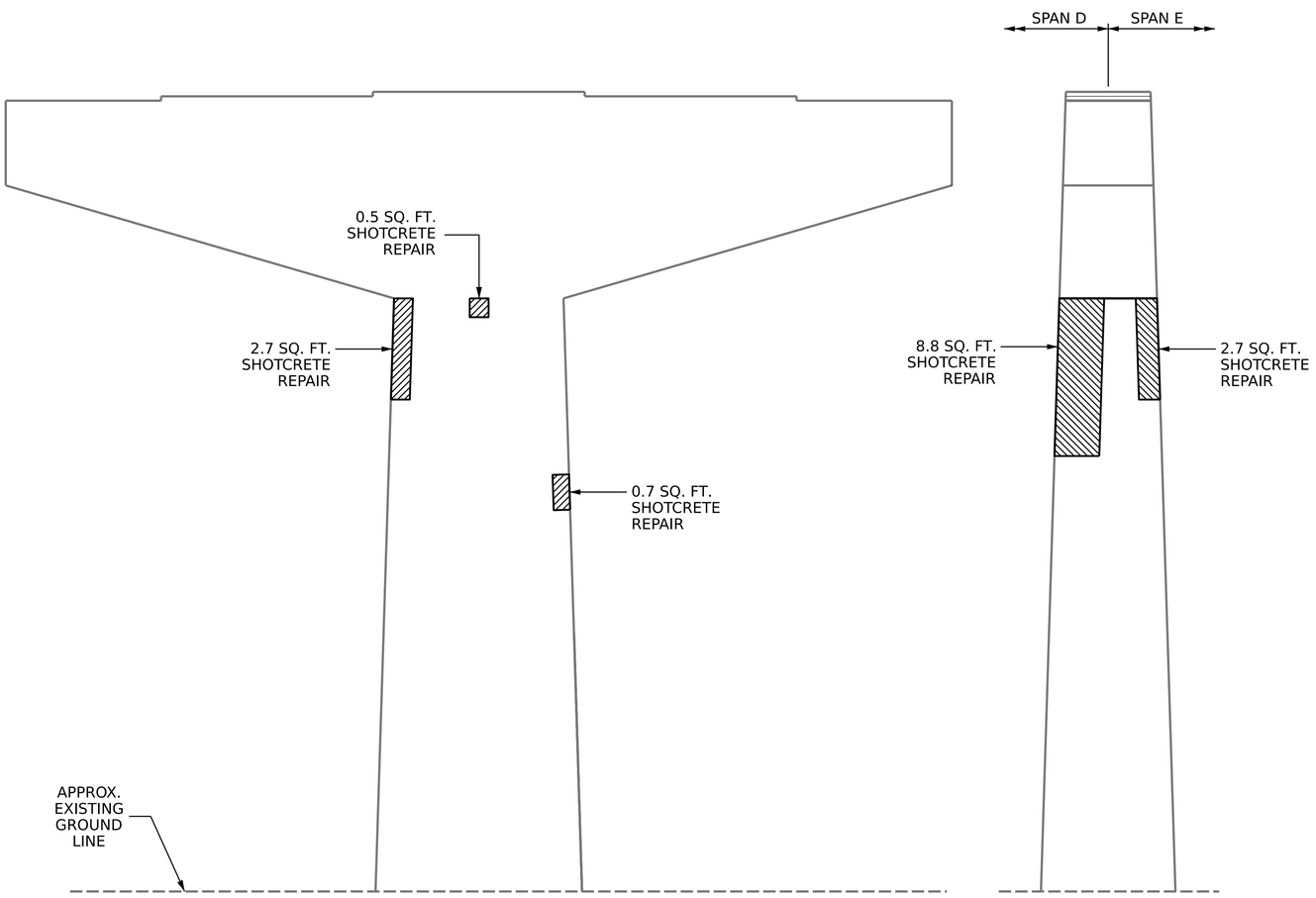
SPAN E
SPAN D

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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 4
SPAN D FACE

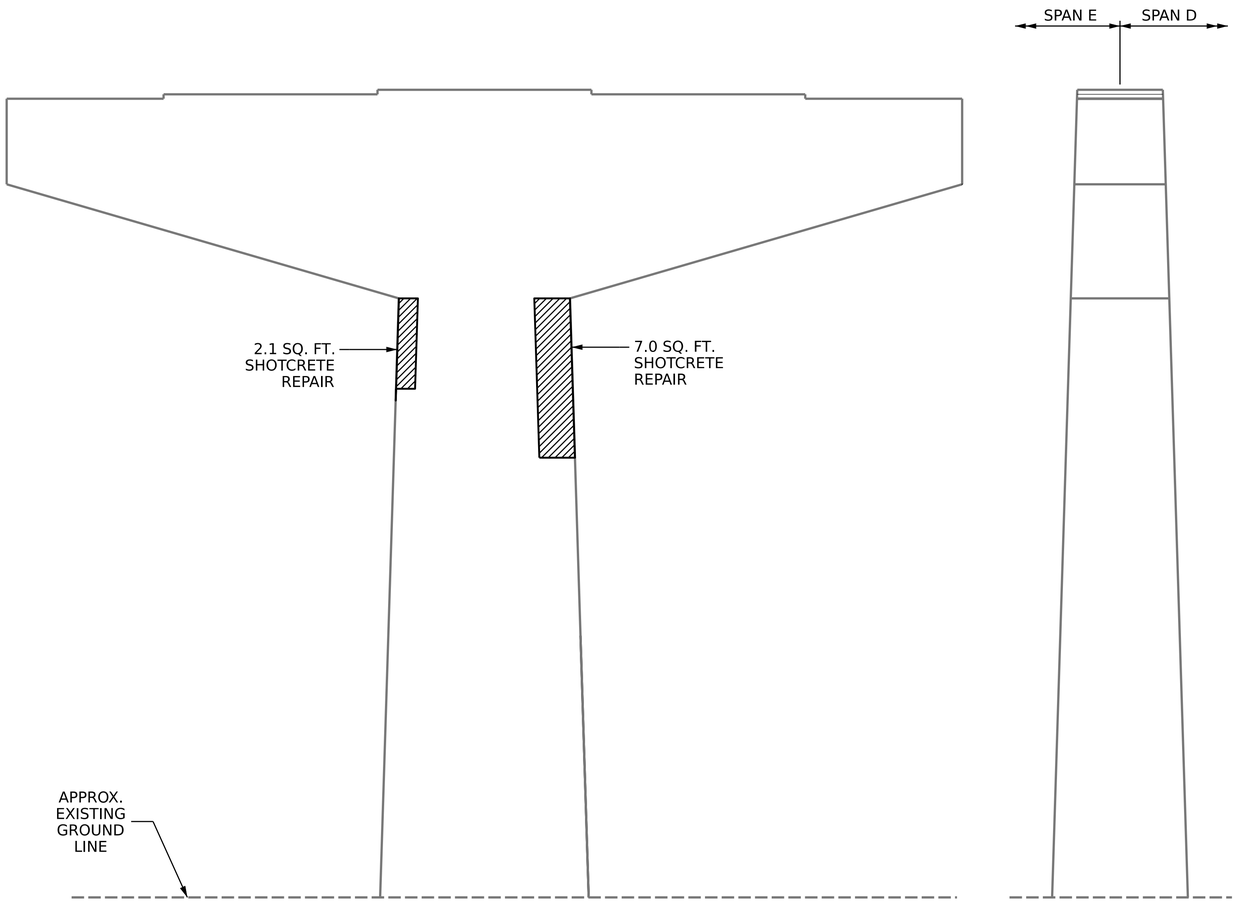
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-22
1			3			TOTAL SHEETS
2			4			25

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

R:\15BPR61\Structures\FinalPlans\401_043_15BPR61_SMU_B4D_S22_190009.dgn
ksedai

PLAN - BOTTOM OF CAP



ELEVATION - SPAN E VIEW

END VIEW
(RIGHT SIDE)

AS-BUILT REPAIR QUANTITY TABLE

BENT 4 SPAN E FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	9.1	4.6		
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:

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 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.61

CHEROKEE COUNTY

BRIDGE NO. 190009

SHEET 2 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 4
SPAN E FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-23
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

R:\15BPR61\Structures\FinalPlans\401_045_15BPR61_SMU_B4E_S23_190009.dgn
ksedai

CONCRETE REPAIR AREA

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

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.

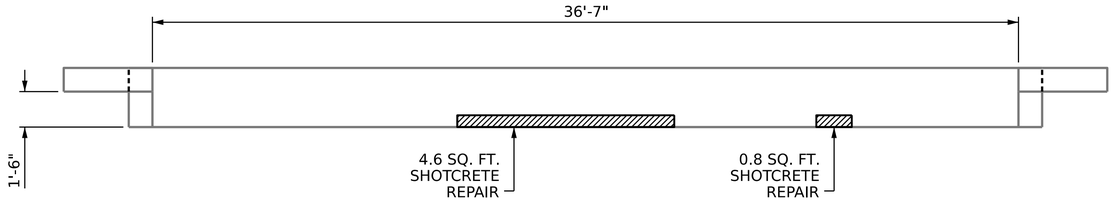
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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.

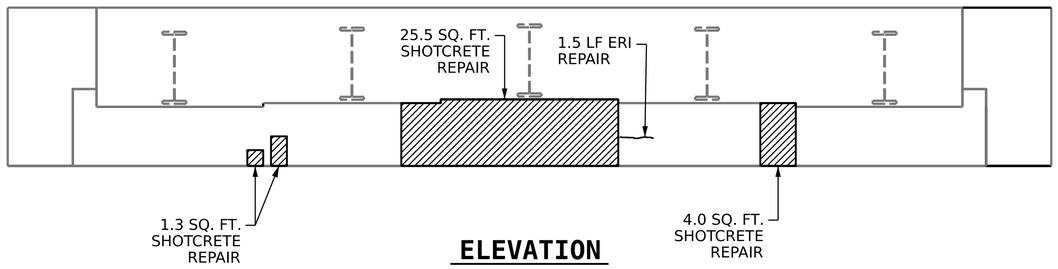
AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	36.2	18.1		
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		1.5		
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

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190009

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 2

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-24
1			3			TOTAL SHEETS
2			4			25

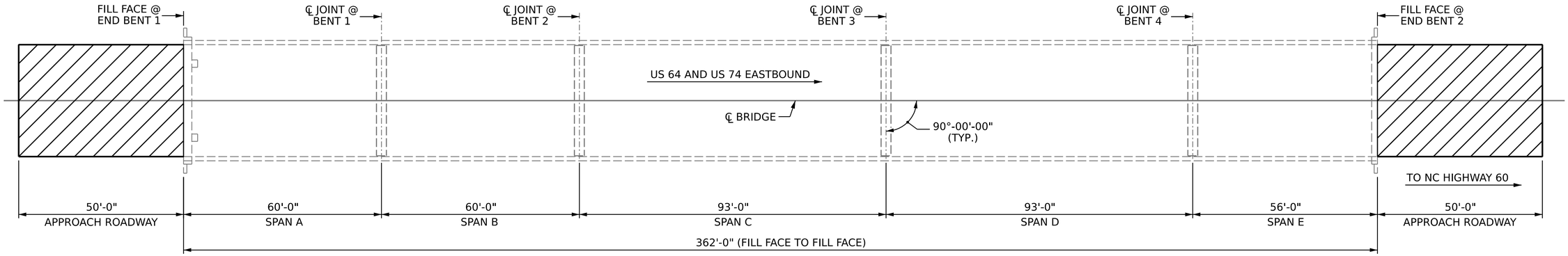
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

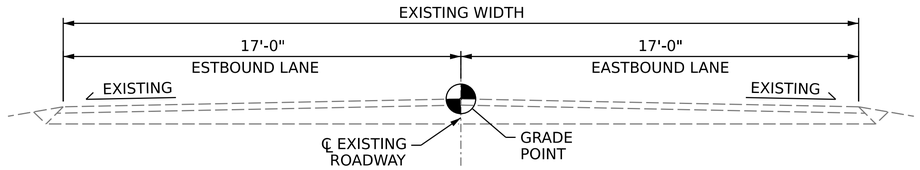
DRAWN BY : A. SORSENGINH DATE : 6/2022
CHECKED BY : S. AGUILA HERNANDEZ DATE : 6/2022

12/8/2022
R:\15BPR61\Structures\Final Plans\401_047_15BPR61_SMU_EB2_S24_190009.dgn
ksedai

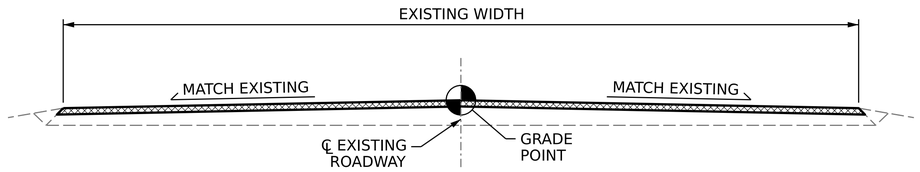
NOTES

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. THE NEW ASPHALT PAVEMENT THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH.



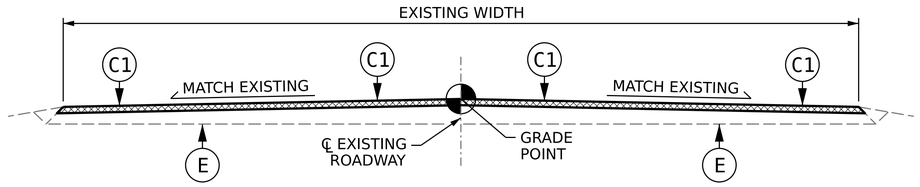


EXISTING ROADWAY SECTION



TYPICAL ROADWAY MILLING SECTION

(MILL TO 1½" DEPTH)



PROPOSED ROADWAY SECTION

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	378.0 SQ. YD.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	40.0 TONS	
ASPHALT BINDER FOR PLANT MIX	5.0 TONS	

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 1½" IN DEPTH OR GREATER THAN 2" IN DEPTH.
E	EXISTING PAVEMENT

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

STATION: 190009

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

INCIDENTAL MILLING AND TYPICAL ROADWAY SECTIONS

DRAWN BY : A. SORSENGINH DATE : 5/2022

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

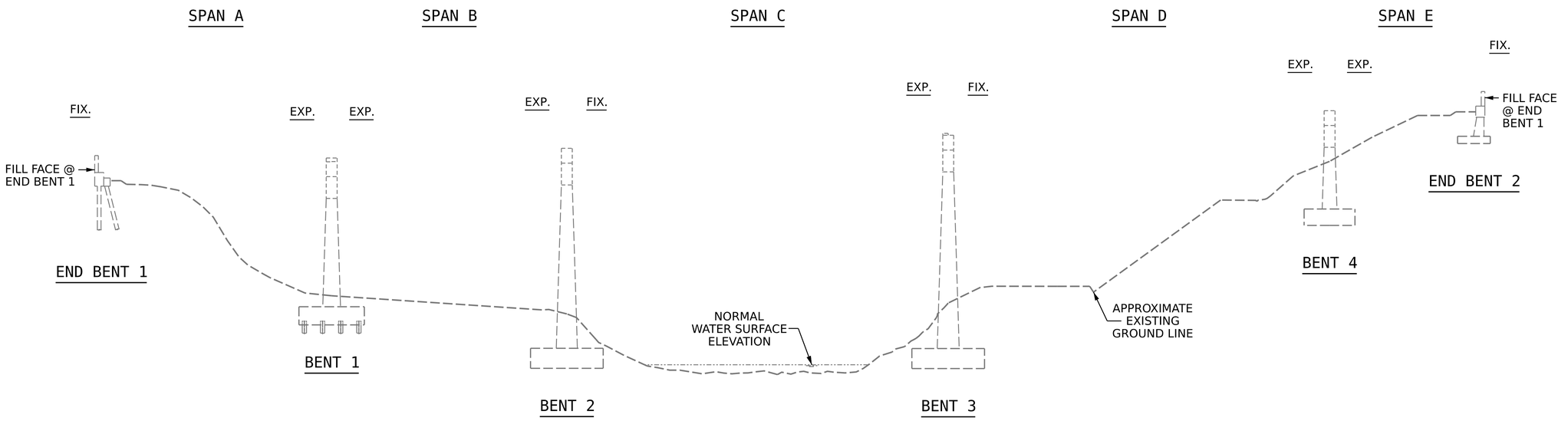
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

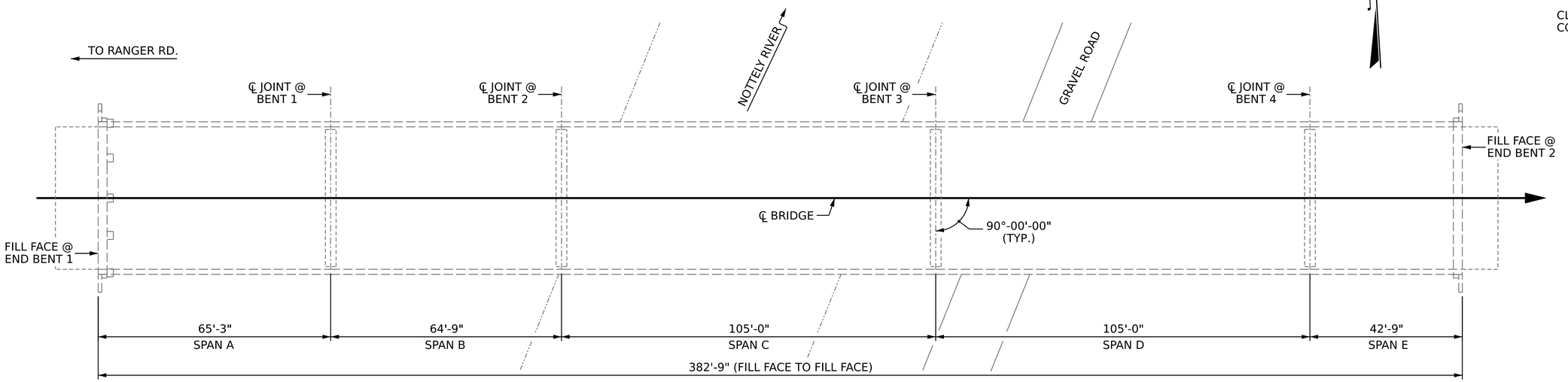
SHEET NO. S1-25

TOTAL SHEETS 25

12/8/2022
R:\15BPR61\Structures\Final Plans\401_049_15BPR61_SMU_AM_S25_190009.dgn
ksedai



SECTION ALONG ℄ BRIDGE



PLAN

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

RESIDENT ENGINEER DATE

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 35647 ENGINEER ADAM A. COLE
02EE93FAB874C5...

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
EA6F794150BF4B7...

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\Final Plans\402_001_15BPR61_SMU_GD_S01_190010.dgn
ksedai

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/5/2022.

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

SCOPE OF WORK

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

OVERLAY PREPARED TOP OF BRIDGE DECK WITH LATEX MODIFIED CONCRETE (LMC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL LINK SLABS AT BENTS 1 & 3

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS AT END BENTS AND BENTS 2 & 4.

GROOVE LMC BRIDGE DECK.

CLEAN AND PAINT EXISTING WEATHERING STEEL GIRDER ENDS AND BEARINGS.

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.

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

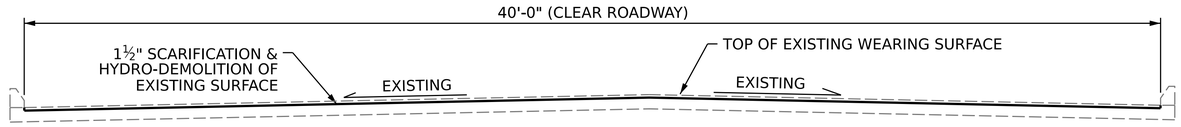
PROJECT NO. 15BPR.61
CHEROKEE COUNTY
BRIDGE NO. 190010

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

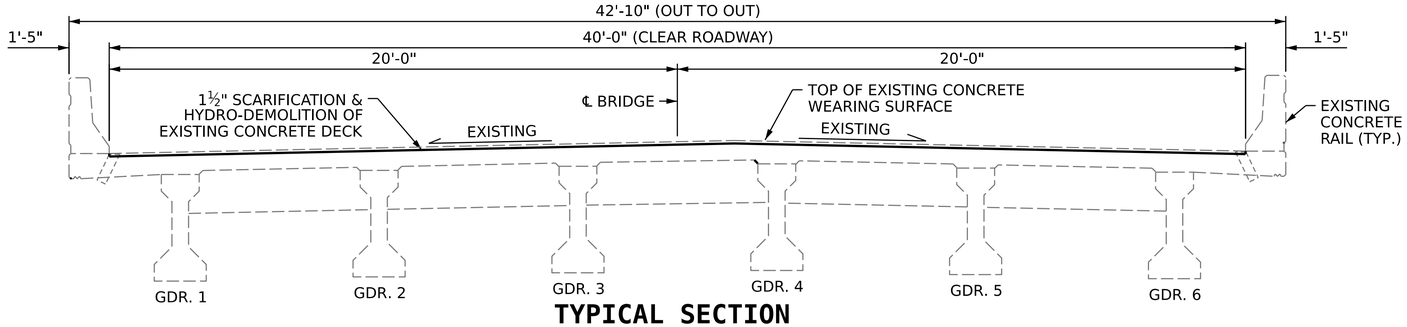
FOR BRIDGE ON
US 64 & US 74 WBL
OVER NOTTELY RIVER AND
GRAVEL RD.

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-01
1			3			TOTAL SHEETS
2			4			28



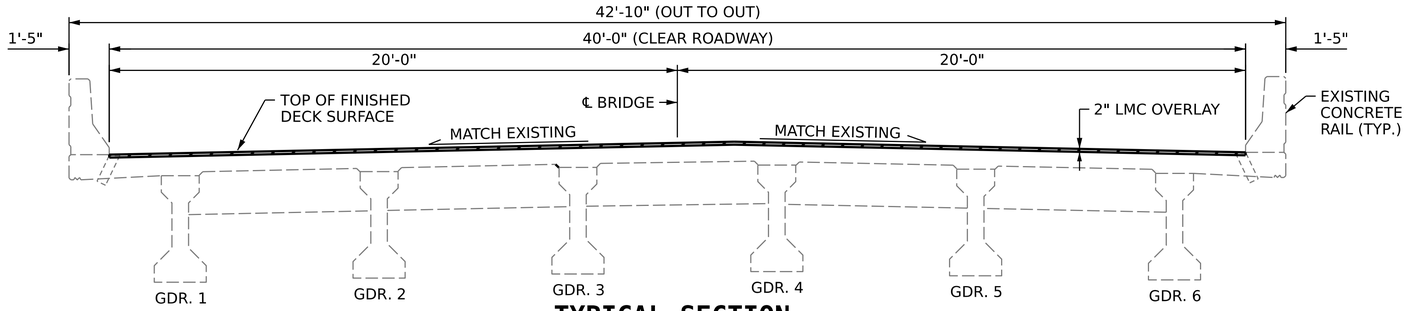
TYPICAL SECTION - APPROACH SLAB 1

(EXISTING)



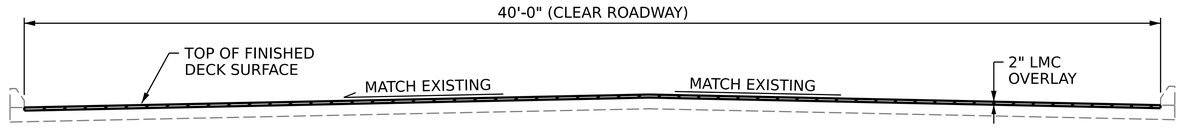
TYPICAL SECTION

(EXISTING)



TYPICAL SECTION

(PROPOSED)



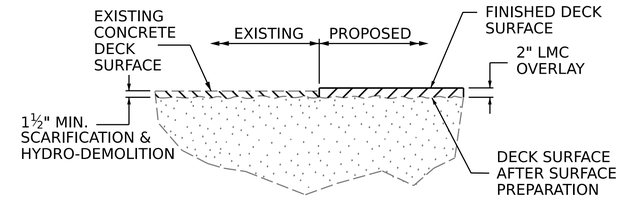
TYPICAL SECTION - APPROACH SLAB 1

(PROPOSED)

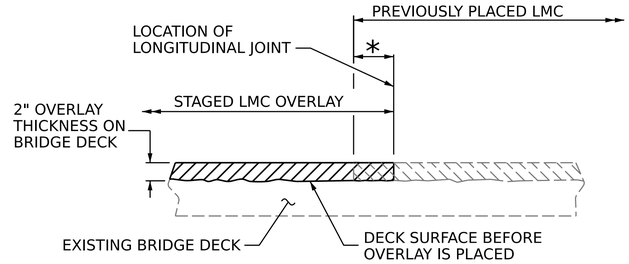
NOTES:

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



SECTION THRU DECK

STAGED LMC OVERLAY JOINT

* 4" OVERLAP BETWEEN OVERLAYS

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

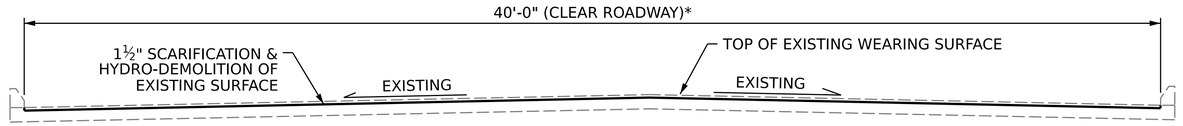
TYPICAL SECTIONS SPANS A, B, & E & SURFACE PREPARATION DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-02
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

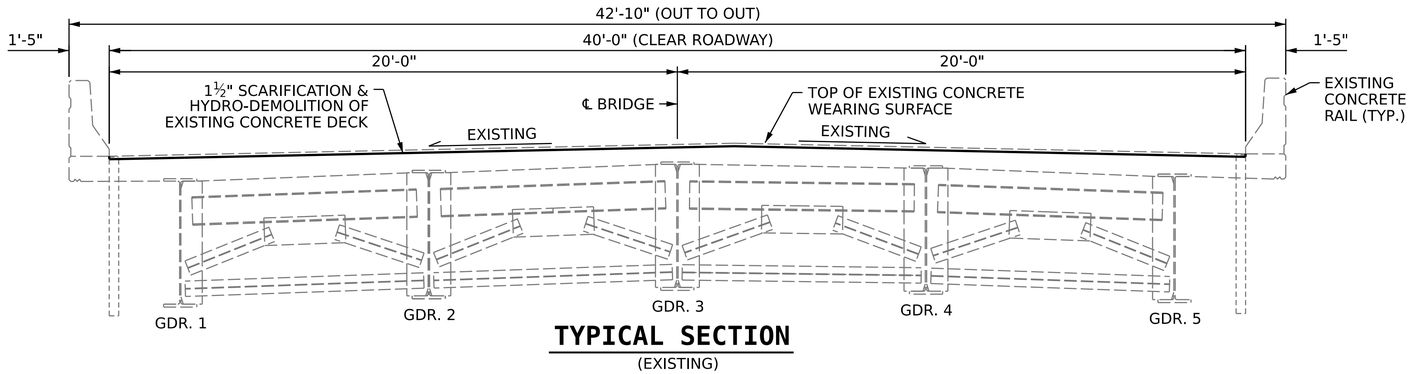
DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\Final Plans\402_003_15BPR61_SMU_TS_S02_190010.dgn
ksedai



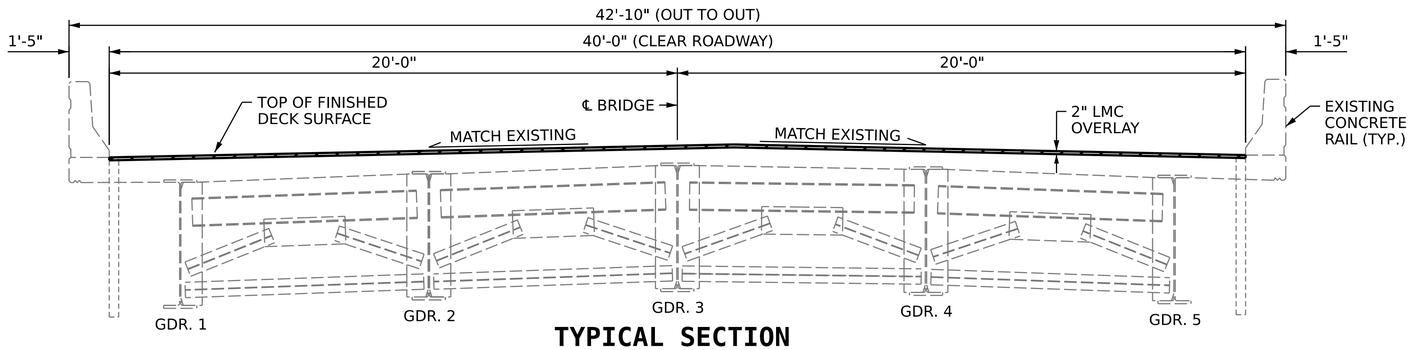
TYPICAL SECTION - APPROACH SLAB 2

(EXISTING)



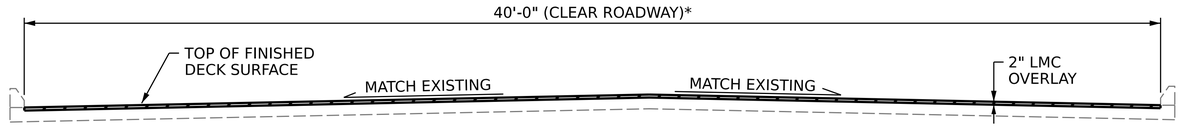
TYPICAL SECTION

(EXISTING)



TYPICAL SECTION

(PROPOSED)



TYPICAL SECTION - APPROACH SLAB 2

(PROPOSED)

NOTES:

FOR NOTES AND STAGED LMC OVERLAY JOINT DETAILS, SEE SHEET S2-02

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 2 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Krishna P. Sodai

EA6F794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

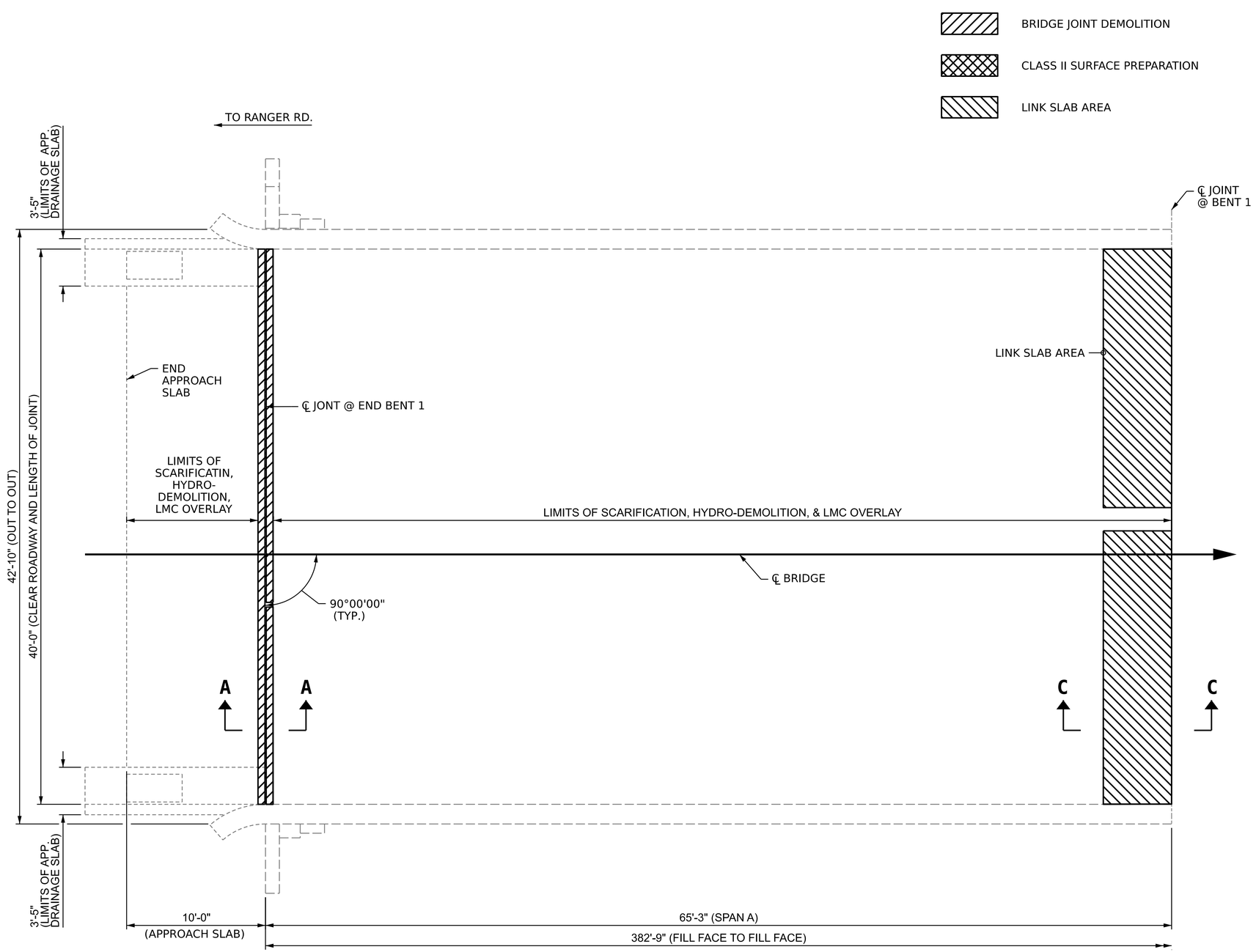
TYPICAL SECTIONS SPANS C & D & SURFACE PREPARATION DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-03
1			3			TOTAL SHEETS
2			4			28

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\Final Plans\402_005_15BPR61_SMU_TS_S03_190010.dgn
ksedal



SPAN A

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPAN A

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	288.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	288.0 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY	18.0 CU. YDS.	
PLACING & FINISHING OF LATEX MOD. CON. OVERLAY	288.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	2374.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	197.0 SQ. FT.	

APPROACH SLAB

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	43.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	43.0 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY	2.7 CU. YDS.	
PLACING & FINISHING OF LATEX MOD. CON. OVERLAY	43.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	278.0 SQ. FT.	

NOTES

REPAIR LOCATIONS AND ESTIMATED 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.

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

FOR "CONCRETE FOR DECK REPAIR", SEE SPECIAL PROVISIONS.

FOR SECTION A-A, SEE "JOINT DETAILS" SHEET.

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

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

FOR LMC OVERLAY SURFACE PREPARATION, 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.

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

FOR BRIDGE JOINT DEMOLITION, 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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 1 OF 5

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Kristna P. Sedai
EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

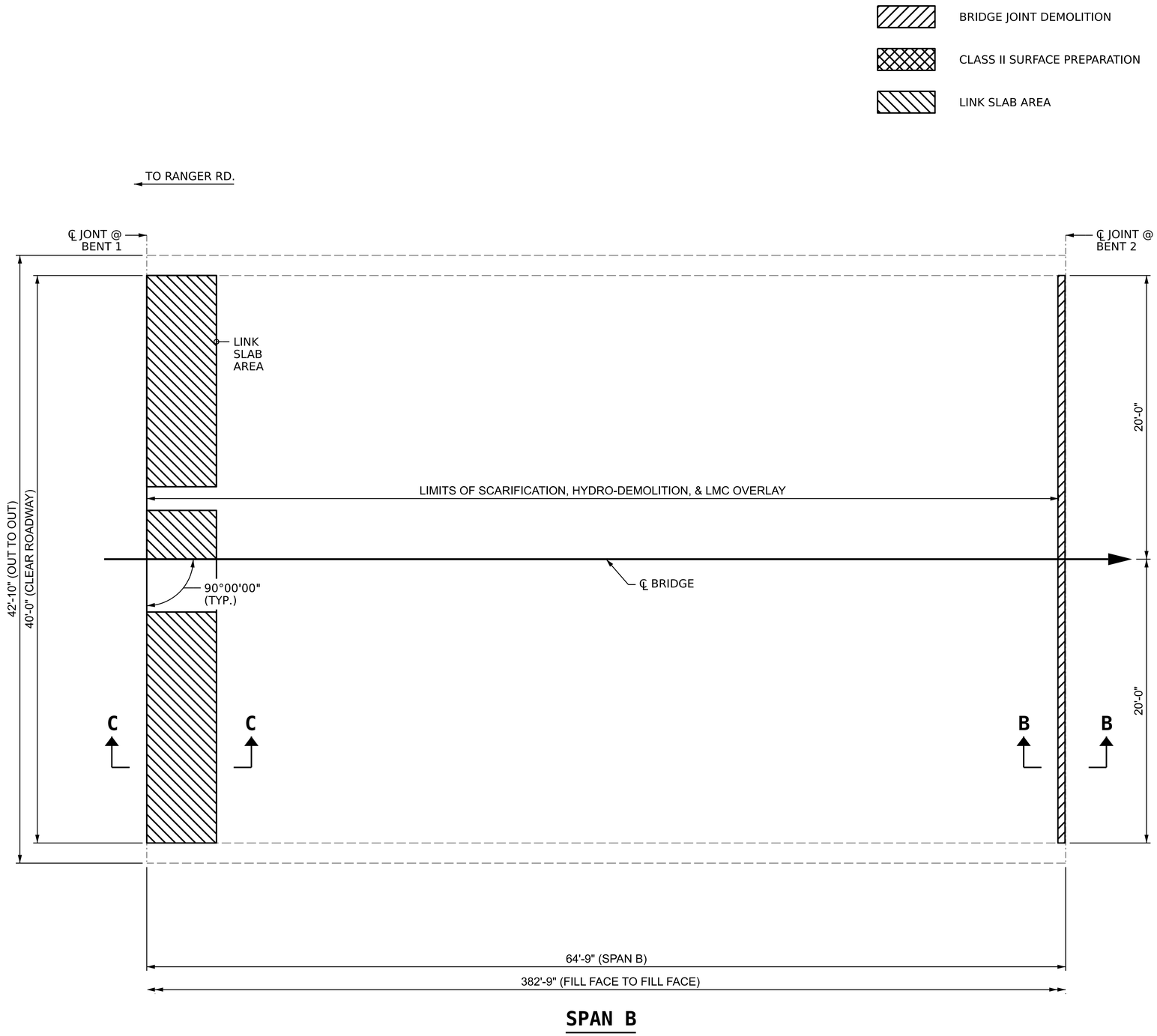
DECK SURFACE REPARS APPROACH SLAB & SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-04
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\Final Plans\402_007_15BPR61_SMU_DSR_S04_190010.dgn
ksedai



SPAN B

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPAN B

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	286.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	286.0 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY	17.9 CU. YDS.	
PLACING & FINISHING OF LATEX MOD. CON. OVERLAY	286.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	2353.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	197.0 SQ. FT.	

NOTES

REPAIR LOCATIONS AND ESTIMATED 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.

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

FOR "CONCRETE FOR DECK REPAIR", SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

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

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

FOR LMC OVERLAY SURFACE PREPARATION, 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.

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

FOR BRIDGE JOINT DEMOLITION, 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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 2 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIRS SPAN B

DRAWN BY : S. AGUILAR HERNANNDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-05
1			3			TOTAL SHEETS
2			4			28

12/8/2022
R:\15BPR61\Structures\Final Plans\402_009_15BPR61_SMU_DSR_S05_190010.dgn
ksedai

SPAN C

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPAN C

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	465.0 SQ. YD.	
CLASS II SURFACE PREPARATION	0.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	465.0 SQ. YD.	
LATEX MODIFIED CONCRETE OVERLAY	29.1 CU. YD.	
PLACING & FINISHING OF LATEX MOD. CON. OVERLAY	465.0 SQ. YD.	
GROOVING BRIDGE FLOORS	3836.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	317.0 SQ. FT.	

NOTES

REPAIR LOCATIONS AND ESTIMATED 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.

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

FOR "CONCRETE FOR DECK REPAIR", SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR SECTION D-D, SEE "LINK SLAB FOR PRESERVATION DETAILS" SHEET.

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

FOR LMC OVERLAY SURFACE PREPARATION, 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.

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

FOR BRIDGE JOINT DEMOLITION, 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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 3 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIRS SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-06
1			3			TOTAL SHEETS
2			4			28

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

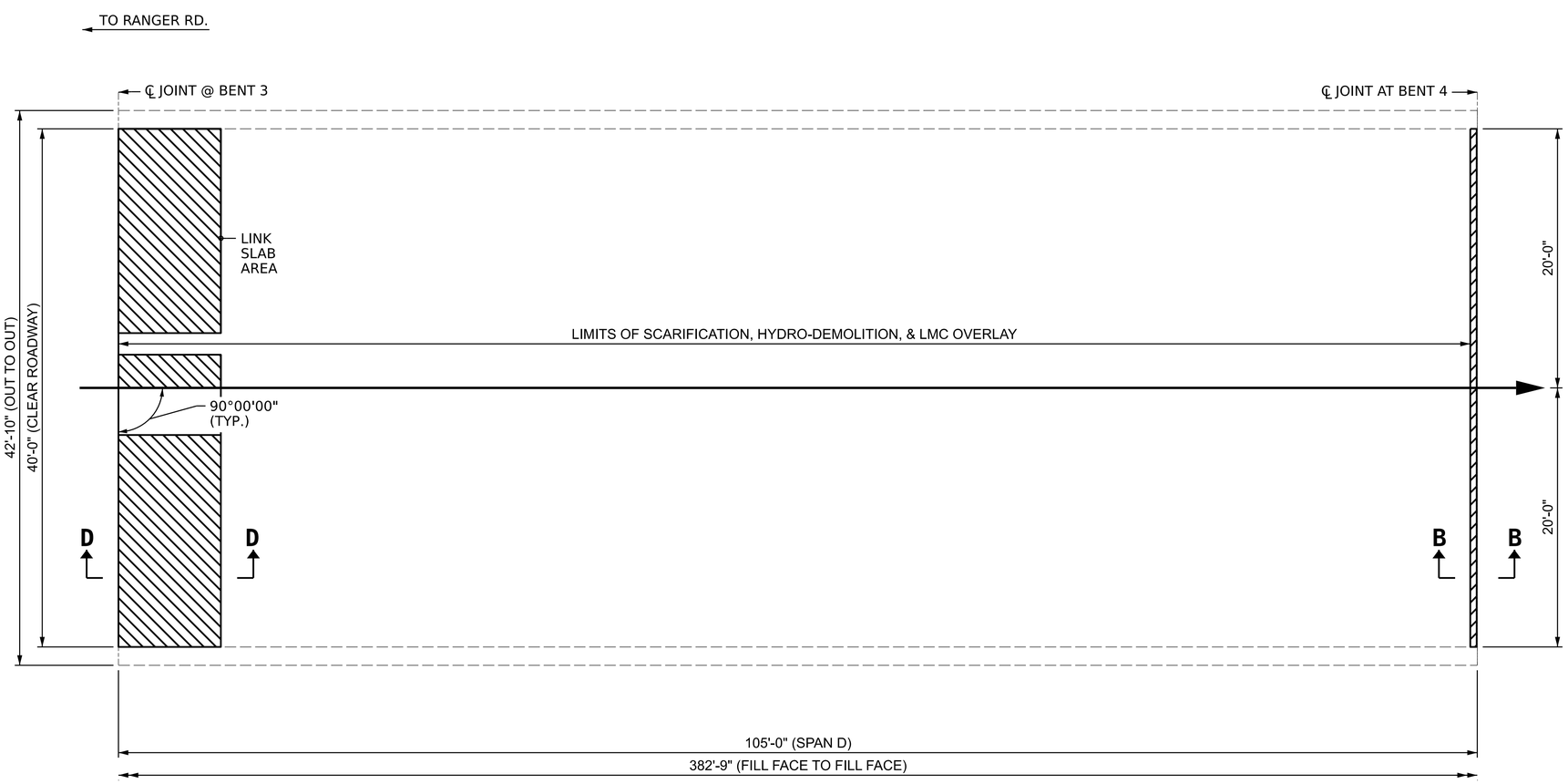
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\Final Plans\402_011_15BPR61_SMU_DSR_S06_190010.dgn
ksedal

BRIDGE JOINT DEMOLITION

CLASS II SURFACE PREPARATION

LINK SLAB AREA



SPAN D

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPAN D

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	465.0 SQ. YD.	
CLASS II SURFACE PREPARATION	0.0 SQ. YD.	
HYDRO-DEMOLITION OF BRIDGE DECK	465.0 SQ. YD.	
LATEX MODIFIED CONCRETE OVERLAY	29.1 CU. YD.	
PLACING & FINISHING OF LATEX MOD. CON. OVERLAY	465.0 SQ. YD.	
GROOVING BRIDGE FLOORS	3836.0 SQ. FT.	
LINK SLAB FOR PRESERVATION	317.0 SQ. FT.	

NOTES

REPAIR LOCATIONS AND ESTIMATED 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.

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

FOR "CONCRETE FOR DECK REPAIR", SEE SPECIAL PROVISIONS.

FOR SECTION B-B, SEE "JOINT DETAILS" SHEET.

FOR SECTION D-D, SEE "LINK SLAB FOR PRESERVATION DETAILS" SHEET.

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

FOR LMC OVERLAY SURFACE PREPARATION, 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.

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

FOR BRIDGE JOINT DEMOLITION, 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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 4 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

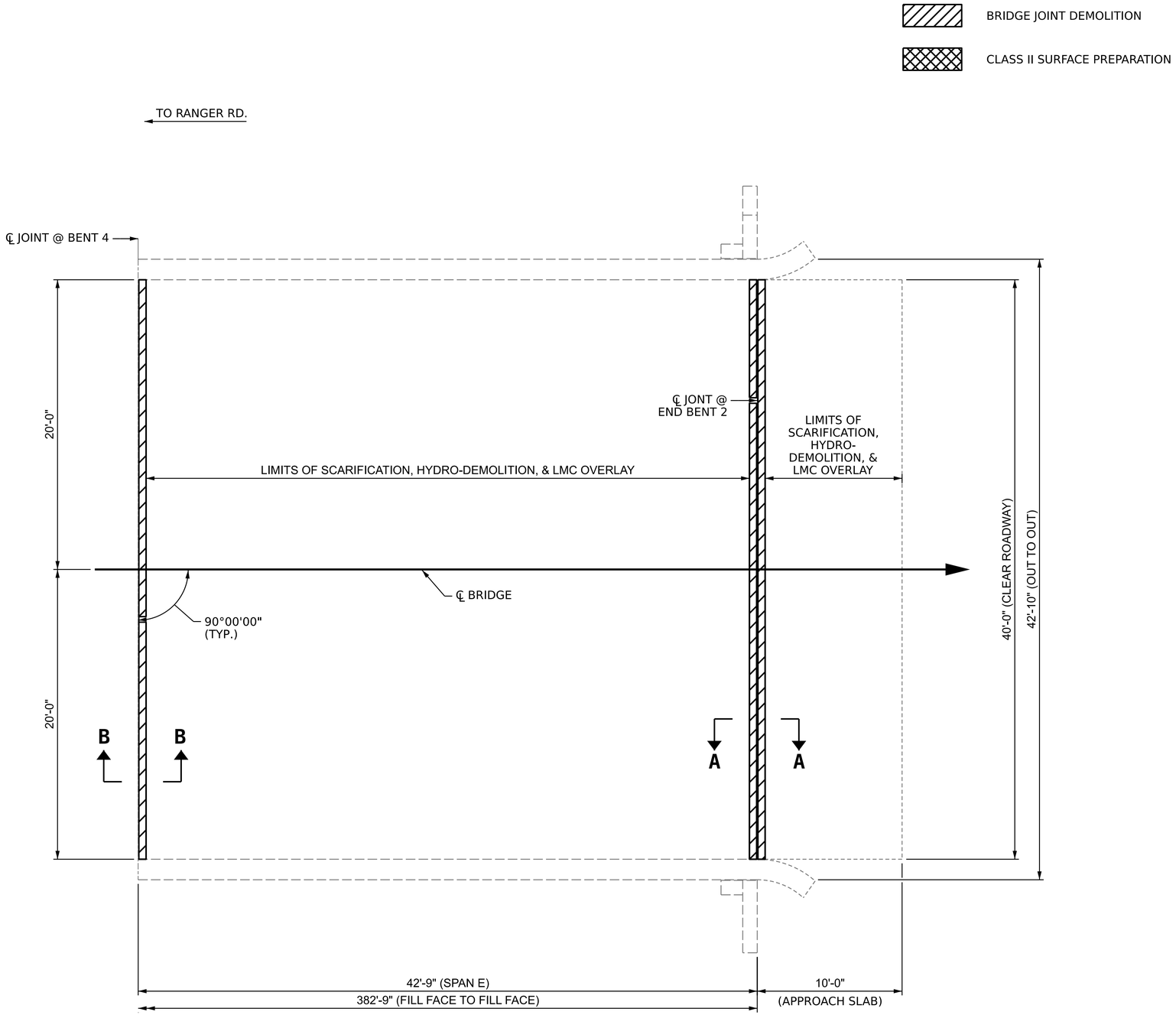
DECK SURFACE REPAIRS SPAN D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-07
1			3			TOTAL SHEETS
2			4			28

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

12/8/2022
R:\15BPR61\Structures\Final Plans\402_013_15BPR61_SMU_DSR_S07_190010.dgn
ksedai



SPAN E

AS-BUILT REPAIR QUANTITY TABLE

DECK SURFACE REPAIR - SPAN E

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	186.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	186.0 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY	11.6 CU. YDS.	
PLACING & FINISHING OF LATEX MOD. CON. OVERLAY	186.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	1539.0 SQ. FT.	

APPROACH SLAB

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	43.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.	
HYDRO-DEMOLITION OF BRIDGE DECK	43.0 SQ. YDS.	
LATEX MODIFIED CONCRETE OVERLAY	2.7 CU. YDS.	
PLACING & FINISHING OF LATEX MOD. CON. OVERLAY	43.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	324.0 SQ. FT.	

NOTES

REPAIR LOCATIONS AND ESTIMATED 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.

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

FOR "CONCRETE FOR DECK REPAIR", SEE SPECIAL PROVISIONS.

FOR SECTIONS A-A AND B-B, SEE "JOINT DETAILS" SHEET.

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

FOR LMC OVERLAY SURFACE PREPARATION, 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.

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

FOR BRIDGE JOINT DEMOLITION, 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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 5 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Kristina P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

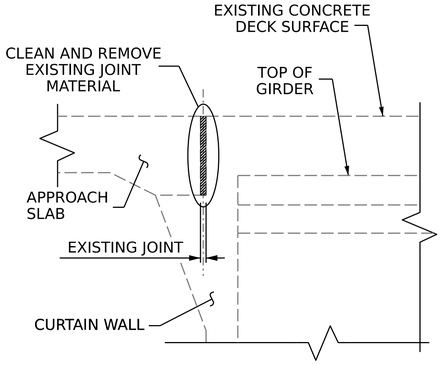
DECK SURFACE REPAIRS SPAN E & APPROACH SLAB

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-08
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

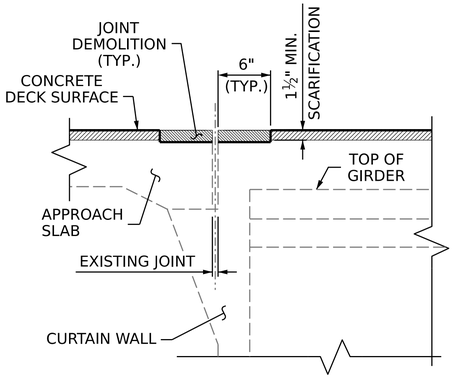
DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\Final Plans\402_015_15BPR61_SMU_DSR_S08_190010.dgn
ksedai

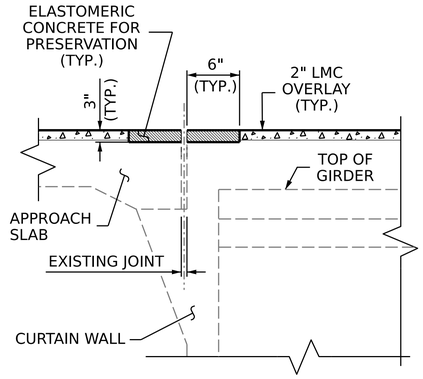


EXISTING JOINT

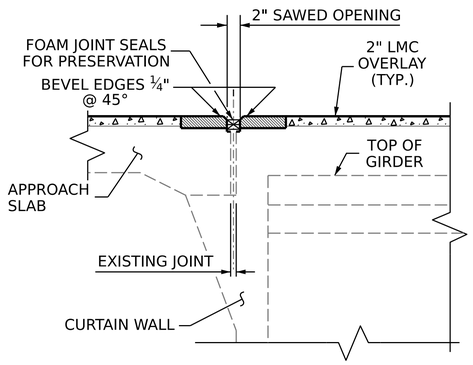
(END BENT 1 SHOWN, END BENT 2 SIMILAR)



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT WITH PRE-SAWED DIMENSION

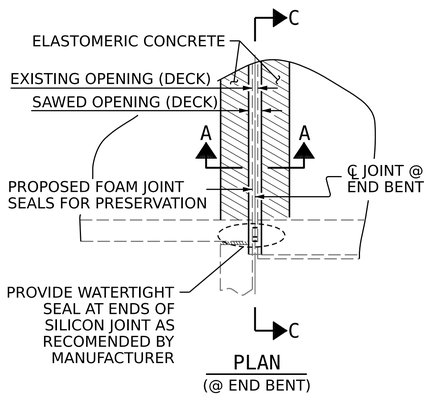


PROPOSED FOAM JOINT

SECTION A-A

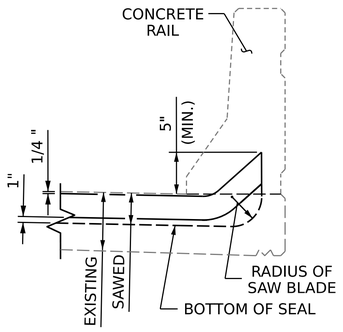
JOINT REPAIR QUANTITY TABLE			
	BRIDGE JOINT DEMOLITION	FOAM JOINT SEALS FOR PRESERVATION	ELASTOMERIC CONCRETE FOR PRESERVATION
END BENT 1	40.0 SQ. FT.	40.0 LF	10.0 CU. FT.
END BENT 2	40.0 SQ. FT.	40.0 LF	10.0 CU. FT.
* TOTAL	80.0 SQ. FT.	80.0 LF	20.0 CU. FT.

* BASED ON THE MINIMUM BLOCKOUT SHOWN.



PLAN

(@ END BENT)



SECTION C-C

JOIT SEAL DETAILS

NOTE

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 1/4", NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE 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.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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 FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND THAT 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 INSTALATION PROCESS.

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 CONCRET.

FOAM JOINT SEALS FOR PRESERVATION SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Docusigned by: Krishna P. Sodai

E4AF794150BF4B7...

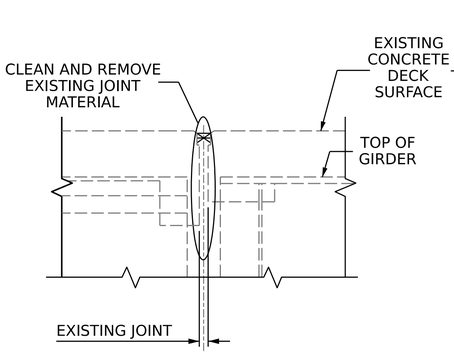
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

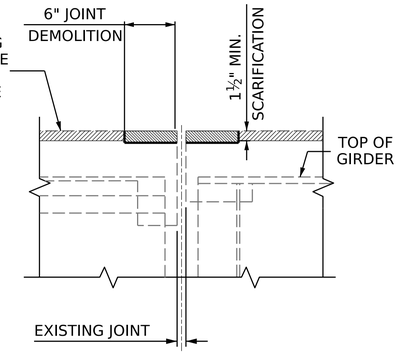
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-09
1			3			TOTAL SHEETS
2			4			28

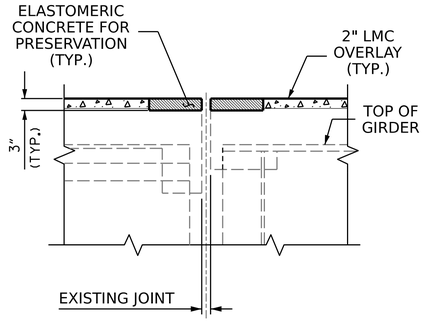
12/8/2022
R:\15BPR61\Structures\FinalPlans\402_017_15BPR61_SMU_JT_S09_190010.dgn
ksedal



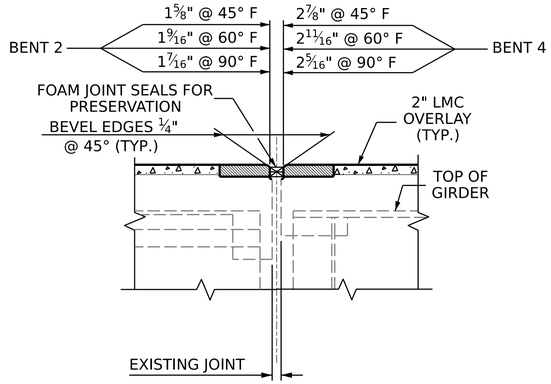
EXISTING JOINT
(BENT 2 SHOWN, BENT 4 SIMILAR)



MINIMUM EXISTING JOINT
DEMOLITION & SCARIFICATION



PROPOSED JOINT
WITH PRE-SAWED DIMENSION

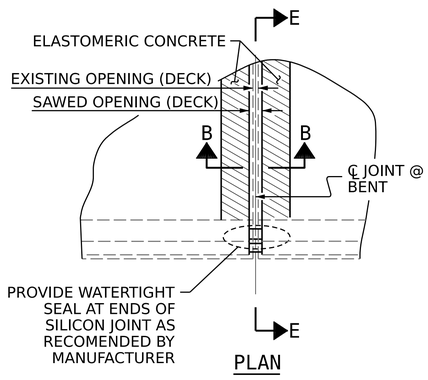


PROPOSED FOAM JOINT

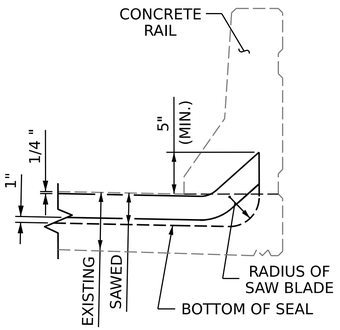
SECTION B-B

JOINT REPAIR QUANTITY TABLE			
	BRIDGE JOINT DEMOLITION	FOAM JOINT SEALS FOR PRESERVATION	ELASTOMERIC CONCRETE FOR PRESERVATION
BENT 2	40.0 SQ. FT.	40.0 LF	10.0 CU. FT.
BENT 4	40.0 SQ. FT.	40.0 LF	10.0 CU. FT.
* TOTAL	80.0 SQ. FT.	80.0 LF	20.0 CU. FT.

* BASED ON THE MINIMUM BLOCKOUT SHOWN.



PLAN



SECTION E-E

JOINT SEAL DETAILS

NOTE

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 1/4", NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE 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.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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 FOAM JOINT SEAL FOR THE SIZE OF THE OPENING ON THE PLANS AND THAT 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 INSTALATION PROCESS.

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 CONCRET.

FOAM JOINT SEALS FOR PRESERVATION SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

PROJECT NO. 15BPR.61
CHEROKEE COUNTY
BRIDGE NO. 190010
SHEET 2 OF 2

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI
Kristna P. Sodai
EA6F794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

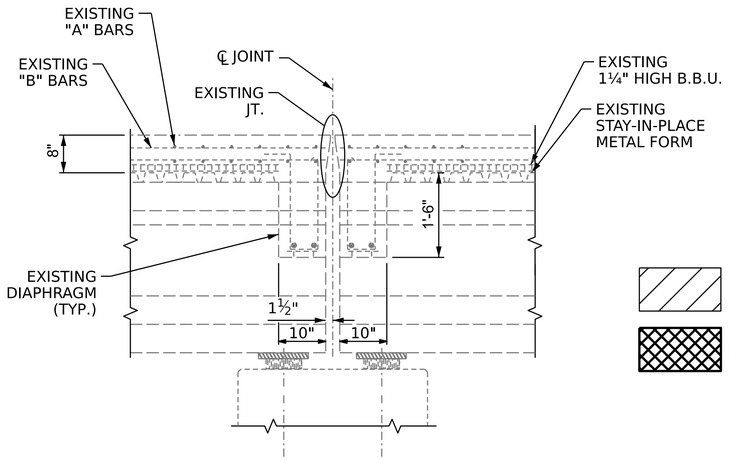
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-10
1			3			TOTAL SHEETS
2			4			28

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

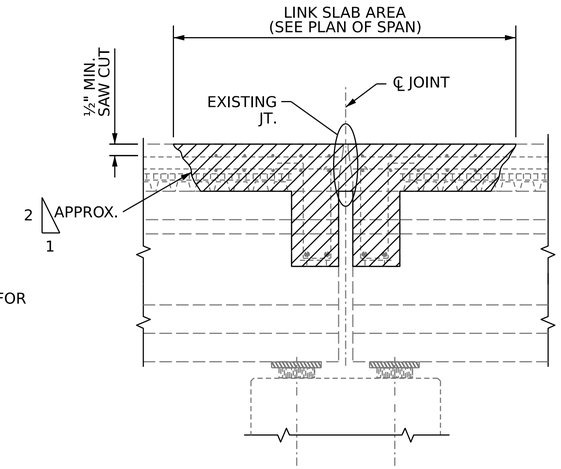
12/8/2022
R:\15BPR61\Structures\Final Plans\402_019_15BPR61_SMU_JT_S10_190010.dgn
ksedal

8/26/21



CONCRETE WORK FOR JOINT REPLACEMENT FOR LINK SLAB FOR PRESERVATION CONSTRUCTION

LINK SLAB FOR PRESERVATION



EXISTING SECTION AT BENT

SECTION 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

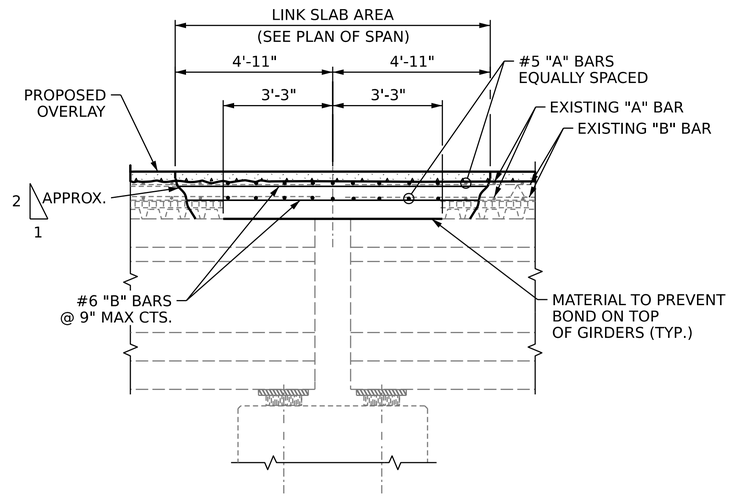
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
∗ A	17	#5	STR	39'-8"	703 LBS.
A	17	#5	STR	39'-8"	703 LBS.
∗ B	70	#6	STR	9'-6"	999 LBS.
B	70	#6	STR	9'-6"	999 LBS.
REINFORCING STEEL					1702 LBS.
∗ EPOXY COATED REINFORCING STEEL					1702 LBS.
CLASS AA CONCRETE				C.Y.	9.7

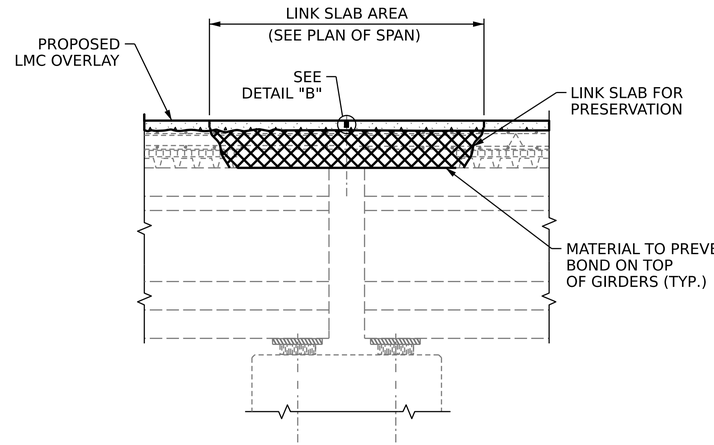
NOTES

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.



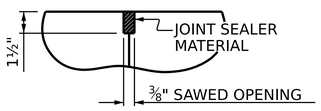


CONSTRUCTION SEQUENCE

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 CONCRETE WORK FOR JOINT REPLACEMENT SPECIAL PROVISION. AS AN ALTERNATIVE, THE CONTRACTOR CAN USE LMC MATERIAL FOR THE LINK SLAB, FOLLOWING THE LATEX MODIFIED CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.
11. AFTER PROPOSED DECK OVERLAY WORK HAS CURED, SAW CUT CONTROL LINES AND FILL WITH SEALER MATERIAL.

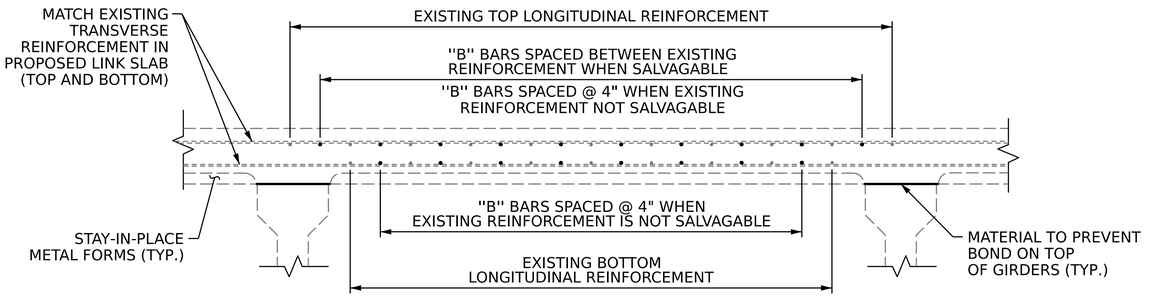
PROPOSED SECTION AT BENT

SECTION C-C



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.61

CHEROKEE COUNTY

BRIDGE NO. 190010

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LINK SLAB FOR PRESERVATION DETAILS @ BENT 1

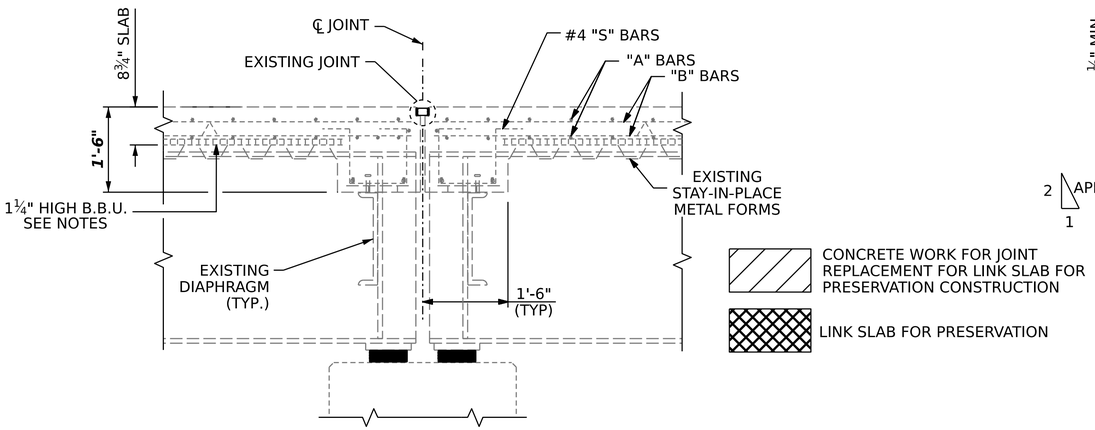
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-11
1			3			TOTAL SHEETS
2			4			28

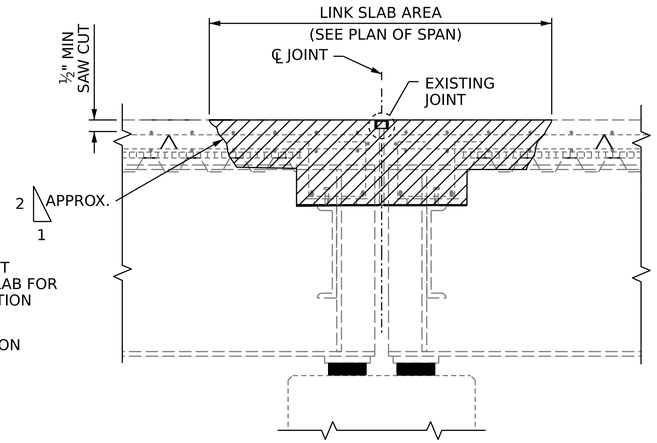
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. A. HERNANDEZ DATE : 6/2020
CHECKED BY : A. SORSENGINH DATE : 6/2020
DESIGN ENGINEER OF RECORD: S. A. HERNANDEZ DATE : 6/2020

12/8/2022
R:\15BPR61\Structures\Final Plans\402_021_15BPR61_SMU_JT_S11_190010.dgn
ksedal

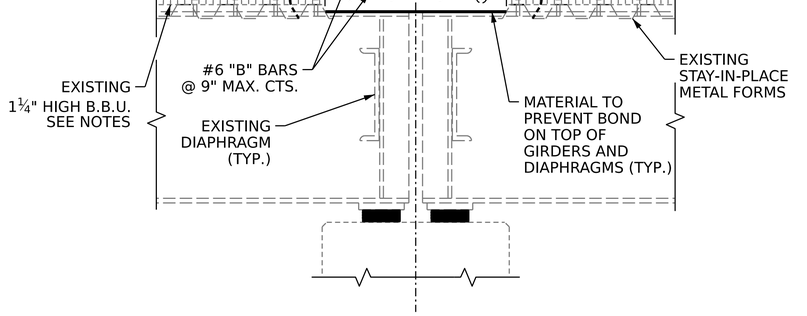
8/26/21

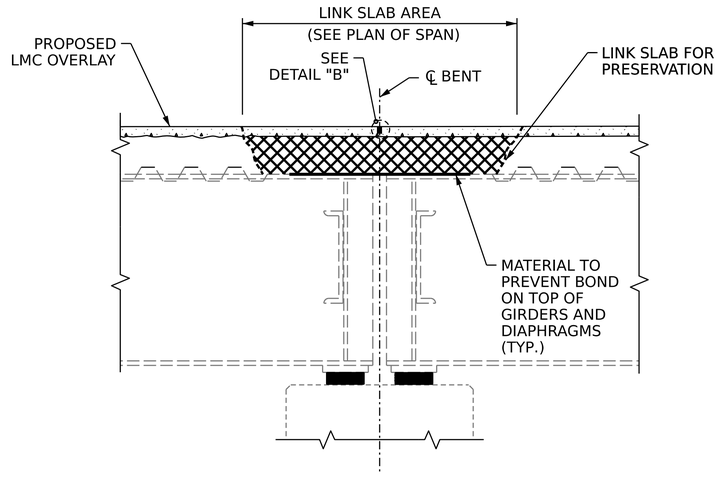


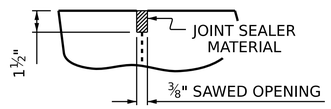


EXISTING SECTION AT BENT

SECTION D-D





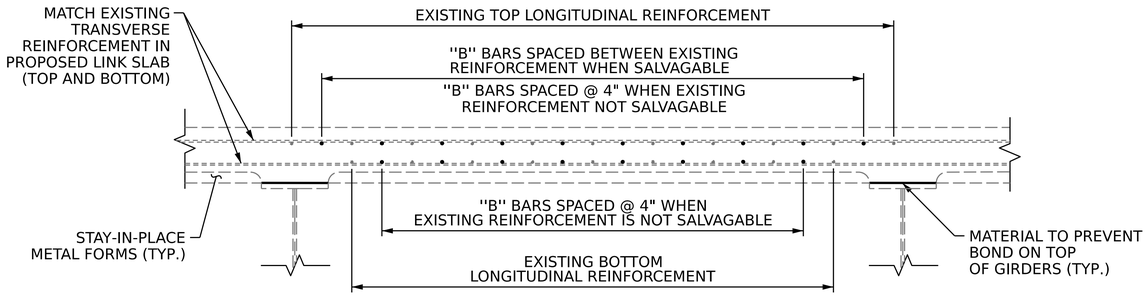


DETAIL "B"

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.

PROPOSED SECTION AT BENT

SECTION D-D



REINFORCEMENT DETAILS

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 3

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✱ A	27	#5	STR	39'-8"	1117 LBS.
A	27	#5	STR	39'-8"	1117 LBS.
✱ B	74	#6	STR	15'-6"	1723 LBS.
B	74	#6	STR	15'-6"	1723 LBS.
REINFORCING STEEL				2840 LBS.	
✱ EPOXY COATED REINFORCING STEEL				2840 LBS.	
CLASS AA CONCRETE				C.Y.	17.1

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 CONCRETE WORK FOR JOINT REPLACEMENT SPECIAL PROVISION. AS AN ALTERNATIVE, THE CONTRACTOR CAN USE LMC MATERIAL FOR THE LINK SLAB, FOLLOWING THE LATEX MODIFIED CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.
11. AFTER PROPOSED DECK OVERLAY WORK HAS CURED, SAW CUT CONTROL LINES AND FILL WITH SEALER MATERIAL.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Kristina P. Sedai
EA6F794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

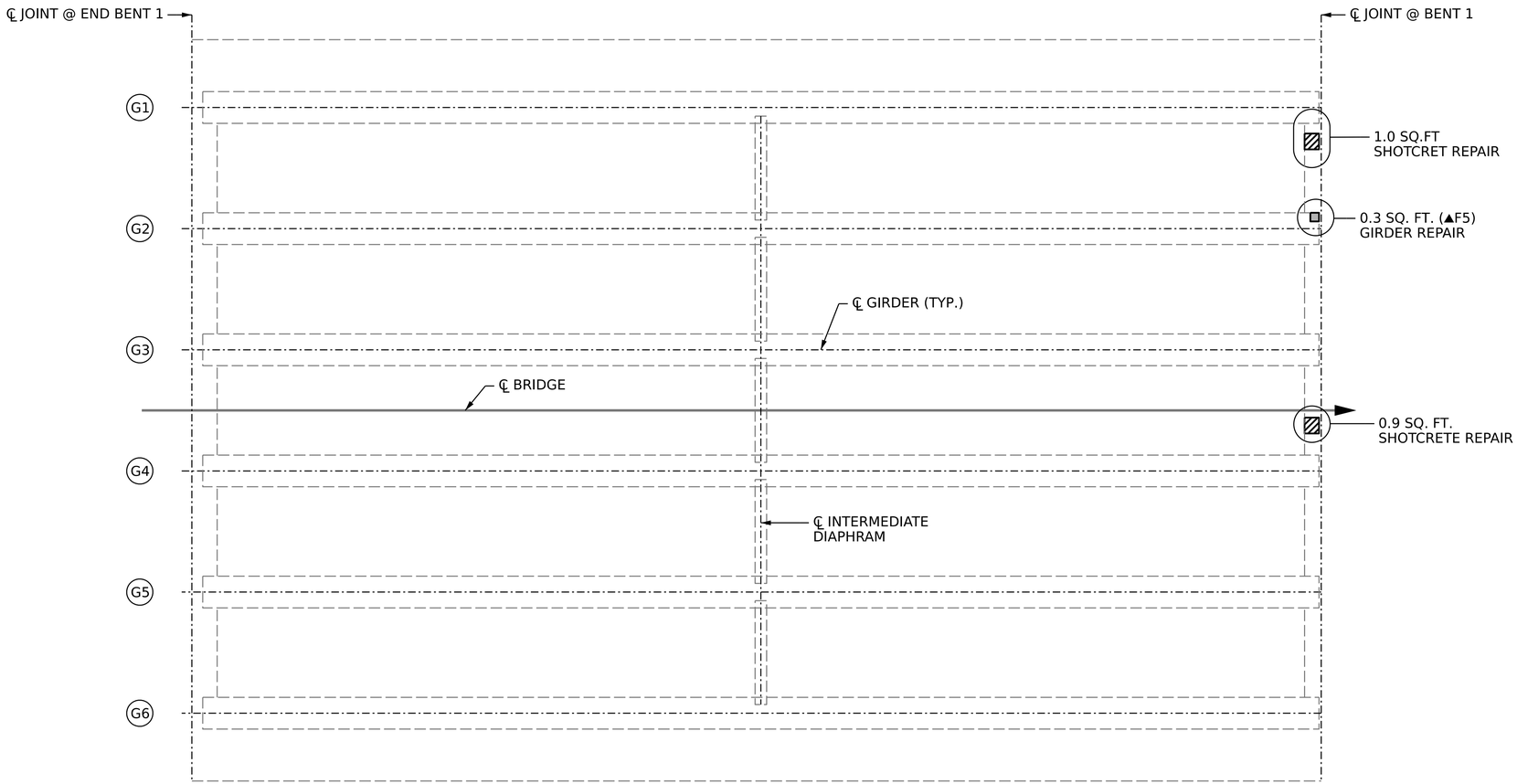
LINK SLAB FOR PRESERVATION DETAILS @ BENT 3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-12
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. A. HERNANDEZ DATE : 6/2020
CHECKED BY : A. SORSENGINH DATE : 6/2020
DESIGN ENGINEER OF RECORD: S. A. HERNANDEZ DATE : 6/2020

12/8/2022
R:\15BPR61\Structures\Final Plans\402_023_15BPR61_SMU_JT_S12_190010.dgn
ksedal

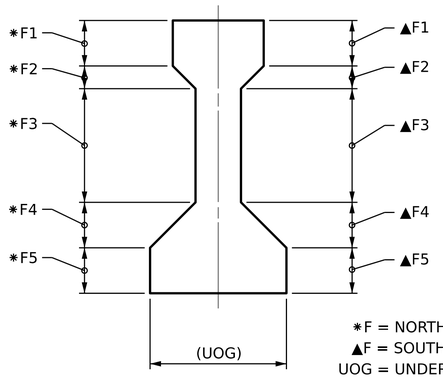


SPAN A

GIRDER REPAIR

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION



∗F = NORTH/WEST FACE
▲F = SOUTH/EAST FACE
UOG = UNDERSIDE OF GIRDER

GIRDER SECTION

GIRDER DAMAGE LOCATIONS

AS - BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN A	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPRHAM	1.9	1.0		
OVERHANG	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
	0	0		
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPRHAM	0	0		
OVERHANG	0	0		
GIRDER REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	0.3	0.1		
EPOXY COATING	AREA SF		AREA SF	
GIRDER ENDS	245.0			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE GIRDER REPAIR DETAILS AND LIMITS OF EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIRS DETAIL SHEET.

FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 1 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

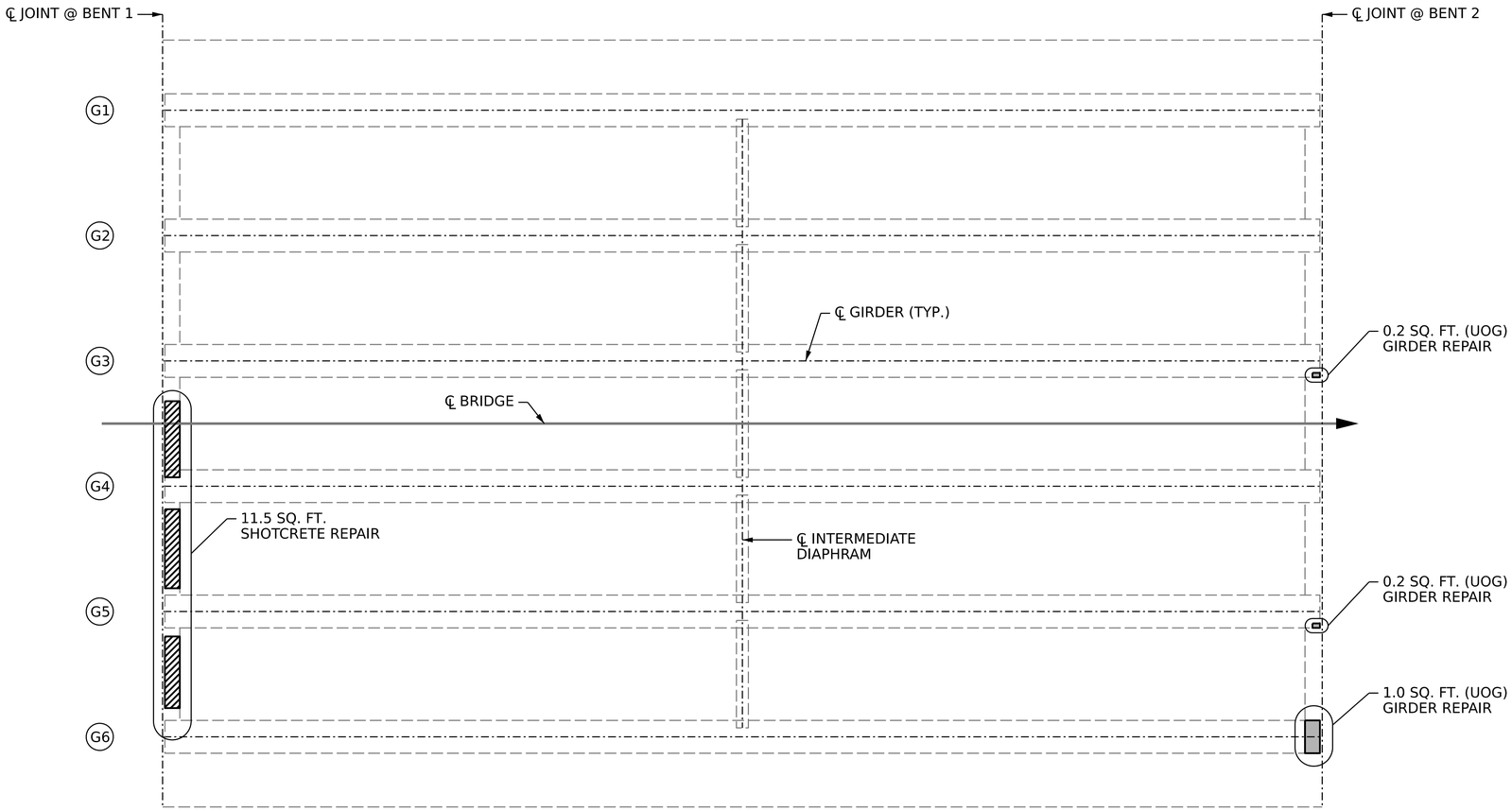
DECK UNDERSIDE REPAIRS SPAN A

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-13
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\Final Plans\402_025_15BPR61_SMU_DUR_S13_190010.dgn
ksedai

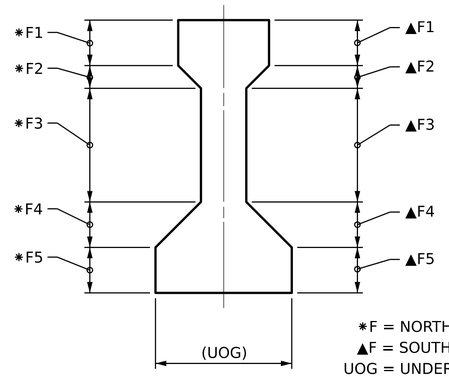


SPAN B

GIRDER REPAIR

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION



*F = NORTH/WEST FACE
▲F = SOUTH/EAST FACE
UOG = UNDERSIDE OF GIRDER

GIRDER SECTION

GIRDER DAMAGE LOCATIONS

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN B	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	11.5	5.8		
OVERHANG	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		
GIRDER REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	1.4	0.7		
EPOXY COATING	AREA SF		AREA SF	
GIRDER END	268.4			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE GIRDER REPAIR DETAILS AND LIMITS OF EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIRS DETAIL SHEET.

FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 2 OF 5

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

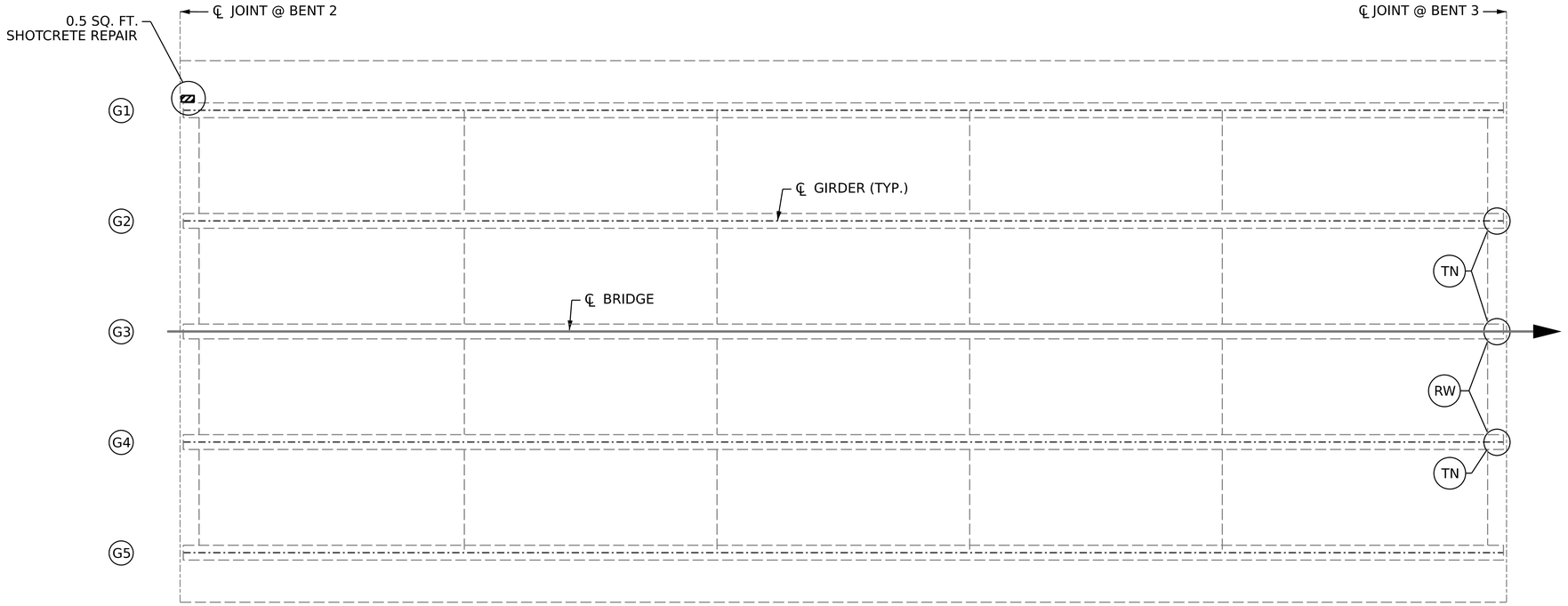
DECK UNDERSIDE REPAIRS SPAN B

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-14
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\FinalPlans\402_027_15BPR61_SMU_DUR_S14_190010.dgn
ksedai



SPAN C

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN C	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0.5	0.3		
CONCRETE GIRDER	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		
CONCRETE GIRDER	0	0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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.

PRIOR TO CLEANING AND PAINTING, REPLACE AND/ OR TIGHTEN MISSING NUTS AND WASHER.

PAYMENT FOR REPLACING AND/ OR TIGHTENING WASHERS AND NUTS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION

TN — TIGHTEN NUT

RW — REPLACE WASHER

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 3 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

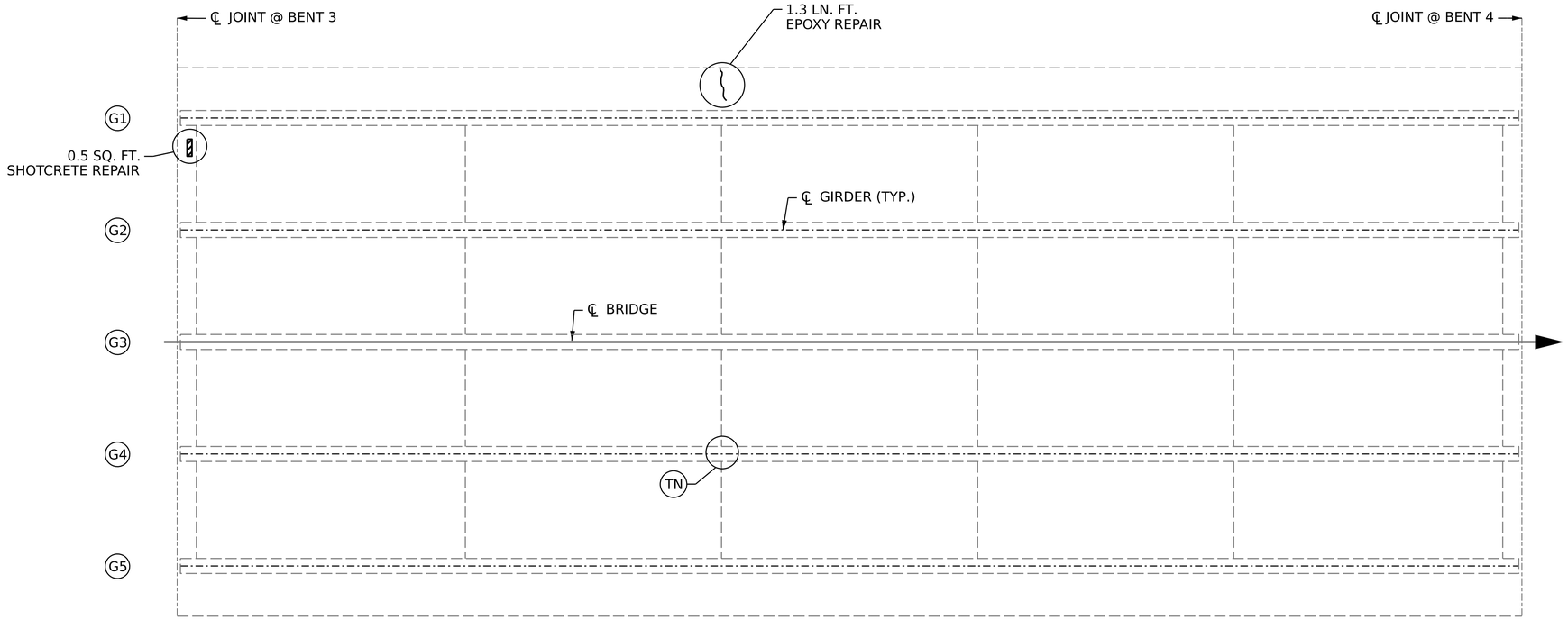
DECK UNDERSIDE REPAIRS SPAN C

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-15
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\Final Plans\402_029_15BPR61_SMU_DUR_S15_190010.dgn
ksedai



SPAN D

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN D	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0.5	0.3		
OVERHANG	0	0		
CONCRETE GIRDER	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		
CONCRETE GIRDER	0	0		
EPOXY RESIN INJECTION	LINEAR FT		LINEAR FT	
UNDERSIDE OF DECK	1.3			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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.

PRIOR TO CLEANING AND PAINTING, REPLACE AND/ OR TIGHTEN MISSING NUTS AND WASHER.

PAYMENT FOR REPLACING AND/OR TIGHTENING WASHERS AND NUTS SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION

TN — TIGHTEN NUT

RW — REPLACE WASHER

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 4 OF 5

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

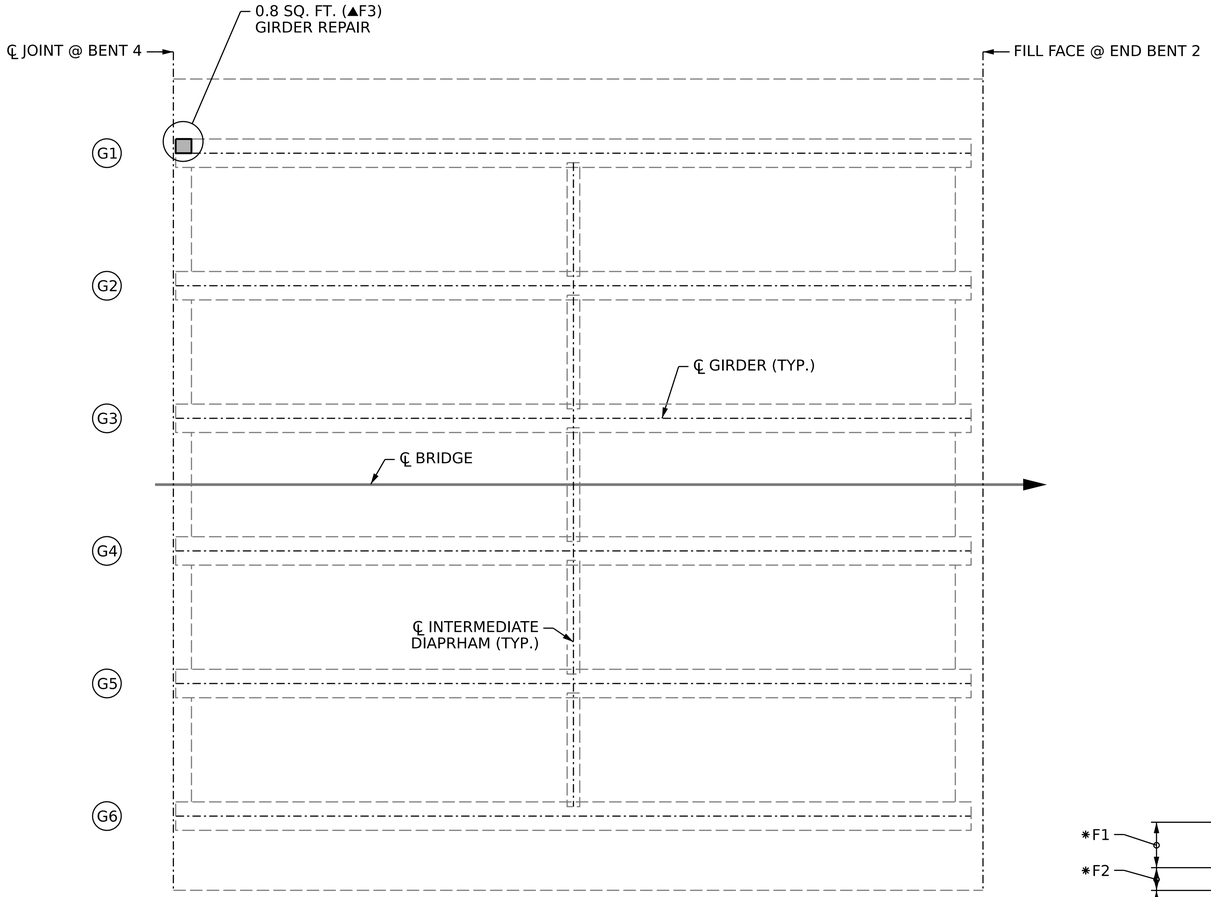
DECK UNDERSIDE REPAIRS SPAN D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-16
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\FinalPlans\402_031_15BPR61_SMU_DUR_S16_190010.dgn
ksedai

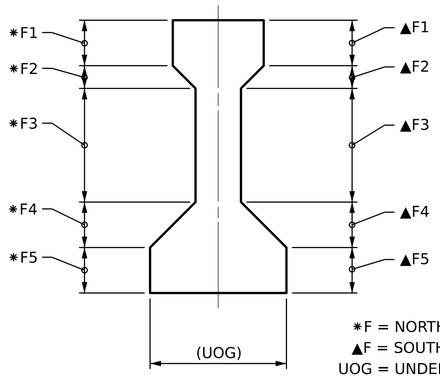


SPAN E

GIRDER REPAIR

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION



✷F = NORTH/WEST FACE
▲F = SOUTH/EAST FACE
UOG = UNDERSIDE OF GIRDER

GIRDER SECTION

GIRDER DAMAGE LOCATIONS

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIRS SPAN E	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0	0		
CONCRETE DIAPHRAGM	0	0		
OVERHANG	0	0		
GIRDER REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
GIRDER	0.8	0.3		
EPOXY COATING	AREA SF		AREA SF	
GIRDER END	185.3			

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

FOR PRESTRESSED CONCRETE GIRDER REPAIR DETAILS AND LIMITS OF EPOXY COATING CONCRETE GIRDER ENDS, SEE PRESTRESSED CONCRETE GIRDER REPAIRS DETAIL SHEET.

FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG AND DIAPHRAGM REPAIR DETAILS" SHEET.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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.

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 5 OF 5

12/12/2022
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

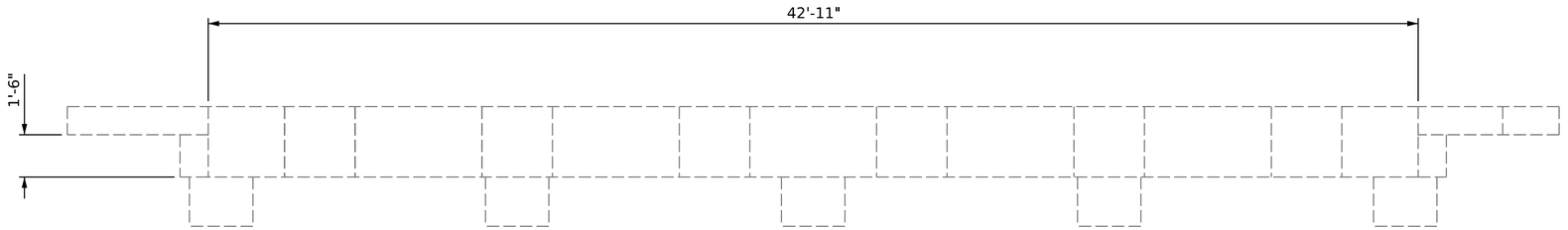
DECK UNDERSIDE REPAIRS SPAN E

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-17
1			3			TOTAL SHEETS
2			4			28

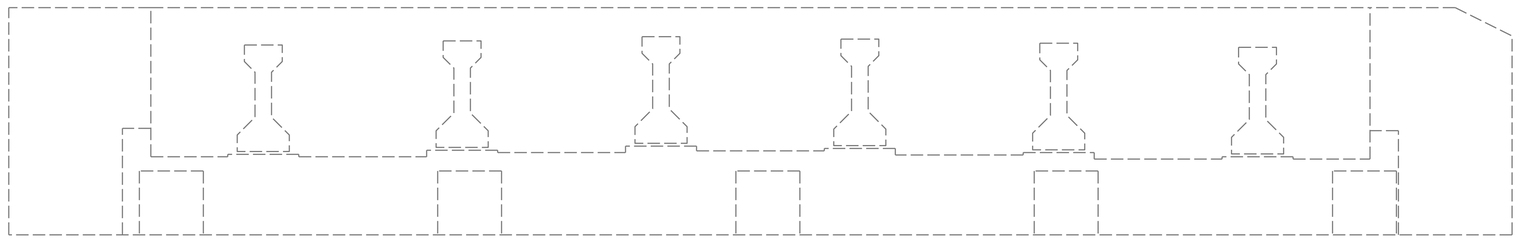
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\FinalPlans\402_033_15BPR61_SMU_DUR_S17_190010.dgn
ksedal



TOP OF CAP



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

REPAIRS - END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
CURTAIN WALL	0	0		
WINGWALL				
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
CURTAIN WALL	0	0		
WINGWALL				
EPOXY RESIN INJECTION		LINEAR FT		LINEAR FT
CAP		0		
CURTAIN WALL		0		
WINGWALL				
EPOXY COATING		AREA SF		AREA SF
TOP OF CAP		59.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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.

SHOTCRETE REPAIRS MAYBE 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.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

EPOXY RESIN INJECTION

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 1

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

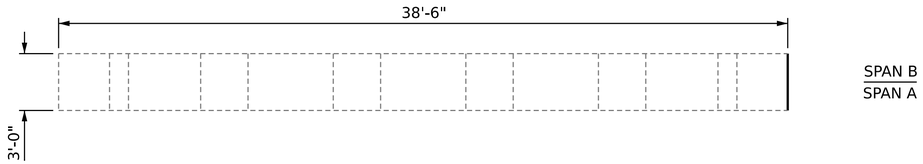
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SHEET NO. S2-18

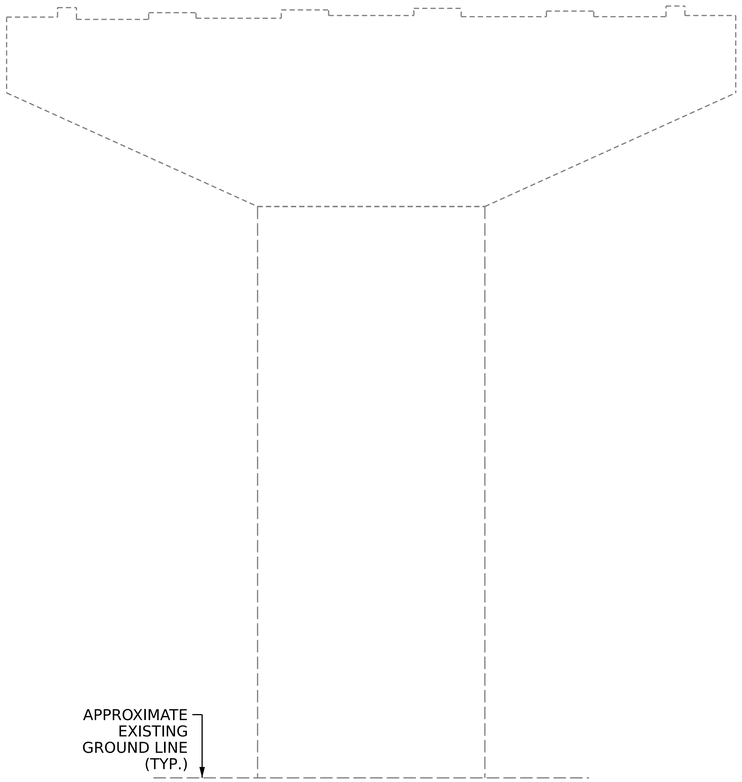
TOTAL SHEETS 28

12/8/2022
R:\15BPR61\Structures\FinalPlans\402_035_15BPR61_SMU_EB1_S18_190010.dgn
ksedal



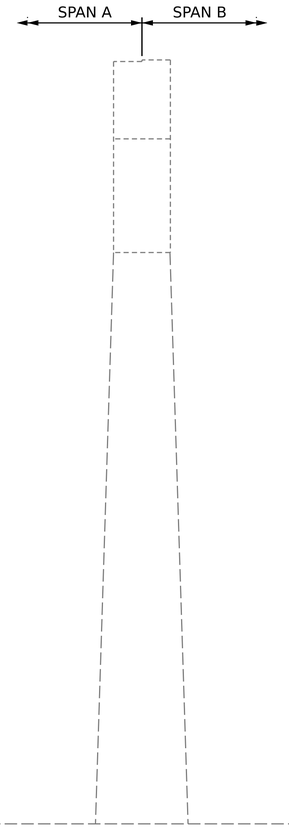
PLAN VIEW

TOP OF CAP



ELEVATION

BENT 1 - SPAN A FACE



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	0	0		
COLUMN	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
EPOXY RESIN INJECTION		LINEAR FT		LINEAR FT
CAP		0		
COLUMN		0		
EPOXY COATING		AREA SF		AREA SF
TOP OF BENT CAP		102.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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.

SHOTCRETE REPAIRS MAYBE 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.

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

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

EPOXY RESIN INJECTION

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1
SPAN A FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-19
1			3			TOTAL SHEETS
2			4			28

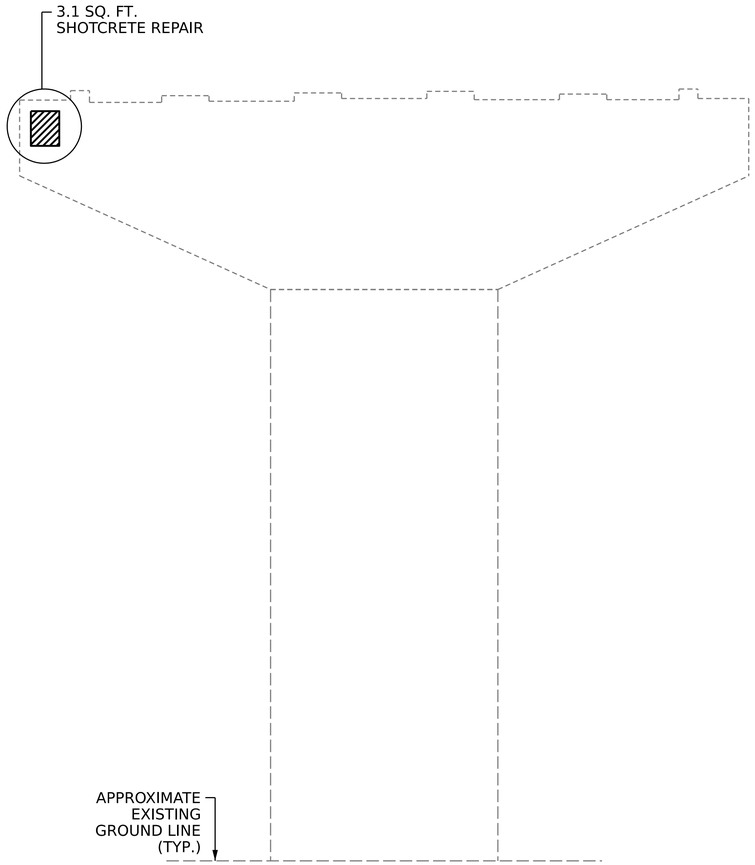
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\FinalPlans\402_037_15BPR61_SMU_B1A_S19_190010.dgn
ksedai

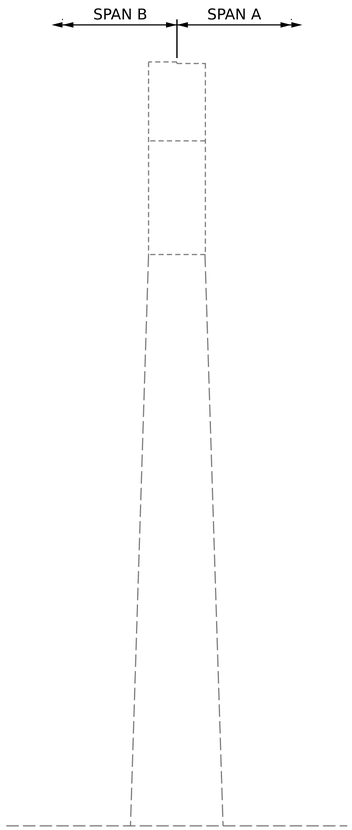
PLAN VIEW

BOTTOM OF CAP



ELEVATION

BENT 1 - SPAN B FACE



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	3.1	1.6		
COLUMN	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
EPOXY RESIN INJECTION		LINEAR FT		LINEAR FT
CAP		0		
COLUMN		0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE 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 CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

EPOXY RESIN INJECTION

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 2 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEAL

Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

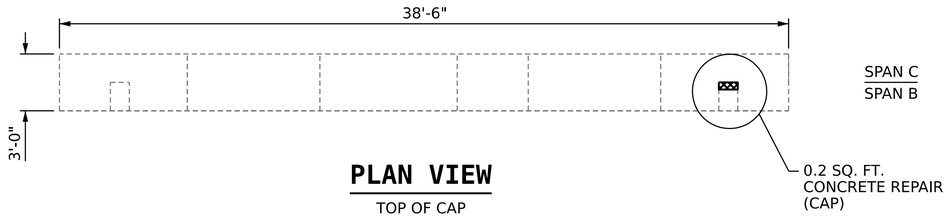
BENT 1
SPAN B FACE

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

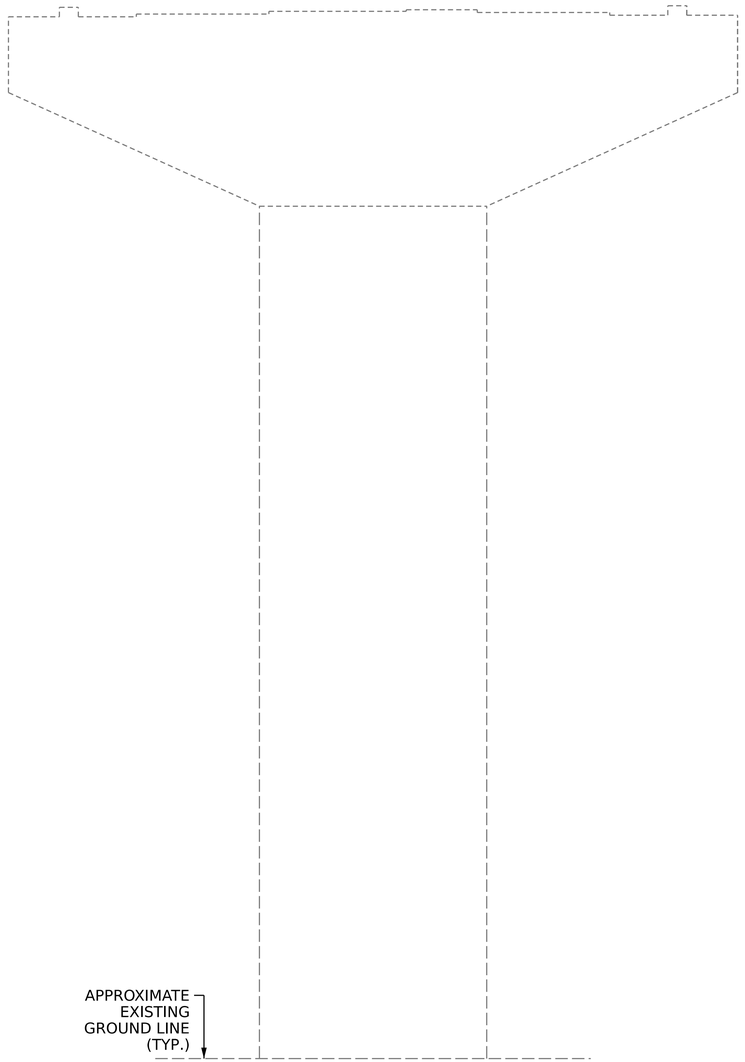
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-20
1			3			TOTAL SHEETS
2			4			28

12/8/2022
R:\15BPR61\Structures\Final Plans\402_039_15BPR61_SMU_BIB_S20_190010.dgn
ksedal



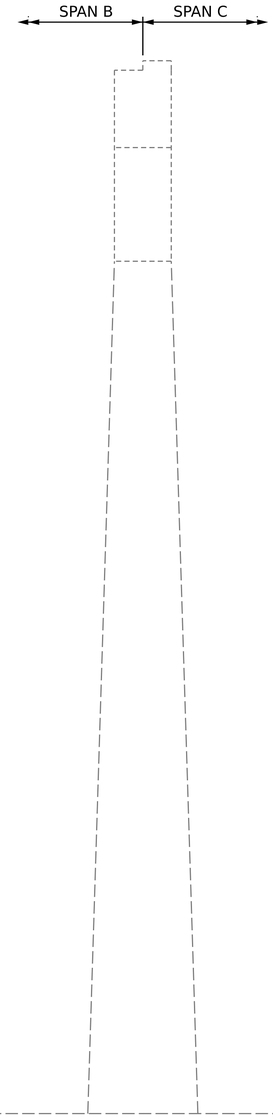
PLAN VIEW

TOP OF CAP



ELEVATION

BENT 2 - SPAN B FACE



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 - SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.2	0.1		
COLUMN	0	0		
EPOXY RESIN INJECTION		LINEAR FT		LINEAR FT
CAP		0		
COLUMN		0		
EPOXY COATING		AREA SF		AREA SF
TOP OF BENT CAP		102.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT.
SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE REPAIR QUANTITY TABLE.

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.

SHOTCRETE REPAIRS MAYBE 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.

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

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

EPOXY RESIN INJECTION

PROJECT NO. **15BPR.61**

CHEROKEE COUNTY

BRIDGE NO. **190010**

SHEET 1 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

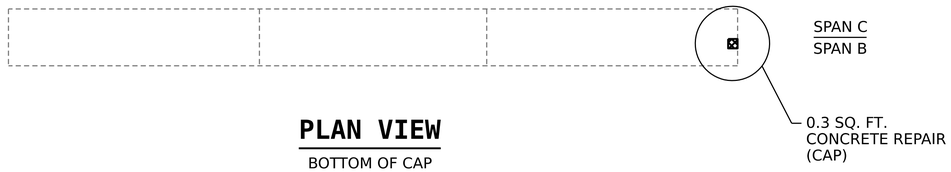
BENT 2
SPAN B FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-21
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

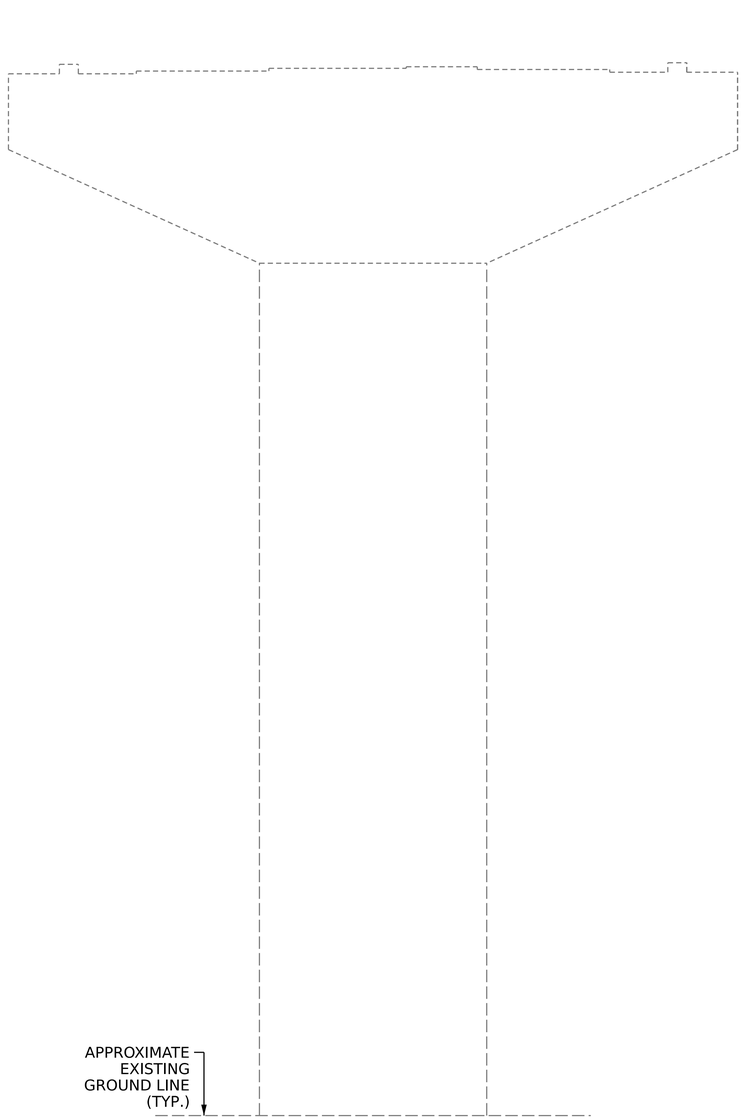
DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\FinalPlans\402_041_15BPR61_SMU_B2B_S21_190010.dgn
ksedal



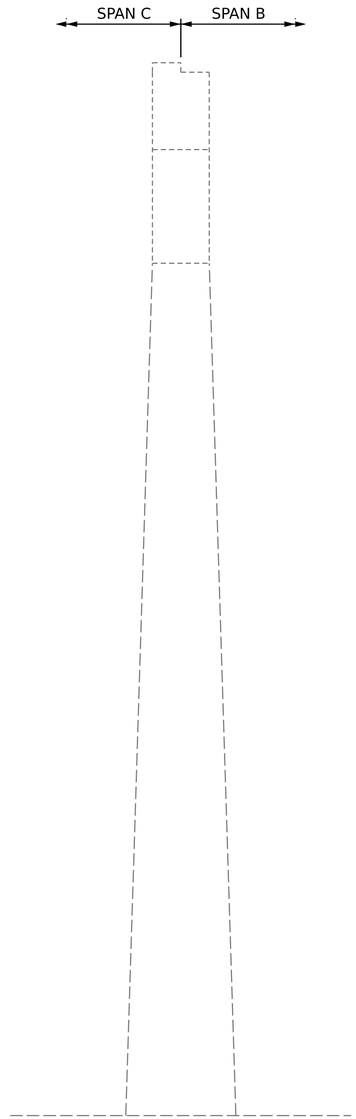
PLAN VIEW

BOTTOM OF CAP



ELEVATION

BENT 2 - SPAN C FACE



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 - SPAN C FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.3	0.2		
COLUMN	0	0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0	0		
COLUMN	0	0		
EPOXY RESIN INJECTION		LINEAR FT		LINEAR FT
CAP		0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.

NOTES

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN BASED ON 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 ENTER THE ACTUAL QUANTITIES INTO THE 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 CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

EPOXY RESIN INJECTION

PROJECT NO. 15BPR.61

CHEROKEE COUNTY

BRIDGE NO. 190010

SHEET 2 OF 2

12/12/2022

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAI

Krishna P. Sodai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2
SPAN C FACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-22
1			3			TOTAL SHEETS
2			4			28

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. AGUILAR HERNANDEZ DATE : 6/2022
CHECKED BY : A. SORSENGINH DATE : 6/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

12/8/2022
R:\15BPR61\Structures\FinalPlans\402_043_15BPR61_SMU_B2C_S22_190010.dgn
ksedal