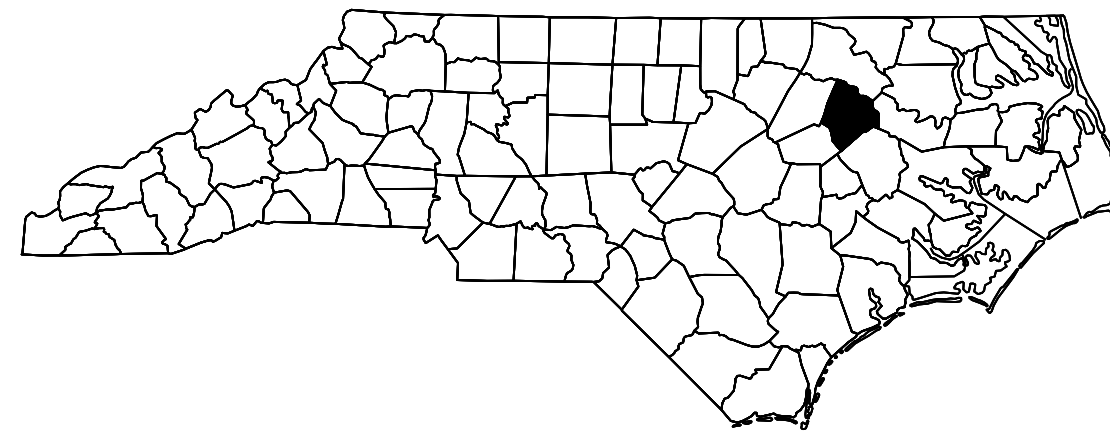


CONTRACT NO: DD00358A PROJECT: I-6041A



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

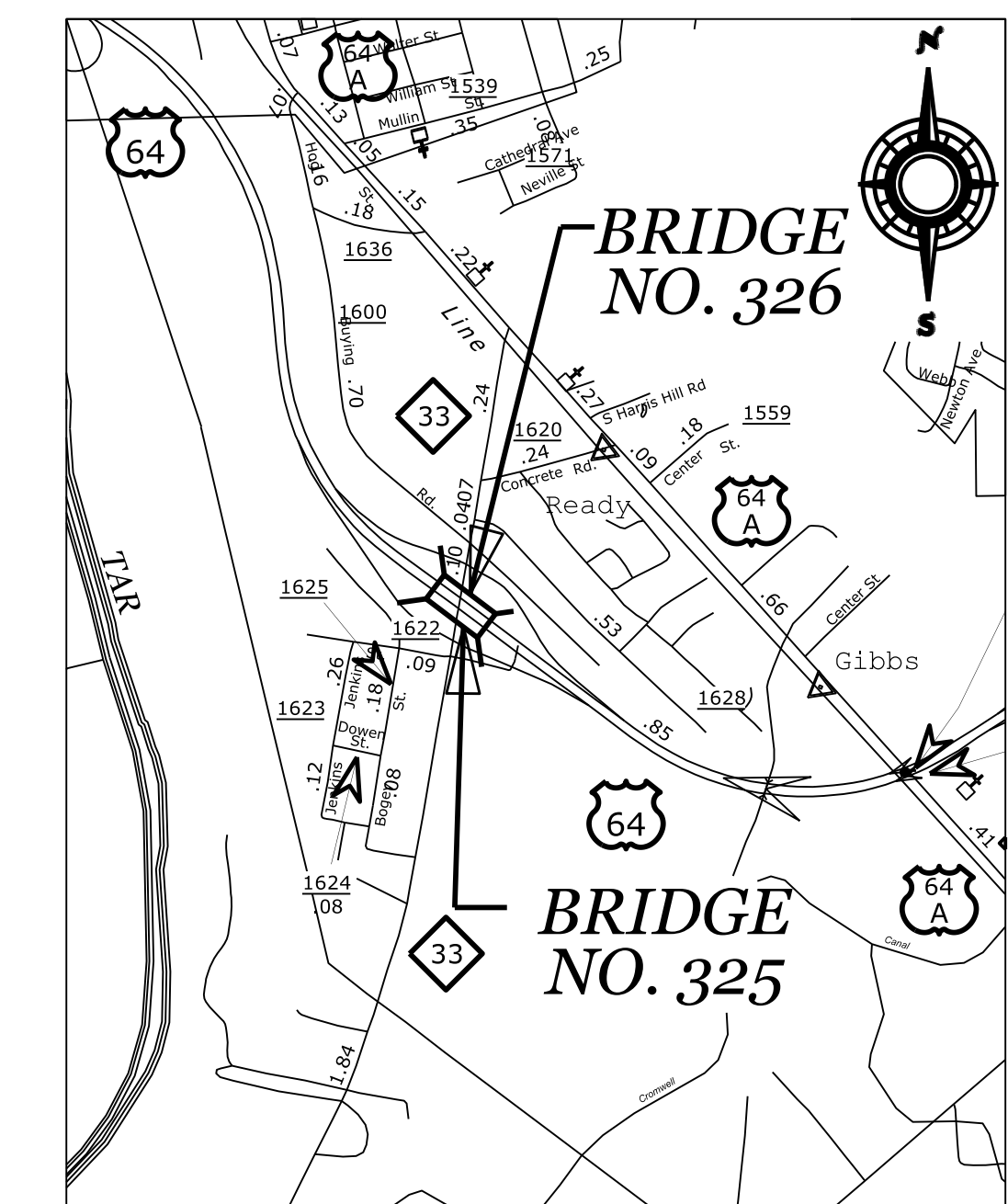
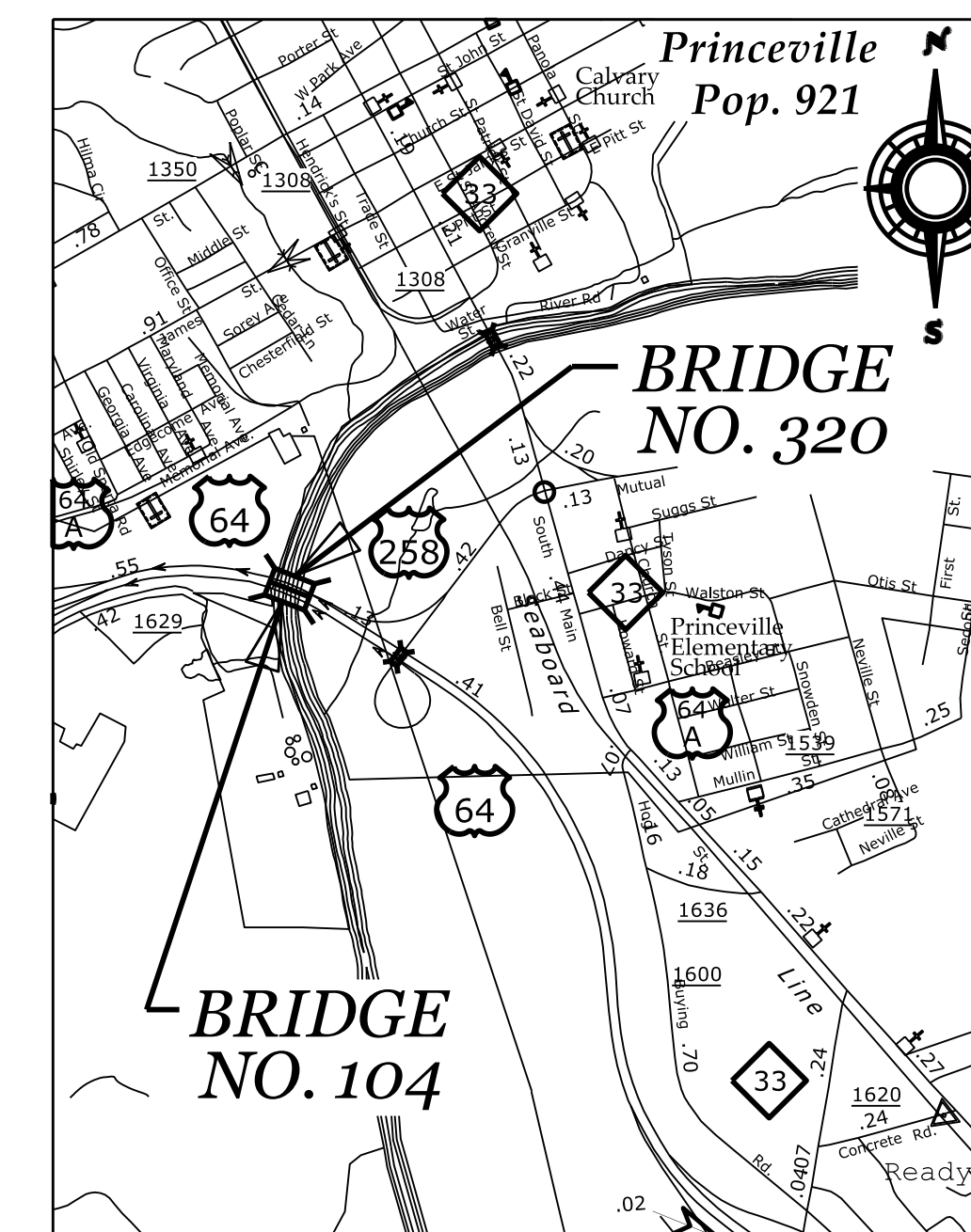
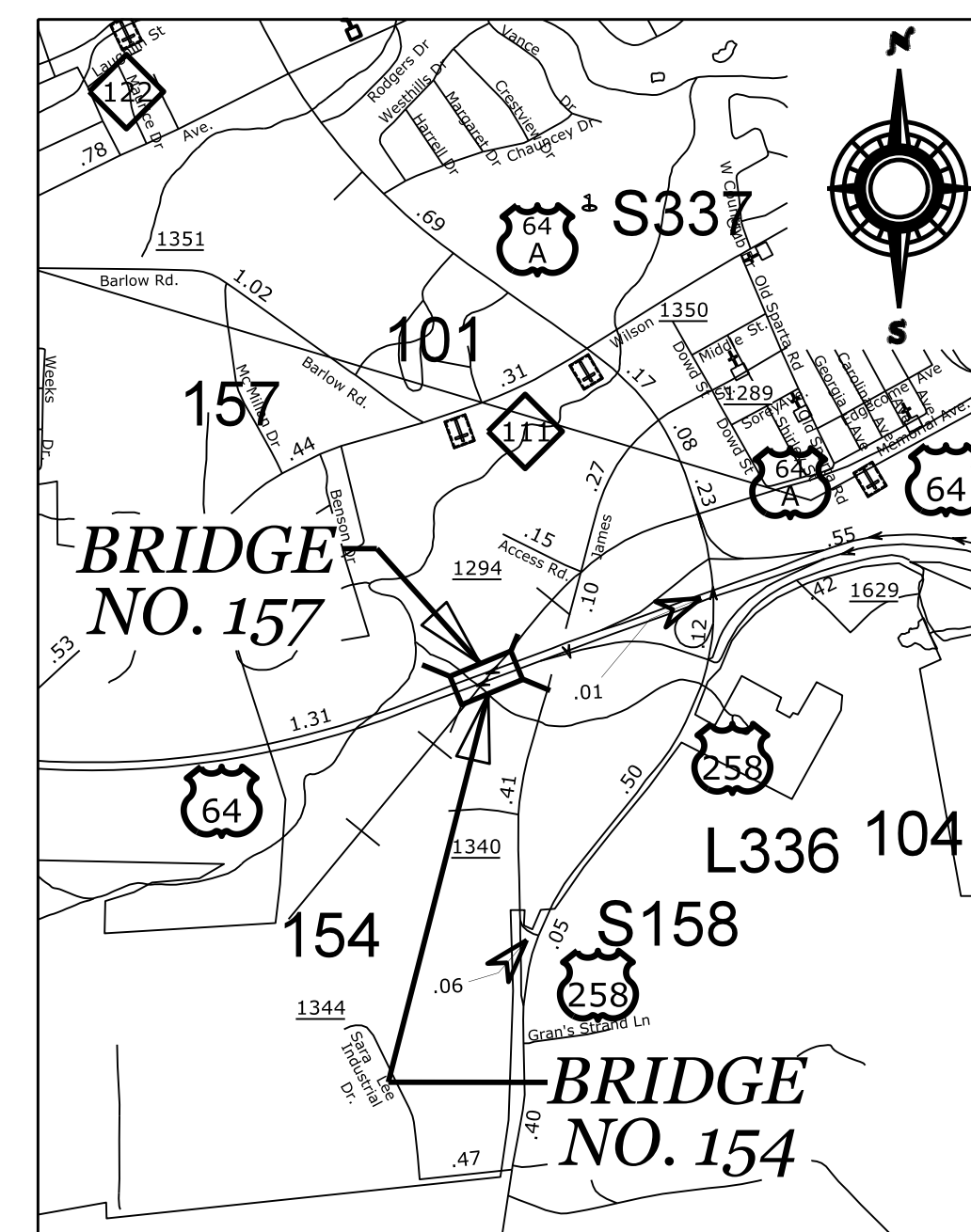
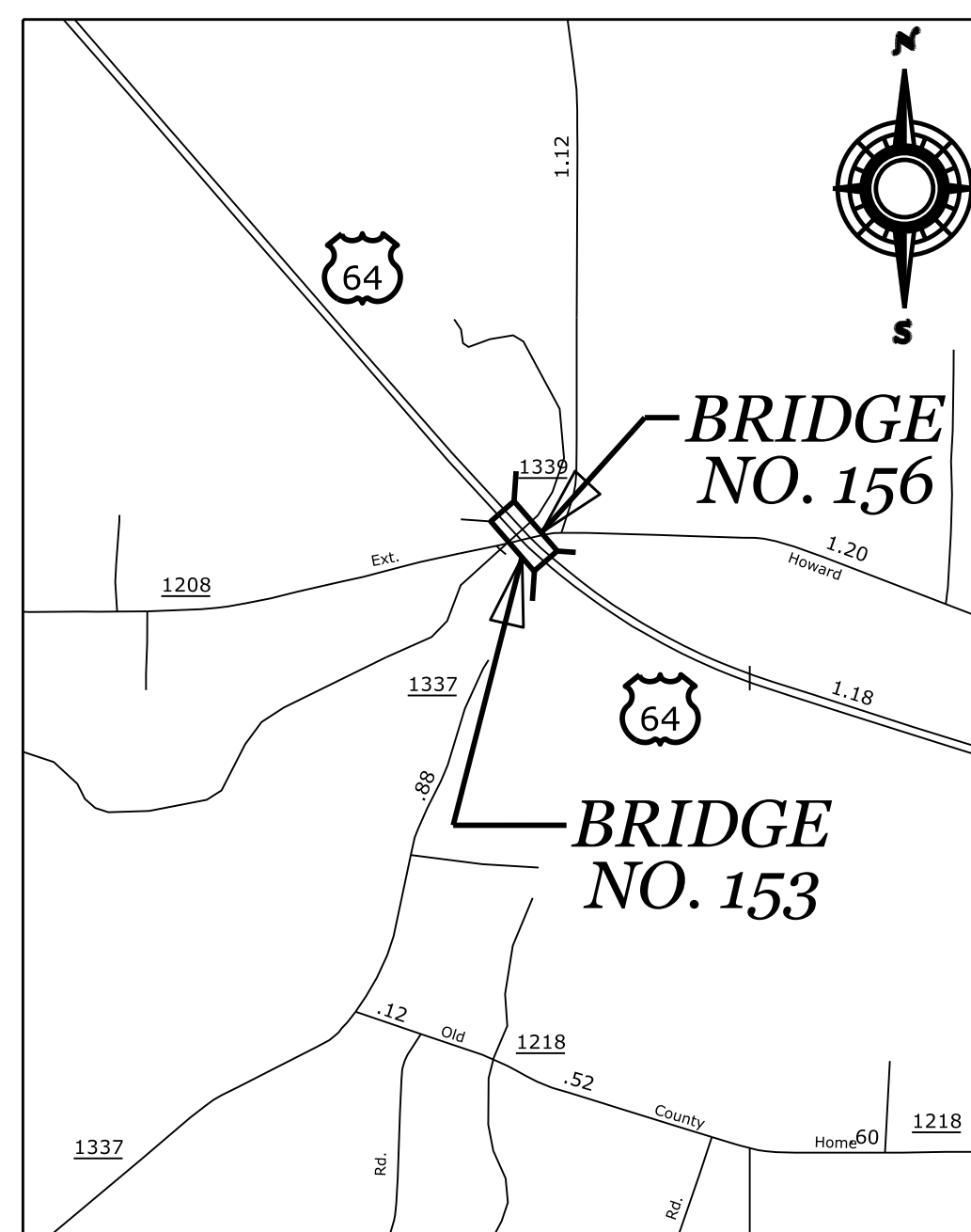
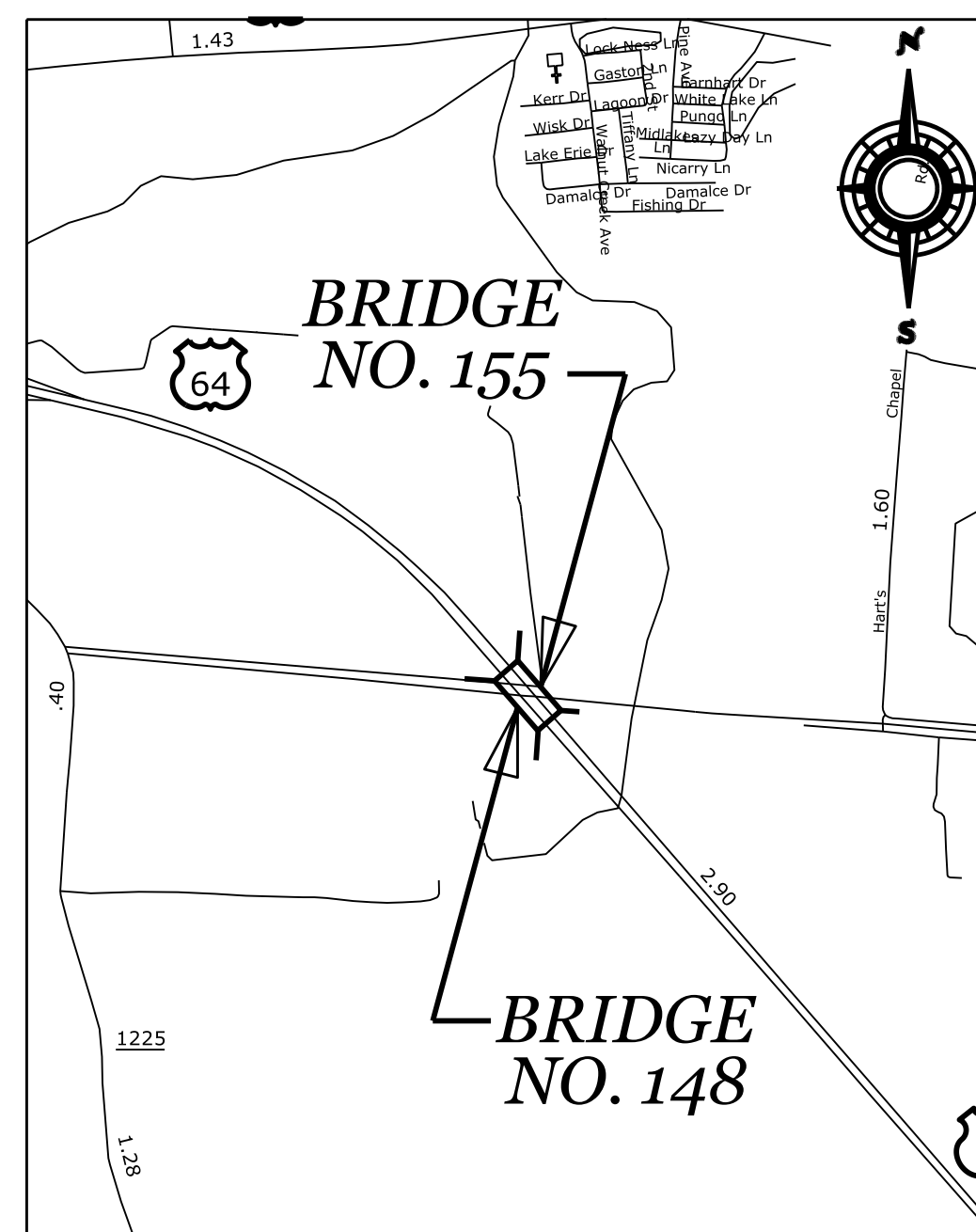
EDGECOMBE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6041A	1	118
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47990.1.1	0087045	P.E.	
47990.3.2	0087045	CONST.	

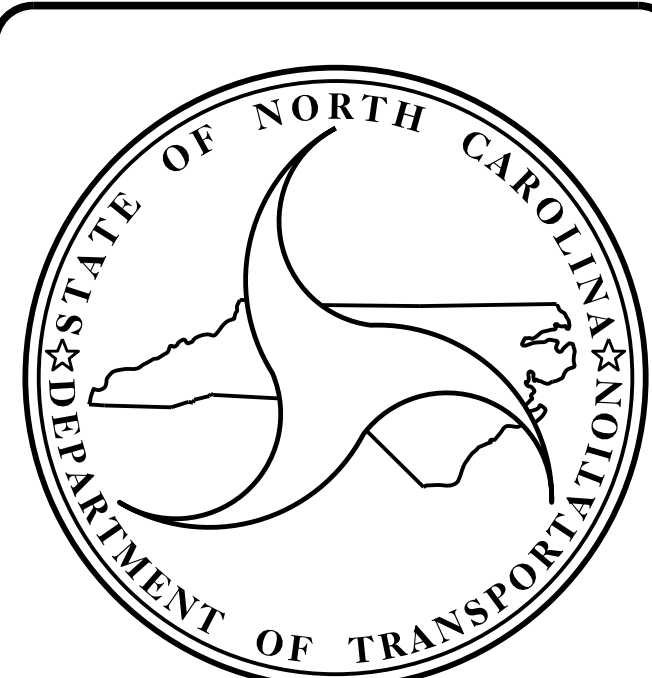
LOCATION:

BRIDGE #320148 ON US 64 EBL OVER CSX RAILROAD. (DOT CROSSING #973750W, MILEPOST AB-129.19)
 BRIDGE #320155 ON US 64 WBL OVER CSX RAILROAD. (DOT CROSSING #973751D, MILEPOST AB-129.21)
 BRIDGE #320153 ON US 64 WBL OVER SR 1208.
 BRIDGE #320156 ON US 64 EBL OVER SR 1208.
 BRIDGE #320154 ON US 64 EBL OVER CSX RAILROAD. (DOT CROSSING #938352A, MILEPOST ABL-2.29)
 BRIDGE #320157 ON US 64 WBL OVER CSX RAILROAD. (DOT CROSSING #938351T, MILEPOST ABL-2.28)
 BRIDGE #320104 ON US 64 EBL OVER TAR RIVER.
 BRIDGE #320320 ON US 64 WBL OVER TAR RIVER.
 BRIDGE #320325 ON US 64 EBL OVER NC 33.
 BRIDGE #320326 ON US 64 WBL OVER NC 33.

TYPE OF WORK: BRIDGE PRESERVATION - CONCRETE DECK REPAIRS, PLACEMENT OF EPOXY OVERLAY HAND APPLICATION SYSTEM OR LATEX MODIFIED CONCRETE, RECONSTRUCTION OF BRIDGE DECK JOINTS AND SEALS, PRESTRESSED CONCRETE GIRDER REPAIRS, AND SUBSTRUCTURE REPAIRS WITH SHOTCRETE & EPOXY RESIN INJECTION.



VICINITY MAP



DESIGN DATA

BRIDGE #148 ADT 2019	=	10,750
BRIDGE #155 ADT 2019	=	10,750
BRIDGE #153 ADT 2019	=	10,750
BRIDGE #156 ADT 2019	=	11,750
BRIDGE #154 ADT 2019	=	8,500
BRIDGE #157 ADT 2019	=	11,500
BRIDGE #104 ADT 2019	=	13,000
BRIDGE #320 ADT 2019	=	11,500
BRIDGE #325 ADT 2018	=	7,750
BRIDGE #326 ADT 2018	=	7,750

PROJECT LENGTH

BRIDGE #148	=	0.038 MILES	BRIDGE #104	=	0.093 MILES
BRIDGE #155	=	0.039 MILES	BRIDGE #320	=	0.100 MILES
BRIDGE #153	=	0.029 MILES	BRIDGE #325	=	0.029 MILES
BRIDGE #156	=	0.029 MILES	BRIDGE #326	=	0.029 MILES
BRIDGE #154	=	0.053 MILES			
BRIDGE #157	=	0.052 MILES			

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

LETTING DATE :
DECEMBER 14, 2021

Kristy W. Alford, P.E., CPM
PROJECT ENGINEER

Aster G. Abraha, P.E.
PROJECT DESIGN ENGINEER

2018 STANDARD SPECIFICATIONS

PROJECT: I-6041A

CONTRACT NO: DD00358A



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EDGECOMBE COUNTY

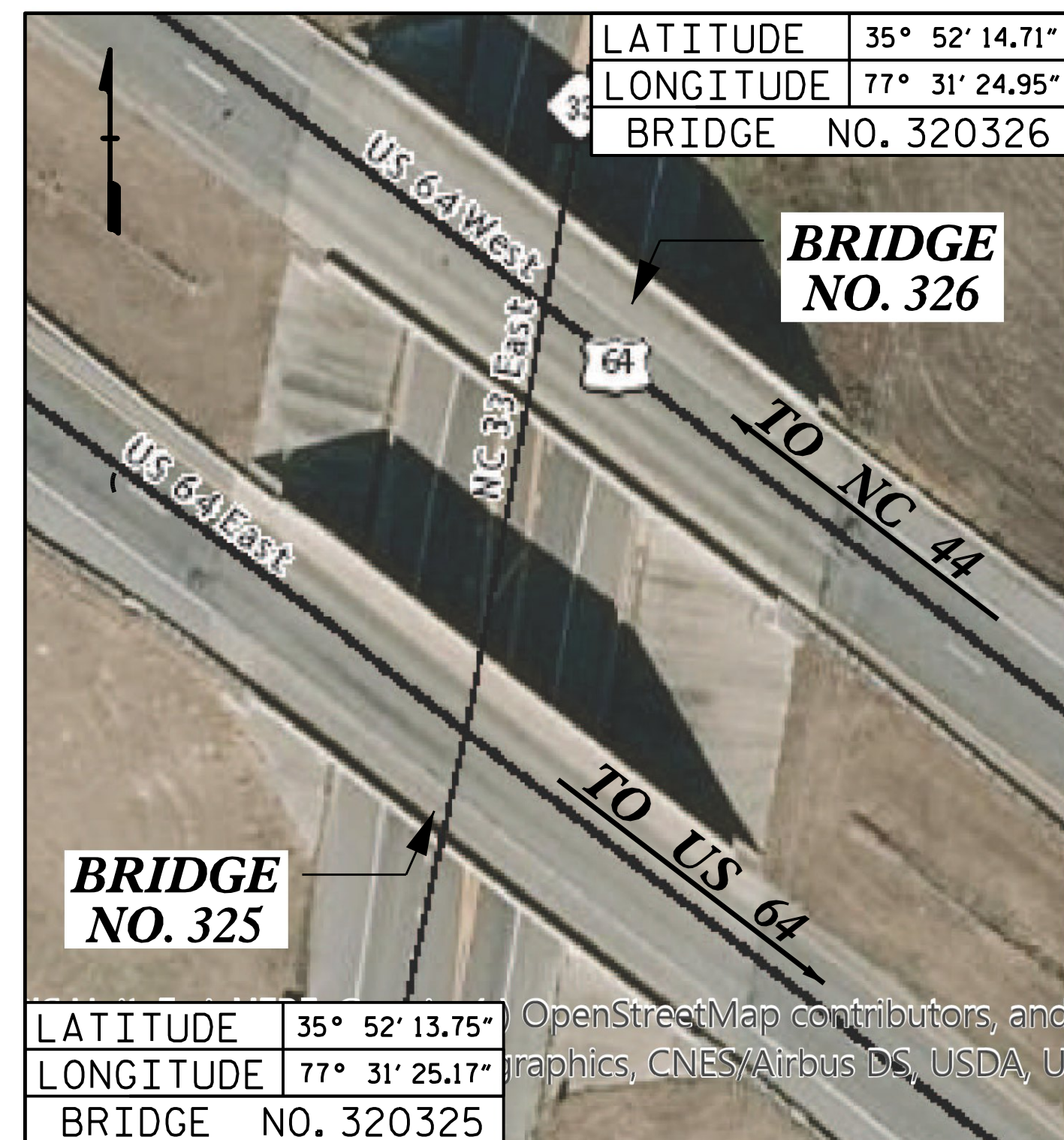
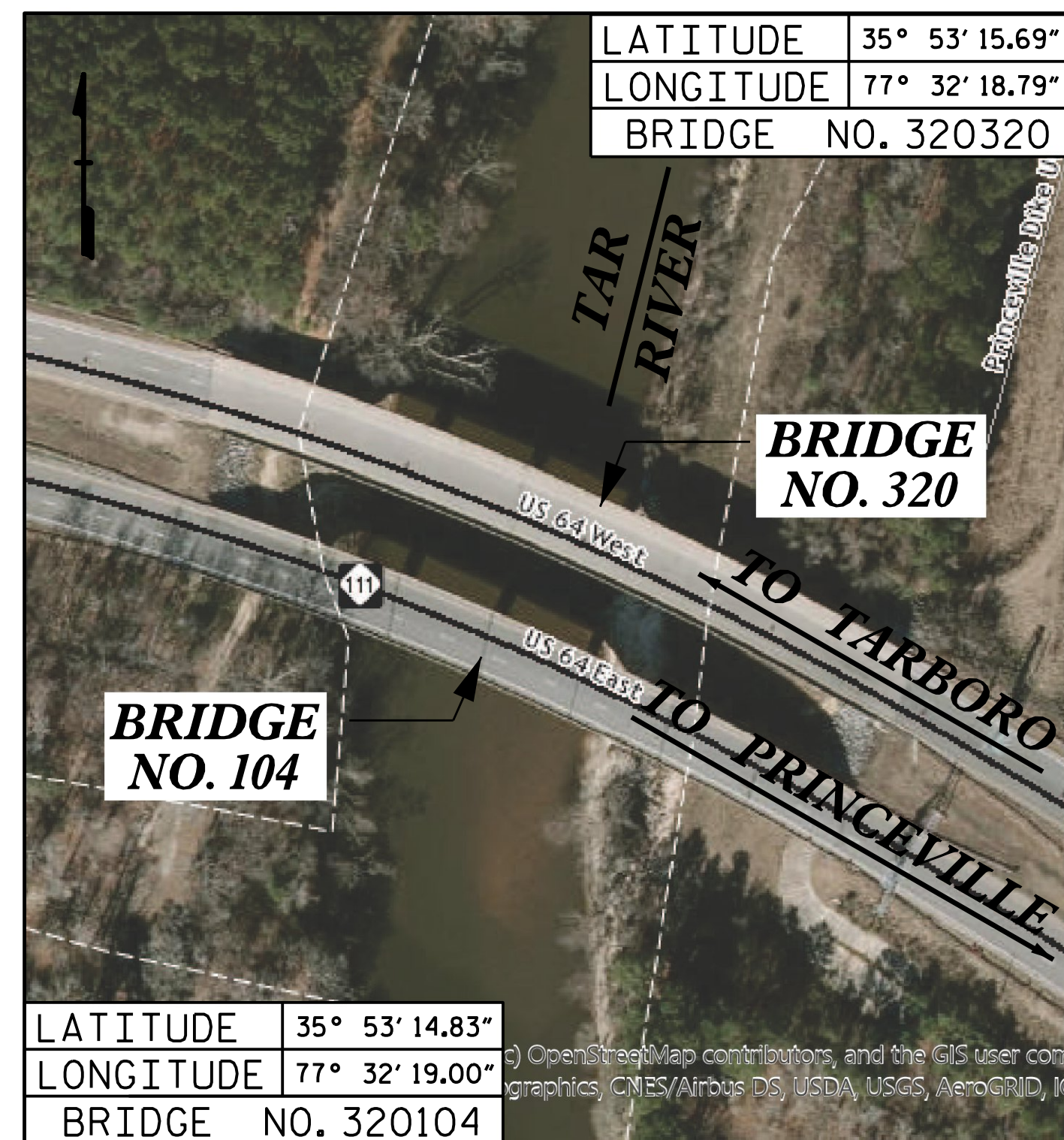
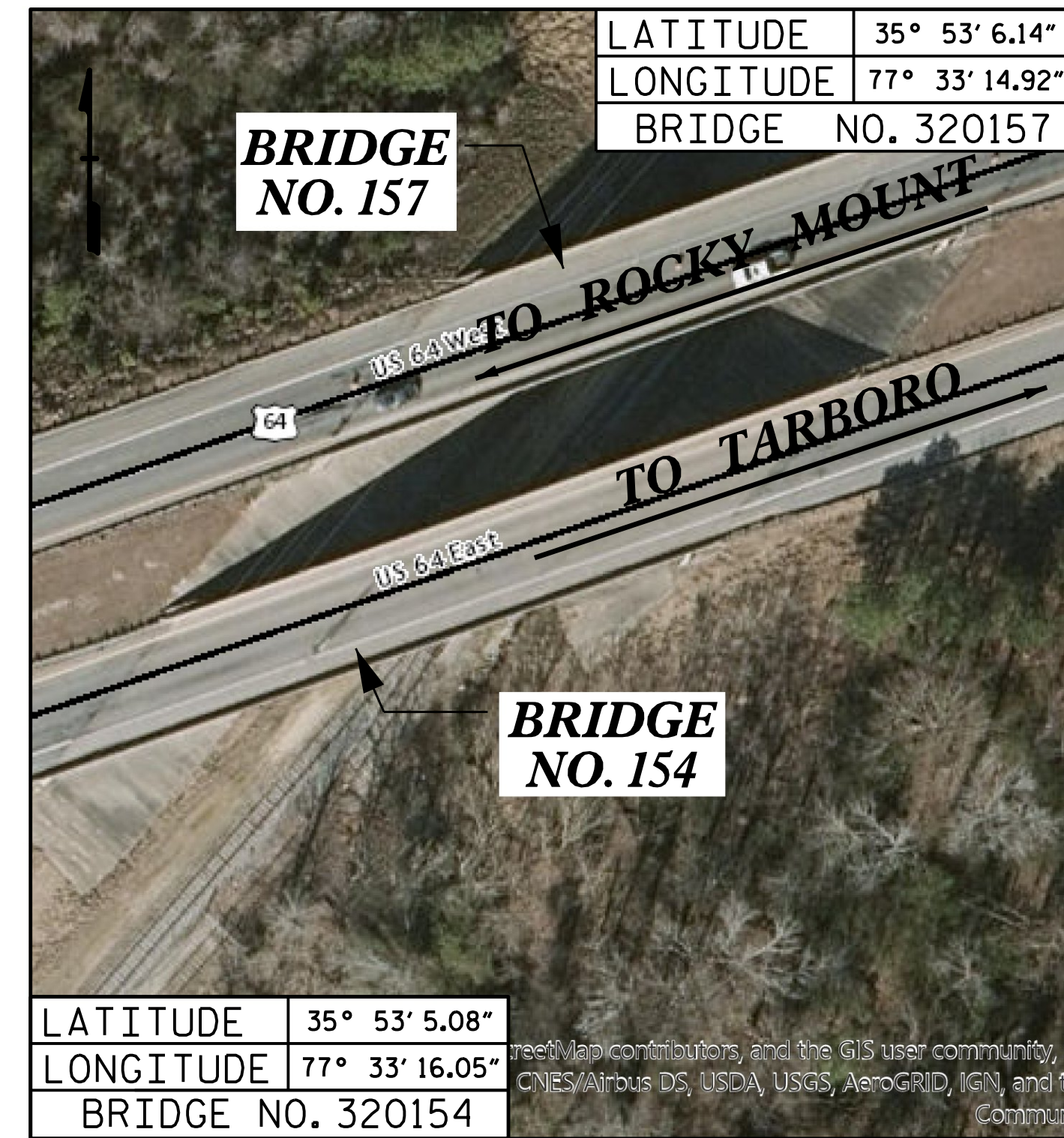
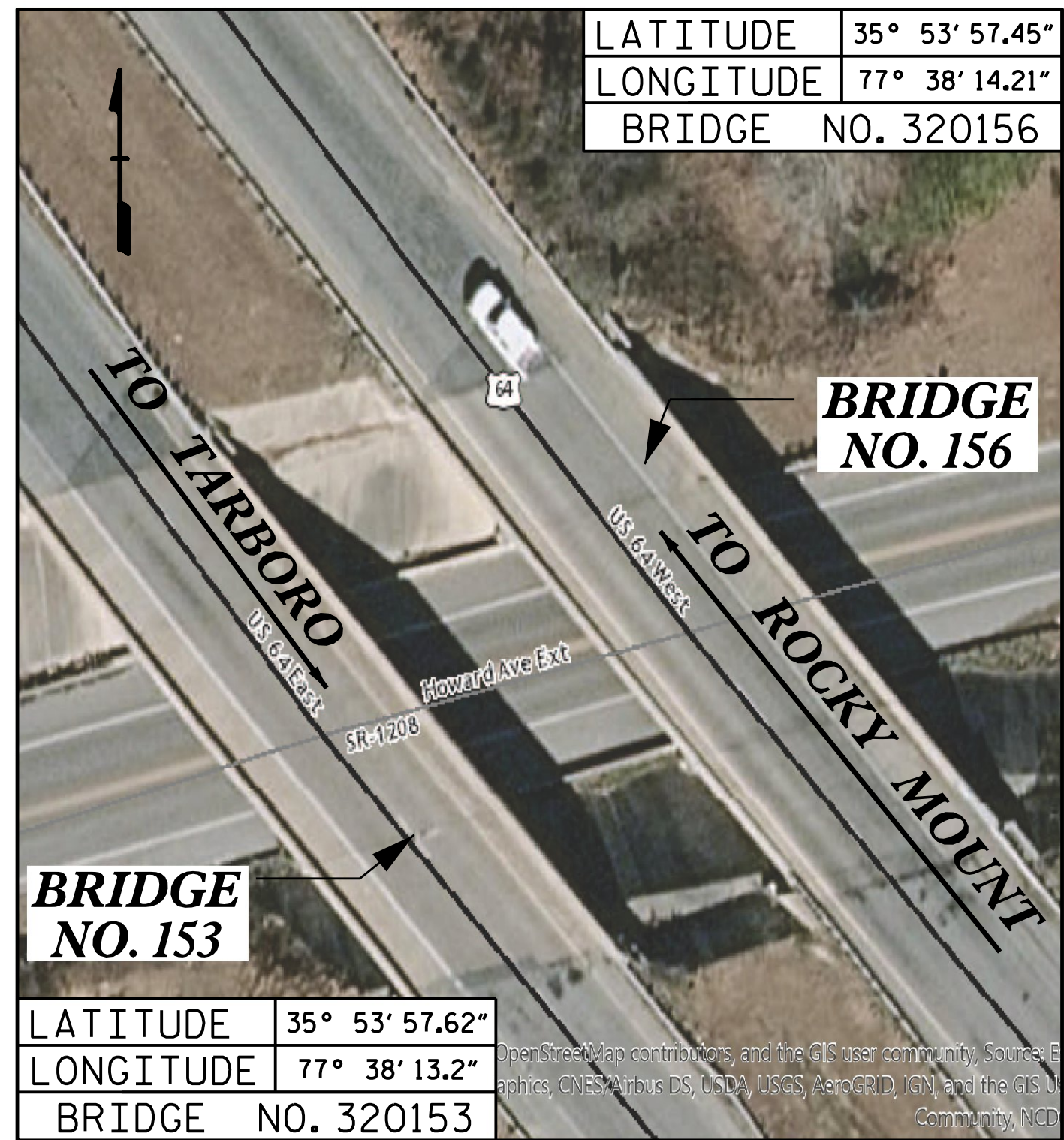
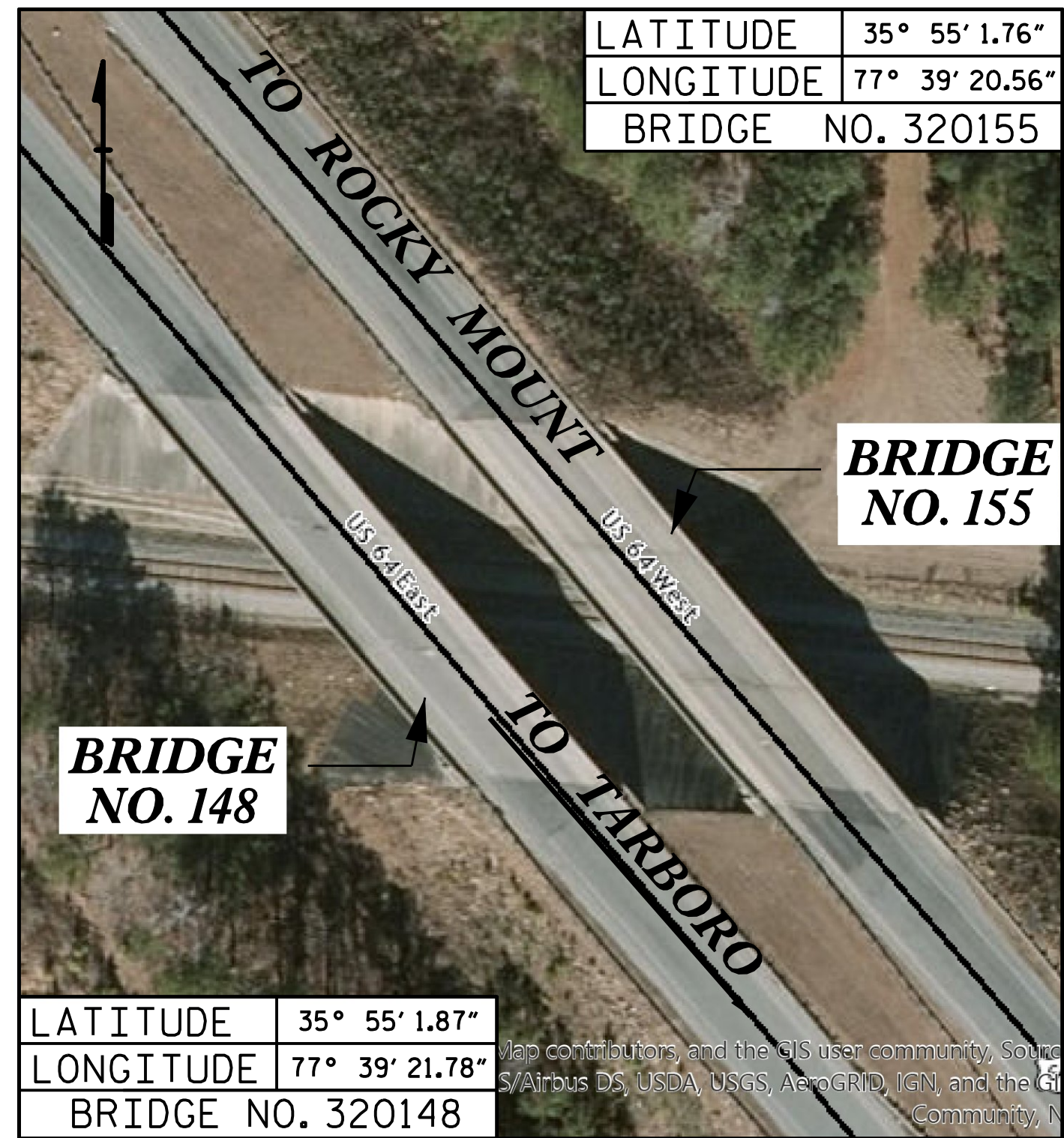
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6041A	1A	118
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47990.1.2	0087045	P.E.	
47990.3.2	0087045	CONST.	

LOCATION: BRIDGE #320148 ON US 64 EBL OVER CSX RAILROAD.
 BRIDGE #320155 ON US 64 WBL OVER CSX RAILROAD.
 BRIDGE #320153 ON US 64 WBL OVER SR 1208.
 BRIDGE #320156 ON US 64 EBL OVER SR 1208.
 BRIDGE #320154 ON US 64 EBL OVER CSX RAILROAD.
 BRIDGE #320157 ON US 64 WBL OVER CSX RAILROAD.
 BRIDGE #320104 ON US 64 EBL OVER TAR RIVER.
 BRIDGE #320320 ON US 64 WBL OVER TAR RIVER.
 BRIDGE #320325 ON US 64 EBL OVER NC 33.
 BRIDGE #320326 ON US 64 WBL OVER NC 33.

TYPE OF WORK: BRIDGE PRESERVATION - CONCRETE DECK REPAIRS,
 PLACEMENT OF EPOXY OVERLAY HAND APPLICATION SYSTEM
 OR LATEX MODIFIED CONCRETE, RECONSTRUCTION OF BRIDGE
 DECK JOINTS AND SEALS, PRESTRESSED CONCRETE GIRDER REPAIRS,
 AND SUBSTRUCTURE REPAIRS WITH SHOTCRETE & EPOXY RESIN INJECTION.

INDEX OF STRUCTURES SHEETS

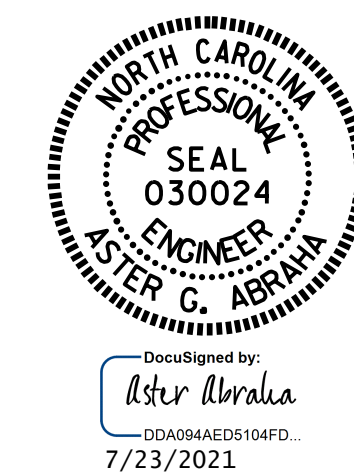
<u>SHEET No.</u>	<u>DESCRIPTION</u>	<u>SHEET No.</u>	<u>DESCRIPTION</u>	<u>SHEET No.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET	S4-7	SUPERSTRUCTURE REPAIRS	S7-22	APPROACH MILLING
1A	INDEX OF SHEETS	S4-8	END BENTS	STRUCTURE No. 320320	
S-1	LOCATION SKETCHES	S4-9 THRU S4-10	BENTS	S8-1	GENERAL DRAWING
S-2	TOTAL BILL OF MATERIALS	STRUCTURE No. 320154		S8-2	TYPICAL SECTION
STRUCTURE No. 320148		S5-1	GENERAL DRAWING	S8-3 THRU S8-9	SURFACE PREPARATION
S1-1	GENERAL DRAWING	S5-2	TYPICAL SECTION	S8-10	JOINT REPAIR
S1-2	TYPICAL SECTION	S5-3 THRU S5-5	SURFACE PREPARATION	S8-11 THRU S8-15	SUPERSTRUCTURE REPAIR
S1-3 THRU S1-5	SURFACE PREPARATION	S5-6	JOINT REPAIR	S8-16	END BENTS
S1-6	JOINT REPAIR	S5-7	SUPERSTRUCTURE REPAIRS	S8-17 THRU S8-22	BENTS
S1-7	SUPERSTRUCTURE REPAIRS	S5-8	END BENTS	STRUCTURE No. 320325	
S1-8	END BENTS	S5-9 THRU S5-10	BENTS	S9-1	GENERAL DRAWING
S1-9 THRU S1-10	BENTS	STRUCTURE No. 320157		S9-2	TYPICAL SECTION
STRUCTURE No. 320155		S6-1	GENERAL DRAWING	S9-3 THRU S9-5	SURFACE PREPARATION
S2-1	GENERAL DRAWING	S6-2	TYPICAL SECTION	S9-6	JOINT REPAIR
S2-2	TYPICAL SECTION	S6-3 THRU S6-5	SURFACE PREPARATION	STRUCTURE No. 320326	
S2-3 THRU S2-5	SURFACE PREPARATION	S6-6	JOINT REPAIR	S10-1	GENERAL DRAWING
S2-6	JOINT REPAIR	S6-7	SUPERSTRUCTURE REPAIR	S10-2	TYPICAL SECTION
STRUCTURE No. 320153		S6-8	END BENTS	S10-3 THRU S10-5	SURFACE PREPARATION
S3-1	GENERAL DRAWING	S6-9 THRU S6-10	BENTS	S10-6	JOINT REPAIR
S3-2	TYPICAL SECTION	STRUCTURE No. 320104		STANDARD SHEETS	
S3-3 THRU S3-5	SURFACE PREPARATION	S7-1	GENERAL DRAWING	SD-1	PCG REPAIR DETAILS
S3-6	JOINT REPAIR	S7-2	TYPICAL SECTION	SD-2	CAP/COLUMN REPAIR DETAILS
S3-7	END BENTS	S7-3 THRU S7-9	SURFACE PREPARATION	SN	STANDARD NOTES
S3-8 THRU S3-9	BENTS	S7-10	DECK REPAIR DETAILS		
STRUCTURE No. 320156		S7-11 THRU S7-12	SUPERSTRUCTURE REPAIRS		
S4-1	GENERAL DRAWING	S7-13	DIAPHRAGM REPAIR DETAILS		
S4-2	TYPICAL SECTION	S7-14	JOINT REPAIR		
S4-3 THRU S4-5	SURFACE PREPARATION	S7-15	END BENTS		
S4-6	JOINT REPAIR	S7-16 THRU S7-21	BENTS		



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO.: 320104, 320148
320153, 320154, 320155
320156, 320157, 320320
320325, & 320326

LOCATION SKETCH

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



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

LOCATION SKETCHES

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 11/2019
 CHECKED BY : A. G. ABRAHA DATE : 12/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			118

TOTAL BILL OF MATERIAL

BRIDGE NO.	INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE S9.5B	ASPHALT BINDER FOR PLANT MIX	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	LATEX MODIFIED CONCRETE OVERLAY	PLACING & FINISHING OF LATEX MODIFIED CONC. OVERLAY	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	VOLUMETRIC MIXER	POURABLE SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE FOR PRESERVATION	BRIDGE JOINT DEMOLITION	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	EPOXY OVERLAY HAND APPLICATION SYSTEM	HYDRO-DEMOLITION OF BRIDGE DECK	SCARIFYING BRIDGE DECK
	SO. YD.	TONS	TONS	SO. FT.	SO. YD.	CU. YD.	SO. YD.	CU. FT.	CU. FT.	LN. FT.	LUMP SUM	LN. FT.	CU. FT.	SO. FT.	SO. FT.	SO. FT.	SO. YD.	SO. YD.
320104	1,541.7	126.8	10.0	20,703.5	5.0	137.4	2,473.4	4.3	402.3	30.0	LUMP SUM	280.3	58.9	256.8	--	--	2,473.4	2,473.4
320148	--	--	--	--	--	--	--	--	24.4	--	LUMP SUM	215.0	35.8	190.4	135.0	7,080	--	--
320153	--	--	--	--	--	--	--	--	1.0	80.0	LUMP SUM	172.0	29.6	157.6	22.0	5,288	--	--
320154	--	--	--	--	--	--	--	--	47.6	--	LUMP SUM	289.0	49.7	264.8	266.3	9,646	--	--
320155	--	--	--	--	--	--	--	--	--	--	LUMP SUM	219.2	37.6	201.0	79.5	7,559	--	--
320156	--	--	--	--	--	--	--	2.0	11.2	--	--	182.2	31.3	167.2	--	5,570	--	--
320157	--	--	--	--	--	--	--	2.1	15.4	--	LUMP SUM	304.5	52.4	279.2	121.5	9,577	--	--
320320	--	--	--	--	--	--	--	--	26.5	--	--	101.5	17.4	93.0	--	26,331	--	--
320325	--	--	--	--	--	--	--	--	--	--	--	85.1	14.6	78.0	--	5,720	--	--
320326	--	--	--	--	--	--	--	--	--	--	--	85.1	14.6	78.0	--	5,720	--	--
TOTAL	1,541.7	126.8	10.0	20,703.5	5.0	137.4	2,473.4	8.4	528.4	110.0	LUMP SUM	1,933.9	341.9	1,766.0	624.3	82,491	2,473.4	2,473.4

GENERAL NOTES:

THIS REPAIR BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS.

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. 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.

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

WORK ON THE BRIDGE(S) SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USE PLATFORMS, 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 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.

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

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

FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

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

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

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

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

FOR LATEX MODIFIED CONCRETE OVERLAY, PLACING & FINISHING OF LATEX MODIFIED CONCRETE OVERLAY AND GROOVING BRIDGE FLOORS, SEE "LATEX MODIFIED CONCRETE" SPECIAL PROVISION.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE, SEE SPECIAL PROVISIONS.

THE RAILROAD TRACK TOP OF RAIL TO BOTTOM OF BEAM VERTICAL CLEARANCES ON THE PLANS ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE TOP OF RAIL TO BOTTOM OF BEAM CLEARANCES AND REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.

ALL PAVEMENT MARKINGS WILL BE IN ACCORDANCE WITH THE TRAFFIC MANAGEMENT PLANS.

FOR ASBESTOS ASSESSMENT FOR BRIDGE DEMOLITION AND RENOVATION ACTIVITIES, SEE SPECIAL PROVISIONS.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT THE FOLLOWING ITEM(S) LISTED WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, 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 THE 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:

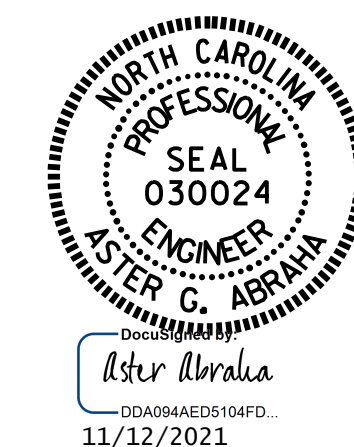
ITEM NO.	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	SO. YD.

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.

CSX RAILROAD NOTES (FOR BRIDGE NO. 148, 155, 154, & 157):

1. THE CONTRACTOR MUST PLAN AND EXECUTE THE PROPOSED WORK TO CONTAIN ALL DEMOLITION DEBRIS AND PREVENT ITS DEPOSITION UPON CSXT PROPERTY, ESPECIALLY THE CSXT TRACK STRUCTURE, INCLUDING INSTALLATION OF A DEMOLITION DEBRIS SHIELD IF NECESSARY (SEE SECTION IV, PARAGRAPHS I AND J OF THE CSXT CONSTRUCTION SUBMISSION CRITERIA).
2. PLEASE NOTE THAT CSXT TYPICALLY DOES NOT PERMIT ANY REDUCTION TO THE EXISTING VERTICAL CLEARANCE(S) ABOVE THE EXISTING CSXT TRACK(S) AT ANY TIME DURING CONSTRUCTION. ANY PROPOSED TEMPORARY REDUCTION OF VERTICAL CLEARANCE MUST BE REVIEWED BY CSXT WITH NO GUARANTEE OF APPROVAL.
3. THE CONTRACTOR MUST PLAN AND PERFORM THE WORK IN A MANNER SUCH THAT CSXT TRACKS AT THE PROJECT LOCATION REMAIN FULLY CAPABLE OF CARRYING RAIL TRAFFIC THROUGHOUT THE WORK PERIOD AND RAIL TRAFFIC IS NOT DELAYED OR OTHERWISE IMPACTED DUE TO THE WORK BEING PERFORMED.
4. THE CONTRACTOR SHALL NOT BE PERMITTED TO USE THE CSXT RIGHT-OF-WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION. THE CSXT RIGHT-OF-WAY MUST REMAIN CLEAR AT ALL TIMES.
5. THE CONTRACTOR SHALL BE REQUIRED TO FULLY COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS, REGULATIONS, STATUTES AND ORDINANCES AT ALL TIMES.
6. PLEASE NOTE THAT CSXT FACILITIES ARE NOT SUBJECT TO MISS UTILITY PROGRAMS. CONTRACTOR SHALL COORDINATE WITH CSXT TO HAVE THEIR FACILITIES MARKED IN THE FIELD, PRIOR TO PERFORMING WORK WITH THE POTENTIAL TO IMPACT BELOW-GRADE FACILITIES. CSXT WILL MARK OUT EXISTING CSXT FACILITIES, AT PROJECT EXPENSE.
7. PLEASE NOTE THAT A CSXT FLAGMAN MAY BE REQUIRED FOR ANY WORK WHICH REQUIRES ENTRY ONTO THE CSXT RIGHT-OF-WAY, ANY WORK THAT HAS POTENTIAL TO FOUL CSXT TRACK, AND ANY WORK TO BE PERFORMED WITHIN 50 FEET OF THE CENTERLINE OF TRACK. CSXT SHALL HAVE SOLE AUTHORITY TO DETERMINE THE NEED FOR FLAGGING REQUIRED TO PROTECT ITS OPERATIONS AND PROPERTY.

PROJECT NO. I-6041A
EDGEcombe COUNTIES
 BRIDGE NO.: 320104, 320148
320153, 320154, 320155
320156, 320157, 320320,
320325, & 320326



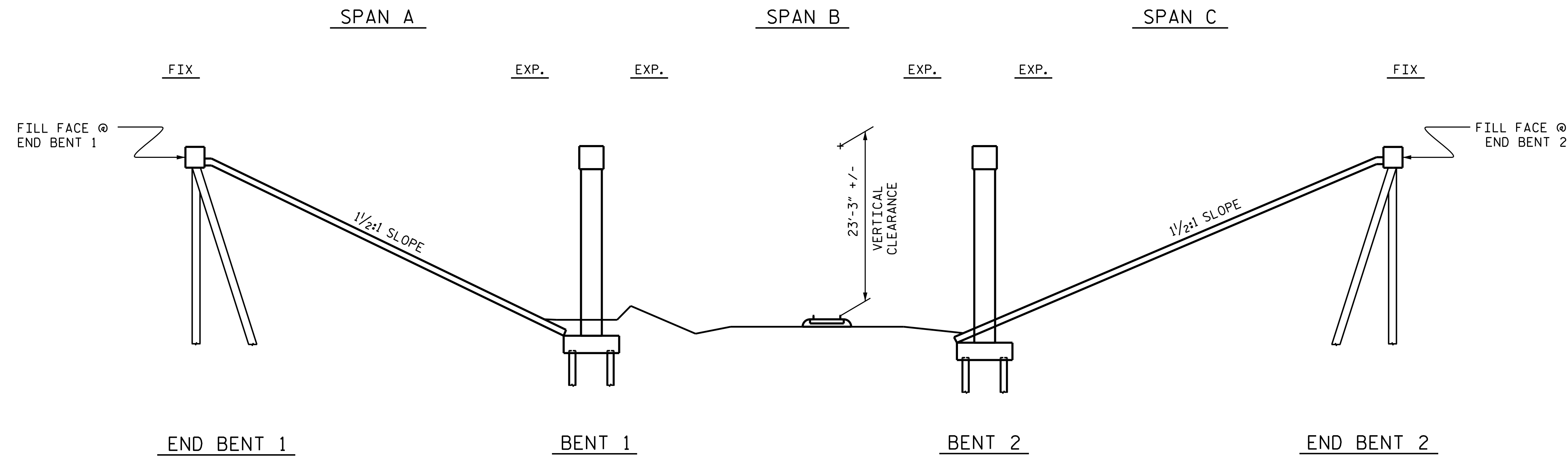
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

BILL OF MATERIAL

DRAWN BY : A. Y. GODFREY DATE : 10/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			118



SECTION ALONG Q SURVEY

SCOPE OF WORK

- BRIDGE DECK PREPARATION BY SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL ELASTOMERIC CONCRETE AND POURABLE SILICONE JOINT SEALANT.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENTS AND BENTS AREA FOR SHOTCRETE AND CONCRETE REPAIRS.
- REPAIR SUBSTRUCTURE USING EPOXY RESIN INJECTION AND SHOTCRETE REPAIRS.

NOTES

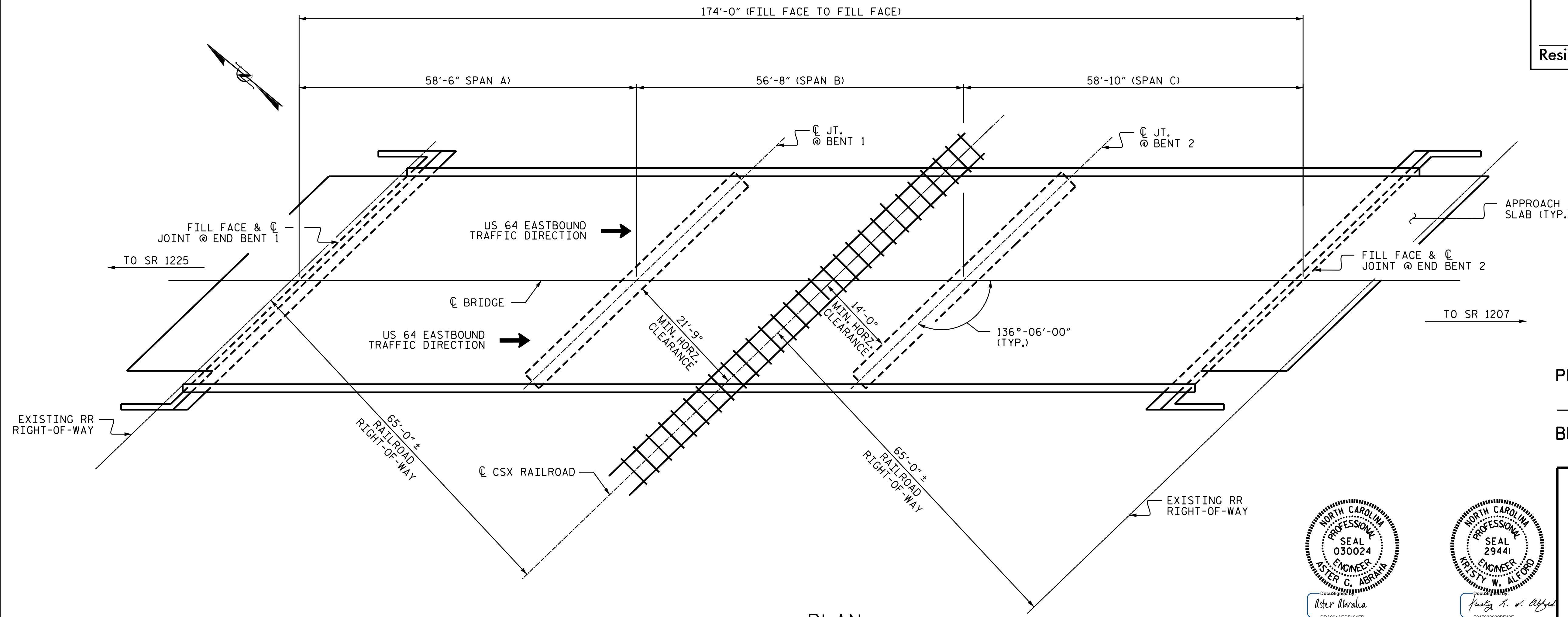
GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 1/4/2021.

BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

RAILROAD RIGHT-OF-WAY IS TAKEN FROM THE BEST INFORMATION AVAILABLE AND NOT EXACT. RAILROAD RIGHT-OF-WAY IS FOR INFORMATION PURPOSES ONLY AND TO BE VERIFIED IN THE FIELD.

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____

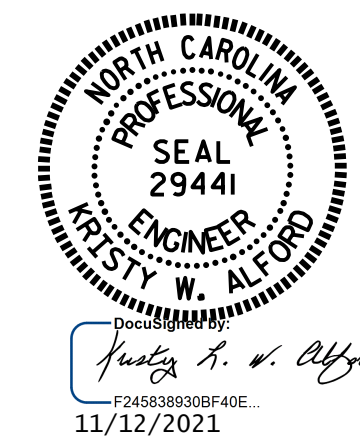
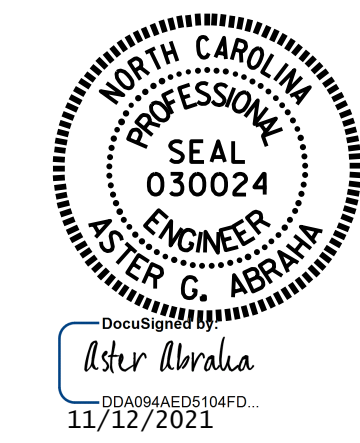


PLAN

(COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320148

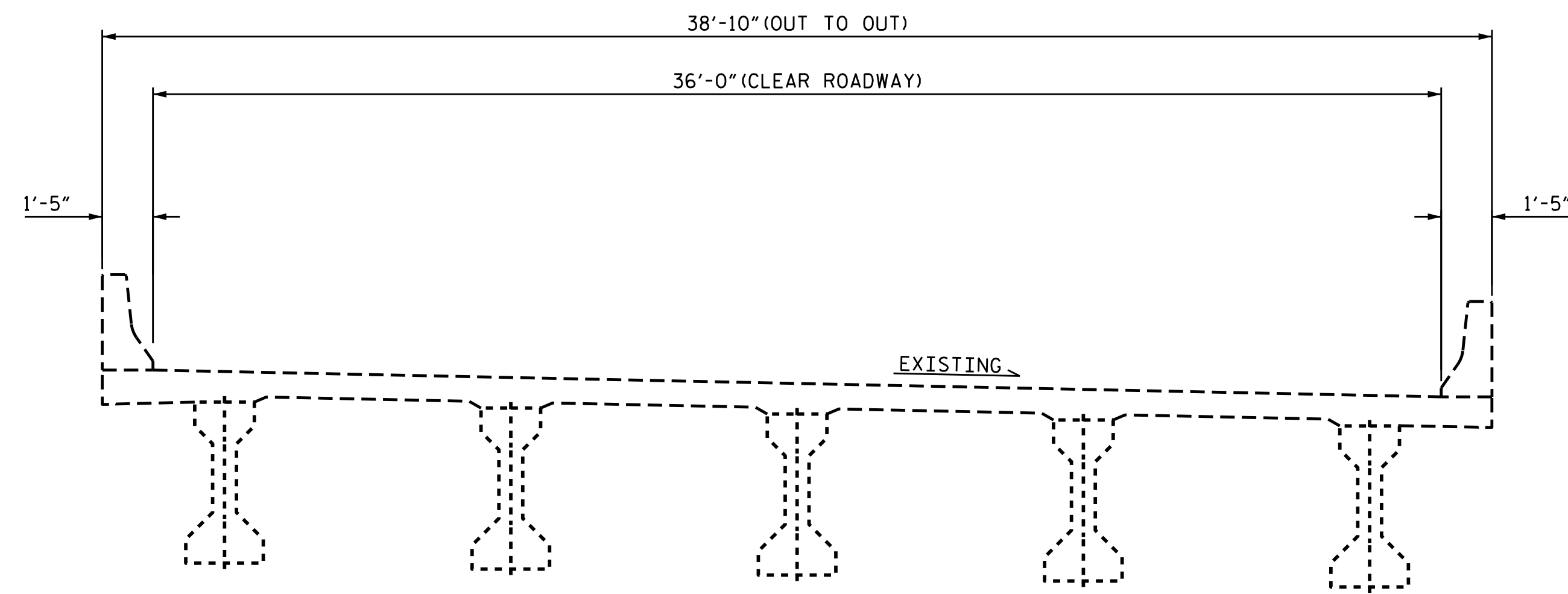
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE NO. 148 ON US 64
 BETWEEN SR 1225 & 1207
 OVER CSX RAILROAD



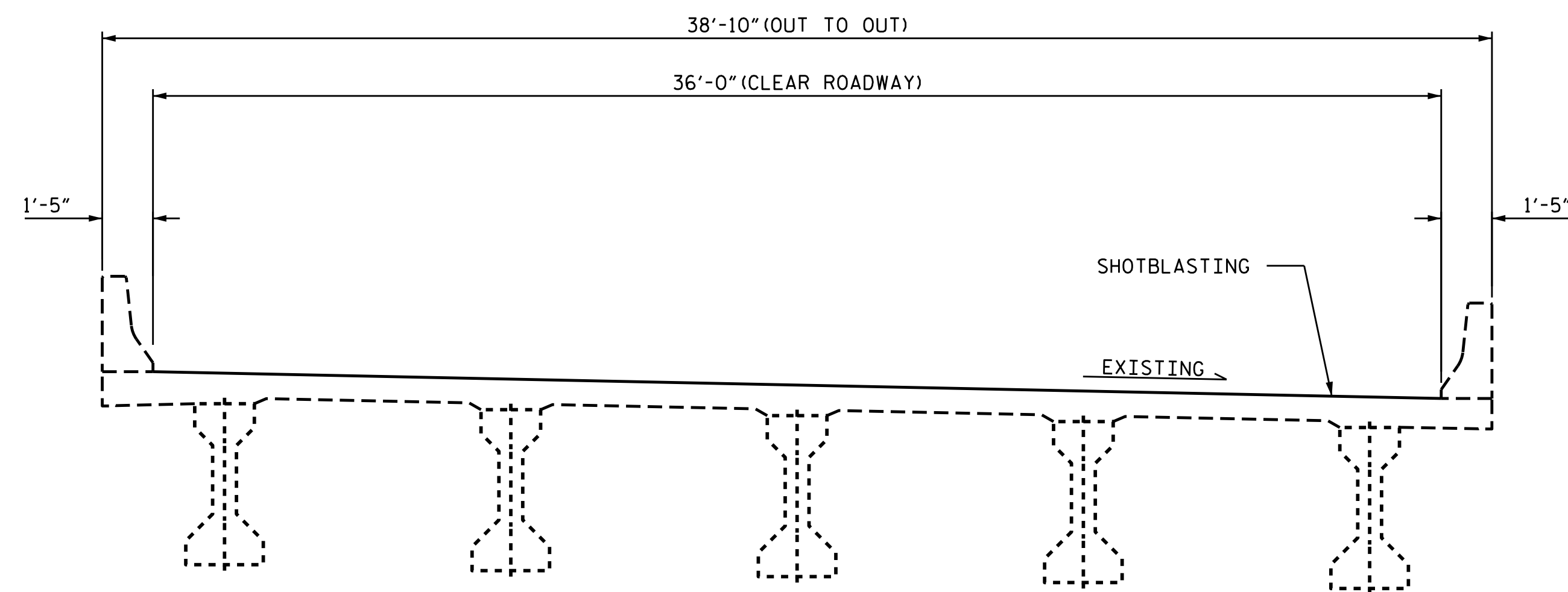
DRAWN BY : A. Y. GODFREY DATE : 09/2019
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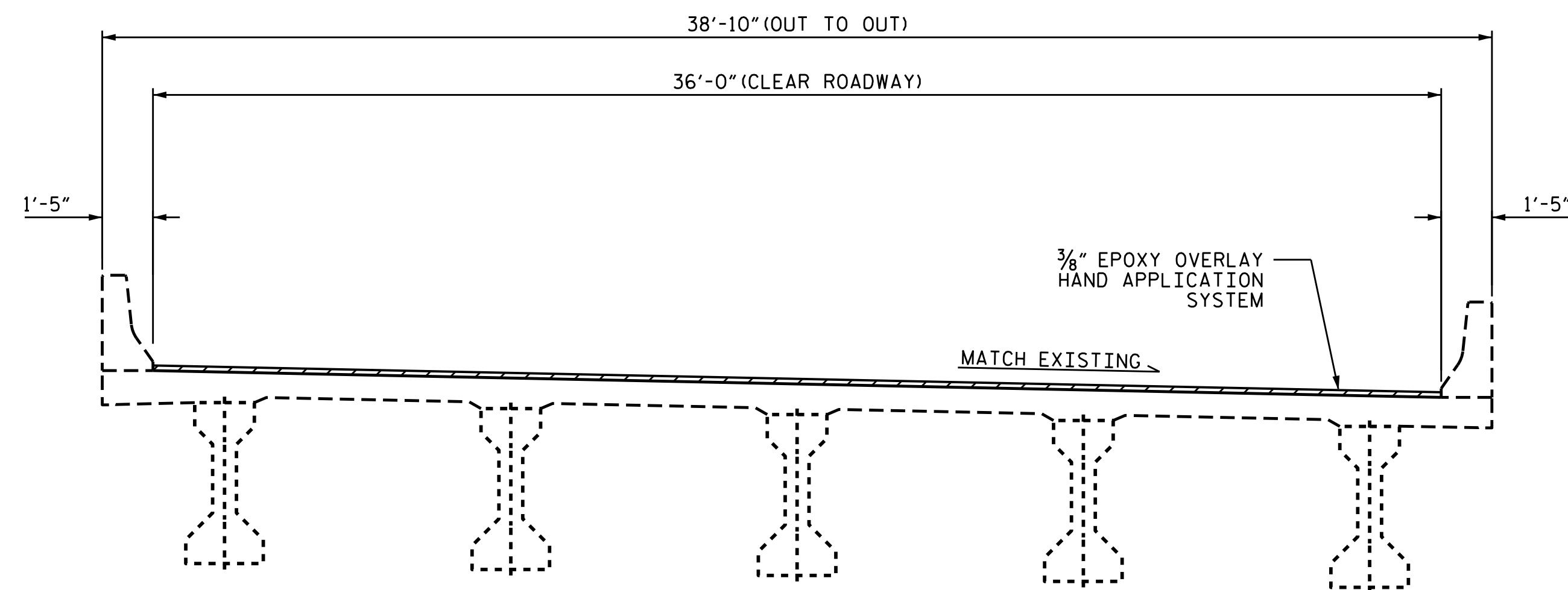
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-1
1			3			TOTAL SHEETS
2			4			118



TYPICAL SECTION
(EXISTING)



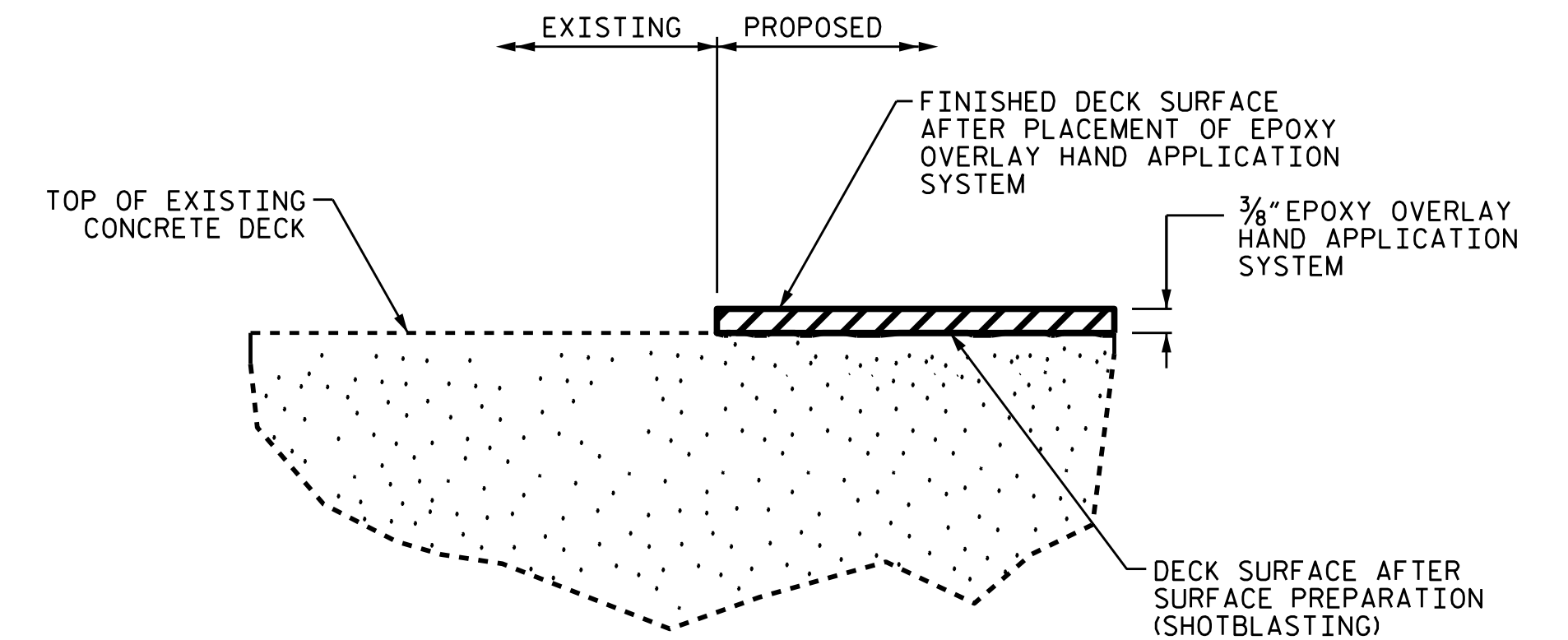
TYPICAL SECTION
(DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

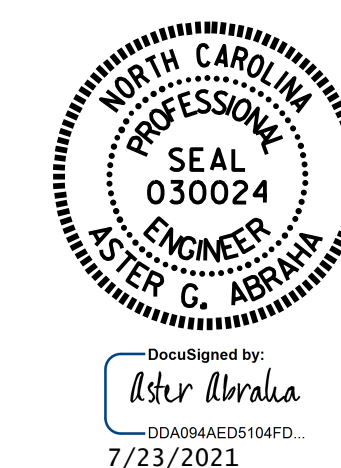
NOTES

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



EPOXY DECK TREATMENT DETAIL

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320148



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTION
 AND SURFACE
 PREPARATION DETAILS**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S1-2
2			4			118

DRAWN BY : A. Y. GODFREY DATE : 09/2019
 CHECKED BY : S. WANCE DATE : 05/2021

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SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,540 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	22.5 SF	
BRIDGE JOINT DEMOLITION	71.4 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS- BUILT REPAIR QUANTITIES TABLE.

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS AND THE DETAIL ON THIS SHEET.

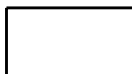


FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

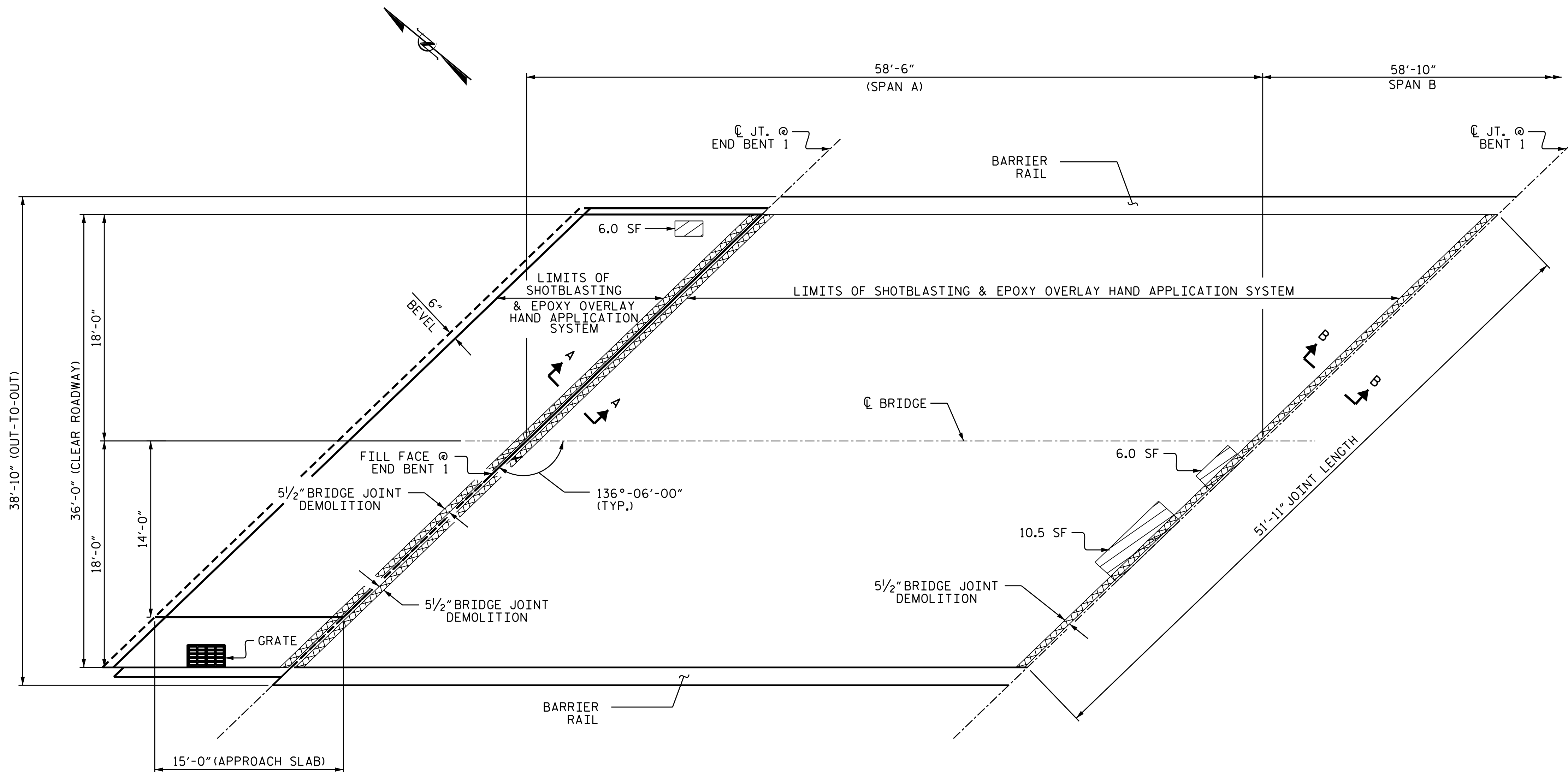
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

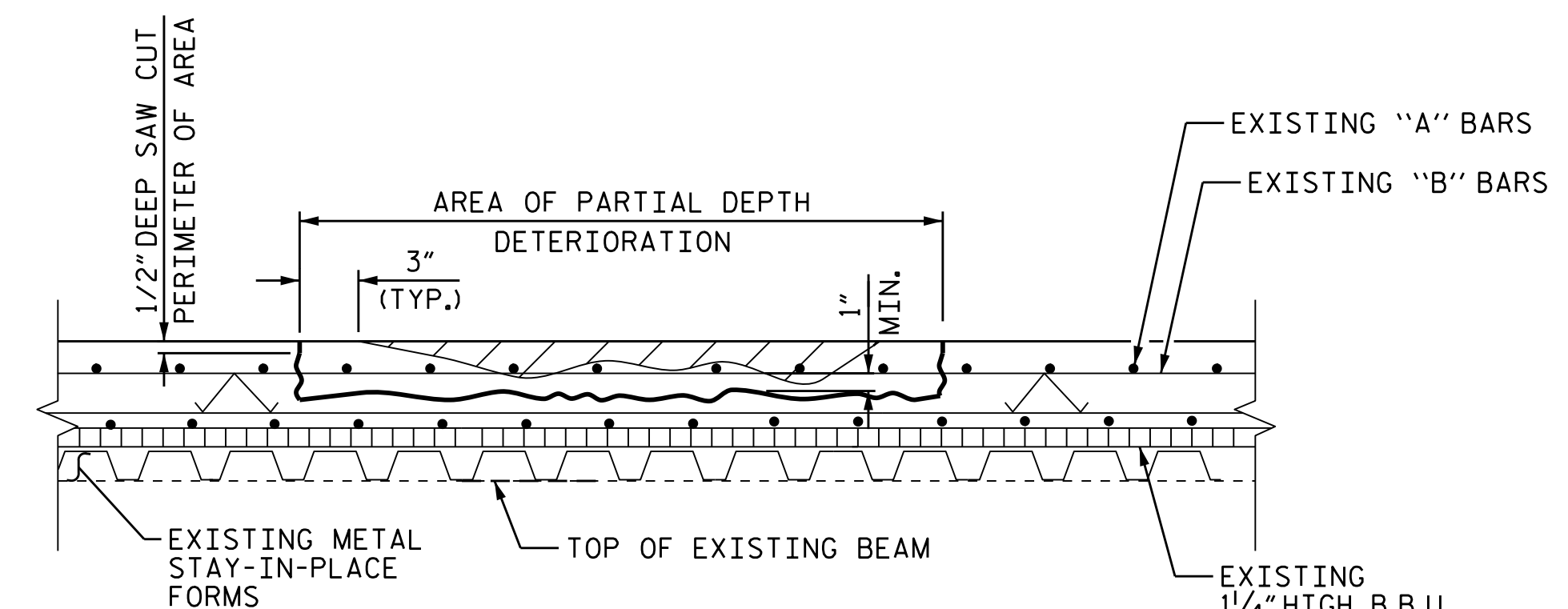
FOR SECTION A-A AND B-B, SEE JOINT REPAIR DETAILS SHEET S2-6.

REPAIR KEY

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION



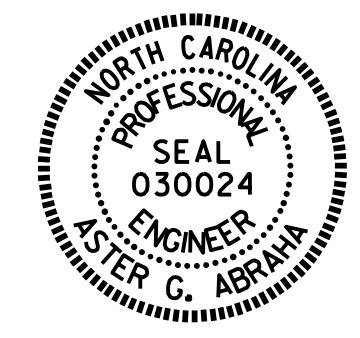
PLAN OF SPAN A AND APPROACH SLAB



CONCRETE DECK REPAIR FOR EPOXY OVERLAY

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320148

SHEET 1 OF 3



DocuSigned by:
 Aster Abraha
 00A08AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN A
 AND APPROACH SLAB**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-3
1			3			TOTAL SHEETS
2			4			118

DRAWN BY : A. Y. GODFREY DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,988 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	86.0 SF	
BRIDGE JOINT DEMOLITION	47.6 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM SEE SPECIAL PROVISIONS.

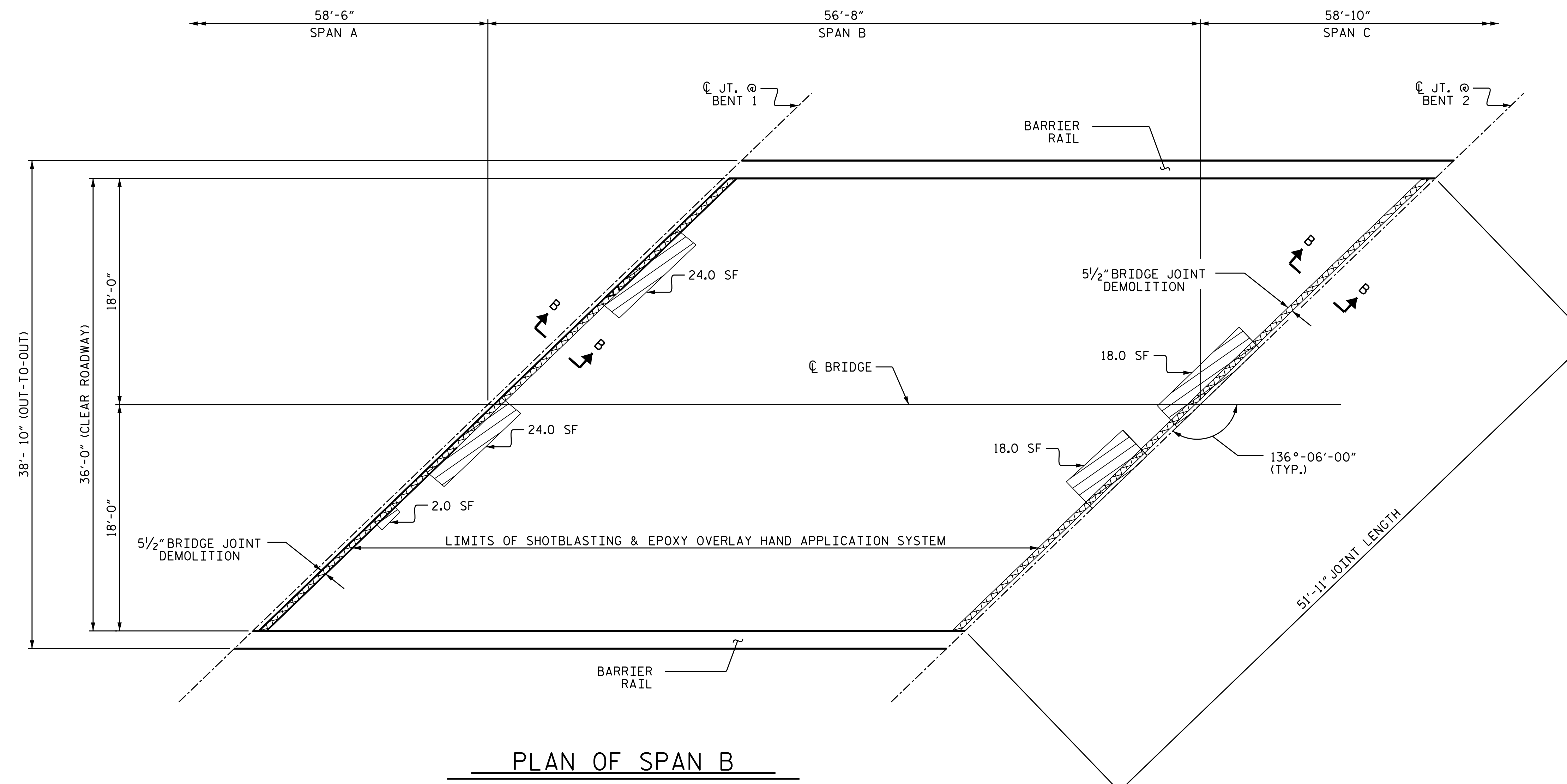
FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS AND THE DETAIL ON SHEET 1 OF 3.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR SECTION A-A AND B-B, SEE JOINT REPAIR DETAILS SHEET S2-6.



REPAIR KEY

- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN B

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320148

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN B**

DRAWN BY : A. Y. GODFREY DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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1			3			S1-4
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SUMMARY OF QUANTITIES FOR
SPAN C AND APPROACH SLAB

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,552 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	26.5 SF	
BRIDGE JOINT DEMOLITION	71.4 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM SEE SPECIAL PROVISIONS.

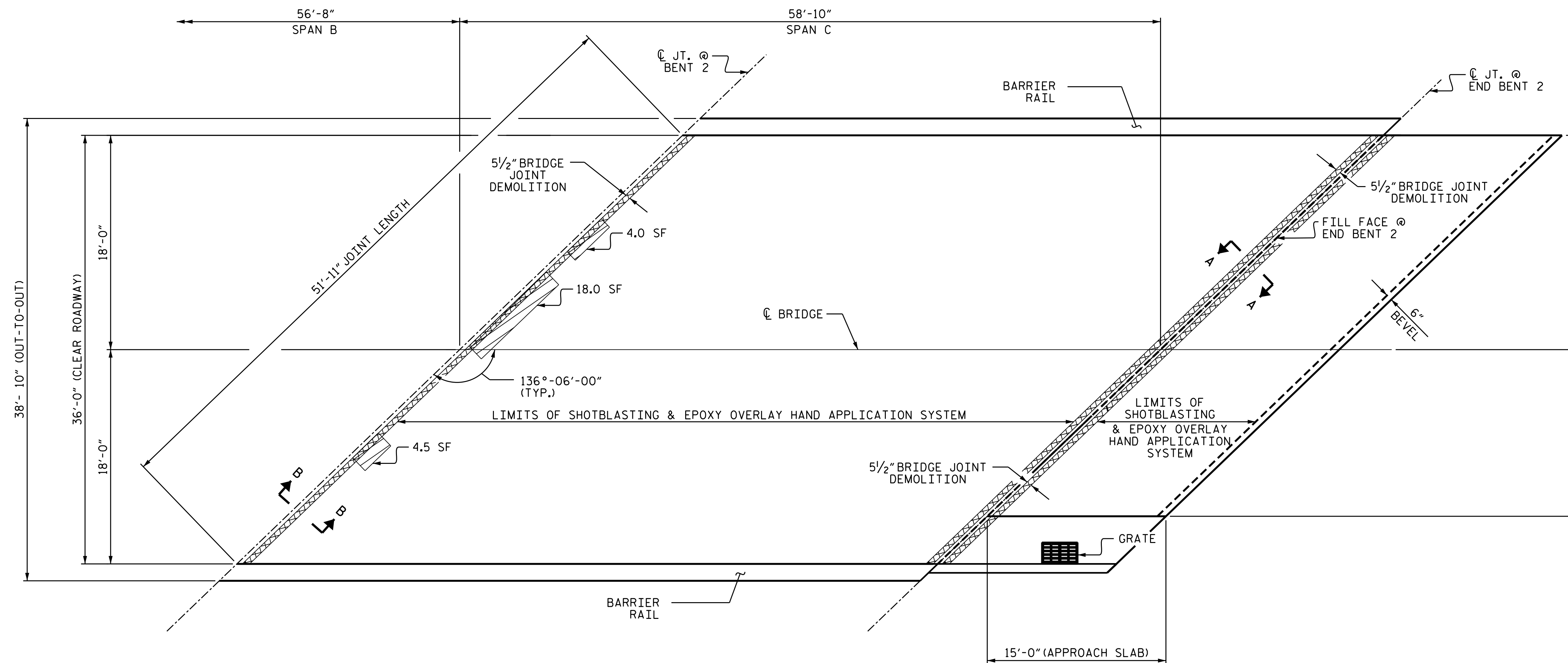
FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS AND THE DETAIL ON SHEET 1 OF 3.

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

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SECTION A-A AND B-B, SEE JOINT REPAIR DETAILS SHEET S2-6.



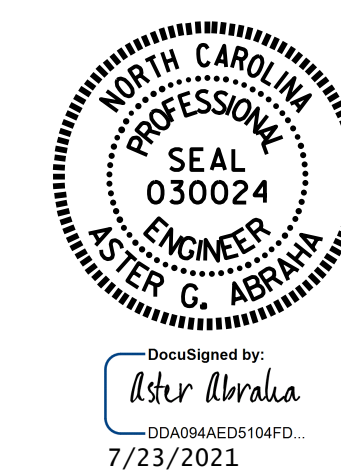
PLAN OF SPAN C AND
APPROACH SLAB

REPAIR KEY

- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320148

SHEET 3 OF 3

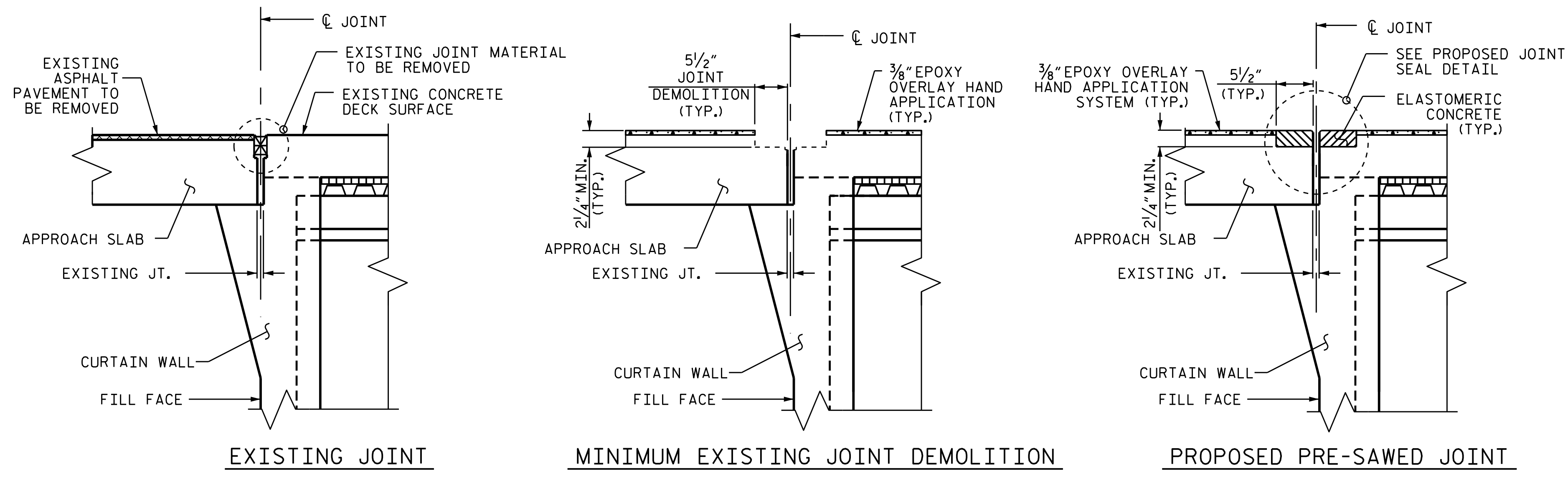


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SURFACE PREPARATION
SPAN C
AND APPROACH SLAB

DRAWN BY : A. Y. GODFREY DATE : 09/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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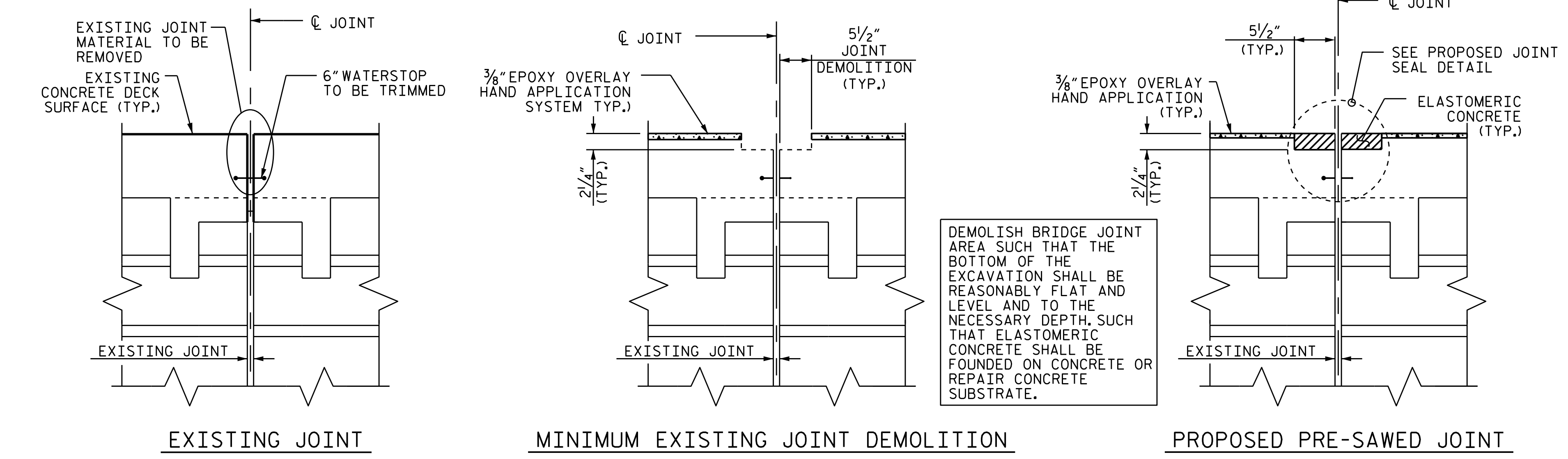
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EXISTING JOINT MINIMUM EXISTING JOINT DEMOLITION PROPOSED PRE-SAWED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

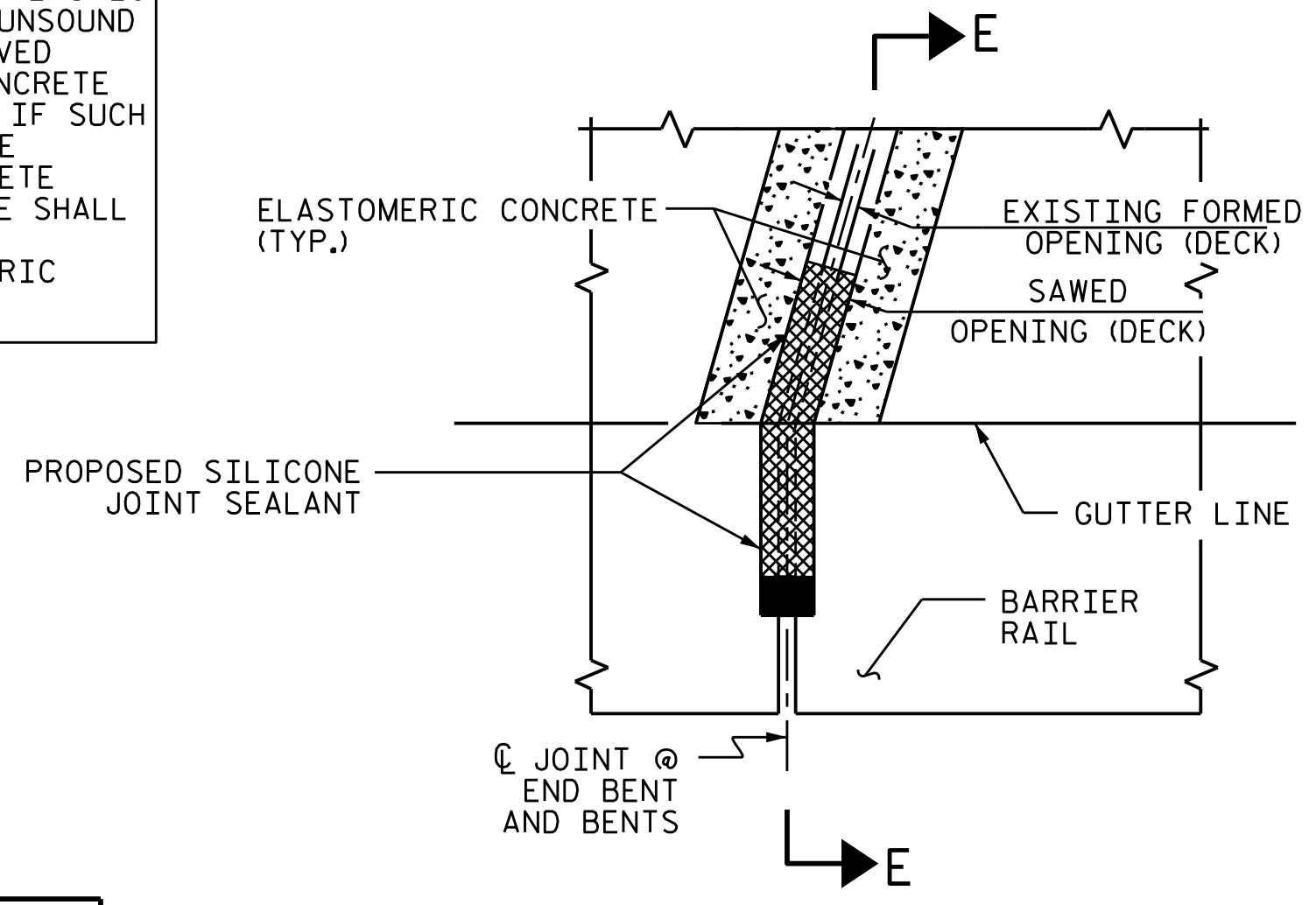


EXISTING JOINT MINIMUM EXISTING JOINT DEMOLITION PROPOSED PRE-SAWED JOINT

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

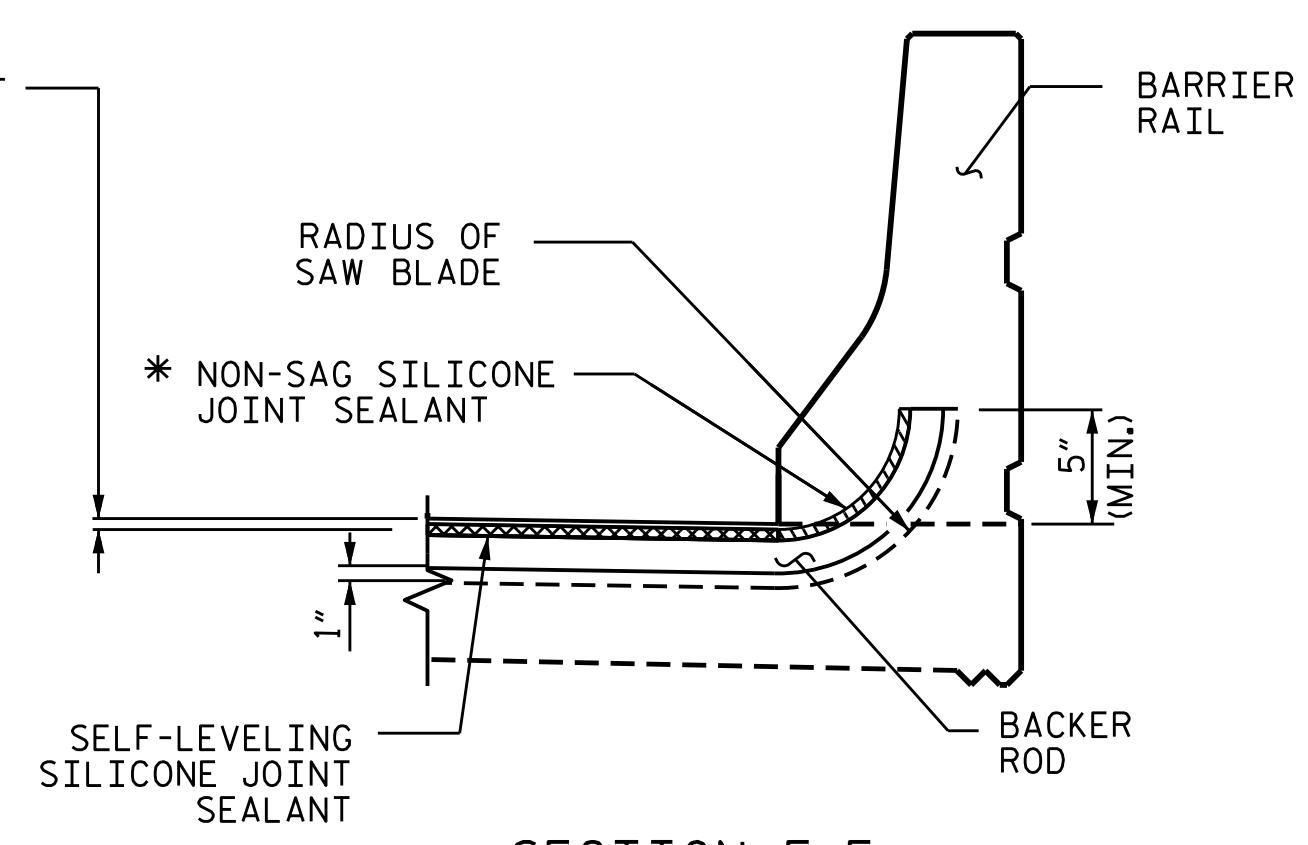
IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



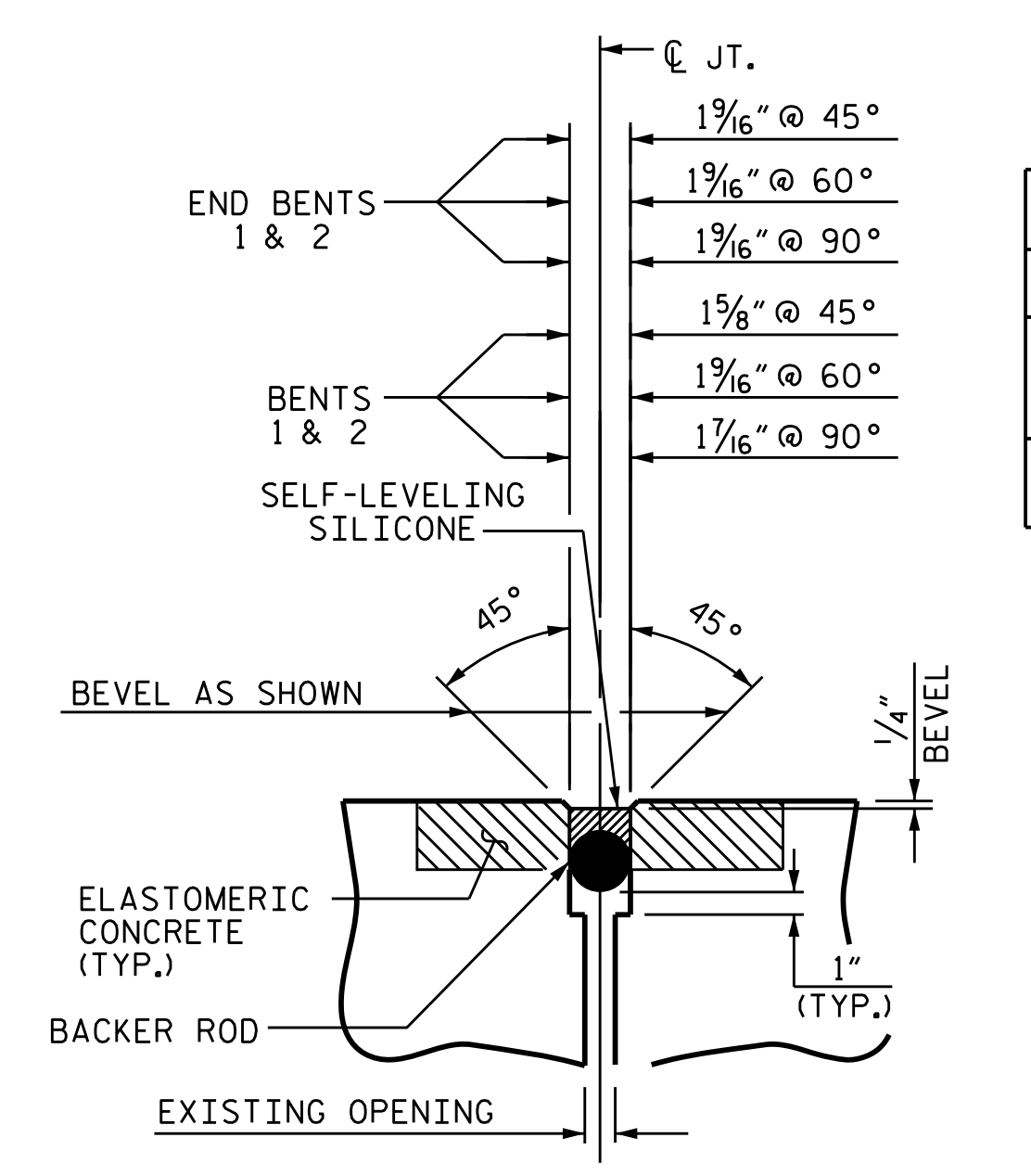
PLAN

*NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.

SILICONE JOINT SEALANT SHALL BE RECESSED 1/2" BELOW DECK SURFACE



SECTION E-E



PROPOSED JOINT SEAL DETAIL (WITH SAWED DIMENSIONS)

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

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

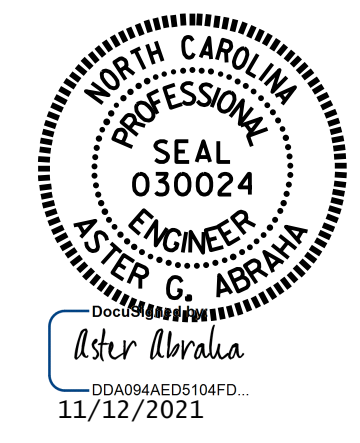
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	35.8 CF	
POURABLE SILICONE JOINT SEALANT	215.0 LF	

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320148

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT REPAIR DETAILS



DRAWN BY : A. Y. GODFREY DATE : 02/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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NOTES:

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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 WILL NOT DAMAGE EXISTING REINFORCING STEEL.

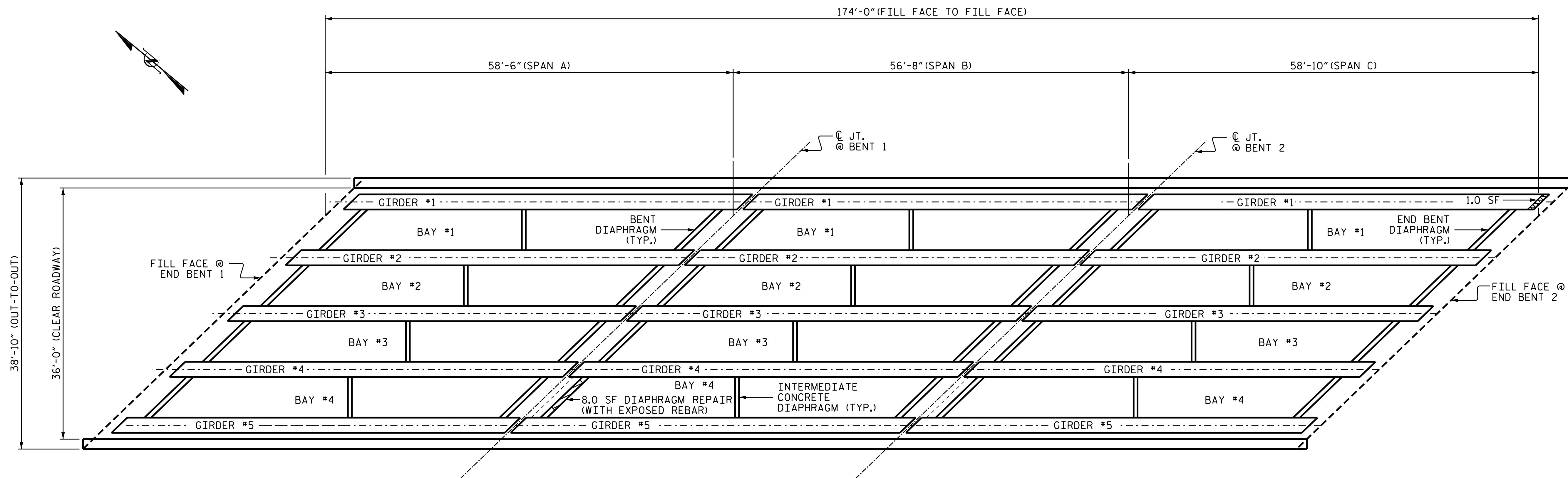
FOR CONCRETE GIRDER AND DIAPHRAGM REPAIR DETAILS, SEE "PRESTRESSED CONCRETE GIRDER AND DIAPHRAGM REPAIR DETAILS" SHEET SD-1.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
UNDERSIDE OF DECK & OVERHANG	0.0	0.0		
BENT DIAPHRAGMS	8.0	2.7		
GIRDER REPAIRS				
DECK GIRDERS	1.0	0.4		

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



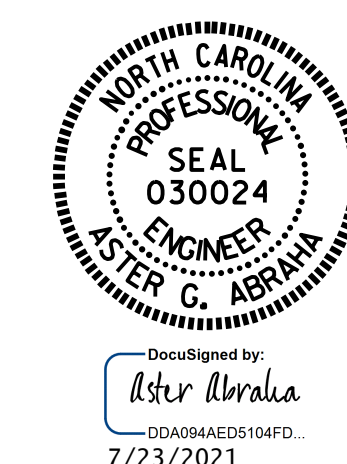
GIRDER REPAIR LOCATIONS

(UNDERSIDE)

REPAIR KEY

- DIAPHRAGM SHOTCRETE REPAIR
- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320148



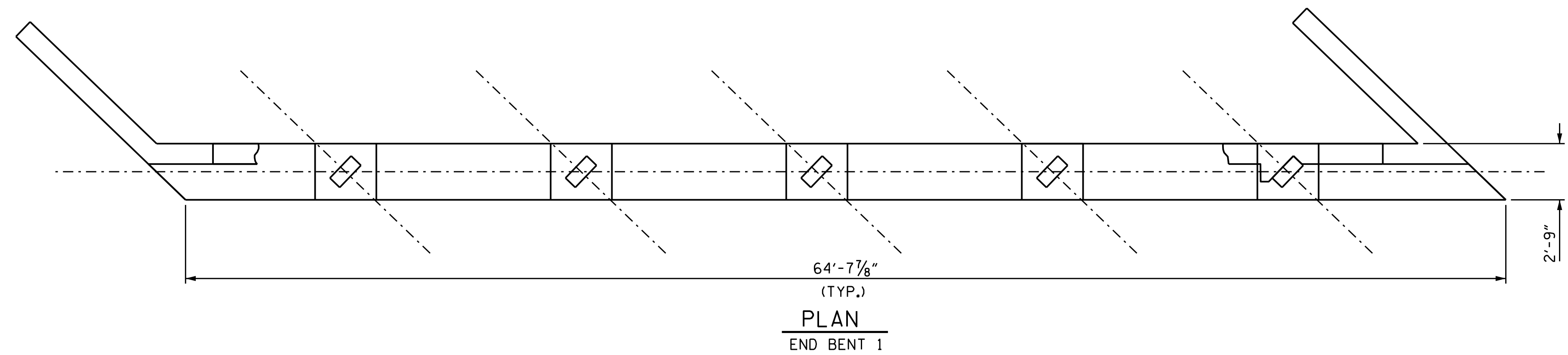
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUPERSTRUCTURE
 CONCRETE REPAIRS**

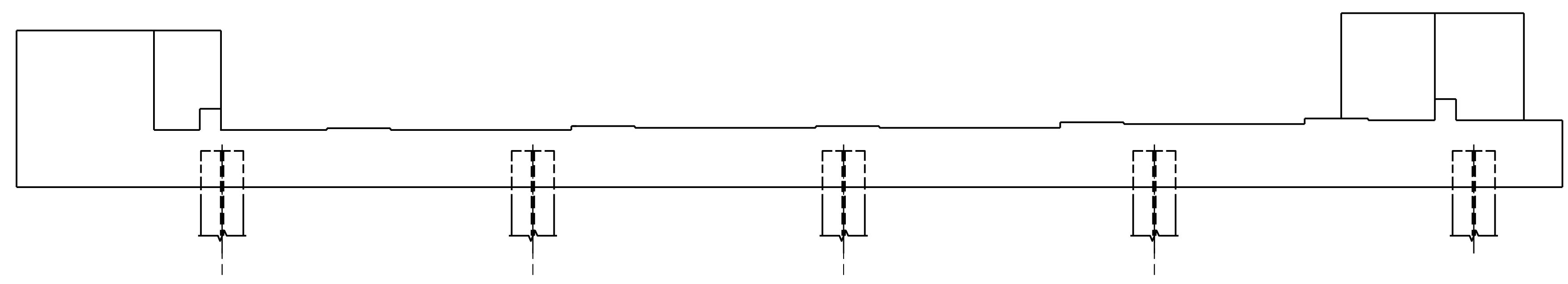
DRAWN BY : A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHAMA/S. WANCE DATE : 05/2021

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1			3			TOTAL SHEETS
2			4			118

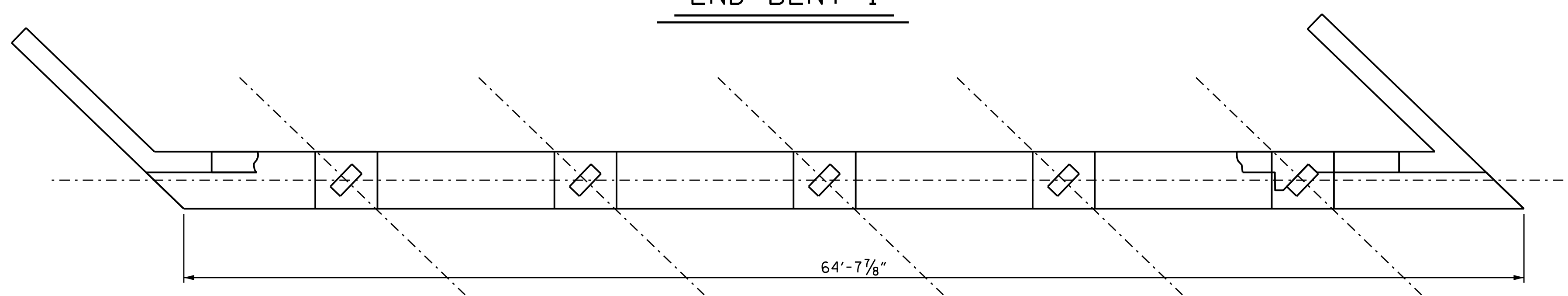


PLAN
END BENT 1

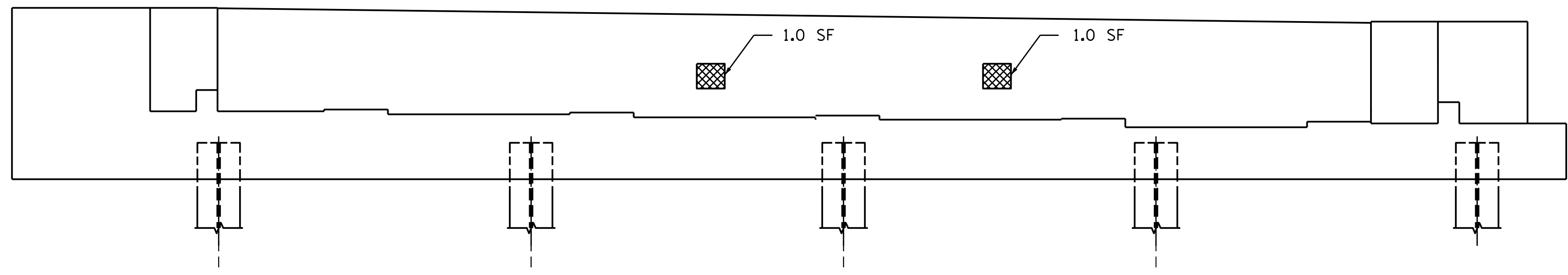


ELEVATION
END BENT 1
(EAST FACE)

END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2
(WEST FACE)

END BENT 2

REPAIR QUANTITY TABLE

REPAIRS END BENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	2.0	1.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		

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

NOTES:

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

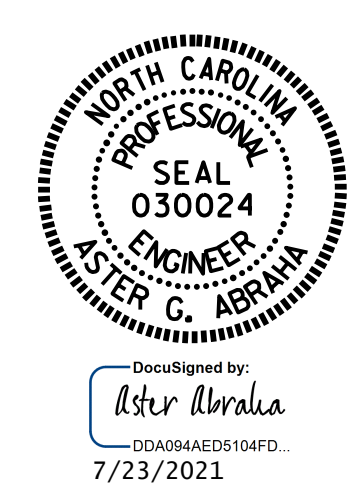
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320148

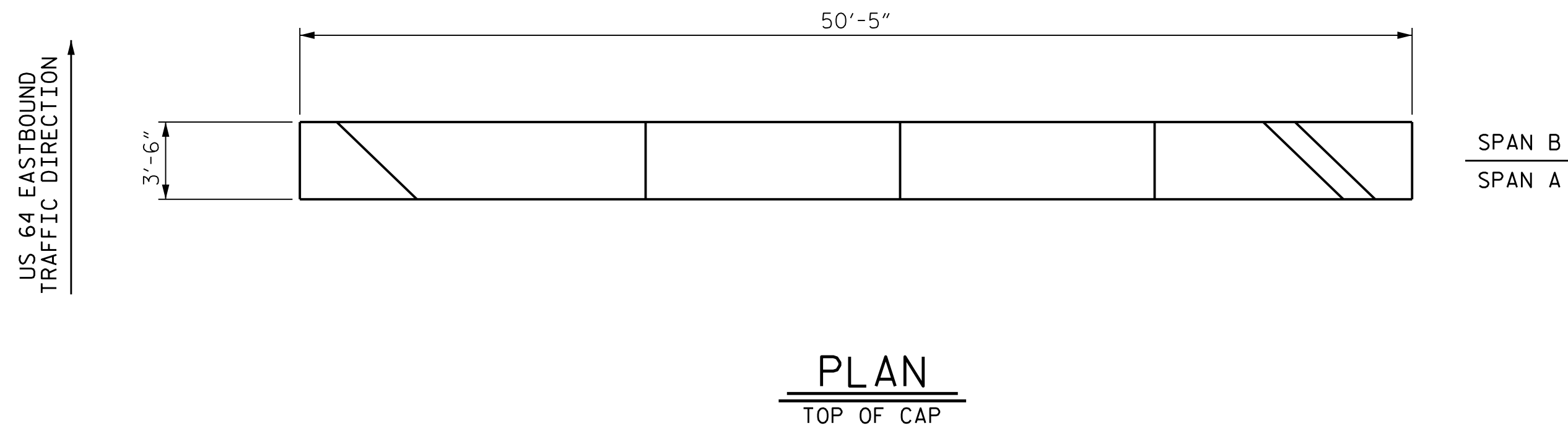


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 END BENT 1 &
 END BENT 2

DRAWN BY : A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S1-8
2			4			TOTAL SHEETS 118

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

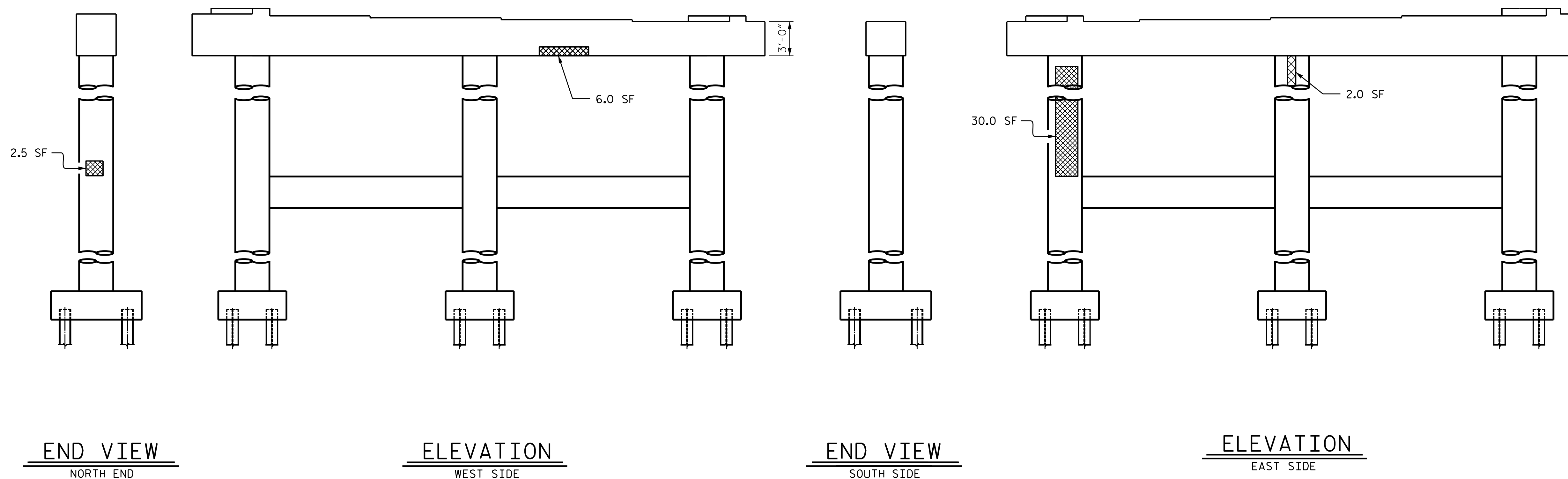
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	6.0	3.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	34.5	17.3		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

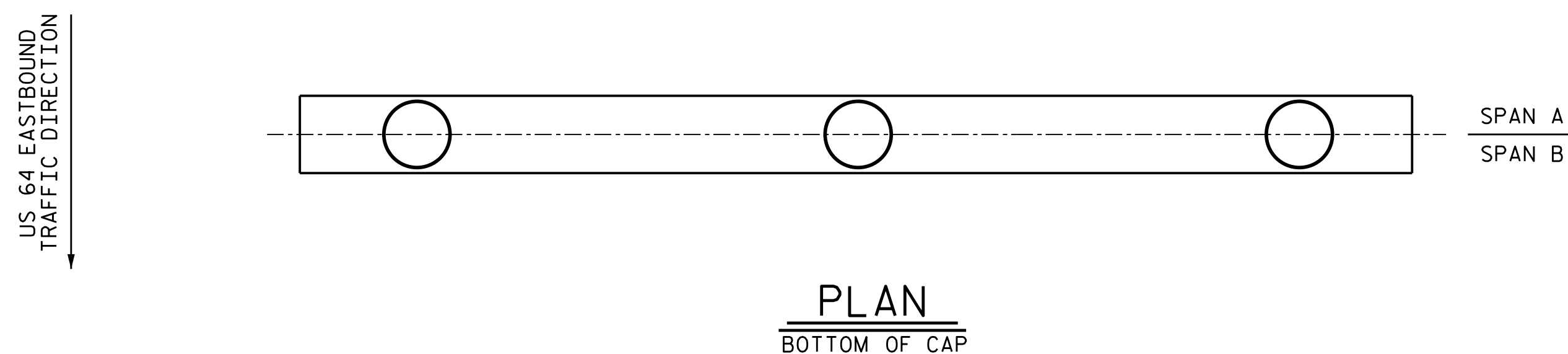


END VIEW
NORTH END

ELEVATION
WEST SIDE

END VIEW
SOUTH SIDE

ELEVATION
EAST SIDE



REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320148

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

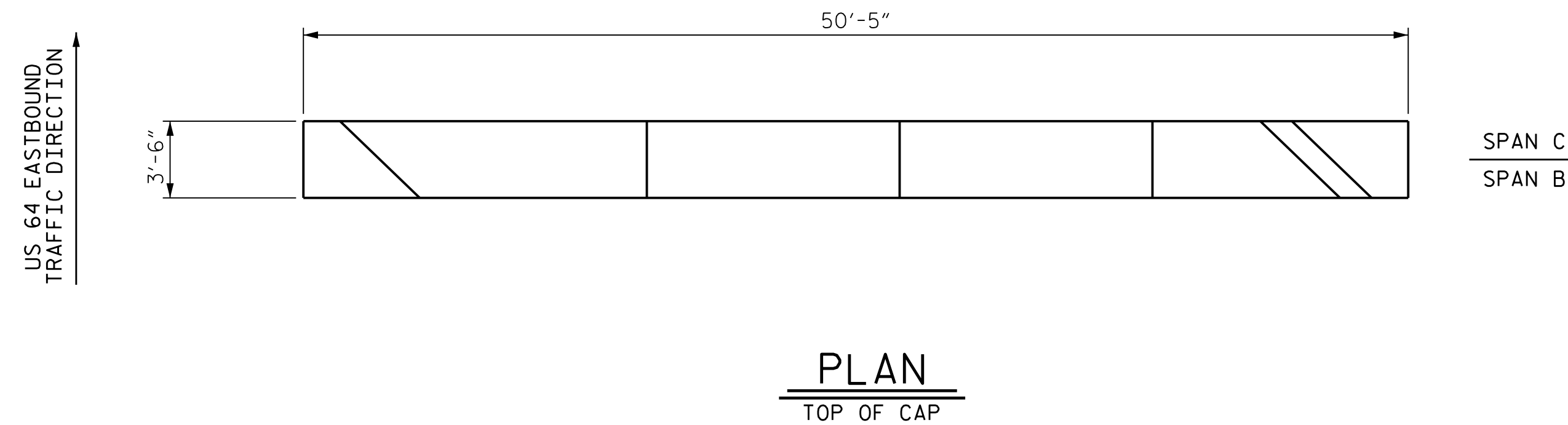
**SUBSTRUCTURE
 BENT 1**



DRAWN BY : A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-9
1			3			TOTAL SHEETS
2			4			118



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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

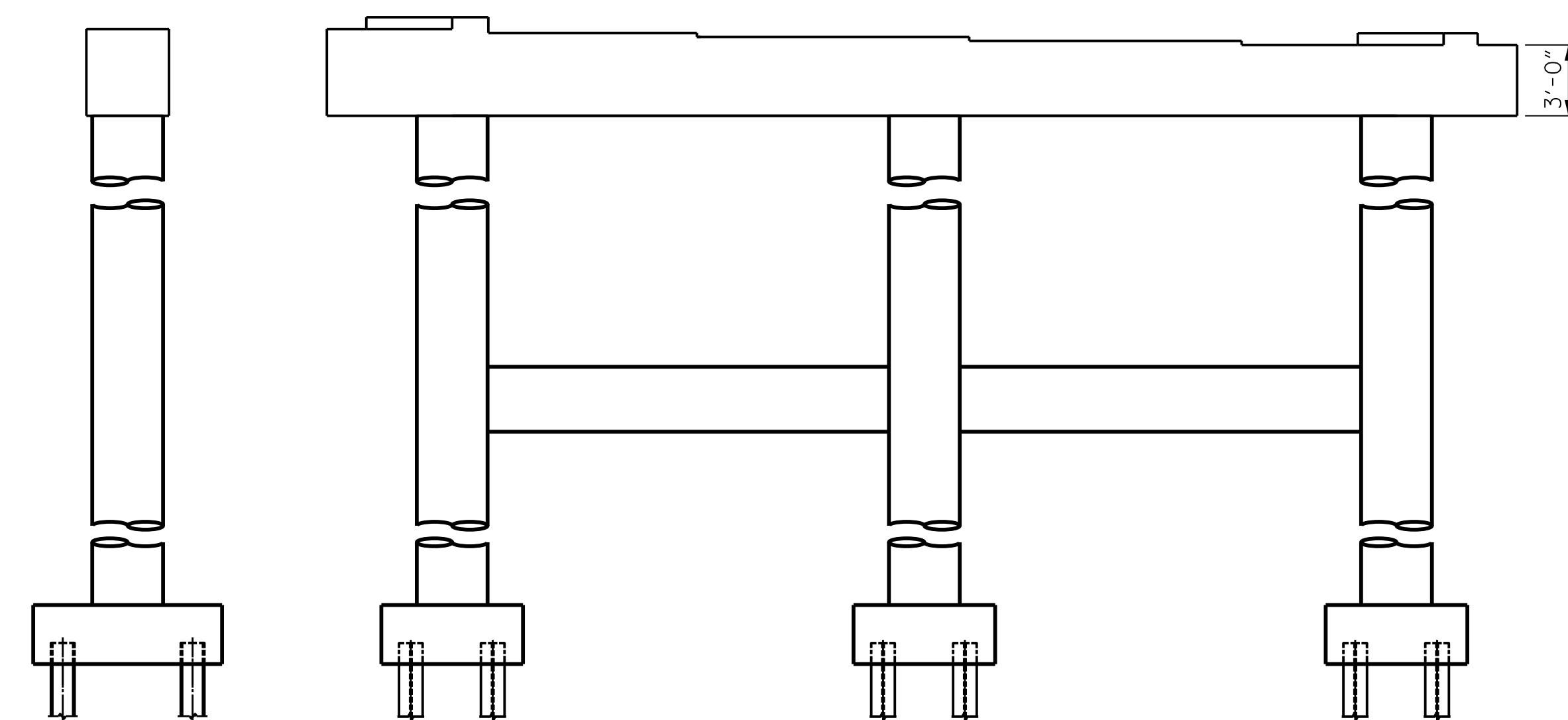
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

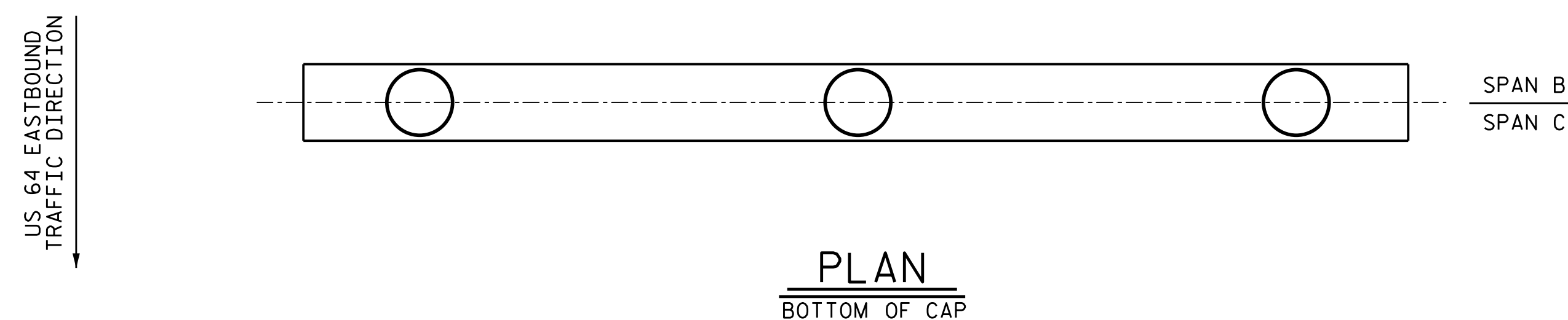


END VIEW
NORTH END

ELEVATION
WEST SIDE

END VIEW
SOUTH SIDE

ELEVATION
EAST SIDE



REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGECOMBE COUNTY
BRIDGE NO. 320148

SHEET 2 OF 2



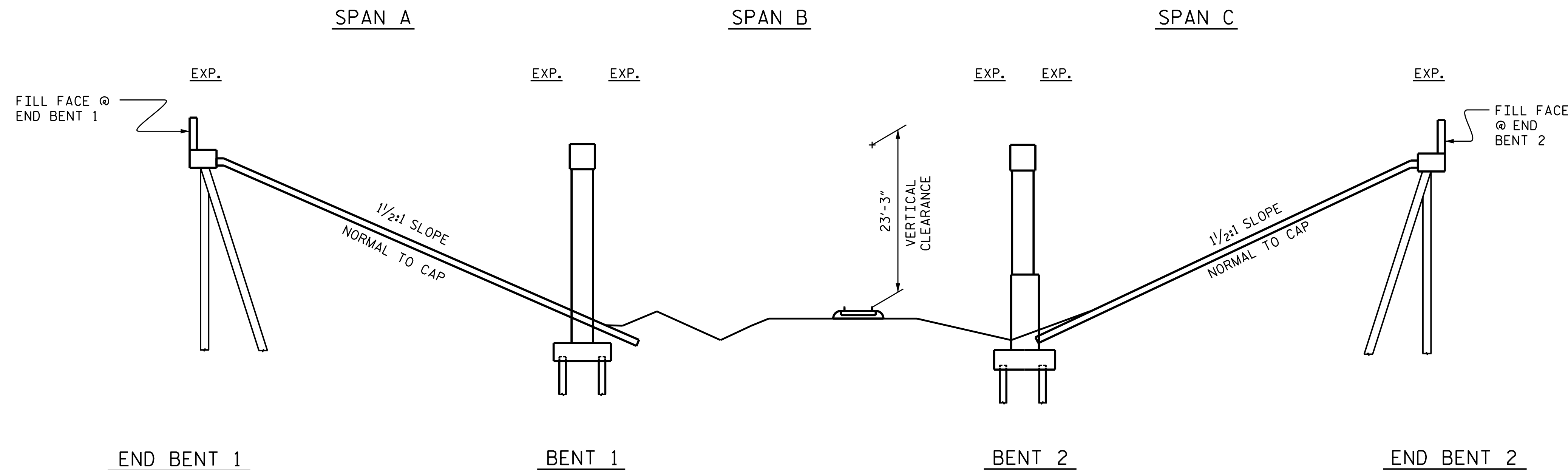
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUBSTRUCTURE
BENT 2**

DRAWN BY : A. Y. GODFREY DATE : 10/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-10
1			3			TOTAL SHEETS
2			4			118



SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC CONCRETE AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.

NOTES

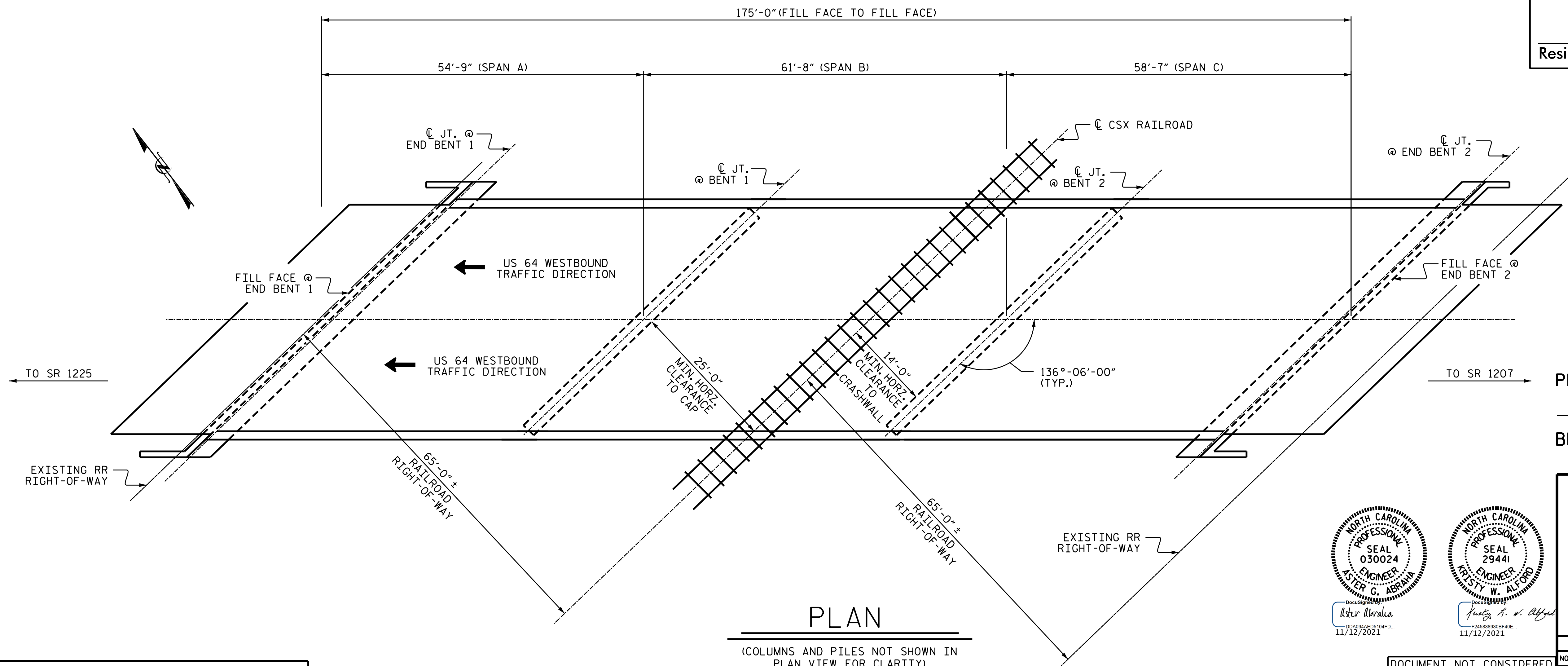
GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 1/26/2017 AND 1/4/2021.

BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

RAILROAD RIGHT-OF-WAY IS TAKEN FROM THE BEST INFORMATION AVAILABLE AND NOT EXACT. RAILROAD RIGHT-OF-WAY IS FOR INFORMATION PURPOSES ONLY AND TO BE VERIFIED IN THE FIELD.

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

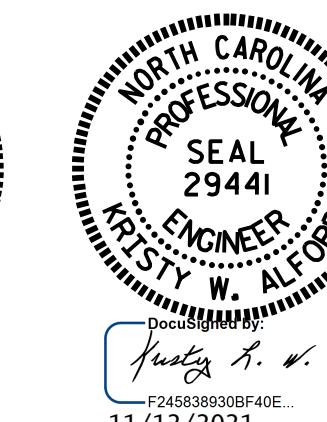
Resident Engineer Date



PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320155

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

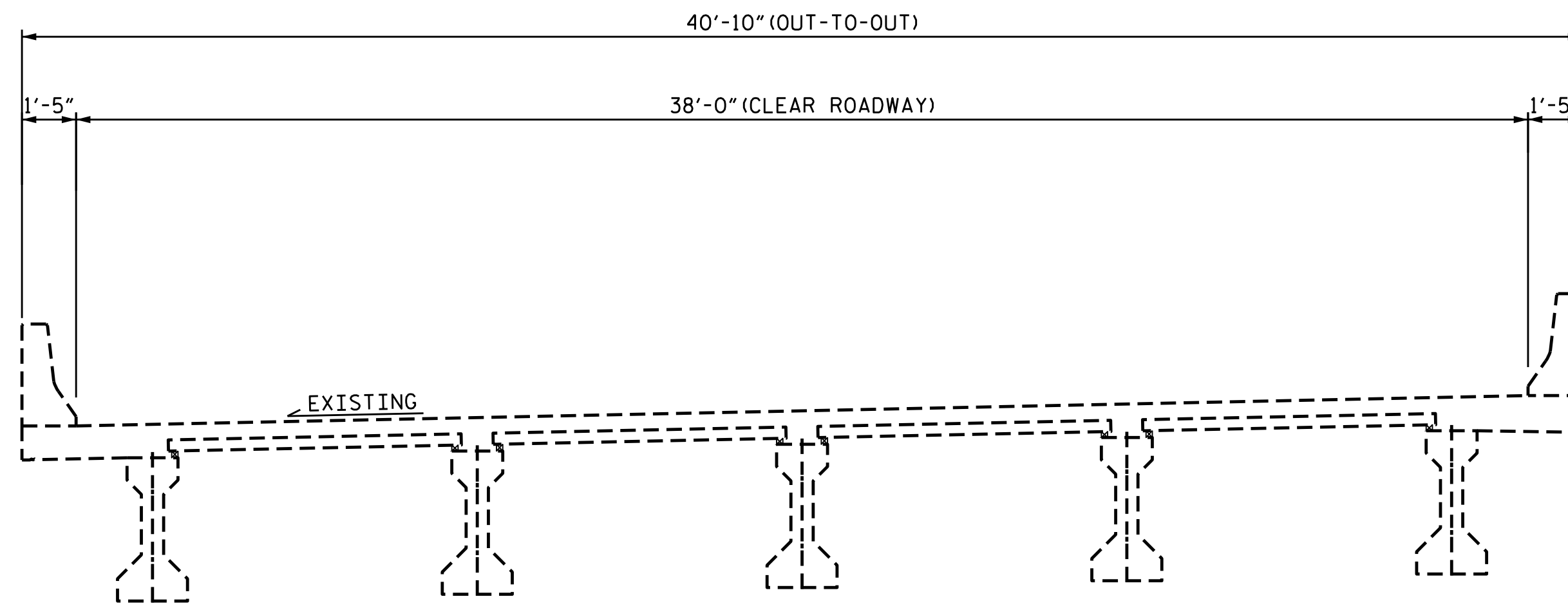
GENERAL DRAWING
 FOR BRIDGE NO. 155 ON US 64
 BETWEEN SR 1225 & SR 1207
 OVER CSX RAILROAD



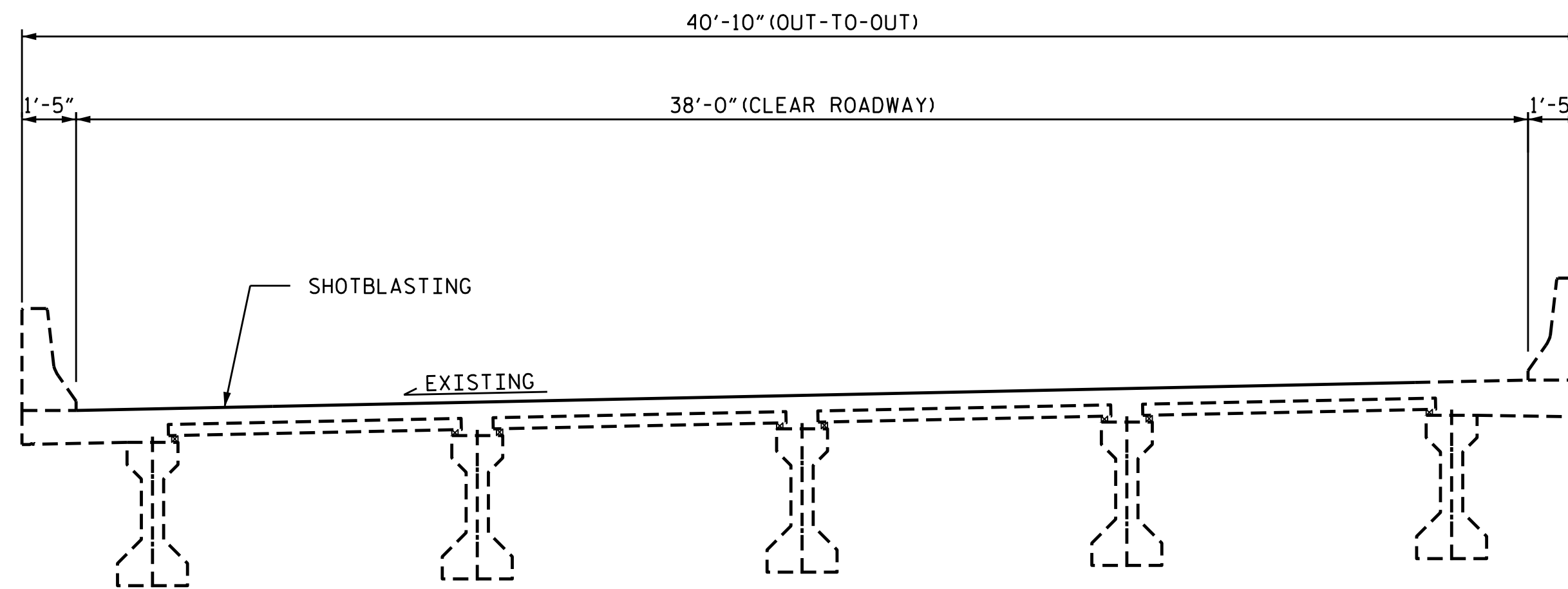
DRAWN BY : A. Y. GODFREY DATE : 09/2019
 CHECKED BY : A. B. ABRAHA DATE : 10/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

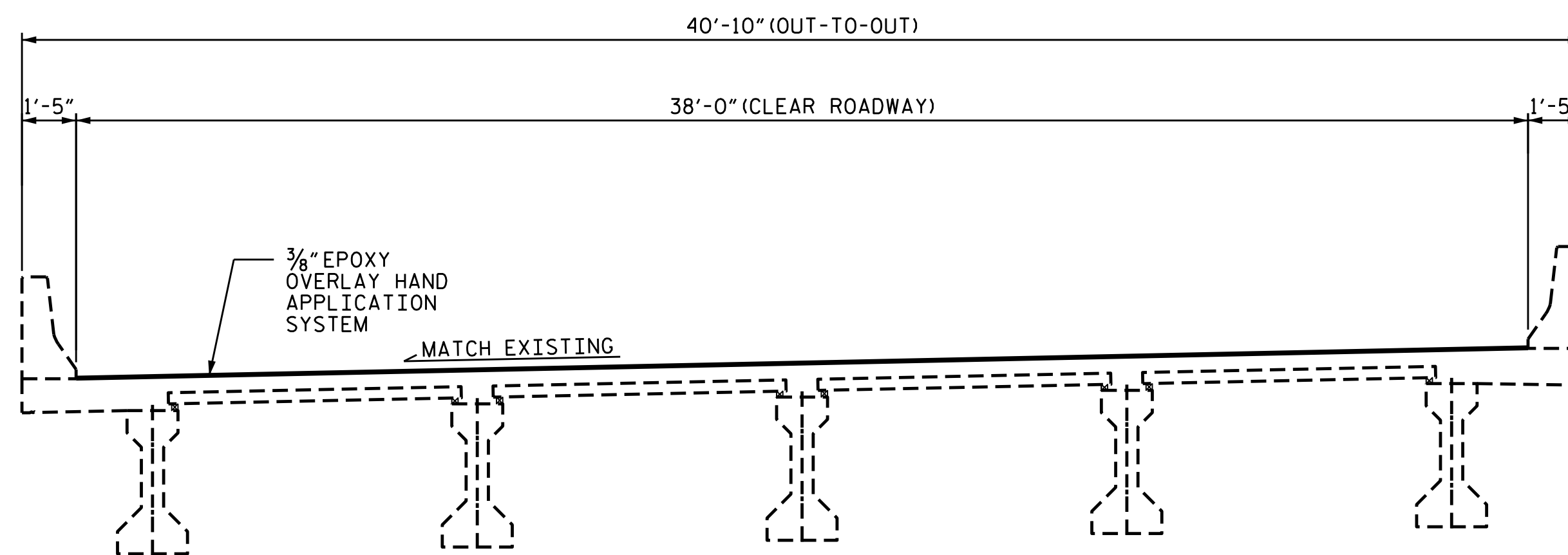
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-1
1			3			TOTAL SHEETS
2			4			118



TYPICAL SECTION
(EXISTING)



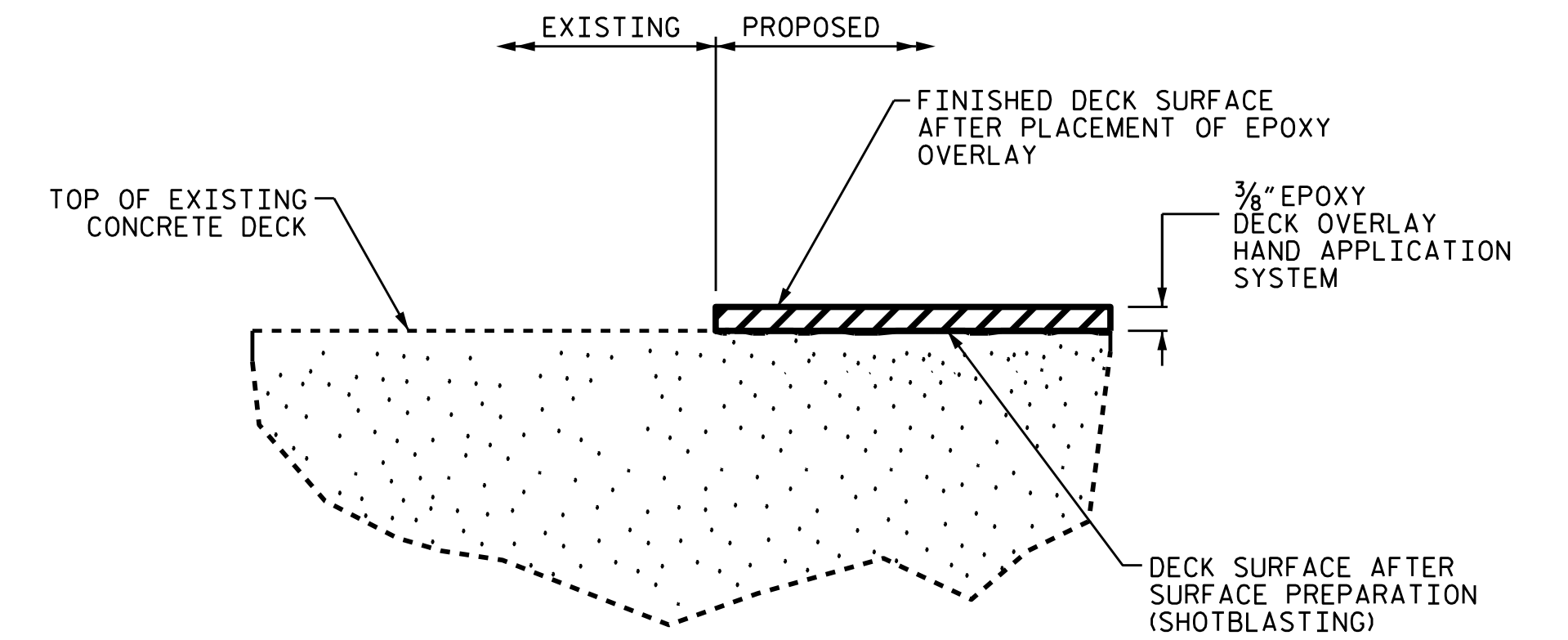
TYPICAL SECTION
(DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

NOTES

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



EPOXY OVERLAY HAND APPLICATION SYSTEM DETAIL

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320155



DocuSigned by:
Aster Abraha
00408AAED510AFD...
7/23/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
TYPICAL SECTION

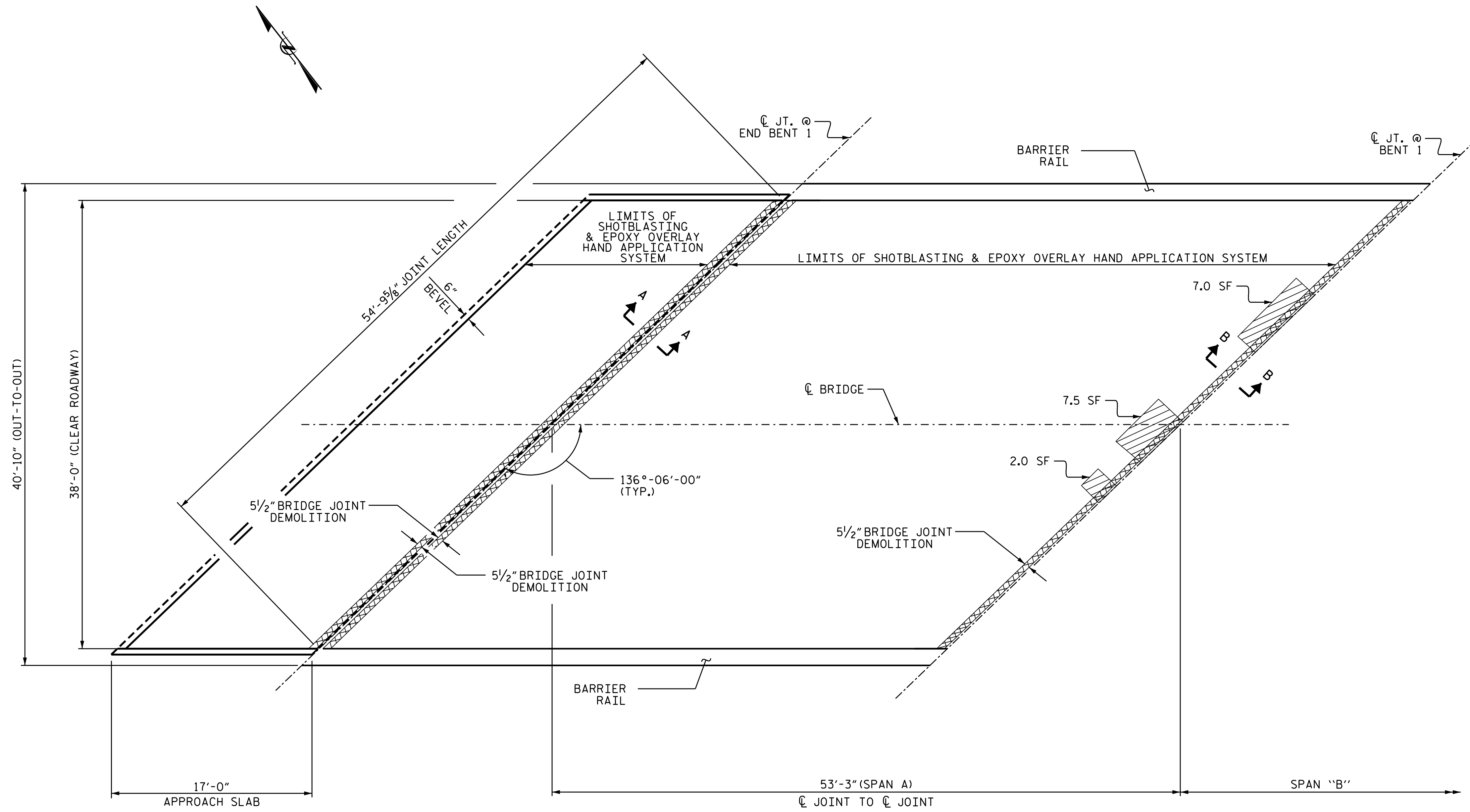
DRAWN BY : A. Y. GODFREY DATE : 09/2019
CHECKED BY : A. G. ABRAHA DATE : 10/2019

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S2-2
2			4			118

SUMMARY OF QUANTITIES FOR
SPAN A AND APPROACH SLAB

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,560 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	16.5 SF	
BRIDGE JOINT DEMOLITION	75.4 SF	



PLAN OF SPAN A
AND APPROACH SLAB

(SEE SHEET NO. S5-6 FOR SECTION A-A AND SECTION B-B)

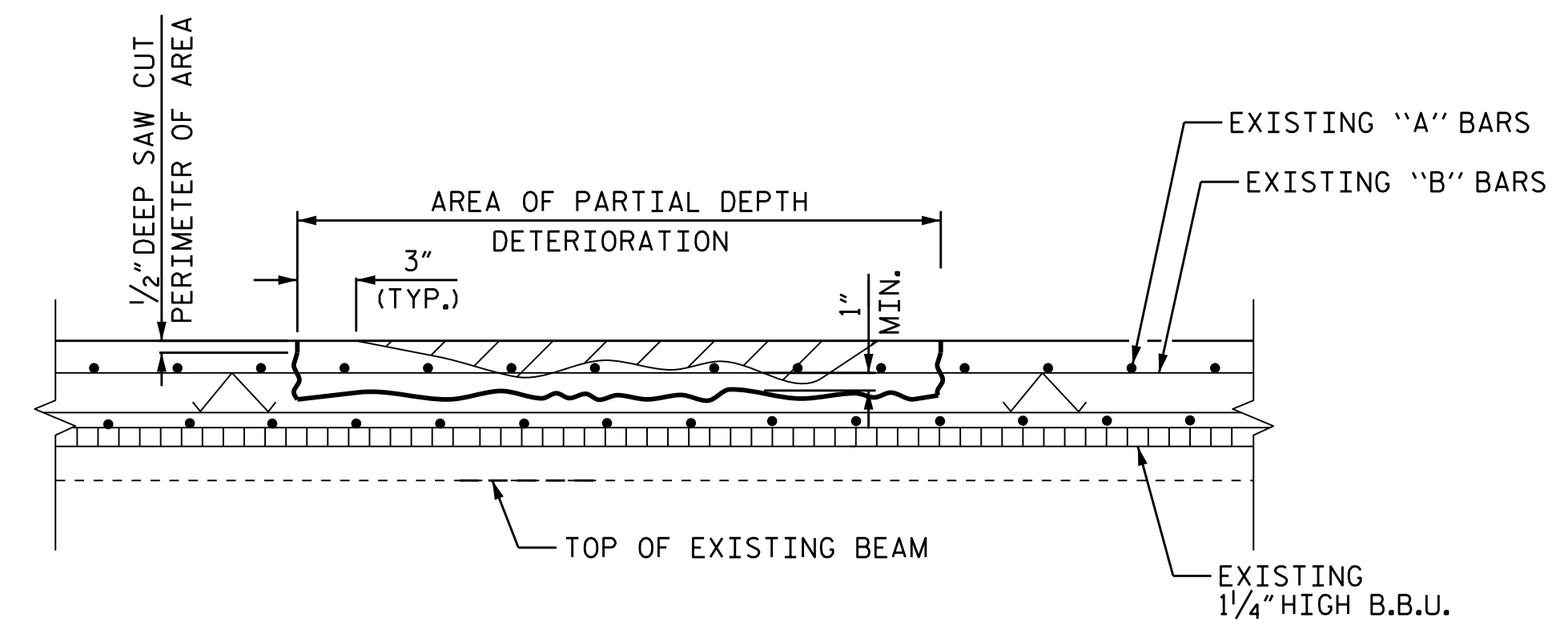
NOTES:
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS- BUILT REPAIR QUANTITIES TABLE.
FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.
FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS.
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

REPAIR KEY

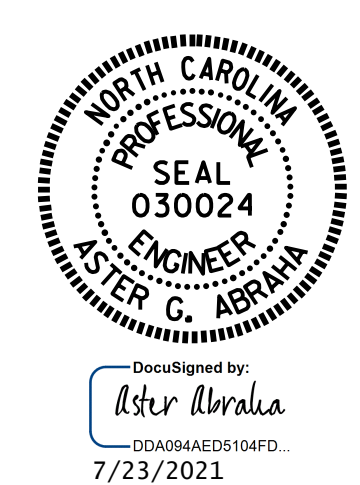
- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320155

SHEET 1 OF 3



CONCRETE DECK REPAIR FOR EPOXY OVERLAY

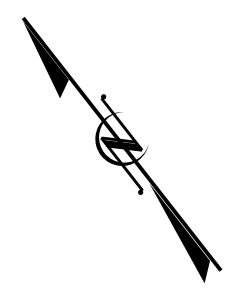


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SURFACE PREPARATION
SPAN A AND
APPROACH SLAB

DRAWN BY : A. Y. GODFREY DATE : 09/2019
CHECKED BY : A. B. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S2-3
2			4			118

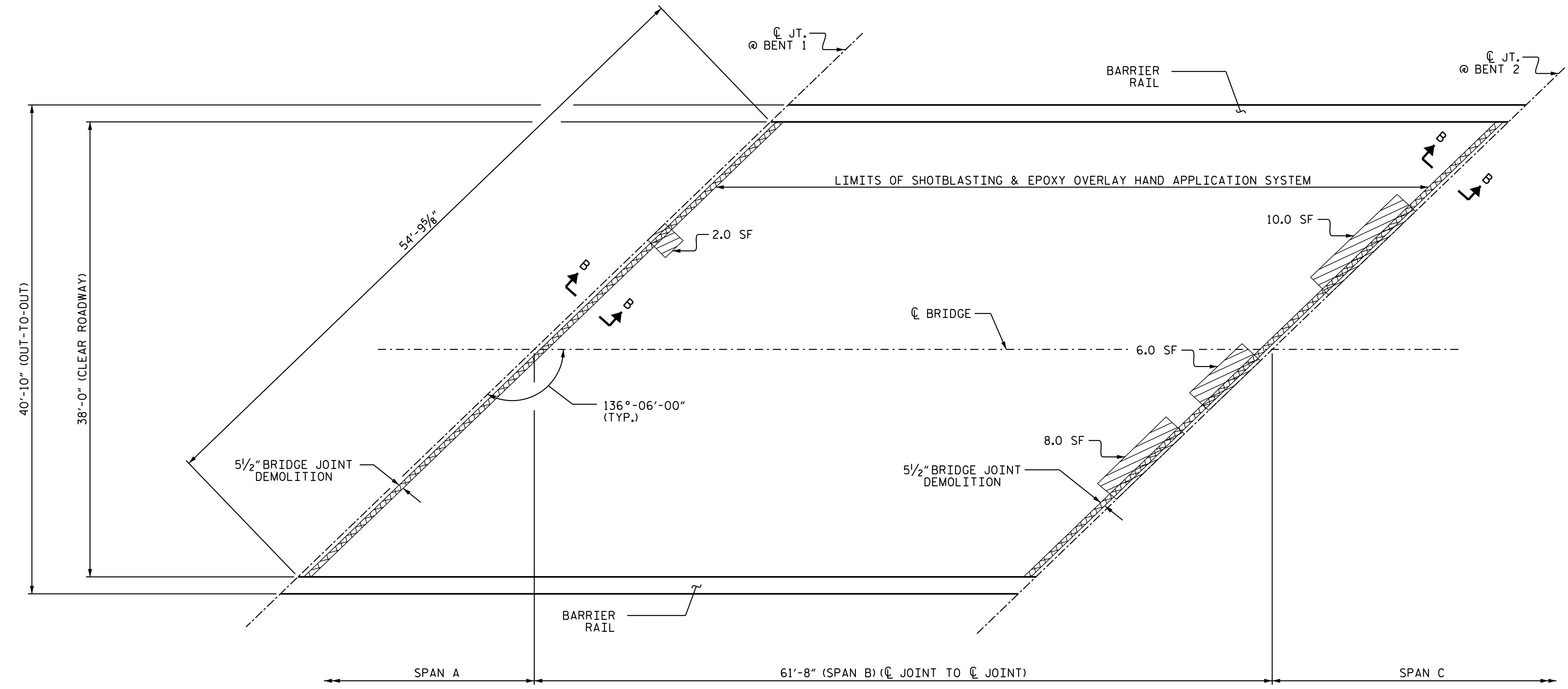


NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,293 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	26.0 SF	
BRIDGE JOINT DEMOLITION	50.2 SF	



REPAIR KEY

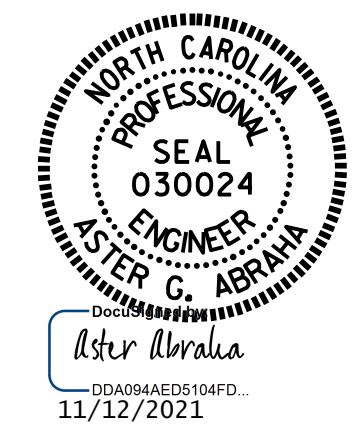
- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN B

(SEE SHEET NO. S4-6 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320155

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN B**

DRAWN BY : A. Y. GODFREY DATE : 09/2019
 CHECKED BY : A. B. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

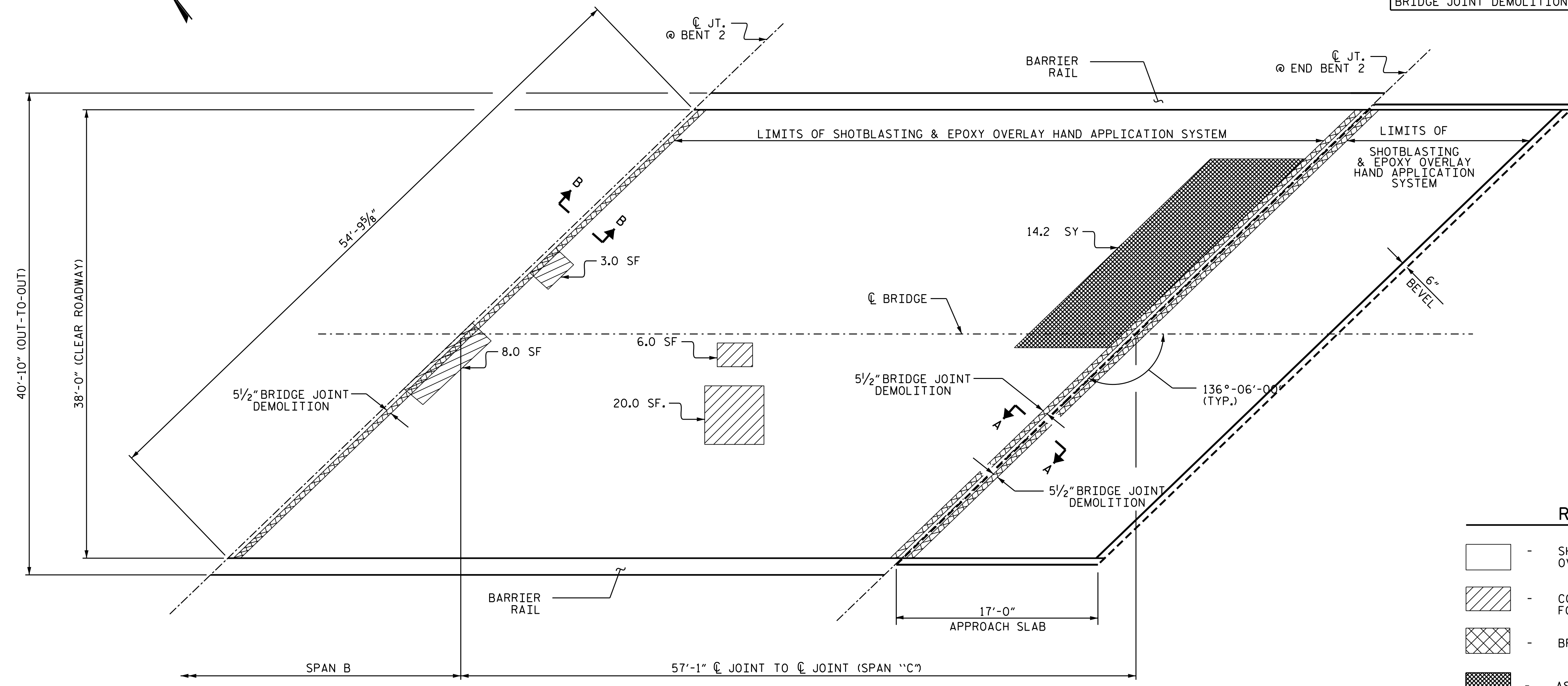
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-4
1			3			TOTAL SHEETS
2			4			118

SUMMARY OF QUANTITIES FOR SPAN C AND APPROACH SLAB

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,706 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	37.0 SF	
BRIDGE JOINT DEMOLITION	75.4 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.



PLAN OF SPAN C AND APPROACH SLAB

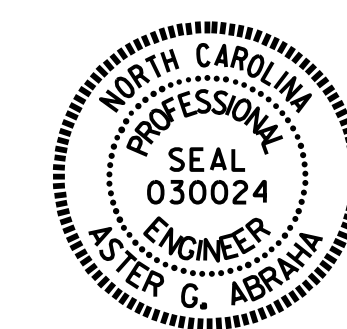
(SEE SHEET NO. S5-6 FOR SECTION A-A AND SECTION B-B)

REPAIR KEY

- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION
- ASPHALT WEARING SURFACE TO BE REMOVED

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320155

SHEET 3 OF 3



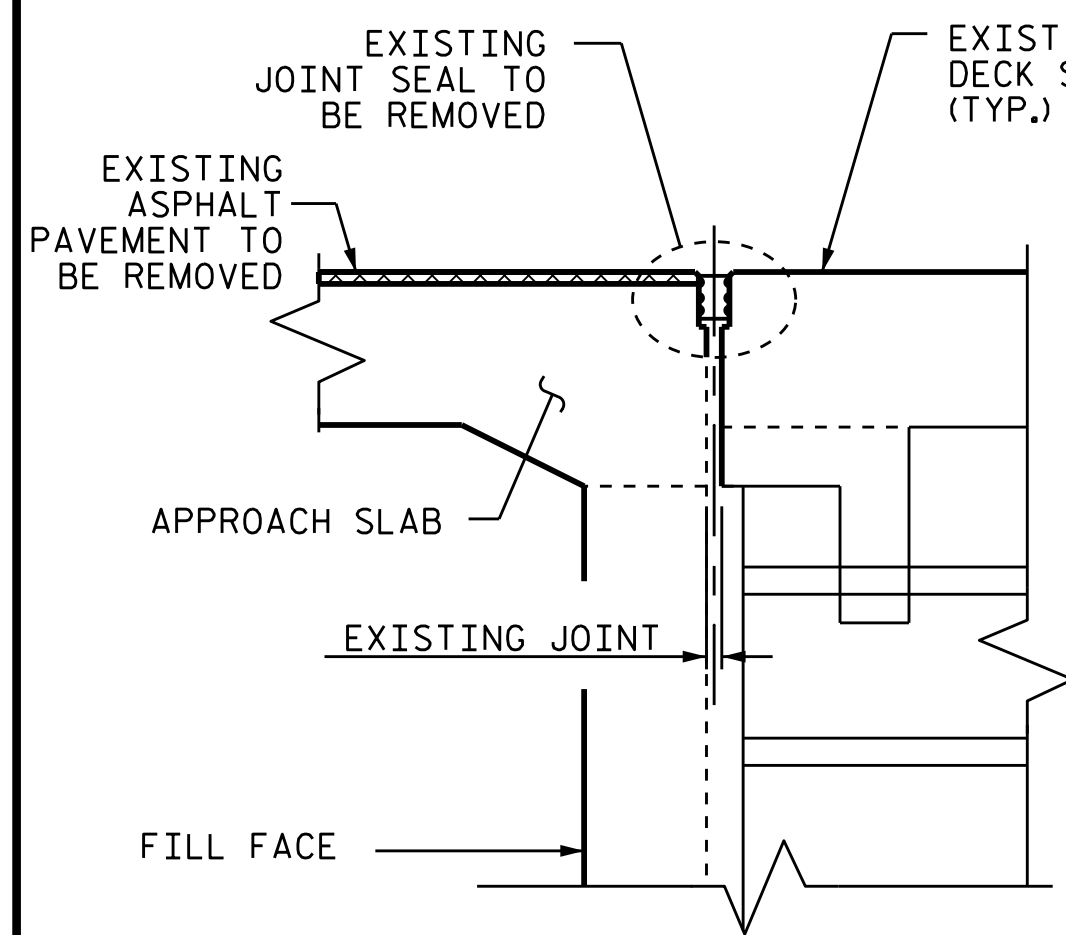
DocuSigned by:
 Aster Abrahams
 004084AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN C AND
 APPROACH SLAB

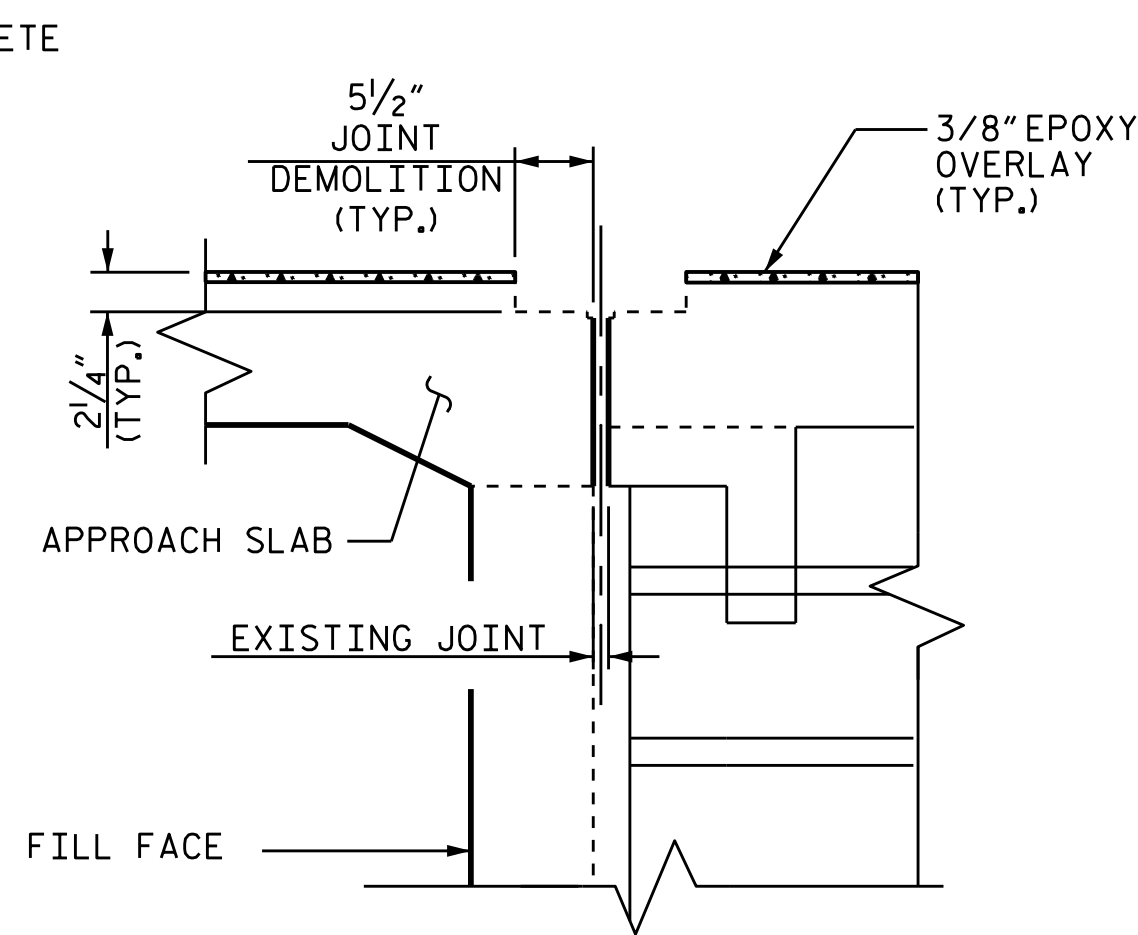
DRAWN BY : A. Y. GODFREY DATE : 09/2019
 CHECKED BY : A. B. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

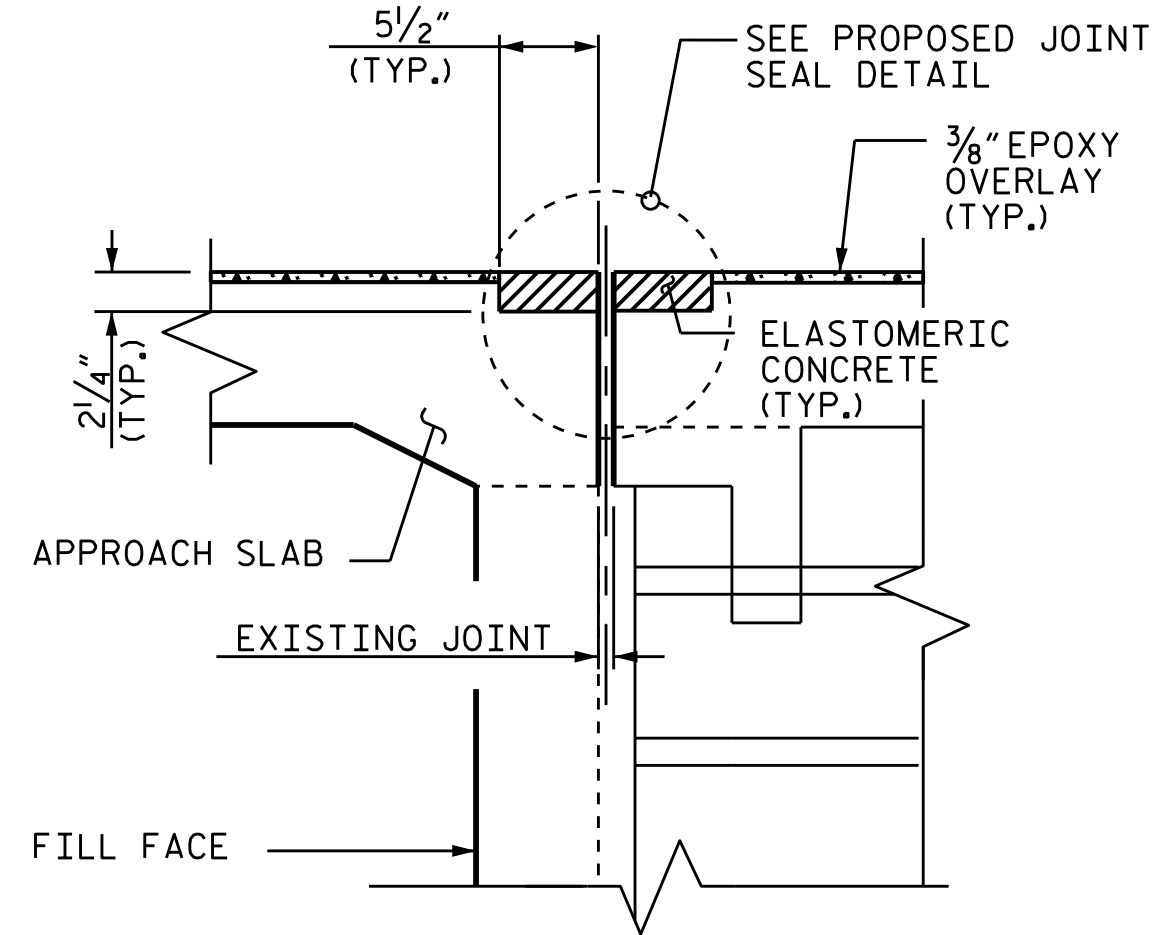
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S2-5
2			4			118



EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

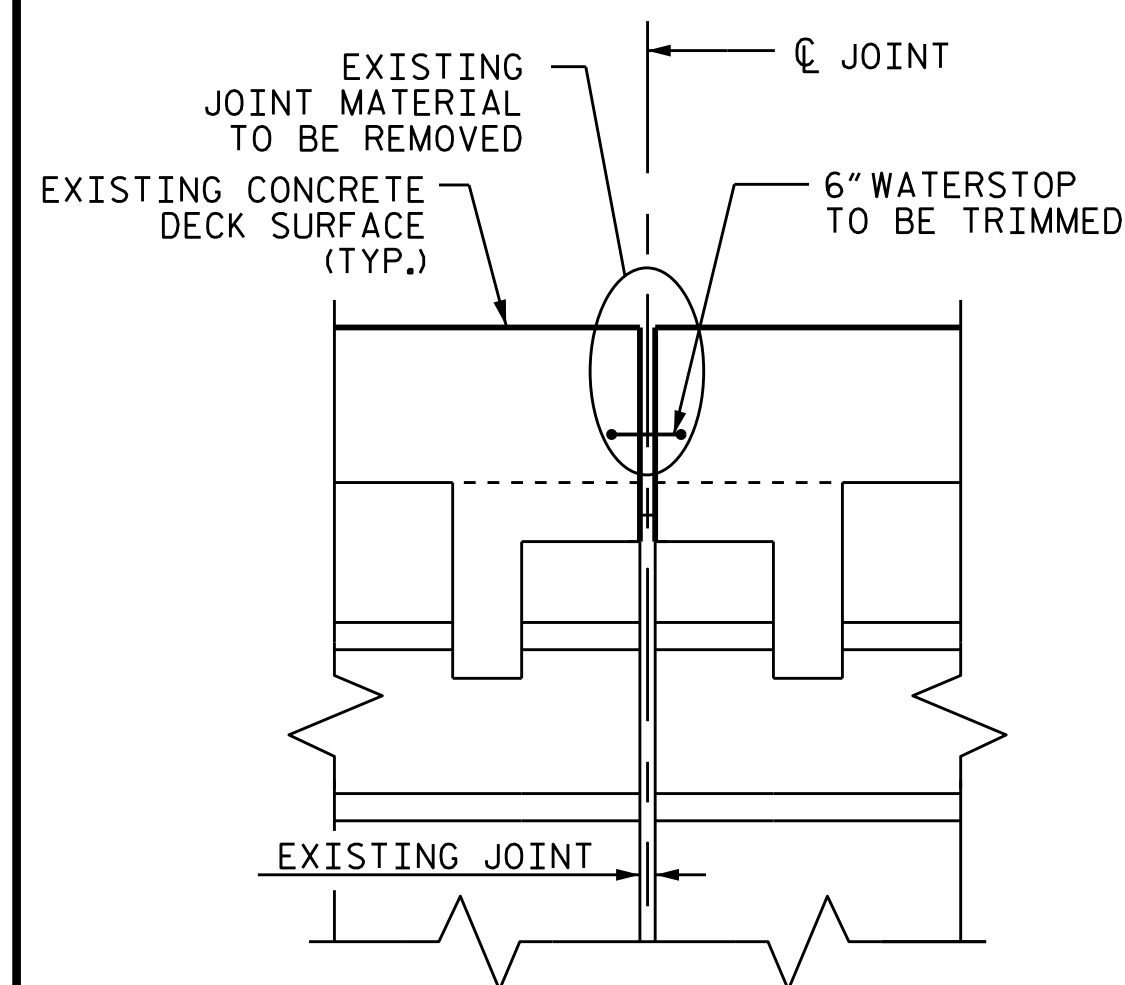
THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

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

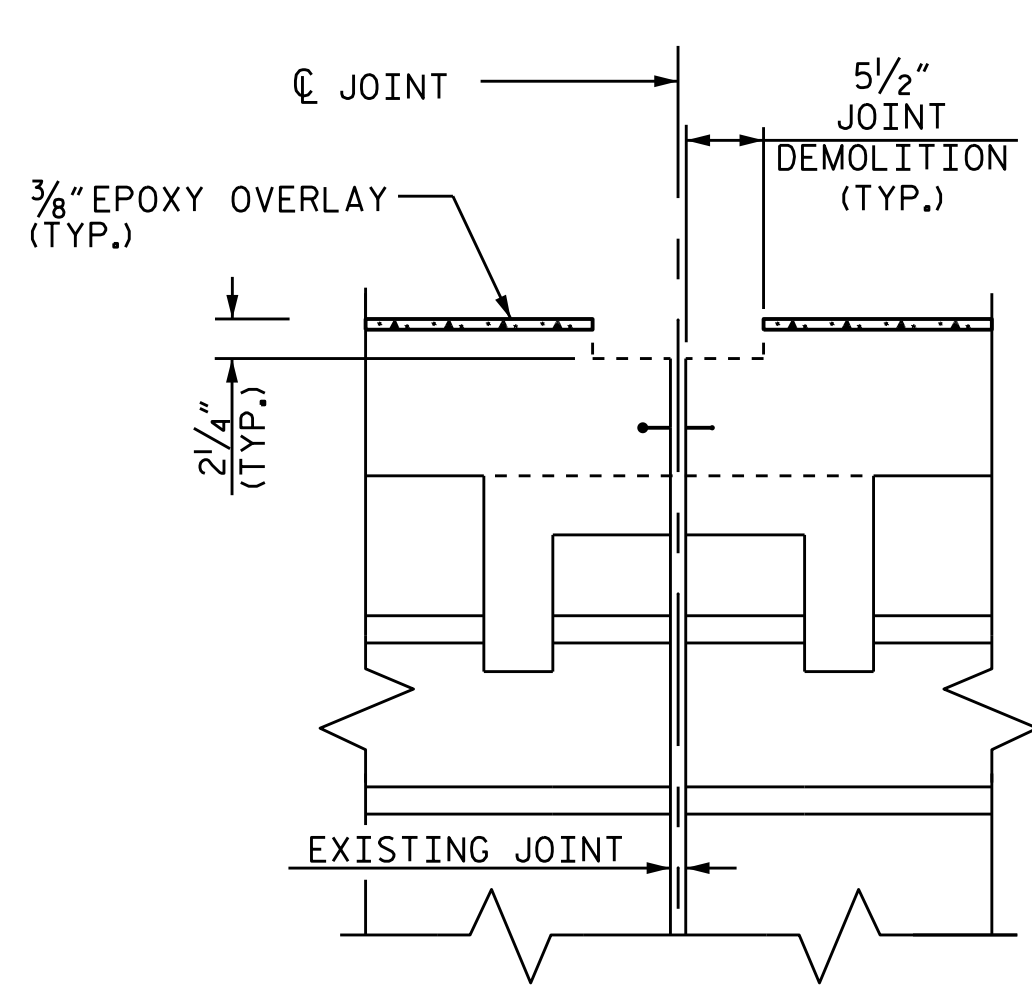
FOR BRIDGE JOINT DEMOLITION SEE SPECIAL PROVISIONS.

JOINT INSTALLATION SEQUENCE AT END BENTS

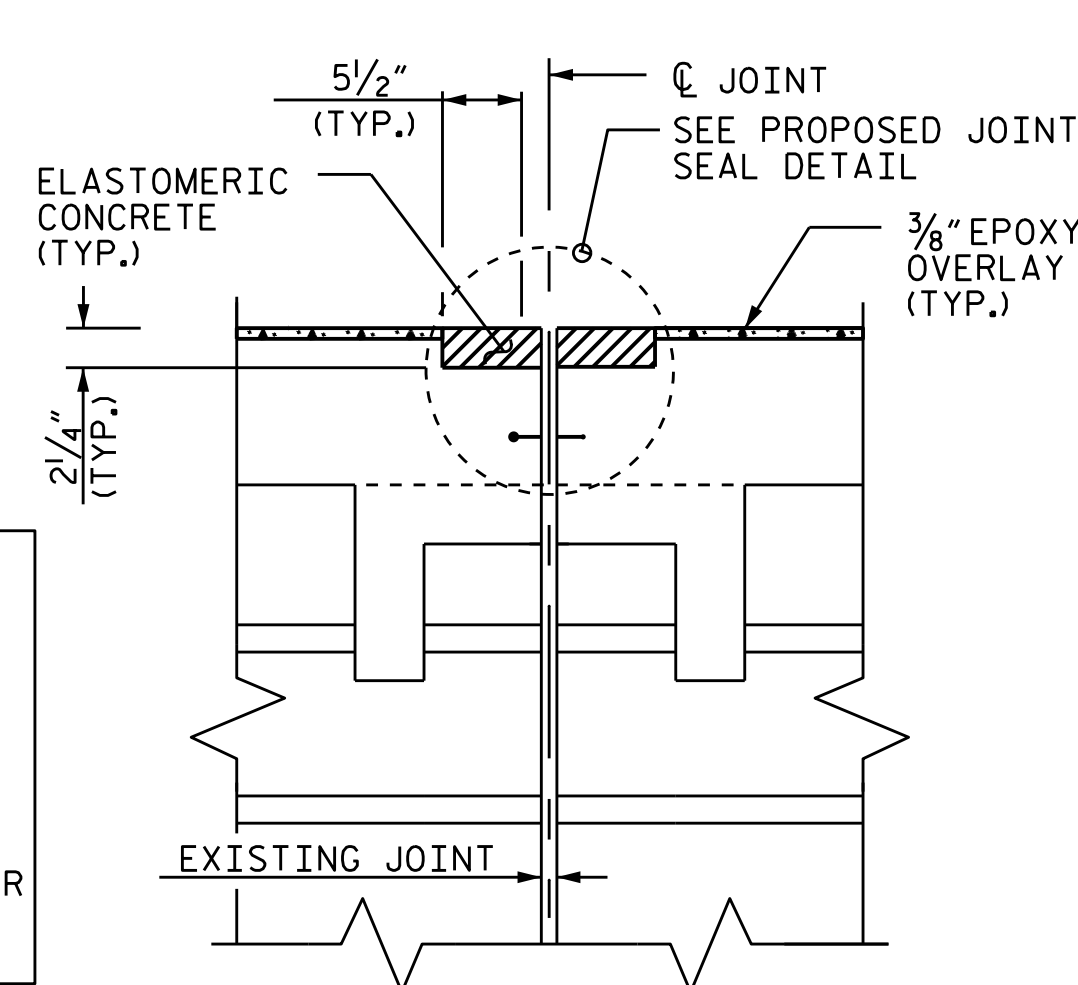
SECTION A-A



EXISTING JOINT

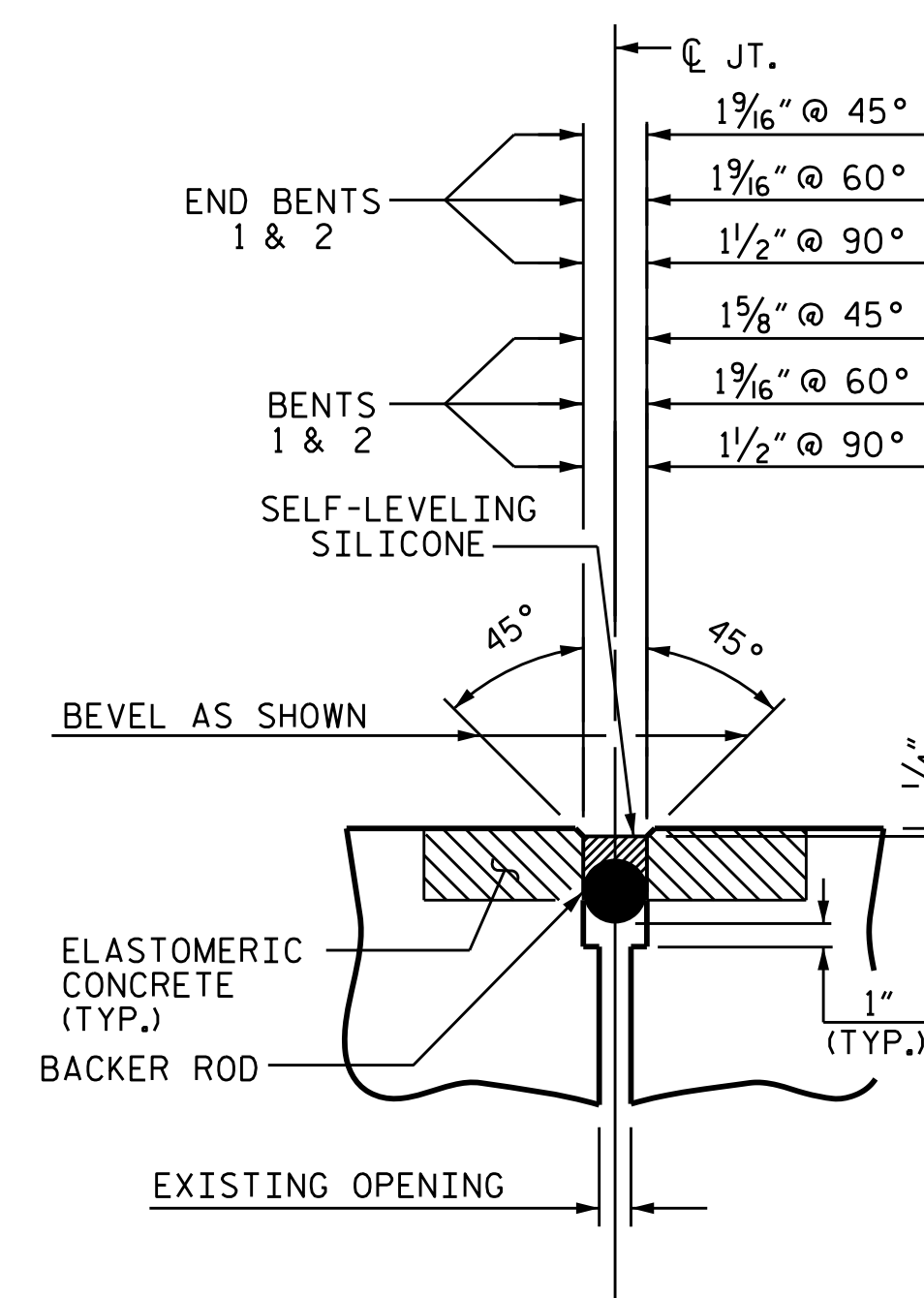


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.



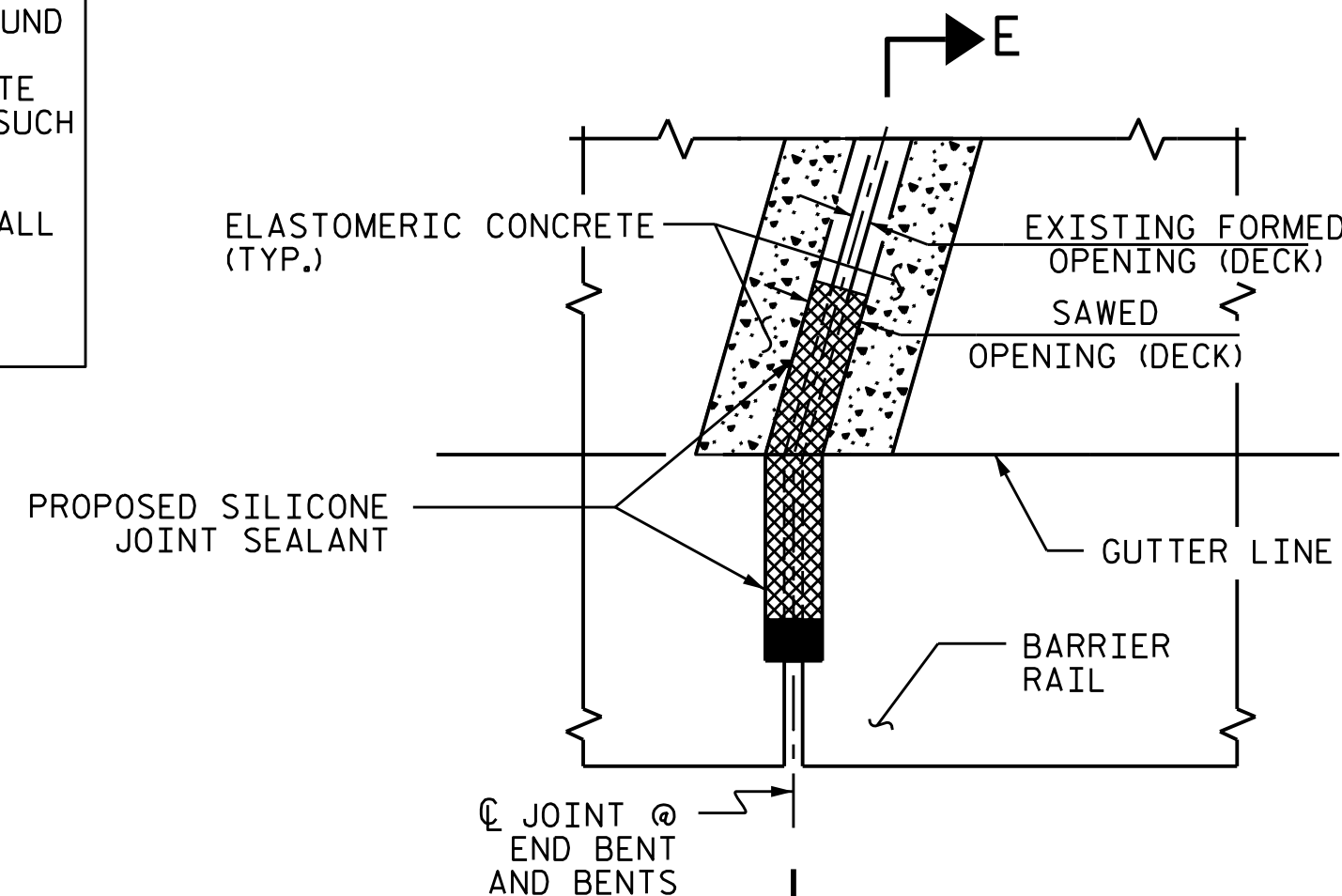
PROPOSED JOINT SEAL DETAIL (WITH SAWED DIMENSIONS)

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	37.6 CF	
POURABLE SILICONE JOINT SEALANT	219.2 LF	

JOINT INSTALLATION SEQUENCE AT BENTS

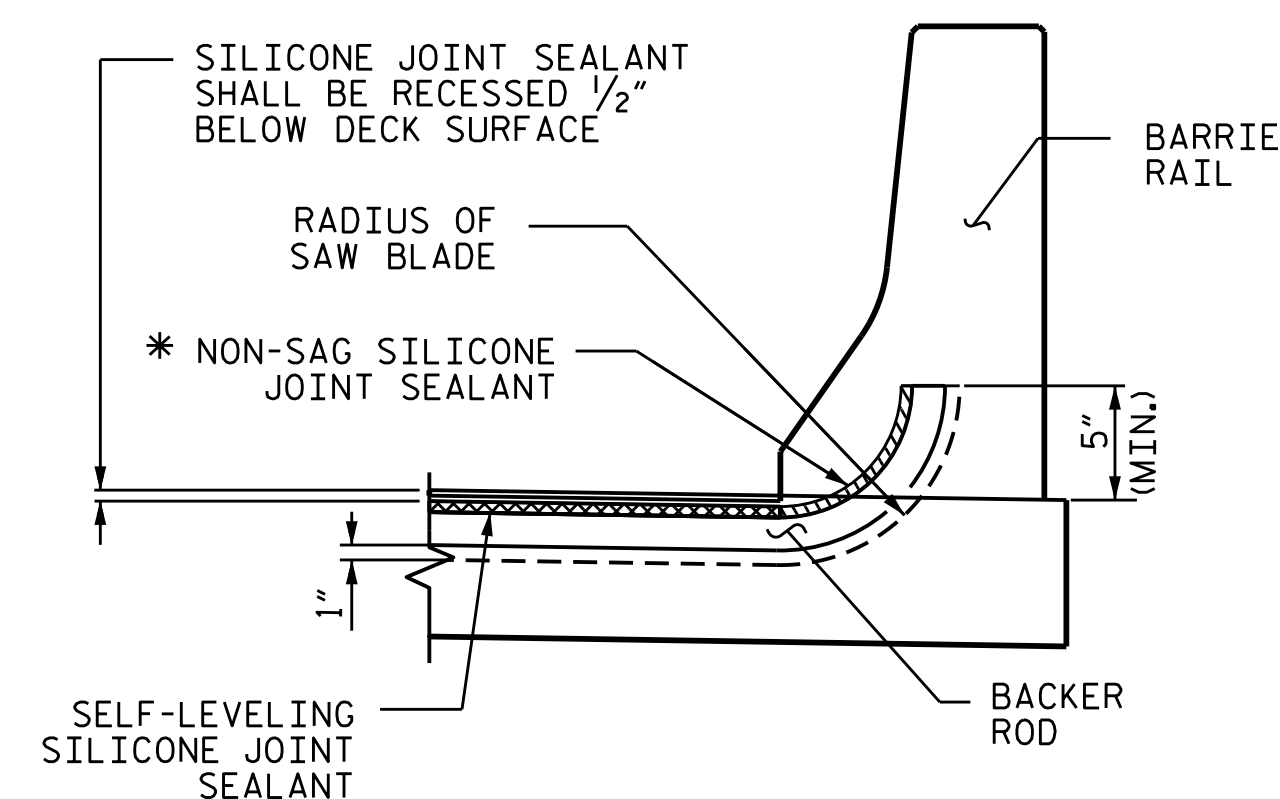
SECTION B-B

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



PLAN

* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



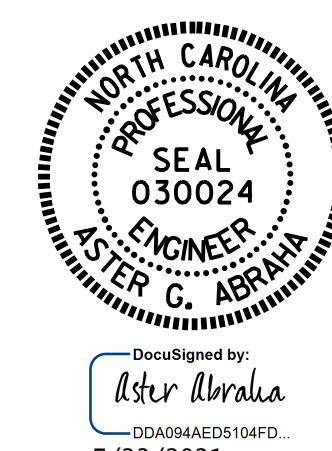
SECTION E-E

JOINT DETAIL AT BARRIER RAIL

PROJECT NO. I-6041A
 EDGEcombe COUNTY
 BRIDGE NO. 320155

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

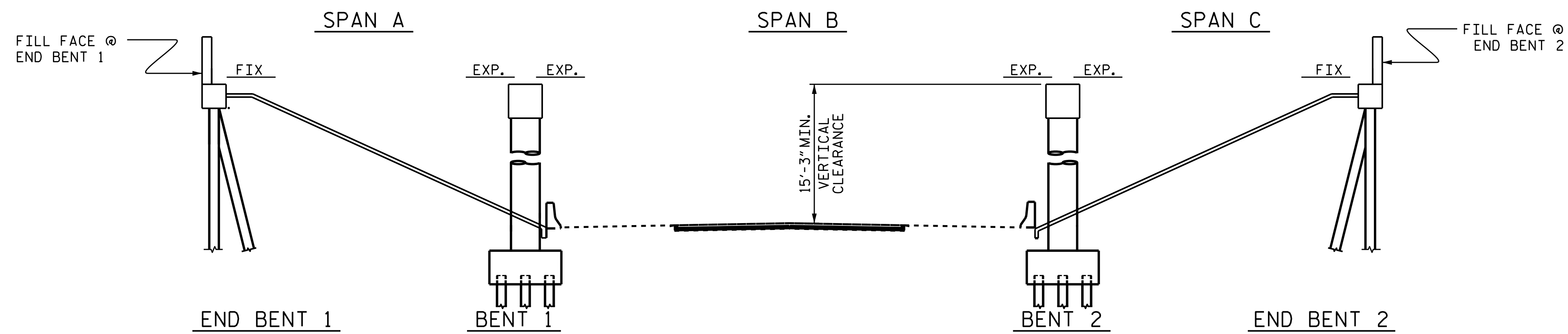
JOINT REPAIR DETAILS



DRAWN BY: A. Y. GODFREY DATE: 02/2021
 CHECKED BY: A. G. ABRAHA DATE: 07/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-6
1			3			TOTAL SHEETS
2			4			118



ELEVATION

(SECTION @ BENT AND END BENTS ARE AT RIGHT ANGLES)

SCOPE OF WORK

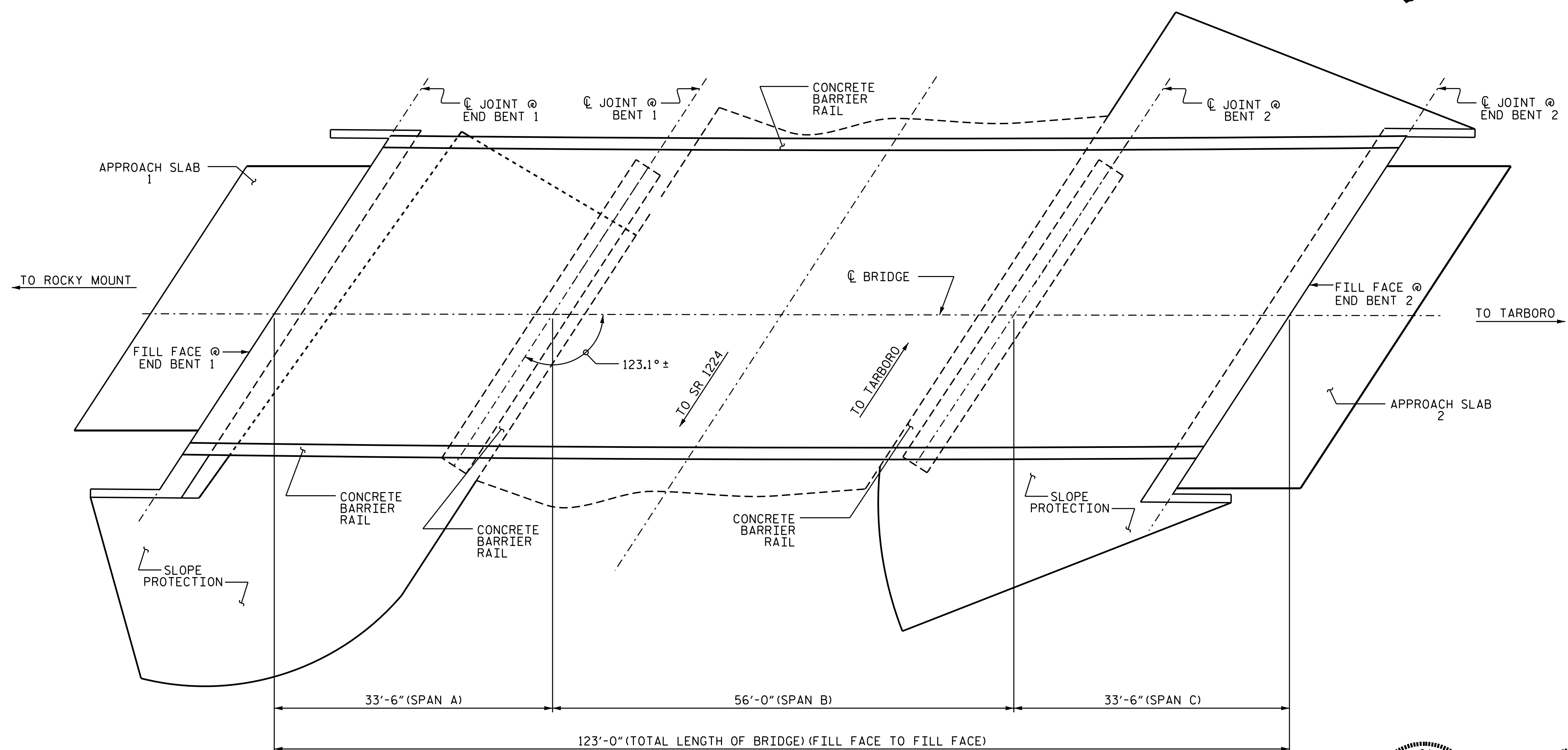
- BRIDGE DECK PREPARATION BY SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL ELASTOMERIC CONCRETE AND POURABLE SILICONE JOINT SEALANT.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENTS AND BENTS AREA FOR SHOTCRETE AND CONCRETE REPAIRS.
- REPAIR SUBSTRUCTURE USING EPOXY RESIN INJECTION AND SHOTCRETE REPAIRS.

NOTES

- GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION, DATED 01/02/2019 AND 01/25/2021.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE.

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



PLAN

(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320153

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING

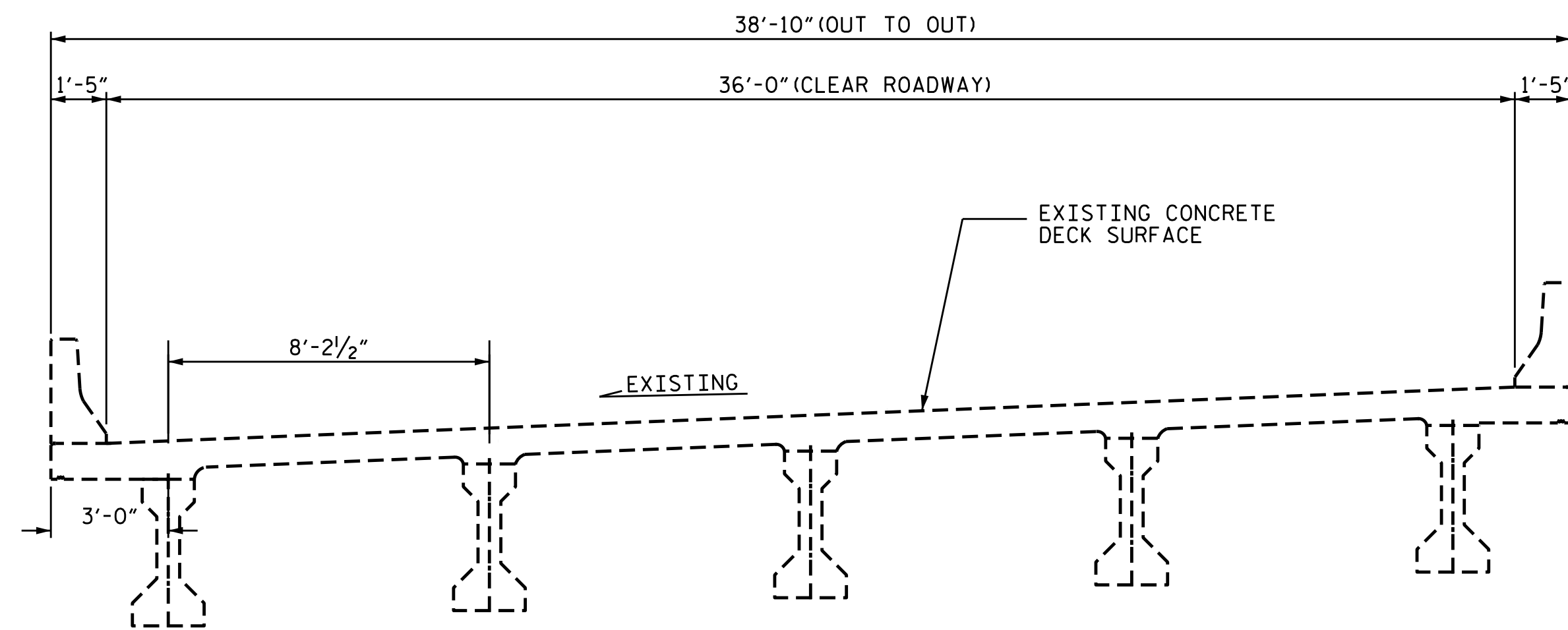
FOR BRIDGE NO. 153 ON
 US 64 BYP EBL OVER
 SR 1208



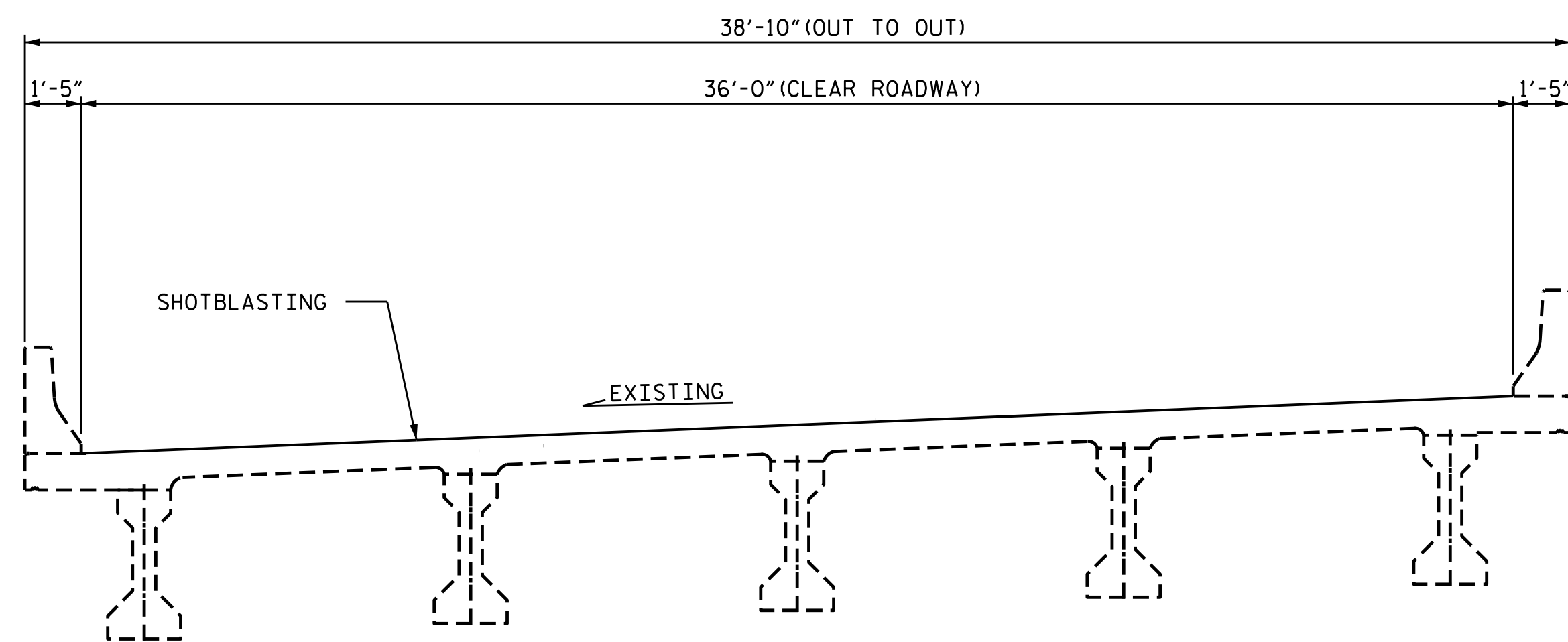
DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA DATE : 10/2019

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

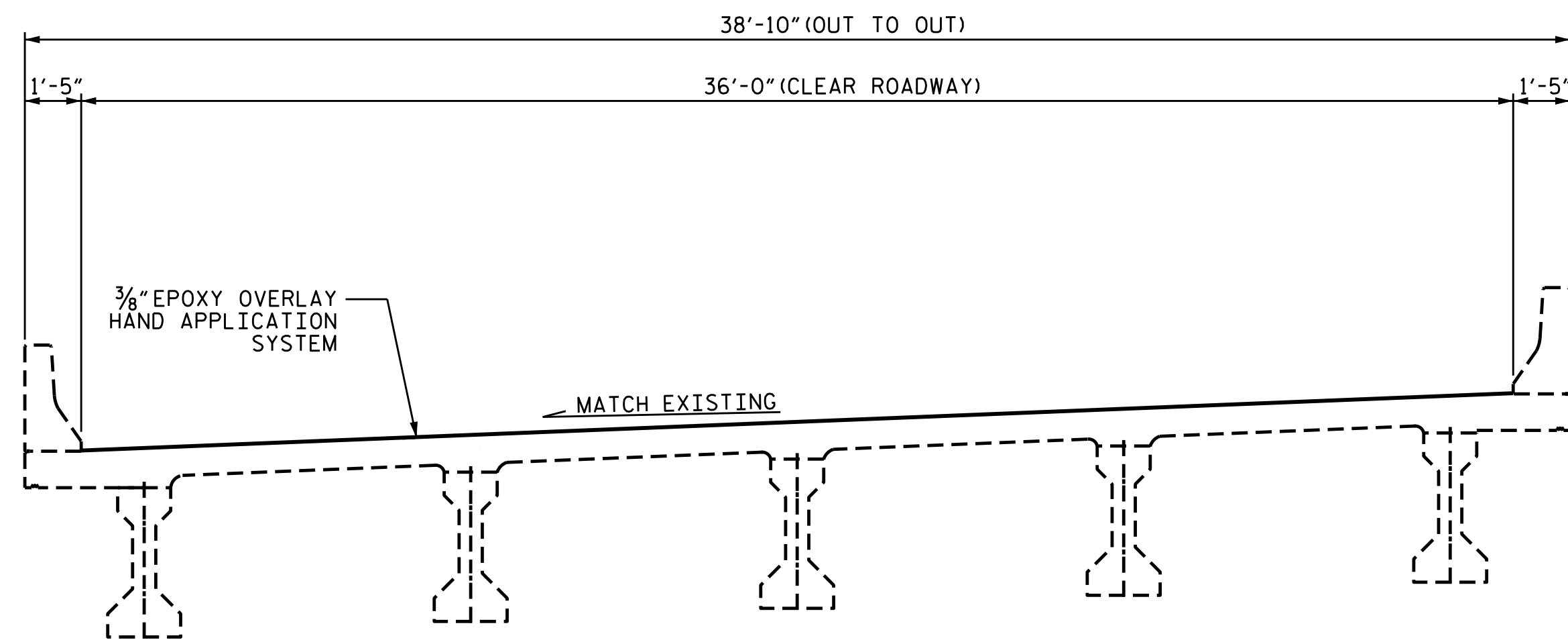
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-1
1			3			TOTAL SHEETS
2			4			118



TYPICAL SECTION
(EXISTING)



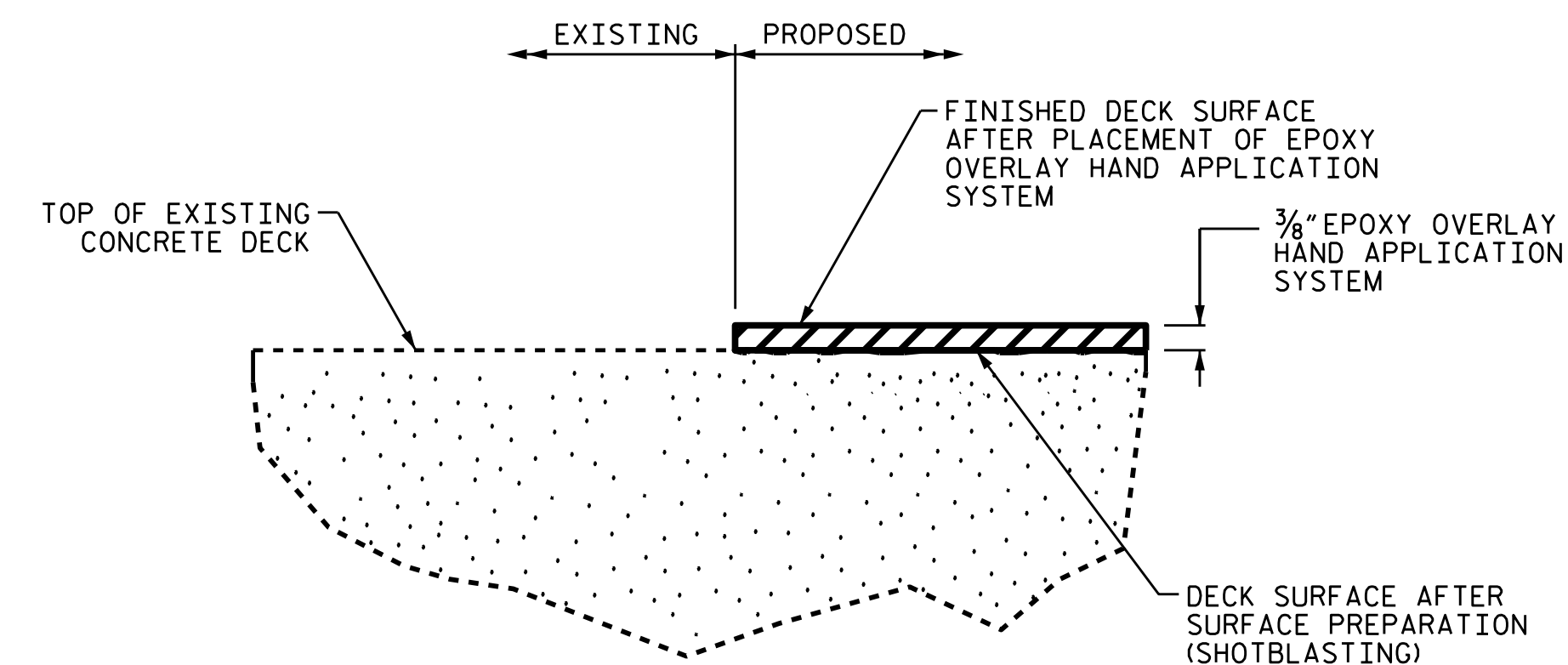
TYPICAL SECTION
(DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

NOTES

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



EPOXY DECK TREATMENT DETAIL

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320153



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTION
 AND SURFACE
 PREPARATION DETAILS**

DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA DATE : 10/2019

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S3-2
2			4			118

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB 1

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,658 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	58.8 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.




FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS AND DETAIL ON THIS SHEET.

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

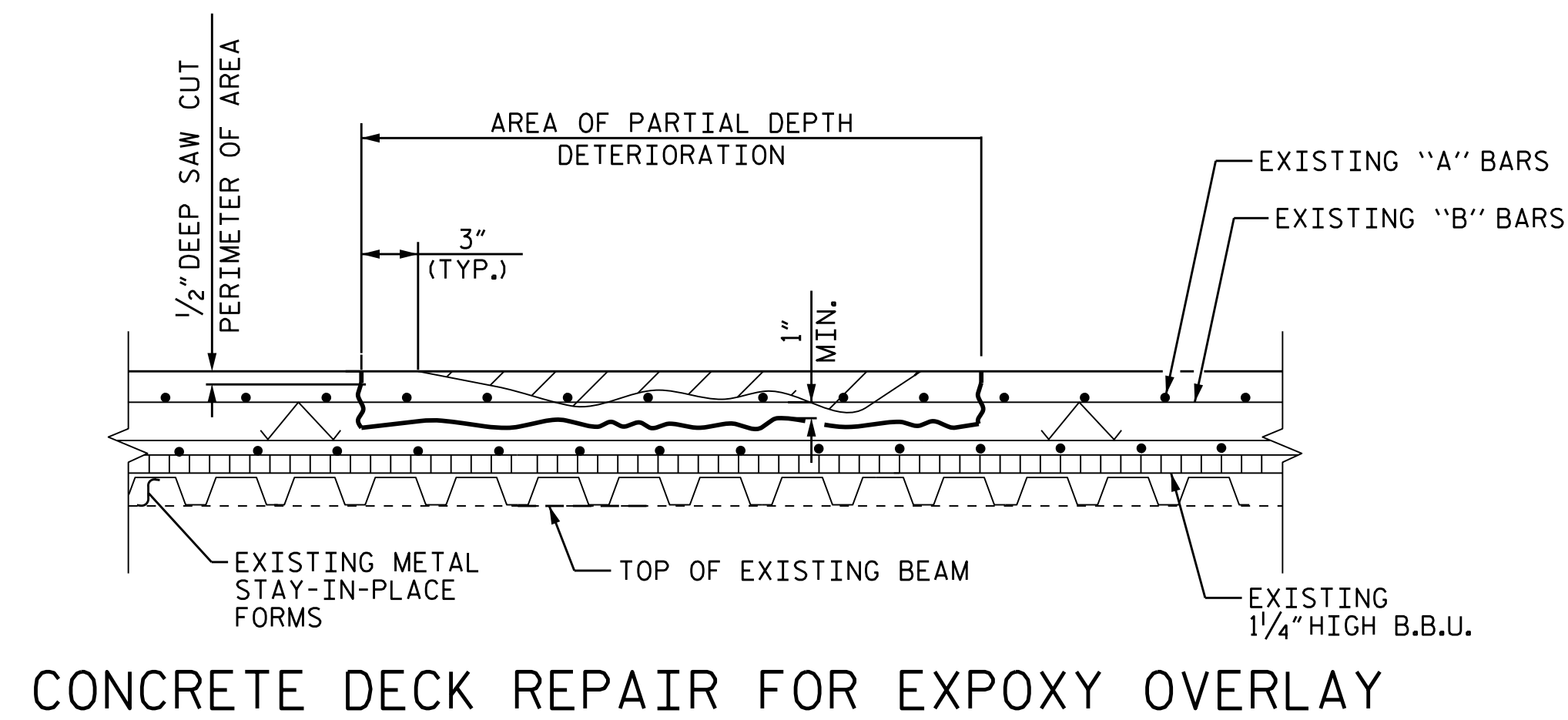
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

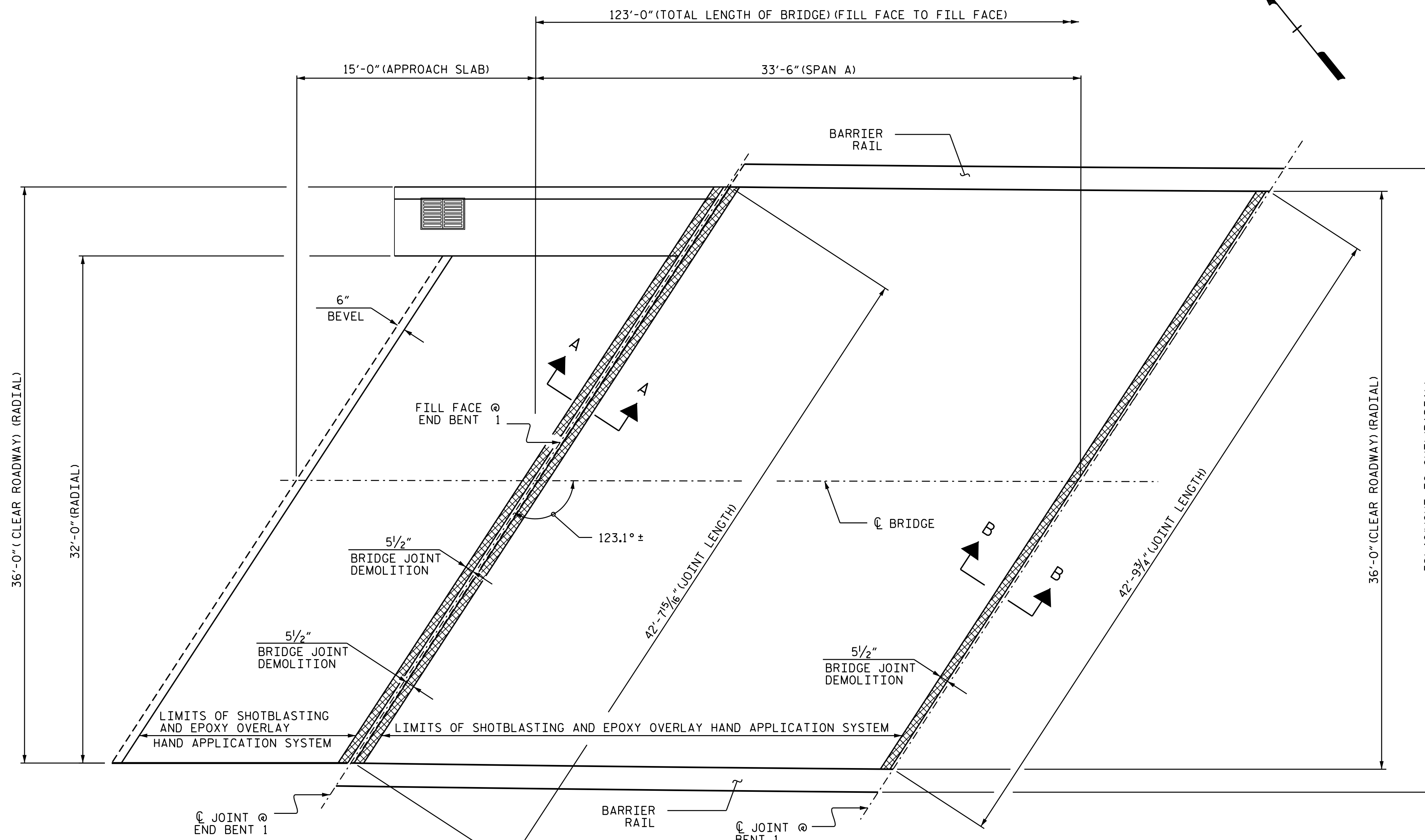
REPAIR KEY

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING FOR POTENTIAL CONCRETE DECK REPAIR FOR EPOXY OVERLAY



CONCRETE DECK REPAIR FOR EXPOXY OVERLAY

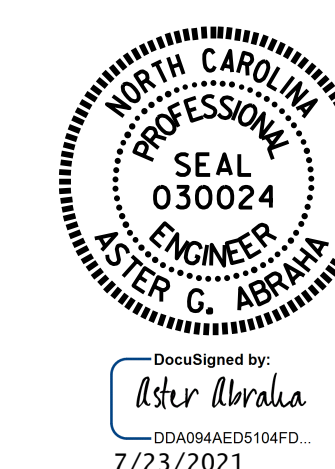


PLAN OF SPAN A AND APPROACH SLAB 1

(SEE SHEET S3-6 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320153

SHEET 1 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN A AND
 APPROACH SLAB 1**

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S3-3
2			4			118

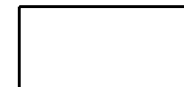

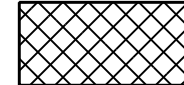
SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,972 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	39.4 SF	

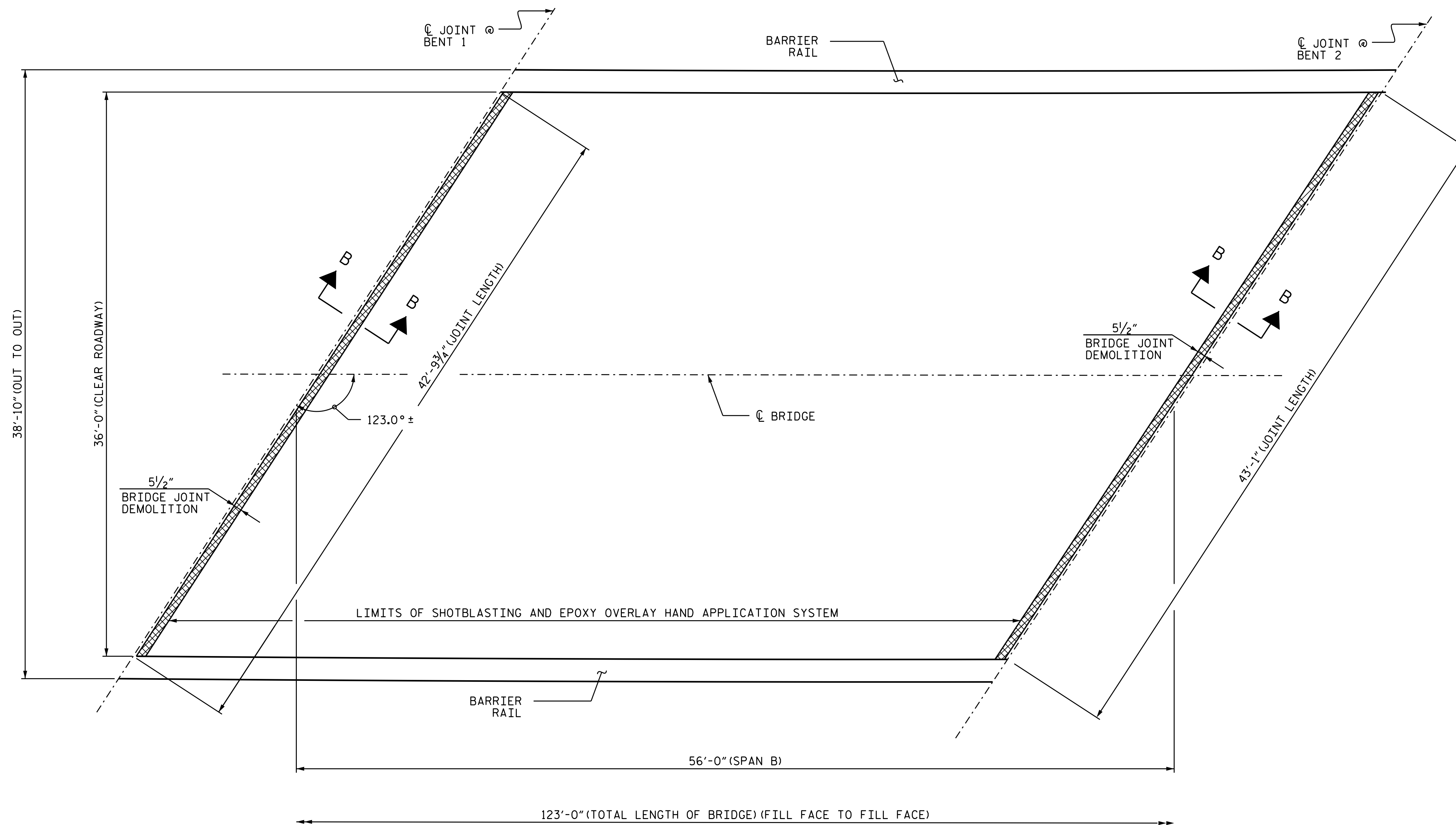
NOTES:

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REPAIR KEY

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING FOR POTENTIAL CONCRETE DECK REPAIR FOR EPOXY OVERLAY



PLAN OF SPAN B

(SEE SHEET S3-6 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320153

SHEET 2 OF 3



DocuSigned by:
 Aster Abraha
 004088AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN B

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA / S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
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1			3			S3-4
2			4			118




SUMMARY OF QUANTITIES FOR SPAN C AND APPROACH SLAB 2

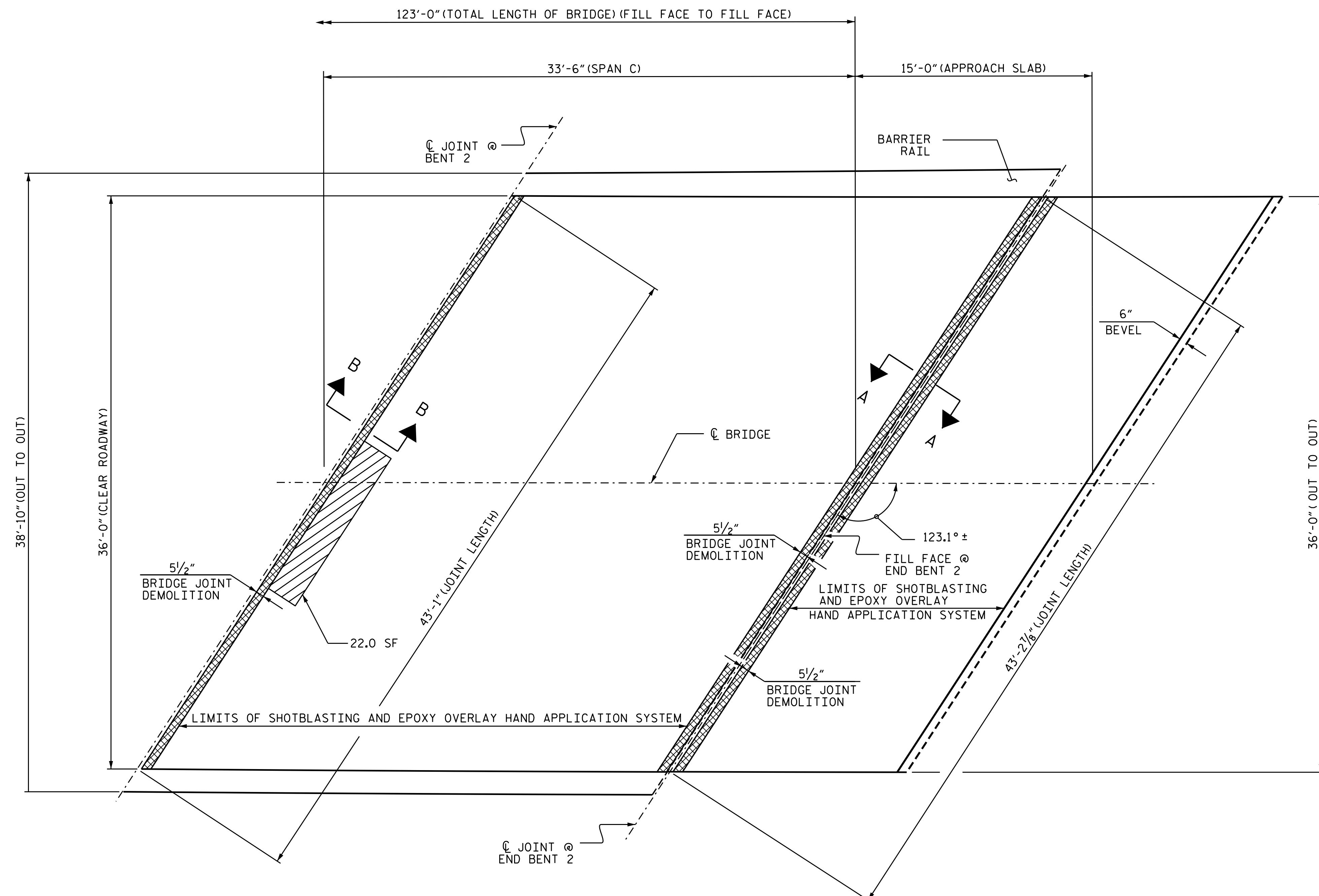
	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,658 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	22.0 SF	
BRIDGE JOINT DEMOLITION	59.4 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

REPAIR KEY

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION



PLAN OF SPAN C AND APPROACH SLAB 2

(SEE SHEET S2-6 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320153

SHEET 3 OF 3



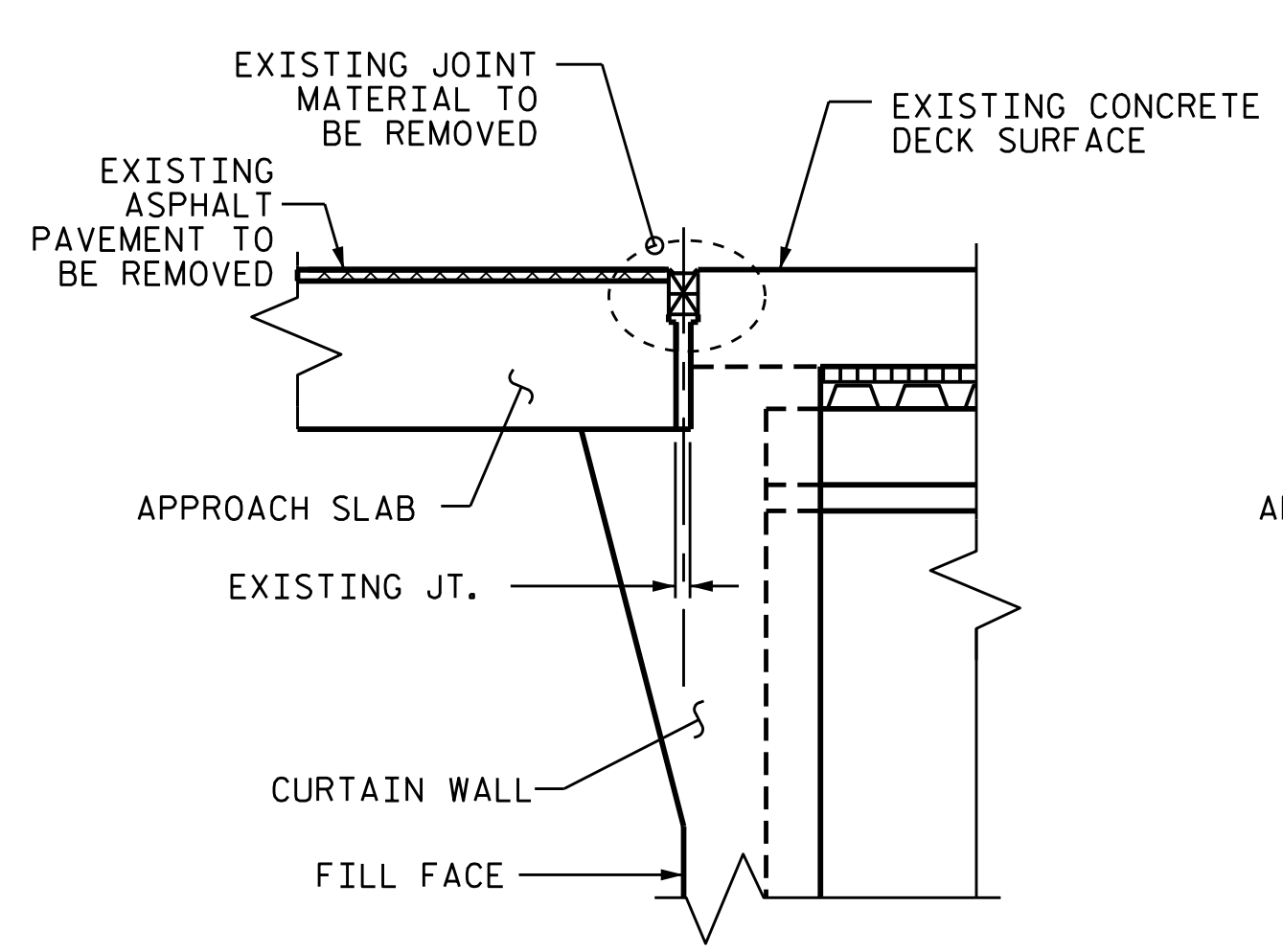
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN C AND
 APPROACH SLAB 2

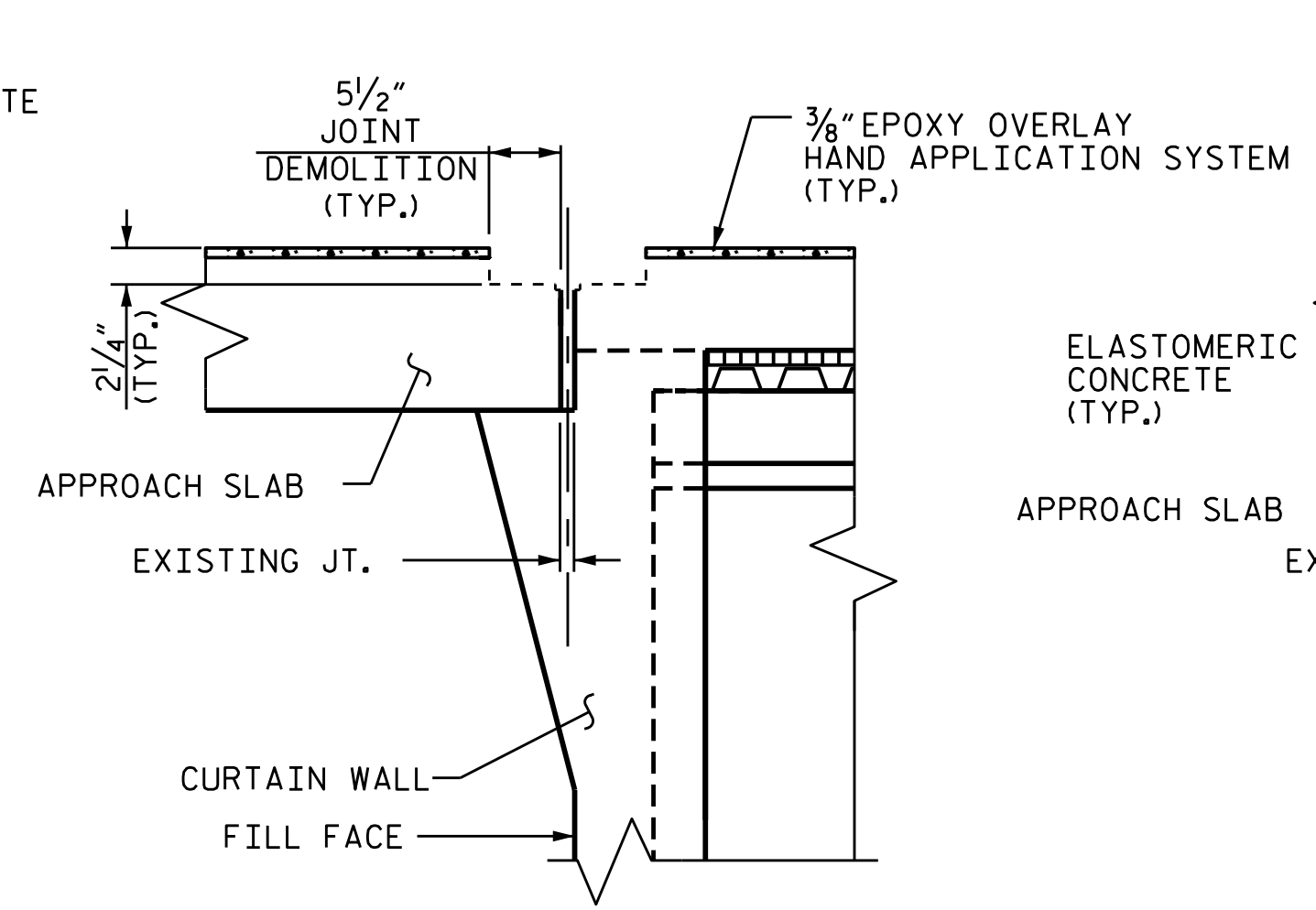
DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
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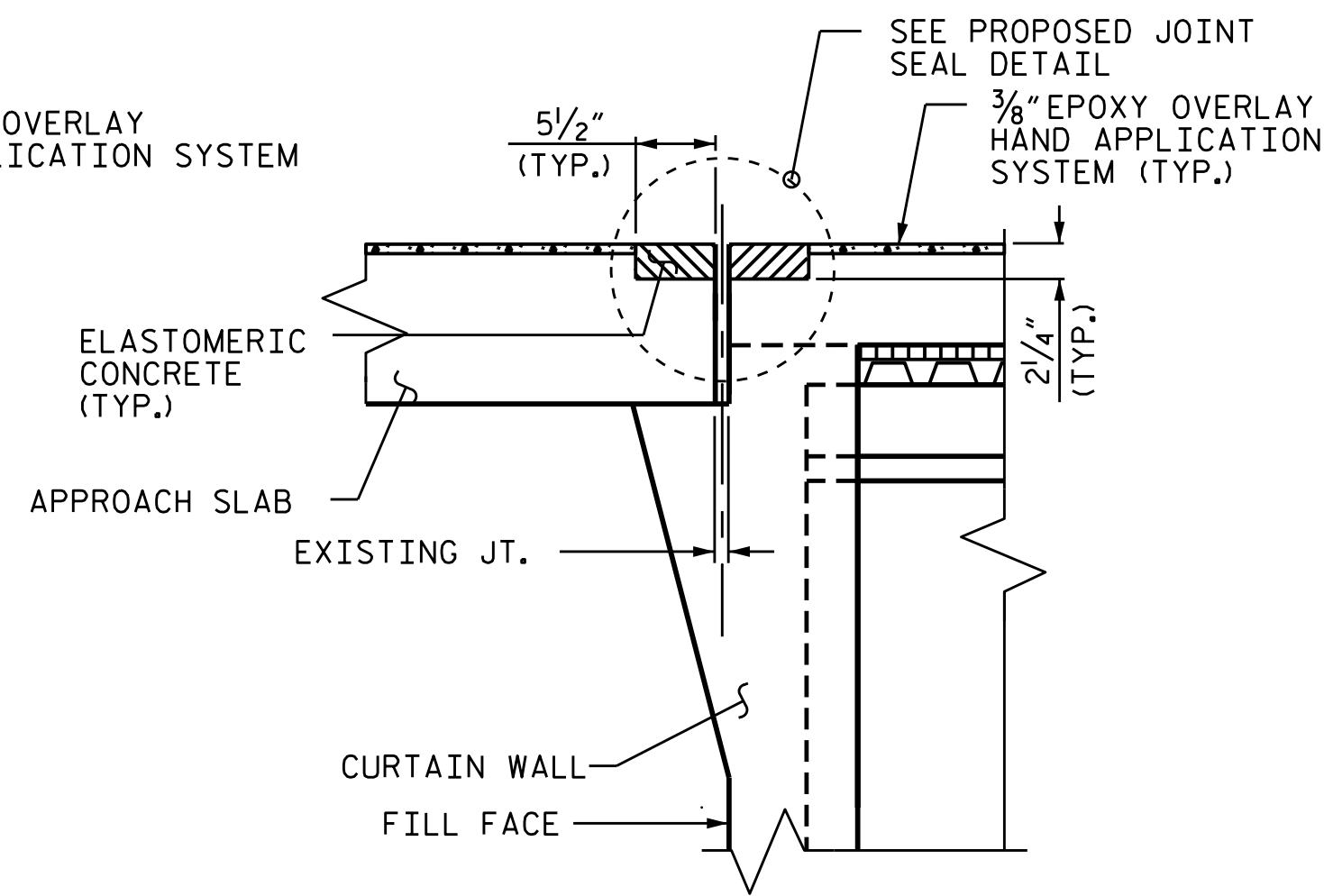
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S3-5
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EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

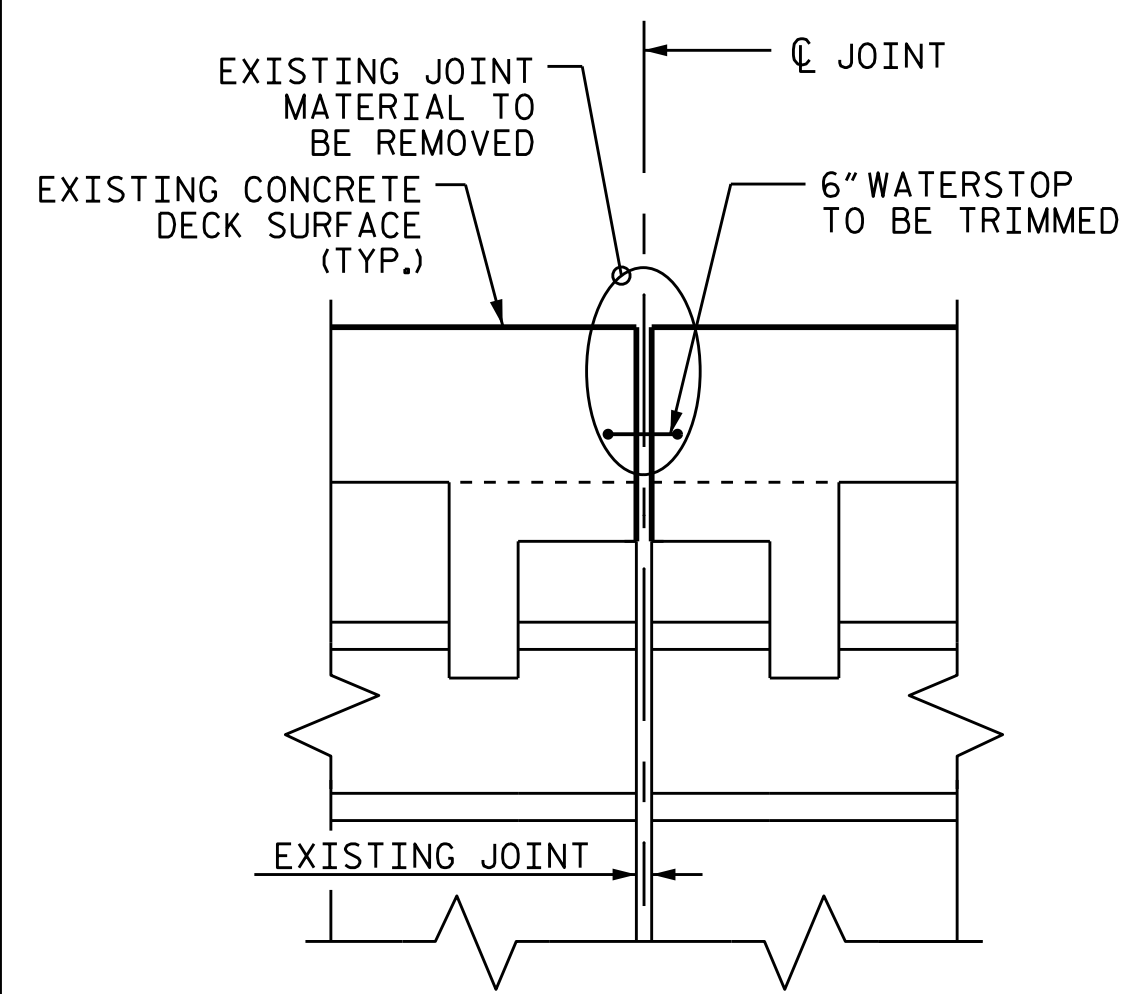
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

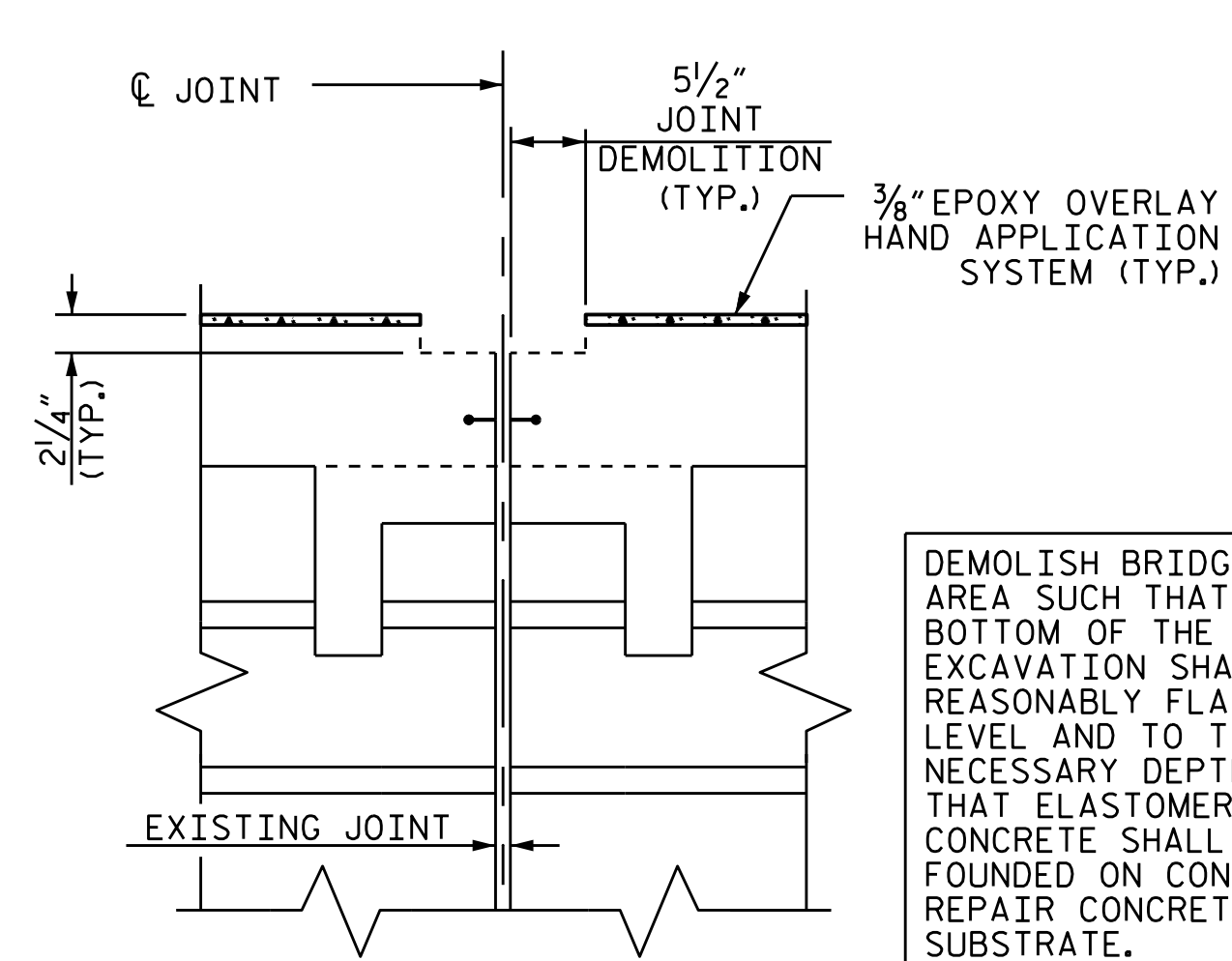
DURING JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

JOINT INSTALLATION SEQUENCE AT END BENTS

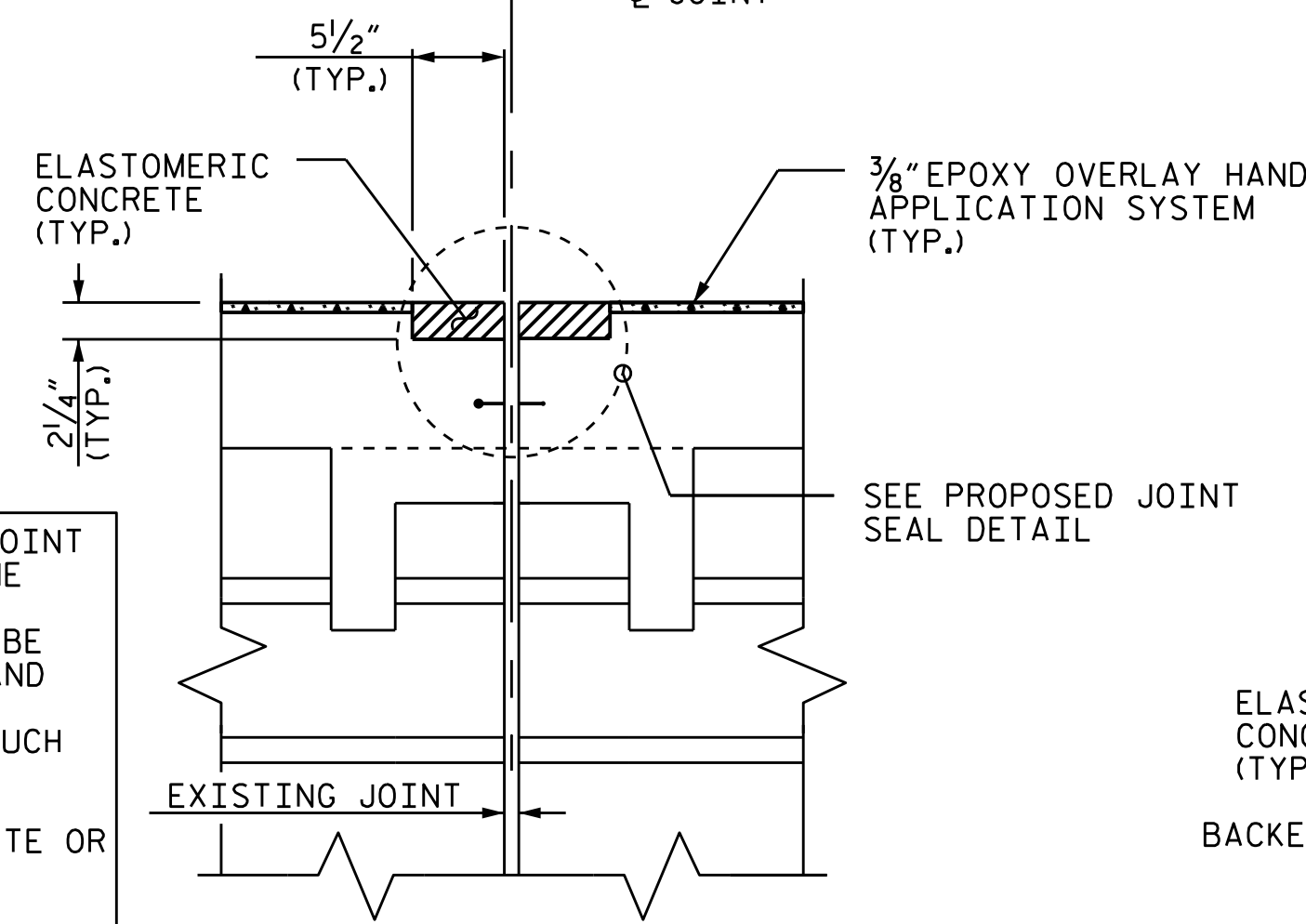
SECTION A-A



EXISTING JOINT

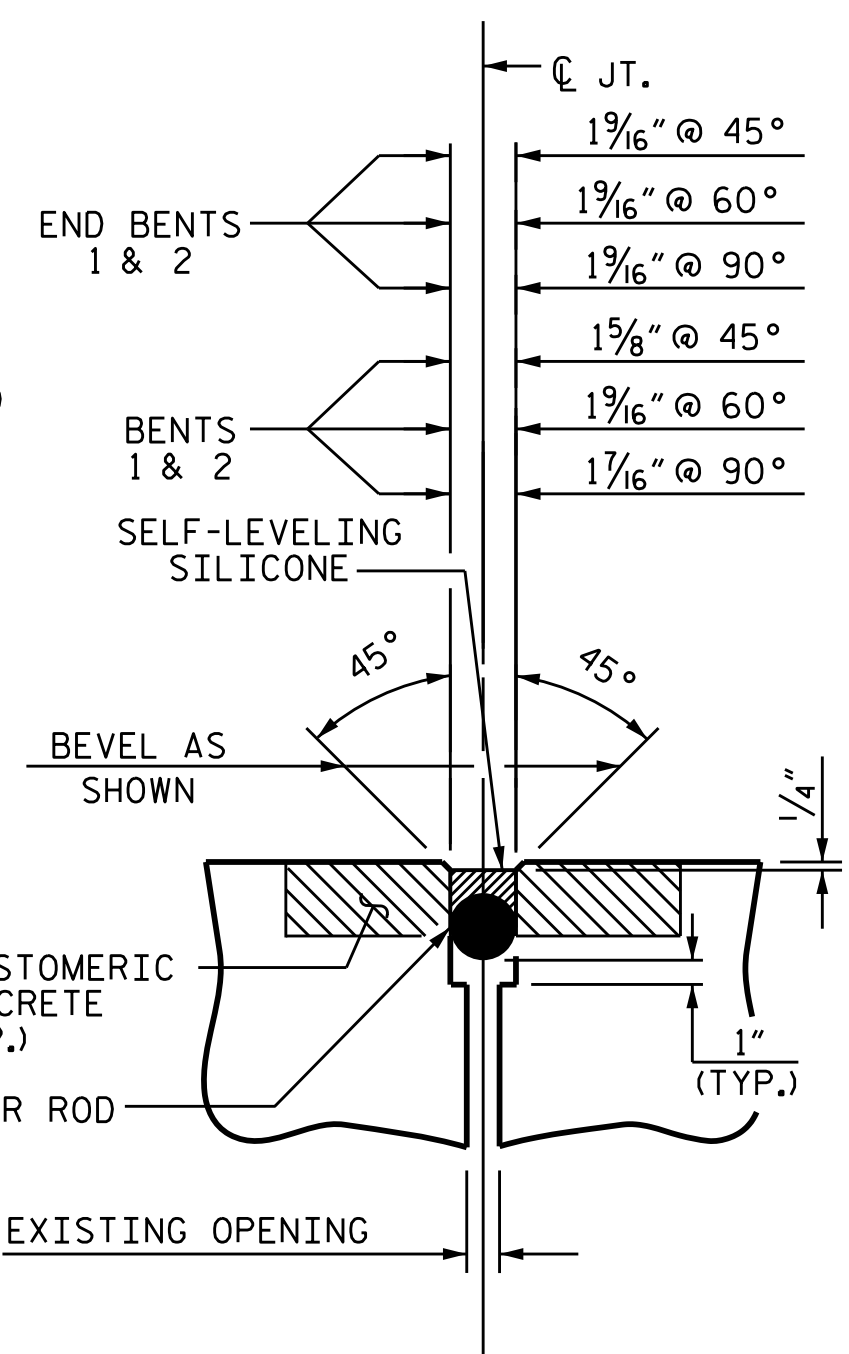


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.



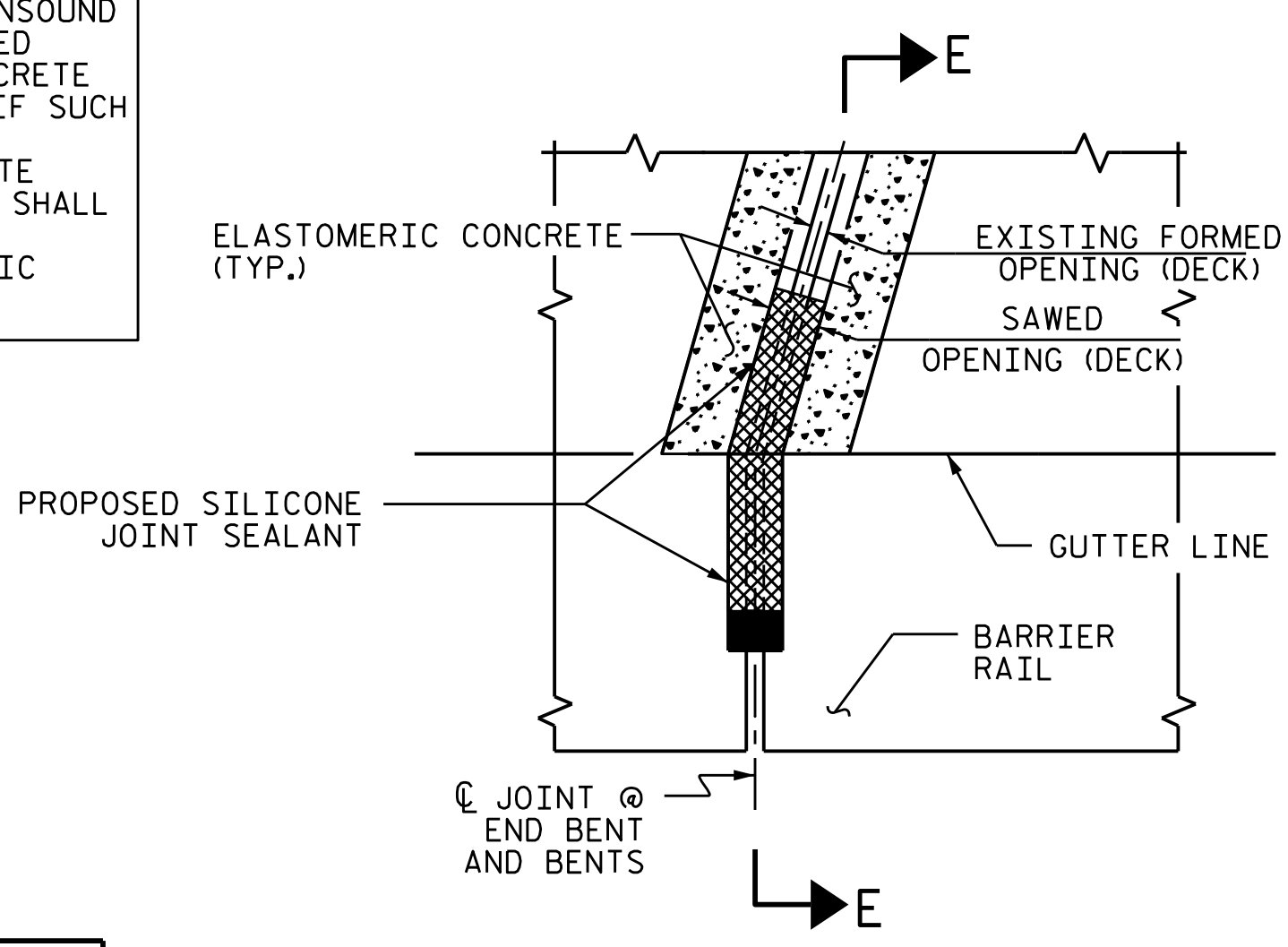
PROPOSED JOINT SEAL DETAIL (WITH SAWED DIMENSIONS)

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	29.6 CF	
POURABLE SILICONE JOINT SEALANT	172.0 LF	

JOINT INSTALLATION SEQUENCE AT BENTS

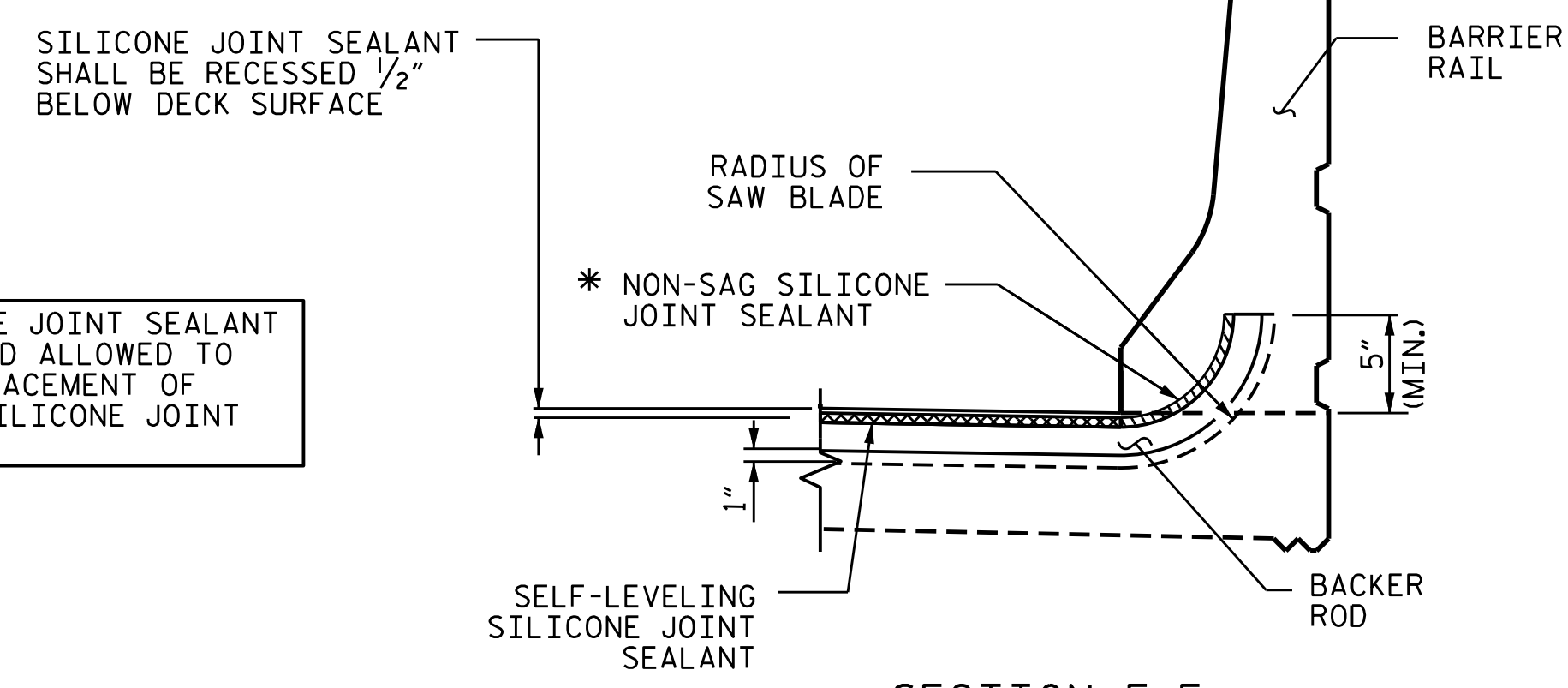
SECTION B-B

IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



PLAN

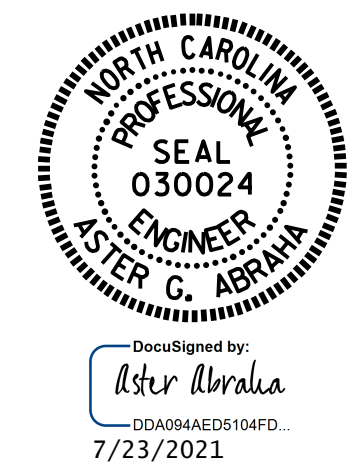
*NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



SECTION E-E

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 02/2021
 CHECKED BY : A. G. ABRAHA DATE : 07/2021

JOINT DETAIL AT BARRIER RAIL



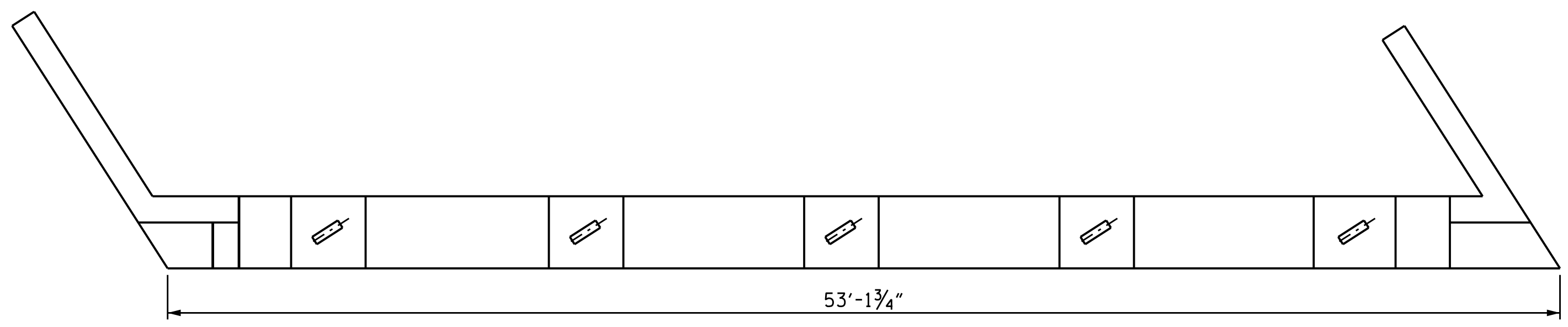
PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320153

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

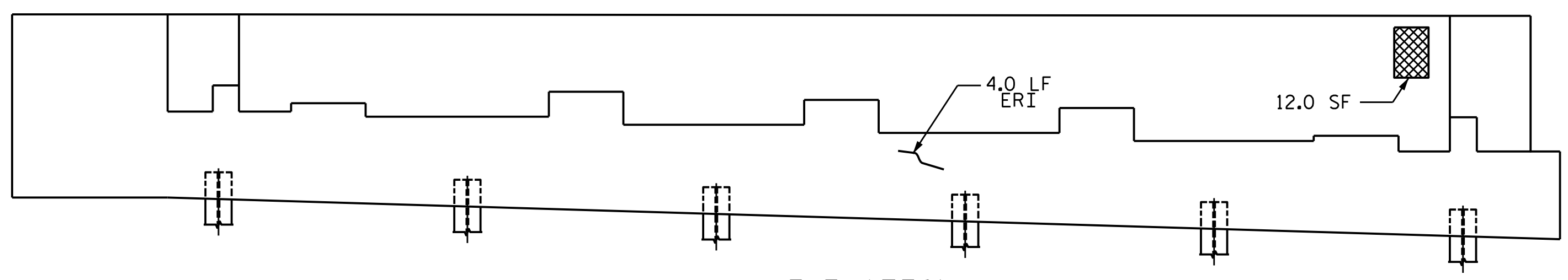
JOINT REPAIR DETAILS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S3-6
2			4			TOTAL SHEETS 118

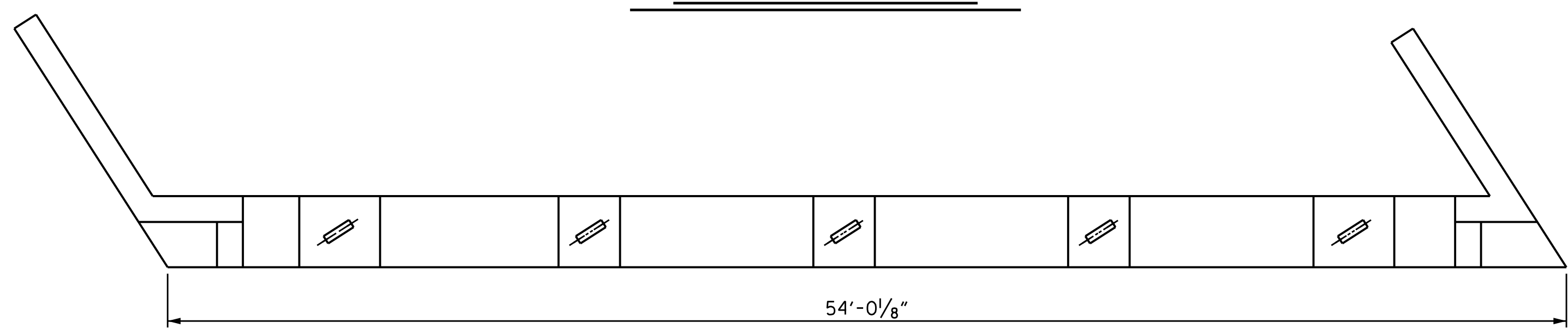


PLAN

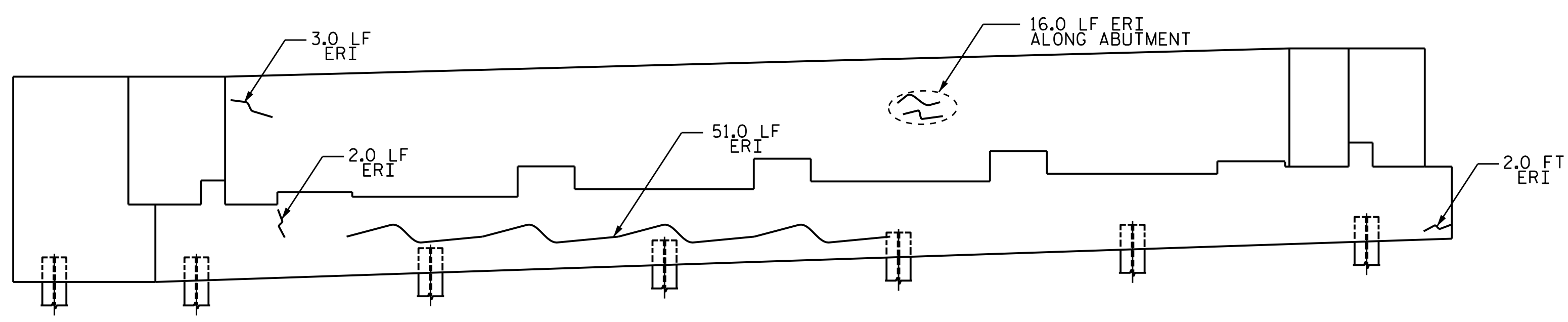


ELEVATION
(LOOKING WEST)

END BENT 1



PLAN



ELEVATION
(LOOKING EAST)

END BENT 2

REPAIR QUANTITY TABLE

END BENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION	LF		LF	
CAP		78.0		
COLUMN		0.0		

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

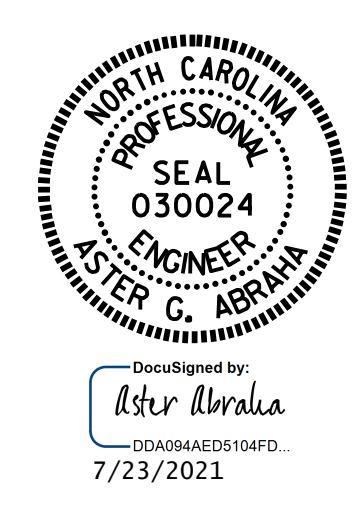
REPAIR KEY

CONCRETE REPAIR AREA (FORM AND POUR)

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320153



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS REPAIR

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:	DESCRIPTION		BY:	DATE:	DESCRIPTION	
1				3				S3-7
2				4				TOTAL SHEETS 118

NOTES:

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

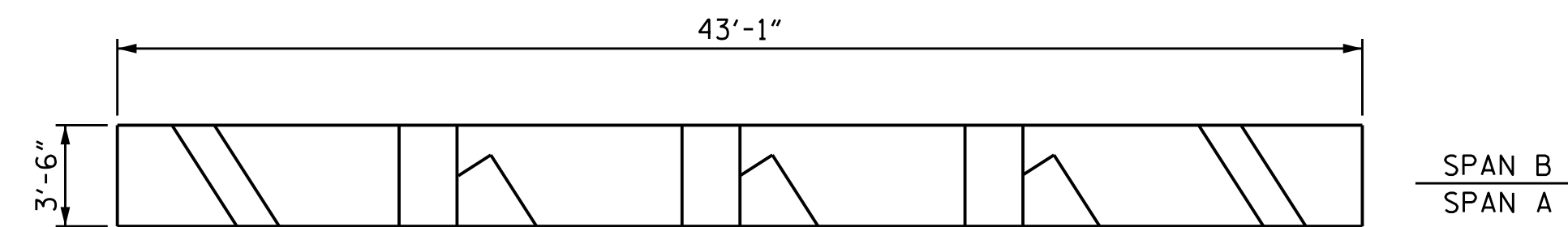
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

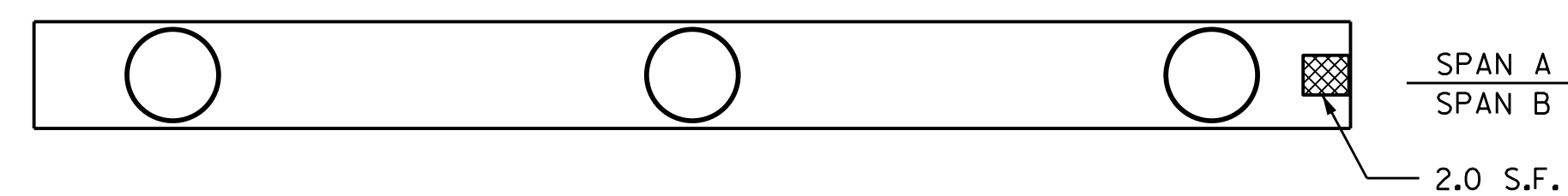
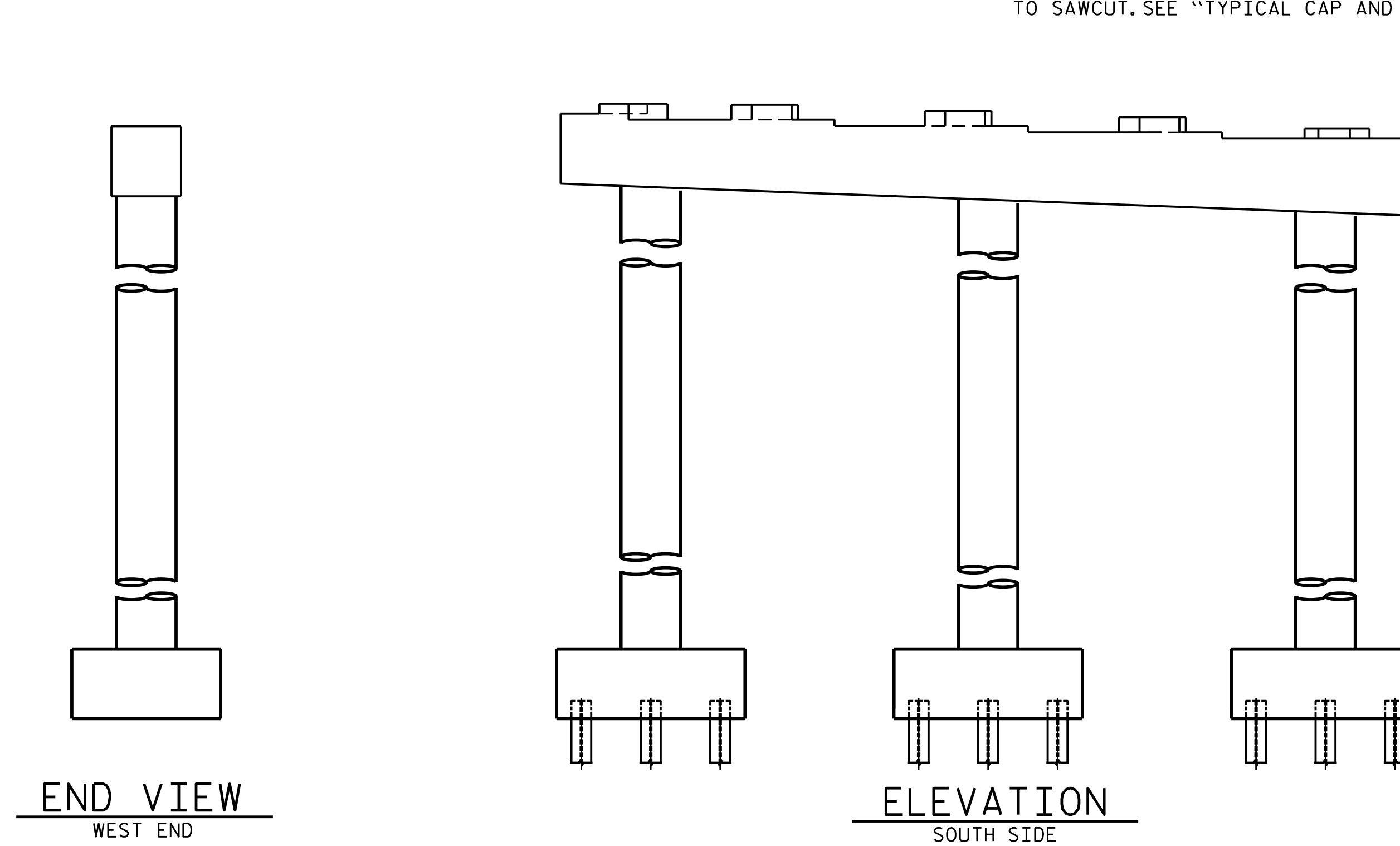
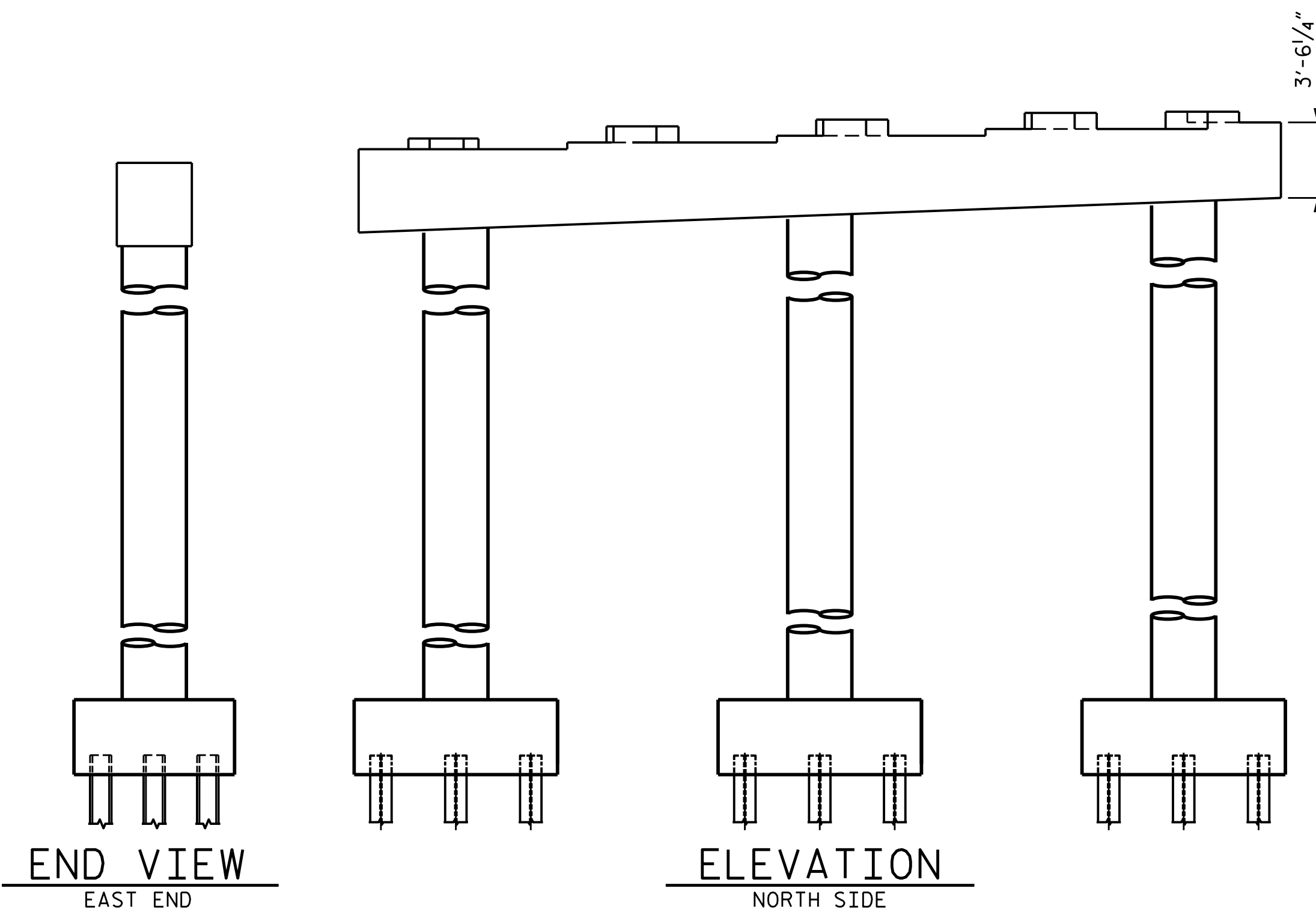
REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	2.0	1.0		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LF		LF
CAP		0.0		
COLUMN		0.0		

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

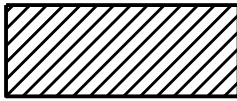
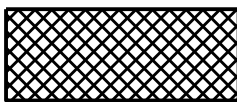



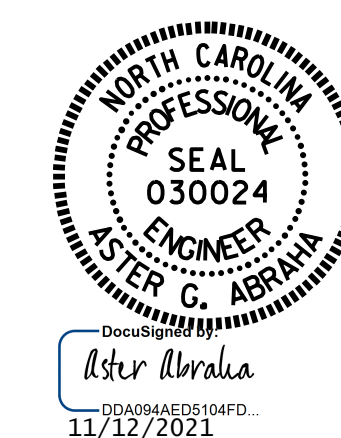
PLAN
TOP OF CAP



PLAN
BOTTOM OF CAP

REPAIR KEY

-  CONCRETE REPAIR AREA (FORM AND POUR)
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320153
 SHEET 1 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
SUBSTRUCTURE BENT 1						S3-8
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	118
1			3			
2			4			

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

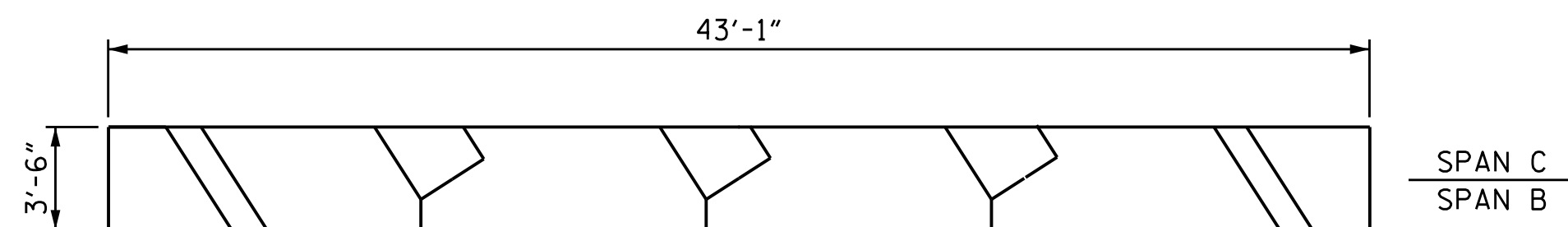
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

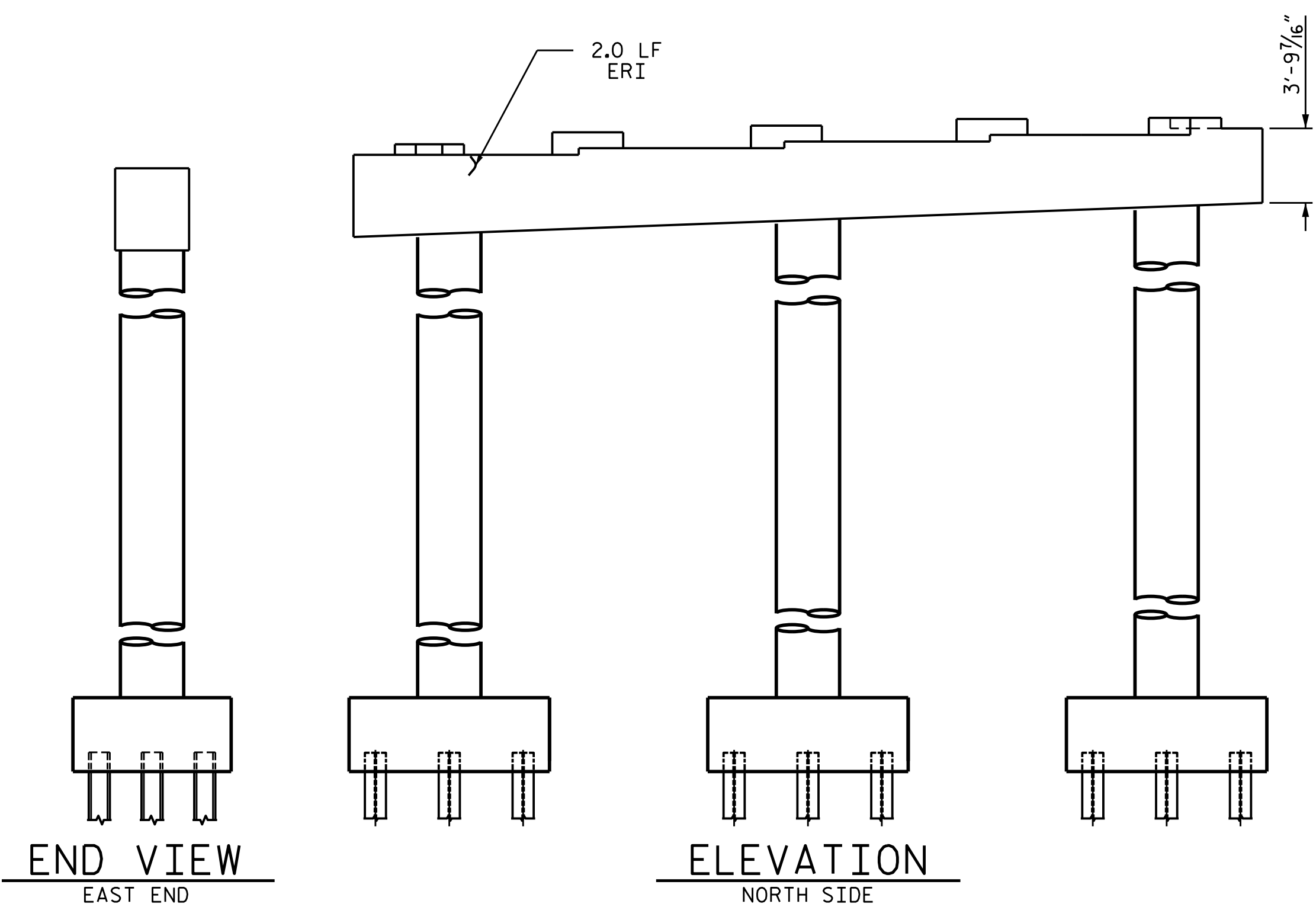
REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LF		LF
CAP		2.0		
COLUMN		0.0		

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



PLAN
TOP OF CAP

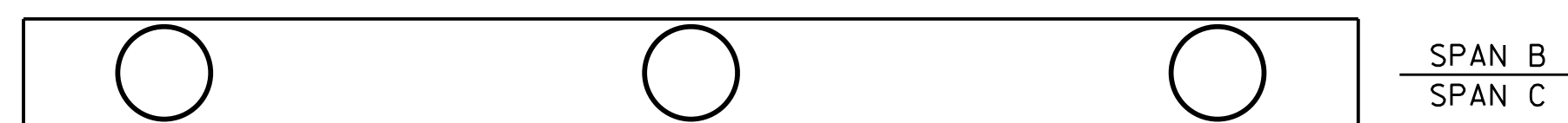


END VIEW
EAST END

ELEVATION
NORTH SIDE

END VIEW
WEST END

ELEVATION
SOUTH SIDE



PLAN
BOTTOM OF CAP

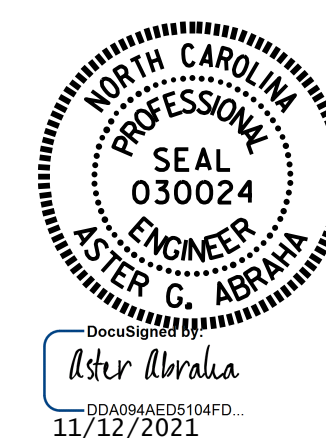
REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320153

SHEET 2 OF 2

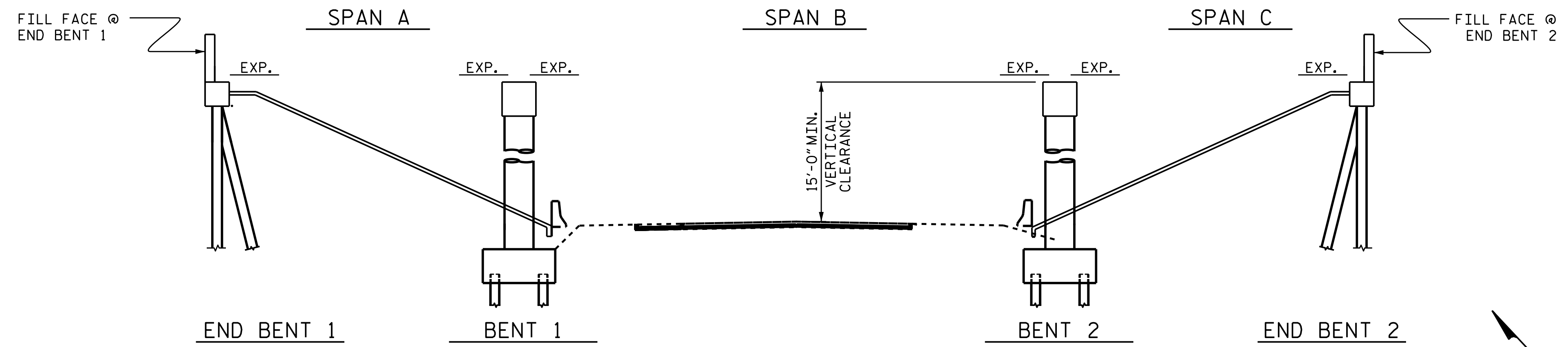
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 2



DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-9
1			3			TOTAL SHEETS
2			4			118



ELEVATION

(SECTION @ BENT AND END BENTS ARE AT RIGHT ANGLES)

SCOPE OF WORK

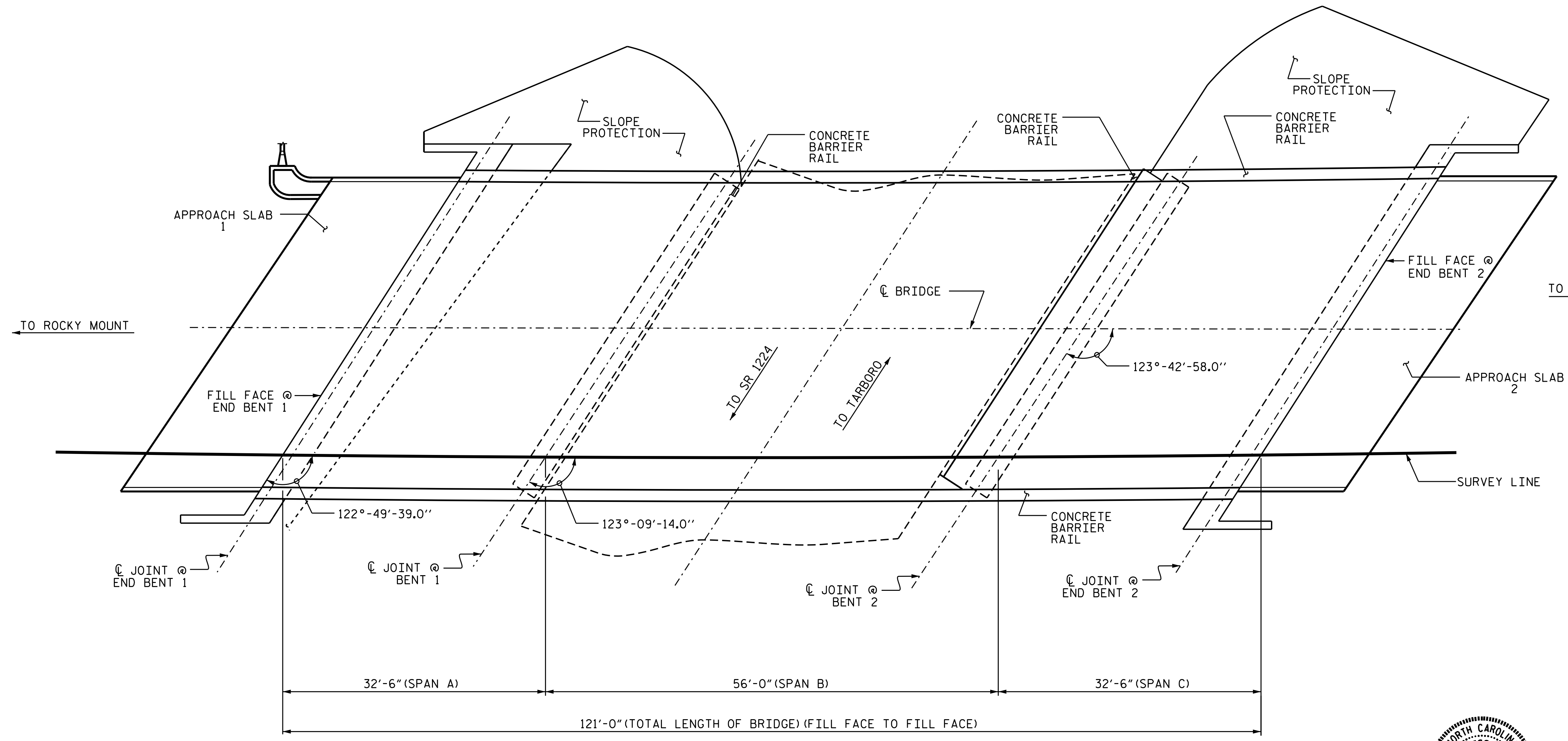
- BRIDGE DECK PREPARATION BY SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL ELASTOMERIC CONCRETE AND POURABLE SILICONE JOINT SEALANT.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENTS AND BENTS AREA FOR SHOTCRETE AND CONCRETE REPAIRS.
- REPAIR SUBSTRUCTURE USING EPOXY RESIN INJECTION AND SHOTCRETE REPAIRS.

NOTES

- GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION, DATED 02/02/2019 AND 02/15/2021.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE.

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



PLAN

(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320156

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE NO. 156 ON
 US 64 WBL OVER SR 1208
 BETWEEN SR 1218 AND SR 1225



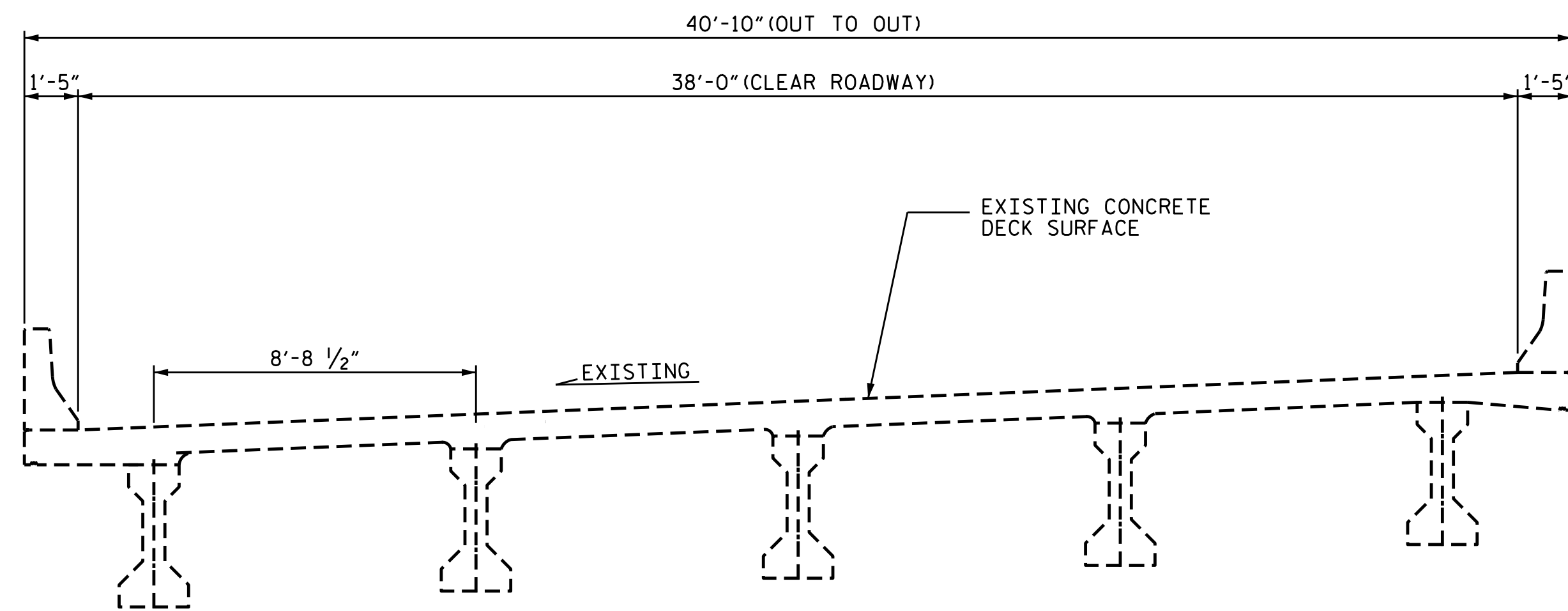
DocuSigned by:
 Aster Abraha
 02485838000F04E0
 7/23/2021

DocuSigned by:
 Kestly W. Alford
 02485838000F04E0
 7/23/2021

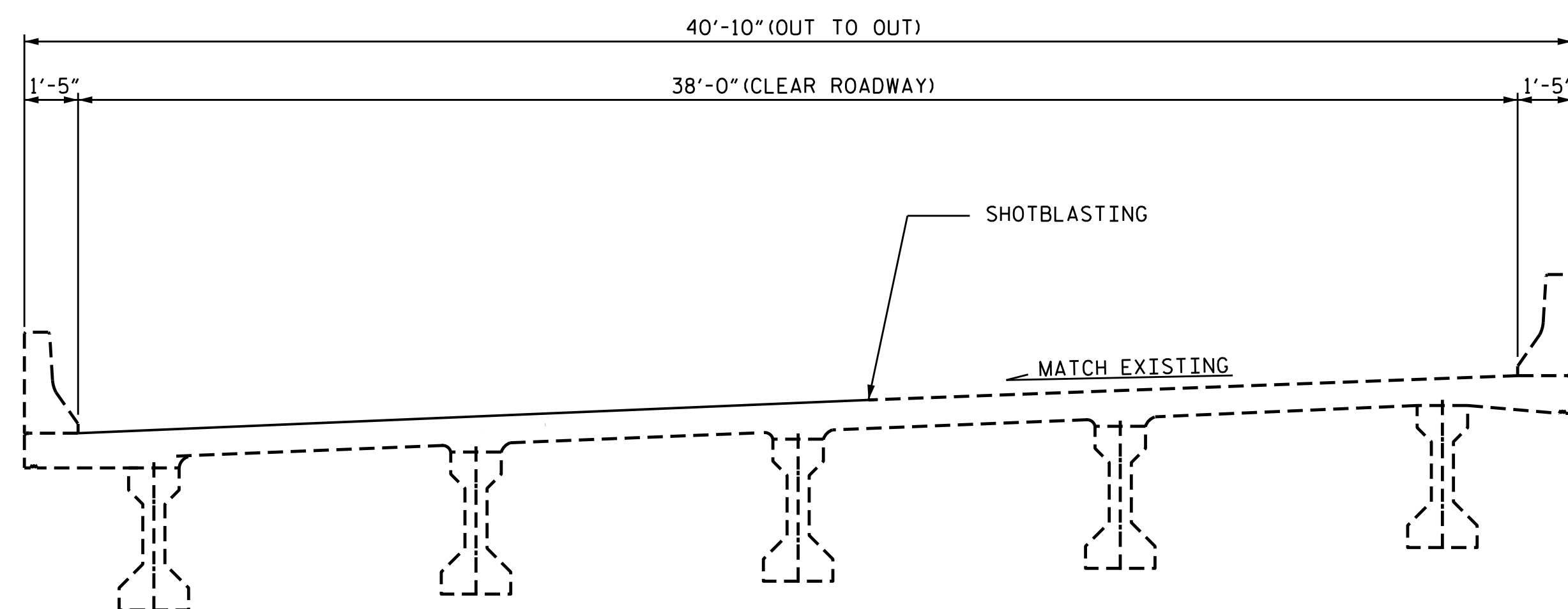
DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/2019

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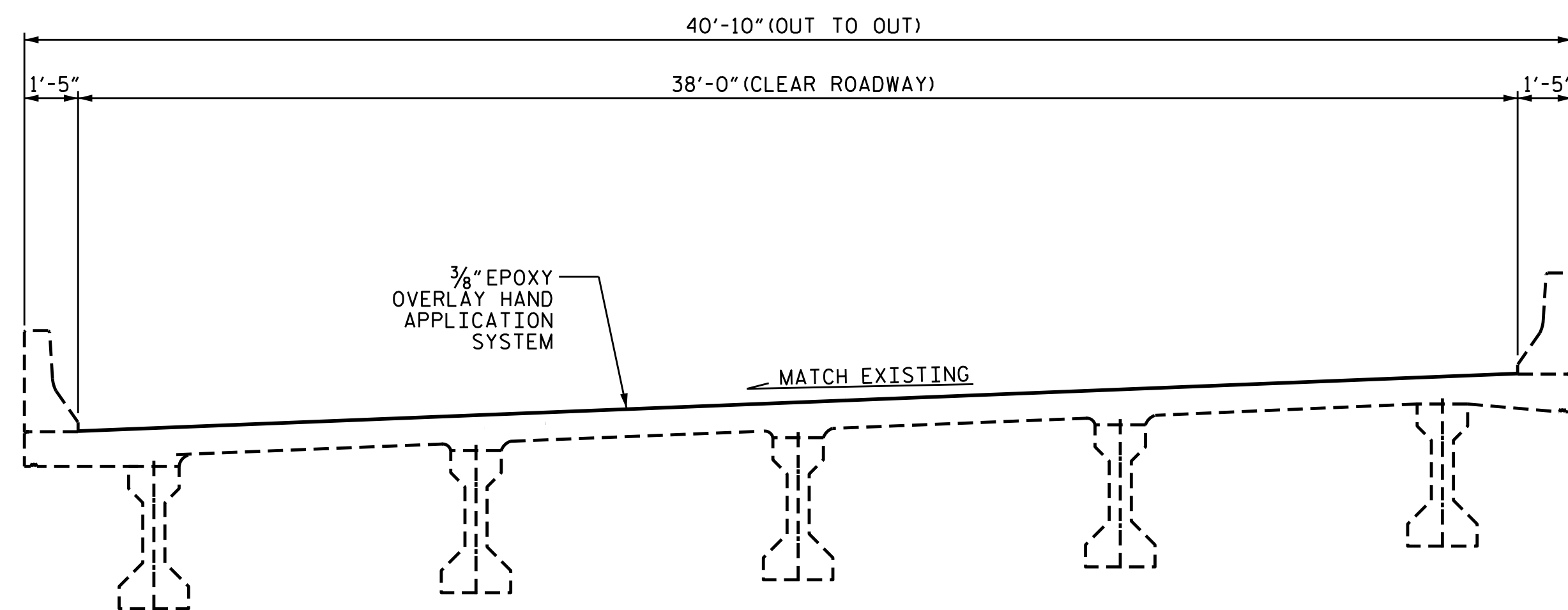
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-1	
1			3			TOTAL SHEETS	118
2			4				



TYPICAL SECTION
(EXISTING)



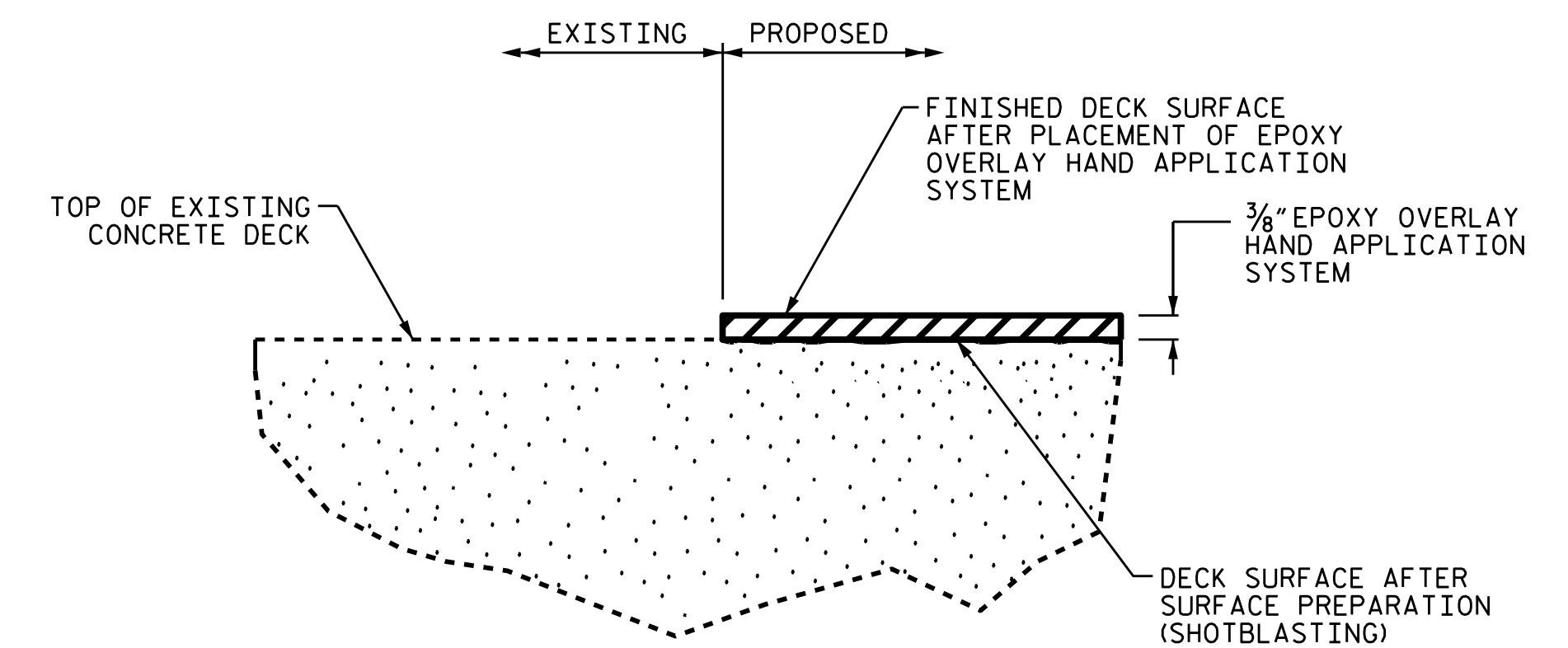
TYPICAL SECTION
(DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

NOTES

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



EPOXY DECK TREATMENT DETAIL

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320156



DocuSigned by:
 Aster Abraha
 00408AAED510AFD...
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**TYPICAL SECTION
 AND SURFACE
 PREPARATION DETAILS**

DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/2019

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S4-2
2			4			118

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB 1

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,743 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	62.4 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.




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

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

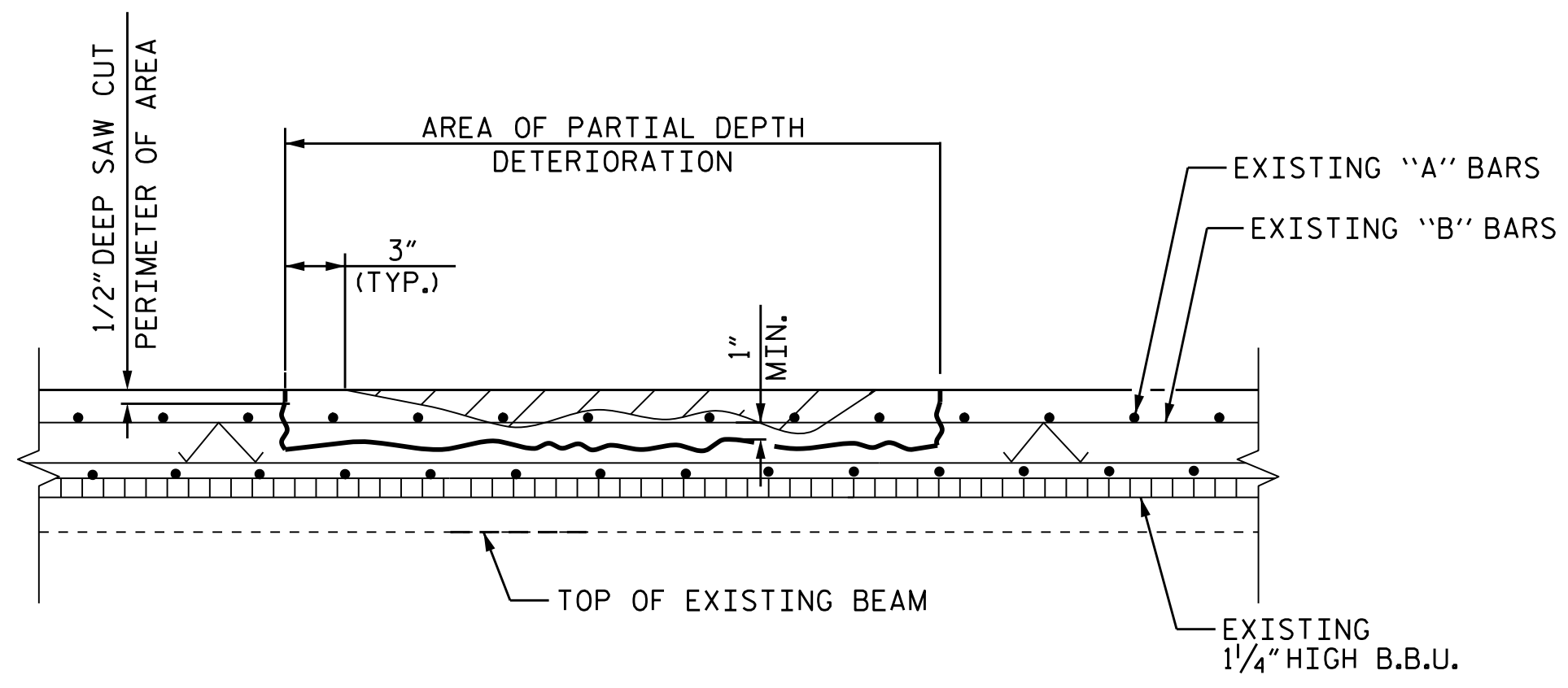
FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

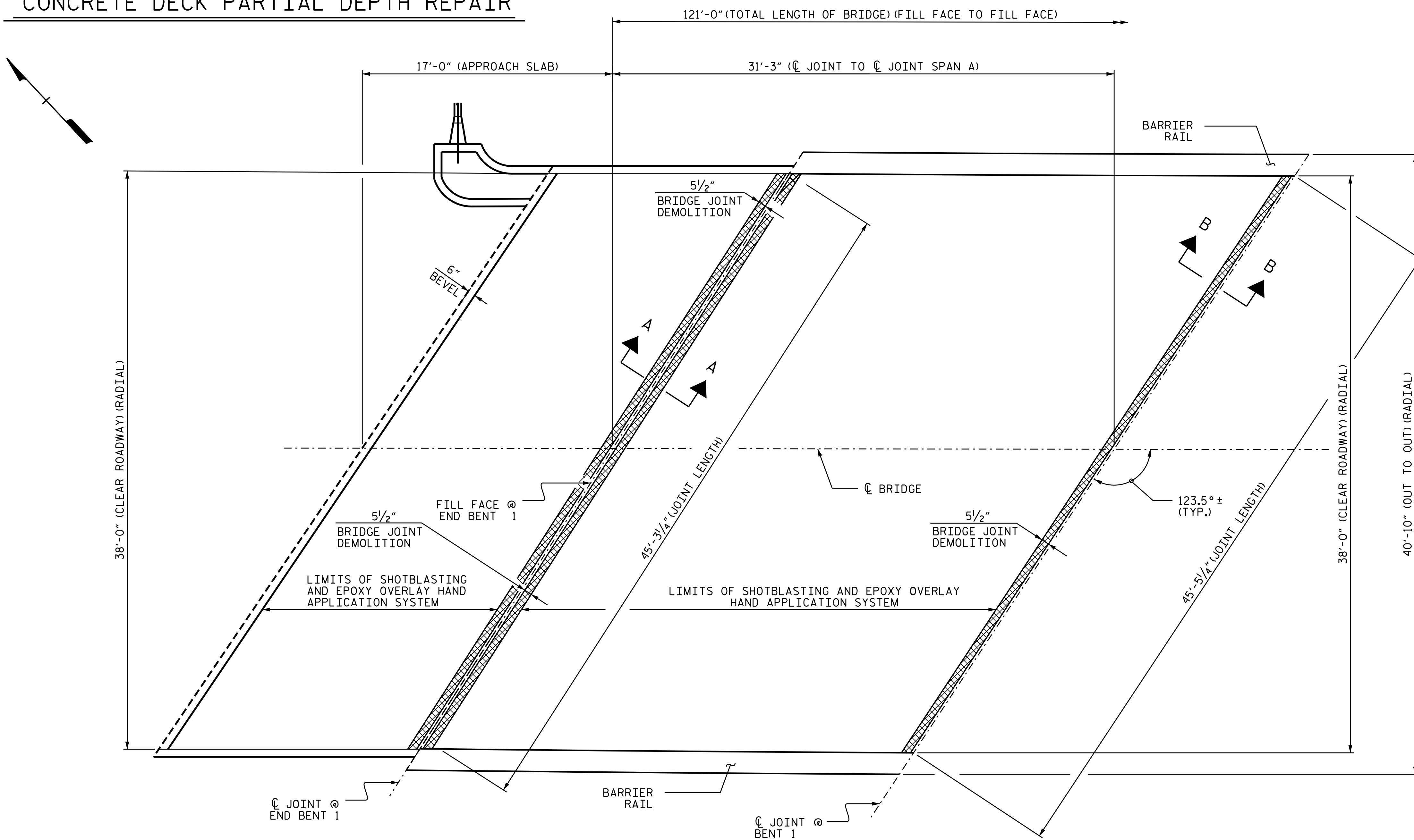
REPAIR KEY

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING FOR POTENTIAL CONCRETE DECK REPAIR FOR EPOXY OVERLAY



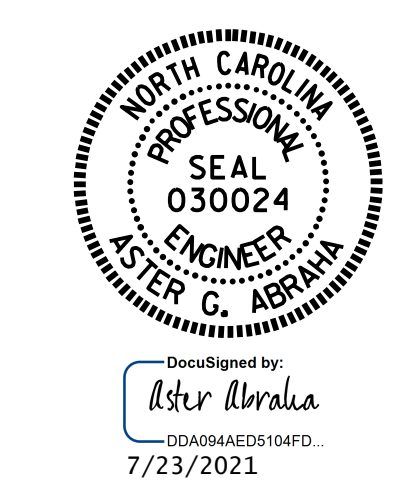
CONCRETE DECK PARTIAL DEPTH REPAIR



PLAN OF SPAN A AND APPROACH SLAB 1

(SEE SHEET S6-6 FOR SECTIONS A-A AND B-B)

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021



PROJECT NO. I-6041A
 EDGEcombe COUNTY
 BRIDGE NO. 320156

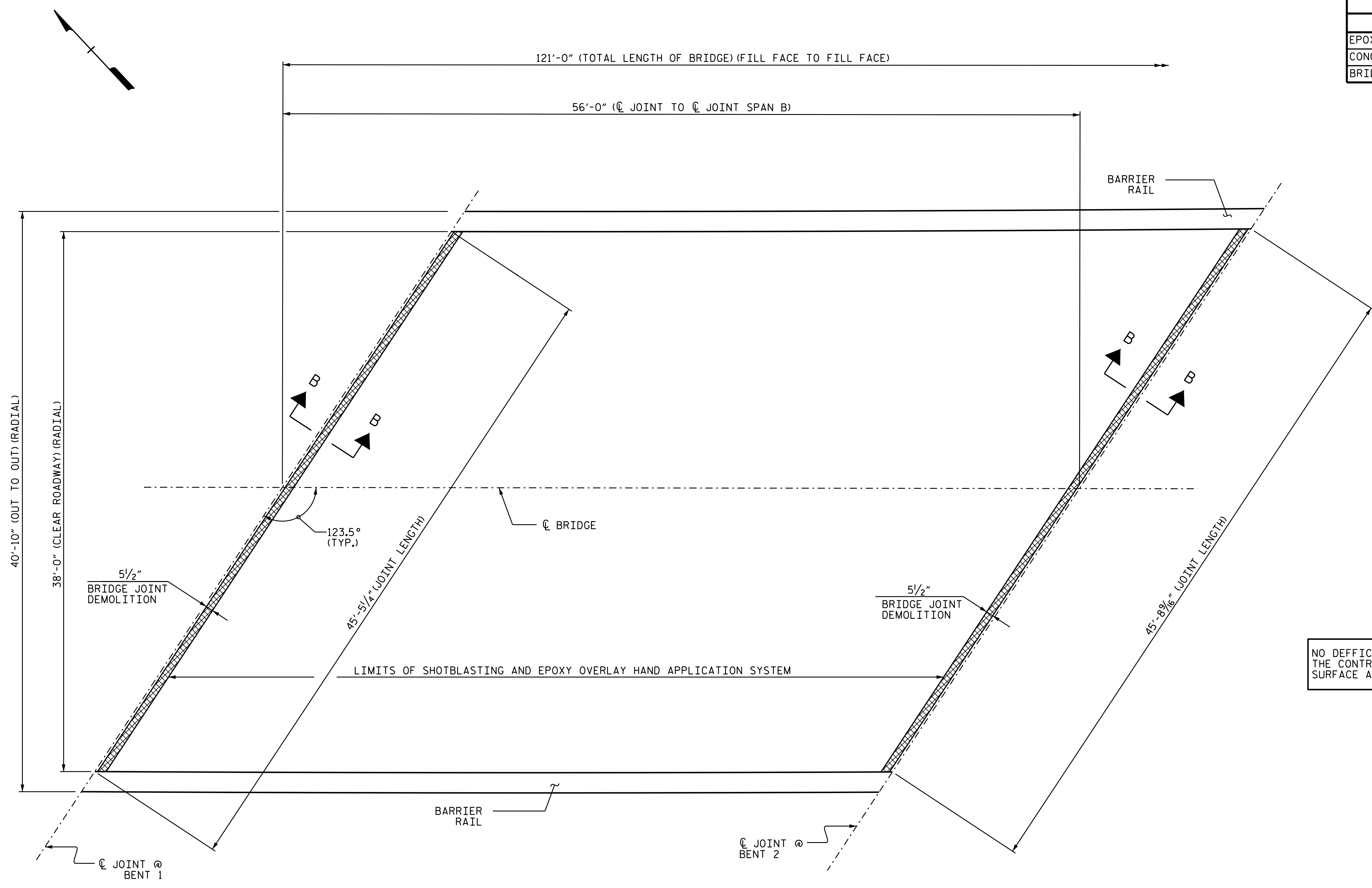
SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN A AND
 APPROACH SLAB 1

NO.	REVISIONS		NO.	REVISIONS		SHEET NO.
	BY:	DATE:		BY:	DATE:	
1			3			S4-3
2			4			TOTAL SHEETS 118

SUMMARY OF QUANTITIES FOR SPAN "B"

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,084 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	41.8 SF	



NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

REPAIR KEY

- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING.

PLAN OF SPAN B
(SEE SHEET S6-6 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320156

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN B

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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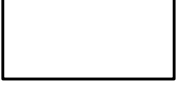
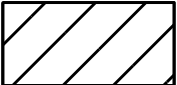

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			118
2			4			

SUMMARY OF QUANTITIES FOR SPAN C AND APPROACH SLAB 2

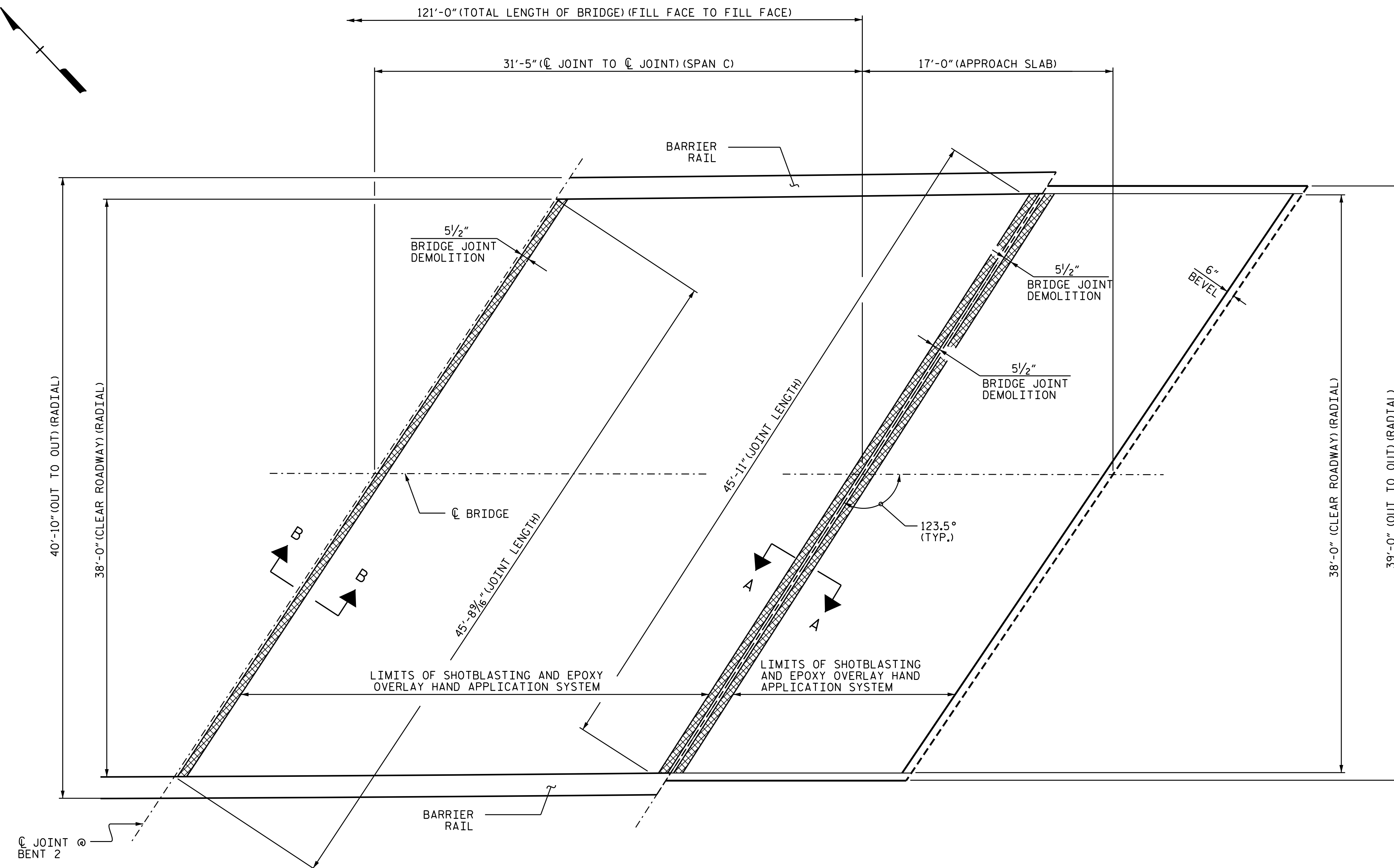
	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,743 SF	
CONCRETE DECK REPAIRS FOR EXPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	63.0 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS- BUILT REPAIR QUANTITIES TABLE.

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

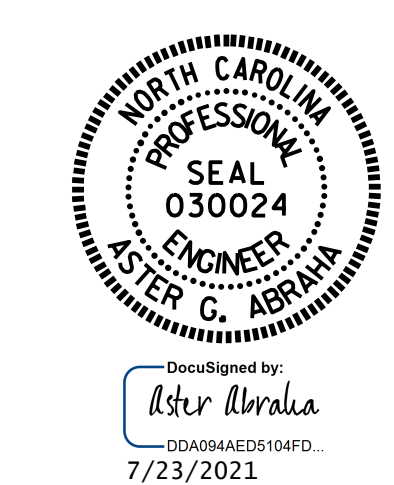
NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING.



PLAN OF SPAN C AND APPROACH SLAB 2
(SEE SHEET S1-6 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320156

SHEET 3 OF 3

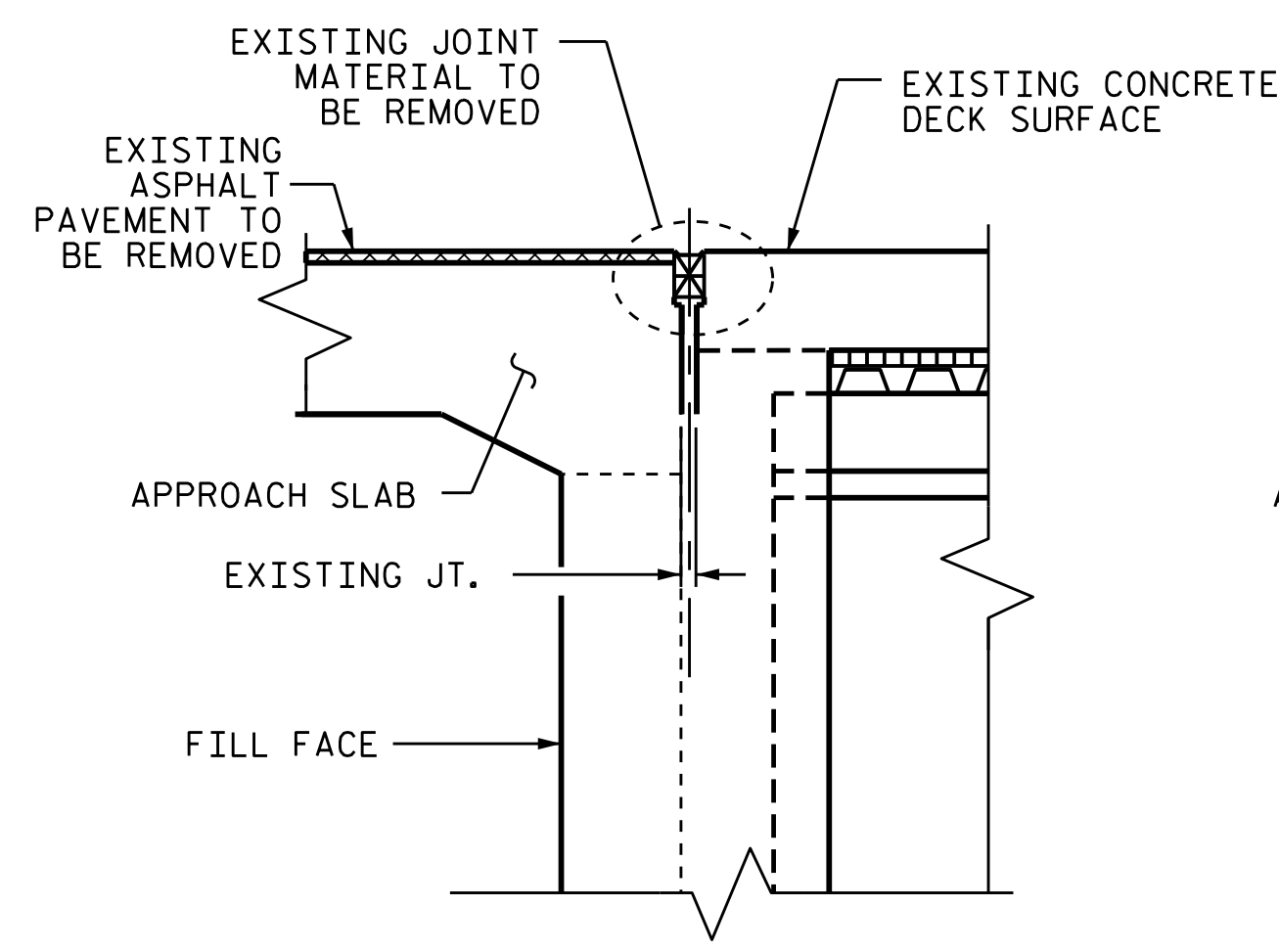


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SURFACE PREPARATION
SPAN C AND
APPROACH SLAB 2

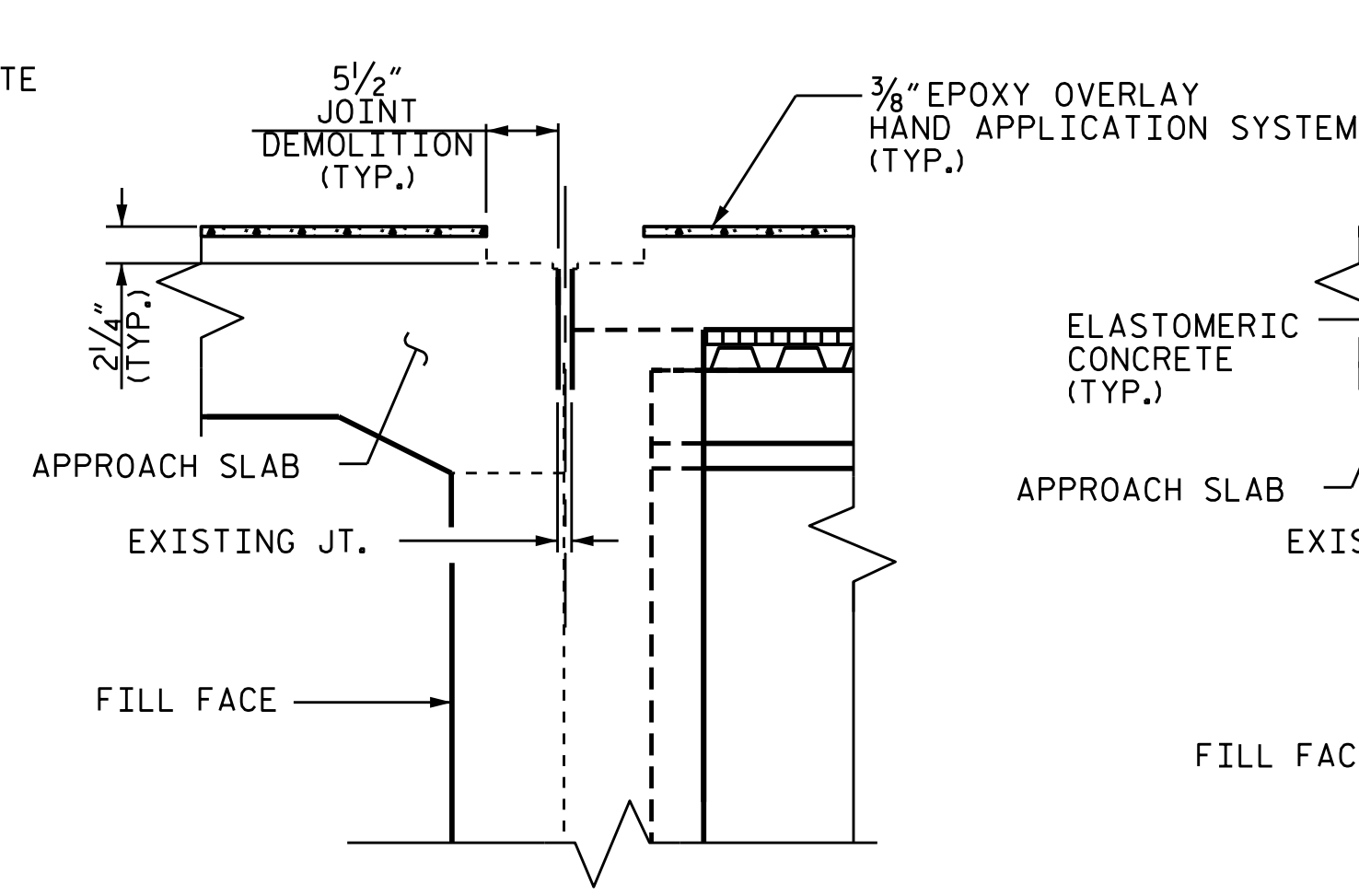
DRAWN BY : S. T. SANDOR DATE : 08/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

NO.	REVISIONS		NO.	REVISIONS		SHEET NO.
	BY:	DATE:		BY:	DATE:	
1			3			S4-5 TOTAL SHEETS 118
2			4			

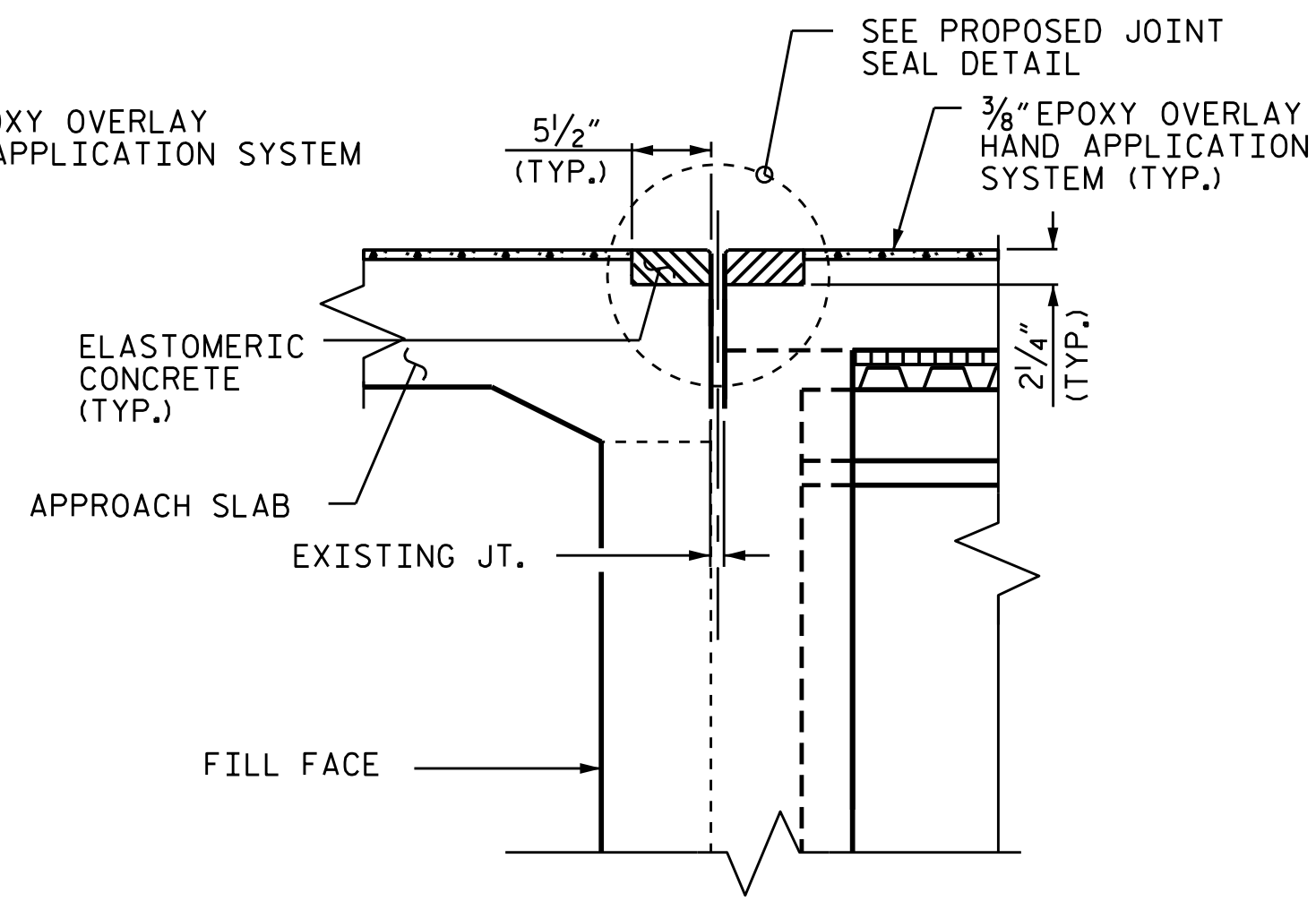
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



EXISTING JOINT



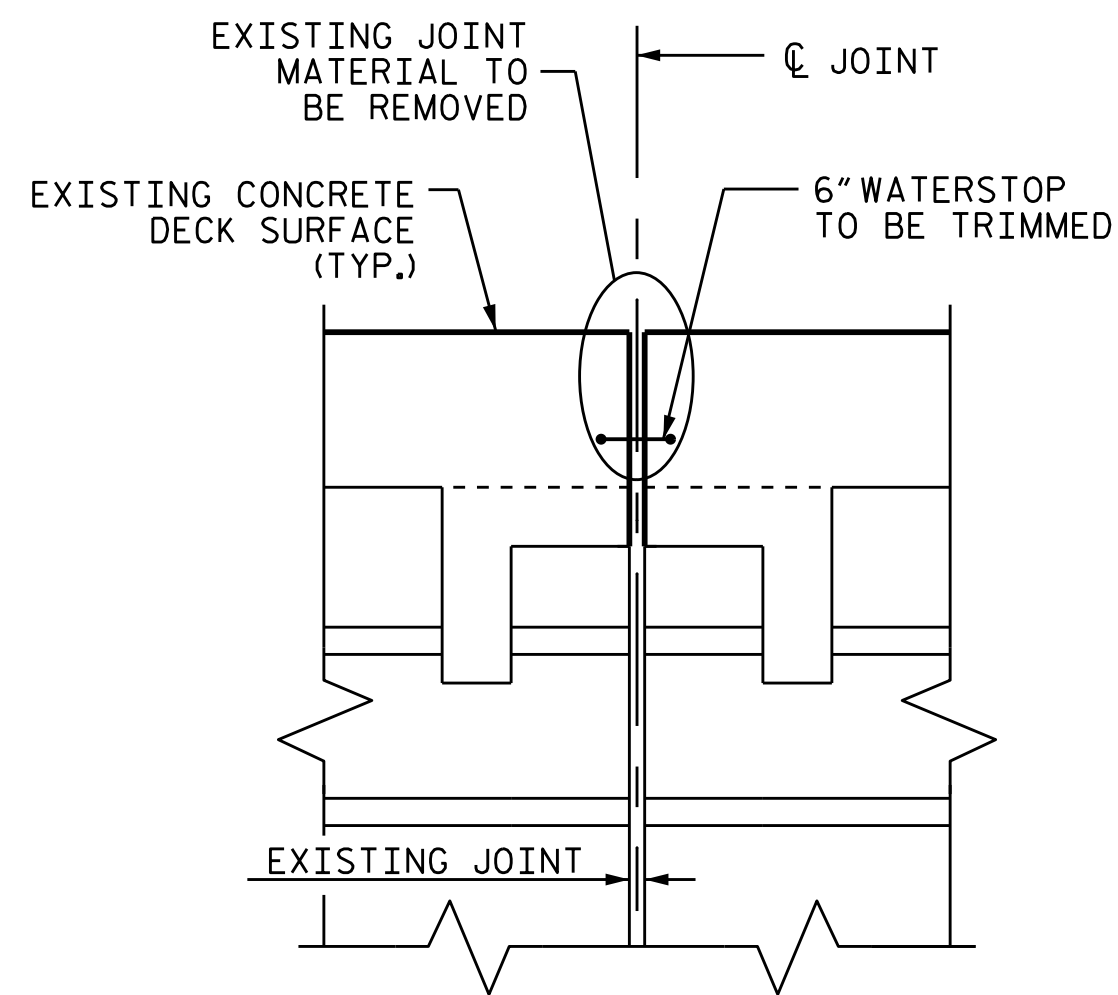
MINIMUM EXISTING JOINT DEMOLITION



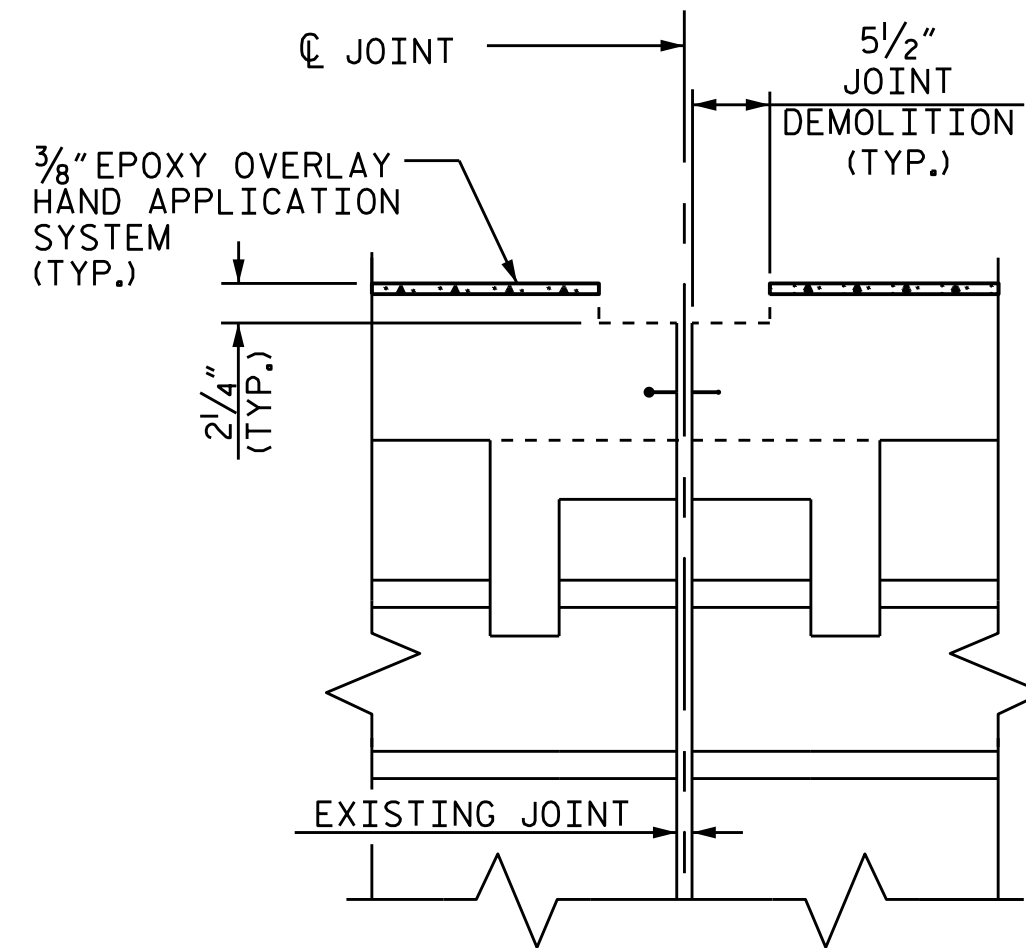
PROPOSED PRE-SAWED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

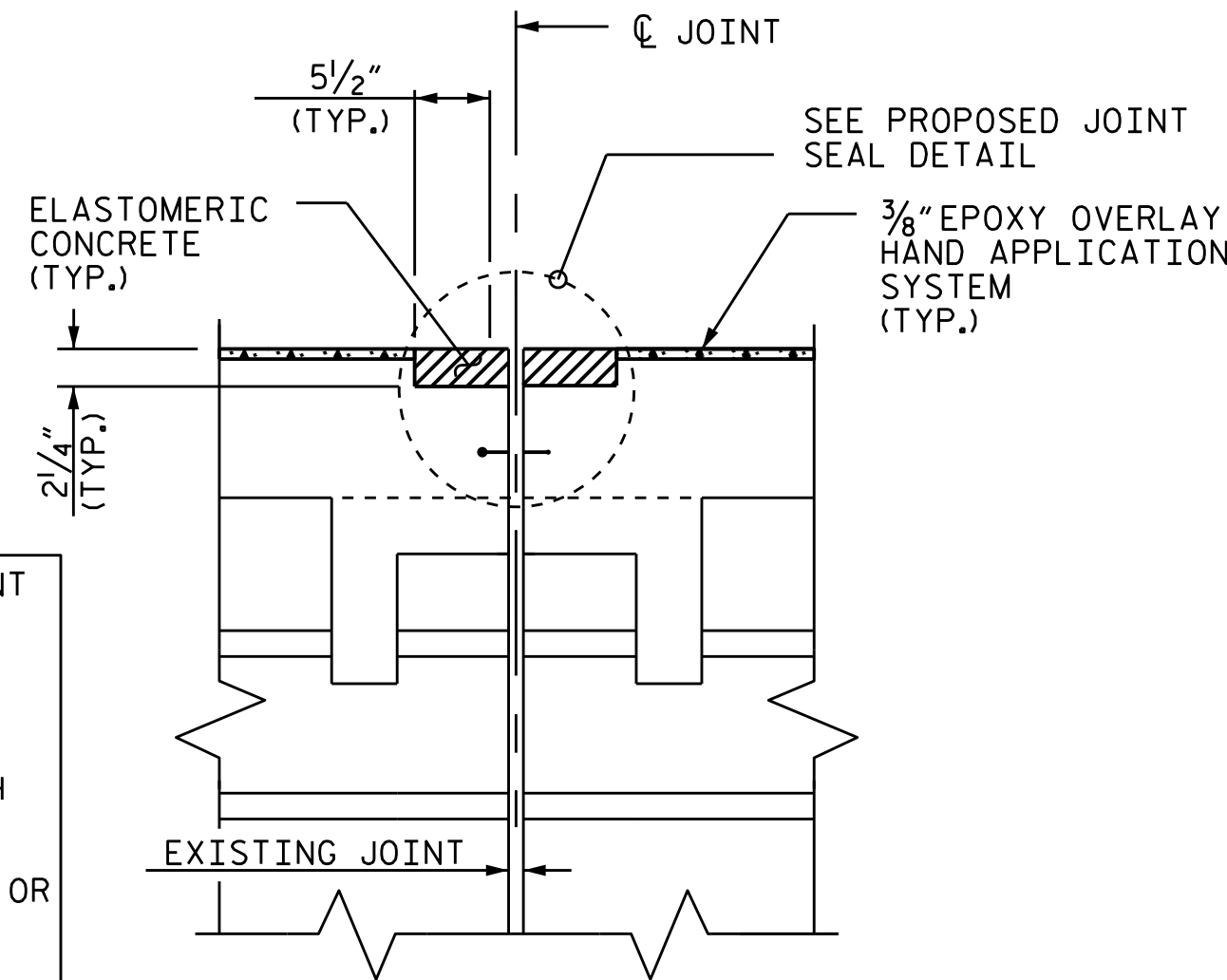


EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.



PROPOSED PRE-SAWED JOINT

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

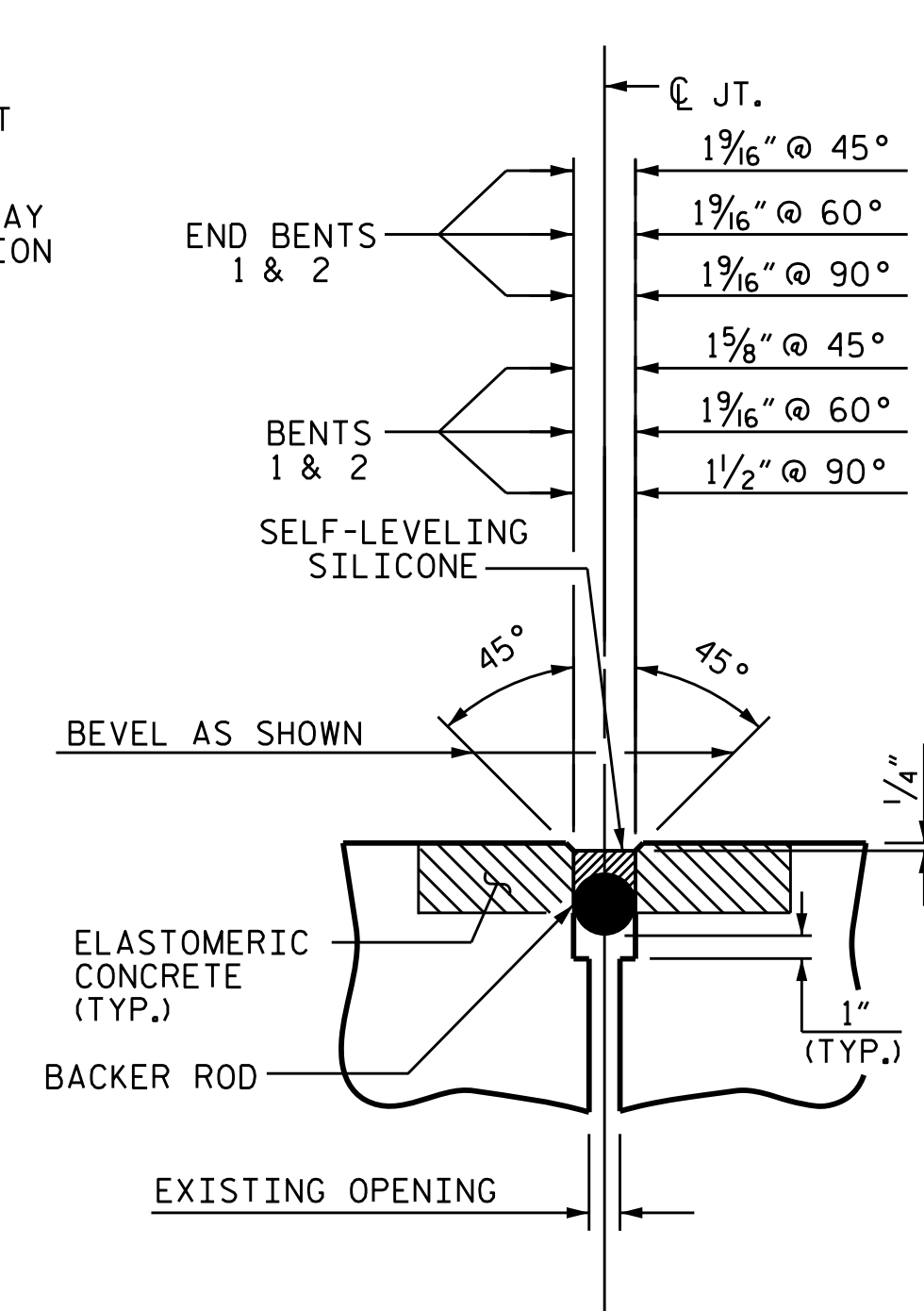
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	31.3 CF	
POURABLE SILICONE JOINT SEALANT	182.2 LF	

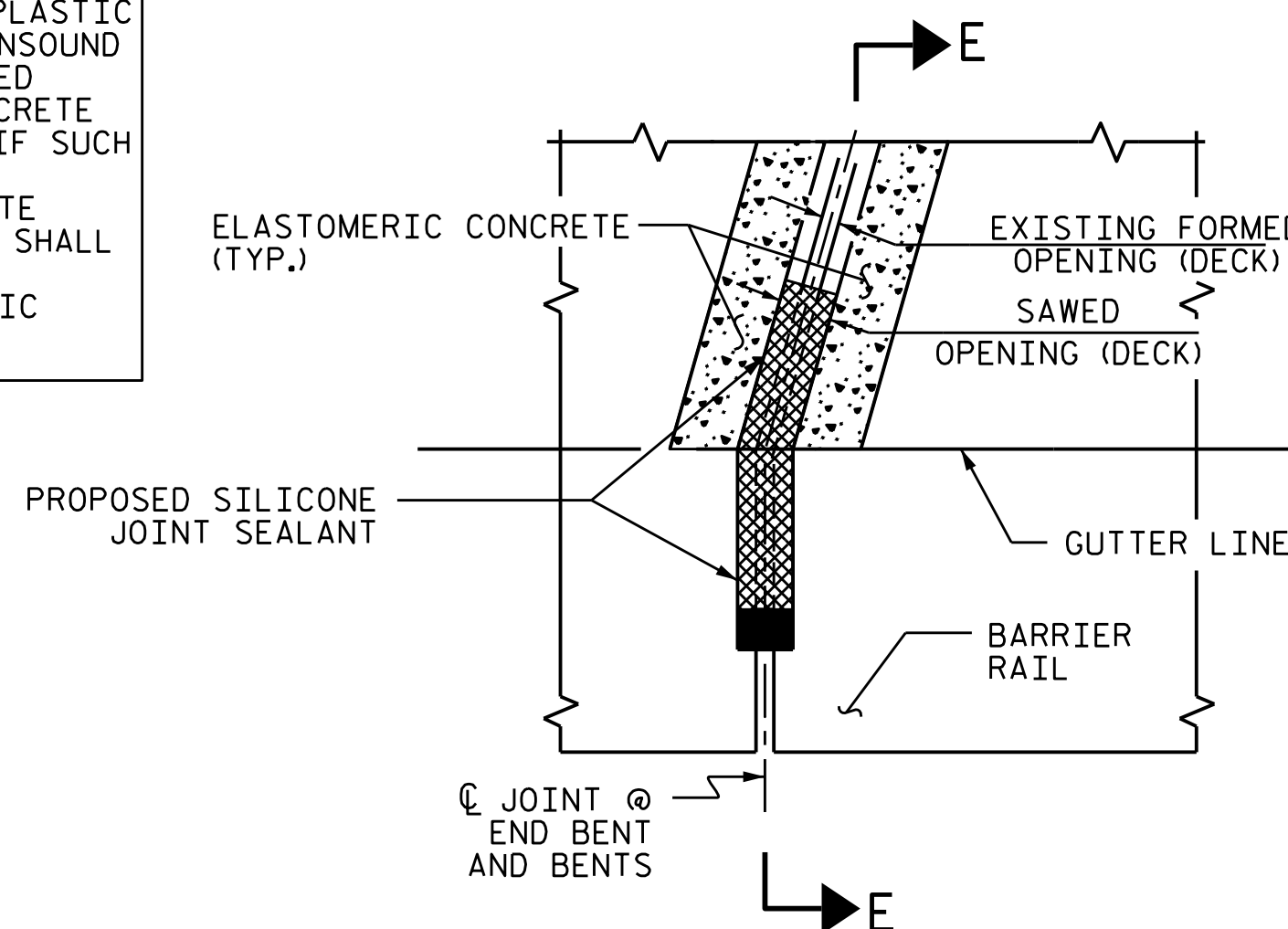


PROPOSED JOINT SEAL DETAIL (WITH SAWED DIMENSIONS)

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

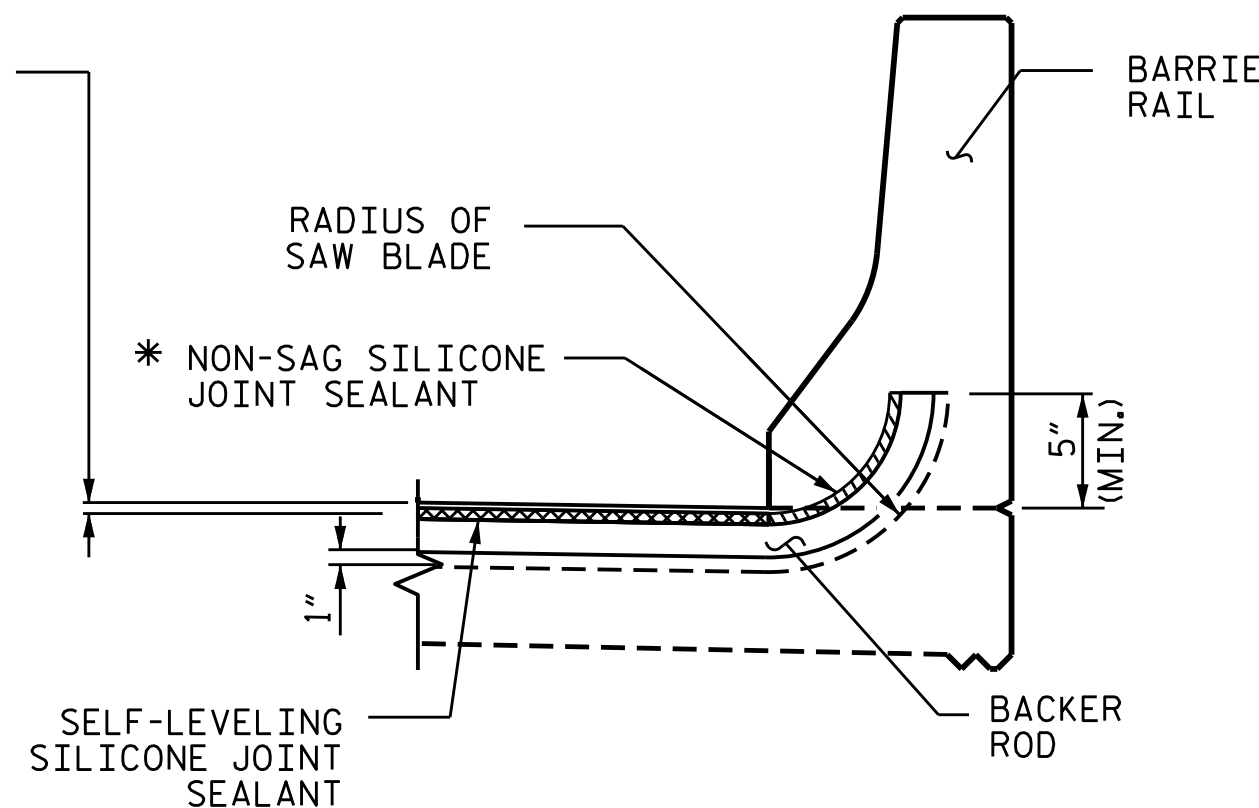
IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



PLAN

* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.

SILICONE JOINT SEALANT SHALL BE RECESSED 1/2" BELOW DECK SURFACE

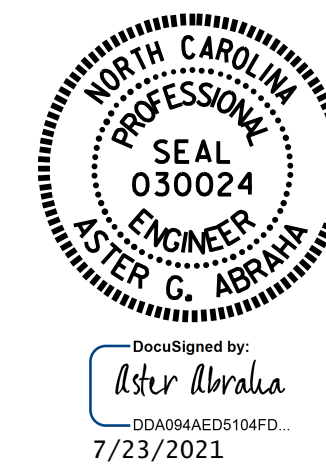


SECTION E-E

JOINT DETAIL AT BARRIER RAIL

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320156

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT REPAIR DETAILS					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		



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DRAWN BY: S. T. SANDOR/A. Y. GODFREY DATE: 02/2021
CHECKED BY: A. G. ABRAHA/S. WANCE DATE: 07/2021

SHEET NO. S4-6
TOTAL SHEETS 118

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.

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

FOR BENT DIAPHRAGM AND CONCRETE GIRDER REPAIR DETAILS, SEE "PRESTRESSED CONCRETE GIRDER GIRDER AND DIAPHRAGM REPAIR DETAILS" SHEET SD-1.

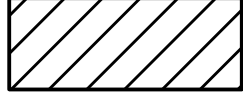
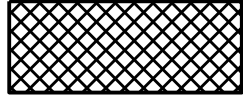
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

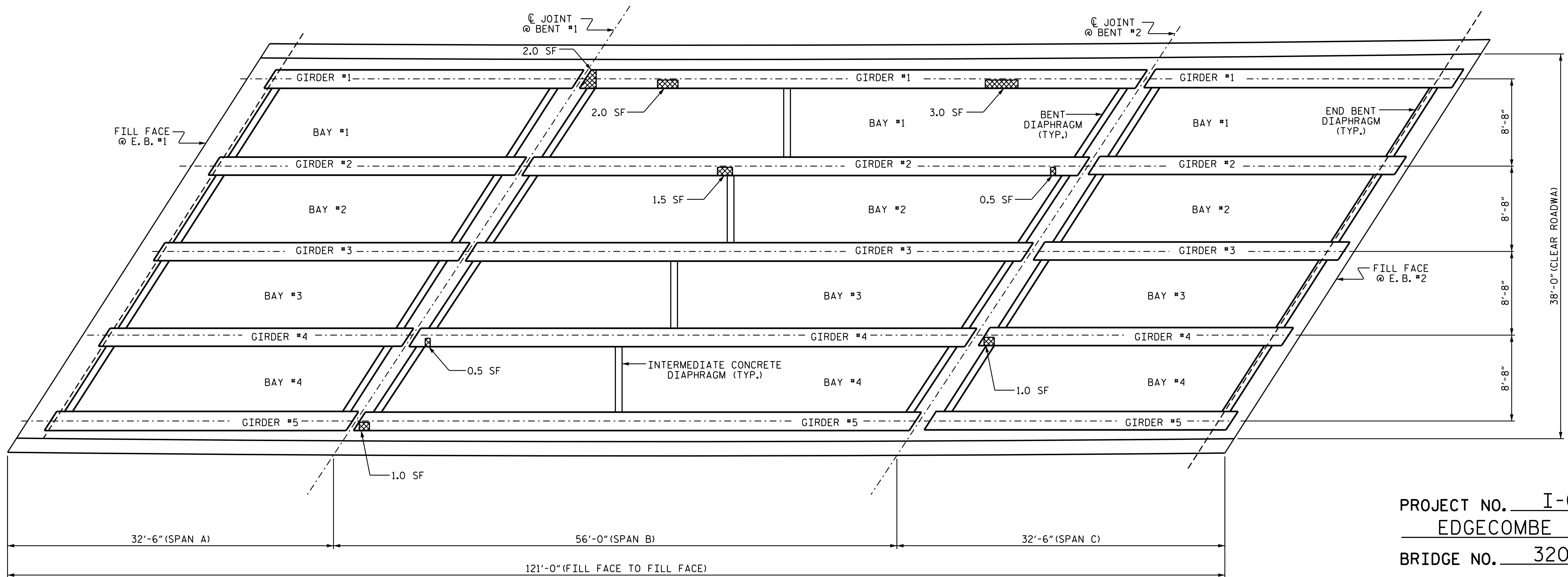
REPAIR QUANTITY TABLE

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	0.0	0.0		
BENT DIAPHRAGMS	0.0	0.0		
GIRDER REPAIRS				
DECK GIRDERS	11.5	3.9		

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

REPAIR KEY

-  - DIAPHRAGM SHOTCRETE REPAIR
-  - PRESTRESSED CONCRETE GIRDER REPAIR



GIRDER REPAIR LOCATIONS
(UNDERSIDE)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320156



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

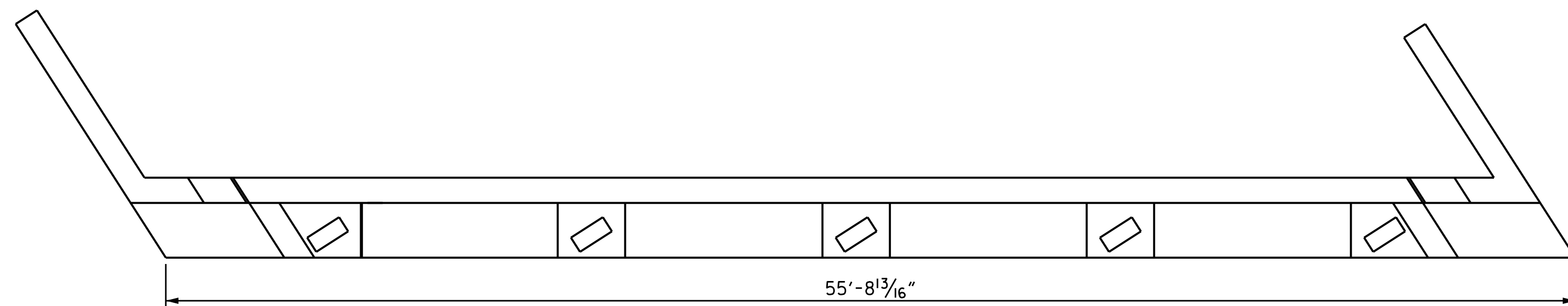
SUPERSTRUCTURE

GIRDER & DIAPHRAGM REPAIR

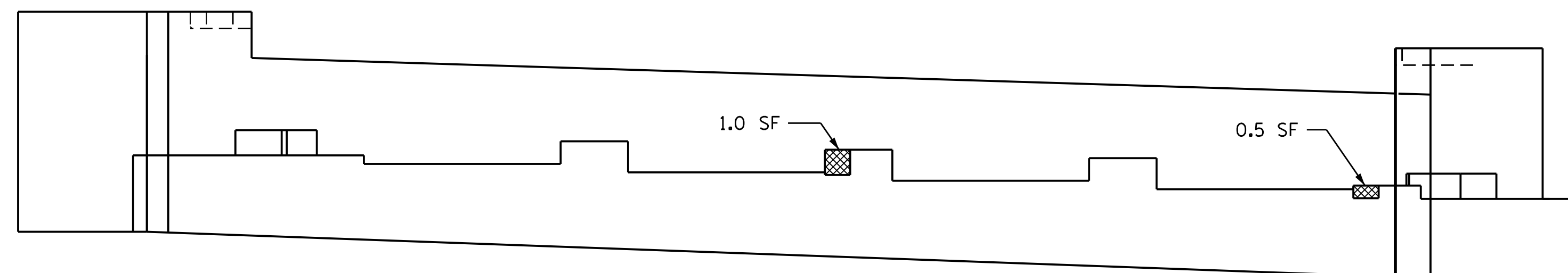
DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA DATE : 06/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S4-7
2			4			118

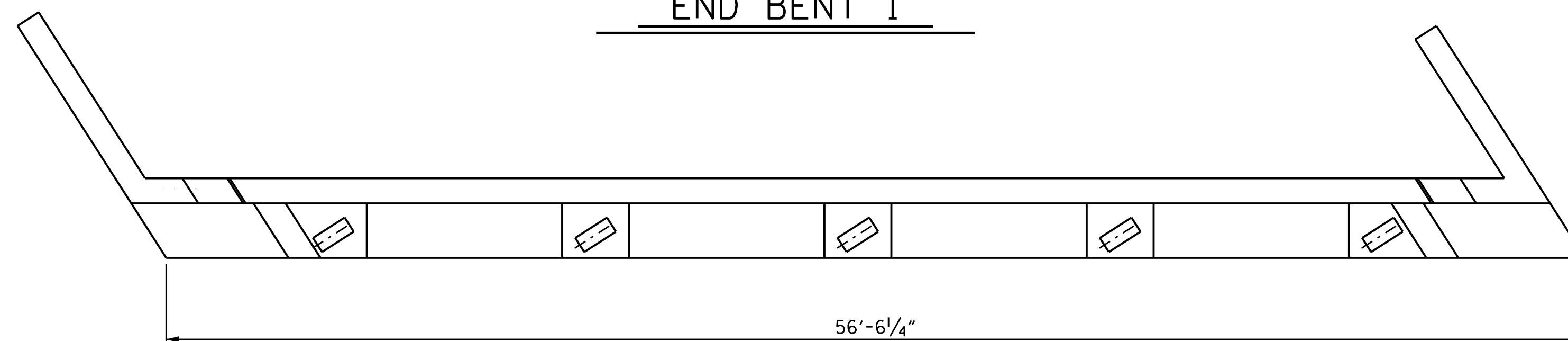


PLAN
(TOP OF CAP)

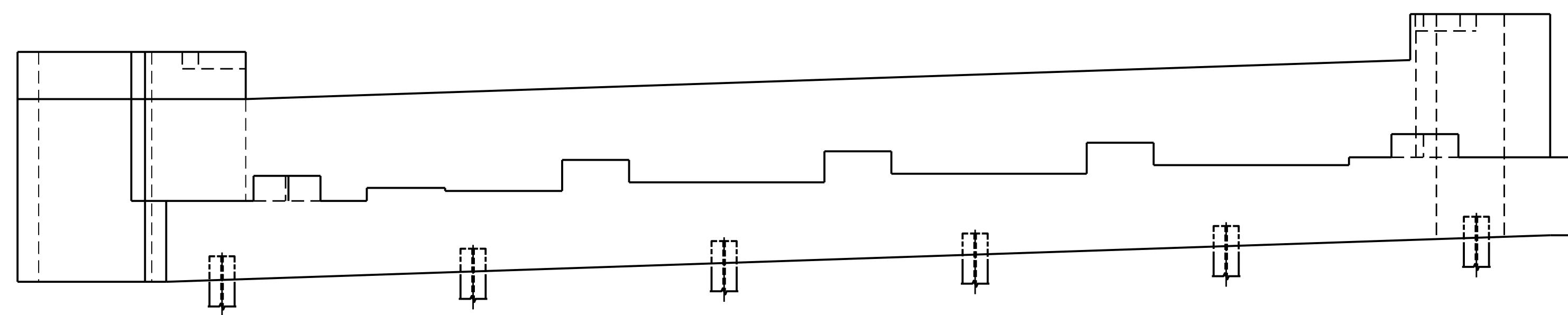


ELEVATION

END BENT 1



PLAN



ELEVATION

END BENT 2

REPAIR QUANTITY TABLE

REPAIRS END BENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	1.5	0.8		
COLUMN	0.0	0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEARANCE TO SAWCUT. 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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

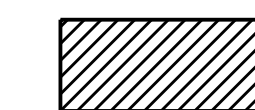
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR KEY

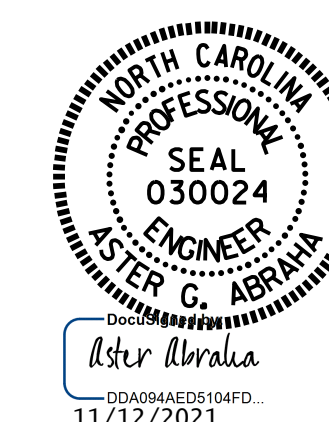


CONCRETE REPAIR AREA (FORM AND POUR)



SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320156



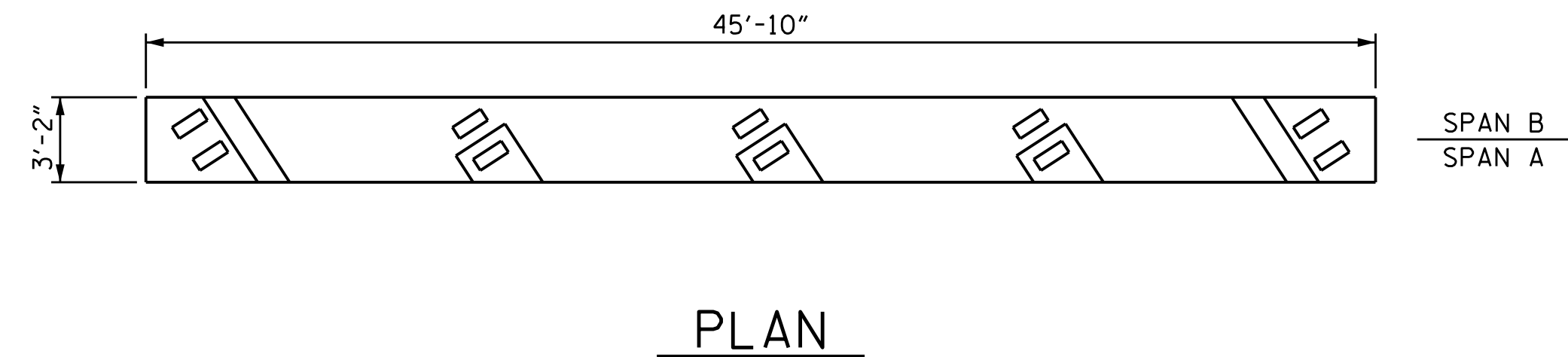
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT REPAIRS

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

NO.	REVISIONS						SHEET NO.
	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			4	S4-8
2			4				118



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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

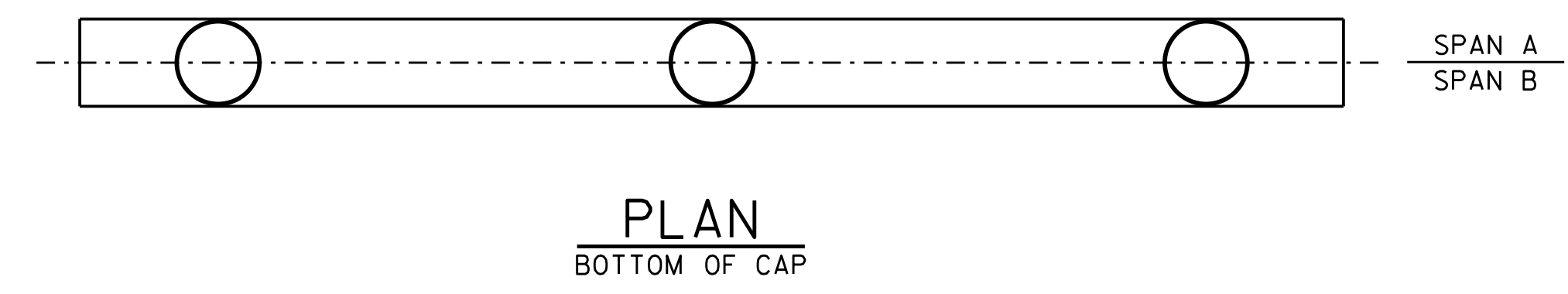
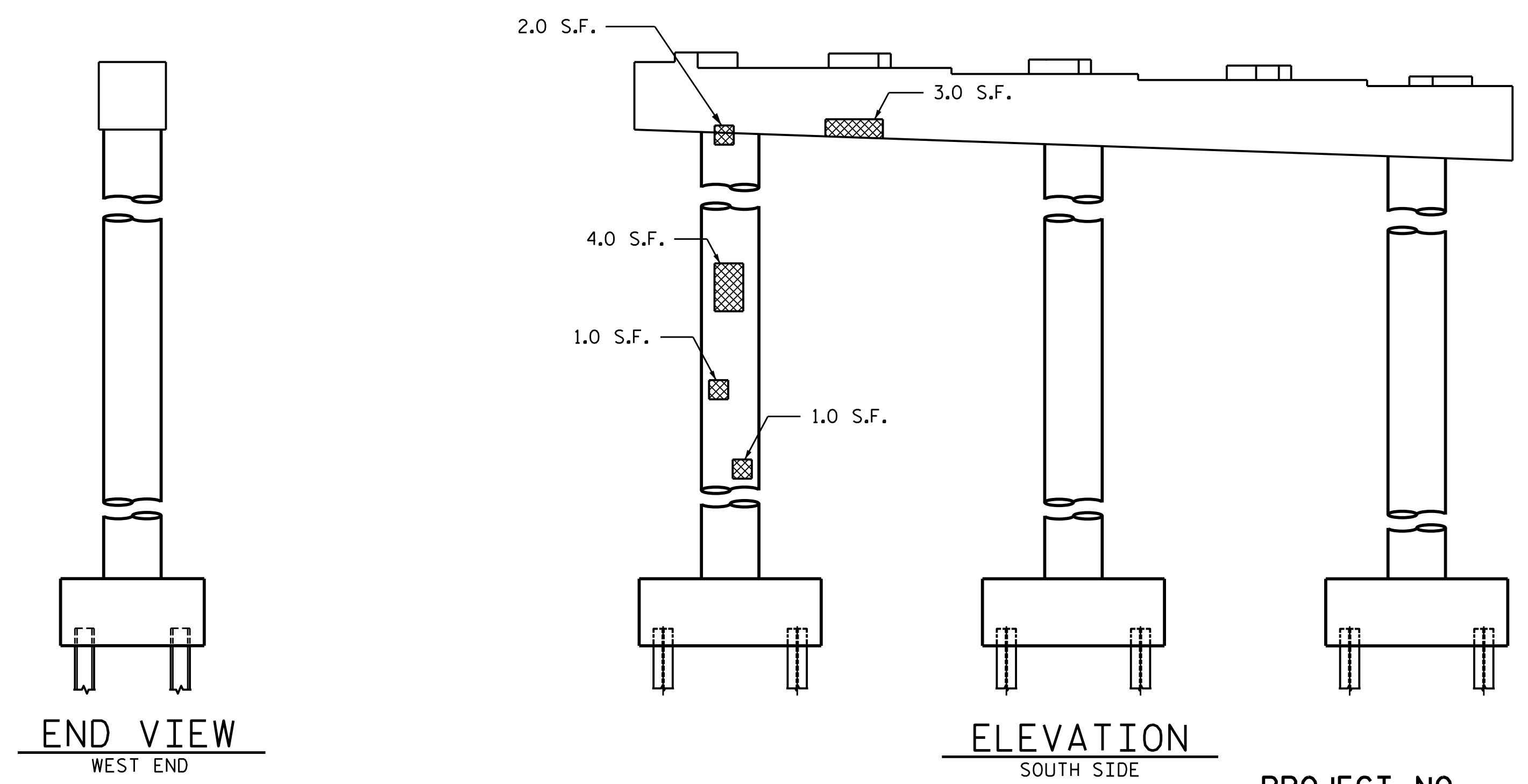
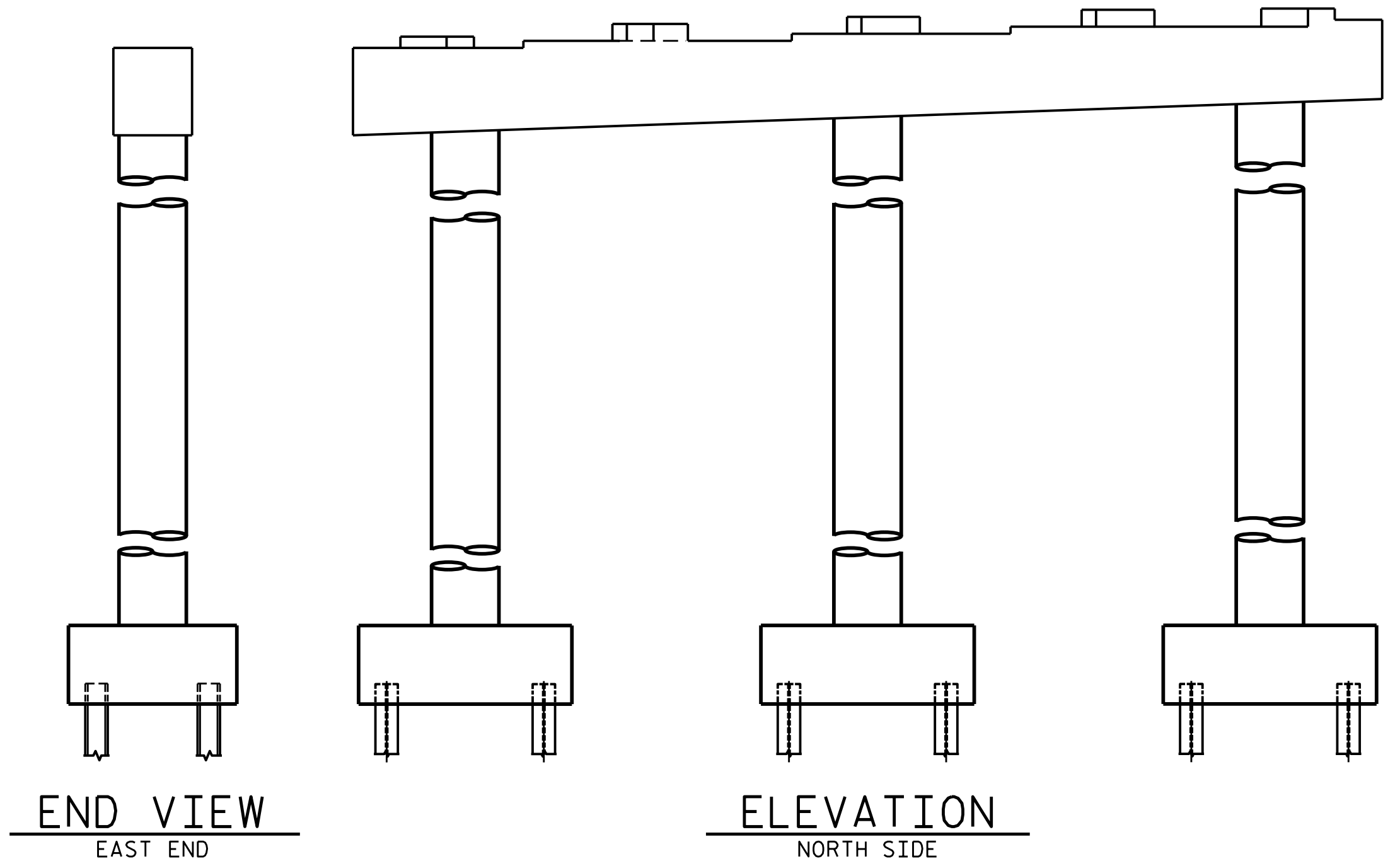
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

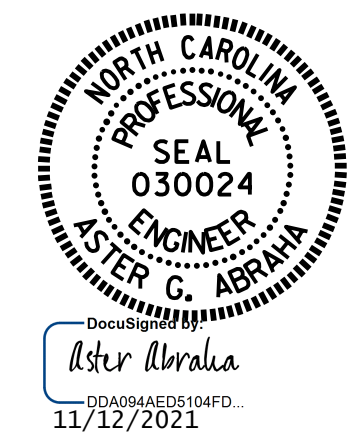
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	5.0	2.5		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	6.0	3.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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



REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320156

SHEET 1 OF 2

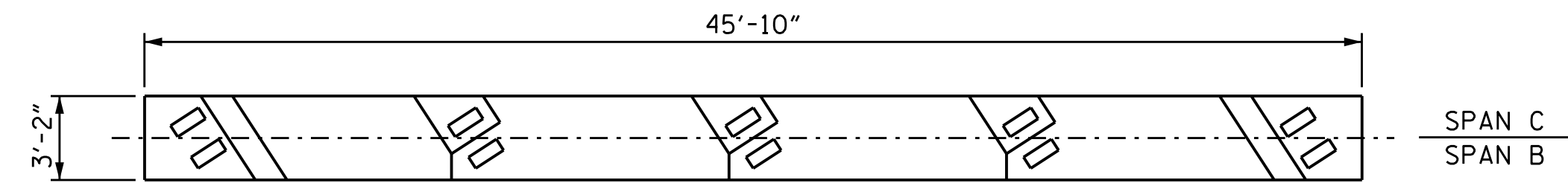
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 1**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			54-9
2			4			118



PLAN
TOP OF CAP

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

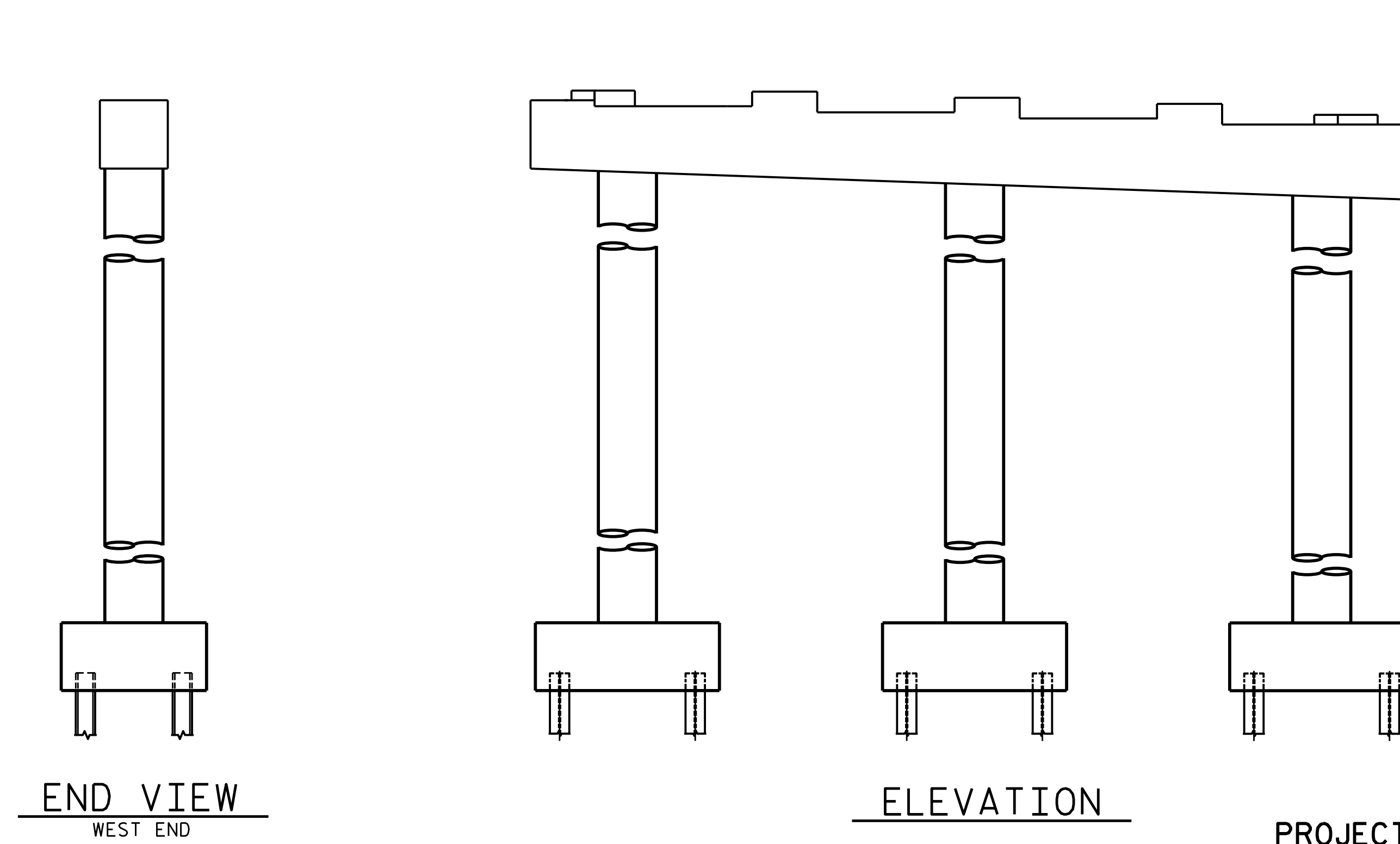
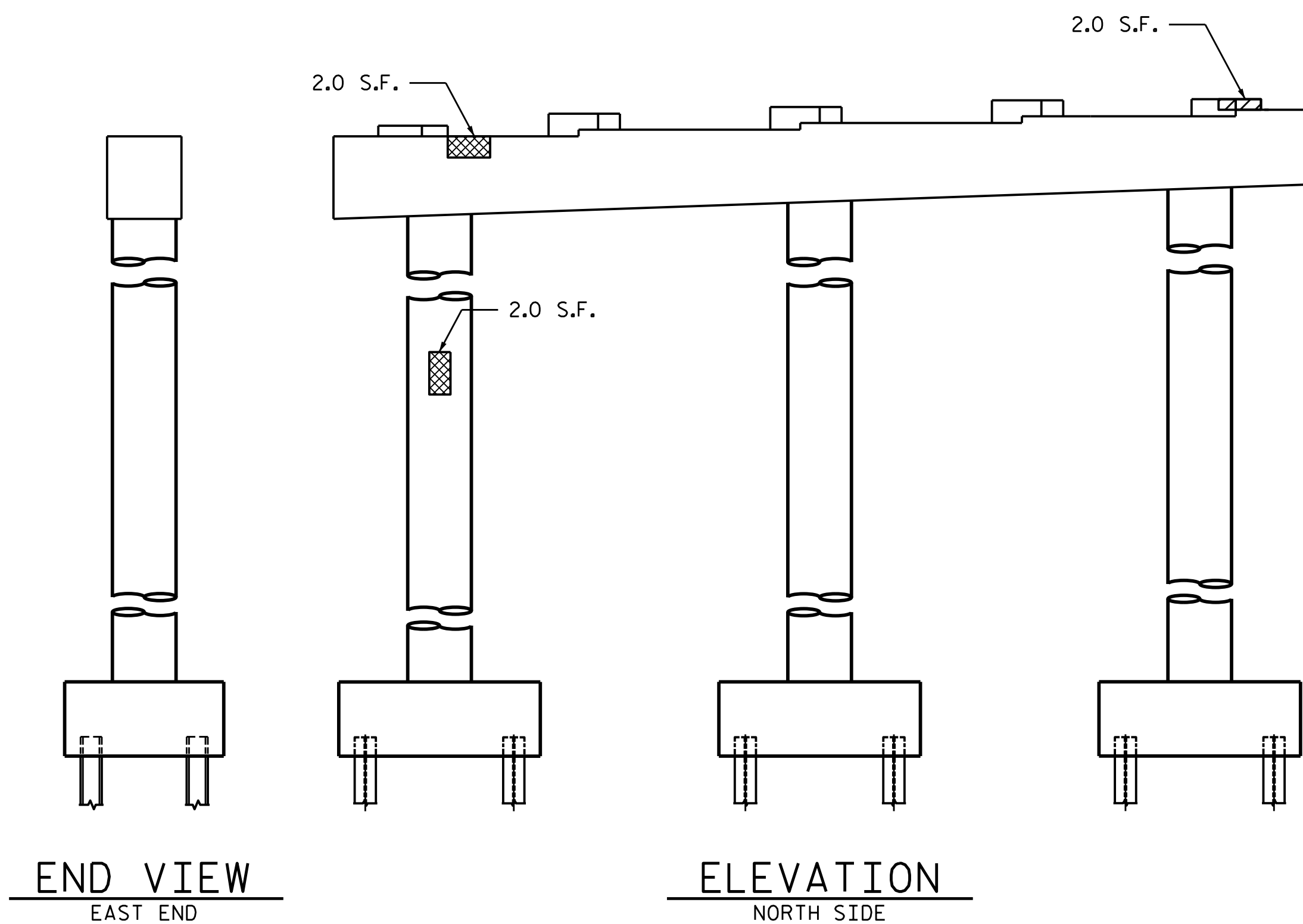
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

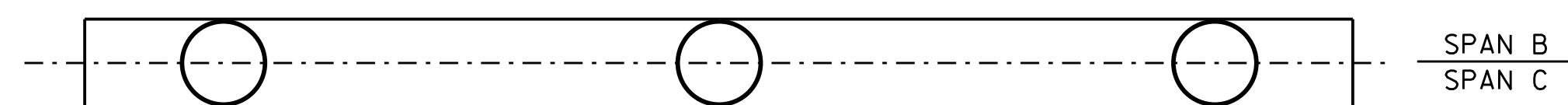
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	2.0	1.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	2.0	1.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	2.0	1.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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



REPAIR KEY

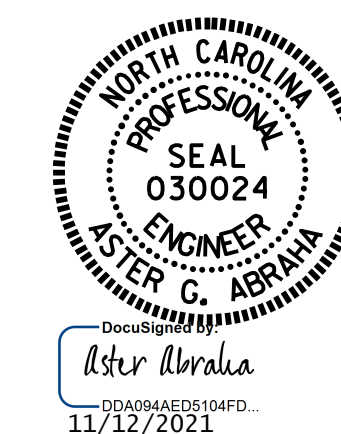
- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA



PLAN
BOTTOM OF CAP

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320156

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 2**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S4-10
2			4			118

SCOPE OF WORK

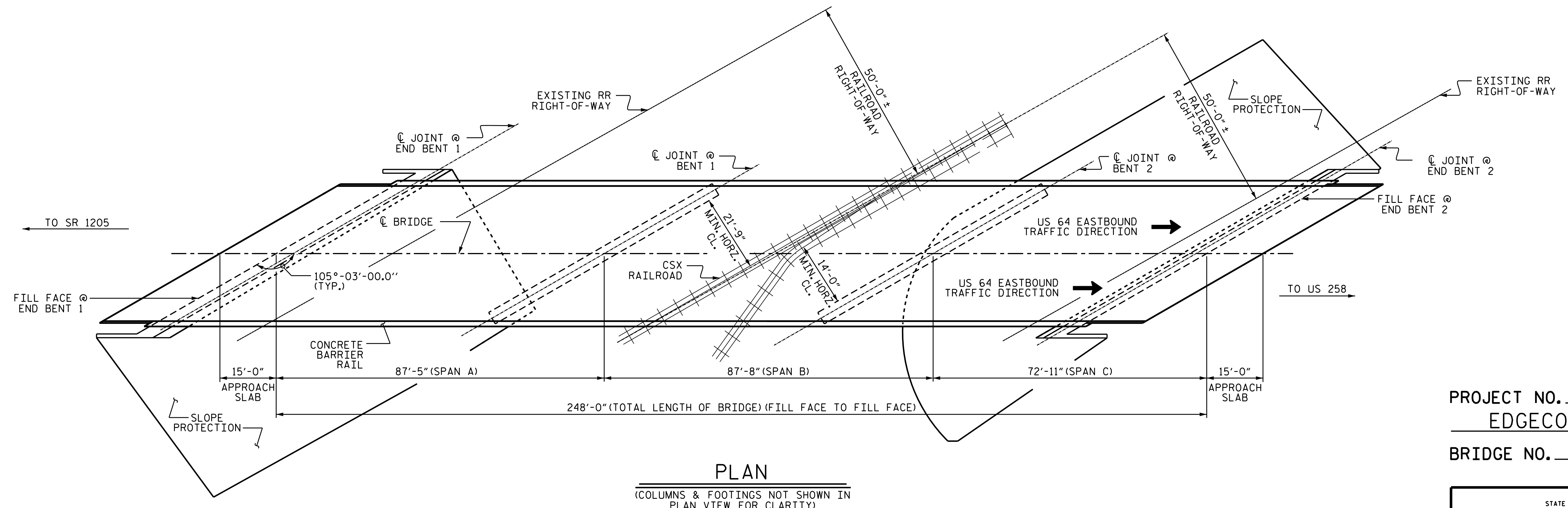
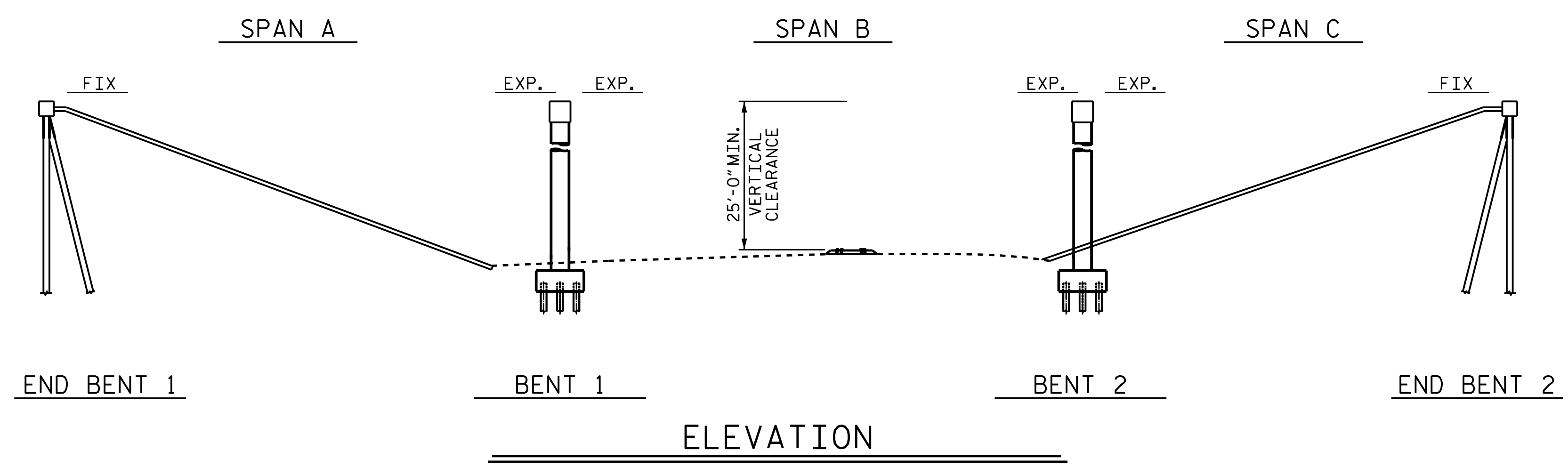
- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC CONCRETE AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- REPAIR SUBSTRUCTURE USING EPOXY RESIN INJECTION AND SHOTCRETE.

NOTES

GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION, DATED 11/05/2018 AND 10/04/2020.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE

RAILROAD RIGHT-OF-WAY IS TAKEN FROM THE BEST INFORMATION AVAILABLE AND NOT EXACT. RAILROAD RIGHT-OF-WAY IS FOR INFORMATION PURPOSES ONLY AND TO BE VERIFIED IN THE FIELD.

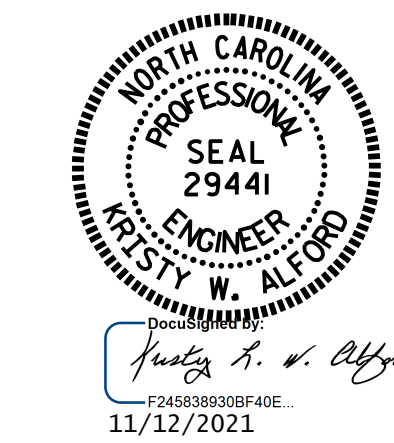
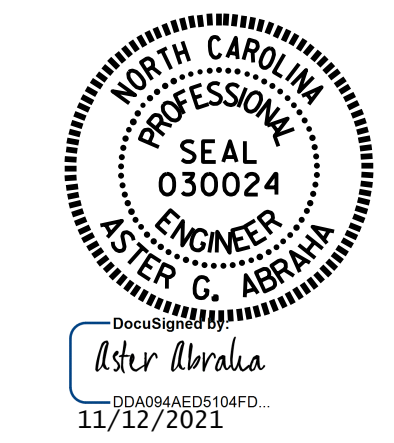


PLAN
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320154

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____

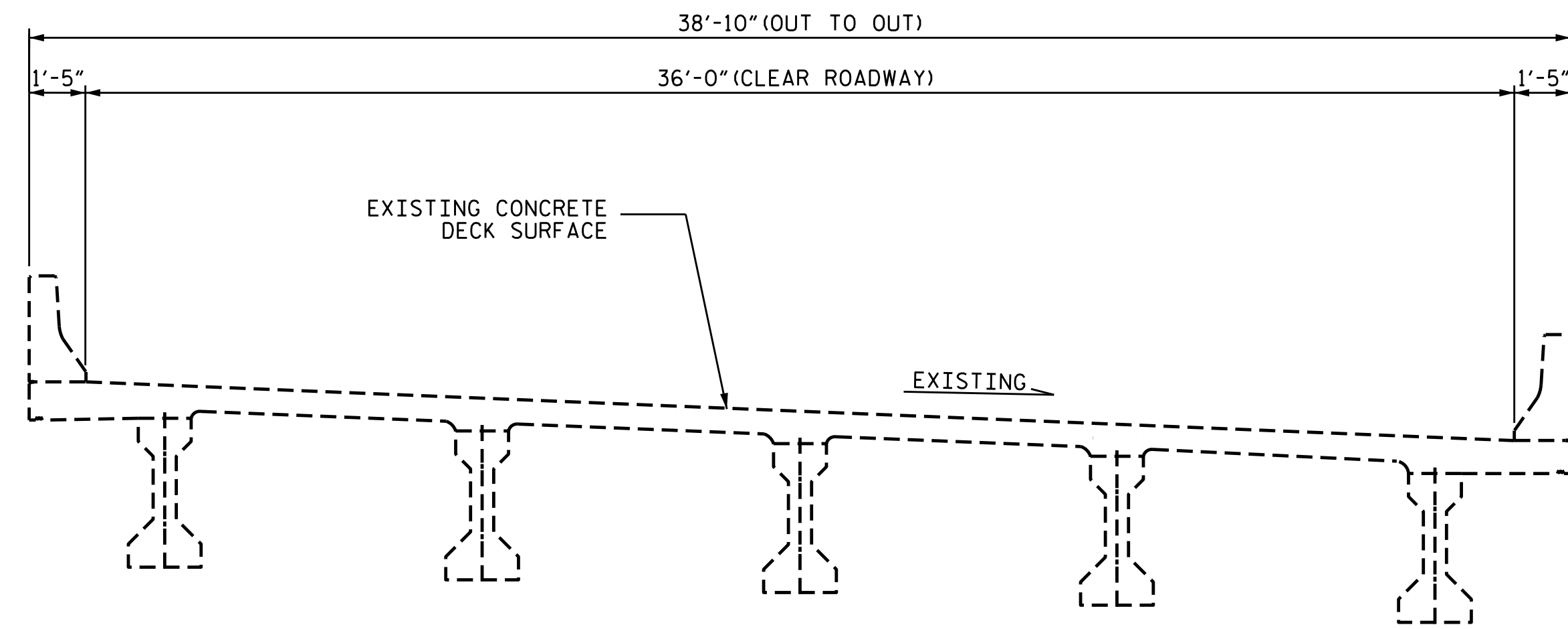


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE NO. 154 ON
 US 64 EBL OVER CSX
 RAILROAD BETWEEN SR 1205
 AND US 258

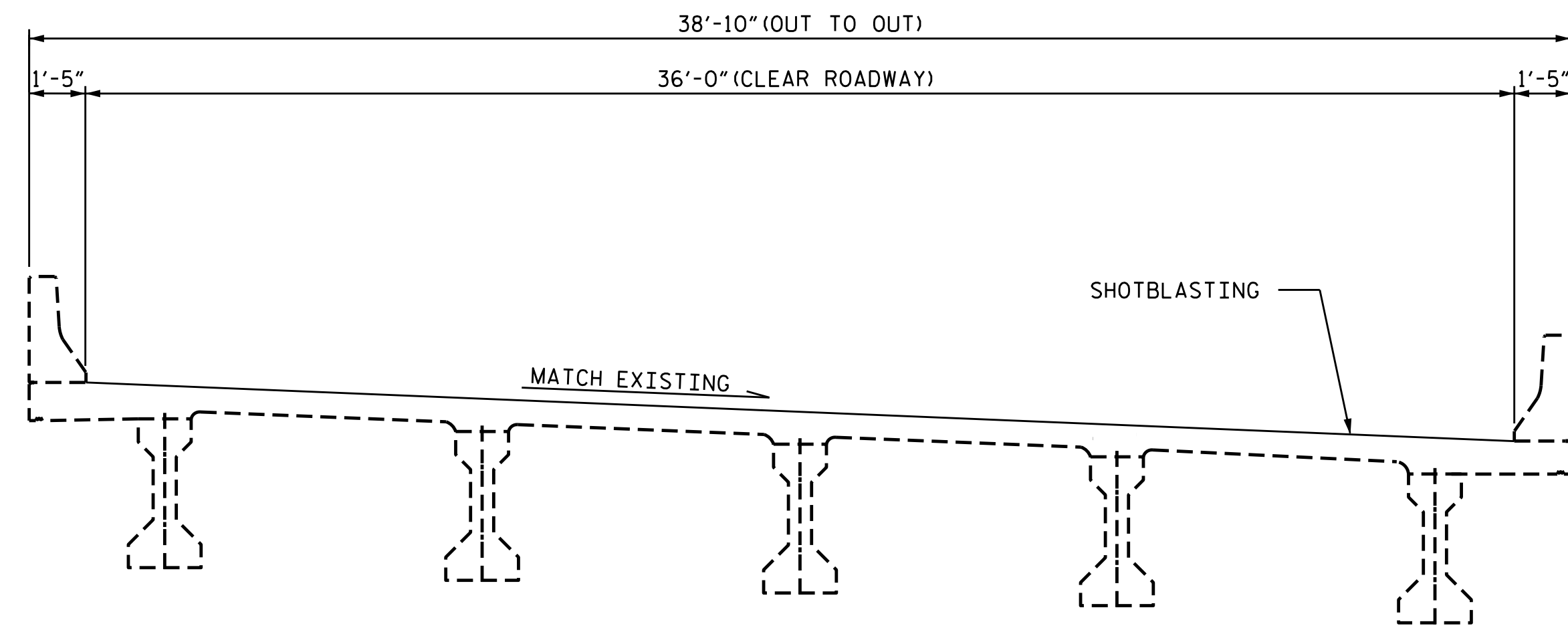
DRAWN BY : S. T. SANDOR DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/2019

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

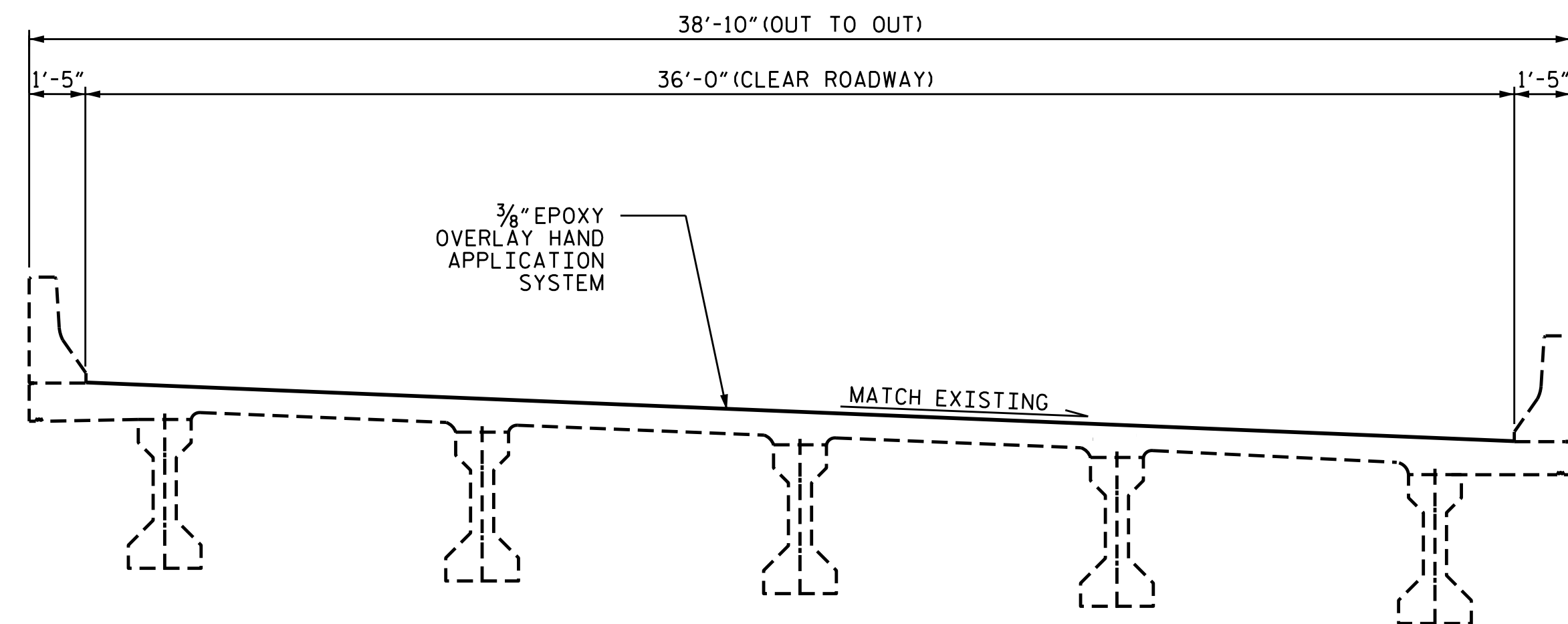
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S5-1
2			4			118



TYPICAL SECTION
(EXISTING)



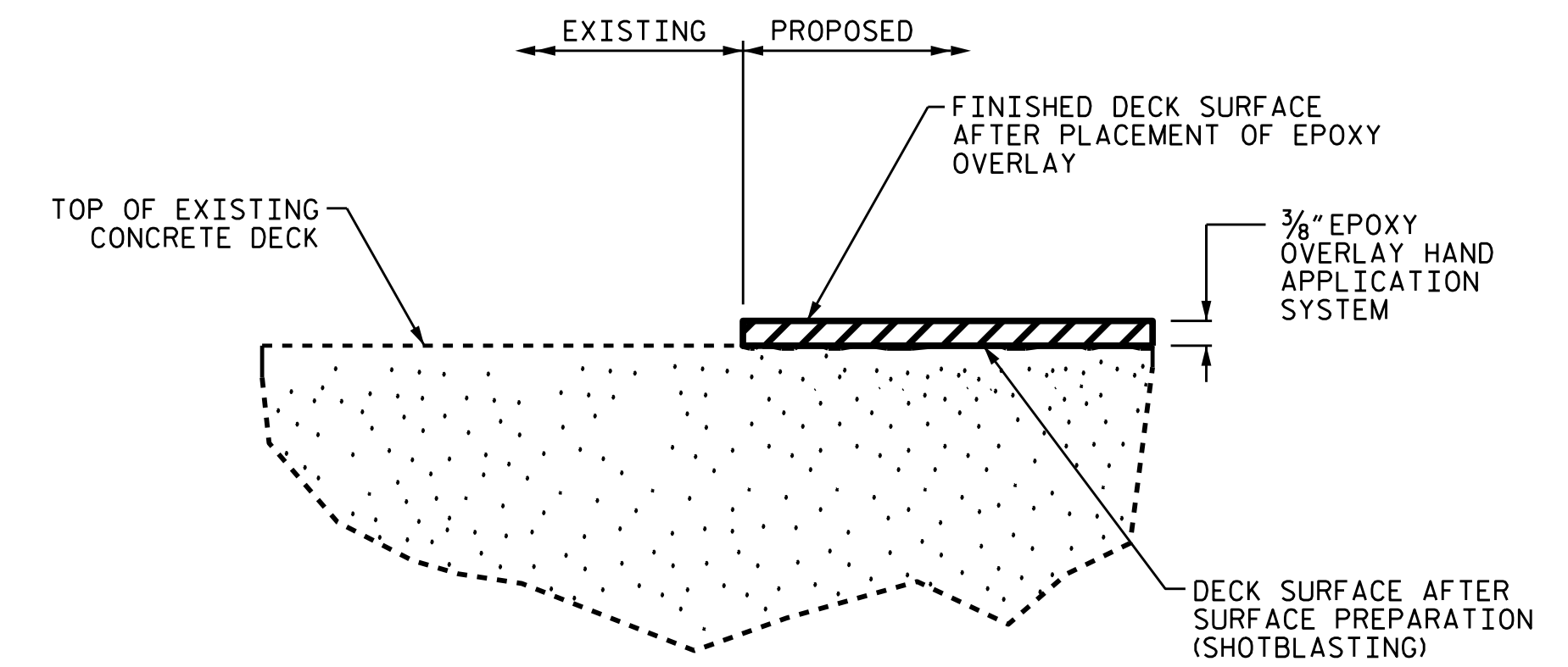
TYPICAL SECTION
(DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

NOTES

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



EPOXY OVERLAY HAND APPLICATION SYSTEM DETAIL

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320154



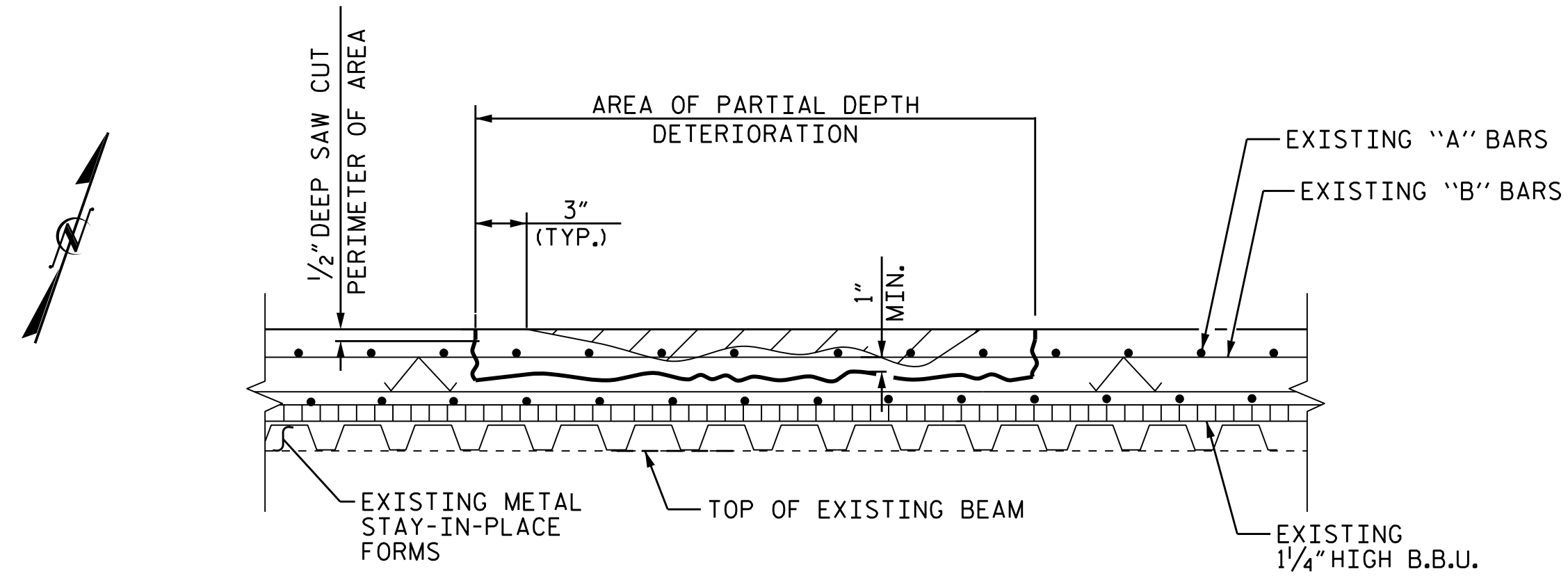
DocuSigned by:
 Aster Abraha
 00408AAED510AFD...
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**TYPICAL SECTION
 AND SURFACE
 PREPARATION DETAILS**

DRAWN BY : S. I. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA DATE : 05/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S5-2
2			4			118



CONCRETE DECK REPAIR FOR EPOXY OVERLAY

NOTES:

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FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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

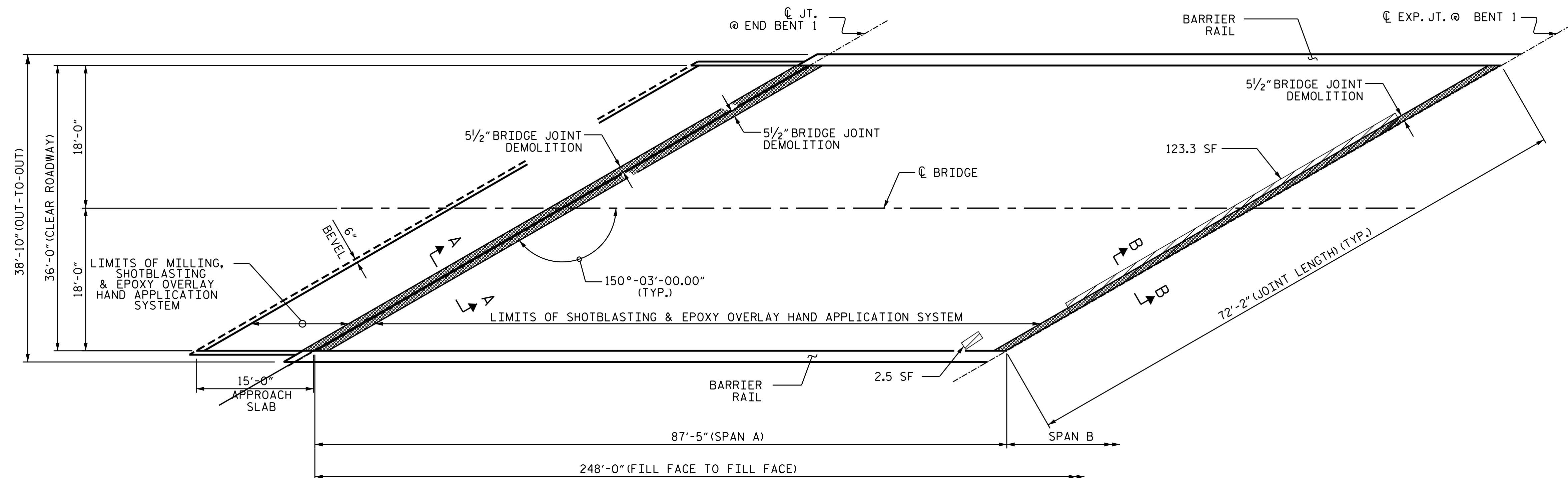
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB 1

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,541 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	125.8 SF	
BRIDGE JOINT DEMOLITION	99.3 SF	

- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION



PLAN OF APPROACH SLAB 1 AND SPAN A

(SEE SHEET S4-6 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320154

SHEET 1 OF 3



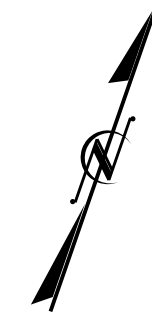
DocuSigned by:
 Aster Abrahams
 004084AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN A AND
 APPROACH SLAB**

DRAWN BY : Z. MALIK / S. T. SANDOR DATE : 11/2019
 CHECKED BY : A. G. ABRAHA / S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
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1			3			S5-3
2			4			118


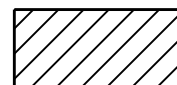



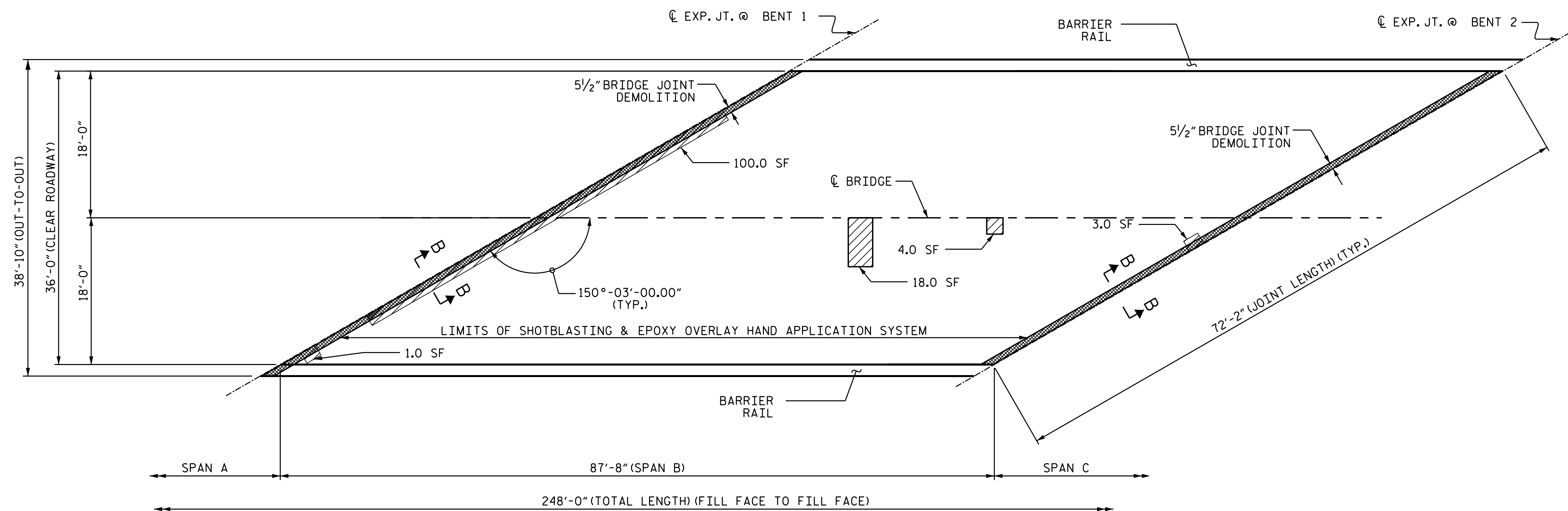
NOTES:

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SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,084 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	126.0 SF	
BRIDGE JOINT DEMOLITION	66.2 SF	

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

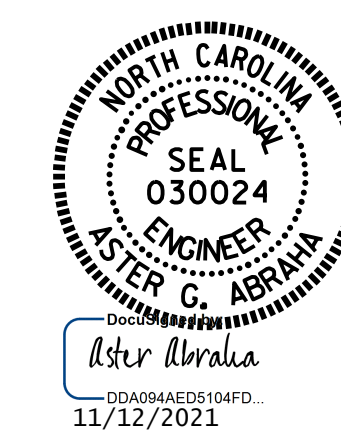


PLAN OF SPAN B

(SEE SHEET S4-6 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320154

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN B**

DRAWN BY : Z. MALIK / S. T. SANDOR DATE : 11/2019
 CHECKED BY : A. G. ABRAHA / S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED


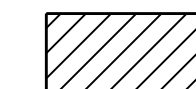
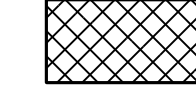
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S5-4
2			4			118

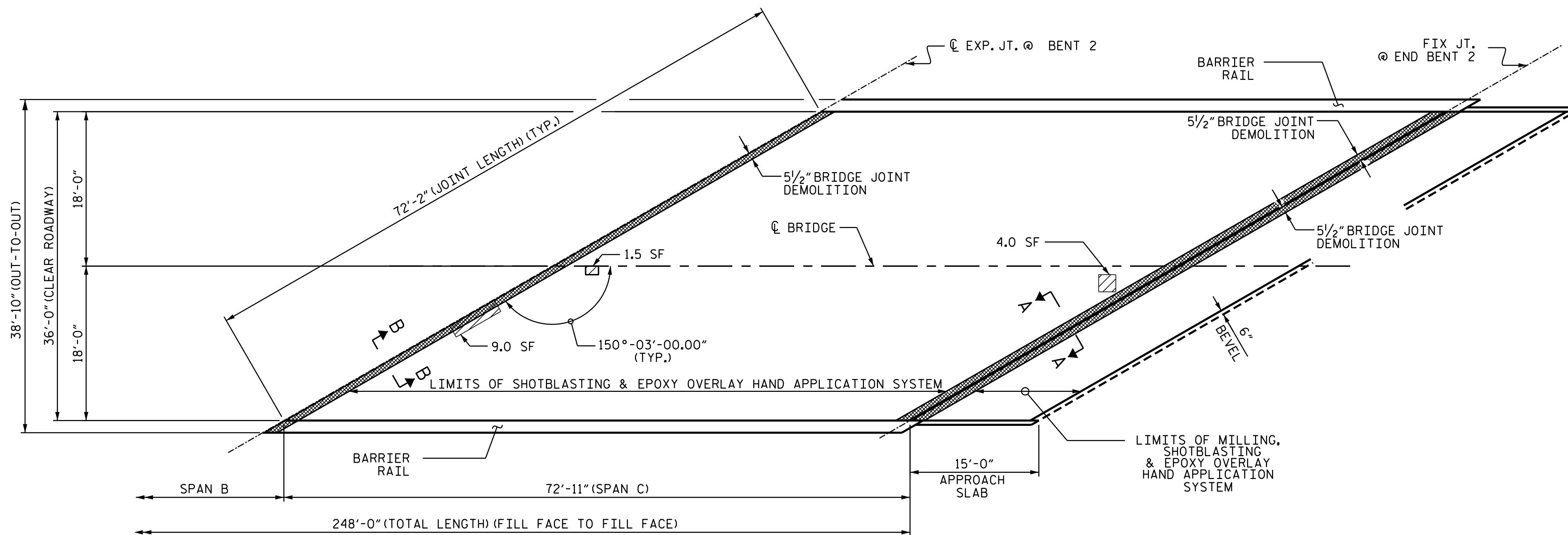
NOTES:

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SUMMARY OF QUANTITIES FOR SPAN C AND APPROACH SLAB 2

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,021 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	14.5 SF	
BRIDGE JOINT DEMOLITION	99.3 SF	

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

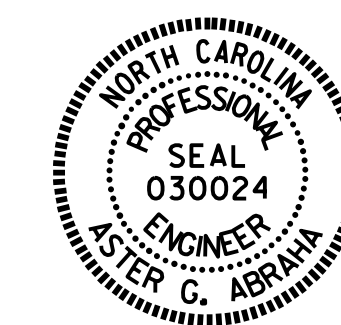


PLAN OF SPAN C AND APPROACH SLAB

(SEE SHEET S4-6 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320154

SHEET 3 OF 3



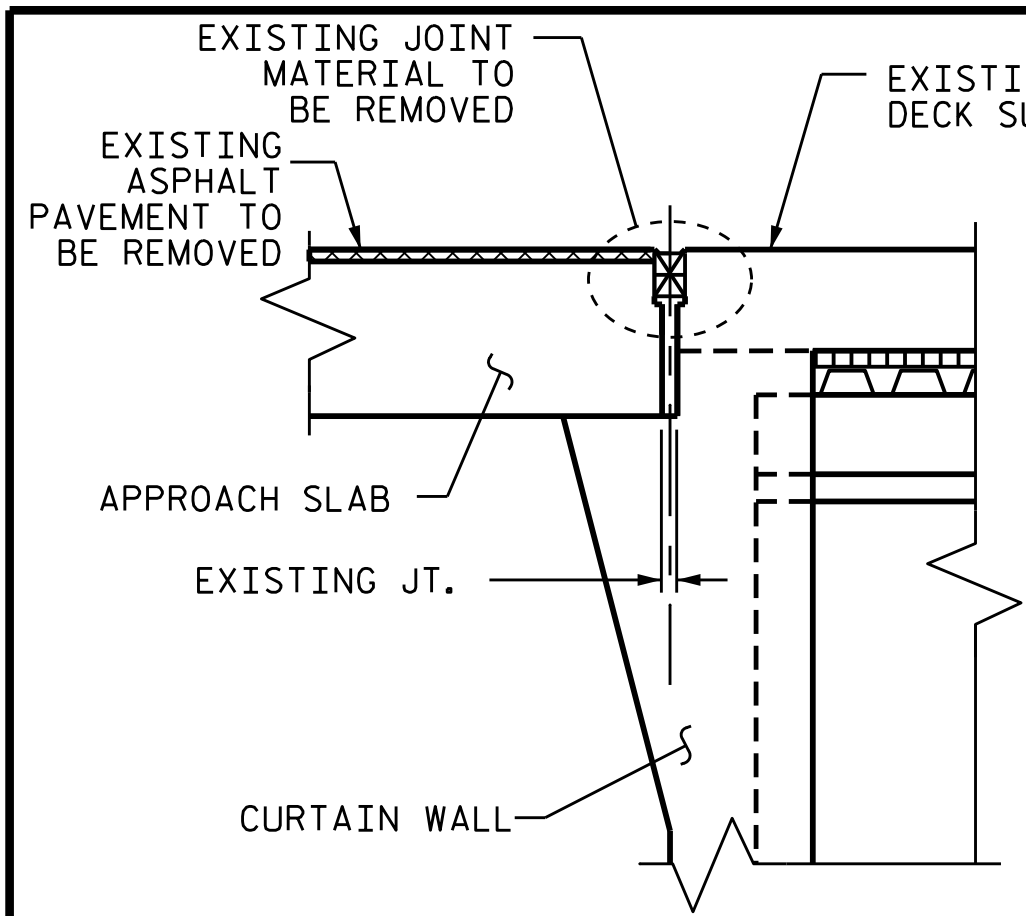
DocuSigned by:
 Aster Abraha
 00408AAED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN C AND
 APPROACH SLAB**

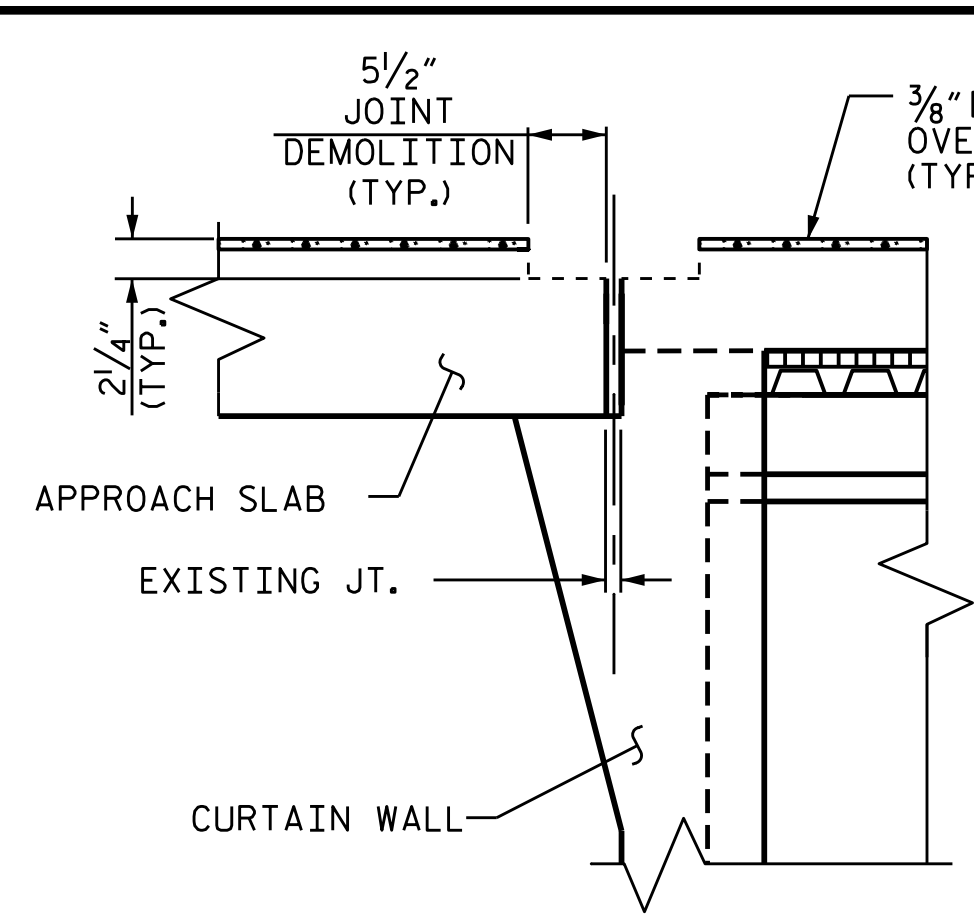
DRAWN BY : Z. MALIK / S. T. SANDOR DATE : 11/2019
 CHECKED BY : A. G. ABRAHA / S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

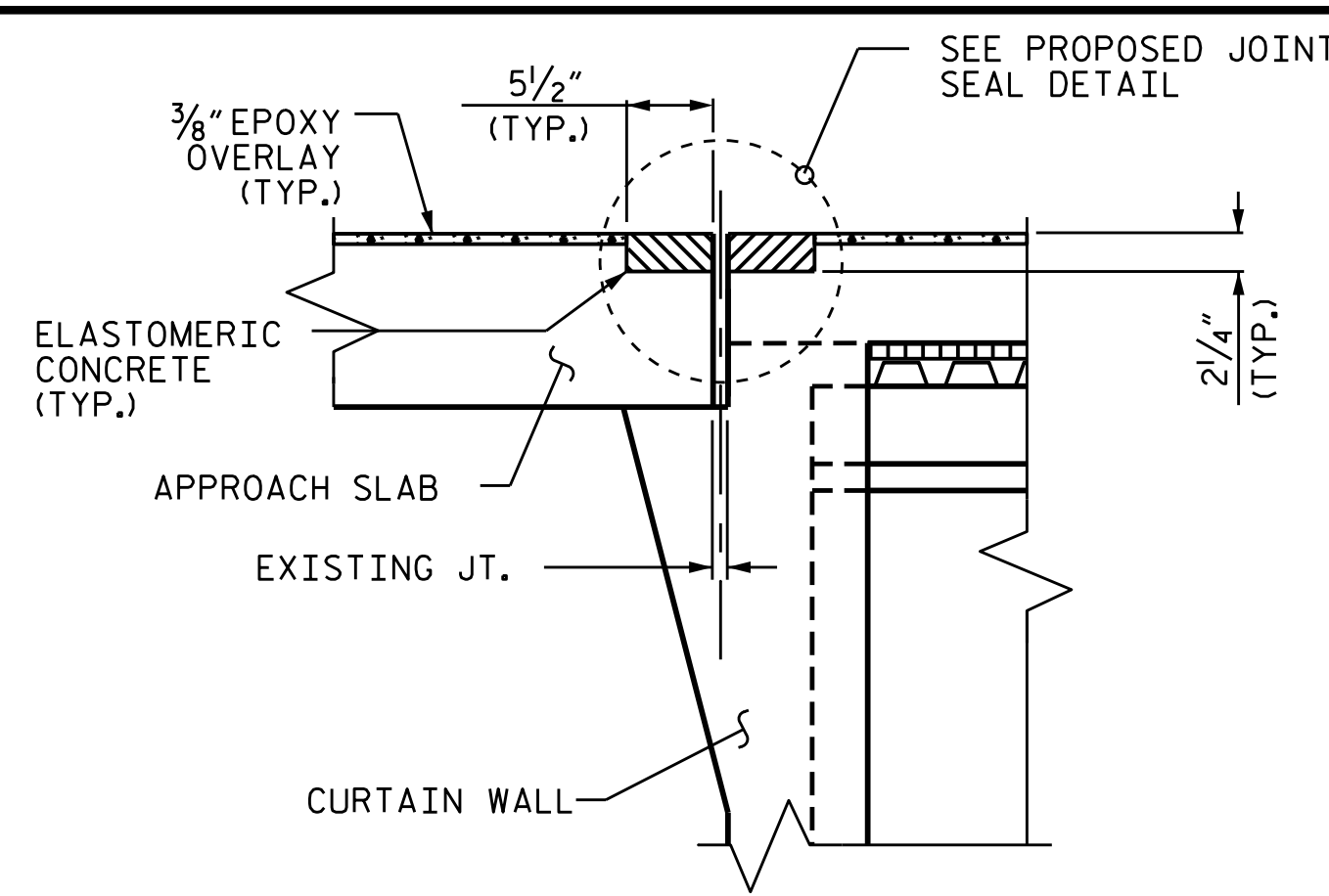
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S5-5
2			4			118



EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY THE ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

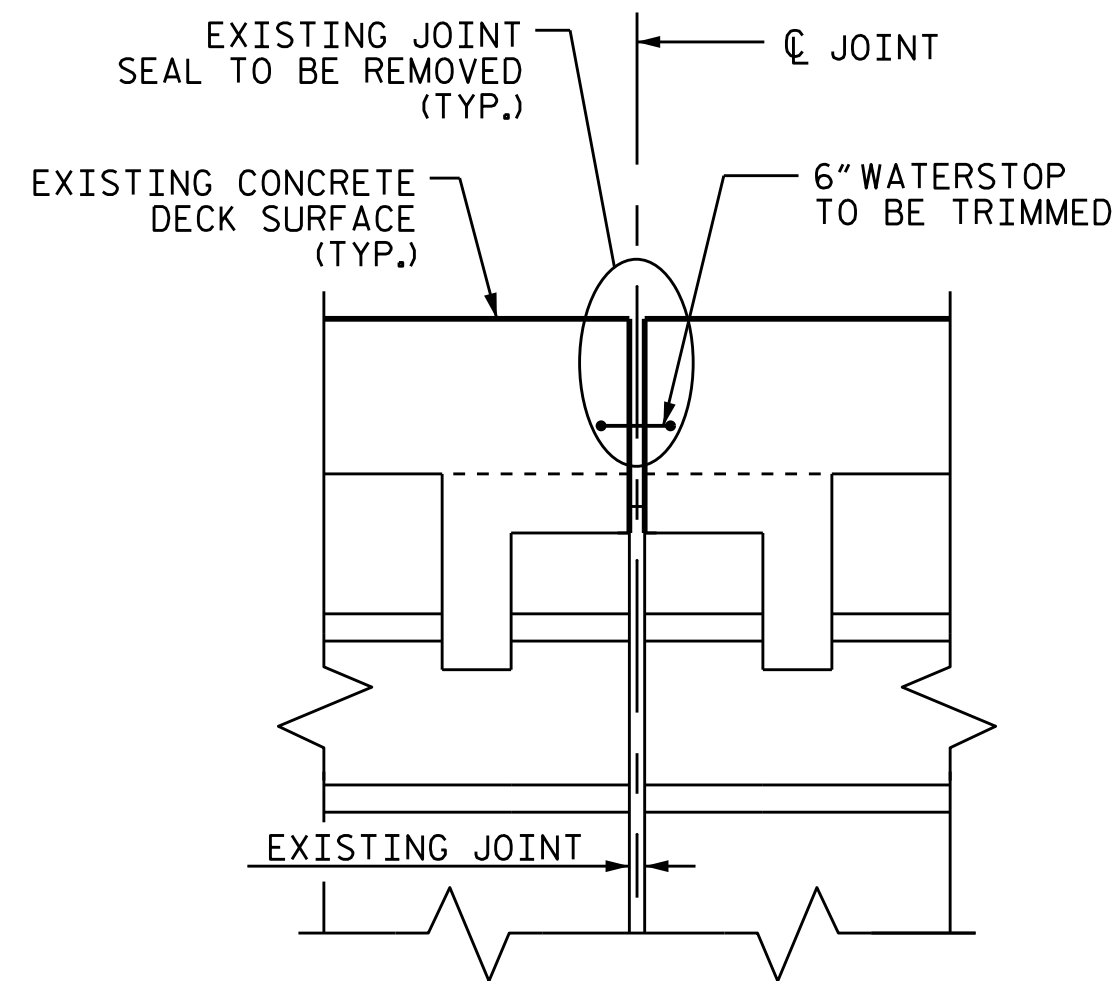
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

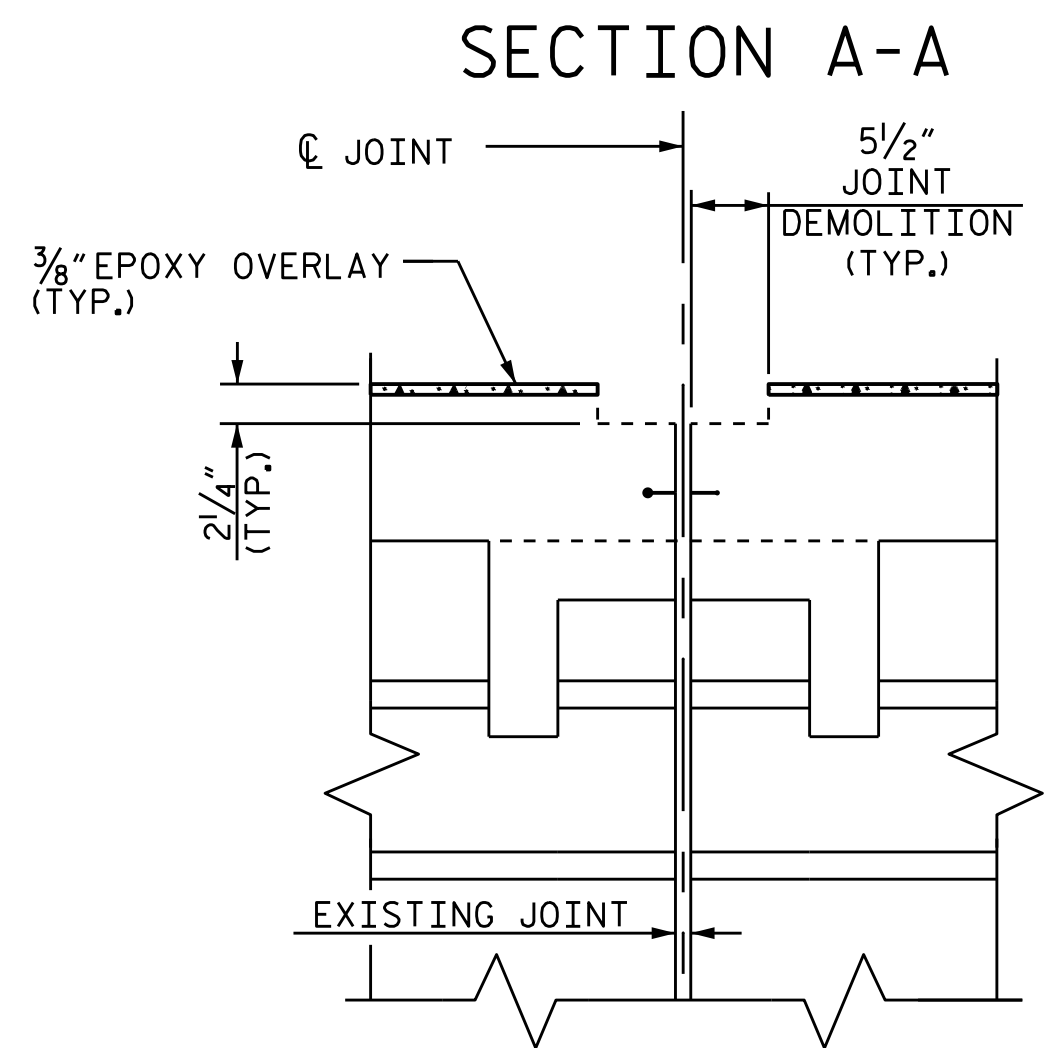
DURING JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISION.

JOINT INSTALLATION SEQUENCE AT END BENTS

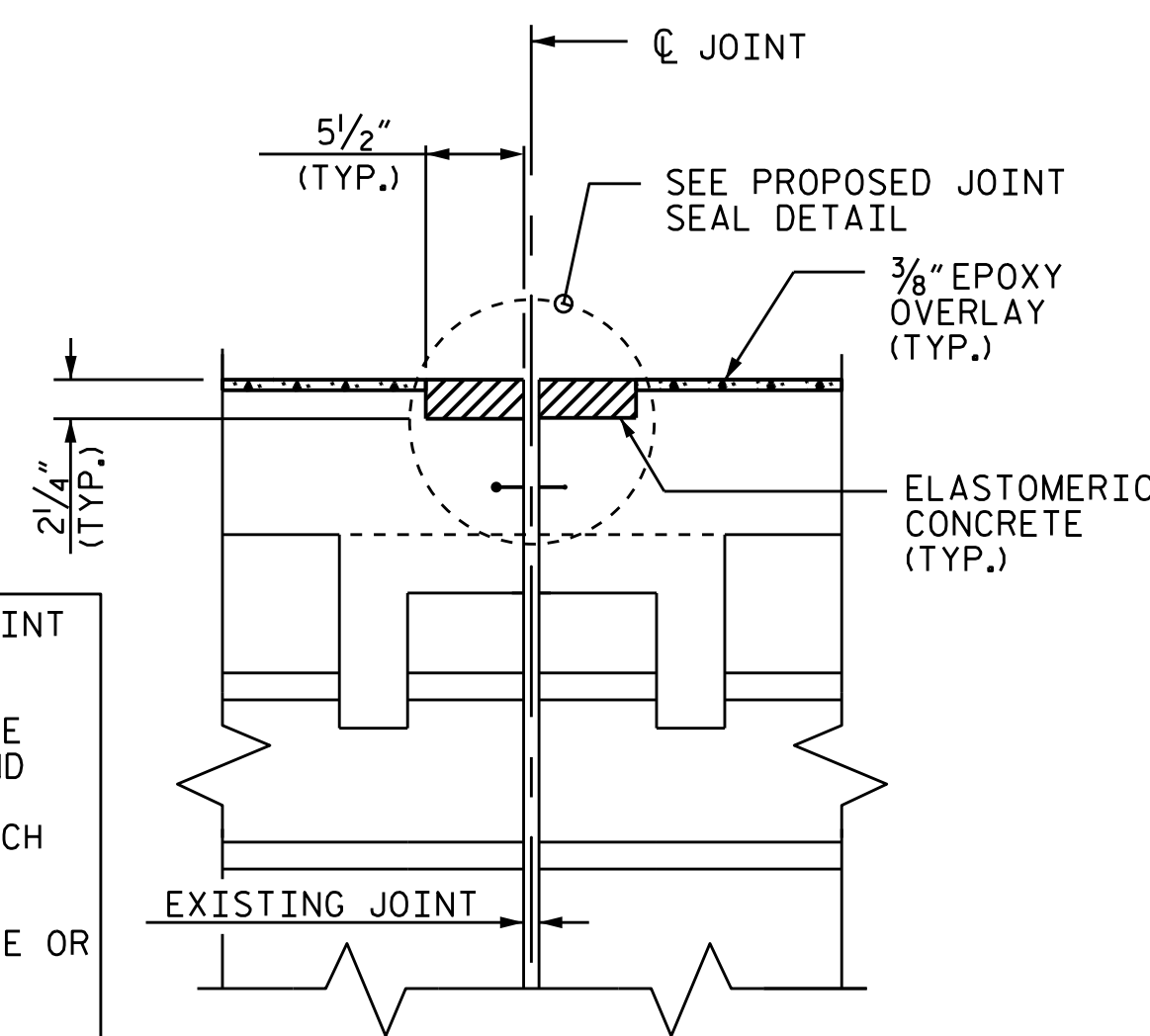


EXISTING JOINT

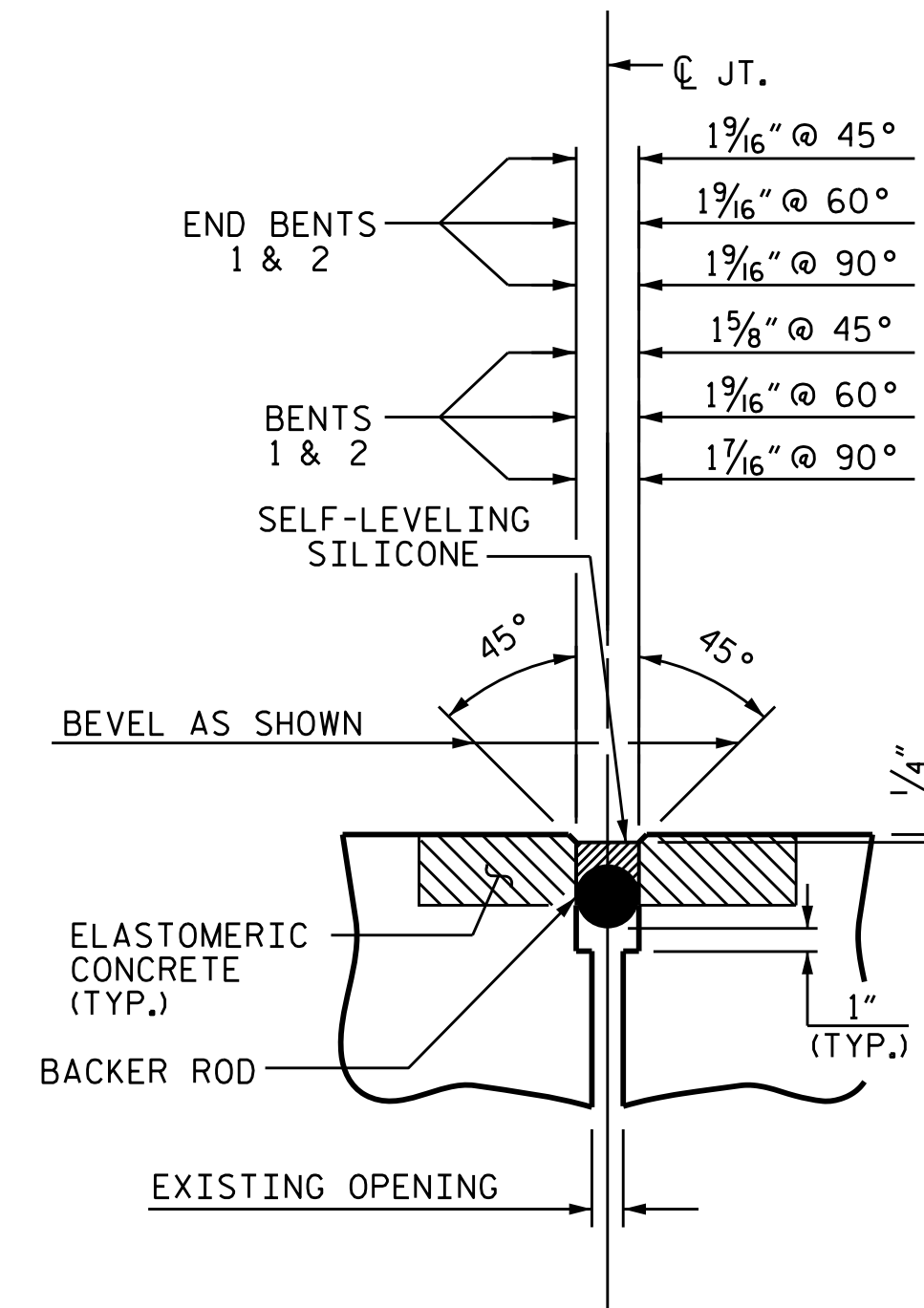


MINIMUM EXISTING JOINT DEMOLITION

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.



PROPOSED PRE-SAWED JOINT



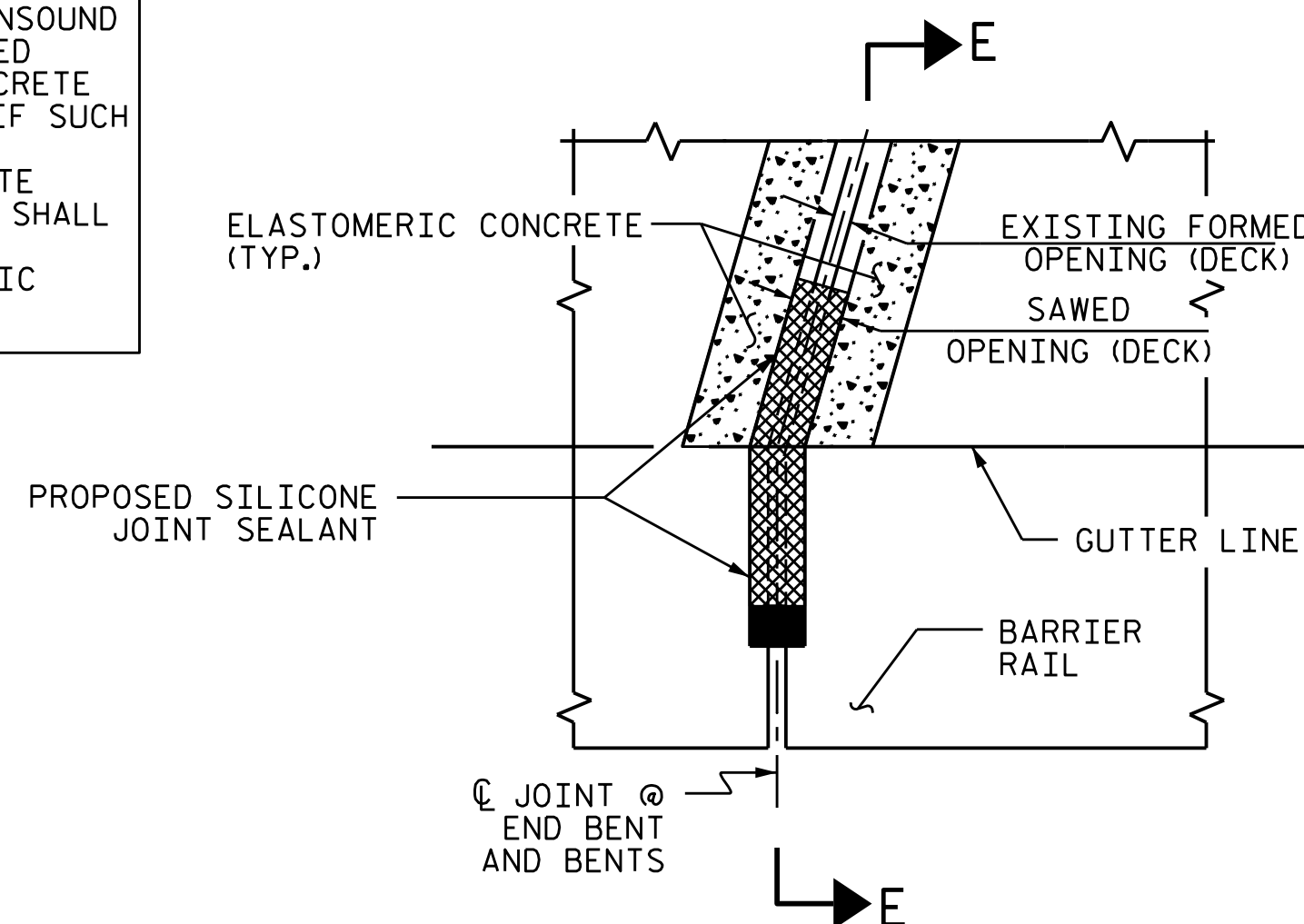
PROPOSED JOINT SEAL DETAIL (WITH SAWED DIMENSIONS)

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	49.7 CF	
POURABLE SILICONE JOINT SEALANT	289.0 LF	

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

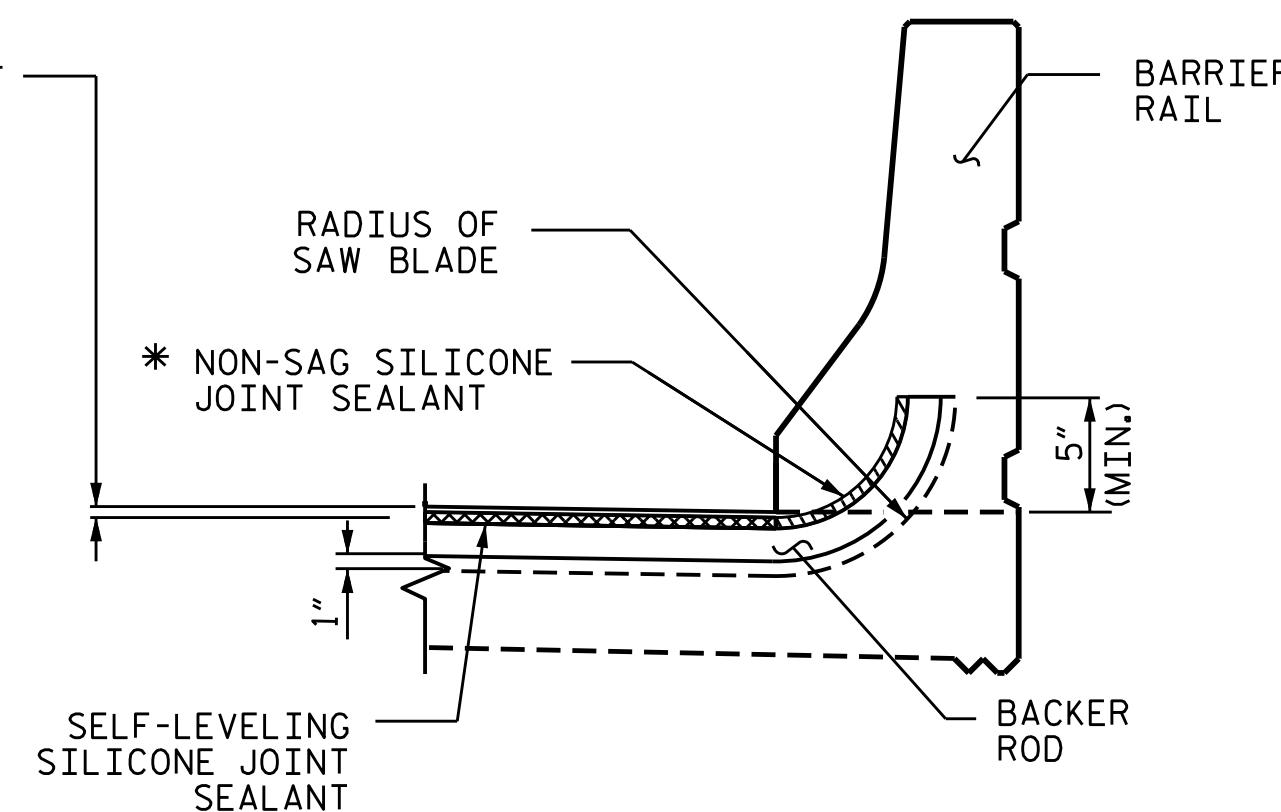
IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



PLAN

* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.

SILICONE JOINT SEALANT SHALL BE RECESSED 1/2" BELOW DECK SURFACE



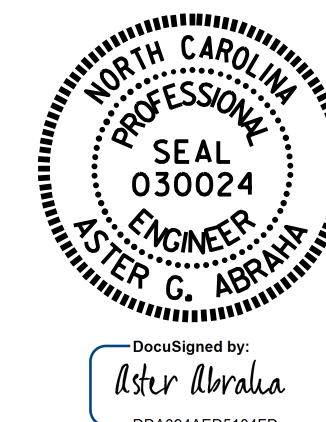
SECTION E-E

JOINT DETAIL AT BARRIER RAIL

PROJECT NO. I-6041A
 EDGEcombe COUNTY
 BRIDGE NO. 320154

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT REPAIR DETAILS



DRAWN BY: S. T. SANDOR/A. Y. GODFREY DATE: 10/2019
 CHECKED BY: A. G. ABRAHA/S. WANCE DATE: 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S5-6
2			4			118

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 BENT DIAPHRAGM AND CONCRETE GIRDER REPAIR DETAILS, SEE "PRESTRESSED CONCRETE GIRDER AND DIAPHRAGM REPAIR DETAILS" SHEET SD-1.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK FOR TEMPORARY FORMWORK. FOR SUBMITTALS OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

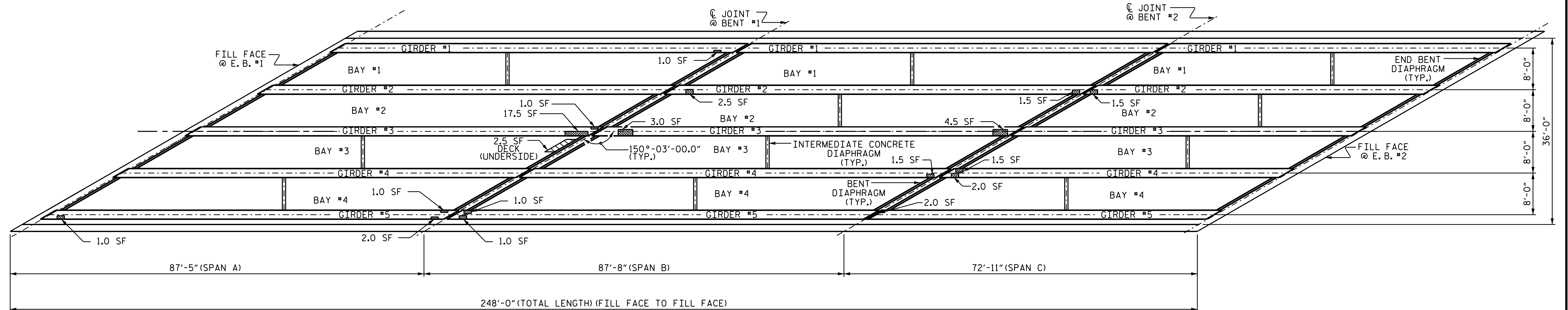
UPON REMOVAL OF TEMPORARY FORMWORK, ALL VOIDS AND HONEYCOMBS ON THE UNDERSIDE OF DECK SURFACE SHALL BE FILLED WITH THE SAME MATERIAL AS USED FOR THE PATCH, AND FINISHED TO CONFORM TO THE SURROUNDING CONCRETE SURFACE.

NO FORMWORK SHALL BE LEFT IN PLACE.

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	2.5	1.0		
BENT DIAPHRAGMS	0.0	0.0		
PRESTRESSED CONCRETE GIRDER REPAIRS				
DECK GIRDERS	44.5	15.0		

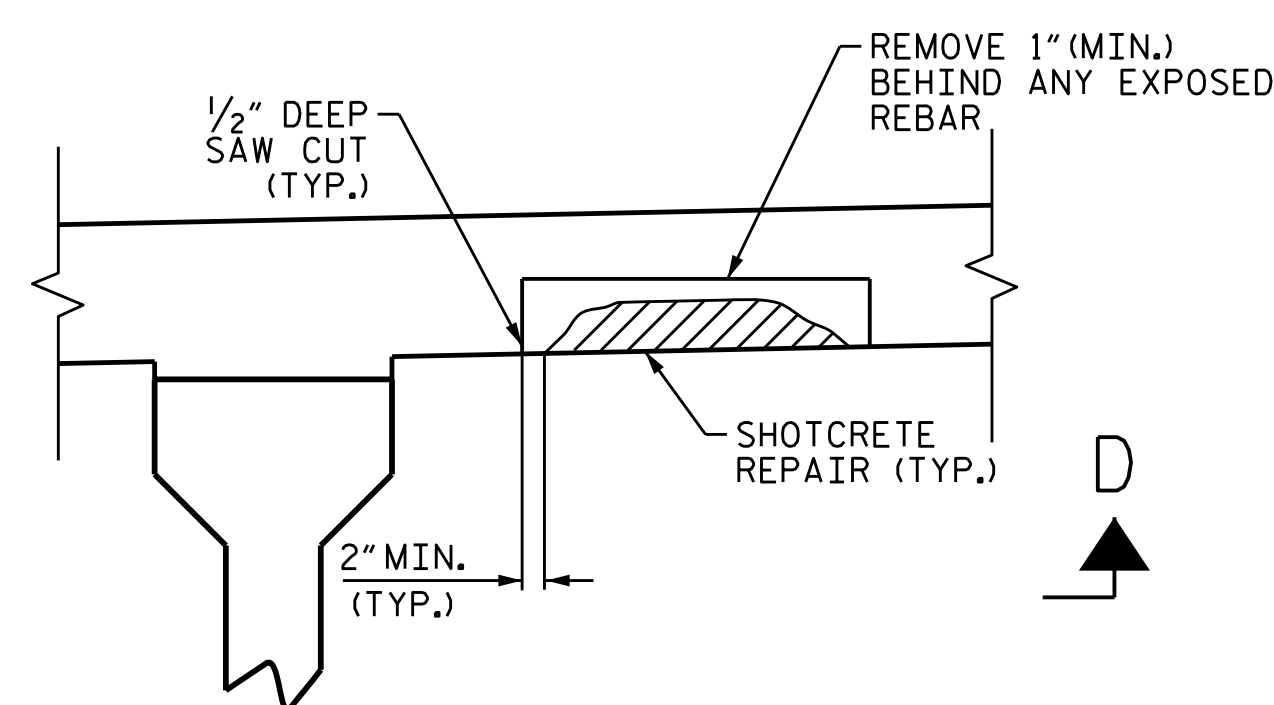
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



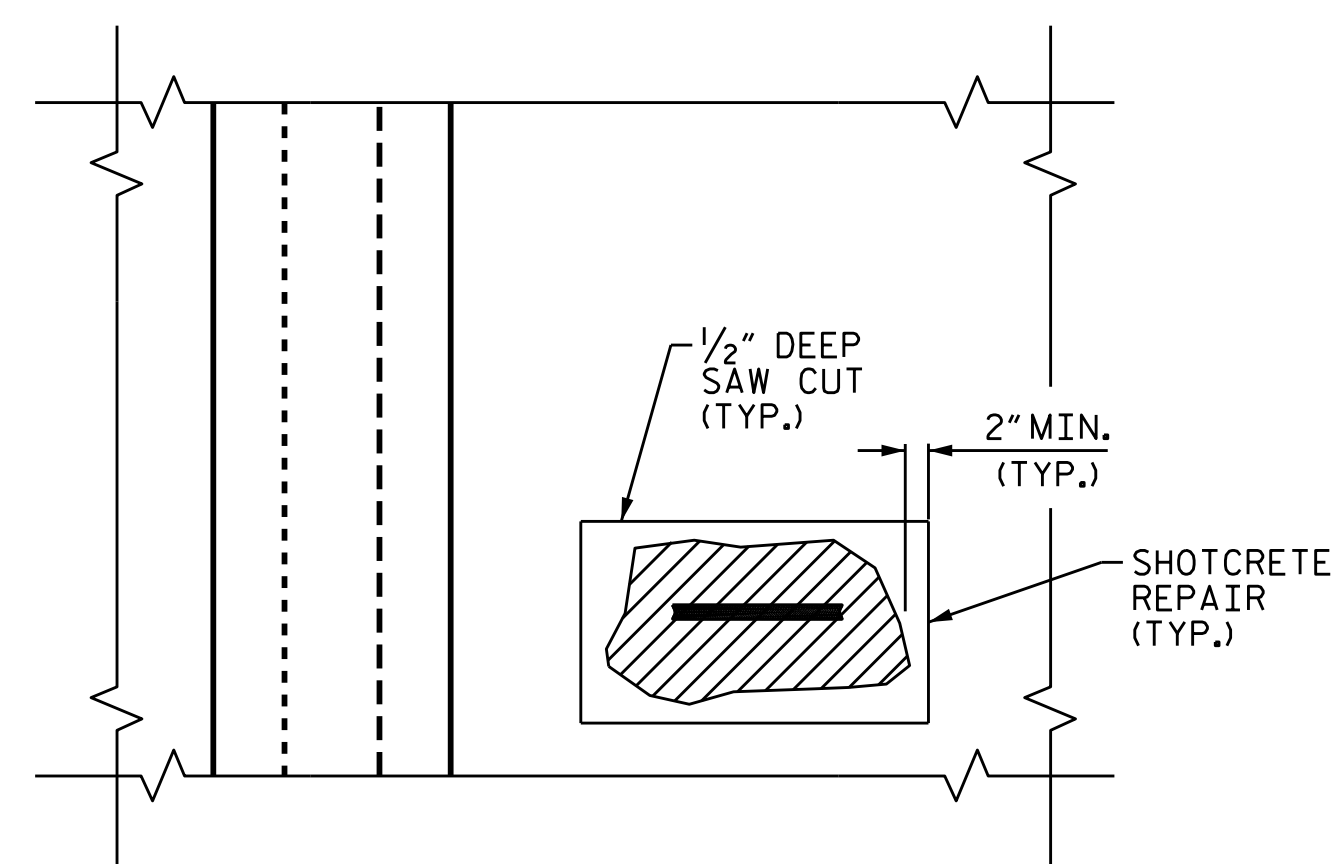
GIRDER REPAIR LOCATIONS
(UNDERSIDE)

REPAIR KEY

- DIAPHRAGM SHOTCRETE REPAIR
- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS FOR DECK UNDERSIDE



TYPICAL SECTION



SECTION D-D

UNDERSIDE OF DECK REPAIR
(AT BENTS)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320154



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 GIRDER & DIAPHRAGM REPAIR

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NO.	REVISIONS				SHEET NO.
	BY:	DATE:	NO.	DATE:	
1			3		S5-7
2			4		TOTAL SHEETS 118

REPAIR QUANTITY TABLE

REPAIRS END BENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	2.0	1.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CLEARANCE TO SAWCUT. 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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

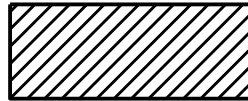
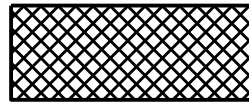
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

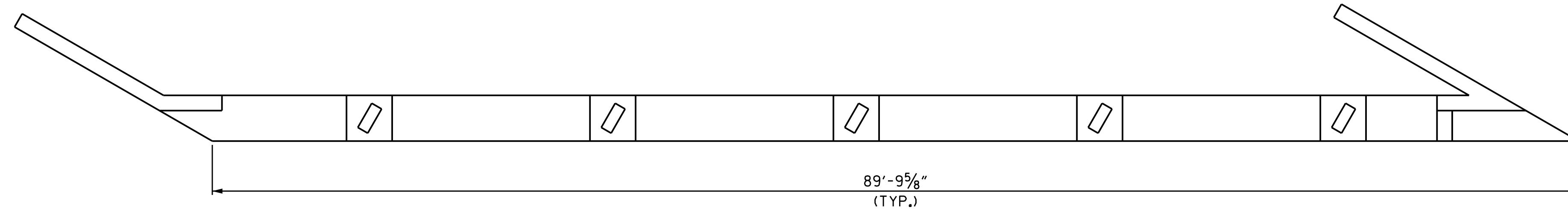
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

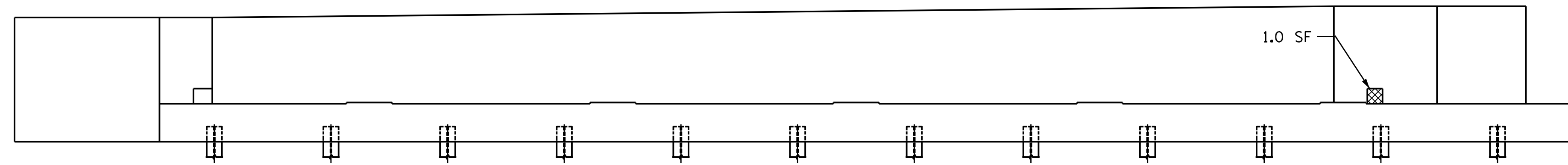
CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR KEY

-  CONCRETE REPAIR AREA (FORM AND POUR)
-  SHOTCRETE REPAIR AREA

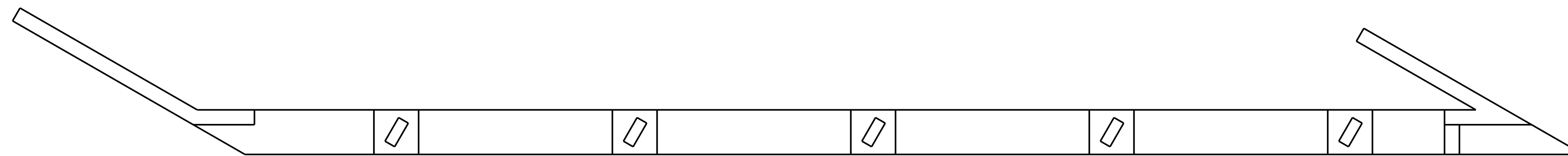


PLAN

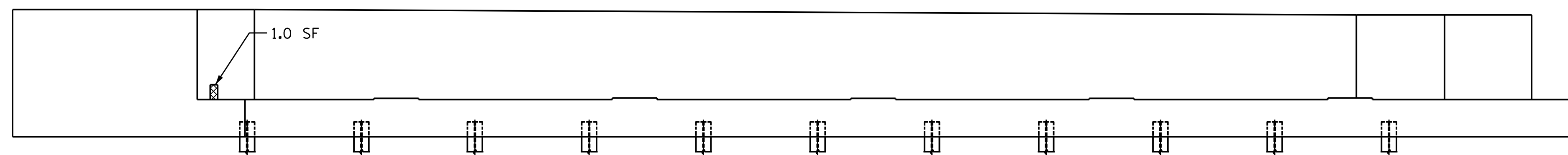


ELEVATION

END BENT 1



PLAN



ELEVATION

END BENT 2

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320154



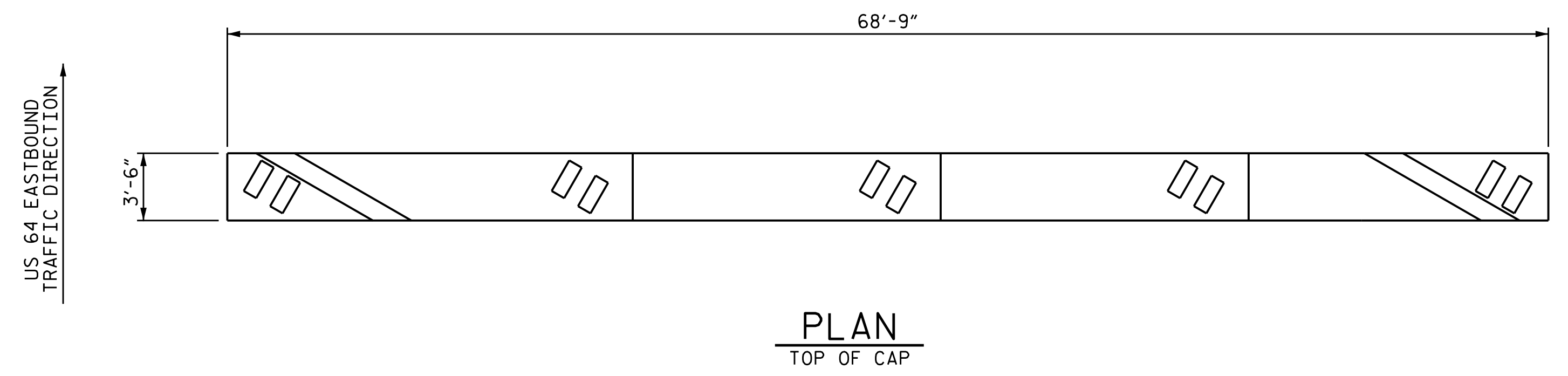
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS REPAIR

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

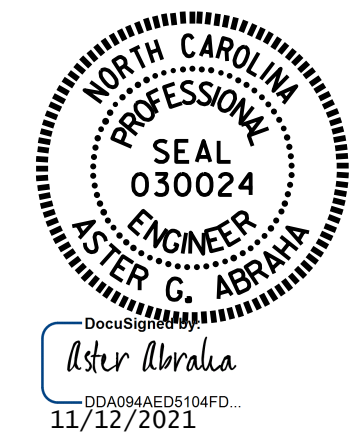
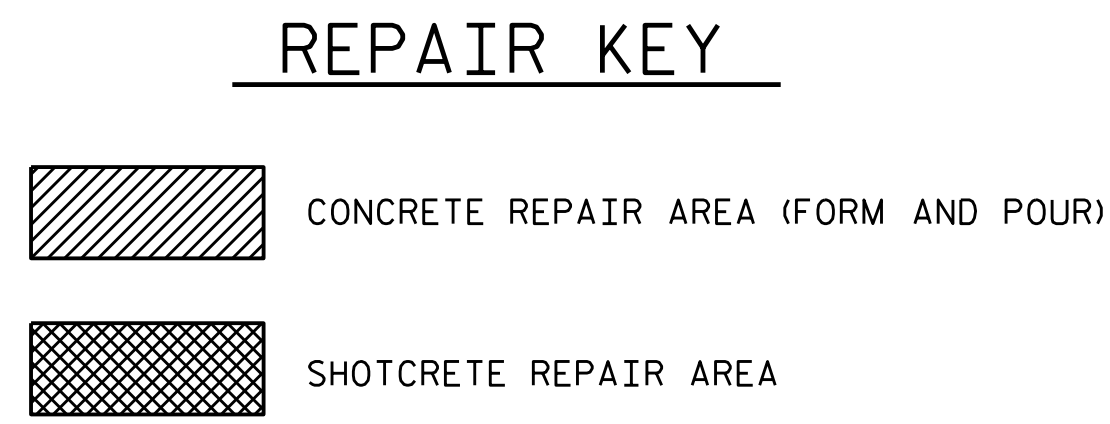
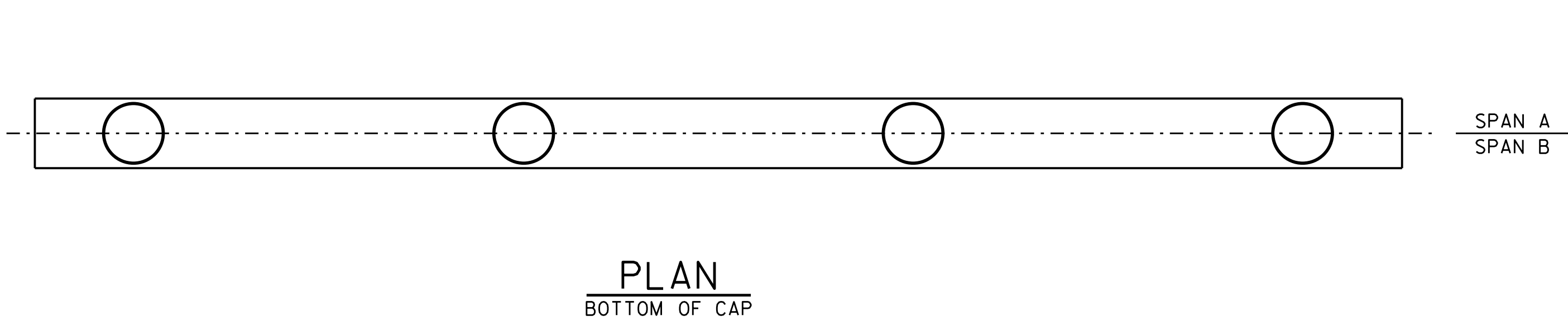
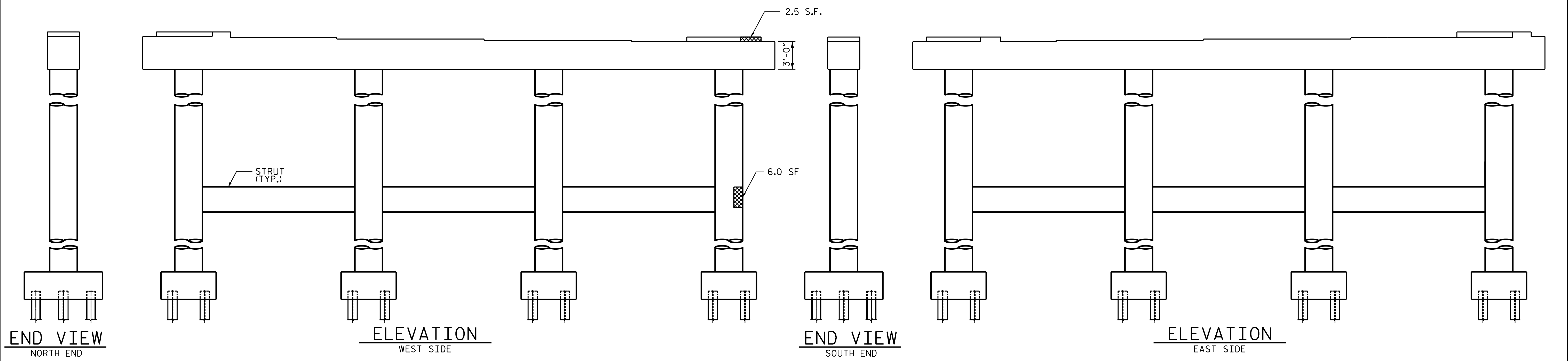
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			55-8
2			4			118



NOTES:
 REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.
 FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
 FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.
 CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE				
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	2.5	1.3		
COLUMN	6.0	3.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320154

SHEET 1 OF 2

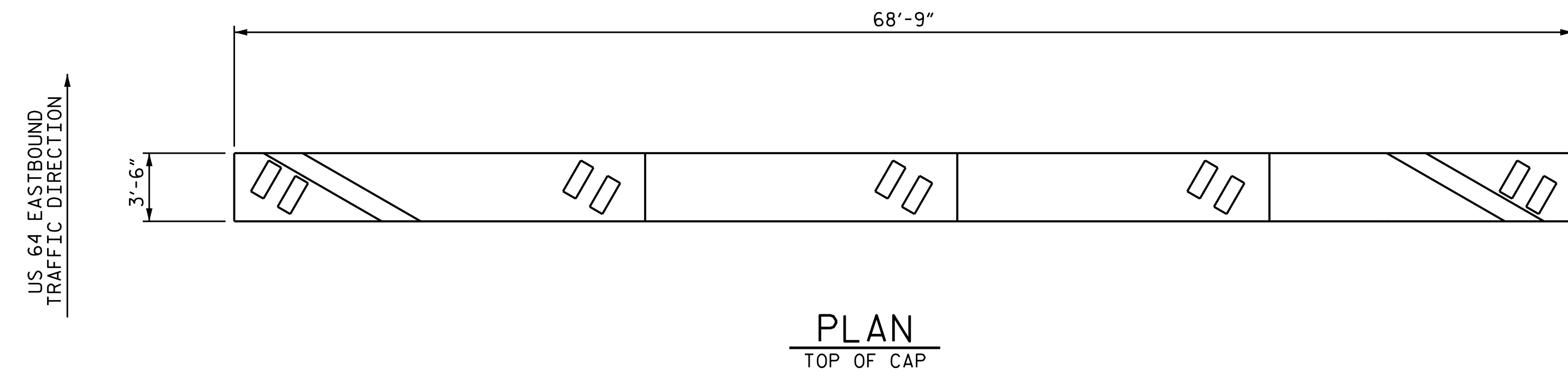
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 1**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S5-9
1			3			TOTAL SHEETS
2			4			118

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NOTES:

REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE 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 LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

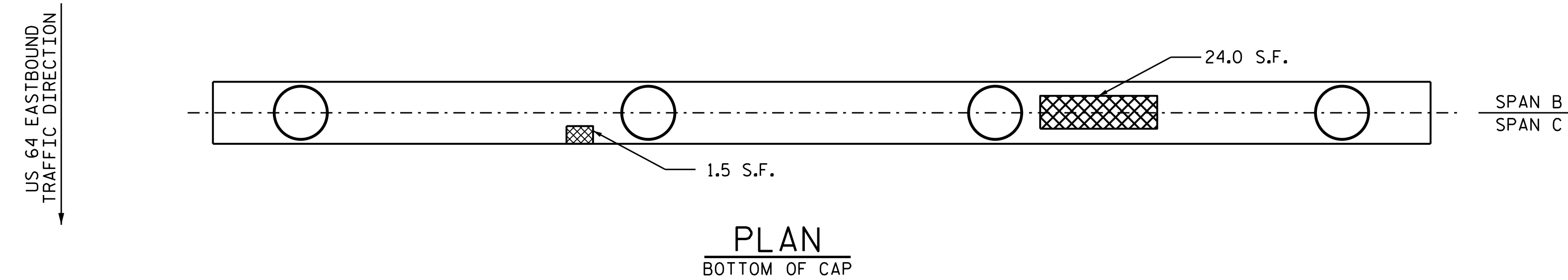
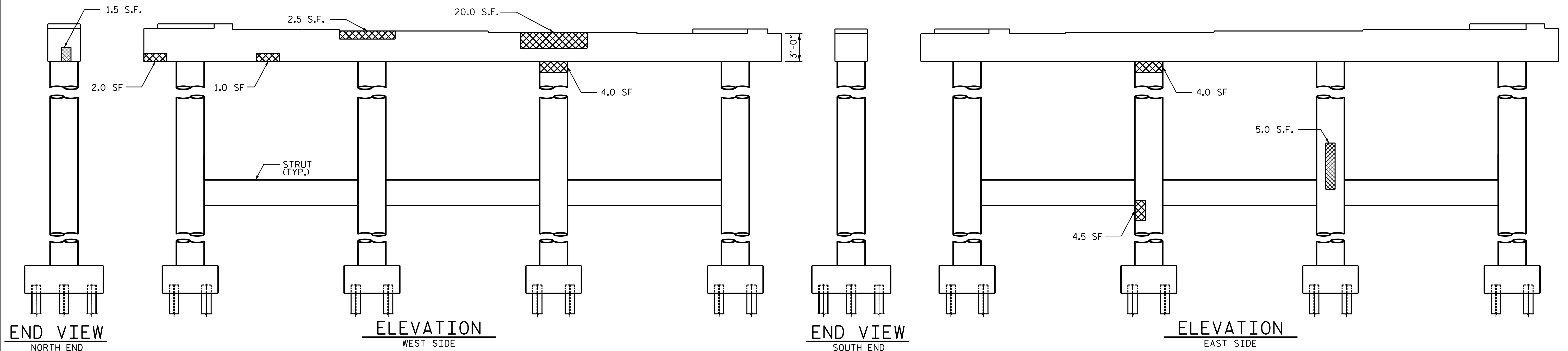
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

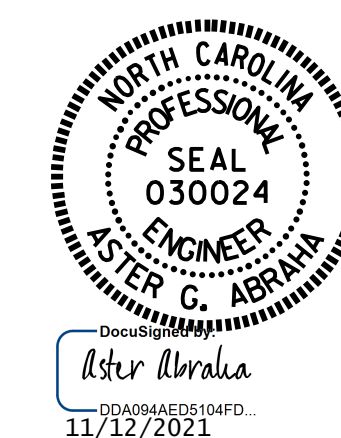
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	27.0	13.5		
CAP (HORIZONTAL FACE)	25.5	12.8		
COLUMN	17.5	8.8		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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



REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320154
 SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 2**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
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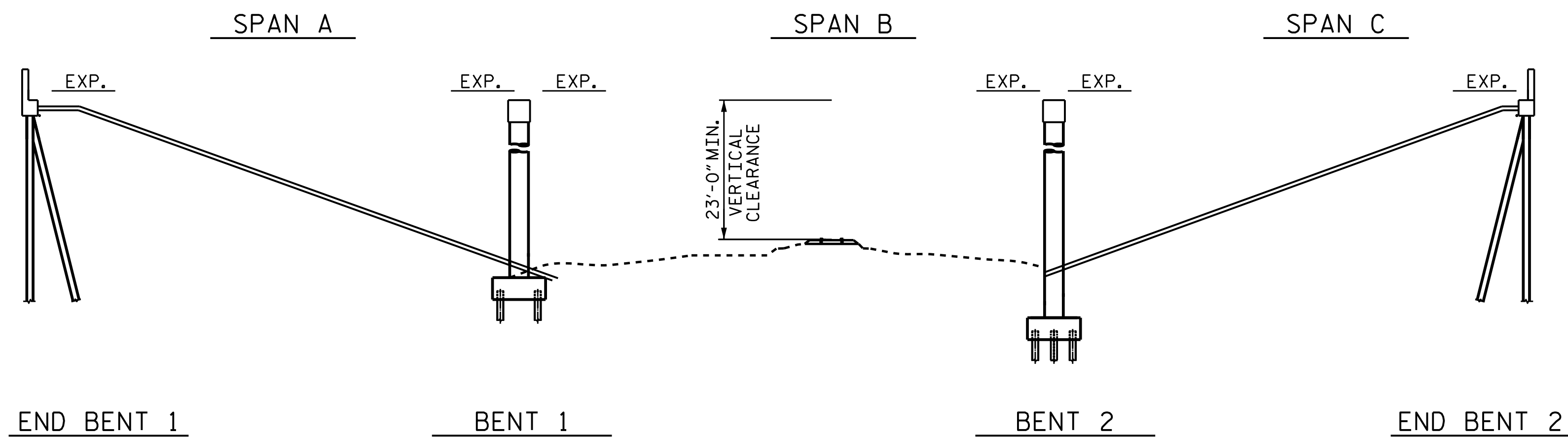
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S5-10
2			4			TOTAL SHEETS 118

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHOD.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY HAND APPLICATION SYSTEM.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC CONCRETE AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- REPAIR SUBSTRUCTURE USING EPOXY RESIN INJECTION AND SHOTCRETE.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL STRIP JOINTS.
- MILL AND REPAVE ASPHALT APPROACH ROADWAYS.
- INJECT CONCRETE CRACKS WITH EPOXY RESIN.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS AND PERFORM SHOTCRETE AND/OR CONCRETE REPAIRS.

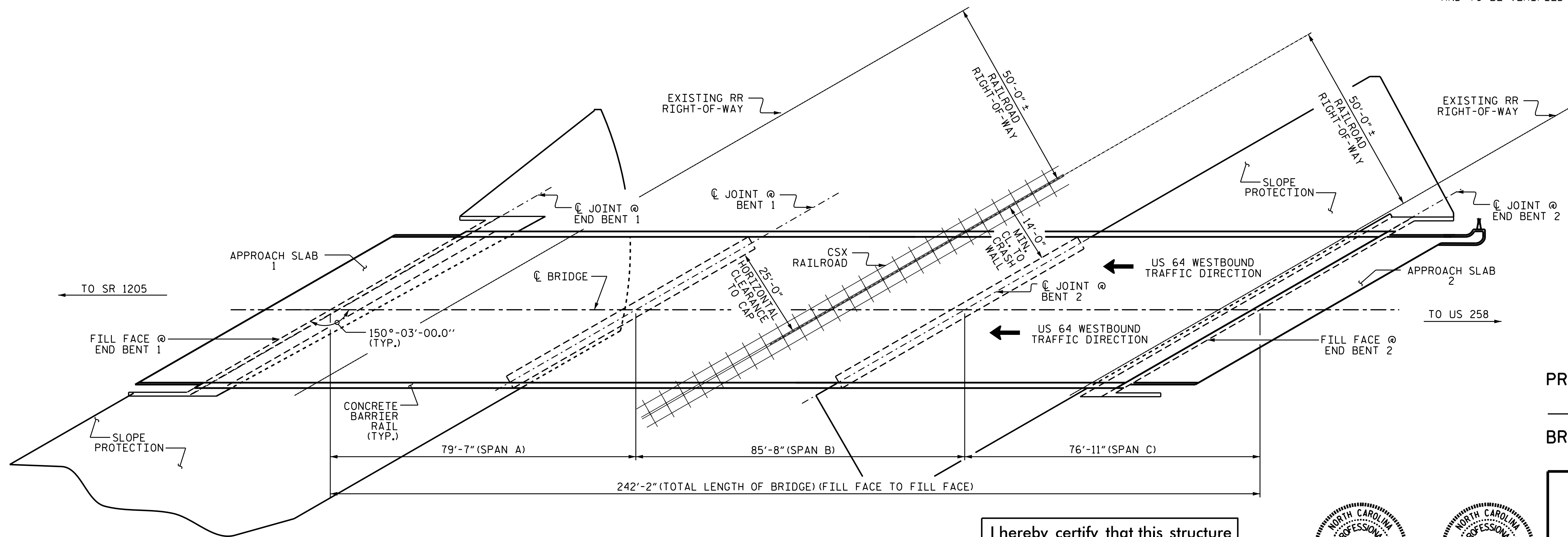
NOTES

- GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION, DATED 11/05/2018 AND 10/04/2020.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE
- RAILROAD RIGHT-OF-WAY IS TAKEN FROM THE BEST INFORMATION AVAILABLE AND NOT EXACT. RAILROAD RIGHT-OF-WAY IS FOR INFORMATION PURPOSES ONLY AND TO BE VERIFIED IN THE FIELD.



ELEVATION

(SECTION @ BENT AND END BENTS ARE AT RIGHT ANGLES)

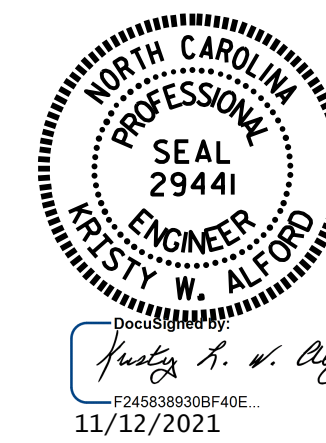
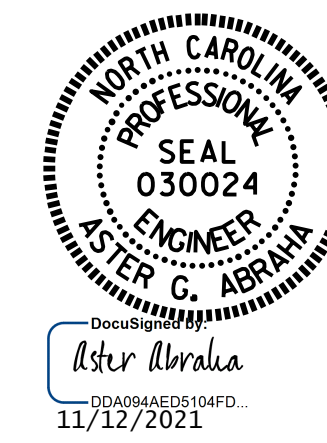


PLAN

(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



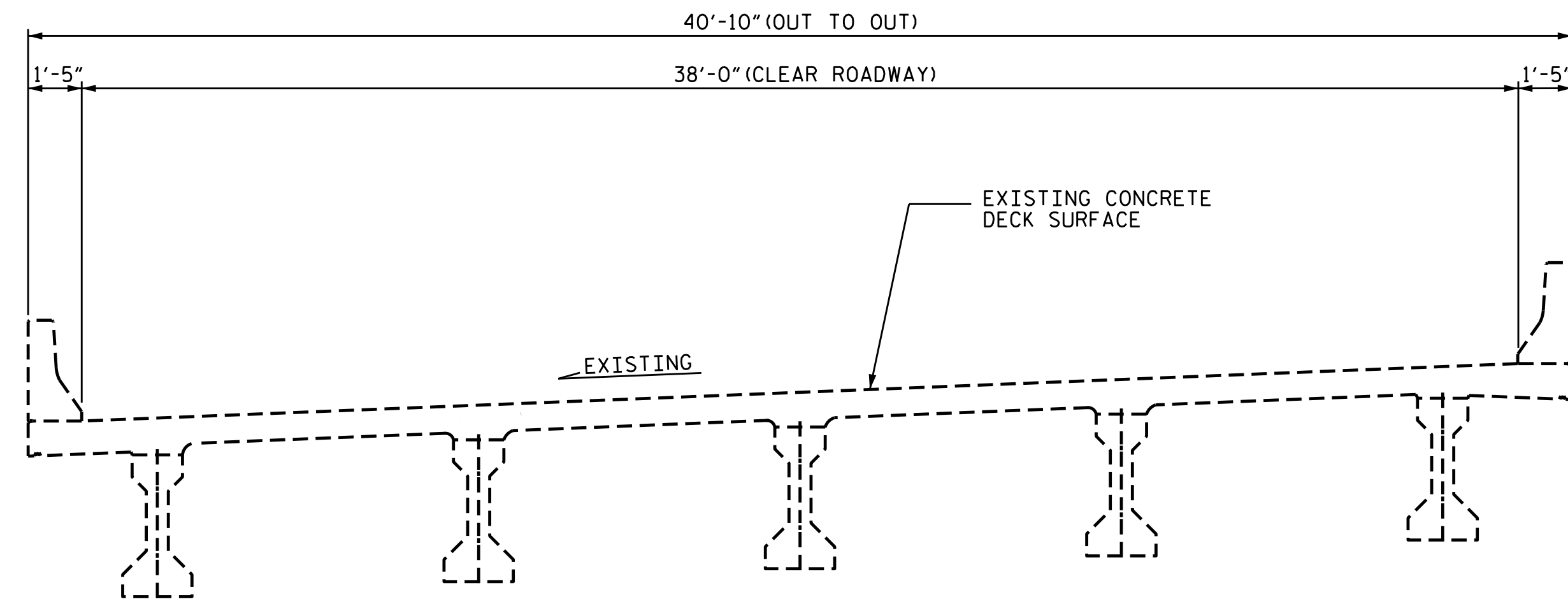
PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320157

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE NO. 157 ON
 US 64 WBL OVER CSX
 RAILROAD BETWEEN SR 1205
 AND US 258

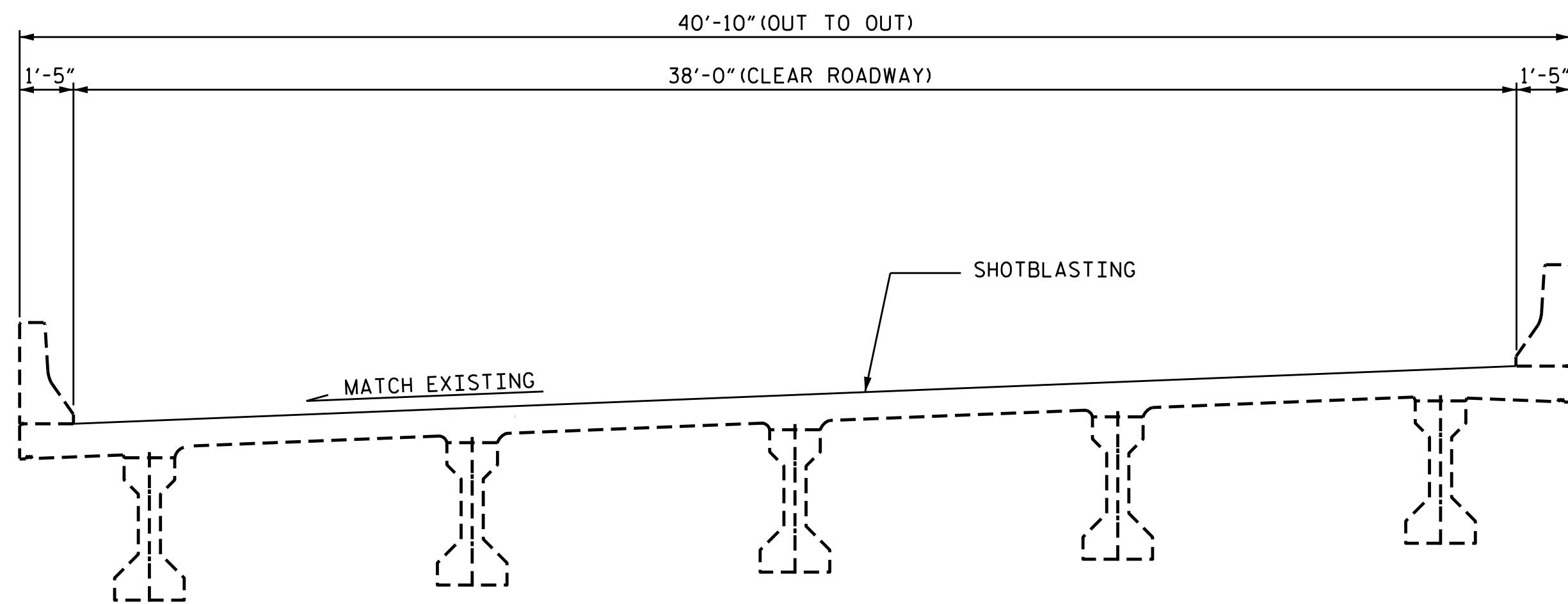
DRAWN BY : S. T. SANDOR DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

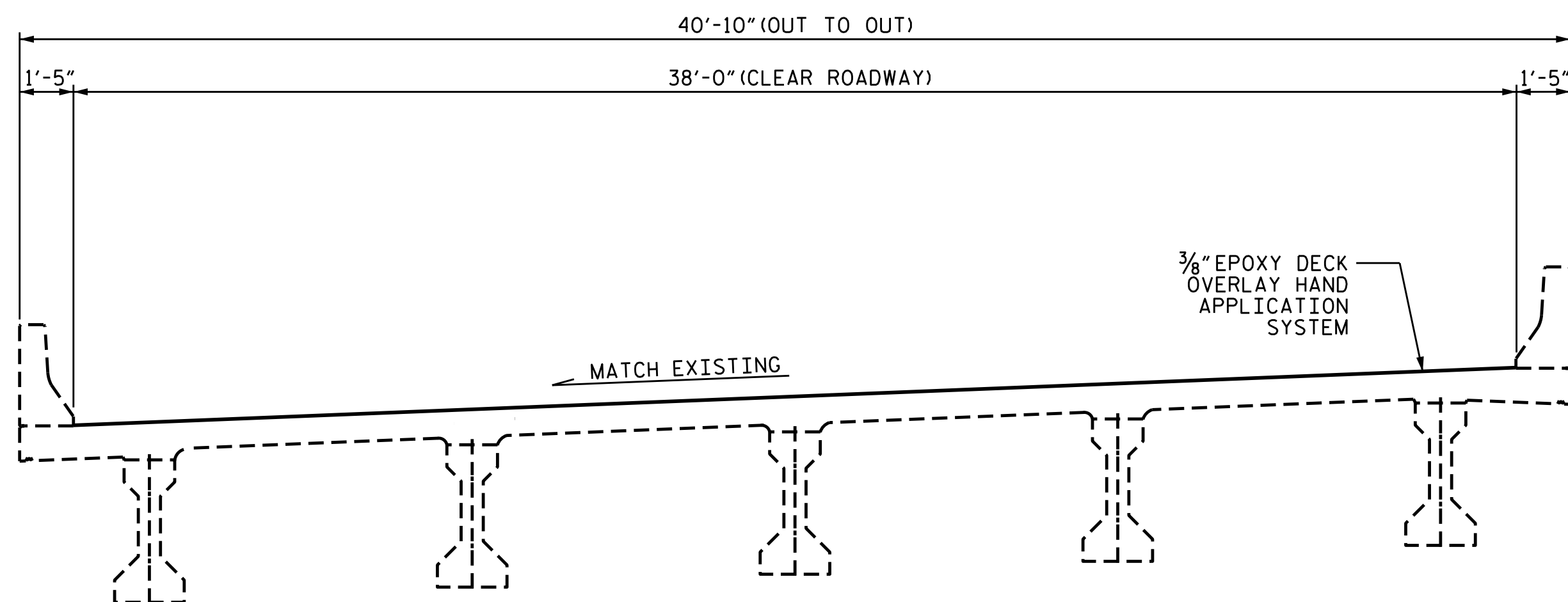
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S6-1
2			4			118



TYPICAL SECTION
(EXISTING)



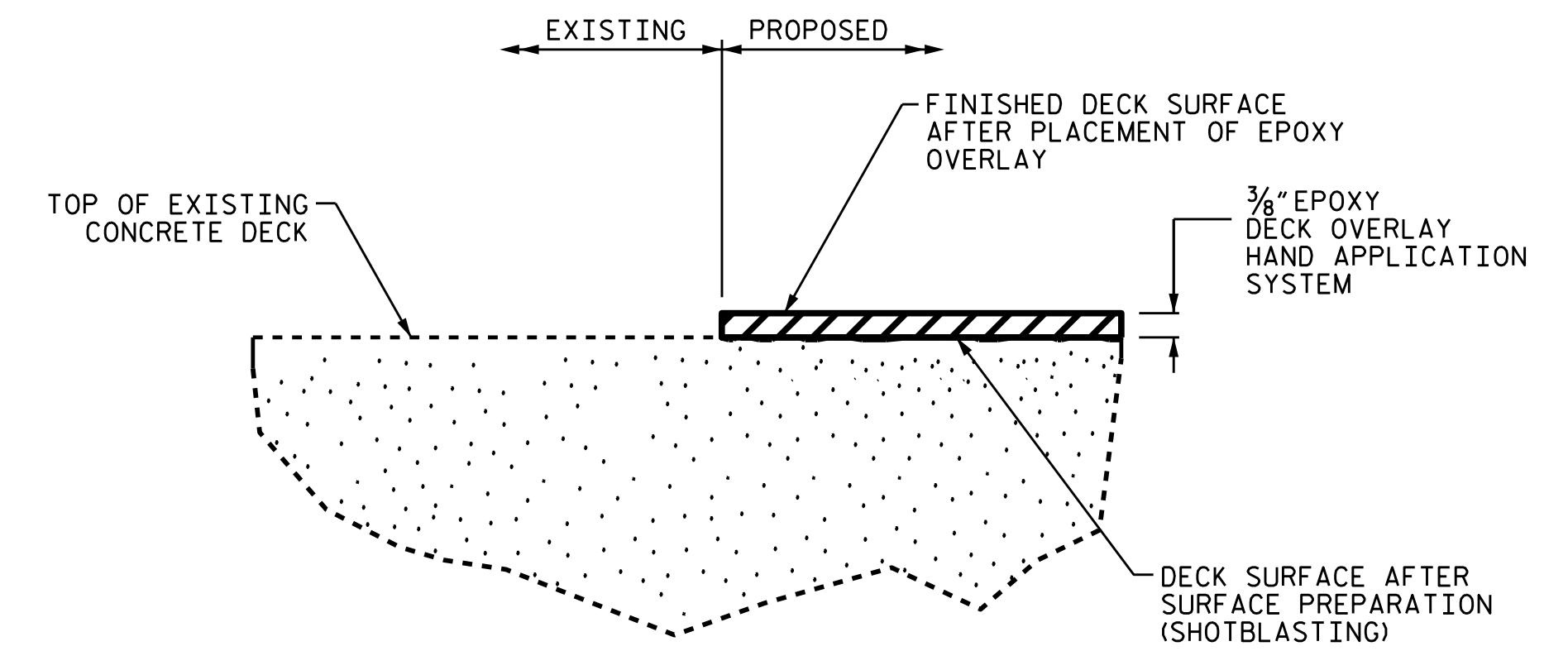
TYPICAL SECTION
(DECK PREPARATION)



TYPICAL SECTION
(PROPOSED)

NOTES

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



EPOXY OVERLAY HAND APPLICATION SYSTEM DETAIL

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320157



DocuSigned by:
 Aster Abraha
 00408AAED510AFD...
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**TYPICAL SECTION
 AND SURFACE
 PREPARATION DETAILS**

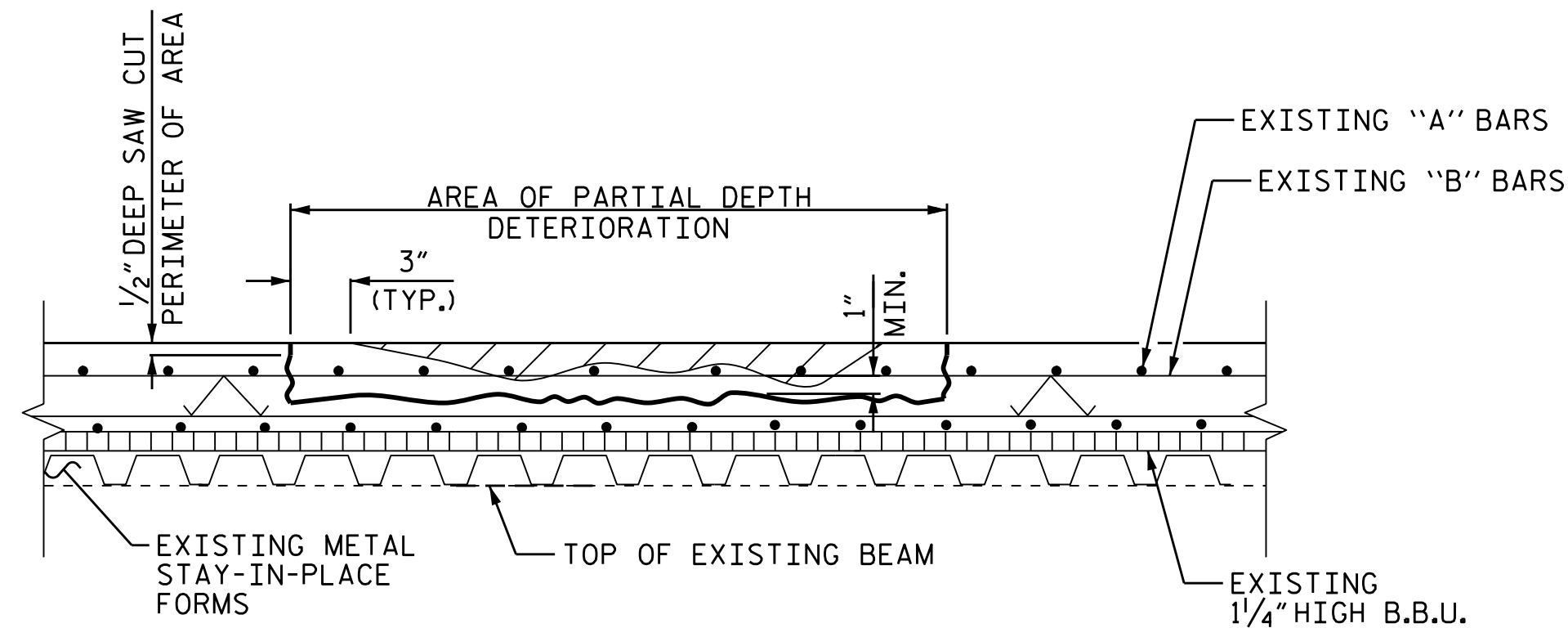
DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA DATE : 10/2019

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S6-2
2			4			118

SUMMARY OF QUANTITIES FOR APPROACH SLAB 1 AND SPAN A

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,249 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	38.0 SF	
BRIDGE JOINT DEMOLITION	104.7 SF	



CONCRETE DECK REPAIR FOR EPOXY OVERLAY

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

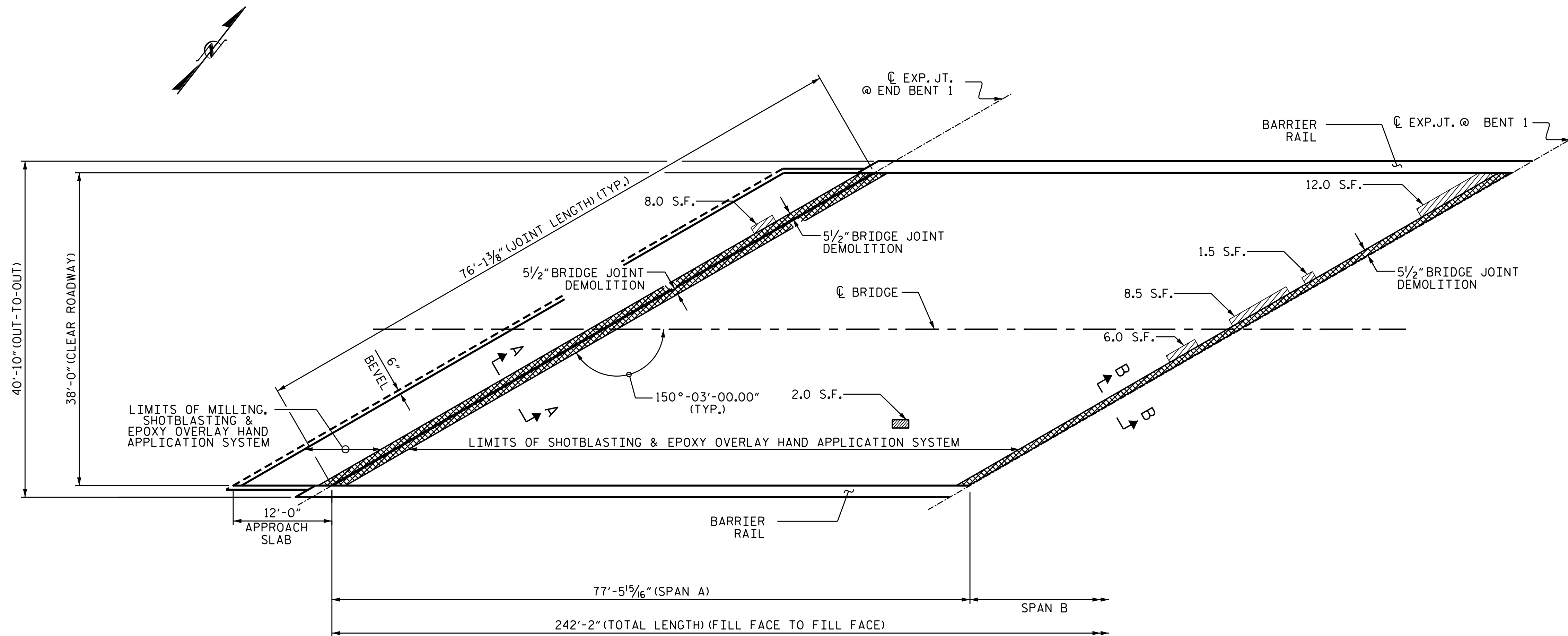
FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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

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

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.



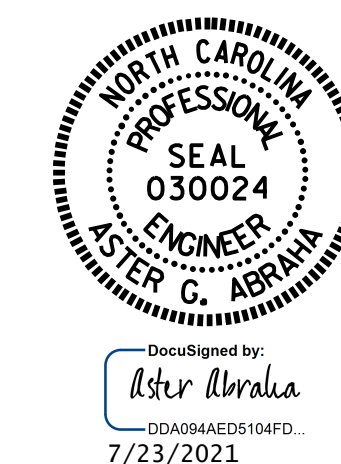
- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN A AND APPROACH SLAB 1

(SEE SHEET S7-6 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320157

SHEET 1 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN A AND
 APPROACH SLAB**

DRAWN BY : Z. MALIK / S. T. SANDOR DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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REVISIONS						SHEET NO.
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1			3			S6-3
2			4			118

SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,180 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	42.5 SF	
BRIDGE JOINT DEMOLITION	69.8 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

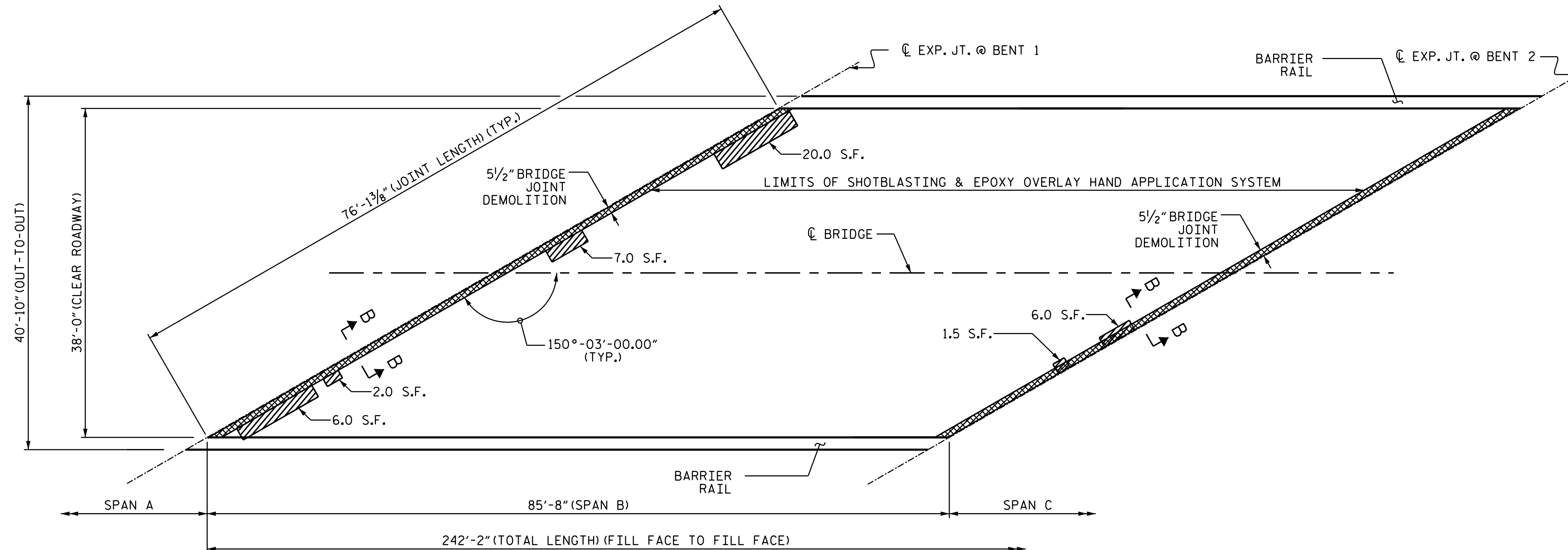
FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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

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

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.



- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN B

(SEE SHEET S7-6 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320157

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN B

DRAWN BY : Z. MALIK / S. T. SANDOR DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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1			3			S6-4
2			4			118

NOTES:

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FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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

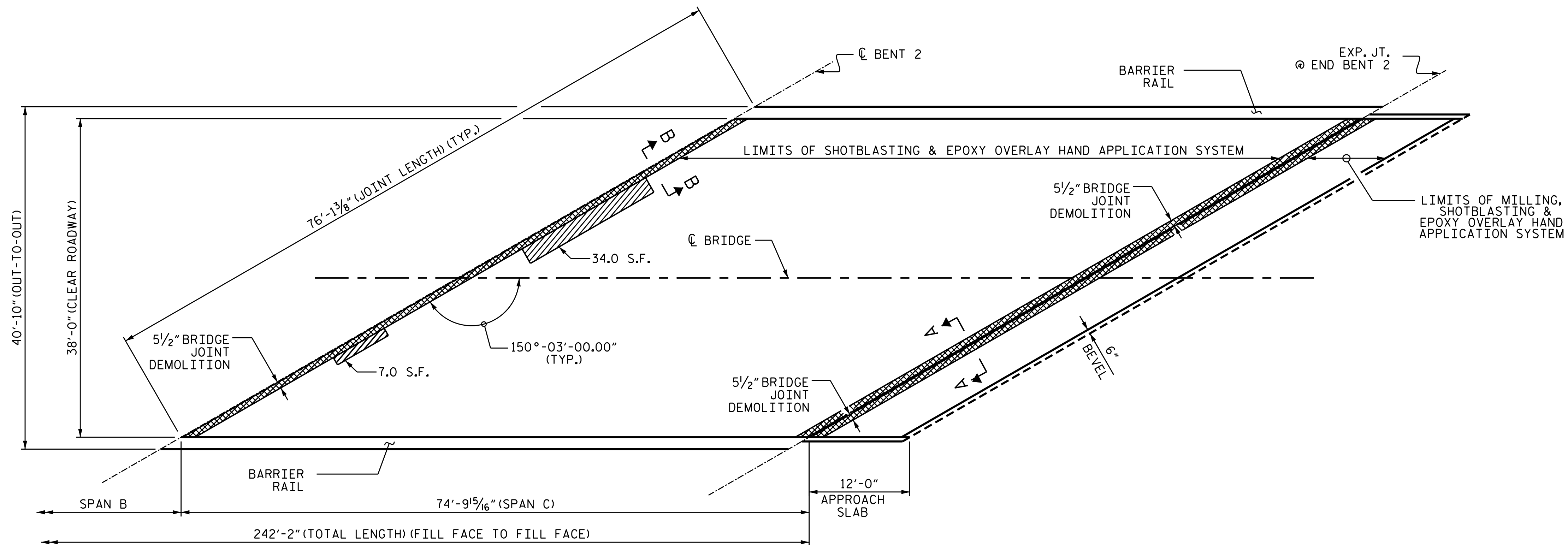
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

SUMMARY OF QUANTITIES FOR SPAN C AND APPROACH SLAB 2

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,148 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	41.0 SF	
BRIDGE JOINT DEMOLITION	104.7 SF	



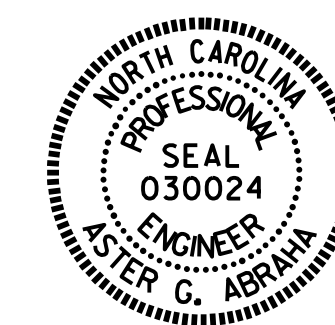
- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PLAN OF SPAN C AND APPROACH SLAB 2

(SEE SHEET S7-6 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320157

SHEET 3 OF 3



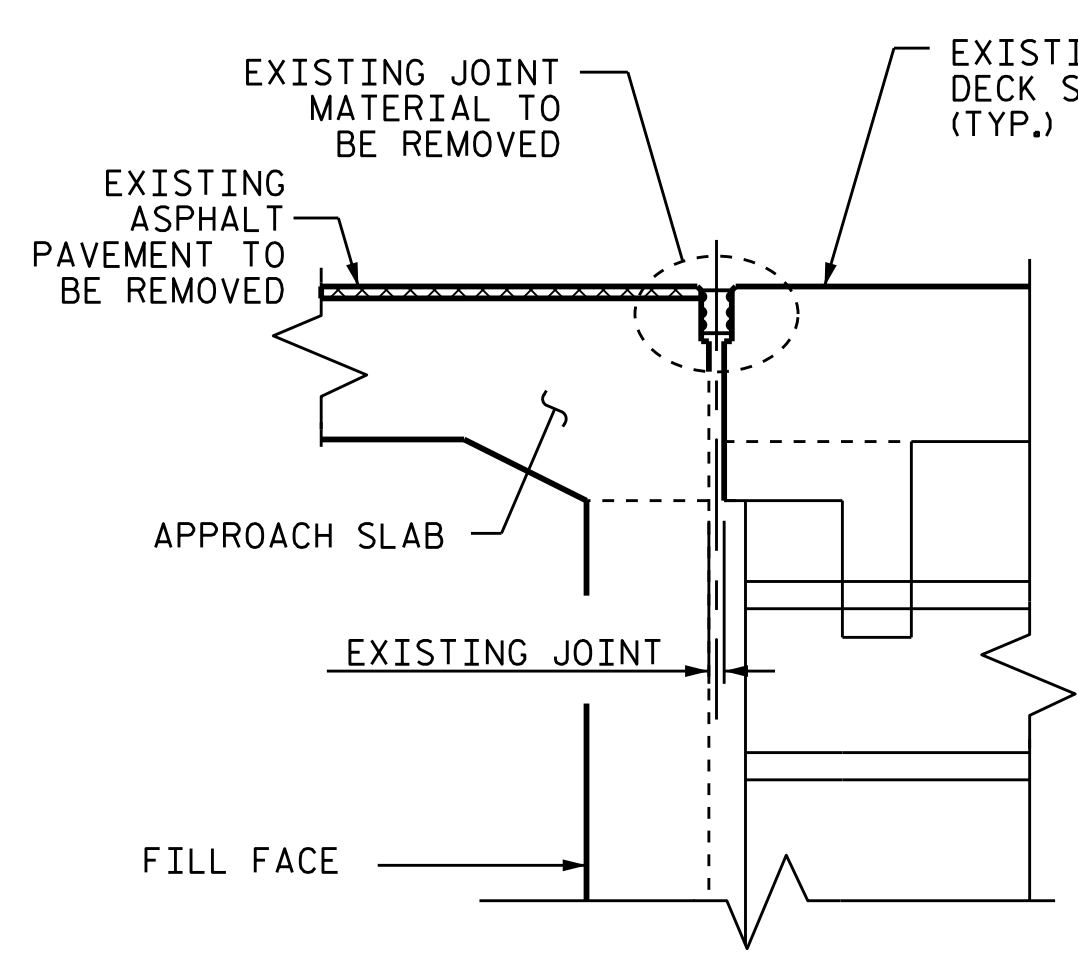
DocuSigned by:
 Aster Abrahama
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 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN C AND
 APPROACH SLAB**

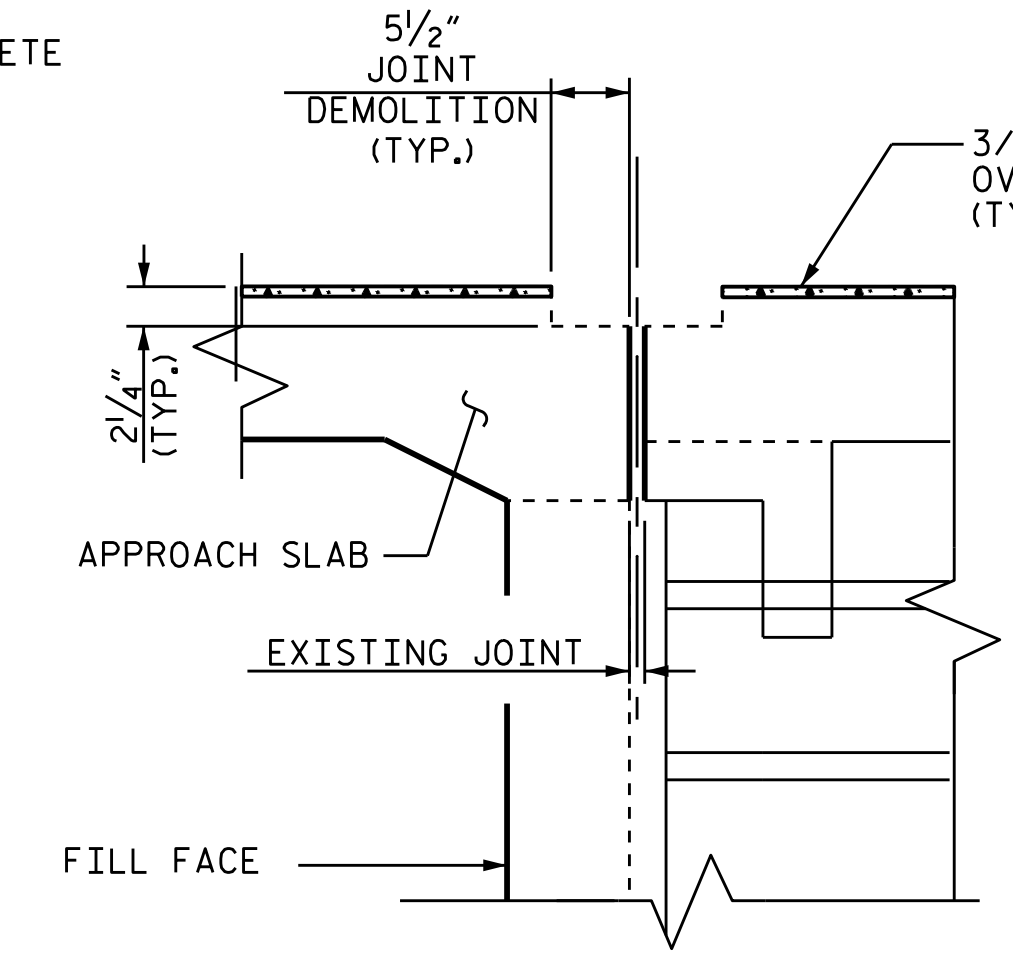
DRAWN BY : Z. MALIK / S. T. SANDOR DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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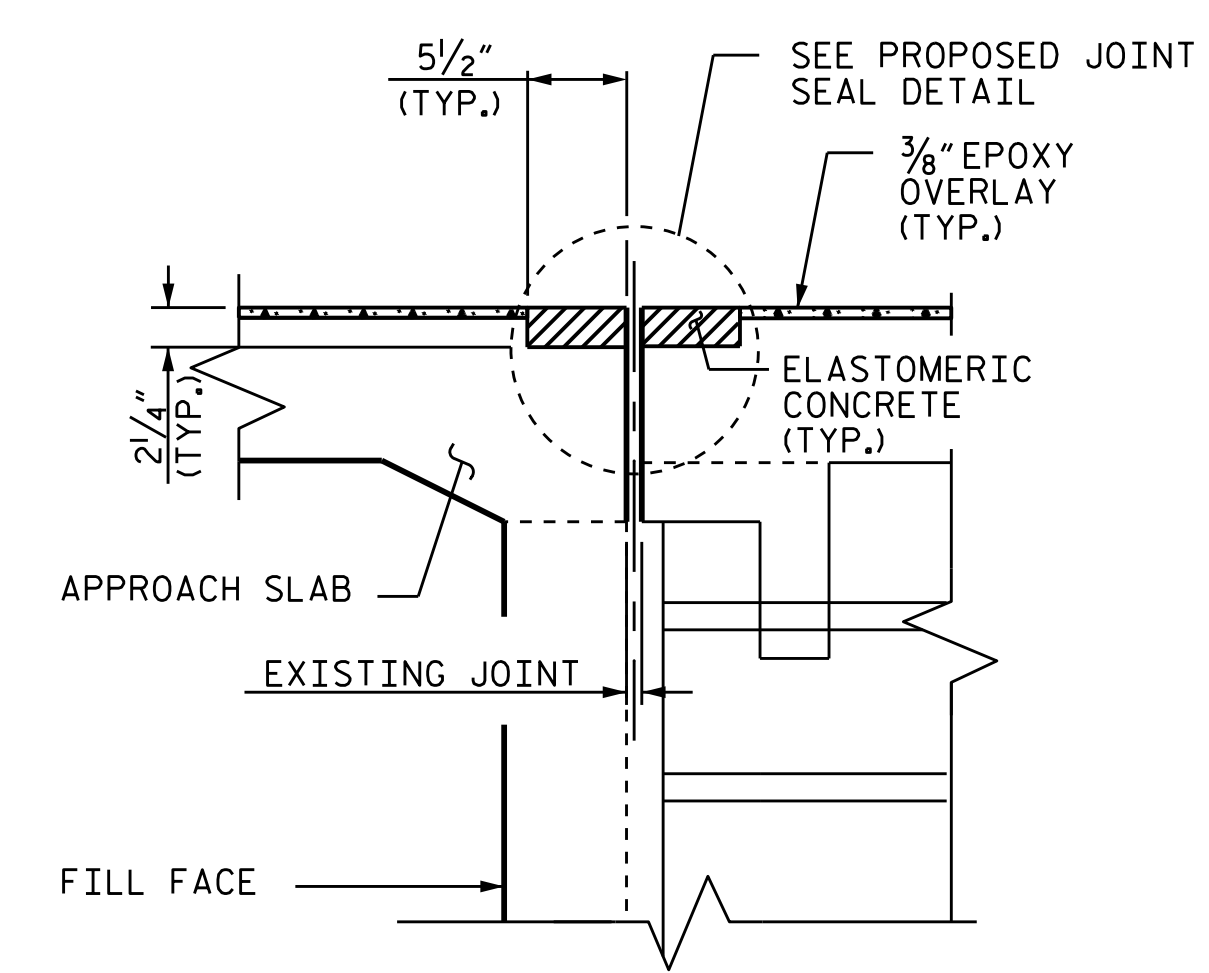
REVISIONS						SHEET NO.
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EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY THE ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

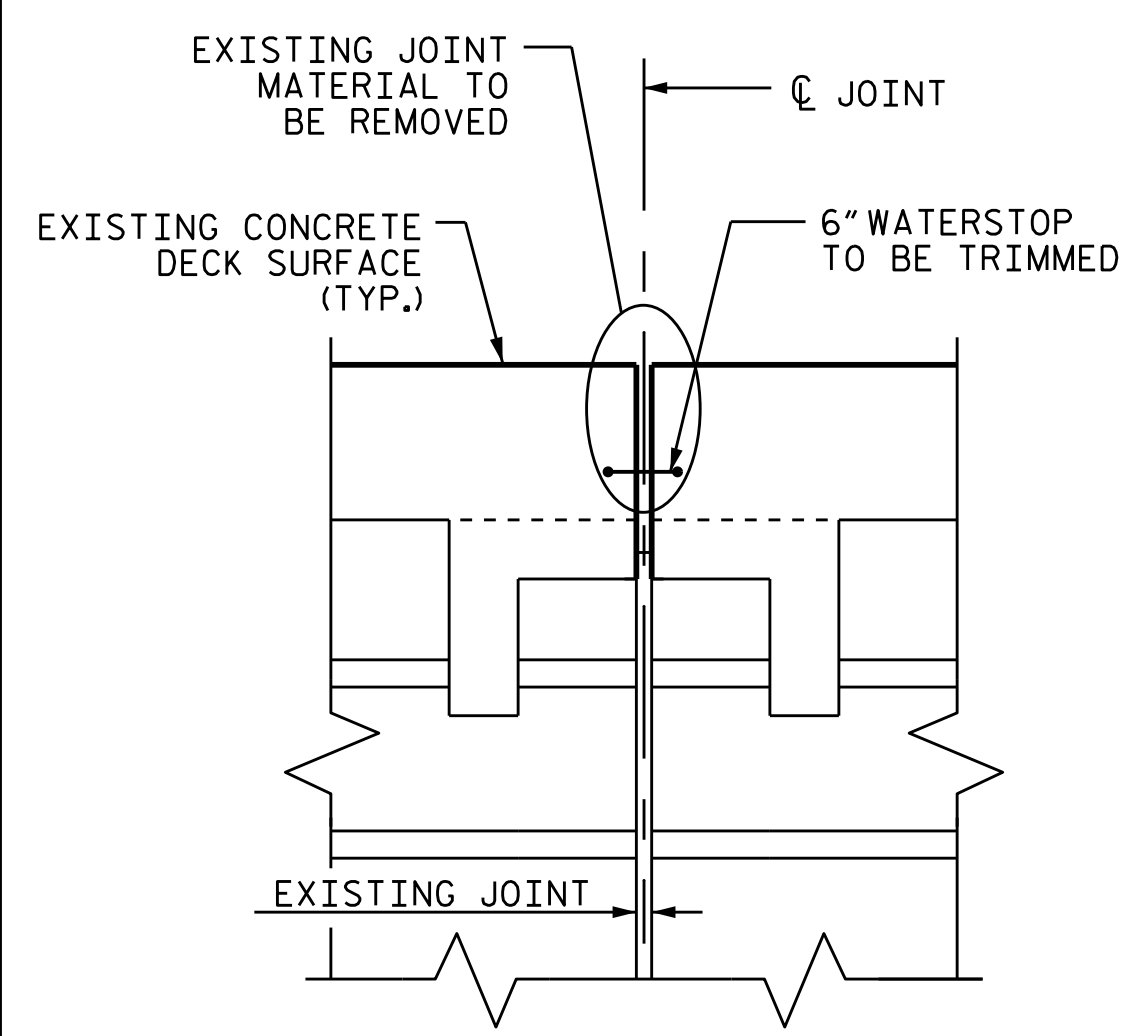
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

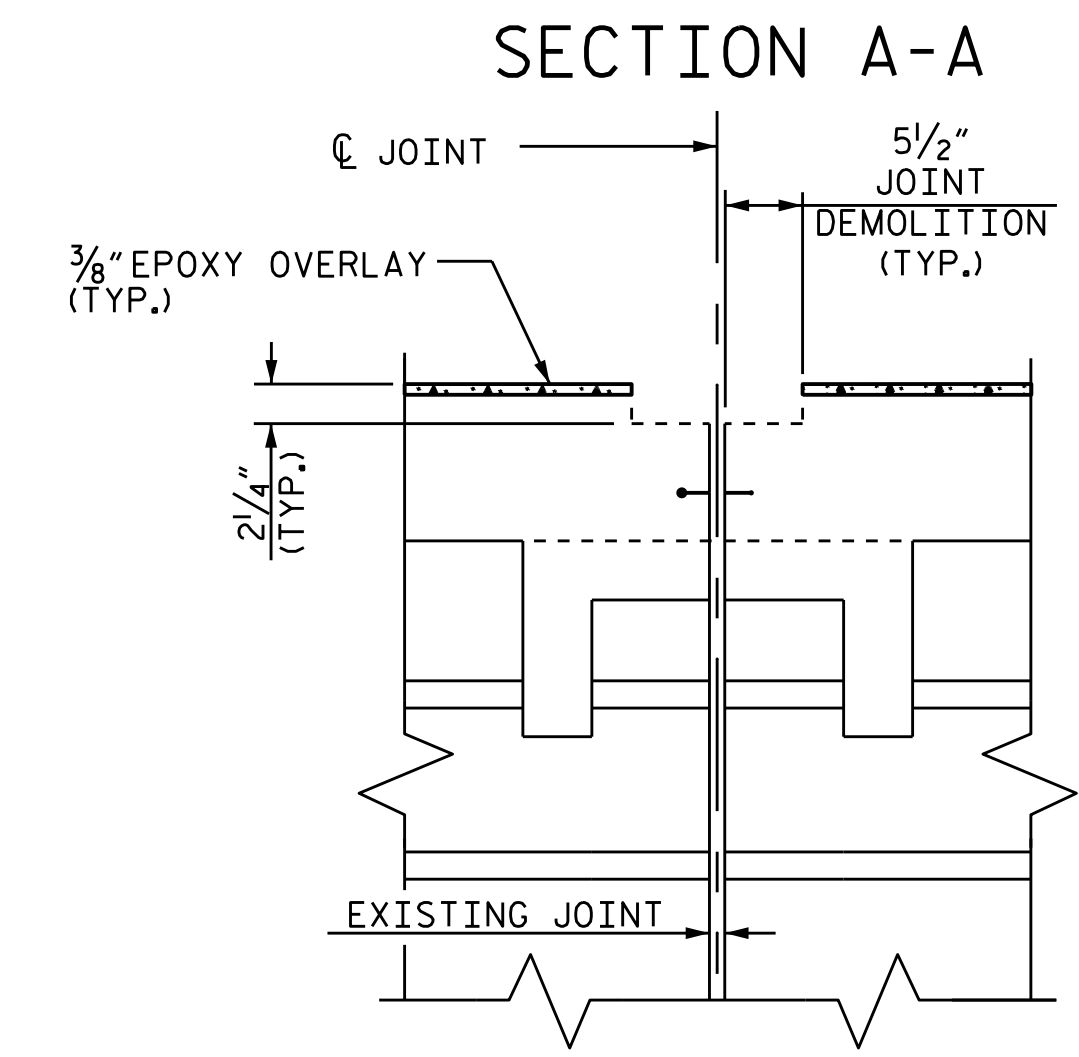
DURING JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISION.

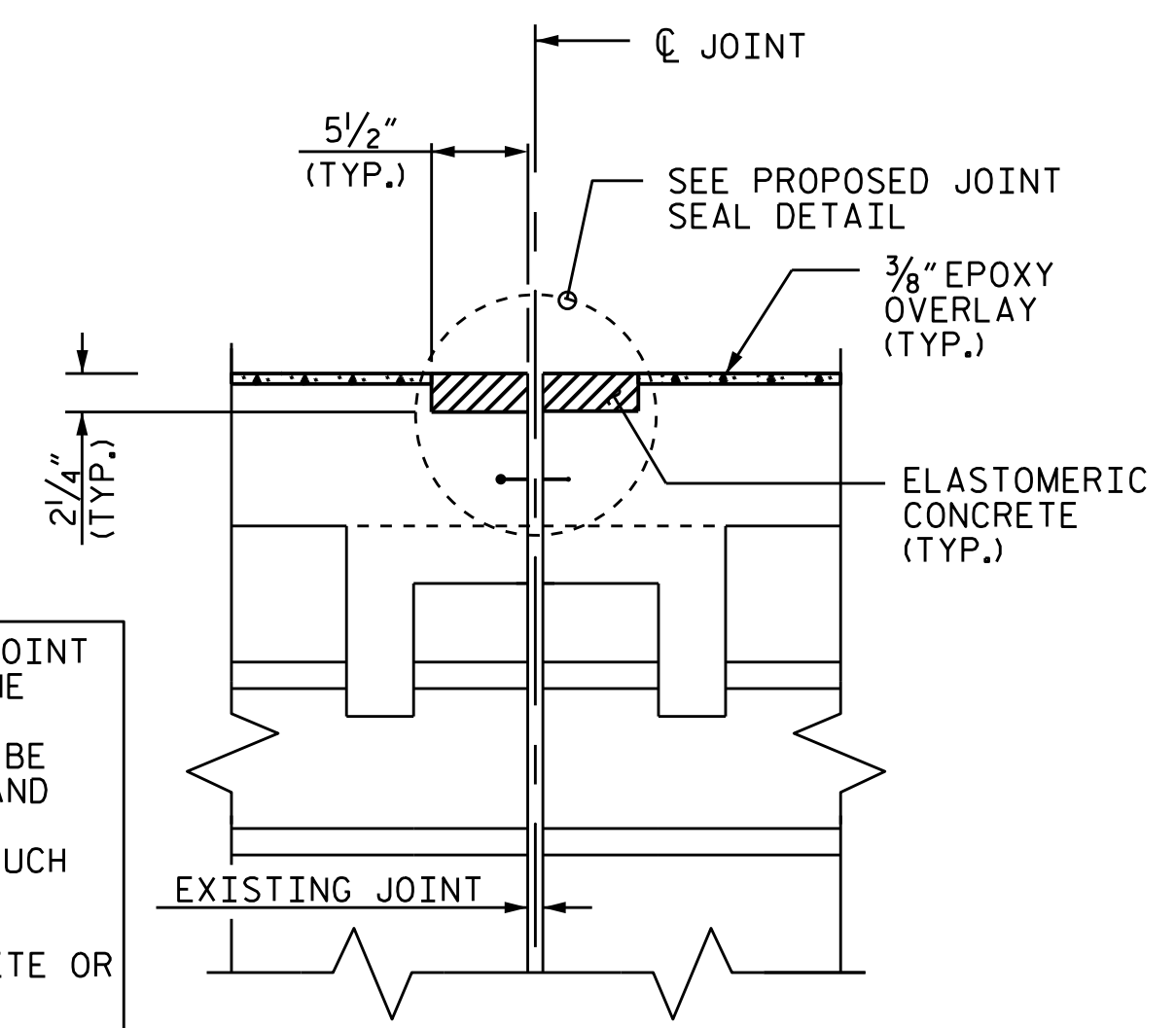
JOINT INSTALLATION SEQUENCE AT END BENTS



EXISTING JOINT

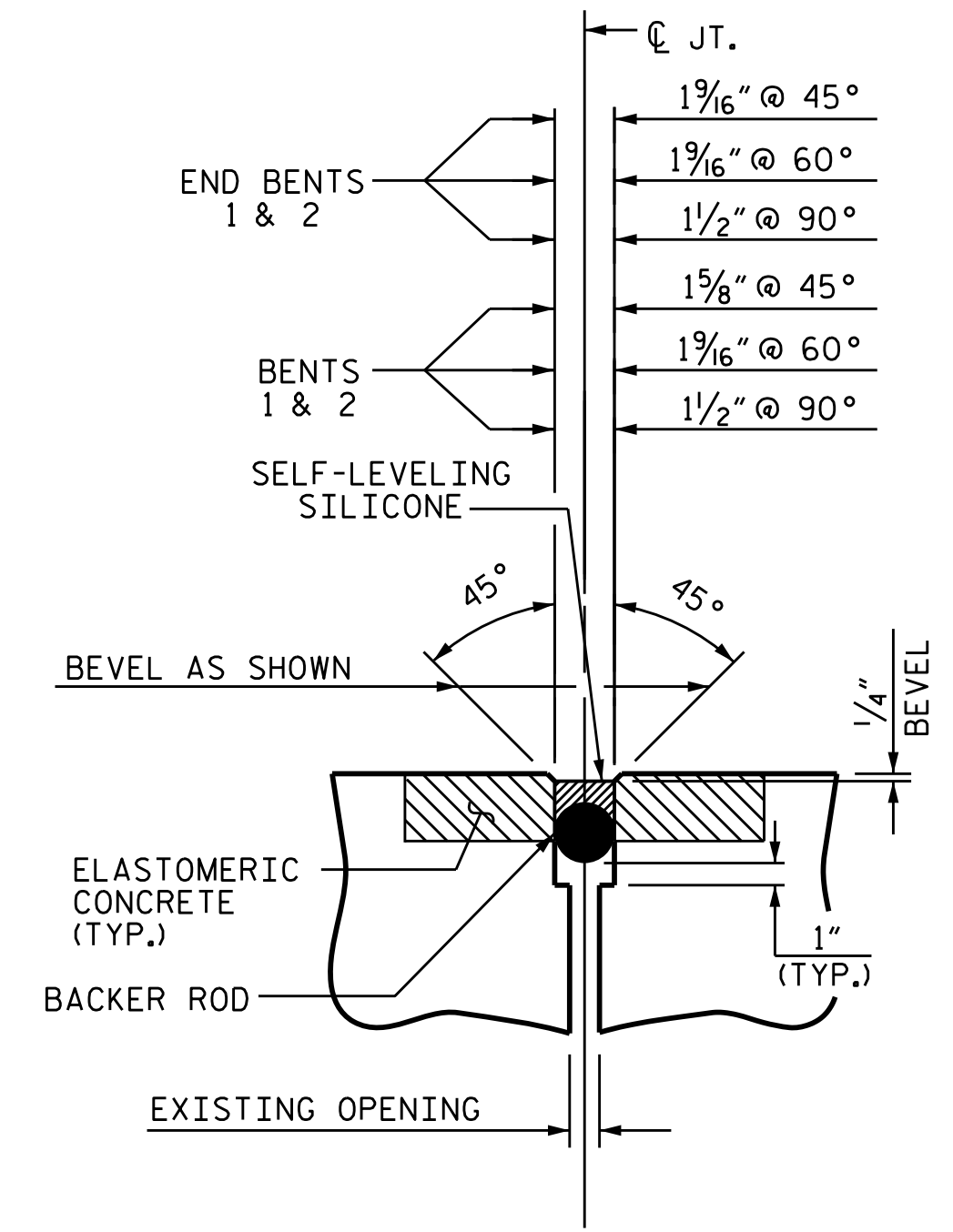


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.



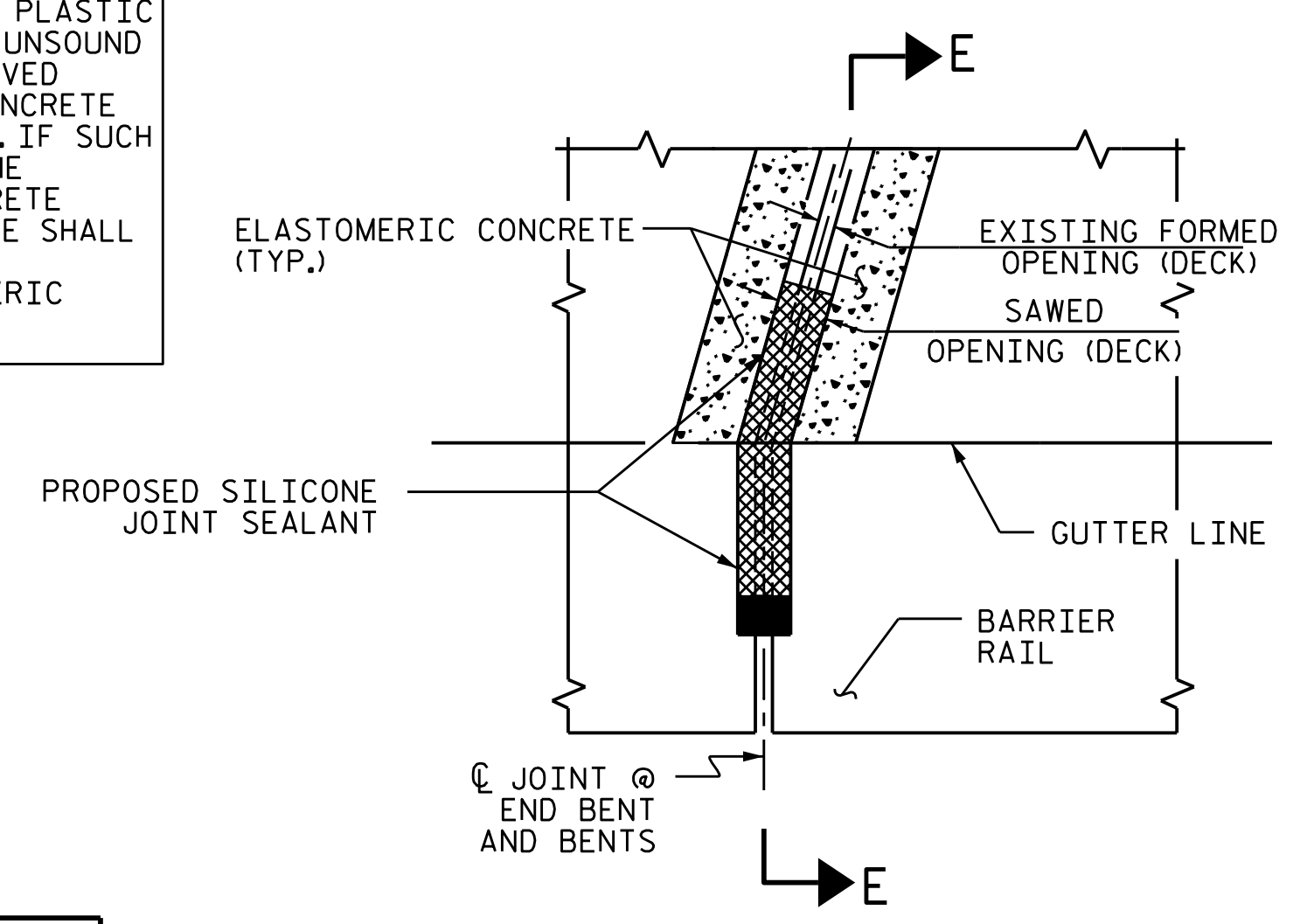
PROPOSED JOINT SEAL DETAIL (WITH SAWED DIMENSIONS)

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	52.4 CF	
POURABLE SILICONE JOINT SEALANT	304.5 LF	

JOINT INSTALLATION SEQUENCE AT BENTS

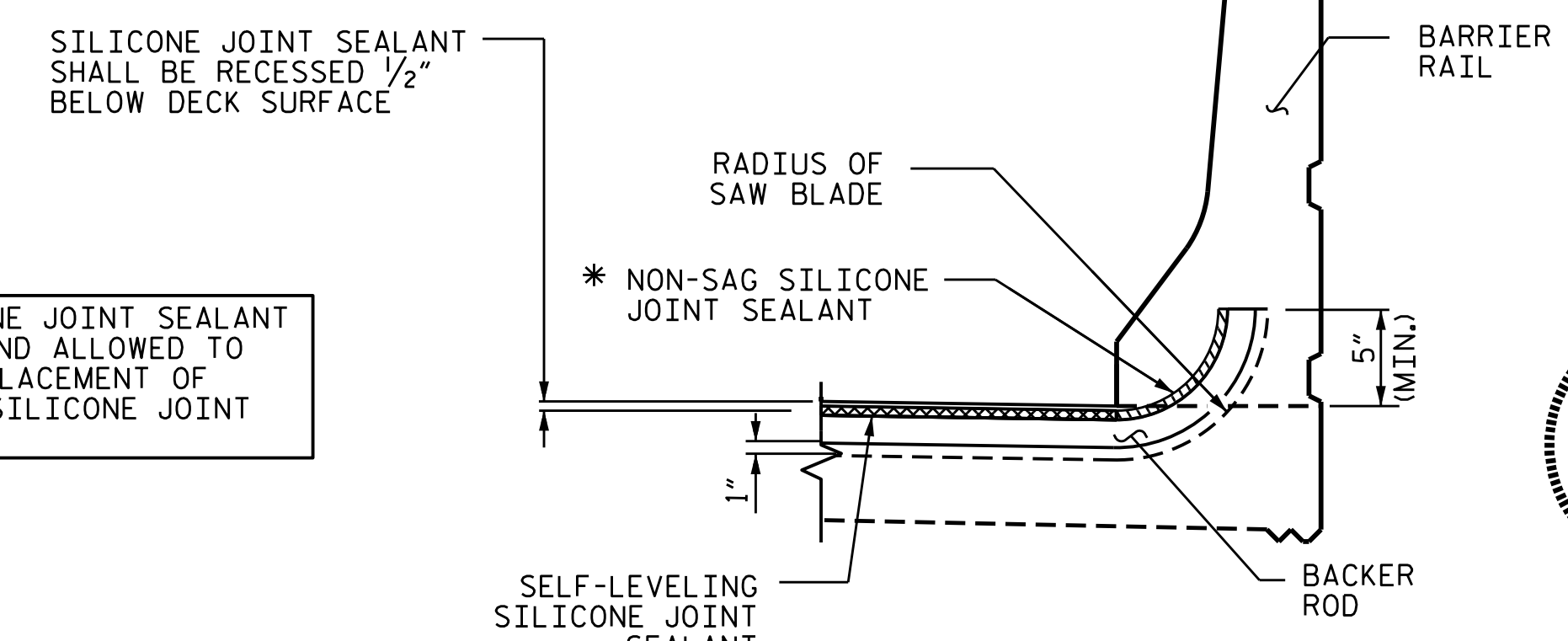
SECTION B-B

IF THE EMBEDDED PORTION OF THE EXISTING UNSOUND PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



PLAN

* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



SECTION E-E

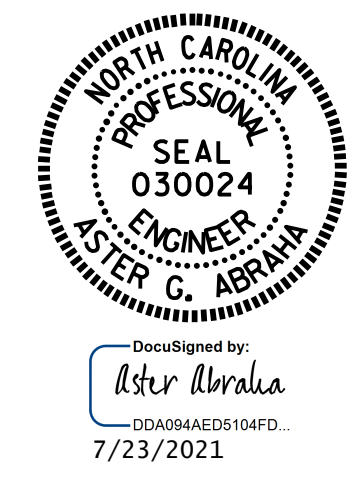
DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 02/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

JOINT DETAIL AT BARRIER RAIL

PROJECT NO. I-6041A
 EDGEcombe COUNTY
 BRIDGE NO. 320157

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT REPAIR DETAILS



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1			3			S6-6
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NOTES:

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

FOR BENT DIAPHRAGM AND CONCRETE GIRDER REPAIR DETAILS, SEE "PRESTRESSED CONCRETE GIRDER AND DIAPHRAGM REPAIR DETAILS" SHEET SD-1.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK FOR TEMPORARY FORMWORK. FOR SUBMITTALS OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

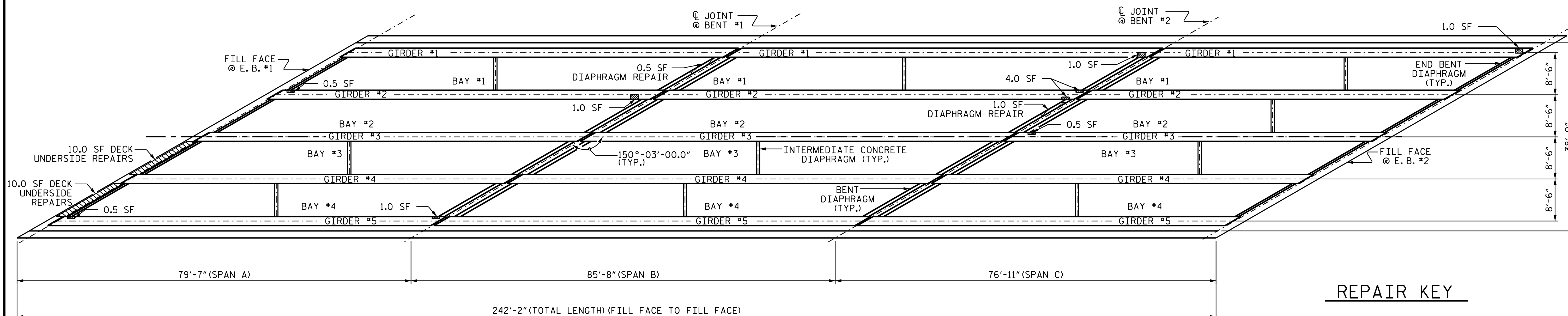
UPON REMOVAL OF TEMPORARY FORMWORK, ALL VOIDS AND HONEYCOMBS ON THE UNDERSIDE OF DECK SURFACE SHALL BE FILLED WITH THE SAME MATERIAL AS USED FOR THE PATCH, AND FINISHED TO CONFORM TO THE SURROUNDING CONCRETE SURFACE.

NO FORMWORK SHALL BE LEFT IN PLACE.

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	20.0	6.7		
BENT DIAPHRAGMS	1.5	0.5		
GIRDER REPAIRS				
DECK GIRDERS	9.5	3.2		

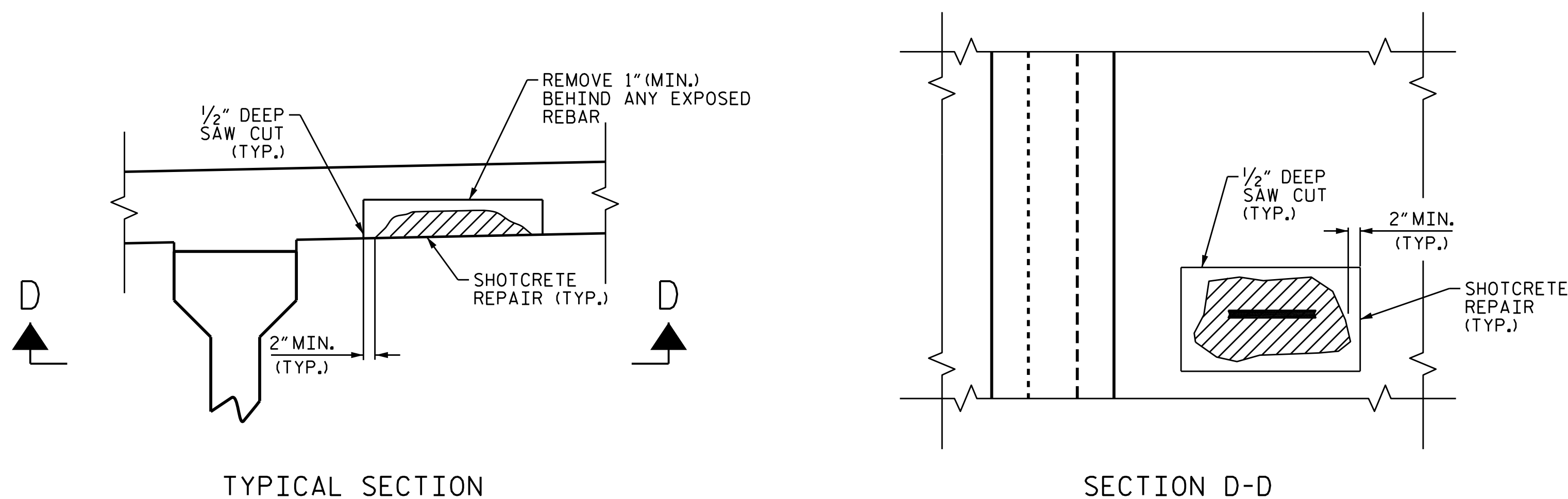
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



GIRDER REPAIR LOCATIONS
(UNDERSIDE)

REPAIR KEY

- DIAPHRAGM SHOTCRETE REPAIR
- PRESTRESSED CONCRETE GIRDER REPAIR
- SHOTCRETE REPAIRS FOR DECK UNDERSIDE



UNDERSIDE OF DECK REPAIR
(AT END BENTS)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320157



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

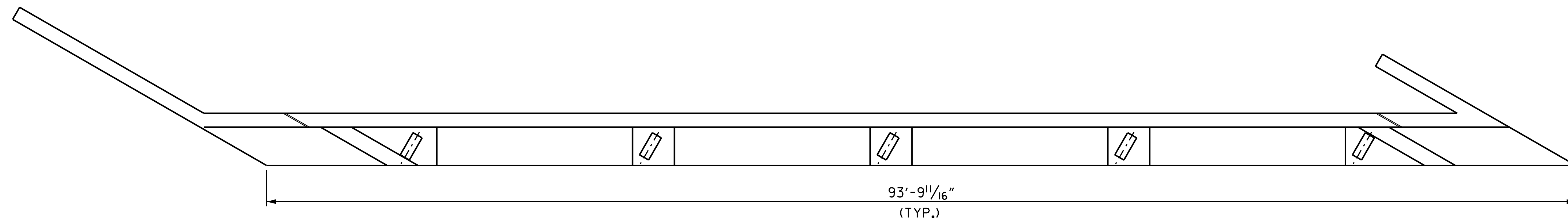
SUPERSTRUCTURE

GIRDER & DIAPHRAGM REPAIR

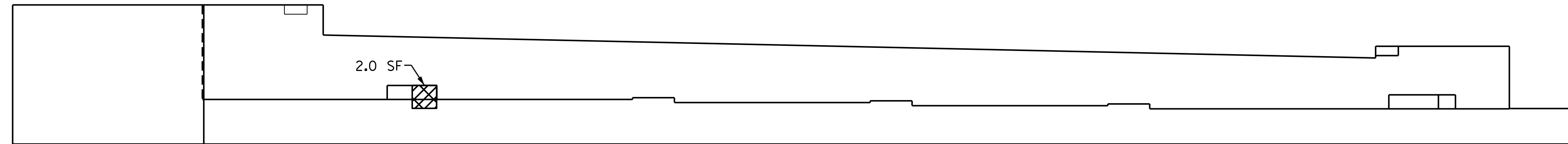
DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 07/2021
 CHECKED BY : A. G. ABRAHA/S/ WANCE DATE : 07/2021

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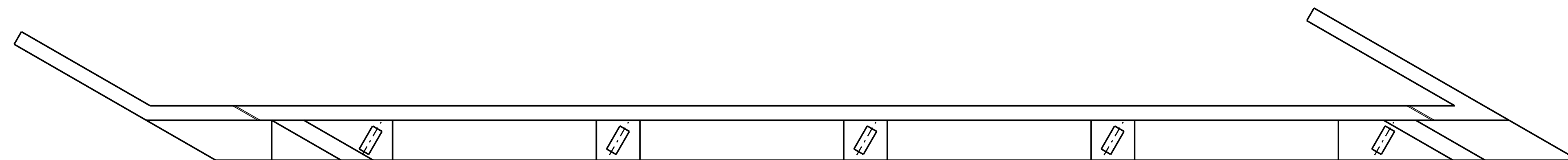


PLAN

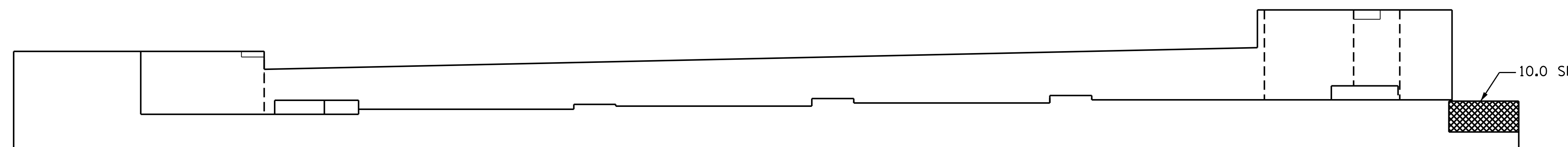


ELEVATION

END BENT 1



PLAN



ELEVATION

END BENT 2

REPAIR QUANTITY TABLE

REPAIRS END BENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	12.0	6.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		

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

NOTES:

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

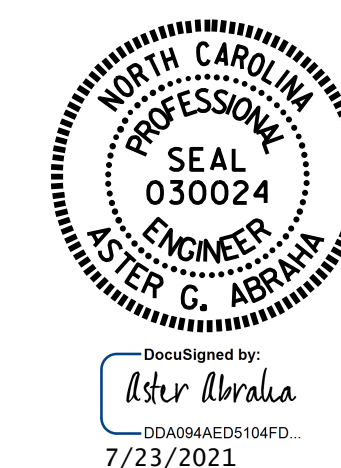
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320157



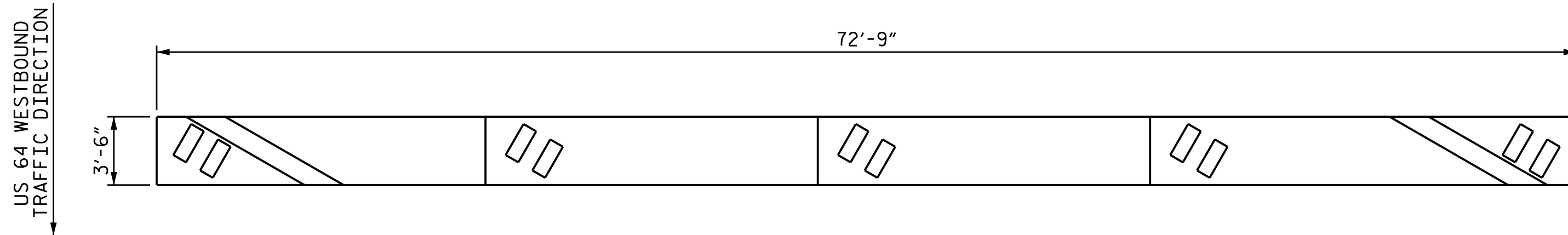
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS REPAIR

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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1			3			S6-8
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PLAN
TOP OF CAP

NOTES:

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

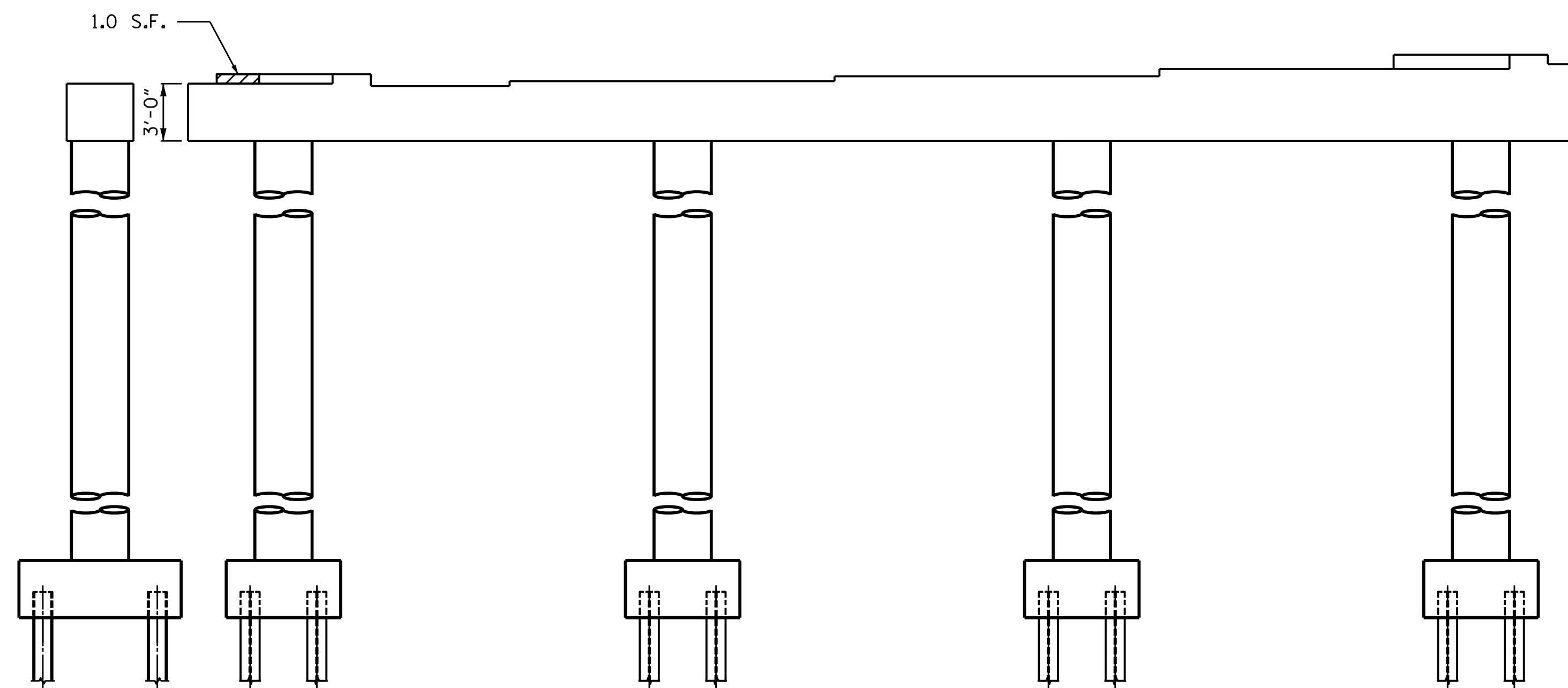
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

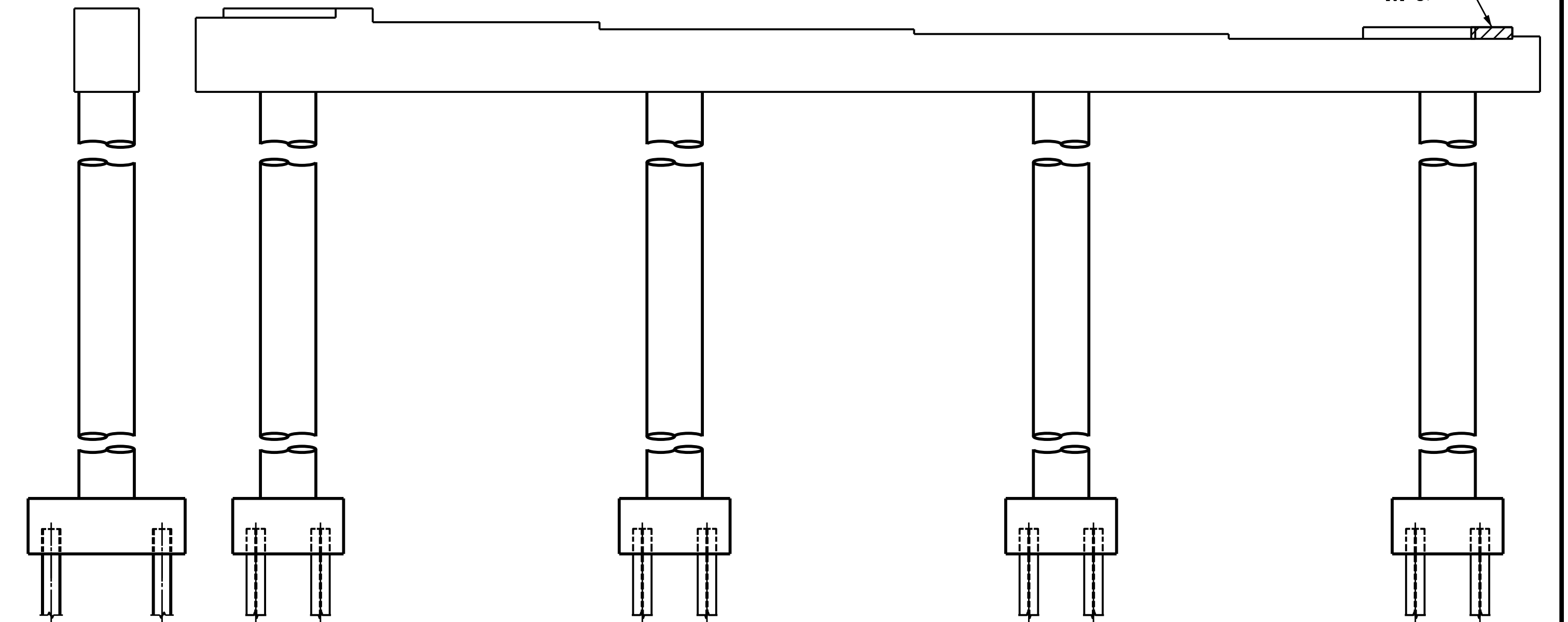
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	2.1	1.1		
COLUMN	0.0	0.0		

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



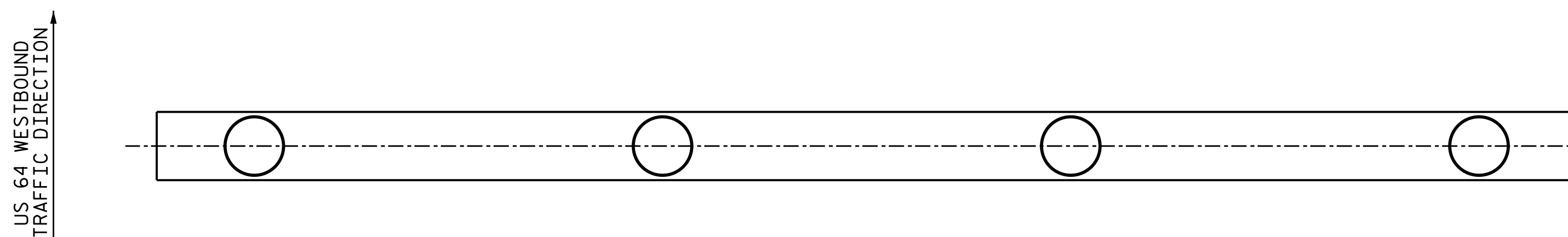
END VIEW
NORTH END

ELEVATION
WEST SIDE



END VIEW
SOUTH END

ELEVATION
EAST SIDE



PLAN
BOTTOM OF CAP

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA



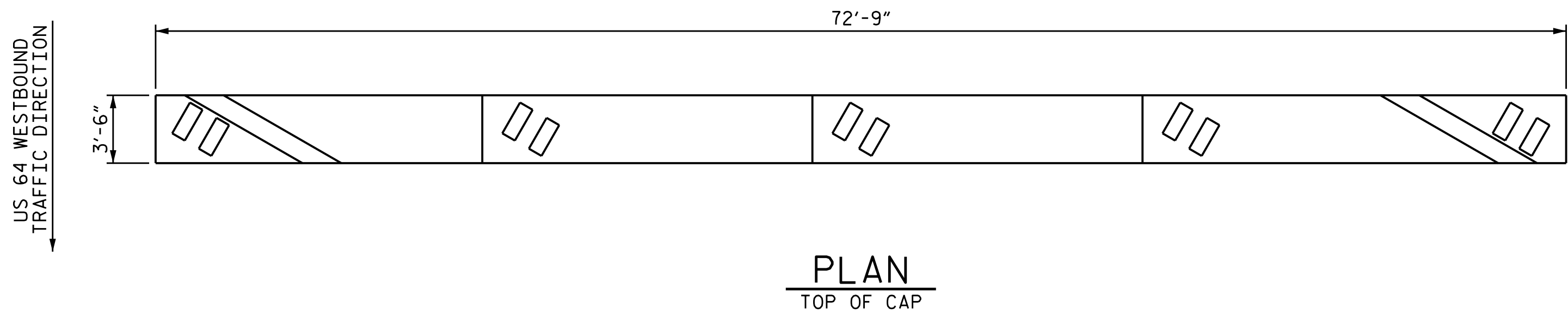
PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320157
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUBSTRUCTURE
 BENT 1**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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2			4			118



SPAN C
SPAN B

NOTES:

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

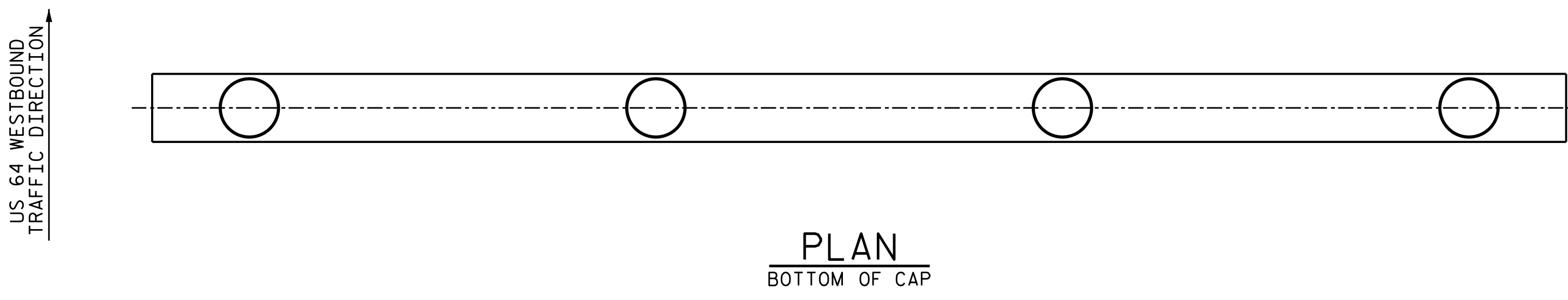
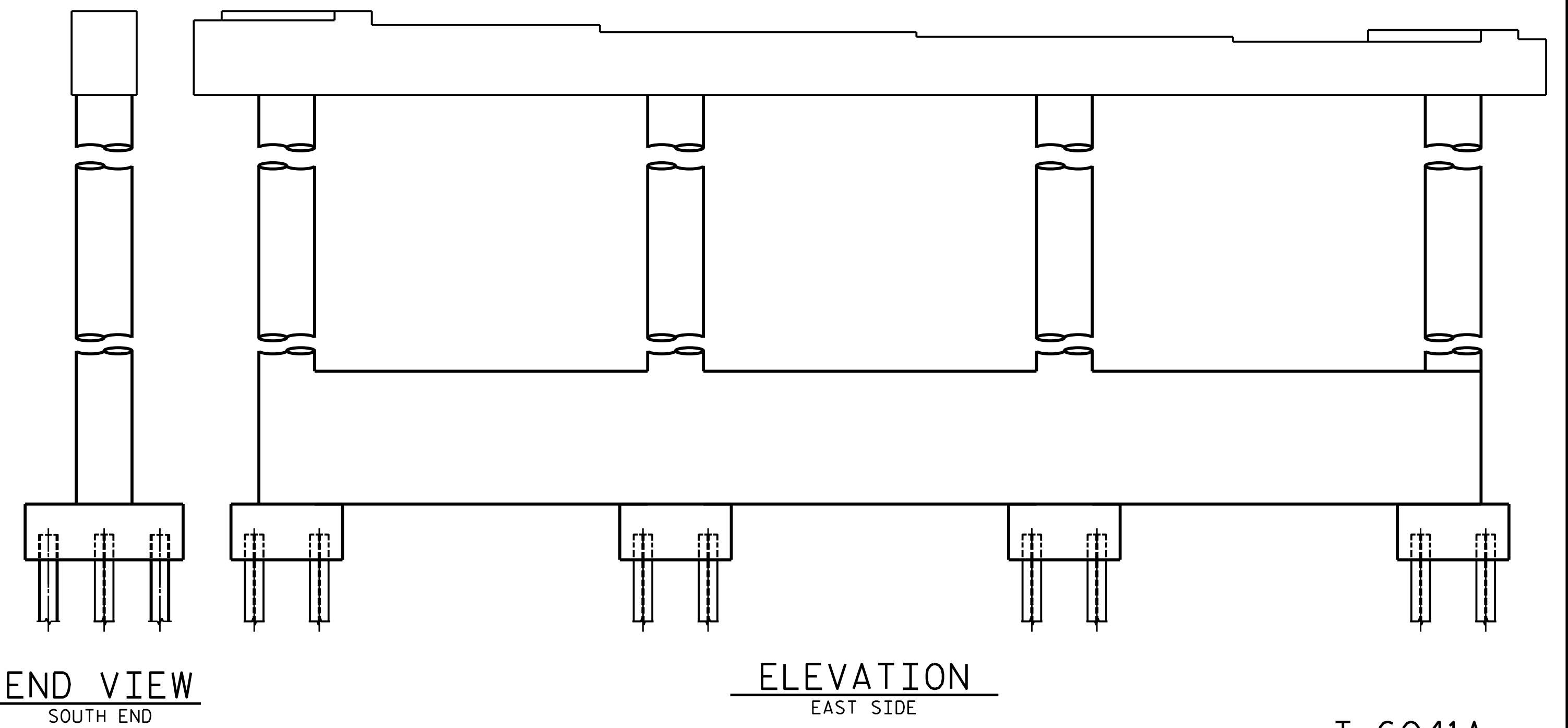
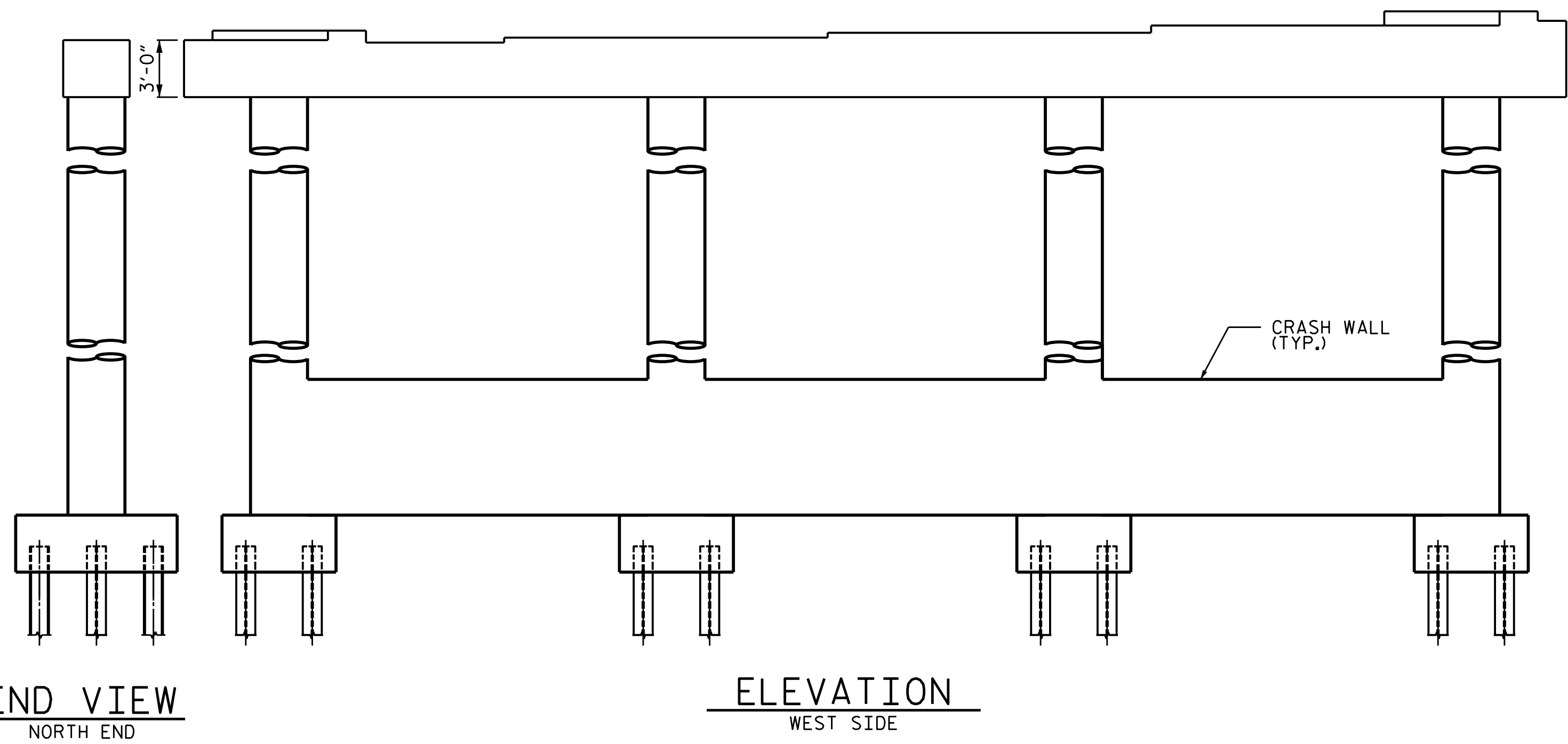
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

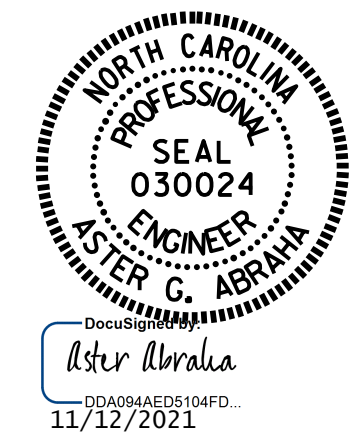
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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



REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320157

SHEET 2 OF 2

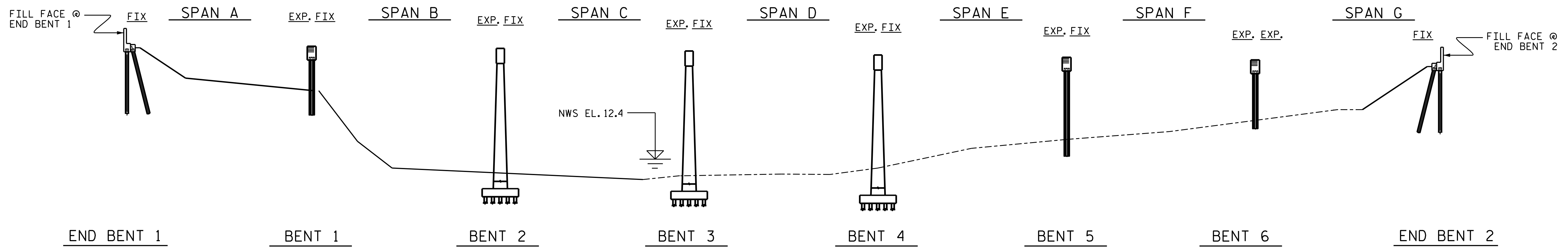
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 2**

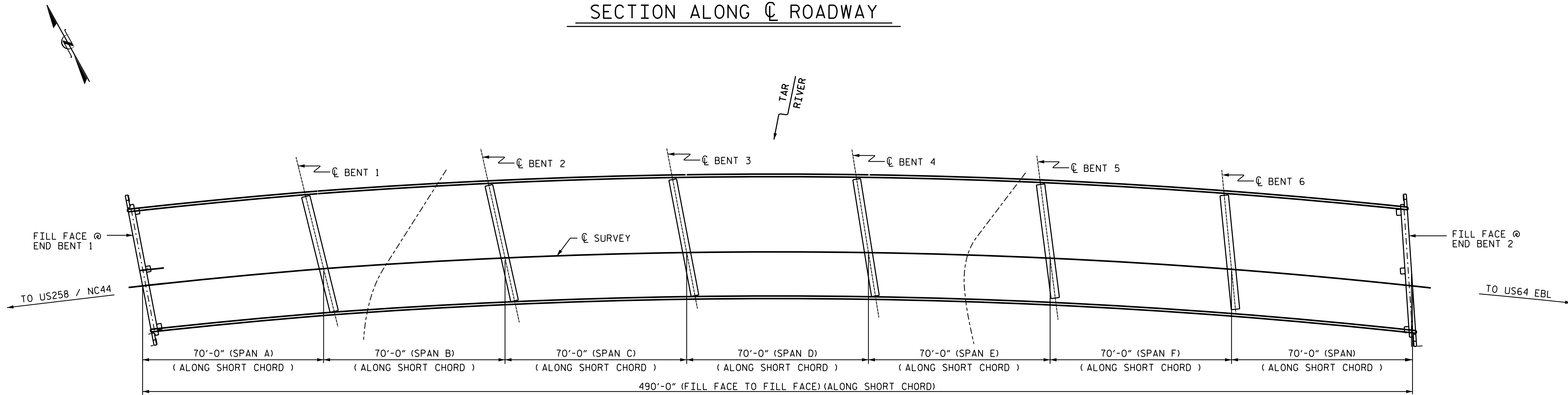
DRAWN BY : S. T. SANDOR DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/2019

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REVISIONS						SHEET NO.
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1			3			S6-10
2			4			TOTAL SHEETS 118



SECTION ALONG C ROADWAY



PLAN

(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

SCOPE OF WORK

- MILL ASPHALT WEARING SURFACE AND PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND HYDRO-DEMOLITION.
- BRIDGE DECK PREPARATION WITH SCARIFICATION AND HYDRO-DEMOLITION.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH LATEX MODIFIED CONCRETE.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC CONCRETE.
- INSTALL POURABLE SILICONE JOINT SEALANT.
- GROOVE LATEX MODIFIED CONCRETE.
- REPAIR SUBSTRUCTURE USING EPOXY RESIN INJECTION AND SHOTCRETE.
- MILL AND PAVE ASPHALT APPROACHES.

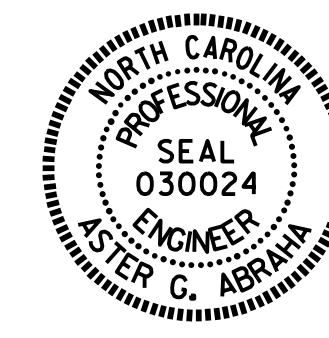
NOTES

- PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND ROUTINE INSPECTION REPORT DATED, FEBRUARY 10, 2021.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

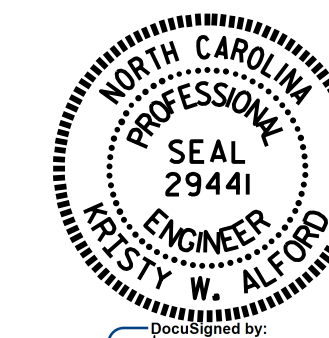
PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



DocuSigned by:
 Kater Abrilia
 00488A4D5104FD...
 7/23/2021



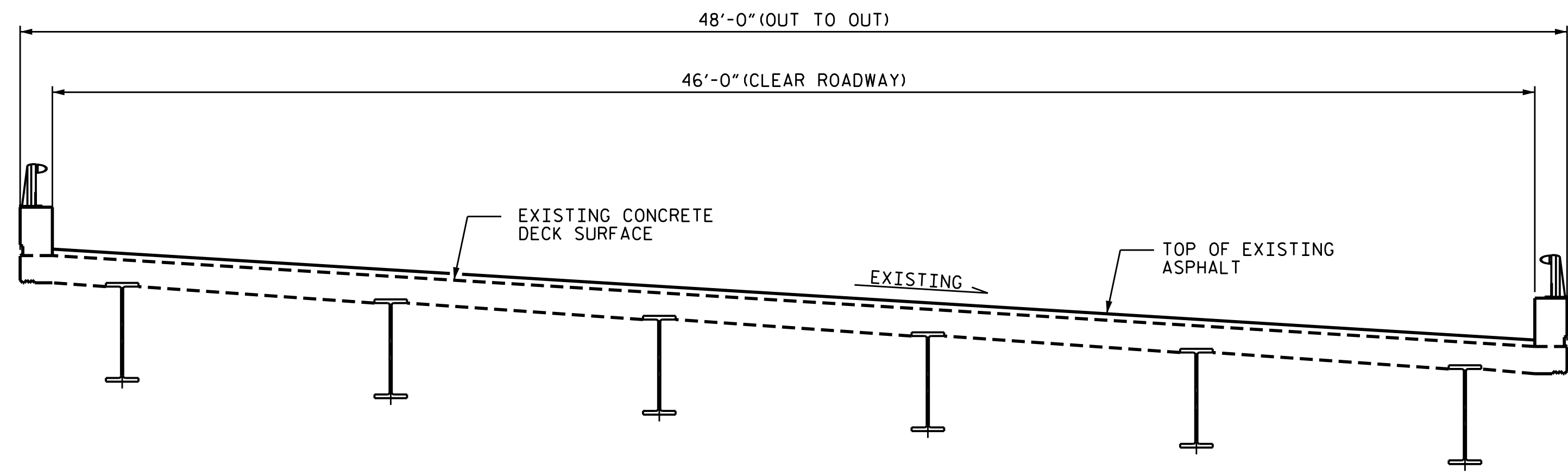
DocuSigned by:
 W. ALFORD
 F24583800BFADE...
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 BRIDGE 104 ON US 64 EAST
 BOUND LANE OVER
 TAR RIVER

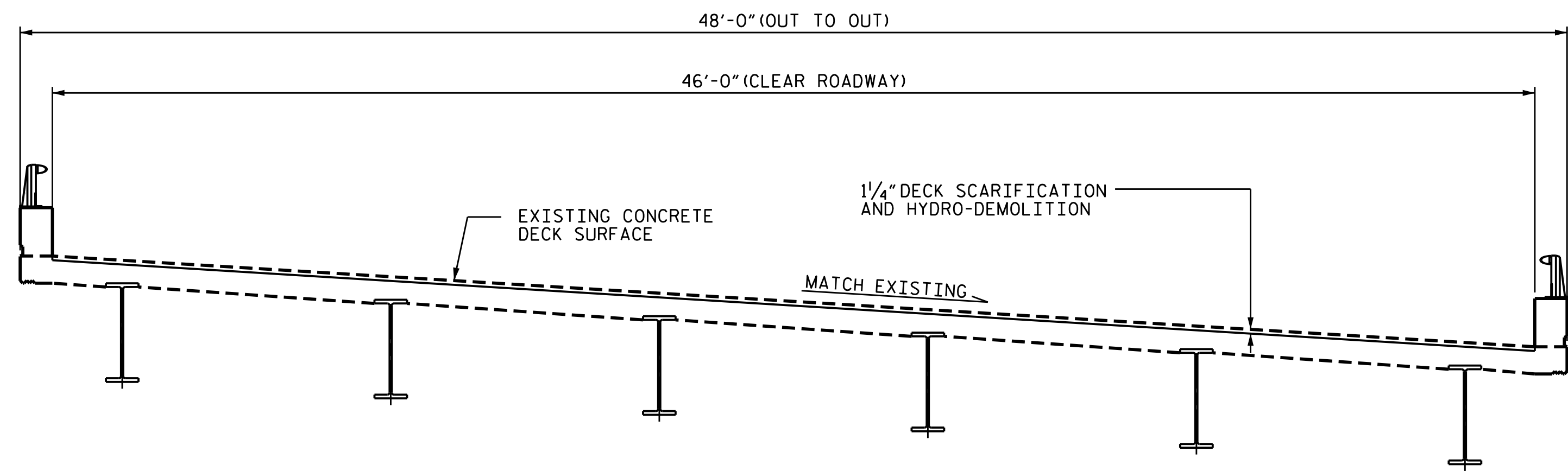
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NO.	BY:	DATE:	NO.	BY:	DATE:	S7-1
1			3			TOTAL SHEETS
2			4			118

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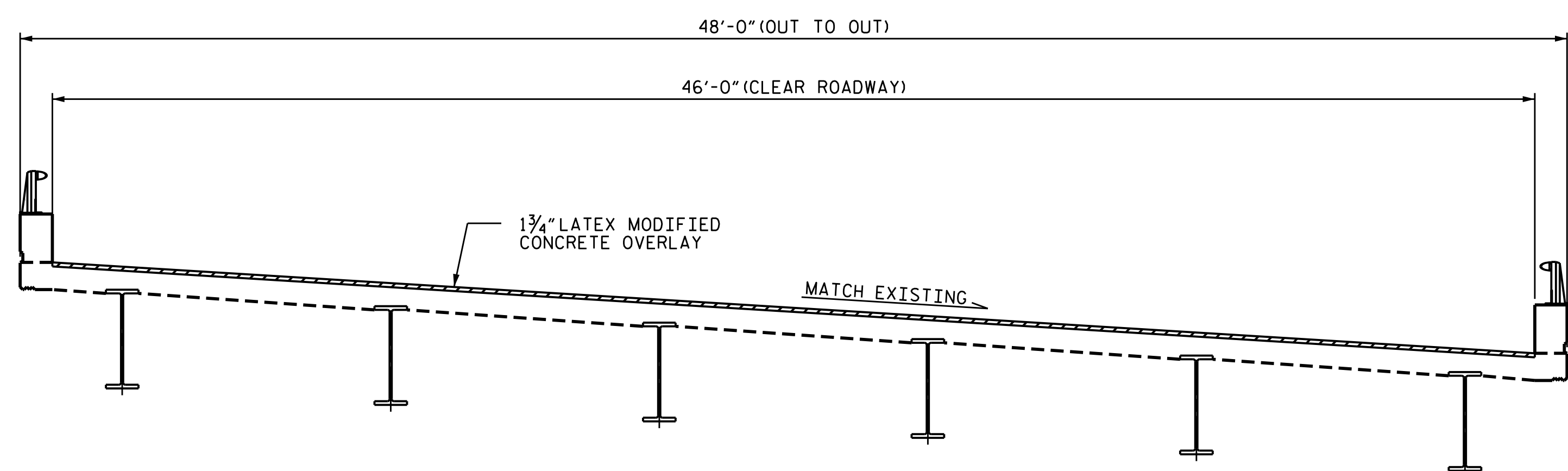
DRAWN BY : S. T. SANDOR DATE : 02/2019
 CHECKED BY : A. Y. GODFREY DATE : 02/2021



TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(DECK PREPARATION AFTER EXISTING ASPHALT IS REMOVED DOWN TO ORIGINAL CONCRETE DECK SURFACE.)

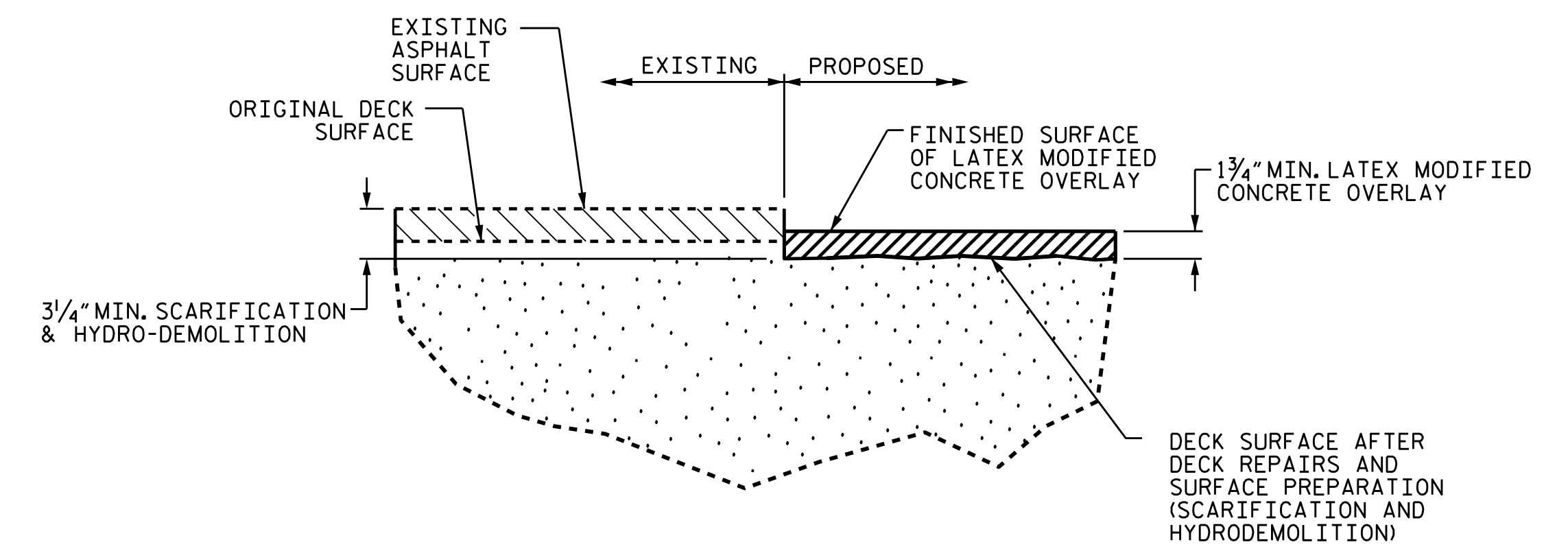


TYPICAL SECTION
(PROPOSED)

NOTES

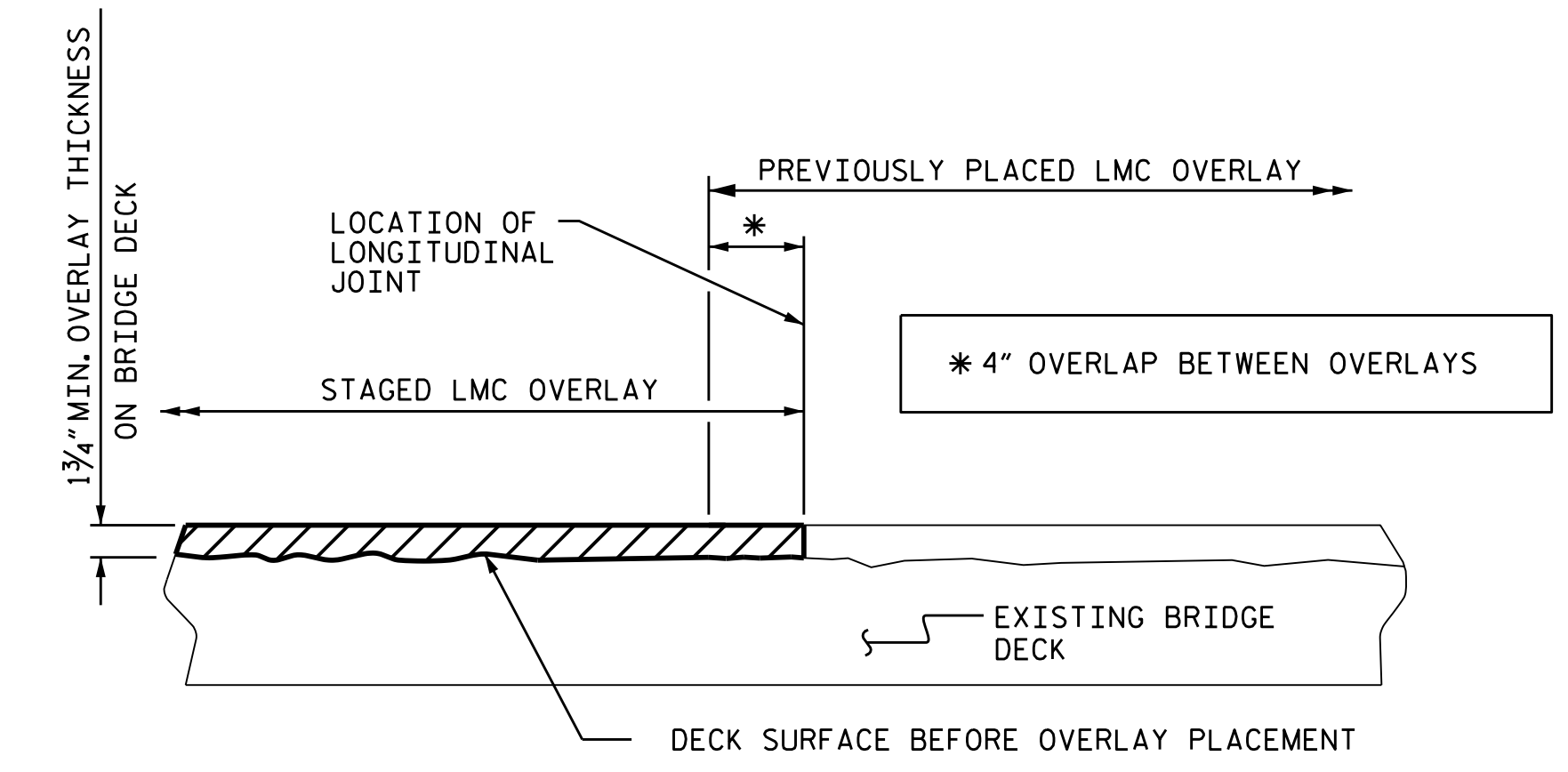
WHEN PREPARING THE SURFACE FOR LMC OVERLAY ADJACENT TO THE PREVIOUSLY PLACED LMC STAGE, THE PREVIOUSLY PLACED LMC SHALL BE SAW-CUT TO THE FULL DEPTH OF THE LMC AT THE CENTERLINE OF THE BRIDGE AND ALL LMC IN THE 4" OVERLAP SHALL BE REMOVED WITH HAND TOOLS PRIOR TO PLACEMENT OF LMC IN THE SECOND STAGE.

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



LATEX MODIFIED CONCRETE OVERLAY DETAIL

(FINISHED SURFACE OF THE LATEX MODIFIED CONCRETE OVERLAY IS APPROX.)

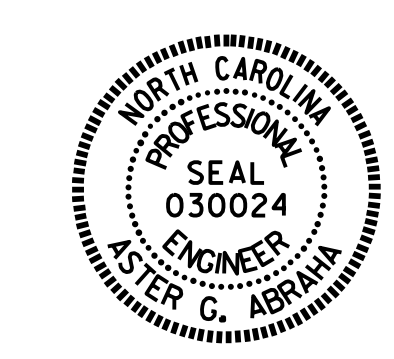


SECTION THRU DECK

STAGED LMC OVERLAY JOINT DETAIL

(AS NEEDED)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104



DocuSigned by:
 Aster Abraha
 00408AAED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION AND SURFACE PREPARATION DETAILS

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 02/2019
 CHECKED BY : A. G. ABRAHA DATE : 03/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	ST-2
1			3			TOTAL SHEETS
2			4			118

SUMMARY OF QUANTITIES FOR SPAN A

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	355.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	355.2 SY	
CLASS II SURFACE PREPARATION	-	
CLASS III SURFACE PREPARATION	-	
LATEX MODIFIED CONCRETE OVERLAY	19.7 CY	
PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	355.2 SY	
GROOVING BRIDGE DECK	2,972.0 SF	
BRIDGE JOINT DEMOLITION	21.4 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

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.

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.




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

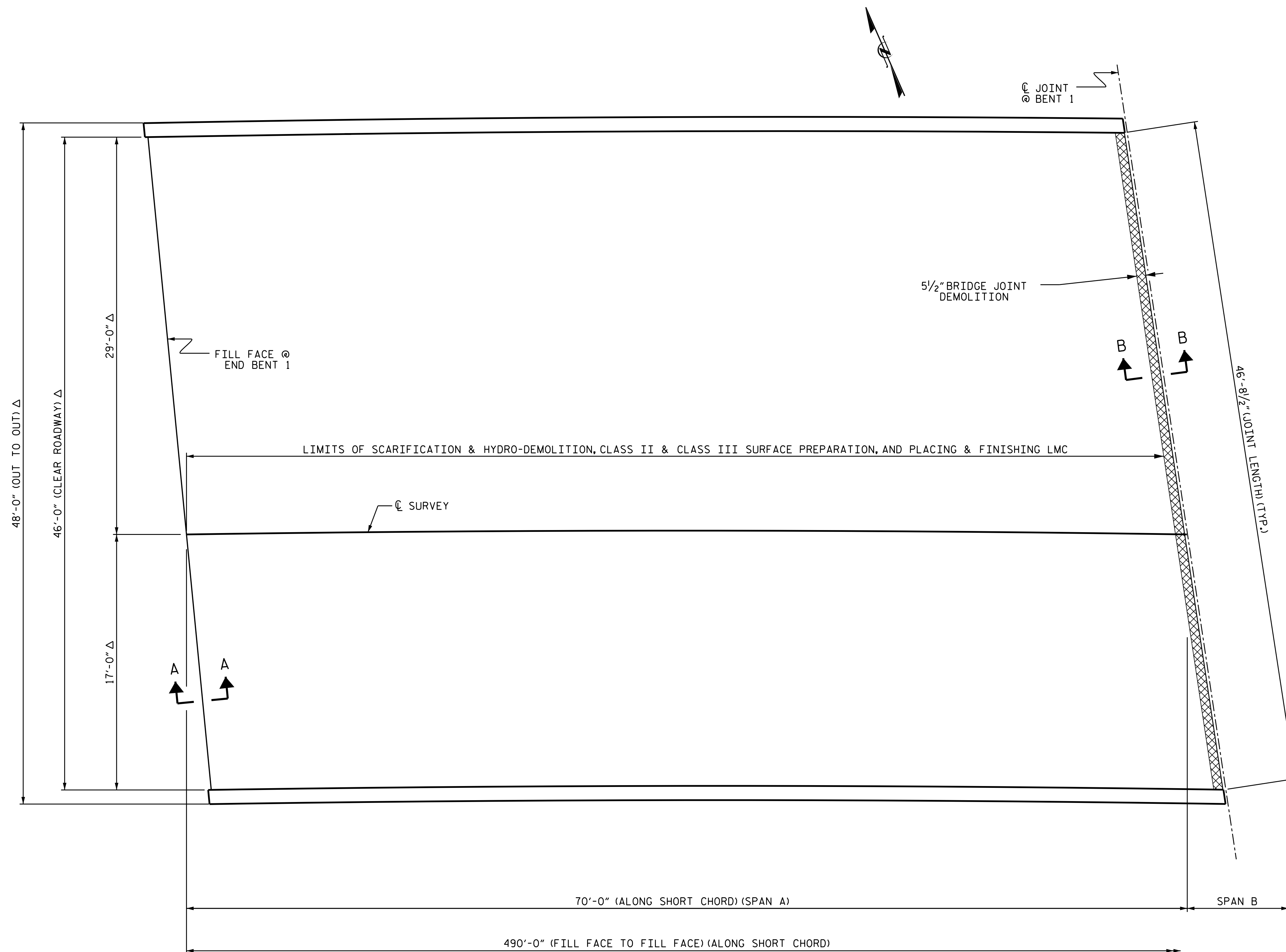
FOR LMC OVERLAY SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

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

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

-  - SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK FOR LMC OVERLAY
-  - APPROX. AREA CLASS II SURFACE PREPARATION
-  - BRIDGE JOINT DEMOLITION



Δ - RADIAL DIMENSION

PLAN OF SPAN A
(SEE SHEET NO. S1-14 FOR SECTIONS A-A AND B-B)

THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II & CLASS III REPAIRS.

PROJECT NO. I-6041A
EDGECOMBE COUNTY
BRIDGE NO. 320104

SHEET 1 OF 7



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SURFACE PREPARATION
SPAN A

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
CHECKED BY : S. WANCE DATE : 06/2021

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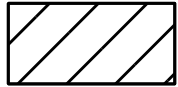

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2			4			118

SUMMARY OF QUANTITIES FOR SPAN B

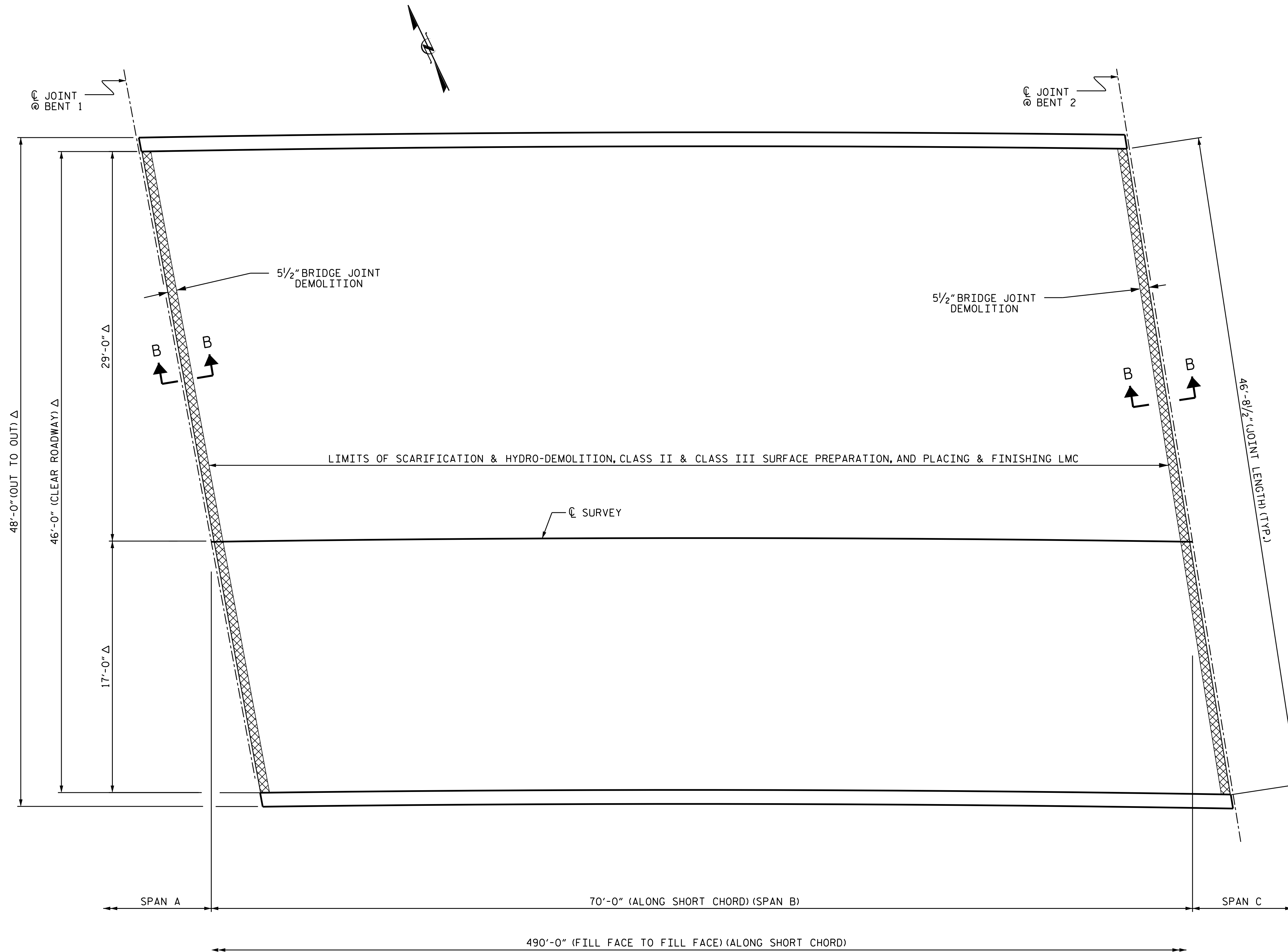
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	352.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	352.6 SY	
CLASS II SURFACE PREPARATION	-	
CLASS III SURFACE PREPARATION	-	
LATEX MODIFIED CONCRETE OVERLAY	19.6 CY	
PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	352.6 SY	
GROOVING BRIDGE DECK	2,951.9 SF	
BRIDGE JOINT DEMOLITION	42.8 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

-  - SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK FOR LMC OVERLAY
-  - APPROX. AREA CLASS II SURFACE PREPARATION
-  - BRIDGE JOINT DEMOLITION

THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II & CLASS III REPAIRS.



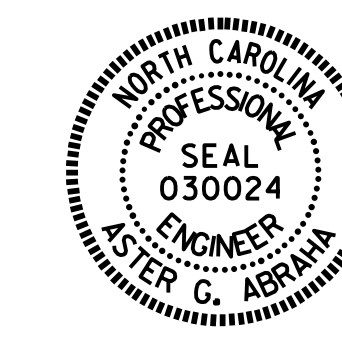
Δ - RADIAL DIMENSION

PLAN OF SPAN B

(SEE SHEET NO. S1-14 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

SHEET 2 OF 7



DocuSigned by:
 Aster Abramo
 00A08AAED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN B

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : S. WANCE DATE : 06/2021

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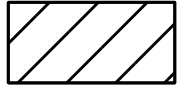

REVISIONS						SHEET NO.
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1			3			118
2			4			

SUMMARY OF QUANTITIES FOR SPAN C

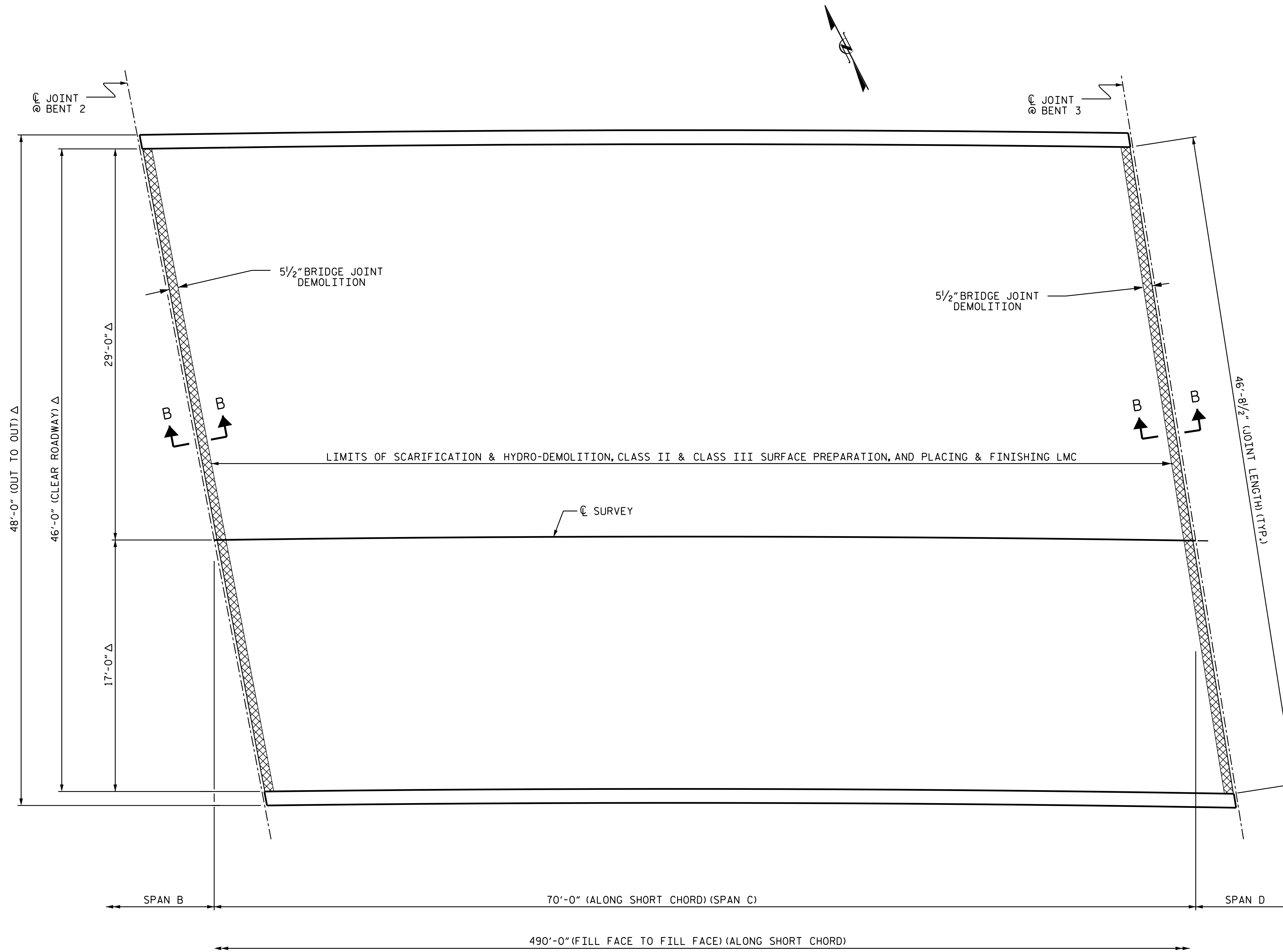
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	352.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	352.6 SY	
CLASS II SURFACE PREPARATION	-	
CLASS III SURFACE PREPARATION	-	
LATEX MODIFIED CONCRETE OVERLAY	19.6 CY	
PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	352.6 SY	
GROOVING BRIDGE DECK	2,951.9 SF	
BRIDGE JOINT DEMOLITION	42.8 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

-  - SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK FOR LMC OVERLAY
-  - APPROX. AREA CLASS II SURFACE PREPARATION
-  - BRIDGE JOINT DEMOLITION

THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II & CLASS III REPAIRS.



Δ - RADIAL DIMENSION

PLAN OF SPAN C

(SEE SHEET NO. S1-14 FOR SECTION B-B)

PROJECT NO. I-6041A

EDGEcombe COUNTY

BRIDGE NO. 320104

SHEET 3 OF 7



DocuSigned by:
Aster Abramo
00A08AAED510AFD
7/23/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN C**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
CHECKED BY : S. WANCE DATE : 06/2021

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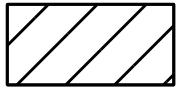

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SUMMARY OF QUANTITIES FOR SPAN D

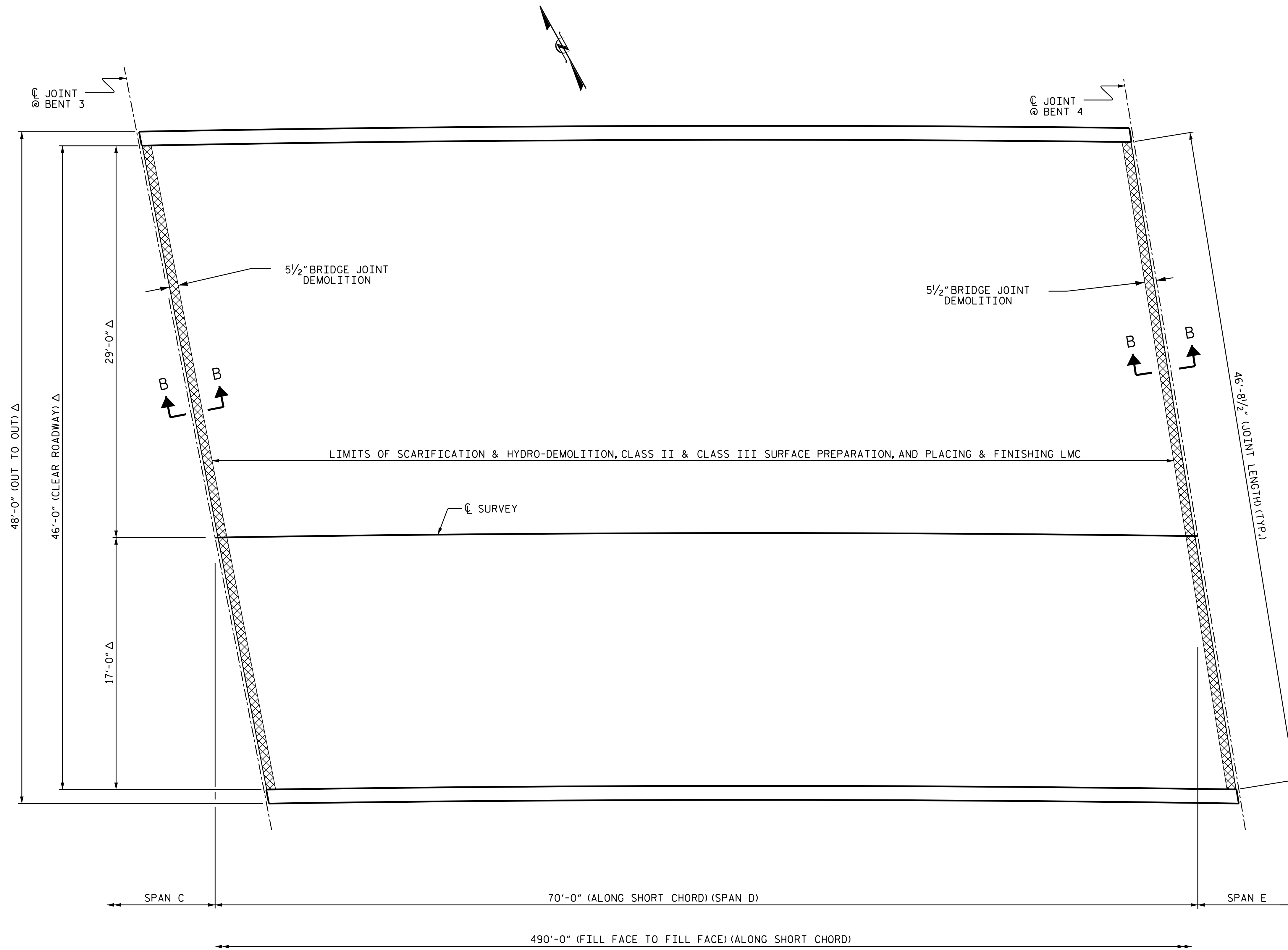
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	352.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	352.6 SY	
CLASS II SURFACE PREPARATION	-	
CLASS III SURFACE PREPARATION	-	
LATEX MODIFIED CONCRETE OVERLAY	19.6 CY	
PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	352.6 SY	
GROOVING BRIDGE DECK	2,951.9 SF	
BRIDGE JOINT DEMOLITION	42.8 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

-  - SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK FOR LMC OVERLAY
-  - APPROX. AREA CLASS II SURFACE PREPARATION
-  - BRIDGE JOINT DEMOLITION

THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II REPAIRS.

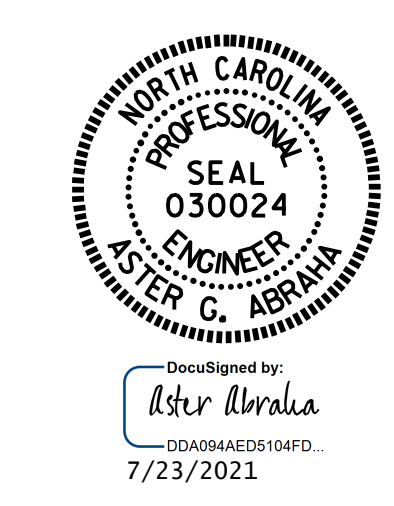


Δ - RADIAL DIMENSION

PLAN OF SPAN D
(SEE SHEET NO. S1-14 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320104

SHEET 4 OF 7



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SURFACE PREPARATION
SPAN D

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
CHECKED BY : S. WANCE DATE : 06/2021

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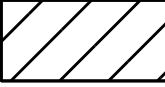

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SUMMARY OF QUANTITIES FOR SPAN E

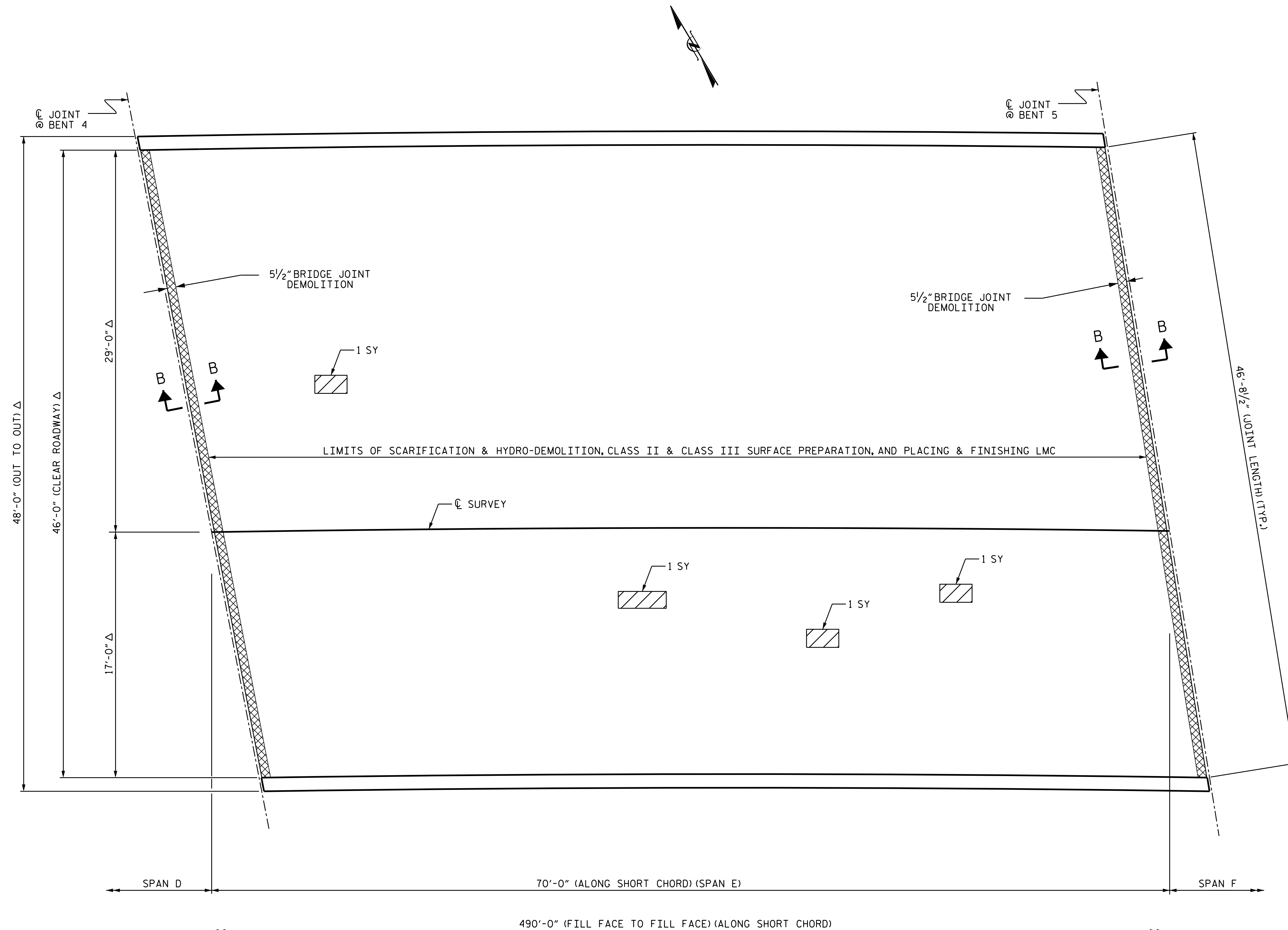
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	352.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	352.6 SY	
CLASS II SURFACE PREPARATION	4.0 SY	
CLASS III SURFACE PREPARATION	-	
LATEX MODIFIED CONCRETE OVERLAY	19.6 CY	
PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	352.6 SY	
GROOVING BRIDGE DECK	2,951.9 SF	
BRIDGE JOINT DEMOLITION	42.8 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

-  - SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK FOR LMC OVERLAY
-  - APPROX. AREA CLASS II SURFACE PREPARATION
-  - BRIDGE JOINT DEMOLITION

THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II & CLASS III REPAIRS.



Δ - RADIAL DIMENSION

PLAN OF SPAN E

(SEE SHEET NO. S1-14 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104

SHEET 5 OF 7



DocuSigned by:
 Aster Abramo
 00A08AAED510AFD...
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN E

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
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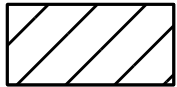

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2			4			118

SUMMARY OF QUANTITIES FOR SPAN F

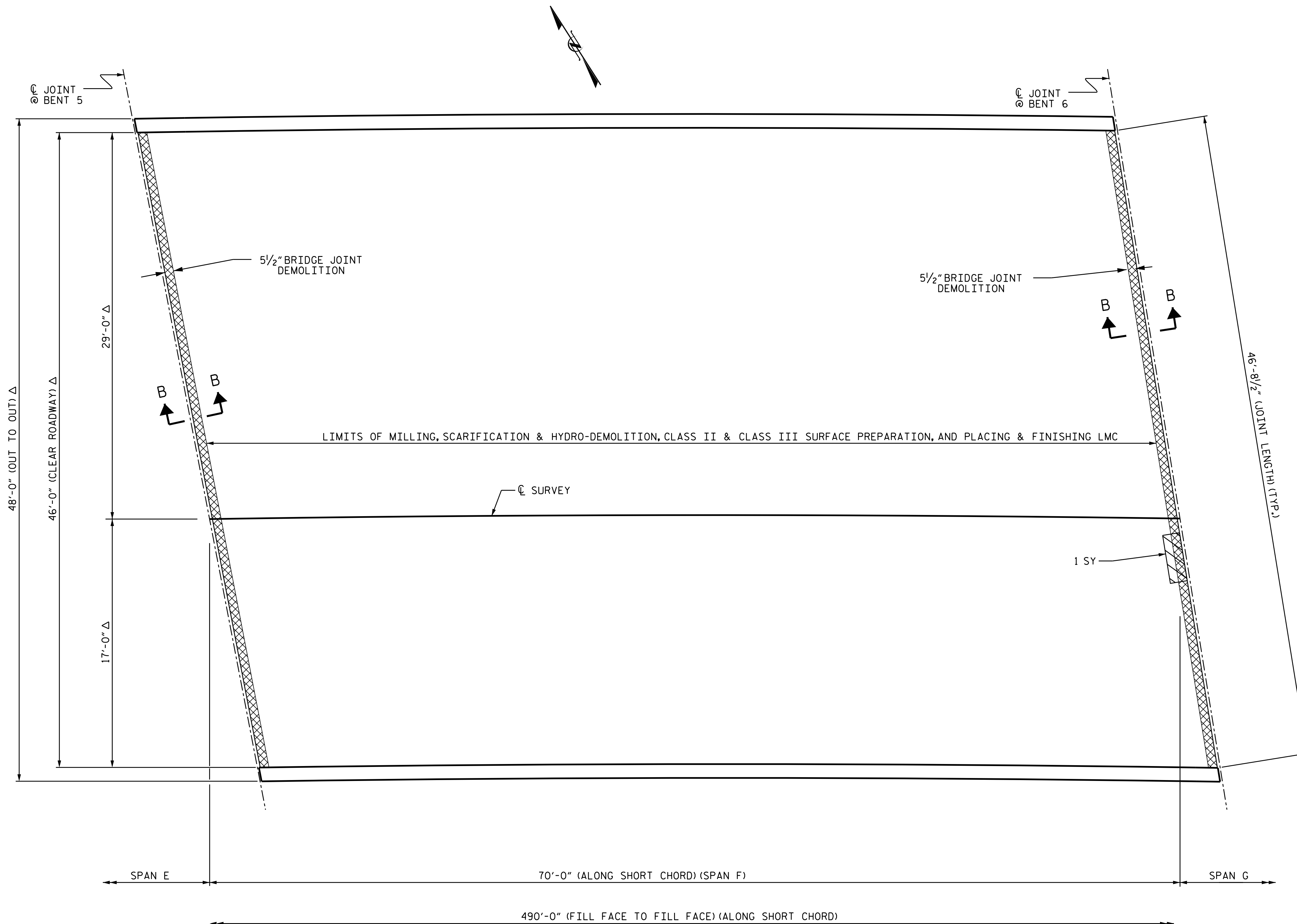
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	352.6 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	352.6 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CLASS III SURFACE PREPARATION	-	
LATEX MODIFIED CONCRETE OVERLAY	19.6 CY	
PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	352.6 SY	
GROOVING BRIDGE DECK	2,951.9 SF	
BRIDGE JOINT DEMOLITION	42.8 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

-  - SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK FOR LMC OVERLAY
-  - APPROX. AREA CLASS II SURFACE PREPARATION
-  - BRIDGE JOINT DEMOLITION

THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II AND CLASS III REPAIRS.



PLAN OF SPAN F

(SEE SHEET NO. S1-14 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

SHEET 6 OF 7



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN F

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : S. WANCE DATE : 06/2021

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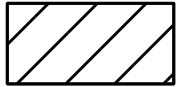

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1			3			118
2			4			

SUMMARY OF QUANTITIES FOR SPAN G

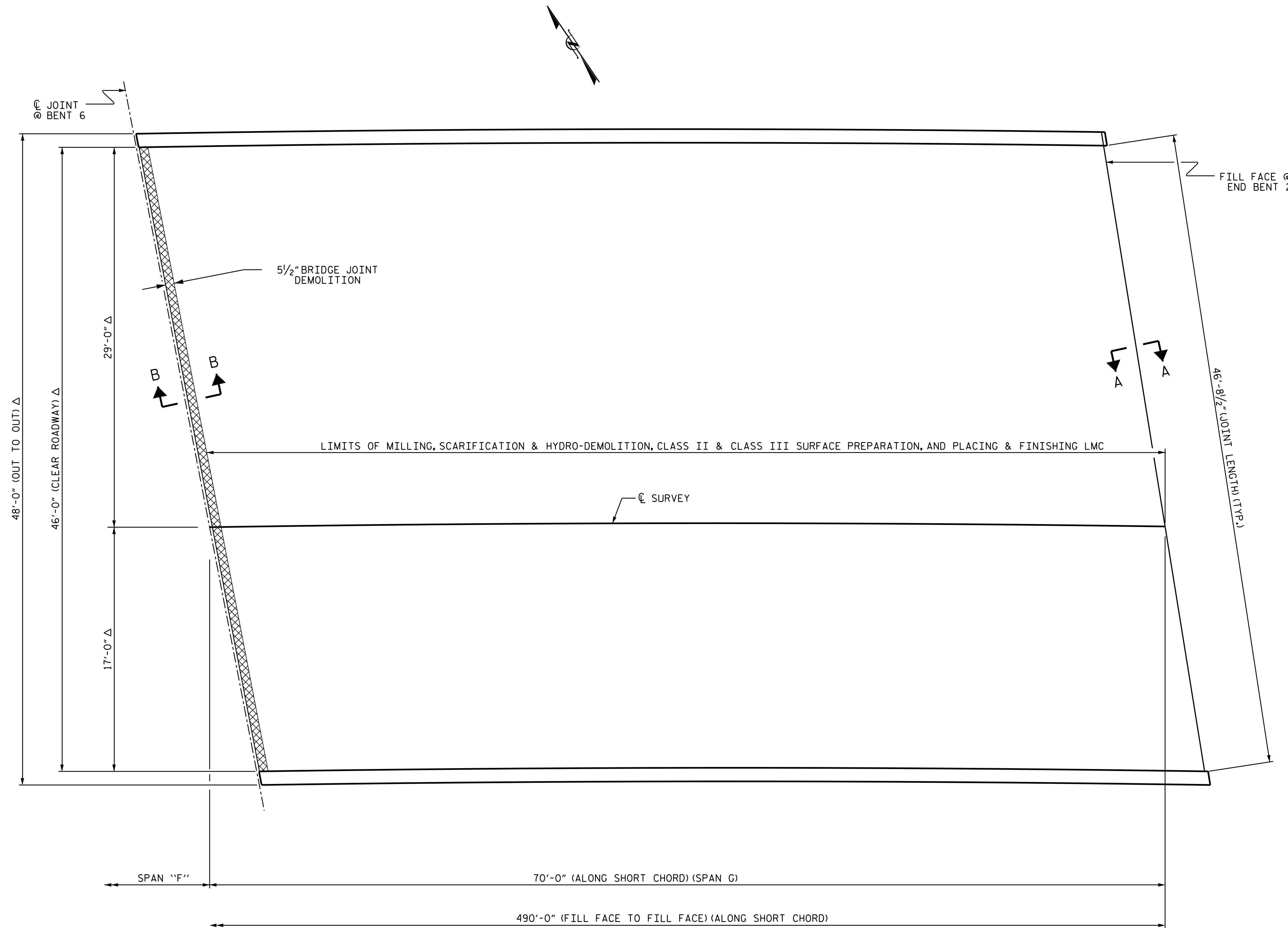
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	355.2 SY	
HYDRO-DEMOLITION OF BRIDGE DECK	355.2 SY	
CLASS II SURFACE PREPARATION	-	
CLASS III SURFACE PREPARATION	-	
LATEX MODIFIED CONCRETE OVERLAY	19.7 CY	
PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY	355.2 SY	
GROOVING BRIDGE DECK	2,972.0 SF	
BRIDGE JOINT DEMOLITION	21.4 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

-  - SCARIFYING AND HYDRO-DEMOLITION OF BRIDGE DECK FOR LMC OVERLAY
-  - APPROX. AREA CLASS II SURFACE PREPARATION
-  - BRIDGE JOINT DEMOLITION

THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II & CLASS III REPAIRS.



Δ - RADIAL DIMENSION

PLAN OF SPAN G

(SEE SHEET NO. S1-14 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A

EDGECOMBE COUNTY

BRIDGE NO. 320104

SHEET 7 OF 7



DocuSigned by:
Aster Abramo
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7/23/2021

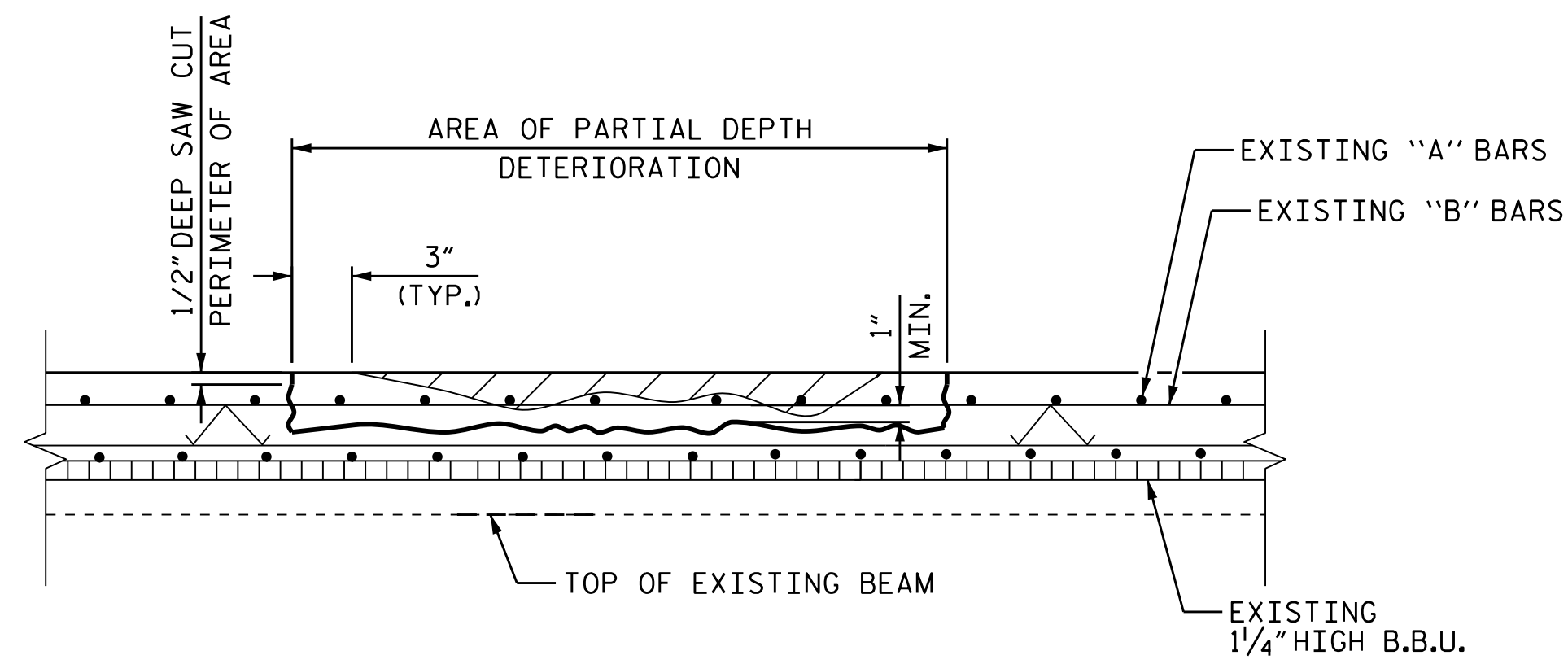
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN G**

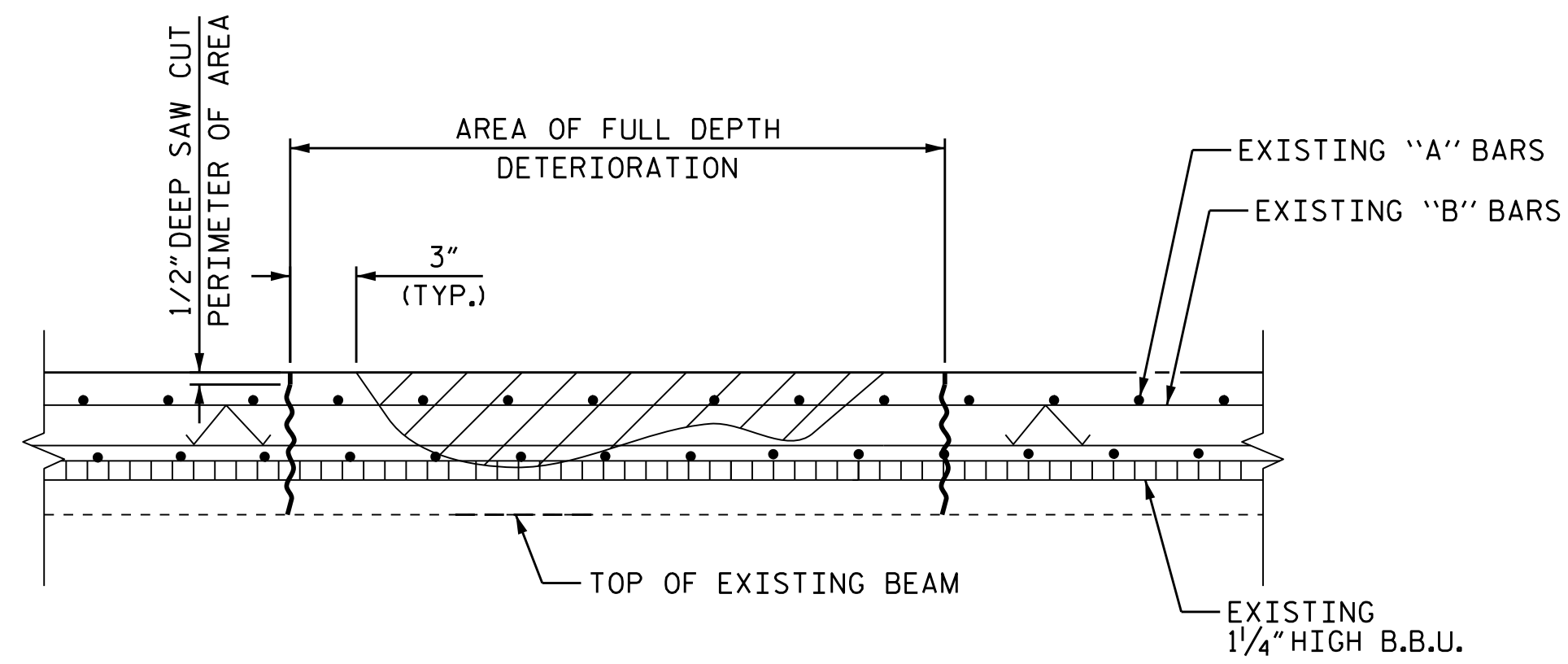
DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
CHECKED BY : S. WANCE DATE : 06/2021

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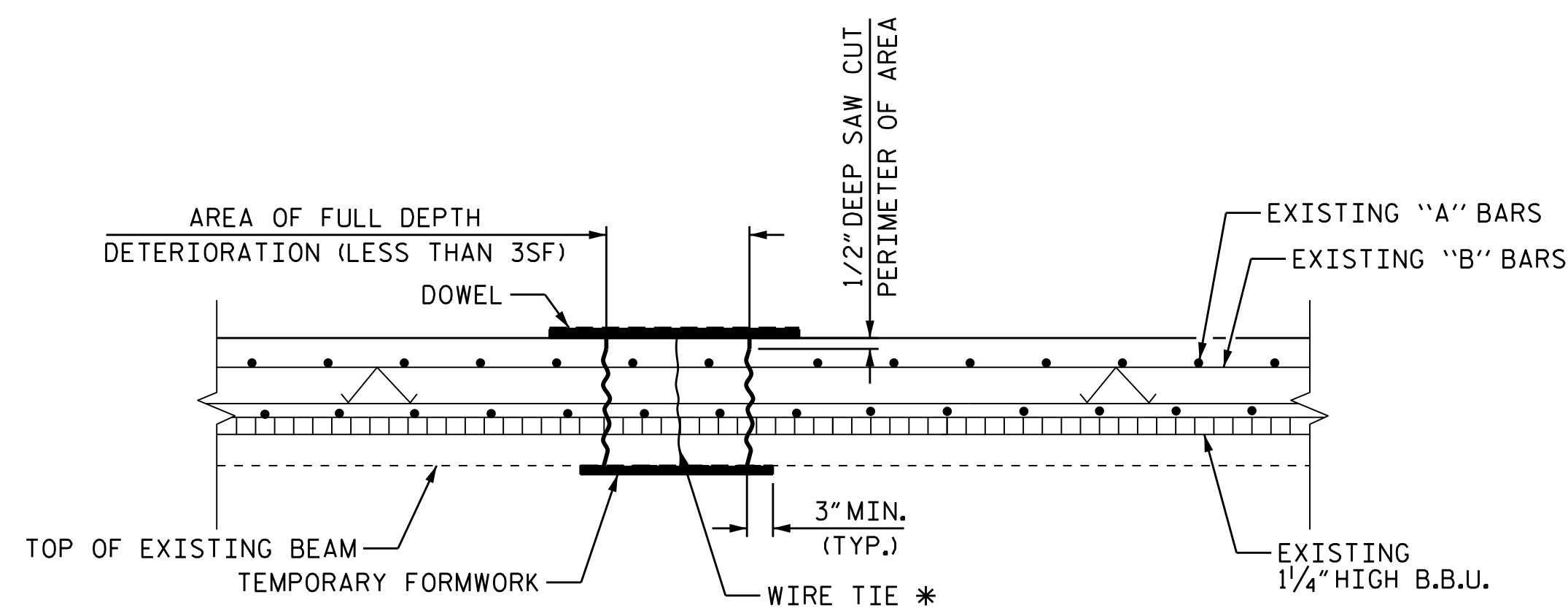
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1			3			S7-9
2			4			118



CLASS II (PARTIAL DEPTH) REPAIR



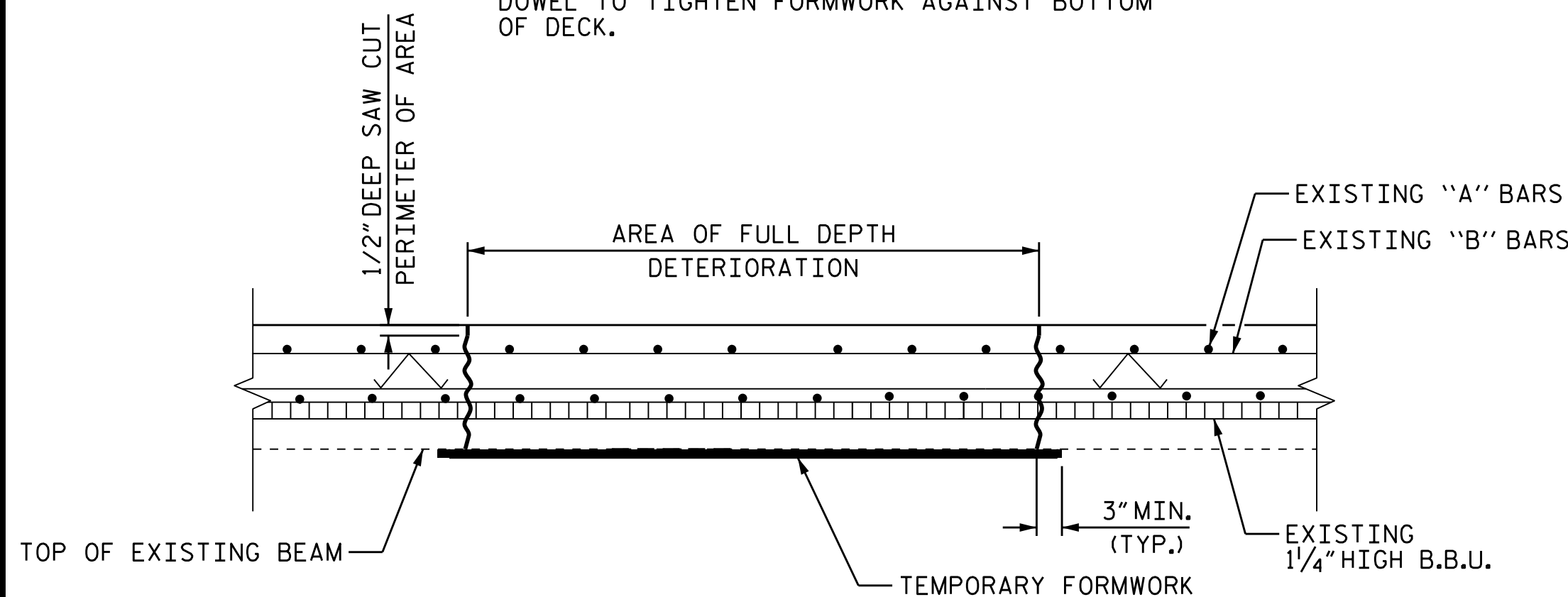
CLASS III (FULL DEPTH) REPAIR



FULL DEPTH REPAIR WITH TEMPORARY FORMWORK

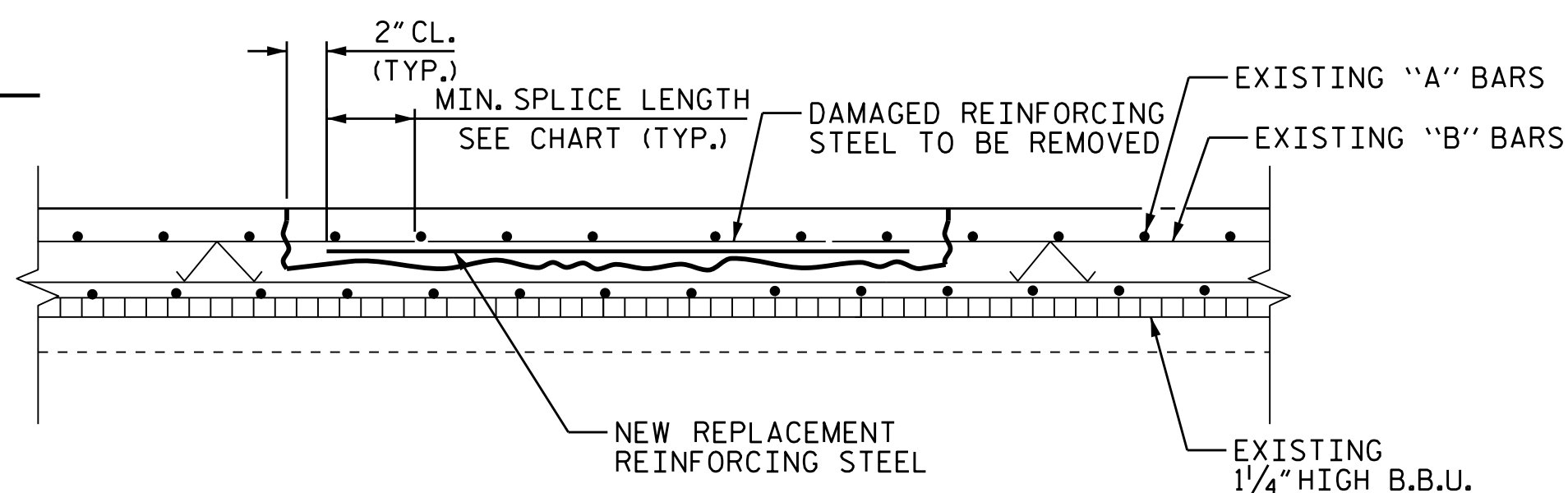
(FOR AREAS OF DETEIORATION EQUAL TO OR LESS THAN 3SF)

* WIRE TIE TO BE KNOTTED BELOW TEMPORARY FORMWORK AND ATTACHED TO DOWEL THAT IS WIDER THAN FORMED FULL DEPTH HOLE. ROTATE DOWEL TO TIGHTEN FORMWORK AGAINST BOTTOM OF DECK.

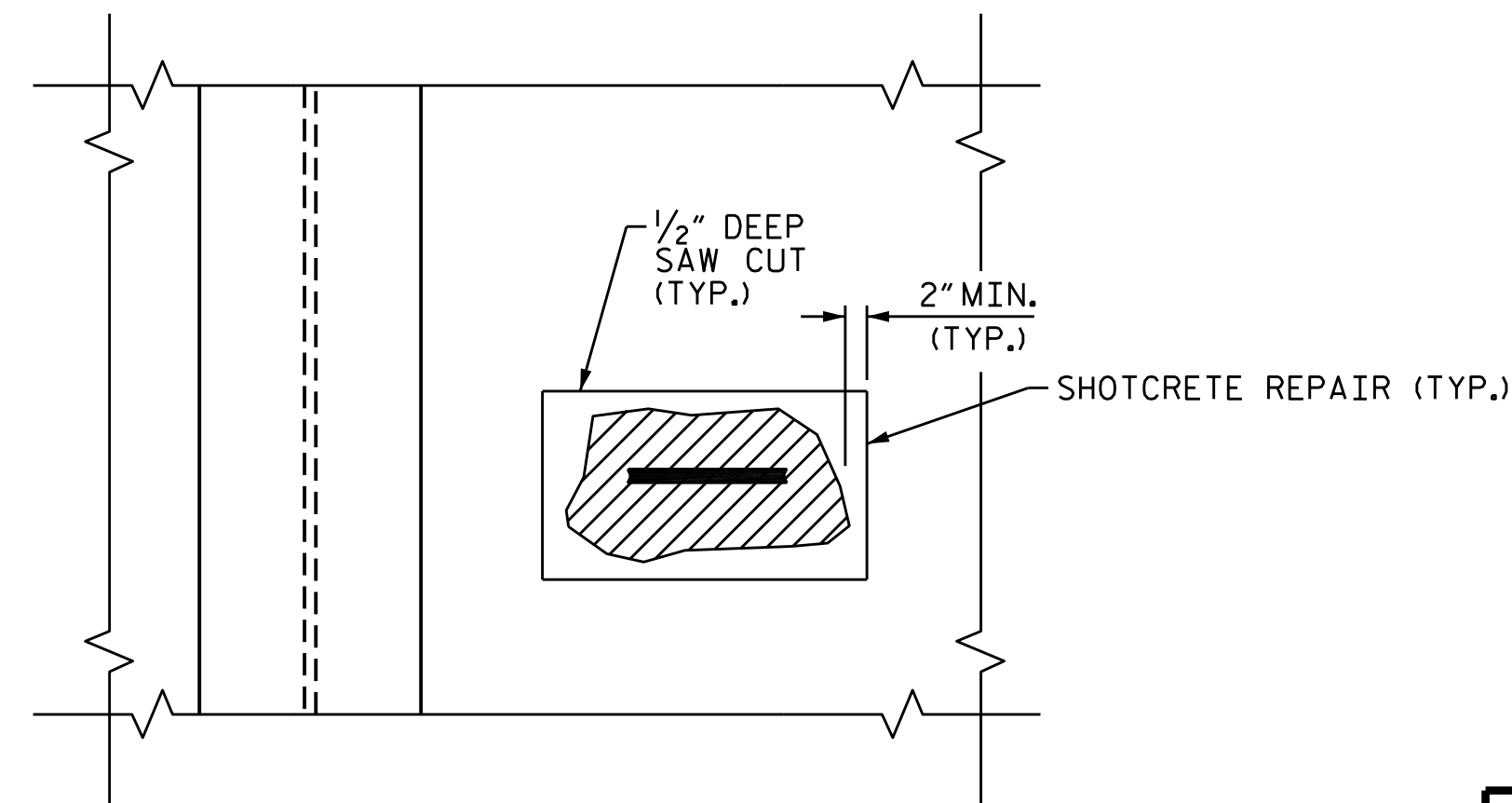


FULL DEPTH REPAIR WITH TEMPORARY FORMWORK

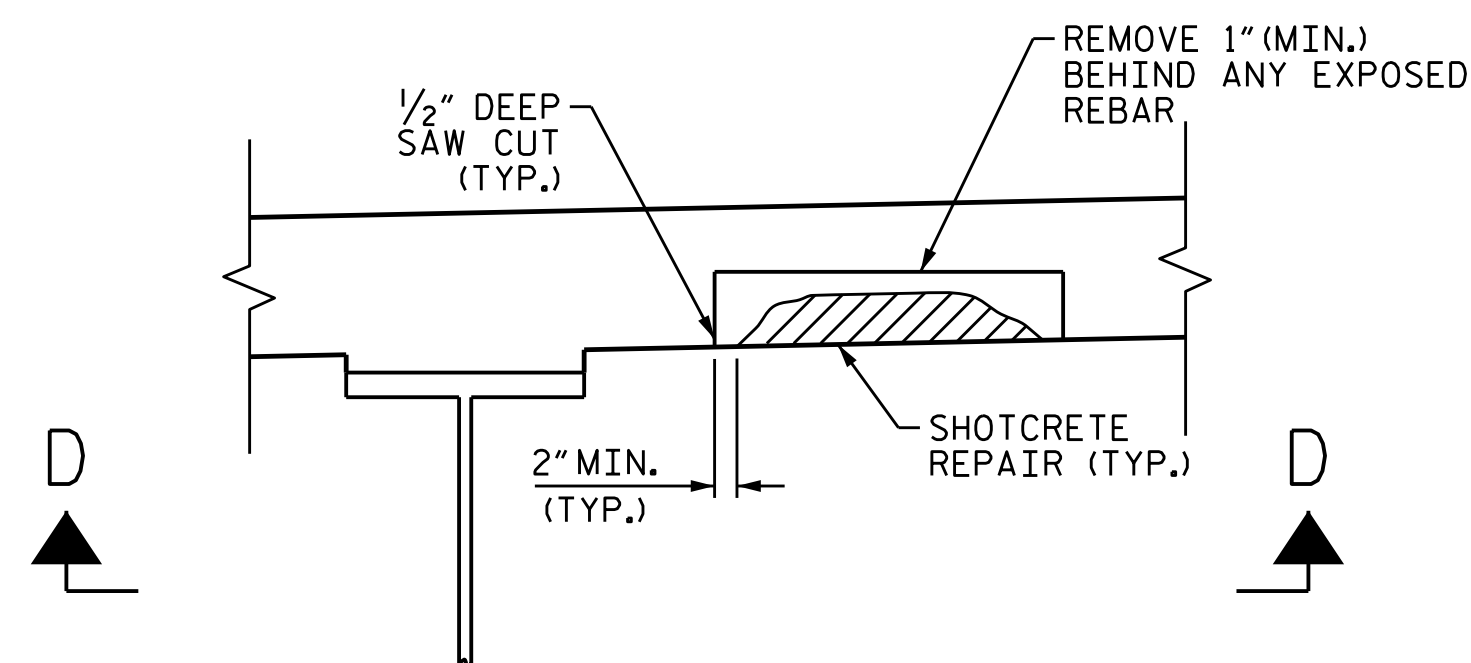
(FOR AREAS OF DETEIORATION GREATER THAN 3SF)



REINFORCING STEEL REPAIR



SECTION D-D



TYPICAL SECTION

UNDERSIDE OF DECK REPAIR

NOTES

FOR AREAS TO BE REPAIRED, SEE "PLAN OF SPAN" AND "SUPERSTRUCTURE CONCRETE REPAIRS" SHEETS.

ALL DECK REPAIRS SHALL BE COMPLETED PRIOR TO PLACEMENT OF OVERLAY.

FOR CLASS II AND CLASS III SURFACE PREPARATION, SEE "OVERLAY SURFACE PREPARATIONS" SPECIAL PROVISION.

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

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

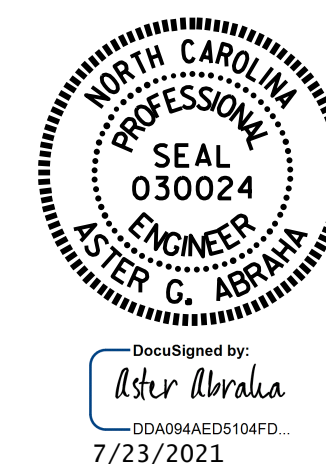
THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK FOR TEMPORARY FORMWORK. FOR SUBMITTALS OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

UPON REMOVAL OF TEMPORARY FORMWORK, ALL VOIDS AND HONEYCOMBS ON THE UNDERSIDE OF DECK SURFACE SHALL BE FILLED WITH THE SAME MATERIAL AS USED FOR THE PATCH, AND FINISHED TO CONFORM TO THE SURROUNDING CONCRETE SURFACE.

NO FORMWORK SHALL BE LEFT IN PLACE.

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

PROJ. NO. I-6041A
EDGEcombe COUNTIES
 BRIDGES NO. 320148



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 STANDARD
 DECK REPAIR DETAILS

ASSEMBLED BY :	S. T. S.	DATE :	03/2019
CHECKED BY :	A.Y.G.	DATE :	07/2021
DRAWN BY :	NAP 9/18		
CHECKED BY :			

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S7-10
2			4			118

NOTES:

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

FOR OVERHANG AND DIAPHRAGM REPAIR DETAILS, SEE "OVERHANG & DIAPHRAGM REPAIR DETAILS" SHEET.

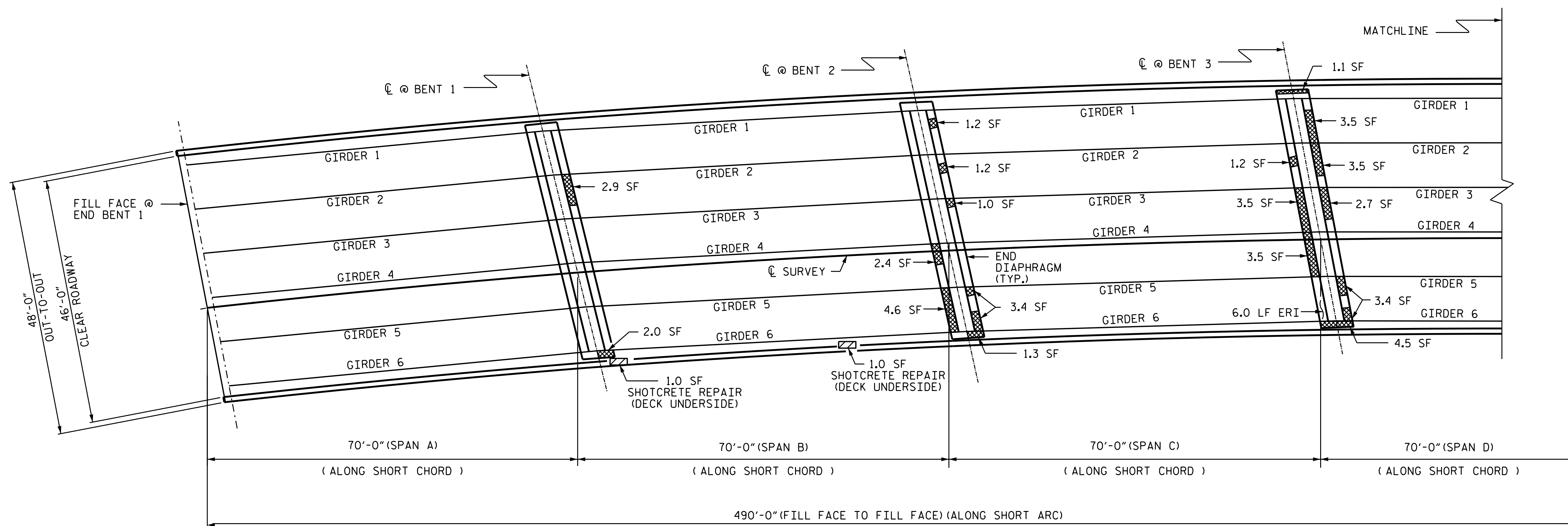
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
UNDERSIDE OF DECK & OVERHANG	10.9	3.7		
BENT DIAPHRAGMS	38.0	12.7		
EPOXY RESIN INJECTION		L.F.		L.F.
BENT DIAPHRAGMS		6.0		

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



OVERHANG AND DIAPHRAGM REPAIR LOCATIONS

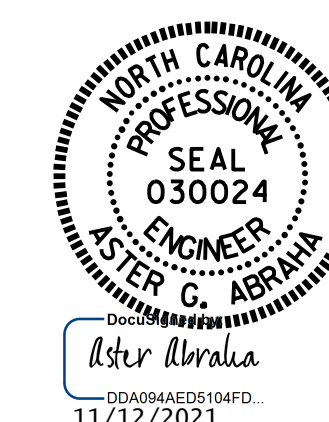
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

REPAIR KEY

- SHOTCRETE DIAPHRAGM REPAIR
- SHOTCRETE REPAIRS FOR DECK UNDERSIDE
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUPERSTRUCTURE
 CONCRETE REPAIRS**

REVISIONS

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

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 S7-11
 TOTAL SHEETS
 118

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DRAWN BY : A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 07/2021

NOTES:

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FOR OVERHANG AND DIAPHRAGM REPAIR DETAILS, SEE "OVERHANG & DIAPHRAGM REPAIR DETAILS" SHEET.

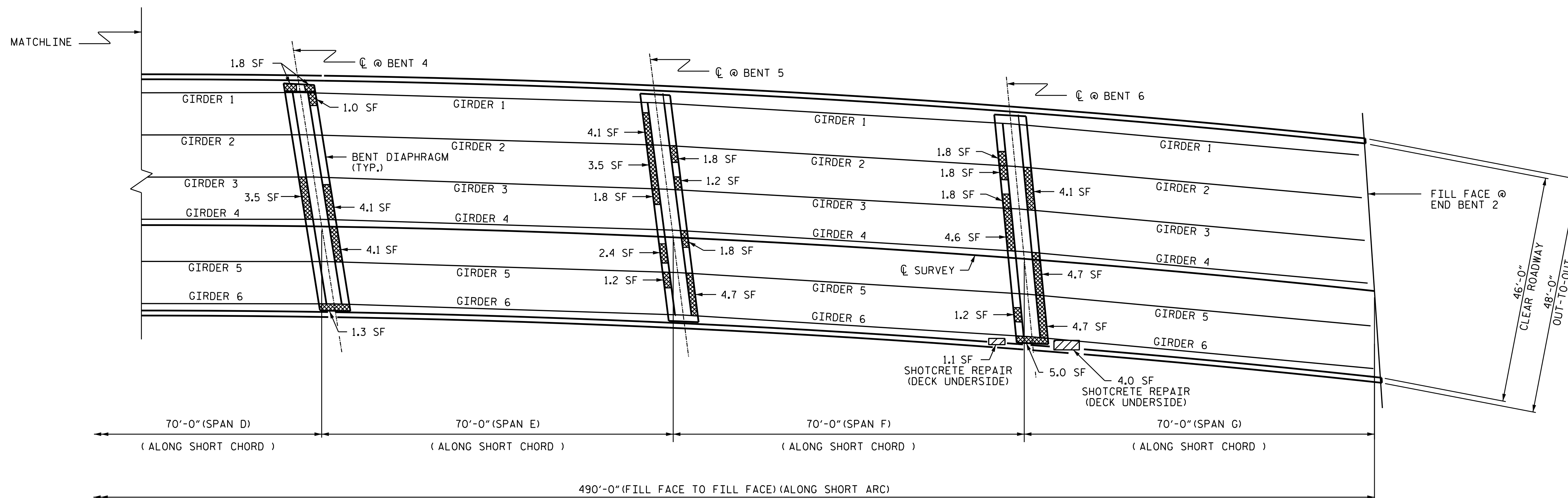
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

REPAIR QUANTITY TABLE

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
UNDERSIDE OF DECK & OVERHANG	13.2	4.4		
BENT DIAPHRAGMS	59.9	19.9		
EPOXY RESIN INJECTION		L.F.		C.F.
BENT DIAPHRAGMS		0.0		

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



OVERHANG AND DIAPHRAGM REPAIR LOCATIONS

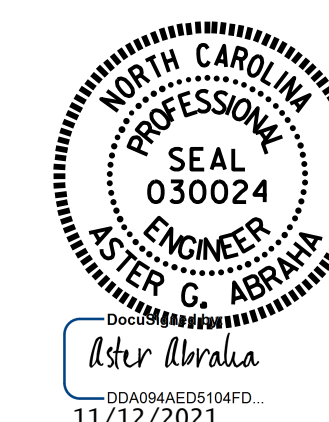
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

REPAIR KEY

- SHOTCRETE DIAPHRAGM REPAIR
- SHOTCRETE REPAIRS FOR DECK UNDERSIDE
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

SHEET 2 OF 2



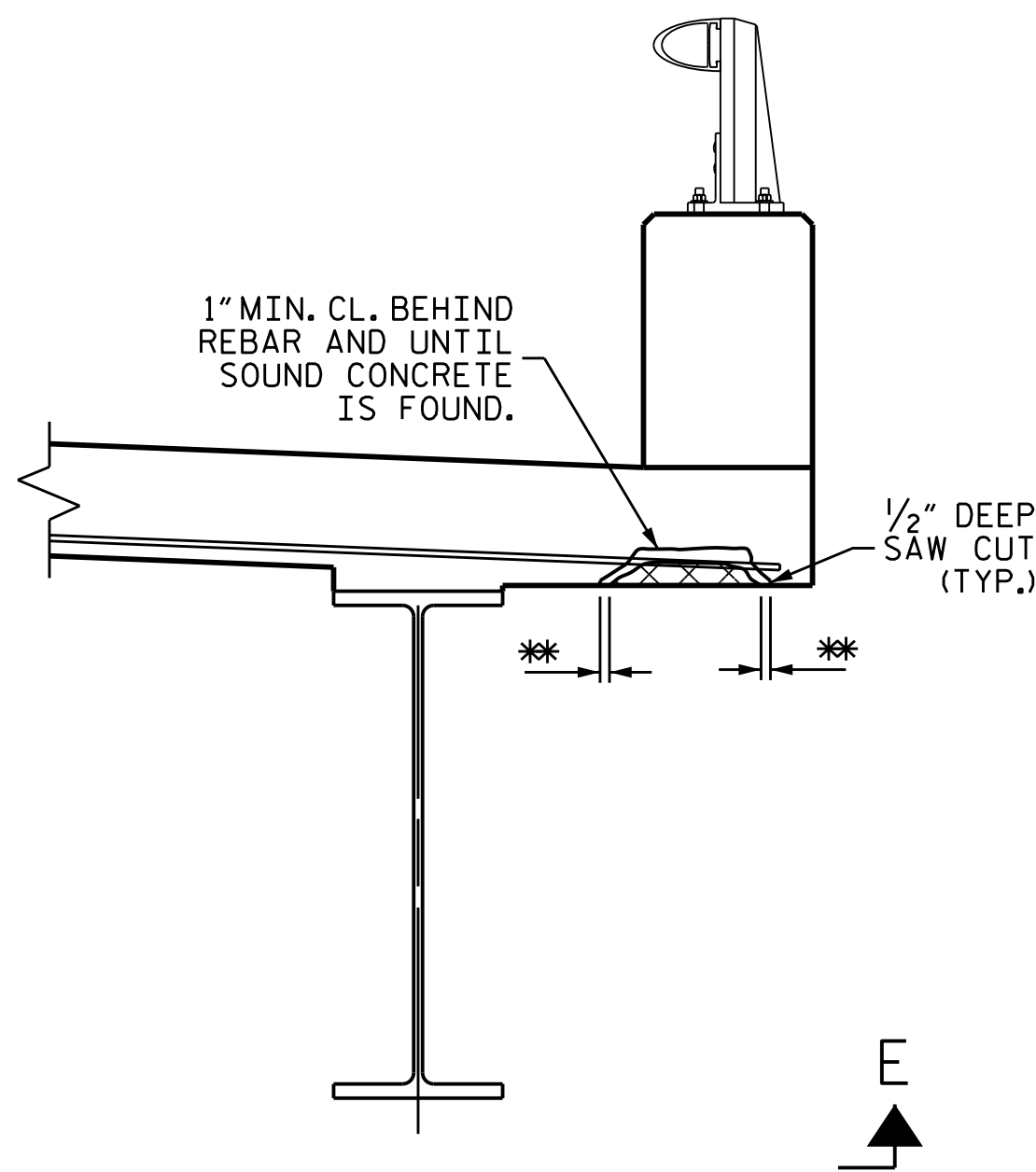
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUPERSTRUCTURE
 CONCRETE REPAIRS**

DRAWN BY : A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 07/2021

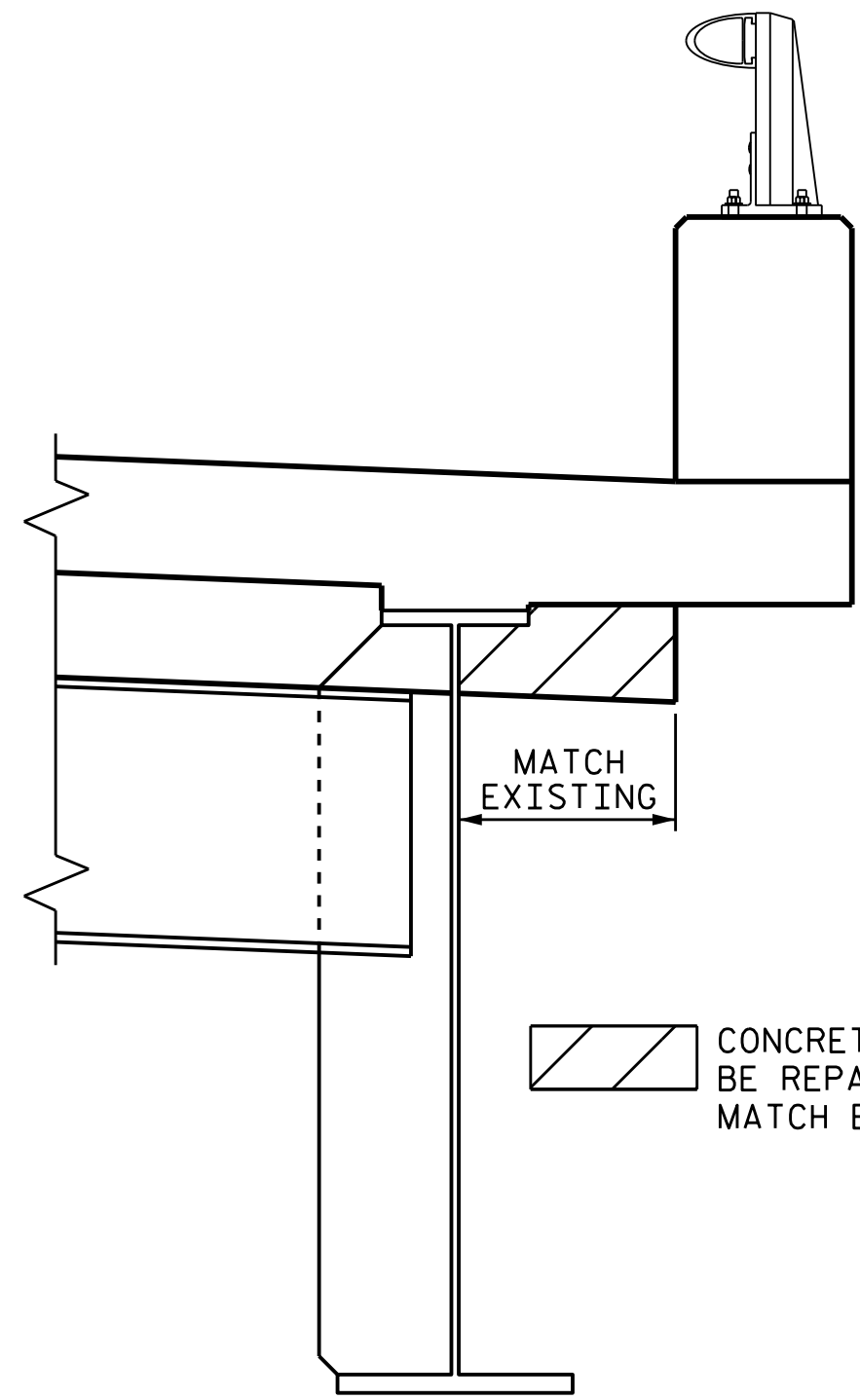
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2			4			



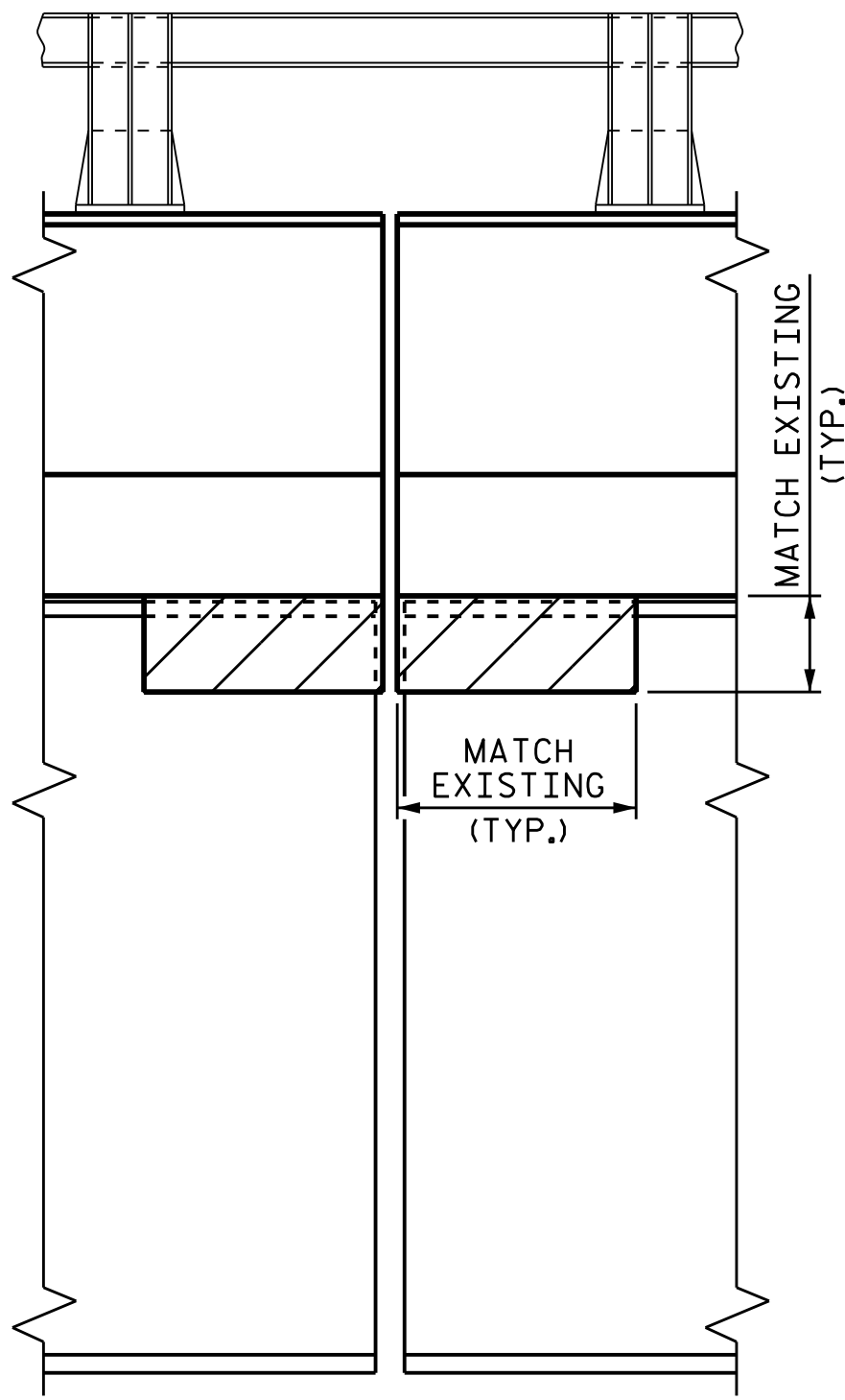
TYPICAL SECTION

DAMAGED AREA * REMOVE CONCRETE UNTIL SOUND CONCRETE IS FOUND (2" MIN. DEPTH)

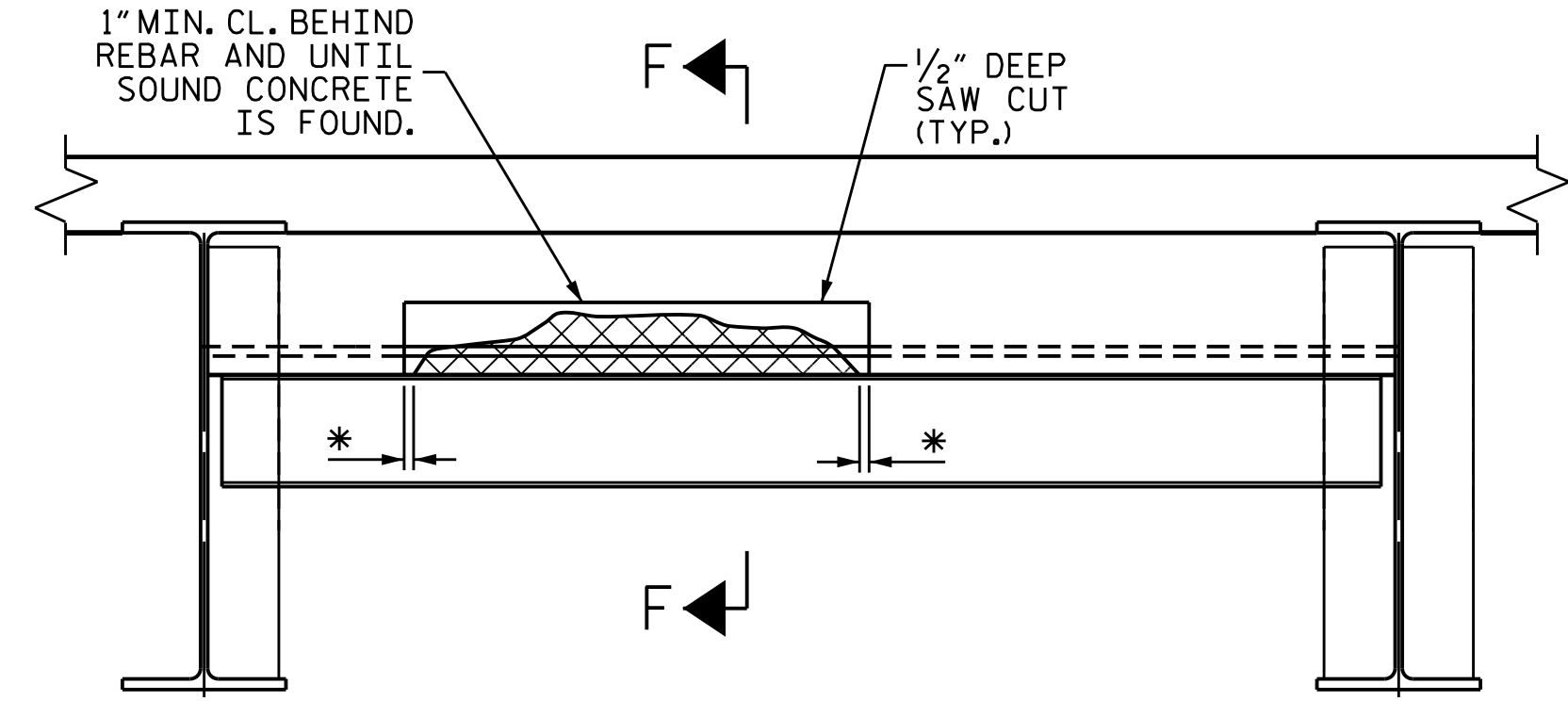


TYPICAL SECTION

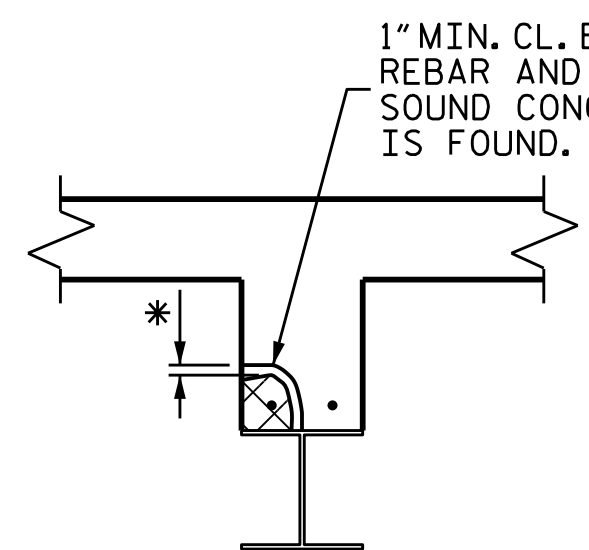
CONCRETE IN THIS AREA SHALL BE REPAIRED AND FORMED TO MATCH EXISTING.



SECTION D-D



TYPICAL SECTION

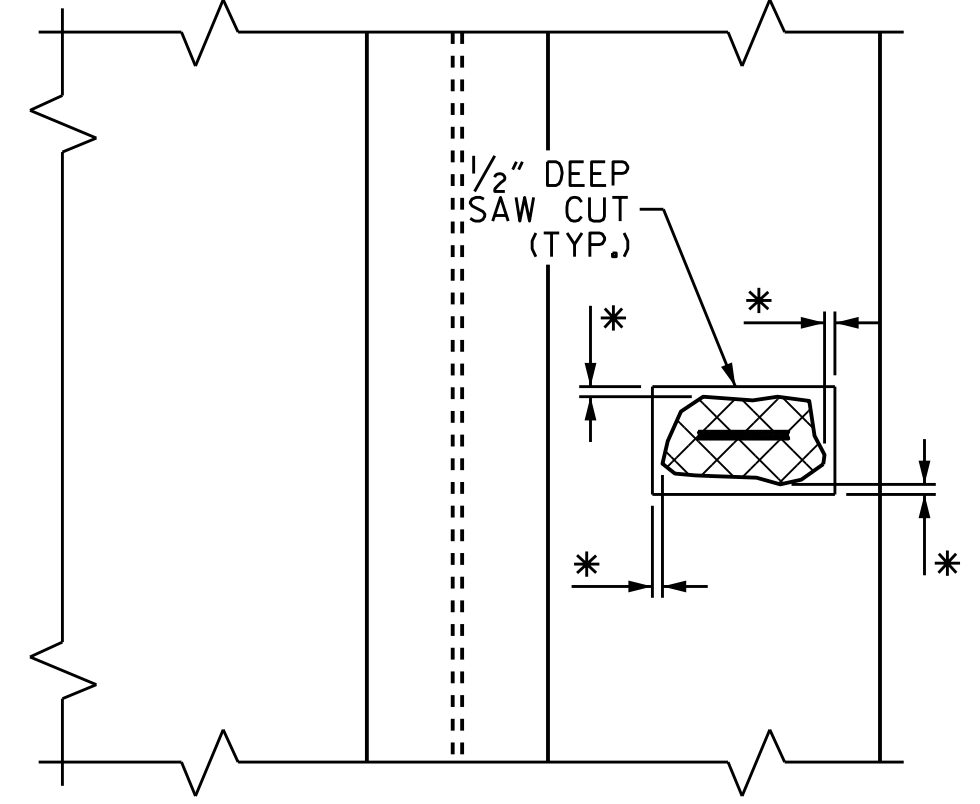


SECTION F-F

* REMOVE CONCRETE UNTIL SOUND CONCRETE IS FOUND (2" MIN. DEPTH)

DAMAGED AREA

NOTE: EXISTING REBAR TO REMAIN IN PLACE. CLEAN AND REPAIR AS NECESSARY.



SECTION E-E

OVERHANG DETAILS

OVERHANG DIAPHRAGM REPLACEMENT DETAILS

NOTE: OVERHANG DIAPHRAGMS TO BE REPAIRED, ARE SHOWN ON "SUPERSTRUCTURE CONCRETE REPAIR" SHEETS.

NOTES

THE METHOD USED TO DELINEATE THE AREAS OF UNSOUND CONCRETE TO BE REPAIRED SHALL NOT PERMANENTLY MARK THE CONCRETE, LEAVE ANY RESIDUE AFTER REMOVAL OR REQUIRE HARSH CHEMICALS TO REMOVE.

THE CONTRACTOR SHALL REMOVE THE DETERIORATED CONCRETE IN ACCORDANCE WITH THE GUIDELINES SET IN THESE NOTES, IN THE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS.

REMOVE UNSOUND CONCRETE TO THE EXTENT NECESSARY, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT.

REINFORCING STEEL WHICH IS DETERMINED BY THE ENGINEER TO BE REPLACED, SHALL BE REMOVED TO A POINT WHERE IT IS SOUND. THE PATCH SHALL EXTEND A SUFFICIENT DISTANCE BEYOND THIS POINT TO DEVELOP A SPLICE LENGTH SPECIFIED IN THE TABLE ON SHEET S1-10.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR AREAS TO BE REPAIRED, SEE "SUPERSTRUCTURE CONCRETE REPAIRS SHEETS".

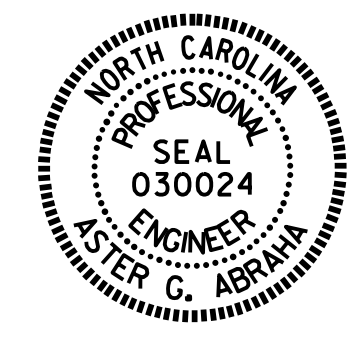
THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO STARTING WORK FOR TEMPORARY FORMWORK. FOR SUBMITTALS OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

UPON REMOVAL OF TEMPORARY FORMWORK, ALL VOIDS AND HONEYCOMBS ON THE UNDERSIDE OF DECK SURFACE SHALL BE FILLED WITH THE SAME MATERIAL AS USED FOR THE PATCH, AND FINISHED TO CONFORM TO THE SURROUNDING CONCRETE SURFACE.

NO FORMWORK SHALL BE LEFT IN PLACE.

INTERIOR DIAPHRAGM REPAIR DETAILS

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104



DocuSigned by:
 Aster Abramo
 7/23/2021

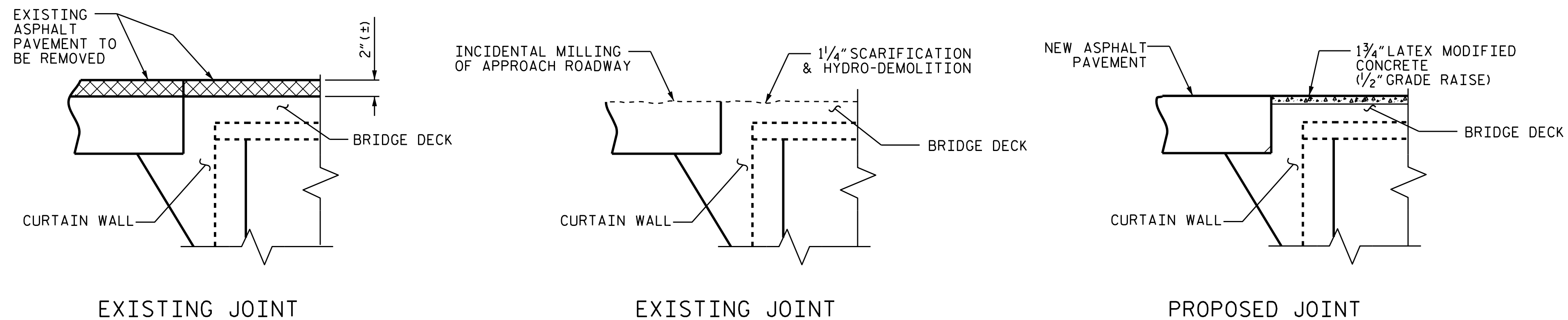
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

OVERHANG & DIAPHRAGM REPAIR DETAILS

DRAWN BY : A. Y. GODFREY DATE : 02/2021
 CHECKED BY : S. WANCE DATE : 06/2021

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2			4			118



JOINT INSTALLATION SEQUENCE AT END BENTS
(SECTION A-A)

NOTES:

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

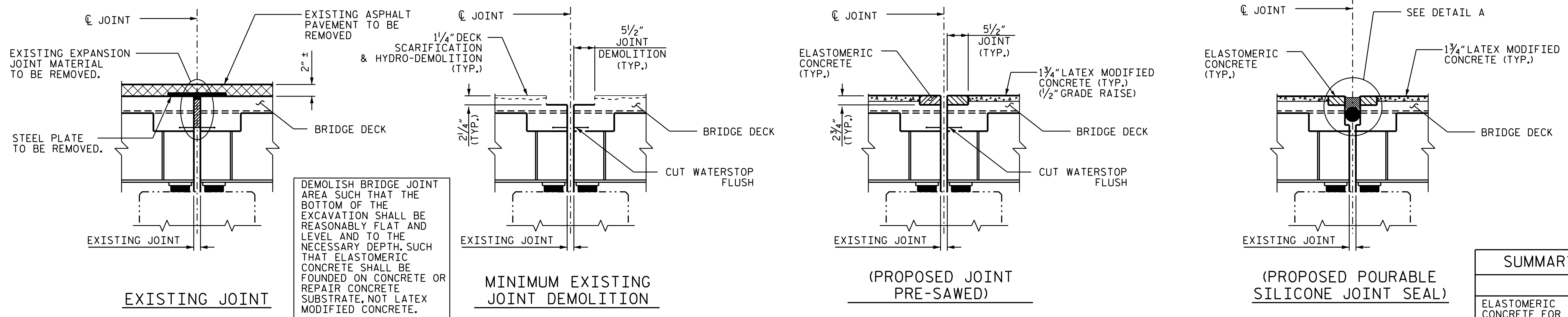
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

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

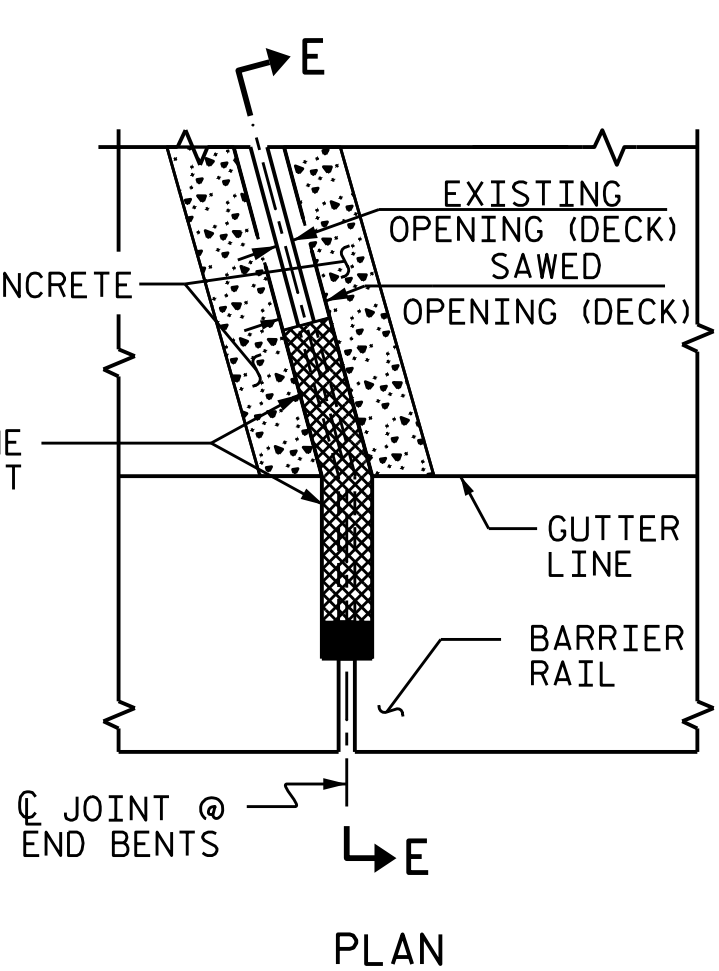
DURING JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

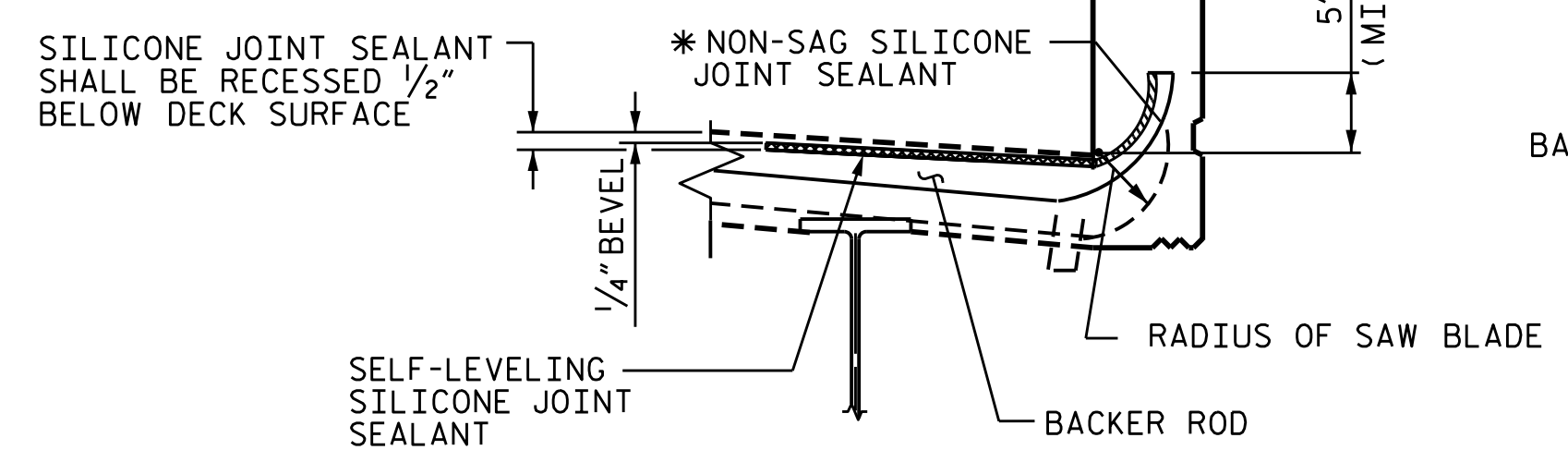


JOINT INSTALLATION SEQUENCE AT BENTS
(FIXED JOINTS SECTION A-A)

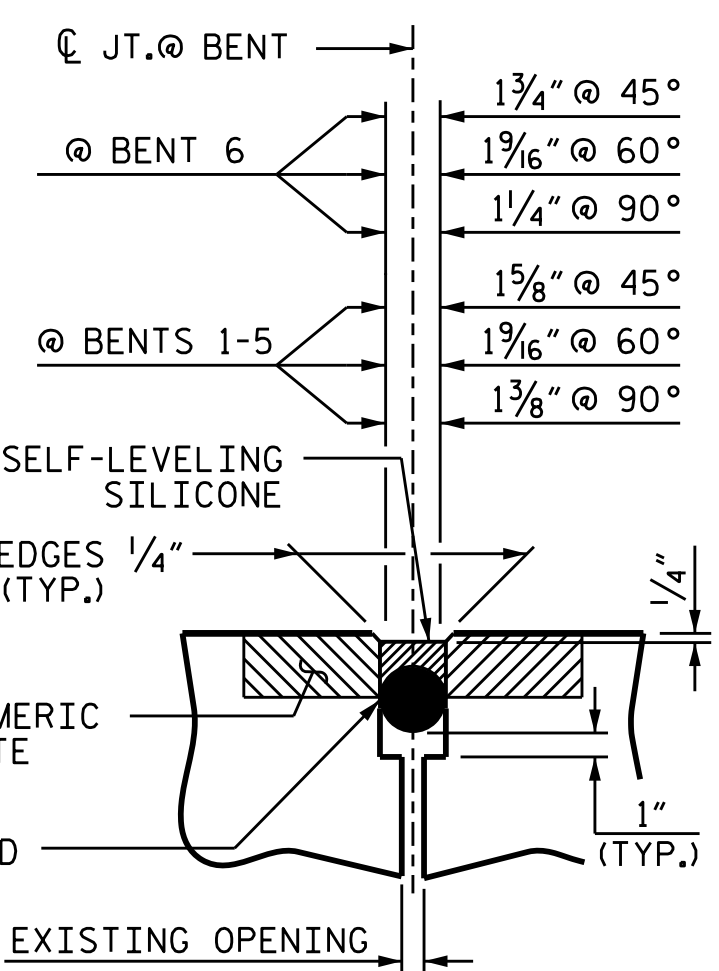
IF THE EMBEDDED PORTION OF THE EXISTING PLASTIC WATERSTOP IS EXPOSED DURING REMOVAL OF UNSOUND CONCRETE, OR IF UNSOUND CONCRETE IS REMOVED WITHIN 2" OF THE WATERSTOP, THE ENTIRE CONCRETE DEPTH TO THE WATERSTOP SHALL BE REMOVED. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED REPAIR CONCRETE SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.



* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



JOINT DETAILS AT BARRIER RAIL



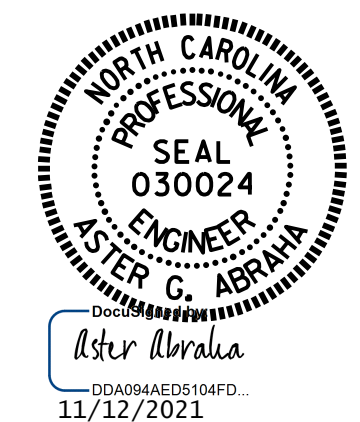
DETAIL A
(PROPOSED)

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	58.9 CF	
POURABLE SILICONE JOINT SEALANT	280.3 LF	

PROJECT NO. I-6041A
EDGECOMBE COUNTY
BRIDGE NO. 320104

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

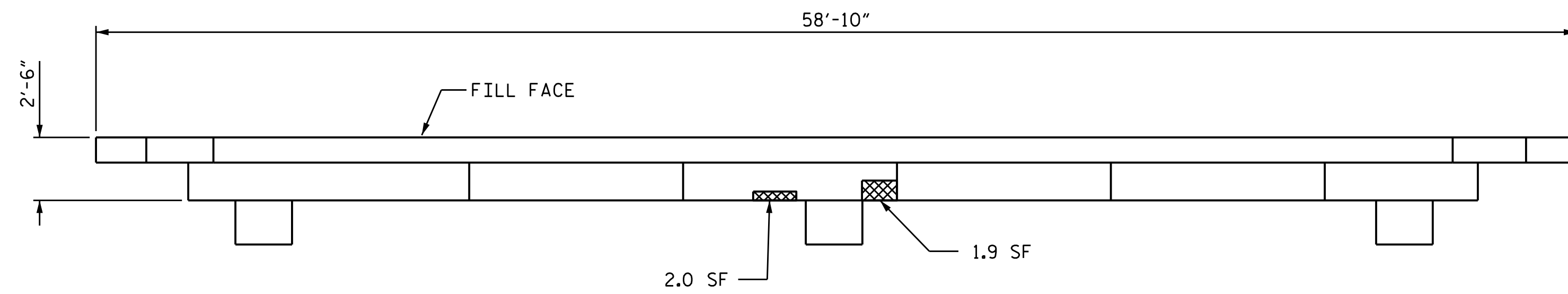
**SUPERSTRUCTURE
JOINT REPAIR
DETAILS**



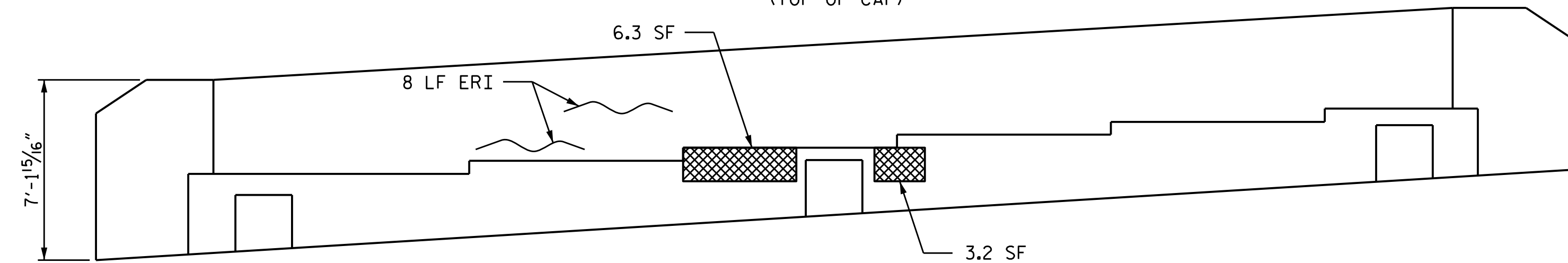
DRAWN BY : S. T. SANDOR / A. Y. GODFREY DATE : 02/2021
CHECKED BY : A. ABRHAHA / S. WANCE DATE : 07/2021

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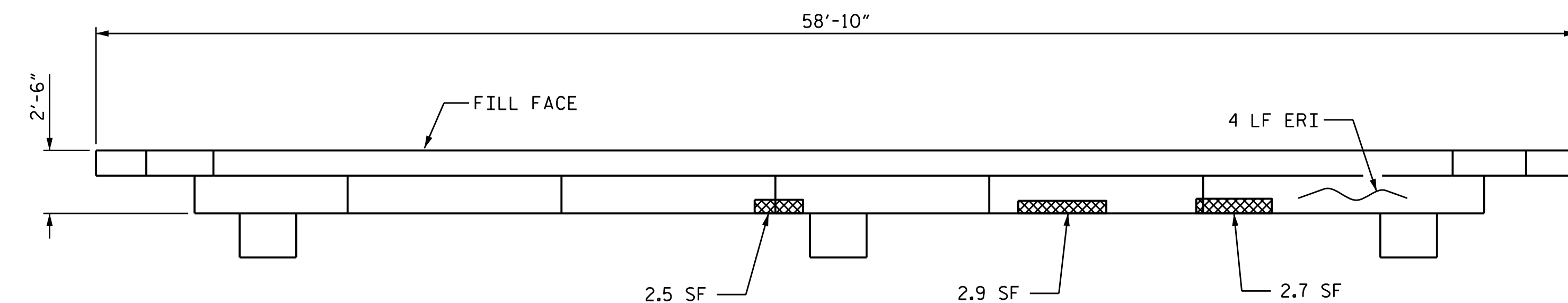


PLAN
(TOP OF CAP)

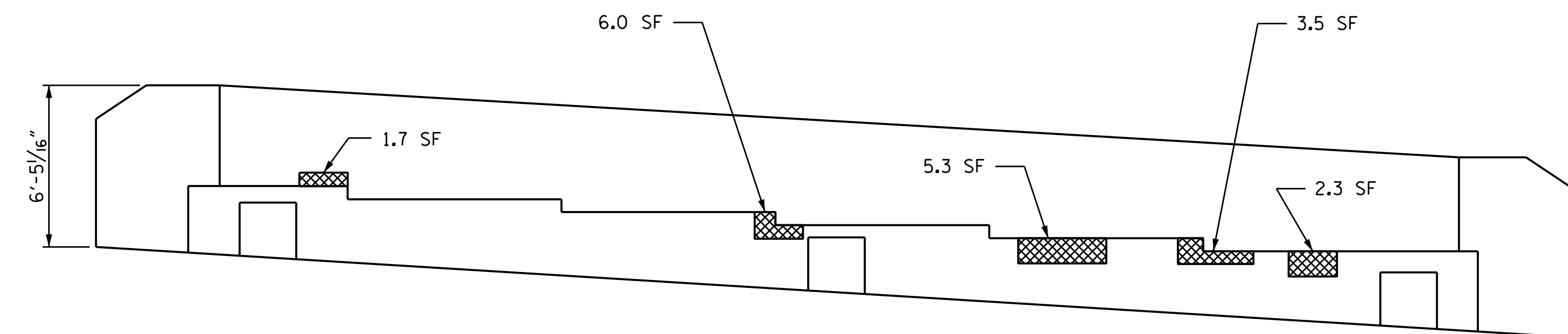


ELEVATION
(LOOKING WEST)

END BENT 1



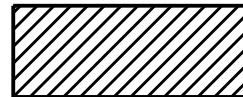
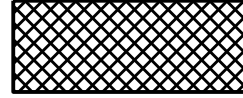

PLAN
(TOP OF CAP)



ELEVATION
(LOOKING EAST)

END BENT 2

REPAIR KEY

-  CONCRETE REPAIR AREA (FORM AND POUR)
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)

REPAIR QUANTITY TABLE

REPAIRS END BENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	4.0	2.0		
CAP (HORIZONTAL, CORNER)	36.3	18.2		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		L.F.		L.F.
CAP		12.0		
COLUMN		0.0		

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

NOTES:

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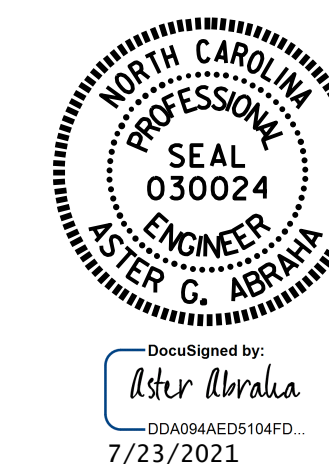
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 END BENT 1 &
 END BENT 2

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2			4			

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DRAWN BY : A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

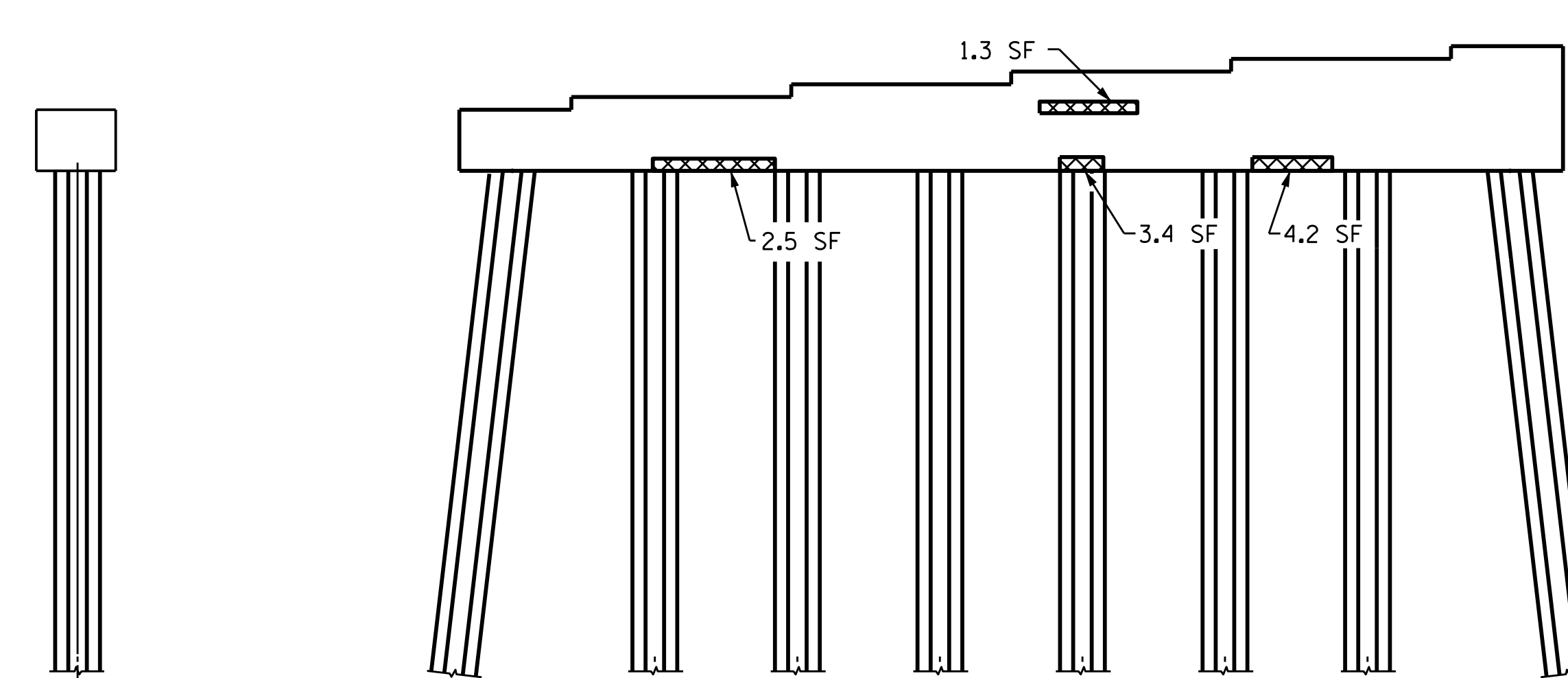
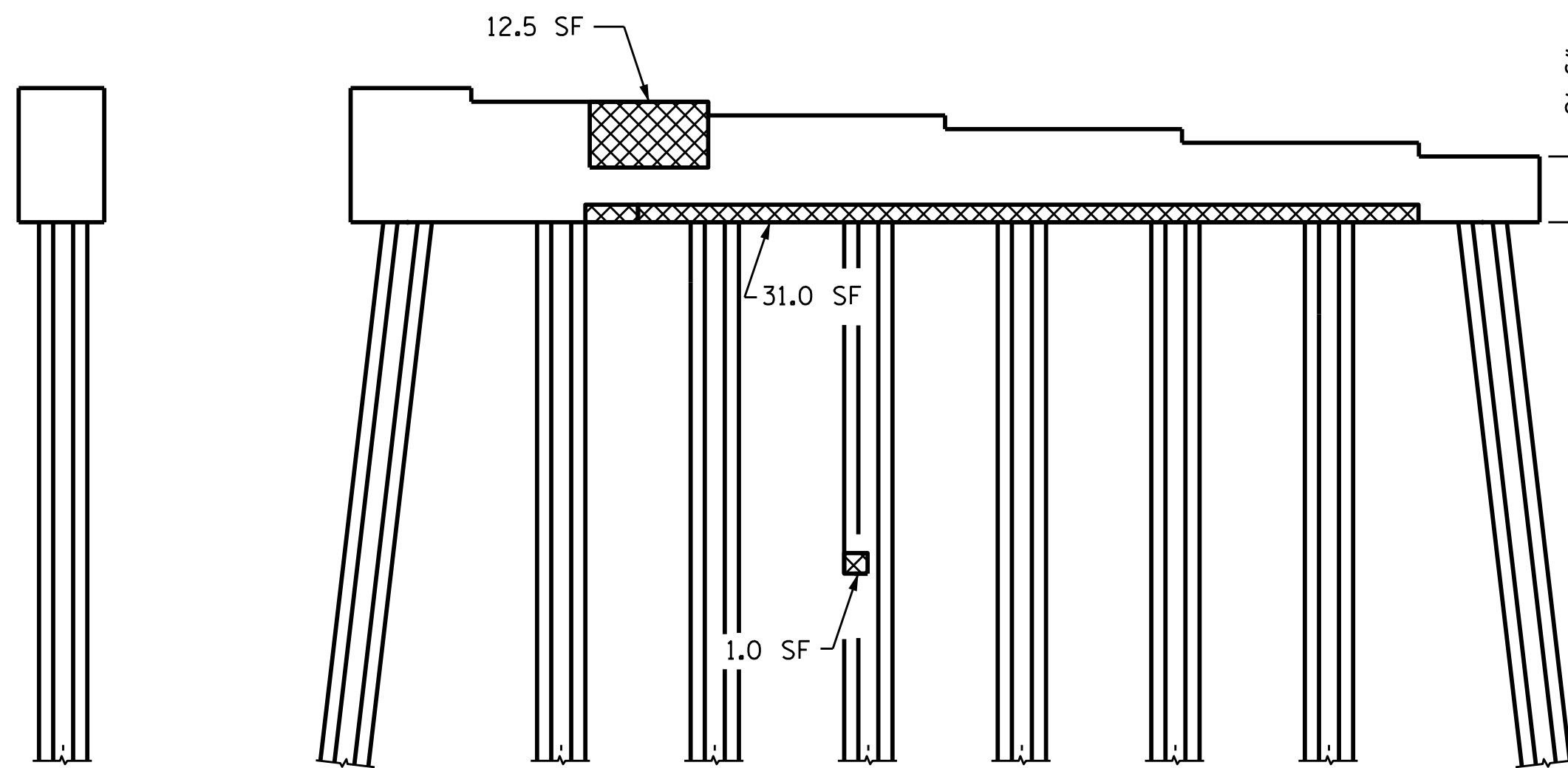
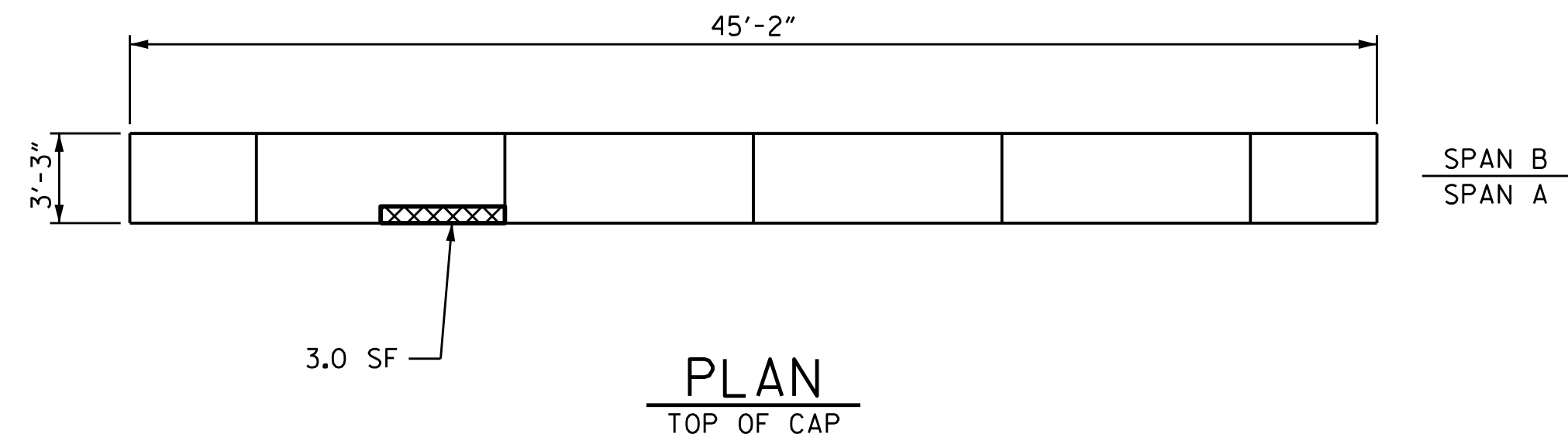
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	54.9	27.5		
CAP (HORIZONTAL FACE)	34.3	17.2		
COLUMN	1.0	0.5		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		L.F.		L.F.
CAP		0.0		
COLUMN		0.0		

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

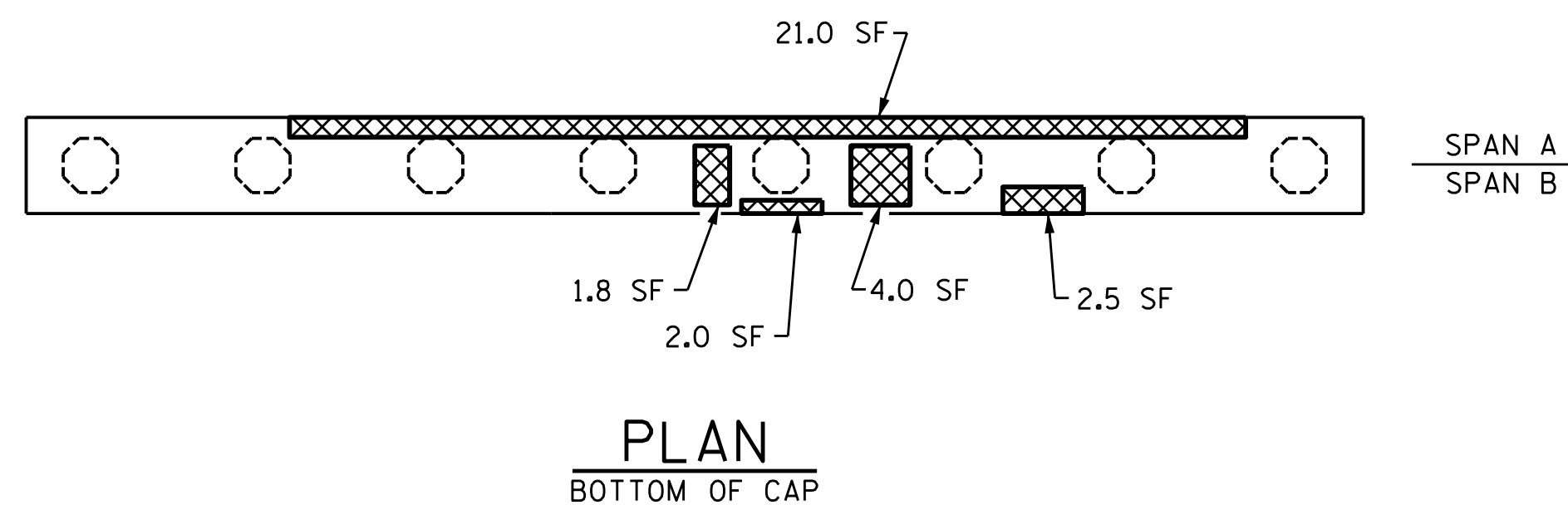


END VIEW
NORTH END

ELEVATION
WEST SIDE
(LOOKING EAST)

END VIEW
SOUTH SIDE

ELEVATION
EAST SIDE



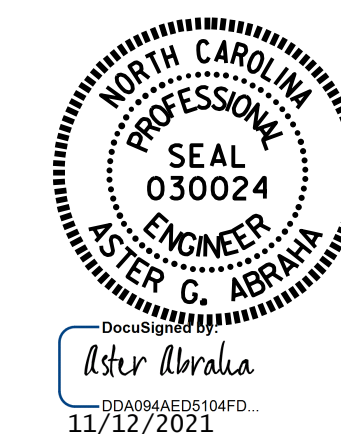
REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

SHEET 1 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 1



DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S7-16
2			4			118

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

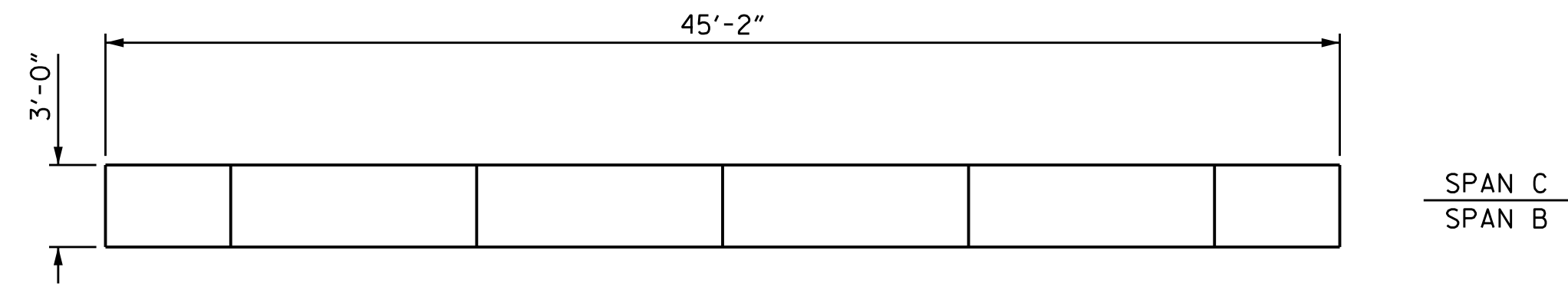
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

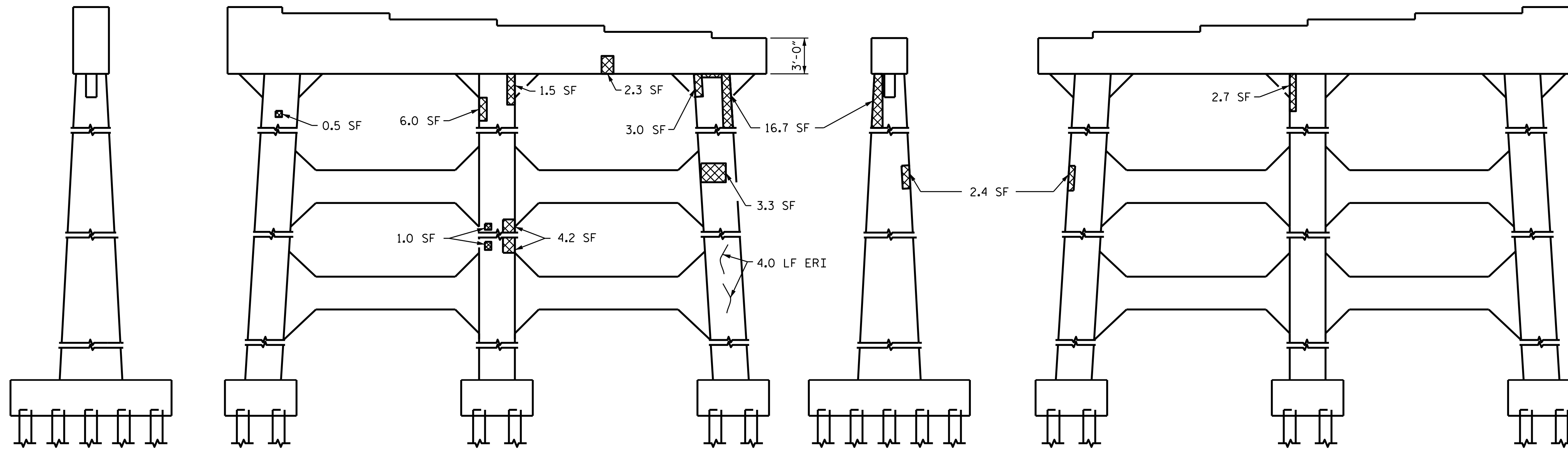
REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	2.3	1.2		
CAP (HORIZONTAL FACE)	1.0	0.5		
COLUMN & STRUTS	41.3	20.7		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION		L.F.		L.F.
CAP		0.0		
COLUMN & STRUTS		4.0		

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



PLAN
TOP OF CAP

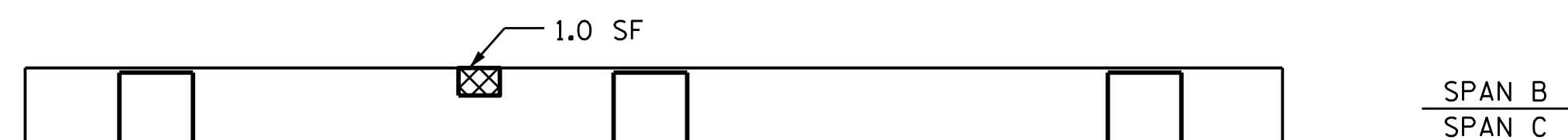


END VIEW
NORTH END

ELEVATION
WEST SIDE
(LOOKING EAST)

END VIEW
SOUTH SIDE

ELEVATION
EAST SIDE



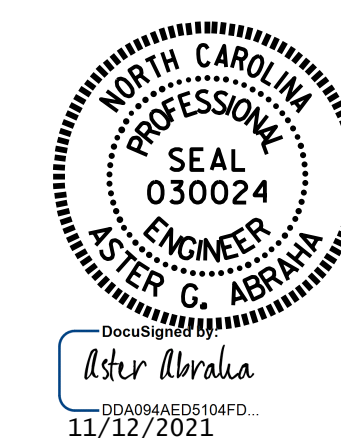
PLAN
BOTTOM OF CAP

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104

SHEET 2 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 2

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			57-17
2			4			118

NOTES:

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

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

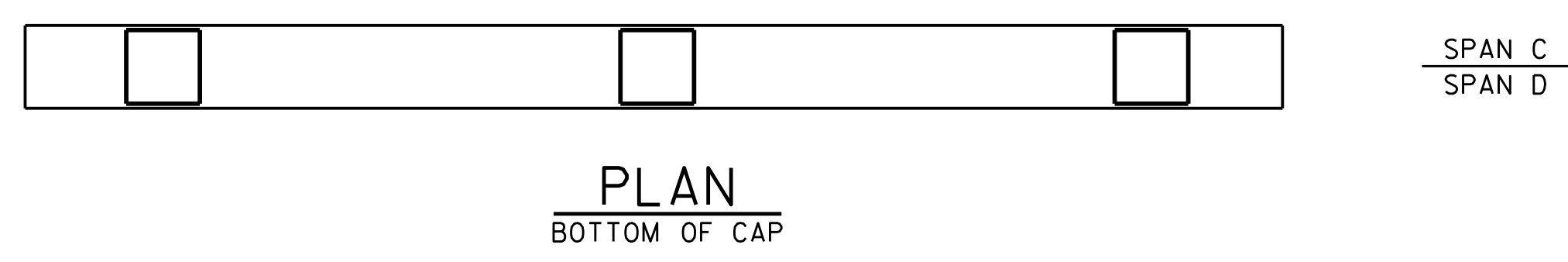
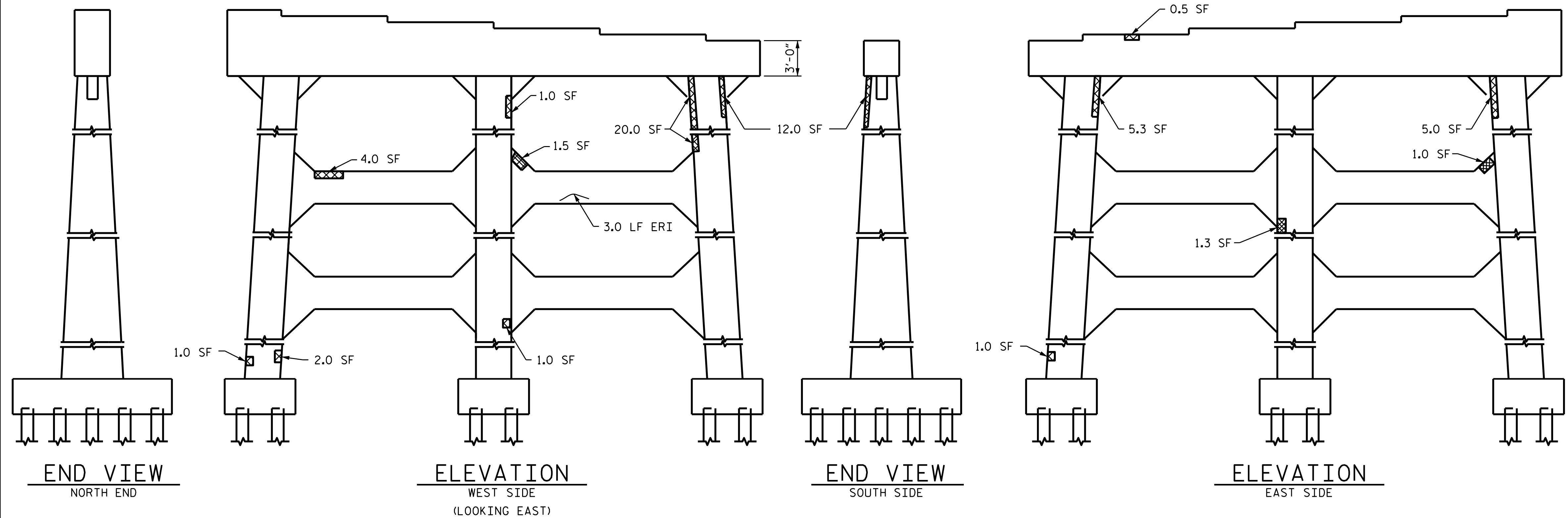
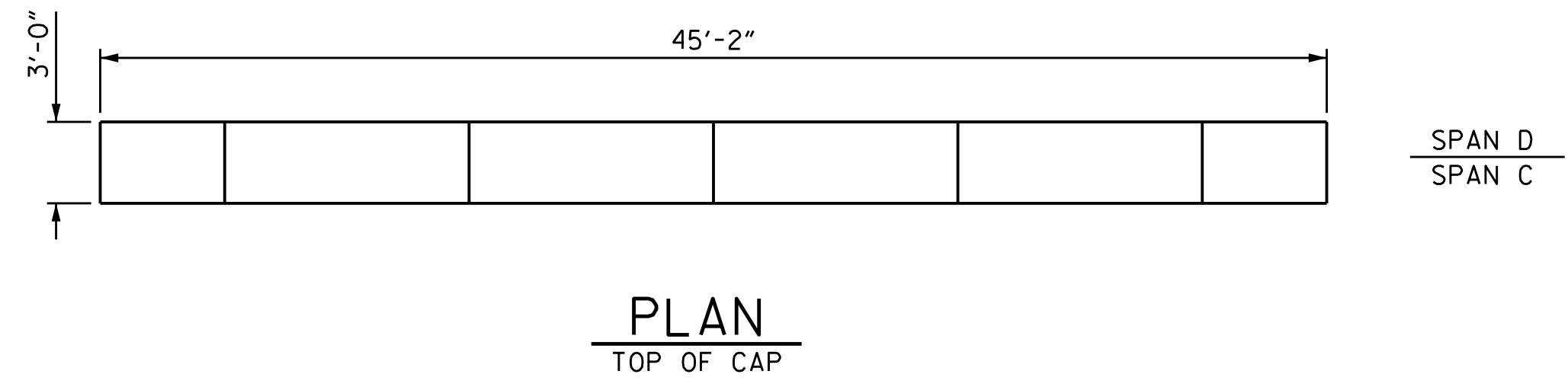
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	0.5	0.3		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN & STRUTS	56.1	28.1		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION		L.F.		L.F.
CAP		0.0		
COLUMN & STRUTS		3.0		

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

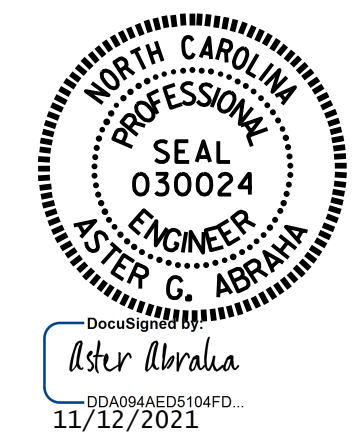


REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

SHEET 3 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 3**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			57-18
2			4			118

NOTES:

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

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

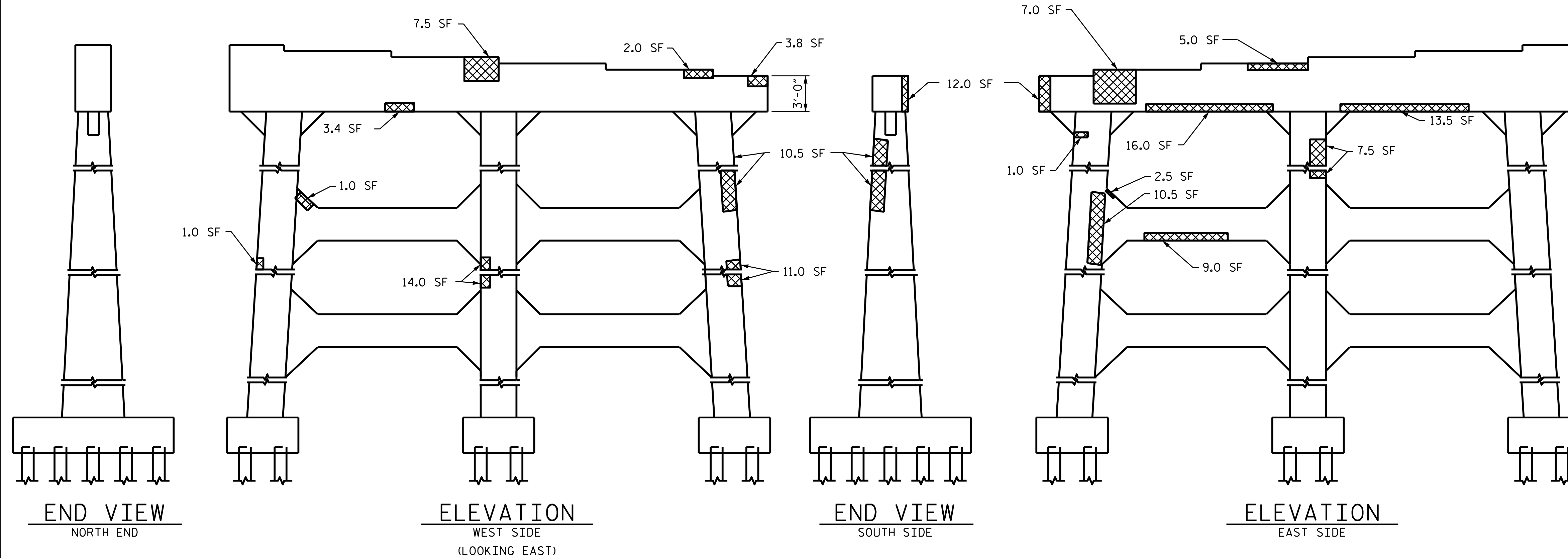
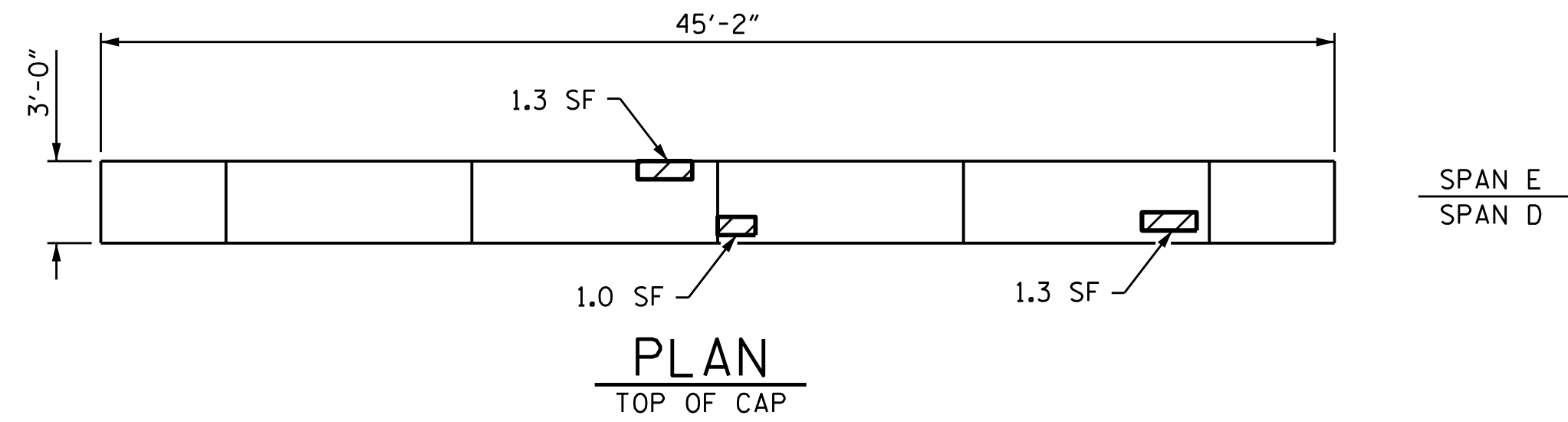
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

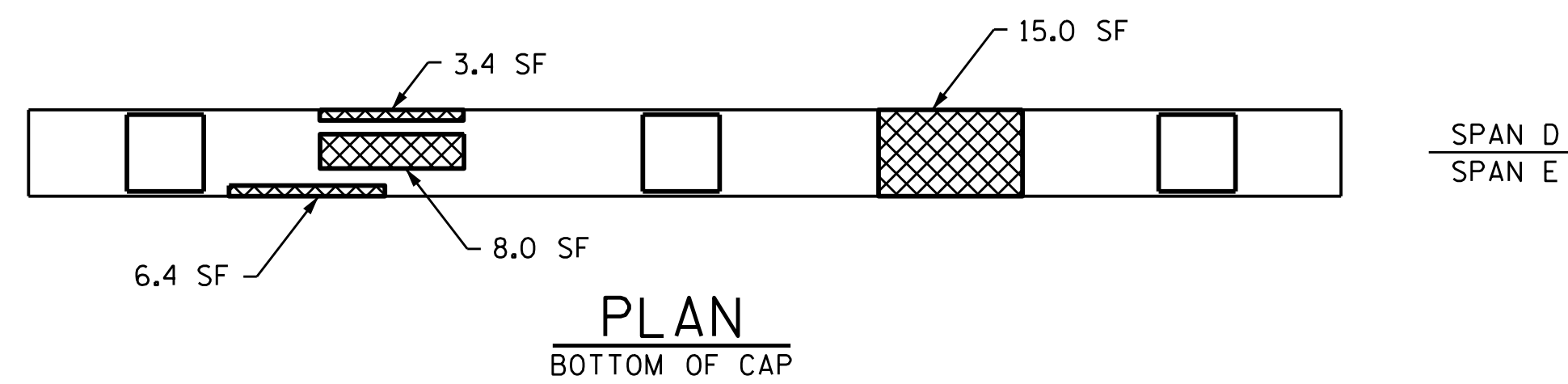
BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	36.4	18.2		
CAP (HORIZONTAL FACE)	66.6	33.3		
COLUMN & STRUTS	68.0	34.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	3.6	1.8		
COLUMN & STRUTS	0.0	0.0		
EPOXY RESIN INJECTION		L.F.		L.F.
CAP		0.0		
COLUMN & STRUTS		0.0		

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



REPAIR KEY

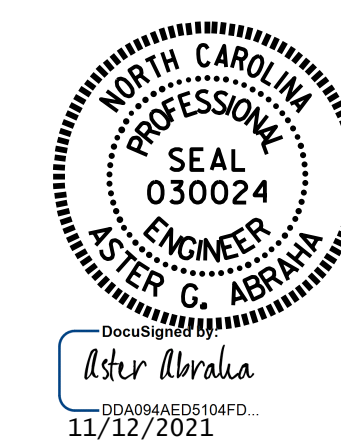
- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104

SHEET 4 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 4



DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NO.	REVISIONS				SHEET NO.
	BY:	DATE:	NO.	DATE:	
1			3		S7-19
2			4		TOTAL SHEETS 118

NOTES:

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

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

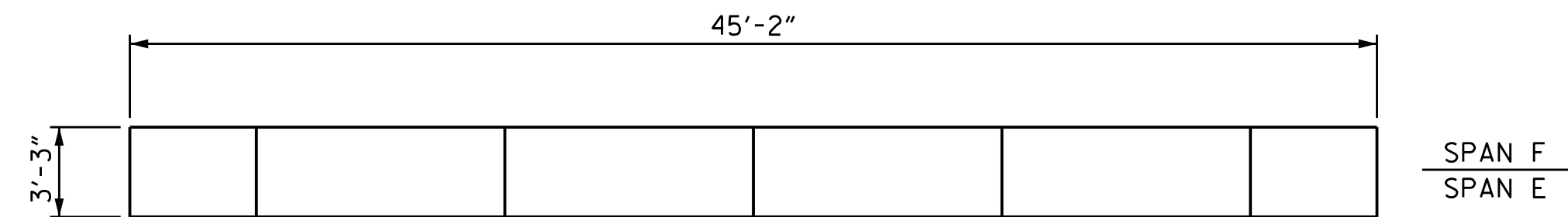
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

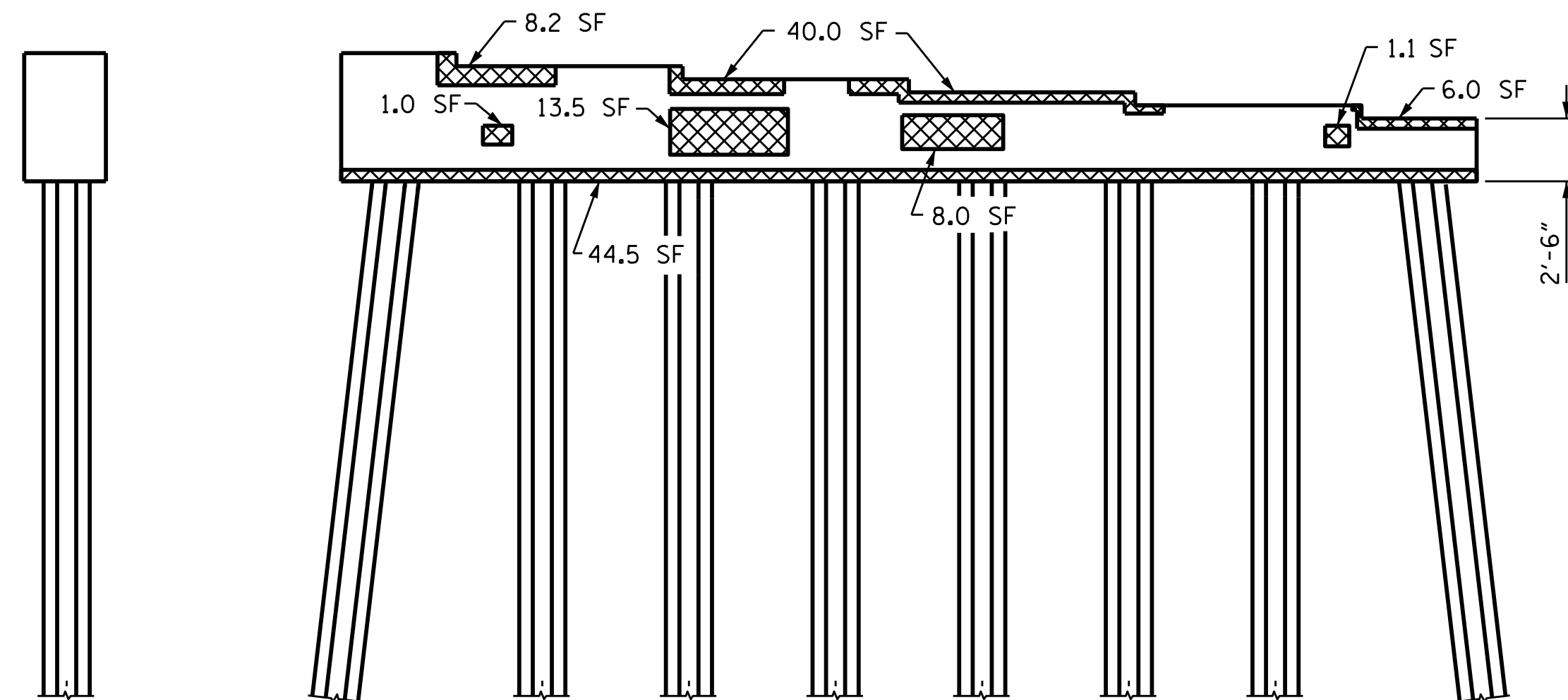
REPAIR QUANTITY TABLE

BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	172.9	86.5		
CAP (HORIZONTAL FACE)	107.6	53.8		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		L.F.		L.F.
CAP		5.0		
COLUMN		0.0		

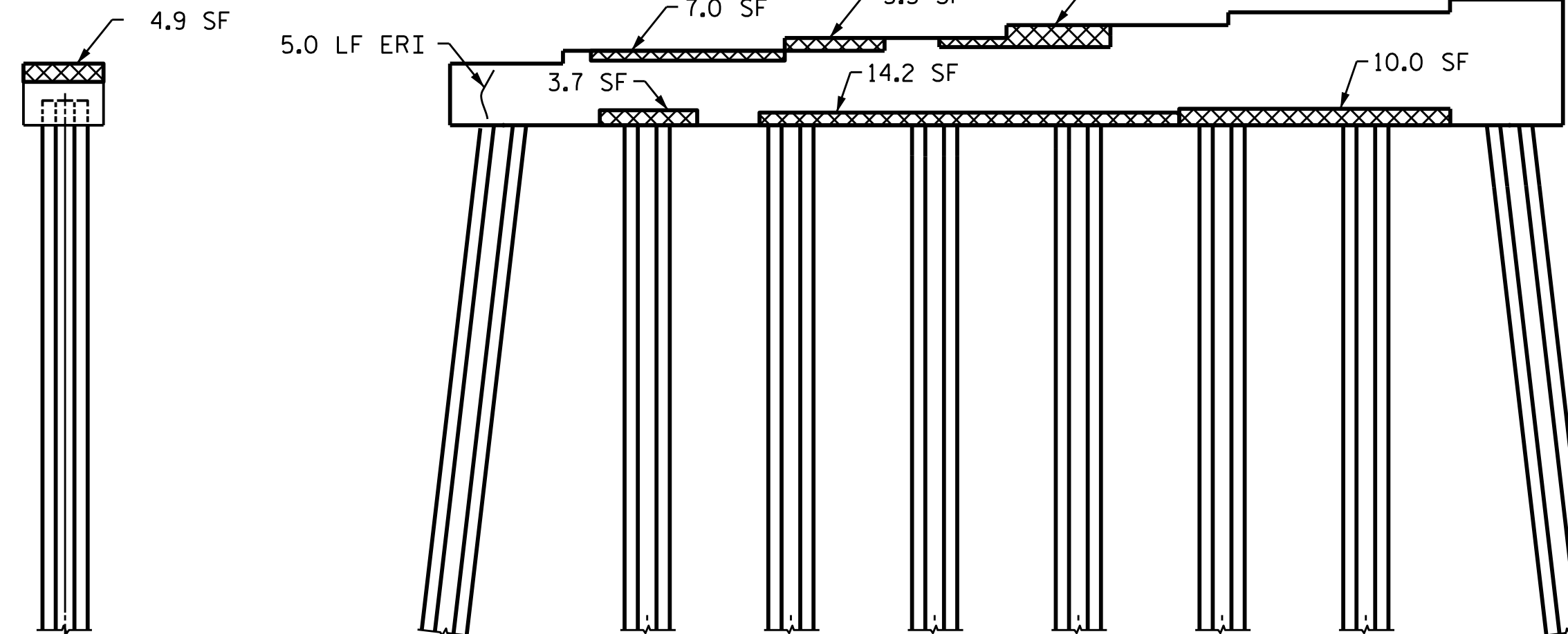
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



PLAN
TOP OF CAP



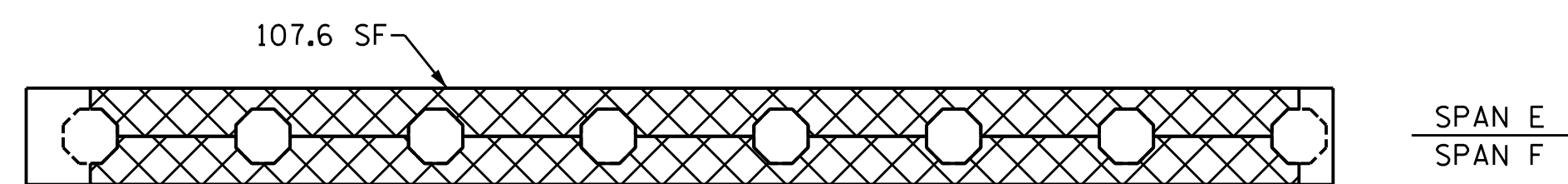
ELEVATION
WEST SIDE
(LOOKING EAST)



ELEVATION
EAST SIDE

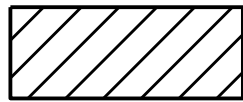
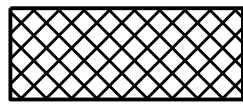

END VIEW
NORTH END

END VIEW
SOUTH SIDE



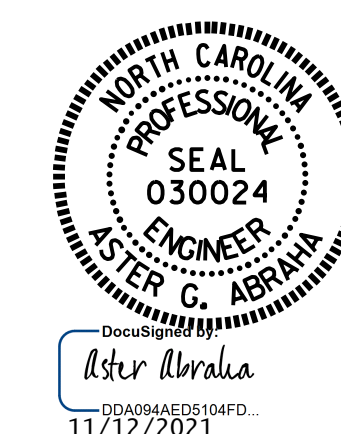
PLAN
BOTTOM OF CAP

REPAIR KEY

-  CONCRETE REPAIR AREA (FORM AND POUR)
-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104

SHEET 5 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 5

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

NO.	REVISIONS				SHEET NO.
	By:	DATE:	NO.	DATE:	
1			3		S7-20 TOTAL SHEETS 118
2			4		

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

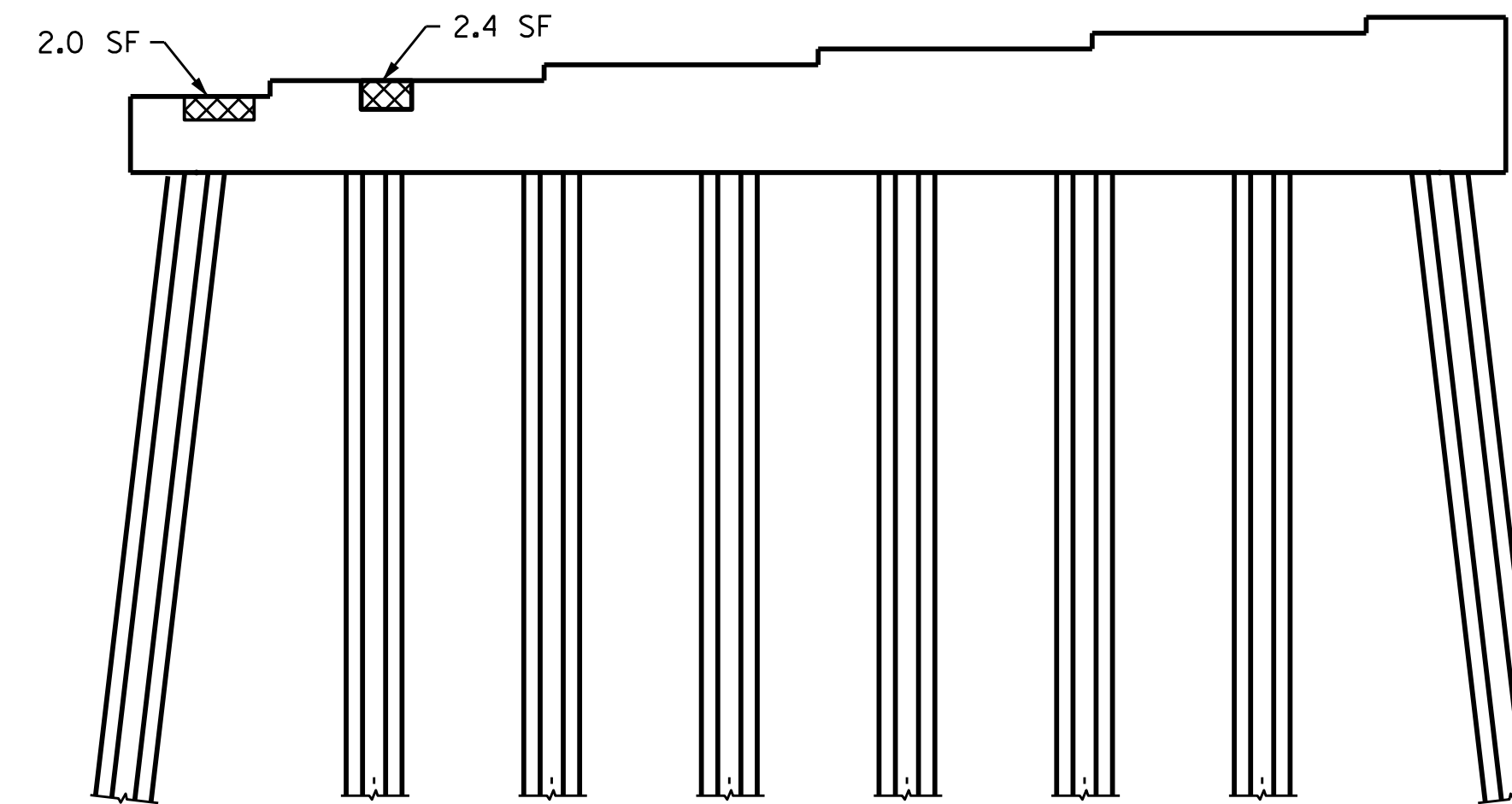
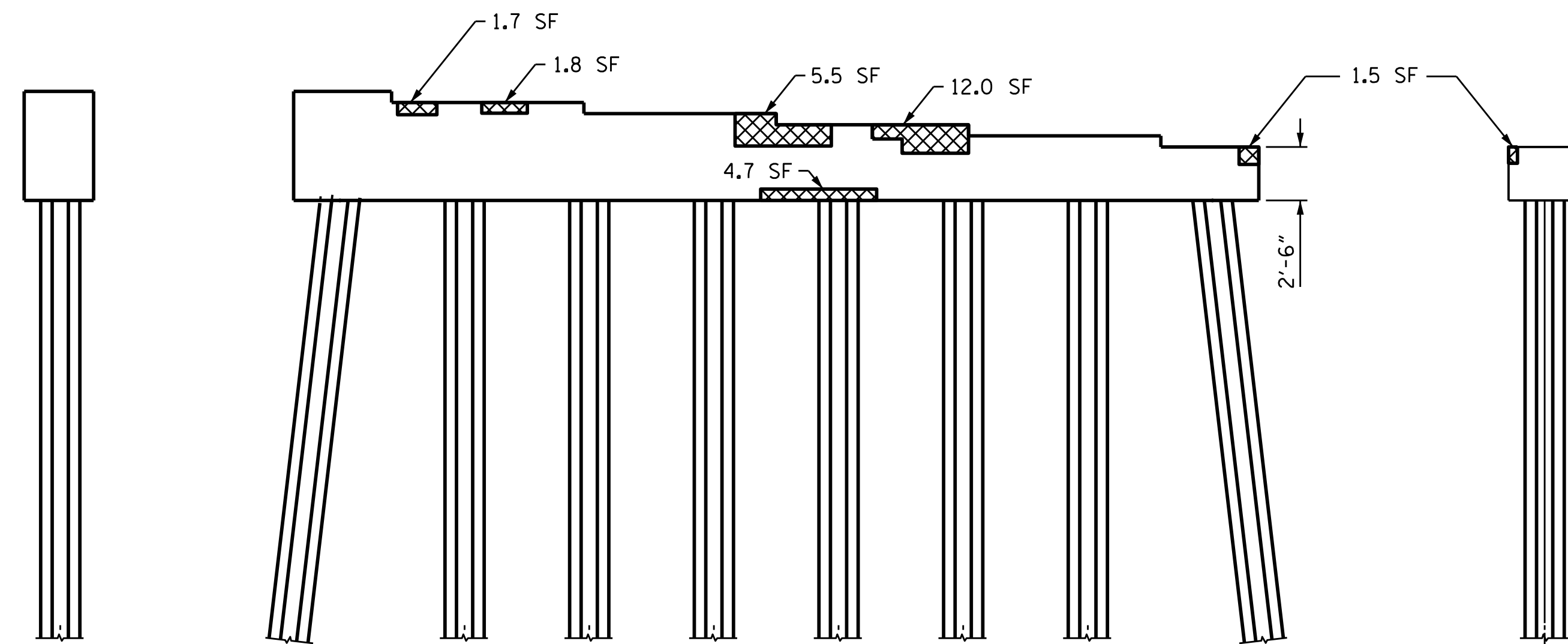
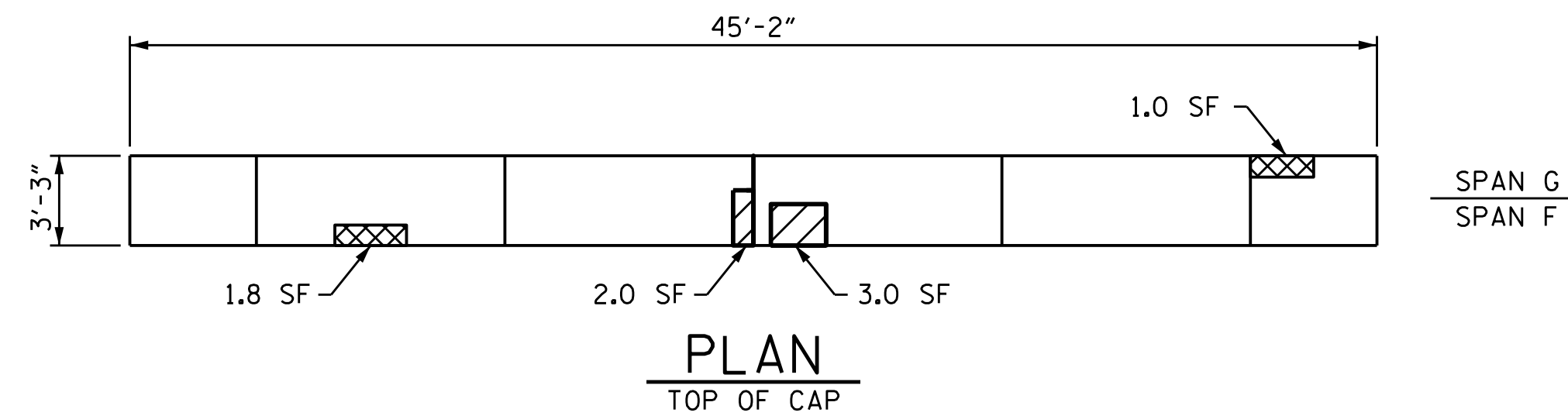
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

BENT 6	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
CAP (VERTICAL FACE)	31.6	15.8		
CAP (HORIZONTAL FACE)	7.5	3.8		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	5.0	2.5		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		L.F.		L.F.
CAP		0.0		
COLUMN		0.0		

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

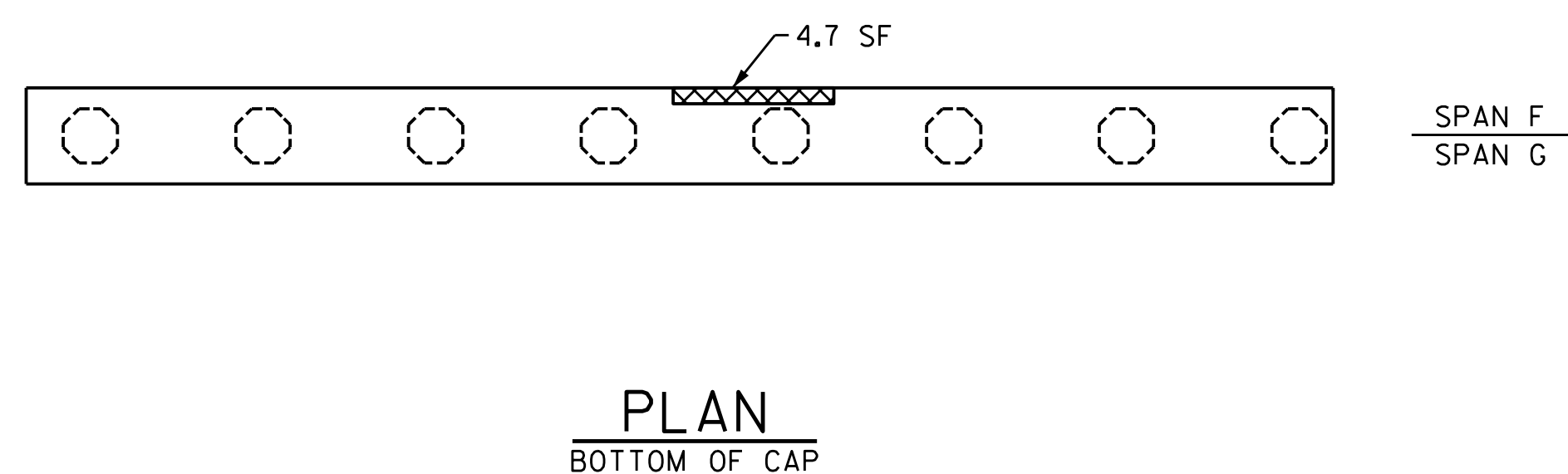


END VIEW
NORTH END

ELEVATION
WEST SIDE
(LOOKING EAST)

END VIEW
SOUTH SIDE

ELEVATION
EAST SIDE



REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320104
 SHEET 6 OF 6



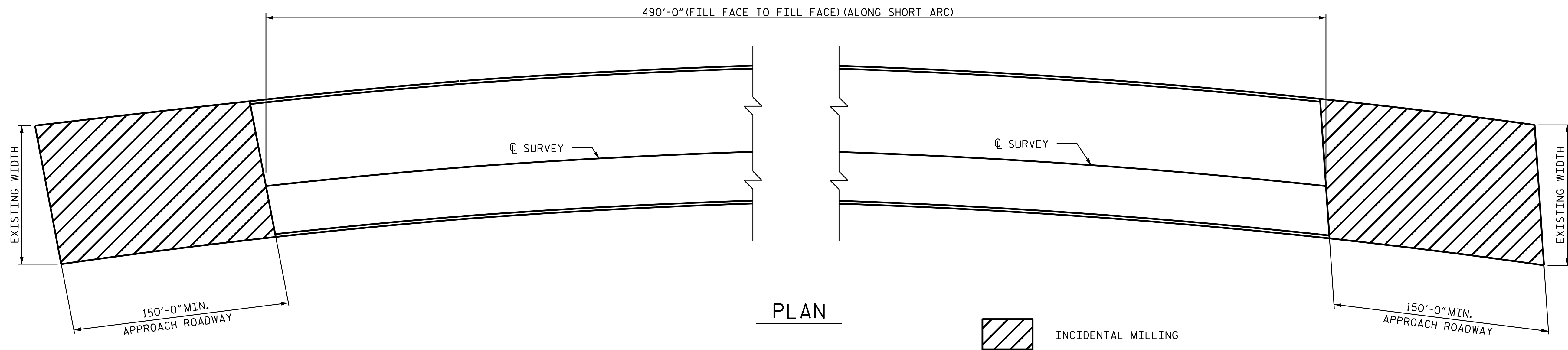
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO. S7-21	
SUBSTRUCTURE BENT 6						TOTAL SHEETS 118	
REVISIONS							
NO.	BY:	DATE:	NO.	BY:	DATE:		
1			3				
2			4				

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 06/2021
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

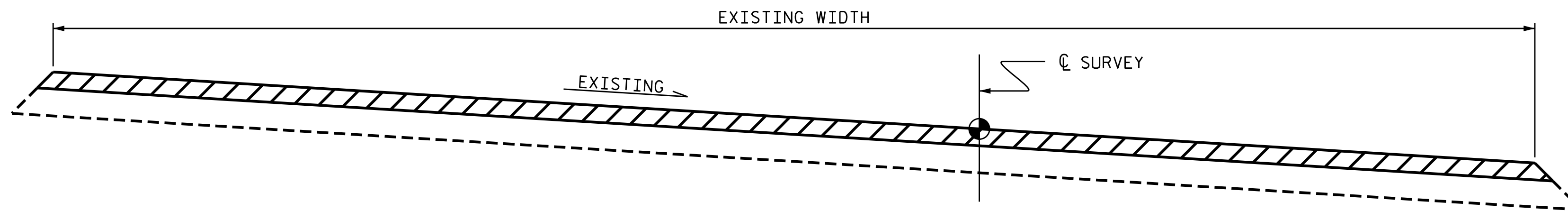
NOTES

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. 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 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH.

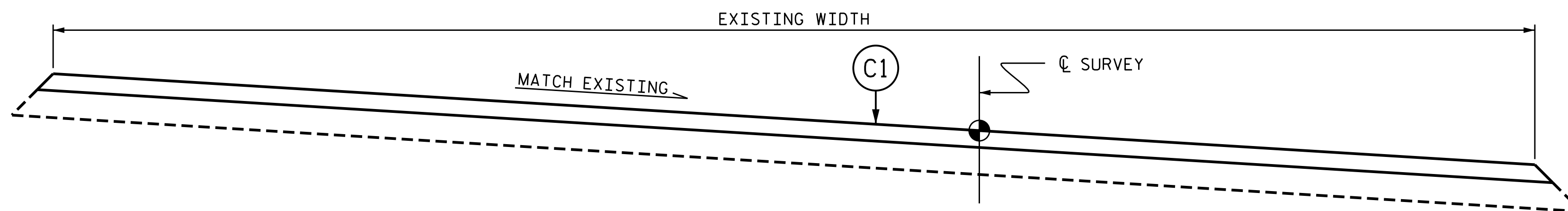


C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" DEPTH.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	1,541.7 S.Y.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	126.8 TONS	
ASPHALT BINDER FOR PLANT MIX	10.0 TONS	

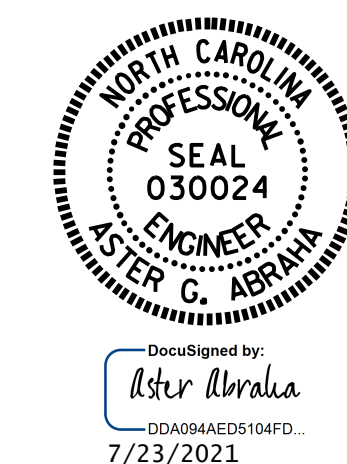


TYPICAL ROADWAY MILLING SECTION



TYPICAL PROPOSED ROADWAY SECTION

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104



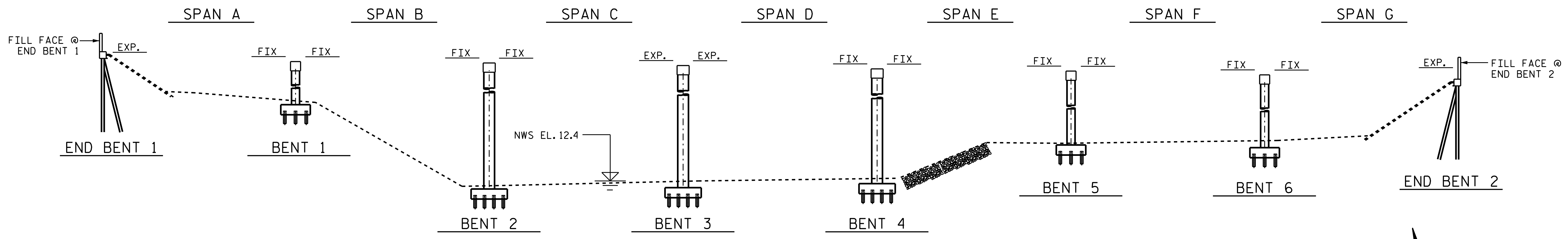
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

APPROACH MILLING AND TYPICAL ROADWAY SECTIONS

DRAWN BY : A. Y. GODFREY DATE : 02/2021
 CHECKED BY : A. G. ABRAHA DATE : 03/2021

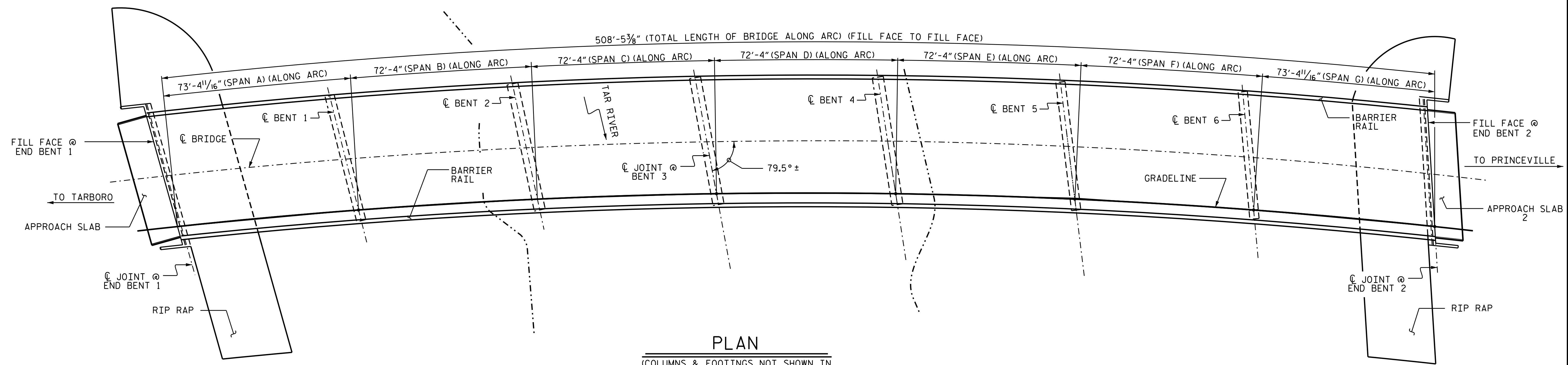
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S7-22
2			4			118



ELEVATION

(SECTION @ BENT AND END BENTS ARE AT RIGHT ANGLES)



PLAN

(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320320

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC CONCRETE AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.

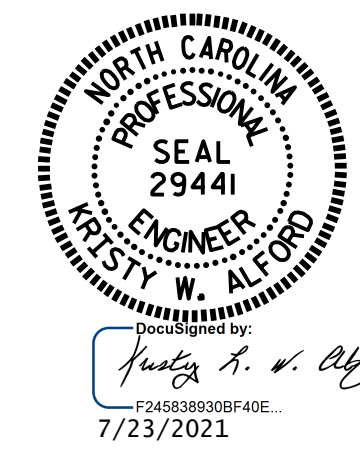
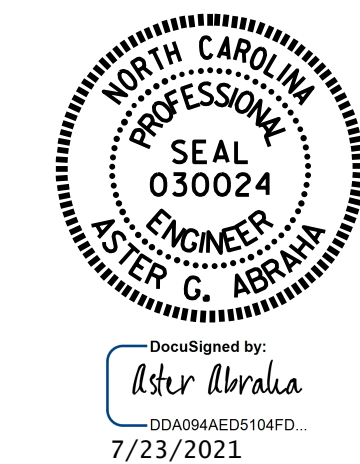
NOTES

- GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION, DATED 02/24/2019 AND 02/02/2021.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____

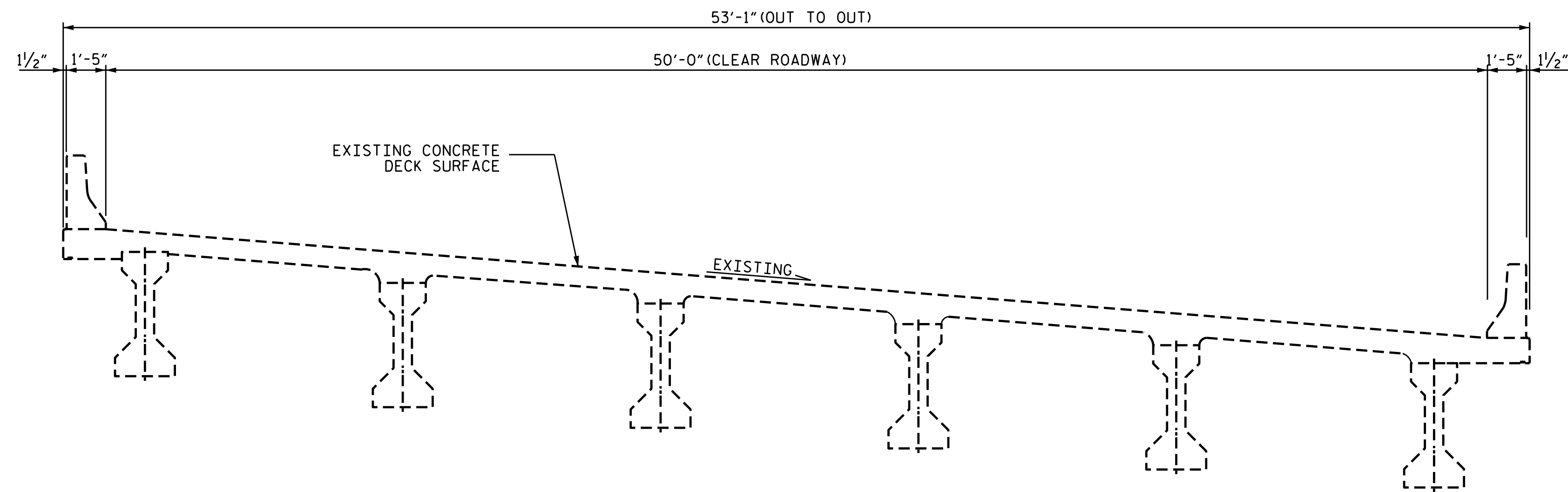
DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/2019



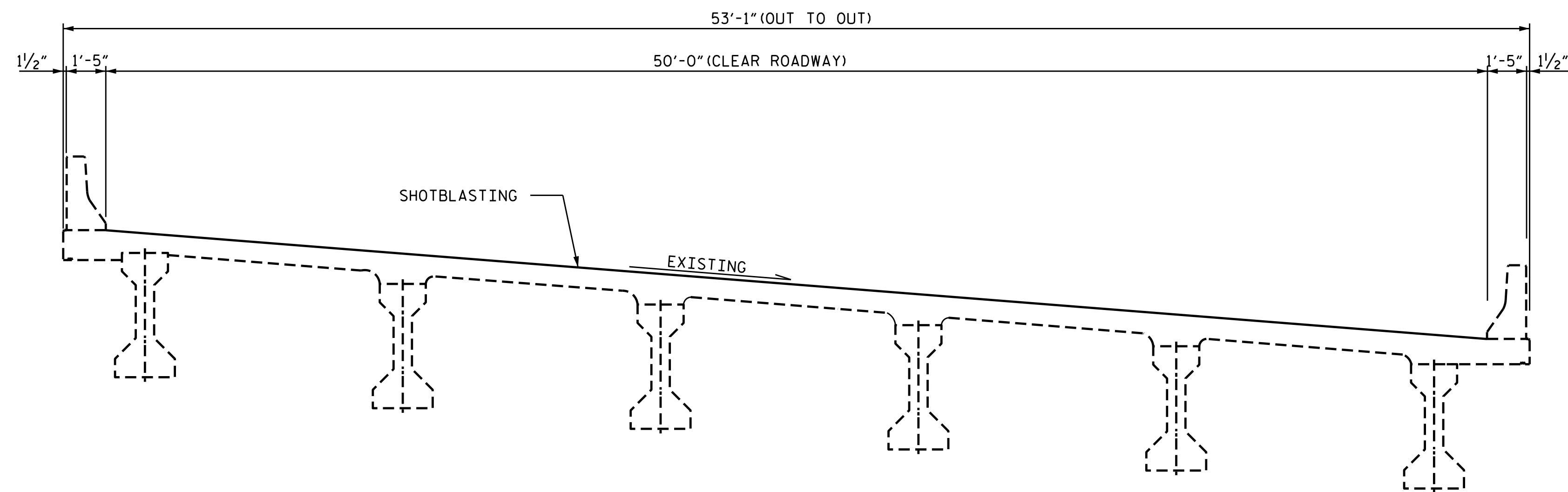
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE NO. 320 ON
 US 64 WBL OVER
 TAR RIVER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

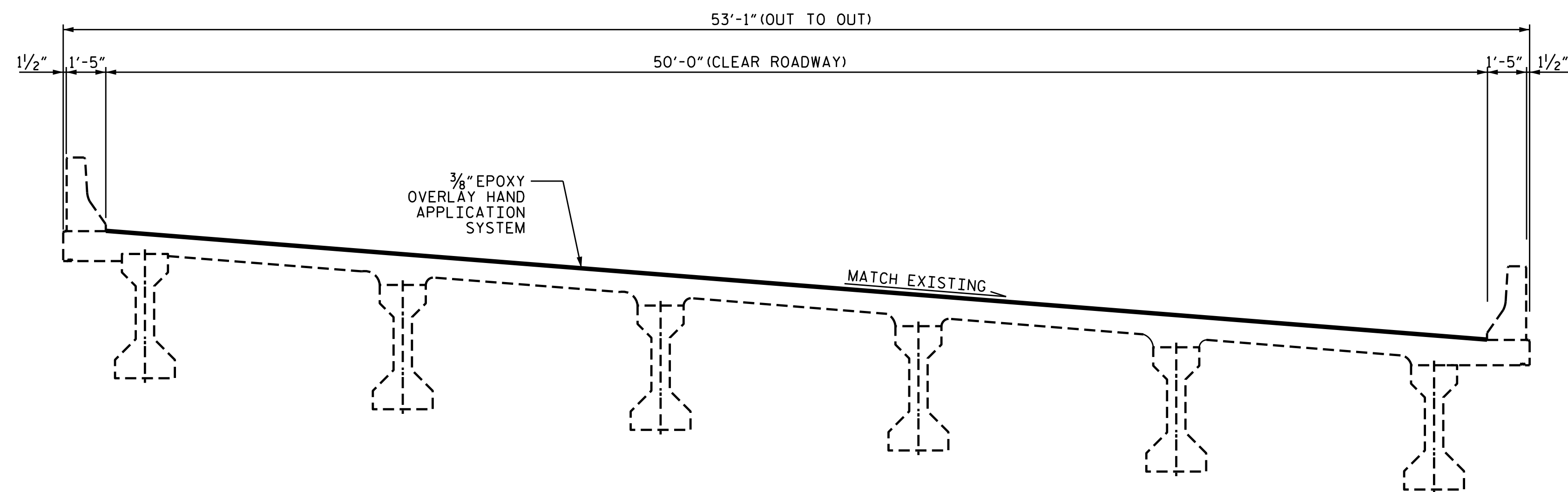
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-1
1			3			TOTAL SHEETS
2			4			118



TYPICAL SECTION
(EXISTING)



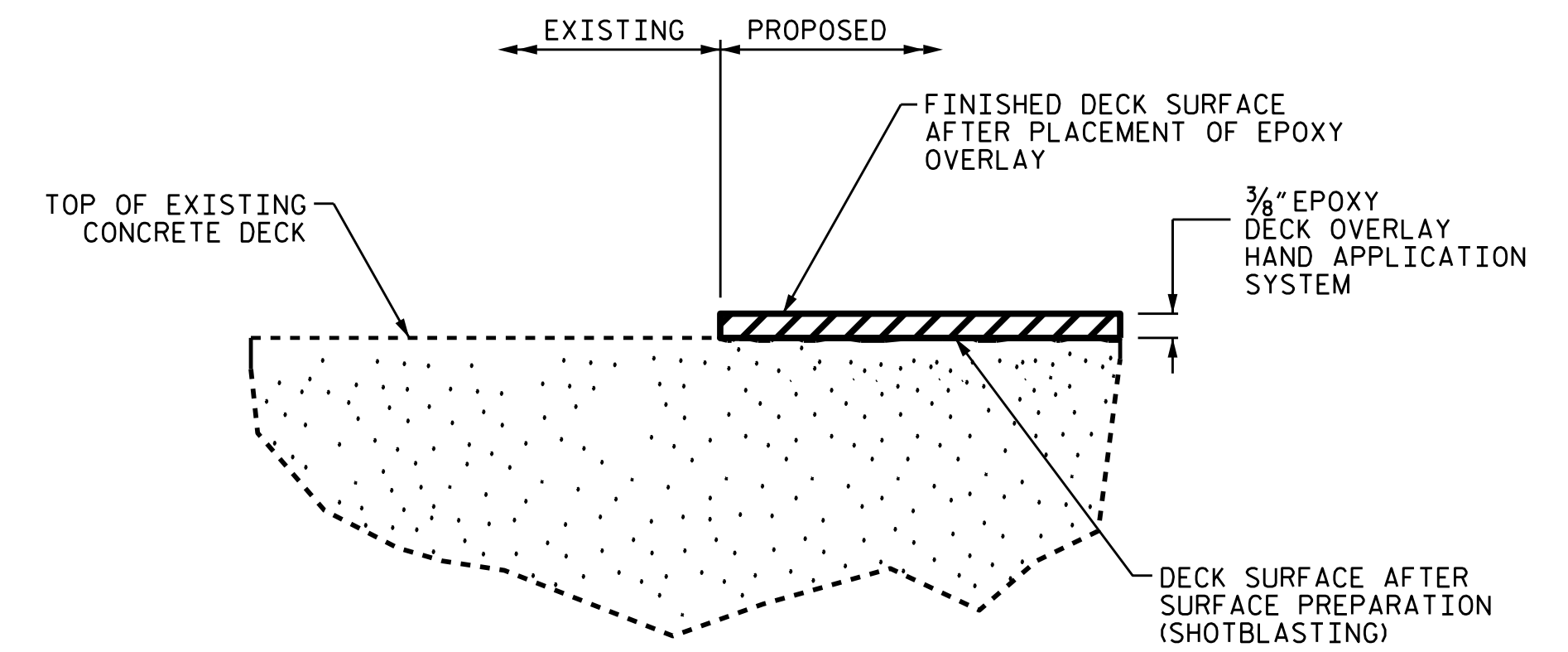
TYPICAL SECTION
(DECK PREPARATION)



TYPICAL SECTION

NOTES

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



EPOXY OVERLAY HAND APPLICATION SYSTEM DETAIL

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
TYPICAL SECTION AND SURFACE PREPARATION DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					TOTAL SHEETS 118

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/2019

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB 1

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	4,145 S.F.	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 S.F.	
BRIDGE JOINT DEMOLITION	46.5 S.F.	

NOTES:

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


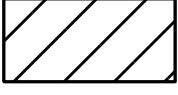

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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

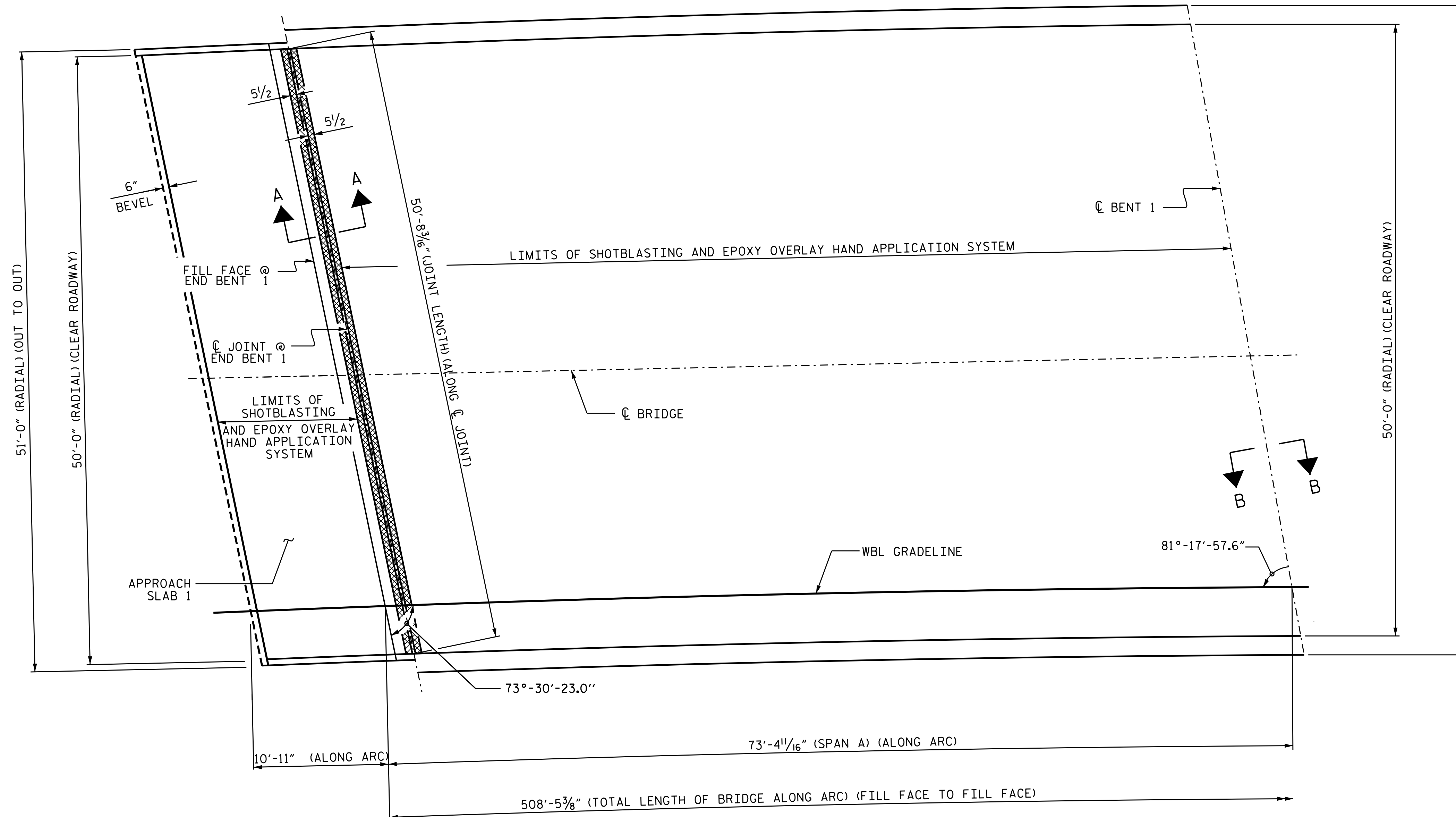
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

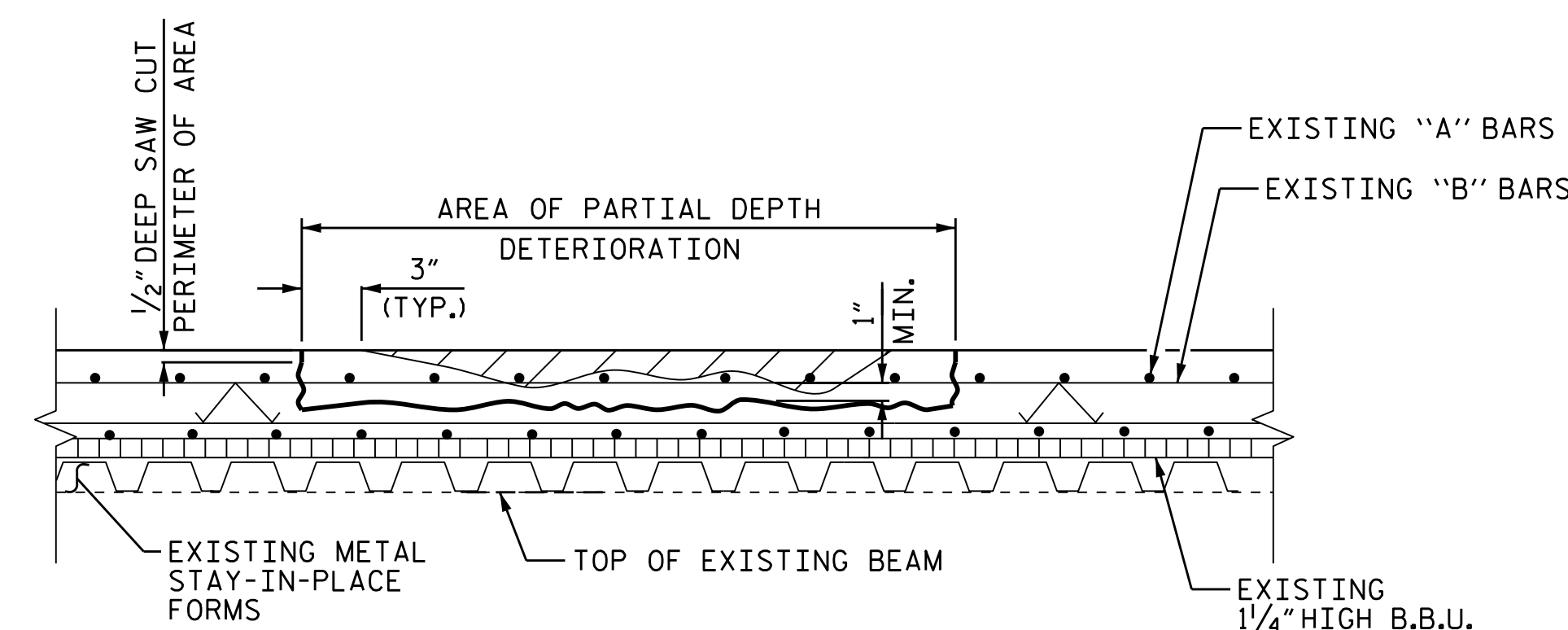
-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING.



PLAN OF APPROACH SLAB 1 AND SPAN A

(SEE SHEET S7-10 FOR SECTIONS A-A AND B-B)



CONCRETE DECK REPAIR FOR EPOXY OVERLAY

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

SHEET 1 OF 7



DocuSigned by:
 Aster Abraha
 004088AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN A AND
 APPROACH SLAB 1

DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

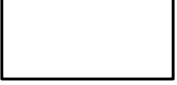
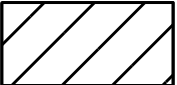
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S8-3
2			4			118

SUMMARY OF QUANTITIES FOR SPAN B

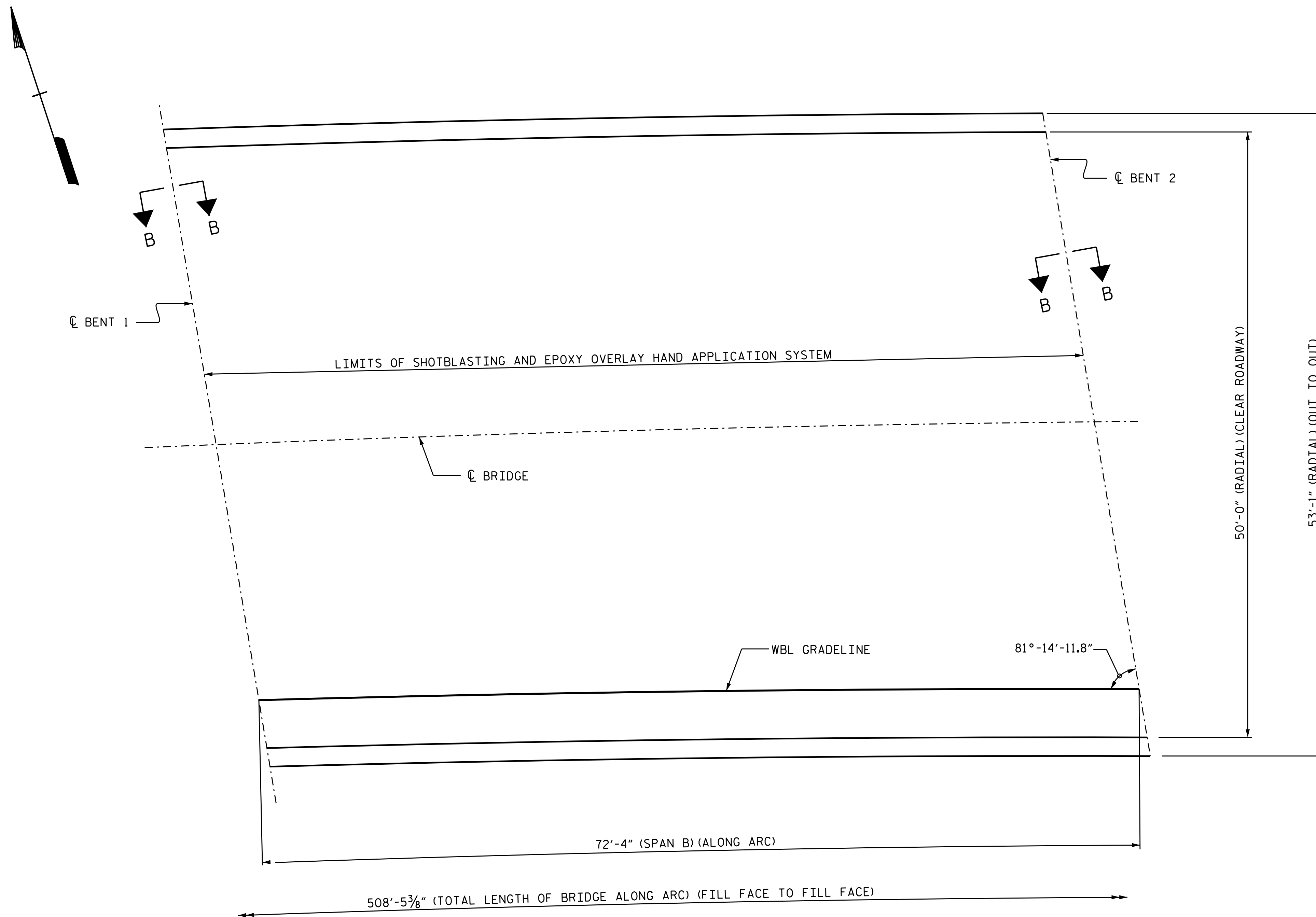
	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,617.0 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	

NOTES:

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

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOT BLASTING.



PLAN OF SPAN B

(SEE SHEET S7-10 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320320

SHEET 2 OF 7



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN B

DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED


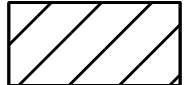
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NO.	BY:	DATE:	NO.	BY:	DATE:	S8-4
1			3			TOTAL SHEETS
2			4			118

SUMMARY OF QUANTITIES FOR SPAN C

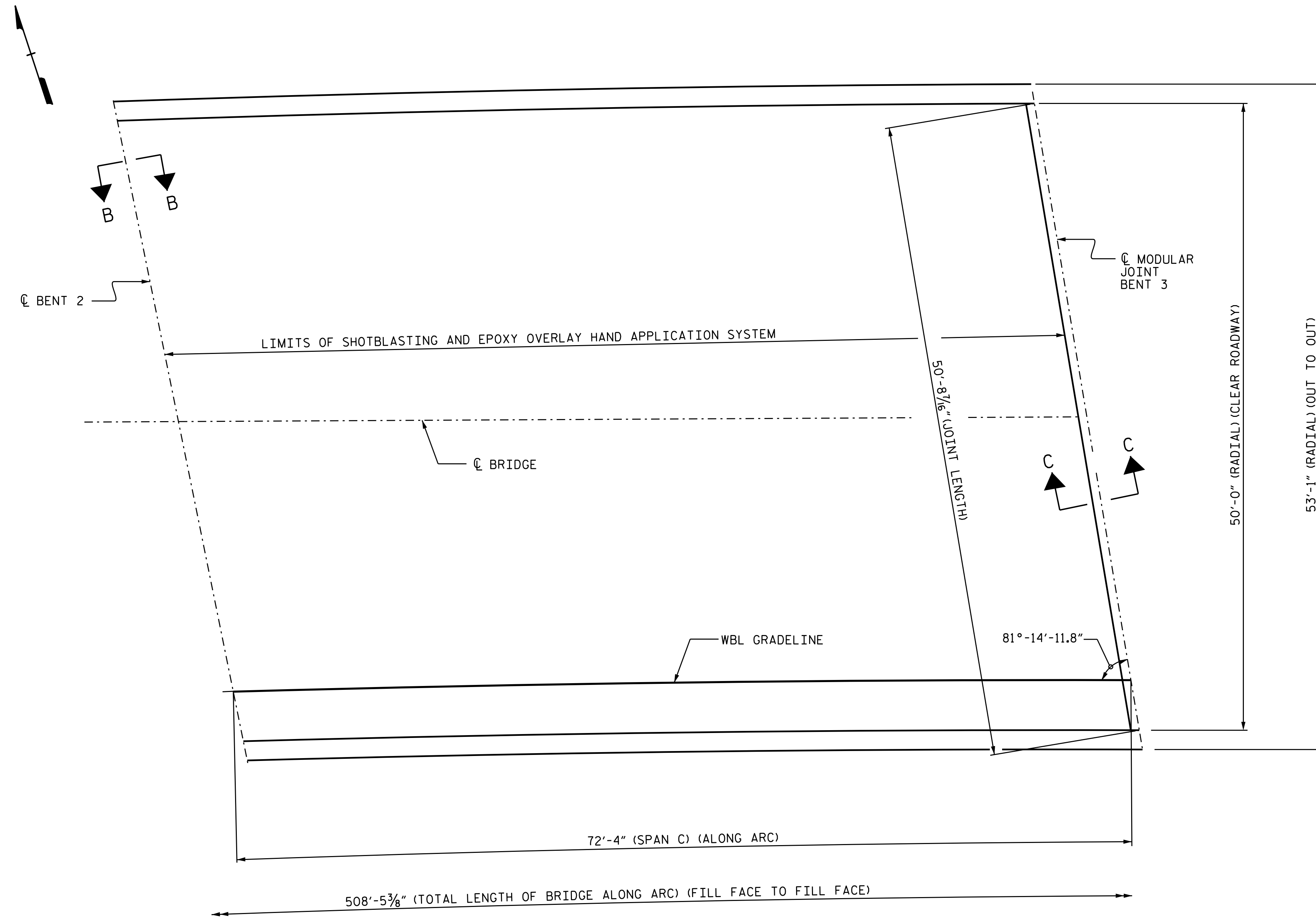
	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,595 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	

NOTES:

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

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY

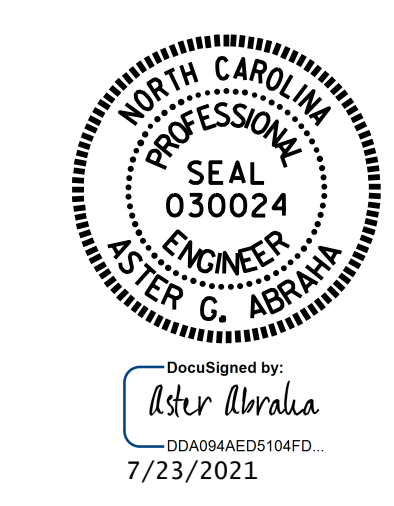
NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING.



PLAN OF SPAN C
(SEE SHEET S7-10 AND S7-11 FOR SECTIONS B-B AND C-C)

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320320

SHEET 3 OF 7



DocuSigned by:
Aster Abbraha
7/23/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN C**

DRAWN BY : S. T. SANDOR DATE : 09/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

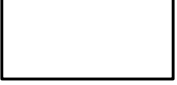
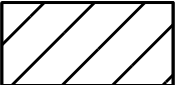
NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S8-5	
2				4			TOTAL SHEETS 118	

SUMMARY OF QUANTITIES FOR SPAN D

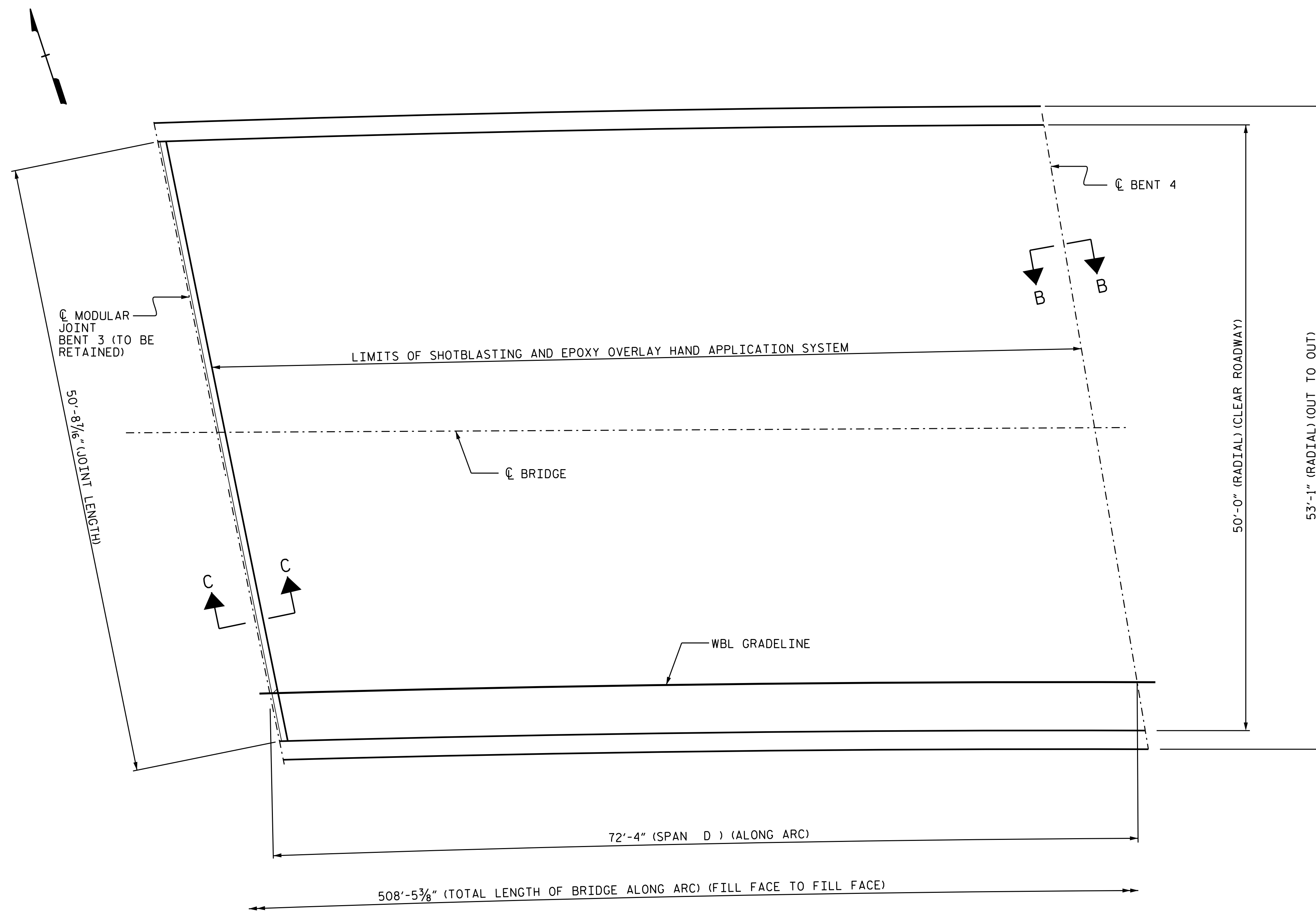
	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,595 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	

NOTES:

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

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY

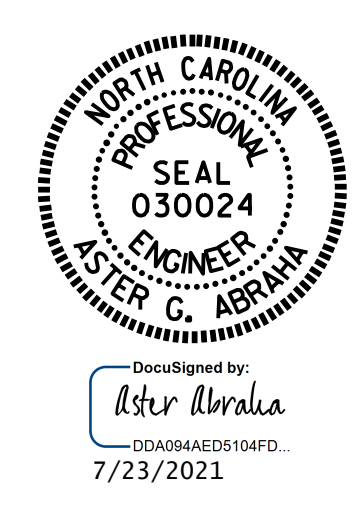
NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING.



PLAN OF SPAN D
(SEE SHEET S7-10 AND S7-11 FOR SECTIONS B-B AND C-C)

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320320

SHEET 4 OF 7



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN D**

DRAWN BY : S. T. SANDOR DATE : 09/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-6
1			3			TOTAL SHEETS
2			4			118


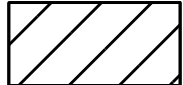
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SUMMARY OF QUANTITIES FOR SPAN E

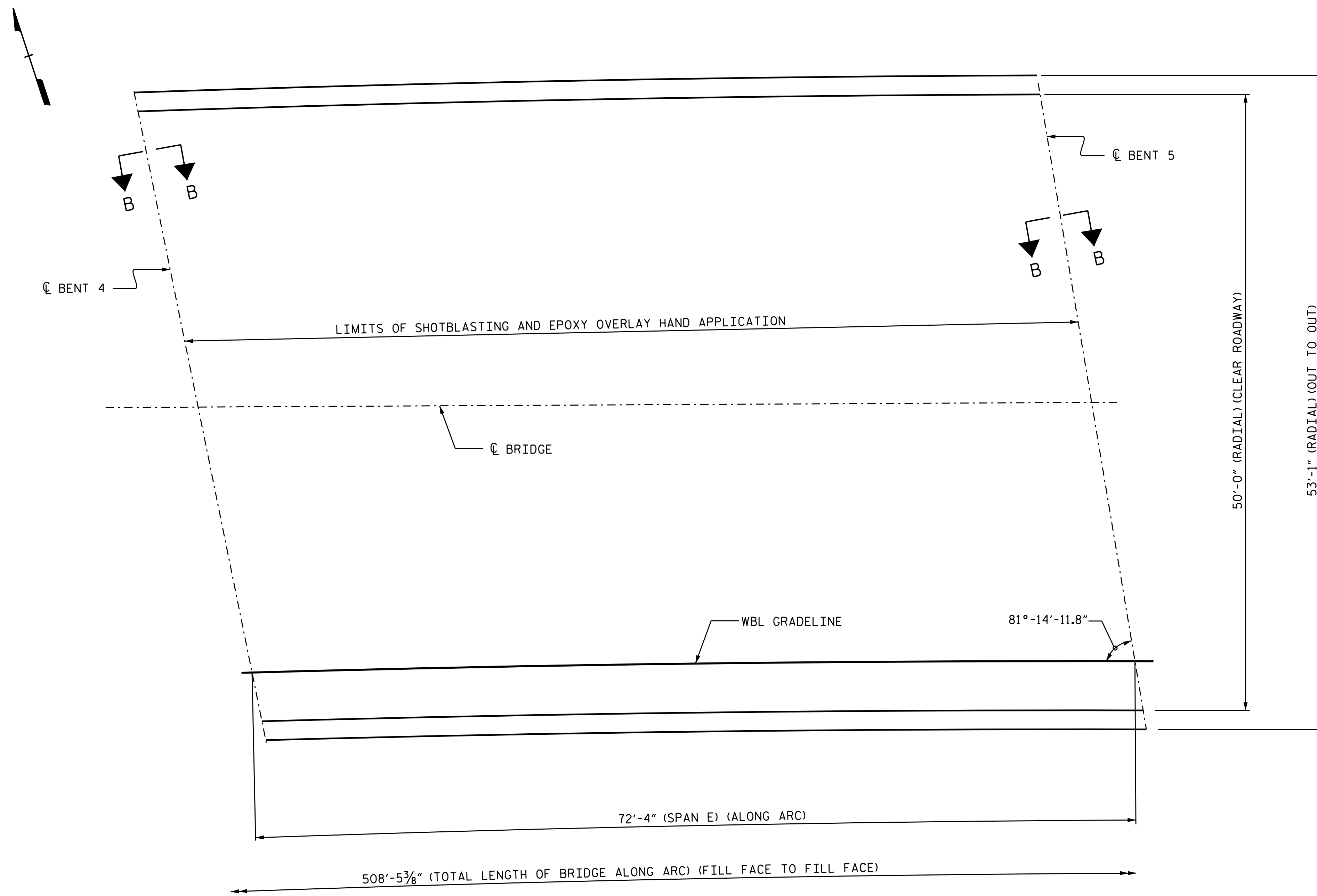
	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,617 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	

NOTES:

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

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING.



PLAN OF SPAN E

(SEE SHEET S7-10 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

SHEET 5 OF 7



DocuSigned by:
 Aster Abraha
 00A08AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN E

DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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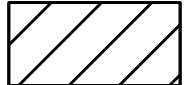
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NO.	BY:	DATE:	NO.	BY:	DATE:	S8-7
1			3			TOTAL SHEETS
2			4			118

SUMMARY OF QUANTITIES FOR SPAN F

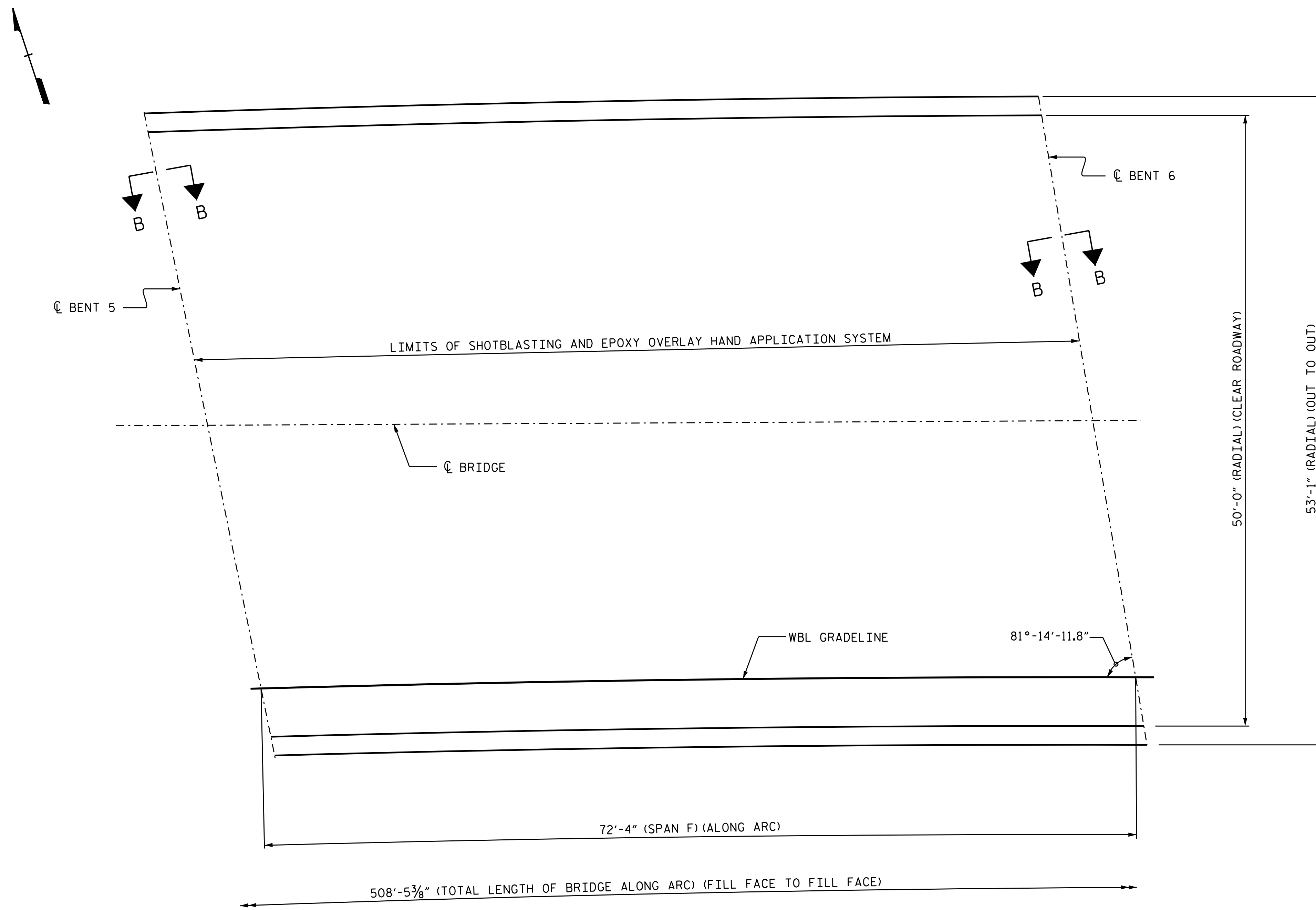
	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	3,617 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	

NOTES:

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

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SHOTBLASTING.



PLAN OF SPAN F

(SEE SHEET S7-10 FOR SECTION B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

SHEET 6 OF 7



DocuSigned by:
 Aster Abraha
 00A08AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN F

DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

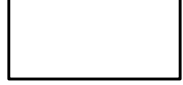
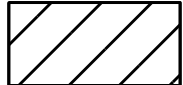

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-8
1			3			TOTAL SHEETS
2			4			118

SUMMARY OF QUANTITIES FOR SPAN G AND APPROACH SLAB 2

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	4,145 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	46.5 SF	

NOTES:

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

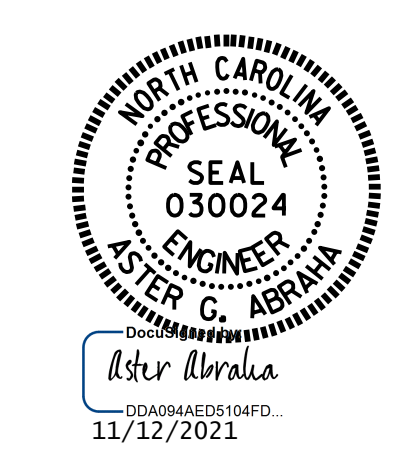
-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL INSPECT THE DECK SURFACE AFTER SCARIFICATION FOR POTENTIAL CLASS II REPAIRS.



PLAN OF APPROACH SLAB 2 AND SPAN G
(SEE SHEET S7-10 FOR SECTIONS A-A AND B-B)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320
 SHEET 7 OF 7



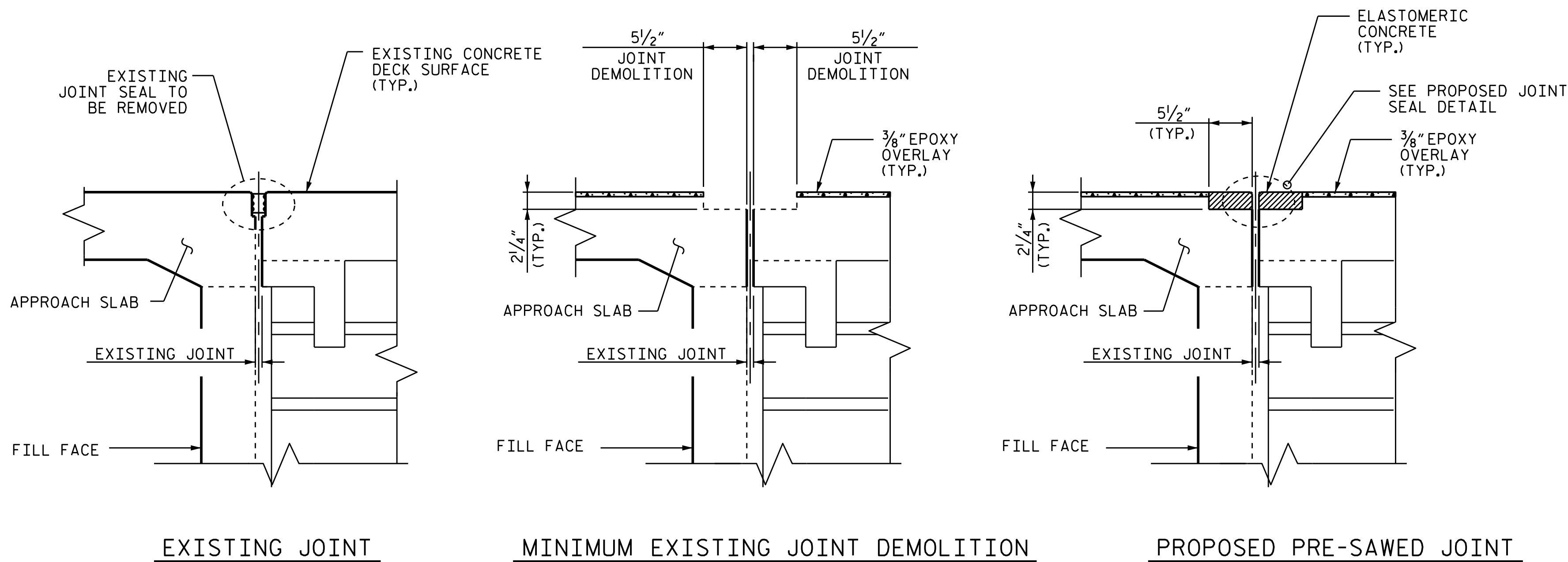
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN G AND
 APPROACH SLAB 2**

DRAWN BY : S. T. SANDOR DATE : 09/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-9
1			3			TOTAL SHEETS
2			4			118



NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

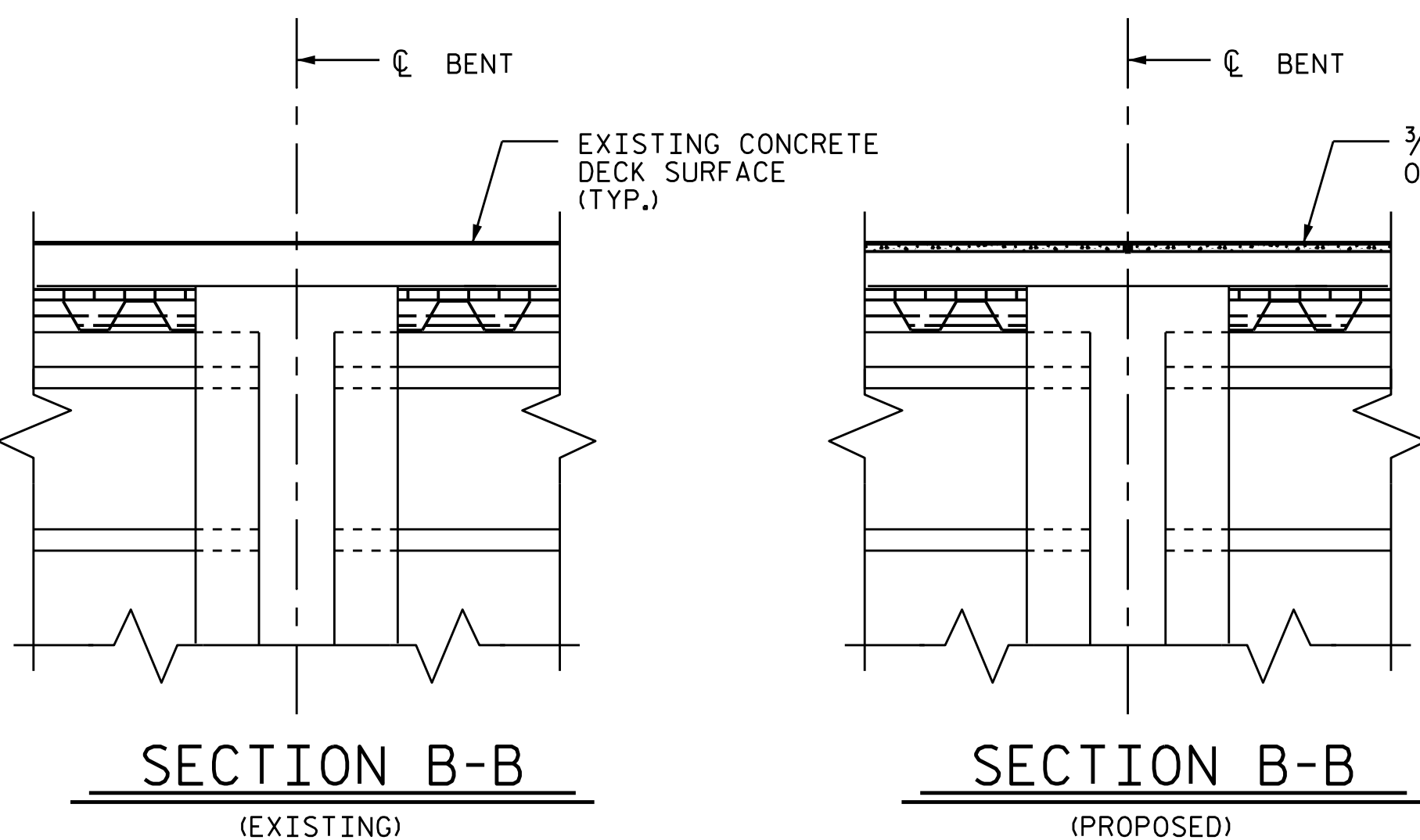
DURING JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.

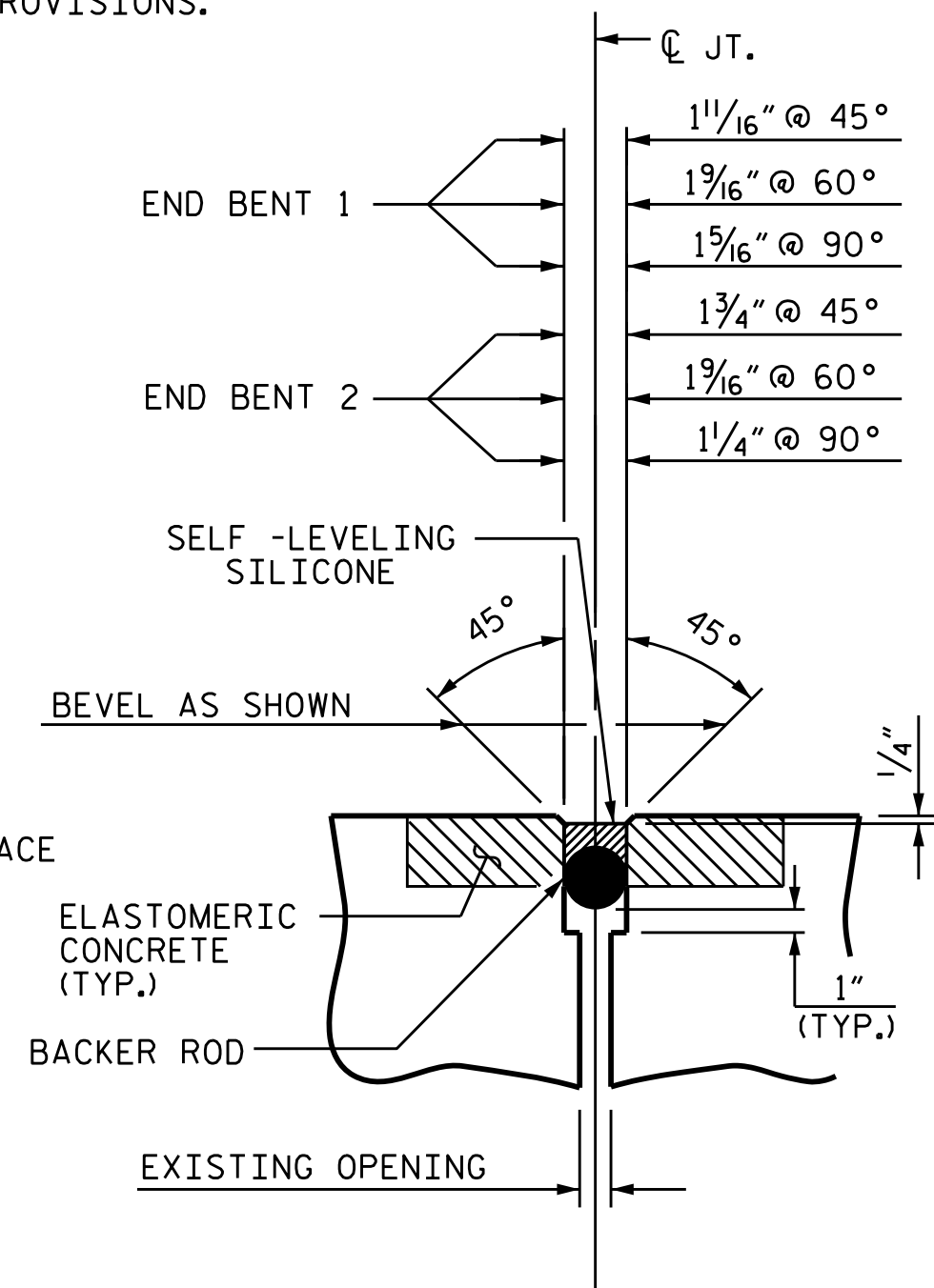
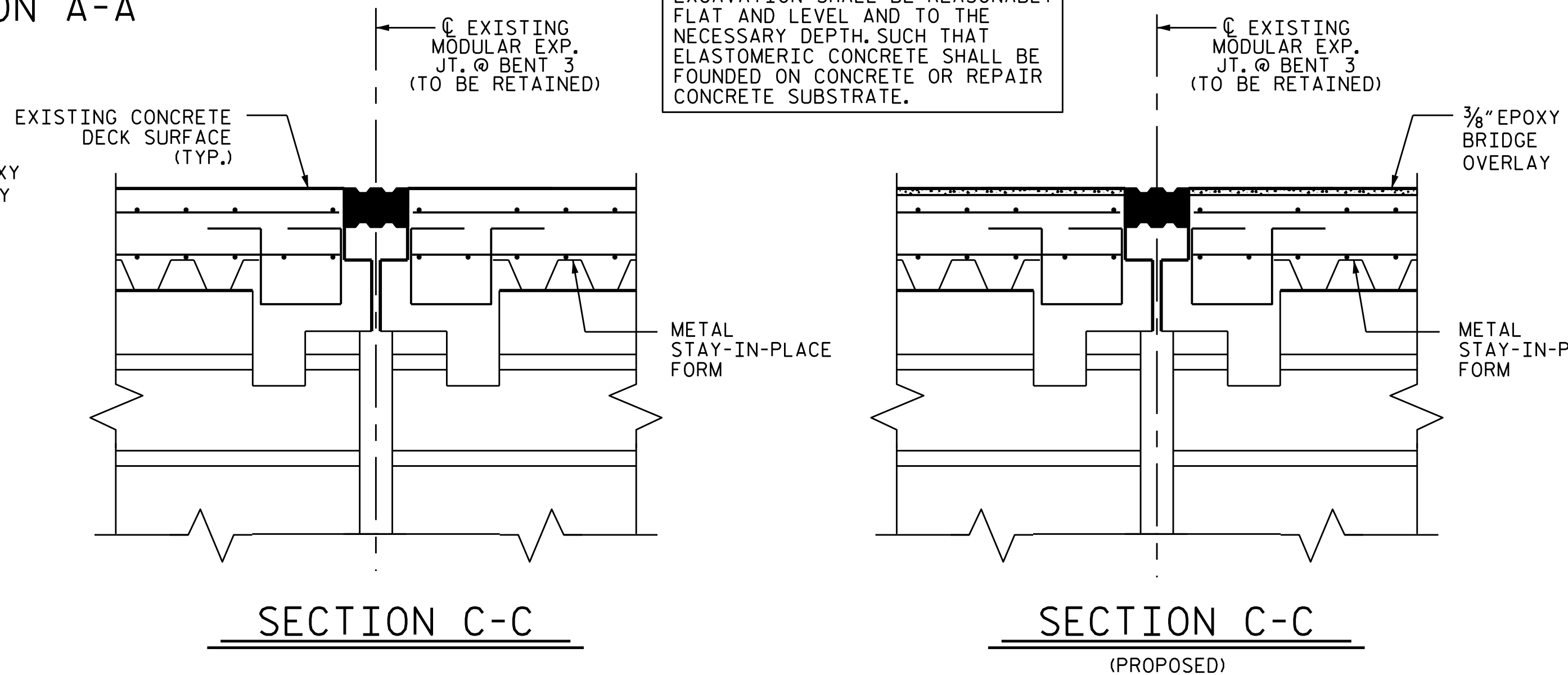
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A



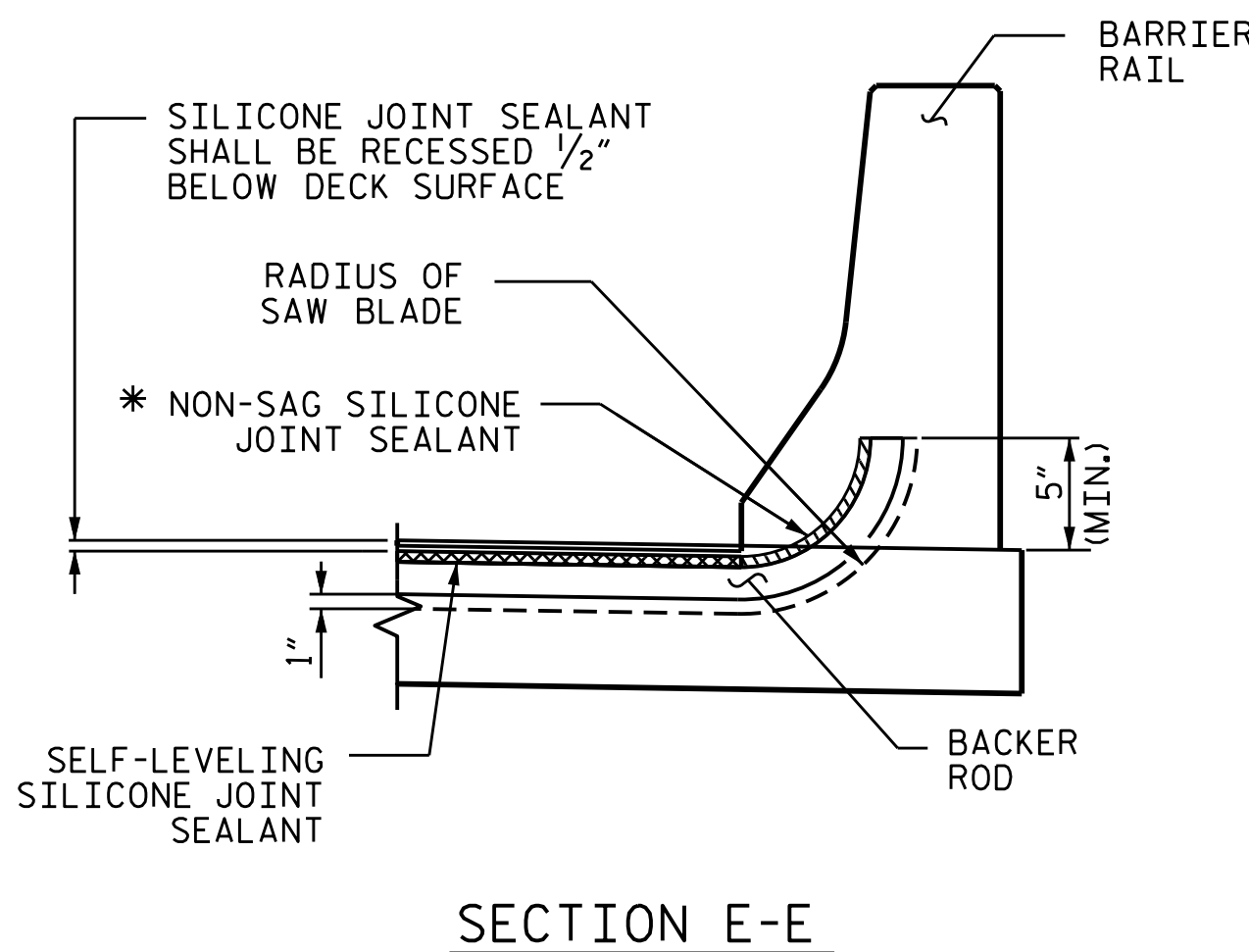
DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUND ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.



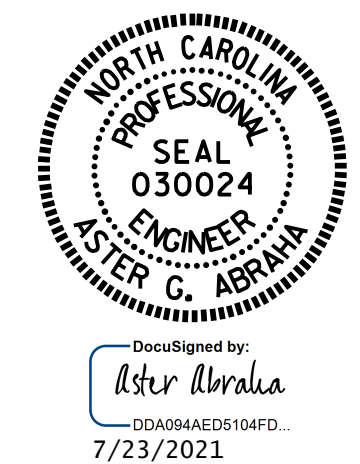
SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	17.4 C.F.	
POURABLE SILICONE JOINT SEALANT	101.5 L.F.	

*NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320



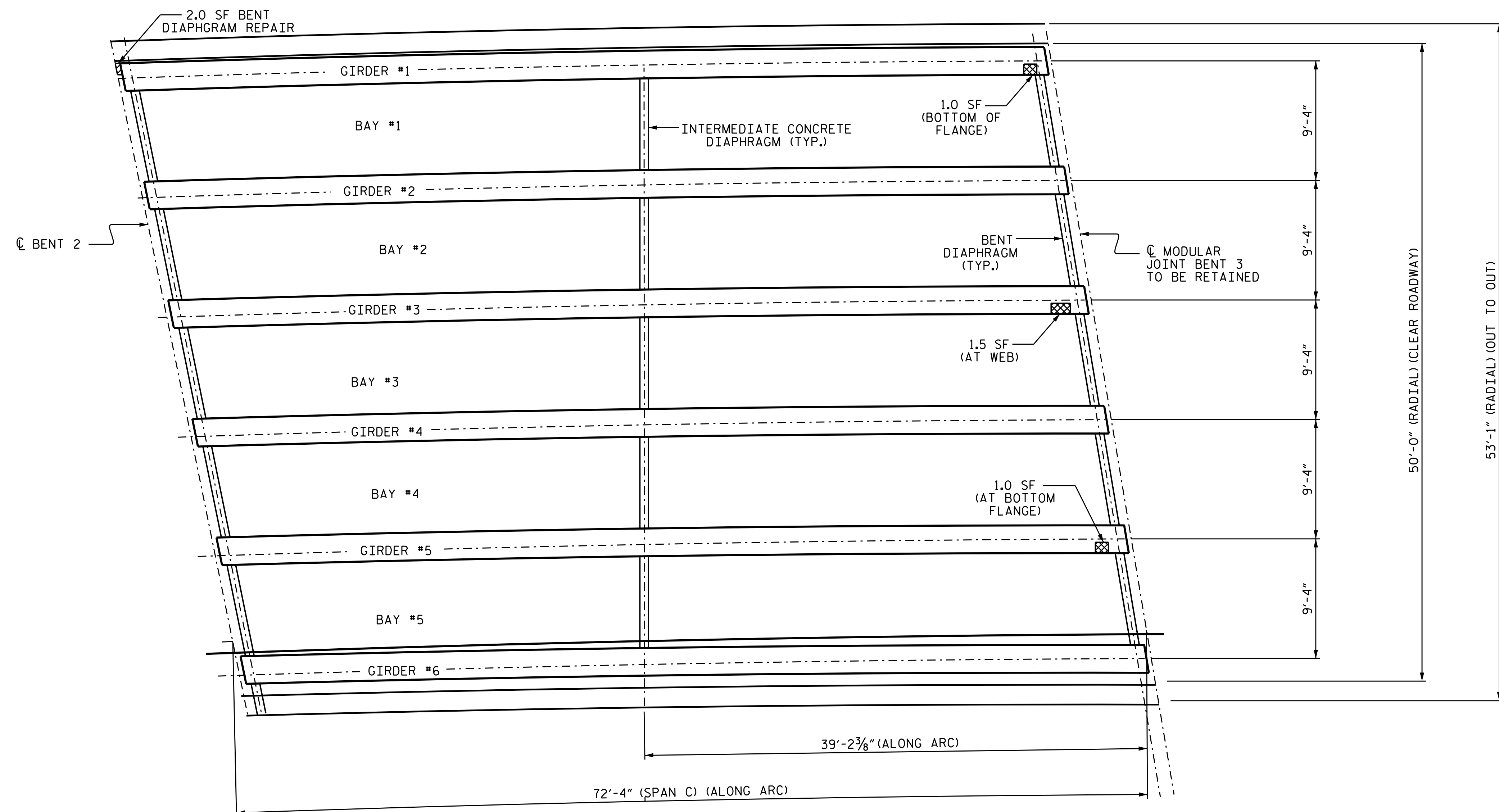
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT REPAIR DETAILS

DRAWN BY : S. T. SANDOR/ A. Y. GODFREY DATE : 02/2021
 CHECKED BY : A. G. ABRAHA DATE : 07/2021

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1			3			S8-10
2			4			TOTAL SHEETS 118



OVERHANG AND DIAPHRAGM REPAIR LOCATIONS
SPAN C

REPAIR QUANTITY TABLE FOR SPAN C				
UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	0.0	0.0		
BENT DIAPHRAGMS	2.0	1.0		
PRESTRESSED CONCRETE GIRDER REPAIRS				
GIRDERS	3.5	1.8		

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

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

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 WILL NOT DAMAGE EXISTING REINFORCING STEEL.

FOR CONCRETE GIRDER AND DIAPHRAGM REPAIR DETAILS, SEE PRESTRESSED CONCRETE GIRDER AND DIAPHRAGM REPAIR DETAILS SHEET SD-1.

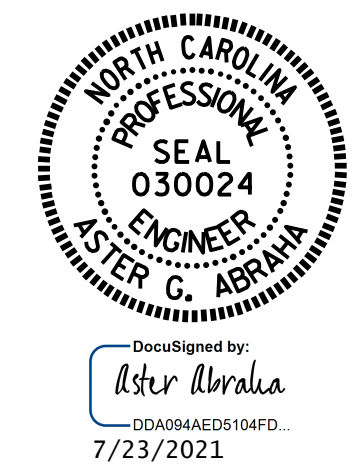
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

REPAIR KEY

- DIAPHRAGM SHOTCRETE REPAIR
- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. I-6041A
EDGEcombe COUNTY
STATION: 320320

SHEET 1 OF 5



DocuSigned by:
Aster Abraha
00408AAED510AFD
7/23/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUPERSTRUCTURE
CONCRETE REPAIRS
SPAN C**

DRAWN BY : S. T. SANDOR DATE : 09/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

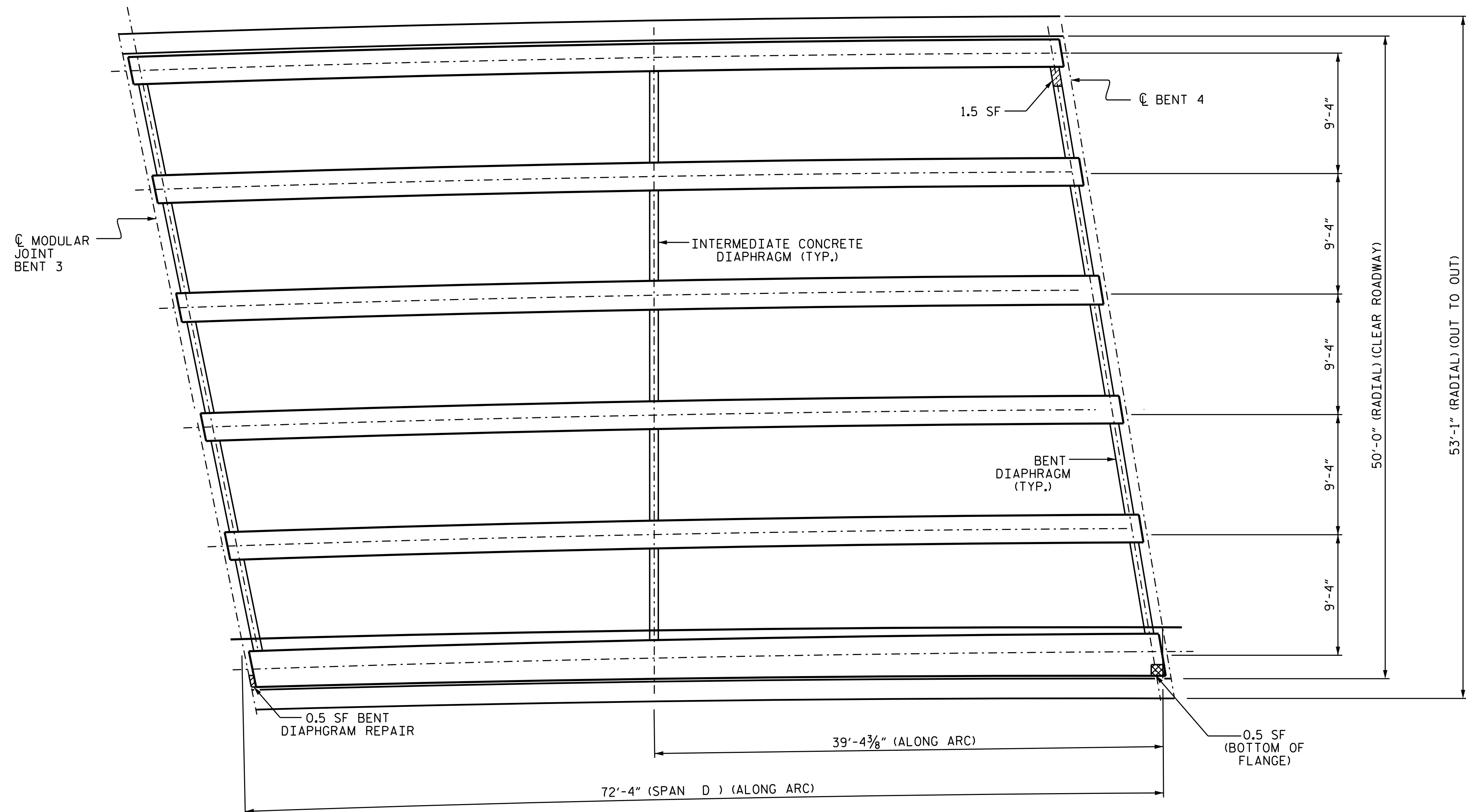
DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

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1			3			S8-11
2			4			118

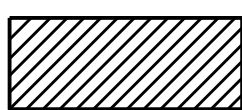
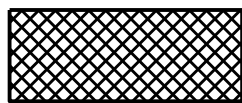
REPAIR QUANTITY TABLE FOR SPAN D

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	0.0	0.0		
BENT DIAPHRAGMS	2.0	1.0		
PRESTRESSED CONCRETE GIRDER REPAIRS				
GIRDERS	0.5	0.5		

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



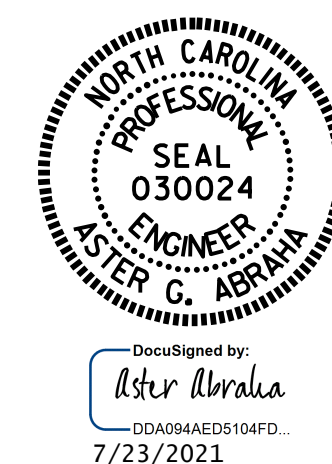
REPAIR KEY

-  - DIAPHRAGM SHOTCRETE REPAIR
-  - PRESTRESSED CONCRETE GIRDER REPAIR

OVERHANG AND DIAPHRAGM REPAIR LOCATIONS
SPAN D

PROJECT NO. I-6041A
EDGEcombe COUNTY
STATION: 320320

SHEET 2 OF 5



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
CONCRETE REPAIRS
SPAN D

DRAWN BY : S. T. SANDOR DATE : 09/2019
CHECKED BY : A. G. ABRAHA/ S. WANCE DATE : 06/2021

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1			3			S8-12
2			4			118

REPAIR QUANTITY TABLE SPAN E

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	0.0	0.0		
BENT DIAPHRAGMS	0.0	0.0		
PRESTRESSED CONCRETE GIRDER REPAIRS				
GIRDERS	1.0	0.5		

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



REPAIR KEY

- DIAPHRAGM SHOTCRETE REPAIR
- PRESTRESSED CONCRETE GIRDER REPAIR

OVERHANG AND DIAPHRAGM REPAIR LOCATIONS
SPAN E

PROJECT NO. I-6041A
EDGEcombe COUNTY
STATION: 320320

SHEET 3 OF 5



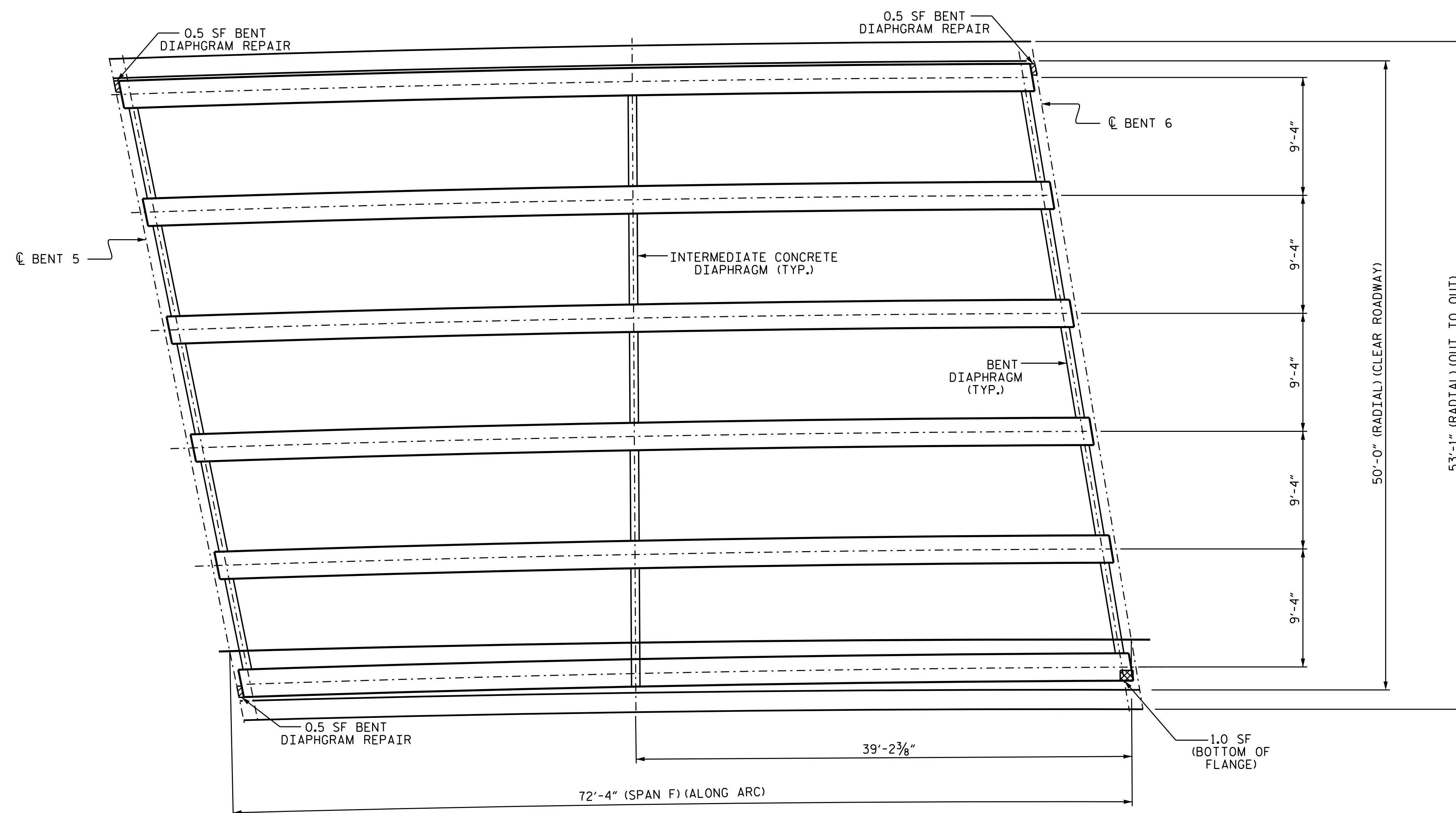
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
CONCRETE REPAIRS
SPAN E

DRAWN BY : S. T. SANDOR DATE : 09/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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1			3			S8-13
2			4			TOTAL SHEETS 118



OVERHANG AND DIAPHRAGM REPAIR LOCATIONS
SPAN F

REPAIR QUANTITY TABLE FOR SPAN F

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	0.0	0.0		
BENT DIAPHRAGMS	1.5	0.8		
PRESTRESSED CONCRETE GIRDER REPAIRS				
GIRDERS	1.0	0.5		

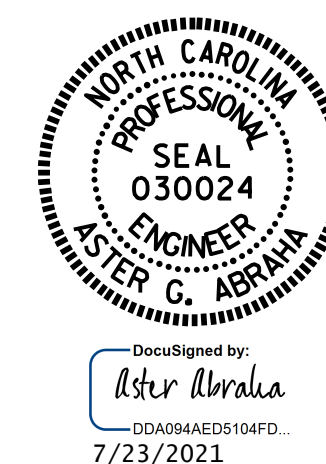
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

REPAIR KEY

- DIAPHRAGM SHOTCRETE REPAIR
- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. I-6041A
EDGEcombe COUNTY
STATION: 320320

SHEET 4 OF 5



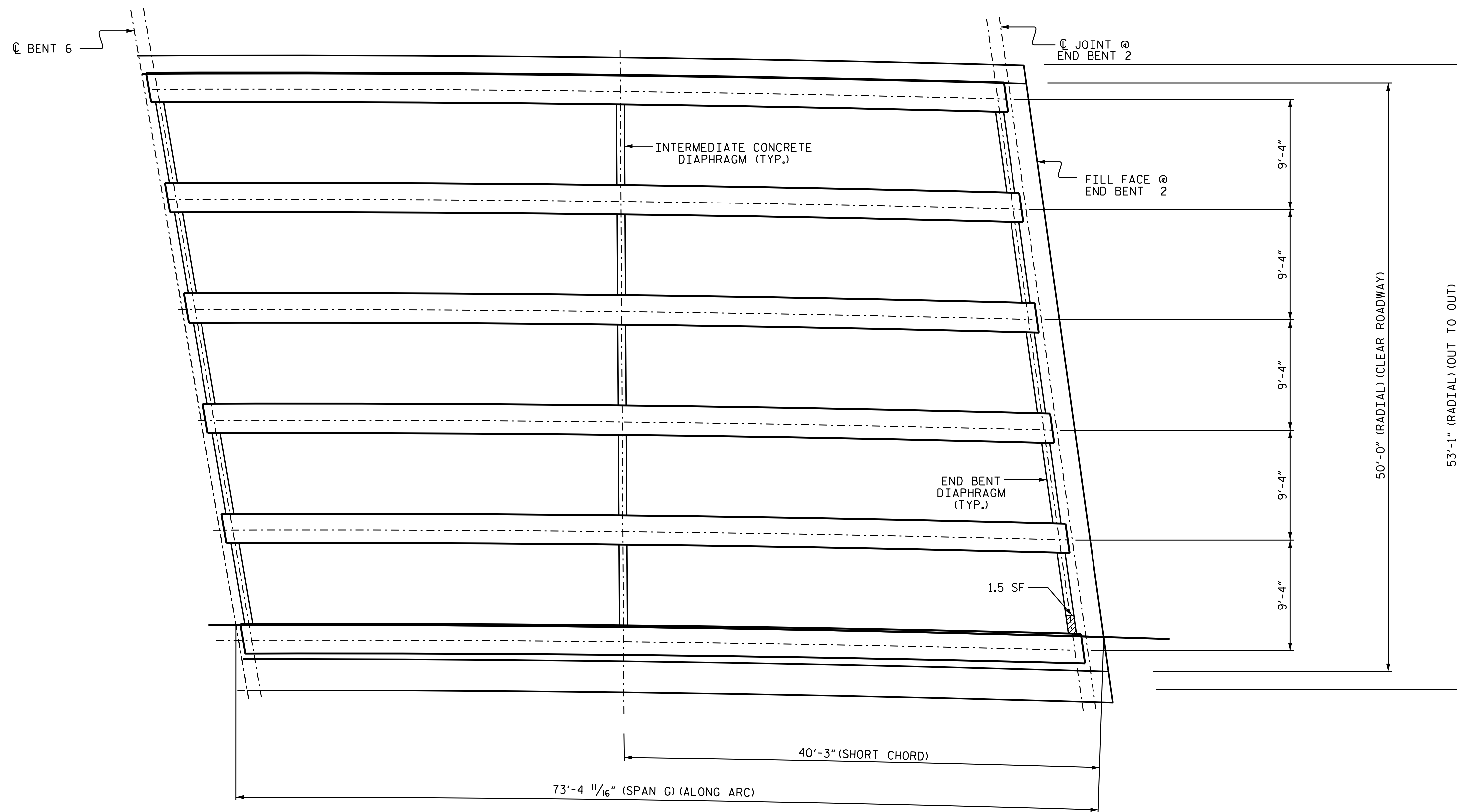
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
CONCRETE REPAIRS
SPAN F

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CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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1			3			S8-14
2			4			118



OVERHANG AND DIAPHRAGM REPAIR LOCATIONS
SPAN G

REPAIR QUANTITY TABLE FOR SPAN G

UNDERSIDE OF DECK	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK & OVERHANG	0.0	0.0		
BENT DIAPHRAGMS	1.5	0.8		
PRESTRESSED CONCRETE GIRDER REPAIRS				
GIRDERS	0.0	0.0		

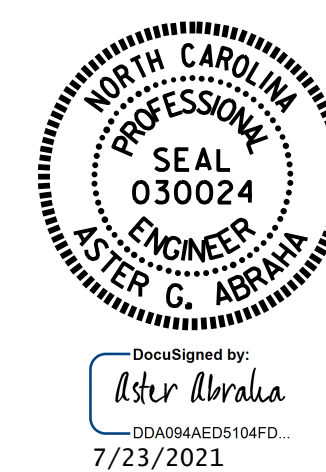
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.

REPAIR KEY

- DIAPHRAGM SHOTCRETE REPAIR
- PRESTRESSED CONCRETE GIRDER REPAIR

PROJECT NO. I-6041A
EDGEcombe COUNTY
STATION: 320320

SHEET 5 OF 5



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUPERSTRUCTURE
CONCRETE REPAIRS
SPAN G**

DRAWN BY : S. T. SANDOR DATE : 09/2019
CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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REVISIONS						SHEET NO.
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1			3			S8-15
2			4			118

REPAIR QUANTITY TABLE

REPAIRS END BENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		

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

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

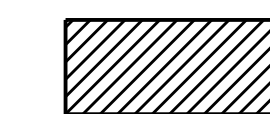
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR KEY

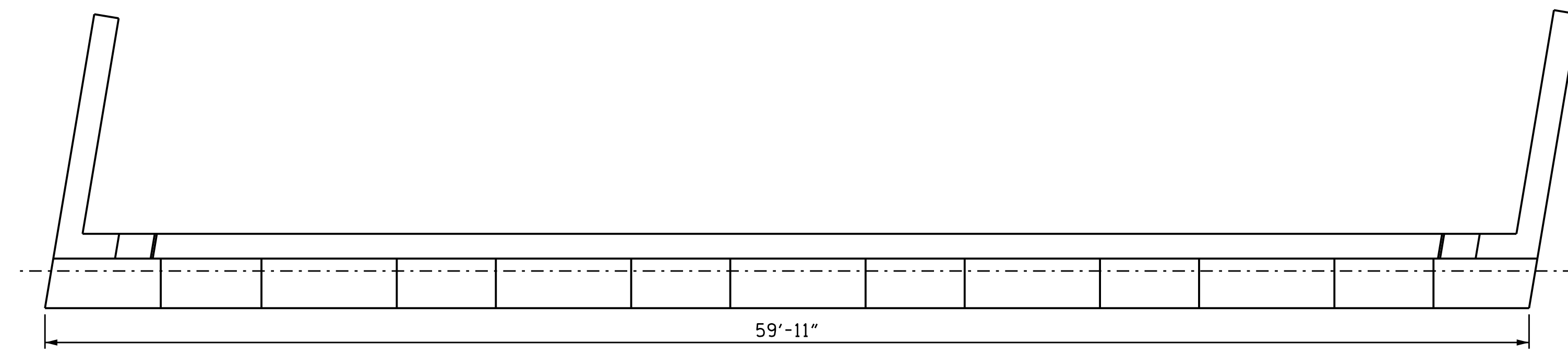


CONCRETE REPAIR AREA (FORM AND POUR)

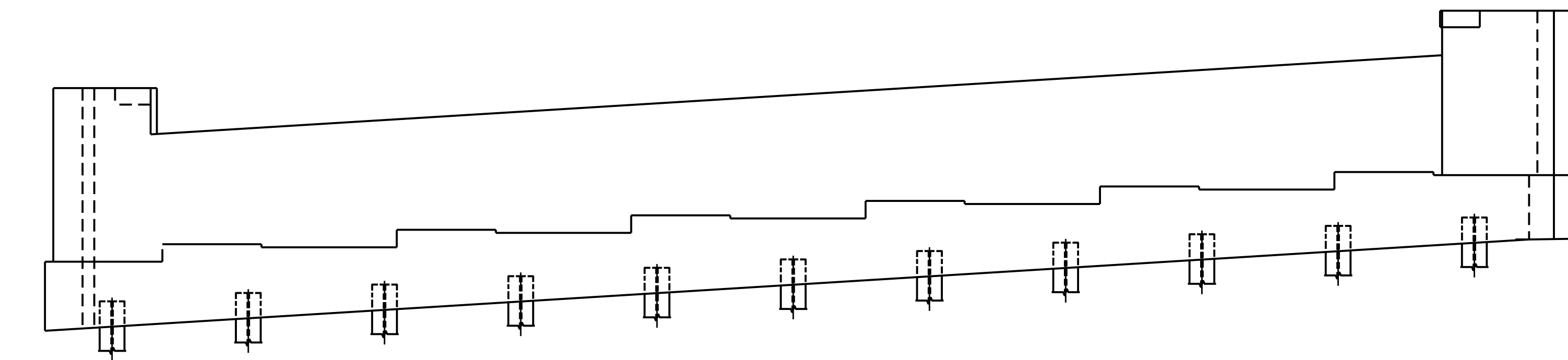


SHOTCRETE REPAIR AREA

NO DEFICIENCIES NOTED DURING FIELD INSPECTION. THE CONTRACTOR AND ENGINEER SHALL RE-INSPECT THE END BENTS FOR POTENTIAL REPAIRS.

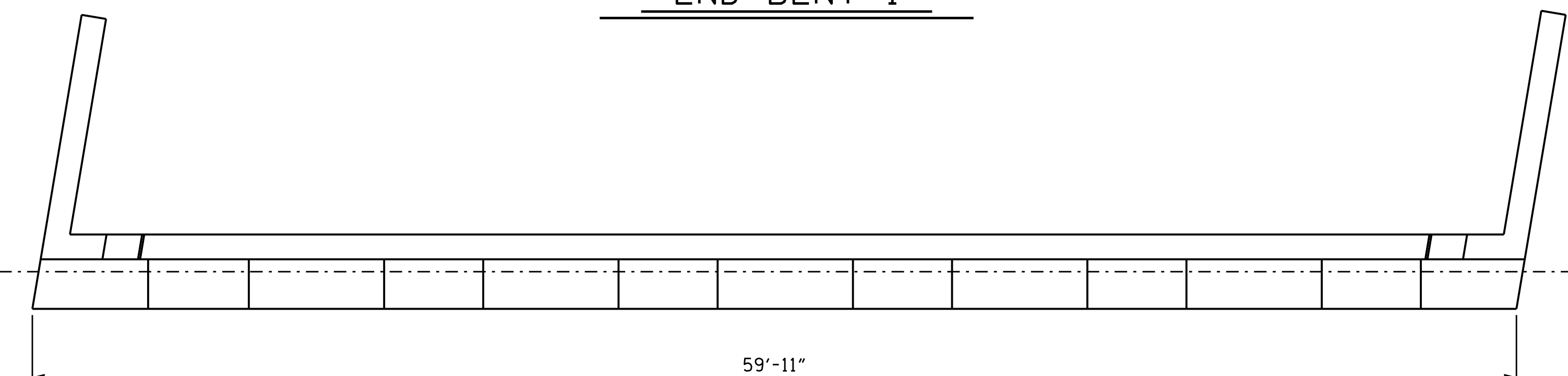


PLAN

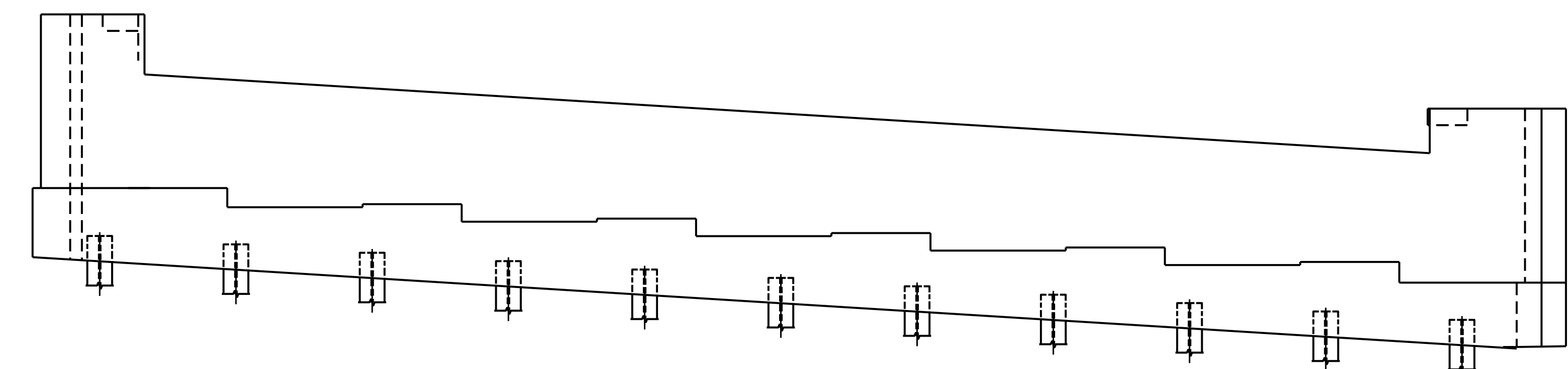


ELEVATION

END BENT 1



PLAN



ELEVATION

END BENT 2

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320320



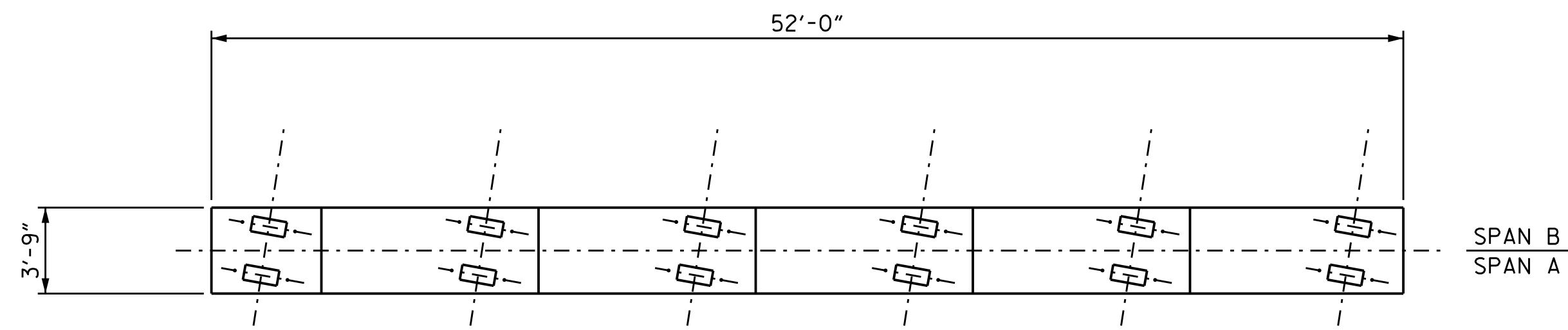
DocuSigned by:
 Aster Abraha
 00408AAED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT REPAIRS

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1			3			S8-16
2			4			118



PLAN
TOP OF CAP

NOTES:

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

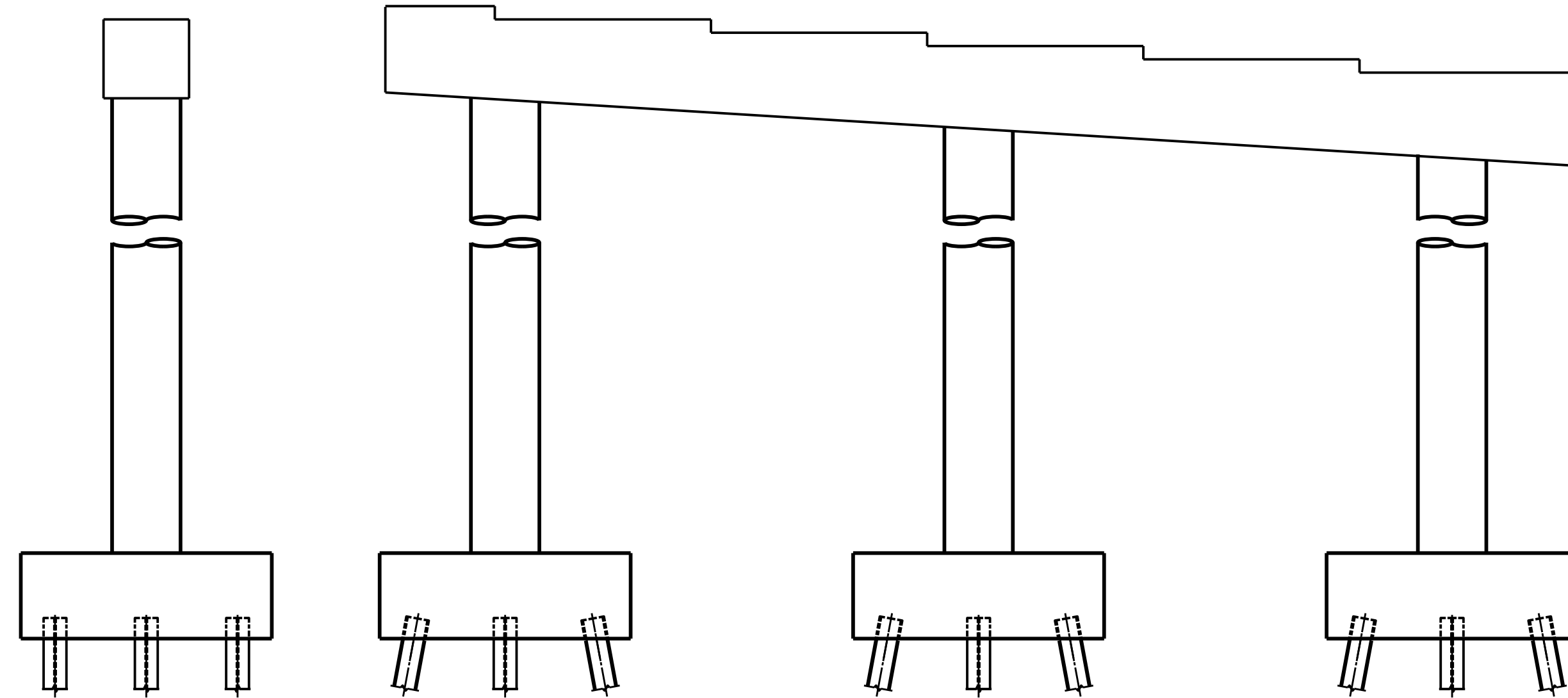
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

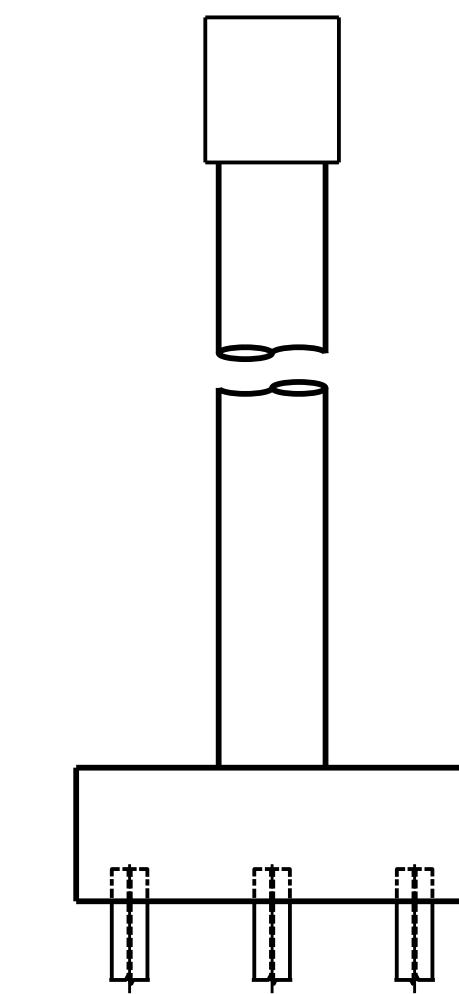
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

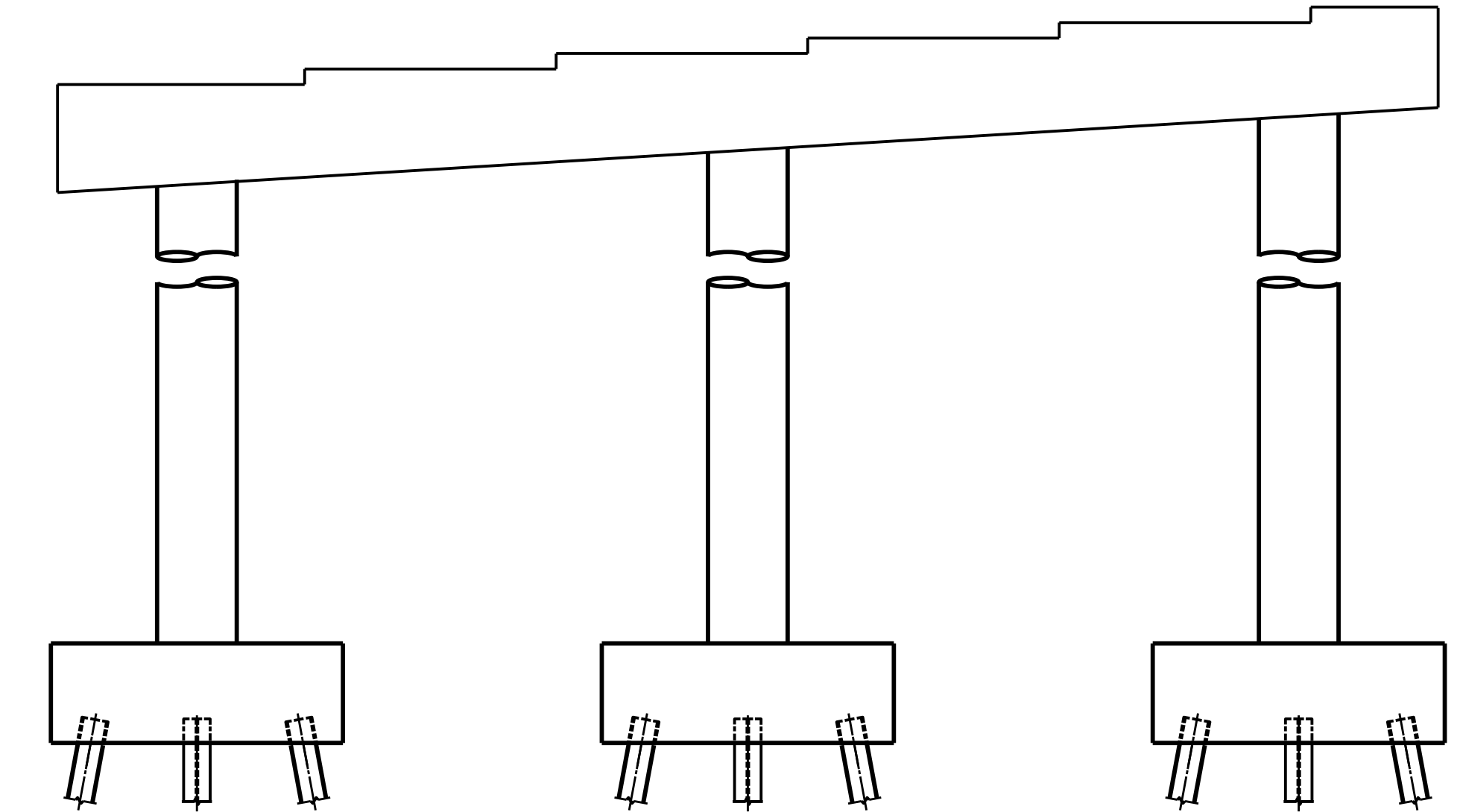


END VIEW
NORTH END

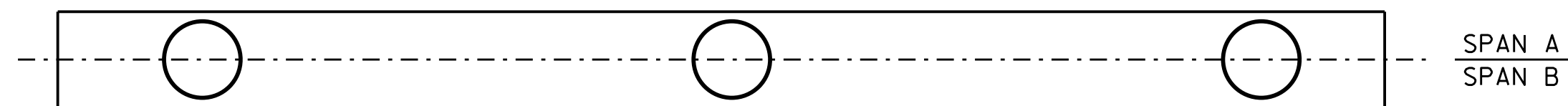
ELEVATION
WEST SIDE



END VIEW
SOUTH END



ELEVATION
EAST SIDE



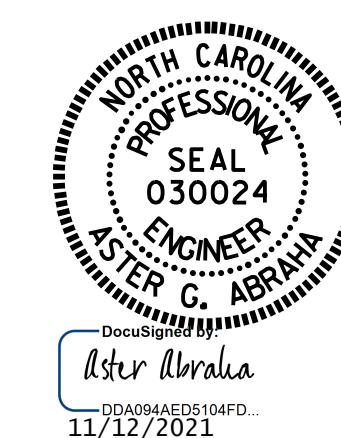
PLAN
BOTTOM OF CAP

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

SHEET 1 OF 6



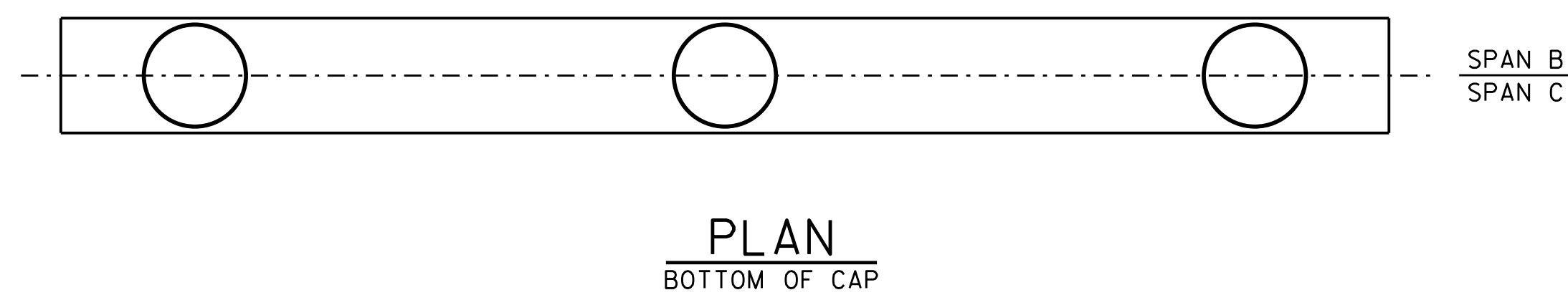
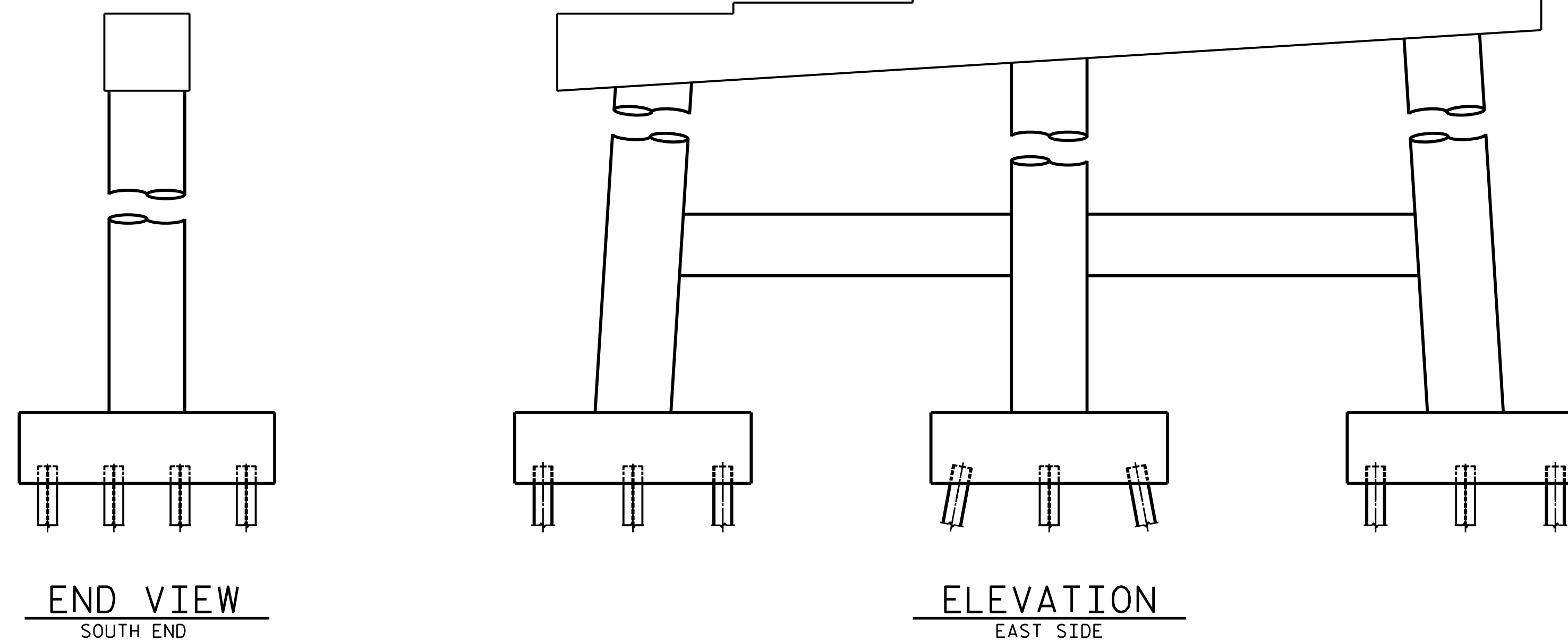
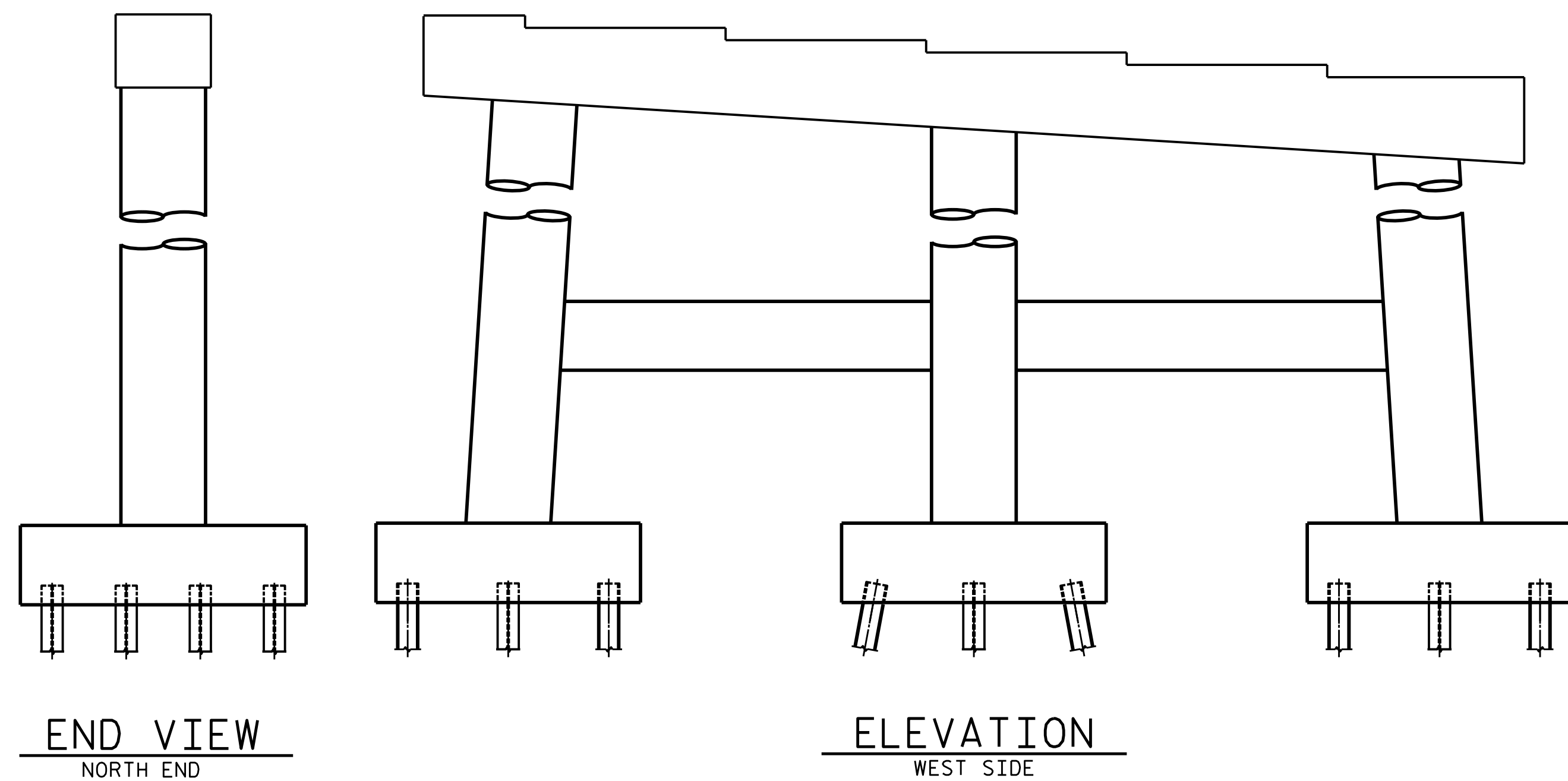
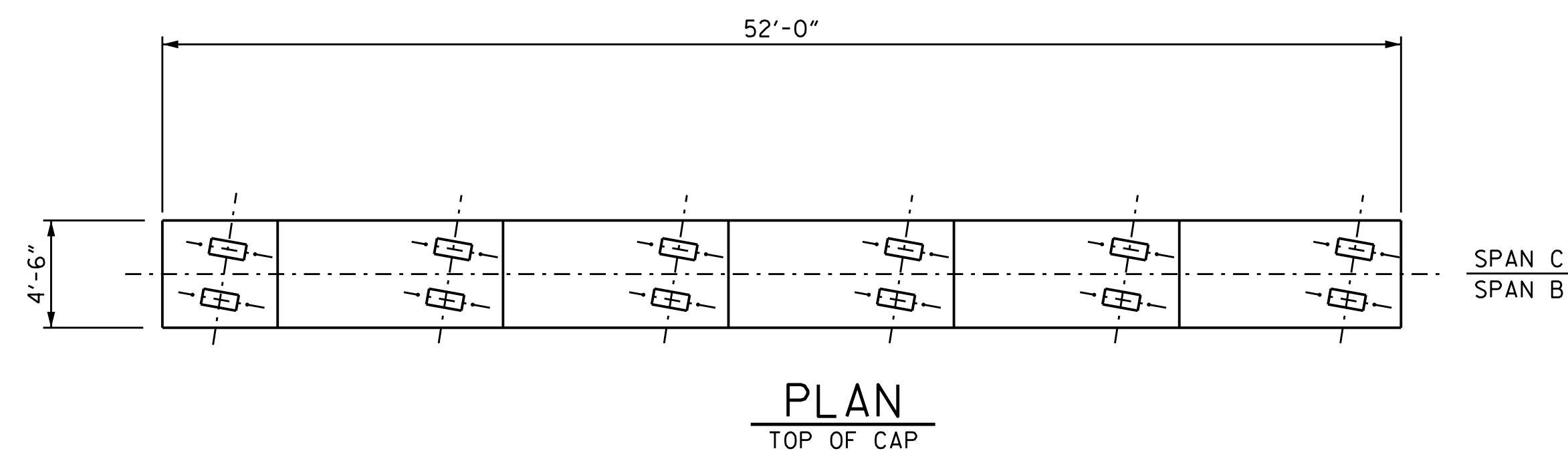
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 1**

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

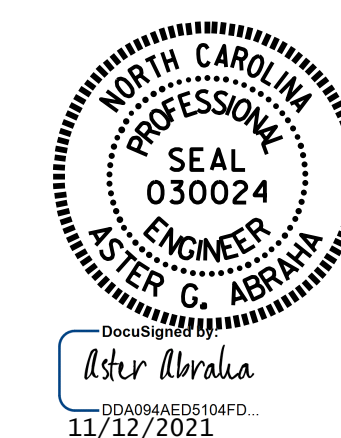
REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA



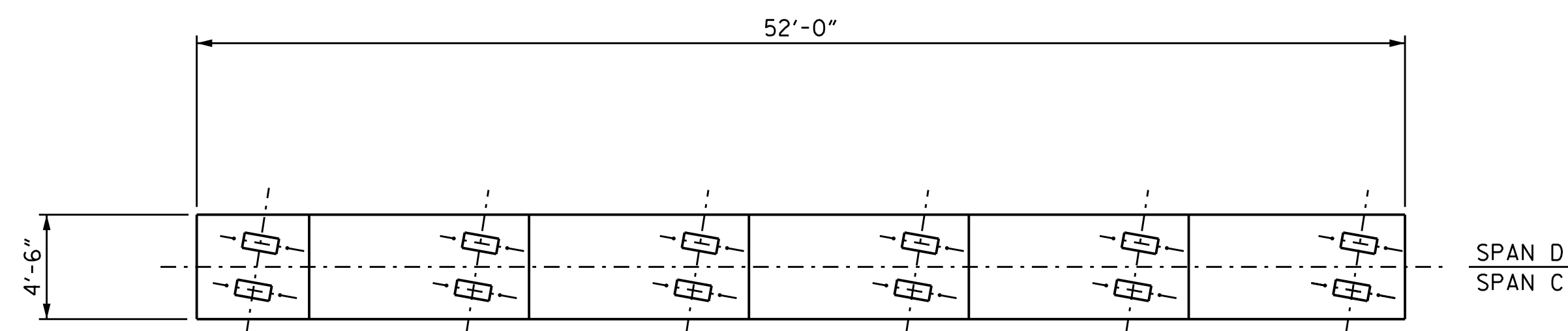
PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320
 SHEET 2 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 2

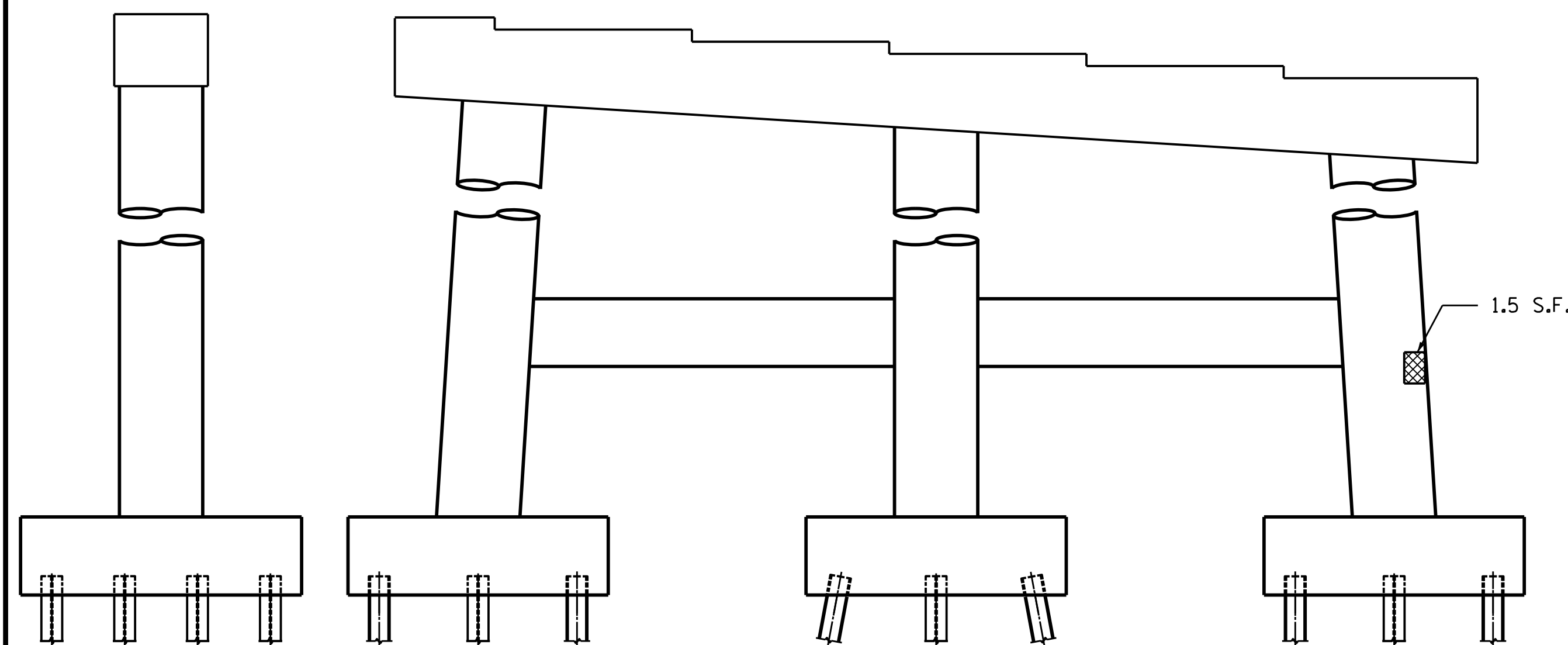
DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S8-18
2			4			TOTAL SHEETS 118

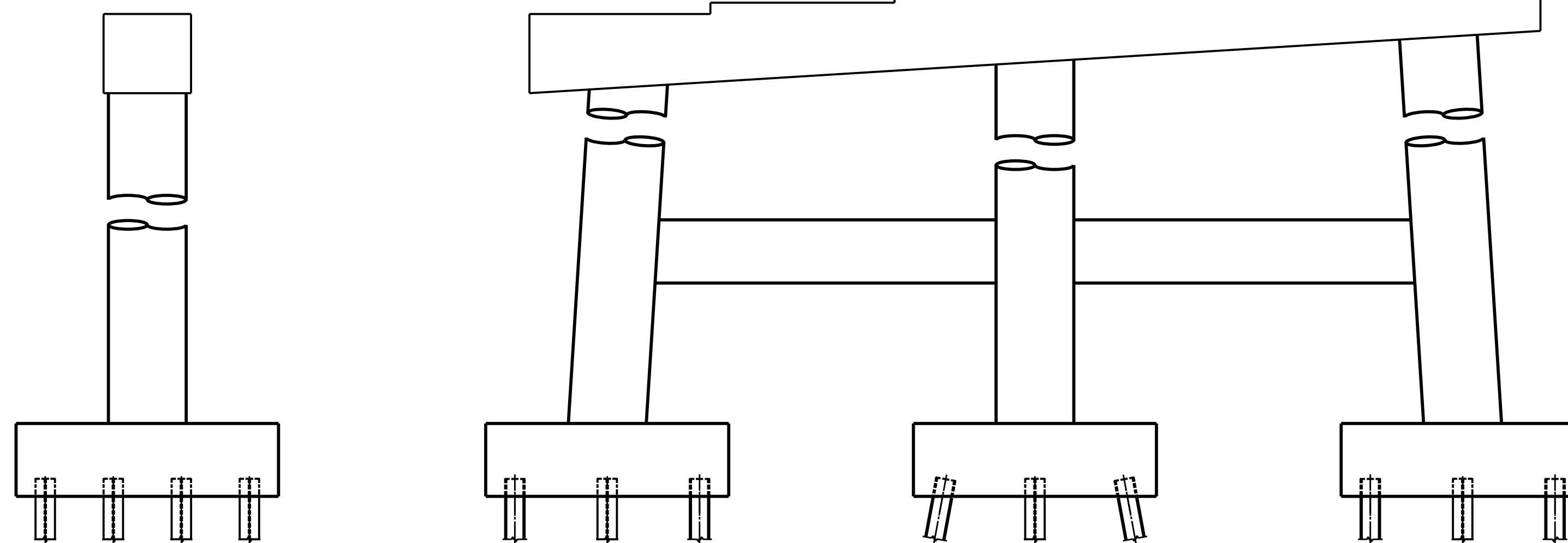


PLAN
TOP OF CAP



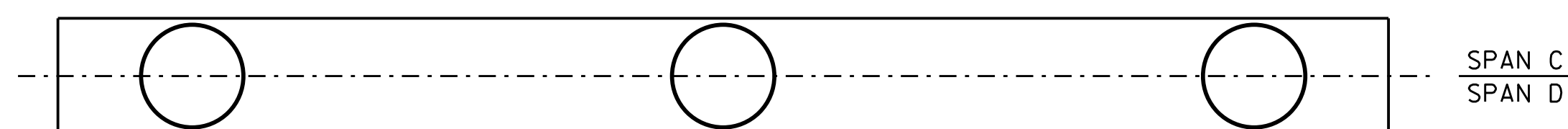
END VIEW
NORTH END

ELEVATION
WEST SIDE



END VIEW
SOUTH END

ELEVATION
EAST SIDE



PLAN
BOTTOM OF CAP

NOTES:

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

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FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

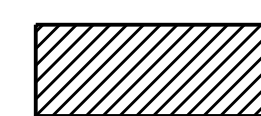
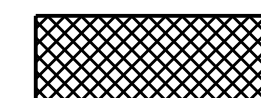
CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	1.5	0.8		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

REPAIR KEY

-  CONCRETE REPAIR AREA (FORM AND POUR)
-  SHOTCRETE REPAIR AREA



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

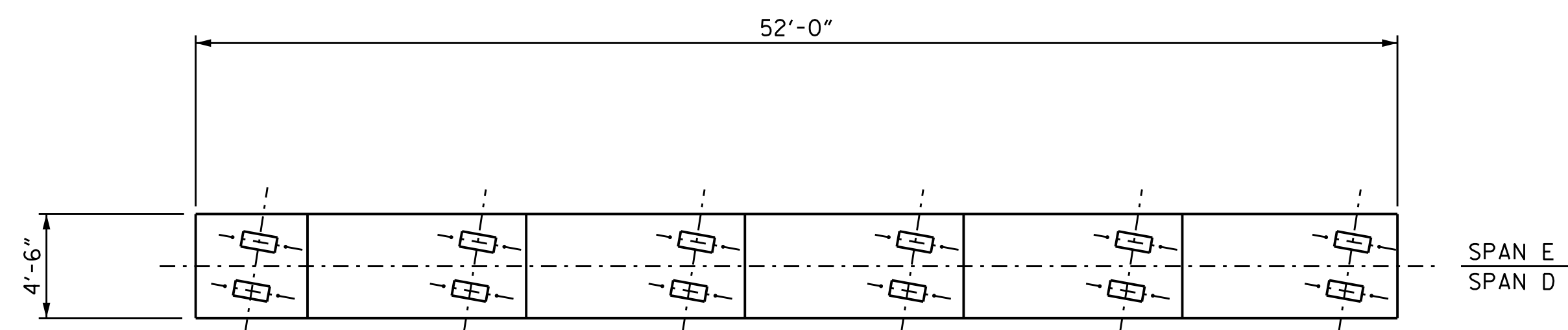
SHEET 3 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 3

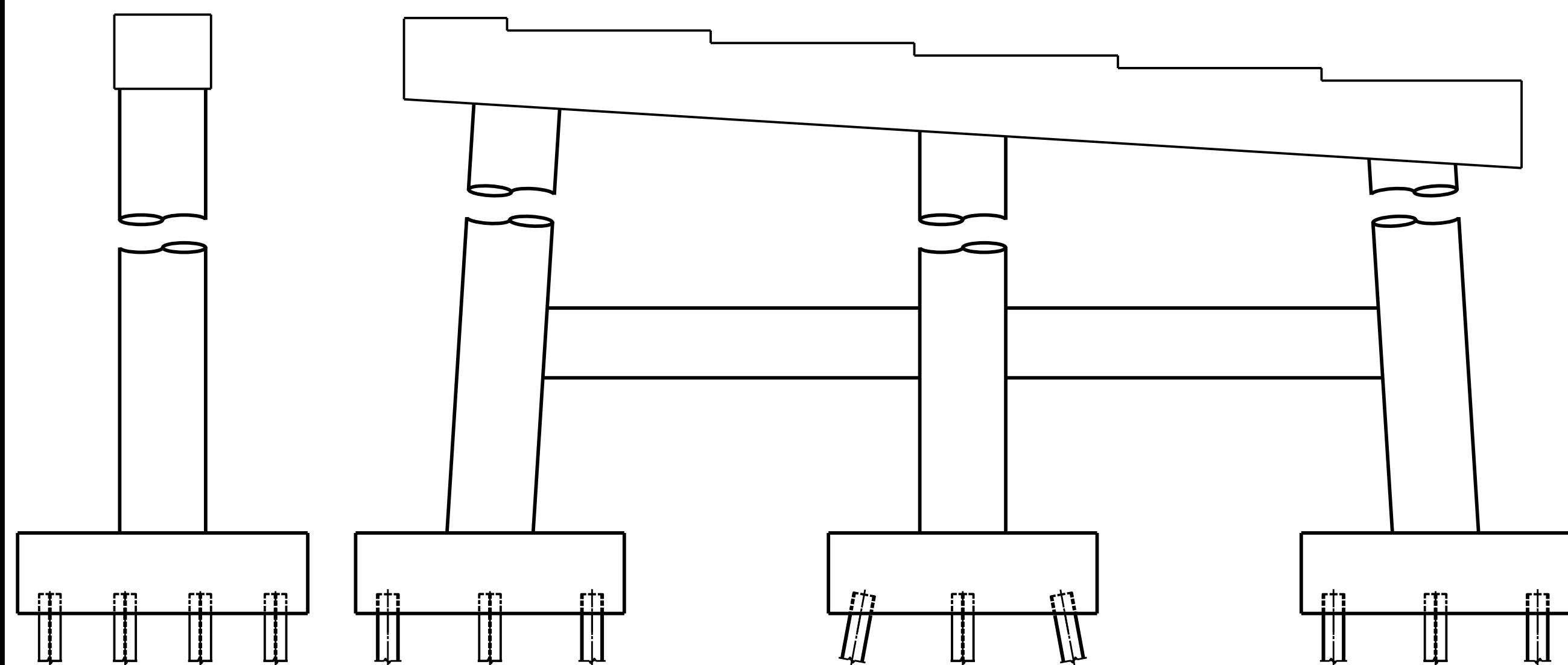
DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S8-19
2			4			118

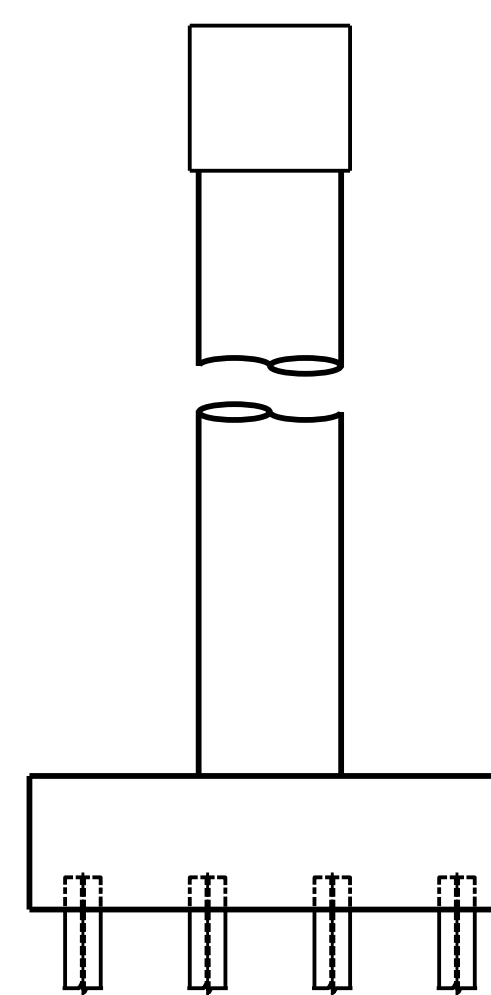


PLAN
TOP OF CAP

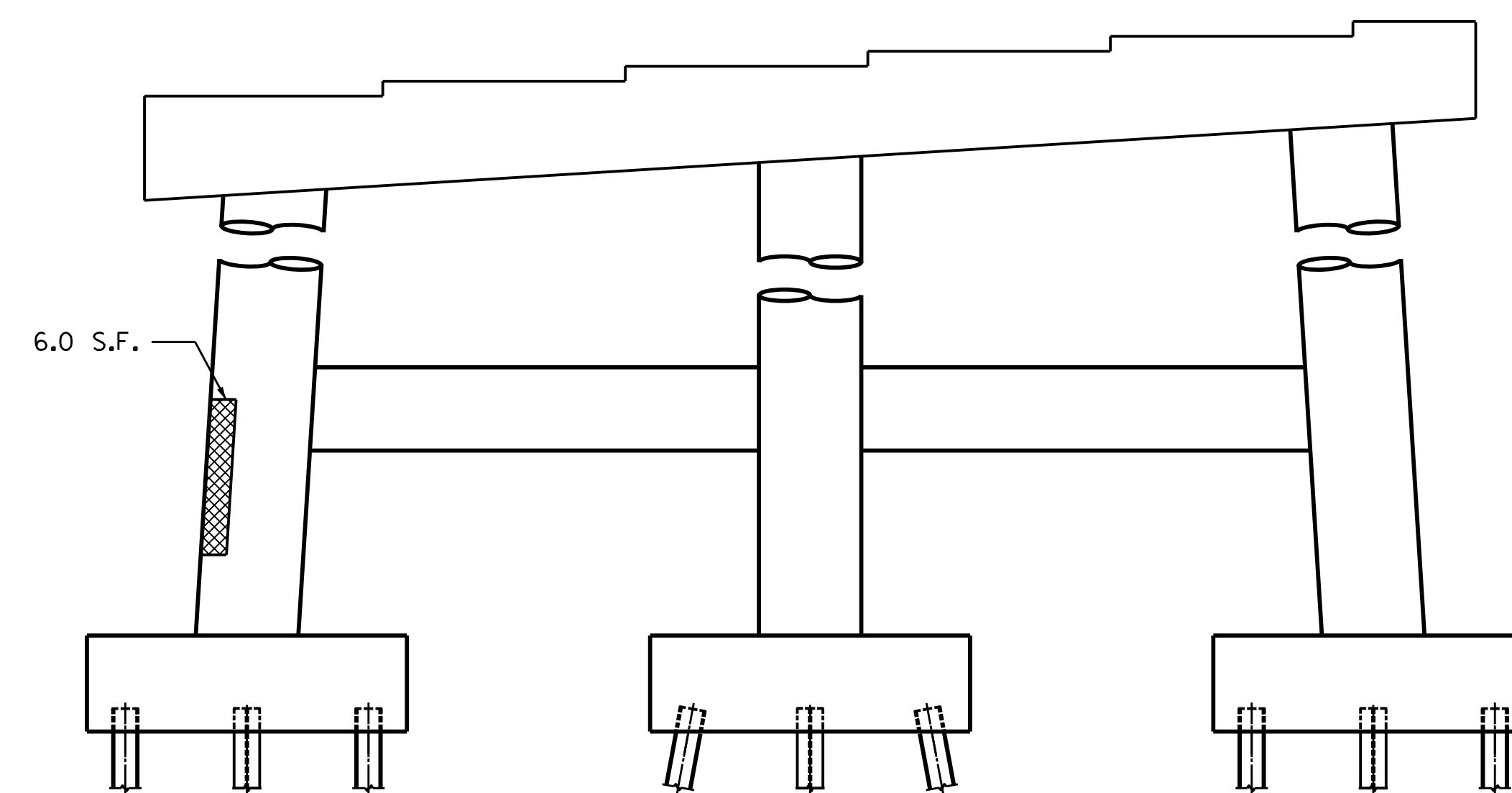


END VIEW
NORTH END

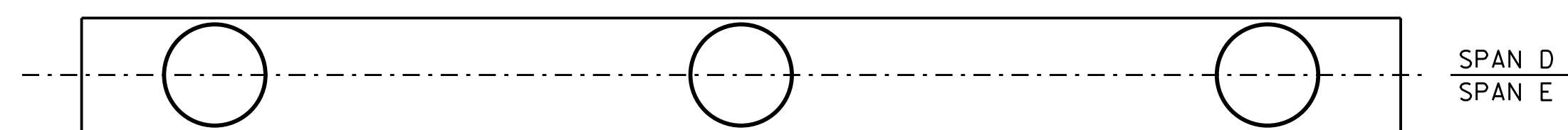
ELEVATION
WEST SIDE



END VIEW
SOUTH END



ELEVATION
EAST SIDE



PLAN
BOTTOM OF CAP

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	6.0	3.0		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA



PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

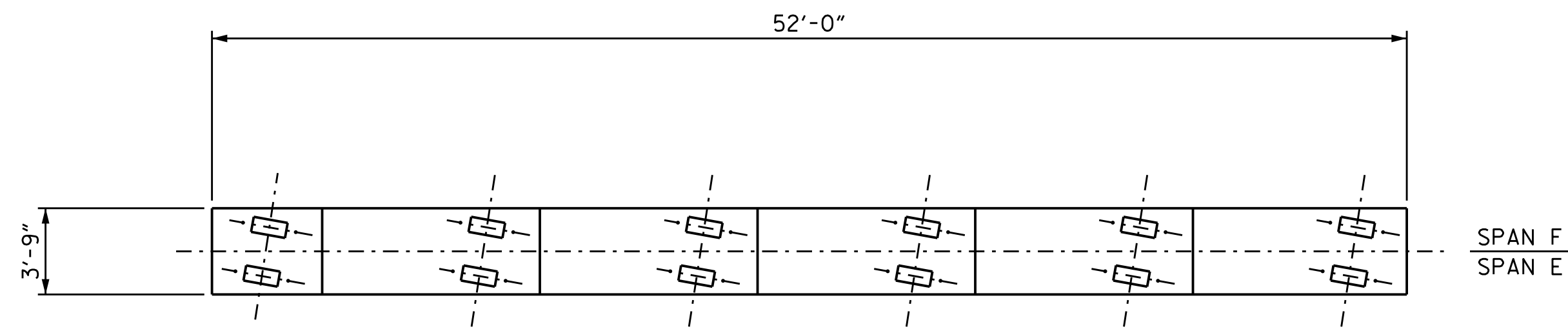
SHEET 4 OF 6

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 4

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S8-20
2			4			118



PLAN
TOP OF CAP

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

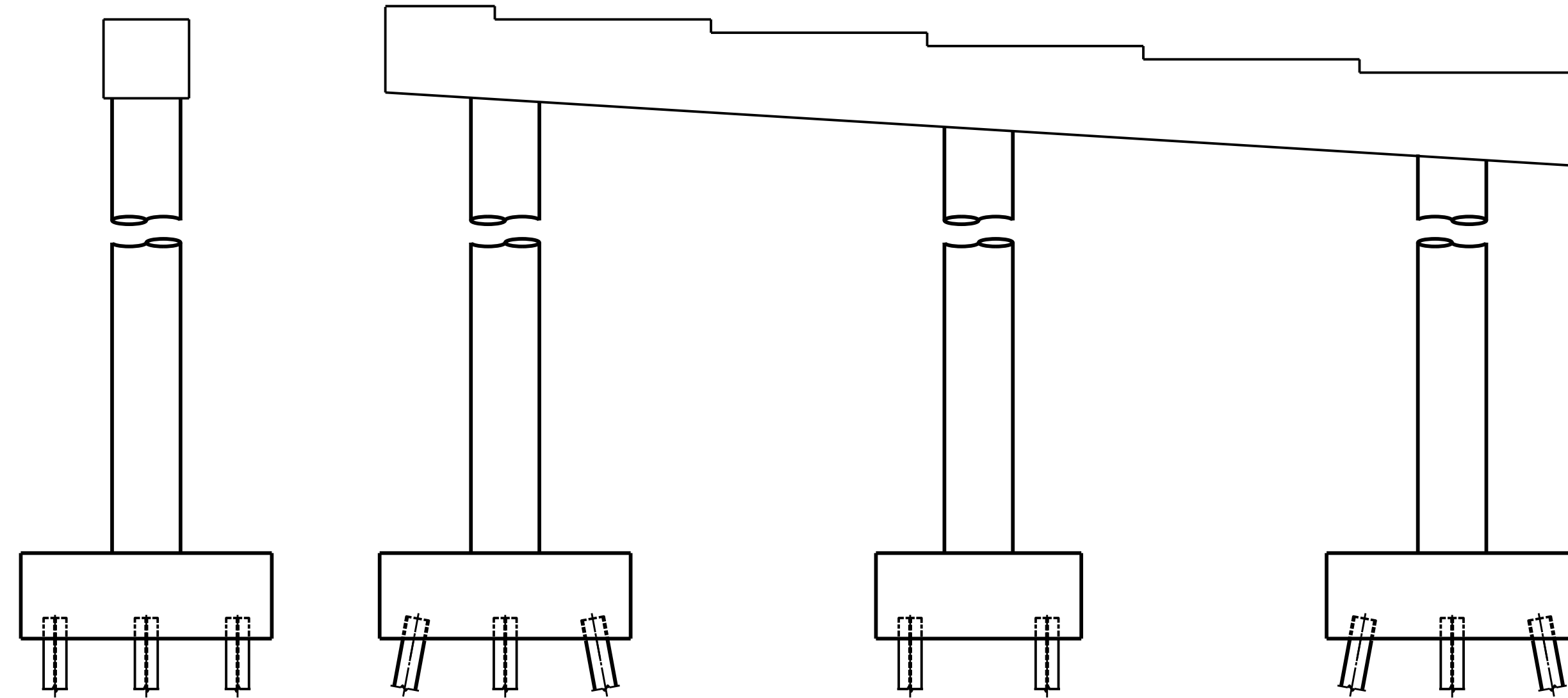
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

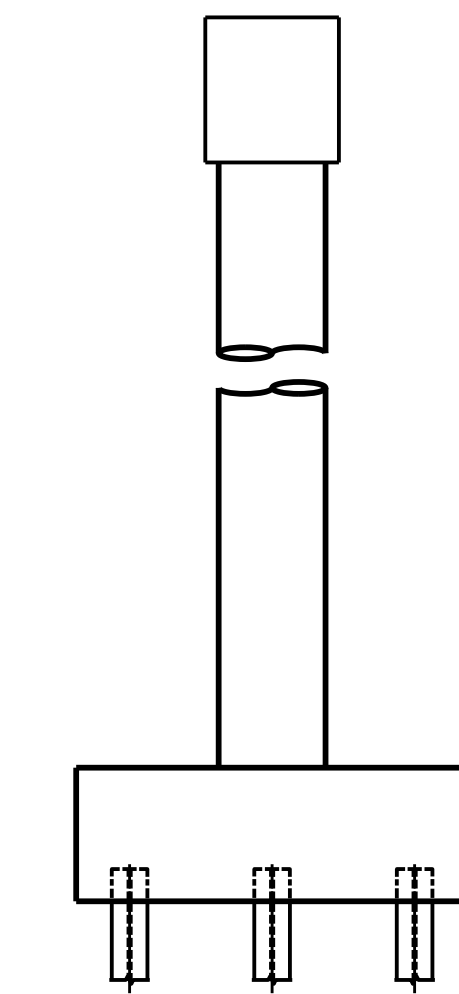
BENT 5	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	21.0	10.5		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

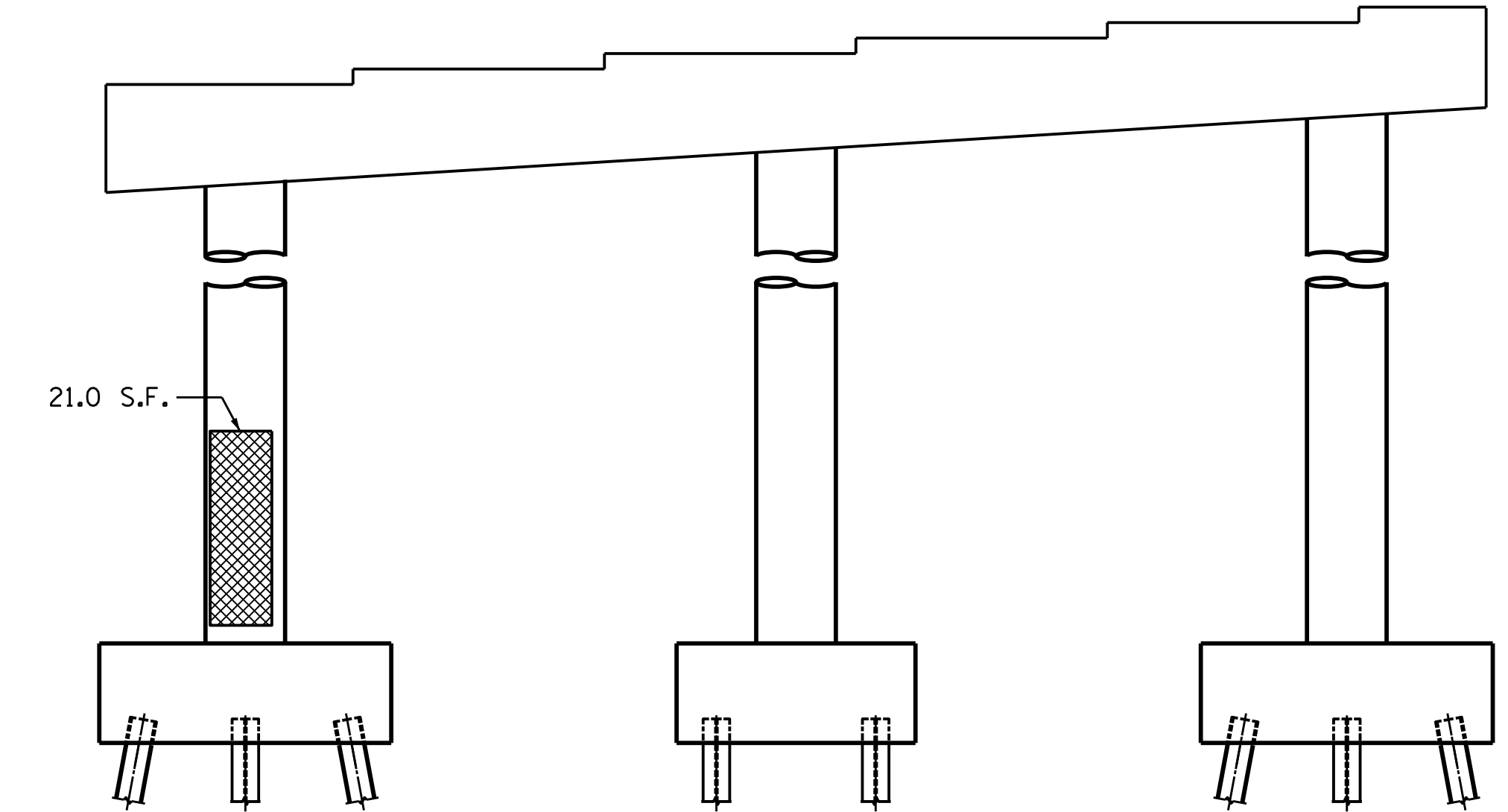


END VIEW
NORTH END

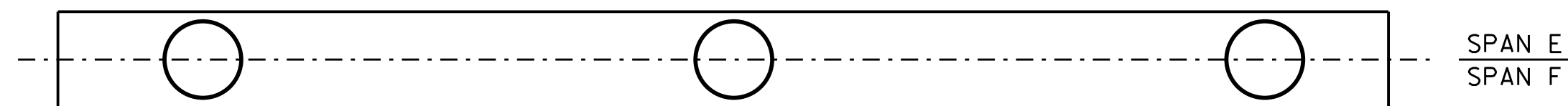
ELEVATION
WEST SIDE



END VIEW
SOUTH END



ELEVATION
EAST SIDE



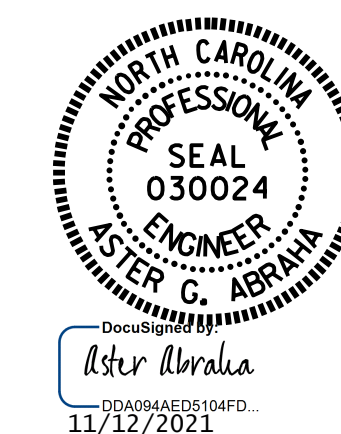
PLAN
BOTTOM OF CAP

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

SHEET 5 OF 6



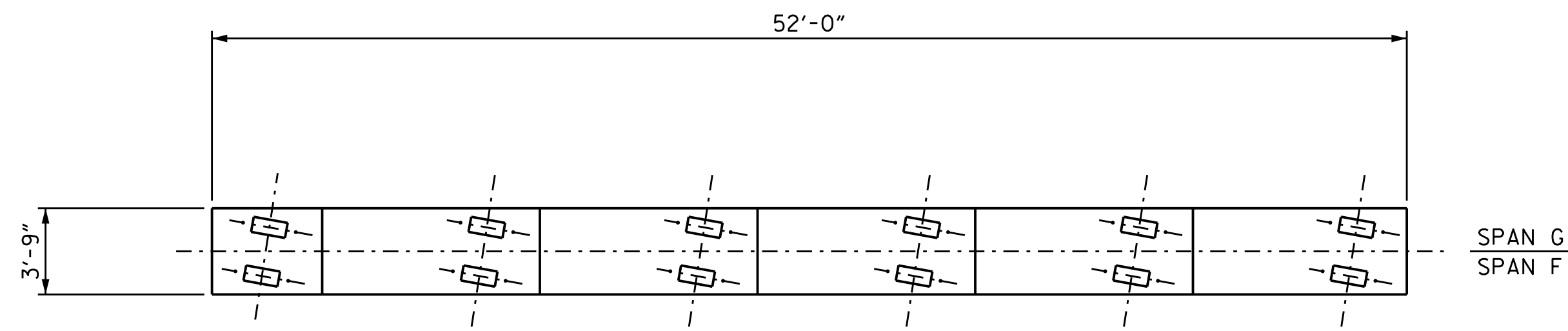
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
BENT 5**

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-21
1			3			TOTAL SHEETS
2			4			118



PLAN
TOP OF CAP

NOTES:

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

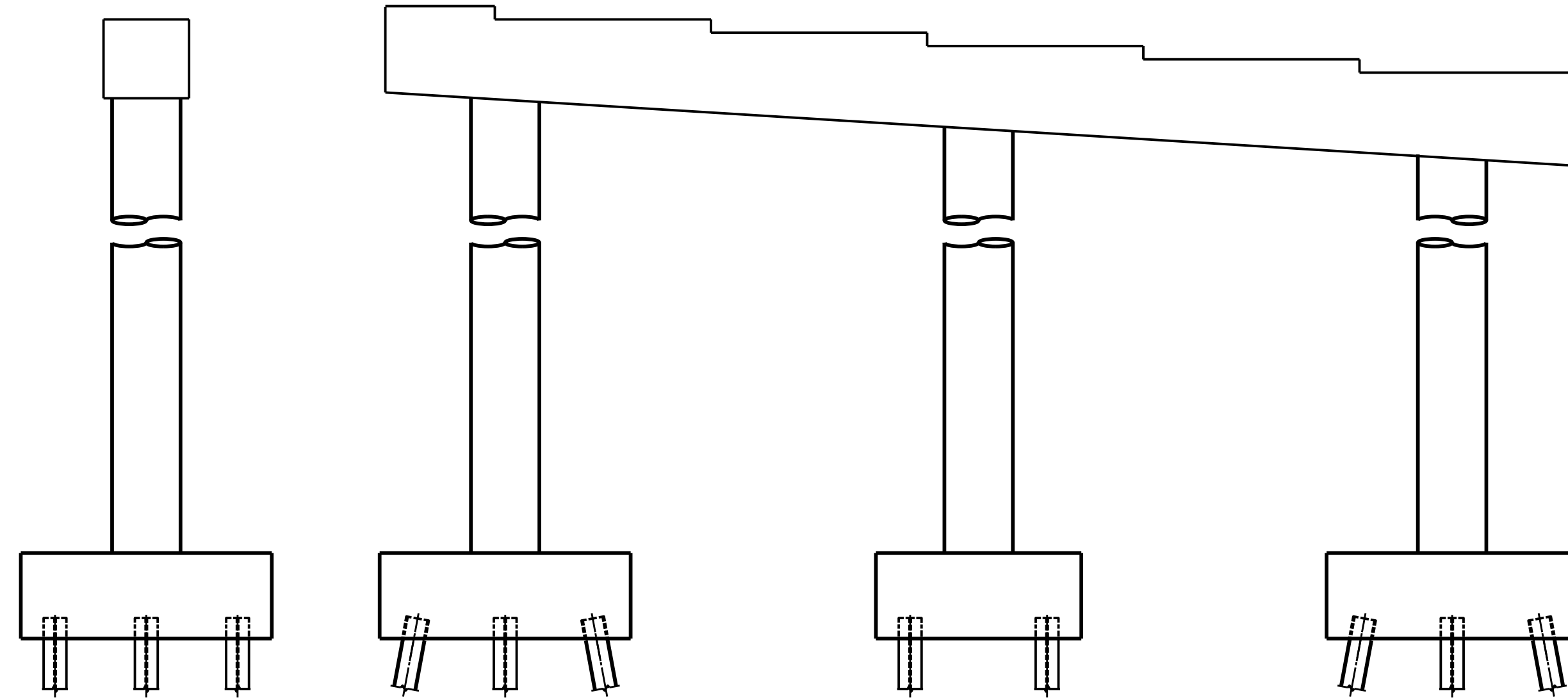
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

REPAIR QUANTITY TABLE

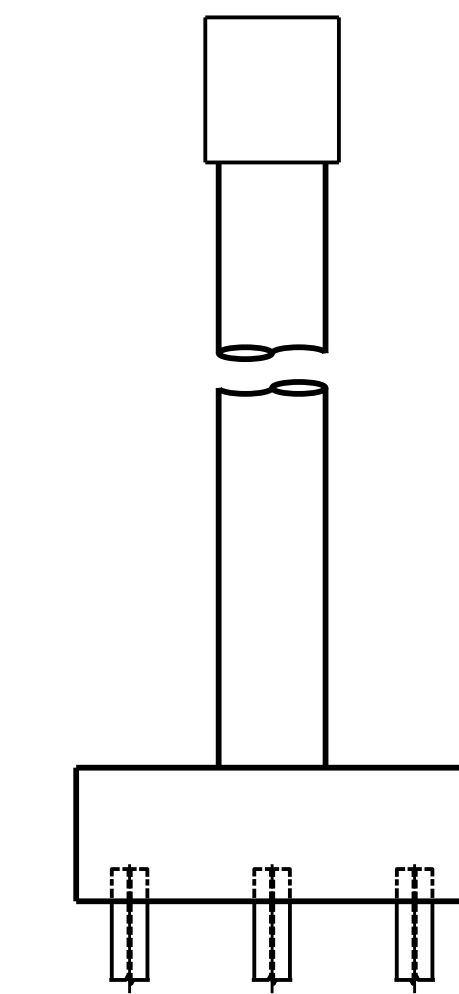
BENT 6	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIR	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	10.5	5.3		
CONCRETE REPAIR				
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL FACE)	0.0	0.0		
COLUMN	0.0	0.0		

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

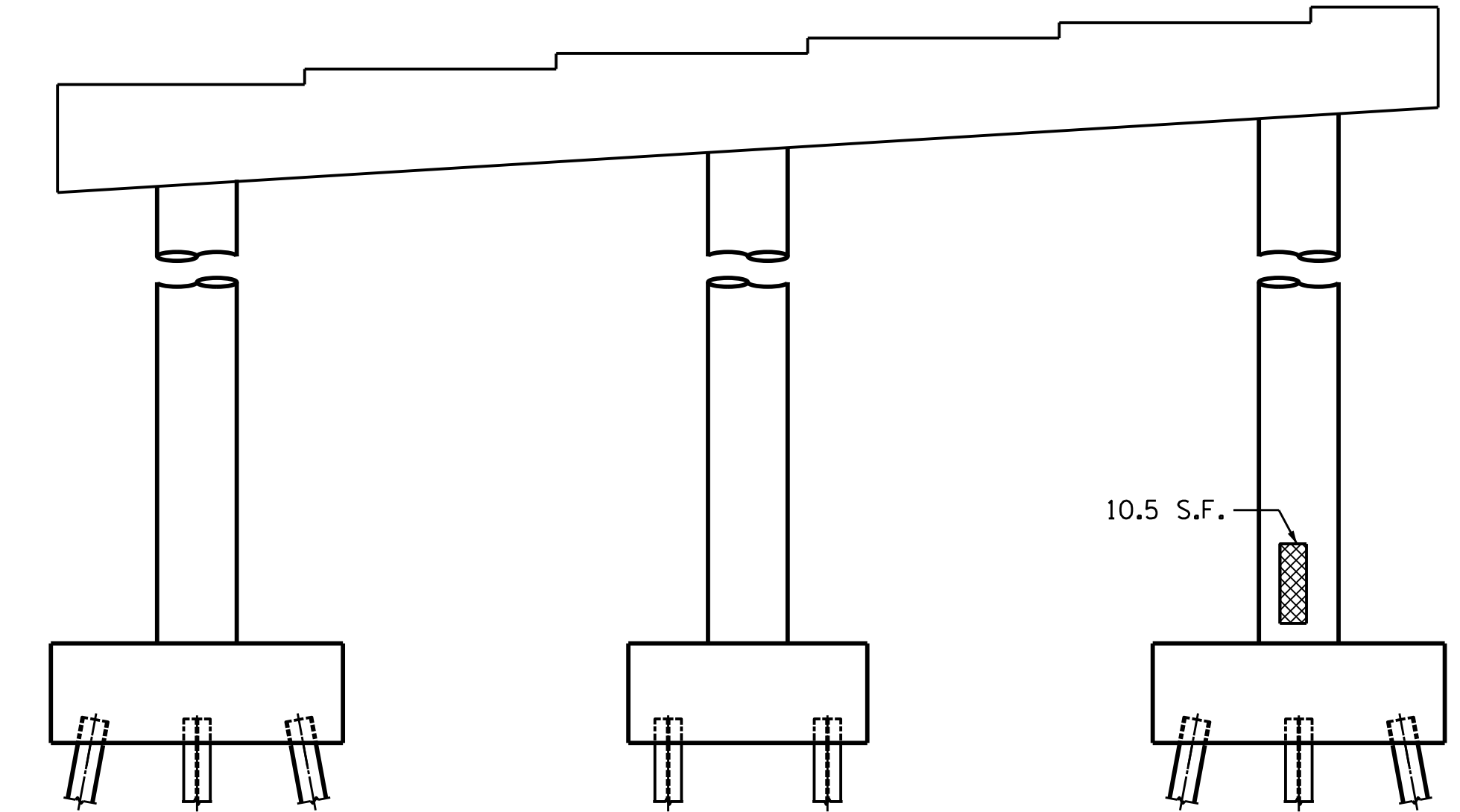


END VIEW
NORTH END

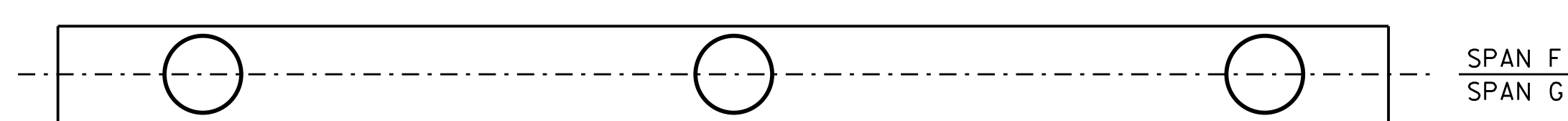
ELEVATION
WEST SIDE



END VIEW
SOUTH END



ELEVATION
EAST SIDE



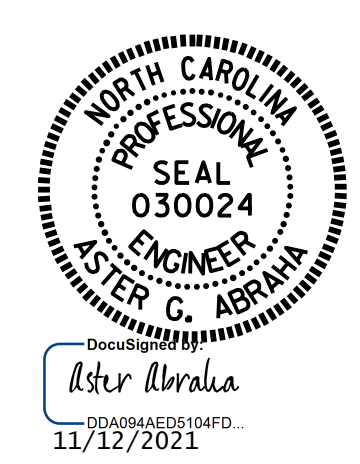
PLAN
BOTTOM OF CAP

REPAIR KEY

- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320320

SHEET 6 OF 6



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 BENT 6**

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 06/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

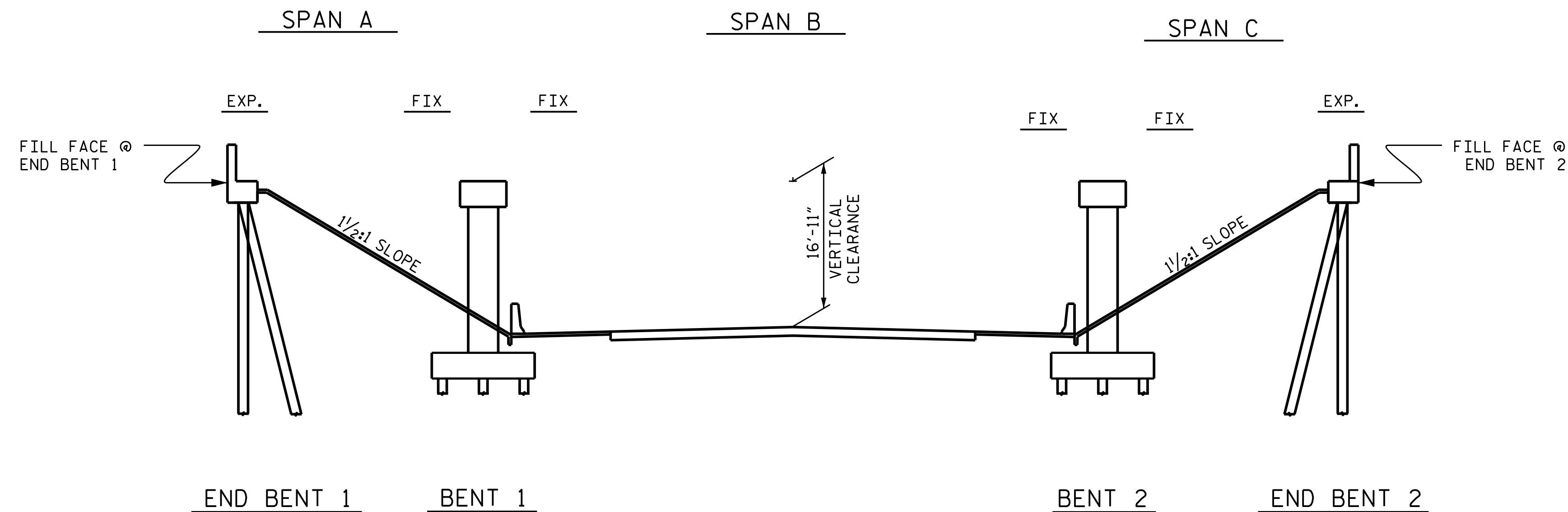
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S8-22
2			4			TOTAL SHEETS 118

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC CONCRETE AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.

NOTES

GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 11/13/2018 AND 11/10/2020
 BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

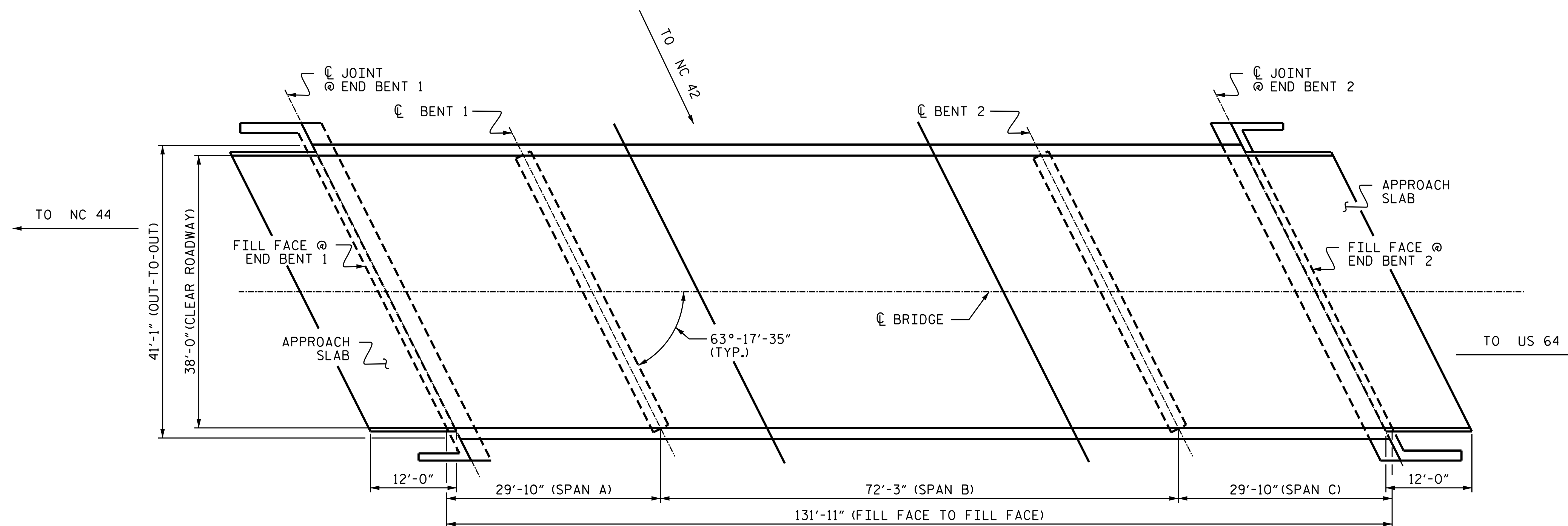


SECTION ALONG C ROADWAY

(SECTION @ BENT AND END BENTS ARE AT RIGHT ANGLES)

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

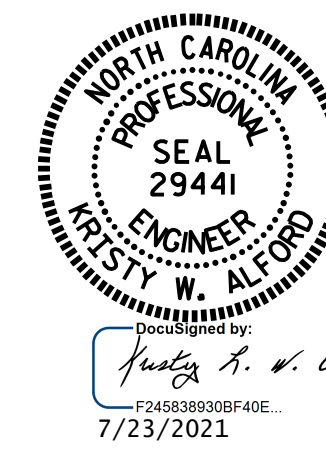
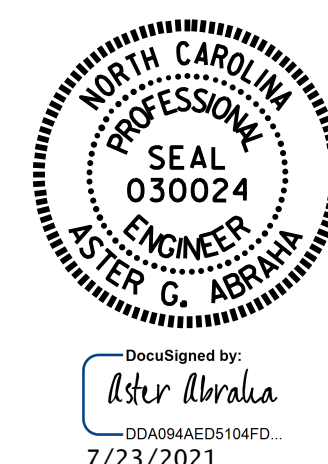
Resident Engineer _____ Date _____



PLAN

(COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320325



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE NO. 325
 ON RELOCATED US 64 EBL
 BETWEEN US 64 & NC 42

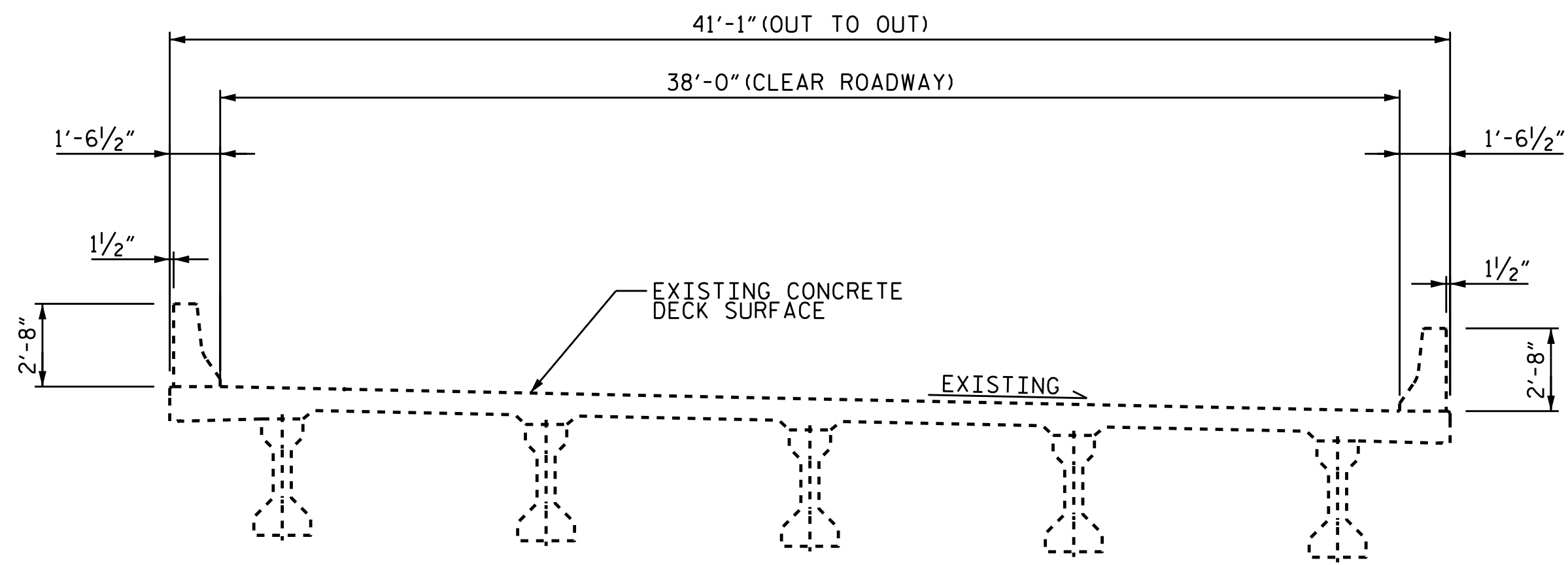
DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/14/19

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S9-1
2			4			118

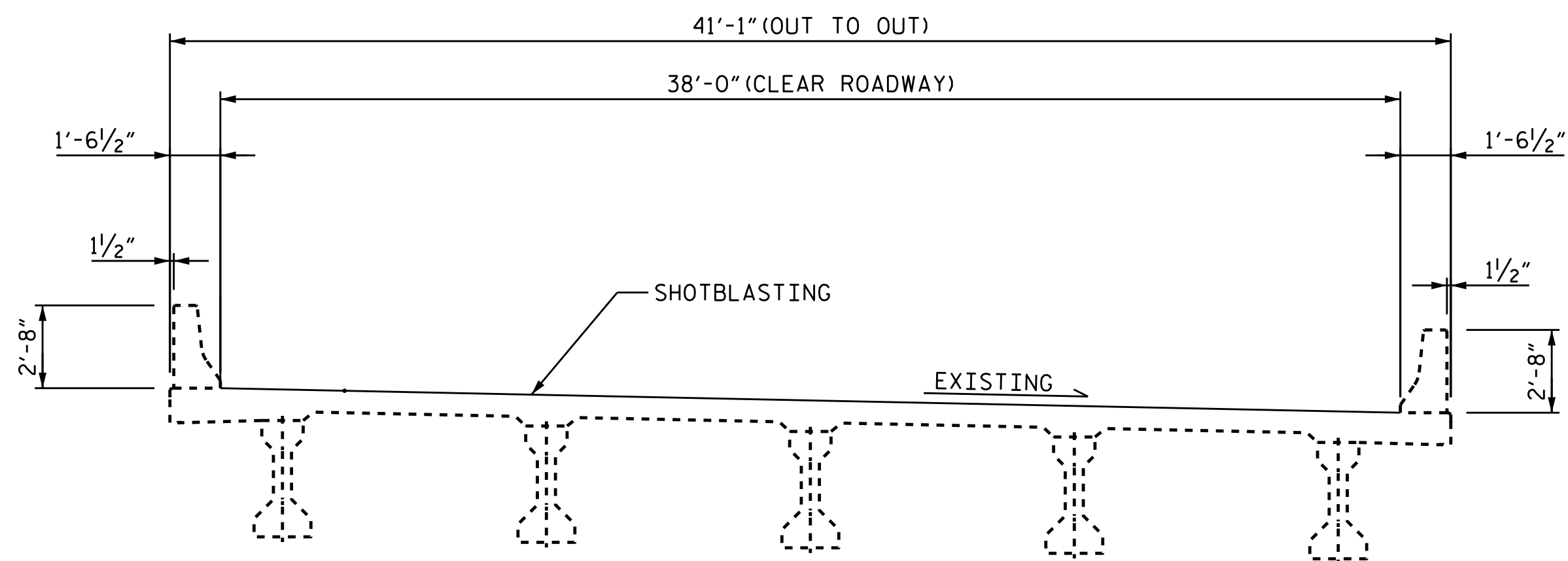
NOTES

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



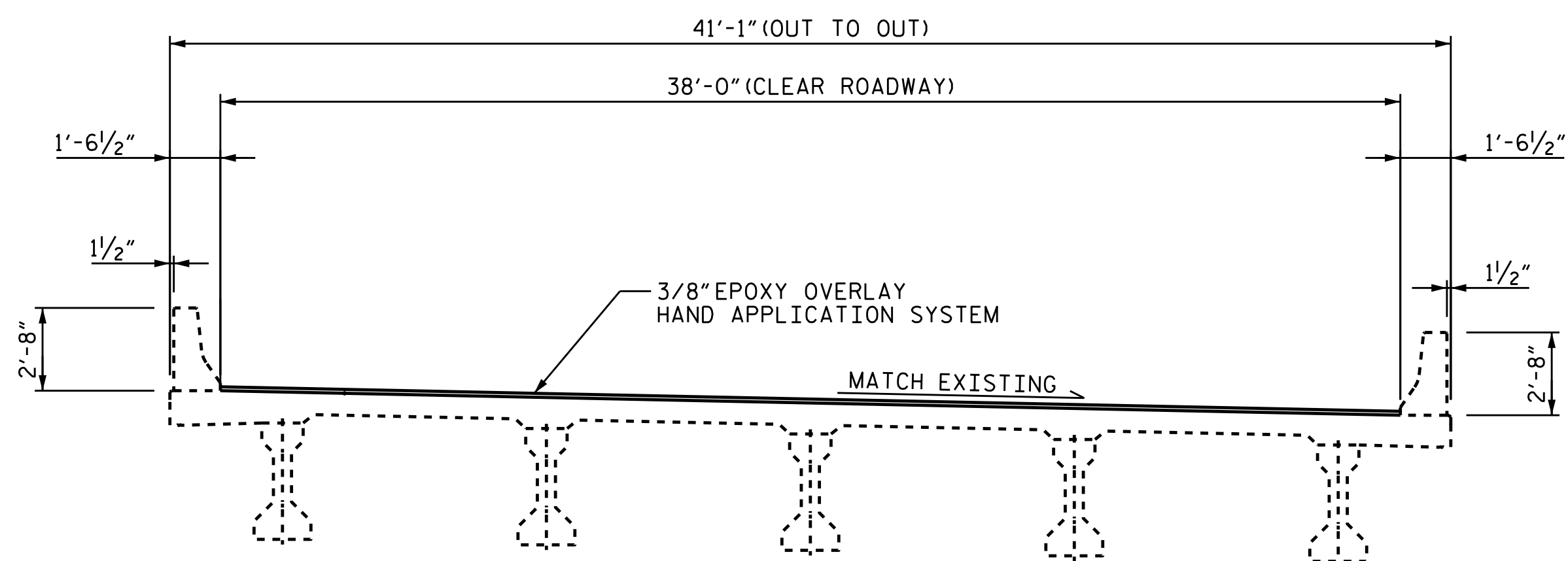
TYPICAL SECTION

(EXISTING)



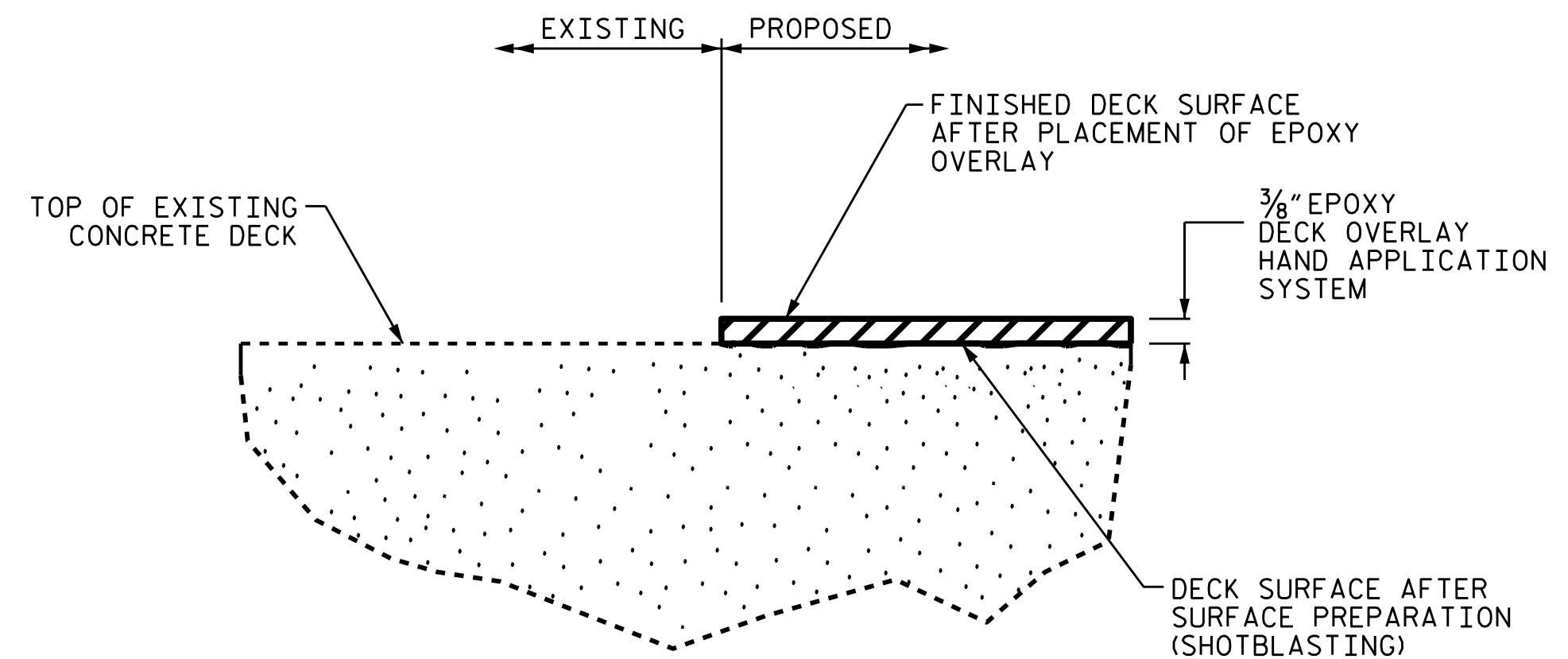
TYPICAL SECTION

(DECK PREPARATION)



TYPICAL SECTION

(PROPOSED)



EPOXY OVERLAY HAND APPLICATION SYSTEM DETAIL

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320325



DocuSigned by:
 Aster Abraha
 00408AAED510AFD
 7/23/2021

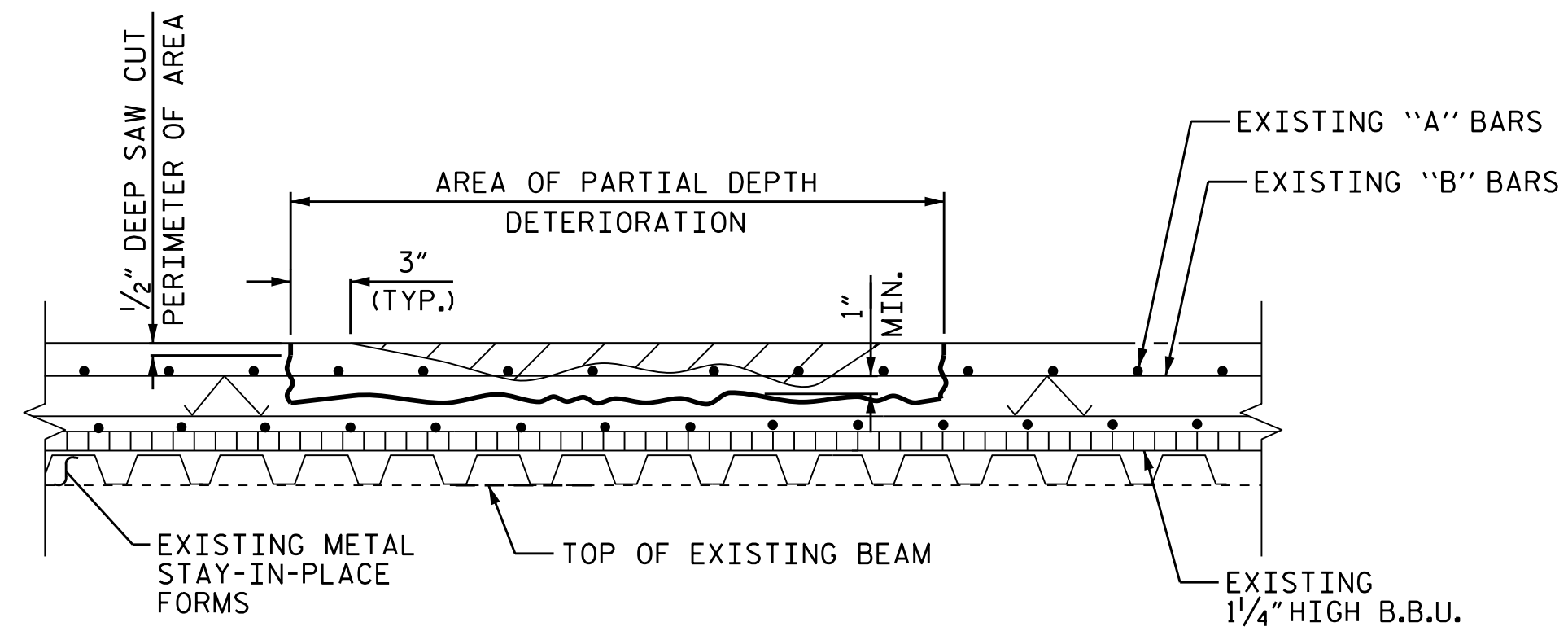
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**TYPICAL SECTION
 AND SURFACE
 PREPARATION DETAILS**

DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/14/19

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S9-2
2			4			TOTAL SHEETS 118



CONCRETE DECK REPAIR FOR EPOXY OVERLAY

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,487 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	39.0 SF	

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

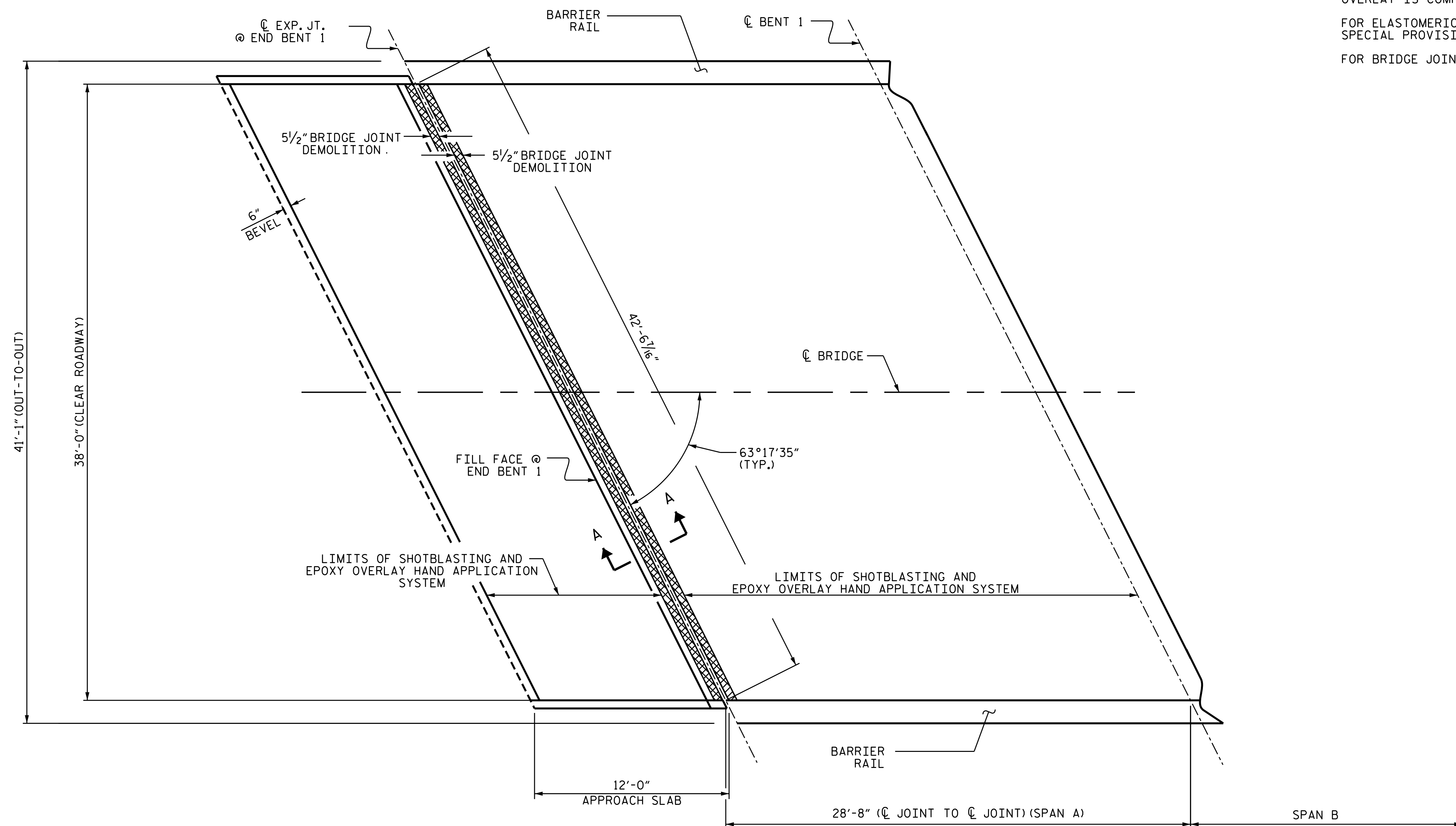
FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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

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

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.



PLAN OF SPAN A AND APPROACH SLAB

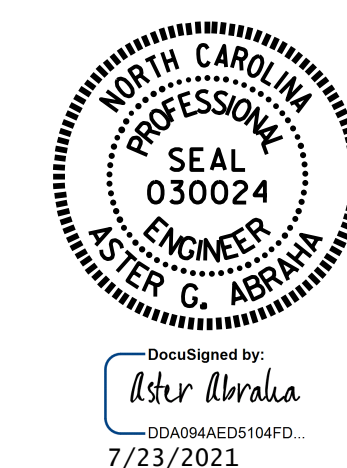
(SEE SHEET NO. S8-6 FOR SECTION A-A)

REPAIR KEY

- SHOTBLASTING OF BRIDGE DECK & EPOXY OVERLAY HAND APPLICATION SYSTEM
- CONCRETE DECK REPAIR FOR EPOXY OVERLAY
- BRIDGE JOINT DEMOLITION

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320325

SHEET 1 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN A AND
 APPROACH SLAB**

DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

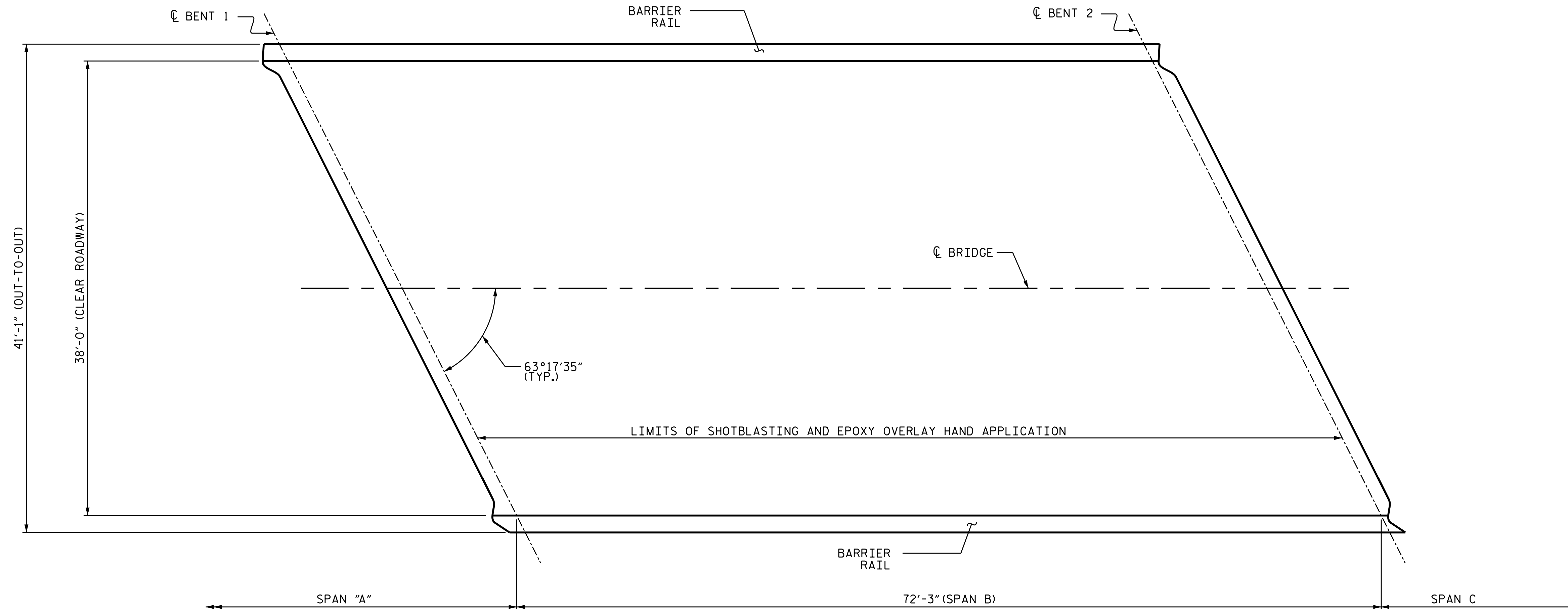
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S9-3
1			3			TOTAL SHEETS
2			4			118

NOTES:

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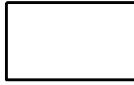
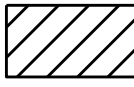
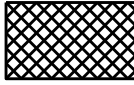
SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,746 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	



PLAN OF SPAN B

REPAIR KEY

-  - SHOTBLASTING OF BRIDGE DECK & EPOXY OVERLAY HAND APPLICATION SYSTEM
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320325

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN B**

DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

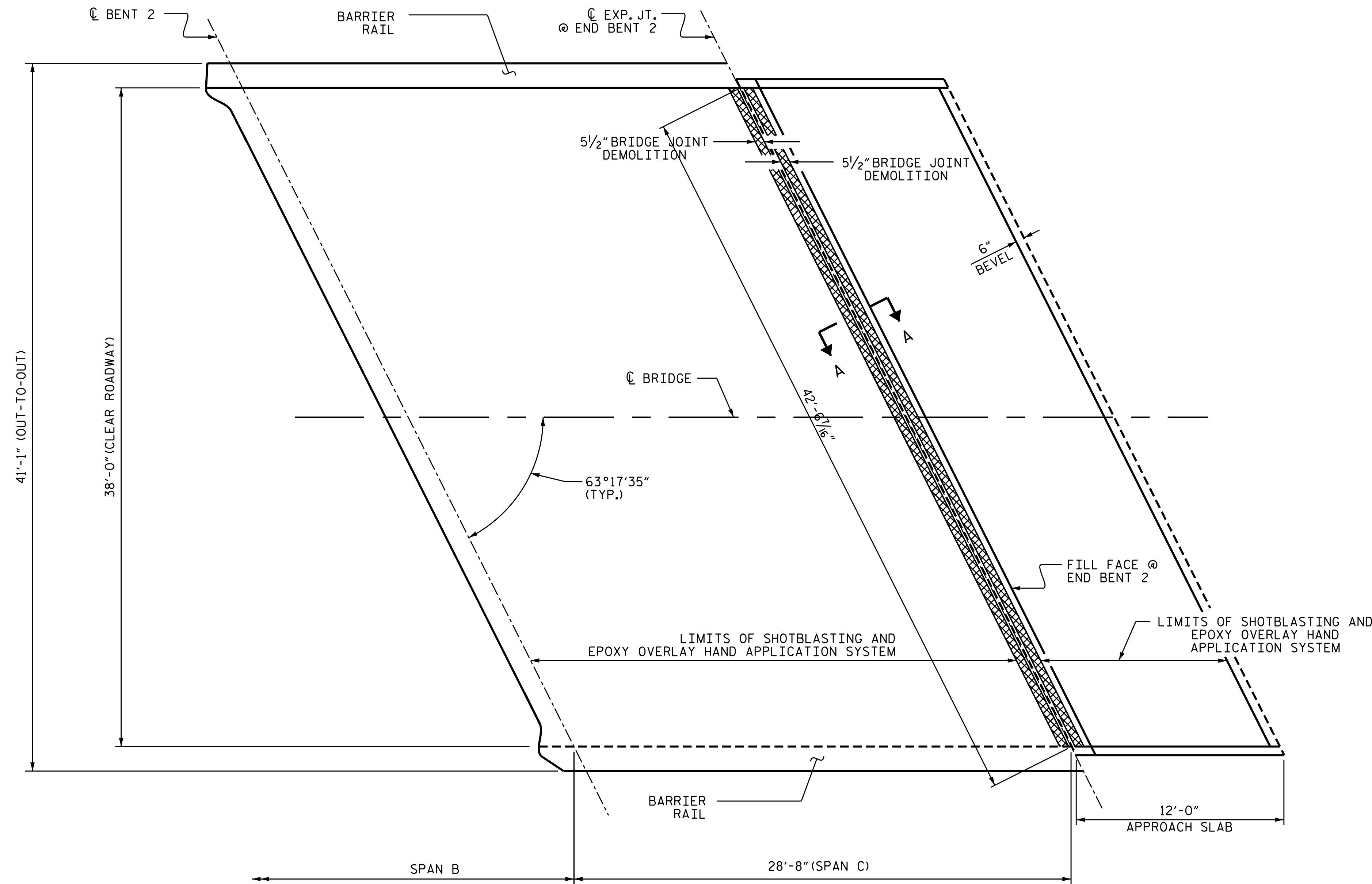
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			99-4
2			4			118

NOTES:

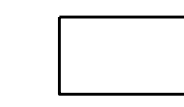
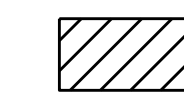

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SUMMARY OF QUANTITIES FOR SPAN C AND APPROACH SLAB

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,487 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	39.0 SF	



REPAIR KEY

-  - SHOTBLASTING OF BRIDGE DECK & EPOXY OVERLAY HAND APPLICATION SYSTEM
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

PLAN OF SPAN C AND APPROACH SLAB

(SEE SHEET NO. S8-6 FOR SECTION A-A)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320325

SHEET 3 OF 3



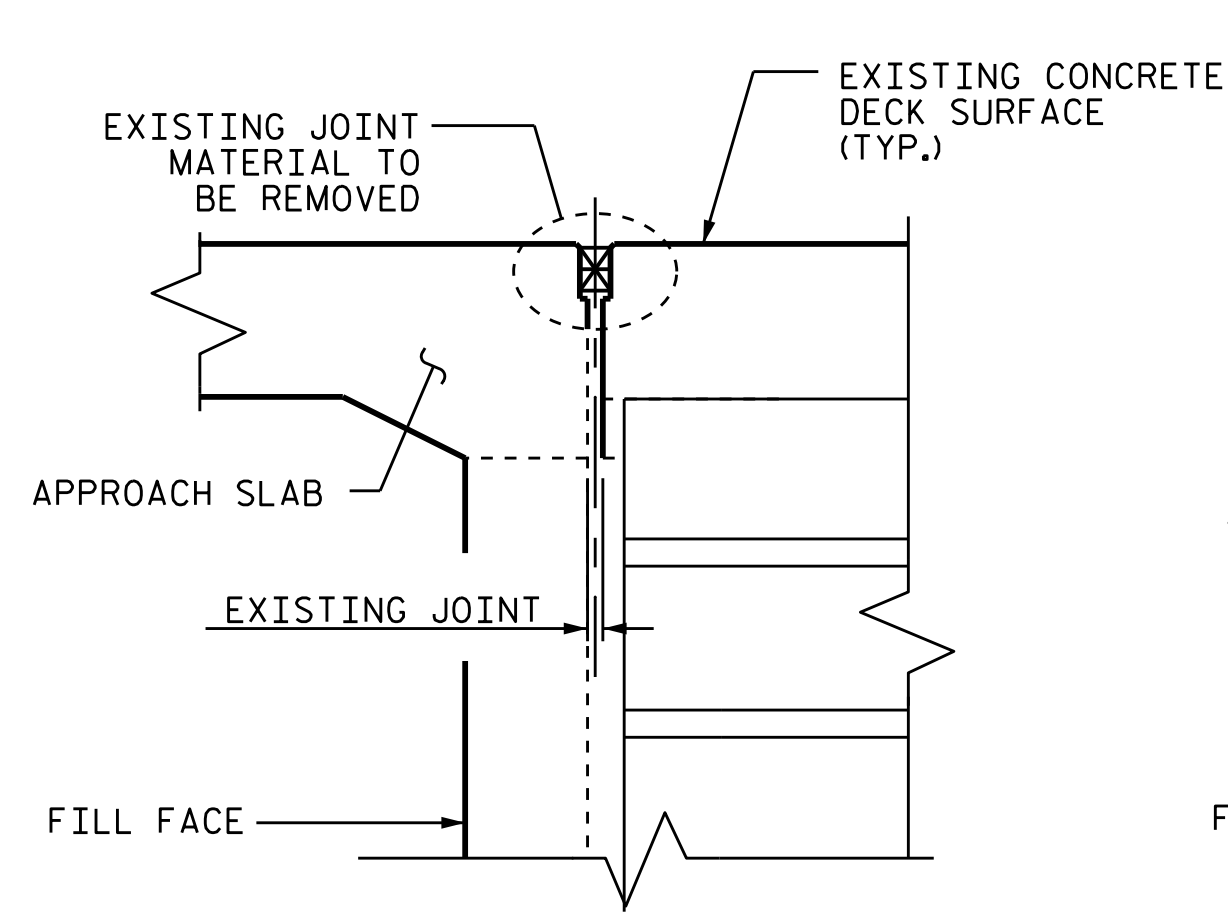
DocuSigned by:
 Aster Abraha
 00A08AED510AFD...
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN C AND
 APPROACH SLAB**

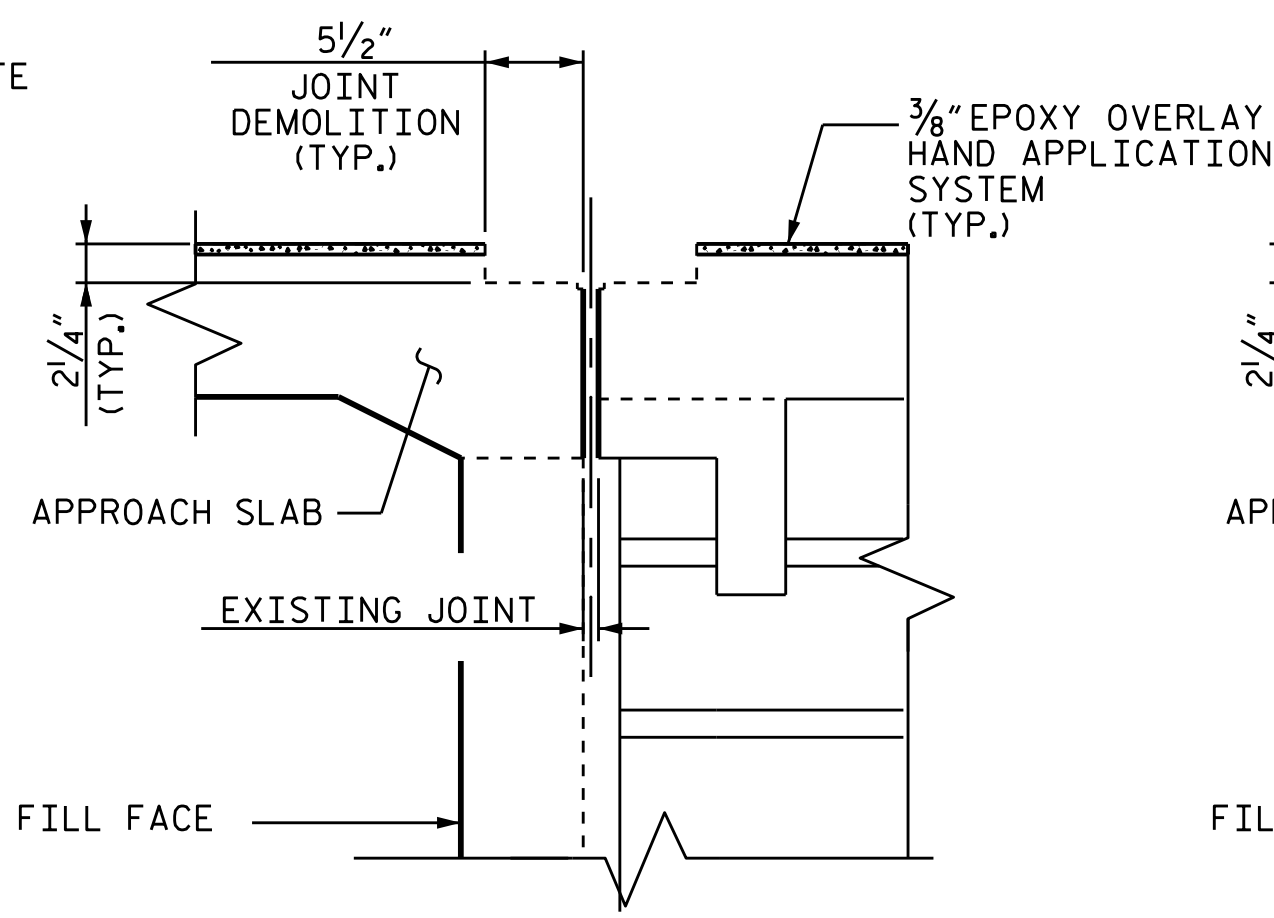
DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA/S. WANCE DATE : 05/2021

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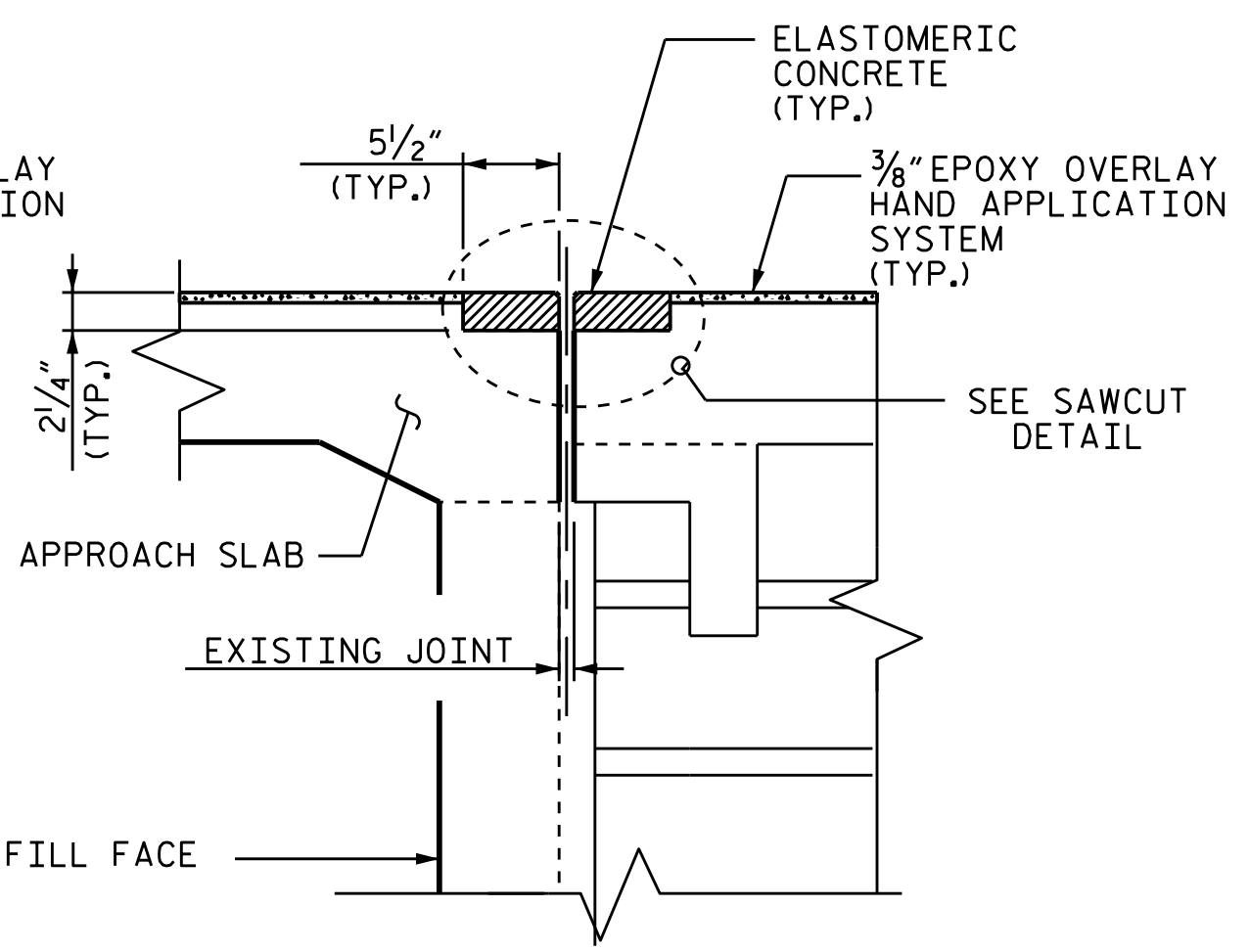
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S9-5
2			4			118



EXISTING JOINT



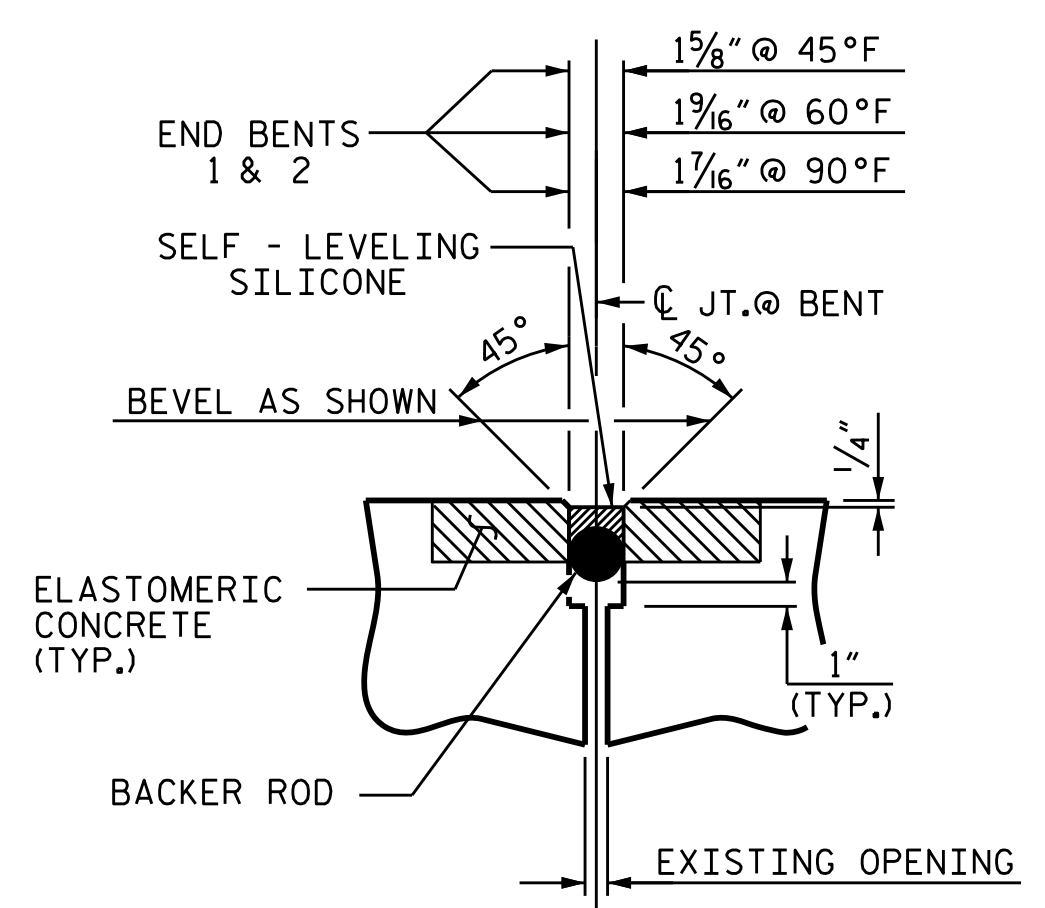
MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A



PROPOSED JOINT SEAL WITH SAWED DIMENSIONS

DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4\"/>

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

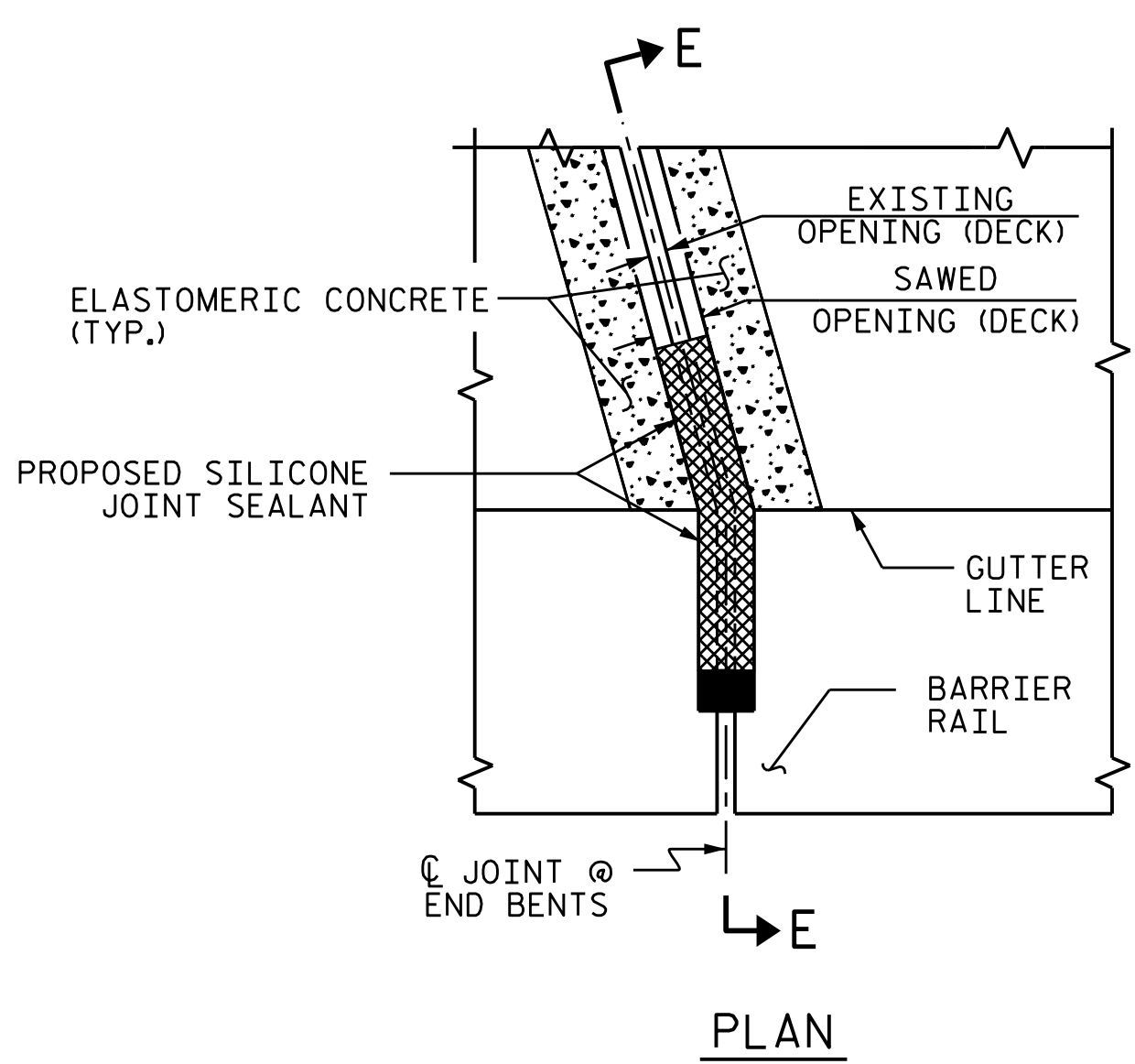
SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

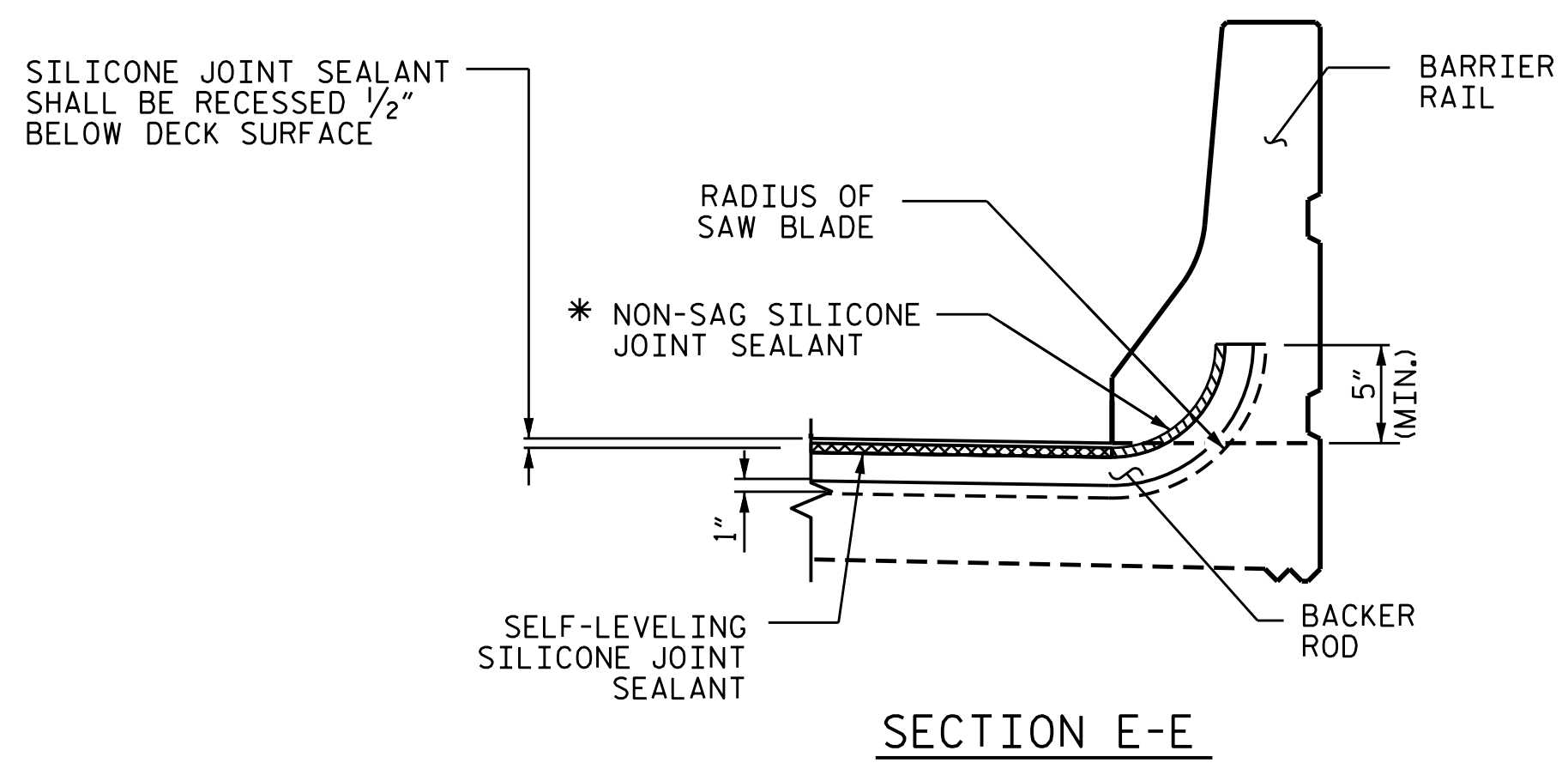
DURING JOINT INSTALLATION PROCEDURE, THE JOINT AND SURROUNDING AREA SHALL BE KEPT CLEAN AND FREE OF DEBRIS.

FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	14.6 CF	
POURABLE SILICONE JOINT SEALANT	85.1 LF	



PLAN

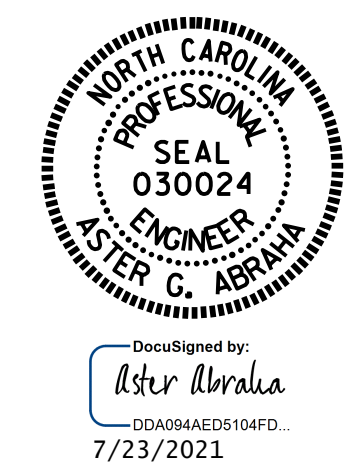


SECTION E-E

* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.

JOINT DETAIL AT BARRIER RAIL

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320325



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT REPAIR DETAILS

DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 02/2021
 CHECKED BY : A. G. ABRAHA DATE : 06/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

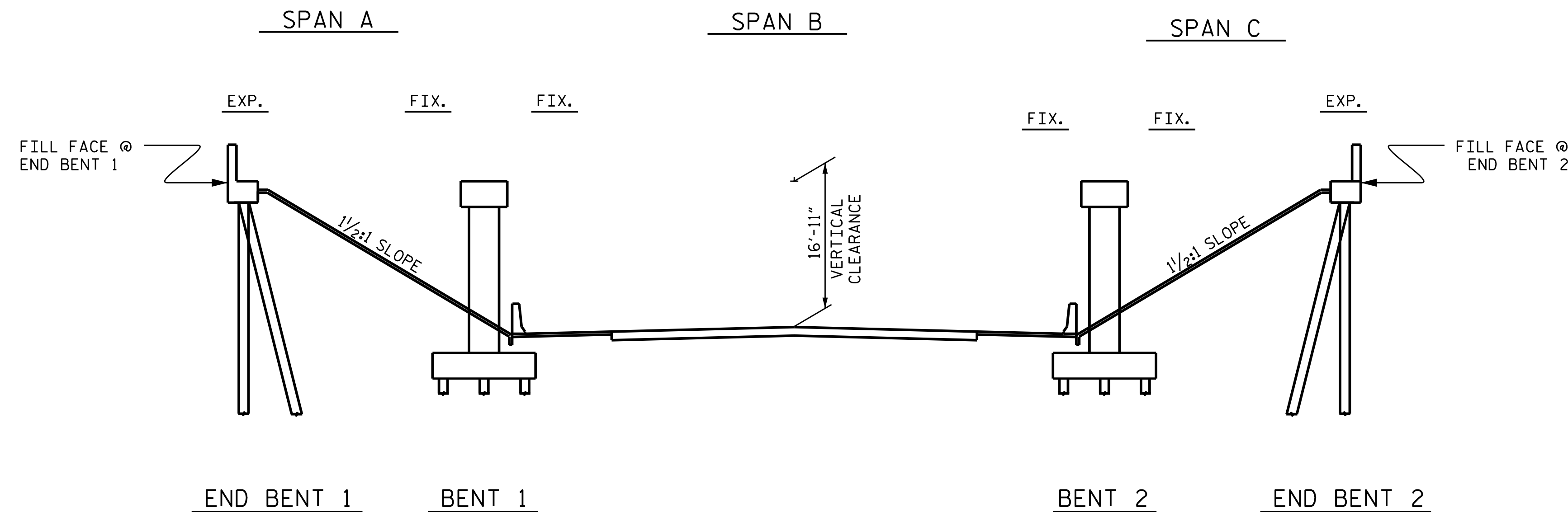
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S9-6
2			4			118

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH EPOXY OVERLAY.
- BRIDGE JOINT DEMOLITION.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC CONCRETE AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.

NOTES

GENERAL DRAWING AND PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 2/19/2019 AND 02/09/2021.
BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

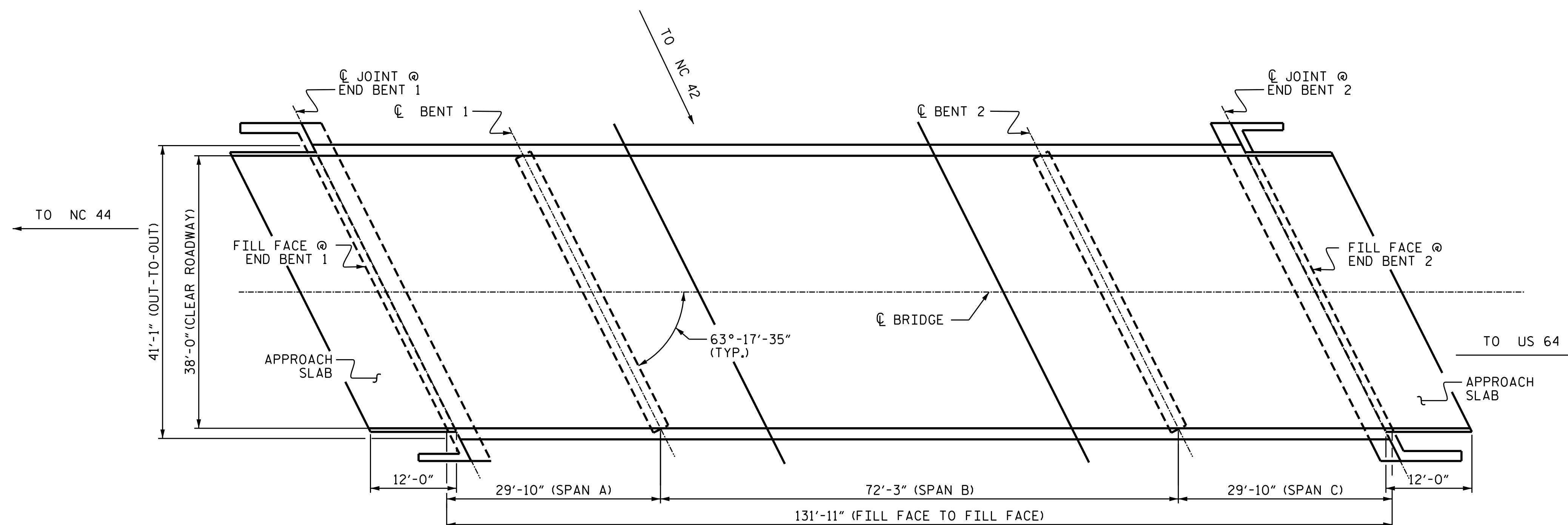


SECTION ALONG C ROADWAY

(SECTION @ BENT AND END BENTS ARE AT RIGHT ANGLES)

I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



PLAN

(COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320326

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

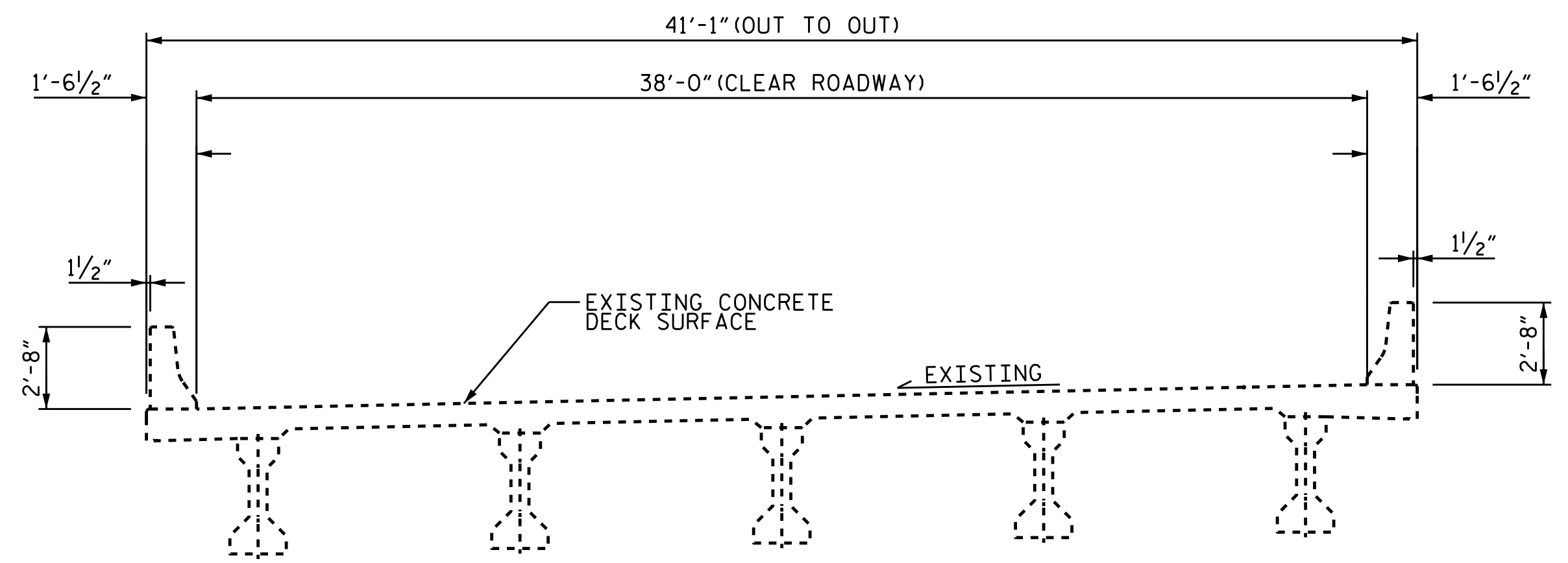
FOR BRIDGE NO. 326
ON RELOCATED US 64 WBL
BETWEEN US 64 & NC 42



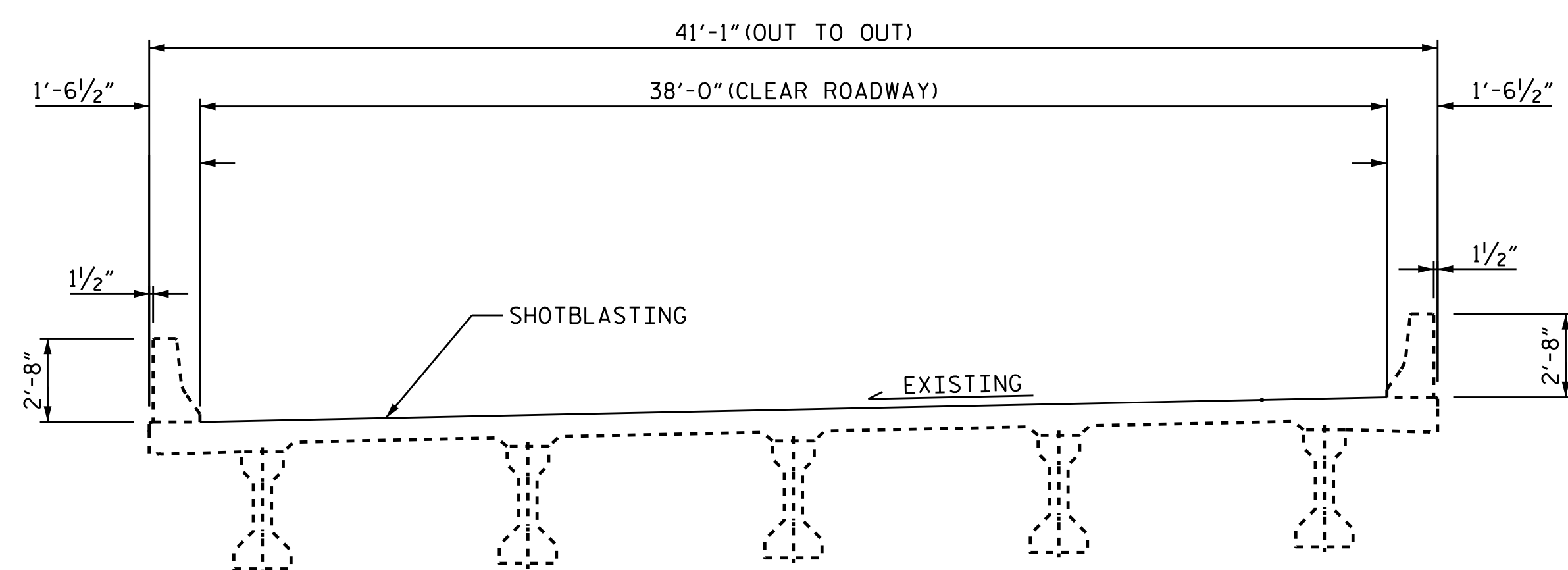
DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
CHECKED BY : A. G. ABRAHA DATE : 11/14/19

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

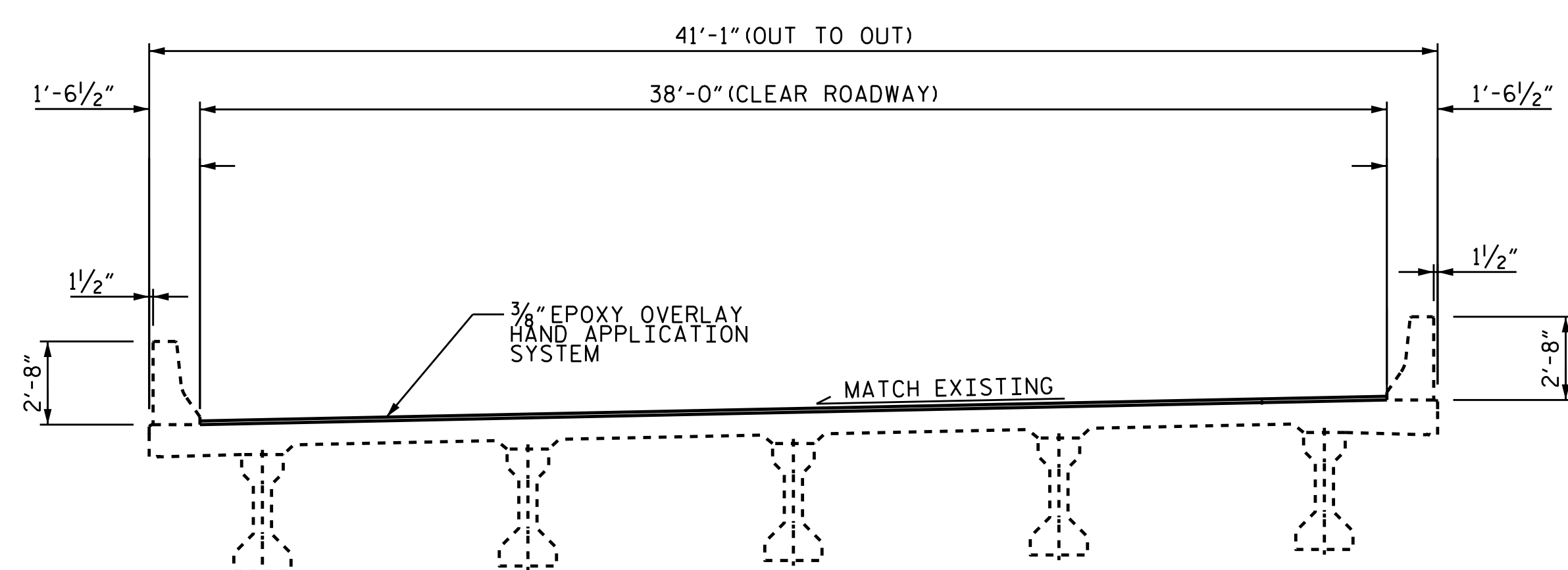
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2			4			118



TYPICAL SECTION
(EXISTING)

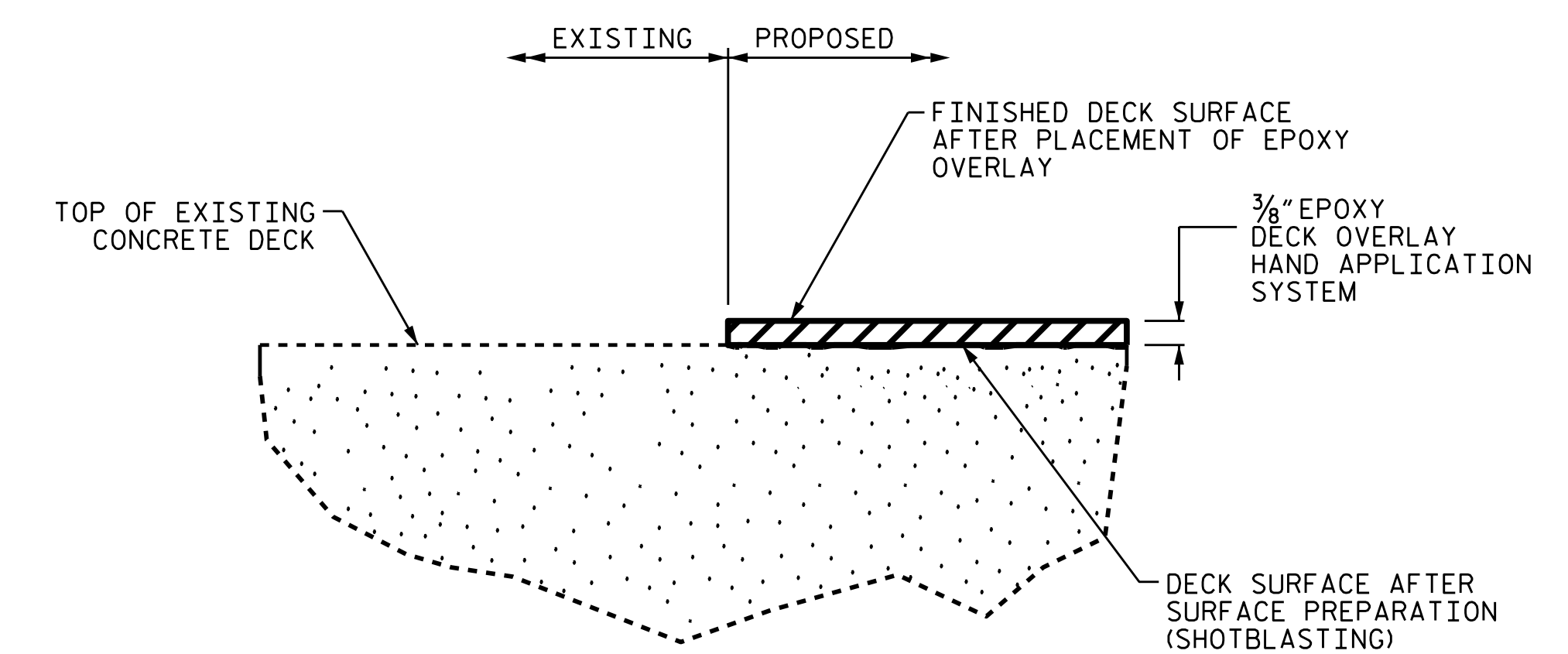


TYPICAL SECTION
(DECK PREPARATION)



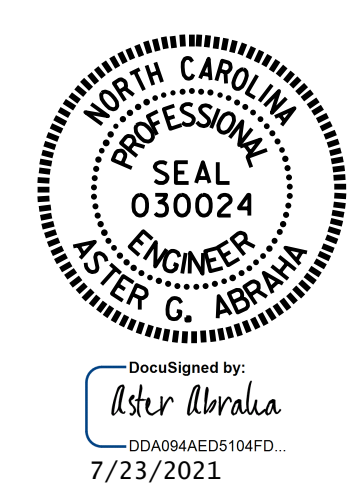
TYPICAL SECTION
(PROPOSED)

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



EPOXY OVERLAY HAND APPLICATION SYSTEM DETAIL

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320326



DocuSigned by:
Aster Abraha
7/23/2021

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION AND SURFACE PREPARATION DETAILS

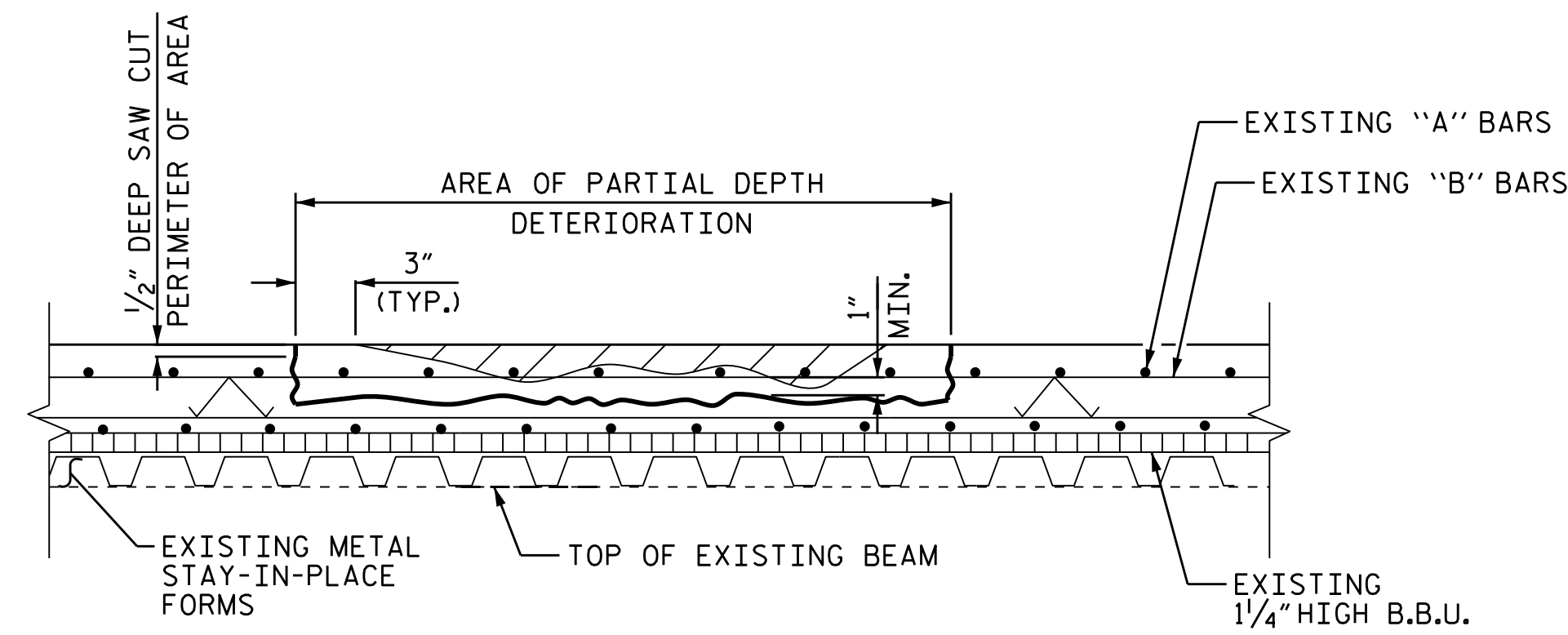
DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 11/2019
CHECKED BY : A. G. ABRAHA DATE : 11/14/19

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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S10-2
2			4			118

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,487 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	39.0 SF	



CONCRETE DECK REPAIR FOR EPOXY OVERLAY

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS- BUILT REPAIR QUANTITIES TABLE.

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.


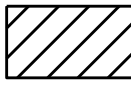
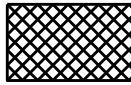
FOR CONCRETE DECK REPAIR FOR EPOXY OVERLAY, SEE SPECIAL PROVISIONS.

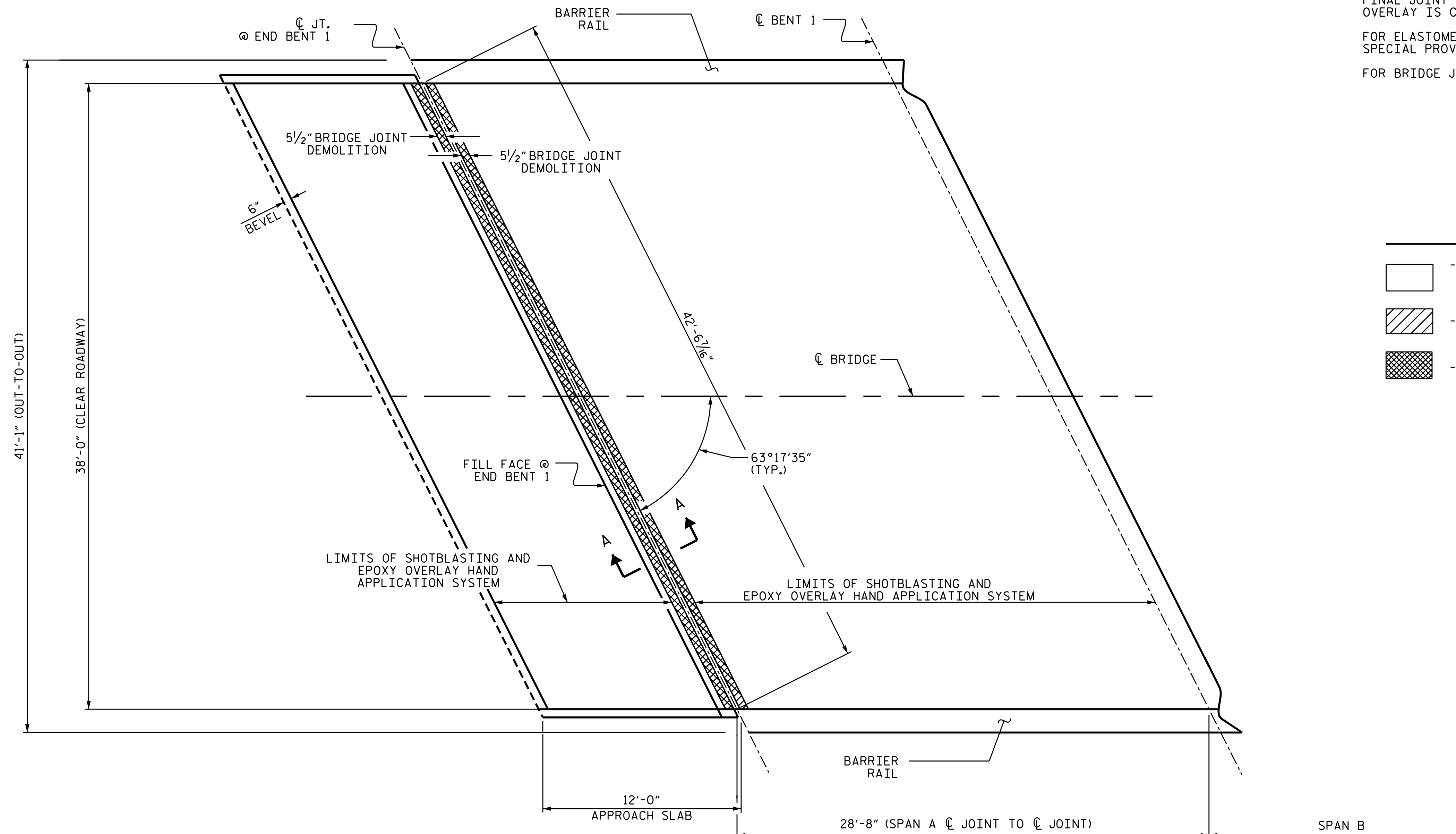
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

REPAIR KEY

-  - SHOTBLASTING OF BRIDGE DECK & EPOXY OVERLAY HAND APPLICATION SYSTEM
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION



PLAN OF SPAN A AND APPROACH SLAB

(SEE SHEET NO. S9-6 FOR SECTION A-A)

PROJECT NO. I-6041A
EDGECOMBE COUNTY
 BRIDGE NO. 320326

SHEET 1 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 SPAN A AND
 APPROACH SLAB

DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/14/19

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

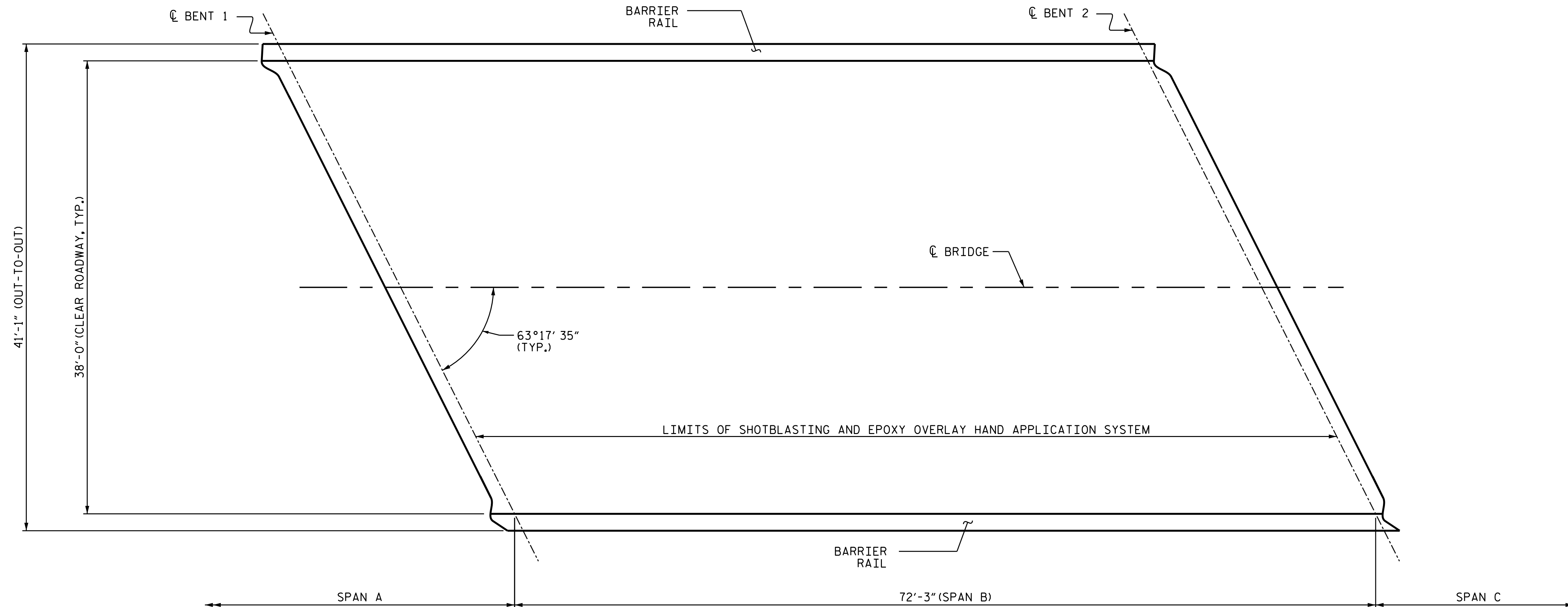
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NOTES:

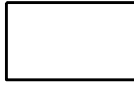
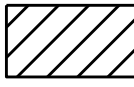
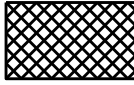
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SUMMARY OF QUANTITIES FOR SPAN "B"

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,746 SF	
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	



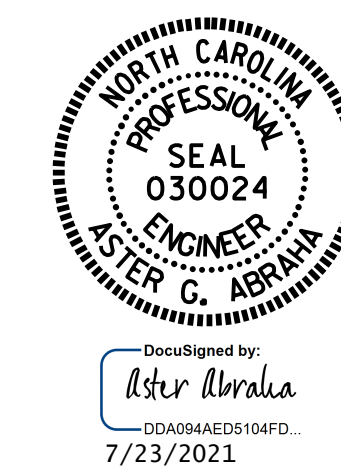
REPAIR KEY

-  - SHOTBLASTING OF BRIDGE DECK & EPOXY OVERLAY SYSTEM I
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

PLAN OF SPAN B

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320326

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN B**

DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/14/19

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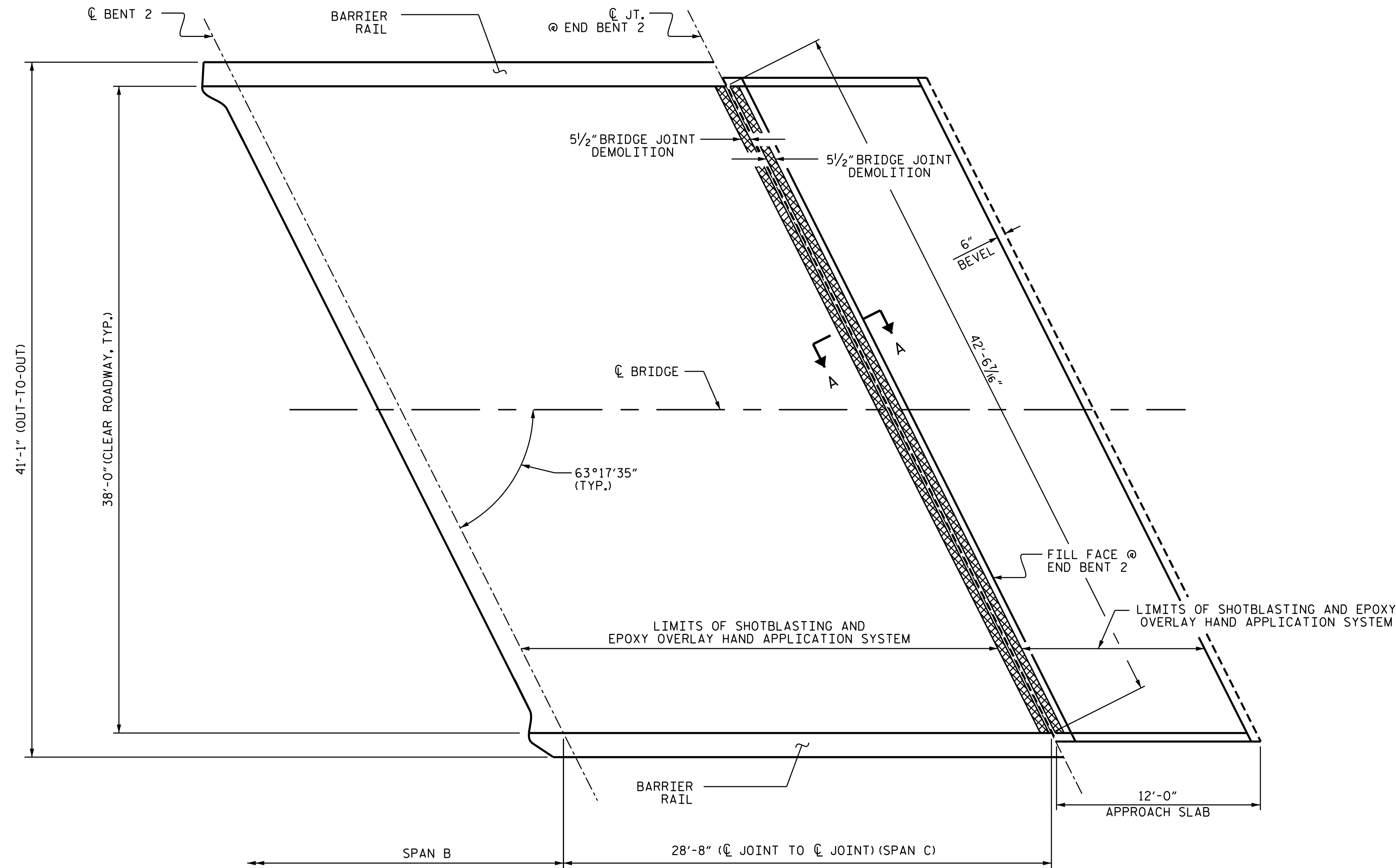
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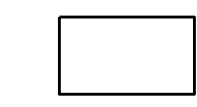
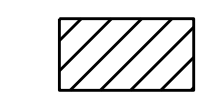
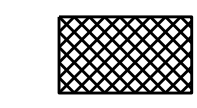
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO AS-BUILT REPAIR QUANTITIES TABLE.

SUMMARY OF QUANTITIES FOR SPAN "C" AND APPROACH SLAB

	ESTIMATE
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,487 SF
CONCRETE DECK REPAIRS FOR EPOXY OVERLAY	0.0 SF
BRIDGE JOINT DEMOLITION	39.0 SF



REPAIR KEY

-  - SHOTBLASTING OF BRIDGE DECK & EPOXY OVERLAY SYSTEM I
-  - CONCRETE DECK REPAIR FOR EPOXY OVERLAY
-  - BRIDGE JOINT DEMOLITION

PLAN OF SPAN C AND APPROACH SLAB

(SEE SHEET NO. S10-6 FOR SECTION A-A)

PROJECT NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320326

SHEET 3 OF 3



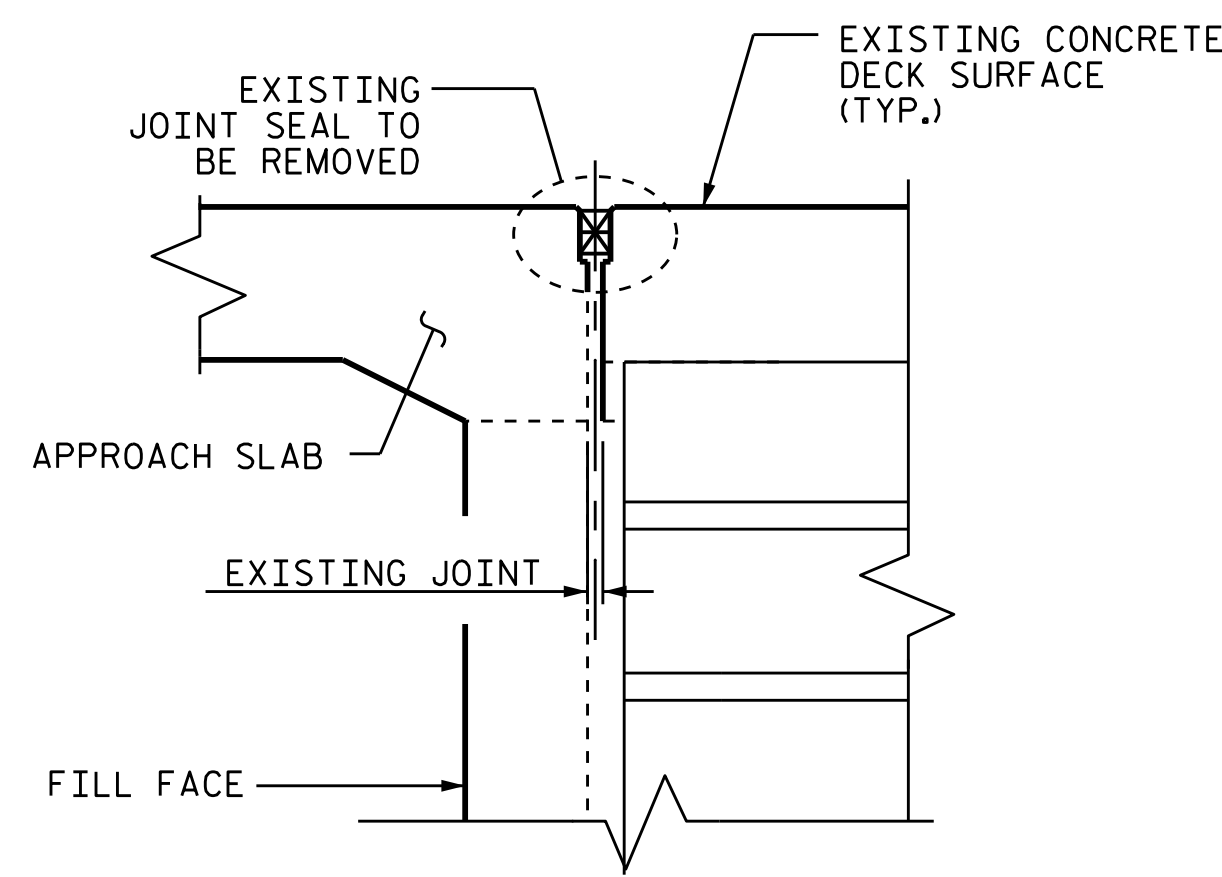
DocuSigned by:
 Aster Abraha
 004080AED510AFD
 7/23/2021

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 SPAN C AND
 APPROACH SLAB**

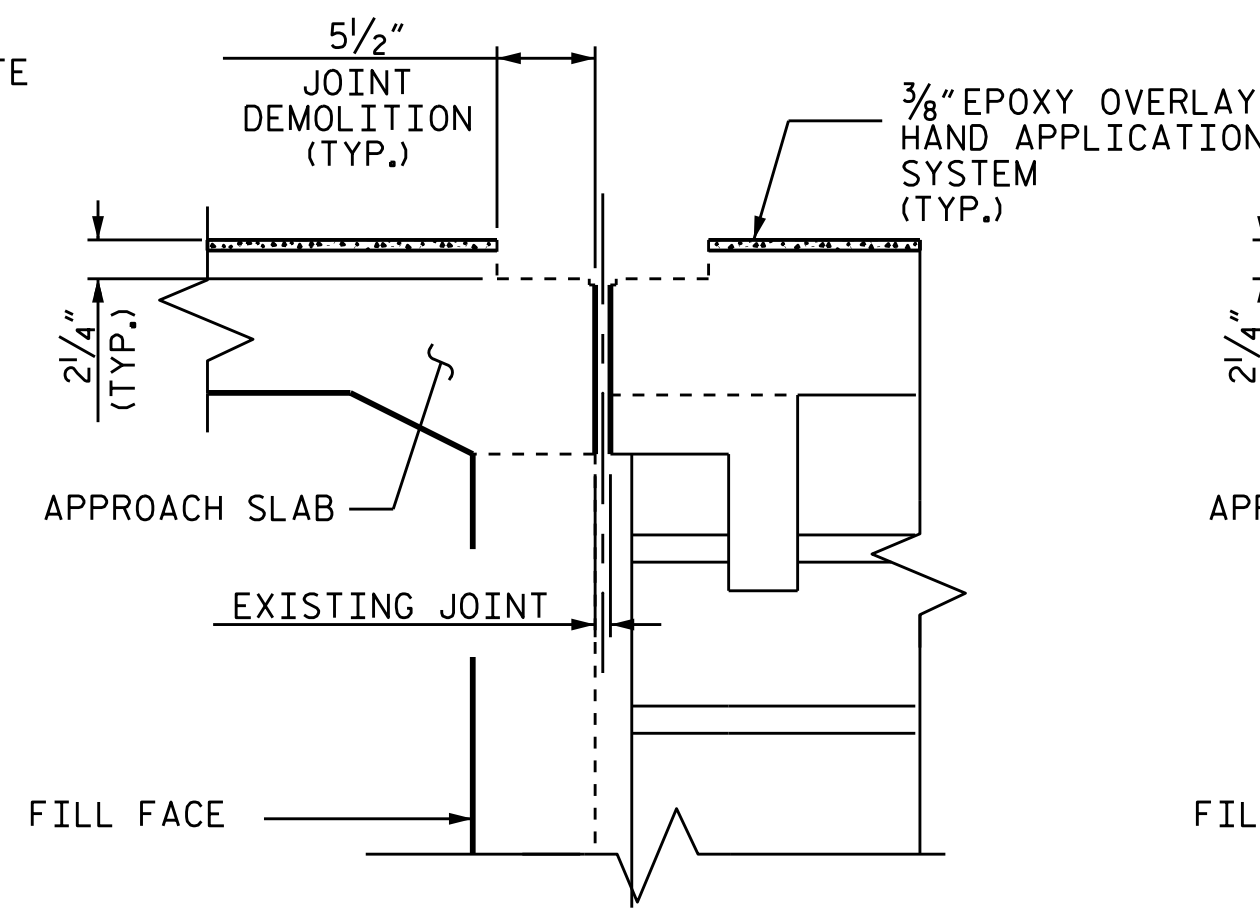
DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/14/19

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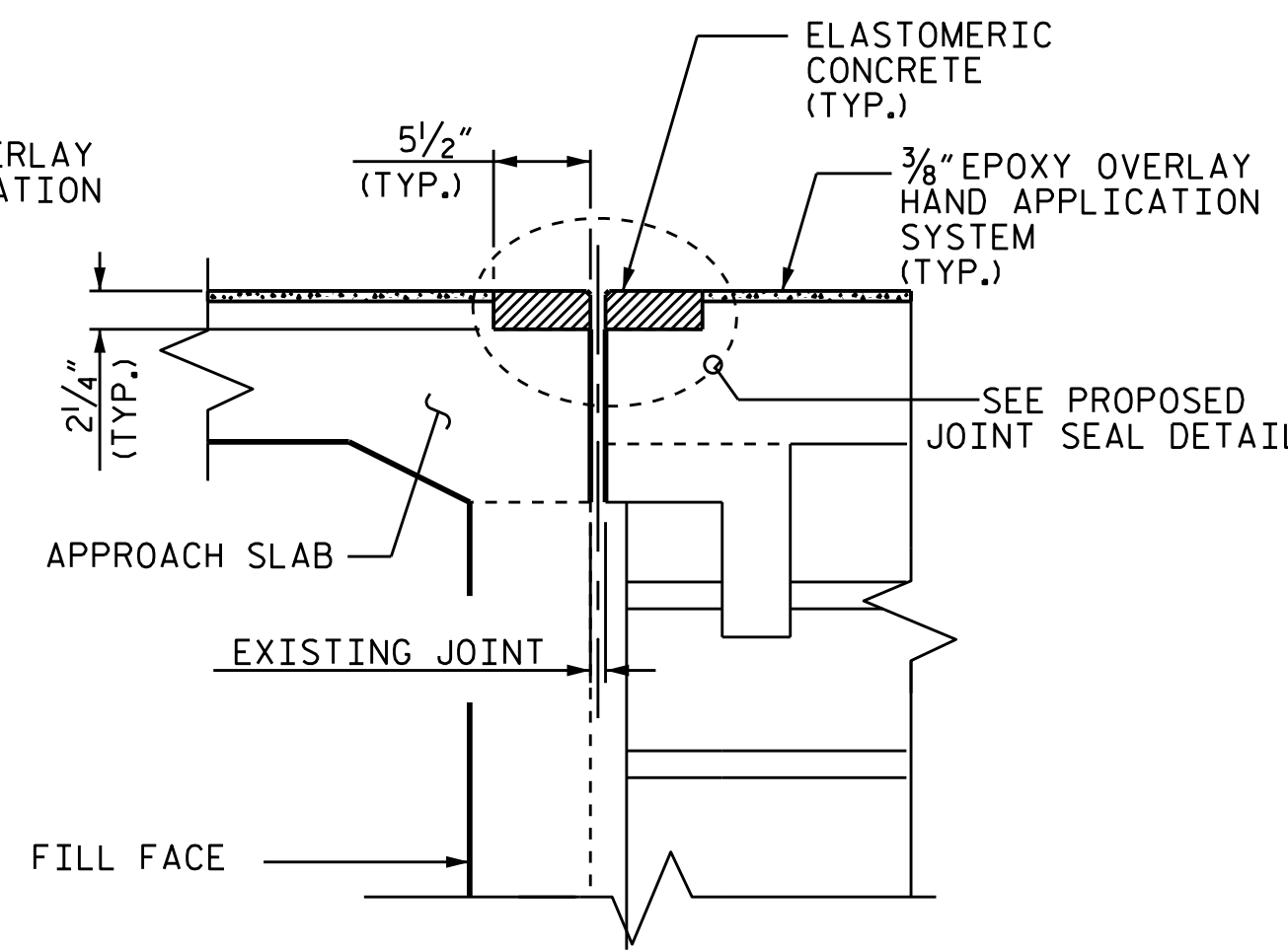
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2			4			118



EXISTING JOINT



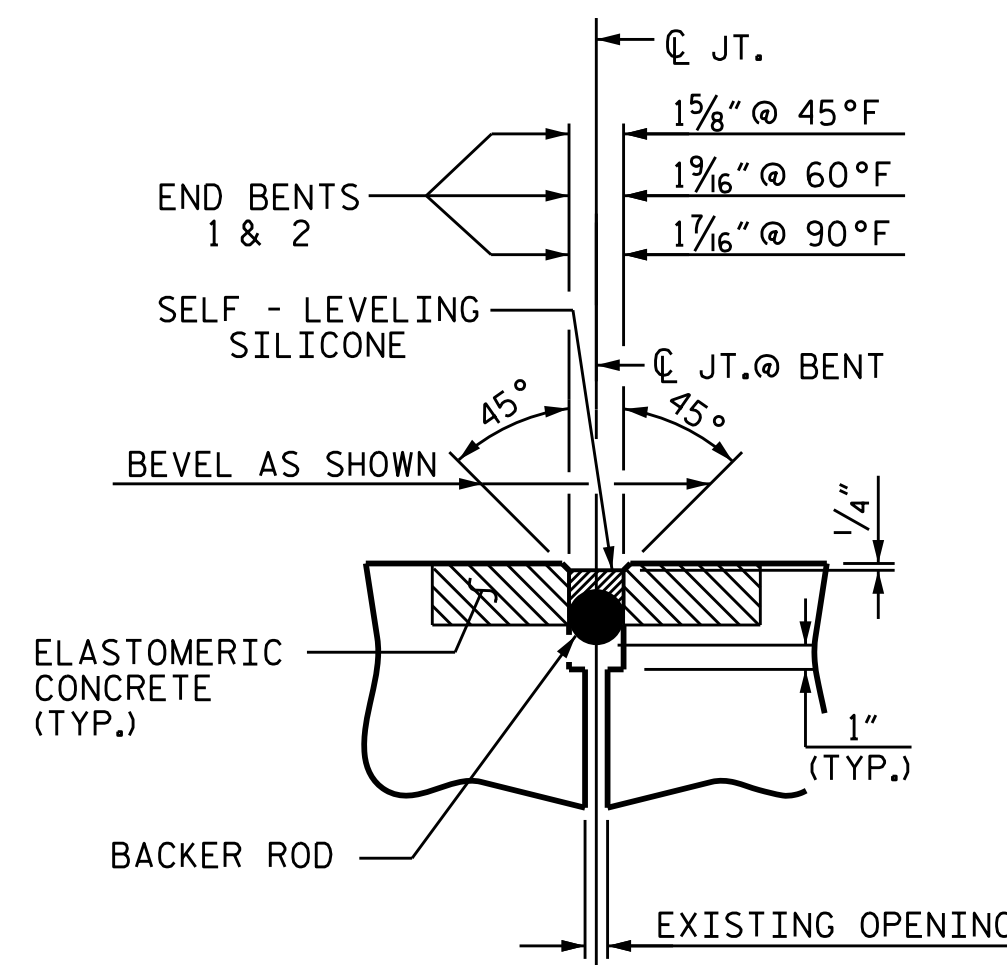
MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

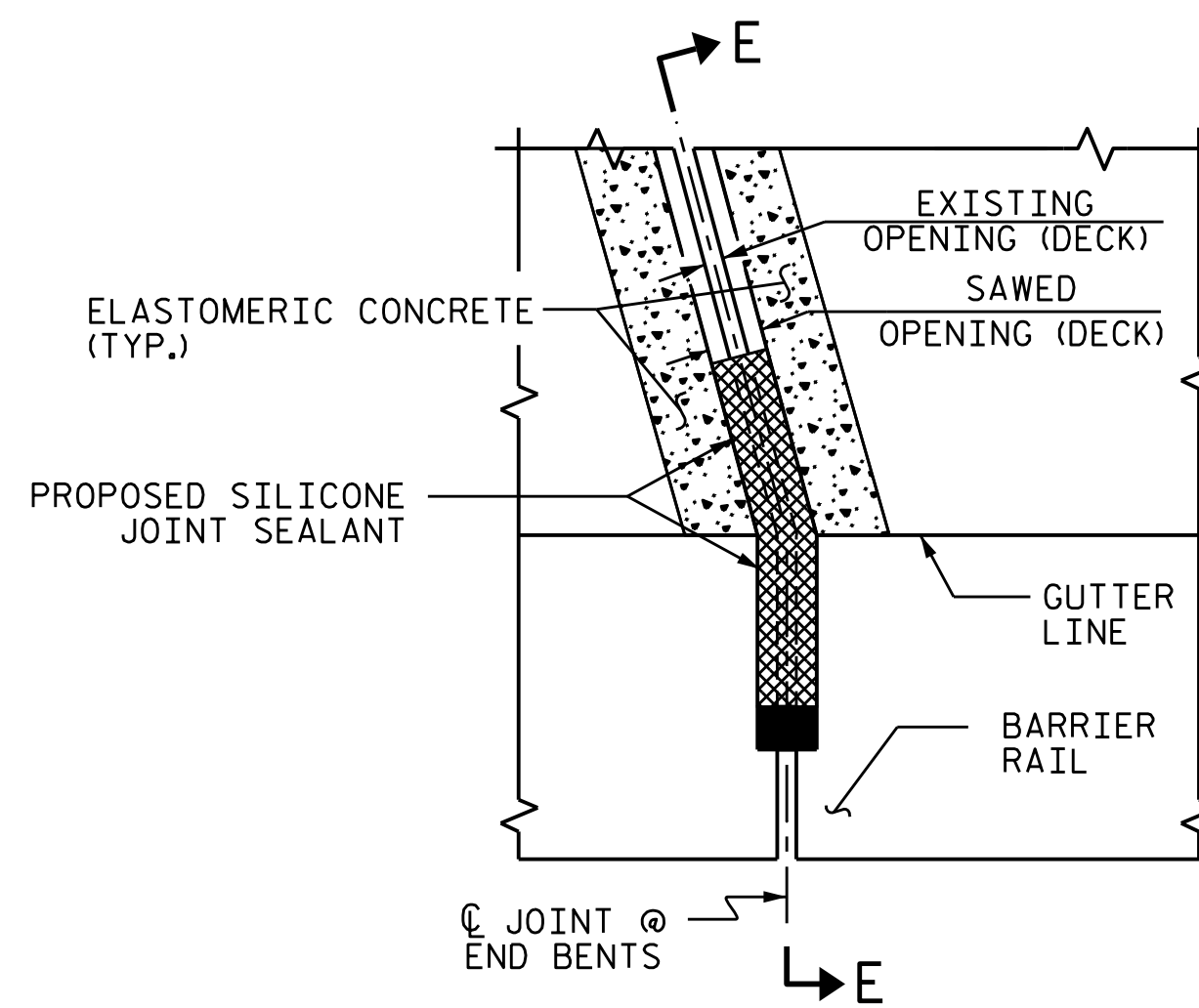
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A



PROPOSED JOINT SEAL DETAIL
(WITH SAWED DIMENSIONS)

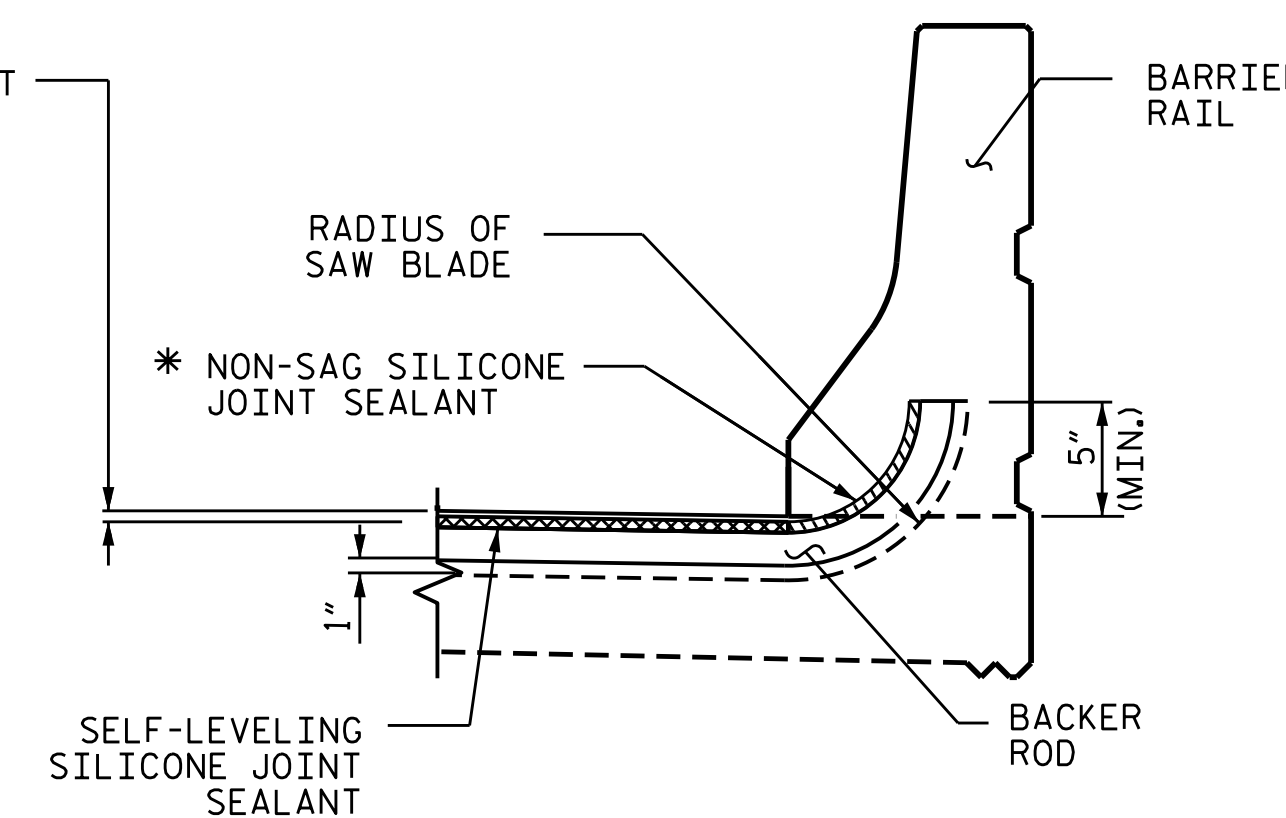
DEMOLISH BRIDGE JOINT AREA SUCH THAT THE BOTTOM OF THE EXCAVATION SHALL BE REASONABLY FLAT AND LEVEL AND TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON CONCRETE OR REPAIR CONCRETE SUBSTRATE.



PLAN

*NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.

SILICONE JOINT SEALANT SHALL BE RECESSED 1/2" BELOW DECK SURFACE



SECTION E-E

JOINT DETAIL AT BARRIER RAIL

NOTES

CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL. IF ACTUAL JOINT OPENINGS VARIES FROM THE OPENING INDICATED IN DETAIL MORE THAN 1/4" NOTIFY ENGINEER. REVISION TO THE JOINT SEAL SIZE MAY BE NECESSARY.

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.

UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

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

FOR POURABLE SILICONE EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

SILICONE JOINT SEALANT AND BACKER ROD SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION.

THE INSTALLATION OF JOINT SEAL SHALL BE WATERTIGHT.

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

FOR EXCAVATION BELOW THE BOTTOM OF THE PLANNED JOINT DEMOLITION, CONCRETE FOR DECK REPAIR SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT BOTTOM OF THE PROPOSED ELASTOMERIC CONCRETE FOR PRESERVATION HEADERS SHOWN.

SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
ELASTOMERIC CONCRETE FOR PRESERVATION	14.6 CF	
POURABLE SILICONE JOINT SEALANT	85.1 LF	

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320326

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT REPAIR
DETAILS

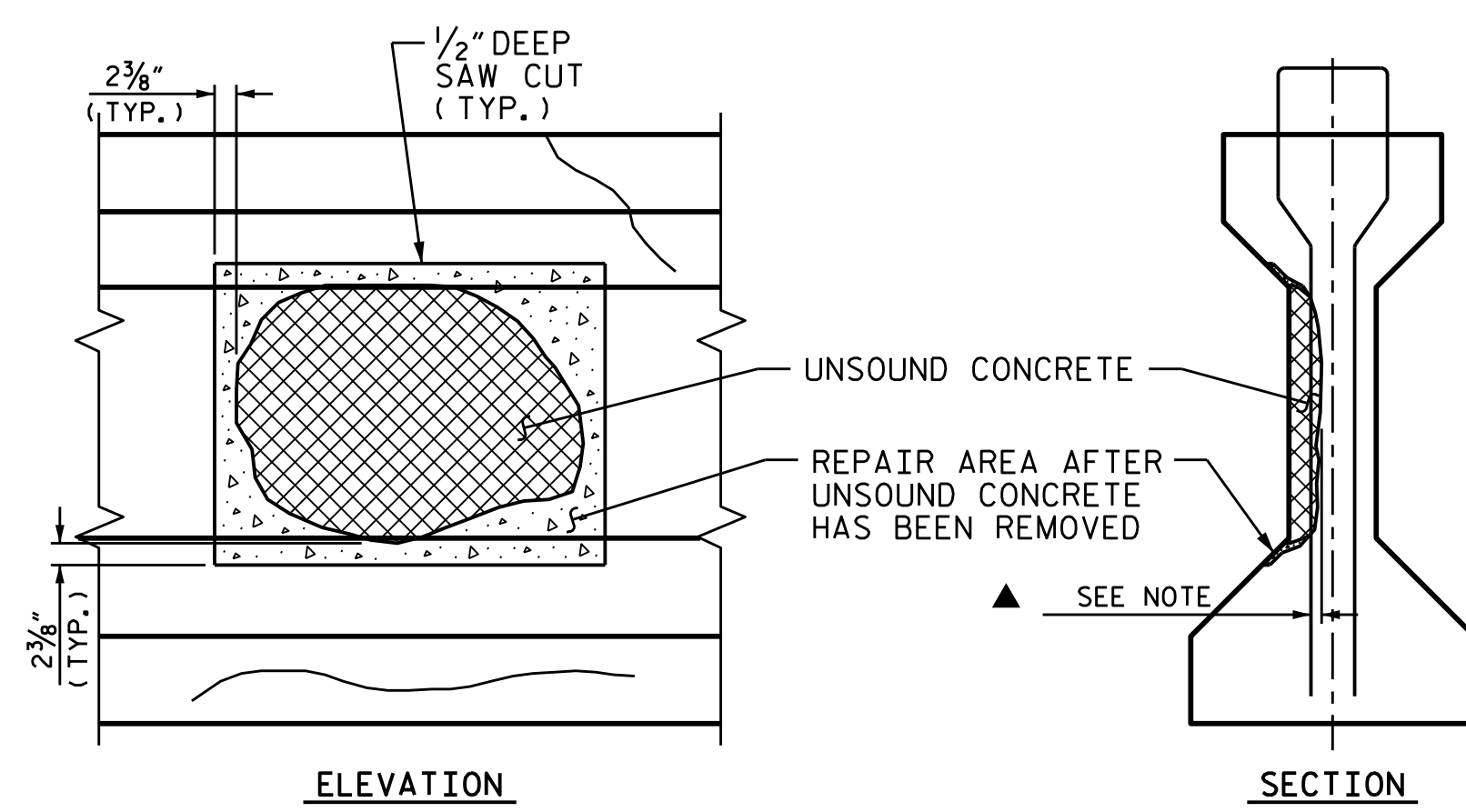


DocuSigned by:
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00408AED510AFD
7/23/2021

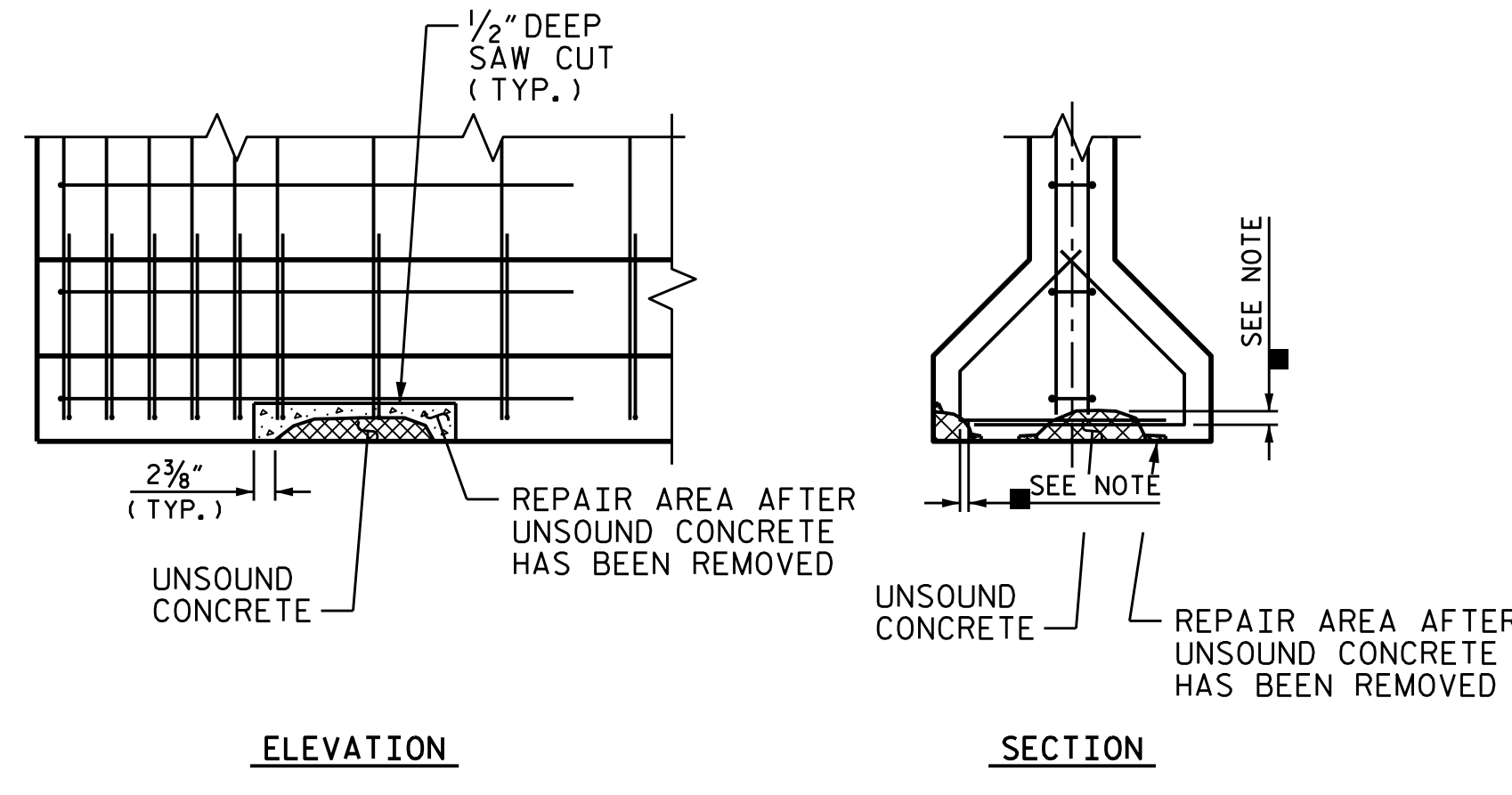
DRAWN BY : ZMALIK/A. Y. GODFREY DATE : 02/2021
CHECKED BY : A. G. ABRAHA DATE : 06/2021

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2			4			118

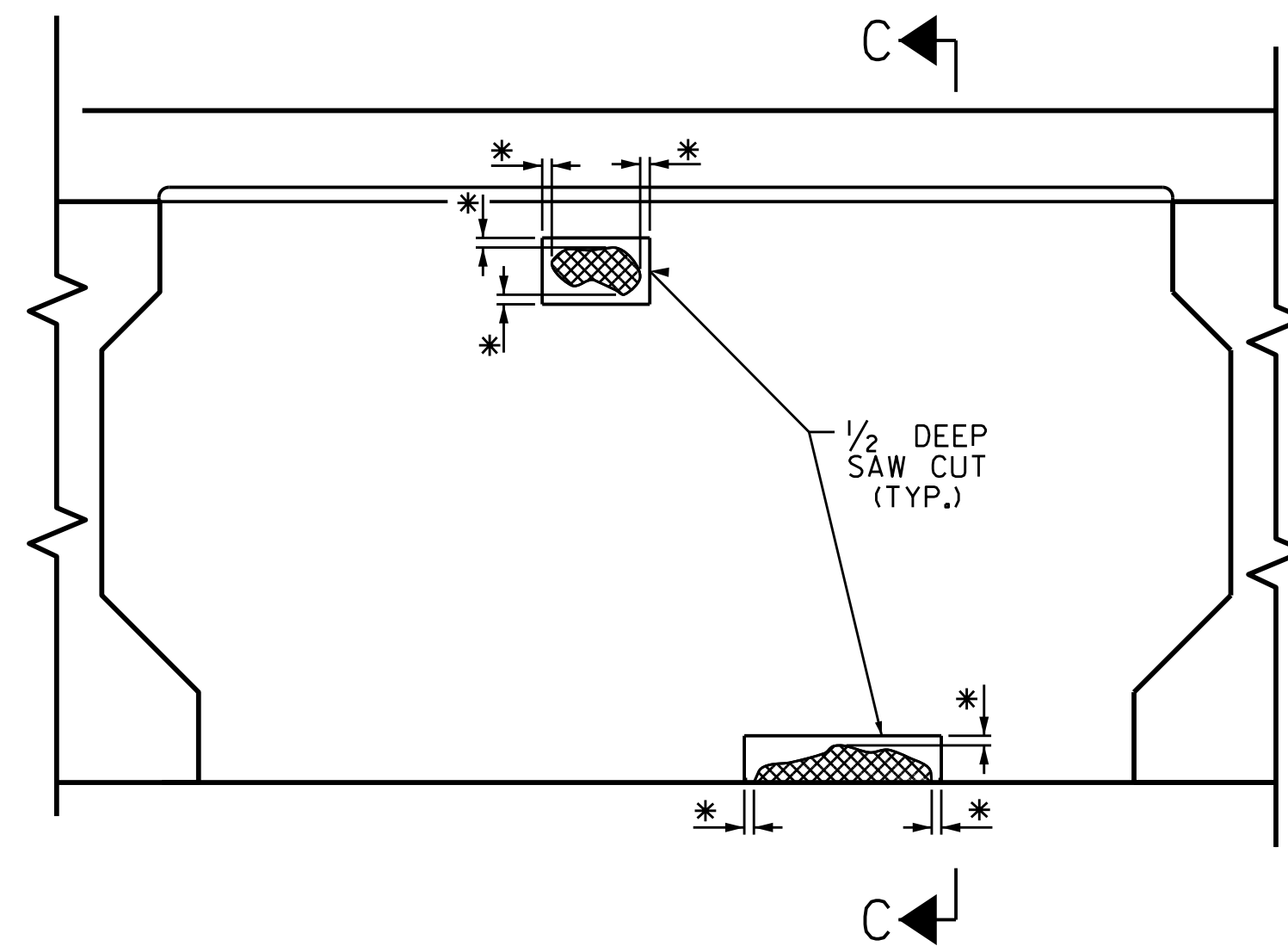


GIRDER WEB REPAIR

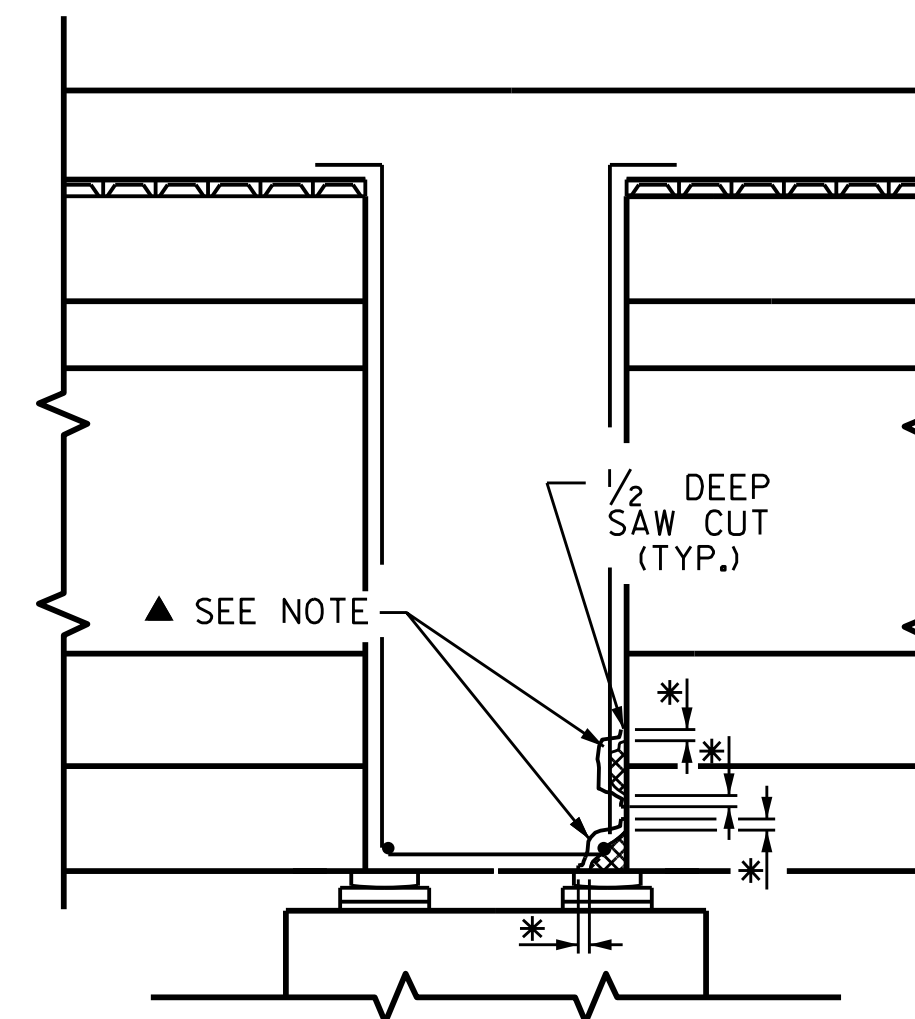


GIRDER FLANGE REPAIR

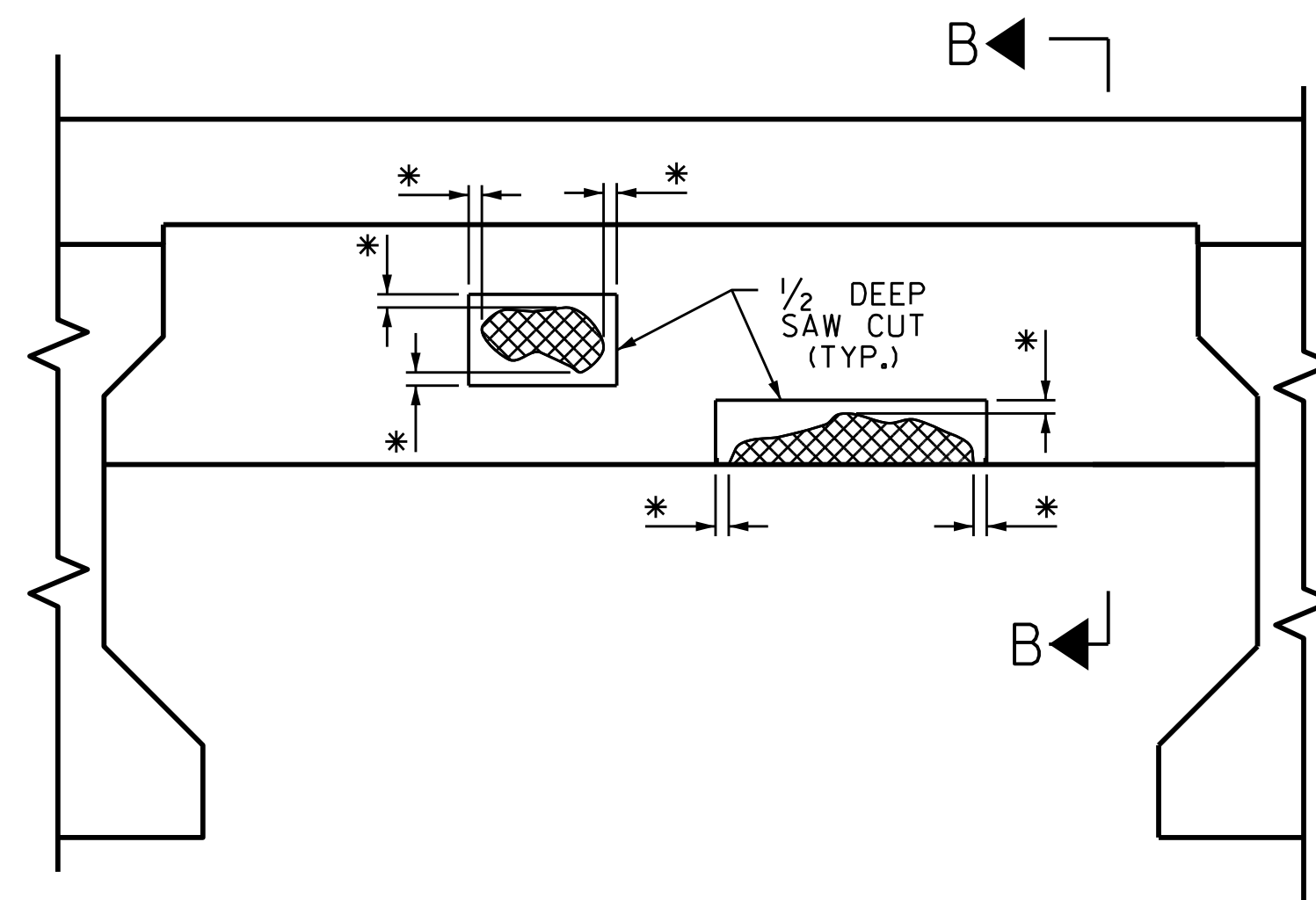
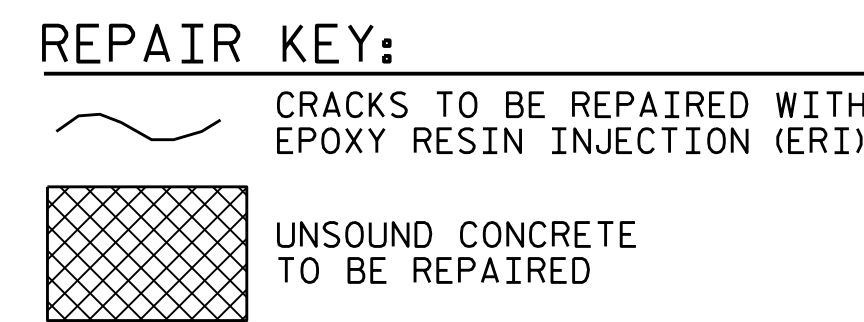
PRESTRESSED GIRDER REPAIR



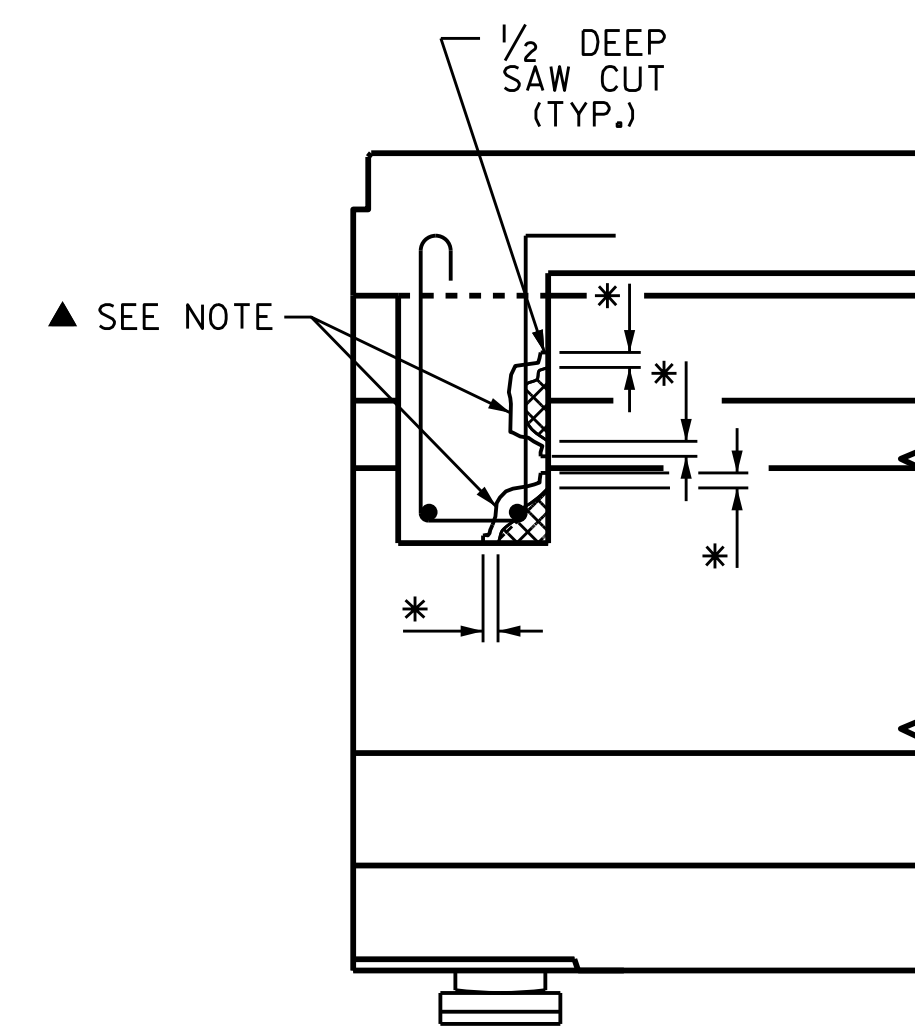
TYPICAL SECTION
(STRUCTURE 320320 @ BENTS 1, 2, 4, 5 & 6)



SECTION C-C
(STRUCTURE 320320 @ BENTS 1, 2, 4, 5 & 6)



TYPICAL SECTION



SECTION B-B

* 1/2" DEEP SAW CUT SHALL BE PLACED 2" INTO SOUND CONCRETE.

BENT DIAPHRAGM REPAIR DETAIL

(EXAMPLE DETAILS ONLY, ACTUAL REBAR SIZE & LOCATION MAY VARY)

NOTES:

- PREPACKAGED MATERIAL IS REQUIRED.
- CONSULT WITH THE ENGINEER TO DETERMINE PRELOADING REQUIREMENTS WHEN REPAIR IS WITHIN THE CENTER REGION OF THE BEAM (0.25L TO 0.75L).
- FOR REPAIRS OVER TRAFFIC AND SHALLOW REPAIRS THAT DO NOT ENGAGE REINFORCEMENT, ANCHOR PATCH MATERIAL USING 1/4" GALVANIZED BOLTS, EPOXY ANCHORED WITH 2" EMBEDMENT. PLACE BOLTS IN A 6" GRID. USE A LATEX OR EPOXY PATCH MATERIAL FOR IMPROVED BOND. USE EXTREME CARE TO NOT DAMAGE STRANDS.
- FOR PRESTRESSED CONCRETE GIRDER REPAIRS, SEE SPECIAL PROVISIONS.
- FOR EPOXY RESIN INJECTION (ERI), SEE SPECIAL PROVISIONS.
- FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

PRESTRESSED GIRDER STRAND REPAIR SEQUENCE:

- AS APPROPRIATE, REMOVE LIVE LOAD FROM REPAIR AREA BY EITHER CLOSING BRIDGE TO TRAFFIC OR SHIFTING TRAFFIC AWAY FROM REPAIR AREA.
- MEASURE OUT THE AREA NEEDED TO HAVE ADEQUATE ROOM TO SPLICE THE BROKEN OR DAMAGED STRAND. IF MULTIPLE STRANDS ARE BROKEN ADJACENT TO ONE ANOTHER THEN THE SPLICES SHALL BE STAGGERED. SEE "SPLICE OFFSET" ABOVE. AFTER YOU HAVE DETERMINED THE REPAIR AREA NEEDED, SAW CUT A MINIMUM OF 1/2" AT RIGHT ANGLES AROUND THE DAMAGED AREA. CHIP OUT REST OF CONCRETE TO A SUFFICIENT REPAIR DEPTH.
- SPLICE STRANDS USING THE MECHANICAL SPLICE STRAND ASSEMBLY AND TENSION TO REQUIRED FORCE PER THE MANUFACTURER'S GUIDELINES.
- PATCH REPAIR AREA AS PER THE REPAIRS TO PRESTRESSED CONCRETE GIRDERS SPECIAL PROVISION. PROFILE OF GIRDER MAY NEED TO BE INCREASED AROUND REPAIR AREA TO PROVIDE PROPER COVER.
- AFTER REPAIR MATERIAL HAS CURED PLACE TRAFFIC BACK ON BRIDGE OR REPAIRED AREA OF BRIDGE.

PRESTRESSED GIRDER REPAIR SEQUENCE:

- SOUND CONCRETE TO DETERMINE EXTENTS OF REPAIR LOCATION.
- REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL. SAW CUT AROUND REPAIR AREA TO A NOMINAL DEPTH OF 1/2".
- REMOVE CONCRETE WITHIN SAW CUT AREA TO MINIMUM 1/2" DEPTH. IF CONCRETE IS DAMAGED BEYOND THE ORIGINAL SAW CUT, A NEW SAW CUT IS REQUIRED.
- IF MORE THAN HALF THE CIRCUMFERENCE OF A REINFORCING BAR IS EXPOSED DURING THIS PROCESS, REMOVE ADDITIONAL CONCRETE TO 1" BEHIND THE BAR. THIS DOES NOT APPLY TO PRESTRESSED STRANDS.
- ALL UNSOUND CONCRETE MUST BE REMOVED, HOWEVER, PRESTRESSED STRANDS SHOULD NOT BE DISTURBED UNLESS ABSOLUTELY NECESSARY. USE EXTREME CARE TO NOT DAMAGE STRANDS.
- CLEAN ALL EXPOSED REINFORCING BARS AND PRESTRESSED STRANDS IN ACCORDANCE WITH THE REPAIRS TO PRESTRESSED CONCRETE GIRDERS SPECIAL PROVISION. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED. NOTE AND PROVIDE DETAILED DOCUMENTATION, INCLUDING LOCATION AND SEVERITY, OF ALL DAMAGE TO PRESTRESSED STRANDS THAT EXCEEDS 10% SECTION LOSS. IF FIVE OR MORE STRANDS ARE DAMAGED, NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF REPAIR MATERIAL.
- REMOVE ALL LOOSE OR WEAKENED MATERIAL THEN CLEAN THE REPAIR AREA OF DIRT, GREASE, OIL, AND FOREIGN MATTER.
- PREPARE SURFACE AND PLACE APPROVED REPAIR MATERIAL ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. MAXIMUM AGGREGATE SIZE FOR REPAIR MATERIAL SHALL NOT EXCEED 2/3 THE MINIMUM REPAIR DEPTH.

PROJECT NO. I-6041A
EDGEcombe COUNTY
BRIDGE NO. 320148, 320154
320156, 320157, 320320

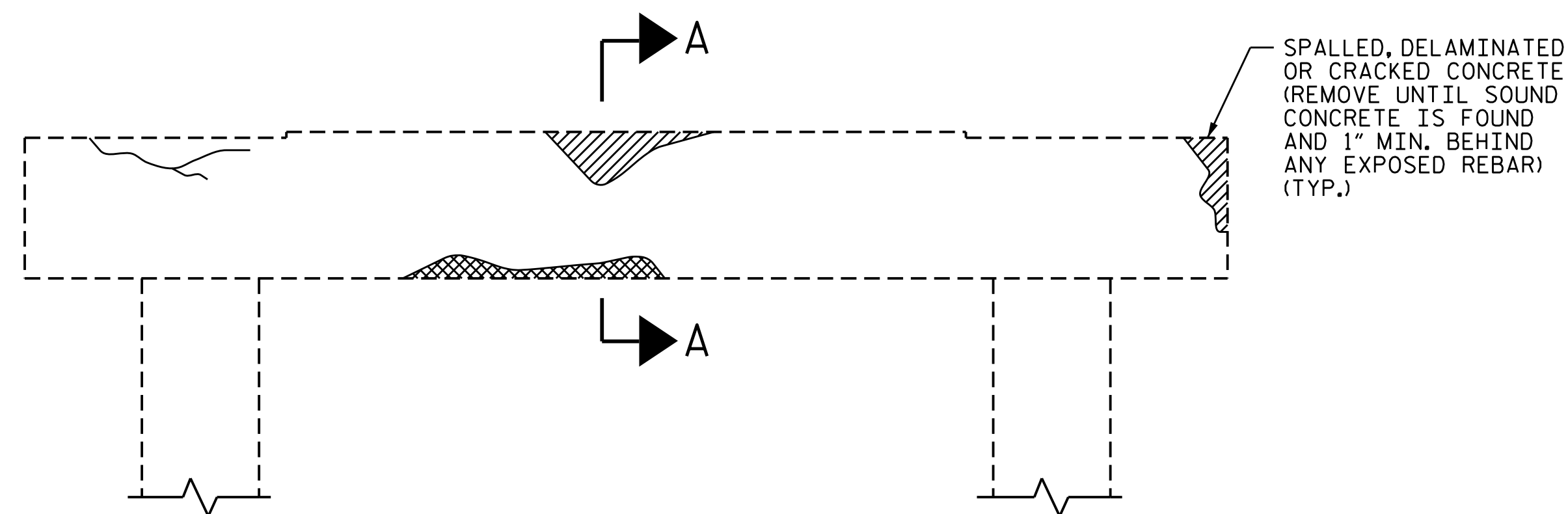


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
PRESTRESSED CONCRETE
GIRDER AND DIAPHRAGM
REPAIR DETAILS

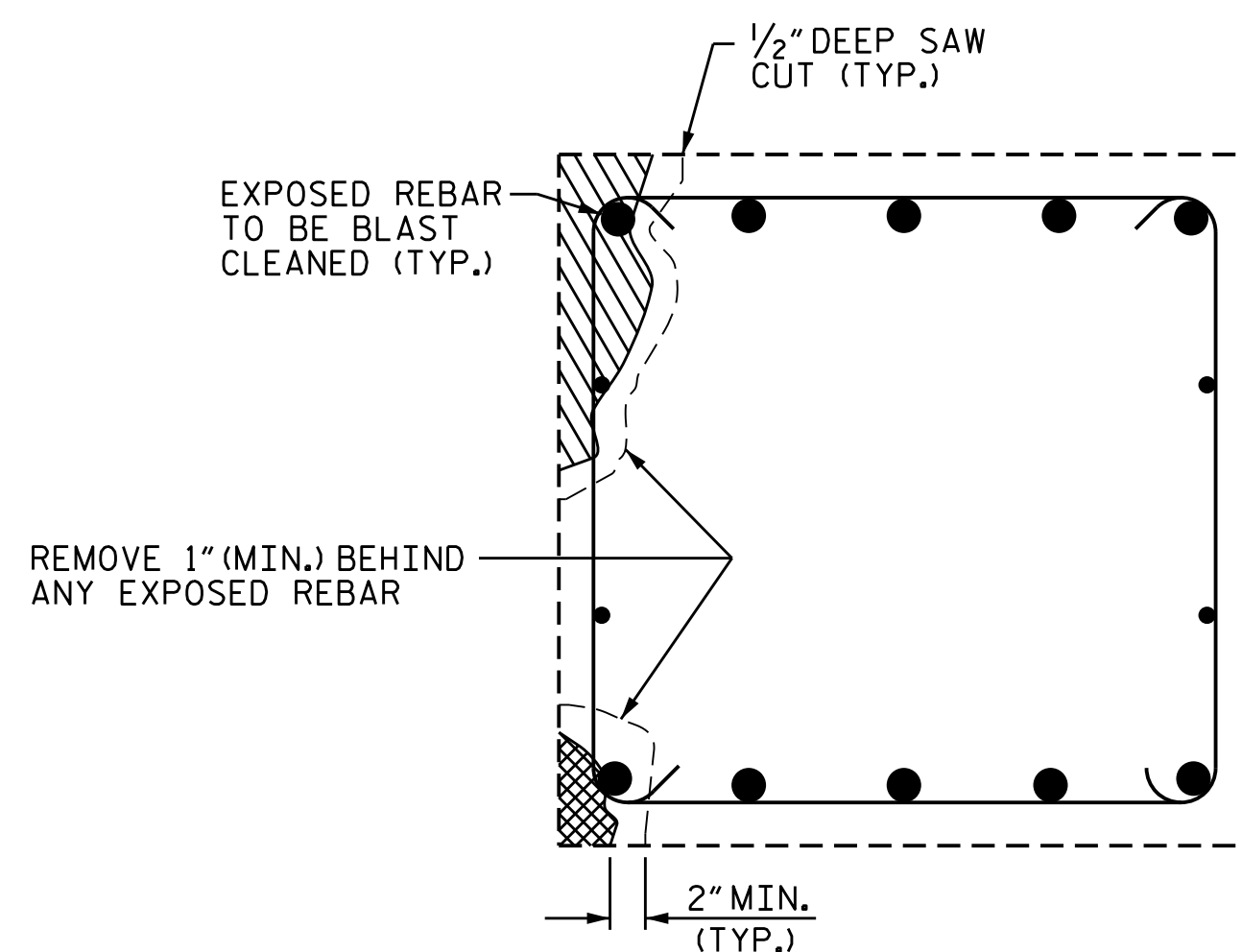
ASSEMBLED BY : S.T.S./A.Y.G. DATE : 06/2021
CHECKED BY : A.G.A./S.W. DATE : 06/2021
DRAWN BY : NAP 08/18
CHECKED BY :

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SD-1
1			3			TOTAL SHEETS
2			4			118

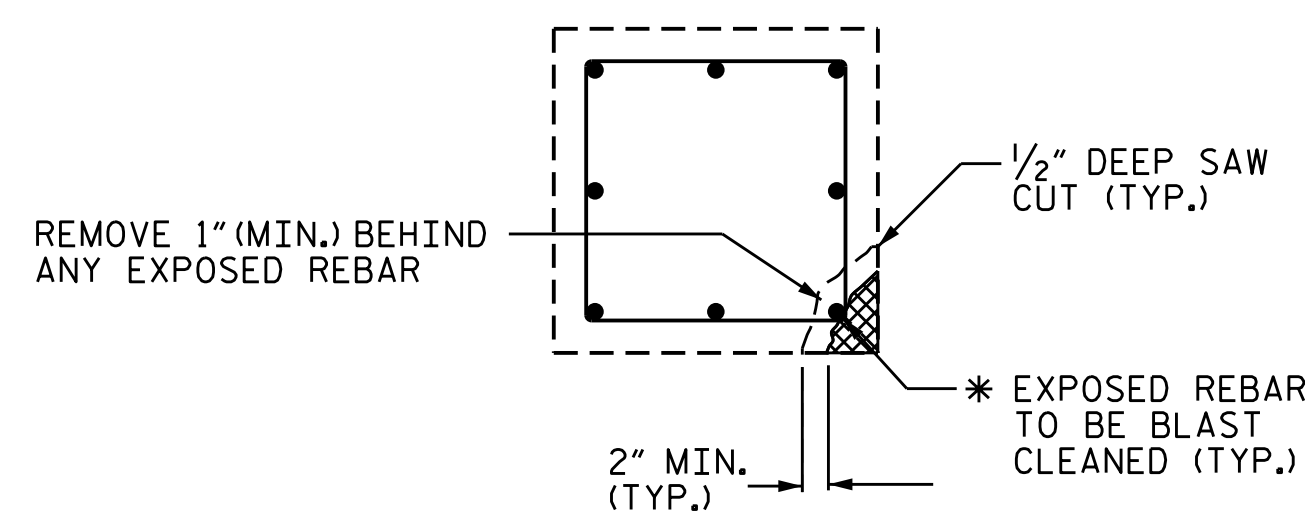


BENT CAP REPAIRS



SECTION A-A

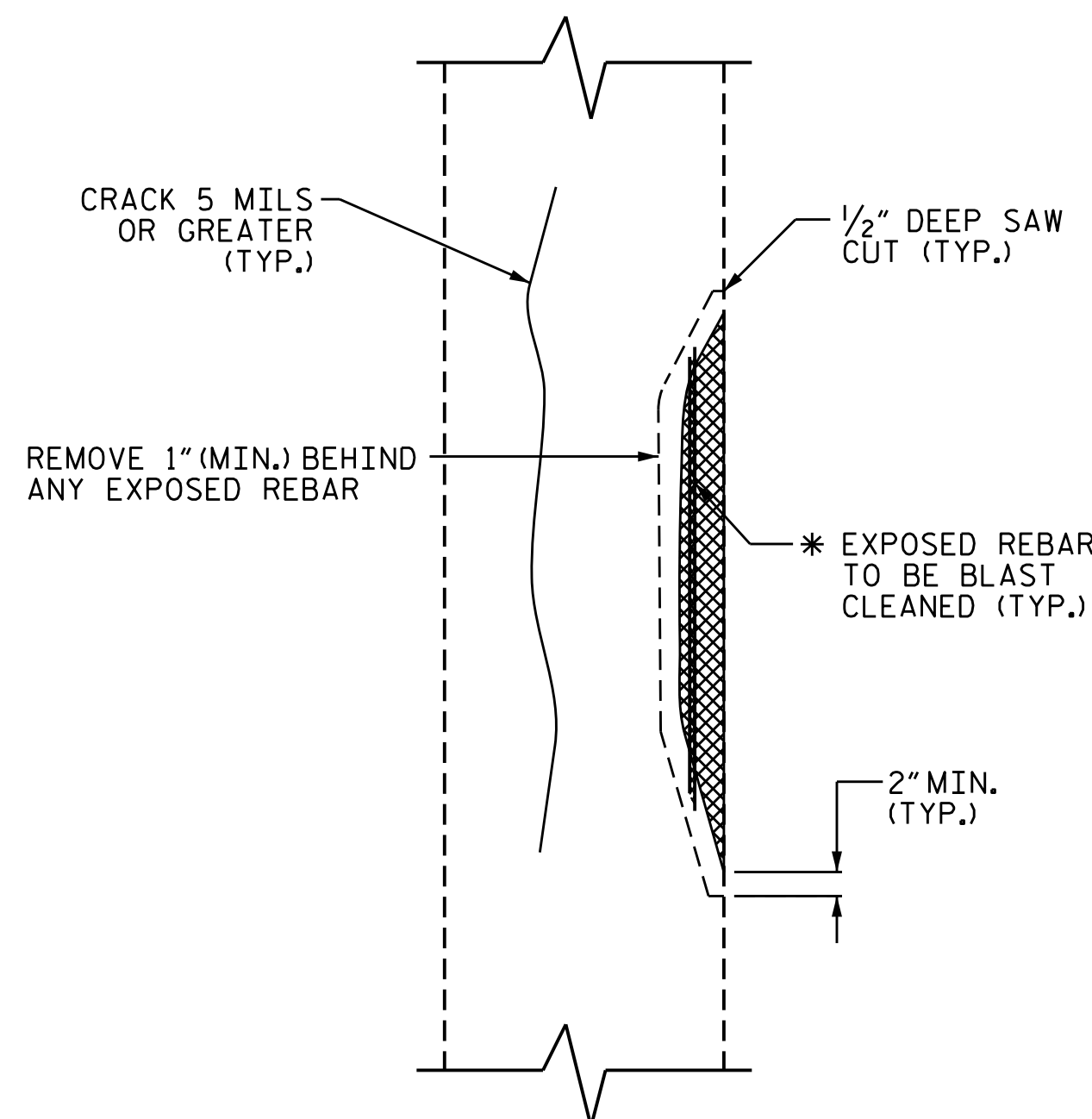
CAP REPAIR



PLAN OF COLUMN

REPAIR KEY

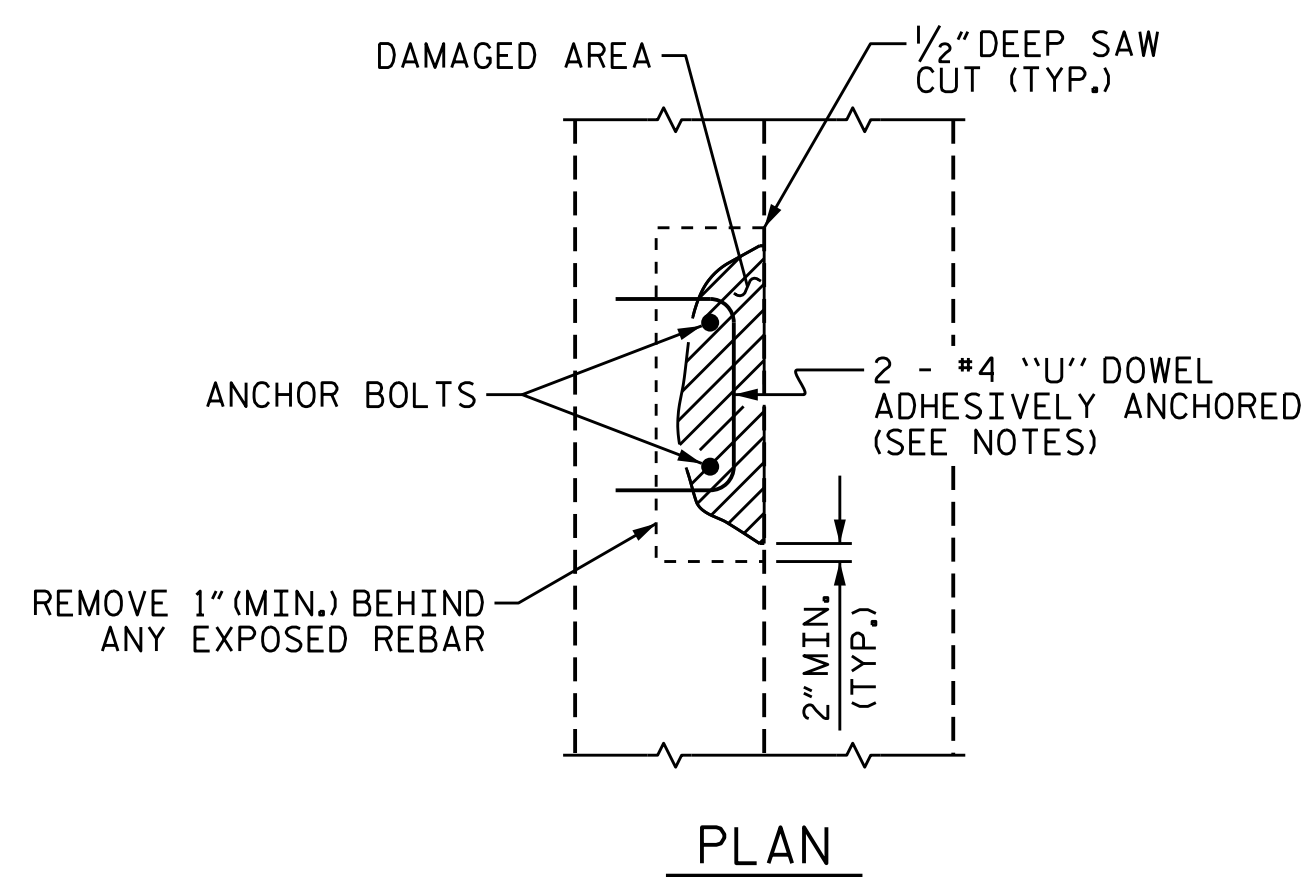
- CONCRETE REPAIR AREA (FORM AND POUR)
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)



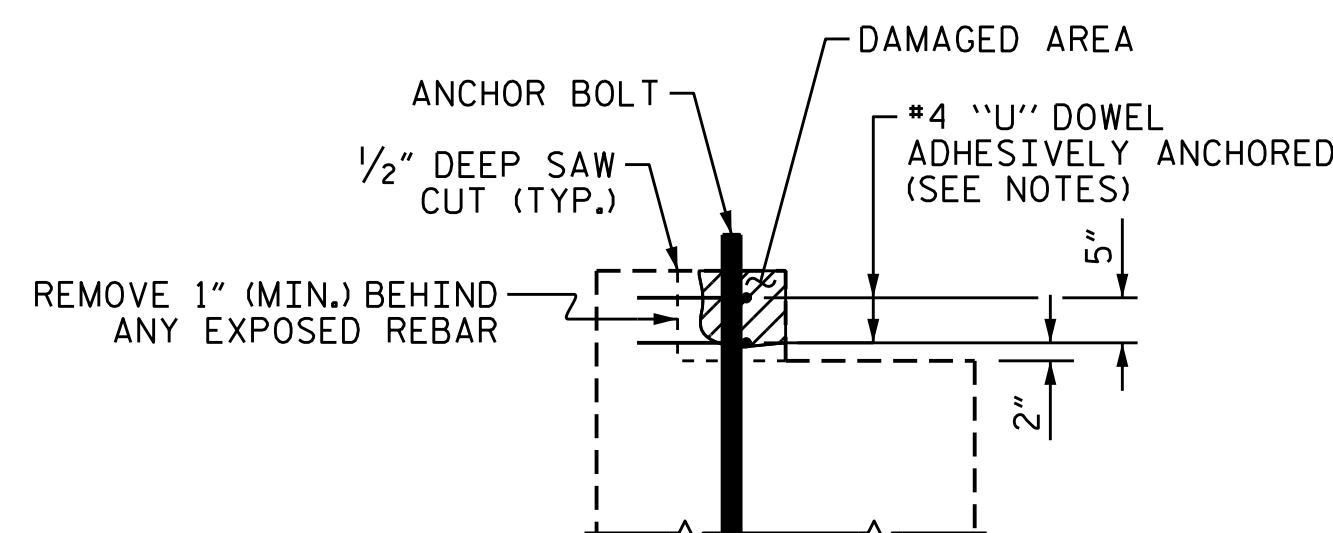
ELEVATION OF COLUMN

COLUMN REPAIR

SPLICE LENGTH TABLE	
BAR SIZE	MIN. SPLICE LENGTH
#4	2'-4"
#5	2'-9"
#6	4'-0"
#7	5'-3"
#8	6'-9"
#9	8'-6"
#10	10'-11"
#11	13'-4"



PLAN



ELEVATION

PEDESTAL WALL REPAIR

NOTES

TYPICAL BENT CAP REPAIRS ARE SHOWN. REPAIR DETAILS SIMILAR FOR END BENT CAPS AND STRUTS.

THE METHOD USED TO DELINEATE THE AREAS OF UNSOUND CONCRETE TO BE REPAIRED SHALL NOT PERMANENTLY MARK THE CONCRETE, LEAVE ANY RESIDUE AFTER REMOVAL OR REQUIRE HARSH CHEMICALS TO REMOVE.

THE CONTRACTOR SHALL REMOVE THE DETERIORATED CONCRETE IN ACCORDANCE WITH THE GUIDELINES SET IN THESE NOTES, IN THE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS.

REMOVE UNSOUND CONCRETE TO THE EXTENT NECESSARY, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT.

NO MORE THAN ONE-THIRD OF THE CAP OR COLUMN CIRCUMFERENCE SHALL BE REMOVED AT ONE TIME. SHOULD IT BECOME NECESSARY TO REMOVE MORE THAN 30% OF A CAP OR COLUMN CROSS SECTIONAL AREA, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

SIMULTANEOUS REMOVAL OF UNSOUND CONCRETE MAY BE PERMITTED ON MORE THAN ONE FACE OF A CAP AND/OR COLUMN, BUT NO MORE THAN 1/2 OF THE CIRCUMFERENCE SHALL BE REMOVED AT ONE TIME. IF REMOVAL EXTENDS MORE THAN 1/2" BEHIND THE MAIN REINFORCING BARS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING. ON COLUMNS AND PILES, NO MORE THAN 10 VERTICAL FEET MAY BE EXPOSED AT ONE TIME BEFORE PLACEMENT OF REPAIR CONCRETE.

REINFORCING STEEL WHICH IS DETERMINED BY THE ENGINEER TO BE REPLACED, SHALL BE REMOVED TO A POINT WHERE IT IS SOUND. THE PATCH SHALL EXTEND A SUFFICIENT DISTANCE BEYOND THIS POINT TO DEVELOP A SPLICE LENGTH SPECIFIED IN THE TABLE ON THIS SHEET.

THE #4 "U" DOWELS ARE REQUIRED ONLY AROUND THE ANCHOR BOLTS. THE EXISTING REINFORCING STEEL IN THE PEDESTAL WALL SHALL BE CLEANED, STRAIGHTENED AND REMAIN IN PLACE.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS.

COAT ALL REPAIR SURFACE AREAS ON THE TOP OF CAPS, INCLUDING CHAMFERS, WITH EPOXY PROTECTIVE COATING, OVERLAPPING THE REPAIR AREA BY A MINIMUM OF 3" ON ALL POSSIBLE SIDES.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

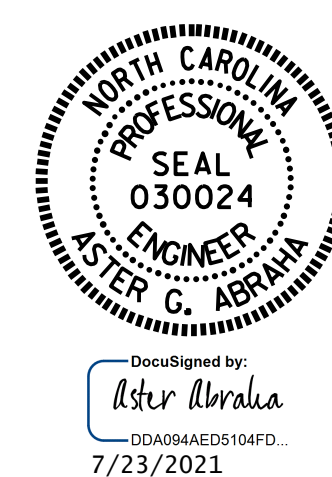
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION (ERI), SEE SPECIAL PROVISIONS.

CLEAN ALL EXPOSED REINFORCING BARS AND PRESTRESSED STRANDS IN ACCORDANCE WITH APPROPRIATE SPECIAL PROVISIONS. FOR BARS WITH MORE THAN 10% SECTION LOSS, SPLICE AND SECURELY TIE SUPPLEMENTAL REINFORCING BARS AS NEEDED. NOTE AND PROVIDE DETAILED DOCUMENTATION, INCLUDING LOCATION AND SEVERITY, OF ALL DAMAGE TO PRESTRESSED STRANDS THAT EXCEEDS 10% SECTION LOSS. IF FIVE OR MORE STRANDS ARE DAMAGED, NOTIFY THE ENGINEER PRIOR TO PLACEMENT OF REPAIR MATERIAL.

PROJ. NO. I-6041A
EDGEcombe COUNTY
 BRIDGE NO. 320104, 320148,
320153, 320154, 320156,
320157, 320320



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD
 TYPICAL CAP
 AND COLUMN
 REPAIR DETAILS

ASSEMBLED BY : S. T. SANDOR DATE : 10/2019
 CHECKED BY : A. G. ABRAHA DATE : 11/2019
 DRAWN BY : NAP 8/18
 CHECKED BY :

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SD-2
1			3			TOTAL SHEETS 118
2			4			

STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

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

CONCRETE:

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

CONCRETE CHAMFERS:

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

DOWELS:

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

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

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

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

ENGLISH

JANUARY, 1990

STD. NO. SN