

CONTRACT NO: DD00358B PROJECT: I-6042A



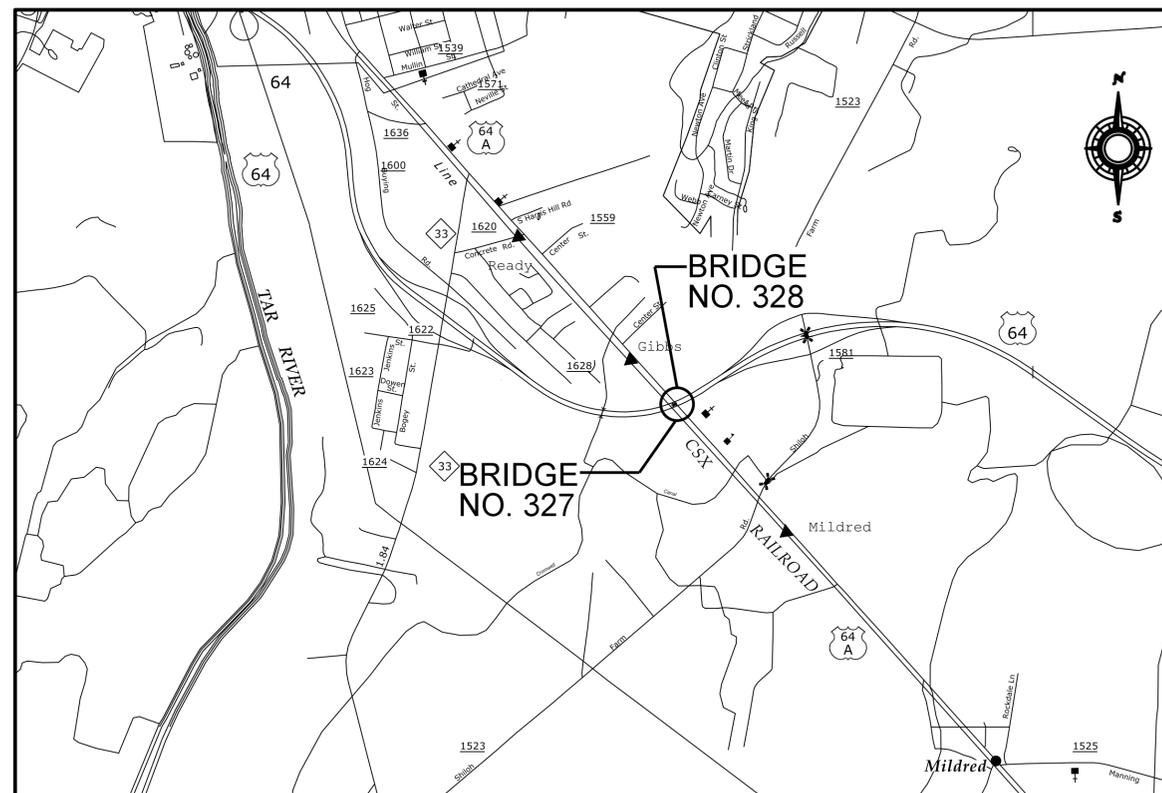
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EDGECOMBE COUNTY

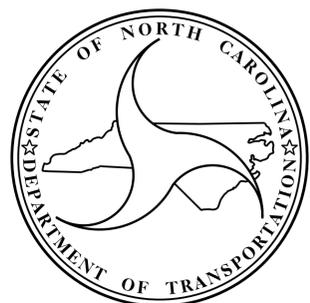
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6042A	1	27
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47991.1.2	0087046	P.E.	
47991.3.2	0087046	CONST.	

LOCATION: BRIDGE #320327 ON US-64 EBL OVER US-64 ALTERNATE AND CSX RAILROAD
(DOT CROSSING #973753S, MILEPOST ABC-138.96)
BRIDGE #320328 ON US-64 WBL OVER US-64 ALTERNATE AND CSX RAILROAD
(DOT CROSSING #973752K, MILEPOST ABC-138.94)

TYPE OF WORK: BRIDGE PRESERVATION - CONCRETE BRIDGE DECK REHABILITATION BY SHOTBLASTING AND PLACING OF EPOXY OVERLAY HAND APPLICATION SYSTEM; RECONSTRUCTION OF BRIDGE DECK JOINTS AND SEALS, AND SUBSTRUCTURE REPAIRS WITH SHOTCRETE.



**BRIDGES NO. 327 AND NO. 328
VICINITY MAP**



DESIGN DATA	
BRIDGE #327 ADT 2018 =	7,750
BRIDGE #328 ADT 2018 =	7,750

PROJECT LENGTH	
BRIDGE #327 =	0.043 MILES
BRIDGE #328 =	0.042 MILES

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

2018 STANDARD SPECIFICATIONS

<p>LETTING DATE : DECEMBER 14, 2021</p>	<p style="text-align: center;">KRISTY W. ALFORD, P.E. <small>PROJECT ENGINEER</small></p> <p style="text-align: center;">ASTER G. ABRAHA, P.E. <small>PROJECT DESIGN ENGINEER</small></p>
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PROJECT: I-6042A

CONTRACT NO: DD00358B



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

EDGECOMBE COUNTY

**LOCATION: BRIDGE #320327 ON US 64 EBL OVER US 64 ALT. AND CSX RAILROAD
BRIDGE #320328 ON US 64 WBL OVER US 64 ALT. AND CSX RAILROAD**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-6042A	1A	27
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
47991.1.2	0087046	P.E.	
47991.3.2	0087046	CONST.	

INDEX OF STRUCTURES SHEETS

<u>SHEET No.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF SHEETS
S-1	LOCATION SKETCHES & TOTAL BILL OF MATERIALS

STRUCTURE No. 320327

S1-1	GENERAL DRAWING
S1-2	TYPICAL SECTION
S1-3 THRU S-6	SURFACE PREPARATION
S1-7	JOINT REPAIR
S1-8	END BENTS
S1-9 THRU S1-11	BENTS

STRUCTURE No. 320328

S2-1	GENERAL DRAWING
S2-2	TYPICAL SECTION
S2-3 THRU S2-6	SURFACE PREPARATION
S2-7	JOINT REPAIR
S2-8	END BENTS
S2-9 THRU S2-11	BENTS

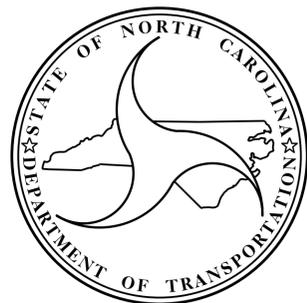
STANDARD SHEETS

SD-1	BENT REPAIR DETAILS
SN	STANDARD NOTES

TYPE OF WORK:

**BRIDGE PRESERVATION - CONCRETE BRIDGE DECK
REHABILITATION BY SHOTBLASTING AND PLACING
OF EPOXY OVERLAY HAND APPLICATION
SYSTEM; RECONSTRUCTION OF BRIDGE DECK
JOINTS AND SEALS, AND SUBSTRUCTURE REPAIRS
WITH SHOTCRETE.**

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



GENERAL NOTES:

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

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 AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO REPAIR QUANTITIES TABLE.

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 CONTRACTORS 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.

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 SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR POURABLE SILICONE JOINT SEALANT, 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 CONTROL PLANS.

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	DESCRIPTION	UNIT
1	CONCRETE DECK REPAIR FOR EPOXY OVERLAY	SQ. FT.
2	VOLUMETRIC MIXER	LUMP SUM

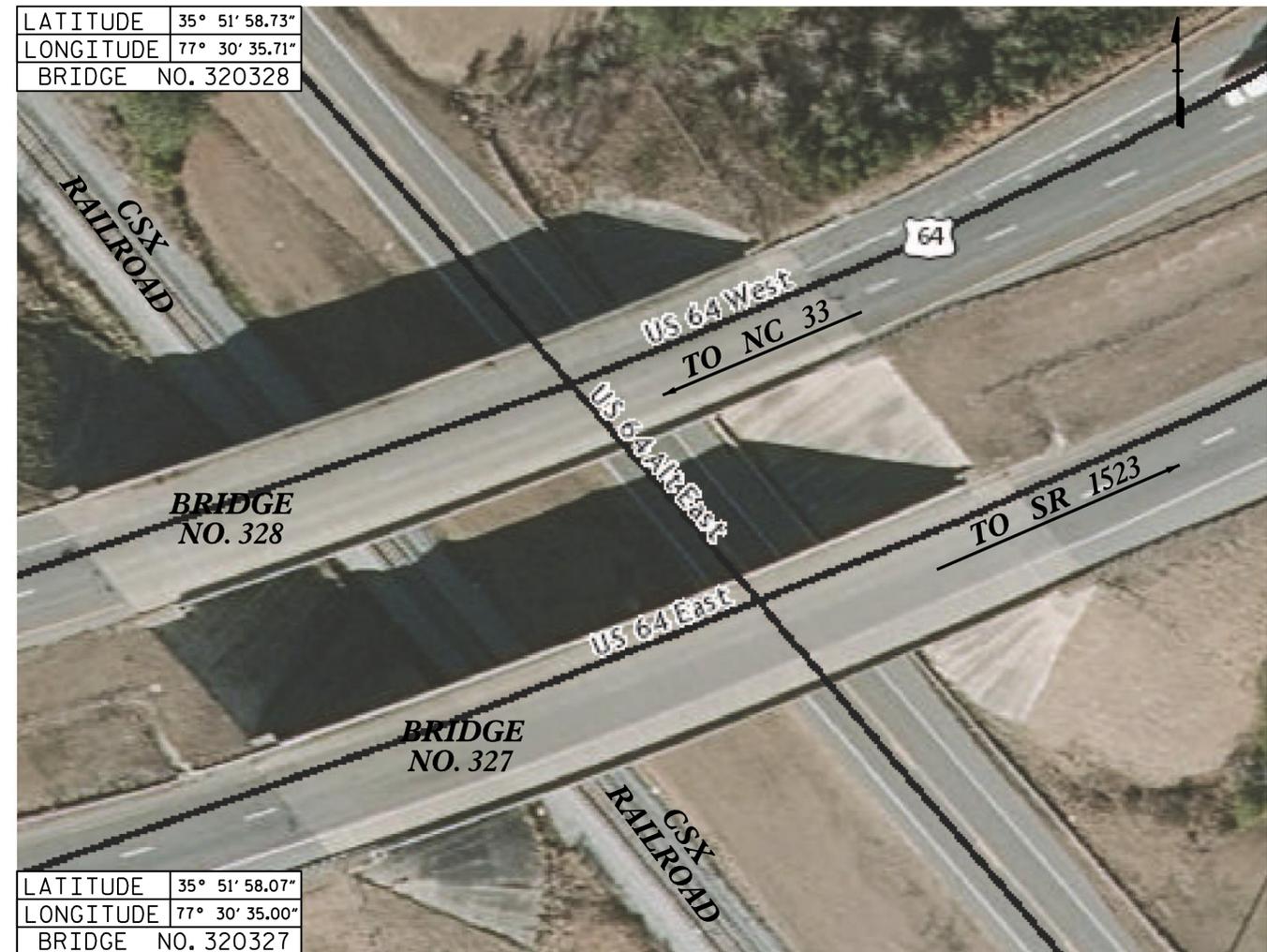
CSX RAILROAD NOTES:

- 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).
- 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.
- 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.
- 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.
- THE CONTRACTOR SHALL BE REQUIRED TO FULLY COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS, REGULATIONS, STATUTES AND ORDINANCES AT ALL TIMES.
- 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 THE PROJECT'S EXPENSE.
- 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 FIFTY FEET (50') OF THE CENTERLINE OF TRACK, CSXT SHALL HAVE SOLE AUTHORITY TO DETERMINE THE NEED FOR FLAGGING REQUIRED TO PROTECT ITS OPERATIONS AND PROPERTY.

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

12-NOV-2021 10:58
 S:\DPG1\Division4\I-6042A\StationPlans\400.005.I-6042A.SMU. BM.320327.dgn
 aabrana

LATITUDE	35° 51' 58.73"
LONGITUDE	77° 30' 35.71"
BRIDGE NO.	320328



LATITUDE	35° 51' 58.07"
LONGITUDE	77° 30' 35.00"
BRIDGE NO.	320327

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.

TOTAL BILL OF MATERIAL					
EDGEcombe COUNTY BRIDGE NO.	SHOTCRETE REPAIRS	POURABLE SILICONE JOINT SEALANT	ELASTOMERIC CONCRETE FOR PRESERVATION	BRIDGE JOINT DEMOLITION	EPOXY OVERLAY HAND APPLICATION SYSTEM
	CU. FT.	LN. FT.	CU. FT.	SO. FT.	SO. FT.
320327	1.5	81.3	14.0	74.5	9,342.2
320328	3.0	81.7	14.0	74.9	9,076.0
TOTAL	4.5	163.0	28.0	149.4	18,418.3

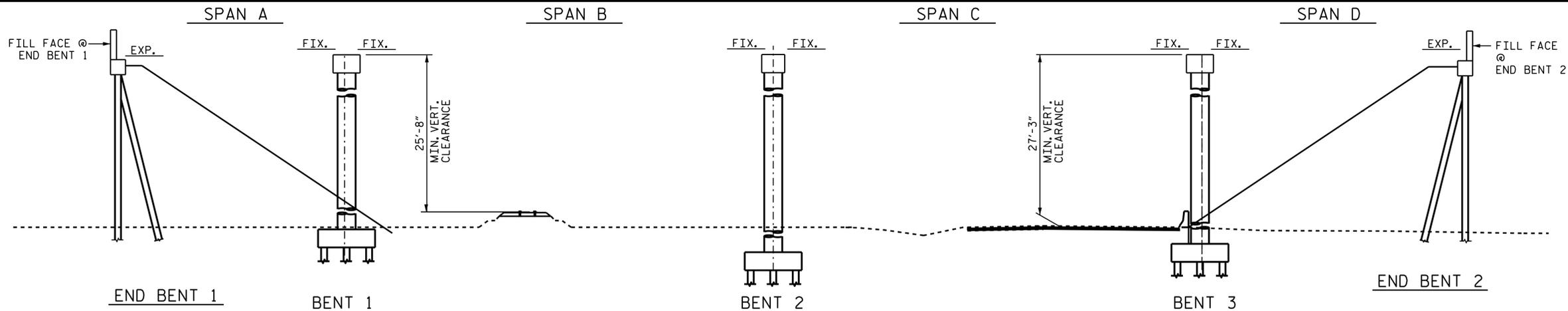
PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320327 & 320328



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL NOTES,
 LOCATION SKETCHES
 & TOTAL BILL OF
 MATERIAL**

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			27

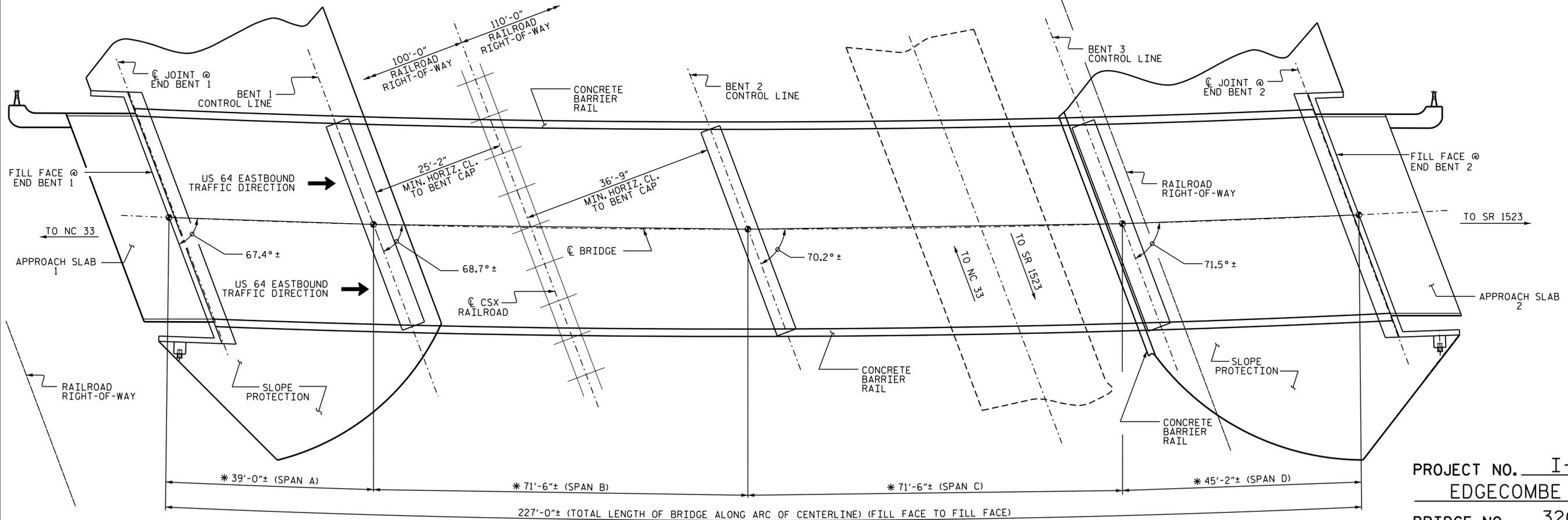


ELEVATION

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

NOTES

- PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION, DATED 02/10/2021.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS



PLAN

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

* DIMENSIONS MEASURED ALONG ARC OF BRIDGE CENTERLINE

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH EPOXY OVERLAY HAND APPLICATION SYSTEM.
- DEMOLISH EXISTING BRIDGE JOINTS.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC HEADERS AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.

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

Resident Engineer _____ Date _____

PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320327

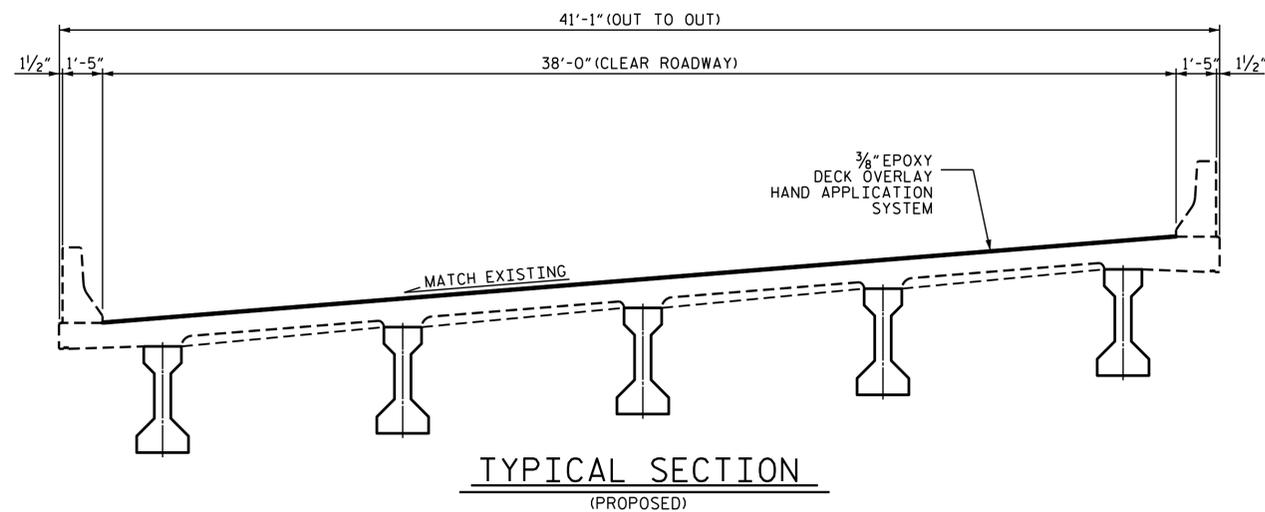
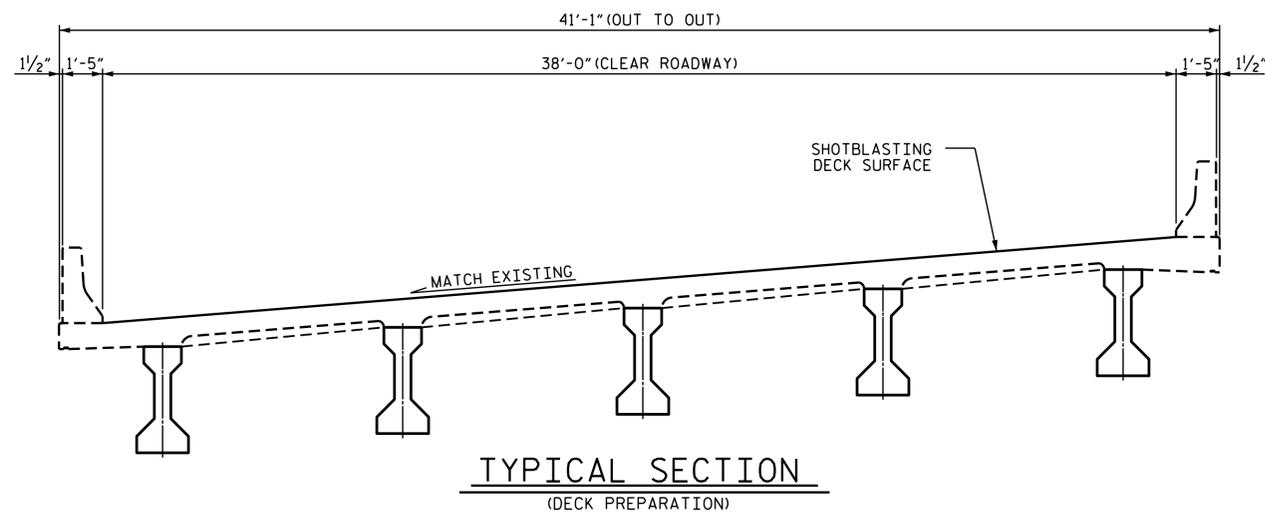
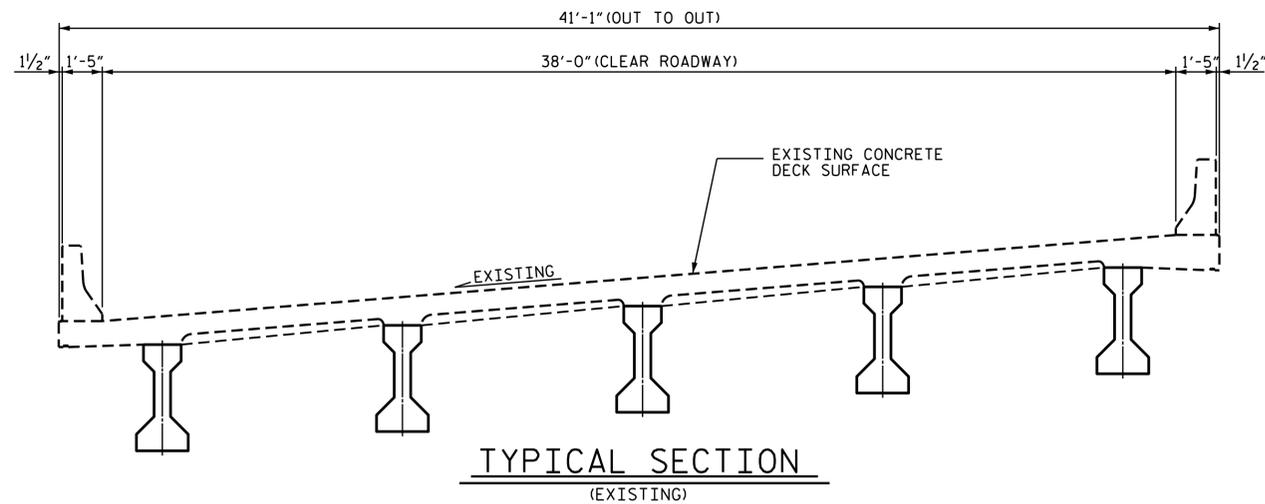
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE NO. 327 ON
 US-64 EBL OVER
 US-64 ALT. AND CSX
 RAILROAD



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-1
1			3			TOTAL SHEETS
2			4			27

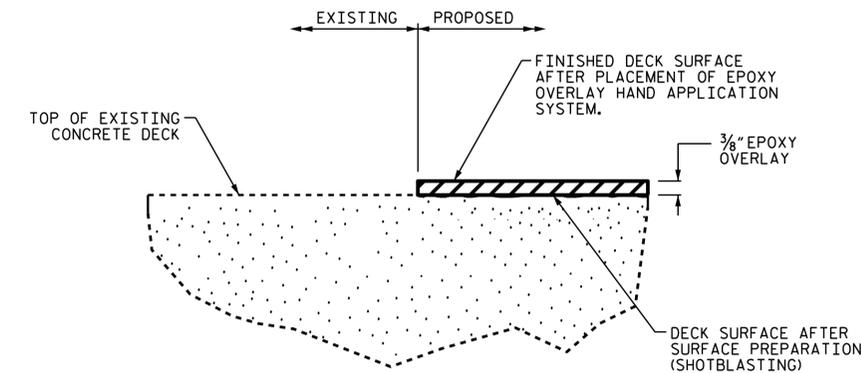
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DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 09/2021
 CHECKED BY : A. G. ABRAHA DATE : 09/2021



NOTES

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



DETAIL FOR EPOXY OVERLAY

PROJECT NO. I-6042A
EDGEcombe COUNTY
BRIDGE NO. 320327



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION
AND SURFACE
PREPARATION DETAILS

DRAWN BY : A. Y. GODFREY DATE : 12/2021
CHECKED BY : A. G. ABRAHA DATE : 04/2021

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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-2
1			3			TOTAL SHEETS
2			4			27

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB 1

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,837.0 SF	
BRIDGE JOINT DEMOLITION	37.7 SF	
ELASTOMERIC CONCRETE FOR PRESERVATION	7.1 CF	

NOTES:

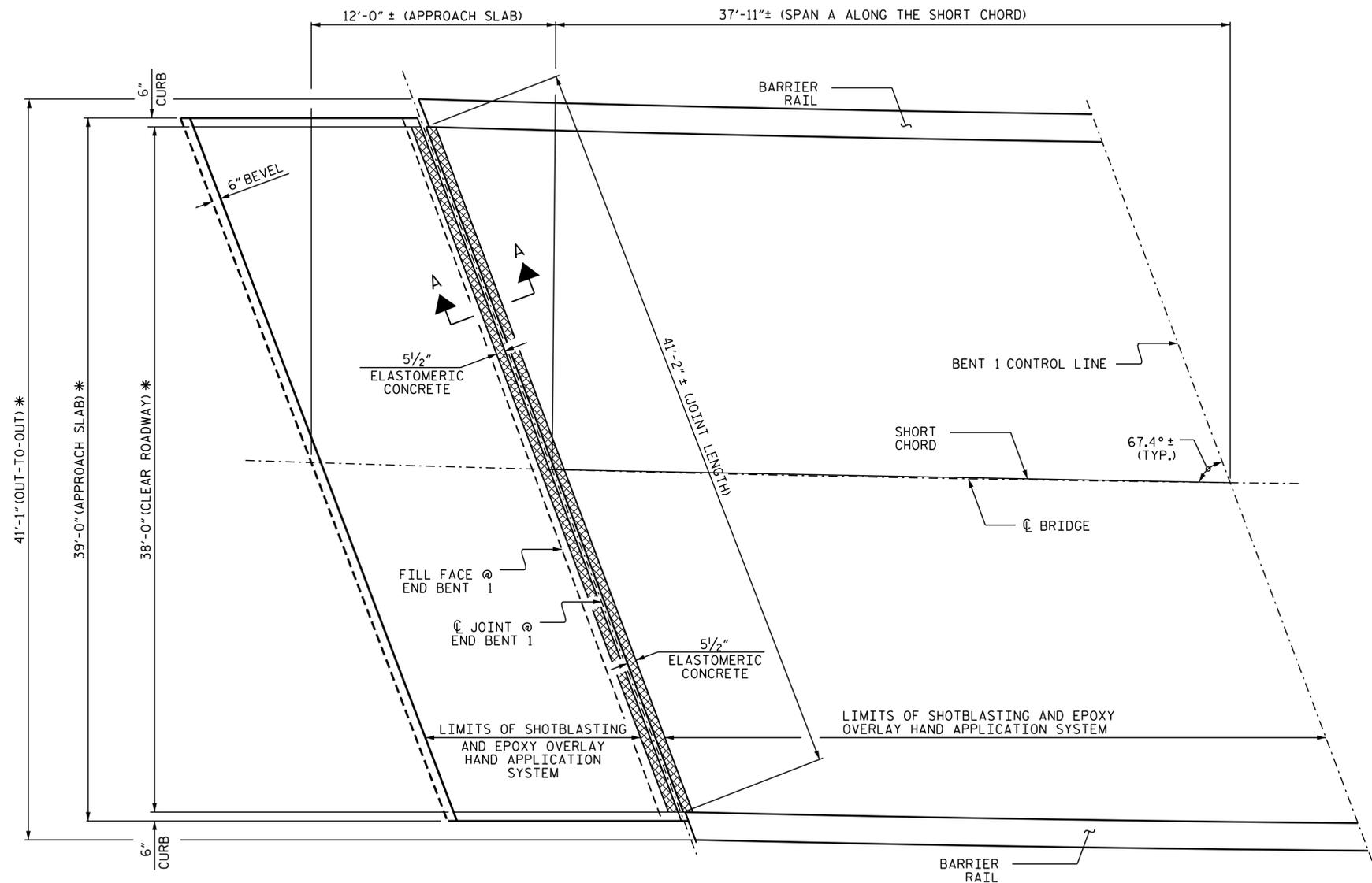
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN IN DRAWINGS ARE DEEMED NECESSARY BY ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED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

FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

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
- BRIDGE JOINT DEMOLITION

* RADIAL DIMENSIONS

PLAN OF SPAN A AND APPROACH SLAB 1

(SEE SHEET S1-7 FOR SECTION A-A)

PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320327

SHEET 1 OF 4



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

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
 CHECKED BY : A. G. ABRAHA DATE : 04/2021

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S1-3
2			4			TOTAL SHEETS 24

SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,717.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	
ELASTOMERIC CONCRETE FOR PRESERVATION	0.0 CF	

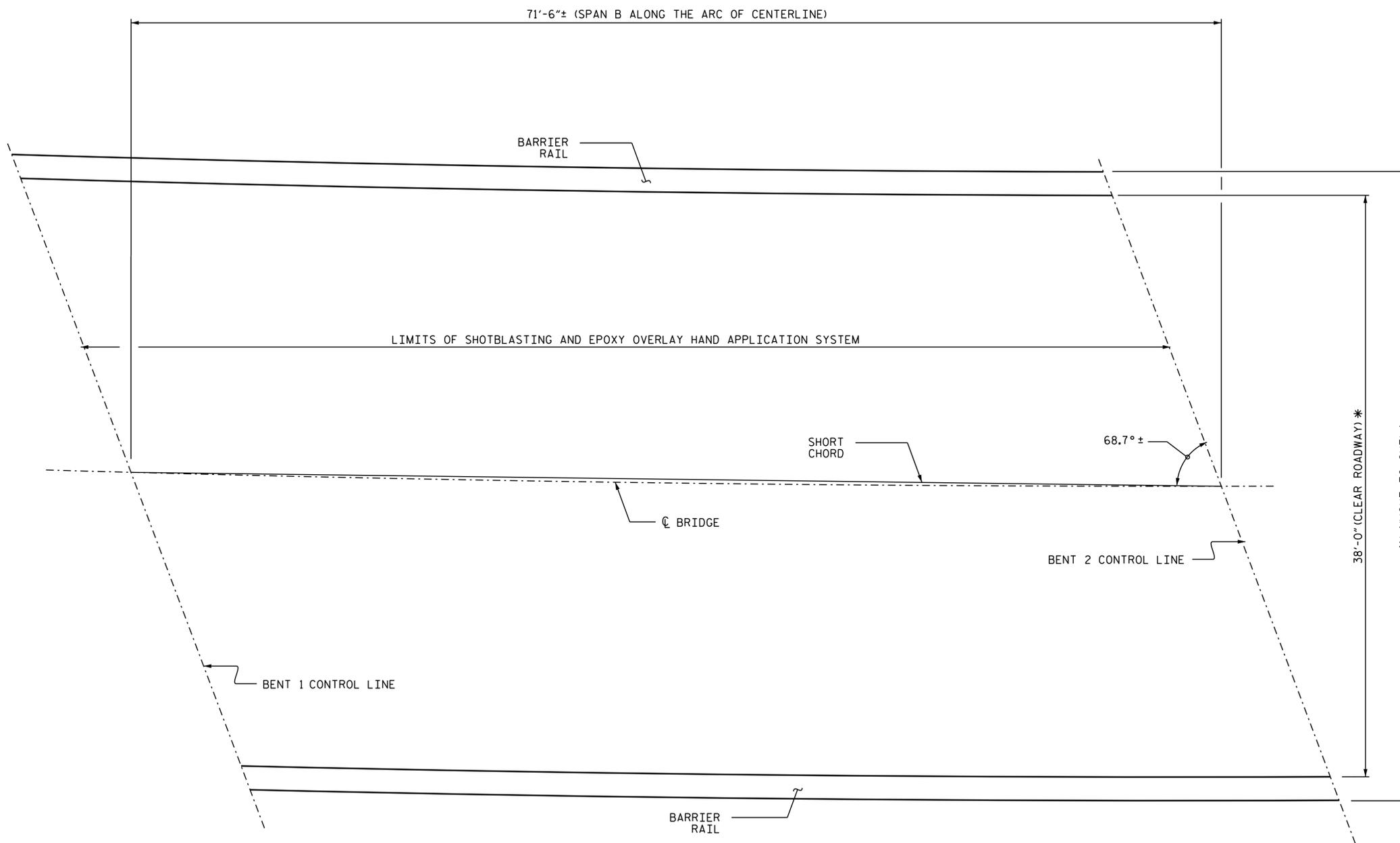
NOTES:

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FOR EPOXY OVERLAY HAND APPLICATION SYSTEM, SEE SPECIAL PROVISIONS.

 - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK

* RADIAL DIMENSIONS



PLAN OF SPAN B

PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320327

SHEET 2 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

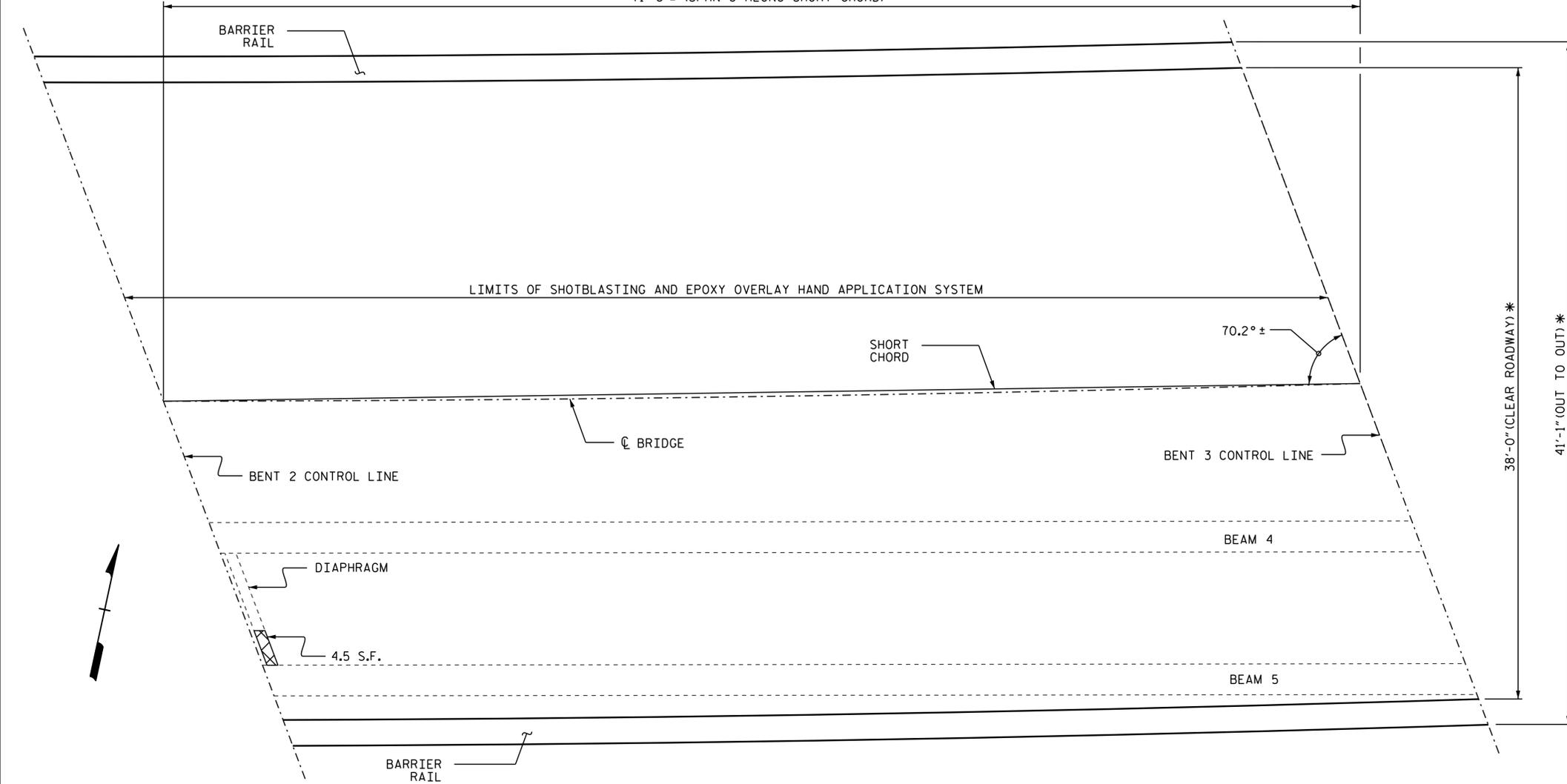
SURFACE PREPARATION
 SPAN B

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
 CHECKED BY : A. G. ABRAHA DATE : 04/2021

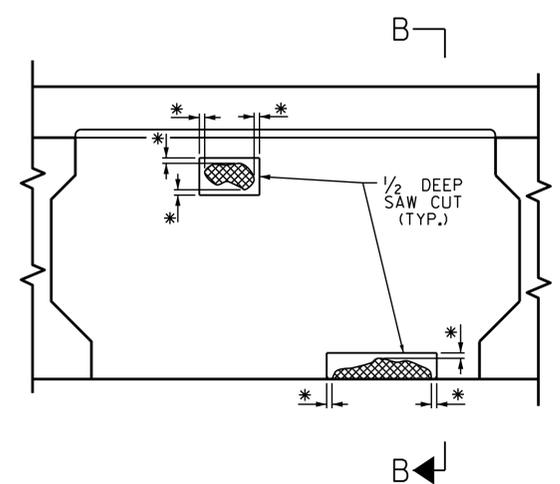
DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

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

71'-6"± (SPAN C ALONG SHORT CHORD)

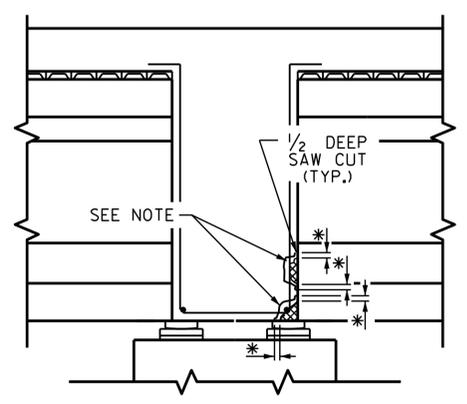


PLAN OF SPAN C



TYPICAL SECTION

* 1/2" DEEP SAW CUT SHALL BE PLACED 1" INTO SOUND CONCRETE.



SECTION B-B

BENT DIAPHRAGM REPAIR DETAIL
(EXAMPLE DETAILS ONLY. ACTUAL REBAR SIZE & LOCATION MAY VARY)

SUMMARY OF QUANTITIES FOR SPAN C

	ESTIMATE	ACTUAL		
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,717.0 SF			
BRIDGE JOINT DEMOLITION	0.0 SF			
ELASTOMERIC CONCRETE FOR PRESERVATION	0.0 CF			
SHOTCRETE REPAIRS				
	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
DIAPHRAGM REPAIR	4.5	1.5		

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.

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 SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS

FOR DIAPHRAGM REPAIR DETAILS, SEE 'BENT DIAPHRAGM REPAIR DETAIL.

- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- SHOTCRETE DIAPHRAGM REPAIR

* RADIAL DIMENSIONS

PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320327

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN C

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
 CHECKED BY : A. G. ABRAHA DATE : 04/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-5
1			3			TOTAL SHEETS
2			4			24

SUMMARY OF QUANTITIES FOR SPAN D AND APPROACH SLAB 2

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,071.3 SF	
BRIDGE JOINT DEMOLITION	36.7 SF	
ELASTOMERIC CONCRETE FOR PRESERVATION	6.9 CF	

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.

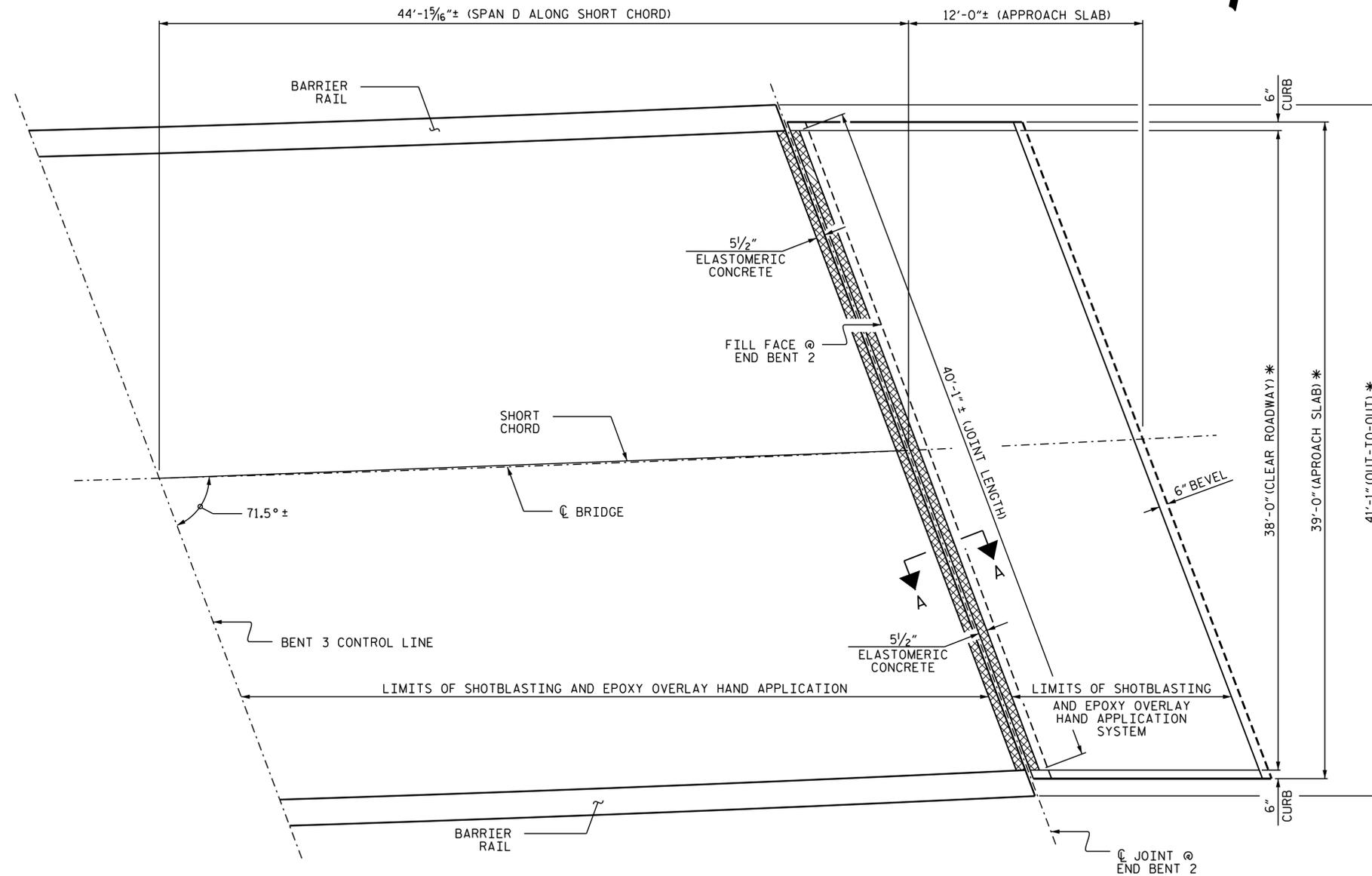
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - BRIDGE JOINT DEMOLITION

* RADIAL DIMENSIONS



PLAN OF SPAN D AND APPROACH SLAB 2

(SEE SHEET S1-7 FOR SECTION A-A)

PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320327

SHEET 4 OF 4



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

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
 CHECKED BY : A. G. ABRAHA DATE : 04/2021

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-6
1			3			TOTAL SHEETS
2			4			27

NOTES

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

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

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

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT. THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

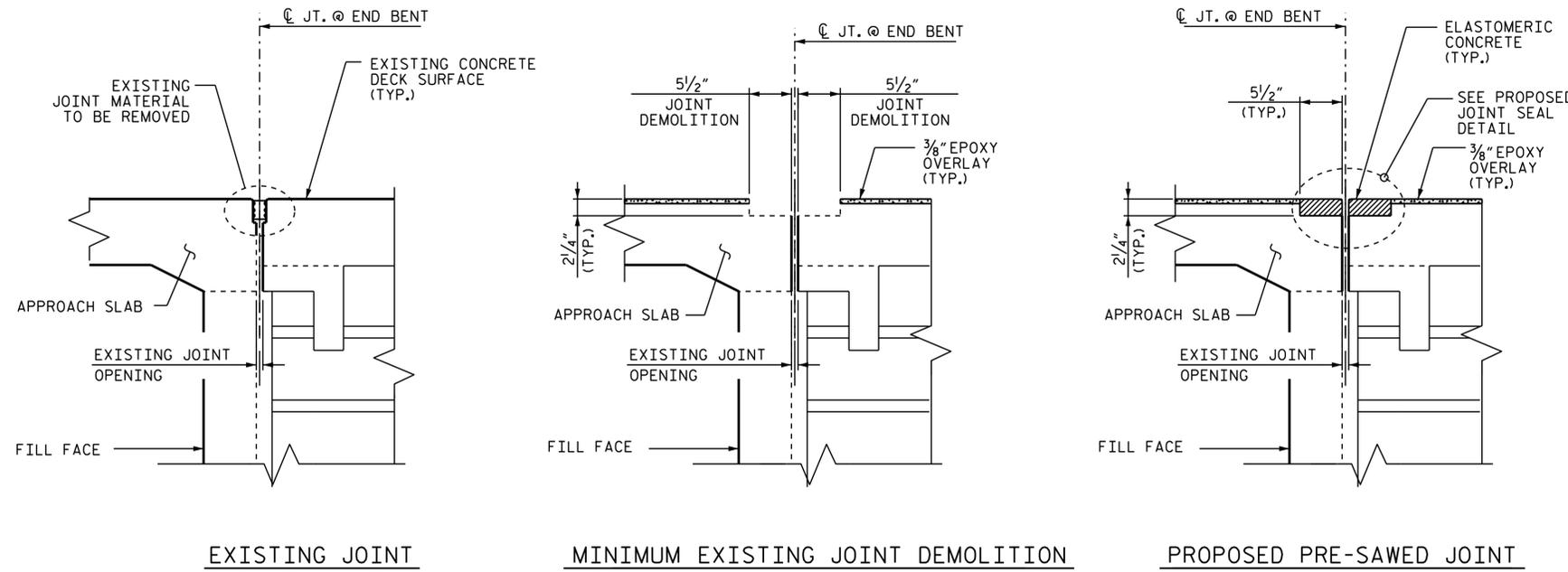
FOR PREFORMED SILICONE RUBBER EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

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

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

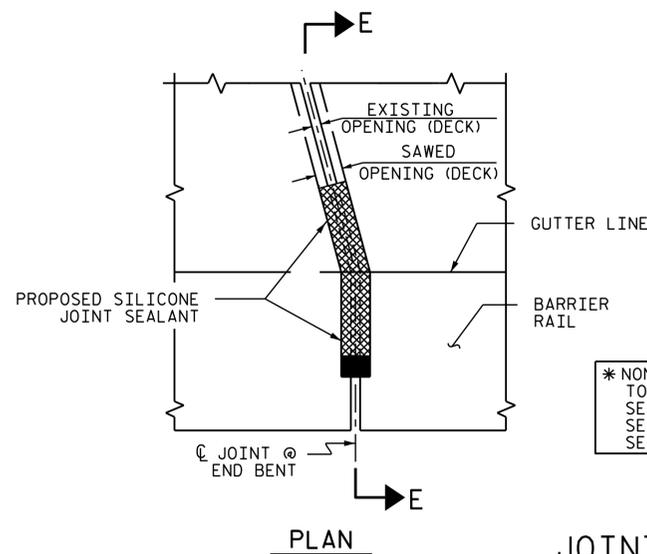
FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION SEE SPECIAL PROVISIONS.

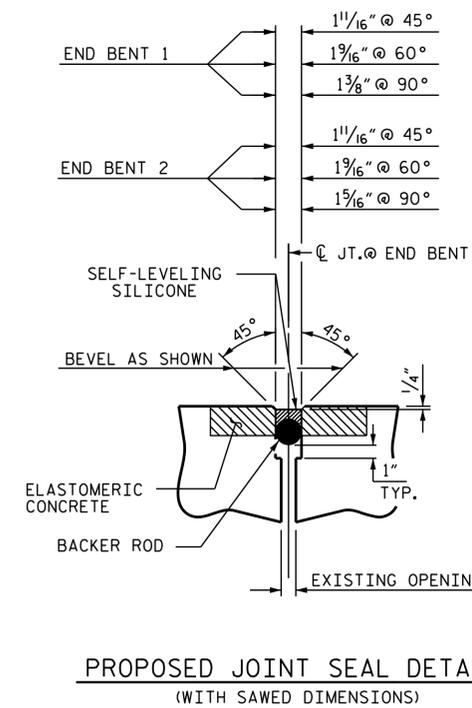
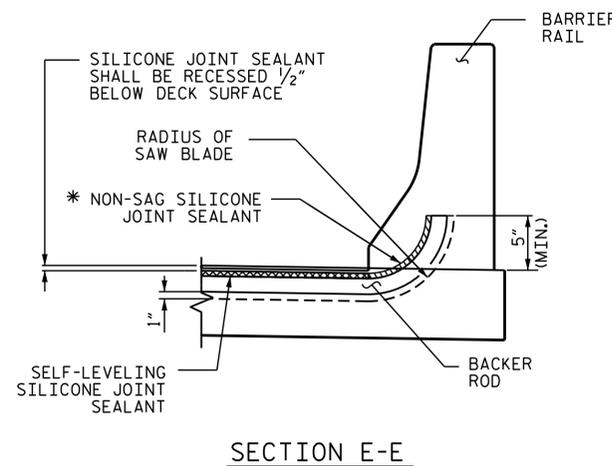


JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION A-A

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT	81.3 L.F.	



JOINT DETAIL AT BARRIER RAIL



PROPOSED JOINT SEAL DETAIL
(WITH SAWED DIMENSIONS)

PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320327

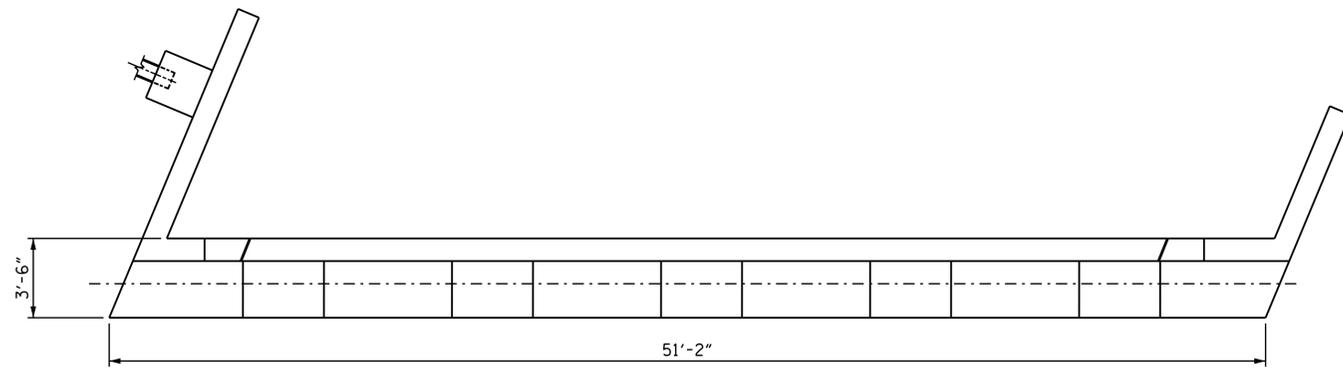


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT REPAIR DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

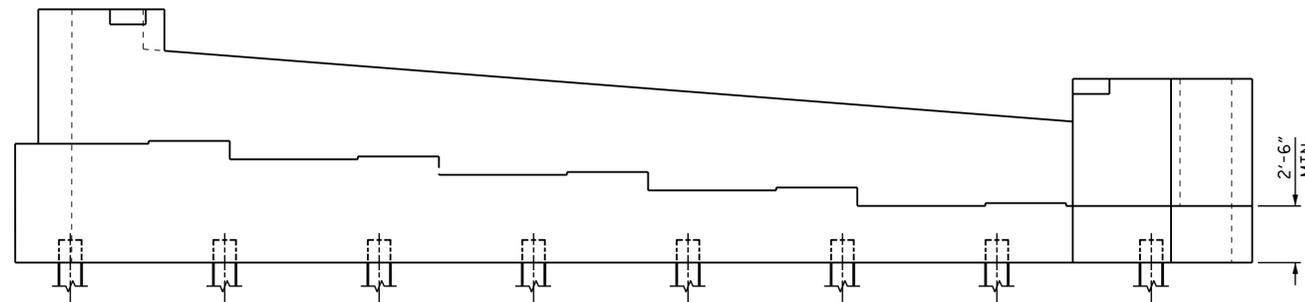
S1-7
TOTAL SHEETS
27

DRAWN BY : A. Y. GODFREY DATE : 12/2021
 CHECKED BY : A. G. ABRAHA DATE : 4/2021

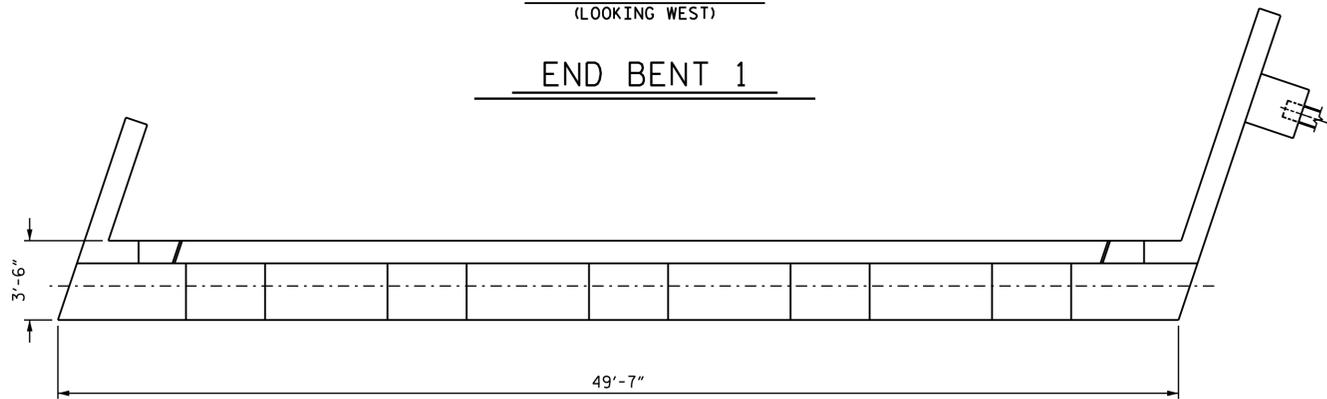
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



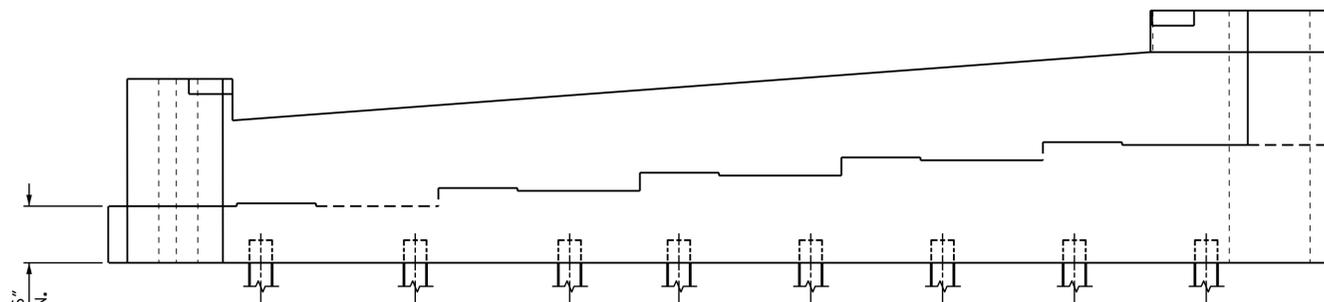
PLAN
(TOP OF CAP)



ELEVATION
(LOOKING WEST)
END BENT 1



PLAN
(TOP OF CAP)



ELEVATION
(LOOKING EAST)
END BENT 2

REPAIR KEY



SHOTCRETE REPAIR AREA

REPAIR QUANTITY TABLE

REPAIRS 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		

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 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.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320327



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS REPAIR

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. Y. GODFREY DATE : 12/2020

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-8
1			3			TOTAL SHEETS
2			4			27

REPAIR QUANTITY TABLE

BENT 1	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		

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:

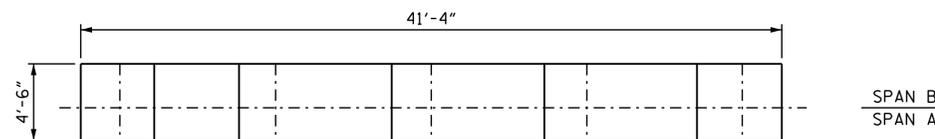
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

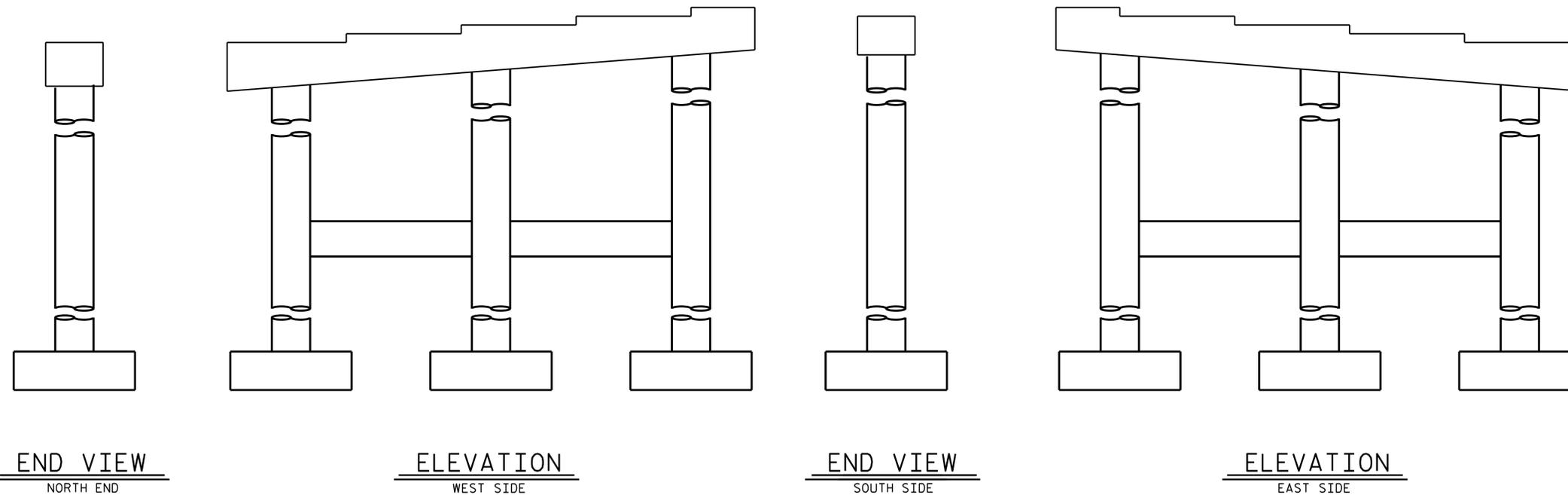
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

US 64 EASTBOUND
TRAFFIC DIRECTION



PLAN
TOP OF CAP



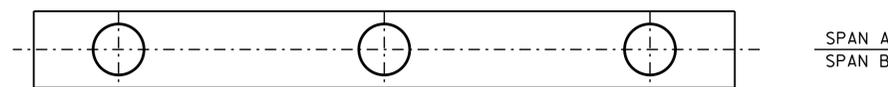
END VIEW
NORTH END

ELEVATION
WEST SIDE

END VIEW
SOUTH SIDE

ELEVATION
EAST SIDE

US 64 EASTBOUND
TRAFFIC DIRECTION



PLAN
BOTTOM OF CAP

REPAIR KEY

SHOTCRETE REPAIR



PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320327

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 BENT 1

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

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S1-9
2			4			27

REPAIR QUANTITY TABLE

BENT 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		

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:

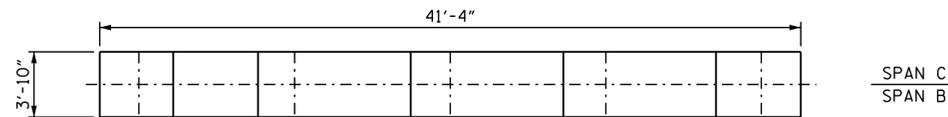
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

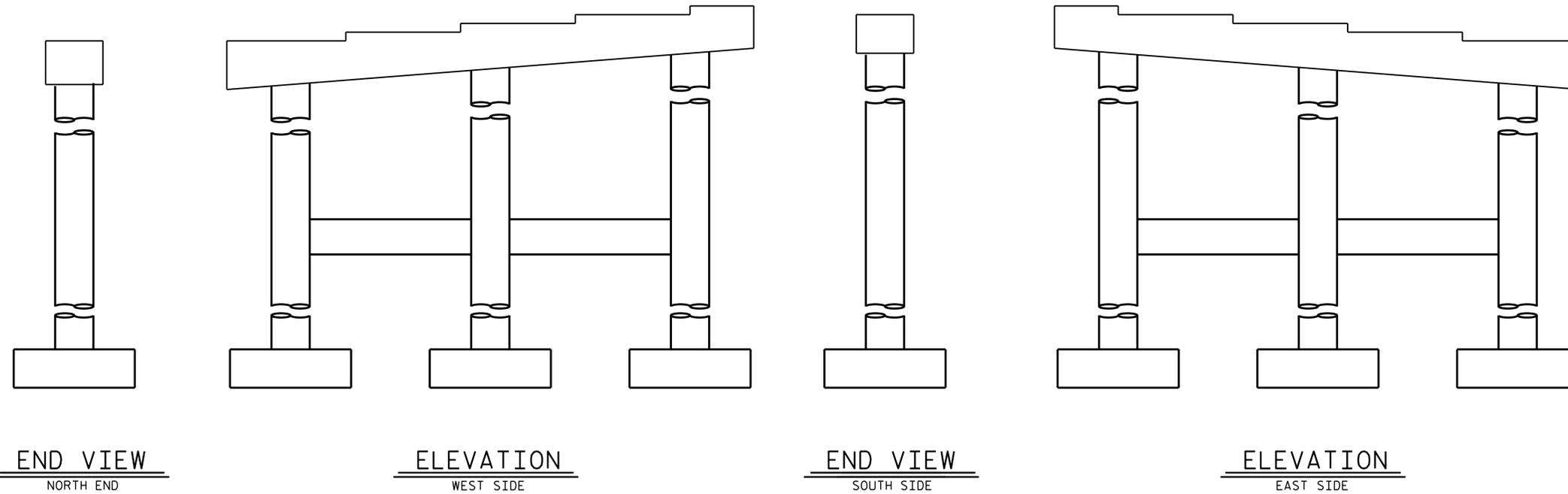
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

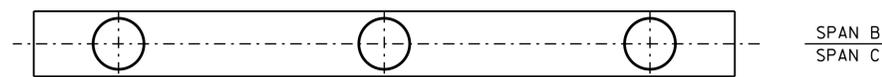
US 64 EASTBOUND
TRAFFIC DIRECTION



PLAN
TOP OF CAP



US 64 EASTBOUND
TRAFFIC DIRECTION



PLAN
BOTTOM OF CAP

REPAIR KEY

SHOTCRETE REPAIR



PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320327

SHEET 2 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
BENT 2

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

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S1-10
2			4			27

REPAIR QUANTITY TABLE

BENT 3	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		

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:

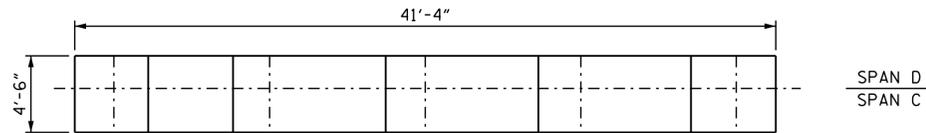
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FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

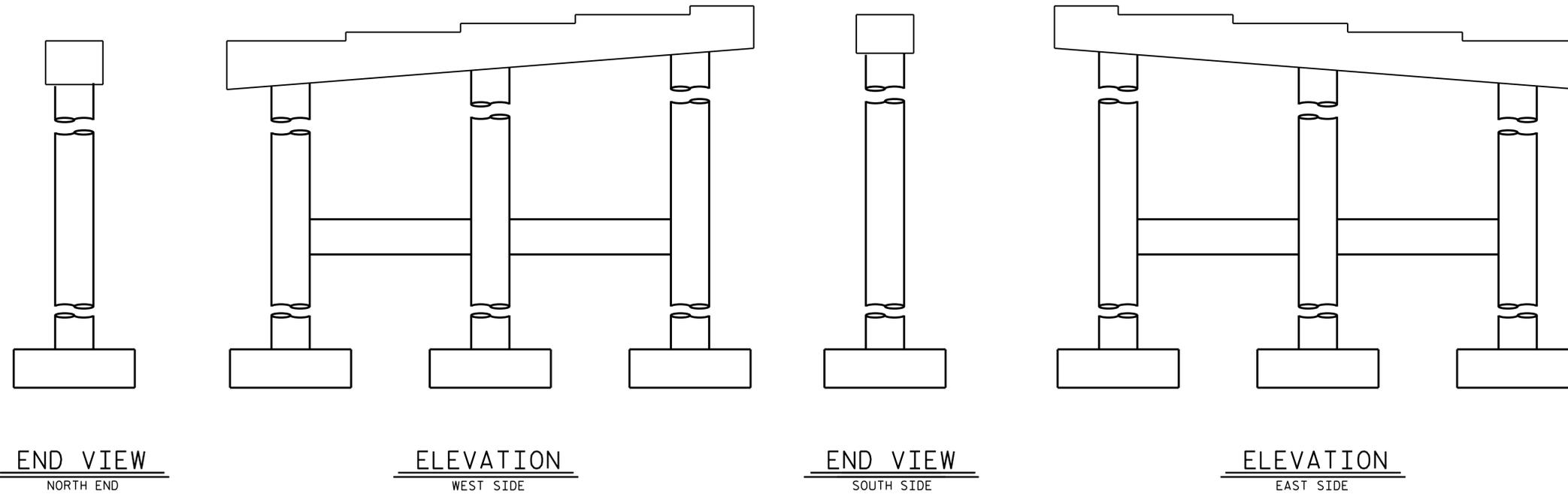
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

US 64 EASTBOUND
TRAFFIC DIRECTION



PLAN
TOP OF CAP



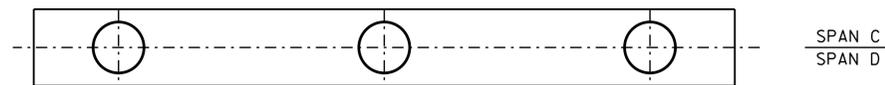
END VIEW
NORTH END

ELEVATION
WEST SIDE

END VIEW
SOUTH SIDE

ELEVATION
EAST SIDE

US 64 EASTBOUND
TRAFFIC DIRECTION



PLAN
BOTTOM OF CAP

REPAIR KEY

SHOTCRETE REPAIR



PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320327

SHEET 3 OF 3

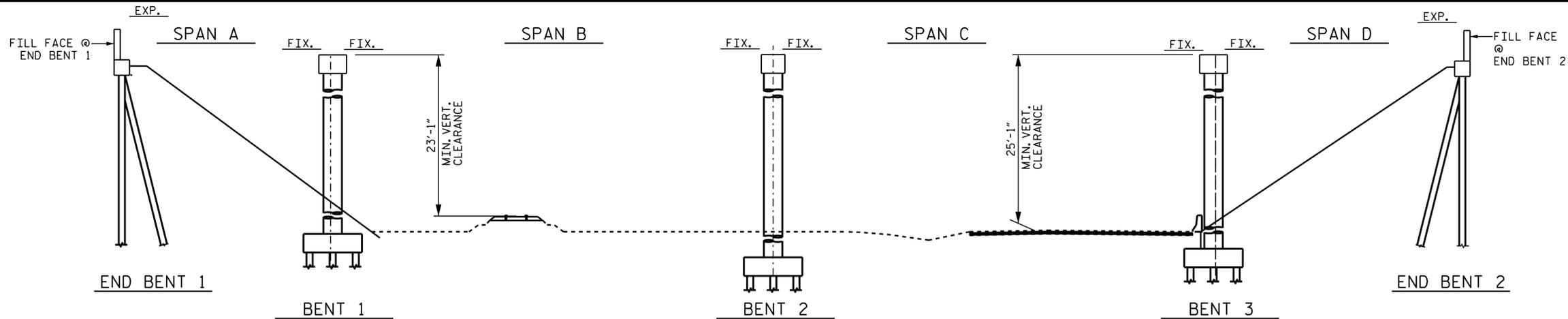
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE BENT 3

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

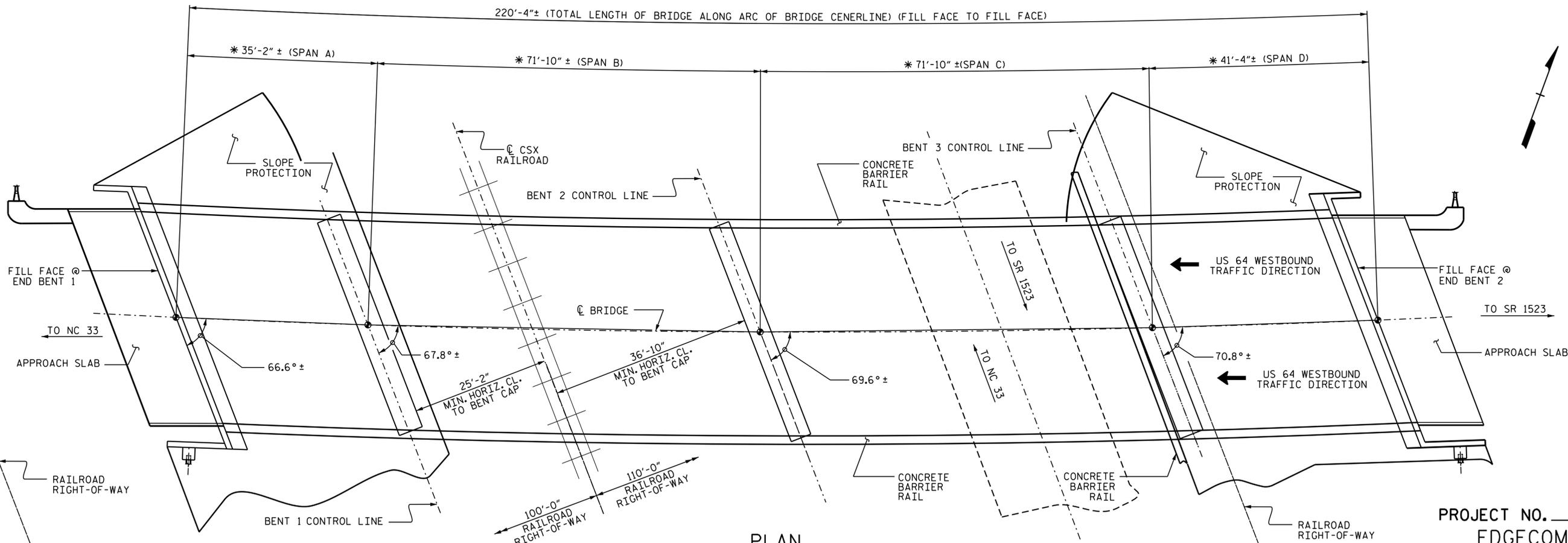
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S1-11
2			4			27



ELEVATION

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



PLAN

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

* DIMENSION MEASURED ALONG THE ARC OF BRIDGE CENTERLINE

NOTES

- PROFILE INFORMATION IS TAKEN FROM ORIGINAL PLANS AND THE ROUTINE INSPECTION, DATED 02/10/2021.
- BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

- BRIDGE DECK PREPARATION WITH SHOTBLASTING METHODS.
- PERFORM CONCRETE DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH EPOXY OVERLAY HAND APPLICATION SYSTEM.
- DEMOLISH EXISTING BRIDGE JOINTS.
- RECONSTRUCT BRIDGE JOINTS WITH ELASTOMERIC HEADERS AND INSTALL BACKER ROD AND SILICONE JOINT SEALANT.

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

Resident Engineer Date



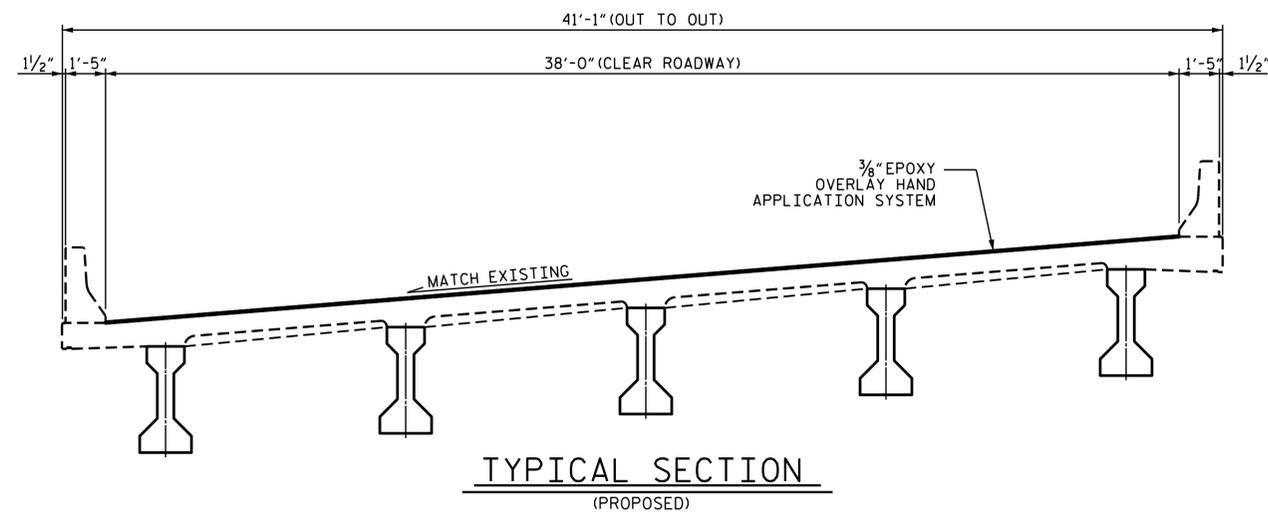
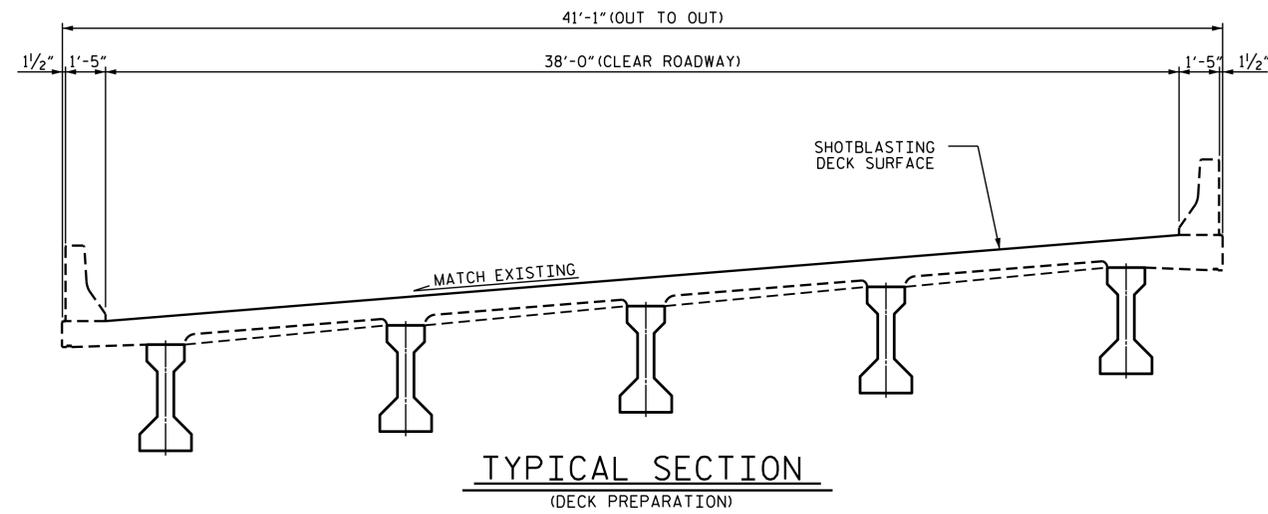
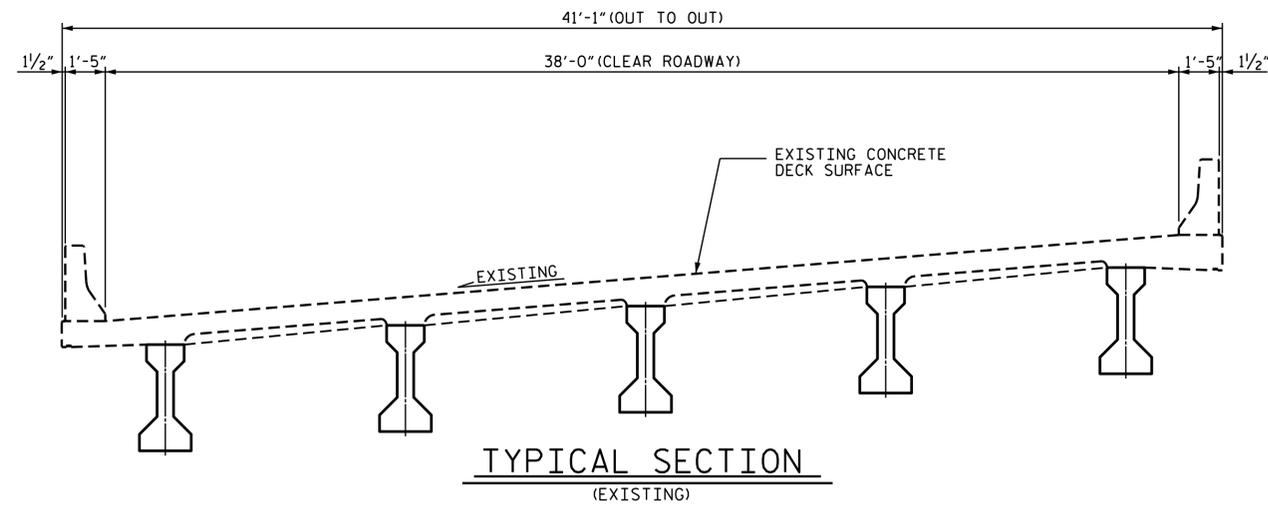
PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320328

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE NO. 328 ON
 US-64 WBL OVER
 US-64ALT. AND CSX
 RAILROAD

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

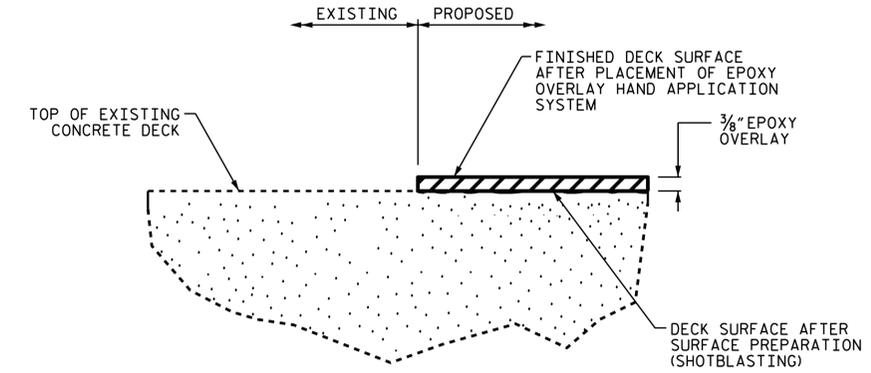
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S2-1
2			4			27



NOTES

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



DETAIL FOR EPOXY OVERLAY

PROJECT NO. I-6042A
EDGEcombe COUNTY
BRIDGE NO. 320328



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION AND SURFACE PREPARATION DETAILS

DRAWN BY : A. Y. GODFREY DATE : 12/2021
CHECKED BY : A. G. ABRAHA DATE : 04/2021

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			27

SUMMARY OF QUANTITIES FOR SPAN A AND APPROACH SLAB 1

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,687.4 SF	
BRIDGE JOINT DEMOLITION	38.0 SF	
ELASTOMERIC CONCRETE FOR PRESERVATION	7.1 CF	

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.

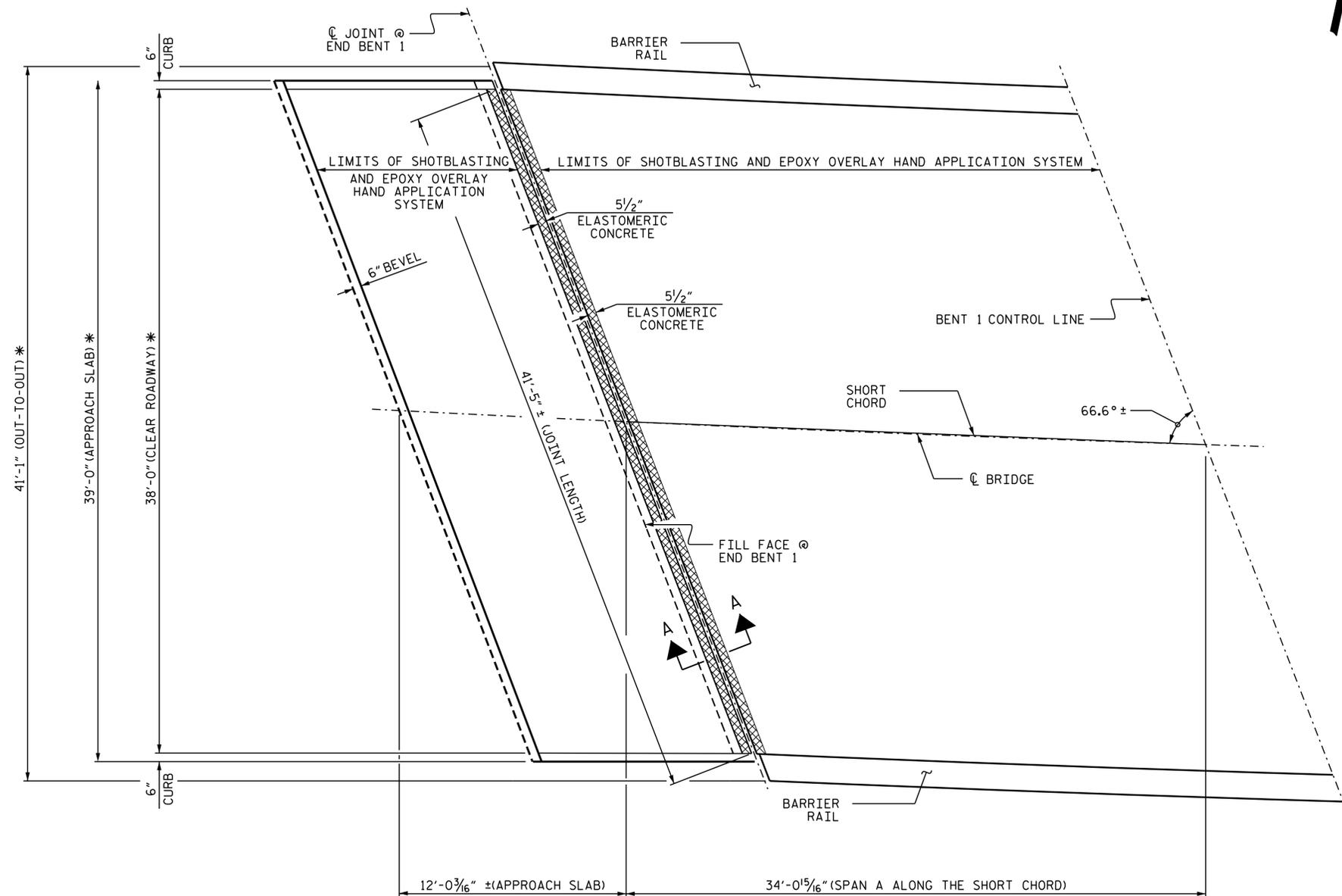
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - BRIDGE JOINT DEMOLITION

* RADIAL DIMENSIONS



PLAN OF SPAN A AND APPROACH SLAB 1

(SEE SHEET SI-7 FOR SECTION A-A)

PROJECT NO. I-6042A

EDGEcombe COUNTY

BRIDGE NO. 320328

SHEET 1 OF 4



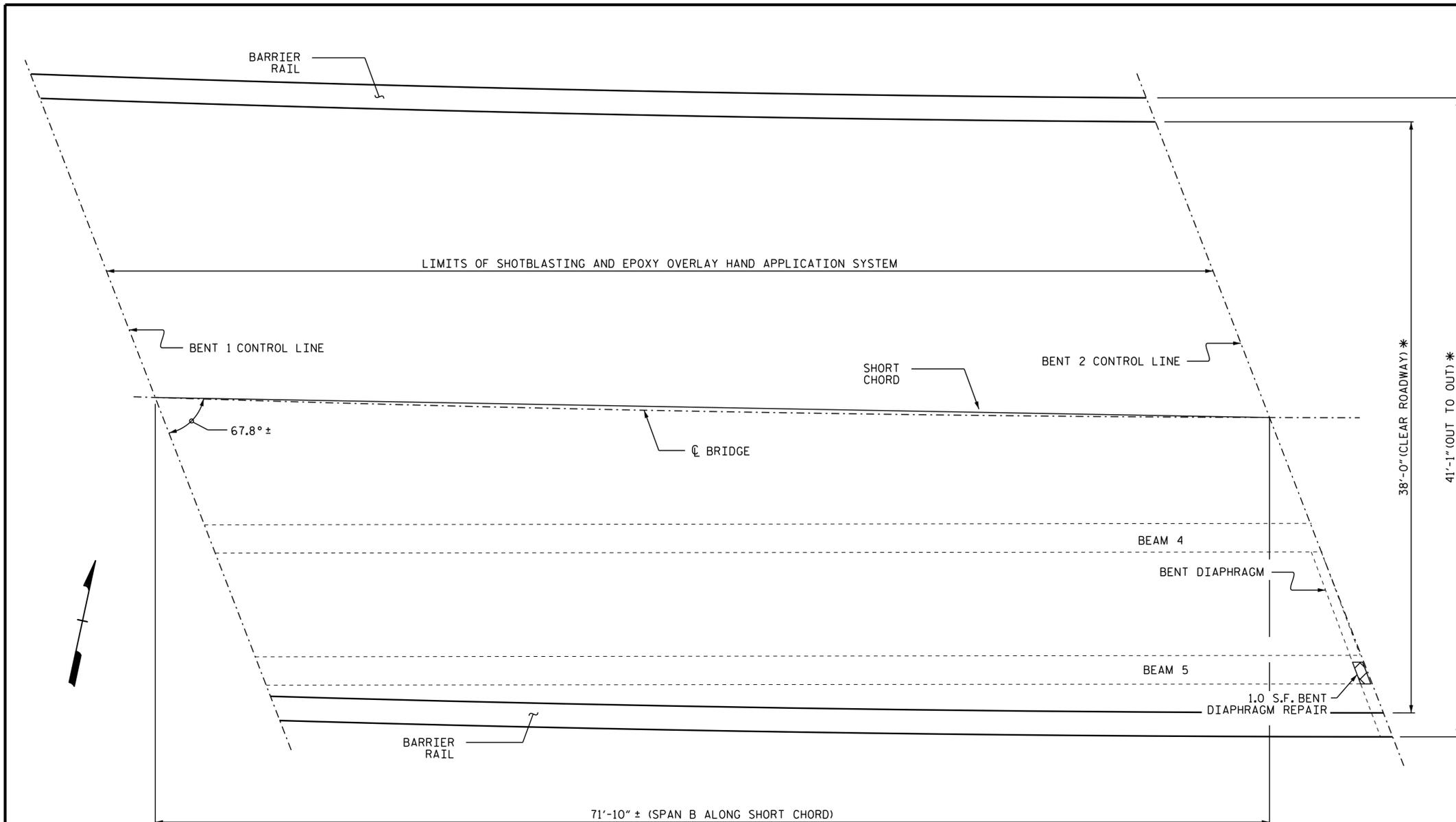
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SURFACE PREPARATION
SPAN A AND
APPROACH SLAB 1**

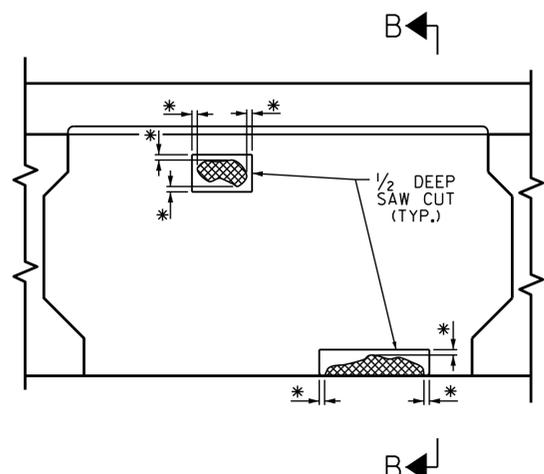
DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
CHECKED BY : A. G. ABRAHA DATE : 04/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-3
1			3			TOTAL SHEETS
2			4			24

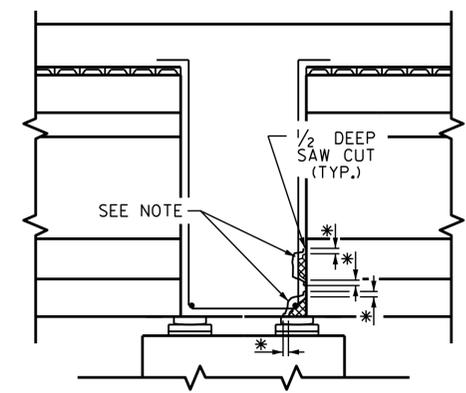


PLAN OF SPAN B



TYPICAL SECTION

* 1/2" DEEP SAW CUT SHALL BE PLACED 1" INTO SOUND CONCRETE.



SECTION B-B

BENT DIAPHRAGM REPAIR DETAIL

(EXAMPLE DETAILS ONLY. ACTUAL REBAR SIZE & LOCATION MAY VARY)

SUMMARY OF QUANTITIES FOR SPAN B

	ESTIMATE	ACTUAL		
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,732.0 SF			
BRIDGE JOINT DEMOLITION	0.0 SF			
ELASTOMERIC CONCRETE FOR PRESERVATION	0.0 CF			
SHOTCRETE REPAIRS				
	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
DIAPHRAGM REPAIR	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.

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 SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR DIAPHRAGM REPAIR DETAILS, SEE "BENT DIAPHRAGM REPAIR DETAIL".

- SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
- SHOTCRETE DIAPHRAGM REPAIR

* RADIAL DIMENSIONS

PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320328

SHEET 2 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SURFACE PREPARATION
 SPAN B**

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
 CHECKED BY : A. G. ABRAHA DATE : 04/2021

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			24

SUMMARY OF QUANTITIES FOR SPAN C

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	2,732.0 SF	
BRIDGE JOINT DEMOLITION	0.0 SF	
ELASTOMERIC CONCRETE FOR PRESERVATION	0.0 CF	

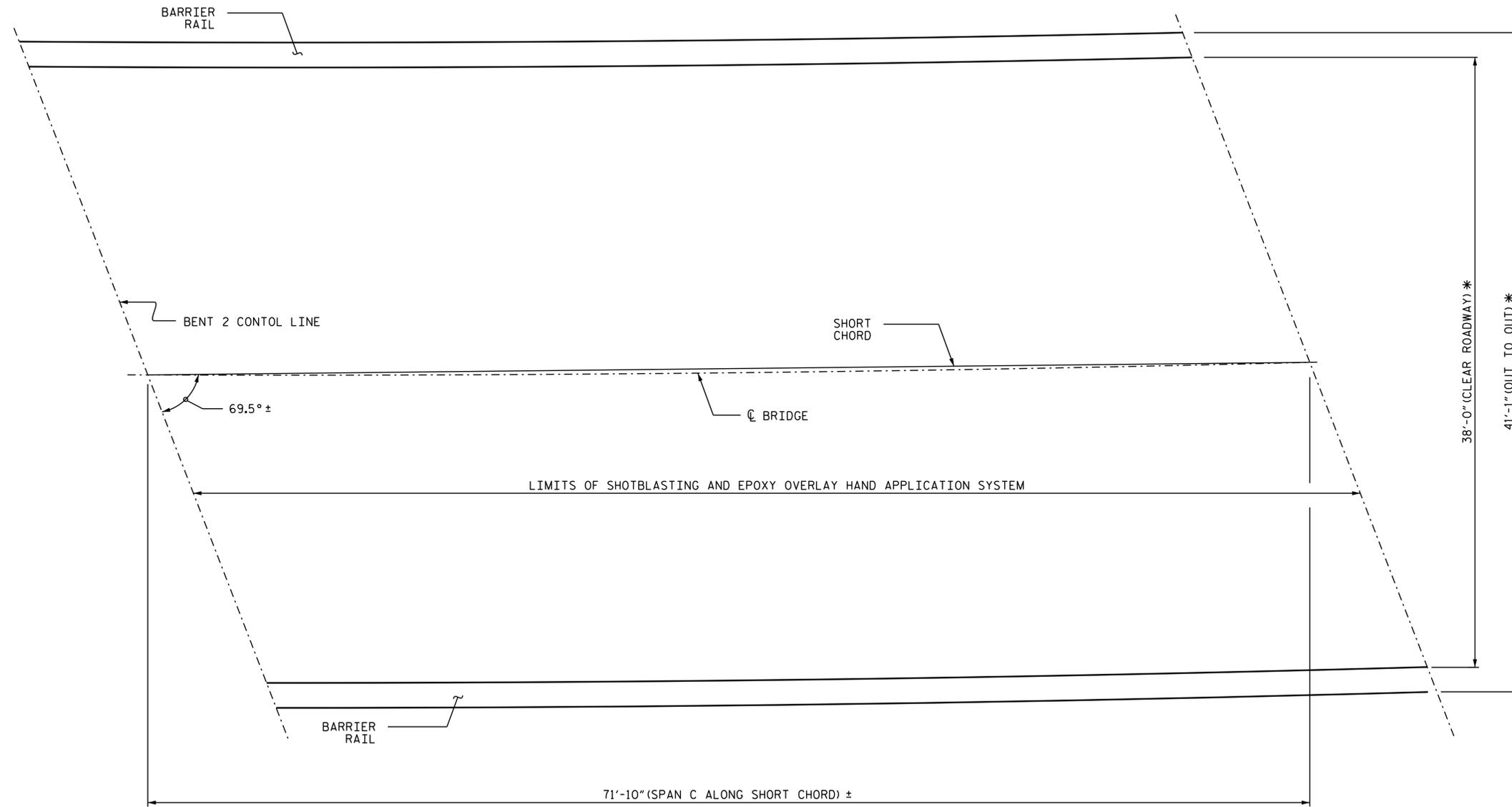
NOTES:

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.

 - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK

* RADIAL DIMENSIONS



PLAN OF SPAN C

PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320328

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION
 SPAN C

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
 CHECKED BY : A. G. ABRAHA DATE : 04/2021

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			24

SUMMARY OF QUANTITIES FOR SPAN D AND APPROACH SLAB 2

	ESTIMATE	ACTUAL
EPOXY OVERLAY HAND APPLICATION SYSTEM	1,924.6 SF	
BRIDGE JOINT DEMOLITION	36.9 SF	
ELASTOMERIC CONCRETE FOR PRESERVATION	6.9 CF	

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.

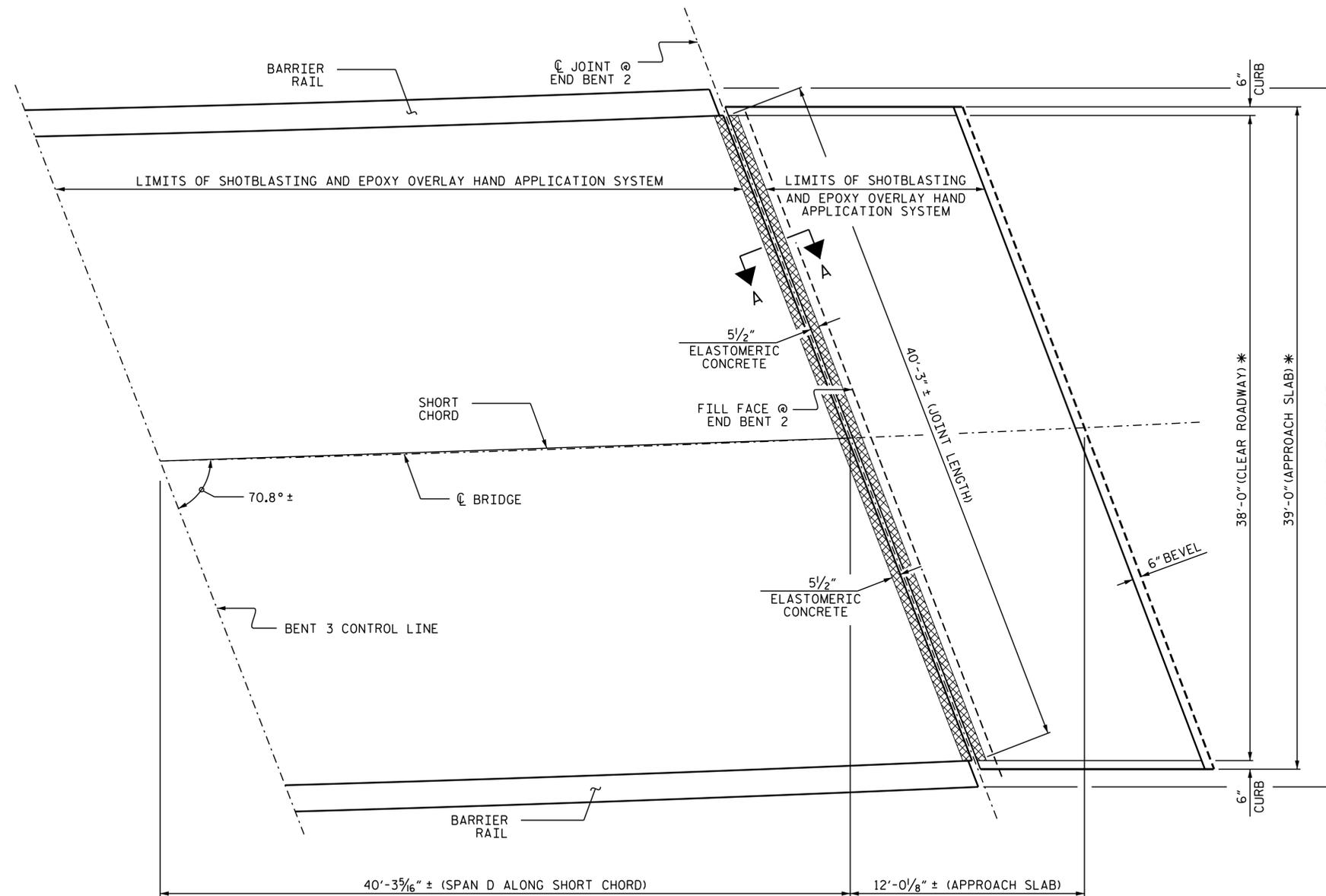
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

-  - SHOTBLASTING AND EPOXY OVERLAY OF BRIDGE DECK
-  - BRIDGE JOINT DEMOLITION

* RADIAL DIMENSIONS



PLAN OF SPAN D AND APPROACH SLAB 2

(SEE SHEET S1-7 FOR SECTIONS A-A)

PROJECT NO. I-6042A
EDGECOMBE COUNTY
 BRIDGE NO. 320328

SHEET 4 OF 4



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

DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 12/2020
 CHECKED BY : A. G. ABRAHA DATE : 4/2021

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			27

NOTES

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

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

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

THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT. THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

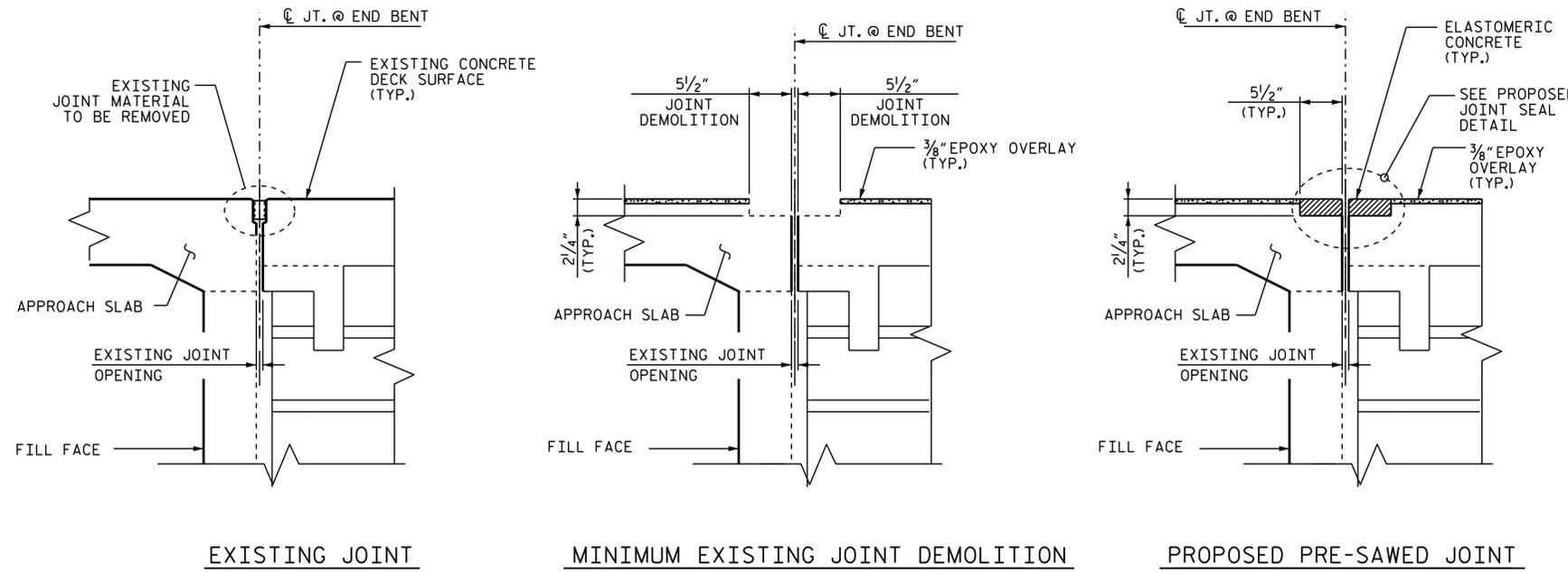
FOR PREFORMED SILICONE RUBBER EXPANSION JOINT SEALS, SEE SPECIAL PROVISIONS.

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

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

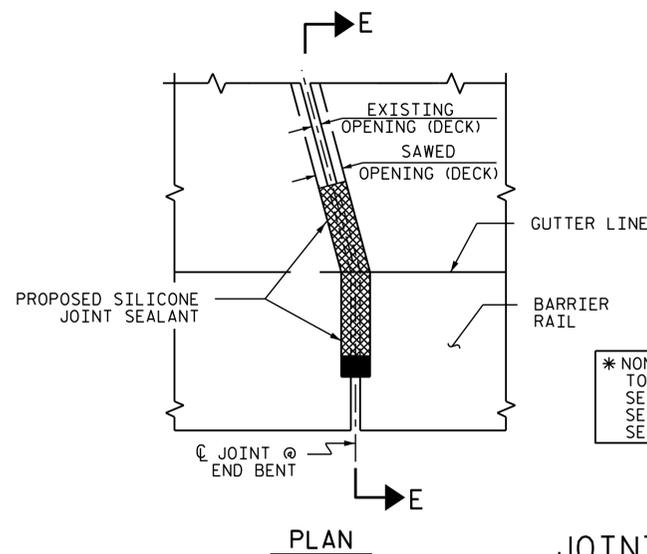
FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION SEE SPECIAL PROVISIONS.

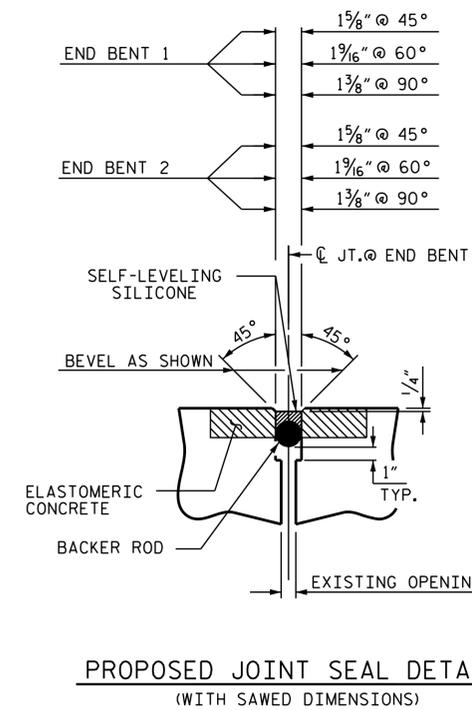
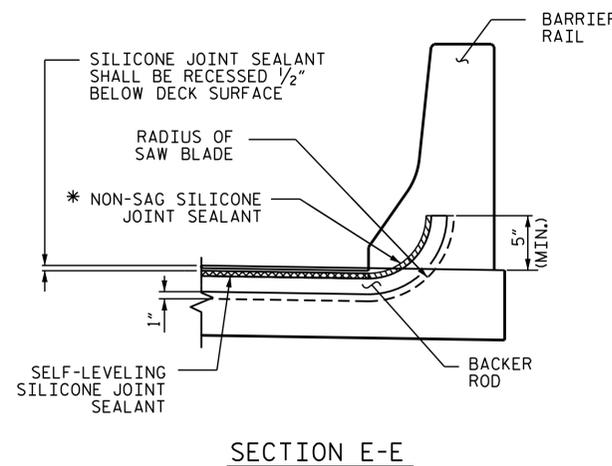


JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION A-A

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT	81.7 L.F.	



JOINT DETAIL AT BARRIER RAIL



PROPOSED JOINT SEAL DETAIL
(WITH SAWED DIMENSIONS)

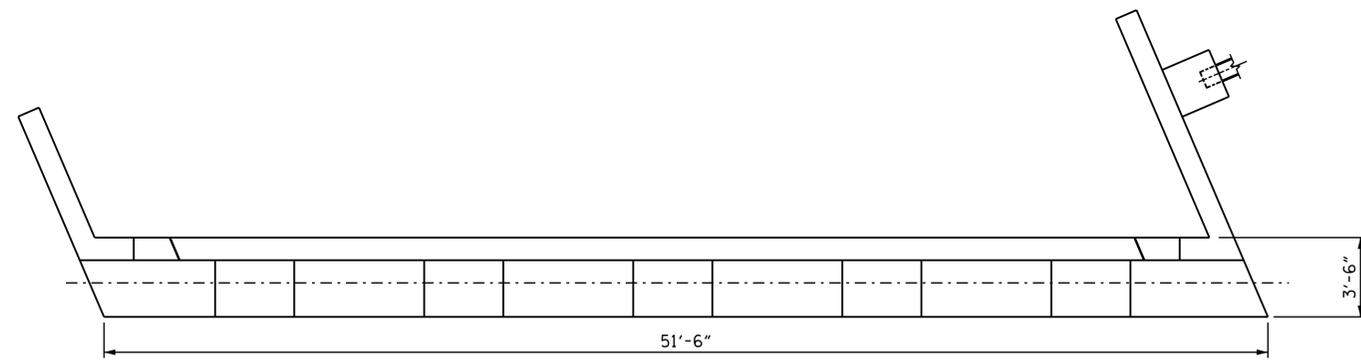
PROJECT NO. I-6042A
EDGEcombe COUNTY
BRIDGE NO. 320328



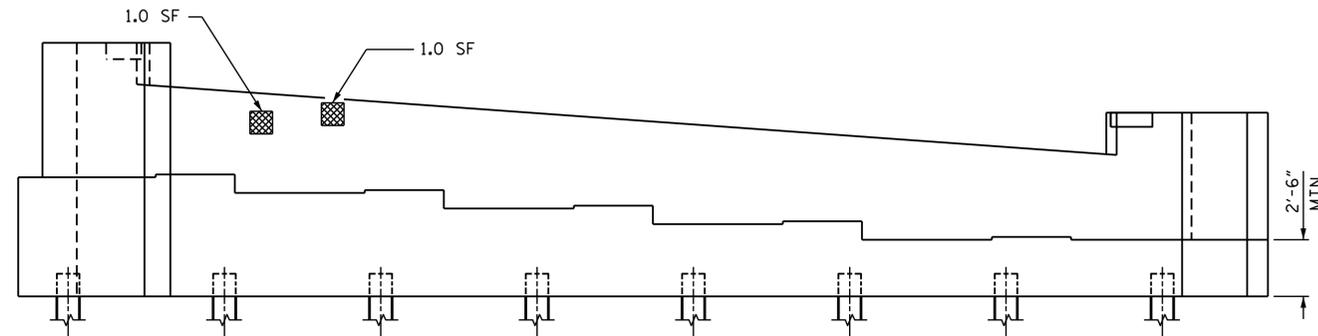
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
JOINT REPAIR DETAILS					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					S2-7
					TOTAL SHEETS 27

DRAWN BY : A. Y. GODFREY DATE : 12/2020
CHECKED BY : A. G. ABRAHA DATE : 04/2021

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

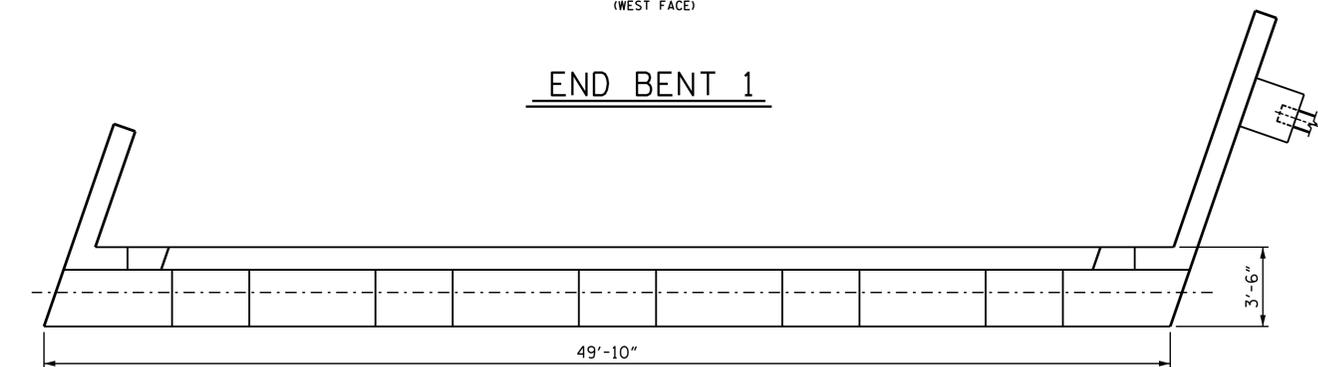


PLAN
END BENT 1

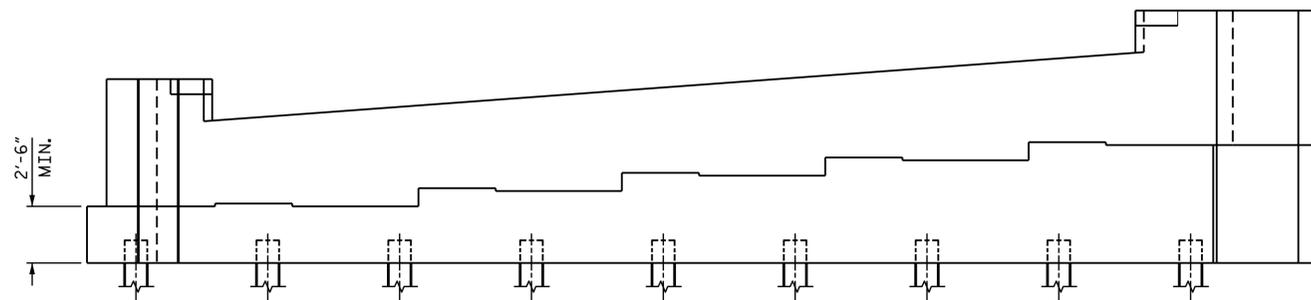


ELEVATION
END BENT 1
(WEST FACE)

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		

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 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.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

REPAIR KEY

☒ - SHOTCRETE REPAIRS

PROJECT NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320328



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

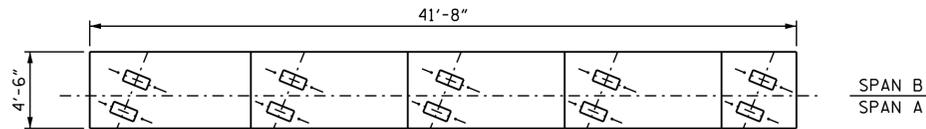
END BENTS REPAIR

DRAWN BY : S. T. SANDOR DATE : 08/2019
 CHECKED BY : A. Y. GODFREY DATE : 12/2020

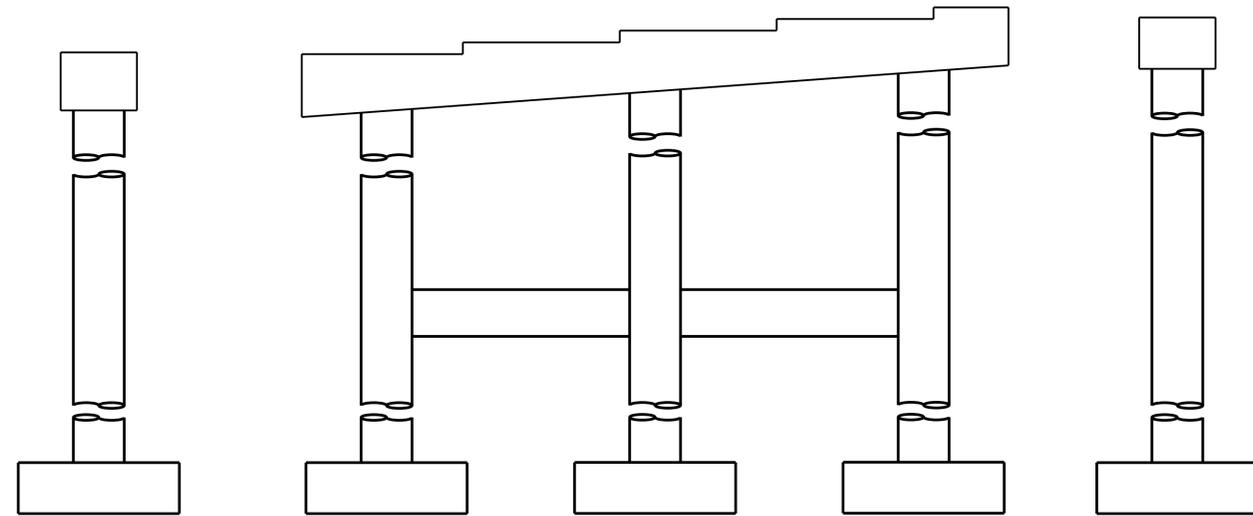
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S2-8
2			4			TOTAL SHEETS 27

US 64 WESTBOUND
TRAFFIC DIRECTION



PLAN
TOP OF CAP



END VIEW
WEST END

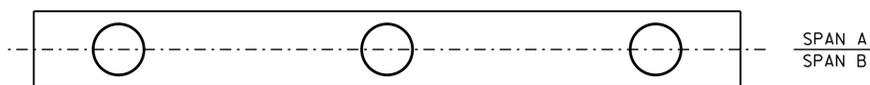
ELEVATION
SOUTH SIDE

END VIEW
EAST END



ELEVATION
NORTH SIDE

US 64 WESTBOUND
TRAFFIC DIRECTION



PLAN
BOTTOM OF CAP

REPAIR KEY

☒ - SHOTCRETE REPAIR



Aster Abraha
11/12/2021

REPAIR QUANTITY TABLE				
BENT 1	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		

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

PROJECT NO. I-6042A
EDGECOMBE COUNTY
BRIDGE NO. 320328

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 1

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

DOCUMENT NOT CONSIDERED
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S2-9
2			4			27

REPAIR QUANTITY TABLE

BENT 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		

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.

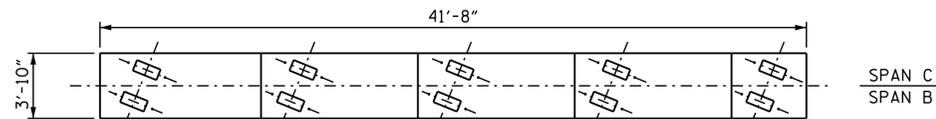
NOTES:

REPAIR LOCATIONS AND 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.

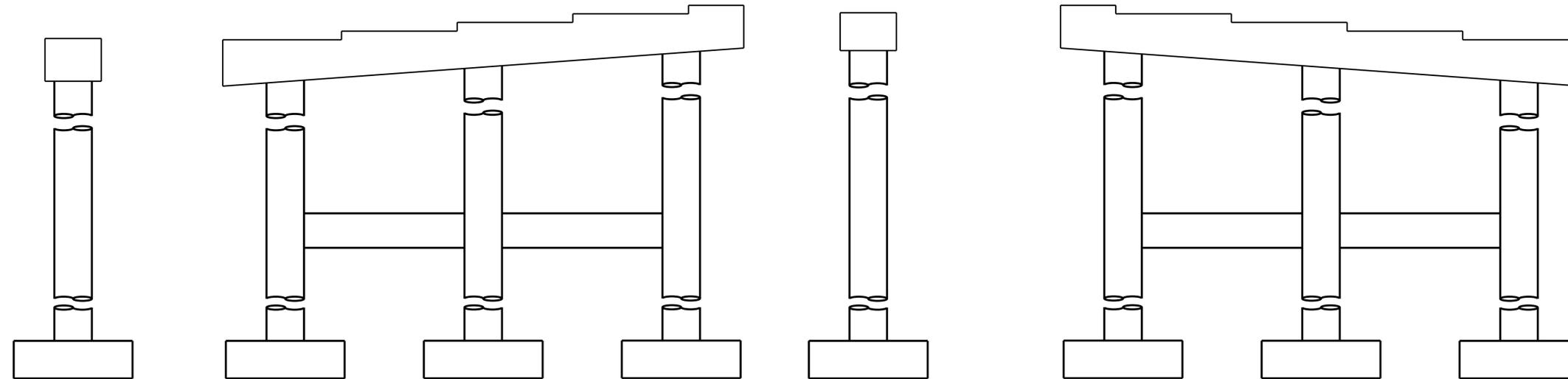
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

US 64 WESTBOUND
TRAFFIC DIRECTION



PLAN
TOP OF CAP



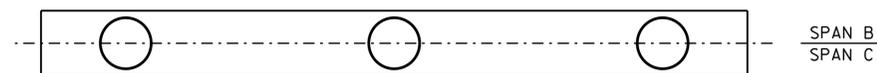
END VIEW
WEST END

ELEVATION
SOUTH SIDE

END VIEW
EAST END

ELEVATION
NORTH SIDE

US 64 WESTBOUND
TRAFFIC DIRECTION



PLAN
BOTTOM OF CAP

REPAIR KEY

☒ - SHOTCRETE REPAIR

PROJECT NO. I-6042A
EDGEcombe COUNTY
BRIDGE NO. 320328

SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 2

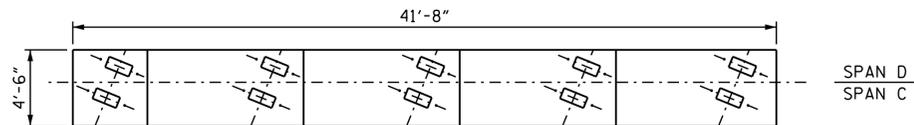


DRAWN BY : S. T. SANDOR/A. Y. GODFREY DATE : 09/2021
CHECKED BY : A. G. ABRAHA DATE : 09/2021

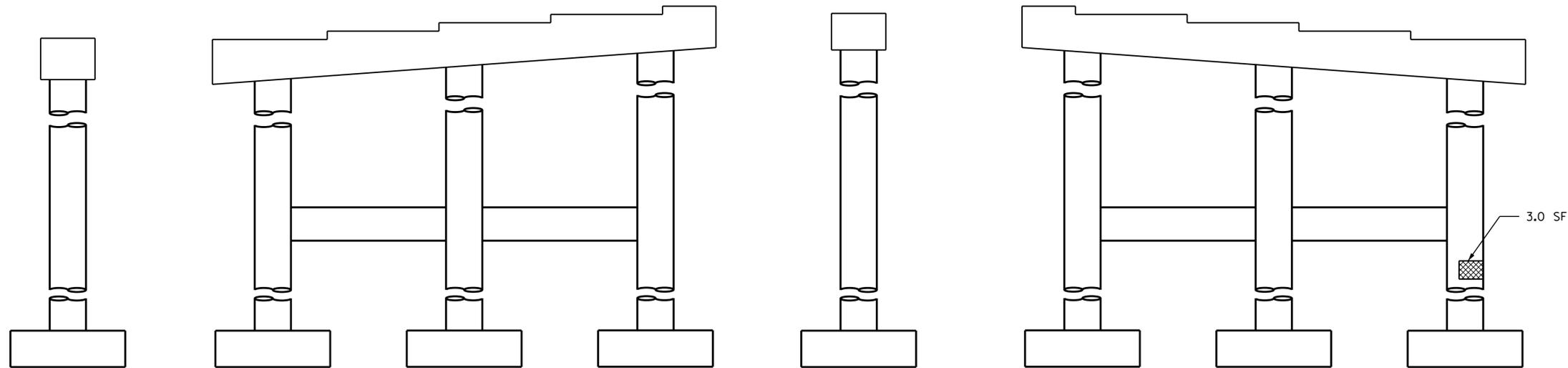
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S2-10
2			4			27

US 64 WESTBOUND
TRAFFIC DIRECTION



PLAN
TOP OF CAP



END VIEW
WEST END

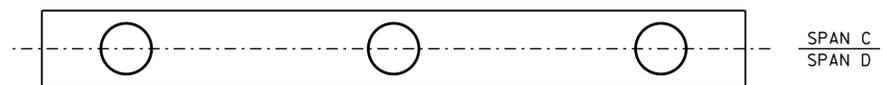
ELEVATION
SOUTH SIDE

END VIEW
EAST END

ELEVATION
NORTH SIDE

3.0 SF

US 64 WESTBOUND
TRAFFIC DIRECTION



PLAN
BOTTOM OF CAP

REPAIR KEY
☒ - SHOTCRETE REPAIR



REPAIR QUANTITY TABLE

BENT 3	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	3.0	1.5		

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.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

PROJECT NO. I-6042A
EDGECOMBE COUNTY
BRIDGE NO. 320328

SHEET 3 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
BENT 3

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

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO. S2-11 TOTAL SHEETS 27
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

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 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.

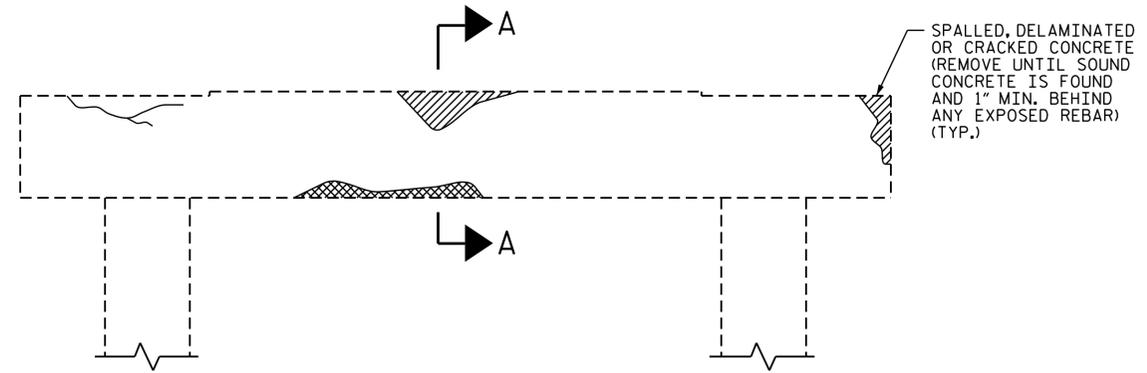
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

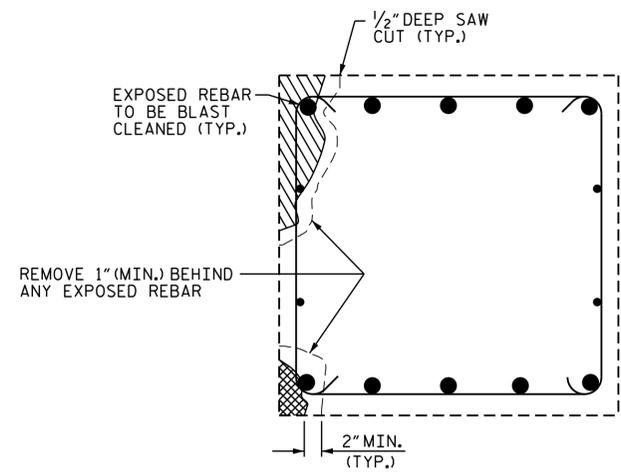
FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

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.

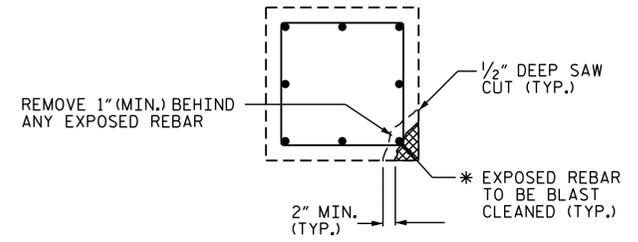


BENT CAP REPAIRS



SECTION A-A

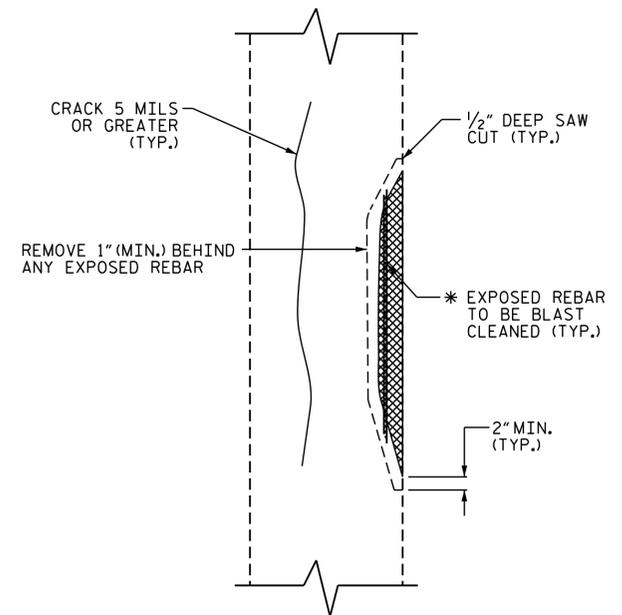
CAP REPAIR



PLAN OF COLUMN

REPAIR KEY

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

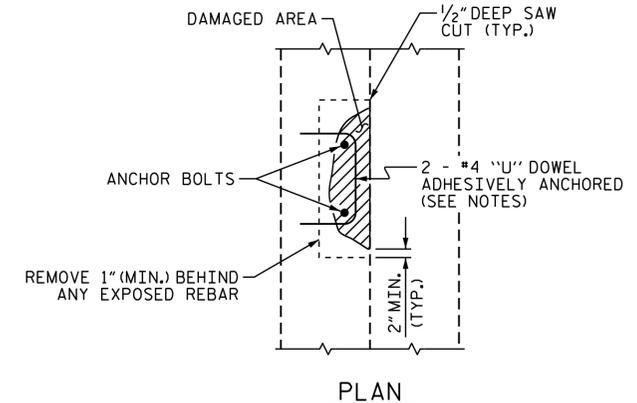


ELEVATION OF COLUMN

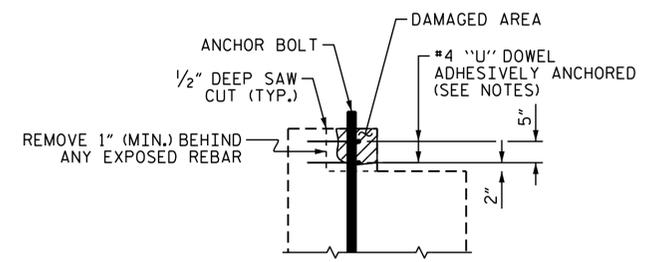
COLUMN REPAIR

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"

* REPAIR LENGTH SHALL NOT EXCEED 10 FEET.



PLAN



ELEVATION

PEDESTAL WALL REPAIR

PROJ. NO. I-6042A
EDGEcombe COUNTY
 BRIDGE NO. 320327 & 320328



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. Y. GODFREY DATE : 12/2020
 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-1
1			3			TOTAL SHEETS
2			4			27

STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

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

CONCRETE:

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

CONCRETE CHAMFERS:

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

DOWELS:

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

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

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

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

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