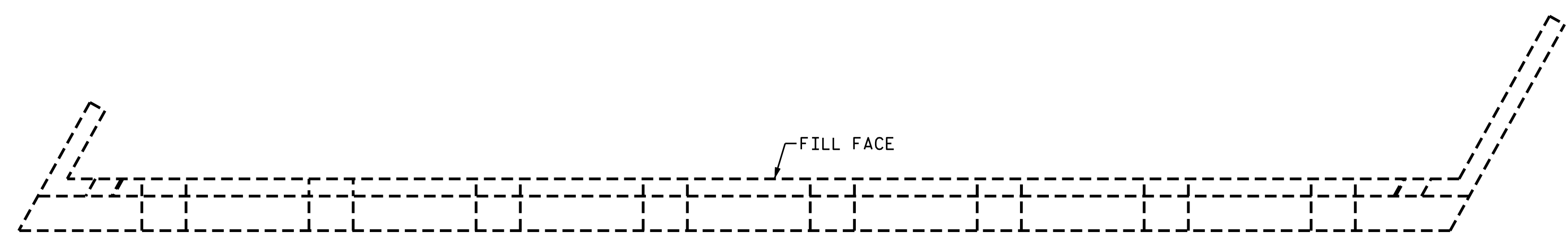


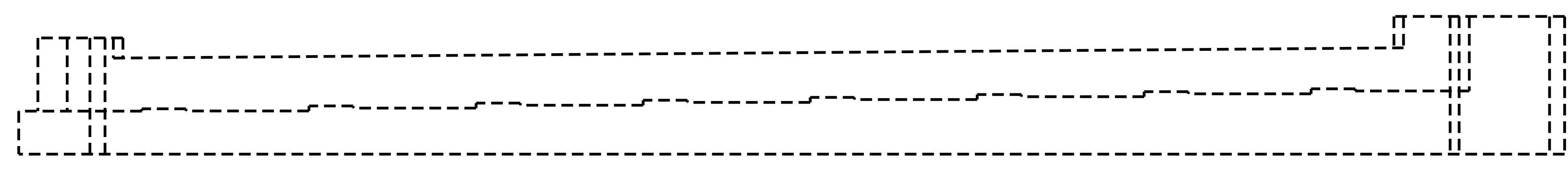
**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

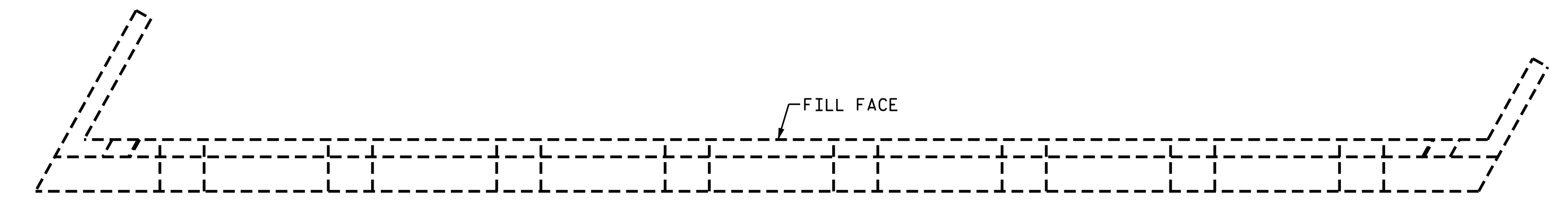
**This file or an individual page
shall not be considered a certified document.**



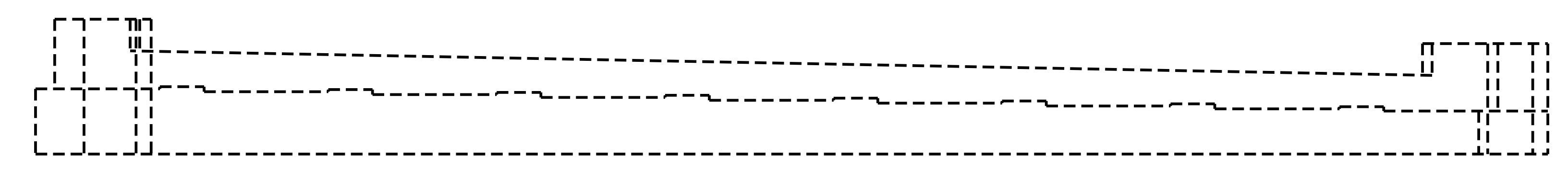
PLAN



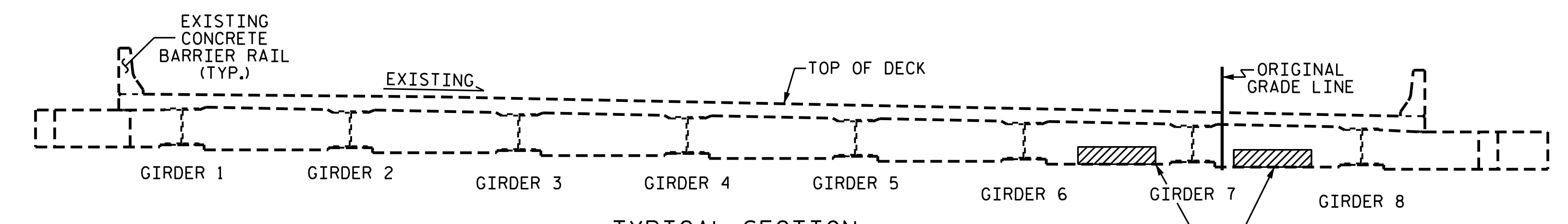
ELEVATION
END BENT 1



PLAN



ELEVATION



TYPICAL SECTION

END BENT 2

- CONCRETE REPAIR AREA
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

DRAWN BY : A. SORSENGINH DATE : 7/2019
 CHECKED BY : E. BAYISSA DATE : 1/2020

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
BACKWALL	0.0			
CAP	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP AT END BENT 1	166.0			
TOP OF CAP AT BENT 1	254.0			

AS-BUILT REPAIR QUANTITY TABLE

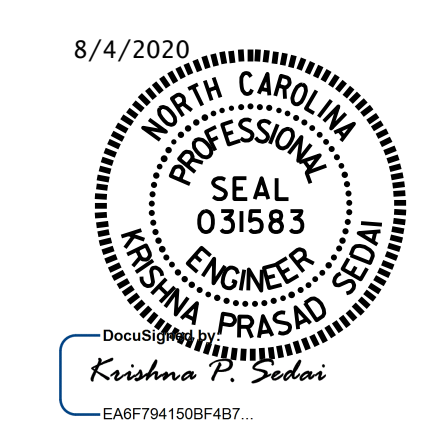
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	9.0	4.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
BACKWALL	0.0			
CAP	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP AT END BENT 2	167.0			
TOP OF CAP AT BENT 2	254.0			

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

NOTES:

- SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
- 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 REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
- FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.
- FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.
- CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5795
 FORSYTH COUNTY
 BRIDGE: 330488

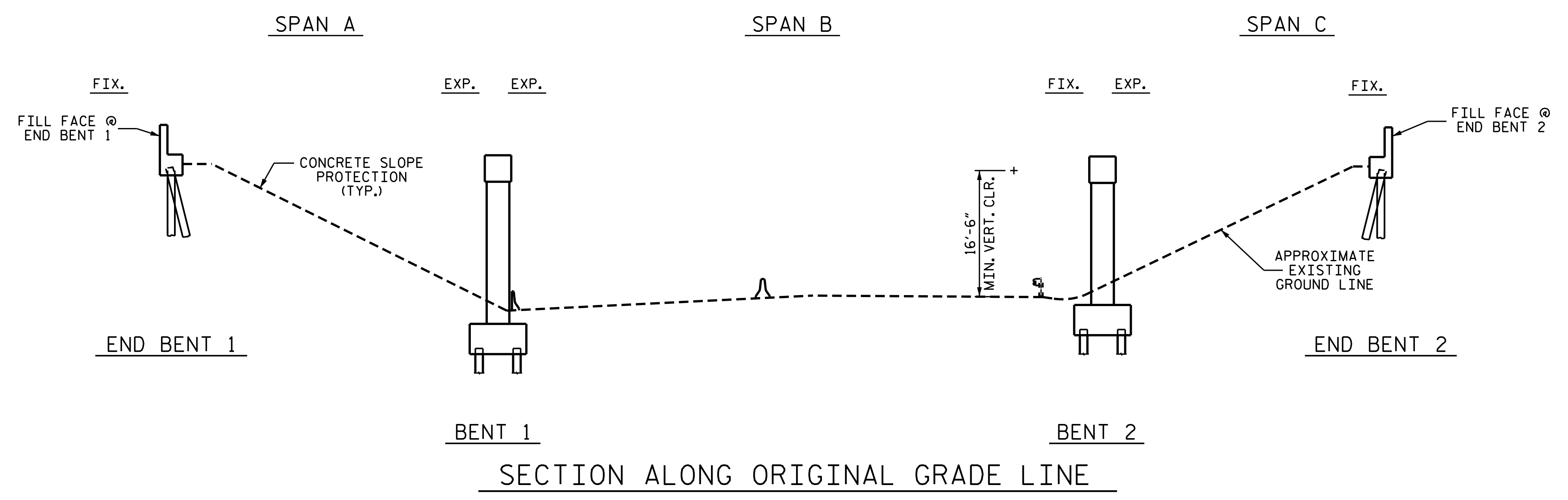


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS 1 & 2

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S13-06
2			4			TOTAL SHEETS 6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

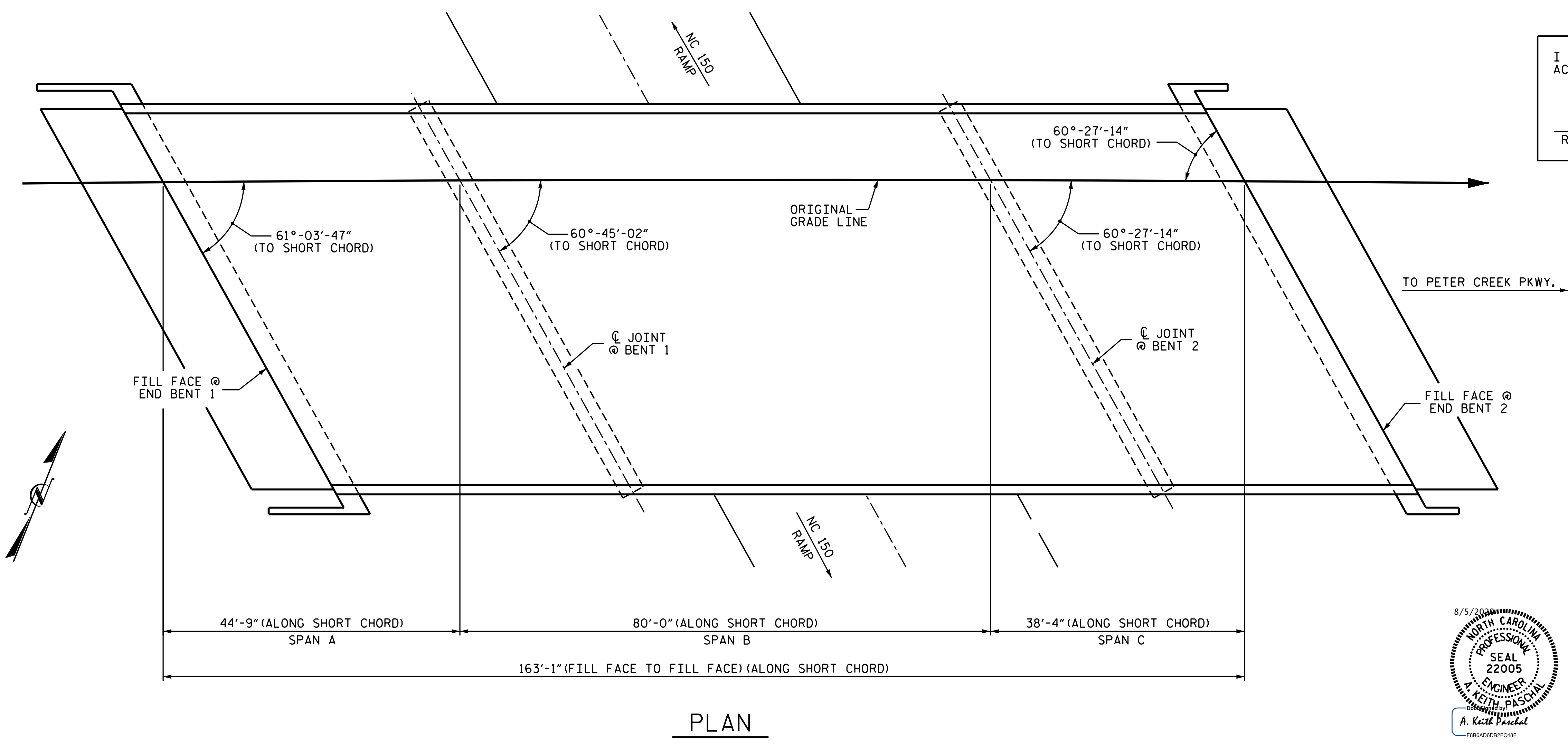


NOTES

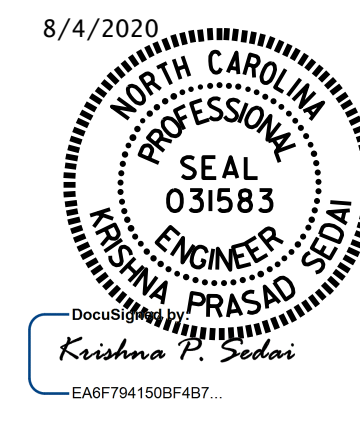
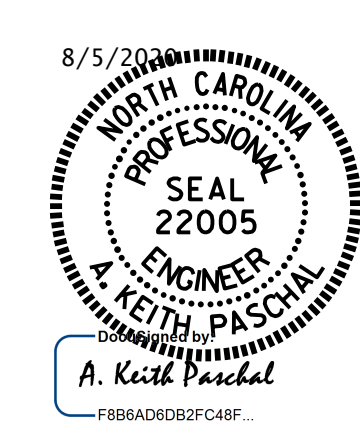
- GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/21/2018.
- BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.
- SCOPE OF WORK**
- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
 - OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYESTER POLYMER CONCRETE (PPC).
 - REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.
 - REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.
 - GROOVE PPC BRIDGE DECK.
 - CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.
 - 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.
 - REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.

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

RESIDENT ENGINEER _____ DATE _____



PROJECT NO. I-5795
 FORSYTH COUNTY
 BRIDGE NO. 330489



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL
 OVER NC 150 RAMPS**

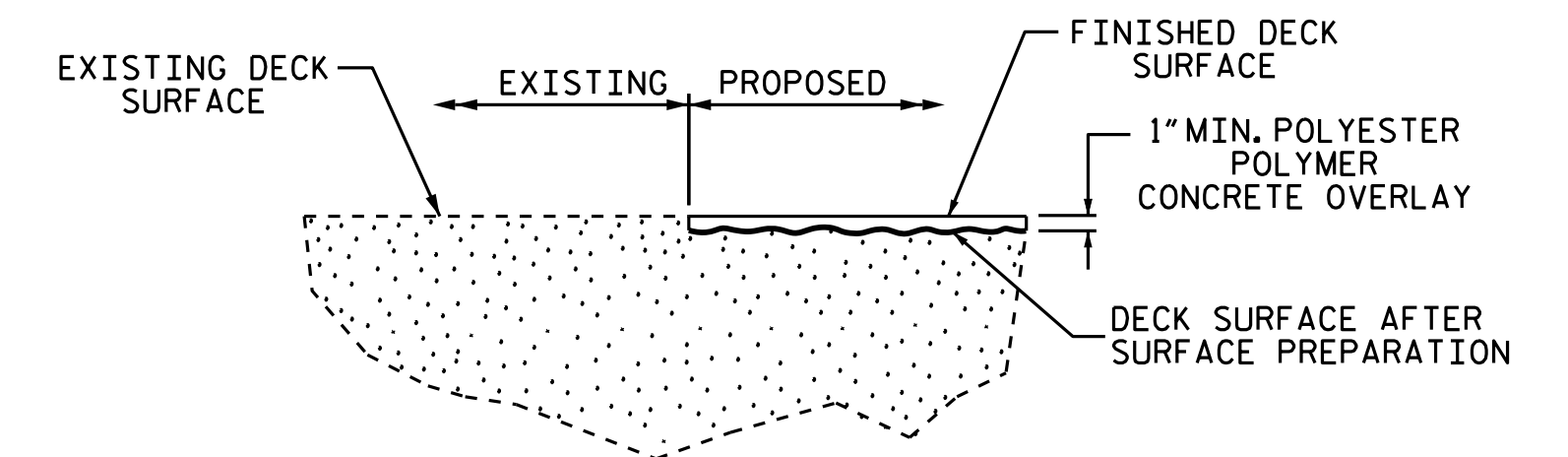
DRAWN BY : A. SORSENGINH DATE : 10/2019
 CHECKED BY : E. BAYISSA DATE : 1/2020

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

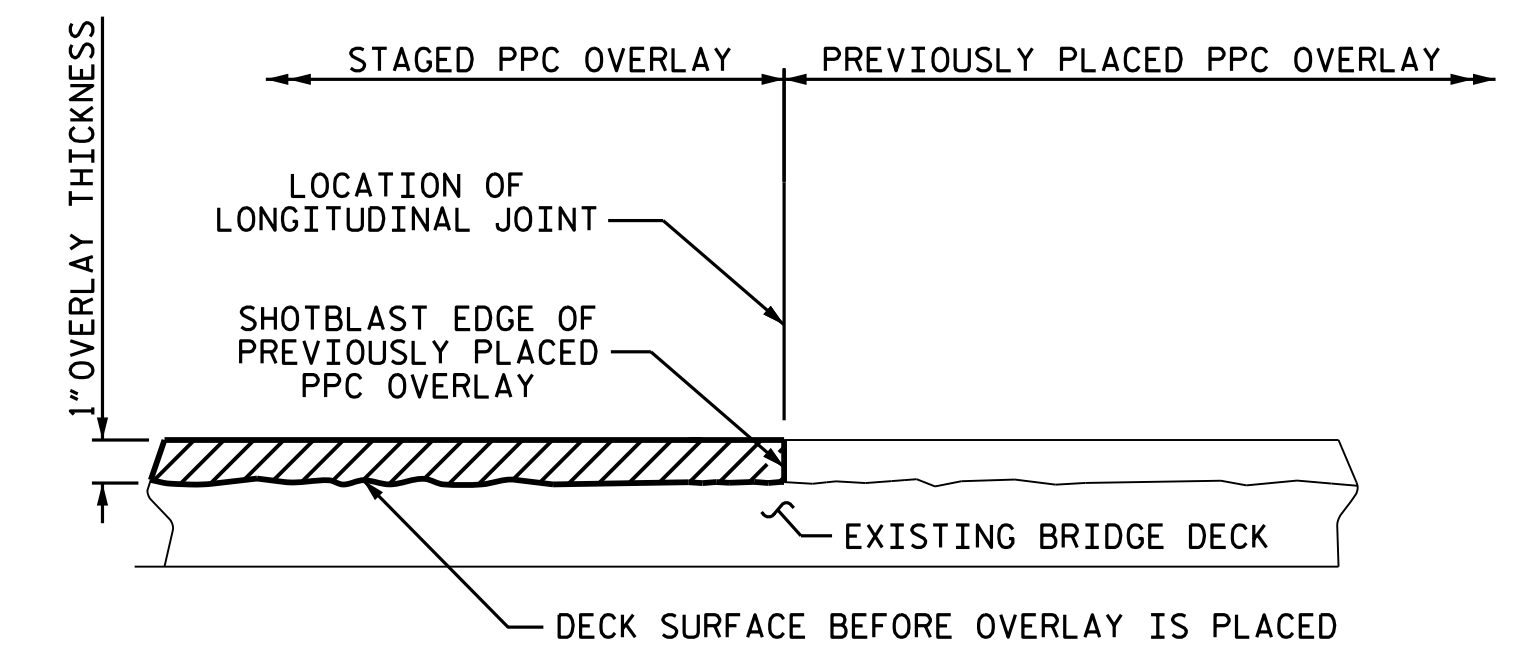
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S14-01
1			3			TOTAL SHEETS
2			4			6

NOTE:

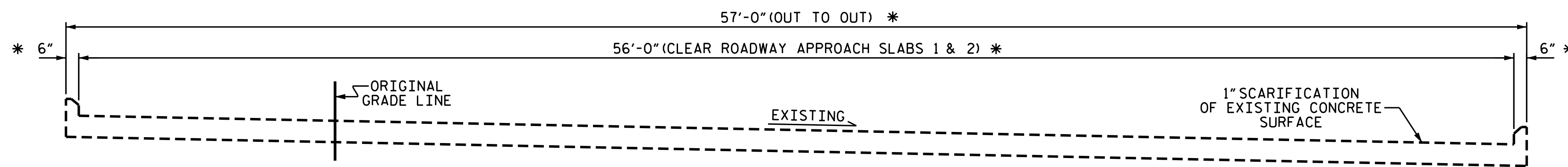
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYESTER POLYMER CONCRETE PLACEMENT.



DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY

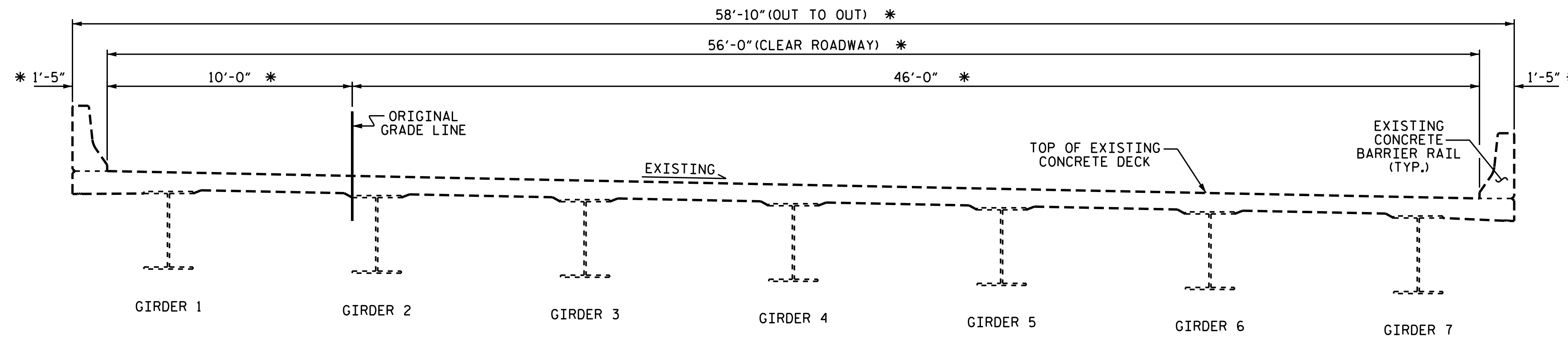


STAGED PPC OVERLAY JOINT
(AS NEEDED)



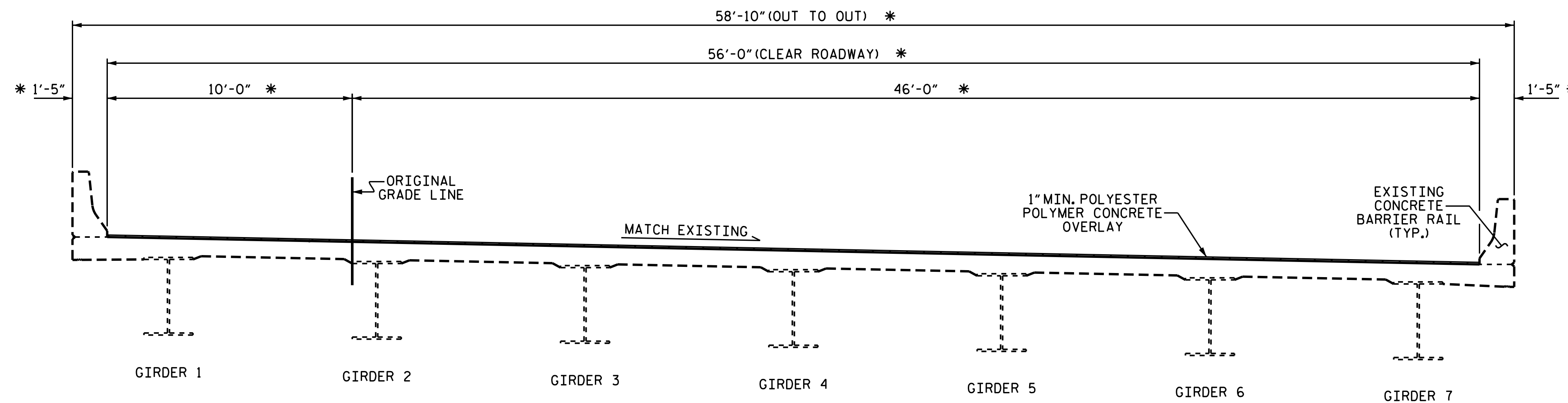
TYPICAL SECTION - APPROACH SLAB

(EXISTING)
* RADIAL DIMENSION



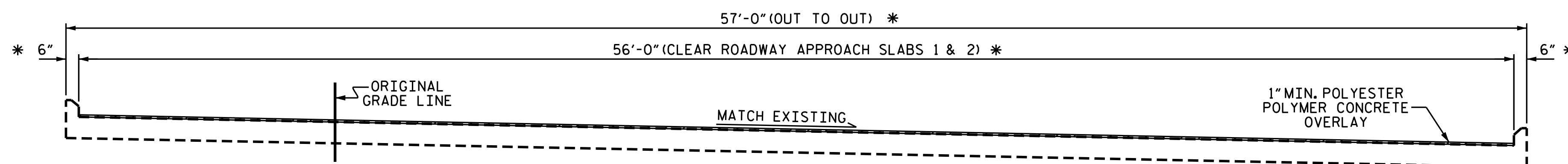
TYPICAL SECTION

(EXISTING)
* RADIAL DIMENSION



TYPICAL SECTION

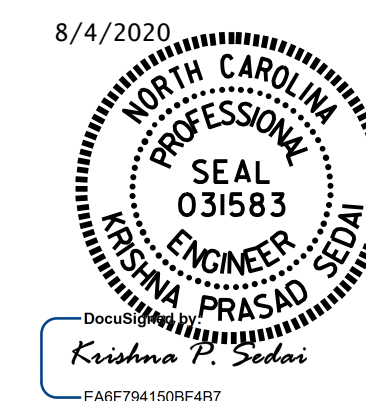
(PROPOSED)
* RADIAL DIMENSION



TYPICAL SECTION - APPROACH SLAB

(PROPOSED)
* RADIAL DIMENSION

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330489



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAILS

DRAWN BY : A. SORSENGINH DATE : 10/2019
CHECKED BY : E. BAYISSA DATE : 1/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S14-02
1			3			TOTAL SHEETS
2			4			6




NOTES:

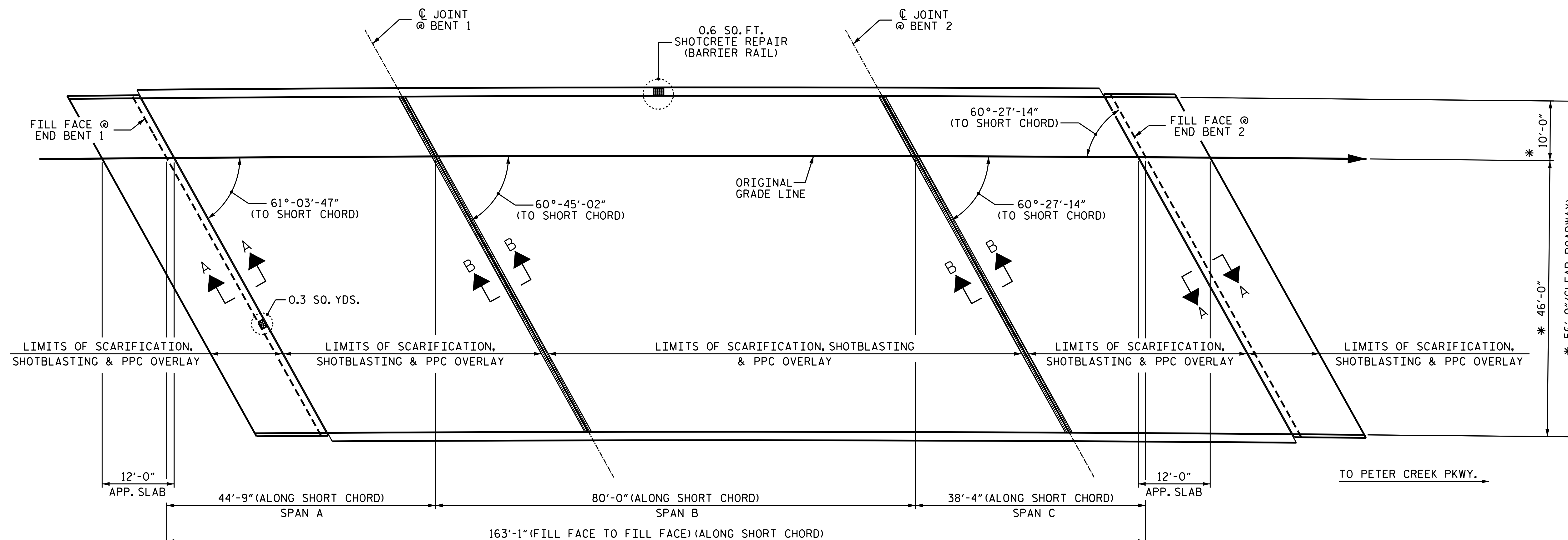
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, PPC MATERIALS, AND PLACING AND FINISHING PPC OVERLAY, SEE POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

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

FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

-  APPROX. CLASS II SURFACE PREPARATION
-  CURB AND BARRIER RAIL
-  EPOXY RESIN INJECTION (ERI)

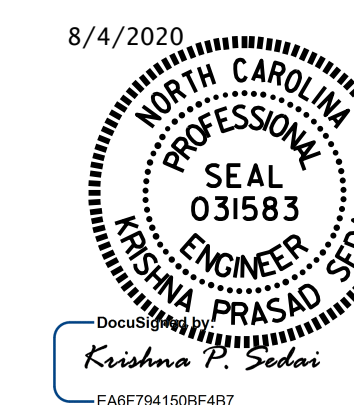


PLAN
* RADIAL DIMENSION

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		APPROACH SLAB 2			
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL		
SCARIFYING BRIDGE DECK	75.0 SQ. YDS.		268.0 SQ. YDS.		491.0 SQ. YDS.		228.0 SQ. YDS.		75.0 SQ. YDS.			
SHOTBLASTING BRIDGE DECK	75.0 SQ. YDS.		268.0 SQ. YDS.		491.0 SQ. YDS.		228.0 SQ. YDS.		75.0 SQ. YDS.			
CLASS II SURFACE PREPARATION	0.3 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.			
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.3 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.			
POLYESTER POLYMER CONCRETE MATERIALS	2.6 CU. YDS.		9.3 CU. YDS.		17.0 CU. YDS.		7.9 CU. YDS.		2.6 CU. YDS.			
PLACING & FINISHING PPC OVERLAY	75.0 SQ. YDS.		268.0 SQ. YDS.		491.0 SQ. YDS.		228.0 SQ. YDS.		75.0 SQ. YDS.			
GROOVING BRIDGE FLOOR	672.0 SQ. FT.		2263.0 SQ. FT.		4172.0 SQ. FT.		1922.0 SQ. FT.		672.0 SQ. FT.			
EPOXY RESIN INJECTION			0.0 LIN. FT.		0.0 LIN. FT.		0.0 LIN. FT.					
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE BARRIER RAIL			0.0	0.0	0.6	0.2	0.0	0.0				

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330489



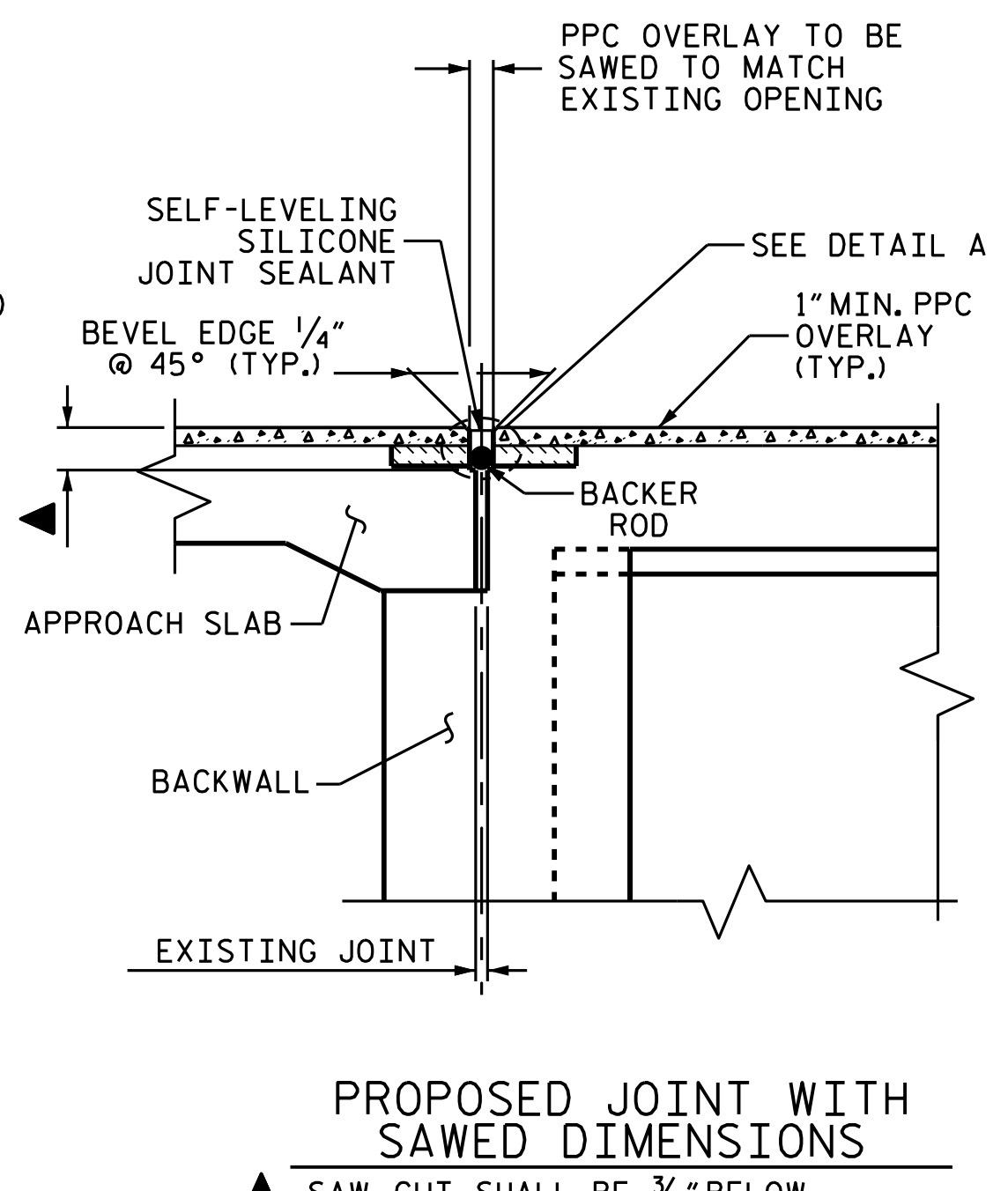
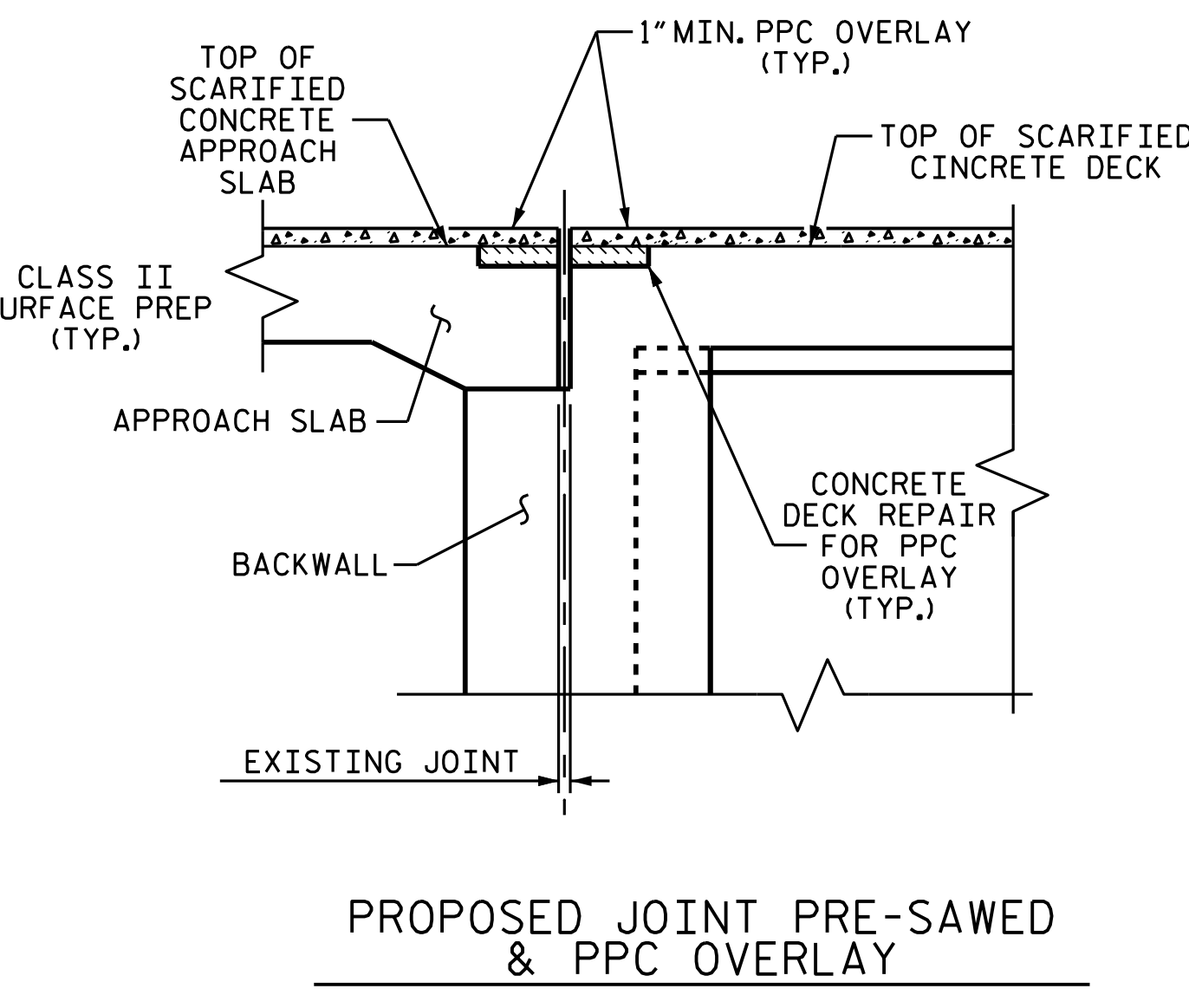
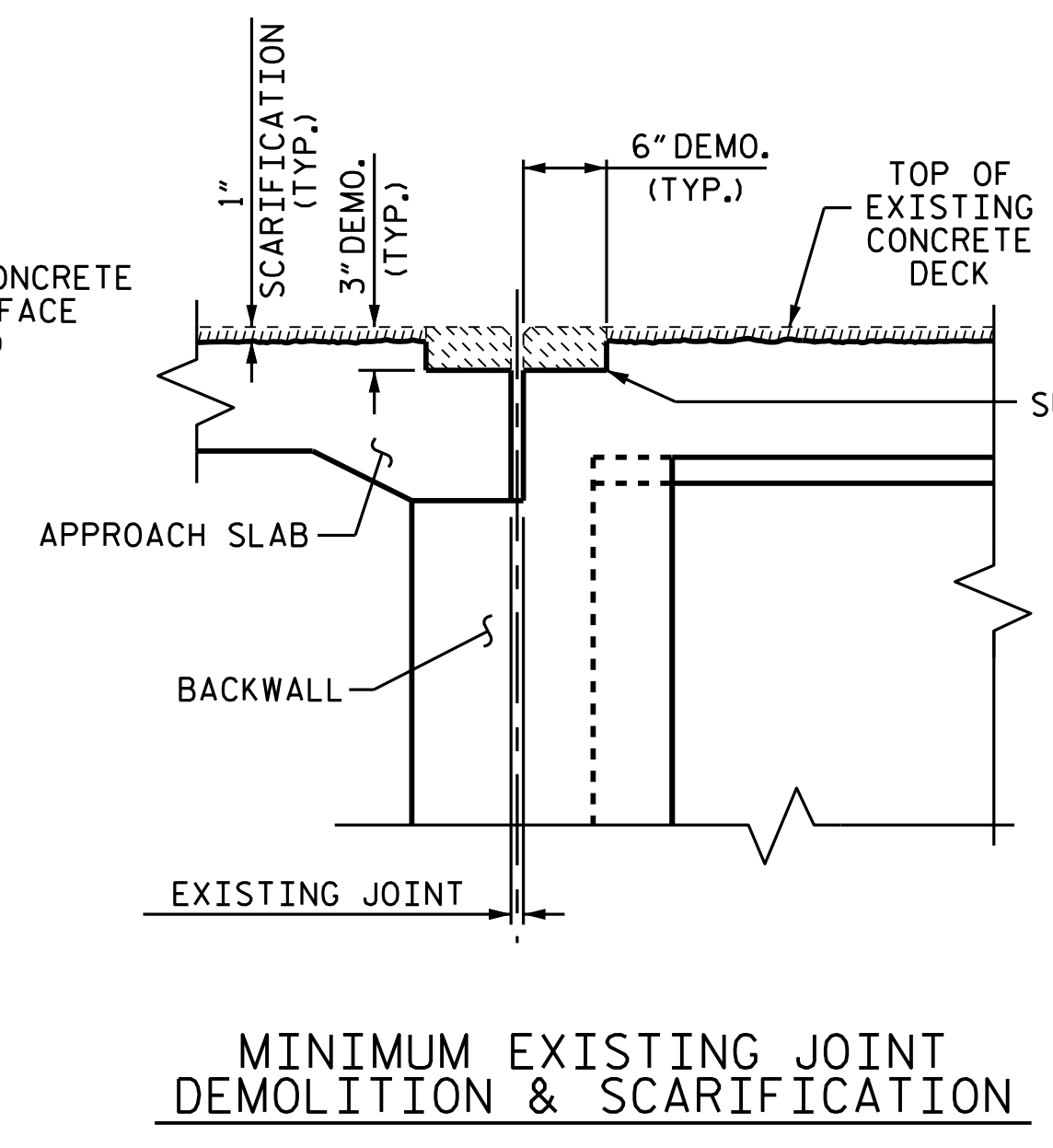
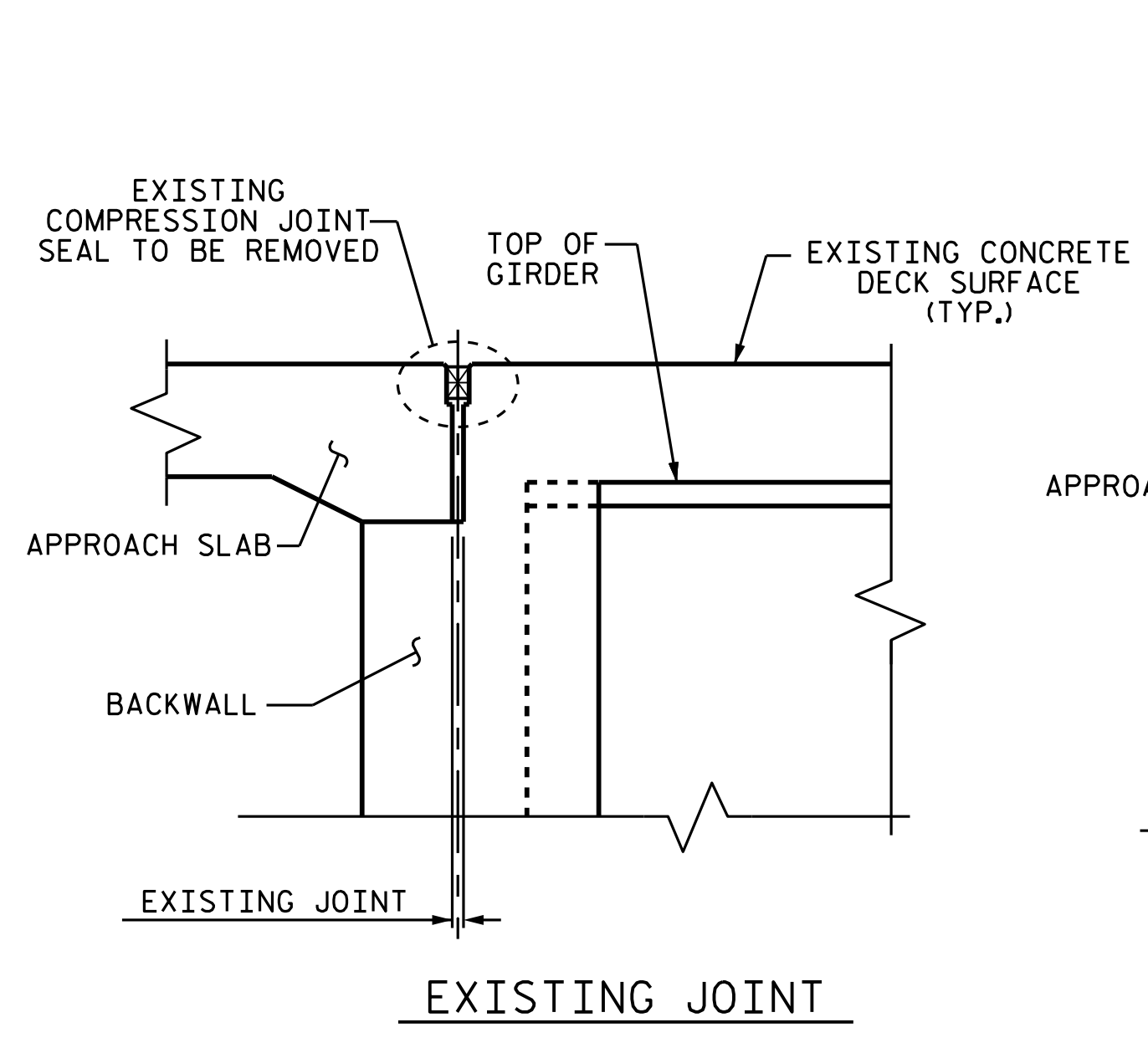
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS AND APPROACH SLAB

DRAWN BY : A. SORSENGINH DATE : 10/2019
CHECKED BY : E. BAYISSA DATE : 1/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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



JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION A-A

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

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

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

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

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

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

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

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

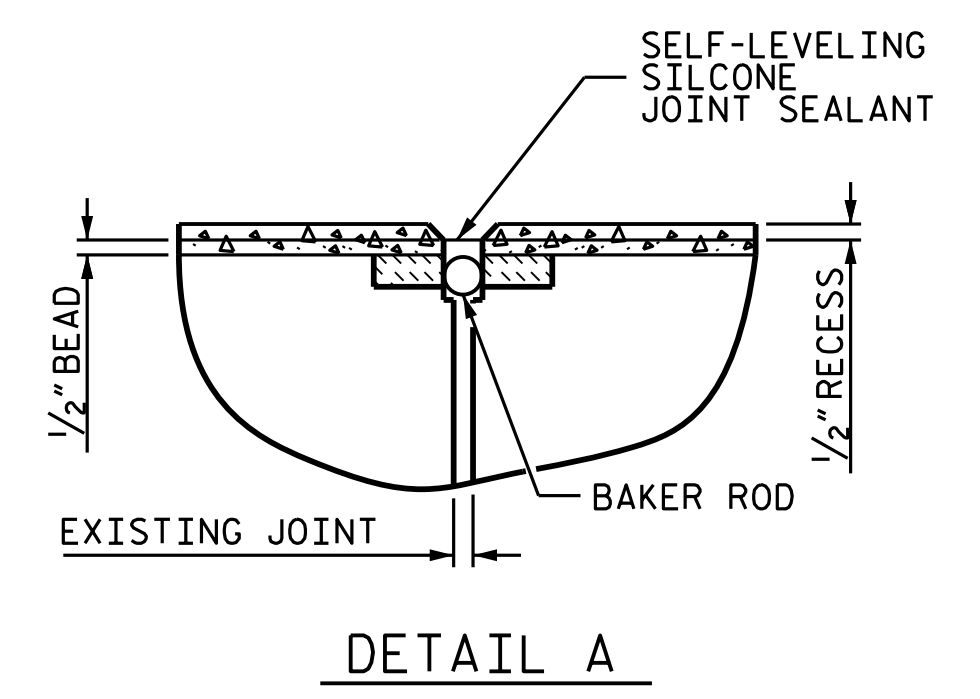
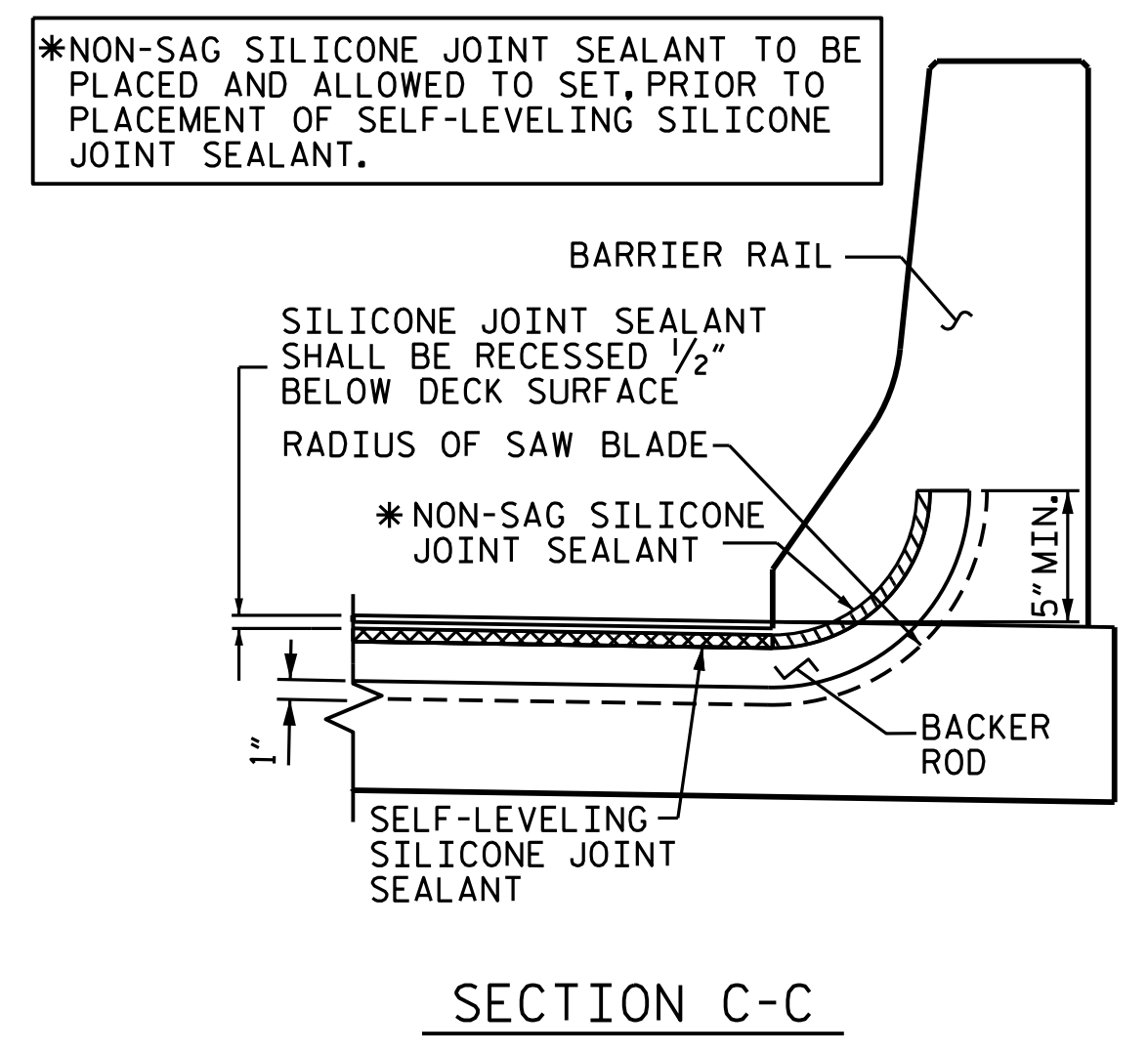
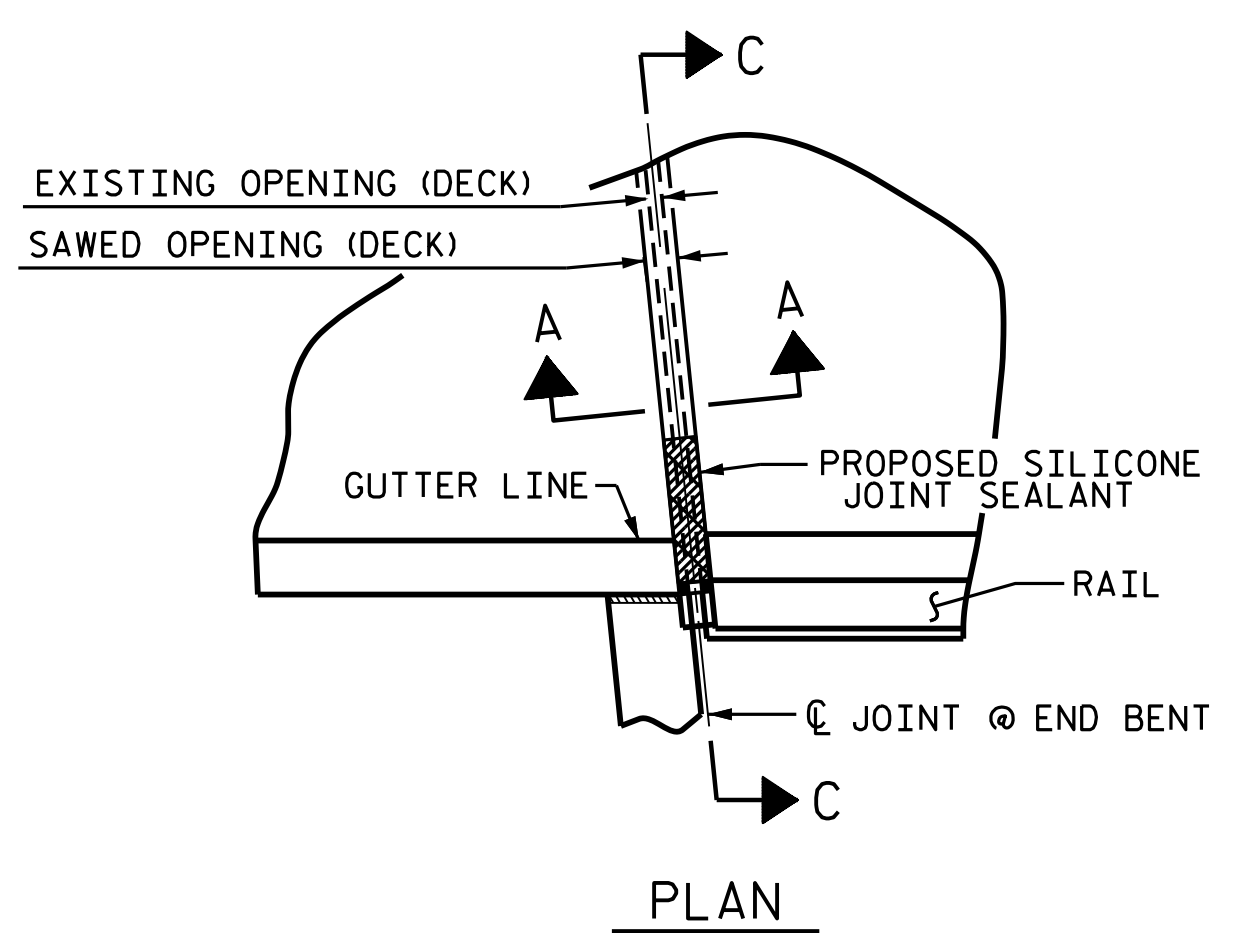
THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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

JOINT REPAIR QUANTITY TABLE				
	CLASS II SURFACE PREPARATION		CONCRETE DECK REPAIR FOR PPC OVERLAY	
END BENT 1	7.1	SY	7.1	SY
END BENT 2	7.1	SY	7.1	SY
* TOTAL	14.2	SY	14.2	SY

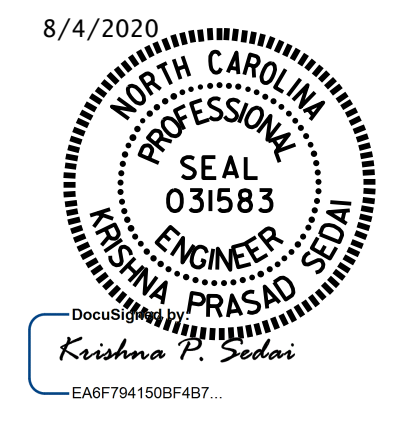
* BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	65.3 LF	
END BENT 2	65.7 LF	
TOTAL	131.0 LF	



JOINT DETAILS AT BARRIER RAIL

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330489



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

DRAWN BY : A. SORSENGINH DATE : 7/2019
CHECKED BY : E. BAYISSA DATE : 1/2020

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S14-04
1			3			TOTAL SHEETS
2			4			6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES

FOAM JOINTS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

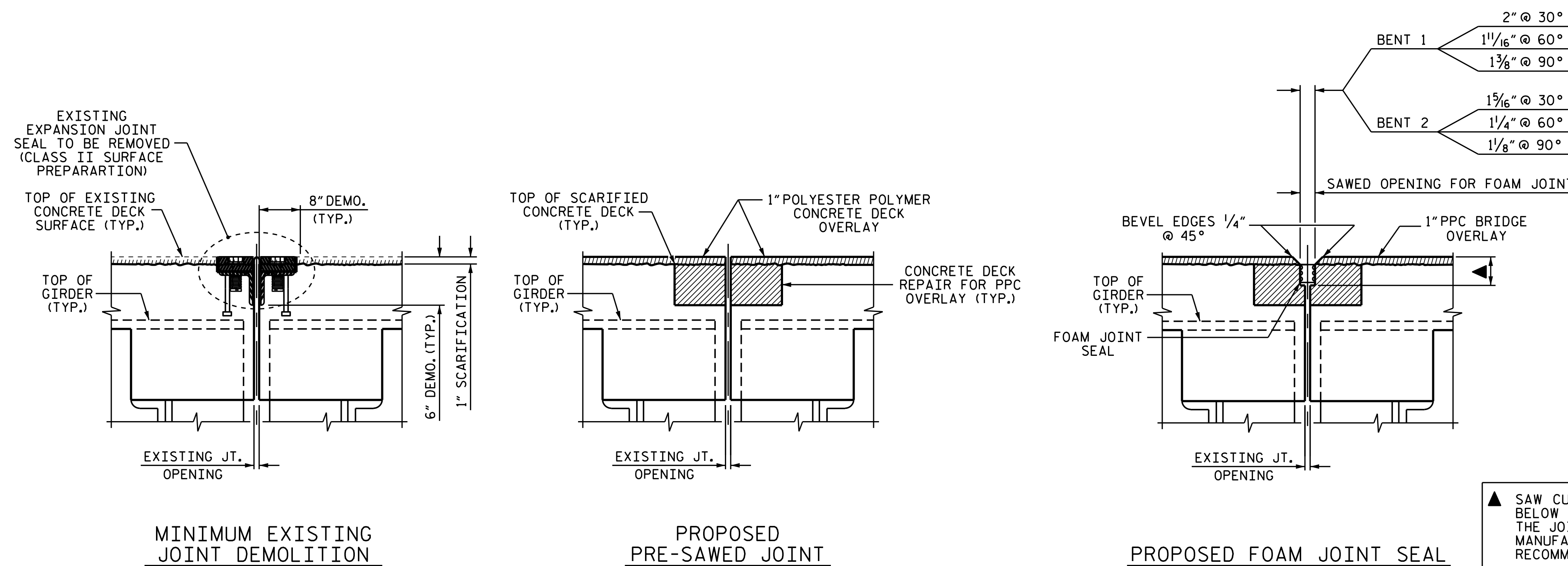
THE FOAM JOINTS SHALL MEET THE MANUFACTURER'S RECOMMENDATION FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

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

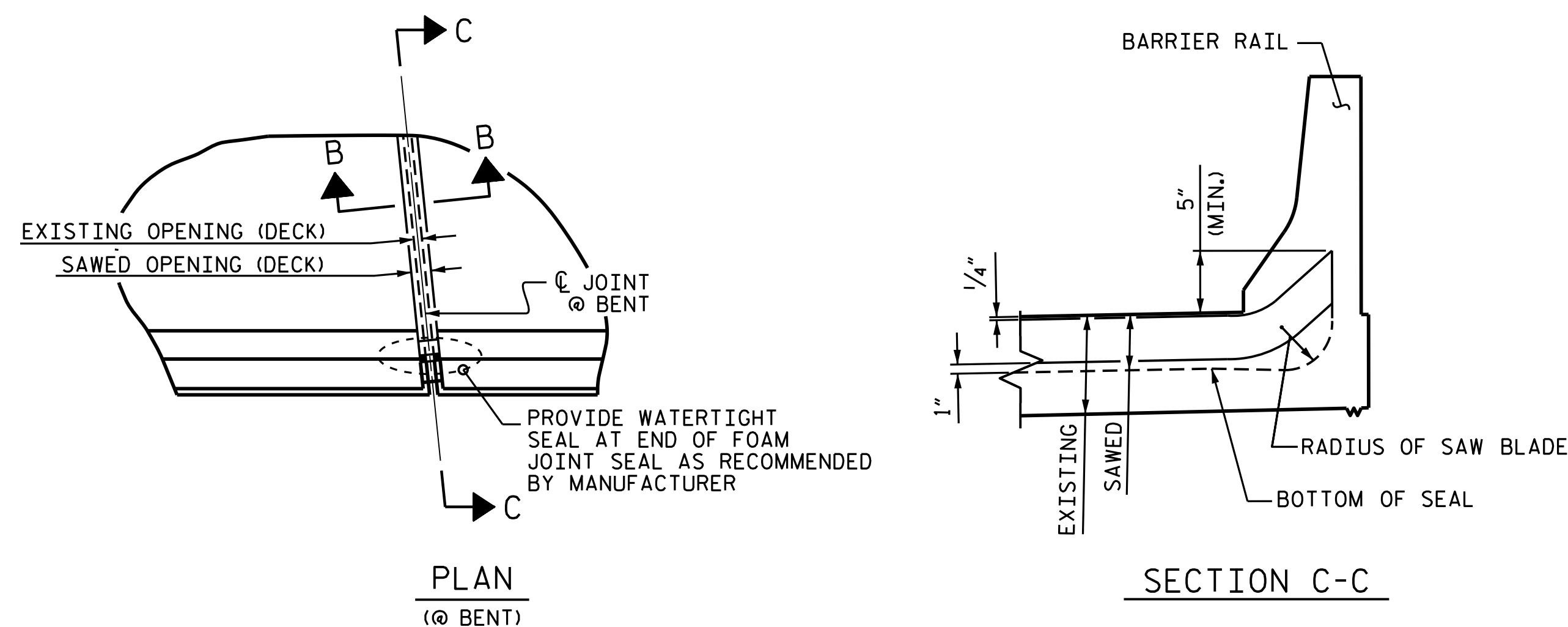
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE BENTS.

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

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



JOINT INSTALLATION SEQUENCE AT BENTS
SECTION B-B



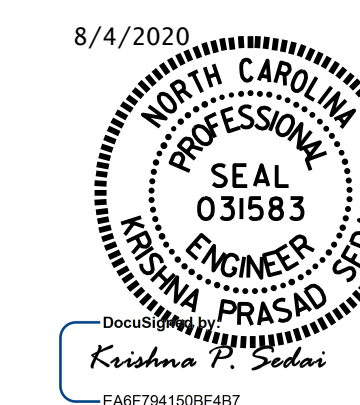
JOINT SEAL DETAILS AT BENTS

	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
BENT 1	9.5 SY	9.5 SY
BENT 2	9.5 SY	9.5 SY
* TOTAL	19.0 SY	19.0 SY

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	64.2 LF	
BENT 2	64.4 LF	
TOTAL	128.6 LF	

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330489



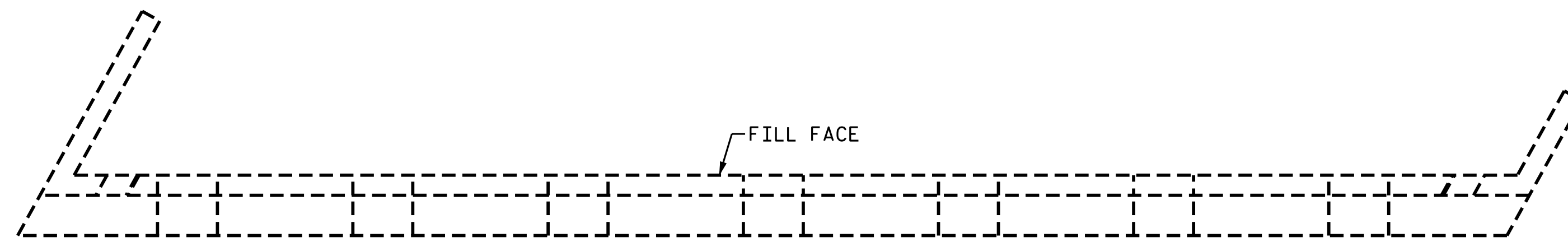
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**JOINT DETAILS
BENTS 1 & 2**

DRAWN BY : A. SORSENGINH DATE : 5/2020
CHECKED BY : E. BAYISSA DATE : 5/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

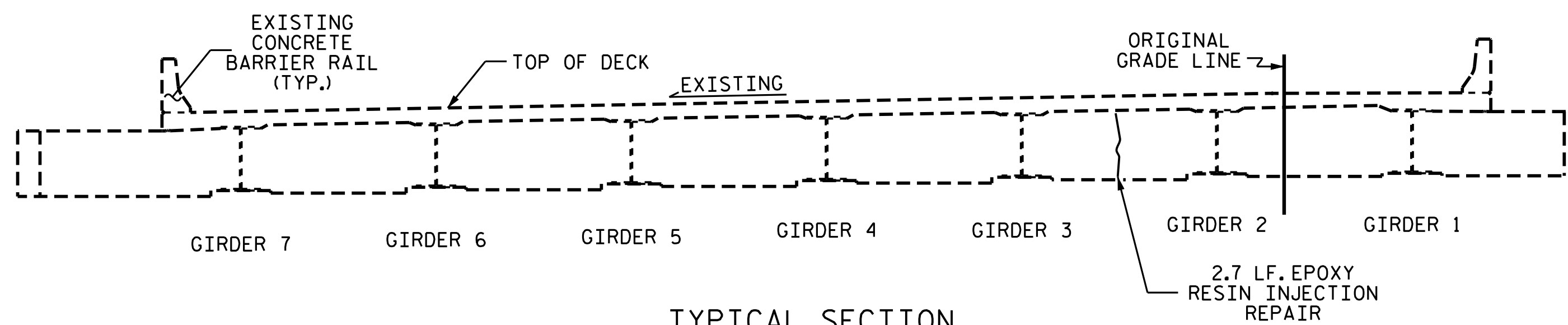
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S14-05
1			3			TOTAL SHEETS
2			4			6



PLAN

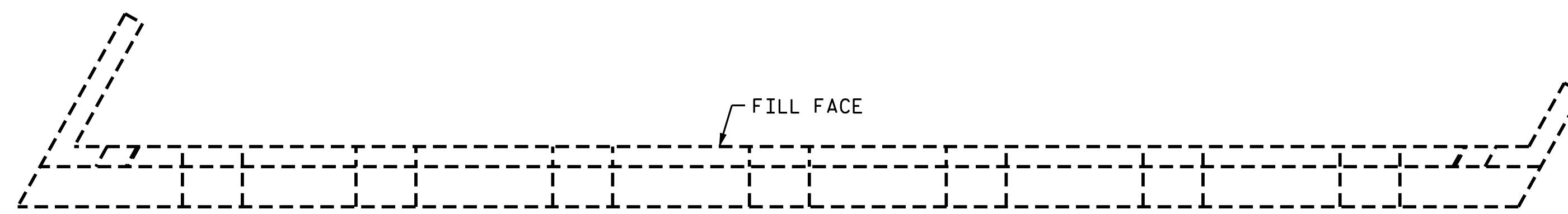


ELEVATION

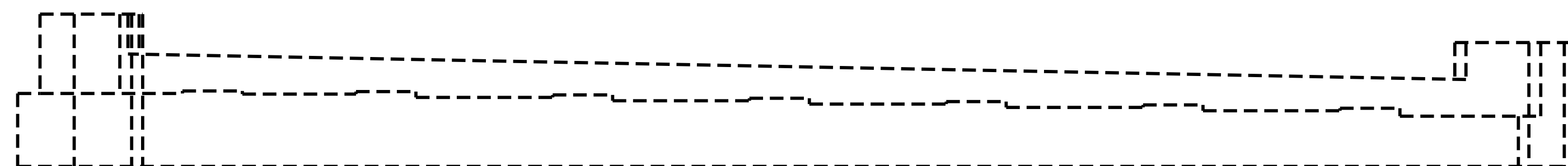


TYPICAL SECTION

END BENT 1



PLAN



ELEVATION

END BENT 2

- CONCRETE REPAIR AREA
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

DRAWN BY : A. SORSENGINH DATE : 10/2019
 CHECKED BY : E. BAYISSA DATE : 1/2020

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
BACKWALL	2.7			
CAP	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP AT END BENT 1	148.0			
TOP OF CAP AT BENT 1	221.0			

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
BACKWALL	0.0			
CAP	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP AT END BENT 2	149.0			
TOP OF CAP AT BENT 2	221.0			

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

NOTES:

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

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.

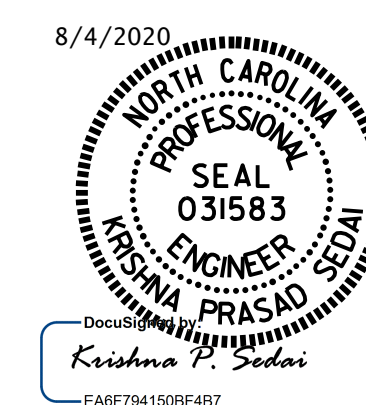
FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

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

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE: 330489



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

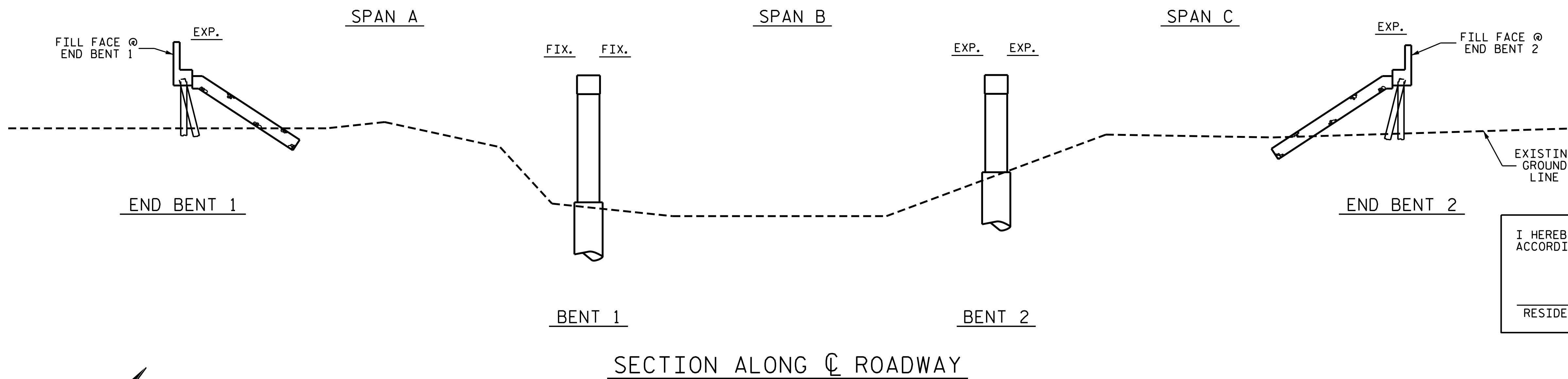
END BENTS 1 & 2

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S14-06
2			4			TOTAL SHEETS 6

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/7/2018.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.

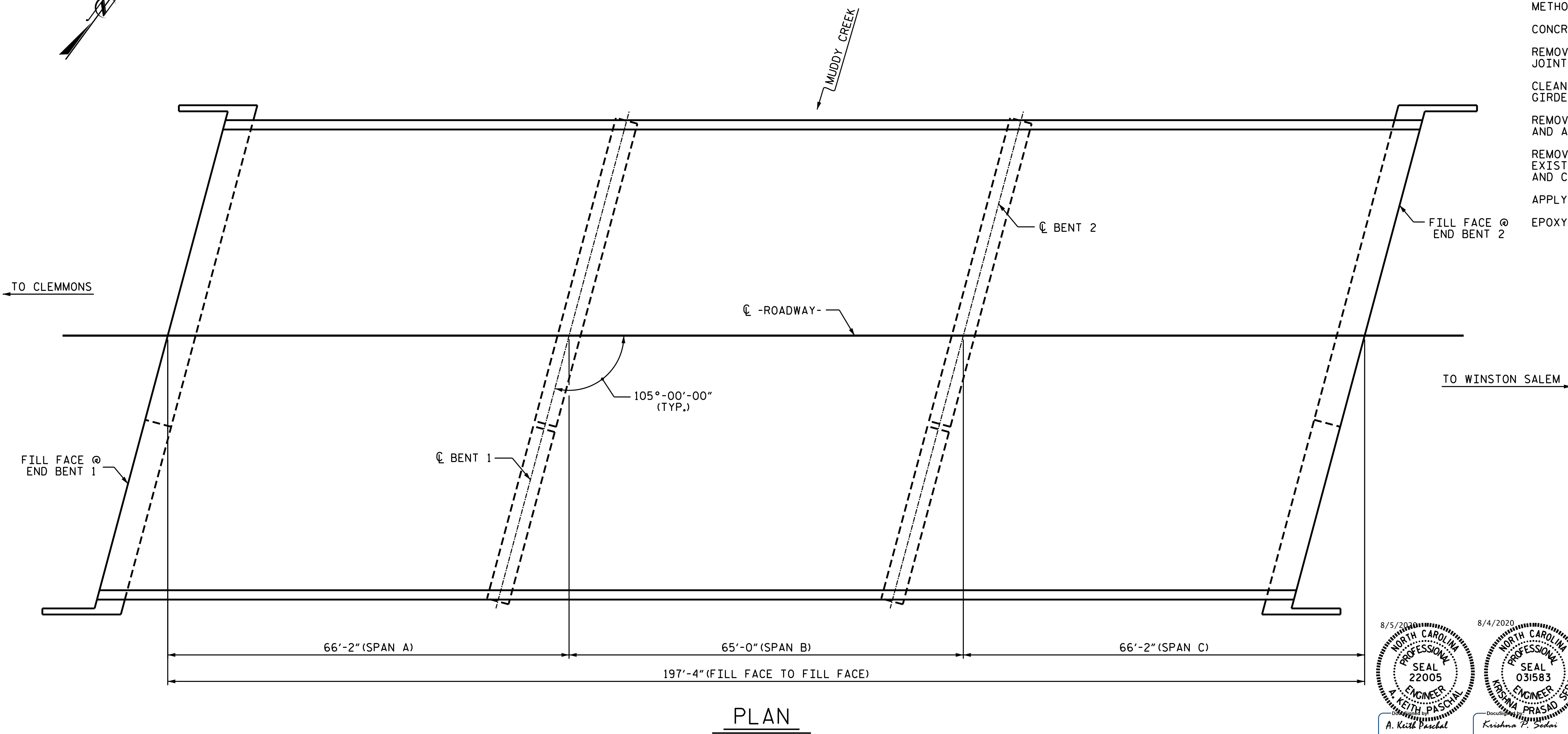


I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

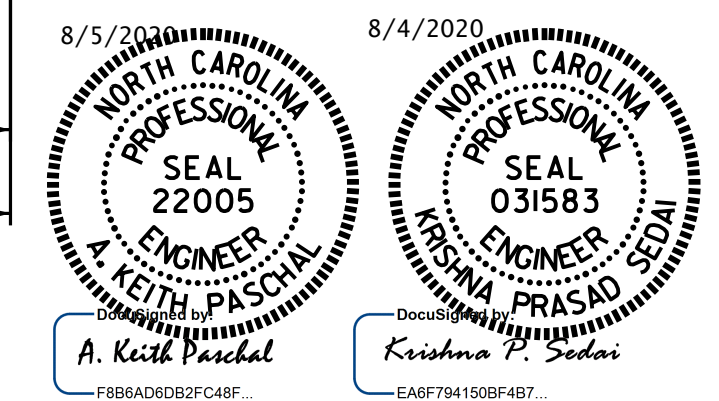
RESIDENT ENGINEER _____ DATE _____

SCOPE OF WORK

- PREPARE TOP OF BRIDGE DECK SURFACE BY SHOTBLASTING METHODS.
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINT SEALS FOR PRESERVATION.
- CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- APPLY SILANE DECK TREATMENT.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.



PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330161



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 EBL
 OVER MUDDY CREEK

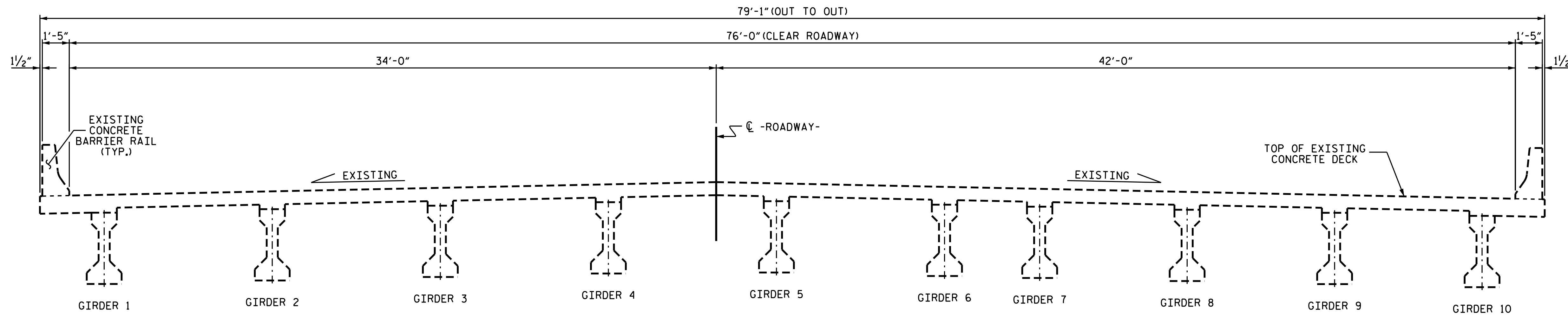
DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

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

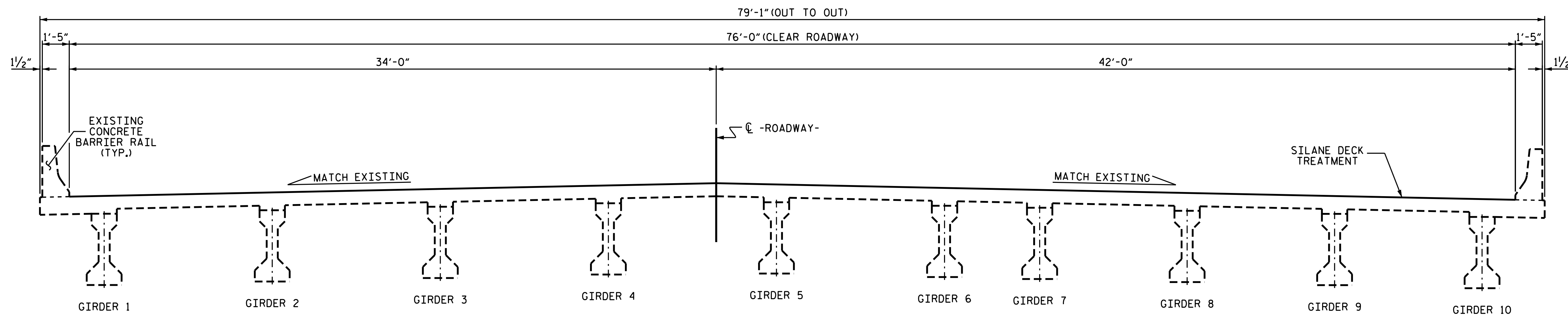
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTE:

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

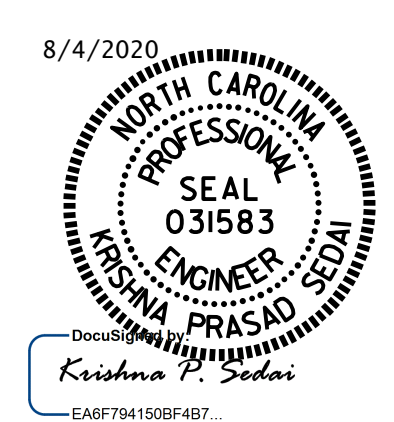


TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330161



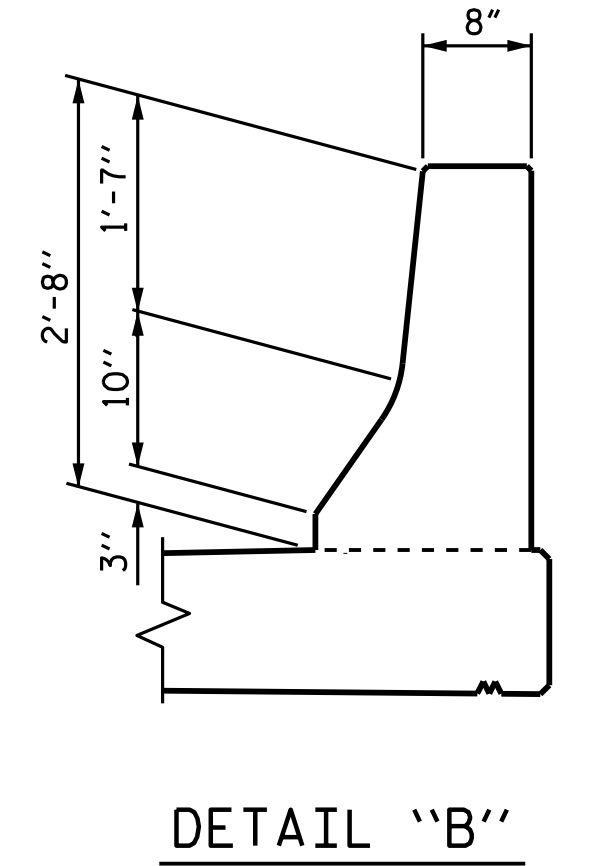
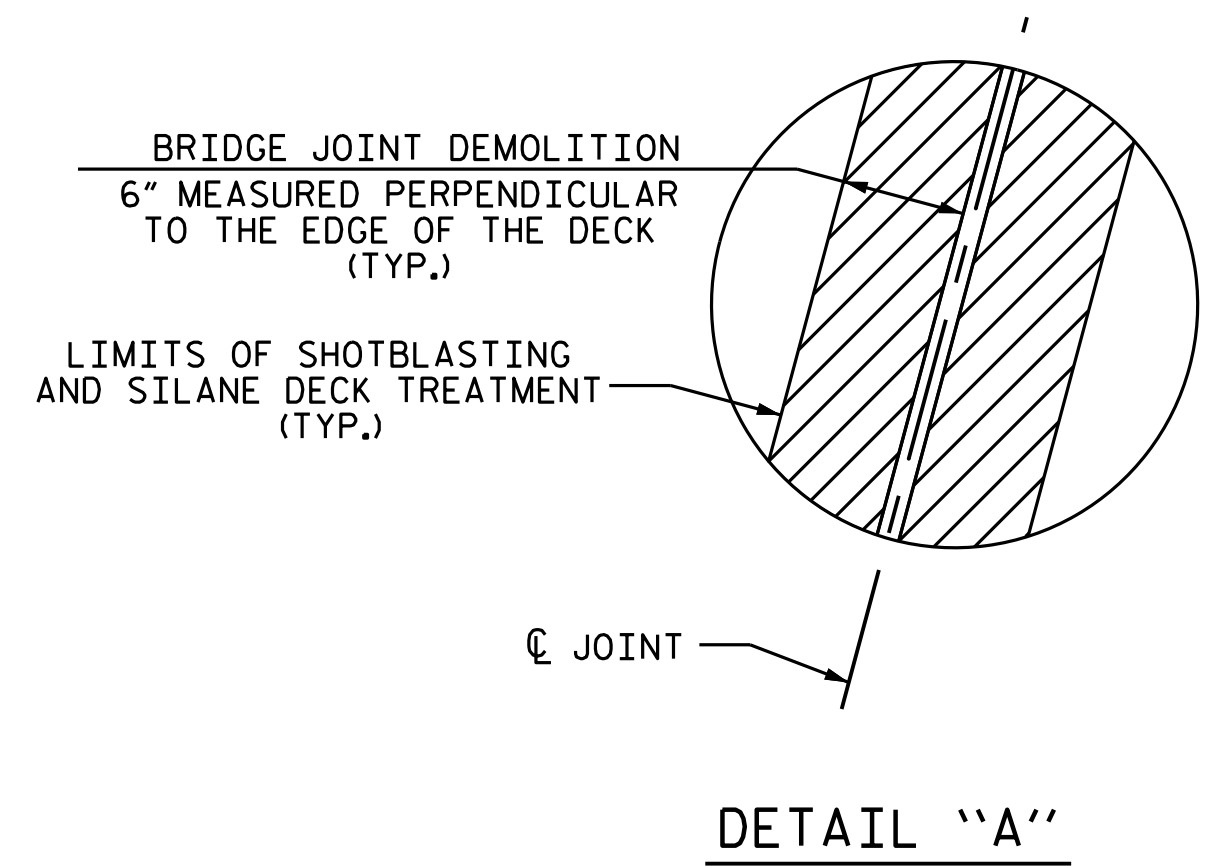
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S15-02
1			3			TOTAL SHEETS
2			4			7



NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR BRIDGE JOINT DEMOLITION, SEE "JOINT DETAILS" SHEET.

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

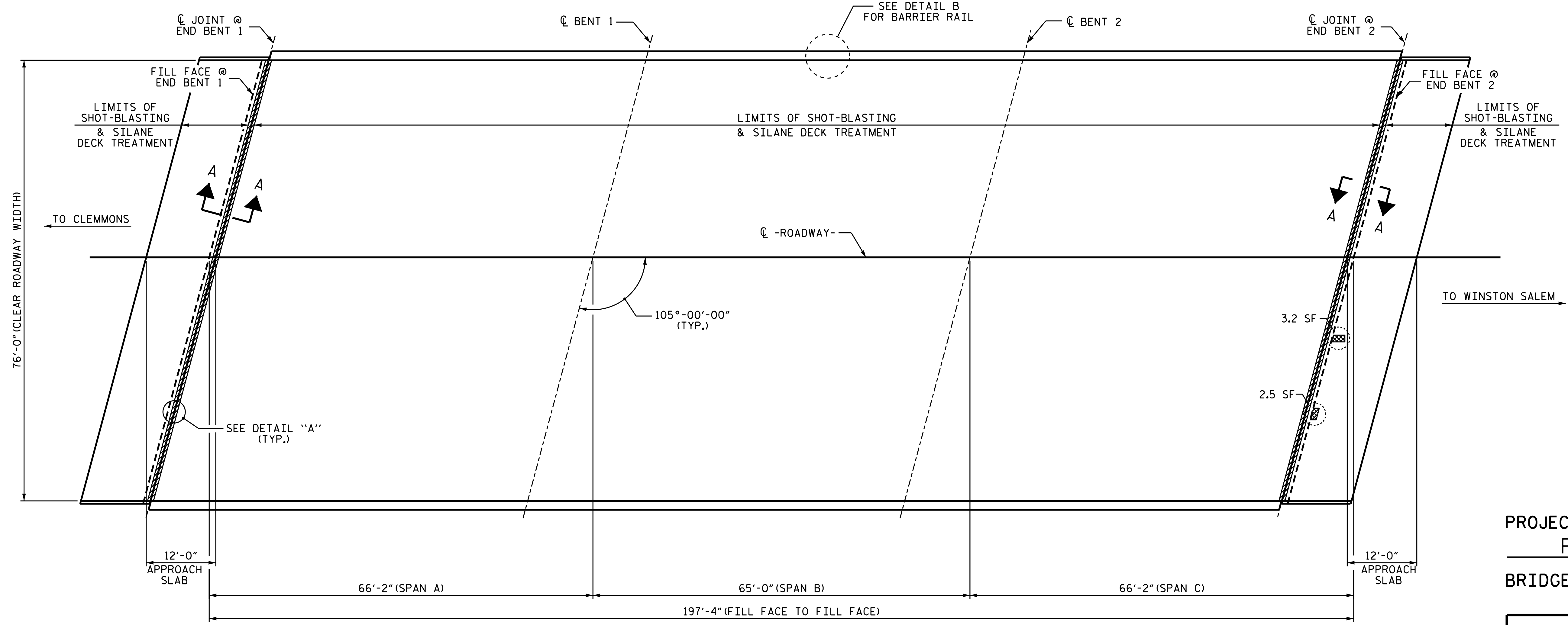
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

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

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

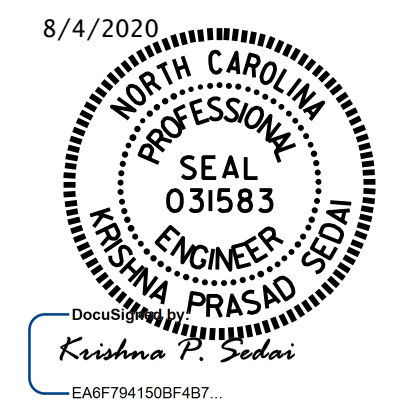
- BRIDGE JOINT DEMOLITION
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
- SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	5.7 SF	
SHOTBLASTING APPROACH SLAB	194 SY	
SILANE DECK TREATMENT	194 SY	
BRIDGE QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
BRIDGE JOINT DEMOLITION	157.4 SF	
SHOTBLASTING BRIDGE DECK	1639 SY	
SILANE DECK TREATMENT	1639 SY	
SURFACE PREPARATION FOR CONCRETE BARRIER	1368.0 SF	
SILANE BARRIER RAIL TREATMENT	1368.0 SF	
EPOXY COATING CONCRETE GIRDER ENDS	484.2 SF	



PLAN - SPANS A, B AND C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330161



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & SILANE DECK
 TREATMENT**

DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

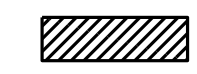
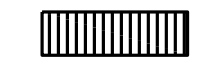


DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			5
2			4			7

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

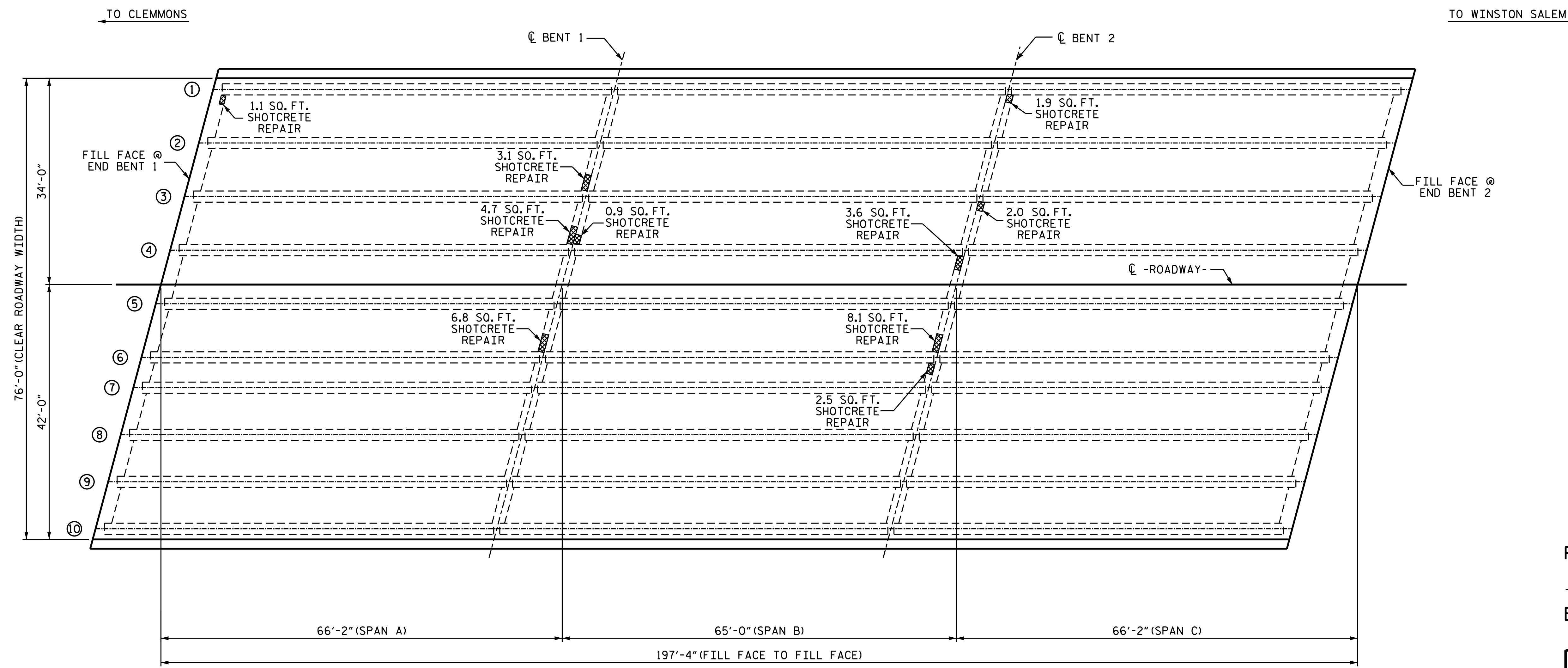
-  UNDERSIDE EPOXY COATING
-  UNDERSIDE REPAIR
-  DIAPHRAGM REPAIR
-  ERI - EPOXY RESIN INJECTION

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

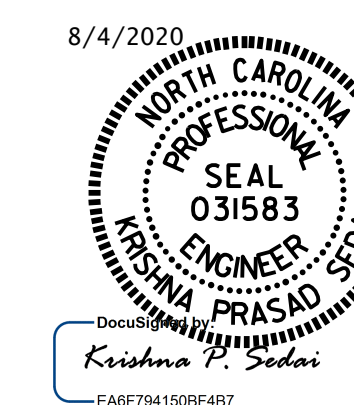
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	34.7	11.6		
GIRDERS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF			

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.



PLAN - SPANS A, B AND C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330161

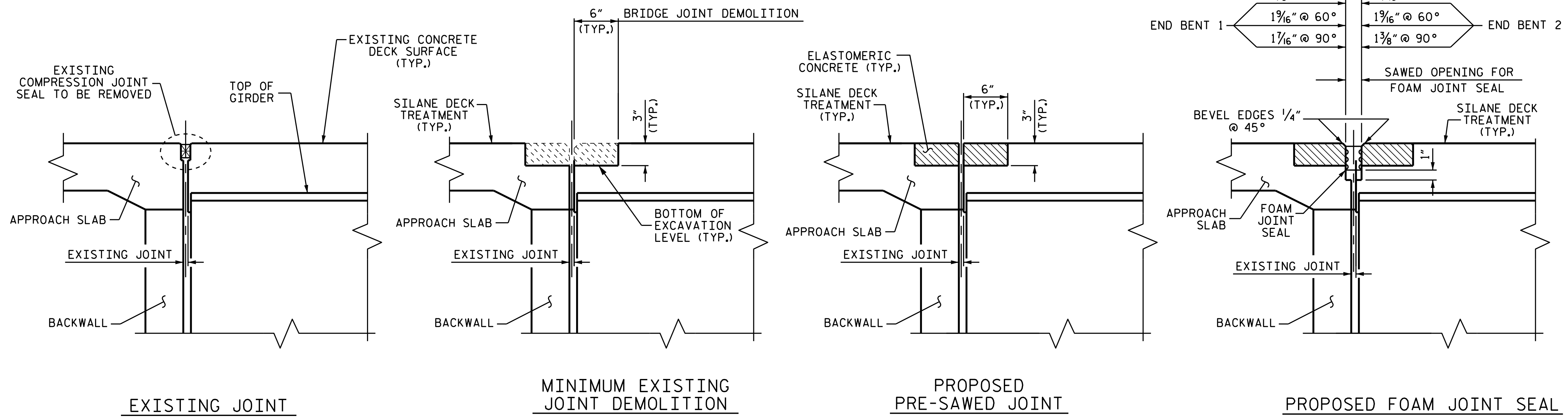


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
PLAN OF SPANS

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3				S15-04 TOTAL SHEETS 7
2				4				

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION A-A

NOTES

FOAM JOINTS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

THE FOAM JOINTS SHALL MEET THE MANUFACTURER'S RECOMMENDATION FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

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

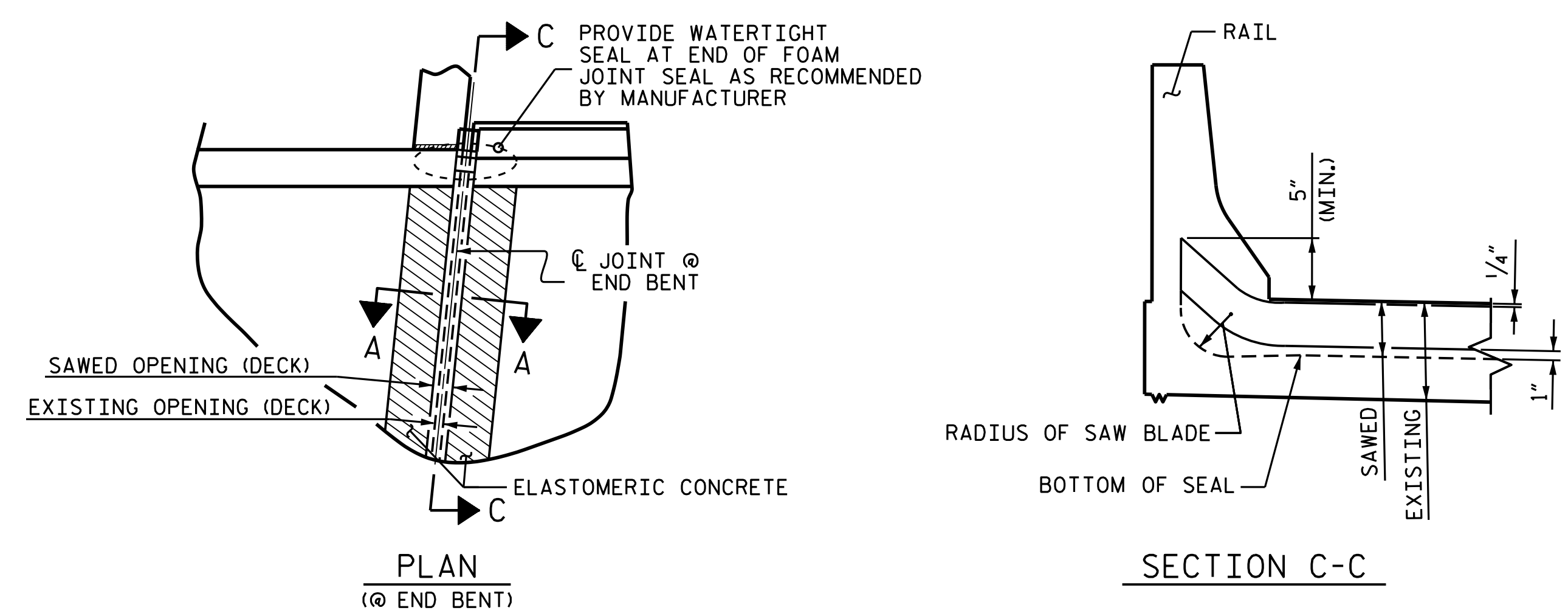
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE END BENTS 1 AND 2.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

DEMOLISH BRIDGE JOINT AREA TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON SOUND CONCRETE OR REPAIR CONCRETE SUBSTRATE. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED CONCRETE REPAIR MATERIAL SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.

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

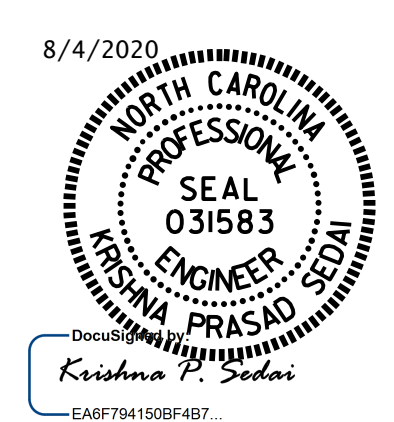


JOINT SEAL DETAILS AT END BENTS

	BRIDGE JOINT DEMOLITION		ELASTOMERIC CONCRETE FOR PRESERVATION		FOAM JOINT SEALS FOR PRESERVATION	
	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL
END BENT 1	78.7 SF		19.7 CF		78.7 LF	
END BENT 2	78.7 SF		19.7 CF		78.7 LF	
* TOTAL	157.4 SF		39.4 CF		157.4 LF	

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330161



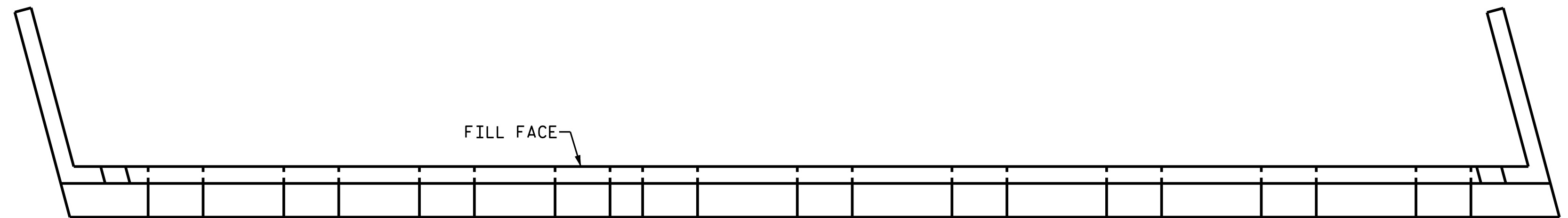
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

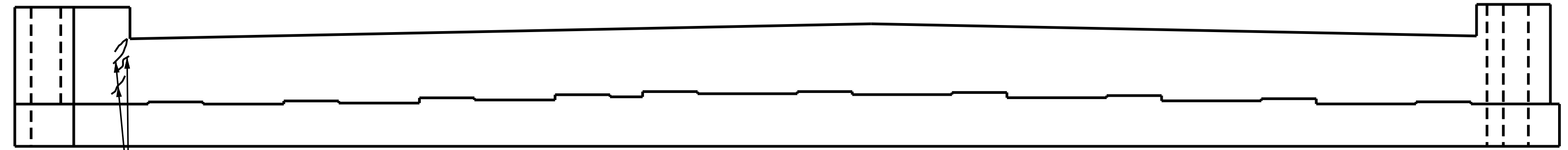
DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S15-05	
2				4			TOTAL SHEETS 7	

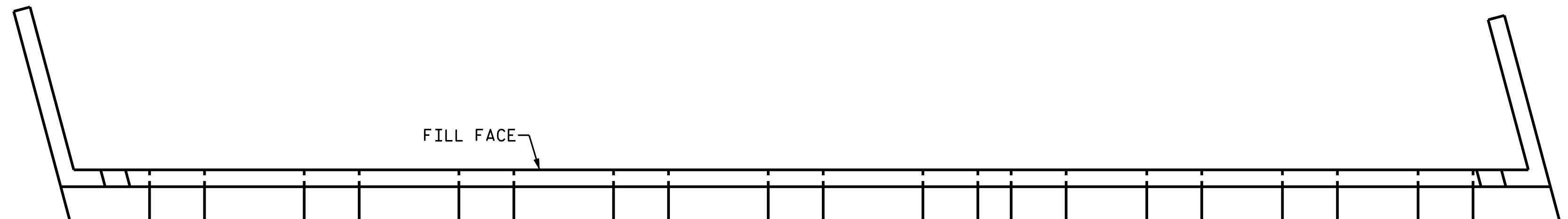
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



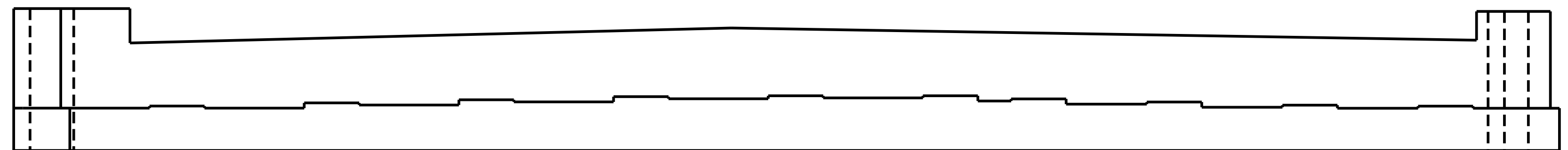
PLAN



ELEVATION
END BENT 1



PLAN



ELEVATION
END BENT 2

- CONCRETE REPAIR AREA
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
BACKWALL		4.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	176.2			

AS-BUILT REPAIR QUANTITY TABLE

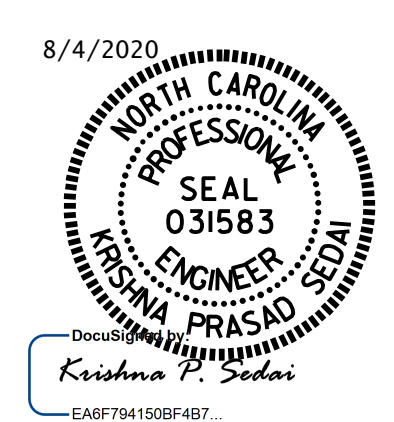
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
BACKWALL		0.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	176.2			

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

NOTES:

- SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
- 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 REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
- FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.
- FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.
- CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE: 330161



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS 1 & 2

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S15-06 TOTAL SHEETS 7
2			4	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

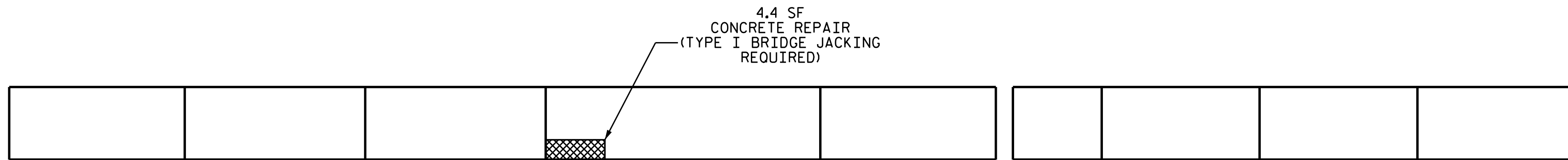
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

CONCRETE REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE "JACKING DETAILS" SHEET.

 SHOTCRETE AREA

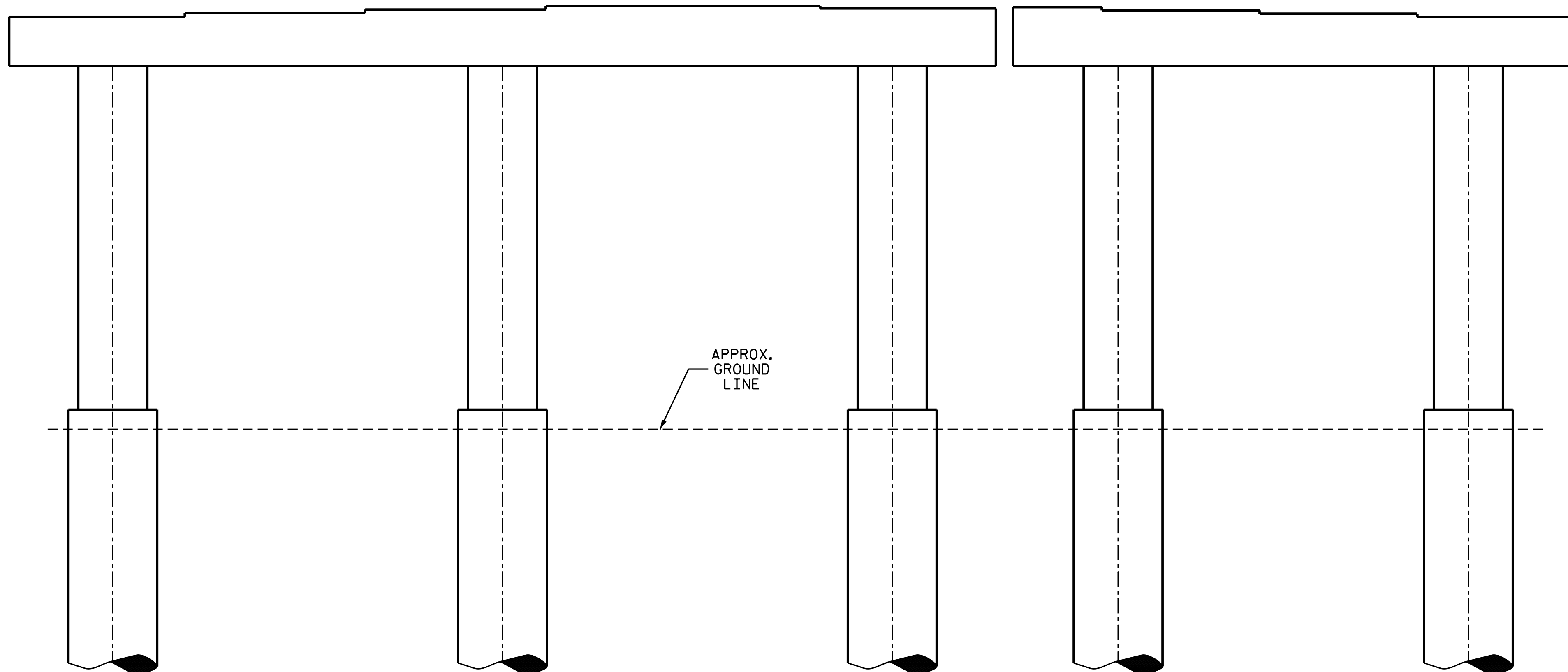
 CONCRETE AREA

 ERI - EPOXY RESIN INJECTION



SPAN B
SPAN A

PLAN - TOP OF CAP

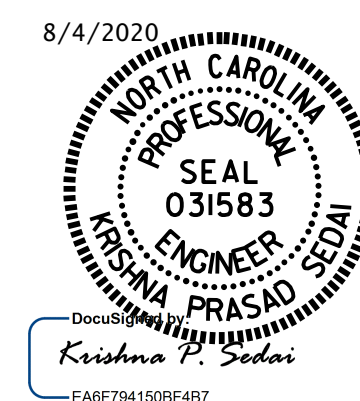


ELEVATION - SPAN A VIEW

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.4	2.2		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP (BENTS 1 & 2)	575.0			

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

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330161



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 SUBSTRUCTURE
 BENT 1
 SPAN A FACE

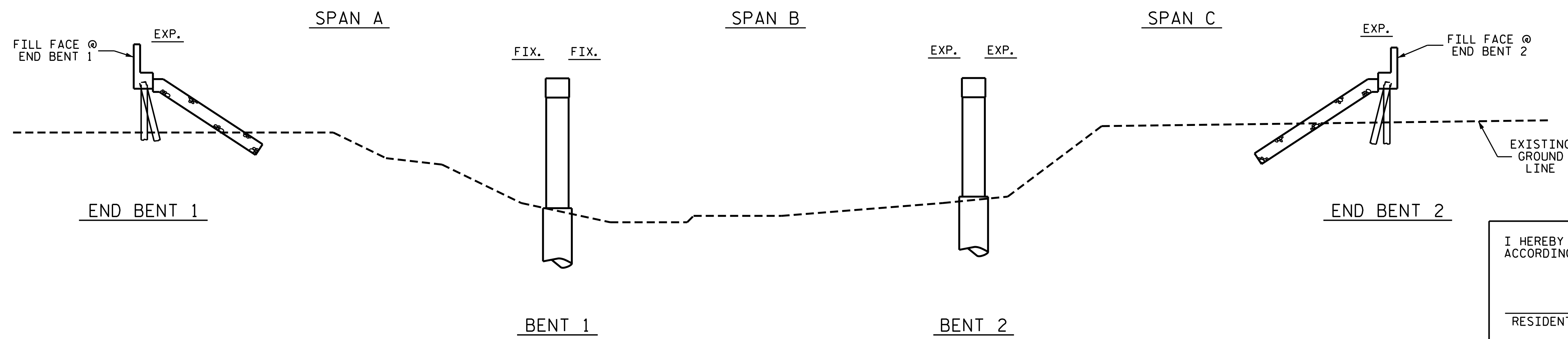
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S15-07
2			4			TOTAL SHEETS 7

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/7/2018.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.

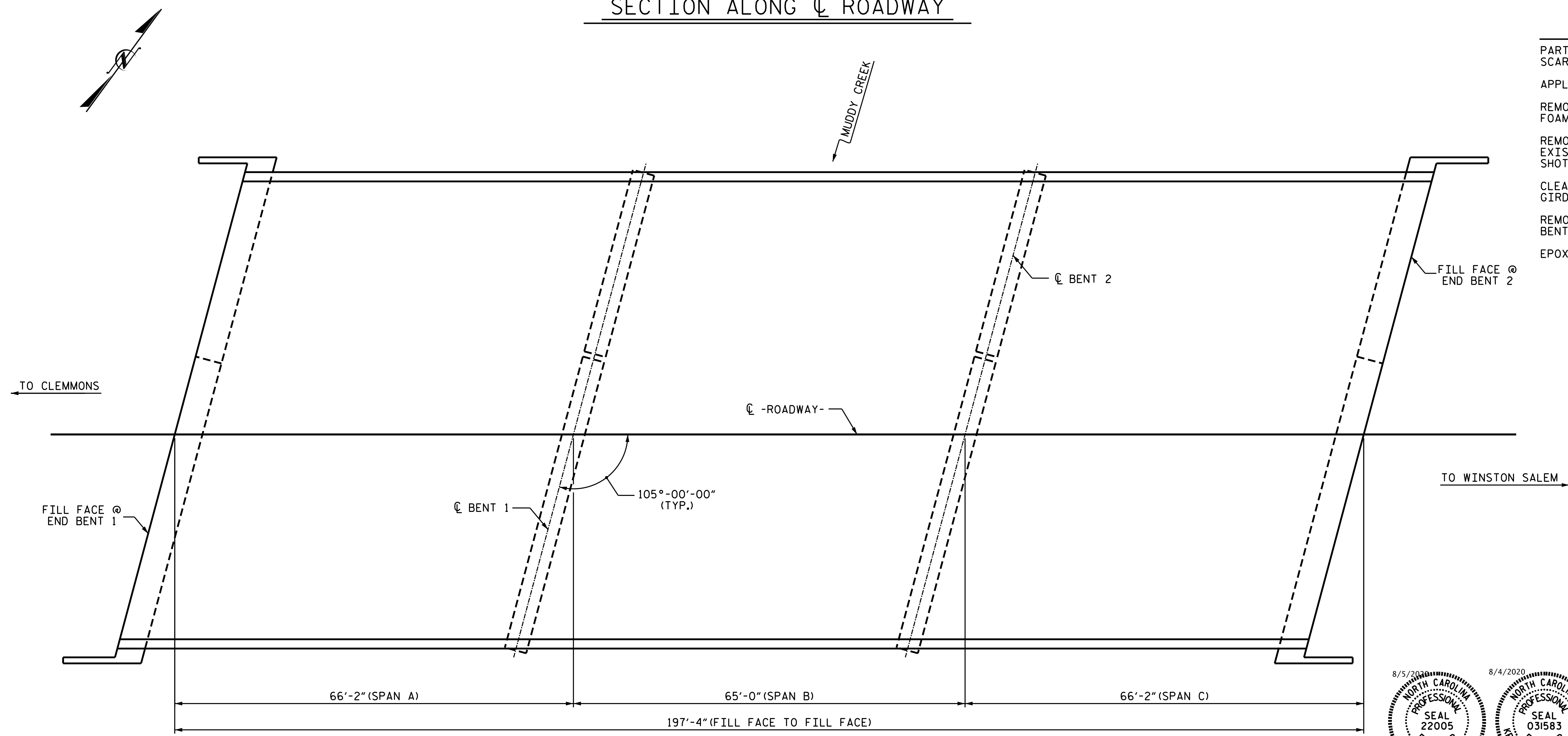


I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

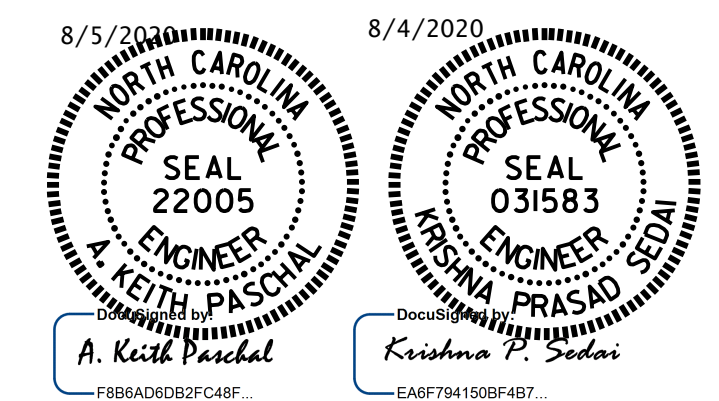
SCOPE OF WORK

- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- APPLY DECK SEALANT TO PREPARED TOP OF BRIDGE DECK.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS AND PERFORM SHOTCRETE AND/OR CONCRETE REPAIRS.
- CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.



PLAN

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330162



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 OVER MUDDY CREEK

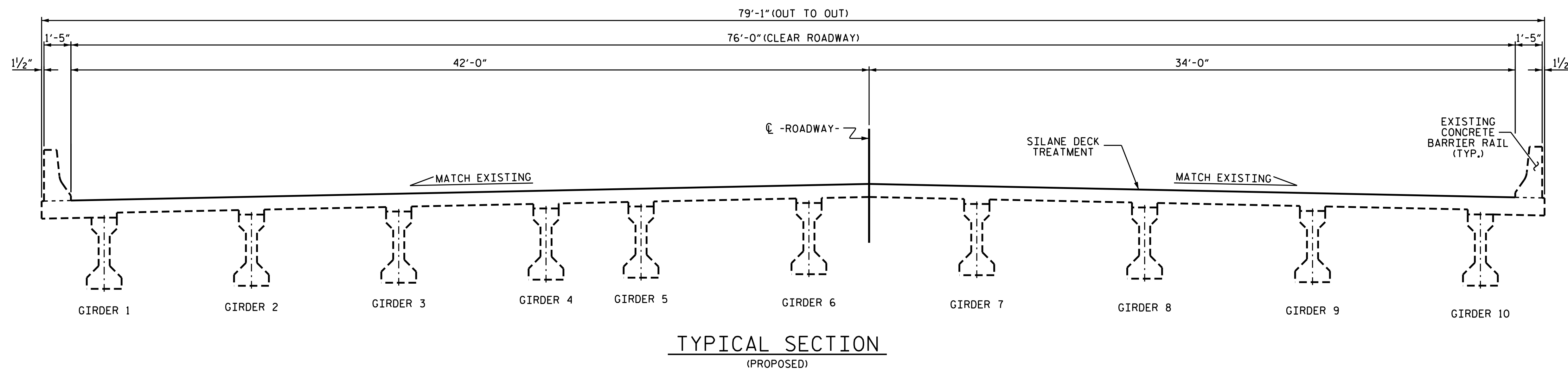
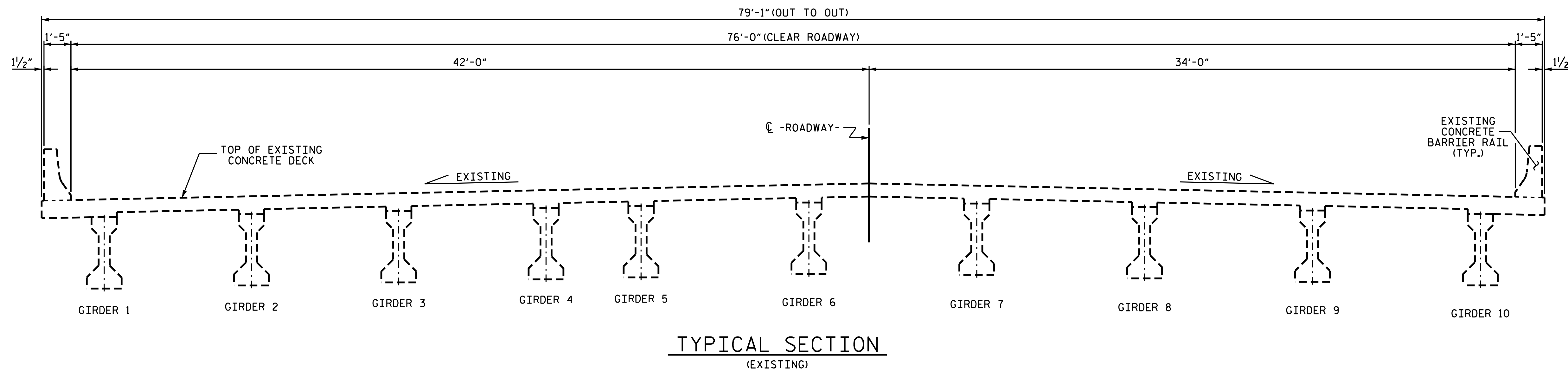
DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTE:

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



PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330162



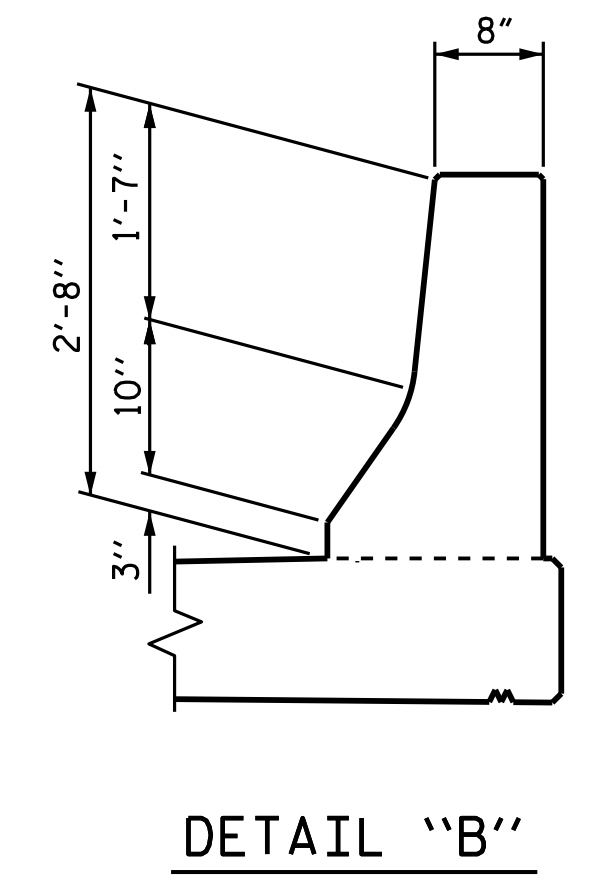
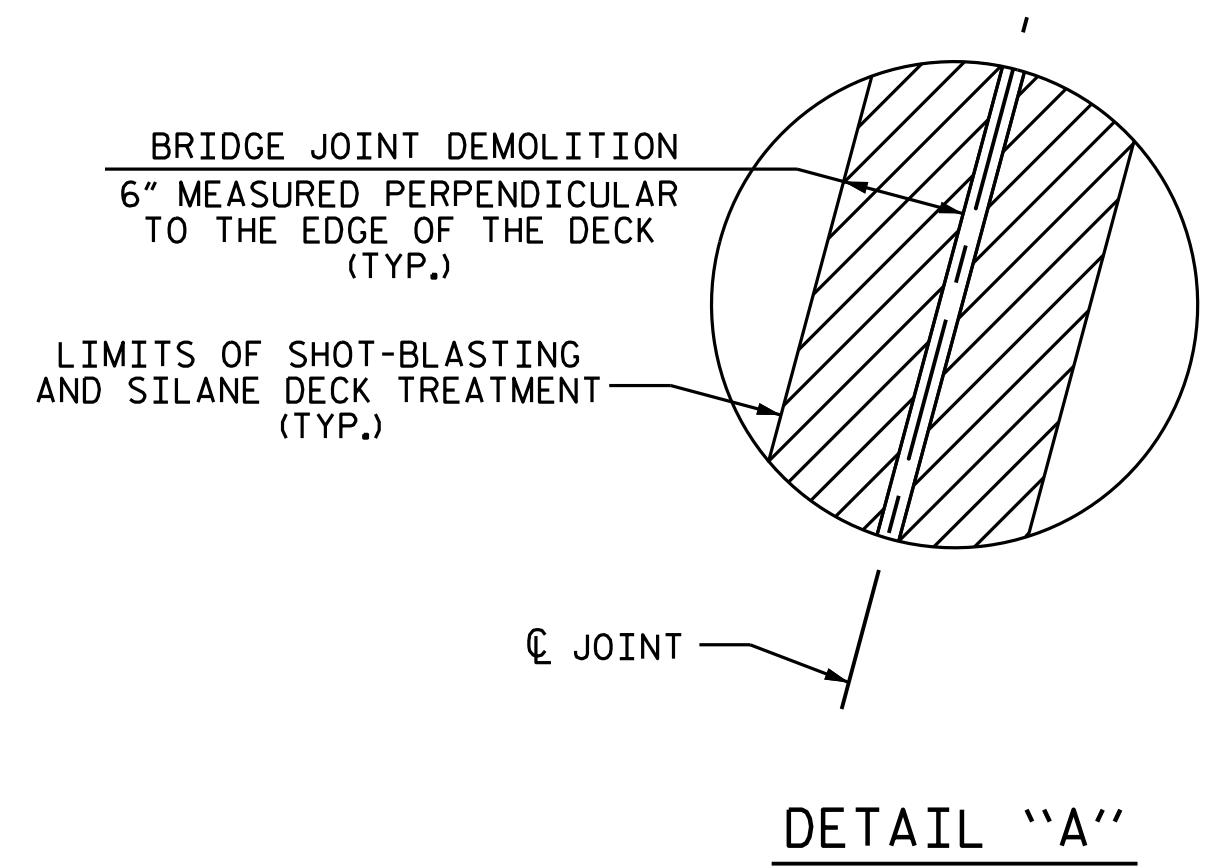
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S16-02
1			3			TOTAL SHEETS
2			4			5



NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR BRIDGE JOINT DEMOLITION, SEE "JOINT DETAILS" SHEET.

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

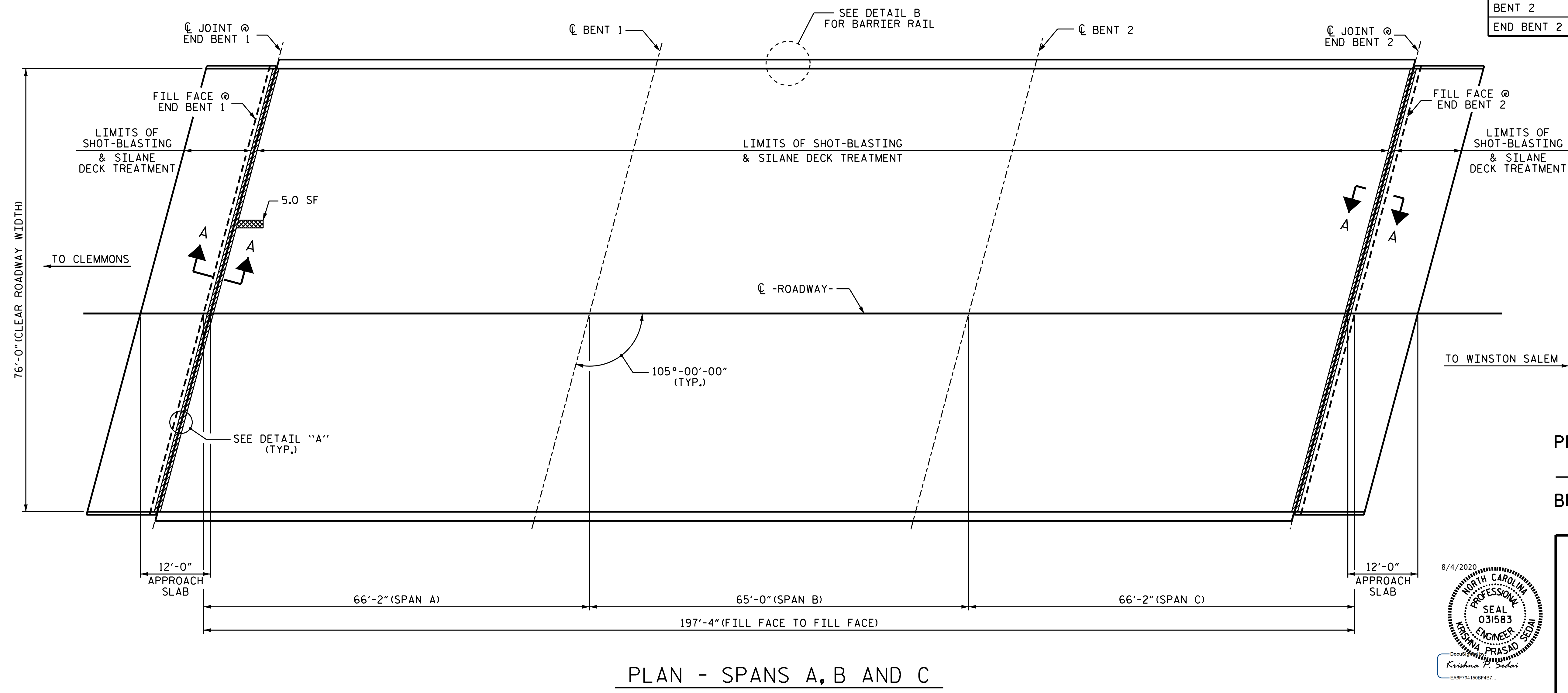
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

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

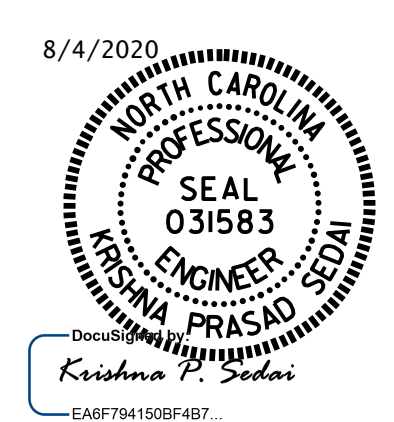
ONLY INNER SURFACE AND TOP SURFACE OF BARRIER RAIL WILL BE TREATED WITH SILANE PENETRANT SEALER.

- BRIDGE JOINT DEMOLITION
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
- SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLAST APPROACH SLAB	194 SY	
SILANE DECK TREATMENT	194 SY	
BRIDGE QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	5.0 SF	
BRIDGE JOINT DEMOLITION	157.4 SF	
SHOTBLAST BRIDGE DECK	1639 SY	
SILANE DECK TREATMENT	1639 SY	
SURFACE PREPARATION FOR CONCRETE BARRIER	1368 SF	
SILANE BARRIER RAIL TREATMENT	1368 SF	
EPOXY COATING CONCRETE GIRDER ENDS	482 SF	
EPOXY COATING		
	ESTIMATE AREA SQ. FT.	ACTUAL AREA SQ. FT.
END BENT 1	176.2	
BENT 1	287.5	
BENT 2	287.5	
END BENT 2	176.2	



PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330162



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT

DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018





DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S16-03
1			3			TOTAL SHEETS
2			4			5

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

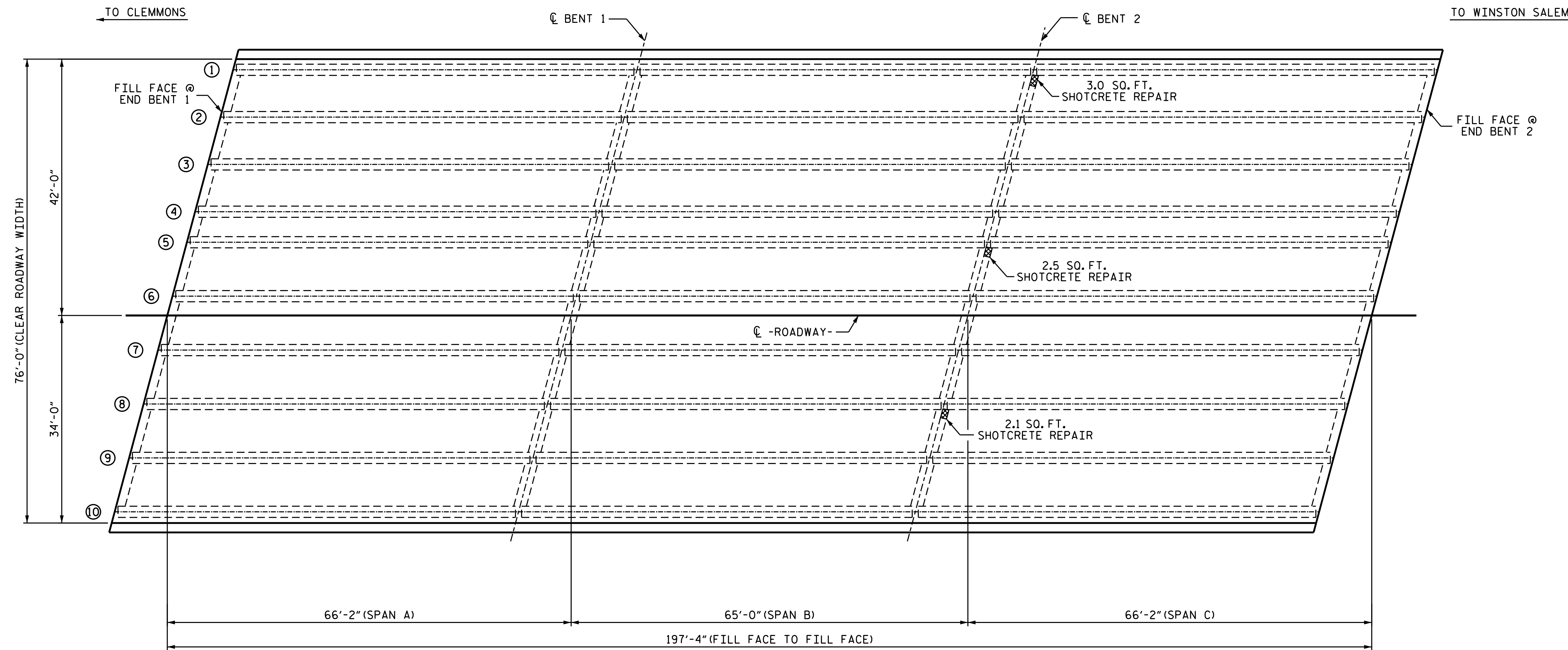
-  UNDERSIDE EPOXY COATING
-  UNDERSIDE REPAIR
-  DIAPHRAGM REPAIR
-  ERI - EPOXY RESIN INJECTION

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

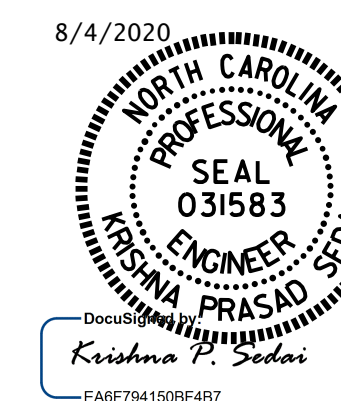
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	7.6	2.5		
GIRDERS	0.0	0.0		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF			

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.



PLAN - SPANS A, B AND C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330162



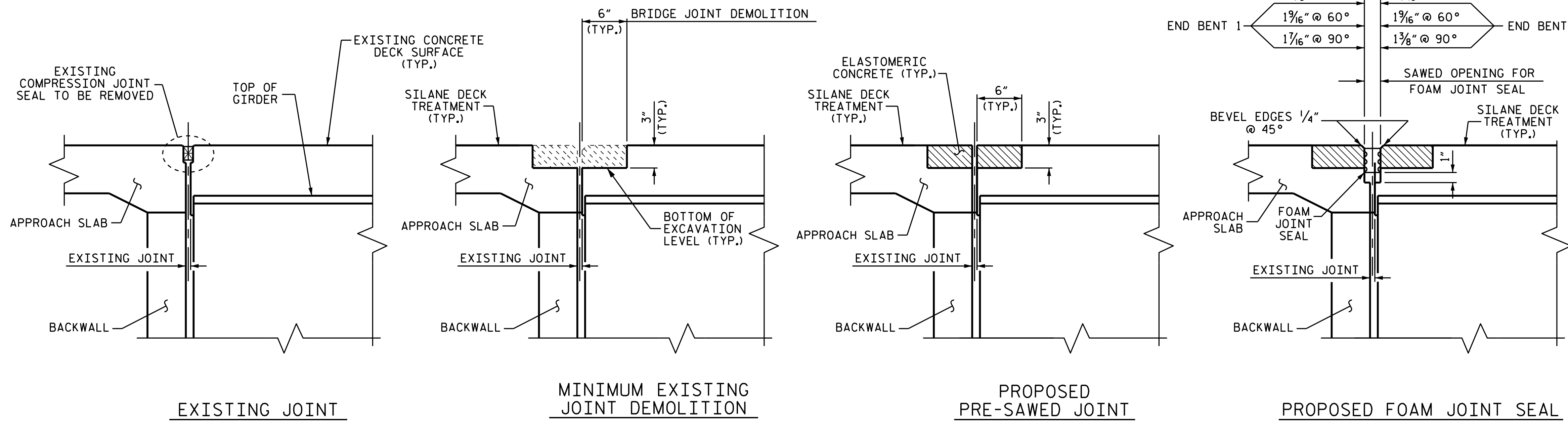
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S16-04
1			3			TOTAL SHEETS
2			4			5



JOINT INSTALLATION SEQUENCE AT END BENTS
SECTION A-A

NOTES

FOAM JOINTS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

THE FOAM JOINTS SHALL MEET THE MANUFACTURER'S RECOMMENDATION FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

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

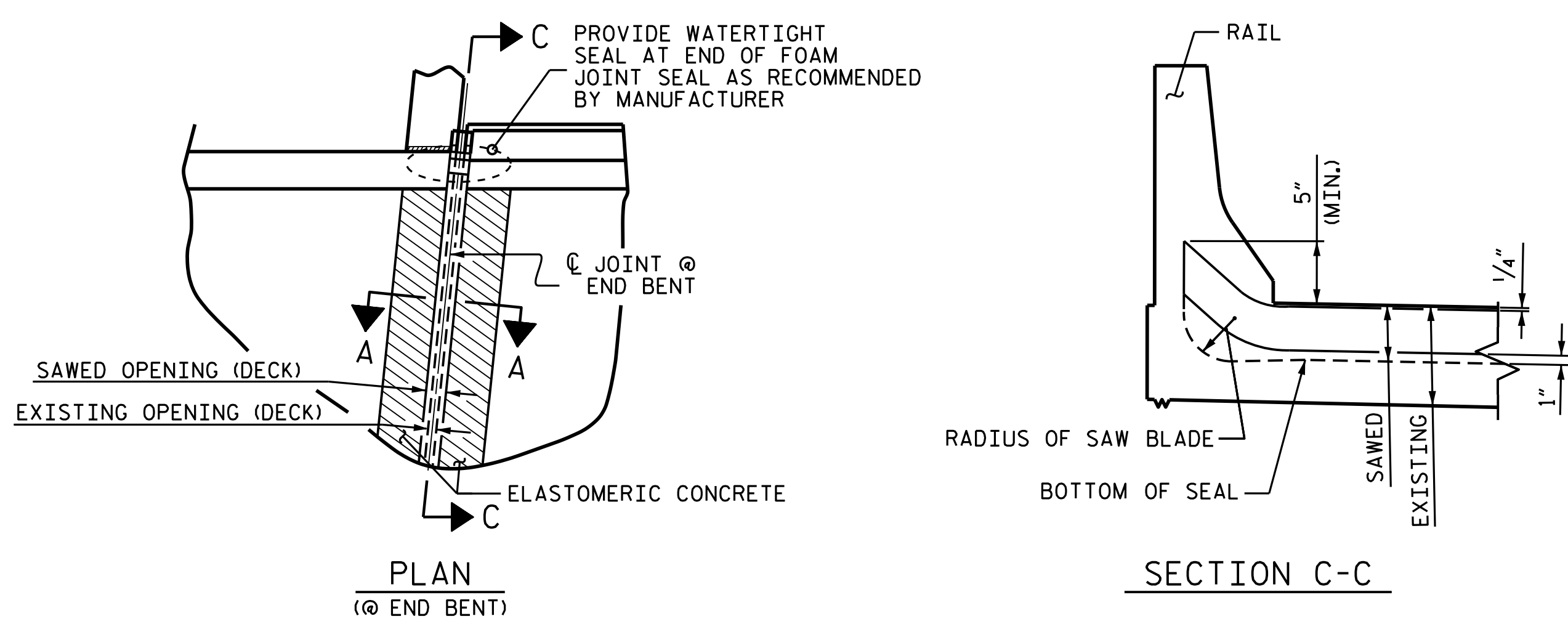
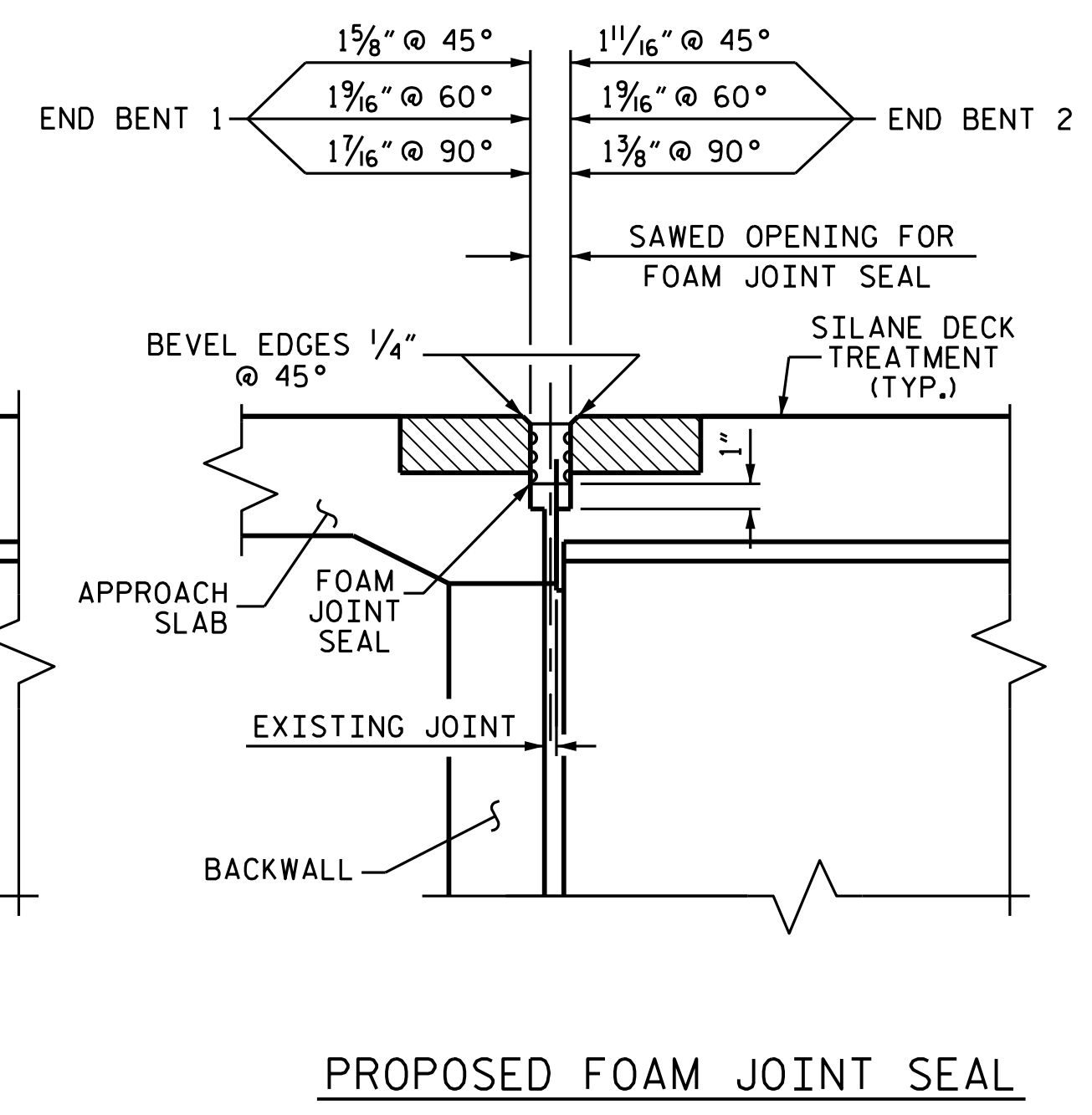
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE END BENTS 1 AND 2.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

DEMOLISH BRIDGE JOINT AREA TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON SOUND CONCRETE OR REPAIR CONCRETE SUBSTRATE. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED CONCRETE REPAIR MATERIAL SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.

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

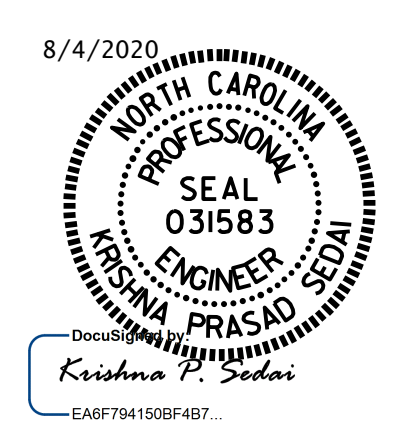


JOINT SEAL DETAILS AT END BENTS

	BRIDGE JOINT DEMOLITION		ELASTOMERIC CONCRETE FOR PRESERVATION		FOAM JOINT SEALS FOR PRESERVATION	
	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL
END BENT 1	78.7 SF		19.7 CF		78.7 LF	
END BENT 2	78.7 SF		19.7 CF		78.7 LF	
* TOTAL	157.4 SF		39.4 CF		157.4 LF	

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330162



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

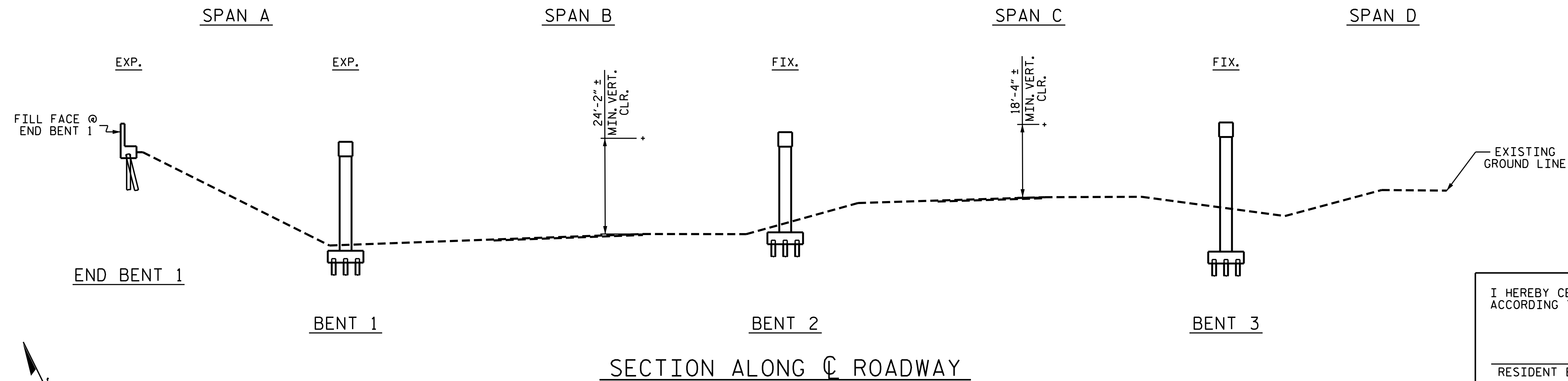
NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S16-05	
2				4			TOTAL SHEETS 5	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTES

PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 9/11/2018.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

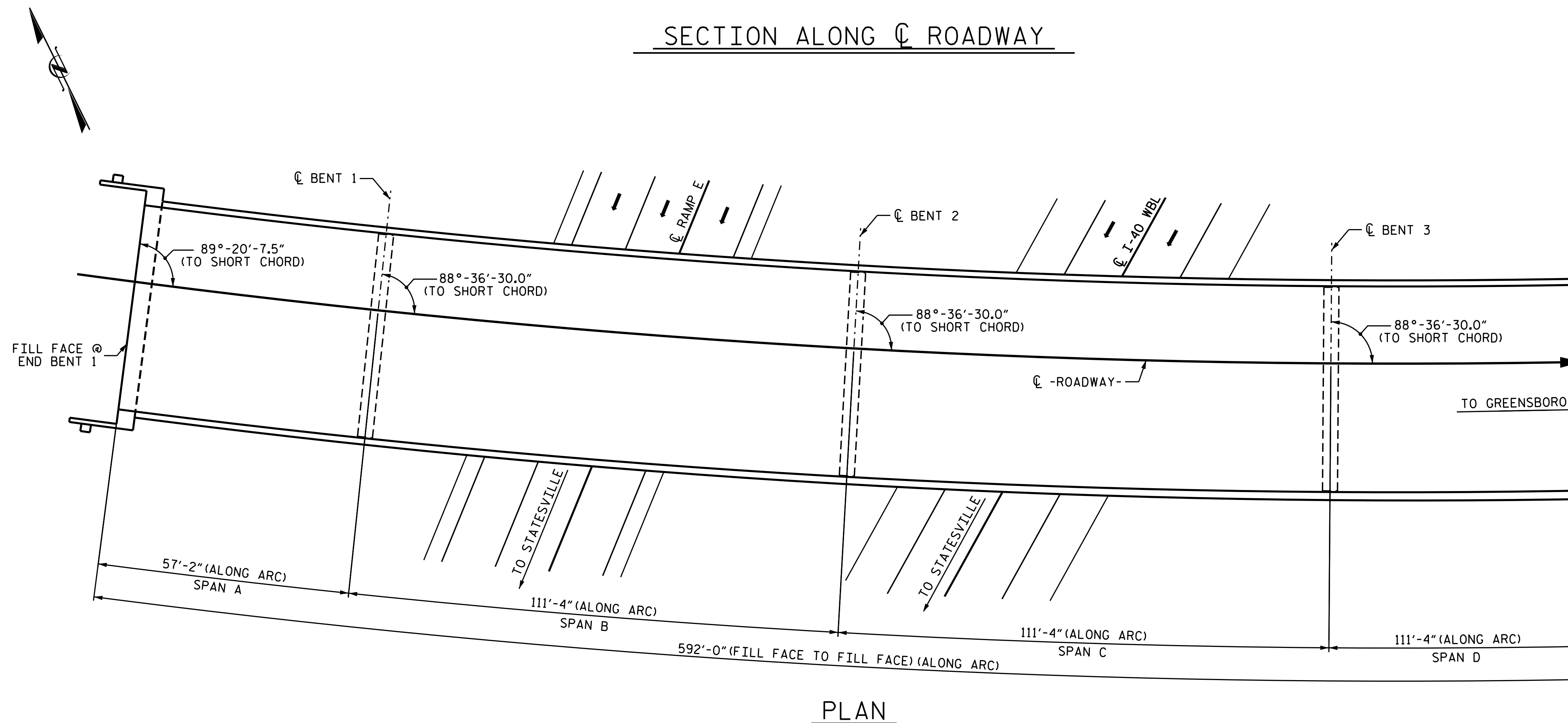


I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

SCOPE OF WORK

- SURFACE PREPARATION AND PAINTING OF WEATHERING STEEL GIRDER ENDS AND BEARINGS.
- PREPARE CONCRETE DECK SURFACE BY SHOTBLASTING.
- APPLY SILANE DECK TREATMENT.
- REMOVE EXISTING MODULAR EXPANSION JOINT AND REPLACE WITH TRANSFLEX JOINT.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.

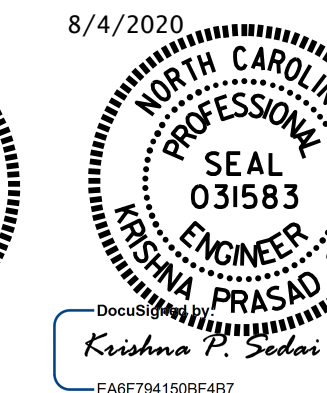
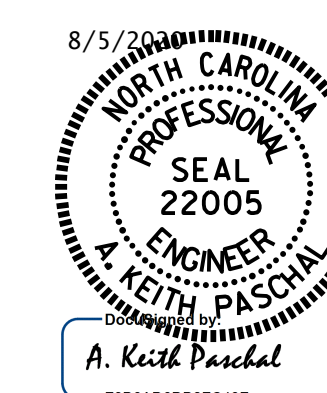


PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

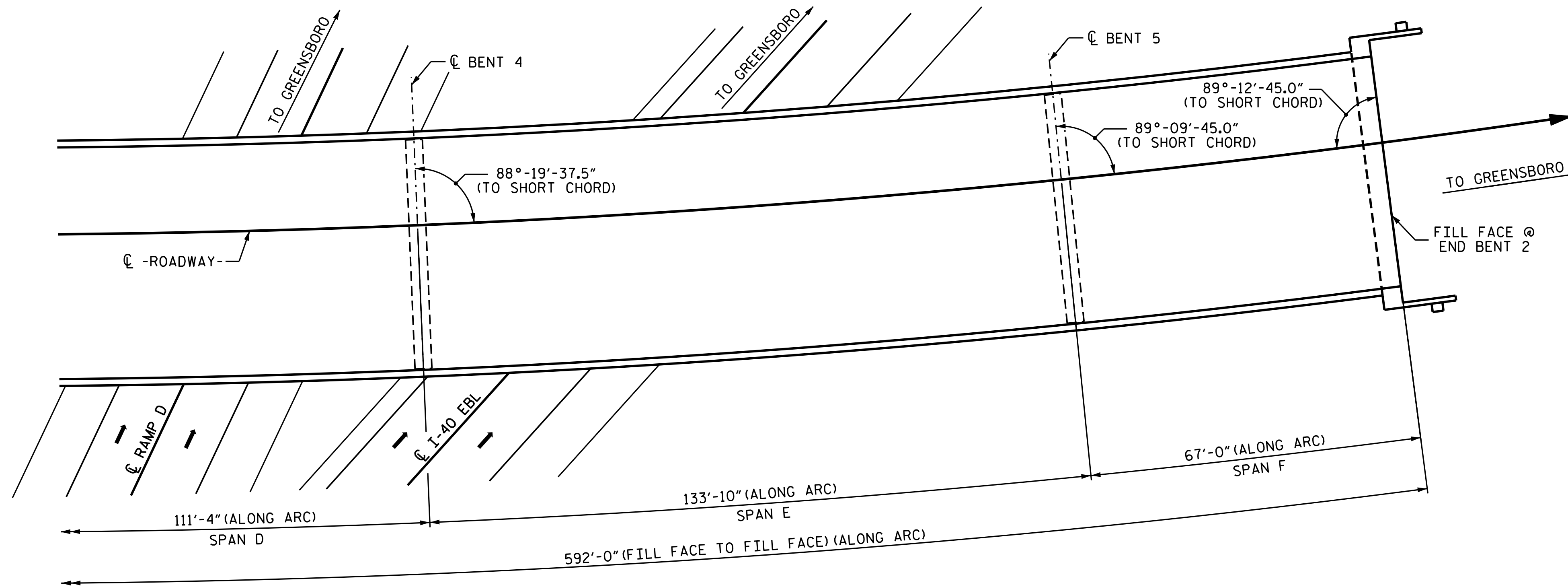
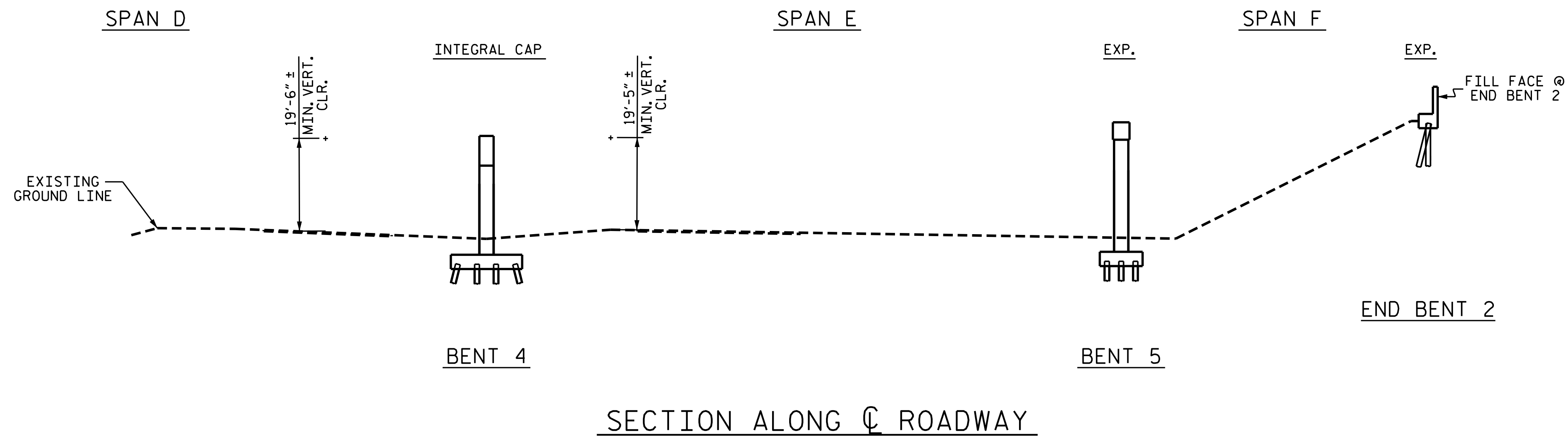
GENERAL DRAWING
 FOR BRIDGE ON
 US 421 SBL RAMP
 OVER I-40 AND I-40 BUS



DRAWN BY : A. SORSENGINH DATE : 3/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

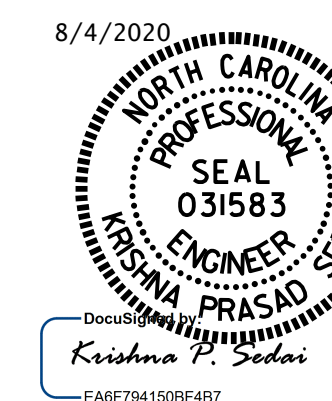
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-01
1			3			TOTAL SHEETS
2			4			10



PLAN

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON
 US 421 SBL RAMP
 OVER I-40 AND I-40 BUS

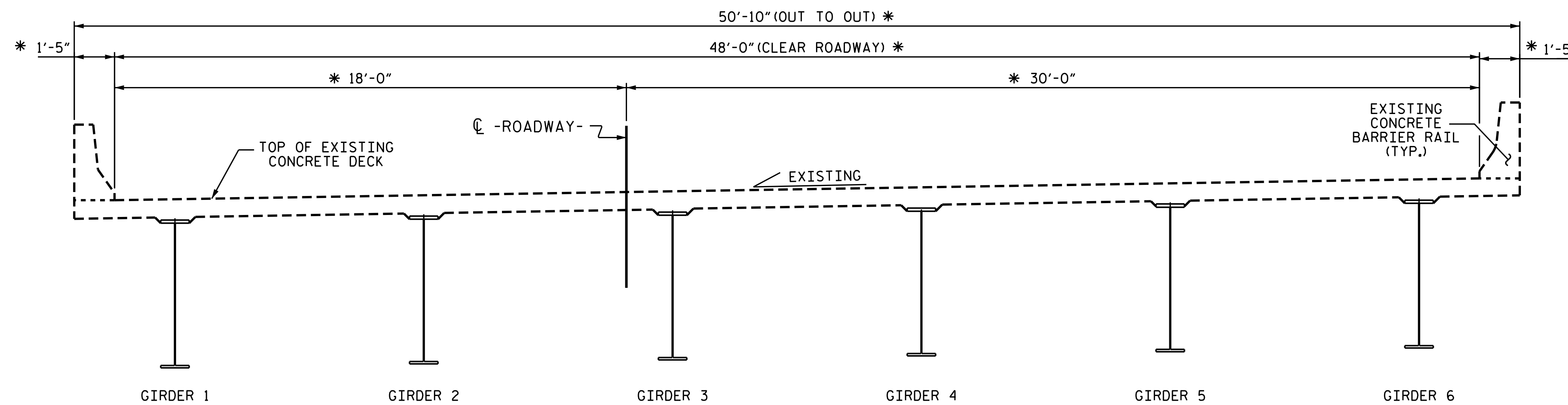
DRAWN BY : A. SORSENGINH DATE : 3/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-02
1			3			TOTAL SHEETS
2			4			10

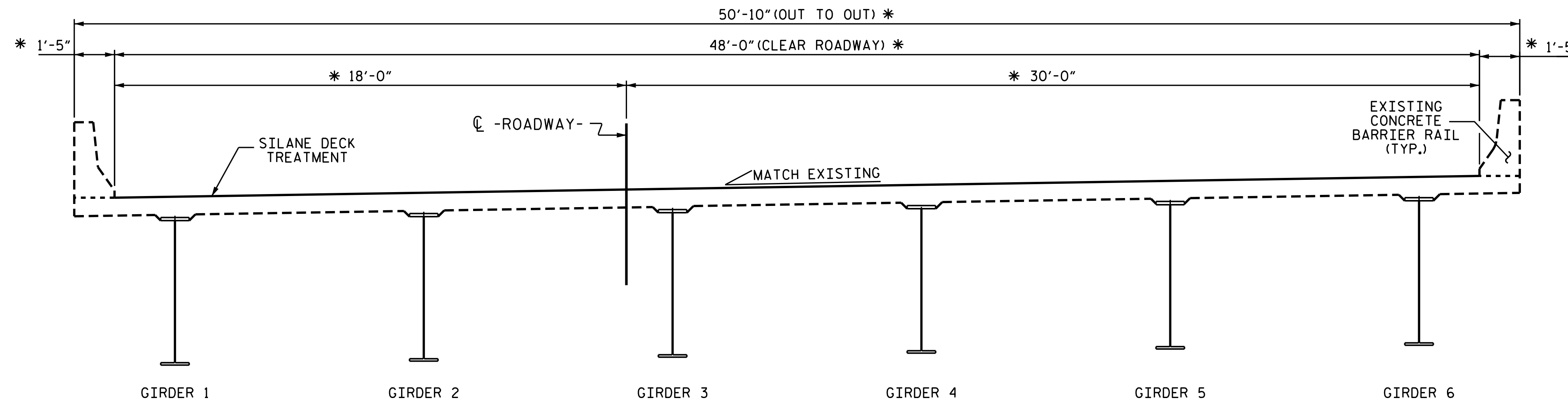
NOTE:

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



TYPICAL SECTION

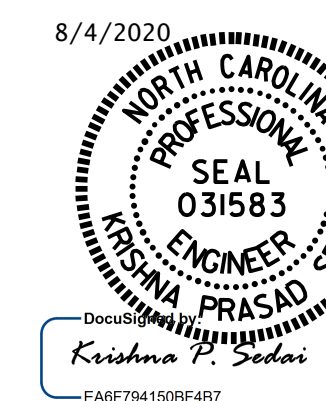
(EXISTING)
* RADIAL DIMENSION



TYPICAL SECTION

(PROPOSED)

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-03
1			3			TOTAL SHEETS
2			4			10

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

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

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

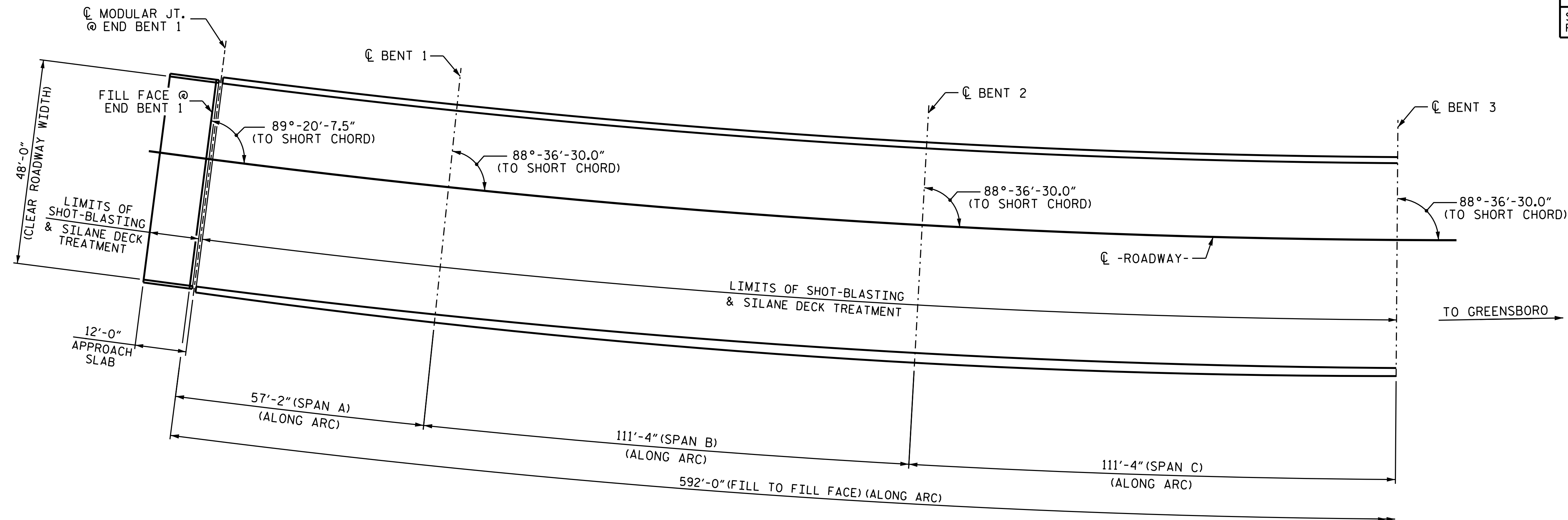
-  CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
-  SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	
SHOTBLAST APPROACH SLAB	62 SY	
SILANE DECK TREATMENT	62 SY	
SILANE BARRIER RAIL TREATMENT	16 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	16 SF	

BRIDGE QUANTITIES

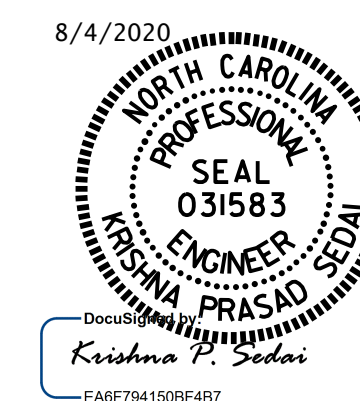
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	
SHOTBLAST BRIDGE DECK	1,485 SY	
SILANE DECK TREATMENT	1,485 SY	
SILANE BARRIER RAIL TREATMENT	1,934 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	1,934 SF	



PLAN OF SPANS A, B, AND C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-04
1			3			TOTAL SHEETS
2			4			10

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

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

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

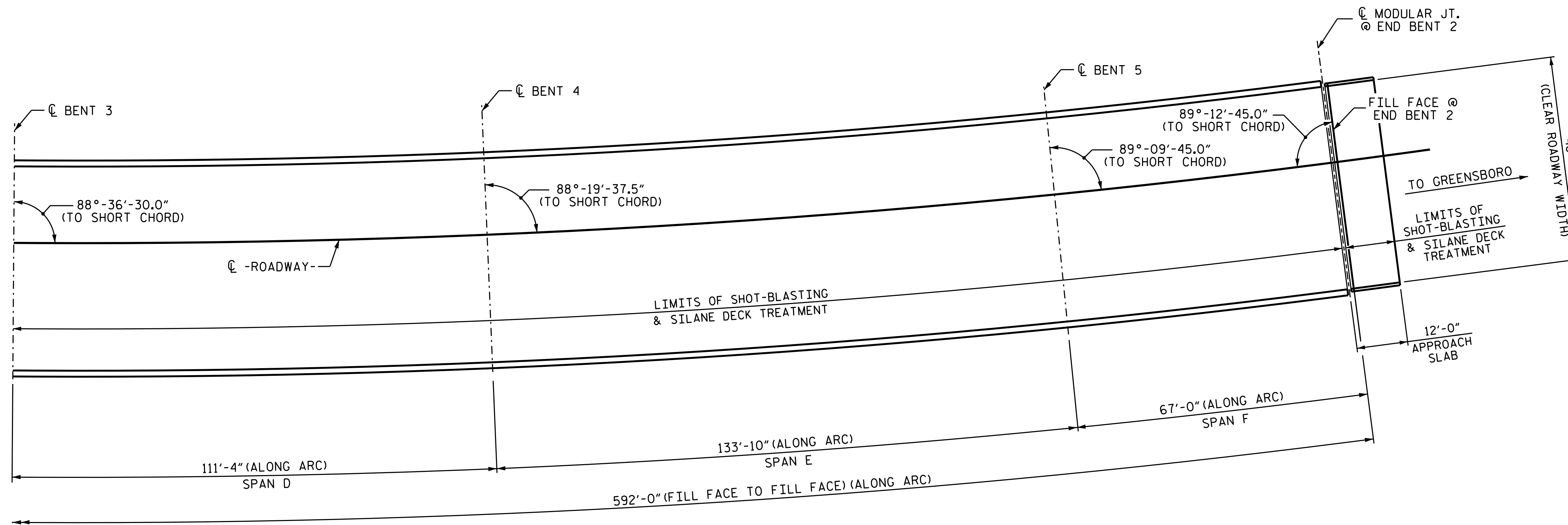
-  CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
-  SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	
SHOTBLAST APPROACH SLAB	62 SY	
SILANE DECK TREATMENT	62 SY	
SILANE BARRIER RAIL TREATMENT	16 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	16 SF	

BRIDGE QUANTITIES

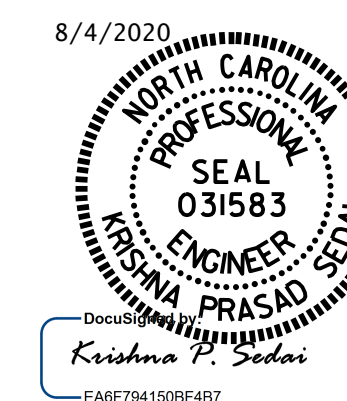
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	
SHOTBLAST BRIDGE DECK	1,657 SY	
SILANE DECK TREATMENT	1,657 SY	
SILANE BARRIER RAIL TREATMENT	2,158 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	2,158 SF	



PLAN OF SPANS D, E, AND F

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444

SHEET 2 OF 2



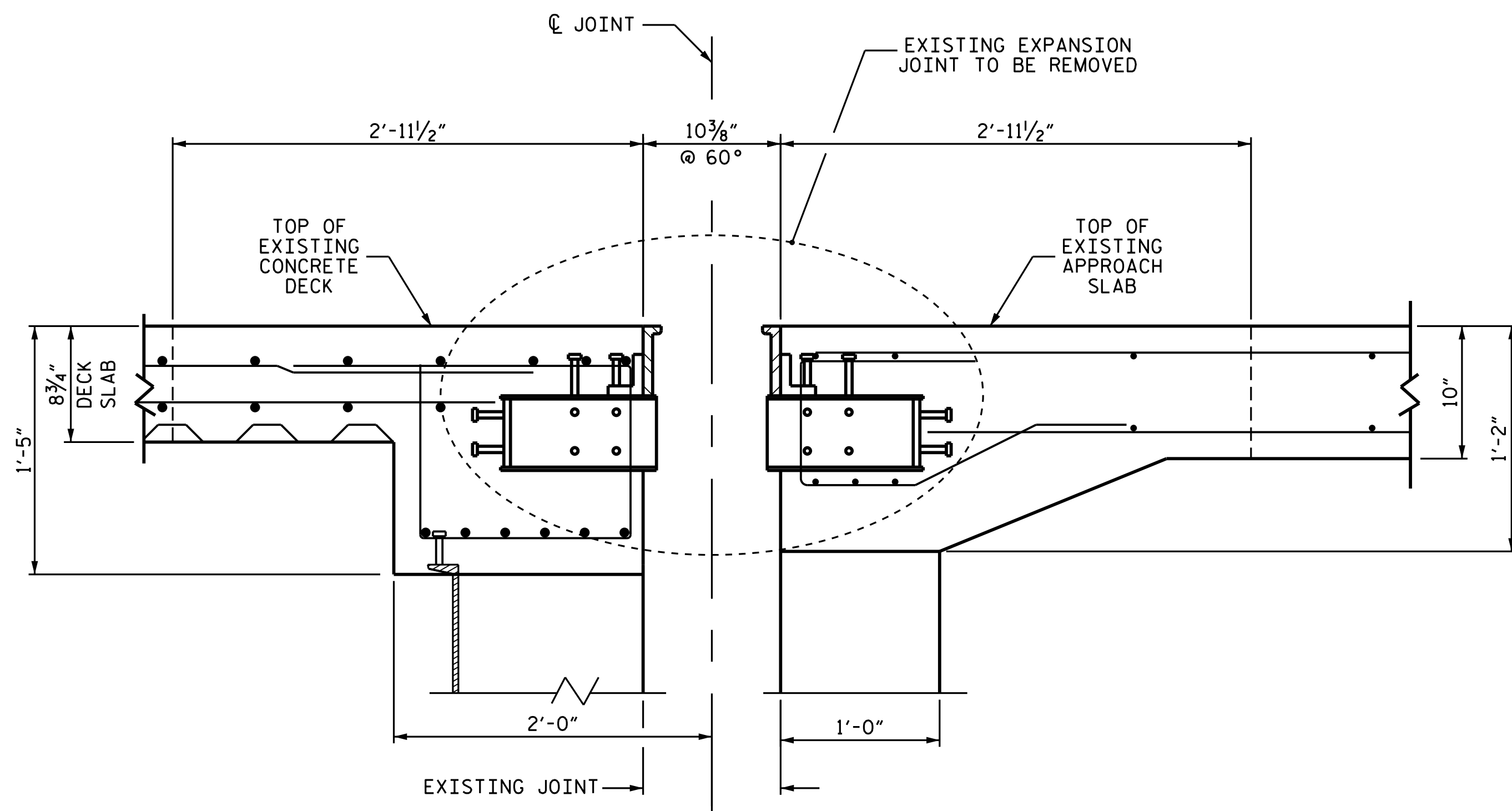
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT

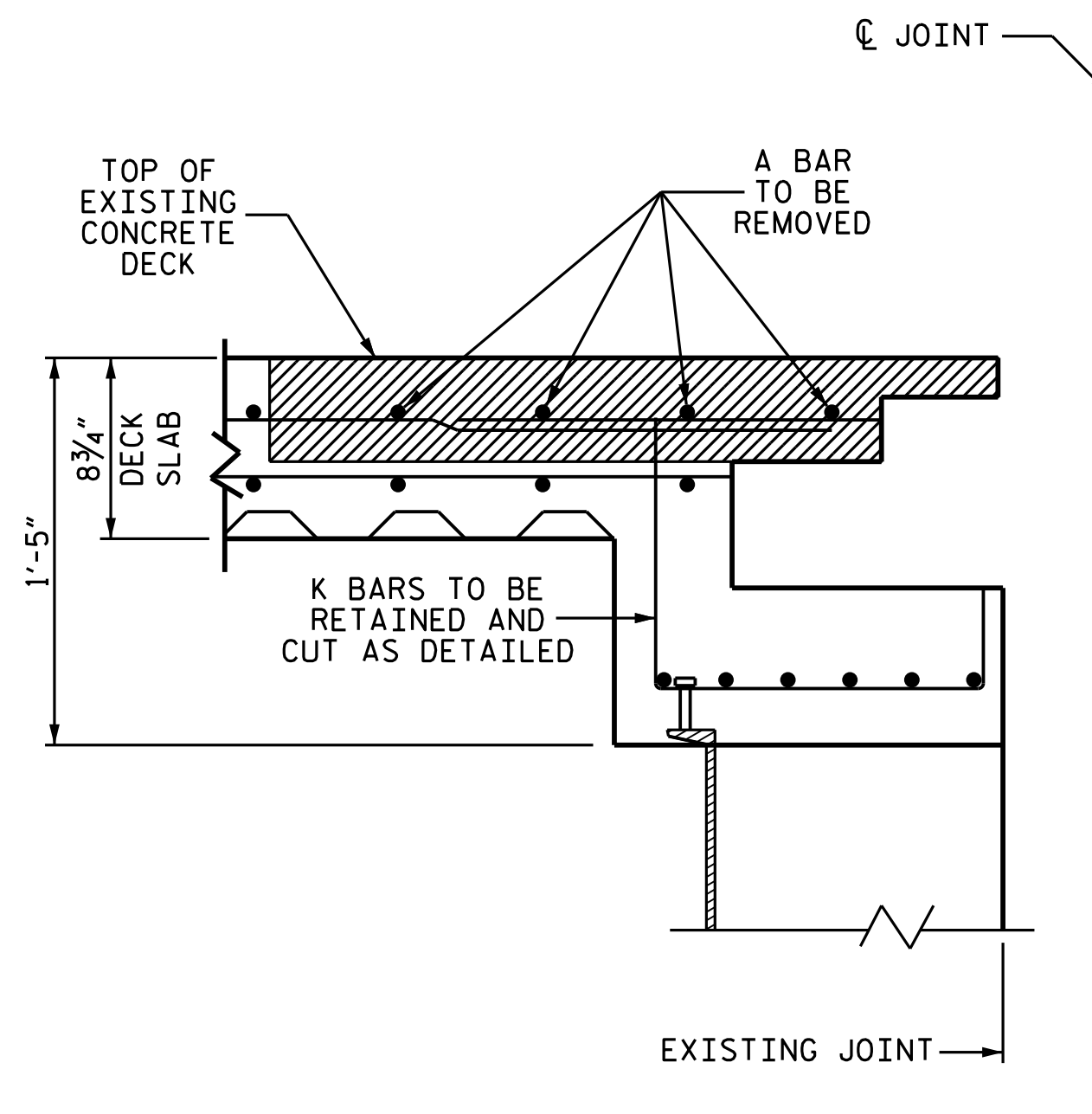
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

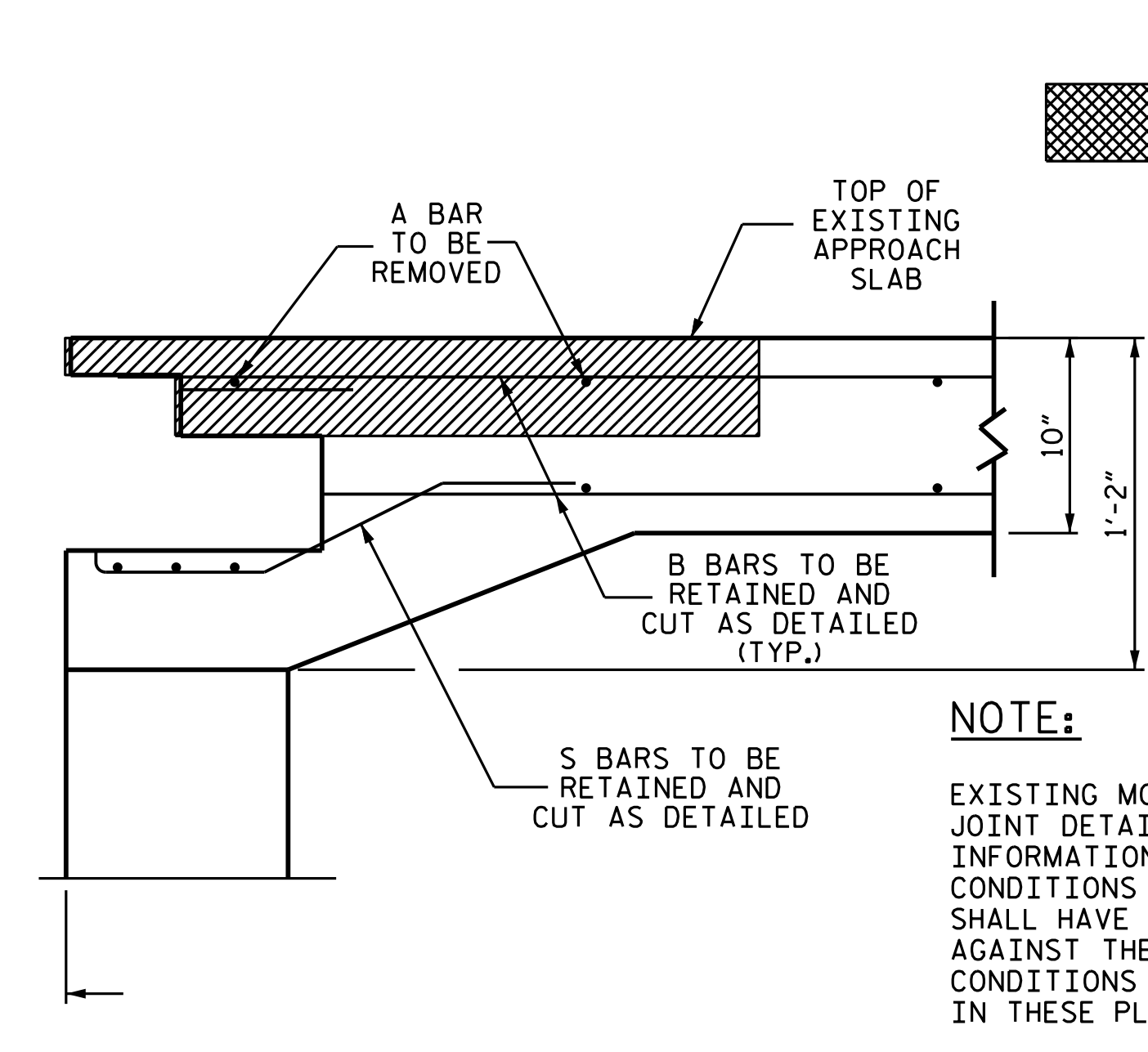
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			10
2			4			



EXISTING MODULAR JOINT
(AT MODULAR JT. BOXES)



MODULAR JOINT REMOVED
(AT MODULAR JT. BOXES)



PROPOSED JOINT REPAIR
(AT MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

EXISTING CONCRETE TO BE REMOVED
 NEW CONCRETE FOR DECK REPAIR.
 * TO BE VERIFIED BY MANUFACTURER

NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.

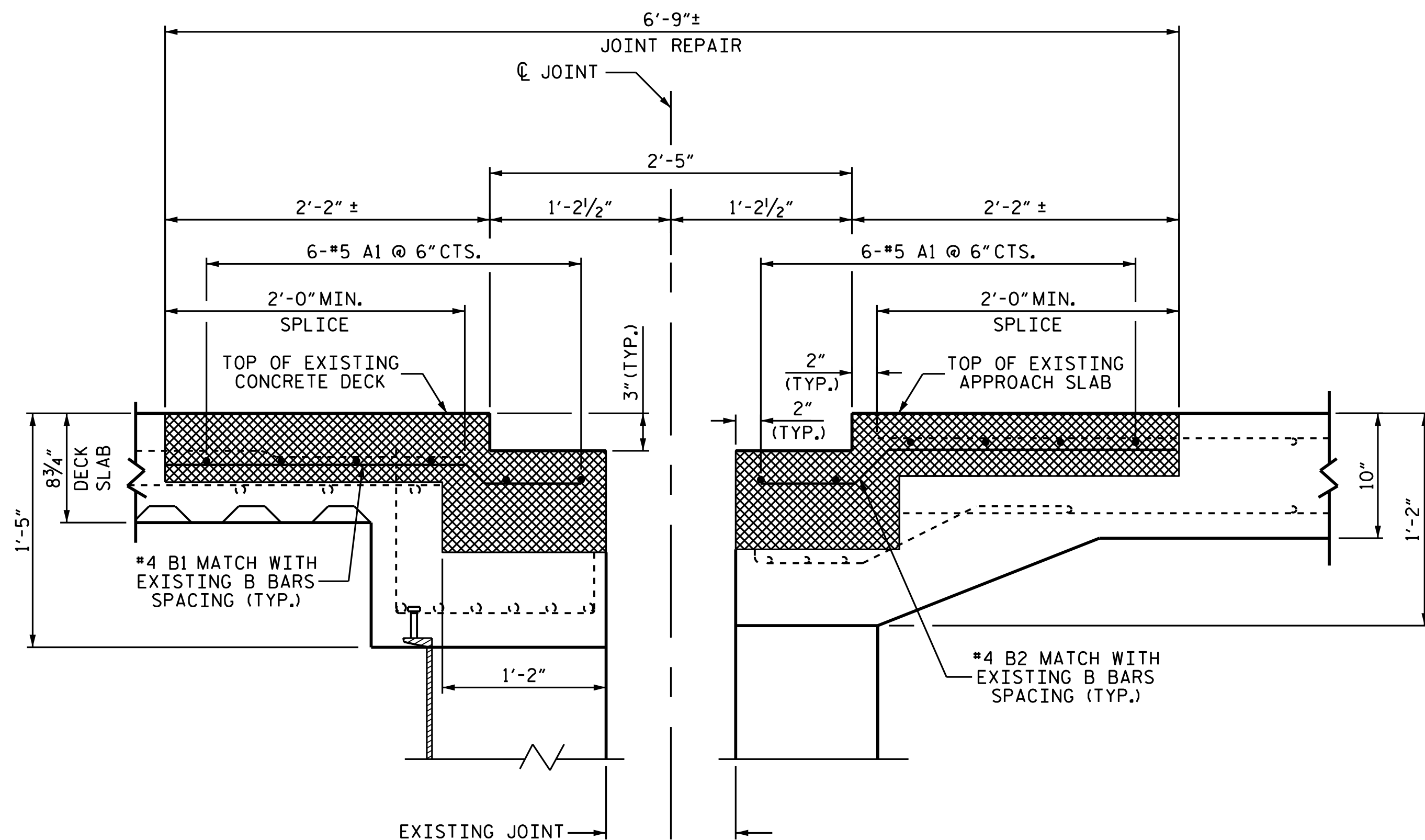
THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

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

THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.

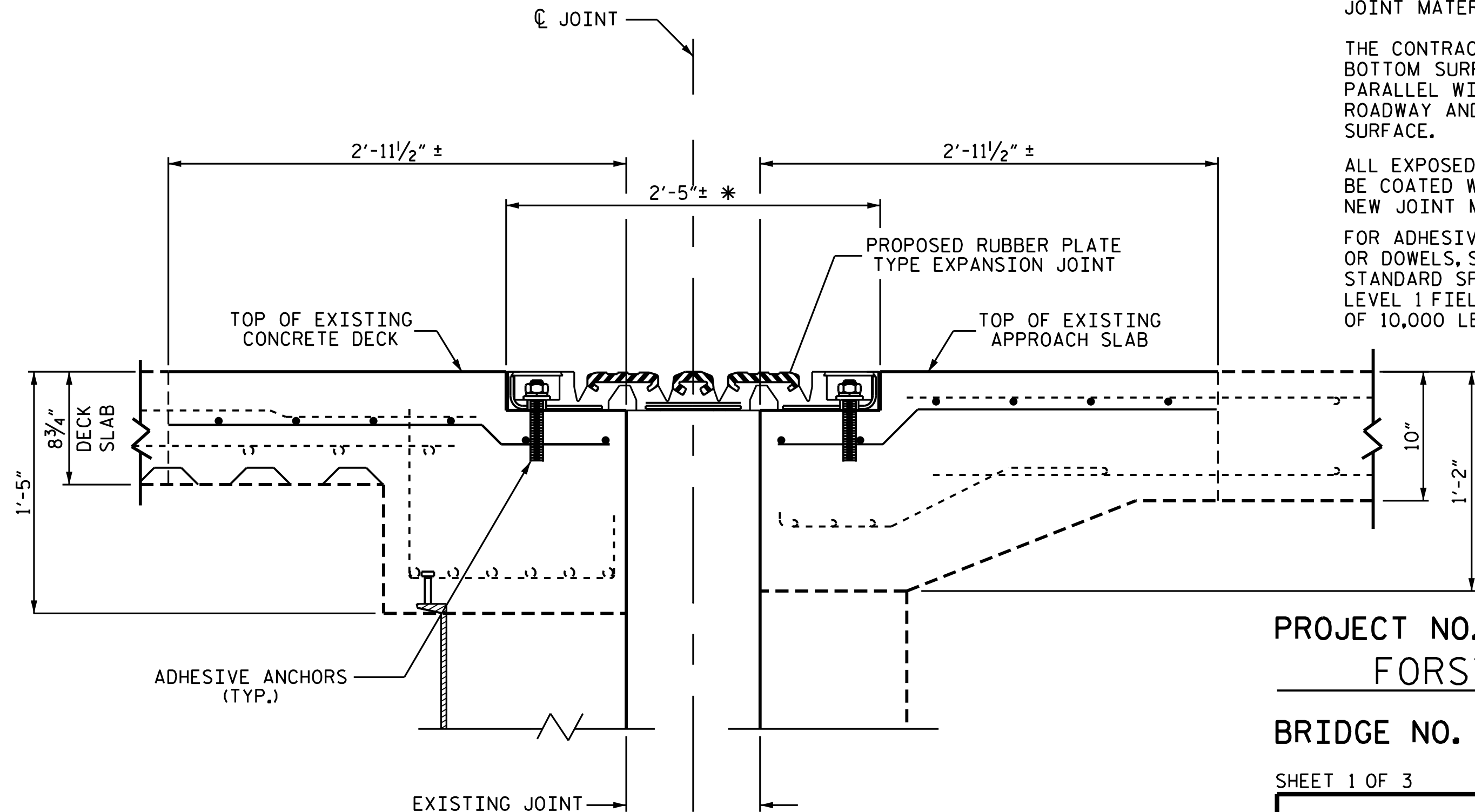
ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.

FOR ADHESIVE ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.



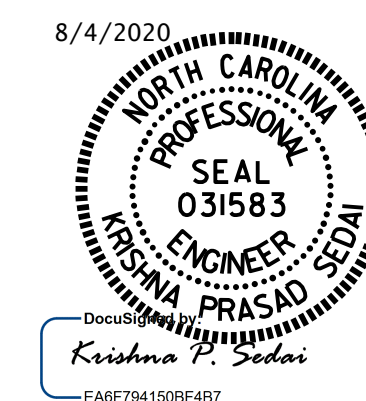
CONCRETE AND REBAR REMOVED
(AT MODULAR JT. BOXES)

SECTION A-A



PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444

SHEET 1 OF 3



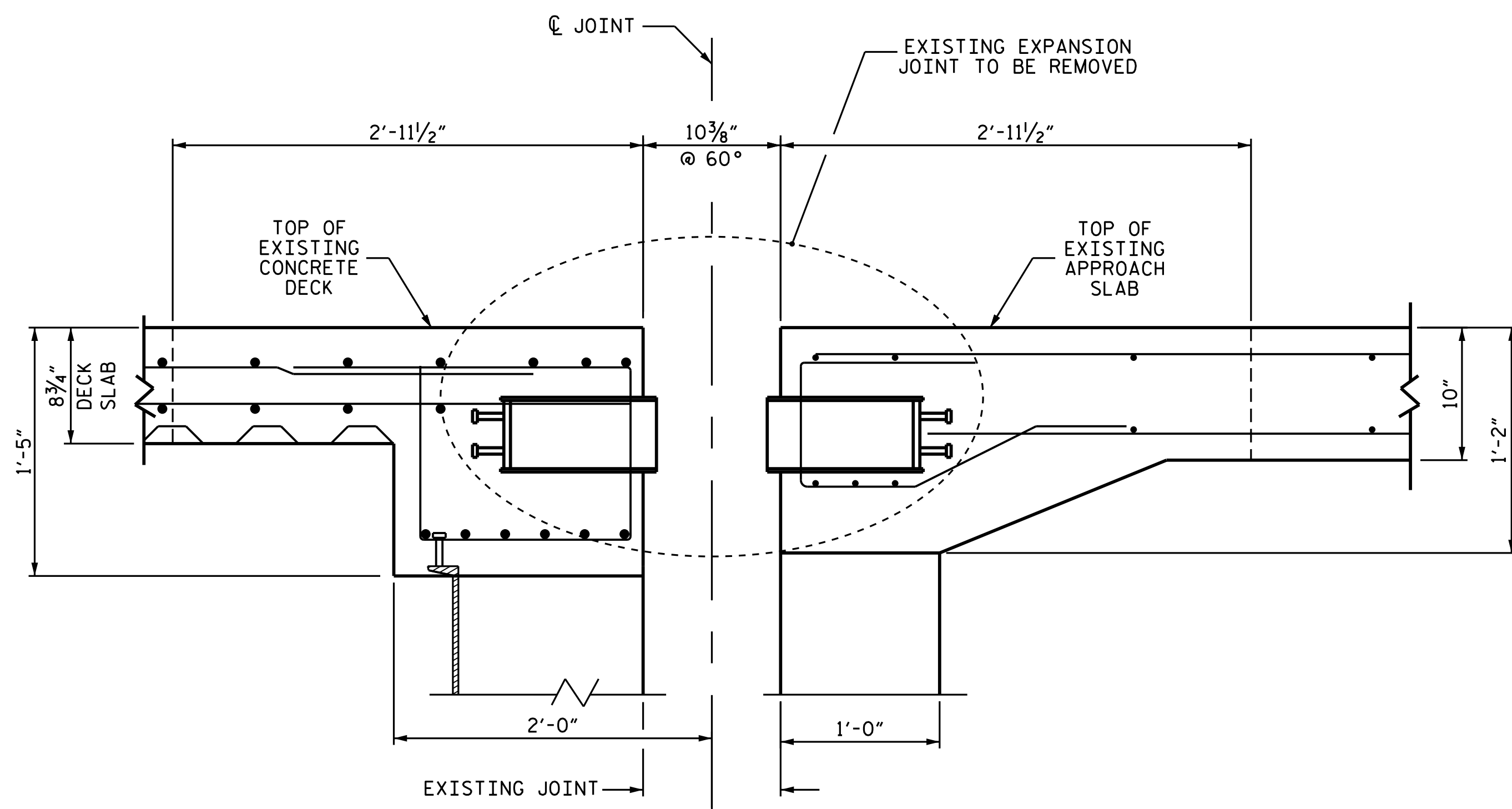
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**END BENT #2
MODULAR JOINT
REPLACEMENT
END BENT 1 SIMILAR**

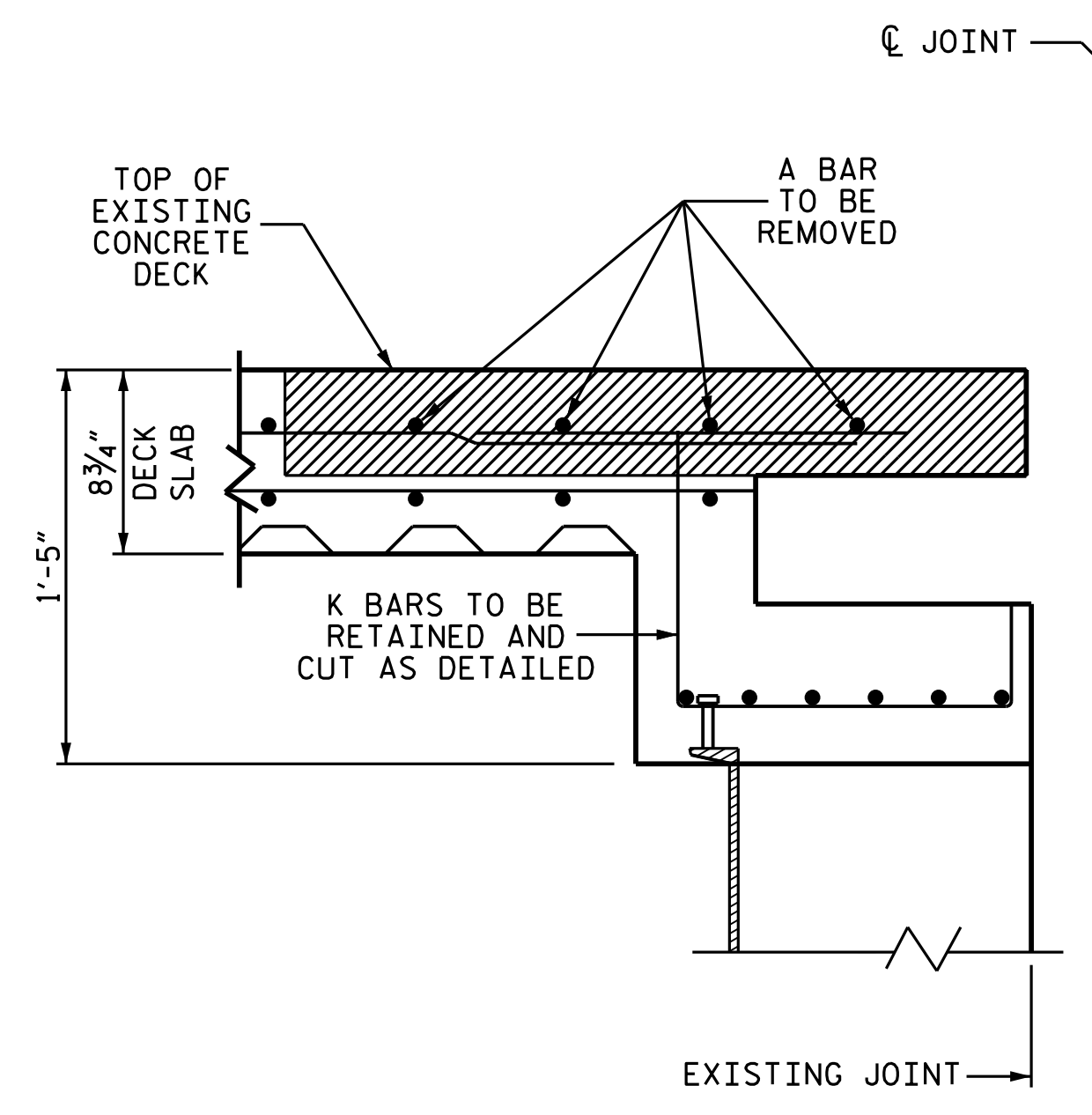
DRAWN BY : A. SORSENGINH DATE : 5/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

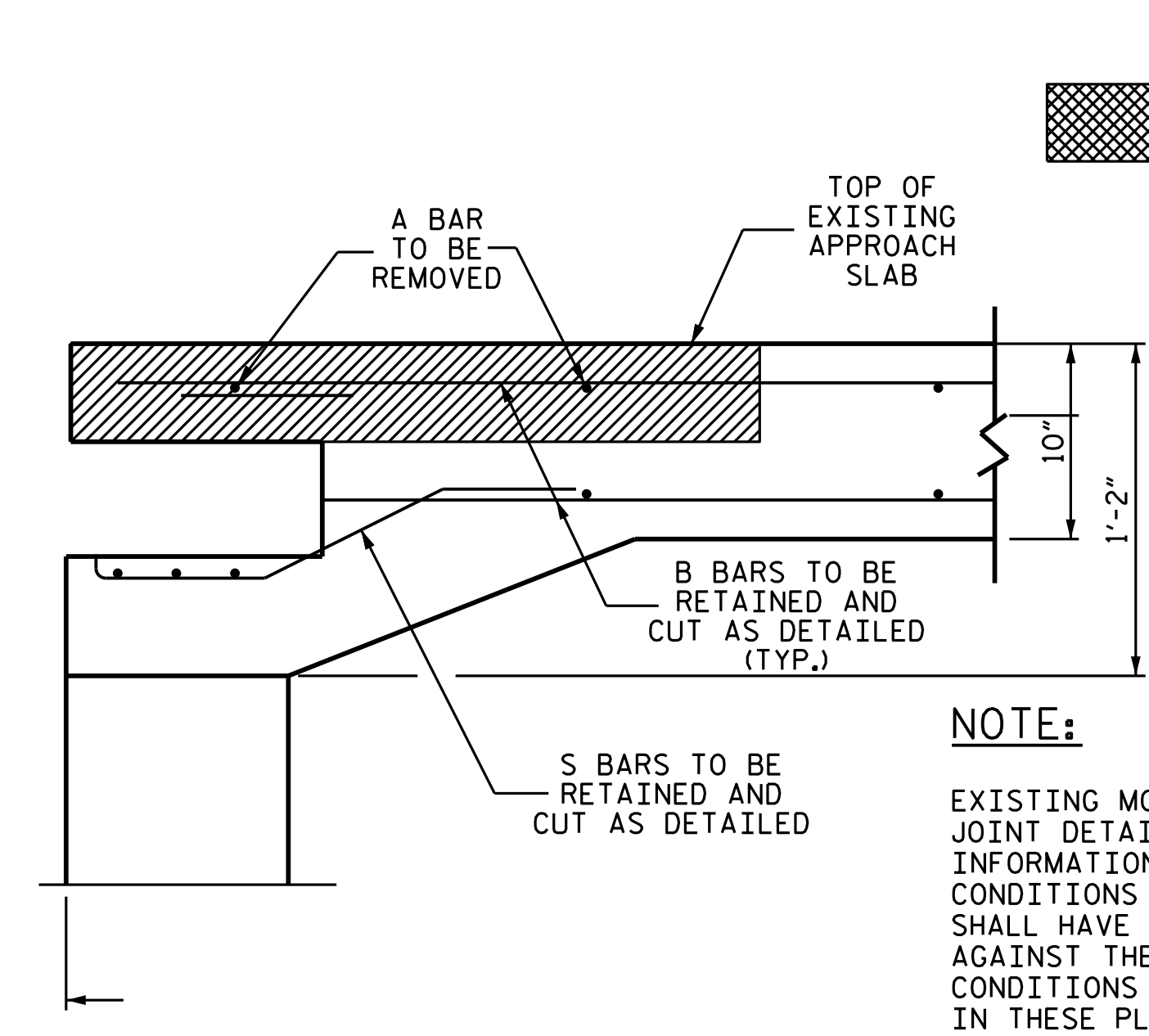
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S17-06
2			4			TOTAL SHEETS 10



EXISTING MODULAR JOINT
(BETWEEN MODULAR JT. BOXES)



MODULAR JOINT REMOVED
(BETWEEN MODULAR JT. BOXES)

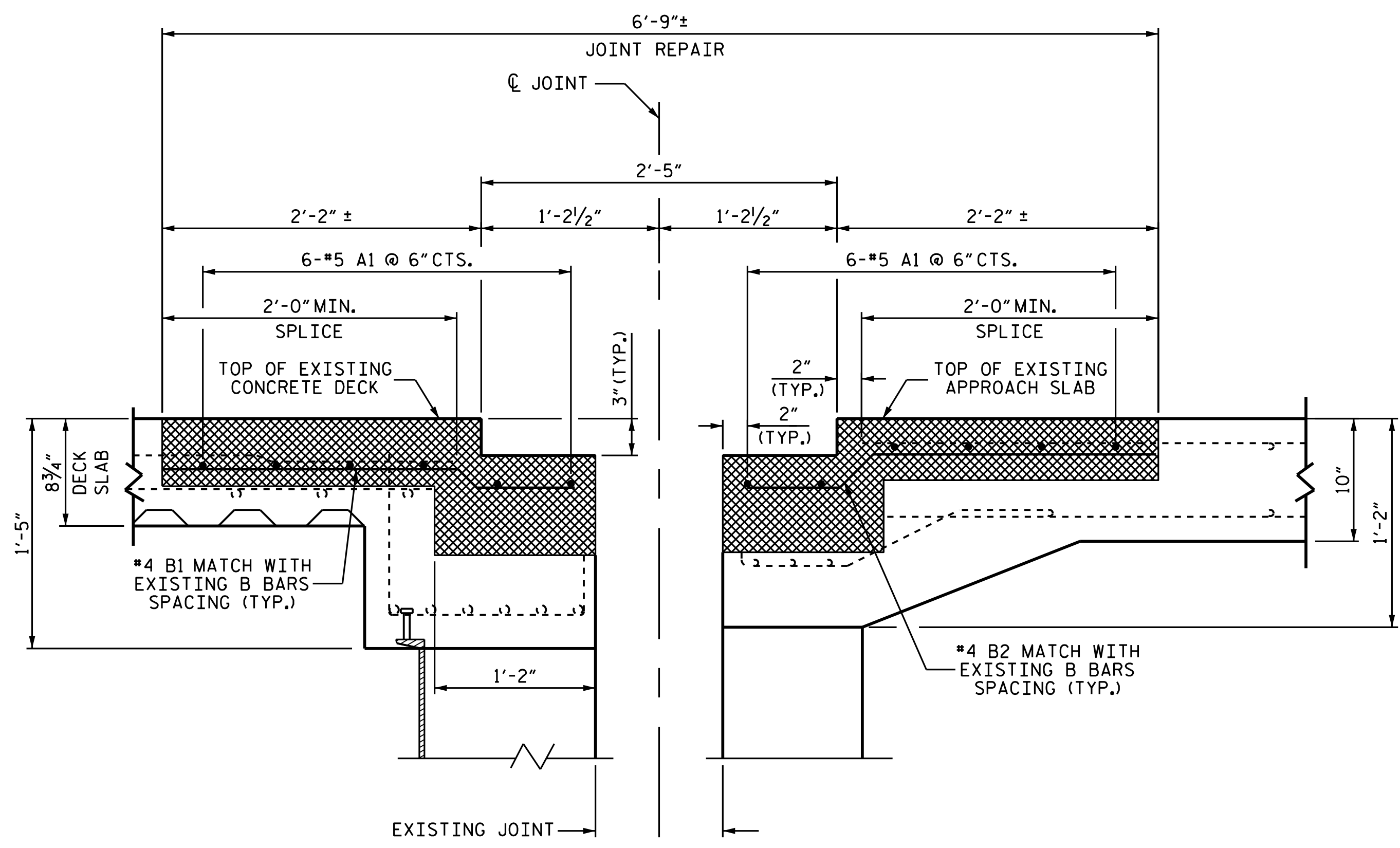


PROPOSED JOINT REPAIR
(BETWEEN MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

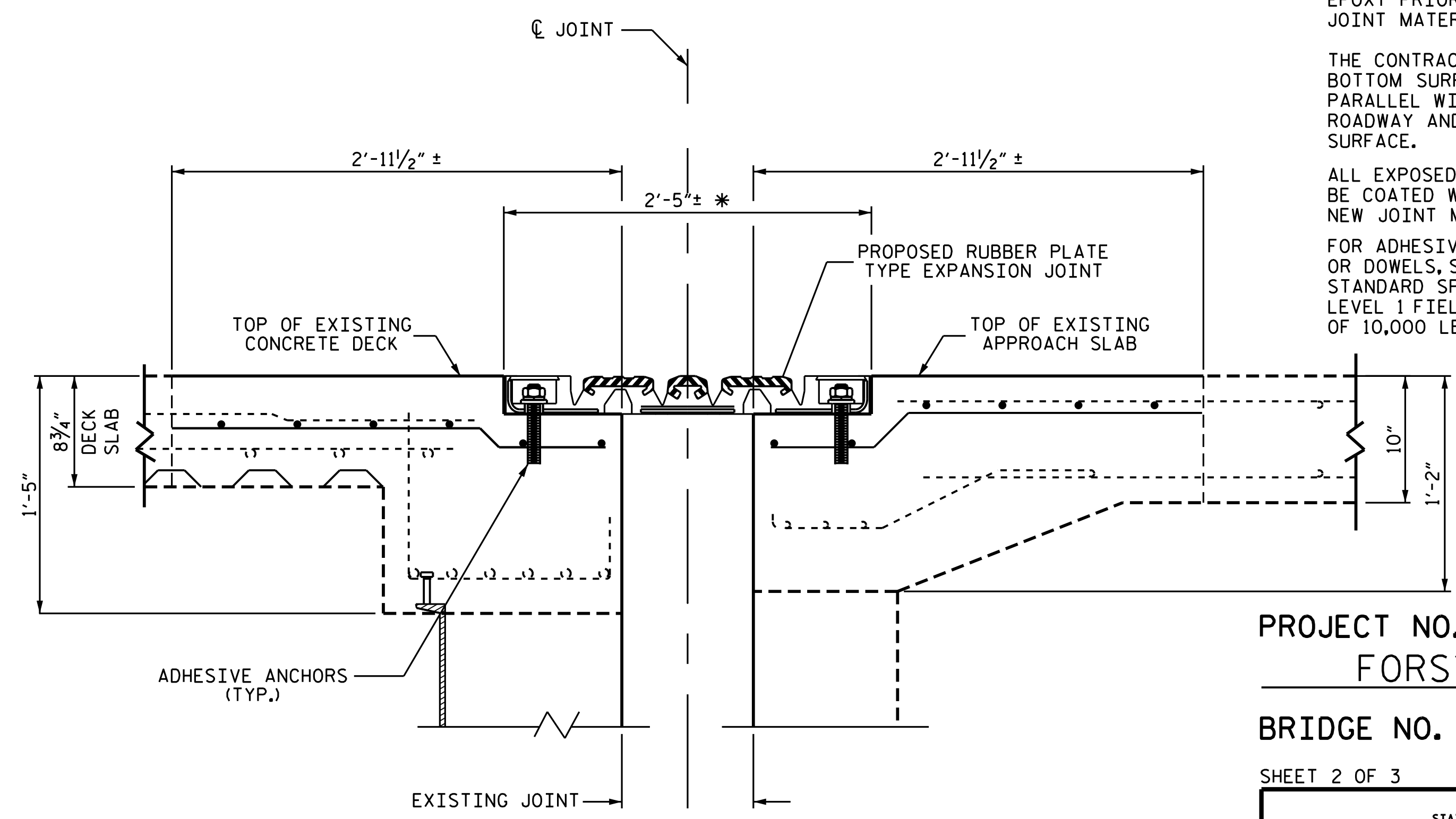
EXISTING CONCRETE TO BE REMOVED
 NEW CONCRETE FOR DECK REPAIR.
* TO BE VERIFIED BY MANUFACTURER

NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.
THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.
ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
FOR ADHESIVE ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.



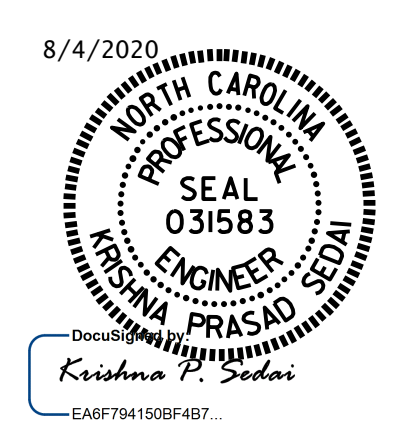
CONCRETE AND REBAR REMOVED
(BETWEEN MODULAR JT. BOXES)



SECTION B-B

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330444

SHEET 2 OF 3

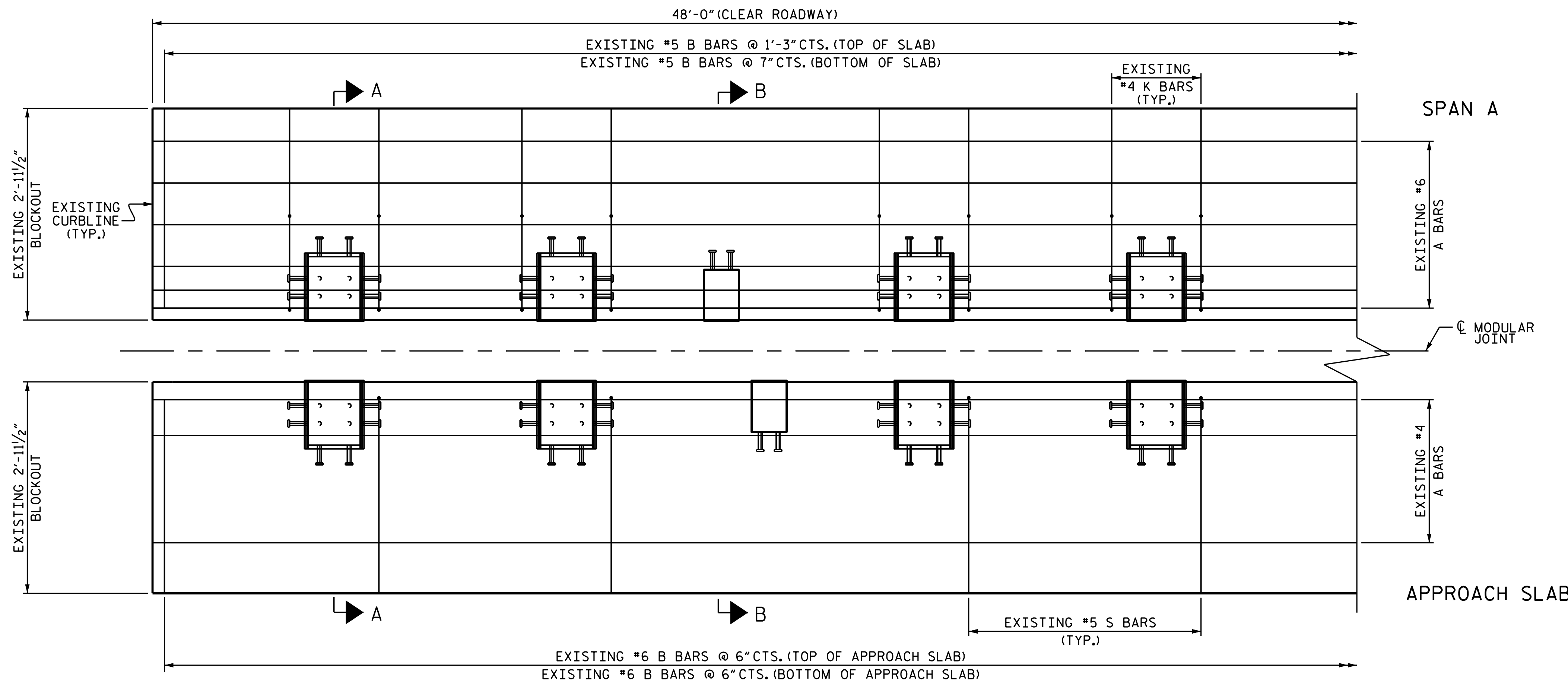


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**END BENT #2
MODULAR JOINT
REPLACEMENT
END BENT 1 SIMILAR**

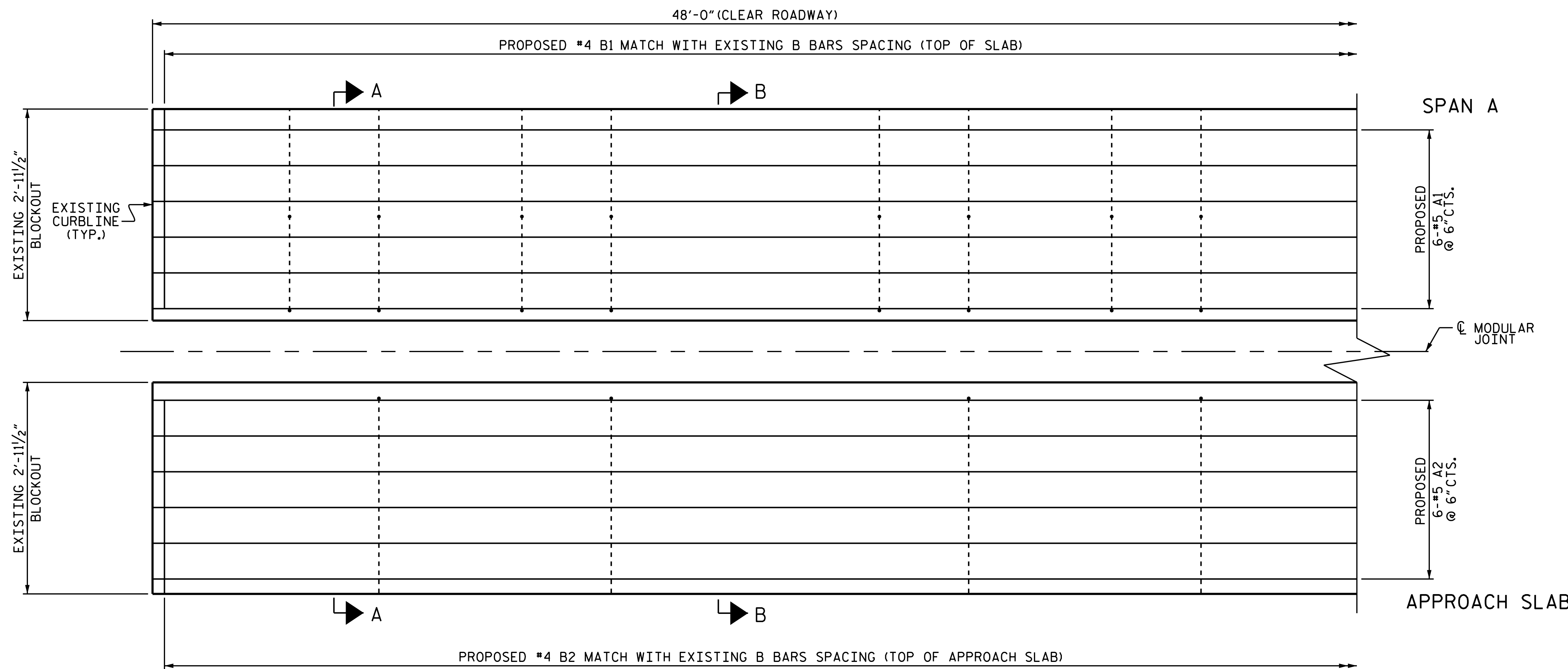
DRAWN BY : A. SORSENGINH DATE : 5/2018
CHECKED BY : M. G. SHAIKH DATE : 5/2018

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			17-07
2			4			10



EXISTING PARTIAL PLAN

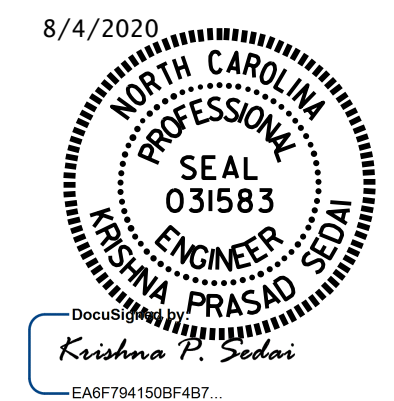


PROPOSED PARTIAL PLAN

BILL OF MATERIAL					
FOR END BENT 1 OR 2					
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	12	#5	STR	47'-8"	597
*B1	38	#4	1	2'-11"	74
*B2	96	#4	2	3'-0"	192
REINFORCING STEEL				LBS.	863
CONCRETE FOR DECK REPAIR					155.9 C.F.
JOINT REPAIR					284.0 S.F.
BAR TYPE					
* EPOXY COATED REINFORCING STEEL					
MOLDED RUBBER SEGMENTAL EXPANSION JOINT					
END BENT 1					48.0 L.F.
END BENT 2					48.0 L.F.

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444

SHEET 3 OF 3



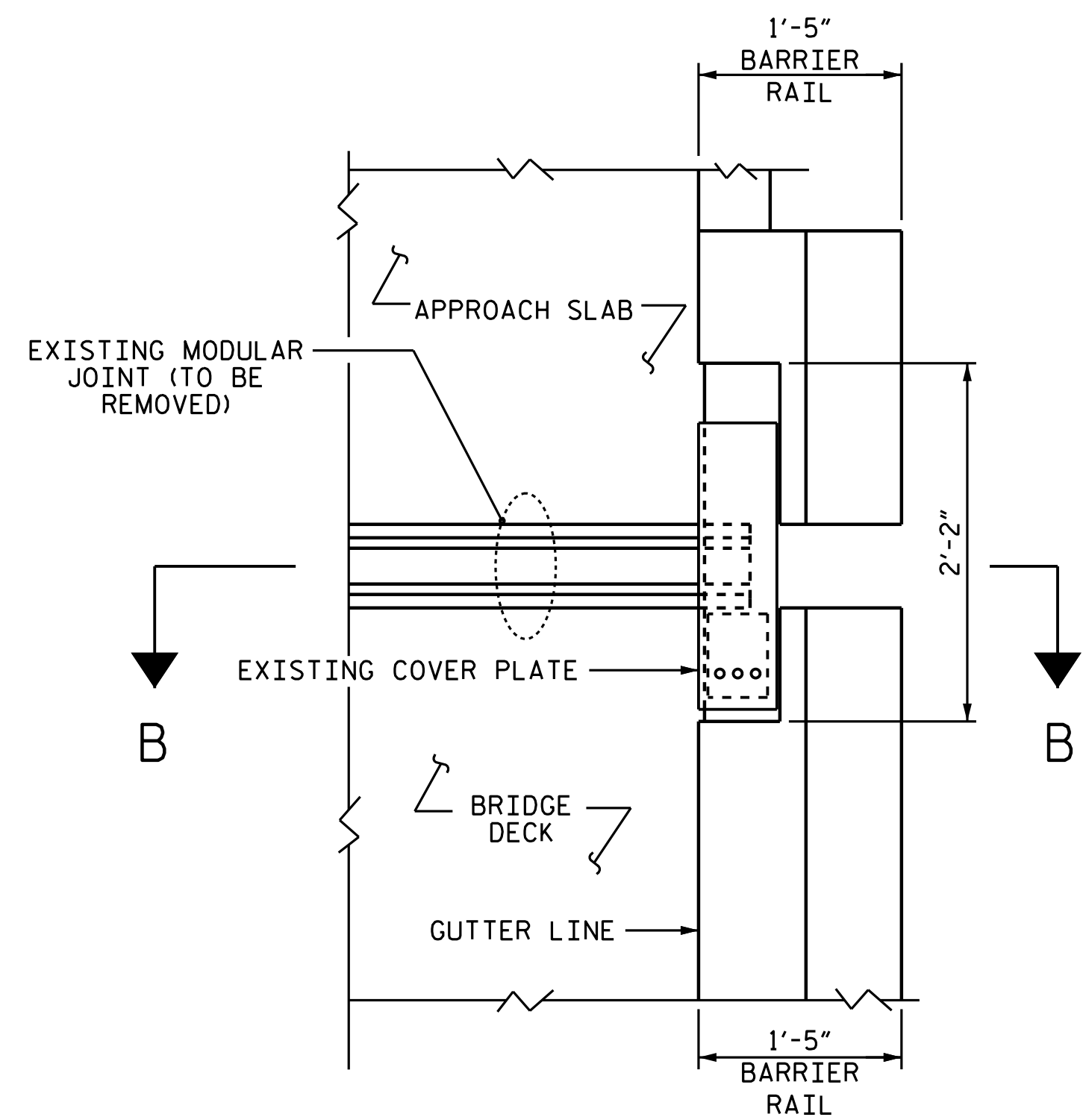
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 PARTIAL PLAN MODULAR
 JOINT REPLACEMENT
 AT END BENT 2
 END BENT 1 SIMILAR

DRAWN BY : A. SORSENGINH DATE : 5/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

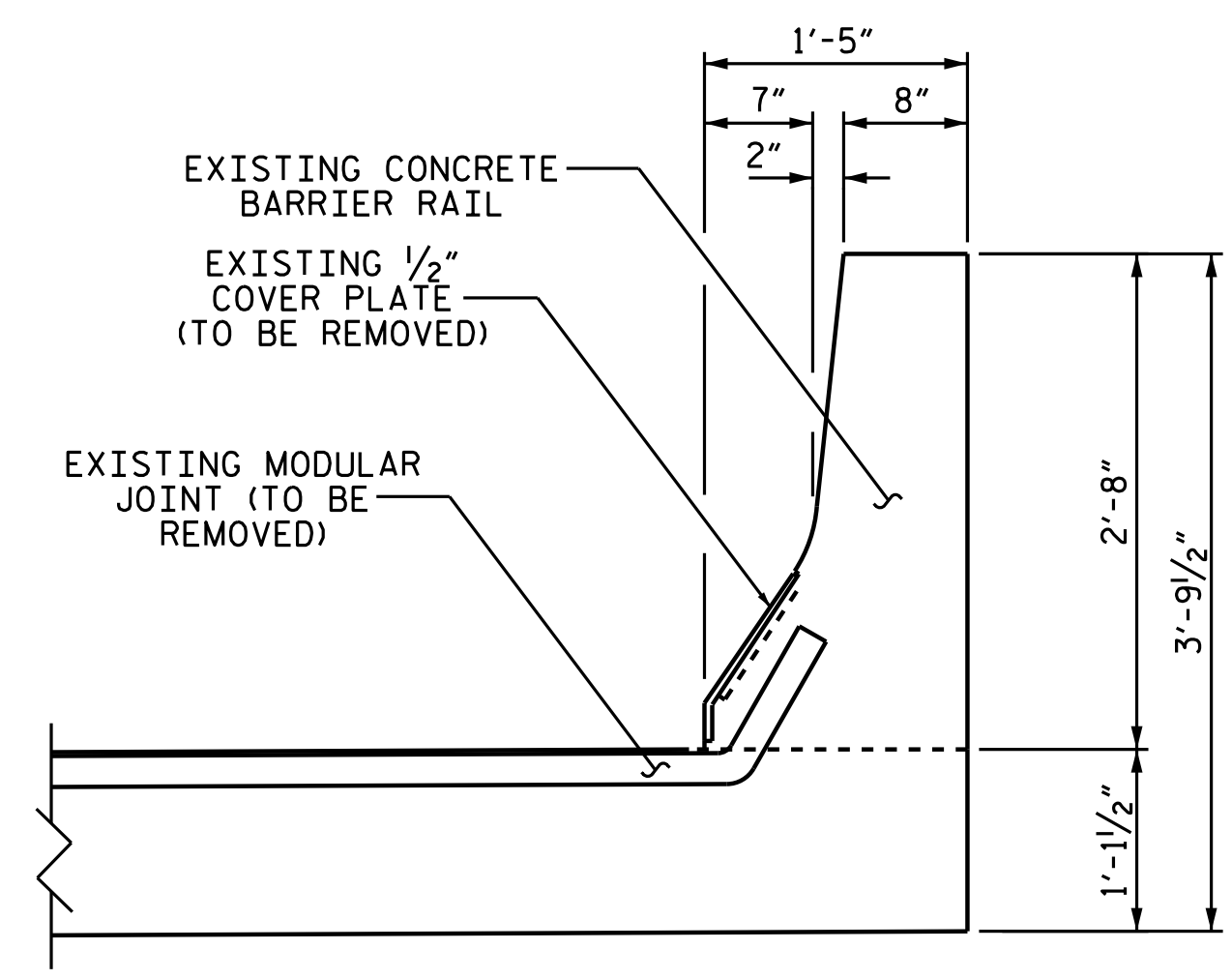
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-08
1			3			TOTAL SHEETS
2			4			10

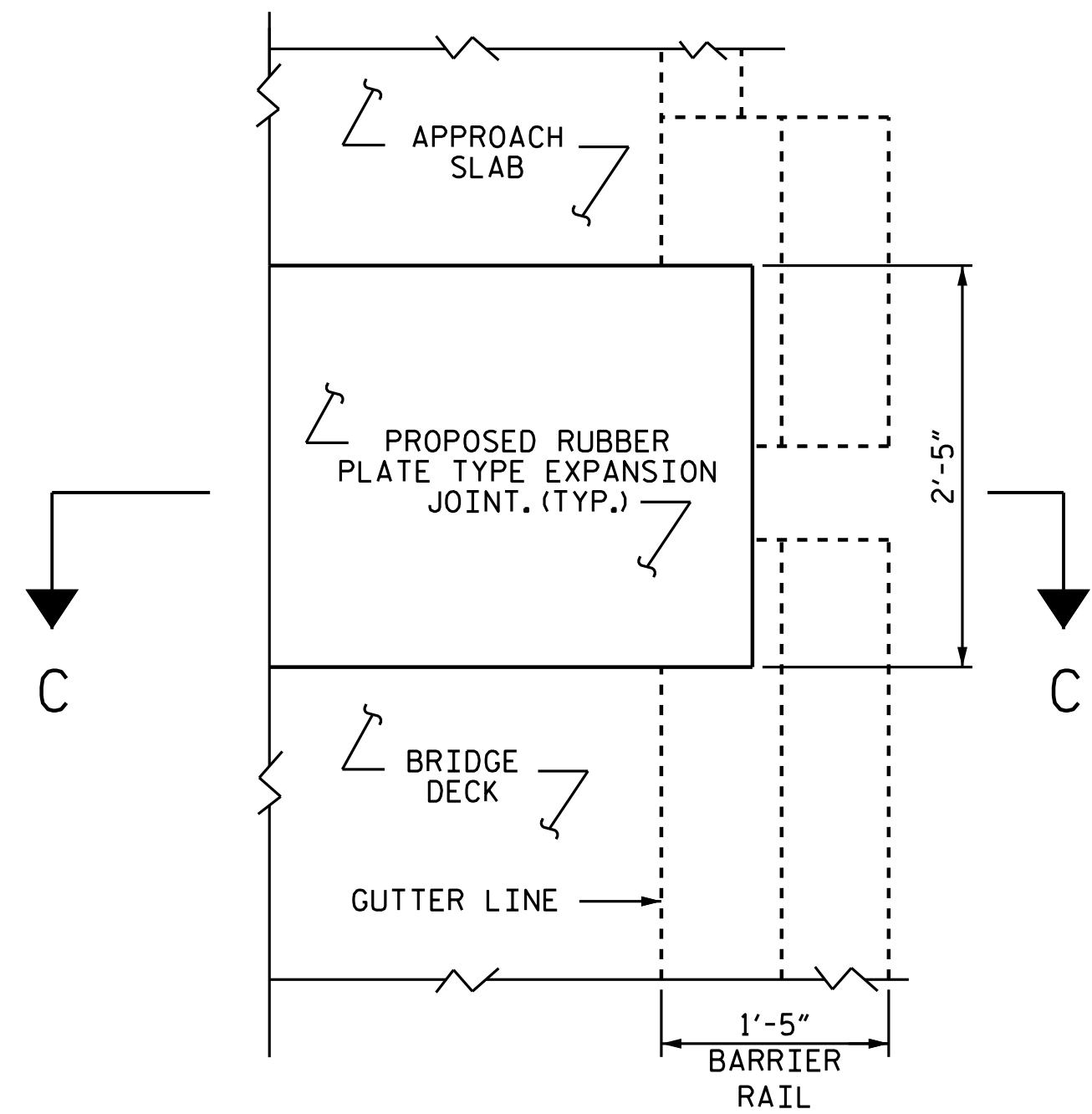
NOTES:
 THE CONTRACTOR SHALL CUT THE EXISTING #5 "S" REBARS EXTENDING INTO THE BARRIER FROM THE DECK AND THE LONGITUDINAL #5 REBAR WITHIN THE LIMIT OF THE PROPOSED RUBBER PLATE JOINT. ALL EXPOSED ENDS OF THESE BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.



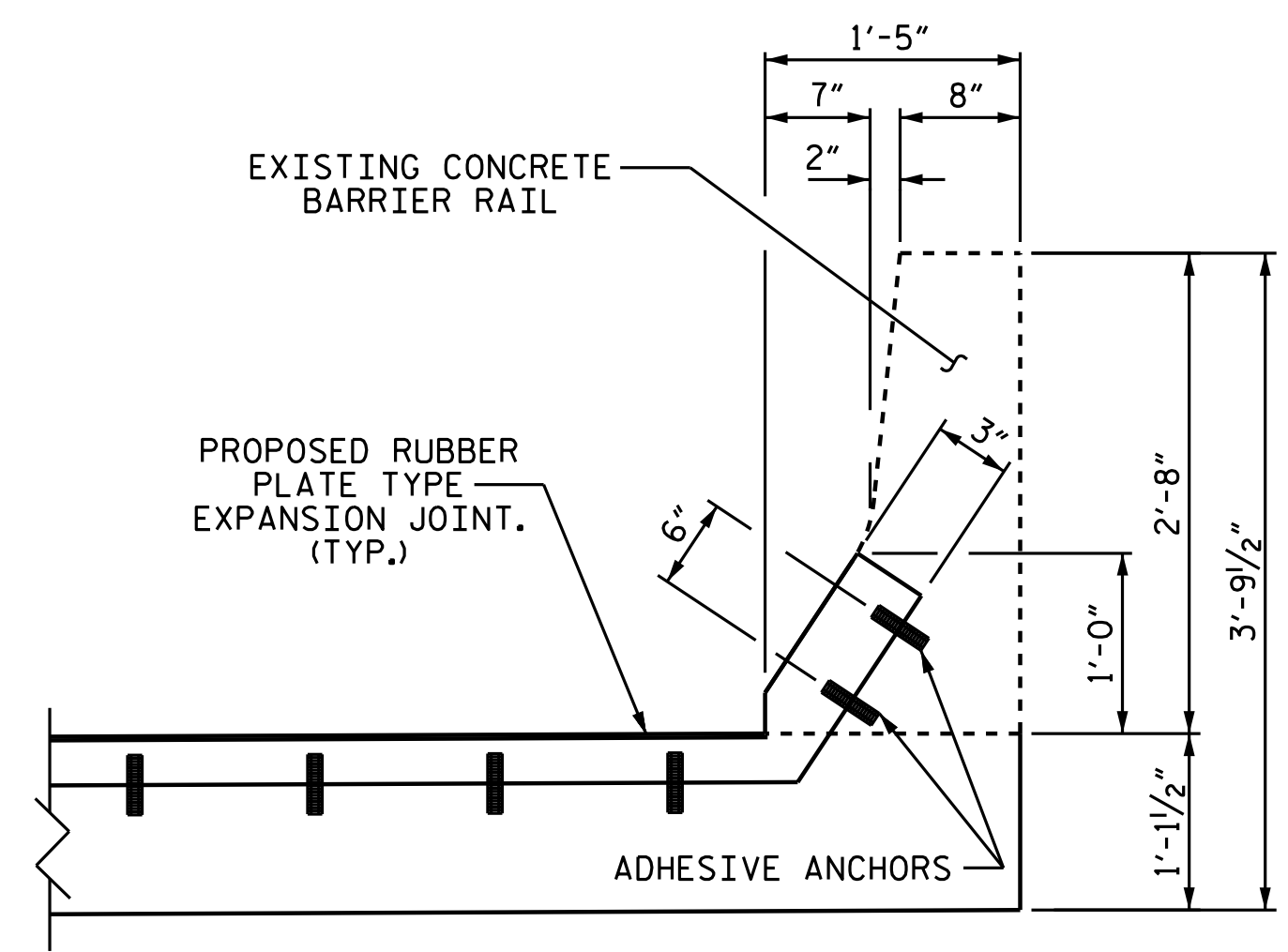
PLAN OF EXISTING MODULAR EXPANSION JOINT SEAL



SECTION B-B

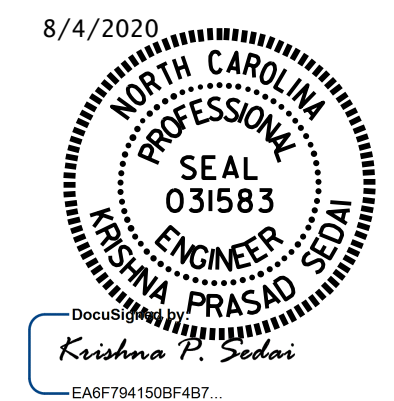


PLAN OF PROPOSED EXPANSION JOINT SEAL



SECTION C-C
 (THE NEW RUBBER PLATE BRIDGE JOINT SHALL BE TURNED UP AND FLUSH WITH THE FACE OF THE BARRIER)

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330444



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 JOINT DETAIL AT
 THE BARRIER RAIL
 END BENT 2
 END BENT 1 SIMILAR

DRAWN BY : A. SORSENGINH DATE : 5/2018
 CHECKED BY : M. G. SHAIKH DATE : 5/2018

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-09
1			3			TOTAL SHEETS
2			4			10

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

NOTES:

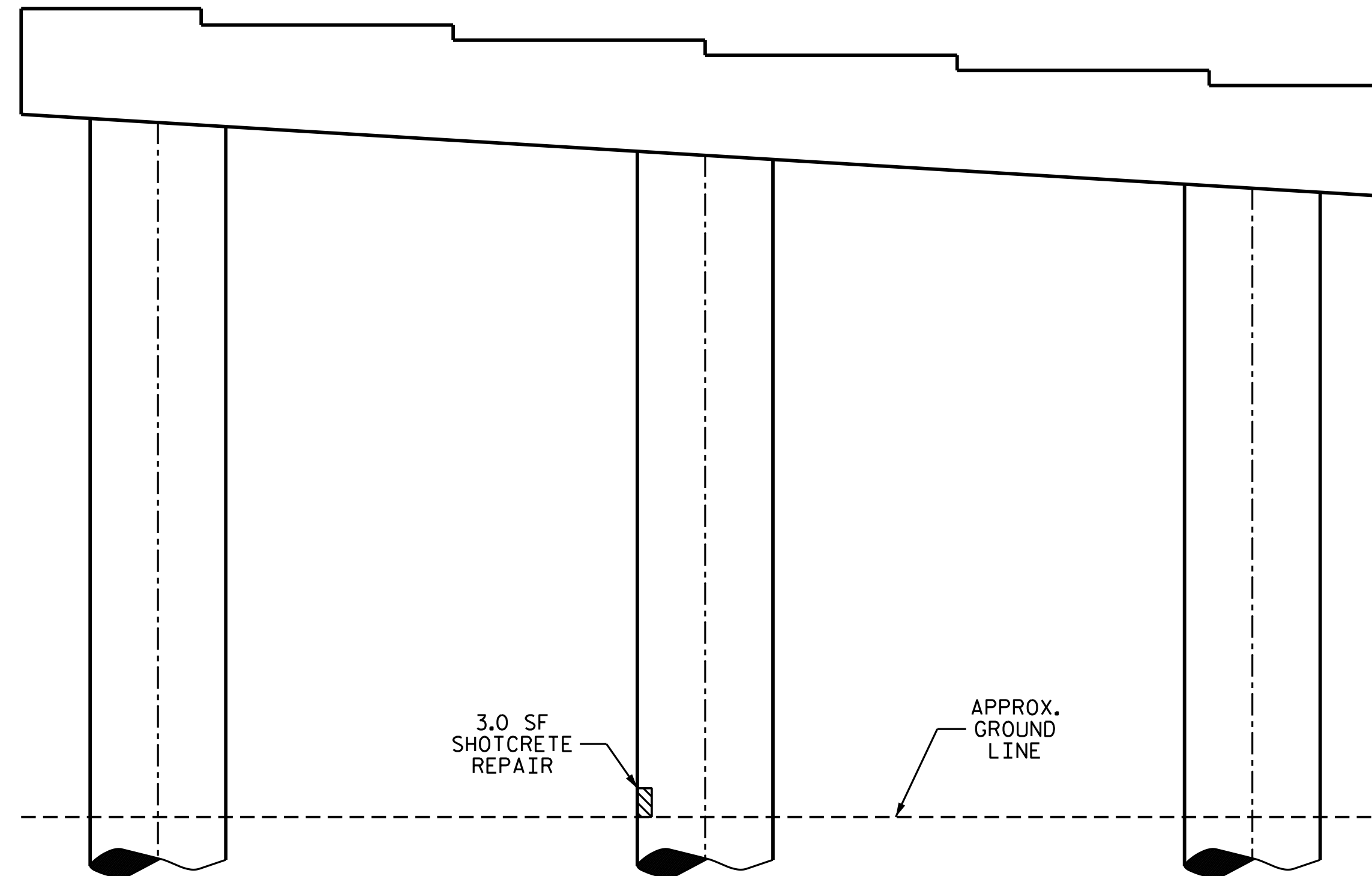
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES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

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

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



PLAN - TOP OF CAP

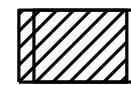
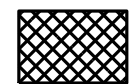



ELEVATION - SPAN C VIEW

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	3.0	1.5		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
* EPOXY COATING ON TOP OF CAP		SO. FT.		SO. FT.
END BENT 1		116.5		
END BENT 2		116.5		

* END BENT NOT SHOWN ON THIS SHEET. TOP SURFACE OF BENT BENT CAP EXCEPT BRIDGE SEATS SHOULD BE EPOXY COATED

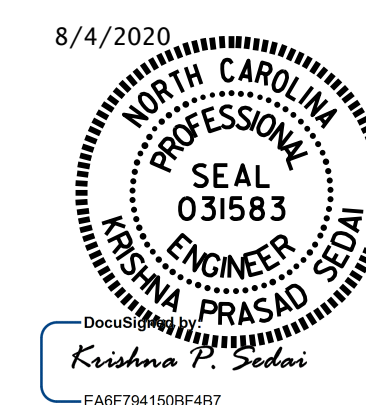
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. FOR REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

-  SHOTCRETE AREA
-  CONCRETE AREA
-  ERI - EPOXY RESIN INJECTION

I-5795

COUNTY

BRIDGE NO. 330444



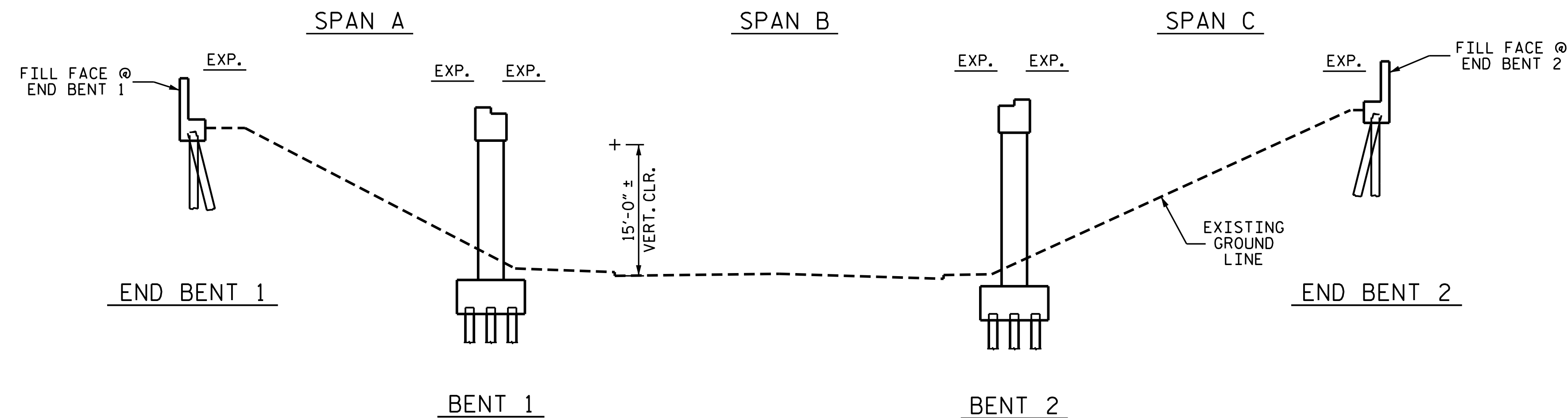
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 2
SPAN C FACE

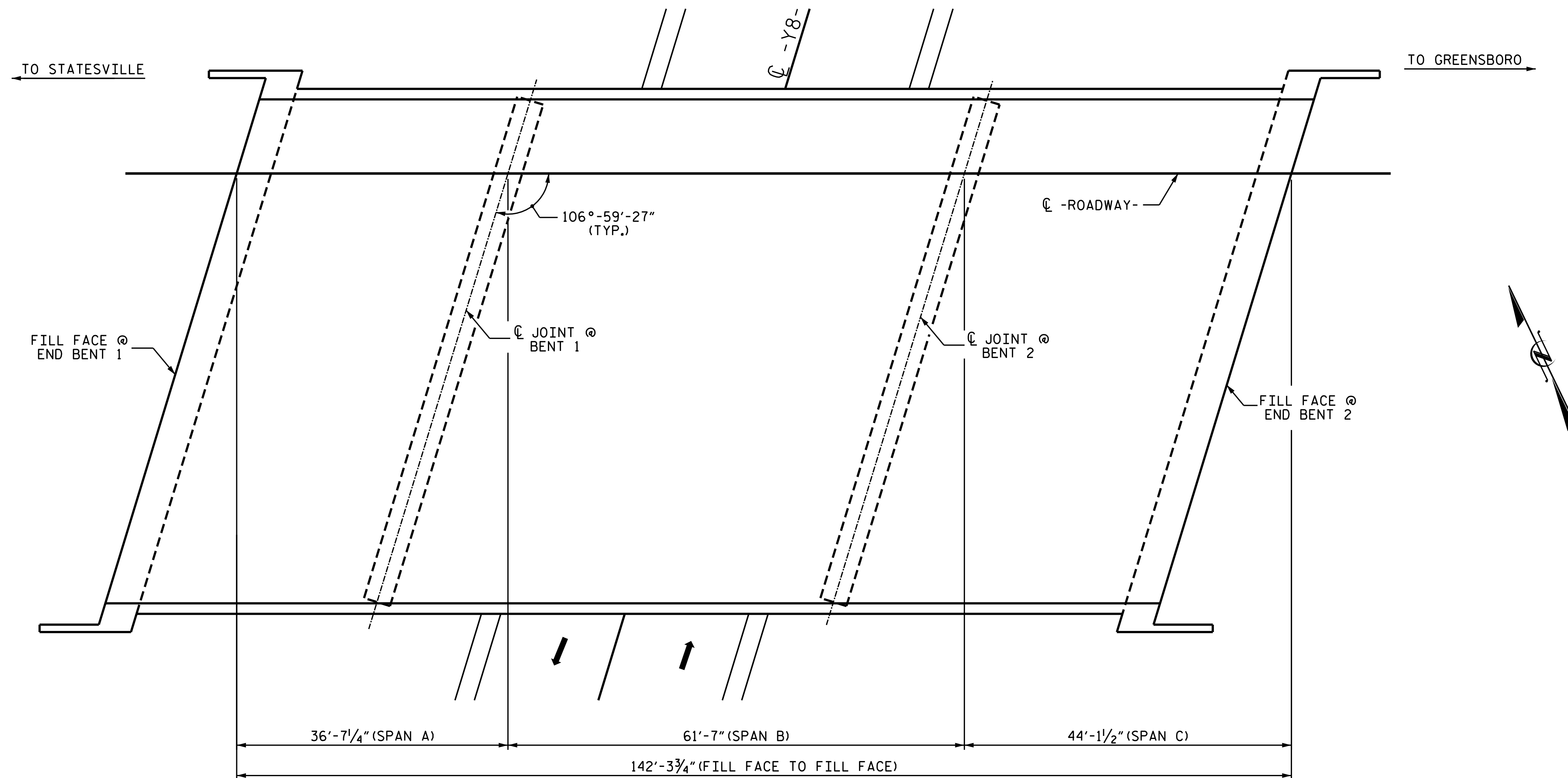
DRAWN BY : A. SORSENGINH DATE : 4/2018
CHECKED BY : M. G. SHAIKH DATE : 5/2018

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-10
1			3			TOTAL SHEETS
2			4			10



SECTION ALONG C ROADWAY



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 7/8/2019.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.

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

RESIDENT ENGINEER

DATE

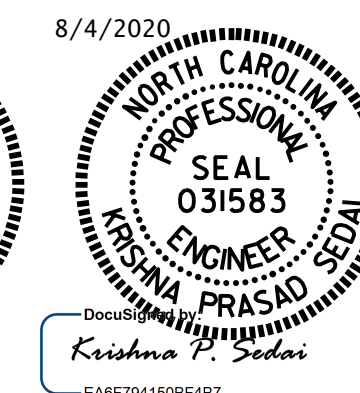
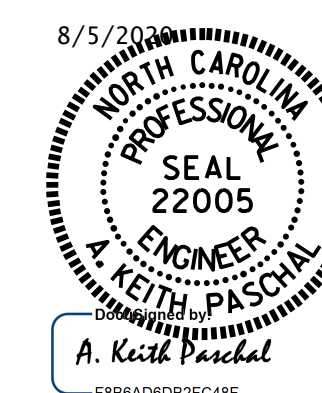
SCOPE OF WORK

- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- APPLY DECK SEALANT TO PREPARED TOP OF BRIDGE DECK.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS AND PERFORM SHOTCRETE AND/OR CONCRETE REPAIRS.
- CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330448

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 EBL
OVER WESTGATE DRIVE



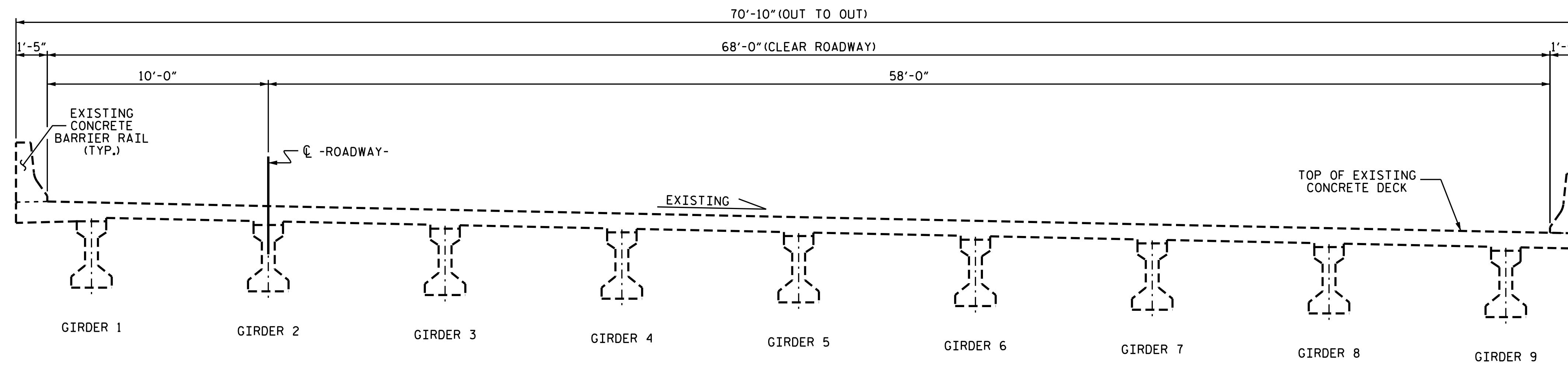
DRAWN BY : A. SORSENGINH DATE : 3/2018
CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

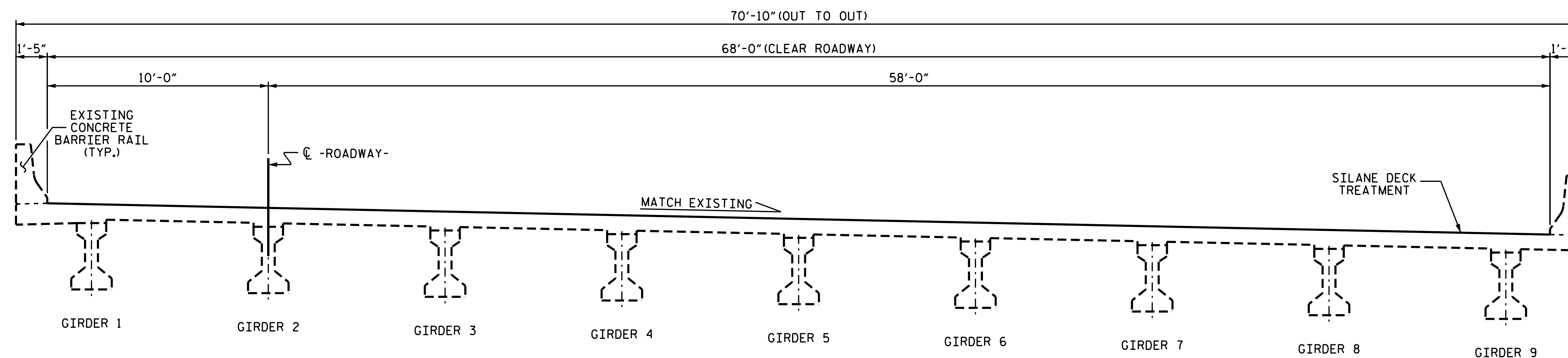
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S18-01
1			3			TOTAL SHEETS
2			4			7

NOTE:

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



TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330448

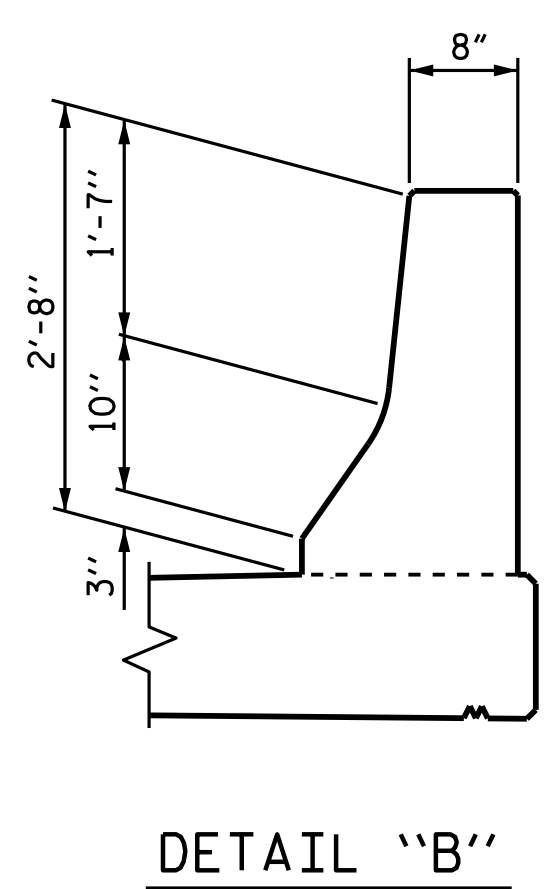
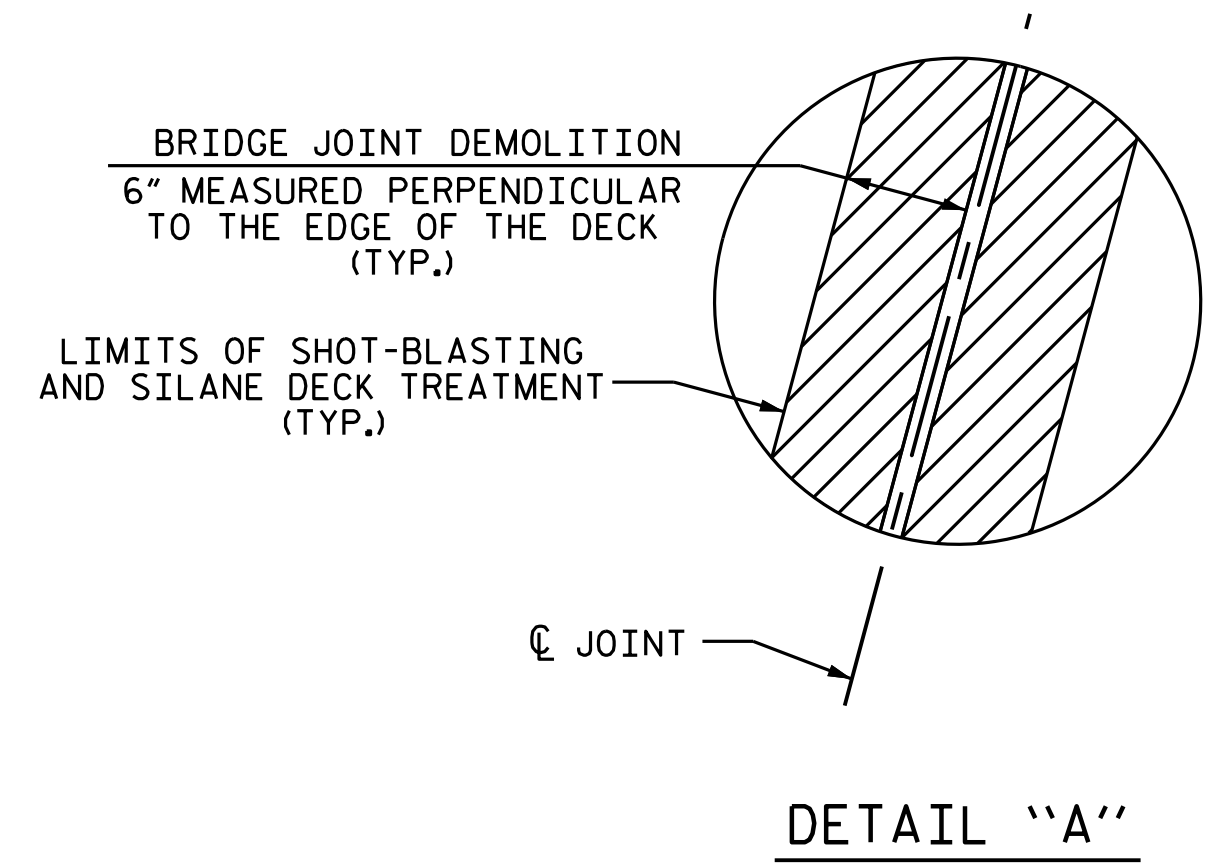


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**TYPICAL SECTION
& SILANE DECK
TREATMENT DETAILS**

DRAWN BY : A. SORSENGINH DATE : 4/2018
CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S18-02
1			3			TOTAL SHEETS
2			4			7



NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR BRIDGE JOINT DEMOLITION, SEE "JOINT DETAILS" SHEET.

FOR EXPXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

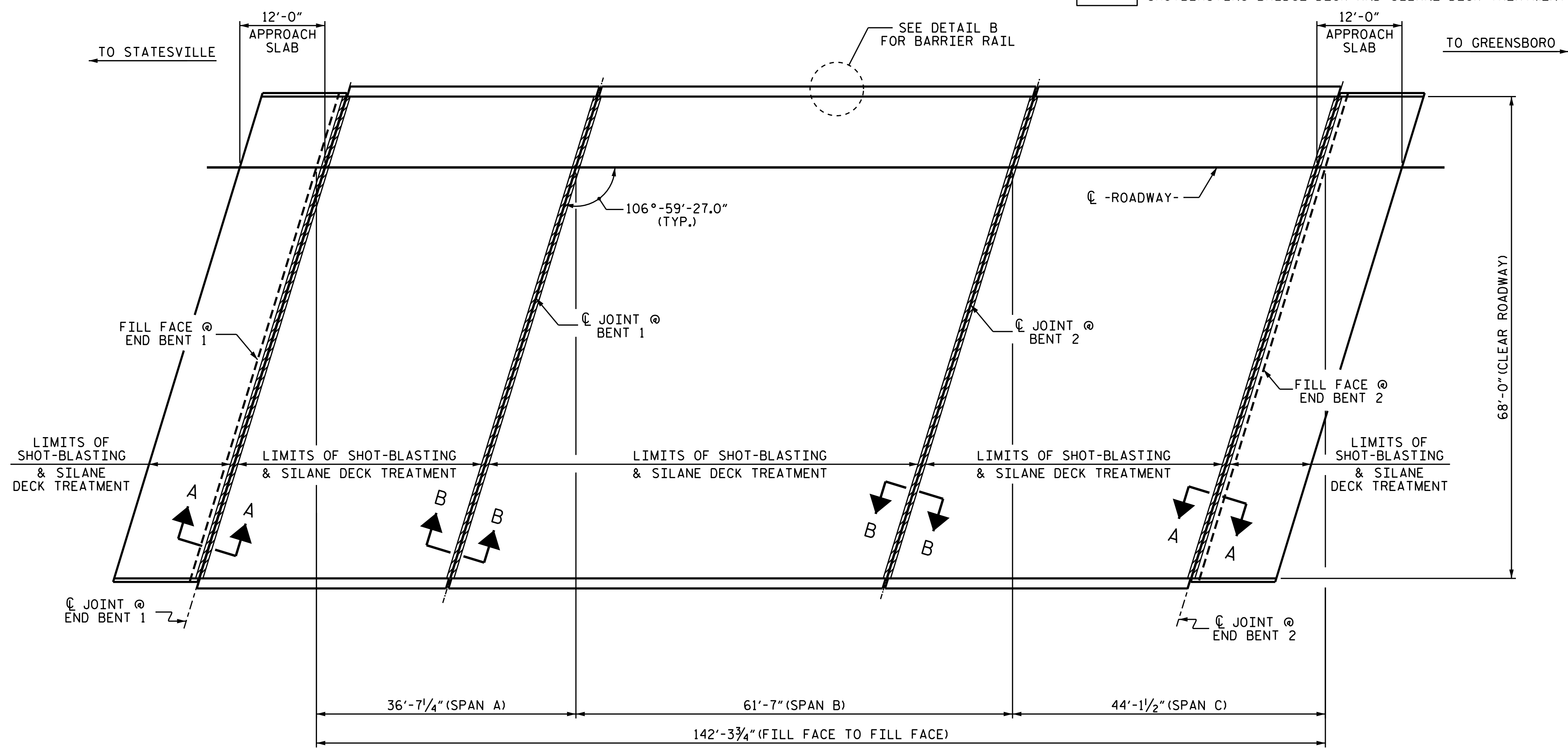
FOR SECTION A-A, SEE "JOINT DETAILS" SHEET.

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

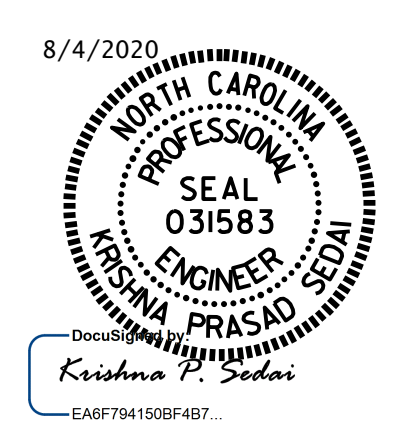
ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

- BRIDGE JOINT DEMOLITION
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
- SHOTBLASTING BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLASTING APPROACH SLAB	173 SY	
SILANE DECK TREATMENT	173 SY	
BRIDGE QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
BRIDGE JOINT DEMOLITION	284.4 SF	
SHOTBLASTING BRIDGE DECK	1,034 SY	
SILANE DECK TREATMENT	1,034 SY	
SURFACE PREPARATION FOR CONCRETE BARRIER	969.7 SF	
SILANE BARRIER RAIL TREATMENT	969.7 SF	
EPOXY COATING CONCRETE GIRDER ENDS	1156.4 SF	



PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330448



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT





DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S18-03
1			3			TOTAL SHEETS
2			4			7

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

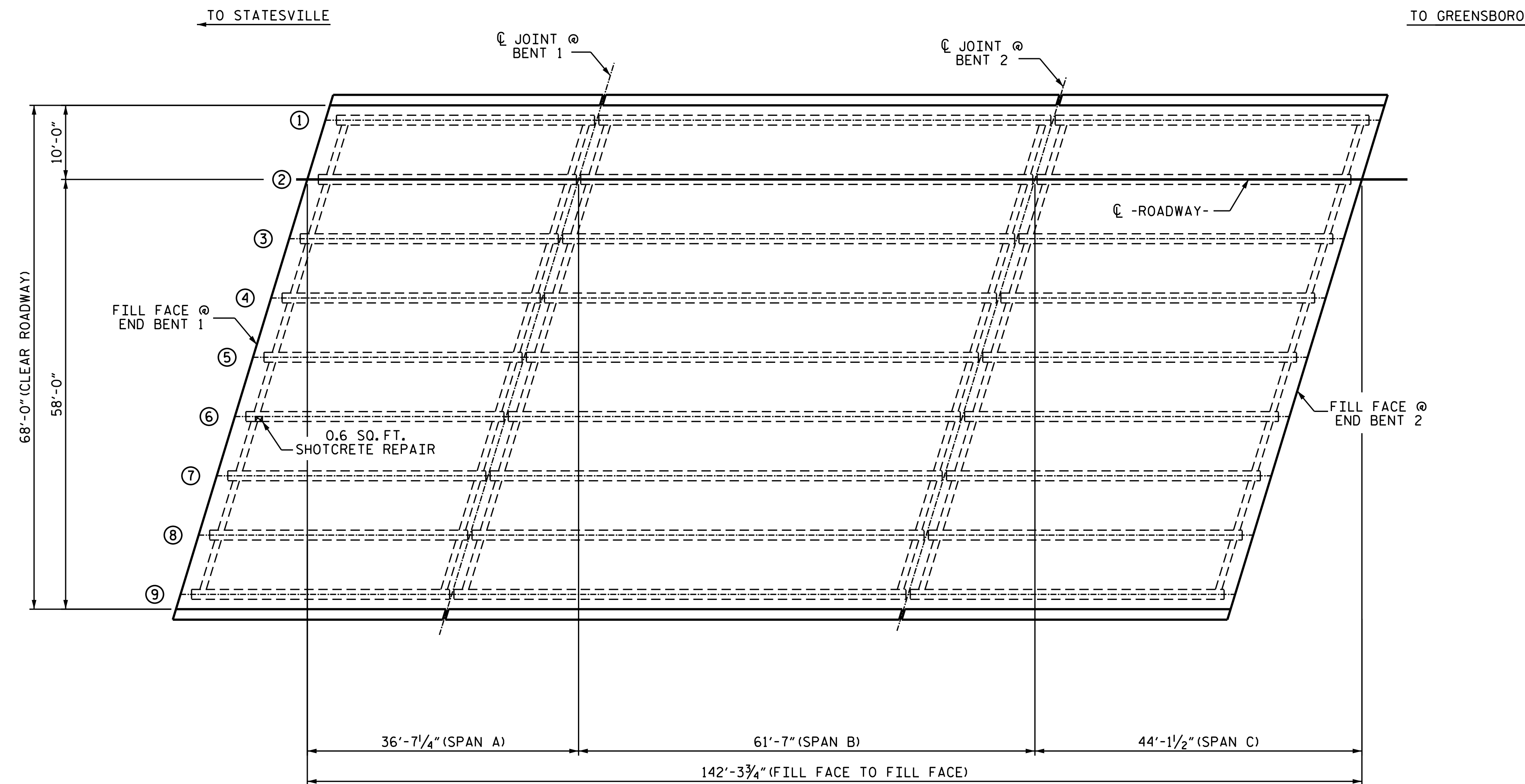
-  UNDERSIDE EPOXY COATING
-  UNDERSIDE REPAIR
-  GIRDER AND DIAPHRAGM REPAIR
-  ERI - EPOXY RESIN INJECTION

AS-BUILT REPAIR QUANTITY TABLE

UNDERSIDE OF DECK REPAIRS

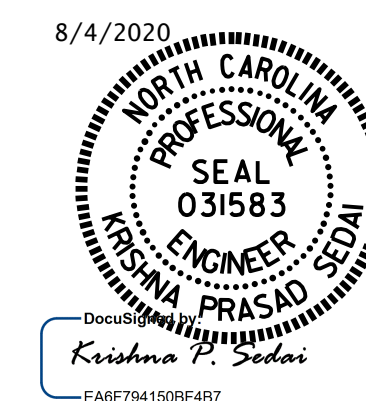
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
INTERIOR DIAPHRAGMS	0.0	0.0		
GIRDER	0.6	0.2		
	ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	0.0 LF			

VALUES REPRESENT ESTIMATED UNDERSIDE OF DECK REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEAR TO SAWCUT. SEE REPAIR DETAILS.



PLAN OF SPANS A, B AND C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330448



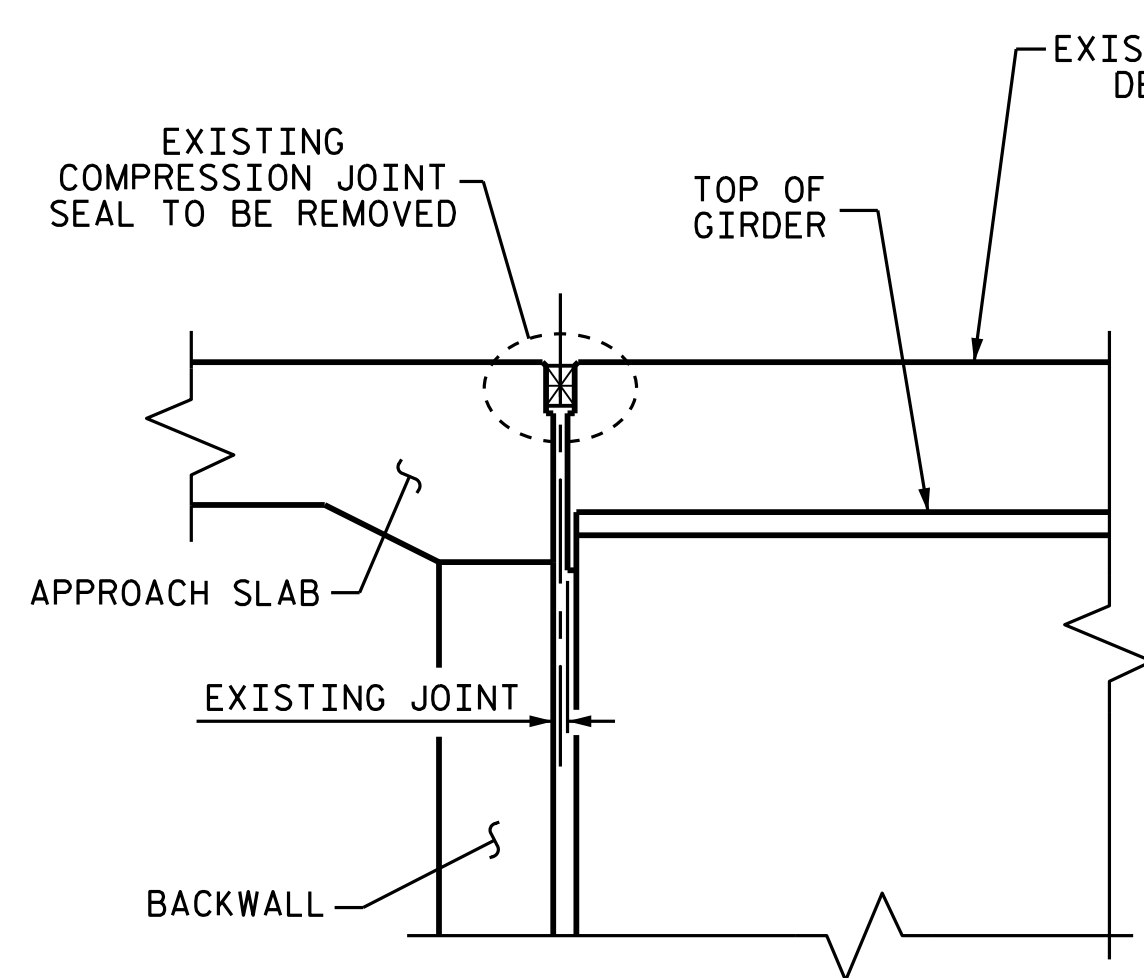
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS

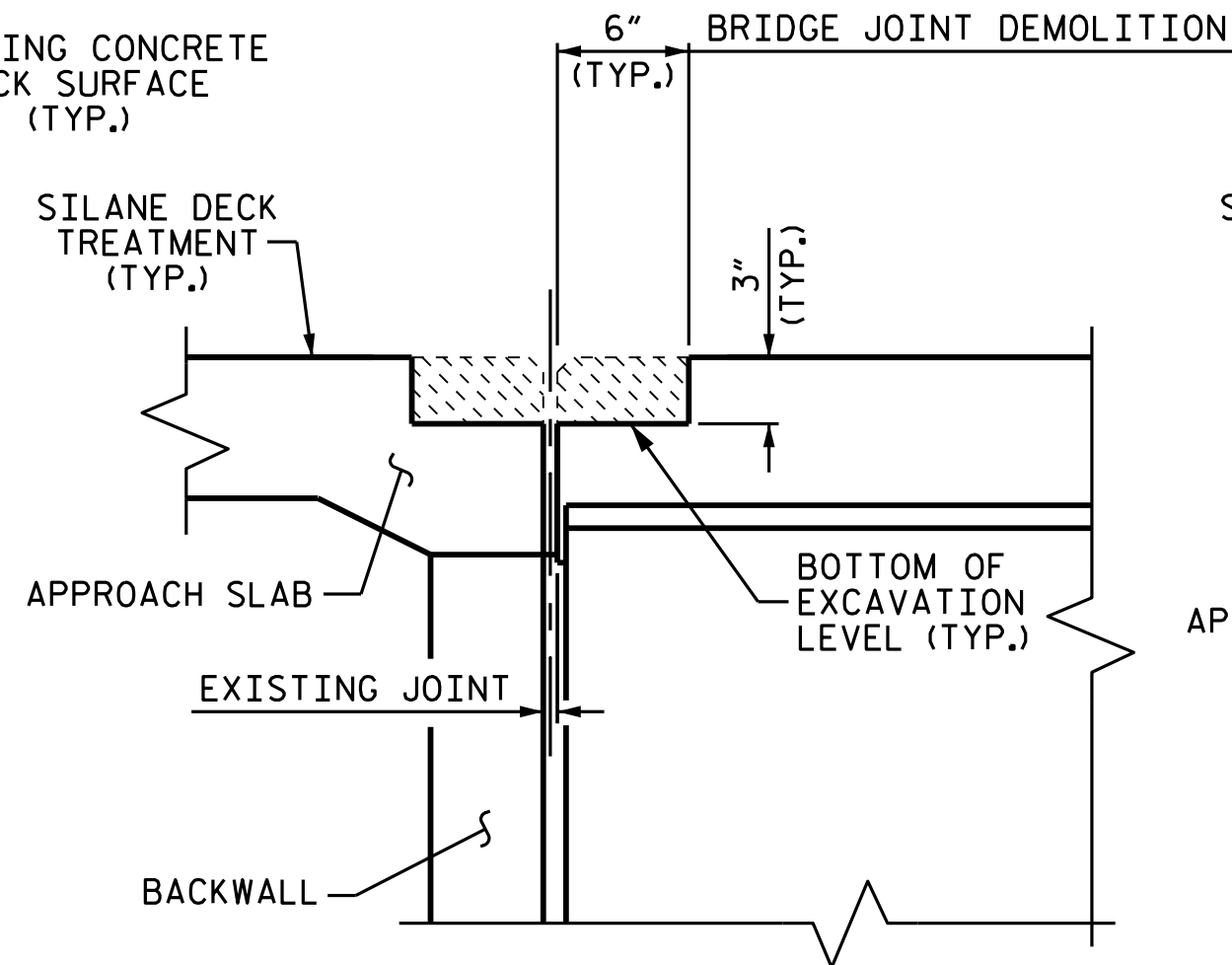
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S18-04
1			3			TOTAL SHEETS
2			4			7

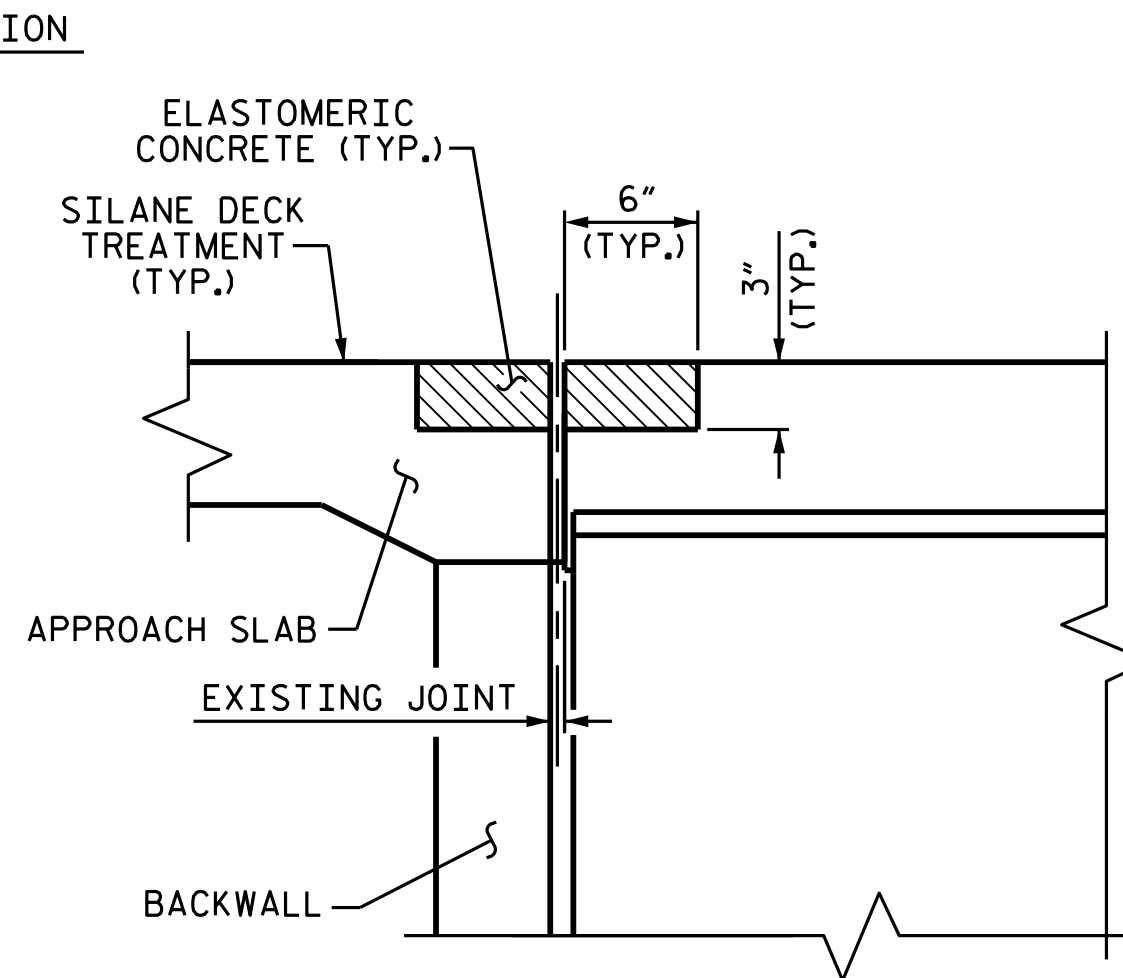
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



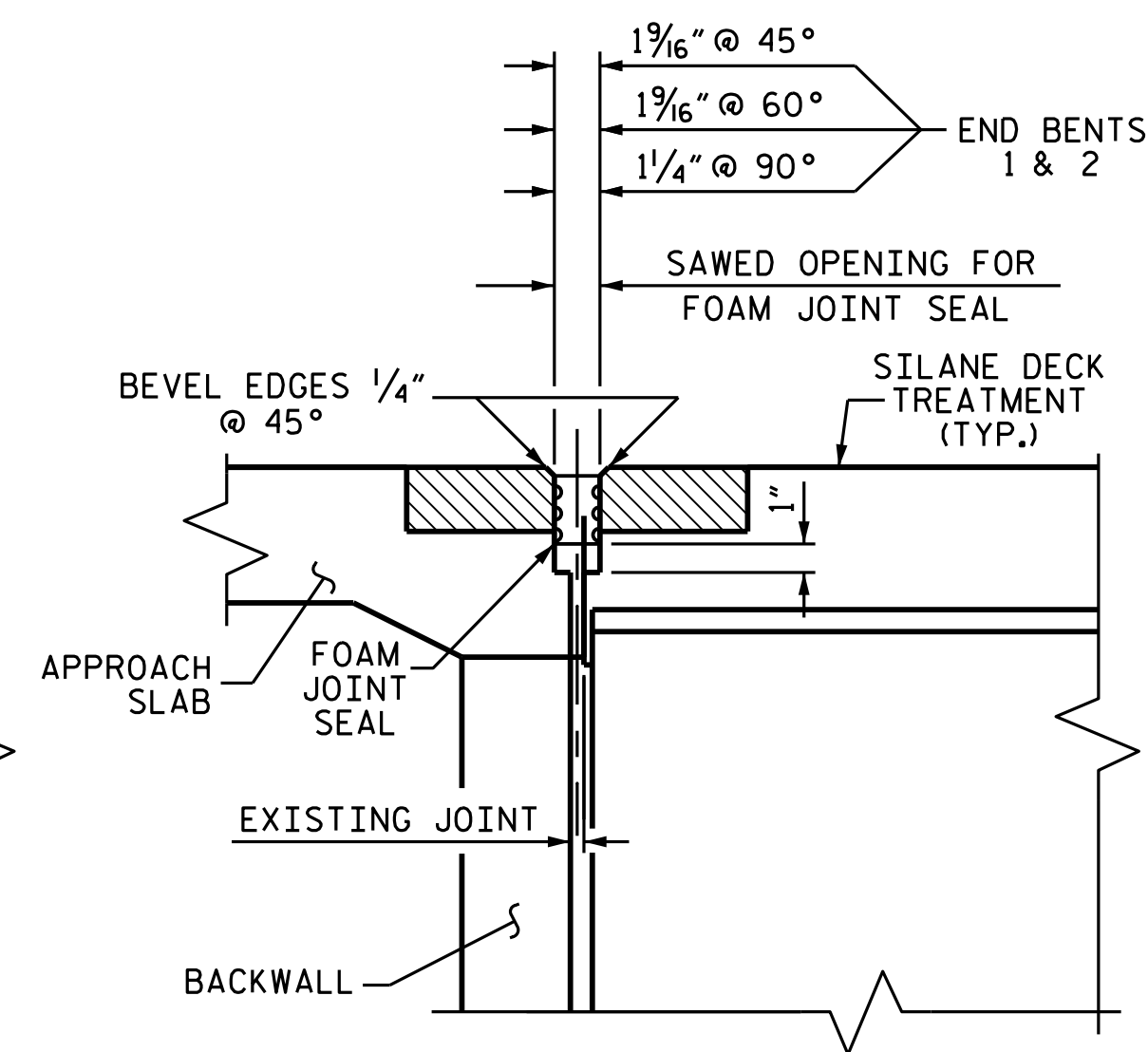
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



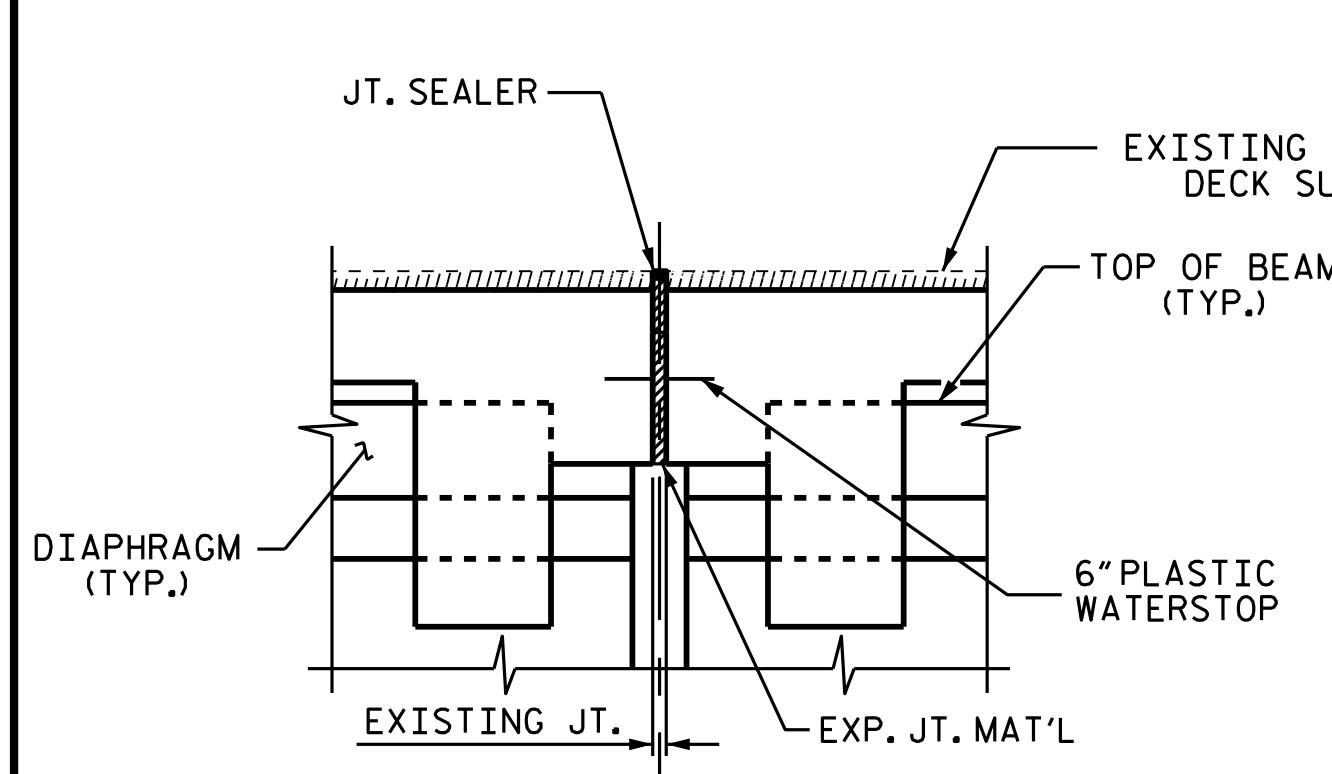
PROPOSED PRE-SAWED JOINT



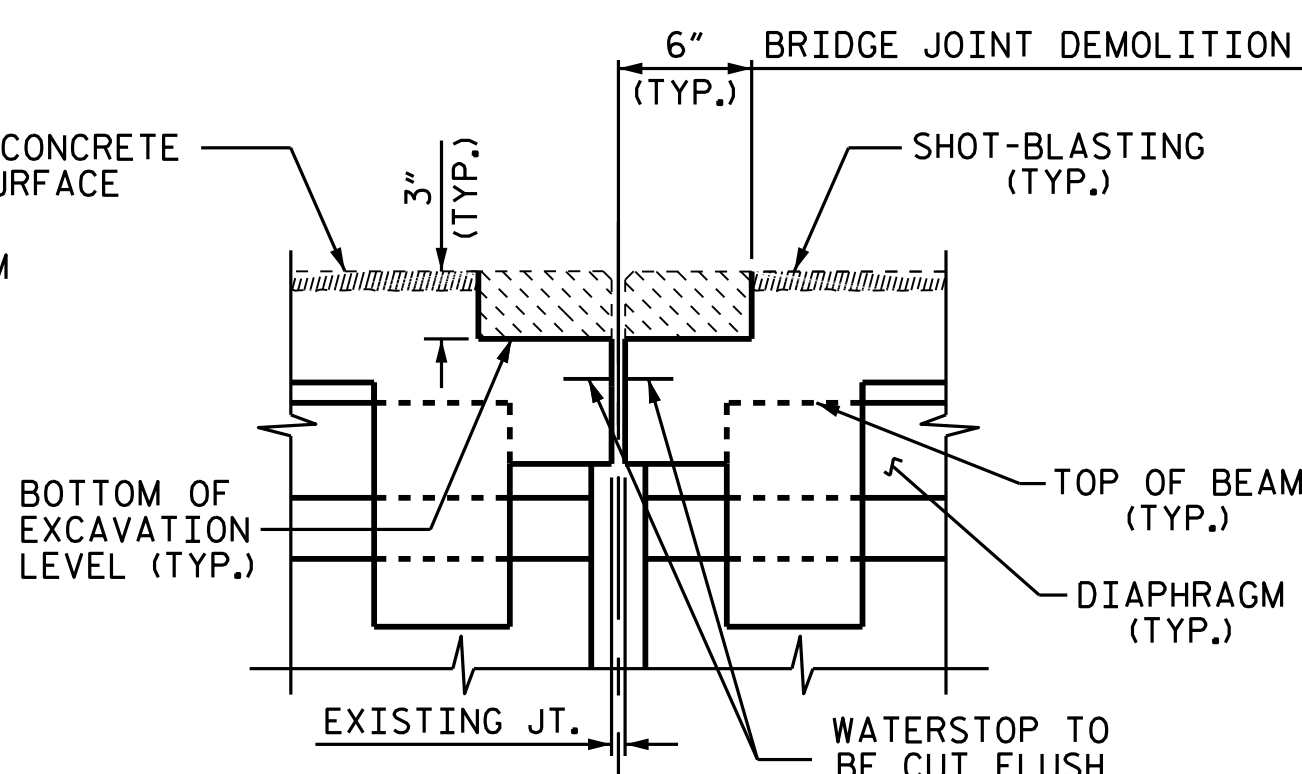
PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT END BENTS

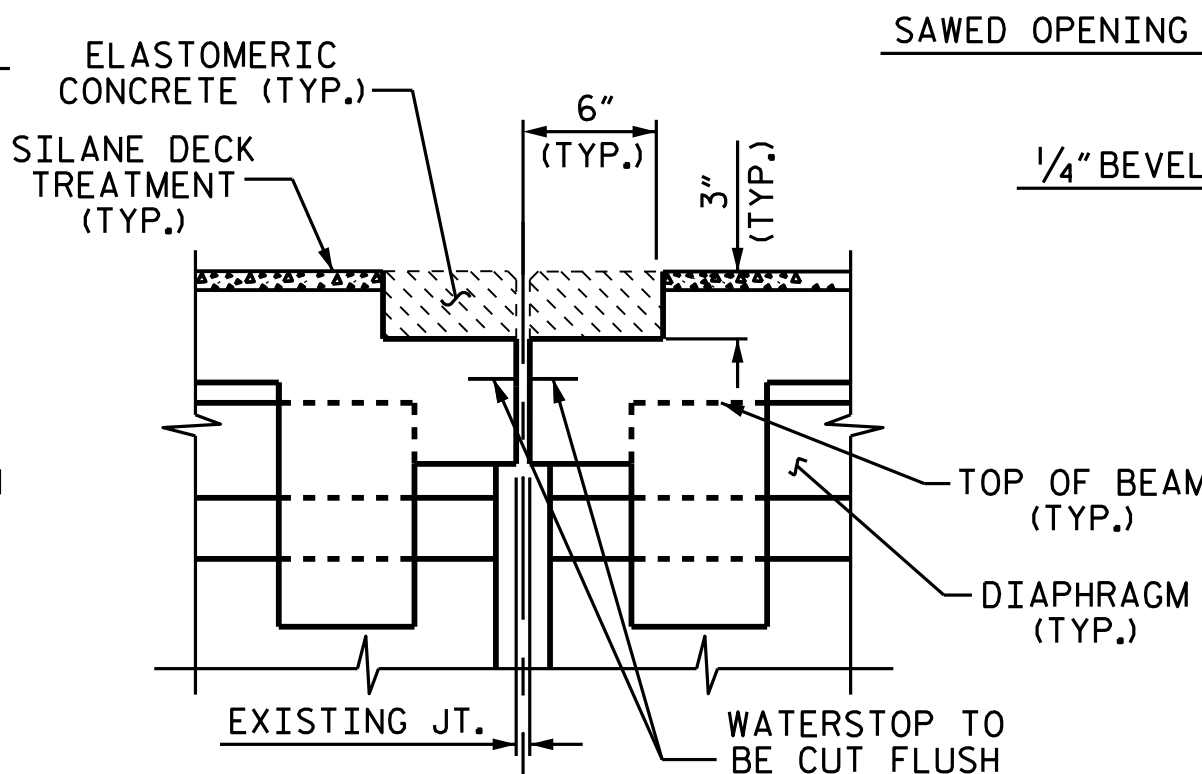
SECTION A-A



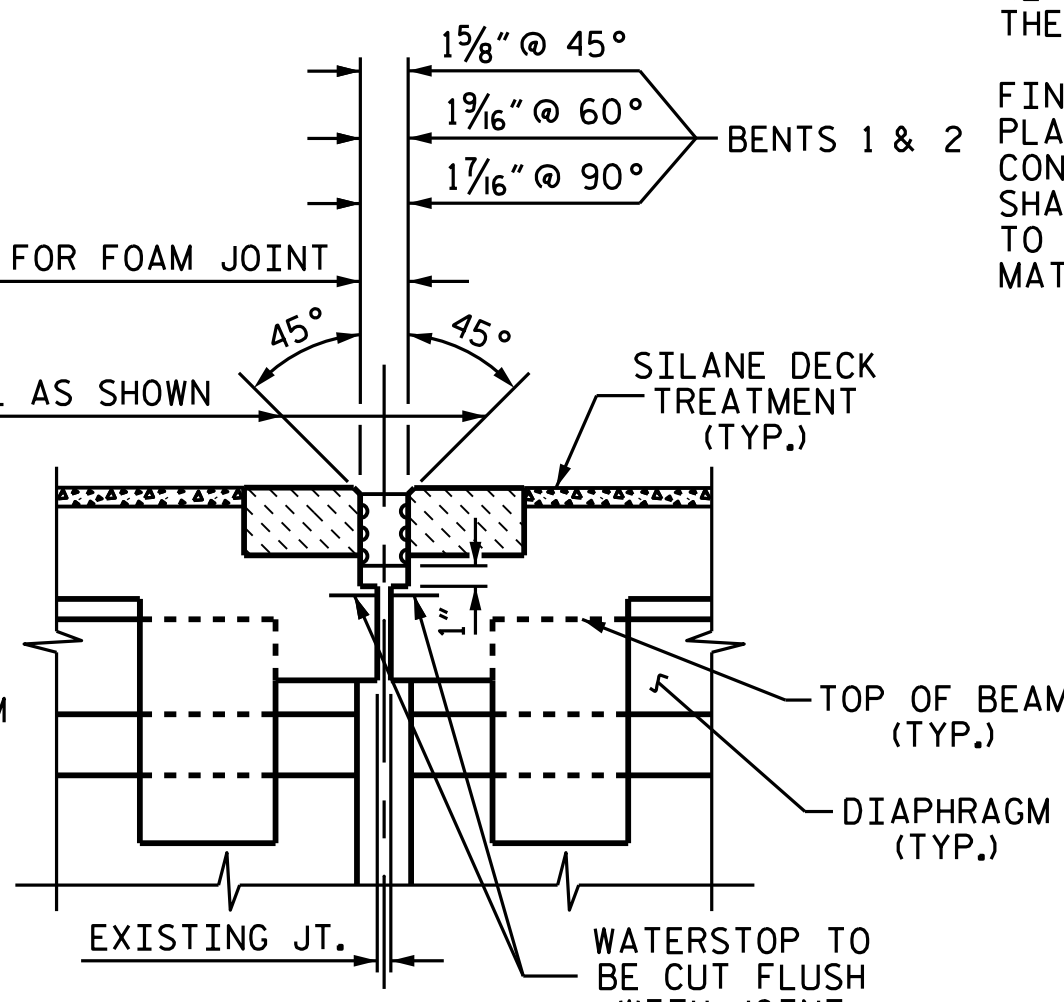
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



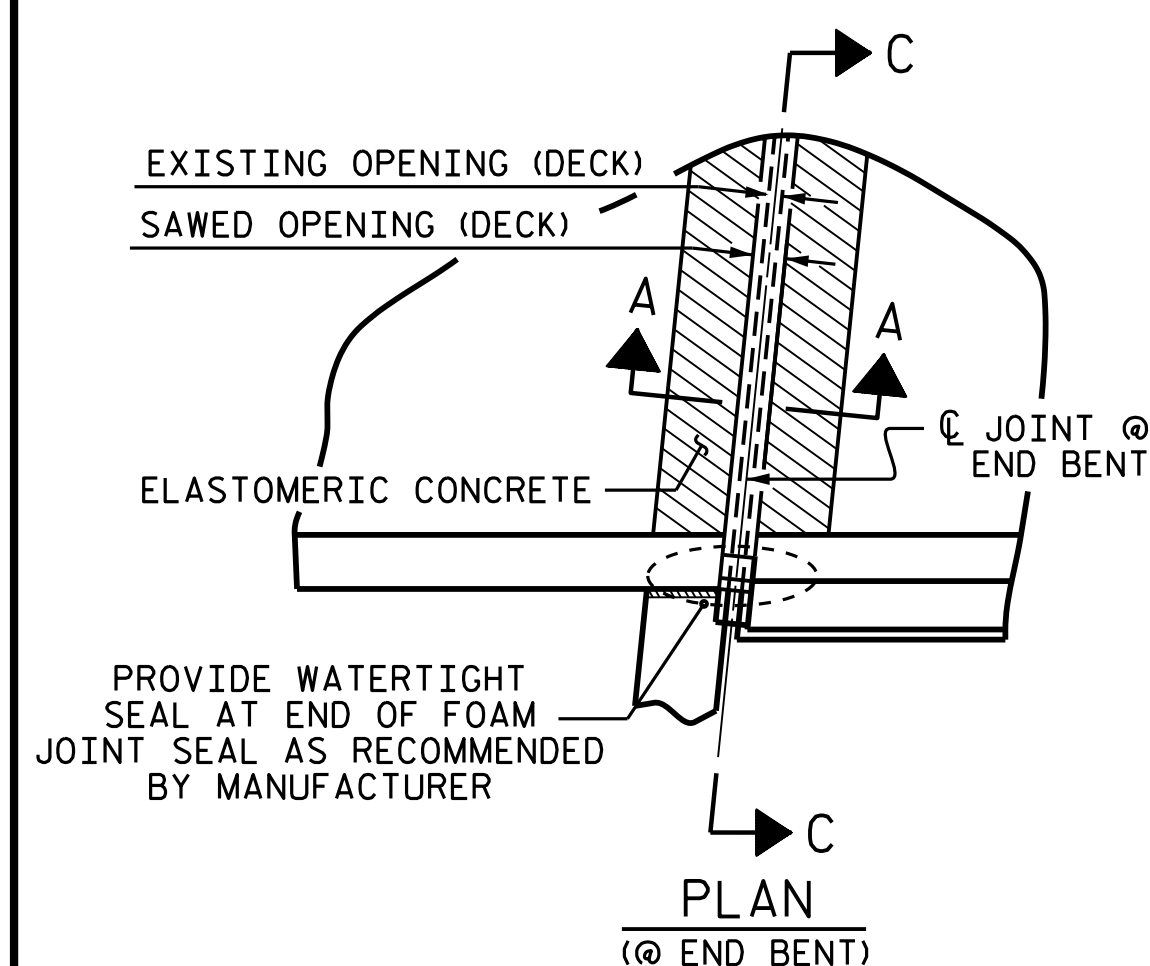
PROPOSED JOINT PRE-SAWED



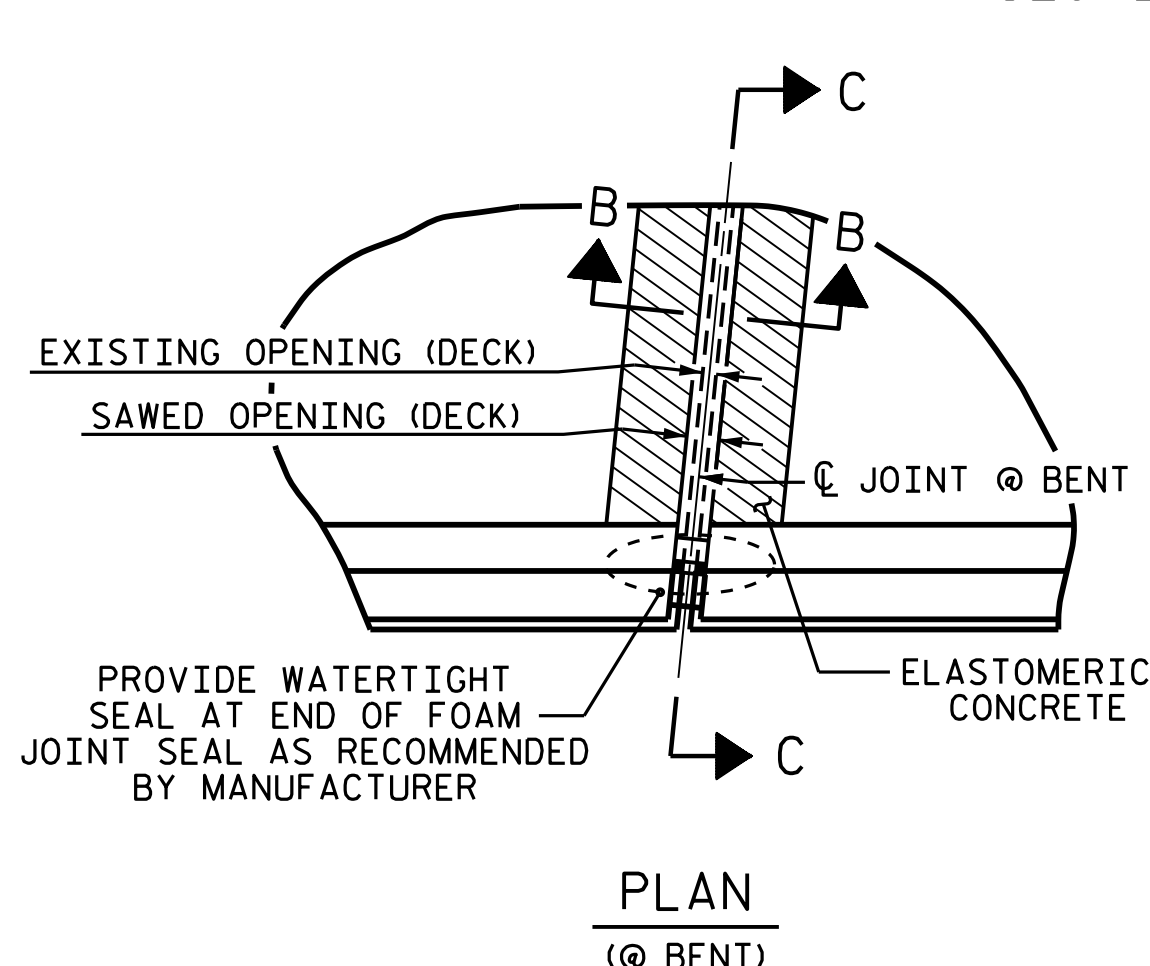
PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS

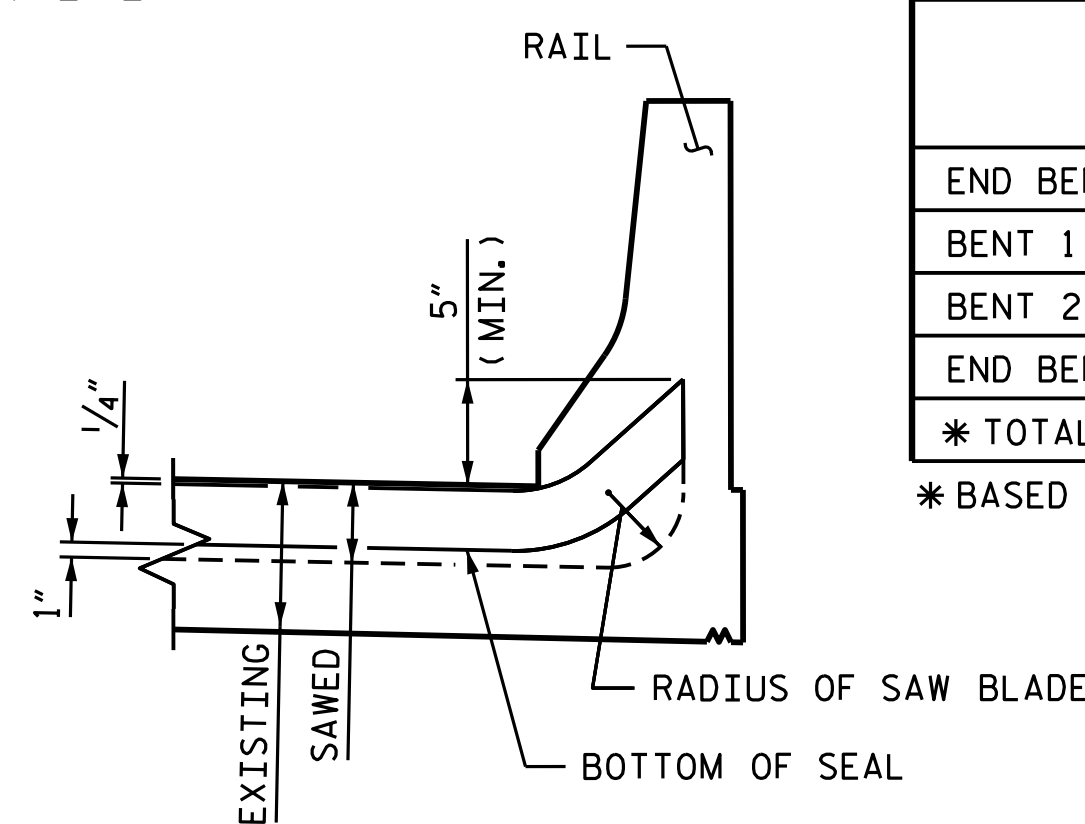
SECTION B-B



PLAN (@ END BENT)



PLAN (@ BENT)



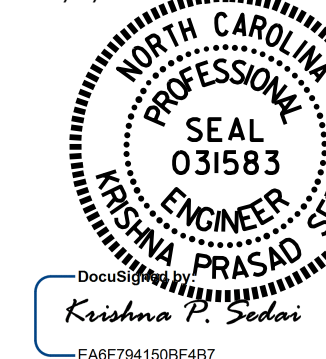
SECTION C-C

JOINT SEAL DETAILS

	JOINT REPAIR QUANTITY TABLE					
	BRIDGE JOINT DEMOLITION		ELASTOMERIC CONCRETE FOR PRESERVATION		FOAM JOINT SEALS FOR PRESERVATION	
	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL
END BENT 1	71.1 SF		17.8 CF		71.1 LF	
BENT 1	71.1 SF		17.8 CF		71.1 LF	
BENT 2	71.1 SF		17.8 CF		71.1 LF	
END BENT 2	71.1 SF		17.8 CF		71.1 LF	
* TOTAL	284.4 SF		71.2 CF		284.4 LF	

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

8/4/2020



DocuSign Envelope ID: 5A8F794150BF487...

PROJECT NO. I-5795
 FORSYTH COUNTY
 BRIDGE NO. 330448

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

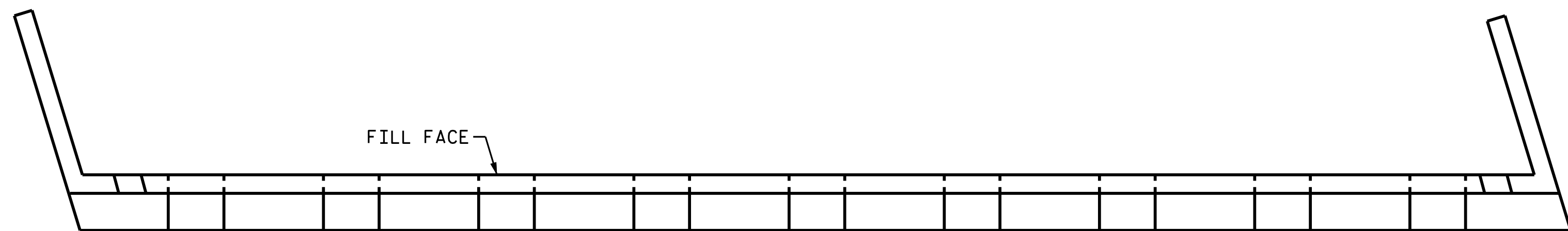
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

04-AUG-2020 16:44
 N:\Division09\I5795\Structures\FinalPlans_Combined\418.011.I5795.SMU.JT.05.330448.dgn

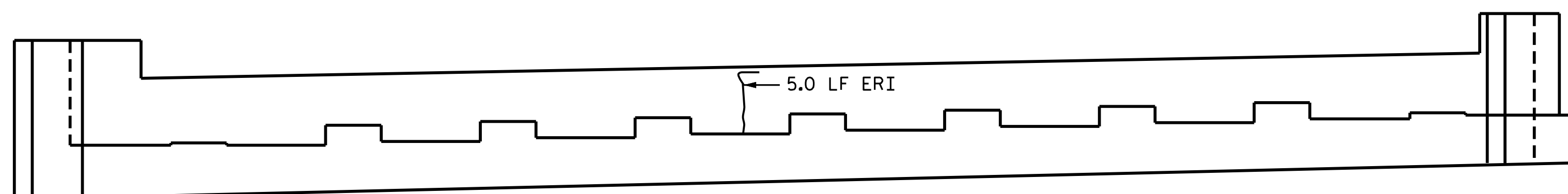
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S18-05
1			3			TOTAL SHEETS
2			4			7

FOAM JOINTS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
 FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.
 FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.
 THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.
 THE FOAM JOINTS SHALL MEET THE MANUFACTURER'S RECOMMENDATION FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.
 THE CONTRACTOR WILL NOT BE PERMITTED TO FORM THE JOINTS IN LIEU OF SAWING THE JOINT.
 THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE END BENTS AND BENTS.
 FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.
 CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF ACTUAL JOINT OPENING VARIES FROM OPENING INDICATED IN DETAIL BY MORE THAN 1/4", NOTIFY ENGINEER REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.
 DEMOLISH BRIDGE JOINT AREA TO THE NECESSARY DEPTH, SUCH THAT ELASTOMERIC CONCRETE SHALL BE FOUNDED ON SOUND CONCRETE OR REPAIR CONCRETE SUBSTRATE. IF SUCH EXCAVATION EXTENDS MORE THAN 2" BELOW THE BOTTOM OF THE PLANNED ELASTOMERIC CONCRETE HEADER, AS SHOWN, APPROVED CONCRETE REPAIR MATERIAL SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE ELASTOMERIC CONCRETE.
 FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF ELASTOMERIC CONCRETE AND/ OR REPAIR CONCRETE SHALL BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF ELASTOMERIC CONCRETE OR CONCRETE REPAIR MATERIAL.

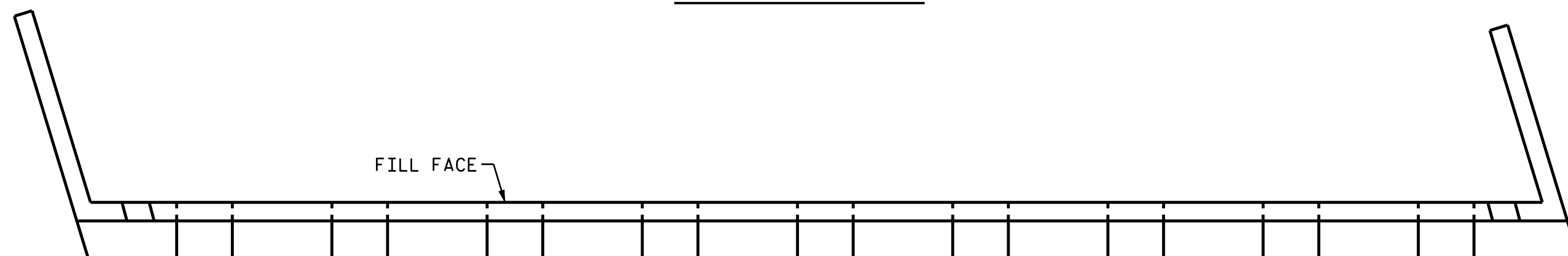


PLAN

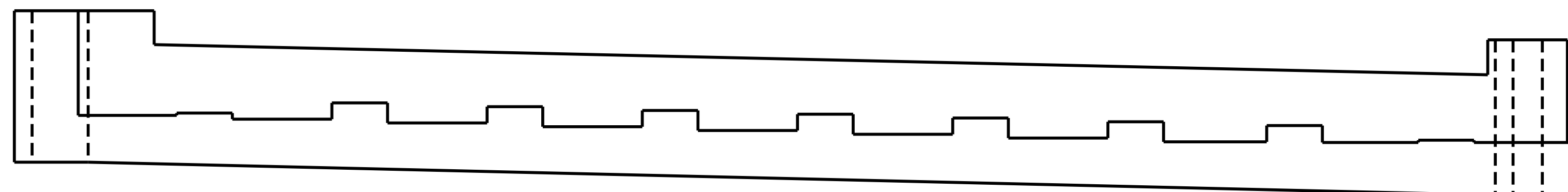


ELEVATION

END BENT 1



PLAN



ELEVATION

END BENT 2

- CONCRETE REPAIR AREA
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
BACKWALL		5.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	200.8			

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
BACKWALL		0.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	200.8			

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

NOTES:

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

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.

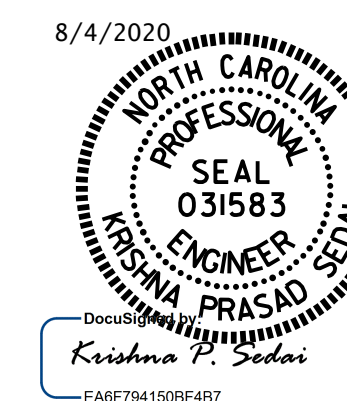
FOR CAP REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

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

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO.: 330448



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS 1 & 2

DRAWN BY : A. SORSENGINH DATE : 4/2017
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S18-06
1			3			TOTAL SHEETS
2			4			7

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

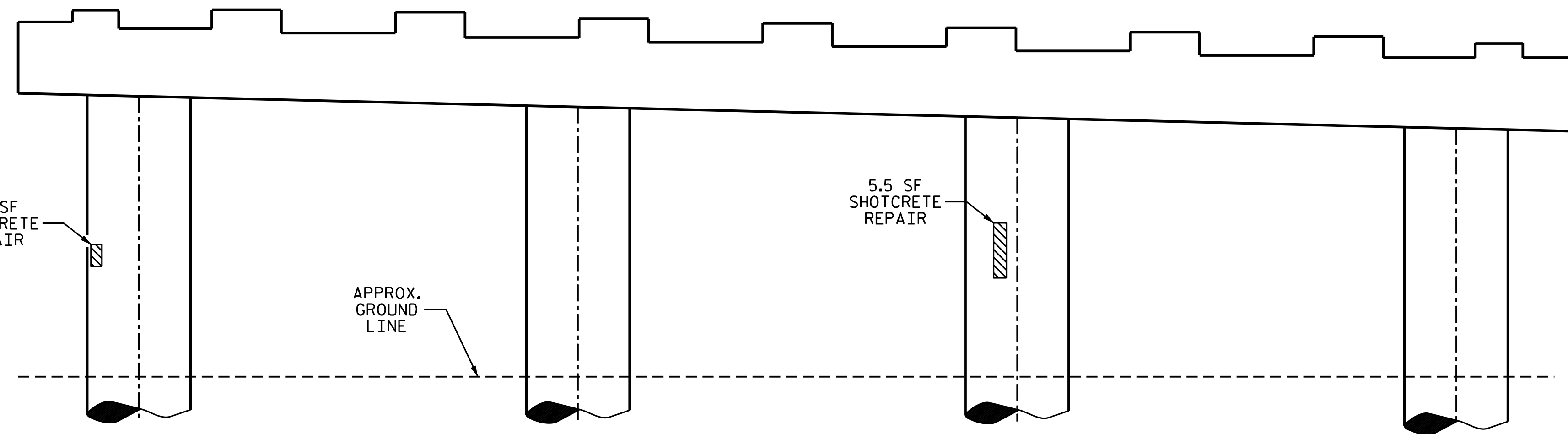
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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



PLAN - TOP OF CAP

- SHOTCRETE AREA
- CONCRETE AREA
- ERI - EPOXY RESIN INJECTION

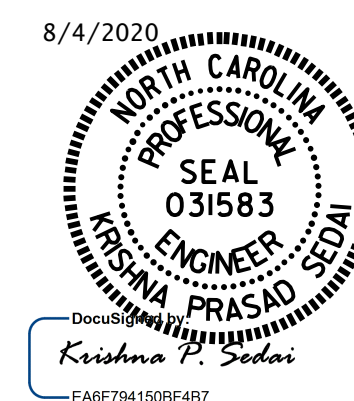


ELEVATION - SPAN A VIEW

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	6.7	3.4		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP (BENTS 1 & 2)	520.6			

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

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330448



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 SUBSTRUCTURE
 BENT 1
 SPAN A FACE

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S18-07
2			4			TOTAL SHEETS 7

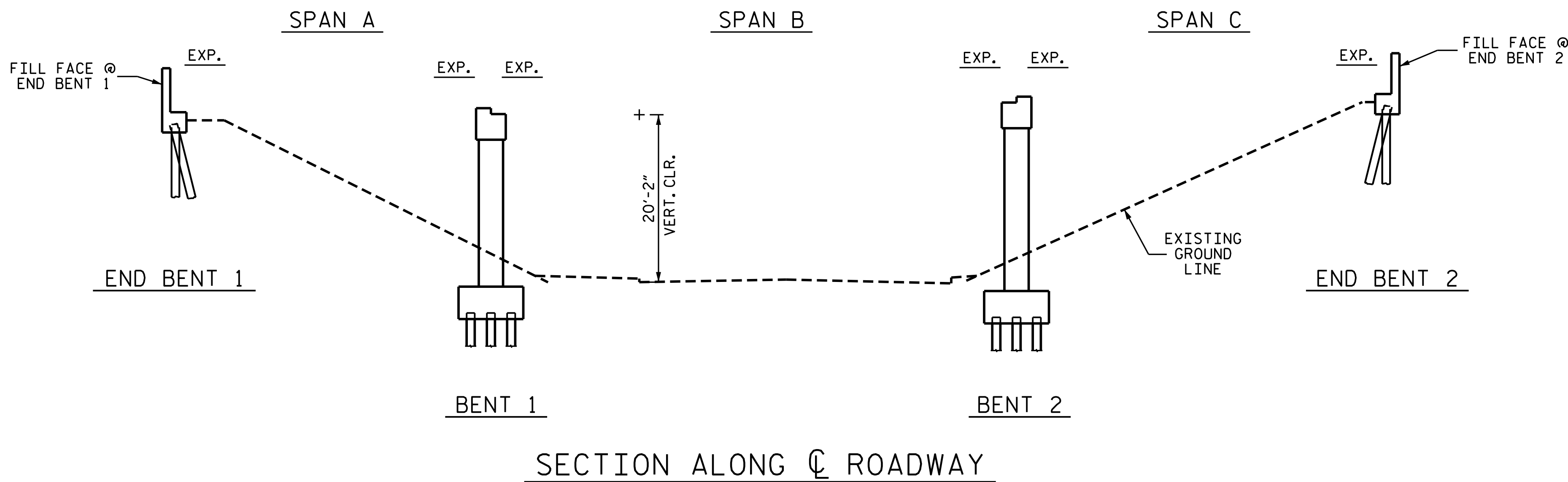
NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 7/8/2019.
BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.

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

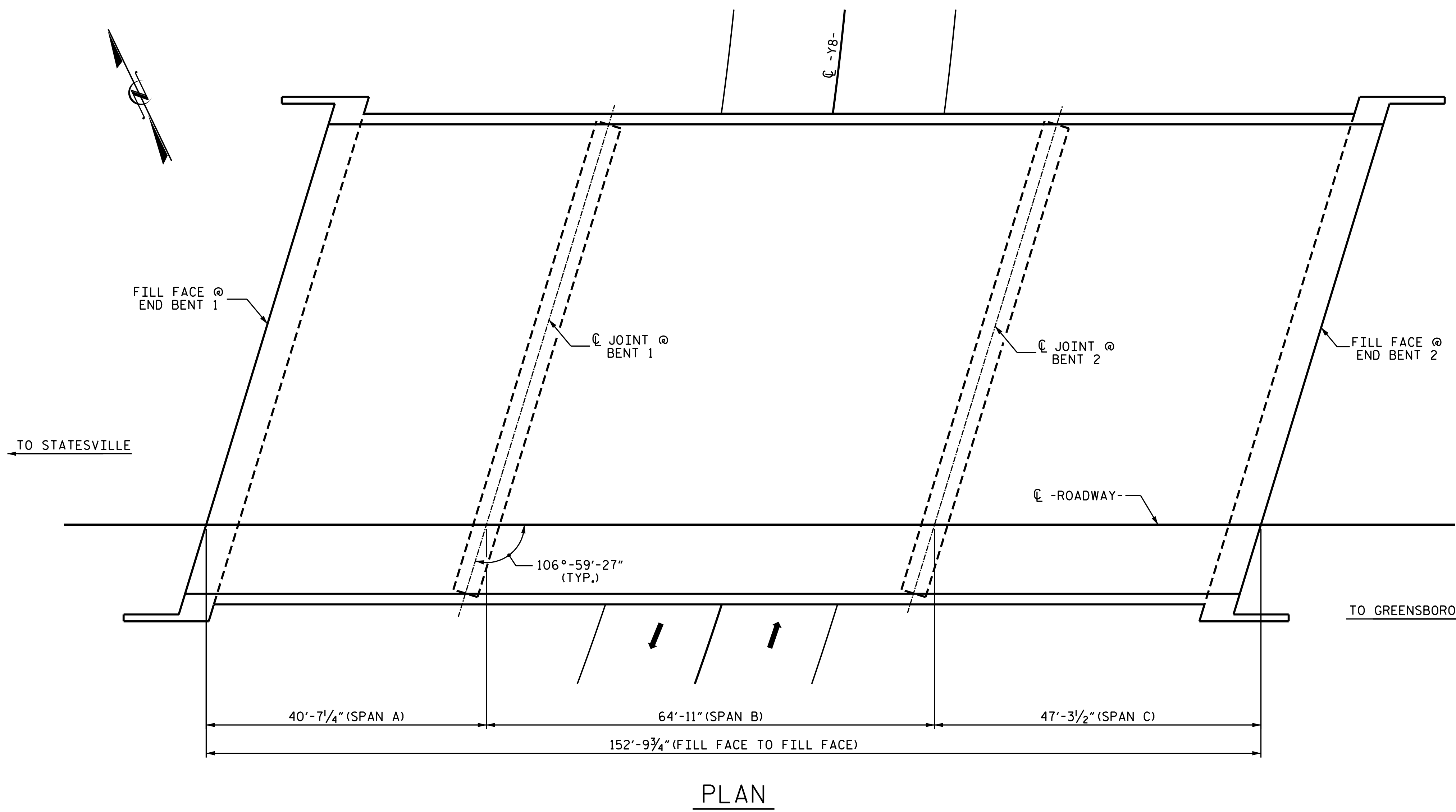
RESIDENT ENGINEER _____

DATE _____

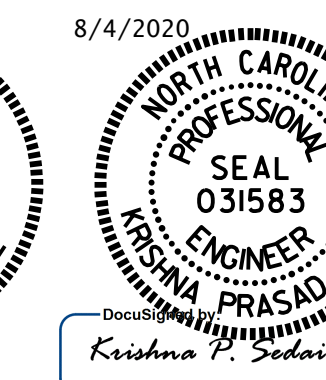
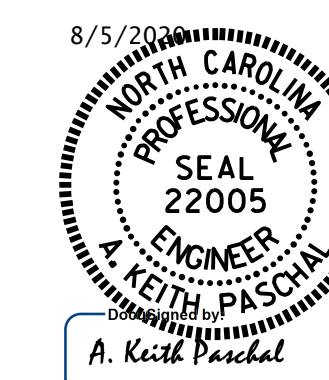


SCOPE OF WORK

- PREPARE TOP OF BRIDGE DECK SURFACE BY SHOTBLASTING METHODS.
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINT SEALS FOR PRESERVATION.
- CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT CAPS AND APPLY EPOXY COATING.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- APPLY SILANE DECK TREATMENT.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.



PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330449



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**GENERAL DRAWING
FOR BRIDGE ON I-40 WBL
OVER WESTGATE DRIVE**

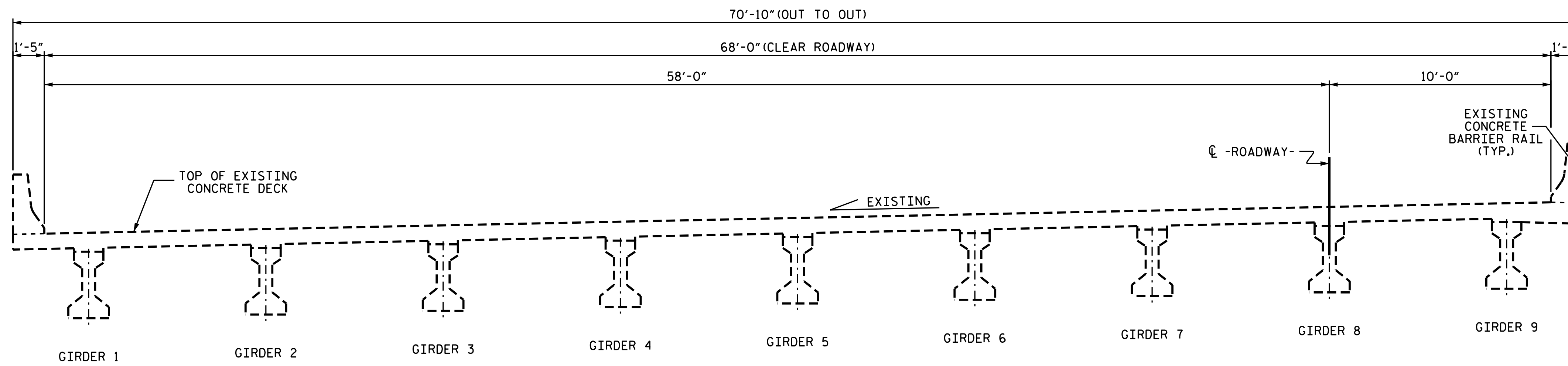
DRAWN BY : A. SORSENGINH DATE : 3/2018
CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

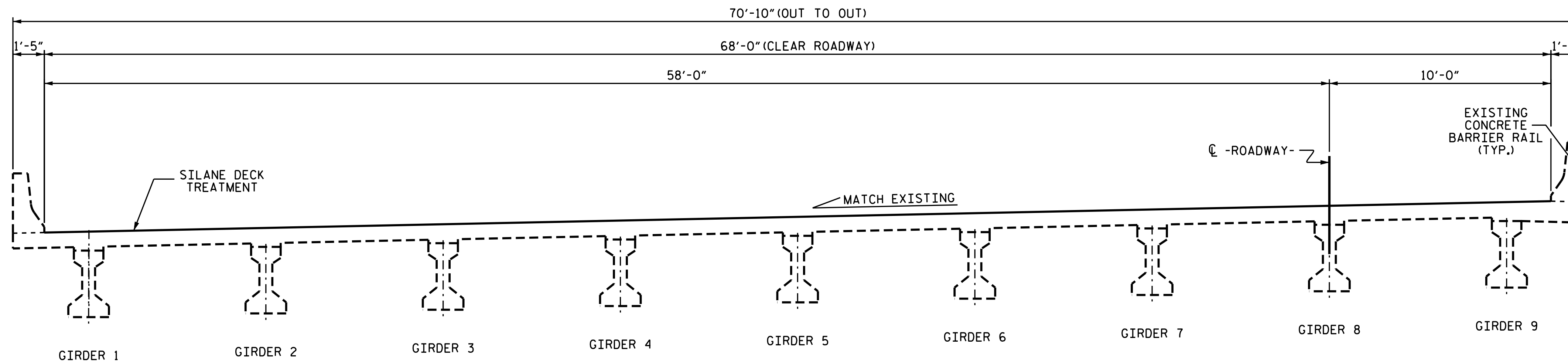
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S19-01
1			3			TOTAL SHEETS
2			4			6

NOTE:

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

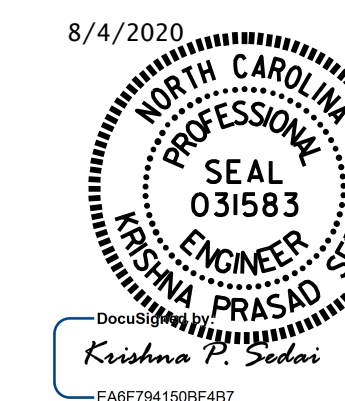


TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330449



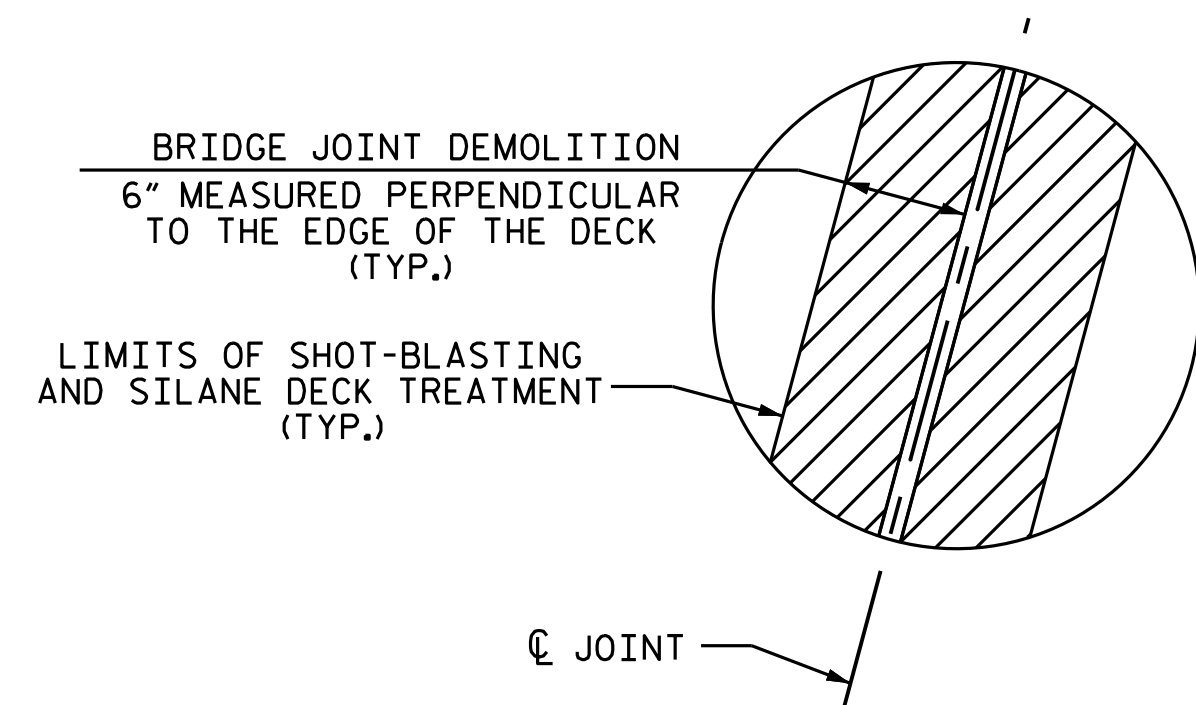
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

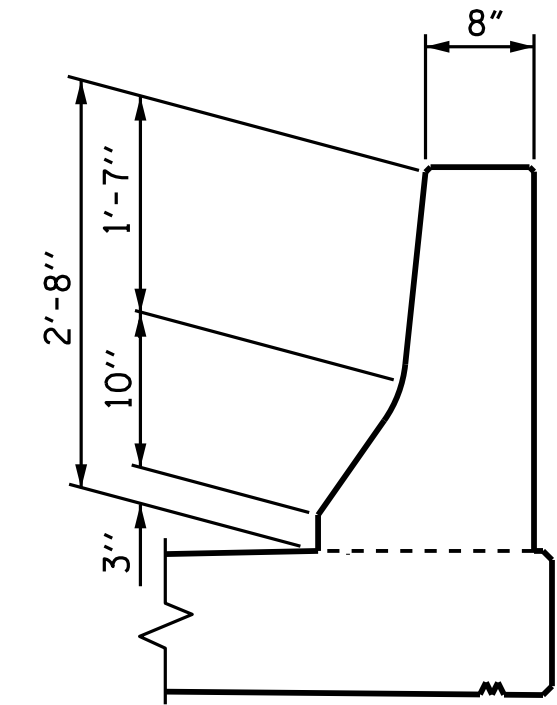
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S19-02
1			3			TOTAL SHEETS
2			4			6



DETAIL "A"



DETAIL "B"

NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

FOR BRIDGE JOINT DEMOLITION, SEE "JOINT DETAILS" SHEET.

FOR EXPXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

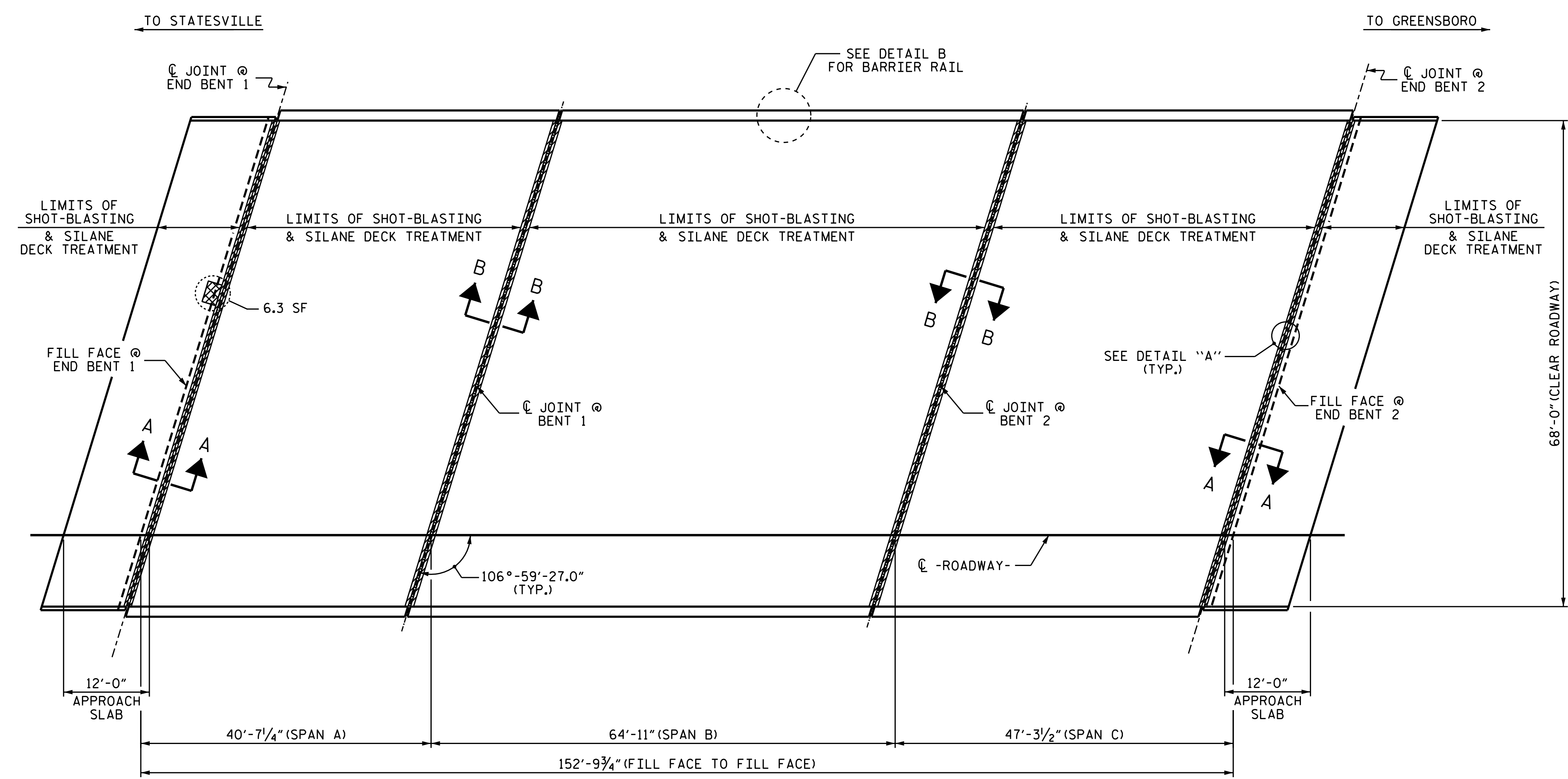
FOR SECTION A-A, SEE "JOINT DETAILS" SHEET.

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

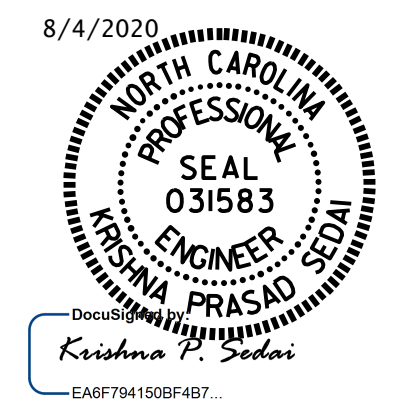
- BRIDGE JOINT DEMOLITION
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
- SHOTBLASTING BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	6.3 SF	
SHOTBLASTING APPROACH SLAB	173 SY	
SILANE DECK TREATMENT	173 SY	
BRIDGE QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
BRIDGE JOINT DEMOLITION	284.4 SF	
SHOTBLASTING BRIDGE DECK	1,130 SY	
SILANE DECK TREATMENT	1,130 SY	
SURFACE PREPARATION FOR CONCRETE BARRIER	1,042.4 SF	
SILANE BARRIER RAIL TREATMENT	1,042.4 SF	
EPOXY COATING CONCRETE GIRDER ENDS	1156.4 SF	



PLAN - SPANS A, B AND C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330449

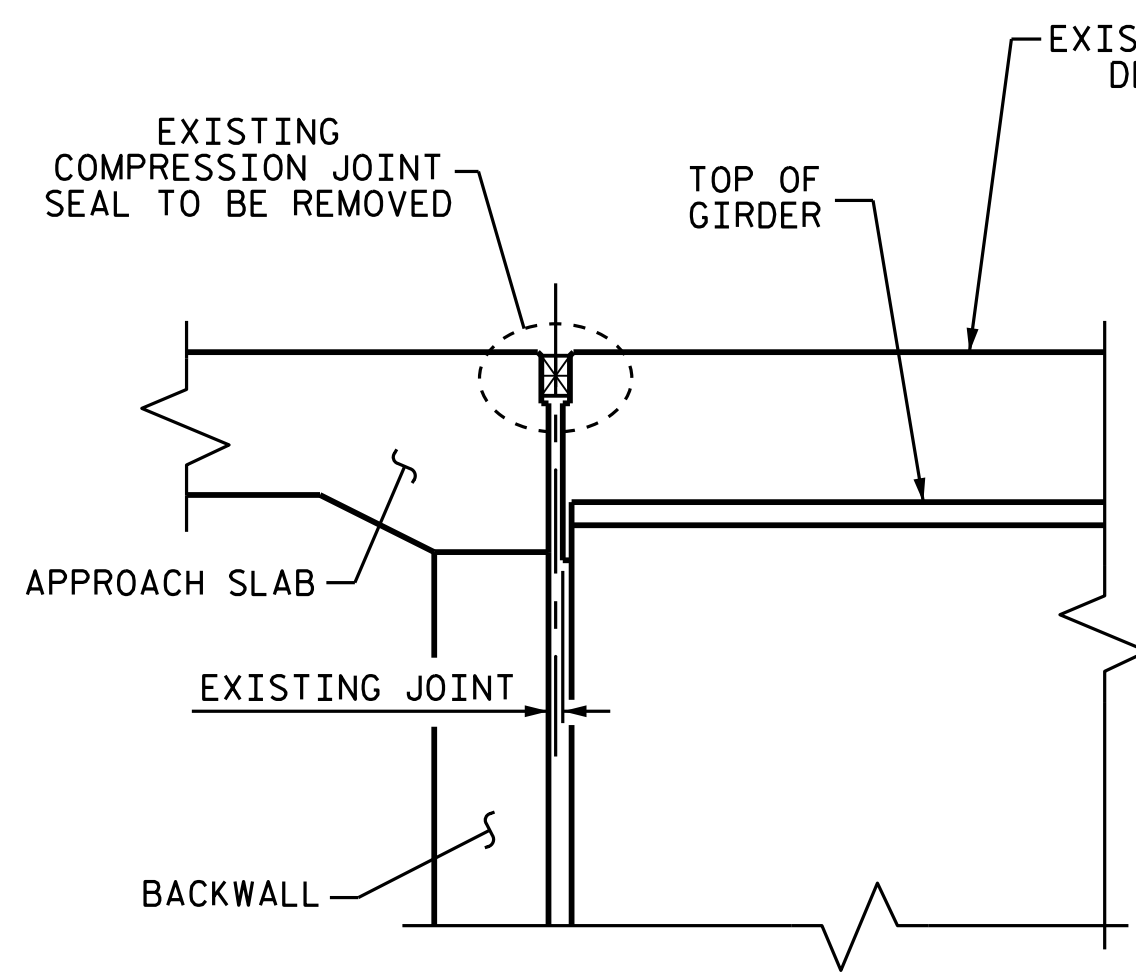


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 & SILANE DECK
 TREATMENT

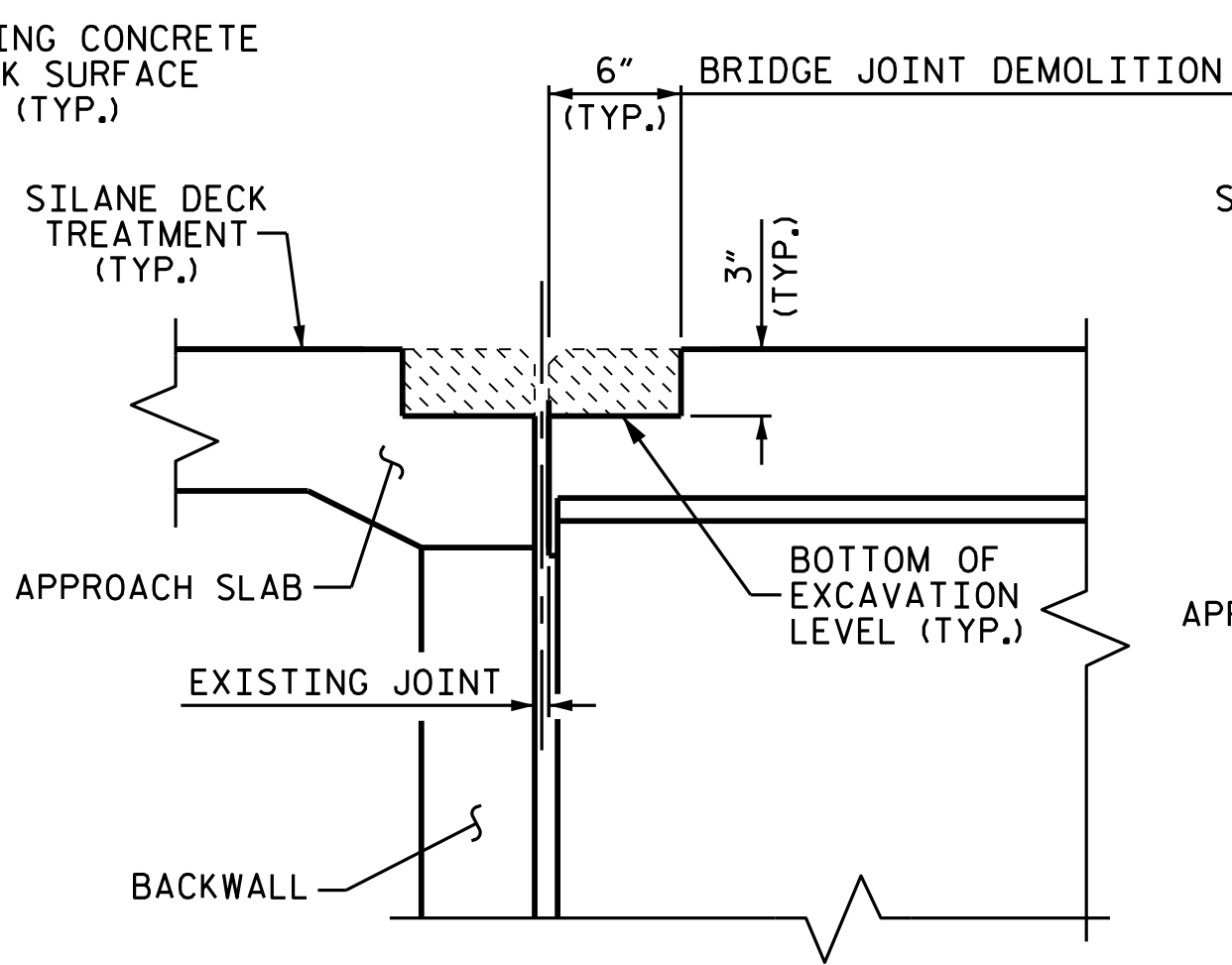
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

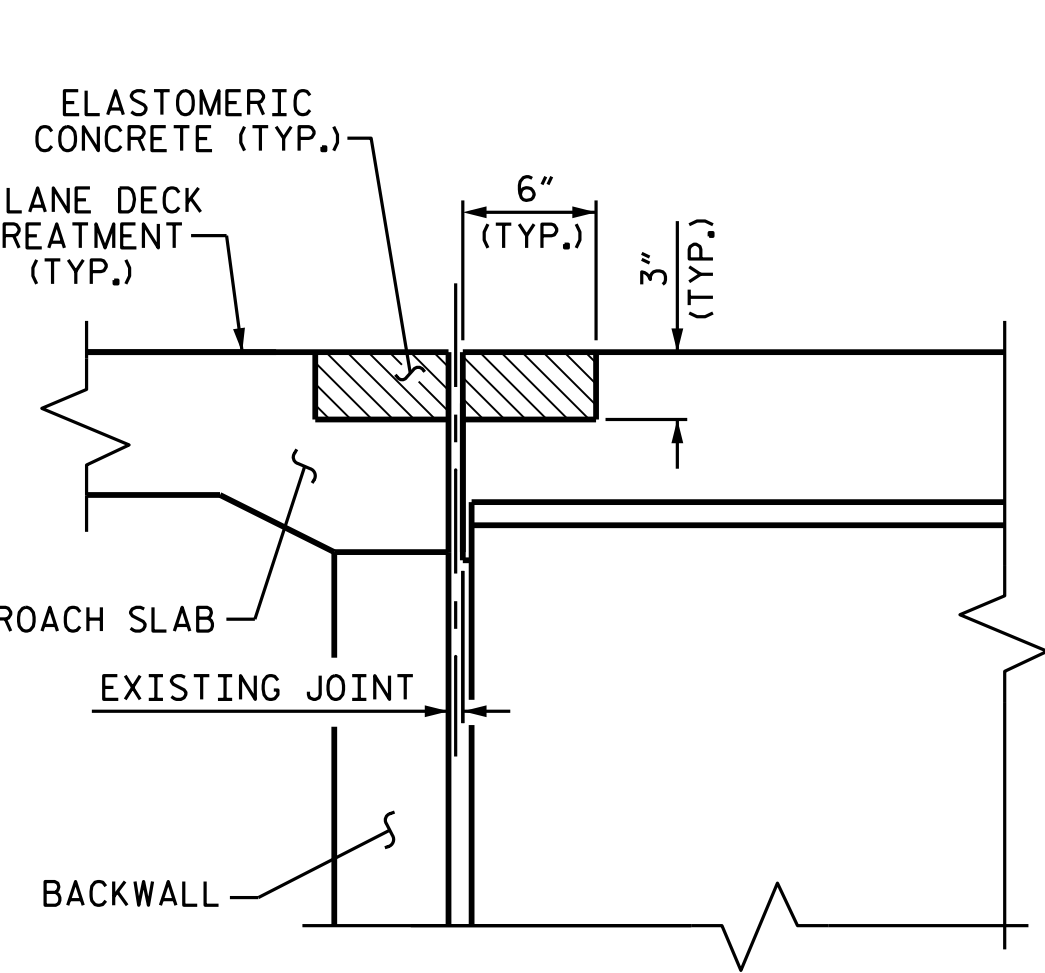
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			6
2			4			



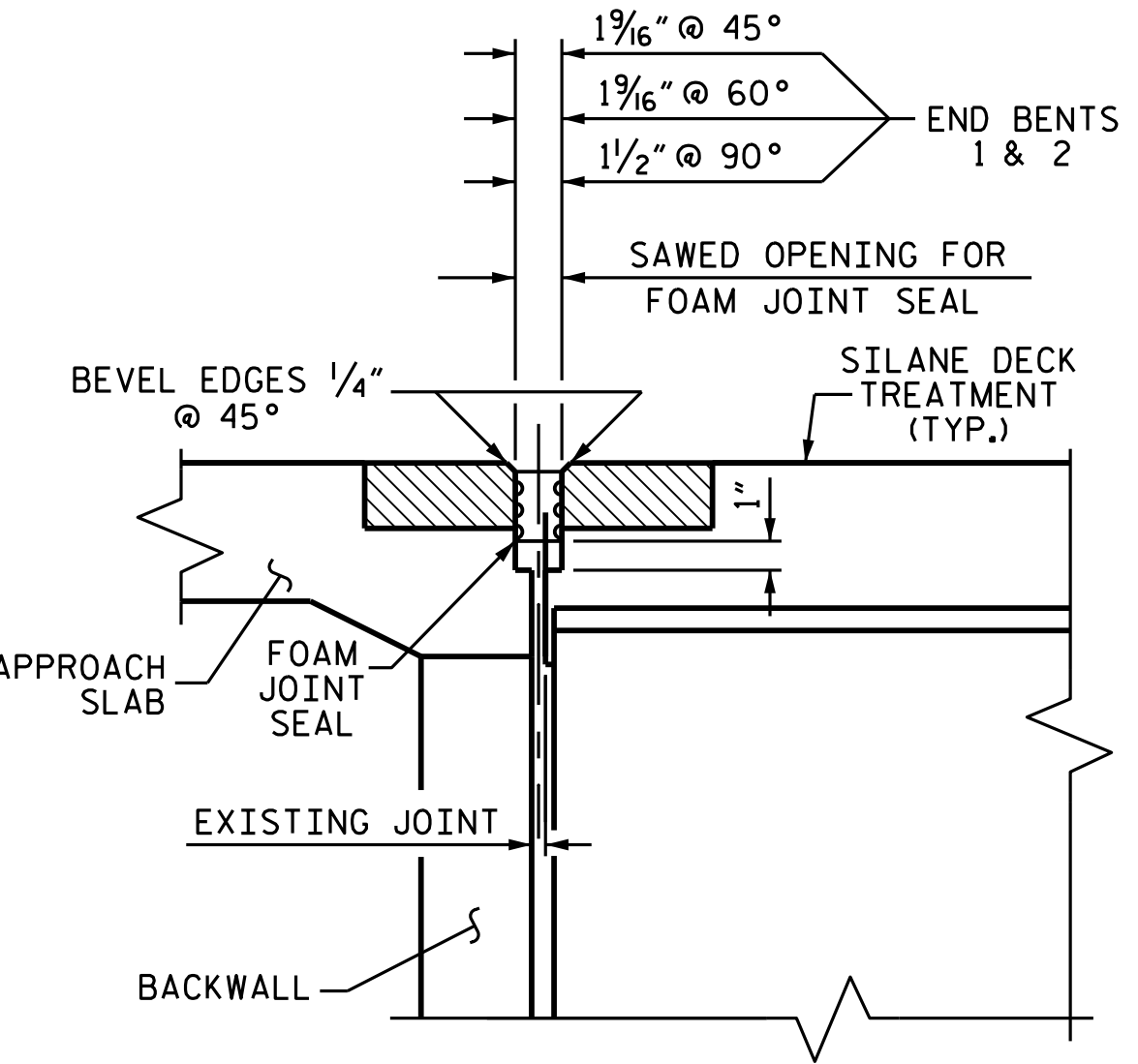
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



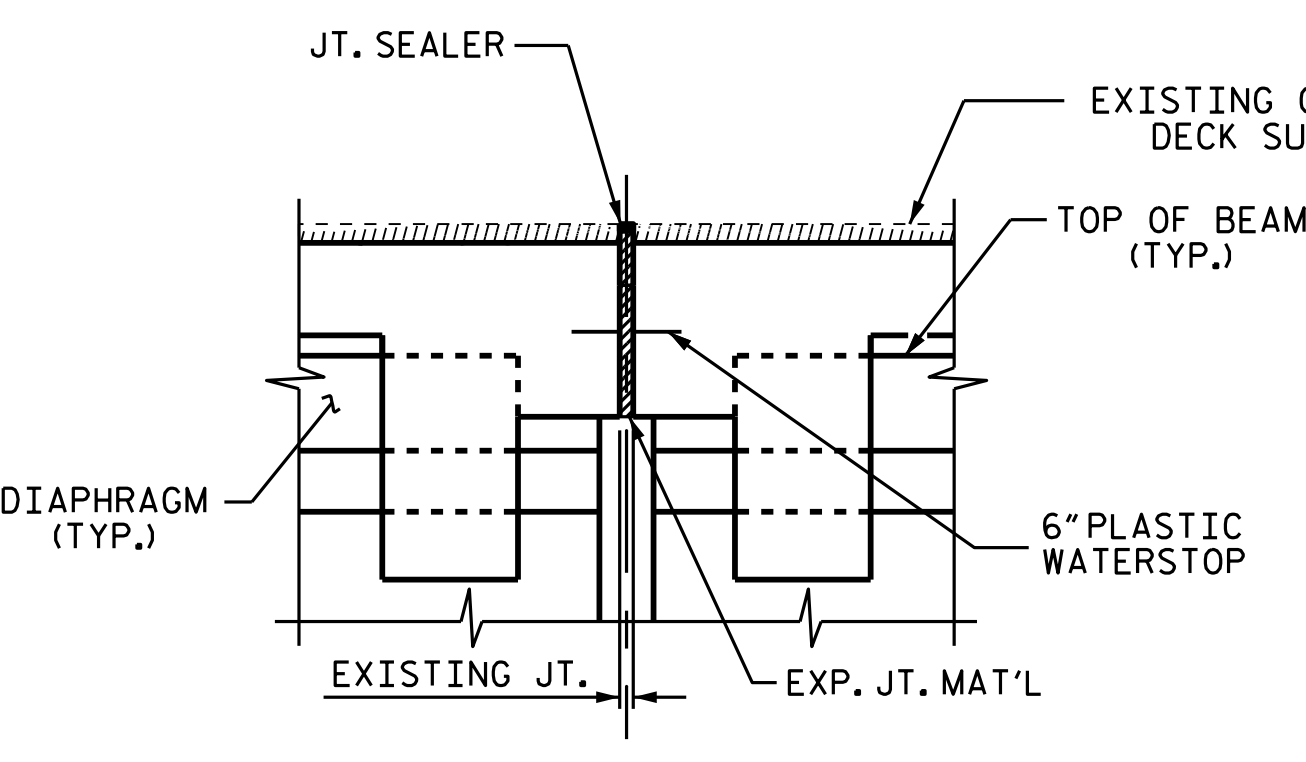
PROPOSED PRE-SAWED JOINT



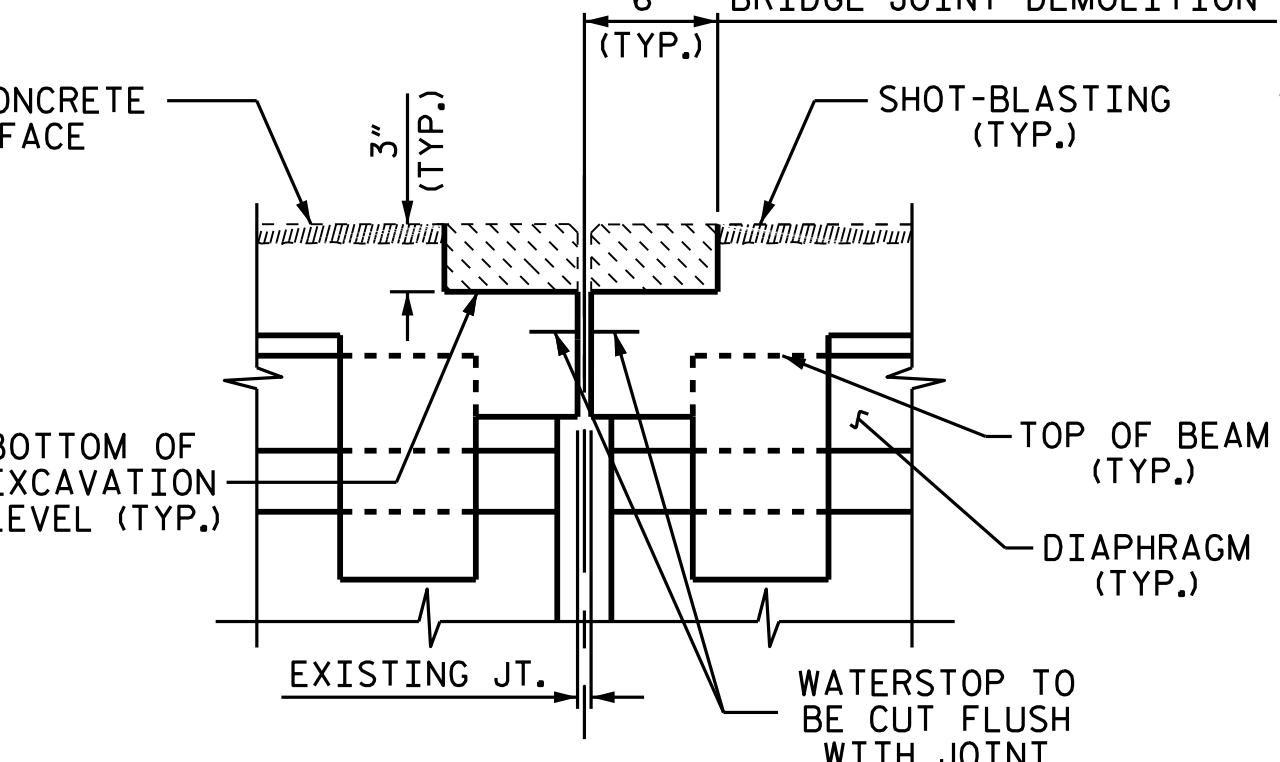
PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT END BENTS

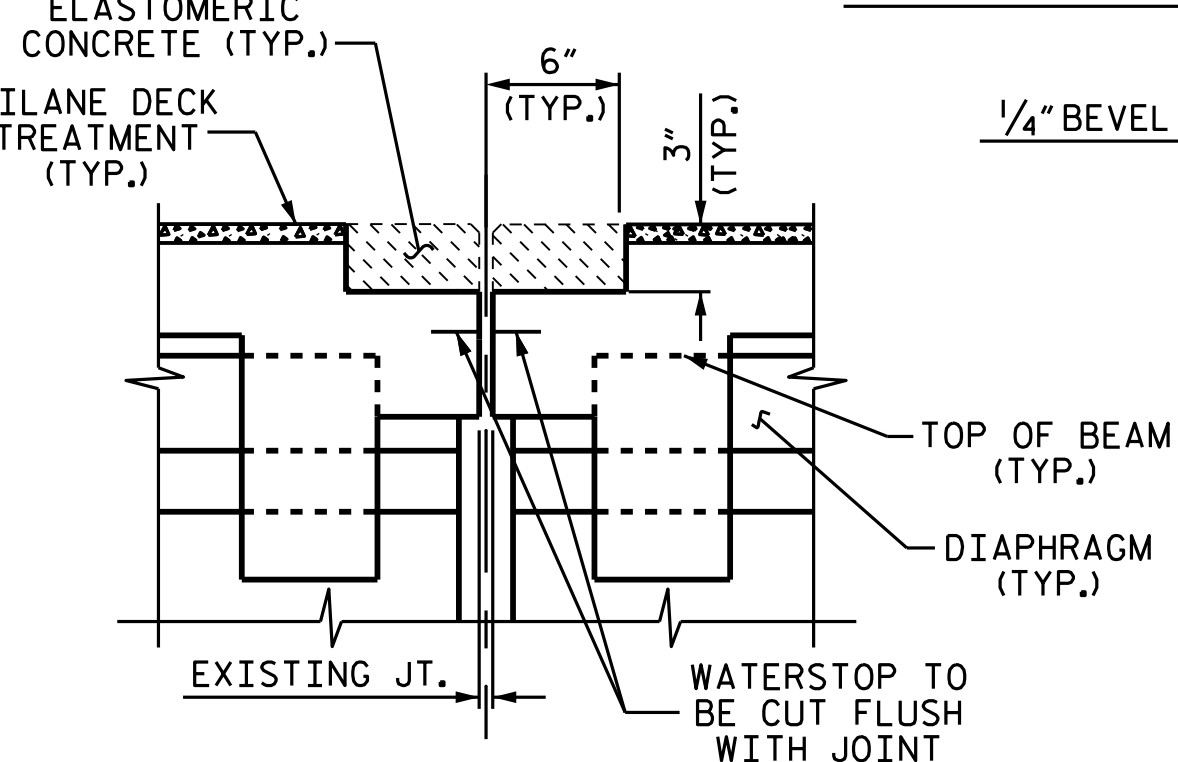
SECTION A-A



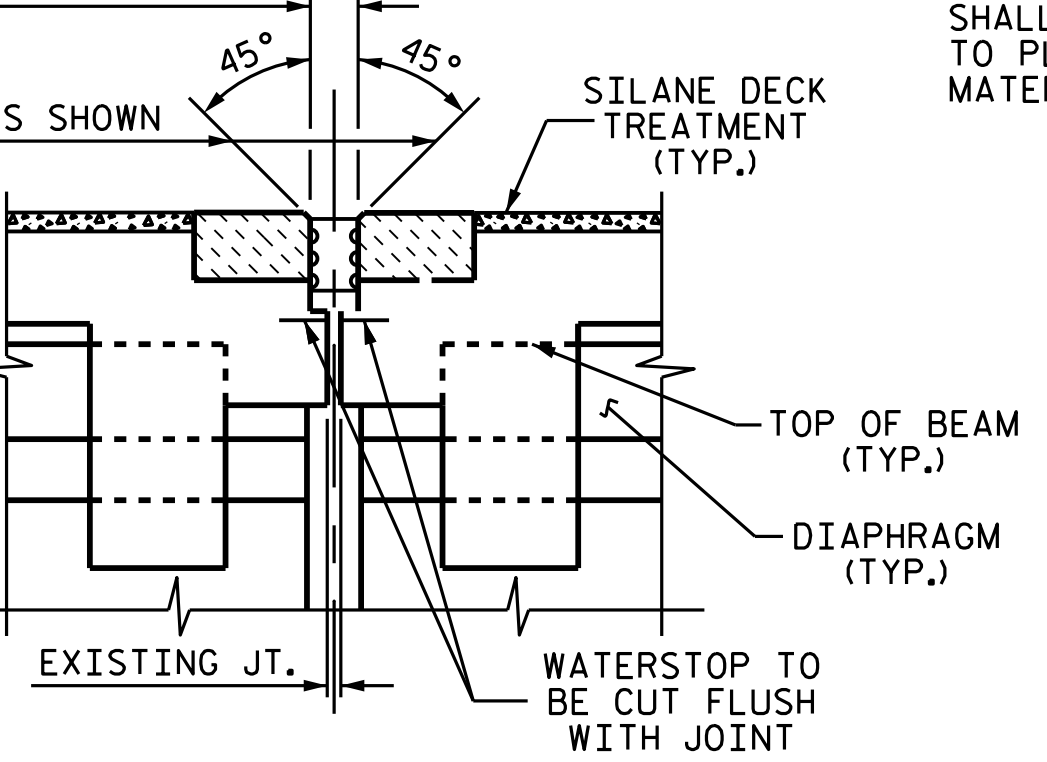
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



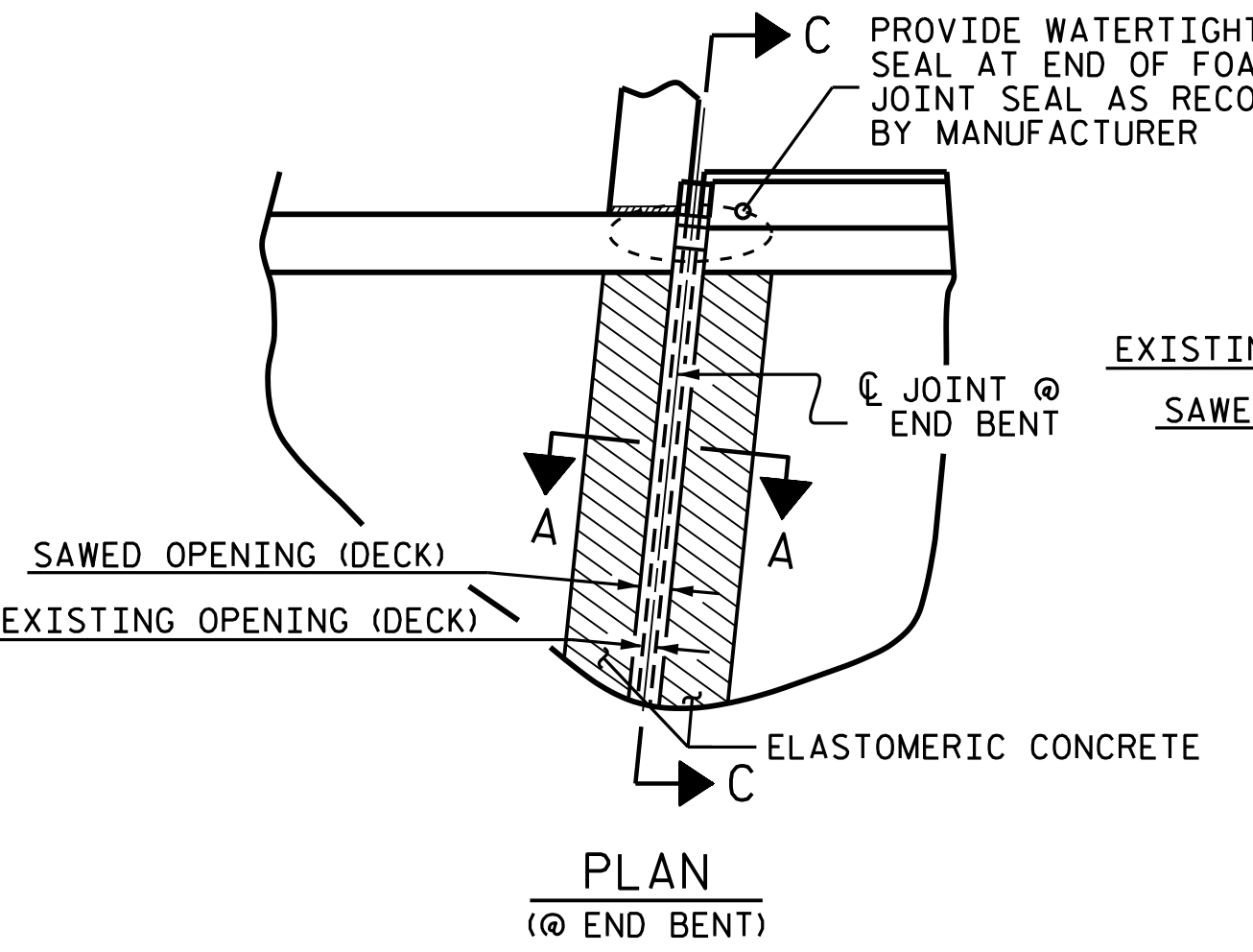
PROPOSED JOINT PRE-SAWED



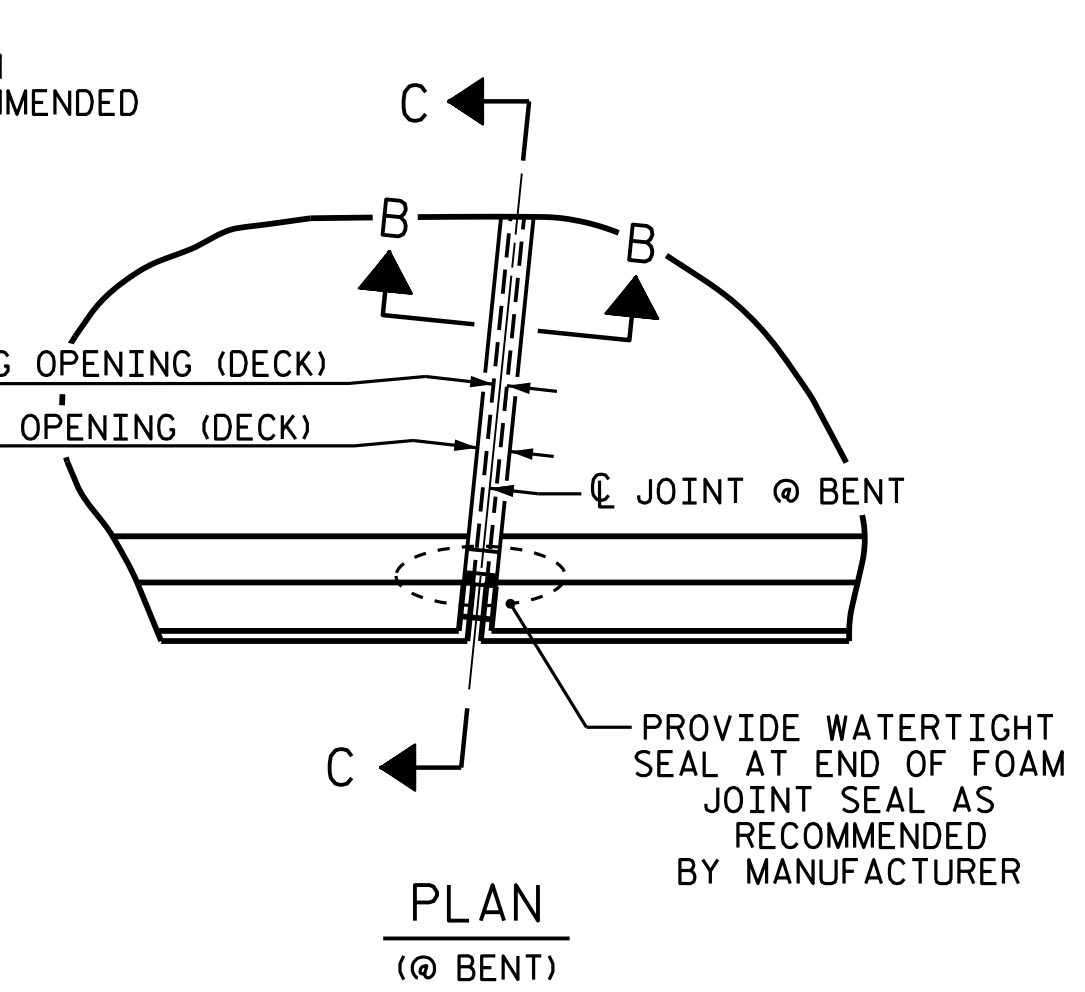
PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS

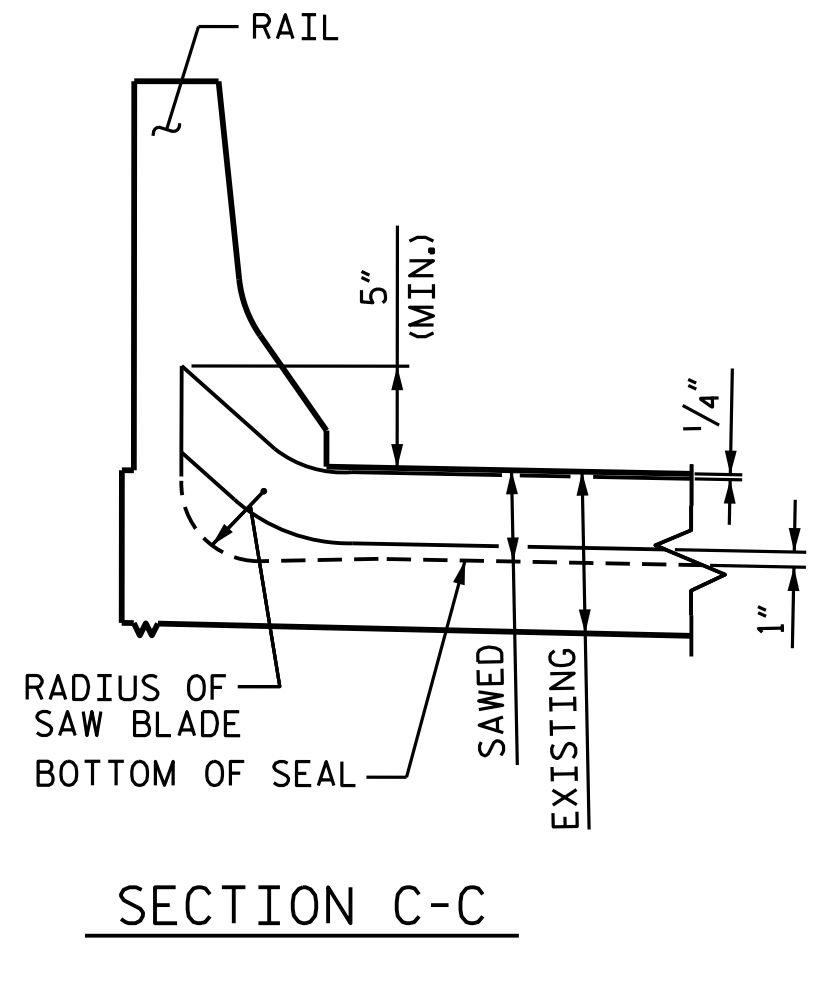
SECTION B-B



PLAN (@ END BENT)



PLAN (@ BENT)



SECTION C-C

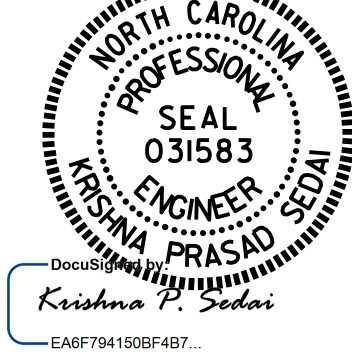
JOINT SEAL DETAILS

JOINT REPAIR QUANTITY TABLE

	BRIDGE JOINT DEMOLITION		ELASTOMERIC CONCRETE FOR PRESERVATION		FOAM JOINT SEALS FOR PRESERVATION	
	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL
END BENT 1	71.1 SF		17.8 CF		71.1 LF	
BENT 1	71.1 SF		17.8 CF		71.1 LF	
BENT 2	71.1 SF		17.8 CF		71.1 LF	
END BENT 2	71.1 SF		17.8 CF		71.1 LF	
* TOTAL	284.4 SF		71.2 CF		284.4 LF	

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

8/4/2020



DocuSign Envelope ID: 5A8F7941508F487...

PROJECT NO. I-5795
 FORSYTH COUNTY
 BRIDGE NO. 330449

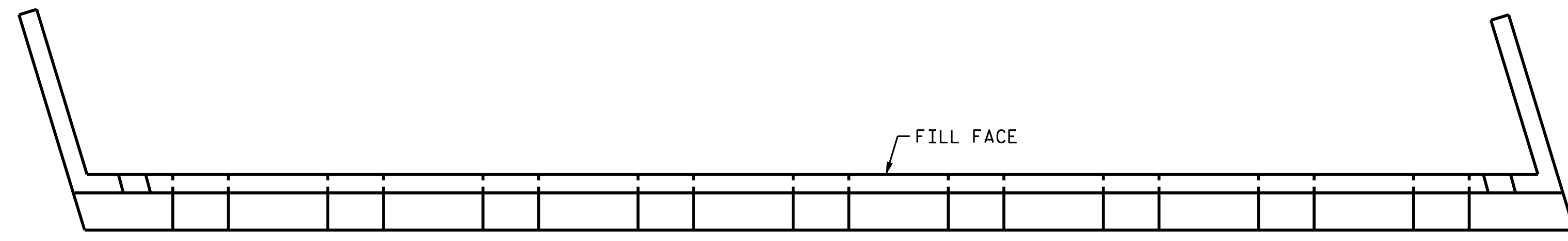
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

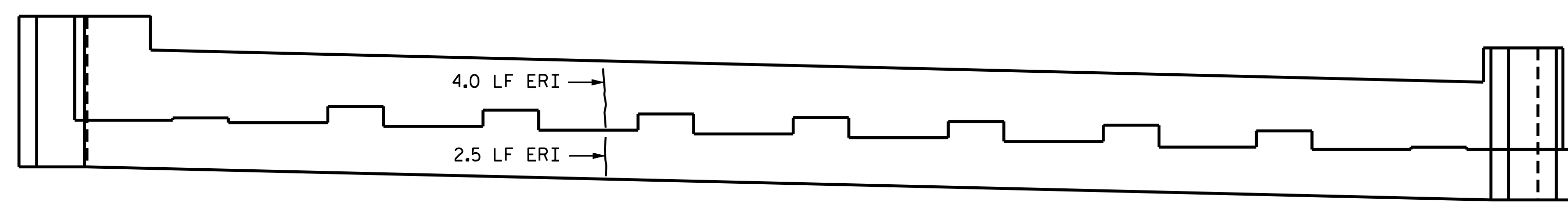
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S19-04
2			4			TOTAL SHEETS 6

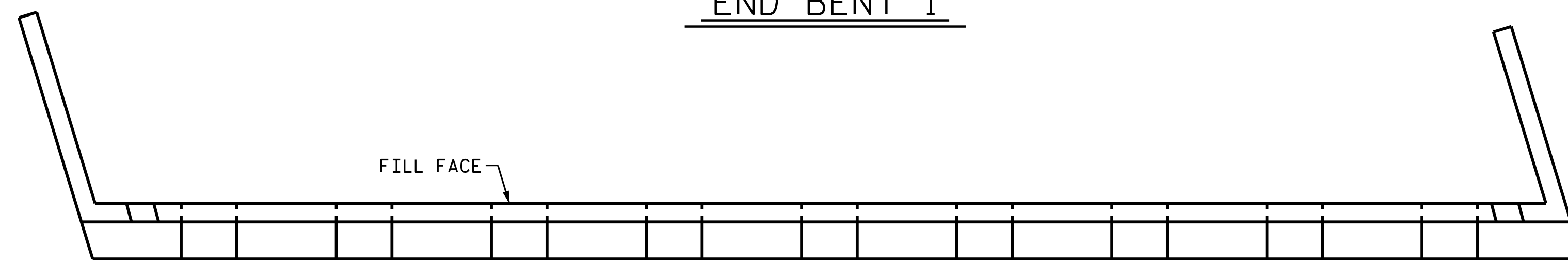


PLAN

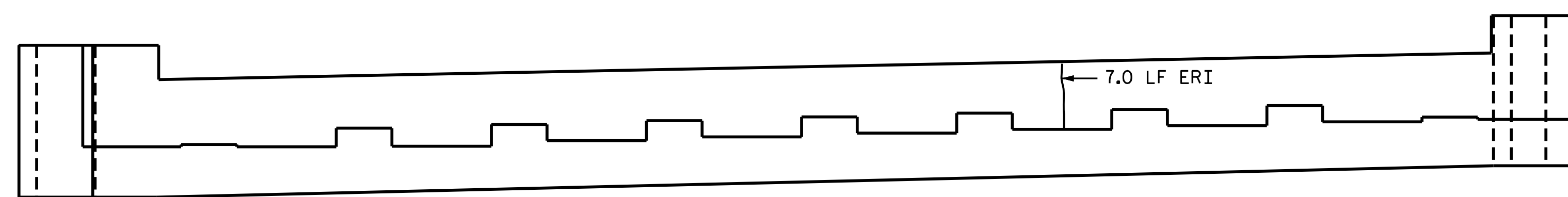


ELEVATION

END BENT 1



PLAN



ELEVATION

END BENT 2

- CONCRETE REPAIR AREA
- SHOTCRETE REPAIR AREA
- EPOXY RESIN INJECTION (ERI)

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
BACKWALL	4.0			
CAP	2.5			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	200.8			

AS-BUILT REPAIR QUANTITY TABLE

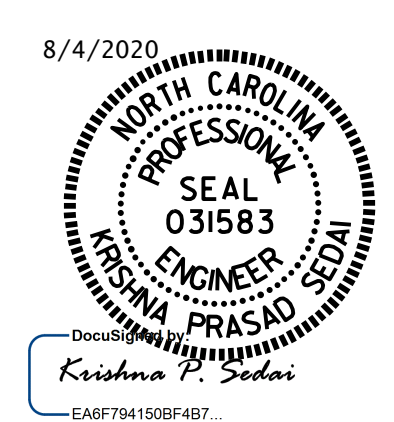
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
BACKWALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
BACKWALL	7.0			
CAP	0.0			
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	200.8			

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

NOTES:

- SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.
- 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 REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.
- FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.
- FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.
- CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5795
 FORSYTH COUNTY
 BRIDGE: 330449



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENTS 1 & 2

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S19-05	
2				4			TOTAL SHEETS 6	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

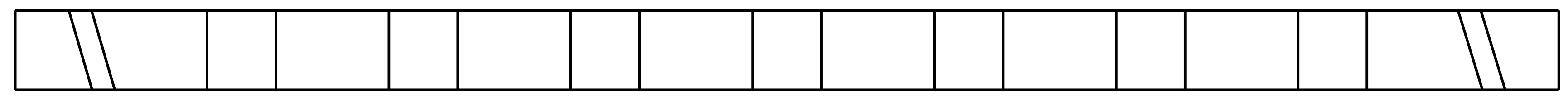
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

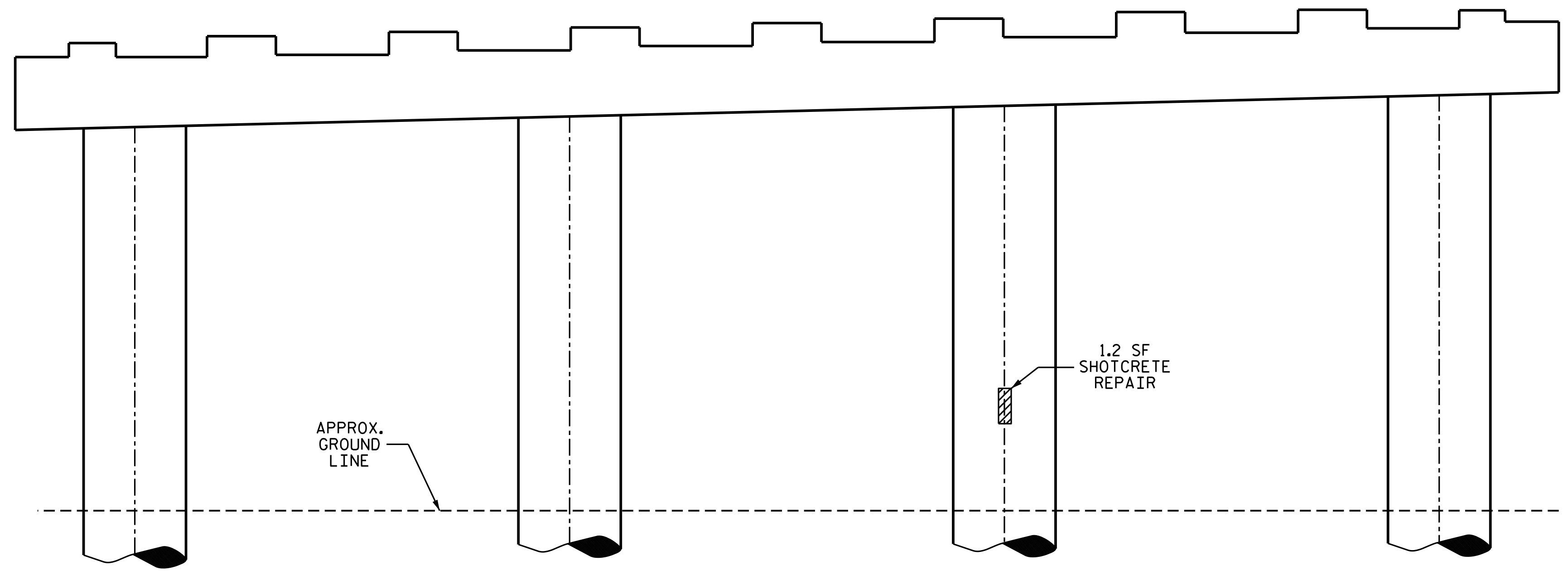
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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



PLAN - TOP OF CAP

- SHOTCRETE AREA
- CONCRETE AREA
- ERI - EPOXY RESIN INJECTION

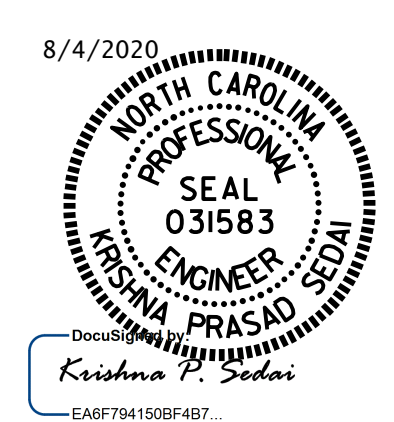


ELEVATION - SPAN C VIEW

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	1.2	0.6		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP (BENTS 1 & 2)	520.6			

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

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330449



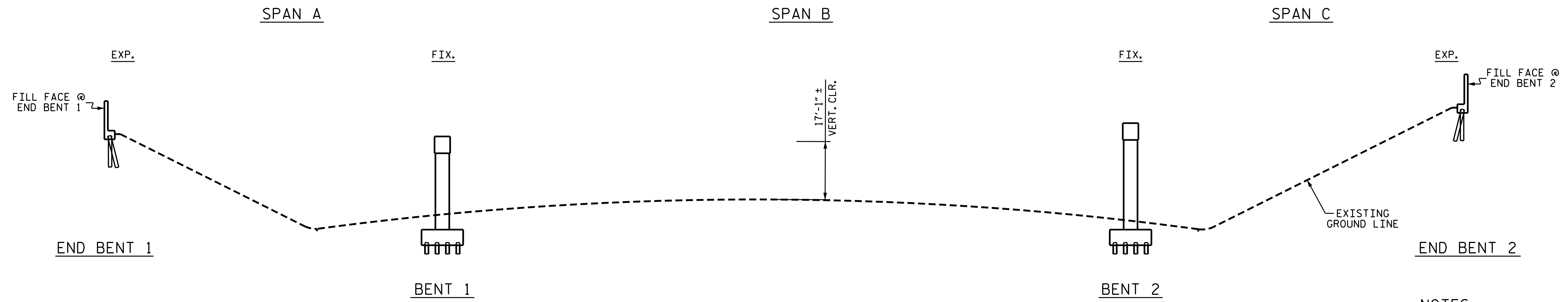
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

 SUBSTRUCTURE
 BENT 2
 SPAN C FACE

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

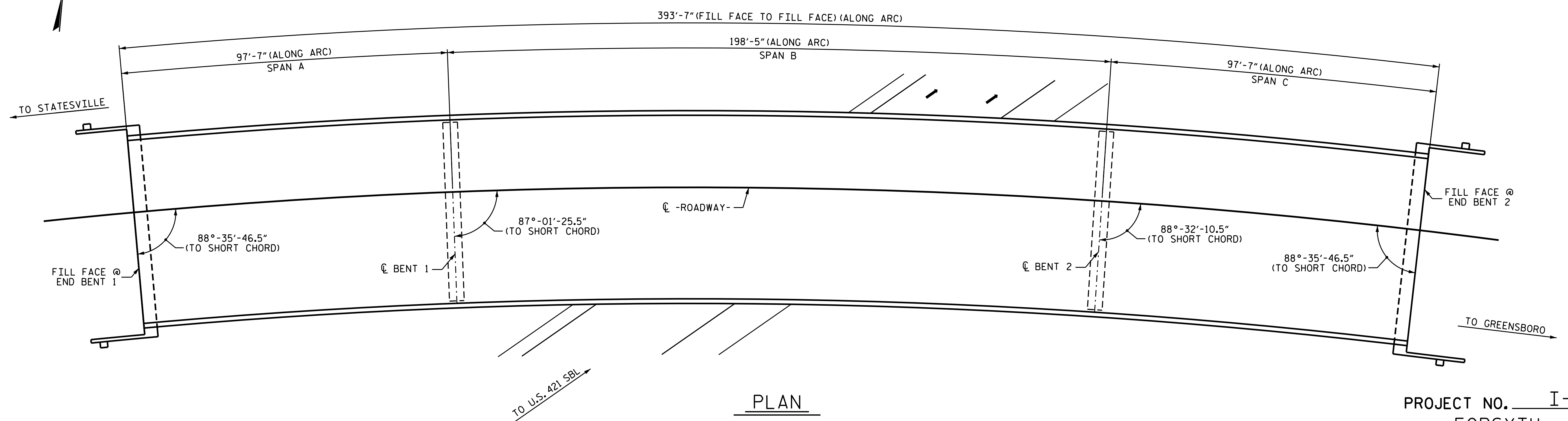
NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S19-06 TOTAL SHEETS 6
2			4	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



SECTION ALONG C ROADWAY

NOTES
 PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 7/9/2020.
 BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.



PLAN

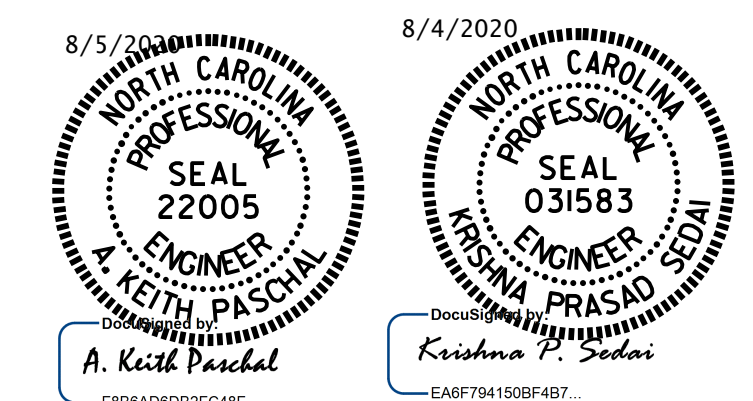
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____

SCOPE OF WORK

- SURFACE PREPARATION AND PAINTING OF GIRDER ENDS AND BEARINGS.
- PREPARE CONCRETE DECK SURFACE BY SHOTBLASTING.
- APPLY SILANE DECK TREATMENT.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.
- REMOVE DEBRIS AND EPOXY COAT END BENT.

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330508



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 OVER I-40 BUS EBL
 (RAMP D)**

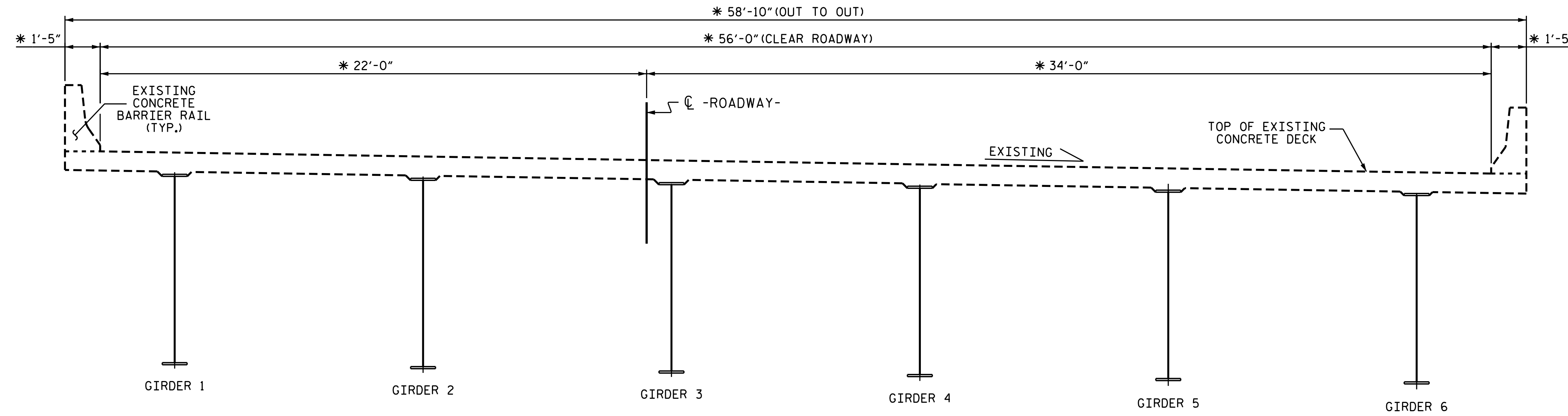
DRAWN BY : A. SORSENGINH DATE : 1/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S20-01
1			3			TOTAL SHEETS
2			4			4

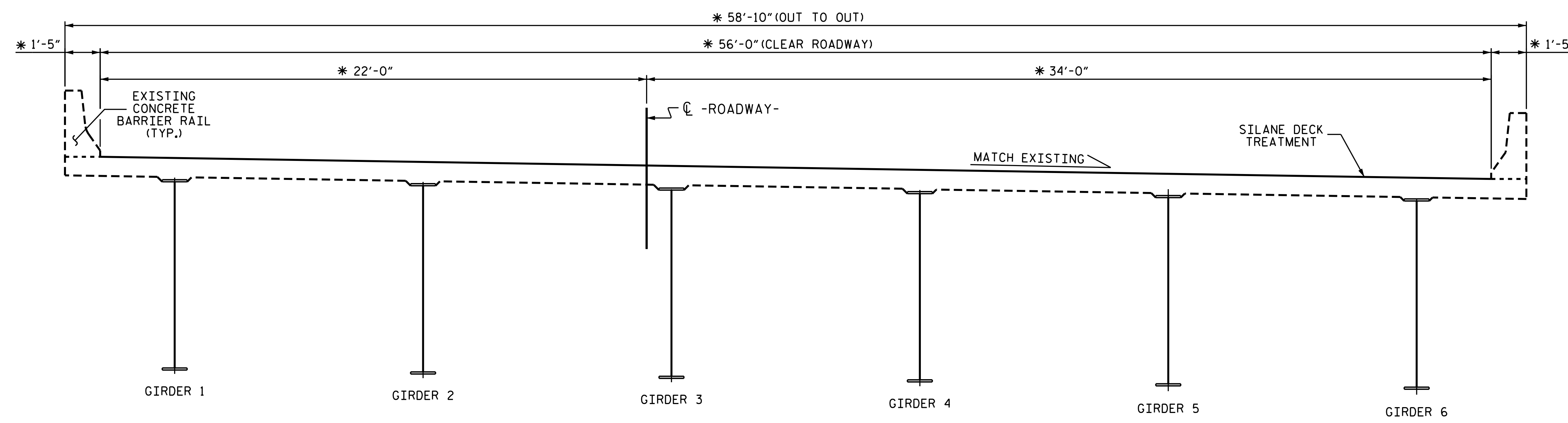
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NOTE:

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

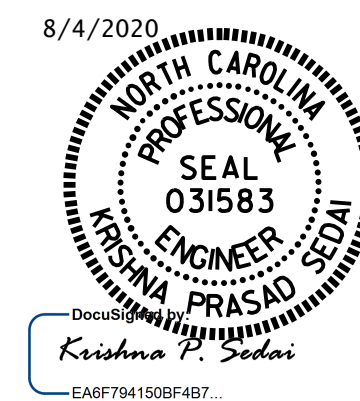


TYPICAL SECTION
 (EXISTING)
 * RADIAL DIMENSION



TYPICAL SECTION
 (PROPOSED)

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330508



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DRAWN BY : A. SORSENGINH DATE : 2/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S20-02
1			3			TOTAL SHEETS
2			4			4

NOTES:


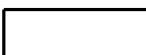
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES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

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

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

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

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

-  CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
-  SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES

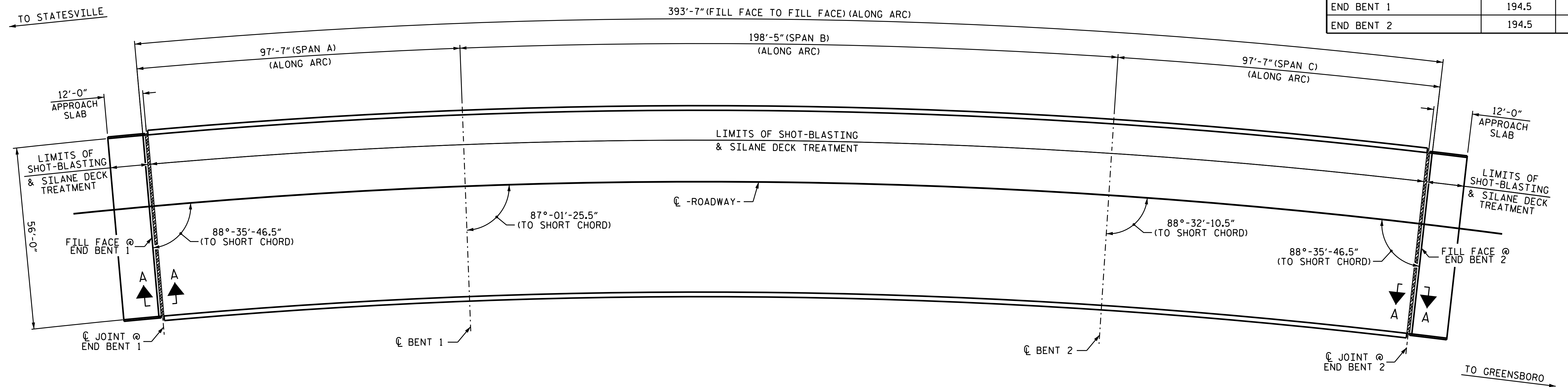
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLAST APPROACH SLAB	194 SY	
SILANE DECK TREATMENT	194 SY	
SILANE BARRIER RAIL TREATMENT	16 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	16 SF	

BRIDGE QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLAST BRIDGE DECK	2,430 SY	
SILANE DECK TREATMENT	2,430 SY	
SILANE BARRIER RAIL TREATMENT	2753 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	2753 SF	

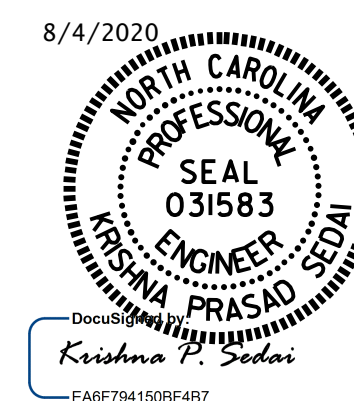
EPOXY COATING

	ESTIMATE	ACTUAL
	AREA SQ. FT.	AREA SQ. FT.
END BENT 1	194.5	
END BENT 2	194.5	



PLAN - SPANS A, B AND C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330508

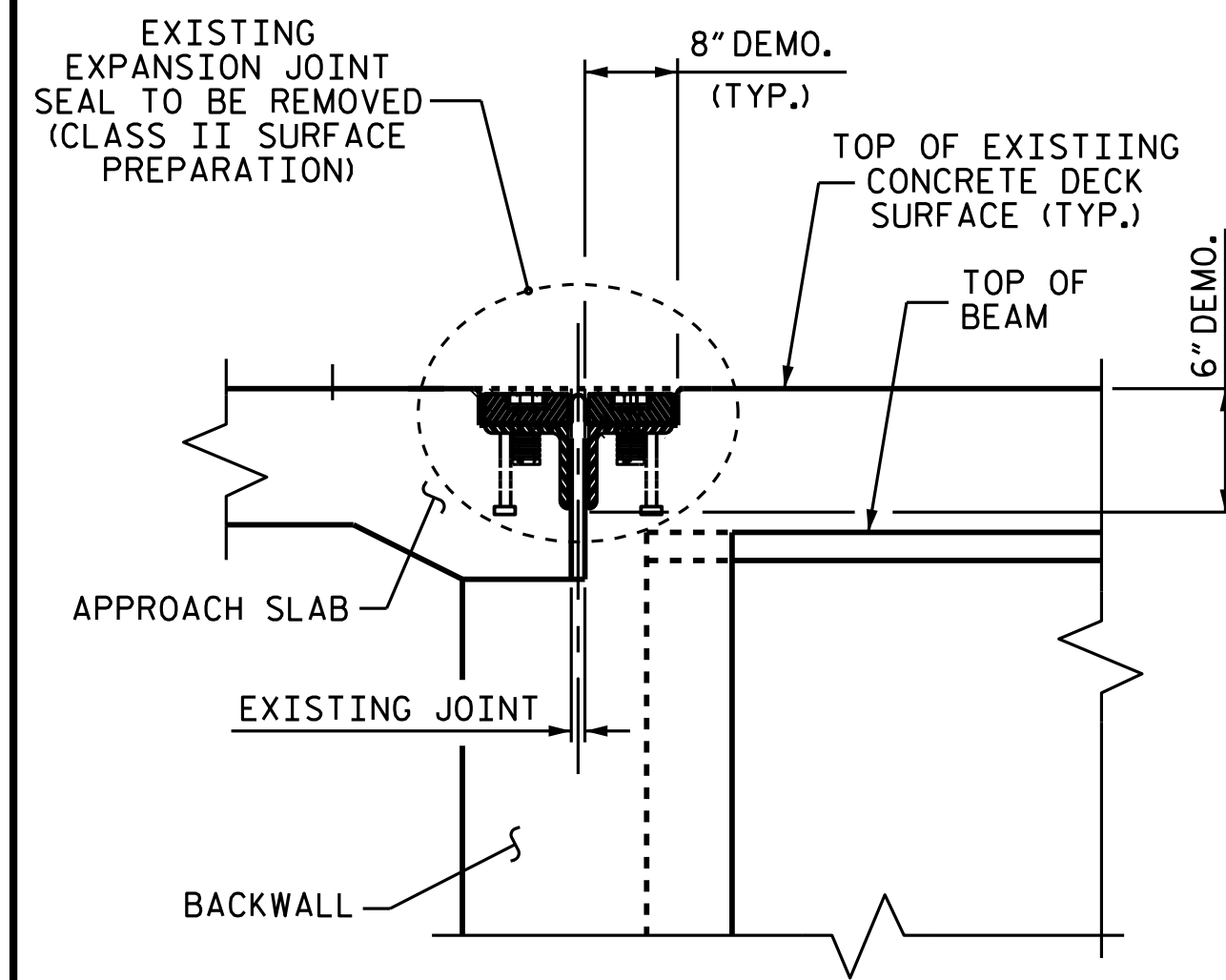


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & SILANE DECK
 TREATMENT**

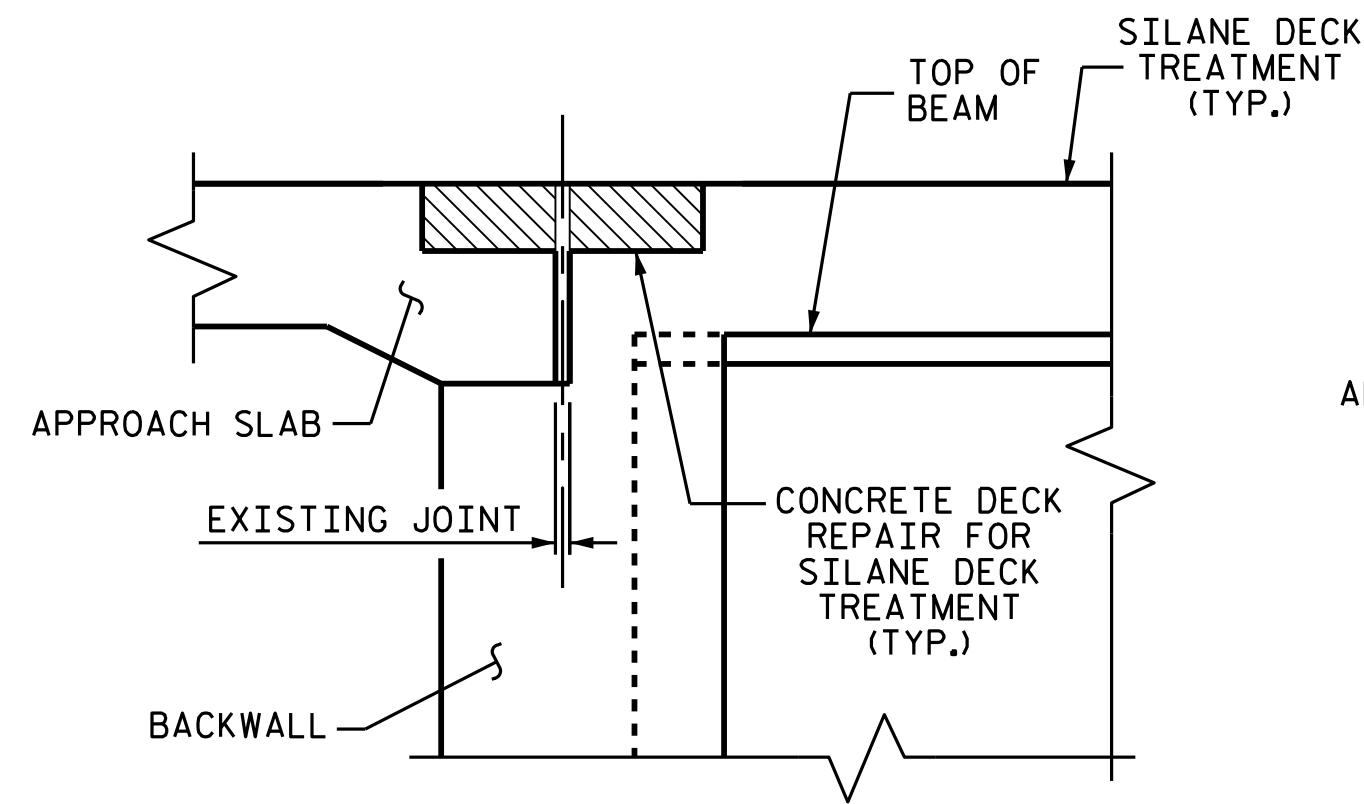
DRAWN BY : A. SORSENGINH DATE : 2/2018
 CHECKED BY : M. G. SHAIKH DATE : 3/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

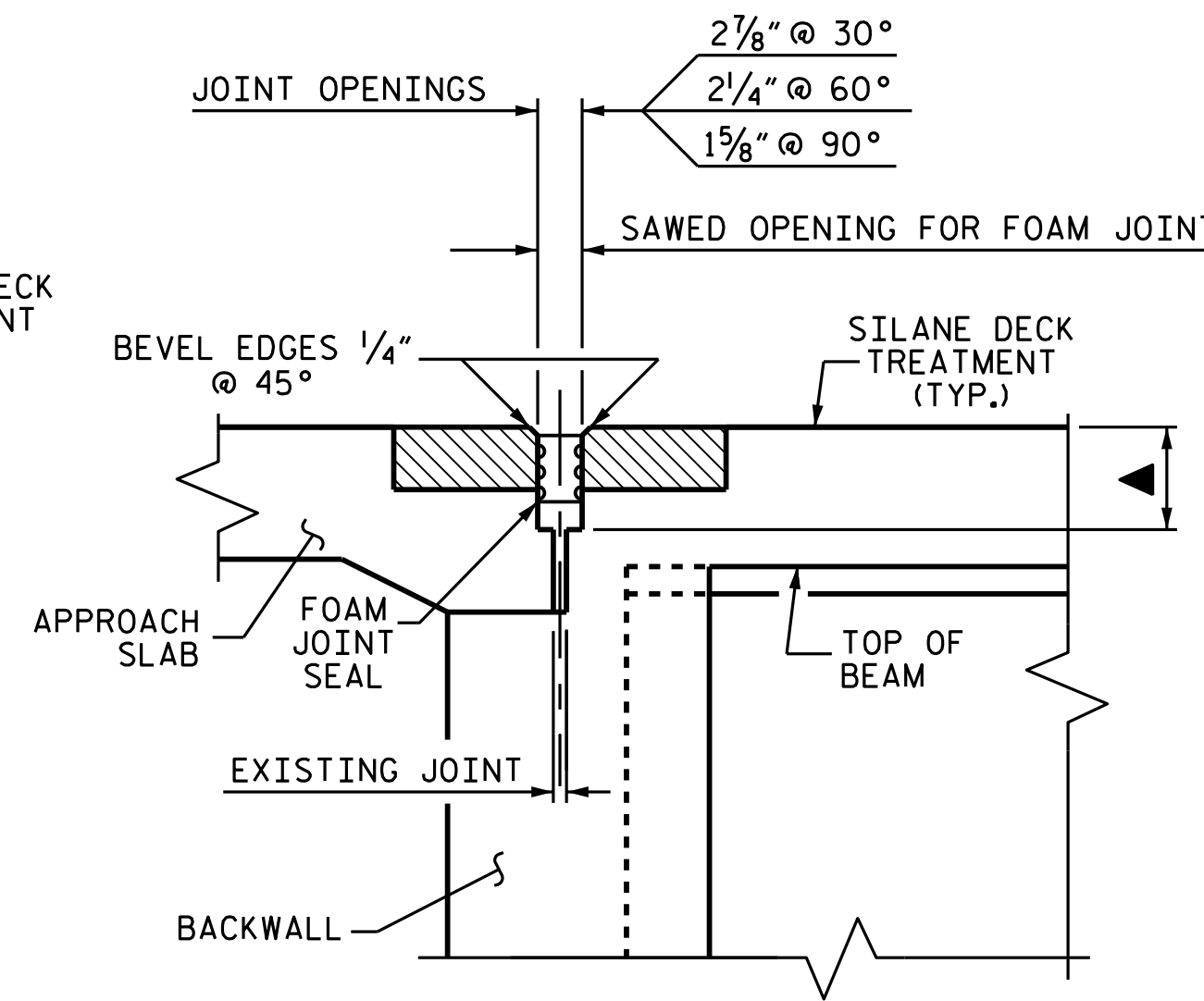
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S20-03
1			3			TOTAL SHEETS
2			4			4



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

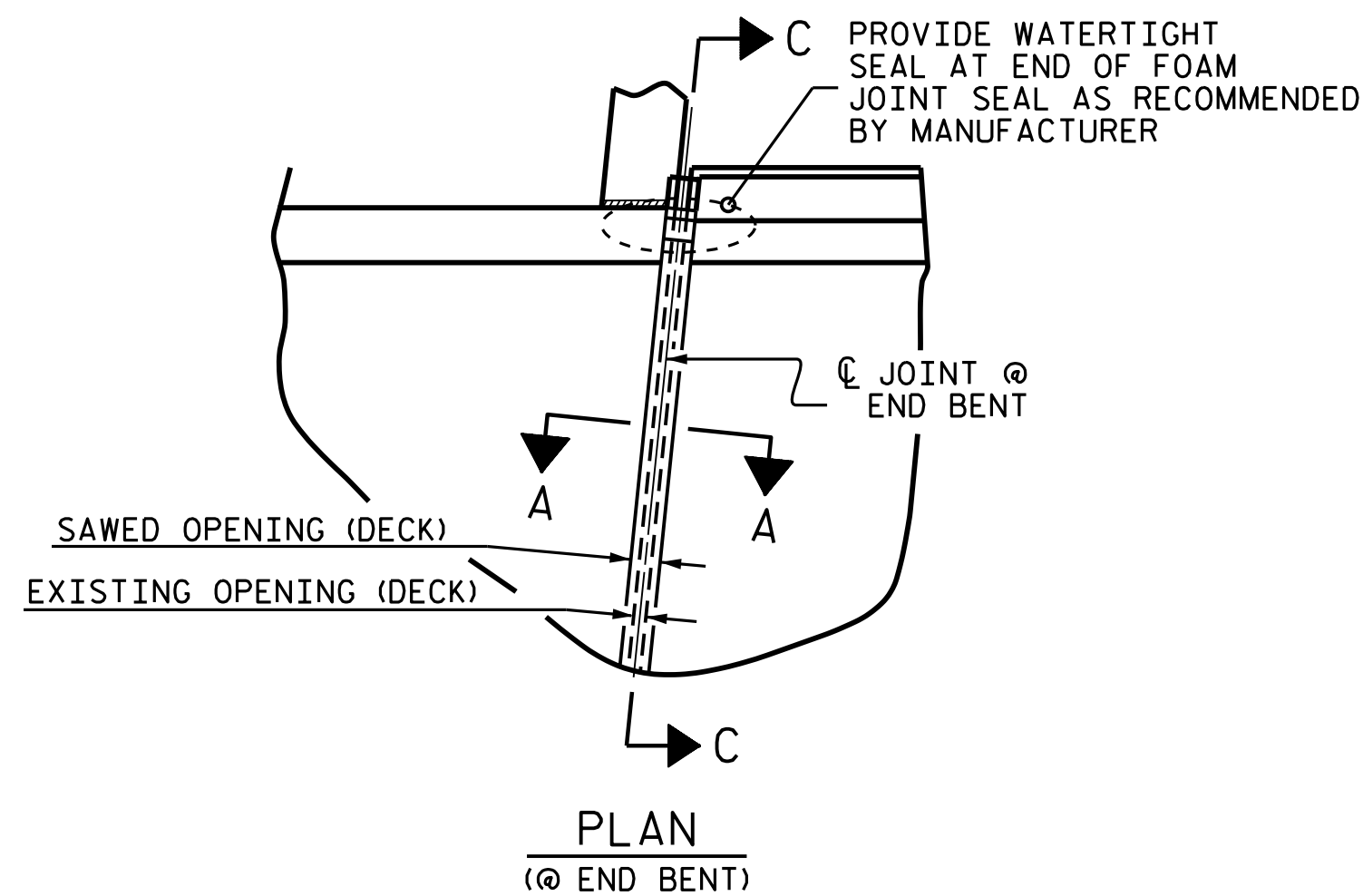


PROPOSED FOAM JOINT SEAL

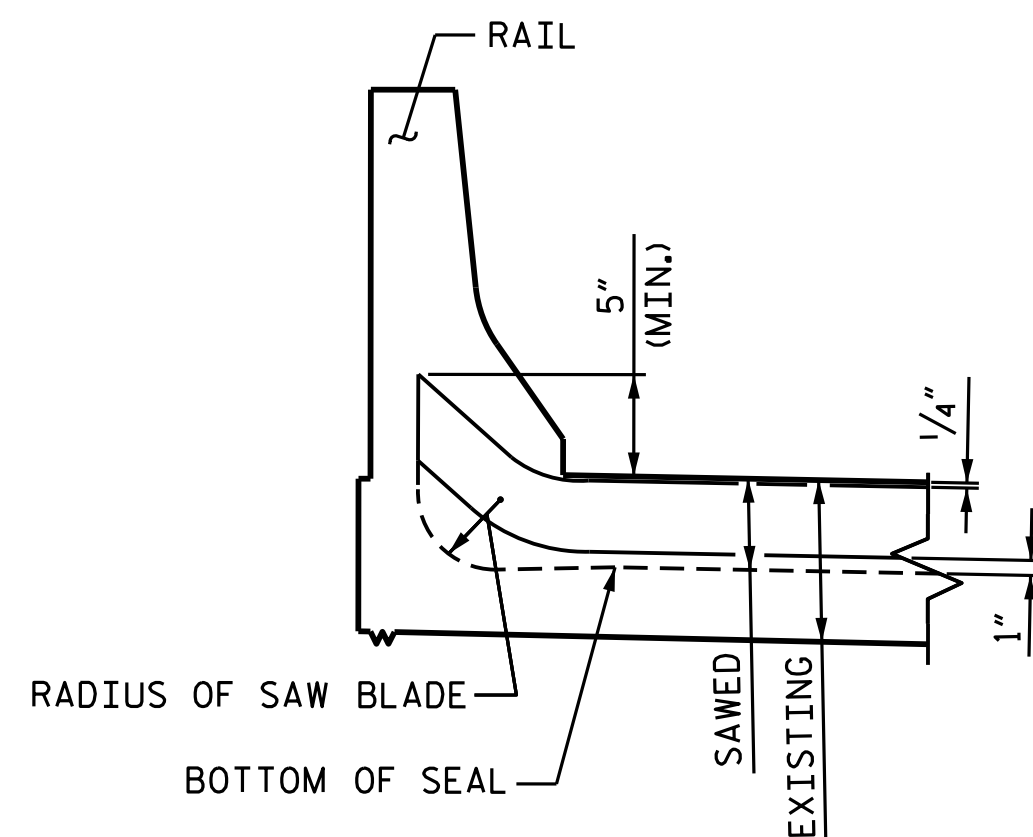
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A



PLAN (@ END BENT)



SECTION C-C

JOINT SEAL DETAILS AT END BENTS

NOTES

FOAM JOINTS SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

THE FOAM JOINTS SHALL MEET THE MANUFACTURER'S RECOMMENDATION FOR THE SIZE OF OPENING ON THE PLANS, AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

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

THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE END BENTS 1 AND 2.

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

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

ELASTOMERIC CONCRETE		
END BENT 1	14.0	(CU. FT.)
END BENT 2	14.0	(CU. FT.)
* TOTAL	28.0	(CU. FT.)

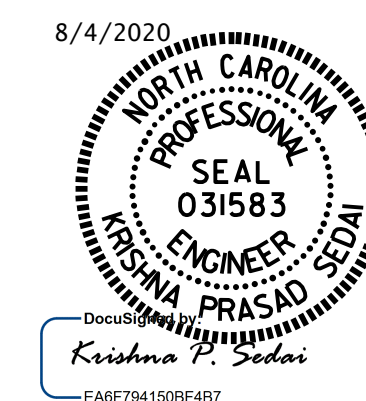
* BASED ON 6" (EA. SIDE) X 3" BLOCKOUT.

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
END BENT 1	56.0 LF	
END BENT 2	56.0 LF	
TOTAL	112.0 LF	

CLASS II SURFACE PREPARATION		
	ESTIMATED	ACTUAL
END BENT 1	6.2 SY	
END BENT 2	6.2 SY	
TOTAL	12.4 SY	

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT		
	ESTIMATED	ACTUAL
END BENT 1	56.0 SF	
END BENT 2	56.0 SF	
TOTAL	112.0 SF	

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330508



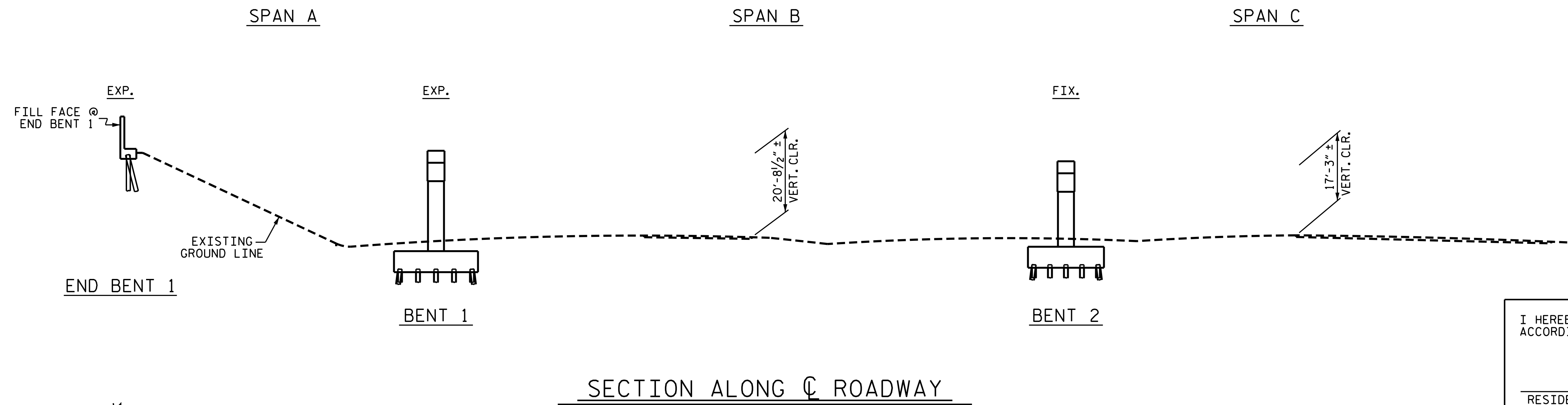
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

DRAWN BY : A. SORSENGINH DATE : 5/2020
 CHECKED BY : M. G. SHAIKH DATE : 5/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S20-04
2			4			TOTAL SHEETS 4



NOTES

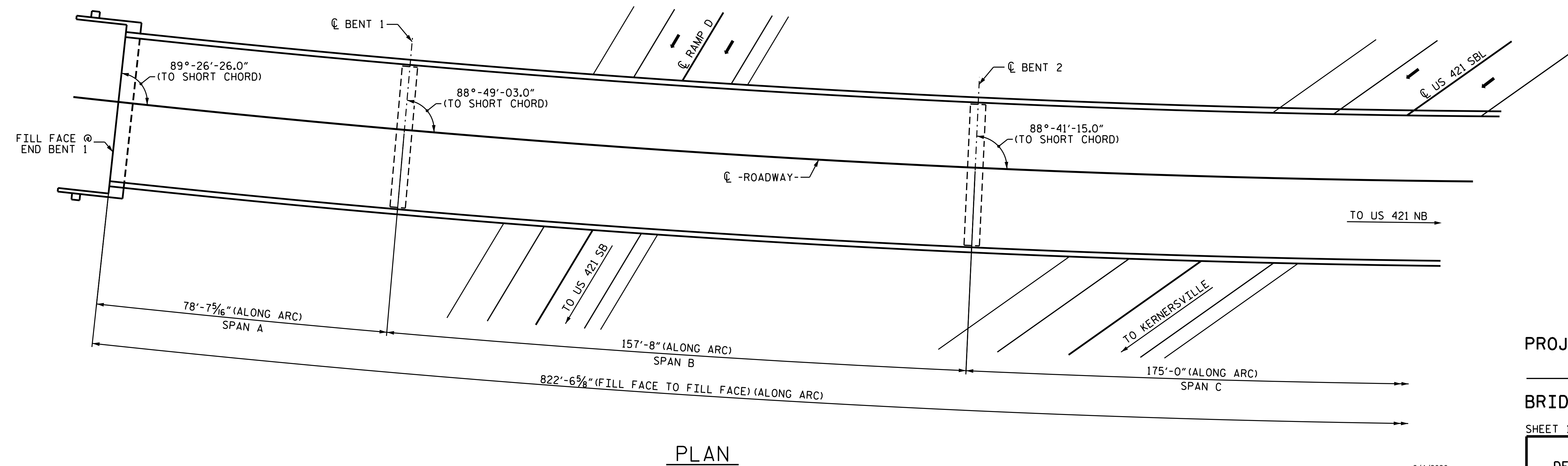
PROFILE INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 9/10/2018.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

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

RESIDENT ENGINEER _____ DATE _____

- SCOPE OF WORK**
- SURFACE PREPARATION AND PAINTING OF GIRDER ENDS AND BEARINGS.
 - PREPARE CONCRETE DECK SURFACE BY SHOTBLASTING.
 - APPLY SILANE DECK TREATMENT.
 - REMOVE EXISTING EXPANSION JOINT AT END BENTS AND REPLACE WITH TRANSFLEX JOINT.
 - REMOVE DEBRIS AND EPOXY COAT TOP OF END BENT CAPS.



PROJECT NO. I-5795

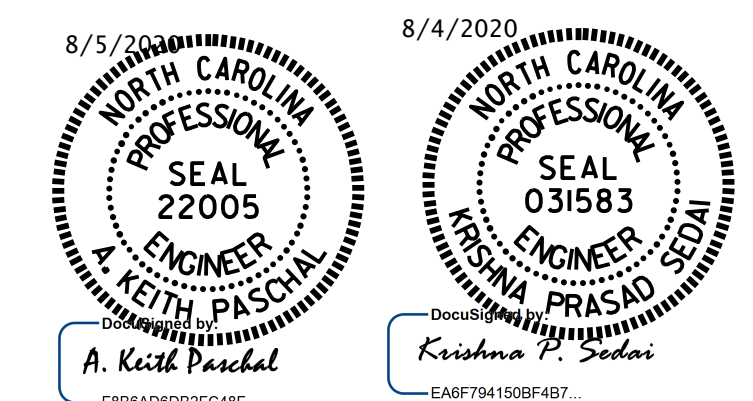
FORSYTH COUNTY

BRIDGE NO. 330509

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 WBL
RAMP OVER I-40 BUS
AND US 421 EBL



DRAWN BY : A. SORSENGINH DATE : 3/2018

CHECKED BY : C. RUIZ DATE : 5/2018

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

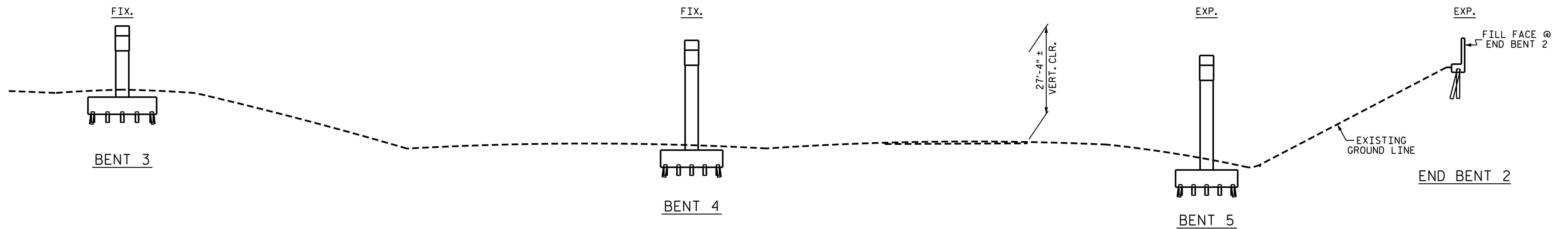
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SPAN C

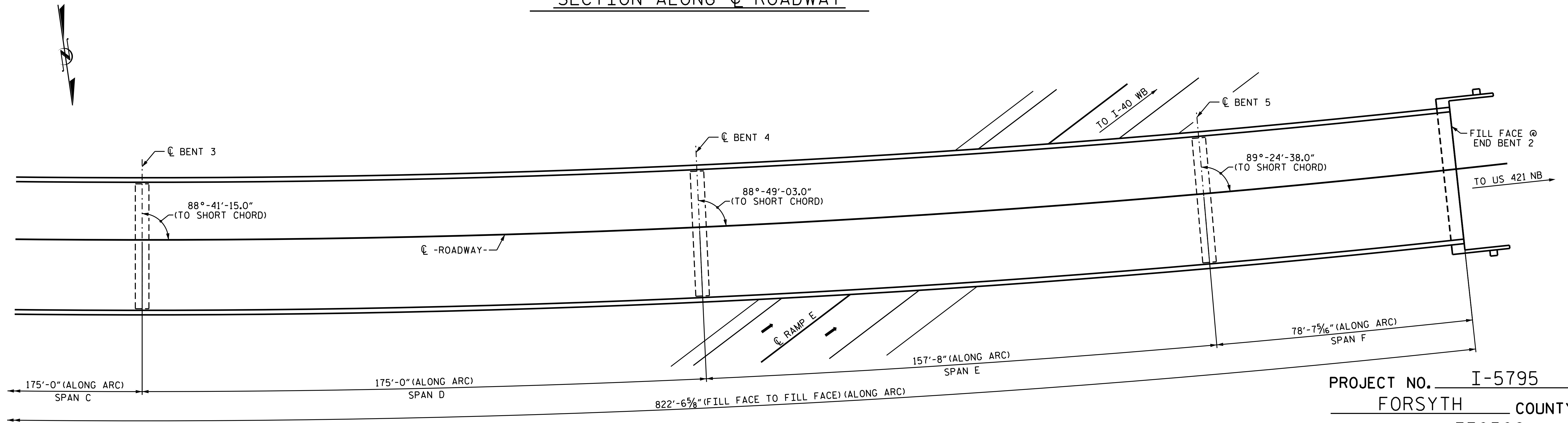
SPAN D

SPAN E

SPAN F



SECTION ALONG C ROADWAY



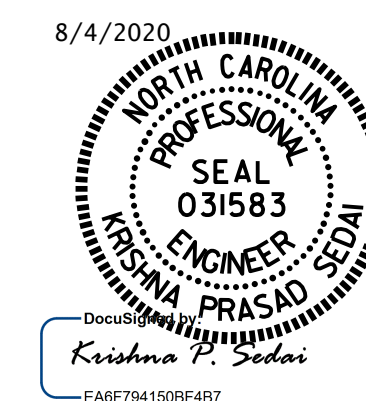
PLAN

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330509

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGE ON I-40 WBL
 RAMP OVER I-40 BUS
 AND US 421 EBL



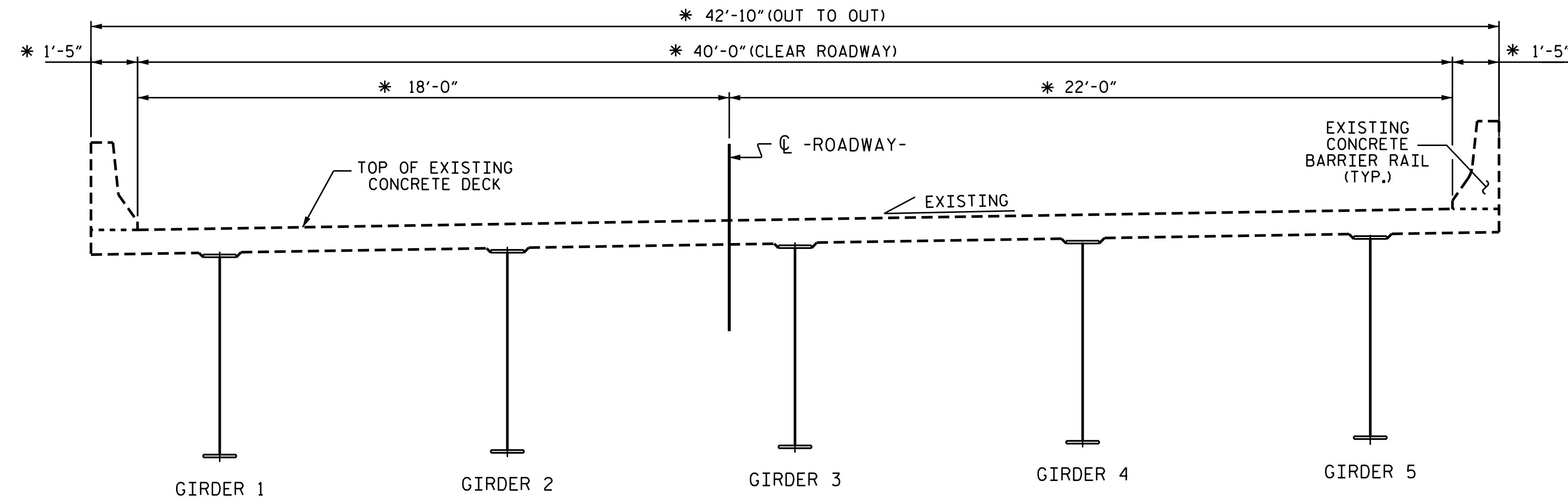
DRAWN BY : A. SORSENGINH DATE : 3/2018
 CHECKED BY : C. RUIZ DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

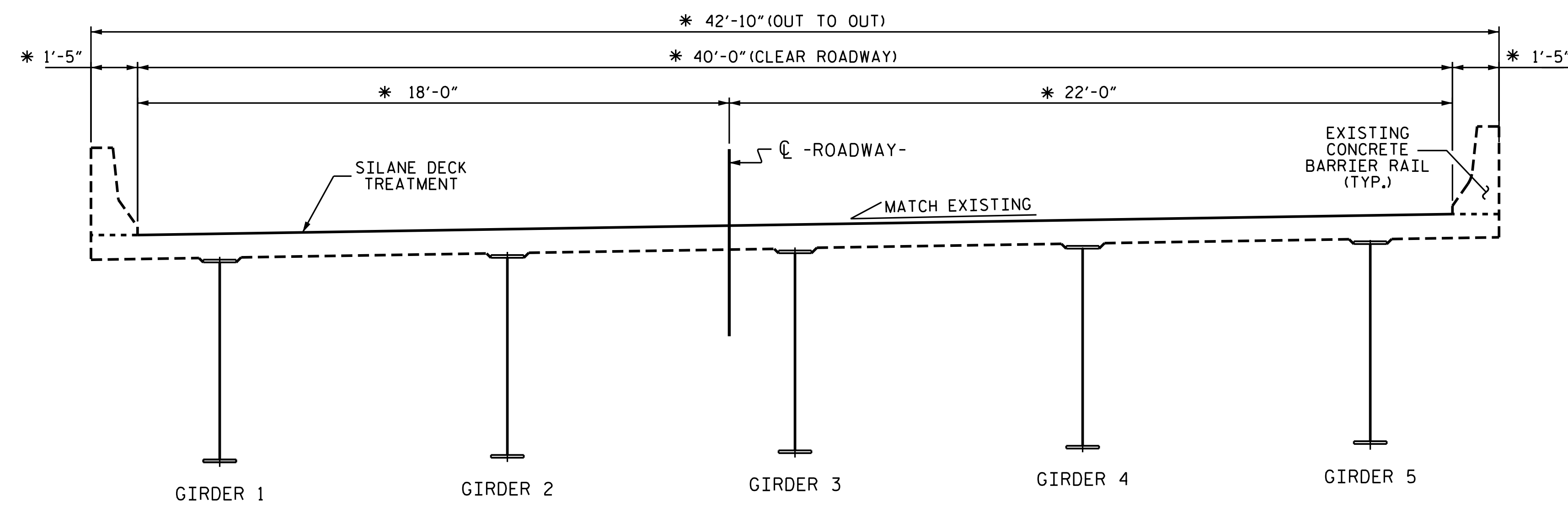
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S21-02
1			3			TOTAL SHEETS
2			4			11

NOTE:

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

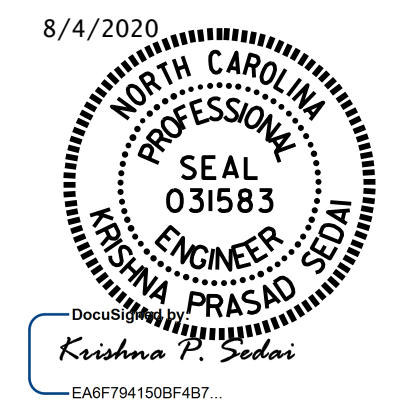


TYPICAL SECTION
(EXISTING)
*RADIAL DIMENSION



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330509



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

TYPICAL SECTION

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : C. RUIZ DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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



NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

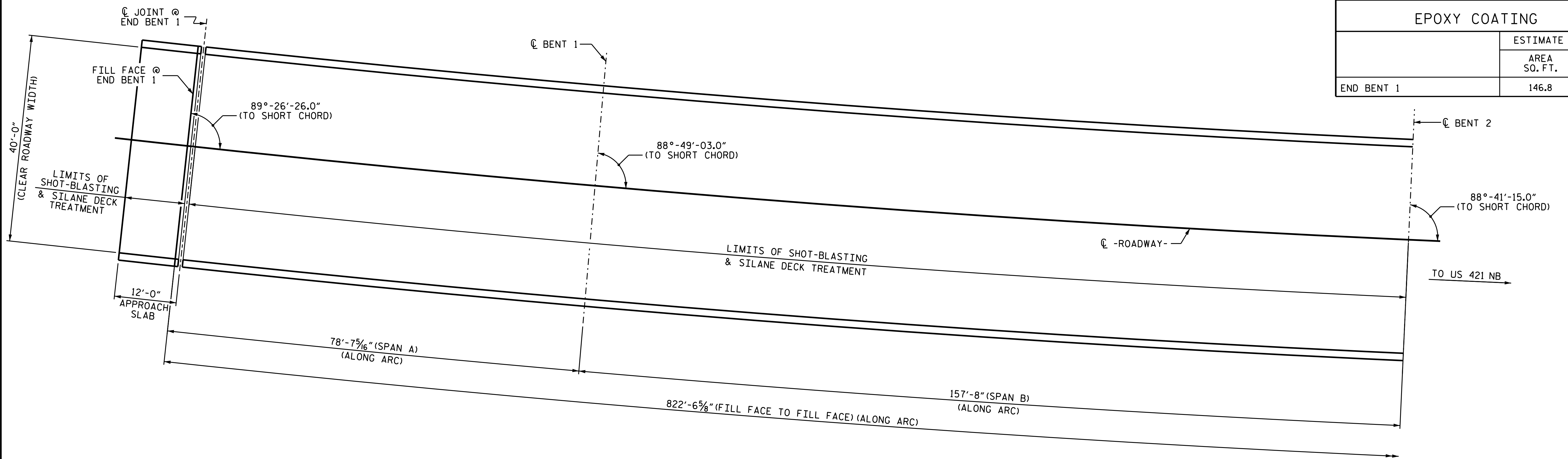
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

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

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

-  CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
-  SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT

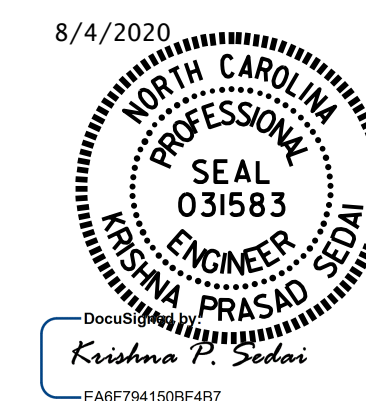
APPROACH SLAB QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	
SHOTBLAST APPROACH SLAB	52 SY	
SILANE DECK TREATMENT	52 SY	
SILANE BARRIER RAIL TREATMENT	0 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	0 SF	
BRIDGE QUANTITIES		
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLAST BRIDGE DECK	1,043 SY	
SILANE DECK TREATMENT	1,043 SY	
SILANE BARRIER RAIL TREATMENT	1,658 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	1,658 SF	
EPOXY COATING		
	ESTIMATE	ACTUAL
	AREA SQ. FT.	AREA SQ. FT.
END BENT 1	146.8	



PLAN OF SPANS A AND B

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330509

SHEET 1 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & SILANE DECK
 TREATMENT**

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : C. RUIZ DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S21-04
1			3			TOTAL SHEETS
2			4			11

BRIDGE QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLAST BRIDGE DECK	778 SY	
SILANE DECK TREATMENT	778 SY	
SILANE BARRIER RAIL TREATMENT	1,234 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	1,234 SF	

NOTES:

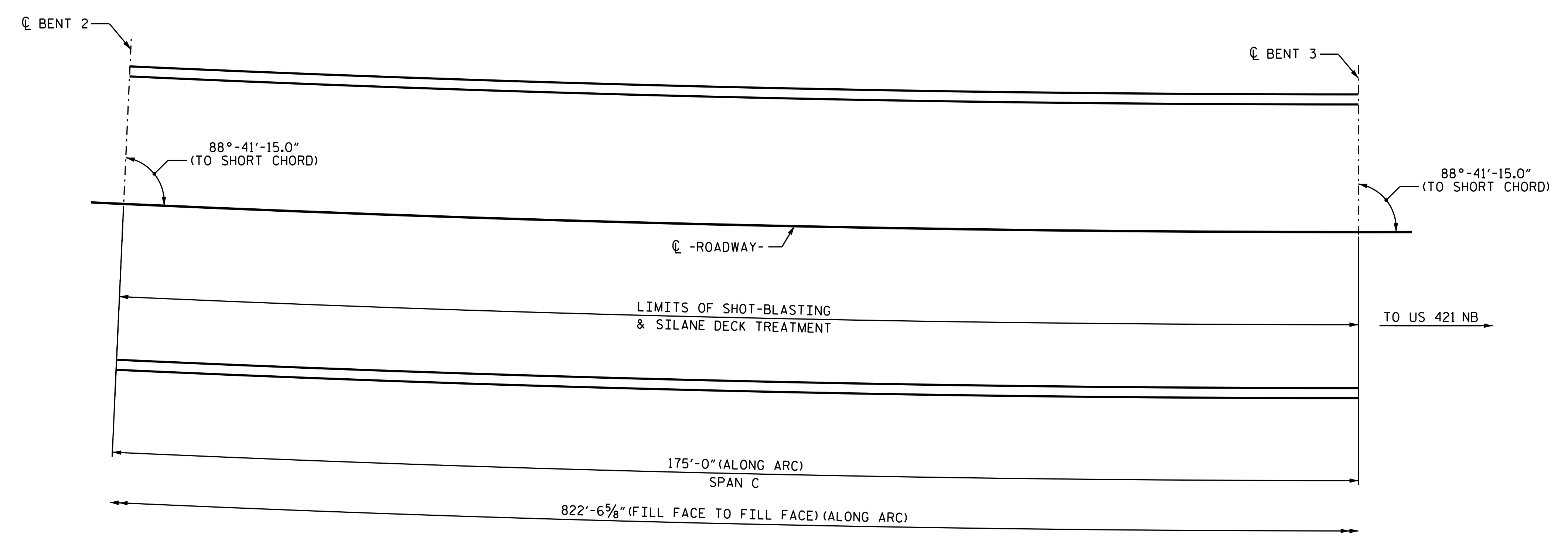
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES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

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

 CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

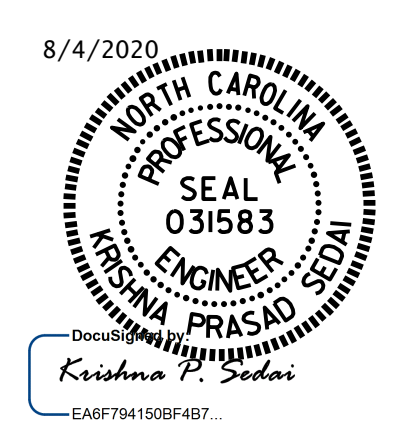
 SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT



PLAN OF SPAN C

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330509

SHEET 2 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SURFACE PREPARATION
 & SILANE DECK
 TREATMENT**

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : C. RUIZ DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S21-05
1			3			TOTAL SHEETS
2			4			11

BRIDGE QUANTITIES


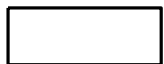
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLAST BRIDGE DECK	778 SY	
SILANE DECK TREATMENT	778 SY	
SILANE BARRIER RAIL TREATMENT	1,234 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	1,234 SF	

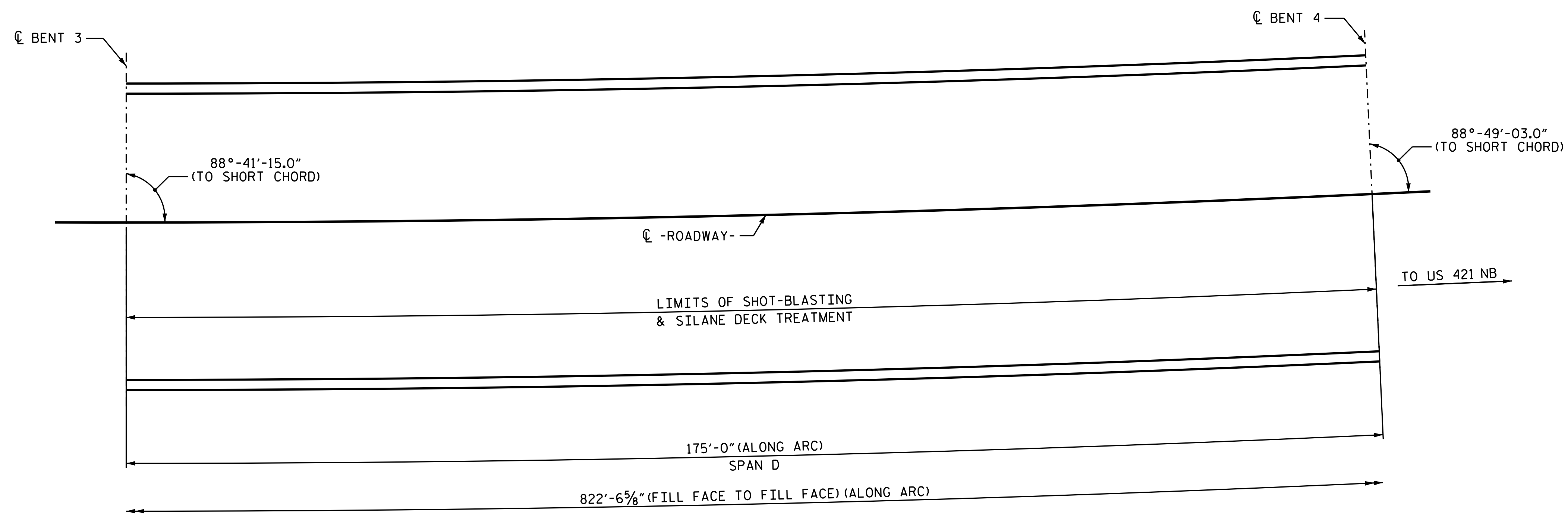
NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

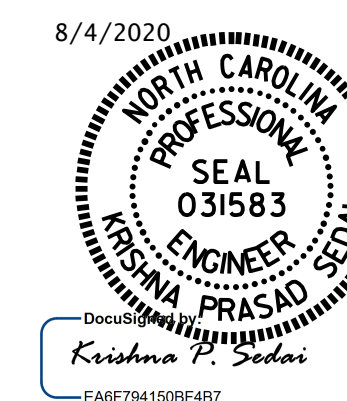
-  CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
-  SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT



PLAN OF SPAN D

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330509

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S21-06
1			3			TOTAL SHEETS
2			4			11

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : C. RUIZ DATE : 5/2018


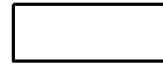
NOTES:

REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH 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 ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT REPAIR QUANTITY TABLE.

CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT SHALL BE COMPLETE PRIOR TO SHOTBLAST OF ENTIRE DECK SURFACE FOR PREPARATION FOR SILANE DECK TREATMENT.

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

ONLY INNER SURFACE AND TOP SURFACE OF BARRIER WILL BE TREATED WITH SILANE PENETRANT SEALER.

-  CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT
-  SHOTBLAST BRIDGE DECK AND SILANE DECK TREATMENT

APPROACH SLAB QUANTITIES

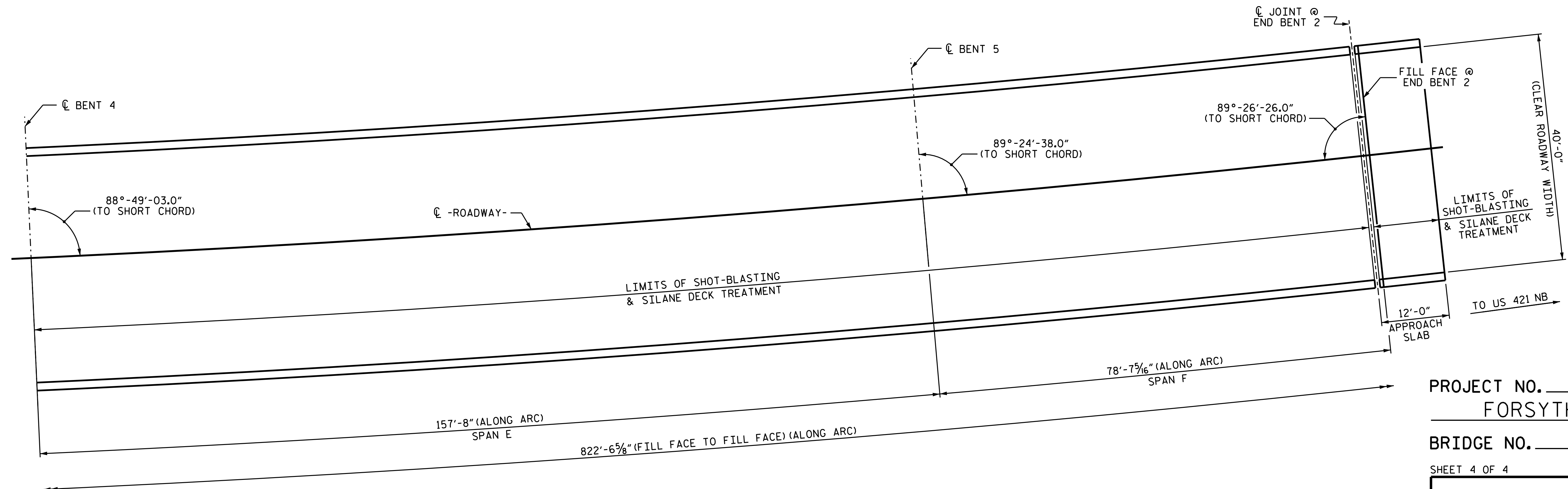
	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	
SHOTBLAST APPROACH SLAB	52 SY	
SILANE DECK TREATMENT	52 SY	
SILANE BARRIER RAIL TREATMENT	0 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	0 SF	

BRIDGE QUANTITIES

	ESTIMATE	ACTUAL
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0.0 SF	
SHOTBLAST BRIDGE DECK	1,043 SY	
SILANE DECK TREATMENT	1,043 SY	
SILANE BARRIER RAIL TREATMENT	1,658 SF	
SURFACE PREPARATION FOR CONCRETE BARRIER	1,658 SF	

EPOXY COATING

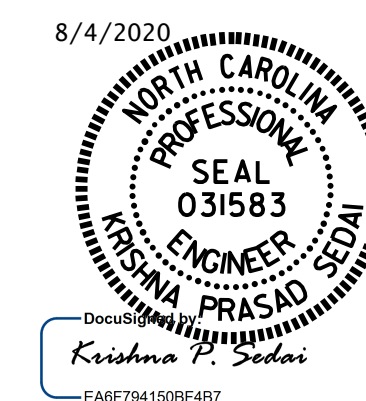
	ESTIMATE	ACTUAL
	AREA SQ. FT.	AREA SQ. FT.
END BENT 2	146.8	



PLAN OF SPANS E AND F

PROJECT NO. I-5795
 FORSYTH COUNTY
 BRIDGE NO. 330509

SHEET 4 OF 4



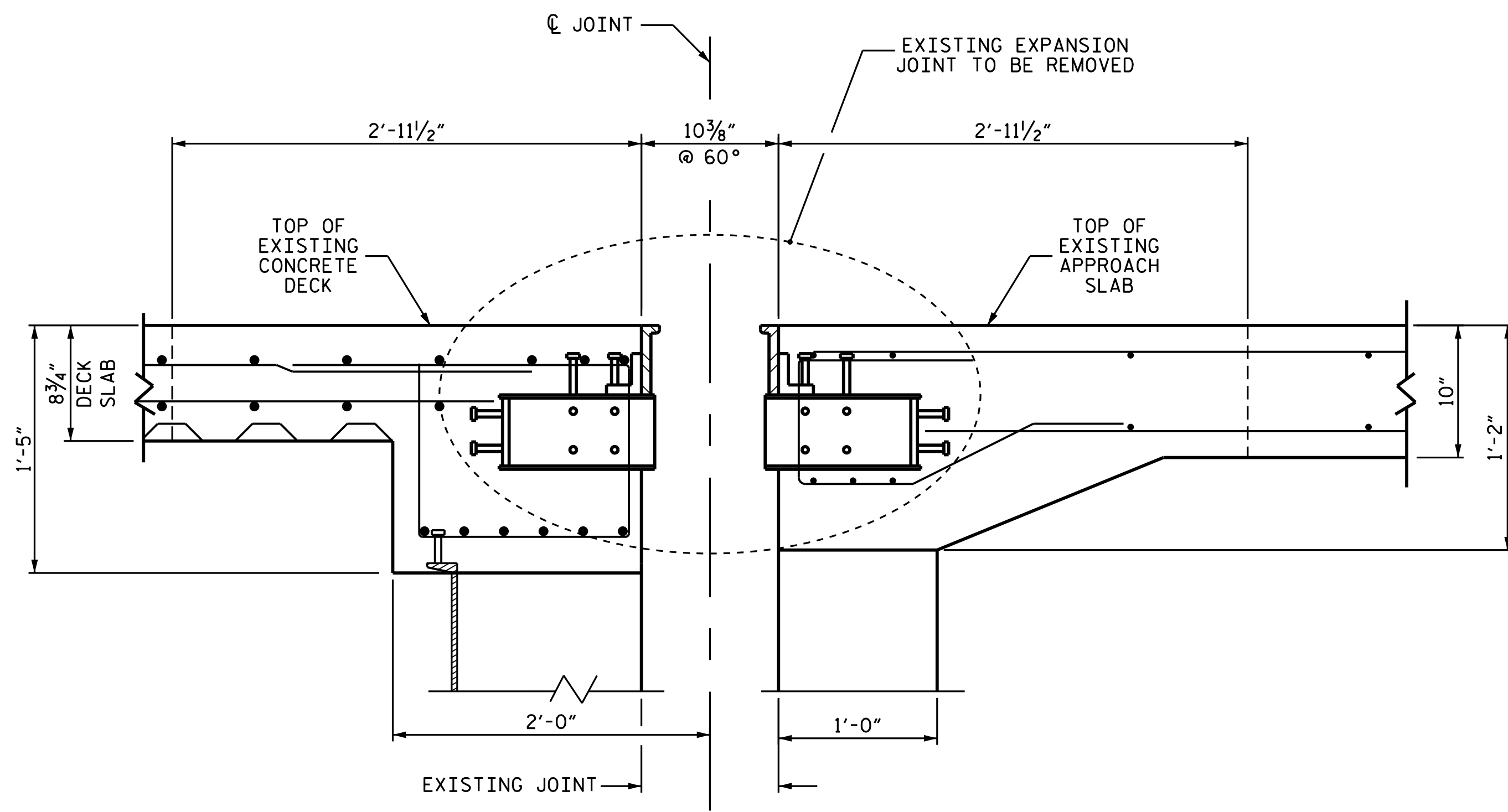
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & SILANE DECK TREATMENT

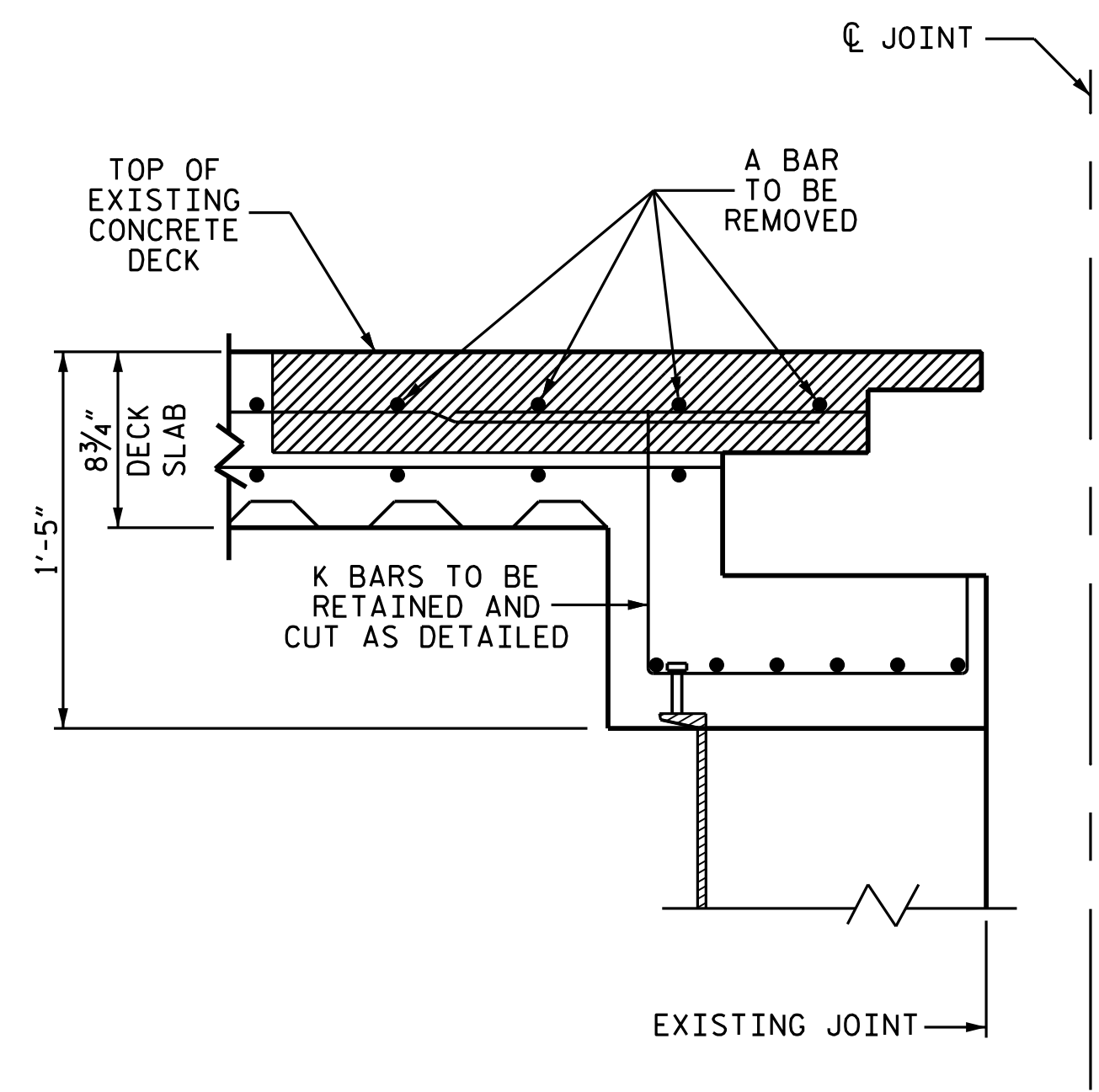
DRAWN BY : A. SORSENGINH DATE : 4/2018
 CHECKED BY : C. RUIZ DATE : 5/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

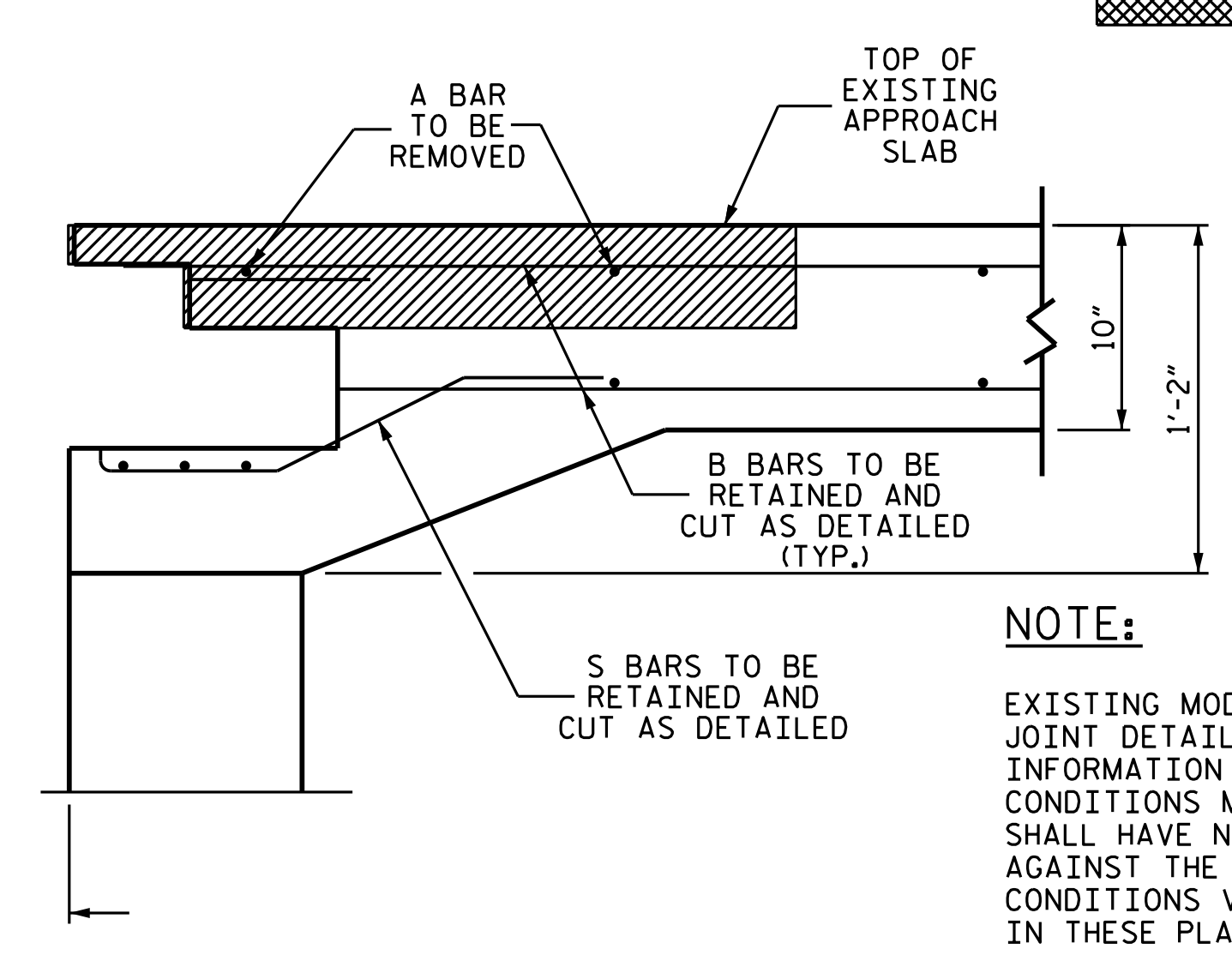
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S21-07
1			3			TOTAL SHEETS
2			4			11



EXISTING MODULAR JOINT
(AT MODULAR JT. BOXES)



MODULAR JOINT REMOVED
(AT MODULAR JT. BOXES)

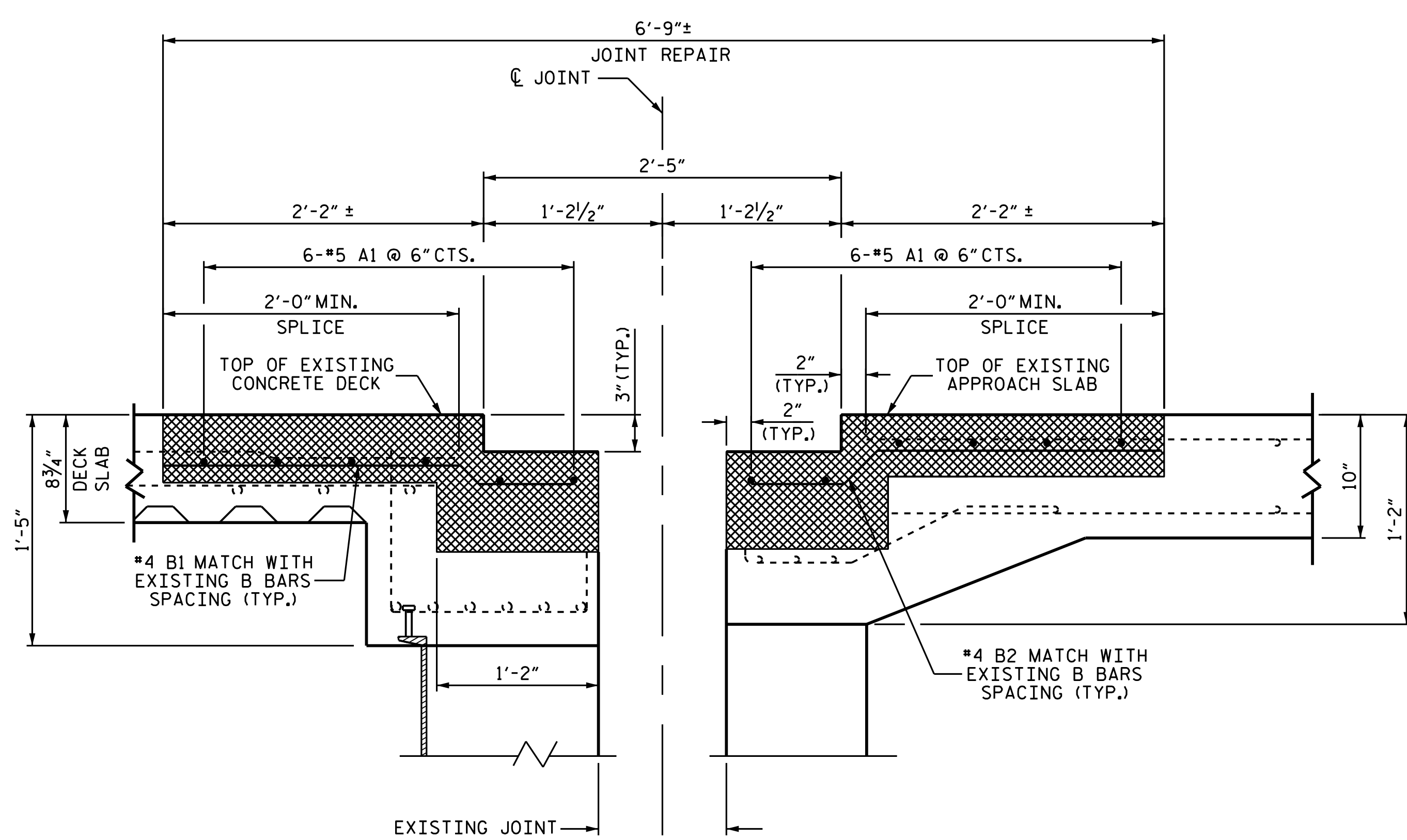


PROPOSED JOINT REPAIR
(AT MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

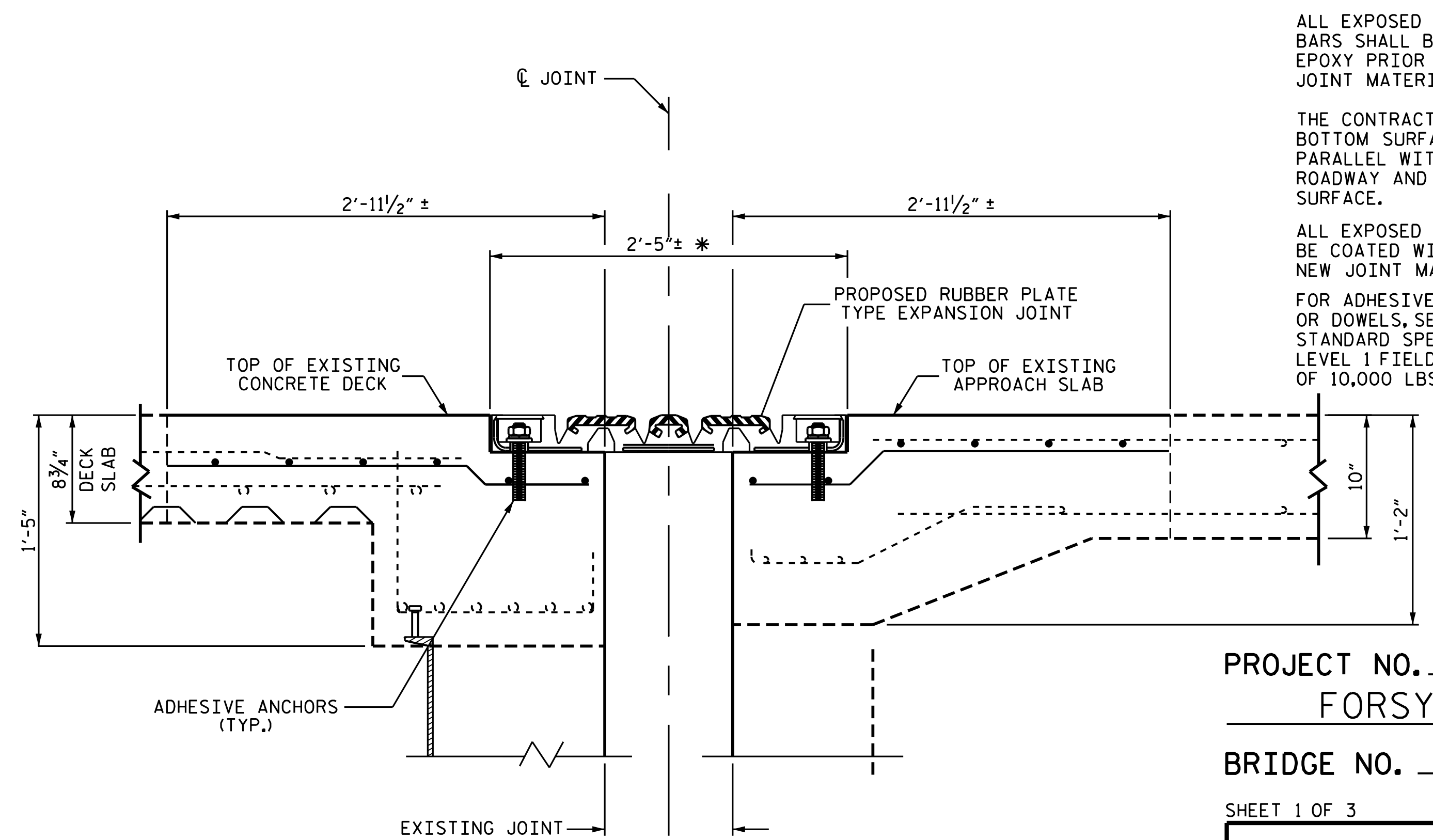
EXISTING CONCRETE TO BE REMOVED
 NEW CONCRETE FOR DECK REPAIR.
* TO BE VERIFIED BY MANUFACTURER

NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.
THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.
ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
FOR ADHESIVE ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.

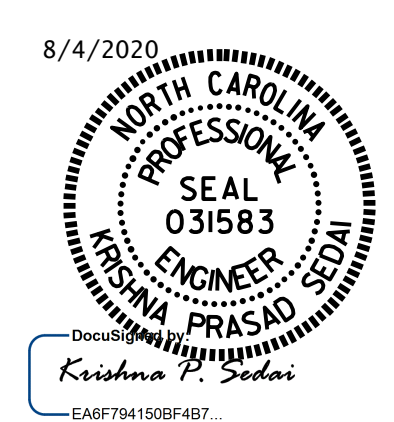


CONCRETE AND REBAR REMOVED
(AT MODULAR JT. BOXES)



SECTION A-A

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330509
SHEET 1 OF 3

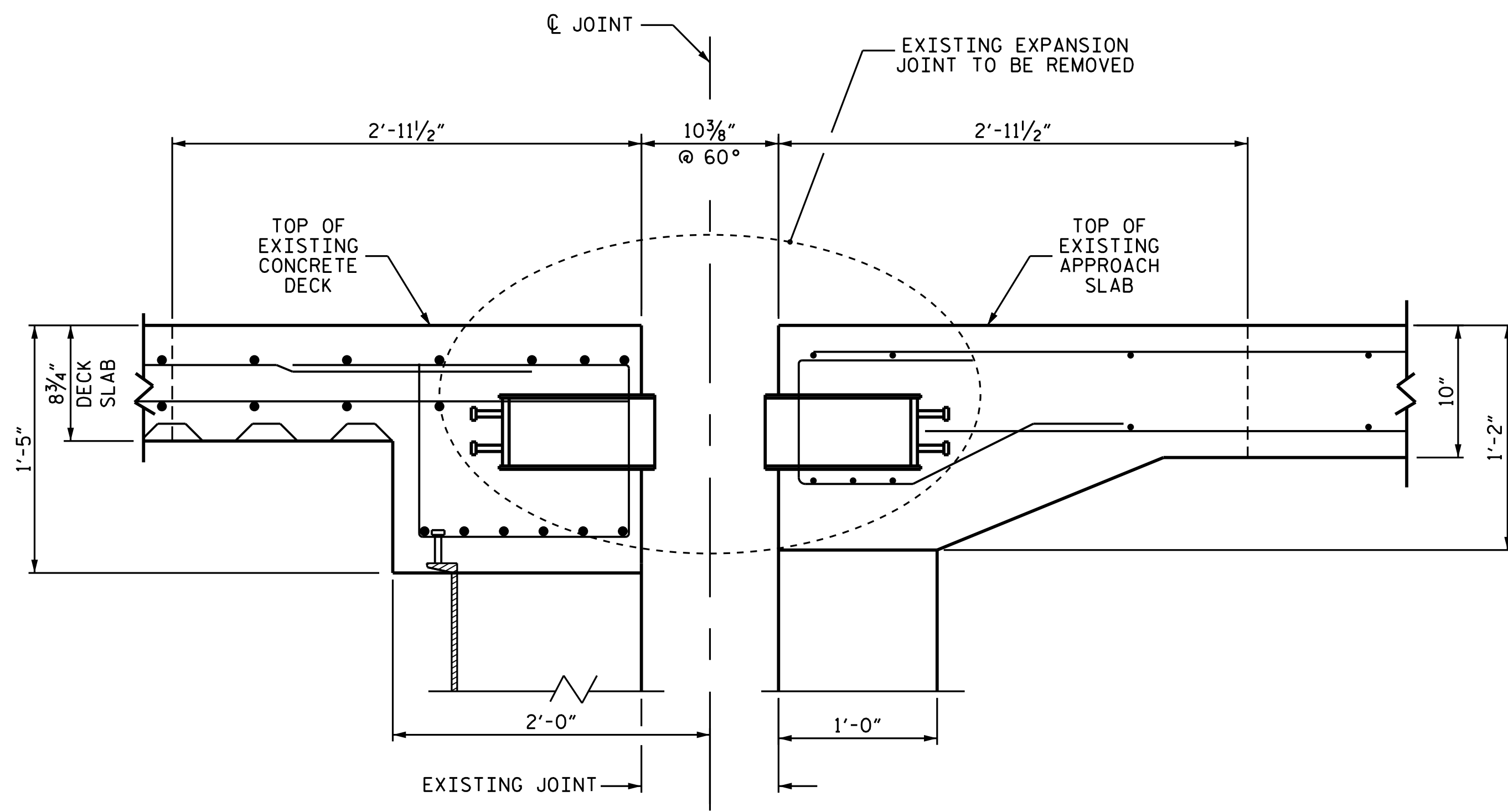


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**END BENT #2
MODULAR JOINT
REPLACEMENT
END BENT 1 SIMILAR**

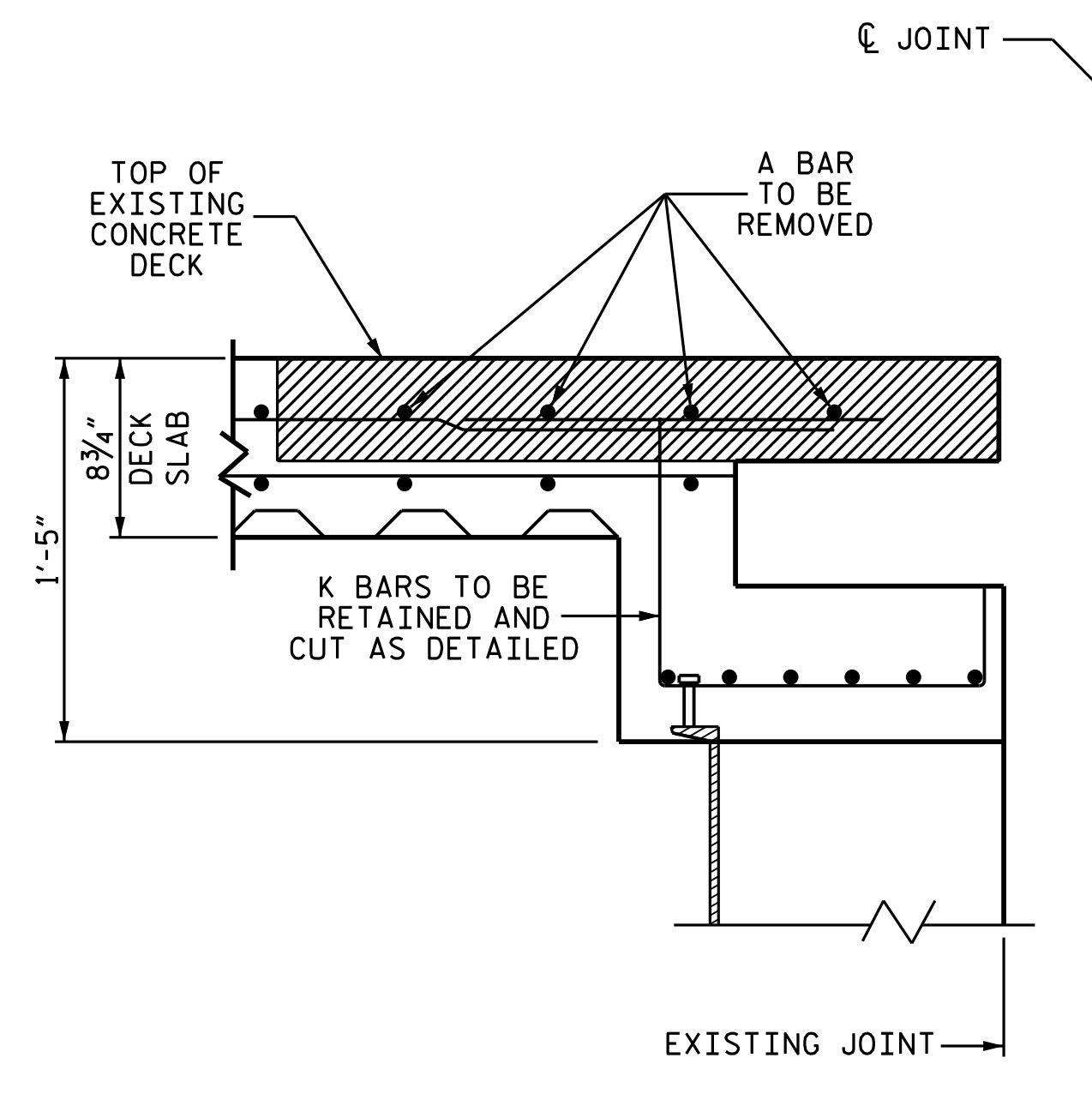
DRAWN BY : A. SORSENGINH DATE : 5/2018
CHECKED BY : K. P. SEDA DATE : 6/2018

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

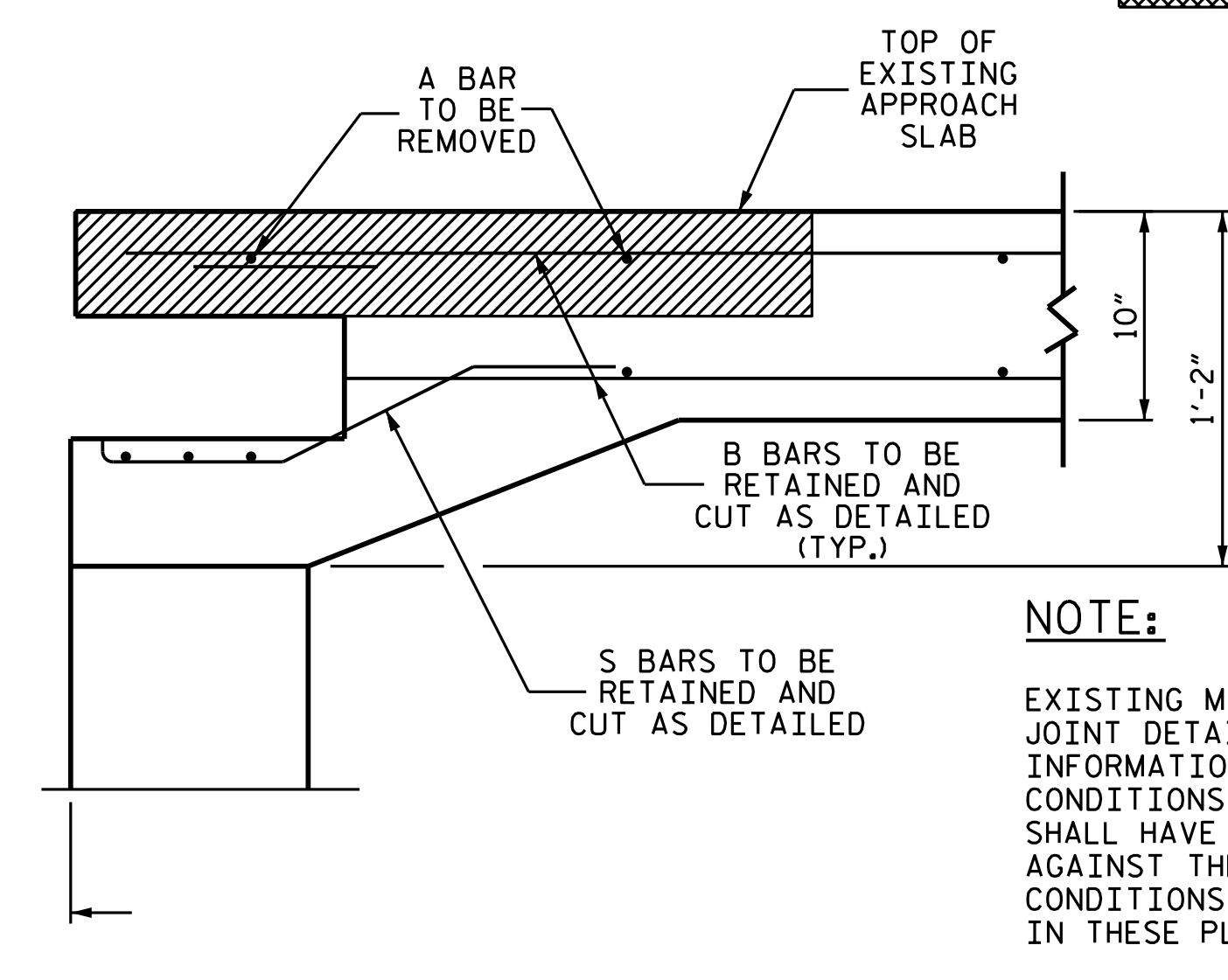
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



EXISTING MODULAR JOINT
(BETWEEN MODULAR JT. BOXES)



MODULAR JOINT REMOVED
(BETWEEN MODULAR JT. BOXES)

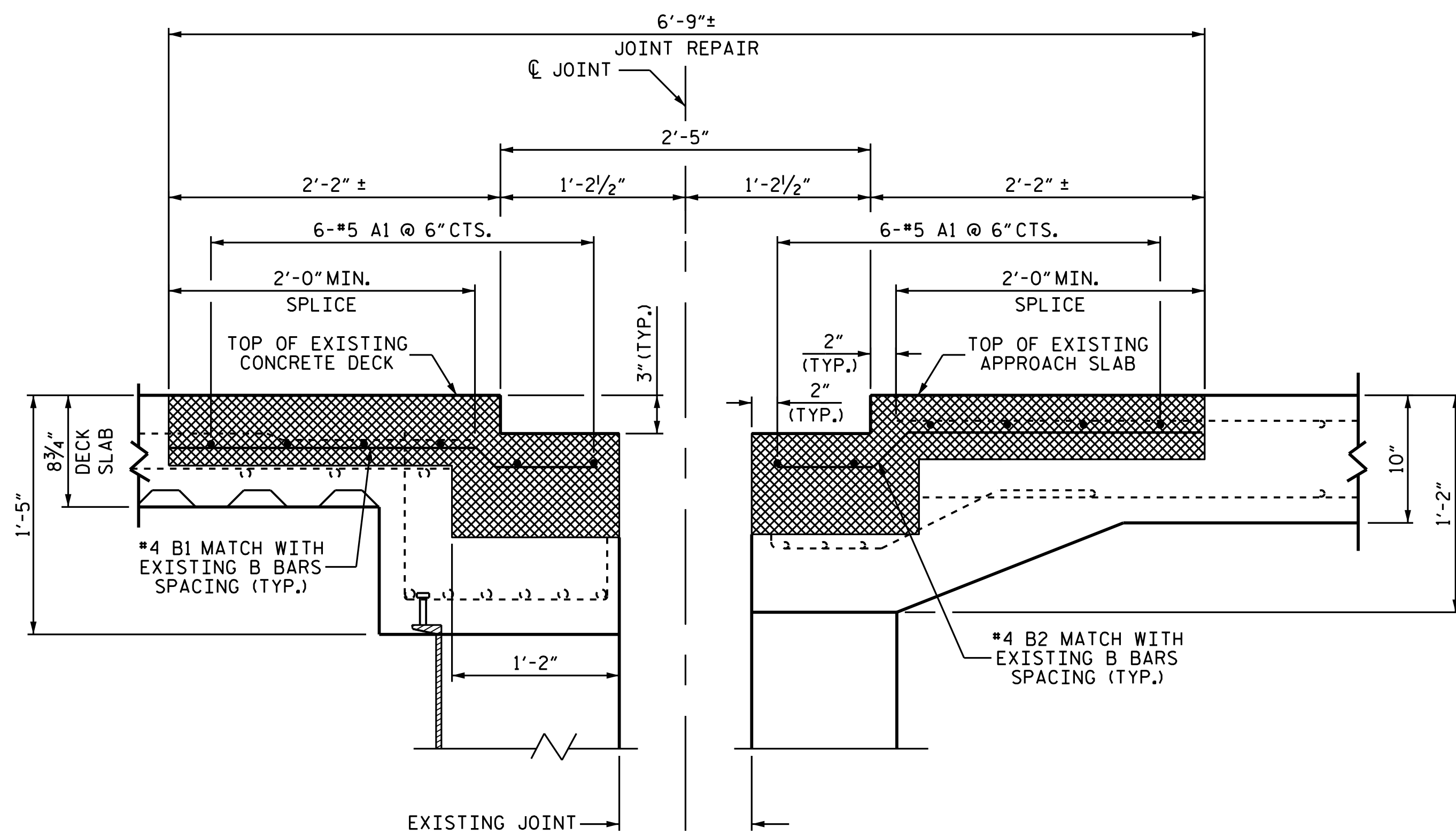


PROPOSED JOINT REPAIR
(BETWEEN MODULAR JT. BOXES)
(THE REINFORCING MAY BE SHIFTED SLIGHTLY)

EXISTING CONCRETE TO BE REMOVED
 NEW CONCRETE FOR DECK REPAIR.
* TO BE VERIFIED BY MANUFACTURER

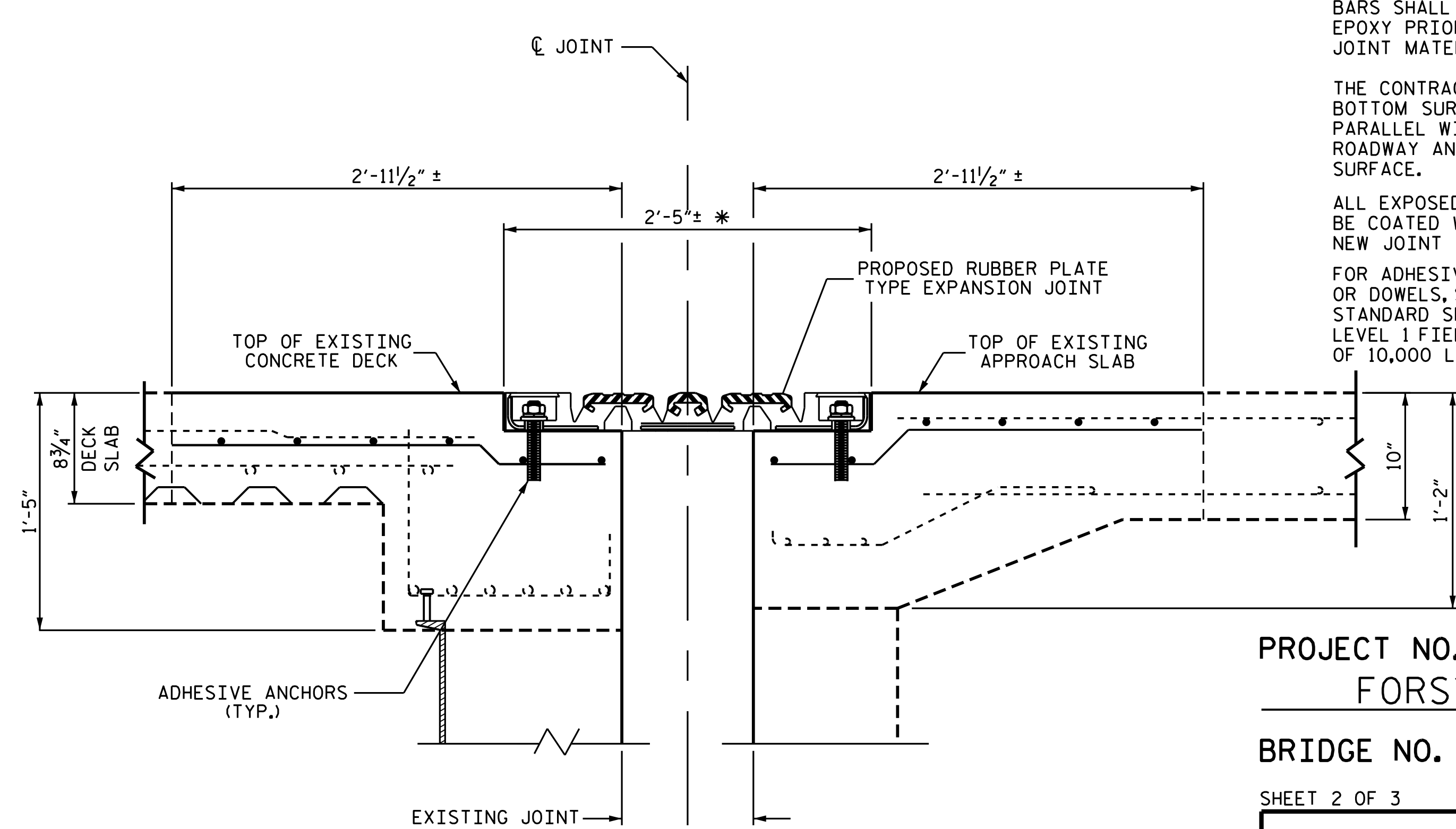
NOTE:
EXISTING MODULAR EXPANSION JOINT DETAIL ARE SHOWN FOR INFORMATION ONLY. ACTUAL FIELD CONDITIONS MAY VARY. THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT IF ACTUAL CONDITIONS VARY FROM WHAT IS SHOWN IN THESE PLANS.
THE CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED EXPANSION JOINT SEAL.

ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
THE CONTRACTOR SHALL PREPARE THE BOTTOM SURFACE OF BLOCKOUT TO BE PARALLEL WITH THE PLANE OF THE ROADWAY AND PROVIDE A UNIFORM SURFACE.
ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
FOR ADHESIVE ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. PERFORM LEVEL 1 FIELD TESTING AT A TEST LOAD OF 10,000 LBS.



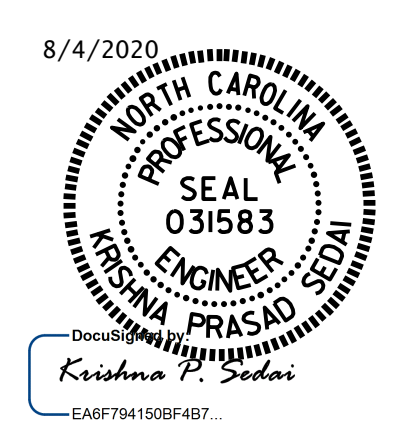
CONCRETE AND REBAR REMOVED
(BETWEEN MODULAR JT. BOXES)

SECTION B-B



PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330509

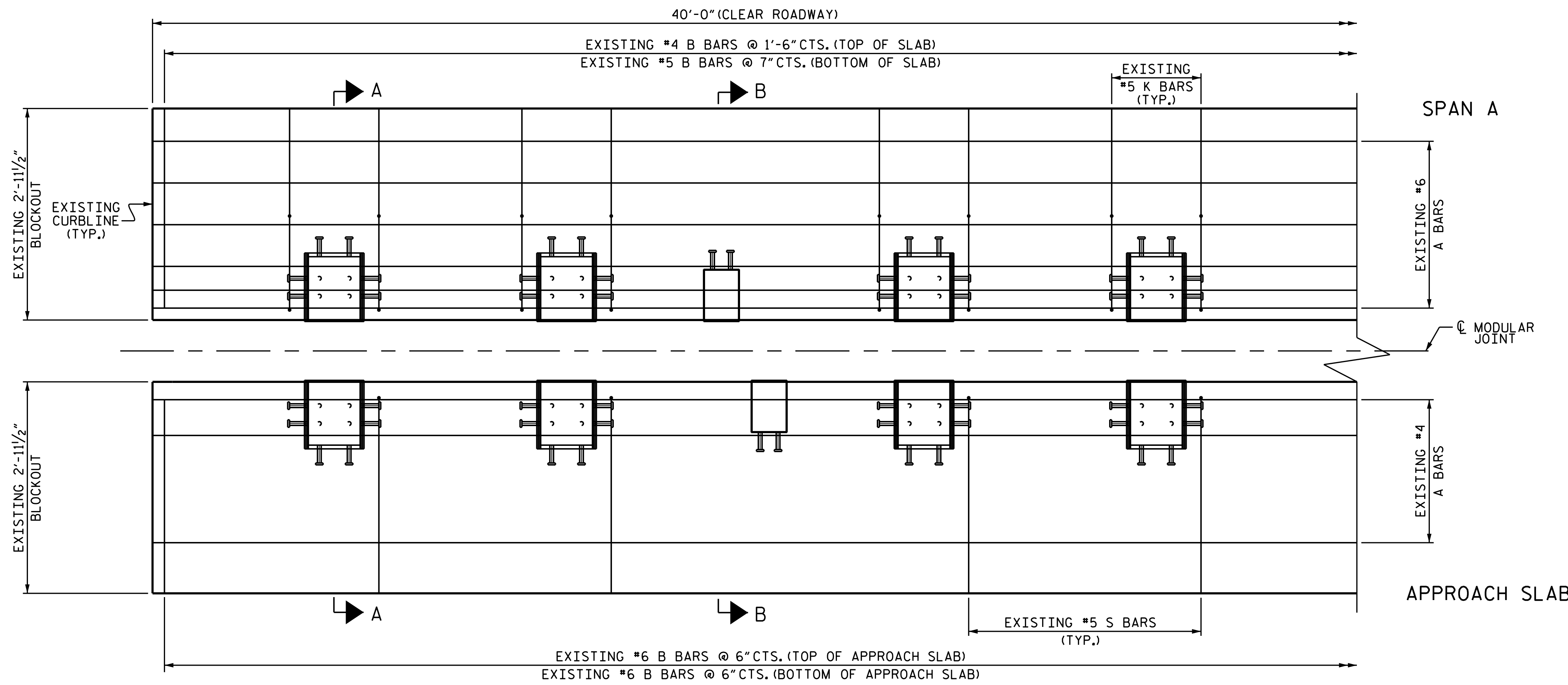
SHEET 2 OF 3
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**END BENT #2
MODULAR JOINT
REPLACEMENT
END BENT 1 SIMILAR**



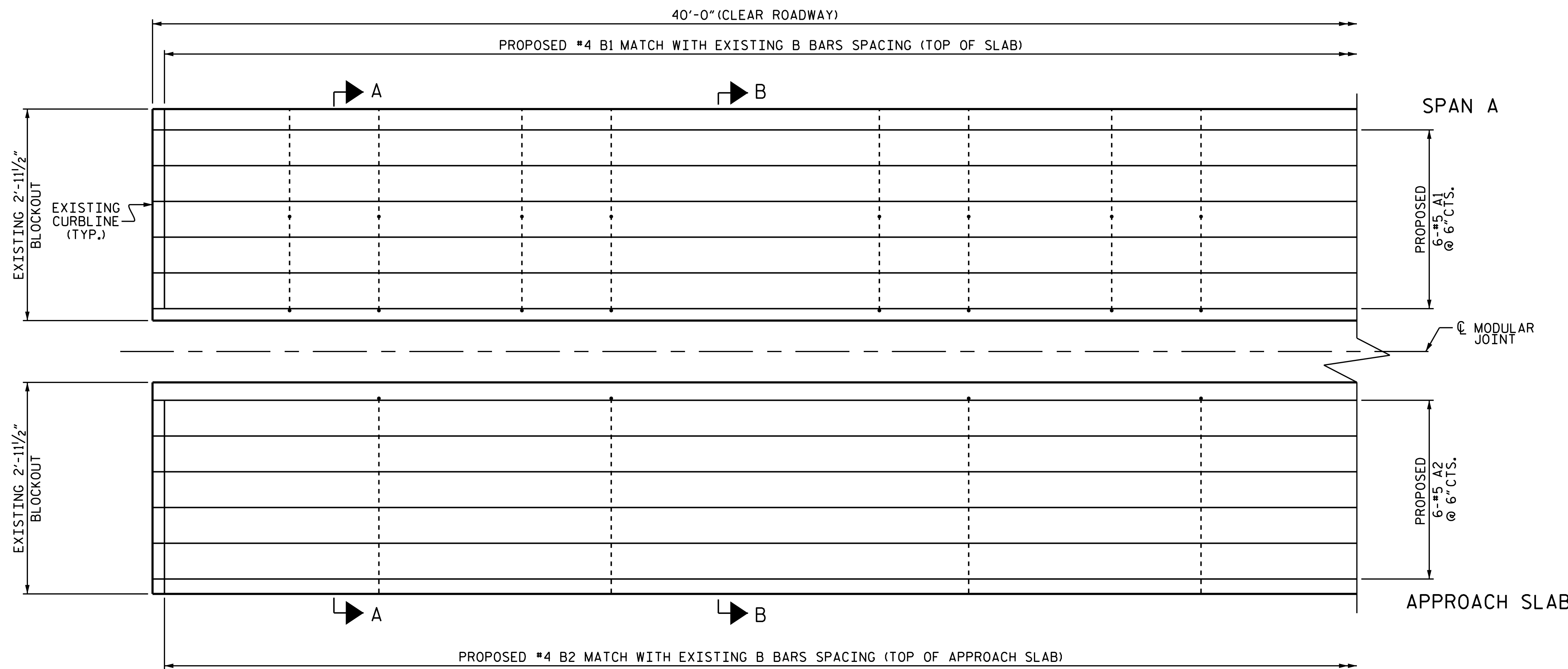
DRAWN BY : A. SORSENGINH DATE : 5/2018
CHECKED BY : K. P. SEDA DATE : 6/2018

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



EXISTING PARTIAL PLAN

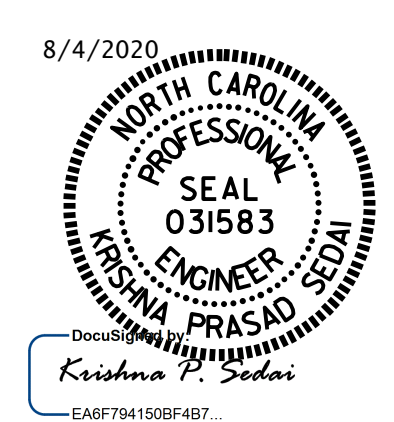


PROPOSED PARTIAL PLAN

BILL OF MATERIAL					
FOR END BENT 1 OR 2					
BAR NO.	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	12	#5	STR	39'-8"	496
*B1	26	#4	1	2'-11"	51
*B2	79	#4	2	3'-0"	158
REINFORCING STEEL				LBS.	705
CONCRETE FOR DECK REPAIR					129.9 C.F.
JOINT REPAIR					236.7 S.F.
BAR TYPE					
* EPOXY COATED REINFORCING STEEL					
MOLDED RUBBER SEGMENTAL EXPANSION JOINT					
END BENT 1					40.0 L.F.
END BENT 2					40.0 L.F.

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330509

SHEET 3 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**PARTIAL PLAN MODULAR
 JOINT REPLACEMENT
 AT END BENT 2
 END BENT 1 SIMILAR**

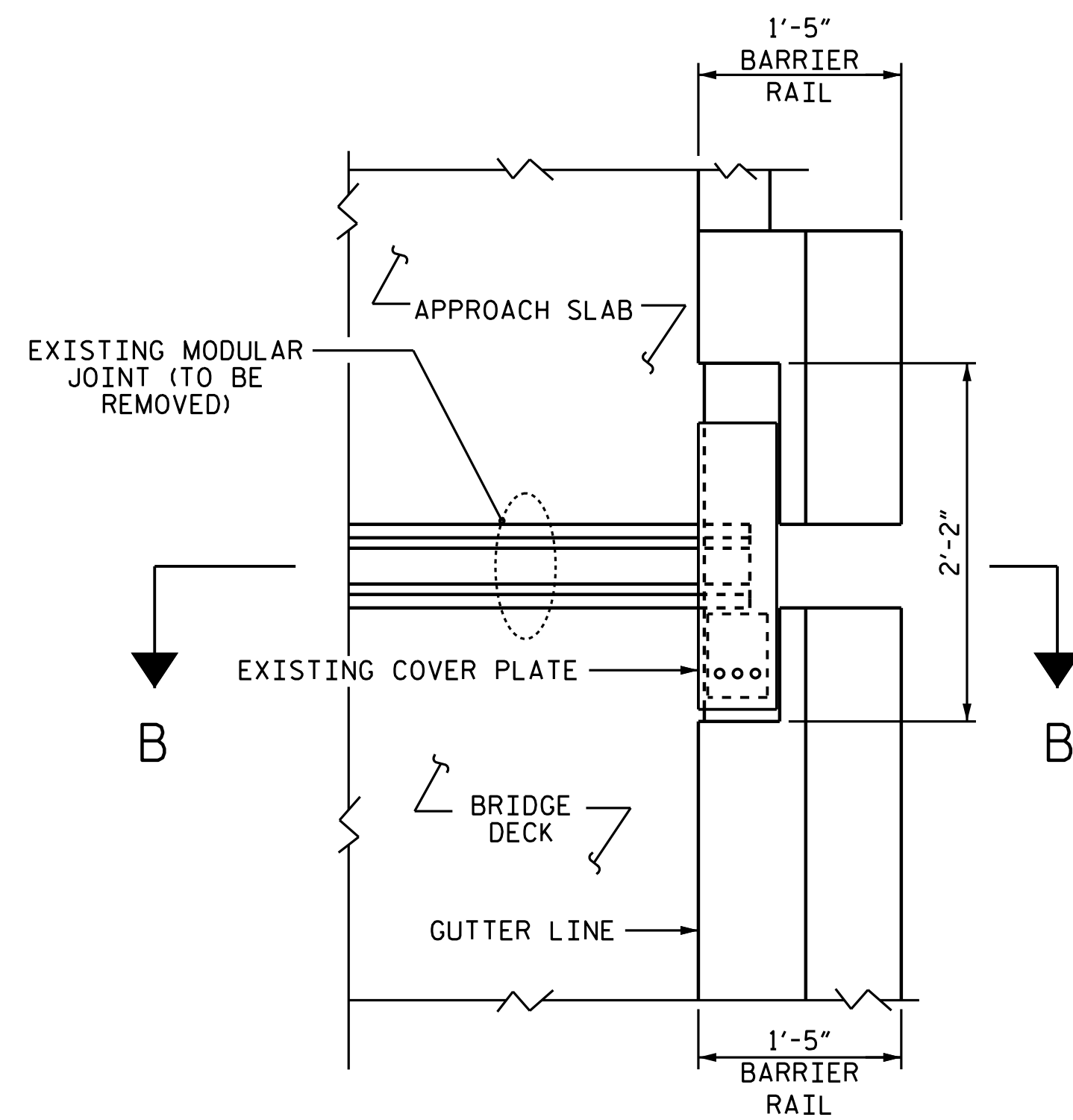
DRAWN BY : A. SORSENGINH DATE : 5/2018
 CHECKED BY : K. P. SEDAI DATE : 6/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

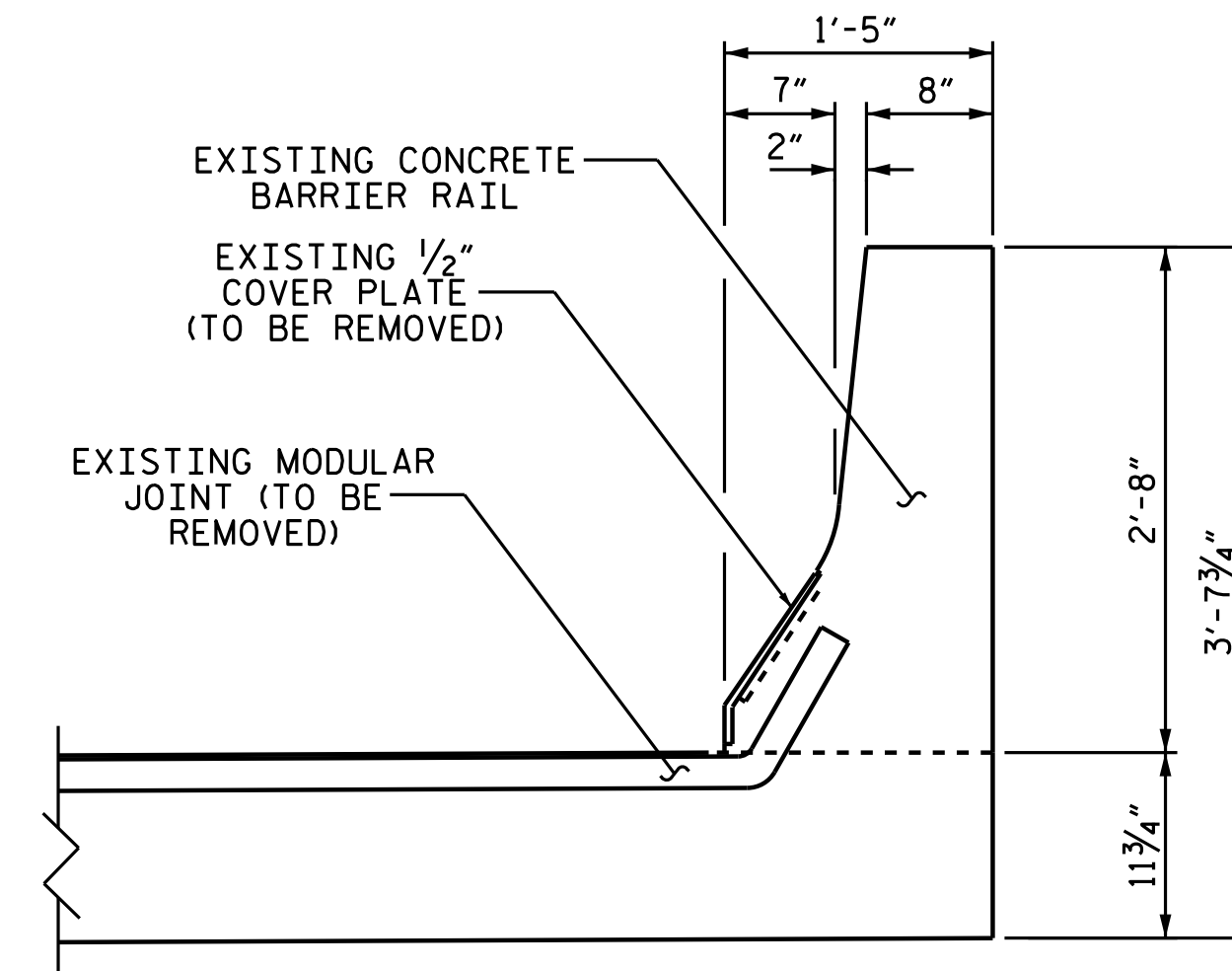
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S21-10
1			3			TOTAL SHEETS
2			4			11

NOTES:

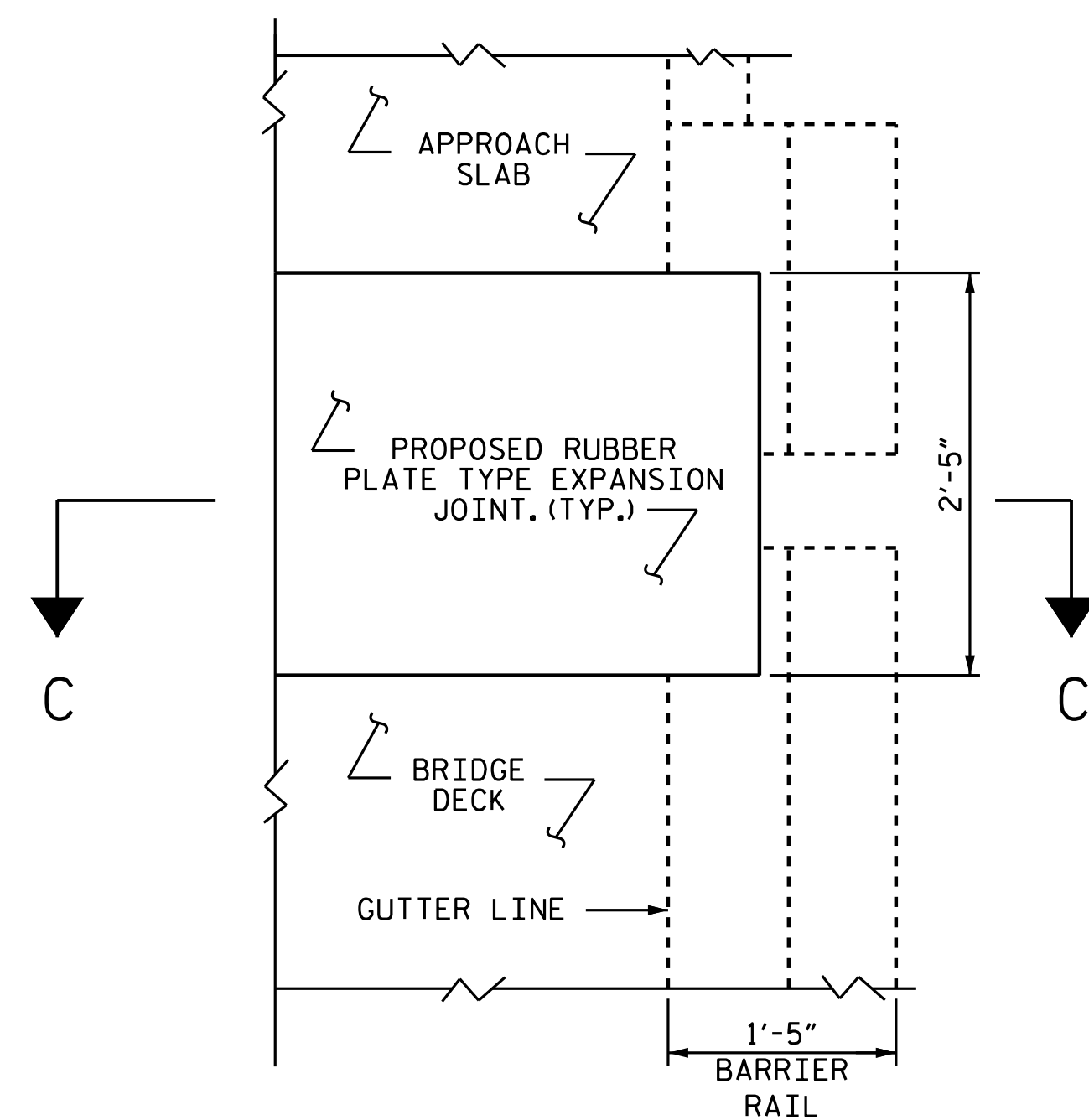
THE CONTRACTOR SHALL CUT THE EXISTING #5 "S" REBARS EXTENDING INTO THE BARRIER FROM THE DECK AND THE LONGITUDINAL #5 REBAR WITHIN THE LIMIT OF THE PROPOSED RUBBER PLATE JOINT. ALL EXPOSED ENDS OF THESE BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.



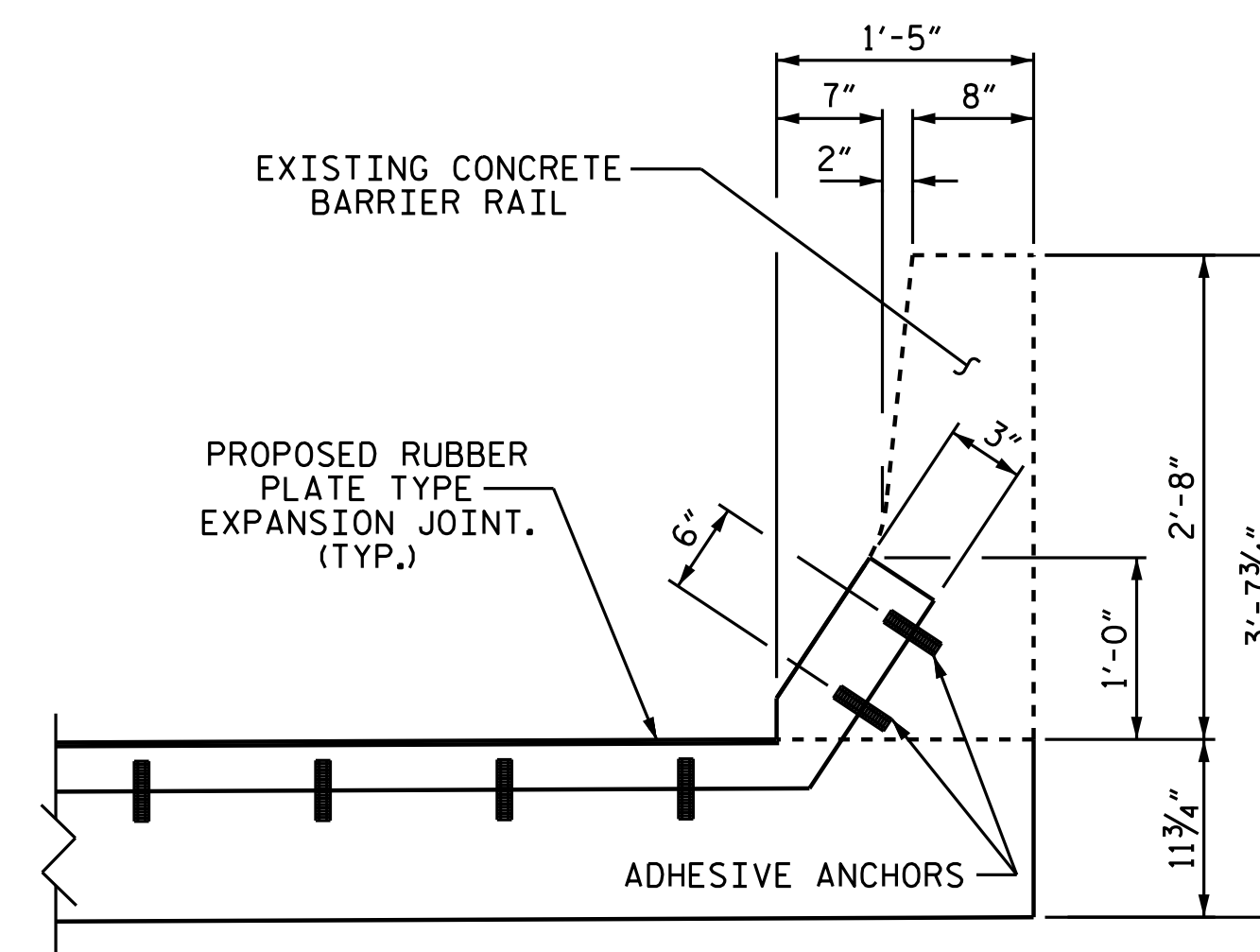
PLAN OF EXISTING MODULAR EXPANSION JOINT SEAL



SECTION B-B

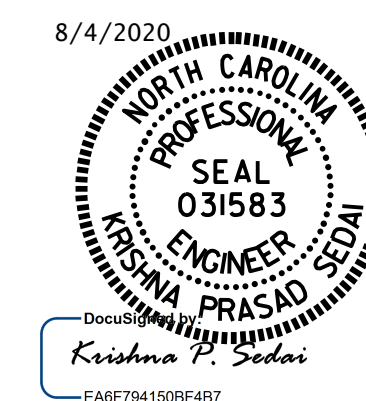


PLAN OF PROPOSED EXPANSION JOINT SEAL



SECTION C-C
(THE NEW RUBBER PLATE BRIDGE JOINT SHALL BE TURNED UP AND FLUSH WITH THE FACE OF THE BARRIER)

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330509



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**JOINT DETAIL AT
 THE BARRIER RAIL
 END BENT 2
 END BENT 1 SIMILAR**

DRAWN BY : A. SORSENGINH DATE : 5/2018
 CHECKED BY : K. P. SEDAI DATE : 6/2018

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S21-11
1			3			TOTAL SHEETS
2			4			11

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 CROSS SECTIONAL AREA 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, IF THE AREAS OF REMOVAL ARE NOT ADJACENT TO OR DIRECTLY OPPOSITE ONE ANOTHER. IF REMOVAL EXTENDS MORE THAN 1 1/2" BEHIND THE MAIN REINFORCING BARS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

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.

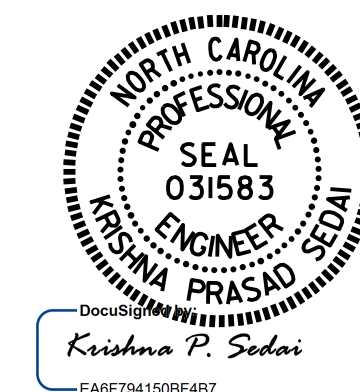
PROJ. NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 161, 444, 448, 449

SHEET 1 OF 3

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

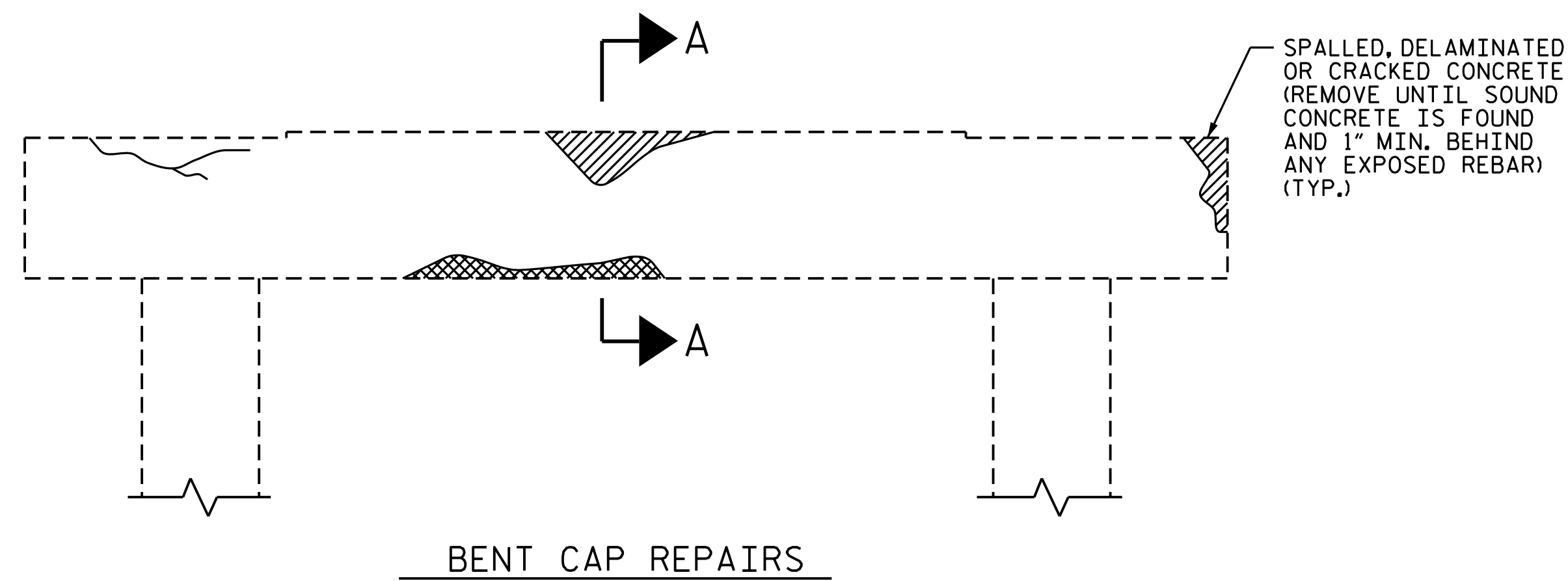
STANDARD
 TYPICAL CAP
 AND COLUMN
 REPAIR DETAILS

8/6/2020

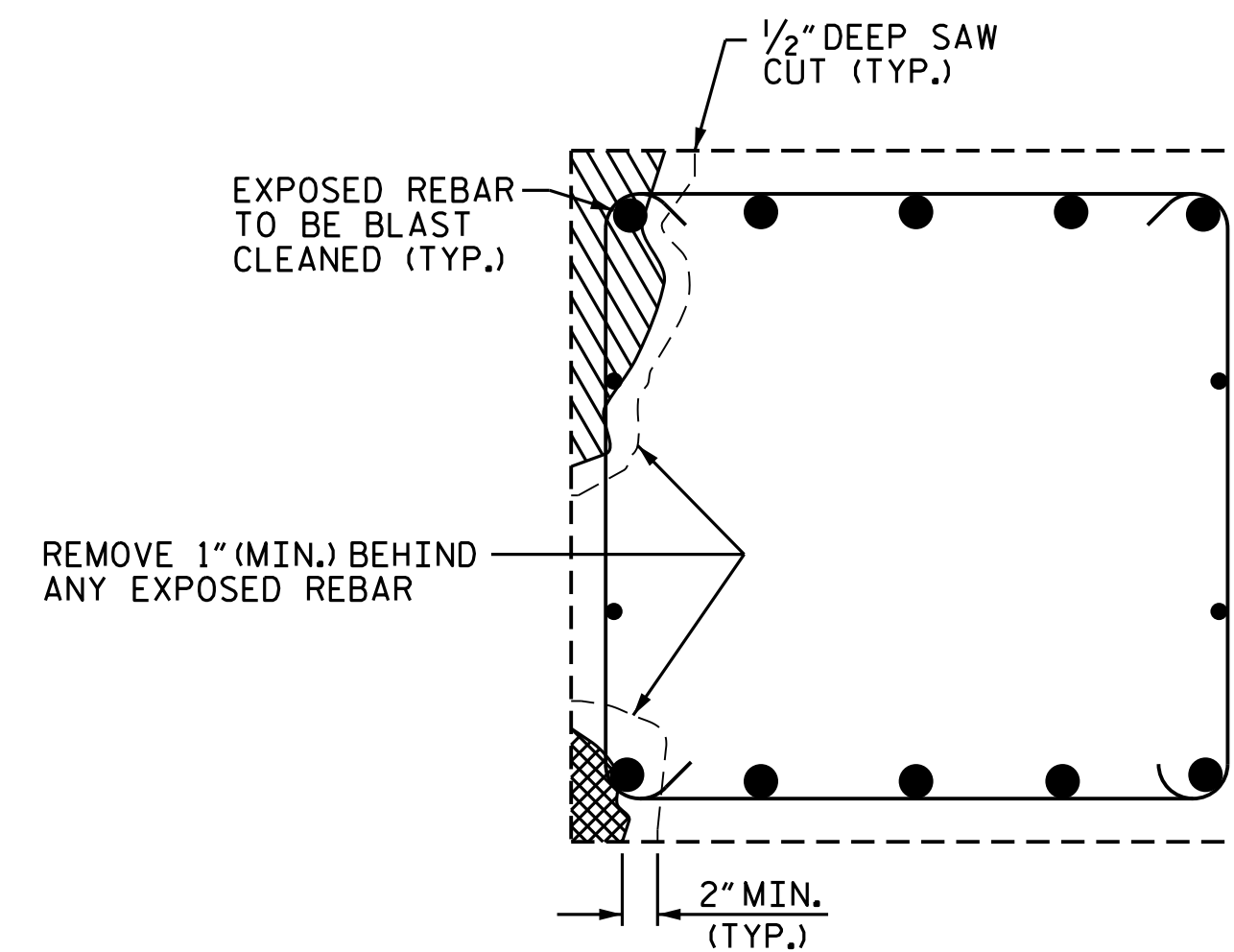


REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SD-1
1			3			TOTAL SHEETS
2			4			3

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

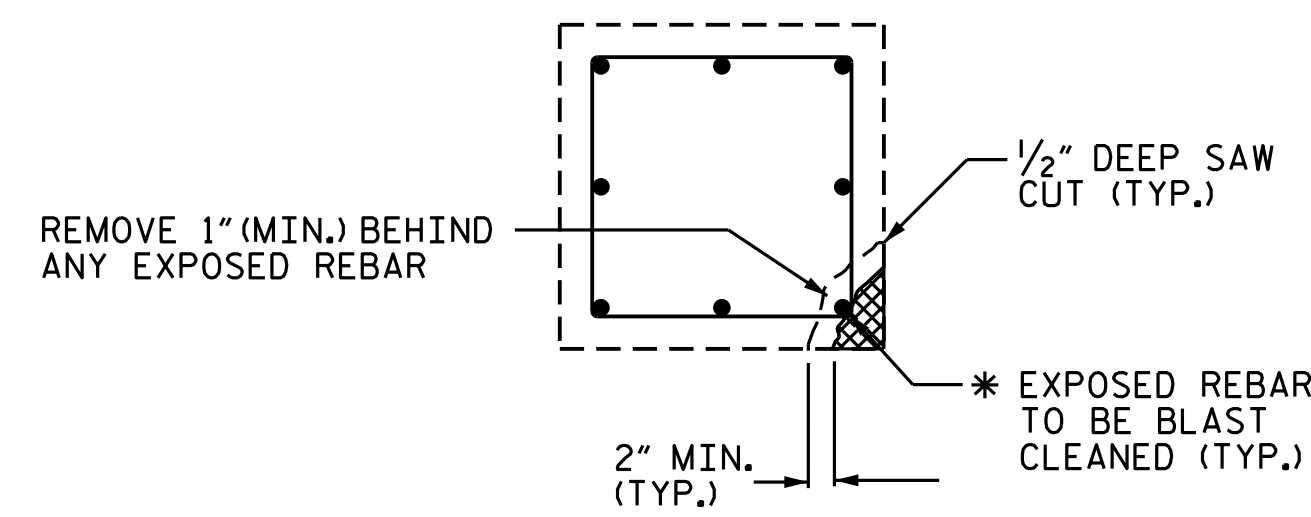


BENT CAP REPAIRS



SECTION A-A

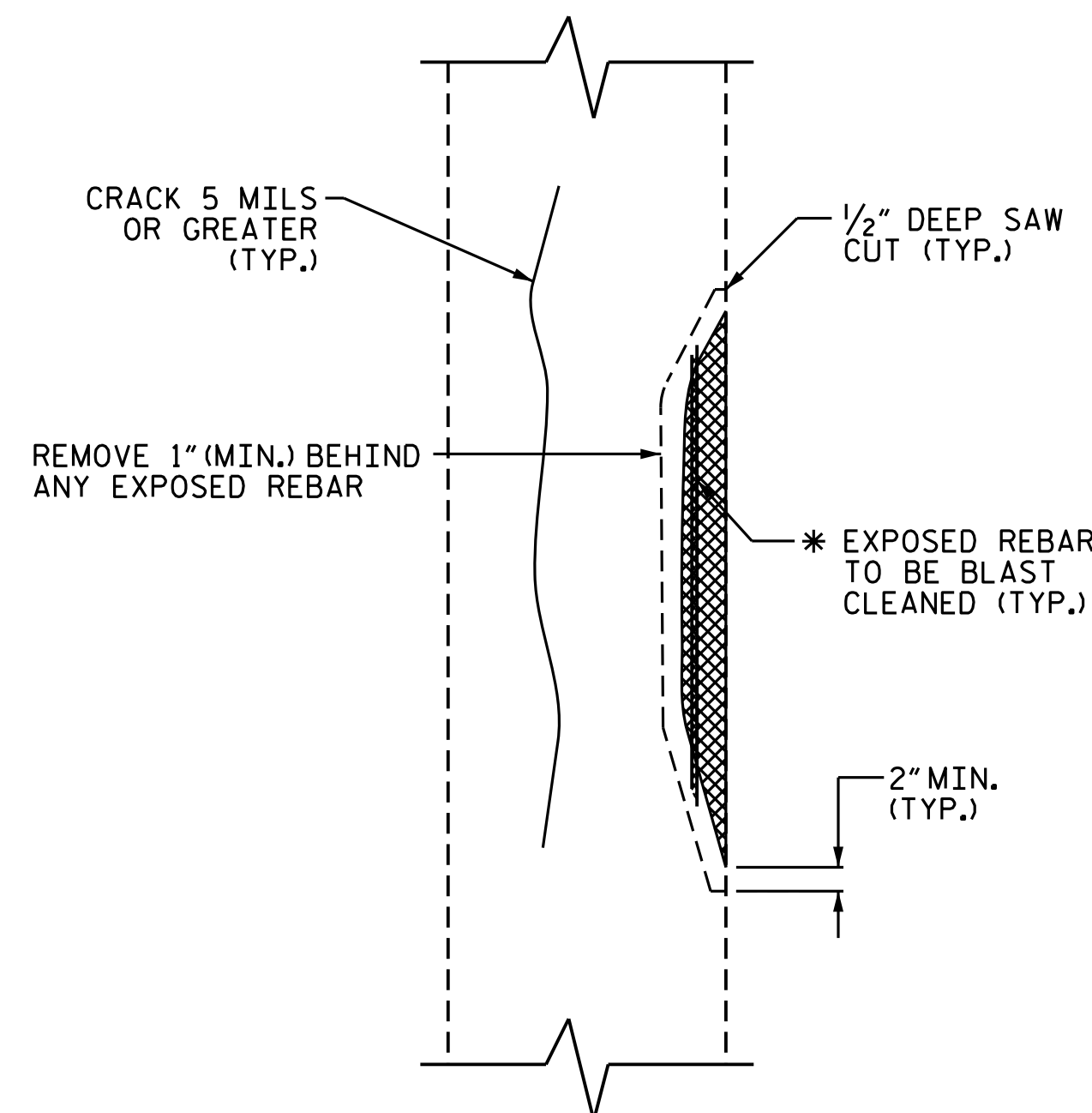
CAP REPAIR



PLAN OF COLUMN

REPAIR KEY

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

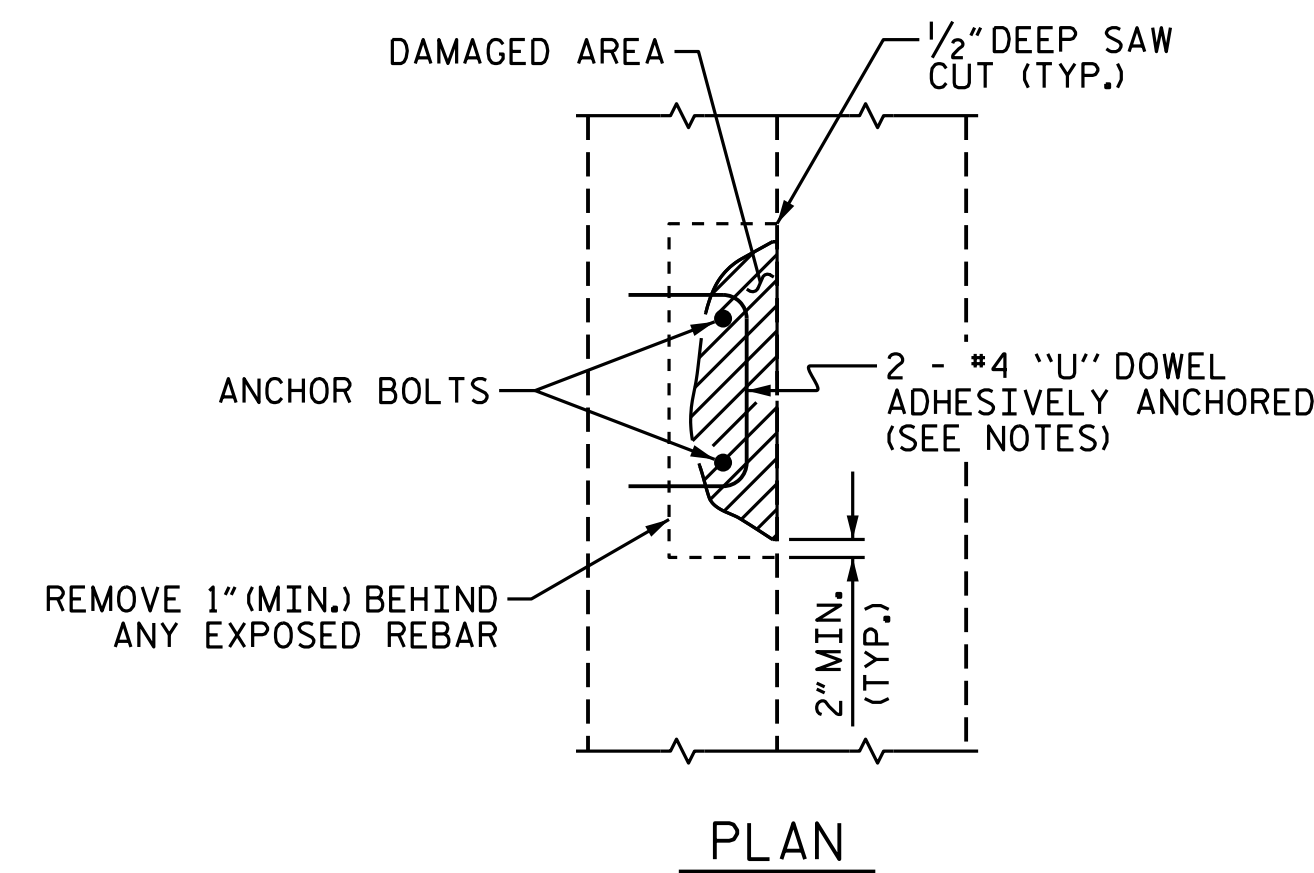


ELEVATION OF COLUMN

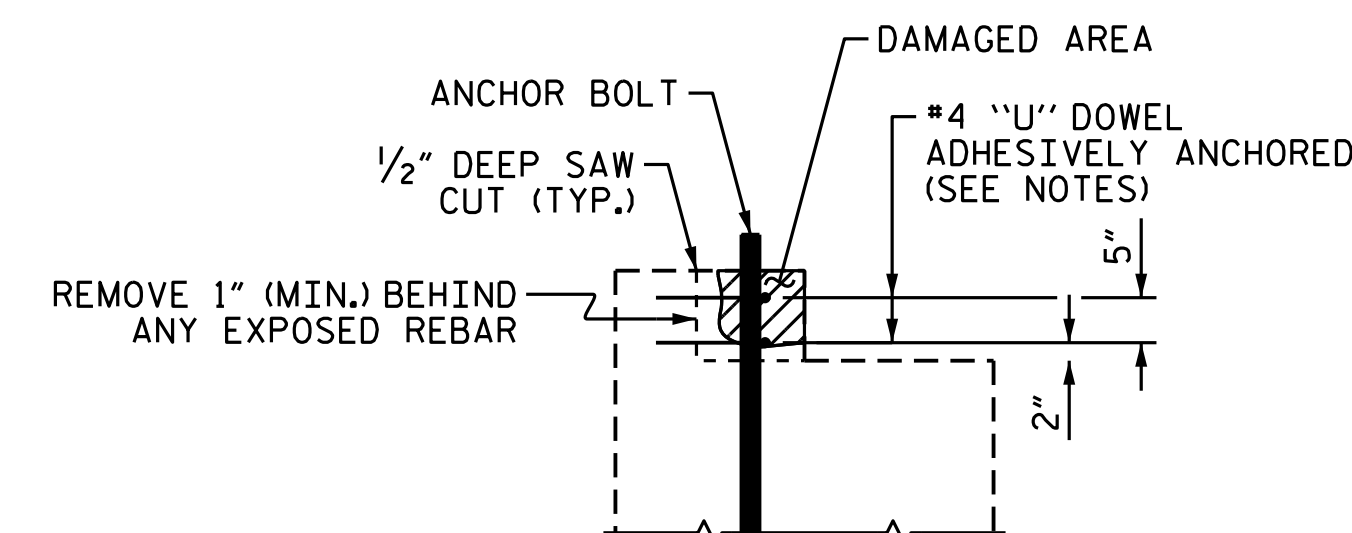
COLUMN REPAIR

* REPAIR LENGTH SHALL NOT EXCEED 10 FEET.

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

ASSEMBLED BY : A. SORSENGINH DATE : 7/2020
 CHECKED BY : M. G. SHAIKH DATE : 7/2020
 DRAWN BY : NAP 8/18
 CHECKED BY :

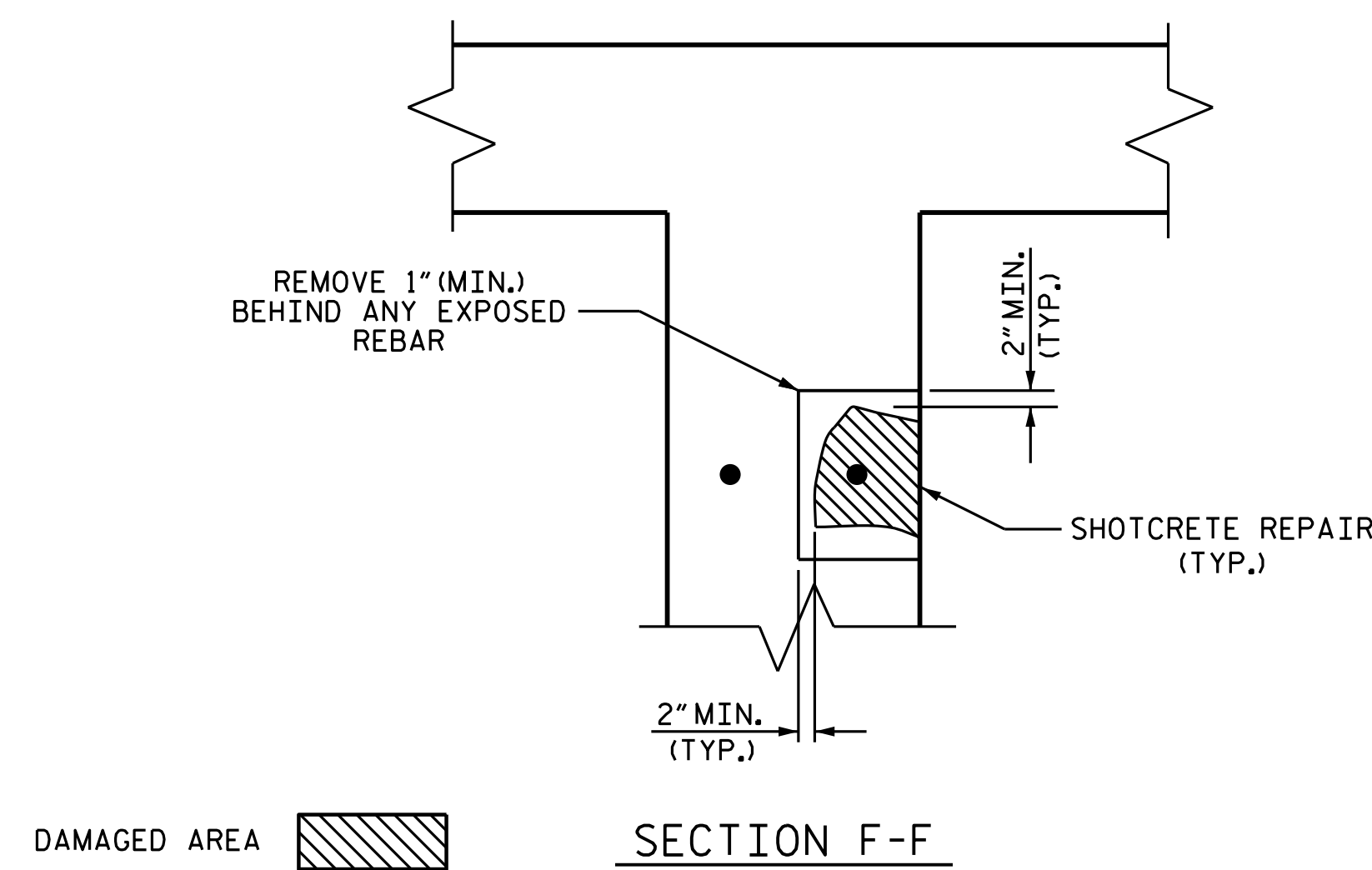
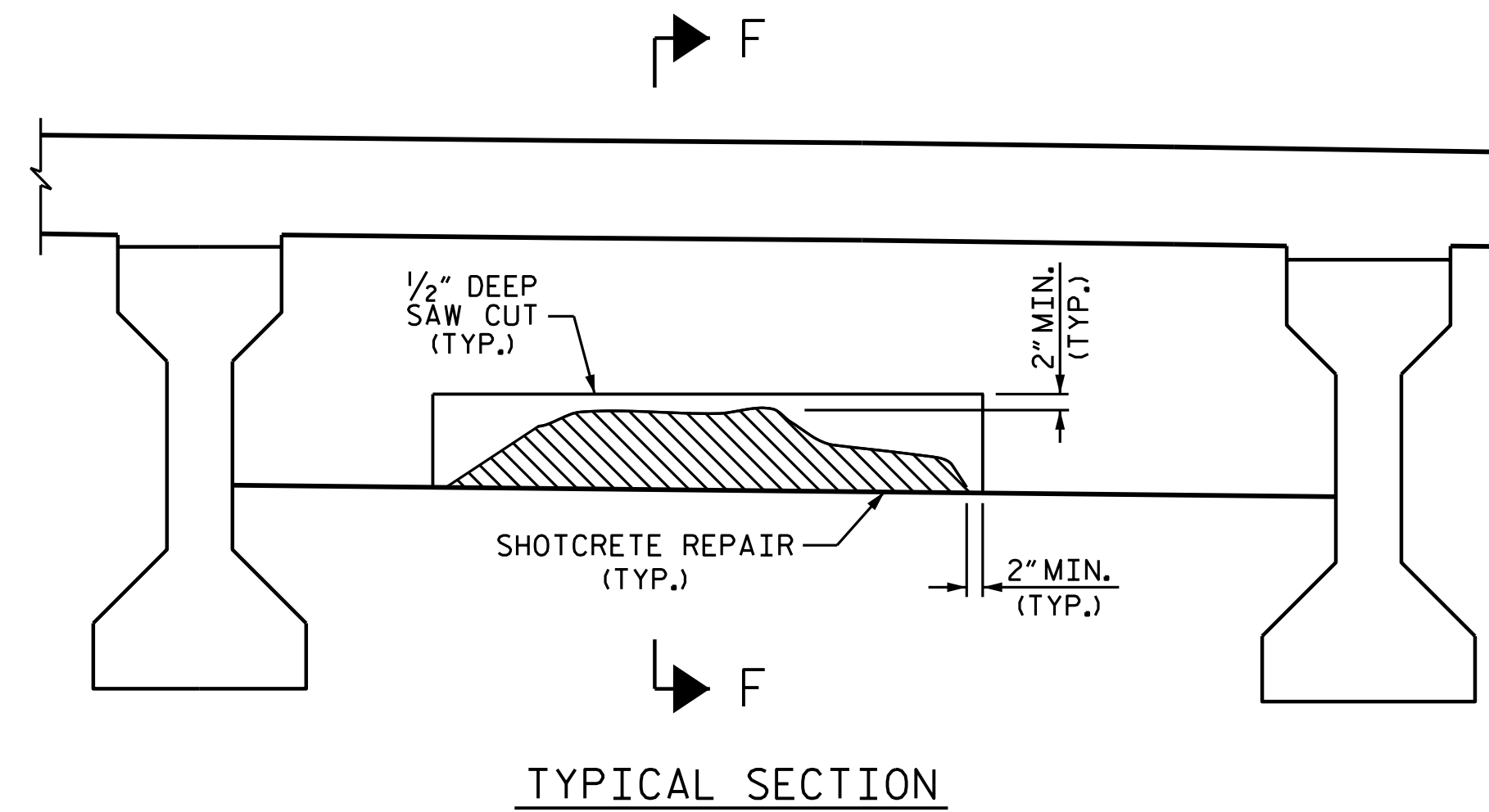
NOTES

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

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

CONTRACTOR SHALL SAW CUT THE REPAIR AREAS SO THAT THE CORNERS ARE SQUARE AS INDICATED ON THE DETAILS.

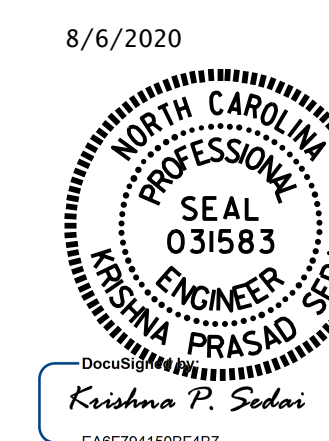
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.



INTERIOR DIAPHRAGM REPAIR DETAILS

PROJECT NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 161, 162

SHEET 2 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DIAPHRAGM
 REPAIR DETAILS**

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : A. SORSENGINH DATE : 5/2018
 CHECKED BY : M. G. SHAIKH DATE : 6/2018

BRIDGE JACKING NOTES:

THIS DETAIL IS A GENERIC EXAMPLE OF A JACKING SCHEME AND DOES NOT NECESSARILY REPRESENT SPECIFIC CONDITIONS AT A PARTICULAR BRIDGE. ACTUAL BRIDGE GEOMETRIES, DIMENSIONS, AND CONDITIONS MAY DIFFER FROM THIS DETAIL. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL INVESTIGATE THE BRIDGES ON THE PROJECT AND DEVELOP A JACKING PLAN TO BE SUBMITTED FOR REVIEW AND APPROVAL. SEE BRIDGE JACKING SPECIAL PROVISION.

PRIOR TO BRIDGE JACKING OPERATIONS, THE ENGINEER AND CONTRACTOR SHALL INSPECT THE STRUCTURE FOR ANY NOTABLE DEFECTS TO THE PRIMARY AND SECONDARY STRUCTURAL MEMBERS. ALL NOTABLE DEFECTS SHALL BE DOCUMENTED AND REPORTED TO THE AREA BRIDGE MAINTENANCE ENGINEER PRIOR TO COMMENCEMENT OF ANY BRIDGE JACKING. THE CONTRACTOR SHALL PROVIDE SAFE AND SUFFICIENT ACCESS TO ALL STRUCTURAL MEMBERS FOR THE ENGINEER TO ESTABLISH PROPER DOCUMENTATION.

PRIOR TO JACKING, THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE BEAM FROM BEING LIFTED.

THE BEAM SHALL BE LIFTED ENOUGH THAT THE BEAM CLEARS THE BEARINGS AND ALL LOAD IS SUPPORTED BY THE JACKS. AFTER JACKING IS COMPLETE, THE CONTRACTOR SHALL PROVIDE FOR A METHOD TO REMOVE THE JACKS AND SUPPORT THE BEAM FOR DEAD AND LIVE LOAD DURING THE REPAIR OPERATIONS. IF THE JACKS REMAIN IN PLACE DURING THE ENTIRE JACKING AND REPAIR OPERATION, THEY SHALL HAVE MECHANICAL LOCK OFF CAPABILITIES.

IF, DURING THE JACKING PROCESS, OR WHILE THE BEAM IS BEING SUPPORTED, THE BEAM SHIFTS FROM ITS ORIGINAL POSITION, ALL WORK SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

BEARINGS ADJACENT TO THE BEAM BEING JACKED MAY BE LOOSENED TO DECREASE THE RESISTANCE OF THE DECK SLAB DURING JACKING. ALL BEARINGS LOOSENED SHALL BE TIGHTENED BACK AFTER REPAIR OPERATIONS ARE COMPLETED AND THE JACKS AND BLOCKING HAVE BEEN REMOVED.

THE MAXIMUM DIFFERENTIAL BETWEEN ADJACENT BEAMS THAT ARE BEING JACKED IS $\frac{1}{8}$ ".

LOADS PROVIDED IN THE "BRIDGE JACKING TABLE" ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR'S ENGINEER SHALL DETERMINE THE EXPECTED LOADS TO BE LIFTED DURING THE BRIDGE JACKING OPERATIONS.

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE JACKING PROCEDURE(S) SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA TO THE ENGINEER FOR APPROVAL PRIOR TO BRIDGE JACKING OPERATIONS.

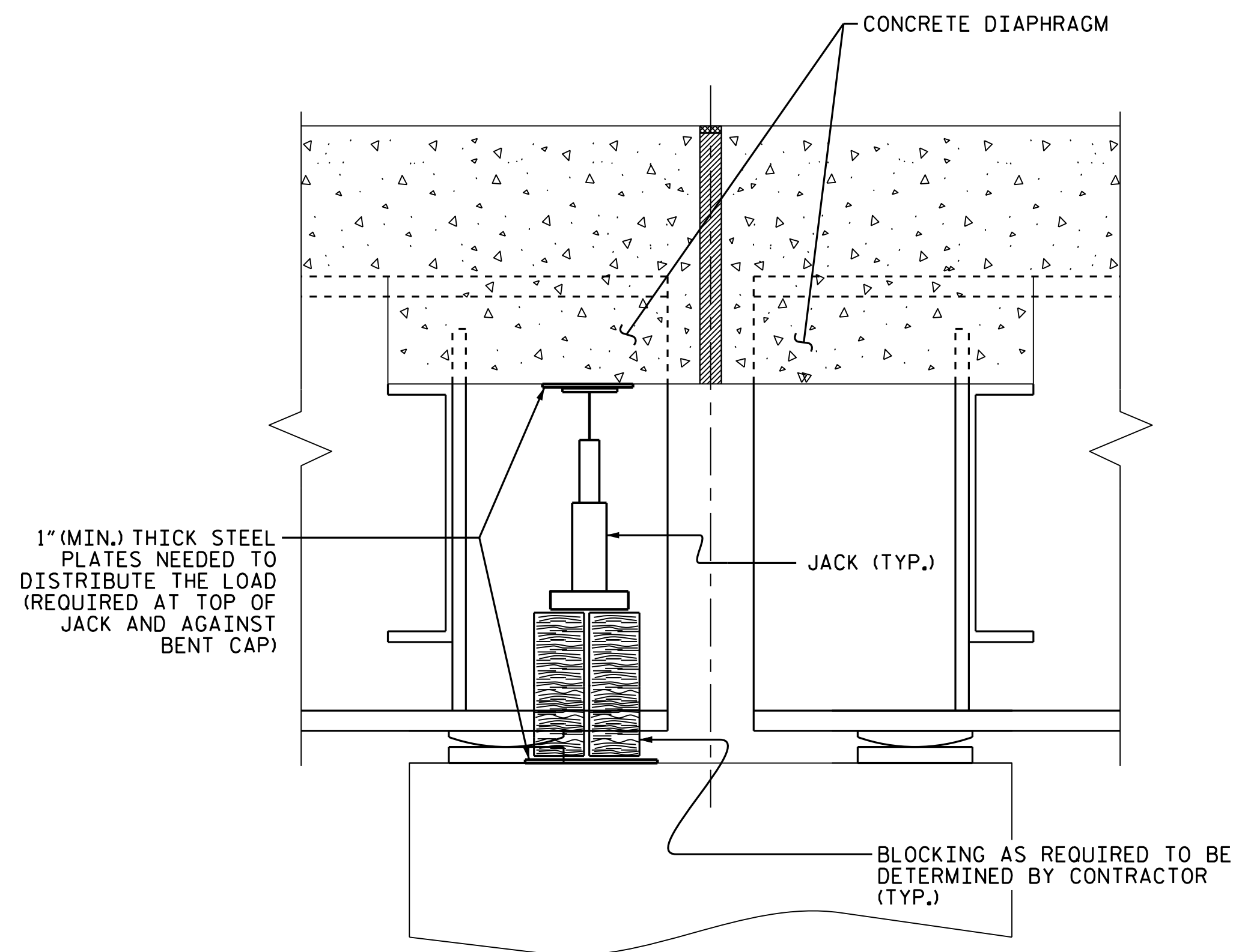
FOR TYPE I OR TYPE II BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR WORKING DRAWING SUBMITTALS, SEE SPECIAL PROVISIONS.

ANY STEEL THAT HAS BEEN WELDED TO THE EXISTING STRUCTURE SHALL REMAIN IN PLACE.

TYPE II BRIDGE JACKING SHALL BE DONE WITH A HYDRULIC JACKING SYSTEM THAT LIFTS EACH BEAM ALONG ENTIRE SPAN END WITH EQUAL FORCE AND AT AN EQUAL RATE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO THE EXISTING STRUCTURE BY BRIDGE JACKING OPERATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.

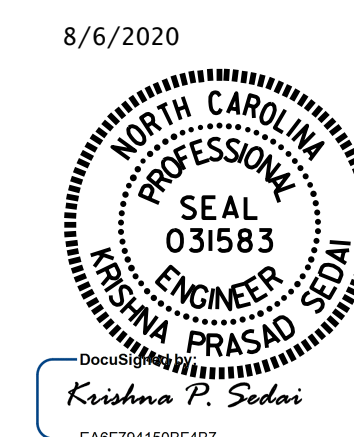


SECTION THRU DIAPHRAGM

BRIDGE JACKING TABLE				
LOCATION	SPAN	BEAM(S)	BRIDGE JACKING TYPE	DEAD LOAD (DC+DW) (KIPS)
END BENT 1				
BENT 1	A	4	I	58
BENT 2				
END BENT 2				

PROJ. NO. I-5795
FORSYTH COUNTY
 BRIDGE NO. 330161

SHEET 3 OF 3



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

STANDARD

BRIDGE JACKING
 DETAILS

ASSEMBLED BY : A. SORSENGINH DATE : 7/2020
 CHECKED BY : M. G. SHAIKH DATE : 7/2020

DRAWN BY : NAP 08/18
 CHECKED BY :

05-AUG-2020 14:43
 B:\Structures\Final Plans Combined\422.005.I-5795.SMU.JK.3.dgn

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

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

