

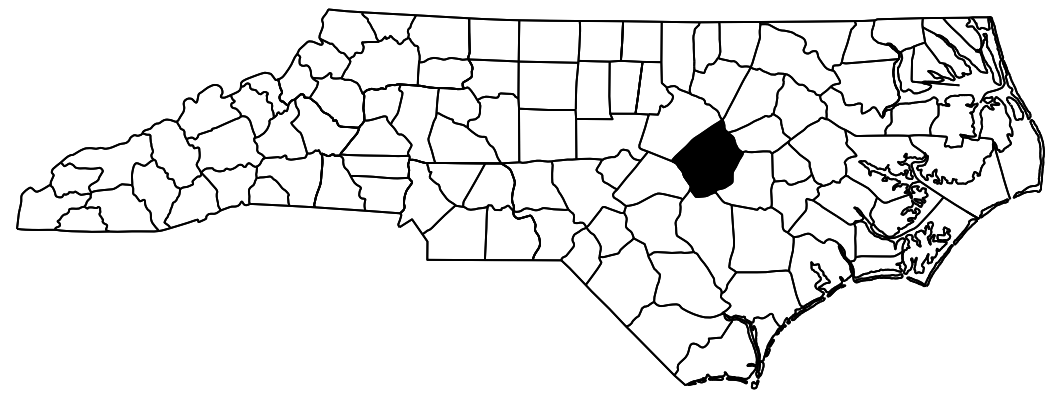
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**This file or an individual page
shall not be considered a certified document.**

PROJECT: I-5781

CONTRACT: C203977



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

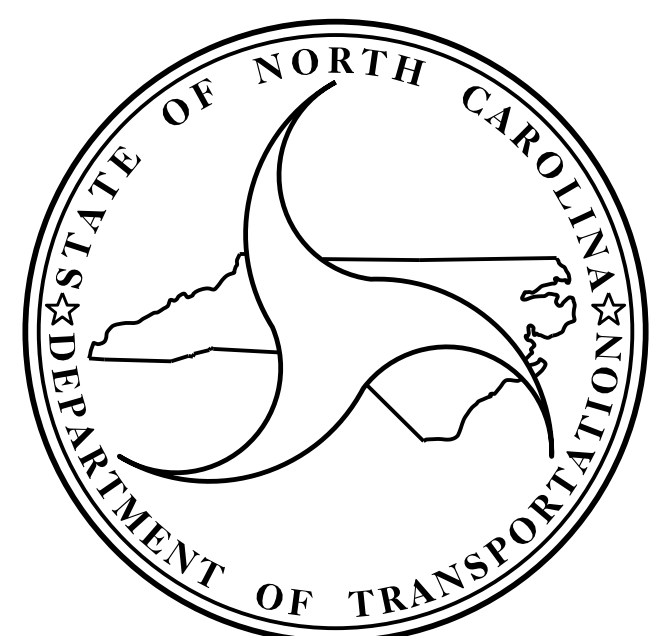
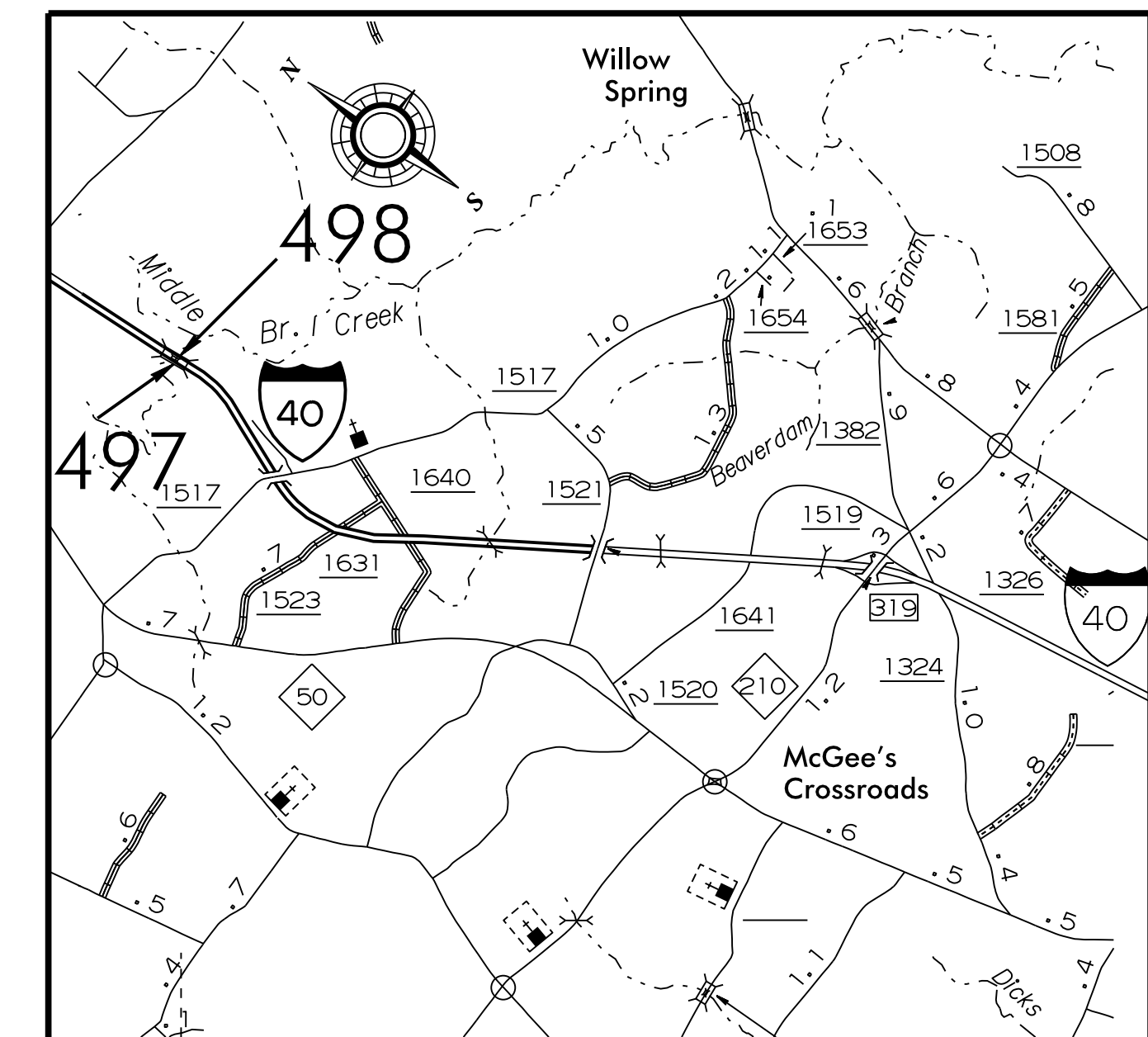
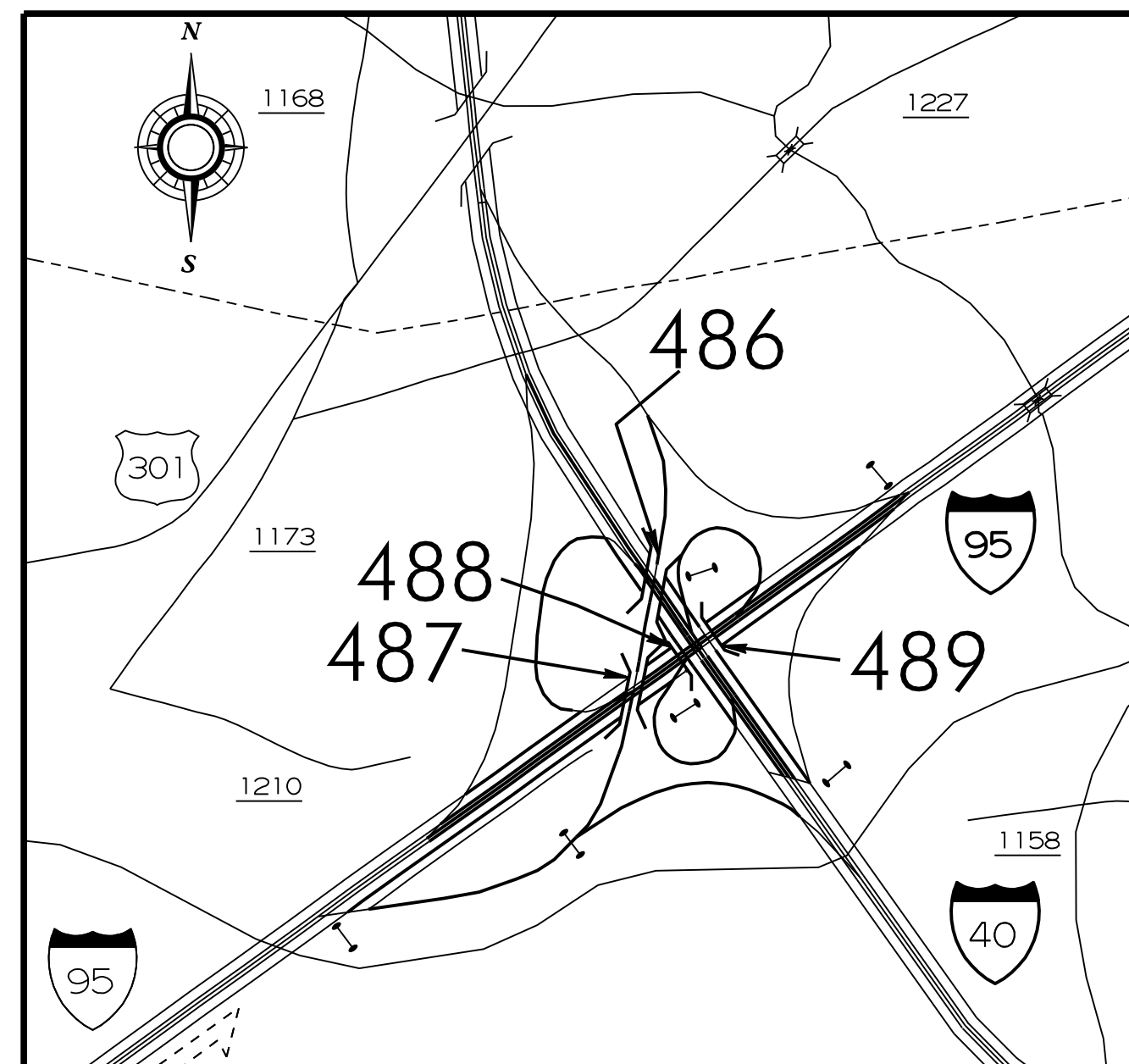
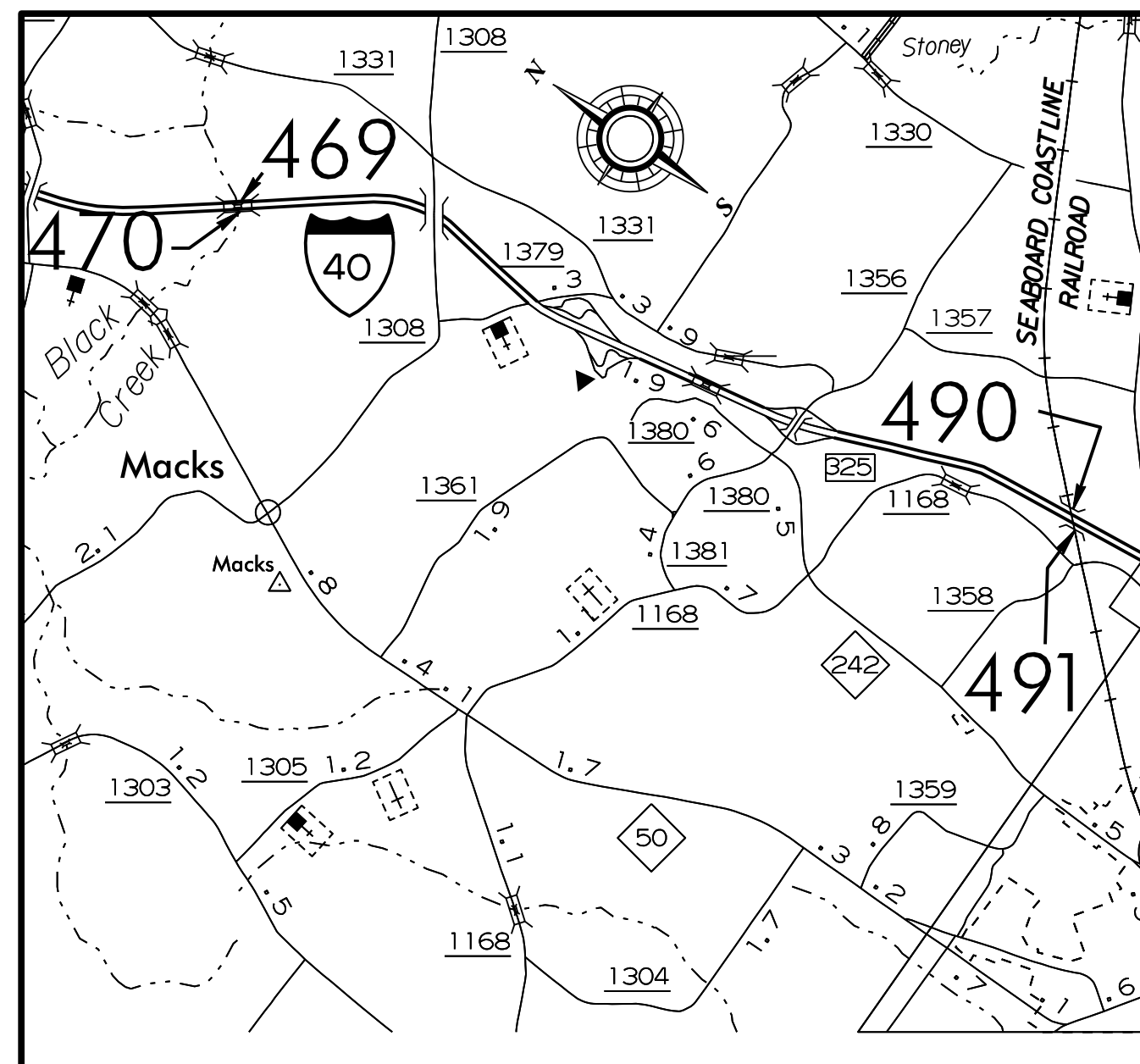
JOHNSTON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5781	1	69
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53022.1.1	NHPIM-0040(050)	P.E.	
53022.3.1	NHPIM-0040(050)	CONST.	

LOCATION:

- BRIDGE #469 ON I-40 WBL OVER BLACK CREEK.**
- BRIDGE #470 ON I-40 EBL OVER BLACK CREEK.**
- BRIDGE #486 ON I-40 WBL RAMP OVER I-40.**
- BRIDGE #487 ON I-40 WBL RAMP OVER I-95.**
- BRIDGE #488 ON I-40 EBL OVER I-95.**
- BRIDGE #489 ON I-40 WBL OVER I-95.**
- BRIDGE #490 ON I-40 WBL OVER SEABOARD COASTLINE RAILROAD.**
- BRIDGE #491 ON I-40 EBL OVER SEABOARD COASTLINE RAILROAD.**
- BRIDGE #497 ON I-40 EBL OVER MIDDLE CREEK.**
- BRIDGE #498 ON I-40 WBL OVER MIDDLE CREEK.**

TYPE OF WORK: BRIDGE PRESERVATION WITH POLYESTER POLYMER CONCRETE OVERLAY, SILICONE JOINT SEALS, GROOVING, PAINTING OF EXISTING WEATHERING STEEL, SUPERSTRUCTURE REPAIRS AND SUBSTRUCTURE REPAIRS.



DESIGN DATA

BRIDGE #469 ADT 2013	=	21,500
BRIDGE #470 ADT 2013	=	21,500
BRIDGE #486 ADT 2013	=	10,000
BRIDGE #487 ADT 2013	=	10,000
BRIDGE #488 ADT 2013	=	20,000
BRIDGE #489 ADT 2013	=	18,000
BRIDGE #490 ADT 2013	=	20,000
BRIDGE #491 ADT 2013	=	20,000
BRIDGE #497 ADT 2013	=	48,000
BRIDGE #498 ADT 2013	=	24,000

PROJECT LENGTH

BRIDGE #469	=	0.044 MILES
BRIDGE #470	=	0.044 MILES
BRIDGE #486	=	0.056 MILES
BRIDGE #487	=	0.059 MILES
BRIDGE #488	=	0.040 MILES
BRIDGE #489	=	0.040 MILES
BRIDGE #490	=	0.030 MILES
BRIDGE #491	=	0.030 MILES
BRIDGE #497	=	0.052 MILES
BRIDGE #498	=	0.052 MILES

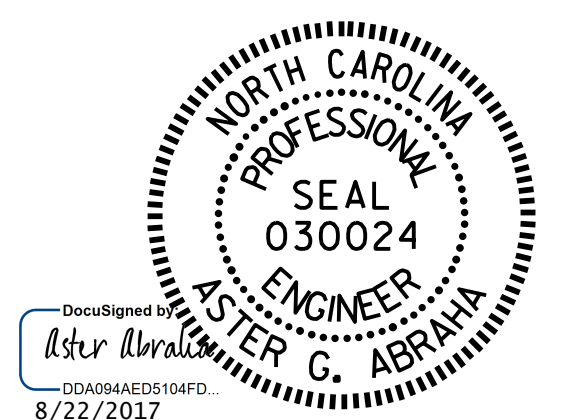
Prepared in the Office of:
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT - PRESERVATION & REPAIR GROUP
1000 BIRCH RIDGE DR. RALEIGH, N.C. 27610

GREGORY W. DICKEY, P.E.

PROJECT ENGINEER

2012 STANDARD SPECIFICATIONS

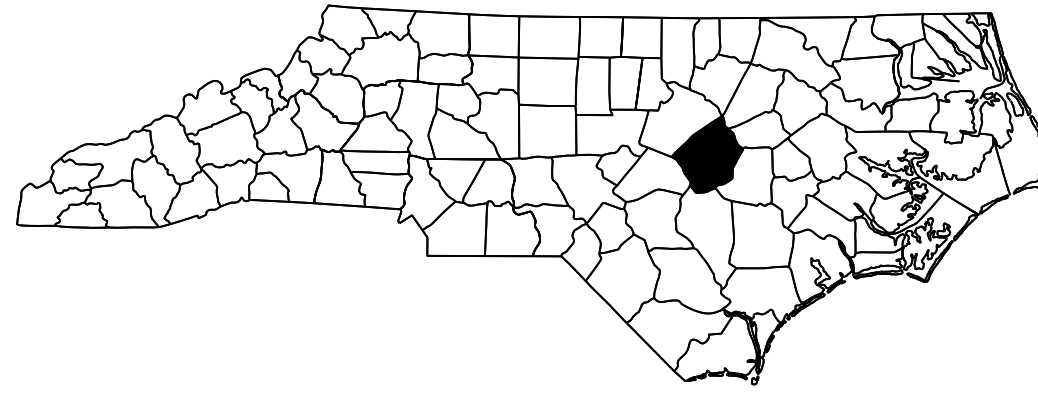
LETTING DATE:
OCTOBER 17, 2017



ASTER G. ABRAHA, P.E.
PROJECT DESIGN ENGINEER

PROJECT: I-5781

CONTRACT: C203977



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

JOHNSTON COUNTY

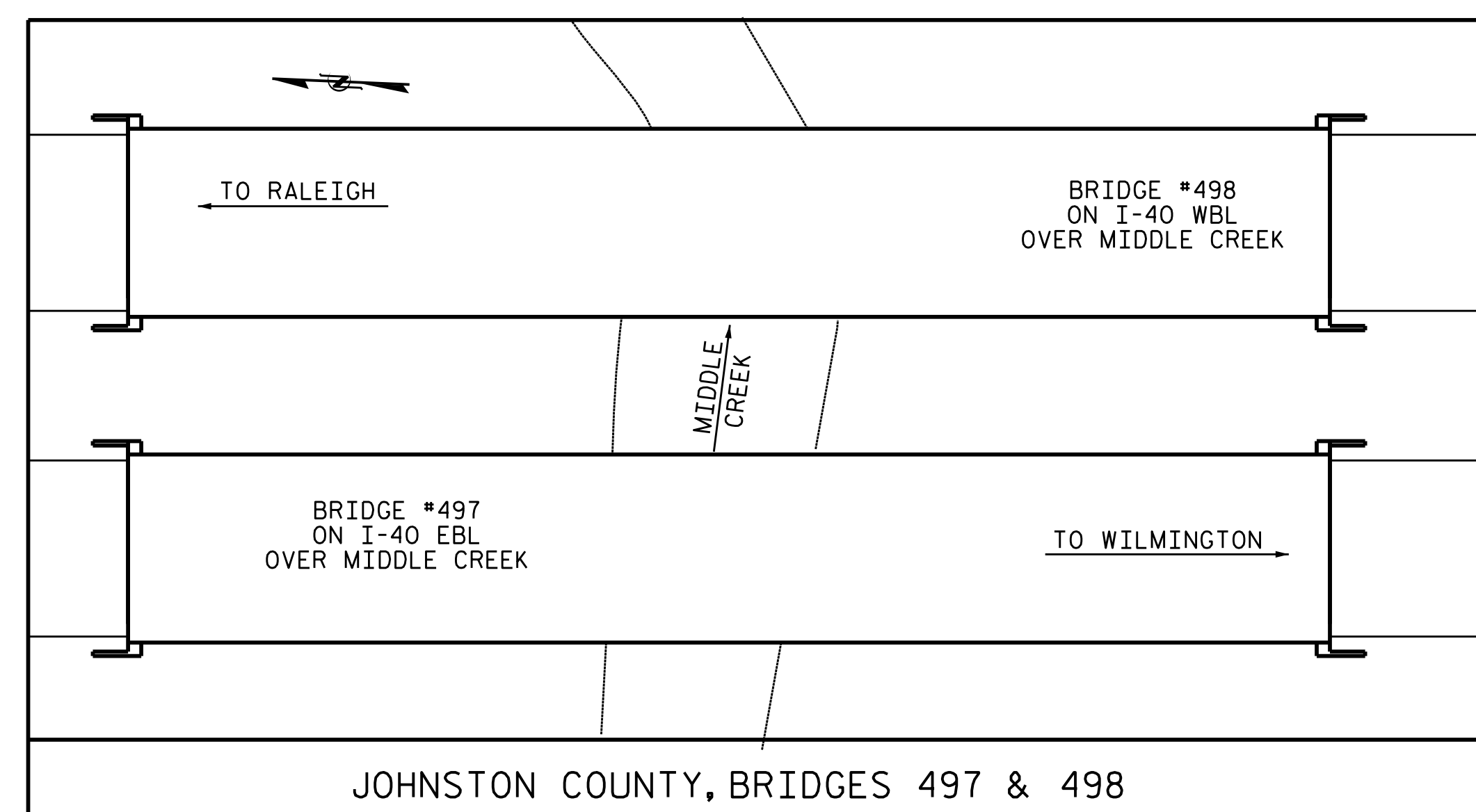
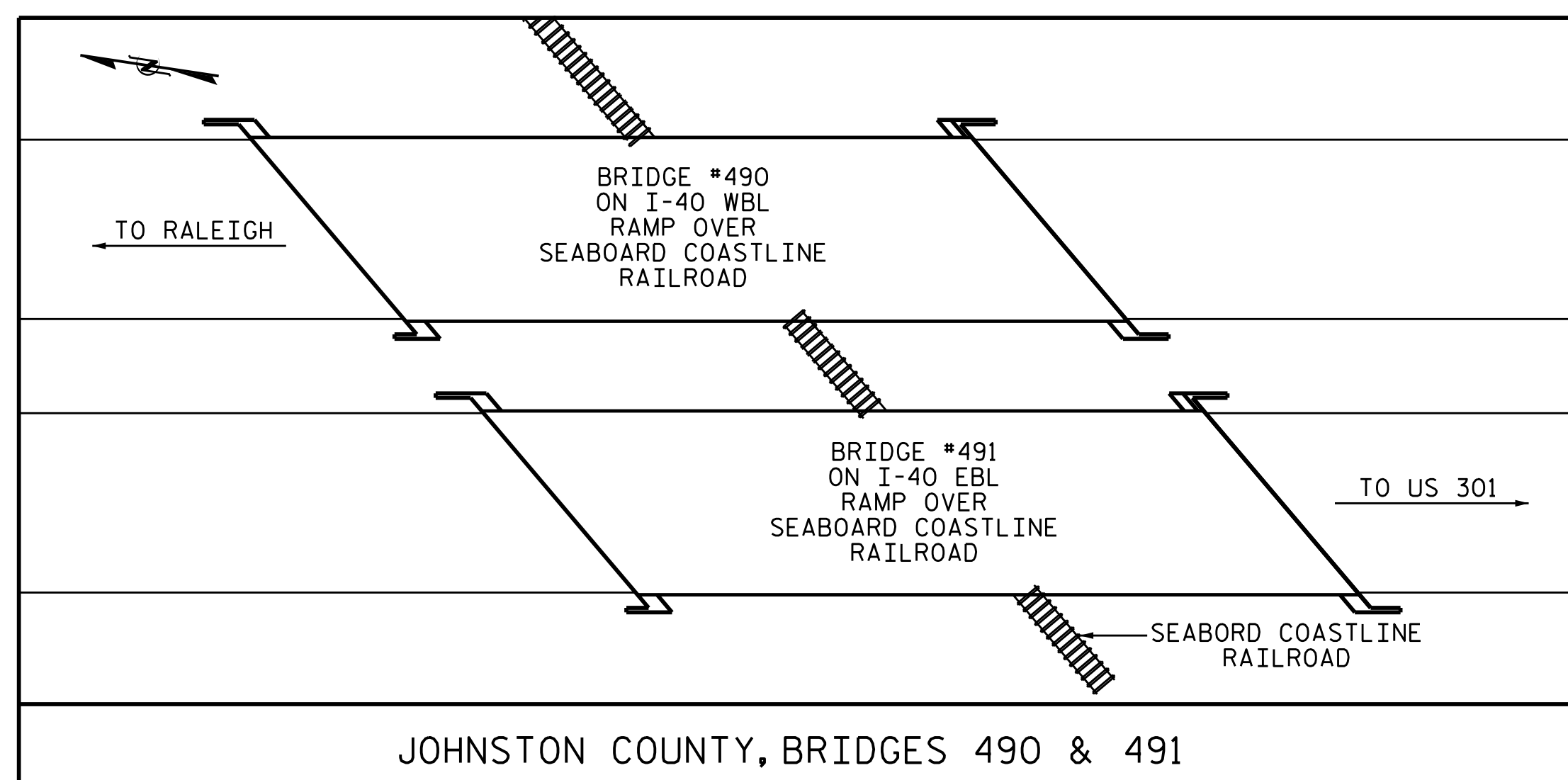
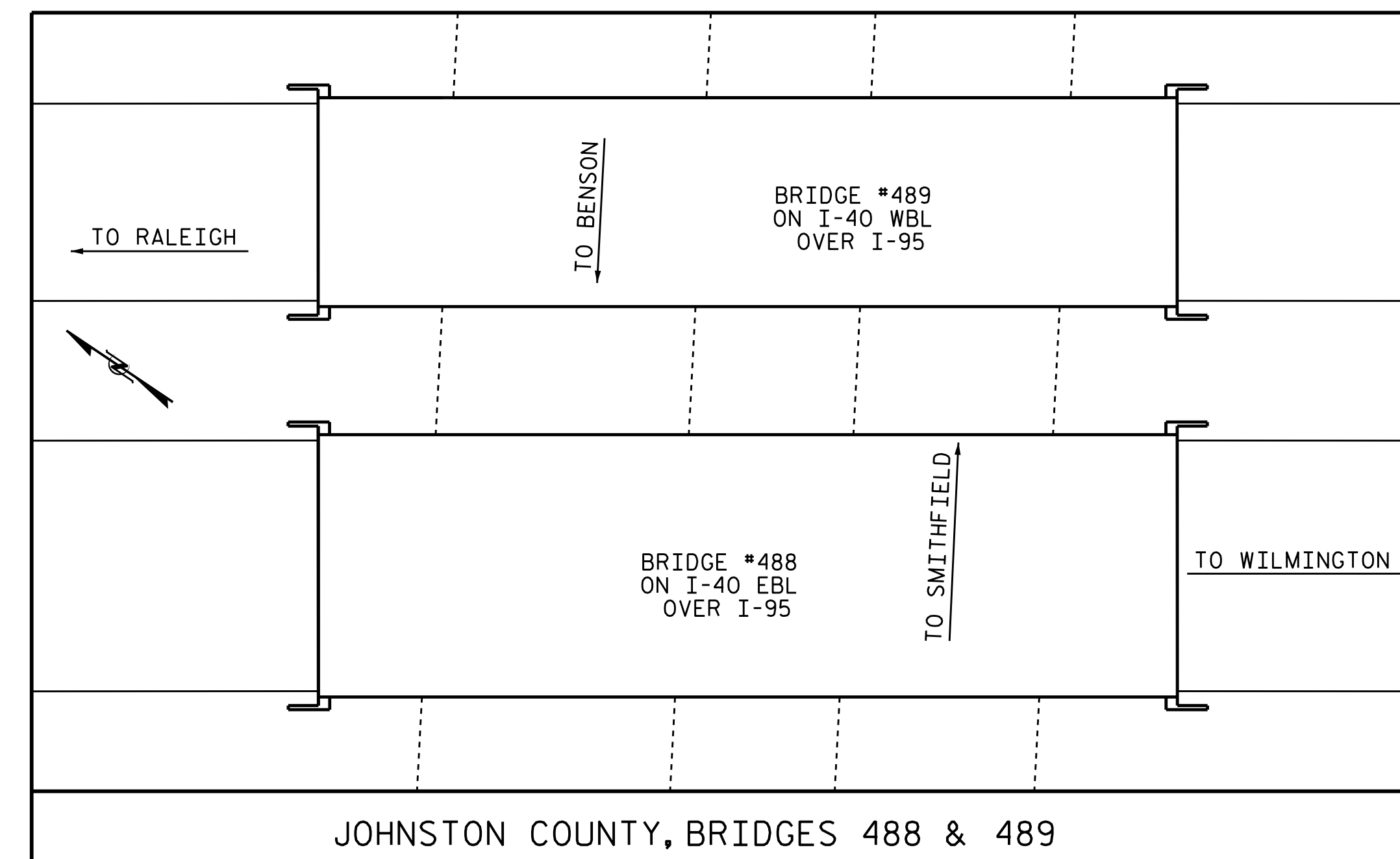
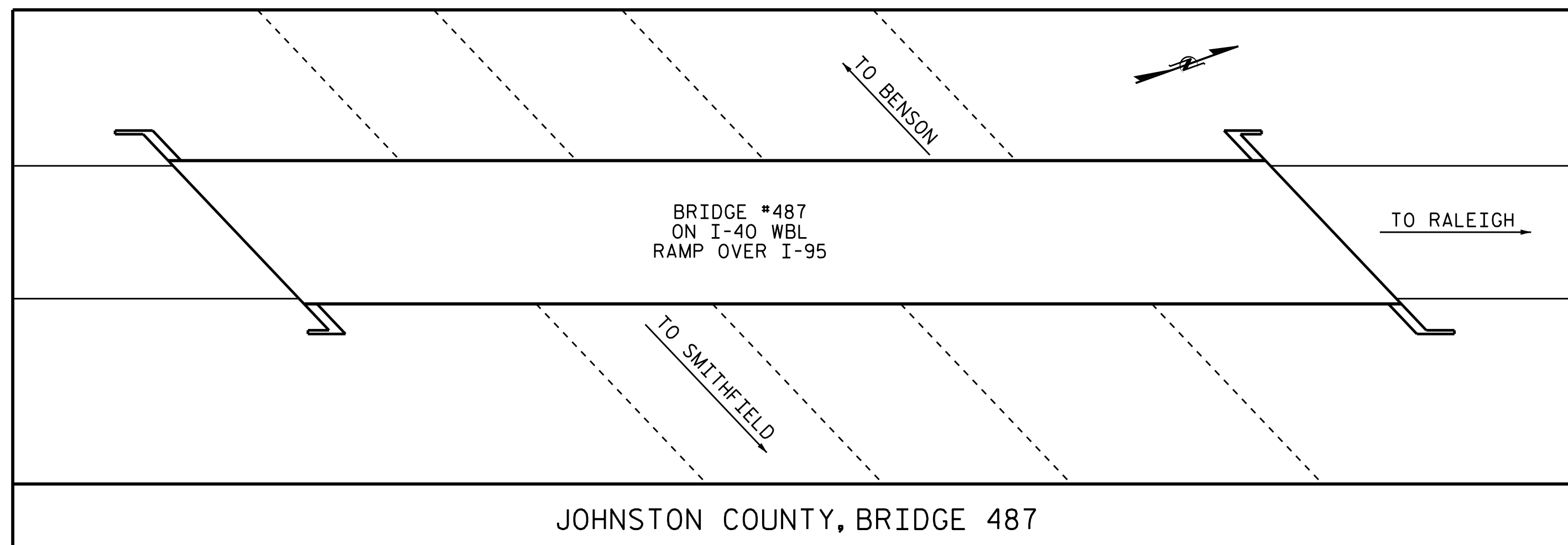
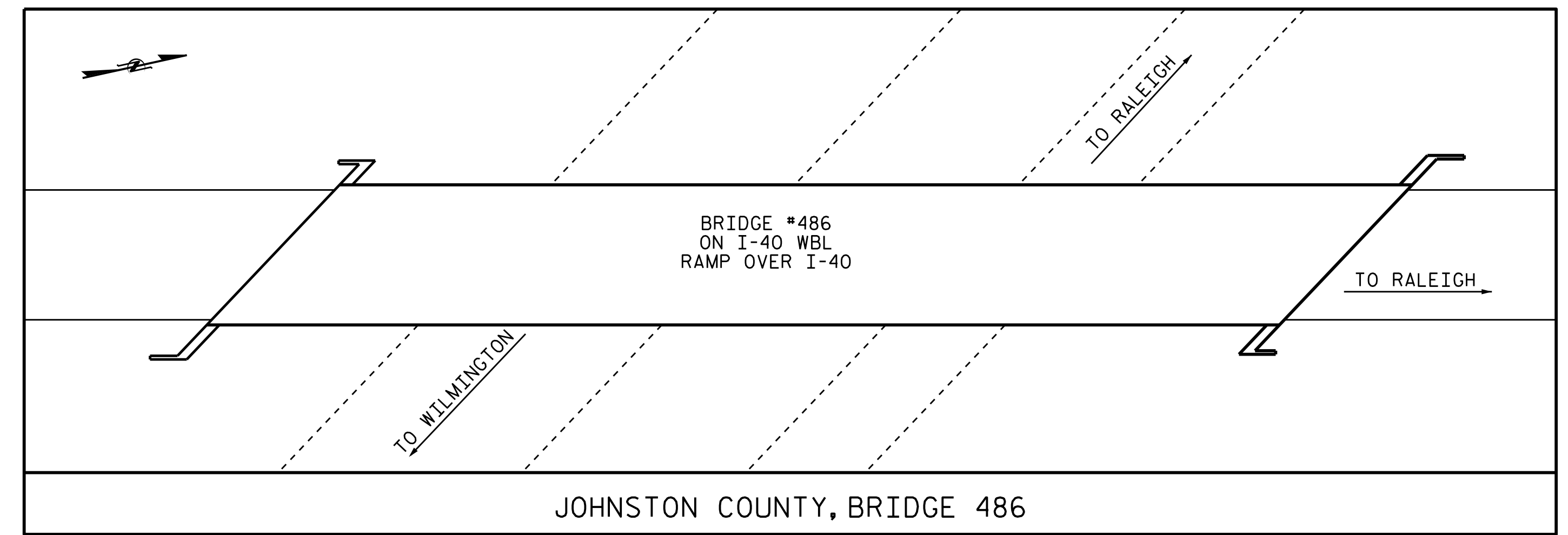
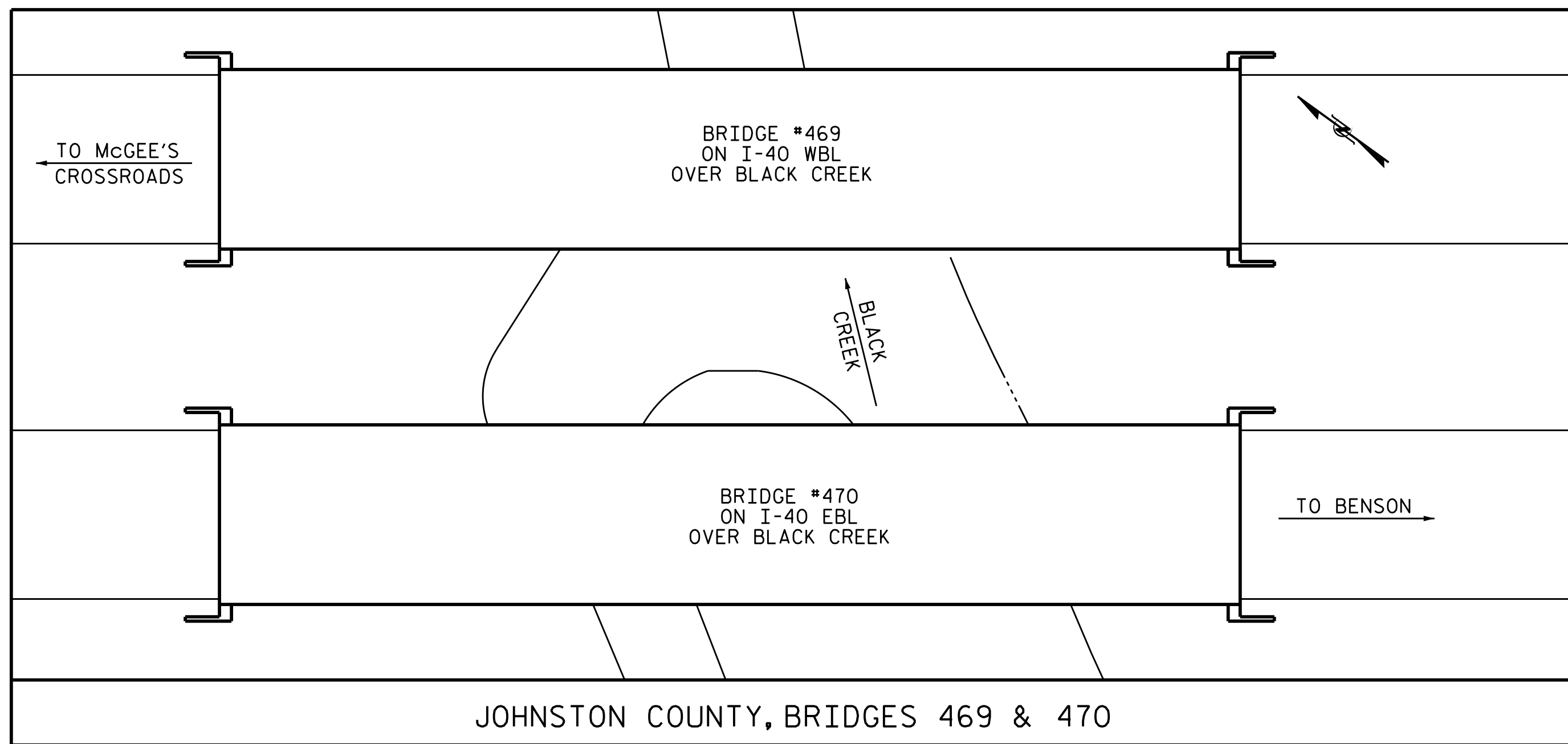
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5781	1A	69
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53022.1.1	NHPIM-0040(050)	P.E.	
53022.3.1	NHPIM-0040(050)	CONST.	

LOCATION: BRIDGE #469 ON I-40 WBL OVER BLACK CREEK.
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 BRIDGE #498 ON I-40 WBL OVER MIDDLE CREEK.

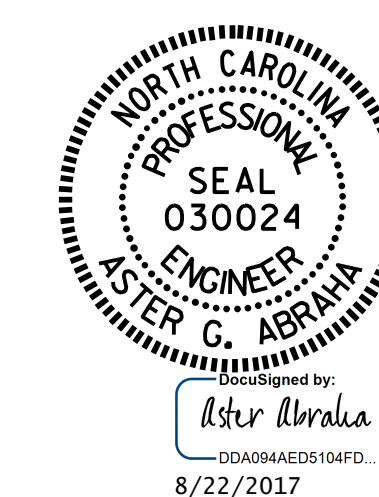
TYPE OF WORK: BRIDGE PRESERVATION WITH POLYESTER POLYMER CONCRETE OVERLAY,
 SILICONE JOINT SEALS, GROOVING, PAINTING OF EXISTING WEATHERING STEEL,
 SUPERSTRUCTURE REPAIRS AND SUBSTRUCTURE REPAIRS.

INDEX OF SHEETS

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF SHEETS
S-1	LOCATION SKETCHES
S-2	TOTAL BILL OF MATERIALS
S-3 THRU S-15	STRUCTURAL PLANS - BRIDGES #469 & #470
S-16 THRU S-29	STRUCTURAL PLANS - BRIDGES #486 & #487
S-30 THRU S-40	STRUCTURAL PLANS - BRIDGES #488 & #489
S-41 THRU S-53	STRUCTURAL PLANS - BRIDGES #490 & #491
S-54 THRU S-68	STRUCTURAL PLANS - BRIDGES #497 & #498
S-69	CAP & COLUMN REPAIR DETAILS
SN	STANDARD NOTES



PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469, 470, 486, 487
488, 489, 490, 491, 497 & 498



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 LOCATION SKETCHES

LOCATION SKETCHES

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

DRAWN BY : S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			69

TOTAL BILL OF MATERIAL

COUNTY	BRIDGE NO.	GROOVING BRIDGE FLOORS	POLLUTION CONTROL	SHOTCRETE REPAIRS	* CLASS II SURFACE PREPARATION	SCARIFYING BRIDGE DECK	SHOTBLASING BRIDGE DECK	CONCRETE DECK REPAIR FOR PPC OVERLAY	PPC MATERIALS	PLACING AND FINISHING PPC OVERLAY	PAINTING EXISTING WEATHERING STEEL STRUCTURE FOR BRIDGE NO.---	PAINTING CONTAINMENT FOR BRIDGE NO.---	EPOXY RESIN INJECTION	EPOXY COATING	SILICONE JOINT SEALANT	FOAM JOINT SEAL	RIP RAP CLASS 2
		SQ. FT.	-	CU. FT.	SQ. YD.	SO. YD.	SO. YD.	SQ. YD.	CU. YD.	SO. YD.	-	-	LN. FT.	SQ. FT.	LN. FT.	LN. FT.	TON
JOHNSTON	469	9,399.0	-	1.0	1.0	1,137.0	1,137.0	** 1.0	31.5	1,137.0	-	-	-	501.0	200.0	-	-
	470	9,399.0	-	1.0	1.0	1,137.0	1,137.0	** 1.0	31.5	1,137.0	-	-	-	501.0	200.0	-	-
	486	10,776.5	LUMP SUM	2.0	1.0	1,313.5	1,313.5	11.0	36.5	1,313.5	LUMP SUM	LUMP SUM	9.5	820.0	250.0	-	-
	487	11,174.0	LUMP SUM	25.4	1.0	1,361.0	1,361.0	7.5	37.8	1,364.0	LUMP SUM	LUMP SUM	50.0	682.0	250.5	-	-
	488	13,286.0	LUMP SUM	20.0	1.0	1,560.0	1,560.0	8.0	43.4	1,560.0	LUMP SUM	LUMP SUM	10.0	439.0	183.0	61	-
	489	10,208.0	LUMP SUM	1.3	1.0	1,228.0	1,228.0	5.4	34.1	1,228.0	LUMP SUM	LUMP SUM	-	348.0	144.0	48	-
	490	7,064.0	-	1.0	1.0	854.5	854.5	** 1.0	23.8	854.5	-	-	-	668.0	210.0	-	-
	491	7,064.0	-	1.0	1.0	854.5	854.5	** 1.0	23.8	854.5	-	-	-	668.0	210.0	-	-
	497	10,835.0	-	1.0	1.0	1,311.0	1,311.0	** 1.0	36.5	1,311.0	-	-	-	676.0	240.0	-	40
	498	10,835.0	-	1.0	1.0	1,311.0	1,311.0	** 1.0	36.5	1,311.0	-	-	-	676.0	240.0	-	30
TOTAL		100,040.5	LUMP SUM	54.7	10.0	12,067.5	12,067.5	37.9	335.4	12,070.5	LUMP SUM	LUMP SUM	69.5	5,979.0	2,127.5	109	70

GENERAL NOTES:

* TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSES, IN CASE UNANTICIPATED CLASS II OR SNOWPLABLE MARKERS ARE ENCOUNTERED.

** CONCRETE DECK REPAIR FOR PPC OVERLAY IS NOT ANTICIPATED, TOKEN PAY ITEMS ARE INDICATED FOR PRICING PURPOSE IN CASE UNANTICIPATED REPAIR AREAS ARE ENCOUNTERED.

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 SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE REPAIR QUANTITY TABLE.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

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

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

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

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

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

FOR POLLUTION CONTROL, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE, SEE SPECIAL PROVISIONS.

FOR POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEAL, SEE SPECIAL PROVISIONS.

ALL PROPOSED EXPANSION JOINT DIMENSIONS, OPENINGS AND BLOCKOUTS ARE SHOWN AT 60°F. CONTRACTOR SHALL FOLLOW MANUFACTURER'S INSTALLATION GUIDELINES AND MAKE ANY NECESSARY ADJUSTMENTS.

WORK ON BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE TO ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

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

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR PAINTING EXISTING WEATHERING STEEL STRUCTURE, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

RIP RAP MATERIAL SHALL BE CLASS 2, IN ACCORDANCE WITH JANUARY 2012 NORTH CAROLINA "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES", SECTION 1042, TABLE 1042-1. (ACCEPTED CRITERIA FOR RIP RAP AND STONE EROSION CONTROL.).

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469, 470, 486, 487,
488, 489, 490, 491,
497 & 498

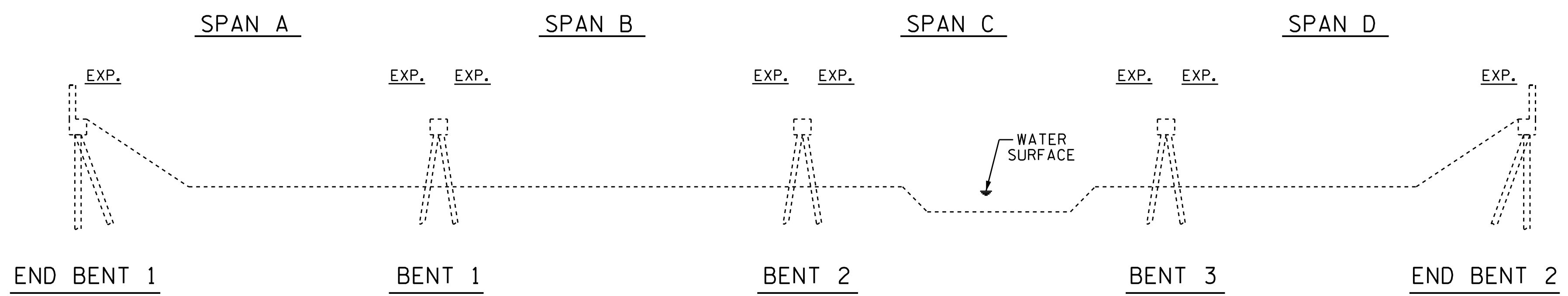


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**GENERAL NOTES
 &
 TOTAL BILL OF MATERIAL**

DRAWN BY : S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

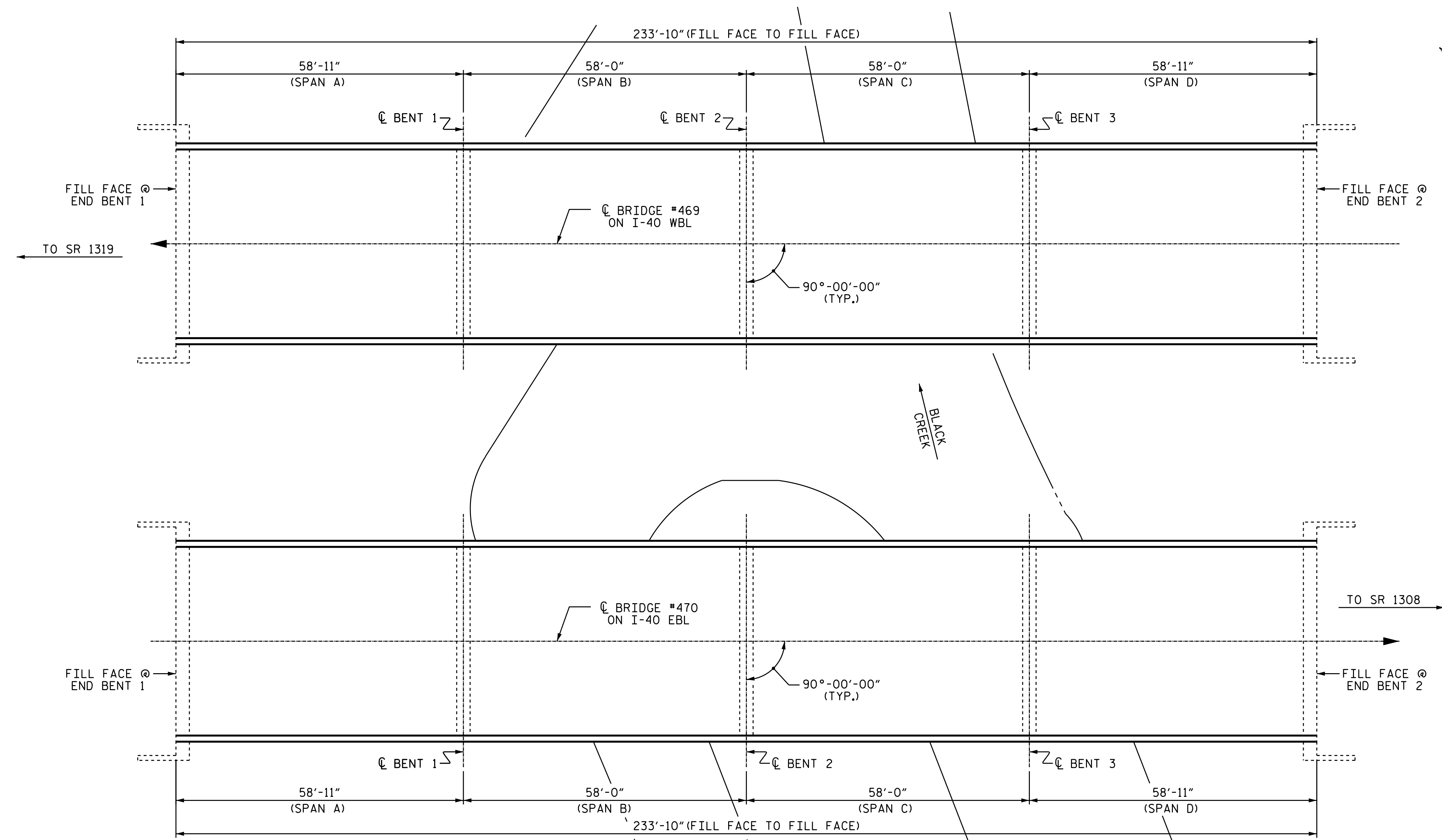
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			69

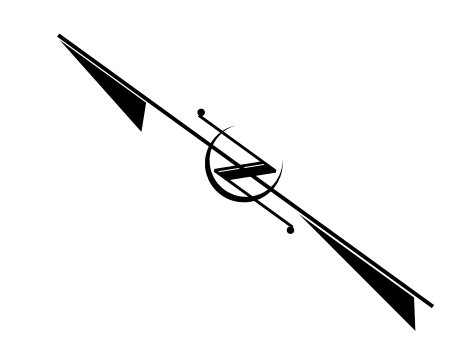


- SCOPE OF WORK**
- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
 - CLEAN AND REMOVE EXISTING BRIDGE DECK JOINTS MATERIAL.
 - PERFORM DECK REPAIRS IN PREPARED AREAS.
 - OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
 - INSTALL SILICONE JOINT SEALANT AND BACKER ROD.
 - GROOVE POLYESTER POLYMER CONCRETE.
 - SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.
 - EPOXY COATING TOP OF CAP.

ELEVATION
(SECTION ALONG C ROADWAY)



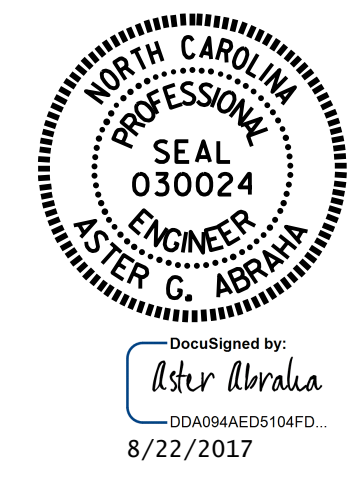
PLAN
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)



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

Resident Engineer _____ Date _____

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469 & 470



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING
 FOR BRIDGES ON I-40
 OVER BLACK CREEK
 BETWEEN SR 1319 & SR 1308

DRAWN BY : M.K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

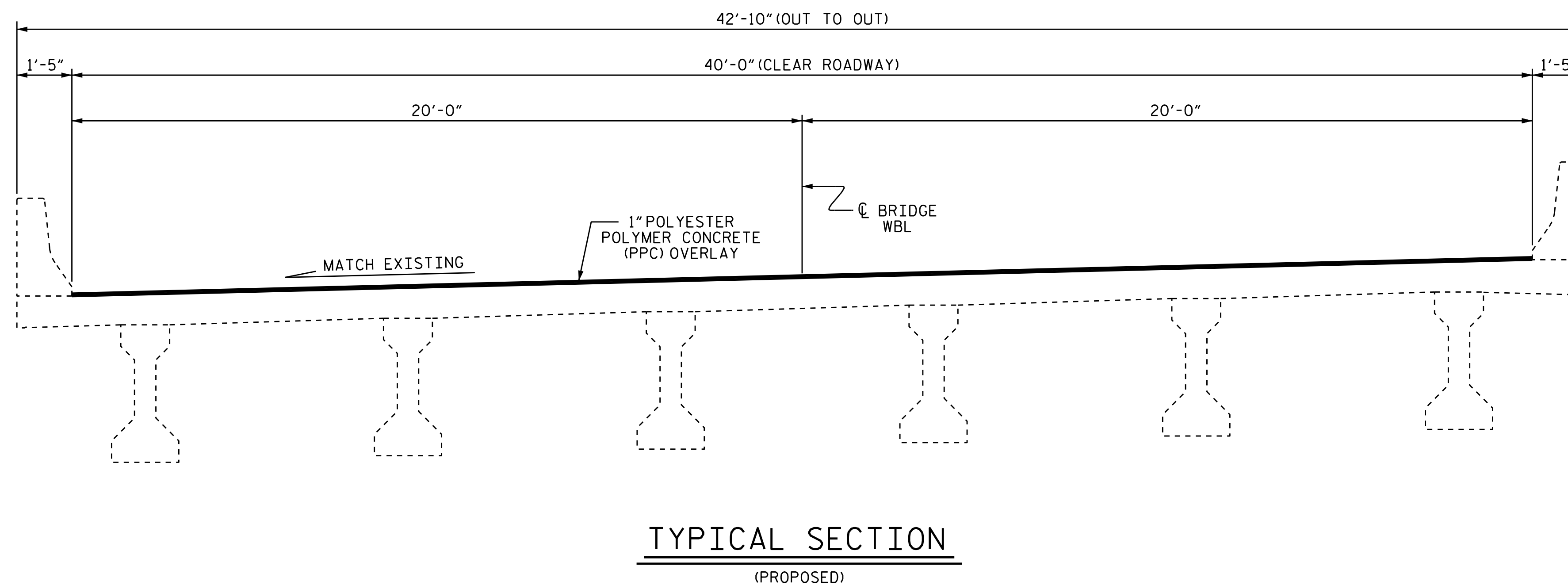
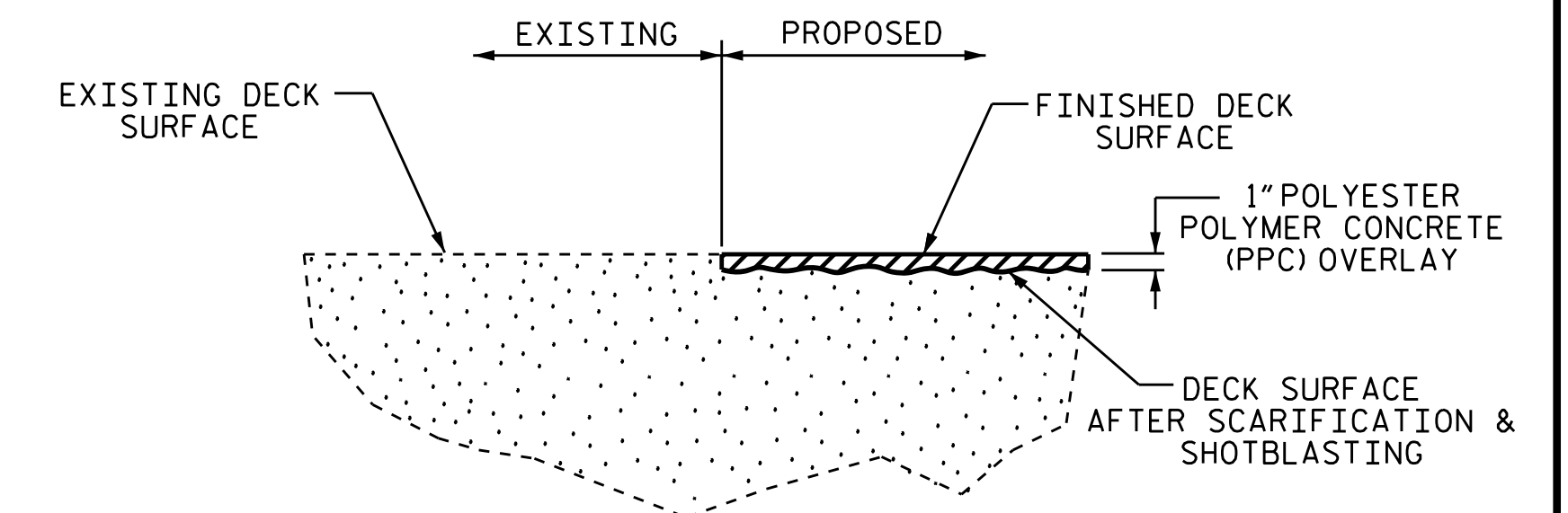
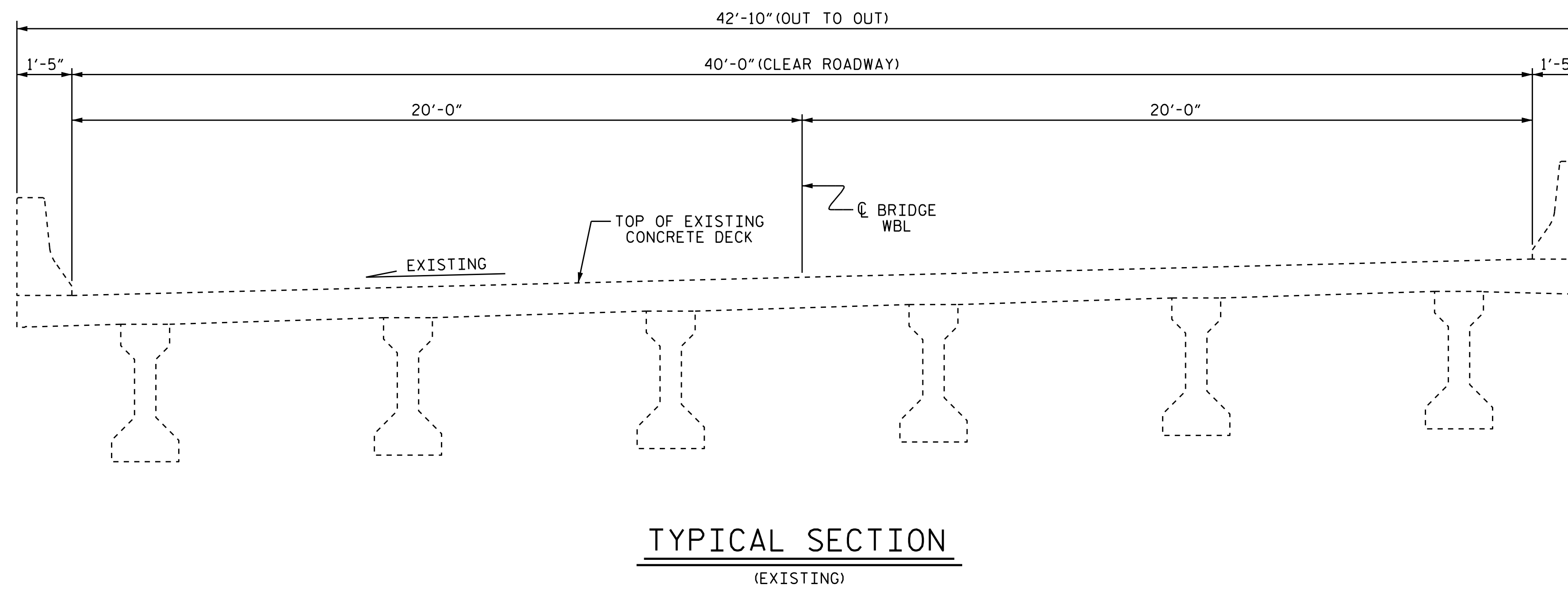
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NO.	BY:	DATE:	NO.	BY:	DATE:	S-3
1			3			TOTAL SHEETS
2			4			69

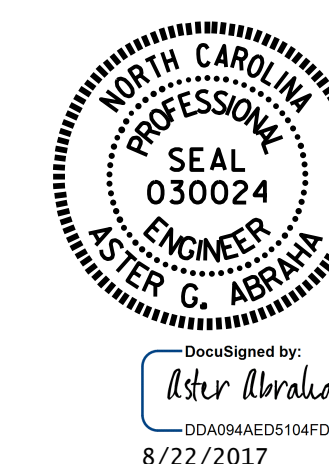
NOTES

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

BRIDGE #469 SHOWN, BRIDGE #470 SIMILAR



PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDG NO. 469 & 470



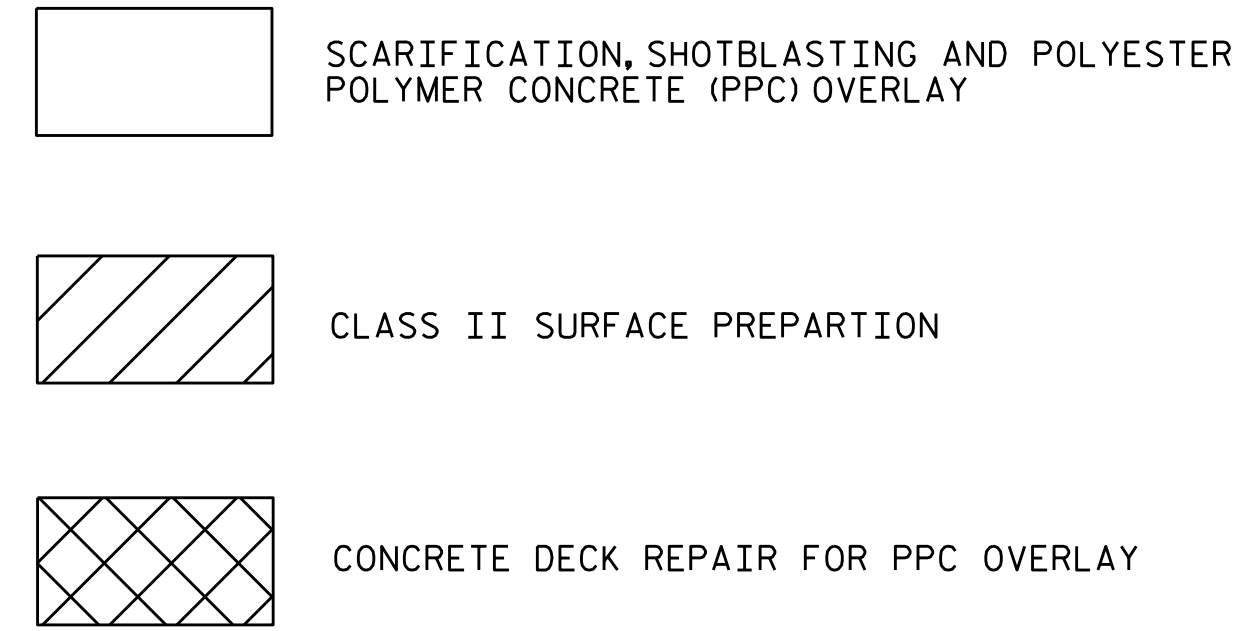
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 &
 PPC OVERLAY DETAIL

DRAWN BY : M.K. BEARD DATE : 3/6/17
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-4
1			3			TOTAL SHEETS
2			4			69

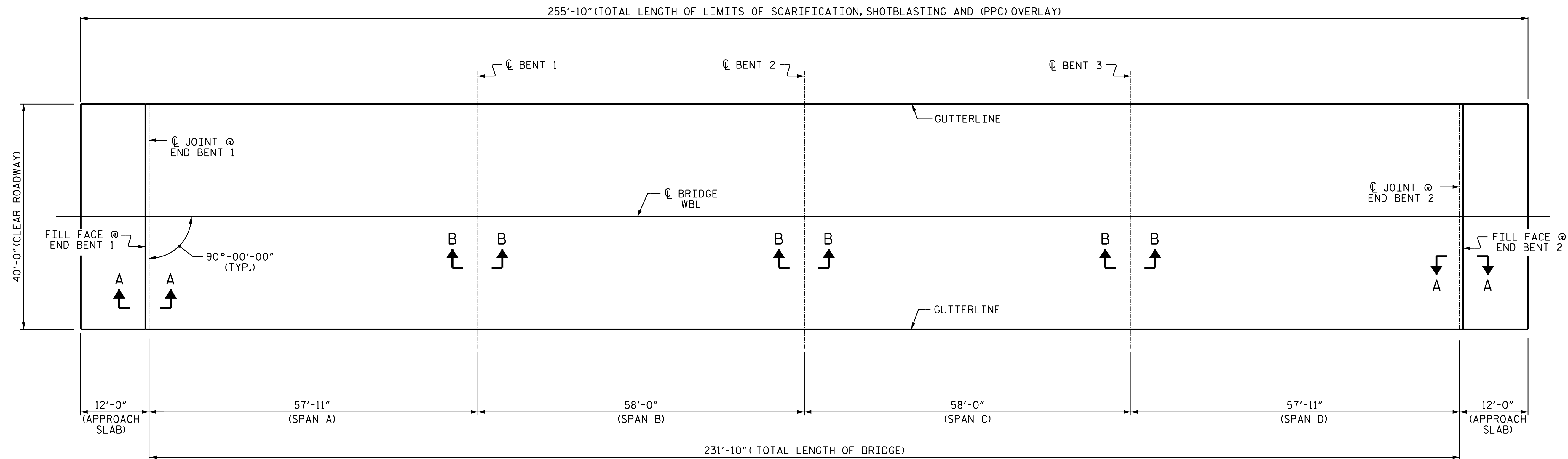
NO DECK REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT, THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE DECK FOR POTENTIAL REPAIRS.



AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,137 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	1.0 SY	
SHOTBLASTING BRIDGE DECK	1,137 SY	
PPC MATERIALS	31.5 CY	
PLACING AND FINISHING PPC OVERLAY	1,137 SY	
GROOVING BRIDGE FLOORS	9,399 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.



PLAN OF SPANS

NOTES

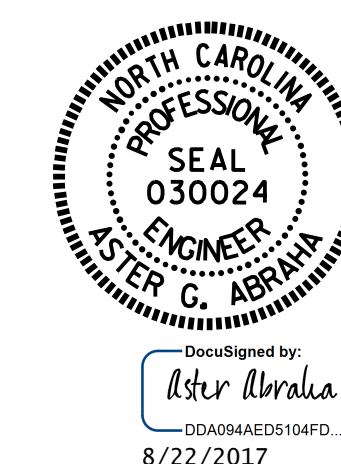
ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT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

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-15.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

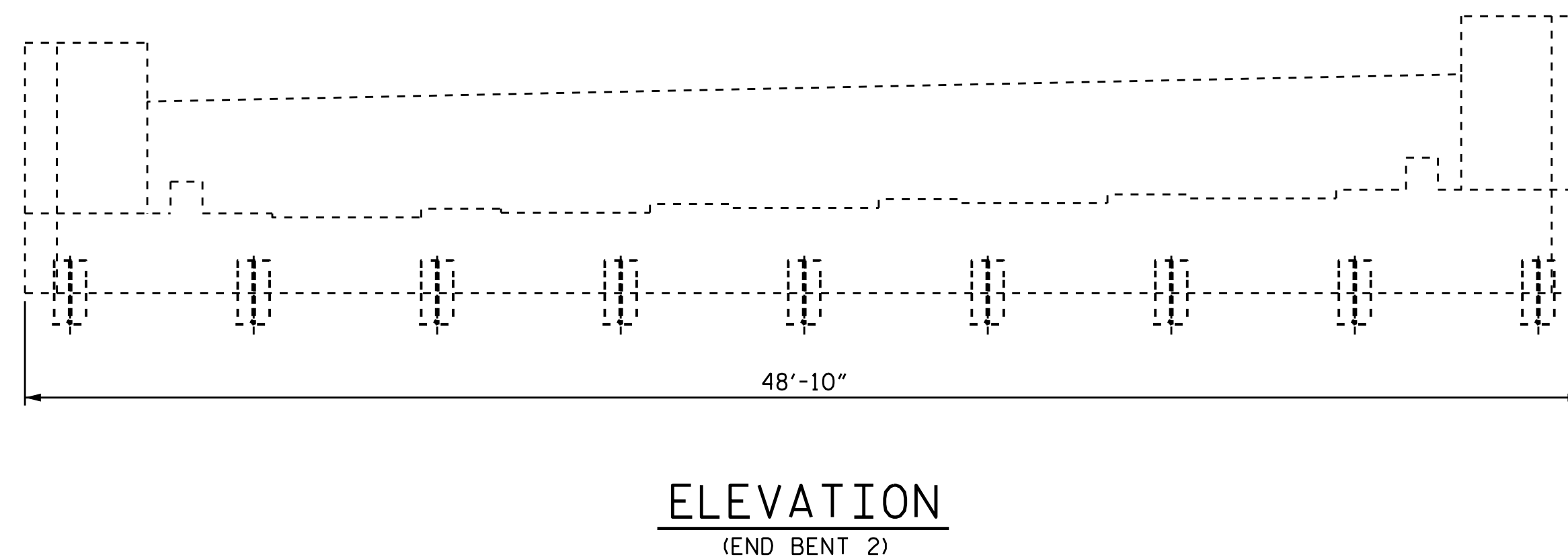
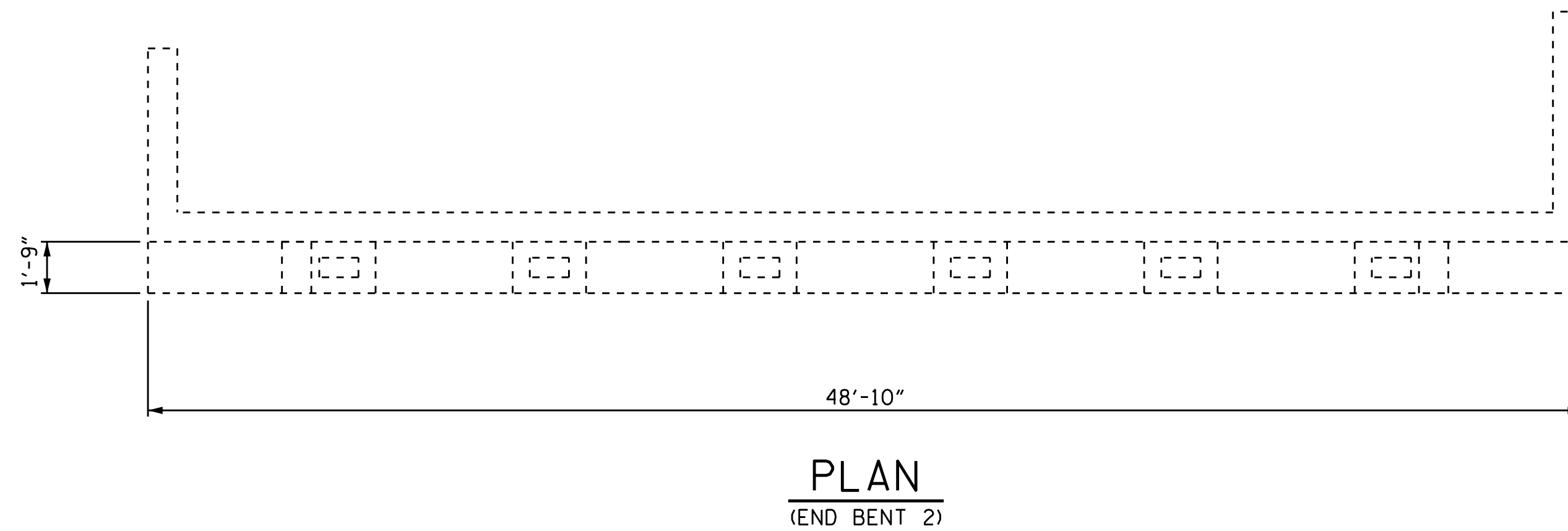
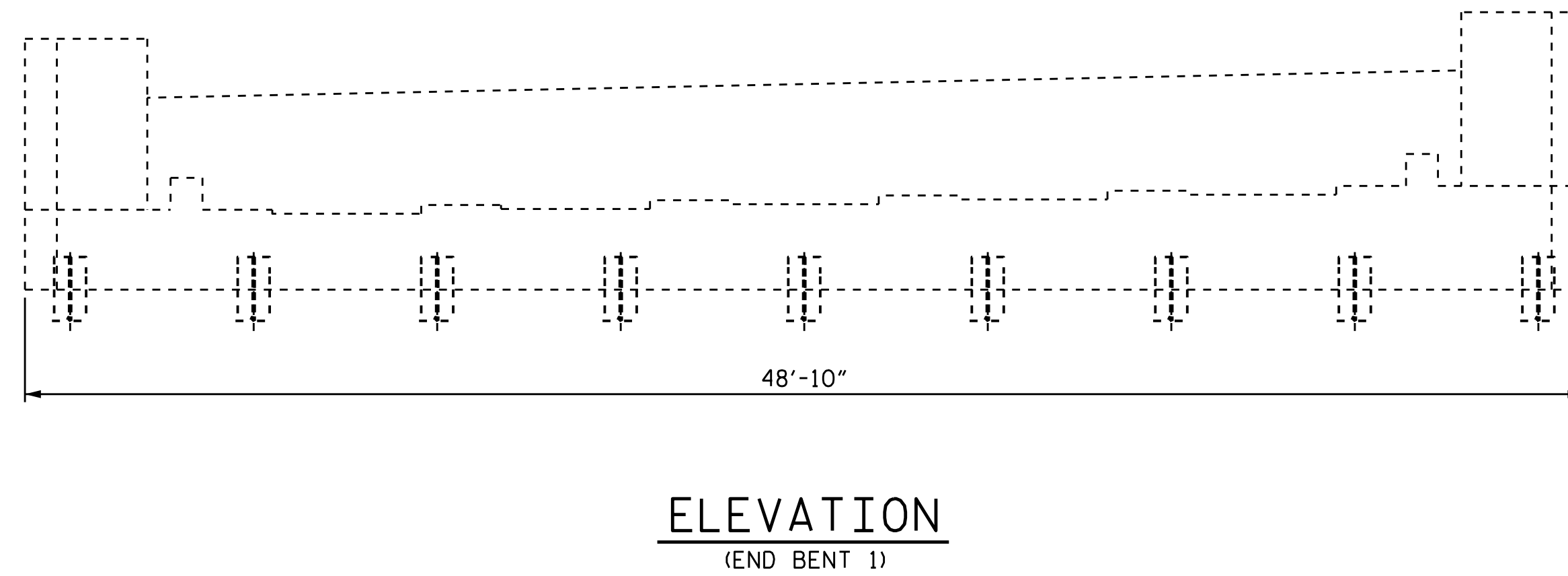
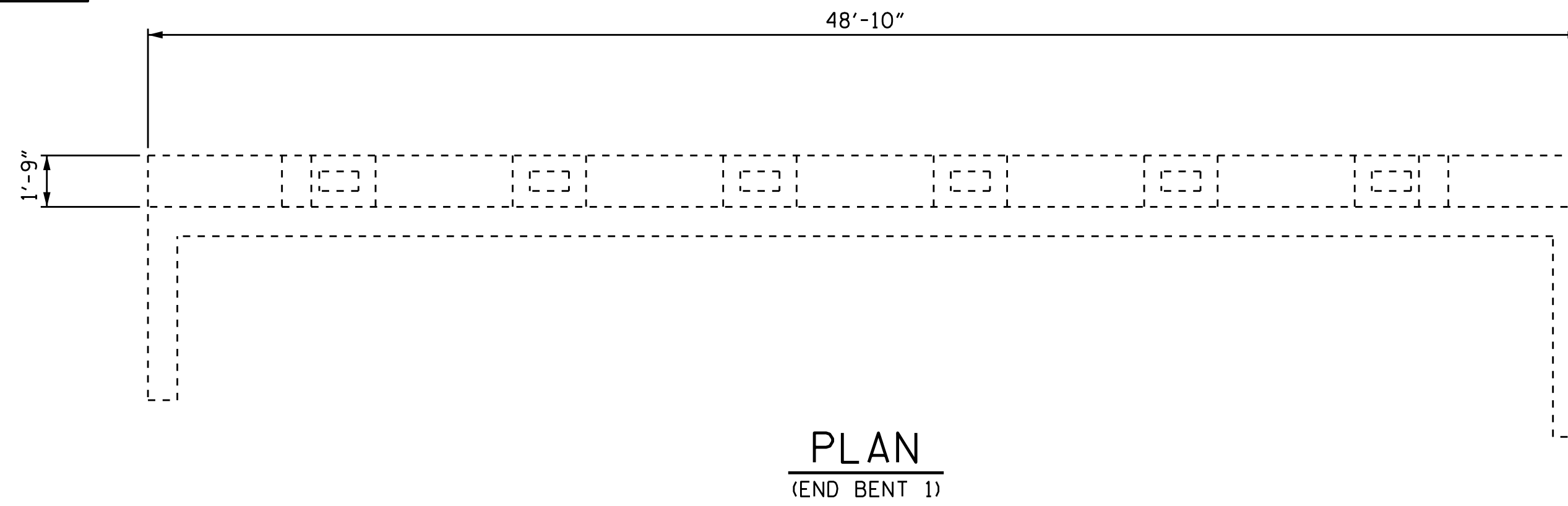
SURFACE PREPARATION & PPC OVERLAY

DRAWN BY : M.K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W.C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-5
1			3			TOTAL SHEETS
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	85.5			
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	85.5			

NOTES

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

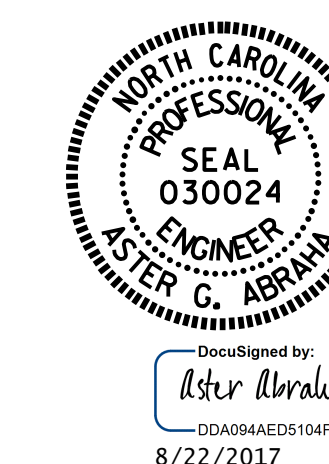
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 END BENTS

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 05/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

NO.	REVISIONS		NO.	REVISIONS		SHEET NO.
	BY:	DATE:		BY:	DATE:	
1			3			S-6
2			4			TOTAL SHEETS 69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

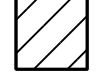
NOTES

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

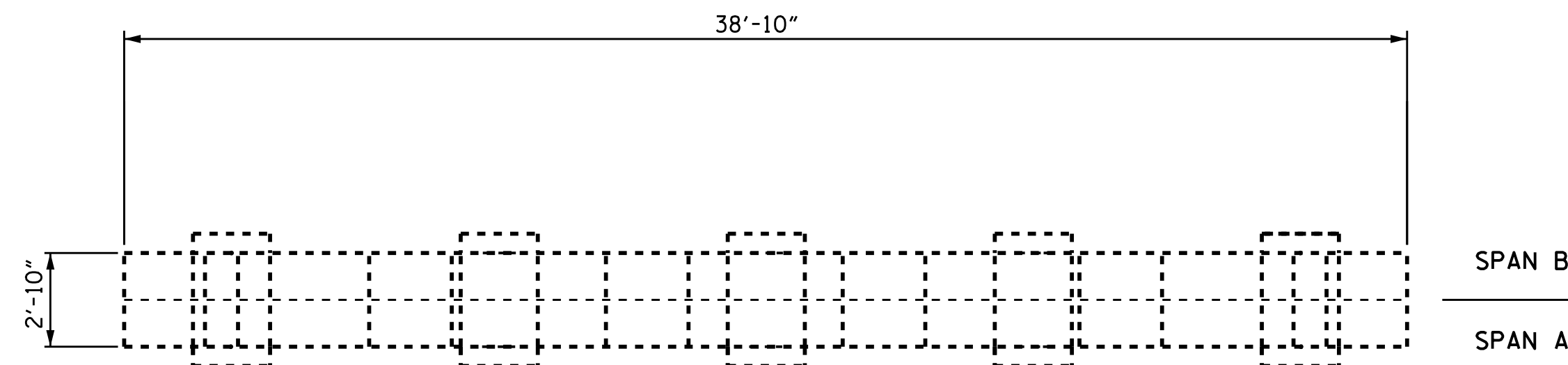
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

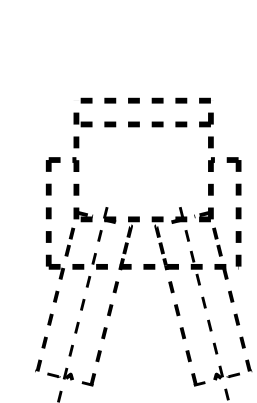
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

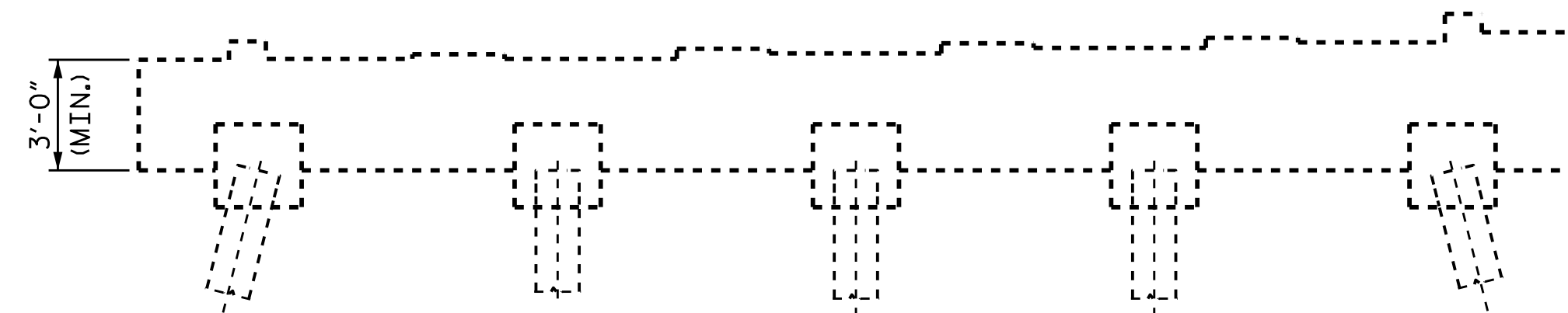
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		110.0		



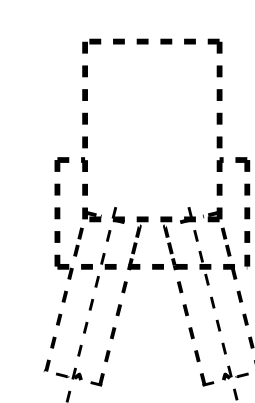
PLAN
(TOP OF CAP)



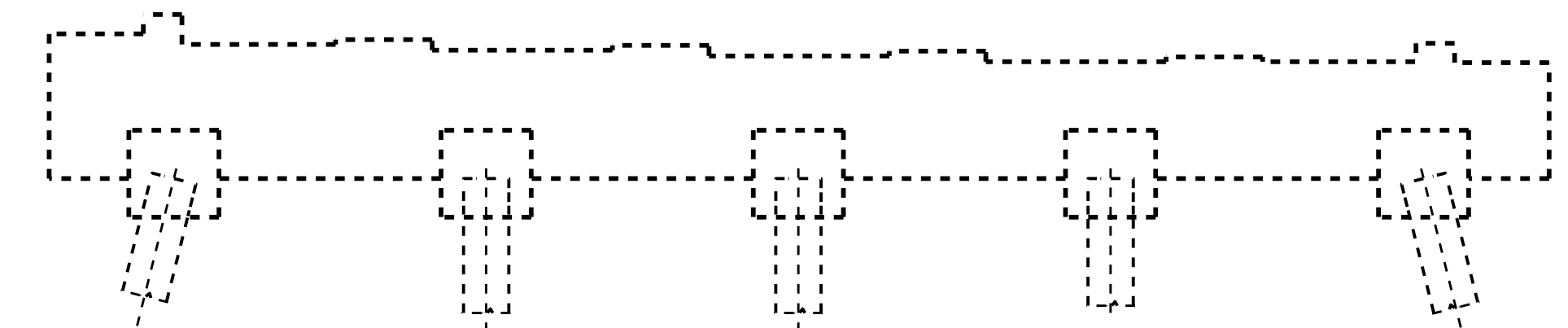
END VIEW
(LEFT SIDE)



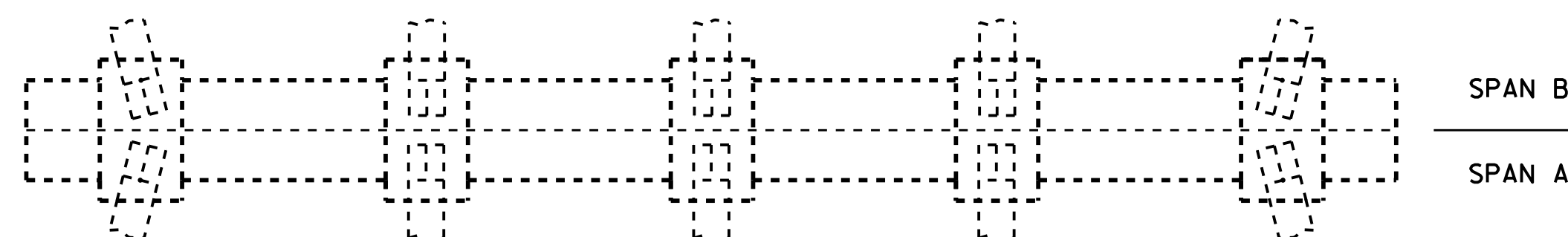
ELEVATION
(SPAN A SIDE)



END VIEW
(RIGHT SIDE)

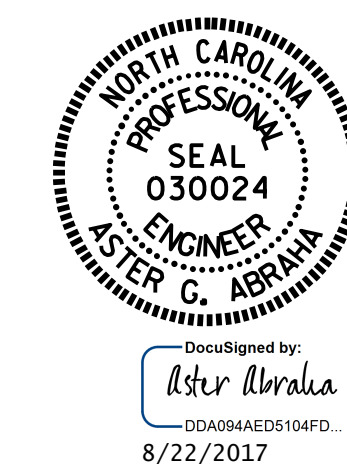


ELEVATION
(SPAN B SIDE)



PLAN
(BOTTOM OF CAP)

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469



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

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S-7	
2				4			TOTAL SHEETS	
							69	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.


NOTES

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

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

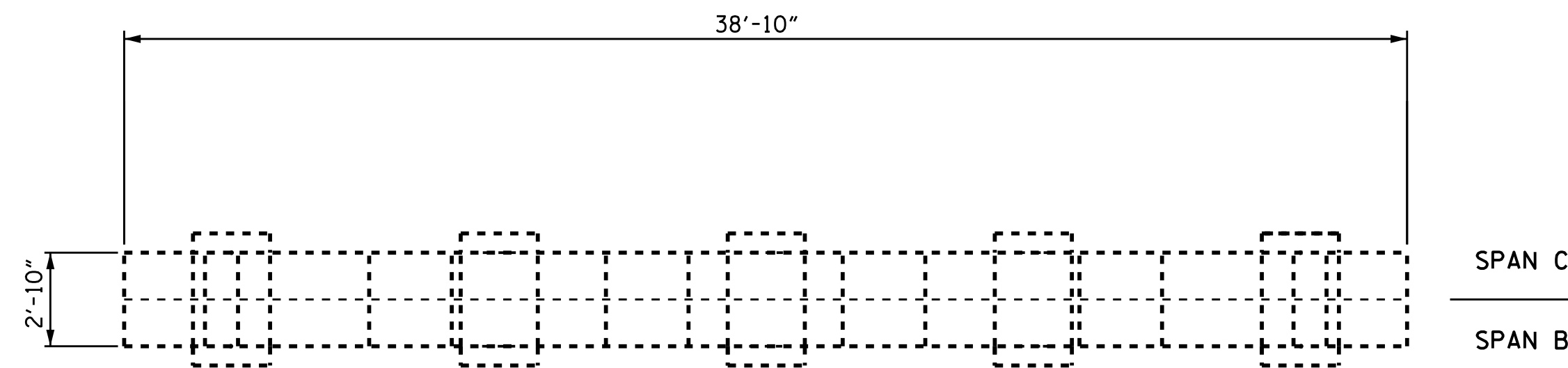
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

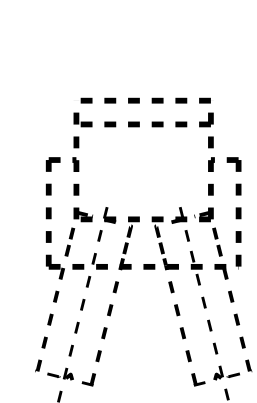
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

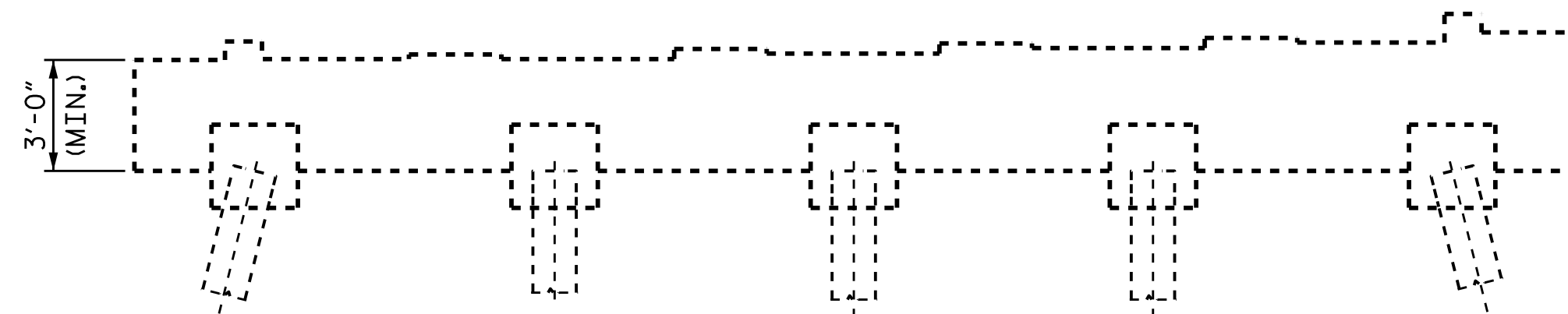
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	110.0			



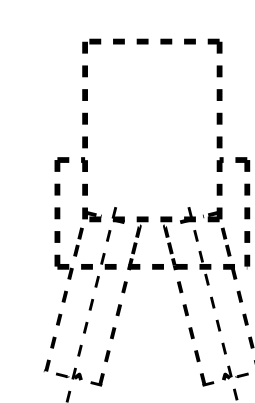
PLAN
(TOP OF CAP)



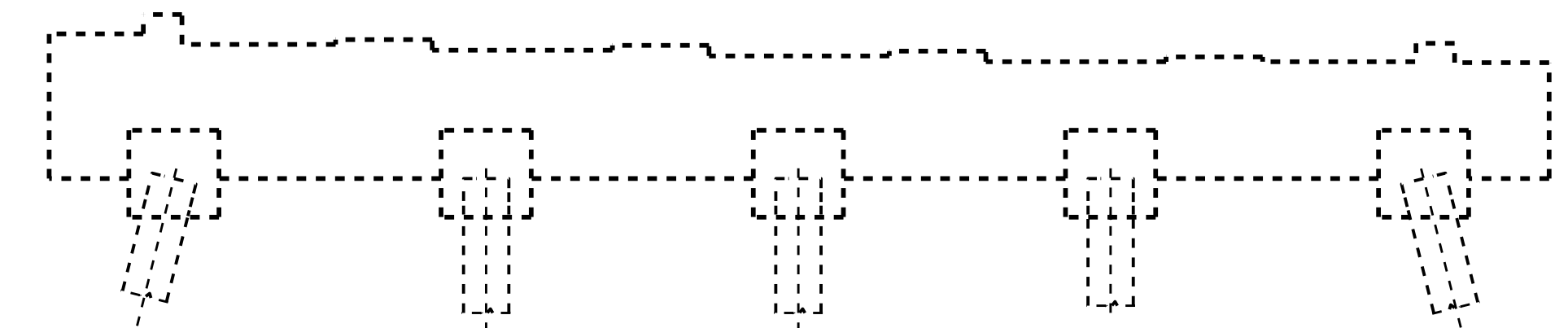
END VIEW
(LEFT SIDE)



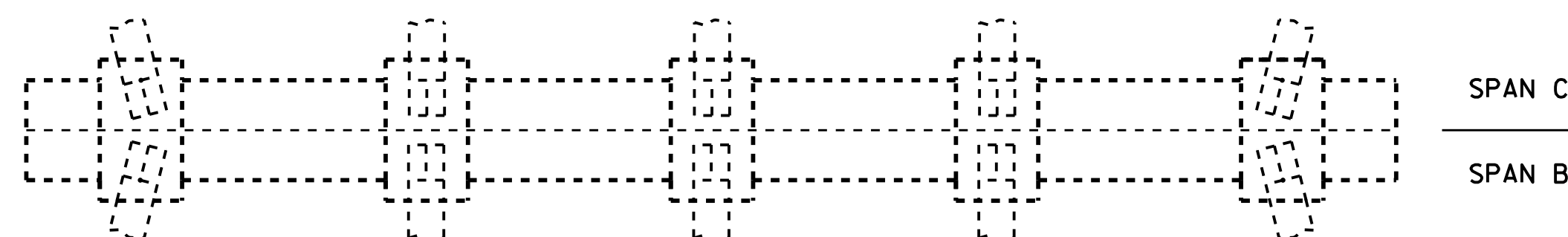
ELEVATION
(SPAN B SIDE)



END VIEW
(RIGHT SIDE)

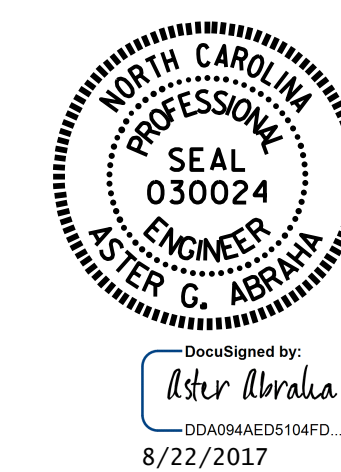


ELEVATION
(SPAN C SIDE)



PLAN
(BOTTOM OF CAP)

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 2

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-8
1			3			TOTAL SHEETS
2			4			69

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DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.


NOTES

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

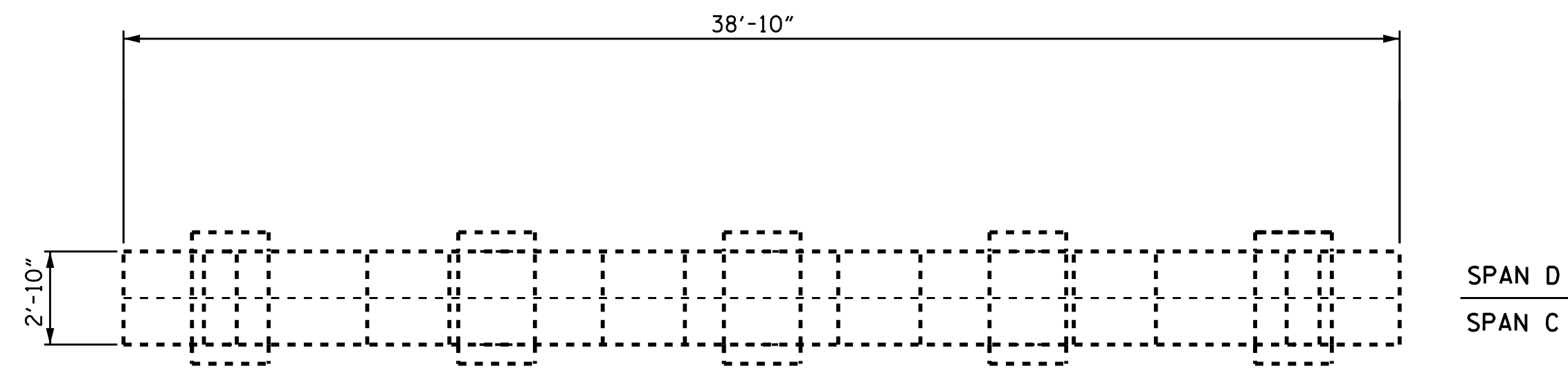
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

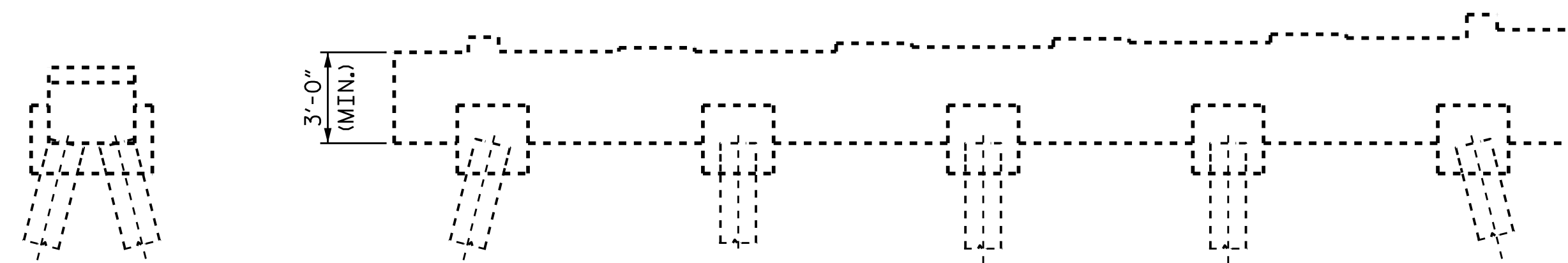
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		110.0		

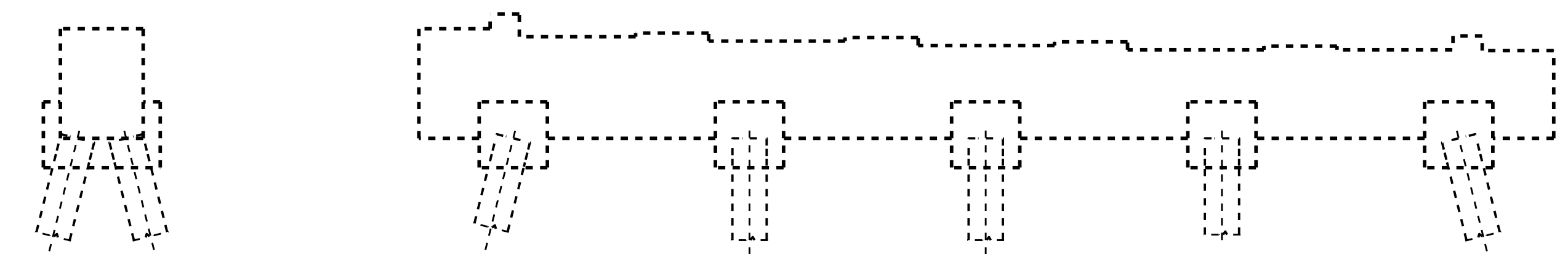


PLAN
(TOP OF CAP)



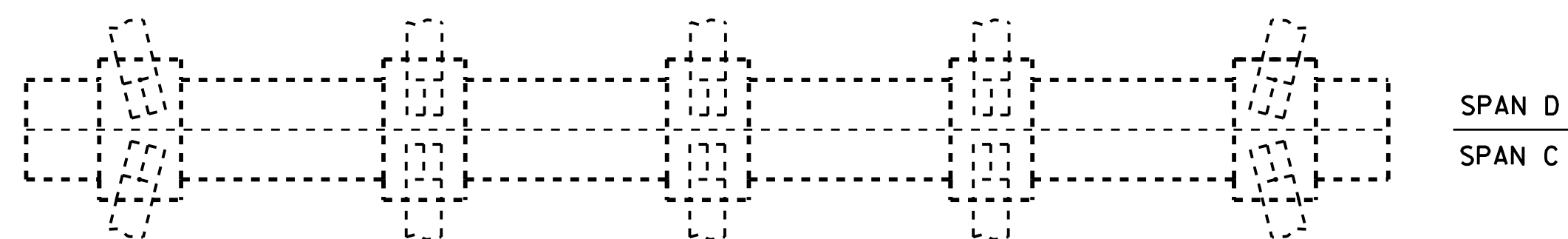
END VIEW
(LEFT SIDE)

ELEVATION
(SPAN C SIDE)



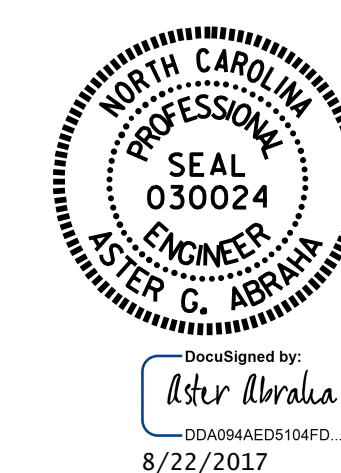
END VIEW
(RIGHT SIDE)

ELEVATION
(SPAN D SIDE)



PLAN
(BOTTOM OF CAP)

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469



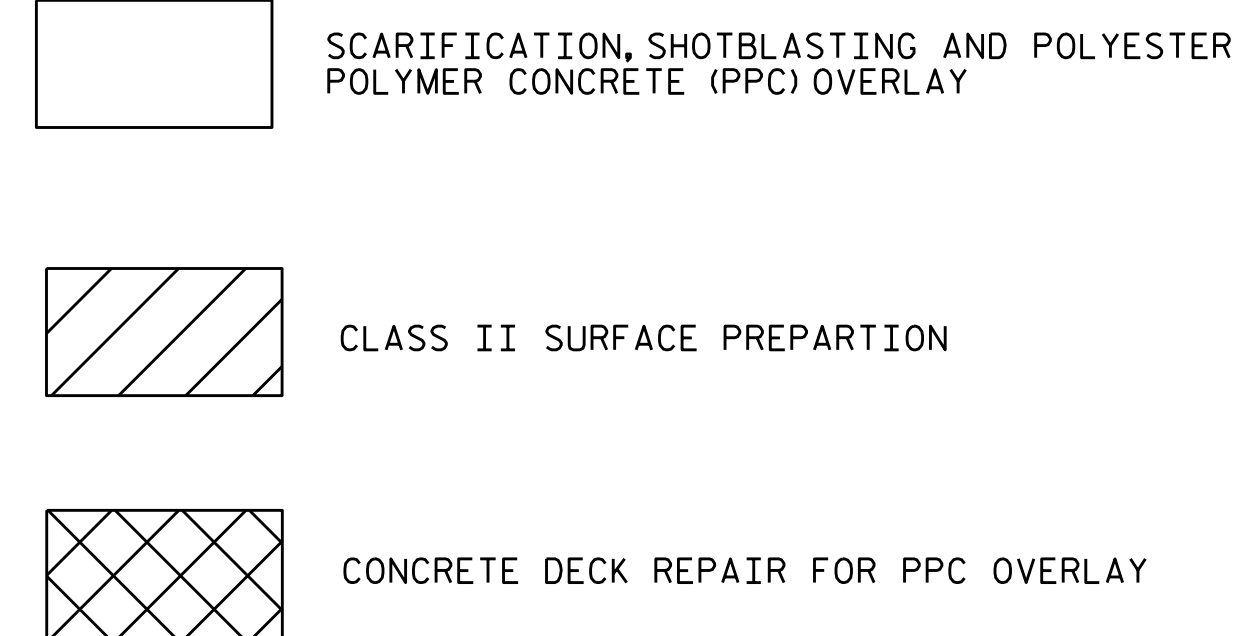
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-9
2			4			69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

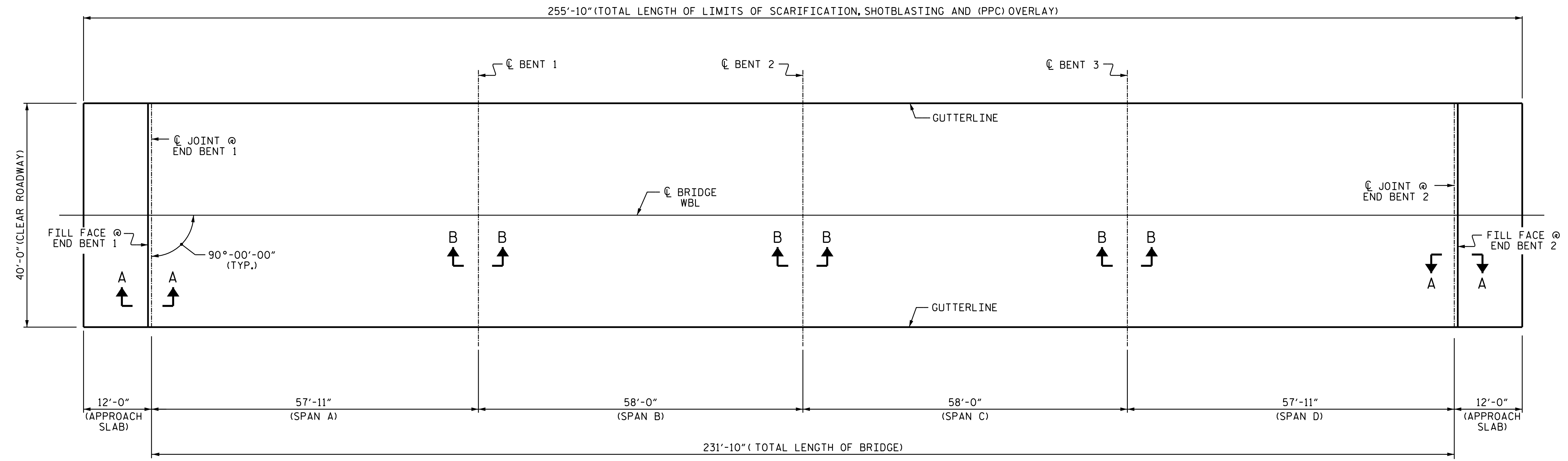
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT, THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE DECK FOR POTENTIAL REPAIRS.



AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,137 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	1.0 SY	
SHOTBLASTING BRIDGE DECK	1,137 SY	
PPC MATERIALS	31.5 CY	
PLACING AND FINISHING PPC OVERLAY	1,137 SY	
GROOVING BRIDGE FLOORS	9,399 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.



PLAN OF SPANS

NOTES

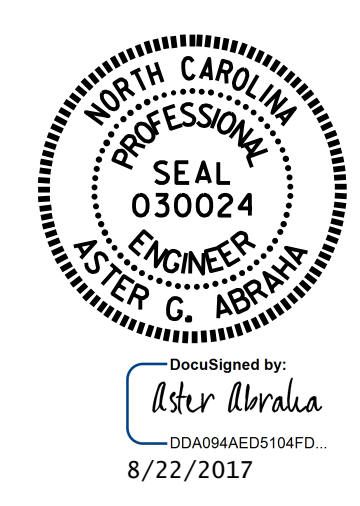
ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT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

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-15.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 470



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

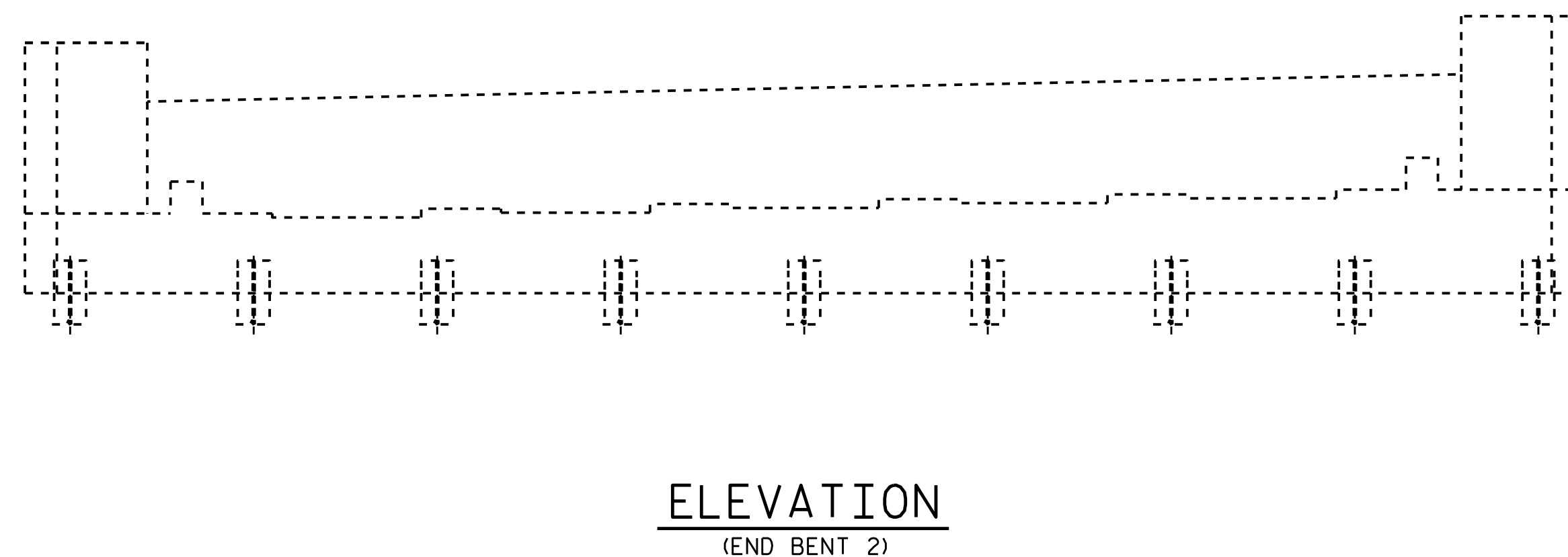
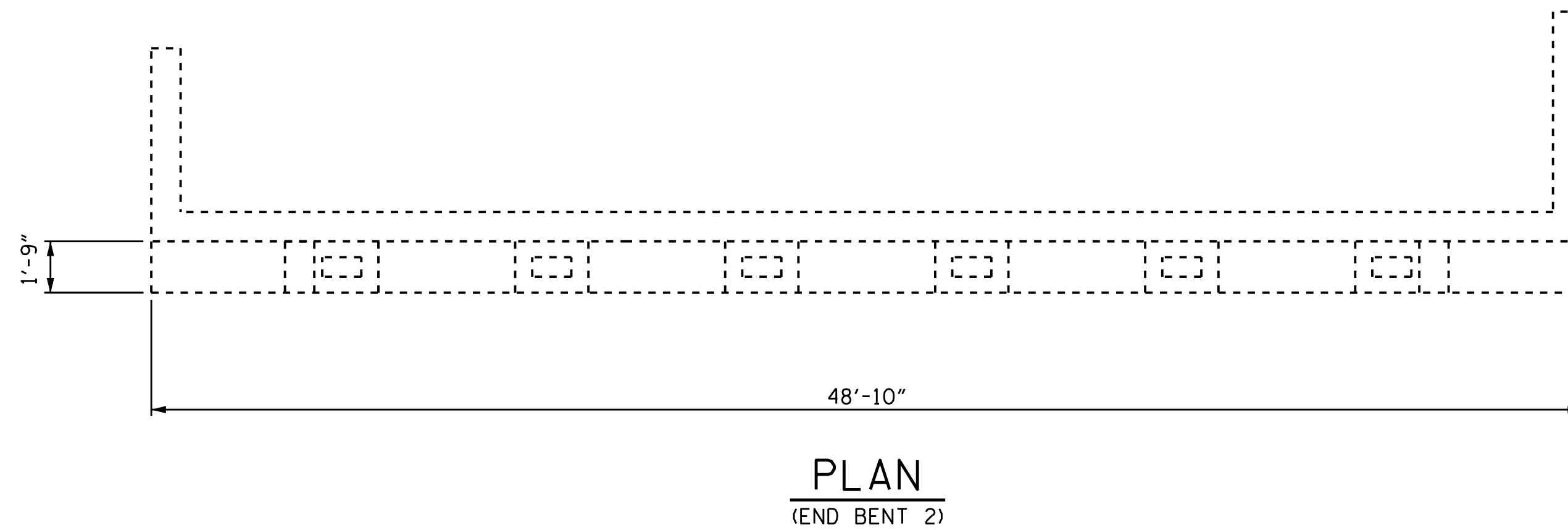
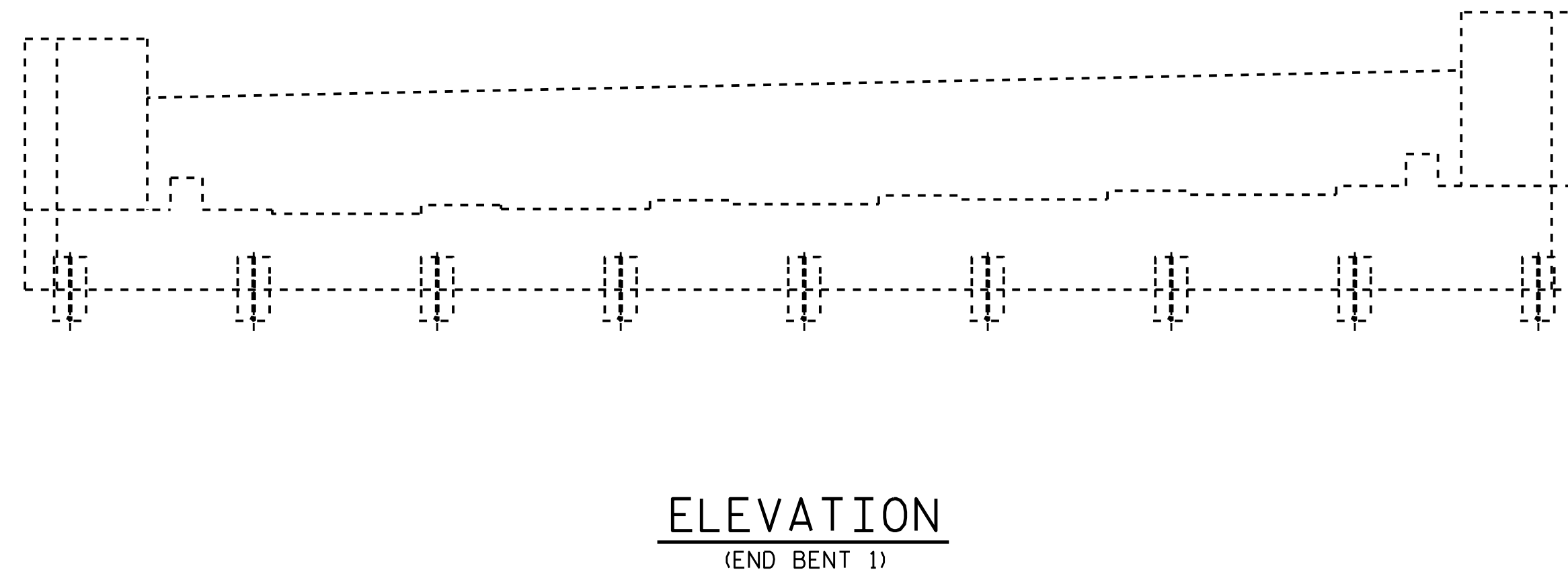
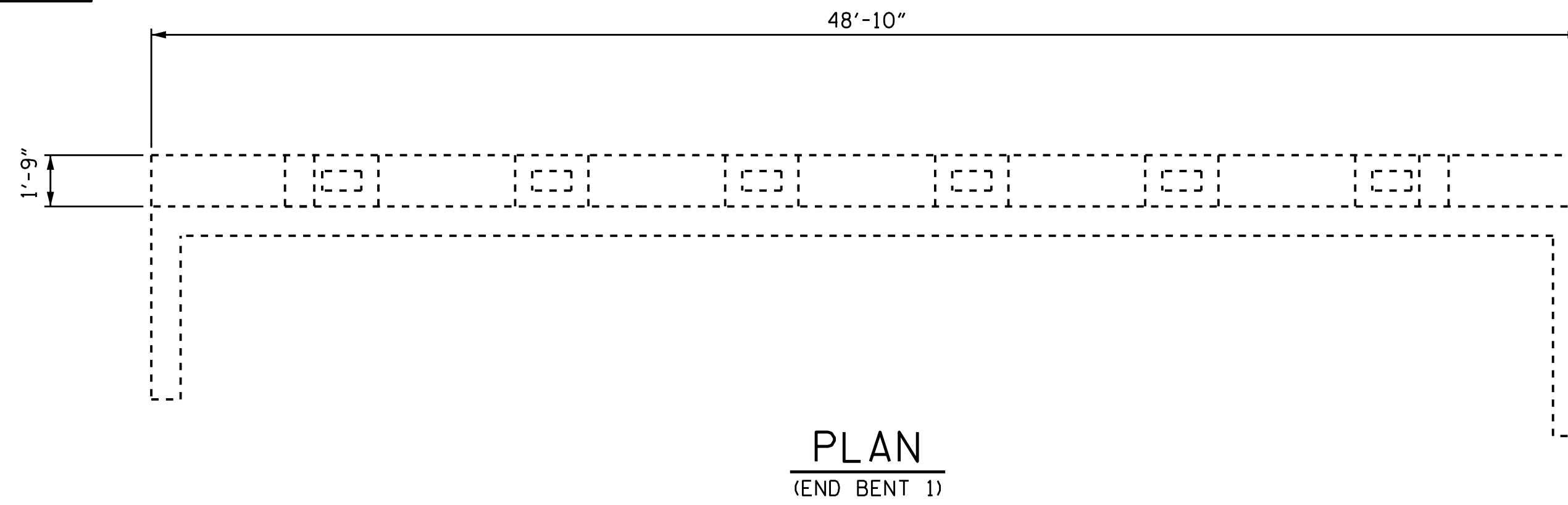
SURFACE PREPARATION & PPC OVERLAY

DRAWN BY : M.K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W.C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			S-10	
2			4			69	

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	85.5			
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	85.5			

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

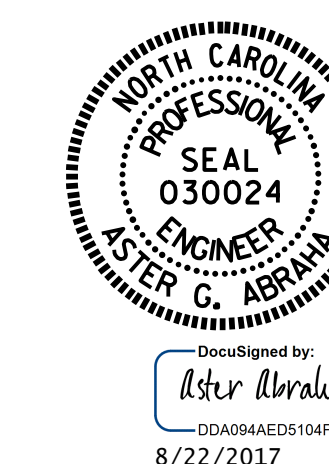
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 470



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 END BENTS

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 05/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

NO.	REVISIONS		NO.	REVISIONS		SHEET NO.
	BY:	DATE:		BY:	DATE:	
1			3			S-11
2			4			TOTAL SHEETS 69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.


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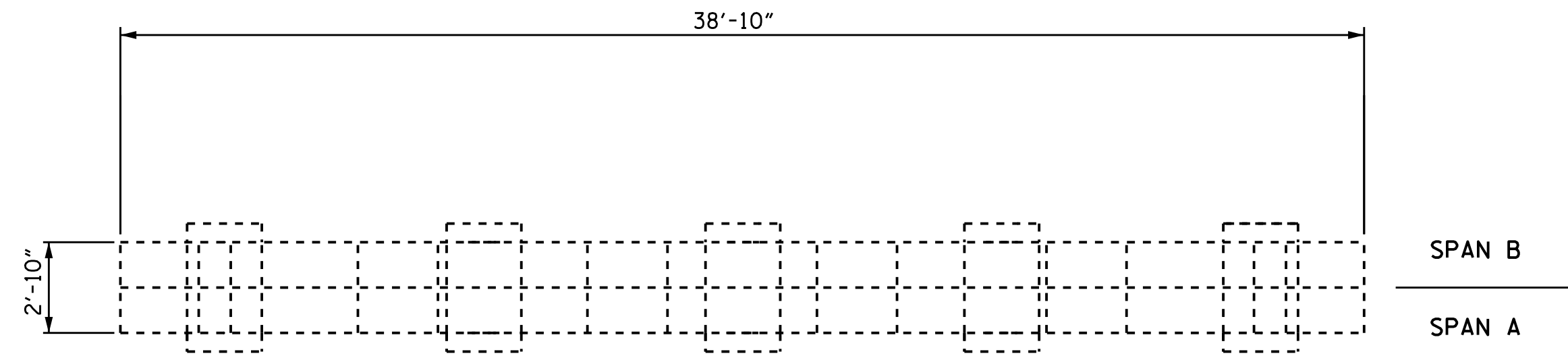
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

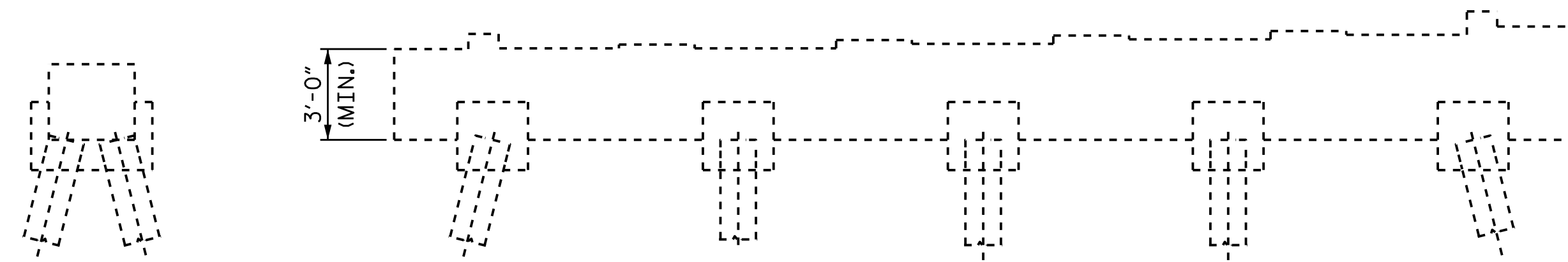
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

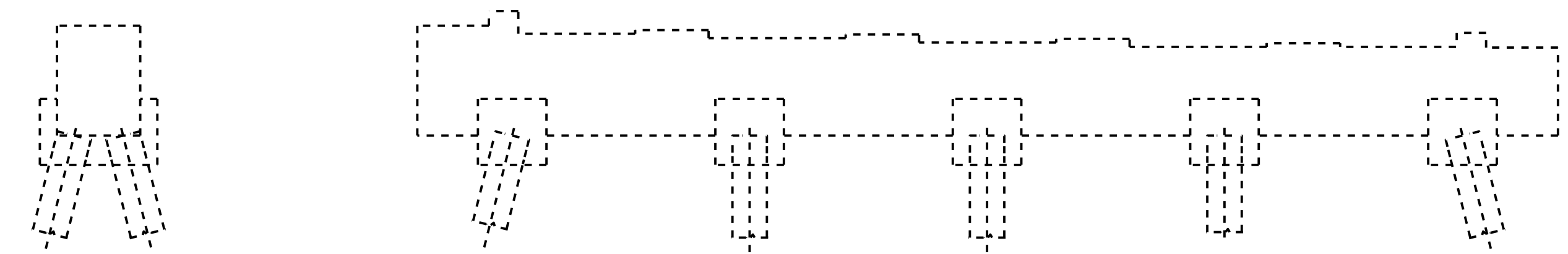
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
EPOXY COATING	AREA SF			
TOP OF CAP	110.0			



PLAN
(TOP OF CAP)



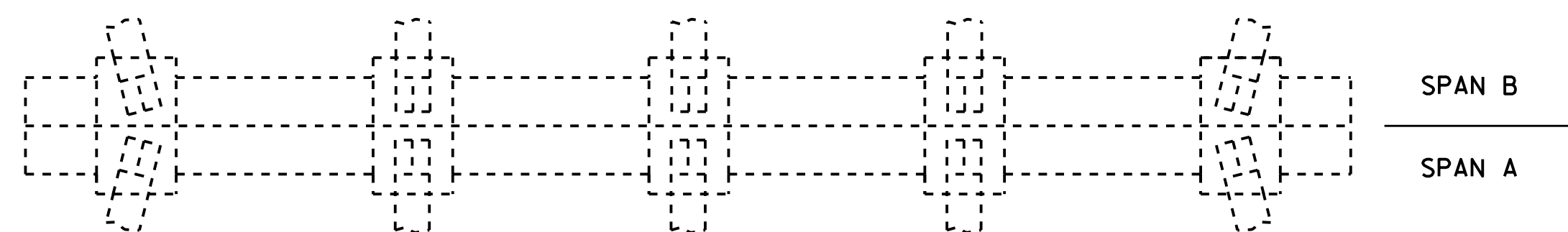
ELEVATION
(SPAN A SIDE)



ELEVATION
(SPAN B SIDE)

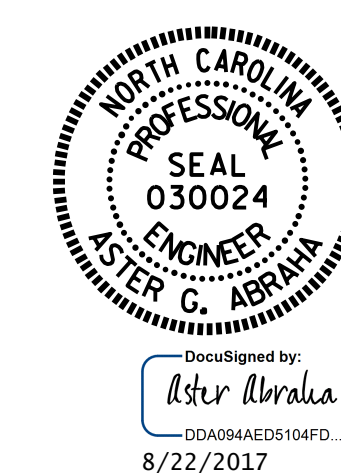
END VIEW
(LEFT SIDE)

END VIEW
(RIGHT SIDE)



PLAN
(BOTTOM OF CAP)

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 470



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

REPAIR
 BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-12
2			4			69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.


NOTES

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

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

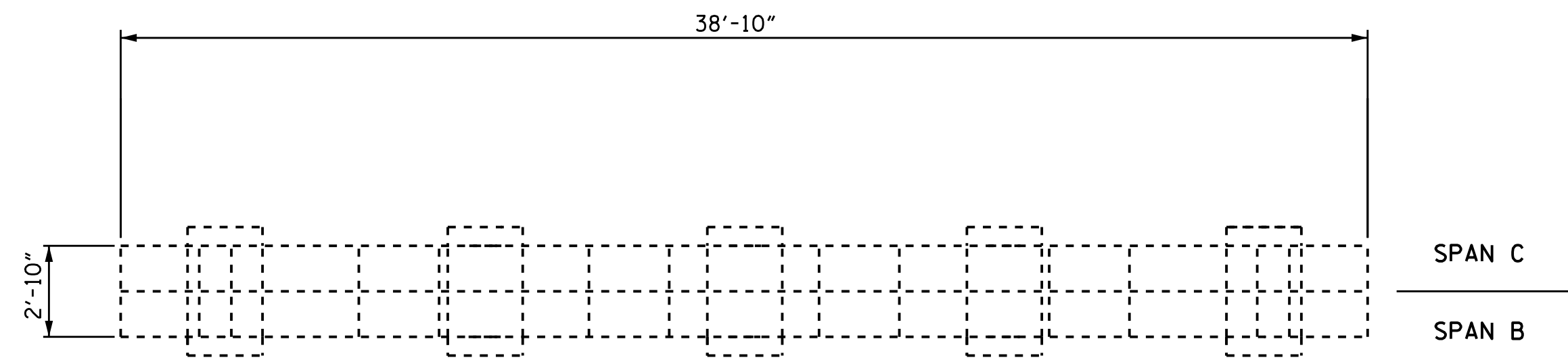
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

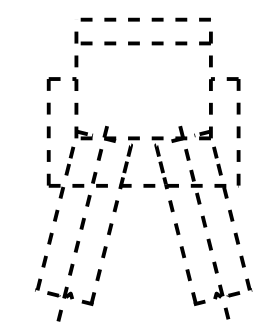
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

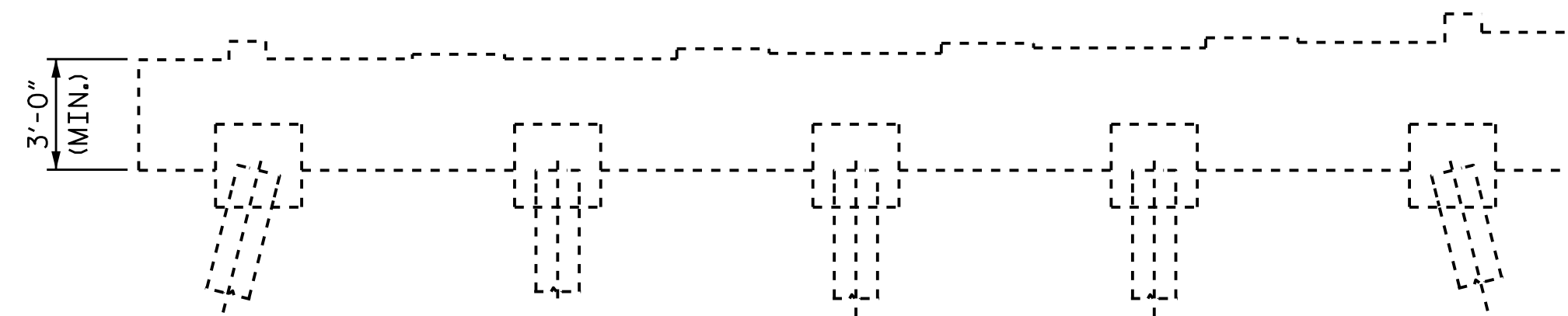
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	110.0			



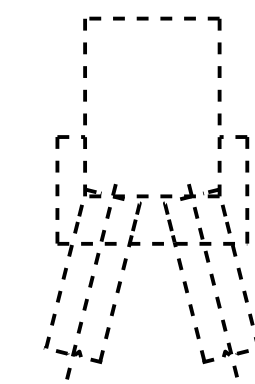
PLAN
(TOP OF CAP)



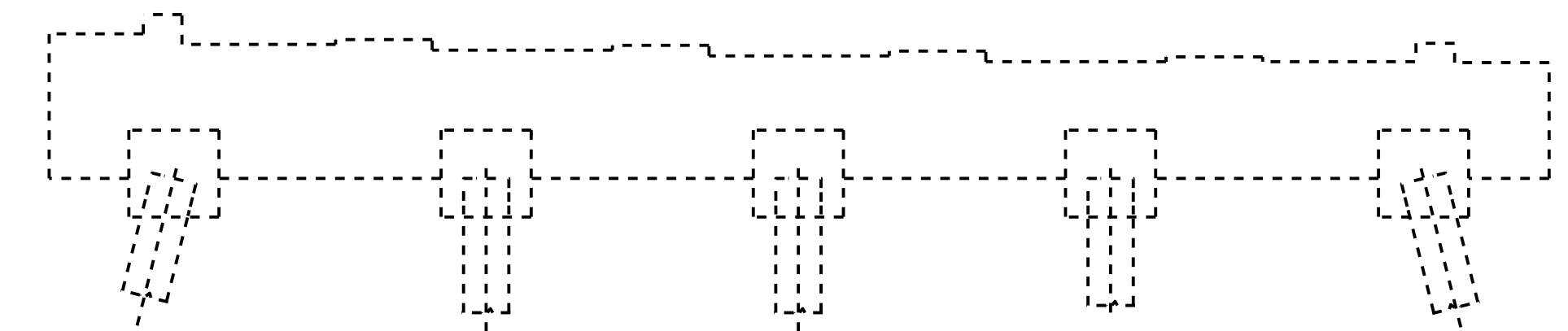
END VIEW
(LEFT SIDE)



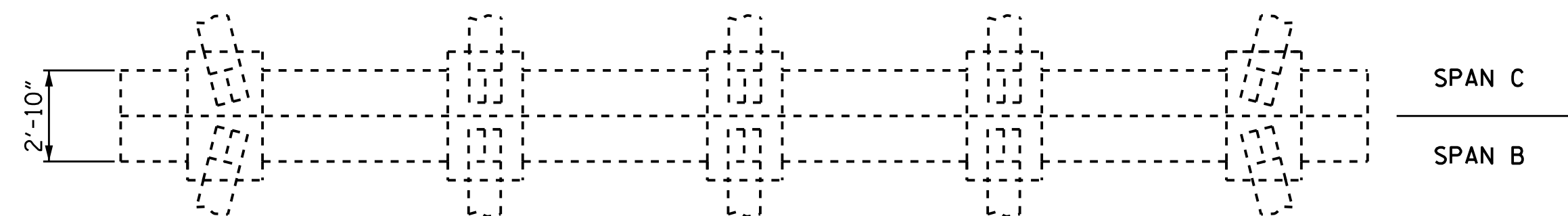
ELEVATION
(SPAN B SIDE)



END VIEW
(RIGHT SIDE)

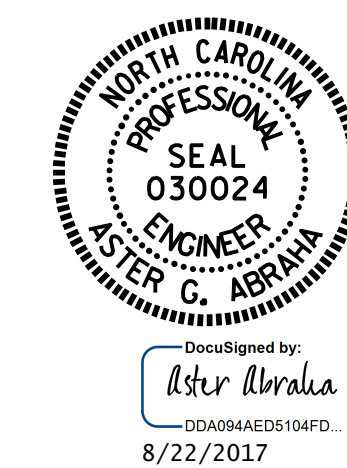


ELEVATION
(SPAN C SIDE)



PLAN
(BOTTOM OF CAP)

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 470



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 2

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S-13 TOTAL SHEETS 69
2			4	

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.


NOTES

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

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

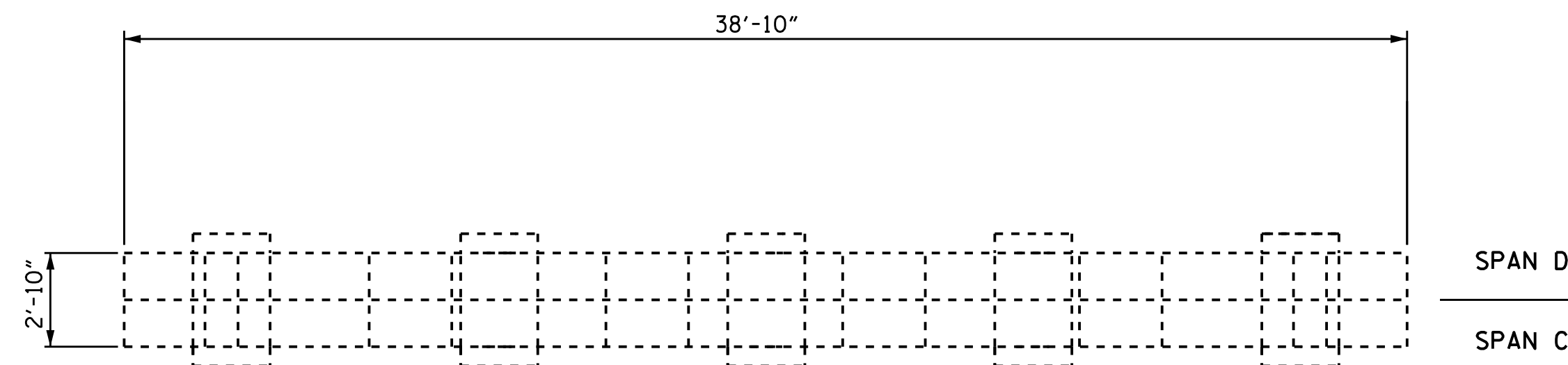
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

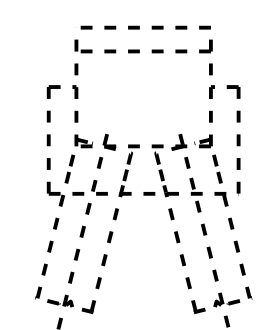
-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

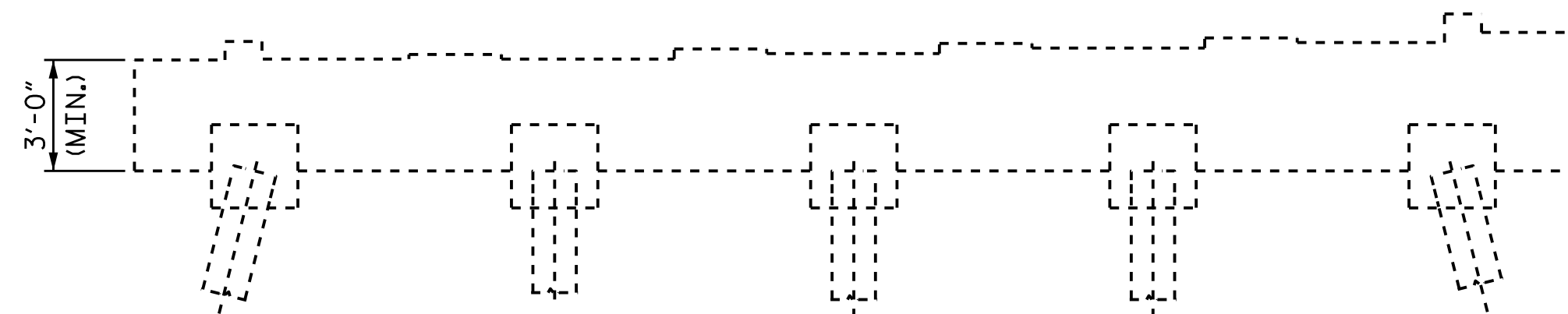
BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		110.0		



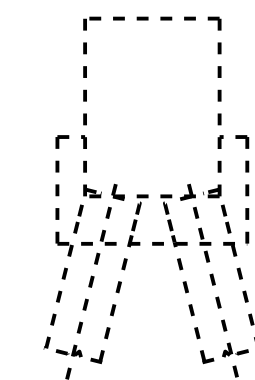
PLAN
(TOP OF CAP)



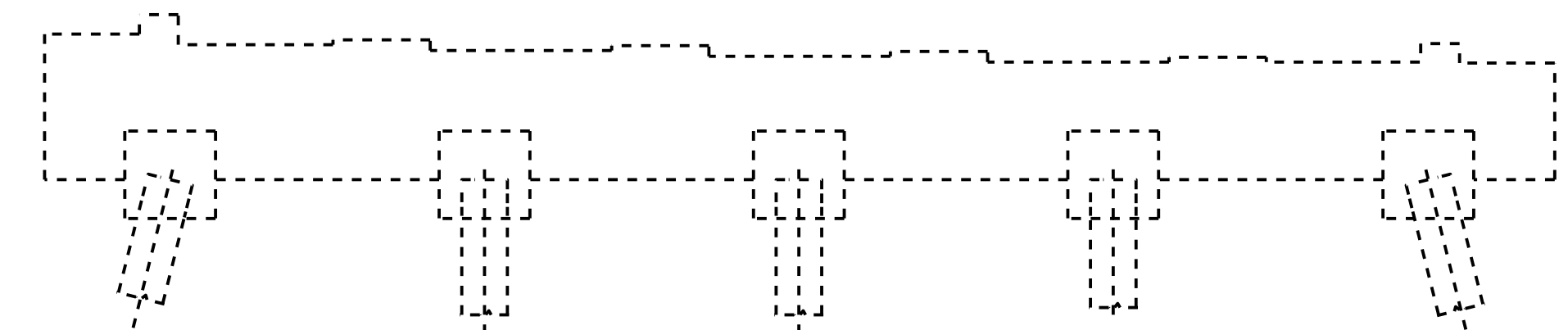
END VIEW
(LEFT SIDE)



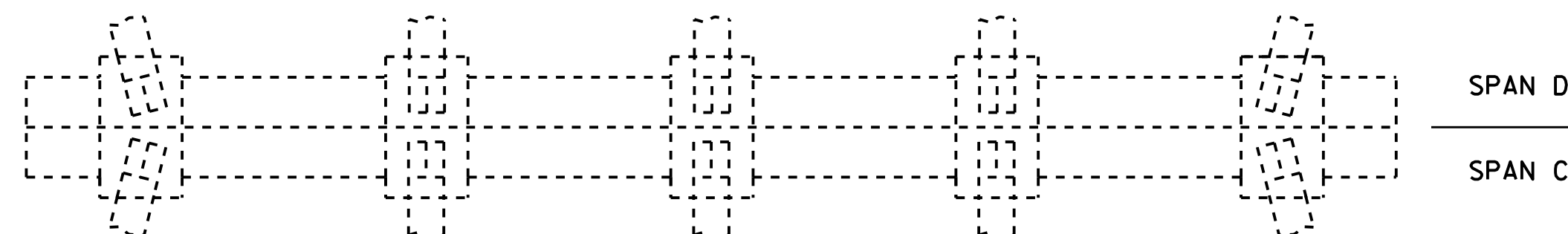
ELEVATION
(SPAN C SIDE)



END VIEW
(RIGHT SIDE)

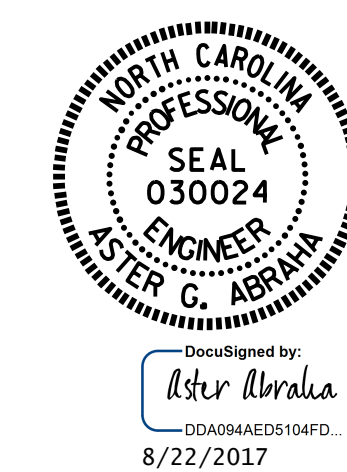


ELEVATION
(SPAN D SIDE)



PLAN
(BOTTOM OF CAP)

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 470

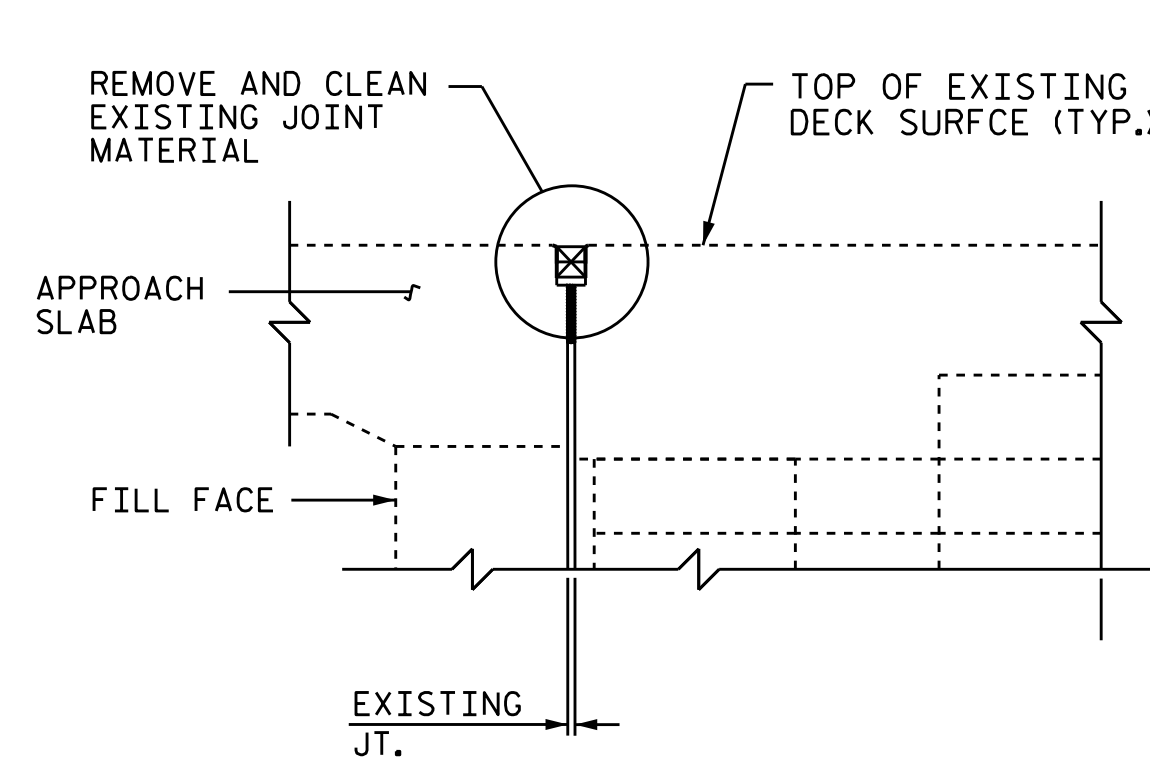


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 3

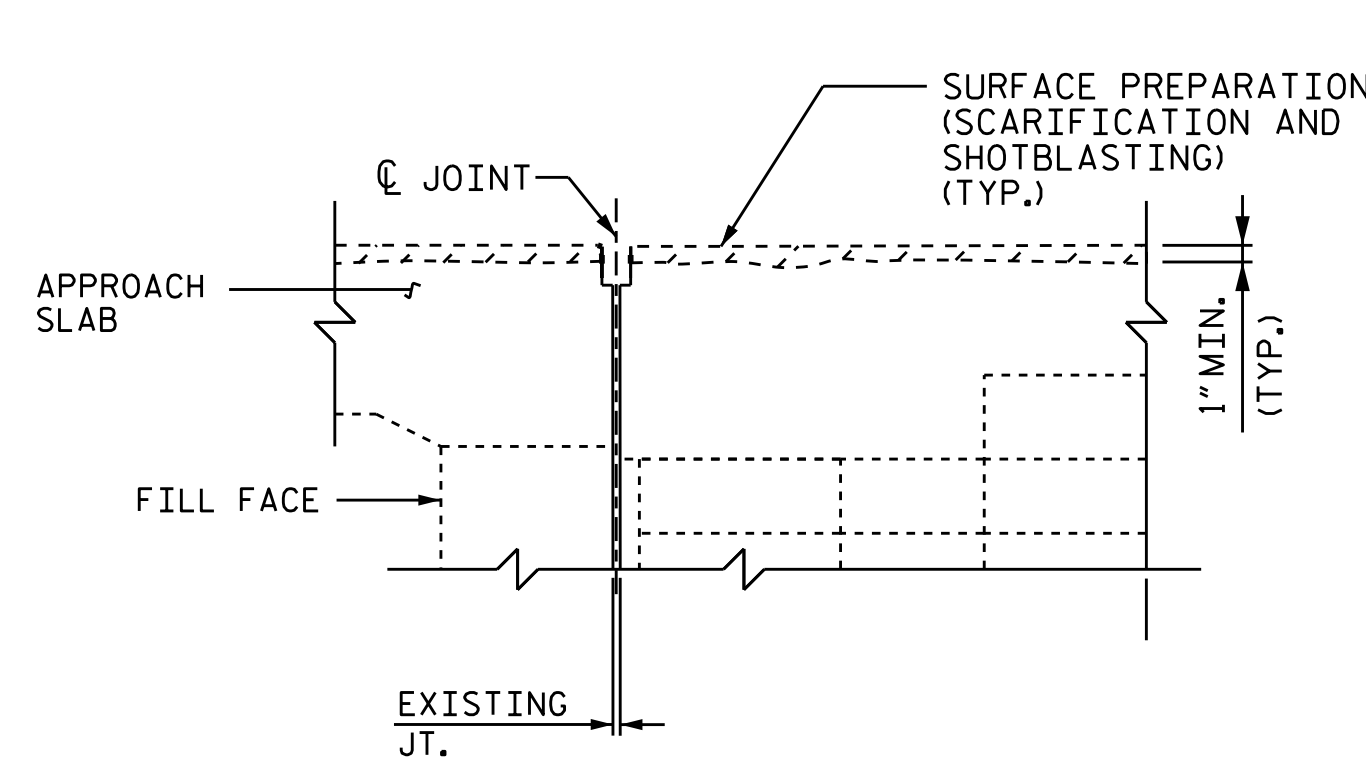
DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

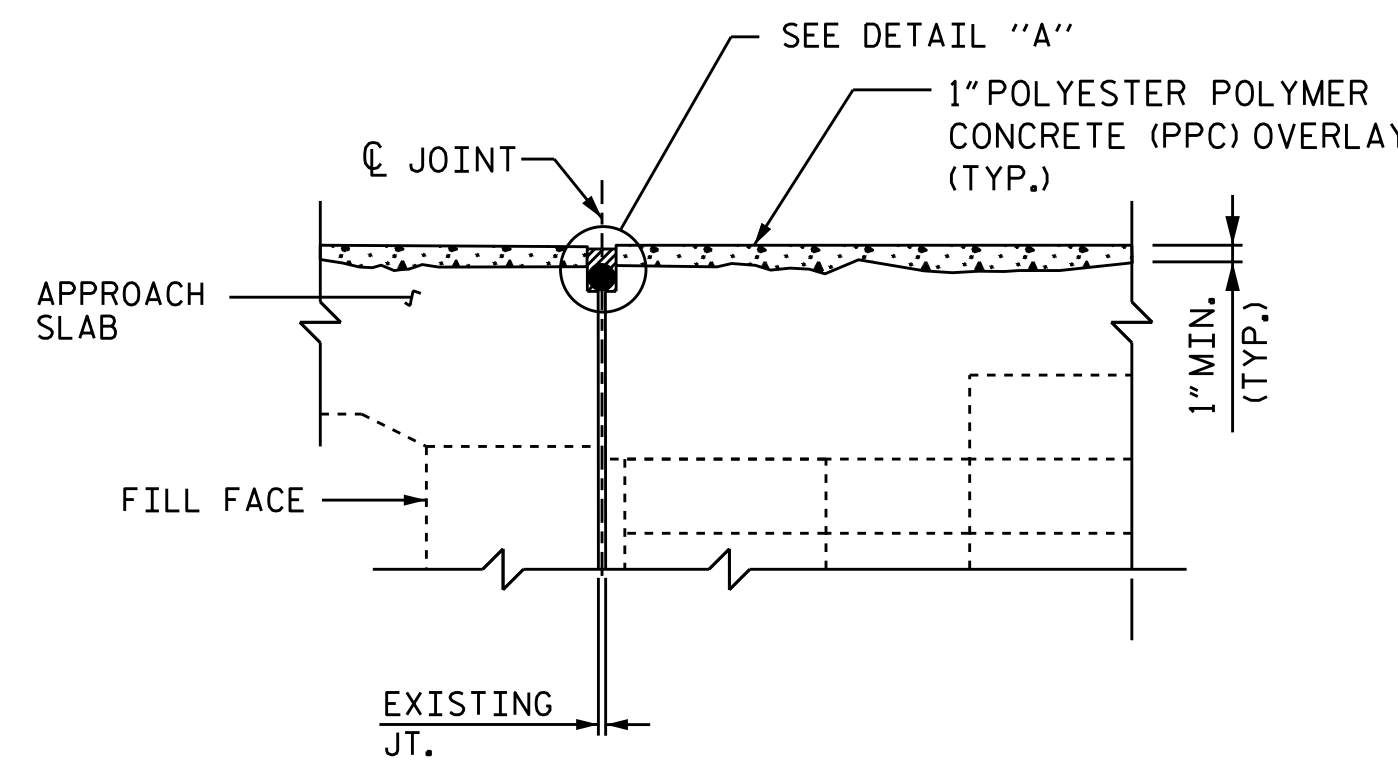
NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S-14	
2				4			TOTAL SHEETS 69	



EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION

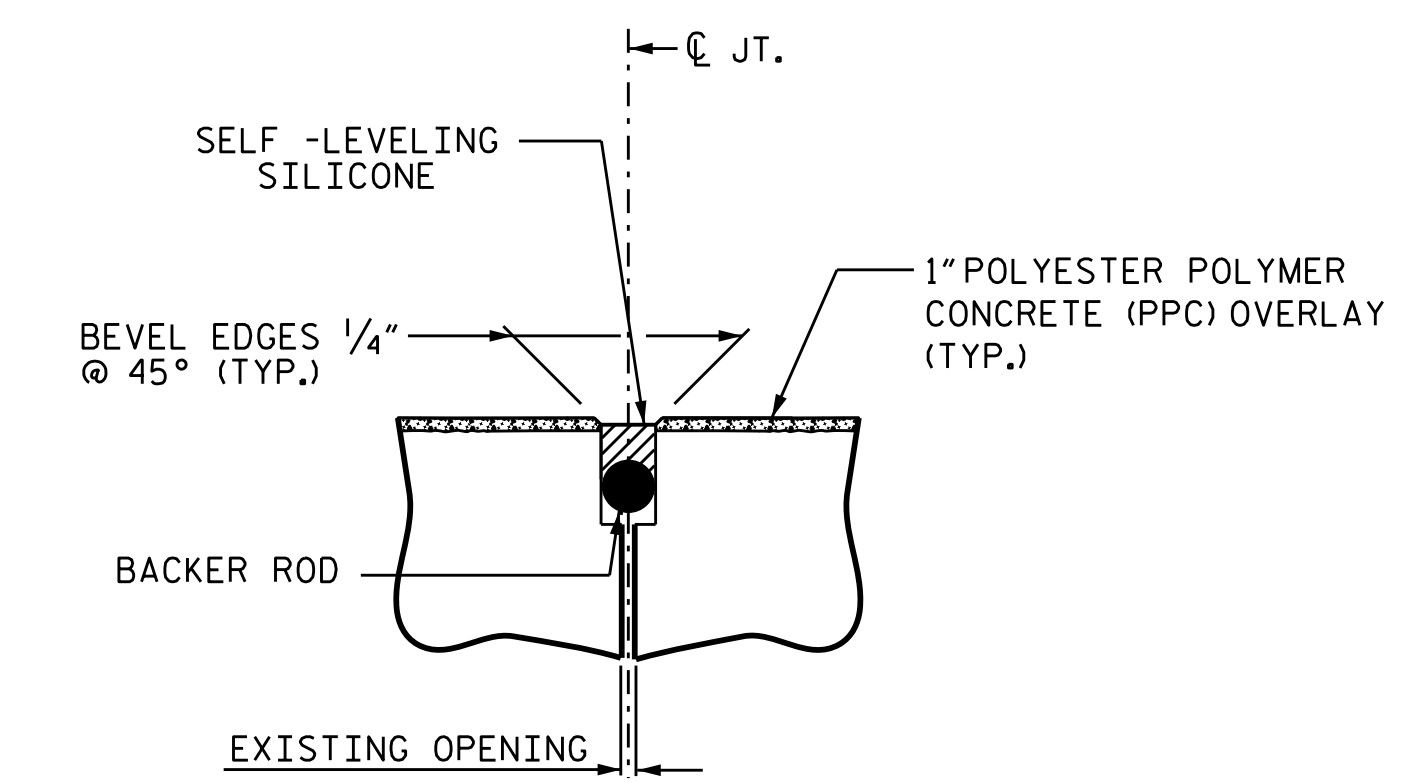


PROPOSED JOINT

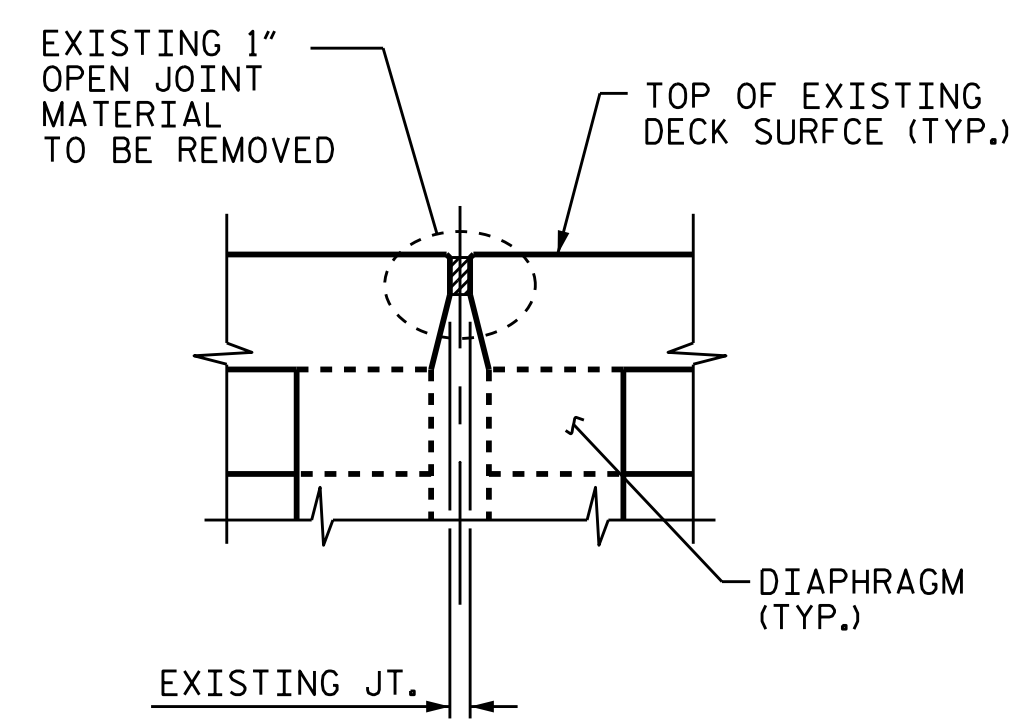
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

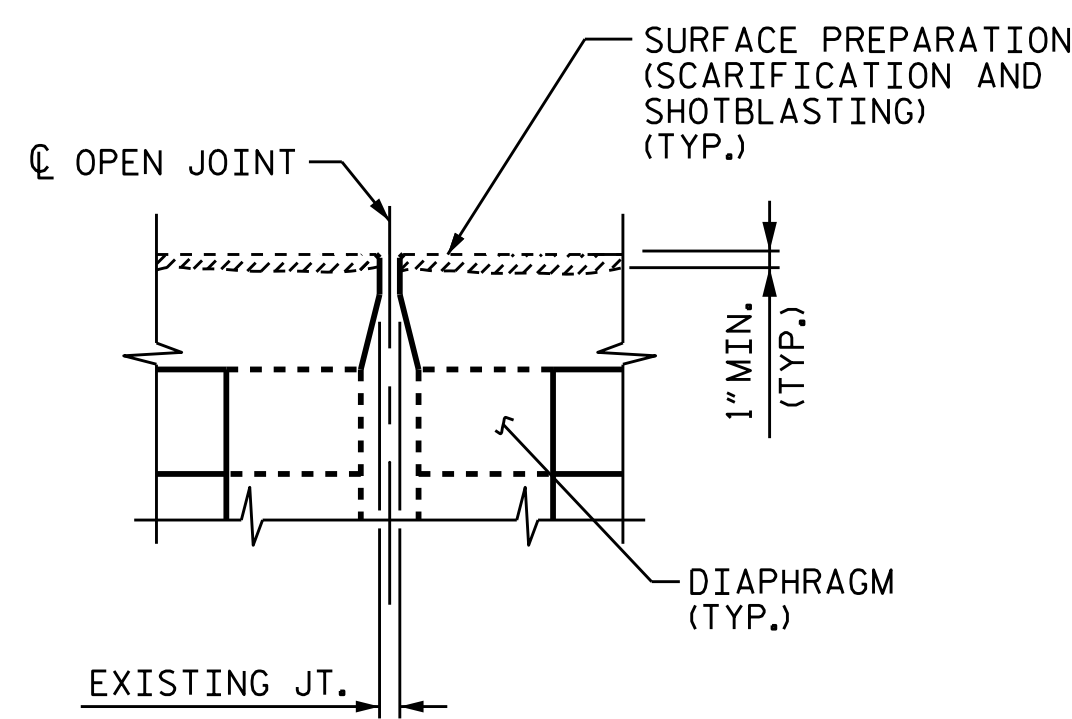
NOTES:
 CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
 FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
 UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
 ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.



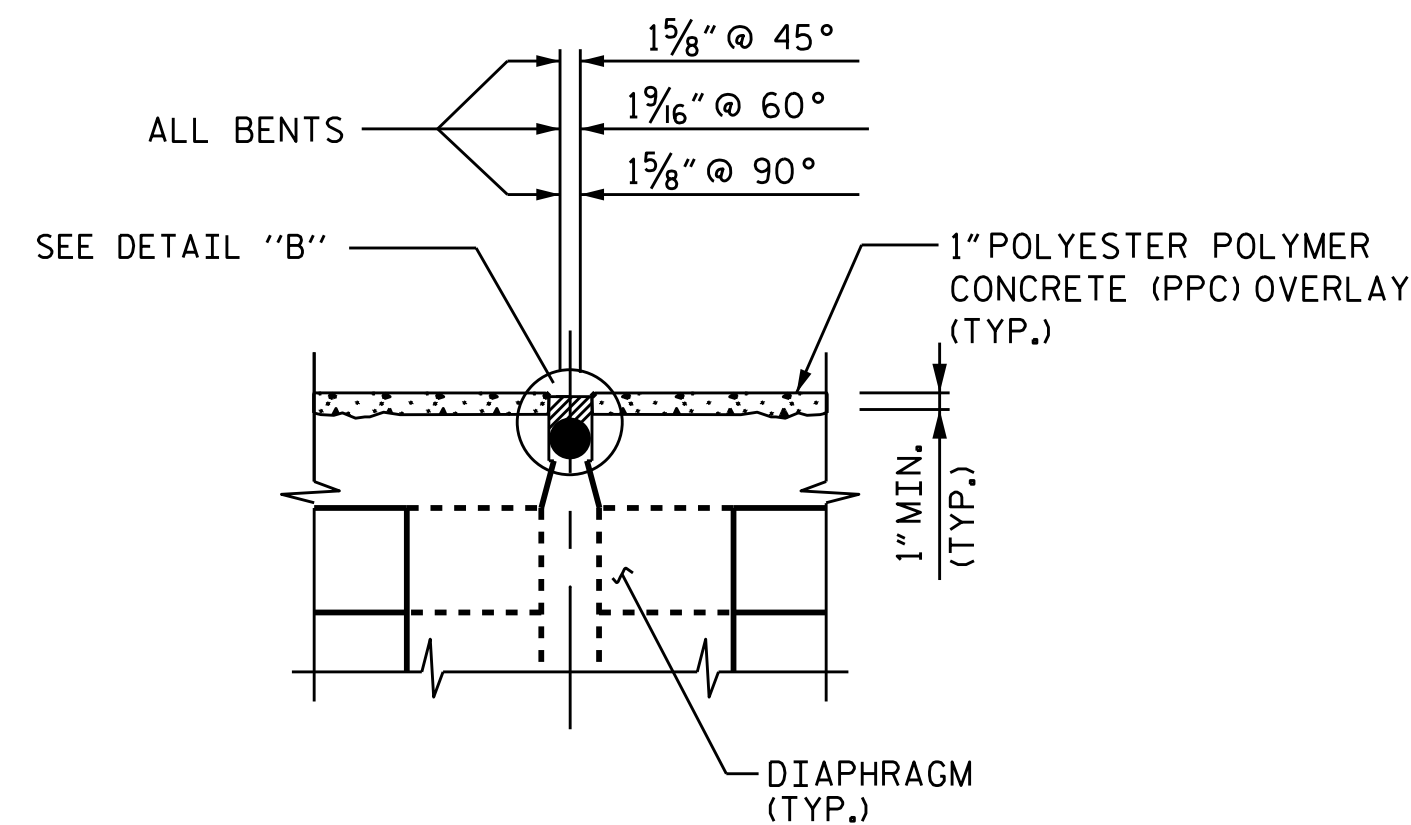
DETAIL A (PROPOSED)



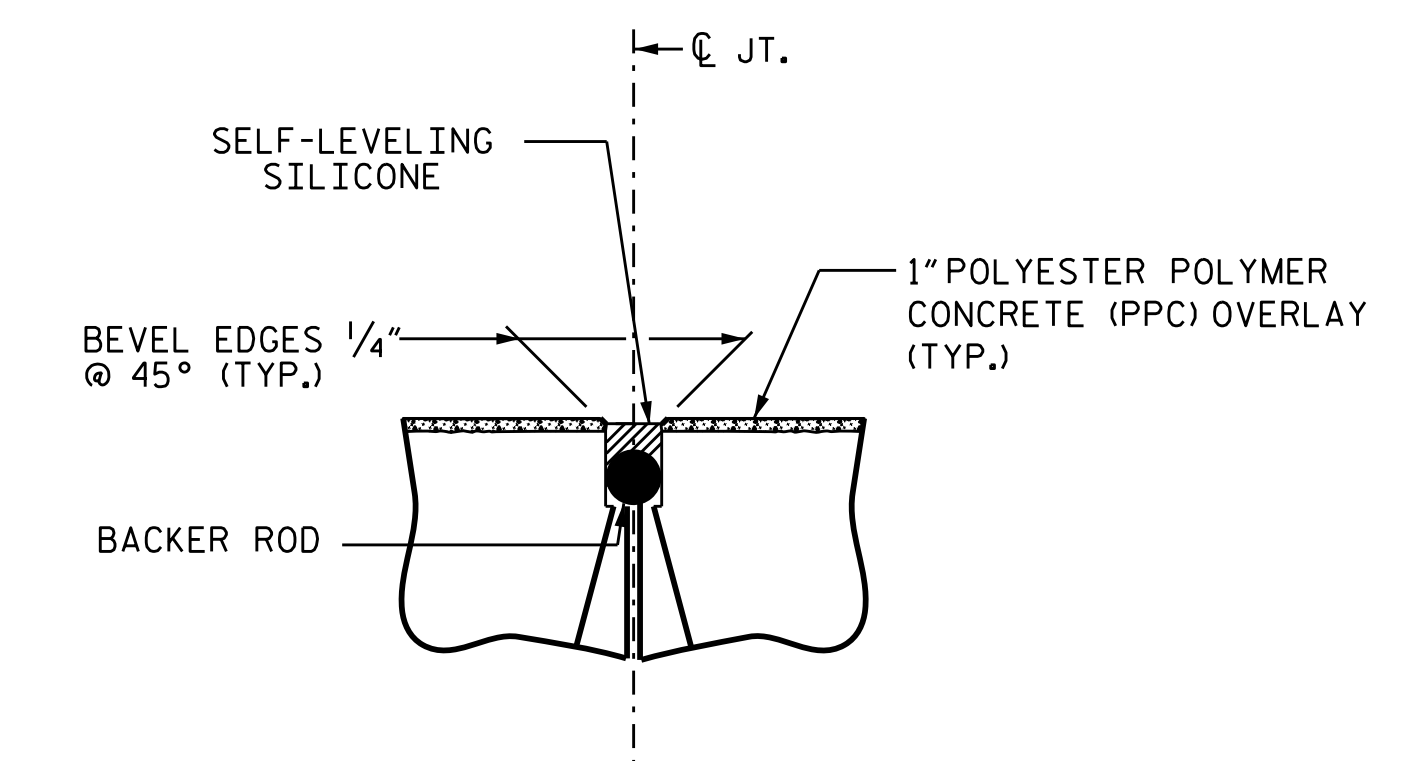
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



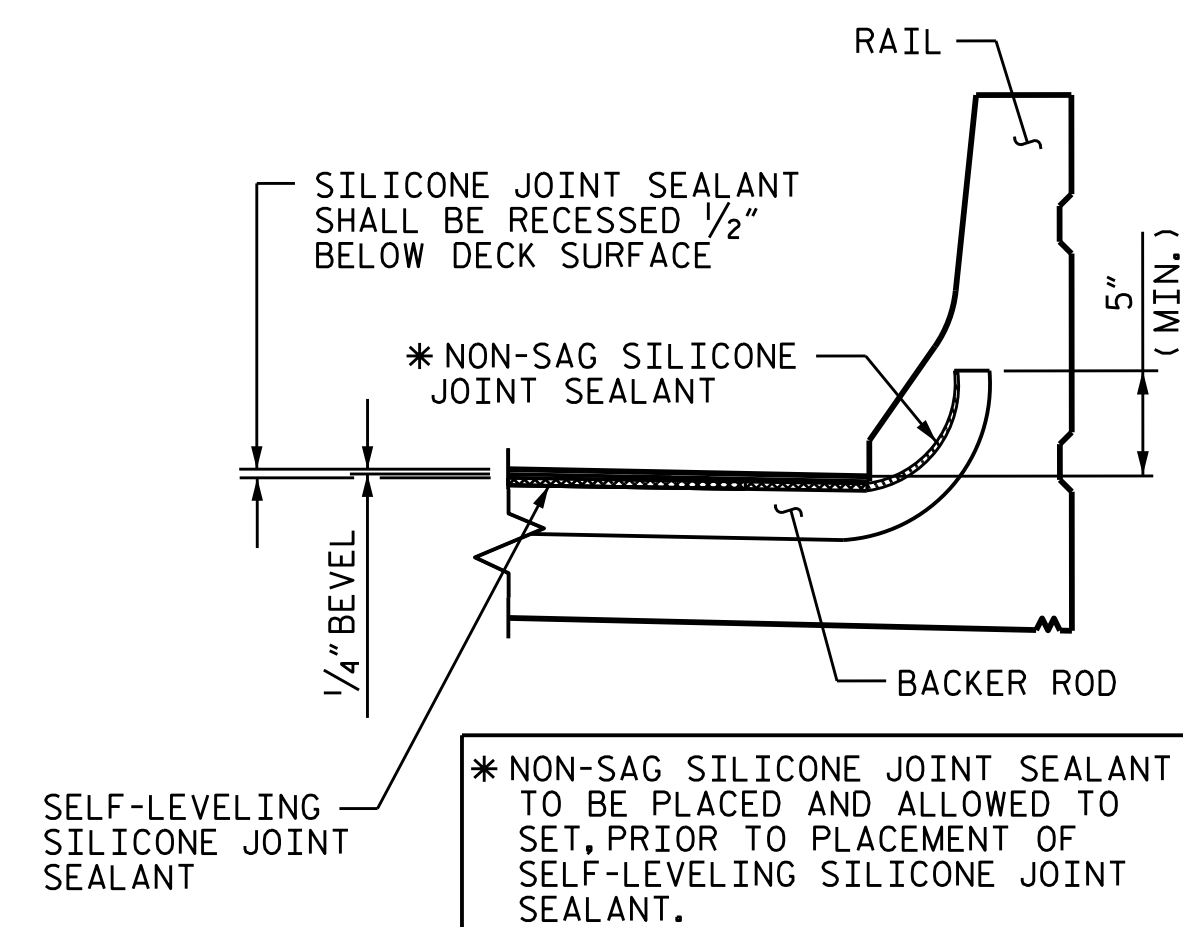
PROPOSED JOINT



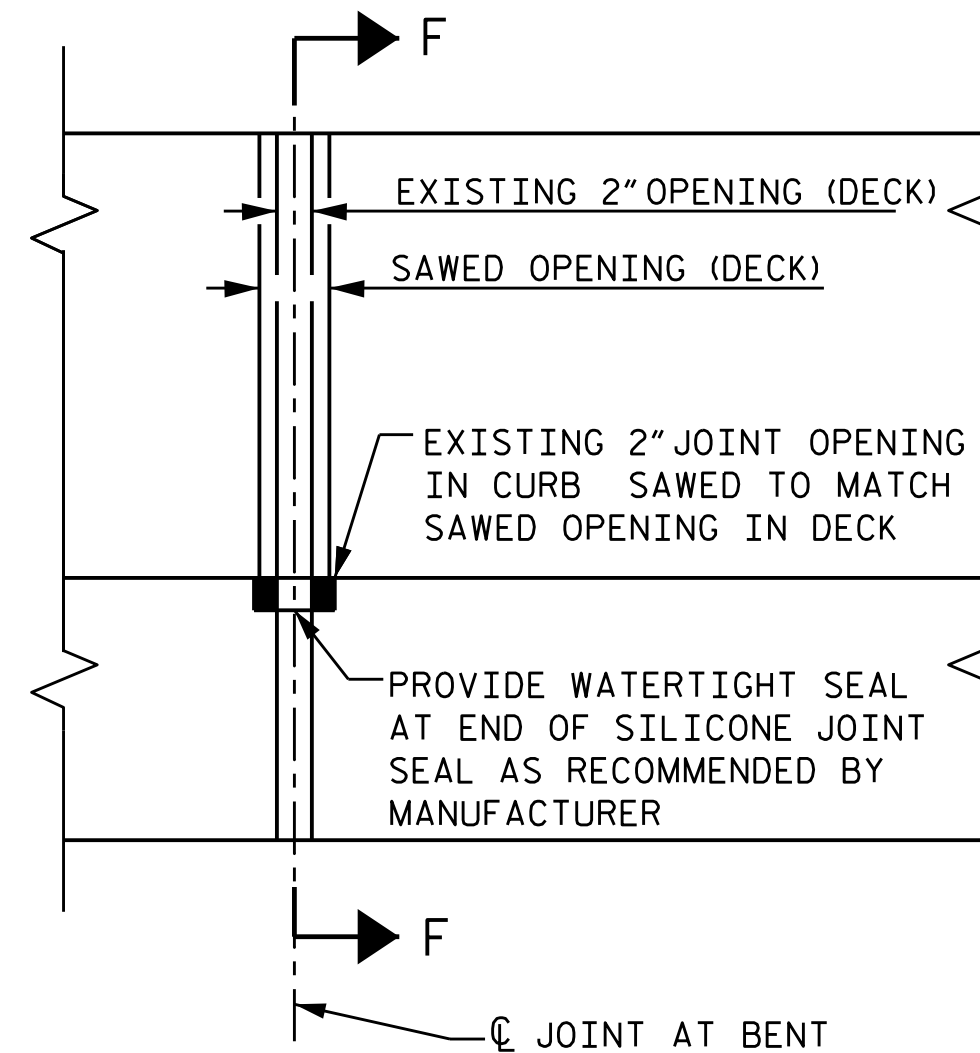
DETAIL B (PROPOSED)

JOINT INSTALLATION SEQUENCE AT BENTS 1, 2 & 3

SECTION B-B



SECTION F-F



PLAN

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469 & 470

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

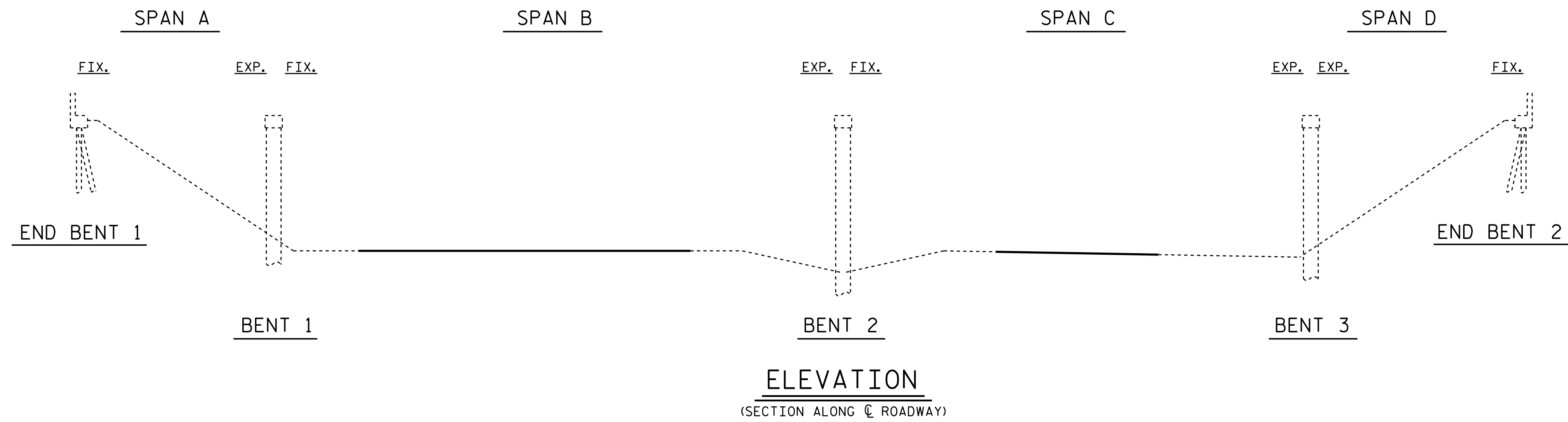
SUPERSTRUCTURE
 JOINT DETAILS



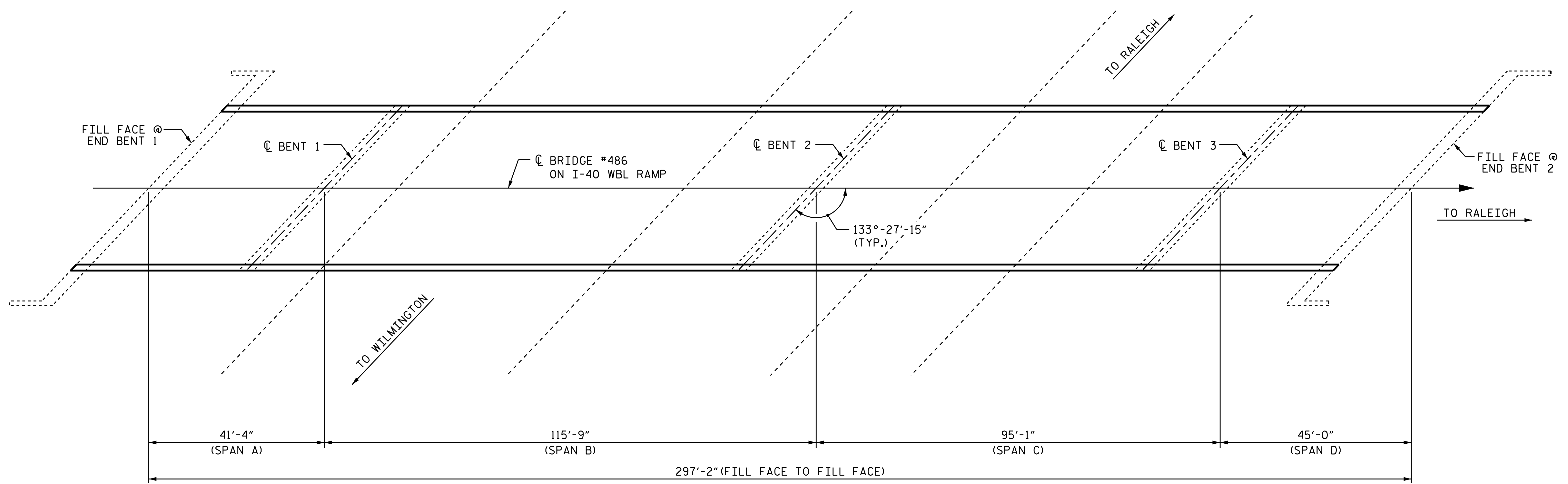
DRAWN BY : M.K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH / A. G. ABRAHA DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-15
1			3			TOTAL SHEETS
2			4			69



- SCOPE OF WORK**
- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
 - DEMOLISH EXISTING BRIDGE DECK JOINTS.
 - PERFORM DECK REPAIRS IN PREPARED AREAS.
 - OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
 - RECONSTRUCT BRIDGE JOINTS AND INSTALL SILICONE JOINT SEALS.
 - GROOVE POLYESTER POLYMER CONCRETE.
 - SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.
 - EPOXY COATING OF TOP OF CAPS.
 - PAINTING EXISTING WEATHERING STEEL GIRDER ENDS.

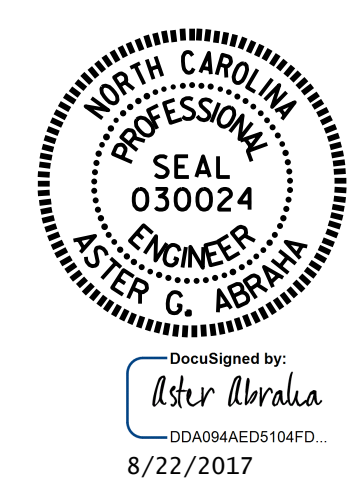


PLAN
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

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

Resident Engineer _____ Date _____

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 486



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

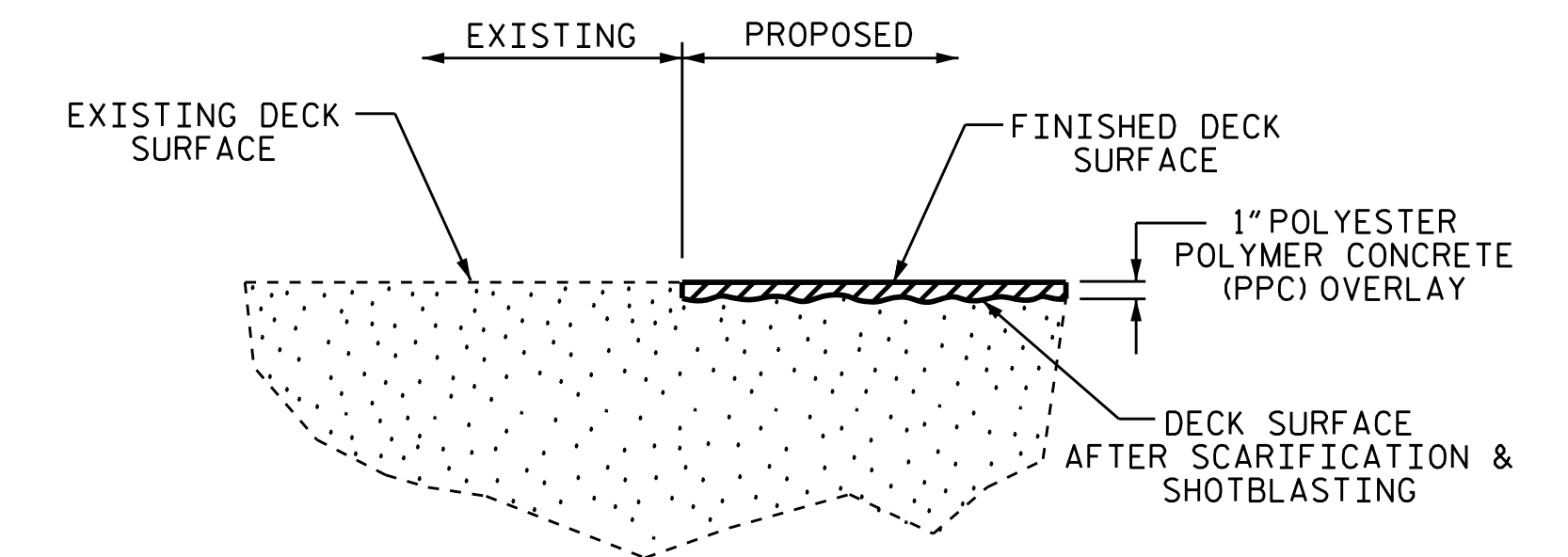
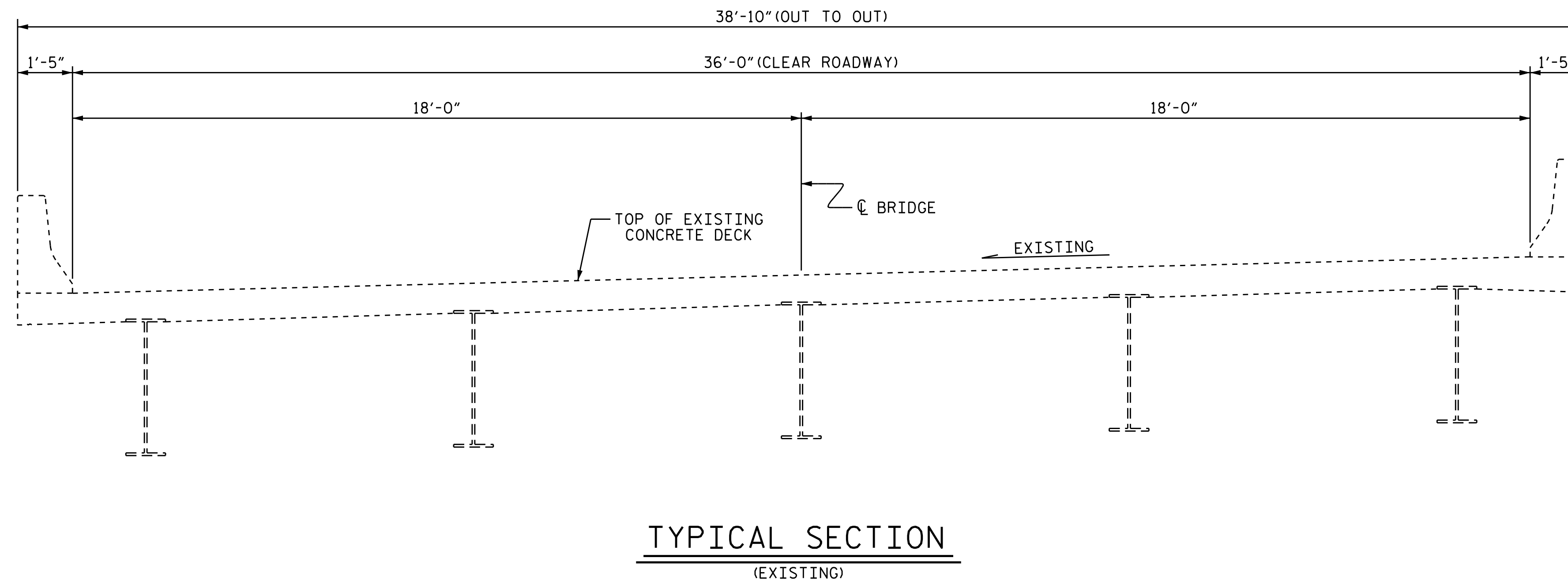
DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

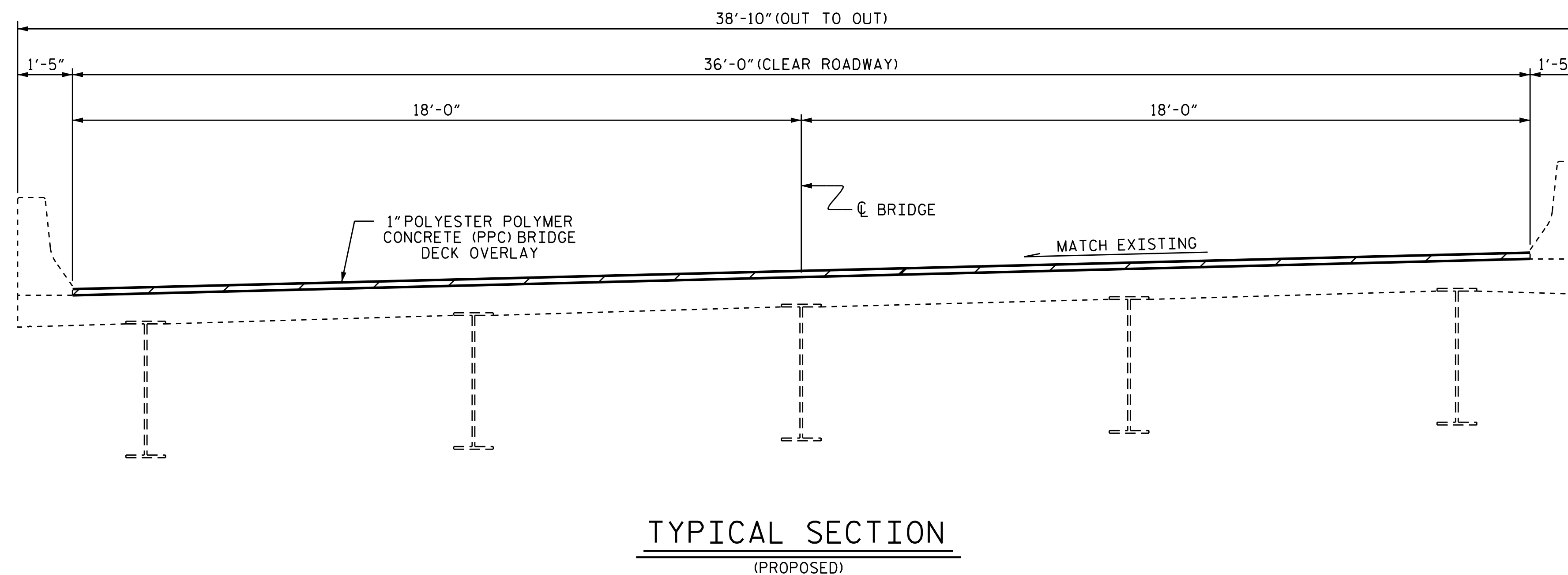
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-16
2			4			69

NOTE

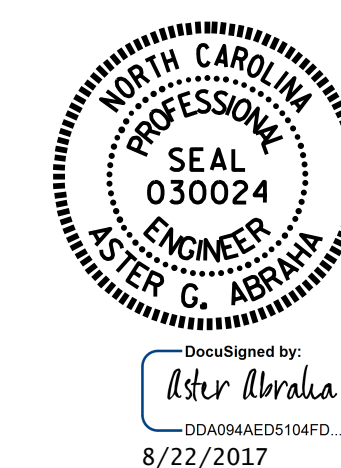
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYESTER POLYMER CONCRETE PLACEMENT.



DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY



PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 486



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTION
&
PPC OVERLAY DETAIL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-17
2			4			69


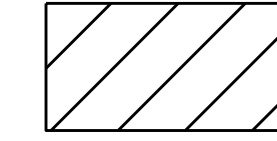
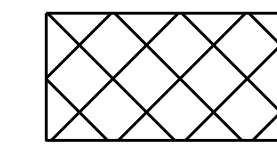
DRAWN BY : M.K. BEARD DATE : 3/6/17
CHECKED BY : W. C. SMITH DATE : 06/2017

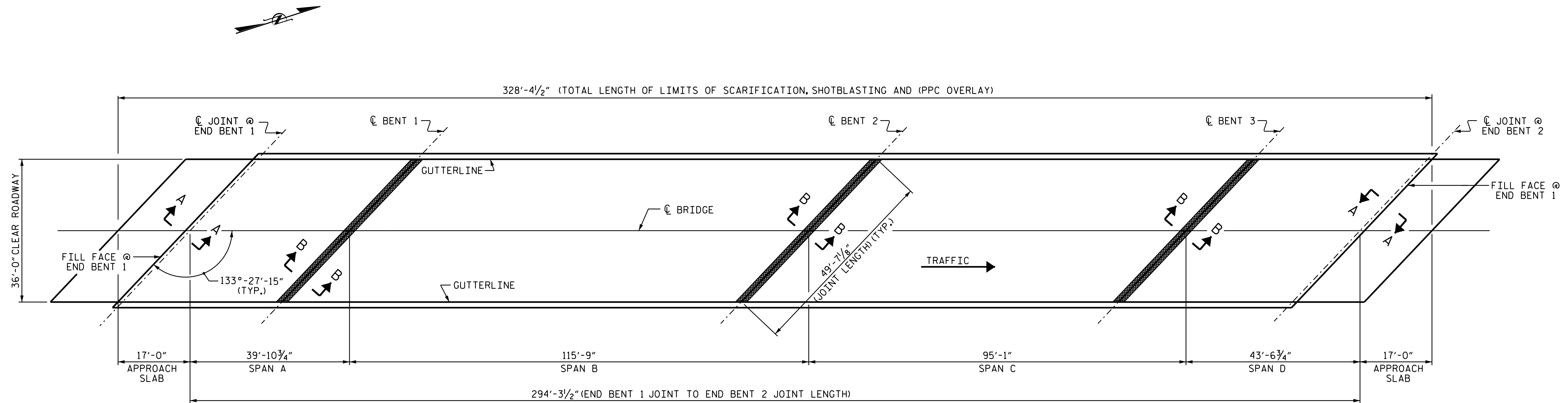
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,313.5 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	11.0 SY	
SHOTBLASTING BRIDGE DECK	1,313.5 SY	
PPC MATERIALS	36.5 CY	
PLACING AND FINISHING PPC OVERLAY	1,313.5 SY	
GROOVING BRIDGE FLOORS	10,776.5 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

-  SCARIFICATION, SHOTBLASTING AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY
-  CLASS II SURFACE PREPARATION
-  CONCRETE DECK REPAIR FOR PPC OVERLAY



PLAN OF SPANS

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 AND B-B, SEE "JOINT DETAILS" SHEET S-29.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 486



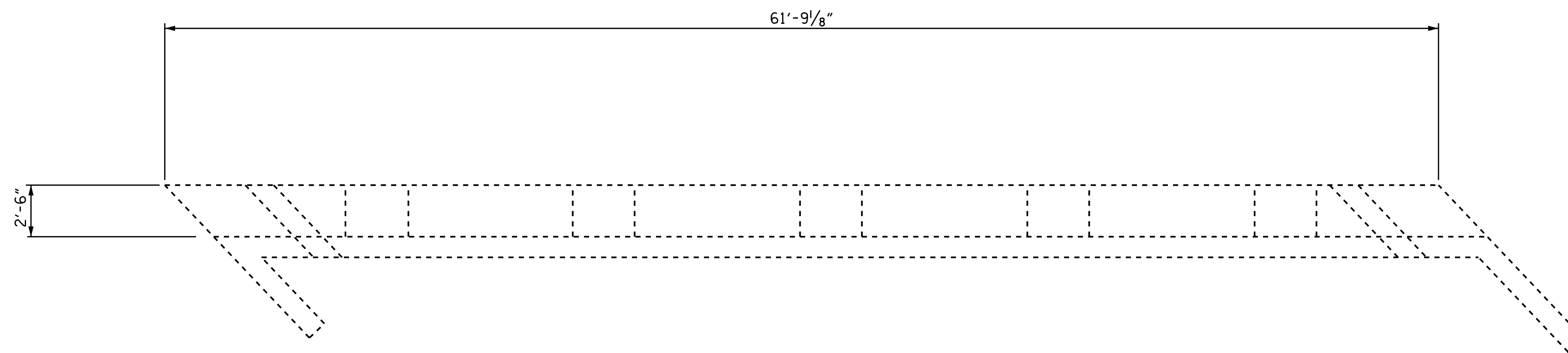
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & PPC OVERLAY

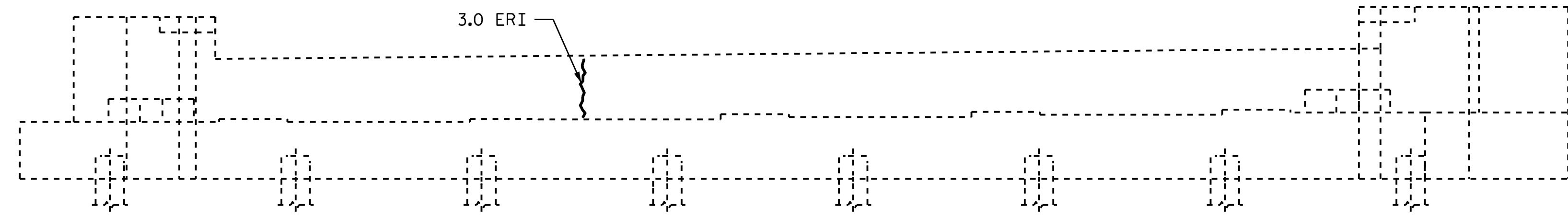
DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W.C. SMITH DATE : 6/15/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

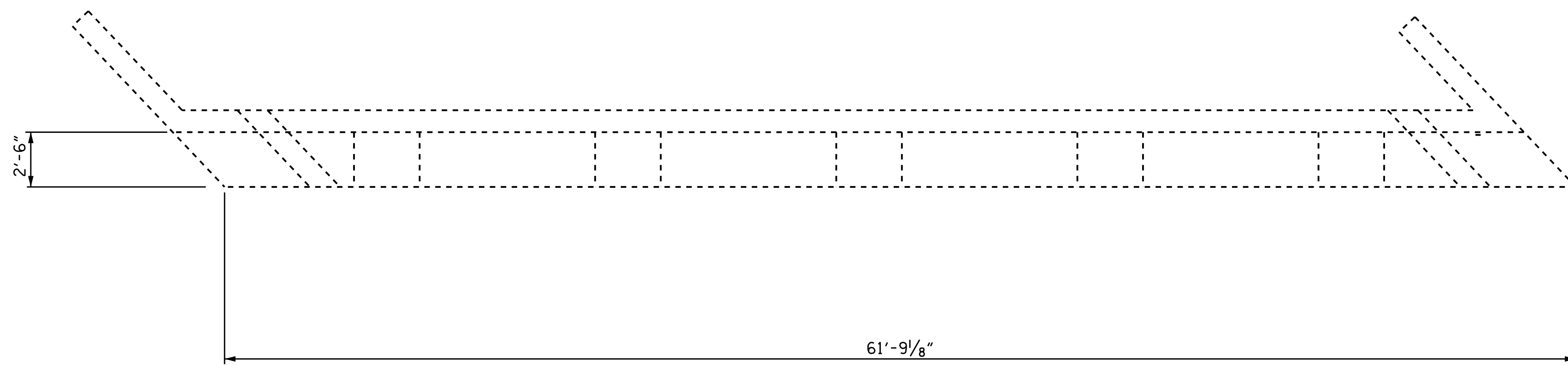
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-18
2			4			69



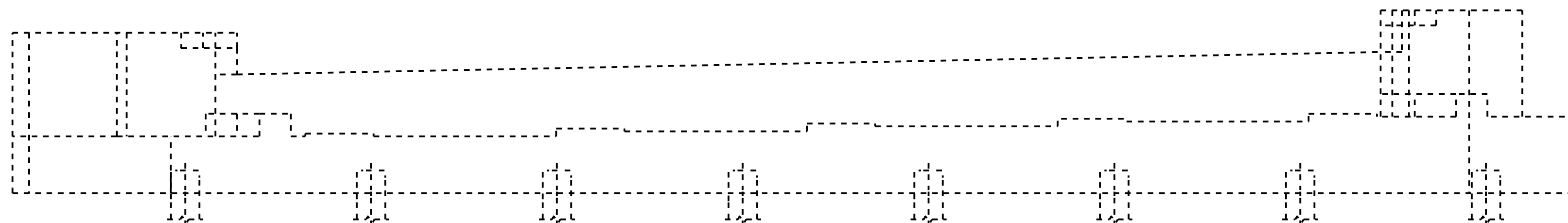
PLAN
(END BENT 1)



ELEVATION
(END BENT 1)



PLAN
(END BENT 2)



ELEVATION
(END BENT 2)

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP			3.0	
EPOXY COATING		AREA SF	AREA SF	
TOP OF CAP		155.0		
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION			LN. FT.	LN. FT.
CAP				
EPOXY COATING		AREA SF	AREA SF	
TOP OF CAP		155.0		

NOTES:

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

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

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

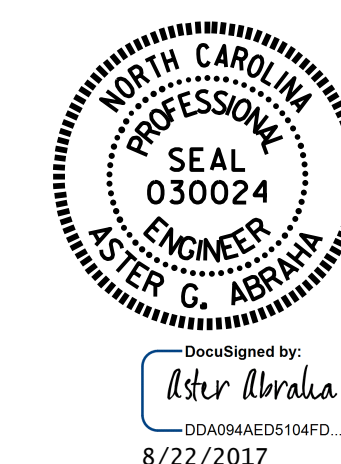
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

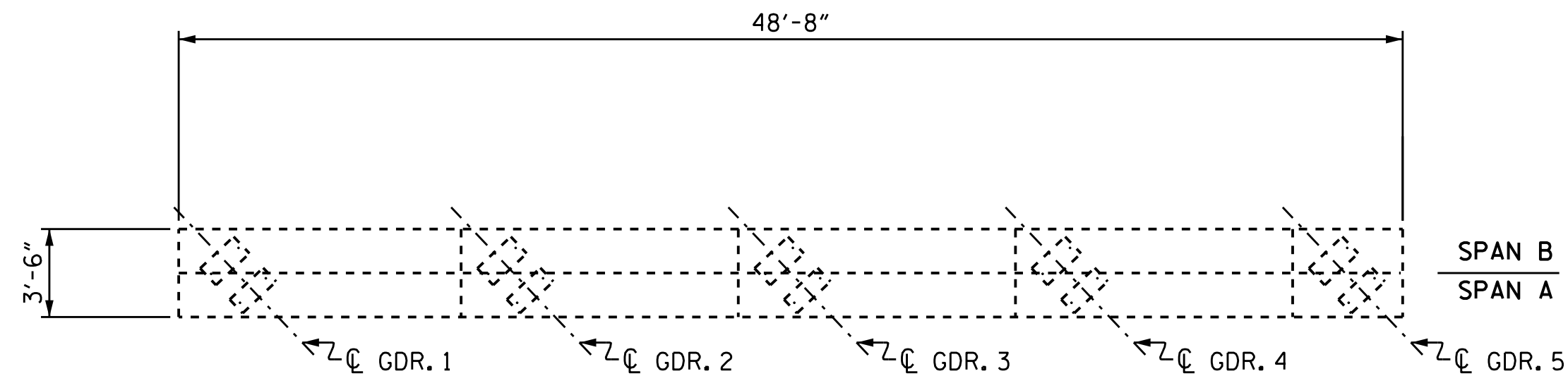
PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 486



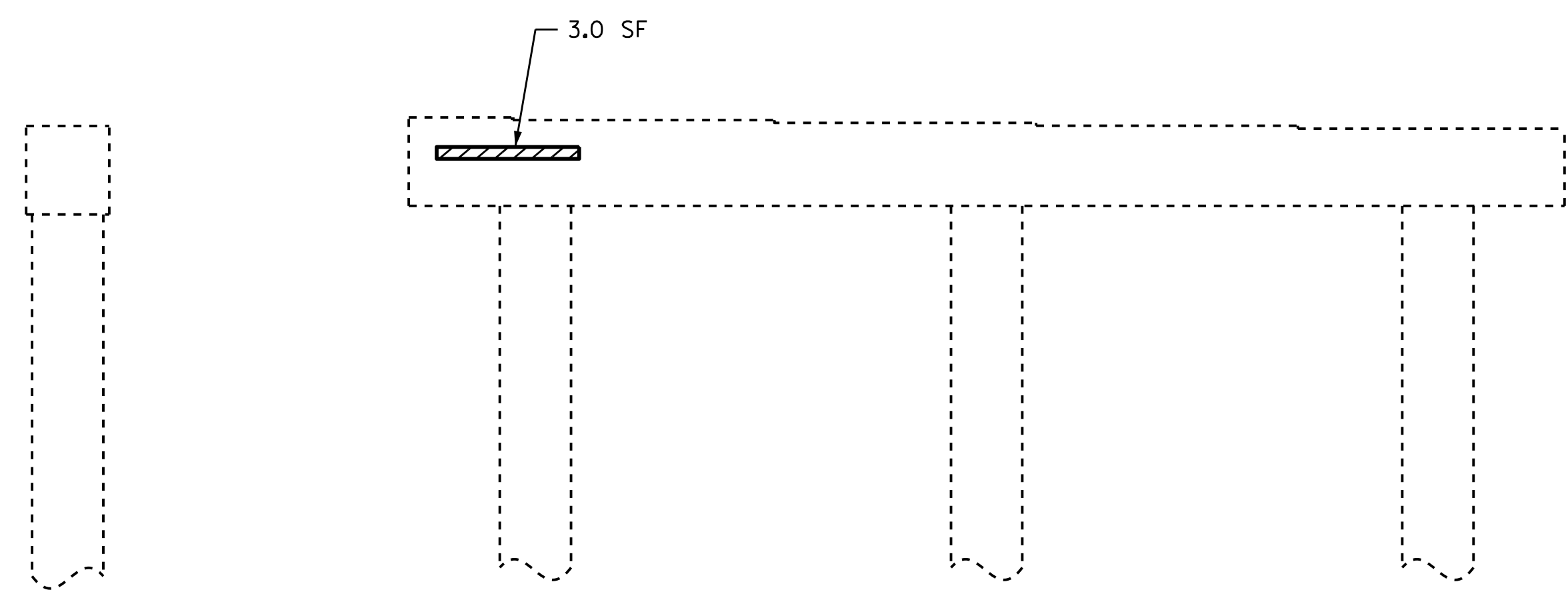
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**SUBSTRUCTURE
 REPAIR
 END BENTS**

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S-19
2			4			TOTAL SHEETS 69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PLAN
(TOP OF CAP)

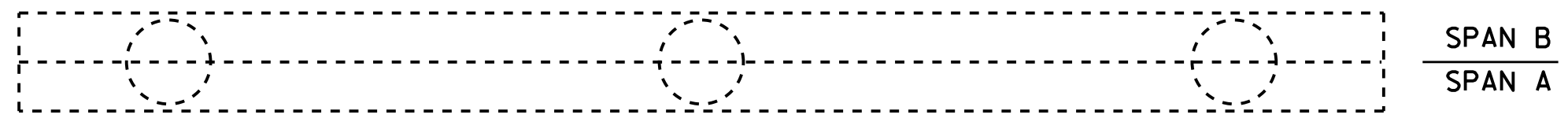


END VIEW
(LEFT SIDE)

ELEVATION
(SPAN A SIDE)

END VIEW
(RIGHT SIDE)

ELEVATION
(SPAN B SIDE)



PLAN
(BOTTOM OF CAP)

NOTES

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

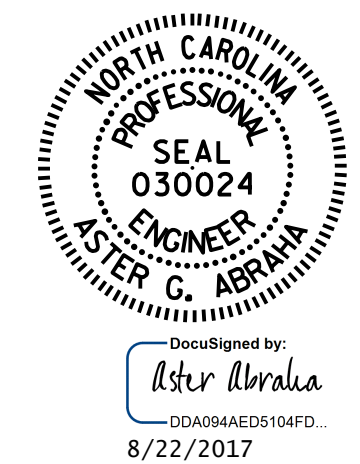
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	3.0	2.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN				
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	170.0			

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 486



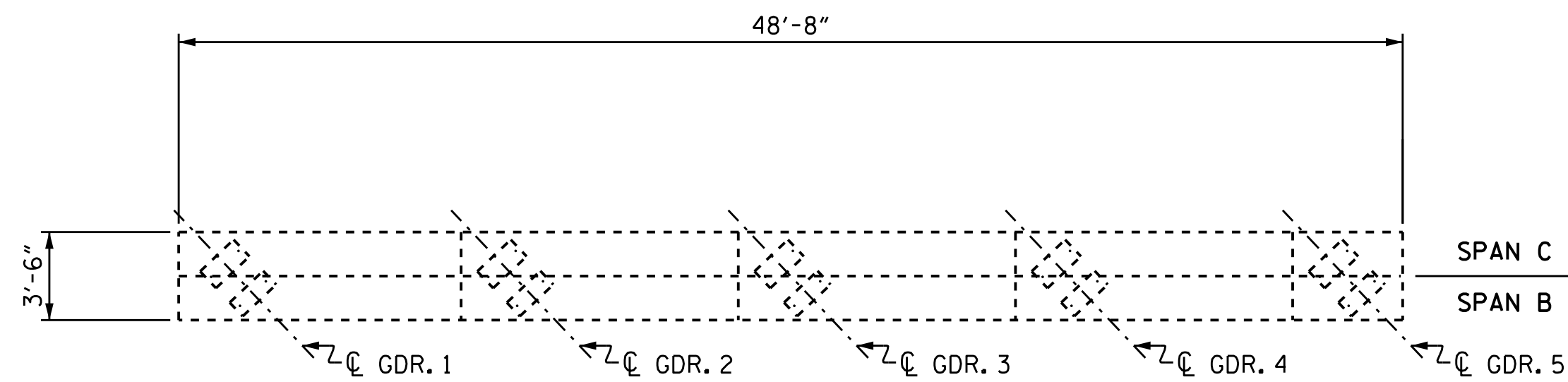
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 REPAIR
 BENT 1**

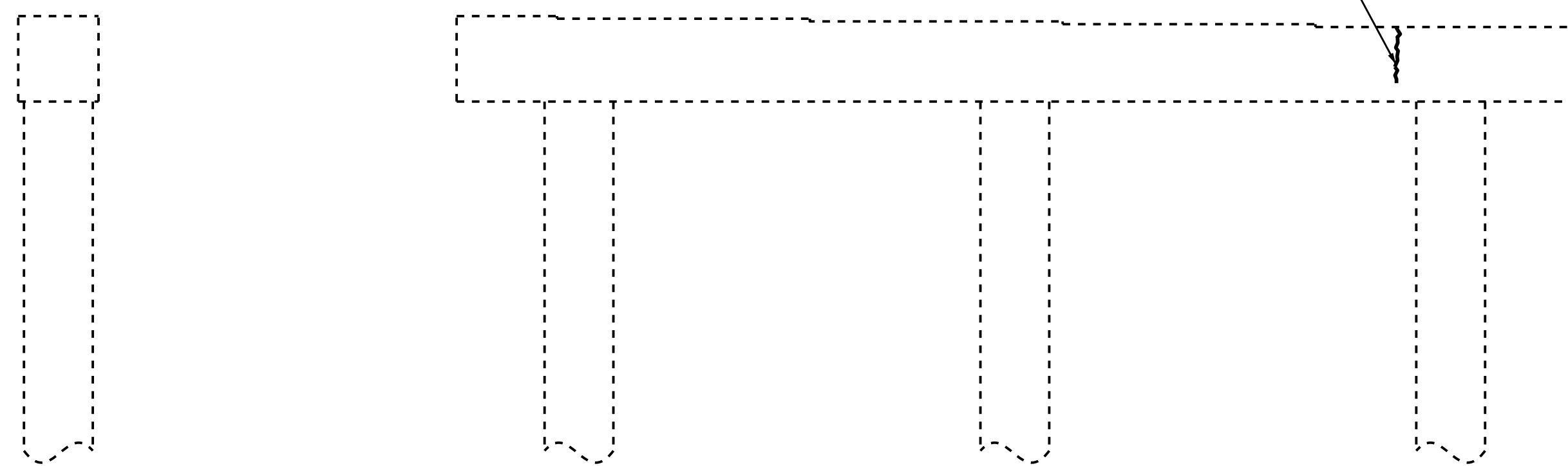
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-20
2			4			69

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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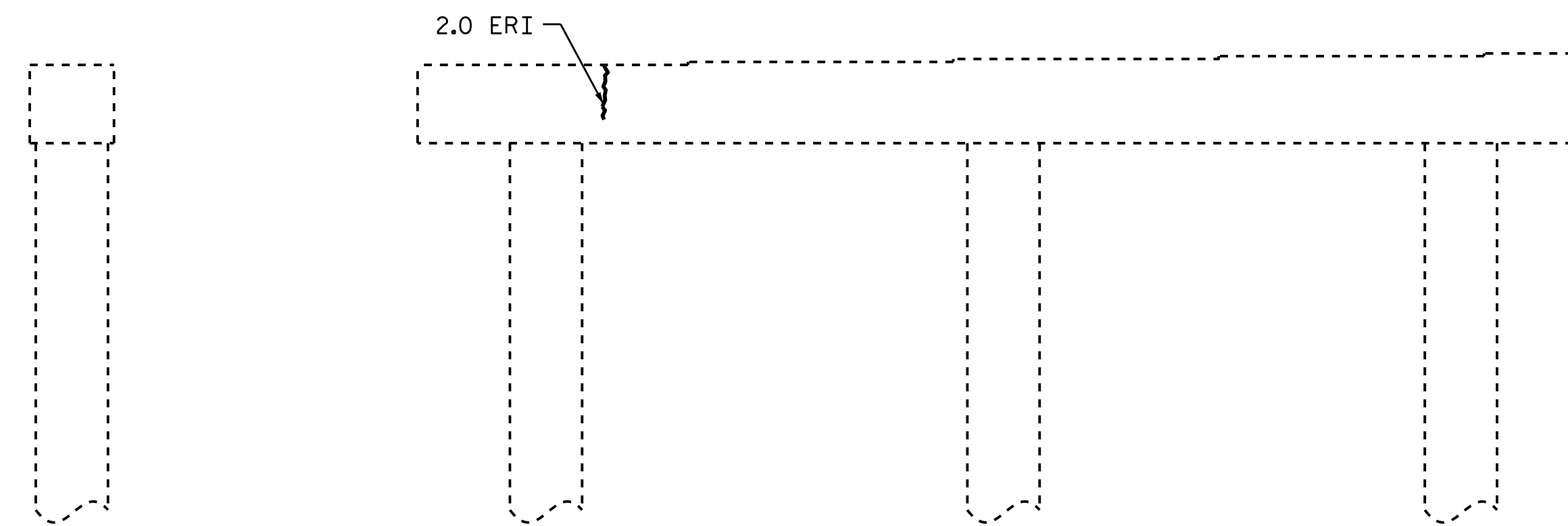


PLAN
(TOP OF CAP)



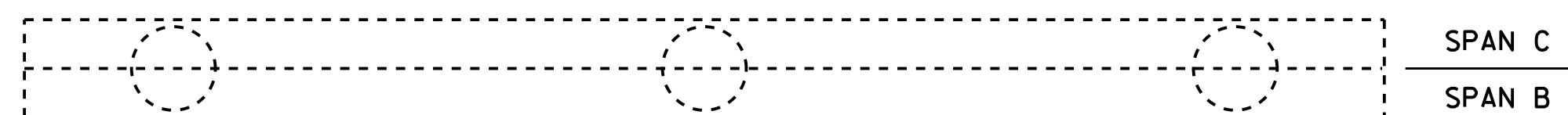
END VIEW
(LEFT SIDE)

ELEVATION
(SPAN B SIDE)



END VIEW
(RIGHT SIDE)

ELEVATION
(SPAN C SIDE)



PLAN
(BOTTOM OF CAP)

NOTES

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

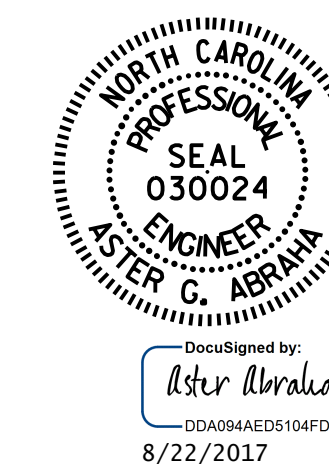
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN				
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		4.5		
COLUMN		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	170.0			

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 486

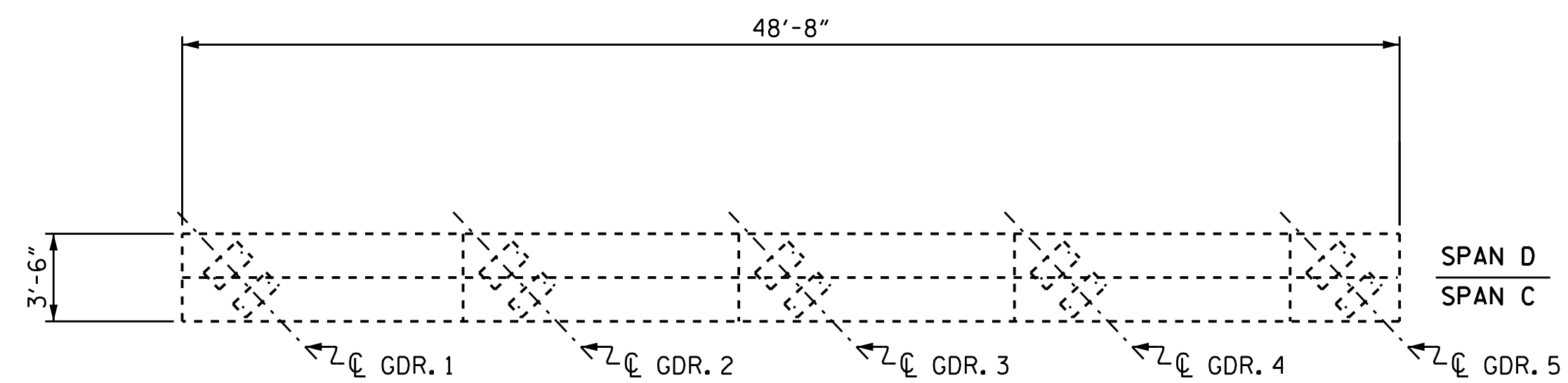


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 2

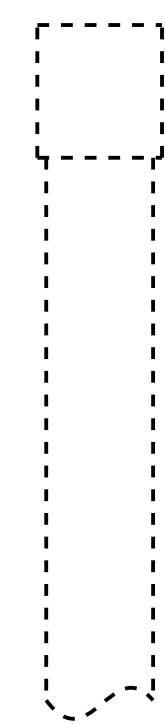
DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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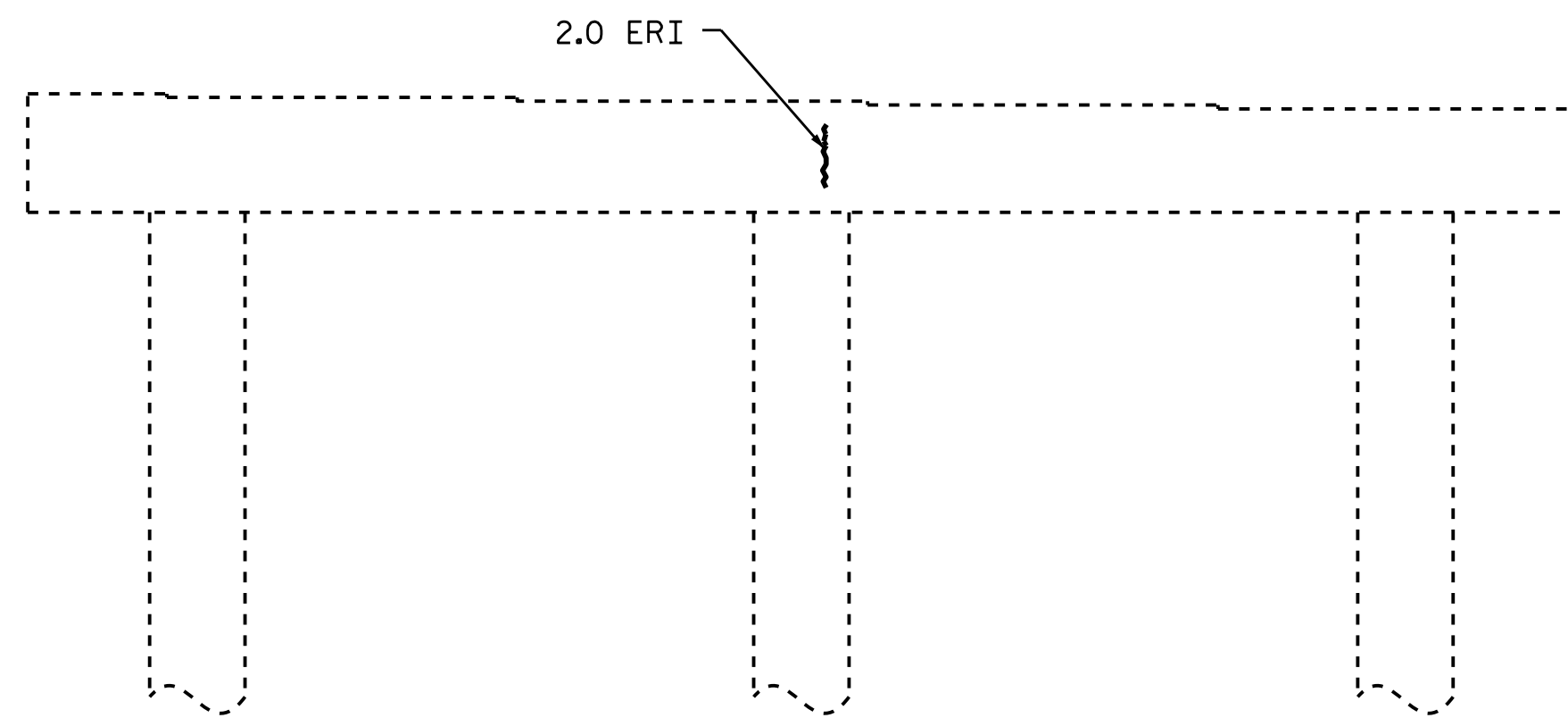
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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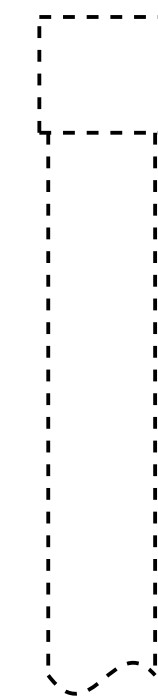
PLAN
(TOP OF CAP)



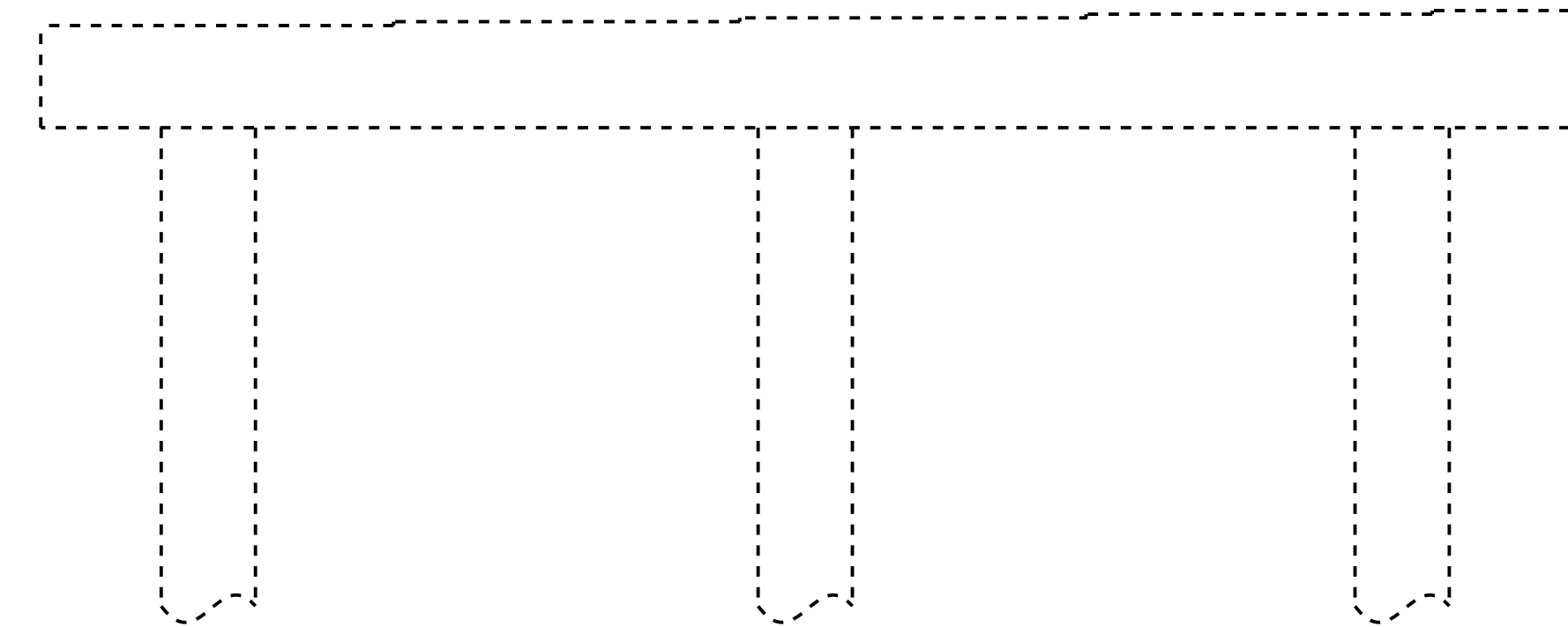
END VIEW
(LEFT SIDE)



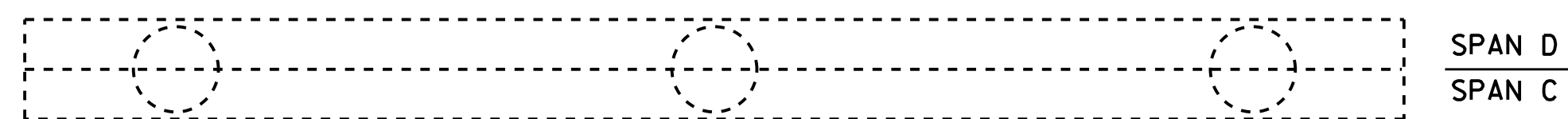
ELEVATION
(SPAN C SIDE)



END VIEW
(RIGHT SIDE)



ELEVATION
(SPAN D SIDE)



PLAN
(BOTTOM OF CAP)

NOTES

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

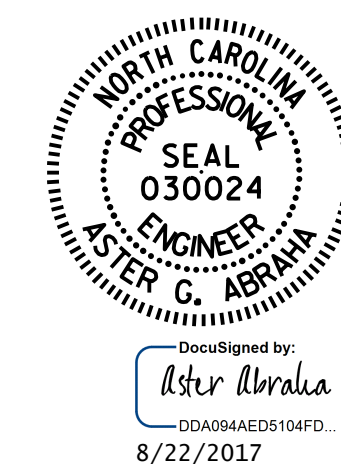
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN				
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		2.0		
COLUMN		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	170.0			

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 486

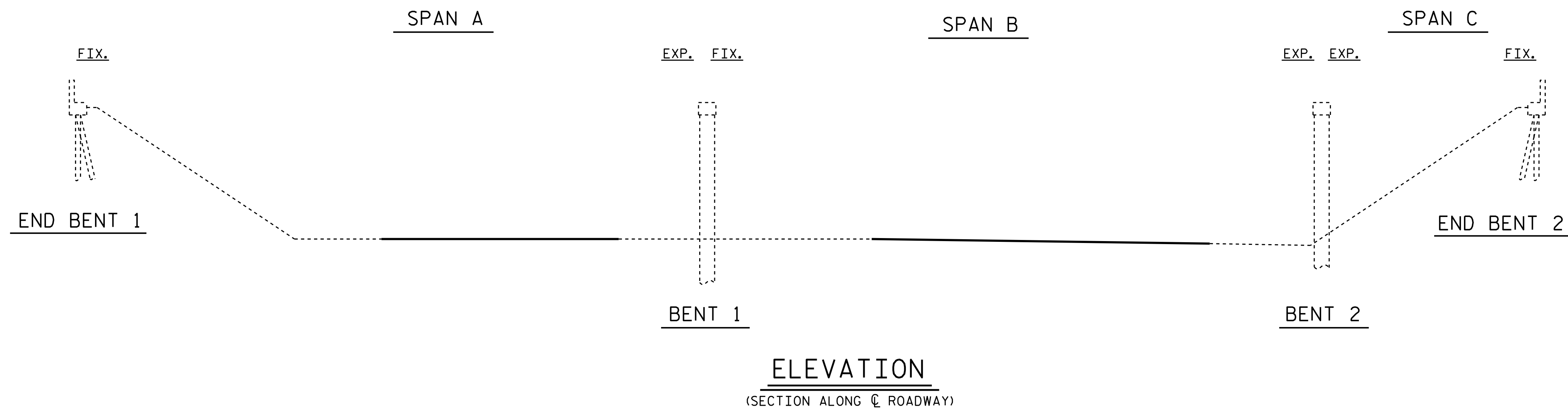


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 3

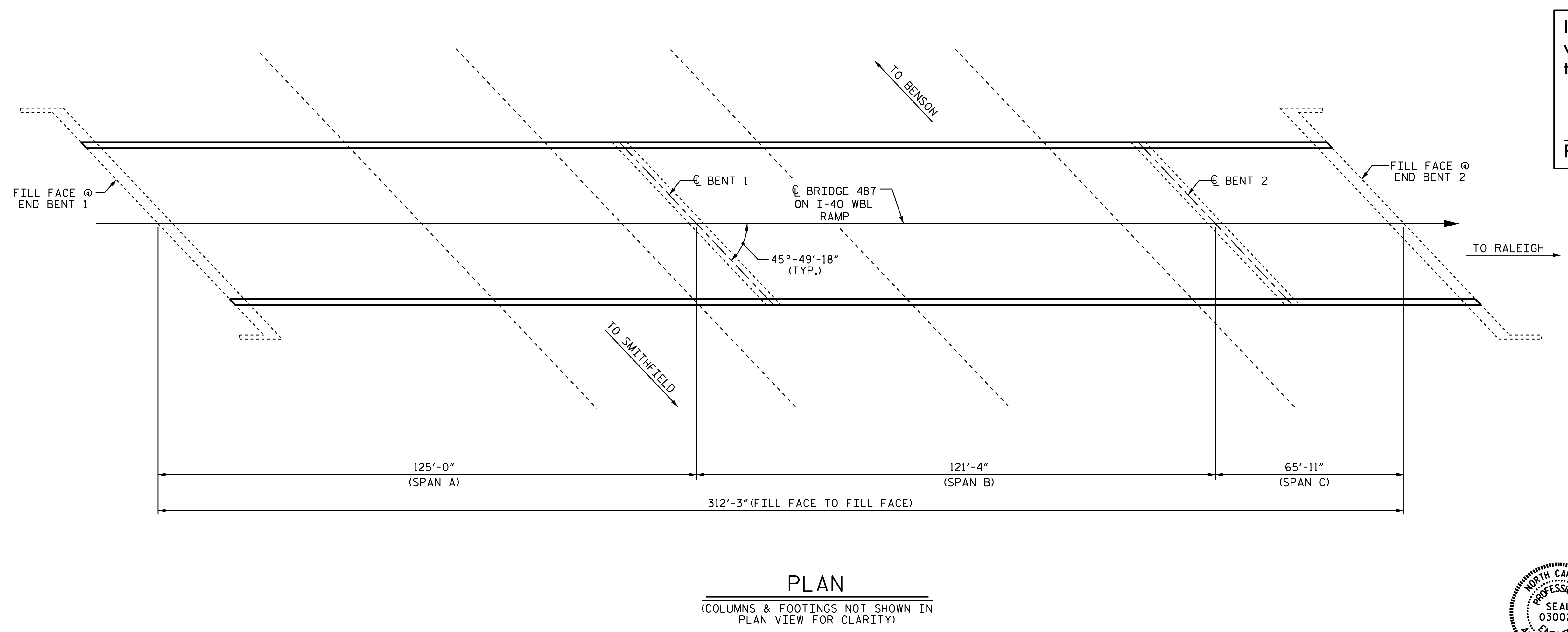
DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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2			4			69



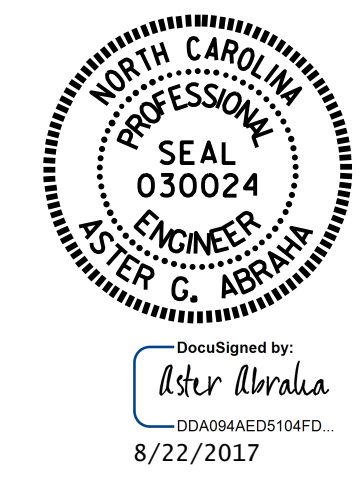
- SCOPE OF WORK**
- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
 - DEMOLISH EXISTING BRIDGE DECK JOINTS.
 - PERFORM DECK REPAIRS IN PREPARED AREAS.
 - OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
 - RECONSTRUCT BRIDGE JOINTS AND INSTALL SILICONE JOINT SEALS.
 - GROOVE POLYESTER POLYMER CONCRETE.
 - SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.
 - EPOXY COATING OF TOP OF CAPS.
 - PAINTING EXISTING WEATHERING STEEL GIRDER ENDS.



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

Resident Engineer _____ Date _____

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 487



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

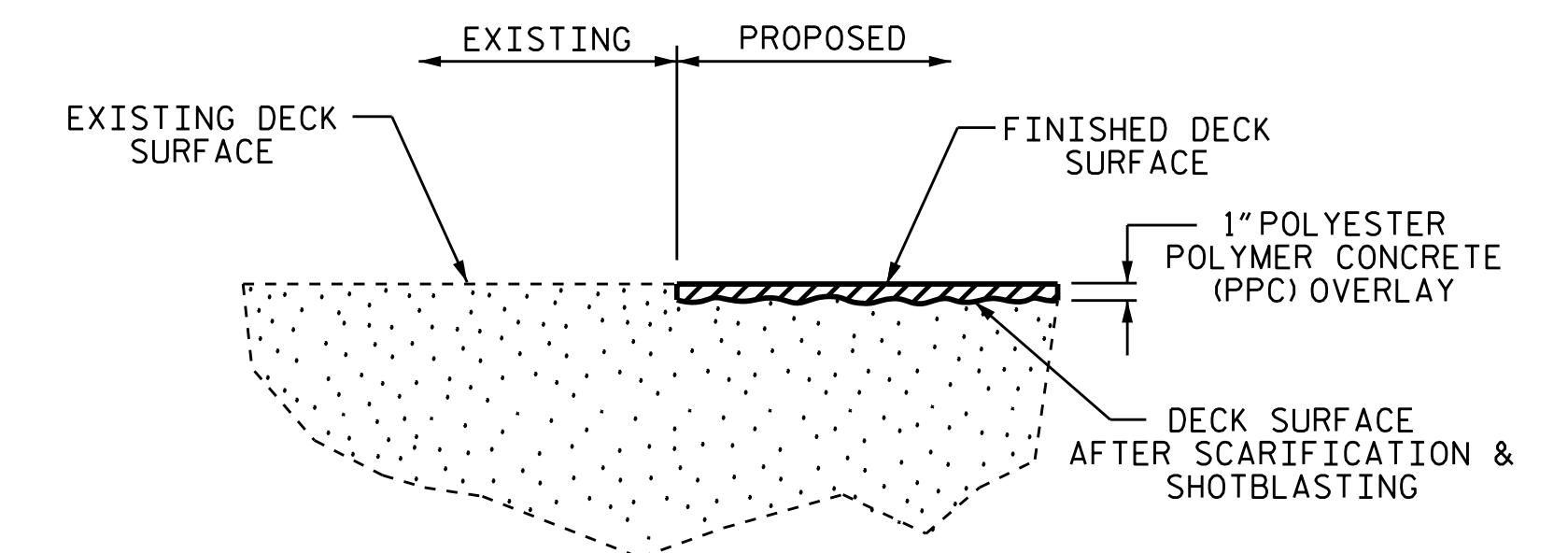
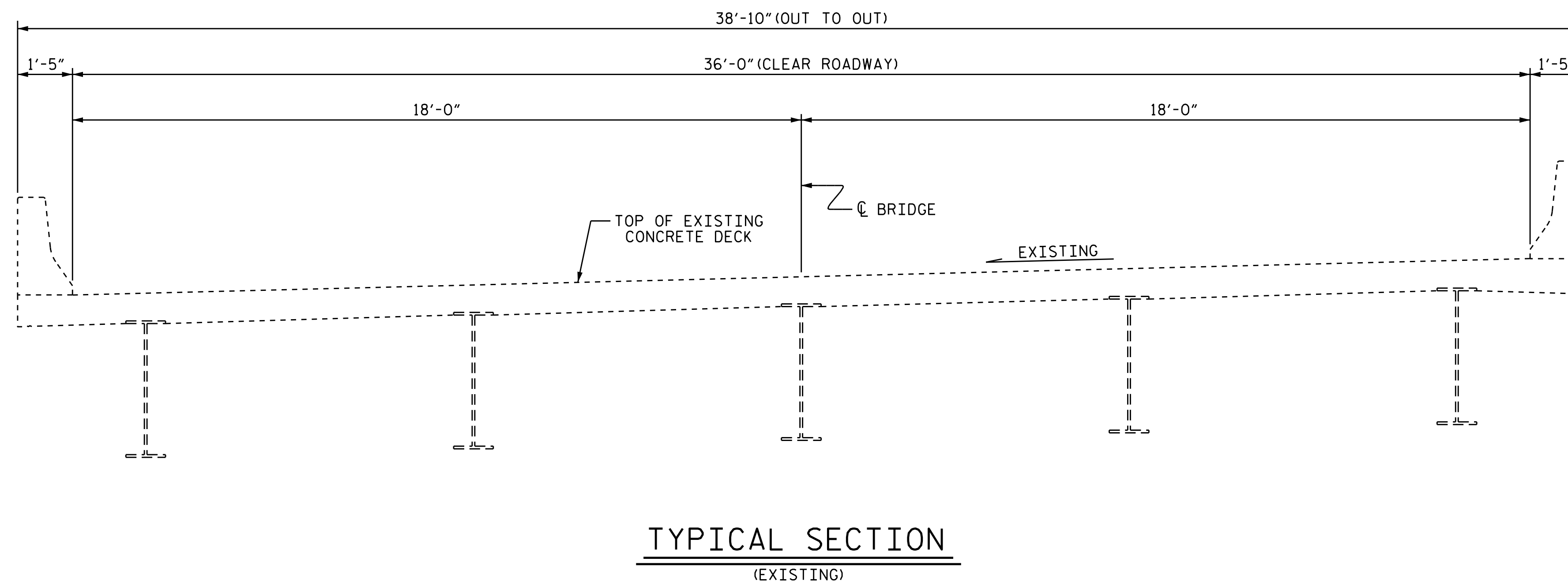
FOR BRIDGE ON
 I-40 WBL RAMP
 OVER I-95

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

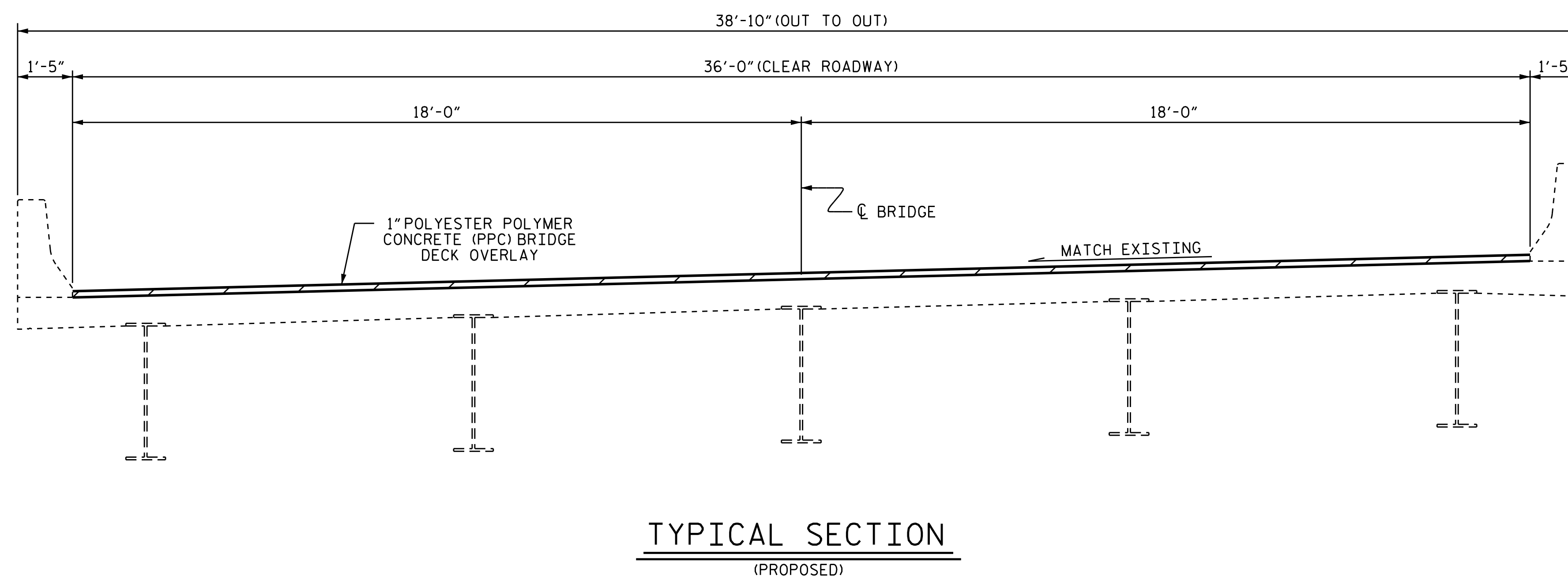
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2				4			TOTAL SHEETS 69	

NOTE

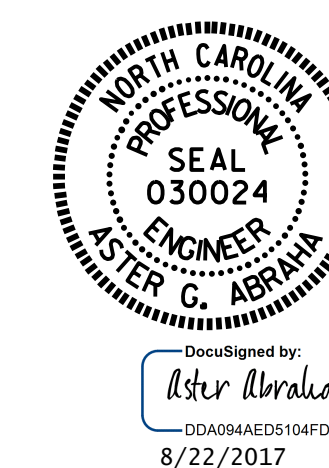
SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYESTER POLYMER CONCRETE PLACEMENT.



DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY



PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 487



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTION
&
PPC OVERLAY DETAILS

DRAWN BY : M.K. BEARD DATE : 04/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

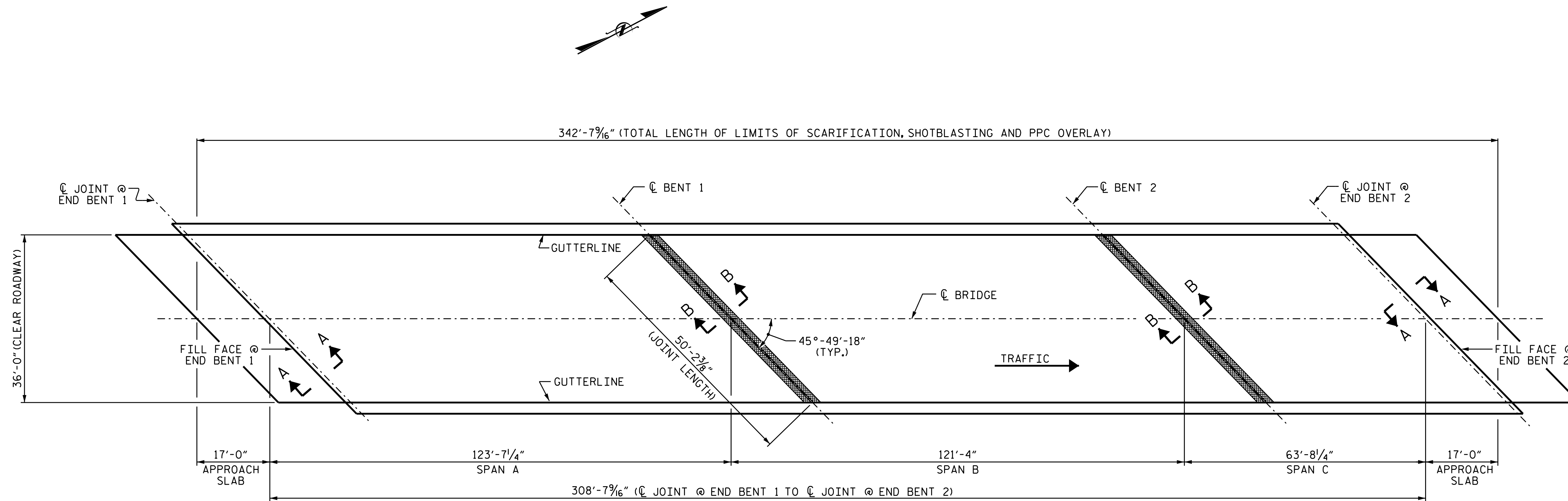
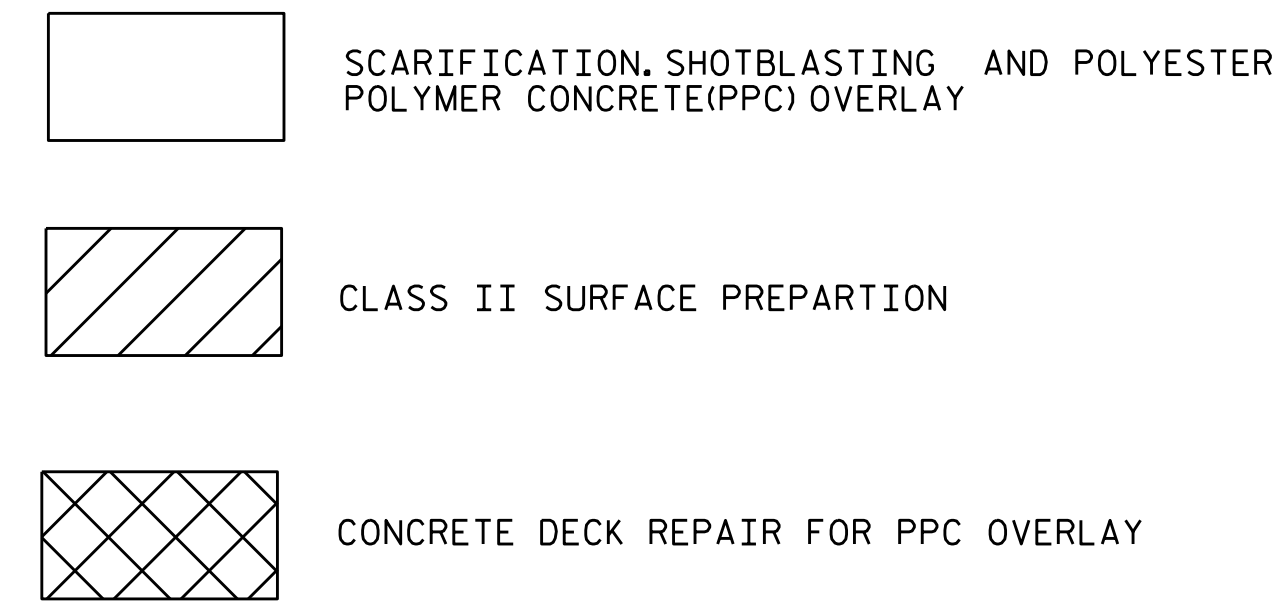
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-24
2			4			69

AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,361.0 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	7.5 SY	
SHOTBLASTING BRIDGE DECK	1,361.0 SY	
PPC MATERIALS	37.8 CY	
PLACING AND FINISHING PPC OVERLAY	1,361.0 SY	
GROOVING BRIDGE FLOORS	11,174.0 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.



PLAN OF SPANS

NOTES

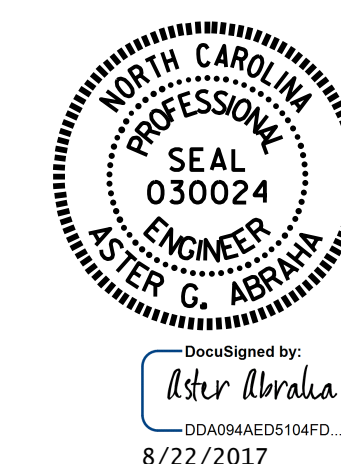
REPAIR LOCATIONS AND ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES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

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-29.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 487



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 SURFACE PREPARATION
 & PPC OVERLAY

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W.C. SMITH DATE : 6/15/17

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-25
2			4			69

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		6.0		
EPOXY COATING	AREA SF			LN. FT.
TOP OF CAP	162.0			

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)				
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		38.0		
EPOXY COATING	AREA SF			LN. FT.
TOP OF CAP	162.0			

NOTES:

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

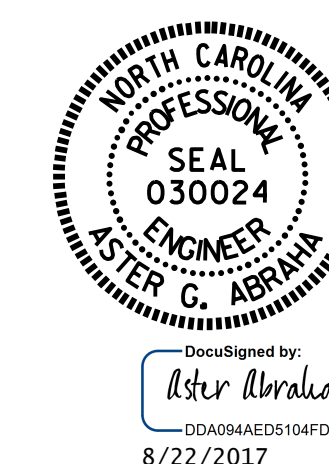
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

☒ - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

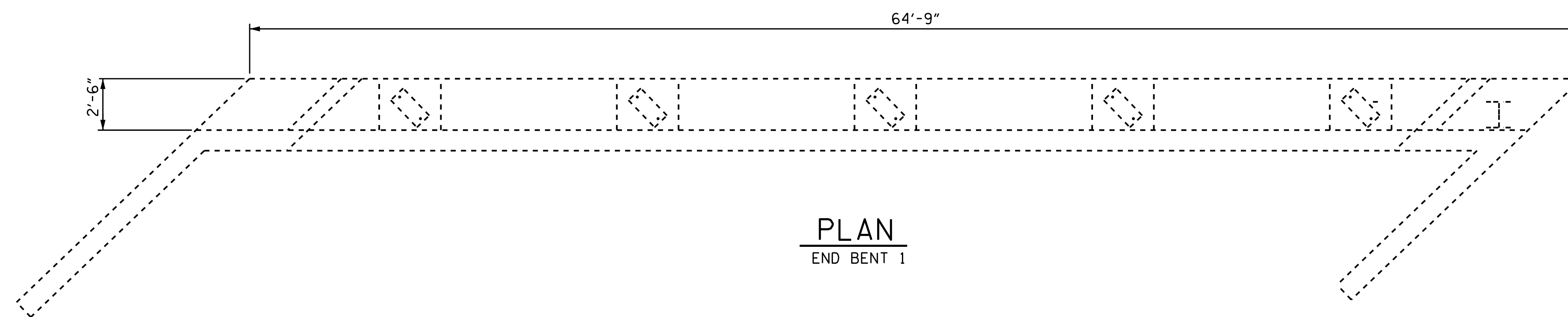
PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 487



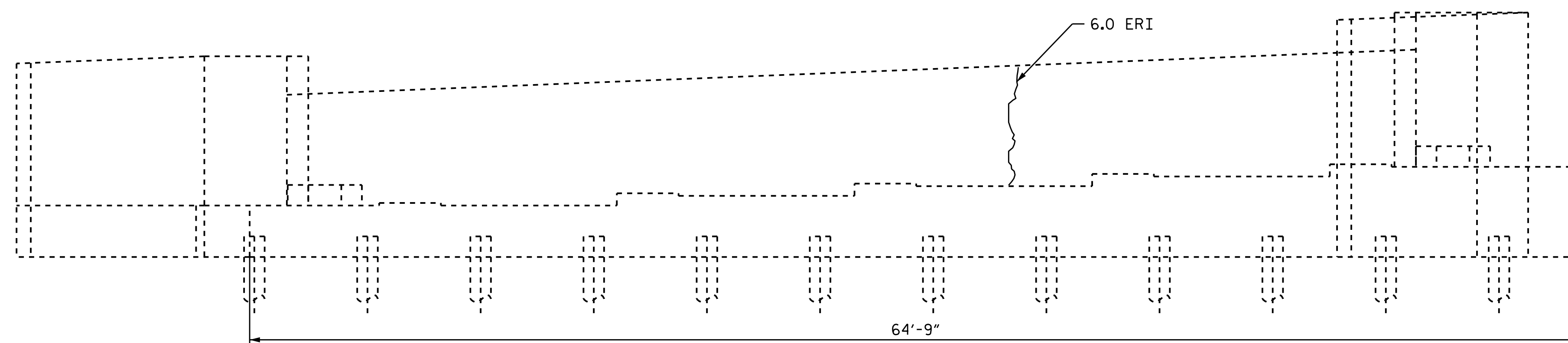
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 END BENTS

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2			4			69

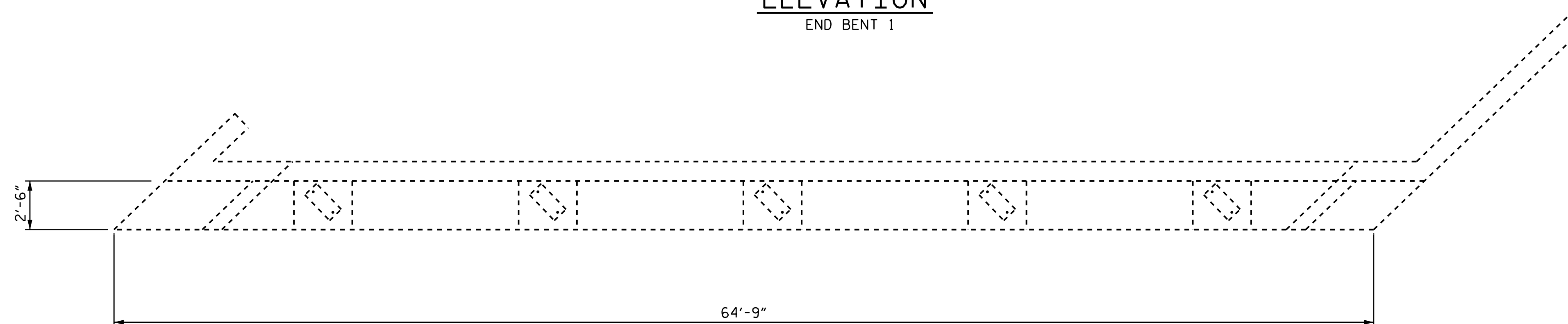
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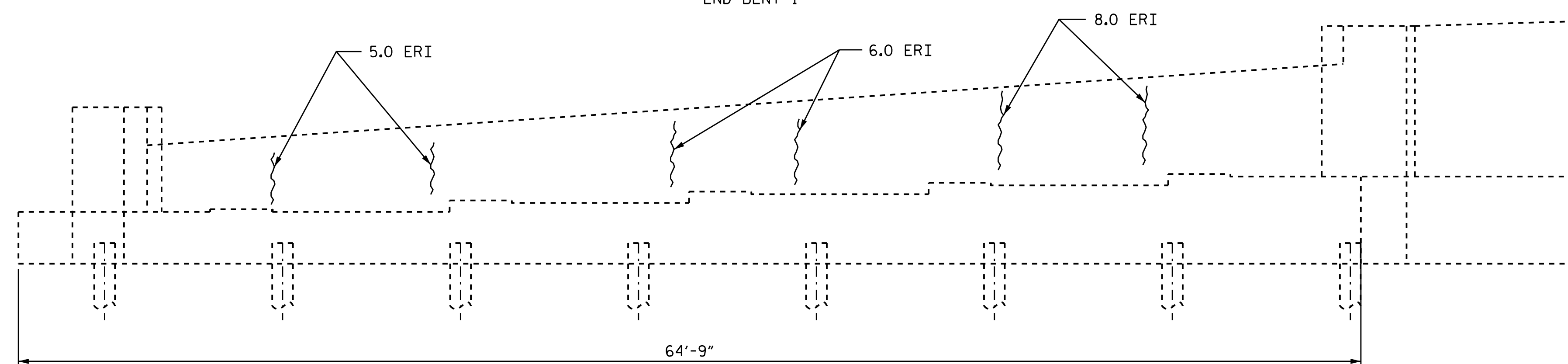
PLAN
END BENT 1



ELEVATION
END BENT 1

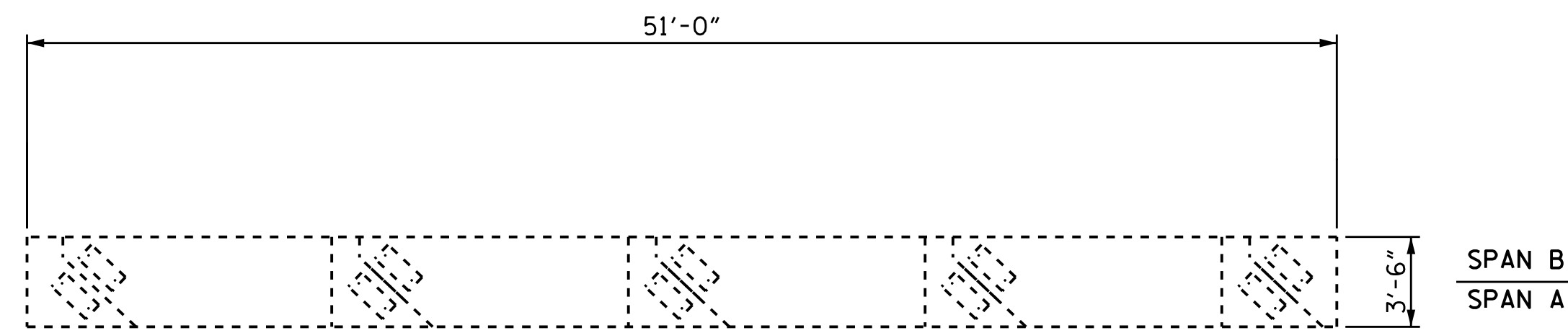


PLAN
END BENT 2

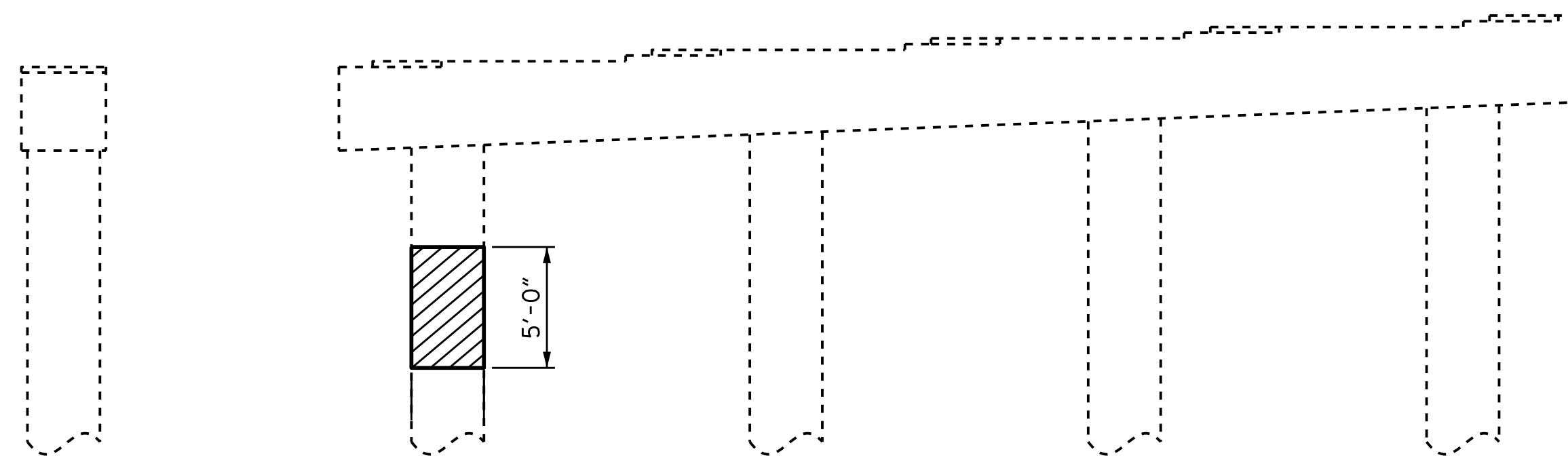


ELEVATION
END BENT 2

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 CHECKED BY : W. C. SMITH DATE : 06/2017

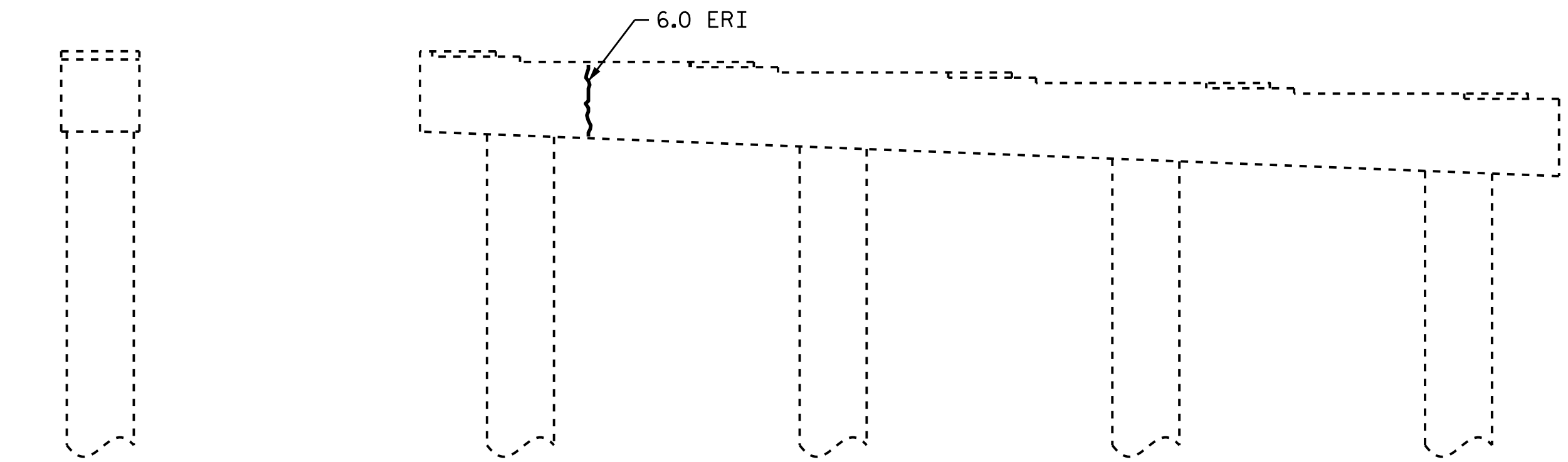


PLAN
(TOP OF CAP)



ELEVATION
(SPAN A SIDE)

END VIEW
(LEFT SIDE)



ELEVATION
(SPAN B SIDE)

END VIEW
(RIGHT SIDE)



PLAN
(BOTTOM OF CAP)

NOTES

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

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

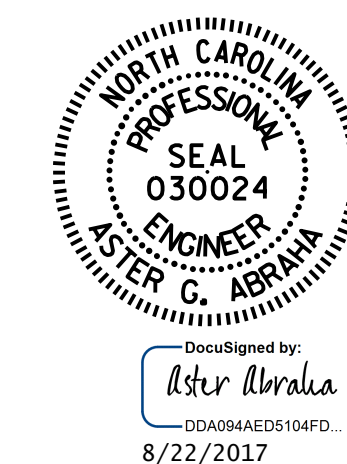
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	47.1	23.6		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		6.0		
COLUMN		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	179.0			

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 487

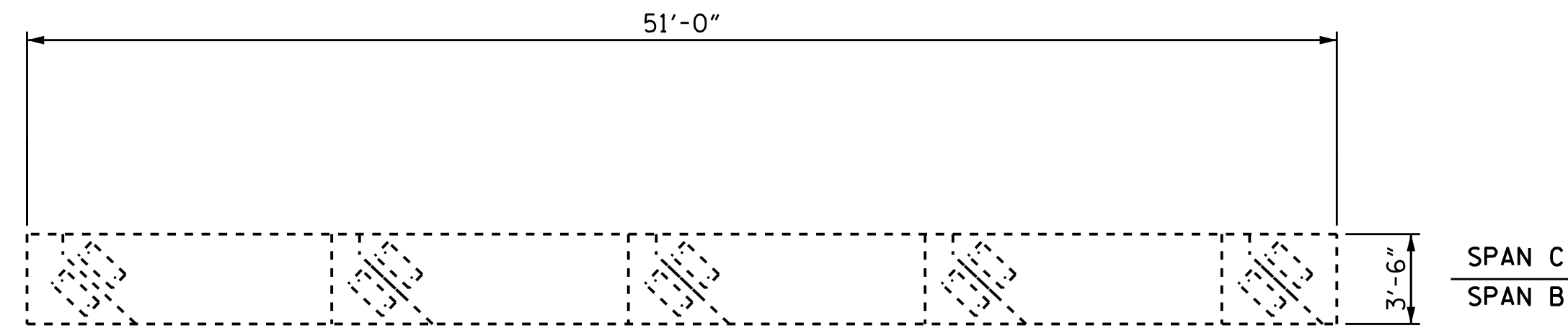


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 BENT 1

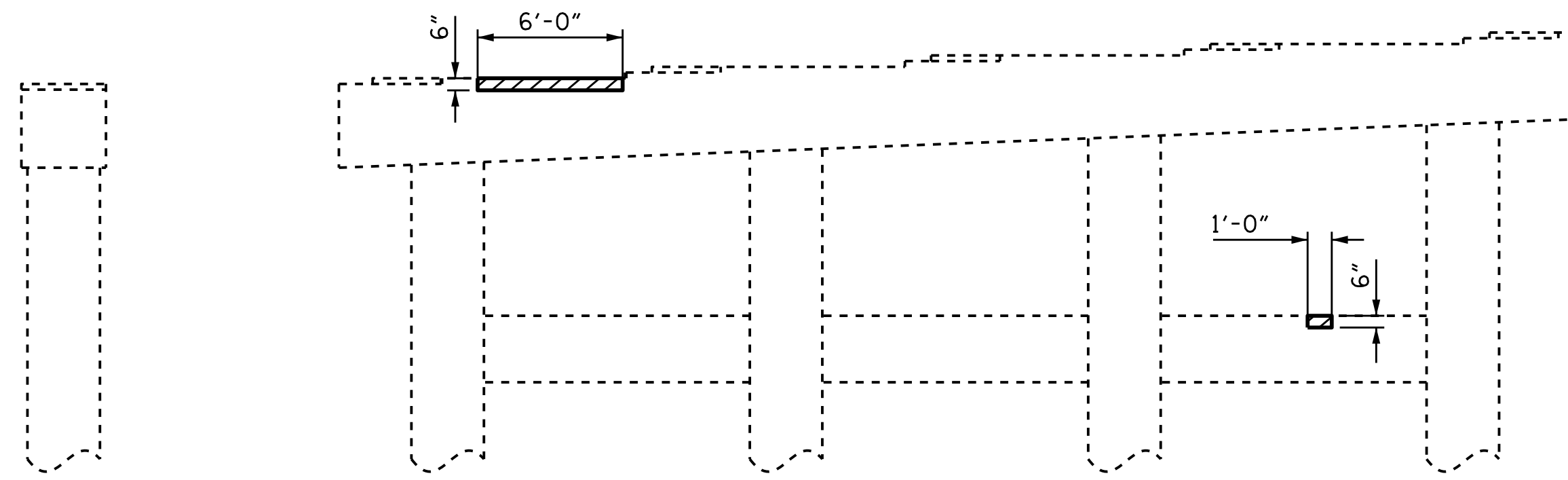
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2			4			69

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 CHECKED BY : W. C. SMITH DATE : 06/2017

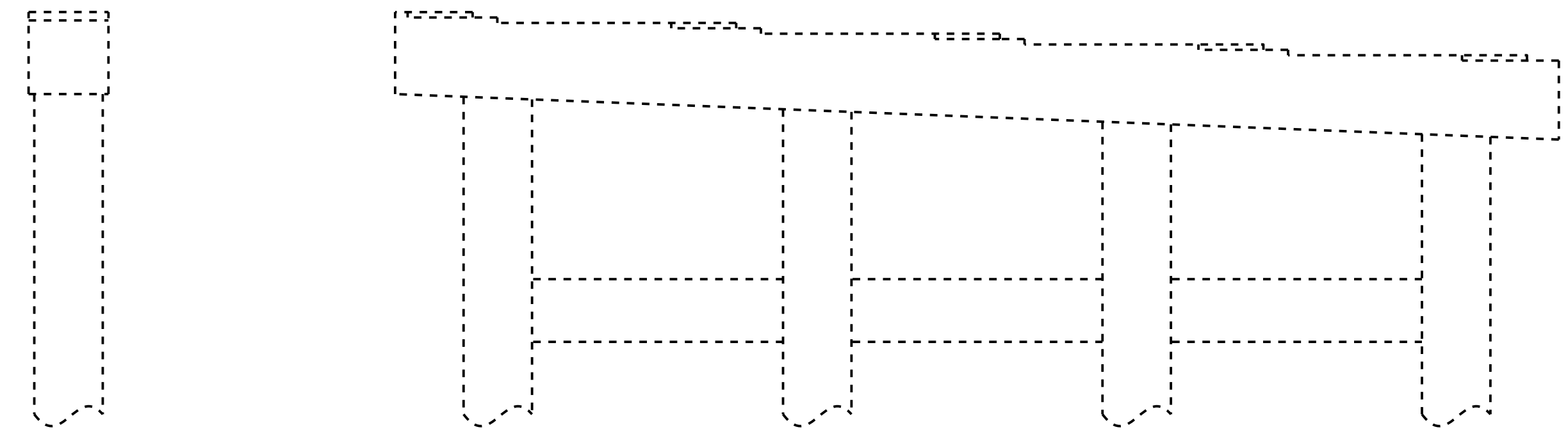


PLAN
(TOP OF CAP)



ELEVATION
(SPAN B SIDE)

END VIEW
(LEFT SIDE)



ELEVATION
(SPAN C SIDE)

END VIEW
(RIGHT SIDE)



PLAN
(BOTTOM OF CAP)

NOTES

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

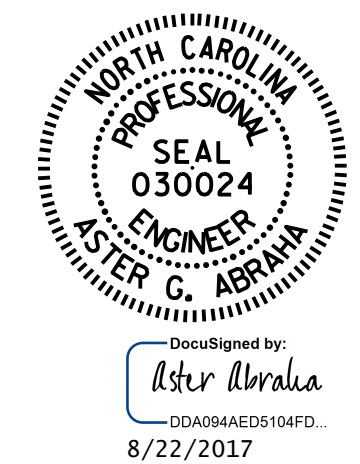
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	3.0	1.5		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
STRUT	0.5	0.3		
FOOTER	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
STRUT		0.0		
FOOTER		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP				

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 487

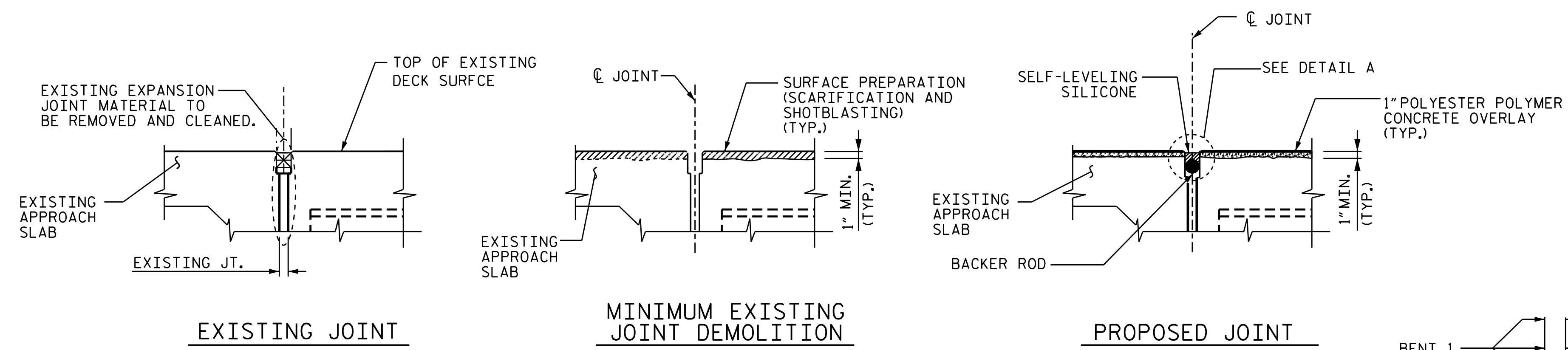


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 BENT 2

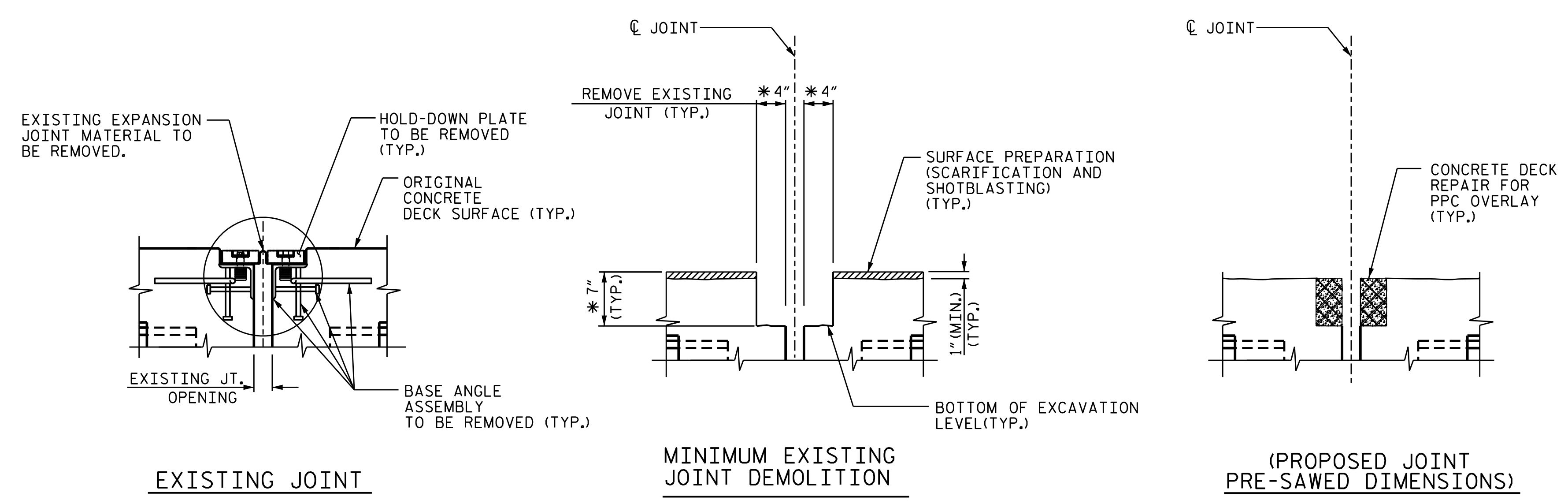
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-28
2			4			69

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

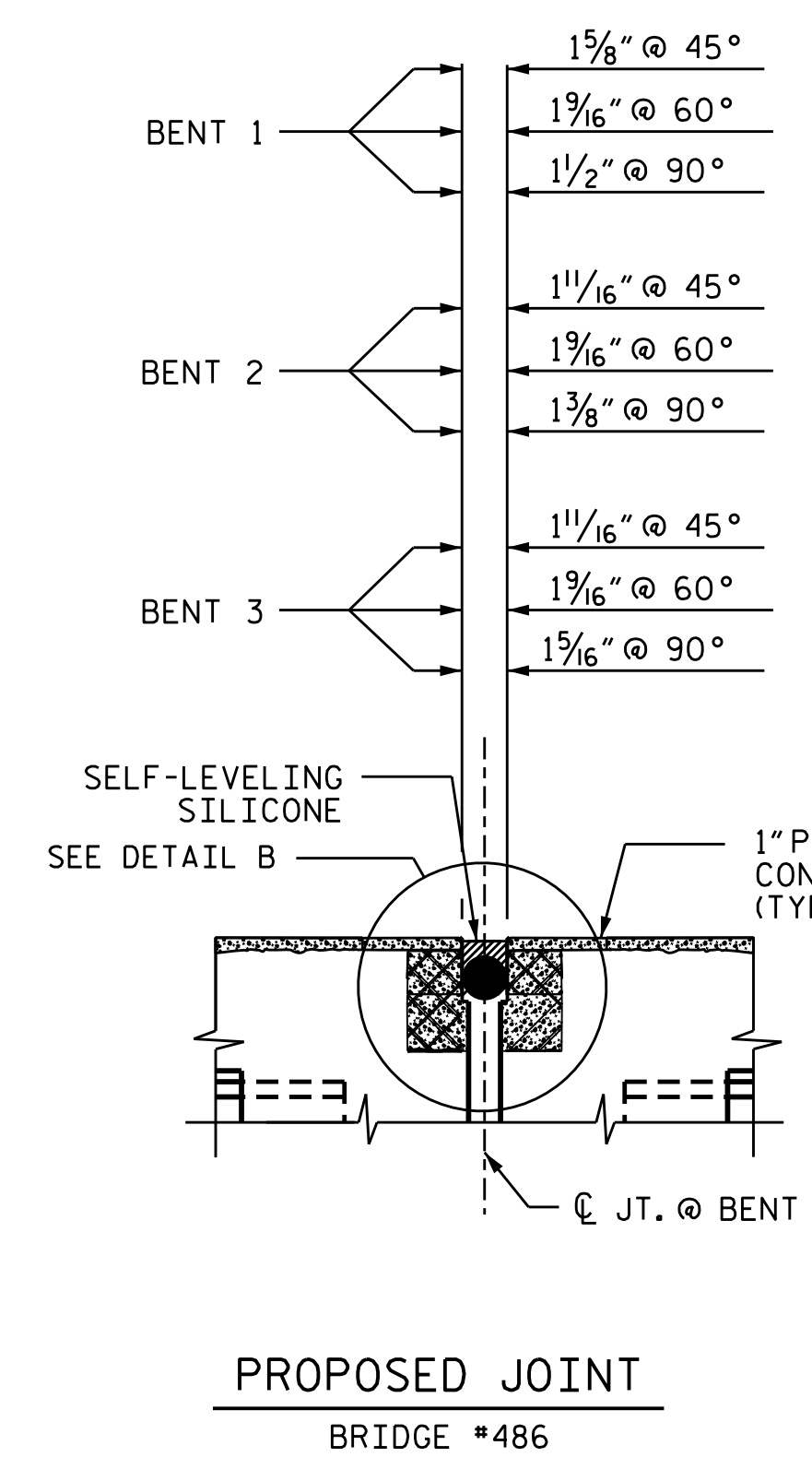
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



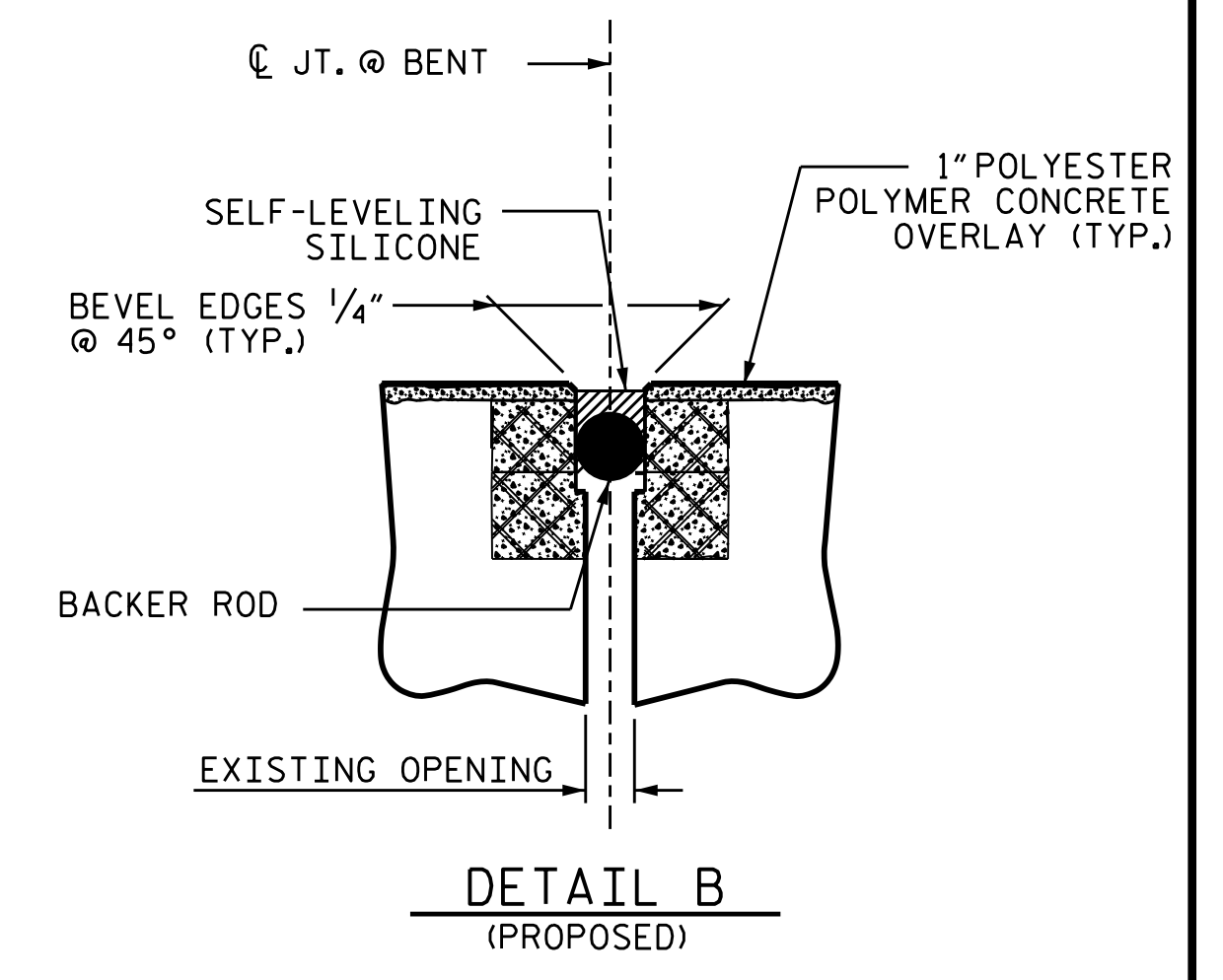
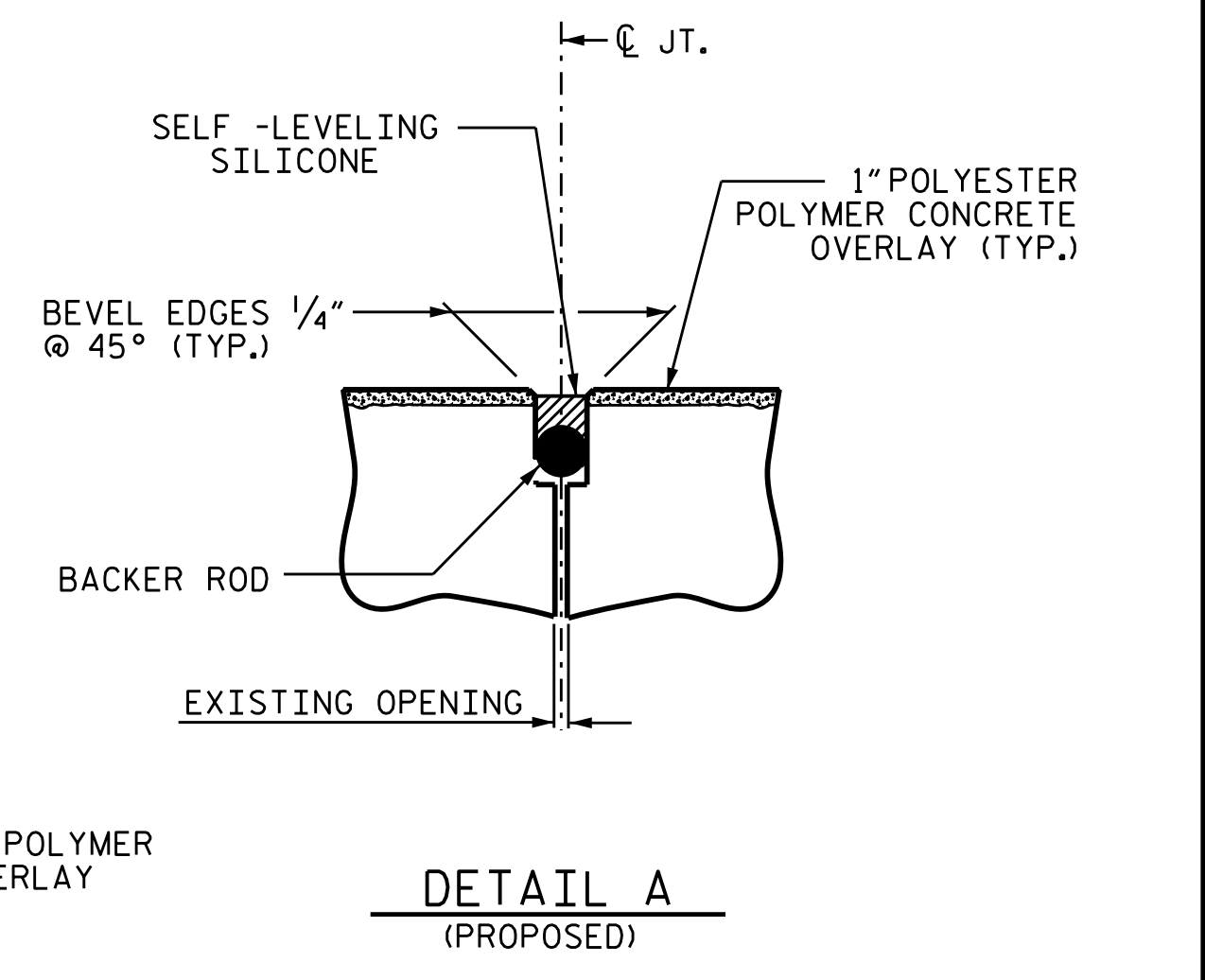
JOINT INSTALLATION SEQUENCE AT END BENTS
 SECTION A-A



JOINT INSTALLATION SEQUENCE AT BENTS
 SECTION B-B

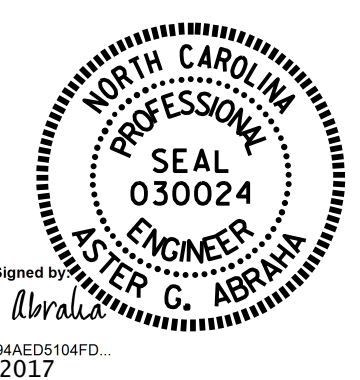
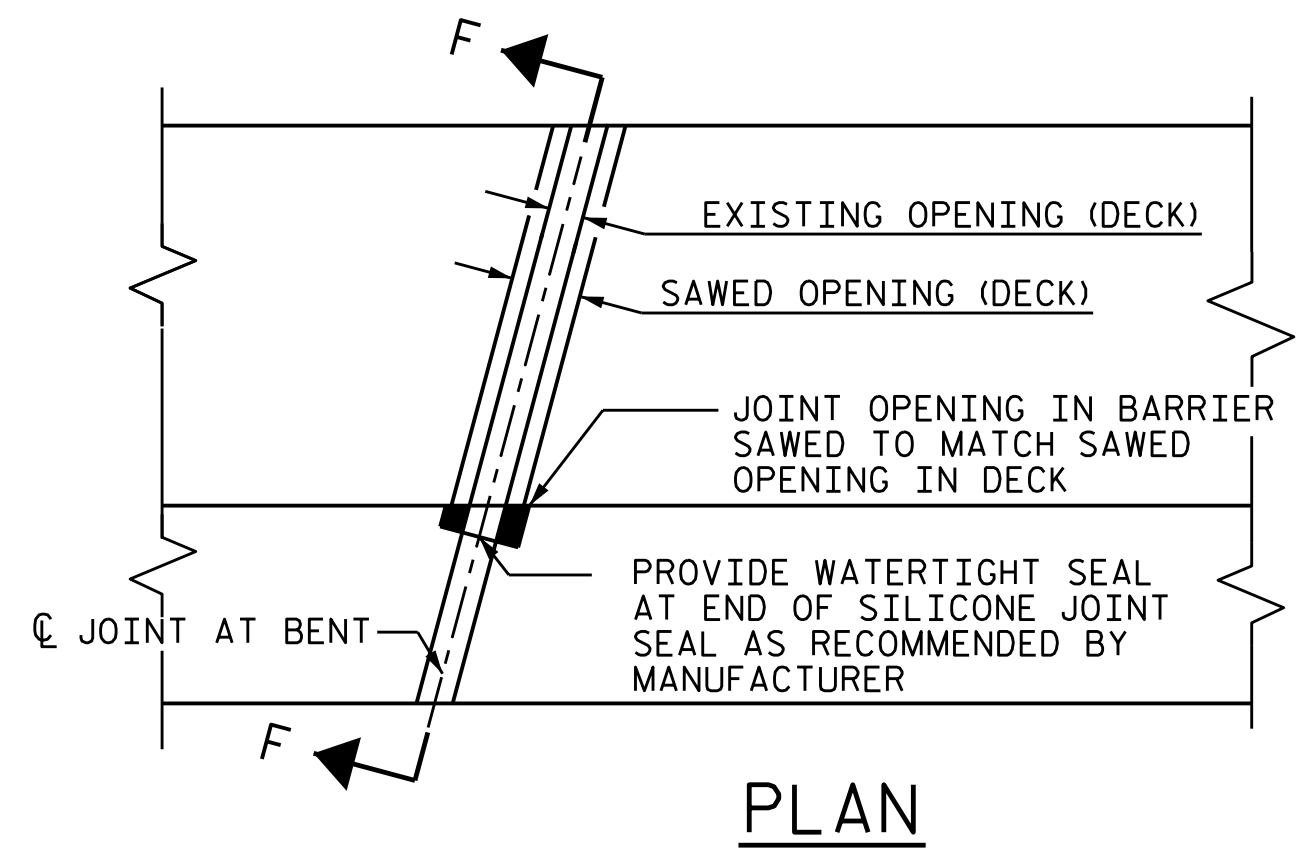
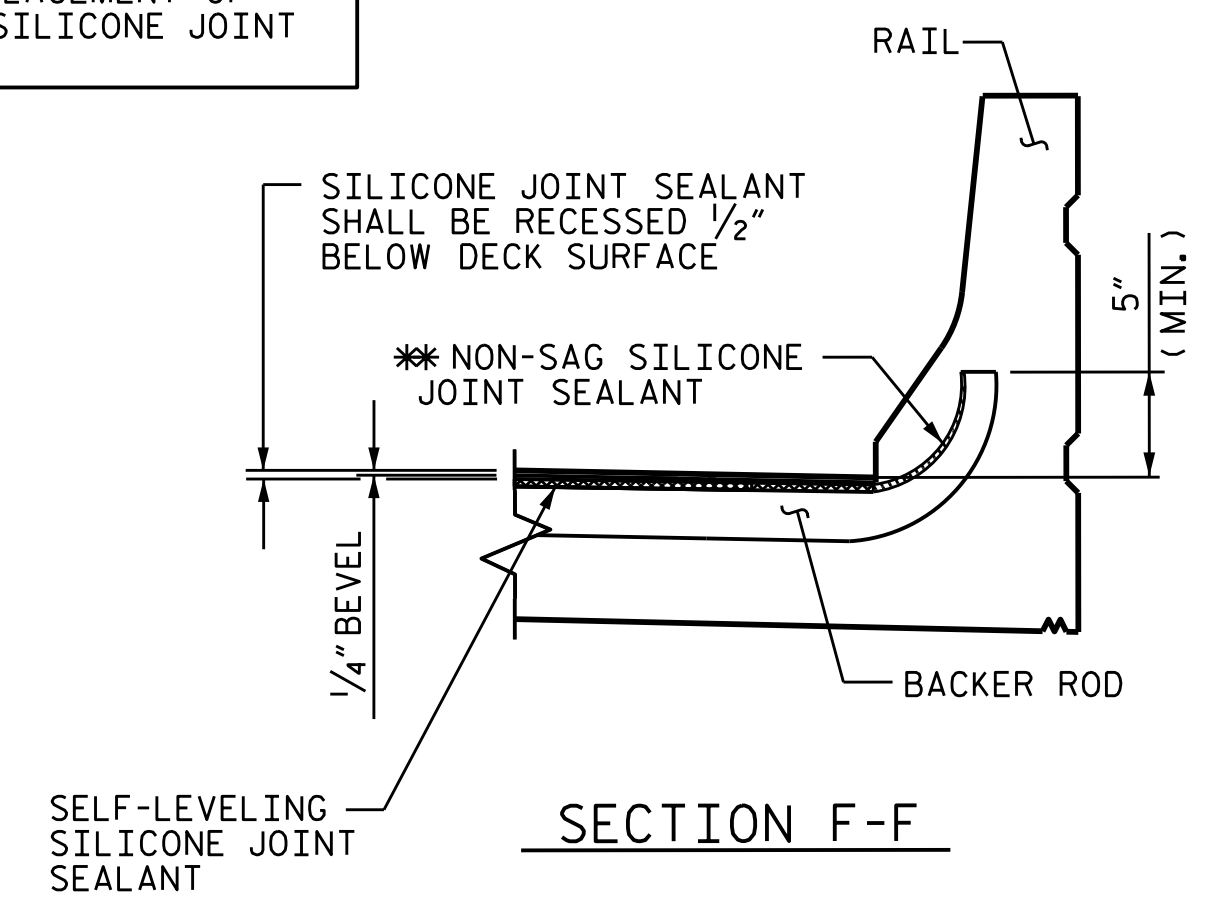


NOTES:
 CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
 FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
 UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
 ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
 * DIMENSIONS INDICATED ARE GENERIC. ACTUAL REMOVAL DIMENSIONS SHALL BE SUFFICIENT TO REMOVE THE HOLD-DOWN PLATE AND BASE ANGLES. BASE ANGLE STUDS MAY REMAIN, BUT SHALL BE CUT FLUSH WITH BOTTOM OF EXCAVATION.



PROJECT NO. I-5781
 JOHNSTON COUNTY
 BRIDGE No.: 486 & 487

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

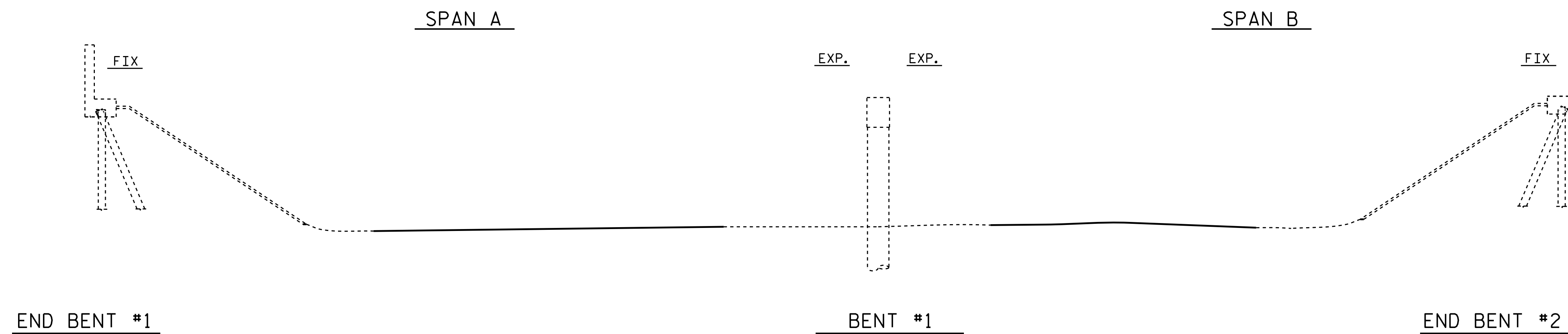


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
JOINT DETAILS

DRAWN BY : M. K. BEARD / S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH / A. C. ABRAHA DATE : 05/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

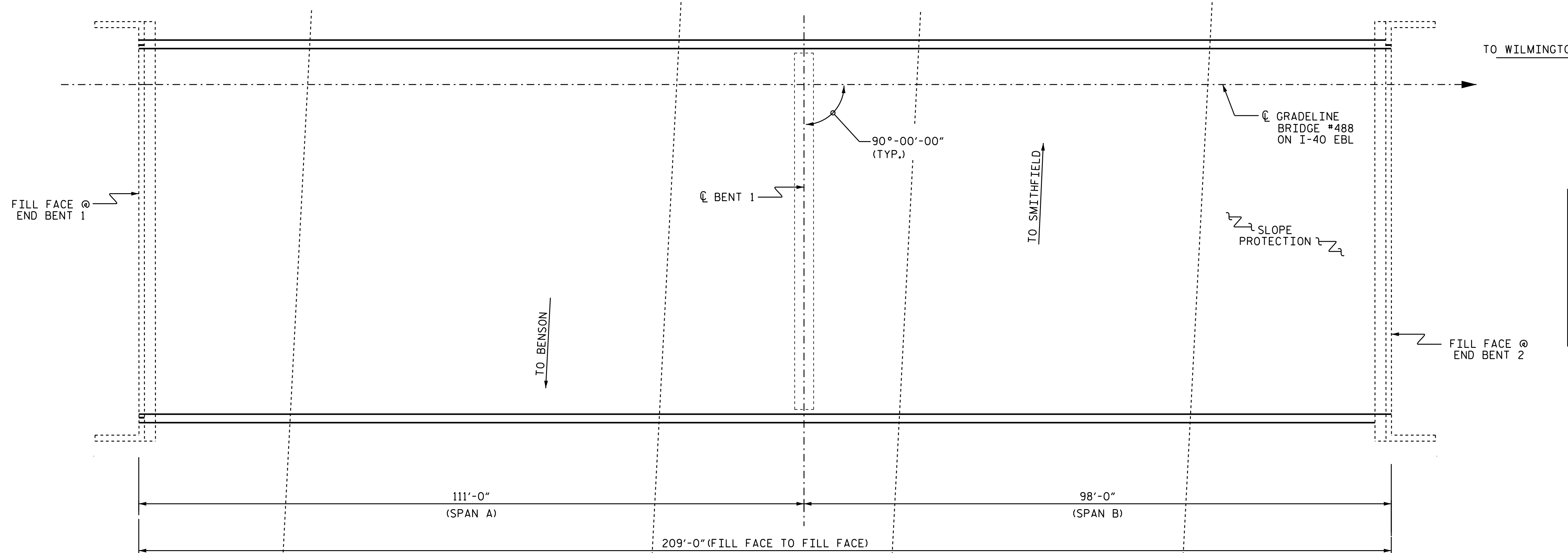
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-29
1			3			TOTAL SHEETS 69
2			4			



ELEVATION
(SECTION ALONG CL ROADWAY)

SCOPE OF WORK

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- DEMOLISH EXISTING BRIDGE DECK JOINTS.
- PERFORM DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL SILICONE JOINT SEALS.
- GROOVE POLYESTER POLYMER CONCRETE.
- SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.
- EPOXY COATING OF TOP OF CAPS.
- PAINTING EXISTING WEATHERING STEEL GIRDER ENDS.



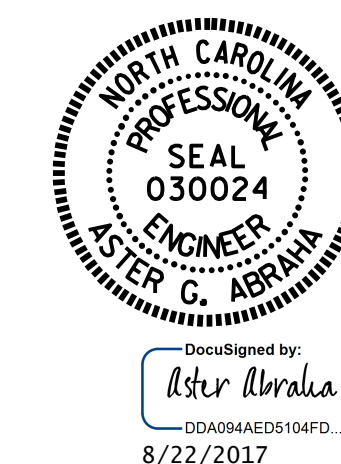
PLAN

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

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

Resident Engineer _____ Date _____

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 488



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON
 I-40 EBL
 OVER I-95

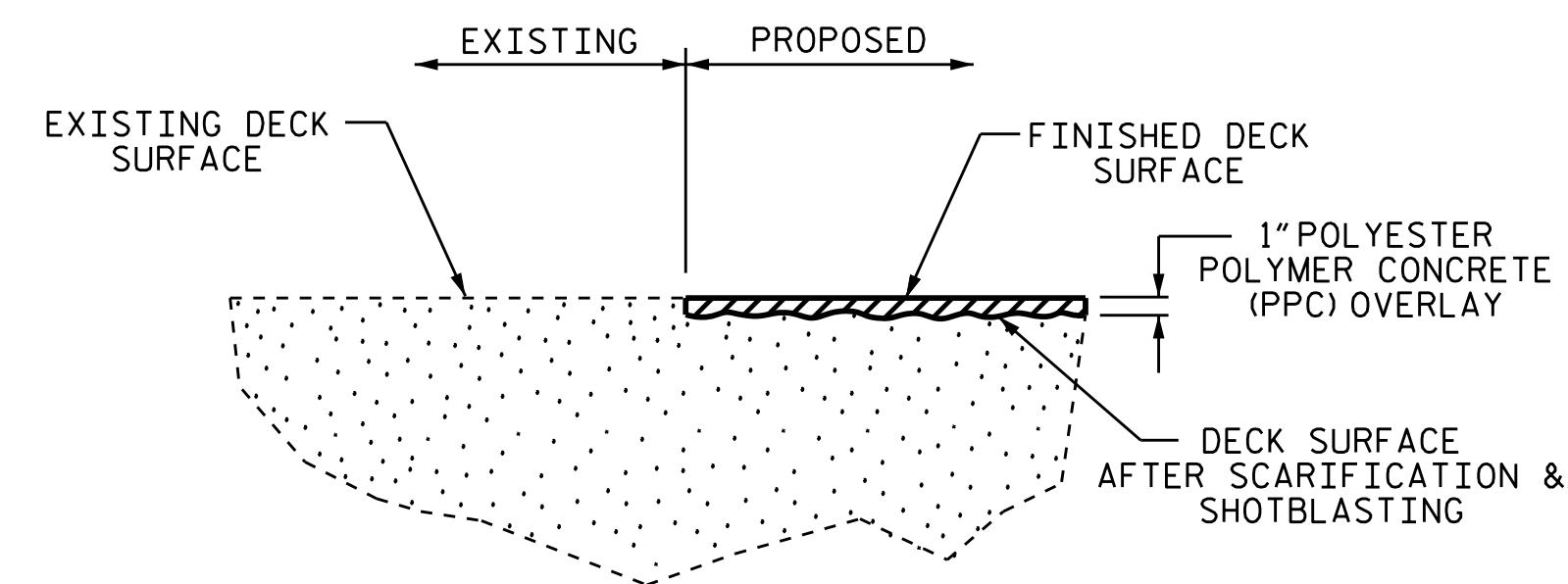
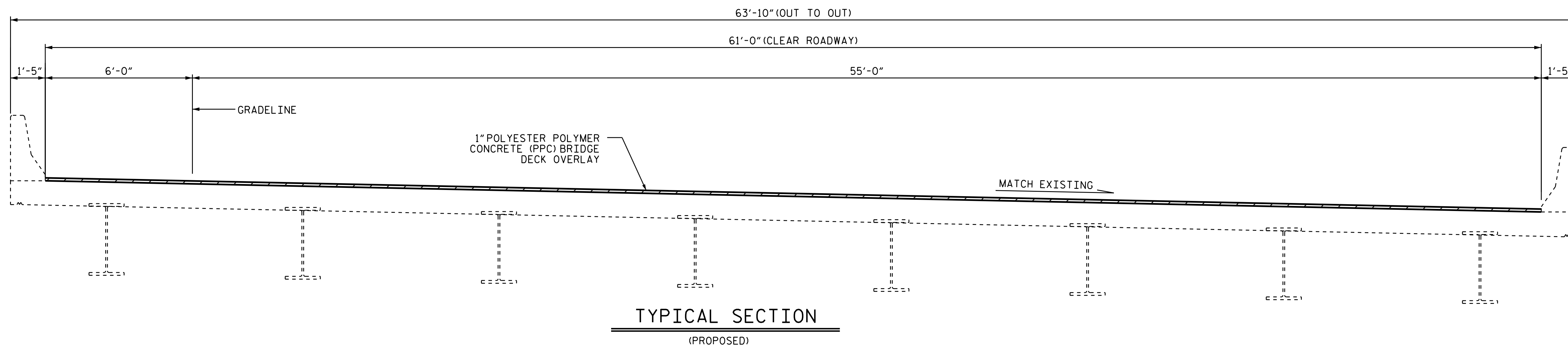
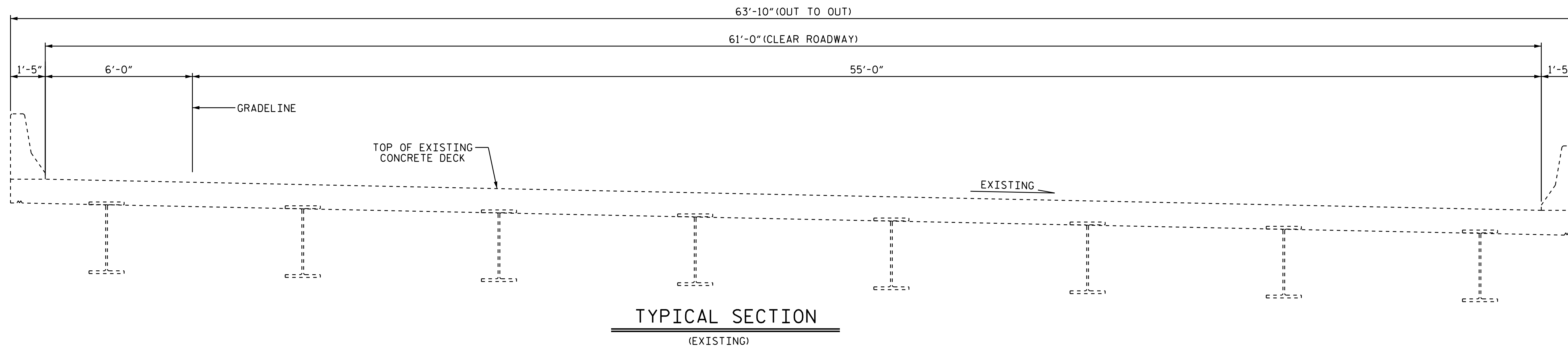
DRAWN BY : S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

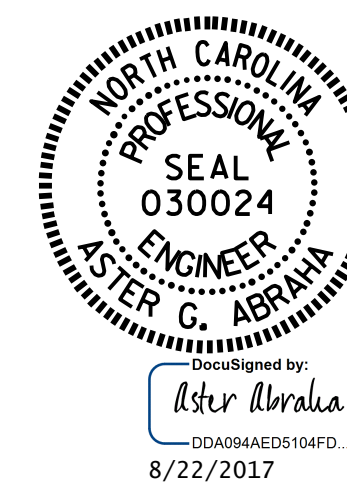
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-30
2			4			69

NOTE:

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



PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 488



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 &
 PPC OVERLAY DETAIL

DRAWN BY : S. T. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017


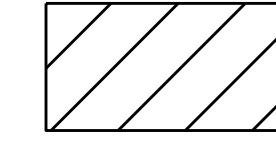
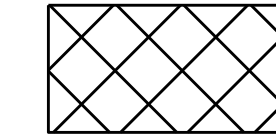
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

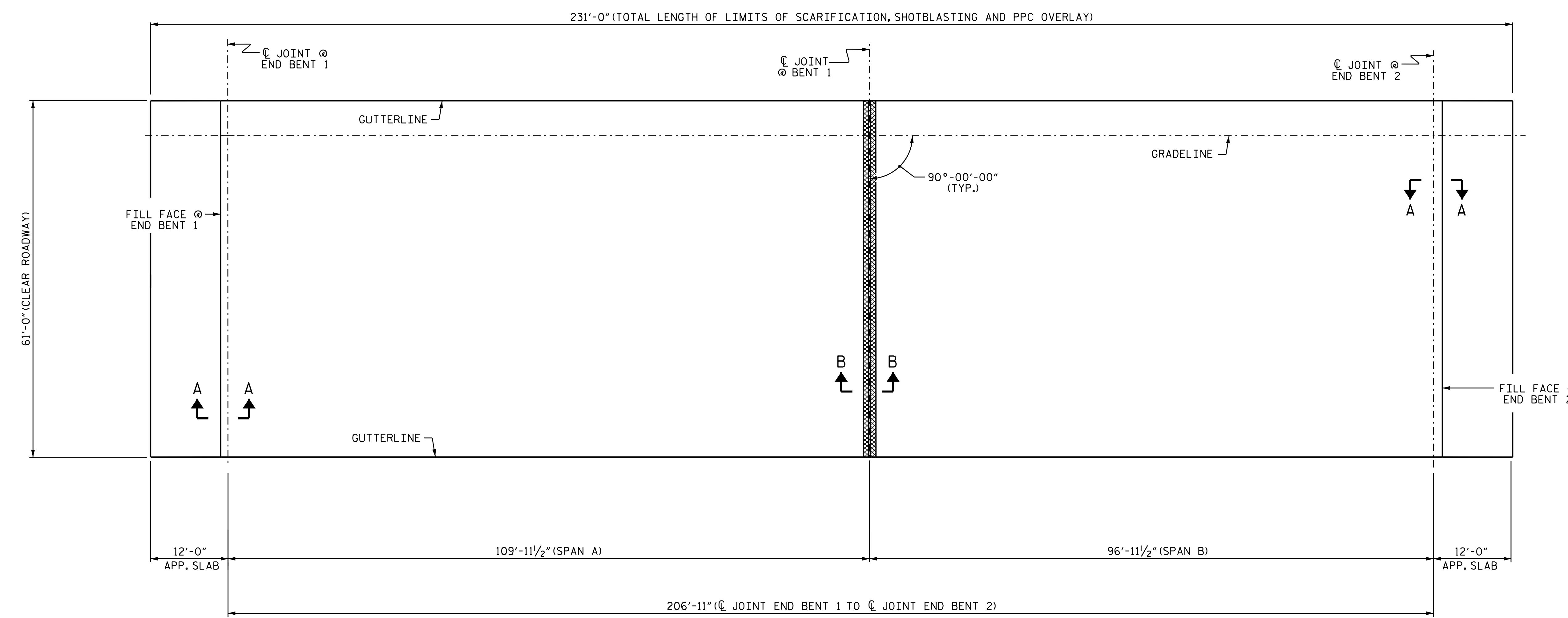
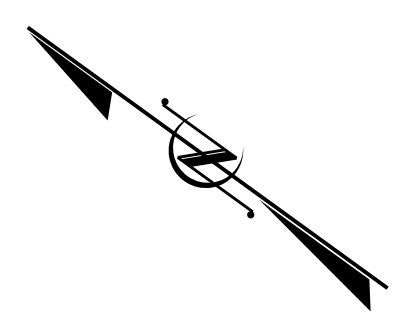
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-31
2			4			69

AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,560.0 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	8.0 SY	
SHOTBLASTING BRIDGE DECK	1,560.0 SY	
PPC MATERIALS	43.4 CY	
PLACING AND FINISHING PPC OVERLAY	1,560.0 SY	
GROOVING BRIDGE FLOORS	13,286.0 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT); SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

-  SCARIFICATION, SHOTBLASTING AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY
-  CLASS II SURFACE PREPARATION
-  CONCRETE DECK REPAIR FOR PPC OVERLAY

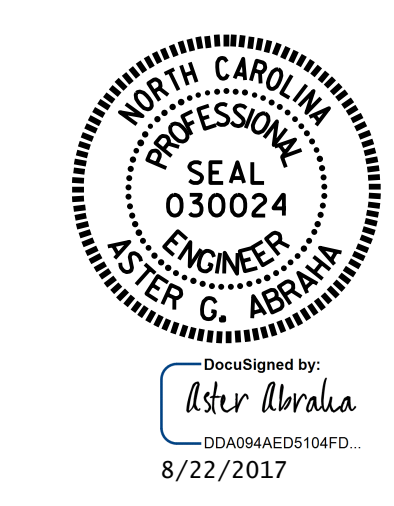


NOTES

- 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 AND B-B, SEE "JOINT DETAILS" SHEET S-40.
- FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.
- FOR CONCRETE DECK REPAIR FOR PPC OVERLAY, PPC MATERIALS, AND PLACING AND FINISHING PPC OVERLAY SEE POLYESTER POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

PLAN OF SPANS

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 488



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

SURFACE PREPARATION & PPC OVERLAY

DRAWN BY : S. T. SANDOR DATE : 04/2017
 CHECKED BY : W.C. SMITH DATE : 6/15/17

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			S-32	
2			4			69	

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF	LN. FT.	
TOP OF CAP		122.5		
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF	LN. FT.	
TOP OF CAP		122.5		

NOTES:

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

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

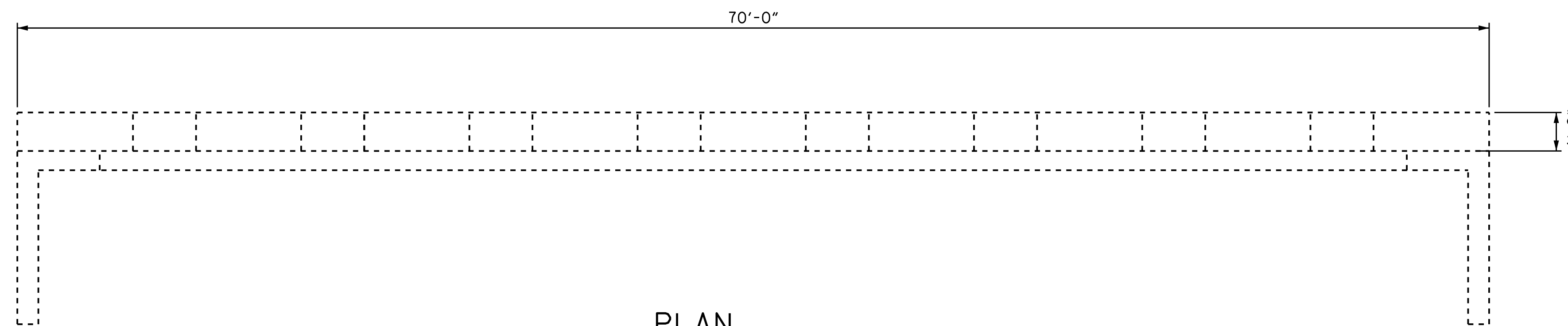
NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
**SUBSTRUCTURE
REPAIR
END BENTS**

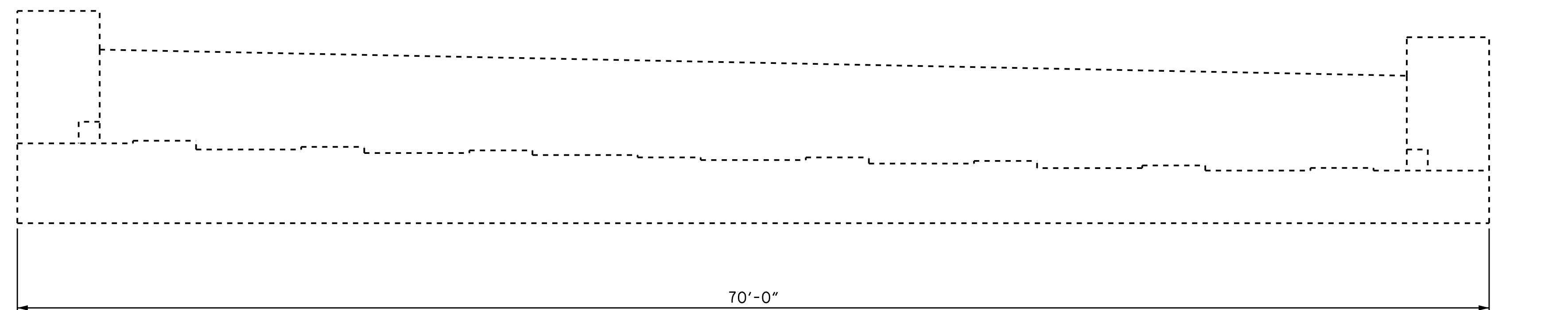
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NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
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2			4			69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



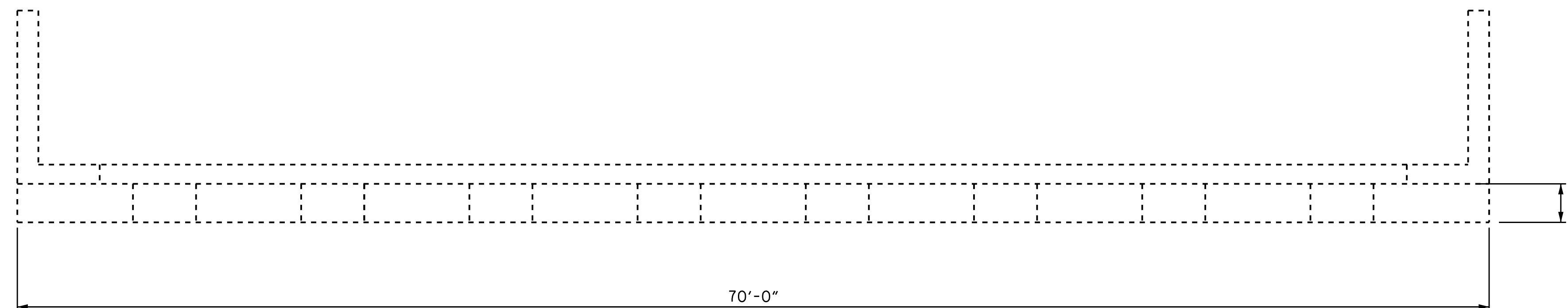
PLAN

END BENT 1



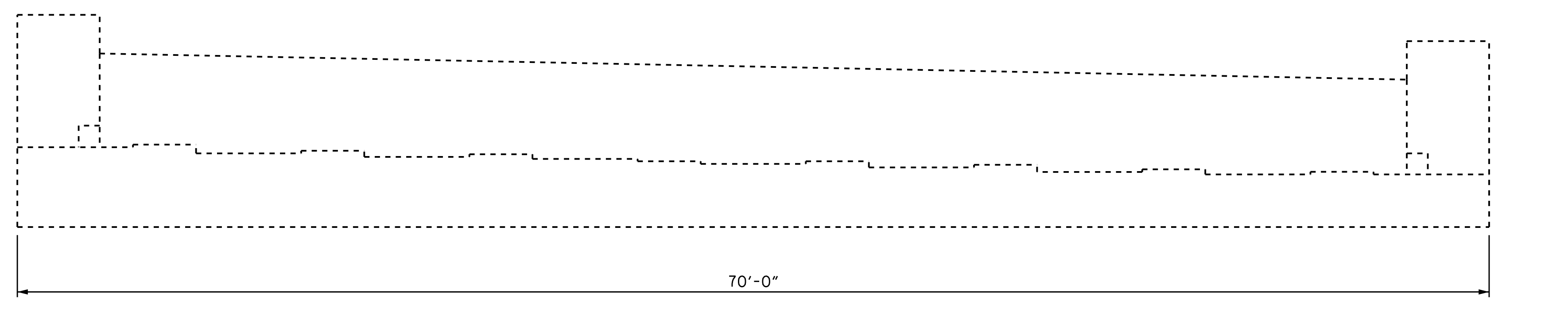
ELEVATION

END BENT 1



PLAN

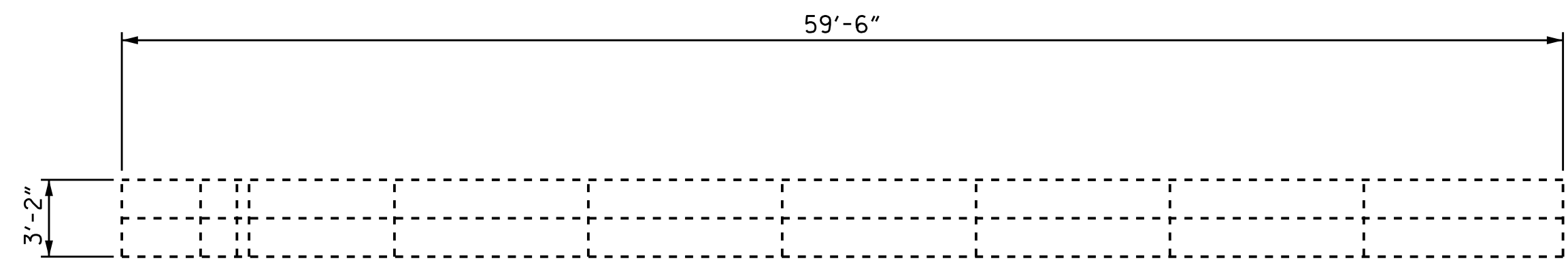
END BENT 2



ELEVATION

END BENT 2

DRAWN BY : S. T. SANDOR DATE : 05/2017
CHECKED BY : W. C. SMITH DATE : 06/2017



PLAN
TOP OF CAP

SPAN B
SPAN A

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

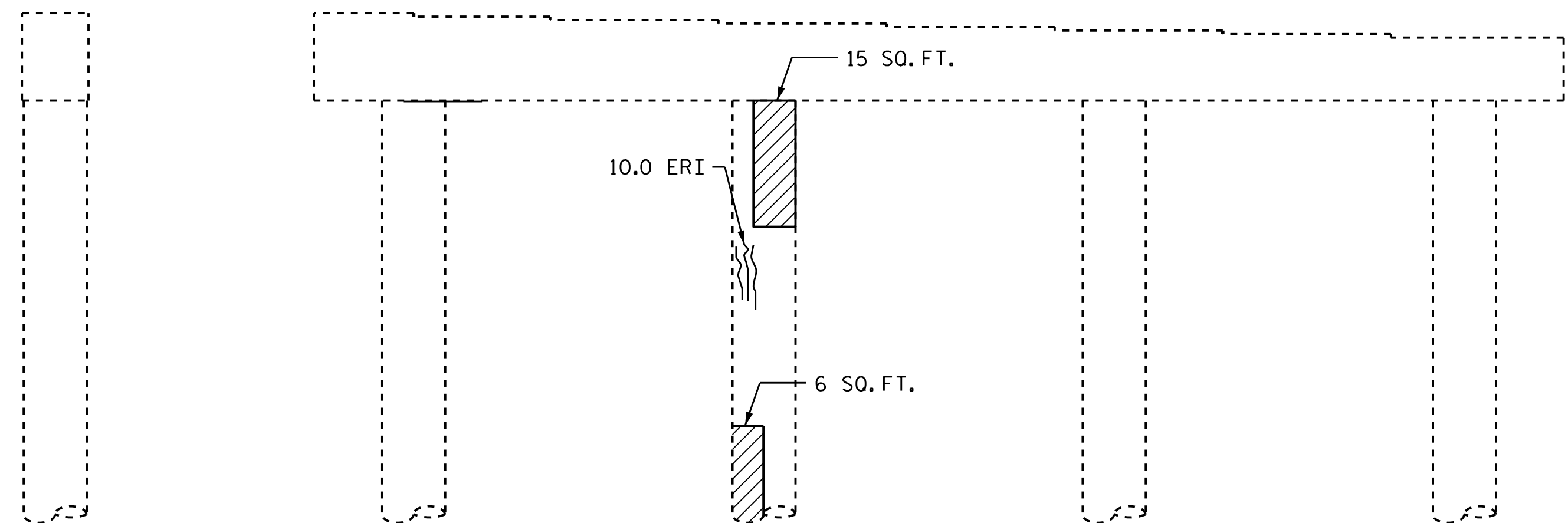
FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

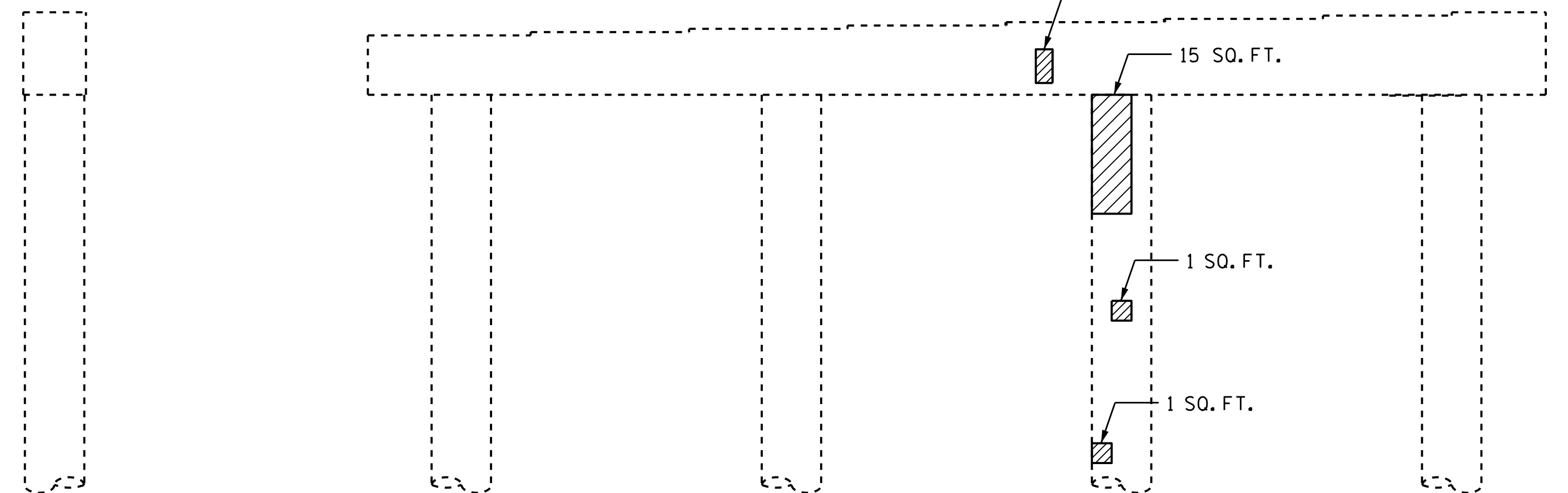
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	1.0	0.5		
CAP (HORIZONTAL, CORNER)	1.0	0.5		
COLUMN	38.0	19.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		10.0		
EPOXY COATING		AREA SF		
TOP OF CAP		189.0		

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



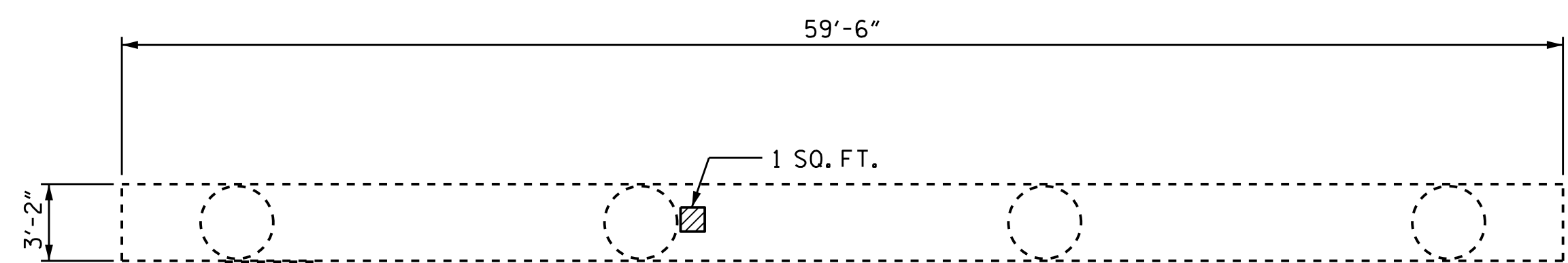
END VIEW
(LEFT SIDE)

ELEVATION
SPAN A SIDE



END VIEW
(RIGHT SIDE)

ELEVATION
SPAN B SIDE



PLAN
BOTTOM OF CAP

SPAN B
SPAN A

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 488



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**SUBSTRUCTURE
 REPAIR
 BENT 1**

REVISIONS

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			3			S-34
2			4			TOTAL SHEETS 69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

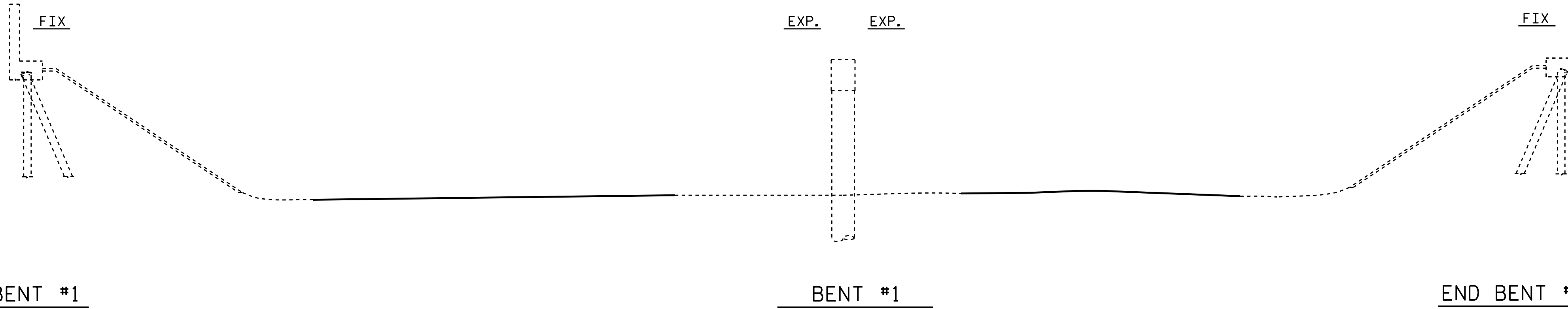
DRAWN BY : S. T. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH DATE : _____

SPAN A

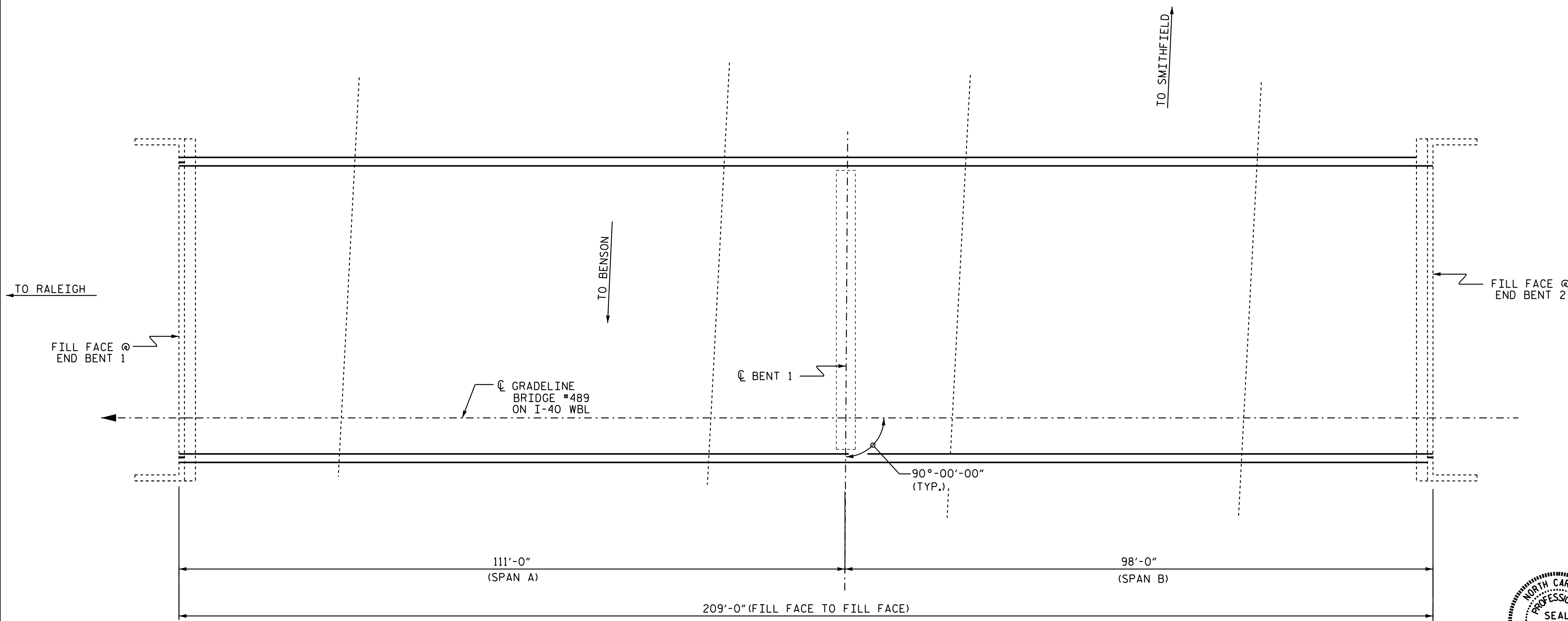
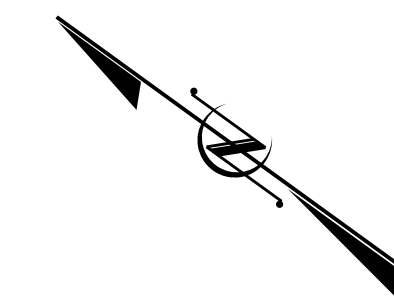
SPAN B

SCOPE OF WORK

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- DEMOLISH EXISTING BRIDGE DECK JOINTS.
- PERFORM DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
- RECONSTRUCT BRIDGE JOINTS AND INSTALL SILICONE JOINT SEALS.
- GROOVE POLYESTER POLYMER CONCRETE.
- SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.
- EPOXY COATING OF TOP OF CAPS.
- PAINTING EXISTING WEATHERING STEEL GIRDER ENDS.



ELEVATION
(SECTION ALONG CL ROADWAY)

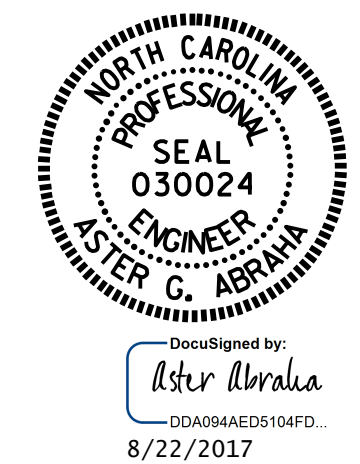


PLAN
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

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

Resident Engineer _____ Date _____

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 489



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 GENERAL DRAWING
 FOR BRIDGE ON
 I-40 WBL
 OVER I-95

DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

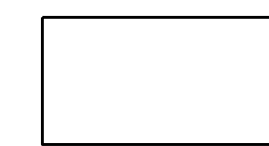
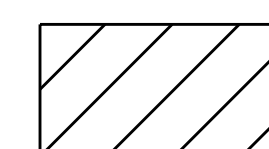
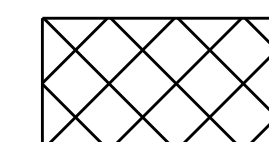
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

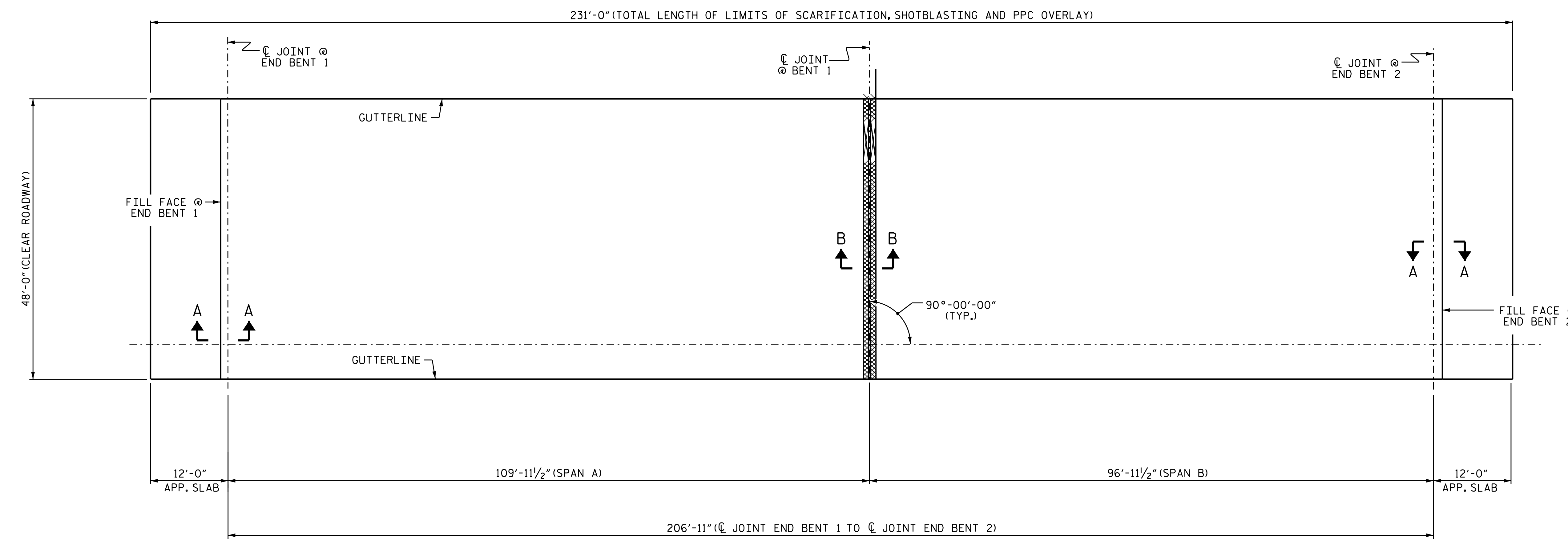
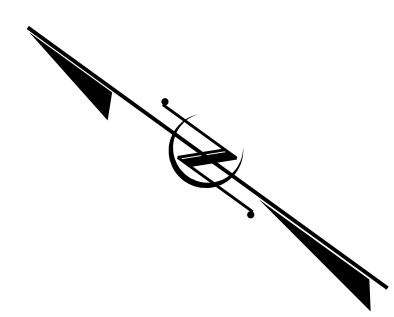
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			69
2			4			

AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,228.0 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	5.4 SY	
SHOTBLASTING BRIDGE DECK	1,228.0 SY	
PPC MATERIALS	34.1 CY	
PLACING AND FINISHING PPC OVERLAY	1,228.0 SY	
GROOVING BRIDGE FLOORS	10,208.0 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT); SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

-  SCARIFICATION, SHOTBLASTING AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY
-  CLASS II SURFACE PREPARATION
-  CONCRETE DECK REPAIR FOR PPC OVERLAY



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.

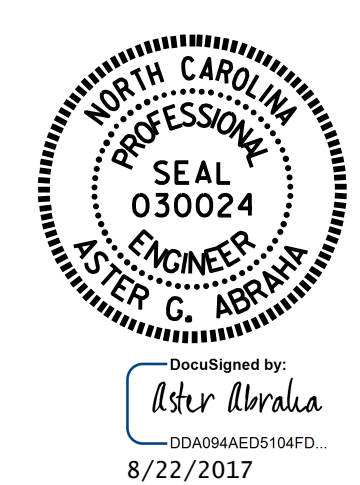
FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-40.

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

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

PLAN OF SPANS

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 489



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

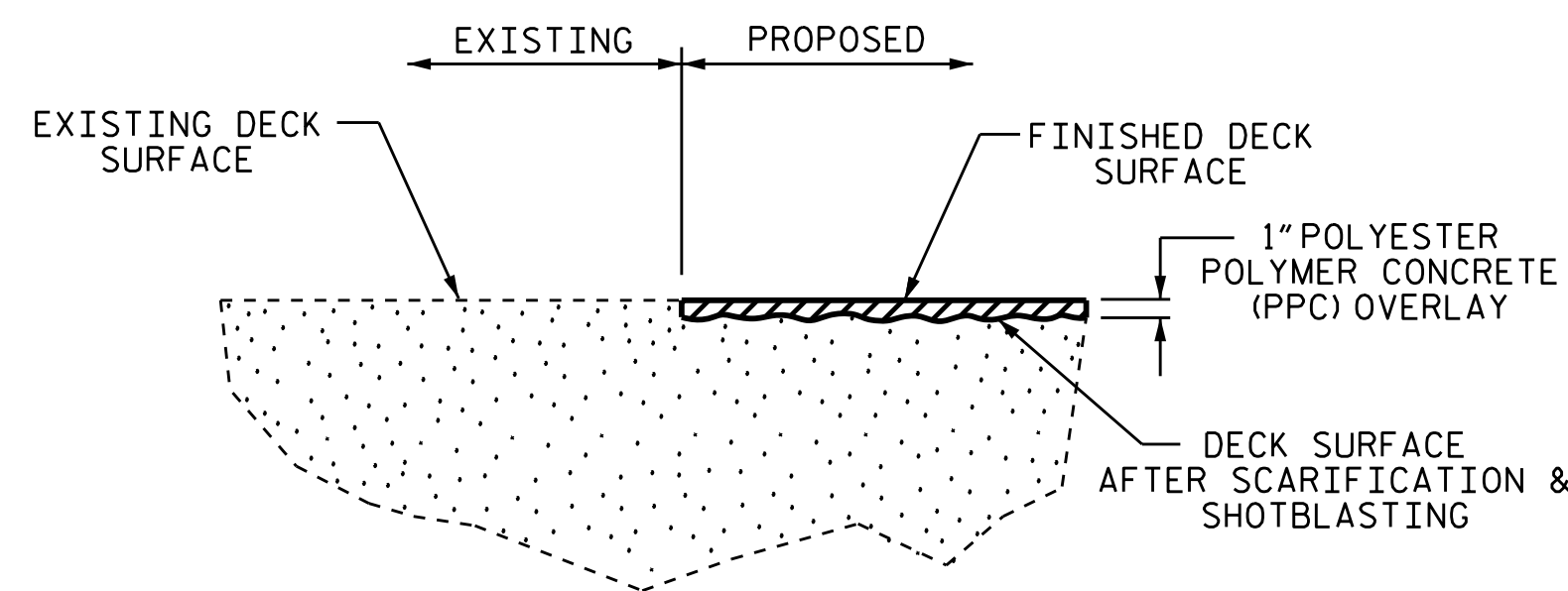
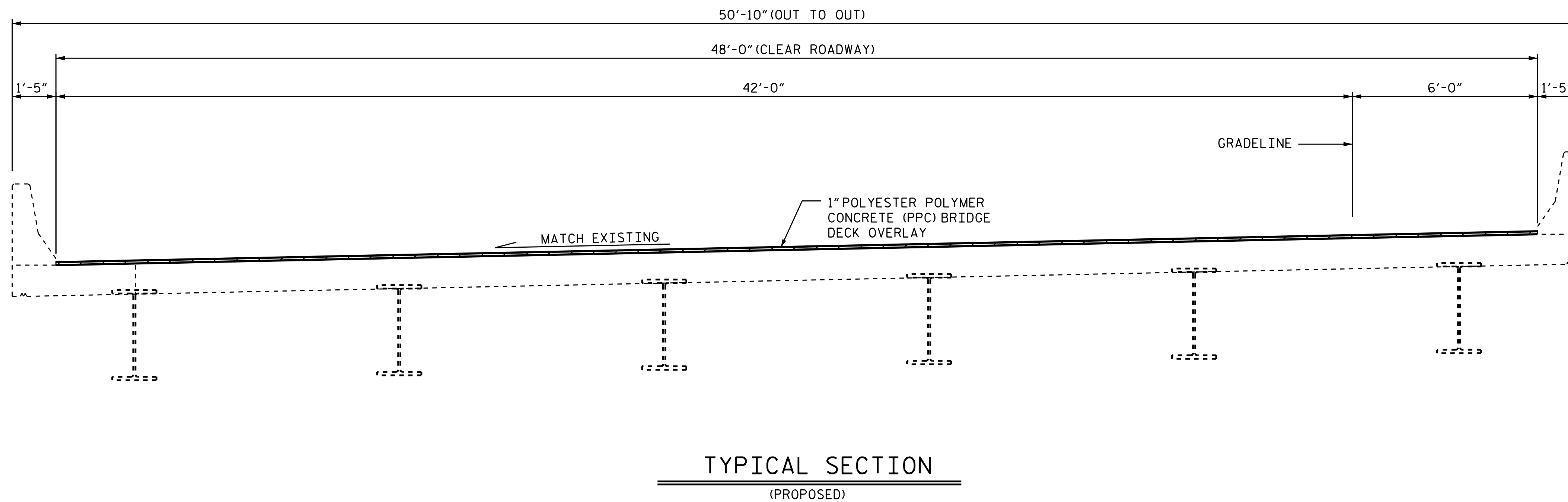
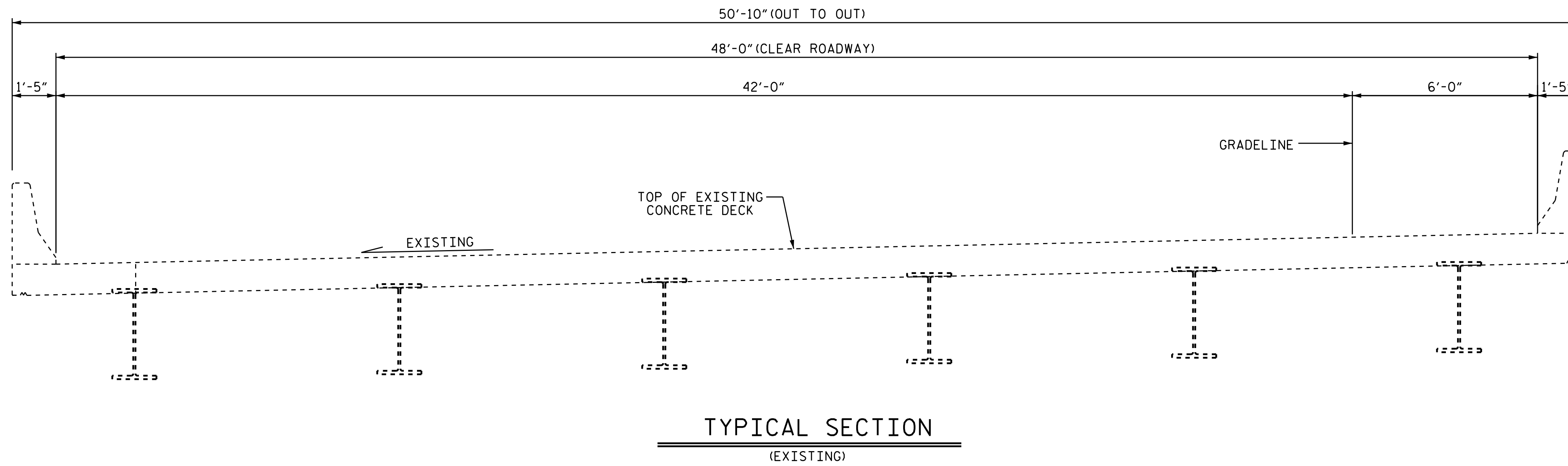
SUPERSTRUCTURE
SURFACE PREPARATION & PPC OVERLAY

DRAWN BY : S. T. SANDOR DATE : 04/2017
 CHECKED BY : W.C. SMITH DATE : 6/15/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

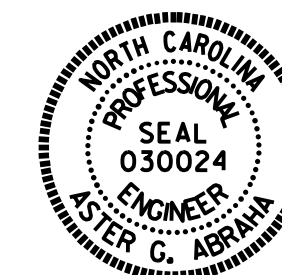
REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS	
1			3			S-36	
2			4			69	

NOTE:
 SEE TRAFFIC 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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 489



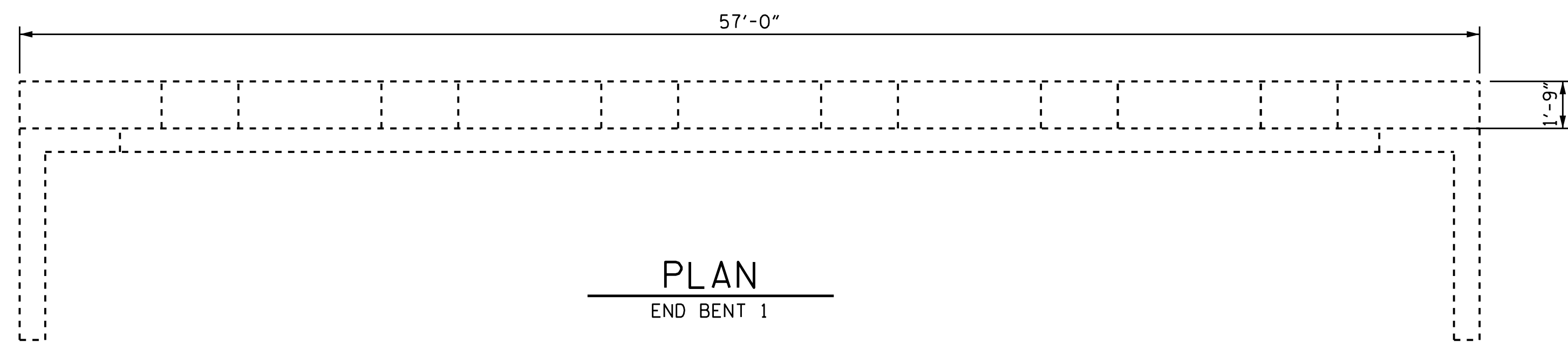
DocuSigned by:
 Aster Abrams
 8/22/2017

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 &
 PPC OVERLAY DETAIL

DRAWN BY : S. I. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

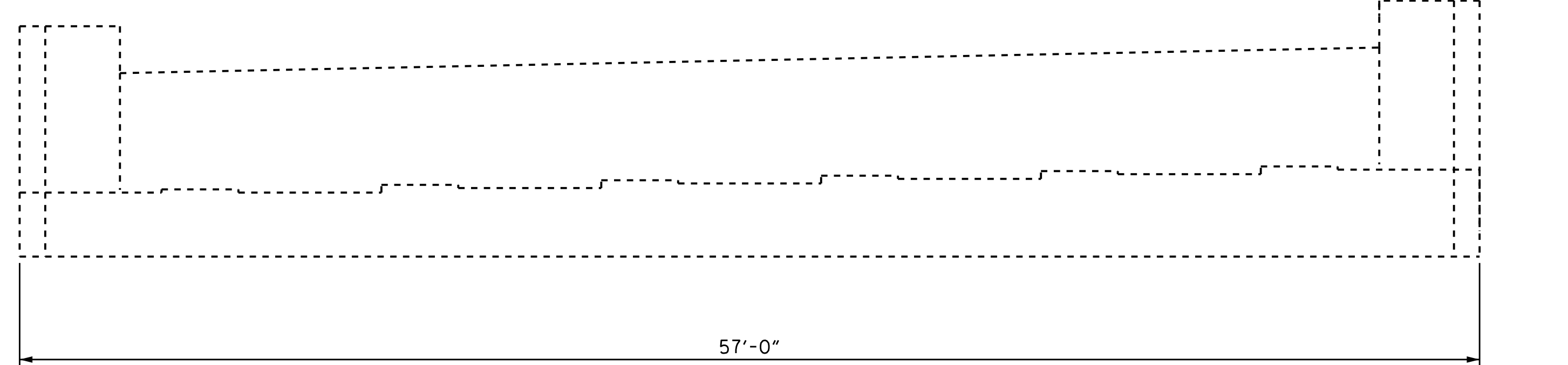
DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			5-37
2			4			69



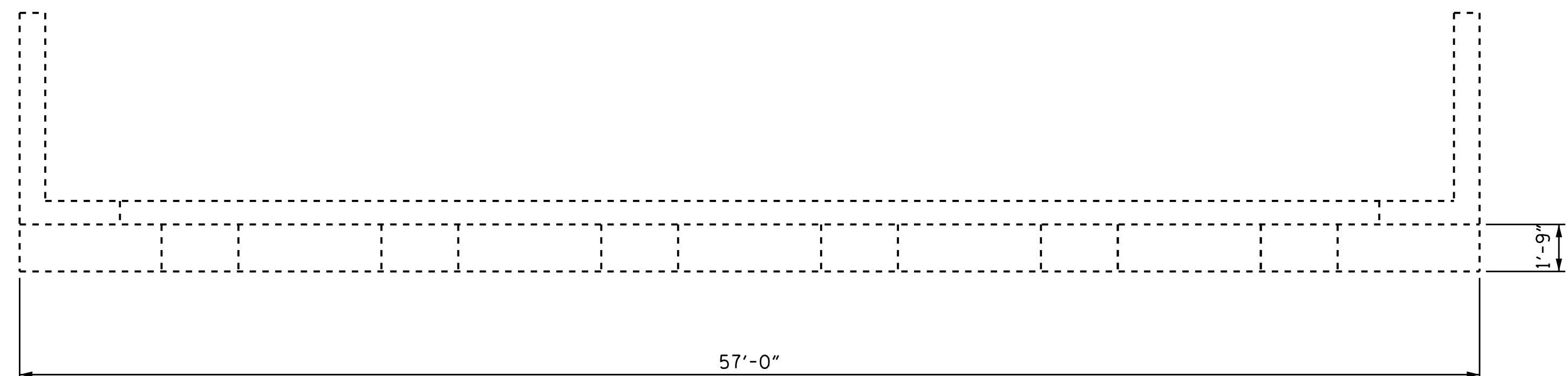
PLAN

END BENT 1



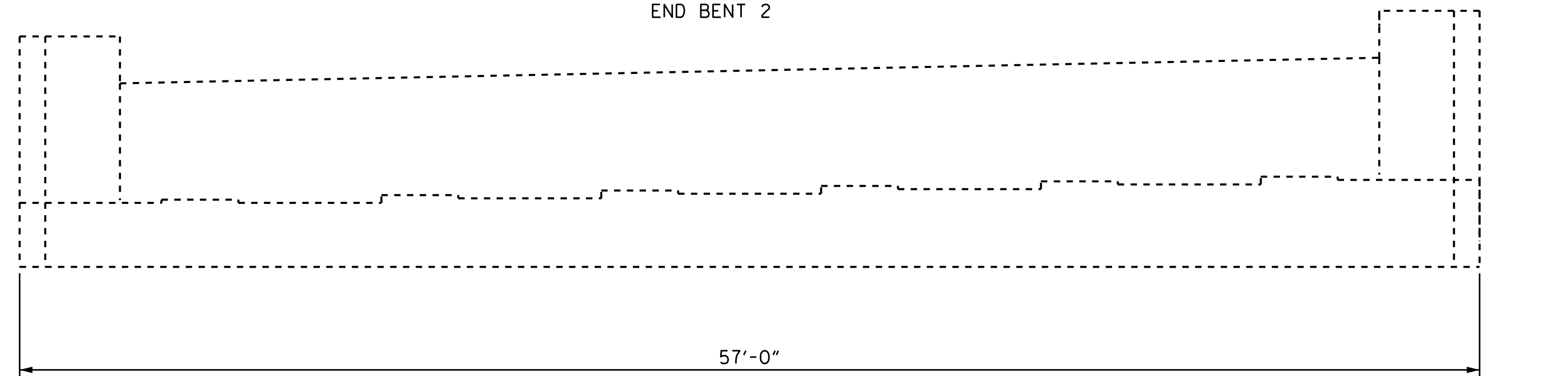
ELEVATION

END BENT 1



PLAN

END BENT 2



ELEVATION

END BENT 2

DRAWN BY : S. I. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

22-AUG-2017 15:48

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF	LN. FT.	
TOP OF CAP		100.0		
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF	LN. FT.	
TOP OF CAP		100.0		

NOTES:

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

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

☒ - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

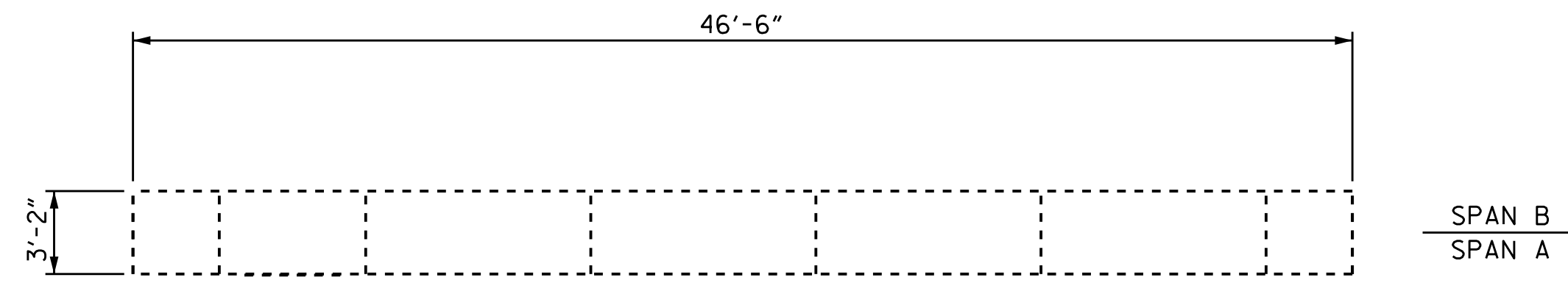
PROJECT NO. I-5781
 JOHNSTON COUNTY
 BRIDGE NO. 489



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 END BENTS

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S-38
2			4			TOTAL SHEETS 69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PLAN
TOP OF CAP

SPAN B
SPAN A

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

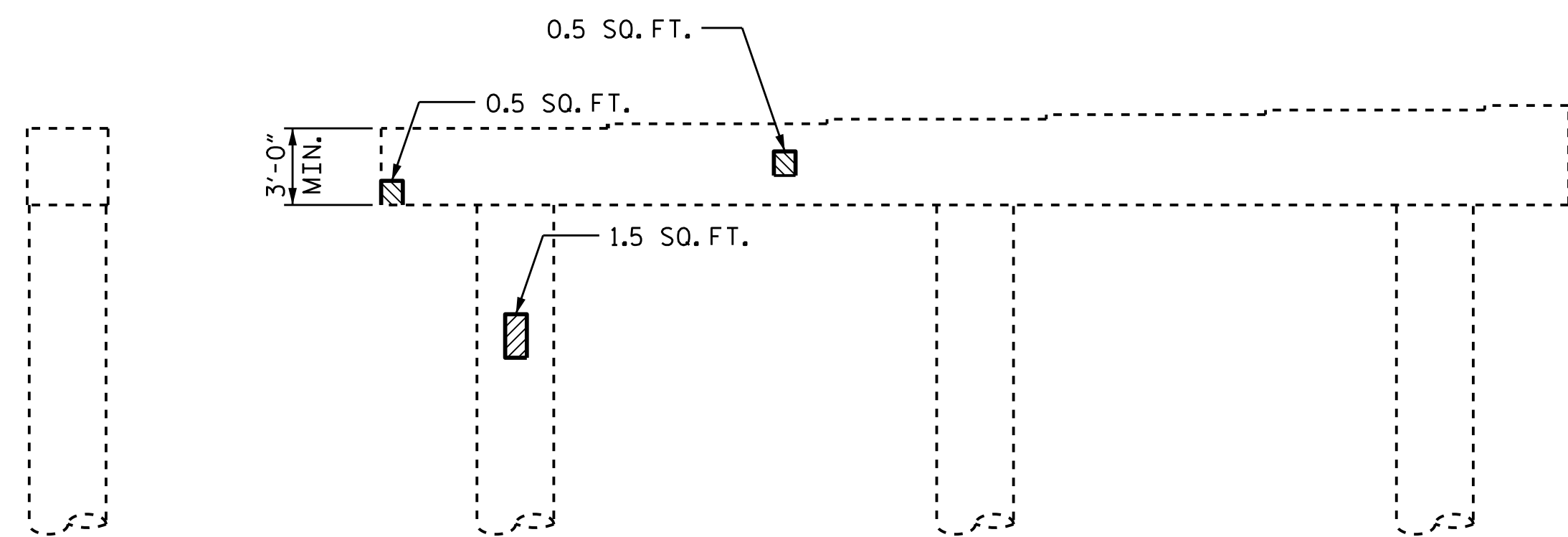
▨ - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

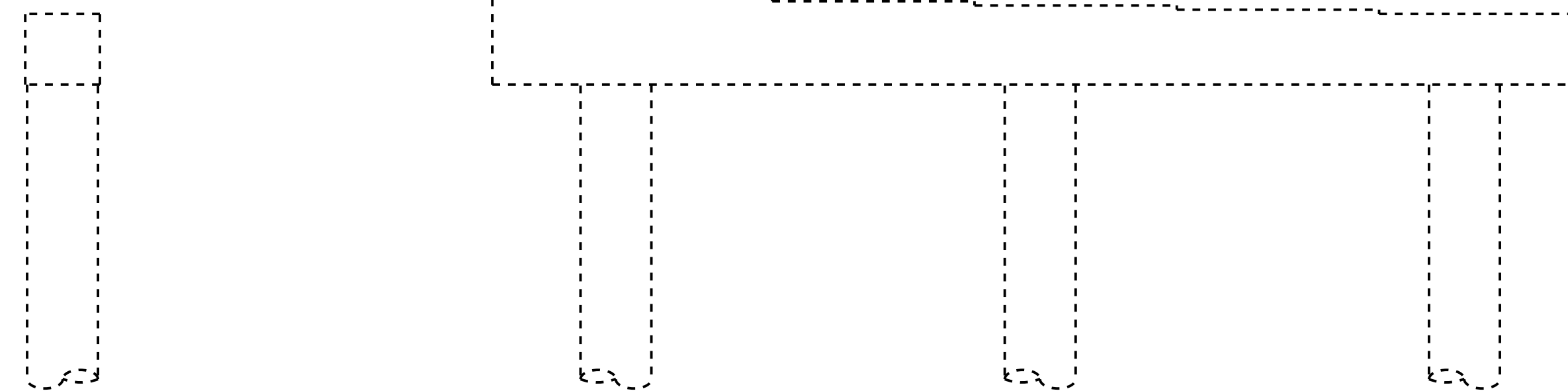
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	1.0	0.5		
COLUMN	1.5	0.8		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	148.0			

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



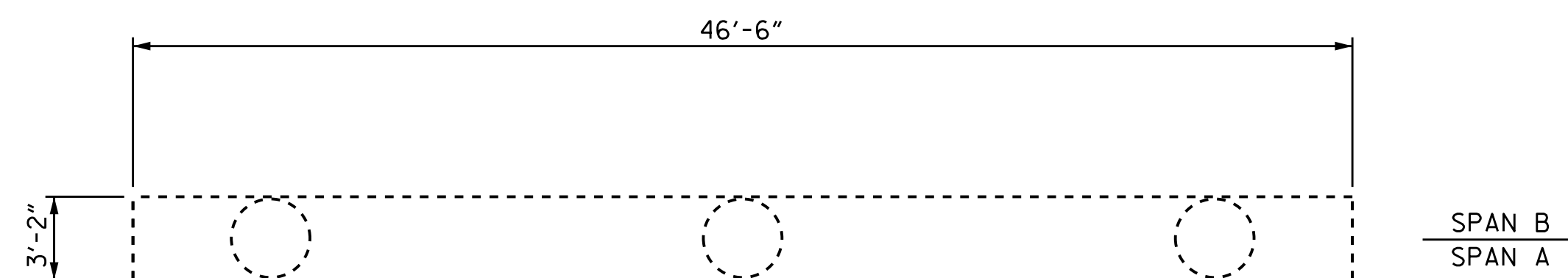
END VIEW
LEFT SIDE

ELEVATION
SPAN A SIDE



END VIEW
RIGHT SIDE

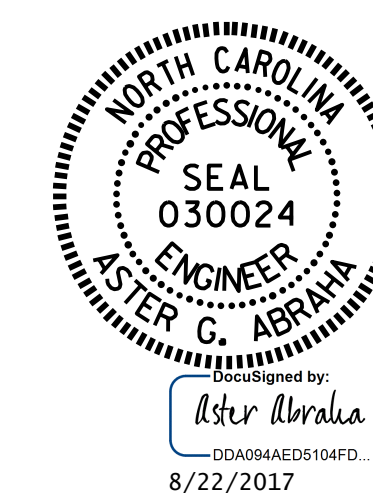
ELEVATION
SPAN B SIDE



PLAN
BOTTOM OF CAP

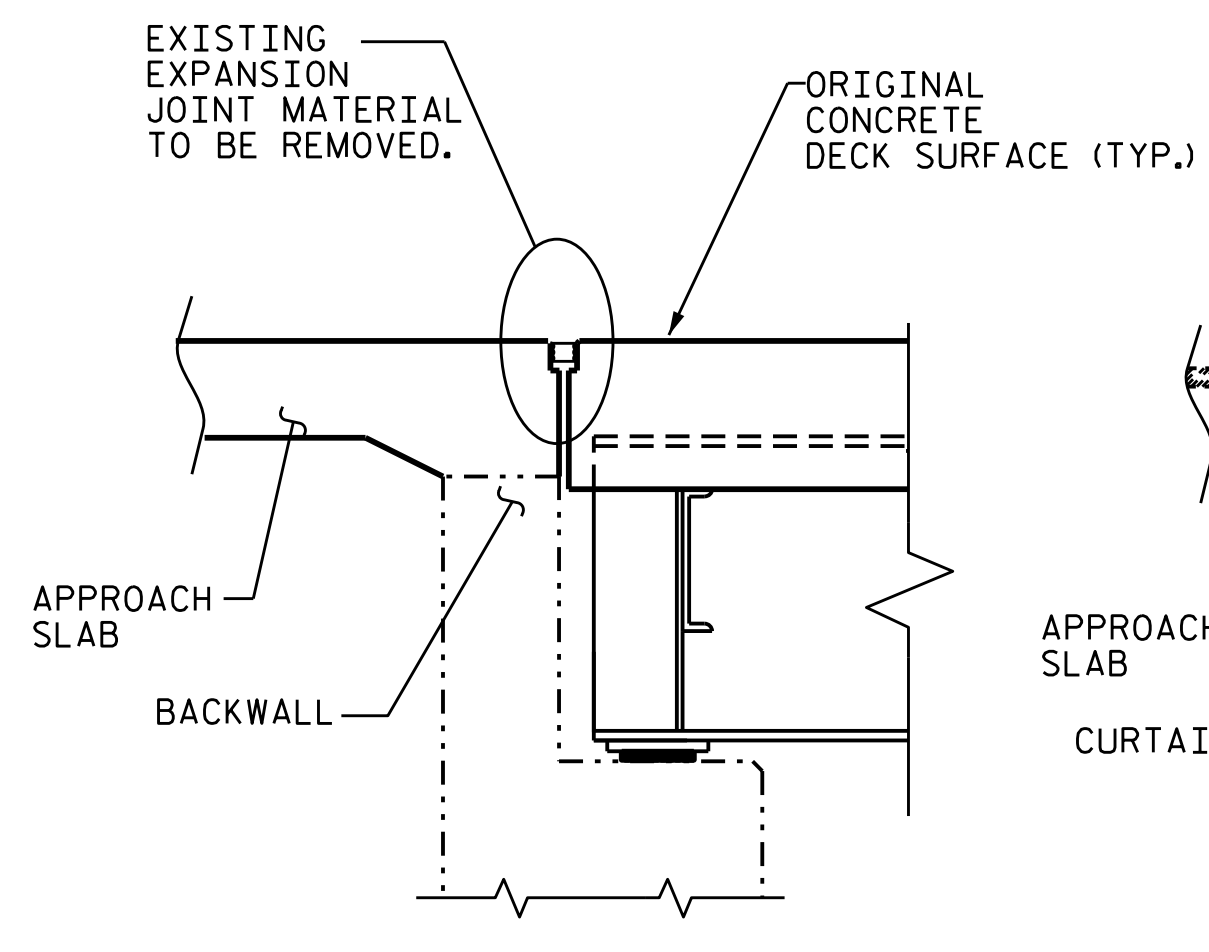
SPAN B
SPAN A

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 489

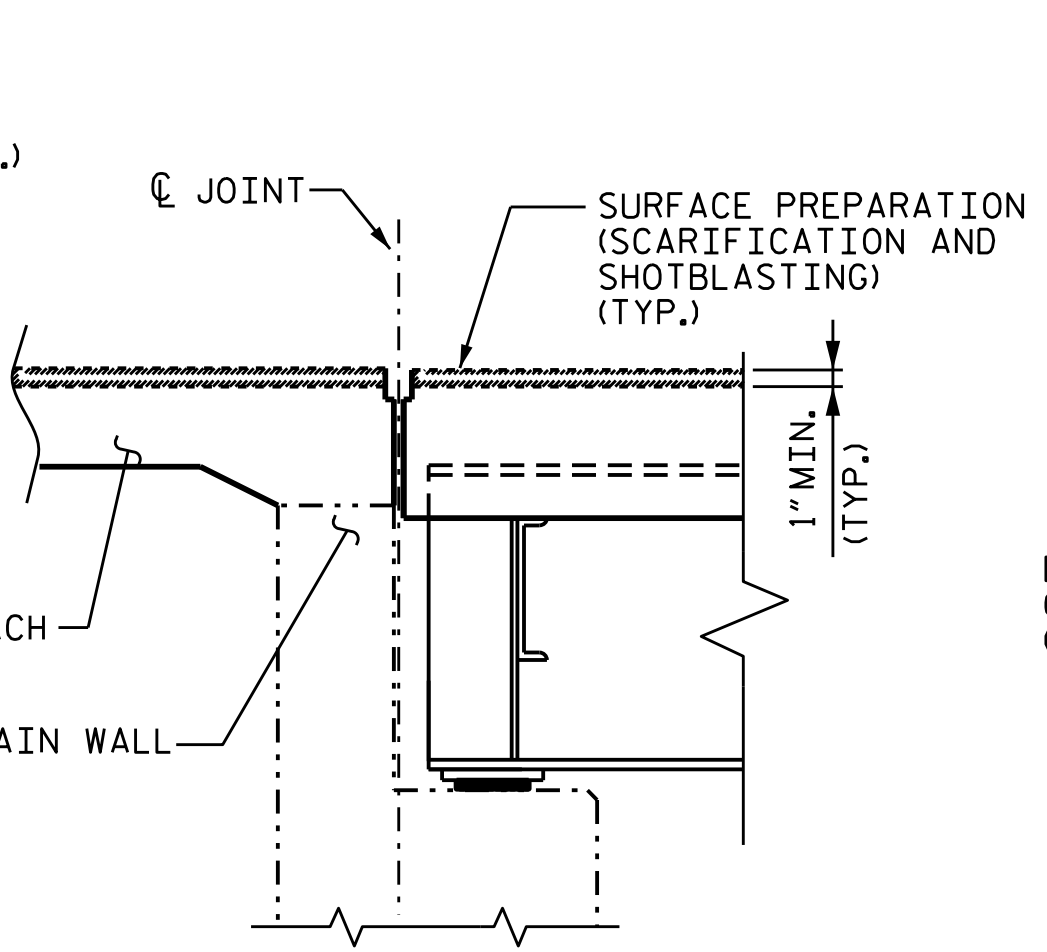


STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE REPAIR BENT 1					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					TOTAL SHEETS 70

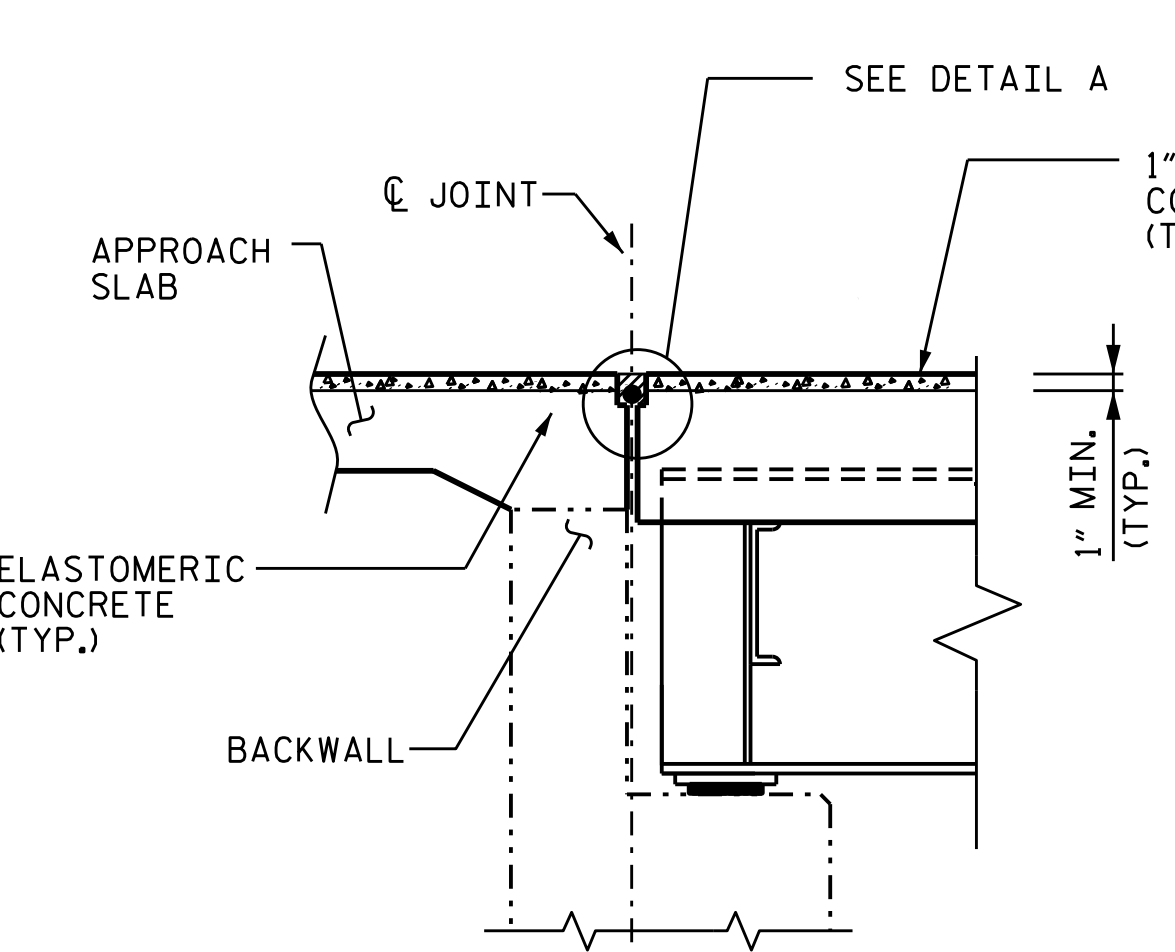
DRAWN BY : S. T. SANDOR DATE : 04/2017
CHECKED BY : W. C. SMITH DATE : 06/2017



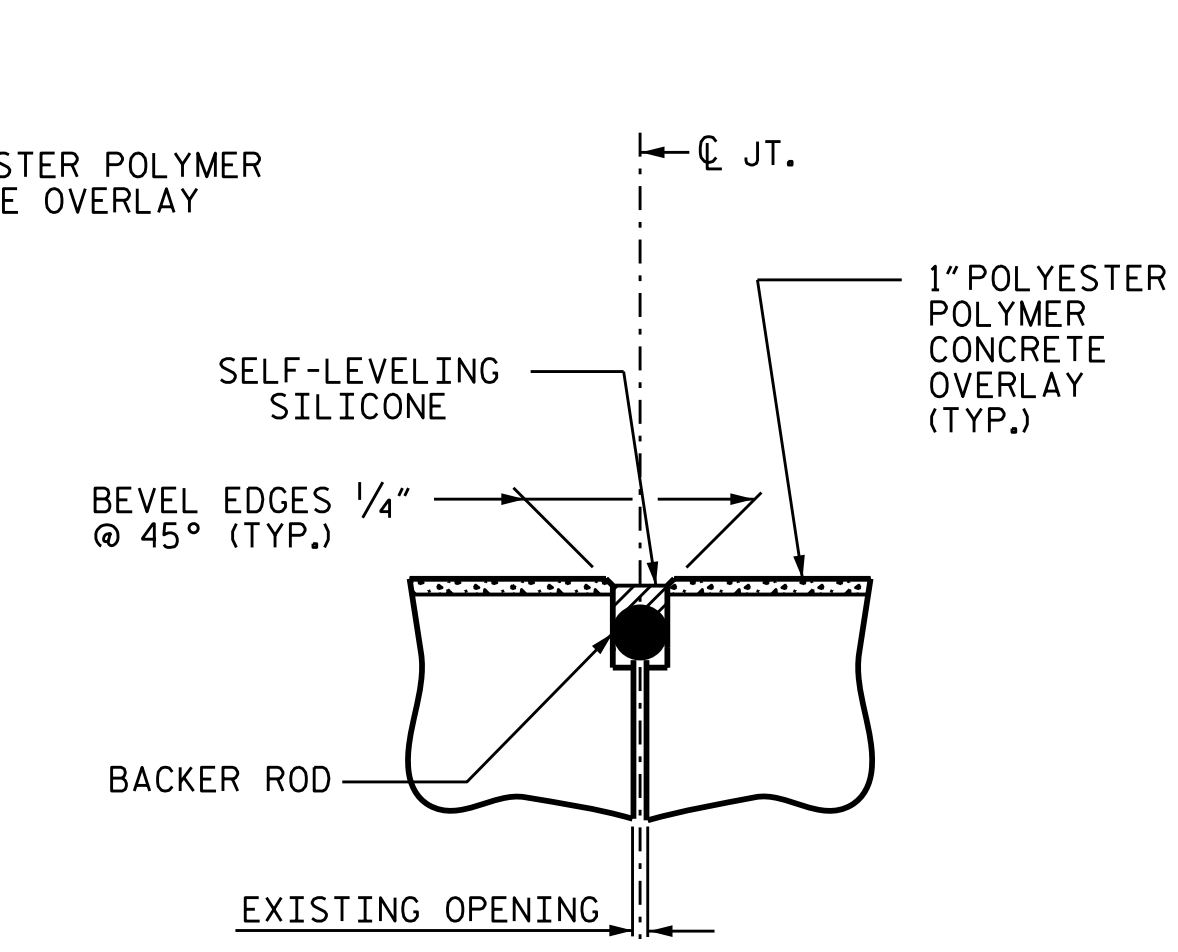
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT

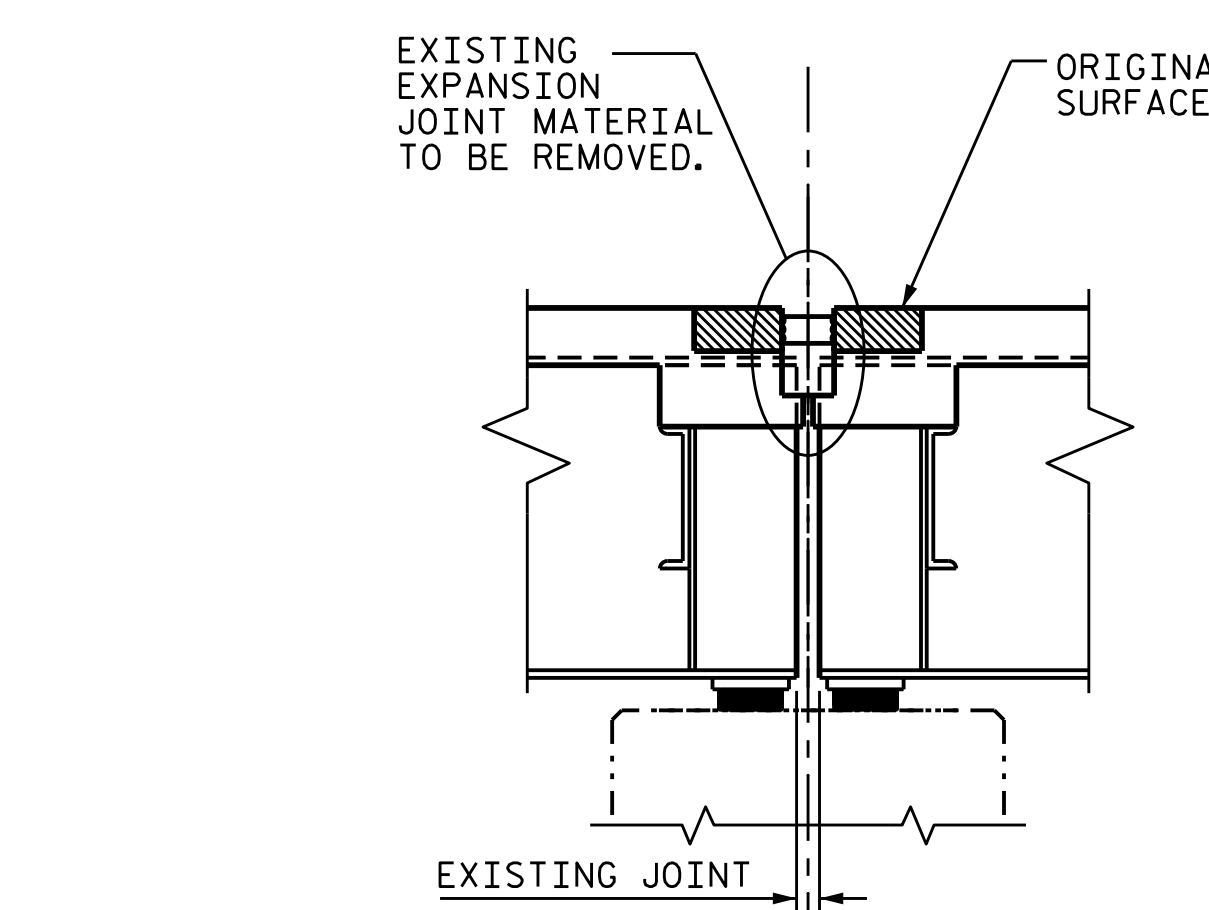


DETAIL A (PROPOSED)

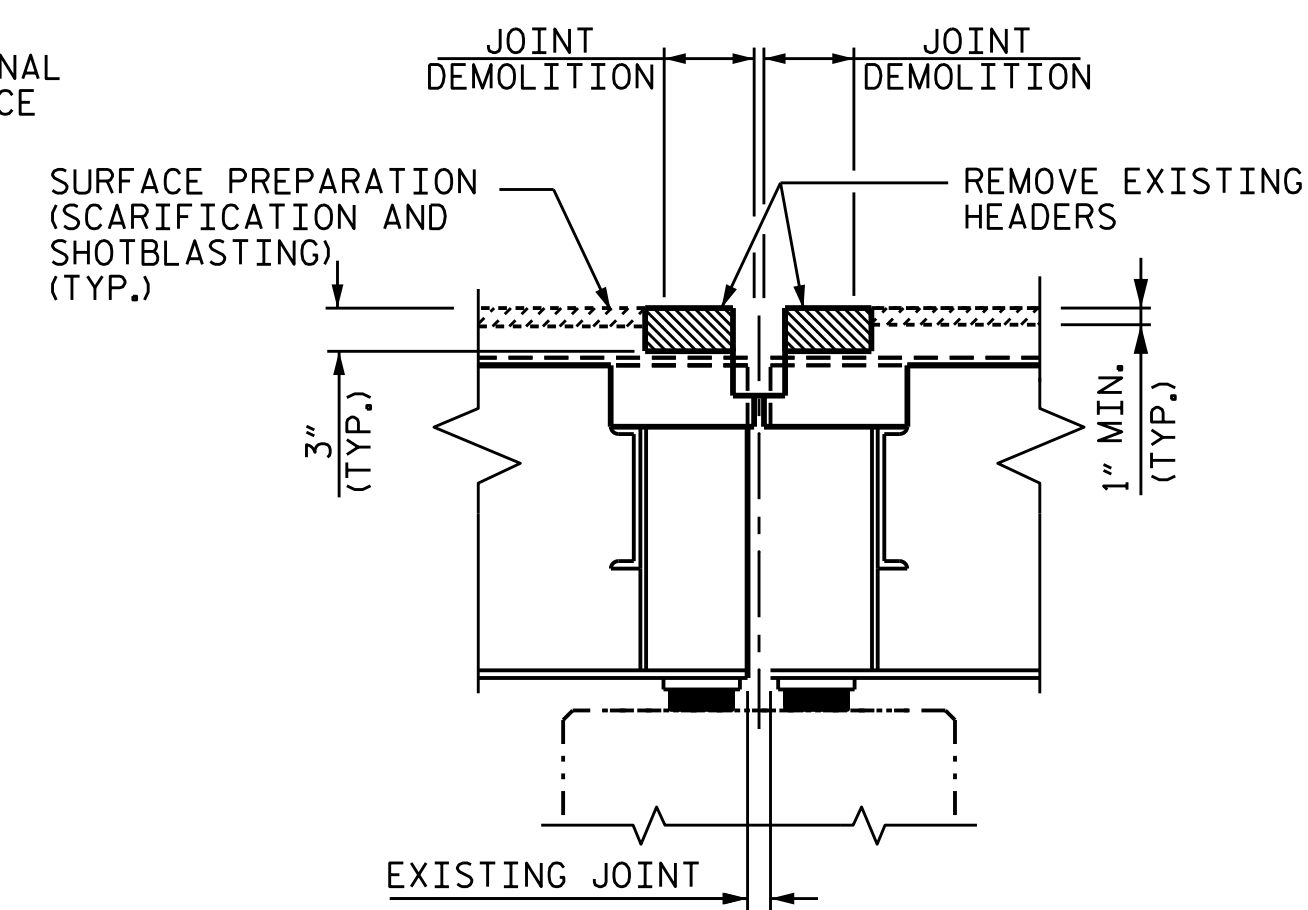
NOTES:
 CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
 FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
 UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
 ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.
 DIMENSIONS INDICATED ARE GENERIC. ACTUAL DEMOLITION DIMENSIONS SHALL BE SUFFICIENT TO REMOVE THE EXISTING ELASTOMERIC CONCRETE OR OTHER JOINT COMPONENTS THAT MAY INTERFERE WITH JOINT REPLACEMENT.

JOINT INSTALLATION SEQUENCE AT END BENTS

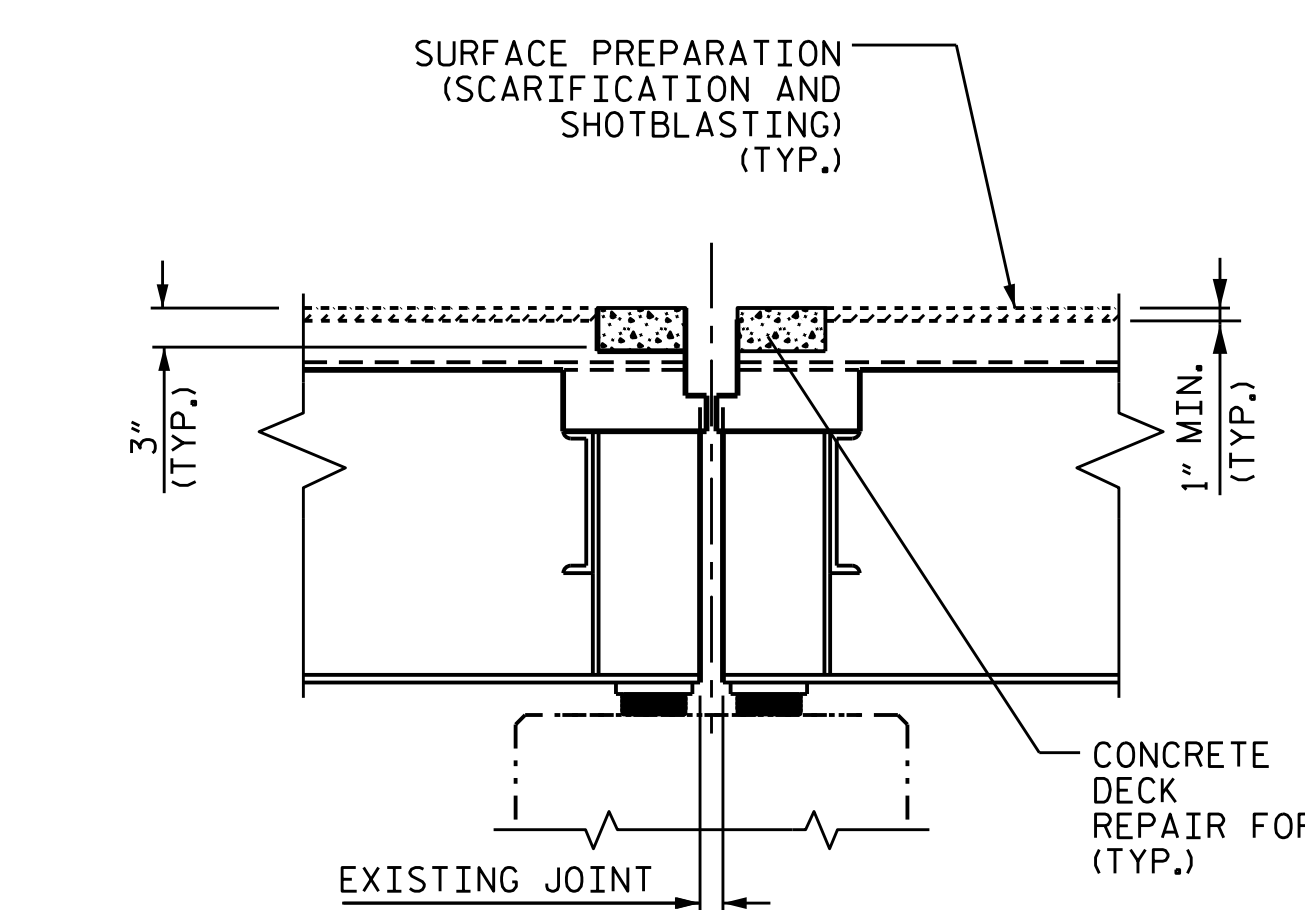
SECTION A-A



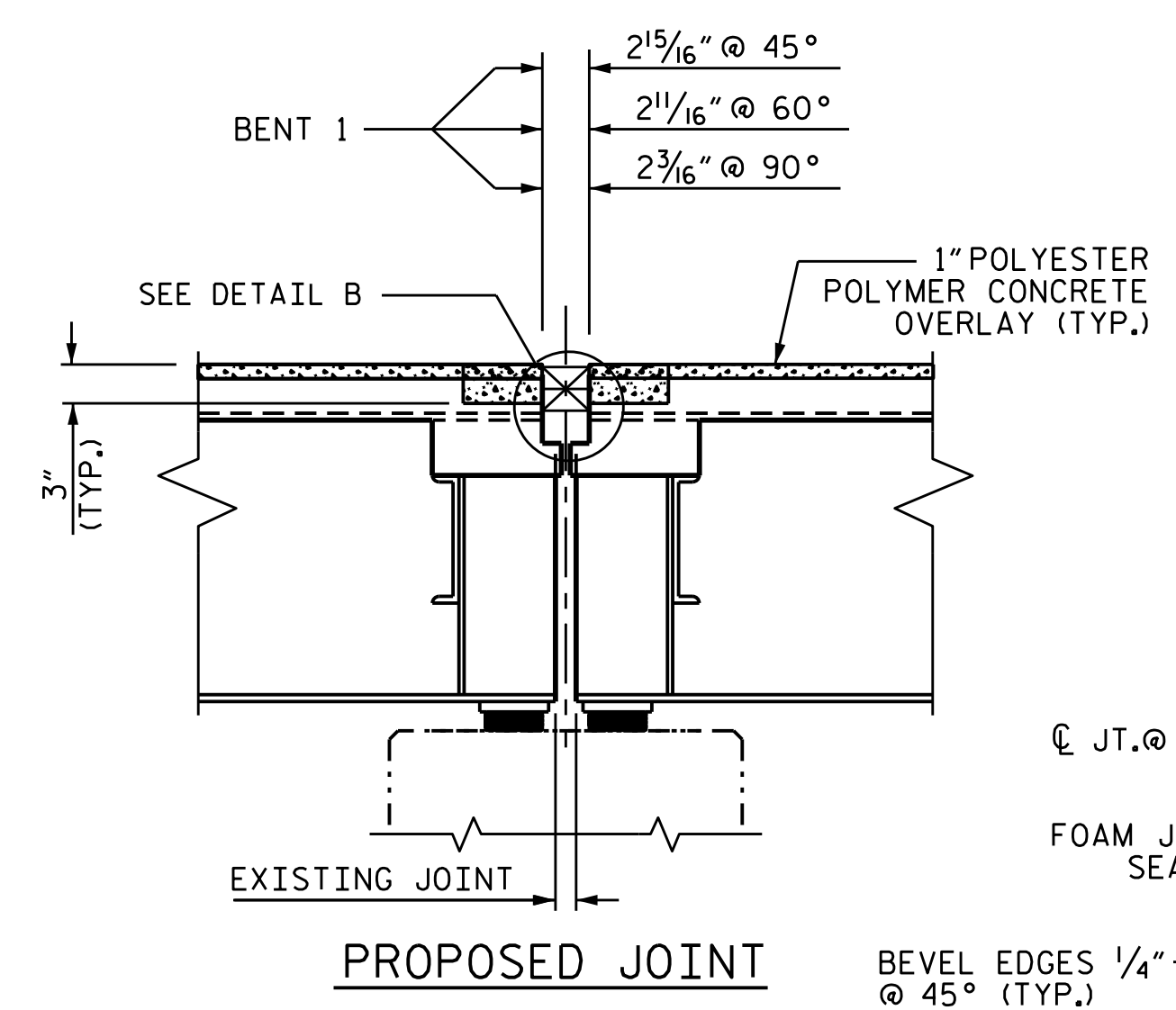
EXISTING JOINT



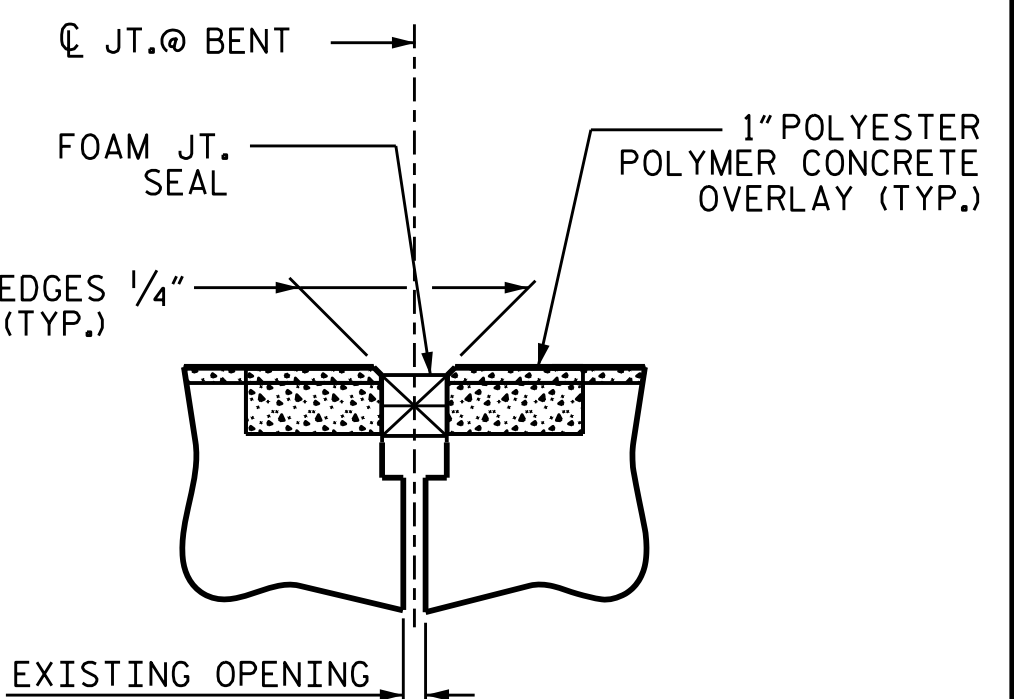
MINIMUM EXISTING JOINT DEMOLITION



PROPOSED JOINT



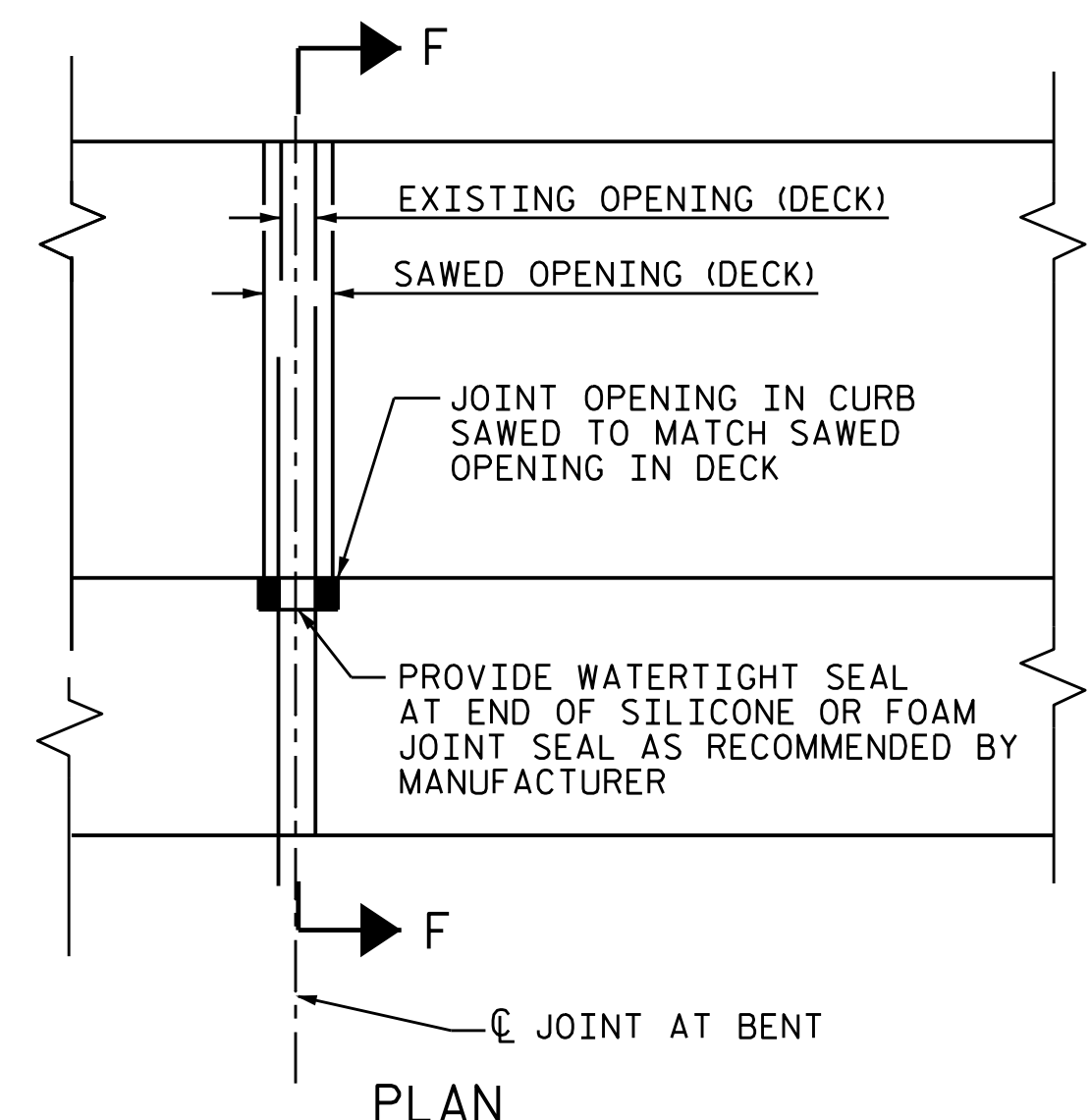
PROPOSED JOINT



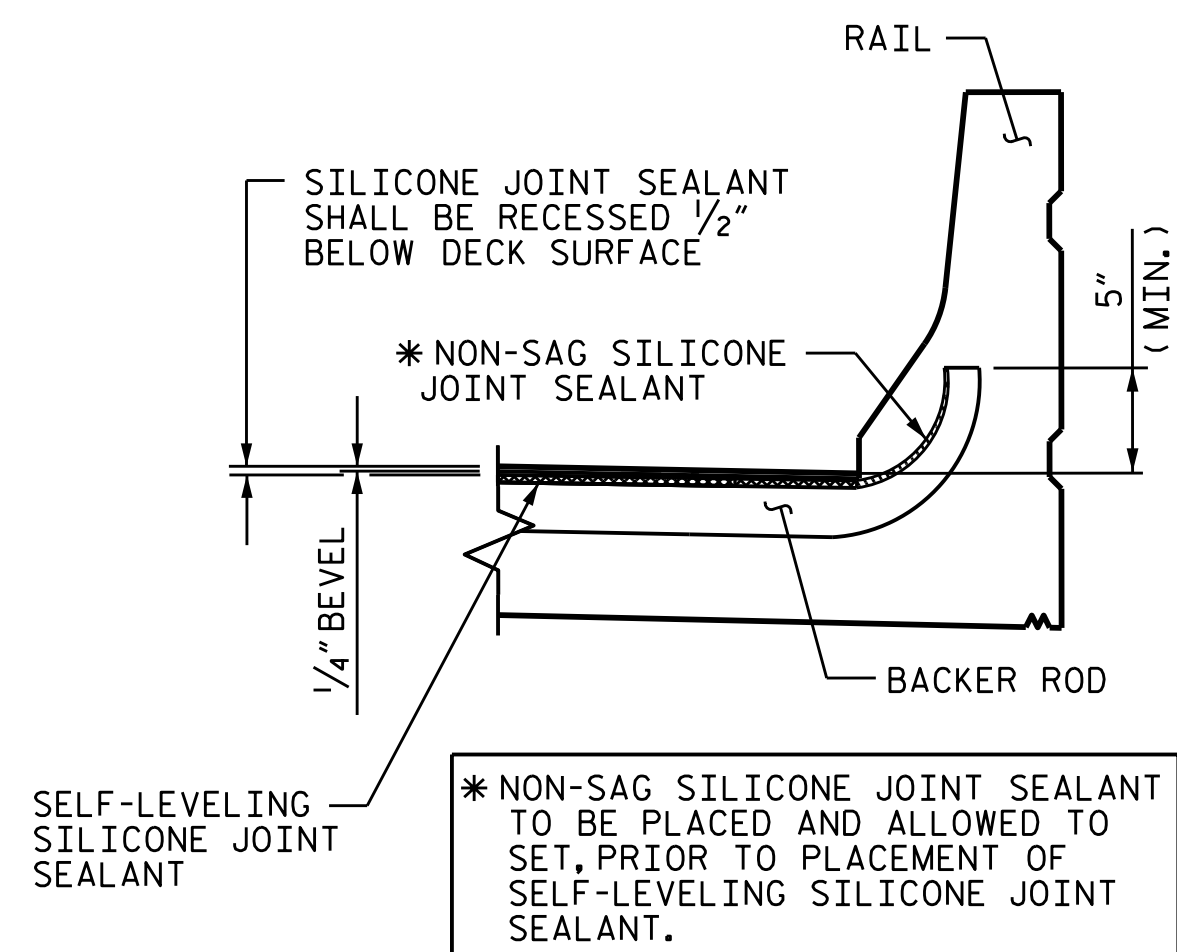
DETAIL B (PROPOSED)

JOINT INSTALLATION SEQUENCE AT BENTS

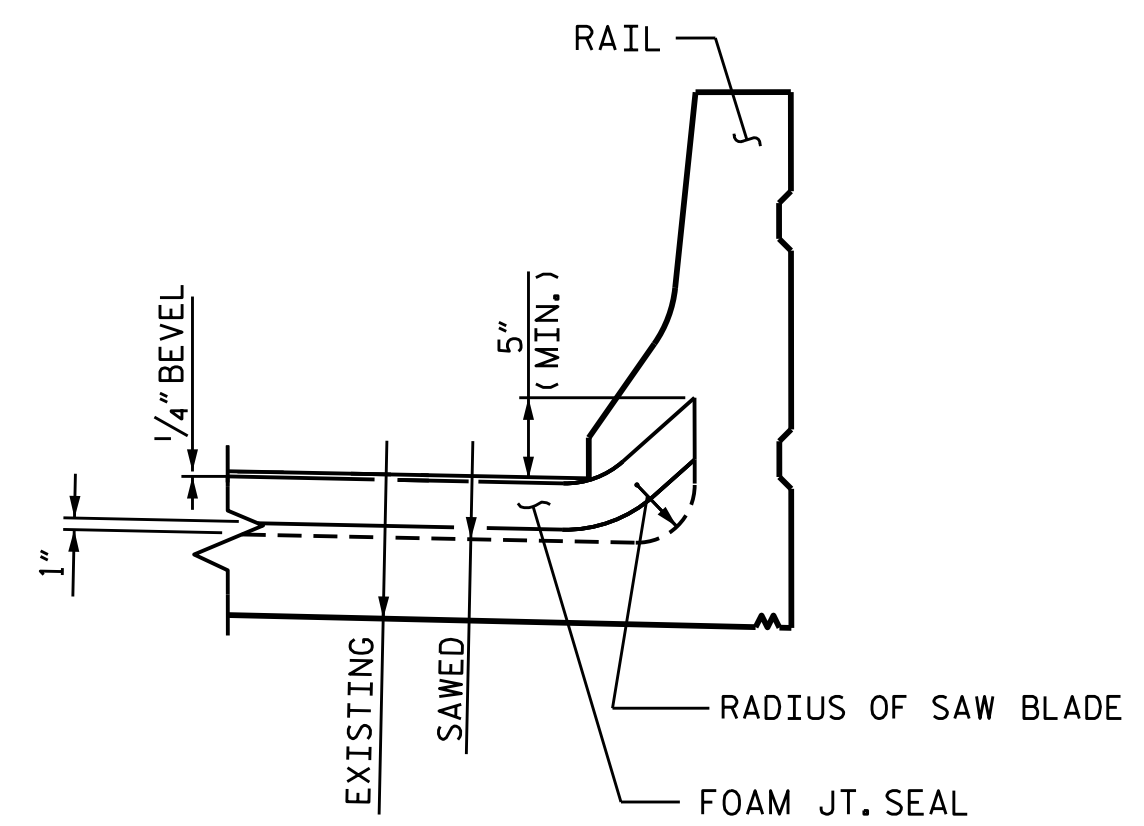
SECTION B-B



PLAN



SECTION F-F AT END BENTS

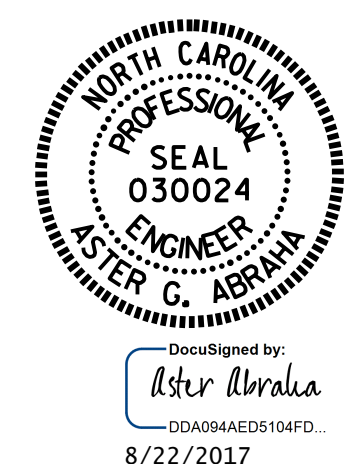


SECTION F-F AT BENT

PROJECT NO. I-5781
 JOHNSTON COUNTY
 BRIDGE NO. 488 & 489

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

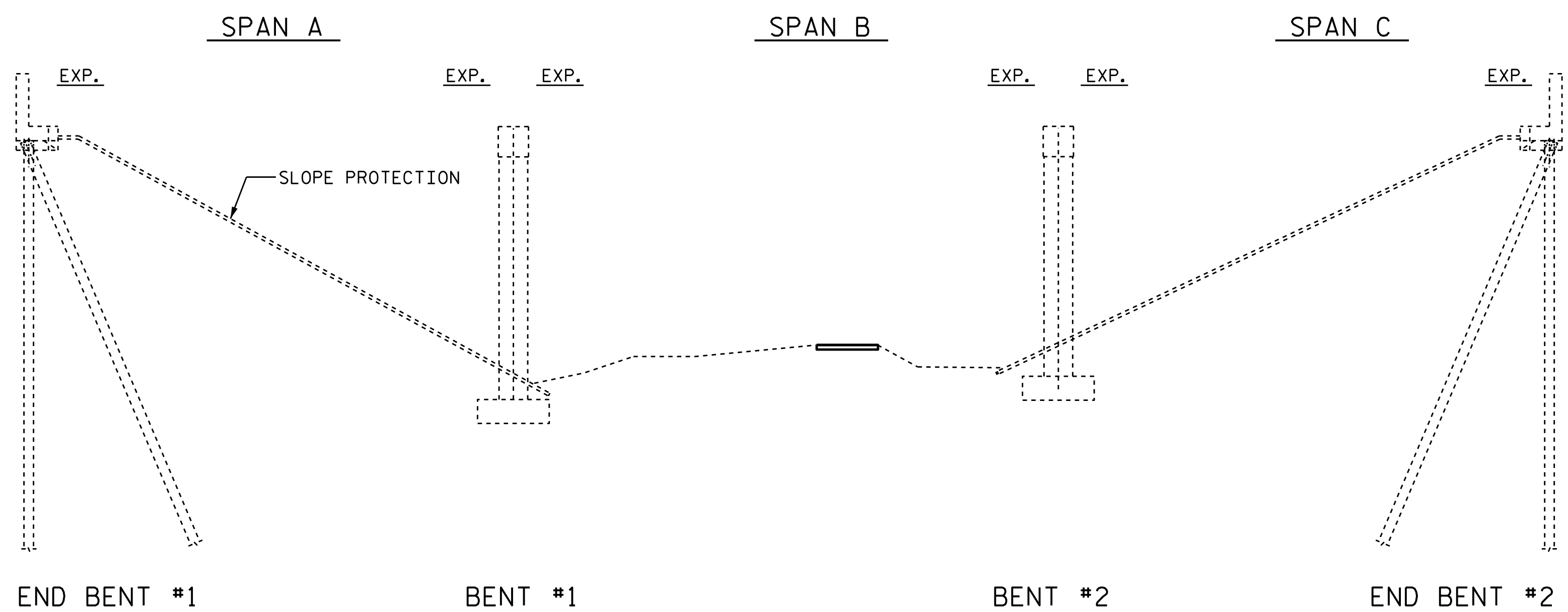
SUPERSTRUCTURE JOINT DETAILS



DRAWN BY : S. T. SANDOR DATE : 04/2017
 CHECKED BY : W. C. SMITH / A. G. ABRAHA DATE : 07/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-40
1			3			TOTAL SHEETS 69
2			4			



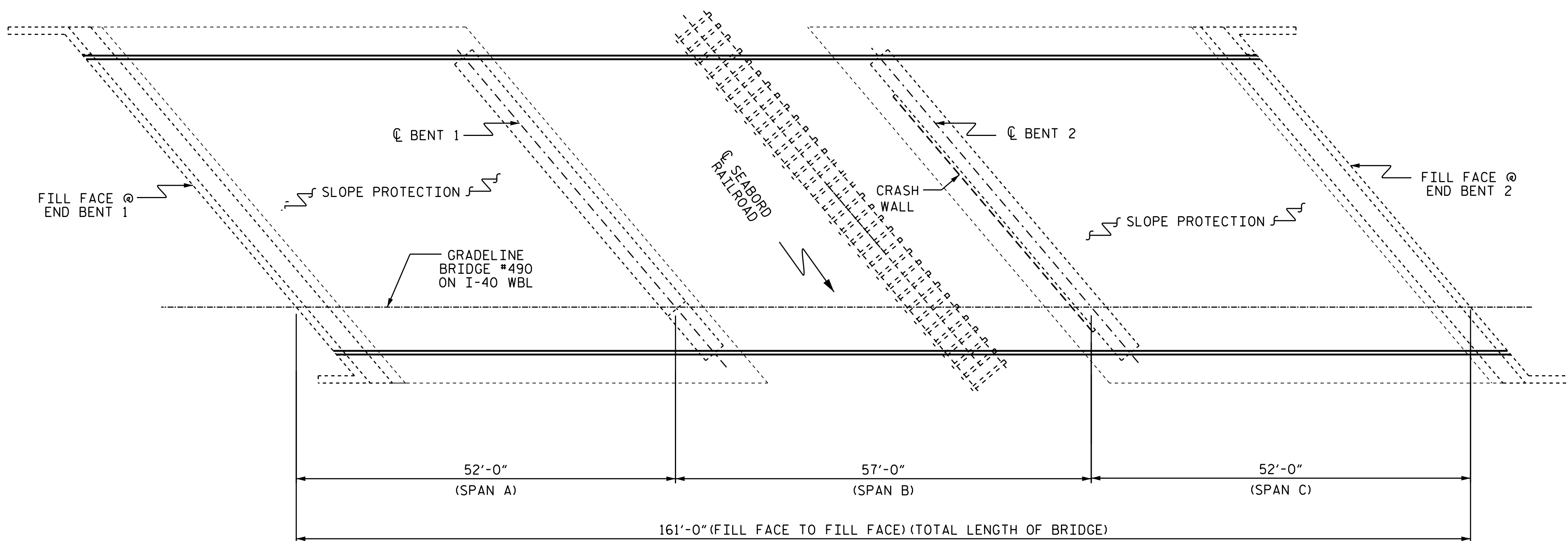
ELEVATION
(SECTION ALONG CL ROADWAY)

SCOPE OF WORK

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- CLEAN AND REMOVE EXISTING BRIDGE DECK JOINTS MATERIAL.
- PERFORM DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
- INSTALL SILICONE JOINT SEALS.
- GROOVE POLYESTER POLYMER CONCRETE.
- EPOXY COATING TOP OF CAP.
- SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.

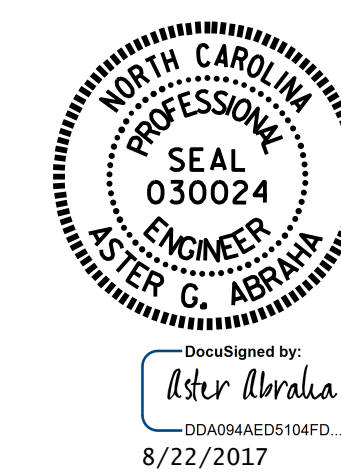
I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



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

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 490

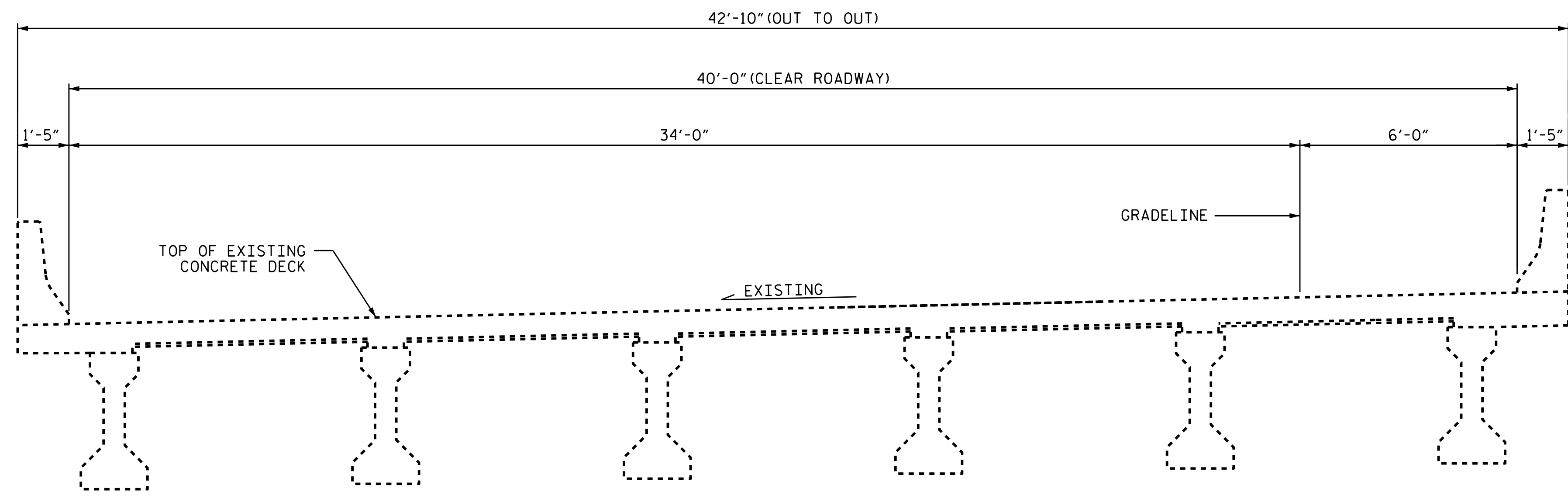


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE ON I-40 WBL
OVER SEABOARD
COASTLINE RAILROAD

DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

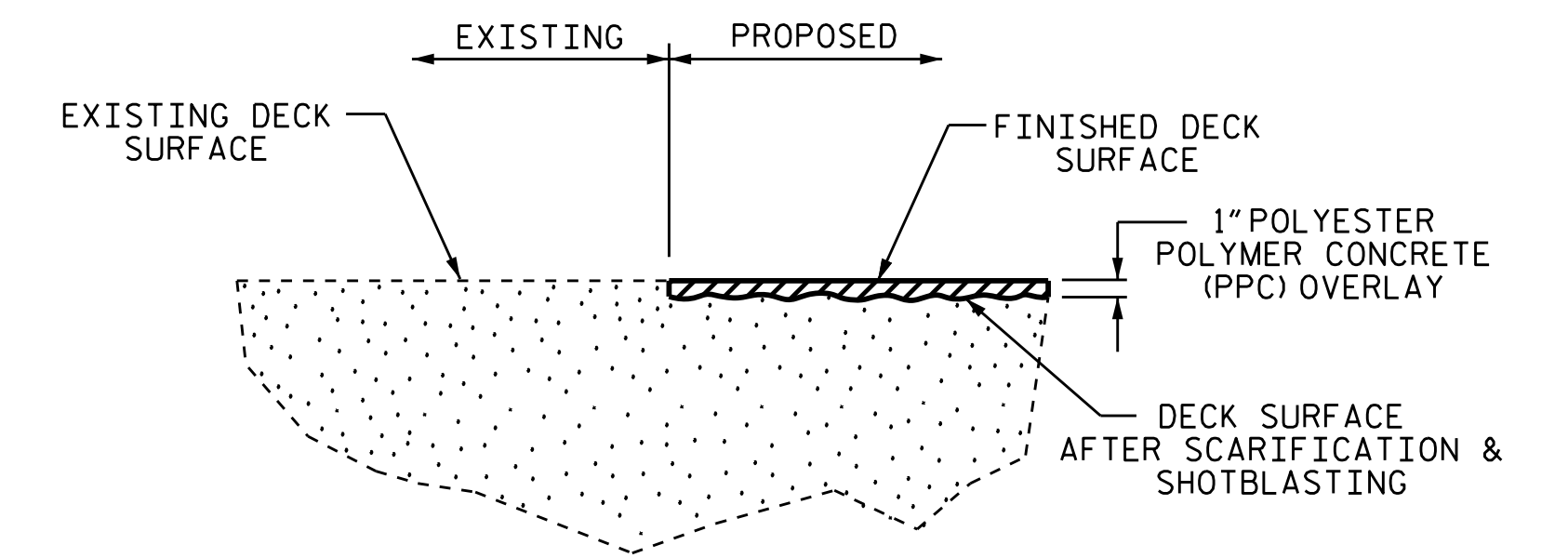
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-41
1			3			TOTAL SHEETS
2			4			69

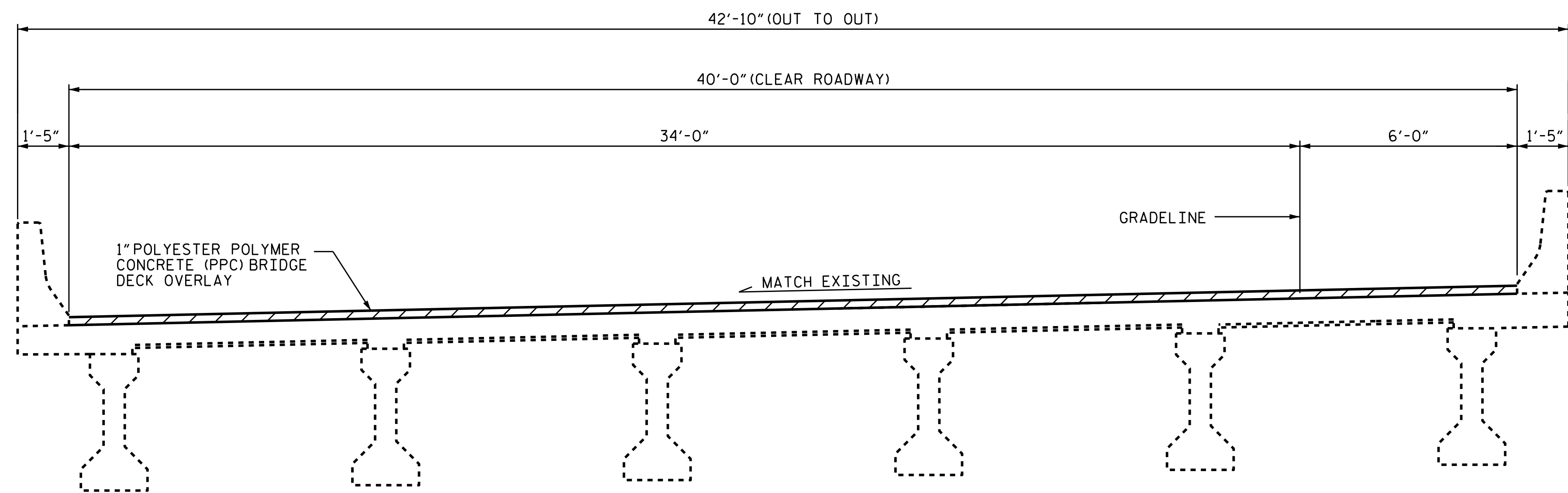


TYPICAL SECTION
(EXISTING)

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

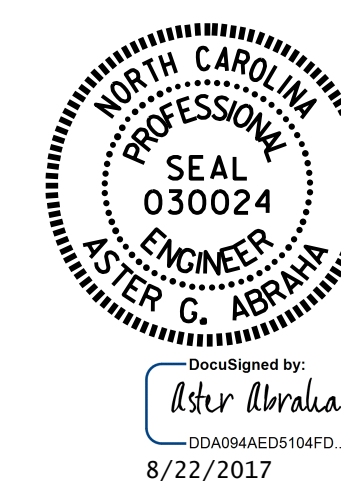


DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY



TYPICAL SECTION
(PROPOSED)

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 490



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTION
&
PPC OVERLAY DETAIL

DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 06/2017


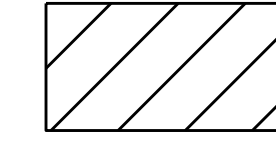
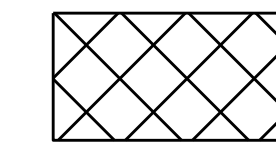
DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

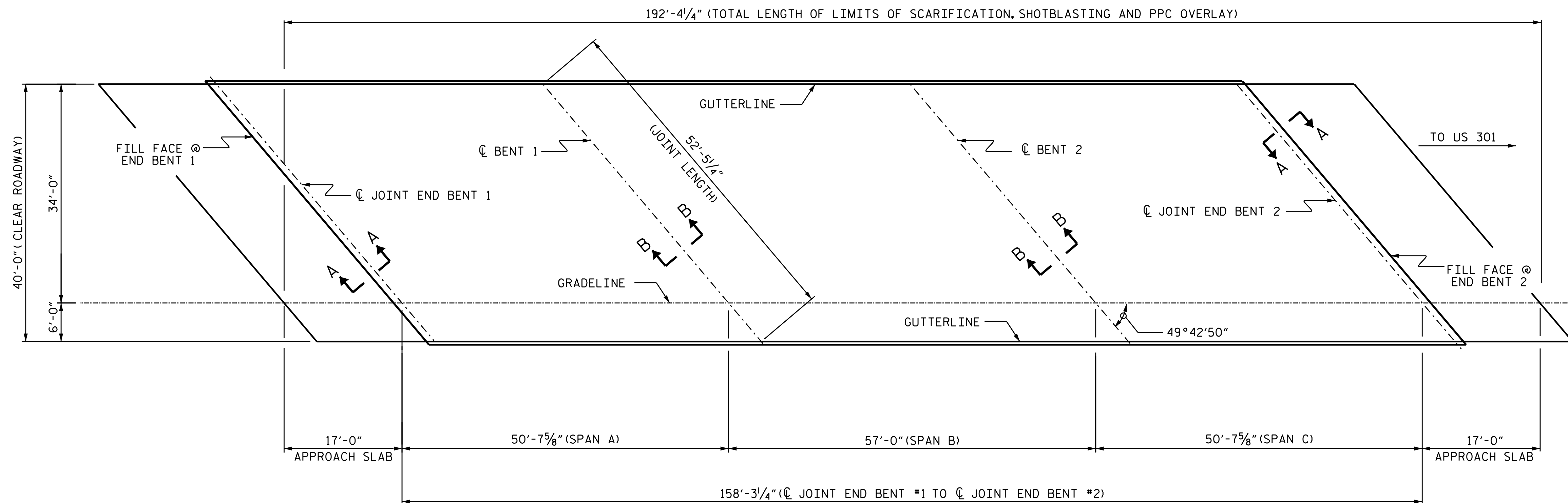
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-42
2			4			69

AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	854.5 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	1.0 SY	
SHOTBLASTING BRIDGE DECK	854.5 SY	
PPC MATERIALS	23.8 CY	
PLACING AND FINISHING PPC OVERLAY	854.5 SY	
GROOVING BRIDGE FLOORS	7,064.0 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.

-  SCARIFICATION, SHOTBLASTING AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY
-  CLASS II SURFACE PREPARATION
-  CONCRETE DECK REPAIR FOR PPC OVERLAY



PLAN OF SPANS

NOTES

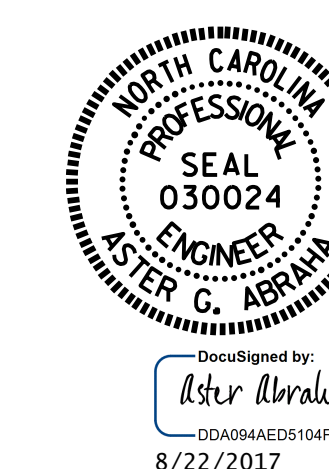
ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT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

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-53.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 490



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE

SURFACE PREPARATION & PPC OVERLAY

DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-43
2			4			69

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		150.0		

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		150.0		

NOTES

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

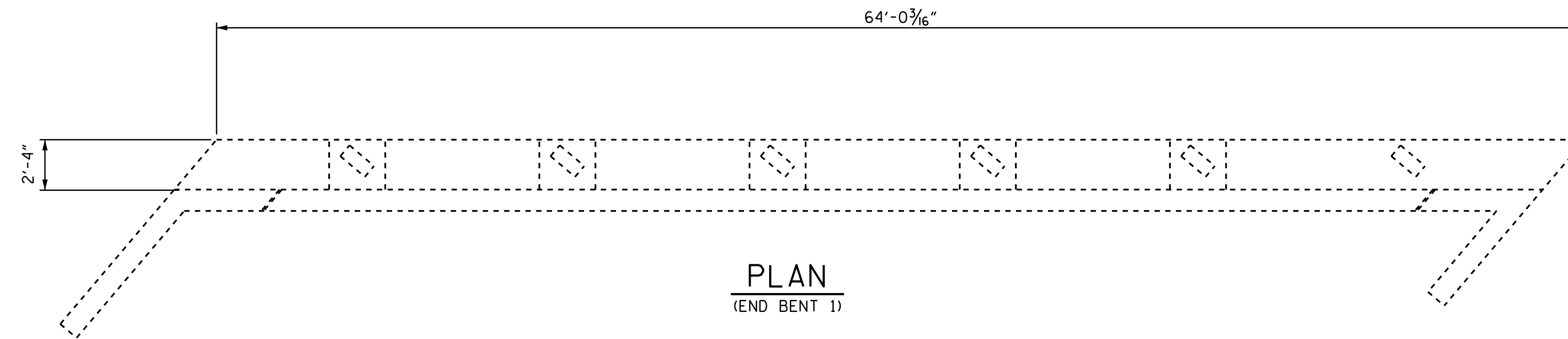
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

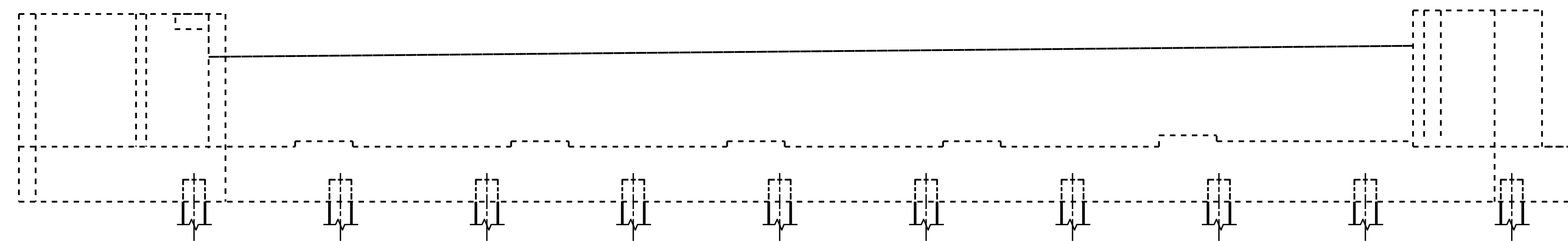
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL. TO SAWCUT. SEE REPAIR DETAILS.

 - SHOTCRETE REPAIR

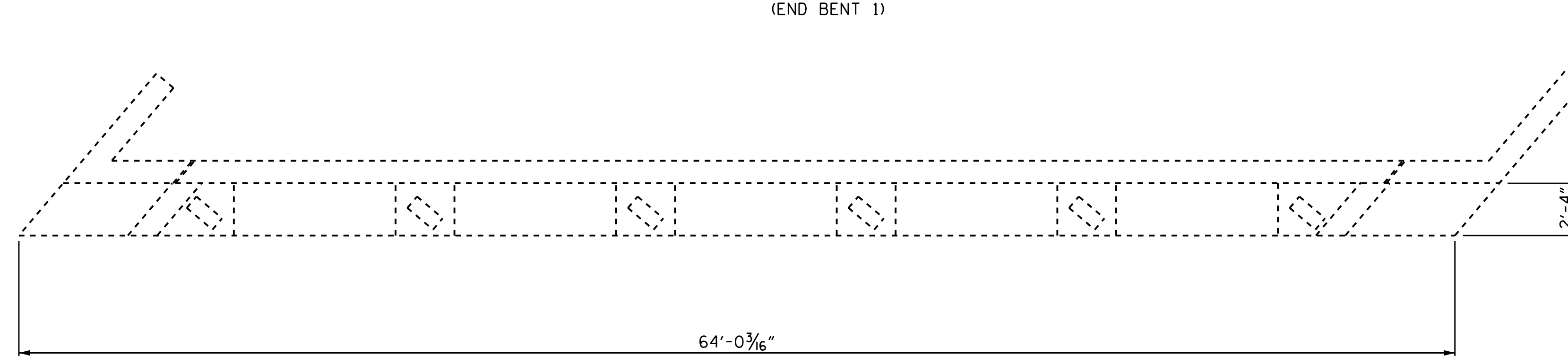
ERI - EPOXY RESIN INJECTION



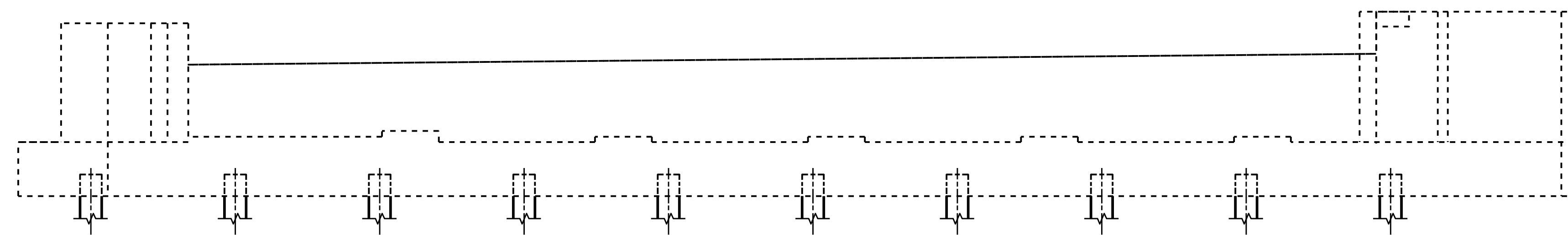
PLAN
(END BENT 1)



ELEVATION
(END BENT 1)

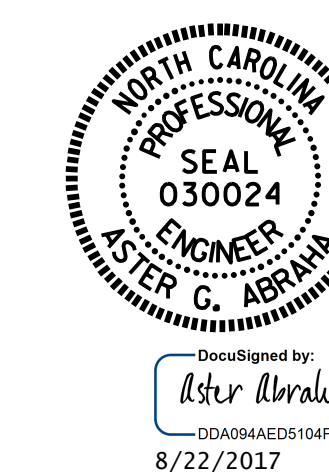


PLAN
(END BENT 2)



ELEVATION
(END BENT 2)

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 490



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 END BENTS

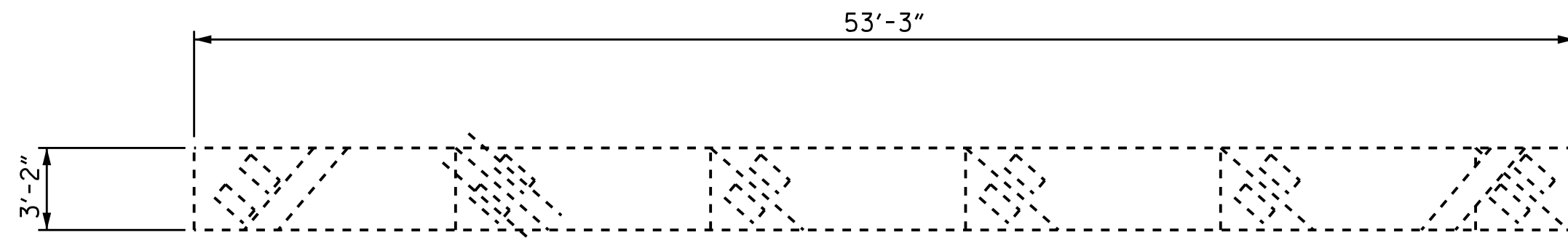
DRAWN BY : S. T. SANDOR DATE : 05/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

22-AUG-2017 15:48
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 adbrana

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-44
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN
TOP OF CAP

NOTES:

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

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

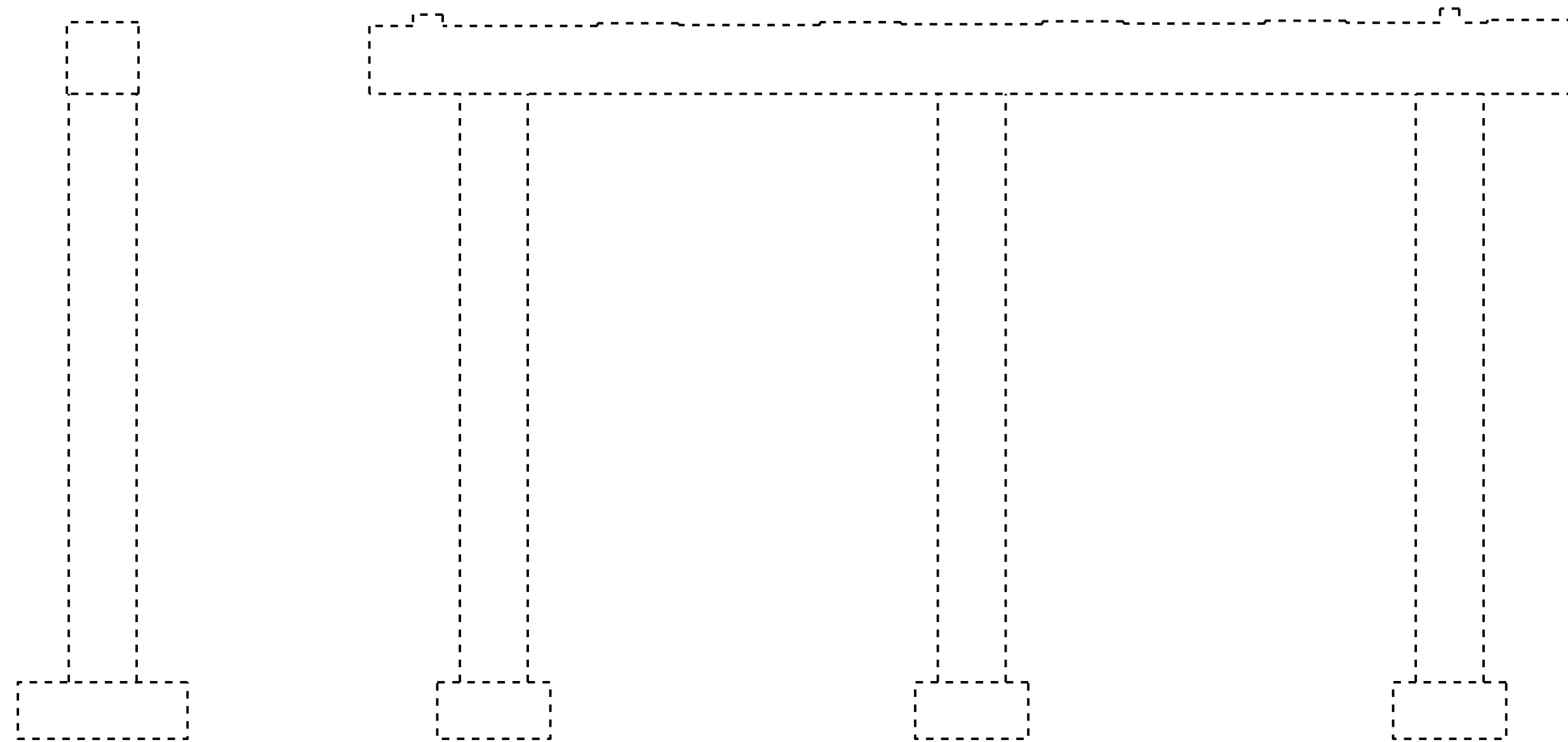
- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

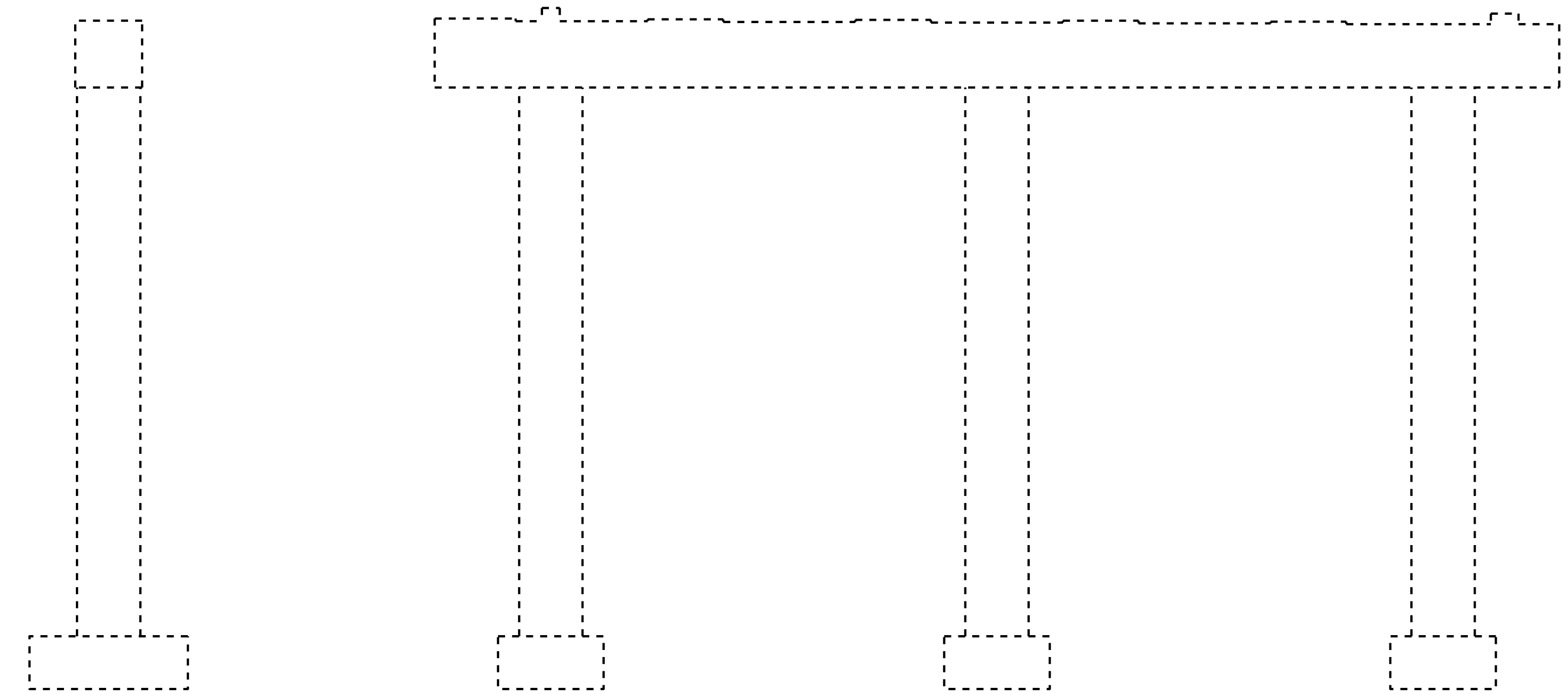
BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		169.0		

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



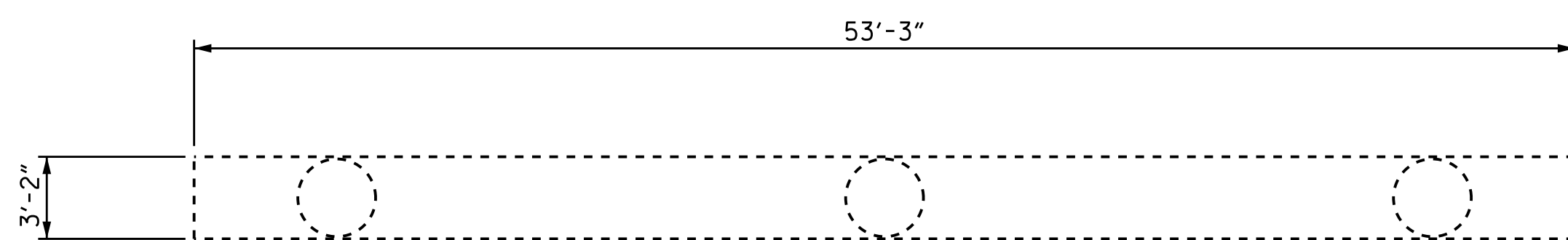
END VIEW
(LEFT SIDE)

ELEVATION
(SPAN A SIDE)



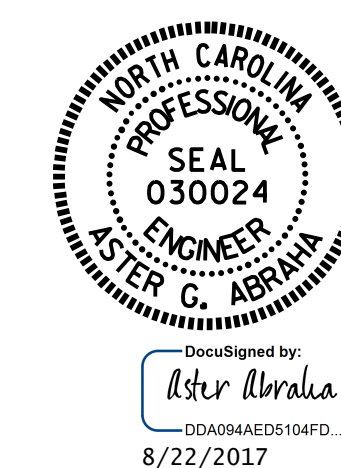
END VIEW
(RIGHT SIDE)

ELEVATION
(SPAN B SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 490



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

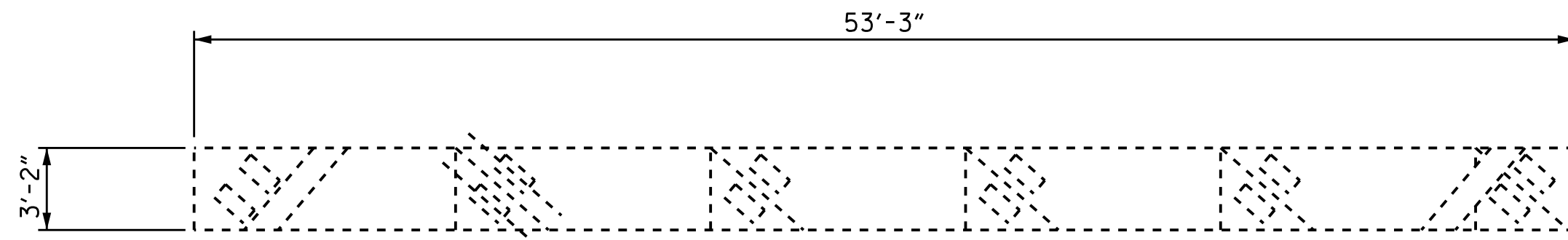
REPAIR
BENT 1

DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-45
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN
TOP OF CAP

NOTES:

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

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

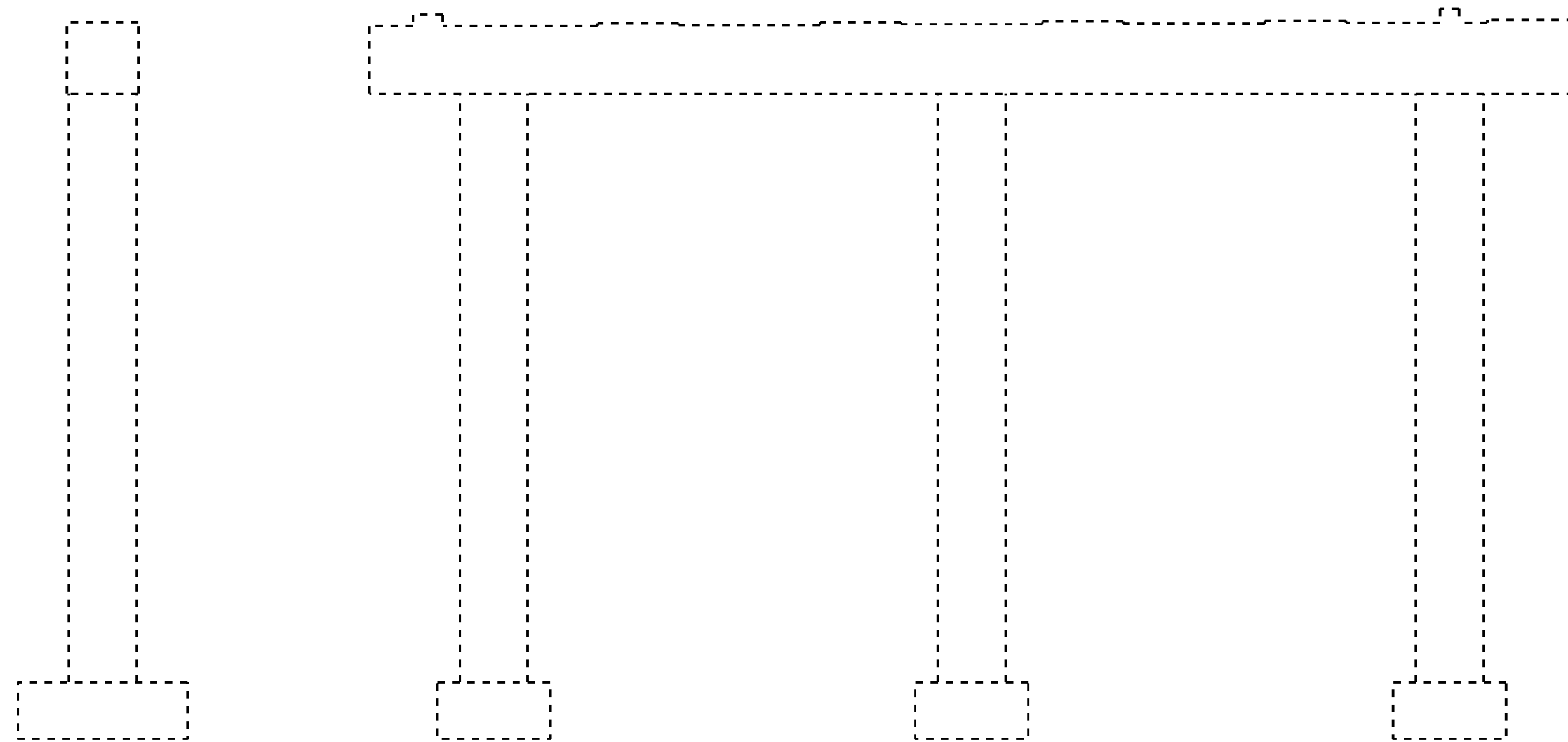
- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

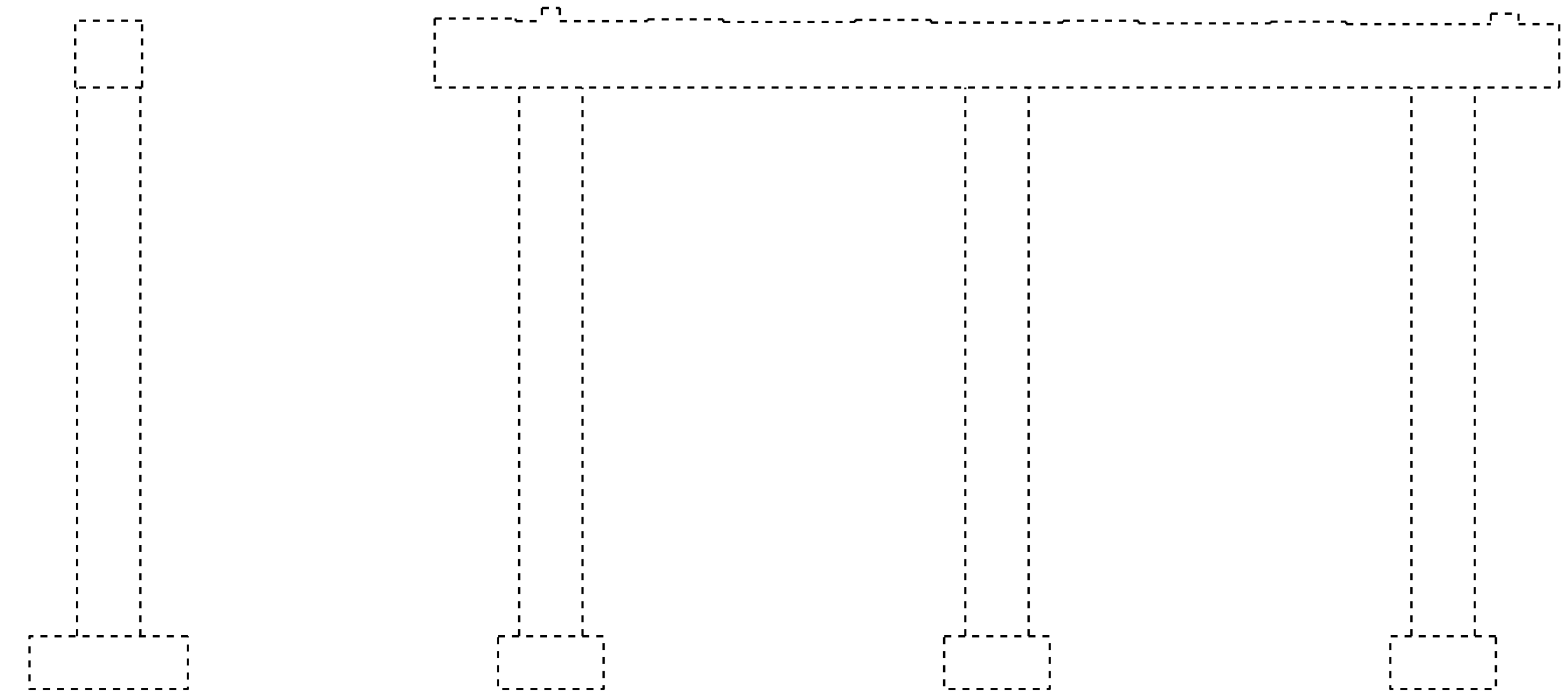
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	169.0			

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



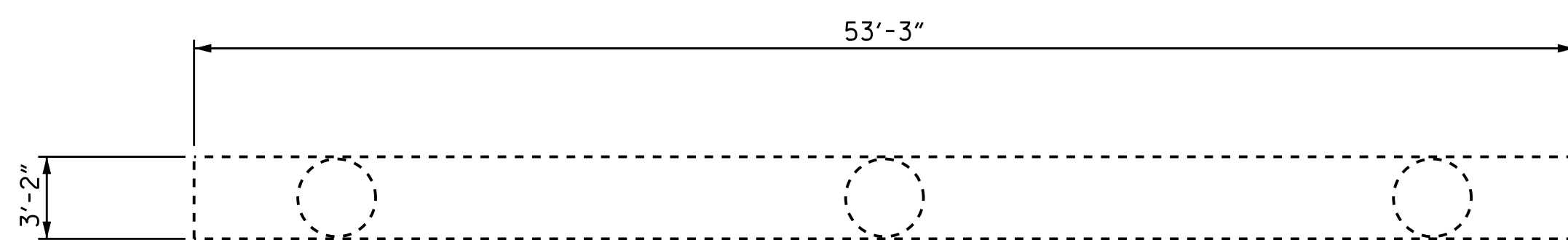
END VIEW
(LEFT SIDE)

ELEVATION
(SPAN A SIDE)



END VIEW
(RIGHT SIDE)

ELEVATION
(SPAN B SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 490

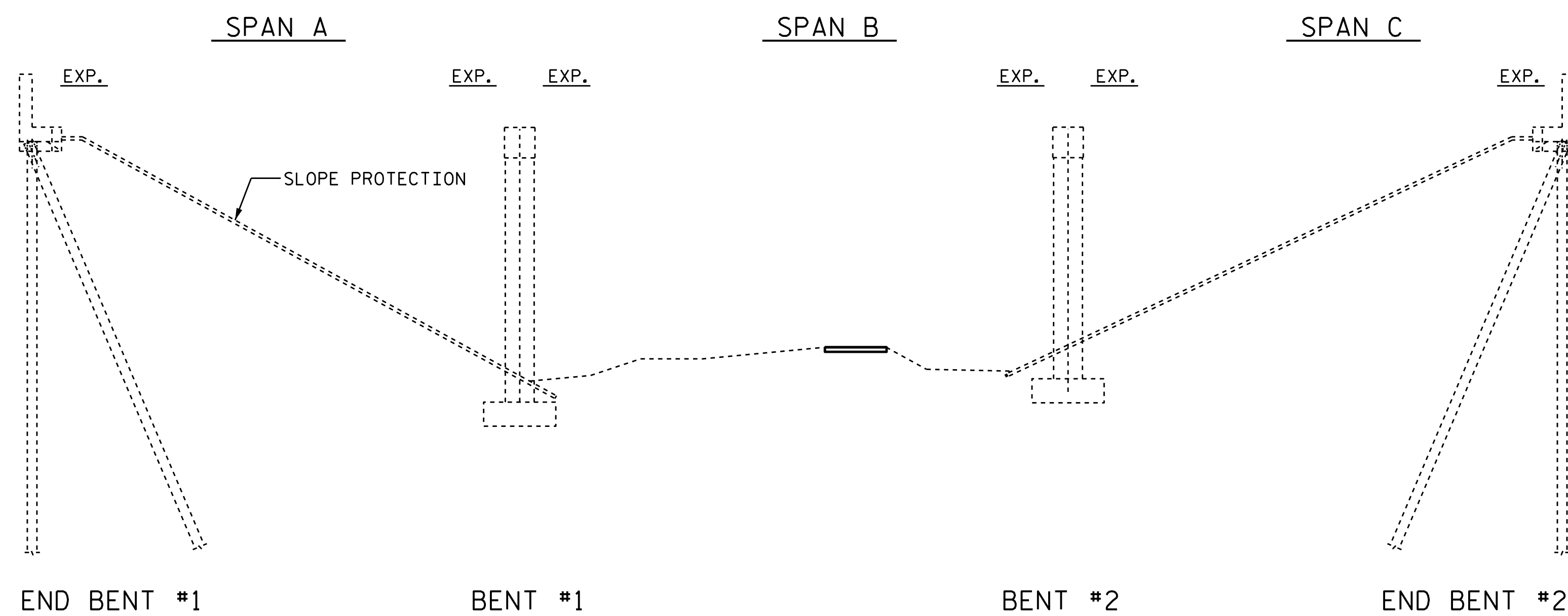


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 BENT 2

DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-46
2			4			69



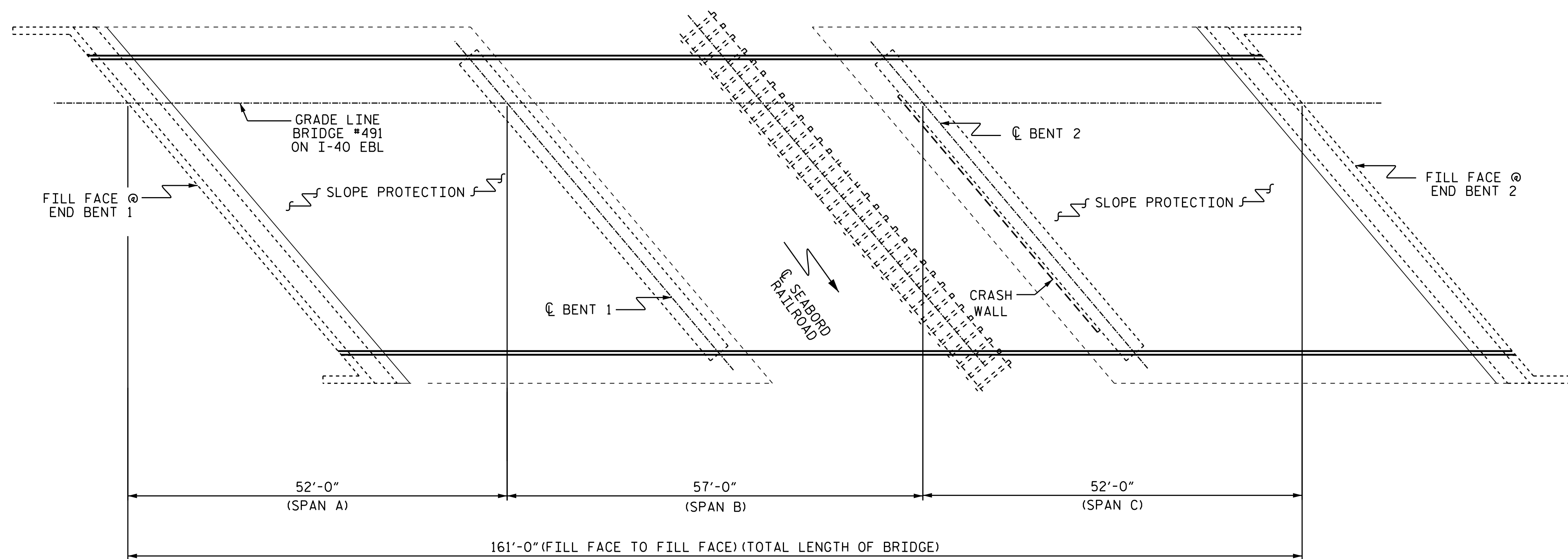
ELEVATION
(SECTION ALONG CL ROADWAY)

SCOPE OF WORK

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- CLEAN AND REMOVE EXISTING BRIDGE DECK JOINTS MATERIAL.
- PERFORM DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
- INSTALL SILICONE JOINT SEALS.
- GROOVE POLYESTER POLYMER CONCRETE.
- EPOXY COATING TOP OF CAP.
- SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.

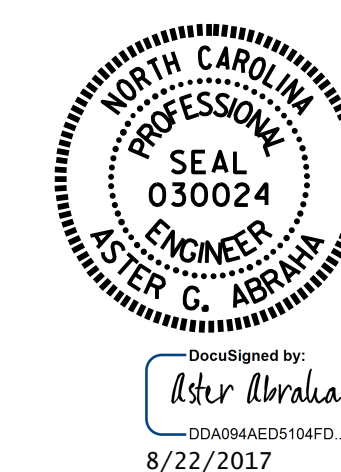
I hereby certify that this structure was rehabilitated according to these plans or as noted therein.

Resident Engineer _____ Date _____



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

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 491

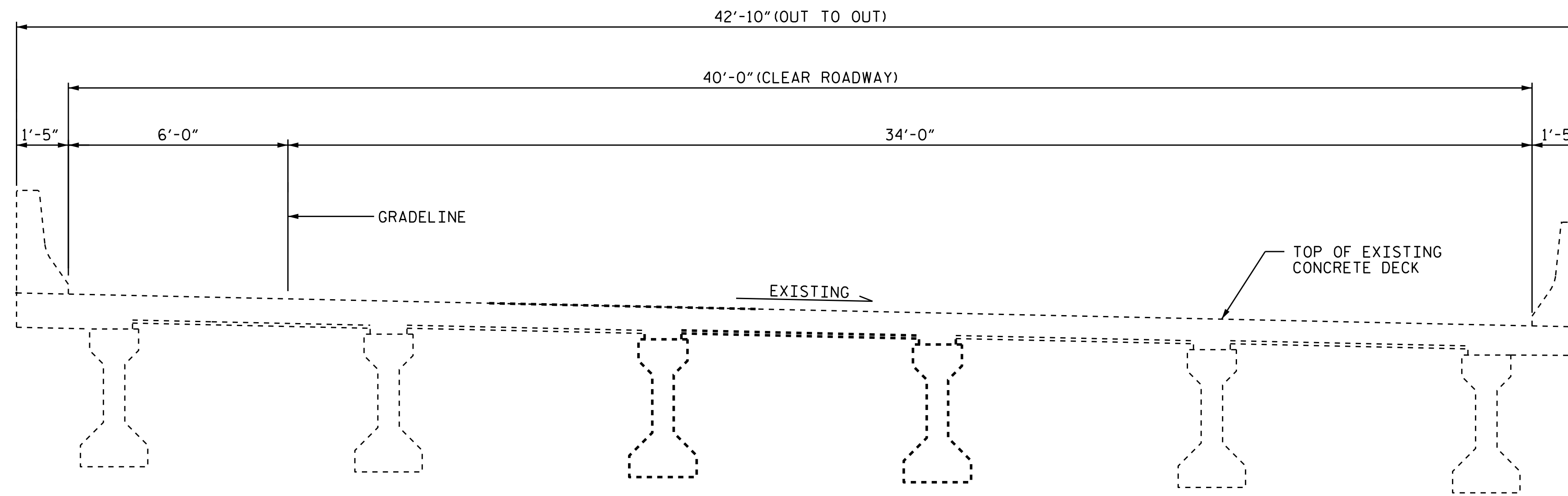


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGE ON I-40
OVER SEABORD
COASTLINE RAILROAD

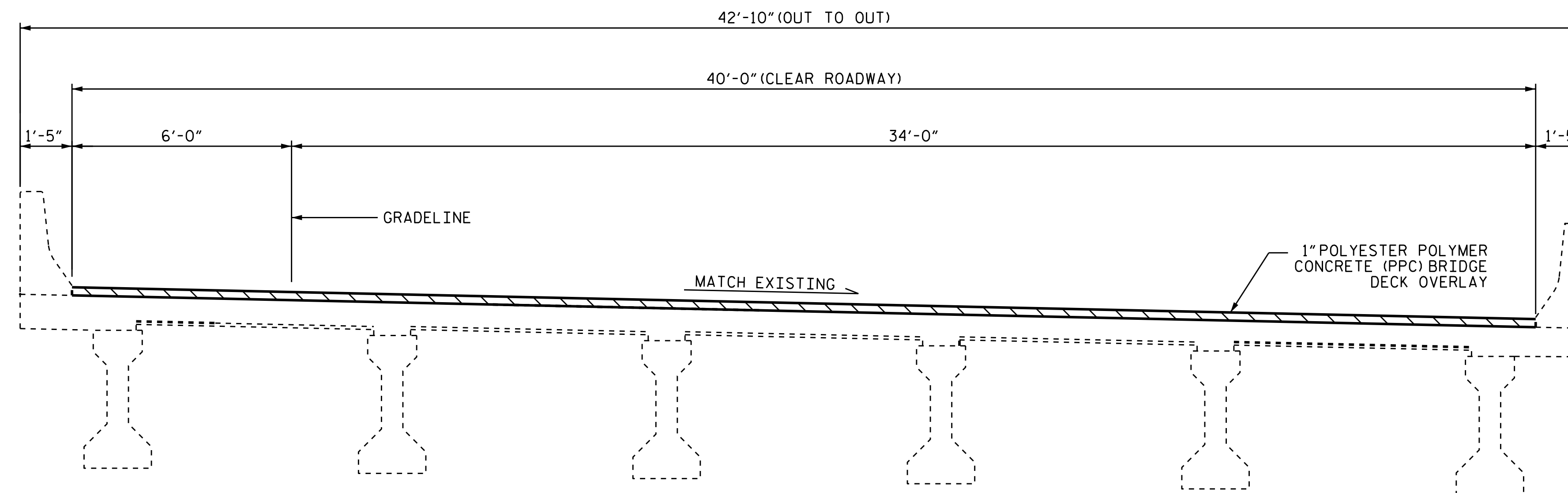
DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-47
2			4			69



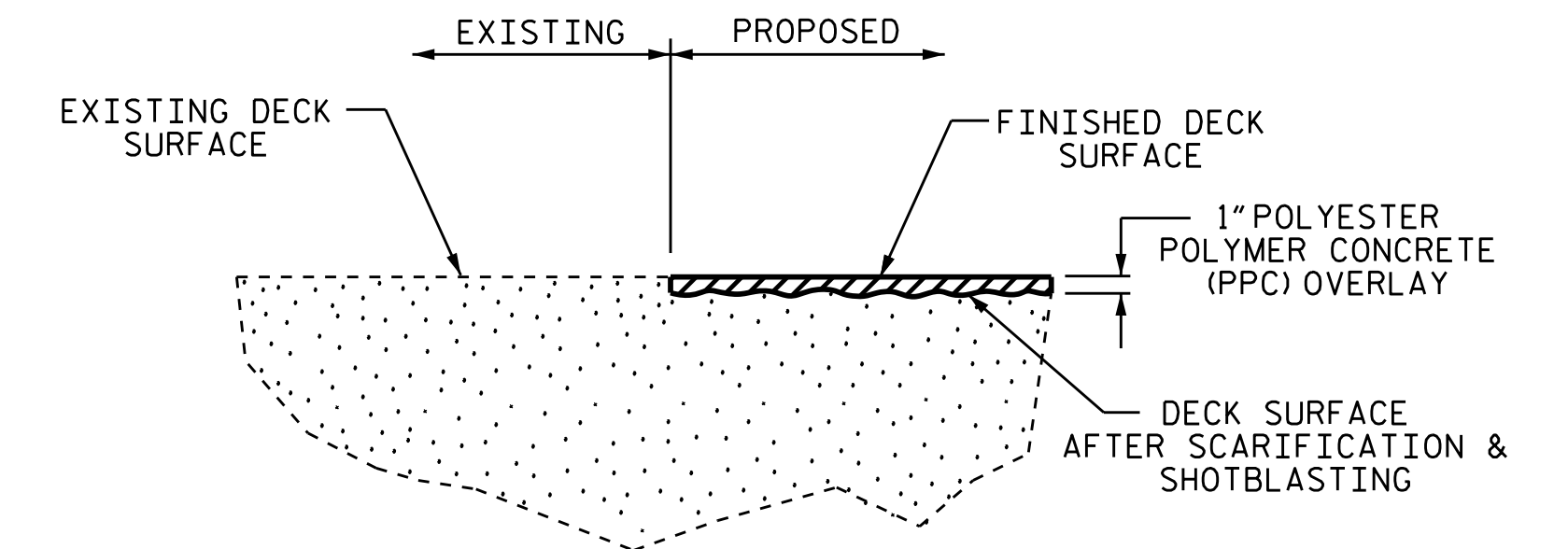
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)

NOTE:

SEE TRAFFIC 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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 491



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 &
 PPC OVERLAY DETAIL


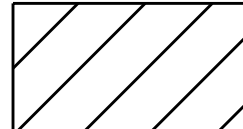

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-48
2			4			69

DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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NO DECK REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE DECK FOR POTENTIAL REPAIRS.

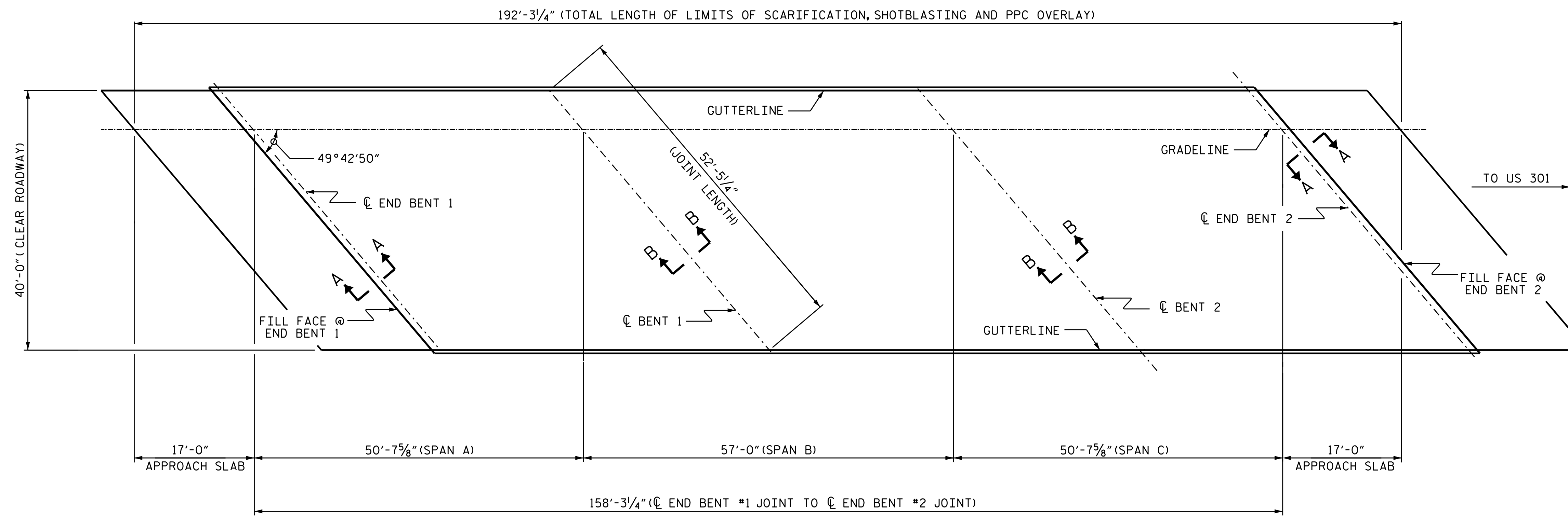


-  SCARIFICATION, SHOTBLASTING AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY
-  CLASS II SURFACE PREPARATION
-  CONCRETE DECK REPAIR FOR PPC OVERLAY

AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	854.5 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	1.0 SY	
SHOTBLASTING BRIDGE DECK	854.5 SY	
PPC MATERIALS	23.8 CY	
PLACING AND FINISHING PPC OVERLAY	854.5 SY	
GROOVING BRIDGE FLOORS	7,064.0 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.



PLAN OF SPANS

NOTES

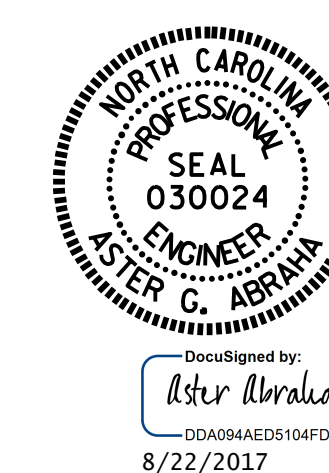
ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT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

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-53.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 491



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUPERSTRUCTURE
 SURFACE PREPARATION
 & PPC OVERLAY

DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-49
2			4			TOTAL SHEETS 69

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		150.0		

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		150.0		

NOTES

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

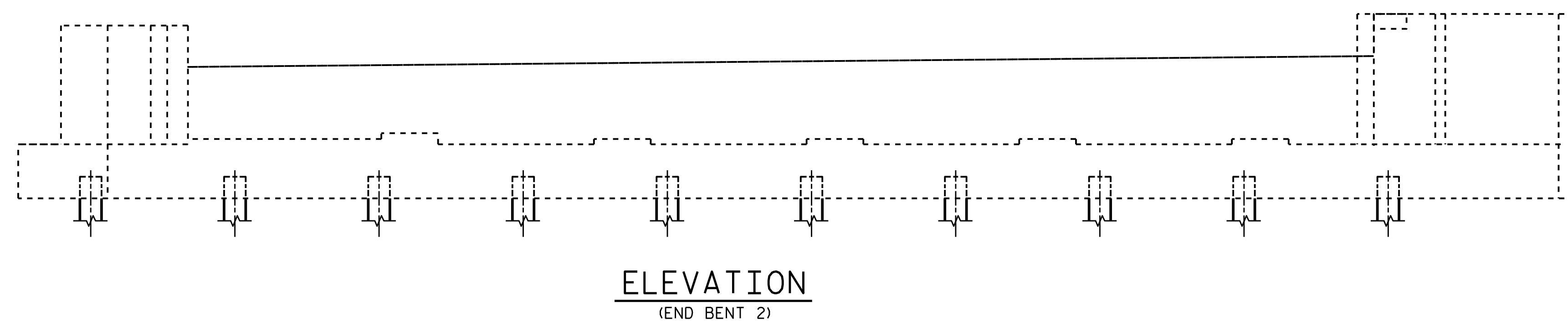
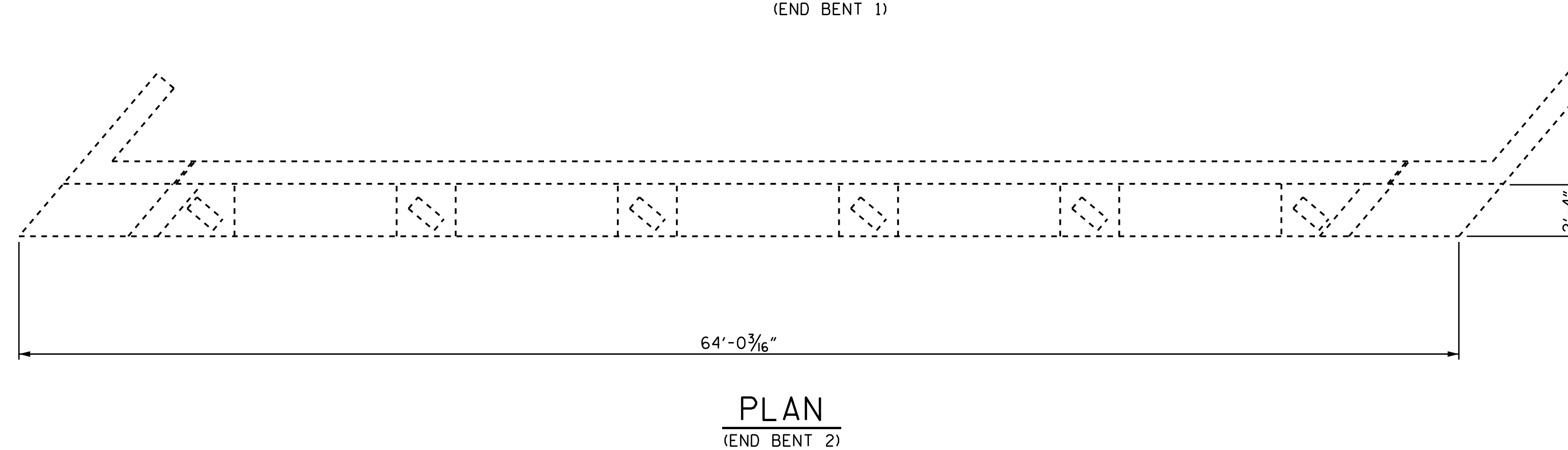
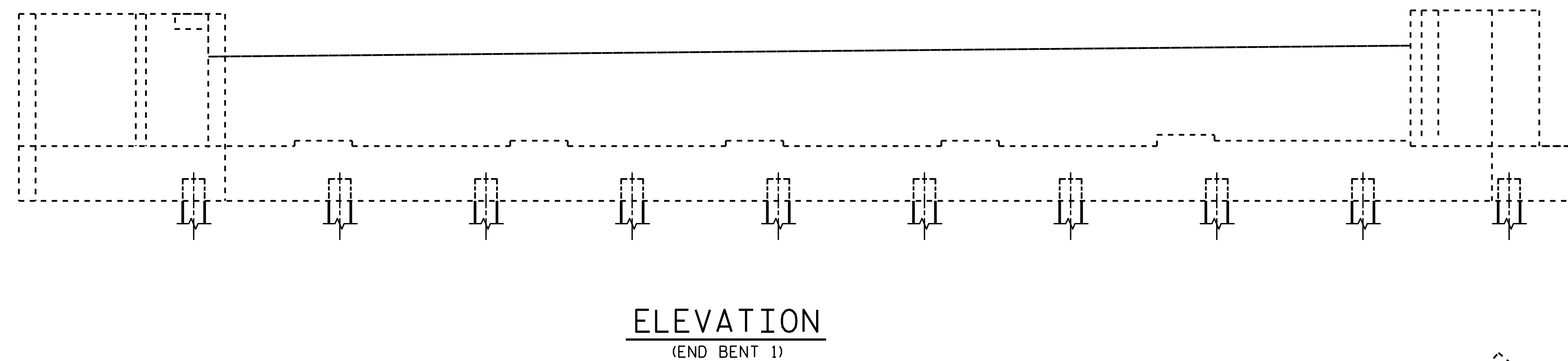
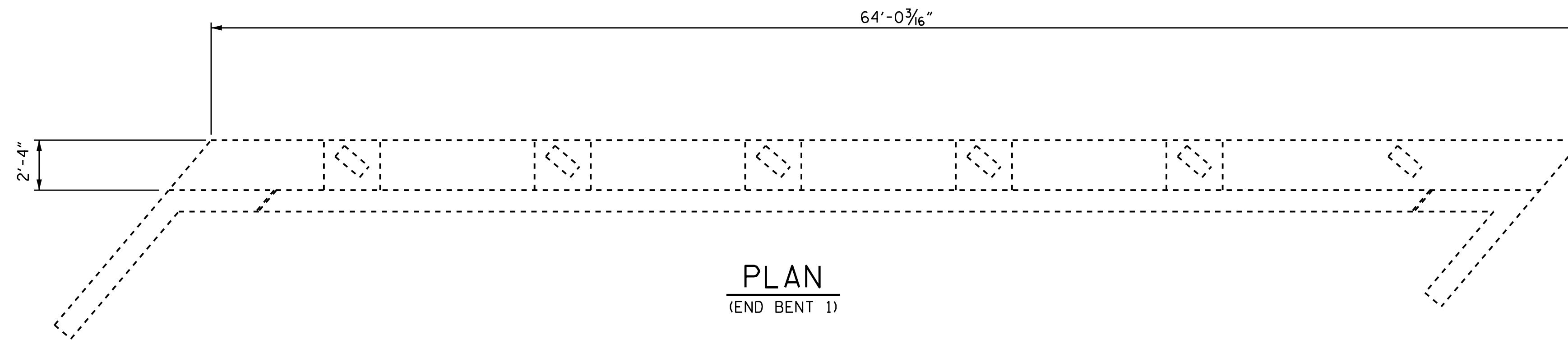
PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 491



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 END BENTS

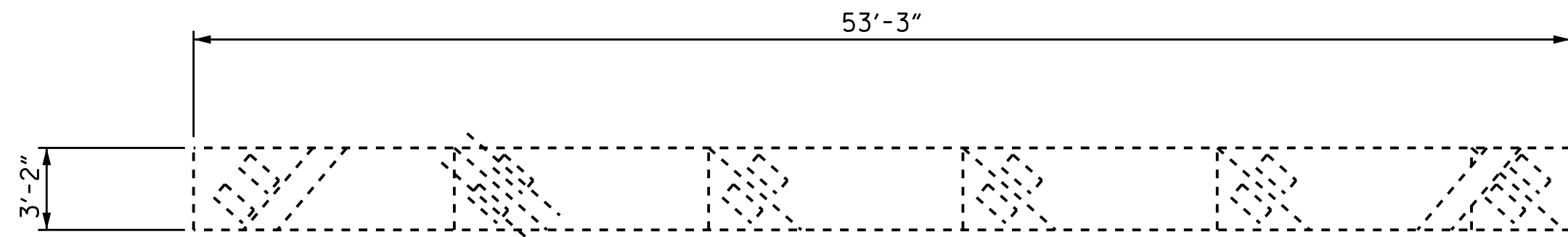
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-50
1			3			TOTAL SHEETS 69
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN
TOP OF CAP

SPAN B
SPAN A

NOTES:

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FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

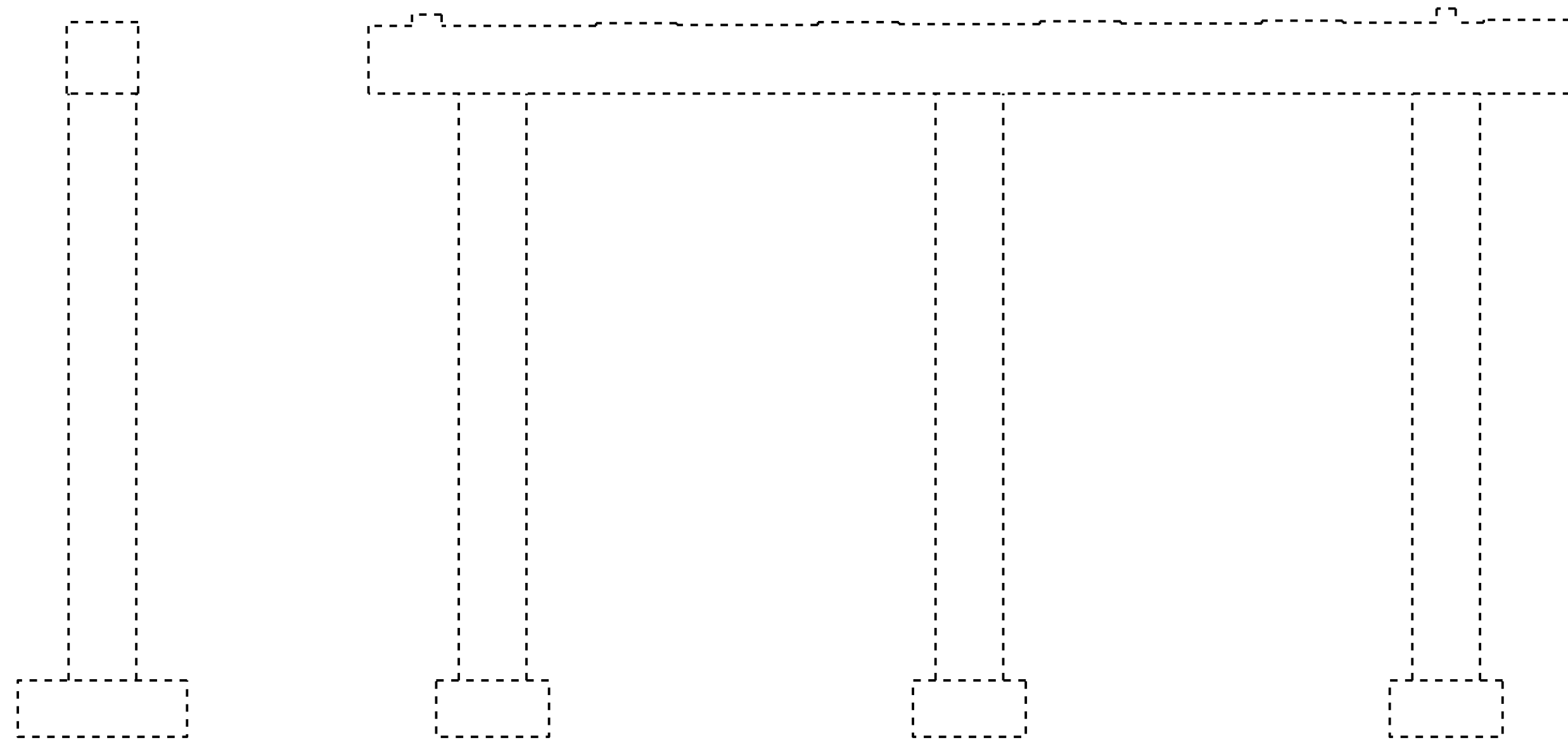
- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

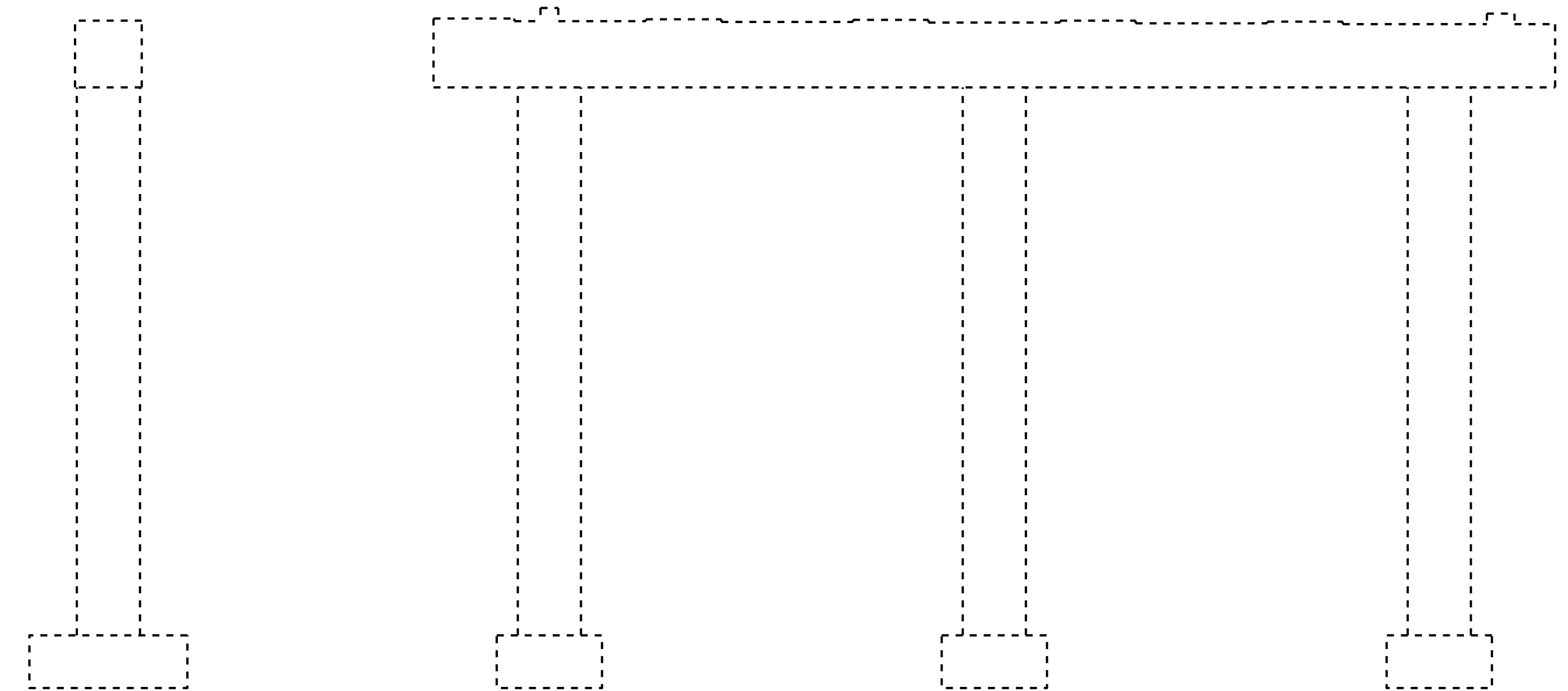
REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		169.0		

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



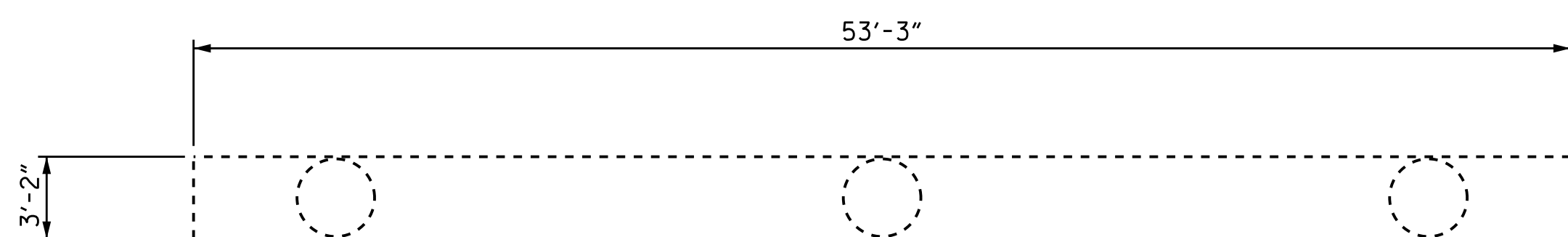
ELEVATION
(SPAN A SIDE)



ELEVATION
(SPAN B SIDE)

END VIEW
(LEFT SIDE)

END VIEW
(RIGHT SIDE)



PLAN
BOTTOM OF CAP

SPAN B
SPAN A

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 491



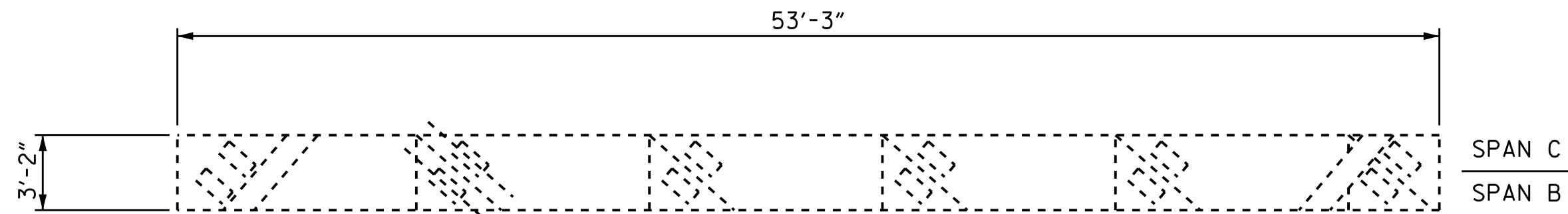
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
REPAIR
BENT 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-51
2			4			69

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DRAWN BY : S. T. SANDOR DATE : 03/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN
TOP OF CAP

NOTES:

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FOR "EPOXY RESIN INJECTION", SEE SPECIAL PROVISIONS.

FOR "EPOXY COATING", SEE SPECIAL PROVISIONS.

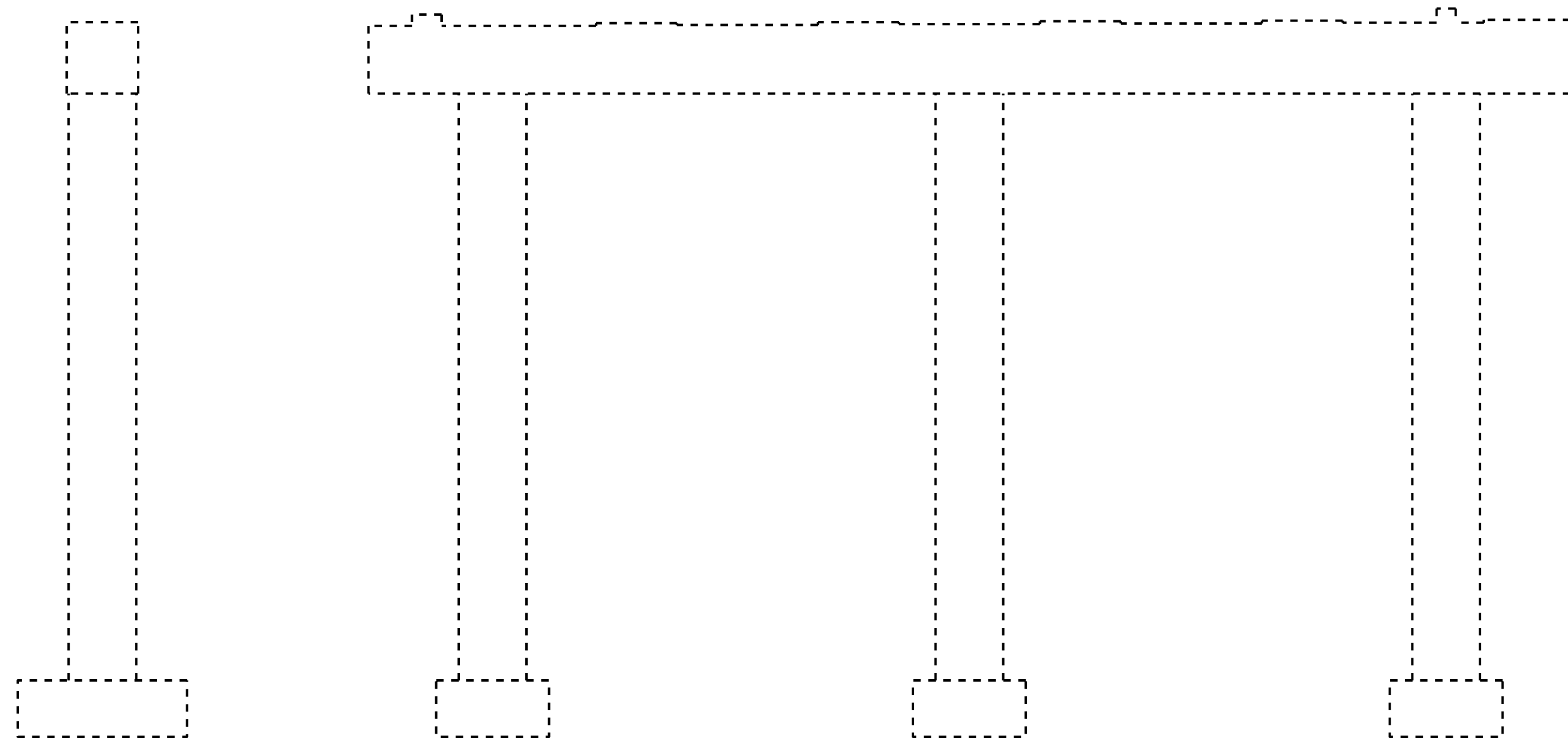
▨ - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

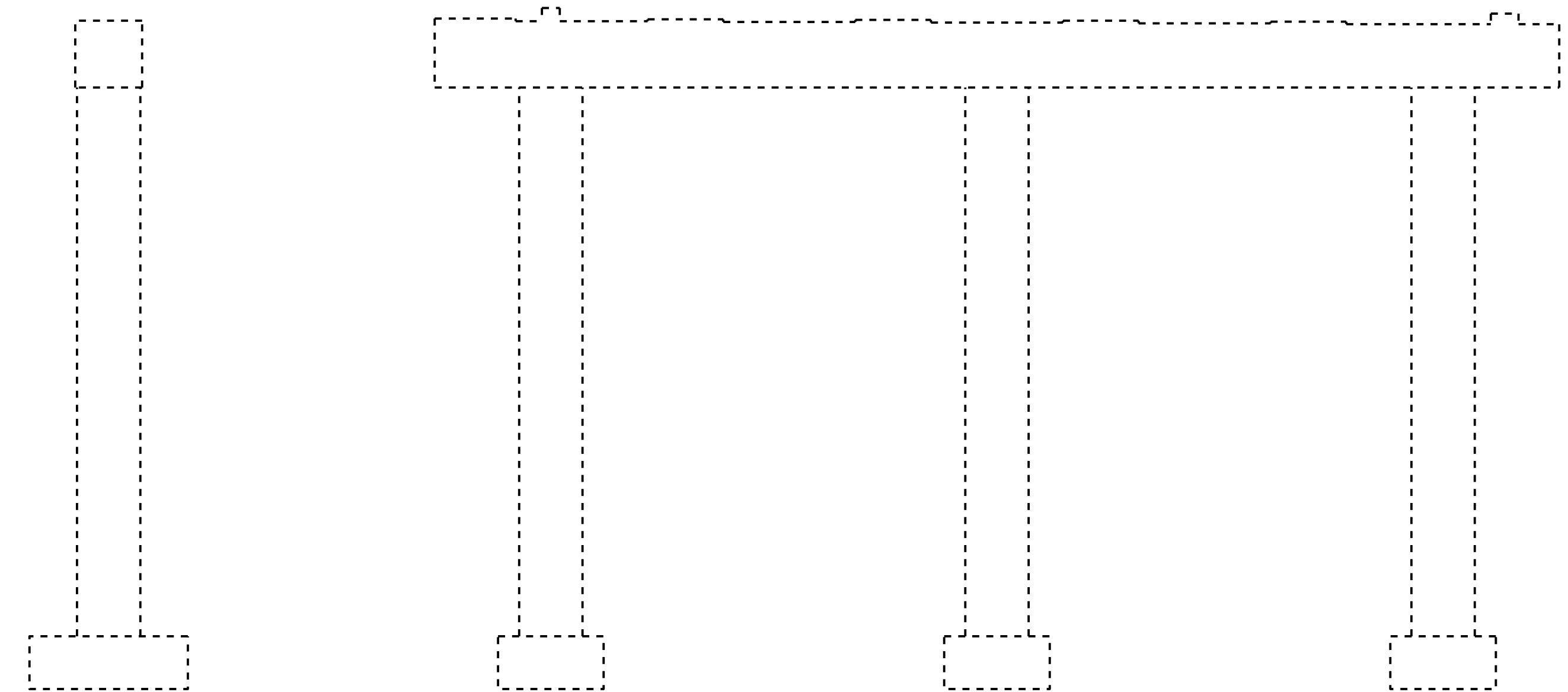
BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT		LN. FT
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		169.0		

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



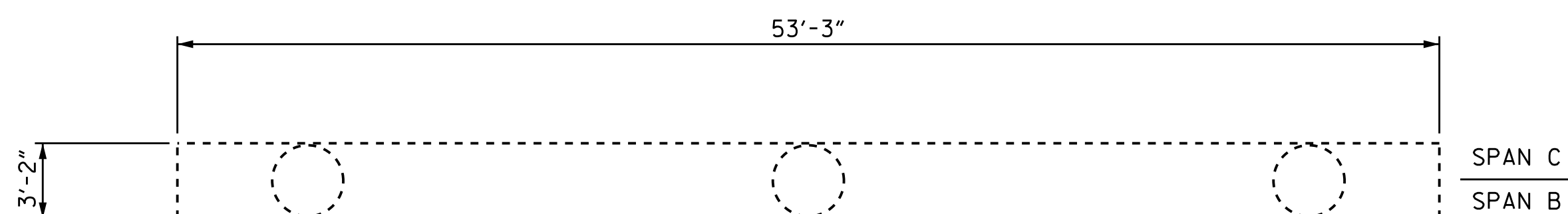
END VIEW
(LEFT SIDE)

ELEVATION
(SPAN A SIDE)



END VIEW
(RIGHT SIDE)

ELEVATION
(SPAN B SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 491

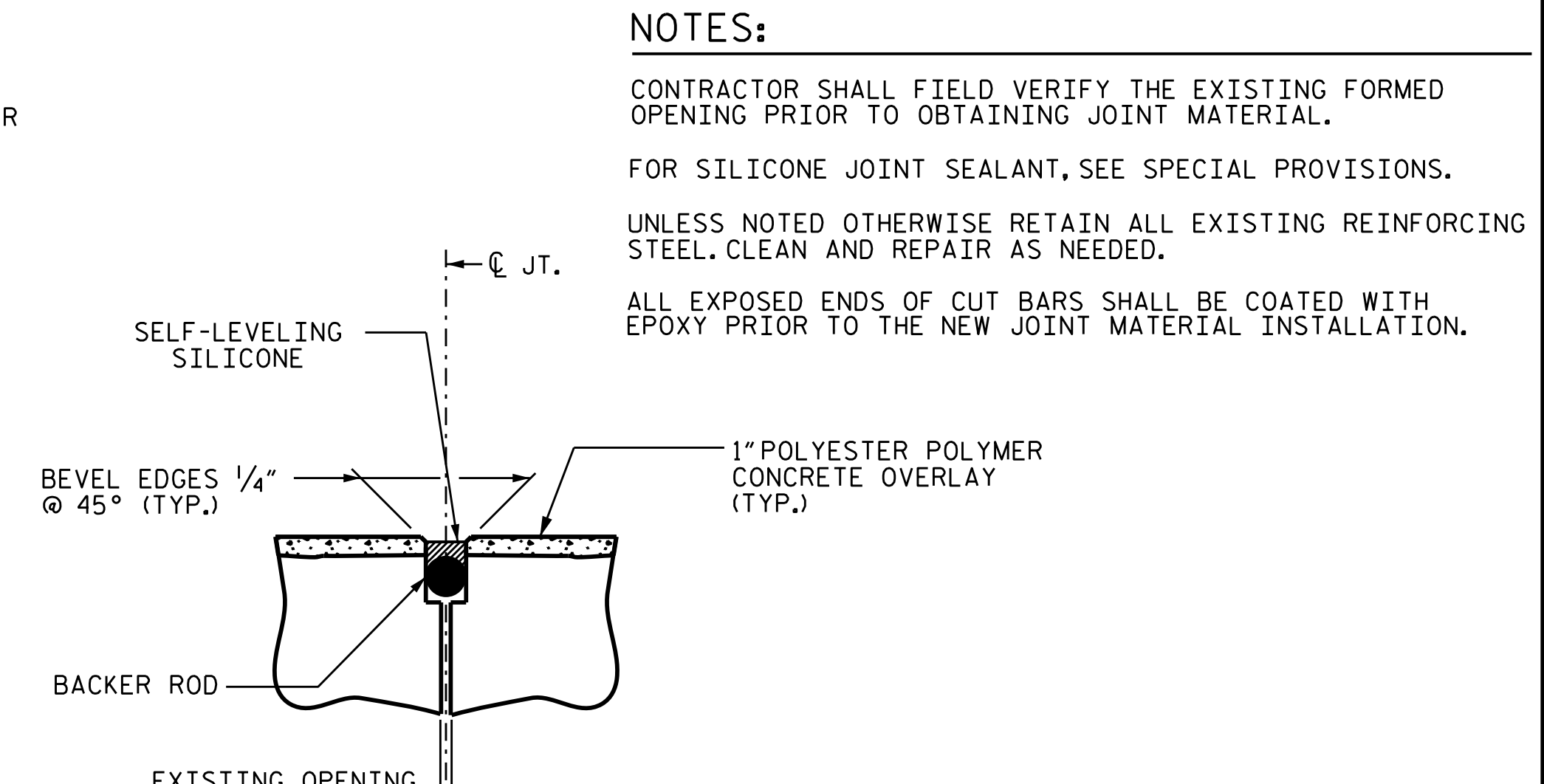
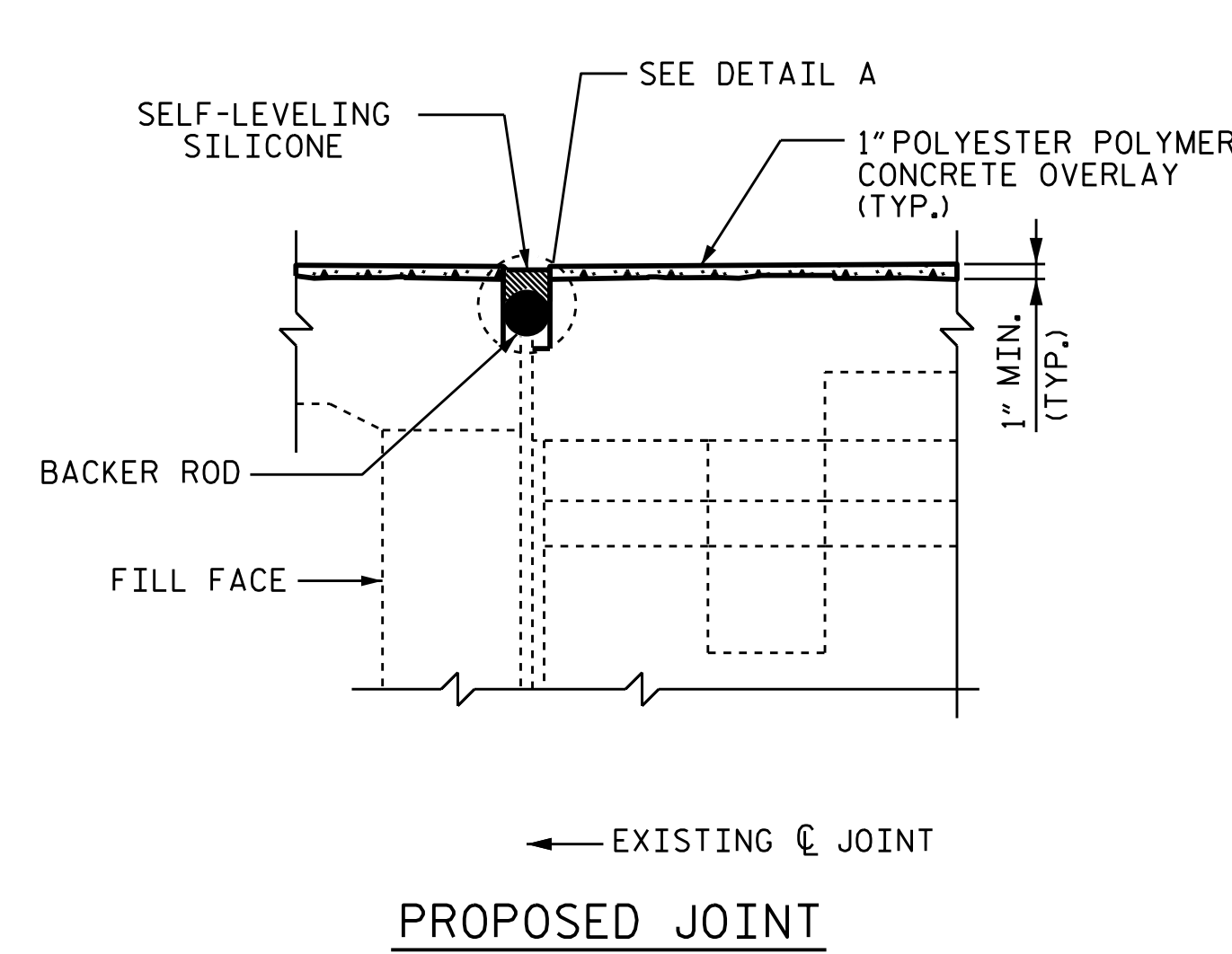
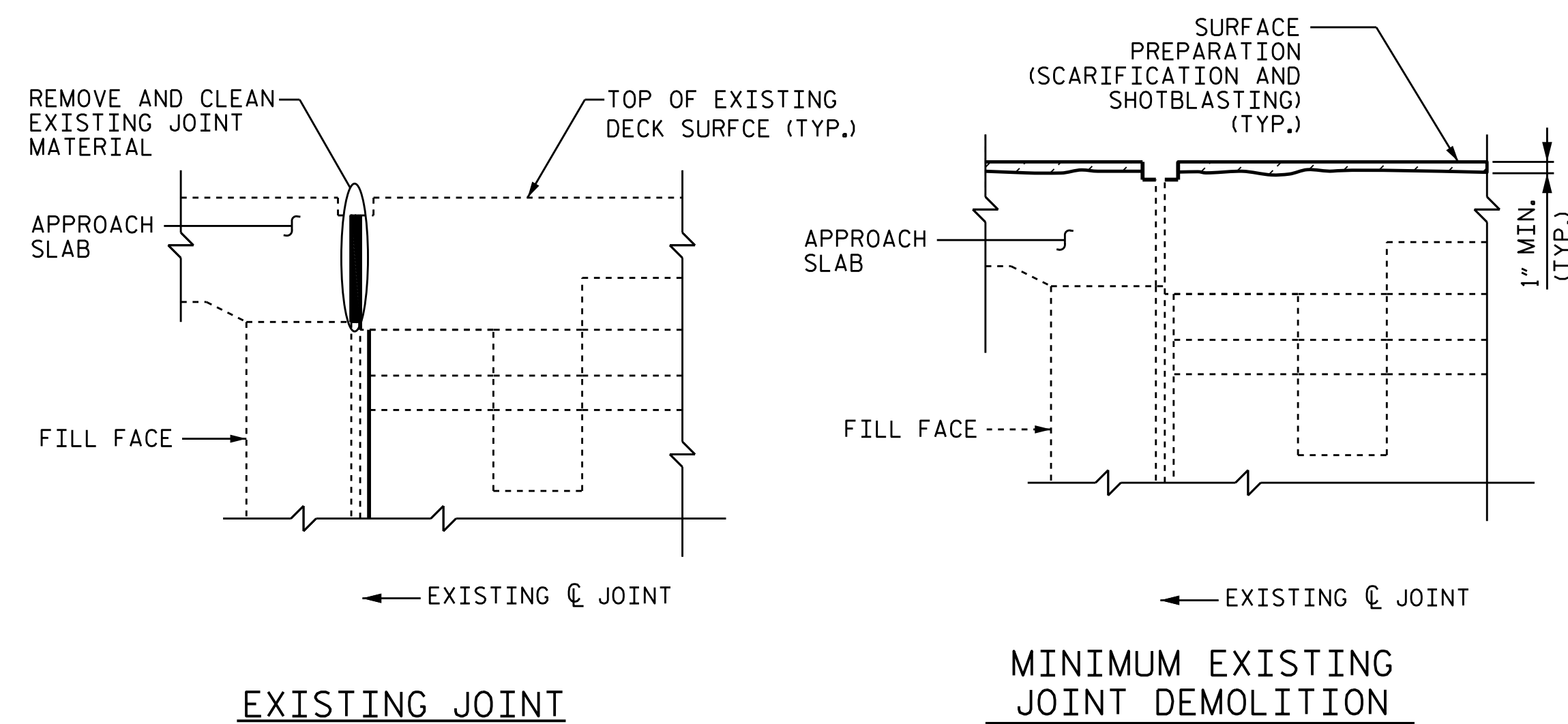


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 2

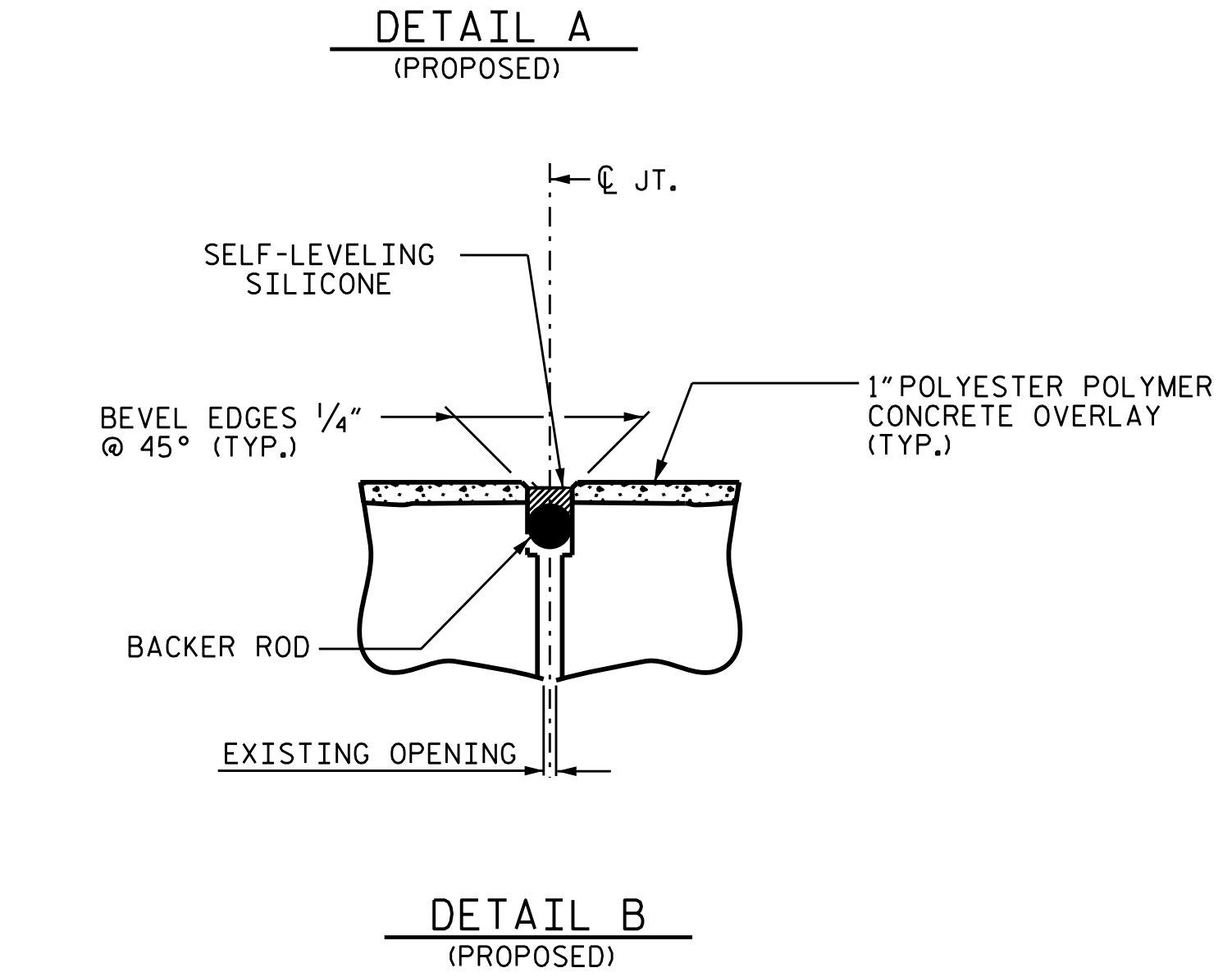
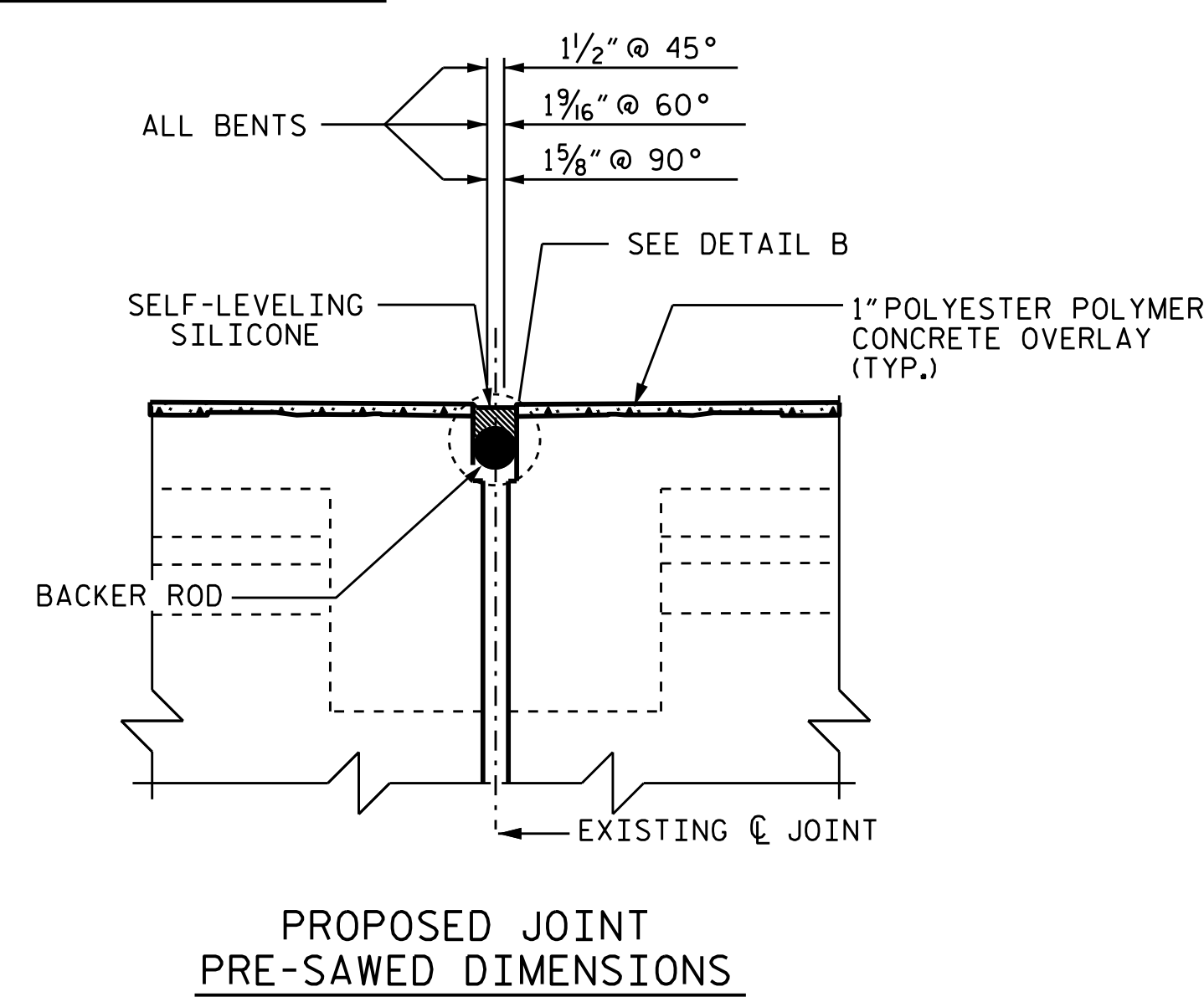
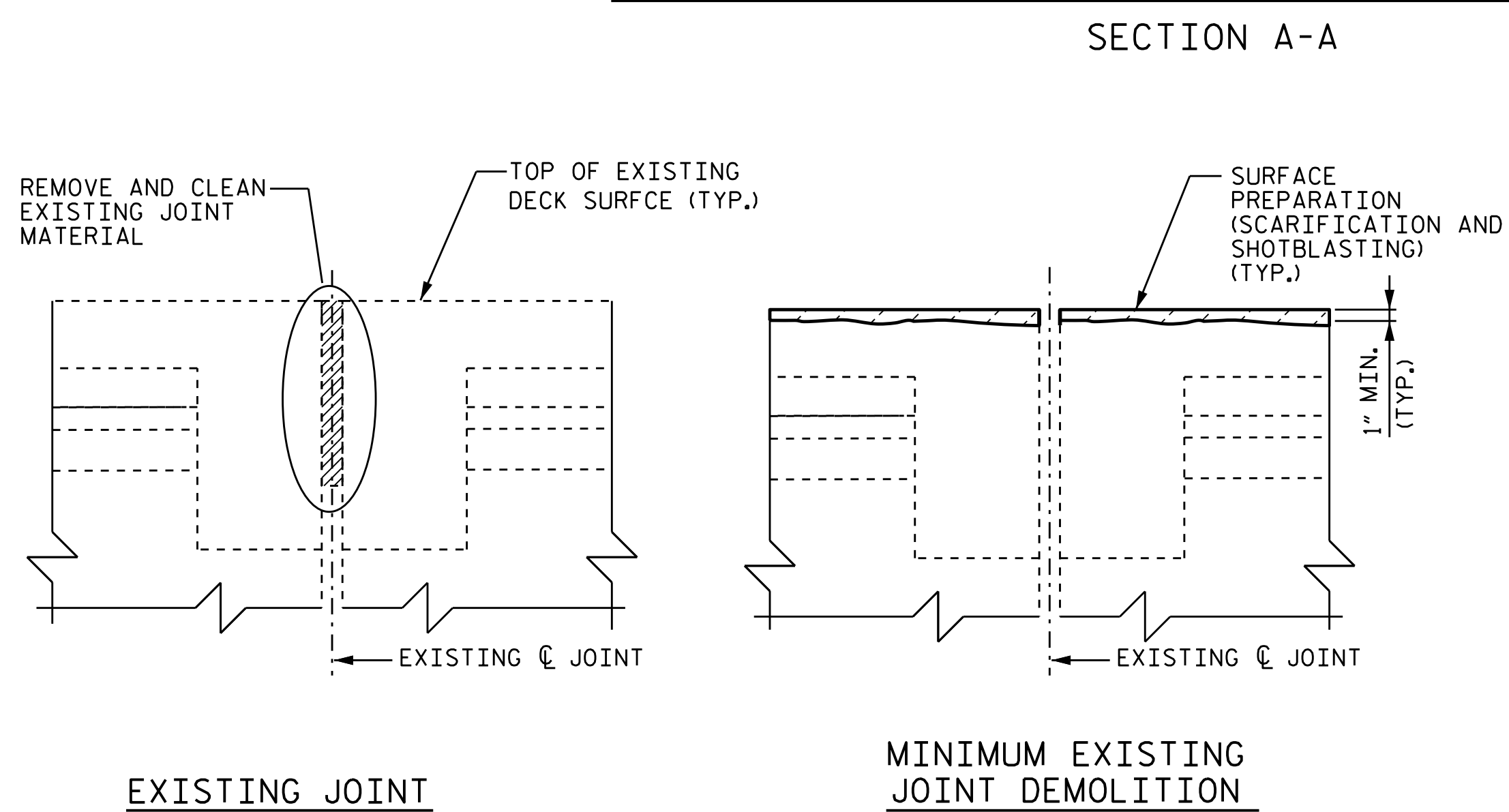
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-52
2			4			69

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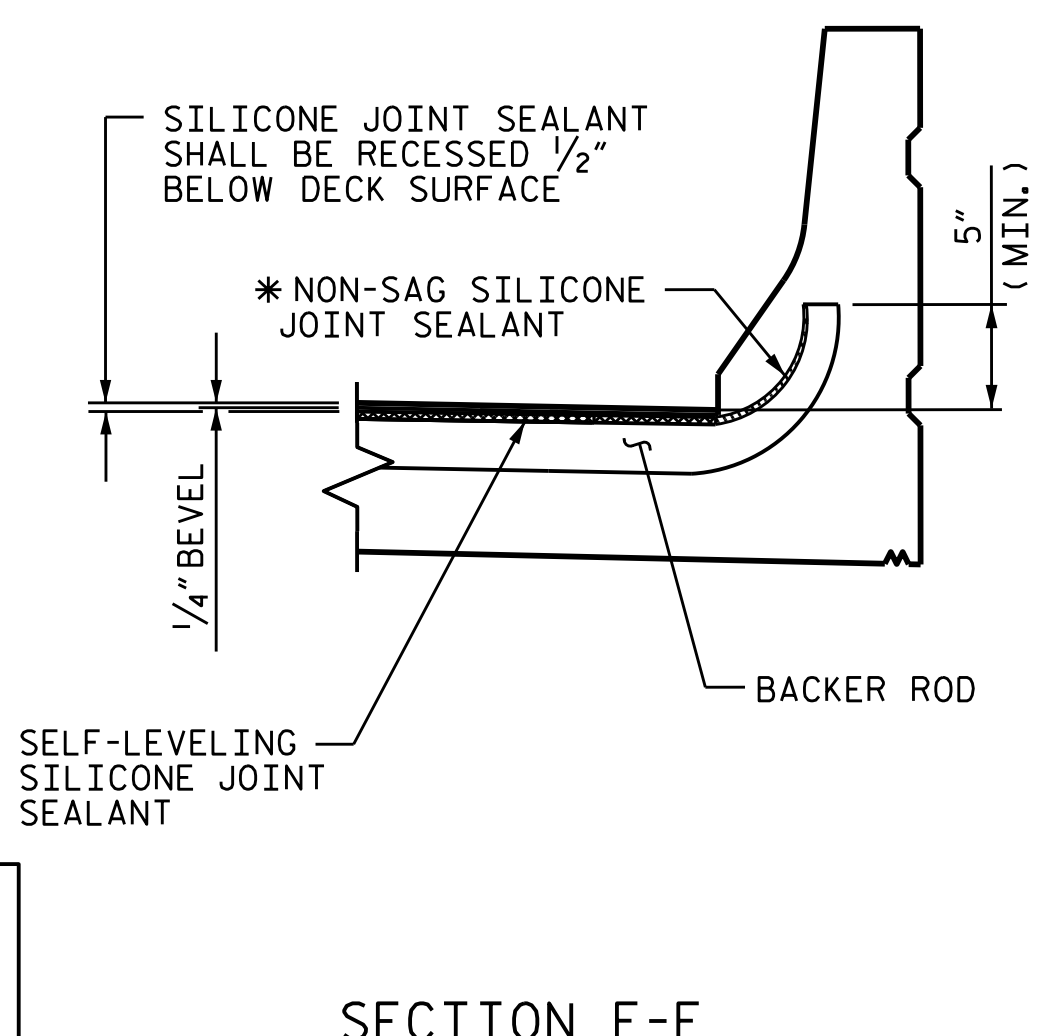
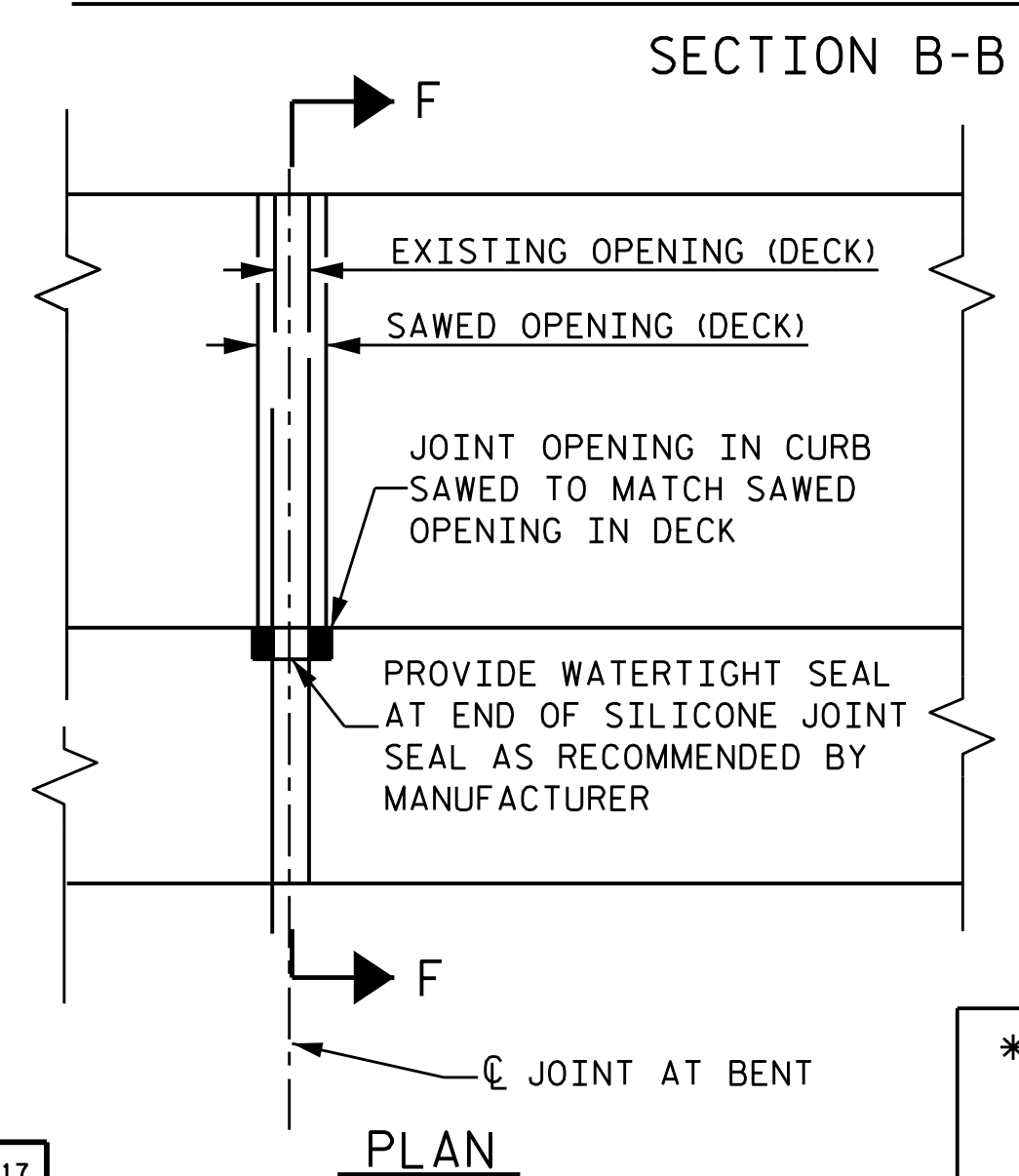
DRAWN BY : S. T. SANDOR DATE : 03/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017



JOINT INSTALLATION SEQUENCE AT END BENTS



JOINT INSTALLATION SEQUENCE AT BENTS

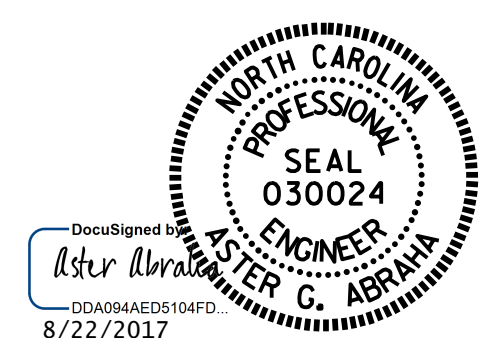


* NON-SAG SILICONE JOINT SEALANT TO BE PLACED AND ALLOWED TO SET, PRIOR TO PLACEMENT OF SELF-LEVELING SILICONE JOINT SEALANT.

PROJECT NO. I-5781
 JOHNSTON COUNTY
 BRIDGE No.: 490 & 491

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

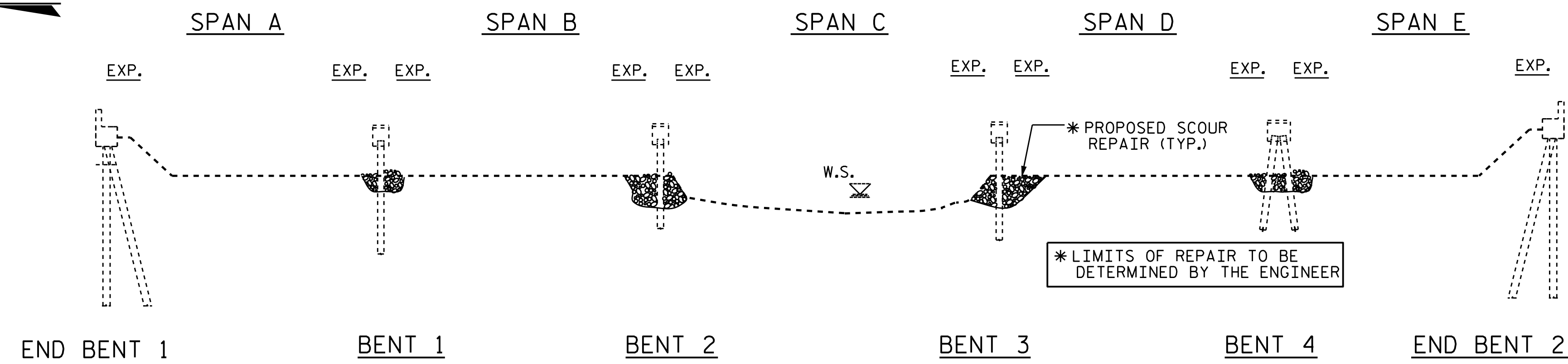
SUPERSTRUCTURE
 JOINT DETAILS



DRAWN BY : S. T. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH / A. C. ABRAHA DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-53
1			3			TOTAL SHEETS 69
2			4			

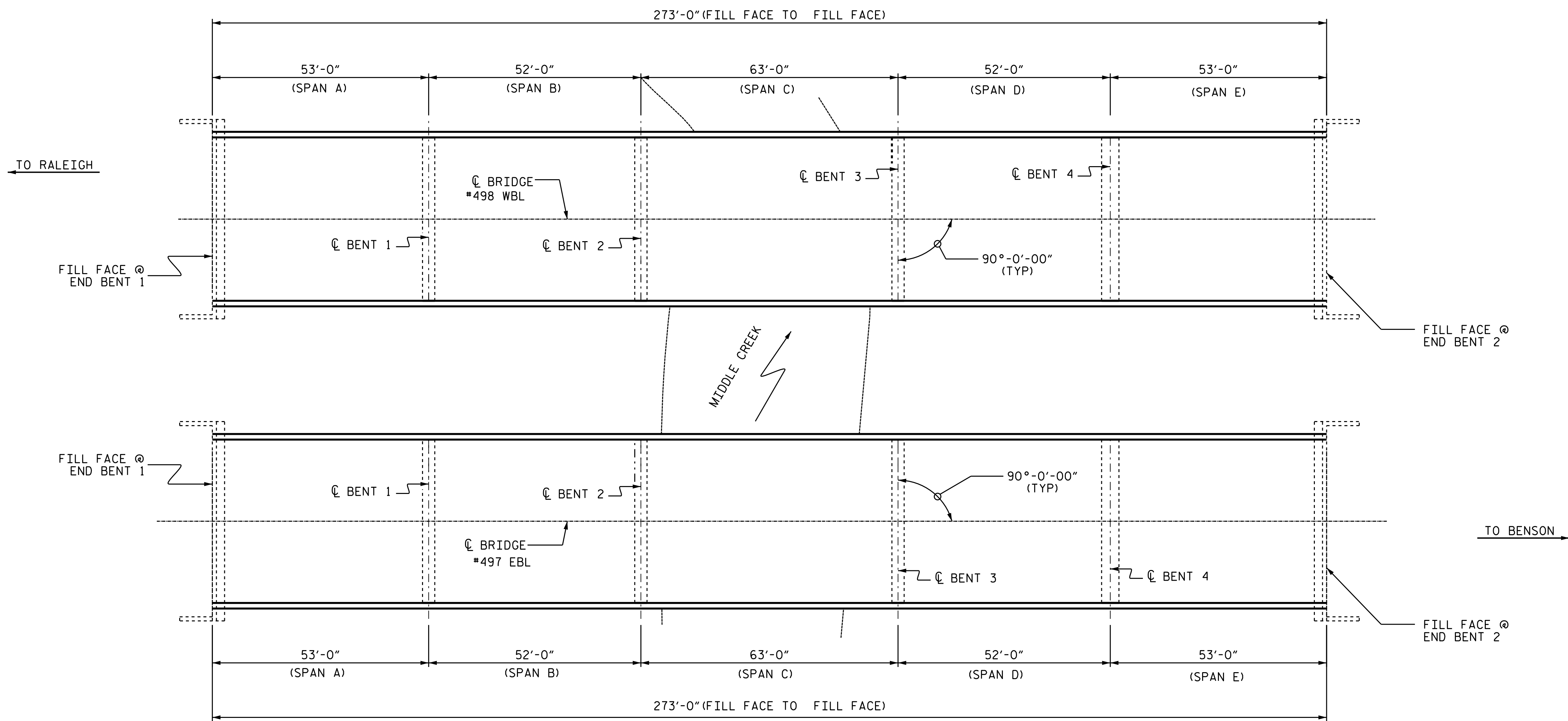


ELEVATION
(SECTION ALONG ϕ ROADWAY)

NOTE
BRIDGE #497 - ALL BENTS HAVE SCOUR.
BRIDGE #498 - BENTS #1, #2 & #3 HAVE SCOUR.

SCOPE OF WORK

- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- CLEAN AND REMOVE EXISTING BRIDGE DECK JOINTS MATERIAL.
- PERFORM DECK REPAIRS IN PREPARED AREAS.
- OVERLAY PREPARED BRIDGE DECK WITH POLYESTER POLYMER CONCRETE.
- INSTALL SILICONE JOINT SEALS.
- GROOVE POLYESTER POLYMER CONCRETE.
- EPOXY COATING TOP OF CAP.
- SUBSTRUCTURE REPAIRS USING EPOXY RESIN INJECTION AND SHOTCRETE.
- FILL SCOUR HOLES WITH CLASS 2 RIP RAP.

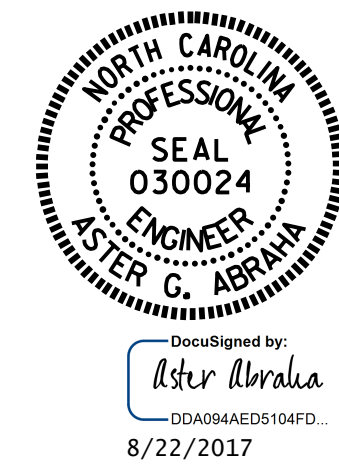


PLAN
(COLUMNS & FOOTINGS NOT SHOWN IN PLAN VIEW FOR CLARITY)

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

Resident Engineer _____ Date _____

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 497 & 498



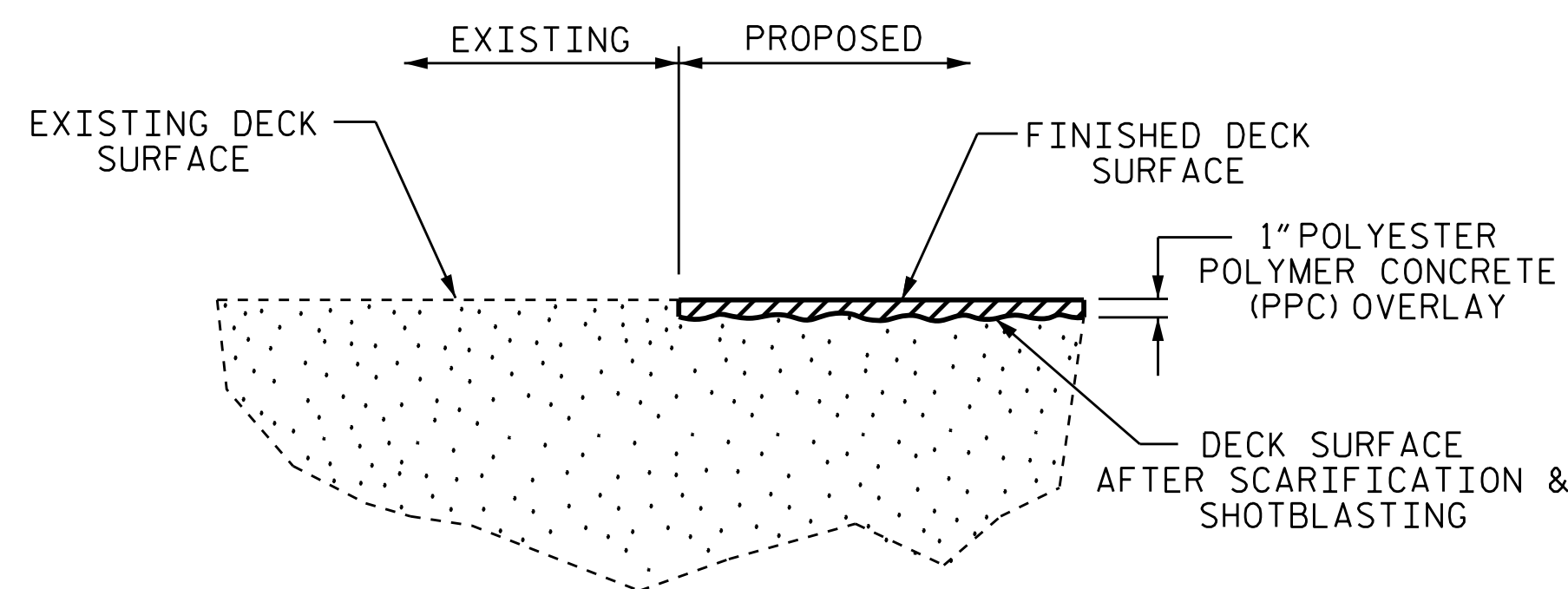
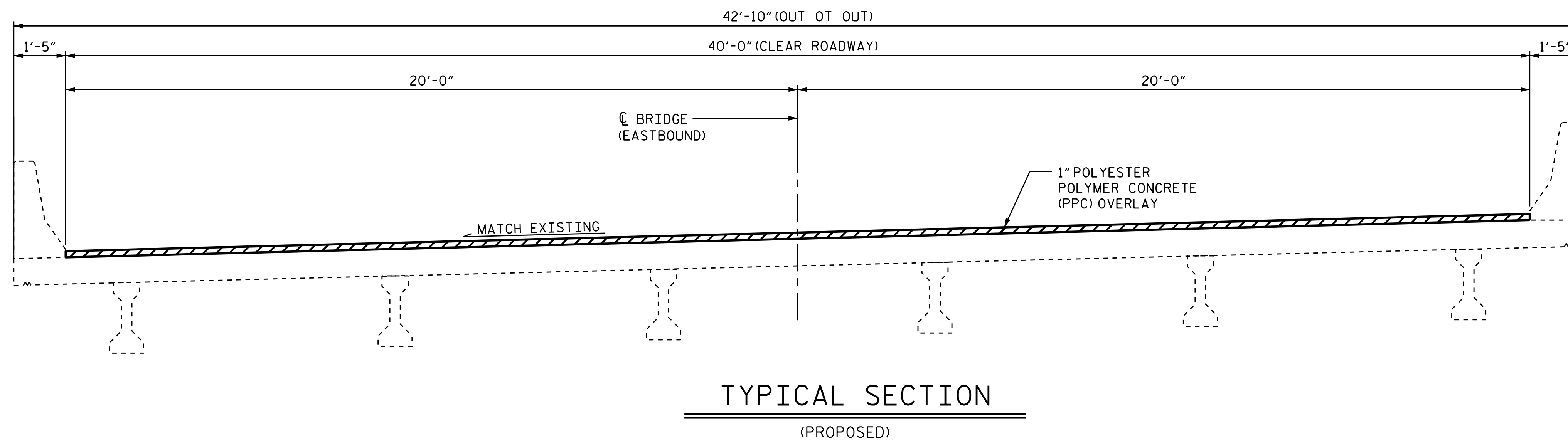
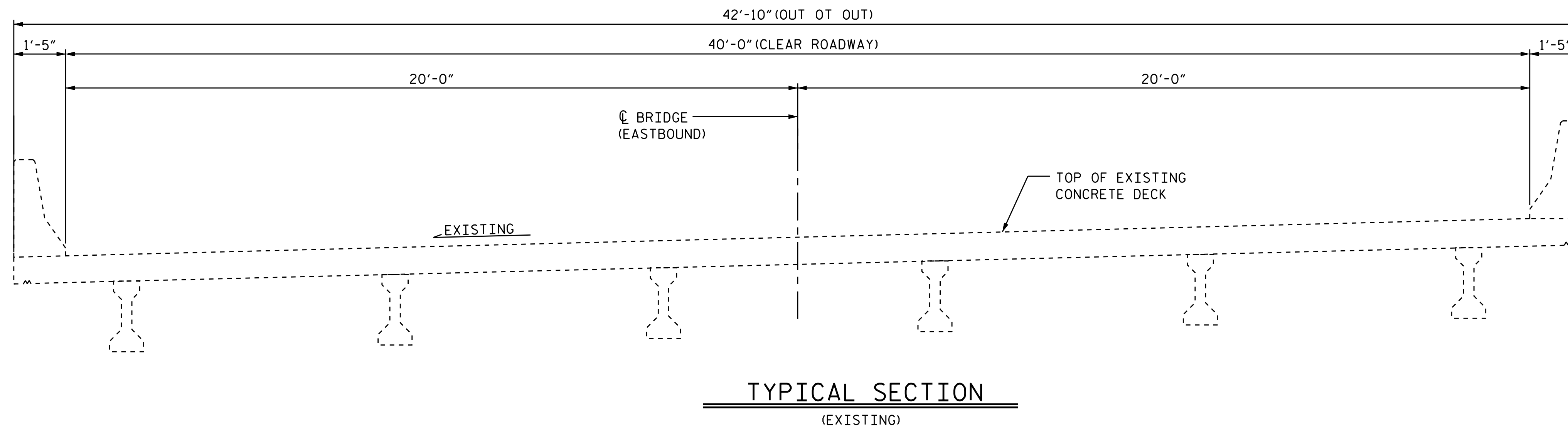
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING
FOR BRIDGES ON I-40 EBL
& I-40 WBL
OVER MIDDLE CREEK

DRAWN BY : S. T. SANDOR DATE : 02/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

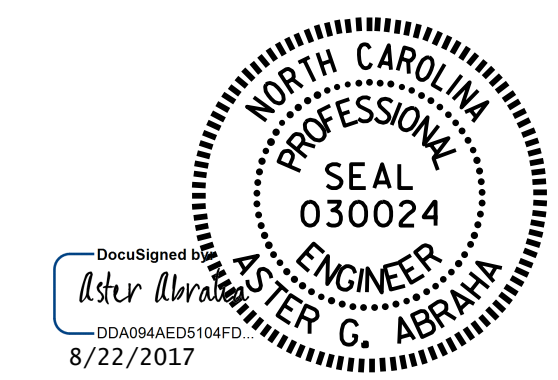
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	S-54	
1			3			TOTAL SHEETS	
2			4			69	

NOTE:
 SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYESTER POLYMER CONCRETE PLACEMENT.
 BRIDGE #497 SHOWN, BRIDGE # 498 SIMILAR



PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 497 & 498




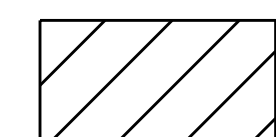
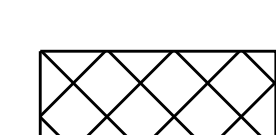
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 &
 PPC OVERLAY DETAILS

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-55
2			4			69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

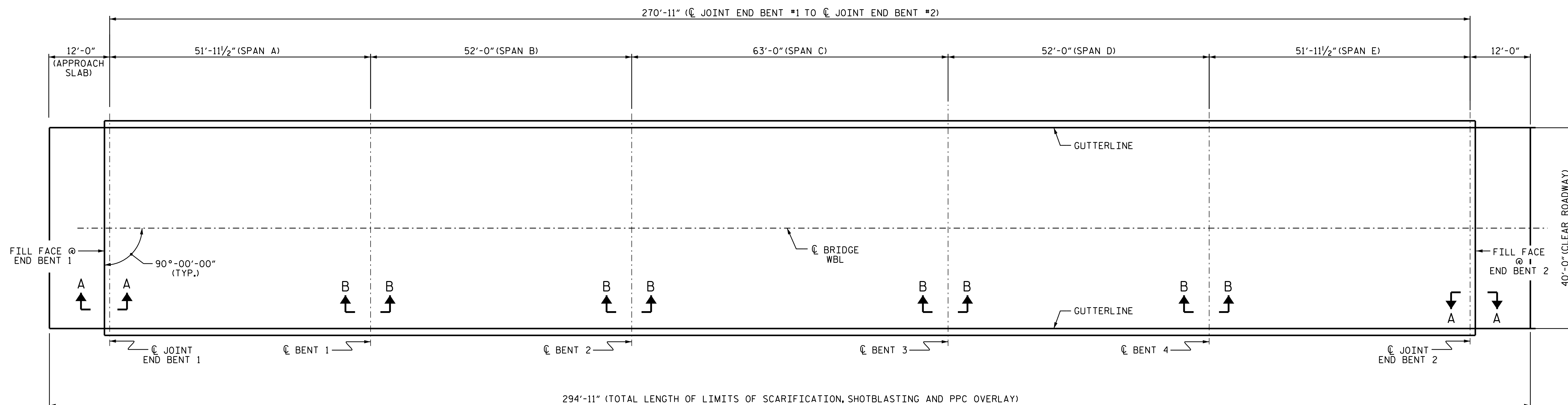
NO DECK REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE DECK FOR POTENTIAL REPAIRS.

-  SCARIFICATION, SHOTBLASTING AND POLYESTER POLYMER CONCRETE (PPC) OVERLAY
-  CLASS II SURFACE PREPARATION
-  CONCRETE DECK REPAIR FOR PPC OVERLAY

AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,311.0 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	1.0 SY	
SHOTBLASTING BRIDGE DECK	1,311.0 SY	
PPC MATERIALS	36.5 CY	
PLACING AND FINISHING PPC OVERLAY	1,311.0 SY	
GROOVING BRIDGE FLOORS	10,835.0 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.



PLAN OF SPANS

NOTES

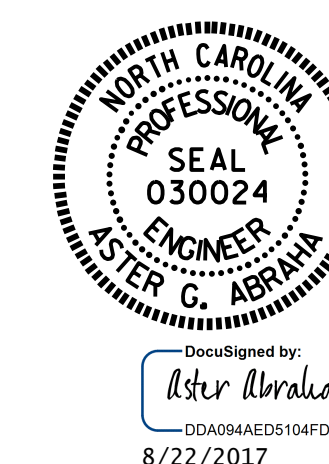
ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT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

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-68.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 497

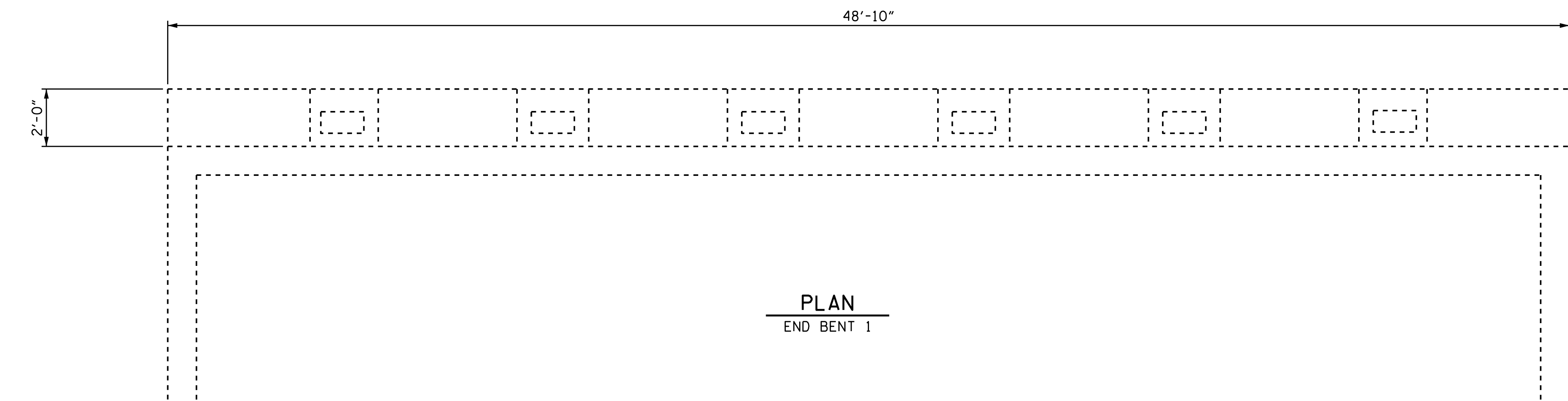


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SURFACE PREPARATION
 & PPC OVERLAY

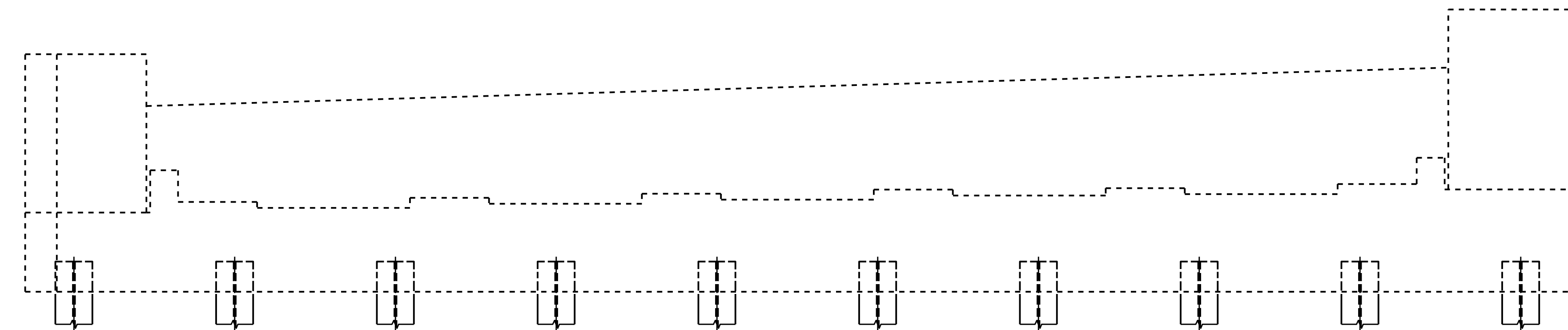
DRAWN BY : S. T. SANDOR DATE : 06/2017
 CHECKED BY : W.C. SMITH DATE : 6/15/17

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

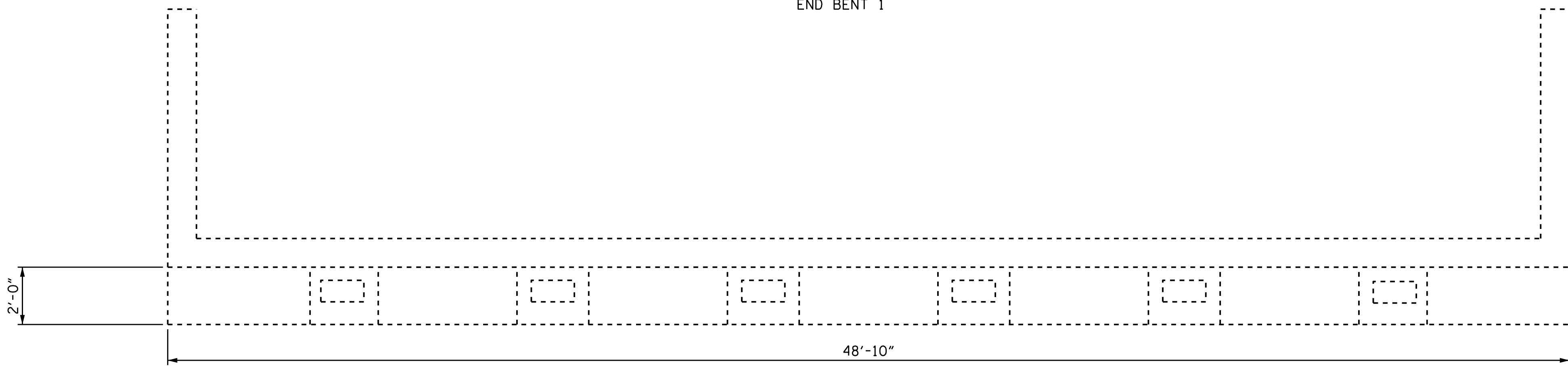
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-56
2			4			69



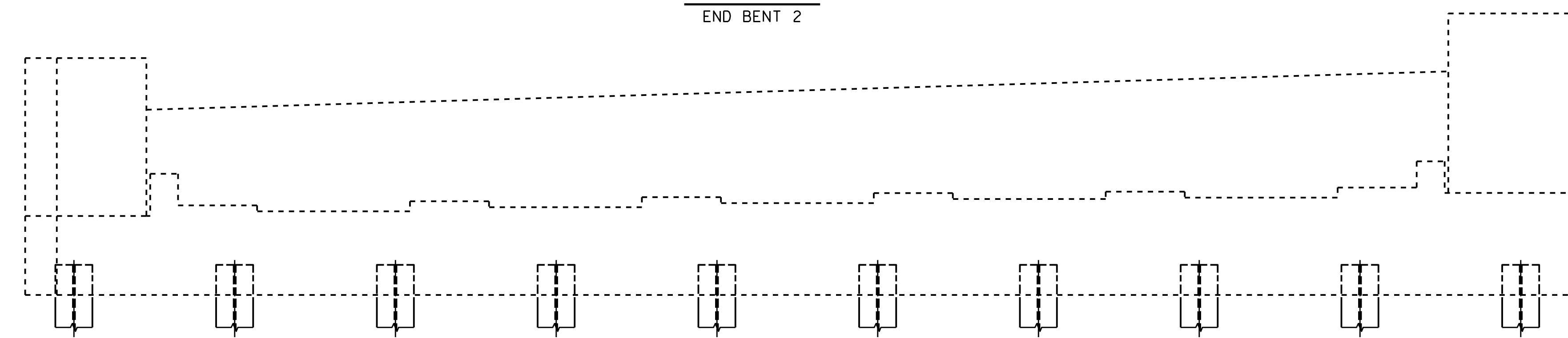
PLAN
END BENT 1



ELEVATION
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		98.0		
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		98.0		

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

- SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

PROJECT NO. I-5781
 JOHNSTON COUNTY
 BRIDGE NO. 497



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
 SUBSTRUCTURE
 REPAIR
 END BENTS

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S-57
2			4			TOTAL SHEETS 69

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NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

NOTES:

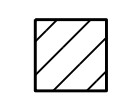
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE INSPECTOR OR ENGINEER THE CONTRACTOR SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS AND ADJUST THE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

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

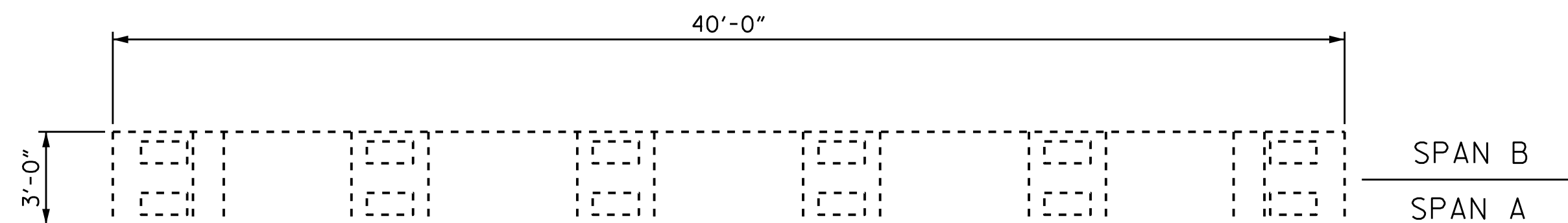
FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

-  - SHOTCRETE REPAIR
- ERI - EPOXY RESIN INJECTION

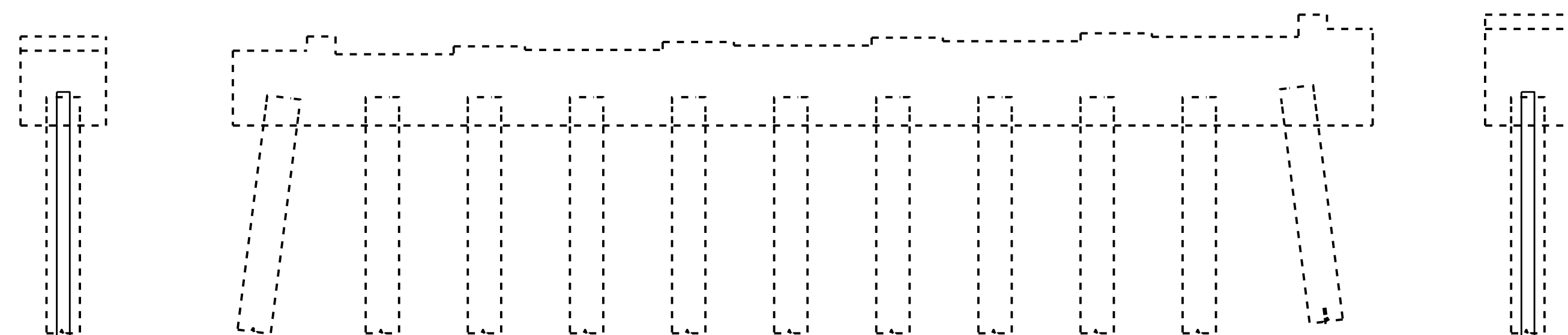
REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

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



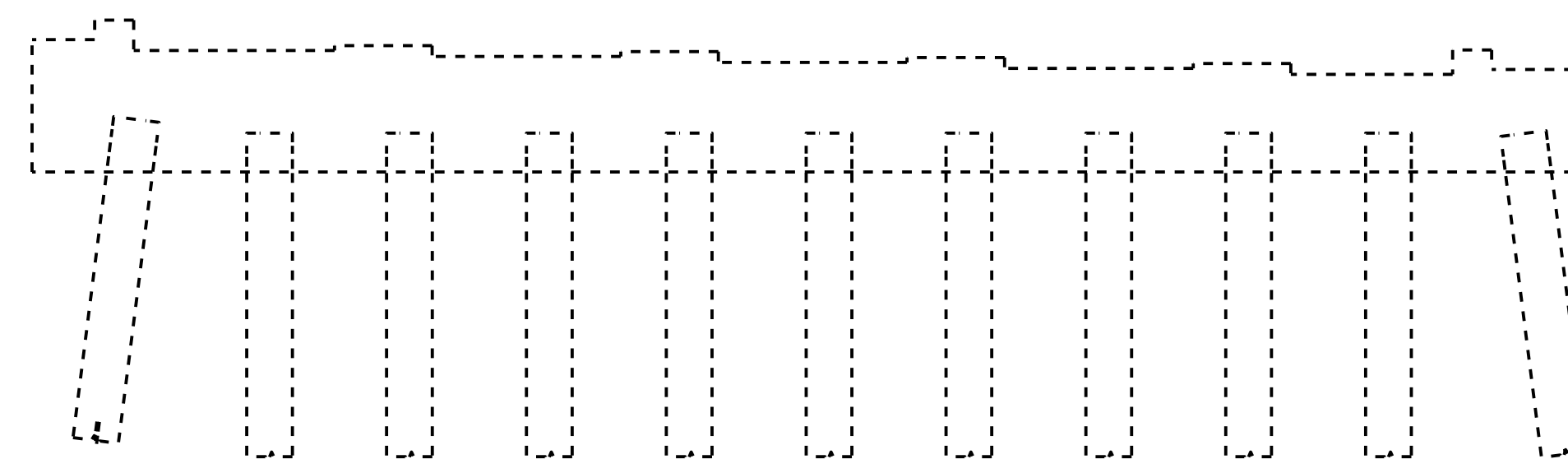
PLAN
TOP OF CAP



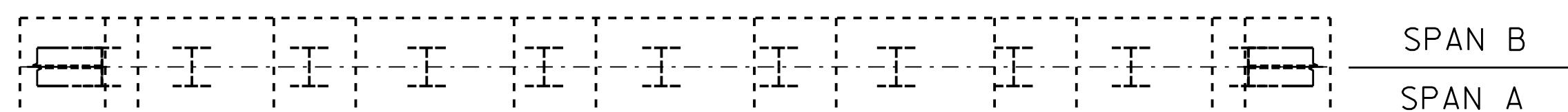
END VIEW
LEFT SIDE

ELEVATION
(SPAN A SIDE)

END VIEW
RIGHT SIDE

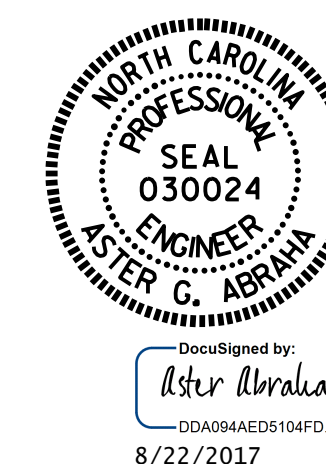


ELEVATION
(SPAN B SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 497



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

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-58
1			3			TOTAL SHEETS
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

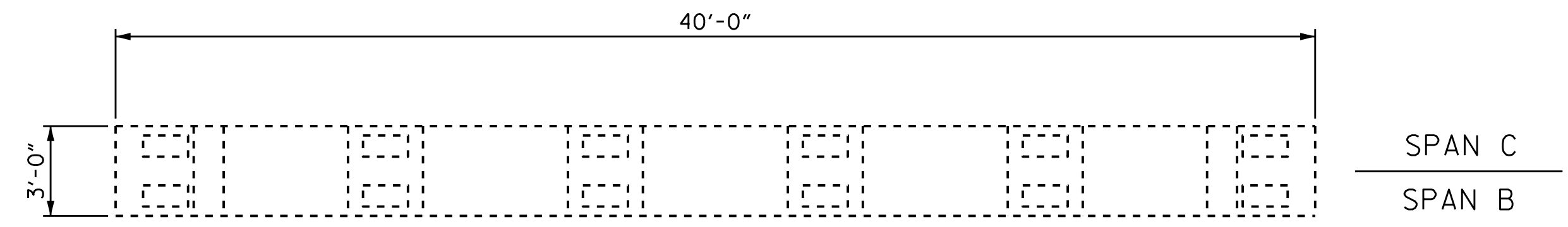
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

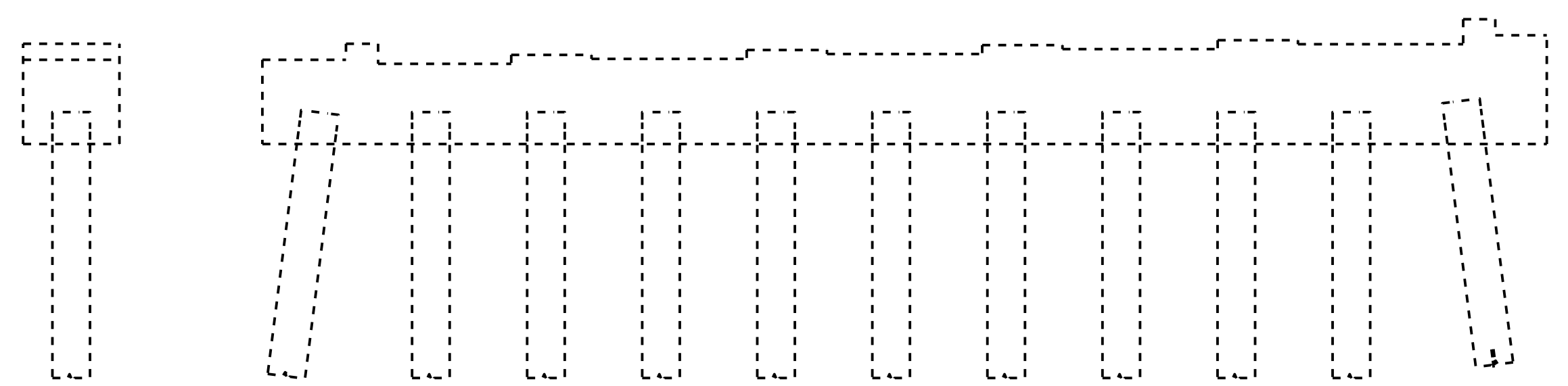
REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

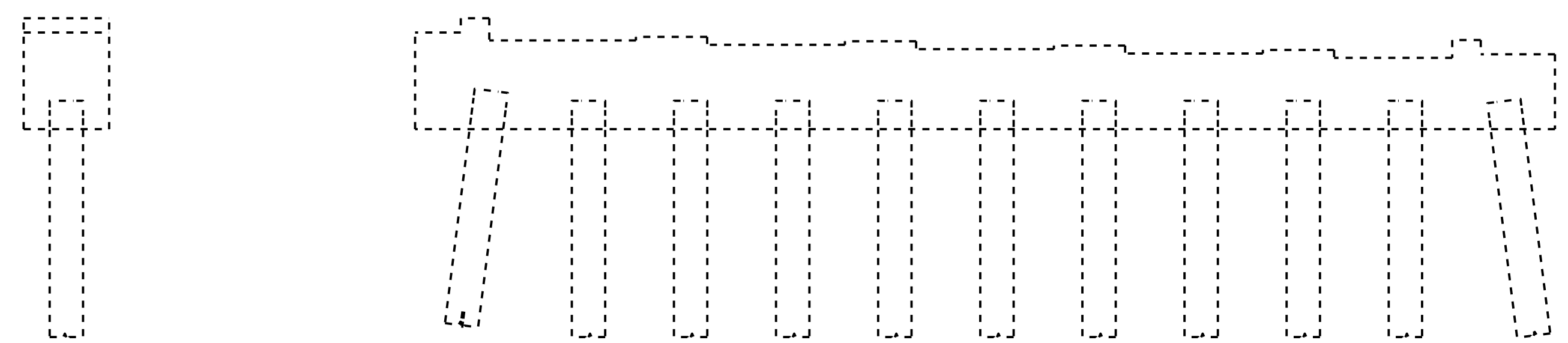
VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 2" CL TO SAWCUT. SEE REPAIR DETAILS.



PLAN
TOP OF CAP



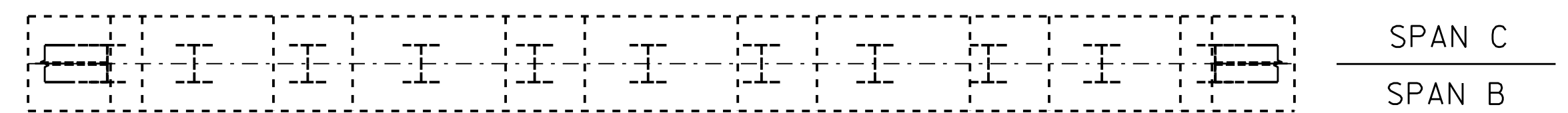
END VIEW
LEFT SIDE



END VIEW
RIGHT SIDE

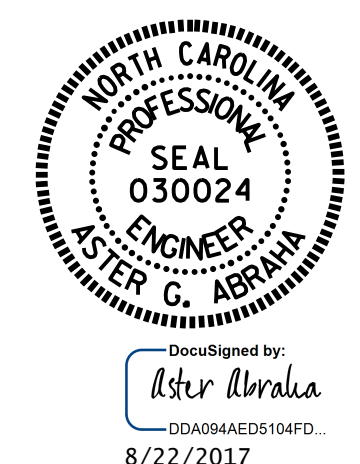
ELEVATION
(SPAN B SIDE)

ELEVATION
(SPAN C SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 497



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

REPAIR
 BENT 2

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-59
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

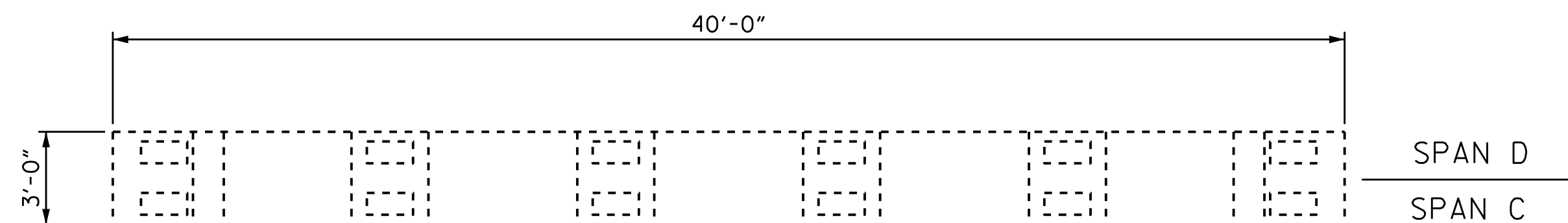
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

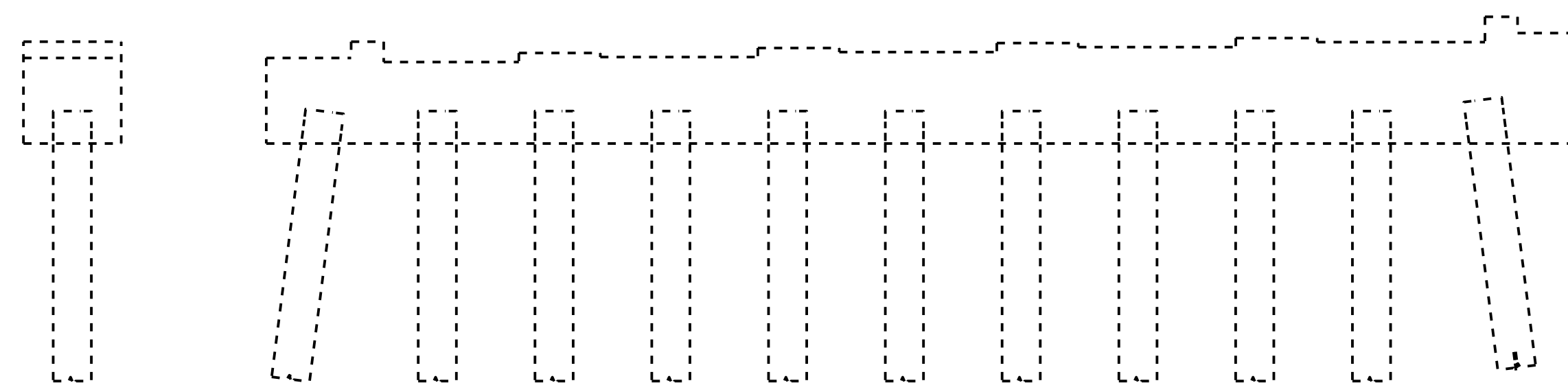
REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

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

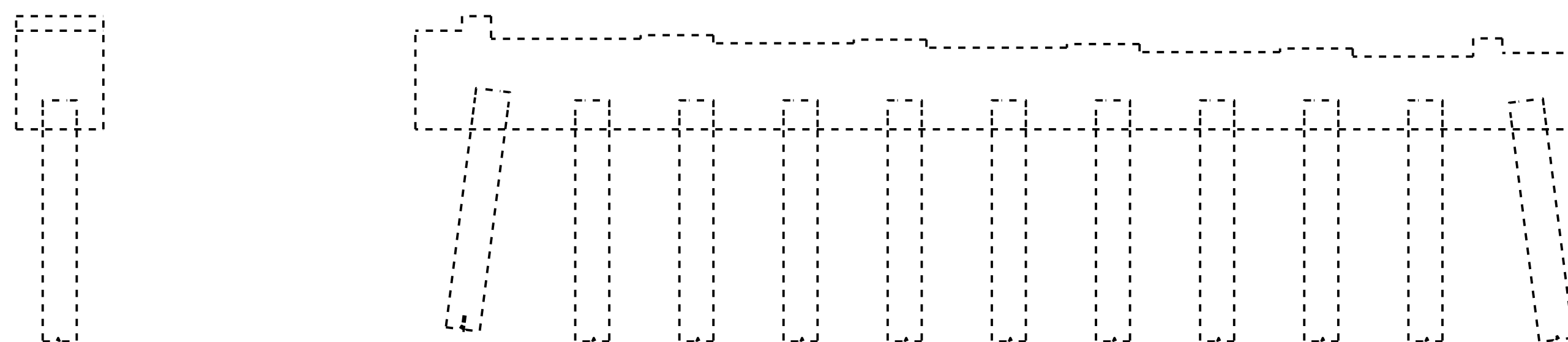


PLAN
TOP OF CAP



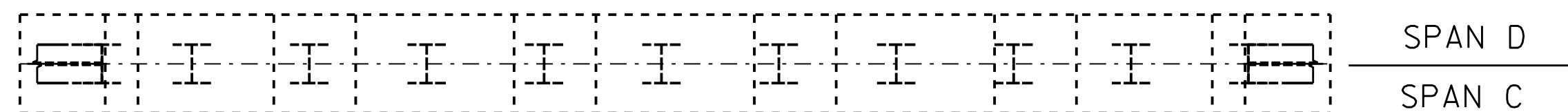
END VIEW
LEFT SIDE

ELEVATION
(SPAN C SIDE)



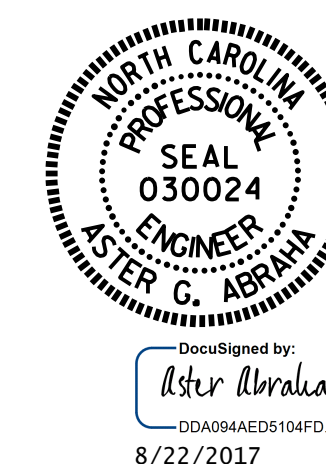
END VIEW
RIGHT SIDE

ELEVATION
(SPAN D SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 497



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
REPAIR
BENT 3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-60
1			3			TOTAL SHEETS
2			4			69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. T. SANDOR DATE : 02/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

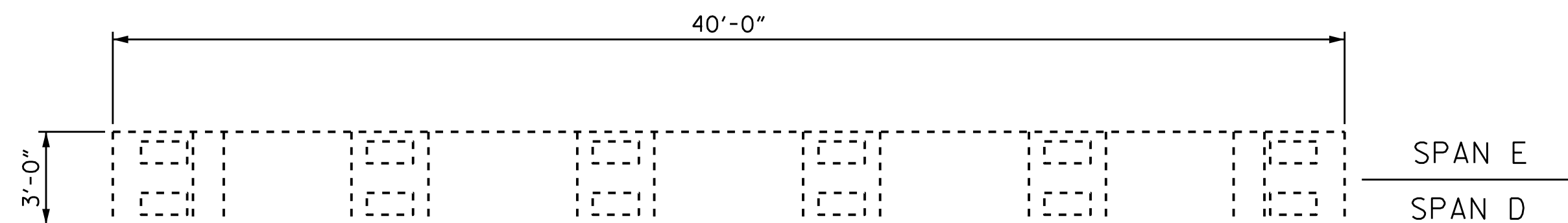
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

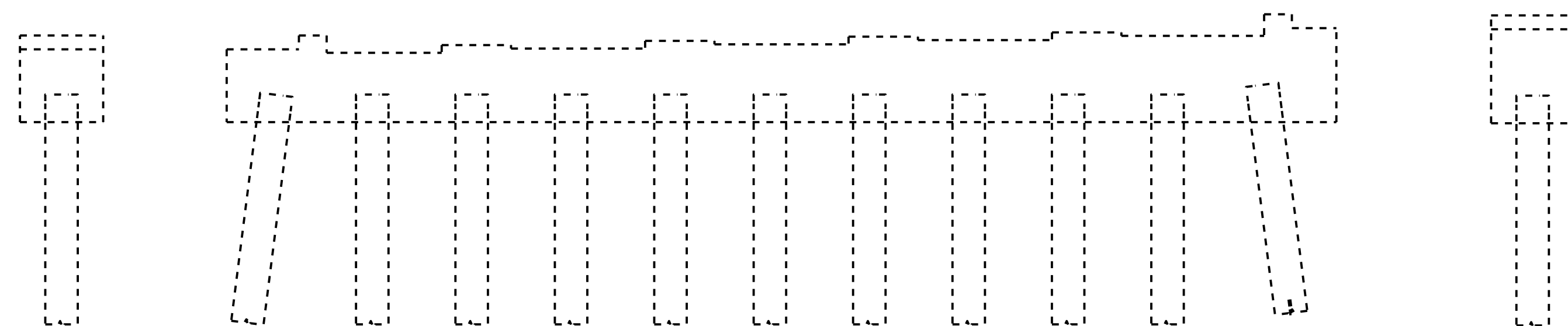
REPAIR QUANTITY TABLE

BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

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



PLAN
TOP OF CAP

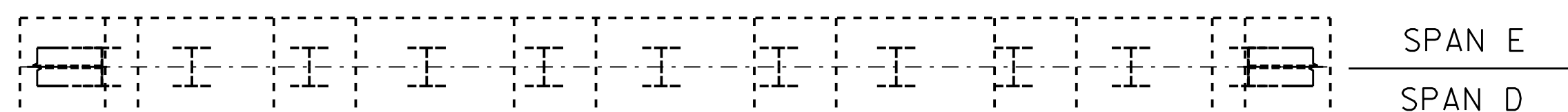


END VIEW
LEFT SIDE

ELEVATION
(SPAN D SIDE)

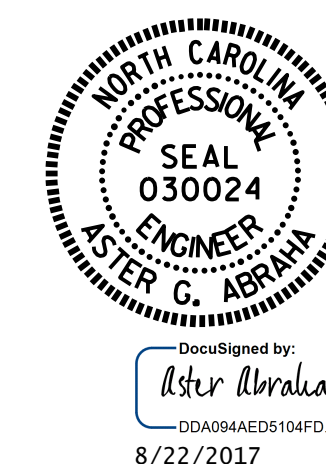
END VIEW
RIGHT SIDE

ELEVATION
(SPAN E SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 497



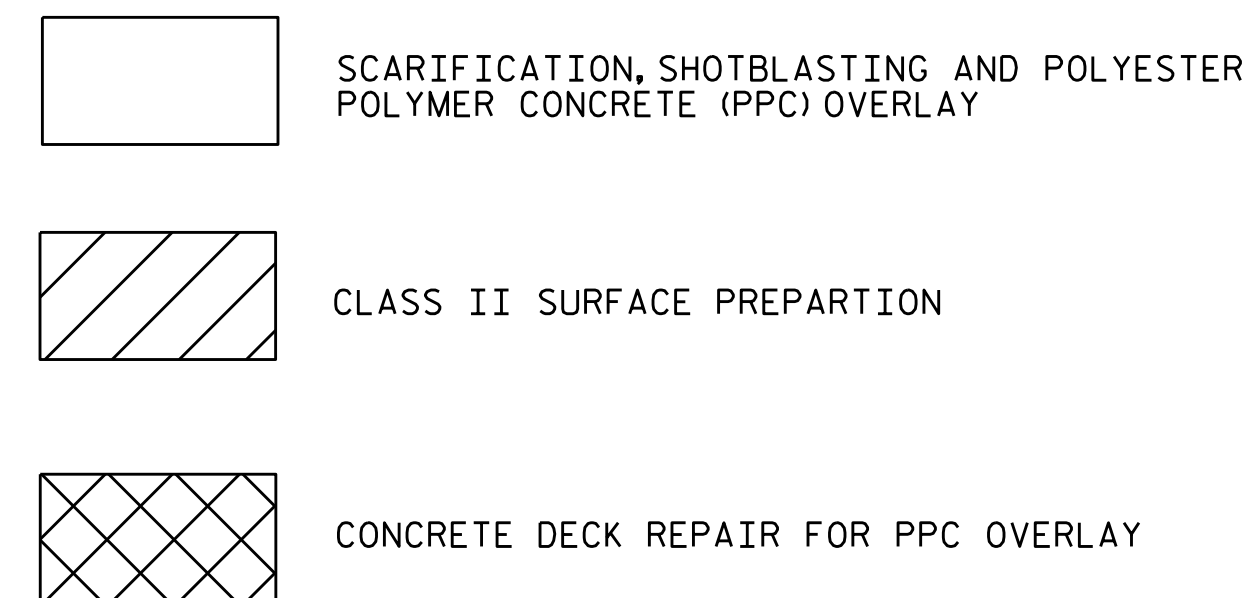
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 REPAIR
 BENT 4

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-61
1			3			TOTAL SHEETS
2			4			69

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

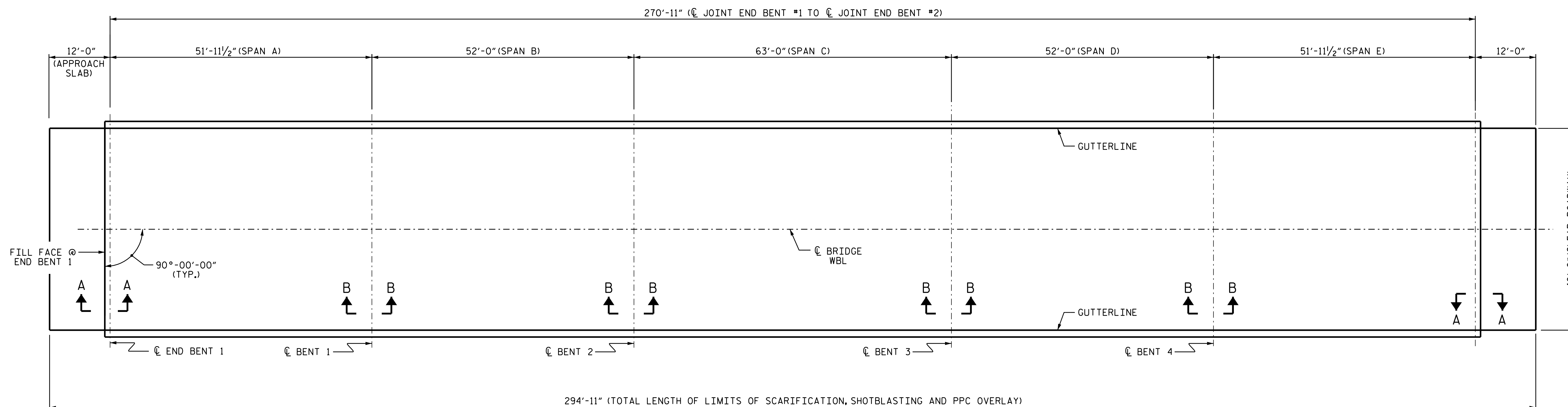
NO DECK REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE DECK FOR POTENTIAL REPAIRS.



AS-BUILT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	1,311.0 SY	
CLASS II SURFACE PREPARATION	1.0 SY	
CONCRETE DECK REPAIR FOR PPC OVERLAY	1.0 SY	
SHOTBLASTING BRIDGE DECK	1,311.0 SY	
PPC MATERIALS	36.5 CY	
PLACING AND FINISHING PPC OVERLAY	1,311.0 SY	
GROOVING BRIDGE FLOORS	10,835.0 SF	

QUANTITIES IN TABLES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PPC OVERLAY AFTER REMOVAL OF SNOWPLOWABLE MARKERS AND UNSOUND CONCRETE (MIN. 2" CLEAR TO SAW CUT). SEE OVERLAY SURFACE PREPARATION FOR POLYESTER POLYMER CONCRETE SPECIAL PROVISION.



PLAN OF SPANS

NOTES

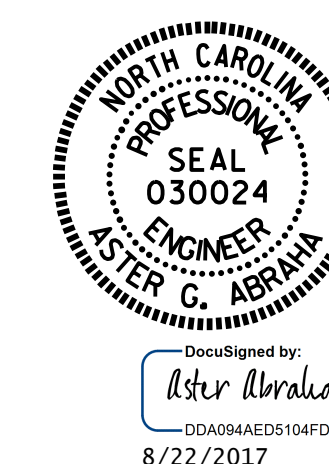
ESTIMATED QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ADJUST THE ACTUAL QUANTITIES ENTERED INTO THE AS-BUILT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

FOR SECTION A-A AND B-B, SEE "JOINT DETAILS" SHEET S-68.

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

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 498



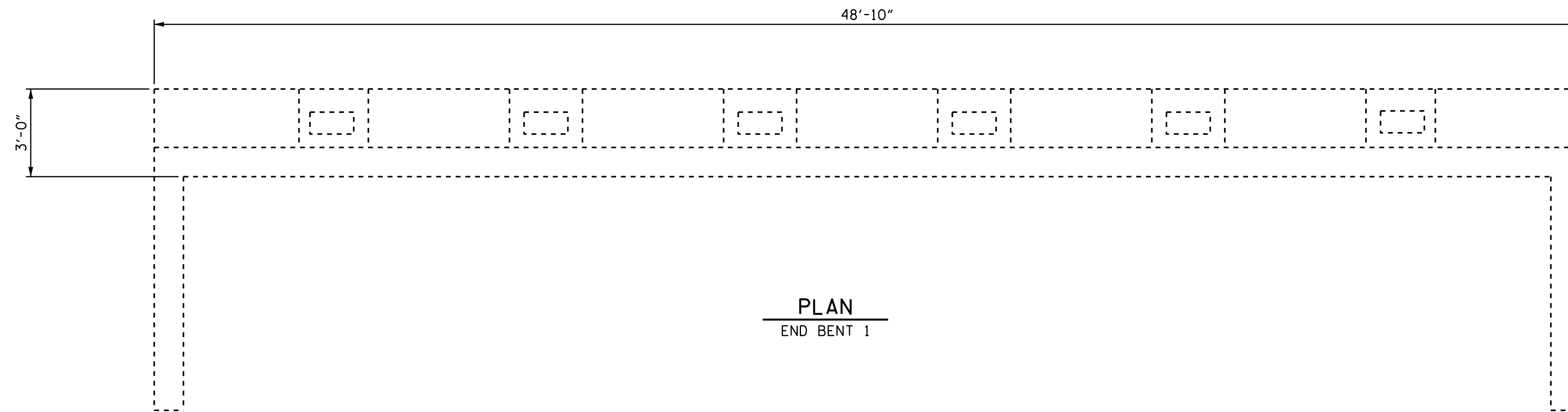
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SURFACE PREPARATION & PPC OVERLAY

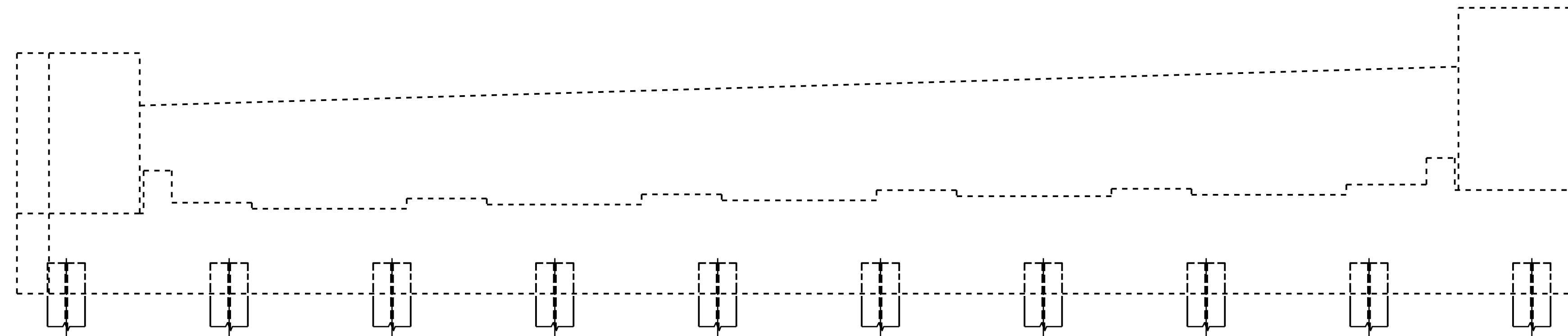
DRAWN BY : S. T. SANDOR DATE : 06/2017
 CHECKED BY : W.C. SMITH DATE : 6/15/17

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

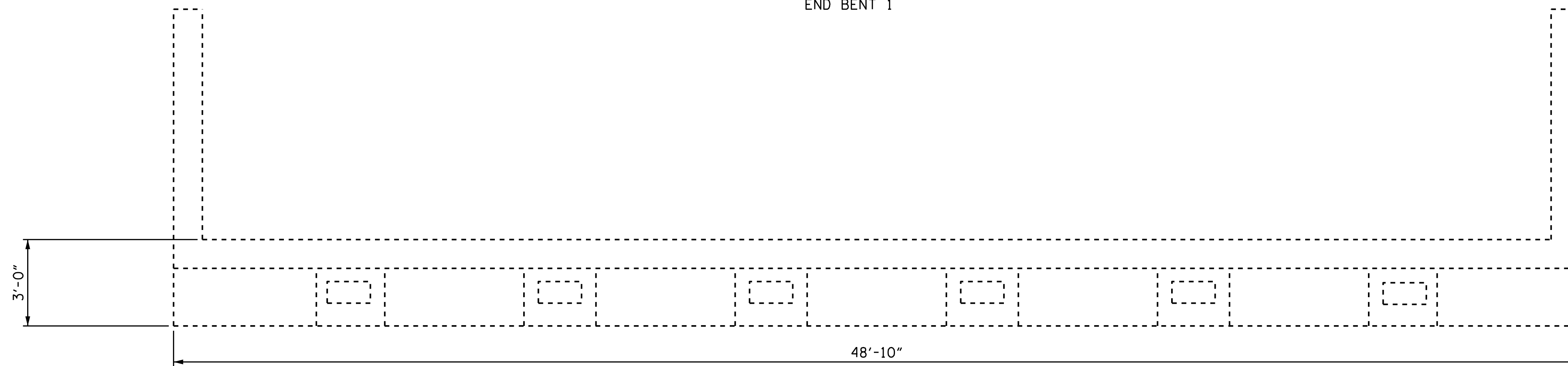
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-62
2			4			69



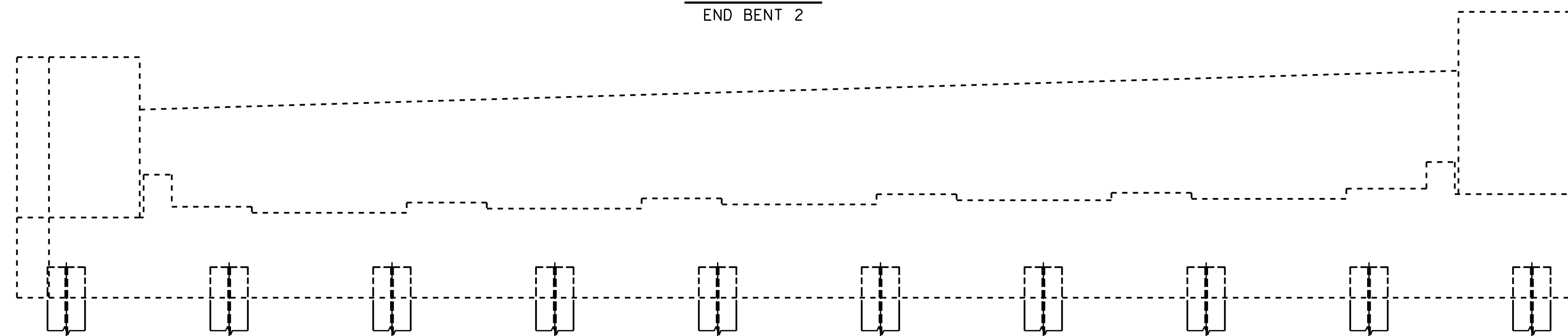
PLAN
END BENT 1



ELEVATION
END BENT 1



PLAN
END BENT 2



ELEVATION
END BENT 2

DRAWN BY : S. T. SANDOR DATE : 02/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

22-AUG-2017 15:48
R:\Structures\Plans\410.015.15781.SMU. EB.500498.S63.dgn
adbrdno

REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		144.0		
END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.	LN. FT.	
CAP		0.0		
EPOXY COATING		AREA SF		
TOP OF CAP		144.0		

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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

 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 498



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

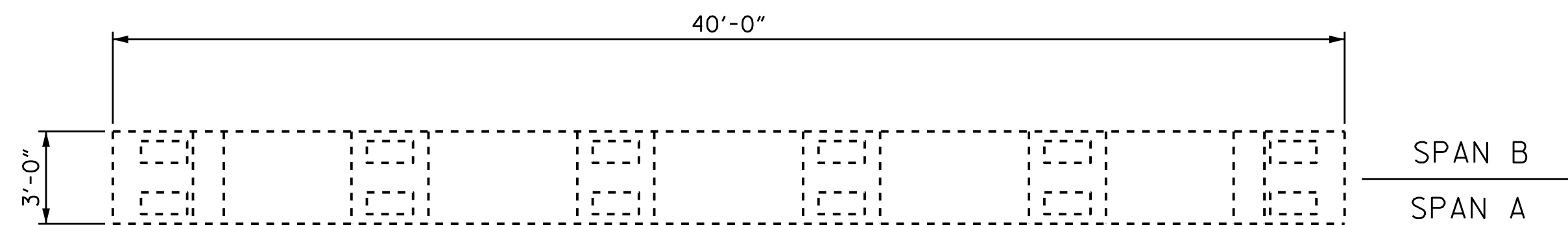
SUBSTRUCTURE

REPAIR
END BENTS

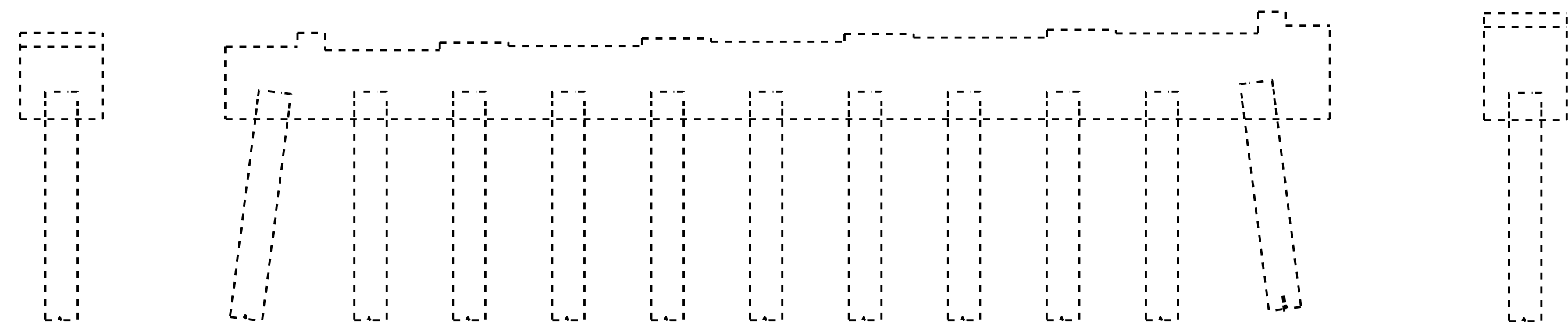
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-63
1			3			TOTAL SHEETS 69
2			4			

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



PLAN
TOP OF CAP

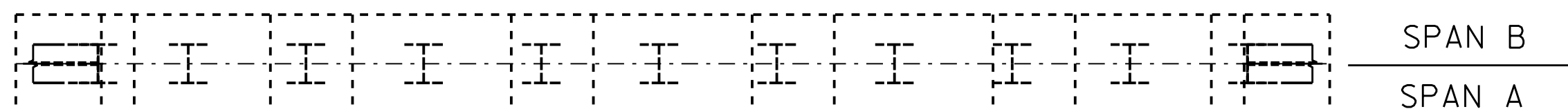


END VIEW
LEFT SIDE

ELEVATION
(SPAN A SIDE)

END VIEW
RIGHT SIDE

ELEVATION
(SPAN B SIDE)



PLAN
BOTTOM OF CAP

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

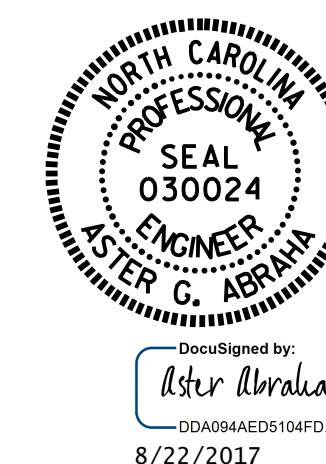
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 498



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

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-64
1			3			TOTAL SHEETS
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

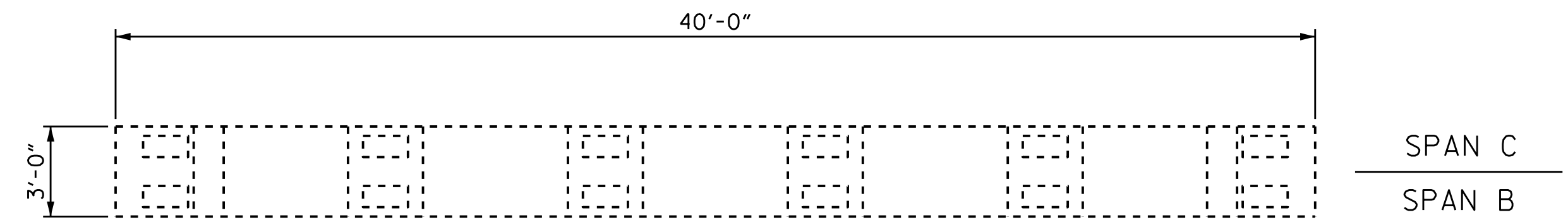
 - SHOTCRETE REPAIR

ERI - EPOXY RESIN INJECTION

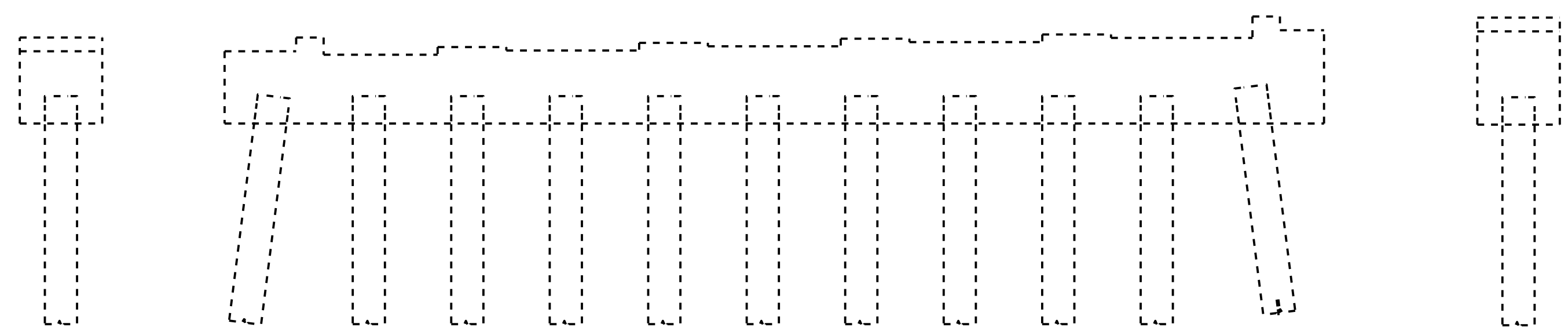
REPAIR QUANTITY TABLE

BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

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



PLAN
TOP OF CAP

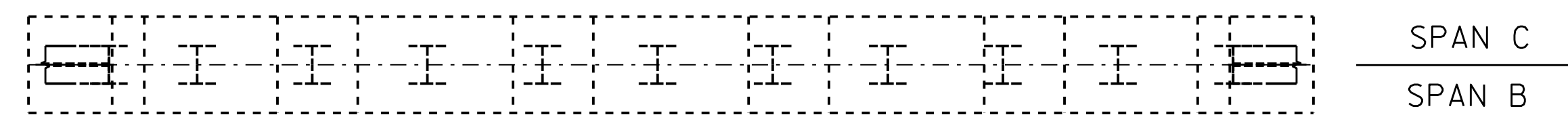


END VIEW
LEFT SIDE

ELEVATION
(SPAN B SIDE)

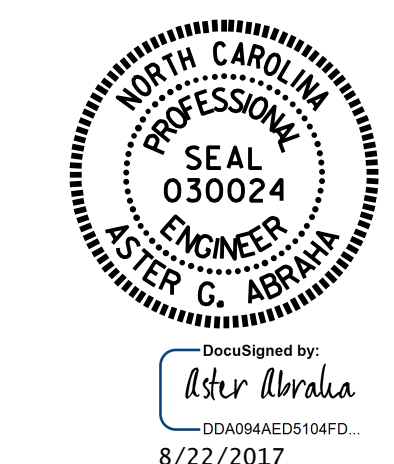
END VIEW
RIGHT SIDE

ELEVATION
(SPAN C SIDE)



PLAN
BOTTOM OF CAP

PROJECT NO. I-5781
JOHNSTON COUNTY
BRIDGE NO. 498



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

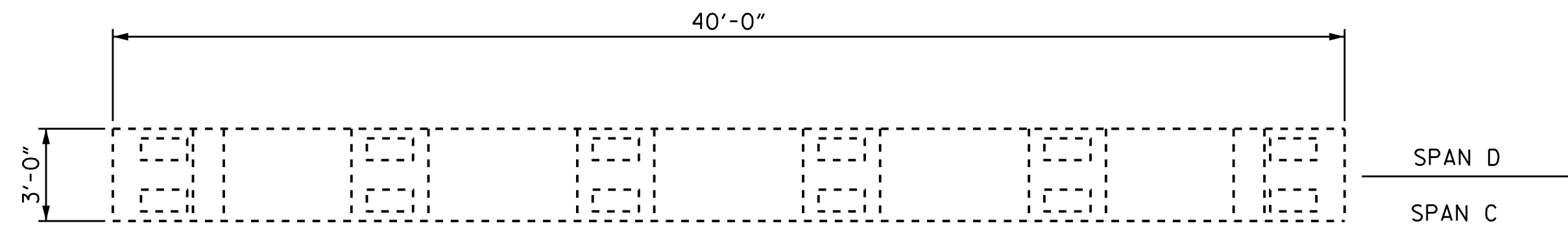
REPAIR
BENT 2

DRAWN BY : S. T. SANDOR DATE : 02/2017
CHECKED BY : W. C. SMITH DATE : 06/2017

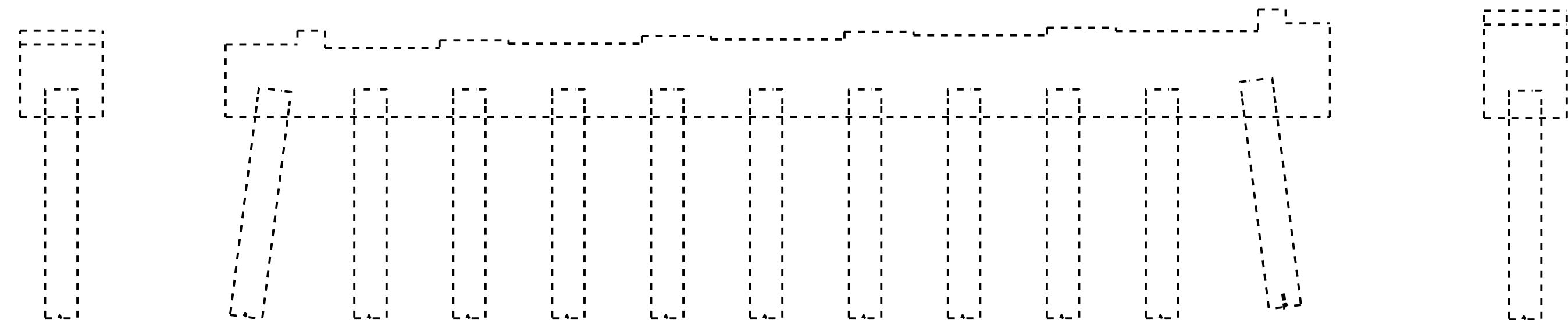
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-65
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



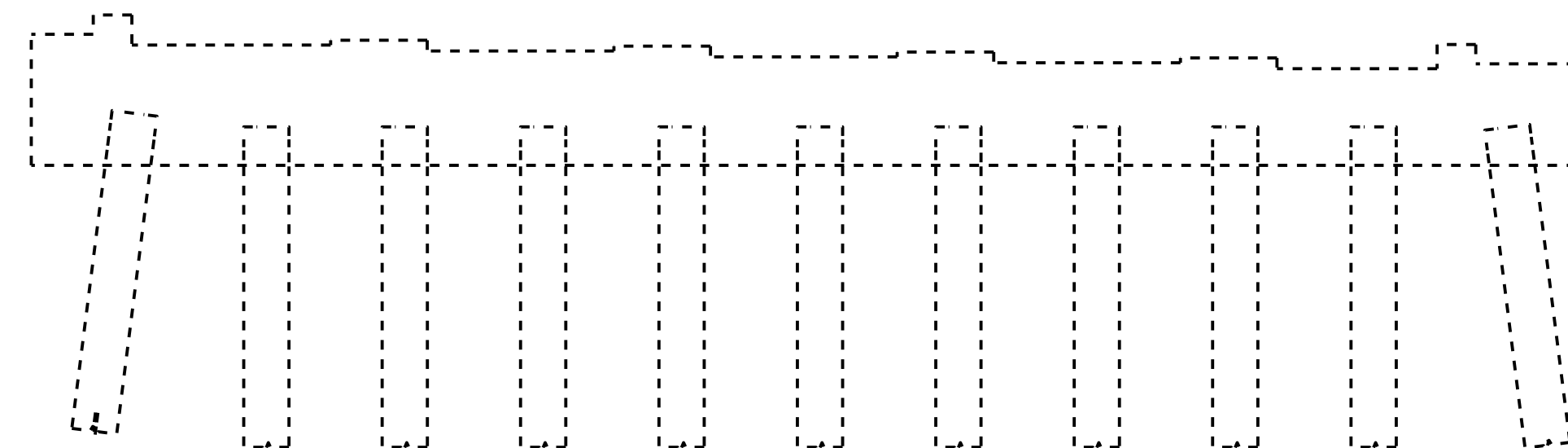
PLAN
TOP OF CAP



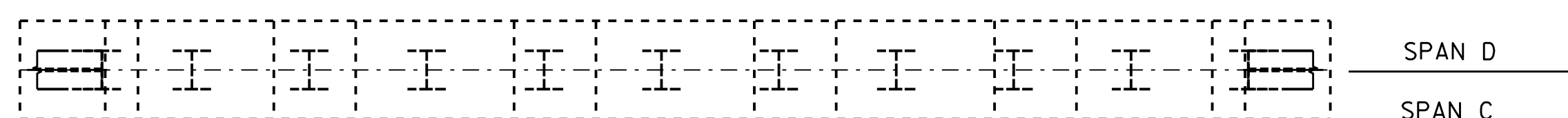
END VIEW
LEFT SIDE

ELEVATION
(SPAN C SIDE)

END VIEW
RIGHT SIDE



ELEVATION
(SPAN D SIDE)



PLAN
BOTTOM OF CAP

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

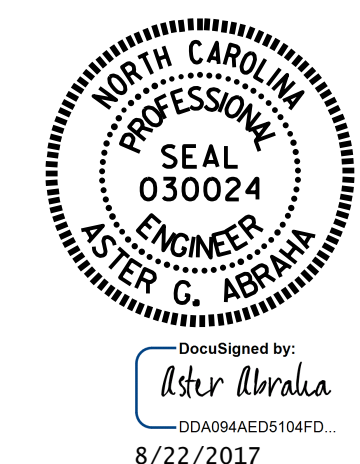
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 3	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 498



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUBSTRUCTURE

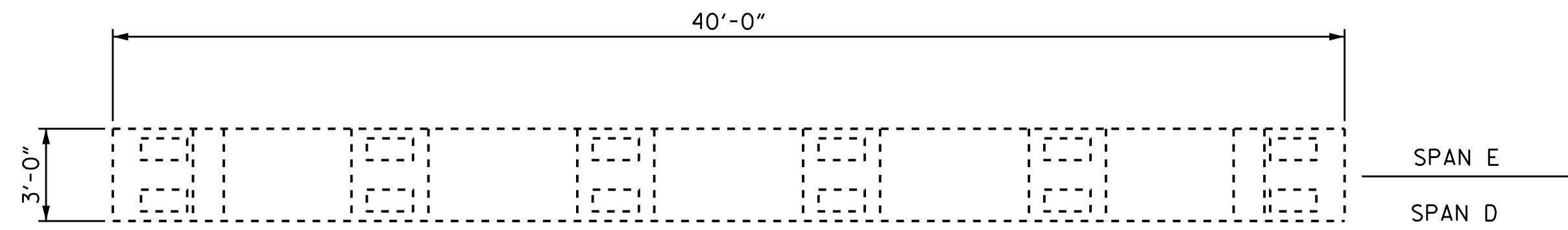
REPAIR
 BENT 3

DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

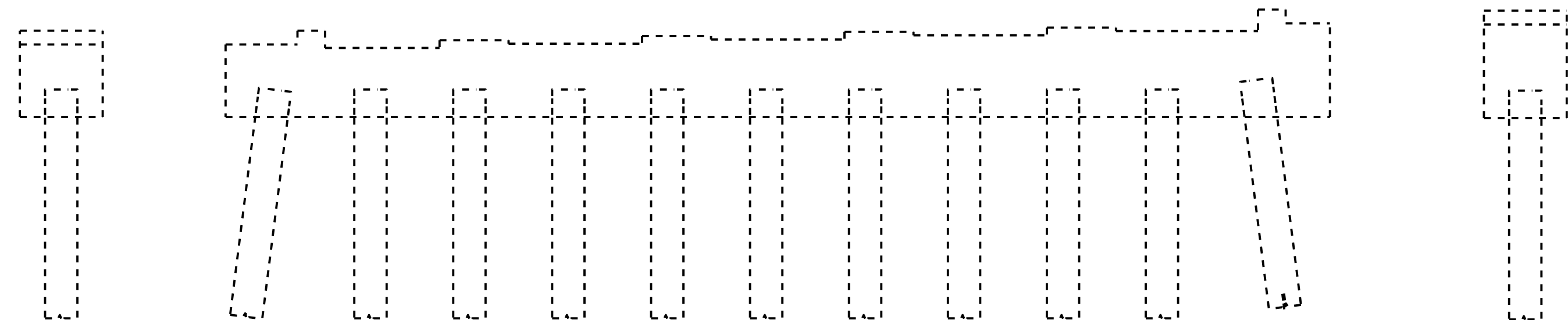
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-66
2			4			69

NO REPAIRS NOTED DURING INSPECTION BY STRUCTURES MANAGEMENT UNIT. THE CONTRACTOR AND ENGINEER SHALL REINSPECT THE SUBSTRUCTURE FOR POTENTIAL REPAIRS.



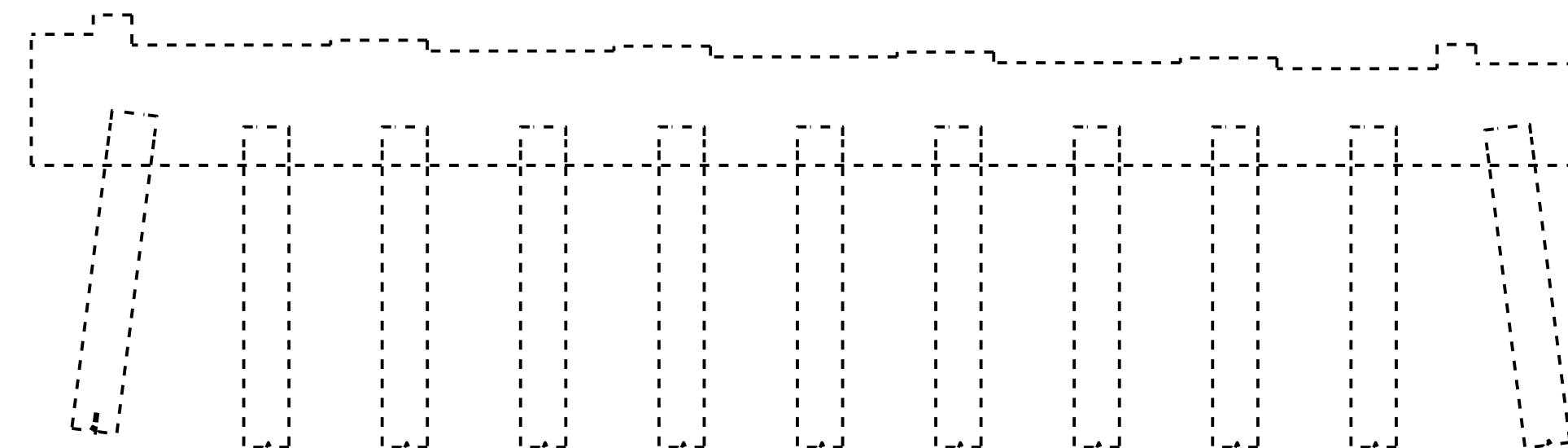
PLAN
TOP OF CAP



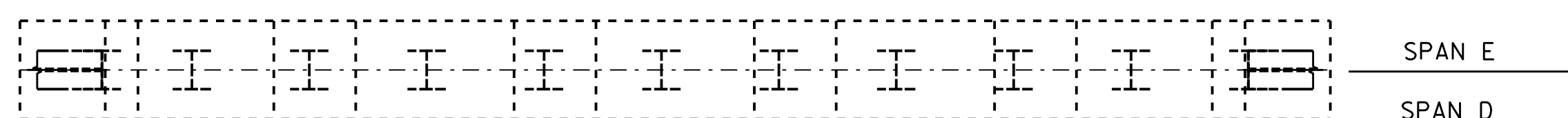
END VIEW
LEFT SIDE

ELEVATION
(SPAN D SIDE)

END VIEW
RIGHT SIDE



ELEVATION
(SPAN E SIDE)



PLAN
BOTTOM OF CAP

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR

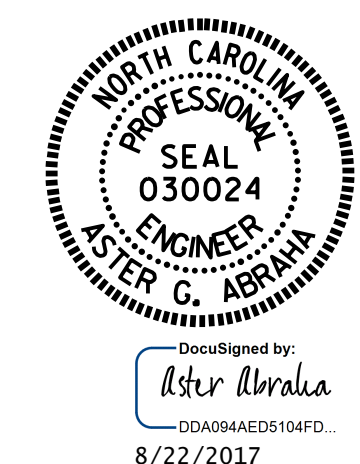
ERI - EPOXY RESIN INJECTION

REPAIR QUANTITY TABLE

BENT 4	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP (VERTICAL FACE)	0.0	0.0		
CAP (HORIZONTAL, CORNER)	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF			
TOP OF CAP	120.0			

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

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 498



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

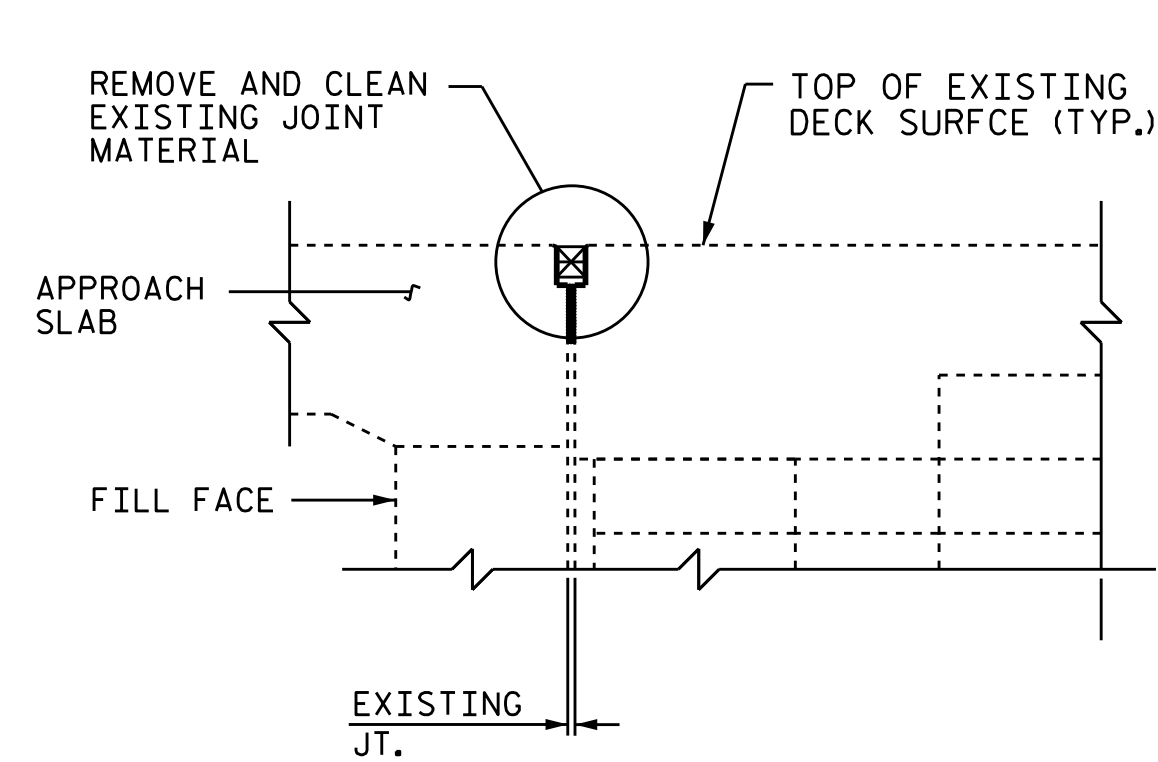
SUBSTRUCTURE

REPAIR
 BENT 4

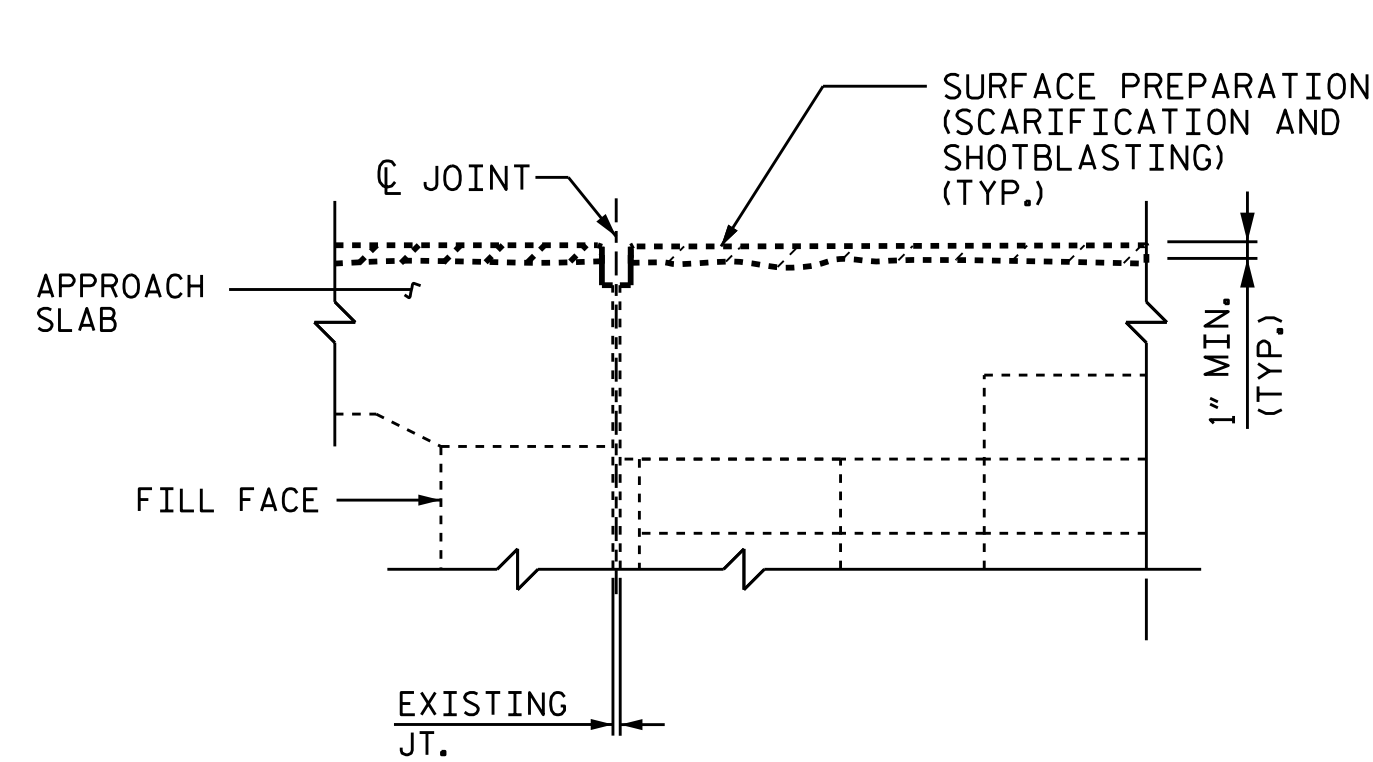
DRAWN BY : S. T. SANDOR DATE : 02/2017
 CHECKED BY : W. C. SMITH DATE : 06/2017

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

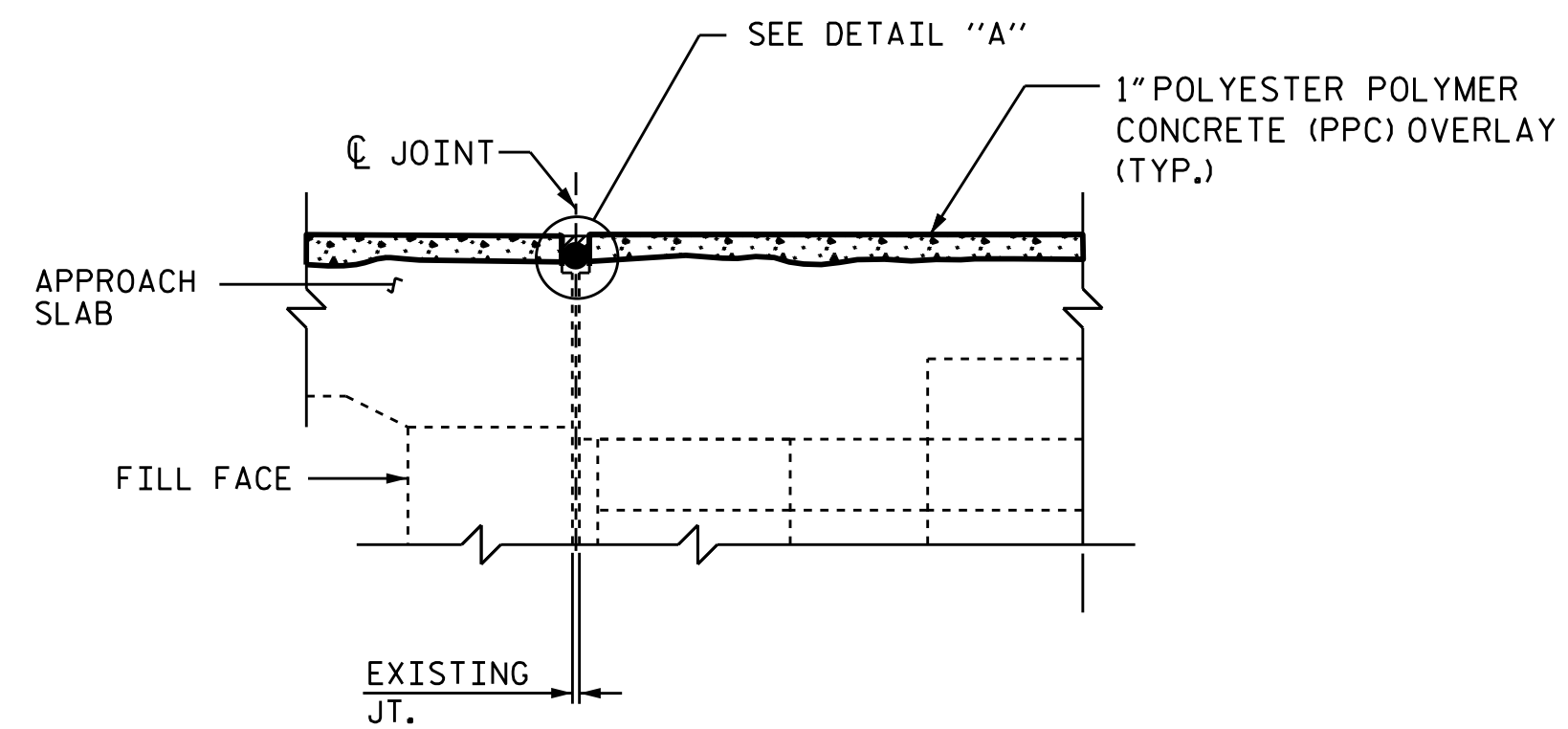
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			S-67
2			4			69



EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION



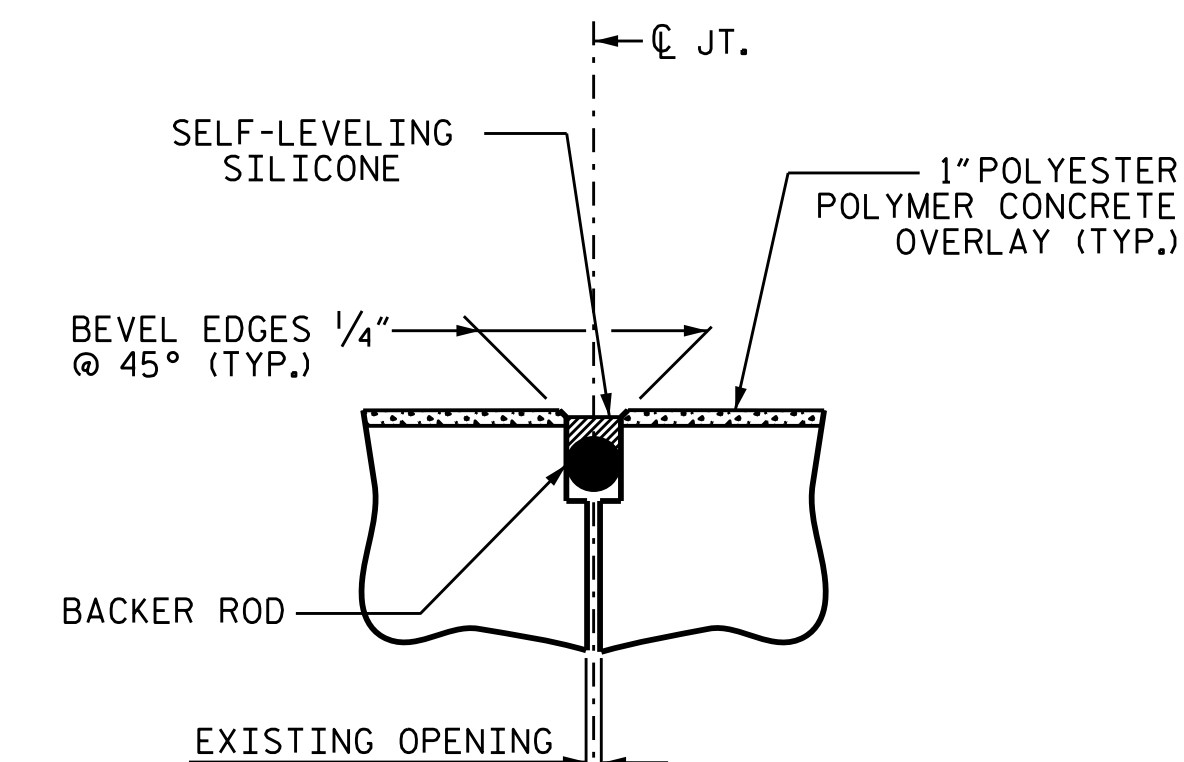
PROPOSED JOINT

JOINT INSTALLATION SEQUENCE AT END BENTS

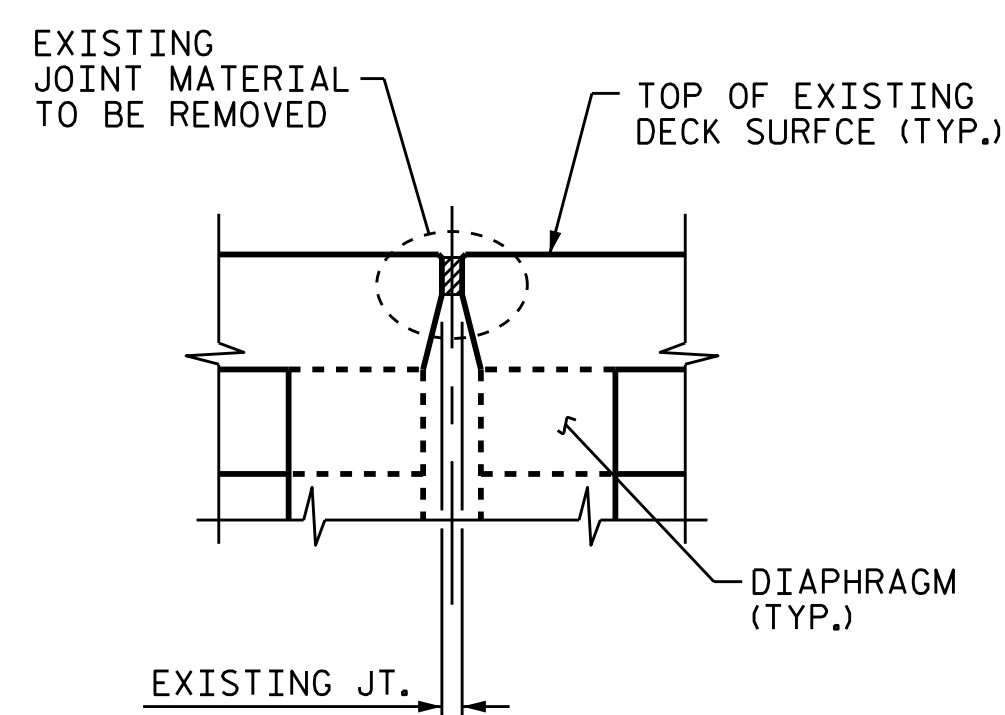
SECTION A-A

NOTES:

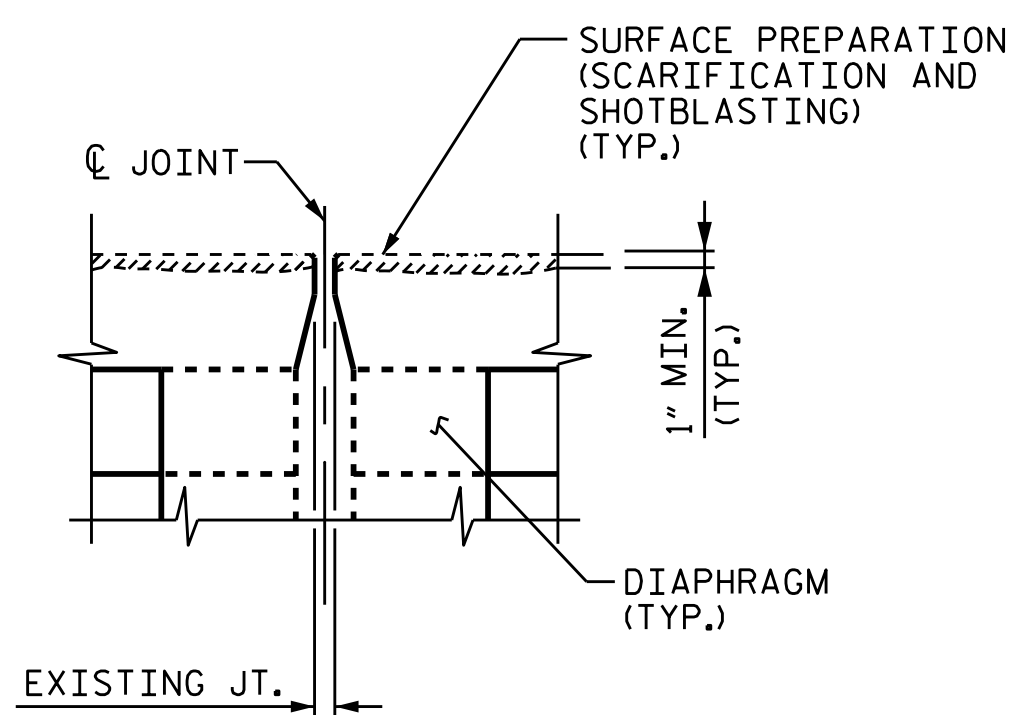
CONTRACTOR SHALL FIELD VERIFY THE EXISTING FORMED OPENING PRIOR TO OBTAINING JOINT MATERIAL.
 FOR SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.
 UNLESS NOTED OTHERWISE RETAIN ALL EXISTING REINFORCING STEEL. CLEAN AND REPAIR AS NEEDED.
 ALL EXPOSED ENDS OF CUT BARS SHALL BE COATED WITH EPOXY PRIOR TO THE NEW JOINT MATERIAL INSTALLATION.



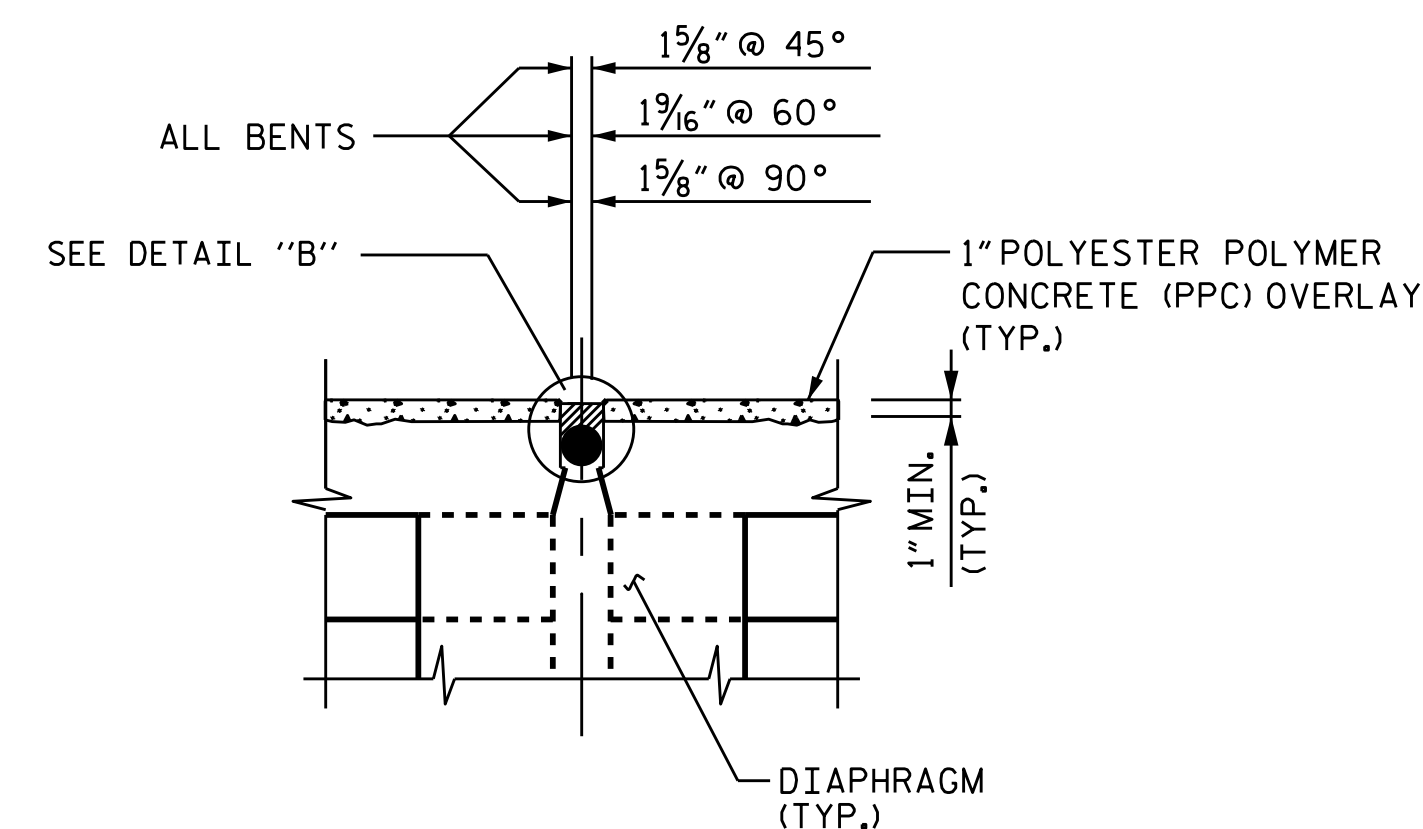
DETAIL A (PROPOSED)



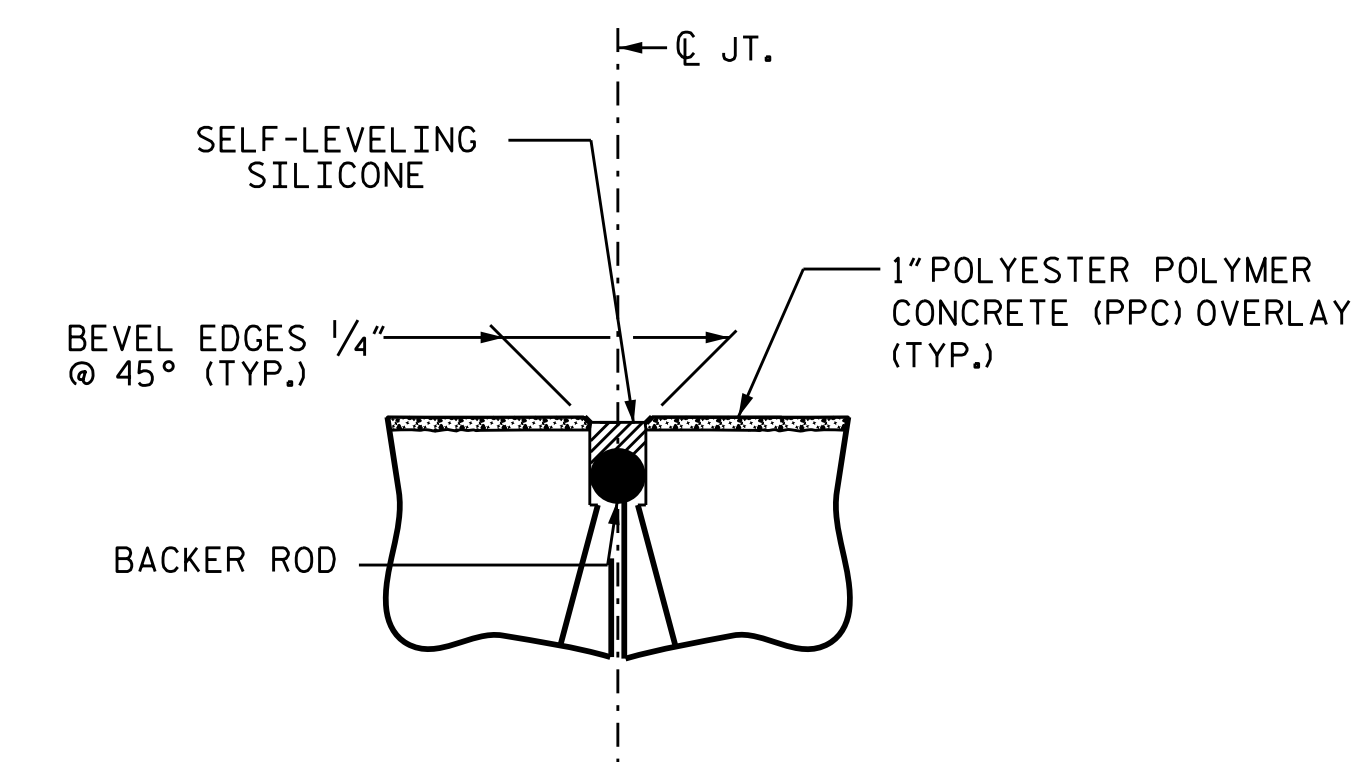
EXISTING JOINT



EXISTING JOINT



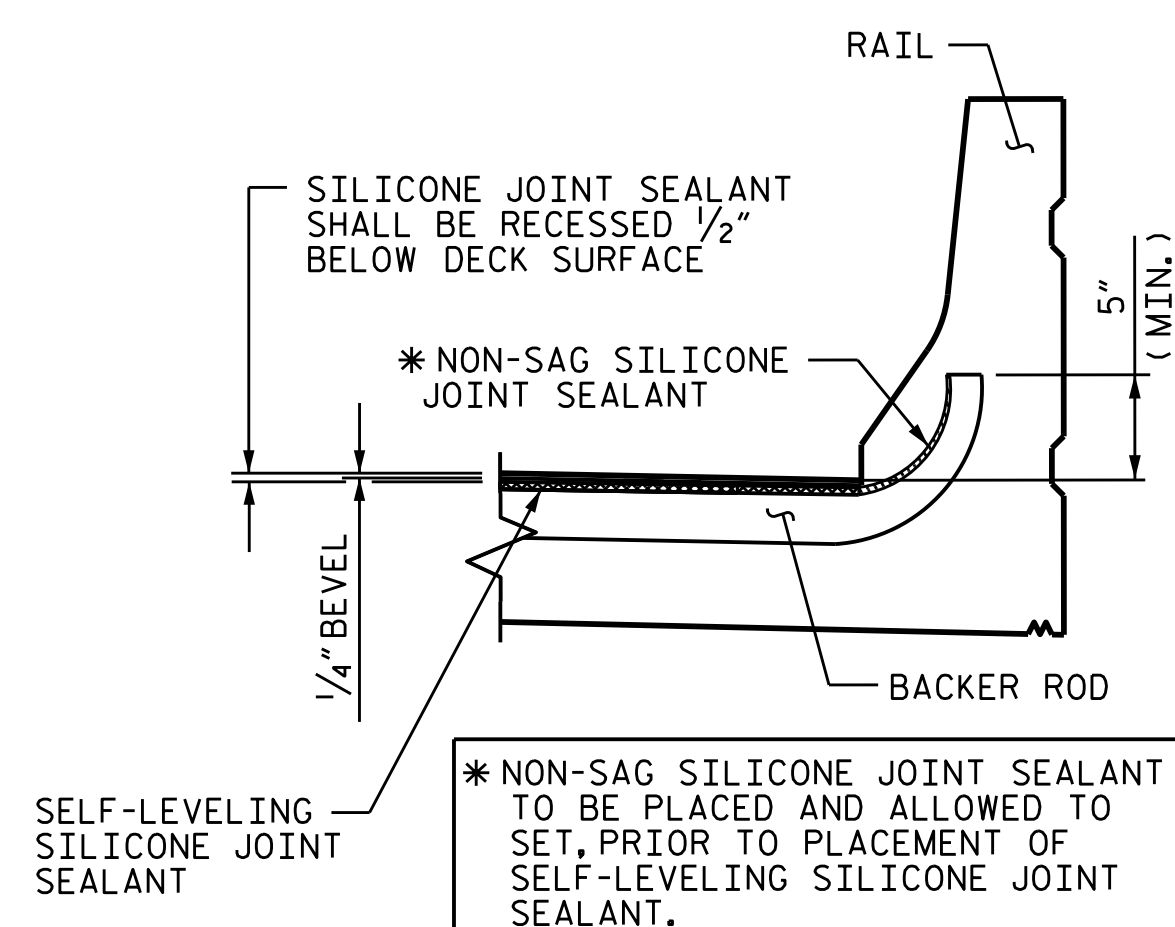
PROPOSED JOINT



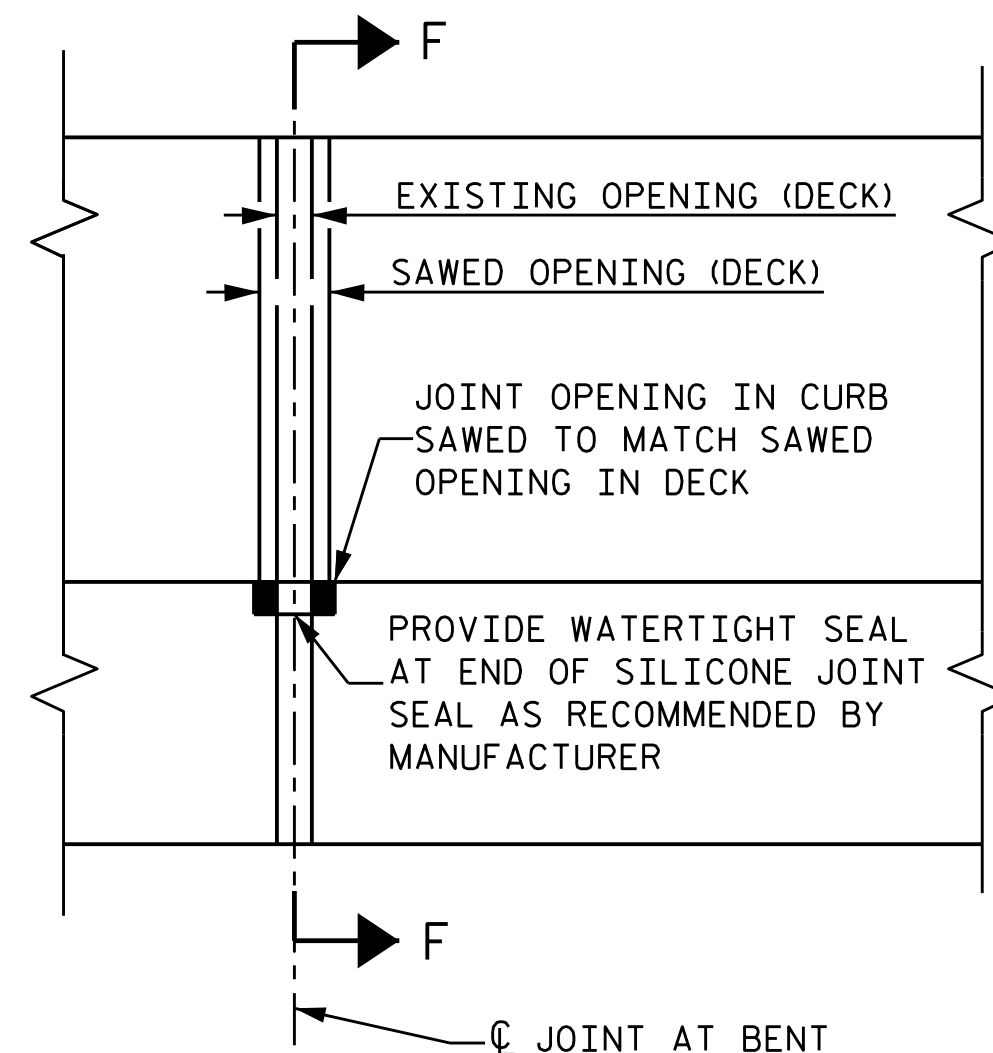
DETAIL B (PROPOSED)

JOINT INSTALLATION SEQUENCE AT BENTS 1, 2 & 3

SECTION B-B



SECTION F-F

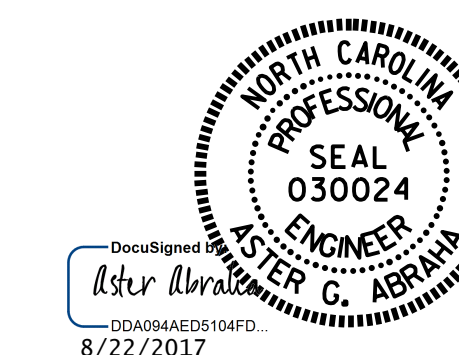


PLAN

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 497 & 498

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 JOINT DETAILS



DRAWN BY : S. I. SANDOR DATE : 06/2017
 CHECKED BY : W. C. SMITH / A. G. ABRAHA DATE : 06/2017

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-68
1			3			TOTAL SHEETS
2			4			69

NOTE

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

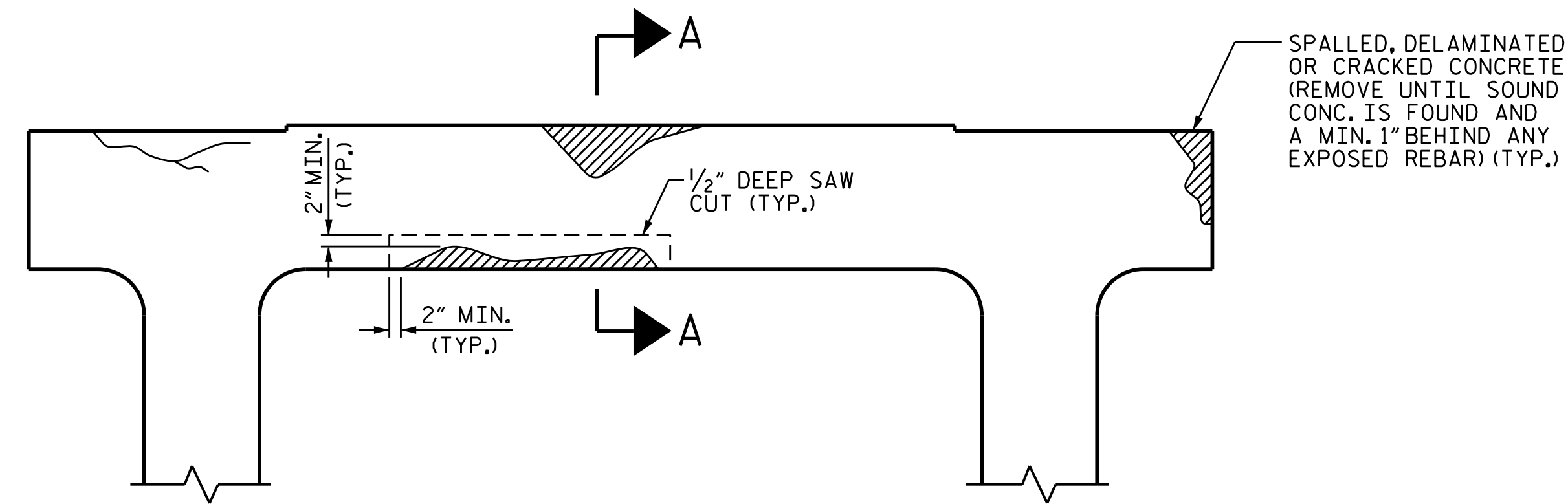
CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

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

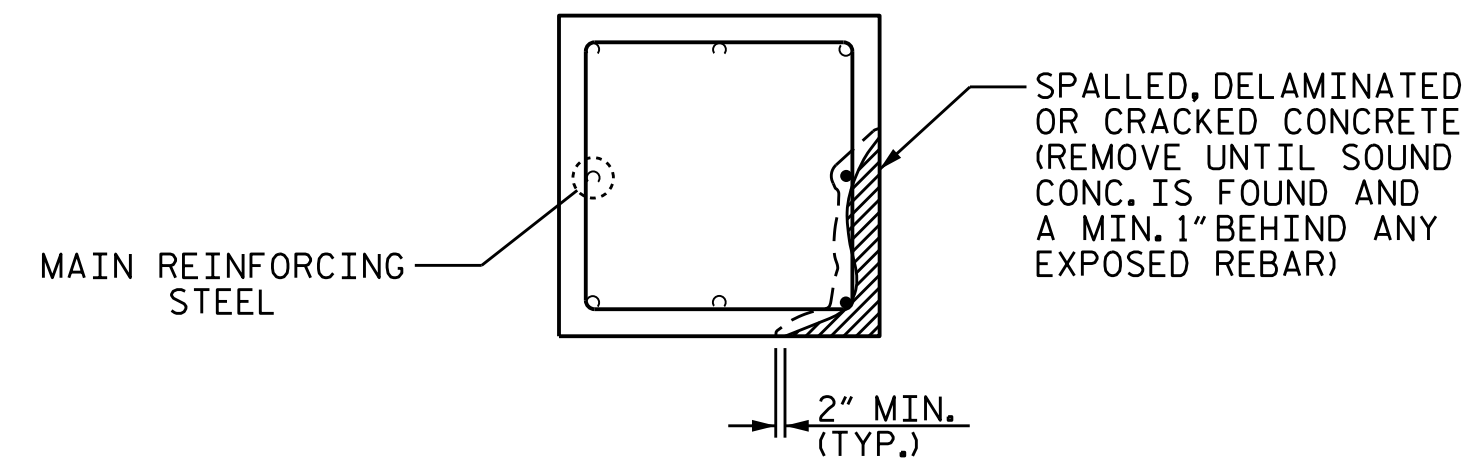
CONCRETE REPAIRS MAY BE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

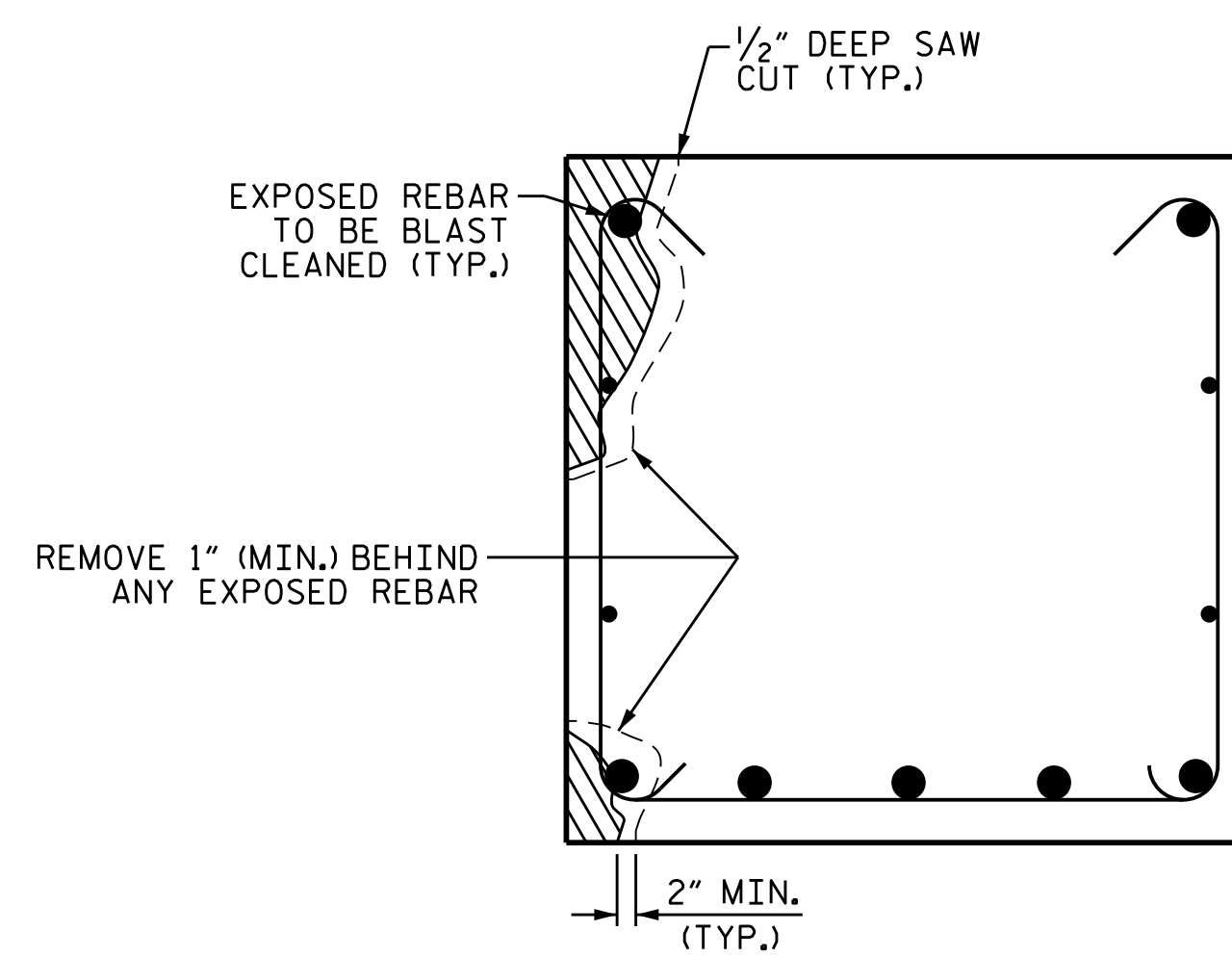
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



BENT CAP REPAIRS

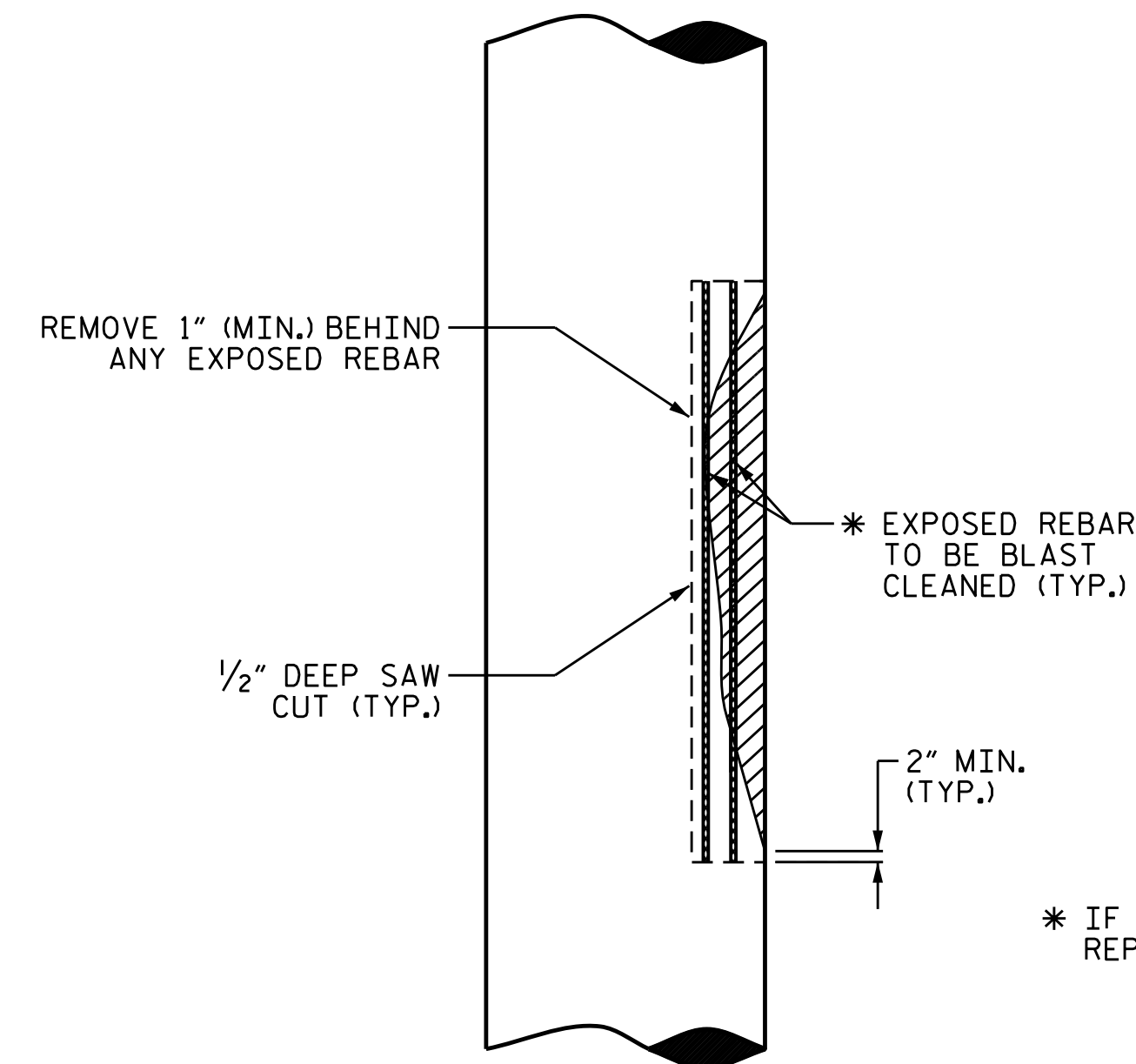


PLAN OF COLUMN



SECTION THRU CAP
(EXAMPLE ONLY, ACTUAL REBAR SIZES & LOCATIONS MAY VARY)

CAP REPAIR

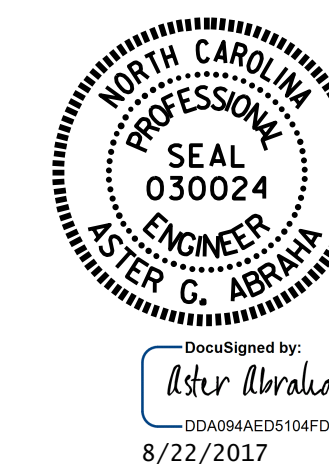


ELEVATION OF CAP

COLUMN REPAIR

* IF CONFINEMENT STEEL IS NOT PRESENT, THEN REPAIR LENGTH SHALL NOT EXCEED 10 FEET.

PROJECT NO. I-5781
JOHNSTON COUNTY
 BRIDGE NO. 469, 470, 486,
487, 488, 489, 490,
491, 497 & 498



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE
 TYPICAL CAP AND COLUMN
 REPAIR DETAILS

DRAWN BY : S. T. SANDOR DATE : 07/2017
 CHECKED BY : W. SMITH DATE : 07/2017

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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-69
1			3			TOTAL SHEETS
2			4			69

STANDARD NOTES

DESIGN DATA:

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

MATERIAL AND WORKMANSHIP:

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

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

CONCRETE:

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

CONCRETE CHAMFERS:

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

DOWELS:

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

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

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.
ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.
IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.
DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.
WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".
EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.
WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.
METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINIS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

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

ENGLISH

JANUARY, 1990

STD. NO. SN