

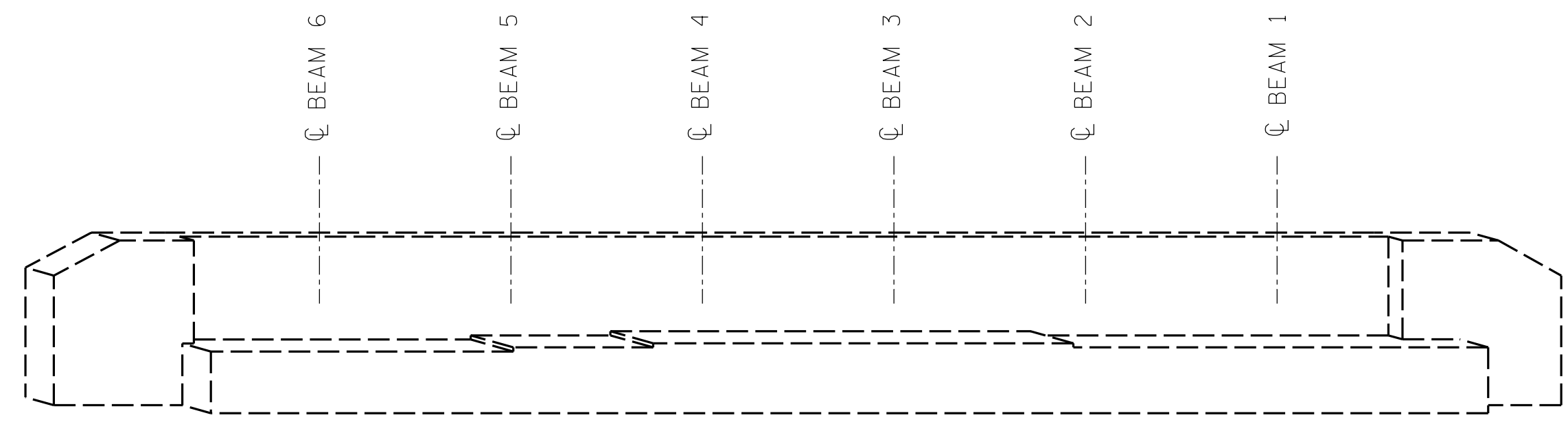
**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

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

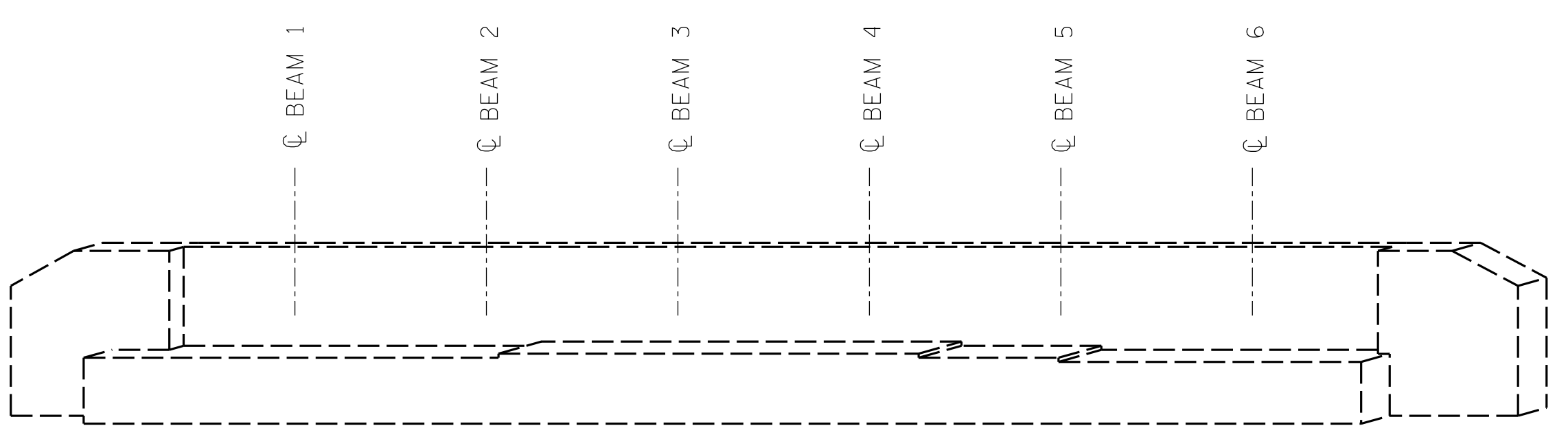
**This file or an individual page
shall not be considered a certified document.**

LEGEND	
	CONCRETE REPAIR AREA (CR)
	SHOTCRETE REPAIR AREA (SCR)
	EPOXY RESIN INJECTION (ERI)

	AS-BUILT REPAIR QUANTITY TABLE			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
	CAP/BACKWALL	-	-	
COLUMN/PILE	-	-		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
	CAP	-	-	
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
	CAP/BACKWALL	-		
COLUMN/PILE	-			



END BENT 1
(EAST FACE)



END BENT 2
(WEST FACE)

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

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 TABLE ABOVE.

CRACKING LOCATIONS AND QUANTITIES FOR LOCATIONS DESCRIBED AS "SCATTERED THROUGHOUT" IN THE INSPECTION REPORT ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER AND CONTRACTOR SHALL IDENTIFY AND REPAIR ALL CRACKS $\geq 1/16"$ AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

AVERAGE CONCRETE COVER IS EXPECTED TO BE FROM 2" TO 3" ON THE CAP AND FROM 1 1/2" TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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

REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5915B
IREDELL COUNTY
BRIDGE NO. 480123

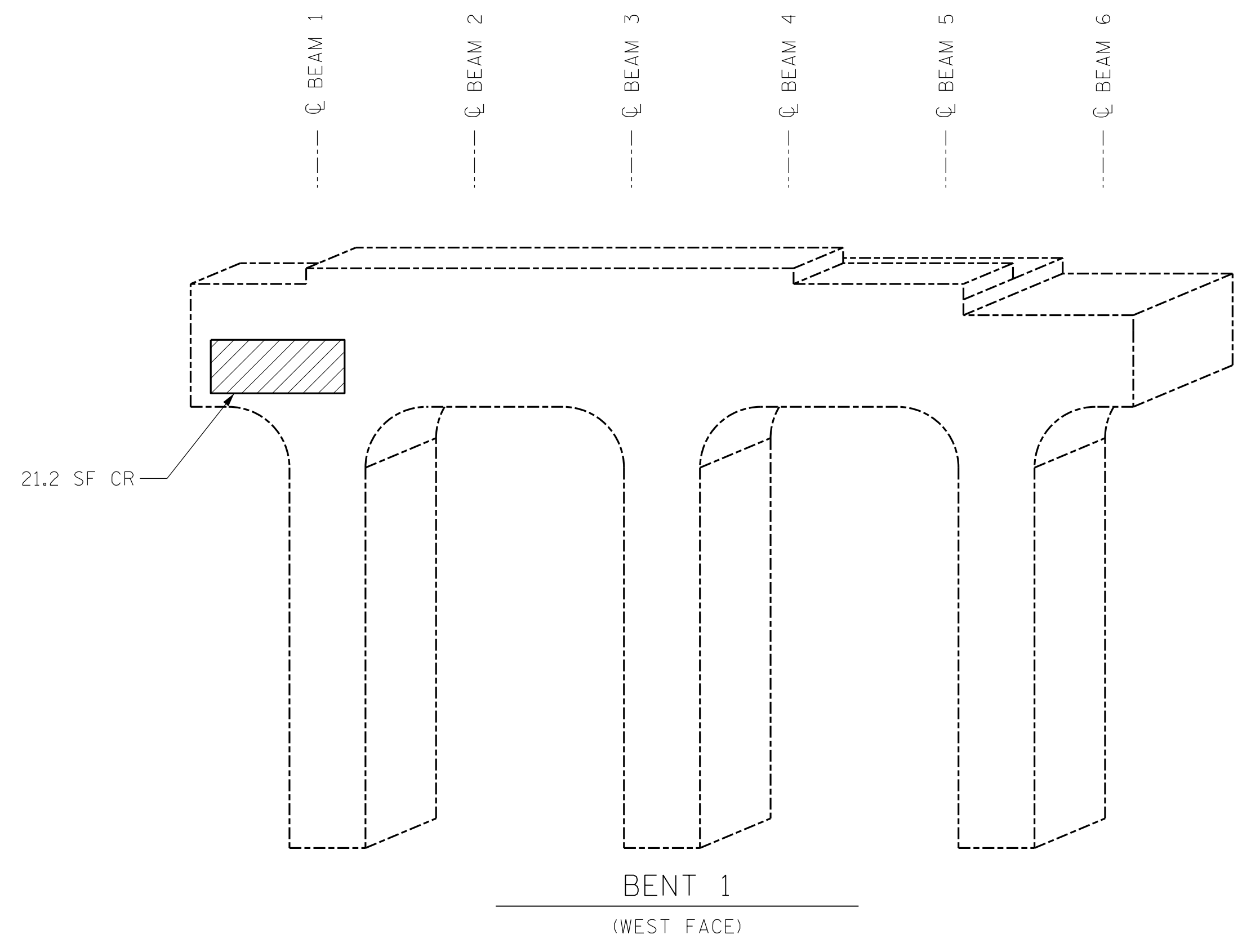
SHEET 1 OF 3



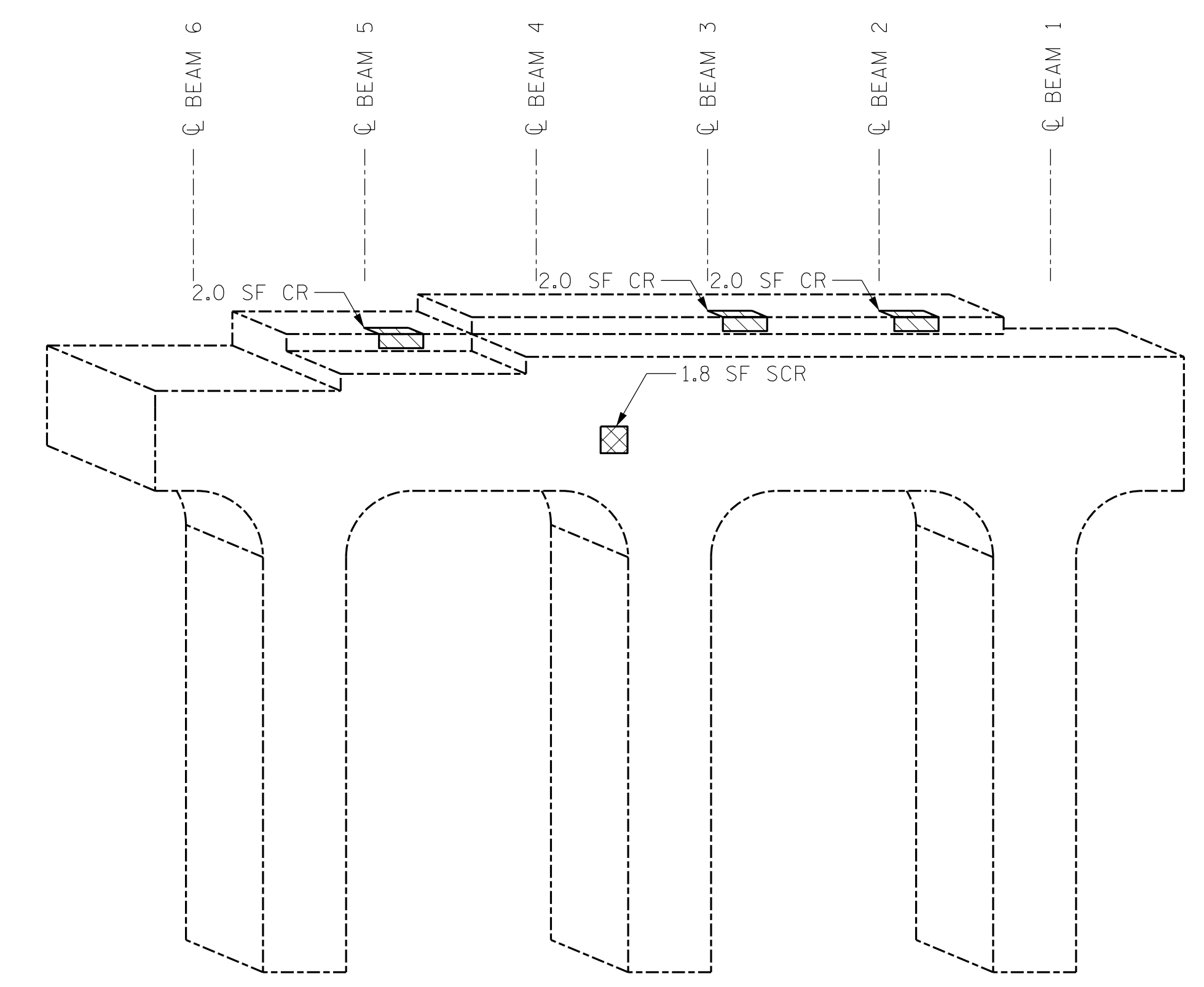
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
SUBSTRUCTURE REPAIRS					
END BENTS 1 & 2					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					8

DRAWN BY :	ALLEN J. MCSWAIN	DATE :	01/2022
CHECKED BY :	FIDEL L. FLORES	DATE :	01/2022
DESIGN ENGINEER OF RECORD:	DIEGO A. AGUIRRE	DATE :	01/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



BENT 1
(WEST FACE)



BENT 1
(EAST FACE)

LEGEND	
	CONCRETE REPAIR AREA (CR)
	SHOTCRETE REPAIR AREA (SCR)
	EPOXY RESIN INJECTION (ERI)

	AS-BUILT REPAIR QUANTITY TABLE			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP/BACKWALL	1.8	0.6		
COLUMN/PILE	-	-		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	27.2	17.2		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP/BACKWALL	-			
COLUMN/PILE	-			

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

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 TABLE ABOVE.

CRACKING LOCATIONS AND QUANTITIES FOR LOCATIONS DESCRIBED AS "SCATTERED THROUGHOUT" IN THE INSPECTION REPORT ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER AND CONTRACTOR SHALL IDENTIFY AND REPAIR ALL CRACKS $\geq 1/16"$ AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

AVERAGE CONCRETE COVER IS EXPECTED TO BE FROM 2" TO 3" ON THE CAP AND FROM 1 1/2" TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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

REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480123

SHEET 2 OF 3

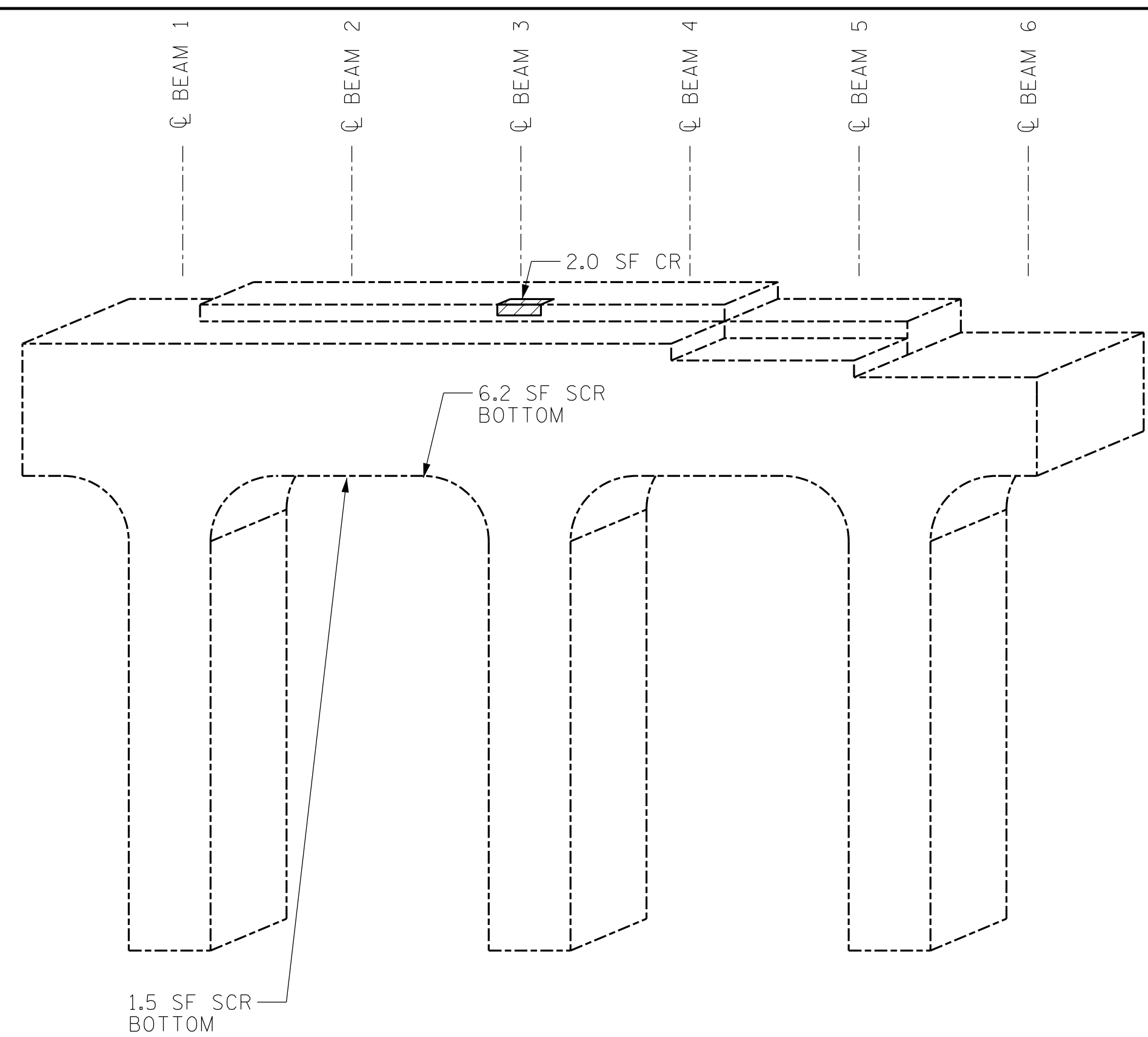


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE REPAIRS
 BENT 1

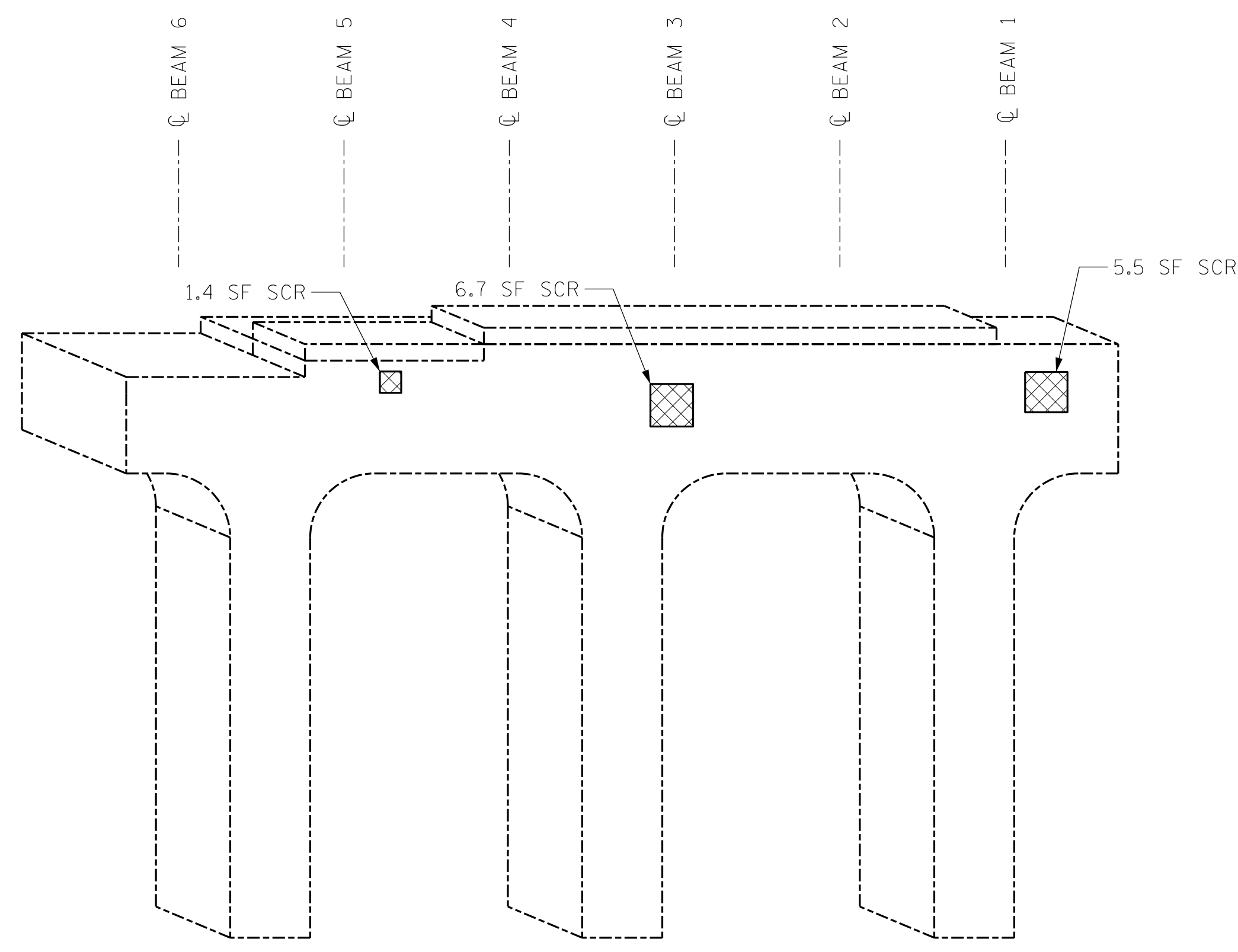
DRAWN BY : ALLEN J. MCSWAIN DATE : 01/2022
 CHECKED BY : FIDEL L. FLORES DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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



BENT 2
(WEST FACE)



BENT 2
(EAST FACE)

LEGEND	
	CONCRETE REPAIR AREA (CR)
	SHOTCRETE REPAIR AREA (SCR)
	EPOXY RESIN INJECTION (ERI)

	AS-BUILT REPAIR QUANTITY TABLE			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP/BACKWALL	21.3	7.3		
COLUMN/PILE	-	-		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	2.0	1.0		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP/BACKWALL	-			
COLUMN/PILE	-			

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

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 TABLE ABOVE.

CRACKING LOCATIONS AND QUANTITIES FOR LOCATIONS DESCRIBED AS "SCATTERED THROUGHOUT" IN THE INSPECTION REPORT ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER AND CONTRACTOR SHALL IDENTIFY AND REPAIR ALL CRACKS $\geq 1/16"$ AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

AVERAGE CONCRETE COVER IS EXPECTED TO BE FROM 2" TO 3" ON THE CAP AND FROM 1 1/2" TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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

REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5915B
IREDELL COUNTY
BRIDGE NO. 480123

SHEET 3 OF 3



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIRS
BENT 2

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S17-8
2			4			TOTAL SHEETS 8

DRAWN BY : ALLEN J. MCSWAIN DATE : 01/2022
CHECKED BY : FIDEL L. FLORES DATE : 01/2022
DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

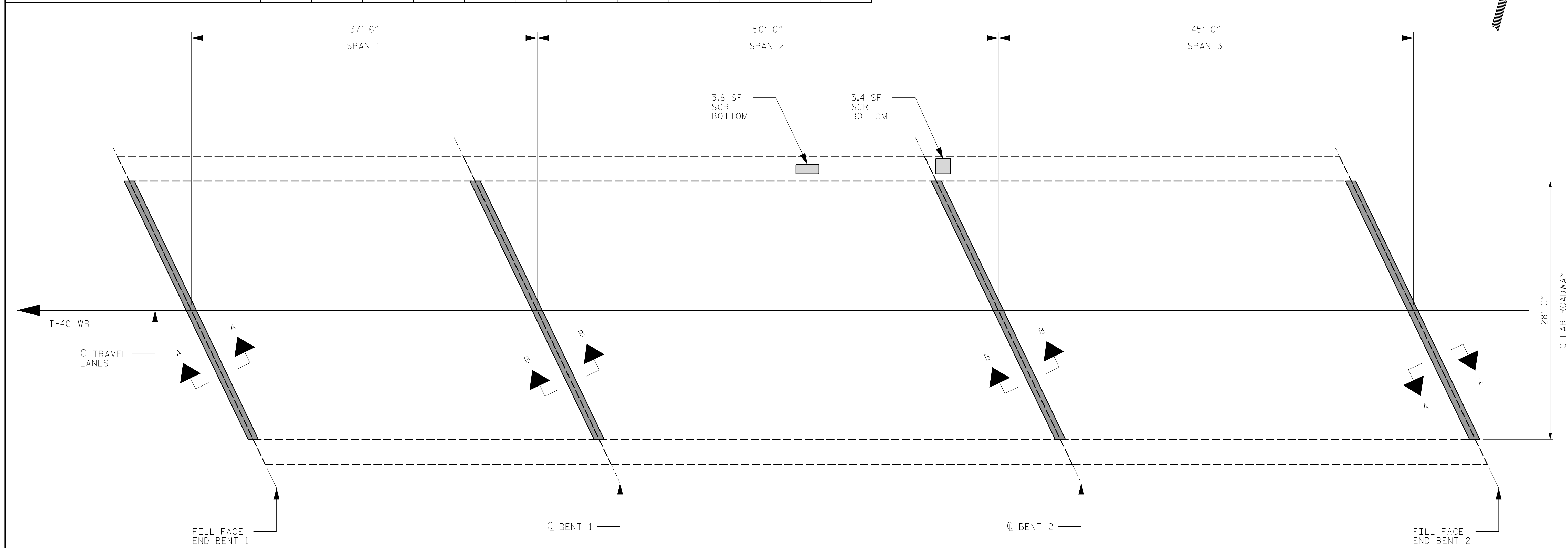
AS-BUILT REPAIR QUANTITY TABLE

DECK REPAIRS

	SPAN 1		SPAN 2		SPAN 3	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
CLASS II SURFACE PREPARATION	-- SY		-- SY		-- SY	
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
SHOTCRETE REPAIR AREA (SCR)	-- SF	-- CF			3.8 SF	1.3 CF
					3.4 SF	1.2 CF

LEGEND:

SCR SHOTCRETE REPAIR AREA



NOTES:

PRIOR TO SURFACE PREPARATION, REMOVE ALL LOOSE, DISINTEGRATED, UNSOUND OR CONTAMINATED CONCRETE FROM THE BRIDGE DECK.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR SCARIFYING BRIDGE DECK, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

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.

DEFECTS (SEE PLAN CALLOUT FOR DETAILS)

BRIDGE JOINT DEMOLITION

DRAWN BY : ALLEN J. MCSWAIN DATE : 01/2022
 CHECKED BY : JACOB H. DUKE DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

4/21/2022
 I5915B.SMU.DSR01.480124.dgn
 daguirre

PROJECT NO. I-5915B
 IREDELL COUNTY
 BRIDGE NO. 480124

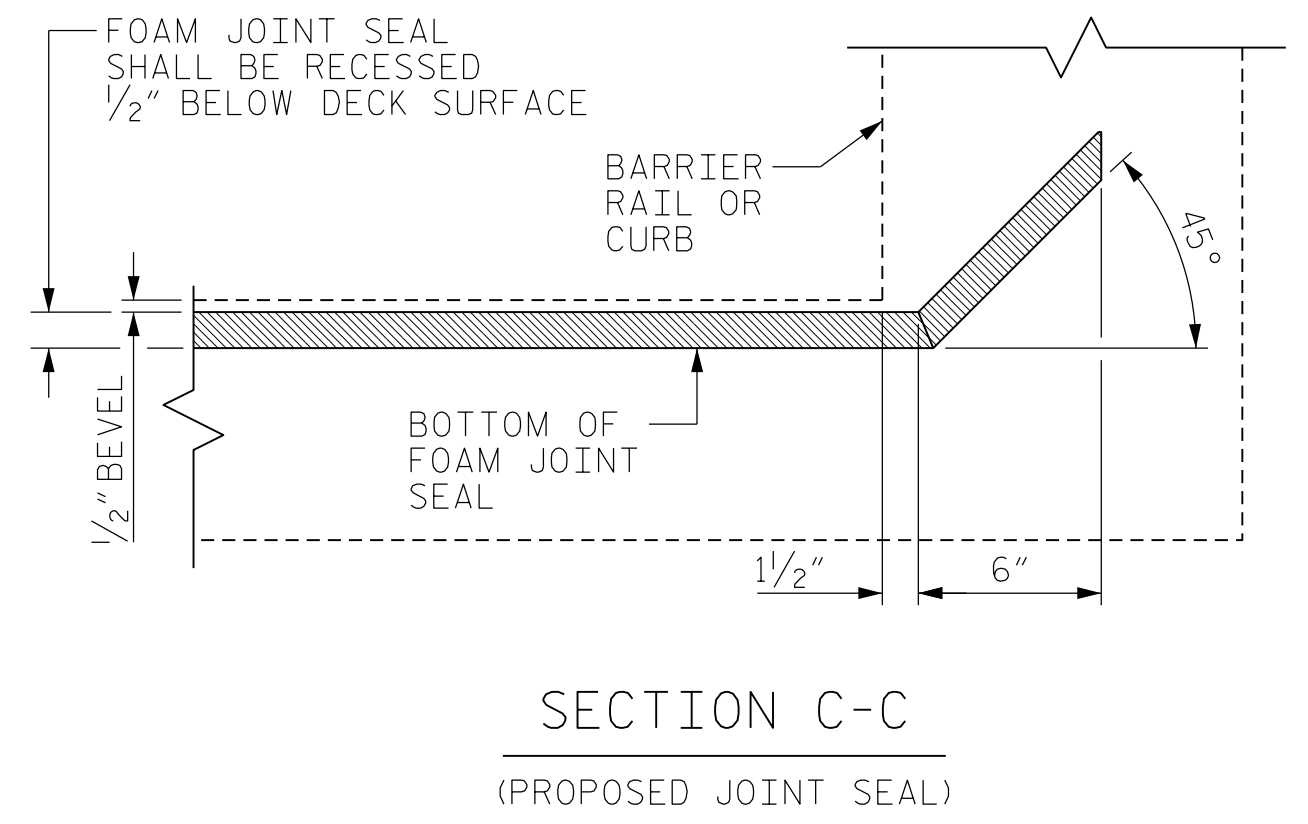
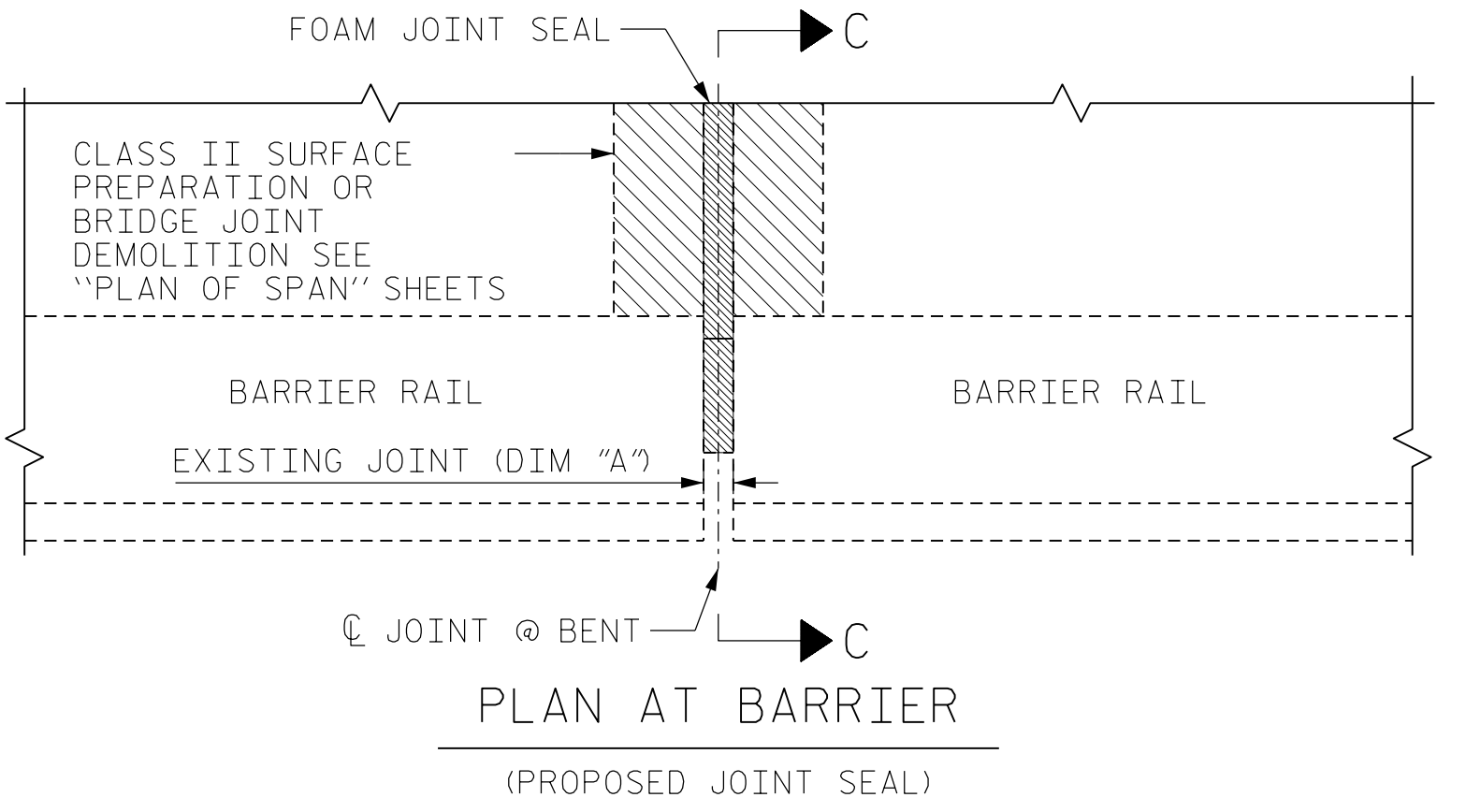
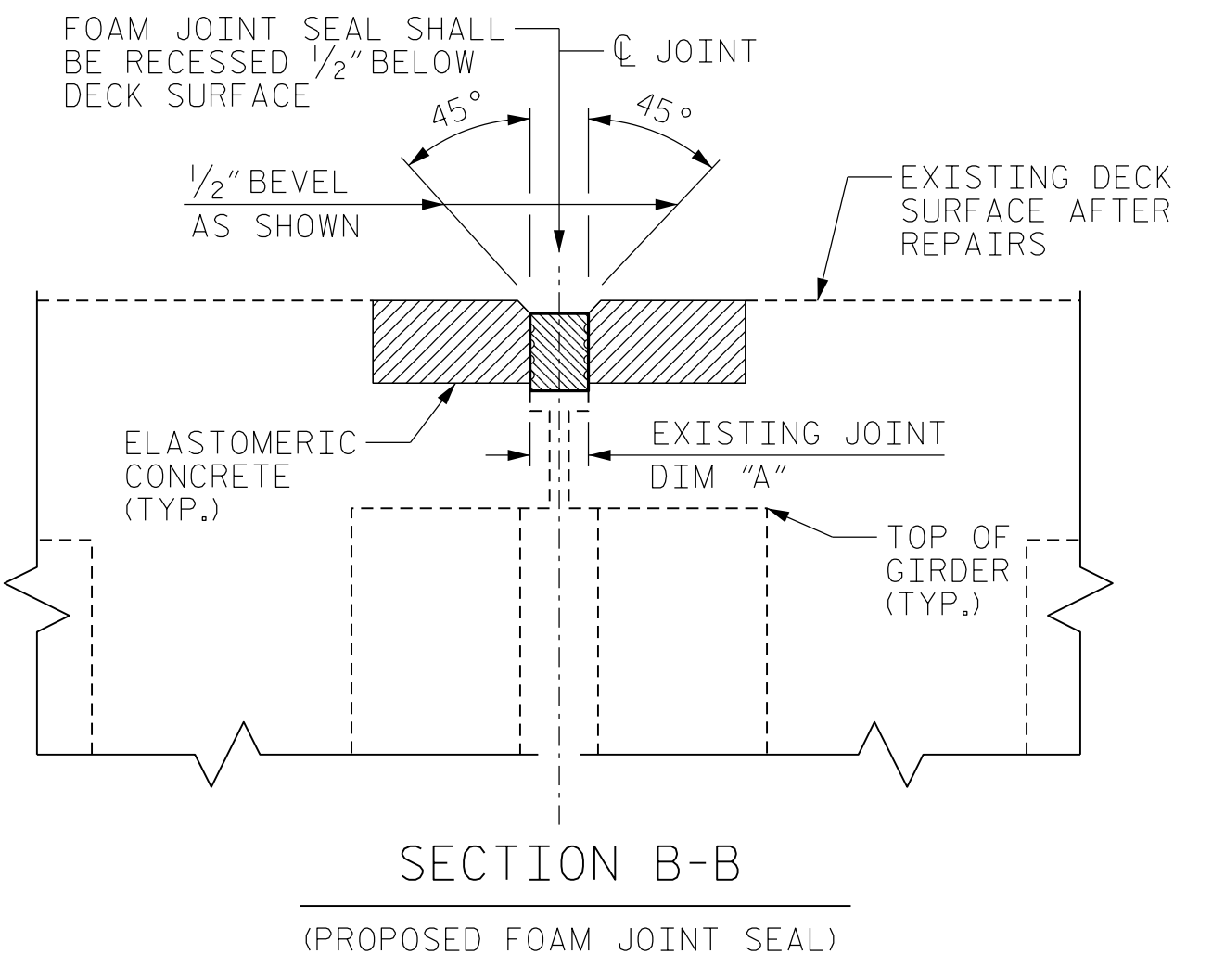
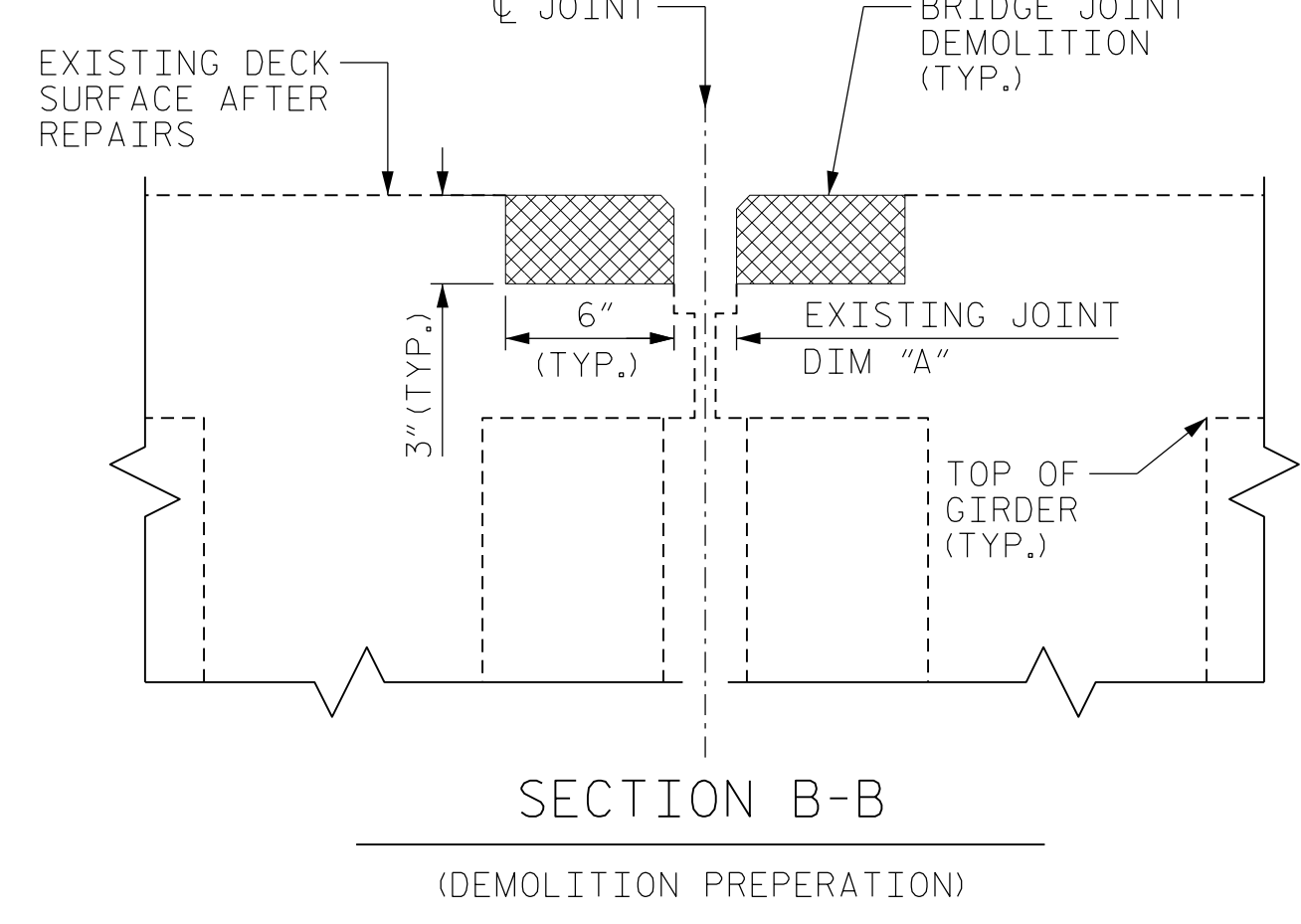
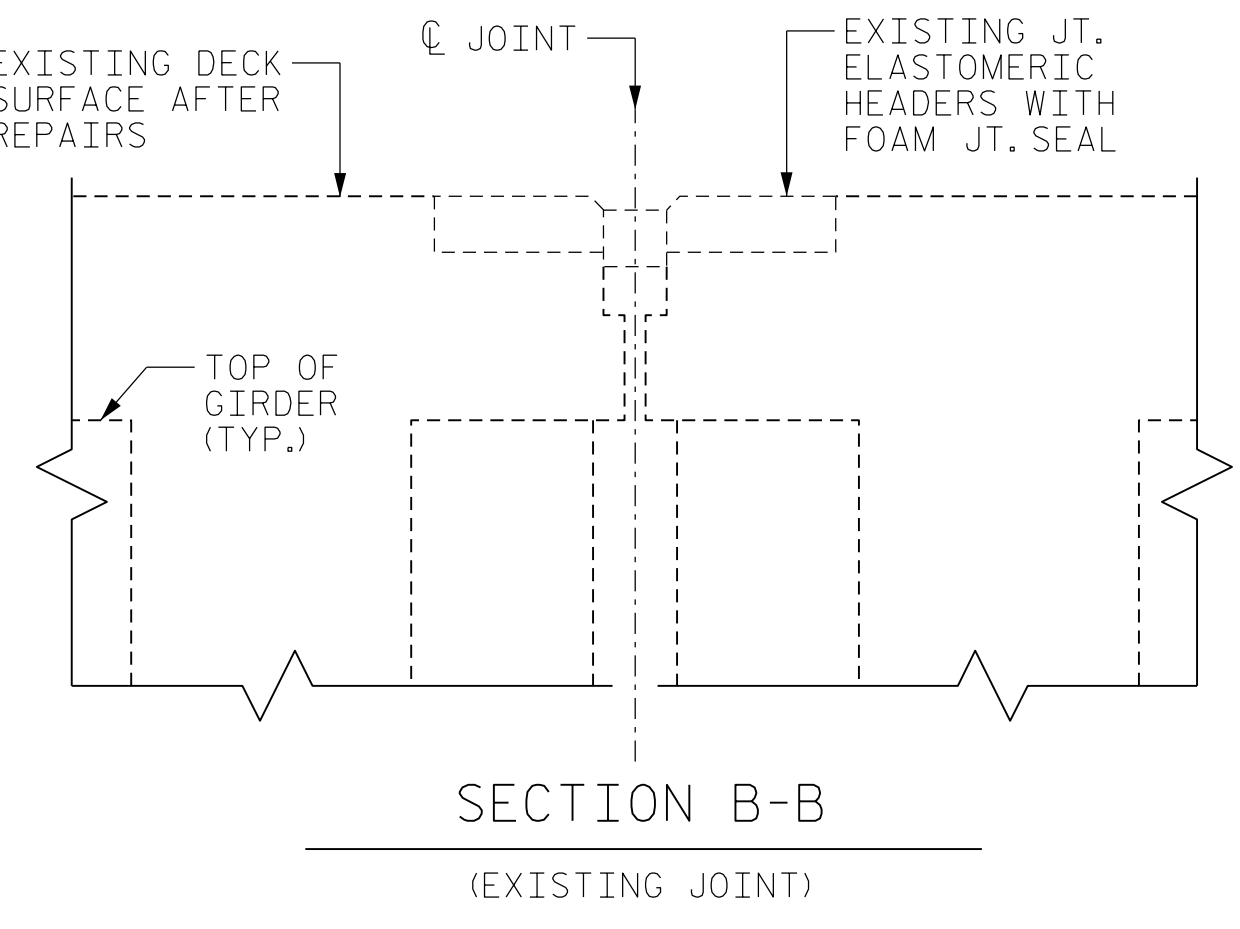
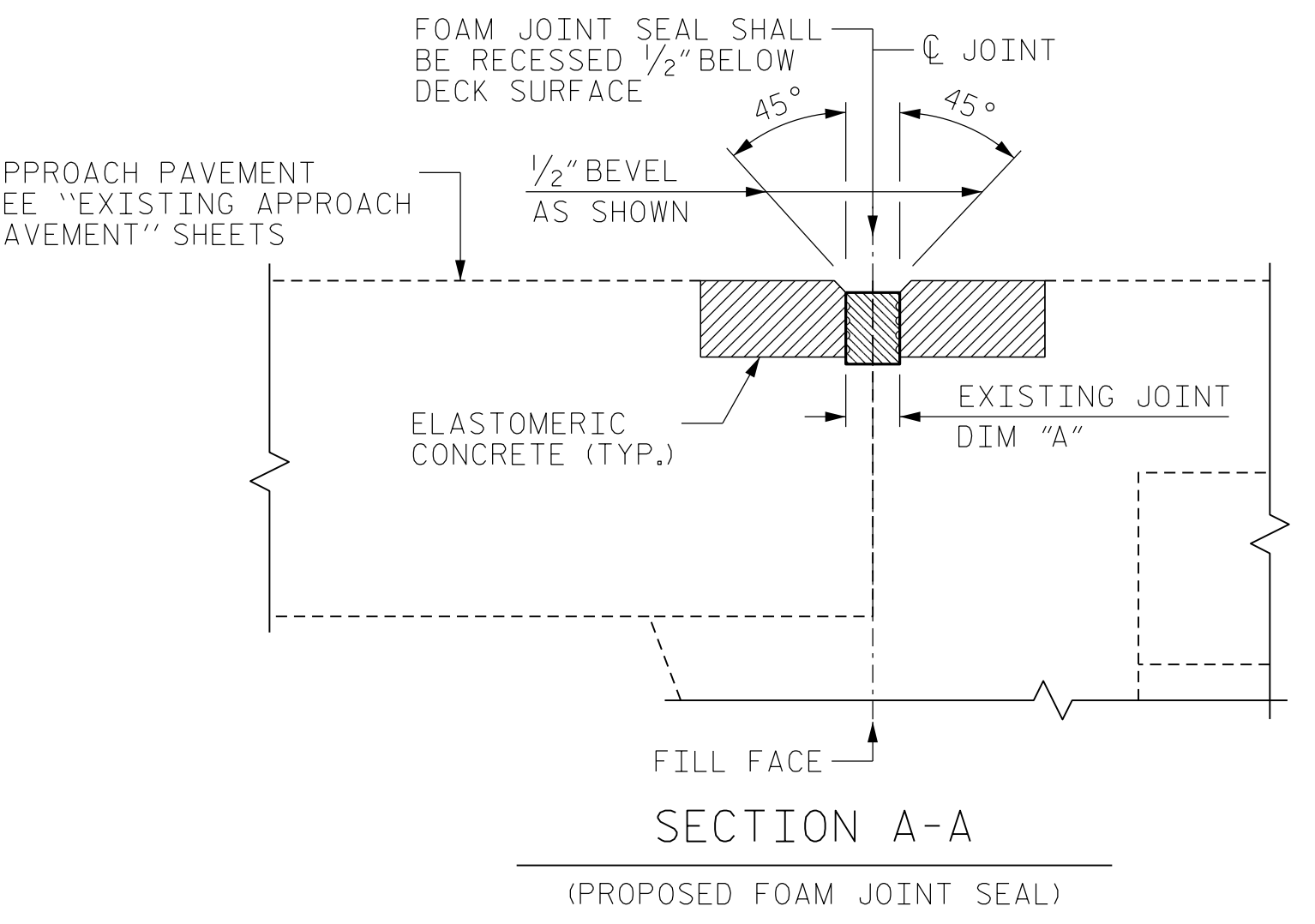
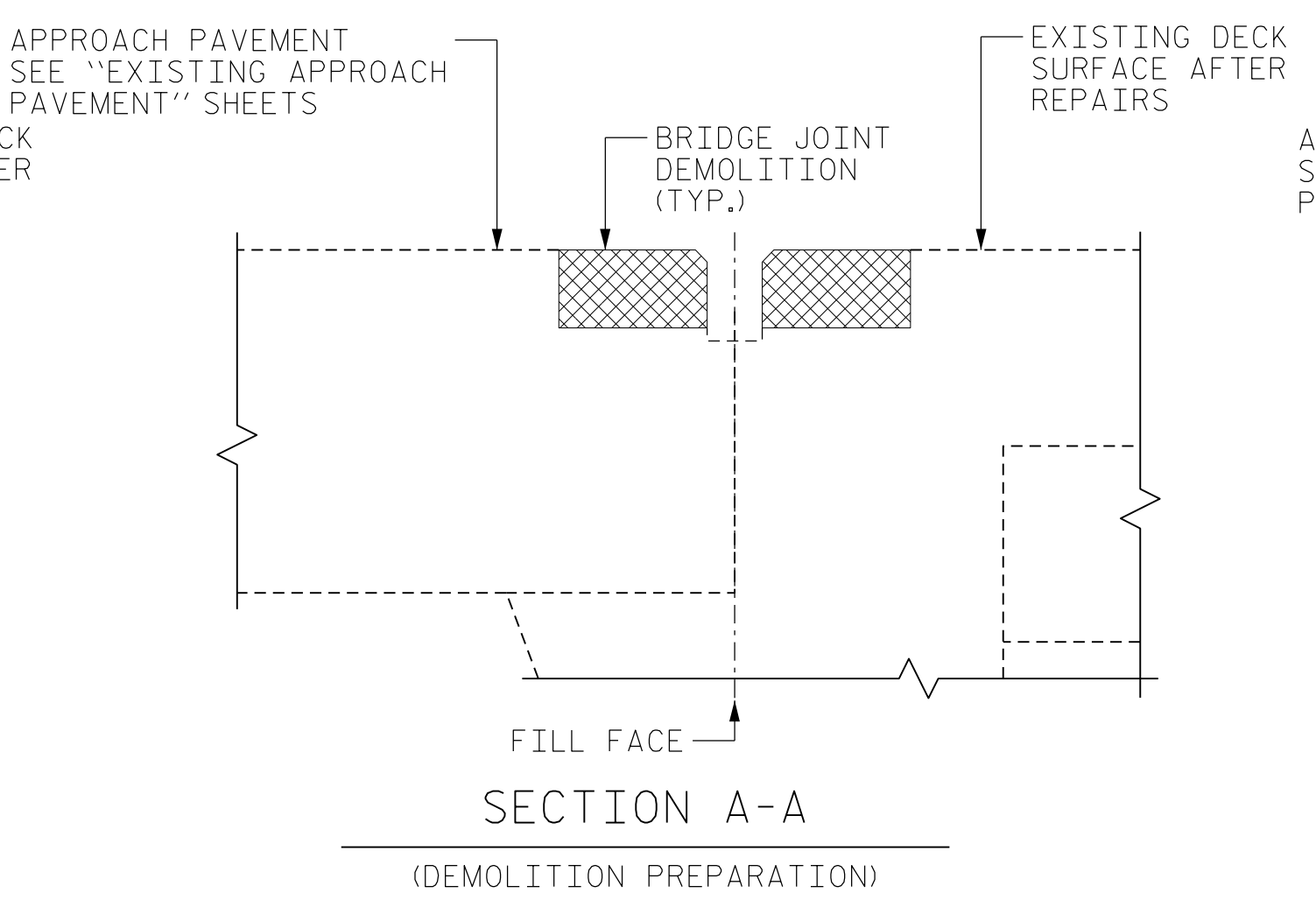
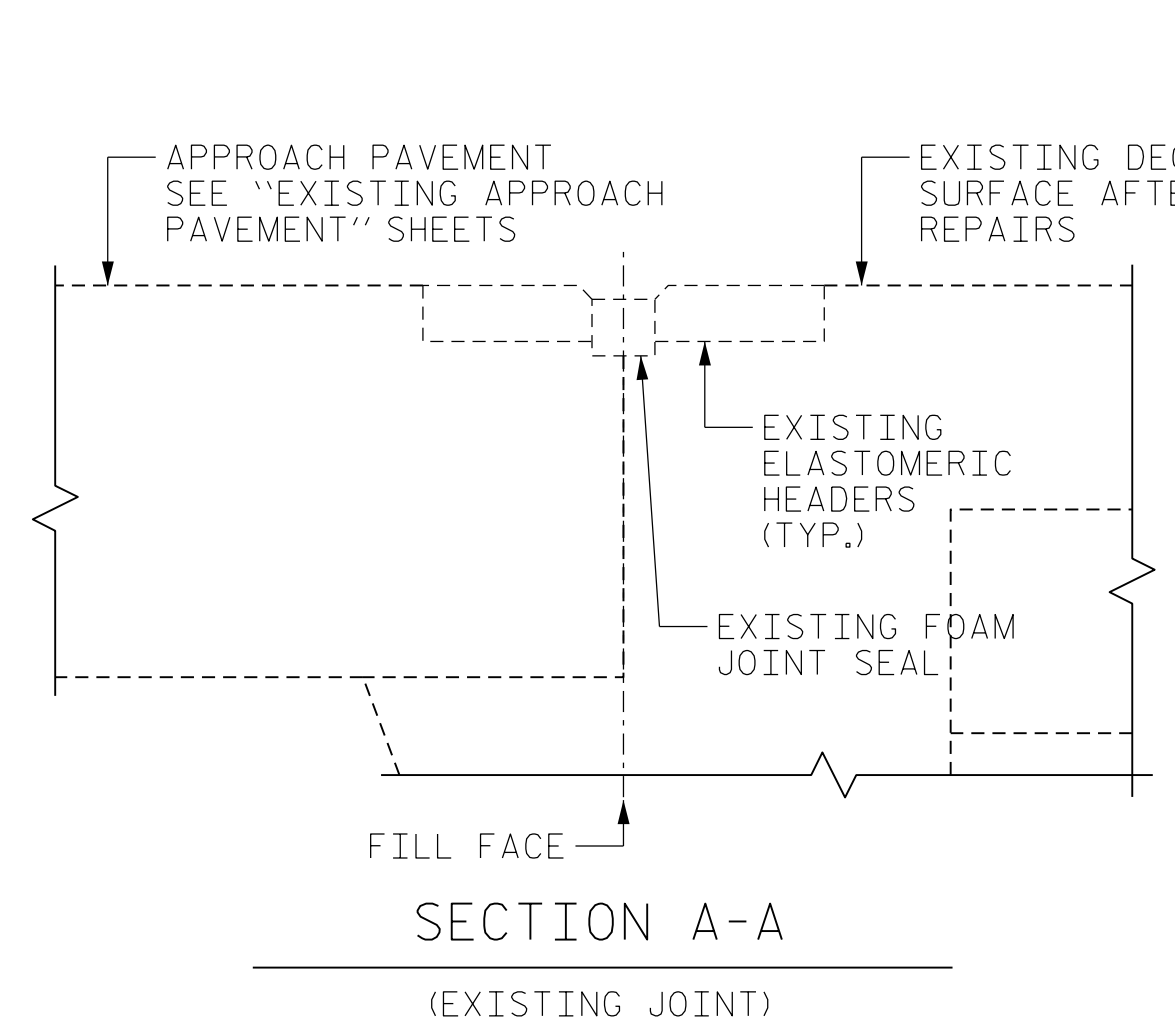


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPANS DECK REPAIRS

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S18-3
2			4			TOTAL SHEETS 8



NOTES:

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

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

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

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

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

THE INSTALLED FOAM JOINT SEAL SHALL BE WATER TIGHT.

QUANTITIES SHOWN IN THE ELASTOMERIC CONCRETE FOR PRESERVATION TABLE BASED ON THE MINIMUM JOINT DEMOLITION SHOWN.

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

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

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

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

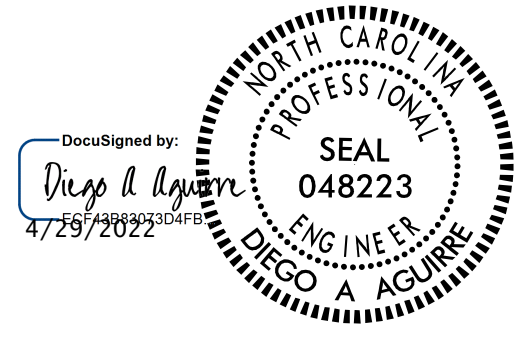
PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480124

BRIDGE JOINT DEMOLITION		
LOCATION	ESTIMATED (SQ.FT.)	ACTUAL (SQ.FT.)
END BENTS	62.2	
BENT 1	31.1	
BENT 2	31.1	

ELASTOMERIC CONCRETE FOR PRESERVATION		
LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)
END BENTS	15.6	
BENT 1	7.8	
BENT 2	7.8	

TABLE 1	
Table Date 02-2022	
BENT/ JOINTS	DIM "A" @ 40 °F
END BENT 1	1 3/4"
1	1 3/4"
2	1 3/4"
END BENT 2	1 7/8"

PROPOSED JOINT QUANTITY		
	ESTIMATED (LIN.FT.)	ACTUAL (LIN.FT.)
FOAM JOINT SEALS FOR PRESERVATION	131.0	



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S18-4
2			4			TOTAL SHEETS 8

DRAWN BY : DIEGO A. AGUIRRE DATE : 01/2022
 CHECKED BY : JACOB H. DUKE DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

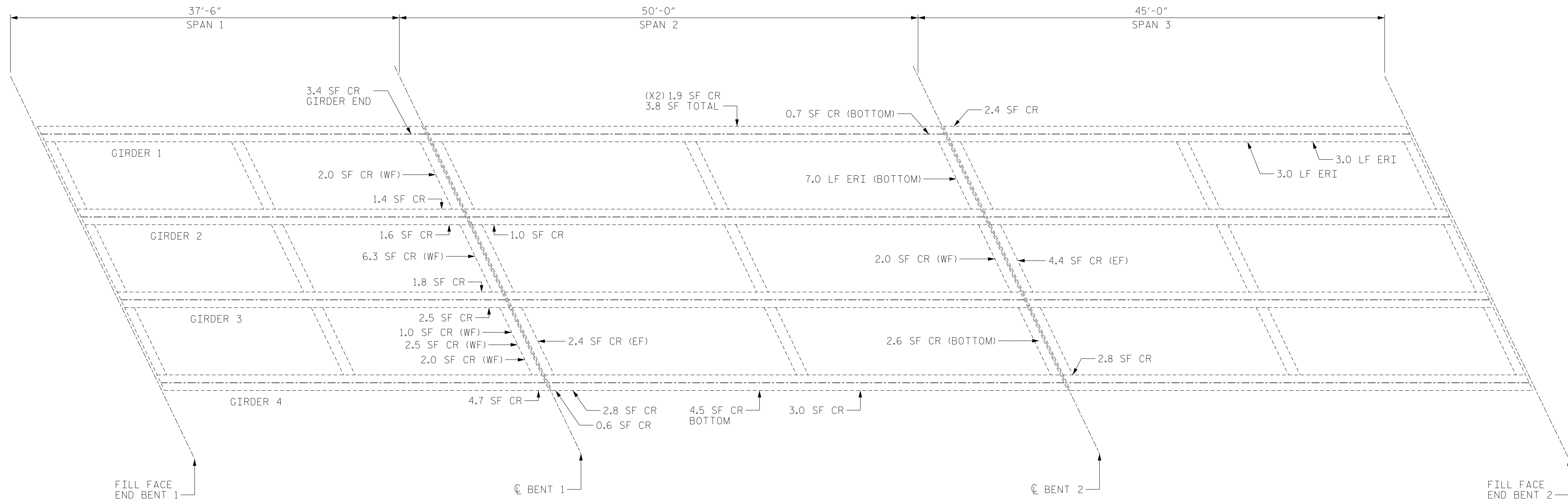
AS-BUILT REPAIR QUANTITY TABLE

SUPERSTRUCTURE REPAIRS

	SPAN 1				SPAN 2				SPAN 3			
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
CONCRETE REPAIR AREA (CR)	29.2 SF	10.6 CF			23.4 SF	8.5 CF			9.6 SF	3.3 CF		
SHOTCRETE REPAIR AREA (SCR)	-- SF	-- CF			-- SF	-- CF			-- SF	-- CF		
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
EPOXY RESIN INJECTION (ERI)	-- LF				7.0 LF				6.0 LF			

LEGEND:

- CR CONCRETE REPAIR AREA
- SCR SHOTCRETE REPAIR AREA
- ERI EPOXY RESIN INJECTION
- EF EAST FACE
- WF WEST FACE



PLAN

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 TABLE ABOVE.

CRACKING LOCATIONS AND QUANTITIES FOR LOCATIONS DESCRIBED AS "SCATTERED THROUGHOUT" IN THE INSPECTION REPORT ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER AND CONTRACTOR SHALL IDENTIFY AND REPAIR ALL CRACKS $\geq \frac{1}{16}$ " AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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

PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480124



KISINGER CAMPO & ASSOCIATES
 301 FAYETTEVILLE ST., SUITE 1500
 RALEIGH, NC 27601 (919) 882-7839
 NC FIRM LICENSE: C-1506

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

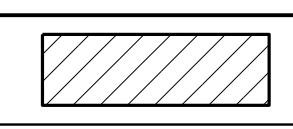
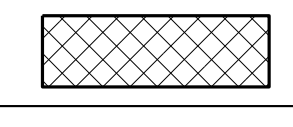

SUPERSTRUCTURE REPAIRS

DRAWN BY : ALLEN J. MCSWAIN DATE : 01/2022
 CHECKED BY : JACOB H. DUKE DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

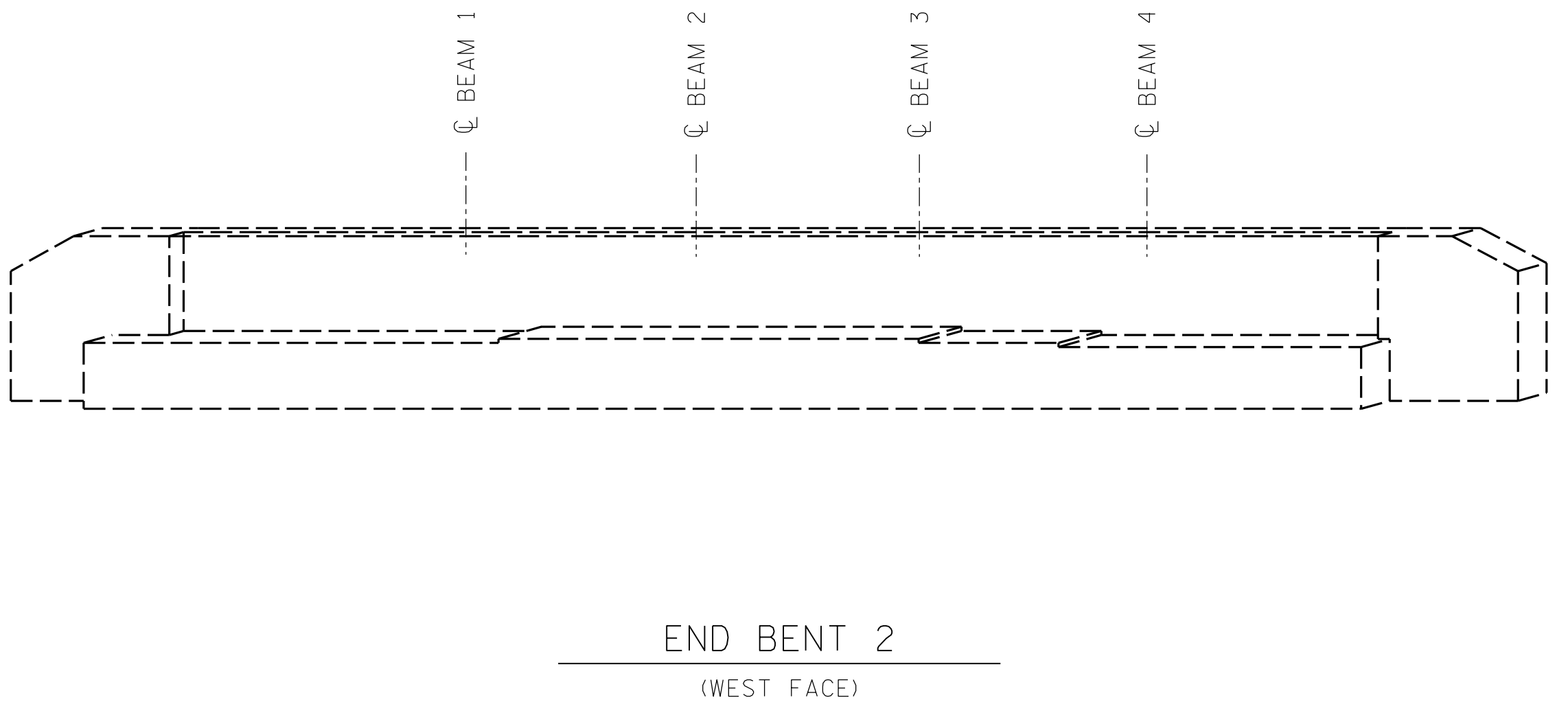
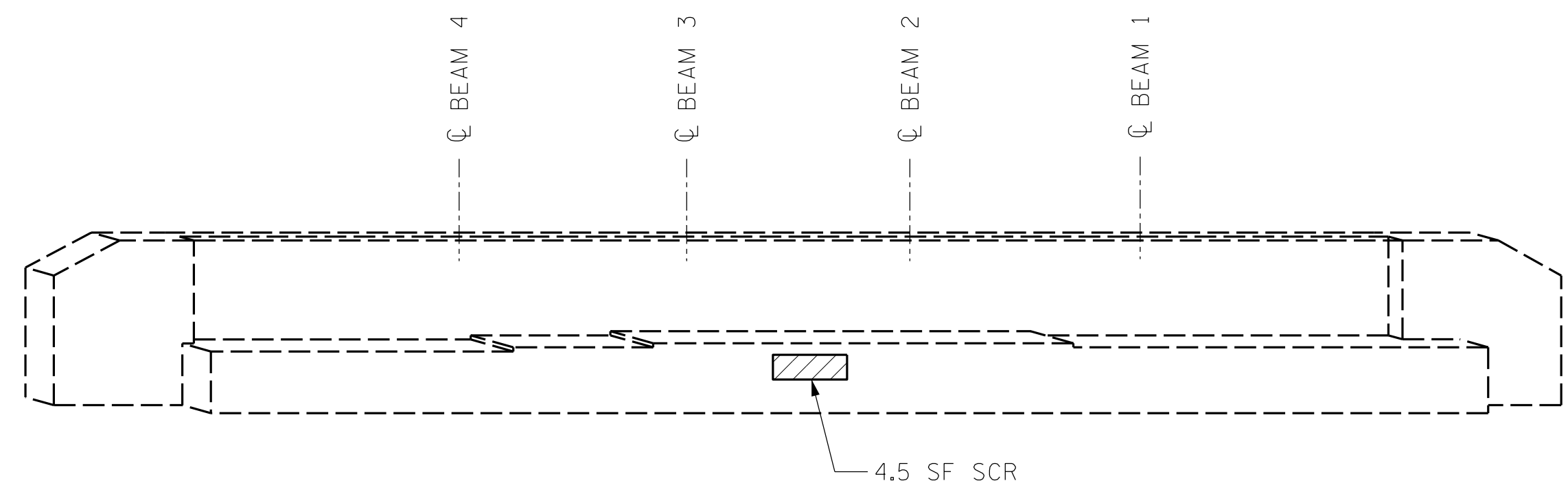
4/21/2022
 I5915B_SMU_SSR01_480124.dgn
 daguirre

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S18-5
2			4			TOTAL SHEETS 8

LEGEND	
	CONCRETE REPAIR AREA (CR)
	SHOTCRETE REPAIR AREA (SCR)
	EPOXY RESIN INJECTION (ERI)

	AS-BUILT REPAIR QUANTITY TABLE			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP/BACKWALL	4.5	1.5		
COLUMN/PILE	-	-		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	-	-		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP/BACKWALL	-			
COLUMN/PILE	-			



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

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 TABLE ABOVE.

CRACKING LOCATIONS AND QUANTITIES FOR LOCATIONS DESCRIBED AS "SCATTERED THROUGHOUT" IN THE INSPECTION REPORT ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER AND CONTRACTOR SHALL IDENTIFY AND REPAIR ALL CRACKS $\geq 1/16"$ AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

AVERAGE CONCRETE COVER IS EXPECTED TO BE FROM 2" TO 3" ON THE CAP AND FROM 1 1/2" TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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

REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

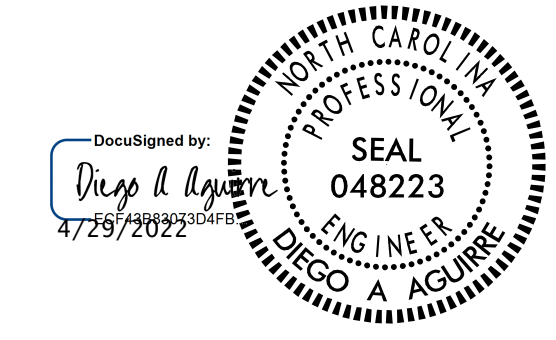
PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480124

SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
REPAIRS

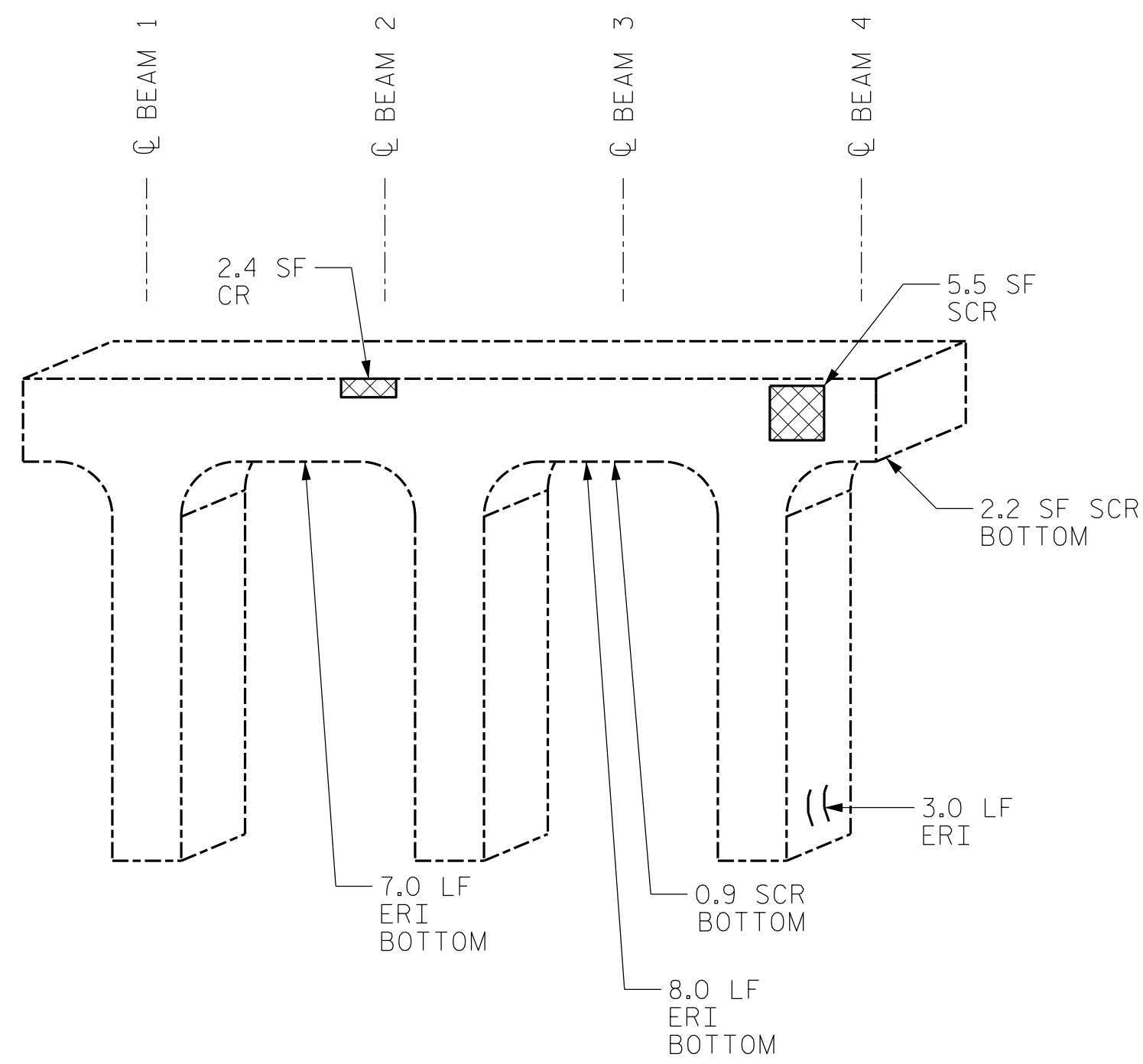
END BENTS 1 & 2



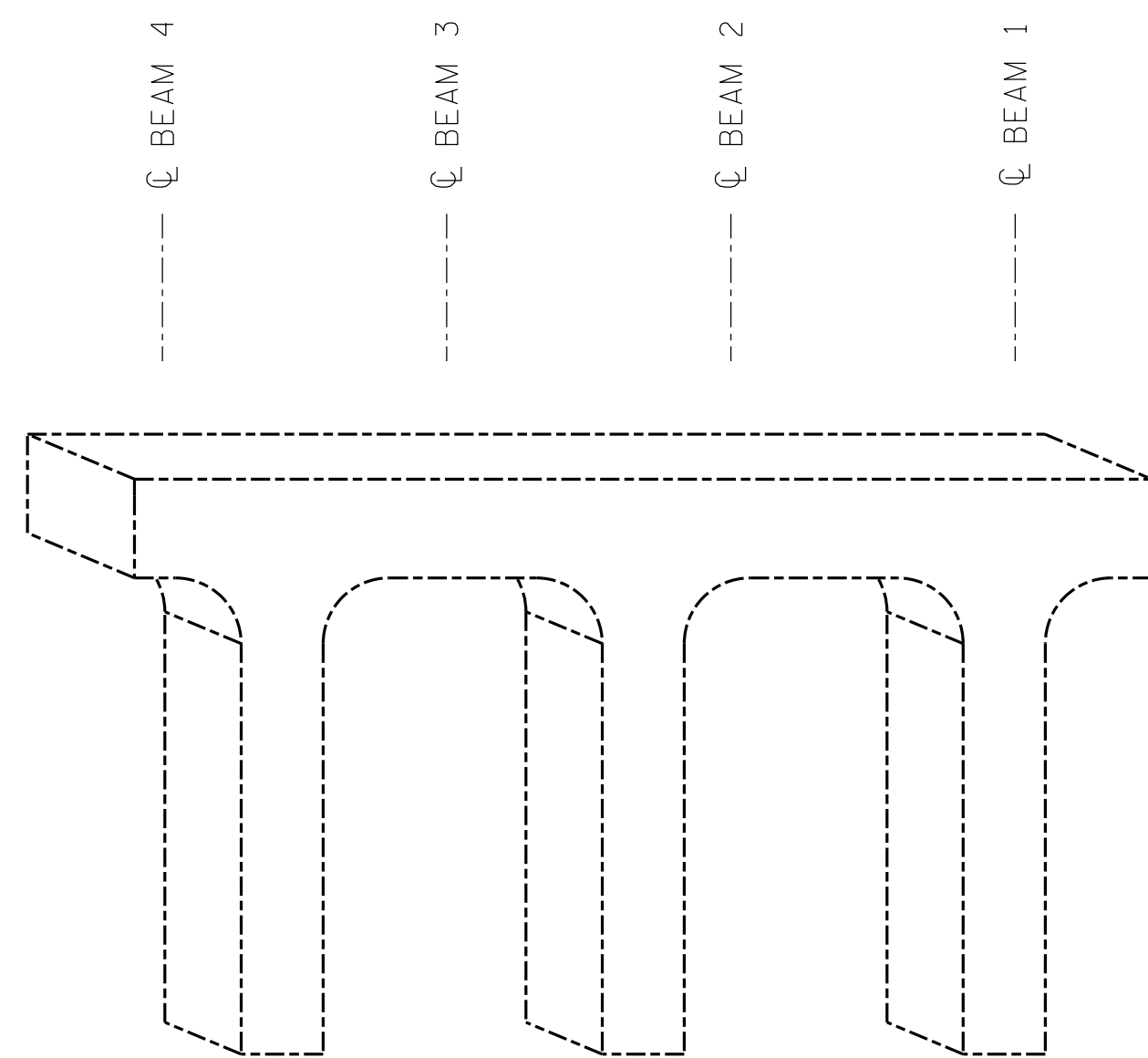
DRAWN BY :	ALLEN J. MCSWAIN	DATE :	01/2022
CHECKED BY :	FIDEL L. FLORES	DATE :	01/2022
DESIGN ENGINEER OF RECORD:	DIEGO A. AGUIRRE	DATE :	01/2022

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S18-6
2			4			TOTAL SHEETS 8



BENT 1
(WEST FACE)



BENT 1
(EAST FACE)

LEGEND	
	CONCRETE REPAIR AREA (CR)
	SHOTCRETE REPAIR AREA (SCR)
	EPOXY RESIN INJECTION (ERI)

	AS-BUILT REPAIR QUANTITY TABLE			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP/BACKWALL	8.6	3.0		
COLUMN/PILE	-	-		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	2.4	0.8		
EPOXY RESIN INJECTION	LIN. FT.		LIN. FT.	
CAP/BACKWALL	15.0			
COLUMN/PILE	3.0			

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

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 TABLE ABOVE.

CRACKING LOCATIONS AND QUANTITIES FOR LOCATIONS DESCRIBED AS "SCATTERED THROUGHOUT" IN THE INSPECTION REPORT ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER AND CONTRACTOR SHALL IDENTIFY AND REPAIR ALL CRACKS $\geq 1/16"$ AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

AVERAGE CONCRETE COVER IS EXPECTED TO BE FROM 2" TO 3" ON THE CAP AND FROM 1 1/2" TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

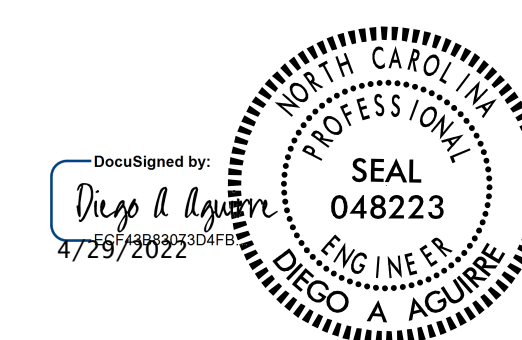
FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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

REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480124

SHEET 2 OF 3

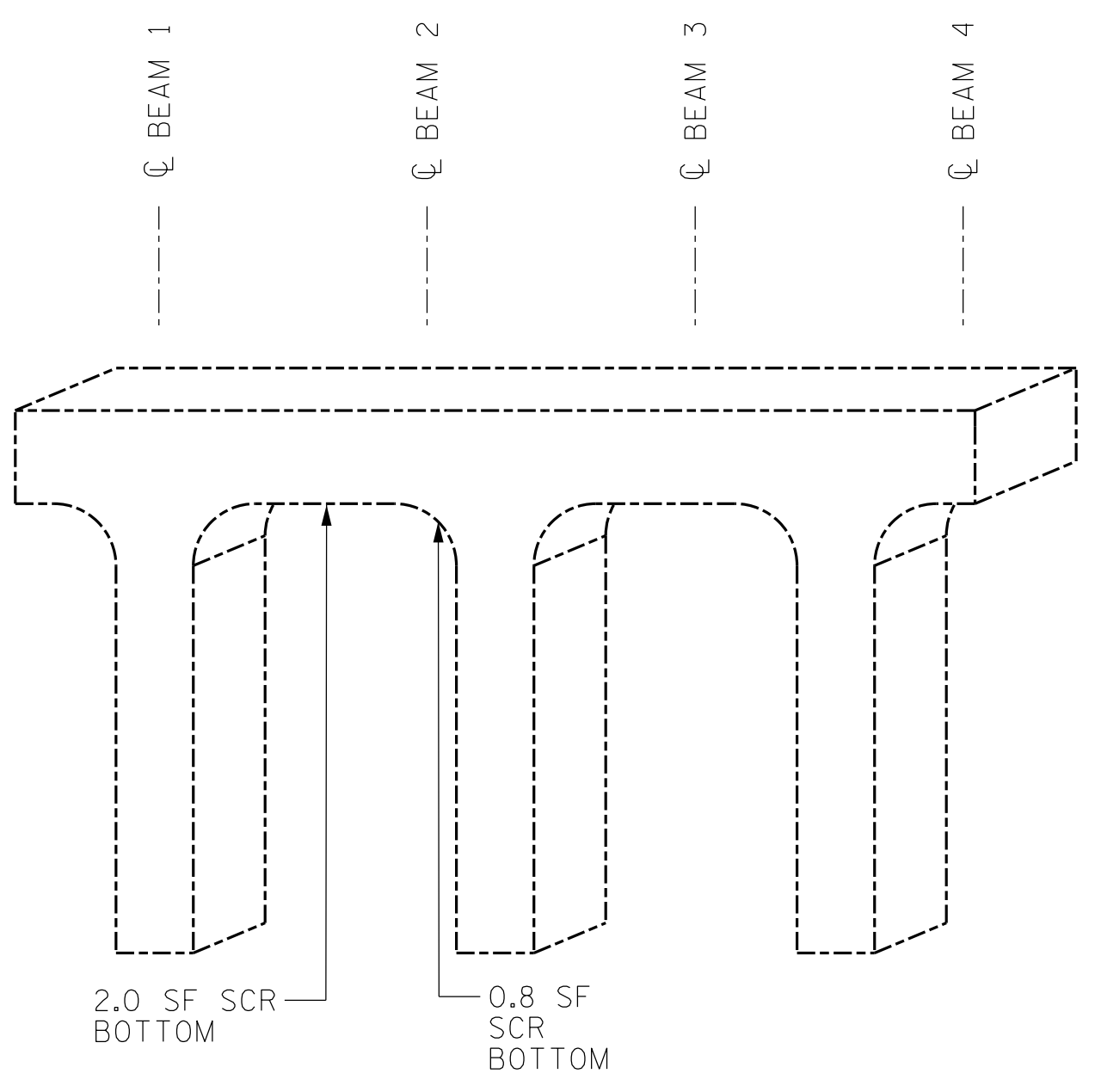


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE REPAIRS
 BENT 1

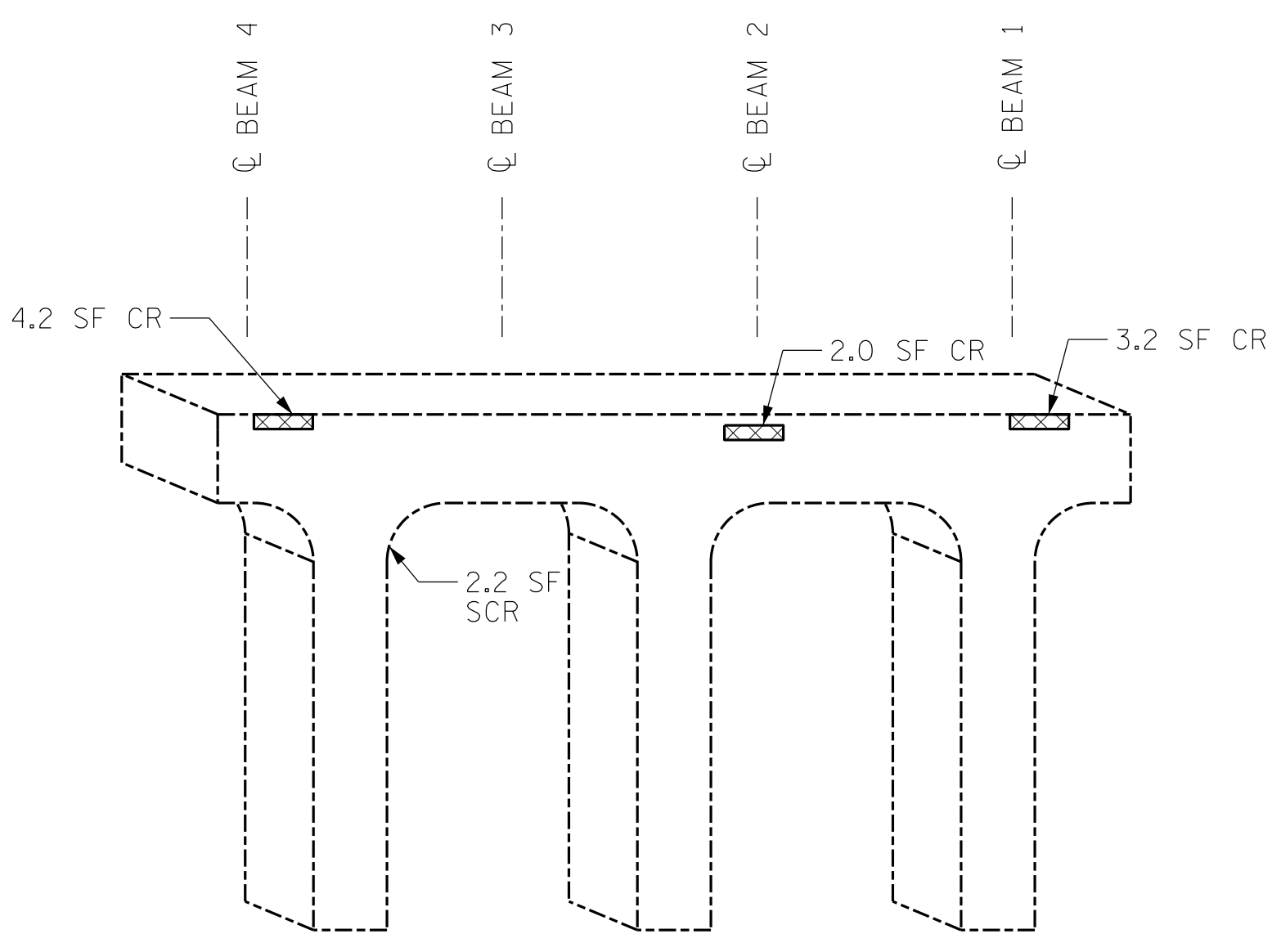
DRAWN BY : ALLEN J. MCSWAIN DATE : 01/2022
 CHECKED BY : FIDEL L. FLORES DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S18-7
2			4			TOTAL SHEETS 8



BENT 2
(WEST FACE)



BENT 2
(EAST FACE)

LEGEND	
	CONCRETE REPAIR AREA (CR)
	SHOTCRETE REPAIR AREA (SCR)
	EPOXY RESIN INJECTION (ERI)

		AS-BUILT REPAIR QUANTITY TABLE			
		ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS		AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP/BACKWALL		2.8	1.0		
COLUMN/PILE		2.2	0.8		
CONCRETE REPAIRS		AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP		9.4	3.2		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.	
CAP/BACKWALL		-			
COLUMN/PILE		-			

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

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 TABLE ABOVE.

CRACKING LOCATIONS AND QUANTITIES FOR LOCATIONS DESCRIBED AS "SCATTERED THROUGHOUT" IN THE INSPECTION REPORT ARE BASED ON THE BEST INFORMATION AVAILABLE. THE ENGINEER AND CONTRACTOR SHALL IDENTIFY AND REPAIR ALL CRACKS $\geq 1/16"$ AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

AVERAGE CONCRETE COVER IS EXPECTED TO BE FROM 2" TO 3" ON THE CAP AND FROM 1 1/2" TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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

REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480124

SHEET 3 OF 3

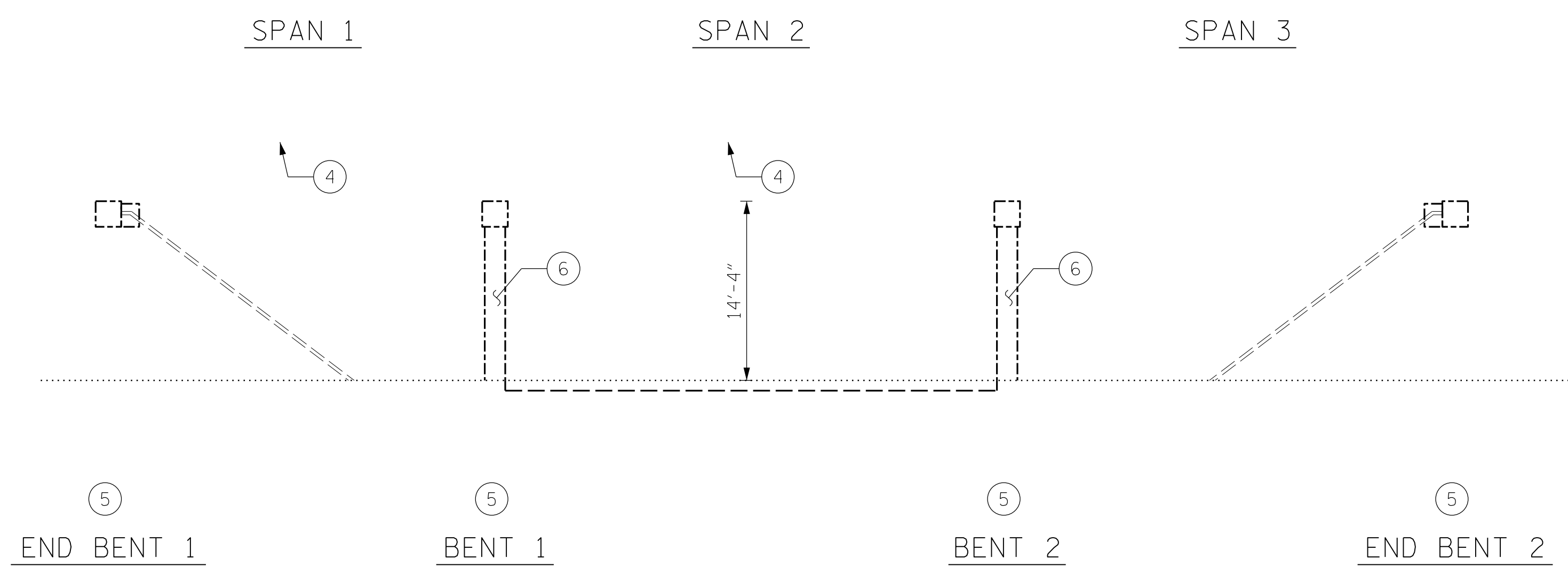


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE REPAIRS
 BENT 2

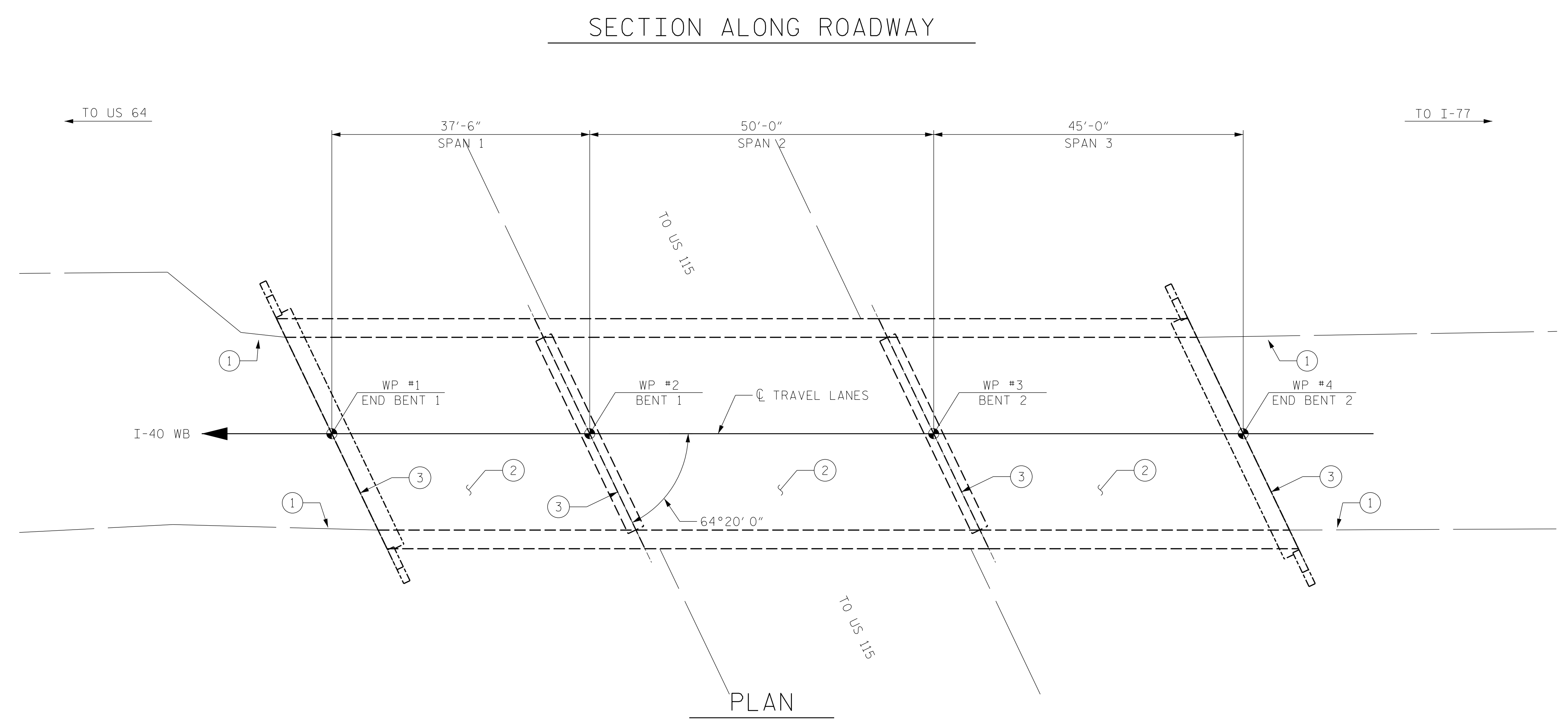
DRAWN BY : ALLEN J. MCSWAIN DATE : 01/2022
 CHECKED BY : FIDEL L. FLORES DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S18-8
2			4			TOTAL SHEETS 8



- SCOPE LEGEND:**
- ① CLEAR SHOULDERS OF DEBRIS AND VEGETATION
 - ② CONCRETE DECK REPAIRS
 - ③ JOINT REPAIRS/REPLACEMENT
 - ④ SUPERSTRUCTURE CONCRETE REPAIRS
 - ⑤ SUBSTRUCTURE CONCRETE REPAIRS
 - ⑥ SUBSTRUCTURE EPOXY RESIN INJECTION



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

RESIDENT ENGINEER _____ DATE _____

PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480124



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-40 WB
 OVER NC 115

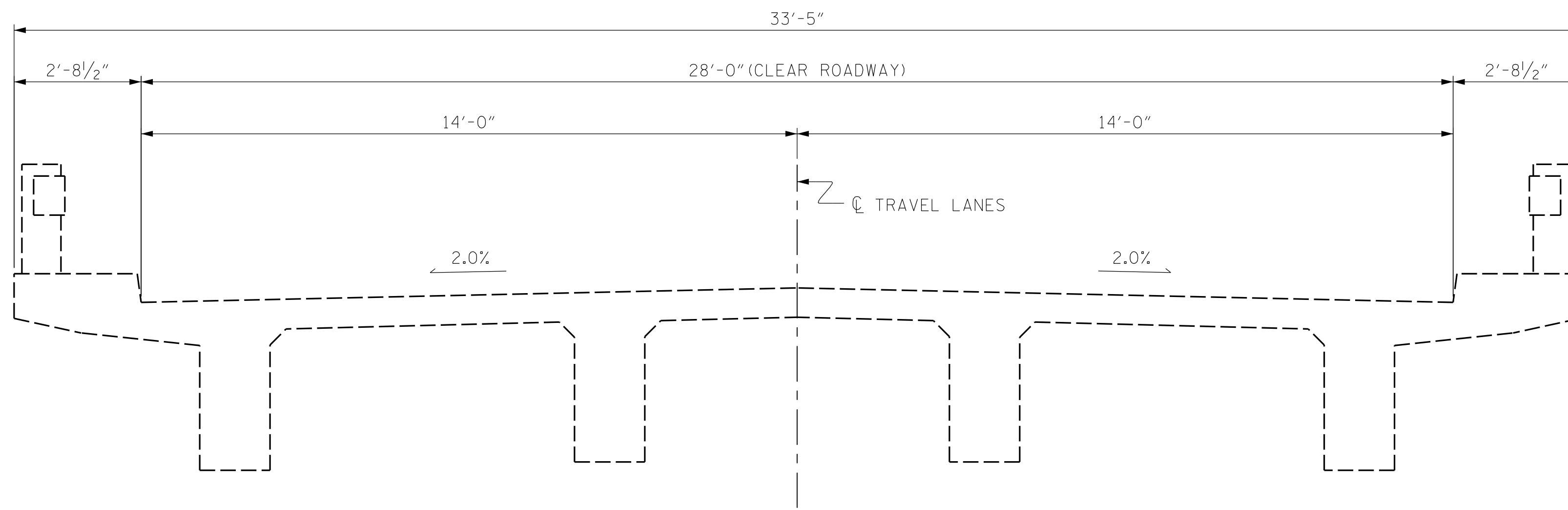
NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE MOST UP TO DATE ROUTINE INSPECTION REPORT DATED 09/16/2021.

DRAWN BY : DIEGO A. AGUIRRE DATE : 01/2022
 CHECKED BY : FIDEL L. FLORES DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

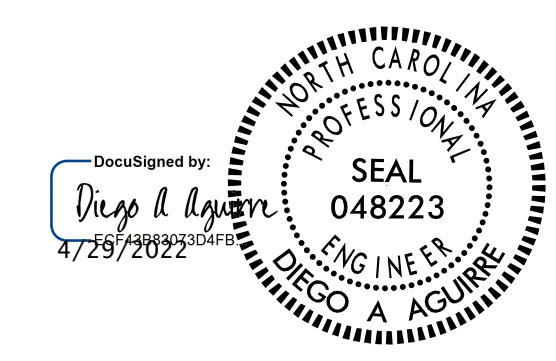
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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



EXISTING

PROJECT NO. I-5915B
IREDELL COUNTY
 BRIDGE NO. 480124



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						SHEET NO.
TYPICAL SECTION						S18-2
REVISIONS						TOTAL SHEETS
NO.	BY:	DATE:	NO.	BY:	DATE:	8
1			3			
2			4			

DRAWN BY : DIEGO A. AGUIRRE DATE : 01/2022
 CHECKED BY : FIDEL L. FLORES DATE : 01/2022
 DESIGN ENGINEER OF RECORD: DIEGO A. AGUIRRE DATE : 01/2022

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

