

ESTIMATED

(LIN.FT.)

188.7

STATE OF NORTH CAROLINA

BY:

REVISIONS

DATE:

SIGNATURES COMPLETED

NC FIRM LICENSE: C-1506

ACTUAL

(LIN.FT.)

COUNTY

SHEET NO

S9-5

TOTAL SHEETS

I-5915B

480065

DATE:

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>

AS-BUILT REPAIR QUANTITY TABLE

ESTIMATE ACTUAL

INCIDENTAL MILLING

ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C

ASPHALT BINDER FOR PLANT MIX

13.1 TON

## NOTES:

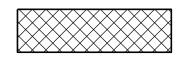
INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 11/2" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. THE NEW ASPHALT PAVEMENT THICKNESS MAY EXCEED 11/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH.

FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.

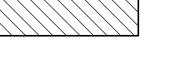
GRADE MAY BE ADJUSTED BY THE ENGINEER TO ENSURE PROPER TIE-IN AT THE END BENTS.

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

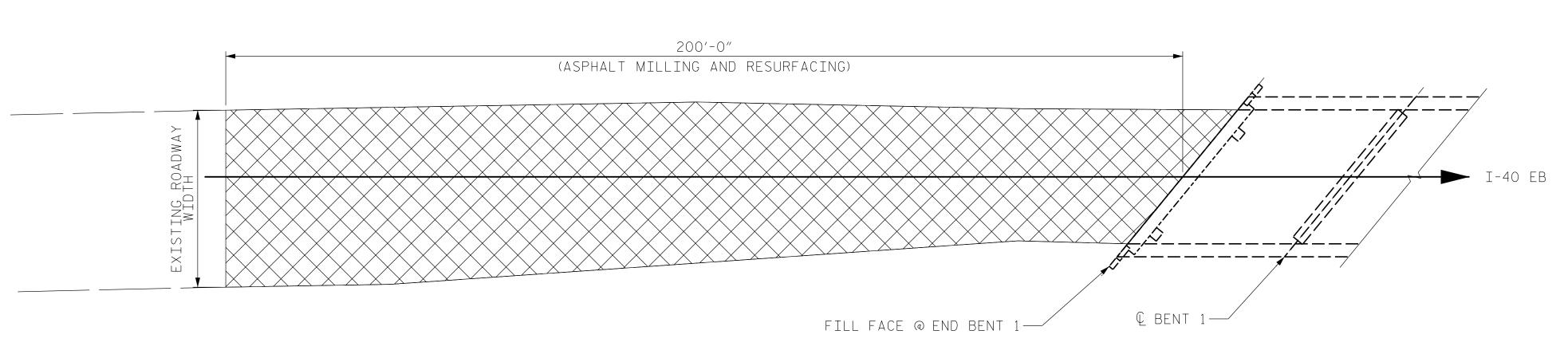
INCIDENTAL MILLING



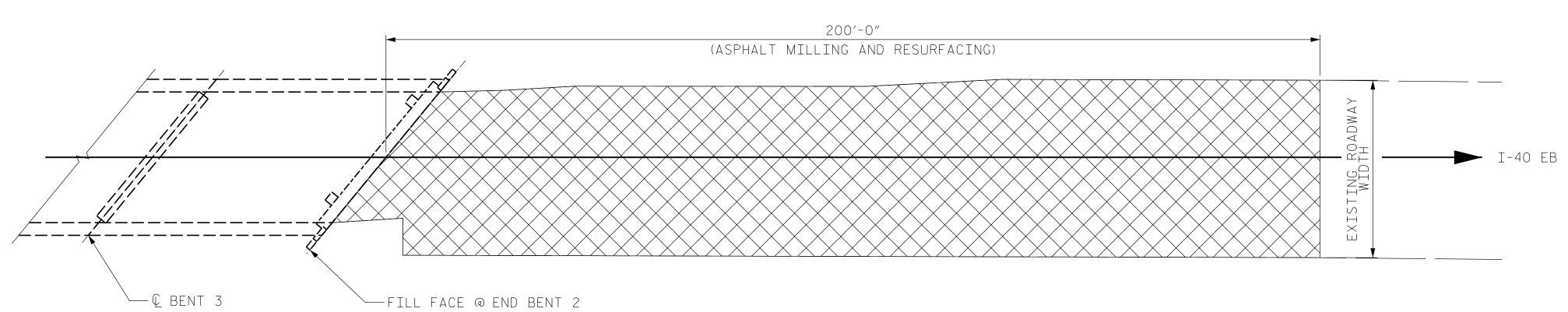
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C (C1)



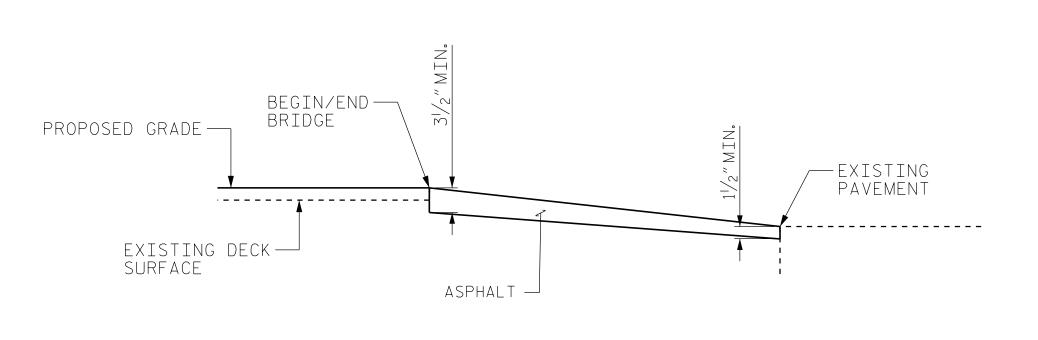




## BEGIN APPROACH SLAB



END APPROACH SLAB



PAVEMENT KEY-IN DETAIL FOR BOTH END BENTS

EXISTING WIDTH

— © EXISTING ROADWAY

— GRADE POINT

— CI

— EXIST.

— EXIST

Docusigned by SEAL

Vicys & Manyor 048223

4/29/2022

OFESS/ON: 74

OFES

FINAL UNLESS ALL

SIGNATURES COMPLETED

CONSIDERED WISINGER CAMPO & ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500

RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506

PROJECT NO. I-5915B

IREDELL COUNTY

BRIDGE NO. 480065

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

APPROACH ROADWAY

MILLING AND RESURFACING

		REVIS	SIO	NS		SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S9-6
1			3			TOTAL SHEETS
2			4			12

DRAWN BY: \_\_\_\_\_FIDEL L.FLORES 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\_AR01\_480065.dgn daguirre

## AS-BUILT REPAIR QUANTITY TABLE

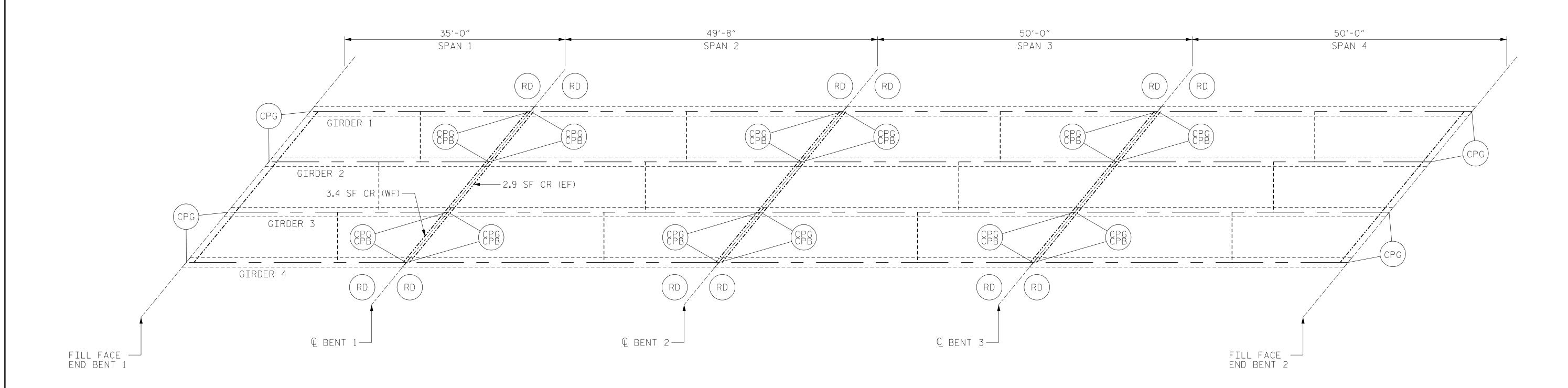
#### CUDEDCEDUCTUDE DEDATOC

			SUPE	RSTRUC	TURE F	REPAIRS										
		SPAN 1				SPAN 2			SPAN 3					N 4		
	ESTI	MATE	AC <sup>-</sup>	TUAL	ESTI	MATE	ACT	TUAL	ESTI	MATE	AC <sup>-</sup>	TUAL	ESTI	EMATE	ACT	UAL
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
CONCRETE REPAIR AREA (CR)	3.4 SF	1.2 CF			2.9 SF	1.0 CF			SF	CF			SF	CF		
	ESTI	MATE	AC <sup>-</sup>	TUAL	ESTI	MATE	ACI	TUAL	ESTI	MATE	AC <sup>-</sup>	TUAL	ESTI	IMATE	АСТ	UAL
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	EXISTING BEARINGS WITH HRSCA 4 EA				8	EA			8	EA			4	EA		

QUANTITIES FOR REMOVAL OF DIAPHRAGMS AT OVERHANGS (RD) ARE NOT INCLUDEDED AND SHALL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REAPIRS".

LEGEND:

- CLEAN AND PAINT GIRDER ENDS (5 LF)
- CLEAN AND PAINT BEARING
- REMOVE END DIAPHRAGM AT OVERHANG (SEE DETAIL "RD")
- CR CONCRETE REPAIR AREA
- EF EAST FACE
- WF WEST FACE



#### 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.

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

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

PRIOR TO CLEANING AND PAINTING STEEL ELEMENTS, REMOVE EXTERIOR DIAPHRAGMS AND A PORTION OF THE INTERIOR DIAPHRAGMS SO AS TO ALLOW FOR CLEANING OF EXISTING STEEL ELEMENTS PRIOR TO PAINTING. SEE DETAILS "RD" AND "RRD".

AFTER THE REMOVAL OF EXTERIOR END DIAPHRAGMS, CUT ANY EXPOSED REBAR FLUSH WITH THE DECK. COAT THE REMAINING EXPOSED REBAR WITH EPOXY. EPOXY WILL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REPAIRS".

FOR DETAILS OF CLEANING AND PAINTING GIRDER ENDS (CPG), REMOVE END DIAPHRAGMS AT OVERHANG (RD), AND REMOVE AND REPAIR DIAPHRAGM ENDS (RRD), SEE "MISCELLANEOUS REPAIRS" SHEET.

FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

ı	DRAWN BY :		ALLEN	J. MCSWA	IN	DATE	:	01/2022
ı	CHECKED BY :		JACOB	H. DUKE		DATE	:	01/2022
I	DESIGN ENGINEER	OF RE	ECORD:	DIEGO	A. AGUIRRE	DATE	0	01/2022

PLAN

I-5915B PROJECT NO.\_\_\_\_ IREDELL COUNTY

480065 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

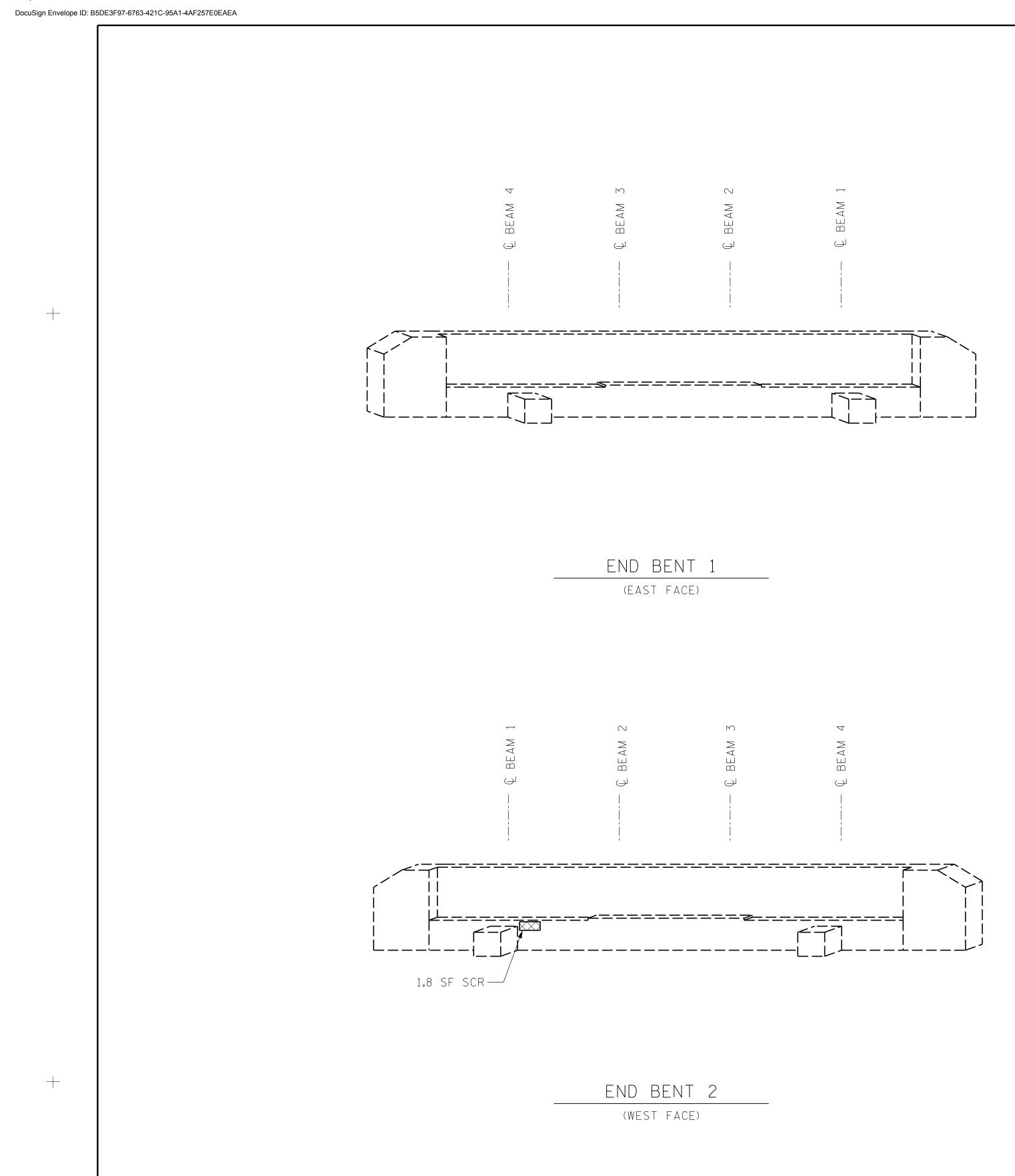
SUPERSTRUCTURE REPAIRS

RALEIGH, NC 27601 (919) 882-7839

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S9-7 DATE: DATE: BY: NO. BY: TOTAL SHEETS 12

FINAL UNLESS ALL SIGNATURES COMPLETED



LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) CAP/BACKWALL 1.8 0.6 COLUMN/PILE CONCRETE REPAIRS CAP EPOXY RESIN INJECTION LIN.FT. LIN.FT. CAP/BACKWALL

> 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:

COLUMN/PILE

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 >= $\frac{1}{16}$ " 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  $1\frac{1}{2}$ " TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

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

> PROJECT NO.\_ IREDELL COUNTY 480065 BRIDGE NO. \_

SHEET 1 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

END BENTS 1 & 2

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED

RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S9-8 DATE: BY: DATE: NO. BY: TOTAL SHEETS

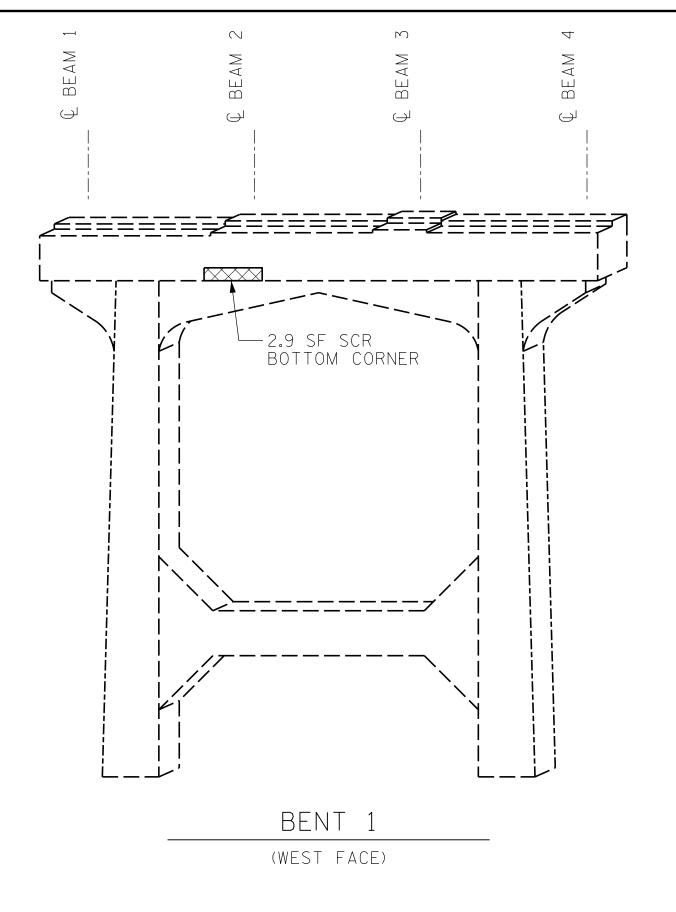
\_ DATE : <u>01/2022</u>

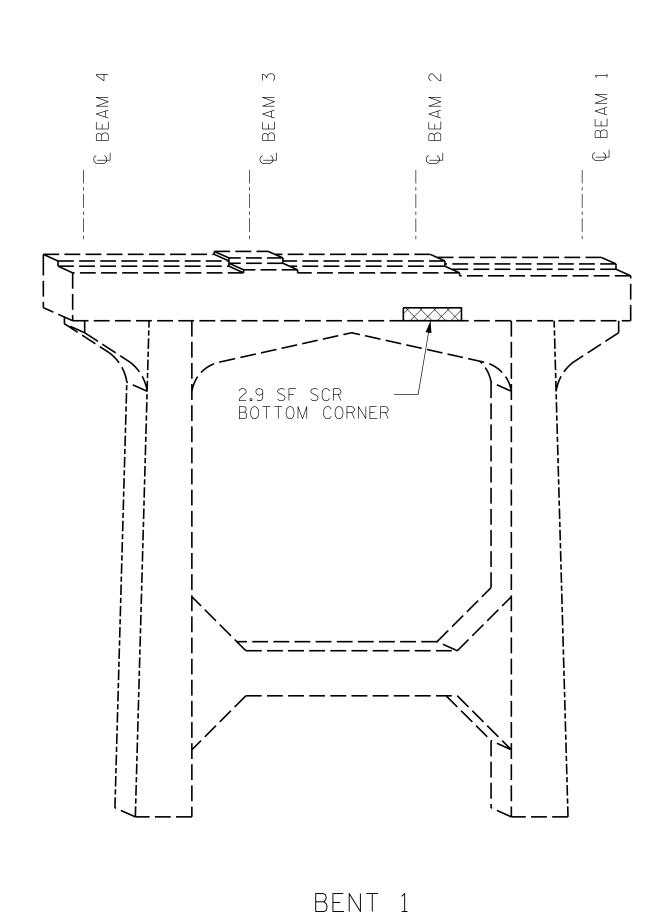
\_ DATE : <u>01/2022</u>

ALLEN J.MCSWAIN

DRAWN BY : \_\_\_\_

CHECKED BY: \_\_\_\_\_FIDEL L.FLORES





(EAST FACE)

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) 5.8 CAP/BACKWALL 2.0 COLUMN/PILE VOLUME CU.FT. CONCRETE REPAIRS CAP EPOXY RESIN INJECTION LIN.FT. LIN.FT. CAP/BACKWALL

> 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.

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

> I-5915B PROJECT NO.\_ IREDELL COUNTY 480065 BRIDGE NO. \_

SHEET 2 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 1

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED

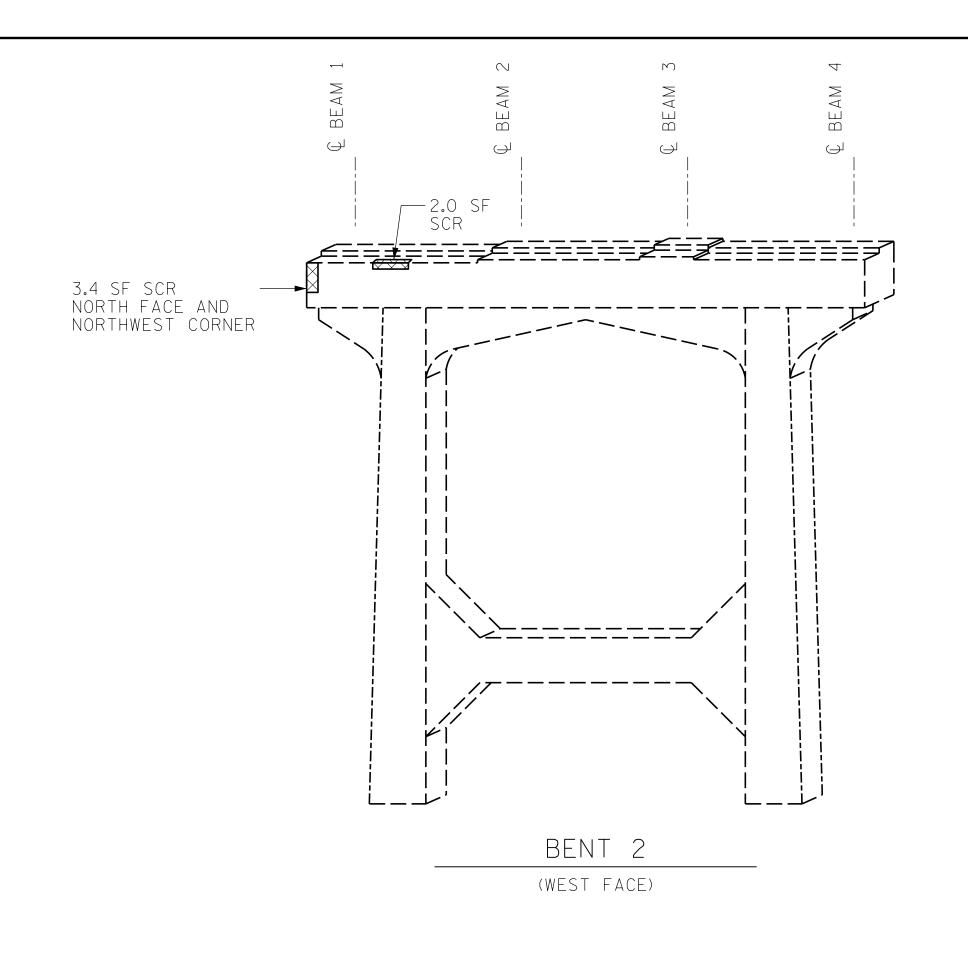
FINAL UNLESS ALL

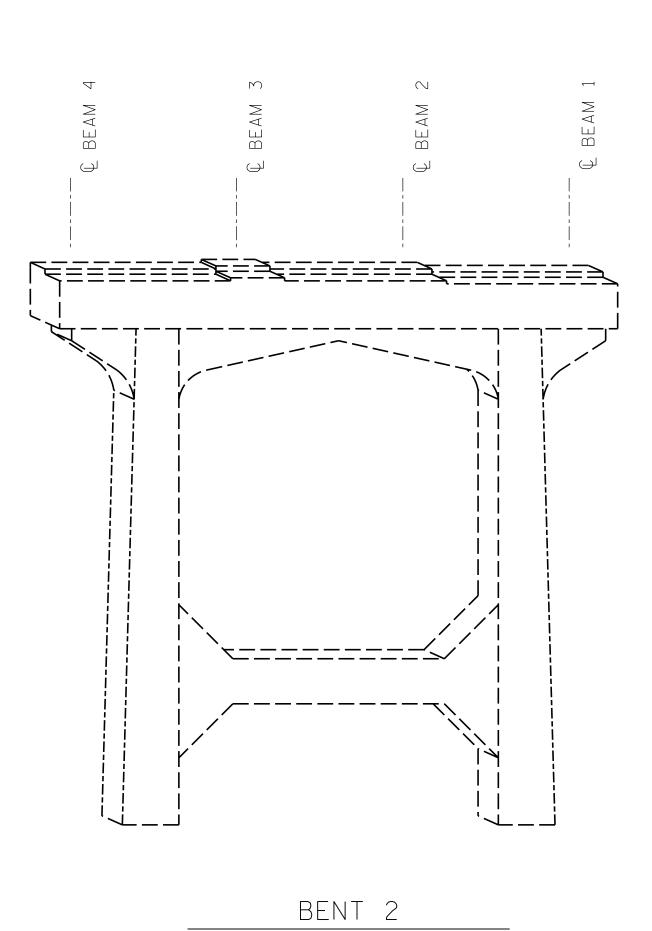
NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S9-9 DATE: BY: DATE: NO. BY: TOTAL SHEETS

\_ DATE : <u>0</u>1/2022 \_ DATE : <u>01/2022</u> FIDEL L.FLORES DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

ALLEN J. MCSWAIN





(EAST FACE)

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) CAP/BACKWALL 5.4 2.4 COLUMN/PILE VOLUME CU.FT. CONCRETE REPAIRS CAP EPOXY RESIN INJECTION LIN.FT. LIN.FT. CAP/BACKWALL

> 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.

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> PROJECT NO.\_ COUNTY 480065 BRIDGE NO. \_

SHEET 3 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 2

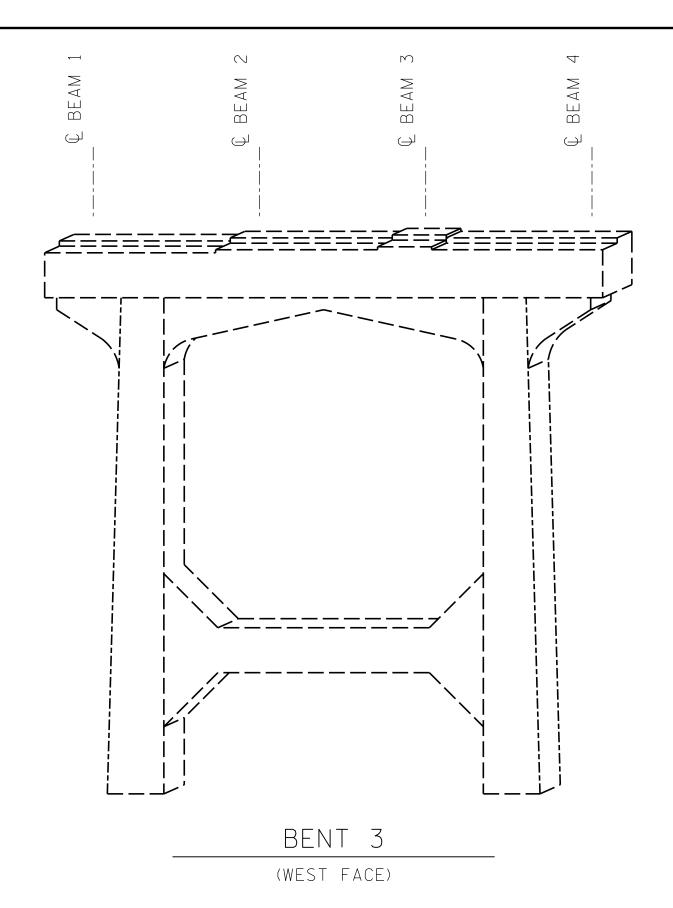
OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839

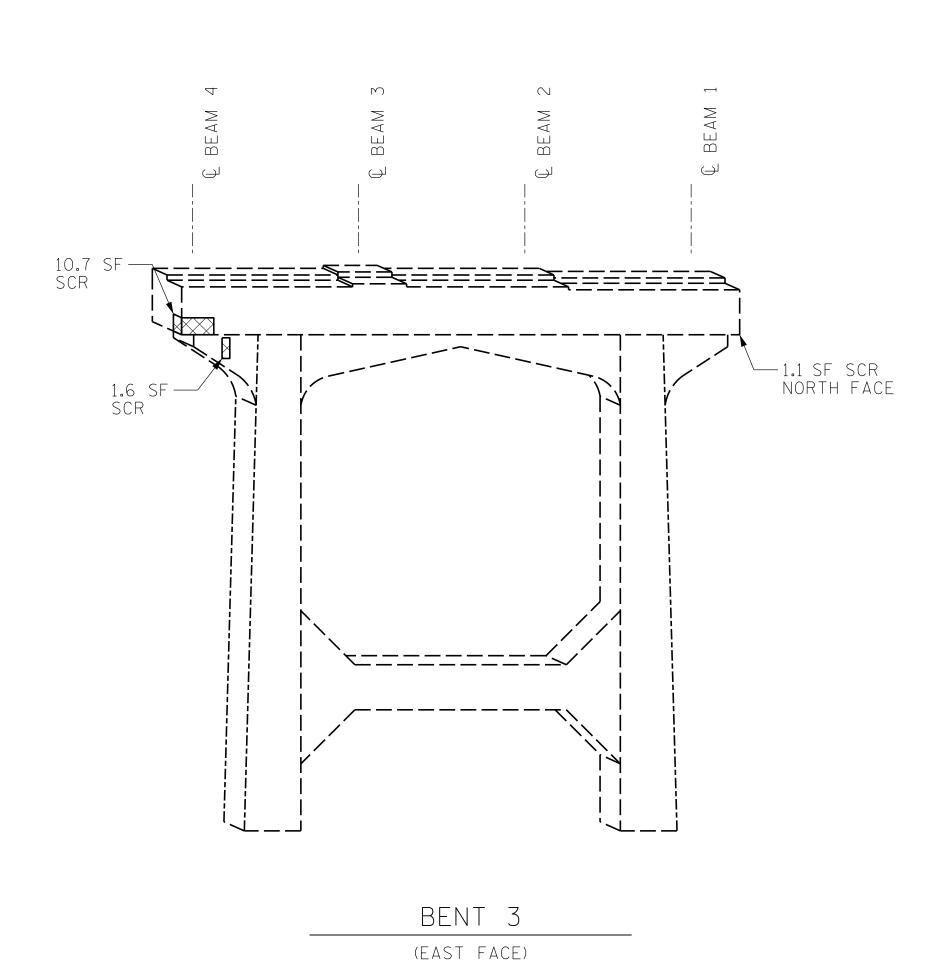
SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

FINAL UNLESS ALL

SHEET NO REVISIONS S9-1Ø DATE: DATE: NO. BY: TOTAL SHEETS

ALLEN J. MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ CHECKED BY: \_\_\_\_\_FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>





		LEGEND	AS-BUILT REPAIR QUANTITY TABLE								
		CONCRETE REPAIR AREA (CR)			QUANT	ITIES					
-				ESTI	MATE	ACT	UAL				
-		SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU. FT.	AREA SQ.FT.	VOLUME CU.FT.				
		EPOXY RESIN INJECTION (ERI)	CAP/BACKWALL	13.4	4.6						
			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	-	-						

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.

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

> I-5915B PROJECT NO. IREDELL COUNTY 480065 BRIDGE NO. \_

SHEET 4 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 3

SHEET NO

S9-11

TOTAL SHEETS

DATE:

WISINGER CAMPO

& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506

REVISIONS DATE: NO. BY:

FINAL UNLESS ALL SIGNATURES COMPLETED

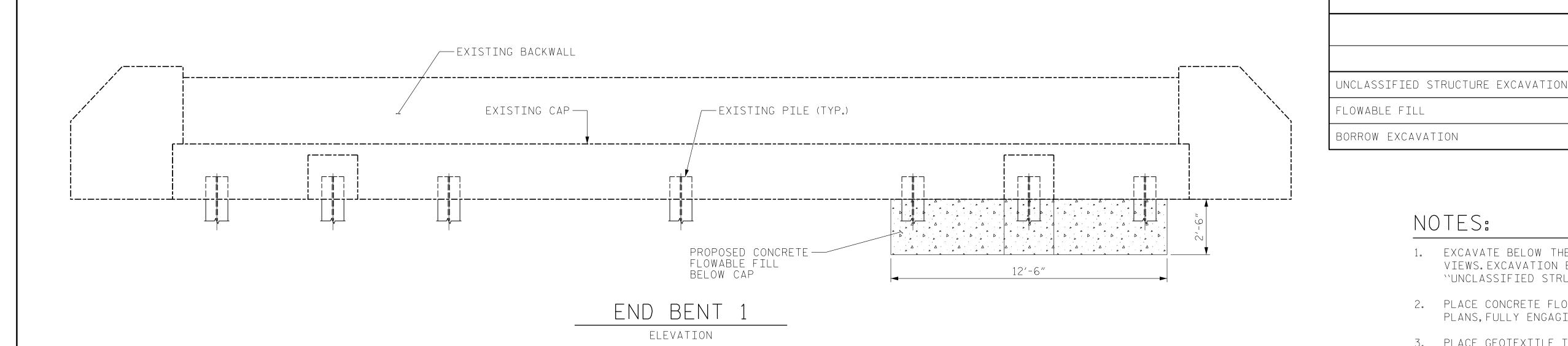
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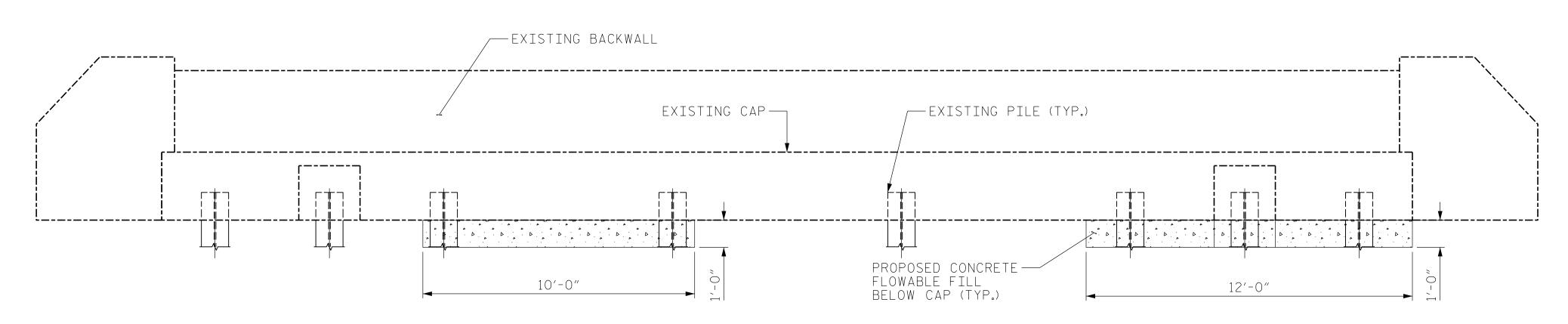
\_ DATE : <u>01/2022</u>

ALLEN J. MCSWAIN

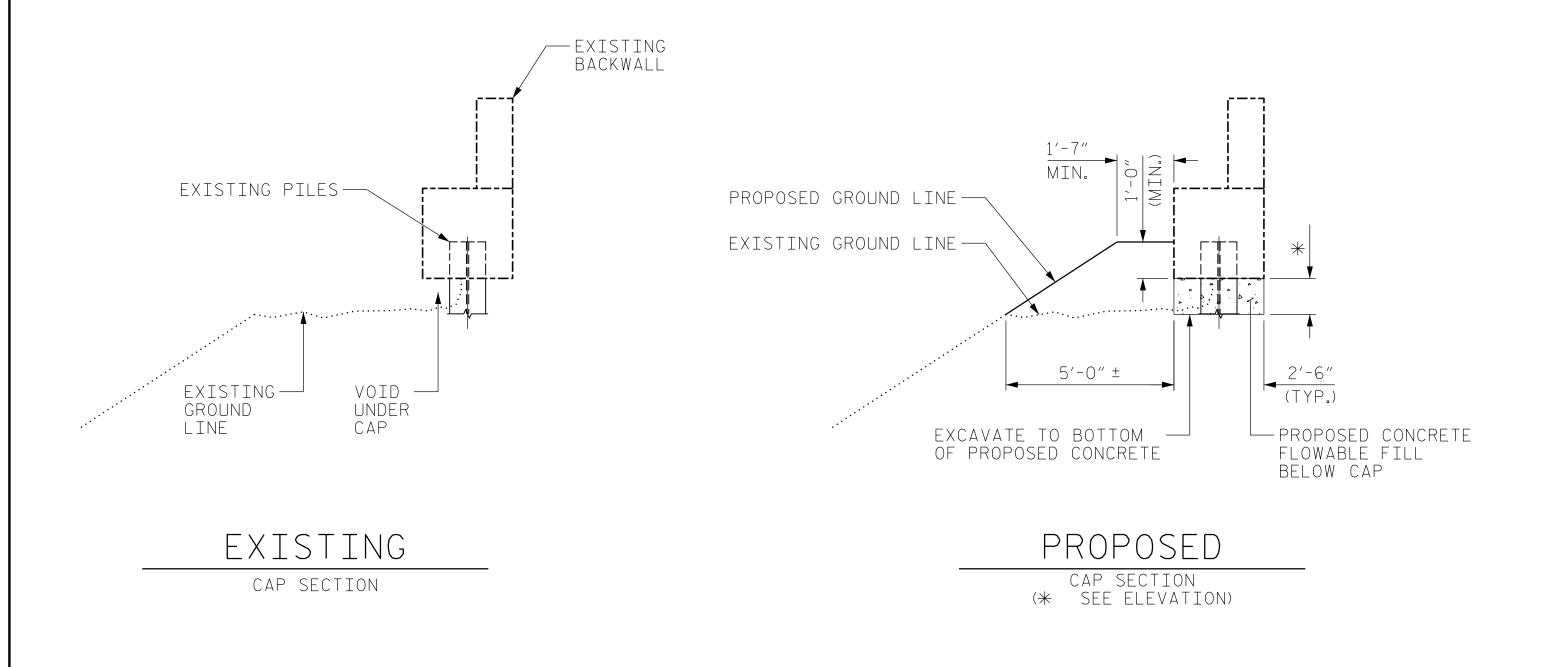
DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

FIDEL L.FLORES





## END BENT 2 ELEVATION



PROPOSED GROUND LINE — EXISTING GROUND LINE — 3'-0" ± 4'-3" EXCAVATE TO BOTTOM - OF PROPOSED CONCRETE

PROPOSED

CAP SECTION AT BRACE PILES (\* SEE ELEVATION)

I-5915B PROJECT NO. IREDEL COUNTY

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1

ACTUAL

ESTIMATE

2.8 CY

2.8 CY

4.1 CY

1. EXCAVATE BELOW THE EXISTING AS INDICATED IN THE ELEVATION

2. PLACE CONCRETE FLOWABLE FILL UNDER THE CAP AS SHOWN IN THESE

3. PLACE GEOTEXTILE TO THE LIMITS SHOWN IN THESE PLANS, UP THE

4. REPLACE REMOVED SOIL AND REGRADE SLOPE USING MATERIAL FROM

UNCLASSIFIED STRUCTURE EXCAVATION, AND ADDITIONAL MATERIAL FROM BORROW EXCAVATION, AS NEEDED. SEE ARTICLE 230-5 OF THE

2018 STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS OF BORROW

FACE OF THE CAP, 1.0 FT ABOVE THE BOTTOM OF THE CAP.

VIEWS. EXCAVATION BELOW THE CAP IS TO BE PAID FOR AS

"UNCLASSIFIED STRUCTURE EXCAVATION".

PLANS, FULLY ENGAGING ADJACENT PILES.

NOTES:

EXCAVATION.

END BENT 2

ACTUAL

ESTIMATE

2.1 CY

2.1 CY

4.4 CY

480065 BRIDGE NO.

> STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

EROSION REMEDIATION END BENT 1 & END BENT 2

KISINGER CAMPO			
& ASSOCIATES	NO.	BY:	
301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839	1		
NC FIRM LICENSE: C-1506	9		

		REVIS	SIO	NS		SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S9-12
1			33			TOTAL SHEETS
2			4			l 12 l

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

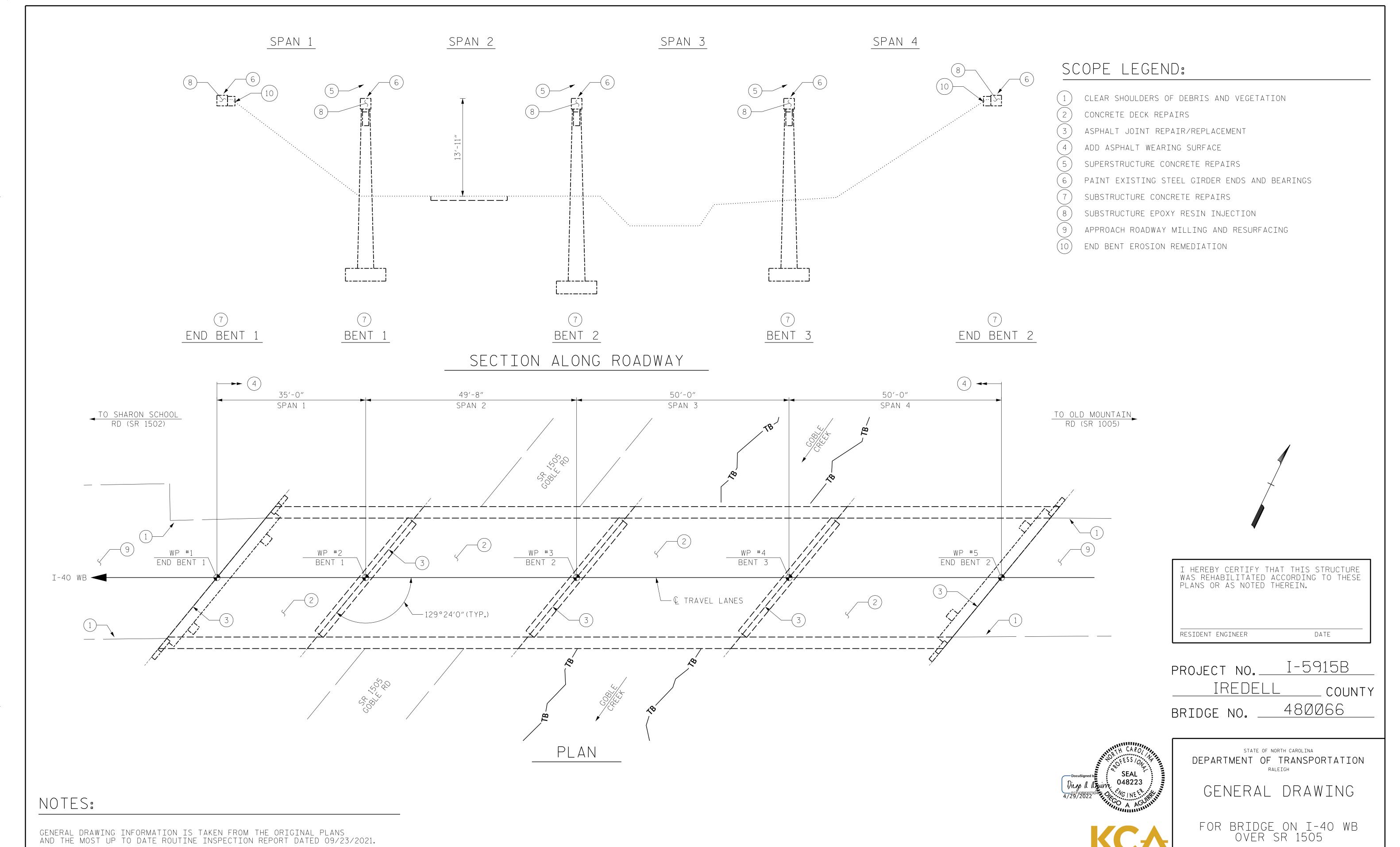
\_ DATE : <u>01/2022</u>

DATE: <u>01/2022</u>

DIEGO A. AGUIRRE

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

JACOB H. DUKE



MISINGER CAMPO

& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500

RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506

SHEET NO.

S1Ø-1

TOTAL SHEETS

DATE:

REVISIONS

NO. BY:

DATE:

BY:

4/21/2022 I5915B\_SMU\_GD01\_480066.dgn daguirre

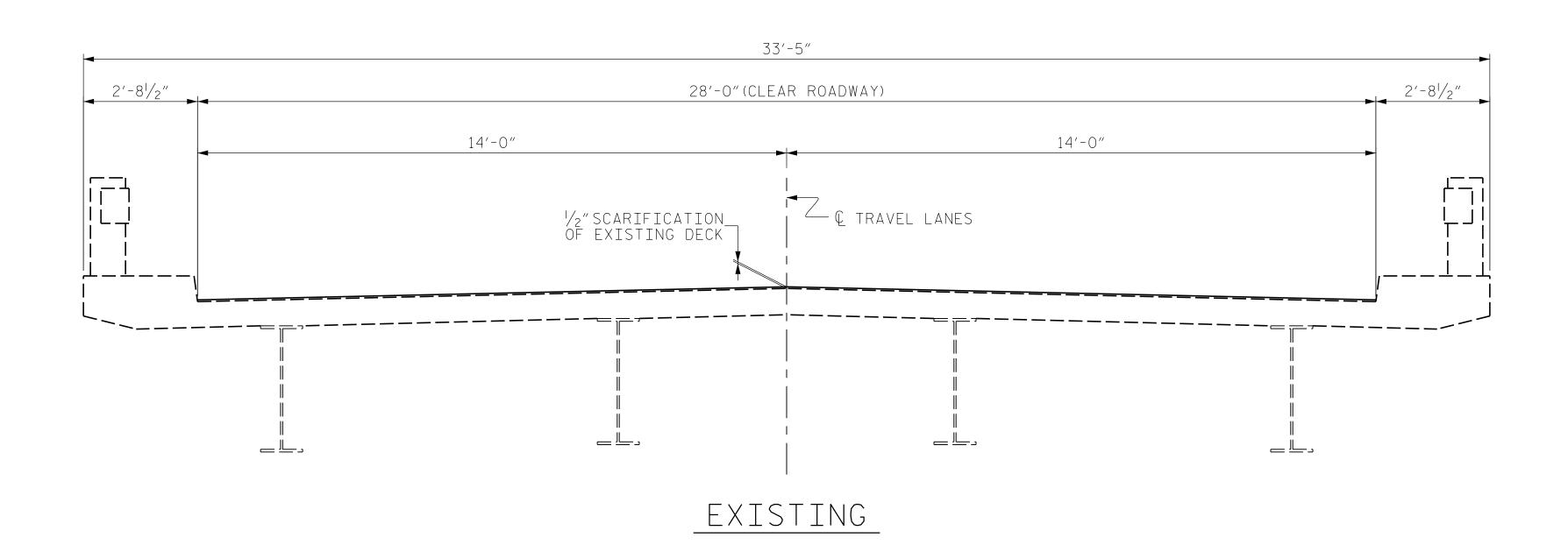
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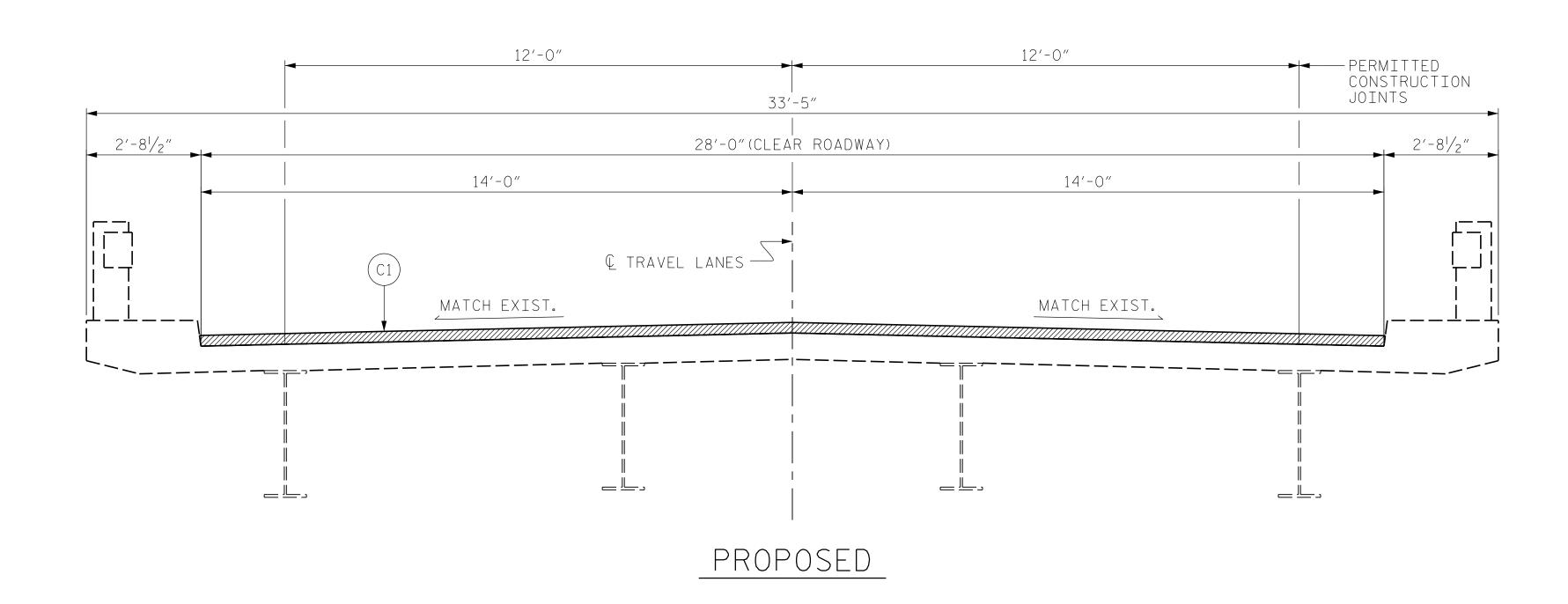
\_ DATE : <u>01/2022</u>

FIDEL L.FLORES

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

CHECKED BY : \_\_\_\_\_\_DIEGO A.AGUIRRE





PROJECT NO. I-5915B IREDELL COUNTY 480066 BRIDGE NO. \_\_\_

NOTES:

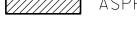
LONGITUDINAL CONSTRUCTION JOINTS OF OVERLAYS SHALL BE LOCATED ALONG THE CENTERLINE OR EDGE OF TRAVEL LANES.

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF ASHPALT WEARING SURFACE (AWS) OVERLAY.

FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.

I	DRAWN BY :	DIEGO	A. AGUIRRE	DATE:	01/2022
ı	CHECKED BY :	FIDEL	L. FLORES	DATE:	01/2022
ı	DESTGN ENGINEER	OF RECORD:	DIEGO A.AGUIRRE	DATF :	01/2022

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



ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

TYPICAL SECTION



,	VC14	
	KISINGER CAMPO	
DOCUMENT NOT CONSIDERED	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	NO
FINAL UNLESS ALL	RALEIGH, NC 27601 (919) 882-7839	1
SIGNATURES COMPLETED	NC FIRM LICENSE: C-1506	2

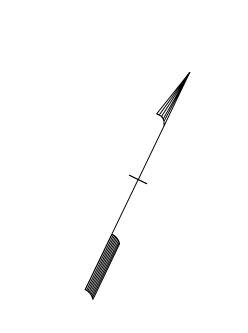
			REVIS	SIO	NS		SHEET NO
5	NO.	BY:	DATE:	NO.	BY:	DATE:	S10-2
)0 39	1			3			TOTAL SHEETS
	9						1 12

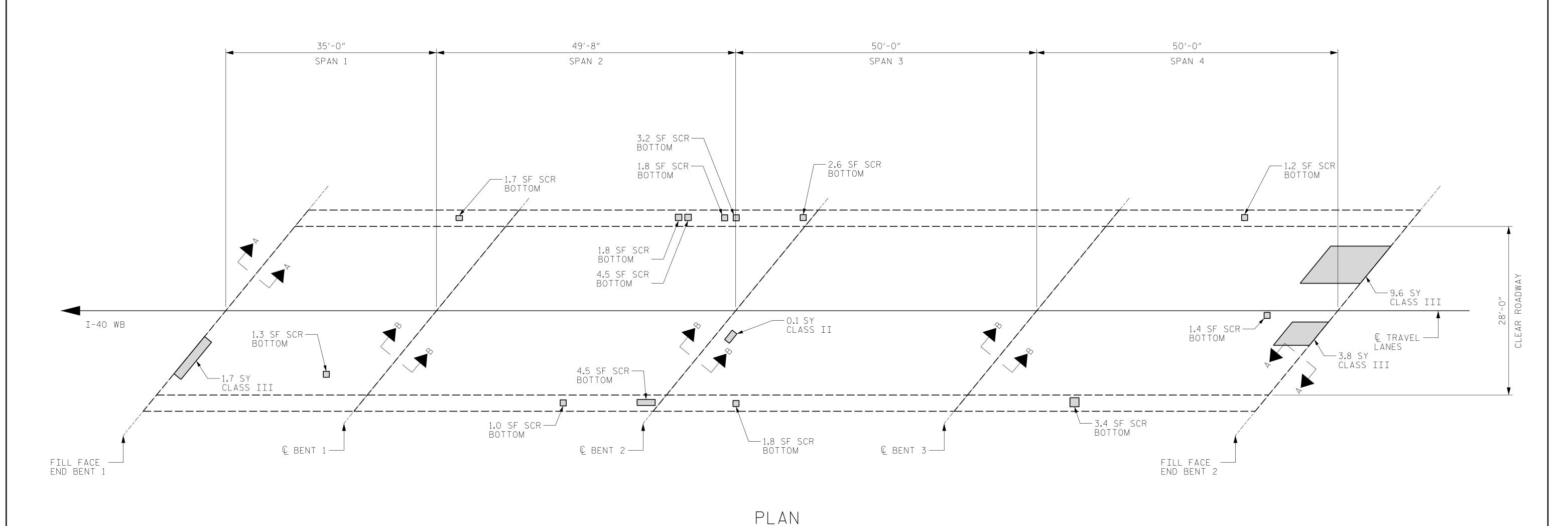
4/21/2022 I5915B\_SMU\_TS01\_480066.dgn daguirre

## AS-BUILT REPAIR QUANTITY TABLE

DECK	REPAIRS	
	CDAN 2	

					DEC	K REPA	IRS									
	SPAN 1				SPAN 2			SPAN 3				SPAN 4				
	ESTI	MATE	ACT	ACTUAL ESTIMAT			ACT	-UAL	ESTIMATE		ACTUAL		ESTIMATE		ACT	UAL
CLASS II SURFACE PREPARATION		SY				SY			0.1 SY					SY		
CLASS III SURFACE PREPARATION	1.7	SY			SY				SY			13.4	1 SY			
SCARIFYING BRIDGE DECK	109	SY			155 SY				156	SY			156	SY		
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
SHOTCRETE REPAIR AREA (SCR)	3.0 SF	1.1 CF			19.4 SF	6.6 CF			1.8 SF	0.6 CF			6.0 SF	2.9 CF		





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)

ALLEN J.MCSWAIN \_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ \_ DATE : <u>01/2022</u> JACOB H. DUKE CHECKED BY : \_\_\_\_\_

DOCUMENT NOT CONSIDERED 301 FAYETTEVILI FINAL UNLESS ALL RALEIGH, NC 276 NC FIRM LICENSE

IREDELL COUNTY 480066 BRIDGE NO. \_ SHEET 1 OF 2

PROJECT NO. I-5915B

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

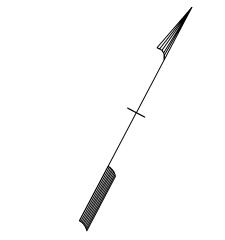
PLAN OF SPANS

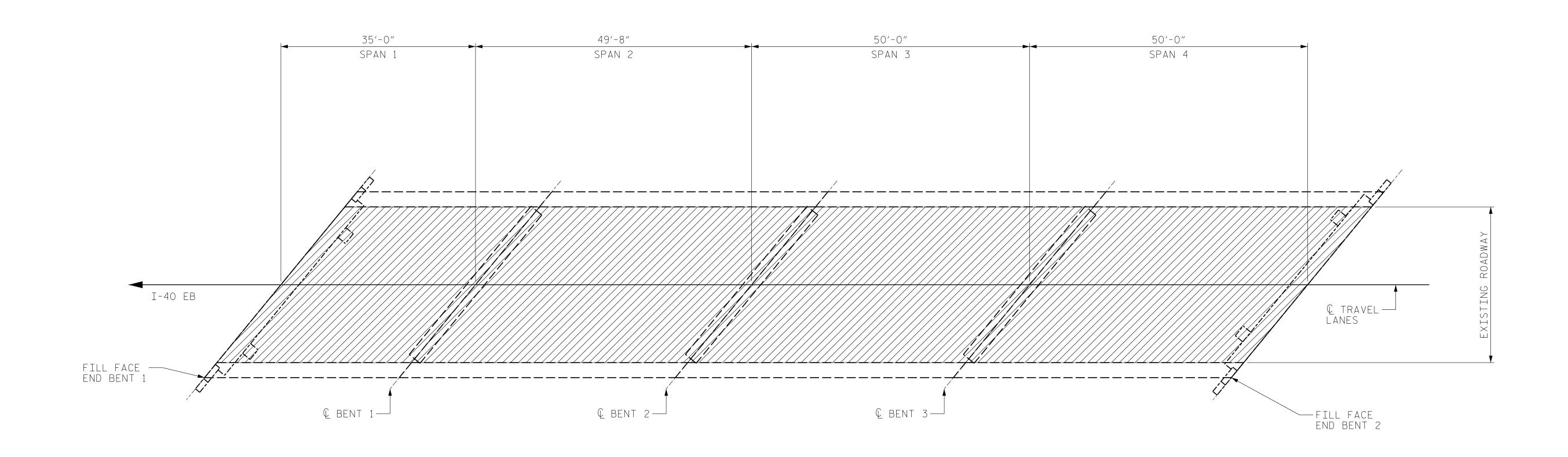
DECK REPAIRS

ER CAMPO		REVISIONS S									
OCIATES	NO.	BY:	DATE:	NO.	BY:	DATE:	S10-3				
/ILLE ST., SUITE 1500 27601 (919) 882-7839	1			3			TOTAL SHEETS				
NSE: C-1506	2			<u>4</u> ,			12				

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u> 4/21/2022 I5915B\_SMU\_DSR01\_480066.dgn daguirre

AS-BUILT REPAIR QUANTITY TABLE									
	SPAI	V 1	SPAN	V 2	SPAN	V 3	SPAN 4		
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C	13 TON		18 TON		18 TON		18 TON		
ASPHALT BINDER FOR PLANT MIX	O.8 TON		1.1 TON		1.1 TON		1.1 TON	_	





PLAN

NOTES:

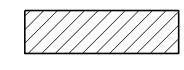
WORK THIS SHEET WITH "JOINT DETAILS" SHEET.

WORK THIS SHEET WITH "TYPICAL SECTION" SHEET.

WORK THIS SHEET WITH "DECK REPAIR DETAILS" SHEET.

FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.

DRAWN BY: \_\_\_\_\_FIDEL L.FLORES DATE: 01/2022
CHECKED BY: \_\_\_\_\_JACOB H.DUKE DATE: 01/2022
DESIGN ENGINEER OF RECORD: \_\_\_\_\_DIEGO A. AGUIRRE DATE: 01/2022



ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C

PROJECT NO. I-5915B

IREDELL COUNTY

BRIDGE NO. \_\_\_\_480066

SHEET 2 OF 2

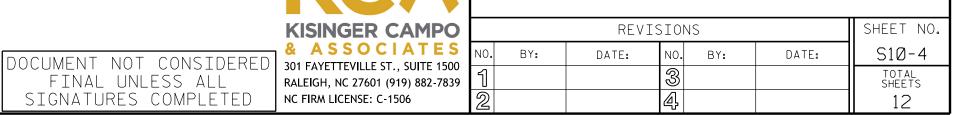
STATE OF NORTH CAROLINA

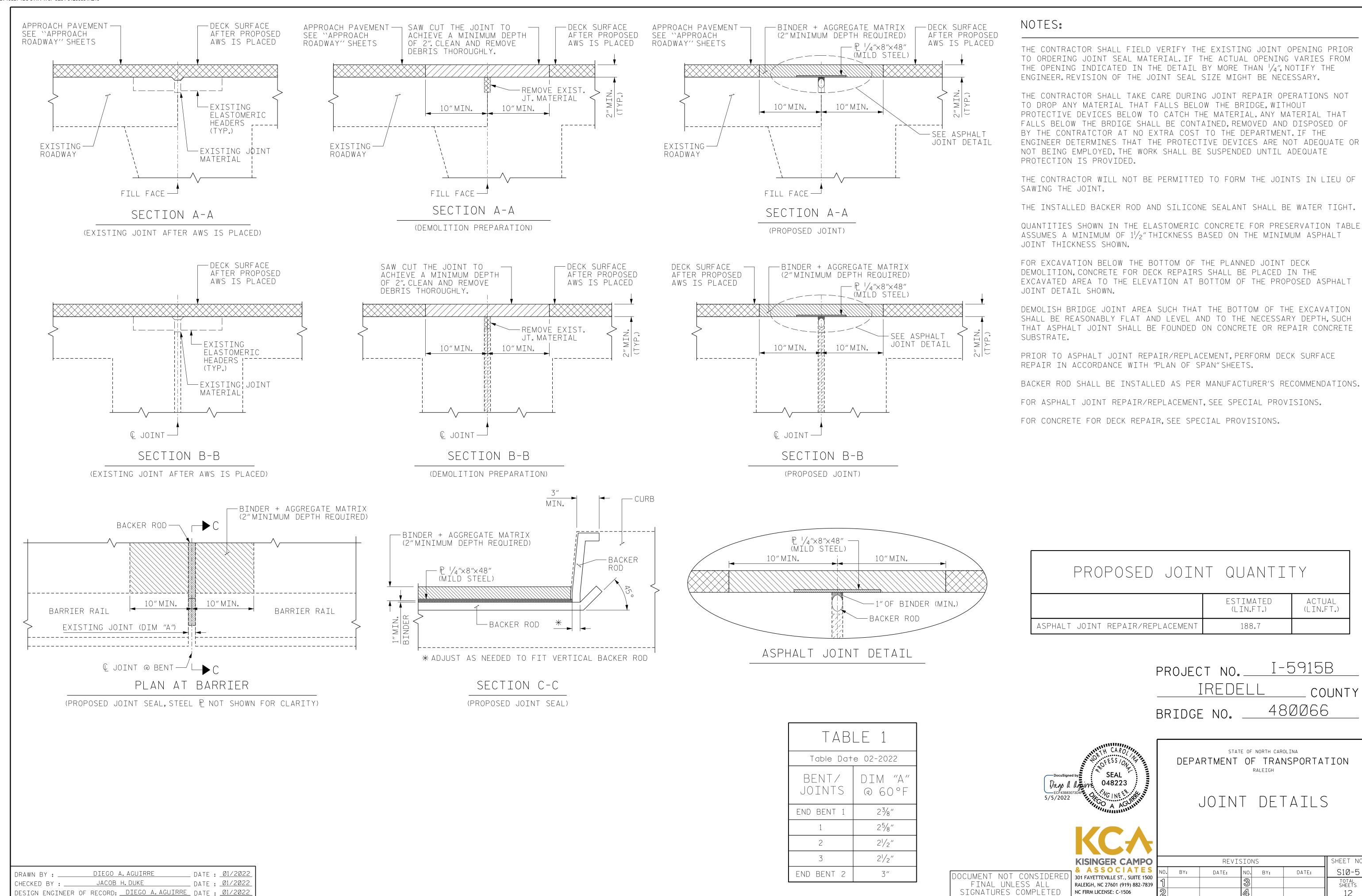
DEPARTMENT OF TRANSPORTATION

RALEIGH

PLAN OF SPANS

ASPHALT WEARING SURFACE





ACTUAL

(LIN.FT.)

COUNTY

SHEET NO

S10-5

TOTAL SHEETS

I-5915B

480066

DATE:

BY:

5/5/2022 I5915B\_SMU\_JT01\_480066.dgn

DocuSign Envelope ID: B5DE3F97-6763-421C-95A1-4AF257E0EAEA AS-BUILT REPAIR QUANTITY TABLE ESTIMATE ACTUAL 1518 SY INCIDENTAL MILLING 213 TON ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C 12.8 TON ASPHALT BINDER FOR PLANT MIX

## NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM  $1^{\prime}/_2$ " DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. THE NEW ASPHALT PAVEMENT THICKNESS MAY EXCEED  $1\frac{1}{2}$ " Due to settlement of the existing approach.

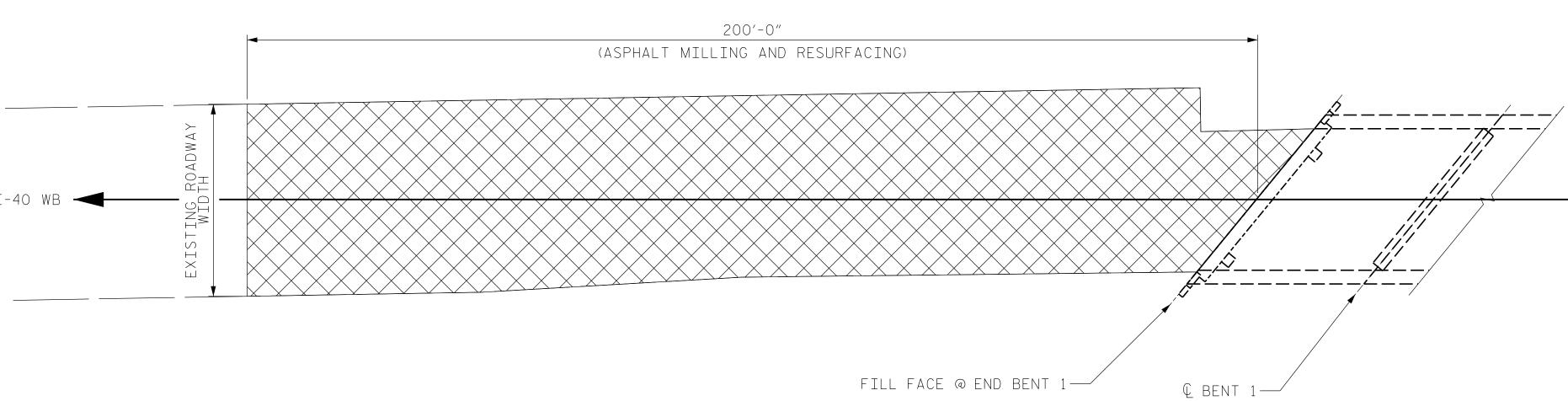
FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.

GRADE MAY BE ADJUSTED BY THE ENGINEER TO ENSURE PROPER TIE-IN AT THE END BENTS.

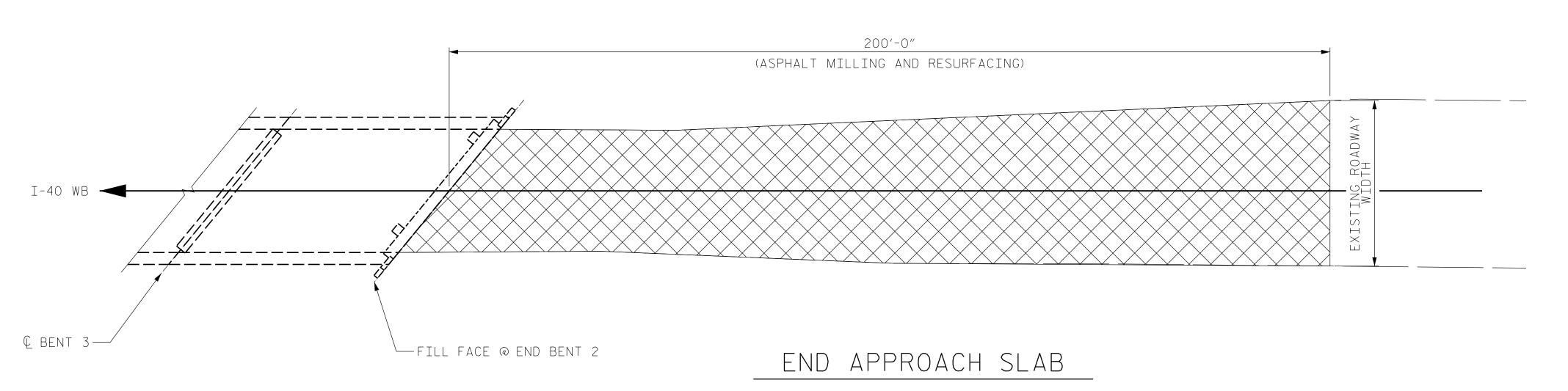
PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 112 LBS.
PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS
NOT LESS THAN 1" OR GREATER THAN 2" IN DEPTH.

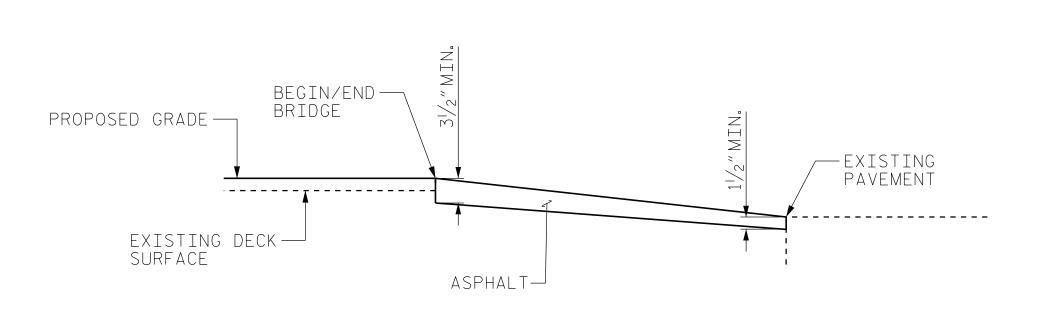
INCIDENTAL MILLING

ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C (C1)



BEGIN APPROACH SLAB





PAVEMENT KEY-IN DETAIL FOR BOTH END BENTS

EXISTING WIDTH EXISTING ROADWAY EXIST. EXIST. ROADWAY SECTION

BEGIN/END BRIDGE

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROACH ROADWAY

I-5915B

480066

DATE:

COUNTY

SHEET NO S1Ø-6

TOTAL SHEETS

	KISINGER CAMPO	
- D	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	NO
	RALEIGH, NC 27601 (919) 882-7839	1
	NC FIRM LICENSE: C-1506	2

KISINGER CAMPO	
& ASSOCIATES	NO.
301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839	1
NC FIRM LICENSE: C-1506	2

			ASPHA	4 L	T MI	LLING
R CAMPO			REVIS	10I	VS .	
OCIATES	МО	DV.	DATE.	МО	DV-	DATE.

PROJECT NO.

BRIDGE NO. \_

IREDELL

FIDEL L.FLORES \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ JACOB H. DUKE \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

## AS-BUILT REPAIR QUANTITY TABLE

			SUPE	RSTRUC	TURE F	REPAIRS	5									
	SPAN 1 SPAN 2 SPAN 3 SPAN 3									.N 4						
	ESTI	ESTIMATE ACTUA		TUAL	ESTI	MATE	ACTUAL		ESTI	MATE	ACTUAL		ESTI	ESTIMATE ACTUAI		JAL
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
CONCRETE REPAIR AREA (CR)	SF	CF			8.0 SF	2.7 CF			SF	CF			SF	CF		
	ESTI	MATE	ACT	TUAL	ESTI	MATE	ACT	ΓUAL	ESTI	MATE	АСТ	-UAL	ESTI	IMATE	ACTL	JAL
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	4	EΑ			8	EΑ			8	EA			4	EA		

LEGEND:

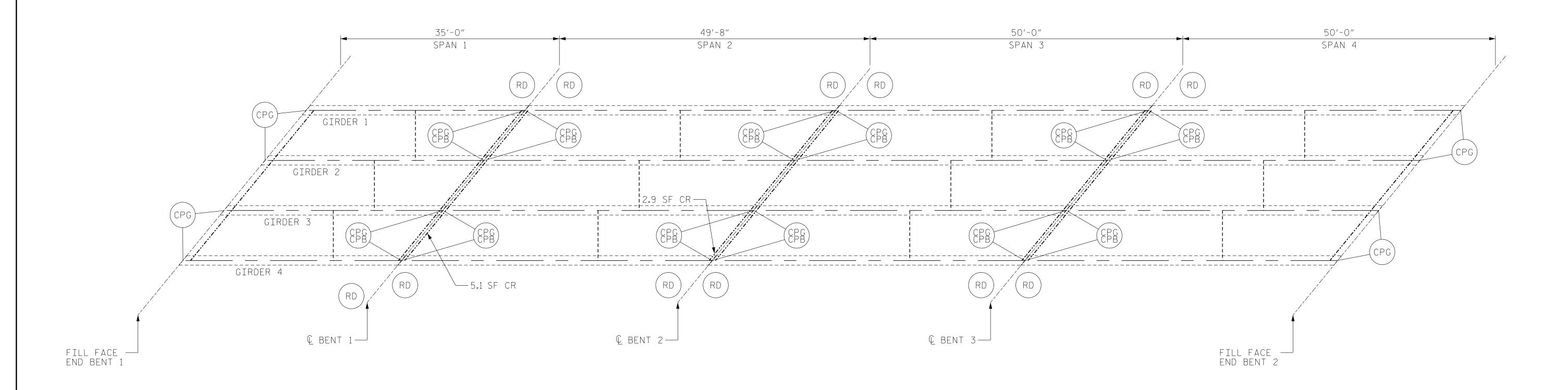
CLEAN AND PAINT GIRDER ENDS (5 LF)

CLEAN AND PAINT BEARING

REMOVE END DIAPHRAGM AT OVERHANG (SEE DETAIL "RD")

CONCRETE REPAIR AREA

QUANTITIES FOR REMOVAL OF DIAPHRAGMS AT OVERHANGS (RD) ARE NOT INCLUDEDED AND SHALL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REAPIRS".



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.

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

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

PRIOR TO CLEANING AND PAINTING STEEL ELEMENTS, REMOVE EXTERIOR DIAPHRAGMS AND A PORTION OF THE INTERIOR DIAPHRAGMS SO AS TO ALLOW FOR CLEANING OF EXISTING STEEL ELEMENTS PRIOR TO PAINTING. SEE DETAILS "RD" AND "RRD".

AFTER THE REMOVAL OF EXTERIOR END DIAPHRAGMS, CUT ANY EXPOSED REBAR FLUSH WITH THE DECK. COAT THE REMAINING EXPOSED REBAR WITH EPOXY. EPOXY WILL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REPAIRS".

FOR DETAILS OF CLEANING AND PAINTING GIRDER ENDS (CPG), REMOVE END DIAPHRAGMS AT OVERHANG (RD), AND REMOVE AND REPAIR DIAPHRAGM ENDS (RRD), SEE "MISCELLANEOUS REPAIRS" SHEET.

FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

DRAWN BY :	ALLEN	N J. MCSWAIN	DATE:	<u>01/2022</u>
CHECKED BY :	JACOE	B H.DUKE	DATE:	<u>01/2022</u>
DESIGN ENGINEER	OF RECORD	: <u>DIEGO A.AGUIRRE</u>	DATE :	01/2022

PLAN

PROJECT NO. I-5915B IREDELL COUNTY 480066 BRIDGE NO. \_



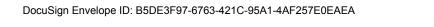
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

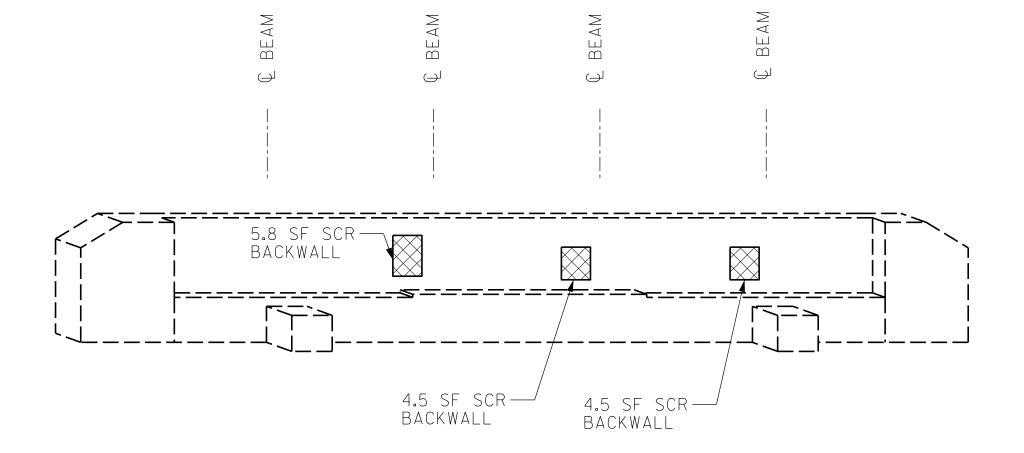
SUPERSTRUCTURE REPAIRS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

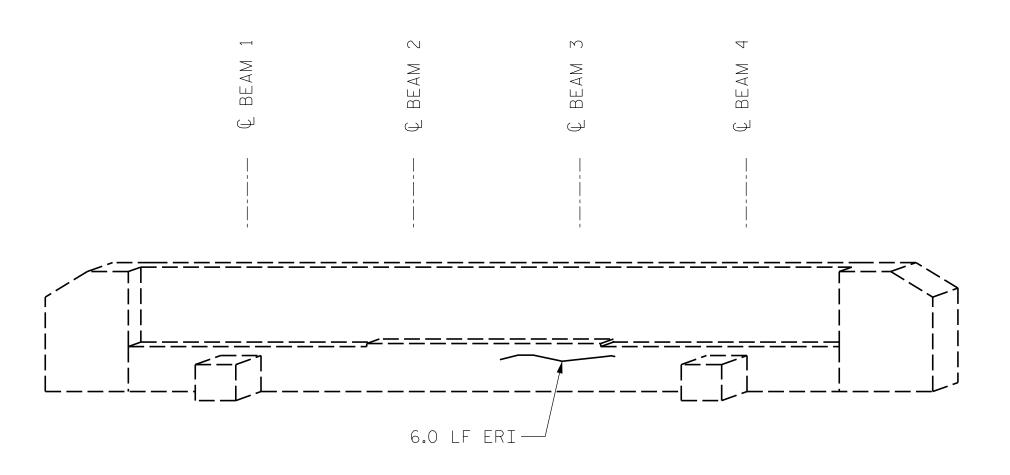
	KISINGER CAMPO	
D	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506	NC T

GER CAMPO			REVI	SIO	NS		SHEET NO.
SOCIATES	NO.	BY:	DATE:	NO.	BY:	DATE:	S1Ø-7
TEVILLE ST., SUITE 1500 NC 27601 (919) 882-7839	1			3			TOTAL SHEETS
ICENSE: C-1506	2			4			<b>l</b> l 12





END BENT (EAST FACE)



END BENT 2 (WEST FACE)

		LEGEND	AS-BUILT REPAIR QUANTITY TABLE							
		CONCRETE REPAIR AREA (CR)			QUANT	ITIES				
				ESTI	MATE	ACT	UAL			
		SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.			
		EPOXY RESIN INJECTION (ERI)	CAP/BACKWALL	14.8	5.0					
_	<u></u>		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	6.0						

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:

COLUMN/PILE

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 >= 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  $1\frac{1}{2}$ " 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.\_ IREDELL COUNTY 480066 BRIDGE NO. \_

SHEET 1 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

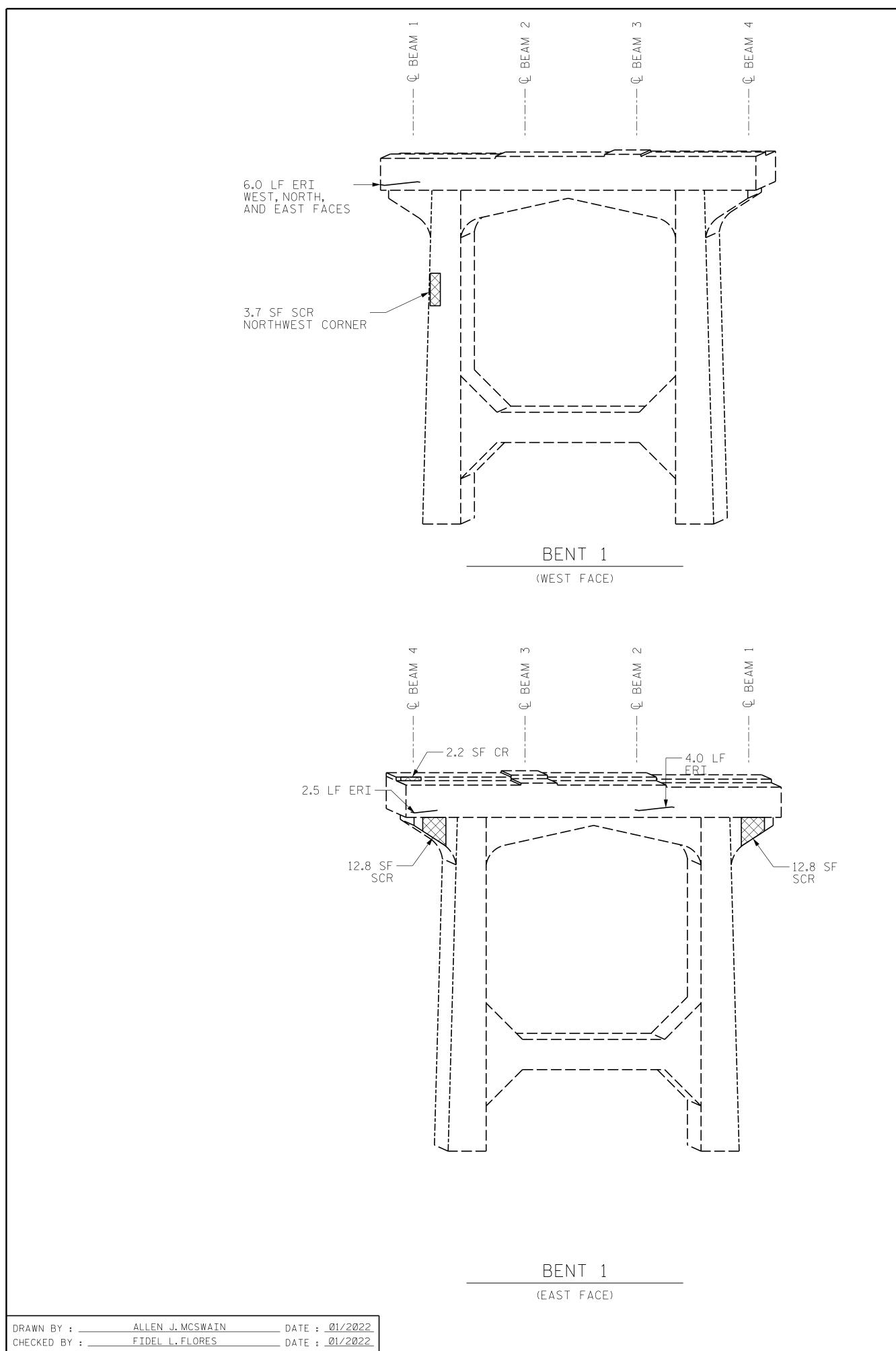
OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

RALEIGH, NC 27601 (919) 882-7839

END BENTS 1 & 2

SHEET NO REVISIONS S10-8 DATE: BY: DATE: NO. BY: TOTAL SHEETS 12

ALLEN J.MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_\_ CHECKED BY: \_\_\_\_\_FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>



		LEGEND	AS-BUILT REPAIR QUANTITY TABLE							
		CONCRETE REPAIR AREA (CR)		ITIES						
				ESTI	МАТЕ	ACTUAL				
-		SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU. FT.	AREA SQ.FT.	VOLUME CU. FT.			
	EPOXY RESIN INJECTION (ERI)		CAP/BACKWALL	25.6	8.6					
			COLUMN/PILE	3.7	1.3					
			CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.			
			CAP	2.2	0.8					
			EPOXY RESIN INJECTION	LIN	.FT.	LIN. FT.				
			CAP/BACKWALL	12.5						
					· · · · · · · · · · · · · · · · · · ·					

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:

COLUMN/PILE

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 >= 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  $1\frac{1}{2}$ " 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.

> I-5915B PROJECT NO.\_ IREDELL \_ COUNTY 480066 BRIDGE NO. \_

SHEET 2 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 1

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

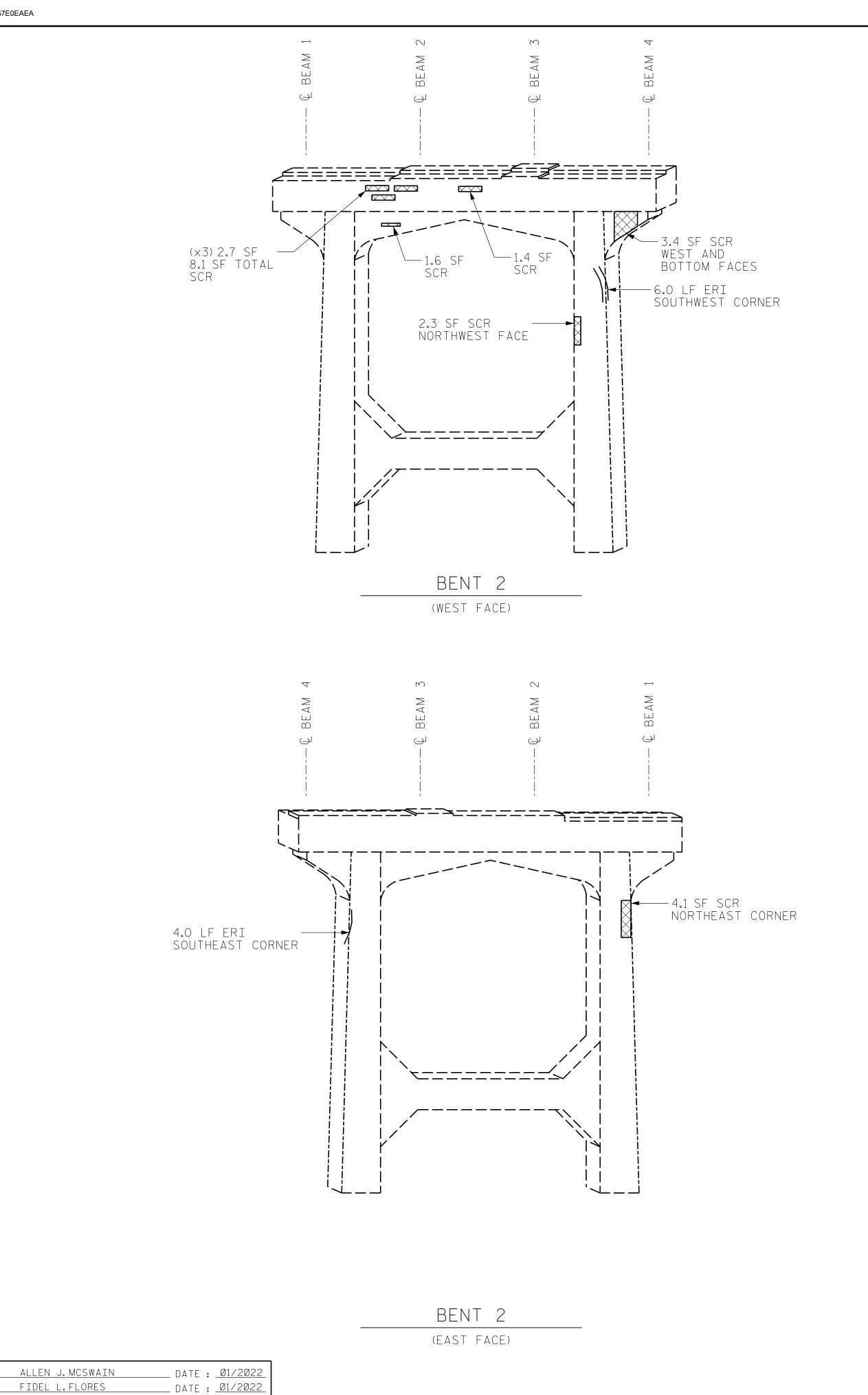
KISINGER CAMPO
& ASSOCIATES
301 FAYETTEVILLE ST., SUITE 1500
RALEIGH, NC 27601 (919) 882-7839
NC FIRM LICENSF: C-1501

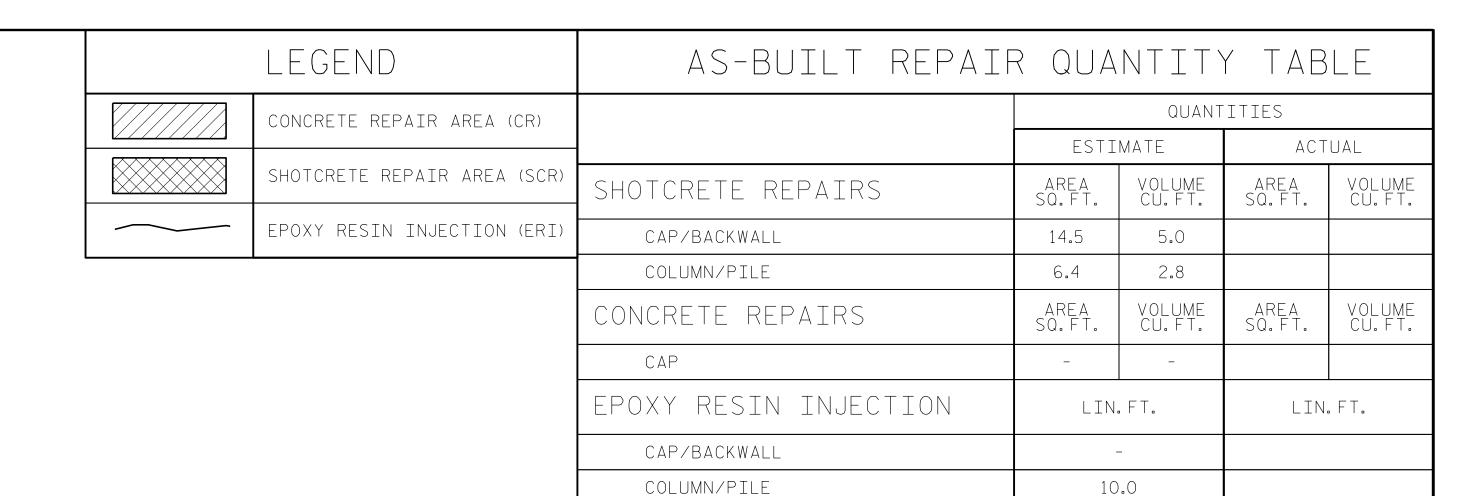
SHEET NO REVISIONS S10-9 DATE: DATE: NO. BY: TOTAL SHEETS

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

DRAWN BY : \_\_\_

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>





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 >= $\frac{1}{16}$  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  $1\frac{1}{2}$ " 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.

> I-5915B PROJECT NO.\_ IREDELL COUNTY 480066 BRIDGE NO. \_

SHEET 3 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 2

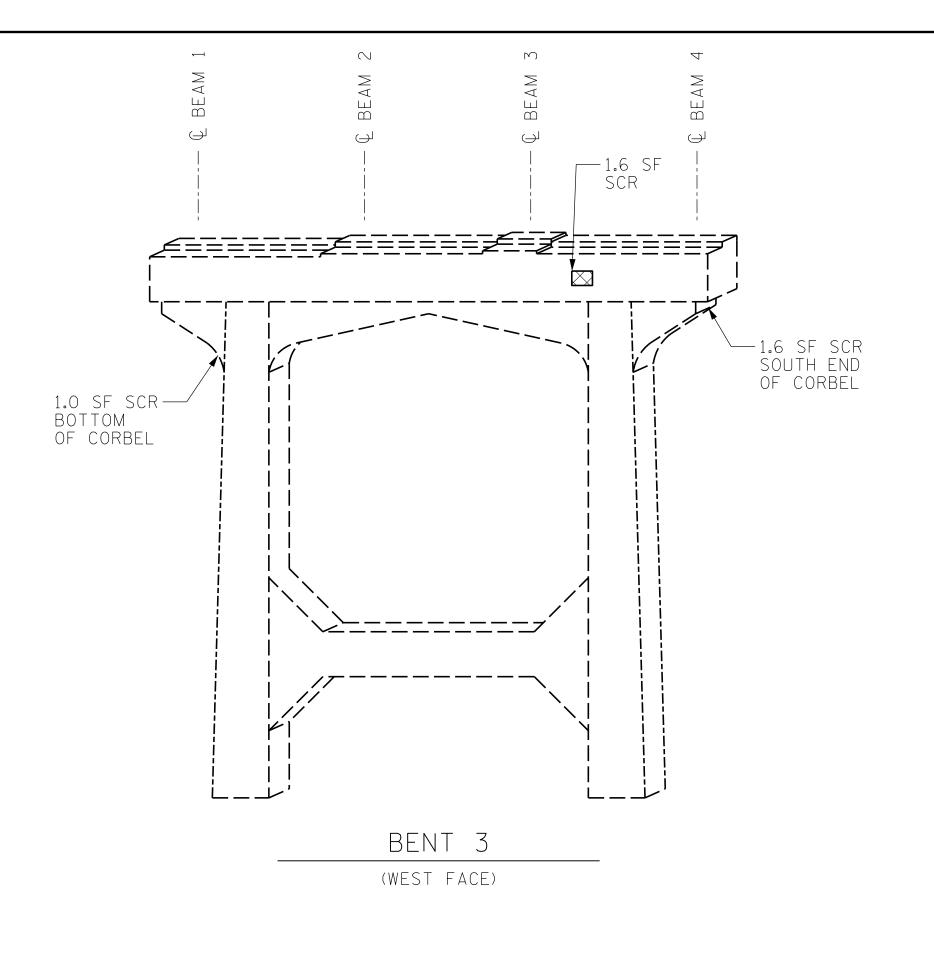
RALEIGH, NC 27601 (919) 882-7839

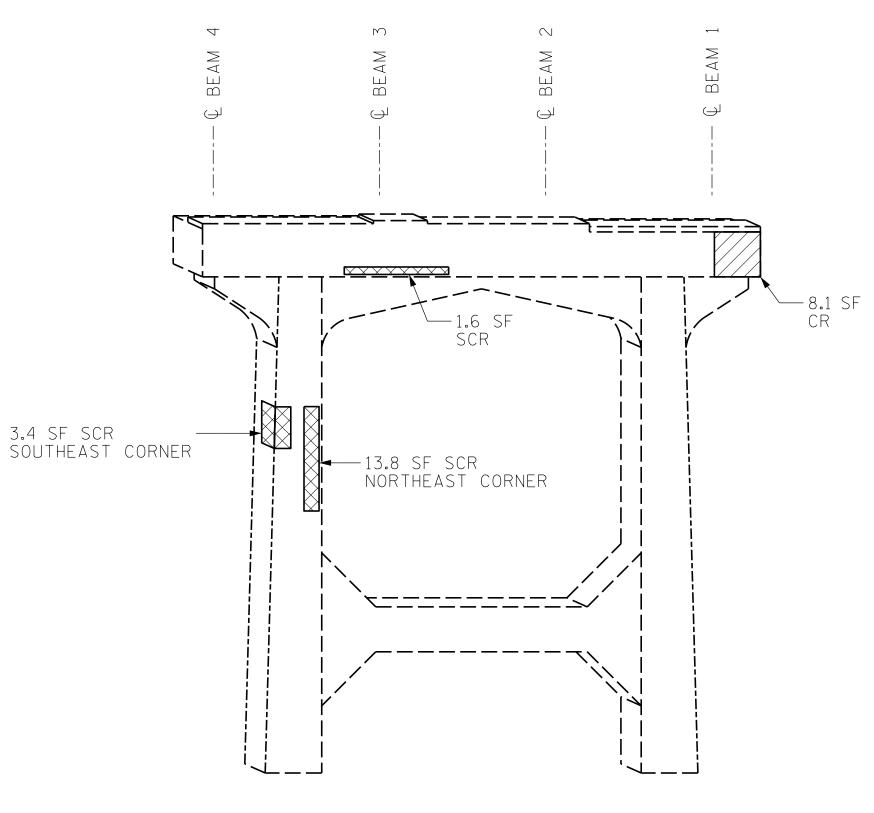
CONSIDERED SOCIATES 301 FAYETTEVILLE ST., SUITE 1500 SIGNATURES COMPLETED

FINAL UNLESS ALL

NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S10-10 DATE: DATE: NO. BY: TOTAL SHEETS





BENT 3 (EAST FACE)

ALLEN J. MCSWAIN \_DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ FIDEL L.FLORES DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

LEGEND AS-BUILT REPAIR QUANTITY TABLE CONCRETE REPAIR AREA (CR) SHOTCRETE REPAIR AREA (SCR) EPOXY RESIN INJECTION (ERI)

SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP/BACKWALL	5.8	2.4		
COLUMN/PILE	17.2	5.8		
CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
CAP	8.1	2.7		
EPOXY RESIN INJECTION	LIN	.FT.	LIN. FT.	
CAP/BACKWALL	-			
COLUMN/PILE	-	-		

QUANTITIES

ESTIMATE

ACTUAL

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 >= $\frac{1}{16}$  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  $1\frac{1}{2}$ " TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

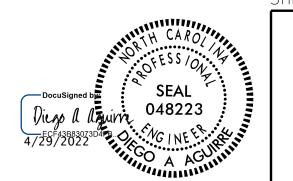
FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

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.

> I-5915B PROJECT NO. IREDELL COUNTY 480066 BRIDGE NO. \_

SHEET 4 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

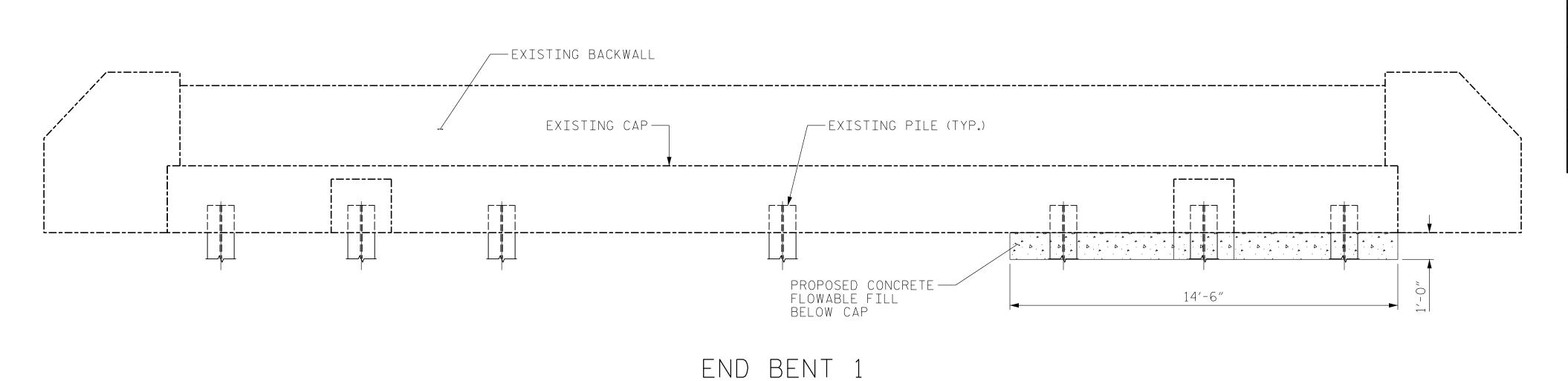
> SUBSTRUCTURE REPAIRS

> > BENT 3

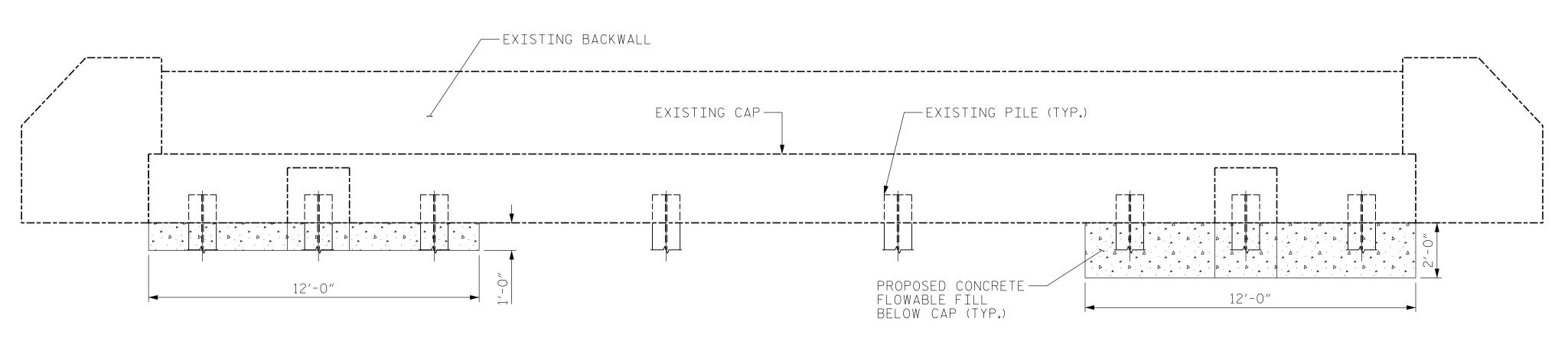


RALEIGH, NC 27601 (919) 882-7839

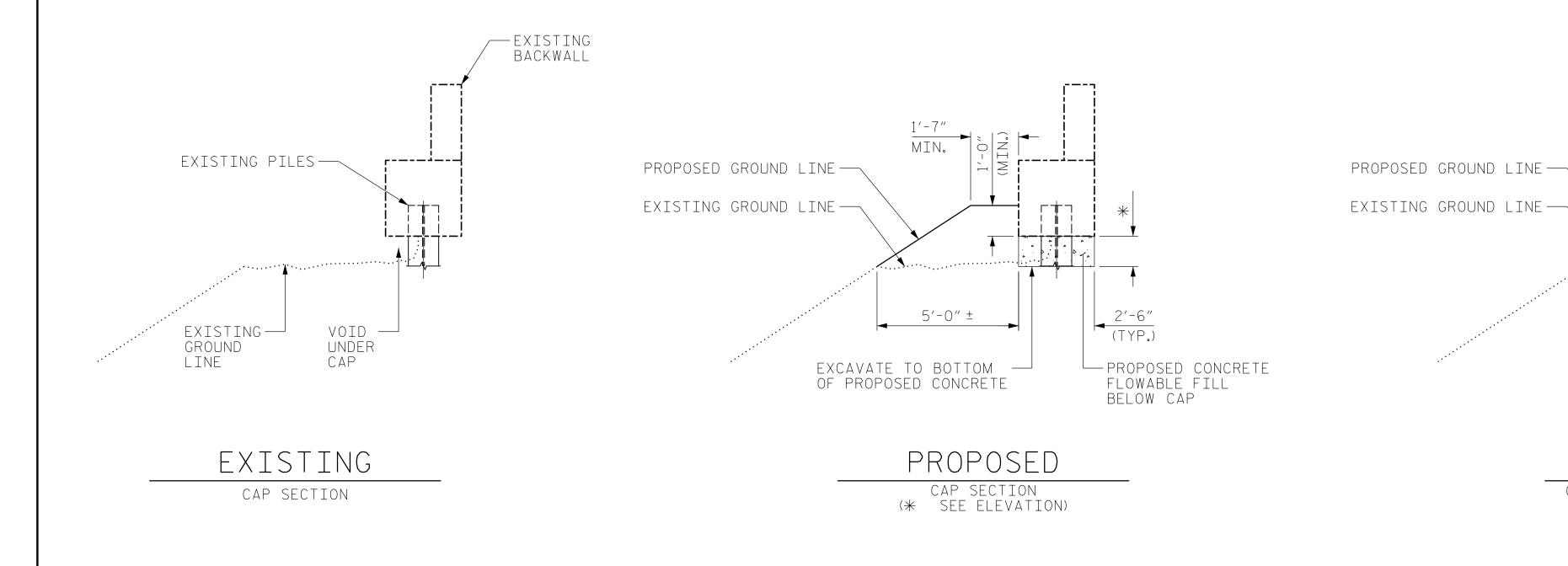
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ELEVATION



## END BENT 2 ELEVATION



PROPOSED CAP SECTION AT BRACE PILES (\* SEE ELEVATION)

EXCAVATE TO BOTTOM - OF PROPOSED CONCRETE

4'-3"

3'-0" ±

## AS-BUILT REPAIR QUANTITY TABLE

	END B	ENT 1	END BENT 2		
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	
UNCLASSIFIED STRUCTURE EXCAVATION	1.3 CY		3.2 CY		
FLOWABLE FILL	1.3 CY		3.2 CY		
BORROW EXCAVATION	2.8 CY		5.7 CY		

## NOTES:

- 1. EXCAVATE BELOW THE EXISTING AS INDICATED IN THE ELEVATION VIEWS. EXCAVATION BELOW THE CAP IS TO BE PAID FOR AS "UNCLASSIFIED STRUCTURE EXCAVATION".
- 2. PLACE CONCRETE FLOWABLE FILL UNDER THE CAP AS SHOWN IN THESE PLANS, FULLY ENGAGING ADJACENT PILES.
- 3. PLACE GEOTEXTILE TO THE LIMITS SHOWN IN THESE PLANS, UP THE FACE OF THE CAP, 1.0 FT ABOVE THE BOTTOM OF THE CAP.
- 4. REPLACE REMOVED SOIL AND REGRADE SLOPE USING MATERIAL FROM UNCLASSIFIED STRUCTURE EXCAVATION, AND ADDITIONAL MATERIAL FROM BORROW EXCAVATION, AS NEEDED. SEE ARTICLE 230-5 OF THE 2018 STANDARD SPECIFICATIONS FOR ADDITIONAL DETAILS OF BORROW EXCAVATION.

I-5915B PROJECT NO. IREDEL COUNTY 480066 BRIDGE NO. \_

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

FROSTON REMEDIATION

COUMENT NOT CONSIDERED

WISINGER CAMPO

A S S O C I A T E S

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

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<b>KC</b> A	END	BENT	1	&	END	BENT	2

SHEET NO REVISIONS S10-12 DATE: DATE: NO. BY: TOTAL SHEETS 12

FINAL UNLESS ALL SIGNATURES COMPLETED

-- PROPOSED CONCRETE FLOWABLE FILL BELOW CAP

4/21/2022 I5915B\_SMU\_SP01\_480066.dgn daguirre

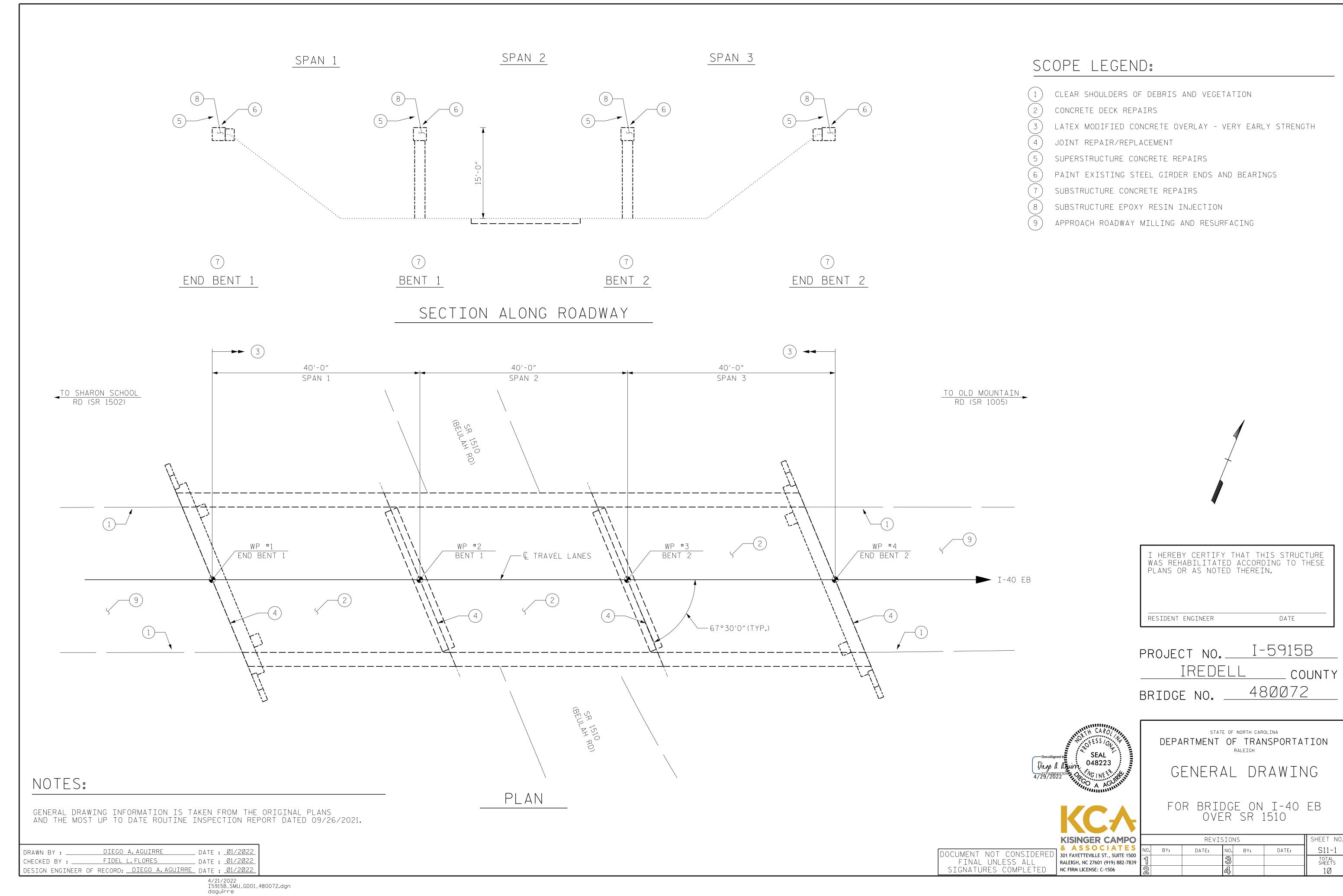
\_DATE : <u>0</u>1/2022

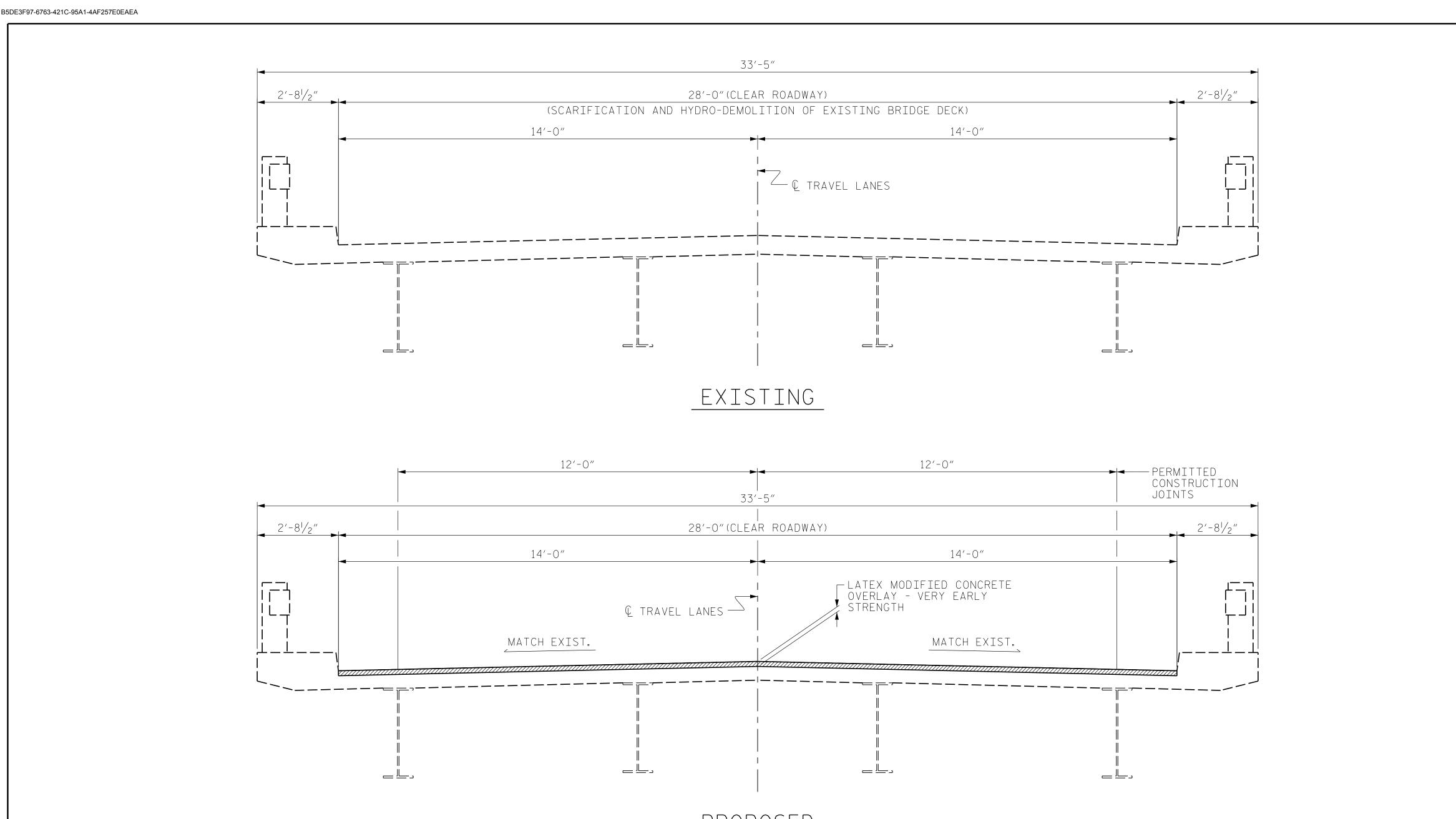
DATE : <u>01/2022</u>

DIEGO A. AGUIRRE

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

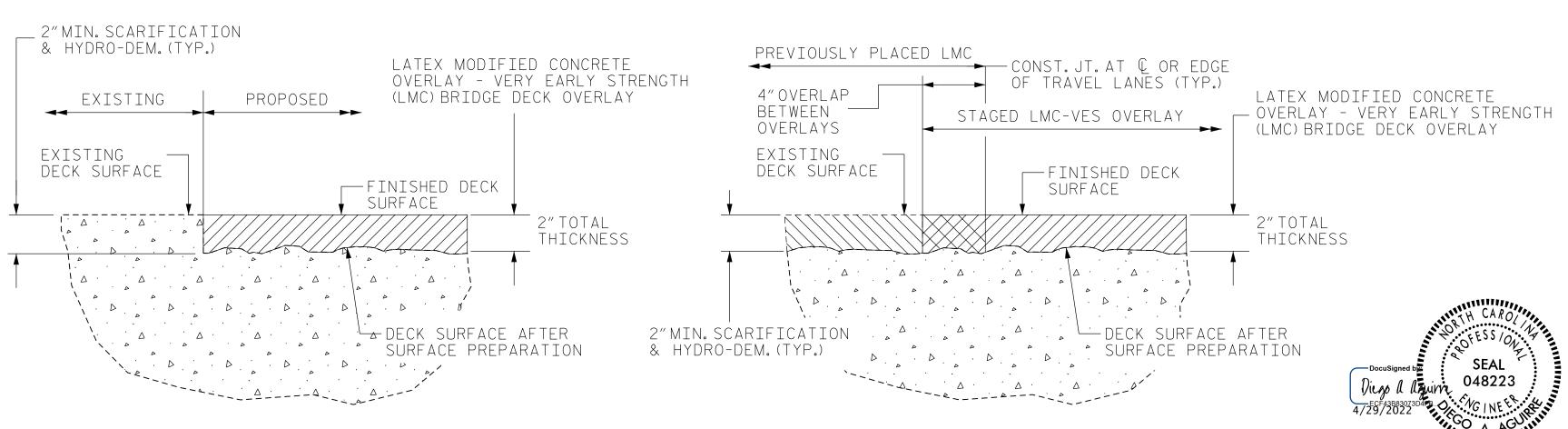
JACOB H. DUKE





## PROPOSED

DETAIL FOR LMC OVERLAY



DETAIL FOR STAGED LMC OVERLAY

I-5915B PROJECT NO. IREDEL COUNTY 480072 BRIDGE NO.

> STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

TYPICAL SECTION

	KISINGER CAMPO	L
DOCUMENT NOT CONSIDERED	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	N(
FINAL UNLESS ALL SIGNATURES COMPLETED	RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506	6/2 2/2

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SHEET NO REVISIONS S11-2 DATE: DATE: BY: NO. BY: TOTAL SHEETS 10

DIEGO A. AGUIRRE \_ DATE : <u>01/2022</u> DRAWN BY : \_\_\_ FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

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

OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF LATEX MODIFIED CONCRETE OVERLAY - VERY EARLY STRENGTH (LMC) SYSTEM AND SURFACE

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND

NOTES:

PREPARATION.

#### DocuSign Envelope ID: B5DE3F97-6763-421C-95A1-4AF257E0EAEA AS-BUILT REPAIR QUANTITY TABLE DECK REPAIRS SPAN 1 SPAN 2 SPAN 3 ACTUAL ESTIMATE ACTUAL ESTIMATE ESTIMATE ACTUAL CLASS II SURFACE PREPARATION 5.4 SY 5.7 SY 16.5 SY 15.1 SY 6.7 SY CLASS III SURFACE PREPARATION VOLUME AREA VOLUME VOLUME AREA VOLUME AREA VOLUME AREA AREA VOLUME AREA 4.3 SF 1.5 CF 11.0 SF 6.0 CF SHOTCRETE REPAIR AREA (SCR) -- SF -- CF -- SF CONCRETE REPAIR AREA (CR) -- SF -- CF -- CF -- SF -- CF 40'-0" 40'-0"

4.6 SY — CLASS II

O.8 SY — CLASS II

SPAN 1

0.5 SY -CLASS III

7.3 SY - CLASS III

— 8.7 SY CLASS III

LEGEND:

- CR CONCRETE REPAIR AREA
- SCR SHOTCRETE REPAIR AREA

<u> 1.5 SF SCR</u>

BOTTOM

40'-0"

SPAN 3

5.5 SF SCR — BOTTOM 2.8 SF SCR— I-40 EB 5.7 SY CLASS II

PLAN

2.6 SY CLASS III

2.7 SY --CLASS III

1.5 SF SCR —

Q BENT 2 ——

BOTTOM

SPAN 2

─1.4 SF SCR BOTTOM

-6.6 SY CLASS III

\_\_\_\_\_1.4 SF SCR

BOTTOM

1.2 SF SCR ── BOTTOM

€ BENT 1 —

-3.2 SY CLASS III

NOTES:

© TRAVEL — LANES

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

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FILL FACE ——

END BENT 1

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)

ALLEN J. MCSWAIN \_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ CHECKED BY : \_\_\_\_\_\_\_JACOB H. DUKE DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A. AGUIRRE</u> DATE: <u>01/2022</u> BRIDGE JOINT DEMOLITION

PROJECT NO. <u>I-59</u>15B IREDELL COUNTY

480072 BRIDGE NO. \_

FINAL UNLESS ALL

SIGNATURES COMPLETED

FILL FACE -

END BENT 2

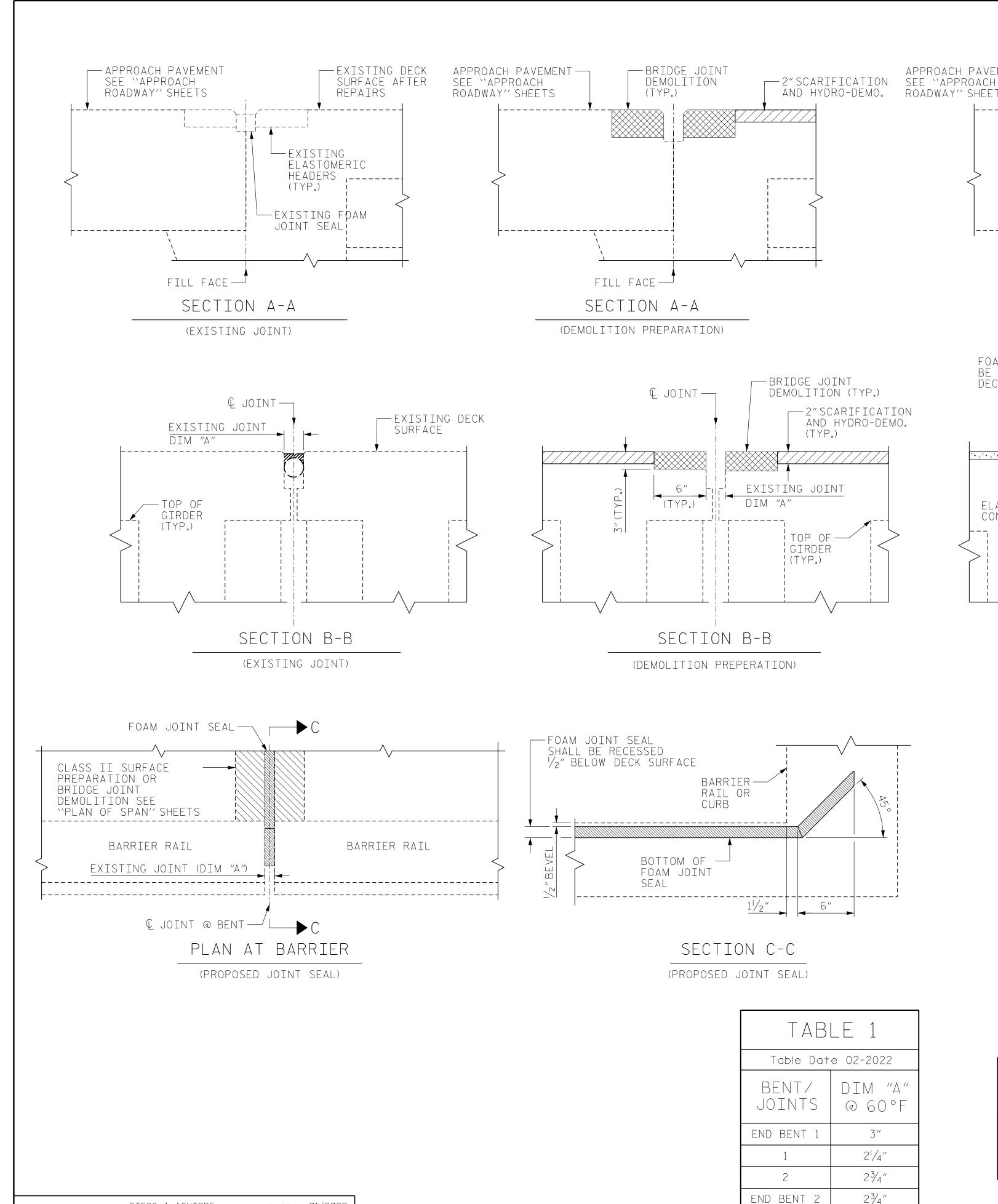
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

> PLAN OF SPANS DECK REPAIRS

SHEET 1 OF 2

SHEET NO REVISIONS S11-3 DATE: DATE: BY: NO. BY: OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 TOTAL SHEETS RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506 1Ø

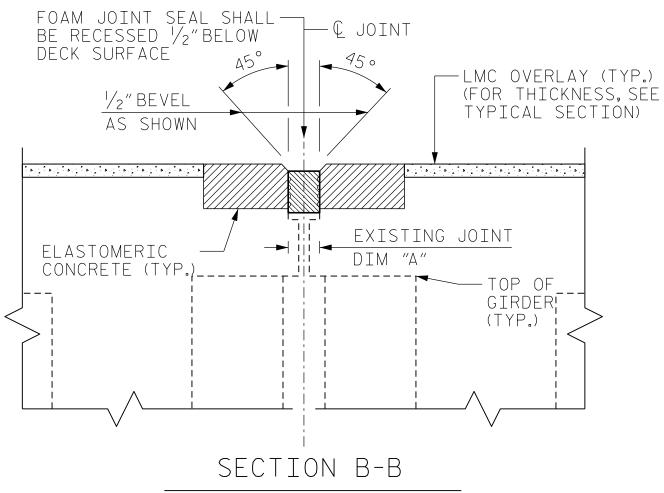
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AS-BUILT REPA	AIR QUANTITY TABLE	NOTES:		
SPAN		BRIDGE DECK GROOVING QUANTITY BASED ON LIMITS REQUIRED IN  FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION, CLASS II AND CL  THE LMC CONCTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEX  DURING CONSTRUCTION, BERMS OR APPROPRIATE COUNTERMEASURES S  THE CONTRACTOR SHALL COLLECT, TREAT AND DISPOSE OF RUN-OFF W  FOR PLACING AND FINISHING LATEX MODIFIED CONCRETE OVERLAY-  LONGITUDINAL CONSTRUCTION JOINTS SHALL BE LOCATED ALONG THE  BRIDGE DECK SCARIFICATION, HYDRO-DEMOLITION, AND LMC-VES, LIM:  CATION. CURRENT AVERAGE COVER IS EXPECTED TO BE FROM O TO 1!  WORK THIS SHEET WITH "JOINT DETAILS" SHEET.  WORK THIS SHEET WITH "DECK REPAIR DETAILS" SHEET.	LASS III SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARAT  XPECTED BLOW THROUGH OF THE DECK DURING HYDRO- DEMOLITION.  SHALL BE USED TO ENSURE HYDRO-DEMOLITION WATER DOES NOT ME  WATER FROM HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PROCESTY EARLY STRENGTH (LMC-VES), SEE LATEX MODIFIED CONCRETED  E CENTERLINE OR EDGE OF TRAVEL LANES.  ITS ARE THE FULL CLEAR ROADWAY WIDTH (INSIDE FACE OF EACH	IGRATE INTO ACTIVE TRAVEL LANES. REPARATION SPECIAL PROVISIONSVERY EARLY CONCRETE SPECIAL PROVISIONS.
<b>◄</b>	40'-0" SPAN 1	40'-0" SPAN 2	40'-0" SPAN 3	
			I-40 EB	28'-0" AR ROADWAY
© TRAVEL — LANES				
FILL FACE END BENT 1	© BENT 1	© BENT 2	FILL FACEFILL FACE	PROJECT NO
		<u>PLAN</u>	Docusigned by SEAL  Dicy of ESS / ON 19 19 19 19 19 19 19 19 19 19 19 19 19	SHEET 2 OF 2  STATE OF NORTH CAROLINA  DEPARTMENT OF TRANSPORTATION  RALEIGH  PLAN OF SPANS
DRAWN BY:ALLEN J. MCSWAIN DATE:Ø1/2022 CHECKED BY:JACOB H. DUKE DATE:Ø1/2022 DESIGN ENGINEER OF RECORD:DIEGO A. AGUIRRE DATE:Ø1/2022	LMC-VES		DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED  KISINGER CAMPO & ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506	NO. BY: DATE: NO. BY: DATE: S11-4



FOAM JOINT SEAL SHALL—
BE RECESSED 1/2" BELOW
DECK SURFACE ├─ Û JOINT -LMC OVERLAY (FOR THICKNESS APPROACH PAVEMENT — ¼″BEVEL SEE TYPICAL AS SHOWN SECTION SHEET) ROADWAY" SHEETS \_ \_ \_ \_ \_ \_ \_ \_ \_ <u>I</u> \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ EXISTING JOINT ELASTOMERIC DIM "A" CONCRETE (TYP.) -----FILL FACE

(PROPOSED FOAM JOINT SEAL)

SECTION A-A



## BRIDGE JOINT DEMOLITION

(PROPOSED FOAM JOINT SEAL)

LOCATION	ESTIMATED (SQ.FT.)	ACTUAL (SQ.FT.)						
END BENTS	60.7							
BENT 1	30.3							
BENT 2	30.3							

## ELASTOMERIC CONCRETE FOR PRESERVATION

LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)
END BENTS	15.2	
BENT 1	7.6	
BENT 2	7.6	

PROPOSED JOINT QUANTITY

	ESTIMATED (LIN.FT.)	ACTUAL (LIN.FT.)
FOAM JOINT SEALS FOR PRESERVATION	128.0	

### 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 ACCOMODATE 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 BRDIGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRATCTOR 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.

I-5915B PROJECT NO.\_ IREDELL COUNTY 480072 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

JOINT DETAILS

RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S11-5 DATE: DATE: BY: NO. BY: TOTAL SHEETS

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED

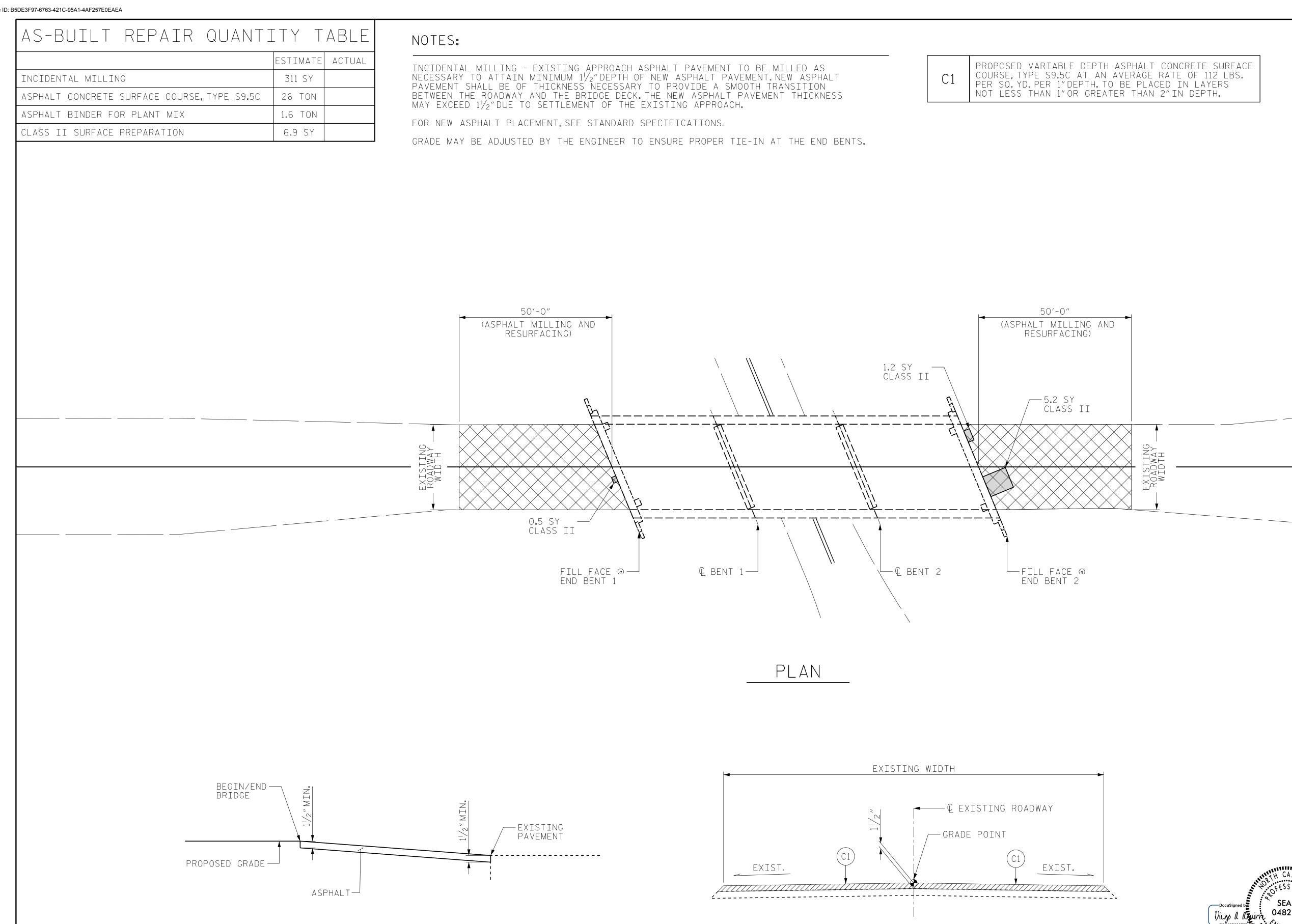
\_DATE : <u>01/2022</u>

DATE : <u>01/2022</u>

DIEGO A. AGUIRRE

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>

JACOB H. DUKE



CONSIDERED SOLIATES

301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

IREDELL COUNTY 480072 BRIDGE NO. \_

I-40 EB

I-5915B

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PROJECT NO.\_

INCIDENTAL MILLING

ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C (C1)

DEFECTS (SEE PLAN CALLOUT FOR DETAILS)

APPROACH ROADWAY

MILLING AND RESURFACING

SHEET NO REVISIONS S11-6 DATE: DATE: BY: NO. BY: TOTAL SHEETS RALEIGH, NC 27601 (919) 882-7839

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u> 4/21/2022 I5915B\_SMU\_AR01\_480072.dgn daguirre

\_ DATE : <u>0</u>1/2022

\_ DATE : <u>01/2022</u>

FIDEL L.FLORES

JACOB H. DUKE

DRAWN BY : \_\_\_

PAVEMENT KEY-IN DETAIL FOR BOTH END BENTS

ROADWAY SECTION

BEGIN/END BRIDGE

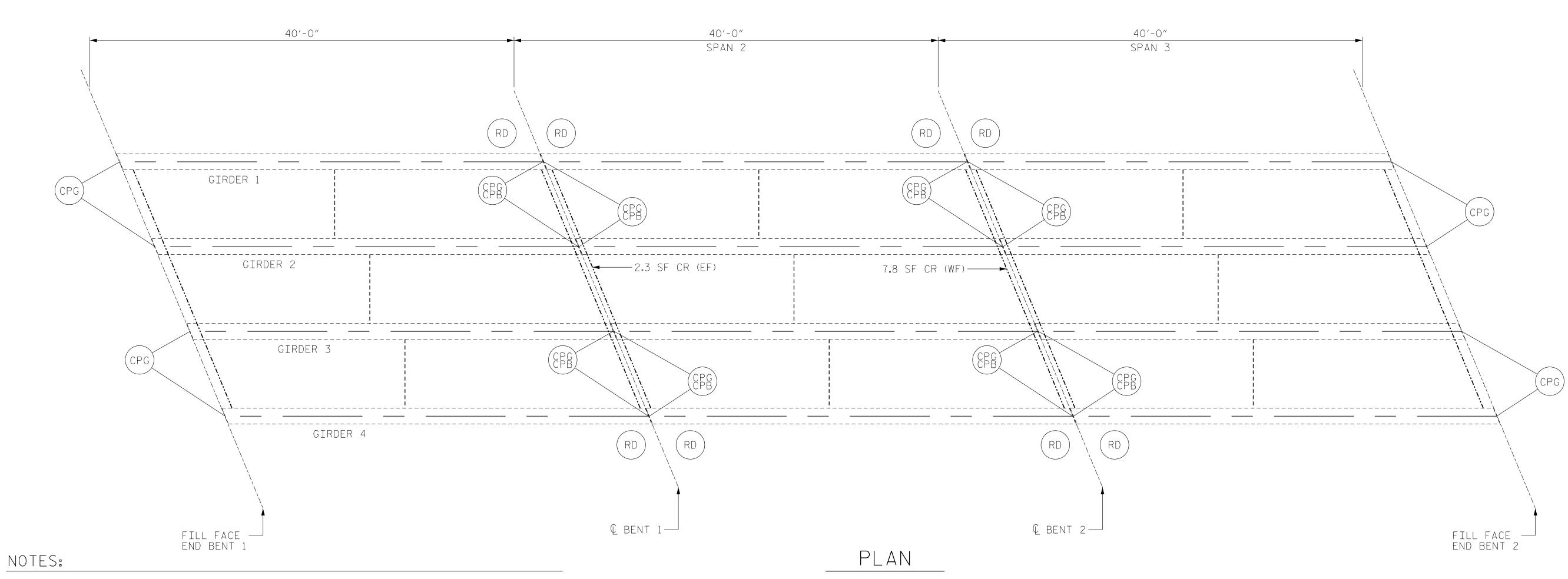
# AS-BUILT REPAIR QUANTITY TABLE CHDEDCTDHCTHDE DEDATDC

	SUPE	RSTRUC	/IUKE F	KEPAIR:								
		SPAN 1		SPAN 2				SPAN 3				
	ESTI	EMATE	AC <sup>-</sup>	TUAL	EST]	IMATE	ACT	TUAL	ESTI	IMATE	AC <sup>-</sup>	TUAL
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
CONCRETE REPAIR AREA (CR)	SF	CF			10.1 SF	3.4 CF			SF	CF		
	ESTI	EMATE	AC <sup>-</sup>	TUAL	EST]	IMATE	АСТ	TUAL	ESTI	IMATE	AC <sup>-</sup>	TUAL
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	4	EΑ			8	EΑ			4	EΑ		

LEGEND:

- CLEAN AND PAINT GIRDER ENDS (5 LF)
- CLEAN AND PAINT BEARING
- REMOVE END DIAPHRAGM AT OVERHANG (SEE DETAIL "RD")
- CR CONCRETE REPAIR AREA

\* QUANTITIES FOR REMOVAL OF DIAPHRAGMS AT OVERHANGS (RD) ARE NOT INCLUDEDED AND SHALL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REAPIRS".



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.

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

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

PRIOR TO CLEANING AND PAINTING STEEL ELEMENTS, REMOVE EXTERIOR DIAPHRAGMS AND A PORTION OF THE INTERIOR DIAPHRAGMS SO AS TO ALLOW FOR CLEANING OF EXISTING STEEL ELEMENTS PRIOR TO PAINTING. SEE DETAILS "RD" AND "RRD".

AFTER THE REMOVAL OF EXTERIOR END DIAPHRAGMS, CUT ANY EXPOSED REBAR FLUSH WITH THE DECK. COAT THE REMAINING EXPOSED REBAR WITH EPOXY. EPOXY WILL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REPAIRS".

FOR DETAILS OF CLEANING AND PAINTING GIRDER ENDS (CPG), REMOVE END DIAPHRAGMS AT OVERHANG (RD), AND REMOVE AND REPAIR DIAPHRAGM ENDS (RRD), SEE "MISCELLANEOUS REPAIRS" SHEET.

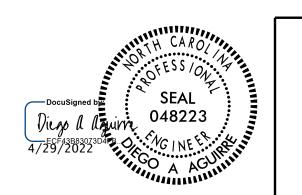
FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

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

I-5915B PROJECT NO.\_\_\_\_ IREDELL COUNTY

480072 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

> SUPERSTRUCTURE REPAIRS

> > NO. BY:

SHEET NO S11-7

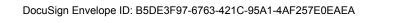
TOTAL SHEETS

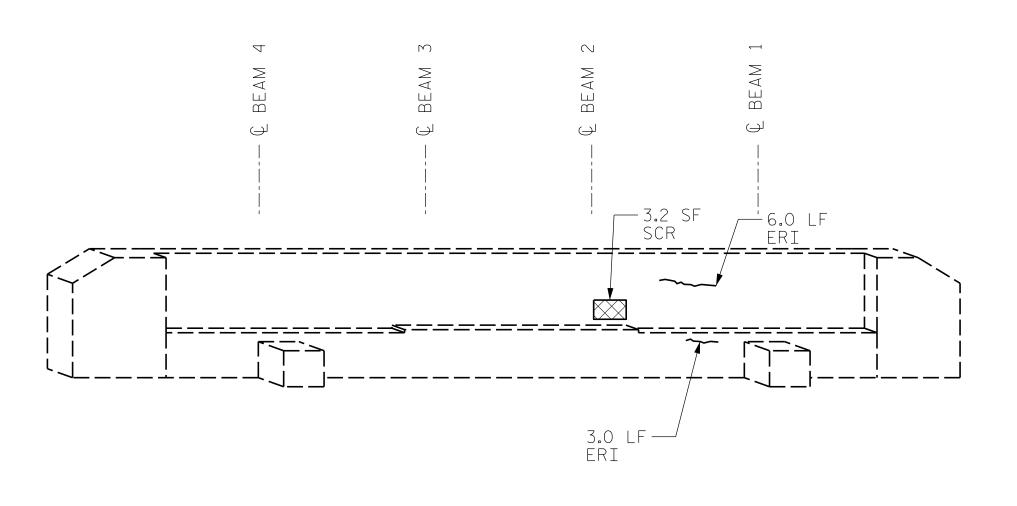
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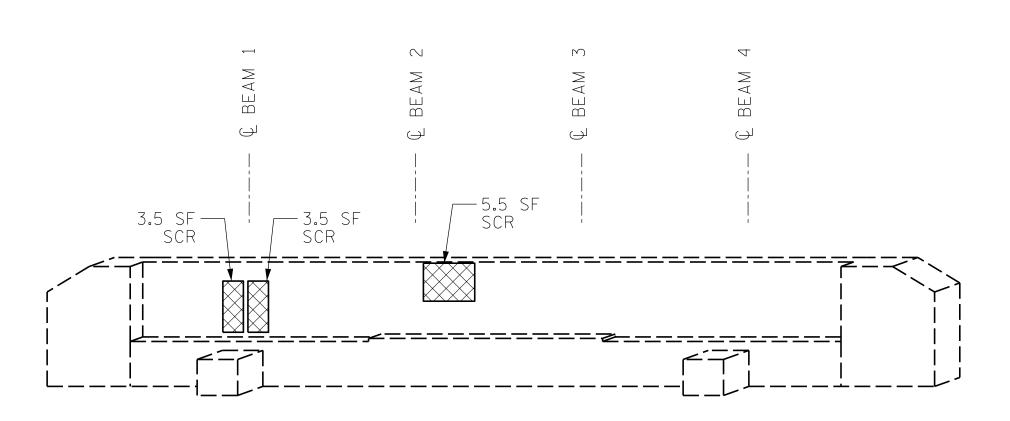
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

KISINGER CAMPO			REVIS	
& ASSOCIATES	NO.	BY:	DATE:	
301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839	1			
NC FIRM LICENSE: C-1506	2			(









END BENT 2 (WEST FACE)

	LEGEND	AS-BUILT REPAIR QUANTITY TABLE					
	CONCRETE REPAIR AREA (CR)			QUANT	ITIES		
			ESTI	MATE	ACTUAL		
	SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU. FT.	AREA SQ.FT.	VOLUME CU.FT.	
	EPOXY RESIN INJECTION (ERI)	CAP/BACKWALL	15.7	5.4			
		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	9	.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:

COLUMN/PILE

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 >= $\frac{1}{16}$  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  $1\frac{1}{2}$ " 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.\_ IREDELL COUNTY

480072 BRIDGE NO. \_

SHEET 1 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

WISINGER CAMPO

& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506

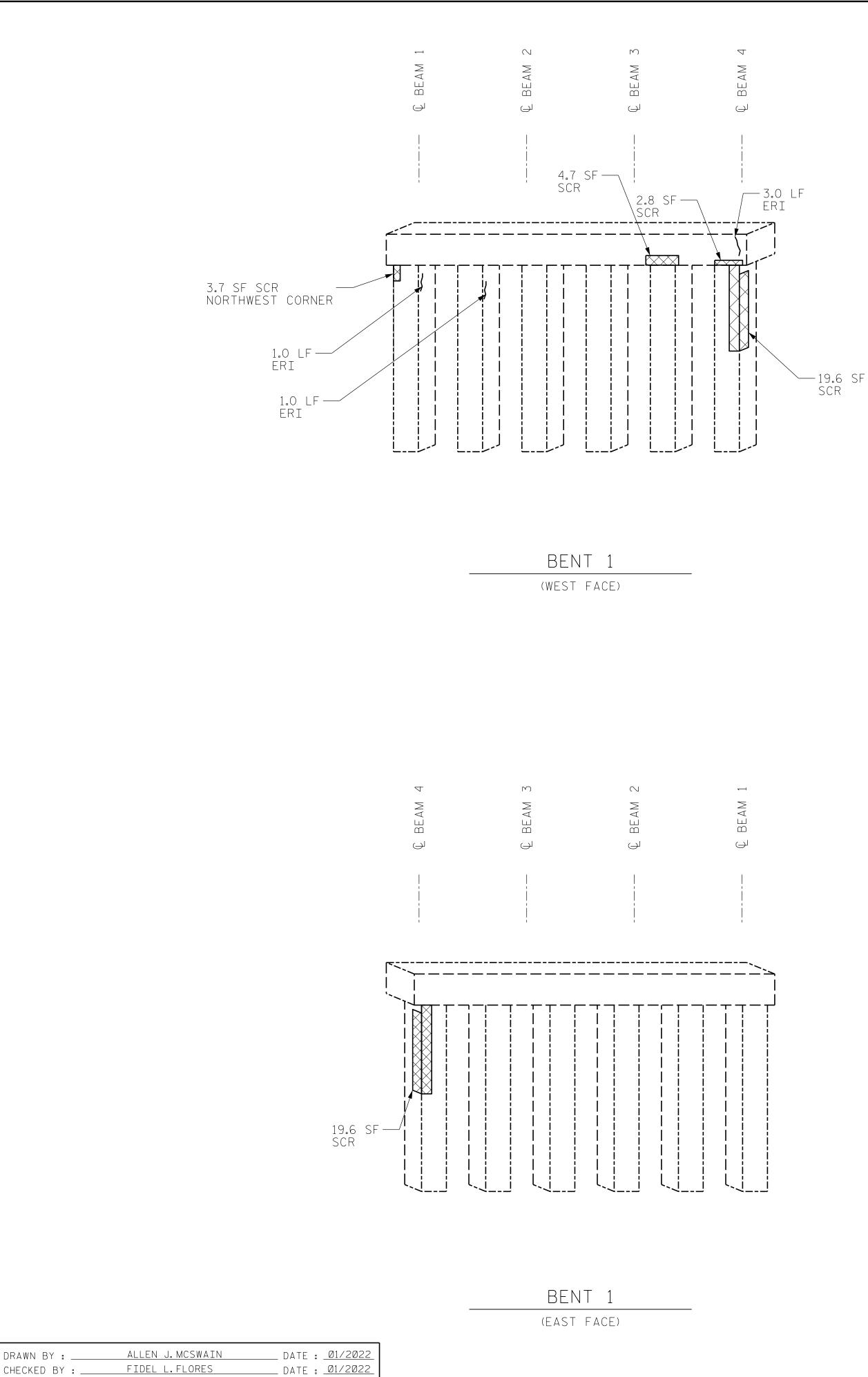
FINAL UNLESS ALL

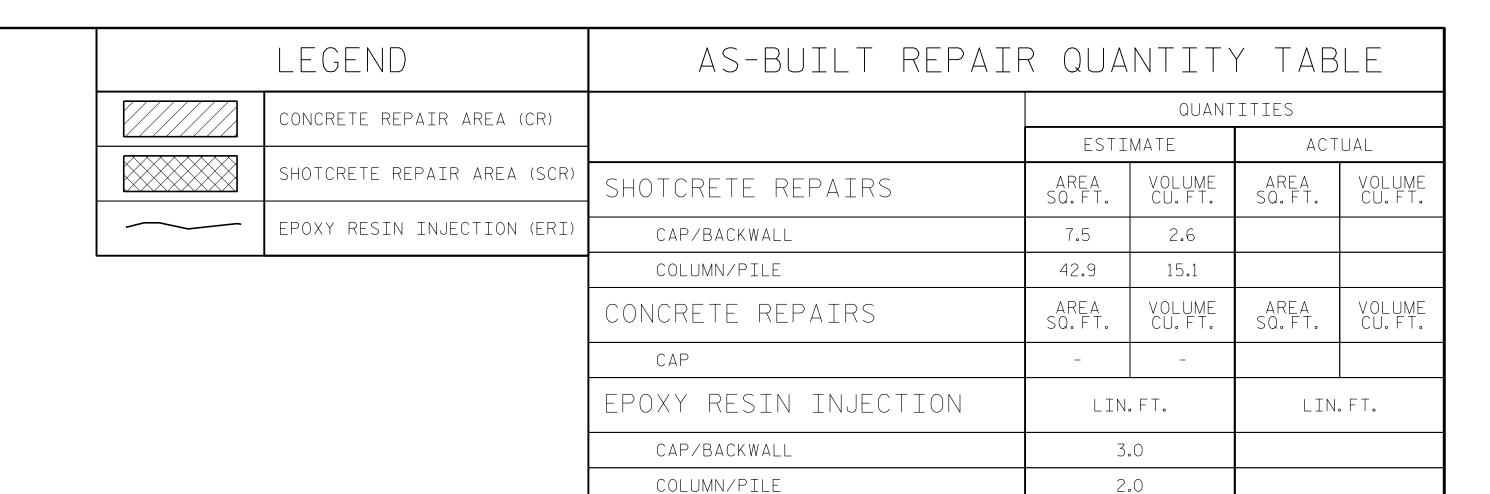
SIGNATURES COMPLETED

END BENTS 1 & 2

SHEET NO REVISIONS S11-8 DATE: DATE: BY: NO. BY: TOTAL SHEETS 10

ALLEN J. MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ \_ DATE : <u>01/2022</u> CHECKED BY: \_\_\_\_\_FIDEL L.FLORES DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>





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.

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

> I-5915B PROJECT NO. IREDELL COUNTY 480072 BRIDGE NO. \_

SHEET 2 OF 3



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 1

	VC14
	KISINGER CAMPO
RED	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500
D	RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S11-9 DATE: DATE: NO. BY: TOTAL SHEETS 10

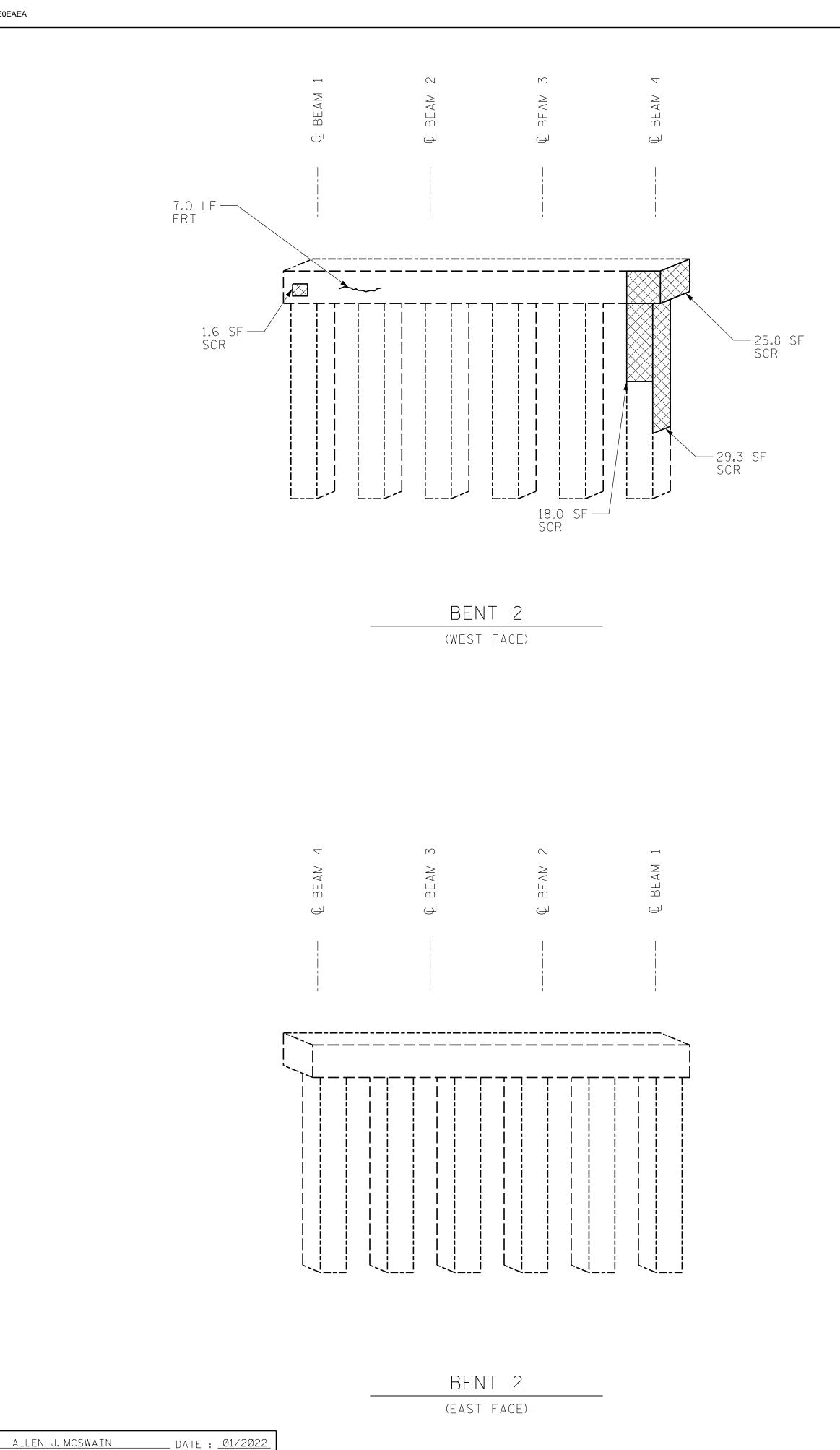
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DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

DRAWN BY : \_\_\_

FIDEL L.FLORES

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>



	LEGEND		AS-BUILT REPAIR QUANTITY TABLE				
		CONCRETE REPAIR AREA (CR)	QUANT		ITIES		
-			ESTIMATE		ACTUAL		
		SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.
	EPOXY RESIN INJECTION (ERI)		CAP/BACKWALL	27.4	9.2		
L			COLUMN/PILE	47.3	15.8		
			CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
			CAP	-	-		
			EPOXY RESIN INJECTION	LIN	.FT.	LIN	FT.
			CAP/BACKWALL	7.	.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:

COLUMN/PILE

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.

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

SHEETS.

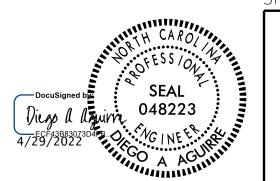
FOR CONCRETE AND SHOTCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS"

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.\_ IREDELL COUNTY 480072 BRIDGE NO. \_

SHEET 3 OF 3



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 2



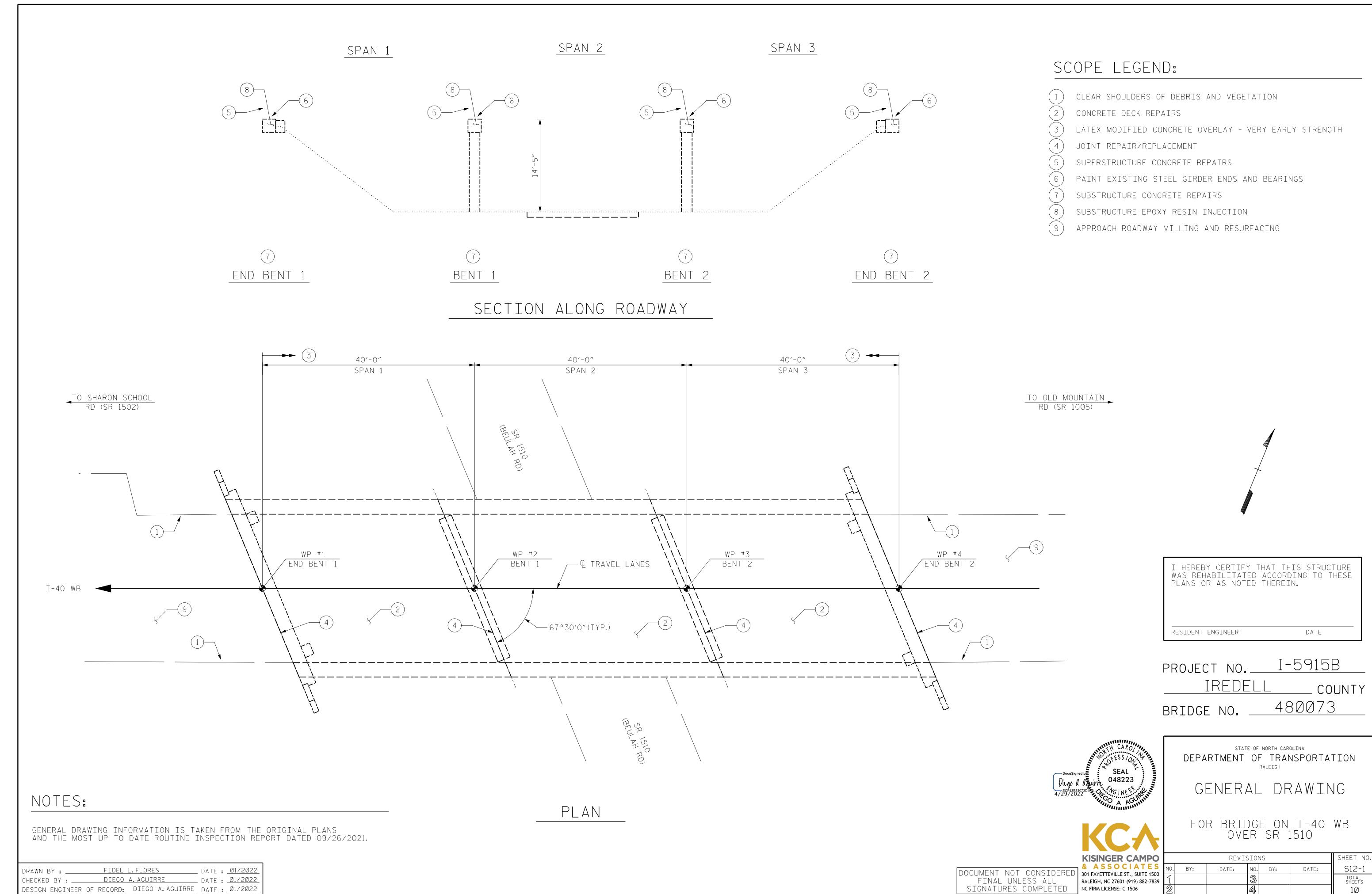
NC FIRM LICENSE: C-1506

FINAL UNLESS ALL

SHEET NO REVISIONS S11-1Ø DATE: DATE: NO. BY: TOTAL SHEETS 10

4/21/2022 I5915B\_SMU\_SBR02\_480072.dgn daguirre

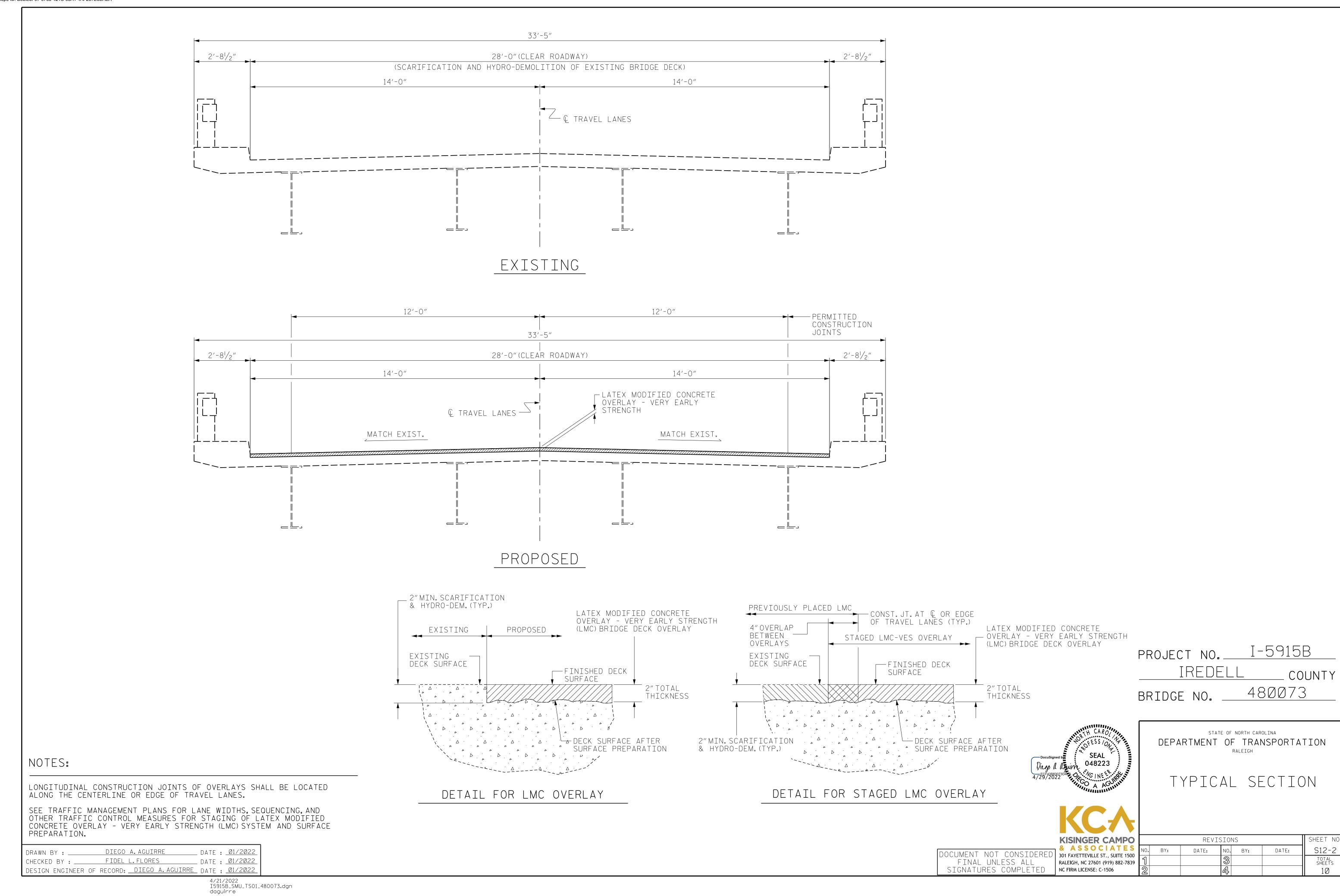
\_ DATE : <u>01/2022</u>



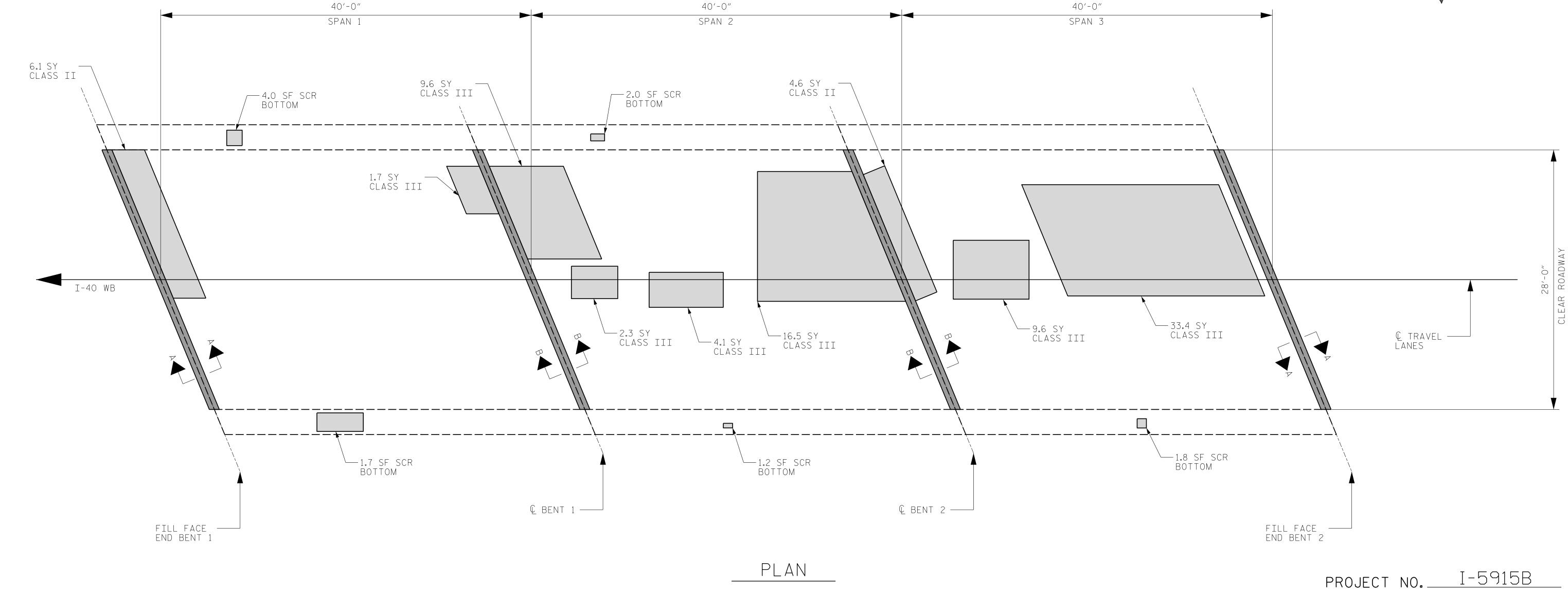
SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

4/21/2022 I5915B\_SMU\_GD01\_480073.dgn daguirre

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>



#### DocuSign Envelope ID: B5DE3F97-6763-421C-95A1-4AF257E0EAEA AS-BUILT REPAIR QUANTITY TABLE DECK REPAIRS SPAN 1 SPAN 2 SPAN 3 ACTUAL ESTIMATE ACTUAL ESTIMATE ESTIMATE ACTUAL CLASS II SURFACE PREPARATION 6.1 SY 4.6 SY CLASS III SURFACE PREPARATION 1.7 SY 32.5 SY 43.0 SY AREA VOLUME AREA AREA VOLUME AREA AREA VOLUME VOLUME VOLUME VOLUME AREA 5.7 SF 2.0 CF 3.2 SF 1.1 CF 0.6 CF 1.8 SF SHOTCRETE REPAIR (SCR) 40'-0" 40'-0" SPAN 1 SPAN 2 6.1 SY — CLASS II 4.6 SY — CLASS II 9.6 SY — CLASS III — 2.0 SF SCR BOTTOM 4.0 SF SCR BOTTOM



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.

ALLEN J. MCSWAIN \_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ \_ DATE : <u>01/2022</u> CHECKED BY : \_\_\_\_\_\_\_JACOB H. DUKE DESIGN ENGINEER OF RECORD: <u>DIEGO A. AGUIRRE</u> DATE: <u>01/2022</u> DEFECTS (SEE PLAN CALLOUT FOR DETAILS) BRIDGE JOINT DEMOLITION IREDELL COUNTY

480073 BRIDGE NO. \_

SHEET 1 OF 2

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

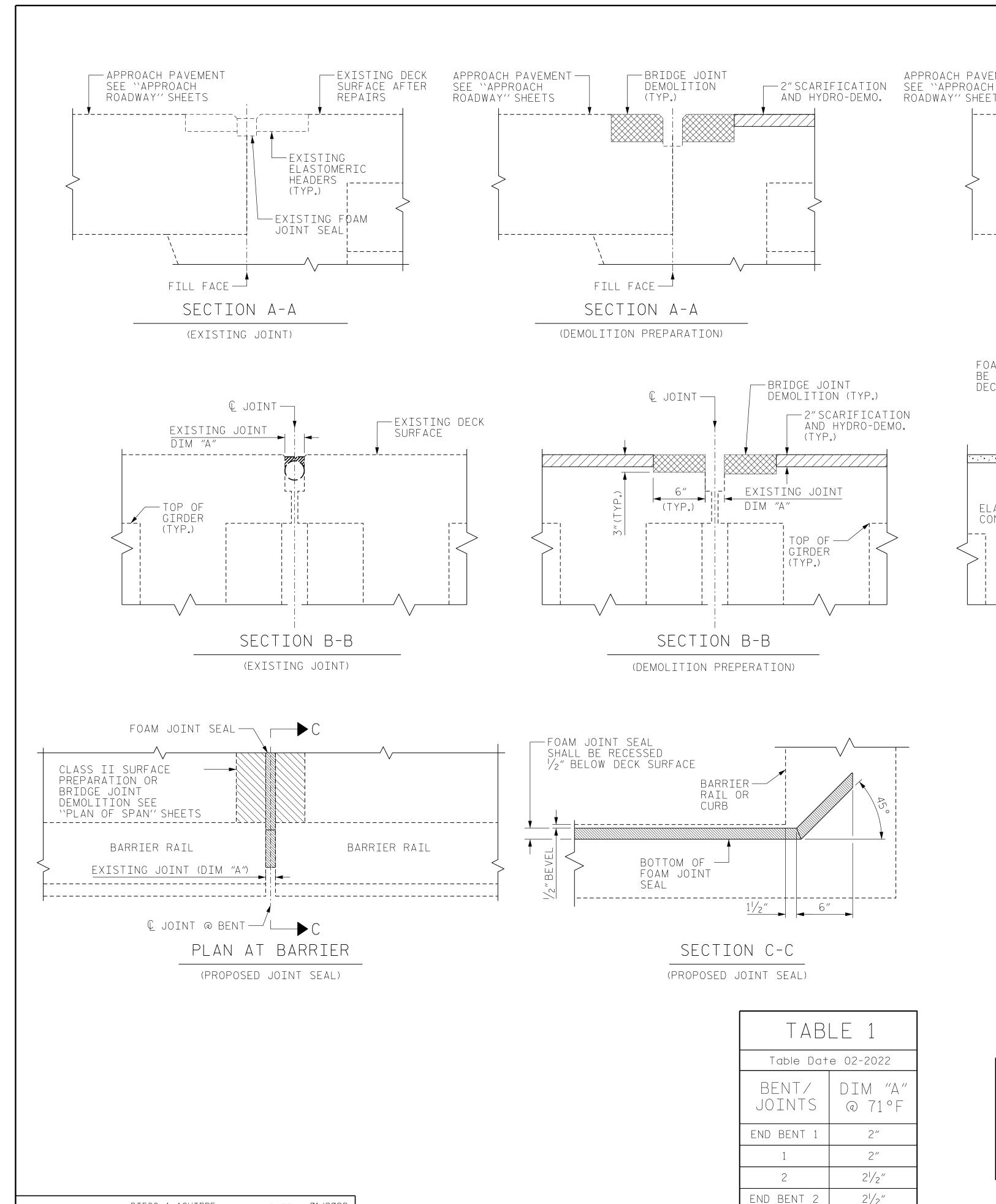
PLAN OF SPANS

DECK REPAIRS

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

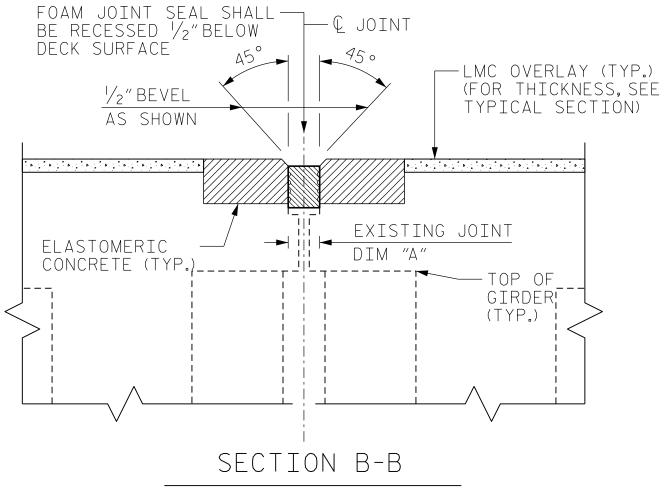
REVISIONS					SHEET NO	
NO.	BY:	DATE:	NO.	BY:	DATE:	S12-3
1			33			TOTAL SHEETS
2			4			10

invelope ID: B5DE3F97-6763-421C-95A1-4AF257E0EAEA		
AS-BUILT REPAIR QUANTITY TABLE	NOTES:	
SPAN 1 SPAN 2 SPAN 3  ESTIMATE ACTUAL ESTIMATE ACTUAL ESTIMATE ACTUAL  SCARIFYING BRIDGE DECK 125 SY 120 SF 1120 SF	BRIDGE DECK GROOVING QUANTITY BASED ON LIMITS REQUIRED IN SECTION 420 FOR SCARIFYING BRIDGE DECK, HYDRO-DEMOLITION, CLASS II AND CLASS III SU THE LMC CONCTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLO DURING CONSTRUCTION, BERMS OR APPROPRIATE COUNTERMEASURES SHALL BE USE THE CONTRACTOR SHALL COLLECT, TREAT AND DISPOSE OF RUN-OFF WATER FROM	REFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.  W THROUGH OF THE DECK DURING HYDRO- DEMOLITION.  D TO ENSURE HYDRO-DEMOLITION WATER DOES NOT MIGRATE INTO ACTIVE TRAVEL LANES.  HYDRO-DEMOLITION PROCESS, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISIONS.  STRENGTH (LMC-VES), SEE LATEX MODIFIED CONCRETE-VERY EARLY CONCRETE SPECIAL PROVISIONS.  E OR EDGE OF TRAVEL LANES.  FULL CLEAR ROADWAY WIDTH (INSIDE FACE OF EACH BRIDGE RAIL).
40'-0"  SPAN 1	40'-0"  SPAN 2  A0'-0"  SPAN 3	
I-40 WB		© TRAVEL LANES  B-0, WAY  BOADWAY
\frac{1}{7-1}		
		IREDELL COUNTY
← C BENT 1 ———	© BENT 2 ———	FILL FACE BRIDGE NO. 480073
FILL FACE END BENT 1	<u>PLAN</u>	STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH  PLAN OF SPANS  PLAN OF SPANS
		LMC OVERLAY
DRAWN BY:ALLEN J.MCSWAIN DATE: 01/2022		KISINGER CAMPO  REVISIONS  SHEET NO.  A S S O C I A T E S 301 FAYETTEVILLE ST., SUITE 1500  NO. BY: DATE: NO. BY: DATE: S12-4
CHECKED BY:		DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED NC FIRM LICENSE: C-1506  NO. BY: DATE:



FOAM JOINT SEAL SHALL—
BE RECESSED 1/2" BELOW
DECK SURFACE ├─ Û JOINT -LMC OVERLAY (FOR THICKNESS APPROACH PAVEMENT — ¼″BEVEL SEE TYPICAL AS SHOWN SECTION SHEET) ROADWAY" SHEETS \_ \_ \_ \_ \_ \_ \_ \_ \_ <u>I</u> \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ \_ EXISTING JOINT ELASTOMERIC DIM "A" CONCRETE (TYP.) -----FILL FACE SECTION A-A

(PROPOSED FOAM JOINT SEAL)



## BRIDGE JOINT $\Gamma$

(PROPOSED FOAM JOINT SEAL)

DEMOLTITON			
LOCATION	ESTIMATED (SQ.FT.)	ACTUAL (SQ.FT.)	
END BENTS	60.7		
BENT 1	30.3		
BENT 2	30.3		

## ELASTOMERIC CONCRETE FOR PRESERVATION

LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)
END BENTS	15.2	
BENT 1	7.6	
BENT 2	7.6	

PROPOSED JOINT QUANTITY

	ESTIMATED (LIN.FT.)	ACTUAL (LIN.FT.)
FOAM JOINT SEALS FOR PRESERVATION	128.0	

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 ACCOMODATE 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 BRDIGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRATCTOR 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.

I-5915B PROJECT NO.\_ IREDELL COUNTY 480073 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

JOINT DETAILS



RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S12-5 DATE: DATE: BY: NO. BY: TOTAL SHEETS

FINAL UNLESS ALL SIGNATURES COMPLETED

\_DATE : <u>01/2022</u>

DATE : <u>01/2022</u>

DIEGO A. AGUIRRE

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>

JACOB H. DUKE

ID: B5DE3F97-6763-421C-95A1-4AF257E0EAEA			
AS-BUILT REPAIR QUANTITY TABLE	NOTES:		
INCIDENTAL MILLING  ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C  ASPHALT BINDER FOR PLANT MIX  1.7 TON	INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 11/2" DEPTH OF NEW ASPHALT PAVEMENT.NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK.THE NEW ASPHALT PAVEMENT THICKNESS MAY EXCEED 11/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH.  FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.  GRADE MAY BE ADJUSTED BY THE ENGINEER TO ENSURE PROPER TIE-IN AT THE END BENTS.	C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1"DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1"OR GREATER THAN 2"IN DEPTH.	INCIDENTAL MILLING  ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C (C1)
	(ASPHALT MILLING AND RESURFACING)	50'-0"  (ASPHALT MILLING AND RESURFACING)	
C LANES			
I-40 WB		EXISTING TO THE PROPERTY OF TH	
	FILL FACE @	FILL FACE @ END BENT 2  END BENT 2	
	<u>PLAN</u>		
PROPOSED GRADE—  BEGIN/END—  NIW  NIW  NIW  NIW  NIW  NIW  NIW  NI	EXISTING WIDTH  EXISTING WIDTH  C1  EXISTING WIDTH  C1  EXISTING WIDTH	ISTING ROADWAY  POINT  C1  EXIST.	PROJECT NO
ASPHALT —  PAVEMENT KEY-IN DETAIL FOR BOTH		Docusigned by S Diego a liquing 04	CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH 18223
- , , , , , , , , , , , , , , , , , , ,	BEGIN/END BRIDGE	4/29/2022 4/29/2022	APPROACH ROADWAY  MILLING AND RESURFACING
DRAWN BY:FIDEL L.FLORES DATE:		DOCUMENT NOT CONSIDERED 301 FAYETTEVIL	REVISIONS   SHEET NO.

# AS-BUILT REPAIR QUANTITY TABLE

### CHDEDCTDHCTHDE DEDATRO

	SUPE	- R S I R U C	/IURE F	TEPAIR:								
		SPAN 1 ESTIMATE ACTUAL			SPAN 2			SPAN 3				
	EST			TUAL	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
CONCRETE REPAIR AREA (CR)	SF	CF			SF	CF			SF	CF		
	EST	IMATE	AC.	TUAL	ESTI	MATE	AC <sup>-</sup>	-UAL	ESTI	MATE	ACT	-UAL
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	4	4 EA			8	EA			4	EΑ		

LEGEND:

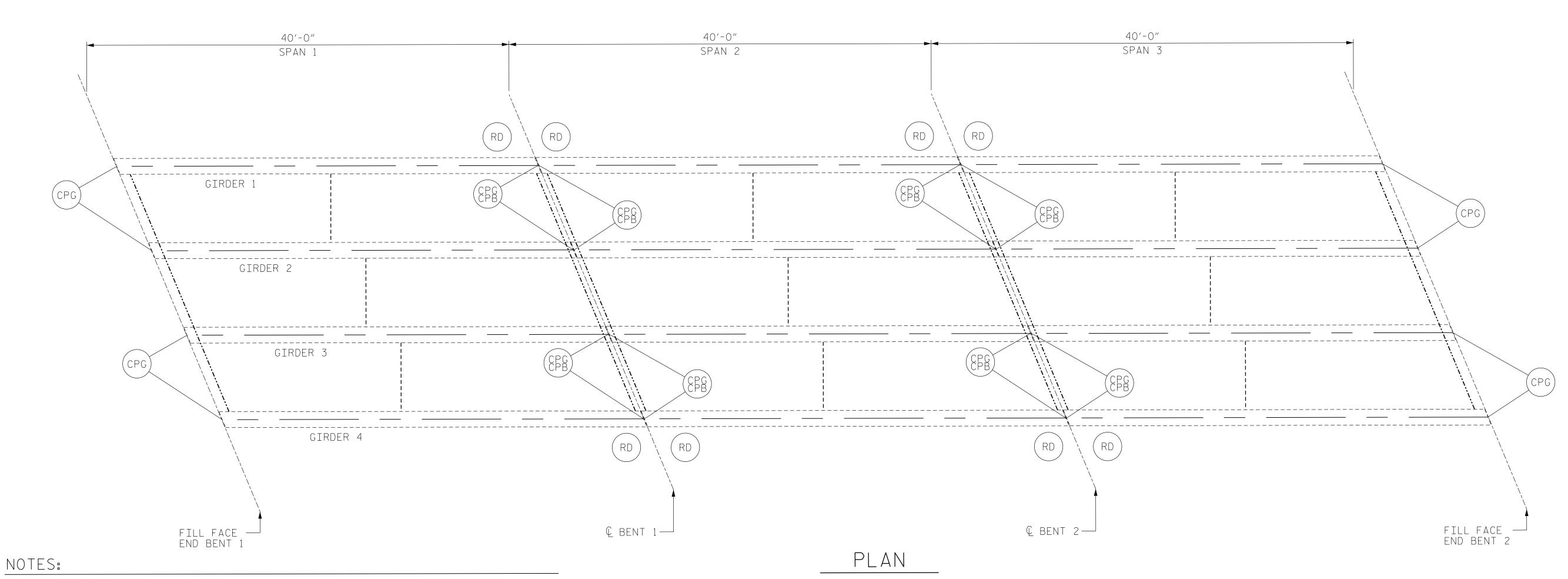
CLEAN AND PAINT GIRDER ENDS (5 LF)

CLEAN AND PAINT BEARING

REMOVE END DIAPHRAGM AT OVERHANG (SEE DETAIL "RD")

CR CONCRETE REPAIR AREA

\* QUANTITIES FOR REMOVAL OF DIAPHRAGMS AT OVERHANGS (RD) ARE NOT INCLUDEDED AND SHALL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REAPIRS".



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.

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

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

PRIOR TO CLEANING AND PAINTING STEEL ELEMENTS, REMOVE EXTERIOR DIAPHRAGMS AND A PORTION OF THE INTERIOR DIAPHRAGMS SO AS TO ALLOW FOR CLEANING OF EXISTING STEEL ELEMENTS PRIOR TO PAINTING. SEE DETAILS "RD" AND "RRD".

AFTER THE REMOVAL OF EXTERIOR END DIAPHRAGMS, CUT ANY EXPOSED REBAR FLUSH WITH THE DECK. COAT THE REMAINING EXPOSED REBAR WITH EPOXY. EPOXY WILL BE INCIDENTAL TO THE PAY ITEM FOR "CONCRETE REPAIRS".

FOR DETAILS OF CLEANING AND PAINTING GIRDER ENDS (CPG), REMOVE END DIAPHRAGMS AT OVERHANG (RD), AND REMOVE AND REPAIR DIAPHRAGM ENDS (RRD), SEE "MISCELLANEOUS REPAIRS" SHEET.

FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

DRAWN BY :	ALLEN J. MCSWAIN	DATE : <u>01/2022</u>
CHECKED BY :	JACOB H.DUKE	DATE : <u>01/2022</u>
DESIGN ENGINEER	OF RECORD: <u>DIEGO A. AGUIF</u>	RRE_DATE : <u>01/2022</u>

I-5915B PROJECT NO.\_\_ IREDELL

480073 BRIDGE NO.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

COUNTY

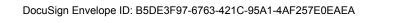
SUPERSTRUCTURE

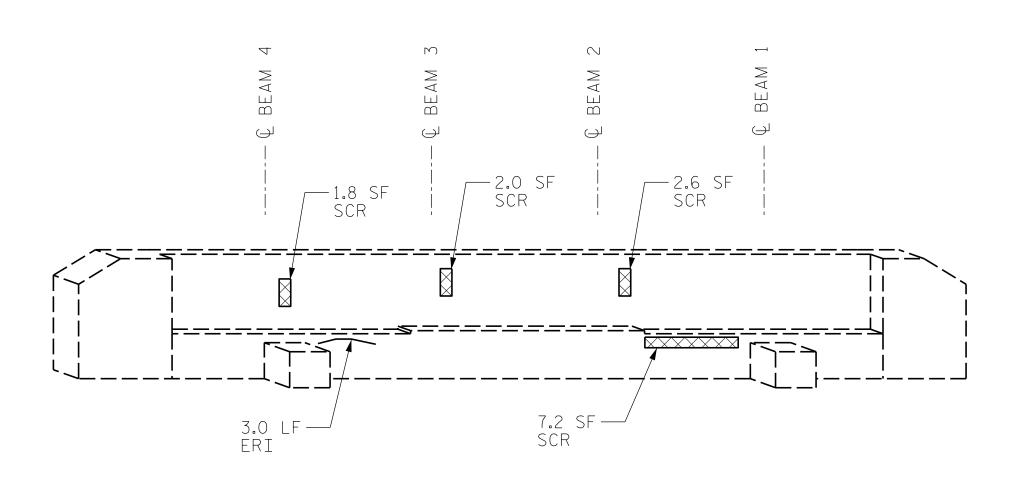
& ASSOCIATES NO. BY: OCUMENT NOT CONSIDERED | 301 FAYETTEVILLE ST., SUITE 1500 | FINAL UNLESS ALL RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

REPAIRS

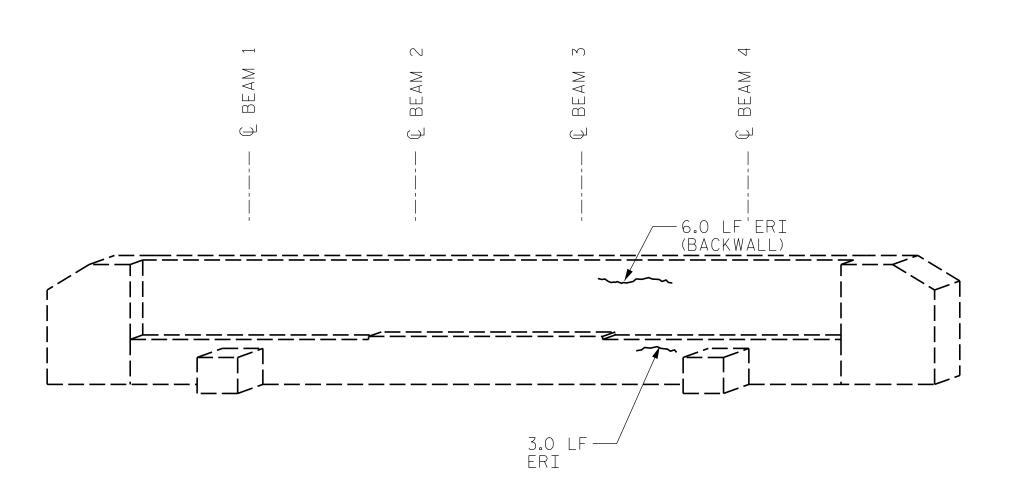
SHEET NO REVISIONS S12-7 DATE: NO. BY: TOTAL SHEETS

4/21/2022 I5915B\_SMU\_SSR01\_480073.dgn





END BENT (EAST FACE)



END BENT 2 (WEST FACE)

	LEGEND	AS-BUILT REPAIR	R QUA	NTIT	Y TAB	LE
	CONCRETE REPAIR AREA (CR)			QUANT	ITIES	
			ESTI	MATE	ACT	UAL
-	SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU. FT.
	EPOXY RESIN INJECTION (ERI)	CAP/BACKWALL	13.6	4.6		
L		COLUMN/PILE	-	-		
		CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU. FT.	AREA SQ.FT.	VOLUME CU. FT.
		CAP	-	-		
		EPOXY RESIN INJECTION	LIN	.FT.	LIN	.FT.

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.

12.0

### NOTES:

CAP/BACKWALL

COLUMN/PILE

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 >= $\frac{1}{16}$  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  $1\frac{1}{2}$ " 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.

> I-5915B PROJECT NO. IREDELL COUNTY 480073 BRIDGE NO. \_

SHEET 1 OF 3



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

WISINGER CAMPO

& ASSOCIATES

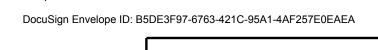
301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

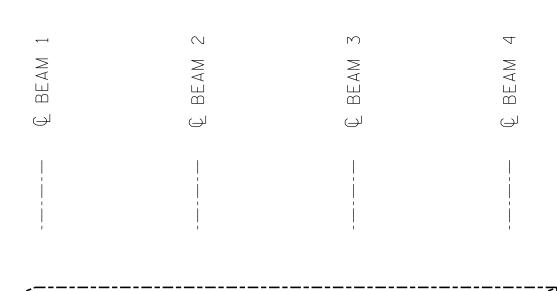
RALEIGH, NC 27601 (919) 882-7839

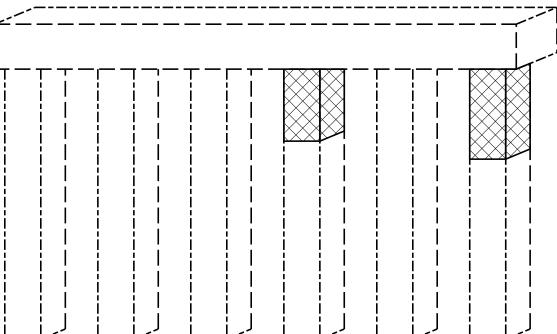
END BENTS 1 & 2

SHEET NO REVISIONS S12-8 DATE: BY: DATE: NO. BY: TOTAL SHEETS 1Ø

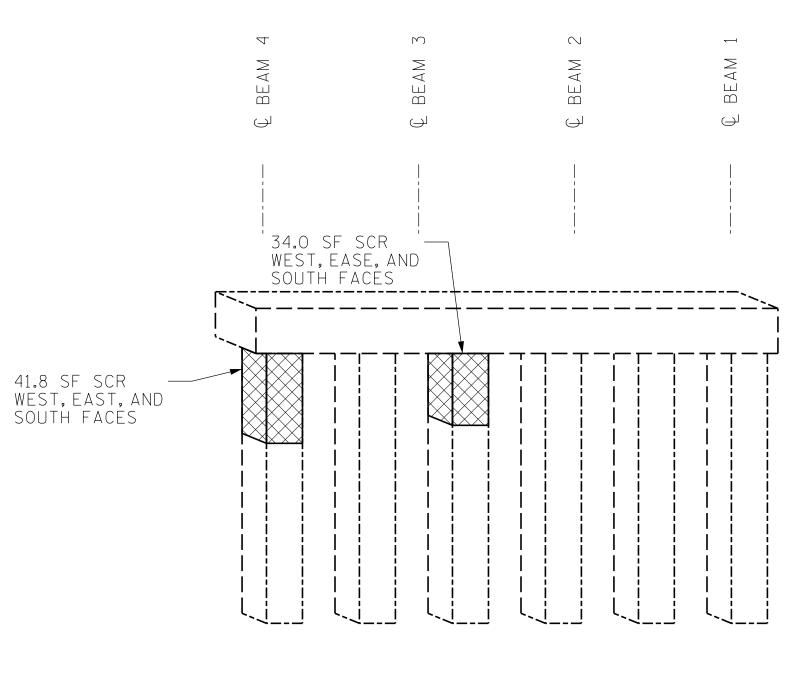
ALLEN J. MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ \_ DATE : <u>01/2022</u> FIDEL L.FLORES DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>







BENT 1 (WEST FACE)



BENT 1 (EAST FACE)

ALLEN J. MCSWAIN \_DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ DATE : <u>01/2022</u> FIDEL L.FLORES DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) CAP/BACKWALL 75.8 COLUMN/PILE 28.2 VOLUME CU.FT. CONCRETE REPAIRS CAP

EPOXY RESIN INJECTION

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.

LIN.FT.

LIN.FT.

### NOTES:

CAP/BACKWALL

COLUMN/PILE

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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.

> I-5915B PROJECT NO. COUNTY

480073 BRIDGE NO. \_

SHEET 2 OF 3



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 1

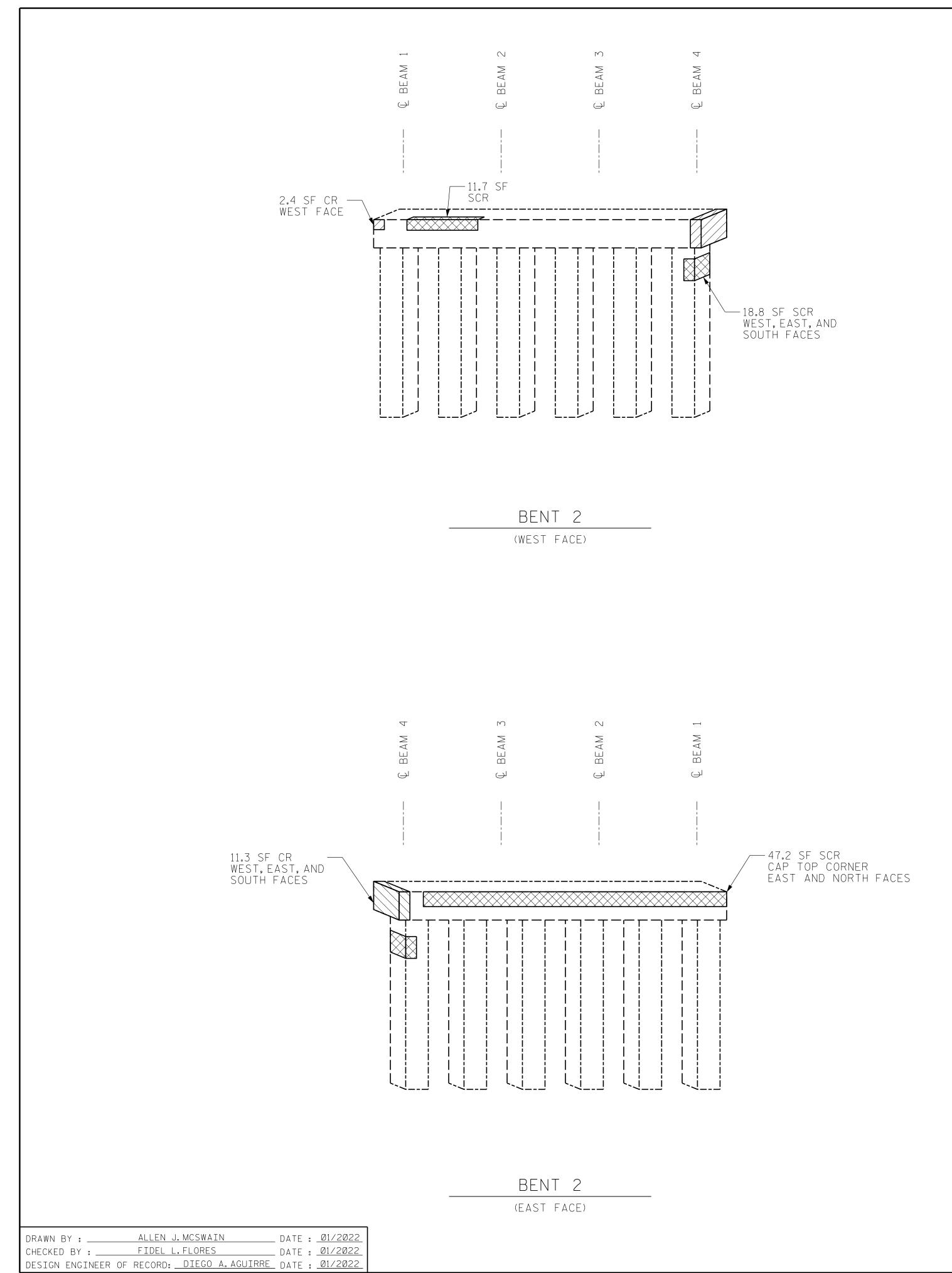
WISINGER CAMPO

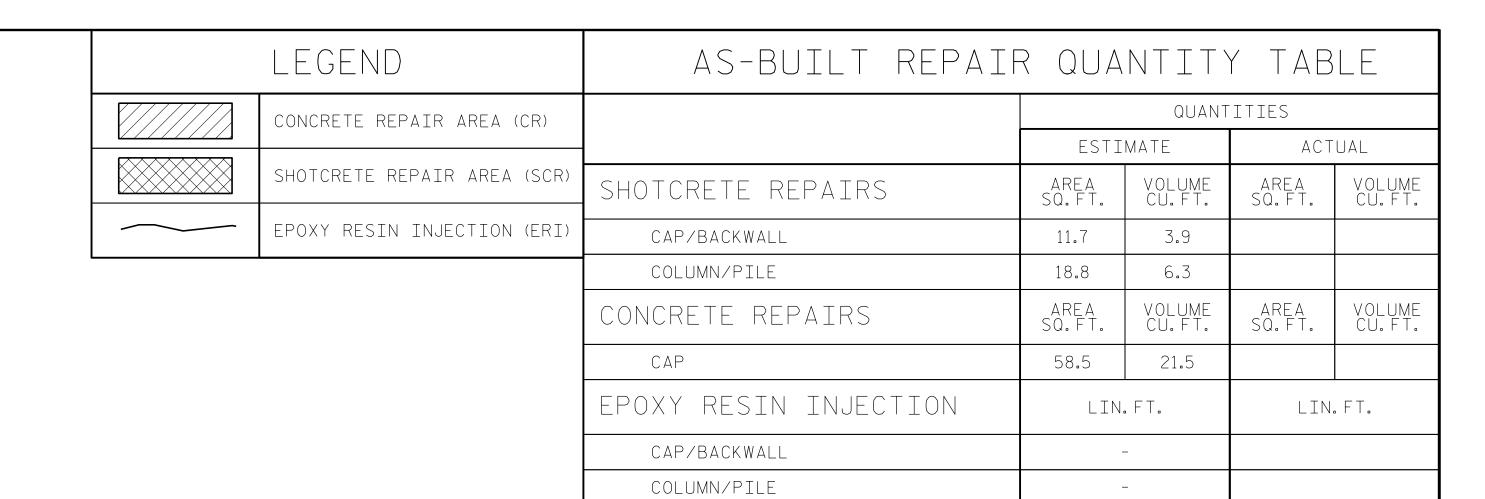
& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED

BY: NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S12-9 DATE: DATE: NO. BY: TOTAL SHEETS 10





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.

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> I-5915B PROJECT NO. COUNTY 480073 BRIDGE NO. \_

SHEET 3 OF 3



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

SUBSTRUCTURE REPAIRS

BENT 2

WISINGER CAMPO

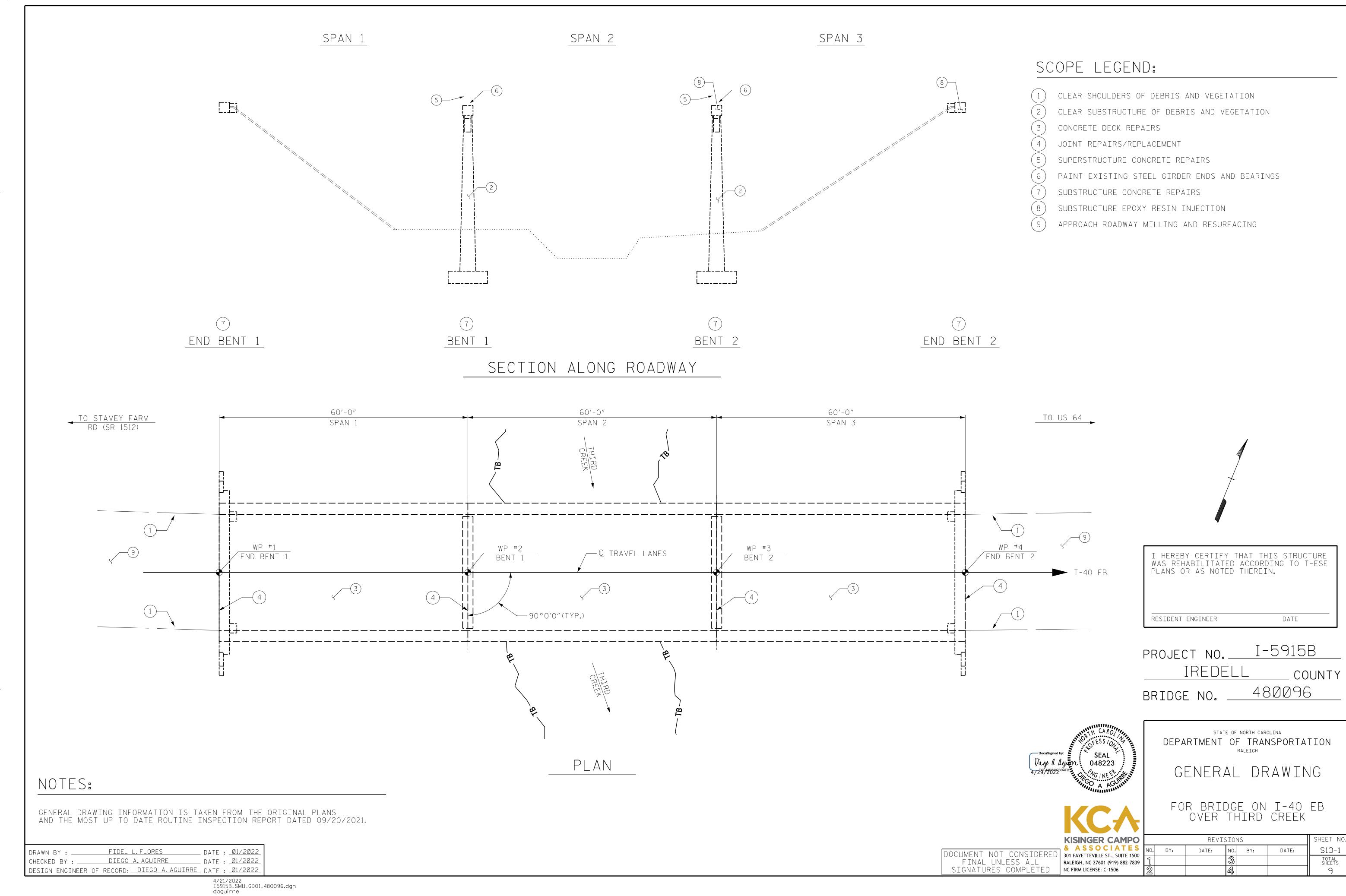
& ASSOCIATES

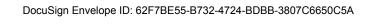
301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839

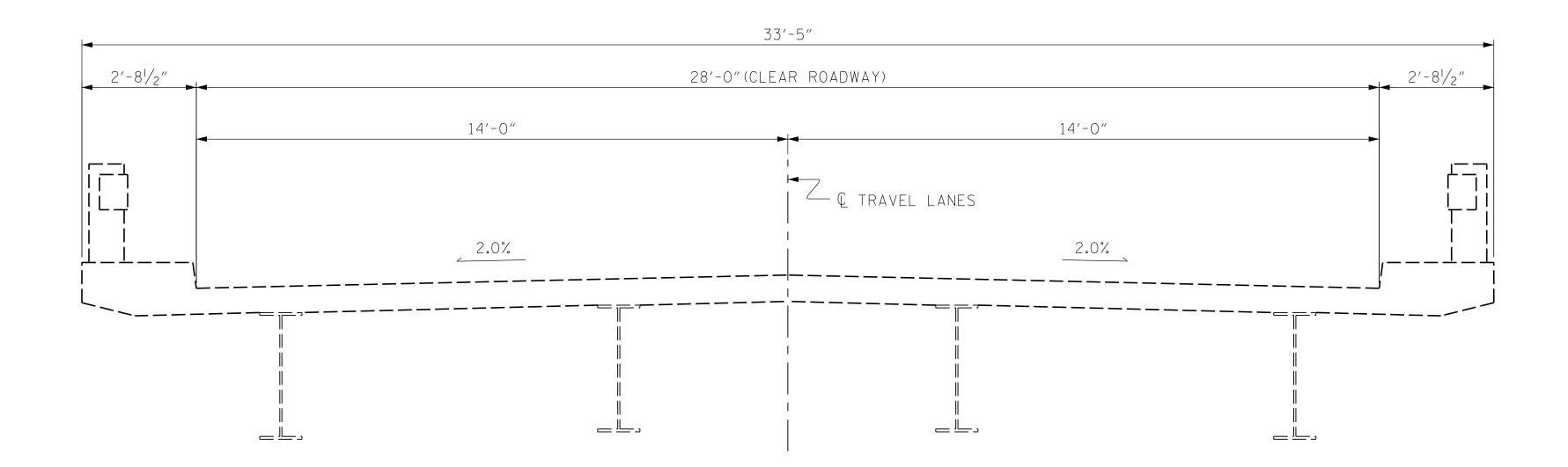
NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S12-10 DATE: BY: DATE: NO. BY: TOTAL SHEETS 10

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EXISTING

PROJECT NO. I-5915B IREDELL COUNTY

BRIDGE NO. <u>480096</u>



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPTCAL SECTION

	KC <sub>1</sub>	
	KISINGER CAMPO	
_	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	N
D	301 FAYETTEVILLE ST., SUITE 1500	Н
	RALEIGH, NC 27601 (919) 882-7839	ו
	NC FIRM LICENSE: C-1506	G

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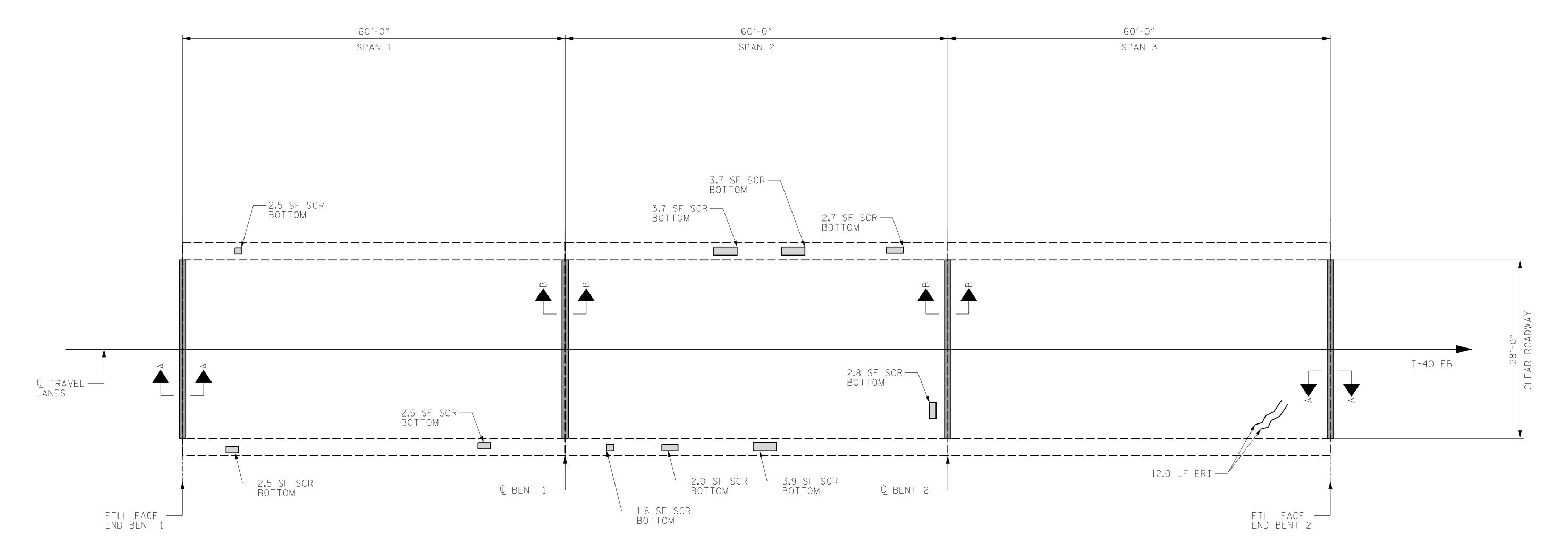
SHEET NO. REVISIONS S13-2 NO. BY: BY: DATE: DATE: TOTAL SHEETS

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 DRAWN BY: \_\_\_\_\_\_ DIEGO A.AGUIRRE CHECKED BY: \_\_\_\_\_ FIDEL L.FLORES

# AS-BUILT REPAIR QUANTITY TABLE

$D \square C V$	$D \square D \land T D C$	

			DEC	CK REPA	IRS								
		SPAN 1				SPA	SPAN 2			SPAN 3			
	ESTIMATE ACTUAL ESTIMATE ACTUAL		ESTIMATE ACTUAL		UAL	ESTIMATE		ACTUAL					
CLASS II SURFACE PREPARATION		SY				SY			SY				
CLASS III SURFACE PREPARATION		SY				SY			SY				
EPOXY RESIN INJECTION (ERI)		LF				LF			12.0 LF				
SHOTCRETE REPAIRS (SCR)	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	
	7.5 SF	2.7 CF			20.6 SF	7.1 CF			SF	CF			



PLAN

PROJECT NO. I-5915B IREDELL COUNTY

480096 BRIDGE NO. \_

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.

ALLEN J.MCSWAIN \_\_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ CHECKED BY : \_\_\_\_\_\_\_JACOB H.DUKE \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u> DEFECTS (SEE PLAN CALLOUT FOR DETAILS) BRIDGE JOINT DEMOLITION

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

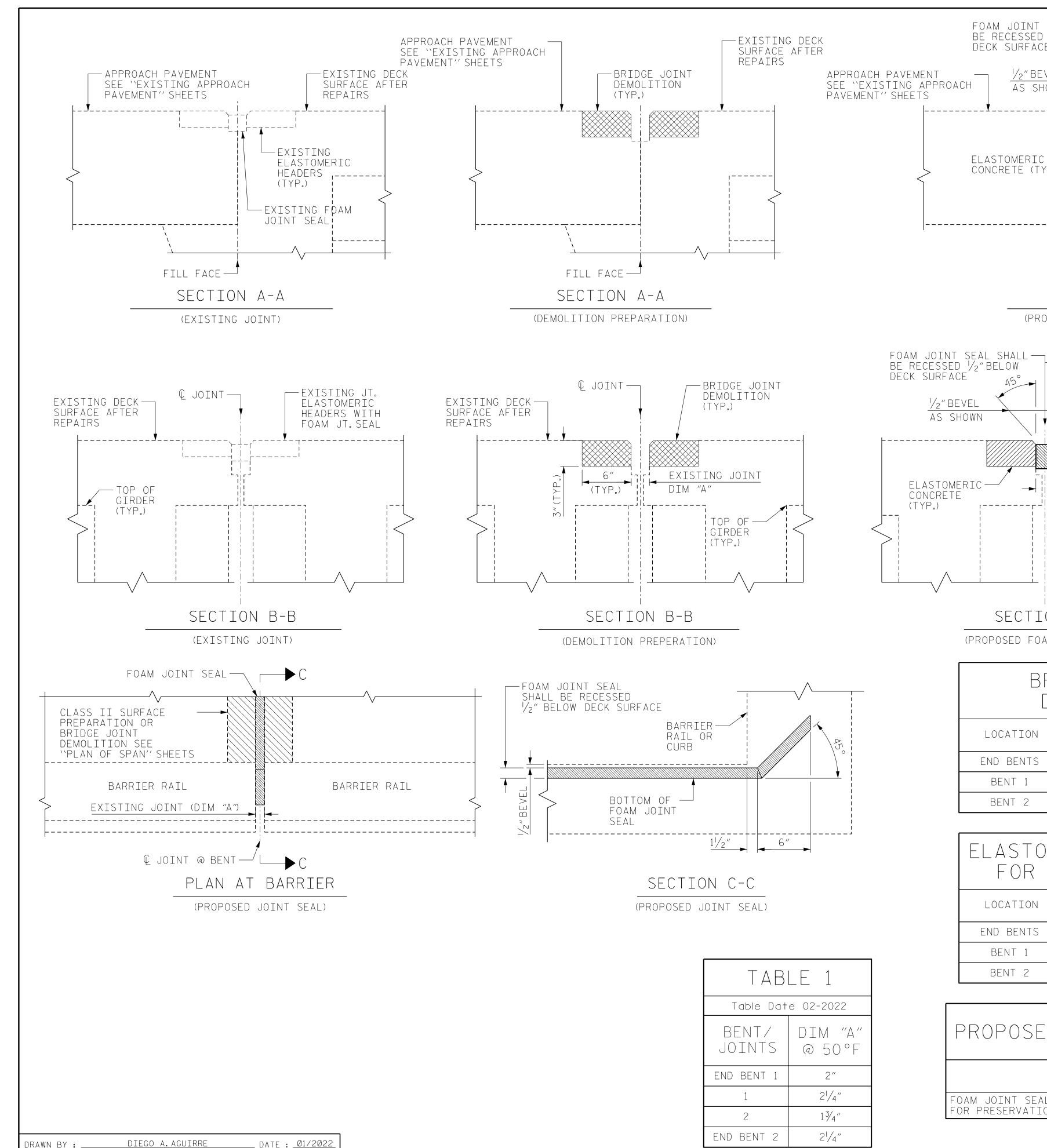
PLAN OF SPANS

DECK REPAIRS

DOCUMENT NOT CONSIDERE FINAL UNLESS ALL SIGNATURES COMPLETED

		L
	<b>KISINGER CAMPO</b>	
RED	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506	ľ
D	NC FIRM LICENSE: C-1506	ľ

	REVISIONS						
NO.	BY:	DATE:	NO.	BY:	DATE:	S13-3	
1			(W)			TOTAL SHEETS	
2			귷			9	



### 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  $\frac{1}{4}$ ", 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 ACCOMODATE 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 BRDIGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRATCTOR 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.

I-5915B PROJECT NO.\_ IREDELL COUNTY 480096 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

JOINT DETAILS

SHEET NO

S13-4

TOTAL SHEETS

RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500

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#### DEMOLITION ESTIMATED ACTUAL LOCATION (SQ.FT.) (SQ.FT.) END BENTS 70.0 BENT 1 35.0 BENT 2 35.0

BRIDGE JOINT

FOAM JOINT SEAL SHALL—
BE RECESSED 1/2" BELOW
DECK SURFACE

/<sub>2</sub>" BEVEL

AS SHOWN

ELASTOMERIC

1/2" BEVEL

AS SHOWN

CONCRETE (TYP.)

-----

FILL FACE —

SECTION A-A

(PROPOSED FOAM JOINT SEAL)

EXISTING JOINT

DIM "A"

SECTION B-B

(PROPOSED FOAM JOINT SEAL)

├─ Ç JOINT

-----

EXISTING JOINT

— EXISTING DECK

TOP OF

GIRDER

(TYP.)

SURFACE AFTER REPAIRS

DIM "A"

ELASTOMERIC CONCRETE FOR PRESERVATION							
LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)					
END BENTS	17.6						
BENT 1	8.8						
BENT 2	8.8						

PROPOSED	JOINT QUA	NTITY
	ESTIMATED (LIN.FT.)	ACTUAL (LIN.FT.)
FOAM JOINT SEALS FOR PRESERVATION	118.0	

\_DATE : <u>01/2022</u>

DATE : <u>01/2022</u>

DRAWN BY : \_\_\_\_

CHECKED BY: \_\_\_\_\_\_JACOB H. DUKE

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>

# DocuSign Envelope ID: 62F7BE55-B732-4724-BDBB-3807C6650C5A AS-BUILT REPAIR QUANTITY TABLE ESTIMATE ACTUAL 314 SY INCIDENTAL MILLING ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C 27 TON 1.6 TON ASPHALT BINDER FOR PLANT MIX EXISTING ROADWAY WIDTH

# NOTES:

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM  $1^{\prime}/_2$ " DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. THE NEW ASPHALT PAVEMENT THICKNESS MAY EXCEED  $1\frac{1}{2}$ " due to settlement of the existing approach.

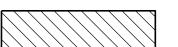
FOR NEW ASPHALT PLACEMENT, SEE STANDARD SPECIFICATIONS.

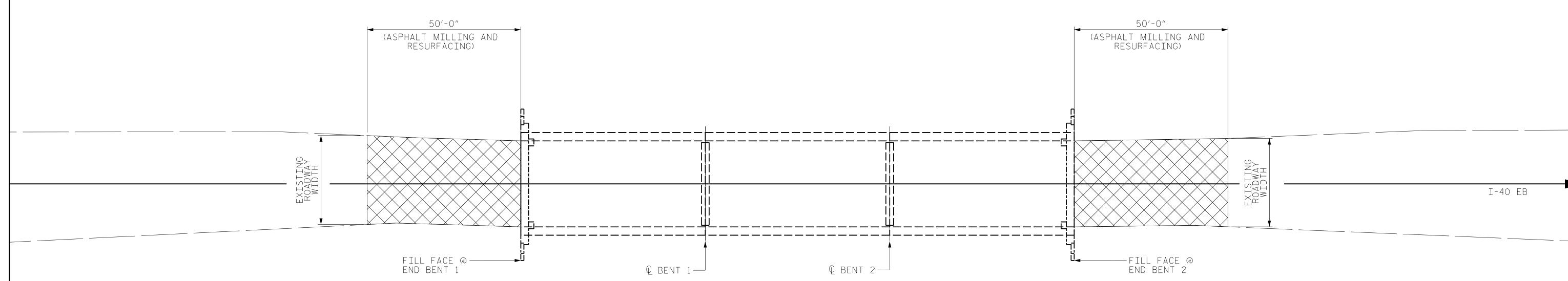
GRADE MAY BE ADJUSTED BY THE ENGINEER TO ENSURE PROPER TIE-IN AT THE END BENTS.

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



ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C (C1)





PLAN

BEGIN/END — BRIDGE PROPOSED GRADE — - EXISTING PAVEMENT -----ASPHALT—

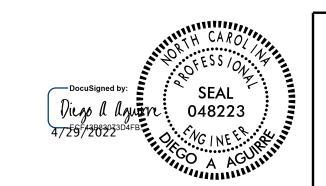
PAVEMENT KEY-IN DETAIL FOR BOTH END BENTS

EXISTING WIDTH EXISTING ROADWAY GRADE POINT EXIST. EXIST. ROADWAY SECTION

BEGIN/END BRIDGE

PROJECT NO. I-5915B IREDELL \_ COUNTY

480096 BRIDGE NO. \_\_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

APPROACH ROADWAY

	KISINGER CAMPO & ASSOCIATES
DOCUMENT NOT CONSIDERED	301 FAYETTEVILLE ST., SUITE 1500
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MILLING	AND	RESURFACING

SHEET NO REVISIONS S13-5 DATE: DATE: BY: NO. BY: TOTAL SHEETS

DRAWN BY :		FIDEL	L. FLORE	S	DATE:	01/2022
CHECKED BY :		JACOB	H. DUKE		DATE:	01/2022
DESIGN ENGINEER	OF	RFCORD:	DIEGO	A. AGUIRRE	DATF :	01/2022

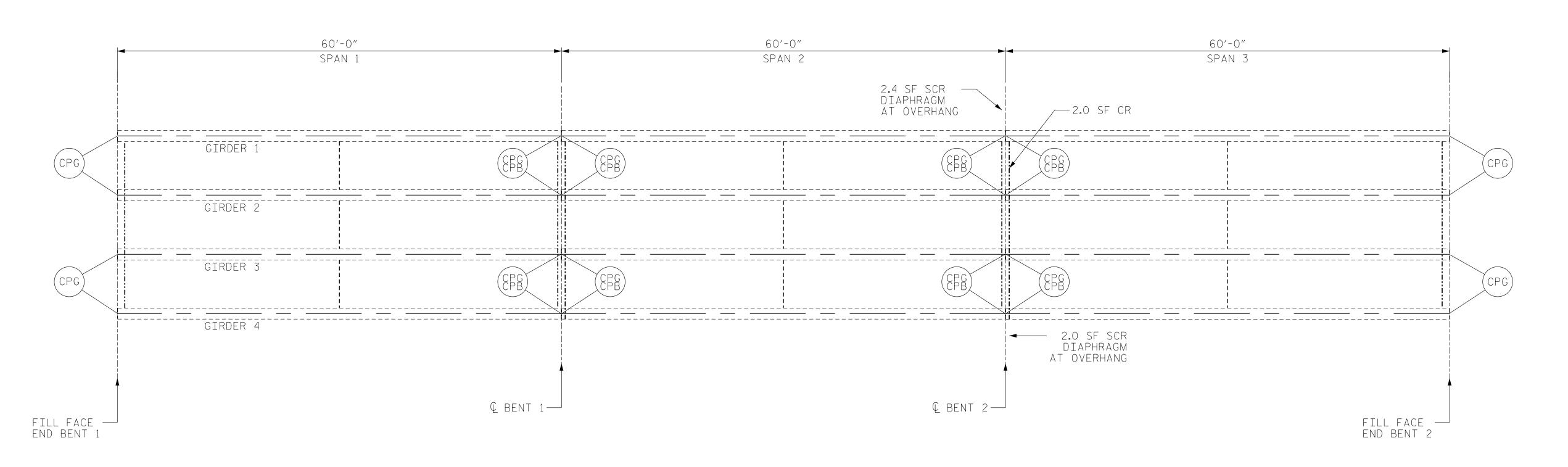
# AS-BUILT REPAIR QUANTITY TABLE

### CUDEDCEDUCTUDE DEDATOC

	SUPE	RSTRUC	CIURE H	REPAIRS	>								
		SPAN 1				SPAN 2				SPAN 3			
	EST	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	
CONCRETE REPAIR AREA (CR)	SF	CF			SF	CF			2.0 SF	0.7 CF			
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	
SHOTCRETE REPAIR AREA (SCR)	SF	CF			2.4 SF	0.8 CF			2.0 SF	0.7 CF			
	EST:	ESTIMATE		ACTUAL		IMATE	AC <sup>-</sup>	TUAL	ESTI	MATE	AC-	TUAL	
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	4	4 EA				8 EA				4 EA			

### LEGEND:

- CLEAN AND PAINT GIRDER ENDS (5 LF)
  - CLEAN AND PAINT BEARING
- CONCRETE REPAIR AREA
- SCR SHOTCRETE REPAIR AREA



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.

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

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

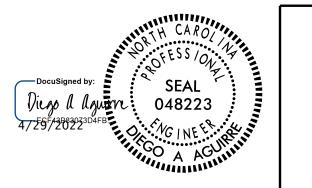
FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR DETAILS OF CLEANING AND PAINTING GIRDER ENDS (CPG), SEE "MISCELLANEOUS REPAIRS" SHEET.

DRAWN BY: \_\_\_\_\_ALLEN J. MCSWAIN \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

PROJECT NO. <u>I-59</u>15B IREDELL COUNTY 480096 BRIDGE NO. \_

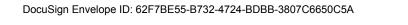


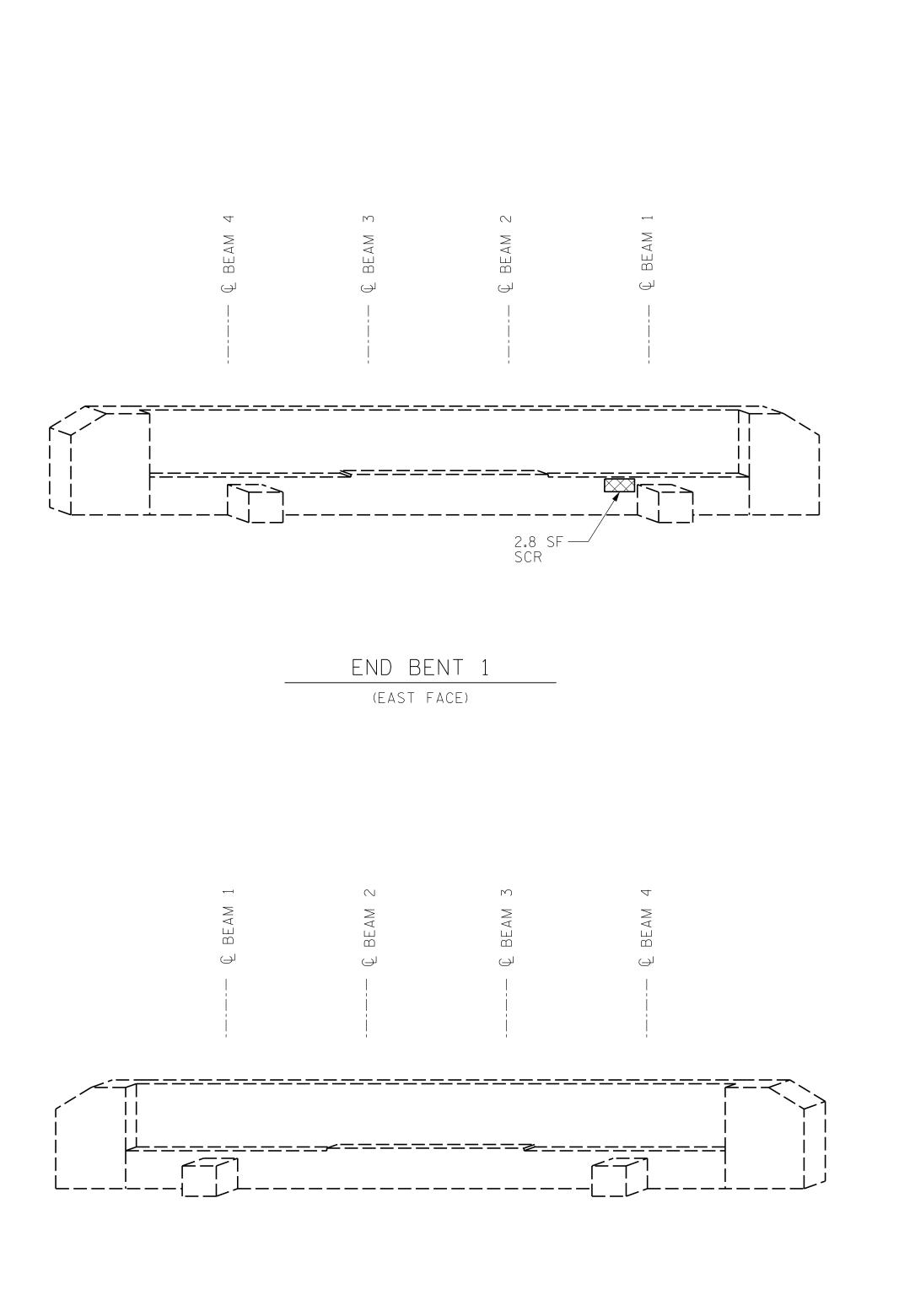
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIRS



	SHEET NO.					
NO.	NO. BY: DATE:		NO.	BY:	DATE:	S13-6
1			3			TOTAL SHEETS
2			<u> </u>			9





END BENT 2 (WEST FACE)

		LEGEND	AS-BUILT REPAIR QUANTITY TABLE								
		CONCRETE REPAIR AREA (CR)		QUANTITIES							
ŀ				ESTI	MATE	ACTUAL					
		SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU. FT.	AREA SQ.FT.	VOLUME CU. FT.				
EPOXY RESIN INJECTION (ERI)			CAP/BACKWALL	2.8	1.0						
			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		_						

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:

COLUMN/PILE

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 >= $\frac{1}{16}$  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  $1\frac{1}{2}$ " 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.\_ COUNTY

480096 BRIDGE NO. \_

SHEET 1 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500

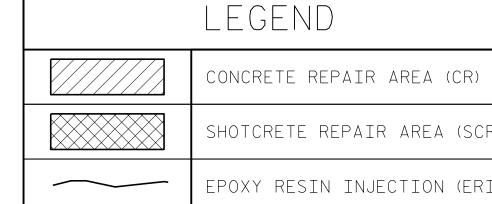
RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

FINAL UNLESS ALL

END BENTS 1 & 2

SHEET NO REVISIONS S13-7 DATE: DATE: BY: NO. BY: TOTAL SHEETS

ALLEN J. MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ \_ DATE : <u>01/2022</u> FIDEL L.FLORES DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>



	AS-BUILT REPAIR QUANTITY TABLE									
		QUANTITIES								
		ESTI	MATE	ACTUAL						
CR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU. FT.					
RI)	CAP/BACKWALL	3.7	1.3							
	COLUMN/PILE	12.4	4.3							
	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:

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

-----5.0 SF — SCR

BENT 1

(EAST FACE)

PROJECT NO.\_ IREDELL COUNTY 480096 BRIDGE NO. \_

I-5915B

SHEET 2 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 1

RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

WISINGER CAMPO

A S S O C I A T E S

301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED

SHEET NO REVISIONS S13-8 DATE: DATE: NO. BY: TOTAL SHEETS

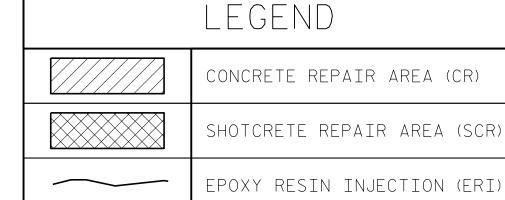
BENT 1 (WEST FACE)

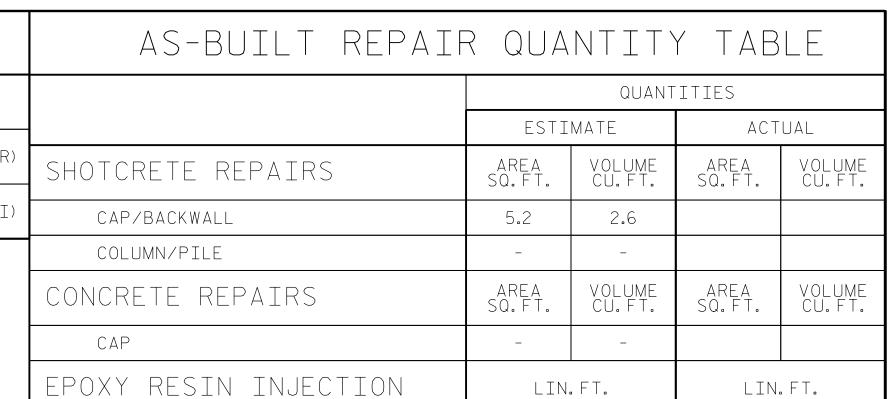
ALLEN J.MCSWAIN \_ DATE : <u>01/2022</u> DRAWN BY : \_\_\_ FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

4.9 SF —— SCR

2.5 SF SCR ──► NORTH FACE

4/21/2022 I5915B\_SMU\_SBR01\_480096.dgn daguirre





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.

1.0

### NOTES:

CAP/BACKWALL

COLUMN/PILE

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\_\_\_\_\_ 5.2 SF SCR `\_\_\_\_\_\_

I-5915B PROJECT NO.\_ IREDELL COUNTY

480096 BRIDGE NO. \_

SHEET 3 OF 3



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

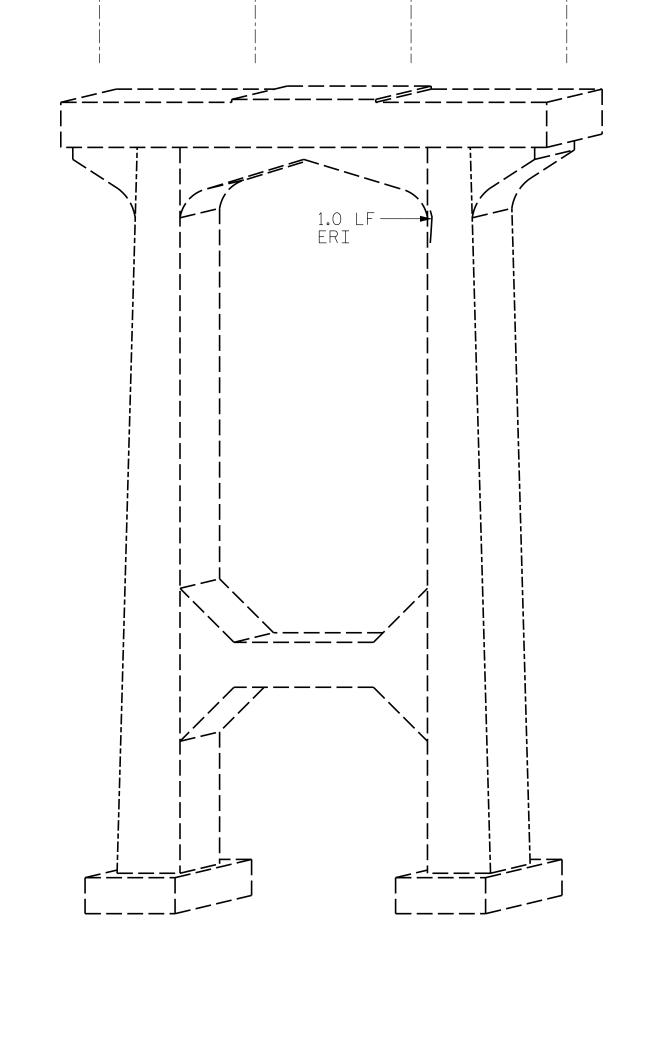
> SUBSTRUCTURE REPAIRS

> > BENT 2

RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED

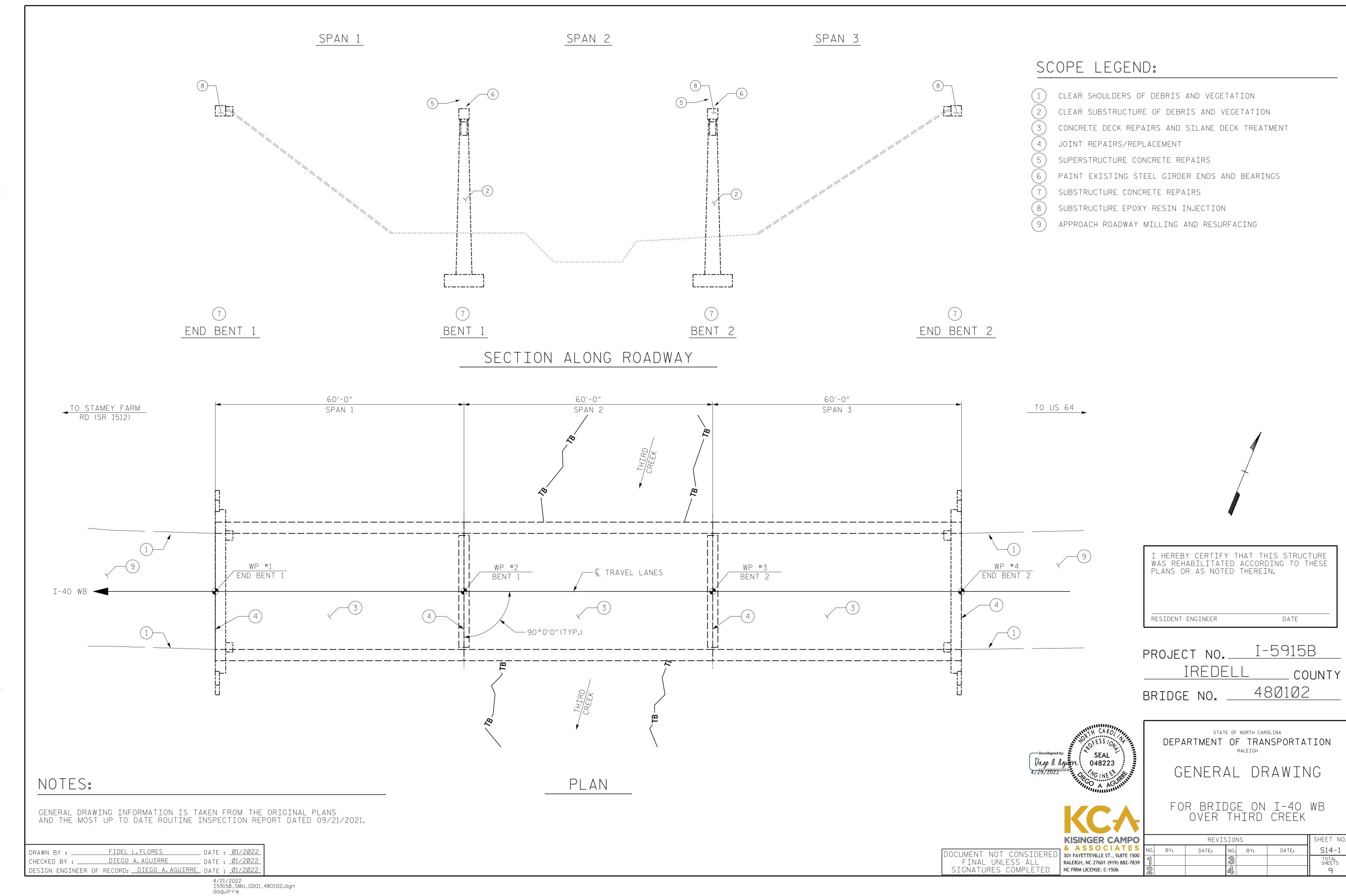
		SHEET NO.						
	BY:	DATE:	NO.	BY:	DATE:	S13-9		
			33			TOTAL SHEETS		
)			4			9		

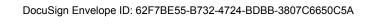


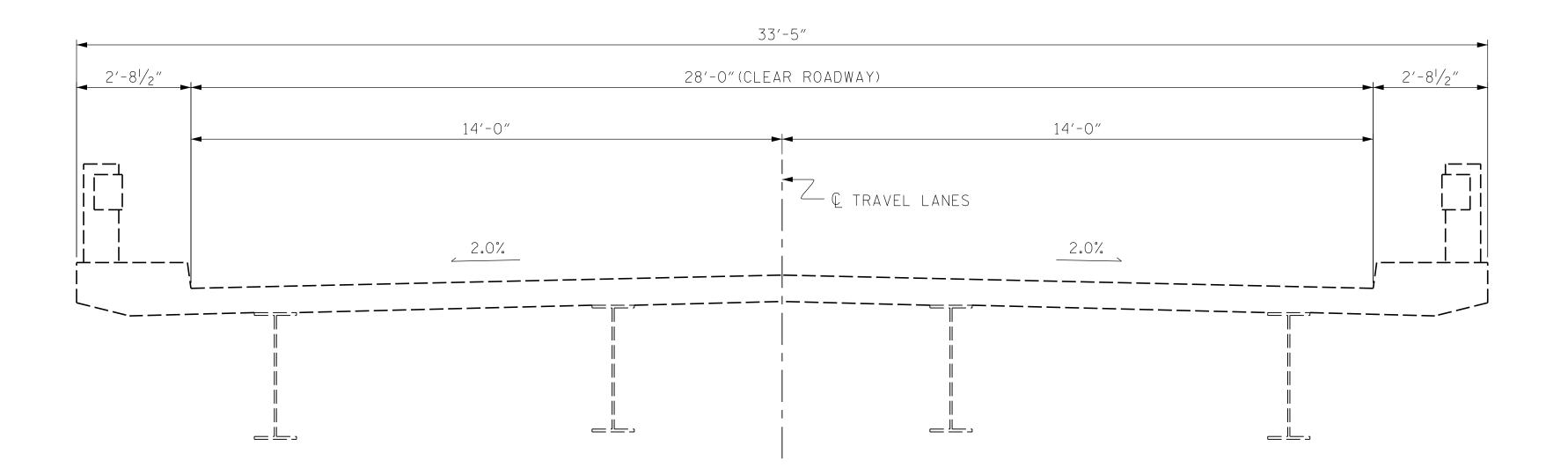
BENT 2 (WEST FACE)

BENT 2 (EAST FACE)

ALLEN J. MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ CHECKED BY: \_\_\_\_\_FIDEL L.FLORES DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>



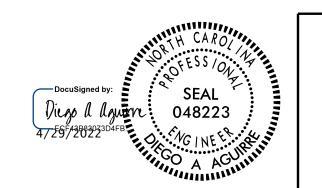




EXISTING

PROJECT NO. I-5915B IREDELL COUNTY

BRIDGE NO. <u>480102</u>



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

I/C14	
KISINGER CAMPO	
& ASSOCIATES	NO.
301 FAYETTEVILLE ST., SUITE 1500	2
RALEIGH, NC 27601 (919) 882-7839	
NC FIRM LICENSE: C-1506	9

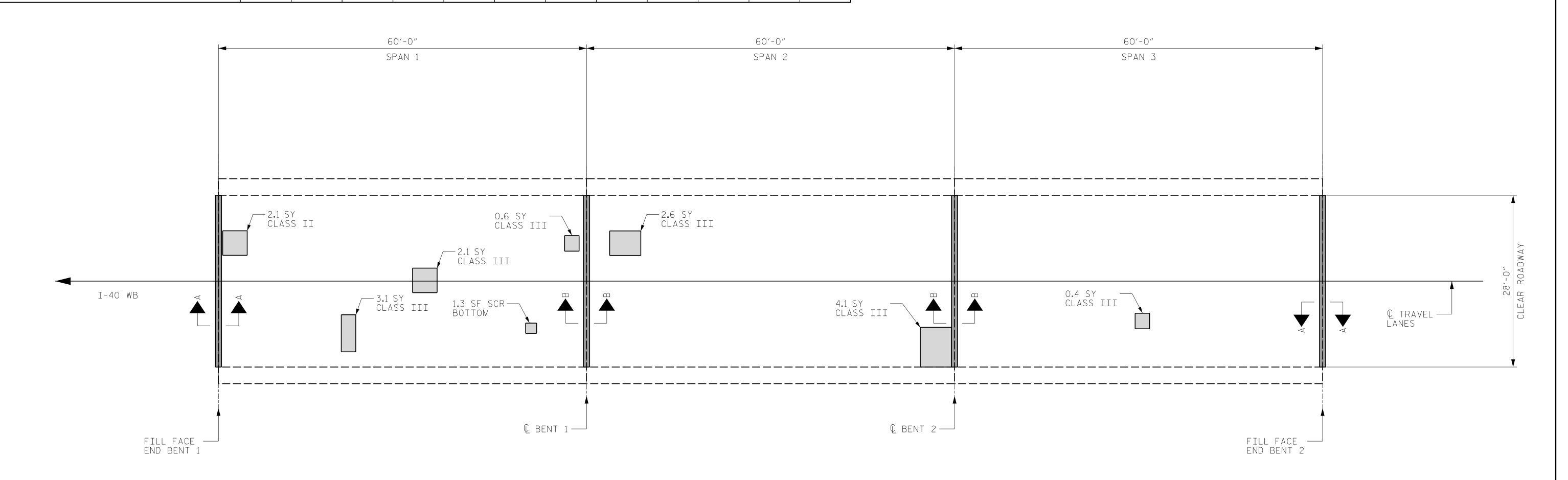
TYPICAL SECTION

SHEET NO. REVISIONS S14-2 NO. BY: DATE: DATE: BY: DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

A SSOCIATION SOLUTION TOTAL SHEETS

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 DRAWN BY: \_\_\_\_\_\_ DIEGO A.AGUIRRE CHECKED BY: \_\_\_\_\_ FIDEL L.FLORES

#### AS-BUILT REPAIR QUANTITY TABLE DECK REPAIRS SPAN 1 SPAN 2 SPAN 3 ACTUAL ESTIMATE ACTUAL ESTIMATE ESTIMATE ACTUAL CLASS II SURFACE PREPARATION 2.1 SY -- SY CLASS III SURFACE PREPARATION 5.8 SY 6.7 SY 0.4 SY SHOTBLASTING BRIDGE DECK 187 SY 187 SY 187 SY SILANE DECK TREATMENT 187 SY 187 SY 187 SY AREA AREA AREA AREA VOLUME VOLUME VOLUME VOLUME VOLUME VOLUME 0.5 CF 1.3 SF -- SF -- CF -- SF SHOTCRETE REPAIR AREA (SCR) -- CF



# PLAN

### NOTES:

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

BRIDGE DECK SHOTBLASTING AND SILANE SEAL LIMITS ARE THE FULL CLEAR ROADWAY WIDTH (INSIDE FACE OF EACH BRIDGE RAIL).

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR SILANE DECK TREATMENT AND SHOTBLASTING BRIDGE DECK, SEE SPECIAL PROVISIONS.

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SILANE SEAL DECK TREATMENT

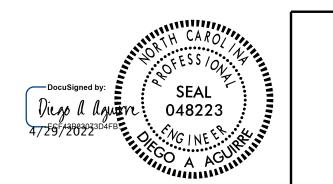
ALLEN J.MCSWAIN \_ DATE : <u>01/2022</u> DRAWN BY : \_\_\_ JACOB H. DUKE \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

DEFECTS (SEE PLAN CALLOUT FOR DETAILS)

BRIDGE JOINT DEMOLITION

PROJECT NO.\_ IREDELL COUNTY

48Ø1Ø2 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

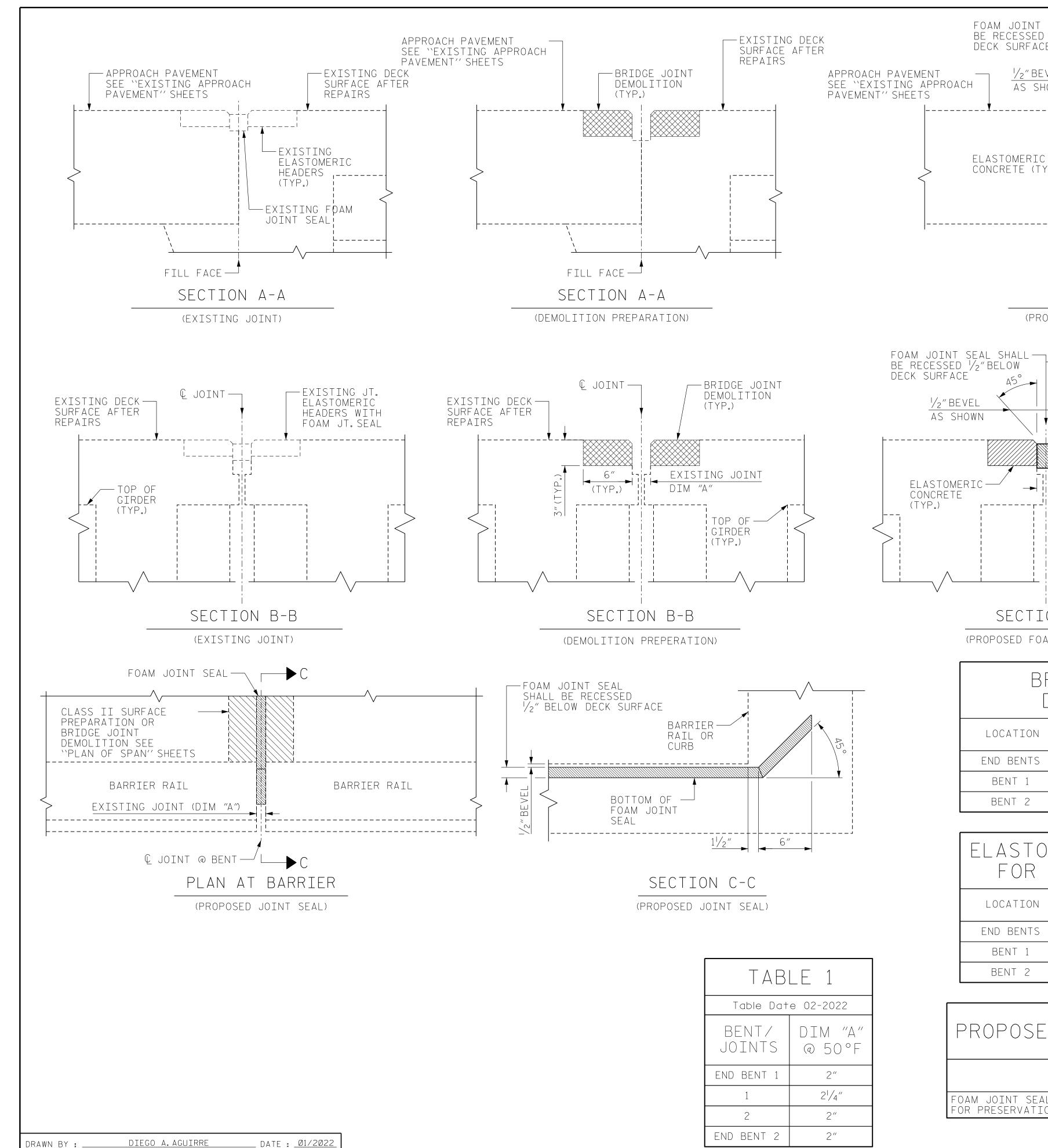
PLAN OF SPANS

DECK REPAIRS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	KISINGER CAMPO			
)	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	NO.	BY:	
,	RALEIGH, NC 27601 (919) 882-7839	1		
	NC FIRM LICENSE: C-1506	2		

SHEET NO REVISIONS S14-3 DATE: DATE: NO. BY: TOTAL SHEETS



### NOTES:

FOAM JOINT SEAL SHALL—
BE RECESSED 1/2" BELOW
DECK SURFACE

/2" BEVEL

AS SHOWN

ELASTOMERIC

√2" BEVEL

AS SHOWN

CONCRETE (TYP.)

-----

FILL FACE —

SECTION A-A

(PROPOSED FOAM JOINT SEAL)

EXISTING JOINT

BRIDGE JOINT

DEMOLITION

ELASTOMERIC CONCRETE

FOR PRESERVATION

PROPOSED JOINT QUANTITY

ESTIMATED

(SQ.FT.)

65.3

32.7

32.7

ESTIMATED (CU.FT.)

16.4

8.2

8.2

ESTIMATED (LIN.FT.)

118.0

DIM "A"

SECTION B-B

(PROPOSED FOAM JOINT SEAL)

LOCATION

END BENTS

BENT 1

BENT 2

LOCATION

END BENTS

BENT 1

BENT 2

FOAM JOINT SEALS

FOR PRESERVATION

— € JOINT

-----

EXISTING JOINT

— EXISTING DECK

TOP OF

GIRDER

(TYP.)

SURFACE AFTER REPAIRS

ACTUAL

(SQ.FT.)

ACTUAL (CU.FT.)

ACTUAL (LIN.FT.)

DIM "A"

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  $\frac{1}{4}$ , 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 ACCOMODATE 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 BRDIGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRATCTOR 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 48Ø1Ø2 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

JOINT DETAILS

SHEET NO

S14-4

TOTAL SHEETS

RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

REVISIONS BY: DATE: DATE: NO. BY:

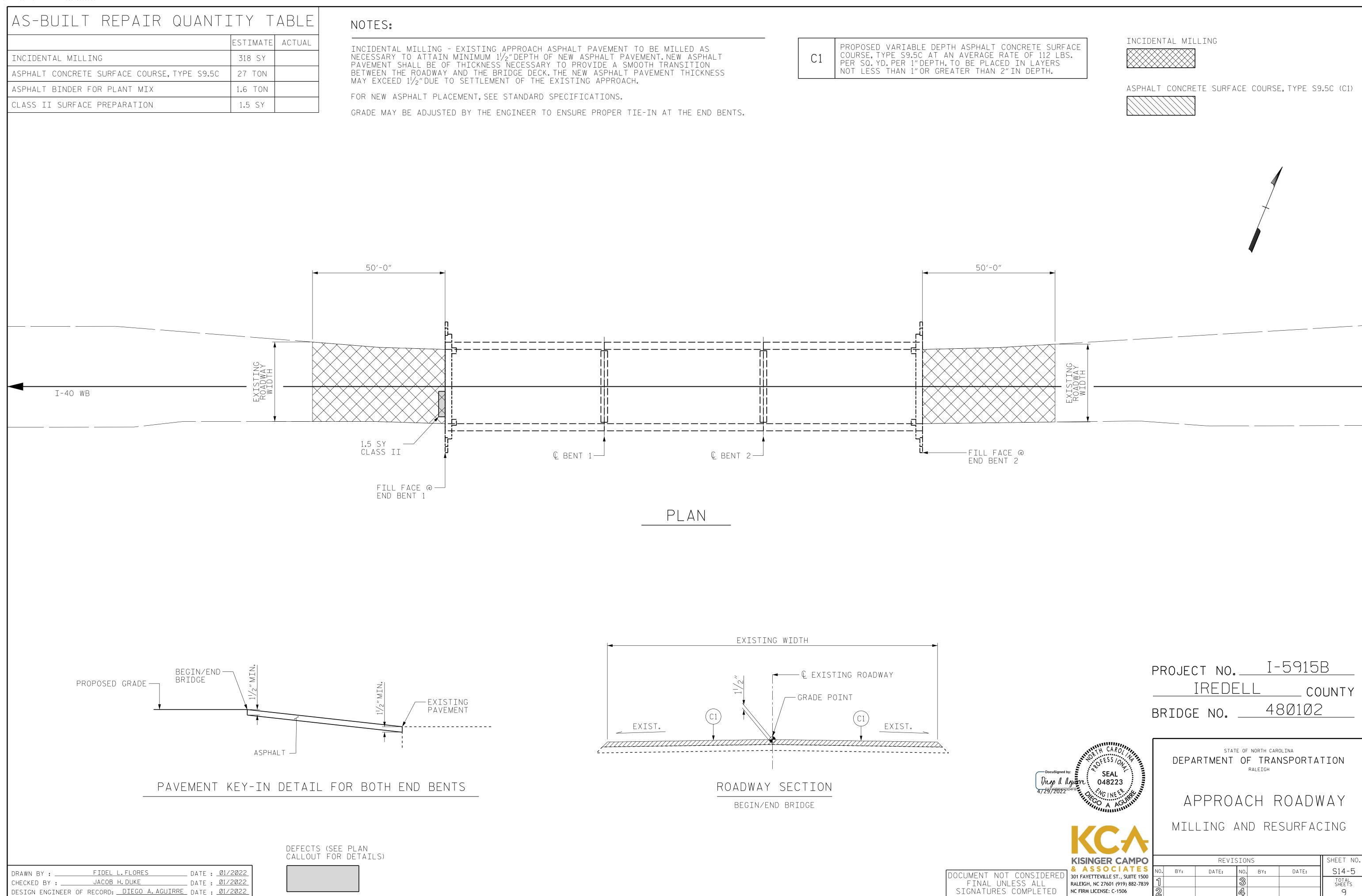
OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED

4/21/2022 I5915B\_SMU\_JT01\_480102.dgn

DATE : <u>01/2022</u>

CHECKED BY: \_\_\_\_\_\_JACOB H. DUKE

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>



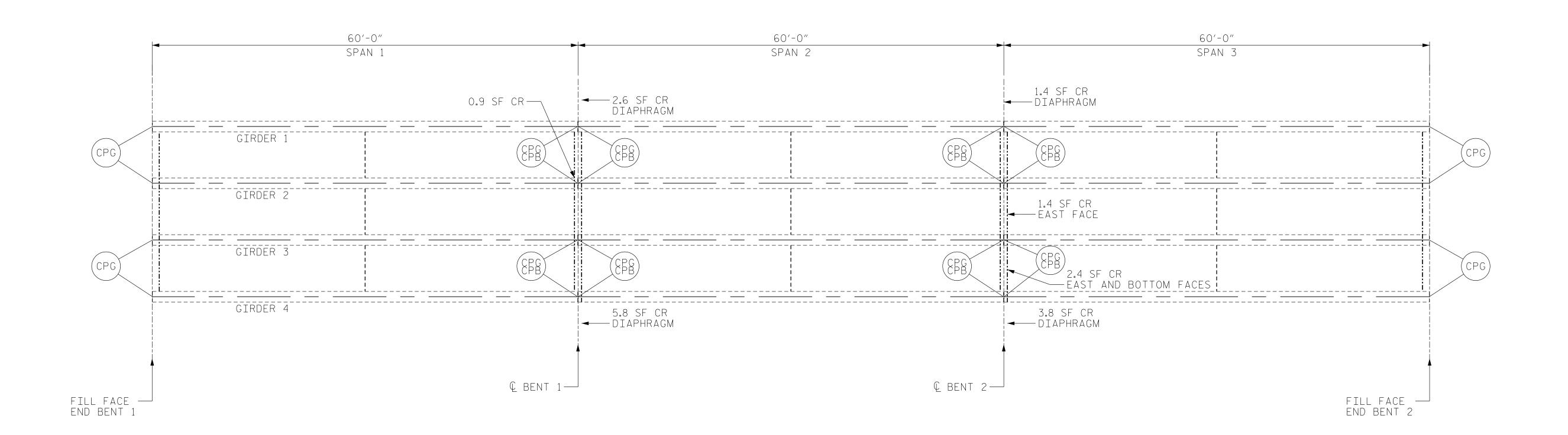
# AS-BUILT REPAIR QUANTITY TABLE

### CUDEDCEDUCTUDE DEDATOC

	SUPE	.RSTRUL	TURE H	KEPAIK;	>								
		SPAN 1				SPAN 2				SPAN 3			
	ESTI	IMATE	AC <sup>-</sup>	TUAL	ESTI	MATE	ACT	UAL	EST]	MATE	AC <sup>-</sup>	TUAL	
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	
CONCRETE REPAIR AREA (CR)	0.9 SF	0.3 CF			8.4 SF	2.9 CF			9.0 SF	4.4 CF			
	ESTI	MATE	AC.	TUAL	ESTI	MATE	ACT	- UAL	EST]	MATE	AC <sup>-</sup>	TUAL	
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	4	EΑ			8	EA			4	EΑ			

## LEGEND:

- CLEAN AND PAINT GIRDER ENDS (5 LF)
  - CLEAN AND PAINT BEARING
- CONCRETE REPAIR AREA



PLAN

### NOTES:

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FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

FOR ZONE PAINTING OF EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR DETAILS OF CLEANING AND PAINTING GIRDER ENDS (CPG), SEE "MISCELLANEOUS REPAIRS" SHEET.

ALLEN J.MCSWAIN DRAWN BY : \_\_\_\_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A. AGUIRRE</u> DATE: <u>01/2022</u>

I-5915B PROJECT NO.\_\_\_\_ IREDELL COUNTY

48Ø1Ø2 BRIDGE NO. \_



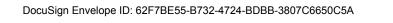
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

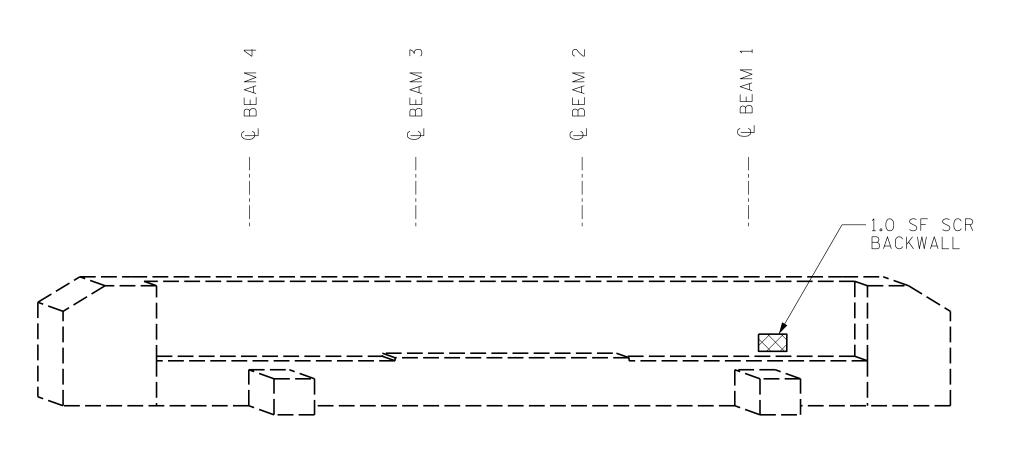
SUPERSTRUCTURE REPAIRS

DOCUMENT NOT CONSIDERE

KISINGER CAMPO	
& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	OCUMENT NOT CONSTDERED
RALEIGH, NC 27601 (919) 882-7839	FINAL UNLESS ALL
NC FIRM LICENSE: C-1506	SIGNATURES COMPLETED

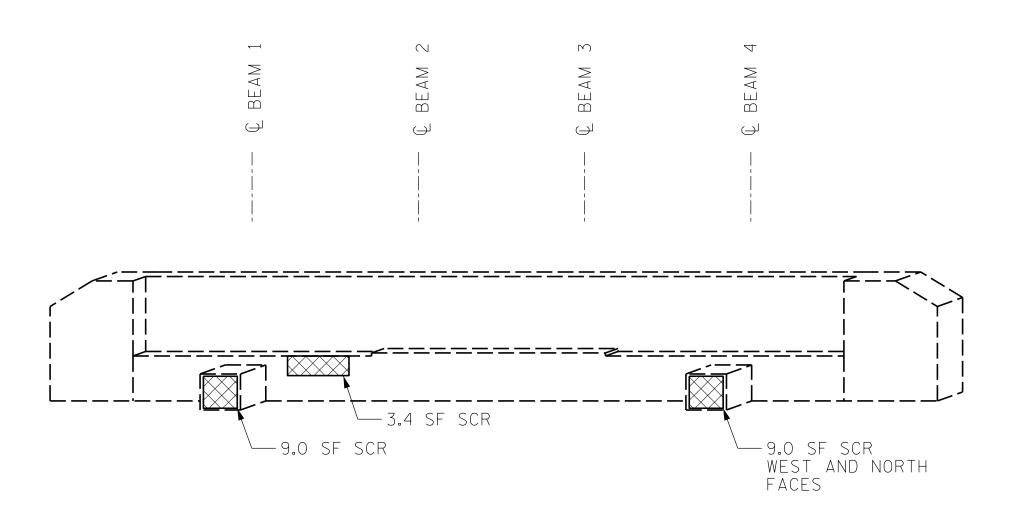
SHEET NO REVISIONS S14-6 DATE: DATE: NO. BY: TOTAL SHEETS





END BENT

(EAST FACE)



END BENT 2

(WEST FACE)

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) 10.6 CAP/BACKWALL 22.4 COLUMN/PILE CONCRETE REPAIRS CAP EPOXY RESIN INJECTION LIN.FT. LIN.FT.

> 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.

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CAP/BACKWALL

COLUMN/PILE

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

> PROJECT NO. IREDELL COUNTY 48Ø1Ø2 BRIDGE NO. \_

SHEET 1 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS

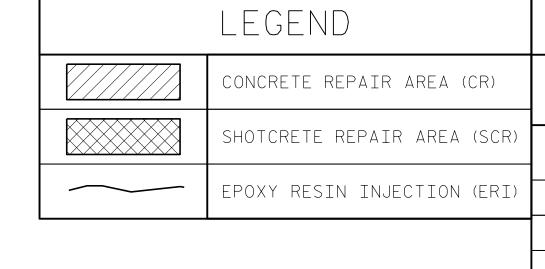
END BENTS 1 & 2

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED

RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S14-7 DATE: BY: DATE: NO. BY: TOTAL SHEETS

ALLEN J. MCSWAIN \_DATE : <u>01/2022</u> DRAWN BY : \_\_\_ \_ DATE : <u>01/2022</u> FIDEL L.FLORES DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>



AS-BUILT REPAIR QUANTITY TABLE QUANTITIES ESTIMATE ACTUAL SHOTCRETE REPAIRS CAP/BACKWALL 6.6 2.3 COLUMN/PILE CONCRETE REPAIRS 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 >= $\frac{1}{16}$  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  $1\frac{1}{2}$ " TO 2" ON THE PILES. ACTUAL CONCRETE COVER SHALL BE DETERMINED BY THE CONTRACTOR AND PRESENTED TO THE ENGINEER PRIOR TO BEGINNING EXCAVATION/ DEMOLITION.

SHEETS.

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

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.

> I-5915B PROJECT NO. IREDELL COUNTY 48Ø1Ø2 BRIDGE NO. \_

SHEET 2 OF 3



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 1

REVISIONS

SHEET NO

S14-8

TOTAL SHEETS

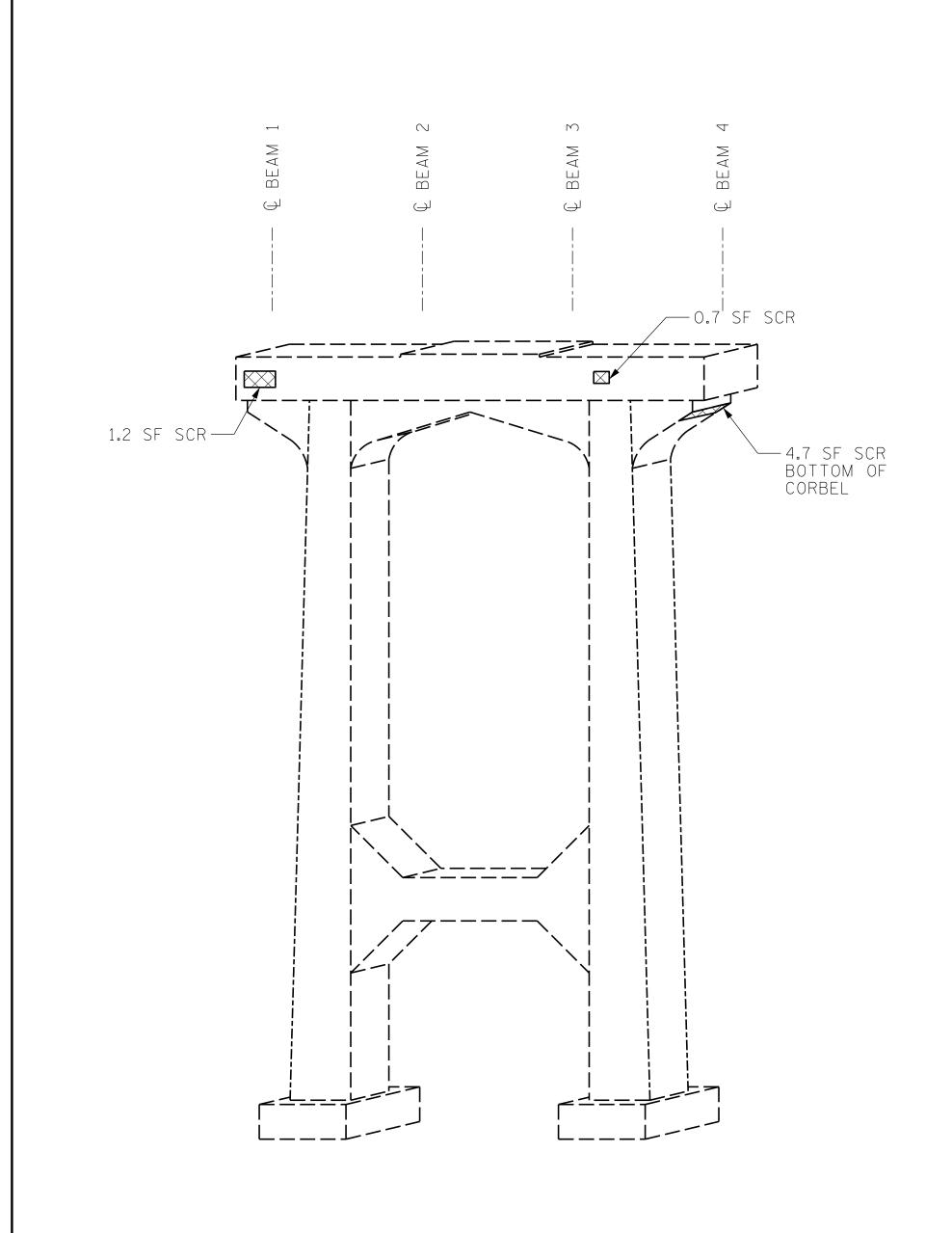
DATE:

RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506

FINAL UNLESS ALL SIGNATURES COMPLETED

DATE: NO. BY: OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500



BENT 1

(EAST FACE)

\_\_\_\_\_

\_DATE : <u>0</u>1/2022

DATE : <u>01/2022</u>

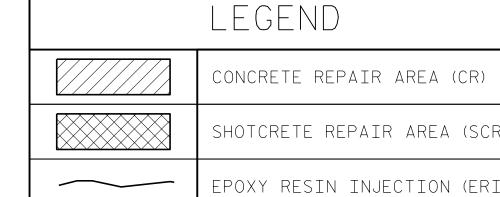
ALLEN J. MCSWAIN

FIDEL L.FLORES

DRAWN BY : \_\_\_

BENT 1

(WEST FACE)



	AS-BUILT REPAIR QUANTITY TABLE									
R)		QUANTITIES								
		ESTI	MATE	ACTUAL						
SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.					
ERI)	CAP/BACKWALL	-	-							
	COLUMN/PILE	3.7	1.9							
	CONCRETE REPAIRS	AREA SQ.FT.	VOLUME CU.FT.	AREA SQ.FT.	VOLUME CU.FT.					
	CAP	-	-							
	EPOXY RESIN INJECTION	LIN	FT.	LIN.FT.						

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:

CAP/BACKWALL

COLUMN/PILE

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

BENT 2

(EAST FACE)

I-5915B PROJECT NO.\_ IREDELL COUNTY

48Ø1Ø2 BRIDGE NO. \_

SHEET 3 OF 3

BY:



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 2

DOCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUI FINAL UNLESS ALL SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

	KC <sub>1</sub>
	KISINGER CAMPO
	& ASSOCIATES
ED	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500
	RALEIGH, NC 27601 (919) 882-7839
.	

REVISIONS DATE: DATE: NO. BY:

SHEET NO

S14-9

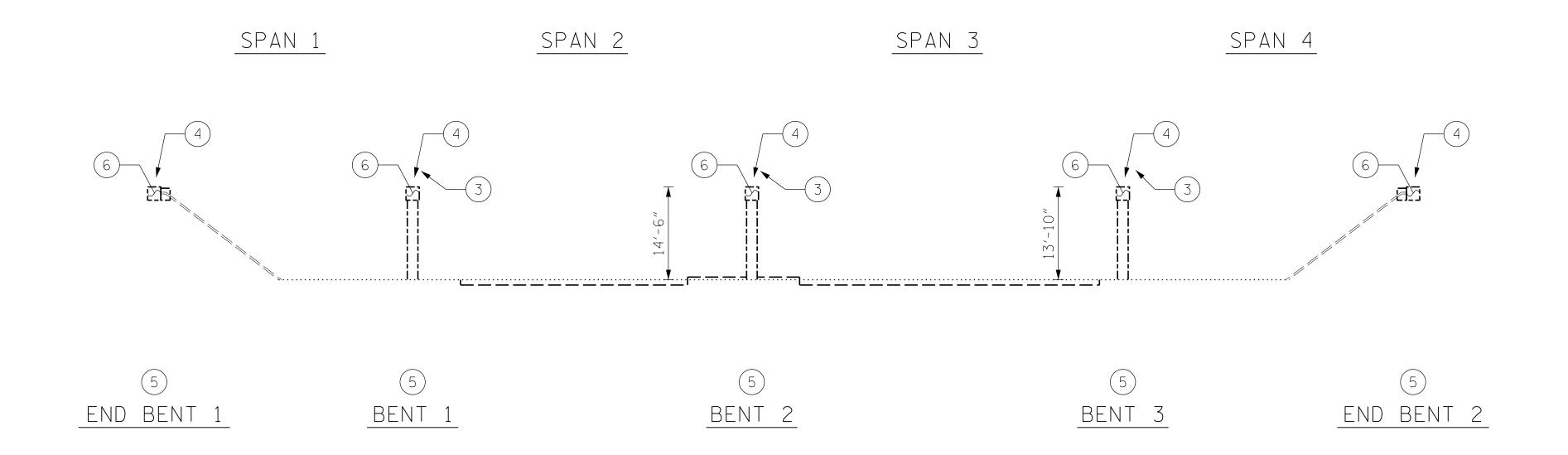
TOTAL SHEETS

ALLEN J.MCSWAIN \_ DATE : <u>01/2022</u> DRAWN BY : \_\_\_ FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

4/21/2022 I5915B\_SMU\_SBR02\_480102.dgn daguirre

BENT 2

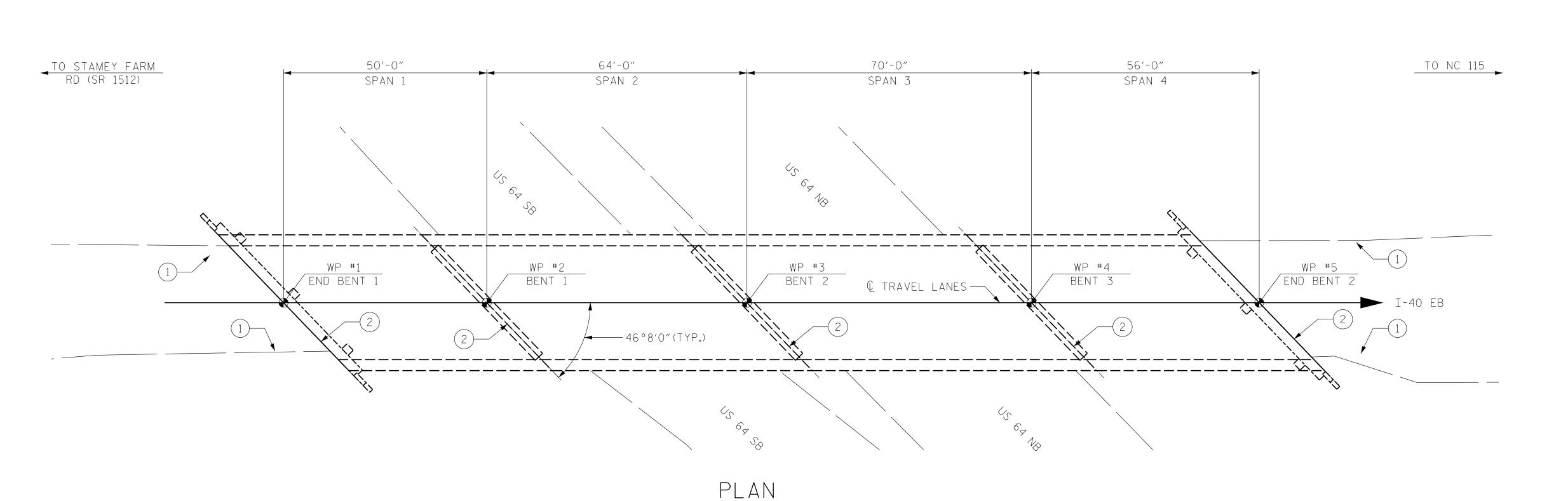
(WEST FACE)



SECTION ALONG ROADWAY

# SCOPE LEGEND:

- CLEAR SHOULDERS OF DEBRIS AND VEGETATION
- JOINT REPAIRS/REPLACEMENT
- SUPERSTRUCTURE CONCRETE REPAIRS
- PAINT EXISTING STEEL BEARINGS
- SUBSTRUCTURE CONCRETE REPAIRS
- SUBSTRUCTURE EPOXY RESIN INJECTION



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

I-5915B PROJECT NO.\_ IREDELL COUNTY

480104 BRIDGE NO. \_

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH GENERAL DRAWING

FOR BRIDGE ON I-40 EB OVER US-64

SHEET NO. REVISIONS S15-1 NO. BY: BY: DATE: DATE: TOTAL SHEETS

NOTES:

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

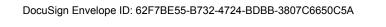
FIDEL L.FLORES \_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ DIEGO A. AGUIRRE \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u> WISINGER CAMPO

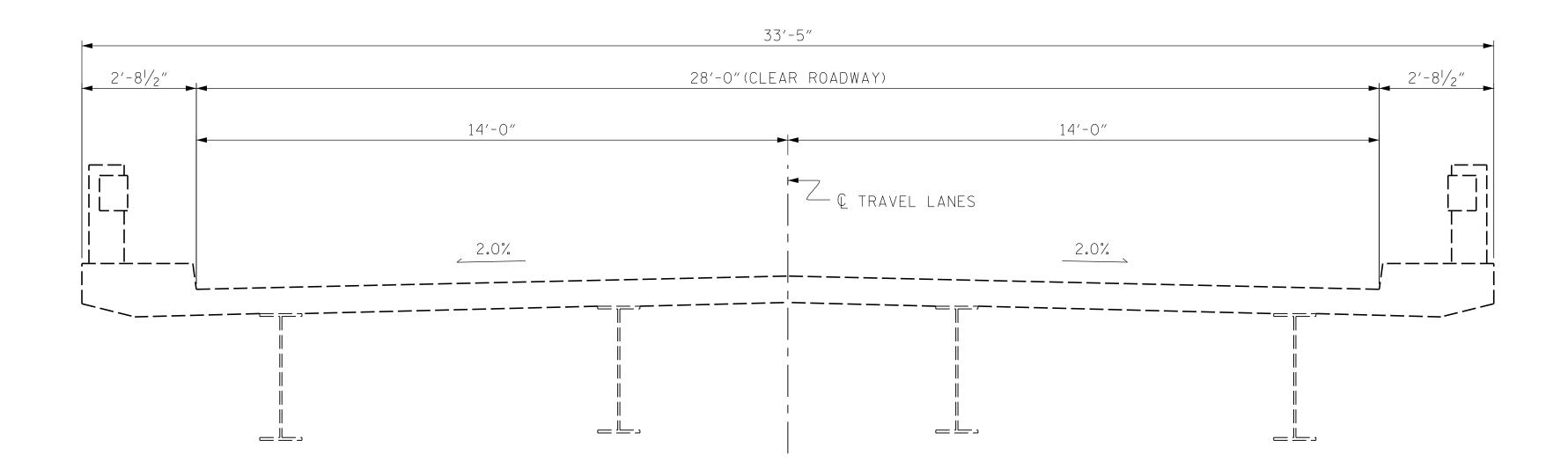
& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500

RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506





EXISTING

PROJECT NO. I-5915B IREDELL COUNTY

BRIDGE NO. \_\_\_\_480104



STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

RALEIGH

KC+	
<b>KISINGER CAMPO</b>	
& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	NO.
BALEIGH NC 27401 (010) 992 7930	ſ

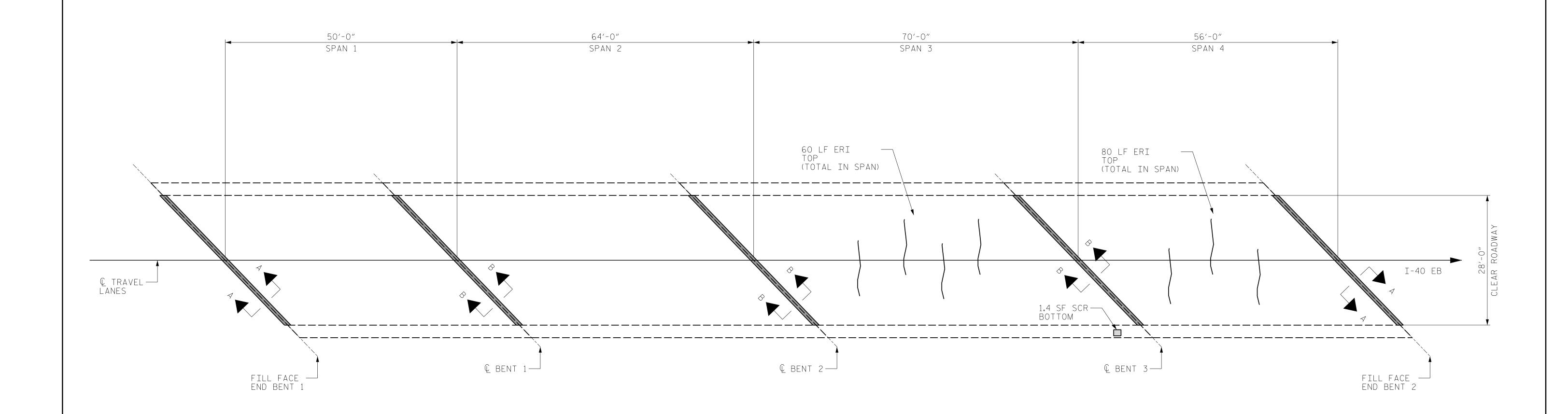
TYPICAL	SECTION

	<b>KISINGER CAMPO</b>			REVIS	10I2	NS		SHEET NO.	
DOCUMENT NOT CONSIDERED	& ASSOCIATES	NO.	BY:	DATE:	NO.	BY:	DATE:	S15-2	
	RALEIGH, NC 27601 (919) 882-7839	1			3			TOTAL SHEETS	
SIGNATURES COMPLETED	NC FIRM LICENSE: C-1506	2			4			9	

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

# AS-BUILT REPAIR QUANTITY TABLE DECK DEDATEC

				DE(	CK REPA	IRS										
	SPAN 1				SPA	N 2		SPAN 3					SPA	N 4		
ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		TUAL	ESTIMATE		AC <sup>-</sup>	UAL		
CLASS II SURFACE PREPARATION	SY		SY				SY				SY					
CLASS III SURFACE PREPARATION	SY		SY		SY				SY				SY			
EPOXY RESIN INJECTION (ERI)	LF	LF		LF				60 LF				80 LF				
	AREA VOLU	ME AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	
SHOTCRETE REPAIR AREA (SCR)	SF (	F		SF	CF			1.4 SF	0.5 CF			SF	CF			



PLAN

PROJECT NO. I-5915B IREDELL COUNTY 48Ø1Ø4 BRIDGE NO. \_\_

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.

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ALLEN J.MCSWAIN \_\_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ CHECKED BY : \_\_\_\_\_\_\_JACOB H.DUKE \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>

DEFECTS (SEE PLAN CALLOUT FOR DETAILS) BRIDGE JOINT DEMOLITION

EPOXY RESIN INJECTION (ERI)



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

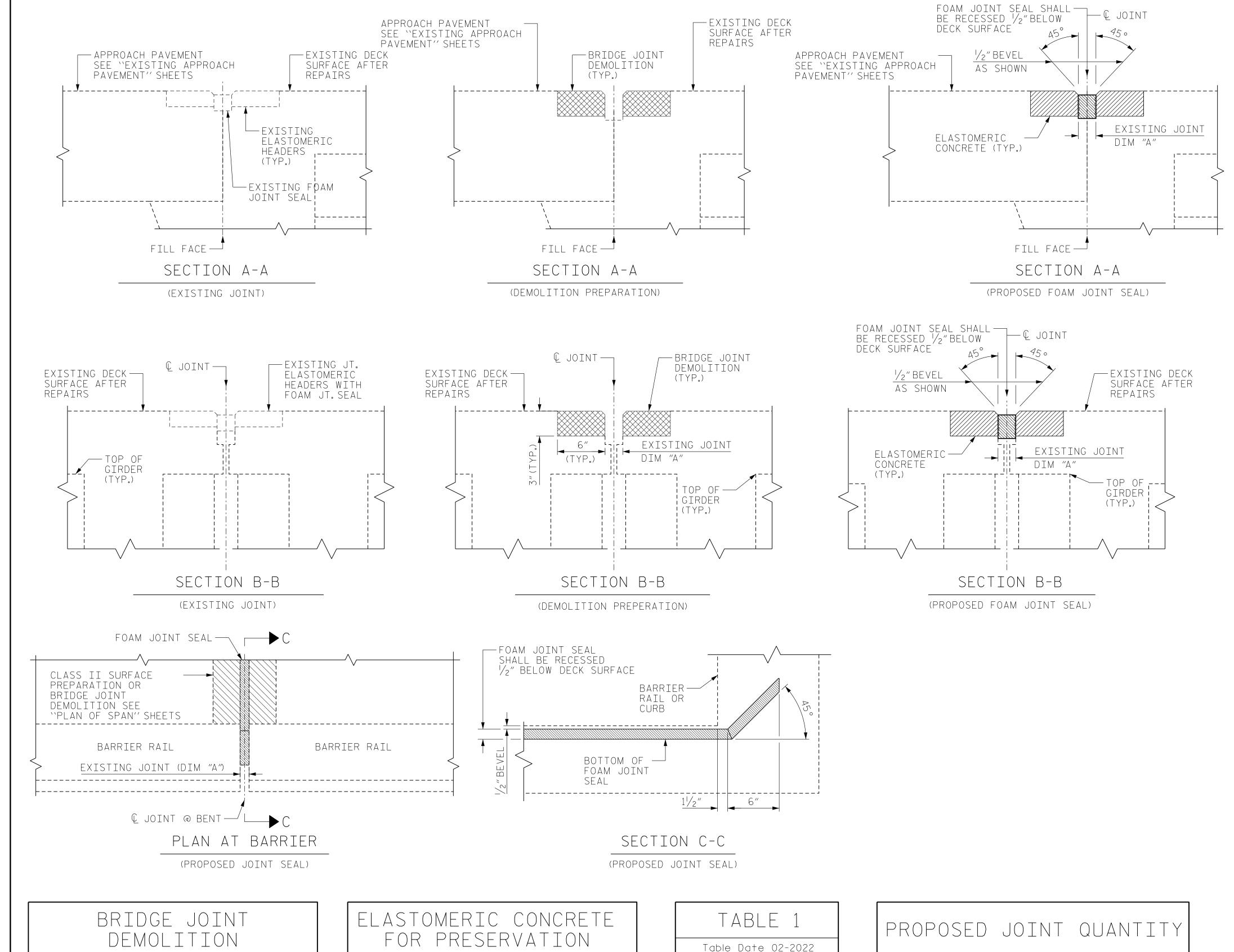
PLAN OF SPANS

DECK REPAIRS

DOCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

FINAL UNLESS ALL

AMPO		SHEET NO			
ATES	NO. BY:	DATE:	NO. BY	: DATE:	S15-3
, SUITE 1500 19) 882-7839	1		3		TOTAL SHEETS
506	2		4		9



	DGE JOINT	_
LOCATION	ESTIMATED (SQ.FT.)	ACTUAL (SQ.FT.)
END BENTS	77.7	
BENT 1	38.8	
BENT 2	38.8	
BENT 3	38.8	

AWN BY :	DIEGO A.AGUIRRE	DATE : <u>01/2022</u>
CKED BY :	JACOB H.DUKE	DATE : <u>01/2022</u>
TON ENGINEER	OF RECORD. DIEGO A. AGUITRRE	DATE . Ø1/2022

ELASTOMERIC CONCRETE FOR PRESERVATION									
LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)							
END BENTS	19.6								
BENT 1	9.8								
BENT 2	9.8								
BENT 3	9.8								

TAB	LE 1
Table Dat	e 02-2022
BENT/ JOINTS	DIM "A" @ 60°F
END BENT 1	21/4"
1	21/4"
2	21/4"
3	2"
END BENT 2	21/4"

ACTUAL ESTIMATED (LIN.FT.) (LIN.FT.) FOAM JOINT SEALS FOR PRESERVATION 202.0

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  $\frac{1}{4}$ ", 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 ACCOMODATE 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 BRDIGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRATCTOR 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.

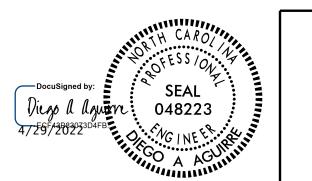
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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.

I-5915B PROJECT NO.\_ IREDELL COUNTY 480104 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

JOINT DETAILS

RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S15-4 DATE: DATE: BY: BY: TOTAL SHEETS

# AS-BUILT REPAIR QUANTITY TABLE

#### SUPERSTRUCTURE REPATRS

			SUFE	K3 IKUU	/ IURE F	TEPAIRS										
	SPAN 1			SPAN 1			SPAN 2			SPAN 3				SPAN 4		
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACT	TUAL
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
CONCRETE REPAIR AREA (CR)	0.9 SF	0.3 CF			5.0 SF	2.5 CF			16.9 SF	5.7 CF			3.4 SF	1.2 CF		
	ESTI	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		MATE	ACTUAL		ESTIMATE		ACT	TUAL
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	4	4 EA				8 EA				8 EA				4 EA		

### LEGEND:

CLEAN AND PAINT BEARING

CONCRETE REPAIR AREA

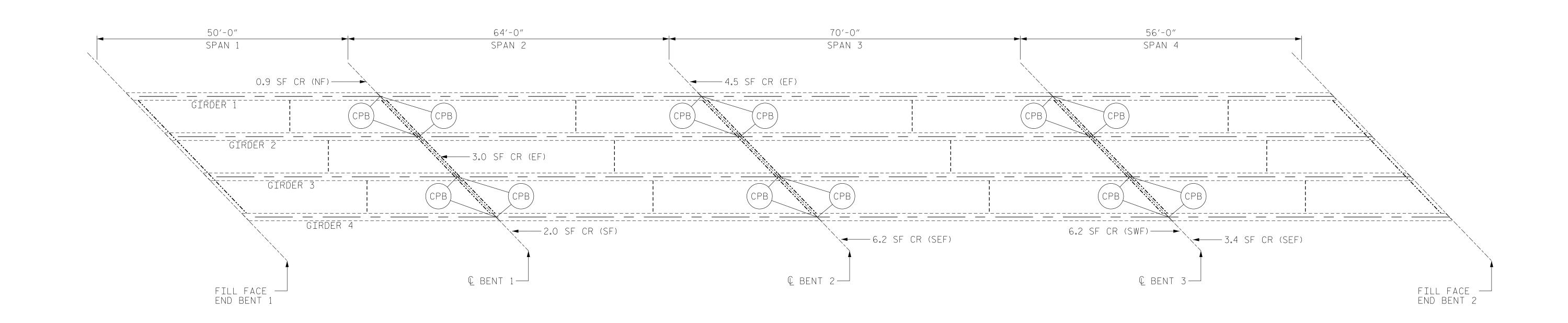
EAST FACE EF

NORTH FACE

SOUTH FACE

SOUTHEAST FACE

SOUTHWEST FACE



NOTES:

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FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

ALLEN J.MCSWAIN \_\_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_\_ \_ DATE : <u>01/2022</u> CHECKED BY : \_\_\_\_\_\_\_JACOB H. DUKE DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u> PLAN

PROJECT NO. I-5915B IREDELL COUNTY 480104 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

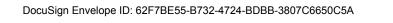
SUPERSTRUCTURE REPAIRS

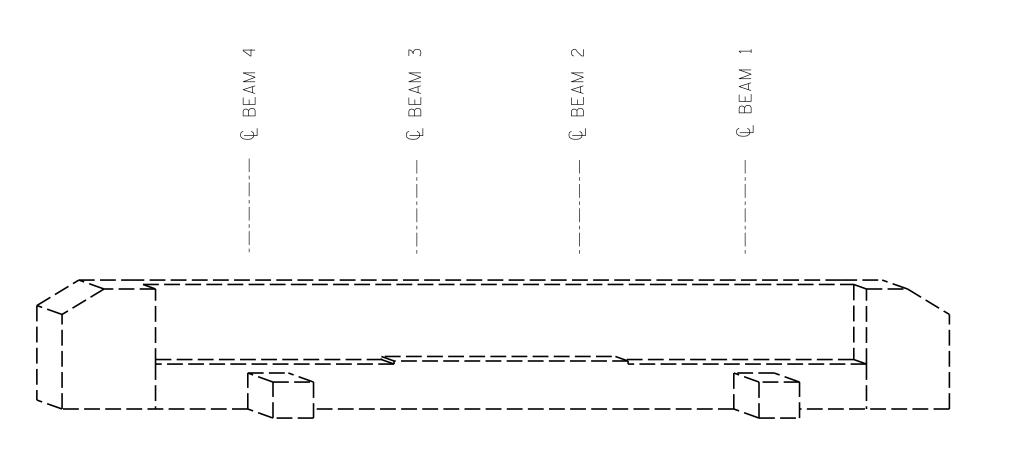


KISINGER CAMPO		
& ASSOCIATES		
201 FAVETTEVILLE CT. CUITE 1500	0.	
& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839	1	

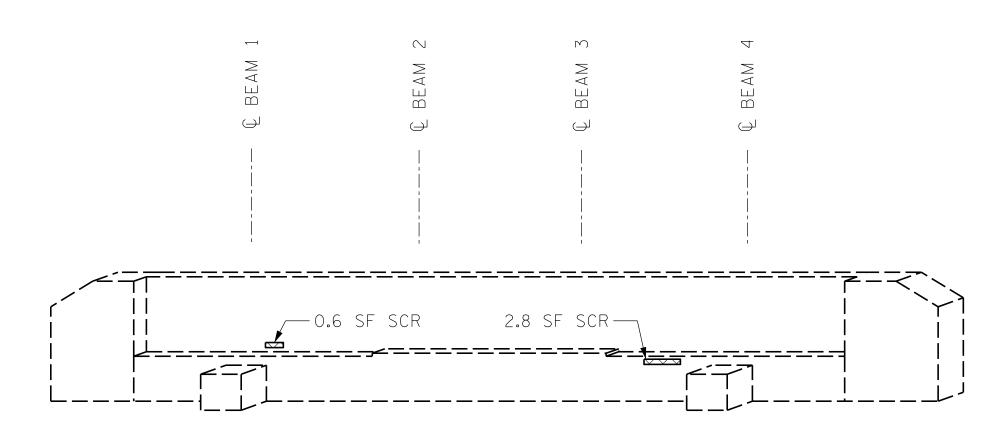
SHEET NO REVISIONS S15-5 DATE: BY: DATE: NO. BY: TOTAL SHEETS

DOCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUIT RALEIGH, NC 27601 (919) 88 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506





END BENT (EAST FACE)



END BENT 2 (WEST FACE)

	LEGEND	AS-BUILT REPAIR QUANTITY TABLE						
Ī	CONCRETE REPAIR AREA (CR)		QUANTITIES					
ŀ			ESTI	MATE	ACTUAL			
-	SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.		
	EPOXY RESIN INJECTION (ERI)	CAP/BACKWALL	3.4	1.2				
•		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	-	-				

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COLUMN/PILE

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

> PROJECT NO. IREDELL COUNTY 480104 BRIDGE NO. \_

SHEET 1 OF 4

BY:



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

END BENTS 1 & 2

NO. BY:

DATE:

WISINGER CAMPO

& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

RALEIGH, NC 27601 (919) 882-7839

SHEET NO REVISIONS

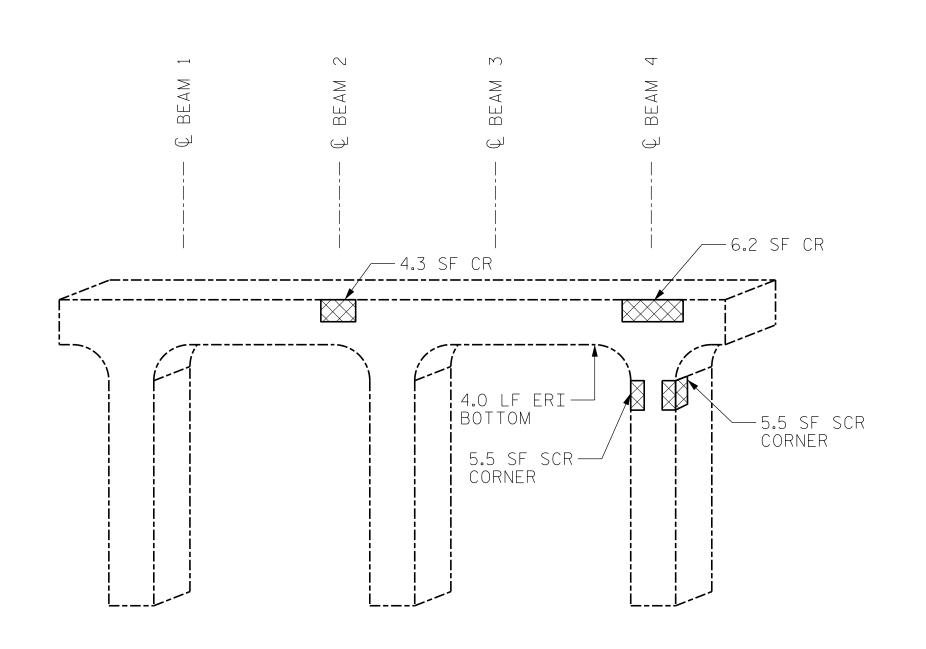
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S15-6

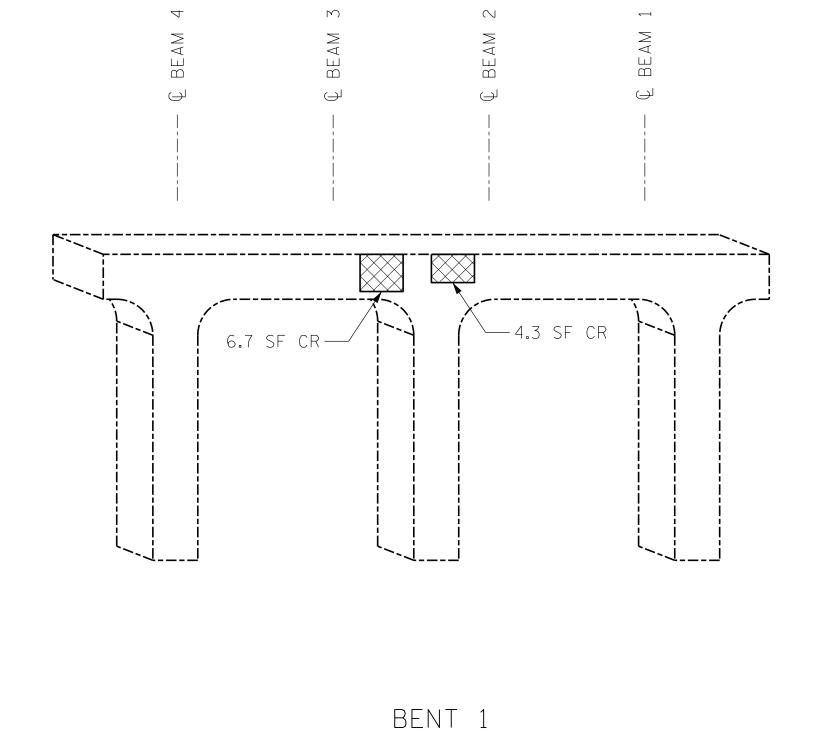
TOTAL SHEETS

ALLEN J.MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ CHECKED BY: \_\_\_\_\_FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

4/21/2022 I5915B\_SMU\_SBR00\_480104.dgn daguirre



BENT 1 (WEST FACE)



(EAST FACE)

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) CAP/BACKWALL COLUMN/PILE 11.0 5.6 VOLUME CU.FT. CONCRETE REPAIRS CAP 21.5 EPOXY RESIN INJECTION LIN.FT. LIN.FT. 4.0 CAP/BACKWALL

> 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:

COLUMN/PILE

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 >= $\frac{1}{16}$  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  $1\frac{1}{2}$ " 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.\_ IREDELL

48Ø1Ø4 BRIDGE NO. \_

SHEET 2 OF 4

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS

BENT 1

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS DATE: S15-7 DATE: NO. BY: TOTAL SHEETS

SIGNATURES COMPLETED

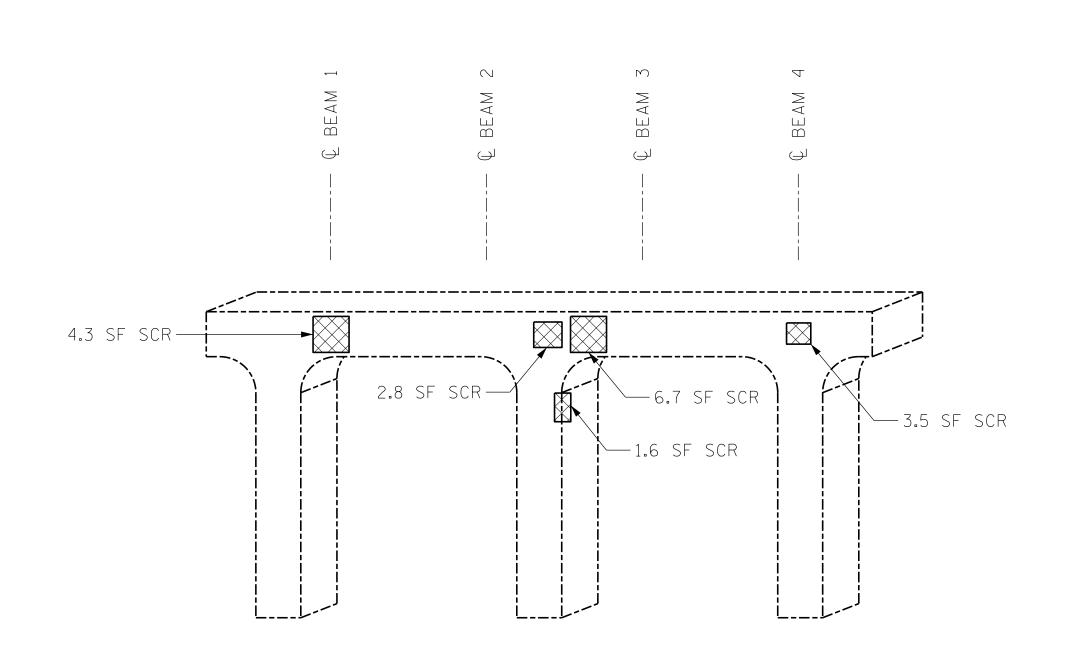
\_DATE : <u>0</u>1/2022

DATE : <u>01/2022</u>

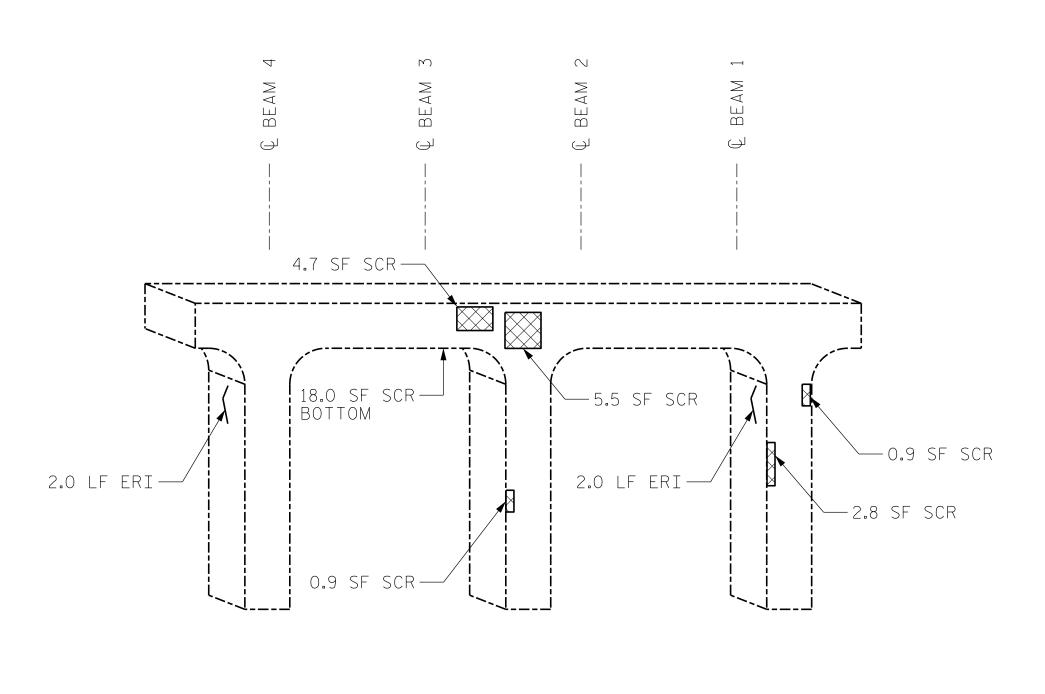
ALLEN J. MCSWAIN

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

FIDEL L.FLORES







BENT 2

(EAST FACE)

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) 15.5 CAP/BACKWALL 45.5 COLUMN/PILE 6.2 VOLUME CU.FT. CONCRETE REPAIRS CAP EPOXY RESIN INJECTION LIN.FT. LIN.FT.

> 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.

\_

4.0

### NOTES:

CAP/BACKWALL

COLUMN/PILE

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.

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AVERAGE CONCRETE COVER IS EXPECTED TO BE FROM 2"TO 3"ON THE CAP AND FROM  $1\frac{1}{2}$ " 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.

> I-5915B PROJECT NO. IREDELL COUNTY 480104 BRIDGE NO. \_

SHEET 3 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS

BENT 2

RALEIGH, NC 27601 (919) 882-7839

WISINGER CAMPO

& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

FINAL UNLESS ALL

SHEET NO REVISIONS S15-8 DATE: DATE: BY: TOTAL SHEETS

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u> 4/21/2022 I5915B\_SMU\_SBR02\_480104.dgn daguirre

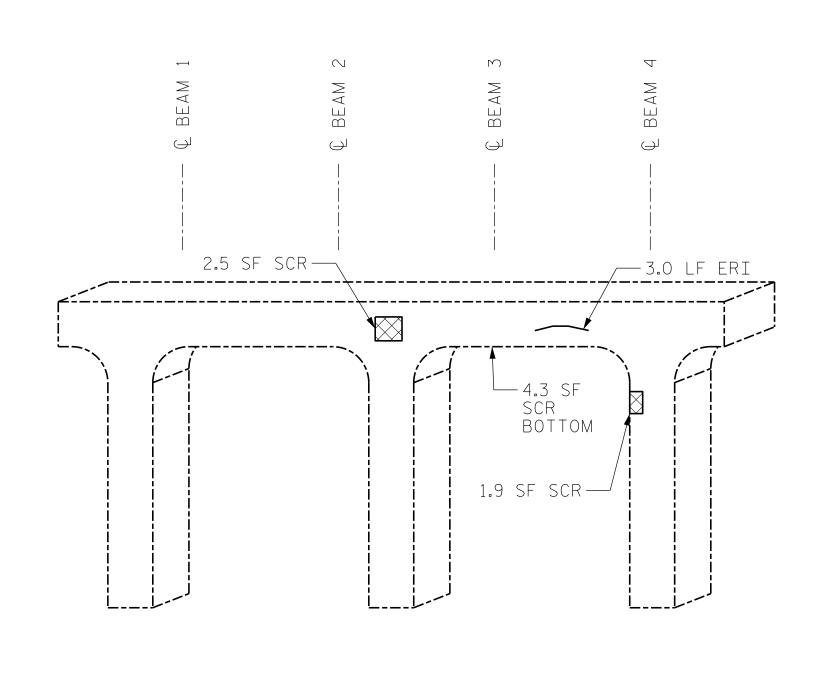
\_DATE : <u>0</u>1/2022

DATE : <u>01/2022</u>

ALLEN J. MCSWAIN

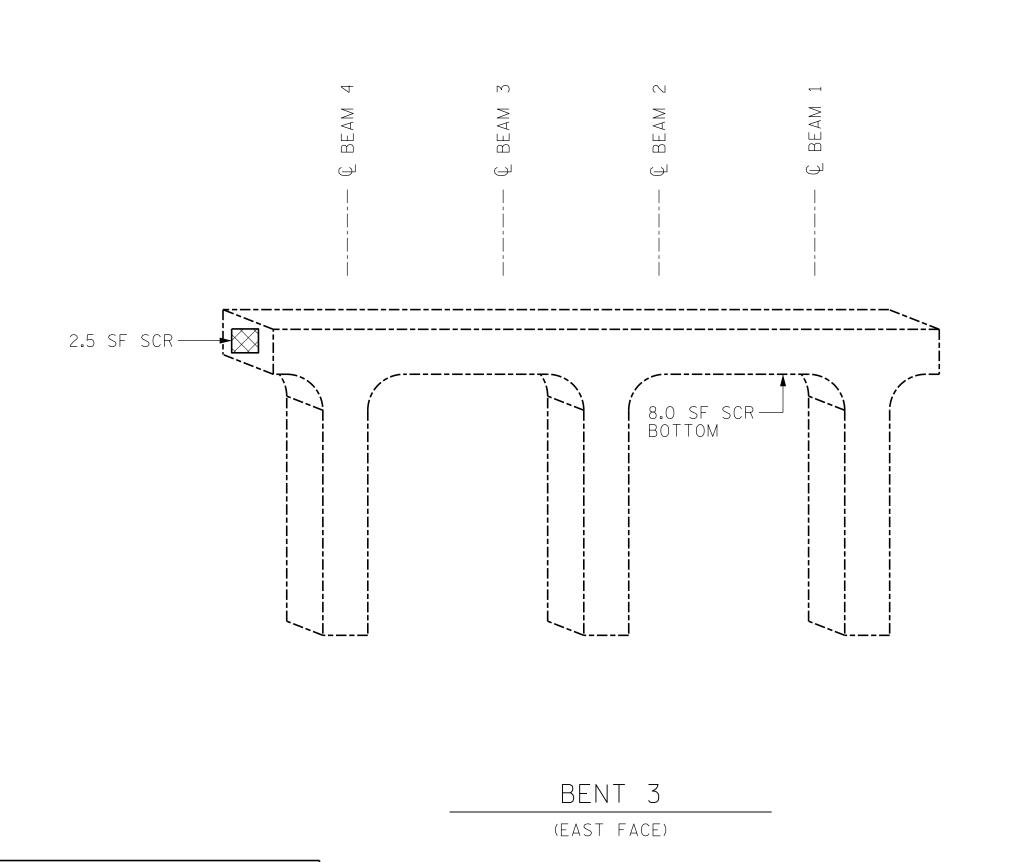
FIDEL L.FLORES

DRAWN BY : \_\_\_



BENT 3

(WEST FACE)



ALLEN J.MCSWAIN

FIDEL L.FLORES

\_ DATE : <u>0</u>1/2022

\_ DATE : <u>01/2022</u>

		LEGEND	AS-BUILT REPAIR QUANTITY TABLE						
		CONCRETE REPAIR AREA (CR)			QUANT	ITIES			
				ESTI	MATE	ACT	UAL		
		SHOTCRETE REPAIR AREA (SCR)	SHOTCRETE REPAIRS	AREA SQ.FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.		
		EPOXY RESIN INJECTION (ERI)	CAP/BACKWALL	17.3	6.0				
•			COLUMN/PILE	1.9	0.7				
			CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.		
			CAP	-	-				
			EPOXY RESIN INJECTION	LIN	FT.	LIN	.FT.		
			CAP/BACKWALL	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:

COLUMN/PILE

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

SHEETS. SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE

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

APPROVAL OF THE ENGINEER.

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

> PROJECT NO.\_ IREDELL 480104 BRIDGE NO. \_\_\_

SHEET 4 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIRS

BENT 3

WISINGER CAMPO

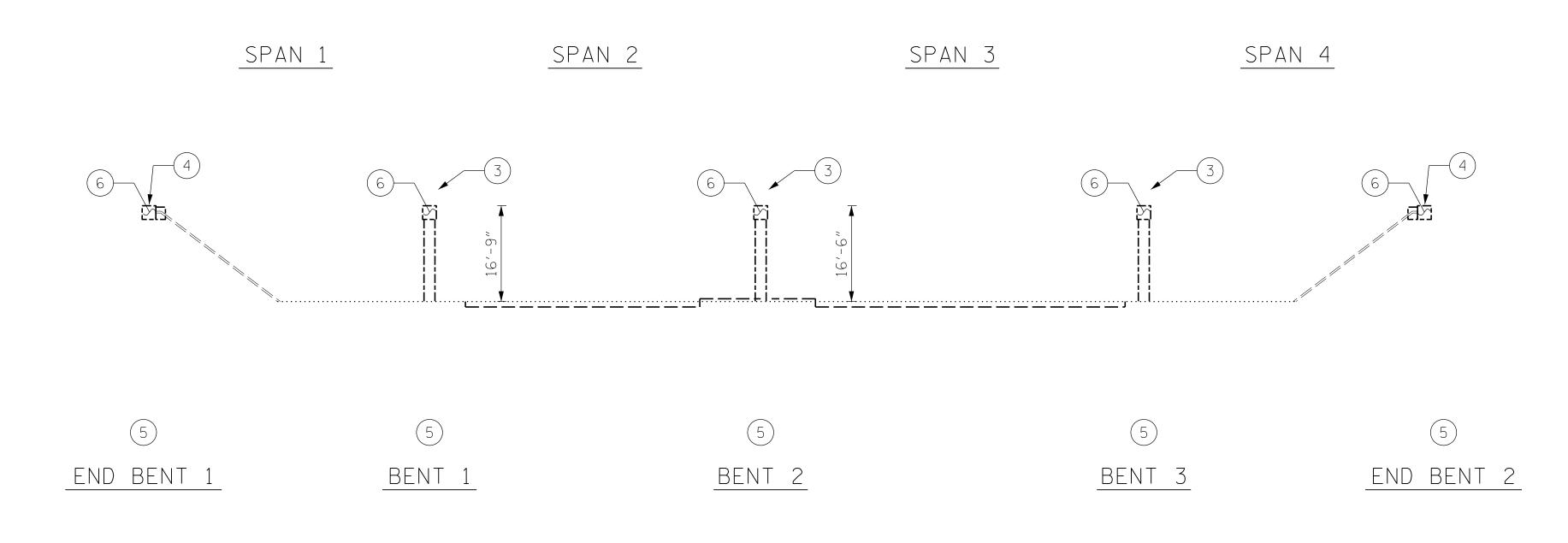
& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

FINAL UNLESS ALL

SHEET NO REVISIONS S15-9 DATE: DATE: NO. BY: TOTAL SHEETS

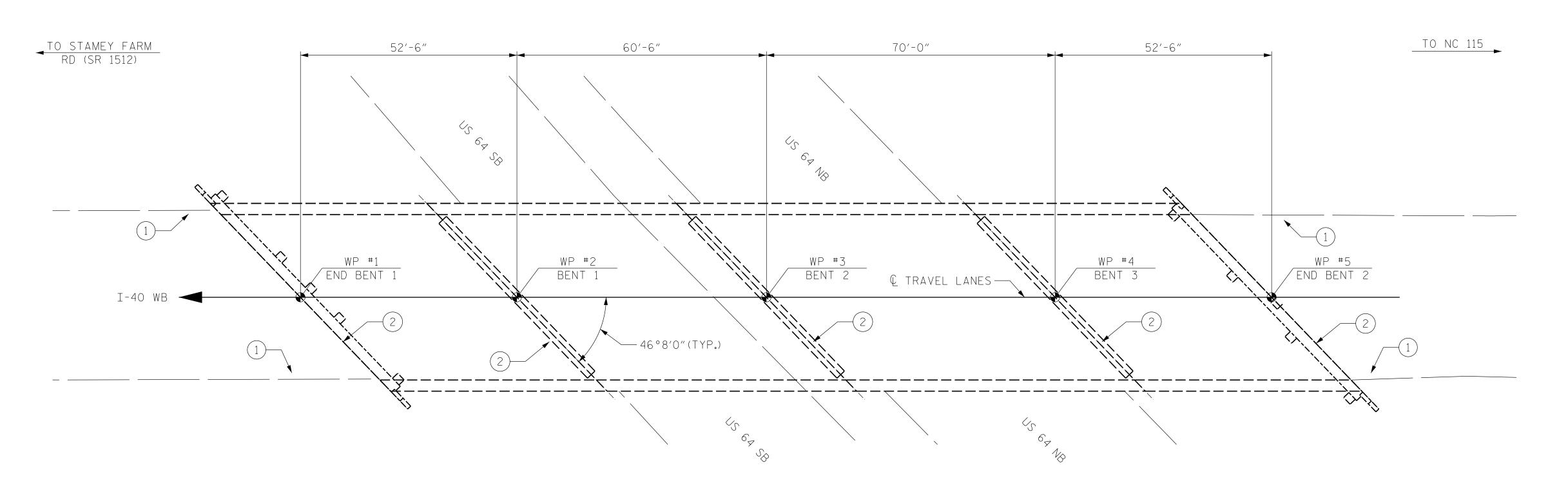
DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u> 4/21/2022 I5915B\_SMU\_SBR03\_480104.dgn daguirre



# SCOPE LEGEND:

- CLEAR SHOULDERS OF DEBRIS AND VEGETATION
- JOINT REPAIRS/REPLACEMENT
- SUPERSTRUCTURE CONCRETE REPAIRS
- PAINT EXISTING STEEL BEARINGS
- SUBSTRUCTURE CONCRETE REPAIRS
- SUBSTRUCTURE EPOXY RESIN INJECTION

SECTION ALONG ROADWAY



PLAN

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

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

DATE

I-5915B

480109

\_ COUNTY

RESIDENT ENGINEER

PROJECT NO.\_

BRIDGE NO. \_\_

IREDELL

GENERAL DRAWING

FOR BRIDGE ON I-40 WB OVER US-64

SHEET NO. REVISIONS S16-1 NO. BY: BY: DATE: DATE: TOTAL SHEETS

NOTES:

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

FIDEL L.FLORES \_\_\_ DATE : <u>01/2022</u> DRAWN BY : \_\_\_ CHECKED BY: \_\_\_\_\_DIEGO A.AGUIRRE \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u>

WISINGER CAMPO

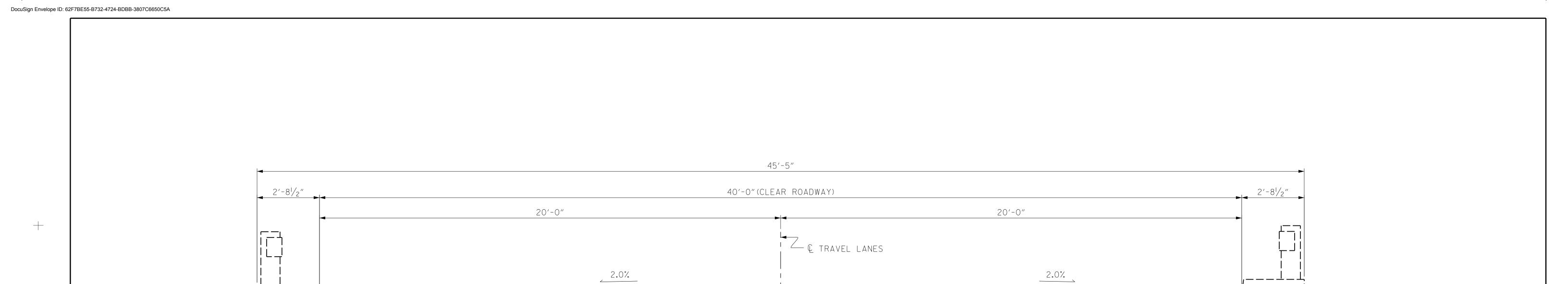
& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500

RALEIGH, NC 27601 (919) 882-7839

NC FIRM LICENSE: C-1506

4/21/2022 I5915B\_SMU\_GD01\_480109.dgn daguirre



EXISTING

PROJECT NO. I-5915B IREDELL \_\_\_\_ COUNTY BRIDGE NO. <u>480109</u>

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION

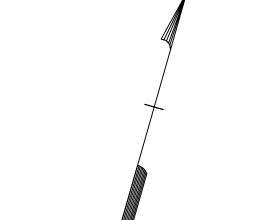
<b>(C</b> +			
SINGER CAMPO			
ASSOCIATES	NO.	BY:	

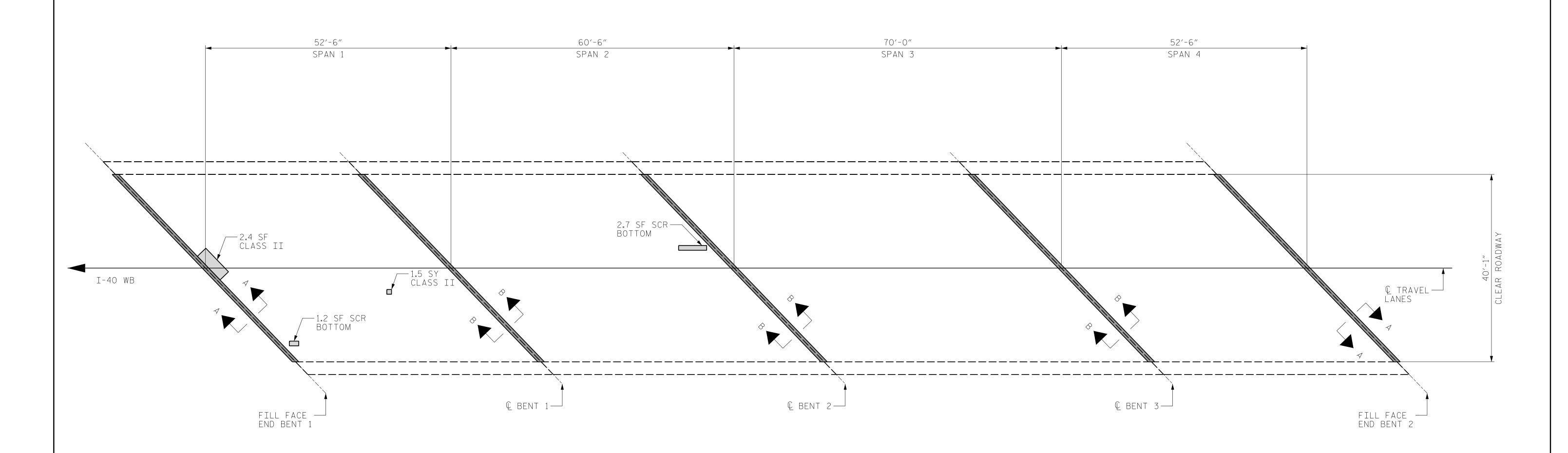
SHEET NO. REVISIONS DATE: S16-2 NO. BY: DATE: DOCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506 TOTAL SHEETS

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 DRAWN BY: \_\_\_\_\_\_ DIEGO A. AGUIRRE CHECKED BY: \_\_\_\_\_ FIDEL L. FLORES

# AS-BUILT REPAIR QUANTITY TABLE

					DEC	K REPA	IRS									
	SPAN 1			SPAN 2			SPAN 3			SPAN 4						
	ESTI	IMATE	AC	TUAL	ESTI	MATE	AC <sup>-</sup>	TUAL	ESTI	MATE	AC.	TUAL	EST]	MATE	AC <sup>-</sup>	TUAL
CLASS II SURFACE PREPARATION	3.9	3.9 SY		SY		SY		SY								
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
SHOTCRETE REPAIR AREA (SCR)	1.2 SF	O.4 CF			2.7 SF	0.9 CF			SF	CF			SF	CF		





PLAN

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.

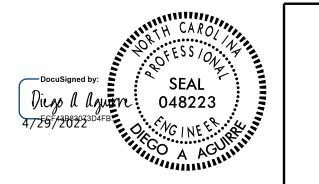
FOR SCARIFYING BRIDGE DECK, SEE OVERLAY SURFACE PREPARATION SPECIAL PROVISION.

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)

ALLEN J. MCSWAIN \_\_\_ DATE : <u>01/2022</u> DRAWN BY : \_\_\_ \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u> BRIDGE JOINT DEMOLITION

PROJECT NO. I-5915B IREDELL COUNTY

480109 BRIDGE NO. \_\_\_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

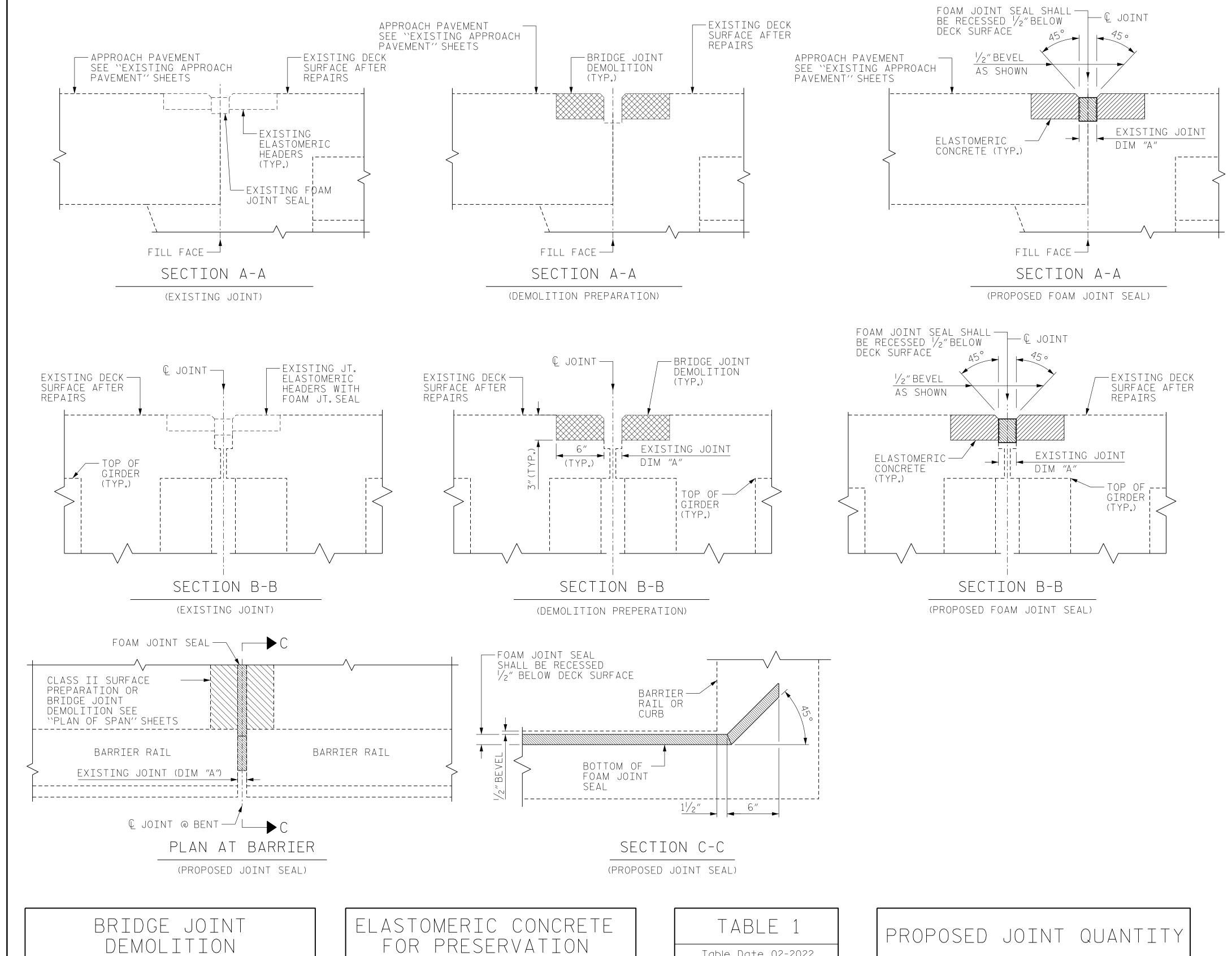
PLAN OF SPANS

DECK REPAIRS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

KISINGER CAMPO			
& ASSOCIATES	NO.	BY:	DAT
301 FAYETTEVILLE ST., SUITE 1500 RALEIGH, NC 27601 (919) 882-7839	ſ		
NC FIRM LICENSE: C-1506	9		

	REVISIONS									
NO.	BY:	DATE:	NO.	BY:	DATE:	S16-3				
1			3			TOTAL SHEETS				
2			4			9				



BRIDGE JOINT DEMOLITION								
LOCATION	ESTIMATED (SQ.FT.)	ACTUAL (SQ.FT.)						
END BENTS	111.3							
BENT 1	55.7							
BENT 2	55.7							
BENT 3	55.7							

			_
RAWN BY :	DIEGO A.AGUIRRE	DATE : <u>01/2022</u>	1
HECKED BY :	JACOB H.DUKE	DATE : <u>01/2022</u>	l
ESIGN ENGINEER	OF RECORD: <u>DIEGO A.AGUIRRE</u>	DATE : <u>01/2022</u>	l

ELASTOMERIC CONCRETE FOR PRESERVATION							
LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)					
END BENTS	28.0						
BENT 1	14.0						
BENT 2	14.0						
BENT 3	14.0						
		<u> </u>					

TABLE 1							
Table Dat	Table Date 02-2022						
BENT/ JOINTS	DIM "A" @ 60°F						
END BENT 1	3/4"						
1	2"						
2	2"						
3	17/8"						
END BENT 2	1"						

# ACTUAL ESTIMATED (LIN.FT.) (LIN.FT.) FOAM JOINT SEALS FOR PRESERVATION

286.0

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 ACCOMODATE 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 BRDIGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRATCTOR 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.

I-5915B PROJECT NO.\_ IREDELL COUNTY 48Ø1Ø9 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

JOINT DETAILS

OCUMENT NOT CONSIDERED 301 FAYET FINAL UNLESS ALL SIGNATURES COMPLETED

IGER CAMPO			REVI	SION	S		SHEET NO.
SSOCIATES	NO.	BY:	DATE:	NO.	BY:	DATE:	S16-4
TTEVILLE ST., SUITE 1500 NC 27601 (919) 882-7839	1			3			TOTAL SHEETS
LICENSE: C-1506	2			4,			9

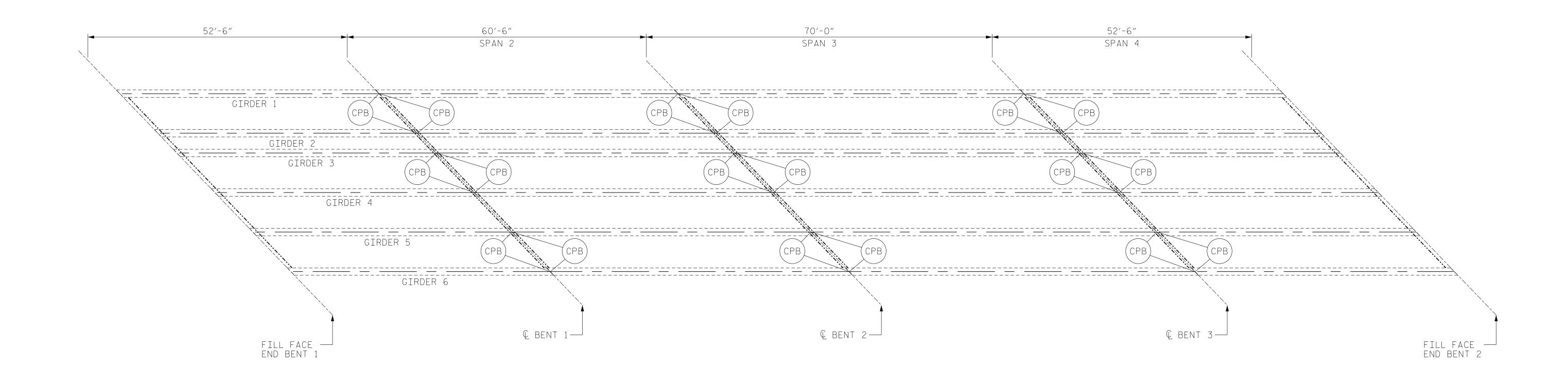
# AS-BUILT REPAIR QUANTITY TABLE

#### CHDEDCTDHCTHDE DEDATDC

			SUPE	.RSTRUC	IURE F	REPAIRS										
	SPAN 1			SPAN 2		SPAN 3				SPAN 4		N 4				
	ESTI	MATE	ACT	TUAL	EST]	IMATE	AC	TUAL	ESTI	MATE	AC <sup>-</sup>	TUAL	ESTI	MATE	ACT	TUAL
CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA	6	EA			12	EA			12	EΑ			6	EA		
	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME	AREA	VOLUME
CONCRETE REPAIR AREA (CR)	SF	CF			SF	CF			SF	CF			SF	CF		

LEGEND:

CLEAN AND PAINT BEARING



PLAN

PROJECT NO. I-5915B IREDELL COUNTY

48Ø1Ø9 BRIDGE NO. \_

NOTES:

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FOR CLEANING & PAINTING EXISTING BEARINGS WITH HRSCA, SEE SPECIAL PROVISIONS.

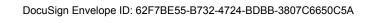
ALLEN J.MCSWAIN \_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_\_ \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

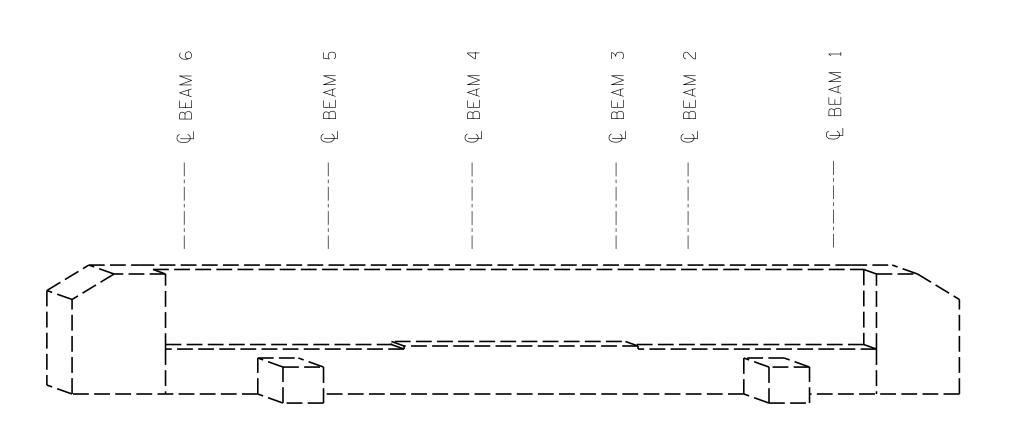
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

SUPERSTRUCTURE REPAIRS

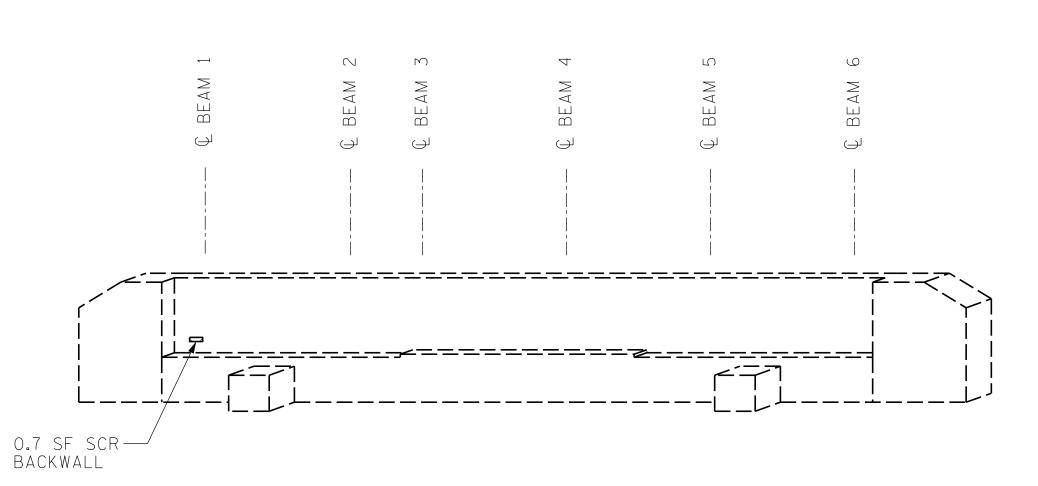
	KISINGER CAMPO		
$\Box$	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	NO.	
U	RALEIGH, NC 27601 (919) 882-7839	1	
	NC FIRM LICENSE: C-1506	2	

R CAMPO			REVIS	SIO	NS		SHEET NO.
CIATES	NO.	BY:	DATE:	NO.	BY:	DATE:	S16-5
LE ST., SUITE 1500 601 (919) 882-7839	1			33			TOTAL SHEETS
E: C-1506	2			4			<b> </b> 9





### END BENT 1 (EAST FACE)



END BENT 2 (WEST FACE)

LEGEND	AS-BU]	AS-BUILT REPAIR QUANTITY TABLE							
CONCRETE REPAIR AF	A (CR)		QUANTITIES						
		ES <sup>-</sup>	IMATE	ACTUAL					
SHOTCRETE REPAIR A	SHOTCRETE REP	AIRS AREA SQ. FT.	VOLUME CU. FT.	AREA SQ.FT.	VOLUME CU.FT.				
EPOXY RESIN INJECT	ON (ERI) CAP/BACKWALL	0.7	0.3						
<u> </u>	COLUMN/PILE	-	-						
	CONCRETE REPA	IRS AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.				
	CAP	-	-						
	EPOXY RESIN I	INJECTION	N. FT.	LIN.	.FT.				

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:

CAP/BACKWALL

COLUMN/PILE

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 >= $\frac{1}{16}$  AS DESCRIBED IN THE SPECIAL PROVISIONS AT EACH BENT.

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

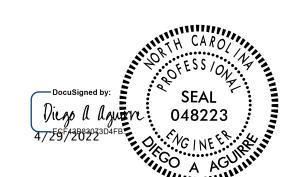
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

> I-5915B PROJECT NO. IREDELL COUNTY

480109 BRIDGE NO. \_

SHEET 1 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

END BENTS 1 & 2

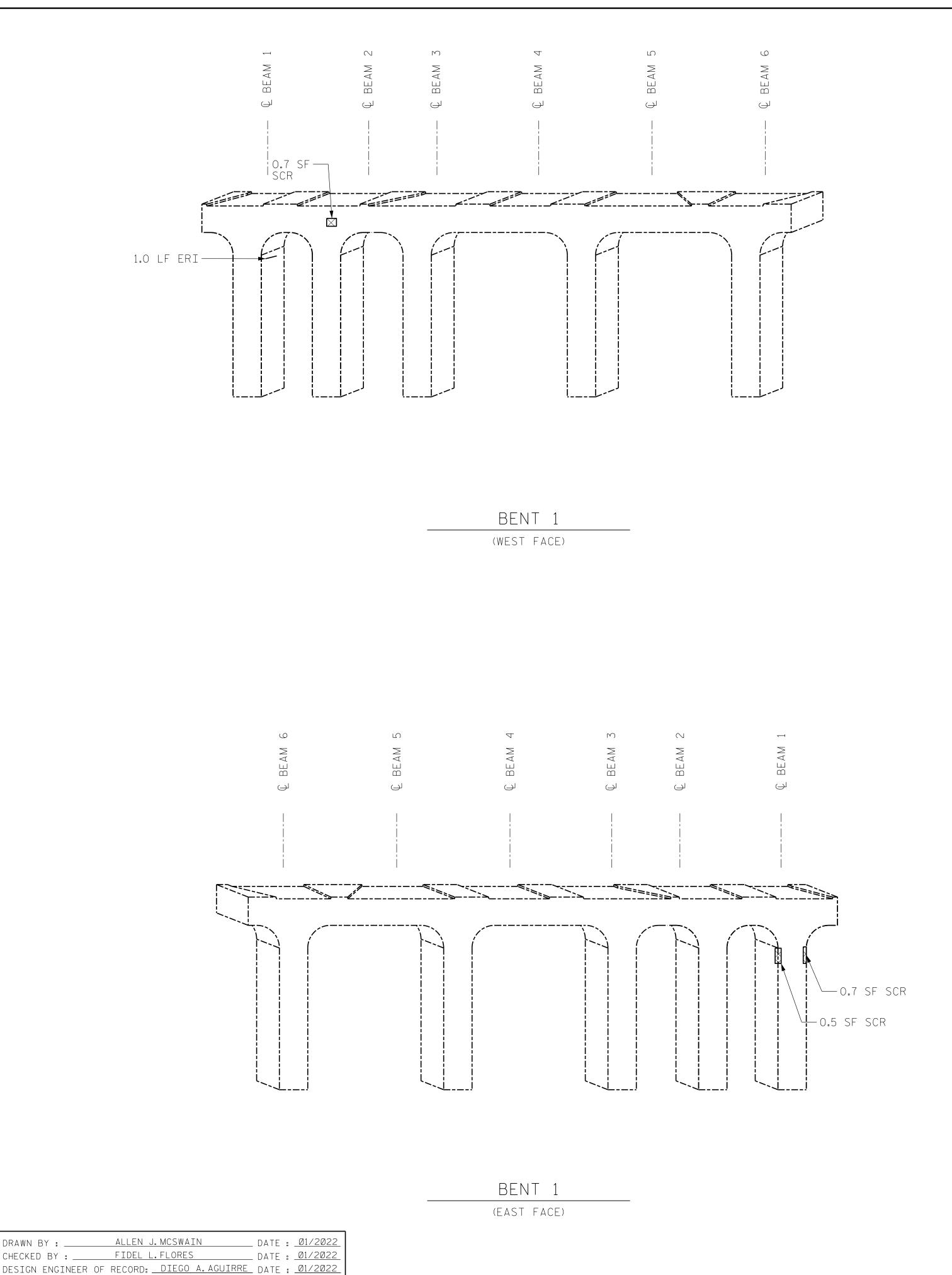
WISINGER CAMPO

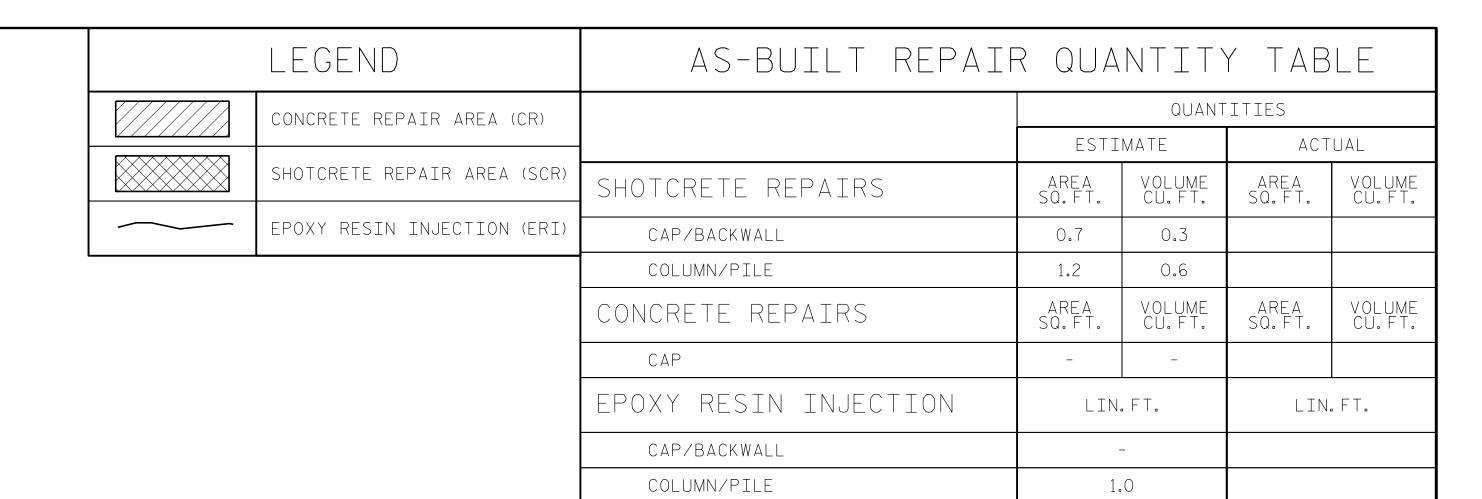
& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 FINAL UNLESS ALL SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S16-6 DATE: DATE: BY: NO. BY: TOTAL SHEETS RALEIGH, NC 27601 (919) 882-7839

ALLEN J. MCSWAIN \_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ CHECKED BY: \_\_\_\_\_FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>





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:

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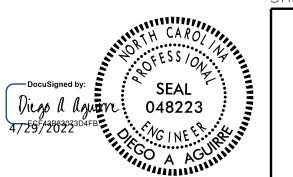
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> PROJECT NO. COUNTY 480109 BRIDGE NO. \_

SHEET 2 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS

BENT 1

S16-7

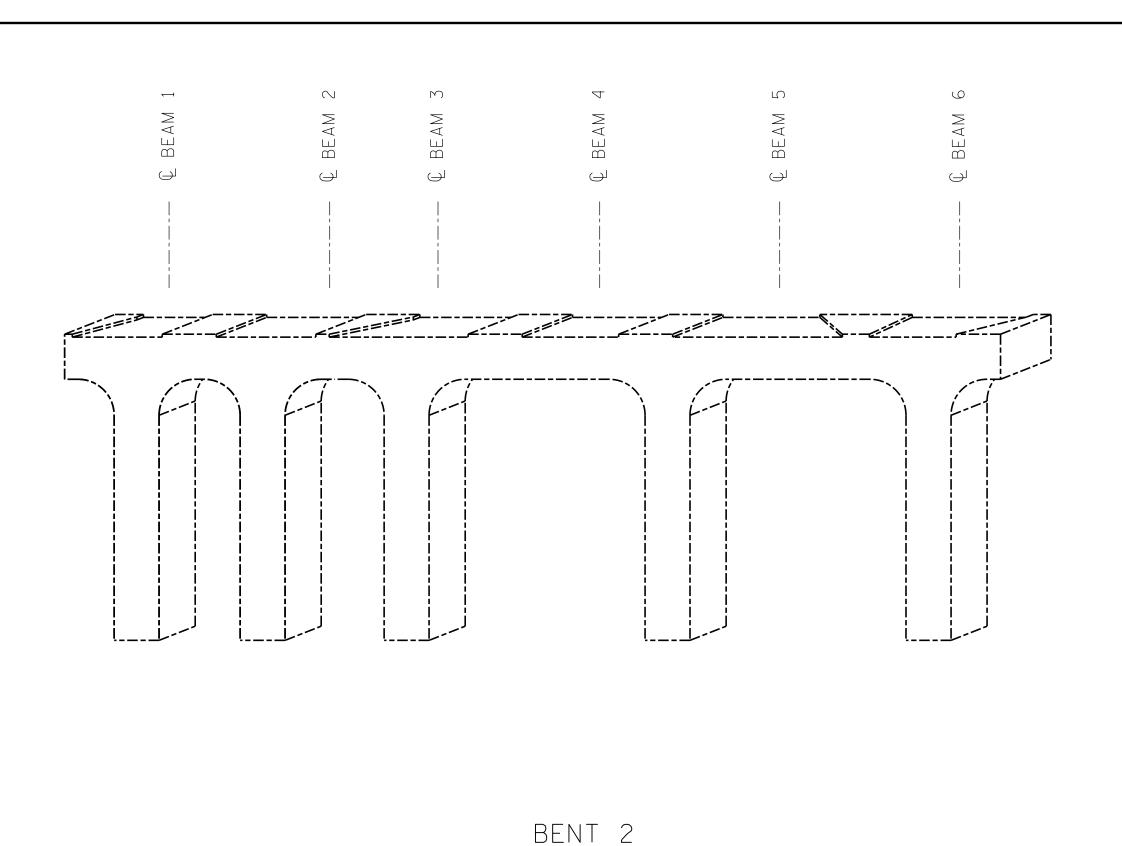
TOTAL SHEETS

RALEIGH, NC 27601 (919) 882-7839

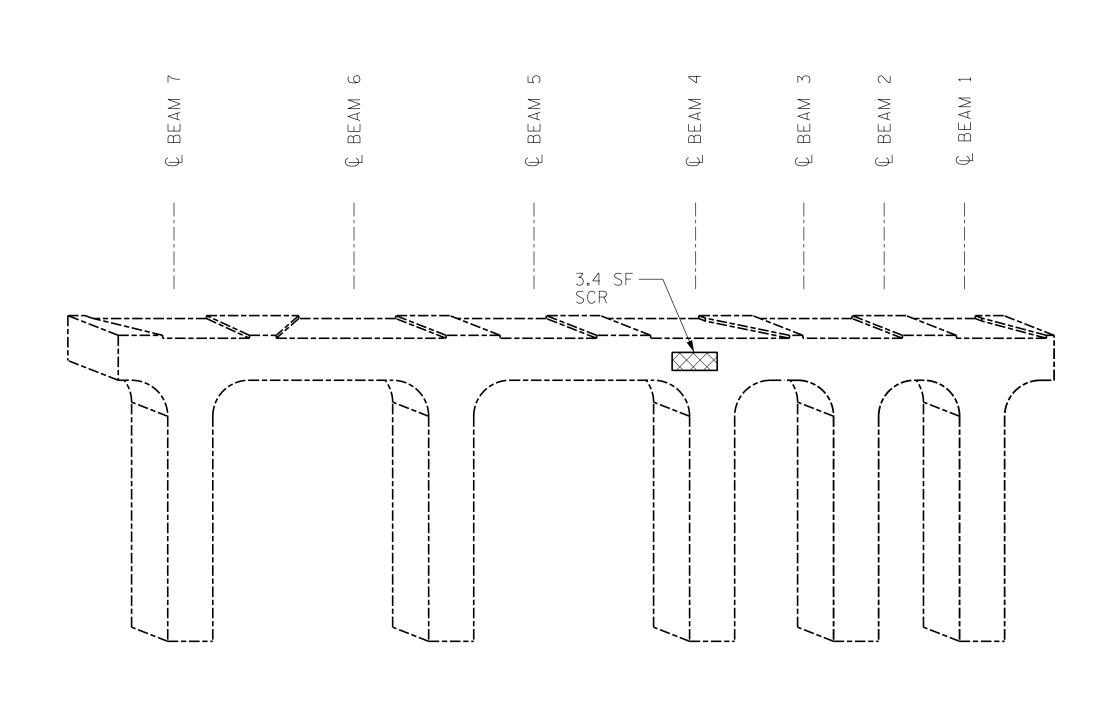
OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 NC FIRM LICENSE: C-1506

SHEET NO REVISIONS DATE: DATE: NO. BY:

FINAL UNLESS ALL SIGNATURES COMPLETED



(WEST FACE)



BENT 2

(EAST FACE)

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) CAP/BACKWALL 3.4 COLUMN/PILE CONCRETE REPAIRS CAP EPOXY RESIN INJECTION LIN.FT. LIN.FT. CAP/BACKWALL

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### NOTES:

COLUMN/PILE

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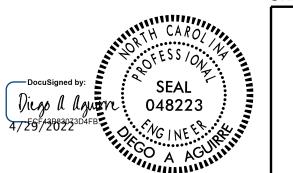
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REPAIRS TO THE BENT CAP MAY REQUIRE BRIDGE JACKING. FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

> PROJECT NO. COUNTY 480109 BRIDGE NO. \_

SHEET 3 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SUBSTRUCTURE REPAIRS

BENT 2

RALEIGH, NC 27601 (919) 882-7839

WISINGER CAMPO

& ASSOCIATES

301 FAYETTEVILLE ST., SUITE 1500 NC FIRM LICENSE: C-1506

SIGNATURES COMPLETED

FINAL UNLESS ALL

SHEET NO REVISIONS S16-8 DATE: DATE: NO. BY: TOTAL SHEETS

4/21/2022 I5915B\_SMU\_SBR02\_480109.dgn daguirre

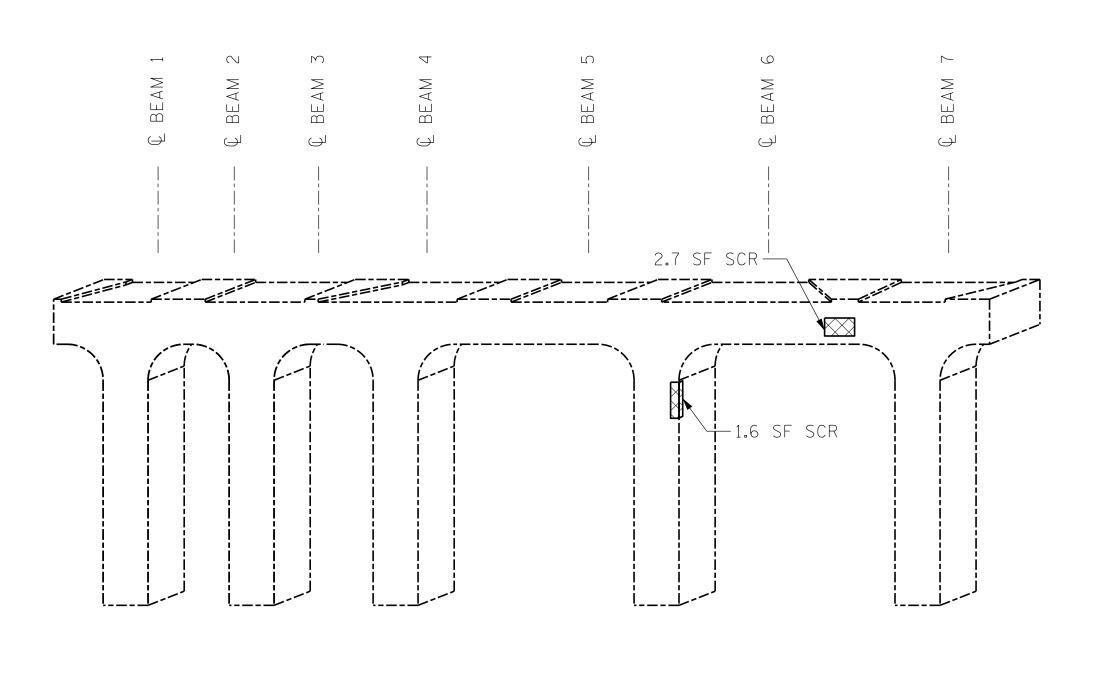
\_DATE : <u>0</u>1/2022

\_ DATE : <u>01/2022</u>

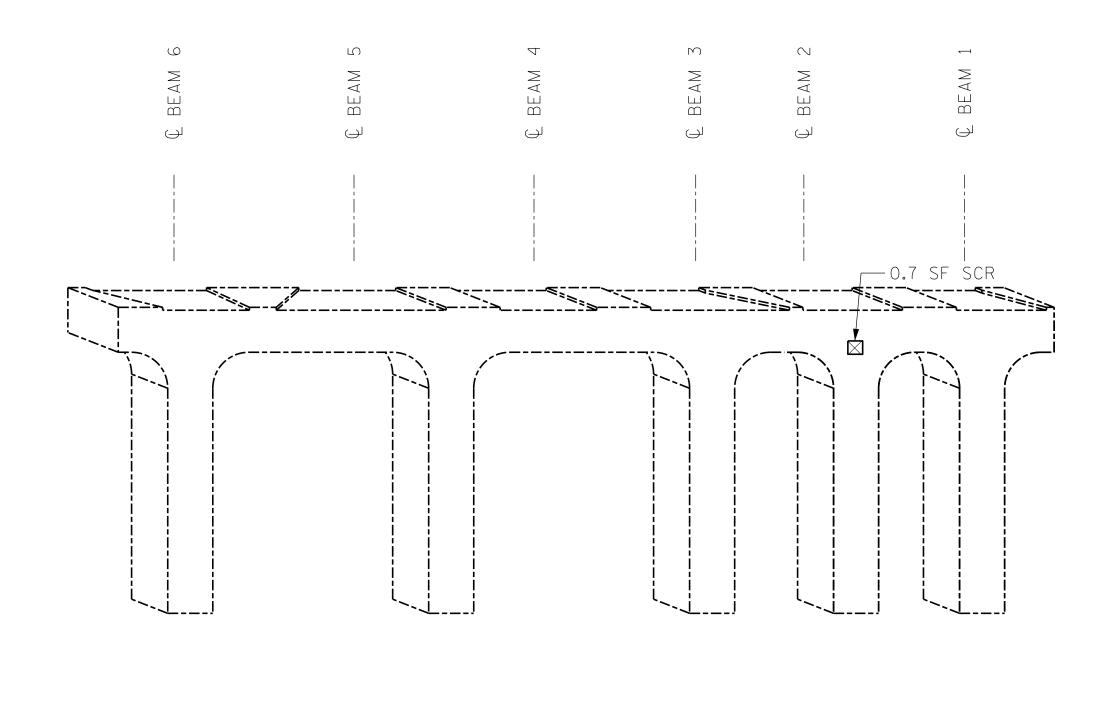
ALLEN J. MCSWAIN

DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>

FIDEL L.FLORES



BENT 3 (WEST FACE)



BENT 3

(EAST FACE)

LEGEND AS-BUILT REPAIR QUANTITY TABLE QUANTITIES CONCRETE REPAIR AREA (CR) ACTUAL ESTIMATE SHOTCRETE REPAIR AREA (SCR) SHOTCRETE REPAIRS EPOXY RESIN INJECTION (ERI) CAP/BACKWALL 3.4 COLUMN/PILE 1.6 0.6 VOLUME CU.FT. CONCRETE REPAIRS CAP EPOXY RESIN INJECTION LIN.FT. LIN.FT.

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### NOTES:

CAP/BACKWALL

COLUMN/PILE

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> PROJECT NO. COUNTY 480109 BRIDGE NO. \_

SHEET 4 OF 4



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

> SUBSTRUCTURE REPAIRS

> > BENT 3

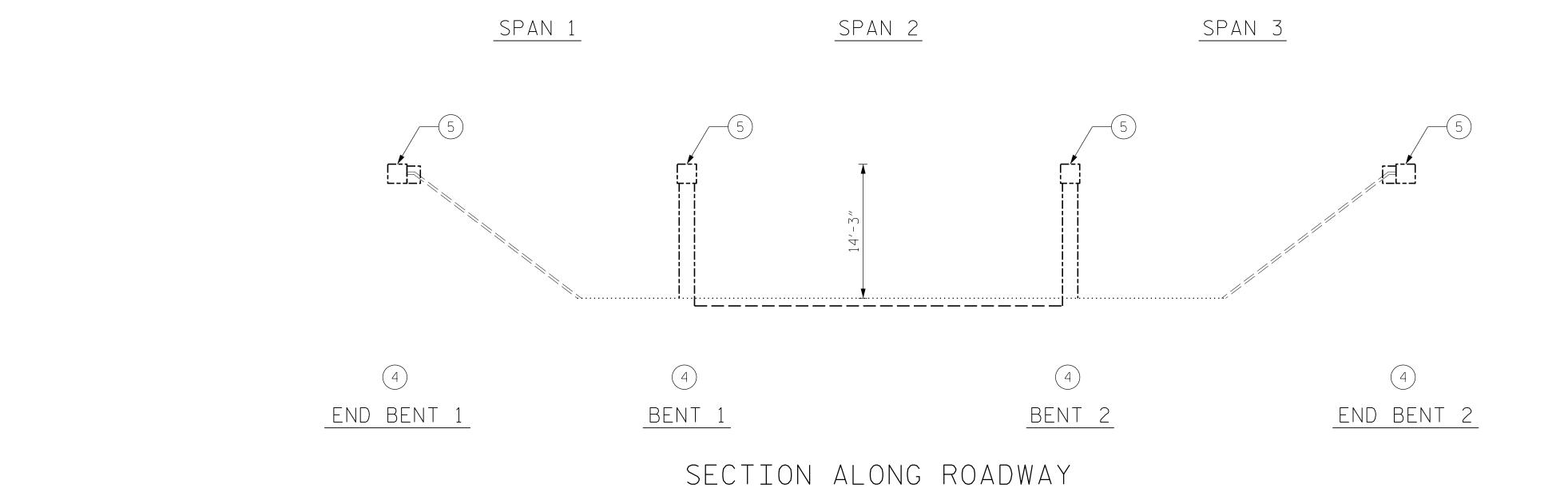


FINAL UNLESS ALL

RALEIGH, NC 27601 (919) 882-7839 SIGNATURES COMPLETED NC FIRM LICENSE: C-1506

SHEET NO REVISIONS S16-9 DATE: DATE: NO. BY: TOTAL SHEETS

ALLEN J. MCSWAIN \_DATE : <u>0</u>1/2022 \_ DATE : <u>01/2022</u> FIDEL L.FLORES DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE: <u>01/2022</u>



# 39'-0" 50'-0" 45'-0" SPAN 1 SPAN 2 SPAN 3 TO US 64 TO I-77 WP #1 END BENT 1 WP #4 END BENT 2 WP #2 BENT 1 WP #3 BENT 2 — © TRAVEL LANES — 64°20′0″(TYP.)

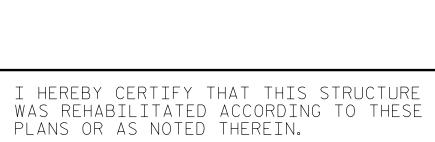
NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE MOST UP TO DATE ROUTINE INSPECTION REPORT DATED 09/12/2021. BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE ROUTINE INSPECTION.

DIEGO A.AGUIRRE \_\_\_\_ DATE : <u>0</u>1/2022 DRAWN BY : \_\_\_ FIDEL L.FLORES \_ DATE : <u>01/2022</u> DESIGN ENGINEER OF RECORD: <u>DIEGO A.AGUIRRE</u> DATE : <u>01/2022</u> PLAN

## SCOPE LEGEND:

- CLEAR SHOULDERS OF DEBRIS AND VEGETATION
- CONCRETE DECK REPAIRS
- JOINT REPAIRS/REPLACEMENT
- SUBSTRUCTURE CONCRETE REPAIRS
- SUBSTRUCTURE EPOXY RESIN INJECTION



RESIDENT ENGINEER

I-5915B PROJECT NO.\_\_

IREDELL \_ COUNTY

DATE

48Ø123 BRIDGE NO. \_\_\_



DEPARTMENT OF TRANSPORTATION RALEIGH

STATE OF NORTH CAROLINA

GENERAL DRAWING

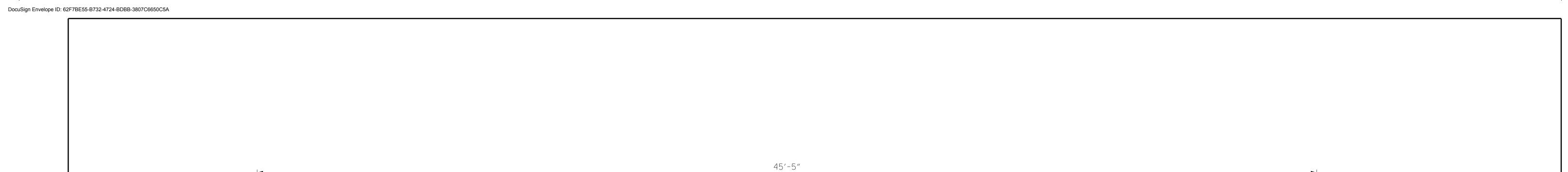
FOR BRIDGE ON I-40 EB OVER NC 115

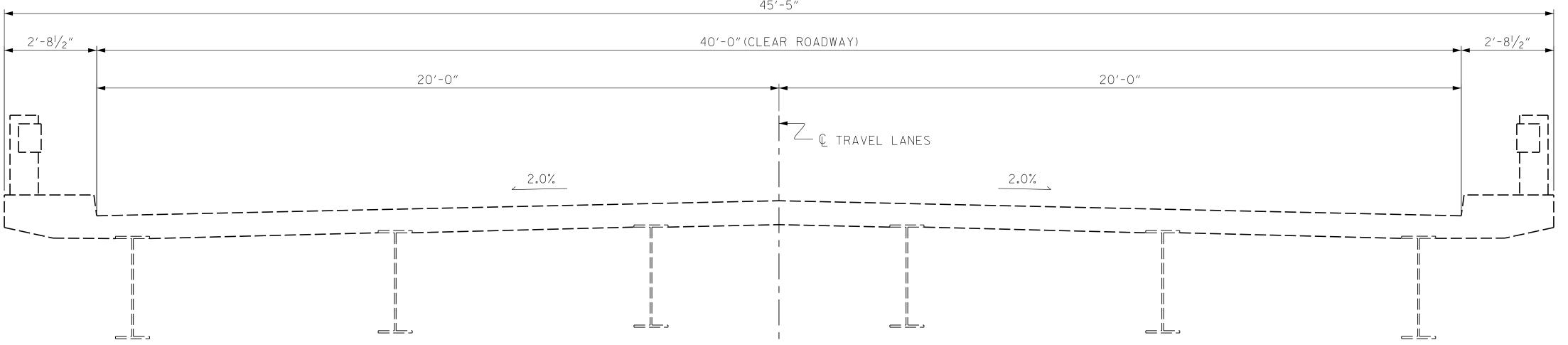
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

	KISINGER CAMPO	
<u> </u>	& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	NO.
_U	RALEIGH, NC 27601 (919) 882-7839	1
	NC FIRM LICENSE: C-1506	2

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BY:	DATE:	NO.	BY:	DATE:	S17-1
		<b>∞</b>			TOTAL SHEETS
		Ŧ			8

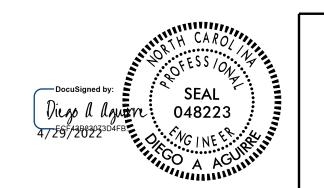
4/21/2022 I5915B\_SMU\_GD01\_480123.dgn daguirre





EXISTING

PROJECT NO. I-5915B IREDELL COUNTY BRIDGE NO. <u>480123</u>



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPTONI SECTIONI

KCA	
KISINGER CAMPO	
& ASSOCIATES 301 FAYETTEVILLE ST., SUITE 1500	NO.
RALEIGH, NC 27601 (919) 882-7839	1
NC FIRM LICENSE: C-1506	2

YPICAL	SEU	L T O I A

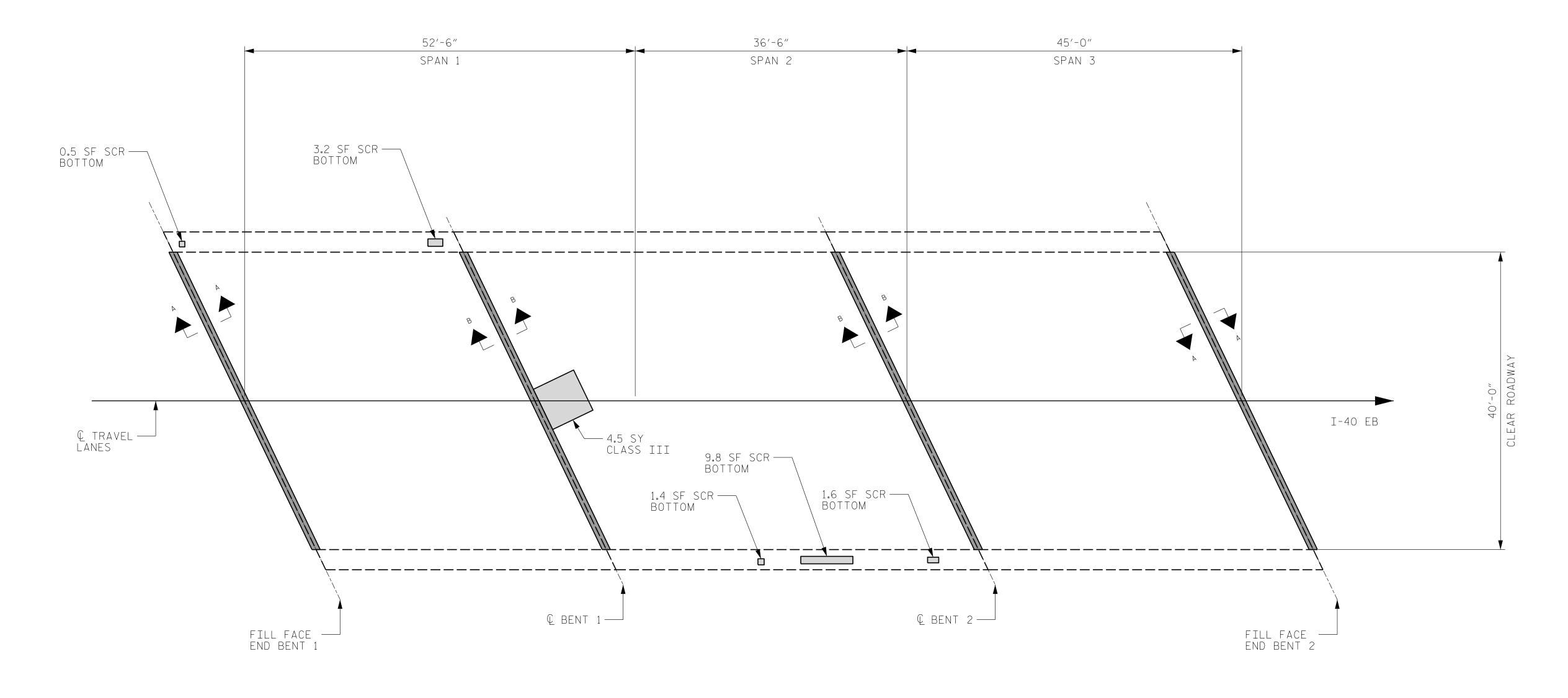
SHEET NO. REVISIONS S17-2 NO. BY: DATE: DATE: BY: DOCUMENT NOT CONSIDERED : FINAL UNLESS ALL SIGNATURES COMPLETED TOTAL SHEETS

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 DRAWN BY: \_\_\_\_\_\_ DIEGO A.AGUIRRE CHECKED BY: \_\_\_\_\_ FIDEL L.FLORES

# AS-BUILT REPAIR QUANTITY TABLE

### DECK REPAIRS

		SPAN 1			SPA	.N 2			SPA	N 3
	ESTI	МАТЕ	ACTUAL	ESTI	MATE	ACT	·UAL	ESTI	MATE	ACTUAL
CLASS III SURFACE PREPARATION		SY		4.5	SY				SY	
SHOTCRETE REPAIR AREA (SCR)	3.7 SF	1.3 CF		12.8 SF	4.4 CF			SF	CF	



PLAN

PROJECT NO. I-5915B

IREDELL COUNTY

BRIDGE NO. 480123

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.

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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

BRIDGE JOINT DEMOLITION

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL

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

NC FIRM LICENSE: C-1506

SIGNATURES COMPLETED

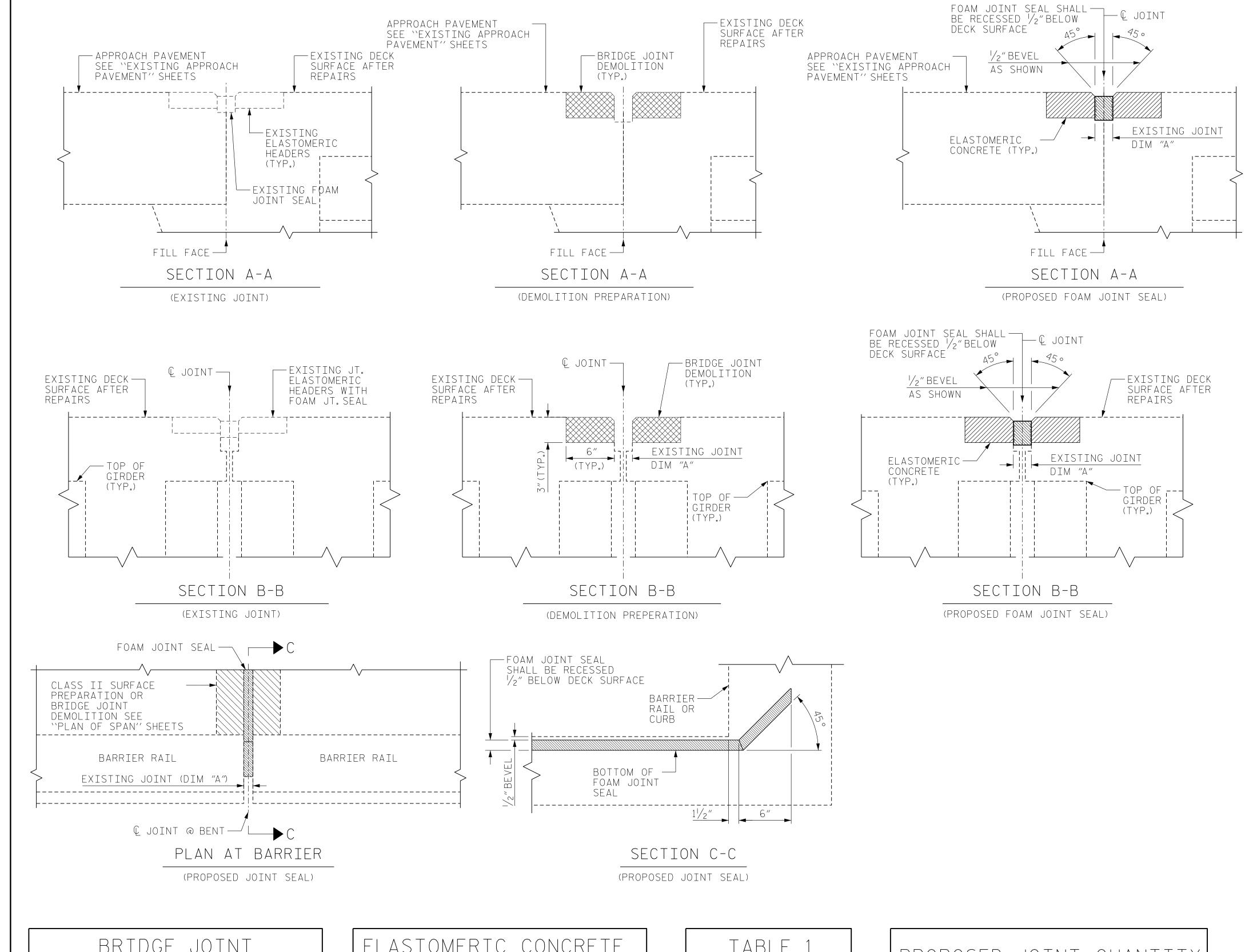
# STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

PLAN OF SPANS

DECK REPAIRS

MPO | REVISIONS | SHEET NO. | TES | NO. | BY: | DATE: | S17-3 | TOTAL | SHEETS

4/21/2022 I5915B\_SMU\_DSR01\_480123.dgn daguirre



BRIDGE JOINT DEMOLITION						
LOCATION	ESTIMATED (SQ.FT.)	ACTUAL (SQ.FT.)				
END BENTS	88.8					
BENT 1	44.4					
BENT 2	44.4					

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

ELASTOMERIC CONCRETE FOR PRESERVATION							
LOCATION	ESTIMATED (CU.FT.)	ACTUAL (CU.FT.)					
END BENTS	22.4						
BENT 1	11.2						
BENT 2	11.2						

TABLE 1								
Table Date 02-2022								
BENT/ JOINTS	DIM "A" @ 40°F							
END BENT 1	15/8″							
1	15/8″							
2	13/4"							
END BENT 2	13/4"							

PROPOSED	JOINT QUA	NTITY
	ESTIMATED (LIN.FT.)	ACTUAL (LIN.FT.)
FOAM JOINT SEALS FOR PRESERVATION	184.0	

### 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 ACCOMODATE 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 BRDIGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRATCTOR 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.

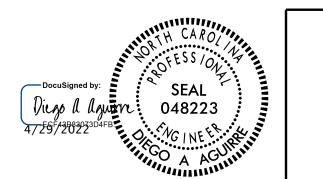
FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

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.

I-5915B PROJECT NO.\_ IREDELL COUNTY 48Ø123 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

JOINT DETAILS

RALEIGH, NC 27601 (919) 882-7839 NC FIRM LICENSE: C-1506

OCUMENT NOT CONSIDERED 301 FAYETTEVILLE ST., SUITE 1500 SIGNATURES COMPLETED

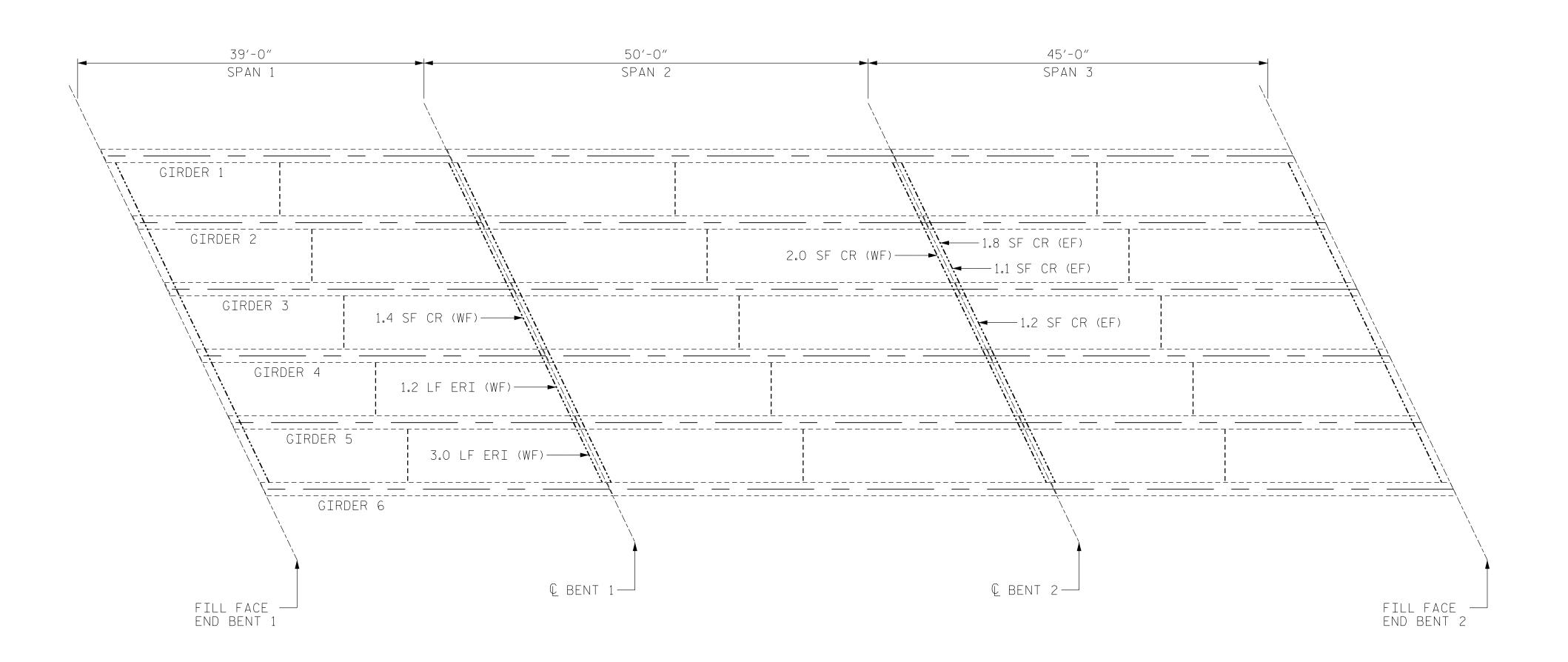
FINAL UNLESS ALL

SHEET NO REVISIONS S17-4 DATE: DATE: BY: BY:

	AS-BUI	LT R	EPAI	R QUA	ANTIT	Т Т Д	BLE						
		SUPE	RSTRUC	TURE R	REPAIRS	S							
		SPAN 1 SPA				N 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)		1.4 SF	0.5 CF			2.0 SF	1.0 CF			4.1 SF	1.4 CF		
		ESTI	MATE	ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
EPOXY RESIN INJECTION (ERI)		4.2 LF				LF				LF			

LEGEND:

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



PLAN

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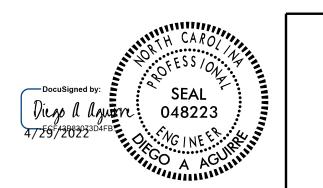
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FOR CONCRETE REPAIRS, SEE "CONCRETE RESTORATION DETAILS" SHEETS.

ALLEN J. MCSWAIN \_\_\_ DATE : <u>01/2022</u> DRAWN BY : \_\_\_\_ \_ DATE : <u>01/2022</u> CHECKED BY : \_\_\_\_\_\_\_JACOB H. DUKE DESIGN ENGINEER OF RECORD: <u>DIEGO A. AGUIRRE</u> DATE: <u>01/2022</u>

NOTES:

PROJECT NO. I-5915B IREDELL COUNTY 48Ø123 BRIDGE NO. \_



STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH

SUPERSTRUCTURE REPAIRS



NC FIRM LICENSE: C-1506

	SHEET NO.					
NO.	BY:	DATE:	NO.	BY:	DATE:	S17-5
1			83			TOTAL SHEETS
2			귷			8