

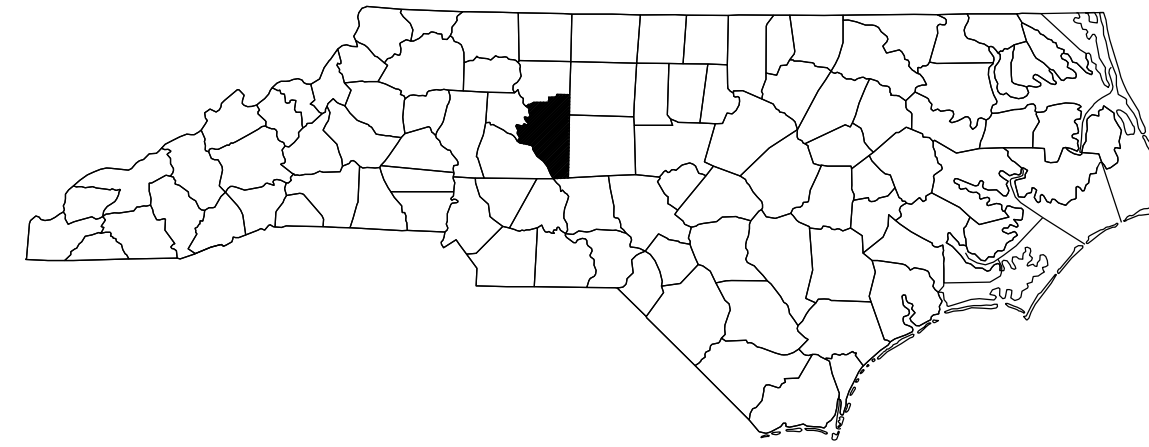
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PROJECT: I-5950

CONTRACT NO.: C204735



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

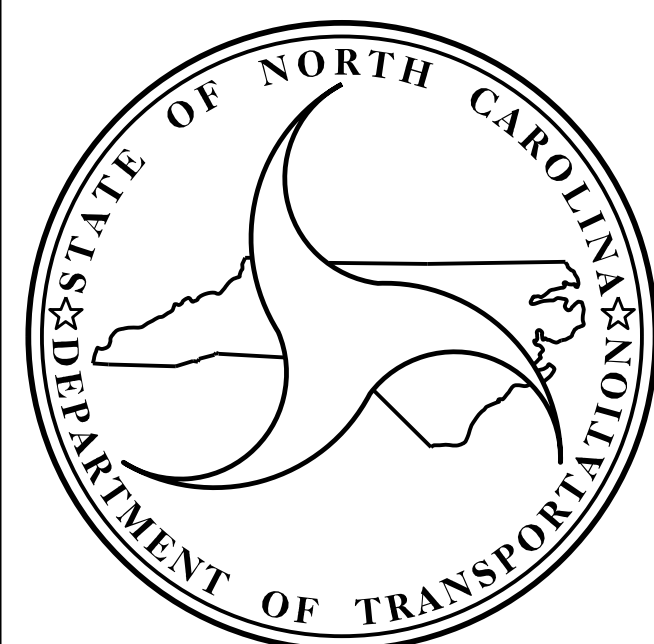
DAVIDSON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5950	1	2
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45897.1.1	-	P.E.	
45897.3.1	0085055	CONST.	

TYPE OF WORK: BRIDGE PRESERVATION - DECK REPAIR, POLYMER CONCRETE (PC) OVERLAY, FOAM JOINT SEALS FOR PRESERVATION, POURABLE SILICONE JOINT SEALANT, PAINTING NON WEATHERING STEEL BEAMS, PAINTING EXISTING BEARINGS, EPOXY COATING AND DEBRIS REMOVAL AND SUBSTRUCTURE REPAIR.

LOCATION:

- BRIDGE NO. 280092 ON NC-8 OVER INTERSTATE 85
- BRIDGE NO. 280137 ON INTERSTATE 85 BUSSINESS, US 29 & US 70 RAMP OVER I-85
- BRIDGE NO. 280146 ON NC-47 OVER INTERSTATE 85
- BRIDGE NO. 280147 ON INTERSTATE 85 NBL OVER SOUTHERN RAILROAD
- BRIDGE NO. 280152 ON INTERSTATE 85 SBL OVER SOUTHERN RAILROAD
- BRIDGE NO. 280154 ON INTERSTATE 85 NBL OVER SWEARING CREEK
- BRIDGE NO. 280157 ON INTERSTATE 85 SBL OVER SWEARING CREEK
- BRIDGE NO. 280170 ON INTERSTATE 85 NBL OVER ABBOTTS CREEK
- BRIDGE NO. 280171 ON INTERSTATE 85 SBL OVER ABBOTTS CREEK
- BRIDGE NO. 280174 ON E. OLD US 64 (SR 2205) OVER I-85



DESIGN DATA

DAVIDSON COUNTY

- BRIDGE No. 280092 ADT 2019 =22,000
- BRIDGE No. 280137 ADT 2018 =11,500
- BRIDGE No. 280146 ADT 2018 =8,700
- BRIDGE No. 280147 ADT 2018 =29,250
- BRIDGE No. 280152 ADT 2018 =29,250
- BRIDGE No. 280154 ADT 2018 =29,250
- BRIDGE No. 280157 ADT 2018 =30,250

PROJECT LENGTH

DAVIDSON COUNTY

- BRIDGE No. 280092 =0.052 MILE
- BRIDGE No. 280137 =0.071 MILE
- BRIDGE No. 280146 =0.052 MILE
- BRIDGE No. 280147 =0.031 MILE
- BRIDGE No. 280152 =0.031 MILE
- BRIDGE No. 280154 =0.046 MILE
- BRIDGE No. 280157 =0.046 MILE

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

2018 STANDARD SPECIFICATIONS

LETTING DATE :

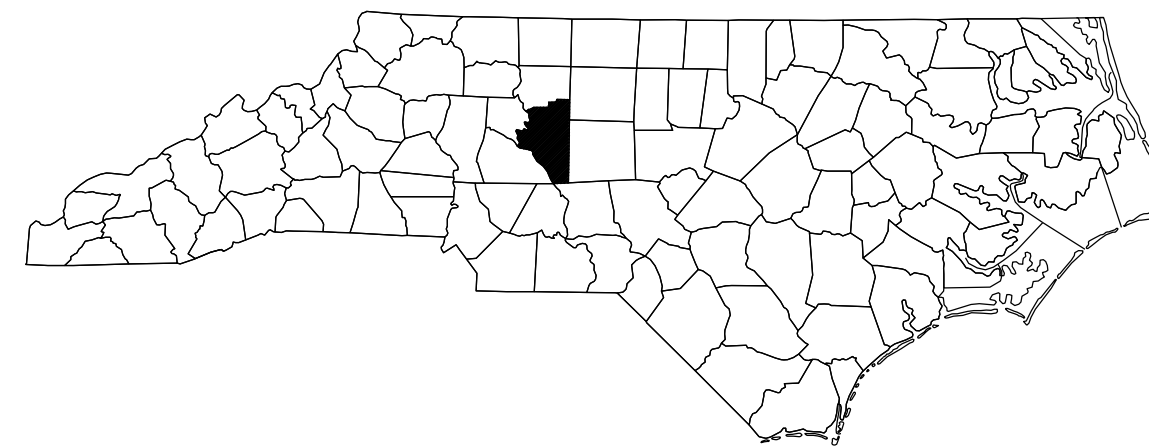
SEPTEMBER 20, 2022

ADAM A. COLE, P.E.
PROJECT ENGINEER

KRISHNA P. SEDAI, P. E.
PROJECT DESIGN ENGINEER

PROJECT: I-5950

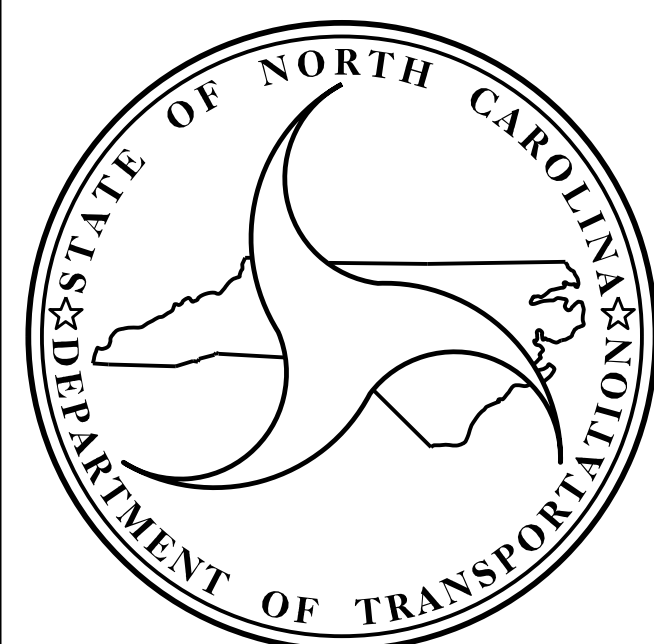
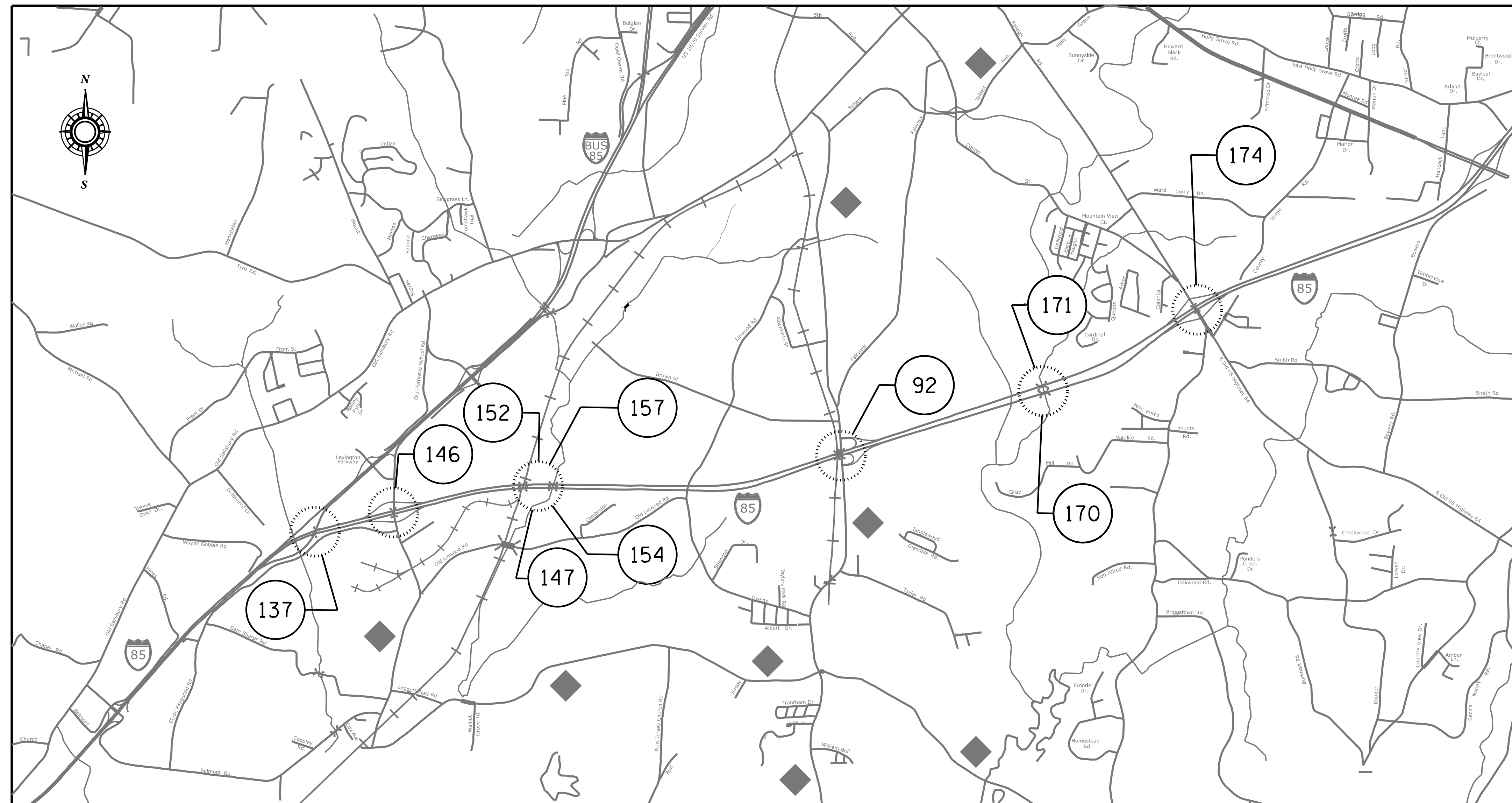
CONTRACT NO.: C204735



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5950	2	2
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45897.1.1	-	P.E.	
45897.3.1	0085055	CONST.	



DESIGN DATA

DAVIDSON COUNTY
 BRIDGE No. 280170 ADT 2018 = 30,250
 BRIDGE No. 280171 ADT 2018 = 30,250
 BRIDGE No. 280174 ADT 2018 = 14,000

PROJECT LENGTH

DAVIDSON COUNTY
 BRIDGE No. 280170 = 0.057 MILE
 BRIDGE No. 280171 = 0.057 MILE
 BRIDGE No. 280174 = 0.049 MILE

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

2018 STANDARD SPECIFICATIONS

LETTING DATE :

SEPTEMBER 20, 2022

ADAM A. COLE, P.E.
 PROJECT ENGINEER

KRISHNA P. SEDAI, P. E.
 PROJECT DESIGN ENGINEER

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

LOCATION: BRIDGE No. 280092 ON NC 8 OVER I-85
BRIDGE No. 280137 ON I-85B, US 29 & US 70 RAMP OVER I-85
BRIDGE No. 280146 ON NC 47 OVER I-85
BRIDGE No. 280147 ON I-85 NBL OVER SOUTHERN RAILROAD
BRIDGE No. 280152 ON I-85 SBL OVER SOUTHERN RAILROAD

INDEX OF STRUCTURES SHEETS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5950	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45897.1.1	-	P.E.	
45897.3.1	0085055	CONST.	

PROJECT: I-5950

CONTRACT NO.: C204735

SHEET No. DESCRIPTION

1 TITLE SHEET
2 TITLE SHEET
1A INDEX OF SHEET
1B INDEX OF SHEET
S-1 TOTAL BILL OF MATERIAL

STRUCTURE No. 280092

SHEET No. DESCRIPTION

S1-01 GENERAL DRAWING
S1-02 GENERAL DRAWING
S1-03 TYPICAL SECTION
S1-04 THRU S1-05 DECK SURFACE REPAIR
S1-06 JOINT DETAILS
S1-07 THRU S1-08 DECK UNDERSIDE REPAIR
S1-09 END BENT 1
S1-10 THRU S1-11 BENT 1
S1-12 END BENT 2

STRUCTURE No. 280147

SHEET No. DESCRIPTION

S4-01 GENERAL DRAWING
S4-02 GENERAL DRAWING
S4-03 TYPICAL SECTION
S4-04 DECK SURFACE REPAIR
S4-05 JOINT DETAILS
S4-06 THRU S4-08 DECK UNDERSIDE REPAIR
S4-09 END BENT 1
S4-10 THRU S4-11 BENT 1
S4-12 THRU S4-13 BENT 2
S4-14 END BENT 2

STRUCTURE No. 280137

SHEET No. DESCRIPTION

S2-01 GENERAL DRAWING
S2-02 GENERAL DRAWING
S2-03 TYPICAL SECTION
S2-04 THRU S2-07 DECK SURFACE REPAIR
S2-08 JOINT DETAILS
S2-09 JOINT DETAILS
S2-10 THRU S2-13 DECK UNDERSIDE REPAIR
S2-14 END BENT 1
S2-15 THRU S2-16 BENT 1
S2-17 THRU S2-18 BENT 2
S2-19 THRU S2-20 BENT 3
S2-21 END BENT 2

STRUCTURE No. 280152

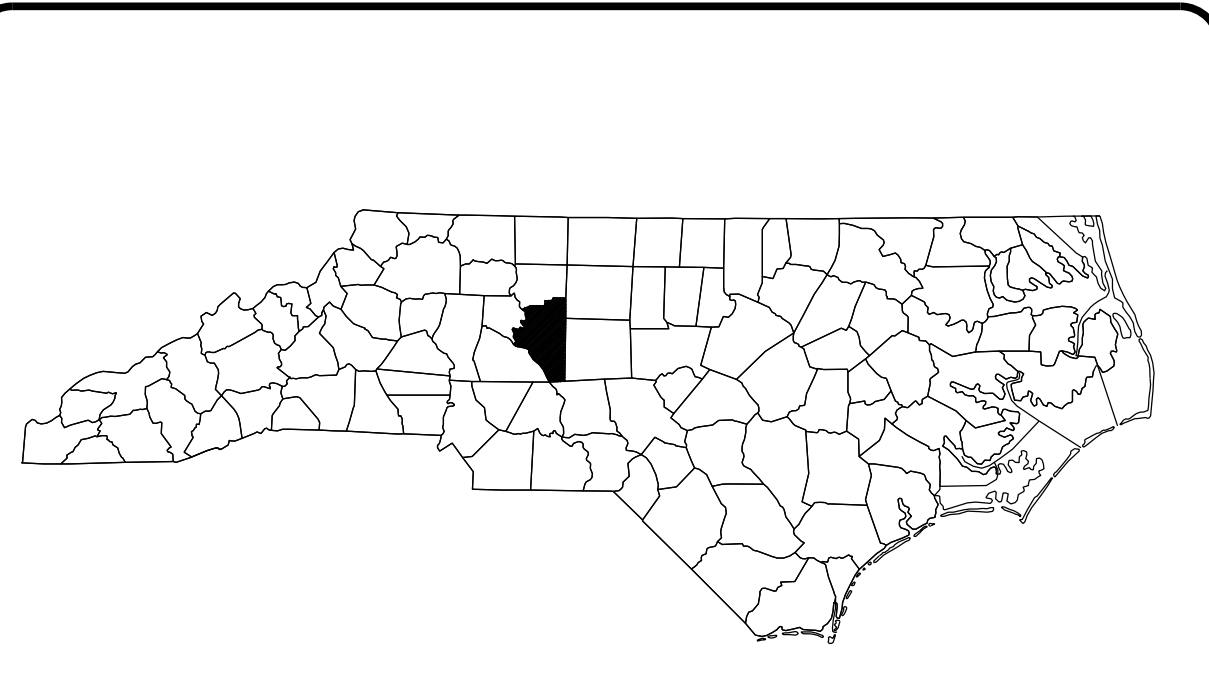
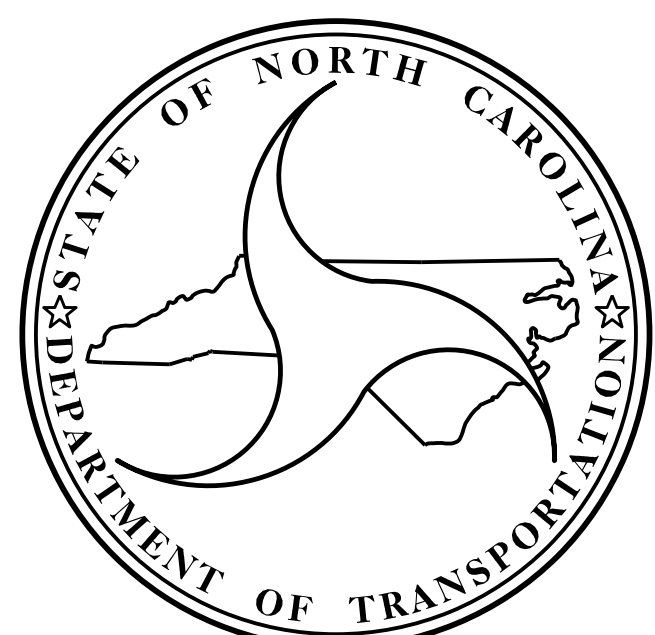
SHEET No. DESCRIPTION

S5-01 GENERAL DRAWING
S5-02 GENERAL DRAWING
S5-03 TYPICAL SECTION
S5-04 DECK SURFACE REPAIR
S5-05 JOINT DETAILS
S5-06 THRU S5-08 DECK UNDERSIDE REPAIR
S5-09 END BENT 1
S5-10 THRU S5-11 BENT 1
S5-12 THRU S5-13 BENT 2
S5-14 END BENT 2

STRUCTURE No. 280146

SHEET No. DESCRIPTION

S3-01 GENERAL DRAWING
S3-02 GENERAL DRAWING
S3-03 TYPICAL SECTION
S3-04 THRU S3-07 DECK UNDERSIDE REPAIR
S3-08 END BENT 1
S3-09 THRU S3-10 BENT 1
S3-11 THRU S3-12 BENT 2
S3-13 THRU S3-14 BENT 3
S3-15 END BENT 2



TYPE OF WORK:
BRIDGE PRESERVATION - DECK REPAIR, POLYMER CONCRETE (PC) OVERLAY, FOAM JOINT SEALS FOR PRESERVATION, POURABLE SILICONE JOINT SEALANT, PAINTING NON-WEATHERING STEEL BEAMS, PAINTING EXISTING BEARINGS, EPOXY COATING AND DEBRIS REMOVAL AND SUBSTRUCTURE REPAIR.

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

LOCATION: BRIDGE No. 280154 ON I-85 NBL OVER SWEARING CREEK
BRIDGE No. 280157 ON I-85 SBL OVER SWEARING CREEK
BRIDGE No. 280170 ON I-85 NBL OVER ABBOTS CREEK
BRIDGE No. 280171 ON I-85 SBL OVER ABBOTS CREEK
BRIDGE No. 280174 ON E. OLD US-64 (SR2205) OVER I-85

INDEX OF STRUCTURES SHEETS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5950	1B	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45897.1.1	-	P.E.	
45897.3.1	0085055	CONST.	

PROJECT: I-5950

CONTRACT NO.: C204735

STRUCTURE No. 280154

<u>SHEET No.</u>	<u>DESCRIPTION</u>
S6-01	GENERAL DRAWING
S6-02	GENERAL DRAWING
S6-03	TYPICAL SECTION
S6-04	DECK SURFACE REPAIR
S6-05	JOINT DETAILS
S6-06 THRU S6-08	DECK UNDERSIDE REPAIR
S6-09	END BENT 1
S6-10 THRU S6-11	BENT 1
S6-12 THRU S6-13	BENT 2
S6-14	END BENT 2
S6-15	CLASS B RIP RAP

STRUCTURE No. 280157

<u>SHEET No.</u>	<u>DESCRIPTION</u>
S7-01	GENERAL DRAWING
S7-02	GENERAL DRAWING
S7-03	TYPICAL SECTION
S7-04	DECK SURFACE REPAIR
S7-05	JOINT DETAILS
S7-06 THRU S7-08	DECK UNDERSIDE REPAIR
S7-09	END BENT 1
S7-10 THRU S7-11	BENT 1
S7-12 THRU S7-13	BENT 2
S7-14	END BENT 2
S7-15	CLASS B RIP RAP

STRUCTURE No. 280170

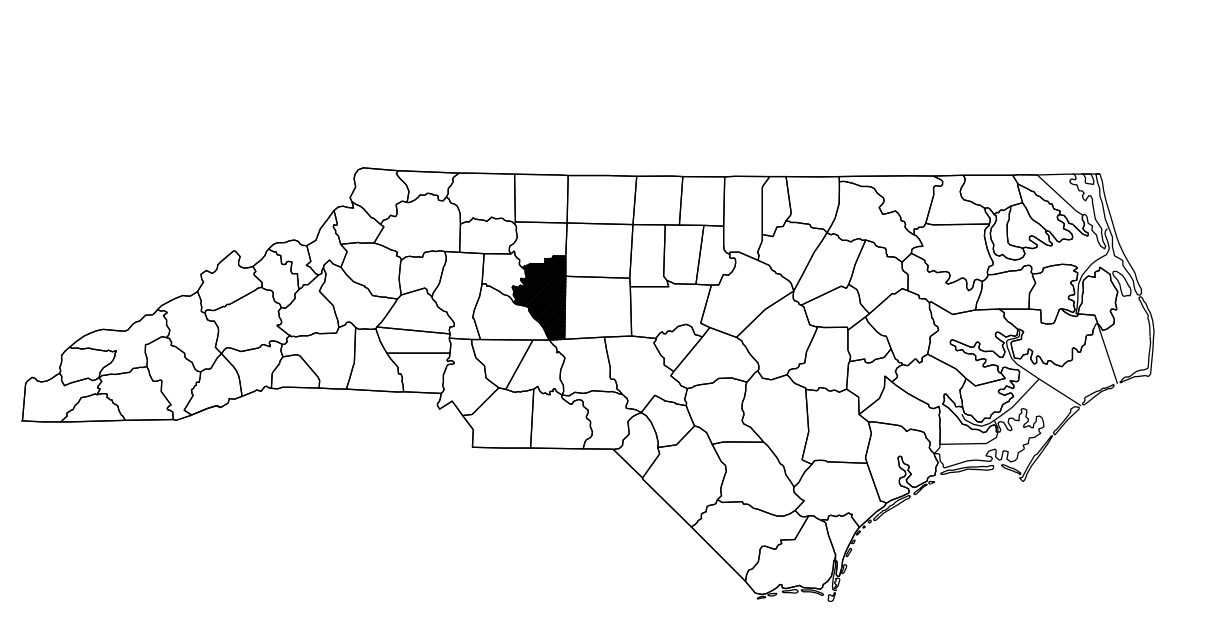
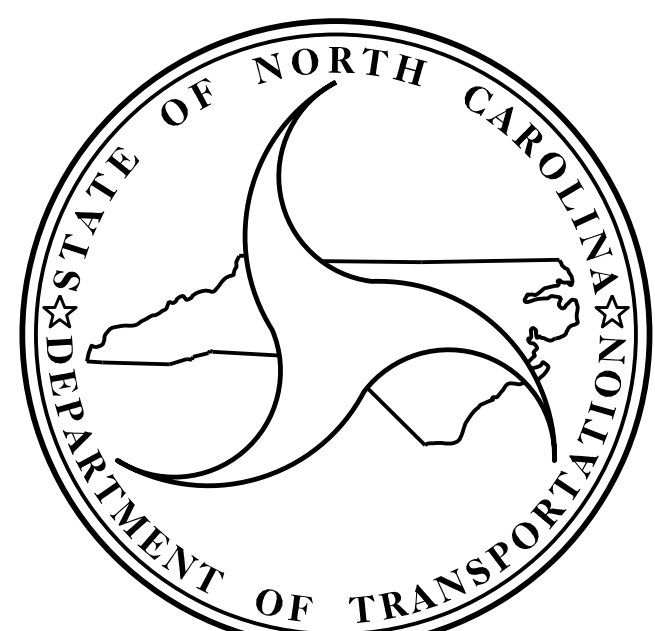
<u>SHEET No.</u>	<u>DESCRIPTION</u>
S8-01	GENERAL DRAWING
S8-02	GENERAL DRAWING
S8-03	TYPICAL SECTION
S8-04	DECK SURFACE REPAIR
S8-05	JOINT DETAILS
S8-06 THRU S8-08	DECK UNDERSIDE REPAIR
S8-09	END BENT 1
S8-10 THRU S8-11	BENT 1
S8-12 THRU S8-13	BENT 2
S8-14	END BENT 2
S8-15	CLASS B RIP RAP

STRUCTURE No. 280171

<u>SHEET No.</u>	<u>DESCRIPTION</u>
S9-01	GENERAL DRAWING
S9-02	GENERAL DRAWING
S9-03	TYPICAL SECTION
S9-04	DECK SURFACE REPAIR
S9-05	JOINT DETAILS
S9-06 THRU S9-08	DECK UNDERSIDE REPAIR
S9-09	END BENT 1
S9-10 THRU S9-11	BENT 1
S9-12 THRU S9-13	BENT 2
S9-14	END BENT 2
S9-15	CLASS B RIP RAP

STRUCTURE No. 280174

<u>SHEET No.</u>	<u>DESCRIPTION</u>	<u>SHEET No.</u>	<u>DESCRIPTION</u>
S10-01	GENERAL DRAWING	SD-1	OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS
S10-02	GENERAL DRAWING	SD-2	TYPICAL CAP AND COLUMN REPAIR DETAILS
S10-03	TYPICAL SECTION		
S10-04 THRU S10-05	DECK SURFACE REPAIR		
S10-06	JOINT DETAILS		
S10-07 THRU S10-08	DECK UNDERSIDE REPAIR		
S10-09	END BENT 1		
S10-10 THRU S10-11	BENT 1		
S10-12	END BENT 2		



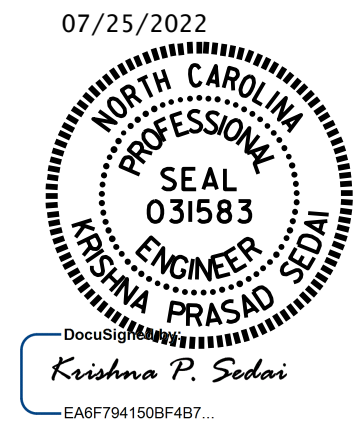
TYPE OF WORK:
BRIDGE PRESERVATION - DECK REPAIR, POLYMER CONCRETE (PC) OVERLAY, FOAM JOINT SEALS FOR PRESERVATION, POURABLE SILICONE JOINT SEALANT, PAINTING NON-WEATHERING STEEL BEAMS, PAINTING EXISTING BEARINGS, EPOXY COATING AND DEBRIS REMOVAL AND SUBSTRUCTURE REPAIR.

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

TOTAL BILL OF MATERIAL																	
BRIDGE NO.	GROOVING BRIDGE FLOORS	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	RIP RAP CLASS B	GEOTEXTILE FOR DRAINAGE	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	CLEANING & REPAINTING OF BRIDGE NO. -----	PAINTING CONTAINMENT FOR BRIDGE NO. -----	FOAM JOINT SEALS FOR PRESERVATION	POURABLE SILICONE JOINT SEALANT	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	FLOWABLE FILL	CONCRETE REPAIRS (CLASS B)	CONCRETE MEDIAN REPLACEMENT
	SQ. FT.	LUMP SUM	SQ. YDS.	TON	SQ. YDS.	CU. FT.	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	CU. YDS.	CU. YDS.	CU. YDS.	CU. FT.	SQ. FT.
280092	19,432.0	-	15.7	-	-	1.8	13.3	-	-	-	132.2	-	82.5	82.5	-	-	3,351.3
280137	14,766.0	LUMP SUM	25.8	-	-	8.8	206.0	2.3	LUMP SUM	LUMP SUM	159.8	66.5	62.2	62.2	-	10.0	-
280146	-	LUMP SUM	-	-	-	11.5	231.5	13.5	LUMP SUM	LUMP SUM	-	-	-	-	-	2.7	-
280147	11,336.0	LUMP SUM	16.7	-	-	17.7	0.6	23.5	LUMP SUM	LUMP SUM	-	118.8	46.5	46.5	-	-	-
280152	11,315.0	LUMP SUM	13.2	-	-	1.8	9.2	15.5	LUMP SUM	LUMP SUM	118.8	-	46.4	46.4	-	-	-
280154	15,110.0	-	12.8	585.0	650.0	-	64.2	6.0	-	-	116.0	-	63.1	63.1	-	-	-
280157	15,328.0	-	15.9	496.0	551.0	-	4.4	25.3	-	-	116.6	-	62.8	62.8	-	-	-
280170	17,853.0	-	13.5	80.0	89.0	-	5.2	106.0	-	-	116.6	-	73.0	73.0	3.0	-	-
280171	17,853.0	-	12.4	155.0	172.0	-	10.1	42.0	-	-	116.6	-	73.0	73.0	5.0	-	-
280174	16,198.0	-	11.5	-	-	0.8	11.1	-	-	-	96.0	-	62.0	62.0	-	-	1,192.0
TOTAL	139,191.0	LUMP SUM	137.5	1,316.0	1,462.0	42.4	555.6	234.1	LUMP SUM	LUMP SUM	972.6	185.3	571.5	571.5	8.0	12.7	4,543.3

TOTAL BILL OF MATERIAL CONTINUED						
BRIDGE NO.	EPOXY COATING	CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY	PLACING & FINISHING POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	CLEANING & PAINTING EXISTING BEARING PLATES
	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	EA
280092	506.0	15.7	2,378.3	2,378.3	2,378.3	20.0
280137	828.0	25.8	1,792.0	1,792.0	1,792.0	-
280146	565.0	-	-	-	-	-
280147	1292.7	16.7	1,340.0	1,340.0	1,340.0	-
280152	1293.6	13.2	1,338.0	1,338.0	1,338.0	-
280154	1265.9	12.8	1,816.2	1,816.2	1,816.2	16.0
280157	1304.0	15.9	1,798.0	1,798.0	1,798.0	16.0
280170	536.8	13.5	2,102.2	2,102.2	2,102.2	16.0
280171	536.8	12.4	2,102.2	2,102.2	2,102.2	16.0
280174	937.8	11.5	1,788.2	1,788.2	1,788.2	16.0
TOTAL	9,066.6	137.5	16,455.1	16,455.1	16,455.1	100.0

PROJECT NO. I-5950
DAVIDSON COUNTY
BRIDGE NO. 280092, 280137, 280146
280147, 280152, 280154
280157, 280170, 280171, 280174



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TOTAL BILL OF MATERIAL

DRAWN BY : E. BAYISSA DATE : 05/2022
CHECKED BY : A. SORSENGINH DATE : 05/2022

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

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

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 4/22/2021.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.

SCOPE OF WORK

PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.

OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINT SEALS FOR PRESERVATION AT END BENTS.

GROOVE PC BRIDGE DECK.

CLEAN AND PAINT EXISTING BEARINGS AT END BENTS.

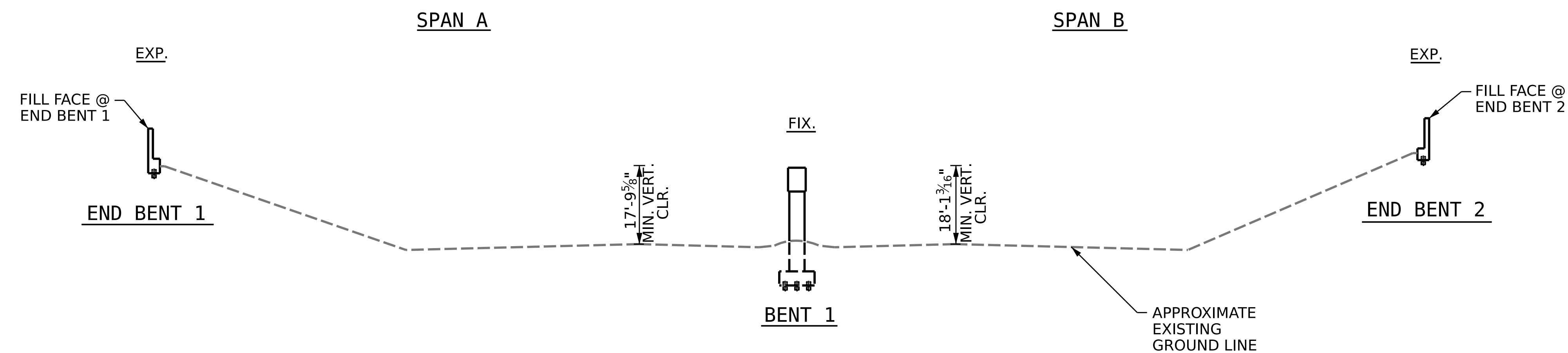
REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.

EPOXY RESIN INJECTION OF CONCRETE CRACKS.

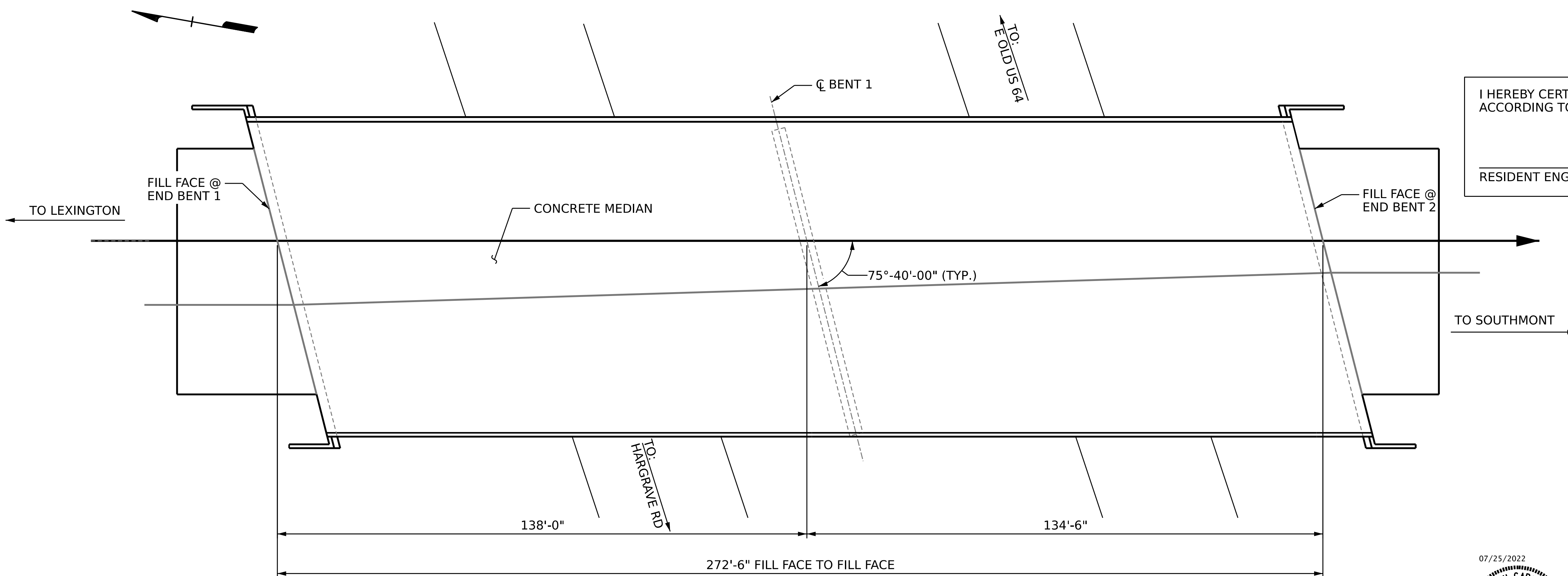
REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.

PROPERLY PREPARE SPALLED AREAS IN EXISTING END BENT AND BENT AND PERFORM SHOTCRETE AND CONCRETE REPAIRS.

REMOVE AND REPLACE CONCRETE MEDIAN.



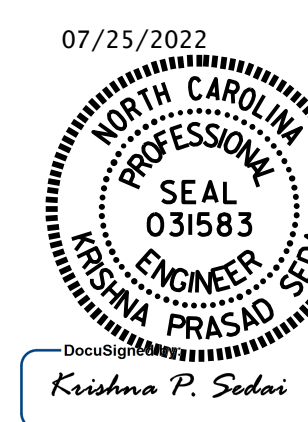
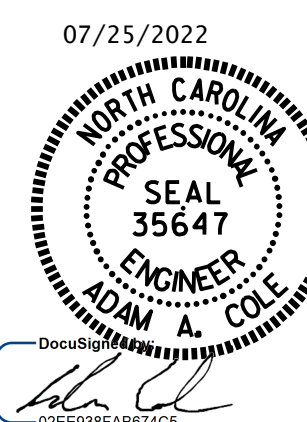
SECTION ALONG ORIGINAL GRADE LINE



PLAN

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

RESIDENT ENGINEER _____ DATE _____



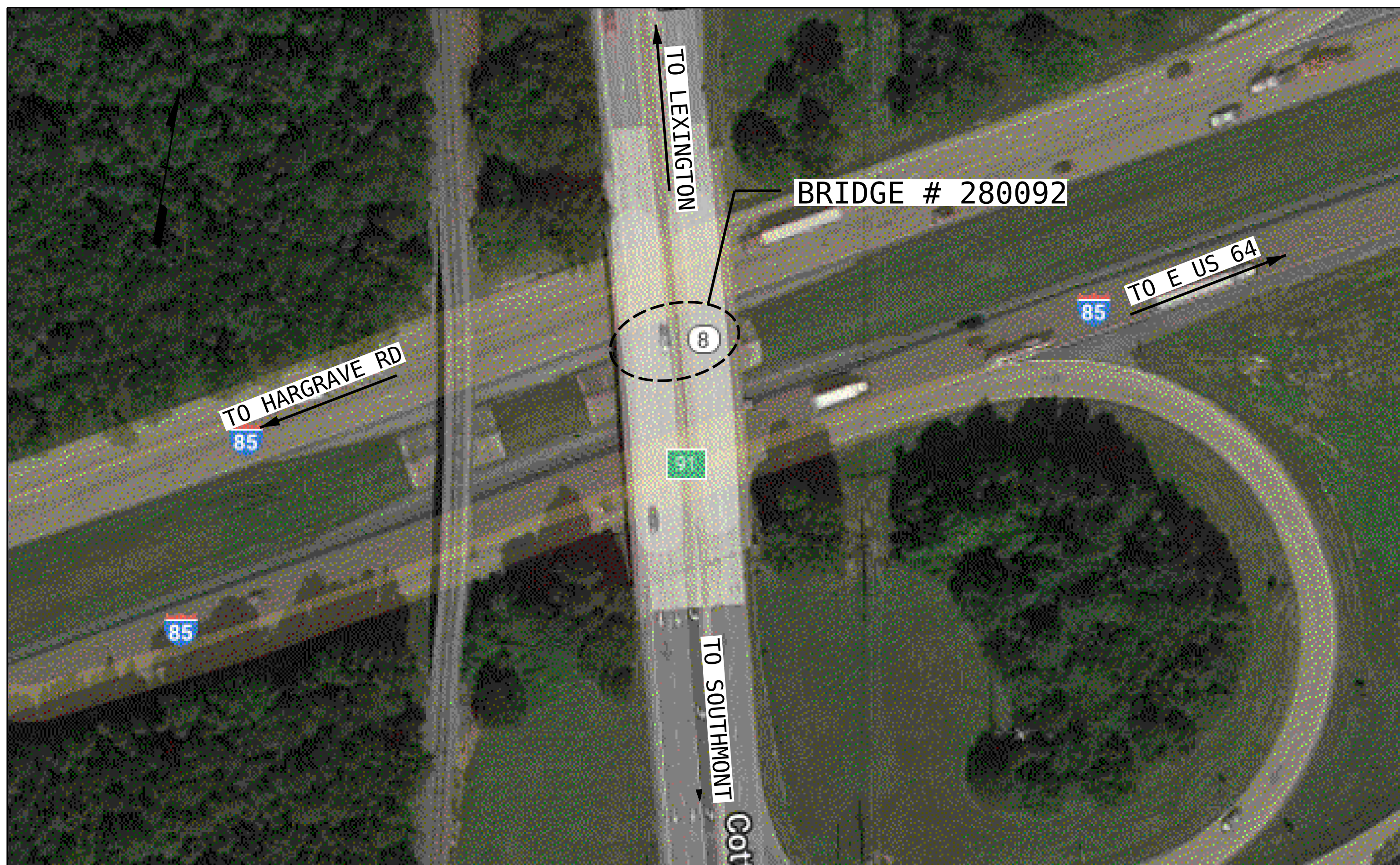
PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON NC 8
 OVER I-85

REVISIONS						SHEET NO. S1-01
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 12
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : K. PUROHIT DATE : 2/2022
 CHECKED BY : A. SORSENGINH DATE : 4/2022



BRIDGE 280092 LOCATION SKETCH

NOTES :

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

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

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OF ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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

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

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPACIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR CONCRETE MEDIAN REPLACEMENT, SEE SPECIAL PROVISIONS.

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

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

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

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

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

THE EXISTING BRIDGE DECK SHALL BE REPAIRED AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY. UNLESS OTHERWISE APPROVED, SUCH LOCATIONS SHALL BE REPAIRED WITH POLYMER CONCRETE.

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

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

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

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR ANCHOR BOLT NUT REPLACEMENT AND TIGHTENING, SEE SPECIAL PROVISIONS.

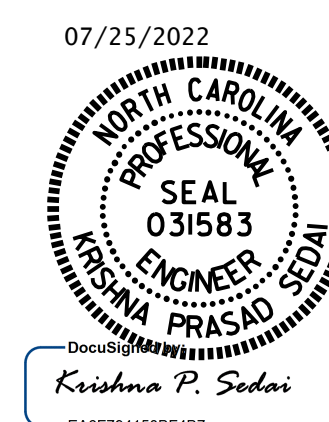
FOR CLEANING AND PAINTING EXISTING BEARING PLATES, SEE SPECIAL PROVISIONS.

BRIDGE COORDINATES		
BRIDGE No.	LATITUDE	LONGITUDE
280092	35°-46'-49"	80°-15'-35.88"

SAMPLE BAR REPLACEMENT	
SIZE	LENGHT
#3	6'-2"
#4	7'-4"
#5	8'-6"
#6	9'-8"
#7	10'-10"
#8	12'-0"
#9	13'-2"
#10	14'-6"
#11	15'-10"

TOTAL BILL OF MATERIAL														
BRIDGE NO. 280092	GROOVING BRIDGE FLOORS	CLASS II SURFACE PREPARATION	CONCRETE REPAIRS	SHOTCRETE REPAIRS	FOAM JOINT SEALS FOR PRESERVATION	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	CONCRETE MEDIAN REPLACEMENT	EPOXY COATING	CONCRETE FOR DECK REPAIR FOR POLYMER CONCRETE OVERLAY	PLACING & FINISHING POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	CLEANING & PAINTING EXISTING BEARING PLATES
	SQ. FT.	SQ. YD.	CU. FT.	CU. FT.	LIN. FT.	CU. YD.	CU. YD.	SQ. FT.	SQ. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	EA.
TOTAL	19432.0	15.7	1.8	13.3	132.2	82.5	82.5	3351.3	506.0	15.7	2378.3	2378.3	2378.3	20

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

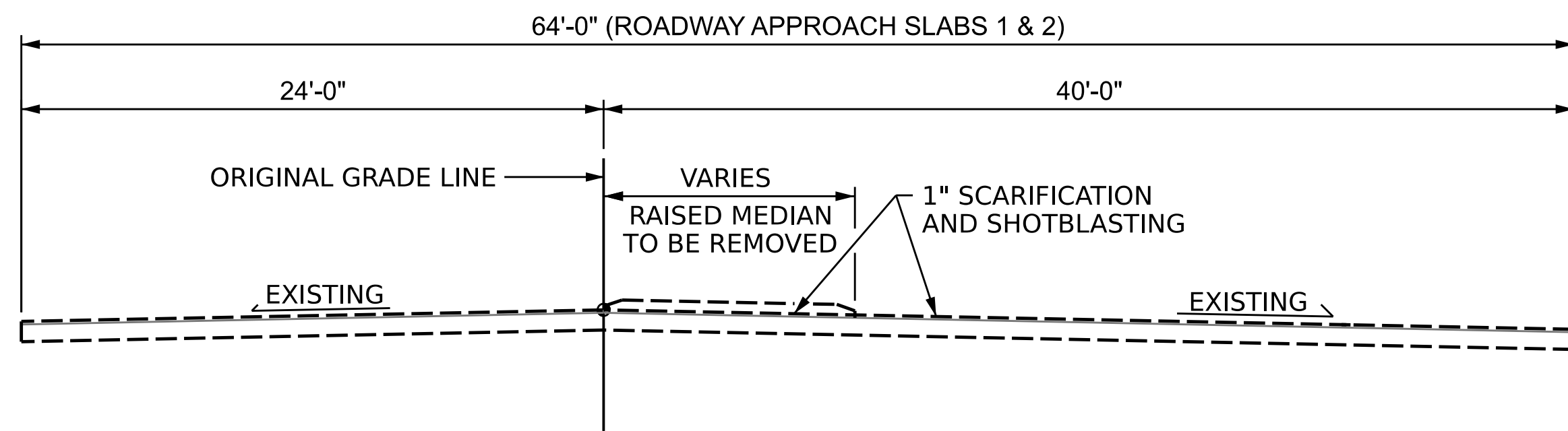
GENERAL DRAWING

FOR BRIDGE ON NC 8
 OVER I-85

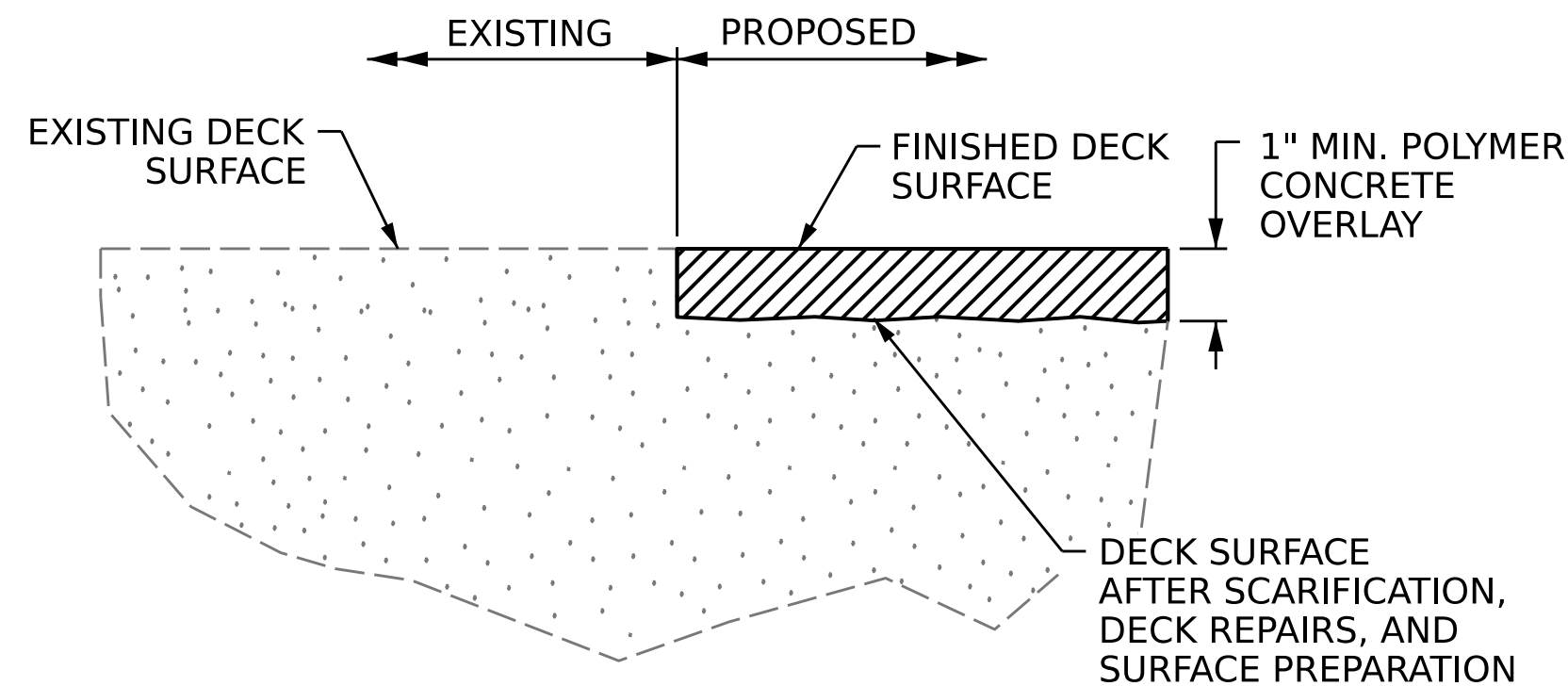
DRAWN BY : K. PUROHIT DATE : 3/2022
 CHECKED BY : A. SORSENGINH DATE : 4/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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



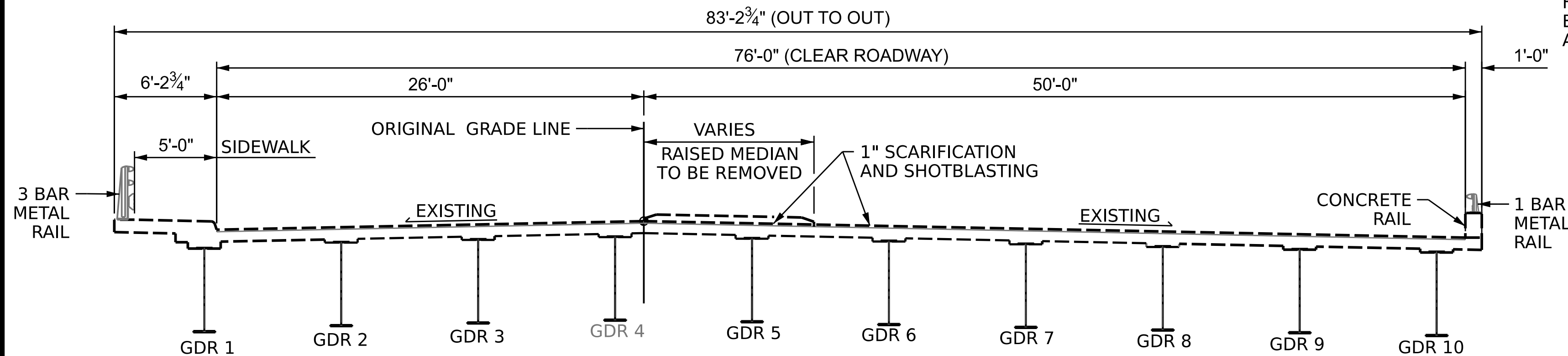
TYPICAL SECTION - APPROACH SLAB
(EXISTING)



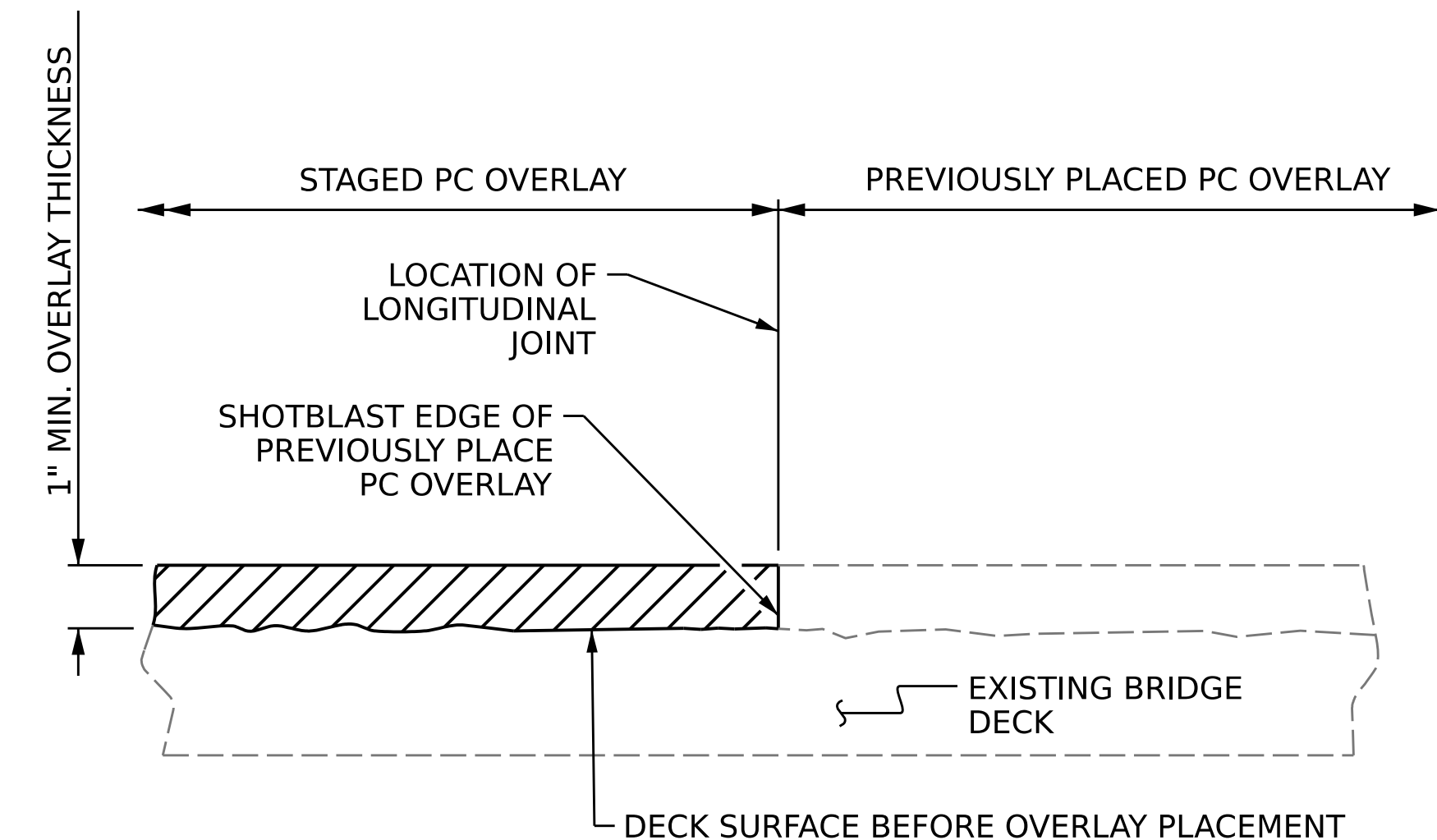
DETAIL FOR POLYMER CONCRETE OVERLAY

FINISHED SURFACE ELEVATION SHALL MATCH EXISTING CONCRETE SURFACE ELEVATION. ACTUAL THICKNESS OF PC OVERLAY MAY VARY.

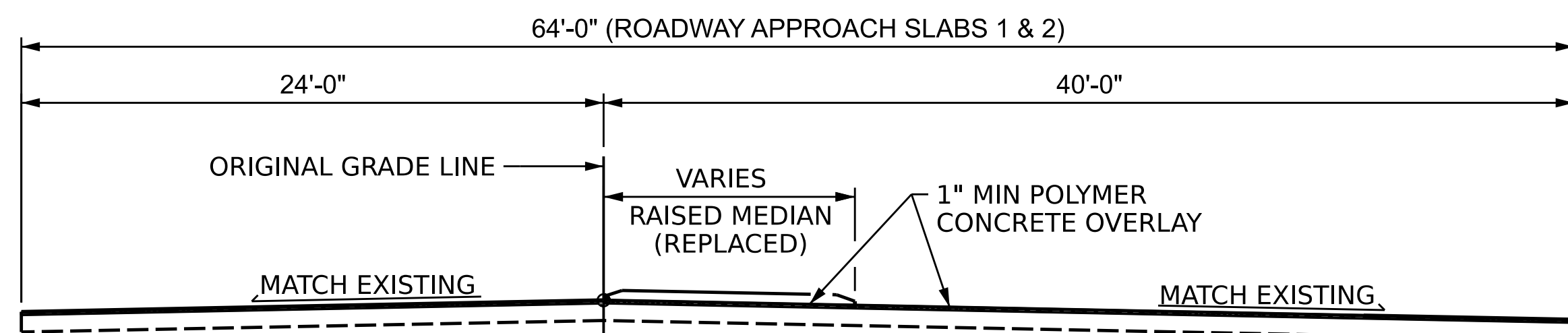
NOTES
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF POLYMER CONCRETE (PC) OVERLAY SYSTEM AND SURFACE PREPARATION.
FOR REMOVING AND REPLACING RAISED MEDIAN, SEE DETAIL "A" AND SPECIAL PROVISIONS.



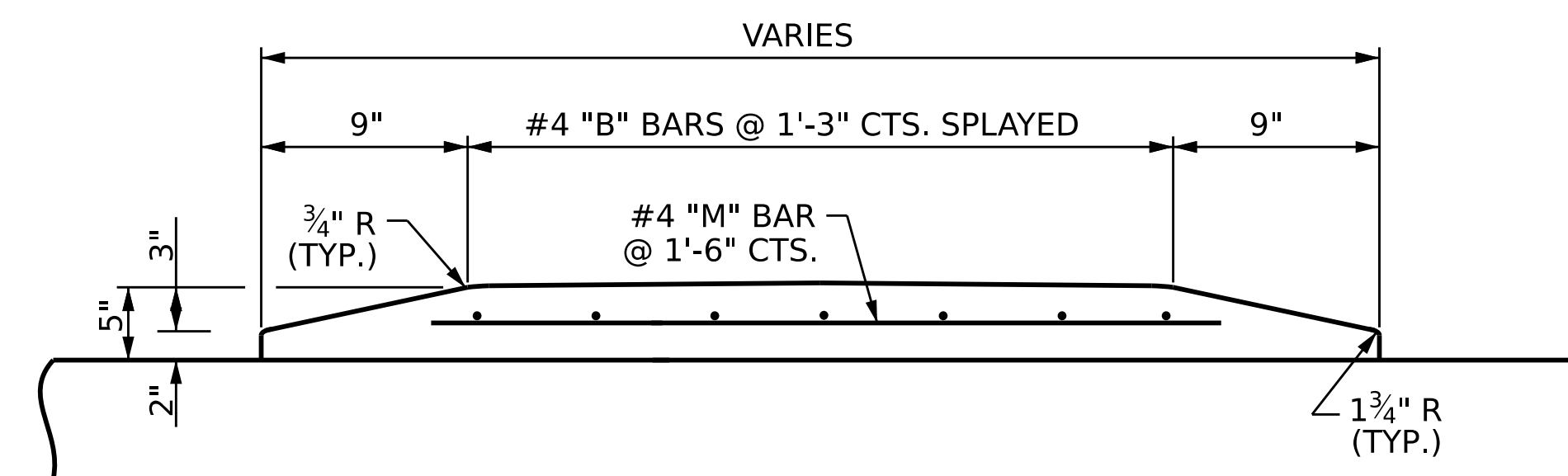
TYPICAL SECTION
(EXISTING)



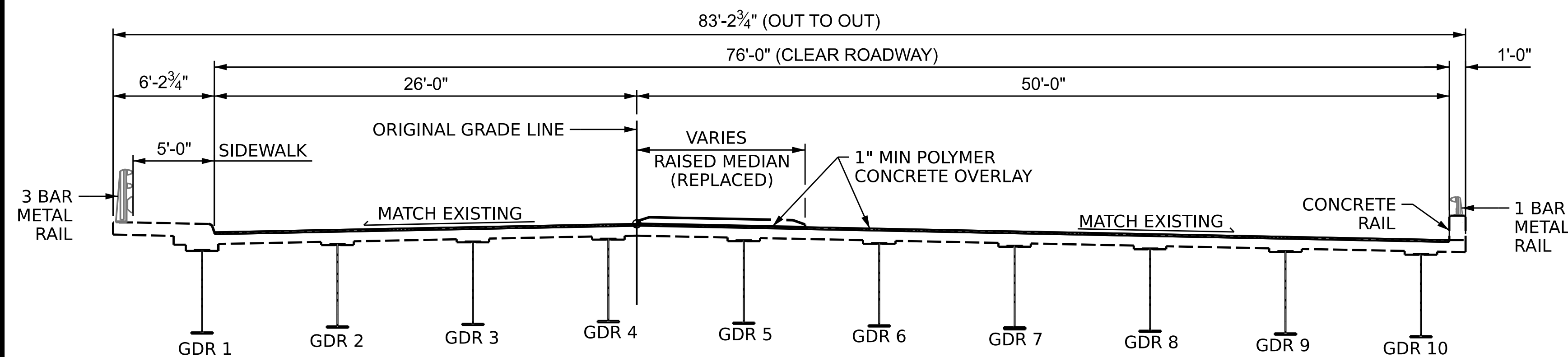
STAGED PC OVERLAY JOINT



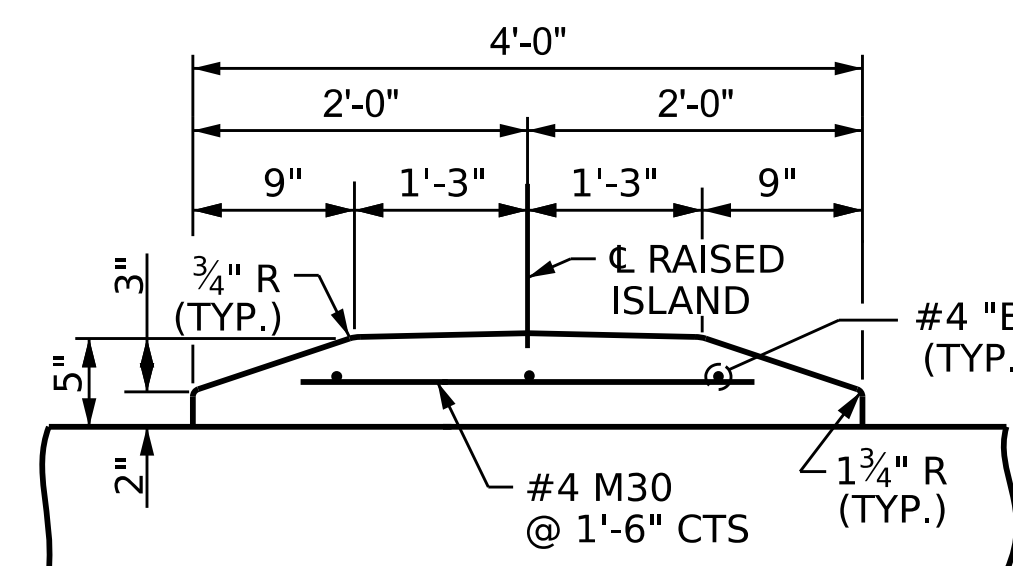
TYPICAL SECTION - APPROACH SLAB
(PROPOSED)



DETAIL "A"

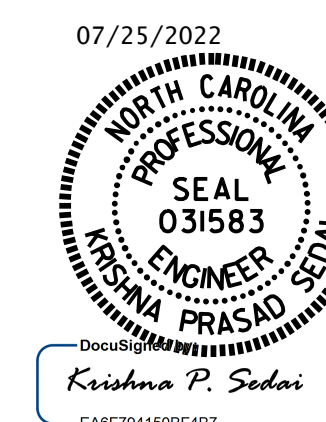


TYPICAL SECTION
(PROPOSED)



DETAIL "A"
(@ END BENT 2)

PROJECT NO. **I-5950**
DAVIDSON COUNTY
BRIDGE NO. **280092**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
TYPICAL SECTION AND SURFACE PREPARATION DETAILS

DRAWN BY : **K. PUROHIT** DATE : **3/2022**
CHECKED BY : **A. SORSENGINH** DATE : **4/2022**

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS: 12

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

TOP OF DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT.) SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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

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

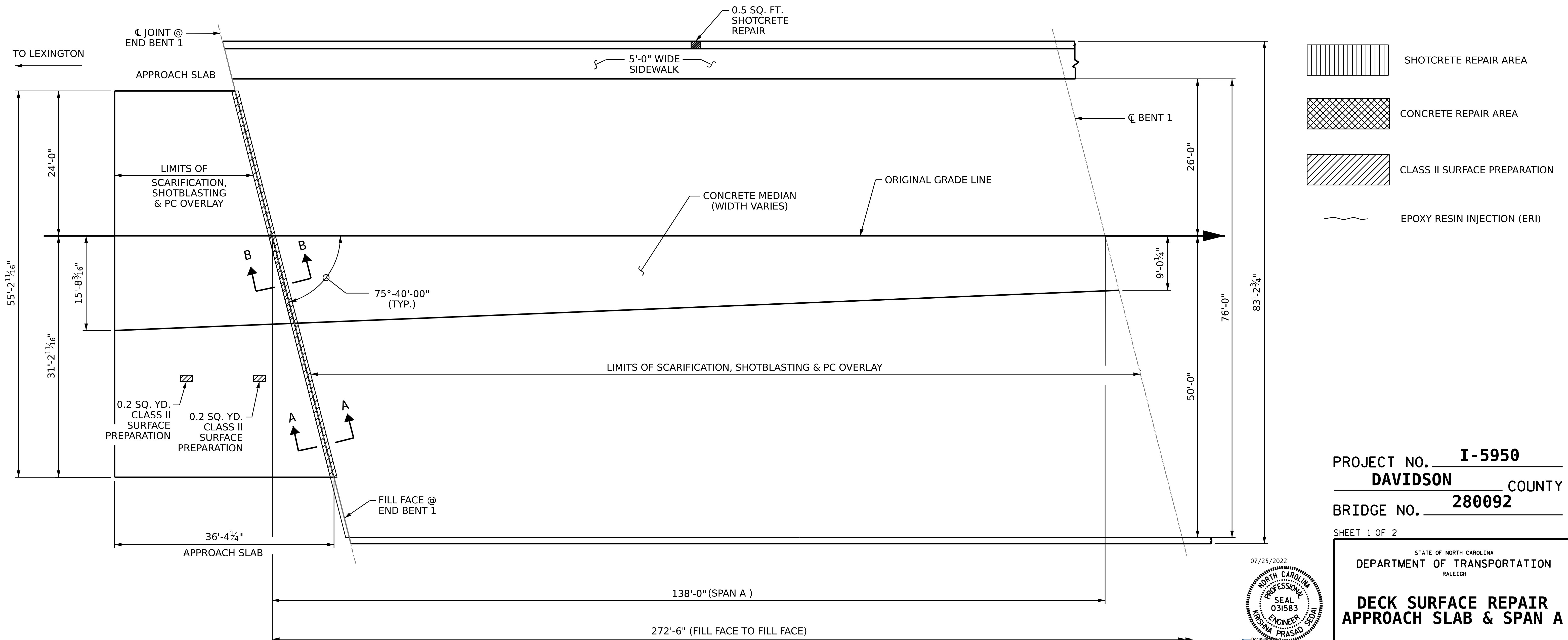
FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING AND FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

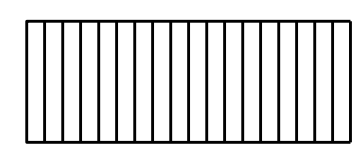
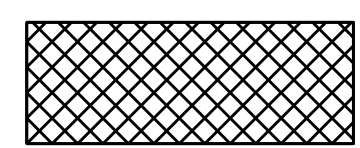
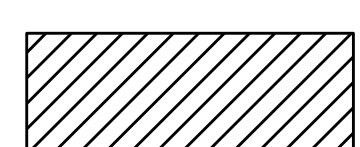

AS-BUILT REPAIR QUANTITY TABLE

APPROACH SLAB 1				
	ESTIMATE		ACTUAL	
SCARIFYING BRIDGE DECK	150.0	SQ.YD.		
SHOTBLASTING BRIDGE DECK	150.0	SQ.YD.		
CLASS II SURFACE PREPARATION	4.1	SQ. YD.		
CONCRETE DECK REPAIR FOR PC OVERLAY	4.1	SQ. YD.		
POLYMER CONCRETE MATERIALS	5.2	CU.YD.		
PLACING & FINISHING PC OVERLAY	150.0	SQ.YD.		
GROOVING BRIDGE FLOORS	1193.0	SQ. FT.		
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA	VOLUME	AREA	VOLUME
	SQ. FT.	CU. FT.	SQ. FT.	CU. FT.
CONCRETE PARAPET				

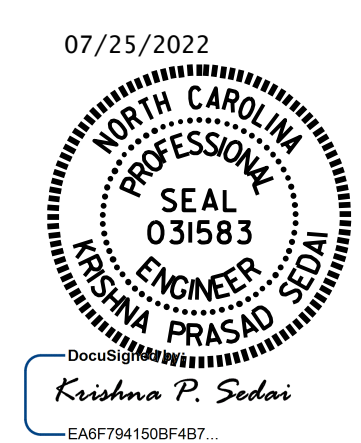
AS-BUILT REPAIR QUANTITY TABLE

SPAN A				
	ESTIMATE		ACTUAL	
SCARIFYING BRIDGE DECK	997.0	SQ.YD.		
SHOTBLASTING BRIDGE DECK	997.0	SQ.YD.		
CLASS II SURFACE PREPARATION	3.7	SQ. YD.		
CONCRETE DECK REPAIR FOR PC OVERLAY	3.7	SQ. YD.		
POLYMER CONCRETE MATERIALS	34.6	CU.YD.		
PLACING & FINISHING PC OVERLAY	997.0	SQ.YD.		
GROOVING BRIDGE FLOORS	8030.0	SQ. FT.		
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA	VOLUME	AREA	VOLUME
	SQ. FT.	CU. FT.	SQ. FT.	CU. FT.
SHOTCRETE REPAIR - CONCRETE PARAPET	0.5	0.2		



-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  CLASS II SURFACE PREPARATION
-  EPOXY RESIN INJECTION (ERI)

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**
 SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DECK SURFACE REPAIR
 APPROACH SLAB & SPAN A**

DRAWN BY : K. PUROHIT DATE : 3/2022
 CHECKED BY : A. SORSENGINH DATE : 5/2022

APPROACH SLAB & SPAN A

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 SIGNATURES COMPLETED

REVISIONS					SHEET NO. S1-04
NO.	BY:	DATE:	NO.	DATE:	
1			3		TOTAL SHEETS 12
2			4		

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

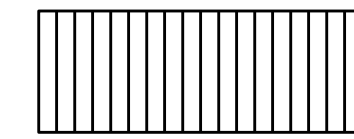
THE BOUNDARIES OF AREAS IDENTIFIED FOR CLASS II (PARTIAL DEPTH) SURFACE PREPARATION ARE APPROXIMATE AND MAY NOT REFLECT ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED AT THE PROJECT SITE.

TOP OF DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT.) SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

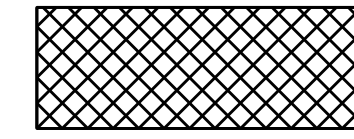
FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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

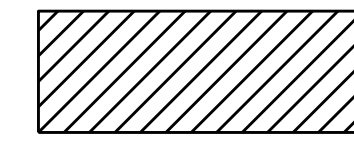
FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING AND FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISIONS.



SHOTCRETE REPAIR AREA



CONCRETE REPAIR AREA



CLASS II SURFACE PREPARATION



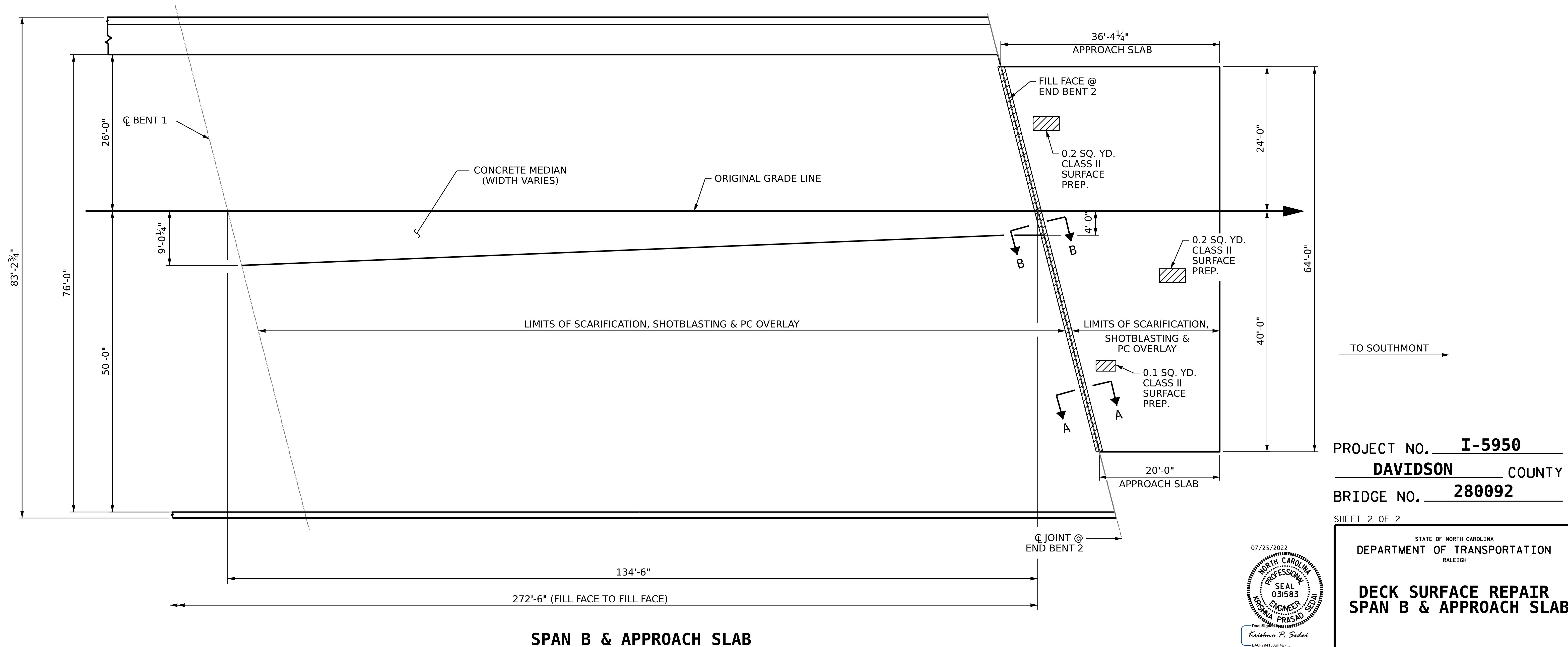
EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE

SPAN B				
	ESTIMATE		ACTUAL	
SCARIFYING BRIDGE DECK	1035.2 SQ.YD.			
SHOTBLASTING BRIDGE DECK	1035.2 SQ.YD.			
CLASS II SURFACE PREPARATION	3.7 SQ. YD.			
CONCRETE DECK REPAIR FOR PC OVERLAY	3.7 SQ. YD.			
POLYMER CONCRETE MATERIALS	35.9 CU.YD.			
PLACING & FINISHING PC OVERLAY	1035.2 SQ.YD.			
GROOVING BRIDGE FLOORS	8506.0 SQ. FT.			
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE PARAPET				

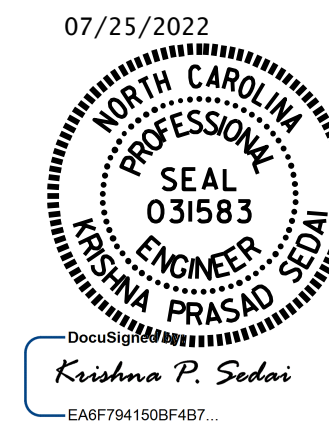
AS-BUILT REPAIR QUANTITY TABLE

APPROACH SLAB 2				
	ESTIMATE		ACTUAL	
SCARIFYING BRIDGE DECK	196.1 SQ.YD.			
SHOTBLASTING BRIDGE DECK	196.1 SQ.YD.			
CLASS II SURFACE PREPARATION	4.2 SQ. YD.			
CONCRETE DECK REPAIR FOR PC OVERLAY	4.2 SQ. YD.			
POLYMER CONCRETE MATERIALS	6.8 CU.YD.			
PLACING & FINISHING PC OVERLAY	196.1 SQ.YD.			
GROOVING BRIDGE FLOORS	1703.0 SQ. FT.			
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE PARAPET				



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**

SHEET 2 OF 2



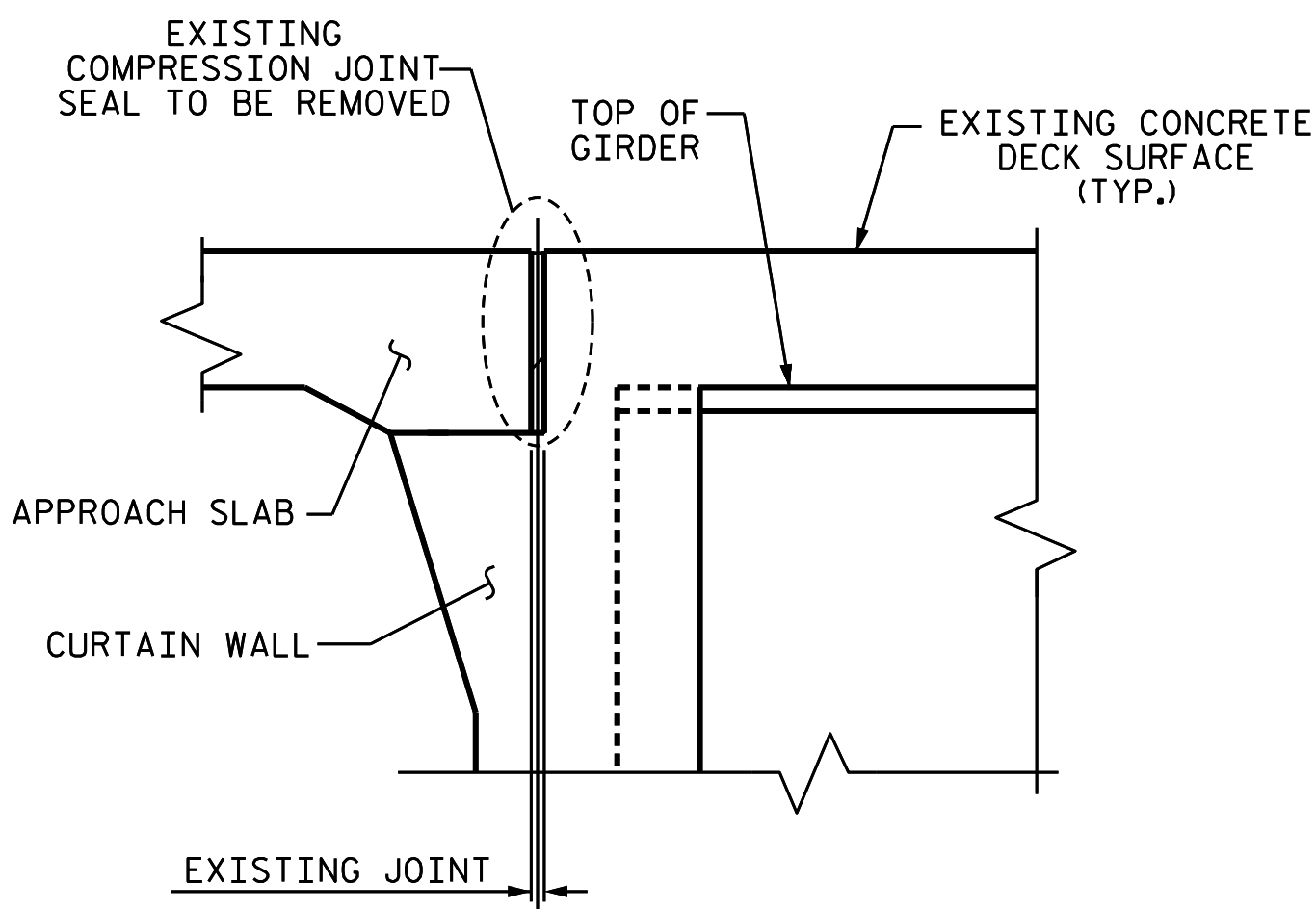
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DECK SURFACE REPAIR
 SPAN B & APPROACH SLAB**

REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	DATE:
1			3	
2			4	

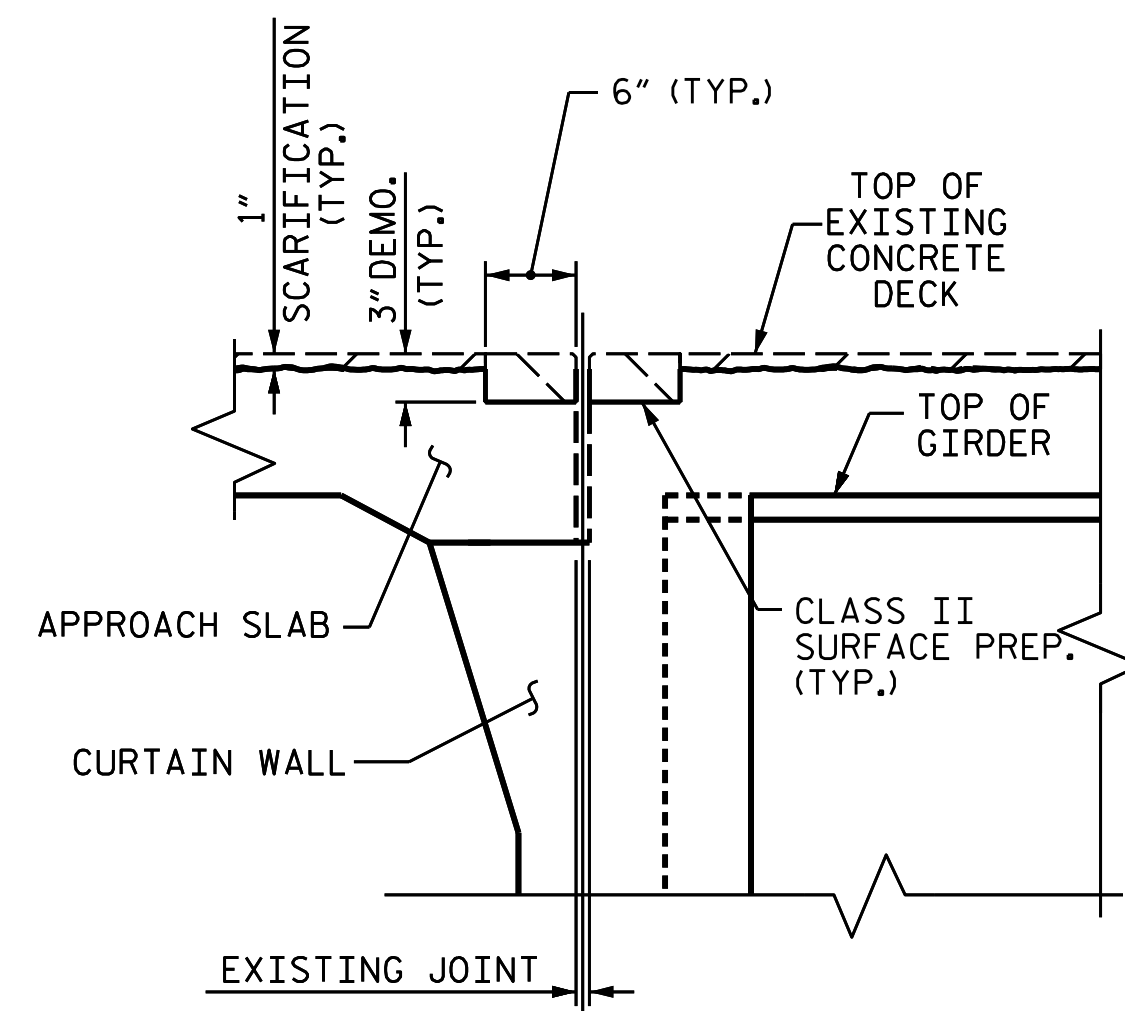
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DRAWN BY : **K. PUROHIT** DATE : **3/2022**
 CHECKED BY : **A. SORSENGINH** DATE : **5/2022**

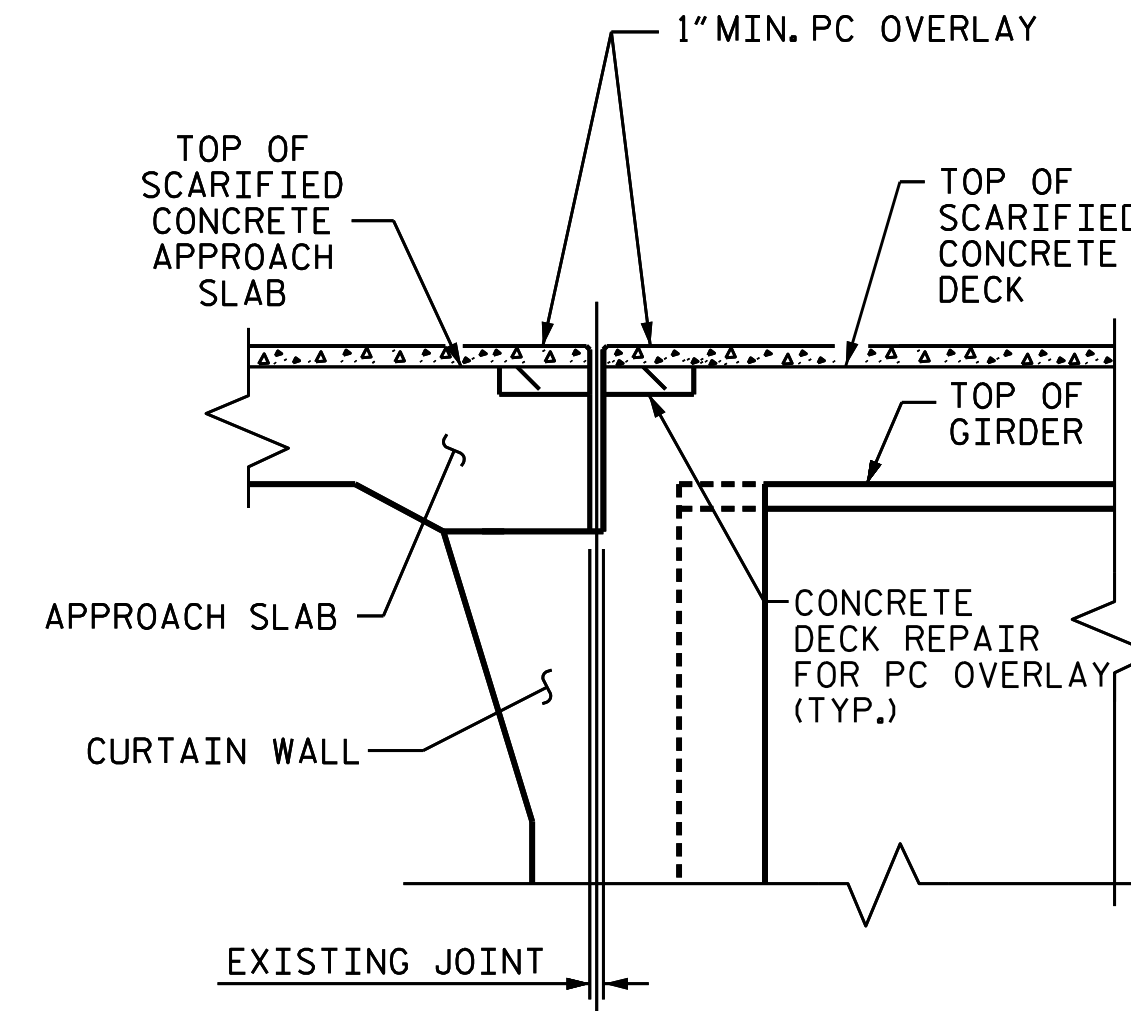
1/25/2022 S:\DPG3\I-5950\Final Plans\401_009_I5950_SMU.DSR_S05_280092.dgn ksedai



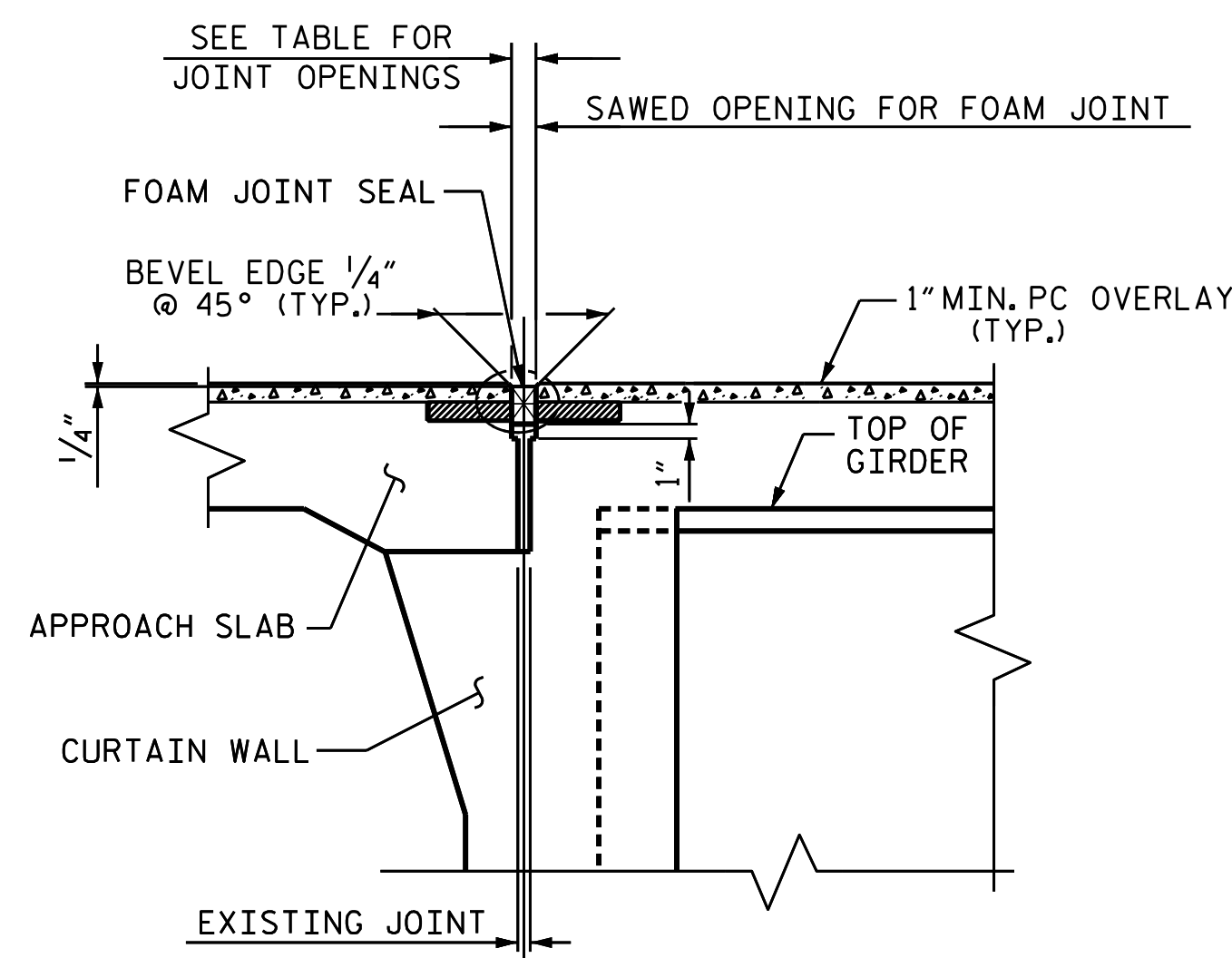
EXISTING JOINT



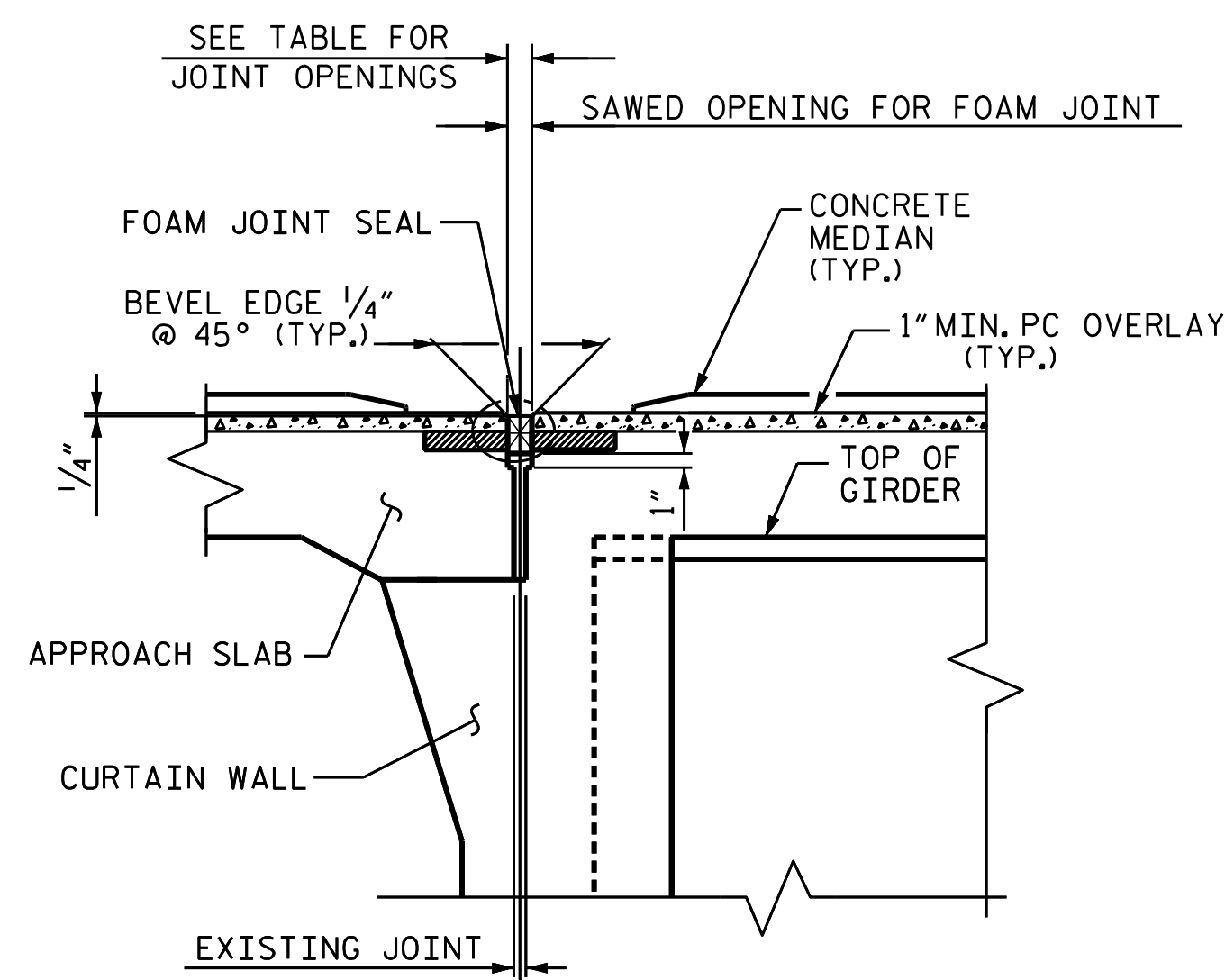
MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PC OVERLAY



PROPOSED FOAM JOINT SEAL SECTION A-A



PROPOSED FOAM JOINT SEAL AT MEDIAN SECTION B-B

JOINT INSTALLATION SEQUENCE AT END BENTS

NOTE

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

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

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

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

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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

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 THAT ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

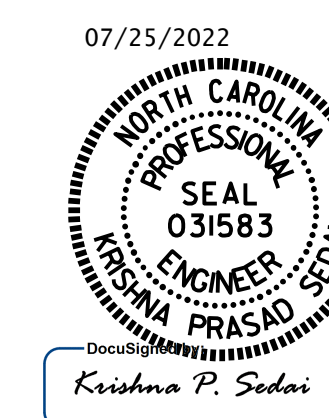
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
FOAM JOINT SEAL FOR PRESERVATION		
END BENT 1	66.1 LF	
END BENT 2	66.1 LF	
TOTAL	132.2 LF	

SAWED JOINT OPENING TABLE			
LOCATION	SAWED JOINT OPENING (PERPENDICULAR TO JOINT)		
	AT 45°	AT 60°	AT 90°
END BENT 1	3 3/16"	3"	2 1/16"
END BENT 2	3 1/8"	3"	2 1/16"

PROJECT NO. I-5950
DAVIDSON COUNTY
 BRIDGE NO. 280092



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

DRAWN BY : K. PUROHIT DATE : 03/2022
 CHECKED BY: A. SORSENGINH DATE : 05/2022

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-06
2			4			TOTAL SHEETS 12

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN A

	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
SHOTCRETE REPAIRS				
UNDERSIDE OF DECK	7.0	2.3		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
CONCRETE REPAIRS				
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGMS	0.0	0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

NOTES

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

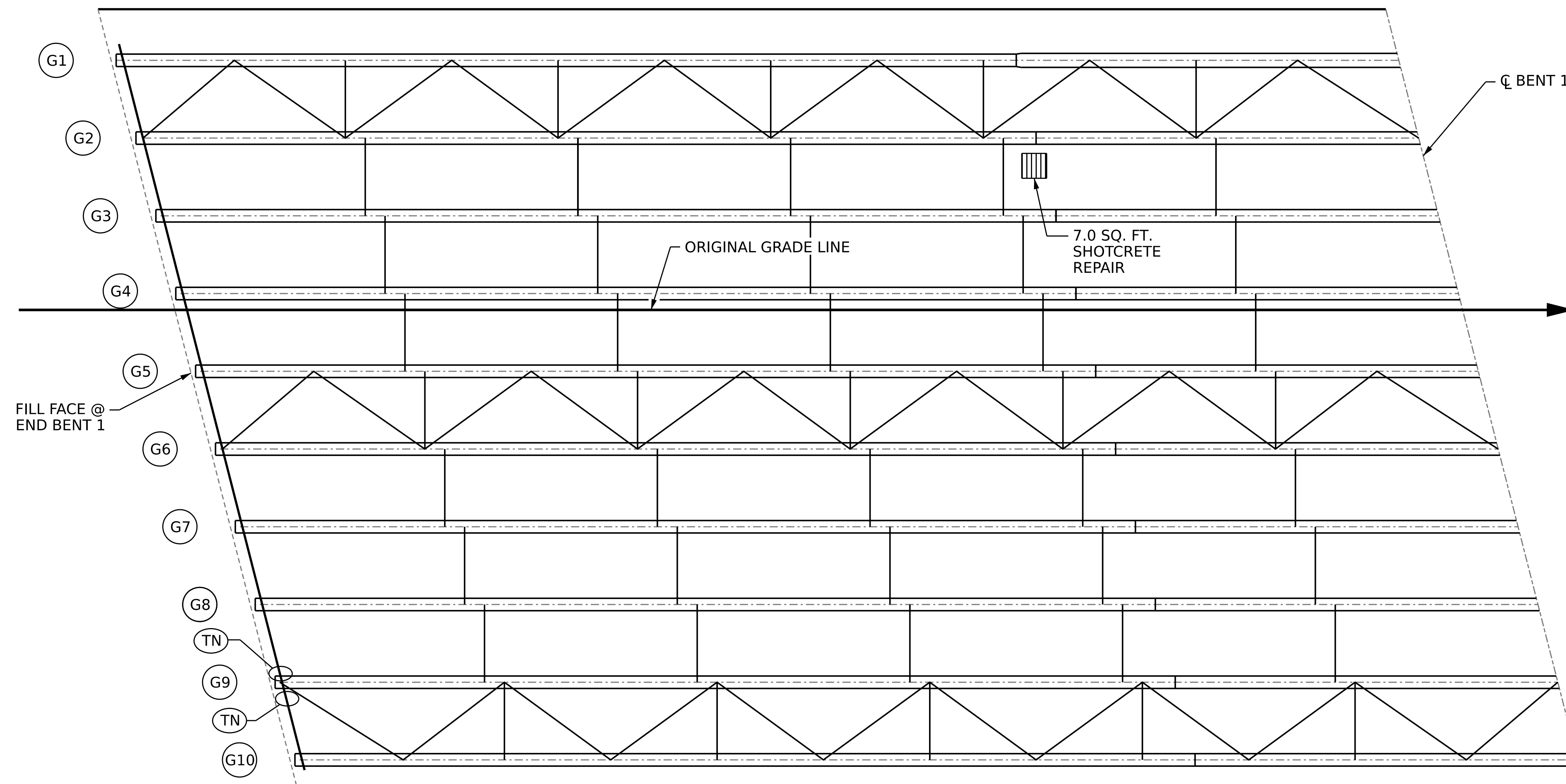
CONTRACTOR SHALL SAWCUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

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

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

FOR OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

PRIOR TO CLEANING AND PAINTING, REPLACE AND /OR TIGHTEN ANCHOR BOLT NUTS. SEE SPECIAL PROVISIONS.

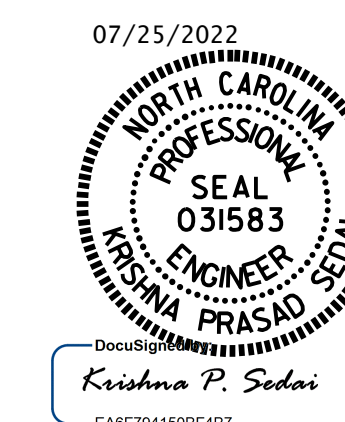


- SHOTCRETE REPAIR
- EPOXY RESIN INJECTION
- TIGHTEN ANCHOR BOLT NUT

SPAN A

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DECK UNDERSIDE REPAIR
 SPAN A**

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-07
1			3			TOTAL SHEETS
2			4			12

DRAWN BY : K. PUROHIT DATE : 2/2022
 CHECKED BY : A. SORSENGINH DATE : 4/2022

AS-BUILT REPAIR QUANTITY TABLE				
DECK UNDERSIDE REPAIR - SPAN B				
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGMS	0.0	0.0		
CONCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGMS	0.0	0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

NOTES

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

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

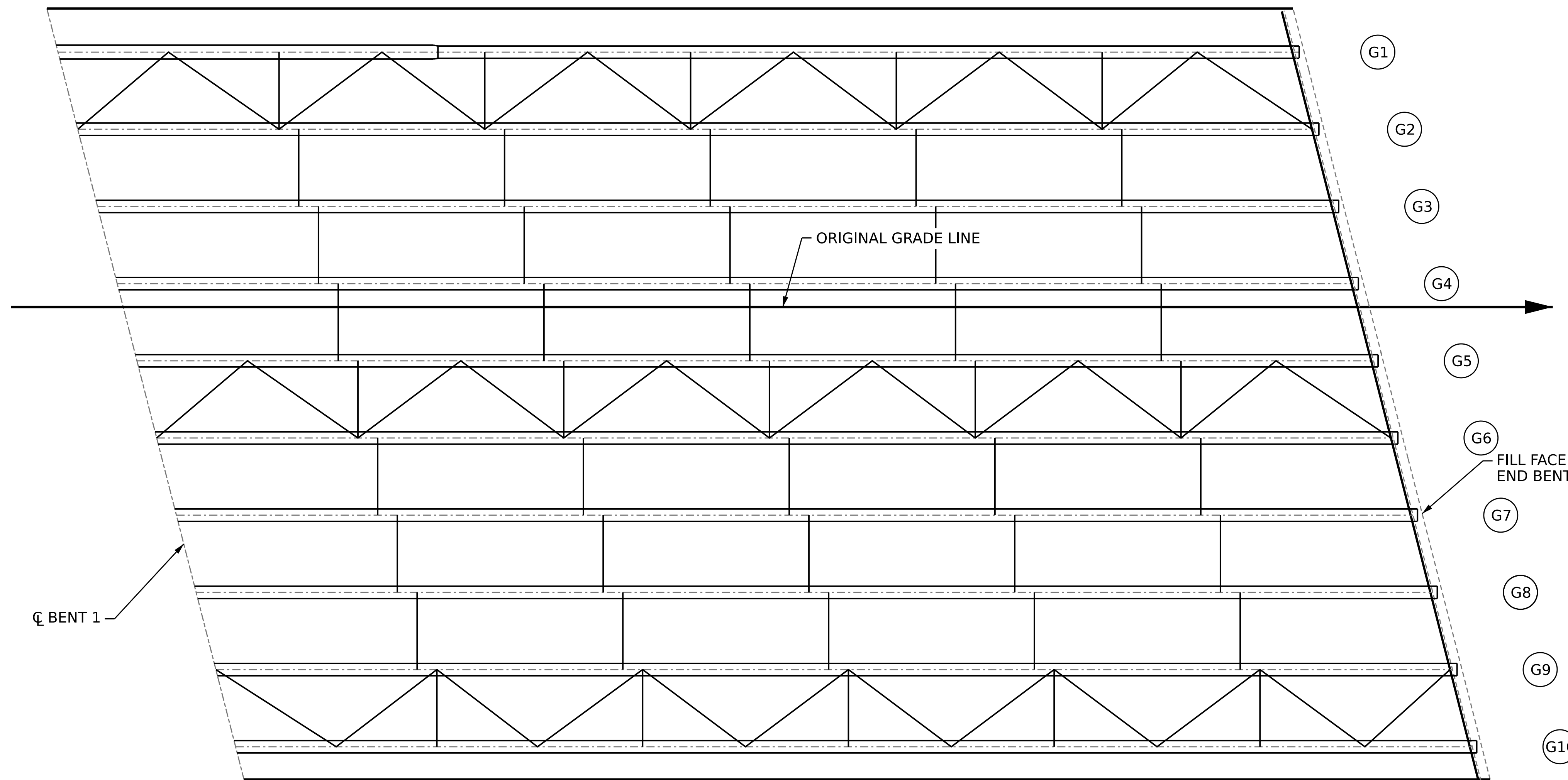
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

CONTRACTOR SHALL SAWCUT TO A NOMINAL DEPTH OF 1/2" BUT REINFORCING STEEL SHALL NOT BE DAMAGED.

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

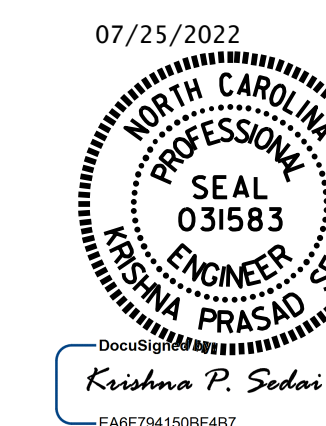
FOR UNDERSIDE OF DECK REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

FOR OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**

SHEET 2 OF 2



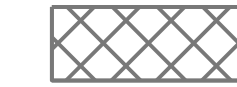


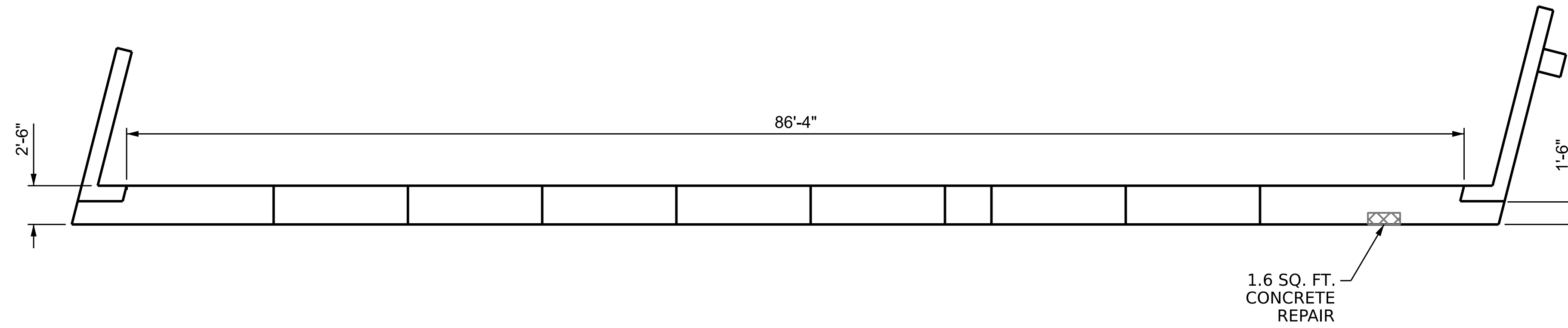
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DECK UNDERSIDE REPAIR
 SPAN B**

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

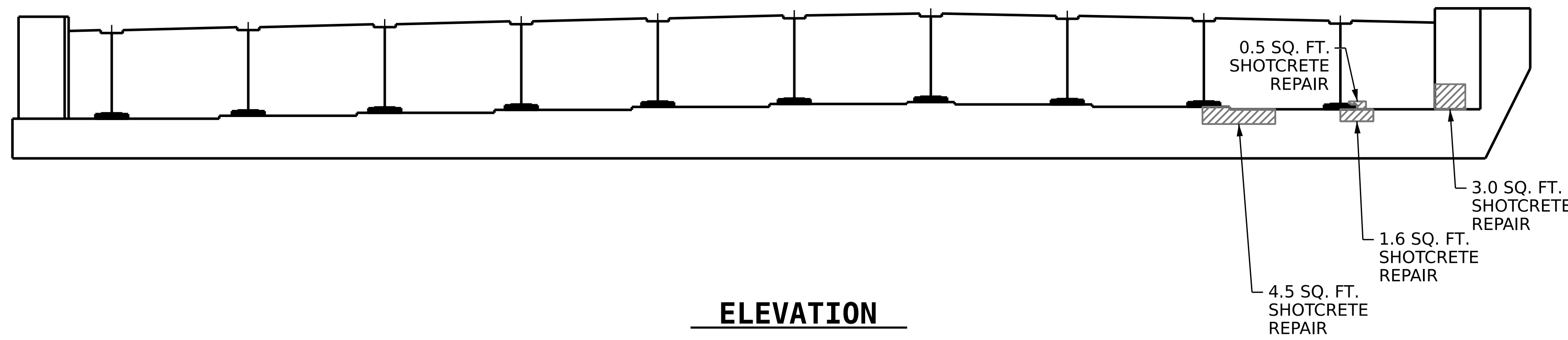
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : K. PUROHIT DATE : 2/2022
 CHECKED BY : A. SORSENGINH DATE : 4/2022

-  SHOTCRETE REPAIR AREA
-  EPOXY RESIN INJECTION
-  CONCRETE REPAIR AREA



PLAN



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	9.1	4.6		
CURTAIN WALL	0.5	0.3		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.6	0.8		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CURTAIN WALL		0.0		
CAP		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF END BENT CAP		99.0		

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

NOTES

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

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

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

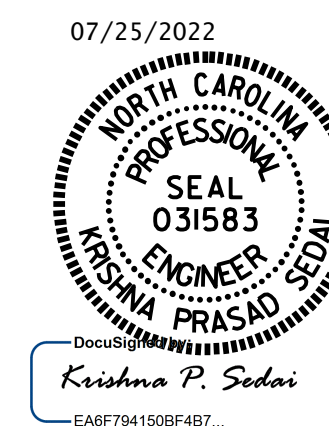
FOR CAP AND COLUMN REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**

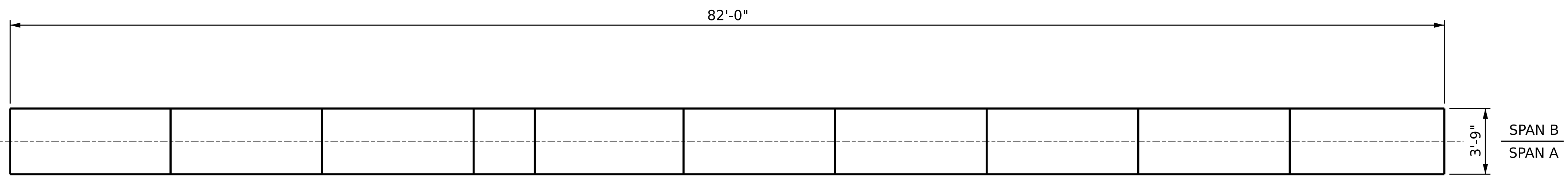


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE REPAIR
END BENT 1

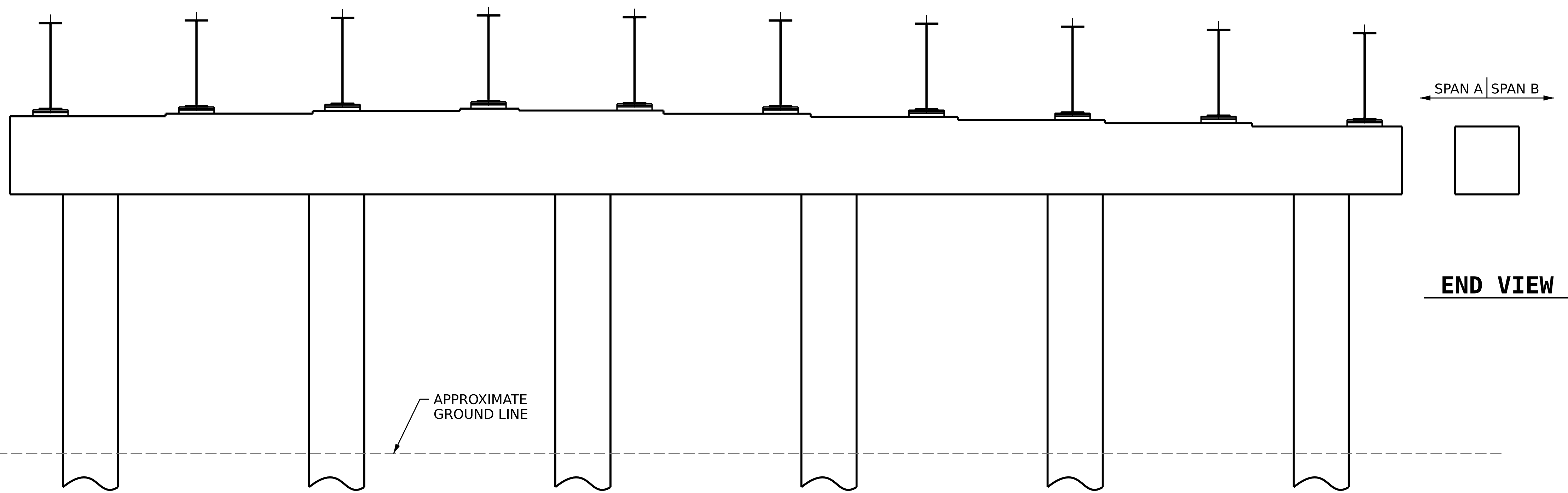
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-09
1			3			TOTAL SHEETS
2			4			12

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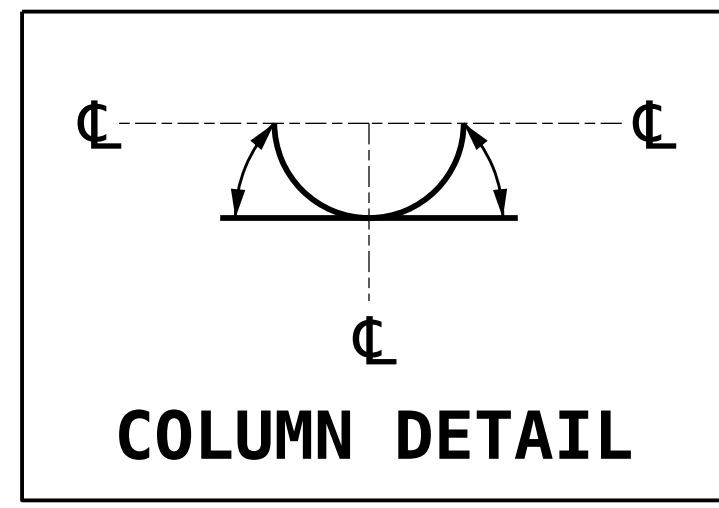
DRAWN BY : K. K. PUROHIT DATE : 03/2022
 CHECKED BY : A. SORSENGINH DATE : 5/2022



**PLAN
TOP OF CAP**



**ELEVATION
SPAN A VIEW**



AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 SPAN A FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		308.0		

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

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

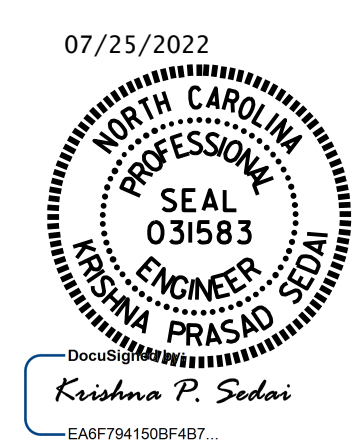
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

- SHOTCRETE REPAIR AREA
- CONCRETE REPAIR AREA
- EPOXY RESIN INJECTION

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**

SHEET 1 OF 2



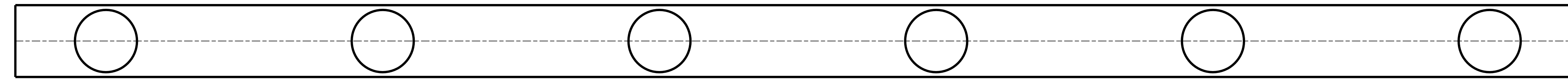
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
SPAN A FACE**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-10
1			3			TOTAL SHEETS
2			4			12

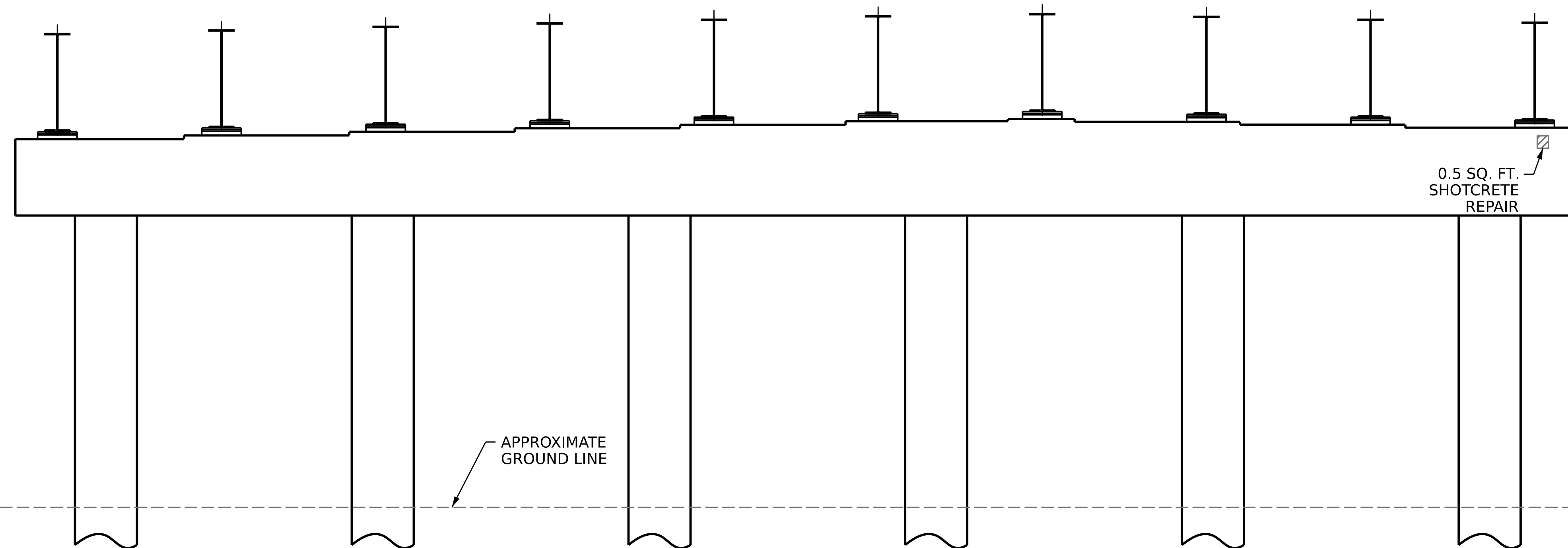
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DRAWN BY : K. PUROHIT DATE : 04/2022
 CHECKED BY : A. SORRENGINH DATE : 05/2022



SPAN B
SPAN A

**PLAN
BOTTOM OF CAP**



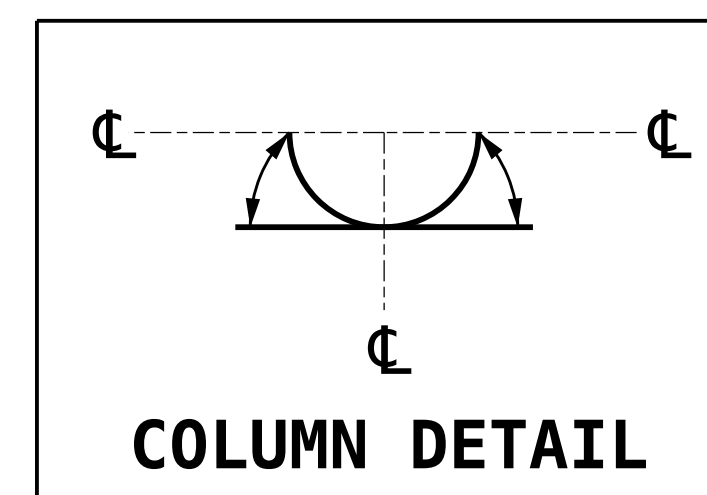
SPAN B | SPAN A

0.5 SQ. FT.
SHOTCRETE
REPAIR

END VIEW

APPROXIMATE
GROUND LINE

**ELEVATION
SPAN B VIEW**



COLUMN DETAIL

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.5	0.3		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		

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

NOTES:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION

PROJECT NO. **I-5950**

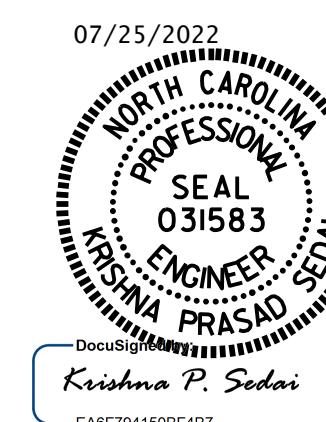
DAVIDSON COUNTY

BRIDGE NO. **280092**

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH




**BENT 1
SPAN B FACE**

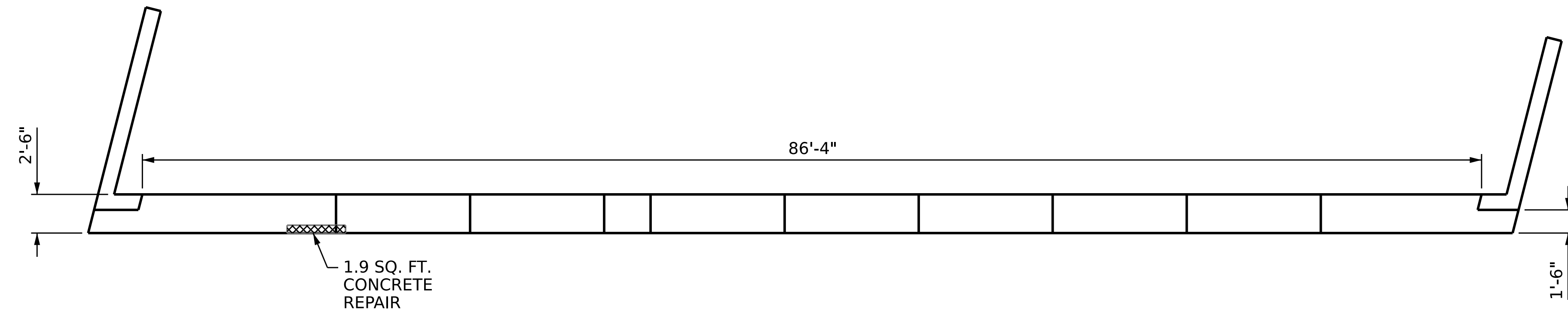


REVISIONS					SHEET NO. S1-11
NO.	BY:	DATE:	NO.	DATE:	
1			3		TOTAL SHEETS 12
2			4		

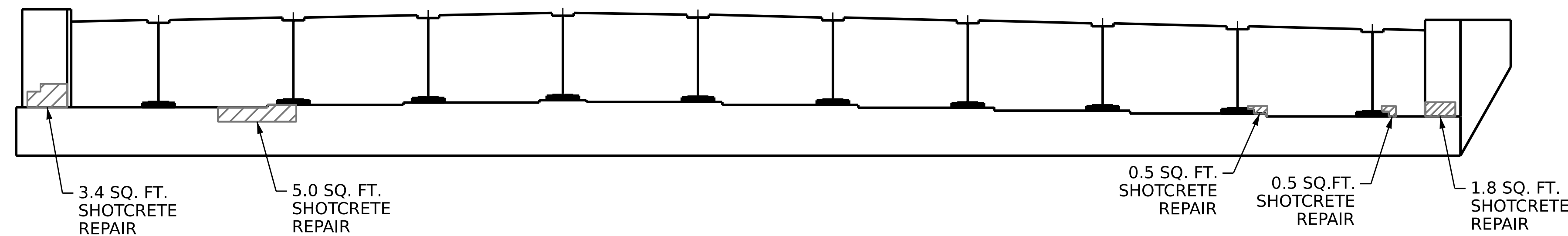
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SIGNATURES COMPLETED

DRAWN BY : K. PUROHIT DATE : 04/2022
CHECKED BY : A. SORSENGINH DATE : 05/2022

-  SHOTCRETE REPAIR AREA
-  CONCRETE REPAIR AREA
-  EPOXY RESIN INJECTION



PLAN



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	5.0	2.5		
CURTAIN WALL	6.2	3.1		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	1.9	1.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CURTAIN WALL		0.0		
CAP		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF END BENT CAP		99.0		

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

NOTES

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

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

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

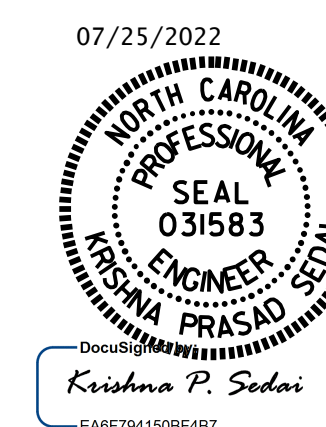
FOR CAP AND COLUMN REPAIRS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS", SHEET.

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280092**



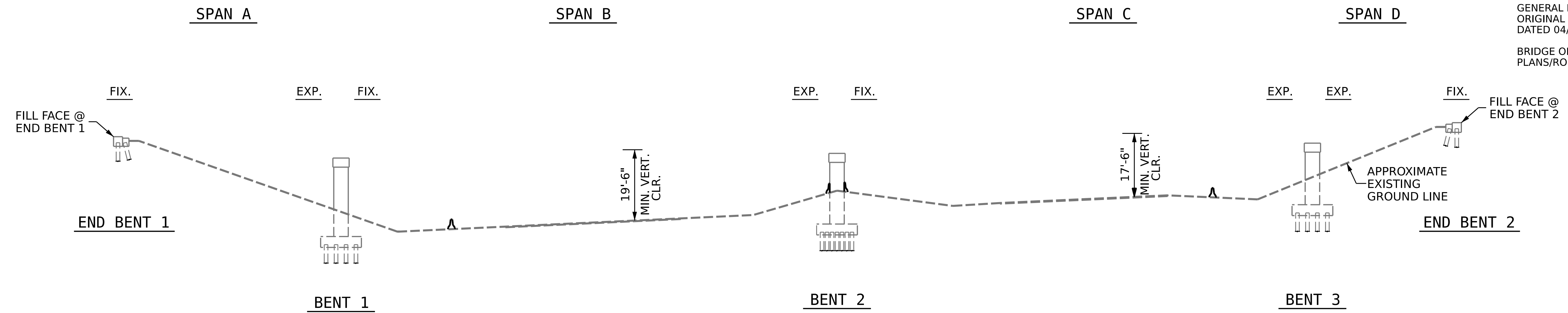
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUBSTRUCTURE REPAIR
END BENT 2

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-12
1			3			TOTAL SHEETS 12
2			4			

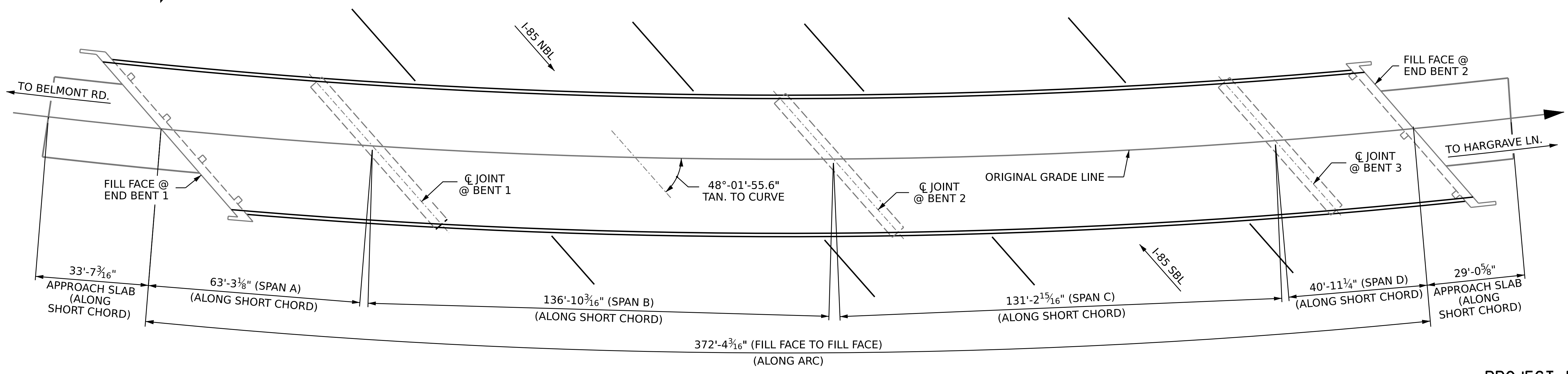
DRAWN BY : **K. PUROHIT** DATE : **03/2022**
 CHECKED BY : **A. SORSENGINH** DATE : **05/2022**

NOTES
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04/06/2022.
 BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ROUTINE INSPECTION.



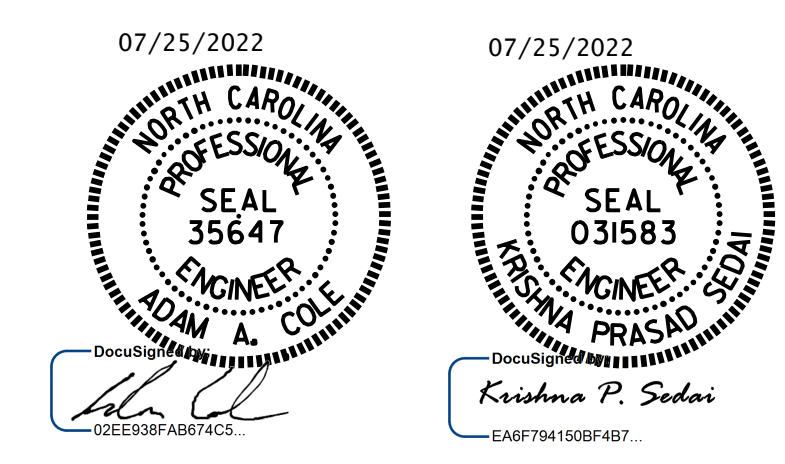
I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER _____ DATE _____



SCOPE OF WORK

- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINT SEALS FOR PRESERVATION.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINT SEALANT.
- GROOVE PC BRIDGE DECK.
- CLEAN AND PAINT EXISTING STEEL STRUCTURE.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- PROPERLY PREPARE SPALLED AREAS IN EXISTING END BENT AND BENTS AND PERFORM SHOTCRETE AND CONCRETE REPAIRS.



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
**FOR BRIDGE ON I-85B,
 US 29, US 70 RAMP
 OVER I-85**

DRAWN BY : A. SORSENGINH DATE : 2/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-01
1			3			TOTAL SHEETS
2			4			21



BRIDGE 280137 LOCATION SKETCH

BRIDGE COORDINATES

BRIDGE No.	LATITUDE	LONGITUDE
280137	35°-46'-18.32"	80°-19'-26.84"

TOTAL BILL OF MATERIAL

BRIDGE NO.	GROOVING BRIDGE FLOORS	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	CLEANING & REPAINTING OF BRIDGE NO. 280137	PAINTING CONTAINMENT FOR BRIDGE NO. 280137	FOAM JOINT SEALS FOR PRESERVATION	POURABLE SILICONE JOINT SEALANT	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)
	SQ. FT.	LUMP SUM	SQ. YDS.	CU. FT.	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	CU. YDS.	CU. YDS.
280137												
TOTAL	14,766	LUMP SUM	25.8	8.8	206.0	2.3	LUMP SUM	LUMP SUM	159.8	66.5	62.2	62.2

TOTAL BILL OF MATERIAL CONTINUED

CONCRETE REPAIRS (CLASS B)	EPOXY COATING	CONCRETE DECK REPAIR FOR POLYMER CONCRETE OVERLAY	PLACING & FINISHING POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK
CU. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.
10.0	828.0	25.8	1,792	1,792	1,792

NOTES

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

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

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OF ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

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

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

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS AND CONCRETE REPAIRS (CLASS B), SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

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

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

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

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL AND CLEANING & REPAINTING BRIDGE, SEE SPECIAL PROVISIONS.

THE EXISTING BRIDGE DECK SHALL BE REPAIRED AS SHOWN ON THE PLANS OR AS DETERMINED BY THE ENGINEER AFTER SCARIFICATION AND PRIOR TO THE SURFACE PREPARATION AND APPLICATION OF THE PC OVERLAY. UNLESS OTHERWISE APPROVED, SUCH LOCATIONS SHALL BE REPAIRED WITH POLYMER CONCRETE.

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

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

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

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

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

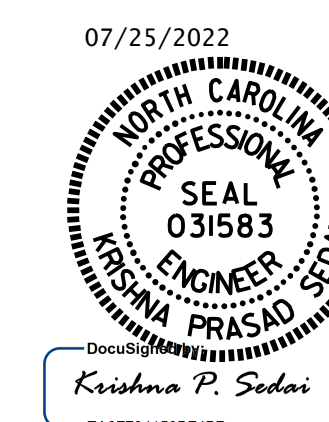
THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES OF REINFORCING STEEL AS FOLLOWS: FOR PROJECTS REQUIRING UP TO 400 TONS OF REINFORCING STEEL, ONE 30 INCH SAMPLE OF EACH SIZE BAR USED, AND FOR PROJECTS REQUIRING OVER 400 TONS OF REINFORCING STEEL, TWO 30 INCH SAMPLES OF EACH SIZE BAR USED. THE SAMPLE BARS SHOULD COME FROM STEEL ACTUALLY USED IN THE PROJECT AND THE SAMPLE BARS SHOULD BE REPLACED BY SPLICED BARS AS SPECIFIED IN THE SAMPLE BAR REPLACEMENT CHART. PAYMENT FOR THE SAMPLE BARS AND REPLACEMENT REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

FOR PAINTING CONTAINMENT, POLLUTION CONTROL AND CLEANING & REPAINTING BRIDGE, SEE SPECIAL PROVISIONS.

FOR ANCHOR BOLT NUT REPLACEMENT AND TIGHTENING, SEE SPECIAL PROVISIONS.

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 2 OF 2



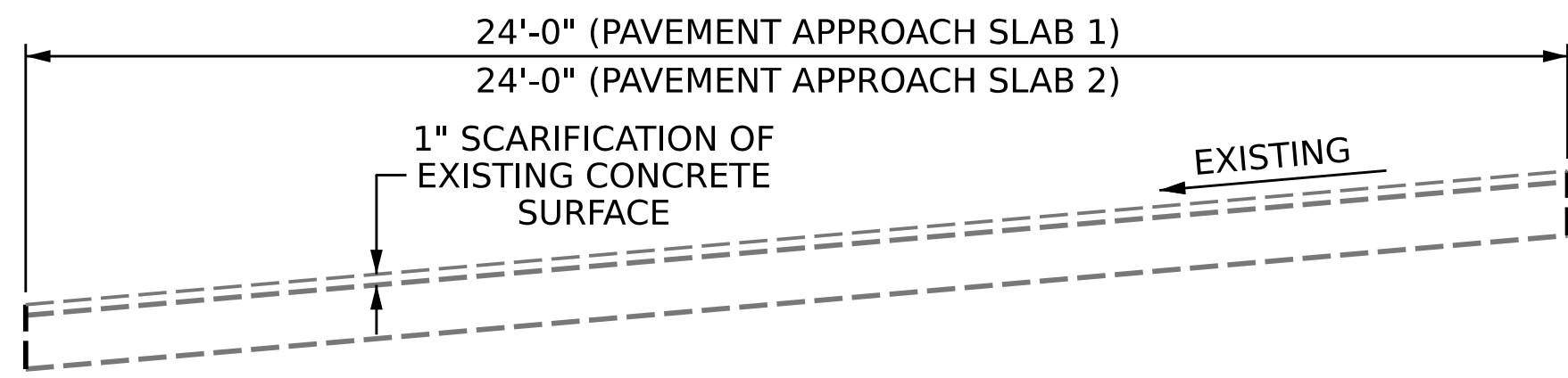
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
**FOR BRIDGE ON I-85B,
 US 29, US 70 RAMP
 OVER I-85**

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

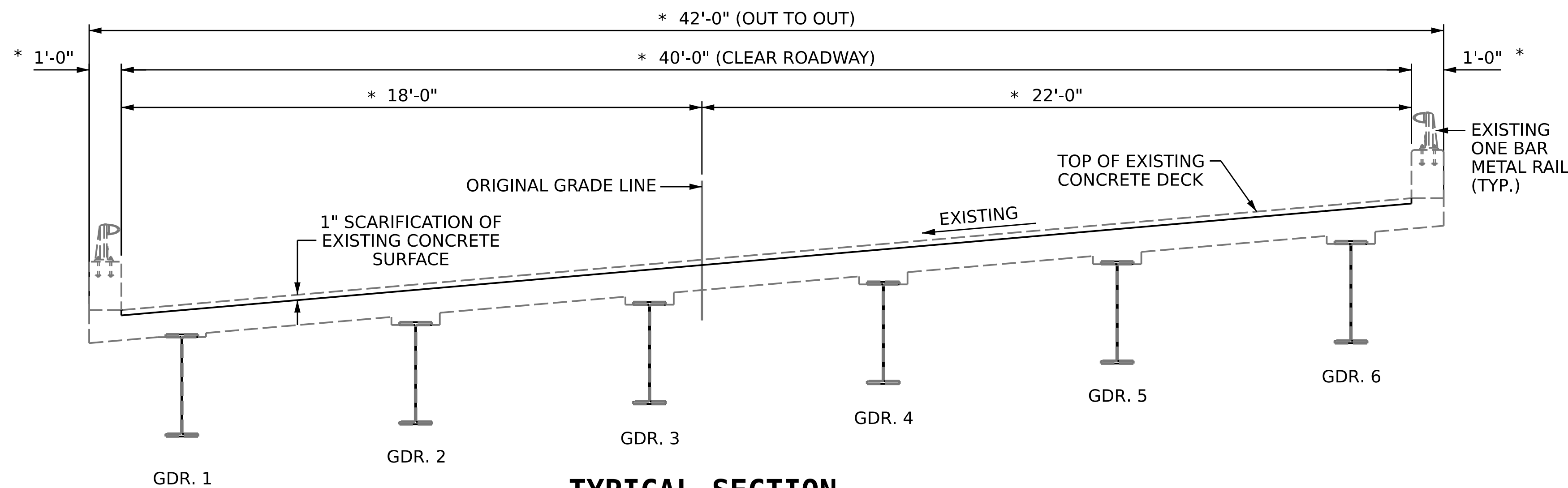
7/25/2022
 SANDP331-5950\Final Plans\402.003. I5950.SMU.LS.S02.280137.dgn
 ksedai

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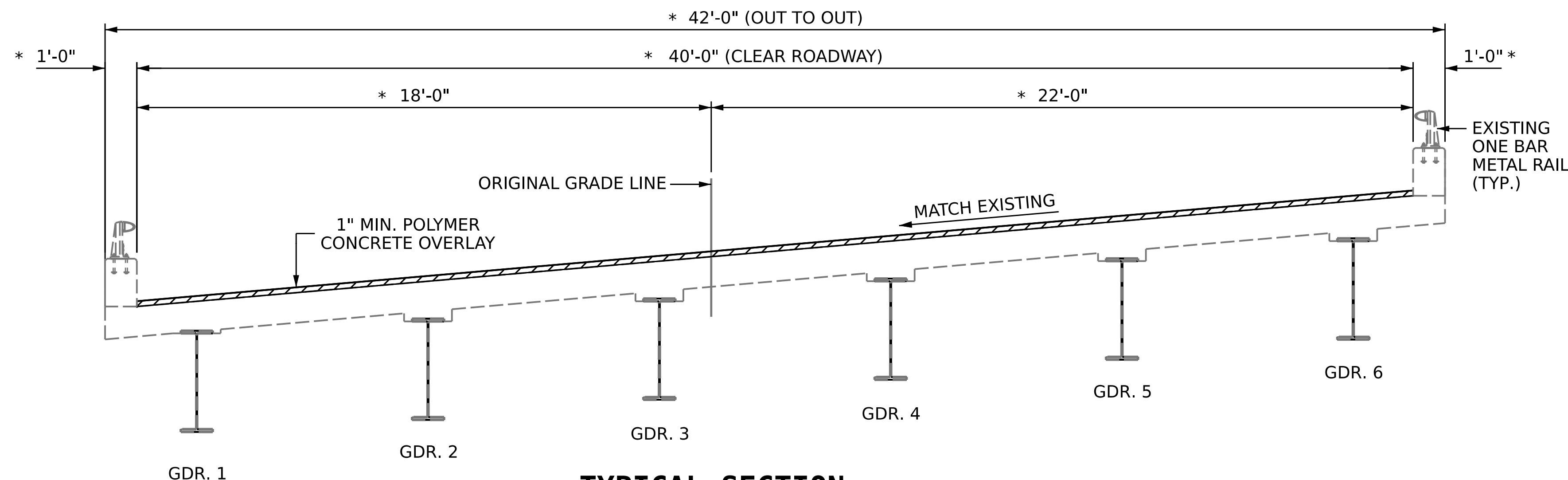
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-02
1			3			TOTAL SHEETS
2			4			21



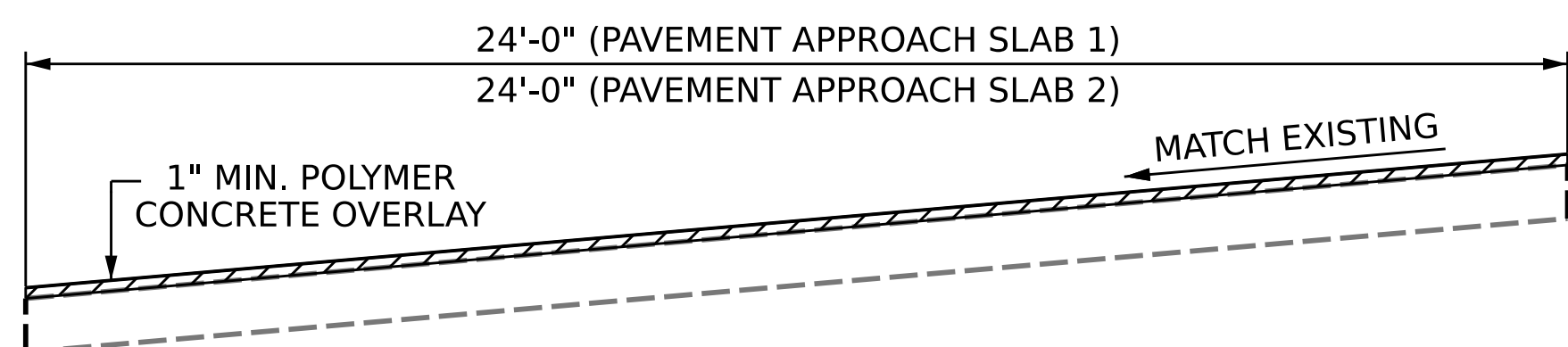
TYPICAL SECTION - APPROACH SLAB
(EXISTING)



TYPICAL SECTION
(EXISTING)
* (RADIAL DIMENSION)



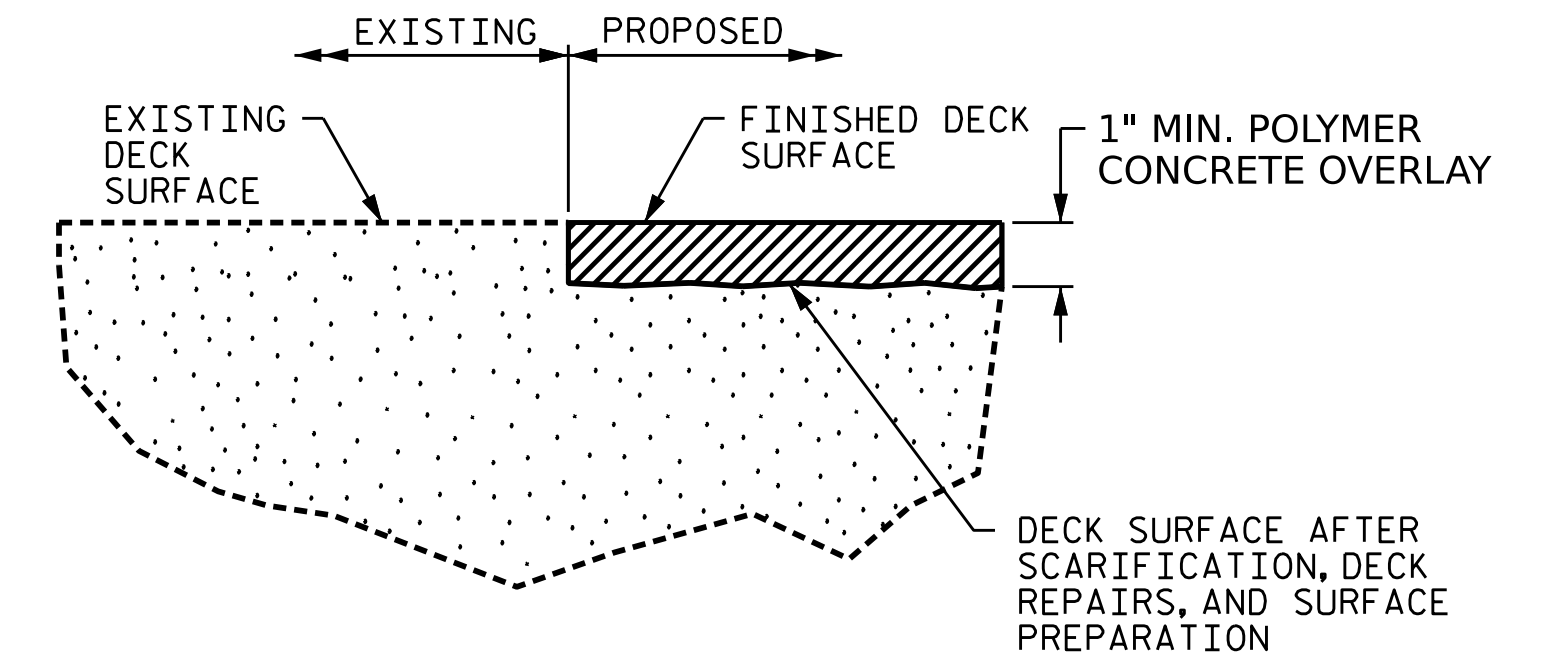
TYPICAL SECTION
(PROPOSED)
* (RADIAL DIMENSION)



TYPICAL SECTION - APPROACH SLAB
(PROPOSED)

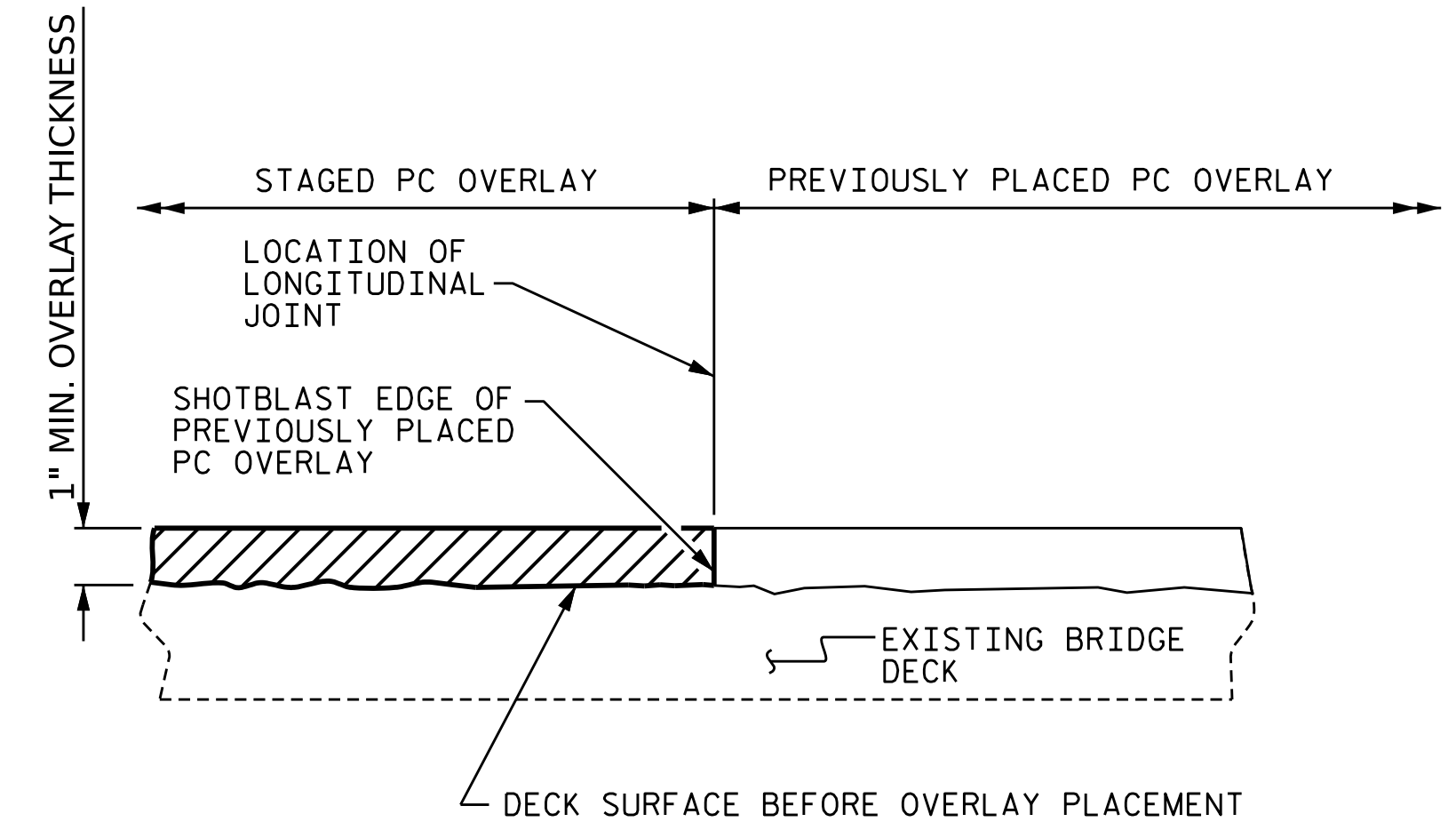
NOTE

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



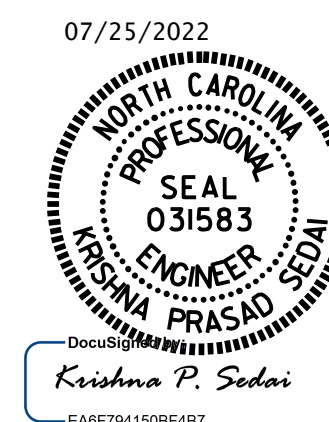
DETAIL FOR POLYMER CONCRETE OVERLAY

FINISHED SURFACE ELEVATION SHALL MATCH EXISTING CONCRETE SURFACE ELEVATION. ACTUAL THICKNESS OF PC OVERLAY MAY VARY.



STAGED PC OVERLAY JOINT

PROJECT NO. **I-5950**
DAVIDSON COUNTY
BRIDGE NO. **280137**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & SURFACE PREPARATION DETAILS

DRAWN BY : A. SORSENGINH DATE : 2/2022
CHECKED BY : E. BAYISSA DATE : 5/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO. S2-03
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 21
2			4			

NOTES

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

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

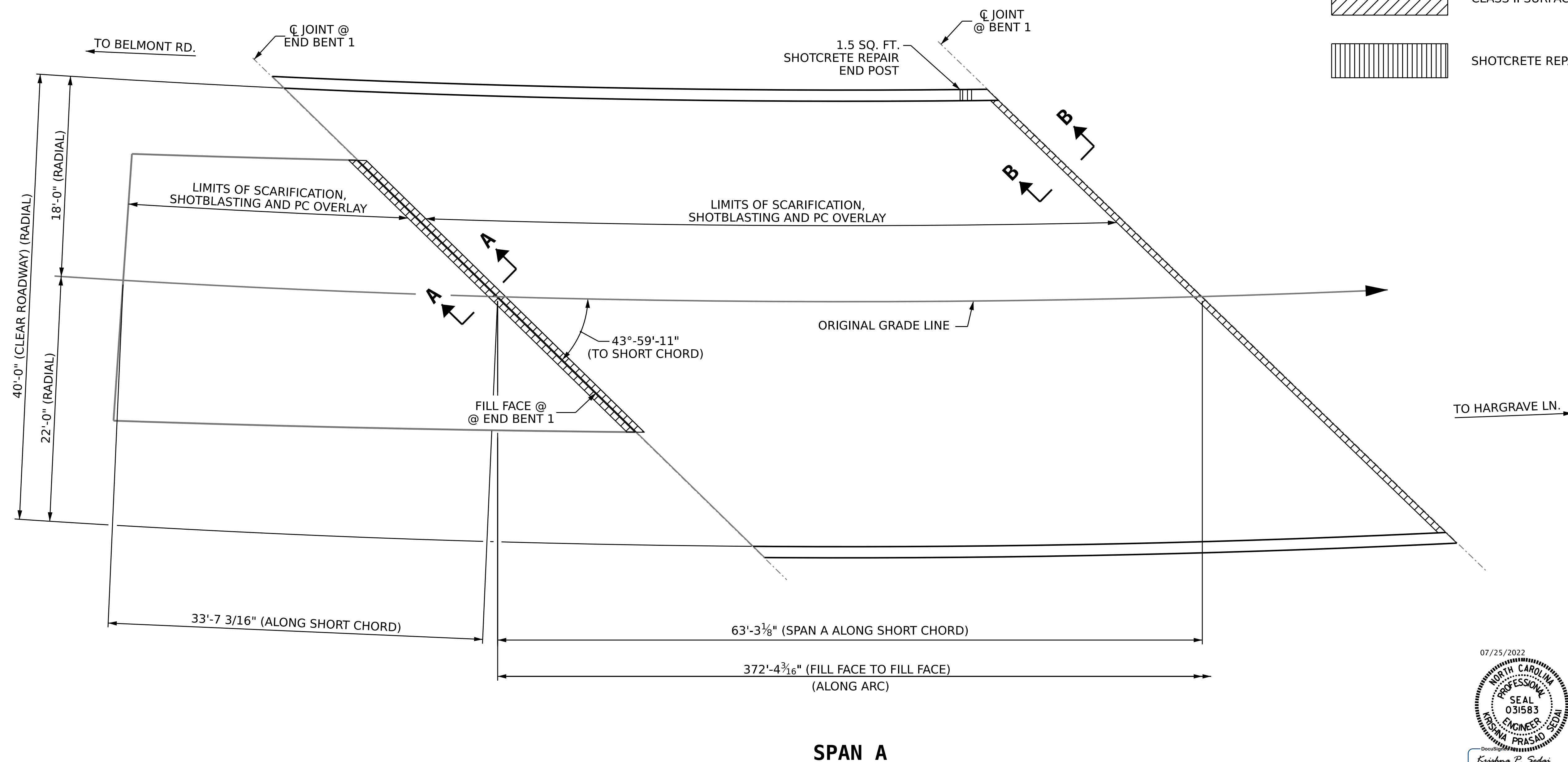
FOR SECTIONS A-A AND B-B, SEE "JOINT DETAILS" SHEET.

TOP OF DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT.) SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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

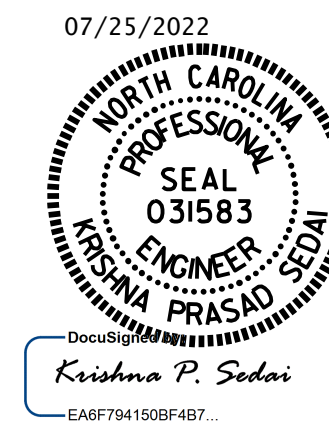
AS-BUILT REPAIR QUANTITY TABLE

	APPROACH SLAB 1		SPAN A	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	88.0 SQ. YDS.		272.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	88.0 SQ. YDS.		272.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	1.9 SQ. YDS.		5.1 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	1.9 SQ. YDS.		5.1 SQ. YDS.	
POLYMER CONCRETE MATERIALS	3.0 CU. YDS.		9.5 CU. YDS.	
PLACING & FINISHING PC OVERLAY	88.0 SQ. YDS.		272.0 SQ. YDS.	
GROOVING BRIDGE FLOOR	671.0 SQ. FT.		2265.0 SQ. FT.	
SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE PARAPET	1.5	0.5		



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 1 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DECK SURFACE REPAIR
 APPROACH SLAB
 & SPAN A**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-04
1			3			TOTAL SHEETS
2			4			21

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DRAWN BY : A. SORSENGINH DATE : 2/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

AS-BUILT REPAIR QUANTITY TABLE

SPAN B		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	602.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	602.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	6.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	6.0 SQ. YDS.	
POLYMER CONCRETE MATERIALS	20.9 CU. YDS.	
PLACING & FINISHING PC OVERLAY	602.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	5000.0 SQ. FT.	
SHOTCRETE REPAIRS		
	ESTIMATE	ACTUAL
	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE PARAPET	1.1	0.4

NOTES

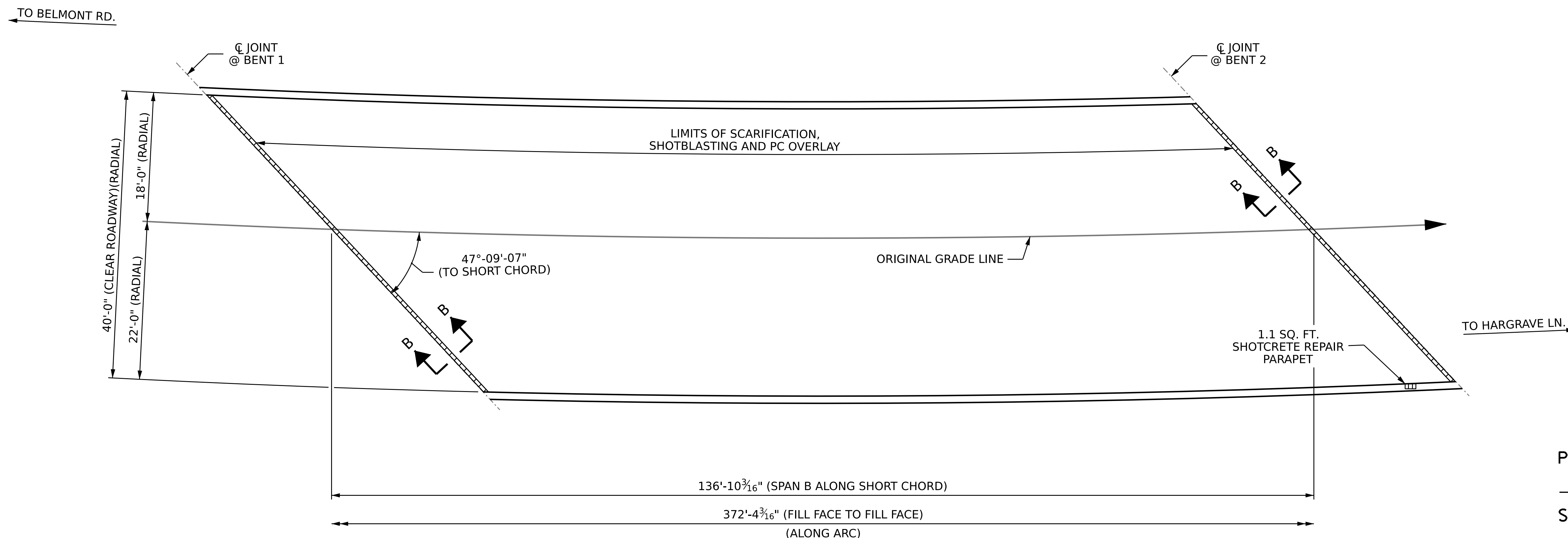
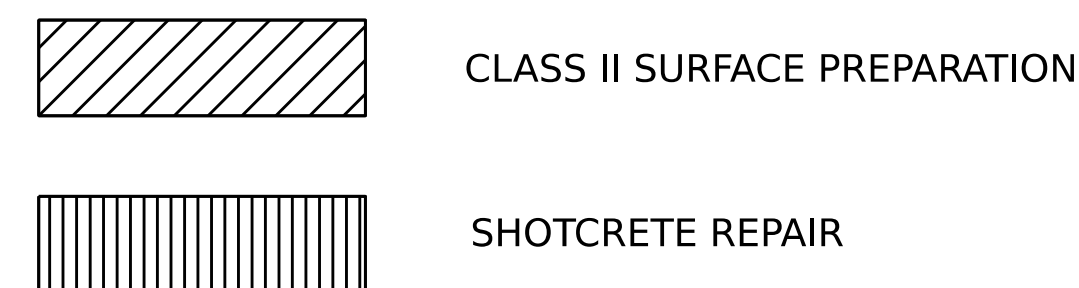
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

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

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

TOP OF DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT.) SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

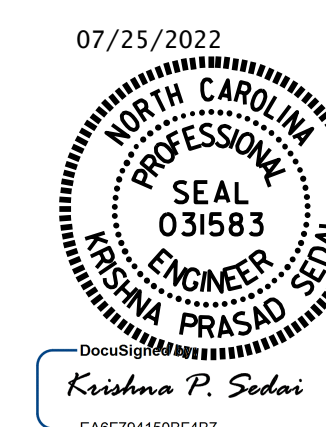
FOR SCARIFYING BRIDGE DECK, SHOTBLASTING BRIDGE DECK AND CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.



SPAN B

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 STATION: **280137**

SHEET 2 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK SURFACE REPAIR
 SPAN B**

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-05
1			3			TOTAL SHEETS
2			4			21

DRAWN BY : A. SORSENGINH DATE : 2/2022
 CHECKED BY : E. BAYISSA DATE : 4/2022

NOTES

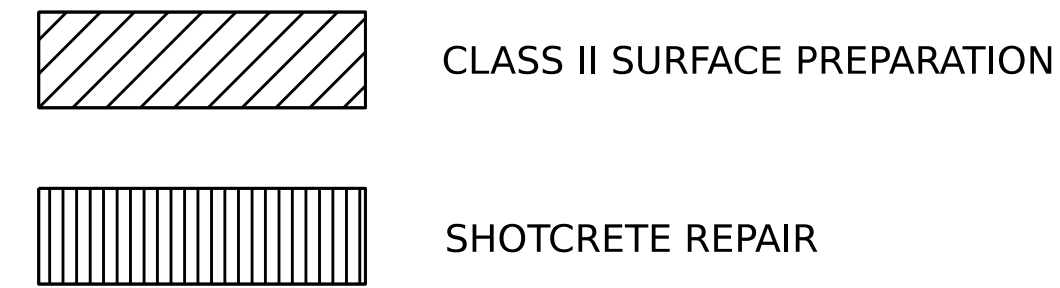
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FOR CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, AND PLACING AND FINISHING PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

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

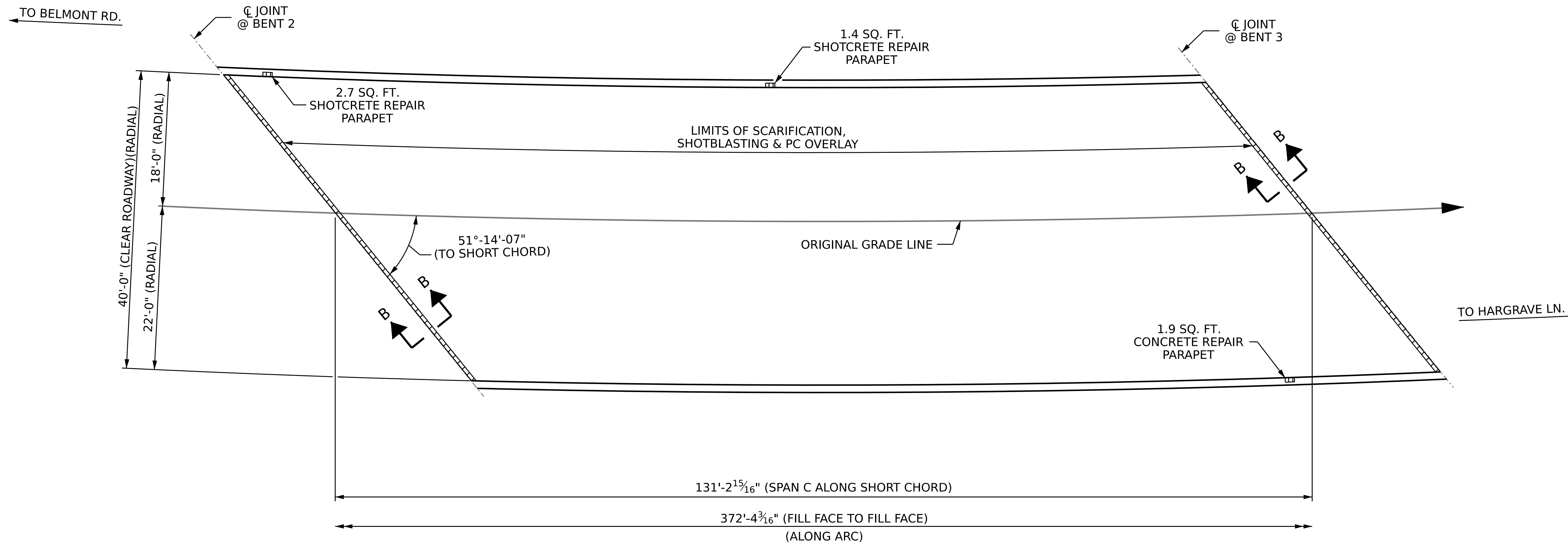
TOP OF DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT.) SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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



AS-BUILT REPAIR QUANTITY TABLE

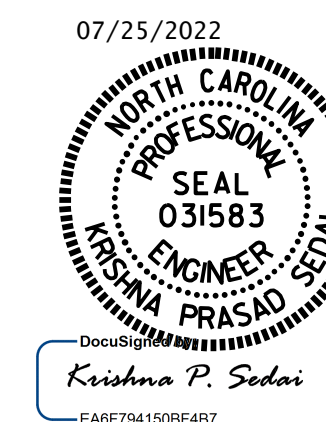
SPAN C		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	577.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	577.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	5.8 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	5.8 SQ. YDS.	
POLYMER CONCRETE MATERIALS	20.0 CU. YDS.	
PLACING & FINISHING PC OVERLAY	577.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	4798.0 SQ. FT.	
	ESTIMATE	ACTUAL
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE PARAPET	4.1	1.4
	ESTIMATE	ACTUAL
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE PARAPET	1.9	0.6



SPAN C

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 STATION: **280137**

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK SURFACE REPAIR
 SPAN C**

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			21

DRAWN BY : A. SORSENGINH DATE : 2/2022
 CHECKED BY : E. BAYISSA DATE : 4/2022

NOTES

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

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

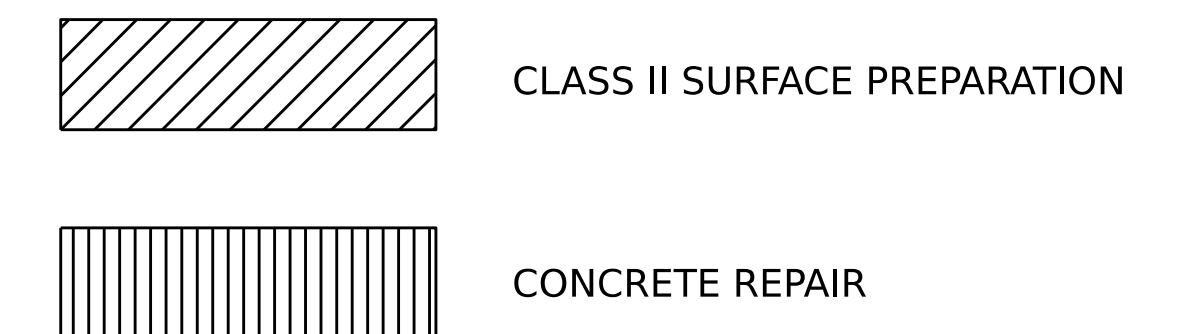
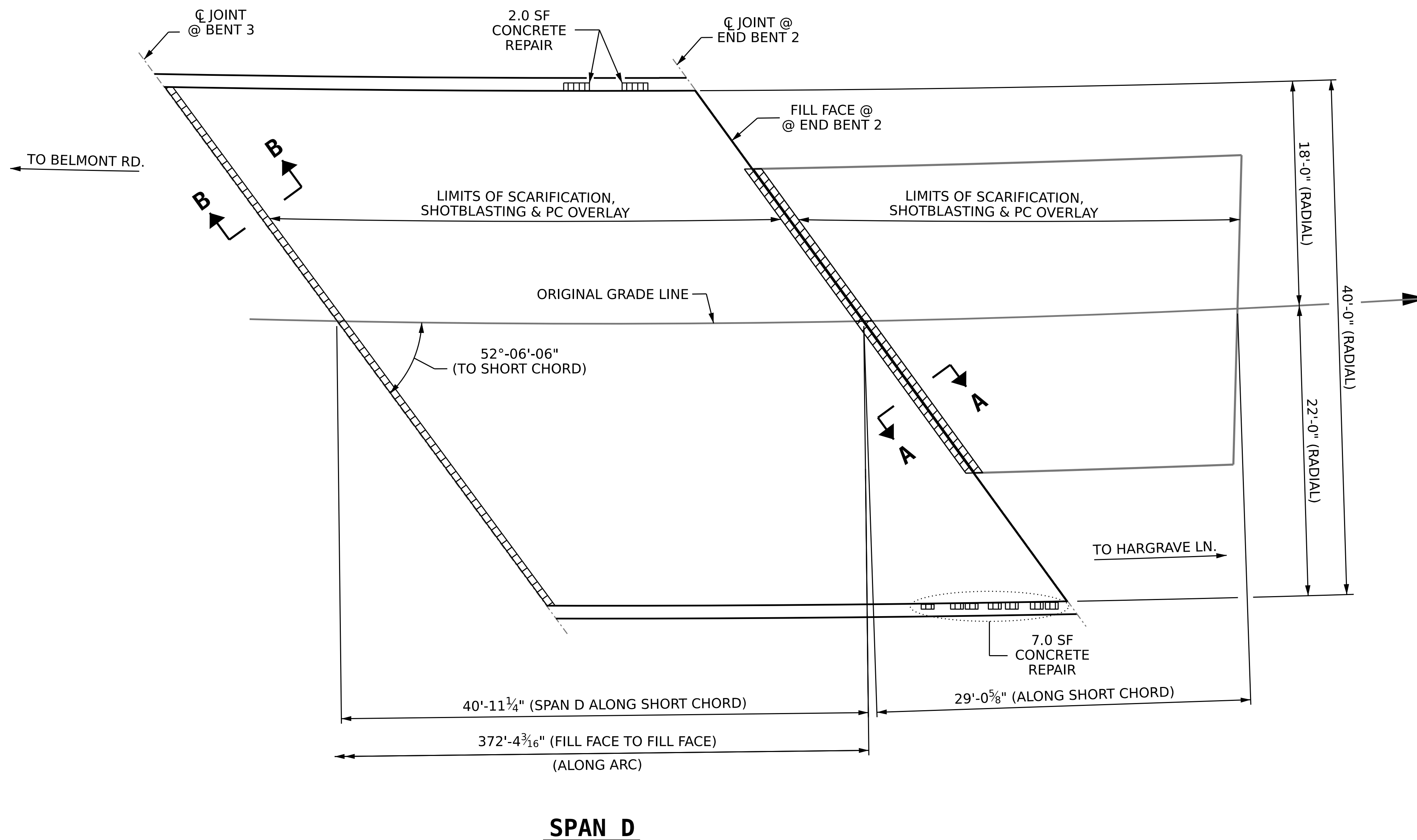
FOR SECTIONS A-A AND B-B, SEE "JOINT DETAILS" SHEET.

TOP OF DECK SURFACE REPAIR QUANTITIES REPRESENT ESTIMATED VALUES OF CLASS II SURFACE PREPARATION AND CONCRETE DECK REPAIR FOR PC OVERLAY AFTER REMOVAL OF UNSOUND CONCRETE (MIN. 2" CLEAR TO SAWCUT.) SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

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

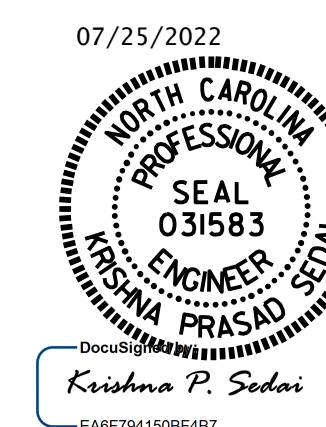
AS-BUILT REPAIR QUANTITY TABLE

	SPAN D		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	177.0 SQ. YDS.		76.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	177.0 SQ. YDS.		76.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	5.4 SQ. YDS.		1.6 SQ. YDS.	
CONCRETE DECK REPAIR FOR PC OVERLAY	5.4 SQ. YDS.		1.6 SQ. YDS.	
POLYMER CONCRETE MATERIALS	6.2 CU. YDS.		2.6 CU. YDS.	
PLACING & FINISHING PC OVERLAY	177.0 SQ. YDS.		76.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	1449.0 SQ. YDS.		583.0 SQ. YDS.	
	ESTIMATE		ACTUAL	
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE PARAPET	9.0	3.0		



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 4 OF 4



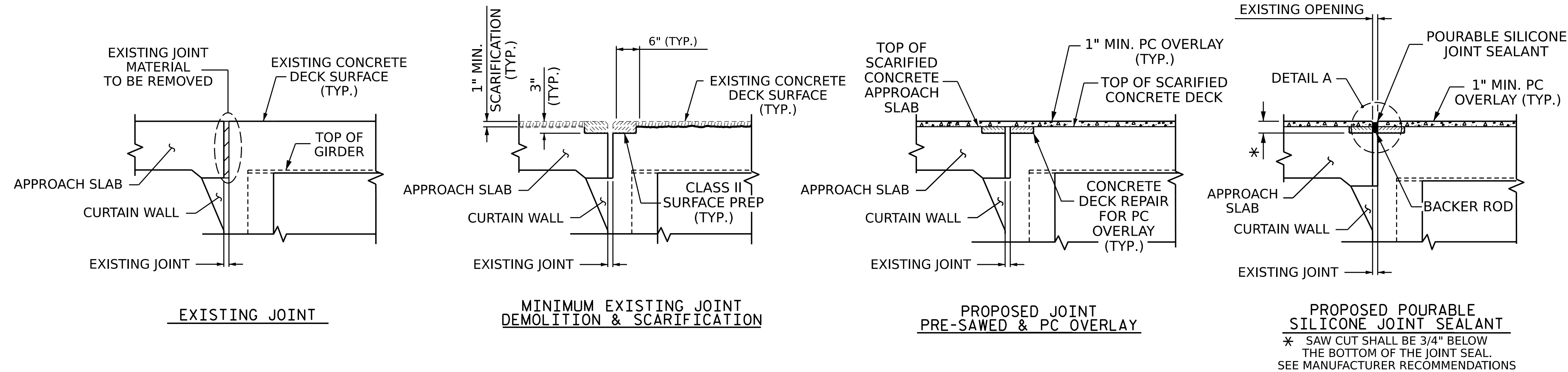
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK SURFACE REPAIR
 SPAN D**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-07
1			3			TOTAL SHEETS
2			4			21

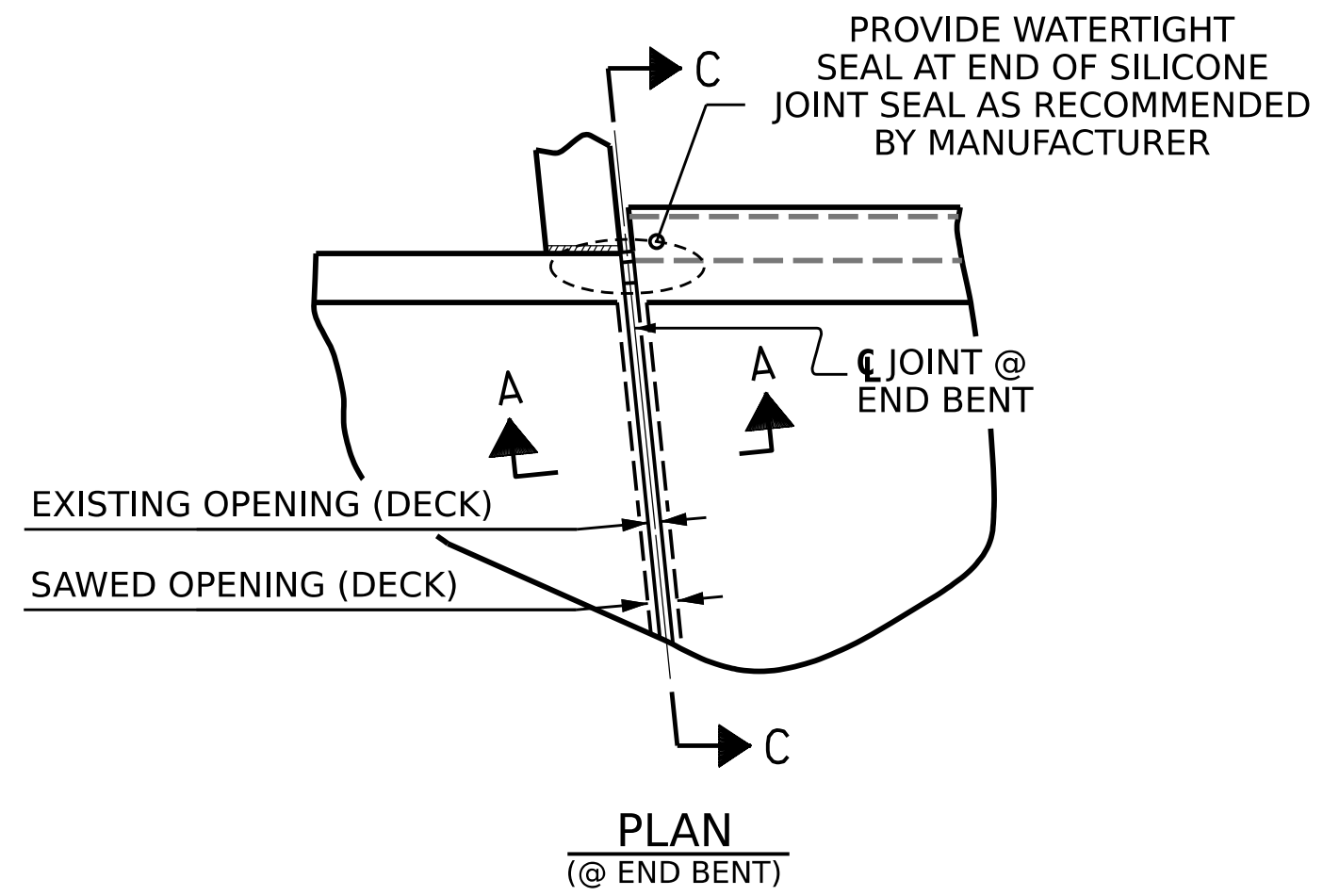
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DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

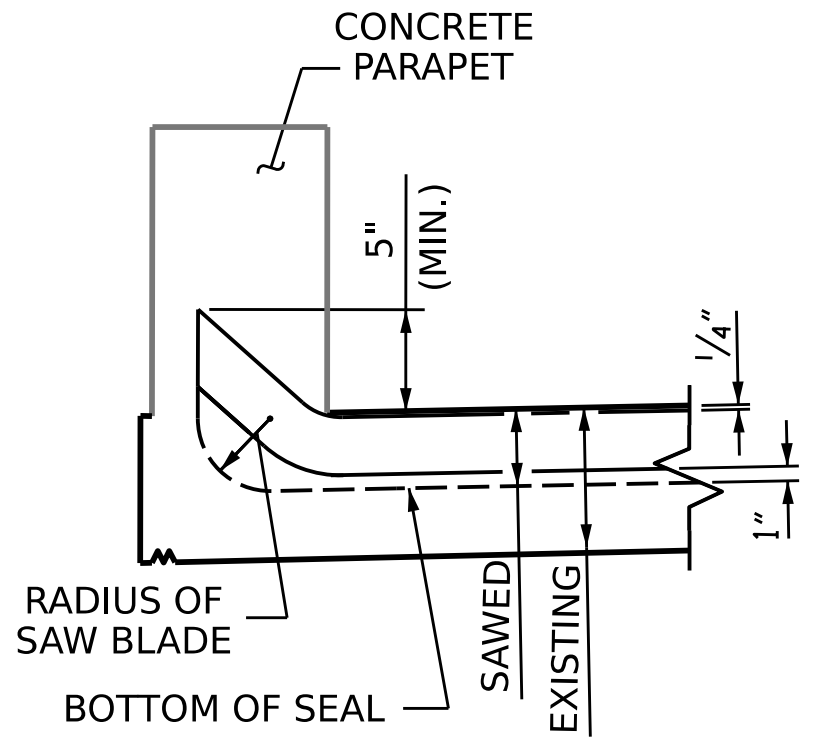


JOINT INSTALLATION SEQUENCE AT END BENTS

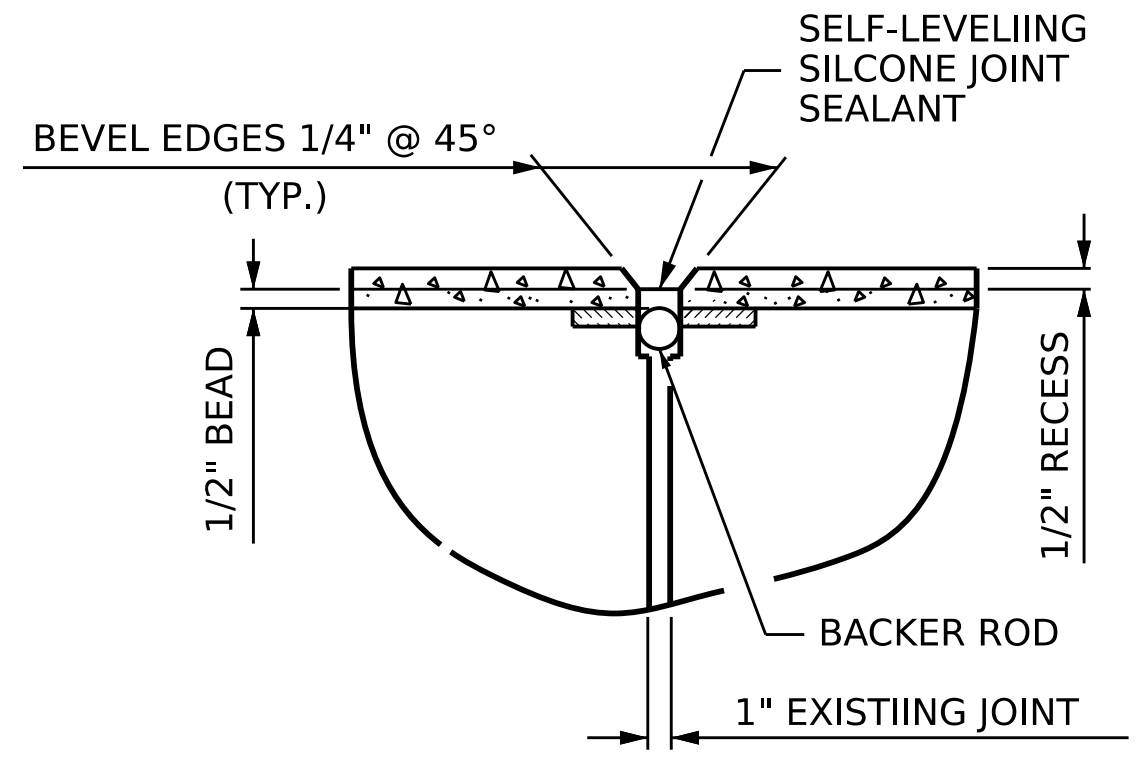
SECTION A-A



PLAN
(@ END BENT)



SECTION C-C



DETAIL A

POURABLE SILICONE JOINT SEALANT	
END BENT 1	34.9 LIN. FT.
END BENT 2	31.6 LIN. FT.
TOTAL	66.5 LIN. FT.

NOTES

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

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

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

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

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

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

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

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

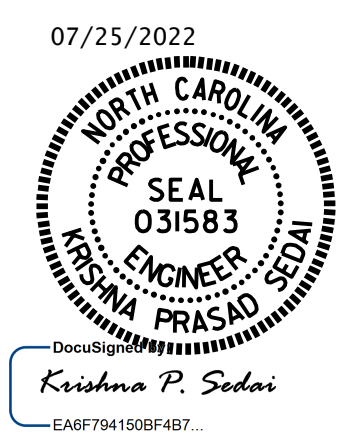
THE INSTALLED POURABLE JOINT SEALANT SHALL BE WATERTIGHT.

POURABLE SILICONE JOINT SEALANT SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

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

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO.: **280137**

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S2-08
2			4			TOTAL SHEETS 21

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NOTE

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

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

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

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

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

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

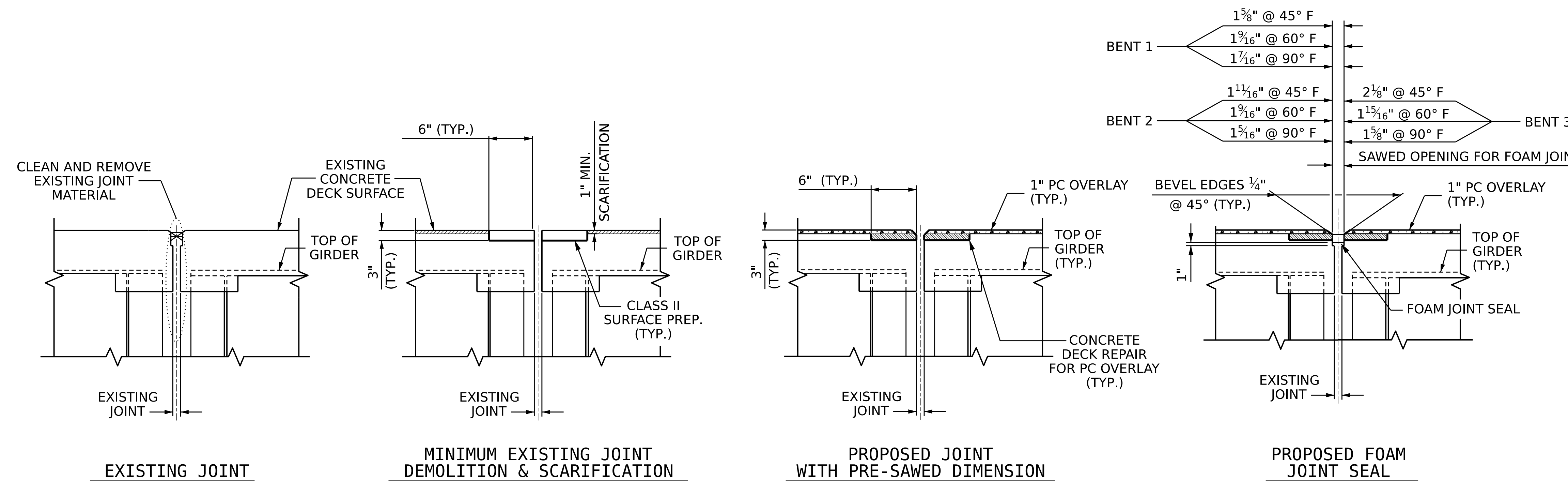
THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

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

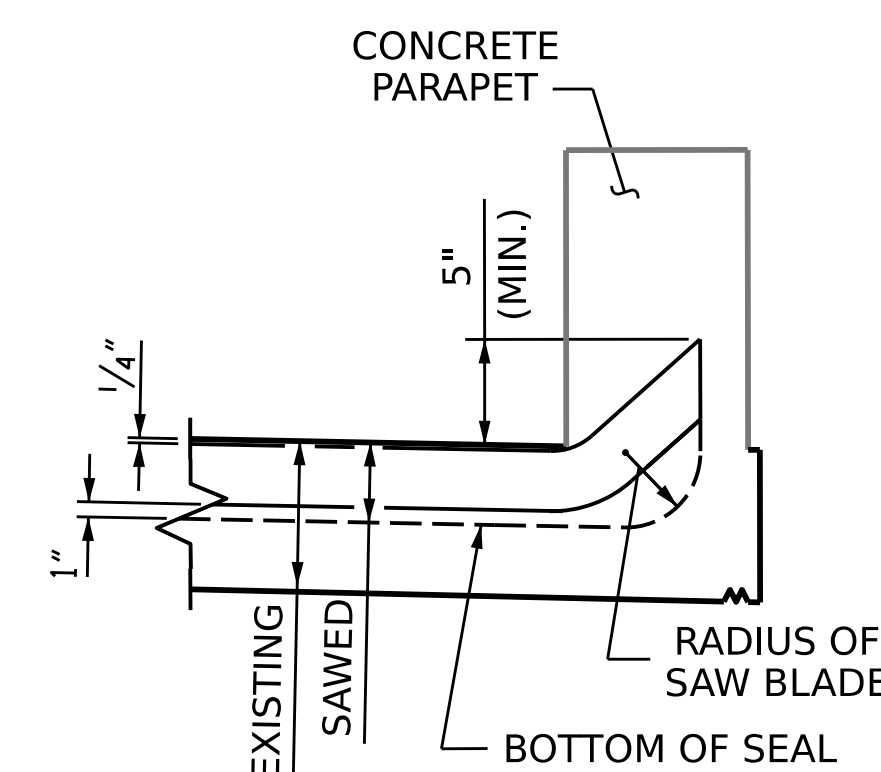
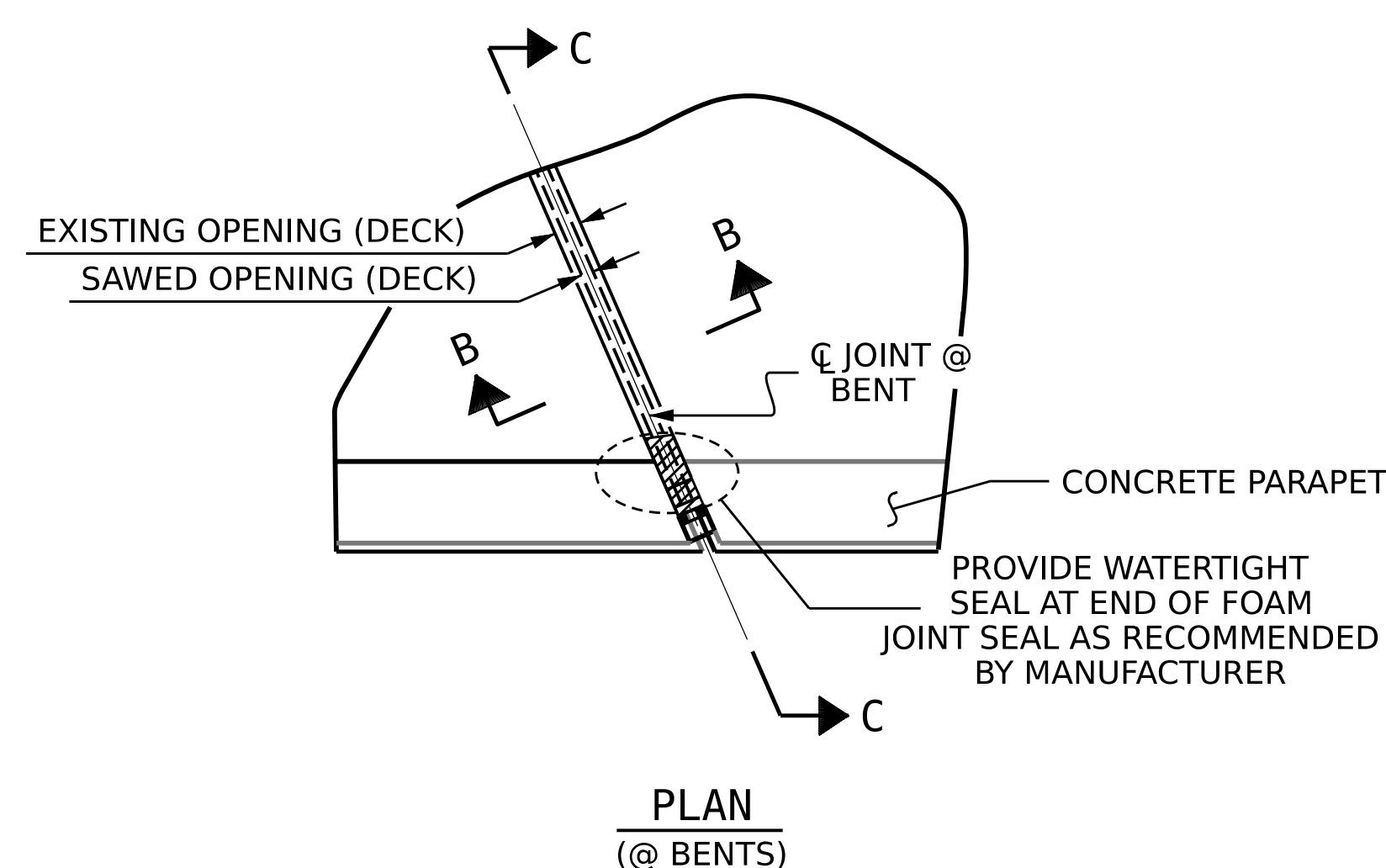
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

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



SECTION B-B

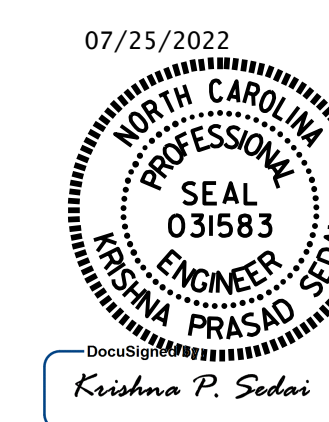
FOAM JOINT SEALS FOR PRESERVATION	
BENT 1	56.5 LF
BENT 2	52.8 LF
BENT 3	50.5 LF
TOTAL	159.8 LF



JOINT SEAL DETAILS

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

JOINT DETAILS

NO.	REVISIONS			NO.	REVISIONS			SHEET NO.
	BY:	DATE:			BY:	DATE:		
1				3			S2-09	
2				4			TOTAL SHEETS 21	

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

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NOTES

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

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

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

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

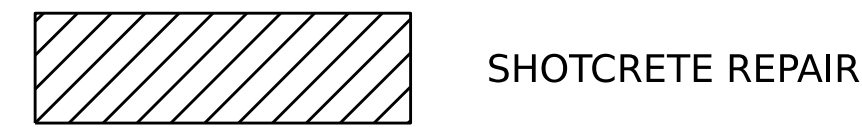
FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

PRIOR TO CLEANING AND PAINTING, REPLACE AND /OR TIGHTEN ANCHOR BOLT NUTS. SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

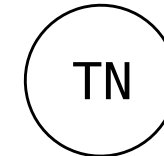
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



SHOTCRETE REPAIR



ERI - EPOXY RESIN INJECTION

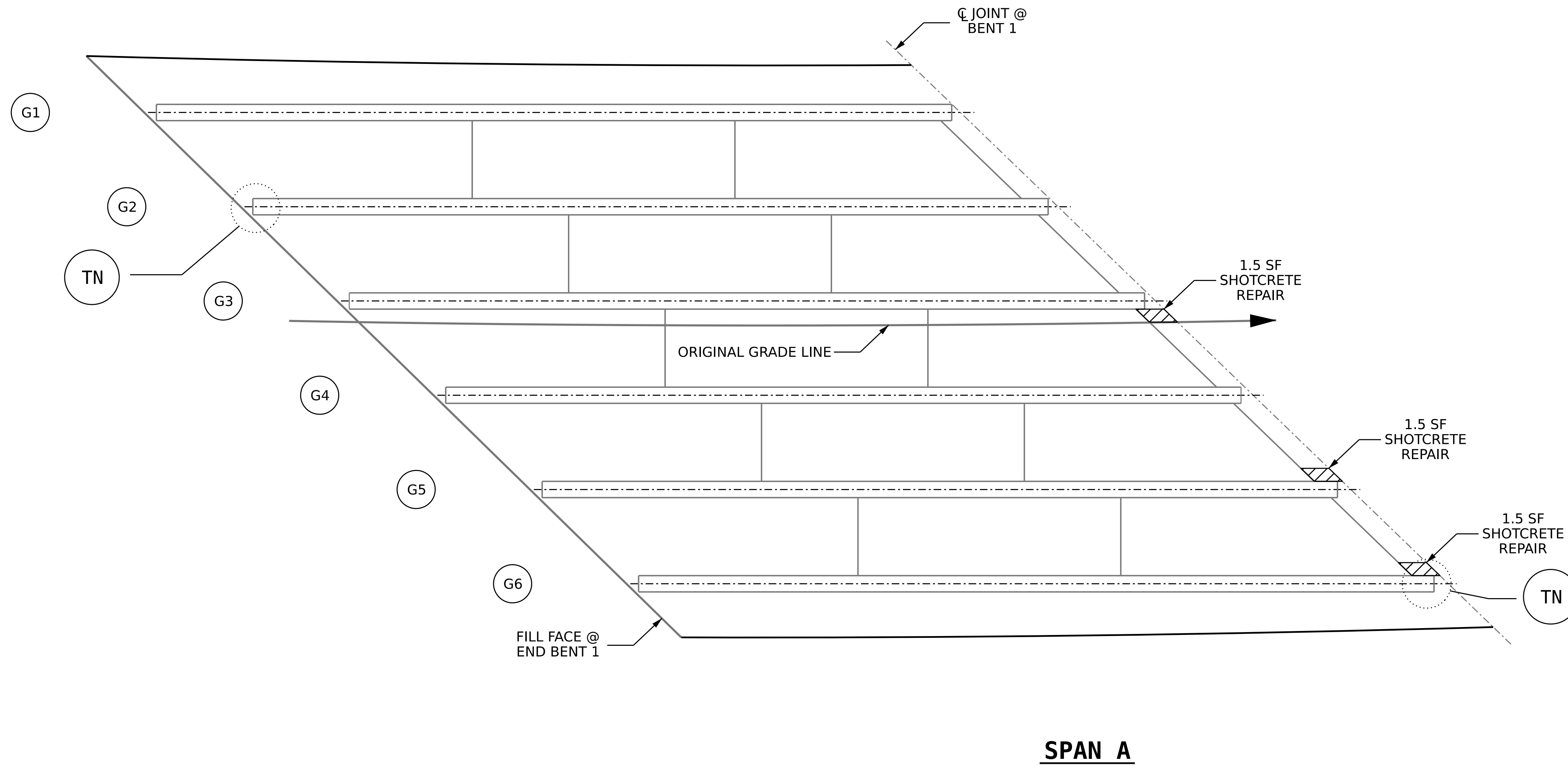


TIGHTEN ANCHOR BOLT NUT

AS-BUILT REPAIR QUANTITY TABLE

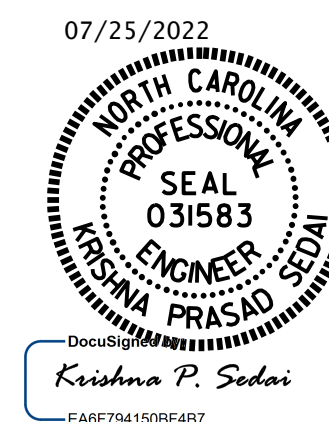
DECK UNDERSIDE REPAIR - SPAN A				
SHOTCRETE REPAIR	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	0.0	0.0		
DIAPHRAGM	4.5	2.3		
OTHER REPAIRS	ESTIMATE		ACTUAL	

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 1 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**DECK UNDERSIDE REPAIR
 SPAN A**

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

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REVISIONS						SHEET NO. S2-10
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 21
2			4			

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN B

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	1.5	0.5		
DIAPHRAGMS	6.0	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. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

NOTES

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

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

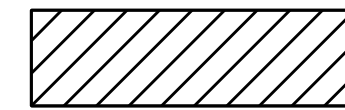
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

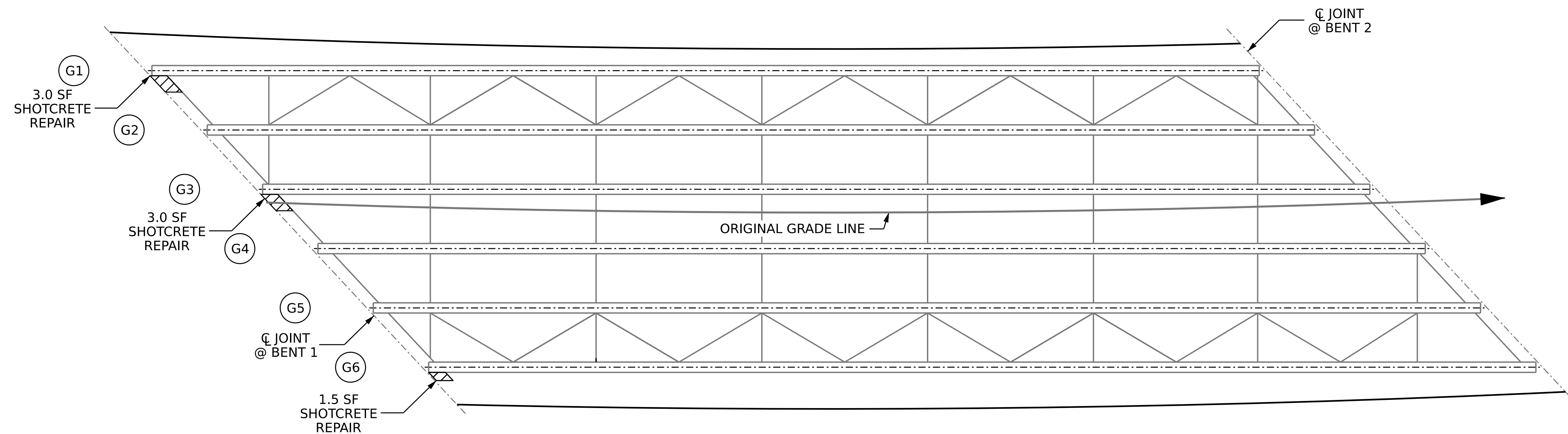
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



SHOTCRETE REPAIR



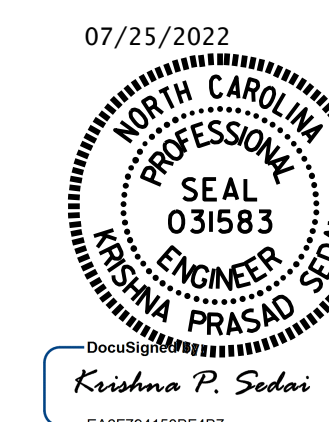
ERI - EPOXY RESIN INJECTION



SPAN B

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 2 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**DECK UNDERSIDE REPAIR
 SPAN B**

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

7/25/2022
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			21
2			4			

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN C

SHOTCRETE REPAIRS	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	1.0	0.3		
DIAPHRAGMS	4.5	2.3		
OTHER REPAIRS				

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

NOTES

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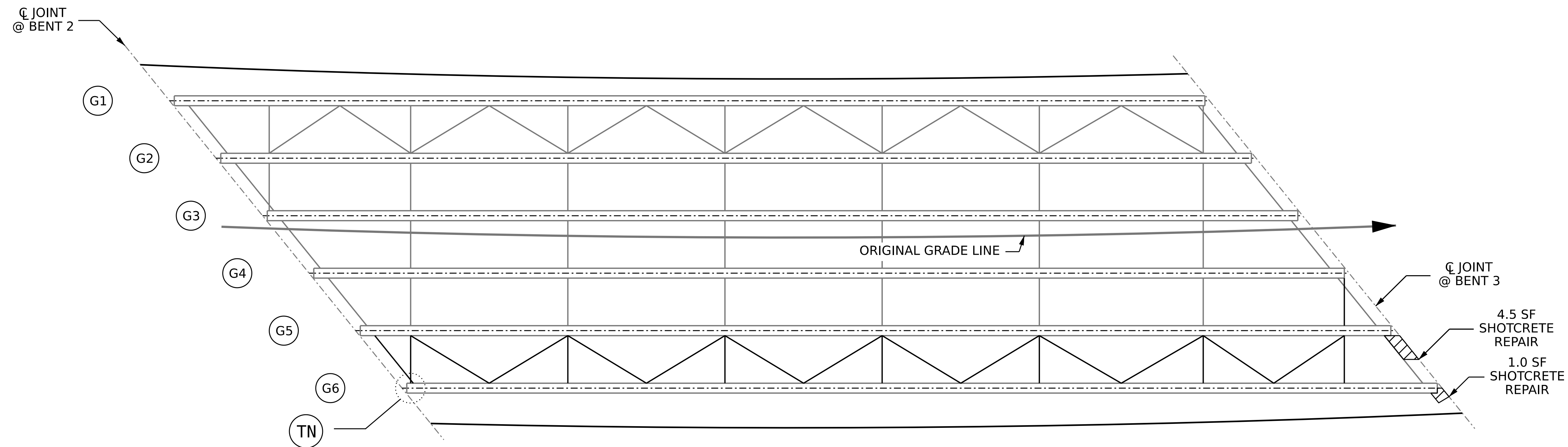
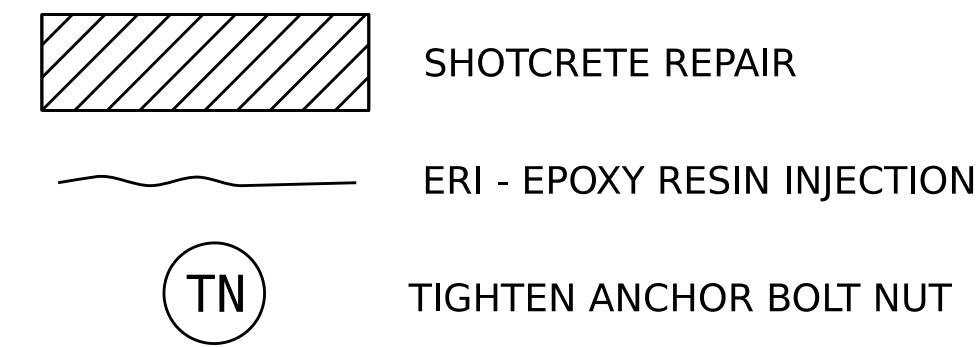
FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

PRIOR TO CLEANING AND PAINTING, REPLACE AND /OR TIGHTEN ANCHOR BOLT NUTS. SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

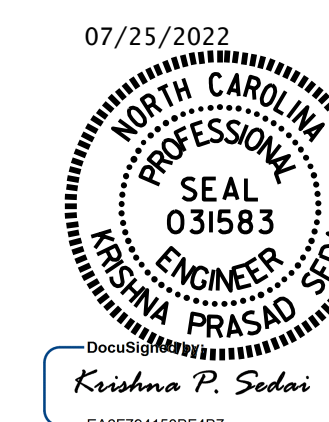
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



SPAN C

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 3 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR SPAN C

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-12
1			3			TOTAL SHEETS
2			4			21

AS-BUILT REPAIR QUANTITY TABLE

DECK UNDERSIDE REPAIR - SPAN D

	ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
SHOTCRETE REPAIR				
UNDERSIDE OF DECK	0.0	0.0		
UNDERSIDE OF OVERHANG	1.0	0.3		
DIAPHRAGM	0.0	0.0		
EPOXY RESIN INJECTION				
UNDERSIDE OF OVERHANG		2.3		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MINIMUM OF 1" BEHIND REBAR AND MINIMUM 2" CLEARANCE TO SAWCUT. SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

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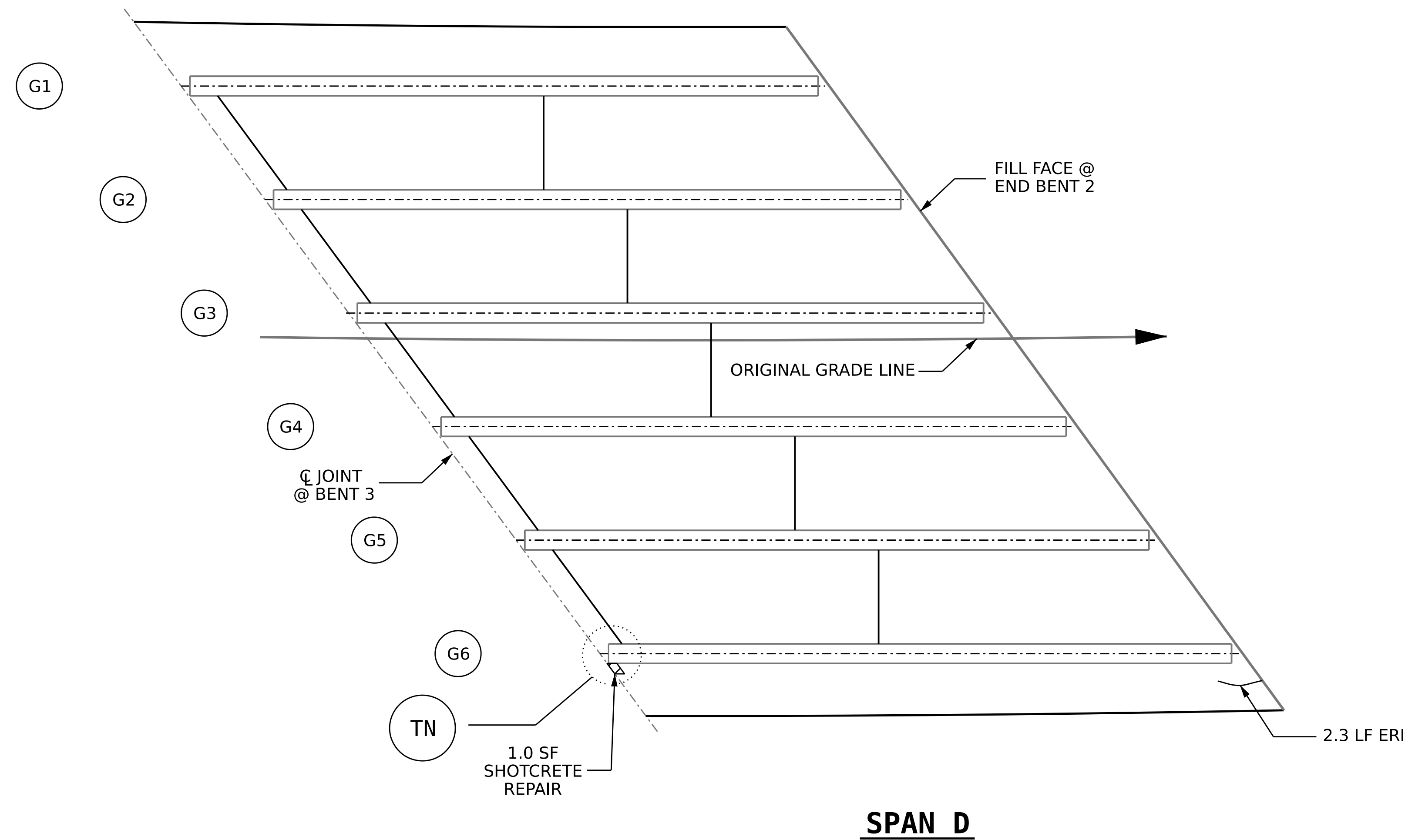
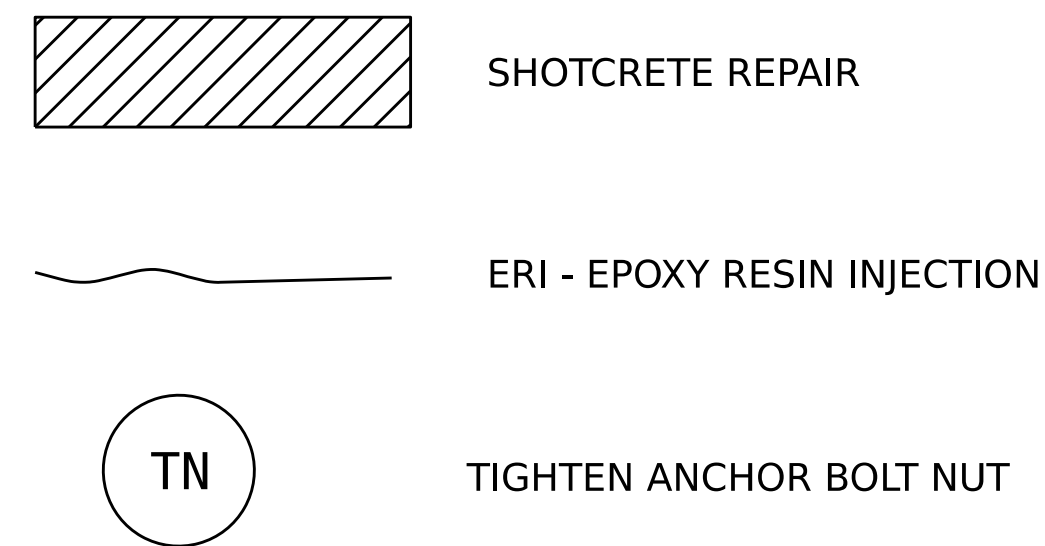
FOR UNDERSIDE OF DECK AND OVERHANG REPAIRS, SEE "OVERHANG, DIAPHRAGM AND BRIDGE RAIL REPAIR DETAILS" SHEET.

PRIOR TO CLEANING AND PAINTING, REPLACE AND /OR TIGHTEN ANCHOR BOLT NUTS. SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

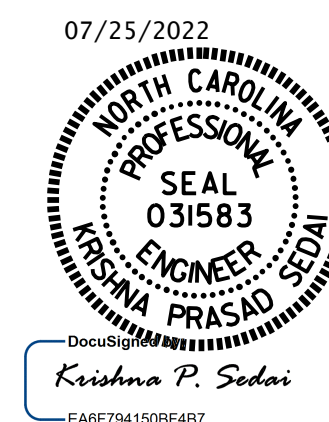
FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 4 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

DECK UNDERSIDE REPAIR SPAN D

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			21
2			4			

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DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

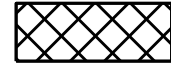
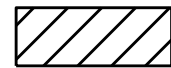

SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

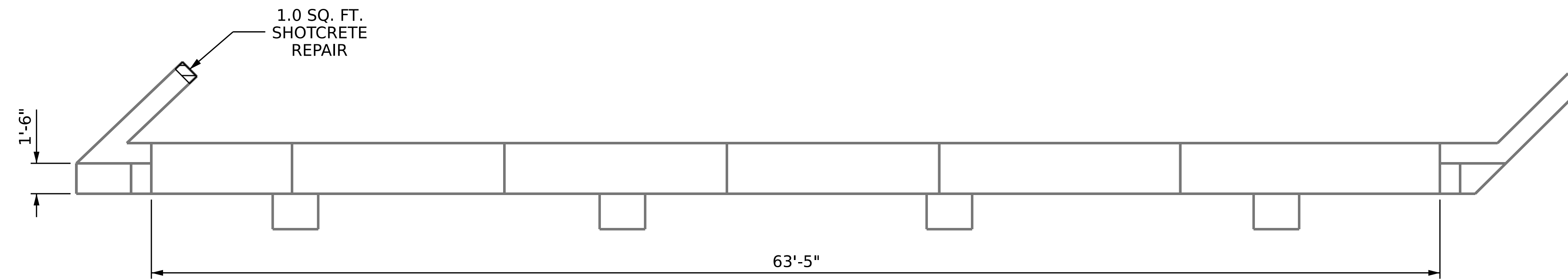
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

AS-BUILT REPAIR QUANTITY TABLE

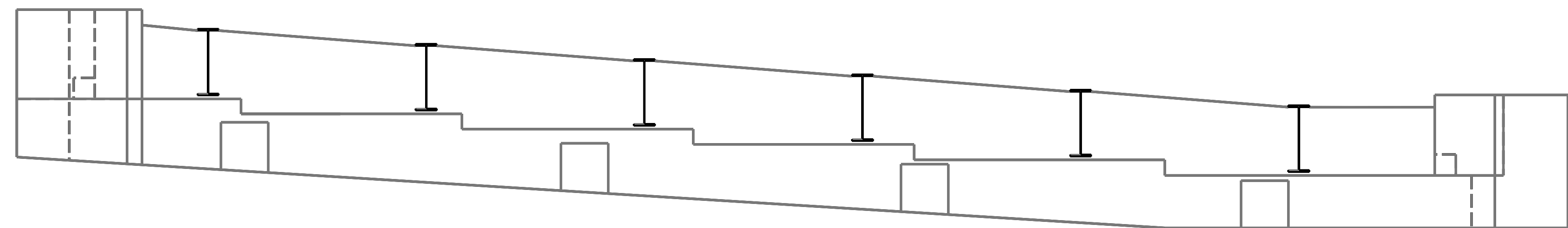
END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	0.0	0.0		
WING	1.0	0.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.	LIN. FT.	
CURTAIN WALL		0.0		
CAP		0.0		
EPOXY COATING		SQ. FT.	SQ. FT.	
TOP OF CAP		92.0		

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

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

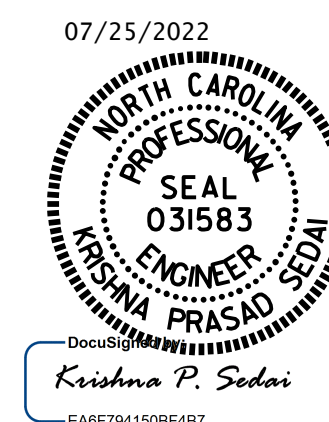


PLAN



ELEVATION
END BENT 1

PROJECT NO. I-5950
DAVIDSON COUNTY
BRIDGE NO. 280137



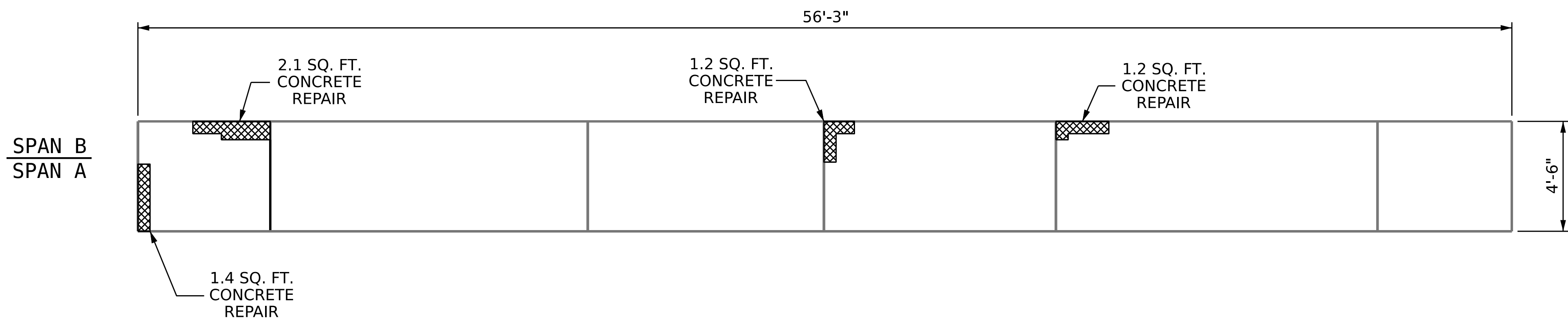
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENT 1

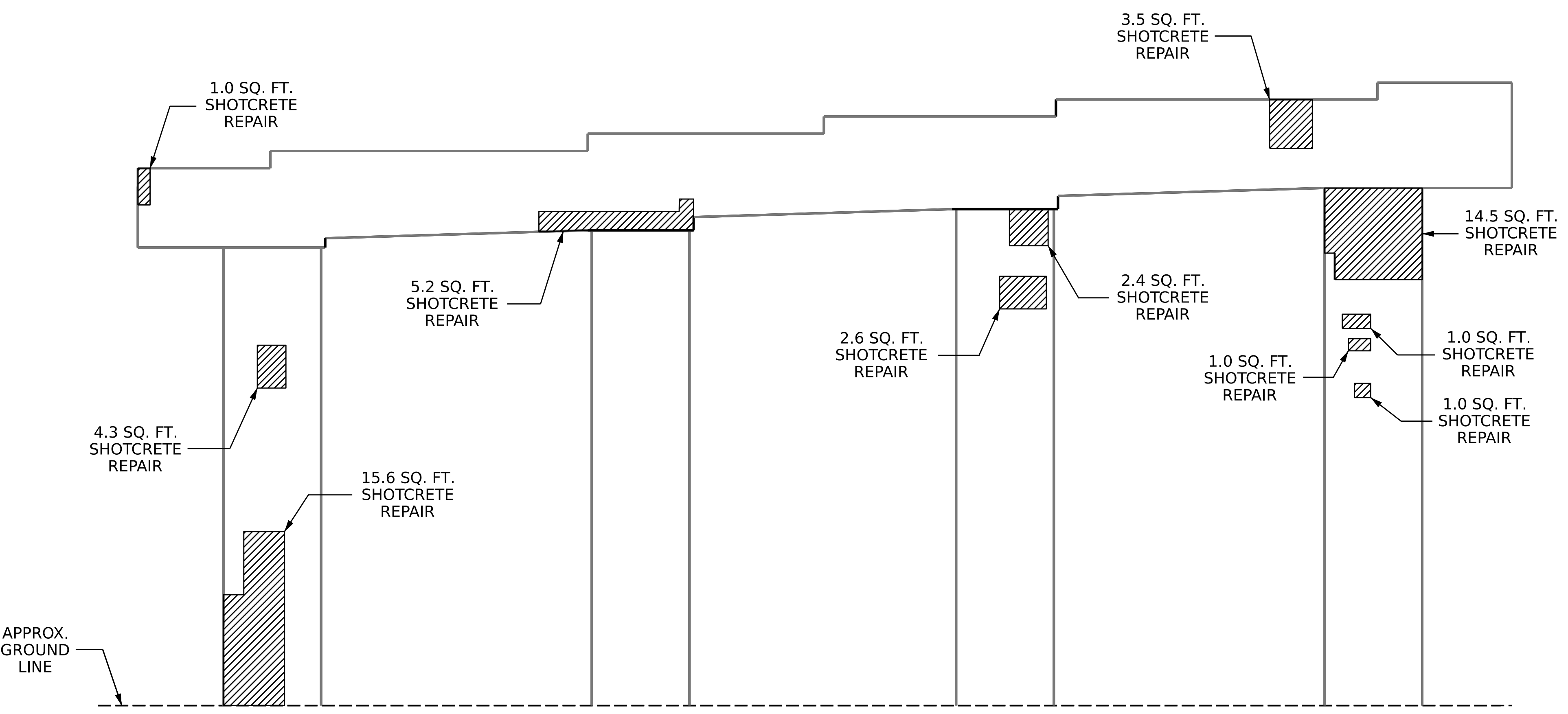
DRAWN BY : A. SORSENGINH DATE : 3/2022
CHECKED BY : E. BAYISSA DATE : 5/2022

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

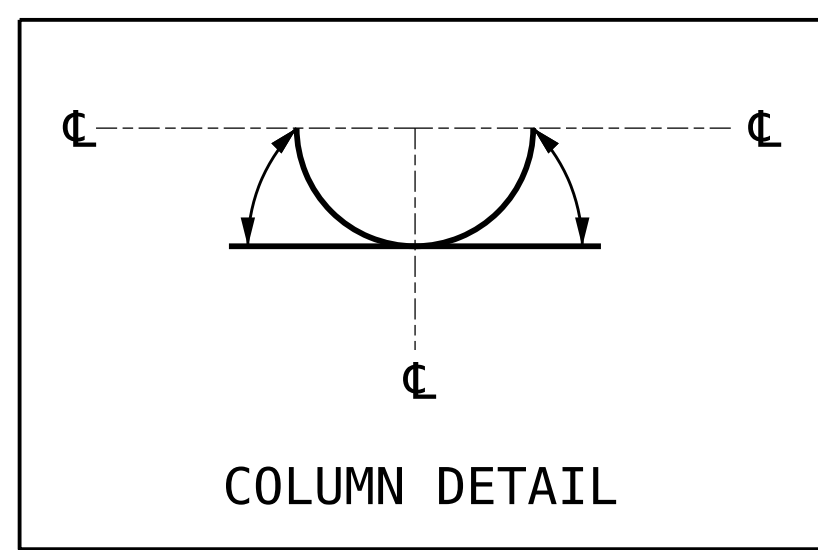
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			21
2			4			



PLAN - TOP OF CAP



SPAN A VIEW - ELEVATION



AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 (A FACE)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	9.7	4.9		
COLUMN	42.4	21.2		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	5.9	3.0		
EPOXY RESIN INJECTION	LN. FT.		LN. FT.	
CAP	0.0			
COLUMN	0.0			
EPOXY COATING	SQ. FT.		SQ. FT.	
TOP OF BENT CAP	228.0			

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

NOTES

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

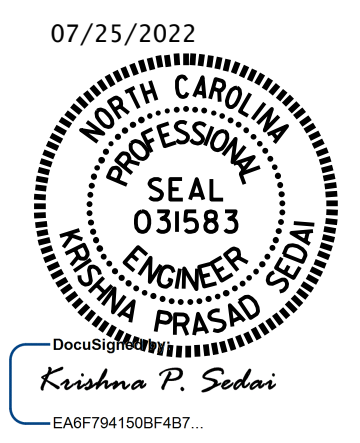
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

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

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 1 OF 2

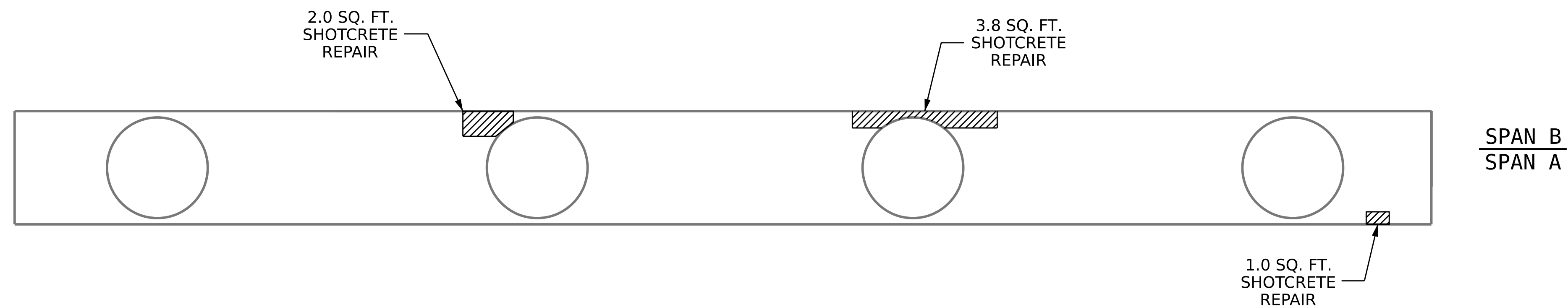


STATE OF NORTH CAROLINA
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 RALEIGH

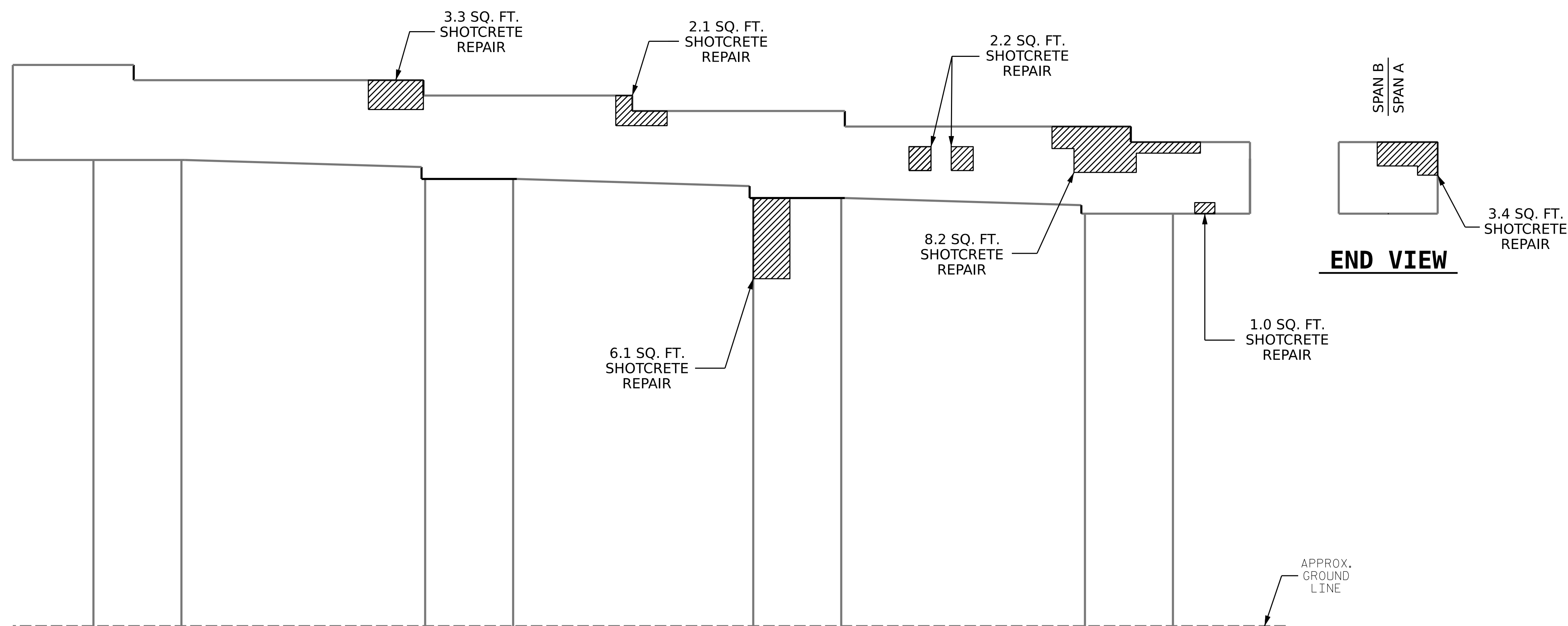
**BENT 1
 SPAN A FACE**

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

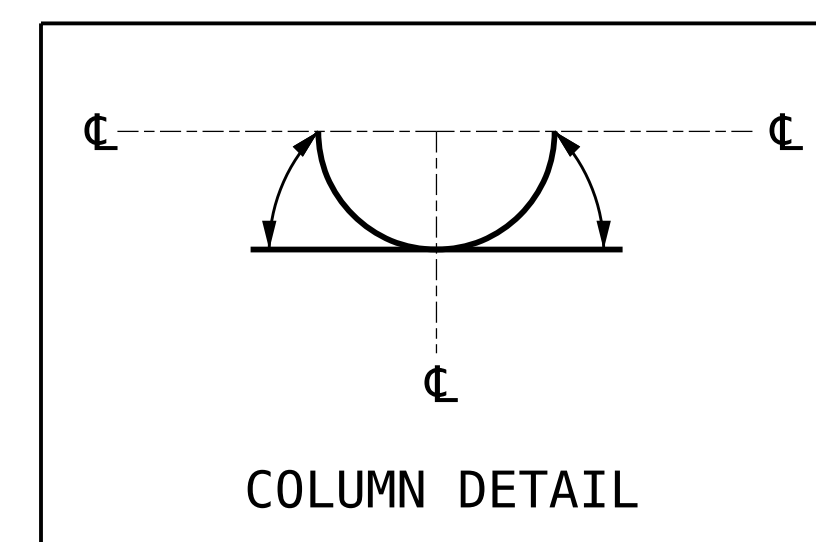
NO.	BY:	DATE:	REVISIONS			SHEET NO.
			NO.	BY:	DATE:	
1			3			S2-15
2			4			TOTAL SHEETS 21



PLAN - BOTTOM OF CAP



SPAN B VIEW - ELEVATION



AS-BUILT REPAIR QUANTITY TABLE

BENT 1 (B FACE)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	27.0	13.5		
COLUMN	6.1	3.1		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		

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

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

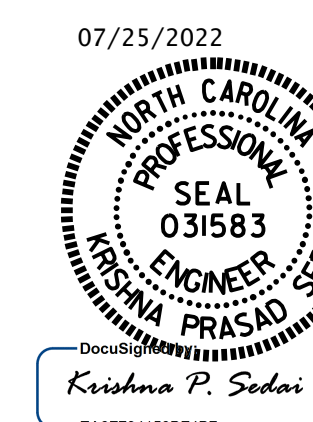
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

- SHOTCRETE REPAIR AREA
- ERI - EPOXY RESIN INJECTION

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 2 OF 2



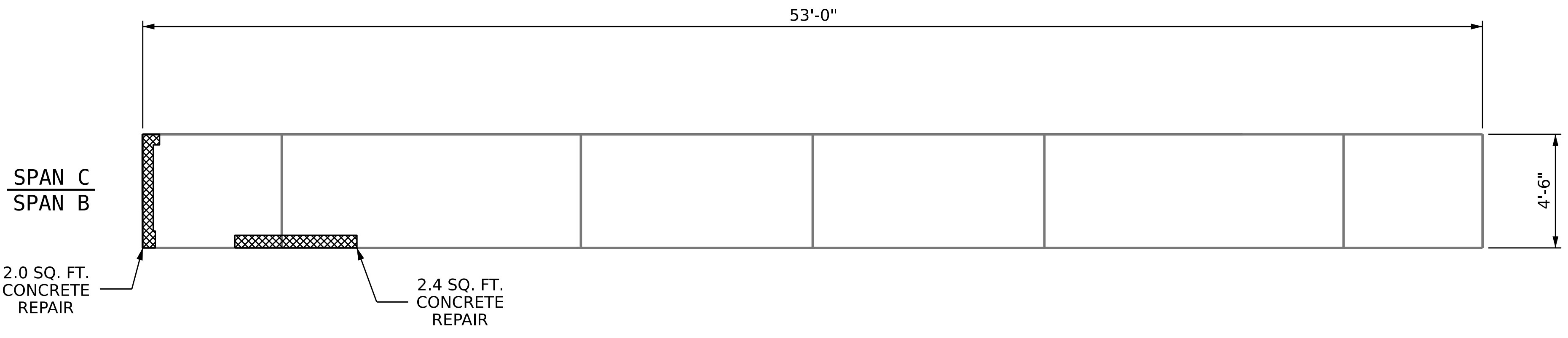
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 1
 SPAN B FACE**

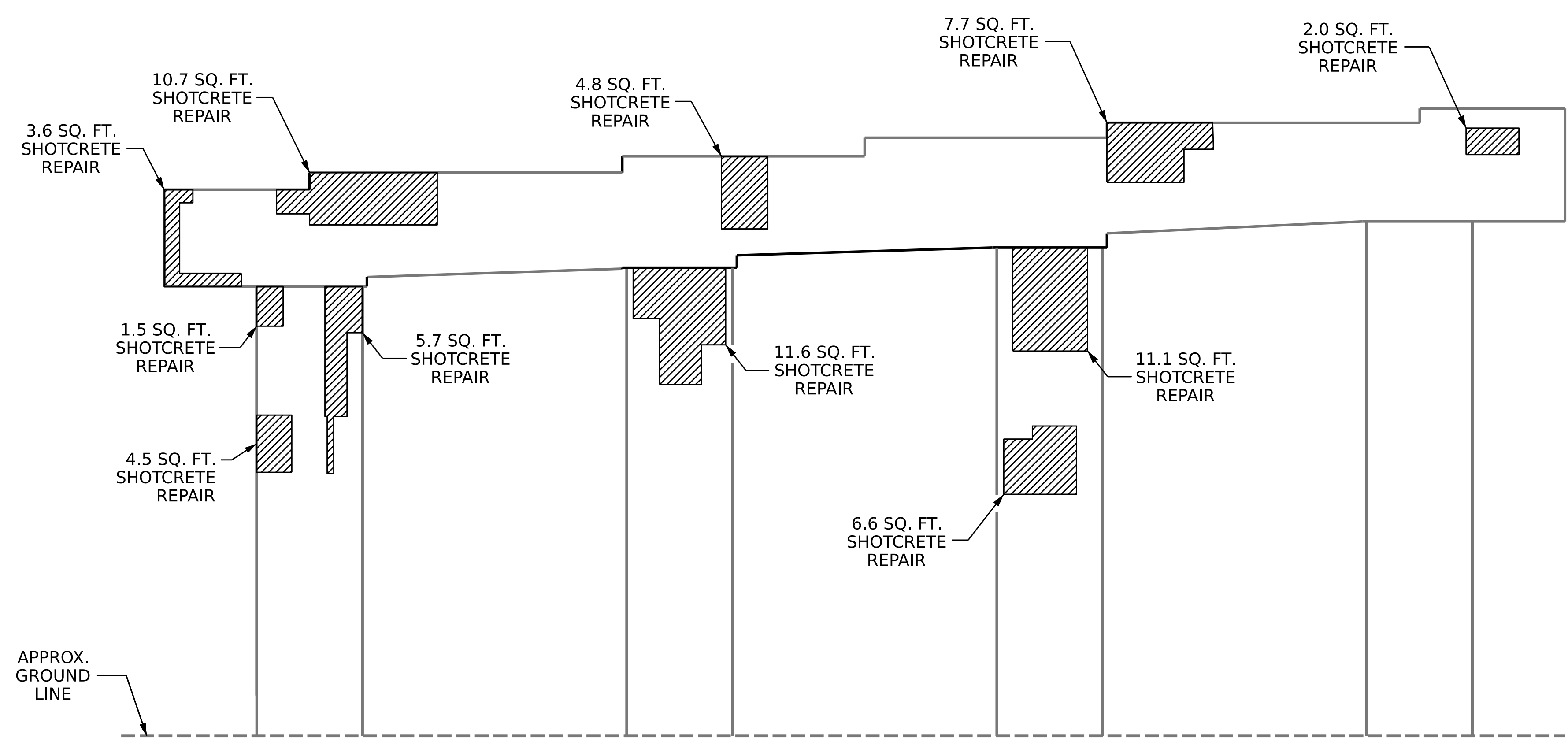
DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S2-16
2			4	TOTAL SHEETS 21

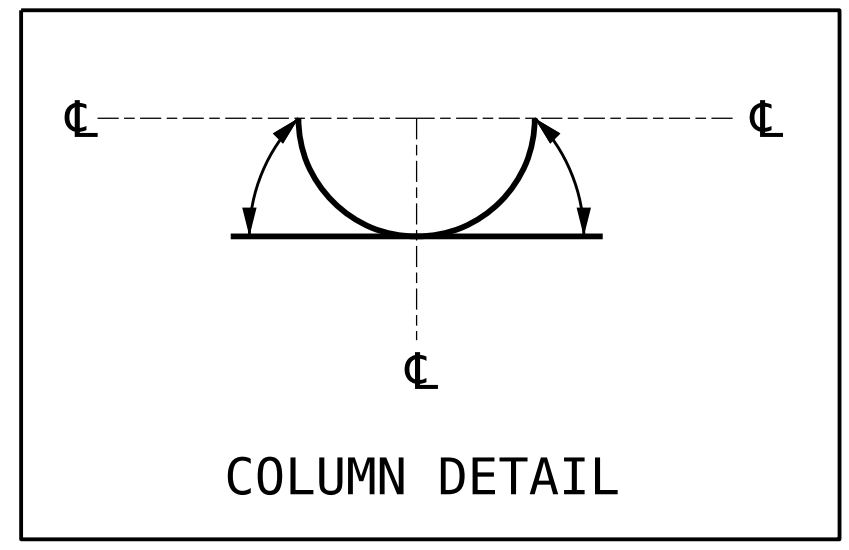
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PLAN - TOP OF CAP



SPAN B VIEW - ELEVATION



AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 (B FACE)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	28.8	14.4		
COLUMN	41.0	20.5		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.4	2.2		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		213.0		

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

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

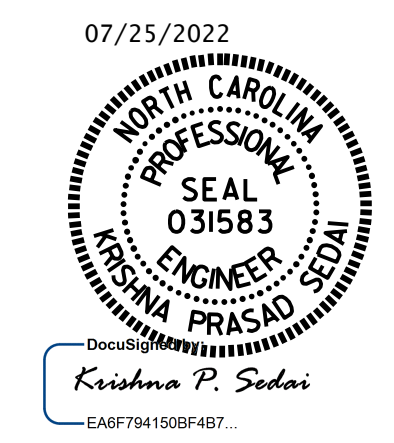
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

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

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

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 SPAN B FACE**

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

NO.	REVISIONS			SHEET NO.
	BY:	DATE:	NO.	
1			3	S2-17
2			4	TOTAL SHEETS 21

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AS-BUILT REPAIR QUANTITY TABLE

BENT 2 (C FACE)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	80.0	40.0		
COLUMN	38.0	19.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		

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



NOTES

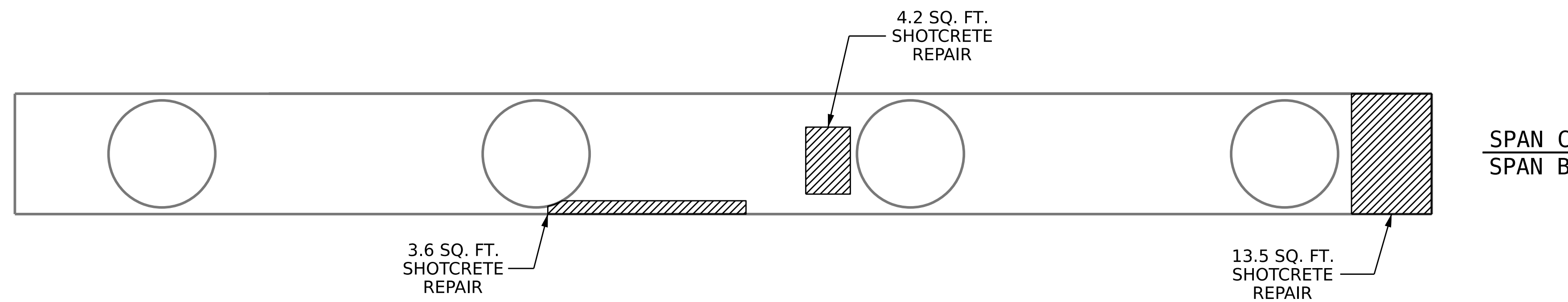
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

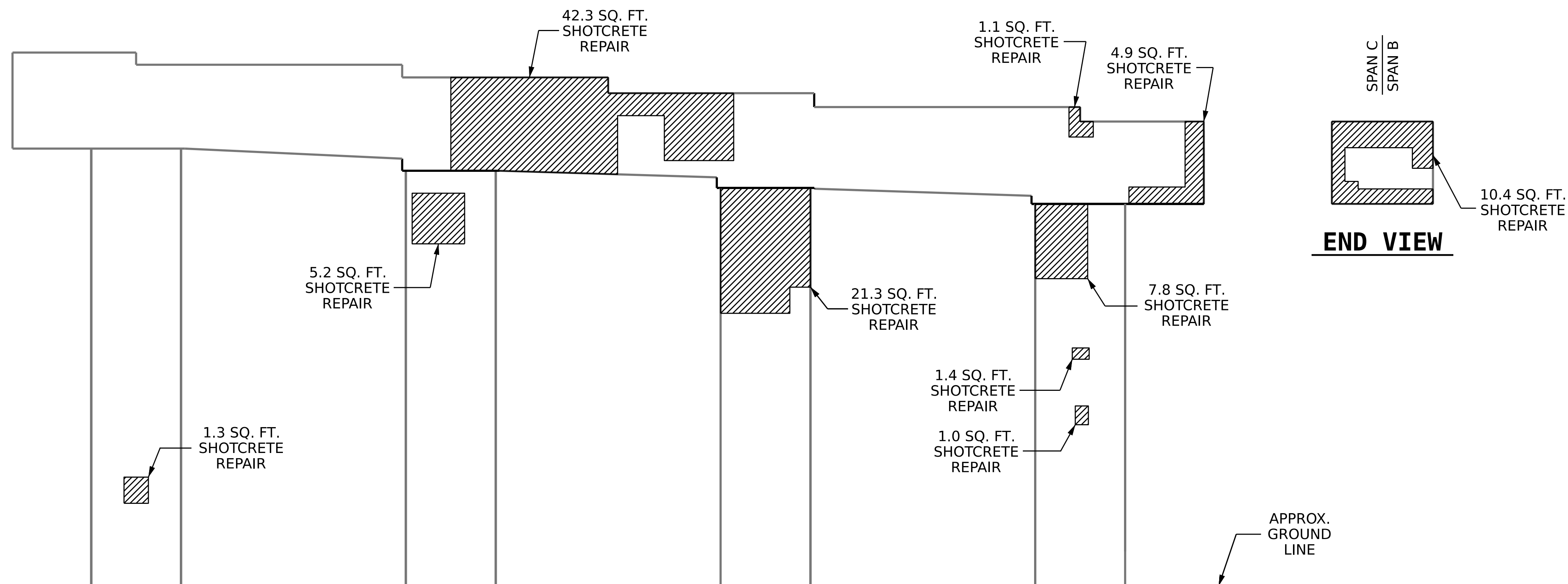
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

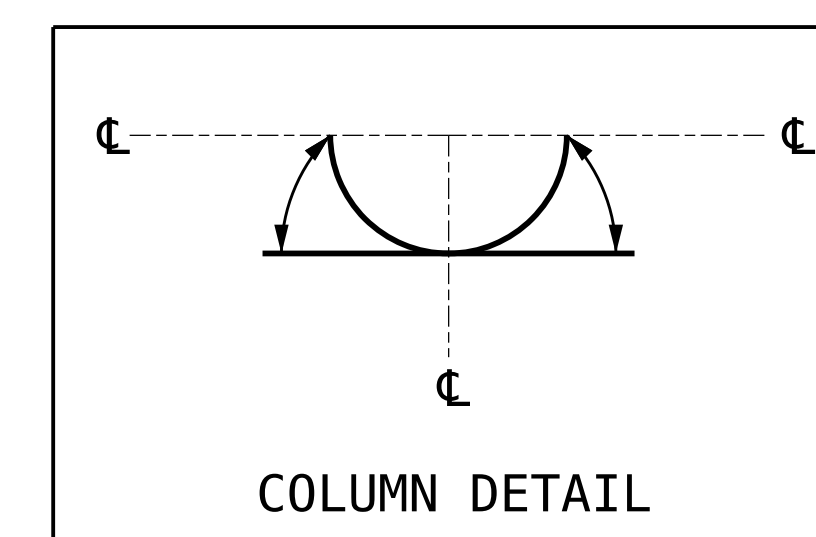
-  SHOTCRETE REPAIR AREA
-  ERI - EPOXY RESIN INJECTION



PLAN - BOTTOM OF CAP

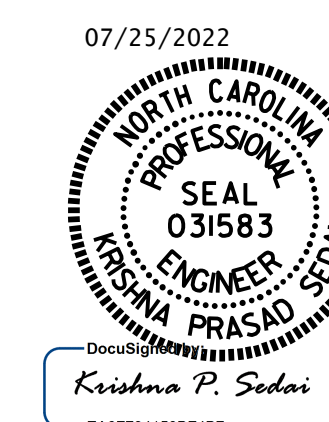


SPAN C VIEW - ELEVATION



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 2 OF 2



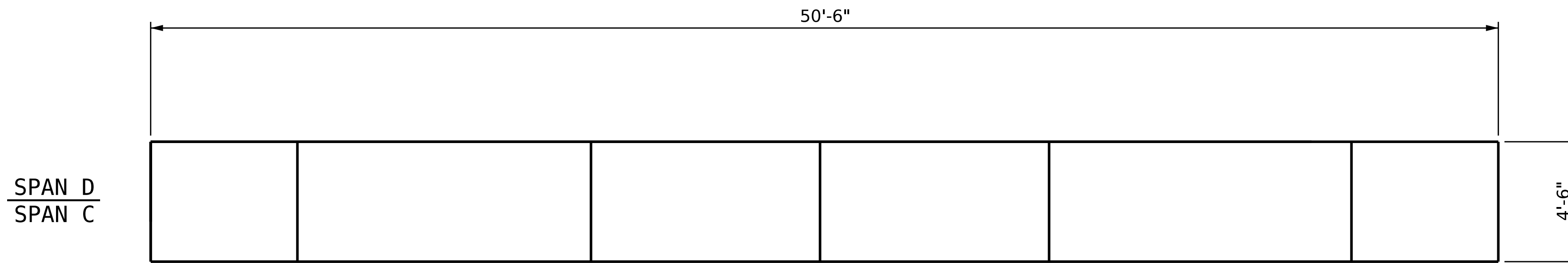
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 2
 SPAN C FACE**

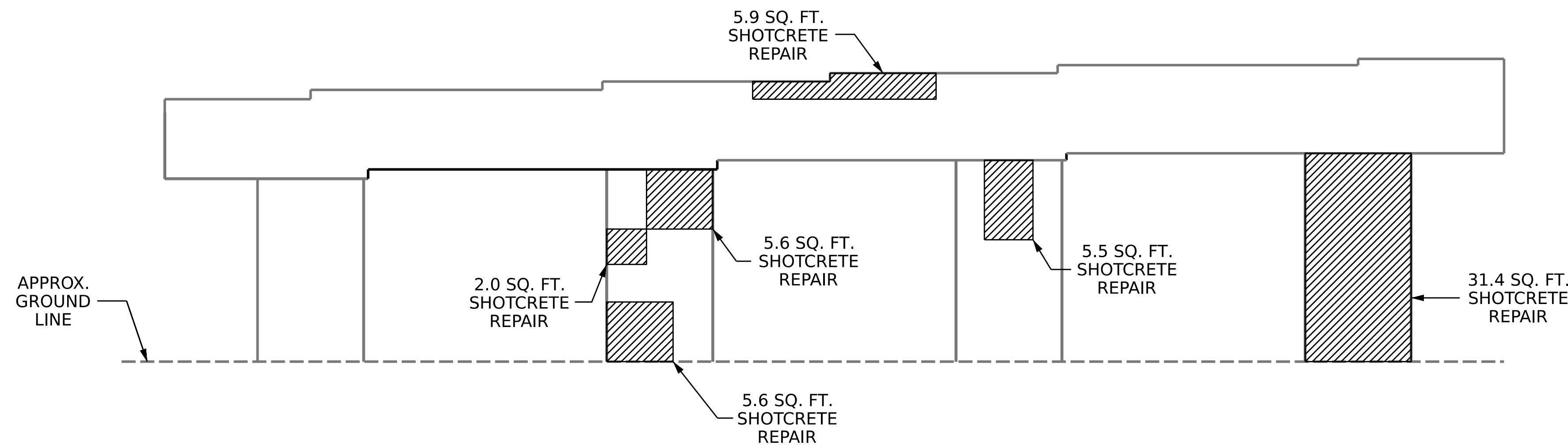
DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

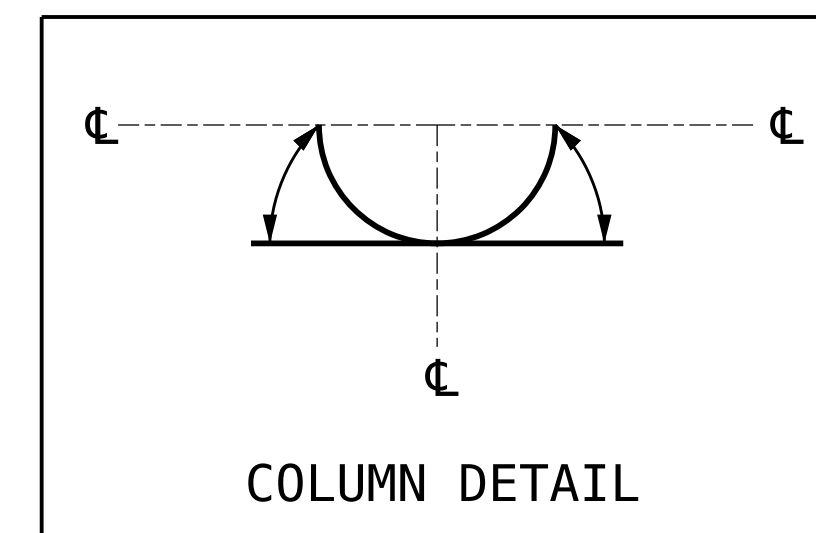
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-18
1			3			TOTAL SHEETS
2			4			21



PLAN - TOP OF CAP



SPAN C VIEW - ELEVATION



AS-BUILT REPAIR QUANTITY TABLE				
BENT 3 (C FACE)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	5.9	3.0		
COLUMN	50.1	25.1		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		219.0		

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

NOTES

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

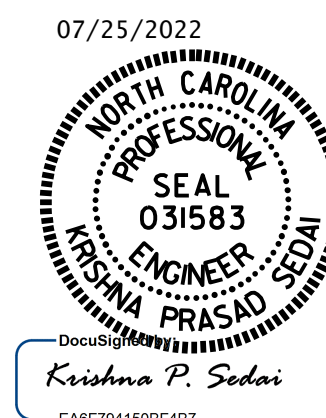
SHOTCRETE REPAIRS MAY BE REPLACED WITH CONCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

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

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

PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 1 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**BENT 3
 SPAN C FACE**

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

DOCUMENT NOT CONSIDERED
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S2-19
2			4			TOTAL SHEETS 21

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 (D FACE)	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	2.9	1.5		
COLUMN	54.5	27.3		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		

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

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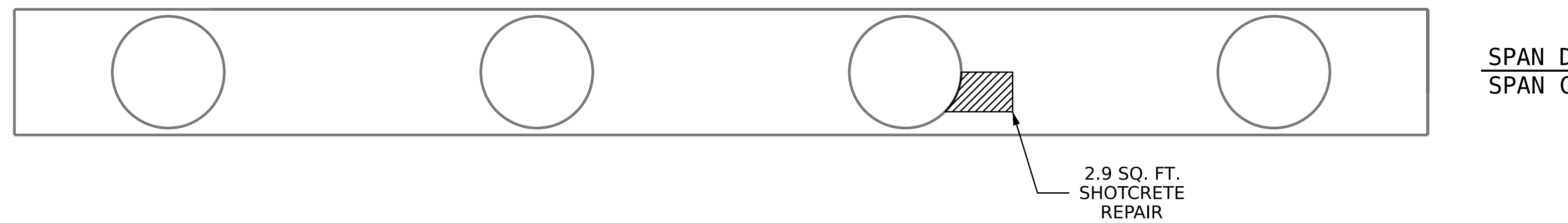
FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

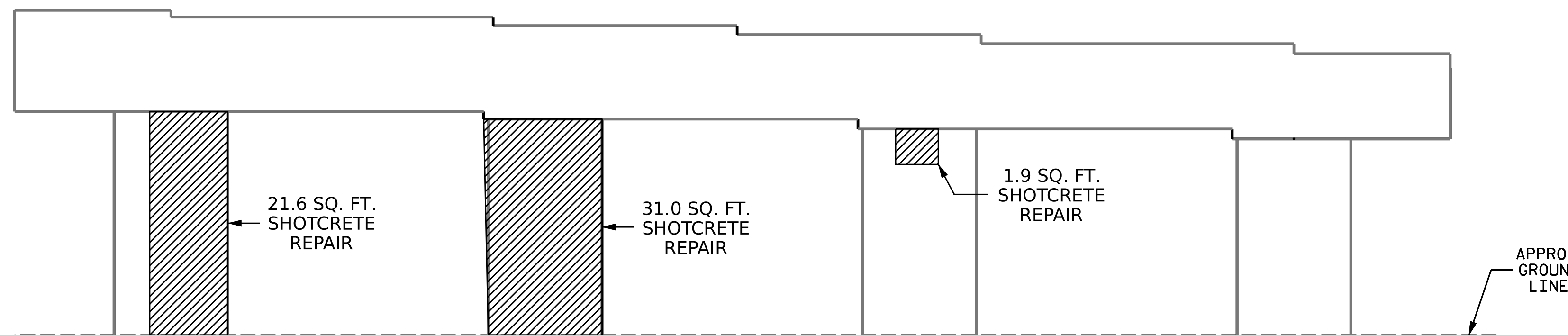
FOR CAP AND COLUMN REPAIR DETAILS, SEE "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

 SHOTCRETE REPAIR AREA

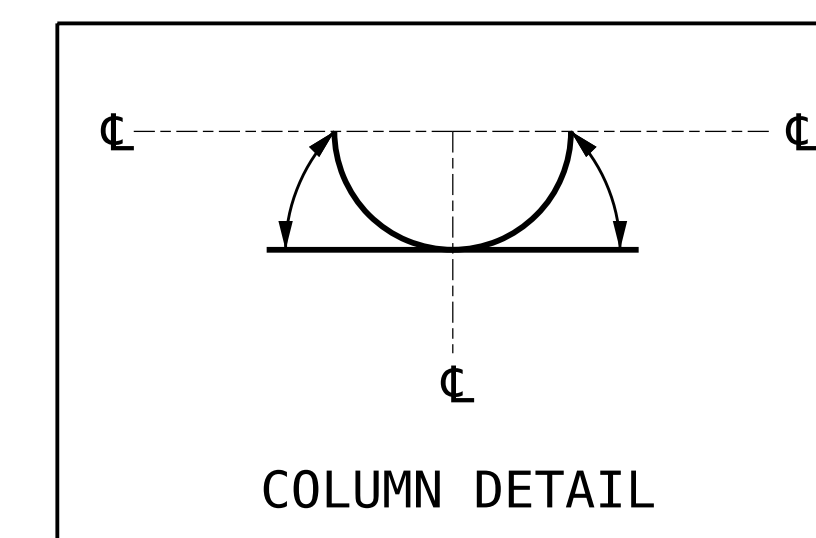
 ERI - EPOXY RESIN INJECTION



PLAN - BOTTOM OF CAP

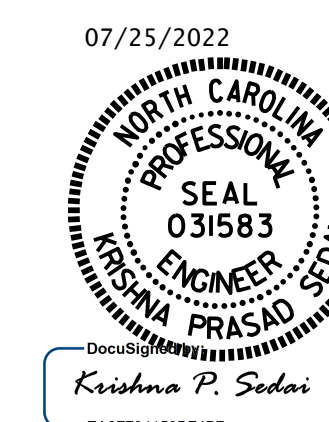


SPAN D VIEW - ELEVATION



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280137**

SHEET 2 OF 2



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
**BENT 3
 SPAN D FACE**

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S2-20
2			4			TOTAL SHEETS 21

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	1.0	0.5		
WING	1.0	0.5		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
SLOPE PROTECTION REPAIR (CLASS B CONCRETE)	30.0	10.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CURTAIN WALL		0.0		
CAP		0.0		
EPOXY COATING		SQ. FT.		SQ. FT.
TOP OF BENT CAP		76.0		

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

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FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.


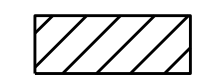

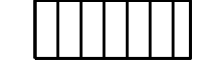
FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

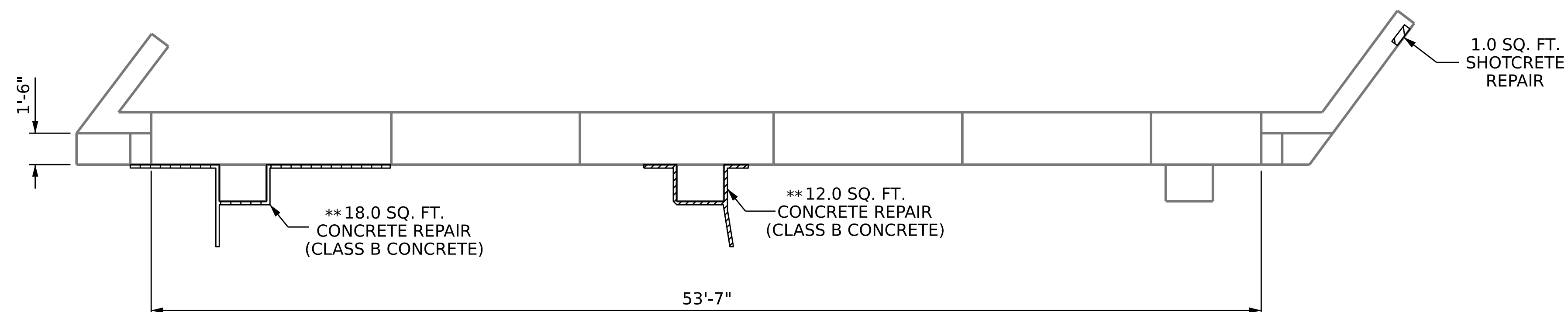
FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

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

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

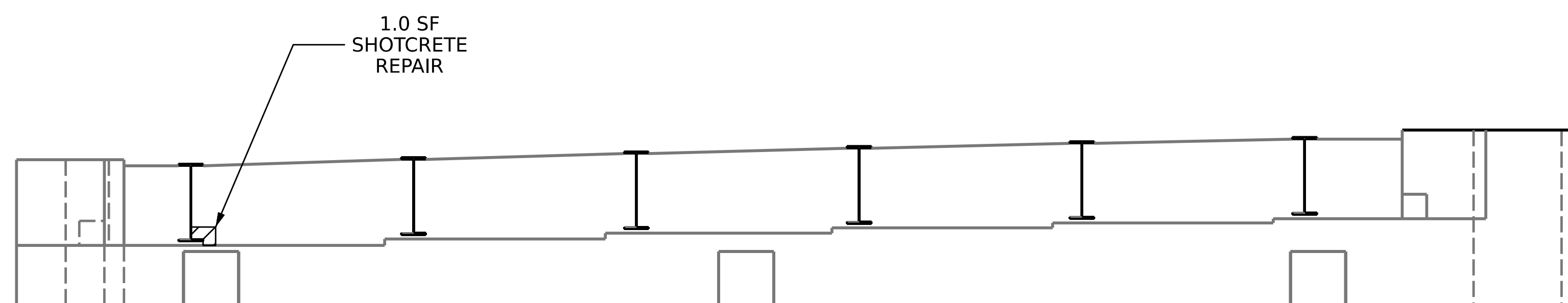
CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING. EPOXY COATING SHALL BE APPLIED TO THE TOP SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE MASONRY PLATES. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

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



PLAN

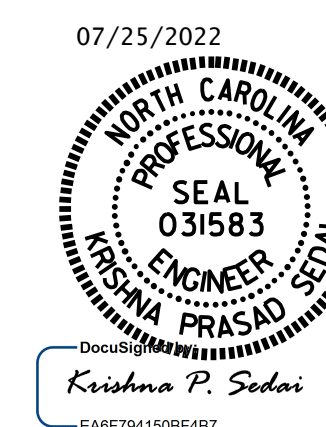
**CLEAN AND CUT 1.0 FT. EACH SIDE OF THE CRACK AND FILL WITH "CLASS B CONCRETE" UP TO THE EXISTING SURFACE.



ELEVATION

END BENT 2

PROJECT NO. I-5950
DAVIDSON COUNTY
 BRIDGE NO. 280137



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

END BENT 2

DRAWN BY : A. SORSENGINH DATE : 3/2022
 CHECKED BY : E. BAYISSA DATE : 5/2022

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS: 21

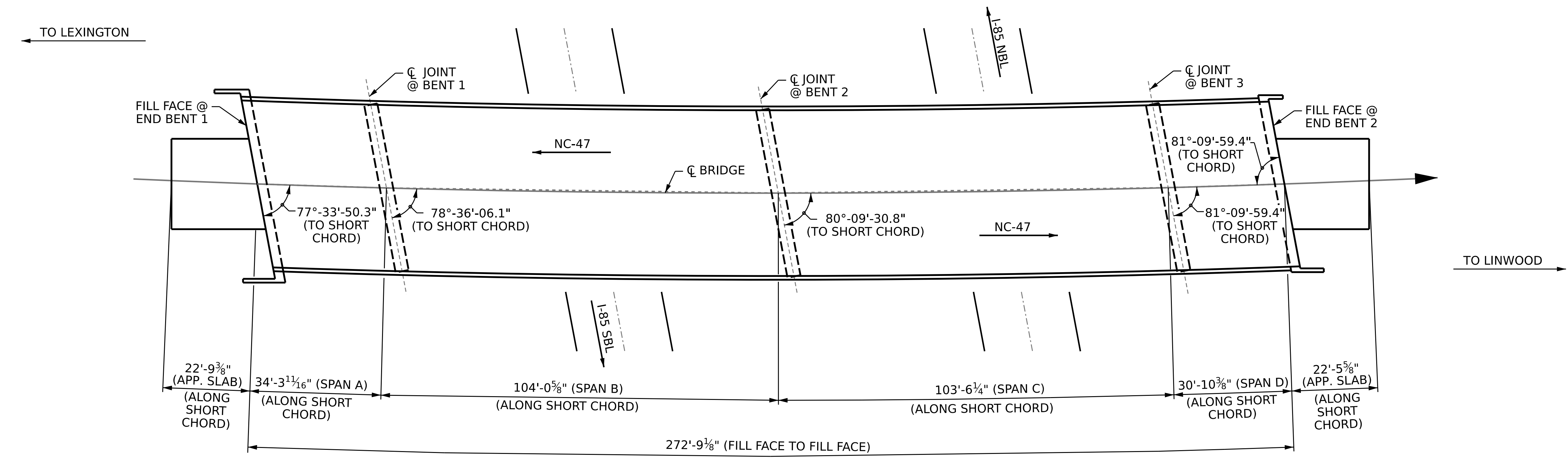
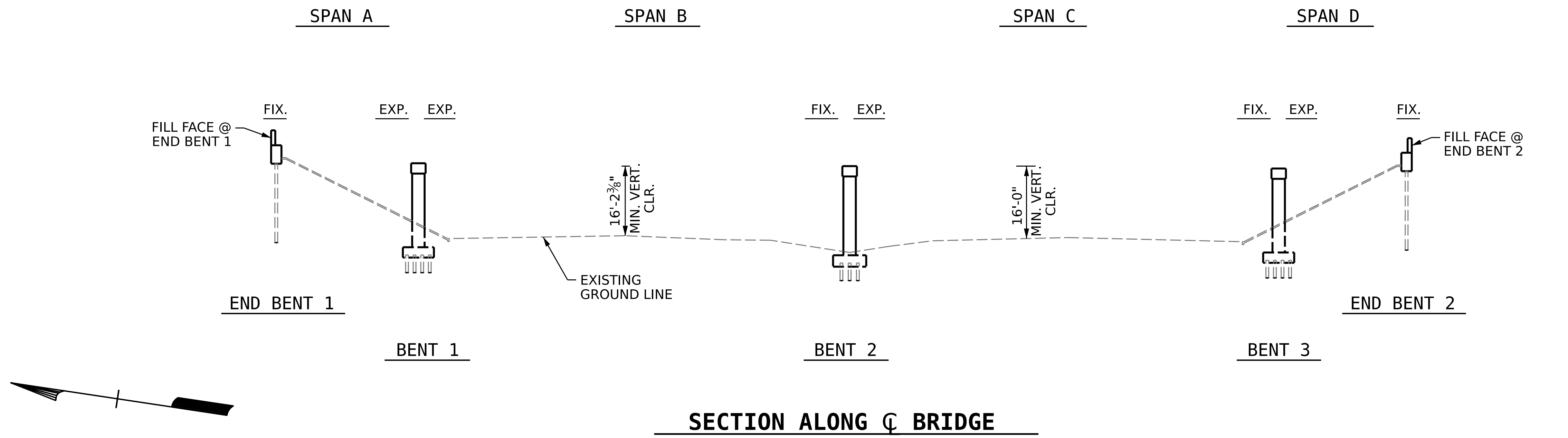
NOTE

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 04/13/2022.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS/ ROUTINE INSPECTION.

SCOPE OF WORK

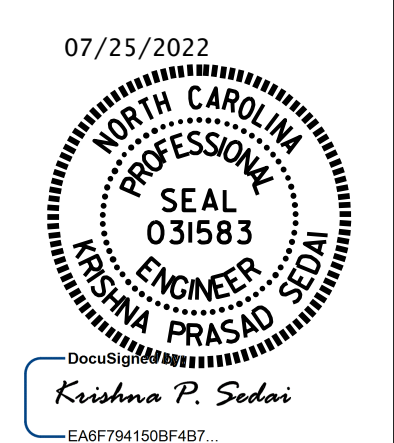
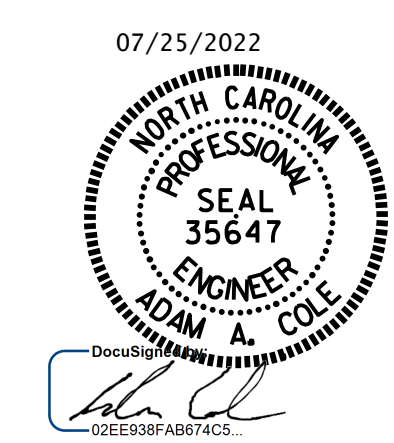
- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS..
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINT SEALS FOR PRESERVATION.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINT SEALANT.
- GROOVE PC BRIDGE DECK.
- CLEAN AND PAINT EXISTING STEEL STRUCTURE.
- REMOVE DEBRIS FROM TOP OF EXISTING END BENT AND BENT CAPS AND APPLY EPOXY COATING.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIRS.
- PROPERLY PREPARE SPALLED AREAS IN EXISTING END BENT AND BENTS AND PERFORM SHOTCRETE AND CONCRETE REPAIRS.



PLAN

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

RESIDENT ENGINEER _____ DATE _____



PROJECT NO. **I-5950**
DAVIDSON COUNTY
 BRIDGE NO. **280146**
 SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

**GENERAL DRAWING
 FOR BRIDGE ON
 NC-47 OVER
 I-85**

REVISIONS						SHEET NO. S3-01
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 15
2			4			

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DRAWN BY : E. BAYISSA DATE : 03/2022
 CHECKED BY : A. SORSENGINH DATE : 05/2022

1/25/2022 S:\DPG3\I-5950\Final Plans\403.001.I5950.SMU.GD.S01.280146.dgn ksedgi