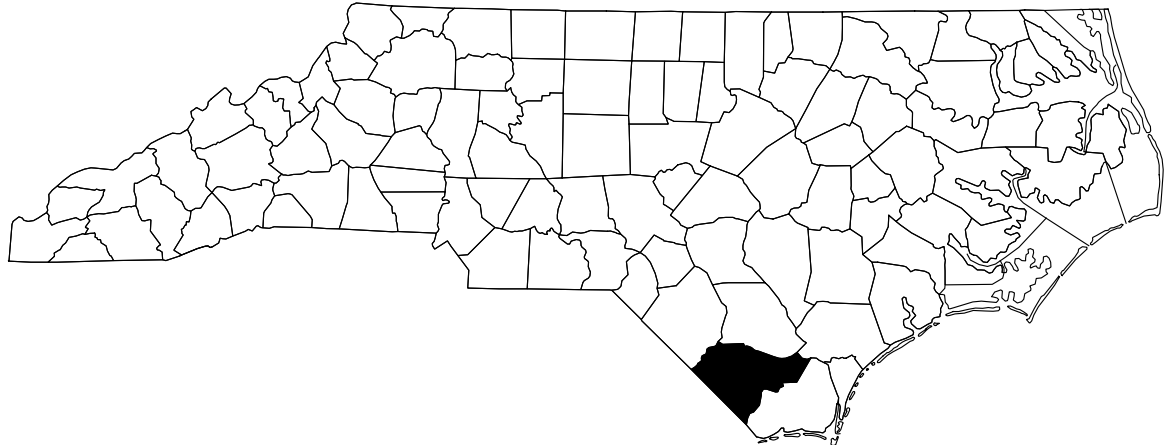


PROJECT: HI-0018

CONTRACT NO: C204994



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

COLUMBUS COUNTY

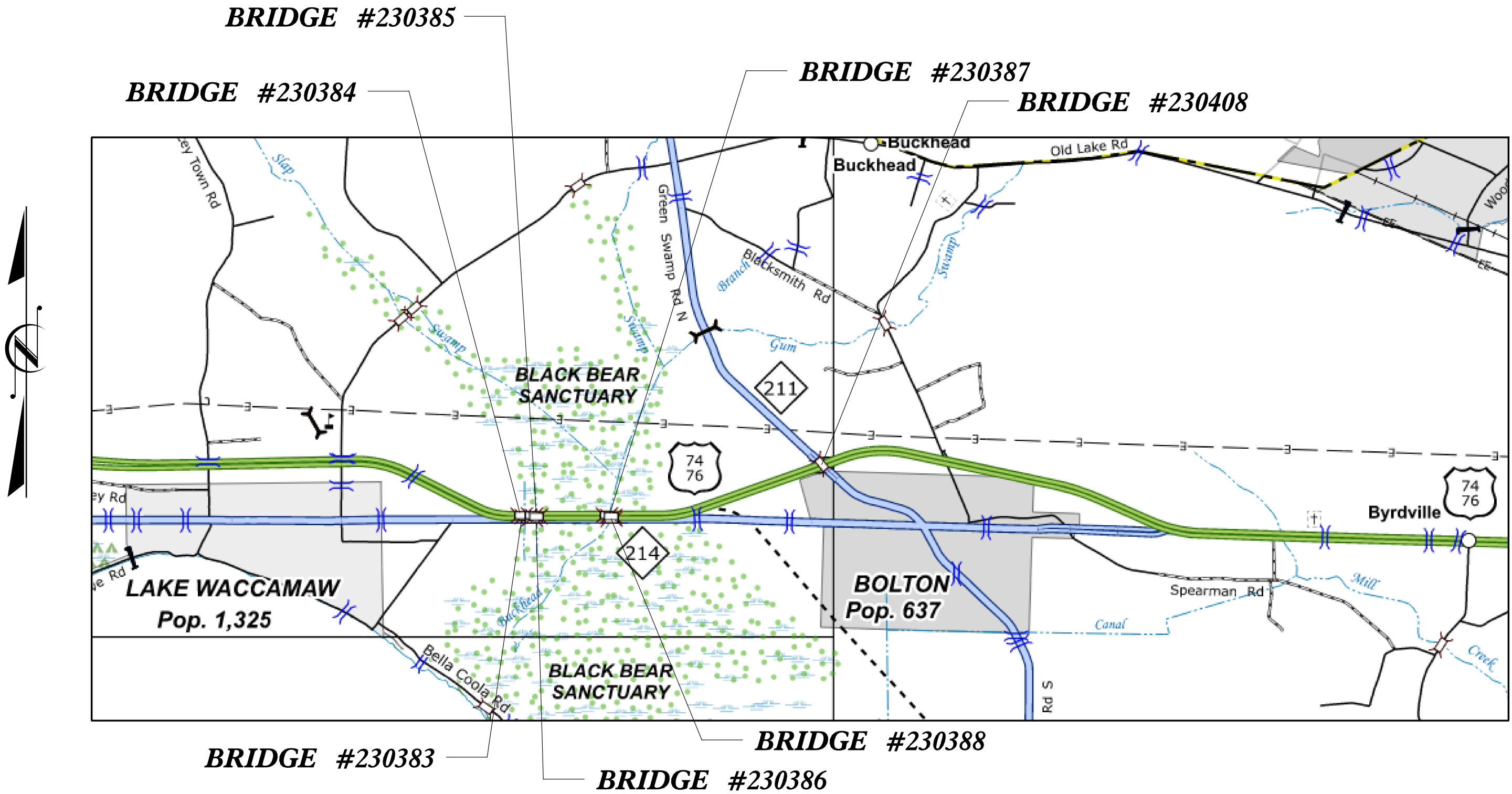
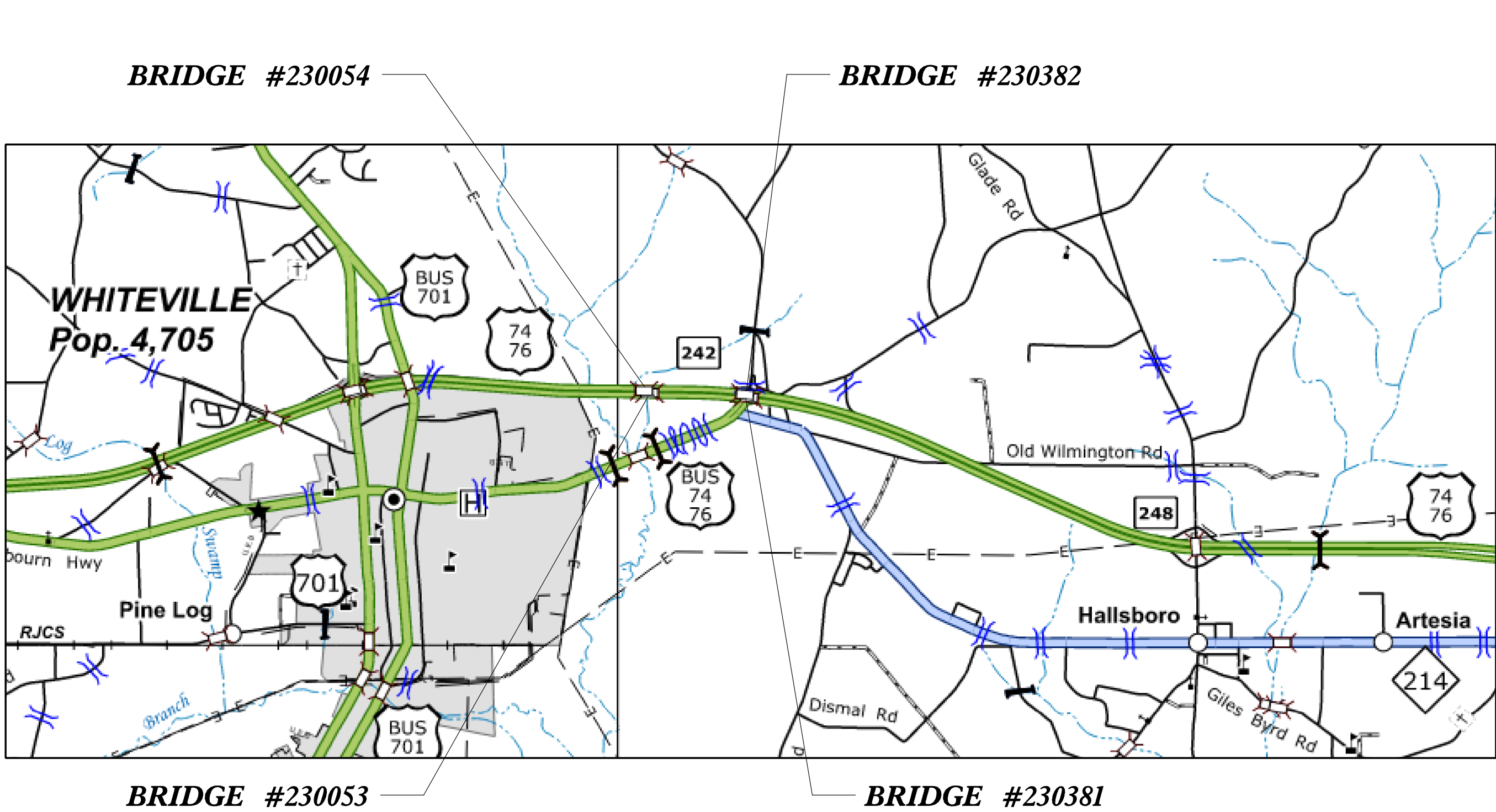
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HI-0018	1	79
STATE PROJ.NO.	F.A. PROJ.NO.	DESCRIPTION	
49989.1.1	0074(247)	P.E.	
49989.3.1	0074(247)	CONST.	

LOCATION:

BRIDGE #230053 ON US 74 / US 76 EBL OVER WHITE MARSH SWAMP
BRIDGE #230054 ON US 74 / US 76 WBL OVER WHITE MARSH SWAMP
BRIDGE #230381 ON US 74 / US 76 EBL OVER SR 1700 (RED HILL ROAD)
BRIDGE #230382 ON US 74 / US 76 WBL OVER SR 1700 (RED HILL ROAD)
BRIDGE #230383 ON US 74 / US 76 EBL OVER FRIAR SWAMP
BRIDGE #230384 ON US 74 / US 76 WBL OVER FRIAR SWAMP

BRIDGE #230385 ON US 74 / US 76 WBL OVER FRIAR SWAMP
BRIDGE #230386 ON US 74 / US 76 EBL OVER FRIAR SWAMP
BRIDGE #230387 ON US 74 / US 76 WBL OVER FRIAR SWAMP
BRIDGE #230388 ON US 74 / US 76 EBL OVER FRIAR SWAMP
BRIDGE #230408 ON NC 211 (GREEN SWAMP ROAD) OVER US 74 / US 76

TYPE OF WORK: BRIDGE REHABILITATION - DECK SURFACE PREPARATION AND POLYMER CONCRETE OVERLAY, SCARIFICATION OF ASPHALT WEARING SURFACE, DECK REPAIRS, POLYMER CONCRETE OVERLAY, SILANE DECK TREATMENT, JOINT REPAIRS, PAINTING EXISTING STRUCTURE, PAINTING EXISTING WEATHERING STEEL STRUCTURE, SUBSTRUCTURE REPAIR, CONCRETE PILE ENCAPSULATION, EPOXY COATING BENT CAPS

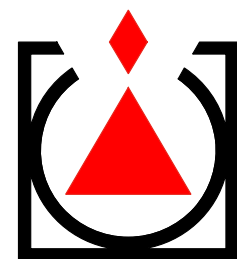


DESIGN DATA
COLUMBUS COUNTY

#230053	ADT	2021	=	16,500	#230385	ADT	2019	=	7,750
#230054	ADT	2021	=	16,500	#230386	ADT	2021	=	15,000
#230381	ADT	2021	=	16,500	#230387	ADT	2018	=	6,750
#230382	ADT	2021	=	16,500	#230388	ADT	2021	=	15,000
#230383	ADT	2021	=	16,500	#230408	ADT	2022	=	1,900
#230384	ADT	2019	=	7,750					

PROJECT LENGTH
COLUMBUS COUNTY

#230053	=	0.04	MILE	#230385	=	0.04	MILE
#230054	=	0.04	MILE	#230386	=	0.04	MILE
#230381	=	0.04	MILE	#230387	=	0.03	MILE
#230382	=	0.04	MILE	#230388	=	0.03	MILE
#230383	=	0.02	MILE	#230408	=	0.04	MILE
#230384	=	0.02	MILE				



GANNETT
FLEMING

One Glenwood Avenue
Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

TIMOTHY M. SHERRILL, P.E.
NCDOT PROJECT ENGINEER

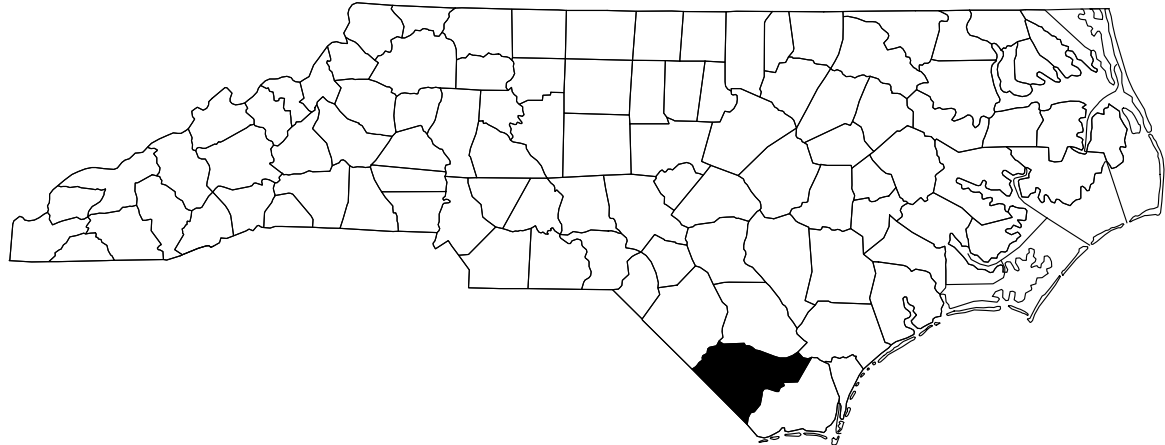
2024 STANDARD SPECIFICATIONS

LETTING DATE:
FEBRUARY 18, 2025



JOHN A. YANNACCONI, P.E.
PROJECT DESIGN ENGINEER

CONTRACT NO: C204994 PROJECT: HI-0018



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

COLUMBUS COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HI-0018	1A	79
STATE PROJ.NO.	F.A.PROJ.NO.	DESCRIPTION	
49989.1.1	0074(247)	P.E.	
49989.3.1	0074(247)	CONST.	

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BRIDGE #230384 ON US 74 / US 76 WBL OVER FRIAR SWAMP

BRIDGE #230385 ON US 74 / US 76 WBL OVER FRIAR SWAMP
BRIDGE #230386 ON US 74 / US 76 EBL OVER FRIAR SWAMP
BRIDGE #230387 ON US 74 / US 76 WBL OVER FRIAR SWAMP
BRIDGE #230388 ON US 74 / US 76 EBL OVER FRIAR SWAMP
BRIDGE #230408 ON NC 211 (GREEN SWAMP ROAD) OVER US 74 /US 76

TYPE OF WORK: BRIDGE REHABILITATION – DECK SURFACE PREPARATION AND POLYMER CONCRETE OVERLAY, SCARIFICATION OF ASPHALT WEARING SURFACE, DECK REPAIRS, POLYMER CONCRETE OVERLAY, SILANE DECK TREATMENT, JOINT REPAIRS, PAINTING EXISTING STRUCTURE, PAINTING EXISTING WEATHERING STEEL STRUCTURE, SUBSTRUCTURE REPAIR, CONCRETE PILE ENCAPSULATION, EPOXY COATING BENT CAPS

INDEX OF DRAWINGS

SHEET NO.

1
1A TO 1B
S-1

S1-01 TO S1-02
S1-03
S1-04 TO S1-05
S1-06
S1-07

S2-01 TO S2-02
S2-03
S2-04 TO S2-05
S2-06
S2-07

S3-01 TO S3-02
S3-03
S3-04 TO S3-05
S3-06
S3-07

S4-01 TO S4-02
S4-03
S4-04 TO S4-05
S4-06
S4-07

DESCRIPTION

TITLE SHEET
INDEX OF DRAWINGS
TOTAL BILL OF MATERIAL

BRIDGE NO. 230053
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
FOAM JOINT SEAL DETAILS
APPROACH SLAB WIDENING DETAILS

BRIDGE NO. 230054
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
FOAM JOINT SEAL DETAILS
SUBSTRUCTURE REPAIR

BRIDGE NO. 230381
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
FOAM JOINT SEAL DETAILS
EXPANSION JOINT SEAL DETAILS

BRIDGE NO. 230382
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
FOAM JOINT SEAL DETAILS
EXPANSION JOINT SEAL DETAILS

SHEET NO.

S5-01 TO S5-02
S5-03
S5-04
S5-05
S5-06

S6-01 TO S6-02
S6-03
S6-04
S6-05
S6-06

S7-01 TO S7-02
S7-03
S7-04 TO S7-05
S7-06
S7-07

S8-01 TO S8-02
S8-03
S8-04 TO S8-05
S8-06
S8-07 TO S8-08

DESCRIPTION

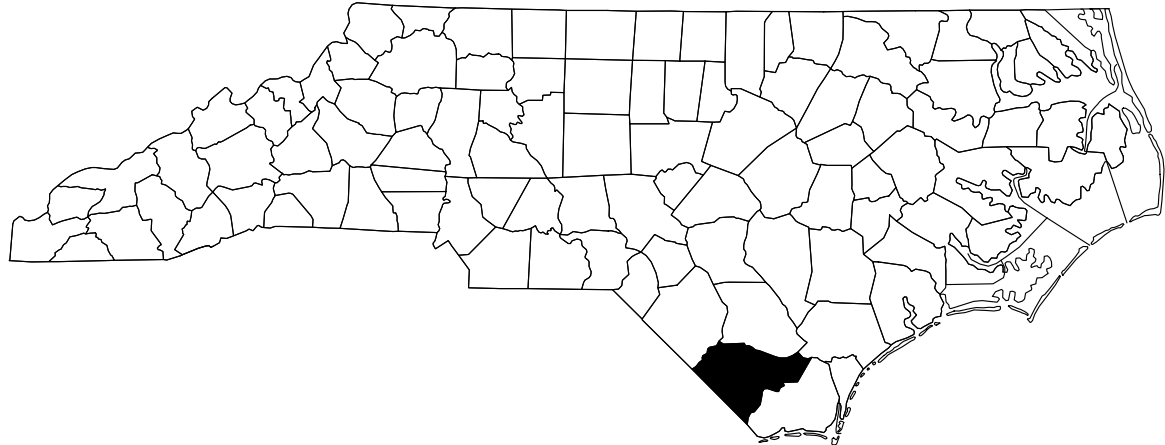
BRIDGE NO. 230383
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
ASPHALT PLUG JOINT DETAILS
SUBSTRUCTURE REPAIR

BRIDGE NO. 230384
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
ASPHALT PLUG JOINT DETAILS
SUBSTRUCTURE REPAIR

BRIDGE NO. 230385
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
ASPHALT PLUG JOINT DETAILS
SUBSTRUCTURE REPAIR

BRIDGE NO. 230386
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
ASPHALT PLUG JOINT DETAILS
SUBSTRUCTURE REPAIR

CONTRACT NO: C204994 PROJECT: HI-0018



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

COLUMBUS COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HI-0018	1B	79
STATE PROJ.NO.	F.A.PROJ.NO.	DESCRIPTION	
49989.1.1	0074(247)	P.E.	
49989.3.1	0074(247)	CONST.	

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BRIDGE #230388 ON US 74 / US 76 EBL OVER FRIAR SWAMP
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TYPE OF WORK: BRIDGE REHABILITATION – DECK SURFACE PREPARATION AND POLYMER CONCRETE OVERLAY, SCARIFICATION OF ASPHALT WEARING SURFACE, DECK REPAIRS, POLYMER CONCRETE OVERLAY, SILANE DECK TREATMENT, JOINT REPAIRS, PAINTING EXISTING STRUCTURE, PAINTING EXISTING WEATHERING STEEL STRUCTURE, SUBSTRUCTURE REPAIR, CONCRETE PILE ENCAPSULATION, EPOXY COATING BENT CAPS

INDEX OF DRAWINGS

SHEET NO.

DESCRIPTION

S9-01 TO S9-02
S9-03
S9-04 TO S9-05
S9-06
S9-07

BRIDGE NO. 230387
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
ASPHALT PLUG JOINT DETAILS
SUBSTRUCTURE REPAIR

S10-01 TO S10-02
S10-03
S10-04 TO S10-05
S10-06
S10-07

BRIDGE NO. 230388
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK REPAIRS
ASPHALT PLUG JOINT DETAILS
SUBSTRUCTURE REPAIR

S11-01 TO S11-02
S11-03
S11-04 TO S11-05

BRIDGE NO. 230408
GENERAL DRAWINGS
TYPICAL SECTION SURFACE PREPARATION DETAILS
DECK SURFACE REPAIR

SD-1
SN

STANDARD DETAILS
TYPICAL CAP AND COLUMN REPAIR DETAILS
STANDARD NOTES

8/26/24

TOTAL BILL OF MATERIAL															
BRIDGE NO.	FLOATING TURBIDITY CURTAIN	GROOVING BRIDGE FLOORS	CLASS IB SURFACE PREPARATION	CLASS II SURFACE PREPARATION	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	CLEANING AND REPAINTING OF BRIDGE #_	CLEANING AND PAINTING EXISTING WEATHERING STEEL FOR BRIDGE #_	PAINTING CONTAINMENT FOR BRIDGE #_	POLLUTION CONTROL	APPROACH SLAB WIDENING	FOAM JOINT SEALS FOR PRESERVATION	EXPANSION JOINT SEALS FOR PRESERVATION	ASPHALT PLUG JOINTS FOR PRESERVATION	PILE ENCAPSULATION
	SQ. YDS.	SQ. FT.	SQ. YDS.	SQ. YDS.	CU. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
230053	_____	8,783	_____	28.4	_____	_____	LUMP SUM	_____	LUMP SUM	LUMP SUM	LUMP SUM	82.0	_____	_____	_____
230054	_____	8,626	_____	28.5	_____	10.0	LUMP SUM	_____	LUMP SUM	LUMP SUM	_____	82.0	_____	_____	_____
230381	_____	8,050	_____	13.6	_____	_____	_____	LUMP SUM	LUMP SUM	LUMP SUM	_____	128.0	43.5	_____	_____
230382	_____	7,902	_____	9.2	_____	_____	_____	LUMP SUM	LUMP SUM	LUMP SUM	_____	85.0	87.0	_____	_____
230383	65.0	_____	508.6	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	231.0	191.2
230384	95.0	_____	508.6	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	231.0	239.8
230385	50.0	_____	928.6	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	346.5	393.4
230386	45.0	_____	928.6	_____	2.3	_____	_____	_____	_____	_____	_____	_____	_____	346.5	253.6
230387	45.0	_____	648.6	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	269.5	200.4
230388	20.0	_____	648.6	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	269.5	125.0
230408	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
TOTAL	320.0	33,361	4,171.6	79.7	2.3	10.0	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	377.0	130.5	1,694.0	1,403.4

TOTAL BILL OF MATERIAL									
BRIDGE NO.	POLYESTER POLYMER CONCRETE MATERIALS	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	EPOXY COATING	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	CONCRETE DECK REPAIR FOR PC OVERLAY	PLACING AND FINISHING PC OVERLAY	BRIDGE DECK WATERPROOFING MEMBRANE-SPRAY APPLIED	SILANE DECK TREATMENT
	CU. YDS.	CU. YDS.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.
230053	34.4	34.4	_____	993.8	993.8	35.6	993.8	_____	_____
230054	36.3	36.3	_____	1,044.9	1,044.9	28.6	1,044.9	_____	_____
230381	34.4	34.4	294	985.4	985.4	14.1	985.4	_____	_____
230382	33.7	33.7	294	964.4	964.4	9.4	964.4	_____	_____
230383	_____	_____	_____	_____	_____	_____	_____	440.6	_____
230384	_____	_____	_____	_____	_____	_____	_____	440.6	_____
230385	_____	_____	_____	_____	_____	_____	_____	860.6	_____
230386	_____	_____	_____	_____	_____	_____	_____	860.6	_____
230387	_____	_____	_____	_____	_____	_____	_____	580.6	_____
230388	_____	_____	_____	_____	_____	_____	_____	580.6	_____
230408	_____	_____	_____	_____	1,447.6	_____	_____	_____	1,447.6
TOTAL	138.8	138.8	588	3,988.5	5,436.1	87.7	3,988.5	3,763.6	1,447.6

NOTE:

AT THE TIME OF THESE PLANS, IT WAS NOT ANTICIPATED THAT THE ITEM(S) LISTED BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THE FOLLOWING ITEM(S) LISTED, OR OTHER WORK WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK IN A TIMELY MANNER, AS DETERMINED IN THE FIELD. SUCH WORK SHALL BE CONSIDERED EXTRA WORK AND SHALL BE ADDRESSED AS PER ARTICLE 104-7 OF THE STANDARD SPECIFICATIONS. PROJECT SPECIAL PROVISIONS THAT OUTLINE REQUIREMENTS FOR THESE POTENTIAL ADDITIONAL WORK ITEMS HAVE BEEN PROVIDED IN THE PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IN ENCOUNTERED.

UNANTICIPATED ITEMS:

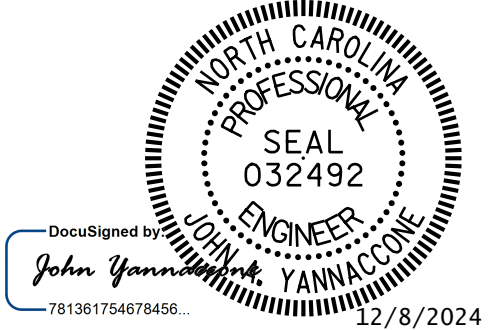
CLASS III SURFACE PREPARATION
VOLUMETRIC MIXER

DRAWN BY : R.L.PUTEK DATE : 08/2024
CHECKED BY : J.A.YANNACCONE DATE : 08/2024



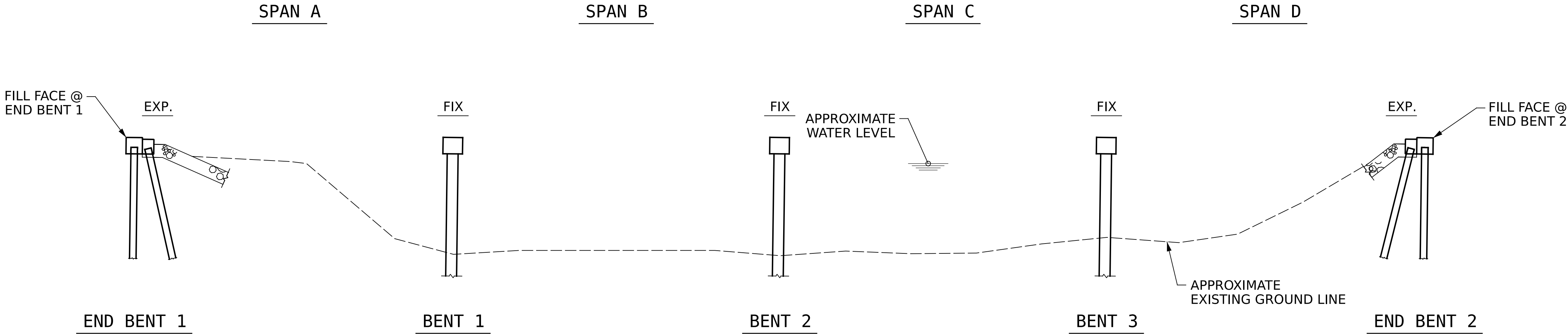
One Glenwood Avenue
Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

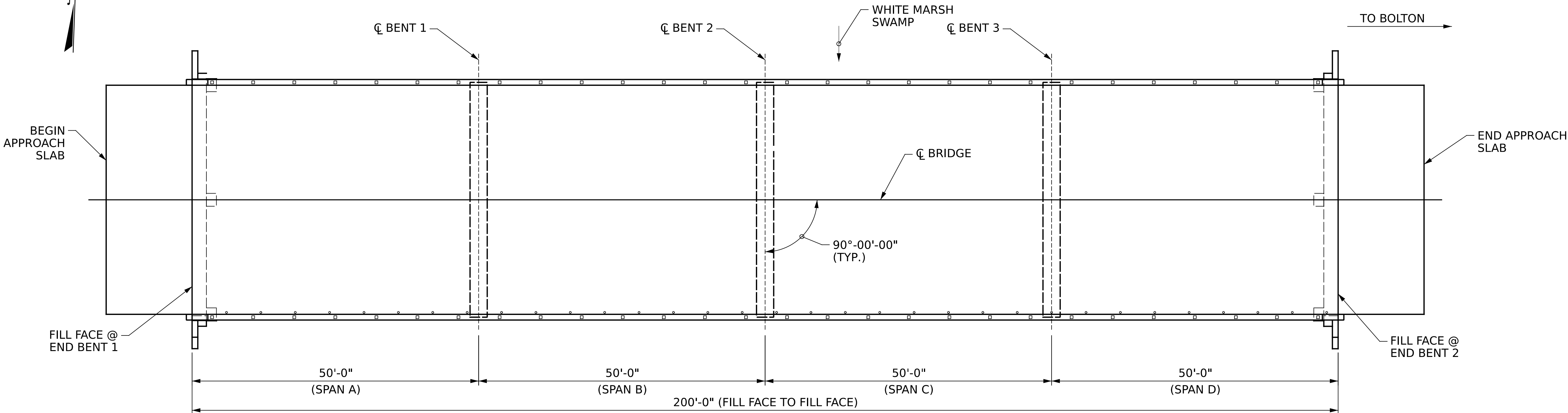


PROJECT NO. HI-0018
COLUMBUS COUNTY
230053, 230054,
BRIDGE NO. 230381, 230382, 230383,
230384, 230385, 230386,
230387, 230388, 230408

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH									
TOTAL BILL OF MATERIAL									
REVISIONS									
NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.			
1			3			S-1			
2			4			TOTAL SHEETS 79			



SECTION ALONG -CL- BRIDGE



PLAN

(FOOTINGS AND PILES NOT SHOWN FOR CLARITY)

NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 06/01/2023.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

SCOPE OF WORK:

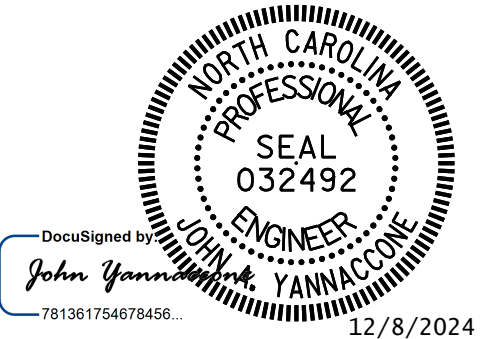
- PARTIALLY REMOVE TOP OF BRIDGE DECK CONCRETE BY SCARIFICATION AND SHOTBLASTING METHODS.
- OVERLAY PREPARED TOP OF BRIDGE DECK WITH POLYMER CONCRETE (PC).
- REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.
- GROOVE PC BRIDGE DECK.
- CLEAN AND PAINT EXISTING STRUCTURAL STEEL BEAMS.
- WIDEN EXISTING APPROACH SLABS.

PROJECT NO. **HI-0018**
COLUMBUS COUNTY
BRIDGE NO. **230053**

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON
US 74 - US 76 BYP EBL
OVER WHITE MARSH SWAMP



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

RESIDENT ENGINEER

DATE



One Glenwood Avenue
Suite 900
Raleigh, NC 27603
919-420-7660
NC Lic. No. F-0270

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-01 TOTAL SHEETS 79
2			4			

DRAWN BY : **R.L.PUTEK** DATE : **08/2024**
CHECKED BY : **J.A.YANNACONE** DATE : **08/2024**

8/26/24



LOCATION SKETCH

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

BRIDGE COORDINATES

LATITUDE	LONGITUDE
34°-20'-58.63"	78°-40'-16.51"

SAMPLE BAR REPLACEMENT

SIZE	LENGTH
#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"

NOTE:
SAMPLE BAR REPLACEMENT LENGTHS BASED ON
30" (SAMPLE LENGTH) PLUS TWO SPLICE LENGTHS
AND f_y = 60ksi.

GENERAL NOTES

SEE CONTRACT DOCUMENTS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYMER CONCRETE (PC) PLACEMENT.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIR.

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 OR 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.

WORK ON THE BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USED PLATFORMS, NETS, SCREEN OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT 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 CONTROL OF TRAFFIC AND LIMITS OF PHASING OF CONSTRUCTION, SEE CONTRACT DOCUMENTS.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR ITEMS ASSOCIATED WITH THE CLEANING AND REPAINTING OF BRIDGE.

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.

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.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

ALL PAVEMENT MARKING WILL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

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

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

FOR POLLUTION CONTROL AND PAINTING CONTAINMENT, SEE PAINTING EXISTING STRUCTURE SPECIAL PROVISION.

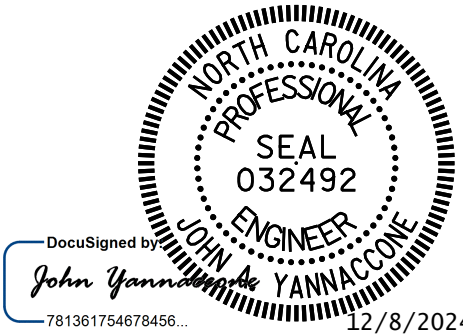
FOR PAINTING EXISTING STRUCTURE, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR APPROACH SLAB WIDENING, SEE SPECIAL PROVISIONS.

PROJECT NO. **HI-0018**
COLUMBUS COUNTY
BRIDGE NO. **230053**

SHEET 2 OF 2



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DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON
US 74 - US 76 BYP EBL
OVER WHITE MARSH SWAMP

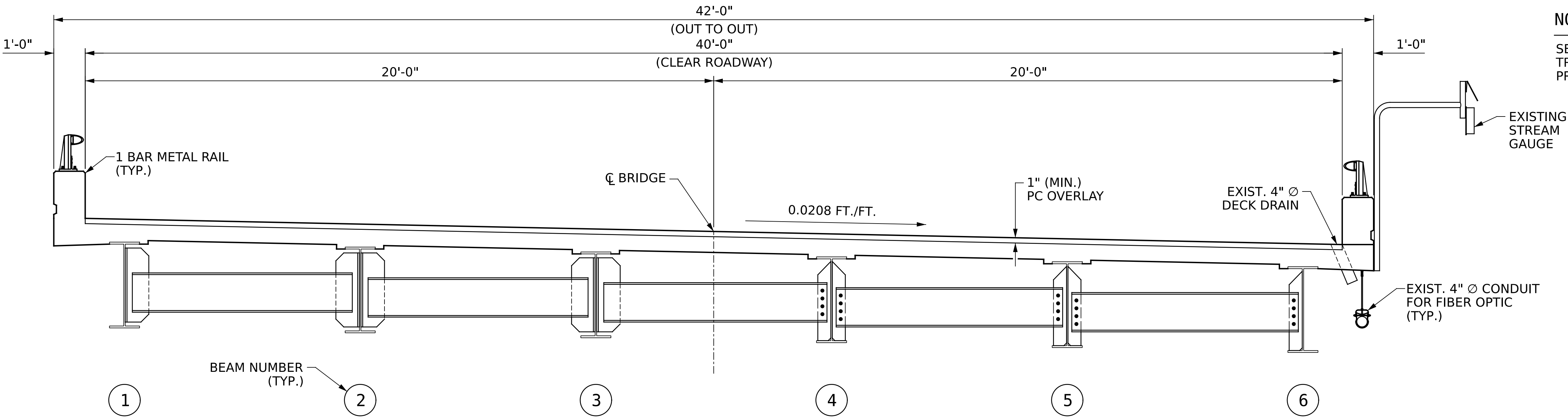
DRAWN BY : **R.L.PUTEK** DATE : **08/2024**
CHECKED BY : **J.A.YANNACCON** DATE : **08/2024**



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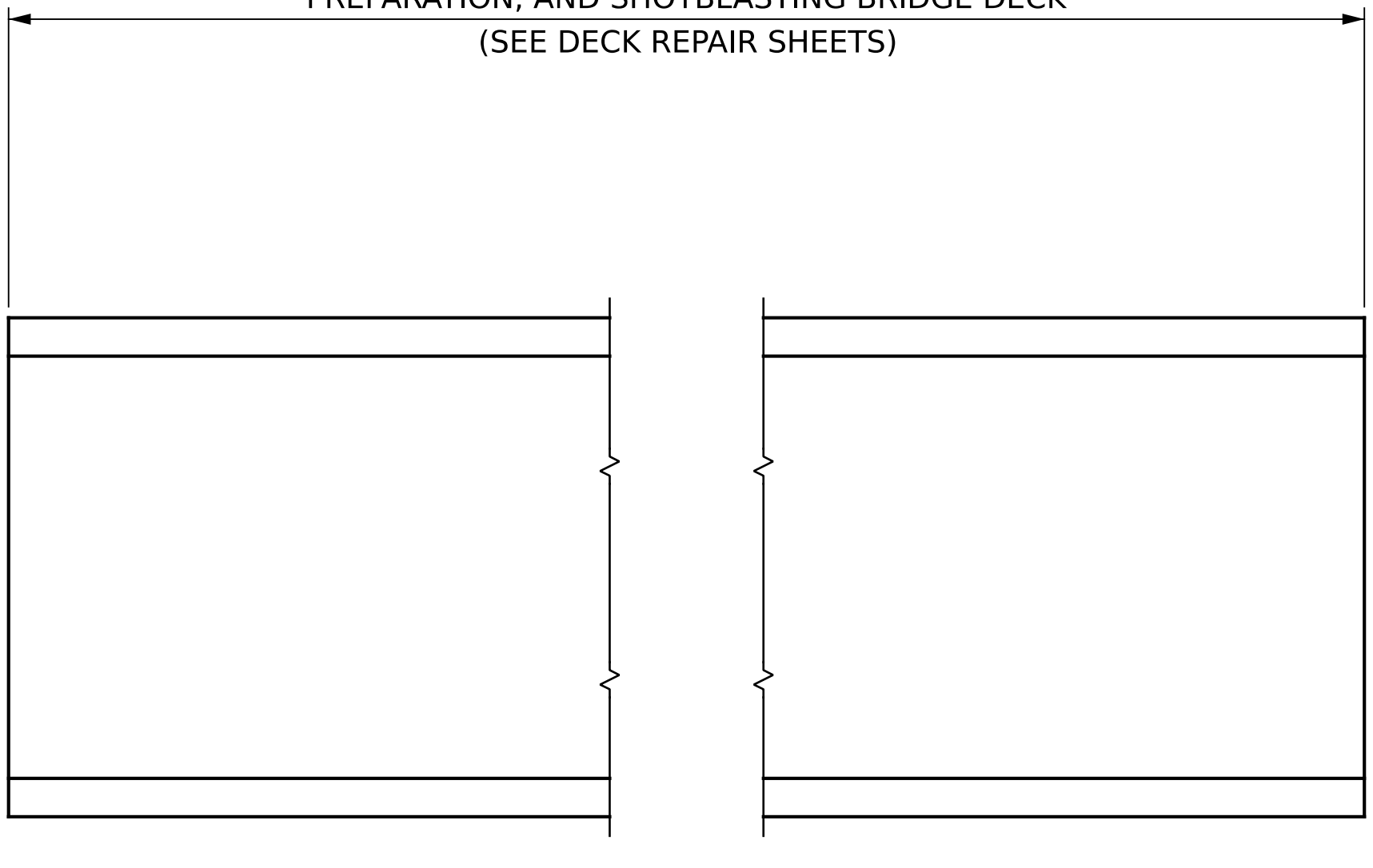


HALF SECTION AT INTERMEDIATE DIAPHRAGMS

HALF SECTION AT BENT DIAPHRAGMS

TYPICAL SECTION
(PROPOSED)

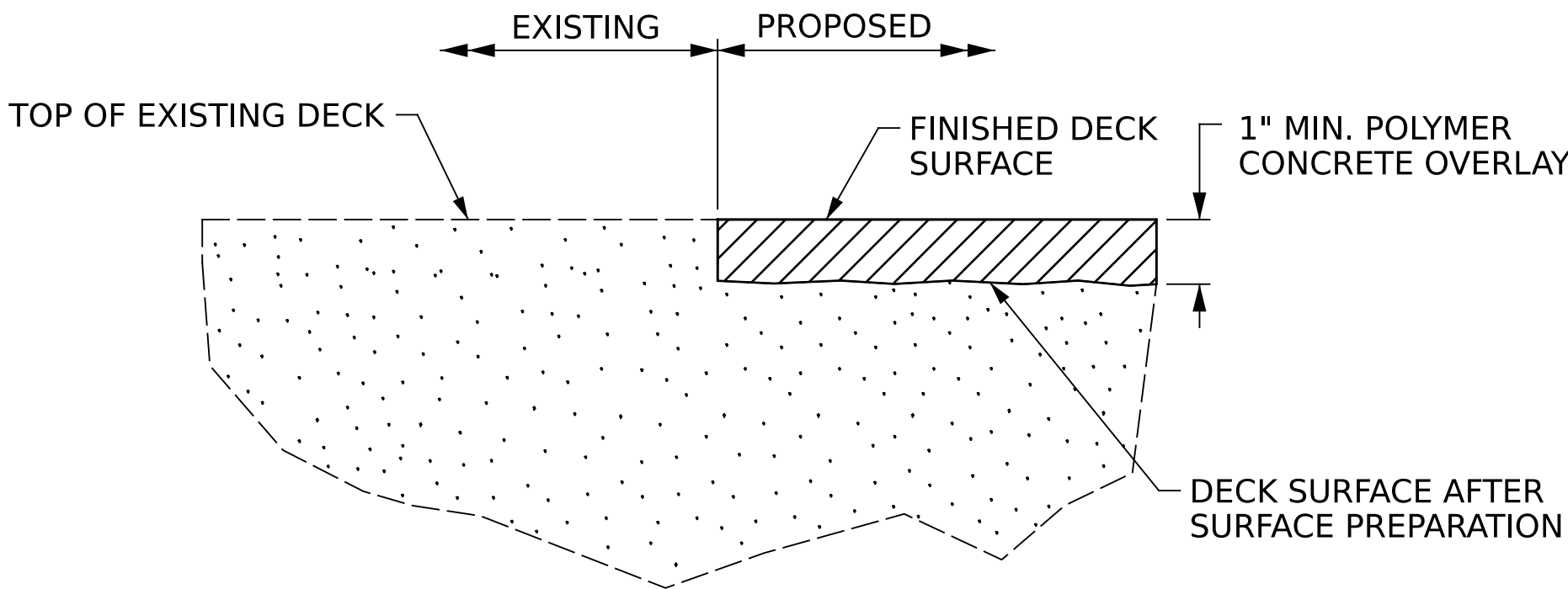
LIMITS OF SCARIFICATION, CONCRETE DECK REPAIR FOR PC OVERLAY, PC MATERIALS, PLACING AND FINISHING PC OVERLAY, CLASS II SURFACE PREPARATION, AND SHOTBLASTING BRIDGE DECK (SEE DECK REPAIR SHEETS)



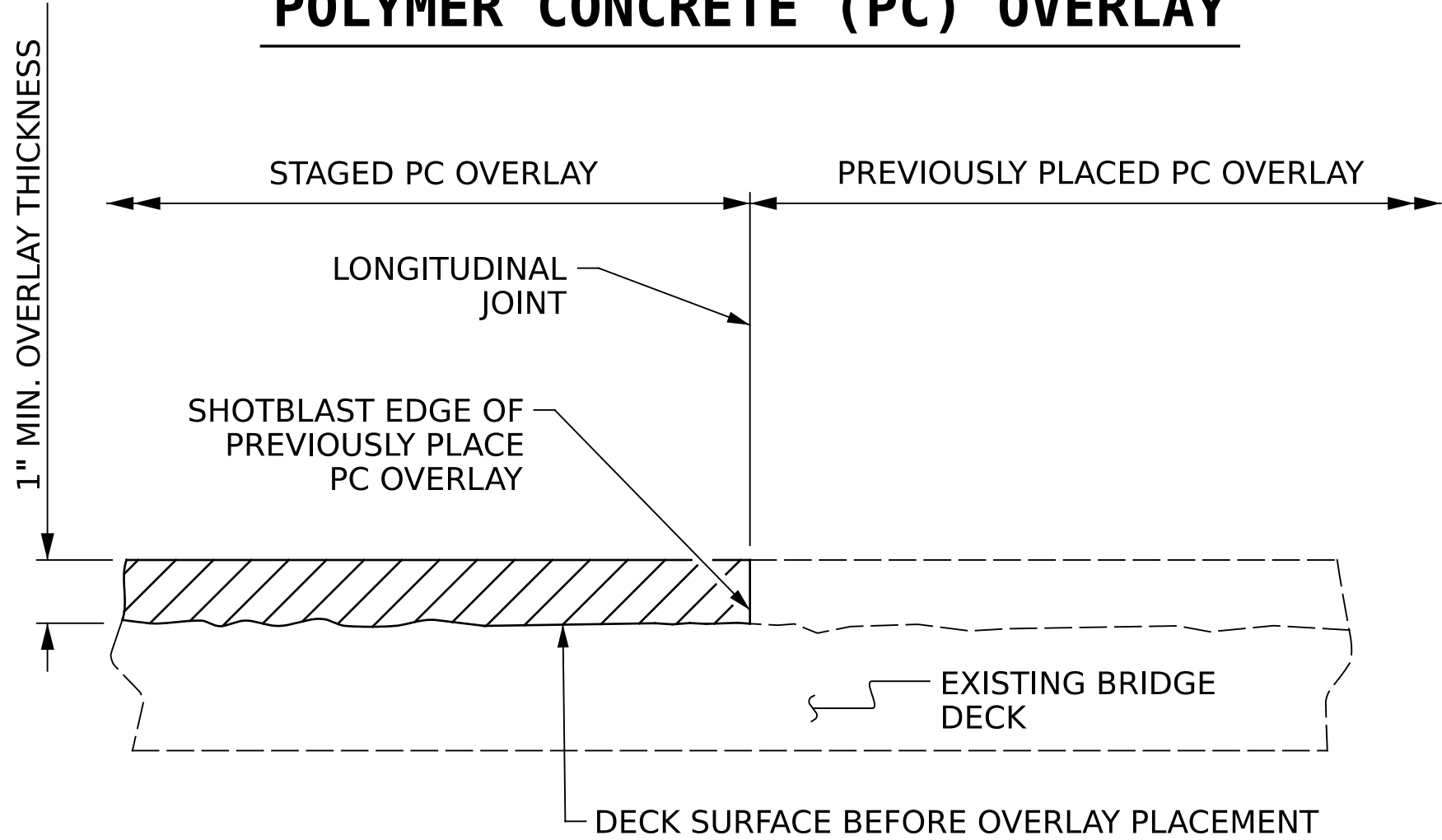
PLAN

ELEVATION

PAY LIMITS FOR OVERLAY BID ITEMS



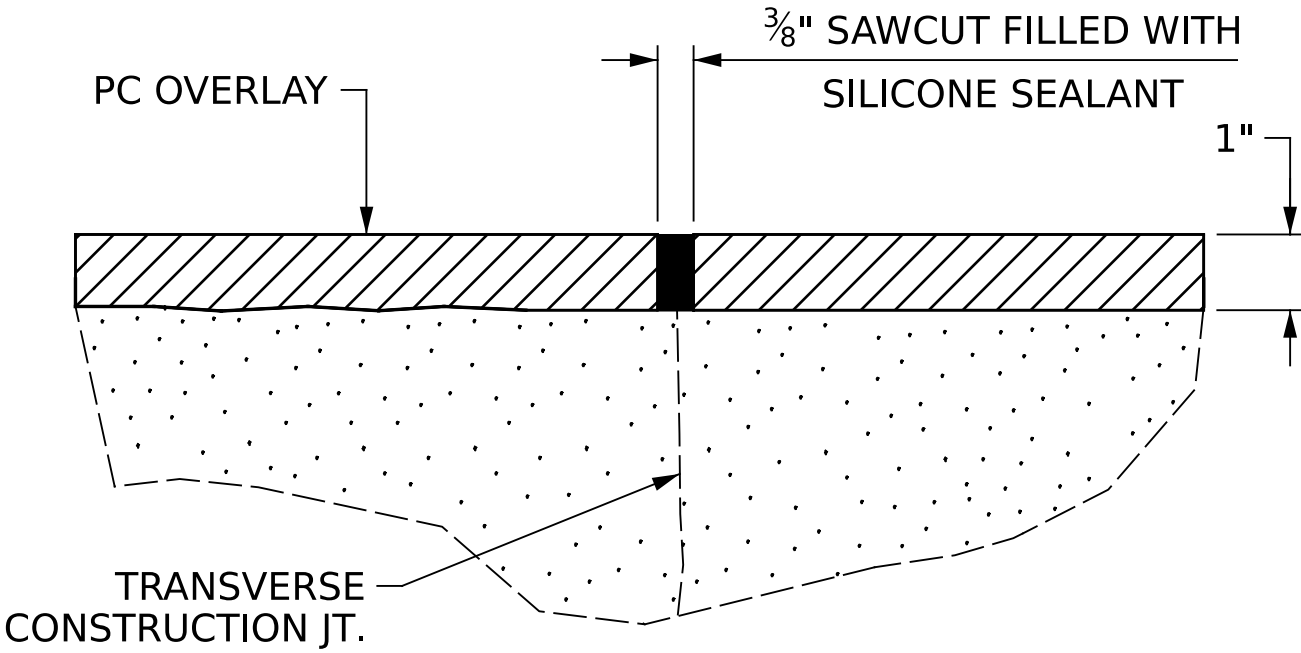
DETAIL FOR POLYMER CONCRETE (PC) OVERLAY



STAGED PC OVERLAY CONSTRUCTION JOINT

NOTES:

SEE CONTRACT DOCUMENTS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND PC PLACEMENT.



DETAIL FOR SAWED CONTRACTION JOINT

PROVIDE AND INSTALL A LOW MODULUS SILICONE SEALANT (NON-SAG OR SELF-LEVELING) WHICH CONFORMS TO ARTICLE 1028-3 OF THE STANDARD SPECIFICATIONS.

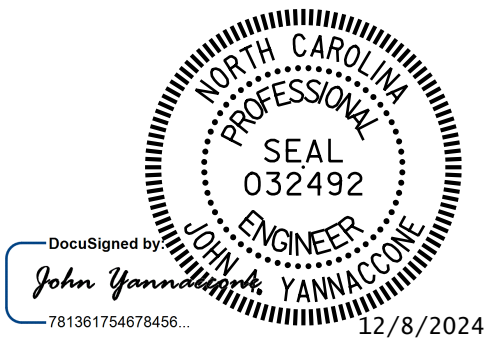
WITHIN 24 HOURS OF PLACEMENT OF THE PC OVERLAY, SAW THE CONTRACTION JOINT AFTER THE PC OVERLAY CAN SUPPORT THE WEIGHT OF THE EQUIPMENT AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH OF THE OVERLAY.

NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING SILICONE SEALANT. PAYMENT AT THE CONTRACT UNIT PRICES FOR THE VARIOUS PAY ITEMS WILL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, TOOLS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.

PROJECT NO. **HI-0018**
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TYPICAL SECTION AND SURFACE PREPARATION DETAILS



DRAWN BY : **R.L.PUTEK** DATE : **08/2024**
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	SCARIFICATION AND SHOTBLASTING OF BRIDGE DECK
	CLASS II SURFACE PREPARATION
	UNDERSIDE OF DECK SHOTCRETE REPAIRS

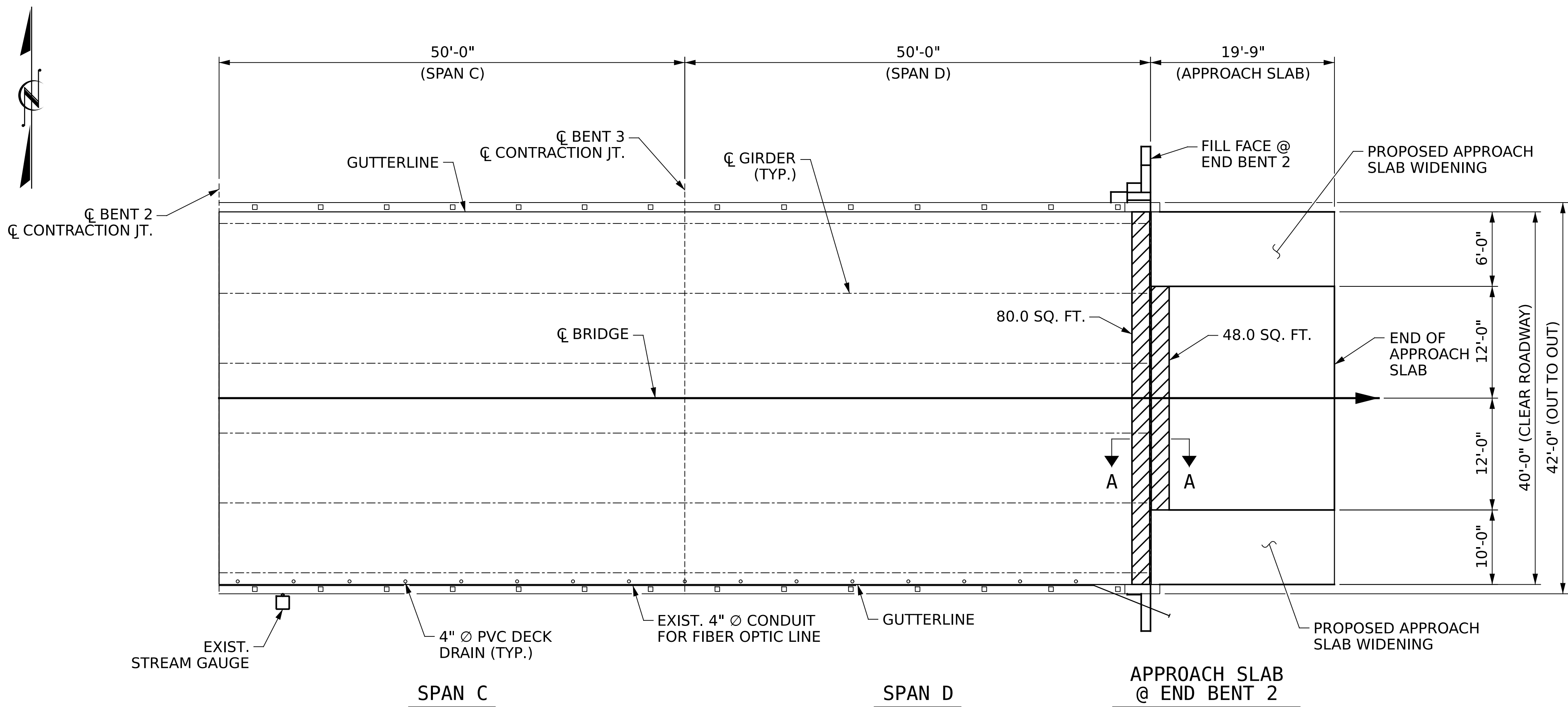
FOR PROPOSED APPROACH SLAB WIDENING, SEE "APPROACH SLAB
WIDENING DETAILS" SHEET.



DocuSigned by:
John Yannaccone
781361754678456... 12/8/2024

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	2			4			TOTAL SHEETS 79

8/26/24



PLAN

NOTES

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

PAYMENT FOR CLASS II SURFACE PREPARATION IS BASED UPON SQUARE YARDS OF ADDITIONAL DEMOLITION REQUIRED FOLLOWING SCARIFICATION OF BRIDGE DECK, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

CONCRETE COVER FOR TOP BARS IN DECK SLAB IS 1½" PER EXISTING BRIDGE PLANS.

FOR SECTION A-A. SEE "FOAM JOINT SEAL DETAILS" SHEET.

FOR CONTRACTION JOINTS, SEE "TYPICAL SECTION AND SURFACE PREPARATION" SHEET.

FOR PROPOSED APPROACH SLAB WIDENING, SEE "APPROACH SLAB WIDENING DETAILS" SHEET.

AS-BUILT QUANTITY REPAIR TABLE

DECK UNDERSIDE REPAIR

SHOTCRETE REPAIRS		ESTIMATE		ACTUAL	
		AREA SF	VOLUME CF	AREA SF	VOLUME CF
UNDERSIDE OF DECK	SPAN C	0.0	0.0		
	SPAN D	0.0	0.0		
INTERIOR DIAPHRAGMS	SPAN C	0.0	0.0		
	SPAN D	0.0	0.0		
OVERHANG DIAPHRAGMS	SPAN C	0.0	0.0		
	SPAN D	0.0	0.0		
UNDERSIDE OF OVERHANG	SPAN C	0.0	0.0		
	SPAN D	0.0	0.0		
		ESTIMATE		ACTUAL	
UNDERSIDE EPOXY RESIN INJECTION	SPAN C	0.0 LIN.FT.			
	SPAN D	0.0 LIN.FT.			

AS-BUILT QUANTITY REPAIR TABLE

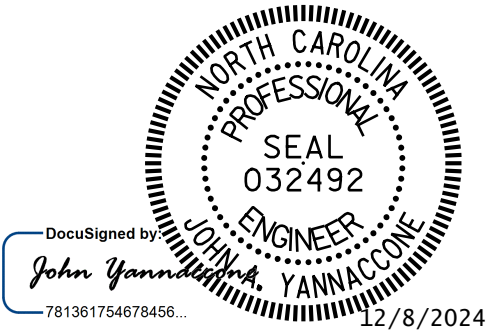
DECK SURFACE REPAIR & APPROACH SLAB REPAIR

		ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	SPAN C	222.2 SQ. YDS.	
	SPAN D	222.2 SQ. YDS.	
	APPROACH SLAB @ END BENT 2	52.4 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	SPAN C	222.2 SQ. YDS.	
	SPAN D	222.2 SQ. YDS.	
	APPROACH SLAB @ END BENT 2	52.4 SQ. YDS.	
CLASS II SURFACE PREPARATION	SPAN C	0.0 SQ. YDS.	
	SPAN D	8.9 SQ. YDS.	
	APPROACH SLAB @ END BENT 2	5.3 SQ. YDS.	
PC MATERIALS	SPAN C	7.7 CU. YDS.	
	SPAN D	7.7 CU. YDS.	
	APPROACH SLAB @ END BENT 2	1.8 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	SPAN C	222.2 SQ. YDS.	
	SPAN D	222.2 SQ. YDS.	
	APPROACH SLAB @ END BENT 2	52.4 SQ. YDS.	
GROOVING BRIDGE FLOORS	SPAN C	1838 SQ. FT.	
	SPAN D	1838 SQ. FT.	
	APPROACH SLAB @ END BENT 2	714 SQ. FT.	

- SCARIFICATION AND SHOTBLASTING OF BRIDGE DECK
- CLASS II SURFACE PREPARATION
- UNDERSIDE OF DECK SHOTCRETE REPAIRS

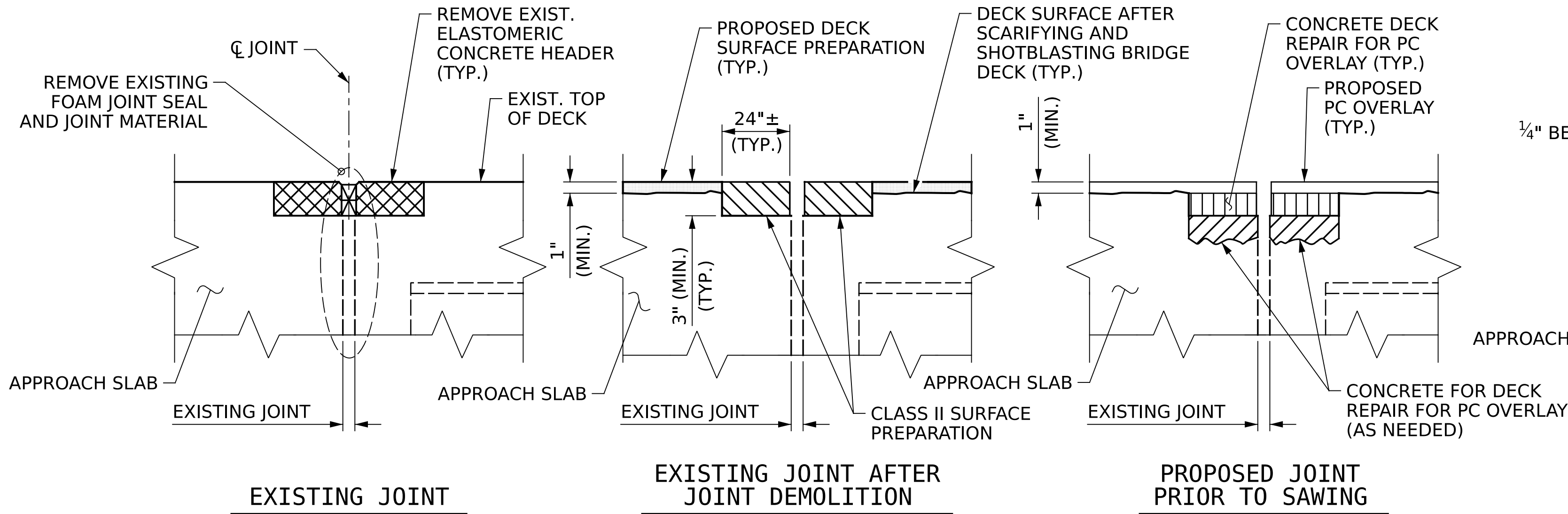
PROJECT NO. **HI-0018**
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BRIDGE NO. **230053**

SHEET 2 OF 2

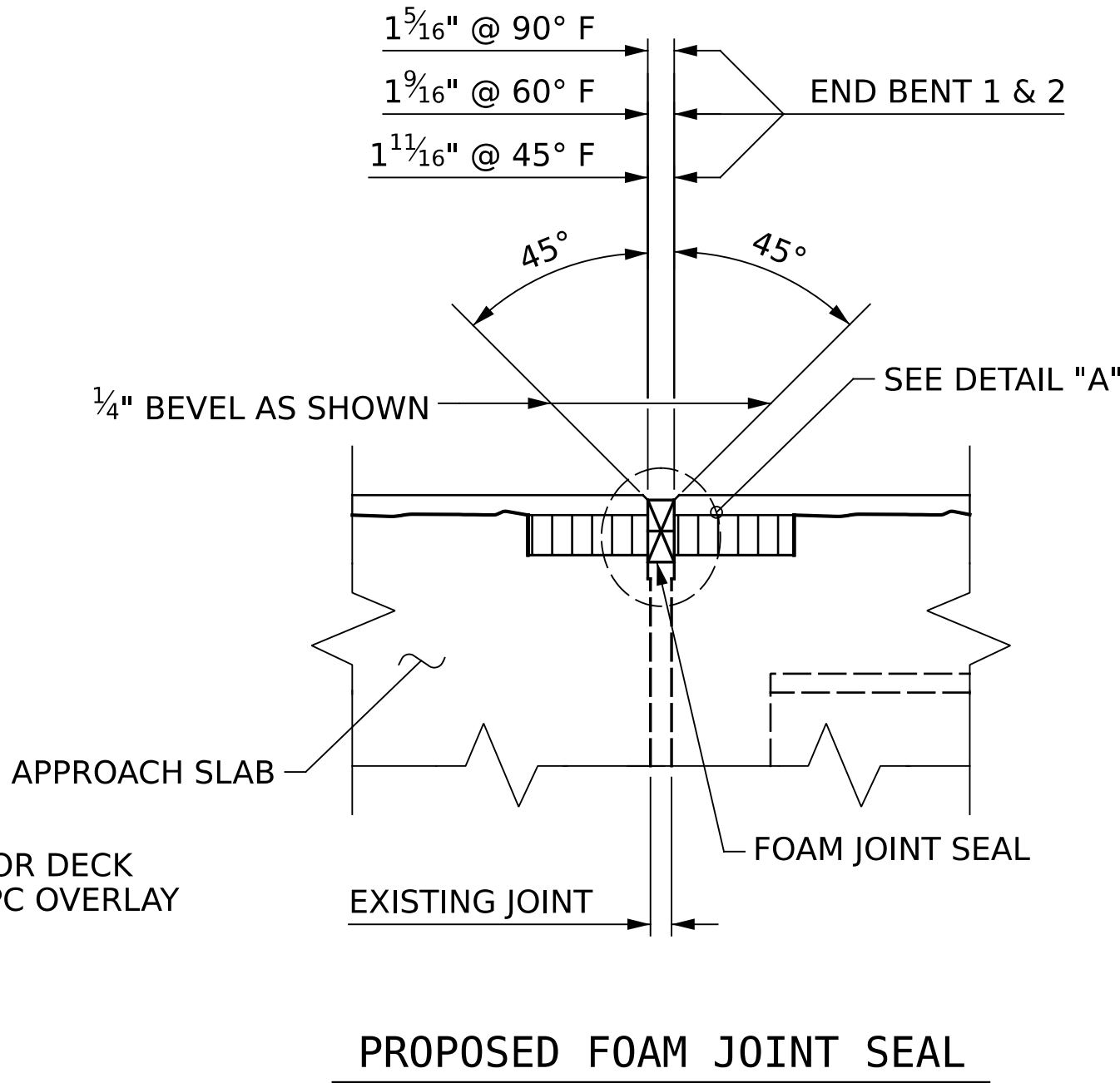


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DECK REPAIRS
SPAN C AND SPAN D
W/ APPROACH SLAB



SECTION A-A
(NOT TO SCALE)



NOTES:

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

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

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

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

THE CONTRACTOR SHALL TAKE CARE DURING JOINT 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 JOINT IN LIEU OF SAWING THE JOINT.

THE INSTALLED FOAM JOINTS SHALL BE WATERTIGHT.

THE 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.

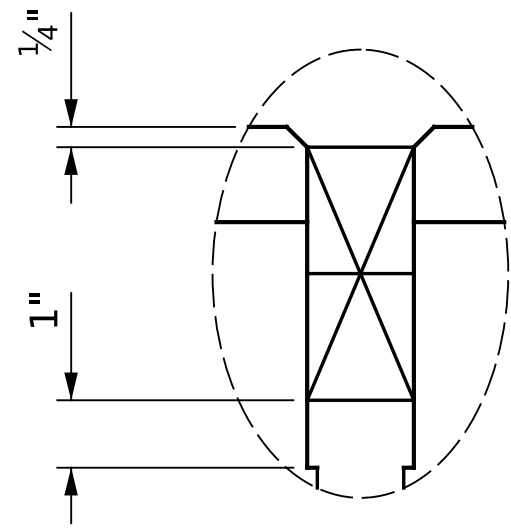
FOR EXCAVATION BELOW THE BOTTOM OF PLANNED CLASS II SURFACE PREPARATION, CONCRETE FOR DECK REPAIR FOR PC OVERLAY SHALL BE PLACED IN THE EXCAVATED AREA TO THE ELEVATION AT THE BOTTOM OF THE PROPOSED PC OVERLAY.

FOR CLASS II SURFACE PREPARATION, SEE OVERLAY SURFACE PREPARATION FOR POLYMER CONCRETE SPECIAL PROVISION.

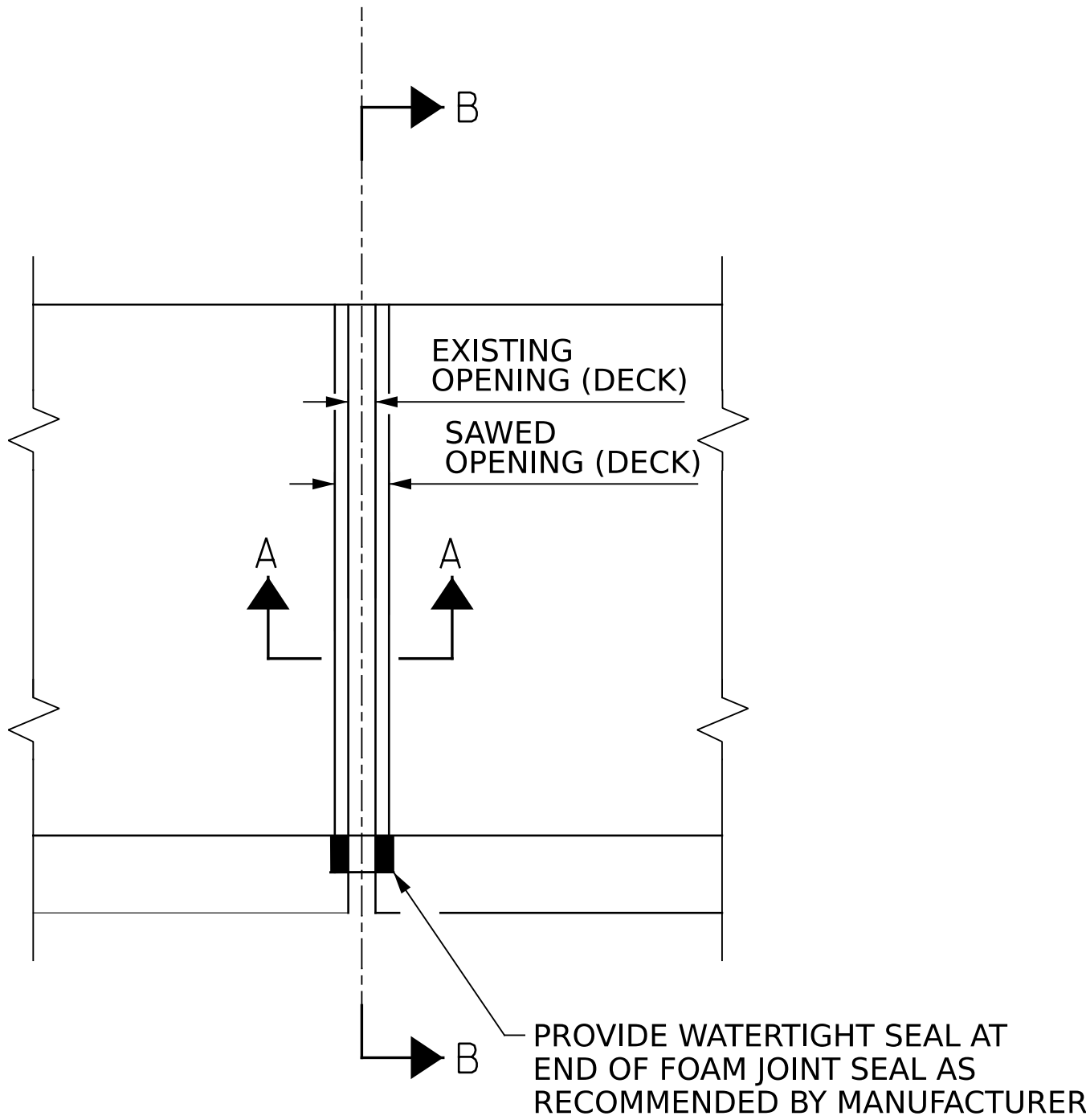
FOR CONCRETE DECK REPAIR FOR PC OVERLAY, SEE POLYMER CONCRETE BRIDGE DECK OVERLAY SPECIAL PROVISION.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

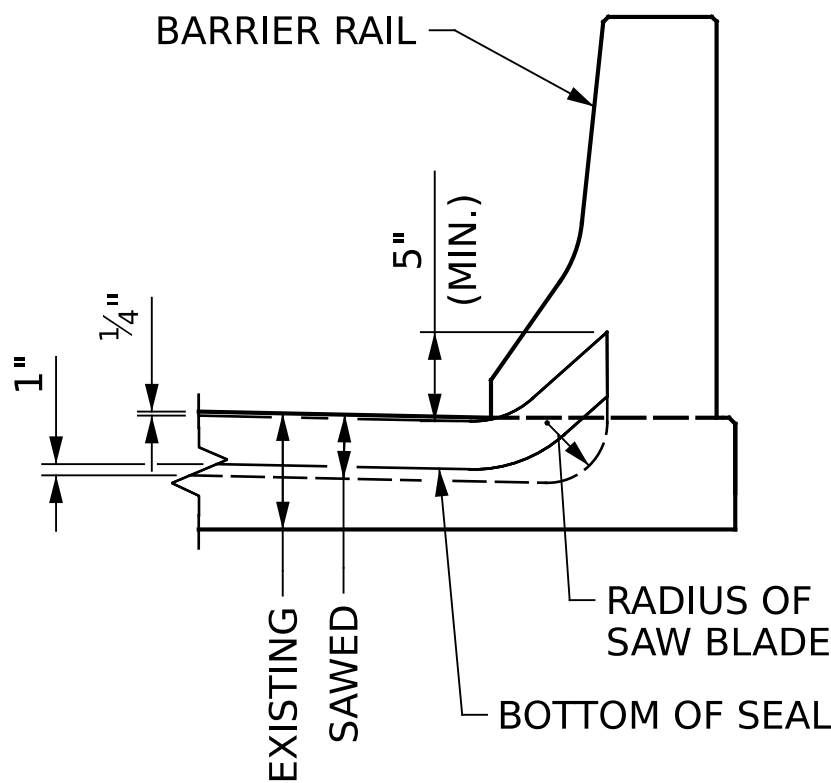
ALL EXISTING ELASTOMERIC CONCRETE SHALL BE REMOVED. THE DEPTH SHOWN IN THE DETAILS FOR CLASS II SURFACE PREPARATION AT THE EXISTING JOINT IS THE MINIMUM DEPTH REQUIRED.



DETAIL "A"



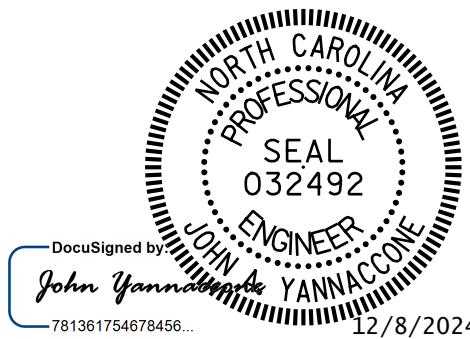
PLAN



SECTION B-B
FOAM JOINT SEAL SHALL BE FACTORY FORMED OR CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPED FACE OF BARRIER RAIL.

AS-BUILT SUMMARY OF QUANTITIES			
ITEM	LOCATION	ESTIMATED	ACTUAL
FOAM JOINT SEALS FOR PRESERVATION	END BENT 1	41.0 LIN.FT.	
	END BENT 2	41.0 LIN.FT.	
CONCRETE DECK REPAIR FOR PC OVERLAY	END BENT 1	17.8 SQ.YDS.	
	END BENT 2	17.8 SQ.YDS.	

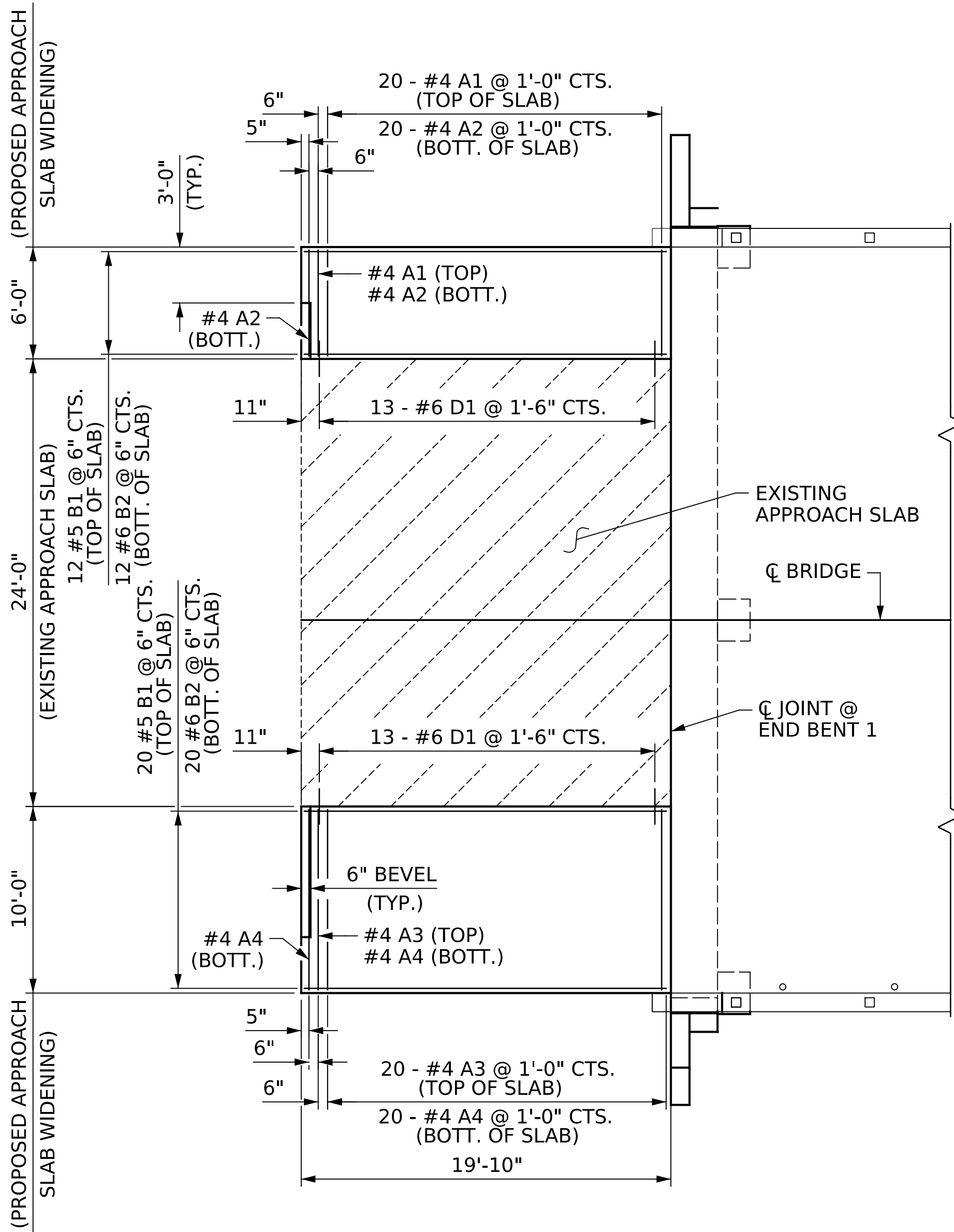
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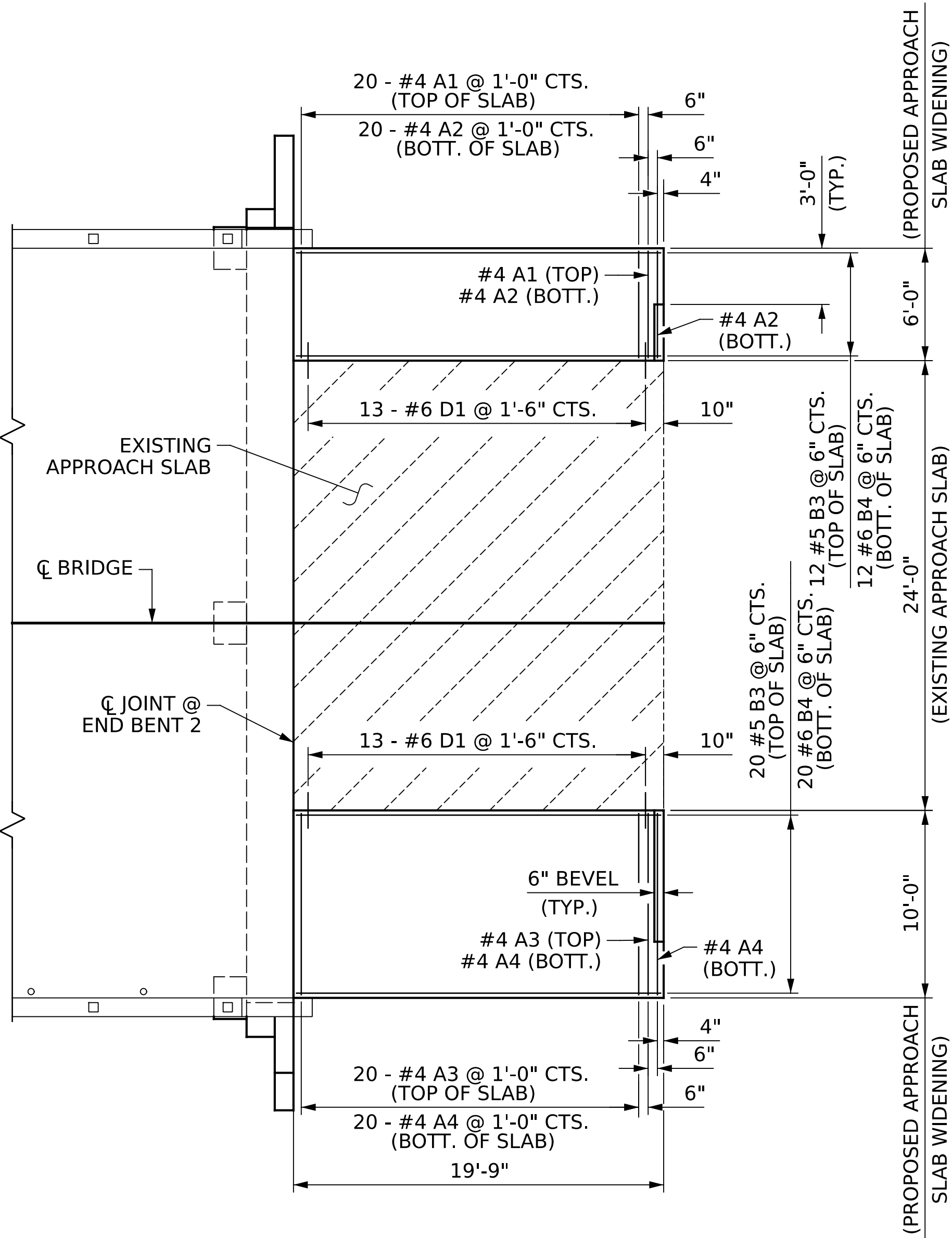
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RALEIGH

**FOAM JOINT SEAL
DETAILS**

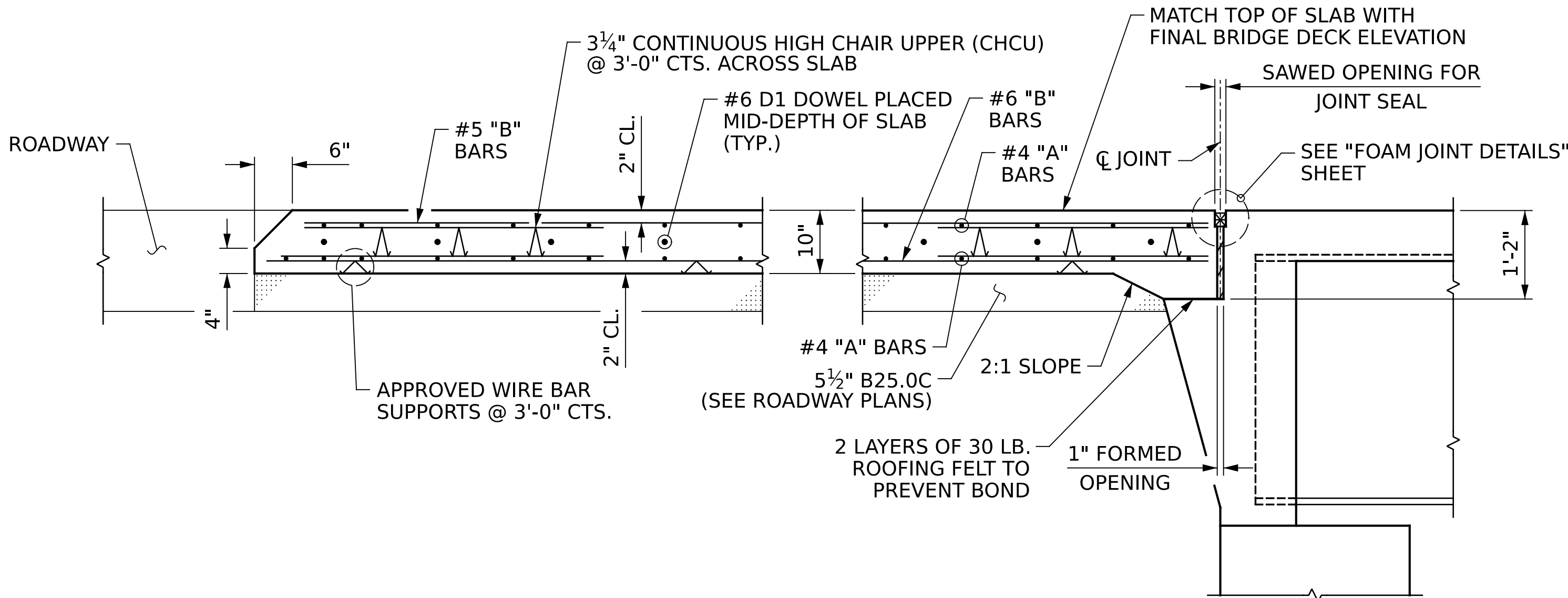
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PLAN @ END BENT 1



PLAN @ END BENT 2



SECTION THRU SLAB

NOTES

1. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS OF THE APPROACH SLABS PRIOR TO ORDERING REINFORCING BARS.
2. FOR ADHESIVELY ANCHORED DOWELS, NO FIELD TESTING IS REQUIRED.
3. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE ARTICLE 420-13 OF THE STANDARD SPECIFICATIONS.
4. FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.
5. FOR APPROACH SLAB WIDENING, SEE SPECIAL PROVISIONS.

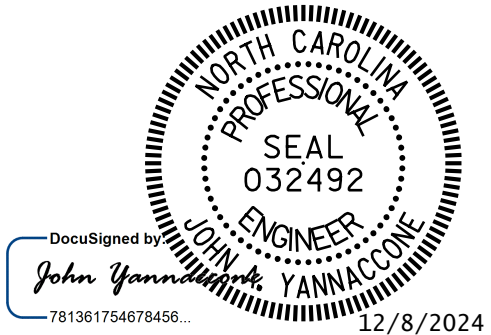
BILL OF MATERIAL					
APPROACH SLAB AT END BENT 1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	21	#4	STR	5'-8"	79
A2	22	#4	STR	5'-8"	83
*A3	21	#4	STR	9'-8"	136
A4	22	#4	STR	9'-8"	142
*B1	32	#5	STR	18'-11"	631
B2	32	#6	STR	19'-5"	933
D1	26	#6	STR	1'-6"	59
REINFORCING STEEL				1217 LBS.	
* EPOXY COATED REINFORCING STEEL				846 LBS.	
CLASS AA CONCRETE				10.0 CU. YDS.	
APPROACH SLAB AT END BENT 2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	21	#4	STR	5'-8"	79
A2	22	#4	STR	5'-8"	83
*A3	21	#4	STR	9'-8"	136
A4	22	#4	STR	9'-8"	142
*B3	32	#5	STR	18'-10"	629
B4	32	#6	STR	19'-4"	929
D1	26	#6	STR	1'-6"	59
REINFORCING STEEL				1213 LBS.	
* EPOXY COATED REINFORCING STEEL				844 LBS.	
CLASS AA CONCRETE				9.9 CU. YDS.	

DRAWN BY : R.L.PUTEK DATE : 08/2024
CHECKED BY : J.A.YANNACCONE DATE : 08/2024



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APPROACH SLAB WIDENING DETAILS

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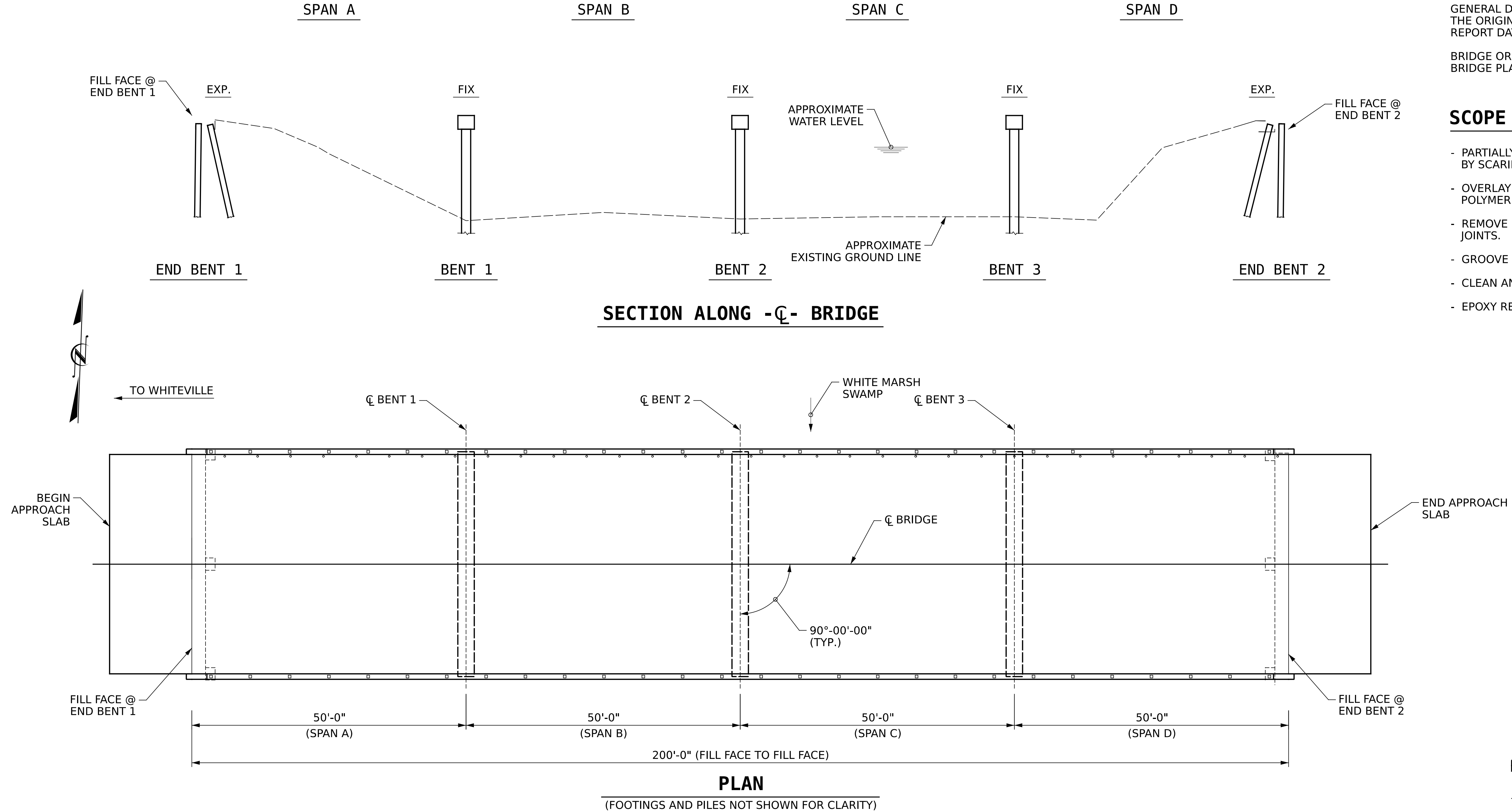
NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 06/12/2023.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS AND ROUTINE INSPECTION REPORT.

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 JOINTS.
- GROOVE PC BRIDGE DECK.
- CLEAN AND PAINT EXISTING STRUCTURAL STEEL BEAMS.
- EPOXY RESIN INJECTION OF CONCRETE CRACKS.

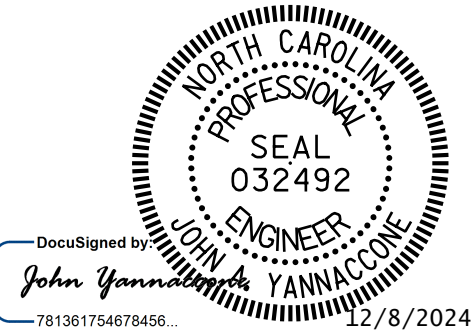


PROJECT NO. **HI-0018**
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BRIDGE NO. **230054**

SHEET 1 OF 2

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RALEIGH

GENERAL DRAWING
FOR BRIDGE ON
US 74 - US 76 BYP WBL
OVER WHITE MARSH SWAMP



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

RESIDENT ENGINEER DATE



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