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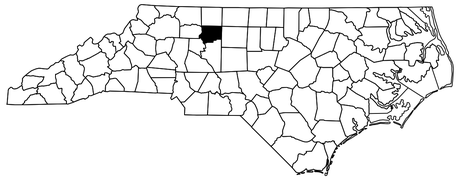
PROJECT: I-5795

CONTRACT NO: C203978



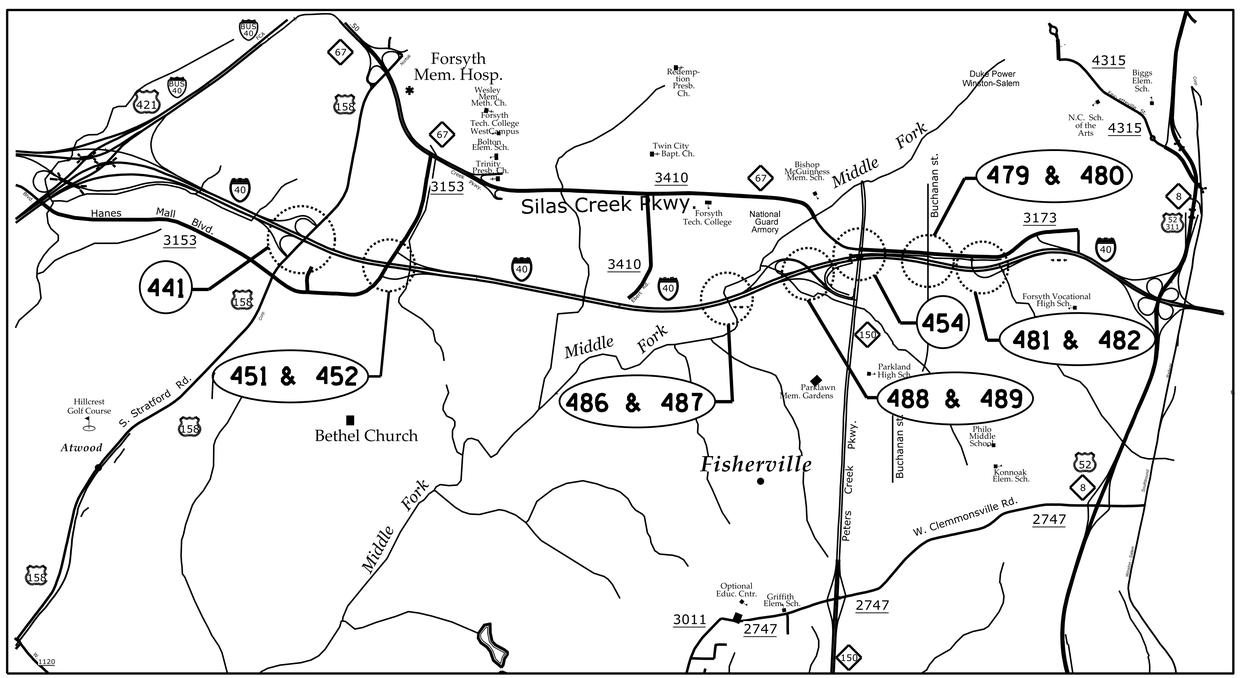
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FORSYTH COUNTY

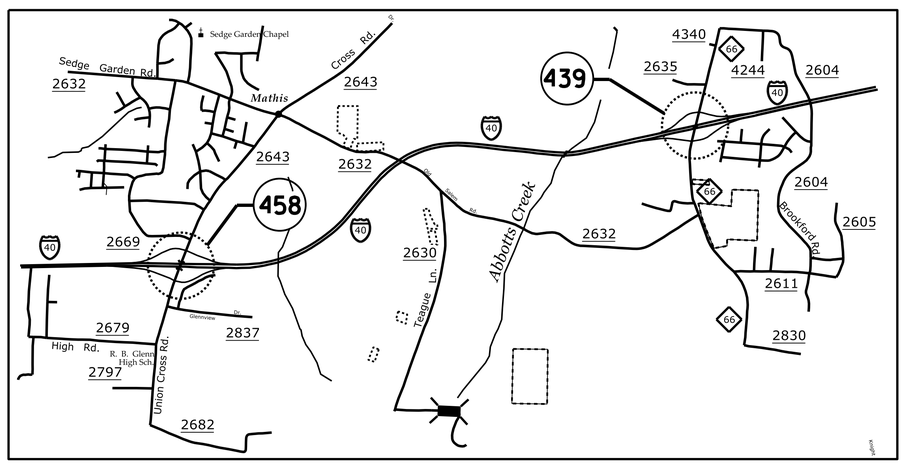
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5795	1	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
53034.1.2	–	P.E.	
53034.3.1	NHPP–0040(032)	CONST.	

TYPE OF WORK: *BRIDGE PRESERVATION: DECK REPAIR, POLYESTER POLYMER CONCRETE OVERLAY, POURABLE SILICONE JOINT SEALANT AND FOAM JOINT REPLACEMENT, PAINTING EXISTING WEATHERING STEEL STRUCTURE, PAINTING OF BEARINGS FOR THESE BRIDGES IS INCLUDED IN THE STRUCTURE STEEL PAINTING, CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS, REMOVE DEBRIS FROM TOP OF EXISTING END BENT & BENT CAPS AND APPLY EPOXY COATING AND SUBSTRUCTURE REPAIR*

LOCATION:
BRIDGE No. 330439 ON NC 66 OVER I–40
BRIDGE No. 330441 ON US 158 (S. STRATFORD RD.) OVER I–40
BRIDGE No. 330451 ON I–40 EBL OVER SR 3153 (HANES MALL BLVD.)
BRIDGE No. 330452 ON I–40 WBL OVER SR 3153 (HANES MALL BLVD.)
BRIDGE No. 330454 ON NC 150 OVER I–40
BRIDGE No. 330458 ON SR 2643 (UNION CROSS RD.) OVER I–40
BRIDGE No. 330479 ON I–40 WBL OVER BUCHANAN STREET
BRIDGE No. 330480 ON I–40 EBL OVER BUCHANAN STREET
BRIDGE No. 330481 ON I–40 WBL OVER I–40 RAMP
BRIDGE No. 330482 ON I–40 EBL OVER I–40 RAMP
BRIDGE No. 330486 ON I–40 WBL OVER SALEM CREEK
BRIDGE No. 330487 ON I–40 EBL OVER SALEM CREEK
BRIDGE No. 330488 ON I–40 WBL OVER NC 150 RAMPS
BRIDGE No. 330489 ON I–40 EBL OVER NC 150 RAMPS



VICINITY MAP – FORSYTH CO.



VICINITY MAP – FORSYTH CO.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN DATA

FORSYTH COUNTY			FORSYTH COUNTY		
BRIDGE No. 330439	ADT 2017	=18,000	BRIDGE No. 330480	ADT 2018	=48,000
BRIDGE No. 330441	ADT 2017	=43,000	BRIDGE No. 330481	ADT 2018	=48,000
BRIDGE No. 330451	ADT 2018	=40,750	BRIDGE No. 330482	ADT 2018	=48,000
BRIDGE No. 330452	ADT 2018	=40,750	BRIDGE No. 330486	ADT 2018	=53,500
BRIDGE No. 330454	ADT 2017	=34,000	BRIDGE No. 330487	ADT 2018	=53,500
BRIDGE No. 330458	ADT 2018	=18,000	BRIDGE No. 330488	ADT 2018	=48,000
BRIDGE No. 330479	ADT 2018	=48,000	BRIDGE No. 330489	ADT 2018	=48,000

PROJECT LENGTH

FORSYTH COUNTY			FORSYTH COUNTY		
BRIDGE No. 330439	=0.042	MILE	BRIDGE No. 330480	=0.022	MILE
BRIDGE No. 330441	=0.050	MILE	BRIDGE No. 330481	=0.023	MILE
BRIDGE No. 330451	=0.035	MILE	BRIDGE No. 330482	=0.022	MILE
BRIDGE No. 330452	=0.035	MILE	BRIDGE No. 330486	=0.036	MILE
BRIDGE No. 330454	=0.038	MILE	BRIDGE No. 330487	=0.036	MILE
BRIDGE No. 330458	=0.040	MILE	BRIDGE No. 330488	=0.033	MILE
BRIDGE No. 330479	=0.026	MILE	BRIDGE No. 330489	=0.031	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 :

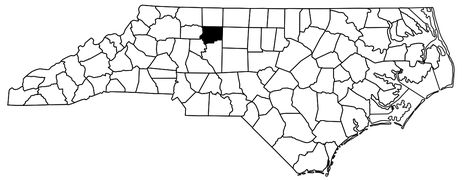
SEPTEMBER 15, 2020

A. KEITH PASCHAL, P.E.
PROJECT ENGINEER

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

PROJECT: I-5795

CONTRACT: C203978



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

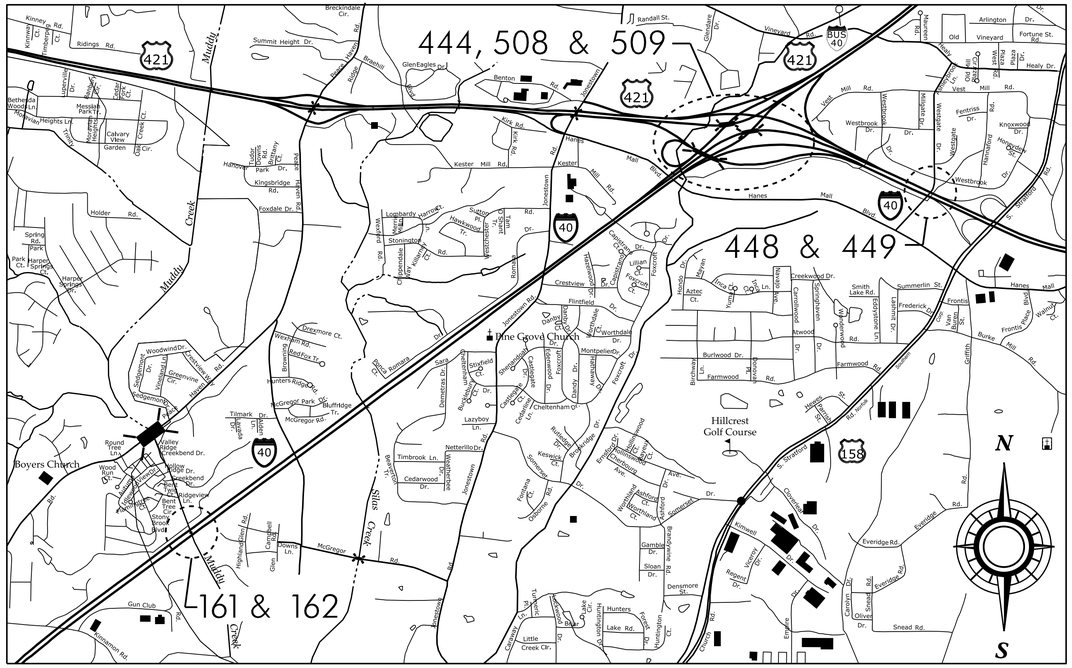
FORSYTH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5795	2	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
53034.1.2	–	P.E.
53034.3.1	NHPP–0040(032)	CONST.

LOCATION: ***BRIDGE No. 330161 ON I–40 EBL OVER MUDDY CREEK***
BRIDGE No. 330162 ON I–40 WBL OVER MUDDY CREEK
BRIDGE No. 330444 ON US 421 SBL RAMP OVER I–40 & I–40 BUS
BRIDGE No 330448 ON I–40 EBL OVER WESTGATE DRIVE
BRIDGE No. 330449 ON I–40 WBL OVER WESTGATE DRIVE
BRIDGE No. 330508 ON I–40 WBL OVER I–40 BUS EBL
BRIDGE No. 330509 ON I–40 WBL RAMP OVER I–40 BUS AND US 421 EBL

TYPE OF WORK: ***BRIDGE PRESERVATION: DECK REPAIR, SILANE DECK TREATMENT, SILANE BARRIER RAIL TREATMENT, JOINT REPLACEMENT, BRIDGE JACKING, PAINTING EXISTING WEATHERING STEEL STRUCTURE, CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA, CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS, REMOVE DEBRIS FROM TOP OF EXISTING END BENT & BENT CAPS AND APPLY EPOXY COATING AND SUBSTRUCTURE REPAIR***



VICINITY MAP – FORSYTH CO.

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN DATA

FORSYTH COUNTY

BRIDGE No. 330161	ADT 2015	=	31,500
BRIDGE No. 330162	ADT 2015	=	31,500
BRIDGE No. 330444	ADT 2013	=	6,500
BRIDGE No. 330448	ADT 2015	=	39,500
BRIDGE No. 330449	ADT 2015	=	39,500
BRIDGE No. 330508	ADT 2015	=	39,500
BRIDGE No. 330509	ADT 2013	=	19,250

PROJECT LENGTH

FORSYTH COUNTY

BRIDGE No. 330161	=	0.037	MILE
BRIDGE No. 330162	=	0.037	MILE
BRIDGE No. 330444	=	0.112	MILE
BRIDGE No. 330448	=	0.027	MILE
BRIDGE No. 330449	=	0.029	MILE
BRIDGE No. 330508	=	0.075	MILE
BRIDGE No. 330509	=	0.156	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 15, 2020

A. KEITH PASCHAL, P.E.
PROJECT ENGINEER

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

PROJECT: I-5795

CONTRACT NO: C203978

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

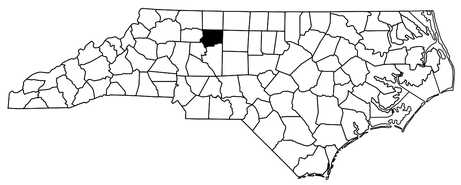
FORSYTH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5795	1A	
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION	
53034.1.2	–	P.E.	
53034.3.1	NHPP–0040(032)	CONST.	

LOCATION: *BRIDGE No. 330439 ON NC 66 OVER I–40*
BRIDGE No. 330441 ON US 158 (S. STRATFORD RD.) OVER I–40
BRIDGE No. 330451 ON I–40 EBL OVER SR 3153 (HANES MALL BLVD.)
BRIDGE No. 330452 ON I–40 WBL OVER SR 3153 (HANES MALL BLVD.)
BRIDGE No. 330454 ON NC 150 OVER I–40
BRIDGE No. 330458 ON SR 2643 (UNION CROSS RD.) OVER I–40
BRIDGE No. 330479 ON I–40 WBL OVER BUCHANAN STREET
BRIDGE No. 330480 ON I–40 EBL OVER BUCHANAN STREET
BRIDGE No. 330481 ON I–40 WBL OVER I–40 RAMP
BRIDGE No. 330482 ON I–40 EBL OVER I–40 RAMP
BRIDGE No. 330486 ON I–40 WBL OVER SALEM CREEK
BRIDGE No. 330487 ON I–40 EBL OVER SALEM CREEK
BRIDGE No. 330488 ON I–40 WBL OVER NC 150 RAMPS
BRIDGE No. 330489 ON I–40 EBL OVER NC 150 RAMPS

INDEX OF STRUCTURES SHEETS

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION



TYPE OF WORK:

BRIDGE PRESERVATION: DECK REPAIR, POLYESTER POLYMER CONCRETE OVERLAY, POURABLE SILICONE JOINT SEALANT AND FOAM JOINT REPLACEMENT, PAINTING EXISTING WEATHERING STEEL STRUCTURE, PAINTING OF BEARINGS FOR THESE BRIDGES IS INCLUDED IN THE STRUCTURE STEEL PAINTING, CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS, REMOVE DEBRIS FROM TOP OF EXISTING END BENT & BENT CAPS AND APPLY EPOXY COATING AND SUBSTRUCTURE REPAIR

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

PROJECT: I-5795

CONTRACT NO: C203978

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FORSYTH COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5795	2A	

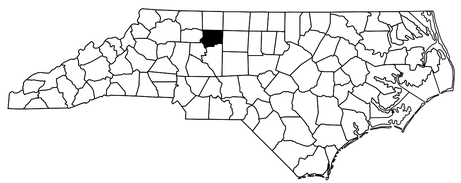
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
53034.1.2	–	P.E.
53034.3.1	NHPP–0040(032)	CONST.

LOCATION:

BRIDGE No. 330439 ON NC 66 OVER I–40
BRIDGE No. 330441 ON US 158 (S. STRATFORD RD.) OVER I–40
BRIDGE No. 330451 ON I–40 EBL OVER SR 3153 (HANES MALL BLVD.)
BRIDGE No. 330452 ON I–40 WBL OVER SR 3153 (HANES MALL BLVD.)
BRIDGE No. 330454 ON NC 150 OVER I–40
BRIDGE No. 330458 ON SR 2643 (UNION CROSS RD.) OVER I–40
BRIDGE No. 330479 ON I–40 WBL OVER BUCHANAN STREET
BRIDGE No. 330480 ON I–40 EBL OVER BUCHANAN STREET
BRIDGE No. 330481 ON I–40 WBL OVER I–40 RAMP
BRIDGE No. 330482 ON I–40 EBL OVER I–40 RAMP
BRIDGE No. 330486 ON I–40 WBL OVER SALEM CREEK
BRIDGE No. 330487 ON I–40 EBL OVER SALEM CREEK
BRIDGE No. 330488 ON I–40 WBL OVER NC 150 RAMPS
BRIDGE No. 330489 ON I–40 EBL OVER NC 150 RAMPS

INDEX OF STRUCTURES SHEETS

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION



TYPE OF WORK:

BRIDGE PRESERVATION: DECK REPAIR, POLYESTER POLYMER CONCRETE OVERLAY, POURABLE SILICONE JOINT SEALANT AND FOAM JOINT REPLACEMENT, PAINTING EXISTING WEATHERING STEEL STRUCTURE, PAINTING OF BEARINGS FOR THESE BRIDGES IS INCLUDED IN THE STRUCTURE STEEL PAINTING, CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS, REMOVE DEBRIS FROM TOP OF EXISTING END BENT & BENT CAPS AND APPLY EPOXY COATING AND SUBSTRUCTURE REPAIR

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

PROJECT: I-5795

CONTRACT NO: C203978

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

FORSYTH COUNTY

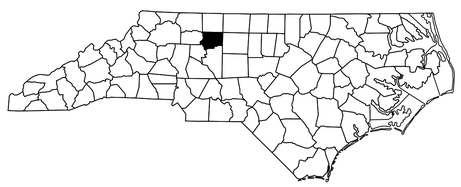
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5795	3A	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
53034.1.2	–	P.E.
53034.3.1	NHPP–0040(032)	CONST.

LOCATION: FORSYTH COUNTY:
BRIDGE No. 330161 ON I–40 EBL OVER MUDDY CREEK
BRIDGE No. 330162 ON I–40 WBL OVER MUDDY CREEK
BRIDGE No. 330444 ON US 421 SBL RAMP OVER I–40 & I–40 BUS
BRIDGE No. 330448 ON I–40 EBL OVER WESTGATE DRIVE
BRIDGE No. 330449 ON I–40 WBL OVER WESTGATE DRIVE
BRIDGE No. 330508 ON I–40 WBL OVER I–40 BUS EBL
BRIDGE No. 330509 ON I–40 WBL RAMP OVER I–40 BUS AND US 421 EBL

INDEX OF STRUCTURES SHEETS

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION



TYPE OF WORK:

BRIDGE PRESERVATION: DECK REPAIR, SILANE DECK TREATMENT, SILANE BARRIER RAIL TREATMENT, JOINT REPLACEMENT, BRIDGE JACKING, PAINTING EXISTING WEATHERING STEEL STRUCTURE, CLEANING AND PAINTING EXISTING BEARINGS WITH HRCSA, CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS, REMOVE DEBRIS FROM TOP OF EXISTING END BENT & BENT CAPS AND APPLY EPOXY COATING AND SUBSTRUCTURE REPAIR

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

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.

BRIDGE COORDINATES

BRIDGE NO.	LATITUDE	LONGITUDE
330439	36°-05'-07.58"	80°-03'-49.30"
330441	36°-03'-58.41"	80°-18'-28.68"
330451	36°-03'-51.93"	80°-18'-01.77"
330452	36°-03'-52.67"	80°-18'-01.12"
330454	36°-03'-55.32"	80°-15'-29.56"
330458	36°-04'-30.03"	80°-06'-34.38"

BRIDGE 330439 LOCATION SKETCH

BRIDGE 330441 LOCATION SKETCH

BRIDGE 330458 LOCATION SKETCH

BRIDGES 330451 & 330452 LOCATION SKETCH

BRIDGE 330454 LOCATION SKETCH

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330439, 330441, 330451
330452, 330454, 330458

SHEET 1 OF 6

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCHES

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : R.L.PUTEK DATE : 06/2020
CHECKED BY : K.P.SEDAI DATE : 06/2020

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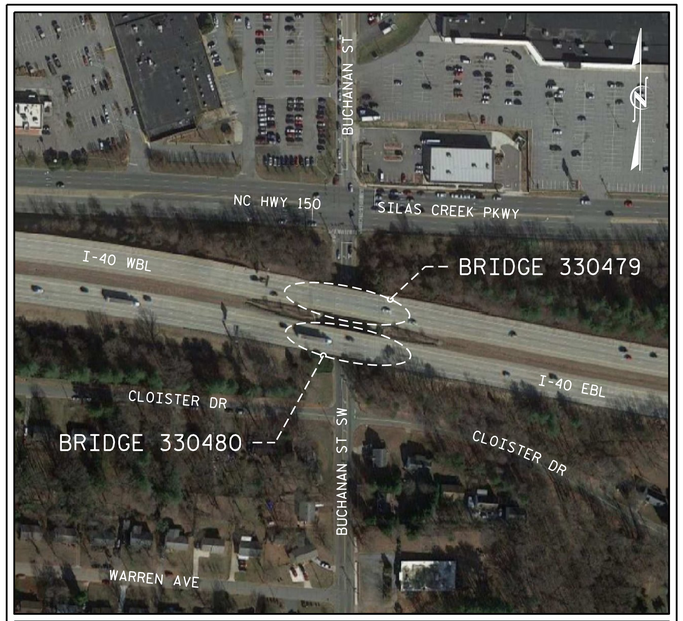
ksedai

NOTES

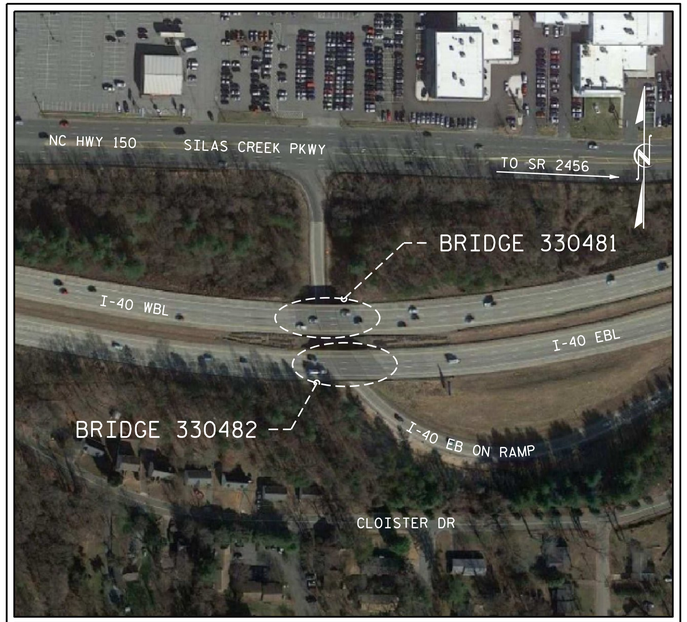
INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

BRIDGE COORDINATES

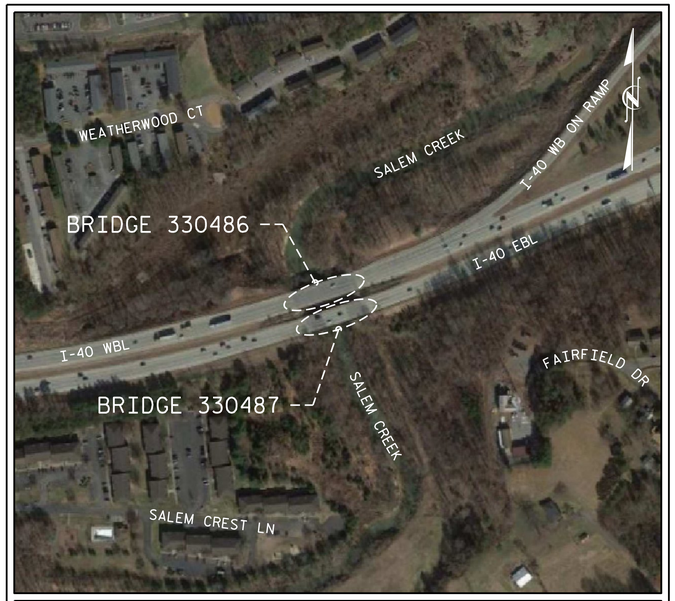
BRIDGE No.	LATITUDE	LONGITUDE
330479	36°-03'-55.09"	80°-15'-06.77"
330480	36°-03'-54.25"	80°-15'-06.73"
330481	36°-03'-53.47"	80°-14'-53.69"
330482	36°-03'-52.66"	80°-14'-53.19"
330486	36°-03'-44.69"	80°-16'-12.36"
330487	36°-03'-43.90"	80°-16'-11.92"
330488	36°-03'-52.95"	80°-15'-46.68"
330489	36°-03'-52.25"	80°-15'-45.89"



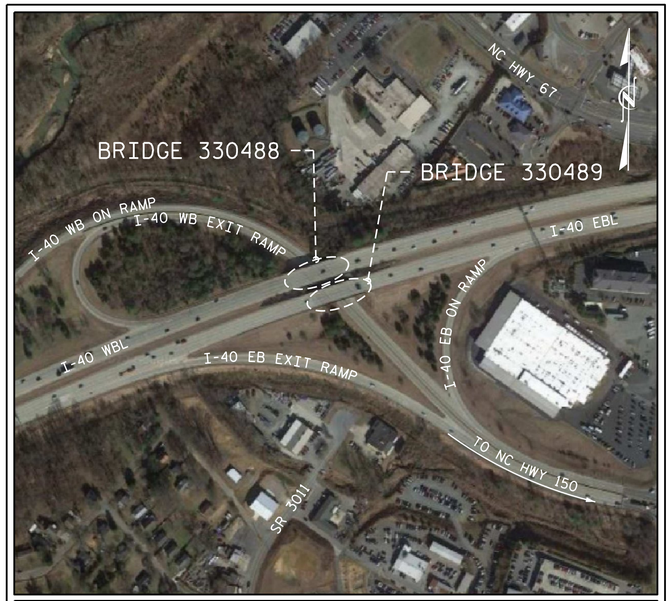
BRIDGES 330479 & 330480 LOCATION SKETCH



BRIDGES 330481 & 330482 LOCATION SKETCH



BRIDGES 330486 & 330487 LOCATION SKETCH



BRIDGES 330488 & 330489 LOCATION SKETCH

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330479, 330480, 330481
330482, 330486, 330487
330488, 330489

SHEET 2 OF 6

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F7941508F487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCHES

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

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DRAWN BY : R.L.PUTEK DATE : 06/2020
CHECKED BY : K.P.SEDAI DATE : 06/2020

04-AUG-2020 16:39
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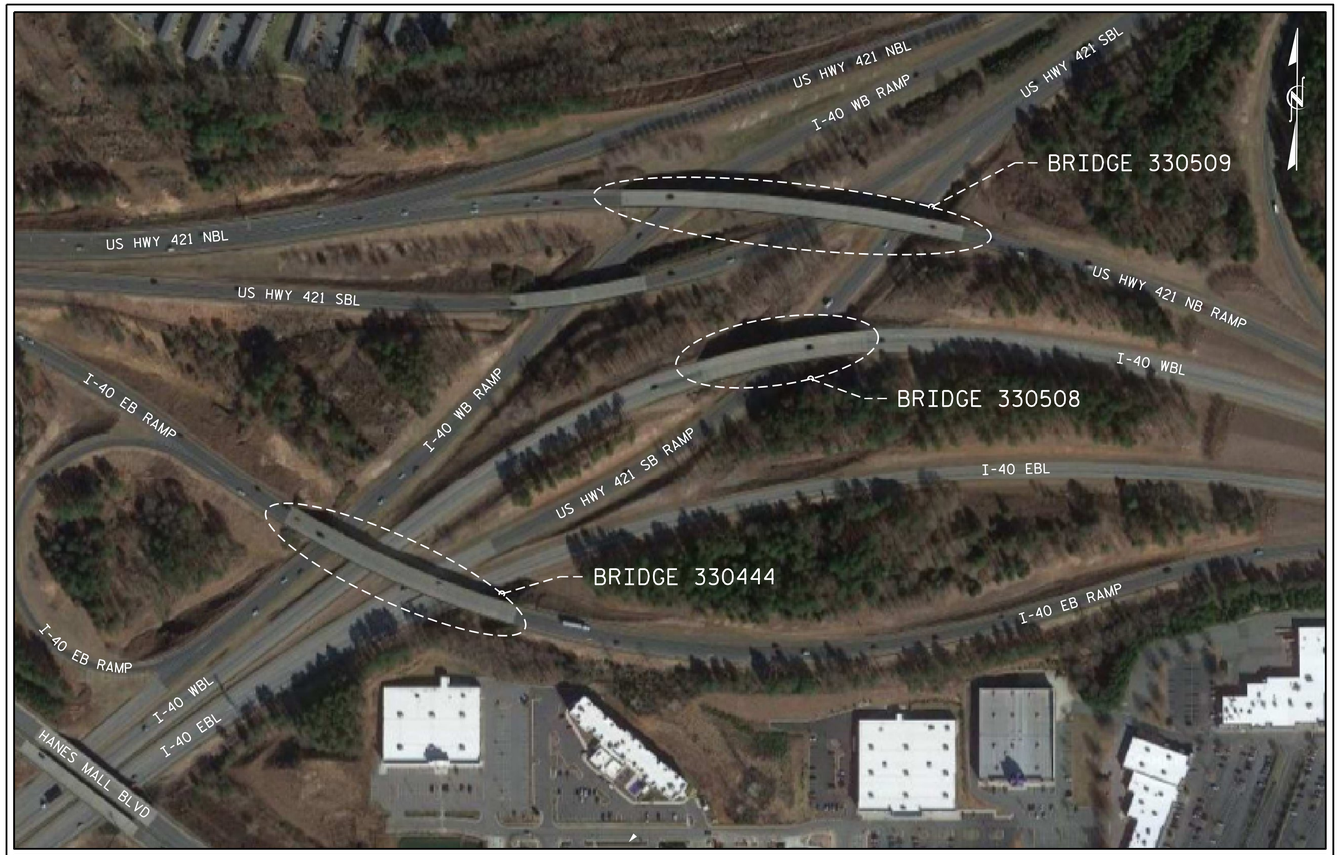
ksedai

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.

BRIDGES 330161 & 330162 LOCATION SKETCH



BRIDGES 330444, 330508 & 330509 LOCATION SKETCH

BRIDGES 330448 & 330449 LOCATION SKETCH

BRIDGE COORDINATES

BRIDGE No.	LATITUDE	LONGITUDE
330161	36°-02'-49.61"	80°-21'-58.66"
330162	36°-02'-50.70"	80°-21'-59.31"
330444	36°-04'-11.90"	80°-19'-42.59"
330448	36°-04'-04.44"	80°-18'-45.43"
330449	36°-04'-05.17"	80°-18'-44.68"
330508	36°-04'-17.77"	80°-19'-32.66"
330509	36°-04'-20.90"	80°-19'-29.13"

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330161, 330162, 330444
330448, 330449, 330508, 330509

SHEET 3 OF 6

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

LOCATION SKETCHES

DRAWN BY : R.L.PUTEK DATE : 06/2020
CHECKED BY : K.P.SEDAI DATE : 06/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

04-AUG-2020 16:39
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ksedai

TOTAL BILL OF MATERIAL

BRIDGE NO.	GROOVING BRIDGE FLOORS	EPOXY COATED REINFORCING STEEL	POLLUTION CONTROL	CLASS II SURFACE PREPARATION	SURFACE PREPARATION FOR CONCRETE BARIER RAIL	CONCRETE REPAIRS	SHOTCRETE REPAIRS	EPOXY RESIN INJECTION	FOAM JOINT SEALS FOR PRESERVATION	CLEANING & PAINTING EXISTING WEATHERING STEEL FOR BRIDGE NO.__	MOLDED RUBBER SEGMENTAL EXPANSION JOINT	PAINTING CONTAINMENT FOR BRIDGE NO.__	VOLUMETRIC MIXER	POURABLE SILICONE JOINT SEALANT	POLYESTER POLYMER CONCRETE MATERIALS
	SQ. FT.	LBS.	LUMP SUM	SQ. YDS.	SQ. FT.	CU. FT.	CU. FT.	LIN. FT.	LIN. FT.	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	LIN. FT.	CU. YDS.
330439	15,693	-	-	51.3	-	-	0.6	-	227.7	-	-	-	-	154.0	63.7
330441	20,573	-	LUMP SUM	46.3	-	-	12.2	-	256.5	LUMP SUM	-	LUMP SUM	-	174.8	84.3
330451	10,854	-	LUMP SUM	33.6	-	-	-	-	123.0	LUMP SUM	-	LUMP SUM	-	126.0	44.9
330452	10,983	-	LUMP SUM	27.2	-	-	-	-	-	LUMP SUM	-	LUMP SUM	-	252.0	45.4
330454	25,008	-	LUMP SUM	60.4	-	-	-	-	-	LUMP SUM	-	LUMP SUM	-	510.0	102.6
330458	10,591	-	-	34.2	-	-	-	-	153.6	-	-	-	-	102.4	43.1
330479	8,731	-	-	27.2	-	25.7	3.2	6.0	-	-	-	-	-	232.8	34.5
330480	7,248	-	-	25.6	-	-	3.0	6.0	-	-	-	-	-	232.8	30.3
330481	6,944	-	-	31.1	-	-	-	4.0	116.6	-	-	-	-	120.0	29.0
330482	7,629	-	-	34.2	-	-	-	-	129.2	-	-	-	-	134.7	31.6
330486	12,617	-	-	28.6	-	-	-	-	-	-	-	-	-	264.0	52.1
330487	10,961	-	-	25.0	-	-	-	-	-	-	-	-	-	232.0	45.6
330488	11,769	-	LUMP SUM	38.6	-	-	5.1	5.0	146.8	LUMP SUM	-	LUMP SUM	-	149.2	48.4
330489	9,701	-	LUMP SUM	33.5	-	-	0.2	2.7	128.6	LUMP SUM	-	LUMP SUM	-	131.0	39.4
330161	-	-	-	-	1368.0	2.2	11.6	4.0	157.4	-	-	-	-	-	-
330162	-	-	-	-	1368.0	-	2.5	-	157.4	-	-	-	-	-	-
330444	-	1726	LUMP SUM	-	4124.0	-	1.5	-	-	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	-	-
330448	-	-	-	-	969.7	-	3.6	5.0	284.4	-	-	-	-	-	-
330449	-	-	-	-	1042.4	-	0.6	13.5	284.4	-	-	-	-	-	-
330508	-	-	LUMP SUM	12.4	2769.0	-	-	-	112.0	LUMP SUM	-	LUMP SUM	-	-	-
330509	-	1410	LUMP SUM	-	5784.0	-	-	-	-	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	-	-
TOTAL	169,302	3,136	LUMP SUM	509.2	17,425.1	27.9	44.1	46.2	2,277.6	LUMP SUM	LUMP SUM	LUMP SUM	LUMP SUM	2,815.7	694.9

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 439, 441, 451, 452,454, 458, 479, 480, 481, 482, 486, 487, 488, 489, 161, 162, 444, 448, 449, 508 & 509

SHEET 4 OF 6

8/10/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Krishna P. Sedai

EA8F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOTAL BILL OF MATERIALS

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			6

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TOTAL BILL OF MATERIAL

BRIDGE NO.	CONCRETE DECK REPAIR FOR POLYESTER POLYMER CONCRETE OVERLAY	ELASTOMERIC CONCRETE FOR PRESERVATION	BRIDGE JOINT DEMOLITION	CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	EPOXY COATING	EPOXY COATING CONCRETE GIRDER ENDS	JOINT REPAIR	PLACING & FINISHING POLYESTER POLYMER CONCRETE OVERLAY	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	SILANE DECK TREATMENT	SILANE BARRIER RAIL TREATMENT	CLEANING & PAINTING EXISTING BEARINGS WITH HRCSA BRIDGE NO.__	TYPE I BRIDGE JACKING
	SQ. YDS.	CU. FT.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. YDS.	SQ. FT.	EA.	EA.
330439	51.3	-	-	-	1100.0	1700.0	-	1,828	1,828	1,828	-	-	-	-
330441	46.3	-	-	-	1271.0	-	-	2,425	2,425	2,425	-	-	-	-
330451	33.6	-	-	-	708.0	-	-	1,292	1,292	1,292	-	-	-	-
330452	27.2	-	-	-	708.0	-	-	1,307	1,307	1,307	-	-	-	-
330454	60.4	-	-	-	1277.0	-	-	2,956	2,956	2,956	-	-	-	-
330458	34.2	-	-	-	713.0	1075.6	-	1,240	1,240	1,240	-	-	-	-
330479	27.2	-	-	-	582.8	909.0	-	988	988	988	-	-	-	-
330480	25.6	_	-	-	582.8	909.0	-	875	875	875	-	-	-	-
330481	31.1	_	-	-	626.8	790.2	-	831	831	831	-	-	-	-
330482	34.2	_	-	-	694.8	790.2	-	912	912	912	-	-	-	-
330486	28.6	_	-	-	656.7	1252.9	-	1,494	1,494	1,494	-	-	-	-
330487	25.0	_	-	-	571.3	1096.3	-	1,309	1,309	1,309	-	-	-	-
330488	38.6	_	-	-	841.0	-	_	1,393	1,393	1,393	-	-	-	-
330489	33.5	_	-	-	739.0	-	-	1,137	1,137	1,137	-	-	-	-
330161	-	39.4	157.4	5.7	927.4	484.2	-	-	-	1,833	1,833	1,368.0	-	1
330162	-	39.4	157.4	5.0	927.4	484.2	-	-	-	1,833	1,833	1,368.0	-	-
330444	-	_	_	-	233.0	-	568.0	-	-	3,266	3,266	4,124.0	12	-
330448	-	71.2	284.4	-	922.2	1156.4	-	-	-	1,207	1207	969.7	-	-
330449	-	71.2	284.4	6.3	922.2	1156.4	-	_	_	1,303	1,303	1,042.4	-	-
330508	-	28.0	-	112.0	389.0	_	-	_	_	2,624	2,624	2,769.0	12	-
330509	-	-	-	-	293.6	_	473.4	_	_	3,746	3,746	5,784.0	10	-
TOTAL	496.8	249.2	883.6	129.0	15,687.0	11,804.4	1,041.4	19,987	19,987	35,799	15,812	17,425.1	34	1

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 439, 441, 451, 452,454, 458, 479, 480, 481, 482, 486, 487, 488, 489, 161, 162, 444, 448, 449, 508 & 509

SHEET 5 OF 6

8/10/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODARI

Krishna P. Sodari

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TOTAL BILL OF MATERIALS

REVISIONS						SHEET NO.
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CHECKED BY : H. A. LOCKLEAR DATE : 4/2020

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NOTES

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 REPAIRS.

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.

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.

WORK ON THE BRIDGES 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 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.

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

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

EXISTING MODULAR JOINT AND DECK REINFORCING STEEL SHOWN IS BASED ON BEST INFORMATION AVAILABLE.

FOR BRIDGE JACKING, SEE SPECIAL PROVISIONS.

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

ADHESIVE ANCHOR BOLTS AND HARDWARE FOR THE PROPOSED EXPANSION JOINT SHALL BE GALVANIZED PER ASTM A153 AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

FOR EPOXY COATED REINFORCING STEEL, SEE 2018 NORTH CAROLINA STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, SECTION 425.

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 BARS FROM WHICH THE SAMPLES ARE TAKEN MUST THEN BE SPLICED WITH REPLACEMENT BARS OF THE SIZE AND LENGTH OF THE SAMPLE, PLUS A MINIMUM LAP SPLICE OF THIRTY BAR DIAMETERS. PAYMENT FOR THE SAMPLES OF REINFORCING STEEL SHALL BE CONSIDERED INCIDENTAL TO VARIOUS PAY ITEMS.

AT THE TIME OF PREPARATION OF THESE PLANS, IT WAS NOT ANTICIPATED THAT ITEMS SHOWN BELOW WOULD BE REQUIRED. HOWEVER, IT MAY BE DETERMINED IN THE FIELD THAT THESE ITEMS, 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 PROJECT DOCUMENTS, BUT NO QUANTITIES HAVE BEEN LISTED. ACTUAL PAY ITEMS, QUANTITIES, AND COSTS WILL BE ESTABLISHED, AS REQUIRED, IF EXTRA WORK IS ENCOUNTERED.

UNANTICIPATED ITEMS:

ITEM NO.	DESCRIPTION	UNIT
1	CLASS III SURFACE PREPARATION	LIN. FT.

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

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

THE ELEVATION(S) AND CLEARANCE(S) SHOWN ON THE PLANS AT THE POINT(S) OF MINIMUM VERTICAL CLEARANCE ARE FROM THE BEST INFORMATION AVAILABLE. PRIOR TO BEGINNING BRIDGE CONSTRUCTION, VERIFY THE ELEVATION(S) ON THE EXISTING PAVEMENT AND CHECK THE CLEARANCE. REPORT ANY VARIATIONS TO THE ENGINEER. ANY PLAN REVISIONS NECESSARY TO ACHIEVE THE REQUIRED MINIMUM VERTICAL CLEARANCE WILL BE PROVIDED BY THE DEPARTMENT.

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.

CONTRACTOR SHALL HAVE A REPRESENTATIVE FROM THE JOINT MANUFACTURER PRESENT DURING INSTALLATION OF PROPOSED MOLDED RUBBER SEGMENTAL EXPANSION JOINT.

FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

FOR JOINT REPAIR, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR PAINTING EXISTING WEATHERING STEEL STRUCTURE, SEE SPECIAL PROVISIONS.

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

FOR PAINTING CONTAINMENT, POLLUTION CONTROL, AND CLEANING & PAINTING EXISTING BEARINGS WITH HPCSA, SEE CLEANING & PAINTING EXISTING BEARINGS WITH HPCSA SPECIAL PROVISION.

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

FOR EPOXY RESIN INJECTIONS (ERI), SEE SPECIAL PROVISIONS.

FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR BRIDGE JOINT DEMOLITION, SEE SPECIAL PROVISIONS.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

FOR SILANE BARRIER RAIL TREATMENT, SEE SPECIAL PROVISIONS.

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330439, 330441, 330451
330452, 330454, 330458, 330479
330480, 330481, 330482, 330486
330487, 330488, 330489, 330161
330162, 330444, 330448, 330449
330508, 330509

SHEET 6 OF 6

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL NOTES

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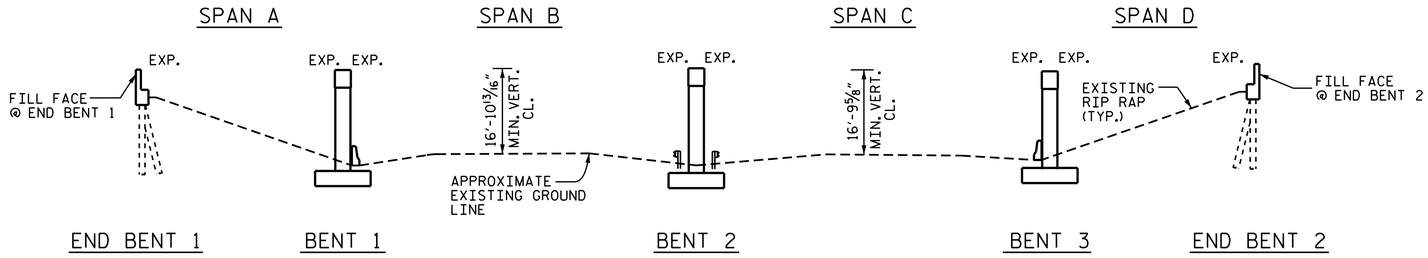
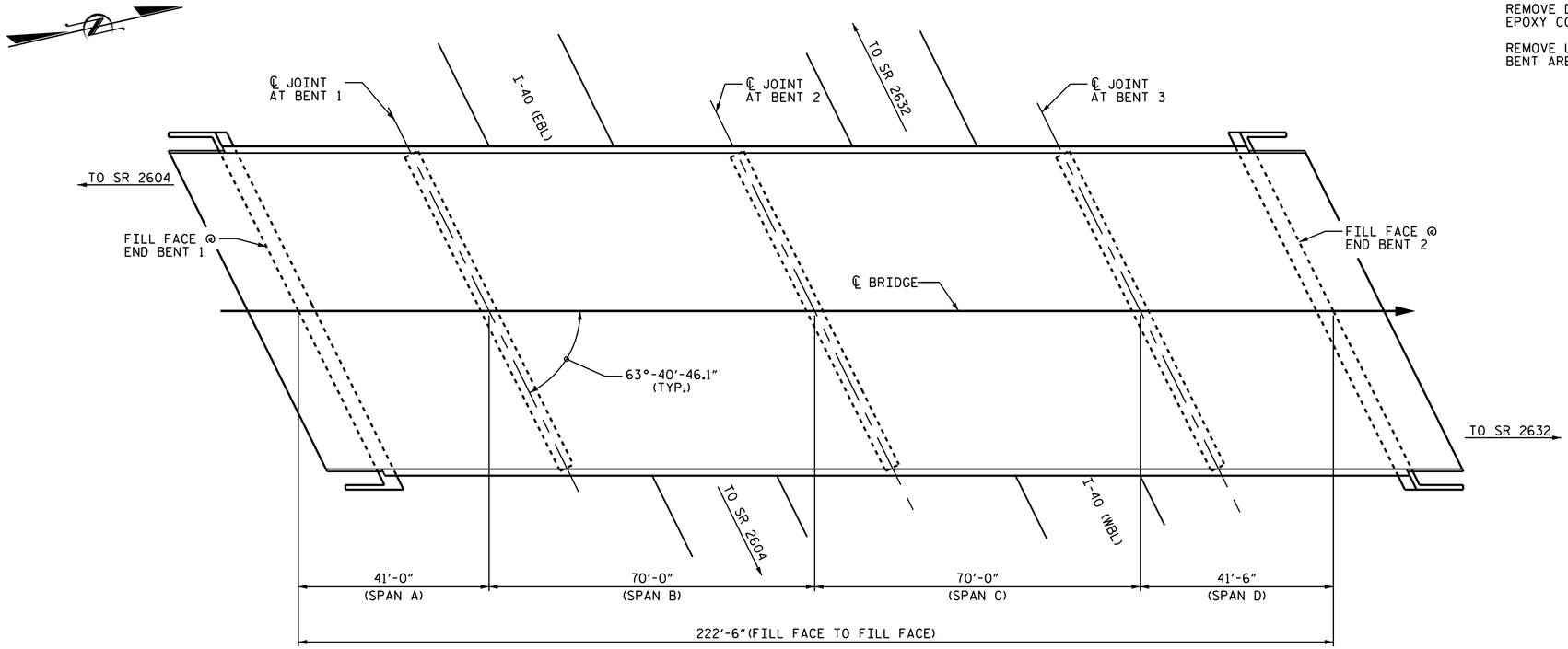
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ℄ BRIDGE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT RATED 7/18/2018.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS.

SCOPE OF WORK

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

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

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

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

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

RESIDENT ENGINEER DATE

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330439

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
Docusigned by: A. Keith Paschal
F8B6AD6DB2FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON NC 66 OVER I-40

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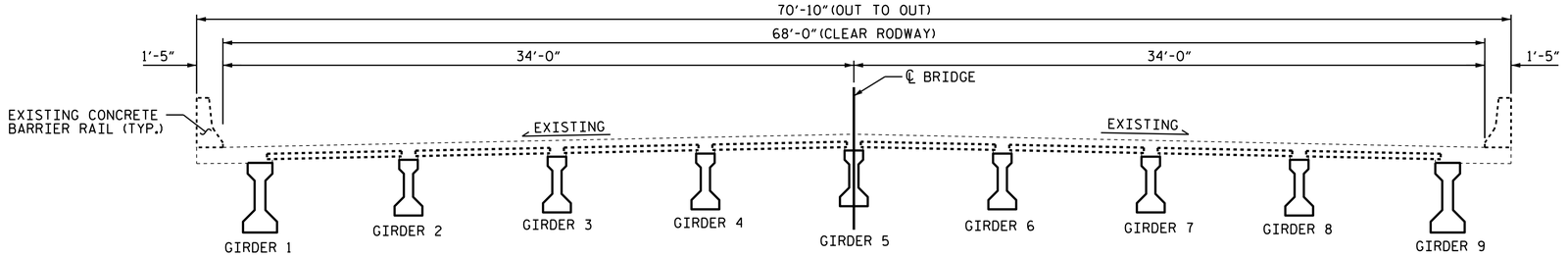
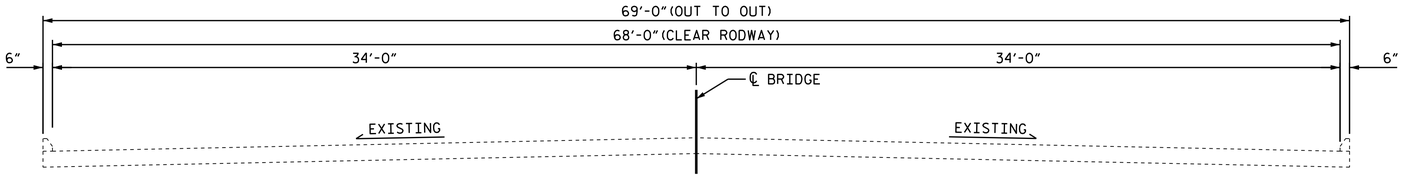
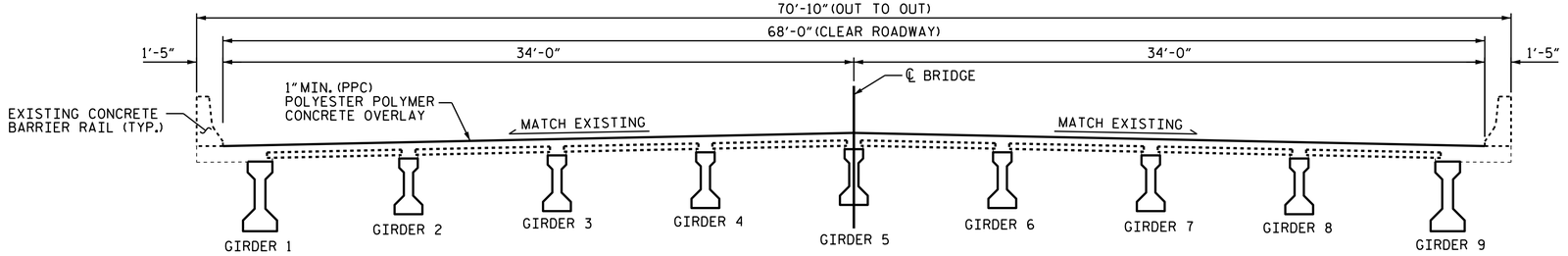


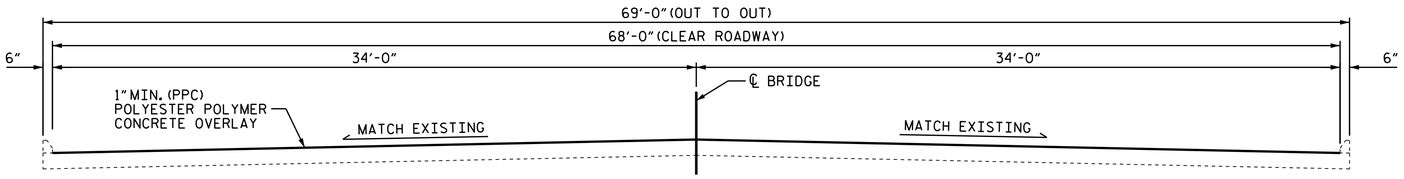
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION - APPROACH SLAB
(EXISTING)

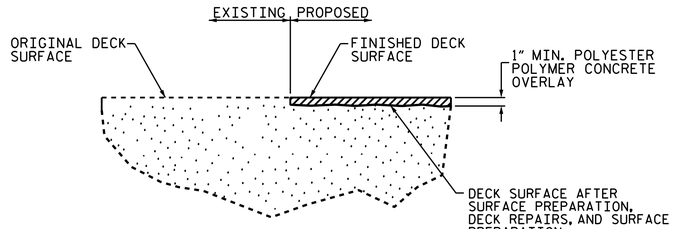


TYPICAL SECTION
(PROPOSED)

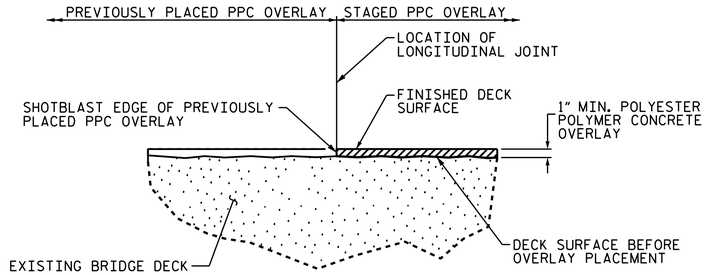


TYPICAL SECTION - APPROACH SLAB
(PROPOSED)

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



DETAIL FOR POLYESTER POLYMER CONCRETE OVERLAY
FINSHED SURFACE ELEVATION SHALL MATCH EXISTING CONCRETE SURFACE ELEVATION. ACTUAL THICKNESS OF PPC OVERLAY MAY VARY.



STAGED PPC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330439

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION & PPC OVERLAY DETAIL

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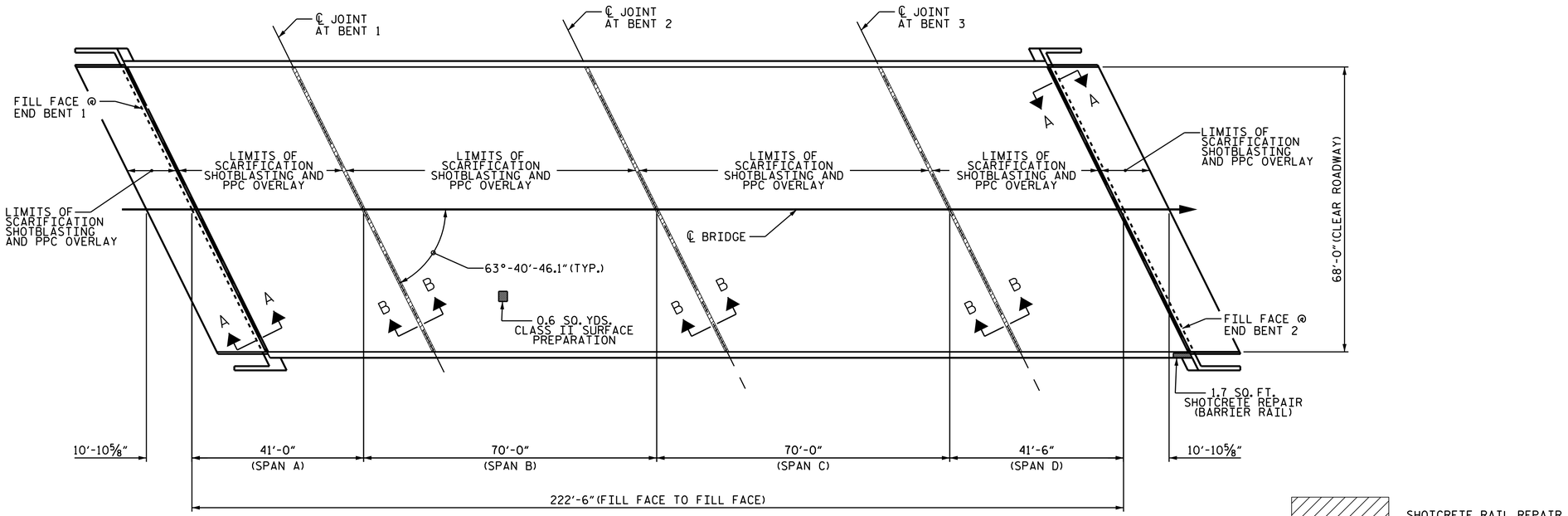

PLAN OF SPANS

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		SPAN D		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	91.0 SQ. YDS.		298.0 SQ. YDS.		523.0 SQ. YDS.		523.0 SQ. YDS.		302.0 SQ. YDS.		91.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	91.0 SQ. YDS.		298.0 SQ. YDS.		523.0 SQ. YDS.		523.0 SQ. YDS.		302.0 SQ. YDS.		91.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.		0.0 SQ. YDS.		0.6 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.0 SQ. YDS.		0.0 SQ. YDS.		0.6 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	3.2 CU. YDS.		10.4 CU. YDS.		18.2 CU. YDS.		18.2 CU. YDS.		10.5 CU. YDS.		3.2 CU. YDS.	
PLACING & FINISHING PPC OVERLAY	91.0 SQ. YDS.		298.0 SQ. YDS.		523.0 SQ. YDS.		523.0 SQ. YDS.		302.0 SQ. YDS.		91.0 SQ. YDS.	
GROOVING BRIDGE FLOOR	651.0 SQ. FT.		2645.0 SQ. FT.		4534.0 SQ. FT.		4534.0 SQ. FT.		2678.0 SQ. FT.		651.0 SQ. FT.	
EPOXY COATING CONCRETE GIRDER ENDS			414.2 SQ. FT.		435.8 SQ. FT.		435.8 SQ. FT.		414.2 SQ. FT.			
EPOXY RESIN INJECTION			0.0 LIN. FT.		0.0 LIN. FT.		0.0 LIN. FT.		0.0 LIN. FT.			

SHOTCRETE REPAIRS	SPAN A				SPAN B				SPAN C				SPAN D			
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CONCRETE BARRIER RAIL	0.0	0.0			0.0	0.0			0.0	0.0			1.7	0.6		

EPOXY COATING	ESTIMATE	ACTUAL
	AREA SQ. FT.	AREA SQ. FT.
TOP OF CAP AT END BENTS 1 & 2 AND BENTS 1 THRU 3	1100.0	0.0

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

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

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

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

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-5795
FORSYTH COUNTY
BRIDGE NO. 330439

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA T. SEDAI
Docusigned by: Krishna T. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR
SPANS A THRU D

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : A. YASMEEN DATE : 02/2020

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2			4		

SHEET NO. S1-03
TOTAL SHEETS 5

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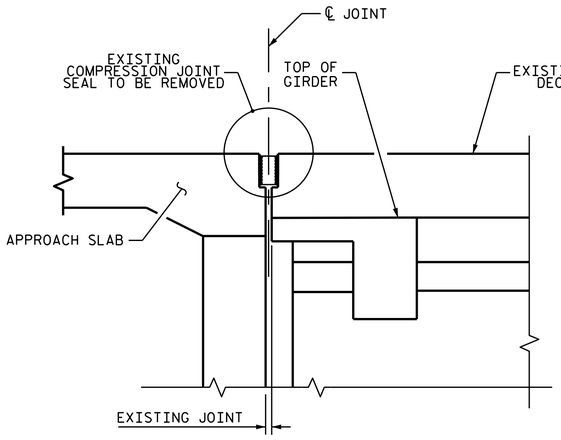
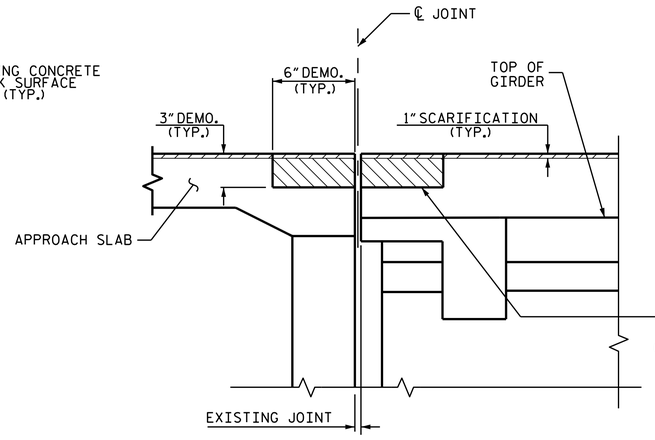
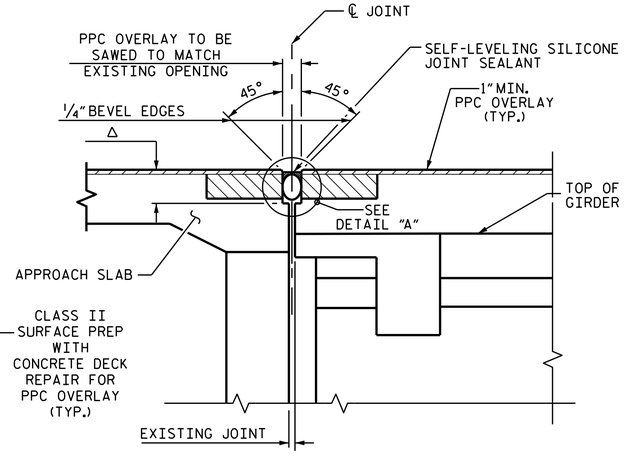


EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATIION



PROPOSED JOINT WITH SAWED DIMENSIONS

Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

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.

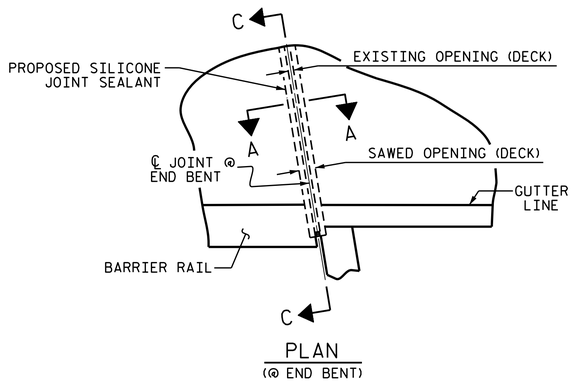
THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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.

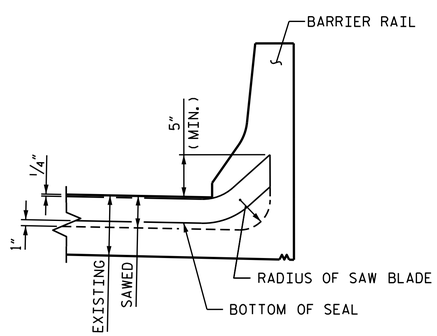
JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	8.4 SY	8.4 SY
END BENT 2	8.4 SY	8.4 SY
TOTAL	16.8 SY	16.8 SY

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

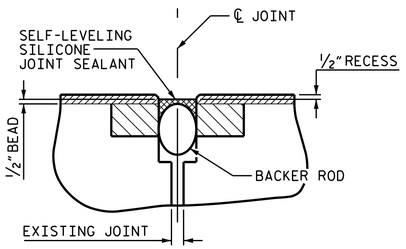


PLAN
(@ END BENT)



SECTION C-C

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	77 LF	
END BENT 2	77 LF	
TOTAL	154 LF	



DETAIL "A"

JOINT SEAL DETAILS

PROJECT NO. I-5795
FORSYTH
BRIDGE NO. 330439

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : ASRA YASMEEN DATE : 08/2019

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1			3				TOTAL SHEETS
2			4				5

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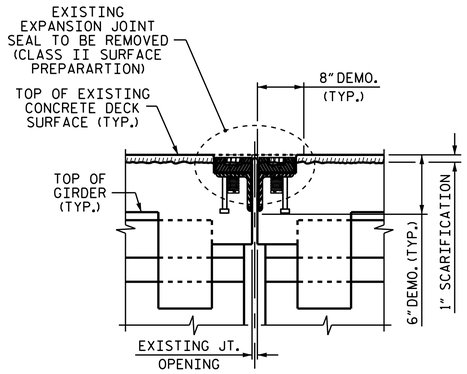
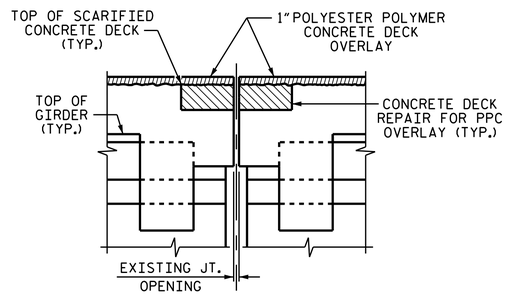
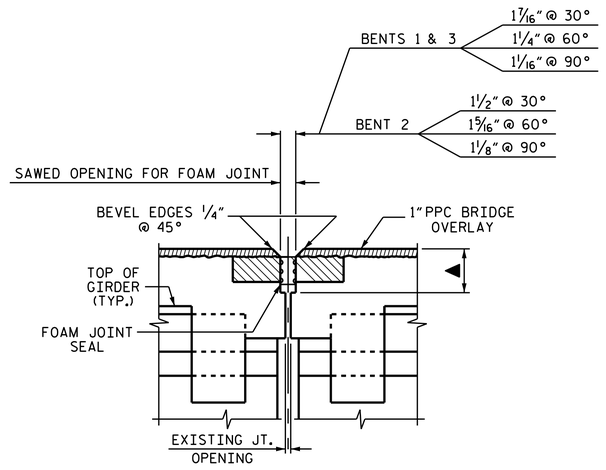


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT



PROPOSED FOAM JOINT SEAL

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

NOTES

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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

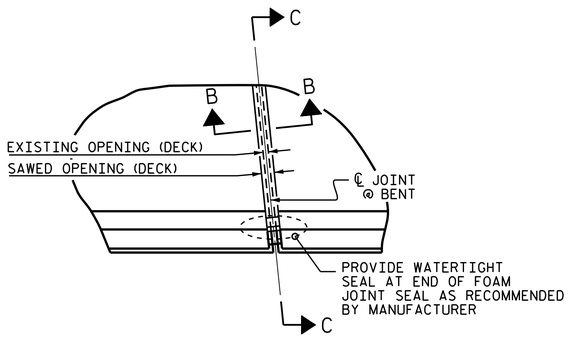
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE BENTS.

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.

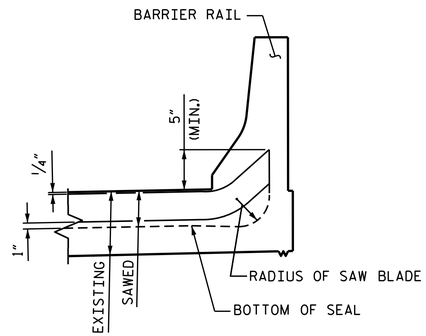
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHALL BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN (@ BENT)



SECTION C-C

JOINT SEAL DETAILS AT BENTS

JOINT REPAIR QUANTITY TABLE				
	CLASS II SURFACE PREPARATION		CONCRETE DECK REPAIR FOR PPC OVERLAY	
	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL
BENT 1	11.3 SY		11.3 SY	
BENT 2	11.3 SY		11.3 SY	
BENT 3	11.3 SY		11.3 SY	
✱ TOTAL	33.9 SY		33.9 SY	

✱ BASED ON THE BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	75.9 LF	
BENT 2	75.9 LF	
BENT 3	75.9 LF	
TOTAL	227.7 LF	

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330439

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS BENTS 1, 2 & 3

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2			4			5

DRAWN BY : A. SORSENGINH DATE : 5/2020

CHECKED BY : ASRA YASMEEN DATE : 5/2020

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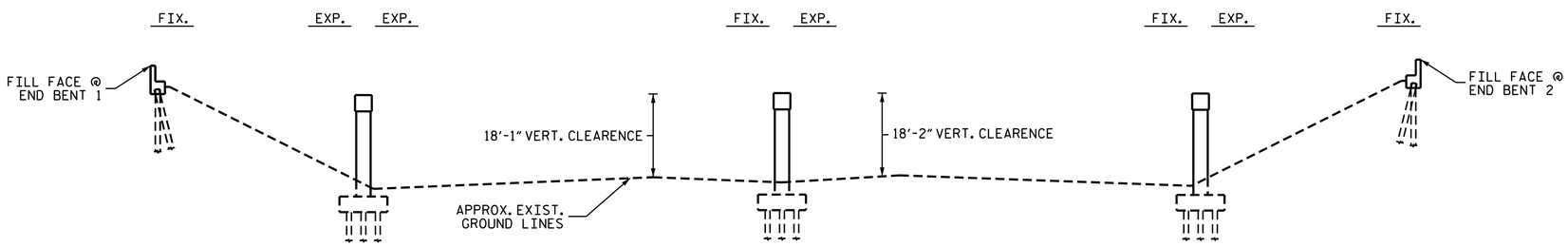
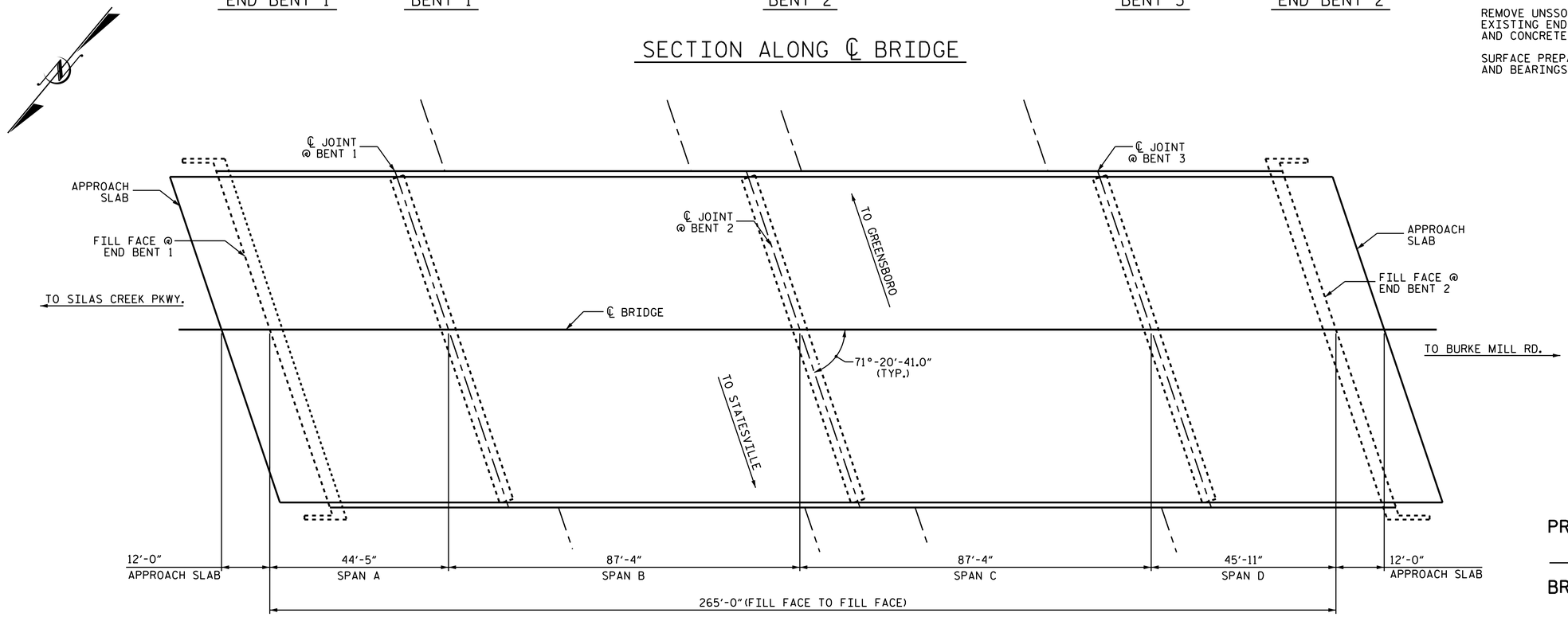
F.A. PROJECT NO.: NHPP-0040(032)

SPAN A SPAN B SPAN C SPAN D



SECTION ALONG ℄ BRIDGE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/16/2018.

BRIDGE ORIENTATION CONFORMS TO EXISTING BRIDGE PLANS.

SCOPE OF WORK

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

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

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

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

REMOVE UNSSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS FOR SHOTCRETE AND CONCRETE REPAIR.

SURFACE PREPARATION AND PAINTING OF GIRDER ENDS AND BEARINGS.

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

RESIDENT ENGINEER DATE

8/5/2020 — NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL — Signed by: A. Keith Paschal — F886AD60B2FC48F...

8/4/2020 — NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI — Docusigned by: Krishna Pr Sedai — EA6F7941508F487...

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PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330441

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

BRIDGE ON US-158 OVER I-40

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DRAWN BY : J. A. TILLMAN DATE : 10/2019
CHECKED BY : H. A. LOCKLEAR DATE : 4/2020

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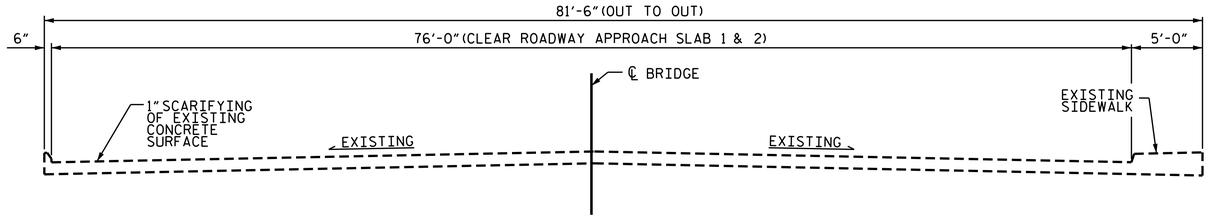
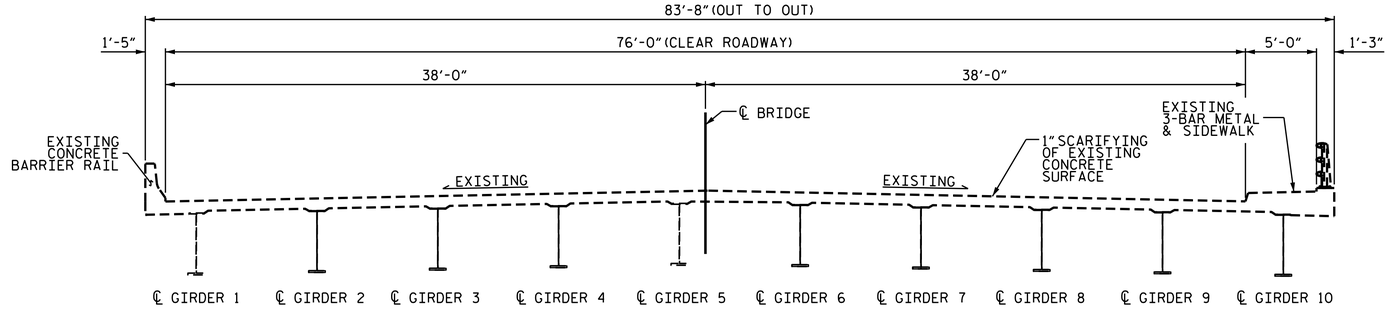


TYPICAL SECTION - APPROACH SLAB
(EXISTING)



TYPICAL SECTION
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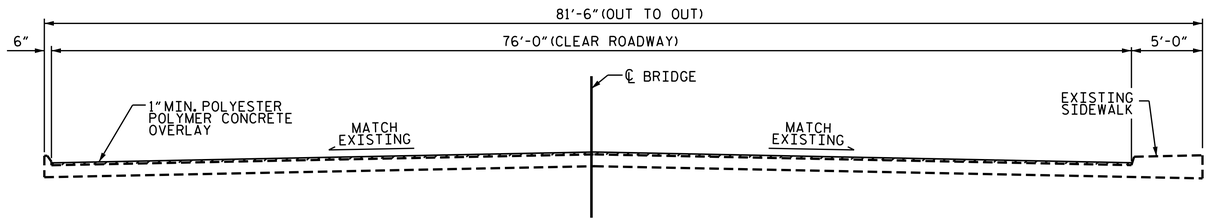
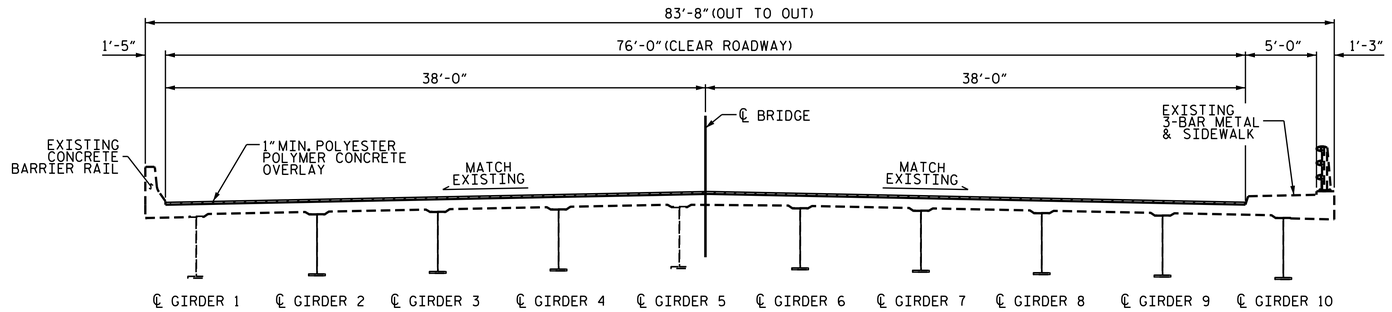


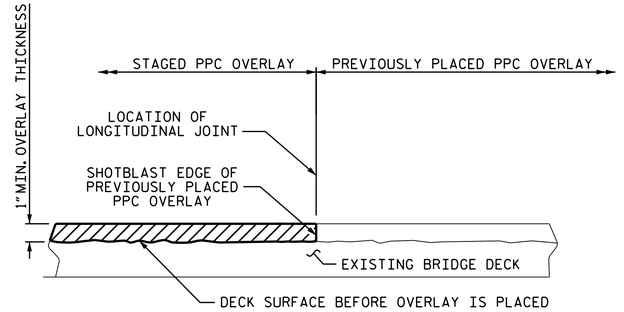
TYPICAL SECTION - APPROACH SLAB
(PROPOSED)



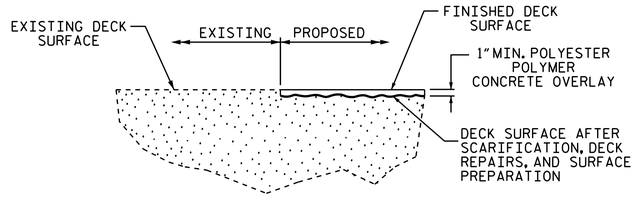
TYPICAL SECTION
(PROPOSED)

NOTE:

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



STAGED PPC OVERLAY JOINT
(AS NEEDED)



DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY

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

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330441

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAILS

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DRAWN BY : J. A. TILLMAN DATE : 2/2020
CHECKED BY: H. A. LOCKLEAR DATE : 4/2020

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AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		SPAN D		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	102.0 SQ. YDS.		366.0 SQ. YDS.		738.0 SQ. YDS.		738.0 SQ. YDS.		379.0 SQ. YDS.		102.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	102.0 SQ. YDS.		366.0 SQ. YDS.		738.0 SQ. YDS.		738.0 SQ. YDS.		379.0 SQ. YDS.		102.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	3.6 CU. YDS.		12.7 CU. YDS.		25.6 CU. YDS.		25.6 CU. YDS.		13.2 CU. YDS.		3.6 CU. YDS.	
PLACING & FINISHING PPC OVERLAY	102.0 SQ. YDS.		366.0 SQ. YDS.		738.0 SQ. YDS.		738.0 SQ. YDS.		379.0 SQ. YDS.		102.0 SQ. YDS.	
GROOVING BRIDGE FLOOR	847.0 SQ. FT.		3098.0 SQ. FT.		6286.0 SQ. FT.		6286.0 SQ. FT.		3208.0 SQ. FT.		848.0 SQ. FT.	

SHORTCRETE REPAIRS	SPAN A				SPAN B				SPAN C				SPAN D			
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL	
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
SIDEWALK (SPAN B)	0.0	0.0			32.5	10.9			0.0	0.0			0.0	0.0		

NOTES:

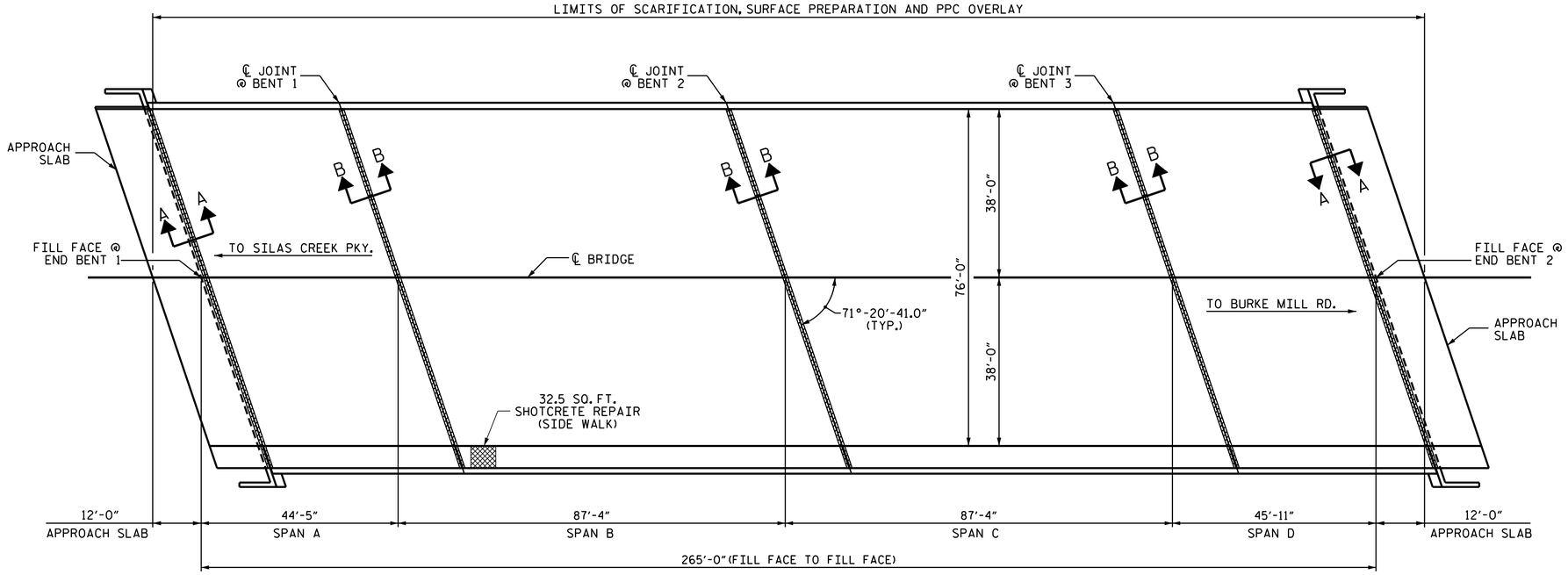
REPAIR LOCATIONS AND ESTIMATE OF QUANTITIES ARE BASED ON THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER WILL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATIONS AND DESCRIPTION OF THE REPAIRS AND ENTER THE ACTUAL QUANTITIES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

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

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

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

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



PLAN

SHOTCRETE REPAIRS FOR SIDEWALKS

BRIDGE JOINTS

PROJECT NO. I-5795

FORSYTH COUNTY

STATION: 330441

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS AND APPROACH SLAB

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-03
1			3			TOTAL SHEETS
2			4			6

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DRAWN BY : J. A. TILLMAN DATE : 2/2020

CHECKED BY: H. A. LOCKLEAR DATE : 4/2020

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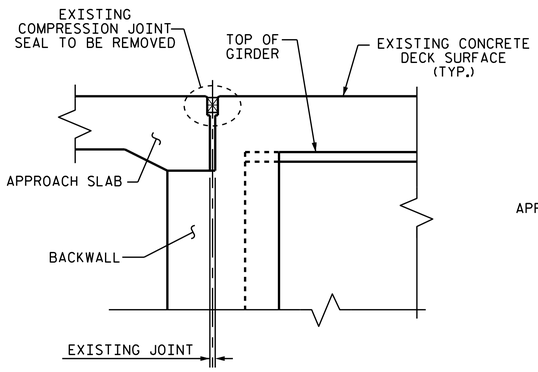
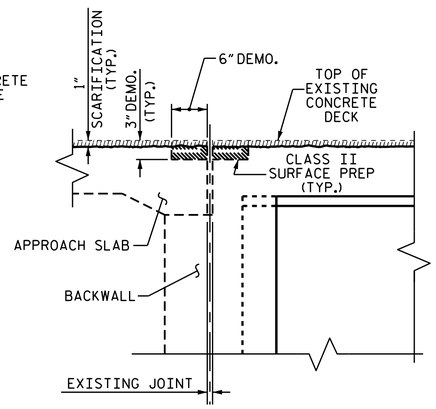
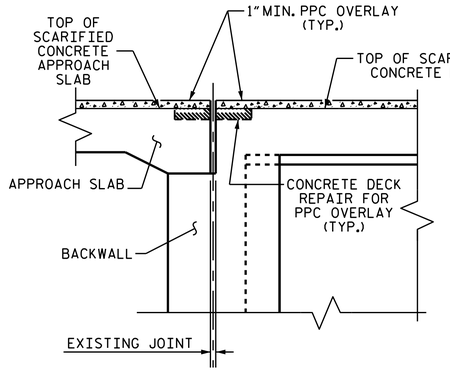


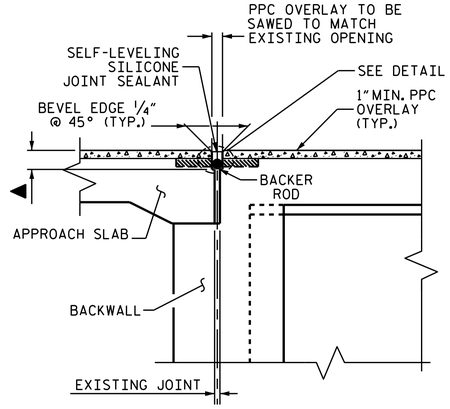
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

▲ SAW CUT SHALL BE ¾" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

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 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.

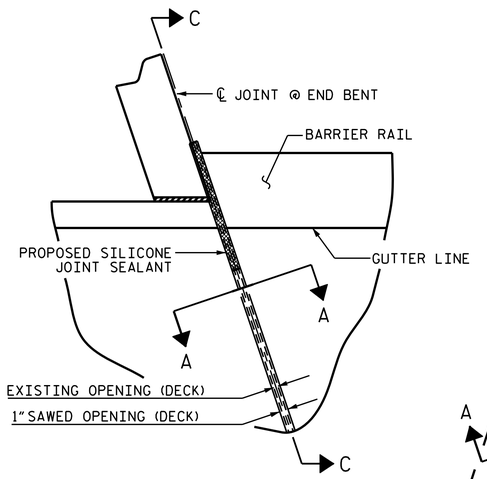
THE MANUFACTURER IS TO PROVIDE THE NOMIAL UNCOMPRESSED SEAL WIDTH OF THE BACKER ROD FOR THE EXISTING JOINT SIZE AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

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 INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

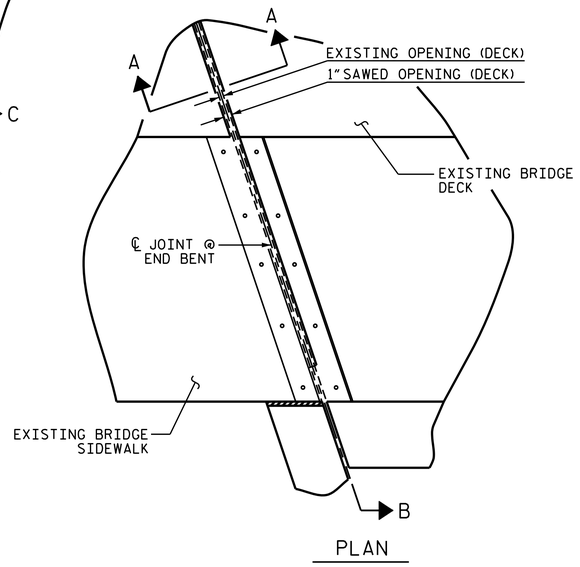
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT END BENTS

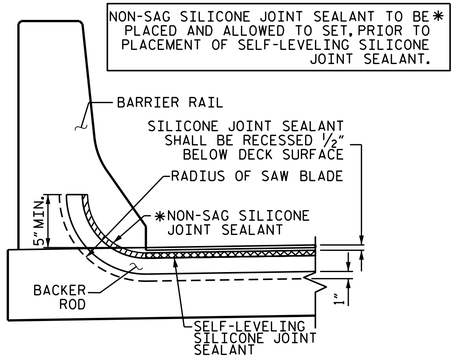


PLAN

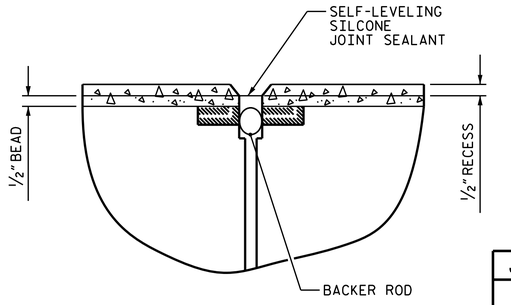
SECTION A-A



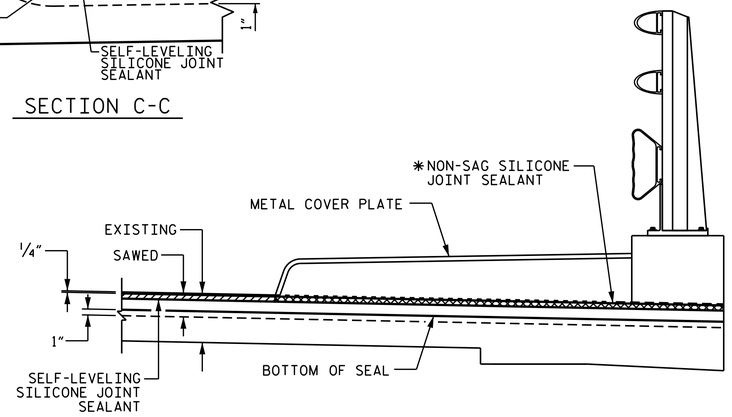
PLAN



SECTION C-C



DETAIL A



SECTION B-B

JOINT DETAILS AT BARRIER RAIL

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	8.9 SY	8.9 SY
END BENT 2	8.9 SY	8.9 SY
TOTAL	17.8 SY	17.8 SY

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	87.4 LF	
END BENT 2	87.4 LF	
TOTAL	174.8 LF	

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330441

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT REPAIR DETAILS

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			6

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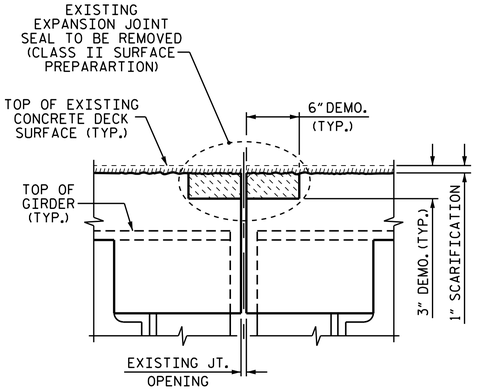
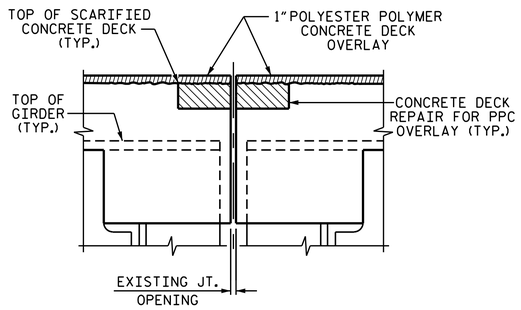
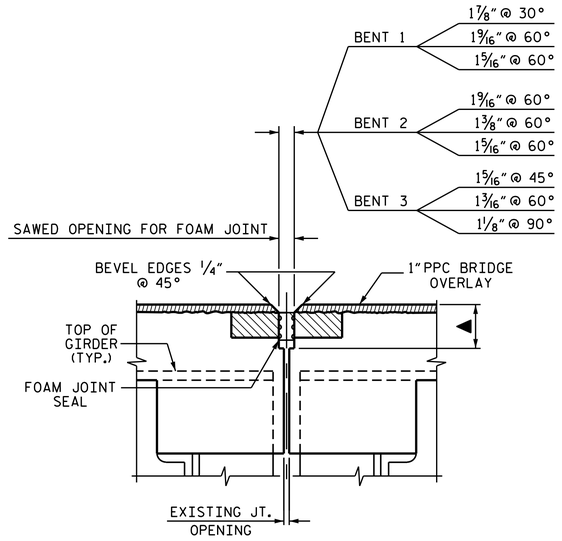


MINIMUM EXISTING JOINT DEMOLITION FOR EXPANSION JOINT SEAL



PROPOSED PRE-SAWED JOINT



PROPOSED FOAM JOINT SEAL

NOTES

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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

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

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.

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.

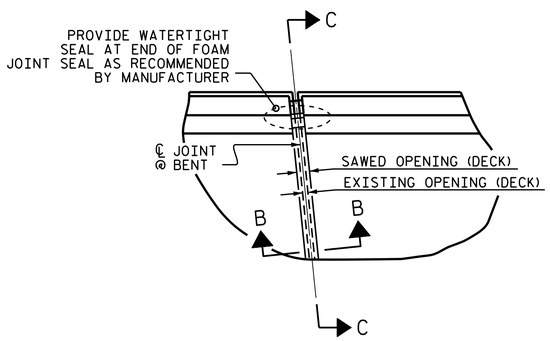
JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

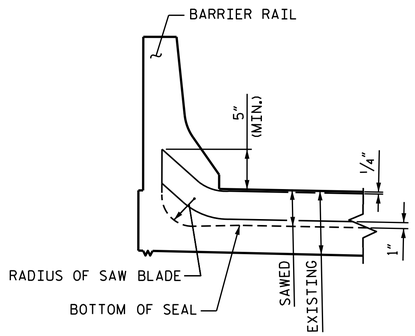
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

JOINT REPAIR QUANTITY TABLE				
	CLASS II SURFACE PREPARATION		CONCRETE DECK REPAIR FOR PPC OVERLAY	
	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL
BENT 1	9.5 SY		9.5 SY	
BENT 2	9.5 SY		9.5 SY	
BENT 3	9.5 SY		9.5 SY	
TOTAL	28.5 SY		28.5 SY	

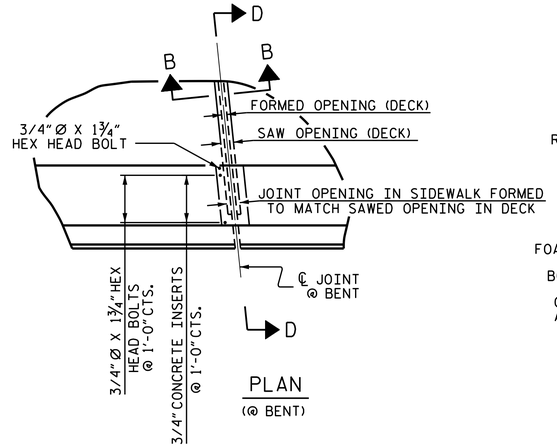
* BASED ON THE MINIMUM BLOCKOUT SHOWN.



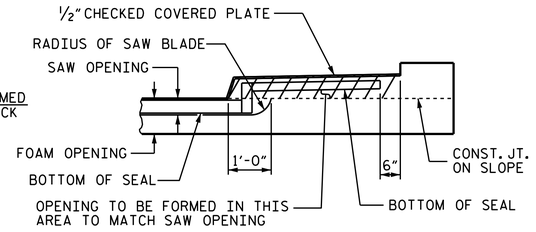
PLAN (@ BENT)



SECTION C-C



PLAN (@ BENT)



SECTION D-D

JOINT SEAL DETAILS AT BENTS

(LEFT SIDE)

JOINT SEAL DETAILS AT BENTS

(RIGHT SIDE)

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	85.5 LF	
BENT 2	85.5 LF	
BENT 3	85.5 LF	
TOTAL	256.5 LF	

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
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PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330441

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS BENTS 1, 2 & 3

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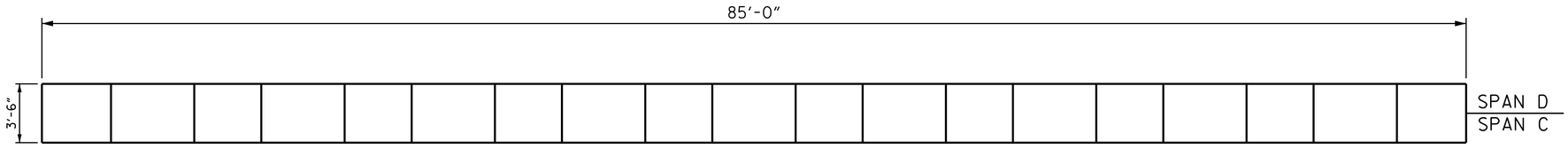
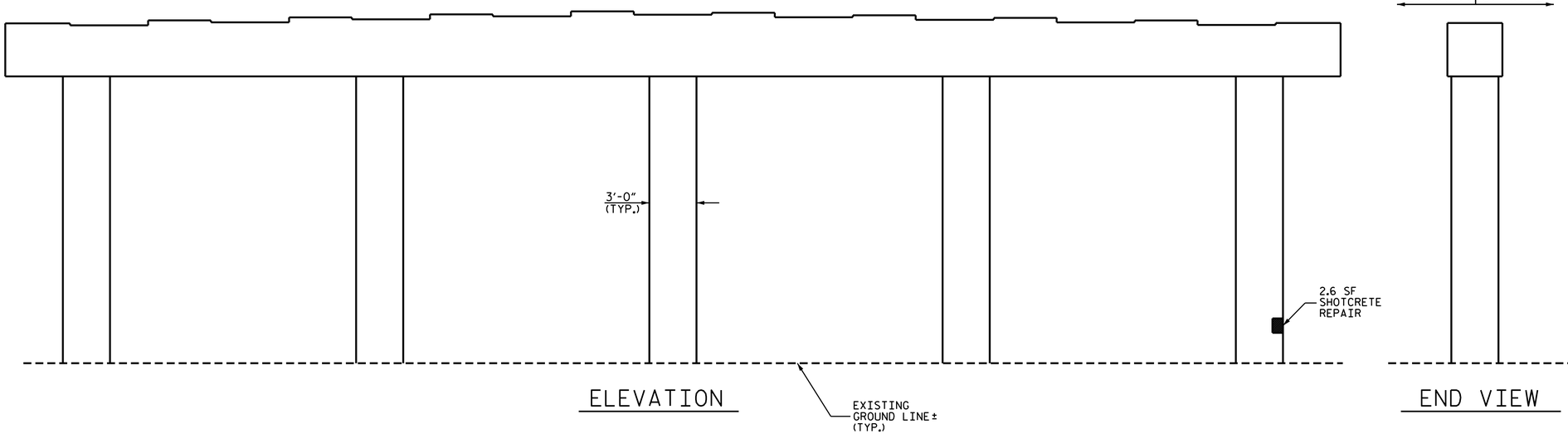
2			4			6



TOP OF CAP



ELEVATION

END 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	2.6	1.3		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP AT END BENTS 1 & 2 AND BENTS 1 THRU 3	1271.0		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 "TYPICAL CAP AND COLUMN REPAIR DETAILS" SHEET.

NOTES

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

FOR "SHOTCRETE REPAIRS", SEE SPECIAL PROVISIONS.

SHOTCRETE REPAIR AREA

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO.: 330441

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR BENT 1 SPAN A FACE

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NO.	BY:	DATE:	NO.	BY:	DATE:	S2-06
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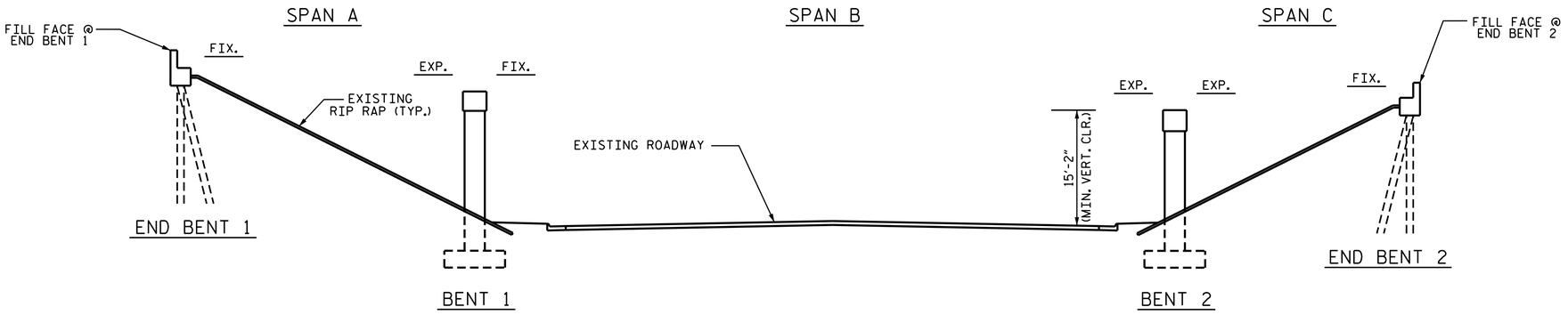
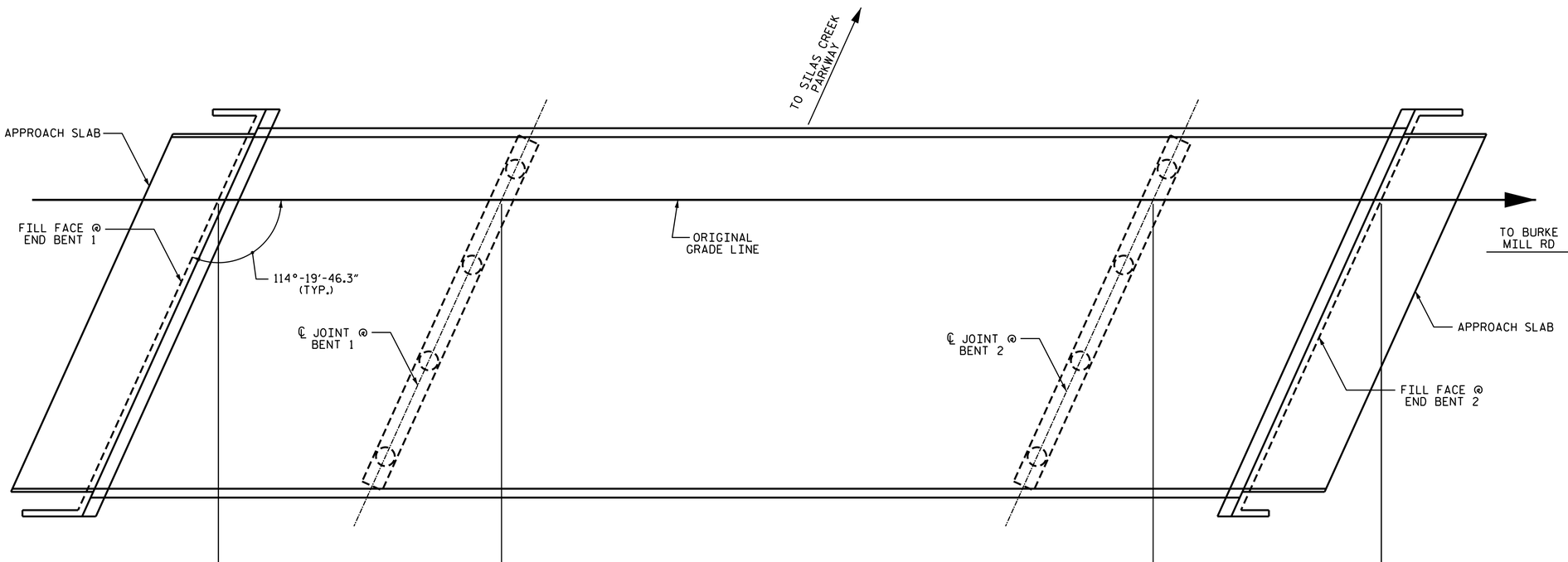
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 7/09/2019.

BRIDGE ORIENATION CONFORMS TO 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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.

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

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.

CLEAN AND PAINT EXISTING STEEL BEARINGS.

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

RESIDENT ENGINEER DATE

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
Signed by: A. Keith Paschal
F8B6AD6DB2FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA T. PRASAD SEDAI
Docusigned by: Krishna T. Sedai
EA6F794150BF4B7...

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330451

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING BRIDGE ON I-40 EBL OVER SR 3153 (HANES MALL BLVD)

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1			3			TOTAL SHEETS
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CHECKED BY : K. PUROHIT DATE : 3-2020

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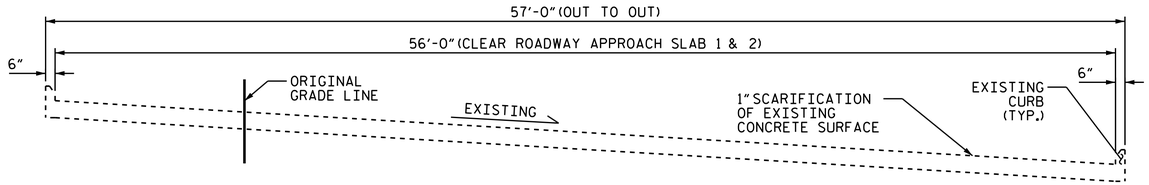
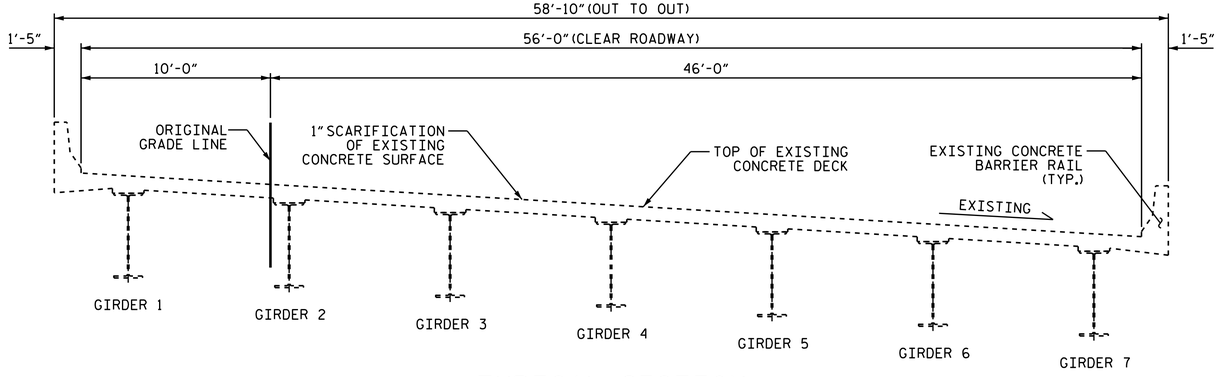


TYPICAL SECTION - APPROACH SLAB
(EXISTING)



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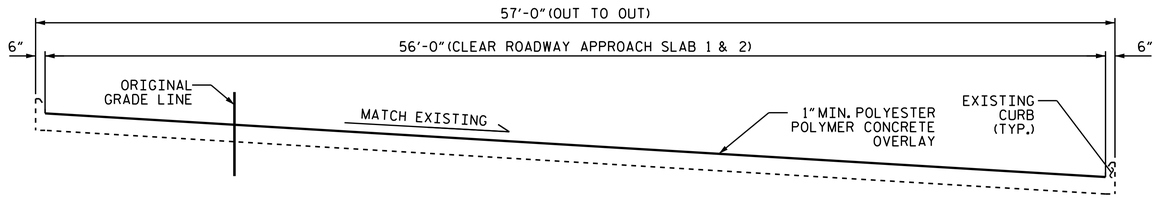
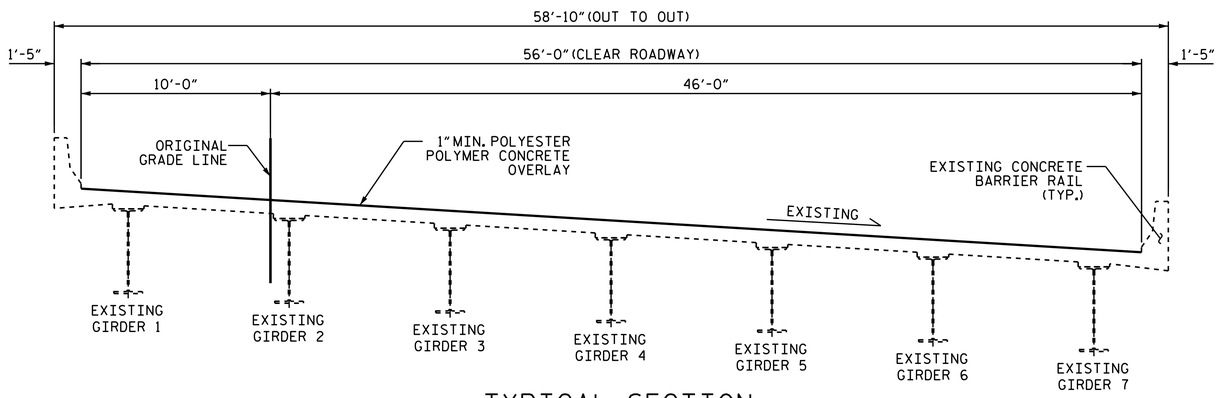
(EXISTING)



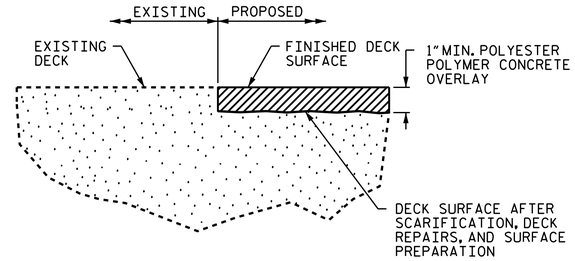
TYPICAL SECTION - APPROACH SLAB
(PROPOSED)



TYPICAL SECTION
(PROPOSED)

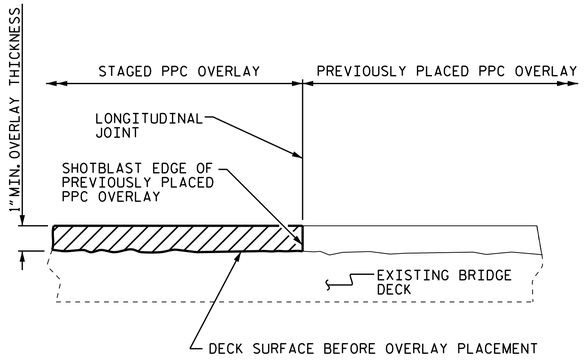
NOTES

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



DETAIL FOR POLYESTER POLYMER CONCRETE OVERLAY

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



STAGED PPC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330451

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna Sedai
EA6F794150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
TYPICAL SECTION AND OVERLAY DETAILS

DRAWN BY : H.A. LOCKLEAR DATE : 9-2019
CHECKED BY : K. PUROHIT DATE : 3-2020

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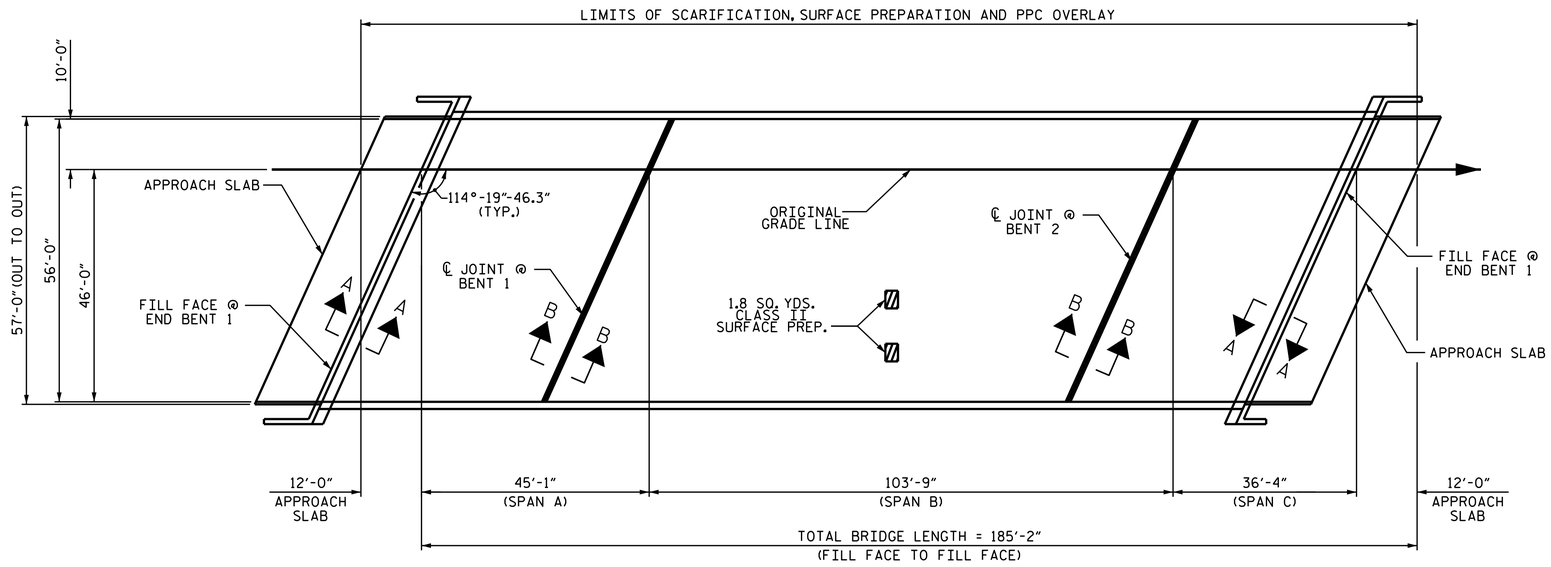
AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	278 SQ. YDS.	
SPAN B	640 SQ. YDS.	
SPAN C	224 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
CLASS II SURFACE PREPARATION		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	1.8 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	1.8 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	278 SQ. YDS.	
SPAN B	640 SQ. YDS.	
SPAN C	224 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
PPC MATERIALS		
APPROACH SLAB 1	2.6 CU. YDS.	
SPAN A	9.7 CU. YDS.	
SPAN B	22.2 CU. YDS.	
SPAN C	7.8 CU. YDS.	
APPROACH SLAB 2	2.6 CU. YDS.	
PLACING AND FINISHING PPC OVERLAY		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	278 SQ. YDS.	
SPAN B	640 SQ. YDS.	
SPAN C	224 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
GROOVING BRIDGE FLOORS		
APPROACH SLAB 1	612 SQ. FT.	
SPAN A	2337 SQ. FT.	
SPAN B	5421 SQ. FT.	
SPAN C	1872 SQ. FT.	
APPROACH SLAB 2	612 SQ. FT.	

EPOXY COATING	AREA SQ. FT.	AREA SQ. FT.
TOP OF CAP AT END BENTS 1 & 2 AND BENTS 1 & 2	708.0	0.0



PLAN

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

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

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

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

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.

APPROX. CLASS II SURFACE PREPARATION

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330451

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS AND APPROACH SLAB

REVISIONS						SHEET NO.
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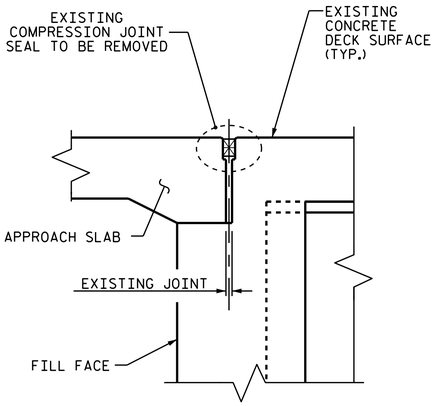
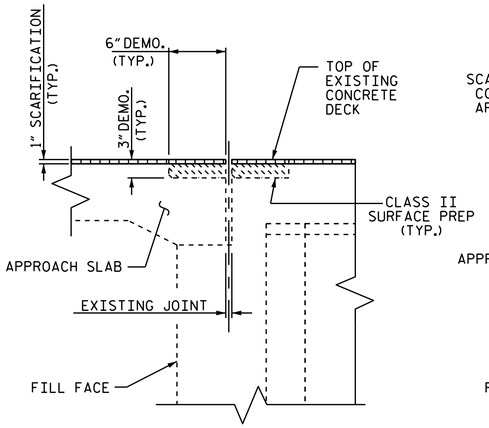
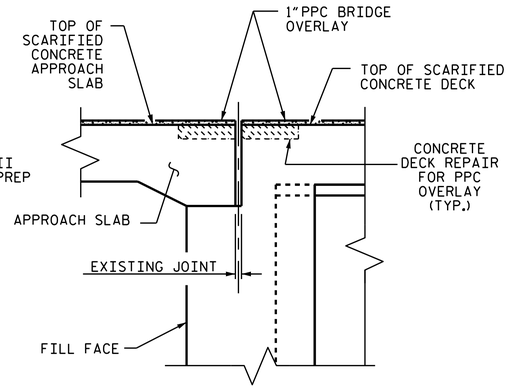


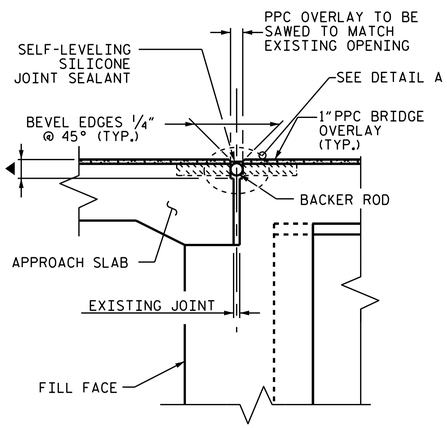
EXISTING JOINT



MINIMUM EXISTING JOINT REMOVAL & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

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.

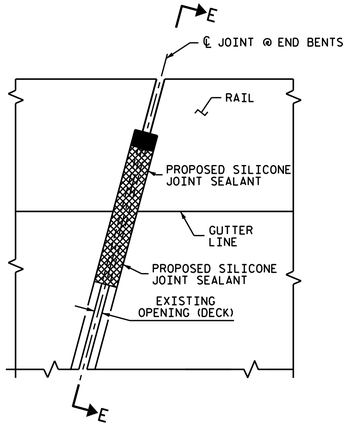
A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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.

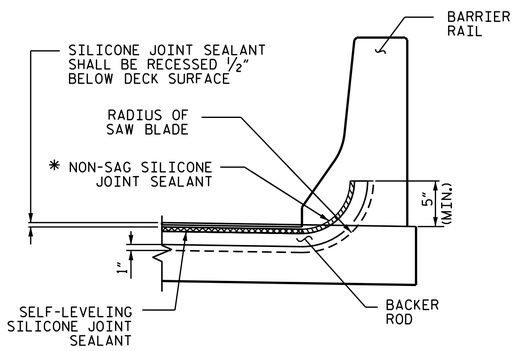
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A



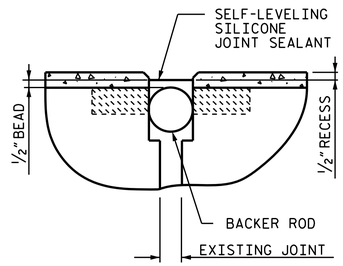
PLAN

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



SECTION E-E

JOINT DETAIL AT BARIER RAIL



DETAIL A

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	6.8 SY	6.8 SY
END BENT 2	6.8 SY	6.8 SY
TOTAL	13.6 SY	13.6 SY

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	63 LF	
END BENT 2	63 LF	
TOTAL	126 LF	

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330451

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

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STATE OF NORTH CAROLINA
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RALEIGH

JOINT REPAIR DETAILS

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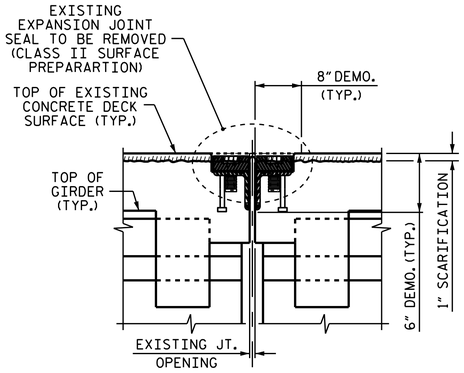
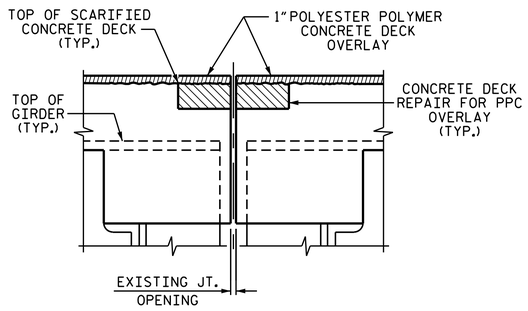
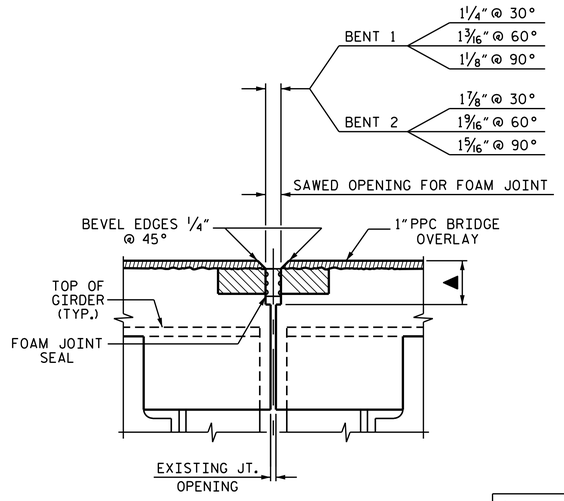


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT



PROPOSED FOAM JOINT SEAL

▲ SAW CUT SHALL BE ¾" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

NOTES

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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

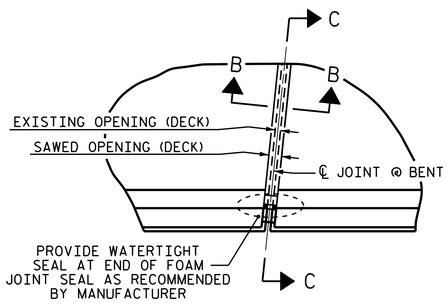
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE BENTS.

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 ¼", NOTIFY ENGINEER REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

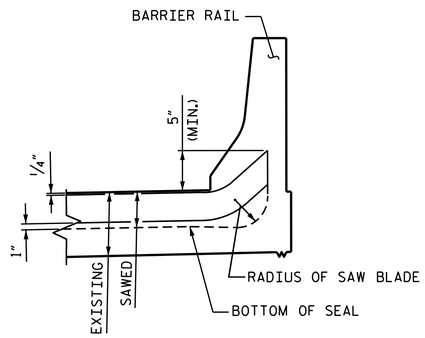
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN
(@ BENT)



SECTION C-C

JOINT SEAL DETAILS AT BENTS

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARTION	CONCRETE DECK REPAIR FOR PPC OVERLAY
BENT 1	9.1 SY	9.1 SY
BENT 2	9.1 SY	9.1 SY
TOTAL	18.2 SY	18.2 SY

✱ BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	61.5 LF	
BENT 2	61.5 LF	
TOTAL	123.0 LF	

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330451

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS
BENTS 1 & 2

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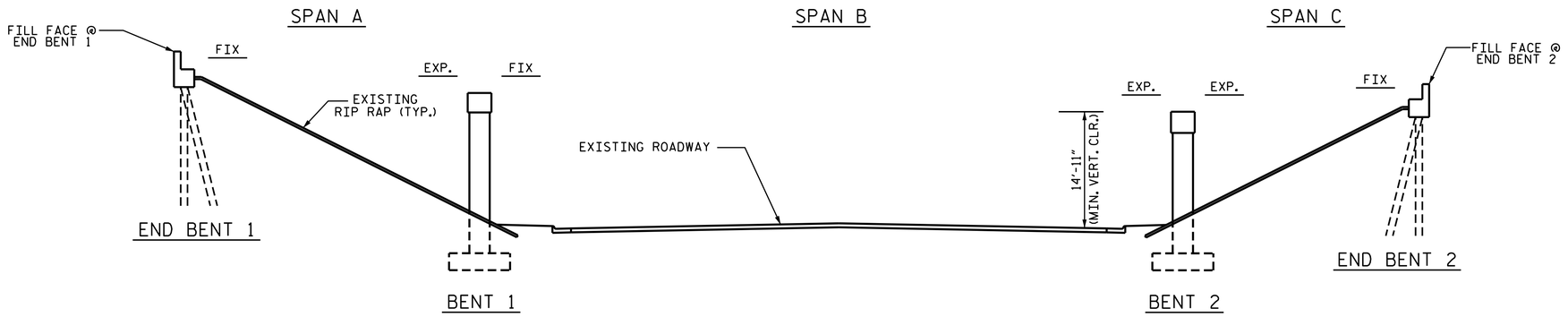
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 7/09/2019.

BRIDGE ORIENATION CONFORMS TO 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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

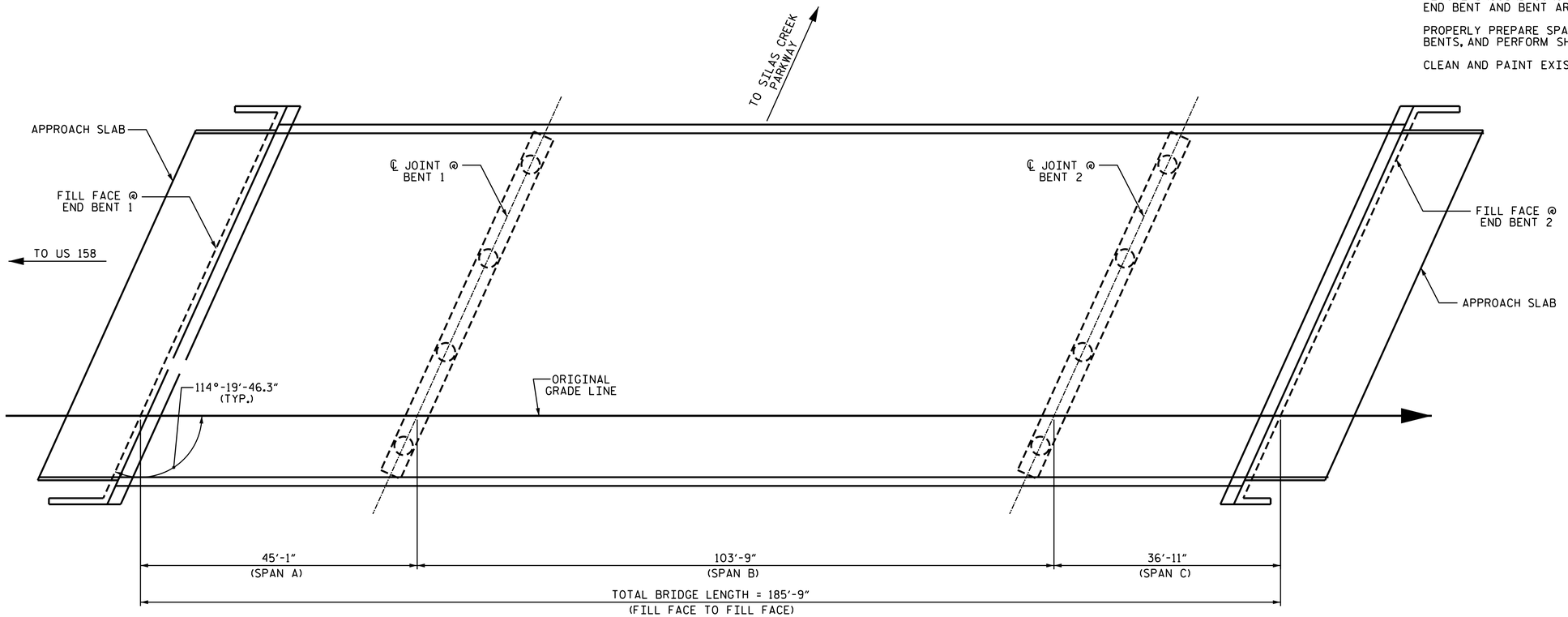
CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.

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

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.

CLEAN AND PAINT EXISTING STEEL BEARINGS.



PLAN

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330452

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

RESIDENT ENGINEER DATE

8/5/2020 NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL — A. Keith Paschal F886AD60B2FC48F...

8/4/2020 NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI — Krishna P. Sedai EA6F79415DBF4B7...

STATE OF NORTH CAROLINA
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GENERAL DRAWING BRIDGE ON I-40 WBL OVER SR 3153 (HANES MALL BLVD)

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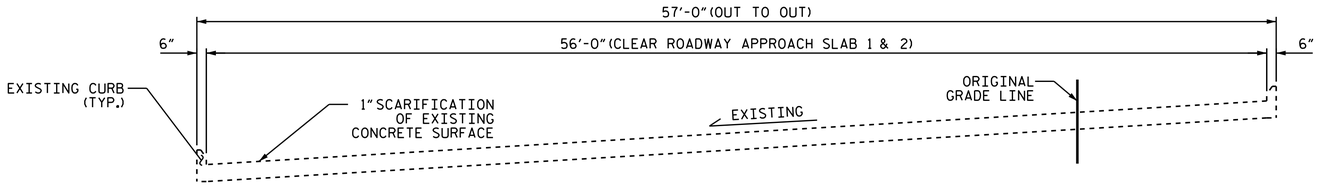
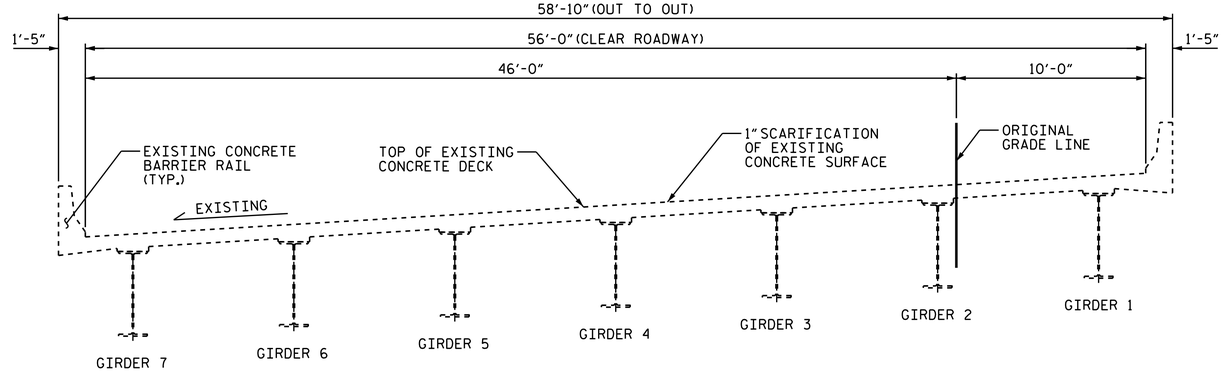


TYPICAL SECTION - APPROACH SLAB
(EXISTING)



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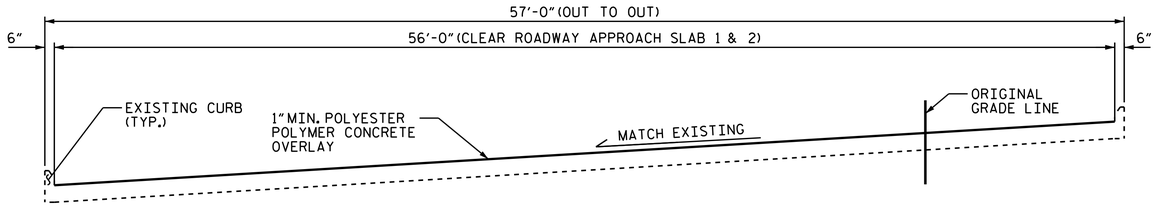
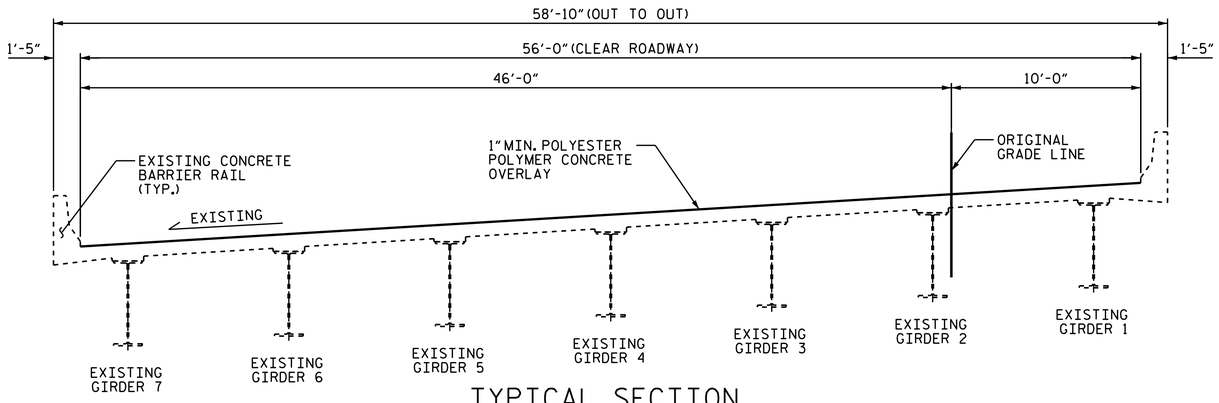
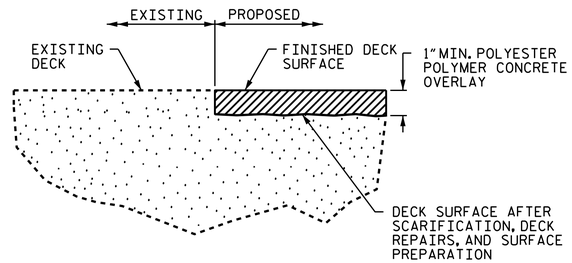


TYPICAL SECTION - APPROACH SLAB
(PROPOSED)

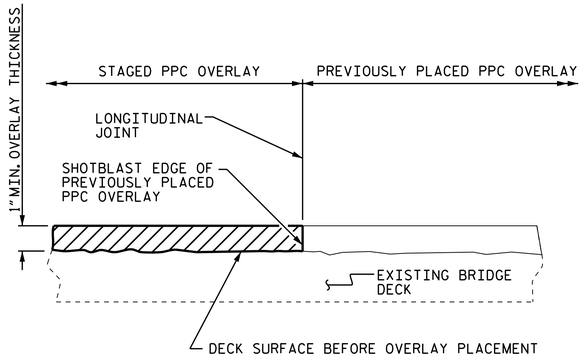


TYPICAL SECTION
(PROPOSED)

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



DETAIL FOR POLYESTER POLYMER CONCRETE OVERLAY
FINISHED SURFACE ELEVATION SHALL MATCH EXISTING CONCRETE SURFACE ELEVATION ACTUAL THICKNESS OF PPC OVERLAY MAY VARY.



STAGED PPC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330452

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna Sedai
EA6F794150BF4B7...

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

DRAWN BY : H.A. LOCKLEAR DATE : 9-2019
CHECKED BY : K. PUROHIT DATE : 3-2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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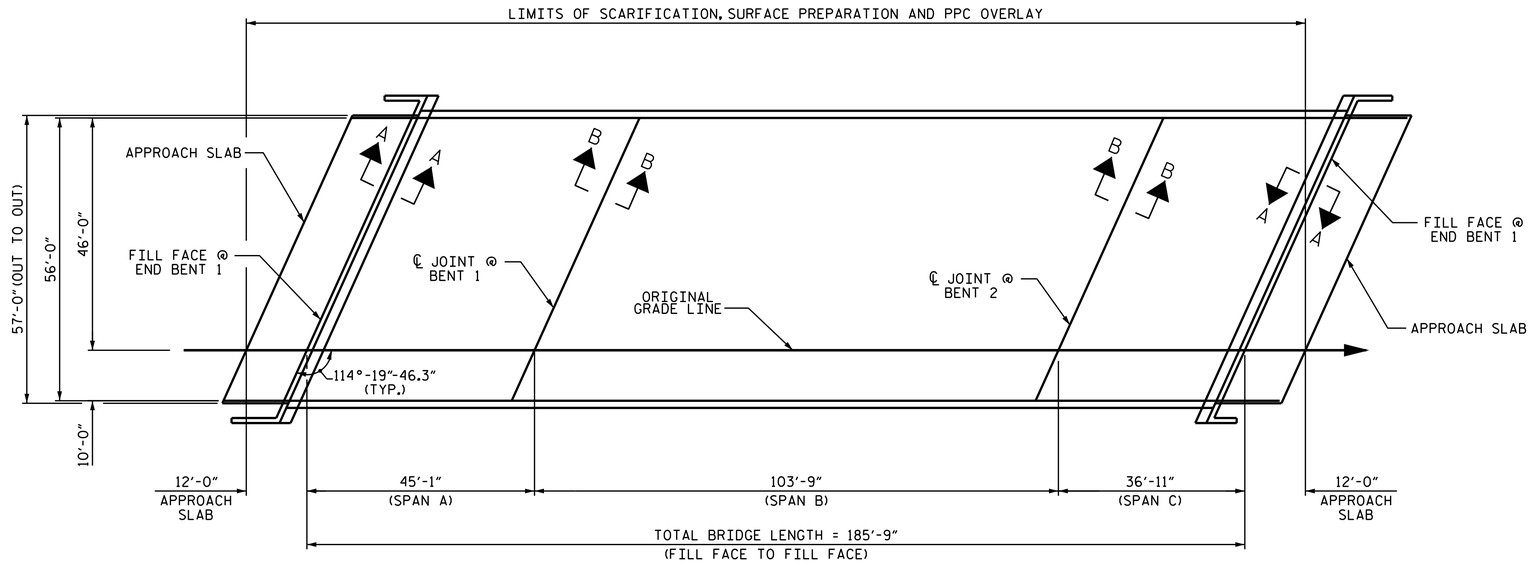
AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	281 SQ. YDS.	
SPAN B	646 SQ. YDS.	
SPAN C	230 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
CLASS II SURFACE PREPARATION		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	281 SQ. YDS.	
SPAN B	646 SQ. YDS.	
SPAN C	230 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
PPC MATERIALS		
APPROACH SLAB 1	2.6 CU. YDS.	
SPAN A	9.8 CU. YDS.	
SPAN B	22.4 CU. YDS.	
SPAN C	8.0 CU. YDS.	
APPROACH SLAB 2	2.6 CU. YDS.	
PLACING AND FINISHING PPC OVERLAY		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	281 SQ. YDS.	
SPAN B	646 SQ. YDS.	
SPAN C	230 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
GROOVING BRIDGE FLOORS		
APPROACH SLAB 1	612 SQ. FT.	
SPAN A	2361 SQ. FT.	
SPAN B	5470 SQ. FT.	
SPAN C	1928 SQ. FT.	
APPROACH SLAB 2	612 SQ. FT.	

EPOXY COATING	AREA SQ. FT.	AREA SQ. FT.
TOP OF CAP AT END BENTS 1 & 2 AND BENTS 1 & 2	708.0	0.0



PLAN

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

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

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

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

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-5795
FORSYTH COUNTY
BRIDGE NO. 330452

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Digitally signed by Krishna P. Sedai
EA6F7941508F487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF SPANS AND APPROACH SLAB

DRAWN BY : H.A. LOCKLEAR DATE : 9-11-2019
CHECKED BY : K. PUROHIT DATE : 3-2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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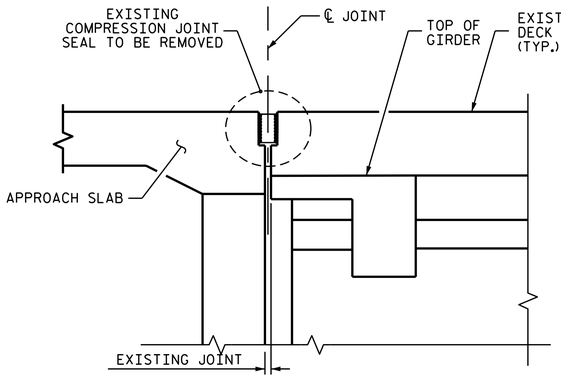
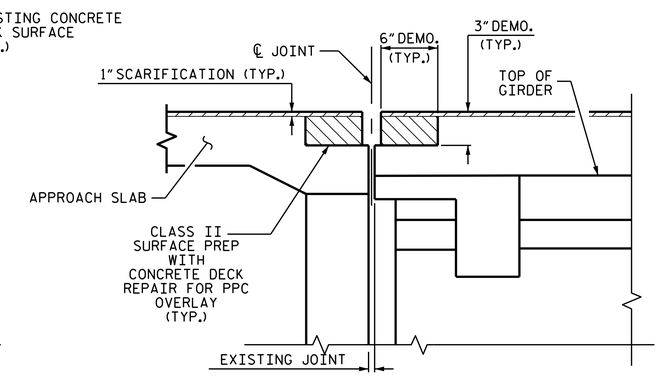
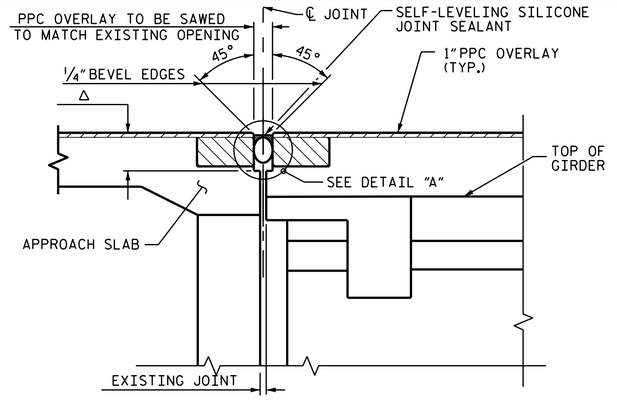


EXISTING JOINT



EXISTING JOINT REMOVAL AND MINIMUM SCARIFICATION



PROPOSED JOINT WITH SAWED DIMENSIONS

Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

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.

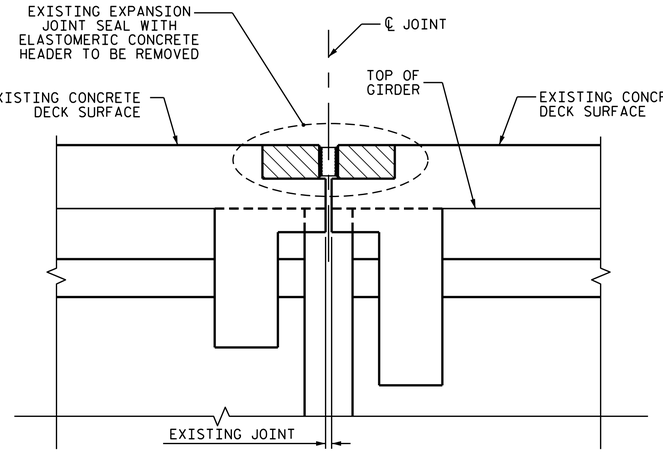
A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

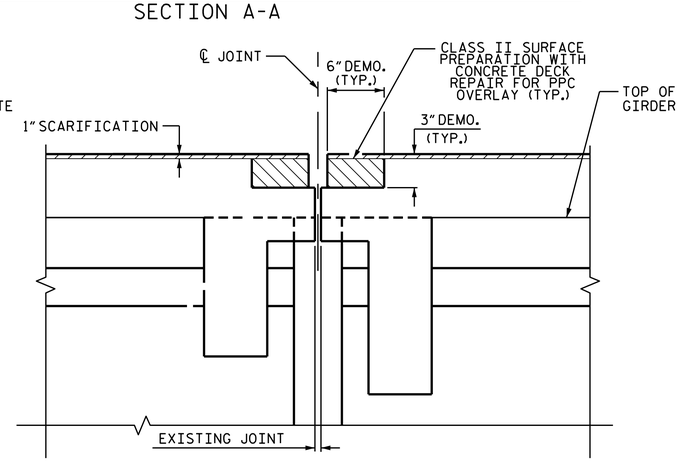
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT END BENTS

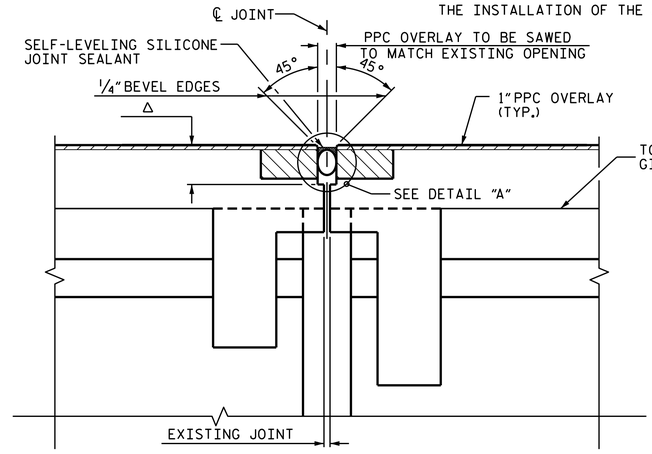
SECTION A-A



EXISTING JOINT



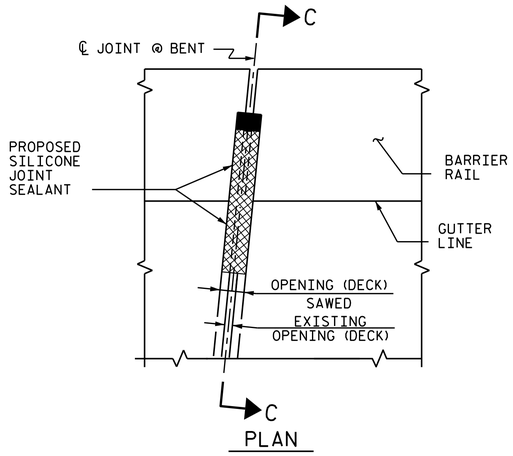
EXISTING JOINT REMOVAL AND MINIMUM SCARIFICATION



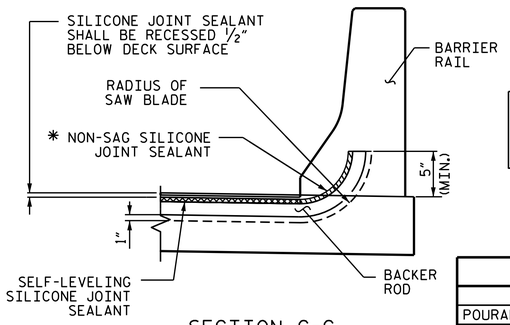
PROPOSED JOINT WITH SAWED DIMENSIONS

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

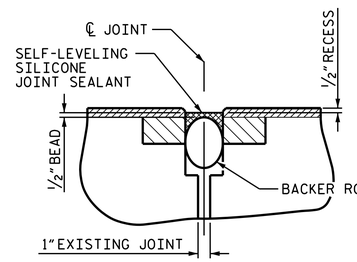


PLAN



SECTION C-C

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



DETAIL "A"

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	63 LF	
BENT 1	63 LF	
BENT 2	63 LF	
END BENT 2	63 LF	
TOTAL	252 LF	

CLASS II SURFACE PREPARATION	
END BENT 1	6.8 SQ. YDS.
BENT 1	6.8 SQ. YDS.
BENT 2	6.8 SQ. YDS.
END BENT 2	6.8 SQ. YDS.
TOTAL	27.2 SQ. YDS.

CONCRETE DECK REPAIR FOR PPC OVERLAY	
END BENT 1	6.8 SQ. YDS.
BENT 1	6.8 SQ. YDS.
BENT 2	6.8 SQ. YDS.
END BENT 2	6.8 SQ. YDS.
TOTAL	27.2 SQ. YDS.

JOINT DETAIL AT BARIER RAIL

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330452

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT REPAIR DETAILS

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

DRAWN BY : H.A. LOCKLEAR DATE : 9-12-2019
CHECKED BY : K. PUROHIT DATE : 3-2020

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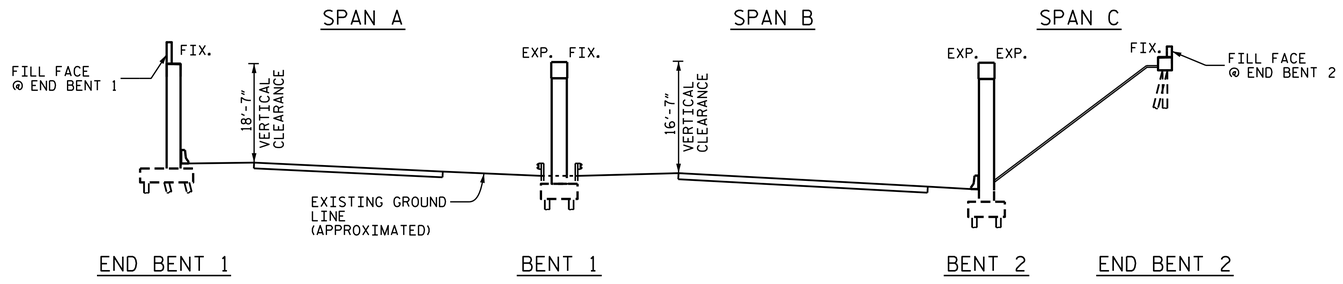
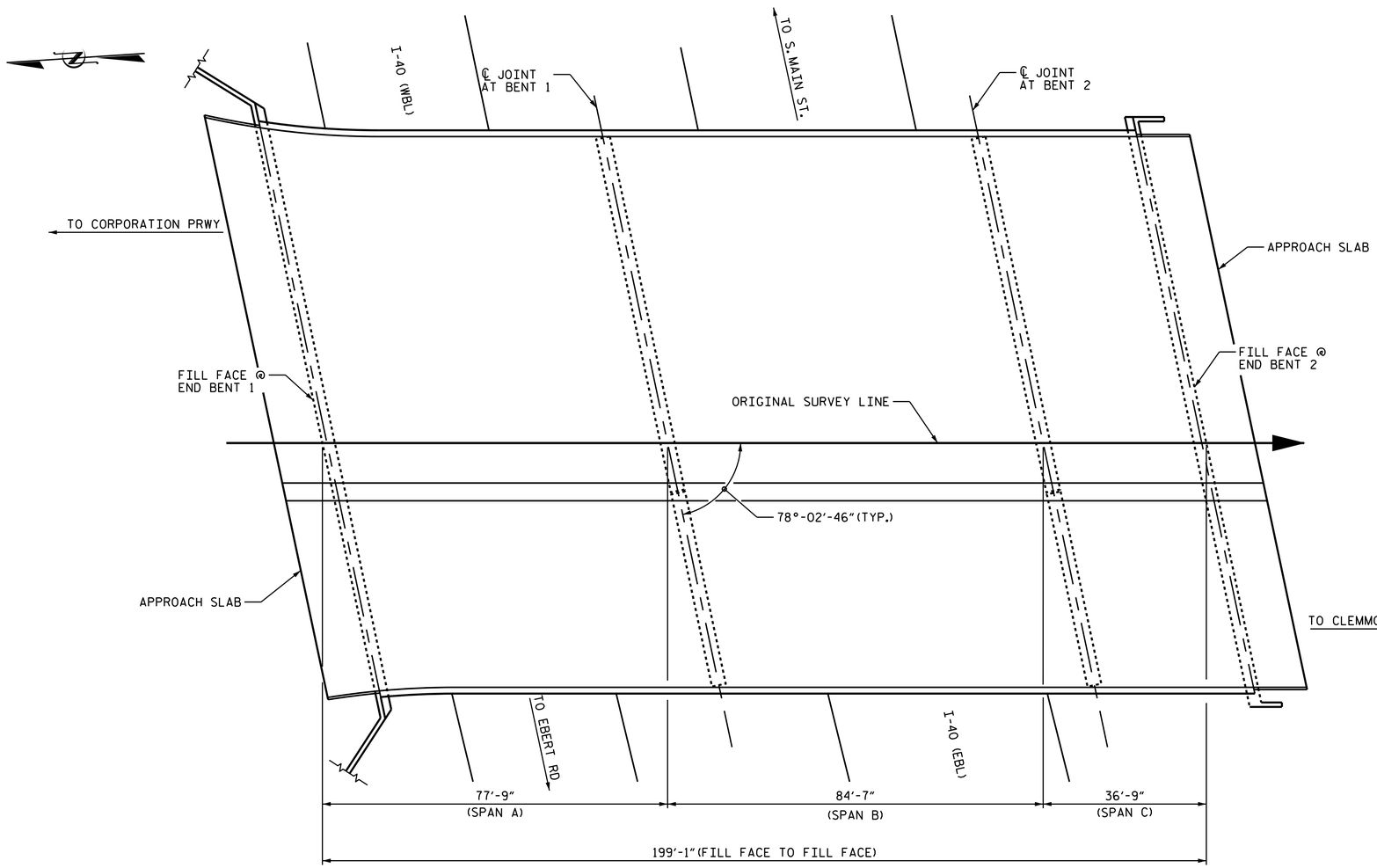
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 9/9/2019.

BRIDGE ORIENTATION CONFORMS TO THE EXISTING BRIDGE PLANS.

SCOPE OF WORK

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

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

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.

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

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

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

CLEAN AND PAINT EXISTING STEEL BEARINGS.

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

RESIDENT ENGINEER DATE

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330454

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
Docusigned by: A. Keith Paschal
F886AD60B2FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING FOR BRIDGE ON NC-150 OVER I-40

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : E. BAYISSA DATE : 04/2020

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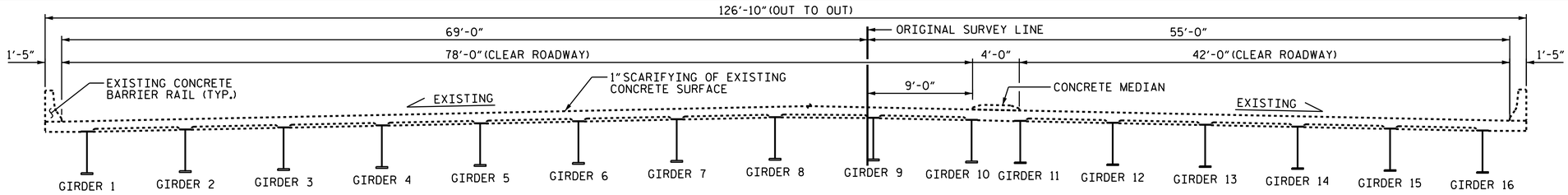

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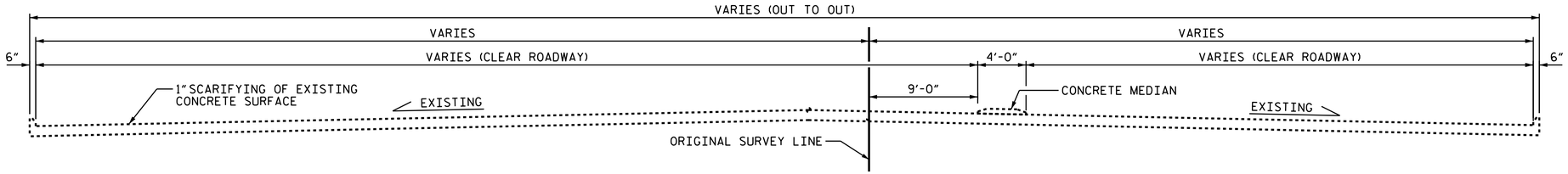
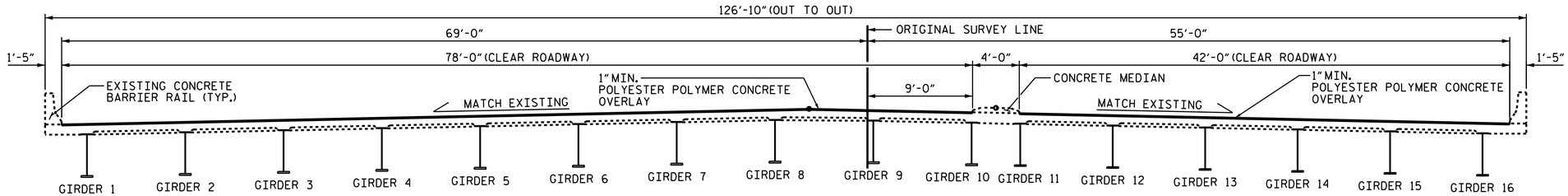
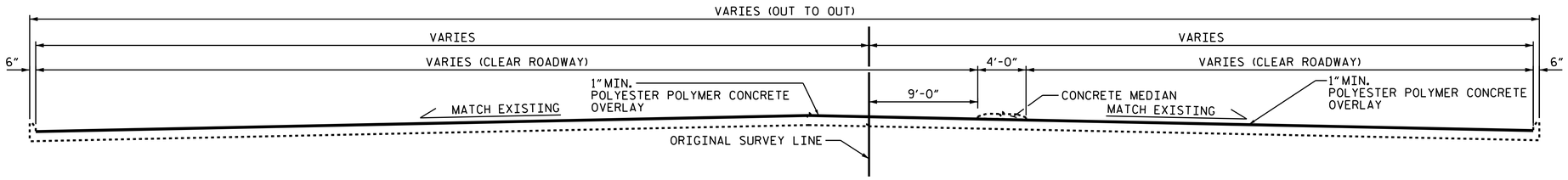


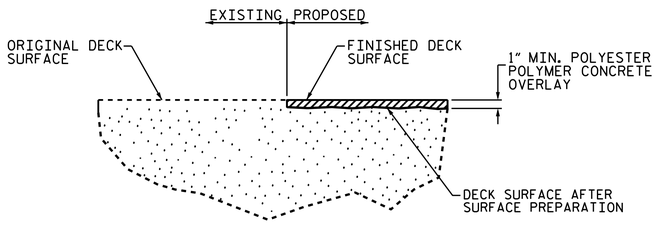
EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION

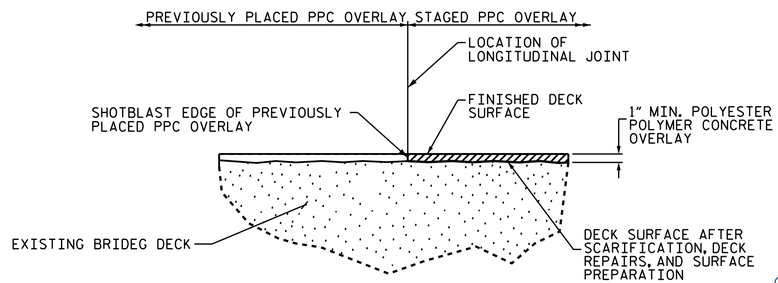


EXISTING TYPICAL SECTION



DETAIL FOR POLYESTER POLYMER CONCRETE OVERLAY

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



STAGED PPC OVERLAY JOINT

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
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NOTES:

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

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330454

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAIL

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : E. BAYISSA DATE : 04/2020

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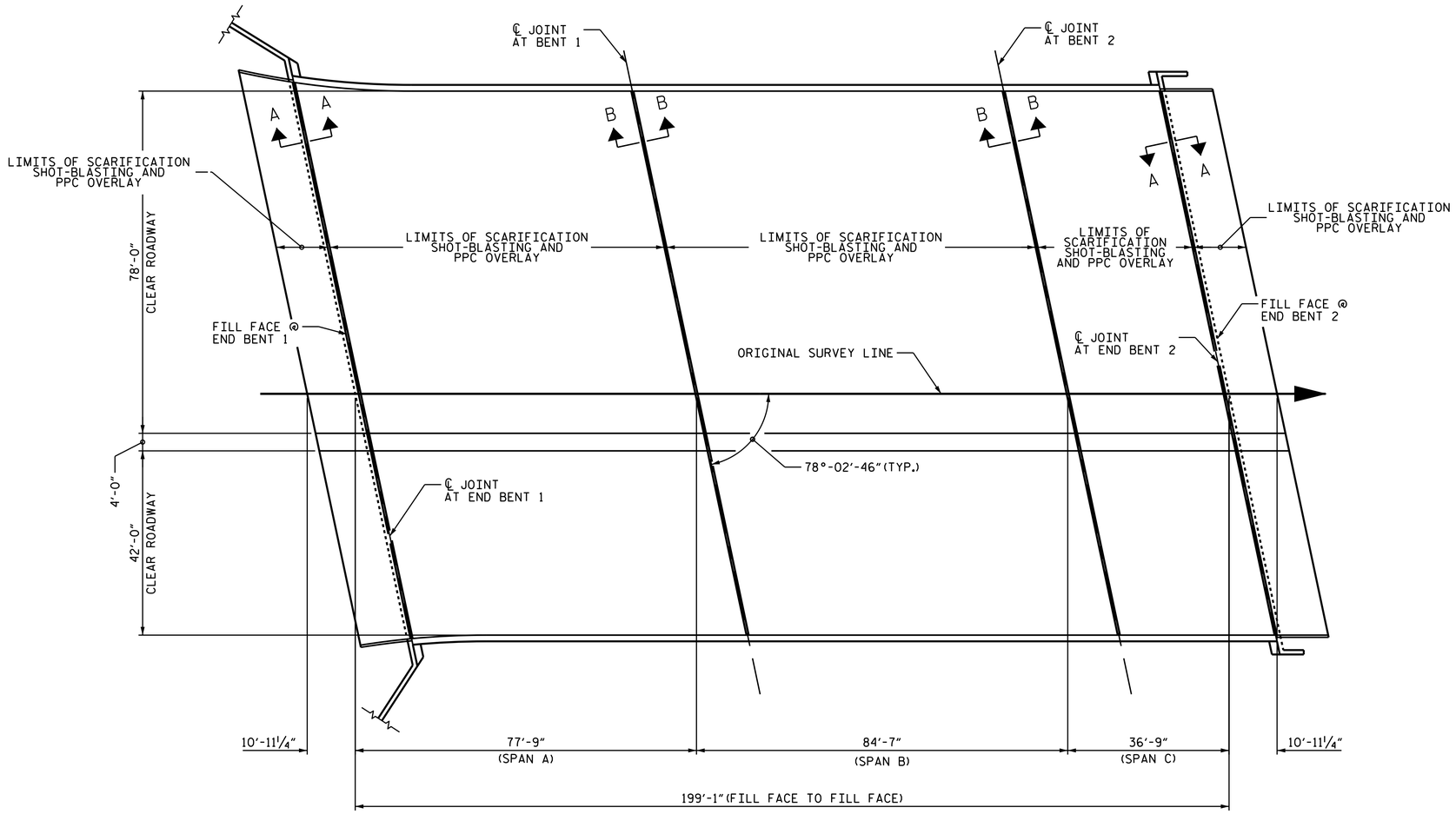

PLAN OF SPANS

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 SECTION A-A AND SECTION B-B, SEE "JOINT REPAIR DETAILS" SHEET.

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

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

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

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.

BRIDGE JOINT DEMOLITION

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	167.0 SQ. YDS.		1025.0 SQ. YDS.		1128.0 SQ. YDS.		476.0 SQ. YDS.		160.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	167.0 SQ. YDS.		1025.0 SQ. YDS.		1128.0 SQ. YDS.		476.0 SQ. YDS.		160.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	5.8 CU. YDS.		35.4 CU. YDS.		39.2 CU. YDS.		16.6 CU. YDS.		5.6 CU. YDS.	
PLACING & FINISHING PPC OVERLAY	167.0 SQ. YDS.		1025.0 SQ. YDS.		1128.0 SQ. YDS.		476.0 SQ. YDS.		160.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	1381.0 SQ. FT.		8709.0 SQ. FT.		9584.0 SQ. FT.		4010.0 SQ. FT.		1324.0 SQ. FT.	
EPOXY COATING	AREA SQ. FT.	AREA SQ. FT.								
TOP OF CAP AT END BENTS 1 & 2 AND BENTS 1 & 2	1277.0	0.0								

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330454

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA T. PRASAD SEDAI
DocuSigned by: Krishna T. Sedai
EA6F7941150BF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR
SPANS A THRU C

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : E. BAYISSA DATE : 04/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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1			3			TOTAL SHEETS
2			4			4

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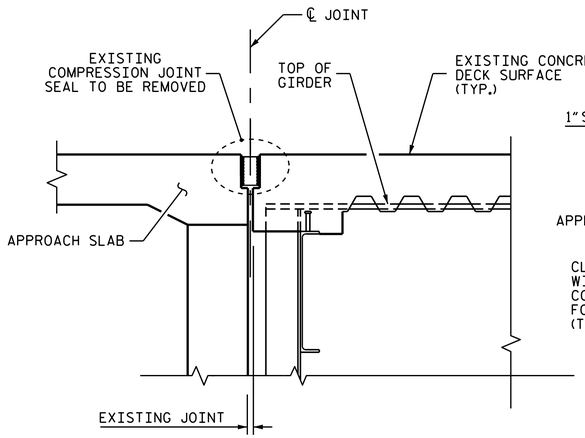
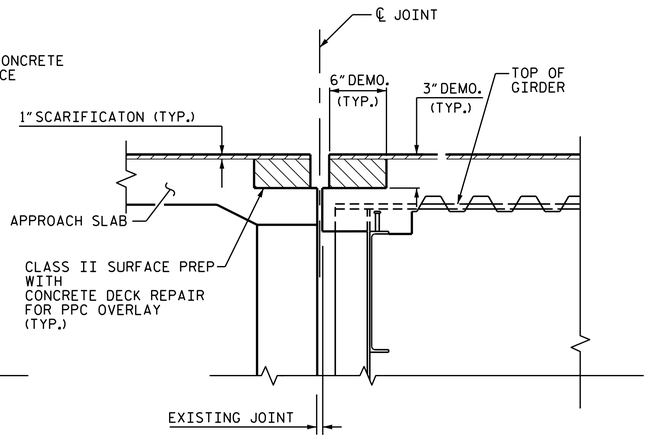
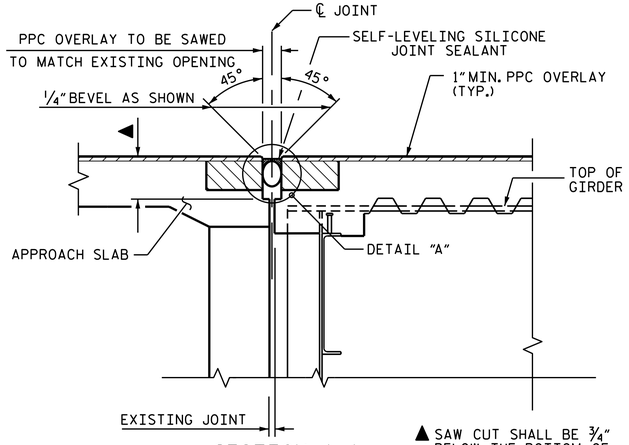


SECTION A-A
EXISTING JOINT



SECTION A-A
(EXISTING JOINT REMOVAL AND MIN. SCARIFICATION)



SECTION A-A
(PROPOSED JOINT WITH SAWED DIMENSIONS)

▲ SAW CUT SHALL BE ¾" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

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.

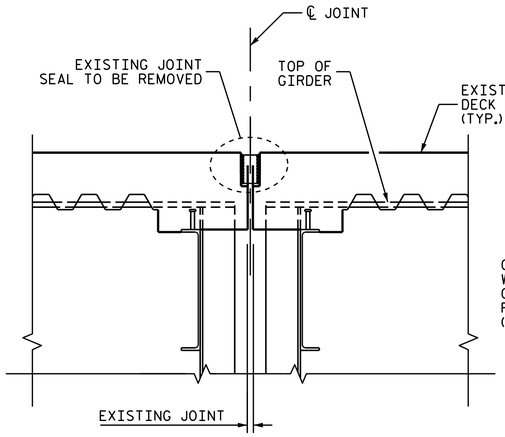
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE BACKER ROD FOR THE EXISTING JOINT SIZE AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

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.

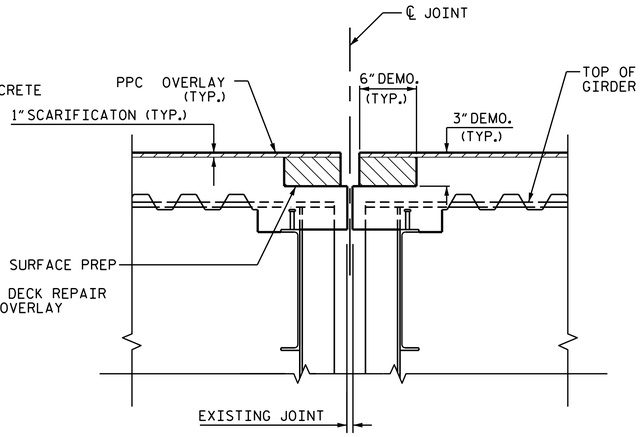
THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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.

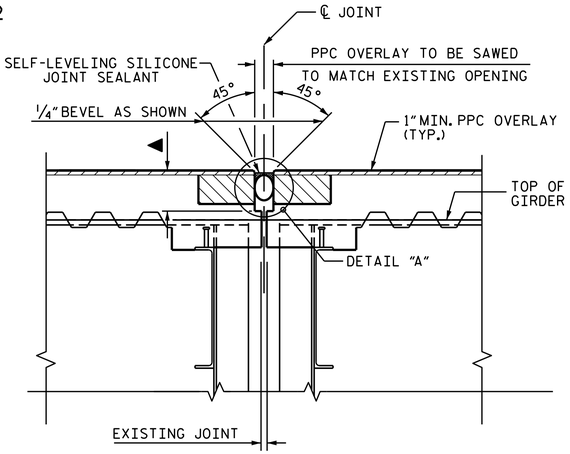
JOINT INSTALLATION SEQUENCE AT END BENTS



SECTION B-B
EXISTING JOINT



SECTION B-B
(EXISTING JOINT REMOVAL AND MIN. SCARIFICATION)



SECTION B-B
(PROPOSED JOINT WITH SAWED DIMENSIONS)

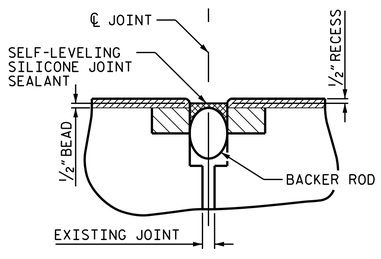
JOINT REPAIR QUANTITY TABLE

	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	127.5 LF	
BENT 1	127.5 LF	
BENT 2	127.5 LF	
END BENT 2	127.5 LF	
TOTAL	510.0 LF	

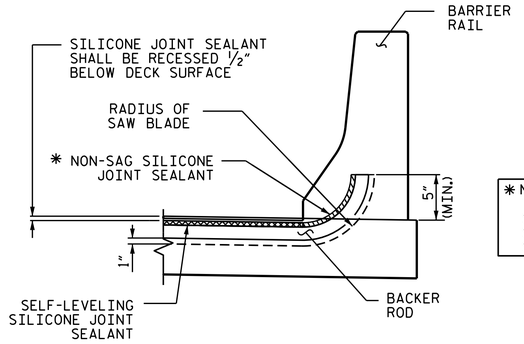
JOINT REPAIR QUANTITY TABLE

	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	15.1 SY	15.1 SY
BENT 1	15.1 SY	15.1 SY
BENT 2	15.1 SY	15.1 SY
END BENT 2	15.1 SY	15.1 SY
TOTAL	60.4 SY	60.4 SY

JOINT INSTALLATION SEQUENCE AT BENTS

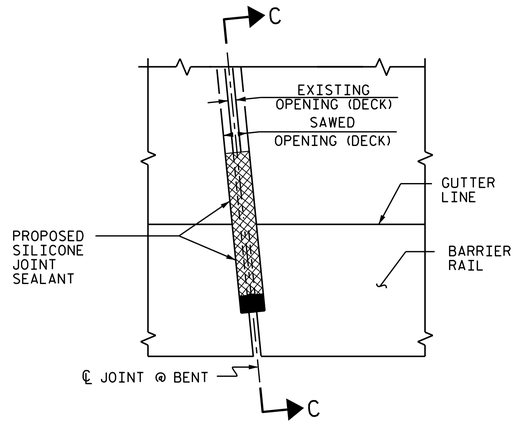


DETAIL "A"



SECTION C-C

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



PLAN

JOINT DETAIL AT BARIER RAIL

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330454

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT REPAIR DETAILS

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F487...

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : E. BAYISSA DATE : 04/2020

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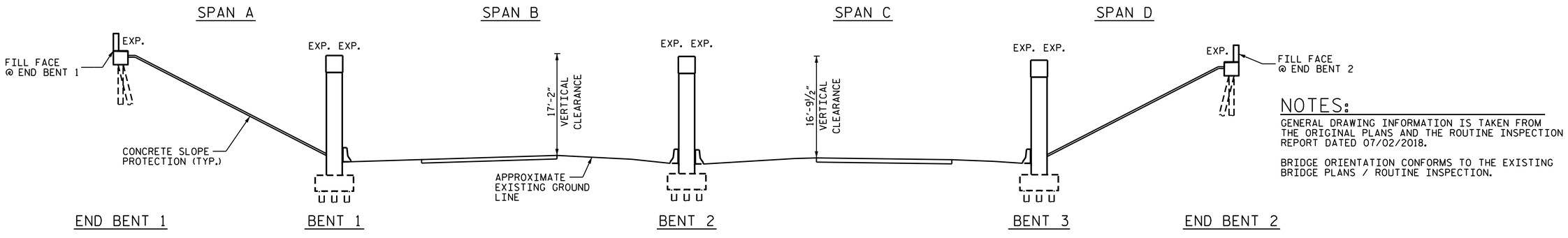
F.A. PROJECT NO.: NHPP-0040(032)

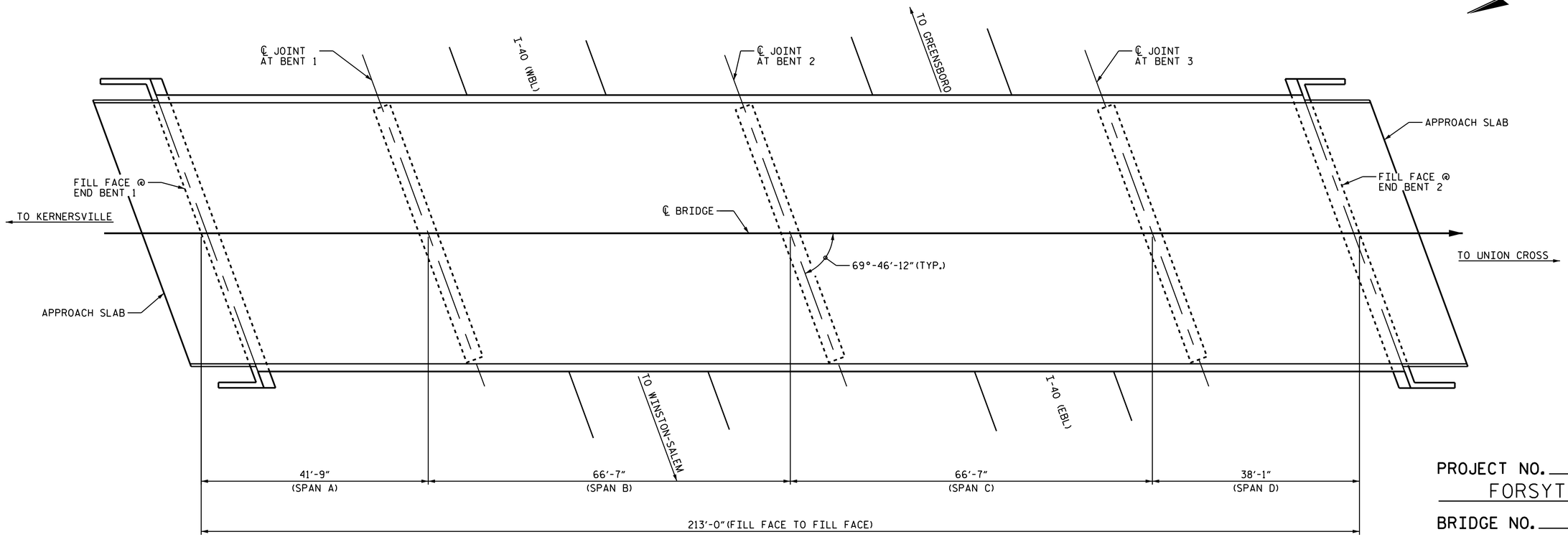


NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 07/02/2018.

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

SECTION ALONG ℄ BRIDGE



PLAN

SCOPE OF WORK

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

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

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS..

GROOVE PPC BRIDGE DECK.

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

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

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

RESIDENT ENGINEER DATE

8/5/2020 — NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL — A. Keith Paschal — FB86AD6DB2FC48F...

8/4/2020 — NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI — Krishna P. Sedai — EA8F7941508F487...

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : E. BAYISSA DATE : 04/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330458

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWINGS

FOR BRIDGE
ON UNION CROSS RD.
(SR 2643)
OVER I-40

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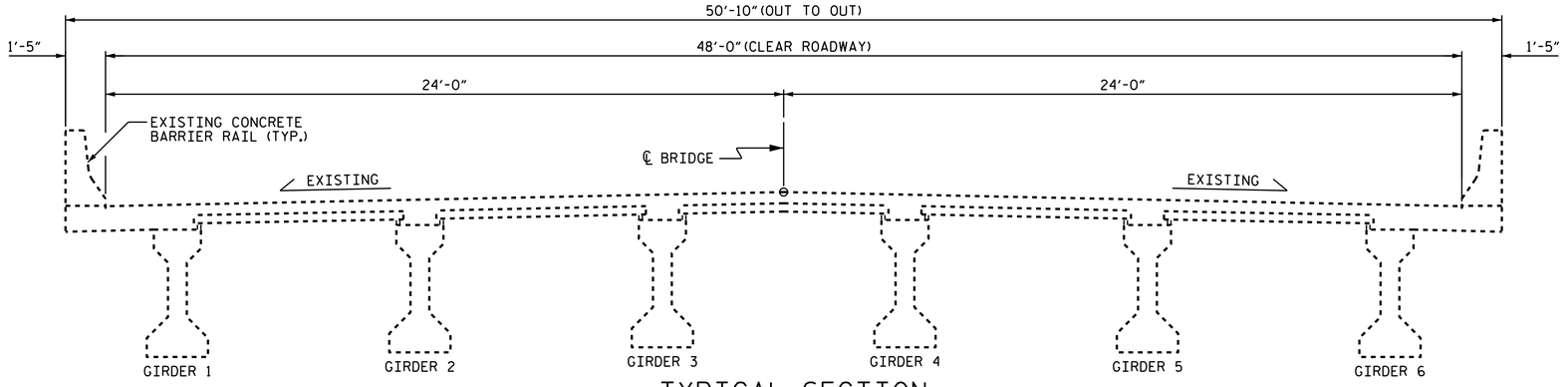
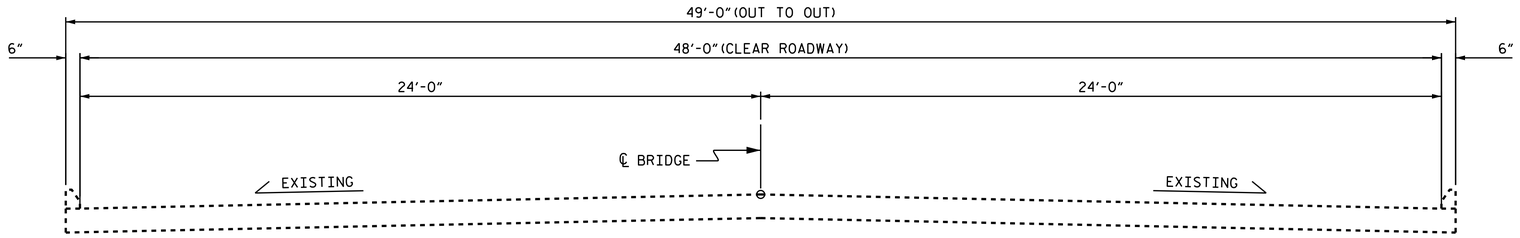
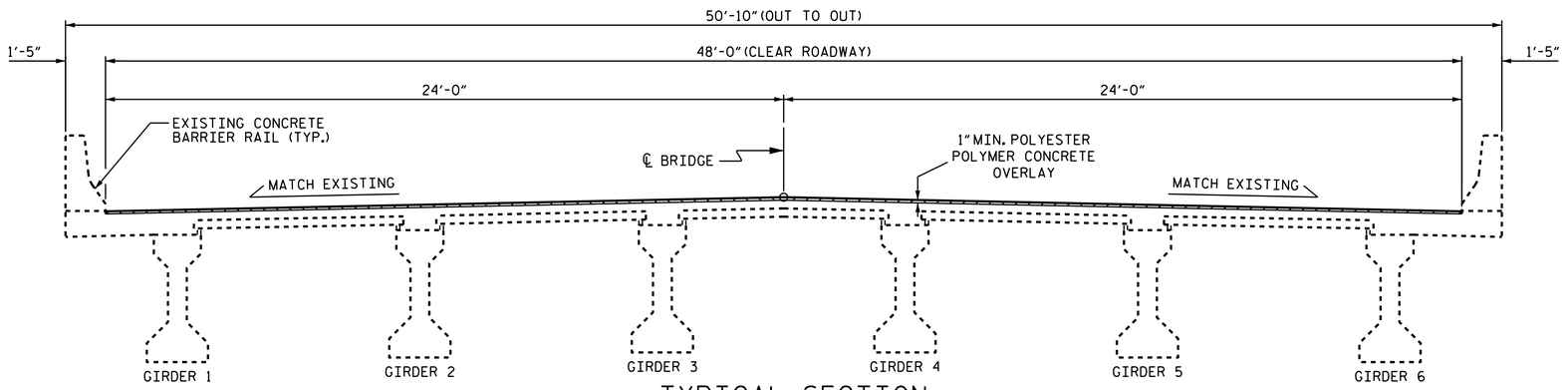


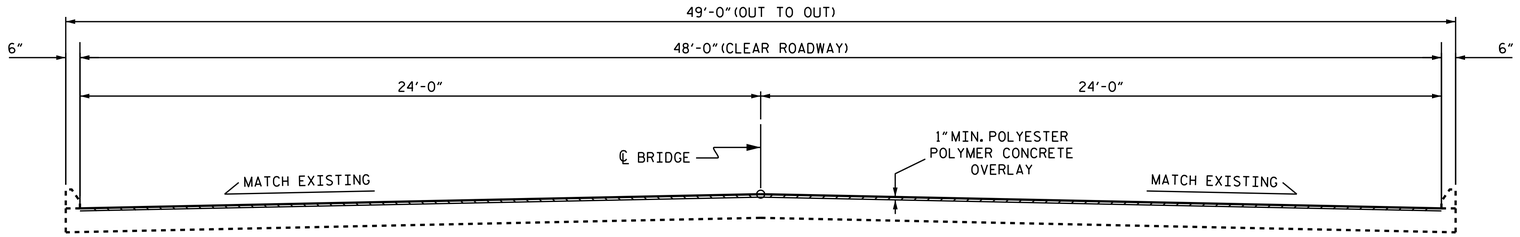
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION - APPROACH SLAB
(EXISTING)



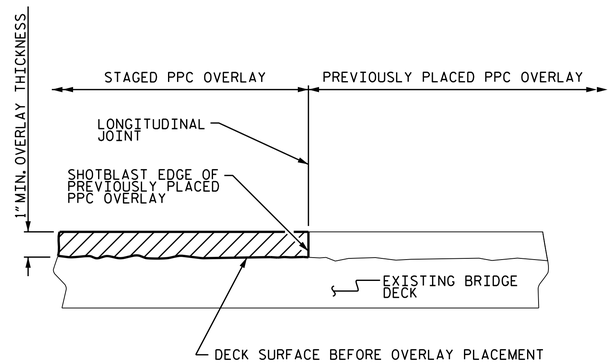
TYPICAL SECTION
(PROPOSED)



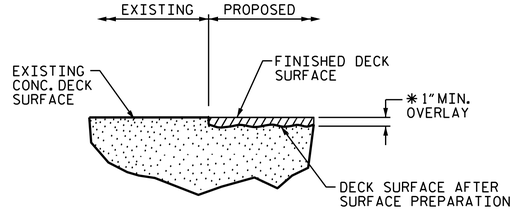
TYPICAL SECTION - APPROACH SLAB
(PROPOSED)

NOTES:

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



STAGED PPC OVERLAY JOINT
(AS NEEDED)



DETAIL FOR PPC OVERLAY

* FINISHED SURFACE ELEVATION SHALL MATCH EXISTING CONCRETE DECK SURFACE ELEVATION. ACTUAL THICKNESS OF PPC OVERLAY MAY VARY.

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330458

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION AND OVERLAY DETAILS

DRAWN BY : C. RUIZ DATE : 07/2019
CHECKED BY : E. BAYISSA DATE : 04/2020

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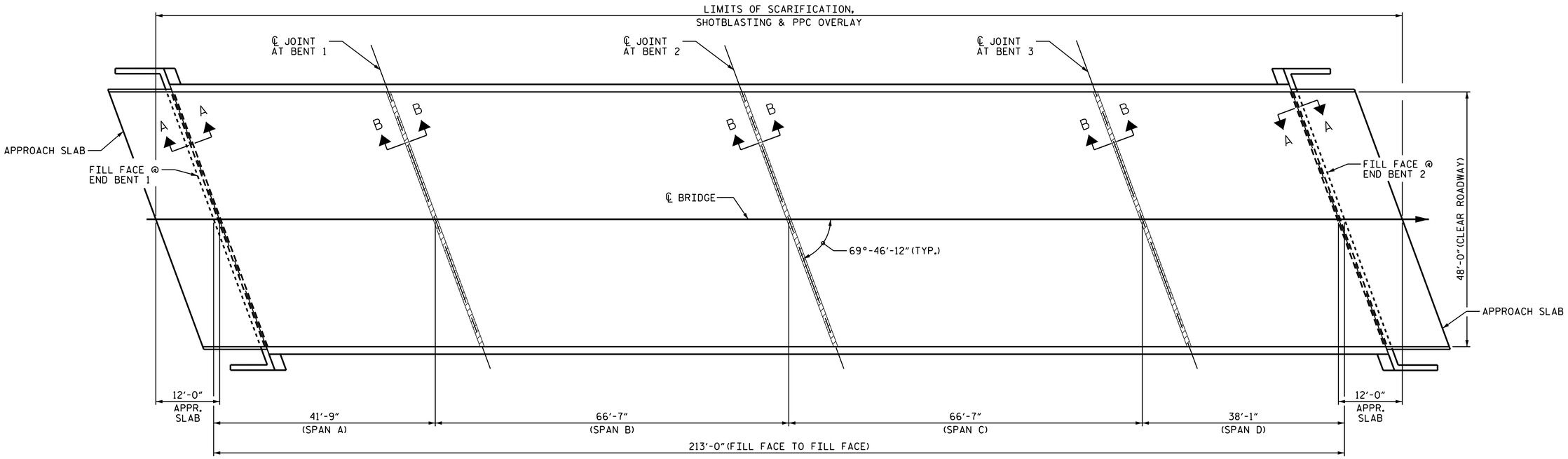

PLAN OF SPANS

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		SPAN D		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	64 SQ. YDS.		215.0 SQ. YDS.		351.0 SQ. YDS.		351.0 SQ. YDS.		195.0 SQ. YDS.		64 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	64 SQ. YDS.		215.0 SQ. YDS.		351.0 SQ. YDS.		351.0 SQ. YDS.		195.0 SQ. YDS.		64 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	2.2 CU. YDS.		7.5 CU. YDS.		12.2 CU. YDS.		12.2 CU. YDS.		6.8 CU. YDS.		2.2 CU. YDS.	
PLACING & FINISHING PPC OVERLAY	64 SQ. YDS.		215.0 SQ. YDS.		351.0 SQ. YDS.		351.0 SQ. YDS.		195.0 SQ. YDS.		64 SQ. YDS.	
GROOVING BRIDGE FLOORS	498.0 SQ. FT.		1791.0 SQ. FT.		2940.0 SQ. FT.		2940.0 SQ. FT.		1924.0 SQ. FT.		498.0 SQ. FT.	
EPOXY COATING CONCRETE GIRDER ENDS			247.3 SQ. FT.		290.5 SQ. FT.		290.5 SQ. FT.		247.3 SQ. FT.			

EPOXY COATING	AREA SQ. FT.	AREA SQ. FT.
TOP OF CAP AT END BENTS 1 & 2 AND BENTS 1 THRU 3	713.0	0.0

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

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

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

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

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.

BRIDGE JOINT @ BENTS

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330458

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

EA6F79415OBF4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR SPANS A THRU D

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CHECKED BY : E. BAYISSA DATE : 04/2020

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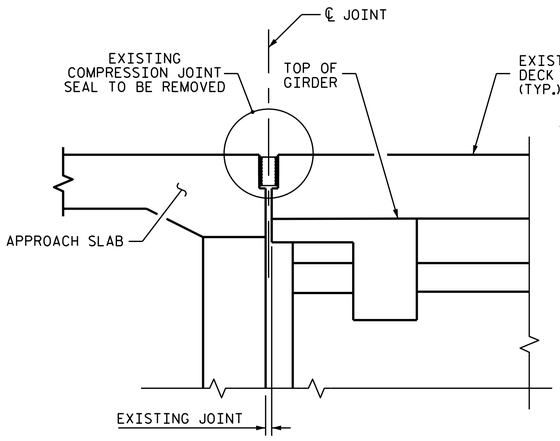
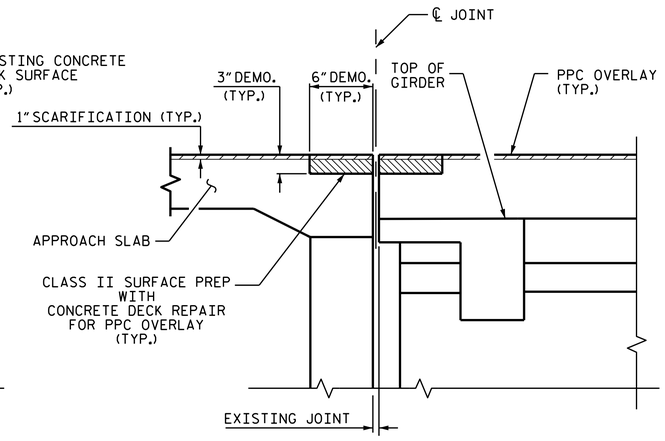
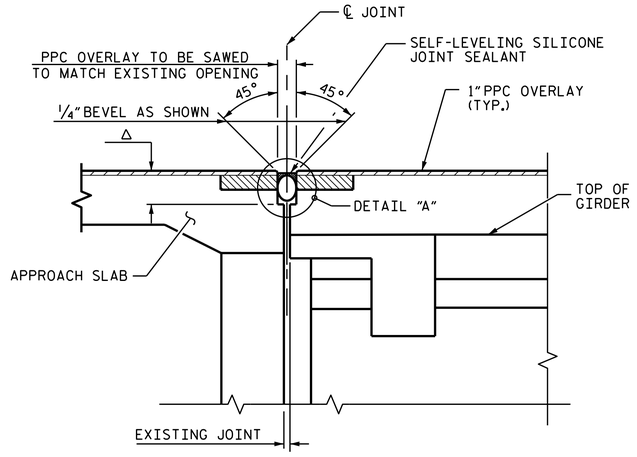


EXISTING JOINT



EXISTING JOINT REMOVAL AND MINIMUM SCARIFICATIONS



PROPOSED JOINT WITH SAWED DIMENSIONS

Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

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.

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 INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

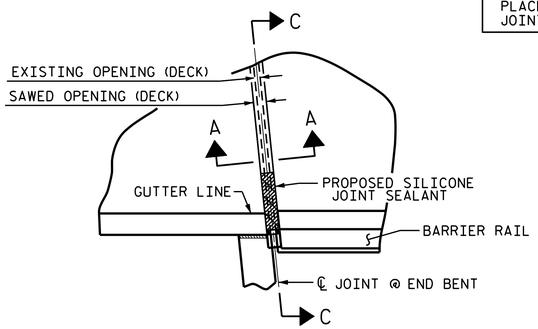
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

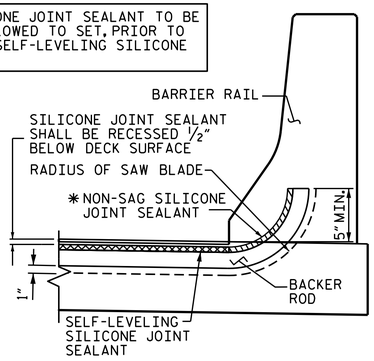
JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	5.7 SY	5.7 SY
END BENT 2	5.7 SY	5.7 SY
TOTAL	11.4 SY	11.4 SY

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	51.2 LF	
END BENT 2	51.2 LF	
TOTAL	102.4 LF	

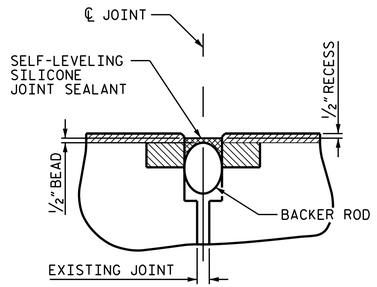


PLAN

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



SECTION C-C



DETAIL "A"

JOINT DETAIL AT BARRIER RAIL

PROJECT NO. I-5795
FORSYTH
BRIDGE NO. 330458

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

DRAWN BY : C. RUIZ DATE : 08/2019
CHECKED BY : E. BAYISSA DATE : 04/2020

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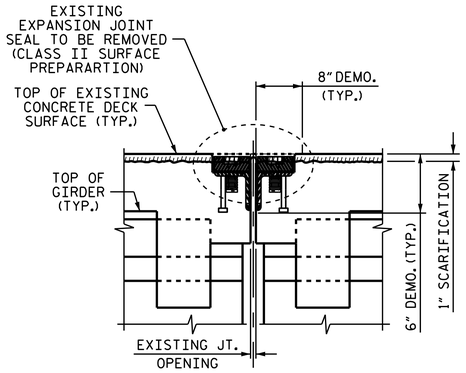
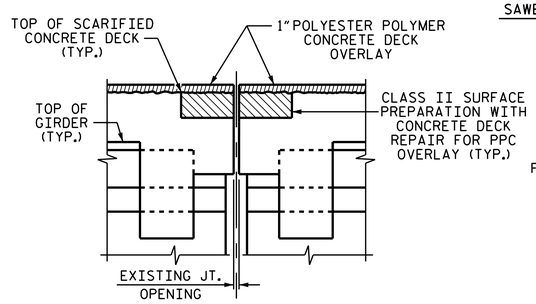
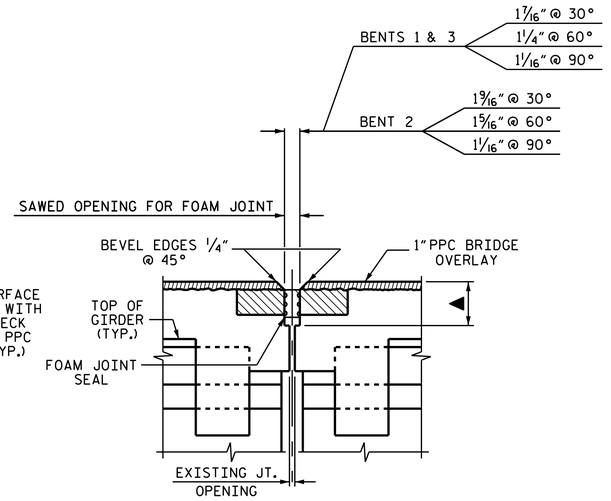


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT



PROPOSED FOAM JOINT SEAL

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

NOTES

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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

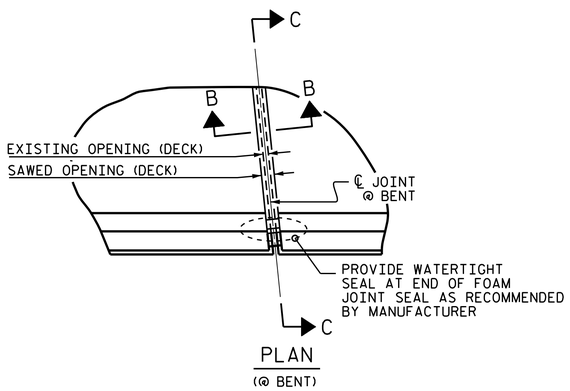
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE FOAM JOINT SEAL BASED ON JOINT OPENINGS AT THE BENTS.

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.

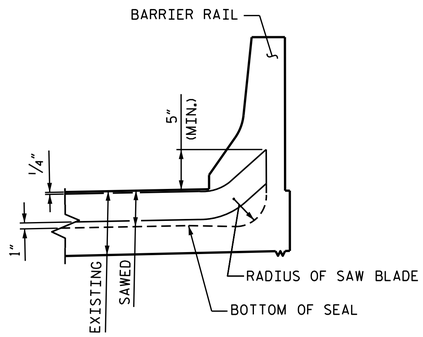
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN (@ BENT)



SECTION C-C

JOINT SEAL DETAILS AT BENTS

JOINT REPAIR QUANTITY TABLE				
	CLASS II SURFACE PREPARATION		CONCRETE DECK REPAIR FOR PPC OVERLAY	
	ESTIMATED	ACTUAL	ESTIMATED	ACTUAL
BENT 1	7.6 SY		7.6 SY	
BENT 2	7.6 SY		7.6 SY	
BENT 3	7.6 SY		7.6 SY	
TOTAL	22.8 SY		22.8 SY	

✱ BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	51.2 LF	
BENT 2	51.2 LF	
BENT 3	51.2 LF	
TOTAL	153.6 LF	

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330458

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDHAI

Docusigned by: Krishna P. Sedhai

EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS
BENTS 1, 2 & 3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S6-05
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DRAWN BY : A. SORSENGINH DATE : 5/2020
CHECKED BY : E. BAYISSA DATE : 5/2020

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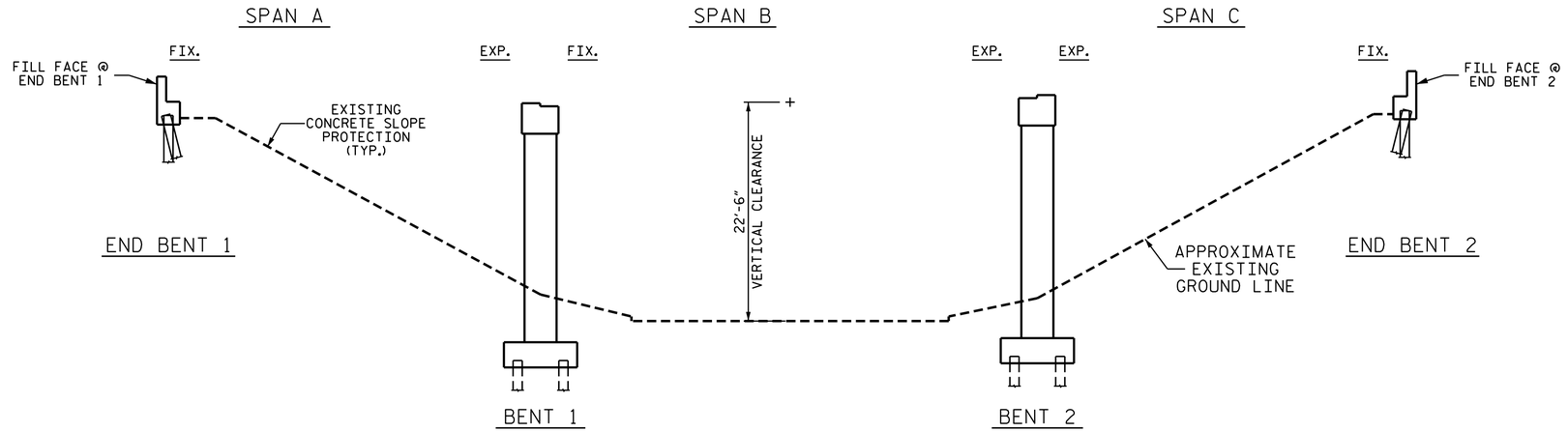
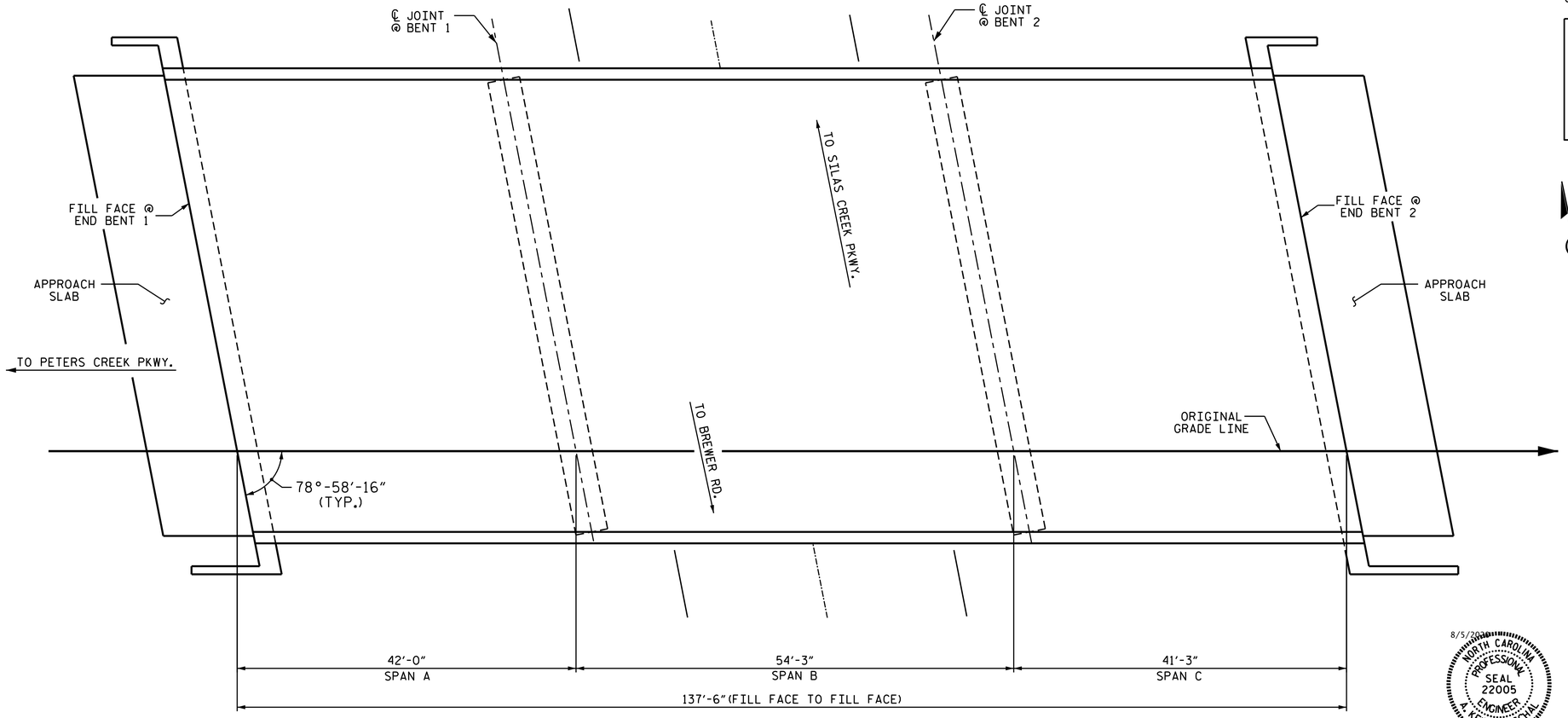
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/16/2018.

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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

INJECT CONCRETE CRACKS WITH EPOXY RESIN.

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS AND PERFORM SHOTCRETE AND/OR CONCRETE REPAIRS.

REPAIR EXISTING CRACKED CONCRETE SLOPE PROTECTION WITH CLASS B CONCRETE MATERIAL.

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

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

RESIDENT ENGINEER DATE

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
A. Keith Paschal
F8B6AD6DB2FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA T. PRASAD SEDAI
Krishna T. Sedai
EA6F7941508F4B7...

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330479

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR
BRIDGE ON I-40 WBL OVER BUCHANAN STREET

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DRAWN BY : A. SORSENGINH DATE : 1/2020
CHECKED BY : K. PUROHIT DATE : 4/2020

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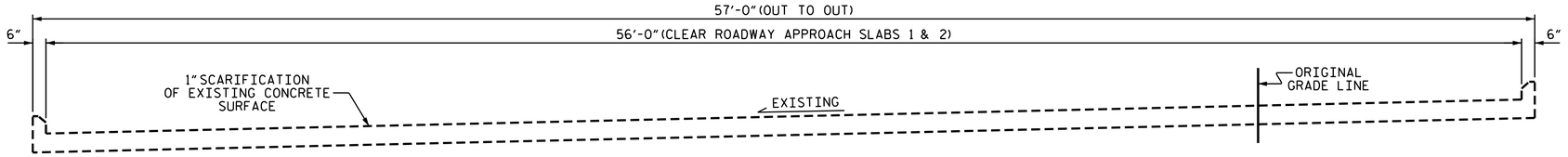
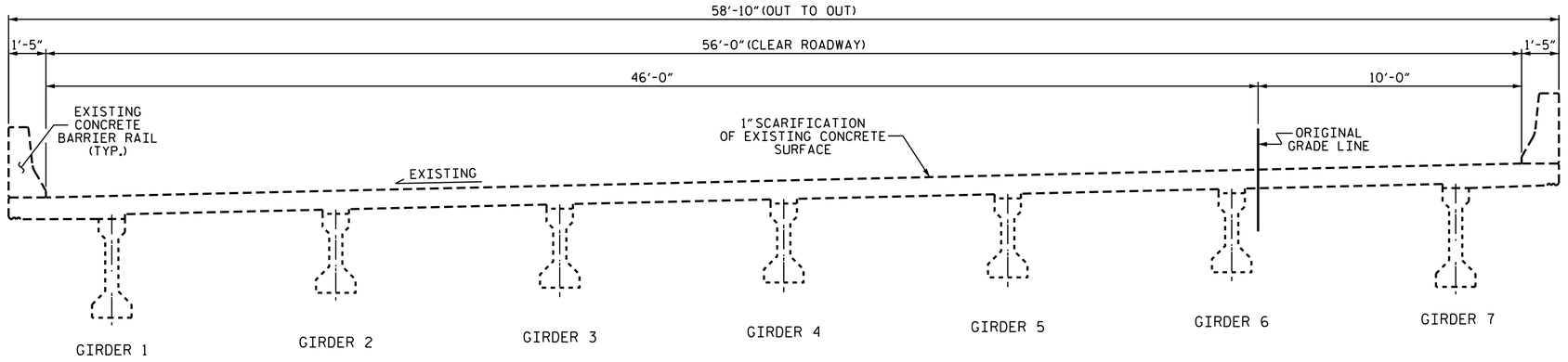
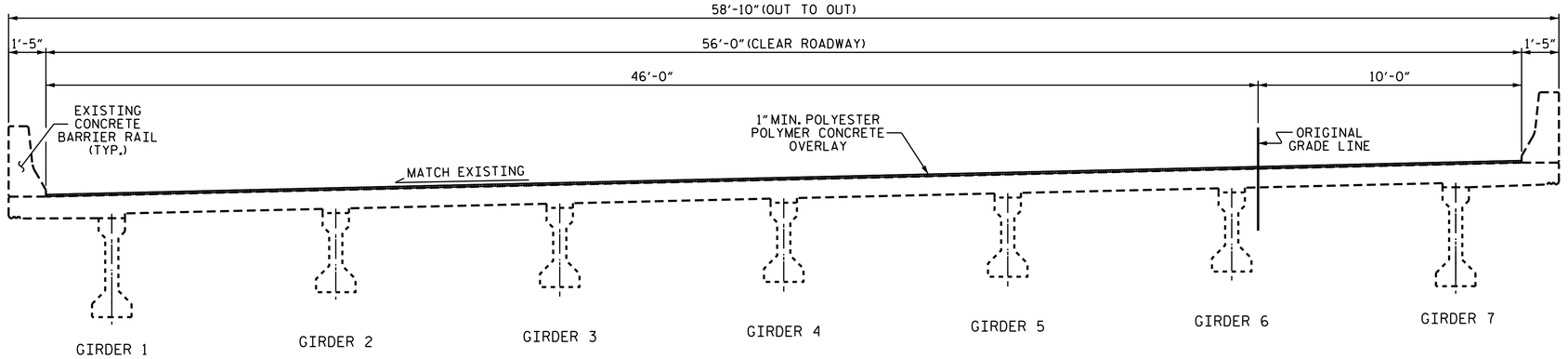


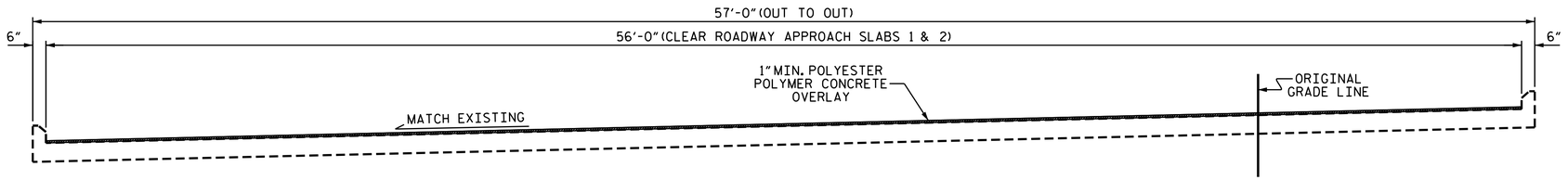
TYPICAL SECTION - APPROACH SLAB
(EXISTING)



TYPICAL SECTION
(EXISTING)



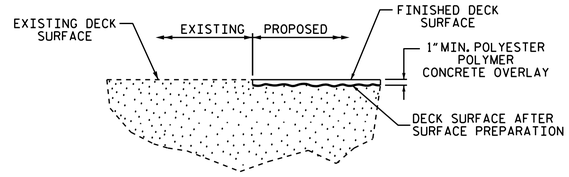
TYPICAL SECTION
(PROPOSED)



TYPICAL SECTION - APPROACH SLAB
(PROPOSED)

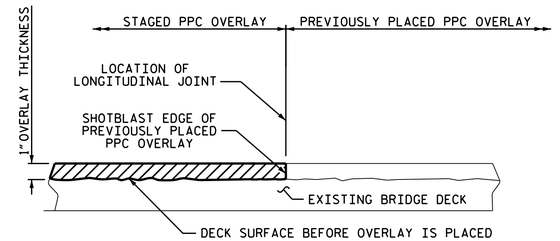
NOTE:

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



DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY

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



STAGED PPC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330479

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAILS

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CHECKED BY : K. PUROHIT DATE : 4/2020

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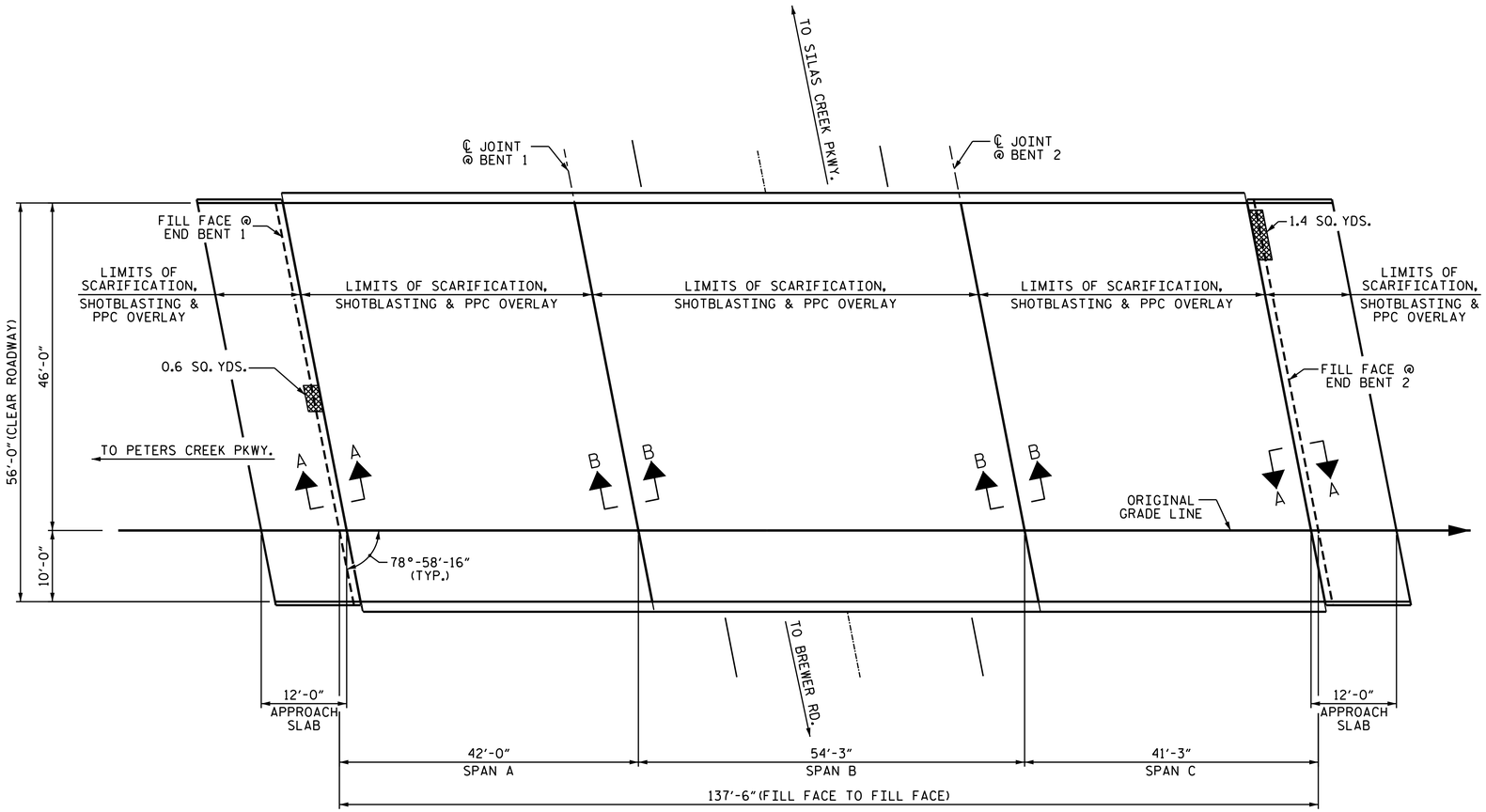

PLAN

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

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

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

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

APPROX. CLASS II SURFACE PREPARATION
CURB AND BARRIER RAIL
EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	74.0 SQ. YDS.		252.0 SQ. YDS.		331.0 SQ. YDS.		257.0 SQ. YDS.		74.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	74.0 SQ. YDS.		252.0 SQ. YDS.		331.0 SQ. YDS.		257.0 SQ. YDS.		74.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.6 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		1.4 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.6 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		1.4 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	2.6 CU. YDS.		9.0 CU. YDS.		11.5 CU. YDS.		8.8 CU. YDS.		2.6 CU. YDS.	
PLACING & FINISHING PPC OVERLAY	74.0 SQ. YDS.		252.0 SQ. YDS.		331.0 SQ. YDS.		257.0 SQ. YDS.		74.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	629.0 SQ. FT.		2141.0 SQ. FT.		2848.0 SQ. FT.		2484.0 SQ. FT.		629.0 SQ. FT.	
EPOXY COATING CONCRETE GIRDER ENDS			285.0 SQ. FT.		339.0 SQ. FT.		285.0 SQ. FT.			
EPOXY RESIN INJECTION			0.0 LIN. FT.		0.0 LIN. FT.		0.0 LIN. FT.			

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330479

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR
SPANS A THRU C

DRAWN BY : A. SORSENGINH DATE : 1/2020
CHECKED BY : K. PUROHIT DATE : 4/2020

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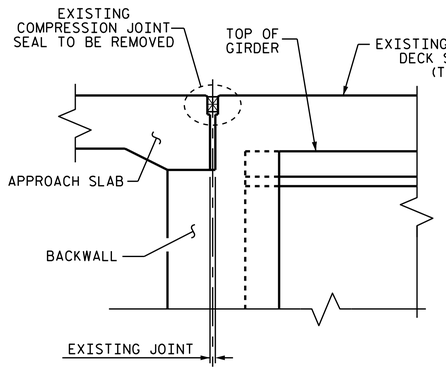
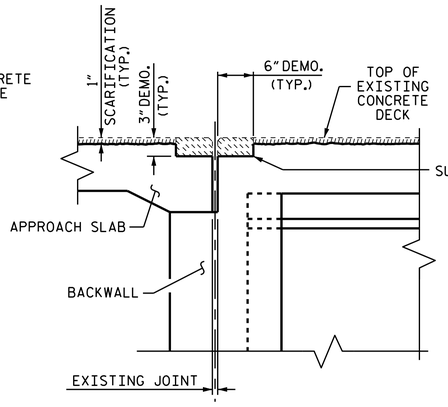
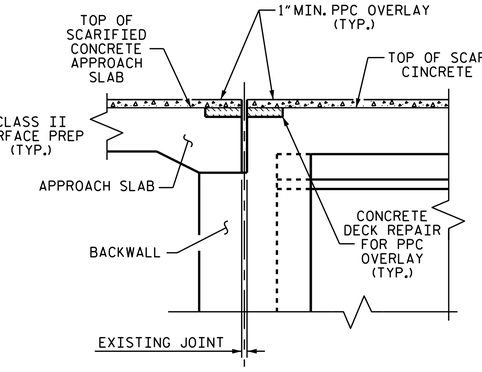


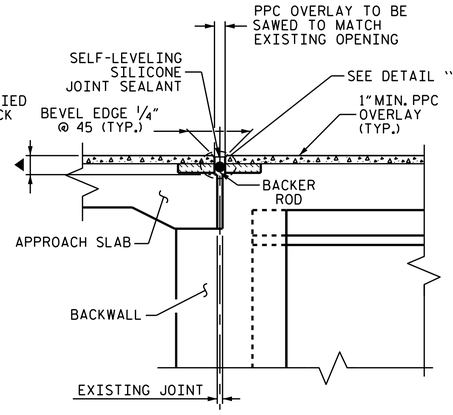
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

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.

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.

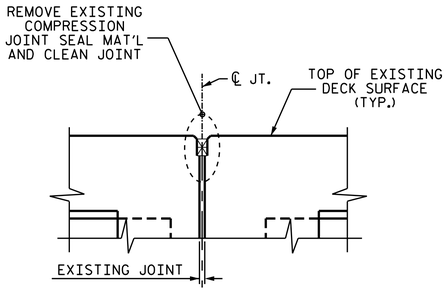
THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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.

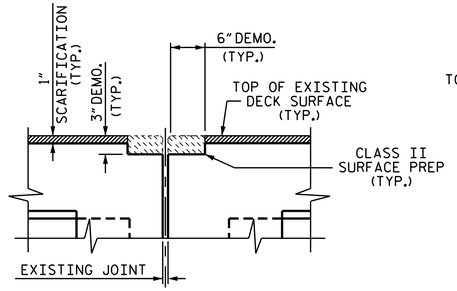
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

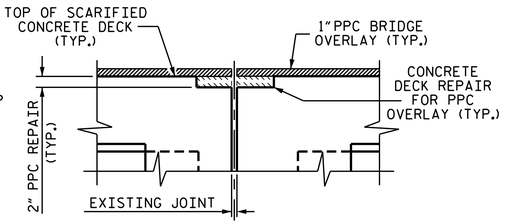
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS



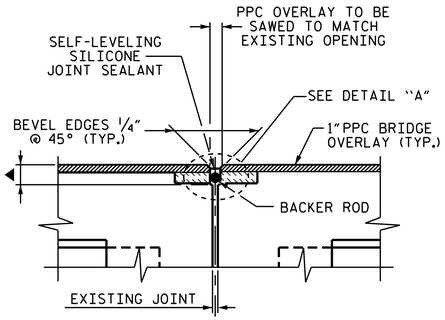
EXISTING COMPRESSION JOINT SEAL



MINIMUM EXISTING JOINT DEMOLITION AND SCARIFICATION



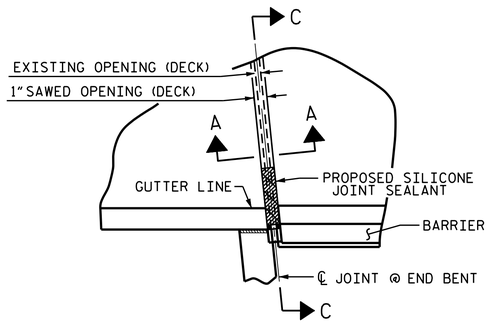
PROPOSED JOINT PRE-SAWED AND PPC OVERLAY



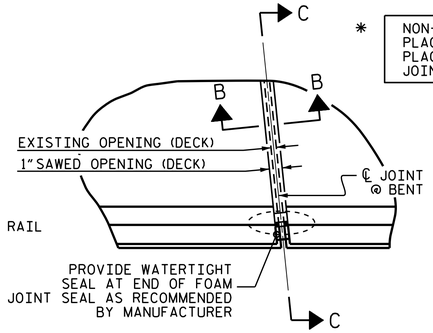
PROPOSED JOINT WITH SAWED DIMENSIONS

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

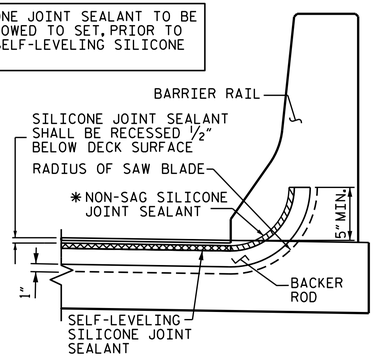


PLAN (@ END BENT)



PLAN (@ BENT)

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

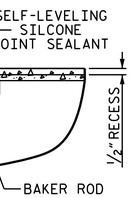


SECTION C-C

JOINT DETAIL AT BARRIER RAIL

JOINT REPAIR QUANTITY TABLE				
	CLASS II SURFACE PREPARATION		CONCRETE DECK REPAIR FOR PPC OVERLAY	
END BENT 1	6.3	SY	6.3	SY
BENT 1	6.3	SY	6.3	SY
BENT 2	6.3	SY	6.3	SY
END BENT 2	6.3	SY	6.3	SY
* TOTAL	25.2	SY	25.2	SY

* BASED ON THE MINIMUM BLOCKOUT SHOWN.



DETAIL A

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	58.2 LF	
BENT 1	58.2 LF	
BENT 2	58.2 LF	
END BENT 2	58.2 LF	
TOTAL	232.8 LF	

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330479

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
EA6F79415DBF4B7...

DRAWN BY : A. SORSENGINH DATE : 1/2020
CHECKED BY : K. PUROHIT DATE : 4/2020

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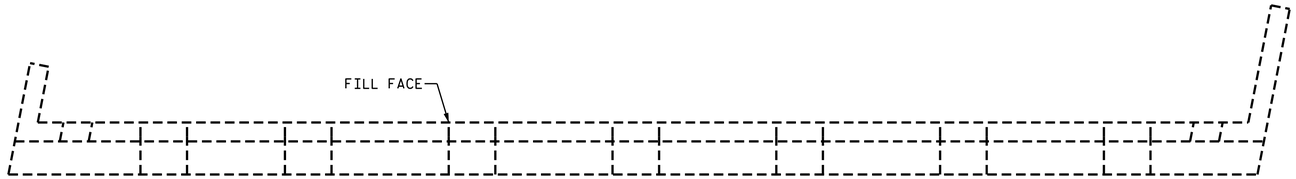
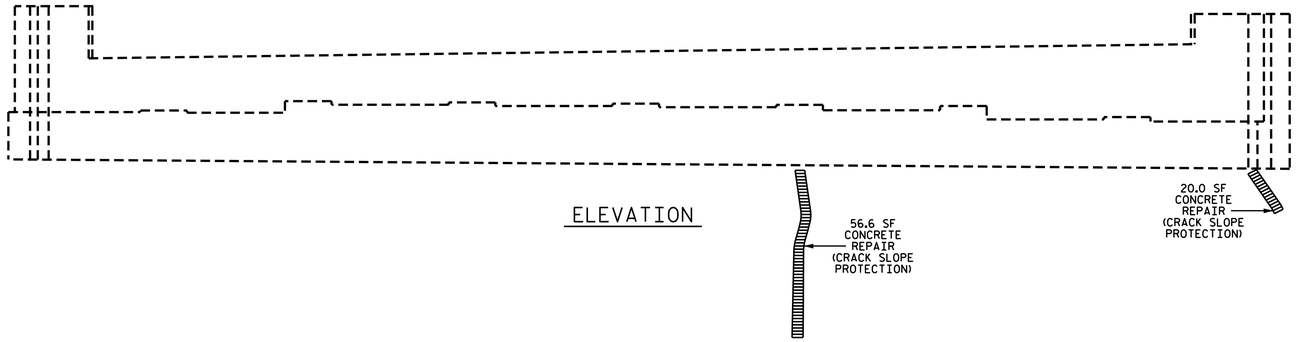
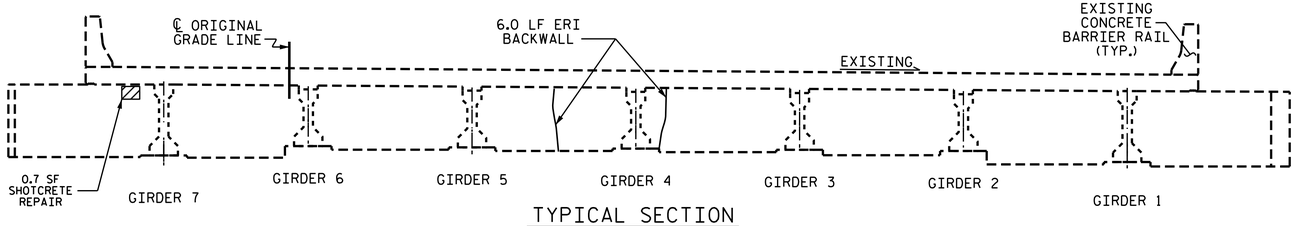


PLAN

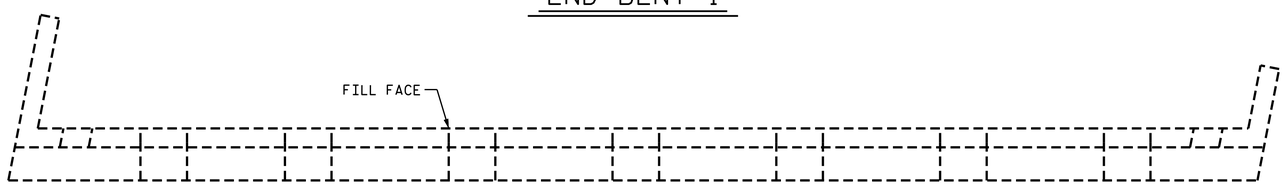


ELEVATION

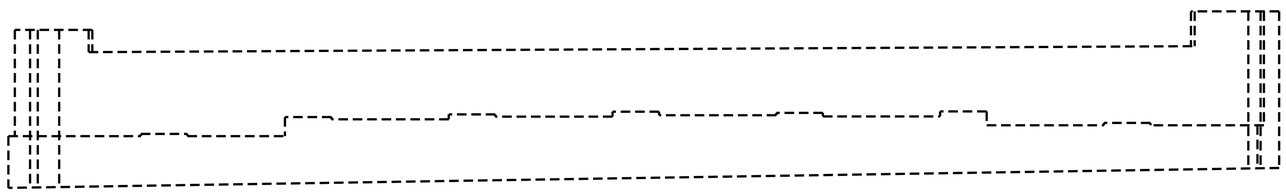


TYPICAL SECTION

END BENT 1



PLAN



ELEVATION

END BENT 2

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		
BACKWALL	0.7	0.4		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
SLOPE PROTECTION REPAIR (CLASS B CONCRETE)	76.6	25.5		
EPOXY RESIN INJECTION		LIN. FT.		LIN. FT.
BACKWALL		6.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	115.6			

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		
BACKWALL	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.
BACKWALL		0.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	115.6			

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:

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

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

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

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.

FOR CRACK REPAIR ON SLOPE PROTECTION, SAW CUT 1 FOOT EACH SIDE OF CRACK LINE, REMOVE CONCRETE, PREPARE SOIL SUBGRADE WITH PROPER COMPACTION THEN FILL WITH CLASS B CONCRETE TO COMPLETE THE REPAIR.

CONCRETE REPAIR AREA CLASS A

CONCRETE REPAIR AREA CLASS B

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE: 330479

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai

EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENTS 1 & 2

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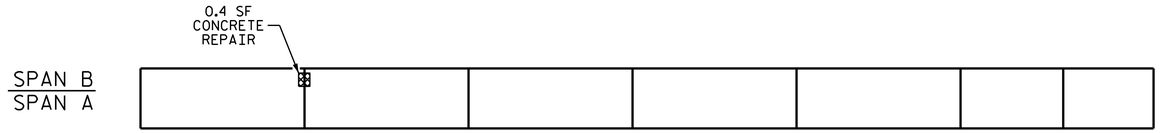
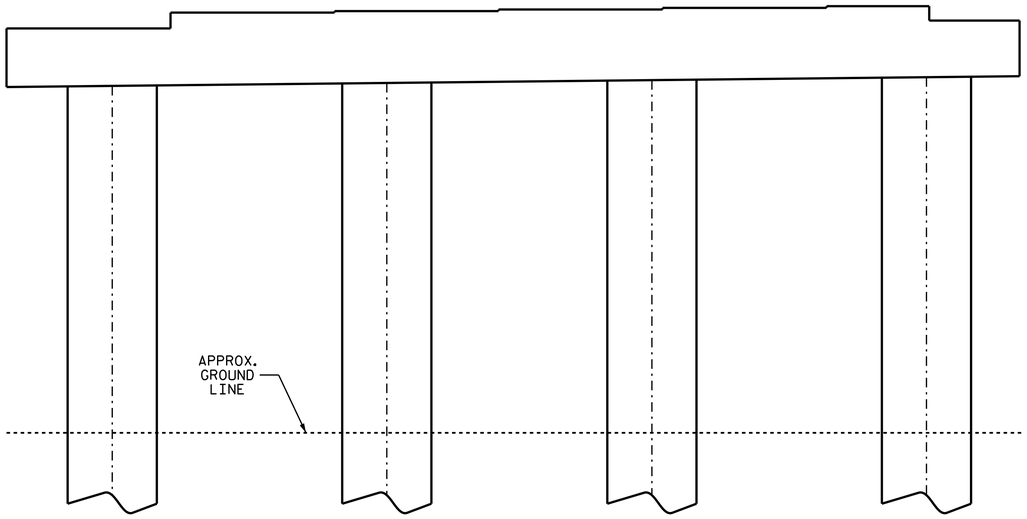
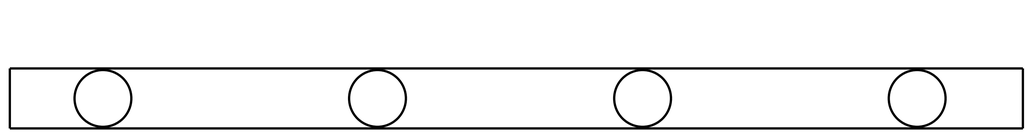


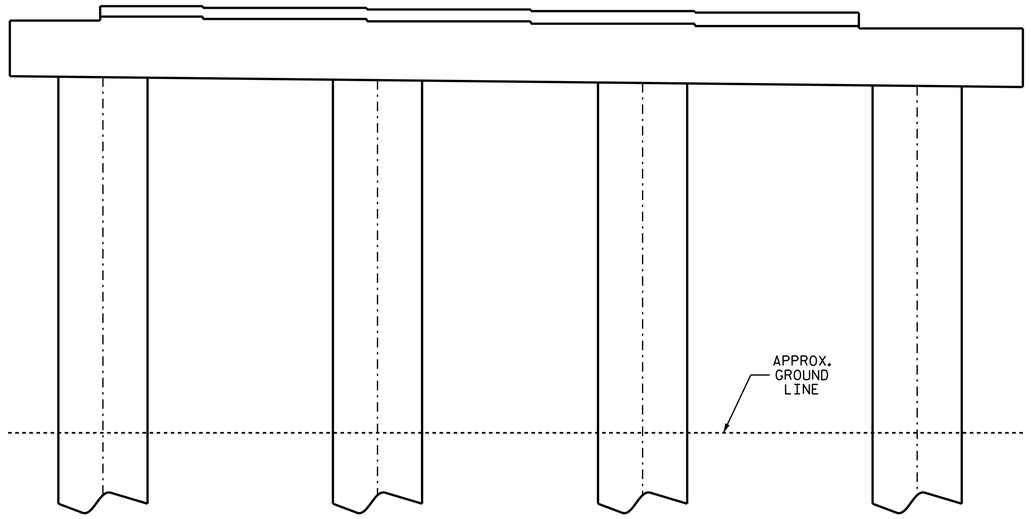
PLAN - TOP OF CAP



SPAN A VIEW - ELEVATION



PLAN - BOTTOM OF CAP



SPAN B VIEW - ELEVATION

AS-BUILT REPAIR QUANTITY TABLE				
BENT 1 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.4	0.2		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	175.8			

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:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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 AREA

CONCRETE AREA

ERI - EPOXY RESIN INJECTION

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

EA6F7941508F487...

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PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330479

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1

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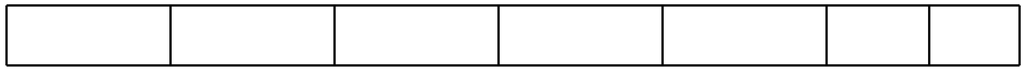
SPAN C
SPAN B



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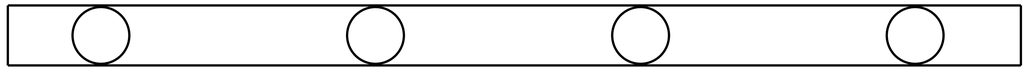
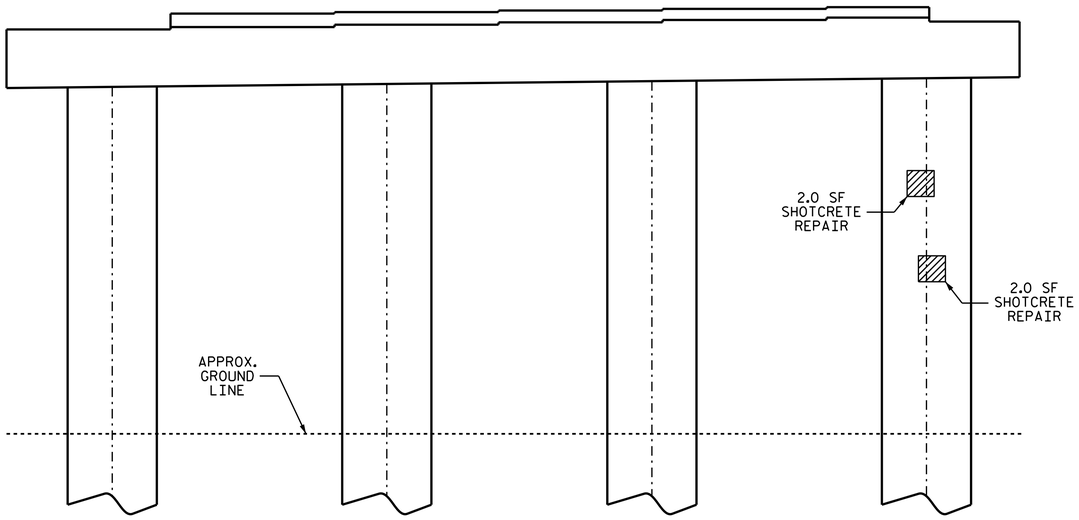
SPAN C

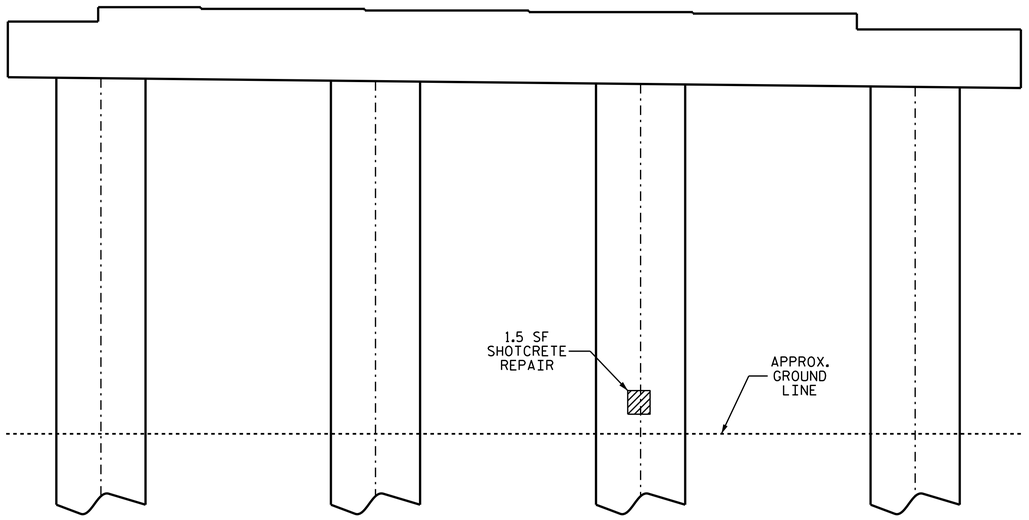


PLAN - TOP OF CAP



SPAN B VIEW - ELEVATION

PLAN - BOTTOM OF CAP



SPAN C VIEW - ELEVATION

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	5.5	2.8		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	175.8			

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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 AREA

CONCRETE AREA

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330479

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2

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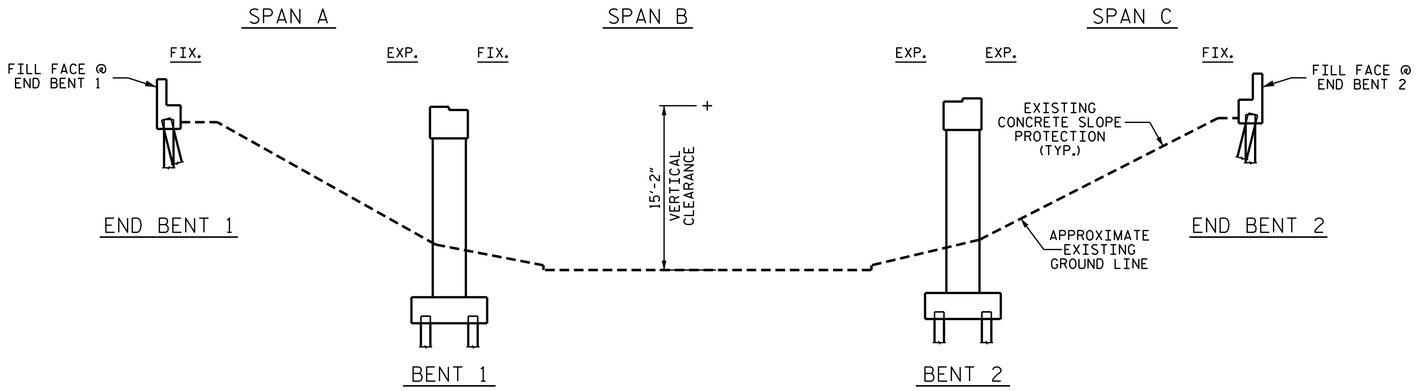
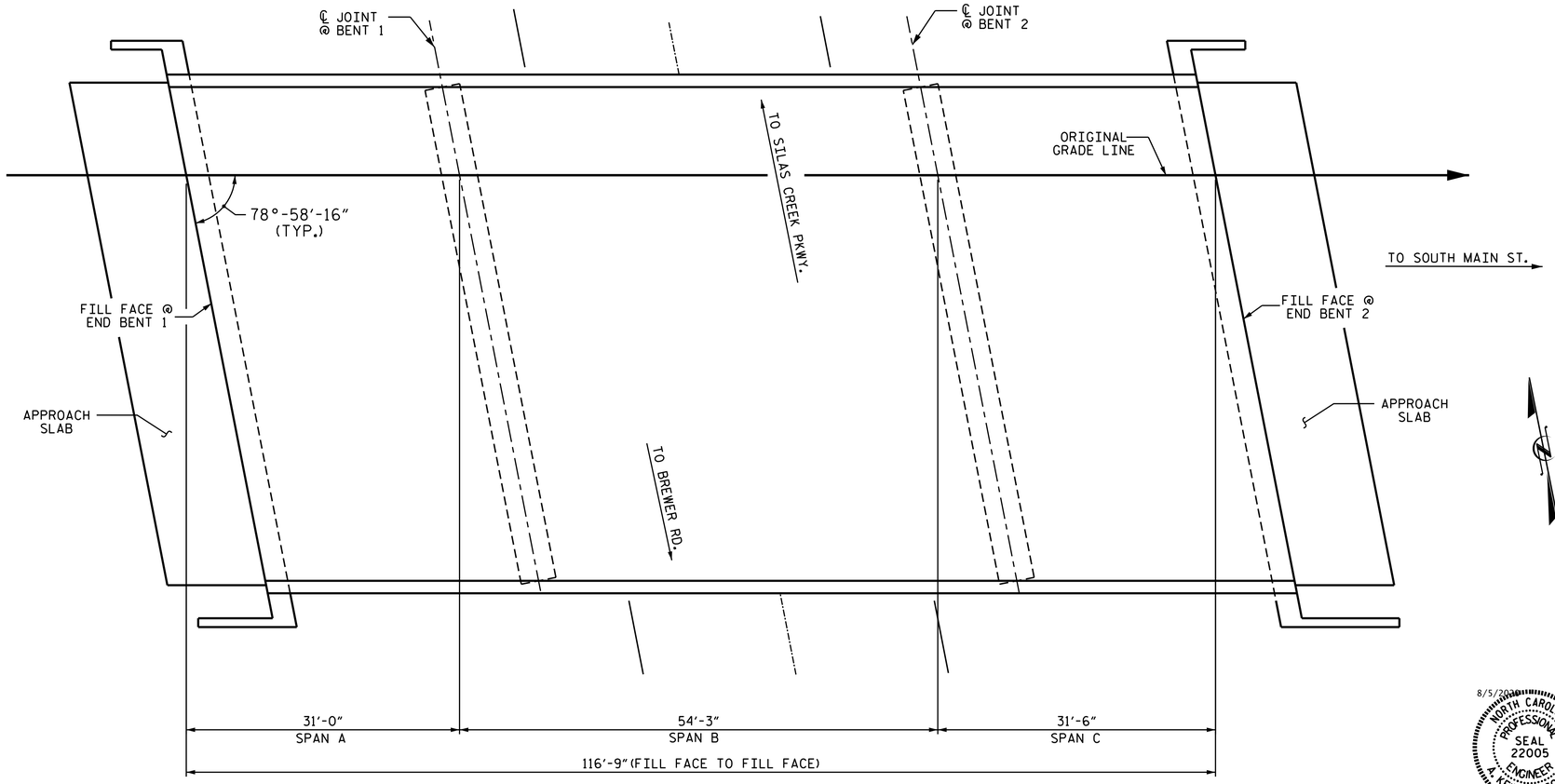
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/16/2018.

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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

INJECT CONCRETE CRACKS WITH EPOXY RESIN.

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS AND PERFORM SHOTCRETE AND/OR CONCRETE REPAIRS.

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

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

RESIDENT ENGINEER DATE

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
A. Keith Paschal
F8B6AD6DB2FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA T. PRASAD SEDAI
Krishna T. Sedai
EA6F7941150BF4B7...

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330480

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING FOR BRIDGE ON I-40 EBL OVER BUCHANAN STREET

DRAWN BY : A. SORSENGINH DATE : 2/2020
CHECKED BY : K. PUROHIT DATE : 4/2020

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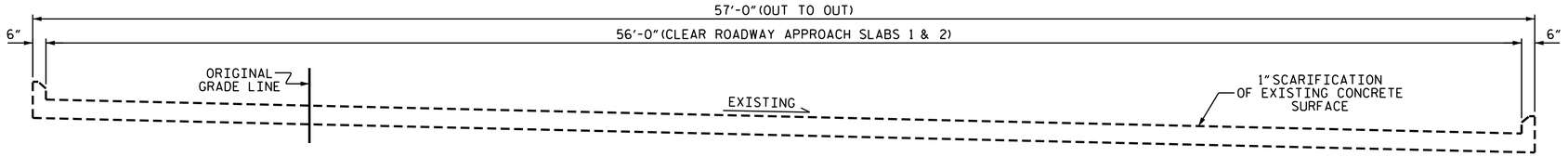
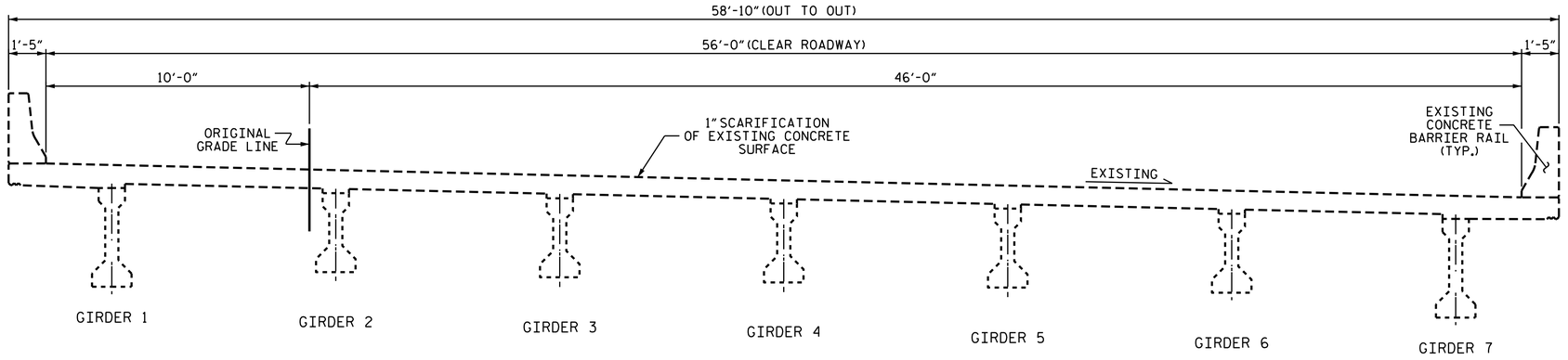
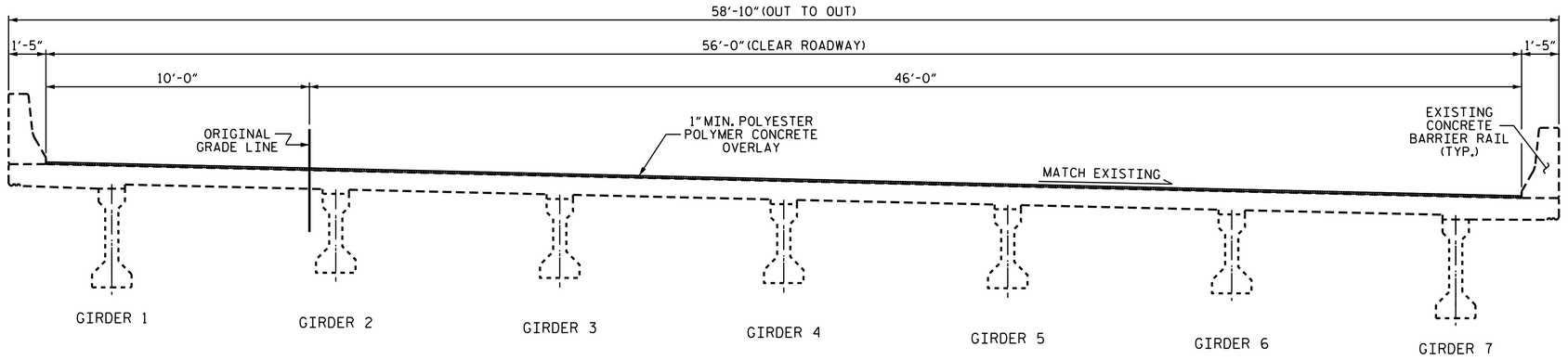


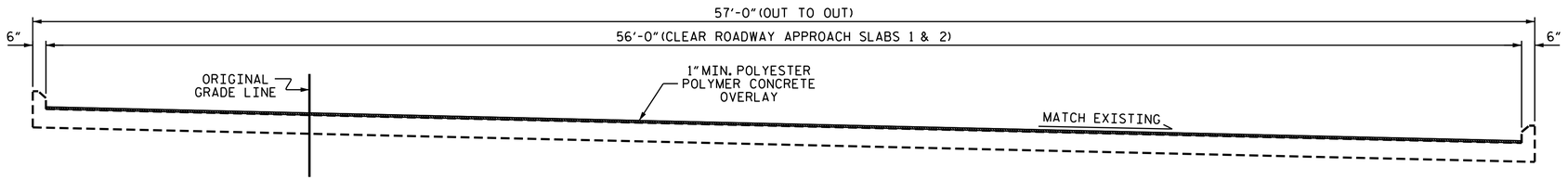
TYPICAL SECTION - APPROACH SLAB
(EXISTING)



TYPICAL SECTION
(EXISTING)



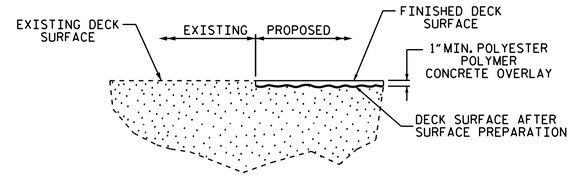
TYPICAL SECTION
(PROPOSED)



TYPICAL SECTION - APPROACH SLAB
(PROPOSED)

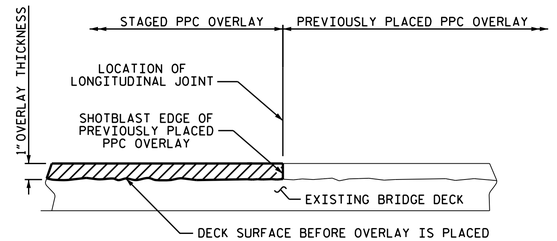
NOTE:

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



DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY

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



STAGED PPC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330480

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S8-02
1			3			TOTAL SHEETS
2			4			7

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DRAWN BY : A. SORSENGINH DATE : 2/2020
CHECKED BY : K. PUROHIT DATE : 4/2020

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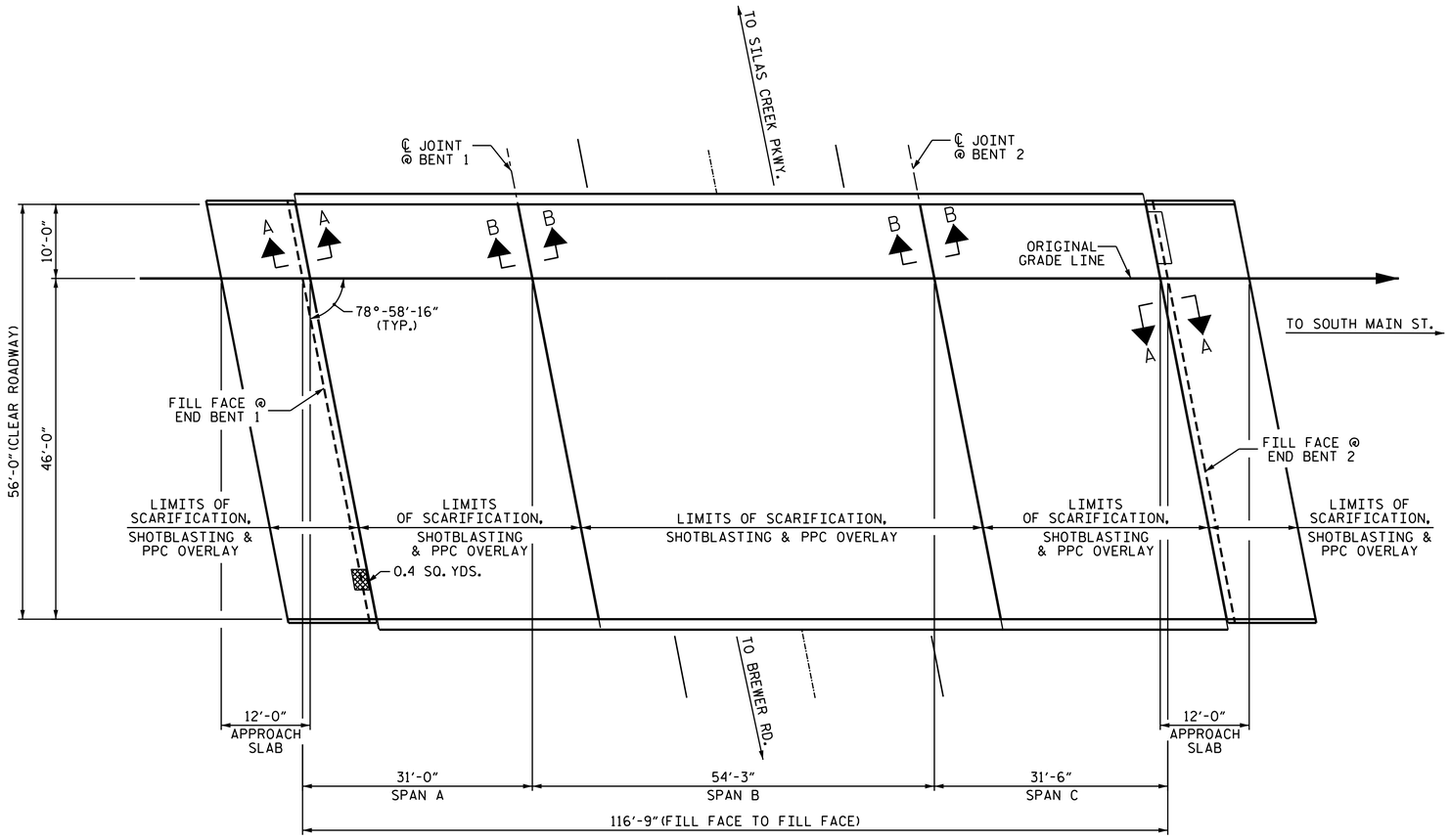

PLAN

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

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

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

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

APPROX. CLASS II SURFACE PREPARATION

CURB AND BARRIER RAIL

EPOXY RESIN INJECTION (ERI)

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	74.0 SQ. YDS.		193.0 SQ. YDS.		338.0 SQ. YDS.		196.0 SQ. YDS.		74.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	74.0 SQ. YDS.		193.0 SQ. YDS.		338.0 SQ. YDS.		196.0 SQ. YDS.		74.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.4 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.4 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	2.6 CU. YDS.		6.7 CU. YDS.		11.7 CU. YDS.		6.7 CU. YDS.		2.6 CU. YDS.	
PLACING & FINISHING PPC OVERLAY	74.0 SQ. YDS.		193.0 SQ. YDS.		338.0 SQ. YDS.		196.0 SQ. YDS.		74.0 SQ. YDS.	
GROOVING BRIDGE FLOORS	629.0 SQ. FT.		1558.0 SQ. FT.		2848.0 SQ. FT.		1584.0 SQ. FT.		629.0 SQ. FT.	
EPOXY COATING CONCRETE GIRDER ENDS			285.0 SQ. FT.		339.0 SQ. FT.		285.0 SQ. FT.			
EPOXY RESIN INJECTION			0.0 LIN. FT.		0.0 LIN. FT.		0.0 LIN. FT.			

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330480

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR

SPANS A THRU C

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			7

DRAWN BY : A. SORSENGINH DATE : 2/2020

CHECKED BY : K. PUROHIT DATE : 4/2020

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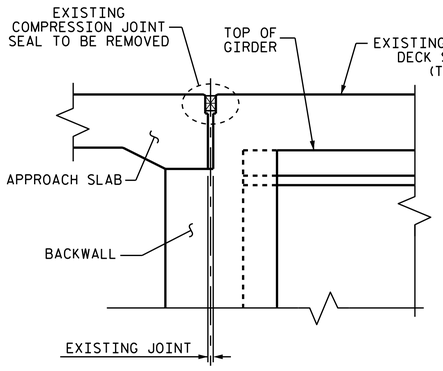
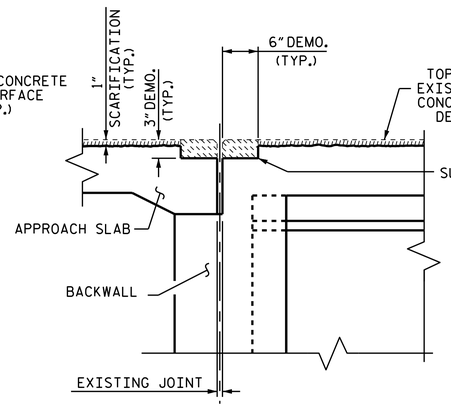
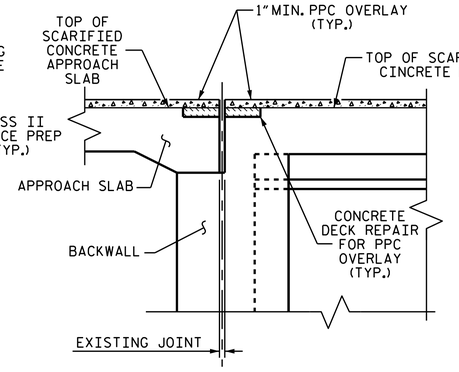


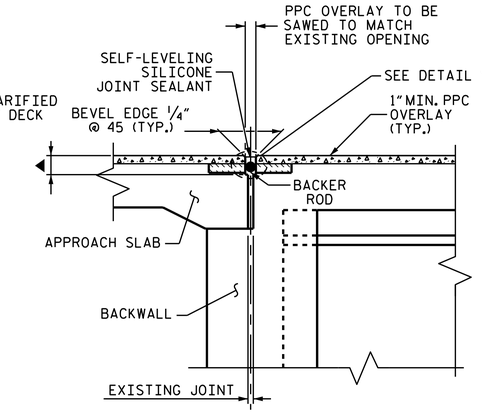
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

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.

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.

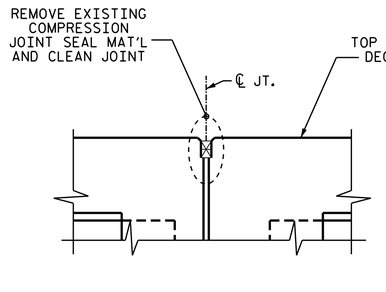
A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

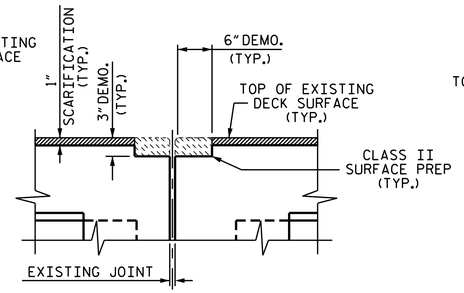
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT END BENTS

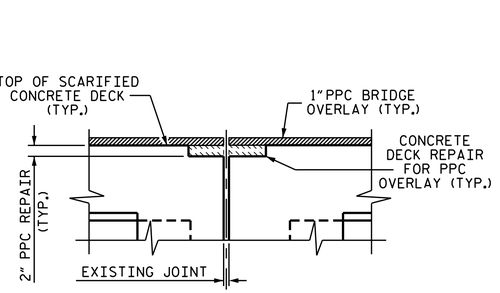
SECTION A-A



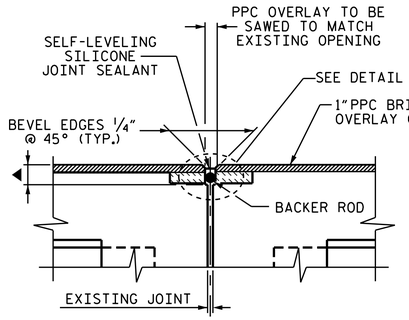
EXISTING COMPRESSION JOINT SEAL



MINIMUM EXISTING JOINT DEMOLITION AND SCARIFICATION



PROPOSED JOINT PRE-SAWED AND PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

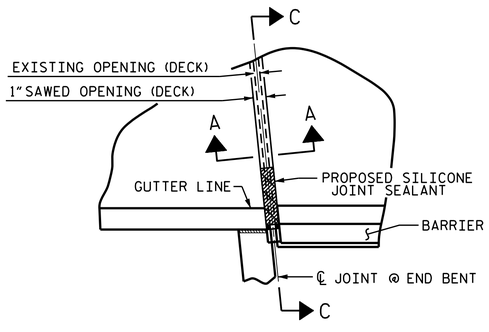
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

JOINT REPAIR QUANTITY TABLE

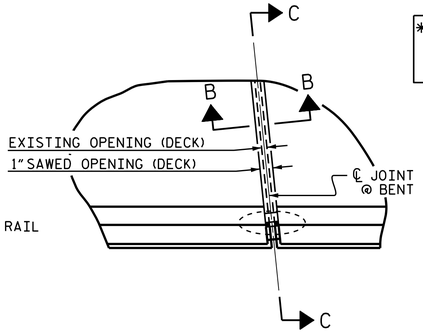
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	58.2 LF	
BENT 1	58.2 LF	
BENT 2	58.2 LF	
END BENT 2	58.2 LF	
TOTAL	232.8 LF	

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

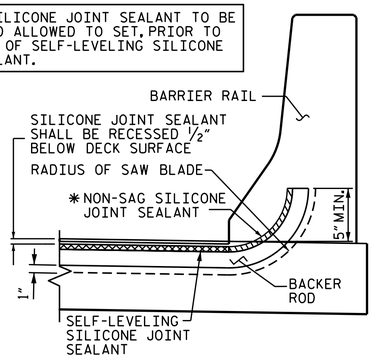


PLAN (@ END BENT)

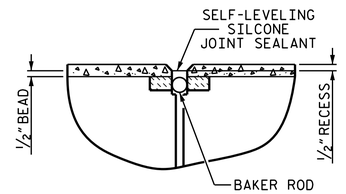


PLAN (@ BENT)

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



SECTION C-C



DETAIL A

JOINT REPAIR QUANTITY TABLE

	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	6.3 SY	6.3 SY
BENT 1	6.3 SY	6.3 SY
BENT 2	6.3 SY	6.3 SY
END BENT 2	6.3 SY	6.3 SY
* TOTAL	25.2 SY	25.2 SY

*BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT DETAIL AT BARRIER RAIL

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330480

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
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DRAWN BY : A. SORSENGINH DATE : 1/2020
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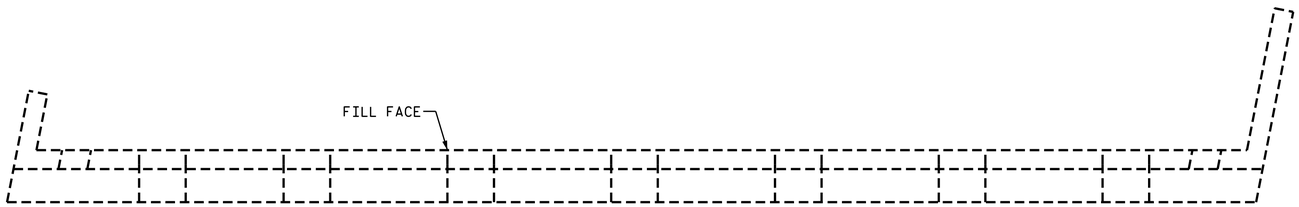

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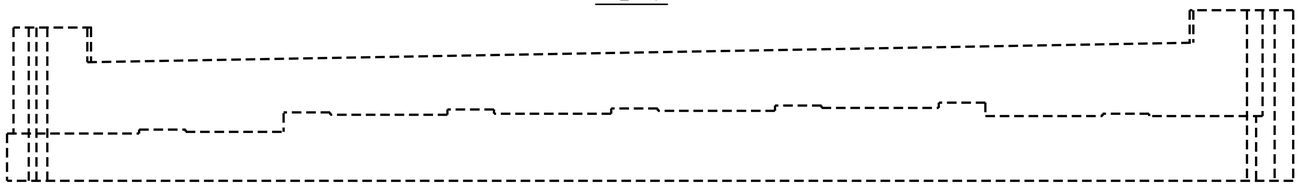
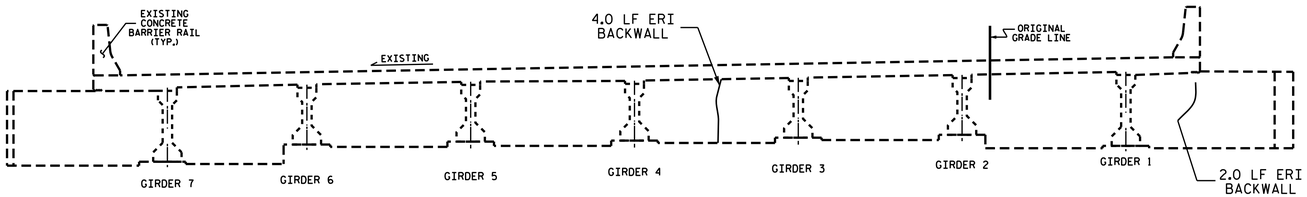
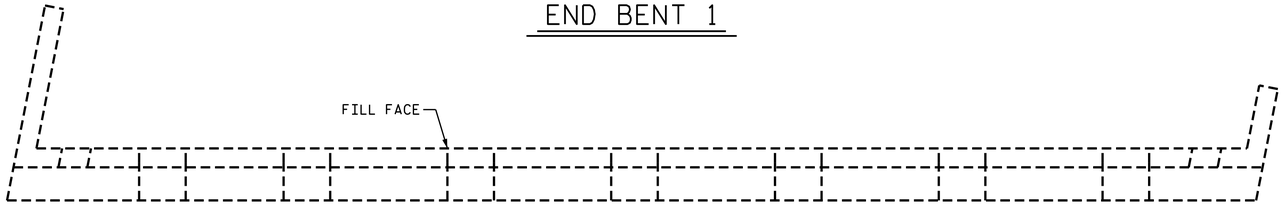


ELEVATION

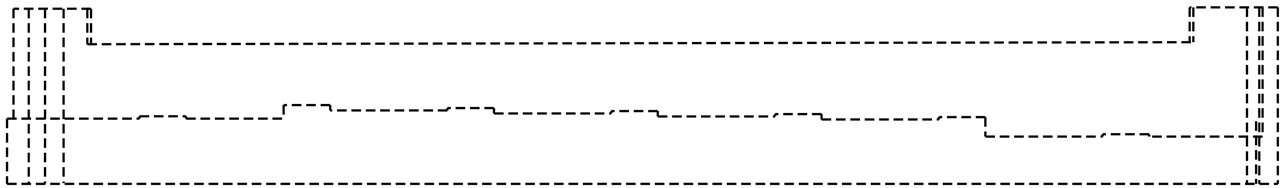


TYPICAL SECTION

END BENT 1



PLAN



ELEVATION

END BENT 2

CONCRETE REPAIR AREA

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

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		
BACKWALL	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.
BACKWALL		6.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	115.6			

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		
BACKWALL	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.
BACKWALL		0.0		
CAP		0.0		
EPOXY COATING	AREA SQ. FT.		AREA SQ. FT.	
TOP OF CAP	115.6			

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

FOR SHOTCRETE REPAIR, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIR, SEE SPECIAL PROVISIONS.

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-5795

FORSYTH COUNTY

BRIDGE: 330480

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

END BENTS 1 & 2

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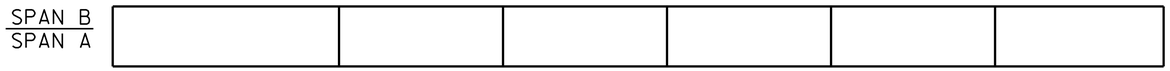
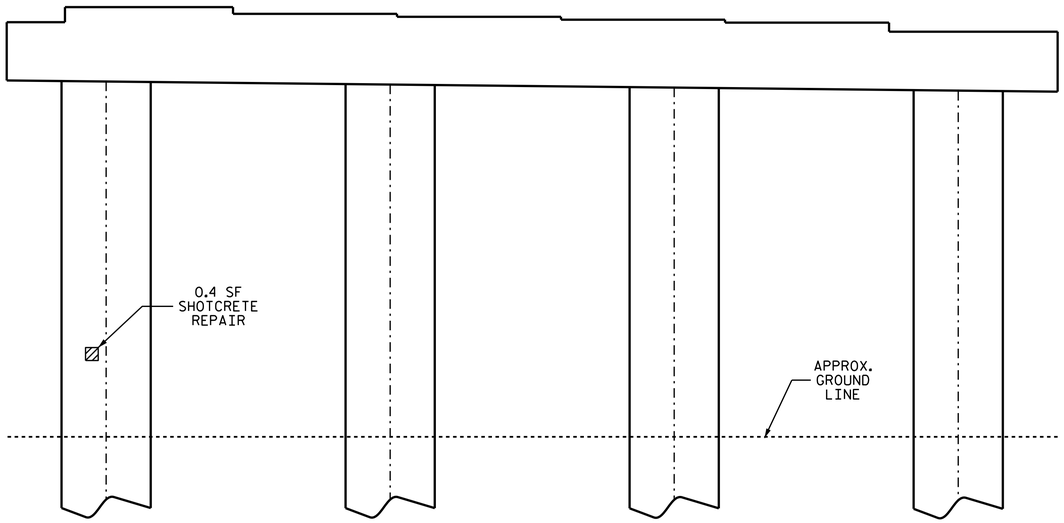
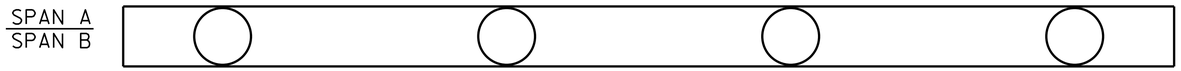


PLAN - TOP OF CAP



SPAN A VIEW - ELEVATION



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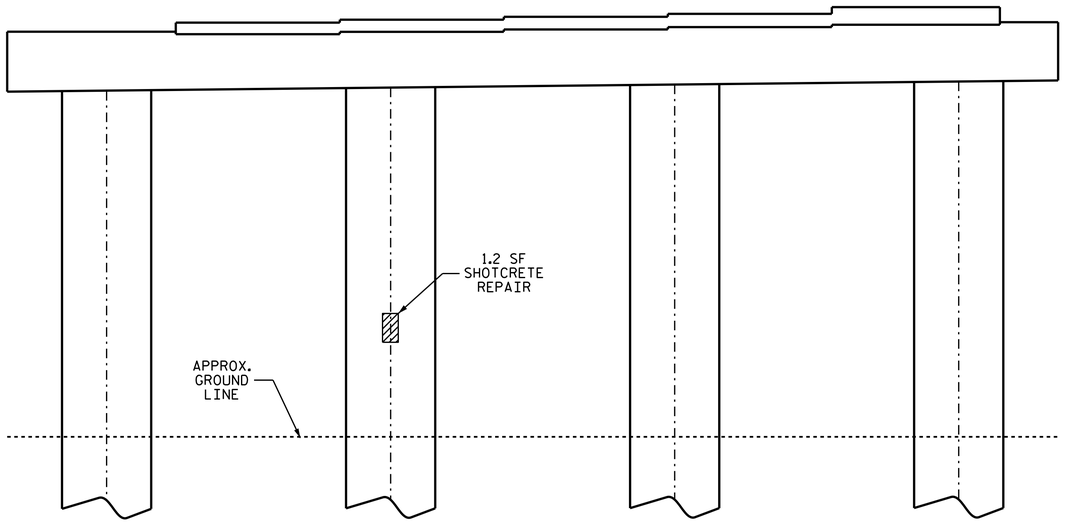

SPAN B VIEW - ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
COLUMN	1.6	0.8		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	175.8			

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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 AREA

CONCRETE AREA

ERI - EPOXY RESIN INJECTION

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330480

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SODAL

Krishna P. Sodal

EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 1

DRAWN BY : A. SORSENGINH DATE : 1/2020

CHECKED BY : K. PUROHIT DATE : 4/2020

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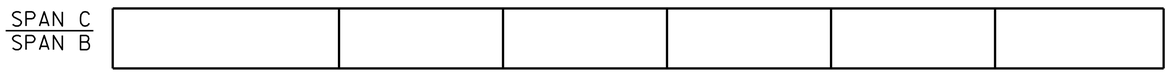
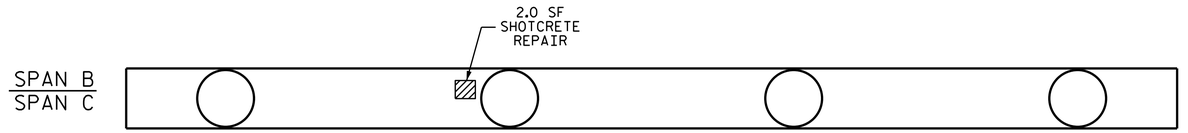
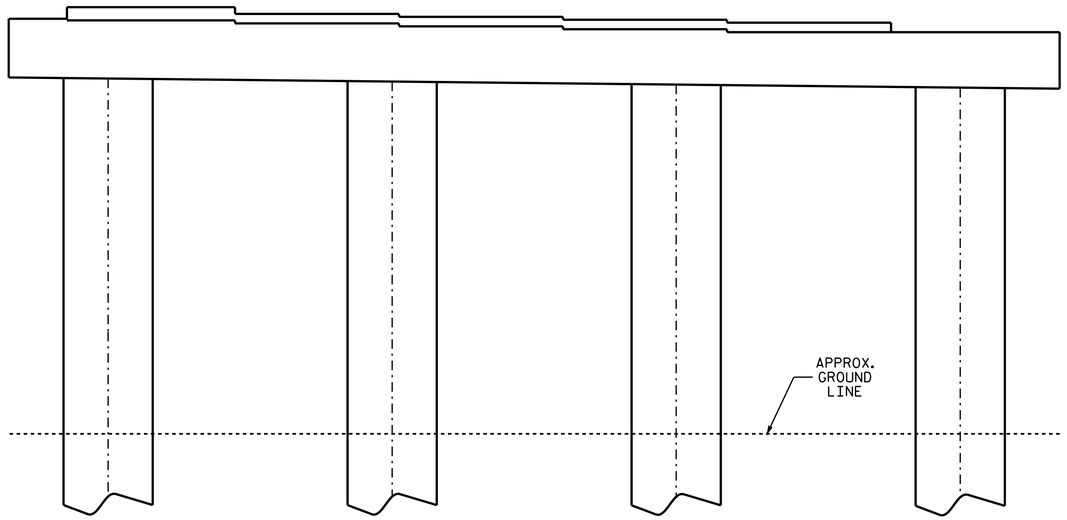
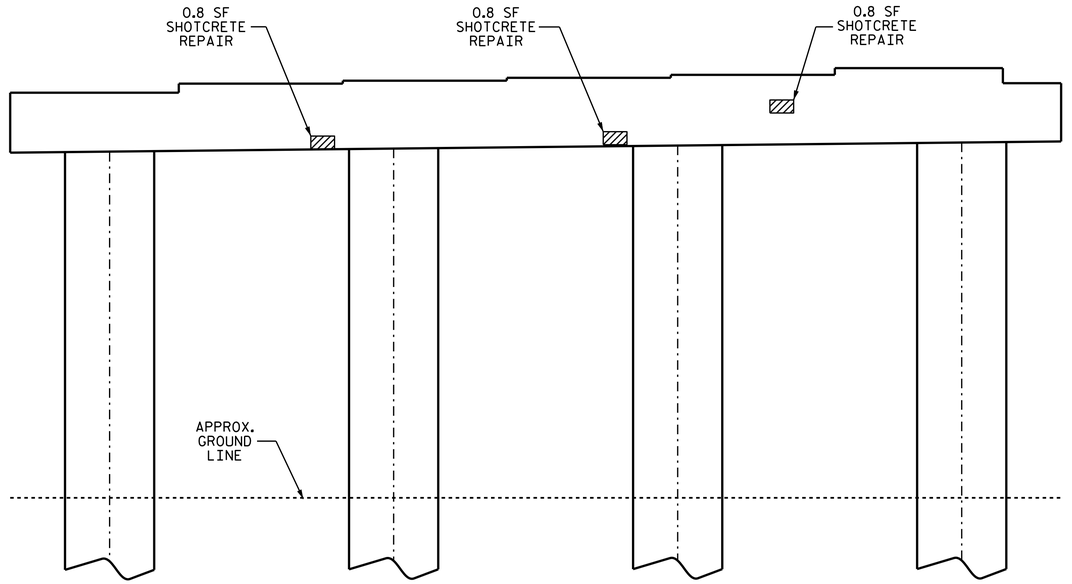




PLAN - TOP OF CAP



PLAN - BOTTOM OF CAP



SPAN B VIEW - ELEVATION

SPAN C VIEW - ELEVATION

AS-BUILT REPAIR QUANTITY TABLE				
BENT 2 REPAIRS	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	4.4	2.2		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
CAP	0.0	0.0		
EPOXY RESIN INJECTION		LN. FT.		LN. FT.
CAP		0.0		
COLUMN		0.0		
EPOXY COATING	AREA SF		AREA SF	
TOP OF CAP	175.8			

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:

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

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

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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 AREA

CONCRETE AREA

ERI - EPOXY RESIN INJECTION

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F7941508F4B7...

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330480

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BENT 2

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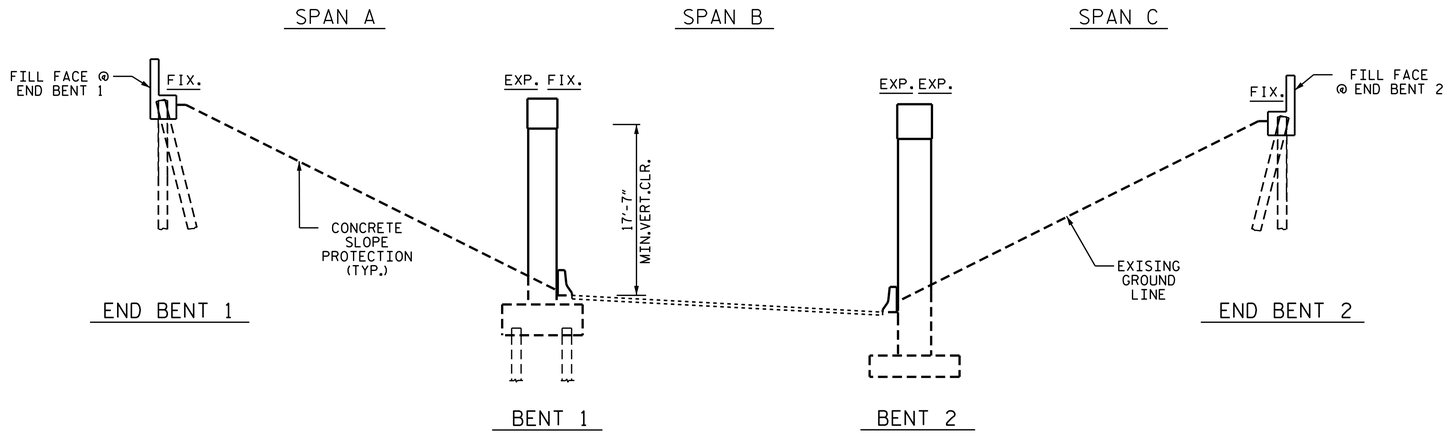
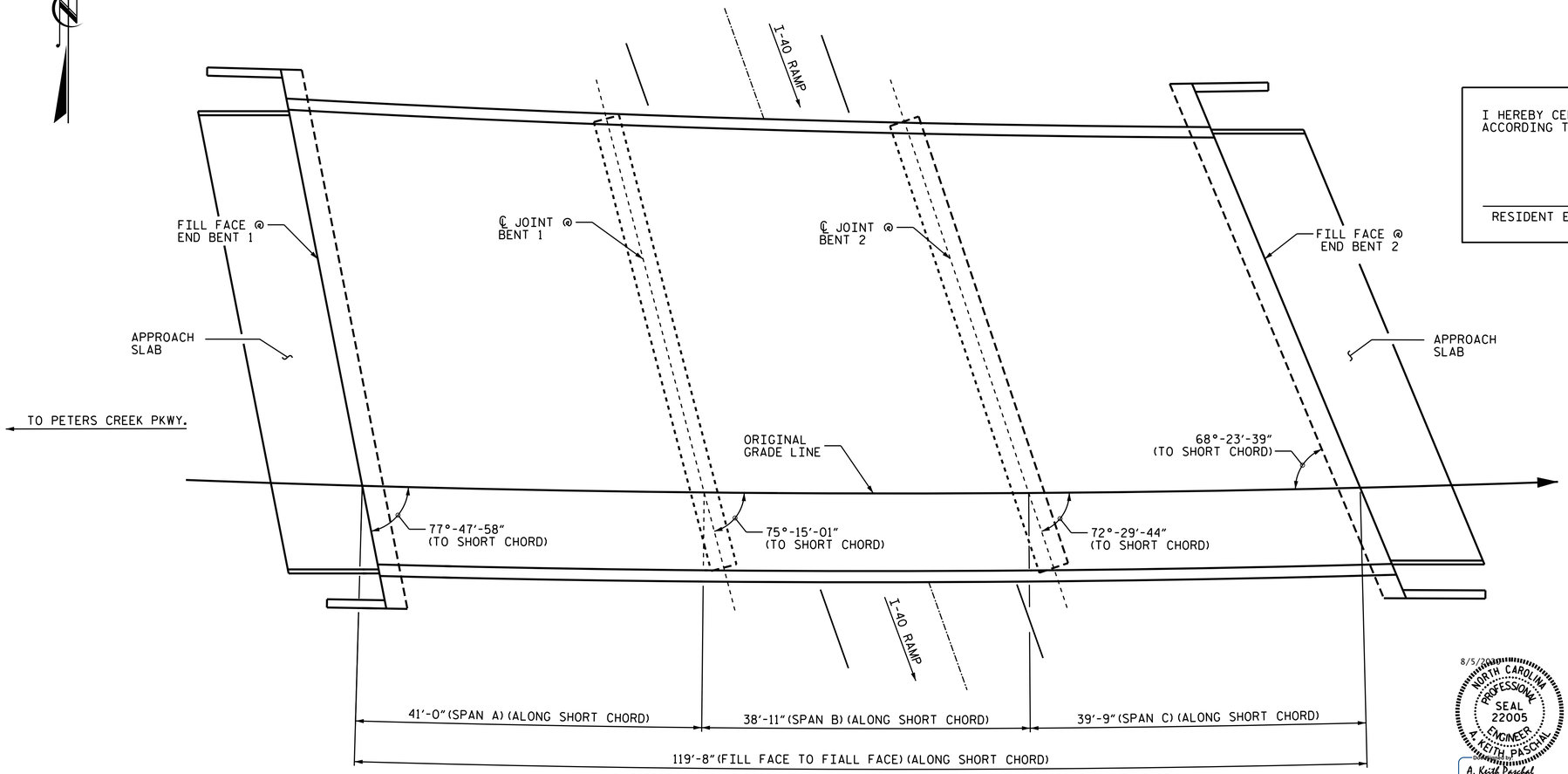
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/22/2018.

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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

GROOVE PPC BRIDGE DECK.

INJECT CONCRETE CRACKS WITH EPOXY RESIN.

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

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

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

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

RESIDENT ENGINEER DATE

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330481

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
A. Keith Paschal
F8B6ADED82FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by:
Krishna Pr Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 WBL OVER I-40 RAMP

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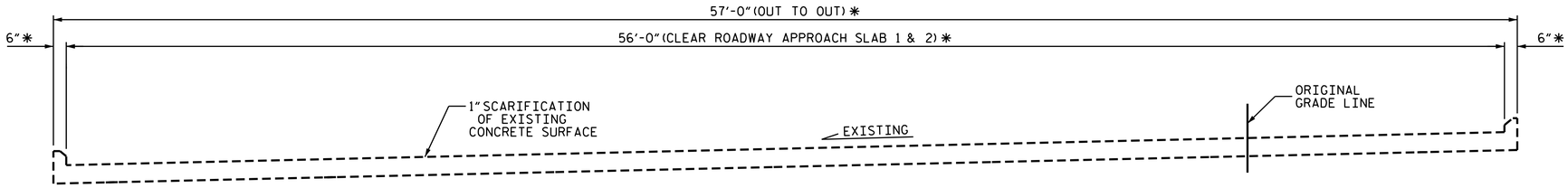
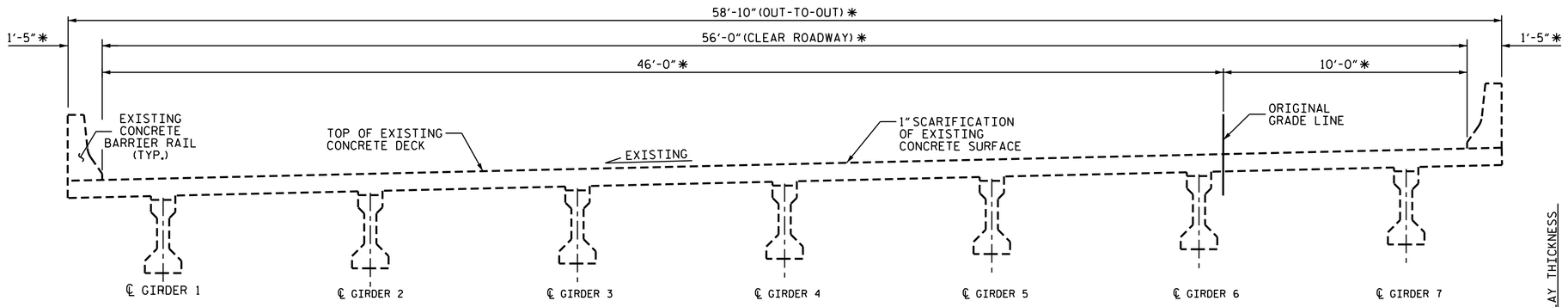
NOTE:
SEE TRANSPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF OVERLAY SURFACE PREPARATION AND POLYSESTER POLYMER CONCRETE PLACEMENT.



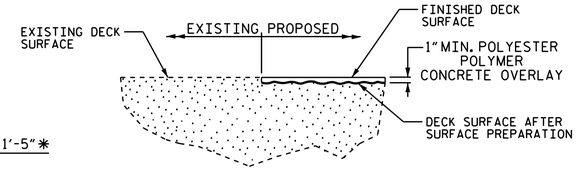
TYPICAL SECTION - APPROACH SLAB

(EXISTING)
*RADIAL DIMENSION



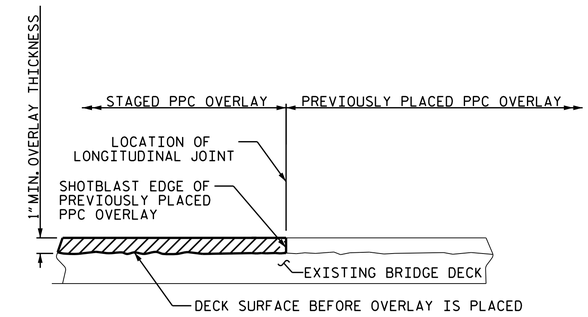
TYPICAL SECTION

(EXISTING)
*RADIAL DIMENSION

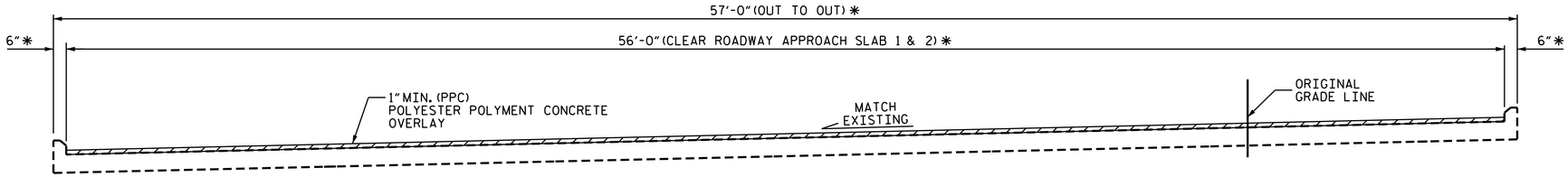


DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY

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

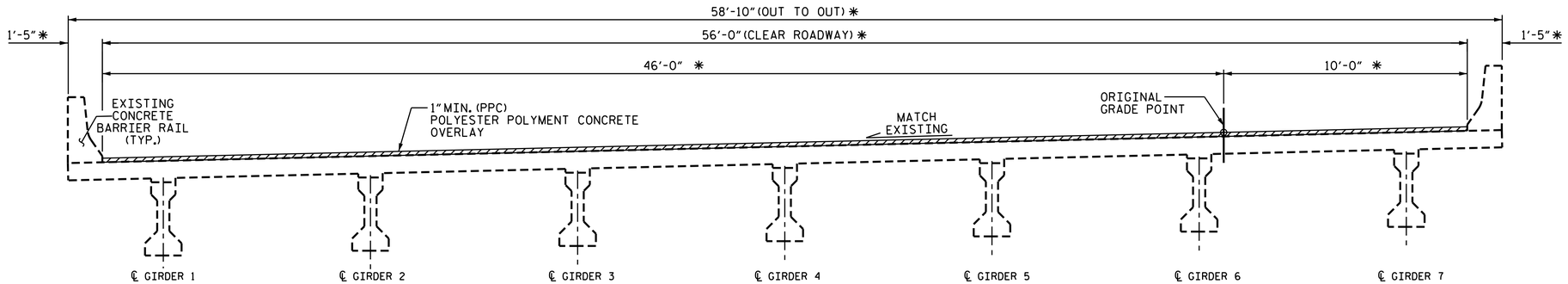


STAGED PPC OVERLAY JOINT



TYPICAL SECTION - APPROACH SLAB

(PROPOSED)
*RADIAL DIMENSION



TYPICAL SECTION

(PROPOSED)
*RADIAL DIMENSION

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330481

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAILS

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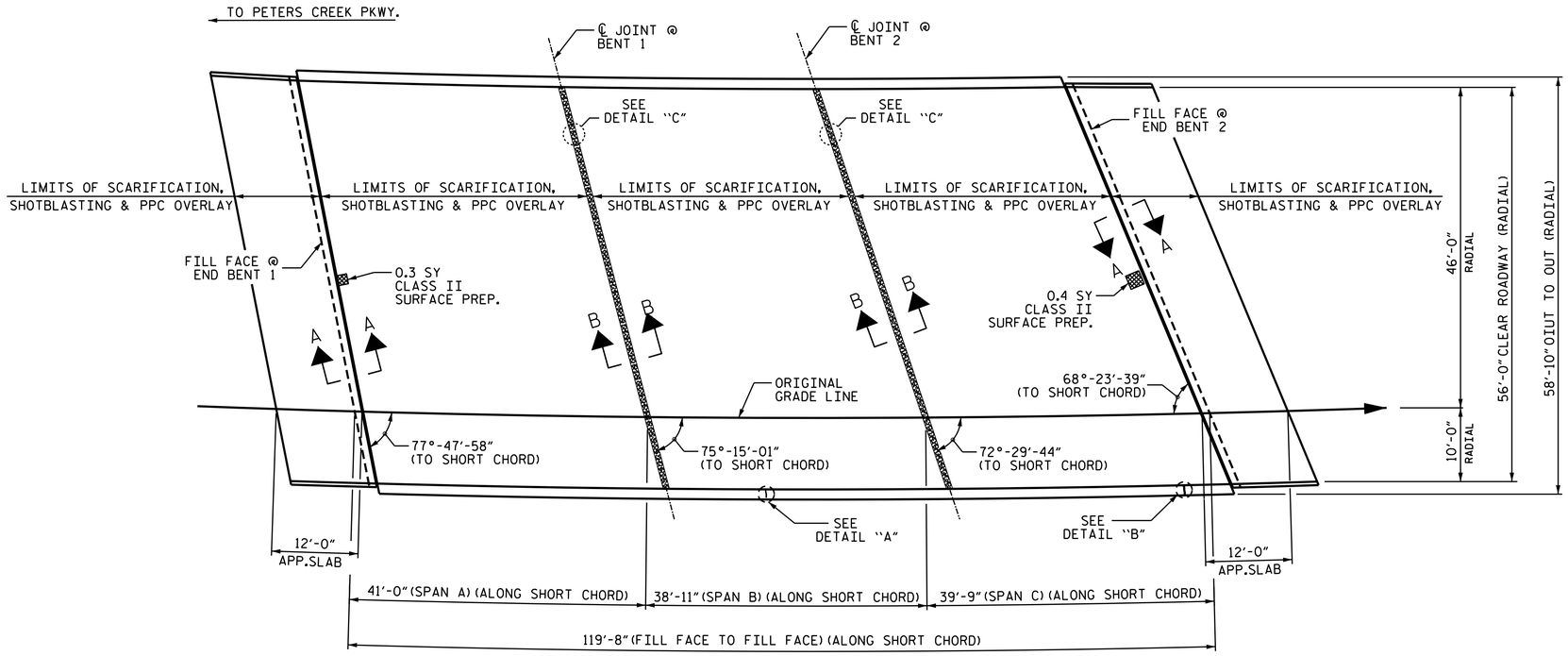
AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK		
APPROACH SLAB 1	69.0 SQ. YDS.	
SPAN A	238.0 SQ. YDS.	
SPAN B	228.0 SQ. YDS.	
SPAN C	229.0 SQ. YDS.	
APPROACH SLAB 2	67.0 SQ. YDS.	
CLASS II SURFACE PREPARATION		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.3 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.4 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.3 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.4 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK		
APPROACH SLAB 1	69.0 SQ. YDS.	
SPAN A	238.0 SQ. YDS.	
SPAN B	228.0 SQ. YDS.	
SPAN C	229.0 SQ. YDS.	
APPROACH SLAB 2	67.0 SQ. YDS.	
PPC MATERIALS		
APPROACH SLAB 1	2.4 CU. YDS.	
SPAN A	8.3 CU. YDS.	
SPAN B	8.0 CU. YDS.	
SPAN C	8.0 CU. YDS.	
APPROACH SLAB 2	2.3 CU. YDS.	
PLACING AND FINISHING PPC OVERLAY		
APPROACH SLAB 1	69.0 SQ. YDS.	
SPAN A	238.0 SQ. YDS.	
SPAN B	228.0 SQ. YDS.	
SPAN C	229.0 SQ. YDS.	
APPROACH SLAB 2	67.0 SQ. YDS.	
GROOVING BRIDGE FLOORS		
APPROACH SLAB 1	547.0 SQ. FT.	
SPAN A	2007.0 SQ. FT.	
SPAN B	1924.0 SQ. FT.	
SPAN C	1926.0 SQ. FT.	
APPROACH SLAB 2	540.0 SQ. FT.	
EPOXY RISIN INJECTION		
SPAN A	0.0 LIN. FT.	
SPAN B	2.0 LIN. FT.	
SPAN C	2.0 LIN. FT.	
EPOXY COATING CONCRETE GIRDER ENDS		
SPAN A	263.4 SQ. FT.	
SPAN B	263.4 SQ. FT.	
SPAN C	263.4 SQ. FT.	

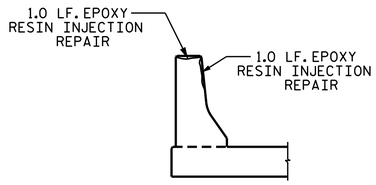
EPOXY COATING

	ESTIMATE	ACTUAL
END BENT 1	116.3 SQ. FT.	
BENT 1	177.9 SQ. FT.	
BENT 2	209.0 SQ. FT.	
END BENT 2	123.6 SQ. FT.	

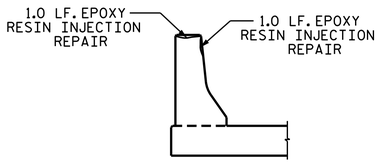


PLAN OF SPANS

APPROX. CLASS II SURFACE PREPARATION
EPOXY RESIN INJECTION (ERI)
BRIDGE JOINT @ BENTS



DETAIL "A"



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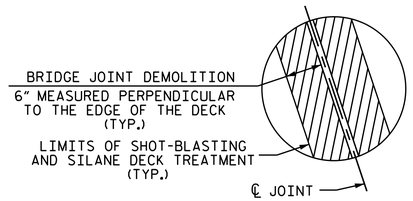

DETAIL "C"

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

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

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

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

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.

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
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PROJECT NO. I-5795
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BRIDGE NO. 330481

STATE OF NORTH CAROLINA
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RALEIGH

DECK SURFACE REPAIR AND APPROACH SLAB

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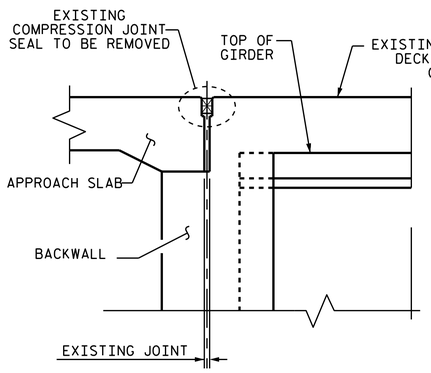
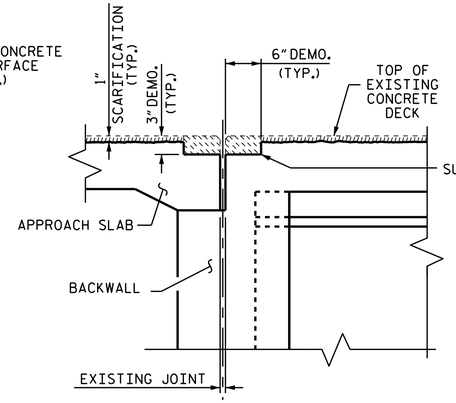
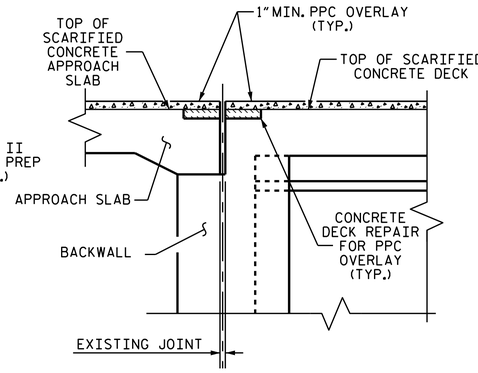


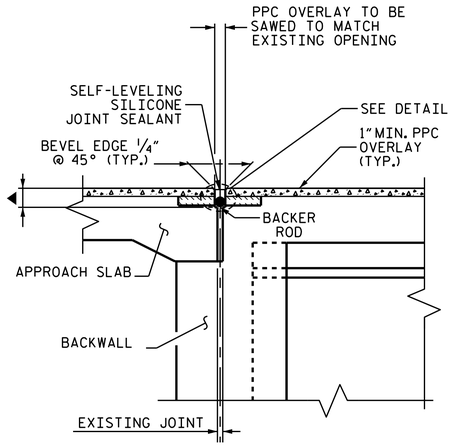
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

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 NOTADEQUATE 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.

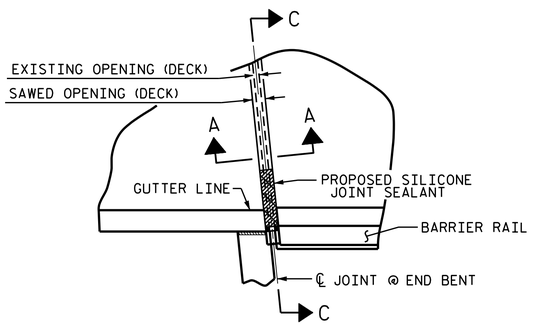
A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

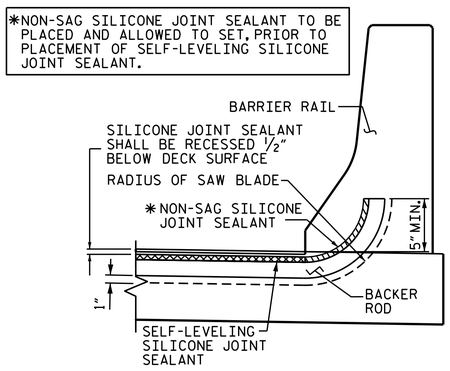
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT END BENTS

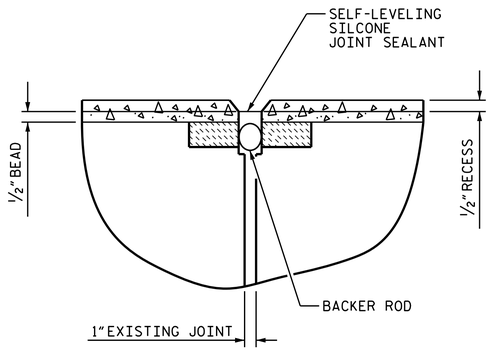
SECTION A-A



PLAN



SECTION C-C



DETAIL A

JOINT SEAL DETAILS AT END BENTS

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	58.5 LF	
END BENT 1	61.5 LF	
TOTAL	120.0 LF	

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	6.4 SY	6.4 SY
END BENT 2	6.7 SY	6.7 SY
* TOTAL	13.1 SY	13.1 SY

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330481

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

EA6F7941508F487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

DRAWN BY : E. BAYISSA DATE : 09/2019

CHECKED BY : A. SORSENGINH DATE : 01/2020

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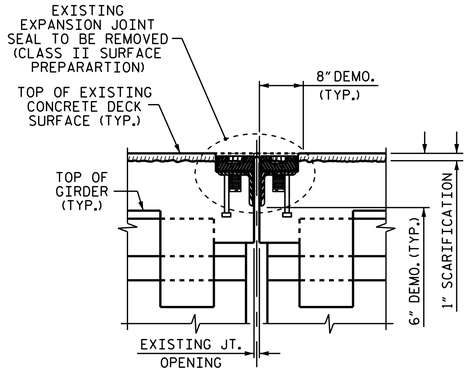
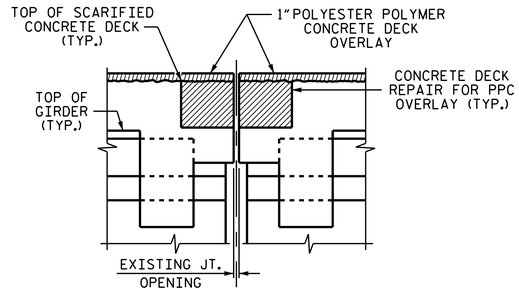
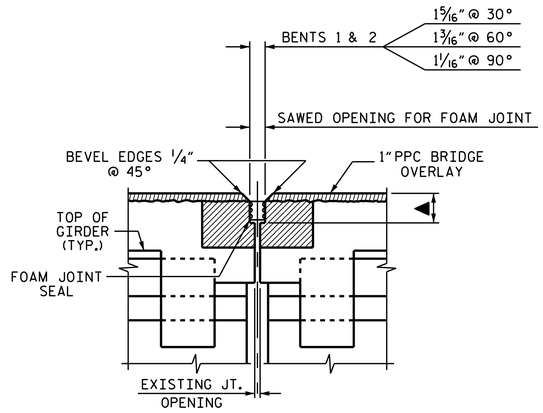


MINIMUM EXISTING JOINT DEMOLITION



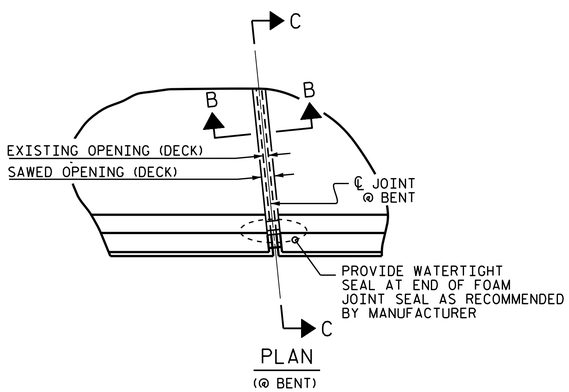
PROPOSED PRE-SAWED JOINT



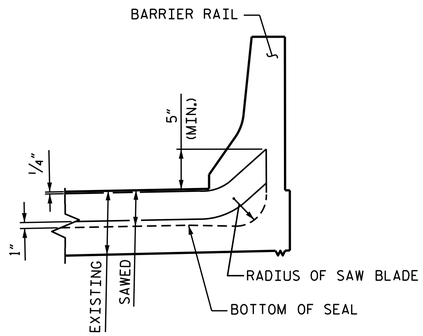
PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN
(@ BENT)



SECTION C-C

JOINT SEAL DETAILS AT BENTS

▲ SAW CUT SHALL BE ¾" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
BENT 1	8.6 SY	8.6 SY
BENT 2	8.7 SY	8.7 SY
✳ TOTAL	17.3 SY	17.3 SY

✳ BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	57.9 LF	
BENT 2	58.7 LF	
TOTAL	116.6 LF	

NOTES

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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 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.

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

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.

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 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.

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 ¼", NOTIFY ENGINEER REVISION TO THE JOINT SEAL SIZE MIGHT BE NECESSARY.

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-5795
FORSYTH COUNTY
BRIDGE NO. 330481

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS
BENTS 1 & 2

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CHECKED BY : E. BAYISSA DATE : 5/2020

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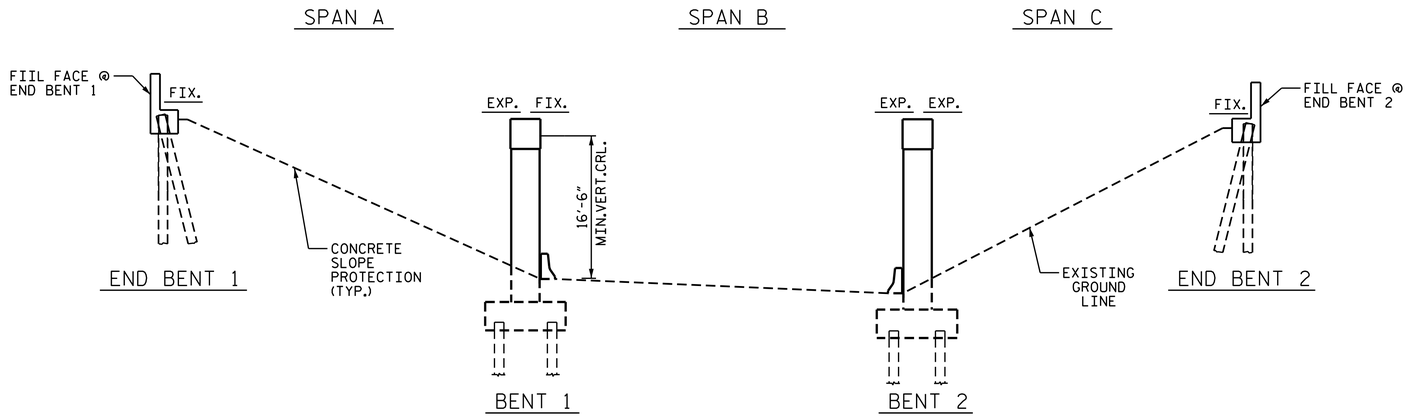
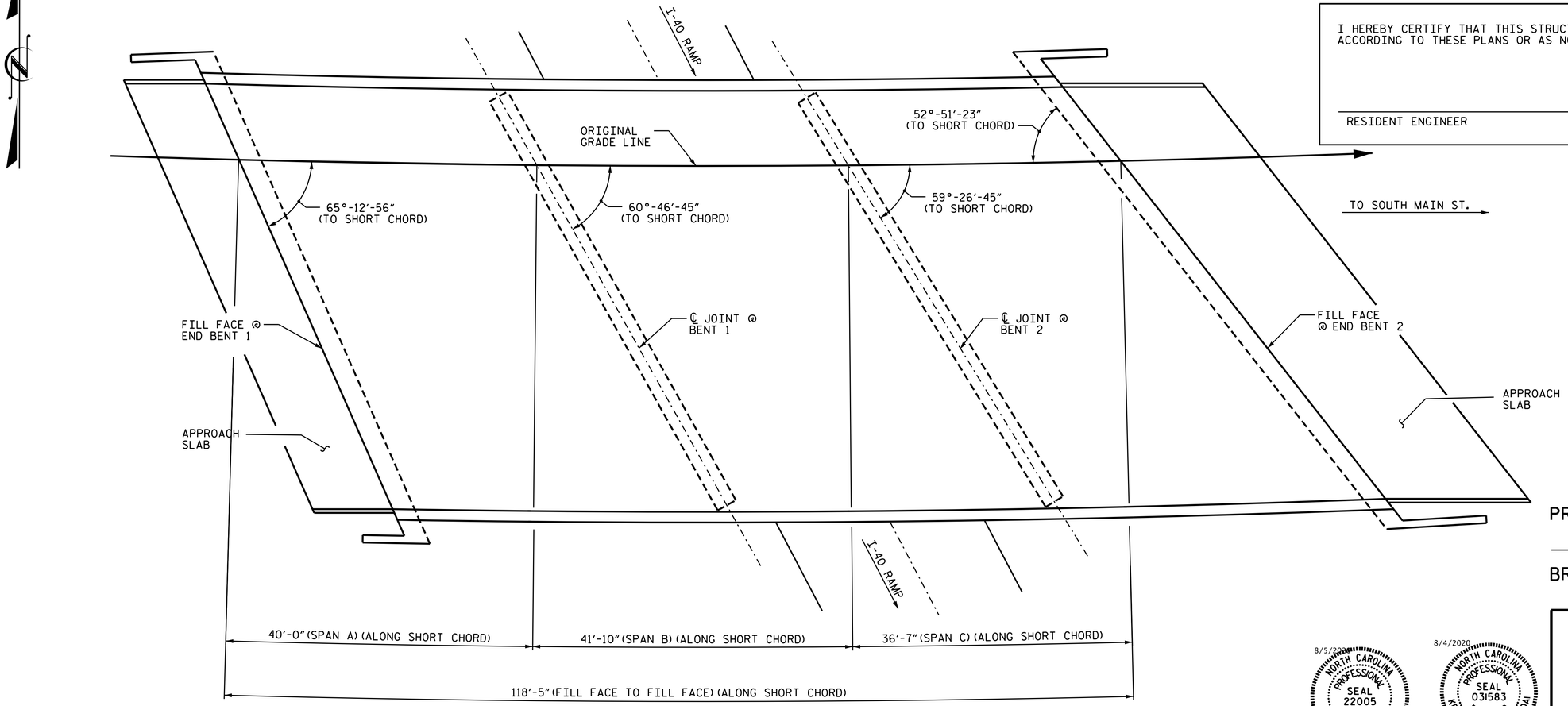
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/22/2018.

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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

GROOVE PPC BRIDGE DECK.

INJECT CONCRETE CRACKS WITH EPOXY RESIN.

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

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

PROPERLY PREPARE SPALLED AREAS IN EXISTING END BENTS AND BENTS, AND PRERFORM SHOTCRETE AND CONCRETE REPAIRS.

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

RESIDENT ENGINEER DATE

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
Docusigned by: A. Keith Paschal
F8B6AD80DB2FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F794150BF4B7...

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330482

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 EBL OVER I-40 RAMP

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DRAWN BY : E.BAYISSA DATE : 07/2019
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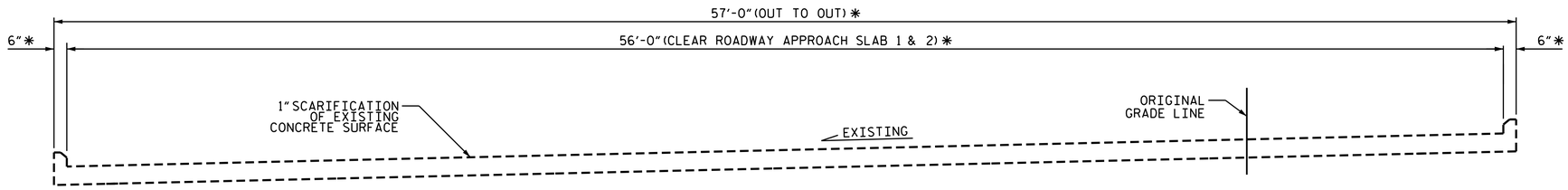
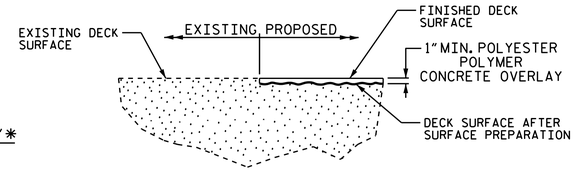
NOTE:
SEE TRANASPORTATION MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGINGOF OVERLAY SURFACE PREPARATION AND POLYSETER POLYMER CONCRETE PLACEMENR.



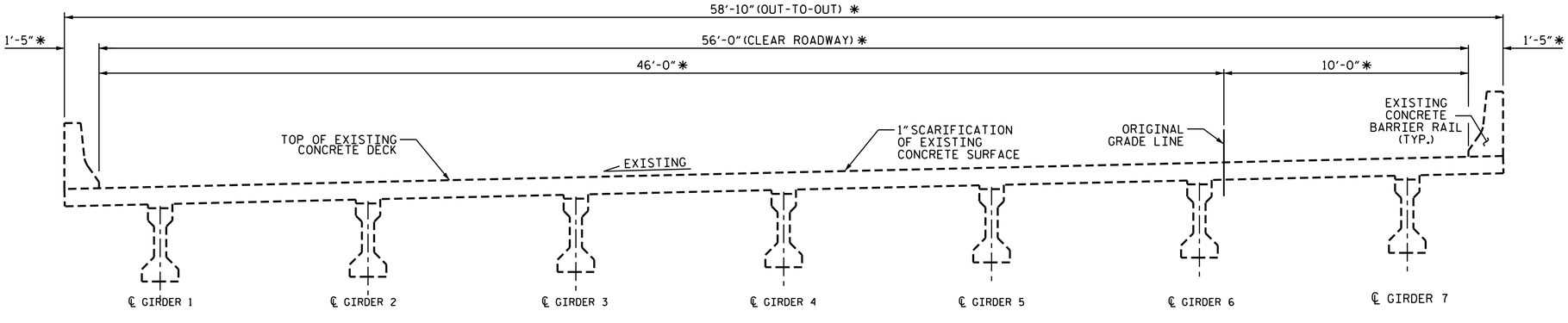
TYPICAL SECTION - APPROACH SLAB

(EXISTING)
RADIAL DIMENSION *



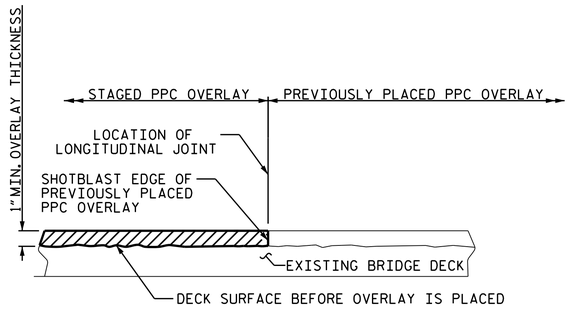
DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY

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

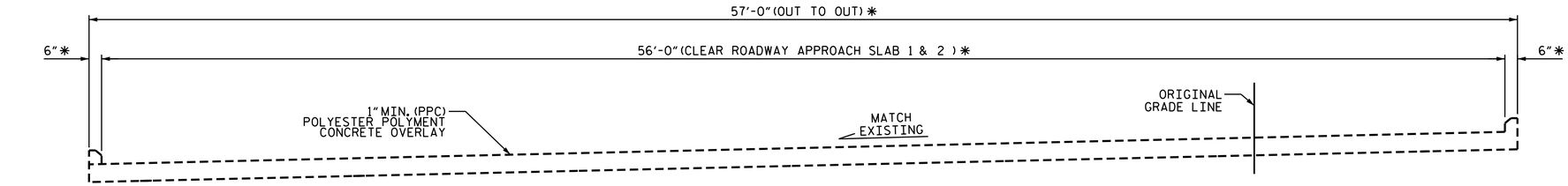


TYPICAL SECTION

(EXISTING)
RADIAL DIMENSION *

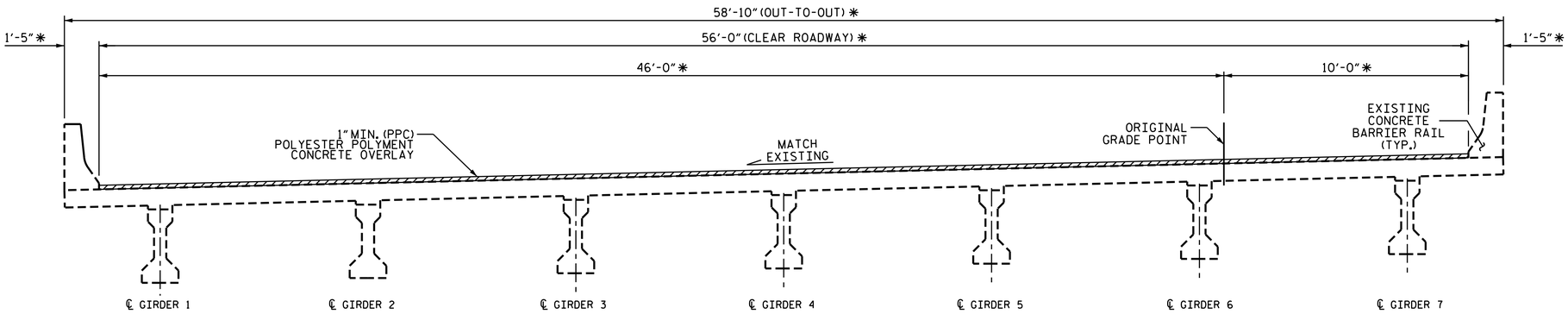


STAGED PPC OVERLAY JOINT



TYPICAL SECTION - APPROACH SLAB

(PROPOSED)
RADIAL DIMENSION *



TYPICAL SECTION

(PROPOSED)
RADIAL DIMENSION *

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330482

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
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DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAILS

DRAWN BY : E.BAYISSA DATE : 07/2019
CHECKED BY : A.SORSENGINH DATE : 01/2020

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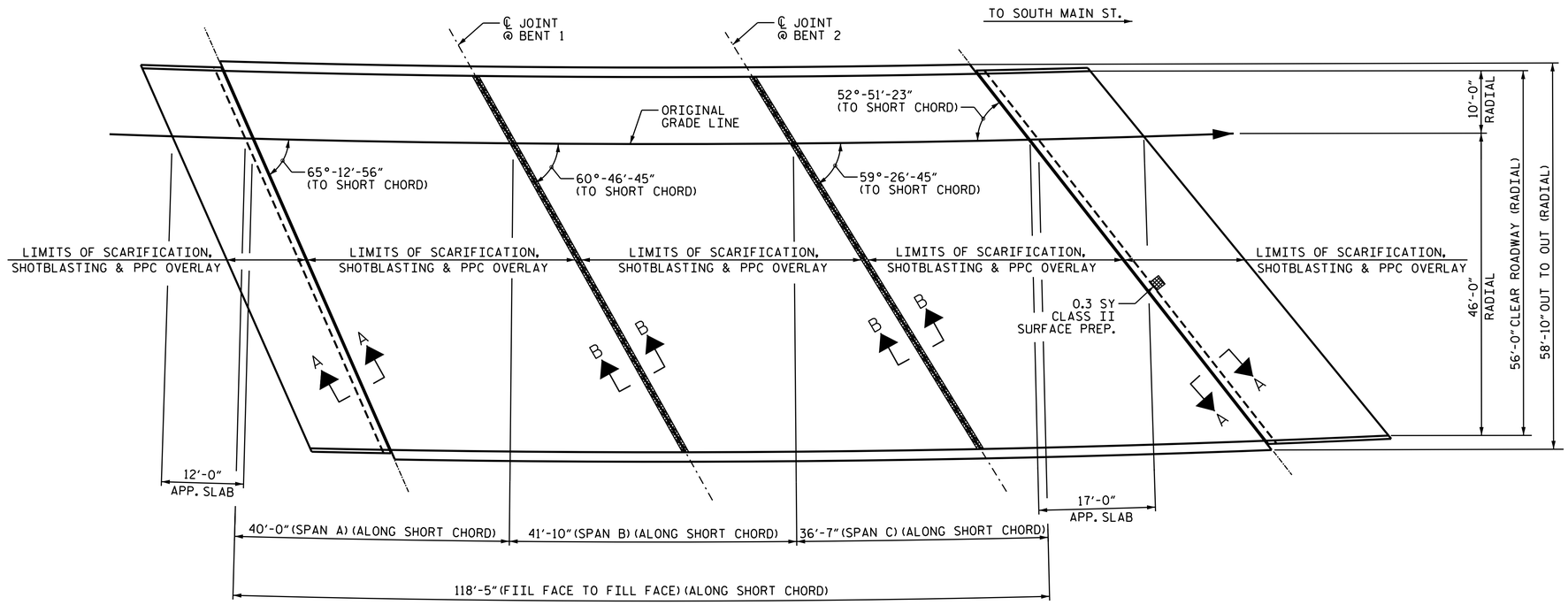
AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK		
APPROACH SLAB 1	67.0 SQ. YDS.	
SPAN A	251.0 SQ. YDS.	
SPAN B	260.0 SQ. YDS.	
SPAN C	233.0 SQ. YDS.	
APPROACH SLAB 2	101.0 SQ. YDS.	
CLASS II SURFACE PREPARATION		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.3 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.3 SQ. YDS.	
SHOTBLASTING BRIDGE DECK		
APPROACH SLAB 1	67.0 SQ. YDS.	
SPAN A	251.0 SQ. YDS.	
SPAN B	260.0 SQ. YDS.	
SPAN C	233.0 SQ. YDS.	
APPROACH SLAB 2	101.0 SQ. YDS.	
PPC MATERIALS		
APPROACH SLAB 1	2.3 CU. YDS.	
SPAN A	8.7 CU. YDS.	
SPAN B	9.0 CU. YDS.	
SPAN C	8.1 CU. YDS.	
APPROACH SLAB 2	3.5 CU. YDS.	
PLACING AND FINISHING PPC OVERLAY		
APPROACH SLAB 1	67.0 SQ. YDS.	
SPAN A	251.0 SQ. YDS.	
SPAN B	260.0 SQ. YDS.	
SPAN C	233.0 SQ. YDS.	
APPROACH SLAB 2	101.0 SQ. YDS.	
GROOVING BRIDGE FLOORS		
APPROACH SLAB 1	535.0 SQ. FT.	
SPAN A	2117.0 SQ. FT.	
SPAN B	2191.0 SQ. FT.	
SPAN C	1967.0 SQ. FT.	
APPROACH SLAB 2	819.0 SQ. FT.	
EPOXY COATING CONCRETE GIRDER ENDS		
SPAN A	263.4 SQ. FT.	
SPAN B	263.4 SQ. FT.	
SPAN C	263.4 SQ. FT.	

EPOXY COATING

	ESTIMATE	ACTUAL
END BENT 1	137.0 SQ. FT.	
BENT 1	197.1 SQ. FT.	
BENT 2	199.5 SQ. FT.	
END BENT 2	161.2 SQ. FT.	



PLAN OF SPANS

APPROX. CLASS II SURFACE PREPARATION

BRIDGE JOINT @ BENTS

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

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

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

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

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-5795

FORSYTH COUNTY

BRIDGE NO. 330482

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR AND APPROACH SLAB

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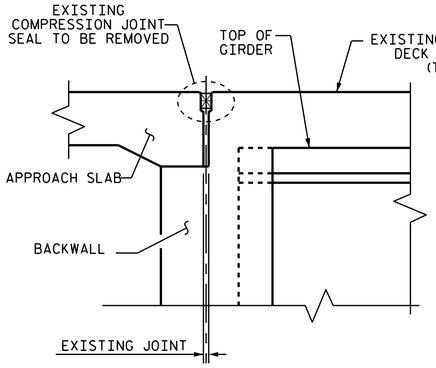
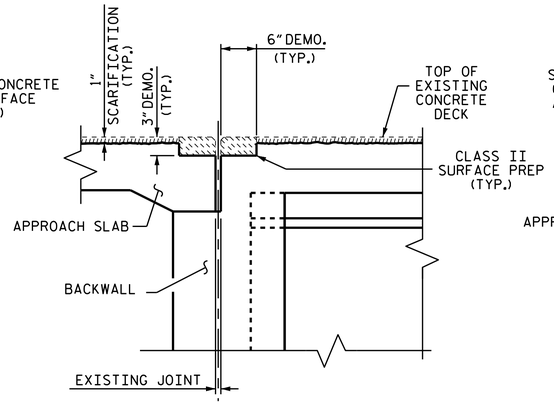
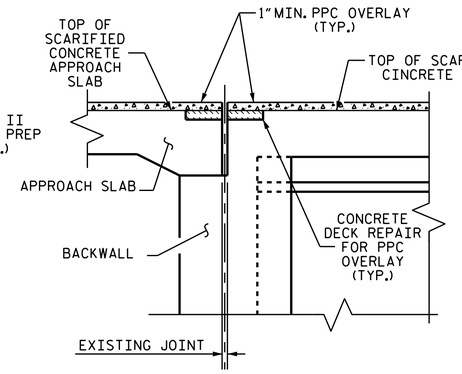


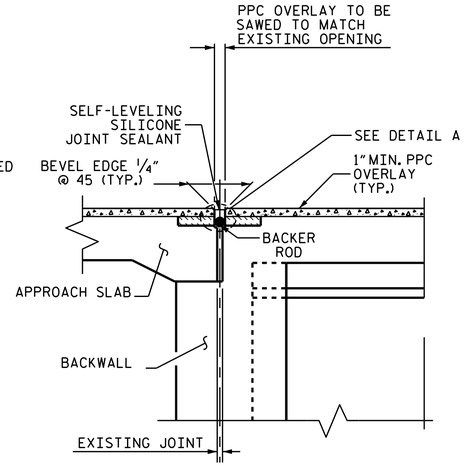
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

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 NOTADEQUATE 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.

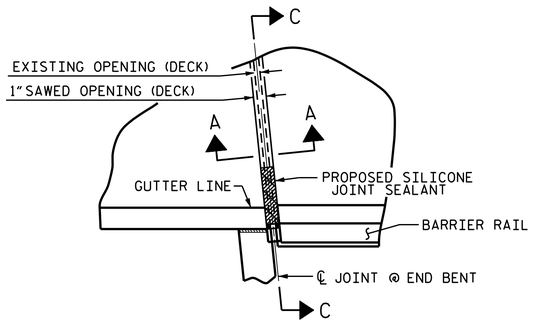
A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

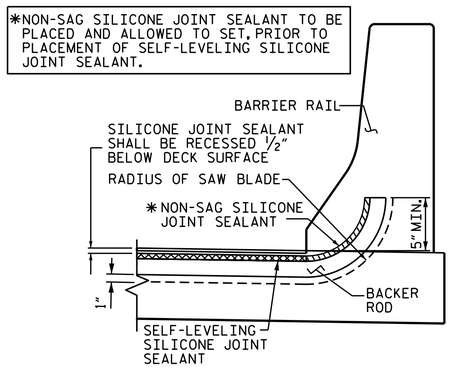
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.

JOINT INSTALLATION SEQUENCE AT END BENTS

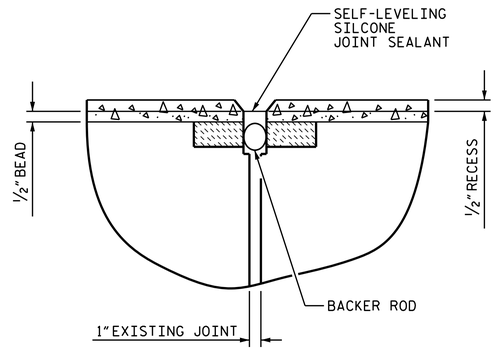
SECTION A-A



PLAN
(@ END BENT)



SECTION C-C



DETAIL A

JOINT SEAL DETAILS AT END BENTS

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	63.0 LF	
END BENT 2	71.7 LF	
TOTAL	134.7 LF	

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	6.9 SY	6.9 SY
END BENT 2	7.8 SY	7.8 SY
* TOTAL	14.7 SY	14.7 SY

*BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330482

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

REVISIONS						SHEET NO.
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2			4			5

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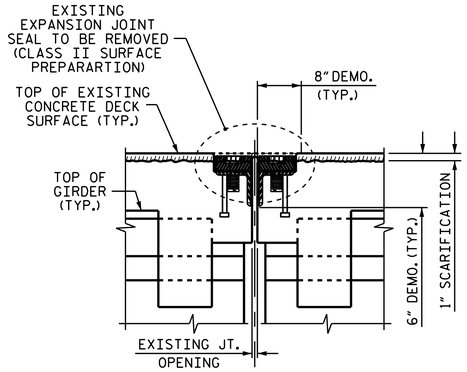
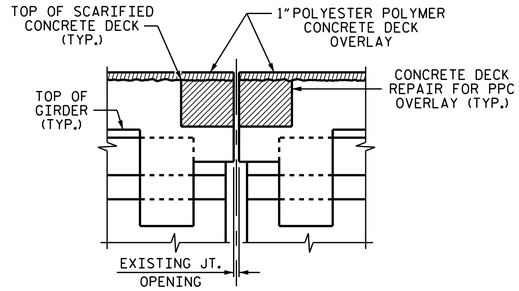
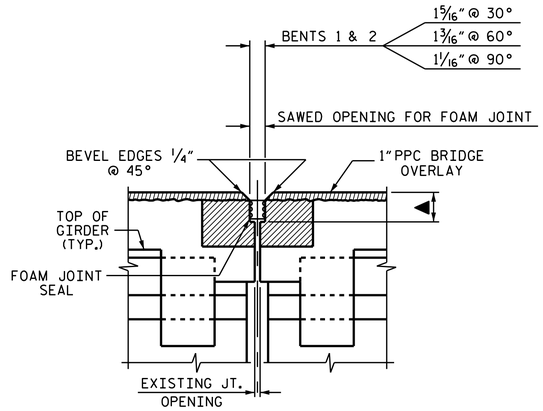


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT



PROPOSED FOAM JOINT SEAL

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

NOTES

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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 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.

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

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.

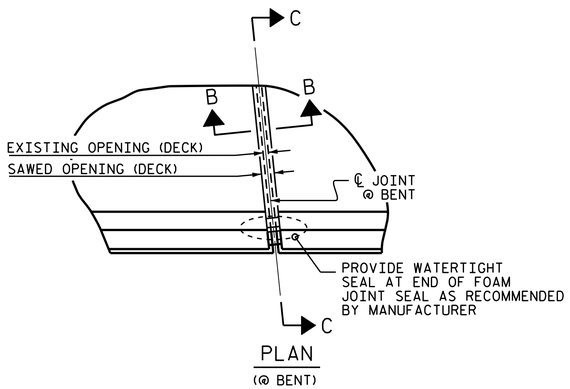
FINAL JOINT SEALS SHALL NOT BE INSTALLED UNTIL THE OVERLAY IS COMPLETE.

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.

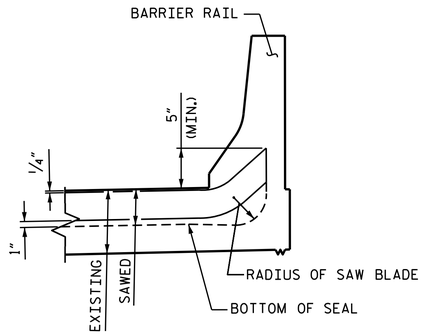
THE MANUFACTURER IS TO PROVIDE THE NOMINAL UNCOMPRESSED SEAL WIDTH OF THE BACKER ROD FOR THE EXISTING JOINT SIZE AND ACCOMMODATE THE MINIMUM EXPANSION SHOWN ON THE PLANS.

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.

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.



PLAN (@ BENT)



SECTION C-C

JOINT SEAL DETAILS AT BENTS

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
BENT 1	9.5 SY	9.5 SY
BENT 2	9.7 SY	9.7 SY
* TOTAL	19.2 SY	19.2 SY

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	64.2 LF	
BENT 2	65.0 LF	
TOTAL	129.2 LF	

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330482

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS
BENTS 1 & 2

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CHECKED BY : E. BAYISSA DATE : 5/2020

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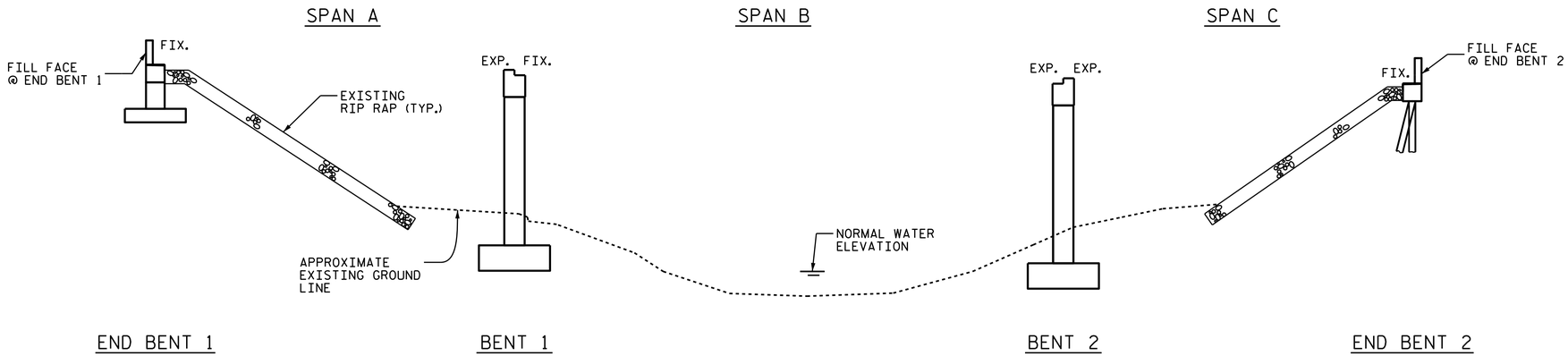
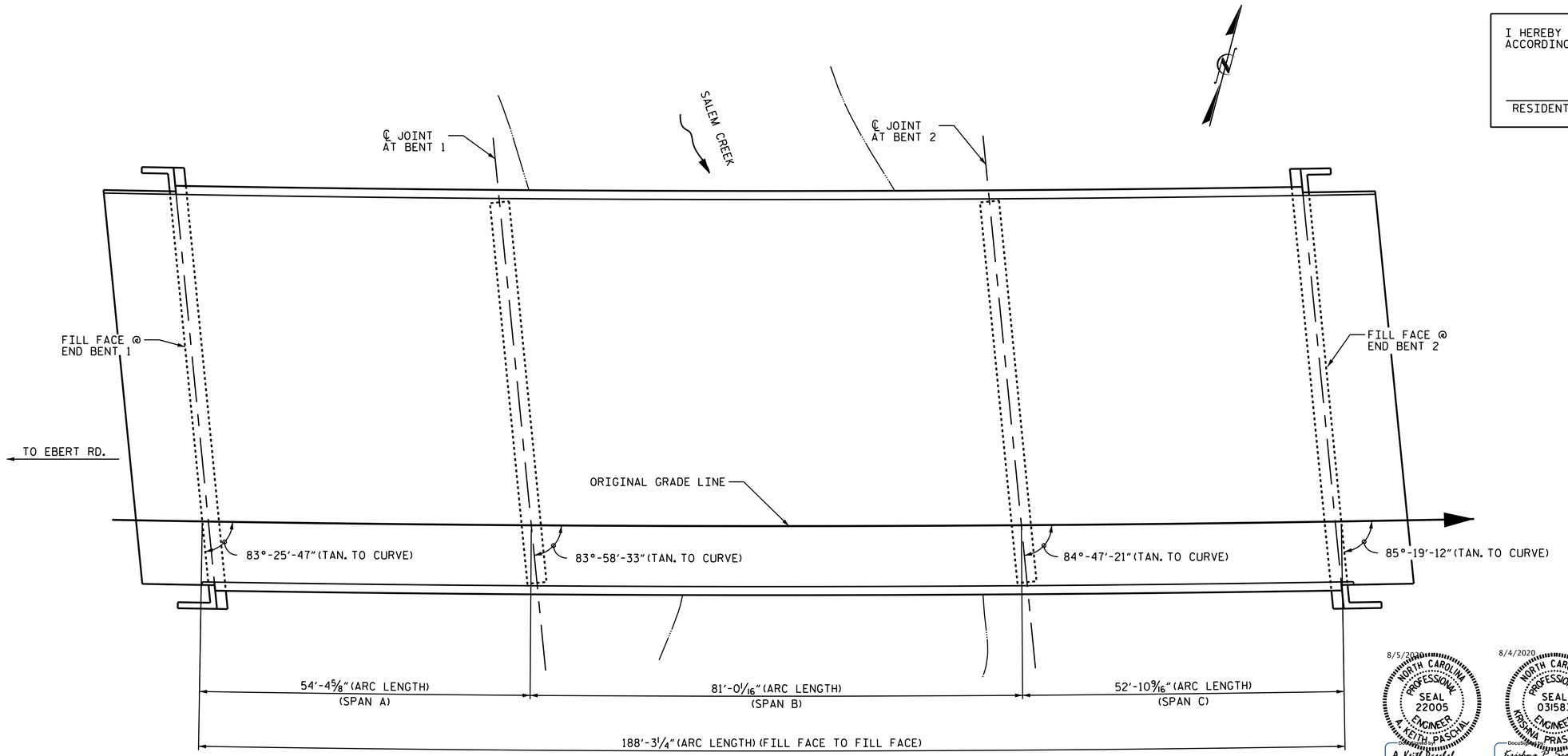
F.A. PROJECT NO.: NHPP-0040(032)



SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES:

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/05/2018.

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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

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

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

RESIDENT ENGINEER DATE

8/5/2020 NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL — Docusigned by: A. Keith Paschal F8B6AD6DB2FC48F...

8/4/2020 NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDH — Docusigned by: Krishna Prasad Sedai EA6F794150BF4B7...

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330486

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING FOR BRIDGE ON I-40(WBL) OVER SALEM CREEK

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DRAWN BY : C. RUIZ DATE : 06/2019
CHECKED BY : E. BAYISSA DATE : 01/2020

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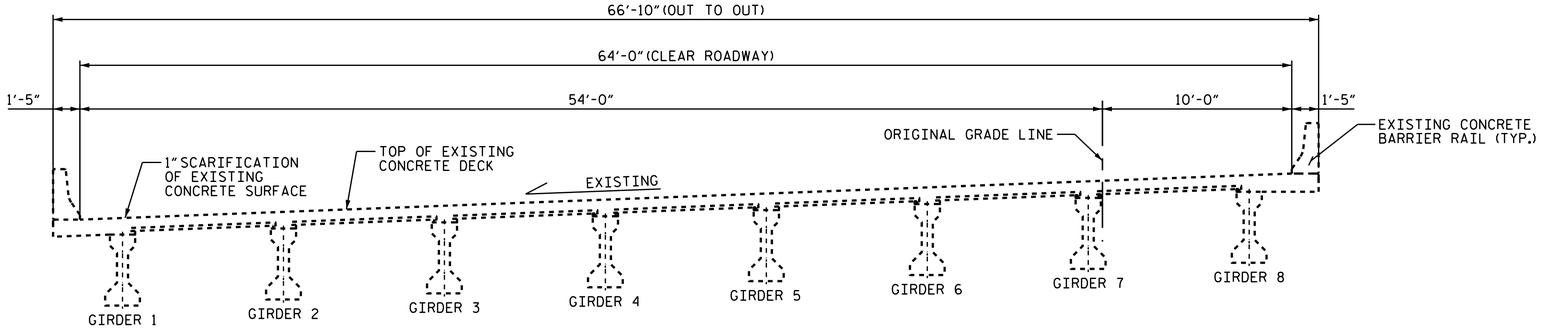
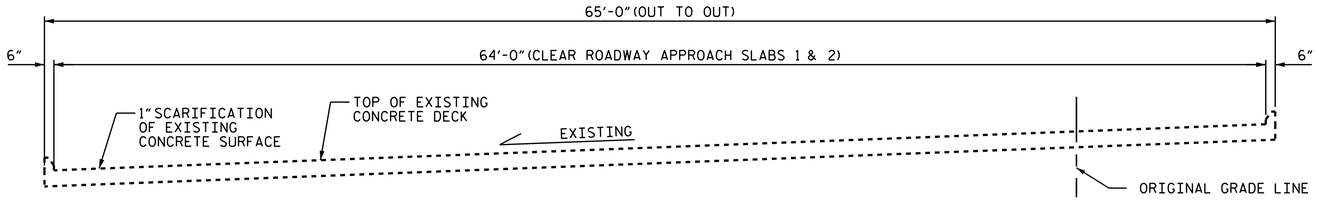
NOTES:

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



TYPICAL SECTION
(EXISTING)



TYPICAL SECTION - APPROACH SLAB
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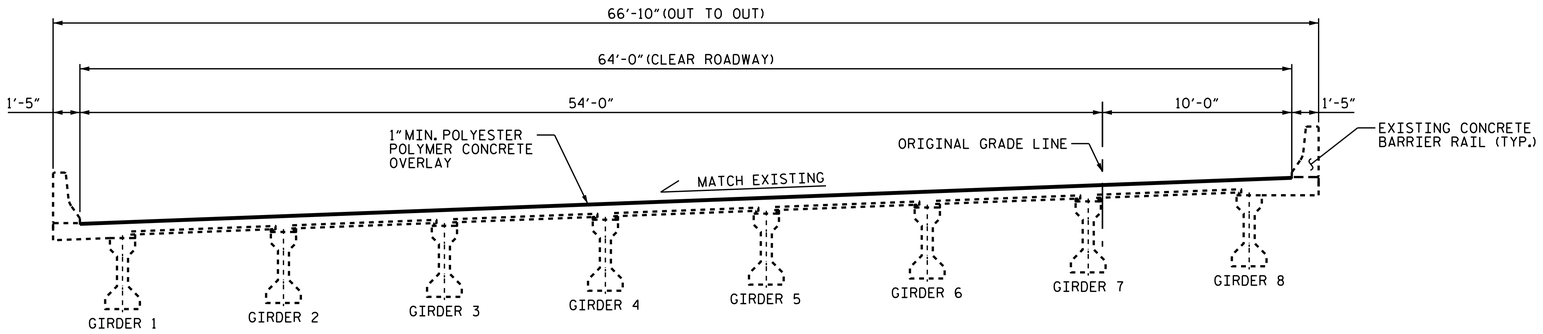
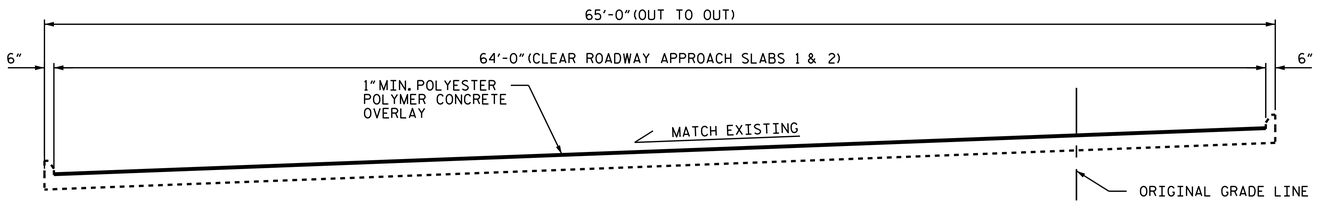
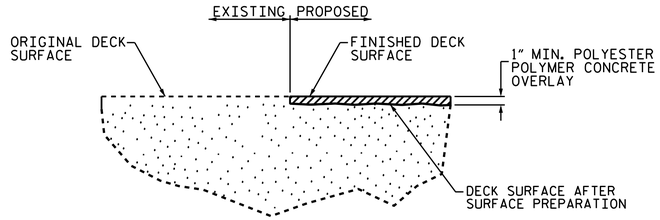


TYPICAL SECTION
(PROPOSED)

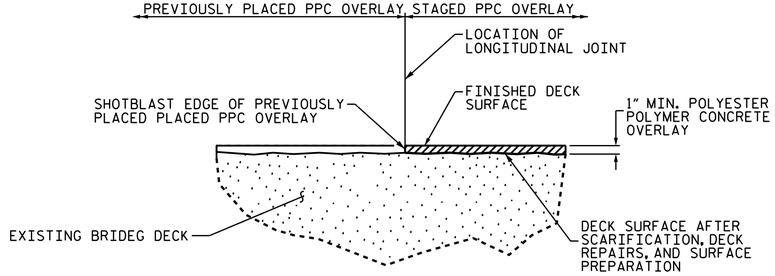


TYPICAL SECTION - APPROACH SLAB
(PROPOSED)



DETAIL FOR POLYESTER POLYMER CONCRETE OVERLAY

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



STAGED PPC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330486

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE TYPICAL SECTION & PPC OVERLAY DETAIL

DRAWN BY :	C. RUIZ	DATE :	06/2019
CHECKED BY :	E. BAYISSA	DATE :	01/2020

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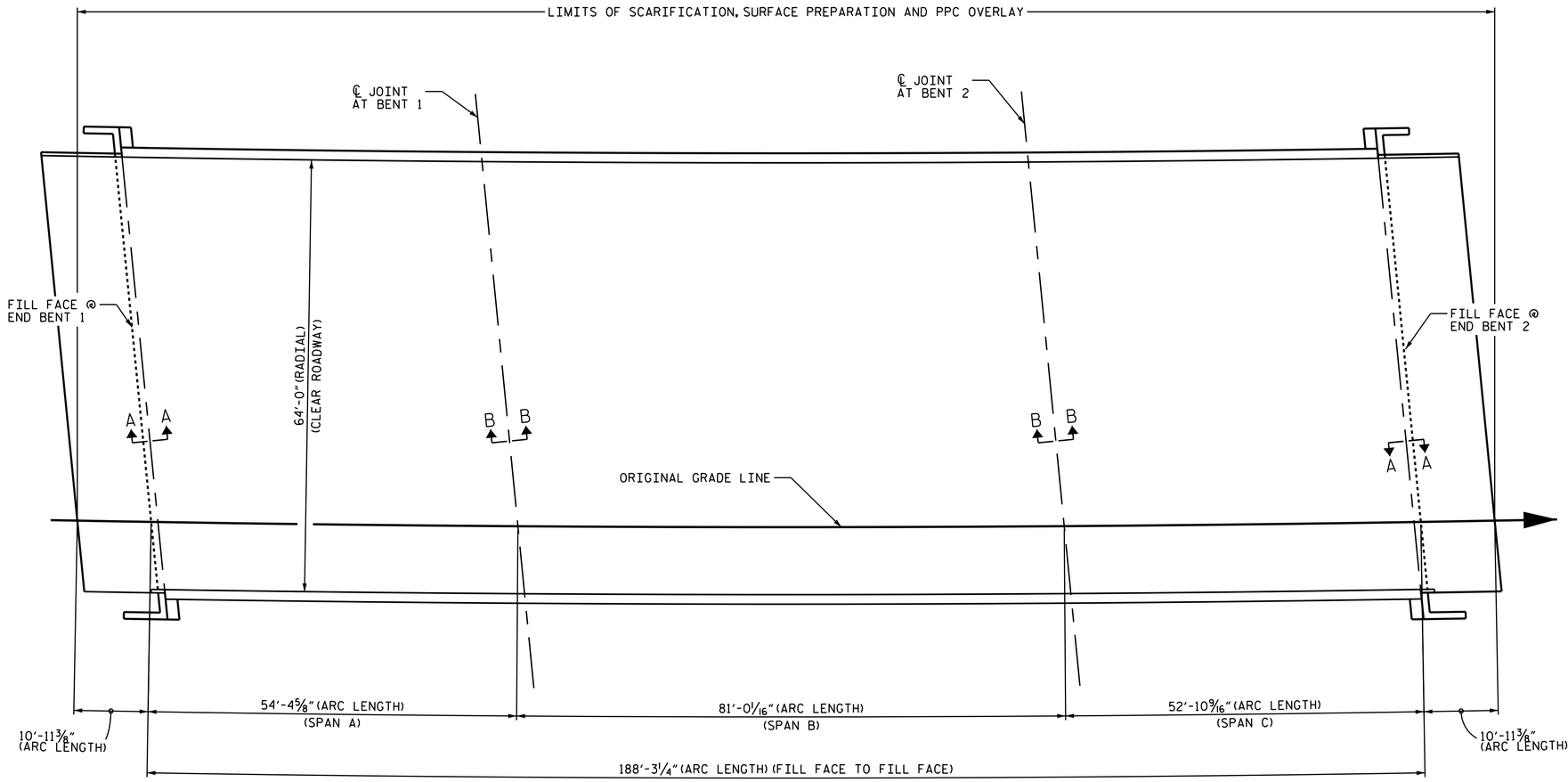
AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK		
APPROACH SLAB 1	85 SQ. YDS.	
SPAN A	379 SQ. YDS.	
SPAN B	576 SQ. YDS.	
SPAN C	369 SQ. YDS.	
APPROACH SLAB 2	85 SQ. YDS.	
CLASS II SURFACE PREPARATION		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK		
APPROACH SLAB 1	85 SQ. YDS.	
SPAN A	379 SQ. YDS.	
SPAN B	576 SQ. YDS.	
SPAN C	369 SQ. YDS.	
APPROACH SLAB 2	85 SQ. YDS.	
PPC MATERIALS		
APPROACH SLAB 1	3.0 CU. YDS.	
SPAN A	13.2 CU. YDS.	
SPAN B	20.0 CU. YDS.	
SPAN C	12.9 CU. YDS.	
APPROACH SLAB 2	3.0 CU. YDS.	
PLACING AND FINISHING PPC OVERLAY		
APPROACH SLAB 1	85 SQ. YDS.	
SPAN A	379 SQ. YDS.	
SPAN B	576 SQ. YDS.	
SPAN C	369 SQ. YDS.	
APPROACH SLAB 2	85 SQ. YDS.	
GROOVING BRIDGE FLOORS		
APPROACH SLAB 1	676 SQ. FT.	
SPAN A	3223 SQ. FT.	
SPAN B	4911 SQ. FT.	
SPAN C	3131 SQ. FT.	
APPROACH SLAB 2	676 SQ. FT.	
EPOXY COATING CONCRETE GIRDER ENDS		
SPAN A	387.4 SQ. FT.	
SPAN B	478.1 SQ. FT.	
SPAN C	387.4 SQ. FT.	

EPOXY COATING

	ESTIMATE	ACTUAL
	AREA SQ. FT.	AREA SQ. FT.
END BENT 1	128.2	0
BENT 1	200.3	0
BENT 2	200.3	0
END BENT 2	127.9	0



PLAN OF SPANS

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

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

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

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

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-5795

FORSYTH COUNTY

BRIDGE NO. 330486

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

DocuSigned by: Krishna P. Sedai

EA6F794150BF487...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR

SPANS A THRU C

DRAWN BY : C. RUIZ DATE : 06/2019

CHECKED BY : E. BAYISSA DATE : 01/2020

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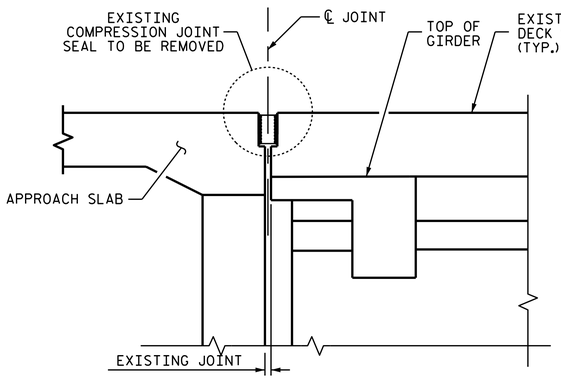
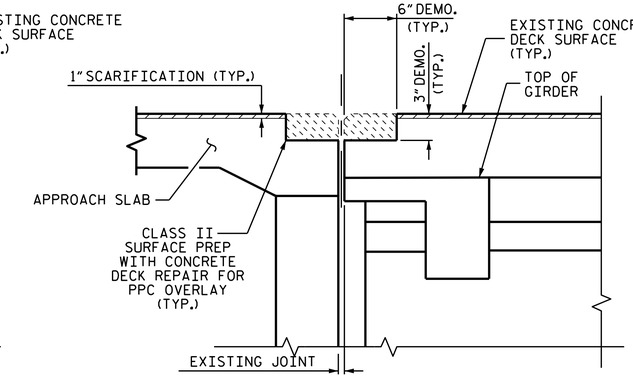
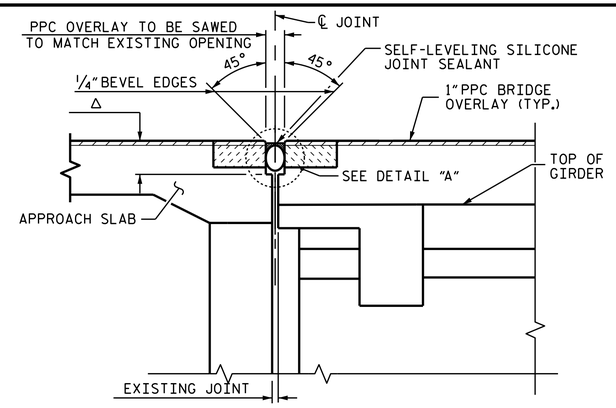


EXISTING JOINT



MINIMUN EXISTING JOINT DEMOLITION & SCARIFICATION

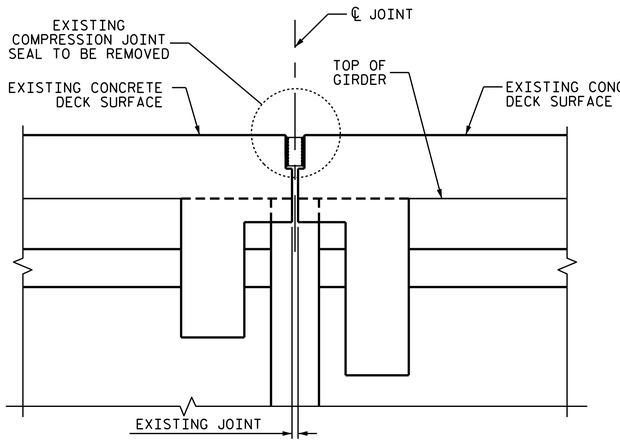


PROPOSED JOINT WITH SAWED DIMENSIONS

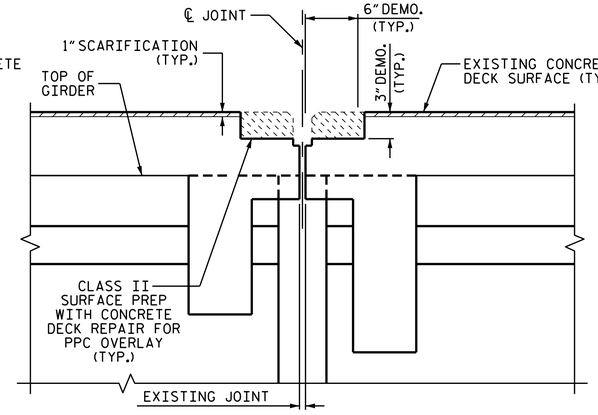
Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

JOINT INSTALLATION SEQUENCE AT END BENTS

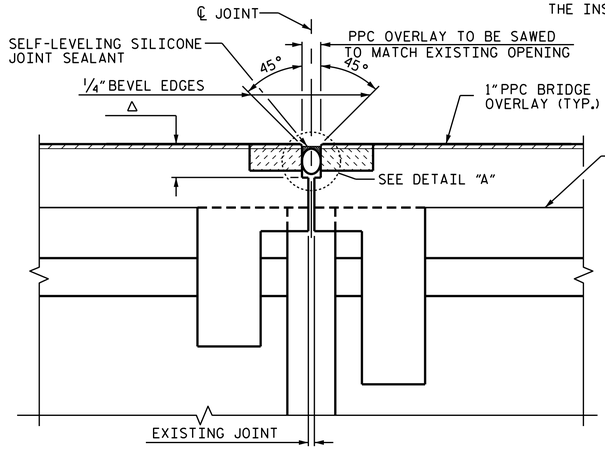
SECTION A-A



EXISTING JOINT



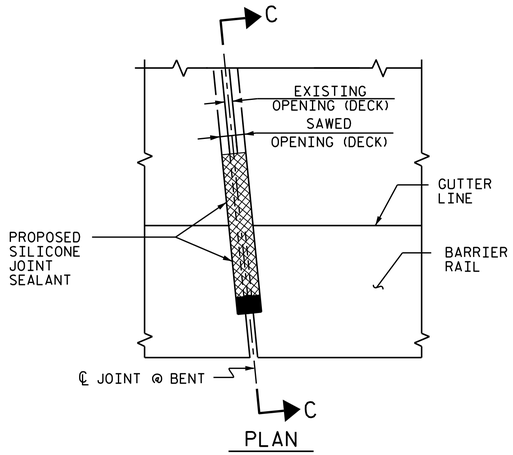
MINIMUN EXISTING JOINT DEMOLITION & SCARIFICATION



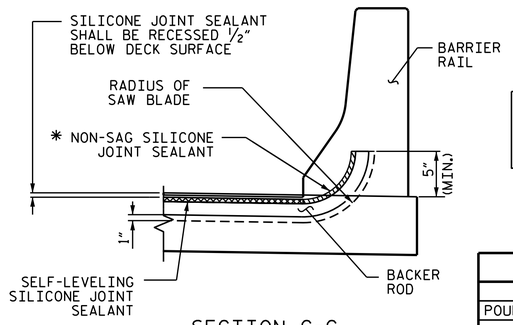
PROPOSED JOINT WITH SAWED DIMENSIONS

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

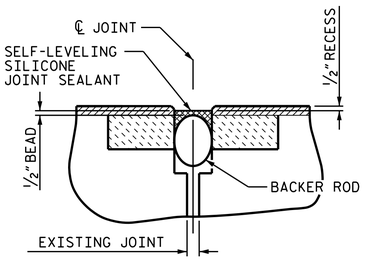


PLAN



SECTION C-C

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



DETAIL "A"

JOINT DETAIL AT BARIER RAIL

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	66 LF	
BENT 1	66 LF	
BENT 2	66 LF	
END BENT 2	66 LF	
TOTAL	264 LF	

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 INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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.

JOINT REPAIR QUANTITY TABLE				
	CLASS II SURFACE PREPARATION		CONCRETE DECK REPAIR FOR PPC OVERLAY	
END BENT 1	7.2	SQ. Y.	7.2	SQ. Y.
BENT 1	7.2	SQ. Y.	7.2	SQ. Y.
BENT 2	7.1	SQ. Y.	7.1	SQ. Y.
END BENT 2	7.1	SQ. Y.	7.1	SQ. Y.
* TOTAL	28.6	SQ. Y.	28.6	SQ. Y.

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330486

STATE OF NORTH CAROLINA
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RALEIGH

JOINT DETAILS

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F7941508F4B7...

DRAWN BY : C. RUIZ DATE : 06/2019
CHECKED BY : E. BAYISSA DATE : 01/2020

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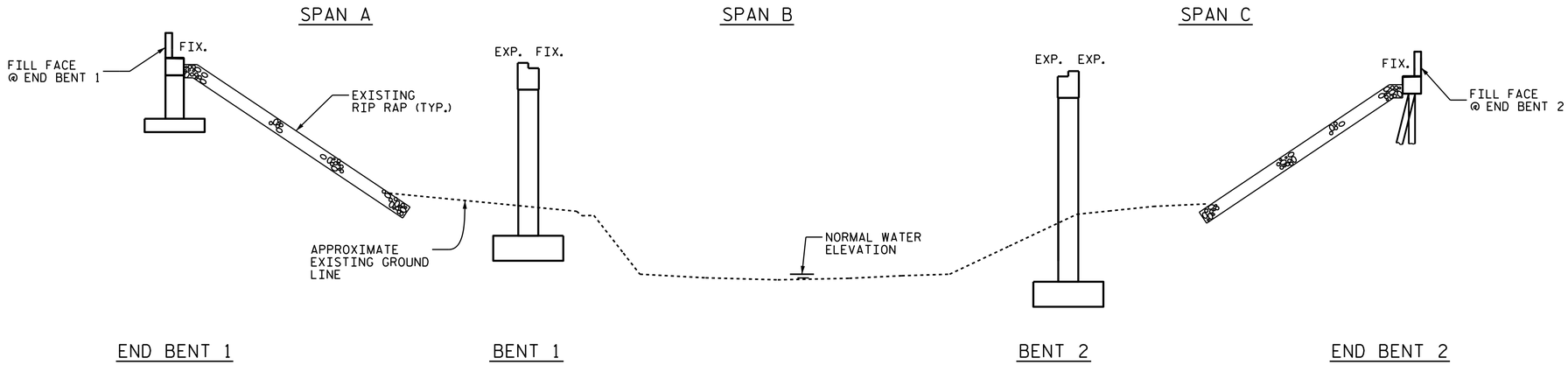
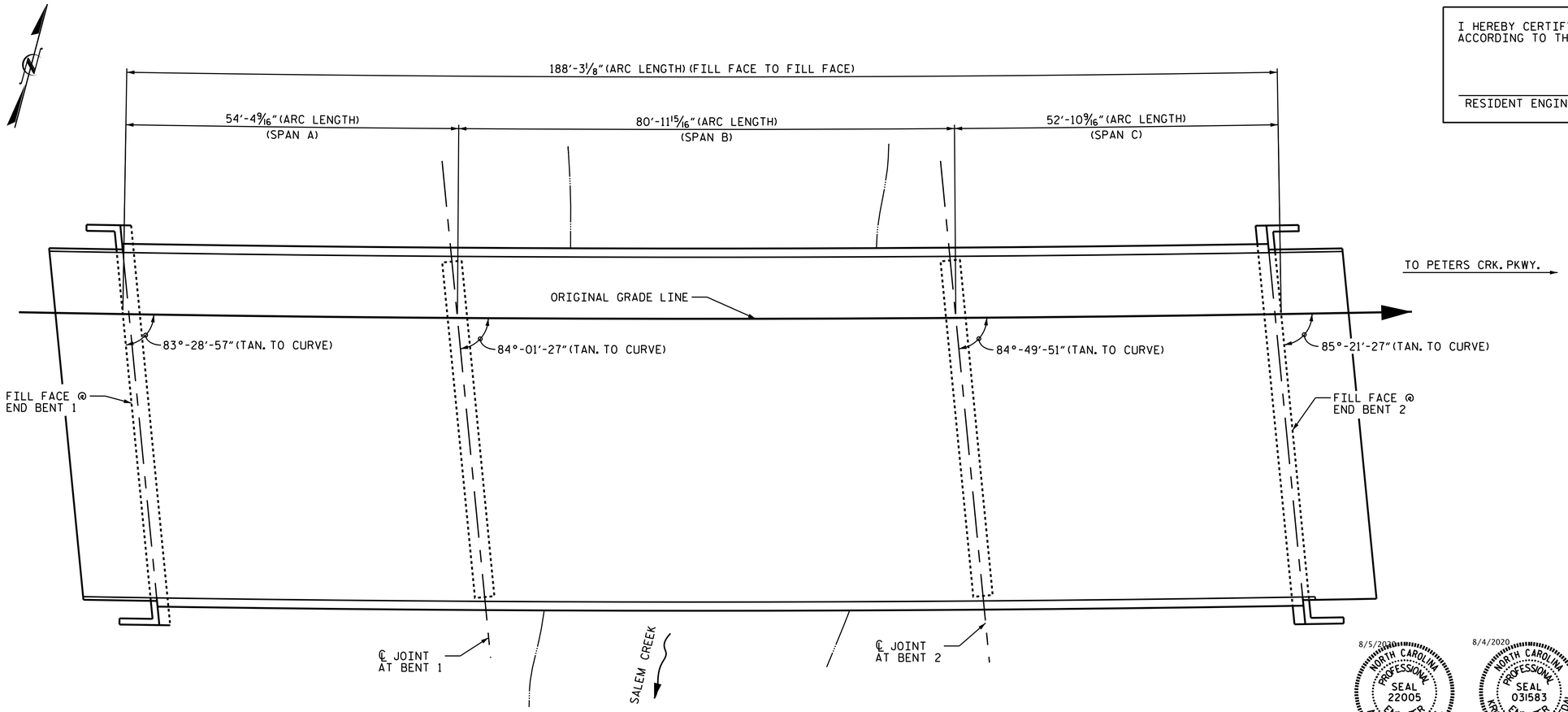


SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/05/2018.

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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

GROOVE PPC BRIDGE DECK.

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

CLEAN AND EPOXY COAT EXISTING PRESTRESSED CONCRETE GIRDER ENDS.

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

RESIDENT ENGINEER DATE

8/5/2020
NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
A. Keith Paschal
F8B6AD6DB2FC48F...

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Krishna P. Sedai
EA6F7941508F4B7...

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330487

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING FOR BRIDGE ON I-40(EBL) OVER SALEM CREEK

DRAWN BY : C. RUIZ DATE : 06/2019
CHECKED BY : E. BAYISSA DATE : 01/2020

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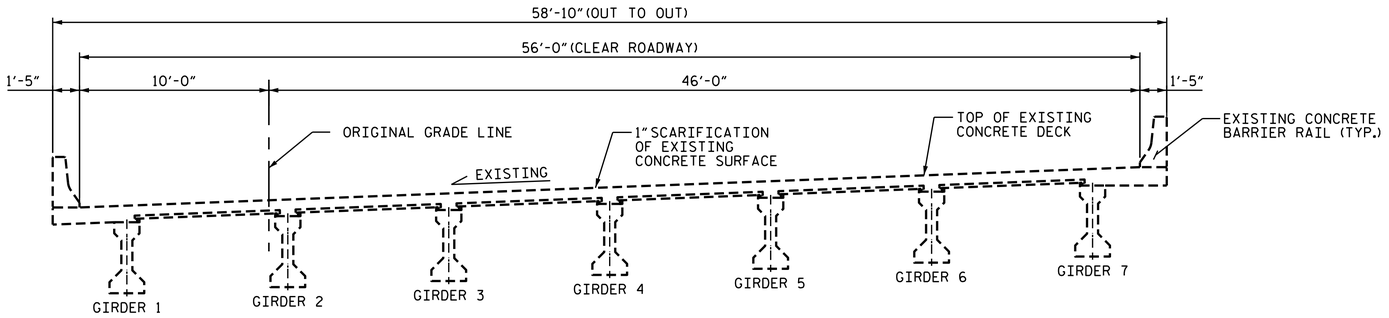
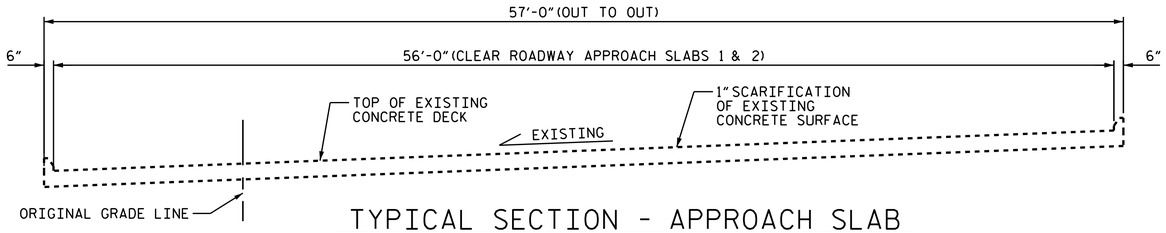
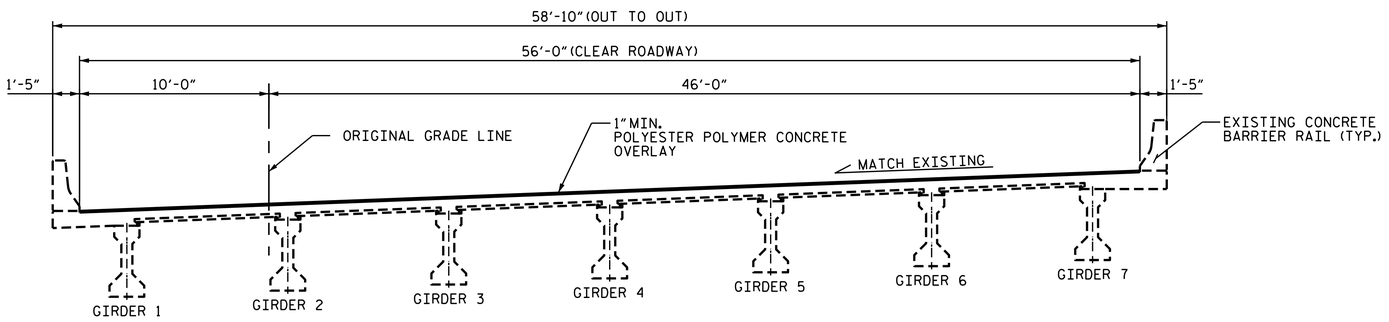


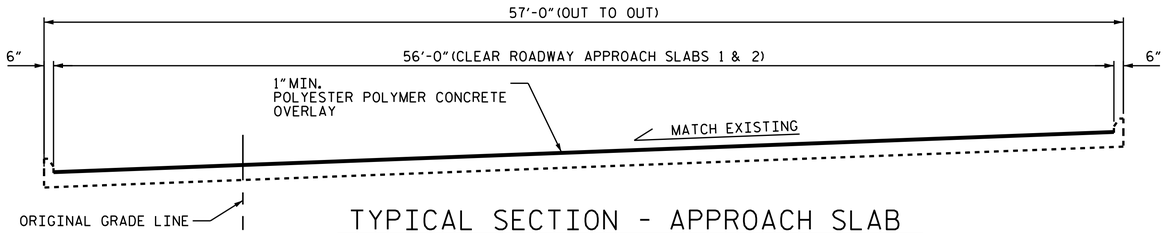
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION - APPROACH SLAB
(EXISTING)

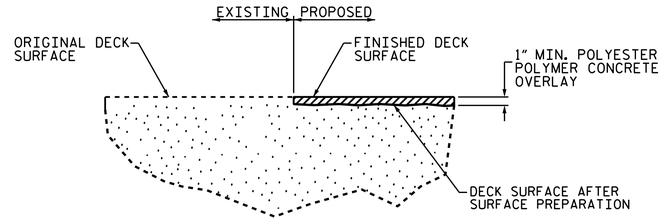


TYPICAL SECTION
(PROPOSED)

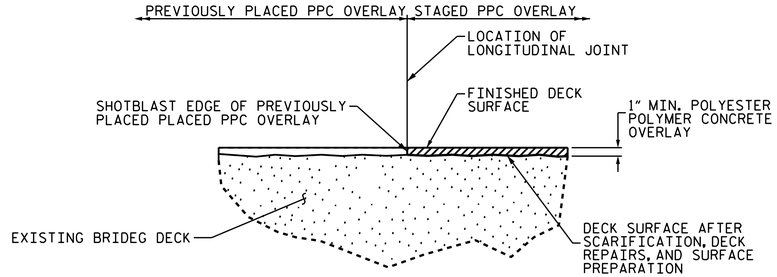


TYPICAL SECTION - APPROACH SLAB
(PROPOSED)

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



DETAIL FOR POLYESTER POLYMER CONCRETE OVERLAY
FINISHED SURFACE ELEVATION SHALL MATCH EXISTING CONCRETE SURFACE ELEVATION. ACTUAL THICKNESS OF PPC OVERLAY MAY VARY



STAGED PPC OVERLAY JOINT
(AS NEEDED)

PROJECT NO. I5795
FORSYTH COUNTY
BRIDGE NO. 330487

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION & PPC OVERLAY DETAIL

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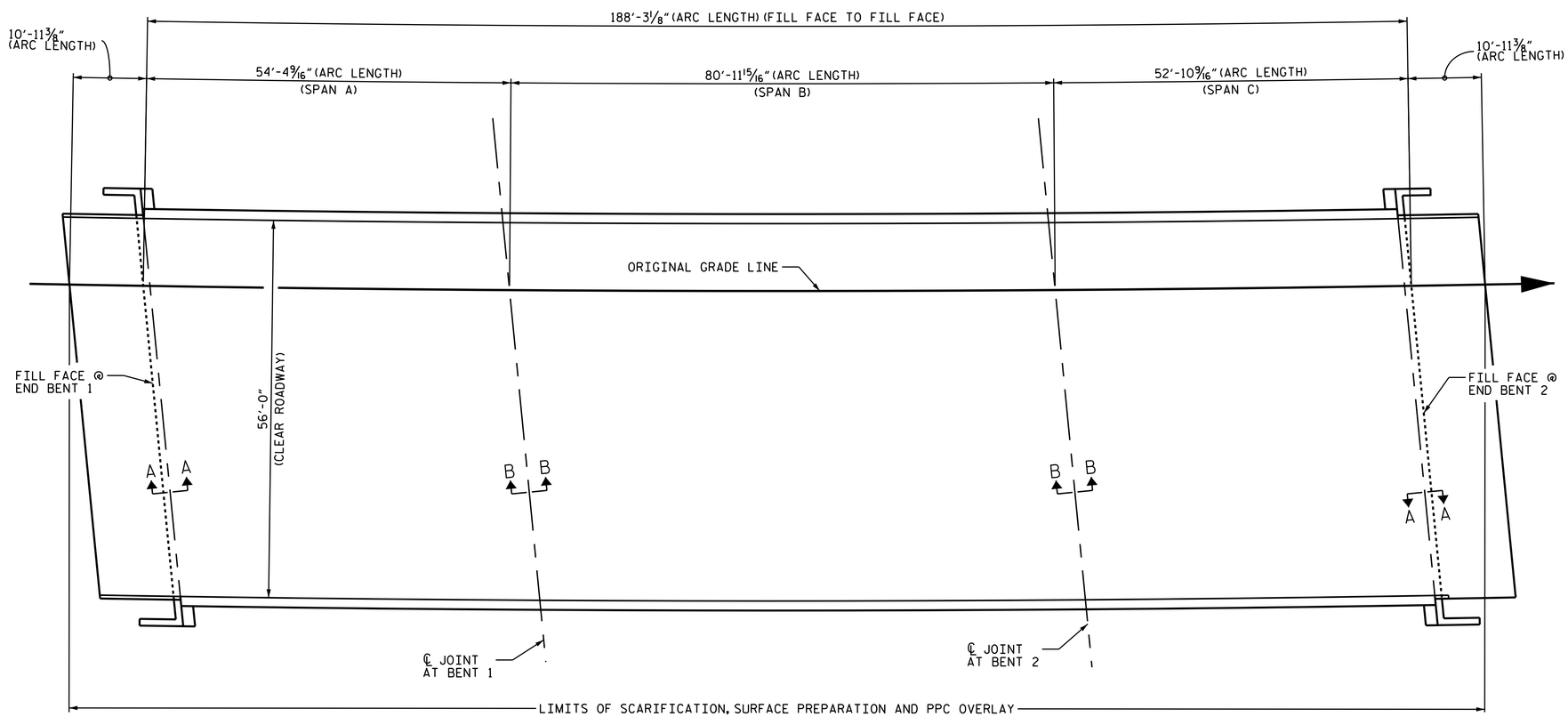
AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS

	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	332 SQ. YDS.	
SPAN B	504 SQ. YDS.	
SPAN C	323 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
CLASS II SURFACE PREPARATION		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY		
APPROACH SLAB 1	0.0 SQ. YDS.	
SPAN A	0.0 SQ. YDS.	
SPAN B	0.0 SQ. YDS.	
SPAN C	0.0 SQ. YDS.	
APPROACH SLAB 2	0.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	332 SQ. YDS.	
SPAN B	504 SQ. YDS.	
SPAN C	323 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
PPC MATERIALS		
APPROACH SLAB 1	2.6 CU. YDS.	
SPAN A	11.6 CU. YDS.	
SPAN B	17.5 CU. YDS.	
SPAN C	11.3 CU. YDS.	
APPROACH SLAB 2	2.6 CU. YDS.	
PLACING AND FINISHING PPC OVERLAY		
APPROACH SLAB 1	75 SQ. YDS.	
SPAN A	332 SQ. YDS.	
SPAN B	504 SQ. YDS.	
SPAN C	323 SQ. YDS.	
APPROACH SLAB 2	75 SQ. YDS.	
GROOVING BRIDGE FLOORS		
APPROACH SLAB 1	587 SQ. FT.	
SPAN A	2800 SQ. FT.	
SPAN B	4266 SQ. FT.	
SPAN C	2721 SQ. FT.	
APPROACH SLAB 2	587 SQ. FT.	
EPOXY COATING CONCRETE GIRDER ENDS		
SPAN A	339.0 SQ. FT.	
SPAN B	418.3 SQ. FT.	
SPAN C	339.0 SQ. FT.	

EPOXY COATING

	ESTIMATE	ACTUAL
	AREA SQ. FT.	AREA SQ. FT.
END BENT 1	114.2	0
BENT 1	173.4	0
BENT 2	173.4	0
END BENT 2	110.3	0



PLAN OF SPANS

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

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

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

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

FOR EPOXY COATING CONCRETE GIRDER ENDS, SEE SPECIAL PROVISIONS.

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-5795
FORSYTH COUNTY
BRIDGE NO. 330487

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
EA6F7941508F4B7...

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR
SPANS A THRU C

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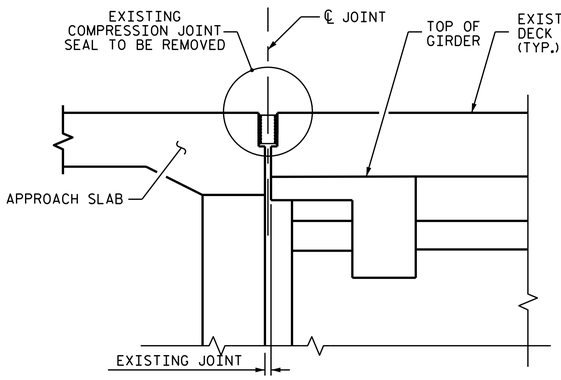
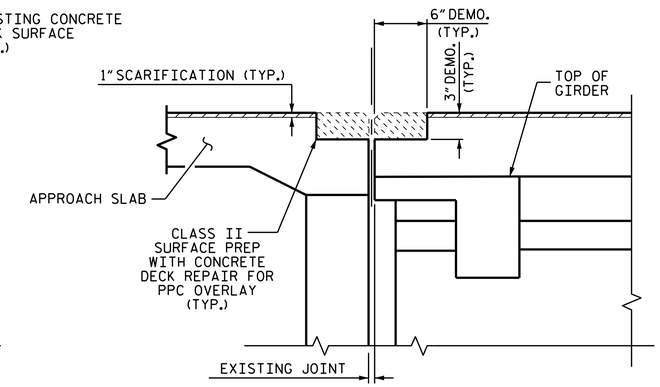
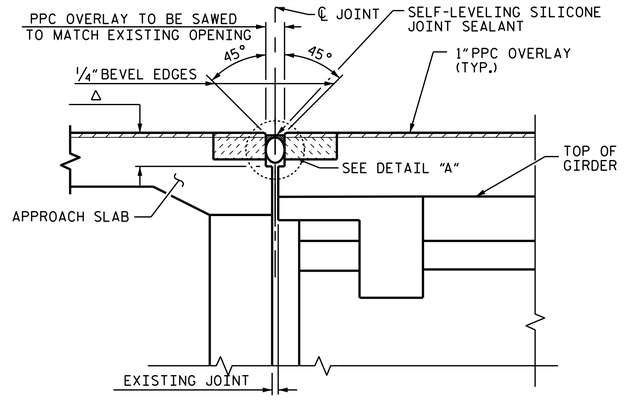


EXISTING JOINT



MINIMUN EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT WITH SAWED DIMENSIONS

Δ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

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.

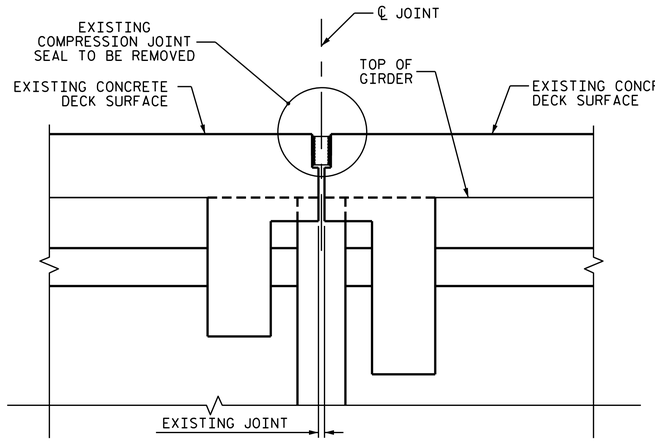
FOR POURABLE SILICONE JOINT SEALANT, SEE SPECIAL PROVISIONS.

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.

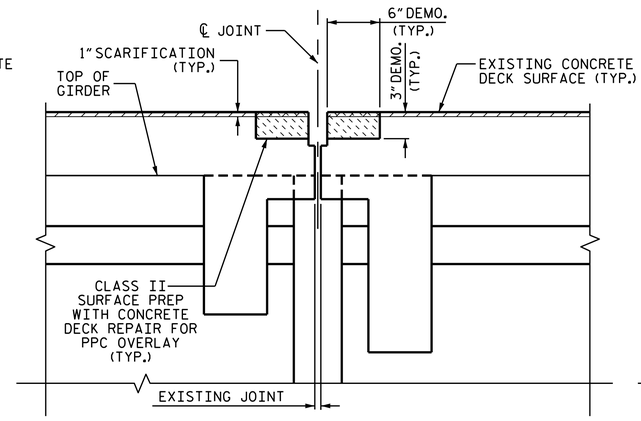
A MANUFACTURER'S CERTIFIED TRAINED REPRESENTATIVE SHALL BE PRESENT DURING THE INSTALLATION OF THE FIRST JOINT OF THE PROJECT, OR UNTIL THE ENGINEER IS SATISFIED WITH THE INSTALLATION PROCESS.

THE INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

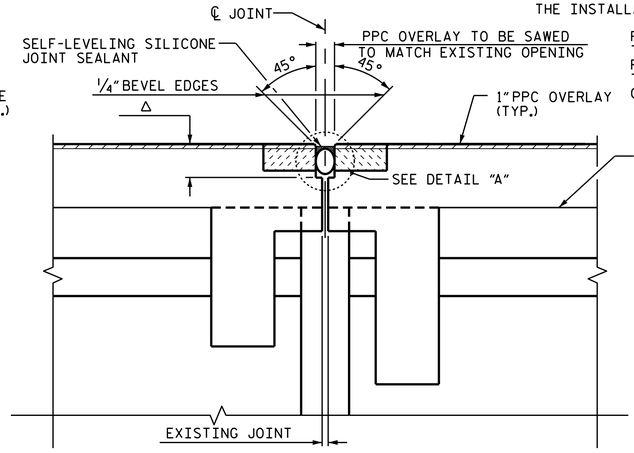
FINAL SURFACE OF THE JOINT DEMOLITION AREA PRIOR TO PLACEMENT OF CONCRETE REPAIR MATERIAL SHOULD BE REASONABLY FLAT AND LEVEL. ENGINEER SHALL DETERMINE THE ACCEPTABILITY OF THE SURFACE PRIOR TO PLACEMENT OF REPAIR CONCRETE.



EXISTING JOINT



MINIMUN EXISTING JOINT DEMOLITION & SCARIFICATION



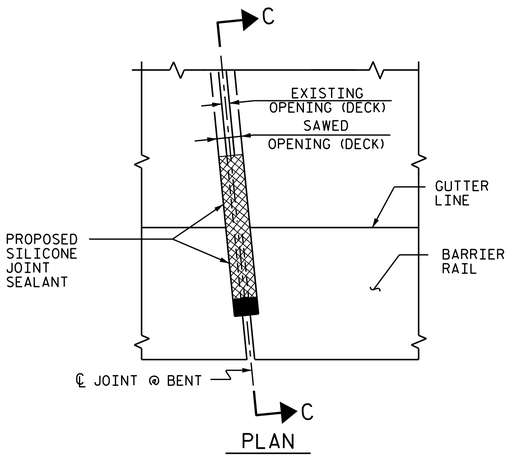
PROPOSED JOINT WITH SAWED DIMENSIONS

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	6.3 SY	6.3 SY
BENT 1	6.3 SY	6.3 SY
BENT 2	6.2 SY	6.2 SY
END BENT 2	6.2 SY	6.2 SY
✱ TOTAL	25.0 SY	25.0 SY

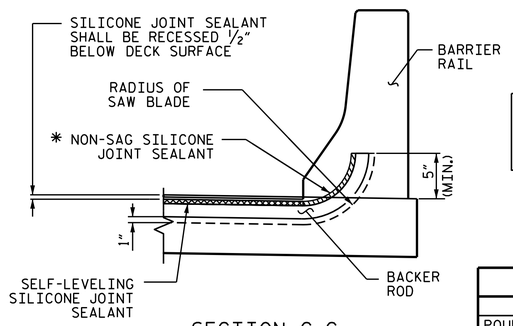
✱ BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B

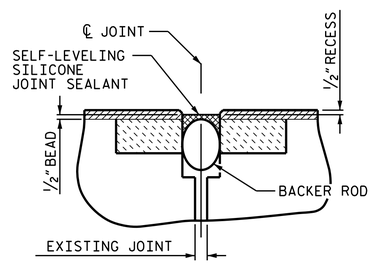


PLAN



SECTION C-C

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



DETAIL "A"

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	58 LF	
BENT 1	58 LF	
BENT 2	58 LF	
END BENT 2	58 LF	
TOTAL	232 LF	

JOINT DETAIL AT BARIER RAIL

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
Docusigned by: Krishna P. Sedai
EA6F7941508F4B7...

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FORSYTH COUNTY
BRIDGE NO. 330487

STATE OF NORTH CAROLINA
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RALEIGH

JOINT DETAILS

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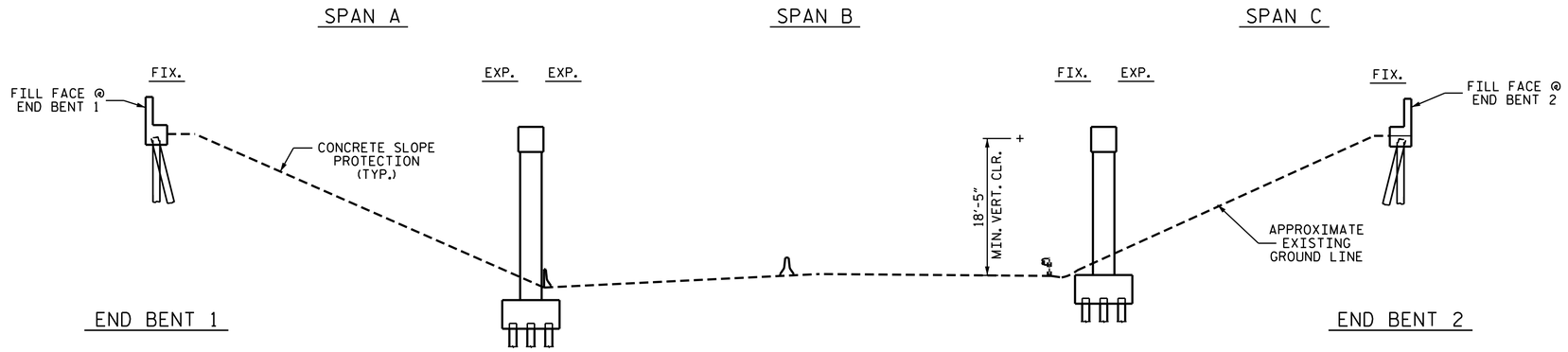
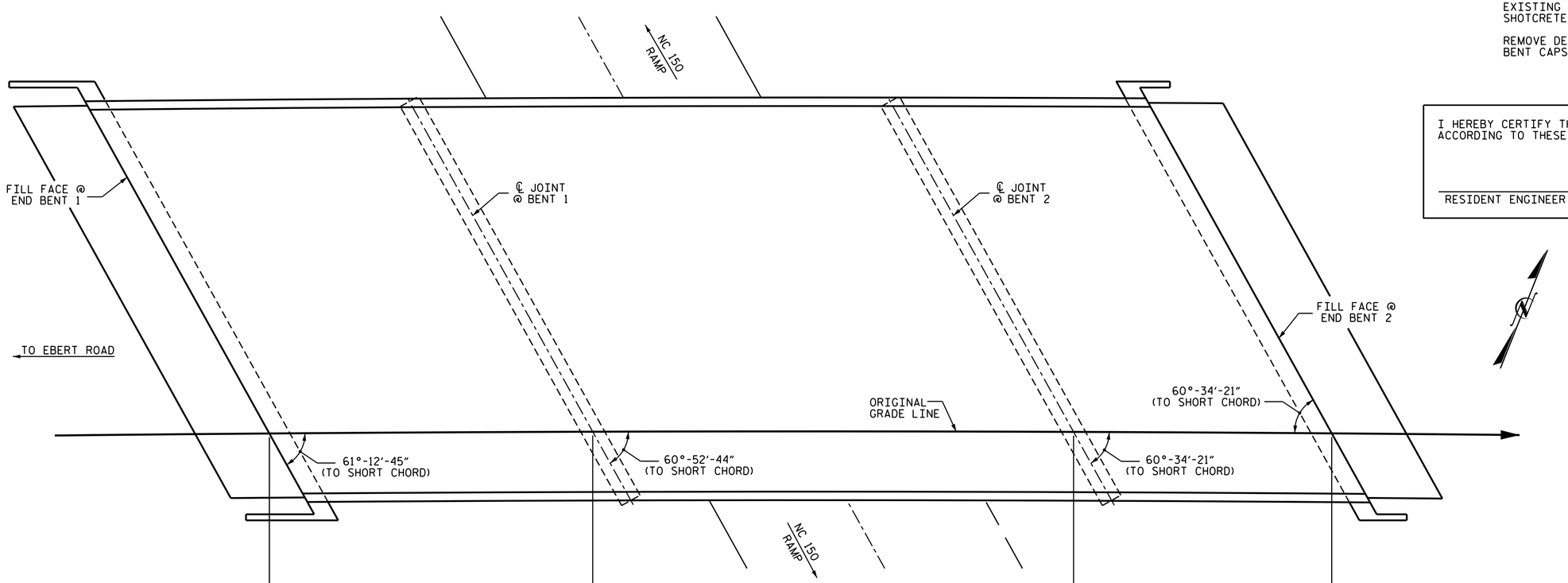


SECTION ALONG ORIGINAL GRADE LINE



PLAN

NOTES

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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 POLYESTER POLYMER CONCRETE (PPC).

REMOVE EXISTING JOINT MATERIAL AND INSTALL POURABLE SILICONE JOINTS.

REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

GROOVE PPC BRIDGE DECK.

CLEAN AND PAINT EXISTING WEATHERING STEEL BEAM ENDS.

INJECT CONCRETE CRACKS WITH EPOXY RESIN.

REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE EXISTING END BENT AND BENT AREAS AND PERFORM SHOTCRETE AND/OR CONCRETE REPAIRS.

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

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

RESIDENT ENGINEER DATE

8/5/2020 NORTH CAROLINA PROFESSIONAL SEAL 22005 ENGINEER A. KEITH PASCHAL
Docusigned by: A. Keith Paschal F886AD6DB2FC48F...

8/4/2020 NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA VENKATA PRASAD SEDA
Docusigned by: Krishna V. Seda EA6F7941508F4B7...

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330488

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOR BRIDGE ON I-40 WBL OVER NC 150 RAMPS

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DRAWN BY : A. SORSENGINH DATE : 6/2019
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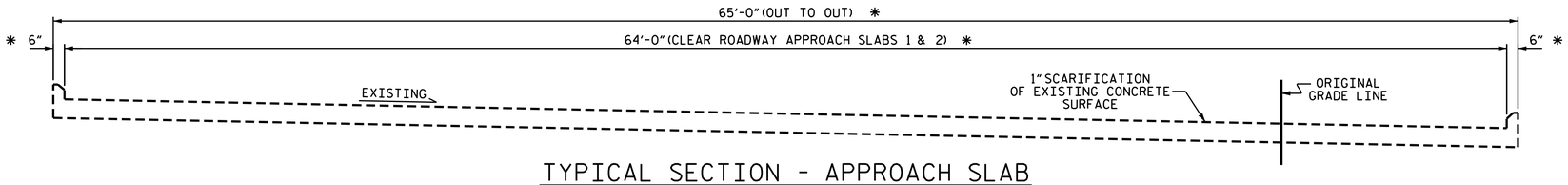
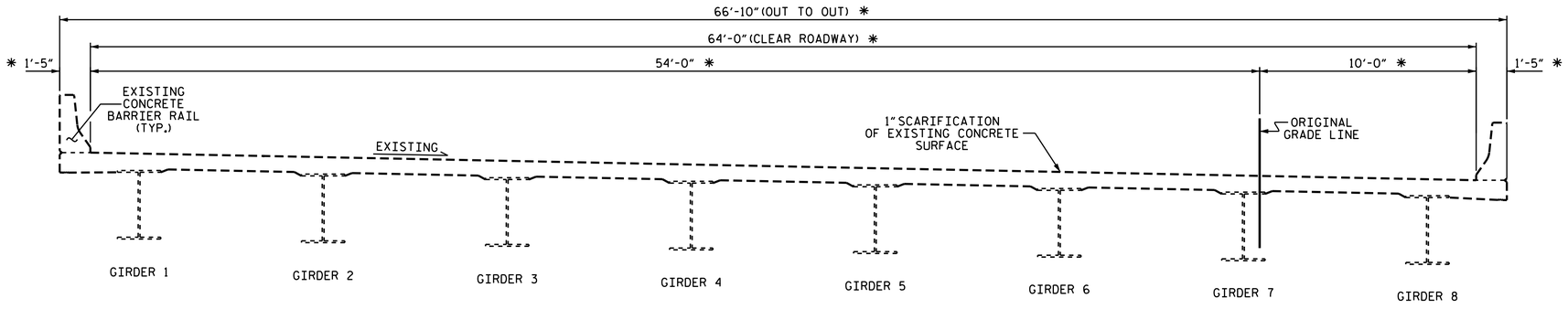


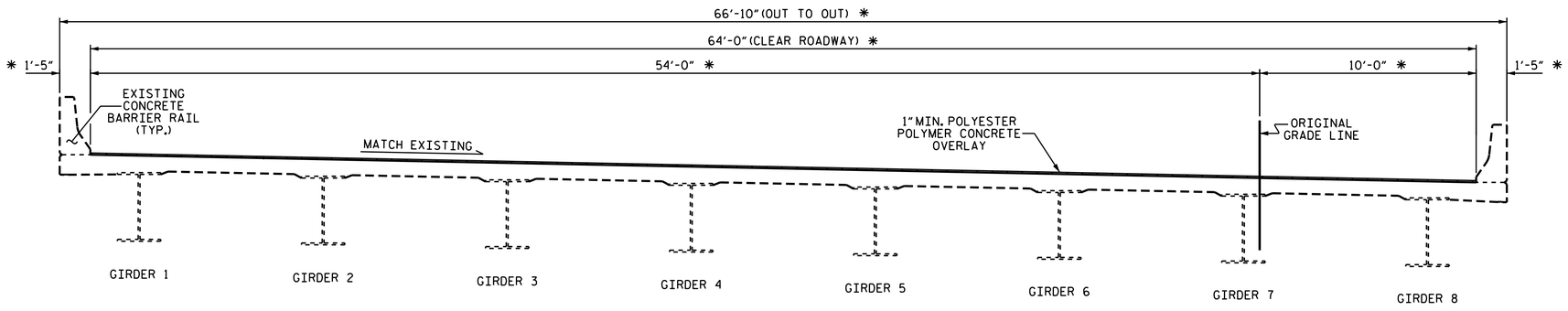
TYPICAL SECTION - APPROACH SLAB

(EXISTING)
* RADIAL DIMENSION



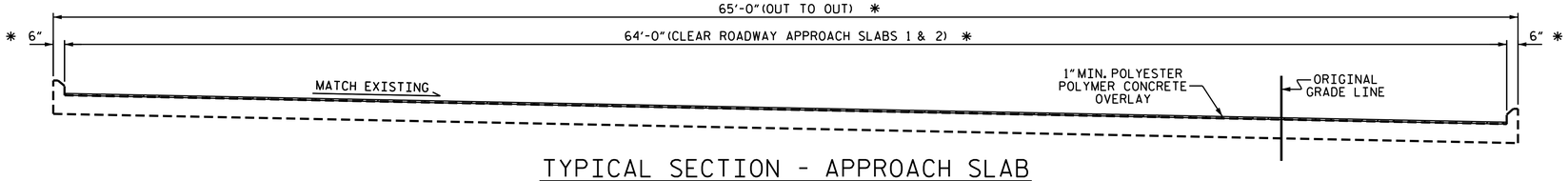
TYPICAL SECTION

(EXISTING)
* RADIAL DIMENSION



TYPICAL SECTION

(PROPOSED)
* RADIAL DIMENSION

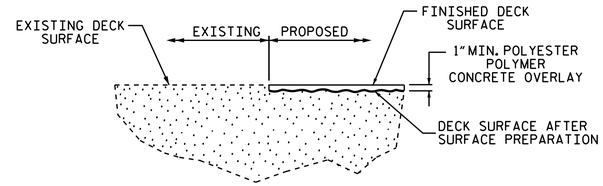


TYPICAL SECTION - APPROACH SLAB

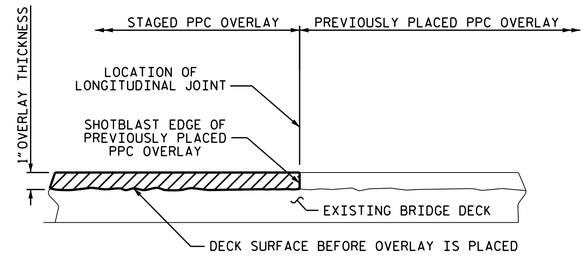
(PROPOSED)
* RADIAL DIMENSION

NOTE:

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



DETAIL OF POLYESTER POLYMER CONCRETE OVERLAY



STAGED PPC OVERLAY JOINT

(AS NEEDED)

PROJECT NO. I-5795
FORSYTH COUNTY
BRIDGE NO. 330488

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
DocuSigned by: Krishna P. Sedai
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION & PPC OVERLAY DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S13-02
1			3			TOTAL SHEETS
2			4			7

DRAWN BY : A. SORSENGINH DATE : 7/2019
CHECKED BY : E. BAYISSA DATE : 1/2020

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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 ACTUAL QUANTITIES INTO THE AS-BUILT REPAIR QUANTITY TABLE.

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

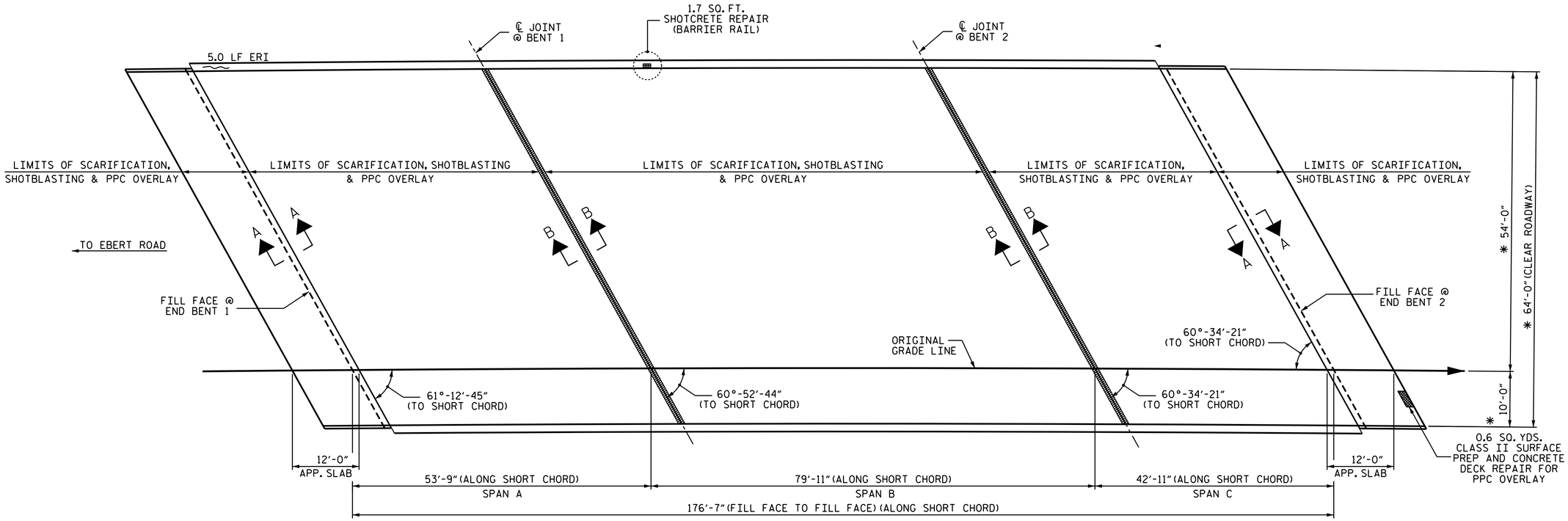
FOR SECTION A-A AND SECTION B-B, SEE "JOINT DETAILS" SHEET.

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

APPROX. CLASS II SURFACE PREPARATION

CURB AND BARRIER RAIL

EPOXY RESIN INJECTION (ERI)



PLAN

* RADIAL DIMENSION

AS-BUILT REPAIR QUANTITY TABLE

TOP OF DECK REPAIRS	APPROACH SLAB 1		SPAN A		SPAN B		SPAN C		APPROACH SLAB 2	
	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	85.0 SQ. YDS.		370.0 SQ. YDS.		560.0 SQ. YDS.		293.0 SQ. YDS.		85.0 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	85.0 SQ. YDS.		370.0 SQ. YDS.		560.0 SQ. YDS.		293.0 SQ. YDS.		85.0 SQ. YDS.	
CLASS II SURFACE PREPARATION	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.6 SQ. YDS.	
CONCRETE DECK REPAIR FOR PPC OVERLAY	0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.0 SQ. YDS.		0.6 SQ. YDS.	
POLYESTER POLYMER CONCRETE MATERIALS	3.0 CU. YDS.		12.8 CU. YDS.		19.4 CU. YDS.		10.2 CU. YDS.		3.0 CU. YDS.	
PLACING & FINISHING PPC OVERLAY	85.0 SQ. YDS.		370.0 SQ. YDS.		560.0 SQ. YDS.		293.0 SQ. YDS.		85.0 SQ. YDS.	
GROOVING BRIDGE FLOOR	669.0 SQ. FT.		3151.0 SQ. FT.		4792.0 SQ. FT.		2489.0 SQ. FT.		668.0 SQ. FT.	
EPOXY RESIN INJECTION			5.0 LIN. FT.		0.0 LIN. FT.		0.0 LIN. FT.			

SHOTCRETE REPAIRS	SPAN A				SPAN B				SPAN C				APPROACH SLAB 2	
	ESTIMATE		ACTUAL		ESTIMATE		ACTUAL		ESTIMATE		ACTUAL			
	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.		
CONCRETE BARRIER RAIL	0.0	0.0			1.7	0.6			0.0	0.0				

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330488

8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

Docusigned by: Krishna P. Sedai

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

DECK SURFACE REPAIR

SPANS A THRU C

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DRAWN BY : A. SORSENGINH DATE : 7/2019

CHECKED BY : E. BAYISSA DATE : 1/2020

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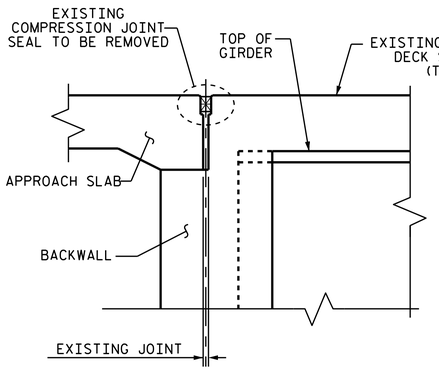
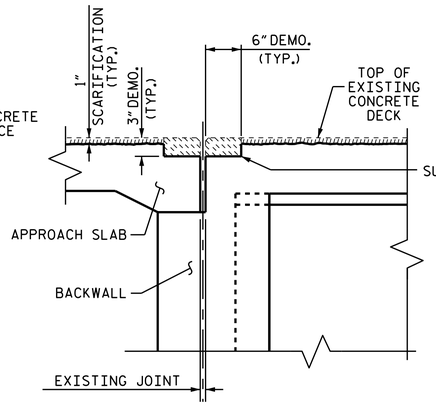
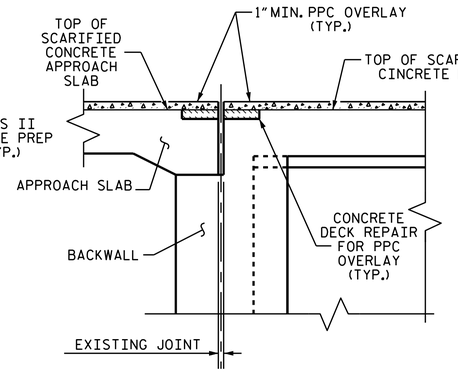


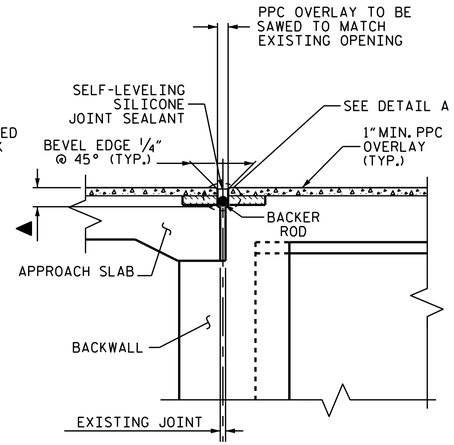
EXISTING JOINT



MINIMUM EXISTING JOINT DEMOLITION & SCARIFICATION



PROPOSED JOINT PRE-SAWED & PPC OVERLAY



PROPOSED JOINT WITH SAWED DIMENSIONS

▲ SAW CUT SHALL BE ¾" BELOW THE BOTTOM OF THE JOINT SEAL. SEE MANUFACTURER RECOMMENDATIONS

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 ¼", 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 INSTALLATION OF THE JOINT SEAL SHALL BE WATERTIGHT.

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.

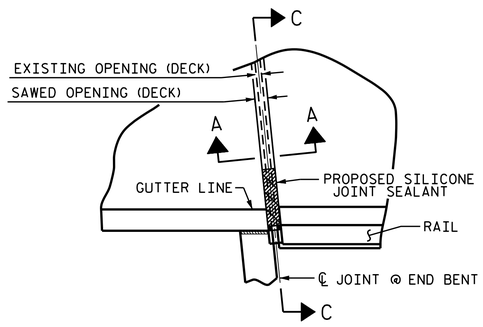
JOINT INSTALLATION SEQUENCE AT END BENTS

SECTION A-A

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
END BENT 1	8.1 SY	8.1 SY
END BENT 2	8.2 SY	8.2 SY
✱ TOTAL	16.3 SY	16.3 SY

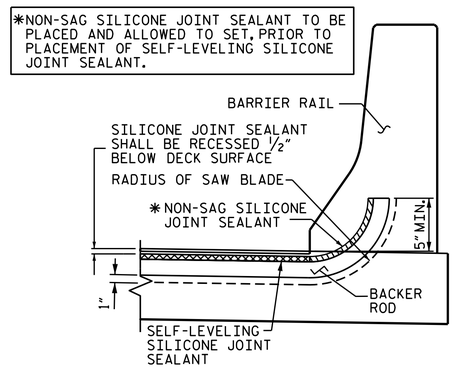
✱ BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
	ESTIMATE	ACTUAL
POURABLE SILICONE JOINT SEALANT		
END BENT 1	74.4 LF	
END BENT 2	74.8 LF	
TOTAL	149.2 LF	

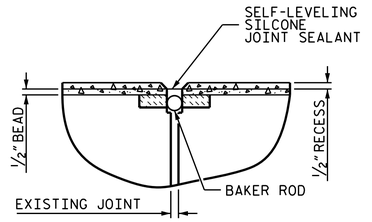


PLAN

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



SECTION C-C



DETAIL A

JOINT DETAILS AT BARRIER RAIL

PROJECT NO. I-5795

FORSYTH COUNTY

BRIDGE NO. 330488

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS

8/4/2020
NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI
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DRAWN BY : A. SORSENGINH DATE : 7/2019
CHECKED BY : E. BAYISSA DATE : 1/2020

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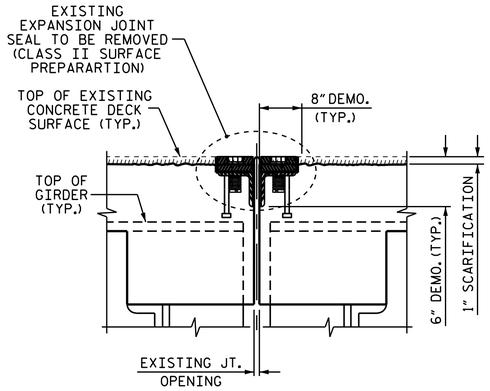
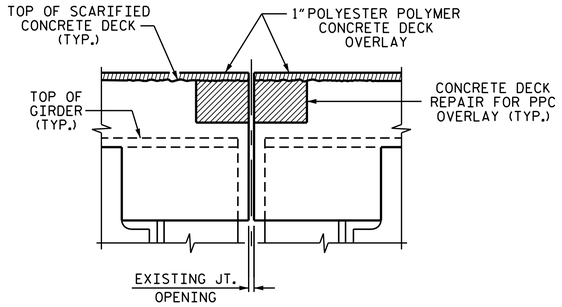
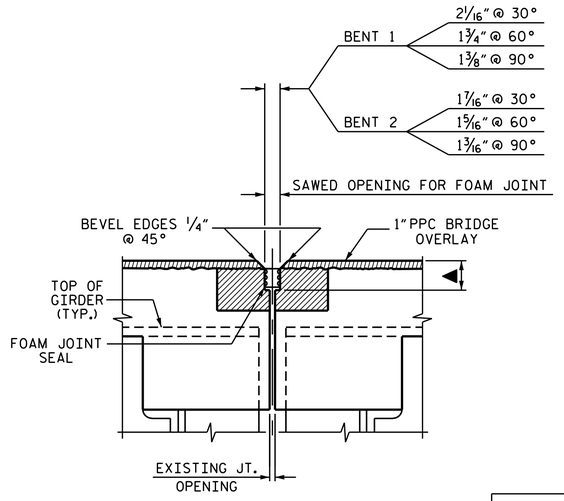


MINIMUM EXISTING JOINT DEMOLITION



PROPOSED PRE-SAWED JOINT

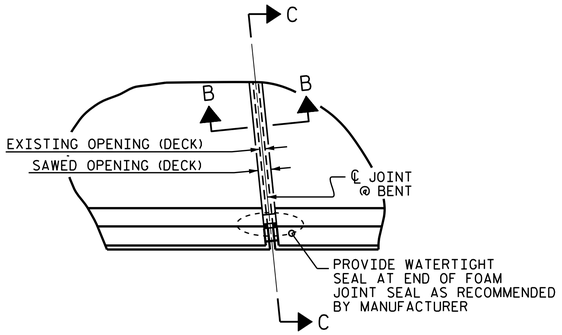


PROPOSED FOAM JOINT SEAL

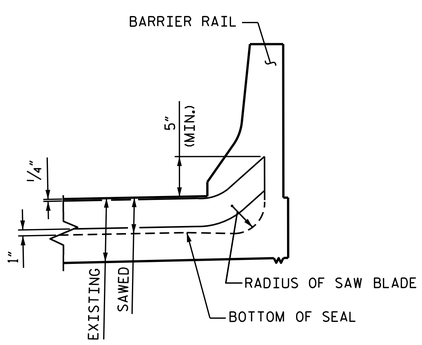
▲ SAW CUT SHALL BE 3/4" BELOW THE BOTTOM OF THE JOINT SEAL, SEE MANUFACTURER RECOMMENDATIONS

JOINT INSTALLATION SEQUENCE AT BENTS

SECTION B-B



PLAN (@ BENT)



SECTION C-C

JOINT SEAL DETAILS AT BENTS

NOTES

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

THE INSTALLED FOAM JOINTS SHALL BE WATER TIGHT.

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

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

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.

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.

JOINT REPAIR QUANTITY TABLE		
	CLASS II SURFACE PREPARATION	CONCRETE DECK REPAIR FOR PPC OVERLAY
BENT 1	10.8 SY	10.8 SY
BENT 2	10.9 SY	10.9 SY
✳ TOTAL	21.7 SY	21.7 SY

✳ BASED ON THE MINIMUM BLOCKOUT SHOWN.

JOINT REPAIR QUANTITY TABLE		
FOAM JOINT SEALS FOR PRESERVATION	ESTIMATED	ACTUAL
BENT 1	73.3 LF	
BENT 2	73.5 LF	
TOTAL	146.8 LF	

PROJECT NO. I-5795

FORSYTH COUNTY

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8/4/2020

NORTH CAROLINA PROFESSIONAL SEAL 031583 ENGINEER KRISHNA PRASAD SEDAI

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DEPARTMENT OF TRANSPORTATION
RALEIGH

JOINT DETAILS
BENTS 1 & 2

DRAWN BY : A. SORSENGINH DATE : 5/2020

CHECKED BY : E. BAYISSA DATE : 5/2020

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