

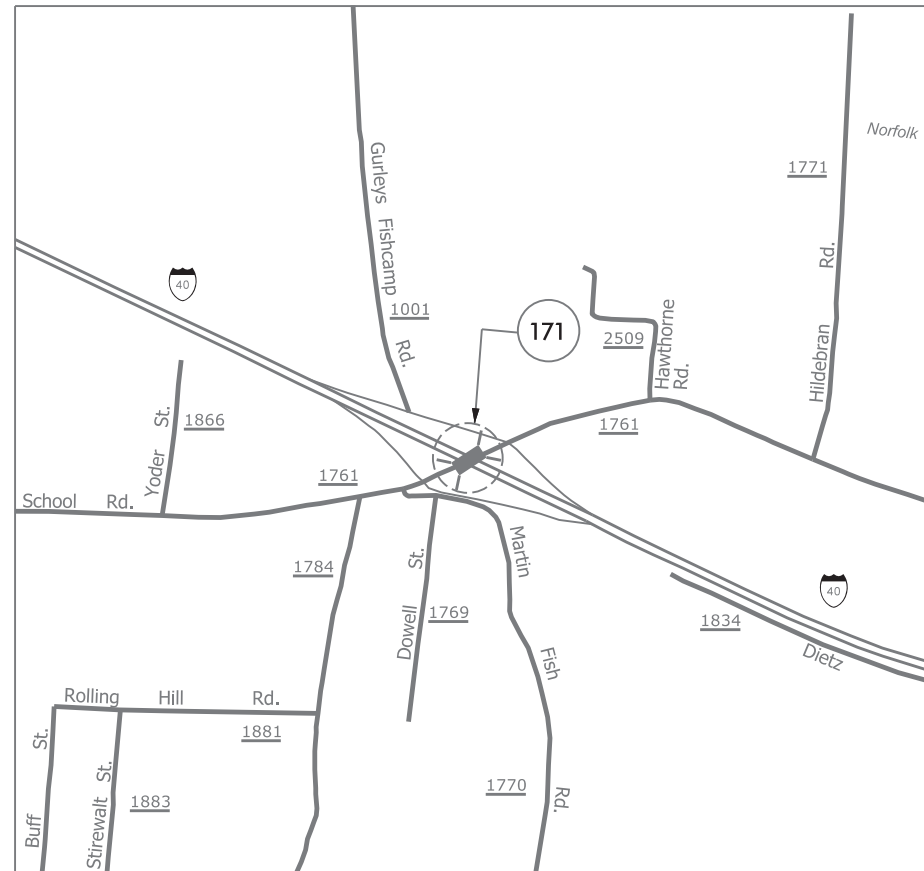
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BURKE COUNTY**

LOCATION: BRIDGE NO. 110171 ON SR-1761 OVER I-40

TYPE OF WORK: BRIDGE REHABILITATION: ASPHALT WEARING SURFACE OVERLAY,  
JOINT REPLACEMENT, SHOTCRETE AND CONCRETE REPAIRS TO  
SUBSTRUCTURE.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	41665.15C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41665.15C		P.E.	
41665.15C		CONST.	



PROJECT: 41665.15C

CONTRACT NO.: DM00413



**DESIGN DATA**

BURKE COUNTY  
BRIDGE No. 110171 ADT 2019 = 4,600

**PROJECT LENGTH**

BURKE COUNTY  
BRIDGE No. 110171 = 0.045 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 :

MARCH 15, 2023

ADAM COLE, P.E.  
PROJECT ENGINEER

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

PROJECT: 41665.15C

CONTRACT NO.: DM00413

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**BURKE COUNTY**

LOCATION: BRIDGE No. 110171 ON SR-1761 OVER I-40

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	41665.15C	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41665.15C		P.E.	
41665.15C		CONST.	

**INDEX OF STRUCTURES SHEETS**

<u>SHEET No.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF SHEETS
S2-01 THRU S2-07	STRUCTURAL PLANS - BRIDGE NO. 110171
SN	STANDARD NOTES

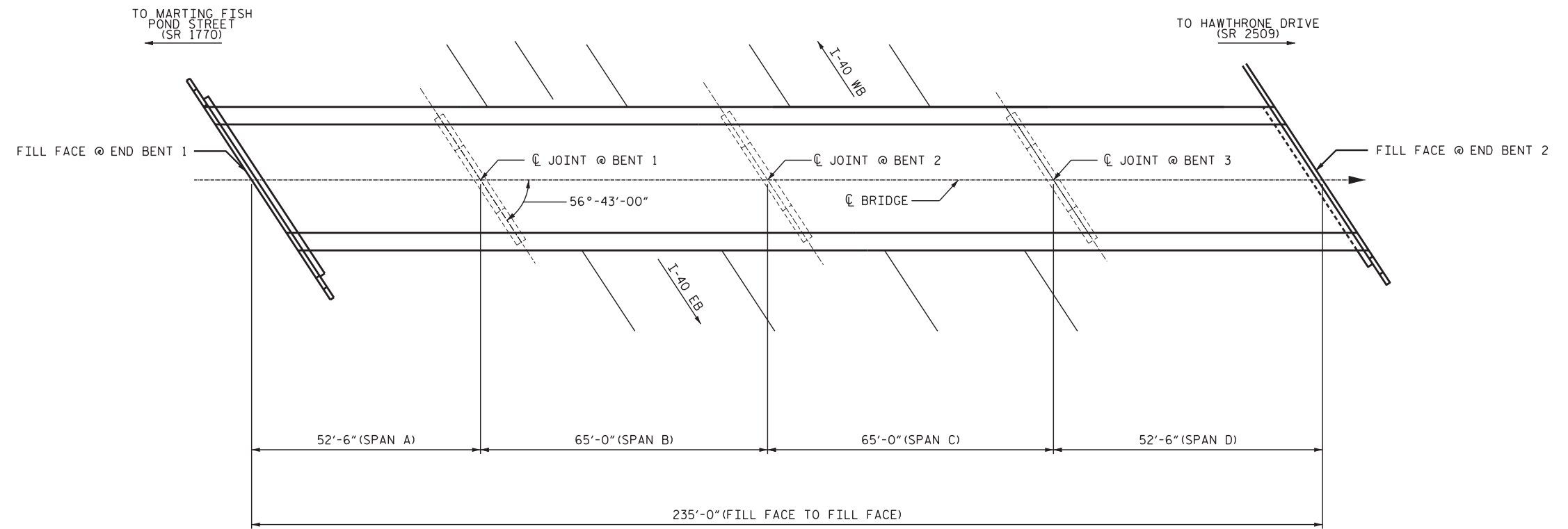
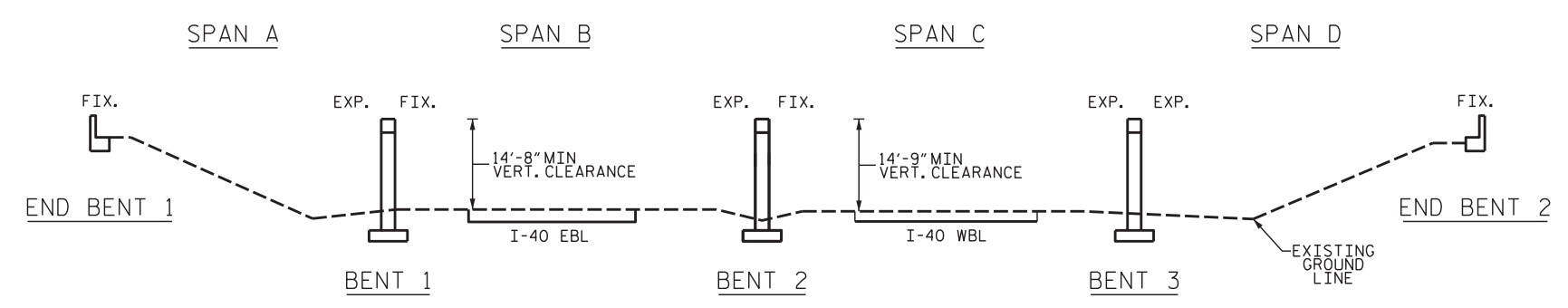


**TYPE OF WORK:**

**BRIDGE PRESERVATION: ASPHALT WEARING SURFACE OVERLAY, JOINT REPLACEMENT, SHOTCRETE AND CONCRETE REPAIRS TO SUBSTRUCTURE.**

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

**NOTES**  
 GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 10/16/2019.  
 BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

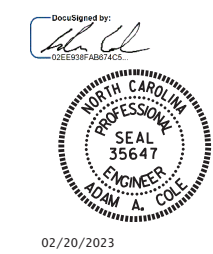


I HEREBY CERTIFY THAT THIS STRUCTURE WAS REHABILITATED ACCORDING TO THESE PLANS OR AS NOTED HEREIN.

RESIDENT ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_

**SCOPE OF WORK**

- REMOVE EXISTING ASPHALT WEARING SURFACE FROM BRIDGE DECK AND APPROACHES.
- PARTIALLY REMOVE BRIDGE DECK CONCRETE BY SCARIFICATION.
- OVERLAY PREPARED BRIDGE DECK WITH ASPHALT WEARING SURFACE.
- REMOVE EXISTING JOINT MATERIAL AND INSTALL ASPHALT PLUG.



PROJECT NO. 41665.15C  
BURKE COUNTY  
 BRIDGE NO. 110171

SHEET 1 OF 2

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

GENERAL DRAWING  
 FOR BRIDGE ON  
 SR 1761 OVER I-40

DRAWN BY : E. CABELL      DATE : 12/2020  
 CHECKED BY : J. A. TILLMAN      DATE : 07/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-01
1			3			TOTAL SHEETS
2			4			07



**LOCATION SKETCH**

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**

LAT: 35.709780  
LONG: -81.439458

**BILL OF MATERIAL**

BRIDGE NO. 110171	INCIDENTAL MILLING	ASPHALT CONCRETE SURFACE COURSE TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	CLASS II SURFACE PREPARATION	ASPHALT PLUG JOINT FOR PRESERVATION	SCARIFYING BRIDGE DECK
	SQ. YDS.	TONS	TONS	SQ. YDS.	LIN. FT.	SQ. YDS.
TOTAL	289.0	134.0	10.0	65.2	100.5	679.0

**NOTES**

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.

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

ROADWAY MILLING IS INCLUDED TO ENSURE A SMOOTH TRANSITION ONTO THE BRIDGE FLOOR. THE CONTRACTOR SHALL MILL AS REQUIRED TO PROVIDE A SMOOTH TRANSITION TO THE ROADWAY AT THE BOTH ENDS OF THE BRIDGE.

THE CONTRACTOR SHALL PROVIDE A METHOD OF HANDLING UNEXPECTED BLOW THROUGH OF THE DECK.

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

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

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

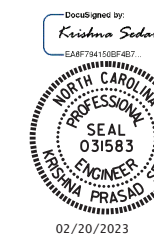
FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR ASPHALT PLUG JOINT FOR PRESERVATION, SEE SPECIAL PROVISIONS.

PROJECT NO. 41665.15C  
BURKE COUNTY  
BRIDGE NO. 110171

SHEET 2 OF 2

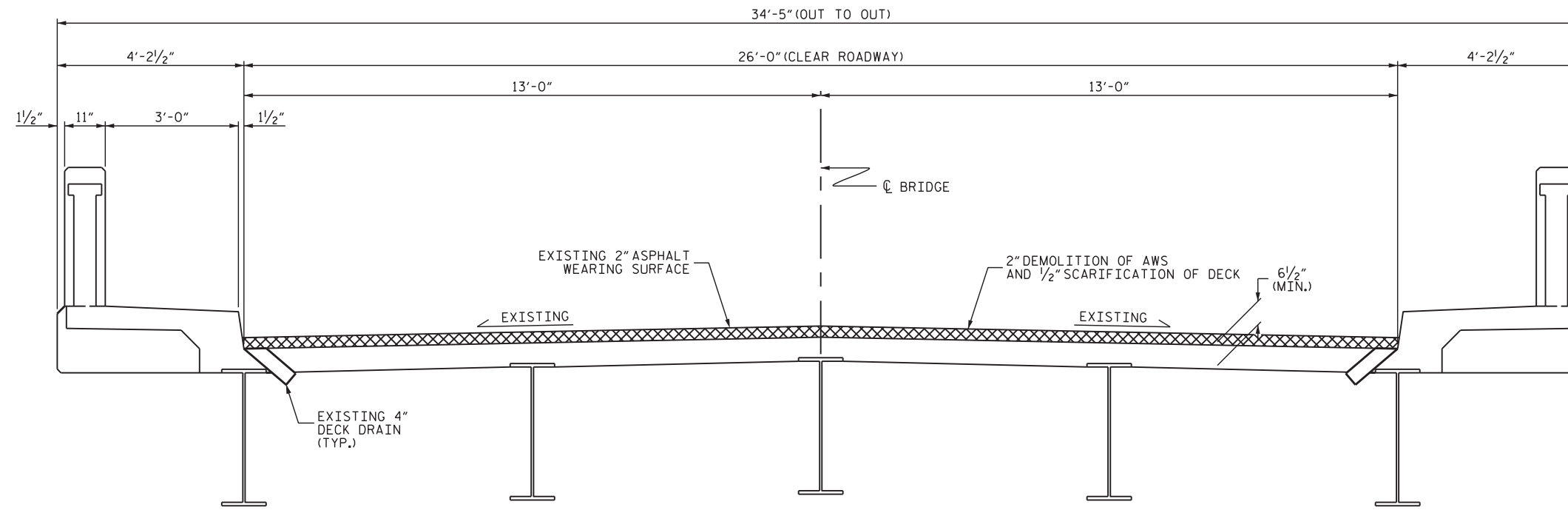


STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH  
GENERAL DRAWING  
FOR BRIDGE  
ON SR 1761 OVER I-40

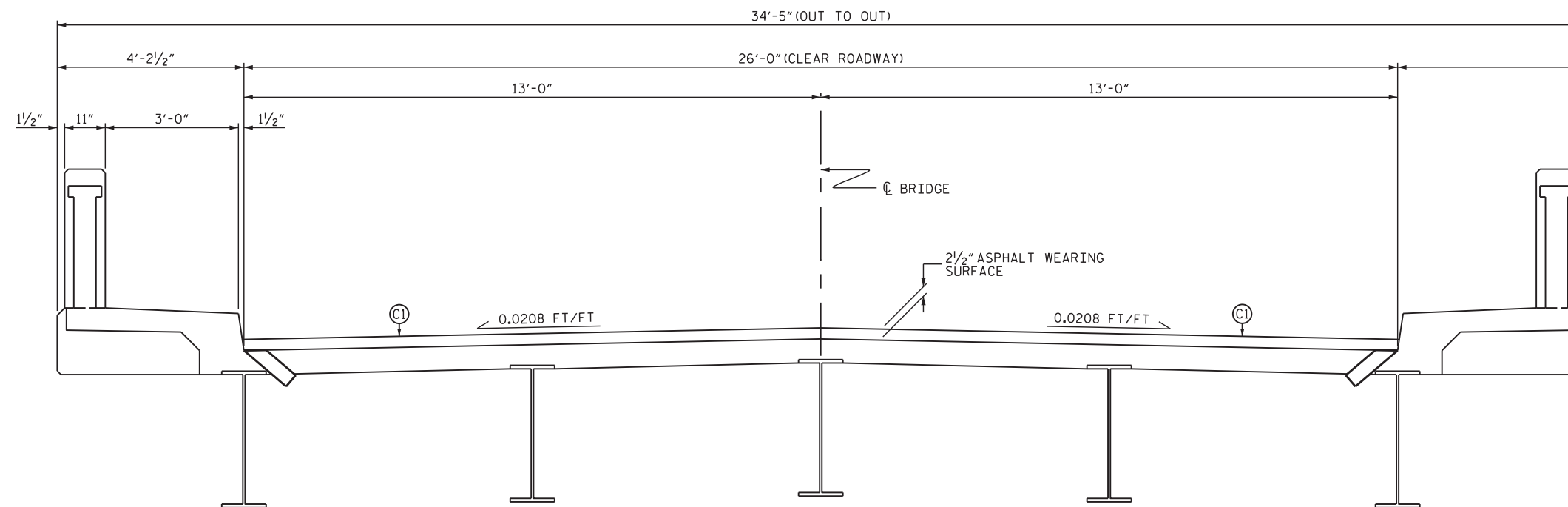
DRAWN BY : E. CABELL DATE : 12/2022  
CHECKED BY : J. A. TILLMAN DATE : 07/2022

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-02
1			3			TOTAL SHEETS
2			4			07



TYPICAL SECTION  
(EXISTING)



TYPICAL SECTION  
(PROPOSED)

C1 PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 110 LBS. PER SQ. YDS. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.



PROJECT NO. 41665.15C  
BURKE COUNTY  
BRIDGE NO. 110171

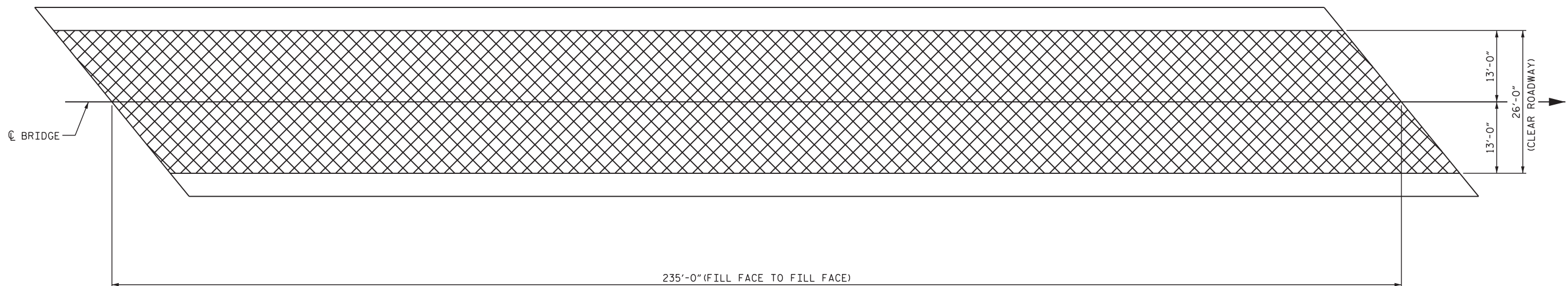
STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH



TYPICAL SECTION

DRAWN BY : J. A. TILLMAN DATE : 09/2022  
CHECKED BY : H. A. LOCKLEAR DATE : 09/2022

DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

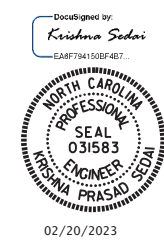
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NO.	BY:	DATE:	NO.	BY:	DATE:	S2-03
1			3			TOTAL SHEETS
2			4			07



-  PHASE I MILLING OF 2" AWS
-  PHASE II 1/2" DECK SCARIFICATION

PLAN

PROJECT NO. 41665.15C  
BURKE COUNTY  
 BRIDGE NO. 110171



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
 OVERALL  
 SURFACE PREPARATION  
 PLAN

DRAWN BY : J. A. TILLMAN DATE : 09/2022  
 CHECKED BY : H. A. LOCKLEAR DATE : 09/2022

DOCUMENT NOT CONSIDERED  
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-04
1			3			TOTAL SHEETS
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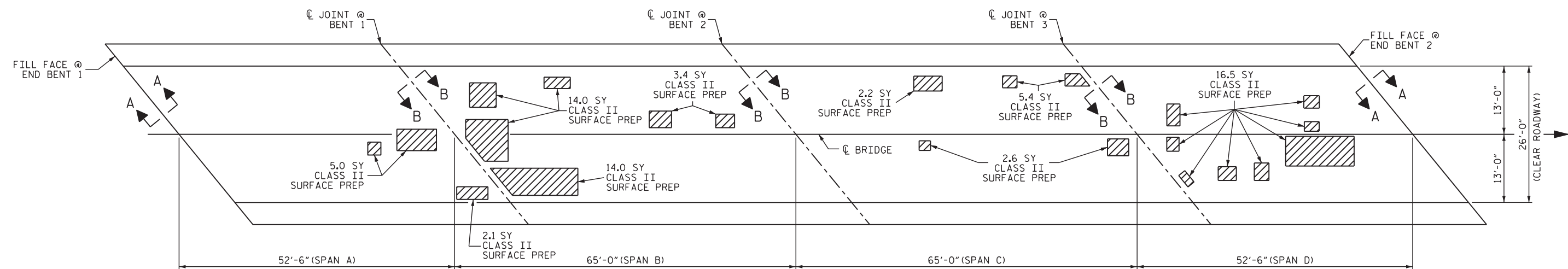
# SUMMARY OF QUANTITIES

TOP OF DECK REPAIRS		
	ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	679.0 SY	
CLASS II SURFACE PREPARATION	* 65.2 SY	
CLASS III SURFACE PREPARATION	0.0 SY	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	94.0 TONS	
ASPHALT BINDER FOR PLANT MIX	7 TONS	

\* BECAUSE OF THE PRESENCE OF THE EXISTING ASPHALT WEARING SURFACE, QUANTITIES OF CLASS II INDICATED ARE ESTIMATED.

AFTER SCARIFICATION OF THE EXISTING ASPHALT WEARING SURFACE AND THE EXISTING CONCRETE DECK AS INDICATED, EXISTING DECK PATCHES SHALL BE REMOVED AND REPAIRED PRIOR TO PLACEMENT OF THE ASPHALT WEARING SURFACE OVERLAY. THE ENGINEER SHALL REVIEW THE PREPARED DECK TO DETERMINE THE AREAS THAT WILL REQUIRE CLASS II OR CLASS III REPAIRS. REPAIR AREAS THAT ARE FULL DECK DEPTH SHALL BE CONSIDERED CLASS III.

FOR CONCRETE FOR DECK REPAIR, SEE SPECIAL PROVISIONS.



CLASS II SURFACE PREPARATION  
 CLASS III SURFACE PREPARATION

## PLAN

PROJECT NO. 41665.15C  
BURKE COUNTY  
 BRIDGE NO. 110171



02/20/2023

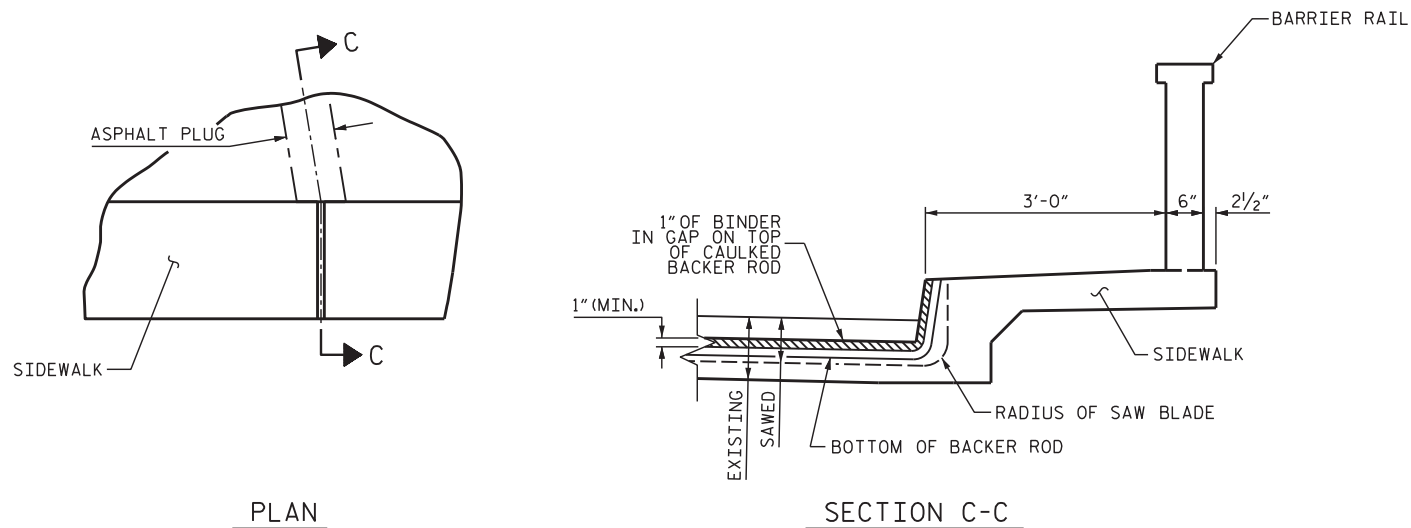
STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

## DECK SURFACE REPAIR

DRAWN BY : J. A. TILLMAN DATE : 09/2022  
 CHECKED BY : H. A. LOCKLEAR DATE : 09/2022

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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S2-05
2			4			TOTAL SHEETS 07



PLAN

SECTION C-C

JOINT DETAIL THRU SIDEWALK

NOTES

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT MATERIALS.

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

ONLY ASPHALTIC PLUG JOINTS THAT ARE APPROVED ON NCDOT'S APPROVED PRODUCT LIST SHALL BE USED.

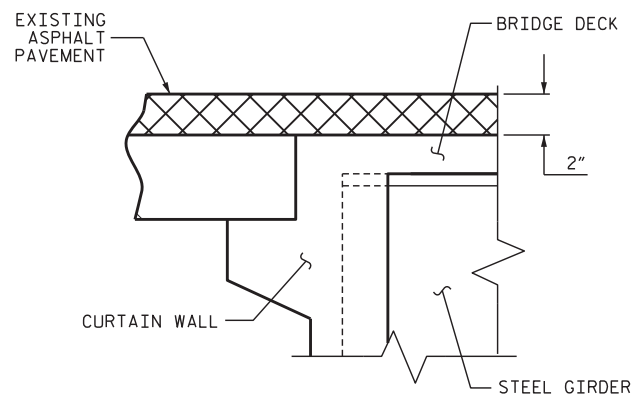
ASPHALTIC PLUG JOINTS SHALL BE INSTALLED AS PER THE MANUFACTURER'S RECOMMENDATIONS.

A MANUFACTURE'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 INSTALL PROCESS.

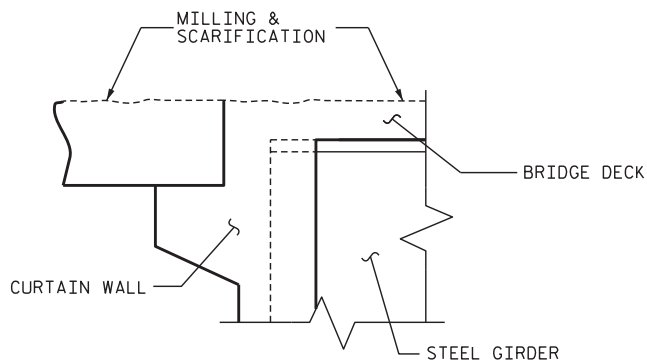
THE CONTRACTOR SHALL TAKE CARE DURING JOINT REHAB OPERATIONS NOT TO ALLOW ANY MATERIAL FALL BELOW THE BRIDGE. ANY MATERIAL THAT FALLS BELOW THE BRIDGE SHALL BE CONTAINED, REMOVED AND DISPOSED OF BY THE CONTRACTOR AT NO EXTRA COST TO THE DEPARTMENT. IF THE ENGINEER DETERMINES THAT THE PROTECTIVE DEVICES ARE NOT ADEQUATE OR NOT BEING EMPLOYED, THE WORK SHALL BE SUSPENDED UNTIL ADEQUATE PROTECTION IS PROVIDED.

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

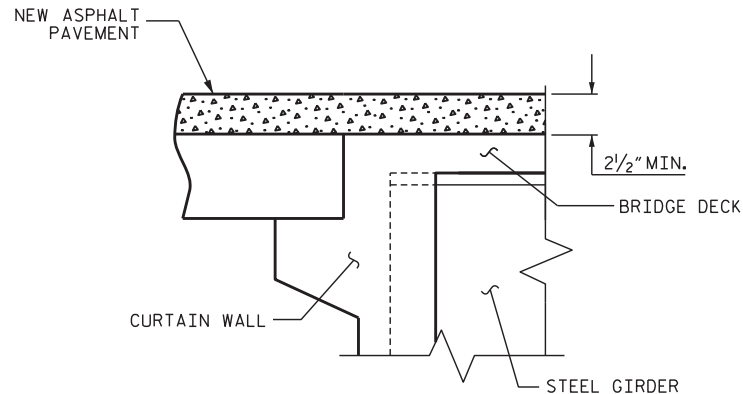
THE STEEL BRIDGE PLATE SHALL BE A MINIMUM OF 36 KSI STEEL. THE STEEL BRIDGE PLATE THICKNESS SHALL BE A MINIMUM OF 1/4".



SECTION A-A  
(EXISTING JOINT)



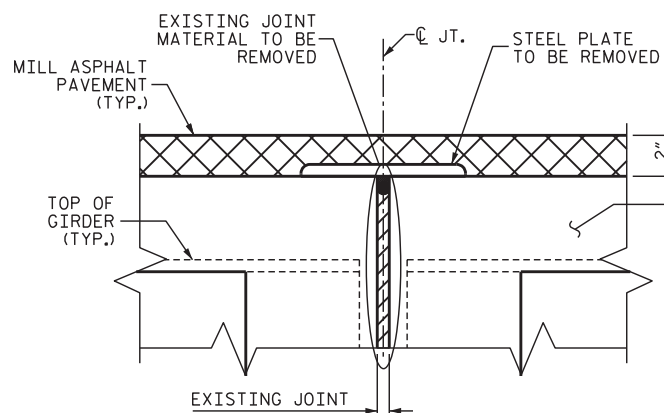
SECTION A-A  
(MINIMUM EXISTING JOINT DEMOLITION)



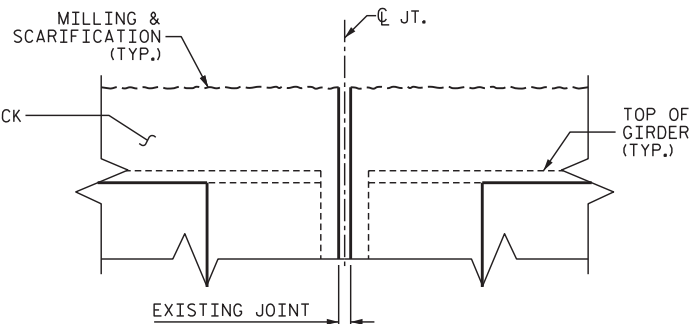
SECTION A-A  
(PROPOSED JOINT)

JOINT INSTALLATION SEQUENCE AT END BENTS

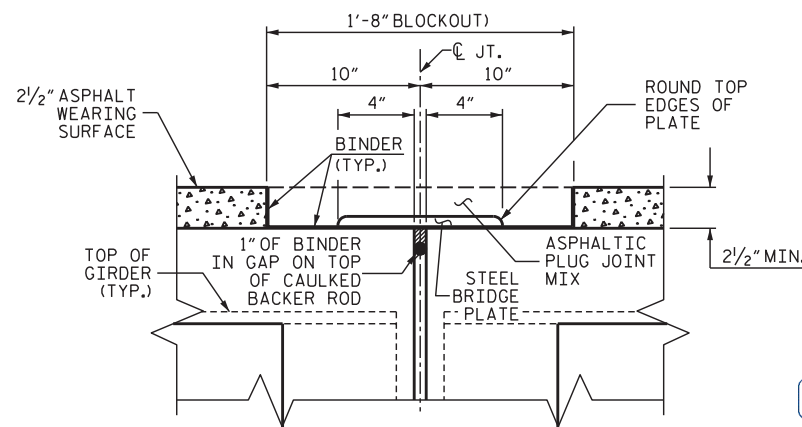
ASPHALT PLUG JOINT FOR PRESERVATION		
	ESTIMATED LIN. FT.	ACTUAL LIN. FT.
BENT 1	33.5	
BENT 2	33.5	
BENT 3	33.5	
TOTAL	100.5	



SECTION B-B  
(EXISTING JOINT)



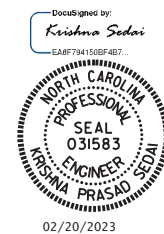
SECTION B-B  
(MINIMUM EXISTING JOINT DEMOLITION)



SECTION B-B  
(PROPOSED ASPHALTIC PLUG JOINT)

JOINT INSTALLATION SEQUENCE AT BENTS

PROJECT NO. 41665.15C  
BURKE COUNTY  
BRIDGE NO. 110171



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

JOINT DETAILS

DRAWN BY : J. A. TILLMAN DATE : 09/2022  
CHECKED BY : H. A. LOCKLEAR DATE : 09/2022

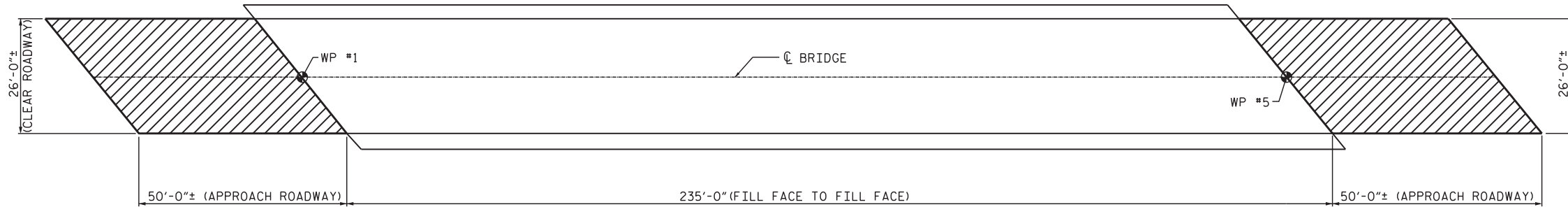
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1			3			S2-06
2			4			TOTAL SHEETS 07



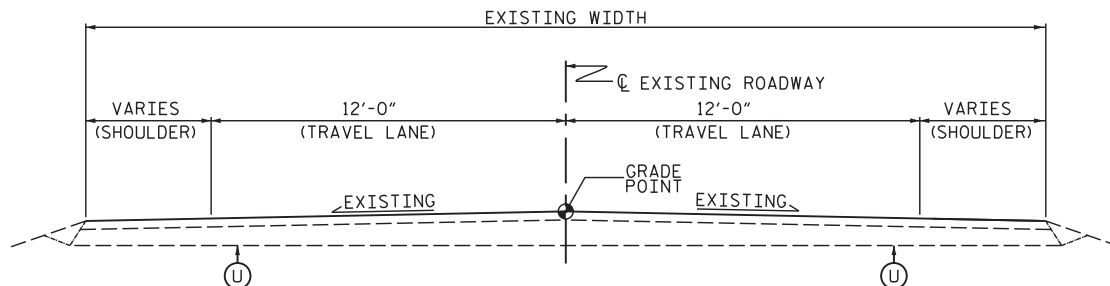
**NOTES**

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVING TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1/2" DEPTH OF NEW ASPHALT PAVING. PROVIDE NEW ASPHALT PAVING THICKNESS TO CREATE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. NEW ASPHALT PAVING THICKNESS MAY EXCEED 1/2" DUE TO SETTLEMENT OF THE EXISTING APPROACH ASPHALT PAVING.

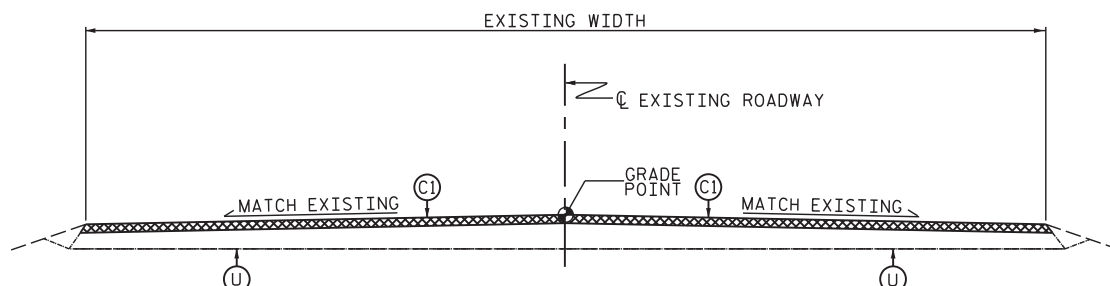
LAYOUT OF APPROACH ROADWAY IS FOR ILLUSTRATIVE PURPOSES ONLY. ESTIMATED QUANTITIES ARE APPROXIMATE. PAYMENT OF MILLING AND NEW APPROACH ASPHALT WILL BE FOR THE ACTUAL QUANTITIES MILLED AND PLACED.



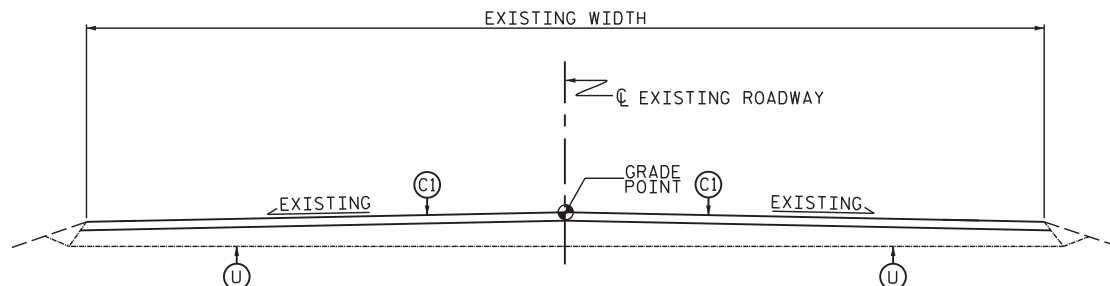
INCIDENTAL MILLING  
**PLAN**



**TYPICAL ROADWAY MILLING SECTION**



**TYPICAL PROPOSED ROADWAY SECTION**  
(MILL TO 1/2" DEPTH)



**PROPOSED ROADWAY SECTION**

SUMMARY OF QUANTITIES		
	ESTIMATE	ACTUAL
INCIDENTAL MILLING	289 SO. YD.	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	40 TONS	
ASPHALT BINDER FOR PLANT MIX	3 TONS	

C1	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 110 LBS. PER SQ. YDS. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 1/2" IN DEPTH OR GREATER THAN 2" IN DEPTH.
U	EXISTING PAVEMENT

PROJECT NO. 41665.13A  
BURKE COUNTY  
 BRIDGE NO. 110171



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH  
**INCIDENTAL MILLING &  
 TYPICAL ROADWAY  
 SECTIONS**

DRAWN BY : J. A. TILLMAN DATE : 09/2022  
 CHECKED BY : H. A. LOCKLEAR DATE : 09/2022

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

DOCUMENT NOT CONSIDERED  
 FINAL UNLESS ALL  
 SIGNATURES COMPLETED

## STANDARD NOTES

### DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	--	20,000 LBS. PER SQ. IN.
	--	27,000 LBS. PER SQ. IN.
	--	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	----	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

### MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

### CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

### CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED  $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO  $1\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A  $\frac{1}{4}$ " FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A  $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

### DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

### ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

### REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

### STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE  $\frac{7}{8}$ "  $\emptyset$  SHEAR STUDS FOR THE  $\frac{3}{4}$ "  $\emptyset$  STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF  $\frac{7}{8}$ "  $\emptyset$  STUDS ALONG THE BEAM AS SHOWN FOR  $\frac{3}{4}$ "  $\emptyset$  STUDS BASED ON THE RATIO OF 3 -  $\frac{7}{8}$ "  $\emptyset$  STUDS FOR 4 -  $\frac{3}{4}$ "  $\emptyset$  STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST  $\frac{3}{16}$ " IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY  $\frac{1}{16}$ " INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

### HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

### SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

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