CONTRACT NO.: DM00378 PROJECT: 41665.13A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

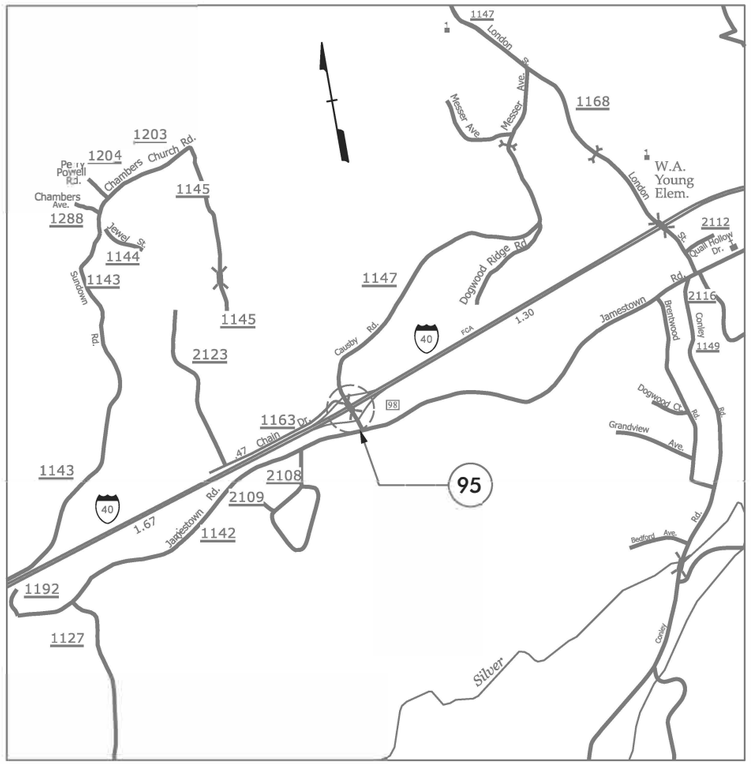
BURKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	41665.13A	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
41665.13A		P.E.
41665.13A		CONST.

LOCATION: BRIDGE No. 110095 ON SR–1147 (CAUSBY ROAD) OVER I–40

TYPE OF WORK: BRIDGE REHABILITATION: REMOVAL OF EXISTING REINFORCED CONCRETE DECK GIRDERS SUPERSTRUCTURE AND REPLACEMENT WITH CORED SLABS, PARTIAL SUBSTRUCTURE REPLACEMENT, SHOTCRETE AND CONCRETE REPAIRS TO SUBSTRUCTURE



DESIGN DATA

BURKE COUNTY
BRIDGE No. 110095 ADT 2016 = 2,200

PROJECT LENGTH

BURKE COUNTY
BRIDGE No. 110095 = 0.039 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 :

JUNE 15, 2022

ADAM COLE, P.E.
PROJECT ENGINEER

AMBER LEE, P.E.
PROJECT DESIGN ENGINEER

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.
- AASHTO M270 GRADE 50W - -	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50 - -	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 ¾" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1½" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A ¼" 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 ¼" 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 ⅞"Ø SHEAR STUDS FOR THE ¾"Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - ⅞"Ø STUDS FOR 4 - ¾"Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞"Ø STUDS ALONG THE BEAM AS SHOWN FOR ¾"Ø STUDS BASED ON THE RATIO OF 3 - ⅞"Ø STUDS FOR 4 - ¾"Ø 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 5/16" 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 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.

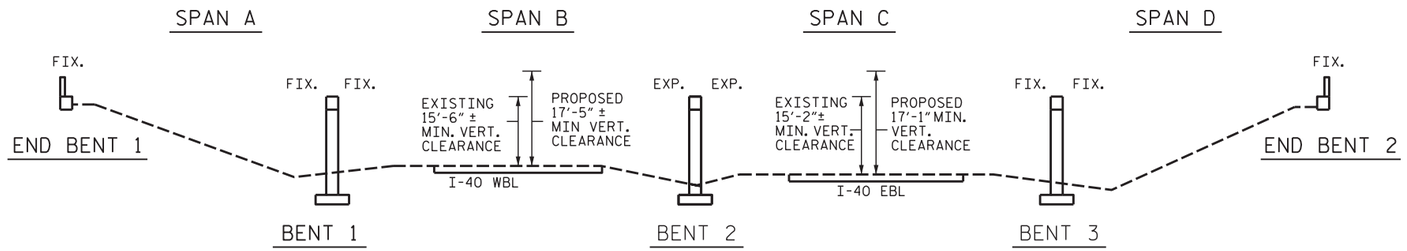
METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE 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:

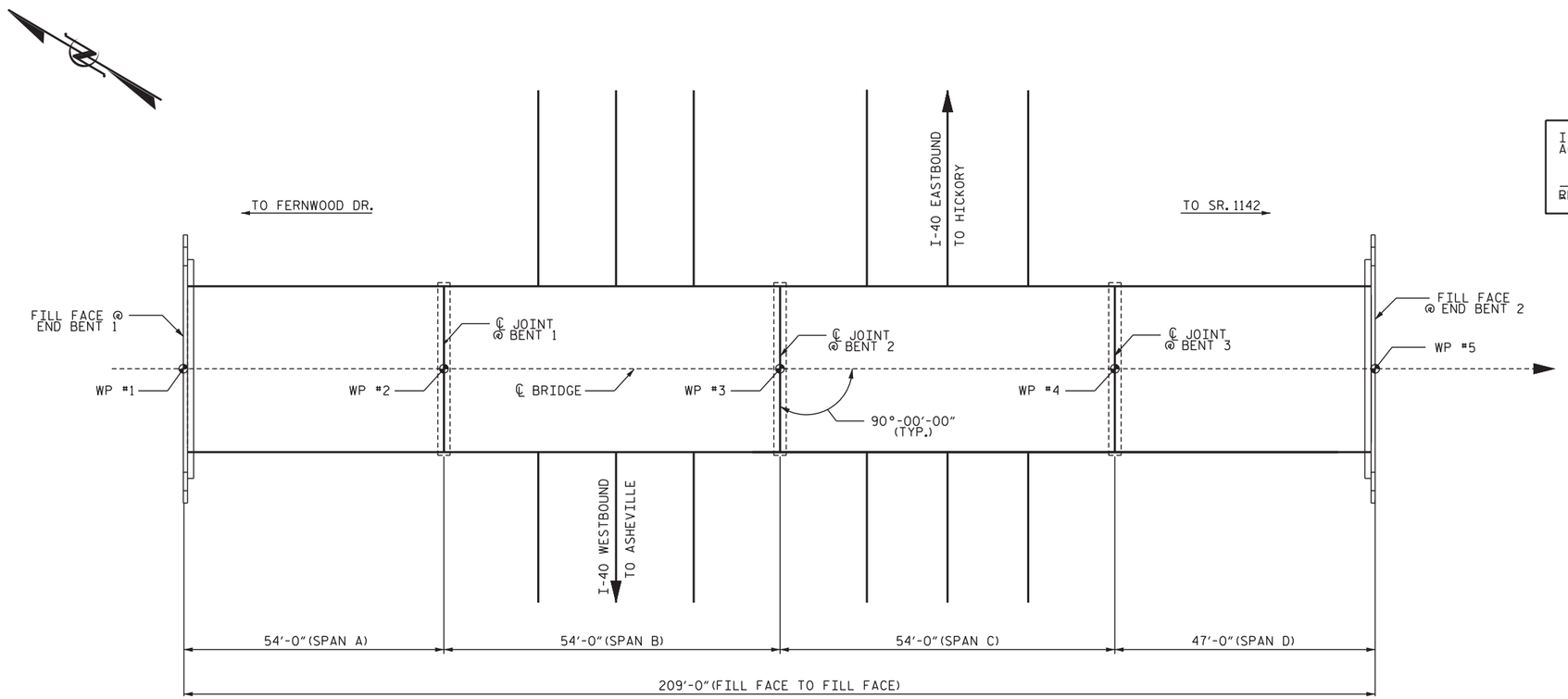
GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990



SECTION ALONG ℄ BRIDGE



PLAN

SCOPE OF WORK

- REMOVE EXISTING BRIDGE SUPERSTRUCTURE.
- CONSTRUCT ADDITIONAL BENT CAP TO SUPPORT WIDER PRESTRESSED CONCRETE CORED SLAB SUPERSTRUCTURE.
- REMOVE UNSOUND CONCRETE AND PROPERLY PREPARE SHOTCRETE AND CONCRETE REPAIR AREAS ON SUBSTRUCTURE.
- REPLACE DECK WITH PRESTRESSED CONCRETE CORED SLAB DECK WITH VERTIAL CONCRETE BARRIER RAILS.
- INSTALL CONCRETE WEARING SURFACE OVERLAY.
- INSTALL APPROACH SLABS.
- PERFORM SHOTCRETE AND CONCRETE REPAIRS IN PREPARED AREAS.
- INSTALL FOAM JOINT SEALS

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 8/25/2021.

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

NORTH CAROLINA PROFESSIONAL SEAL 35647 ENGINEER ADAM A. COLE

DocuSigned by: 02EE93BFAB674C5...

04/06/2022

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by: B248F5AA72FFAD484...

04/06/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRDIGE ON SR1417 (CAUSBY RD.) OVER i-40 BETWEEN FERNWOOD DR. AND SR 1142

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-01
1			3			TOTAL SHEETS
2			4			26

DRAWN BY : E. CABBELL DATE : 12/2020

CHECKED BY : JA. TILLMAN DATE : 12/2021

4/6/2022
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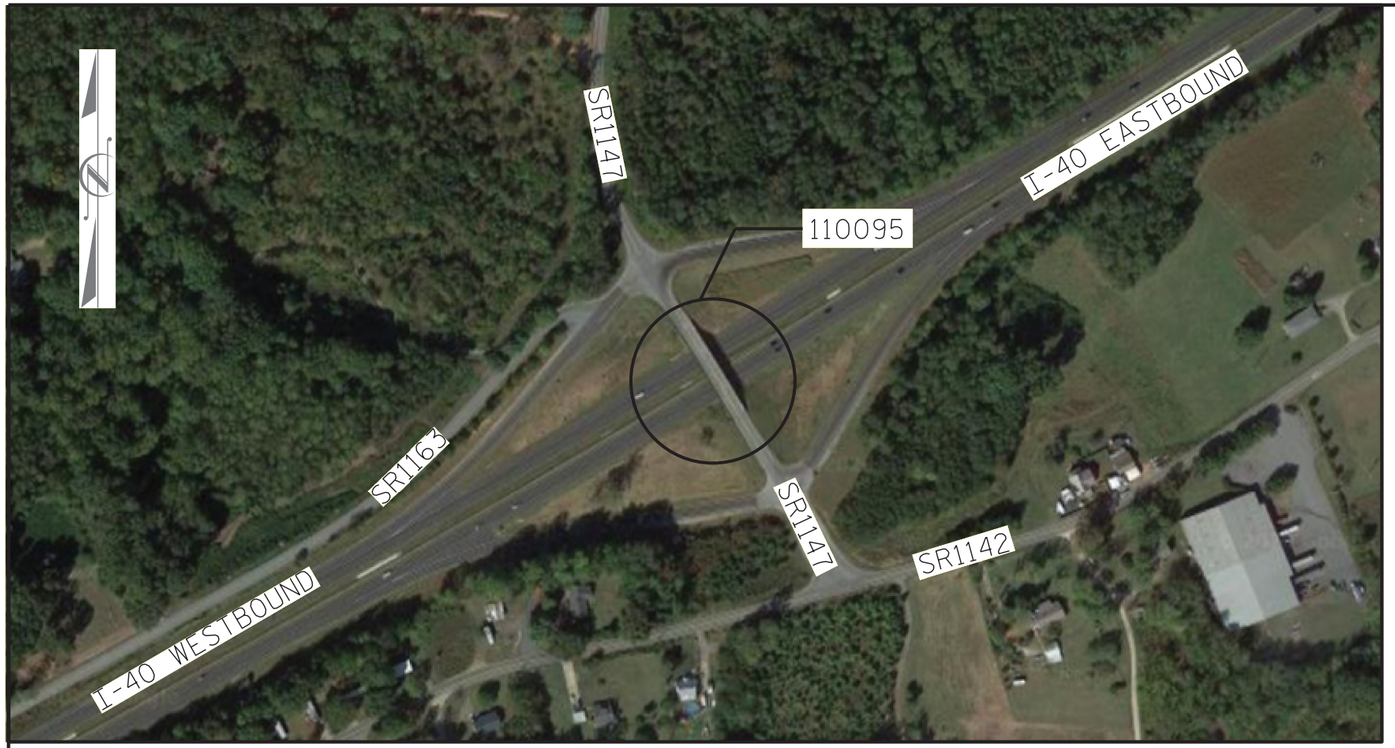

LOCATION SKETCH

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: 35.705389
LONG: -81.784528

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.

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

FOR MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH BRIDGE, SEE SPECIAL PROVISIONS.

FOR PARTIAL REMOVAL OF EXISTING STRUCTURE NO. 110095, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, 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 CONCRETE WEARING SURFACE, SEE SPECIAL PROVISIONS.

FOR ASBESTOS ASSESSMENT, SEE SPECIAL PROVISIONS.

FOR FOAM JOINTS, SEE SPECIAL PROVISIONS.

FOR ELASTOMERIC CONCRETE, SEE SPECIAL PROVISIONS.

ASSUMED LIVE LOAD= HL-93 OR ALTERNATE LOADING.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE "STANDARD NOTES" SHEET.

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.

ELEVATIONS INDICATED ON THESE PLANS ARE TAKEN FROM THE ORIGINAL BRIDGE PLANS FROM 1956. CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS AND ANY CORRELATIONS BETWEEN ORIGINAL AND CURRENT DATUM INFORMATION, THE ORIGINAL PLAN ELEVATIONS, AND THE EXISTING CURRENT ELEVATIONS.

PARTIAL REMOVAL OF EXISTING BRIDGE SHALL BE PERFORMED IN A MANNER THAT PREVENTS DEBRIS FROM FALLING ONTO THE EXISTING ROADWAY BELOW. THE CONTRACTOR SHALL SUBMIT DEMOLITION PLANS FOR REVIEW AND REMOVE THE BRIDGE IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

ANY DAMAGE TO EXISTING REINFORCING STEEL THAT IS TO REMAIN IN PLACE DURING THE CONTRACTOR'S OPERATION SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

FOR PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLANS.

FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.

SEE TRAFFIC MANAGEMENT PLANS FOR LANE WIDTHS, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES.

TOTAL BILL OF MATERIAL

BRIDGE NO. 110095	INCIDENTAL MILLING	ASPHALT CONCRETE BASE COURSE, TYPE B25.0B	ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	ASPHALT BINDER FOR PLANT MIX	ASSBESTOS ASSESSMENT	CONCRETE WEARING SURFACE	GROOVING BRIDGE FLOOR	CLASS A CONCRETE	BRIDGE APPROACH SLAB	REINFORCING STEEL	VERTICAL CONCRETE BARRIER RAIL	ELASTOMERIC BEARINGS	SHOTCRETE REPAIR	FOAM JOINT SEALS	3'-0"X 1'-9" PRESTRESSED CONCRETE CORED SLAB	PARTIAL REMOVAL OF EXISTING STRUCTURE
	SQ. YDS.	TONS	TONS	TONS	LUMP SUM	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	LIN. FT.	LUMP SUM	CU. FT.	LUMP SUM	LIN. FT.	LUMP SUM
SUPERSTRUCTURE					LUMP SUM	6,343	6,525.0		LUMP SUM		412.8	LUMP SUM			2,270.1	
END BENT 1								6.6		1,826			1.2			
BENT 1								10.4		1,698			36.0			
BENT 2								10.4		1,698			27.3			
BENT 3								10.4		1,698			52.8			
END BENT 2								6.6		1,826			0			
TOTAL	342.6	60	30	5	LUMP SUM	6,343	6,525.0	44.4	LUMP SUM	8,746	412.8	LUMP SUM	117.3	LUMP SUM	2,270.1	LUMP SUM

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

1. CONCRETE REPAIRS SQ. FT.

PROJECT NO. 41665.13A
BURKE COUNTY
BRIDGE NO. 110095

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by: Amber Miller
B0495A42FFAD484...
04/06/2022

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON SR1147 (CAUSBY RD.) OVER I-40 BETWEEN FERNWOOD DR. AND SR 1142

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-02
1			3			TOTAL SHEETS
2			4			26

DRAWN BY : E CABBELL DATE : 12/2020
CHECKED BY : JA. TILLMAN DATE : 12/2021

4/6/2022
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amlee

LOAD AND RESISTANCE FACTOR RATING (LRFD) SUMMARY FOR PRESTRESSED CONCRETE GIRDERS

LEVEL		VEHICLE	WEIGHT (W) (TONS)	CONTROLLING LOAD RATING	MINIMUM RATING FACTORS (RF)	TONS = W X RF	STRENGTH I LIMIT STATE											SERVICE III LIMIT STATE						COMMENT NUMBER
								MOMENT					SHEAR						MOMENT						
							LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	LIVELOAD FACTORS	DISTRIBUTION FACTORS (DF)	RATING FACTOR	SPAN	GIRDER LOCATION	DISTANCE FROM LEFT END OF SPAN (ft)	
DESIGN LOAD RATING		HL-93(Inv)	N/A	1	1.056	--	1.75	0.255	1.081	A	EL	25.91	0.530	1.368	A	EL	2.59	1.056	0.254	1.056	B	EL	26.44	
		HL-93(Opr)	N/A	--	1.593	--	1.35	0.255	1.402	A	EL	25.91	0.530	1.773	A	EL	2.59	N/A	--	--	--	--	--	
		HS-20(Inv)	36.000	2	1.321	47.541	1.75	0.255	1.350	A	EL	25.91	0.530	1.635	A	EL	2.59	1.321	0.254	1.321	B	EL	26.44	
		HS-20(Opr)	36.000	--	1.994	71.768	1.35	0.255	1.750	A	EL	25.91	0.530	2.120	A	EL	2.59	N/A	--	--	--	--	--	
LEGAL LOAD RATING	SV	SNSH	13.500	--	2.756	37.203	1.40	0.255	3.499	A	EL	25.91	0.530	4.663	A	EL	2.59	2.756	0.254	2.756	B	EL	26.44	
		SNGARBS2	20.000	--	2.147	42.933	1.40	0.255	2.735	A	EL	25.91	0.530	3.378	A	EL	2.59	2.147	0.254	2.147	B	EL	26.44	
		SNAGRIS2	22.000		2.074	45.639	1.40	0.255	2.647	A	EL	25.91	0.530	3.160	A	EL	2.59	2.074	0.254	2.074	B	EL	26.44	
		SNCOTTS3	27.250	--	1.374	37.440	1.40	0.255	1.745	A	EL	25.91	0.530	2.334	A	EL	2.59	1.374	0.254	1.374	B	EL	26.44	
		SNAGGRS4	34.925	--	1.183	41.330	1.40	0.255	1.506	A	EL	25.91	0.530	1.981	A	EL	2.59	1.183	0.254	1.183	B	EL	26.44	
		SNS5A	35.550	--	1.155	41.052	1.40	0.255	1.470	A	EL	25.91	0.530	2.030	A	EL	2.59	1.155	0.254	1.155	B	EL	26.44	
		SNS6A	39.950	--	1.075	42.940	1.40	0.255	1.369	A	EL	25.91	0.530	1.871	A	EL	2.59	1.075	0.254	1.075	B	EL	26.44	
		SNS7B	42.000	--	1.024	43.105	1.40	0.255	1.305	A	EL	25.91	0.530	1.863	A	EL	2.59	1.024	0.254	1.024	B	EL	26.44	
	TTST	TNAGRIT3	33.000	--	1.315	43.406	1.40	0.255	1.676	A	EL	25.91	0.530	2.211	A	EL	2.59	1.315	0.254	1.315	B	EL	26.44	
		TNT4A	33.075	--	1.325	43.839	1.40	0.255	1.690	A	EL	25.91	0.530	2.135	A	EL	2.59	1.325	0.254	1.325	B	EL	26.44	
		TNT6A	41.600	--	1.099	45.718	1.40	0.255	1.403	A	EL	25.91	0.530	2.032	A	EL	2.59	1.099	0.254	1.099	B	EL	26.44	
		TNT7A	42.000	--	1.113	46.738	1.40	0.255	1.421	A	EL	25.91	0.530	1.909	A	EL	2.59	1.113	0.254	1.113	B	EL	26.44	
		TNT7B	42.000	--	1.161	48.769	1.40	0.255	1.482	A	EL	25.91	0.530	1.801	A	EL	2.59	1.161	0.254	1.161	B	EL	26.44	
		TNAGRIT4	43.000	--	1.100	47.279	1.40	0.255	1.405	A	EL	25.91	0.530	1.737	A	EL	2.59	1.100	0.254	1.100	B	EL	26.44	
		TNAGT5A	45.000	--	1.029	46.327	1.40	0.255	1.314	A	EL	25.91	0.530	1.756	A	EL	2.59	1.029	0.254	1.029	B	EL	26.44	
		TNAGT5B	45.000	3	1.011	45.483	1.40	0.255	1.290	A	EL	25.91	0.530	1.649	A	EL	2.59	1.011	0.254	1.011	B	EL	26.44	

LOAD FACTORS:

DESIGN LOAD RATING FACTORS	LIMIT STATE	γ_{DC}	γ_{DW}
	STRENGTH I	1.25	1.50
	SERVICE III	1.00	1.00

NOTES:

MINIMUM RATING FACTORS ARE BASED ON THE STRENGTH I AND SERVICE III LIMIT STATES.

ALLOWABLE STRESSES FOR SERVICE III LIMIT STATE ARE AS REQUIRED FOR DESIGN.

COMMENTS:

1.
2.
3.
4.

(#) CONTROLLING LOAD RATING

(1) DESIGN LOAD RATING (HL-93)

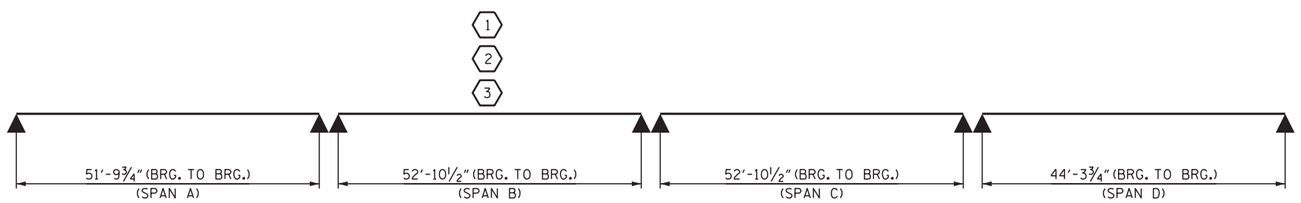
(2) DESIGN LOAD RATING (HS-20)

(3) LEGAL LOAD RATING **

** SEE CHART FOR VEHICLE TYPE

GIRDER LOCATION

I - INTERIOR GIRDER
EL - EXTERIOR LEFT GIRDER
ER - EXTERIOR RIGHT GIRDER



LRFR SUMMARY

FOR SPAN 'A THRU D'

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO.: 110095

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by: Amber Miller B0485A42FAD484...

04/06/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

LRFR SUMMARY FOR CORED SLAB UNIT SPAN A THRU D
(NON-INTERSTATE TRAFFIC)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-03
1			3			TOTAL SHEETS
2			4			26

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ASSEMBLED BY :	E. BAYISSA	DATE : 12/2021
CHECKED BY :	JA. TILLMAN	DATE : 12/2021
DRAWN BY : CVC	6/10	
CHECKED BY : DNS	6/10	

4/6/2022
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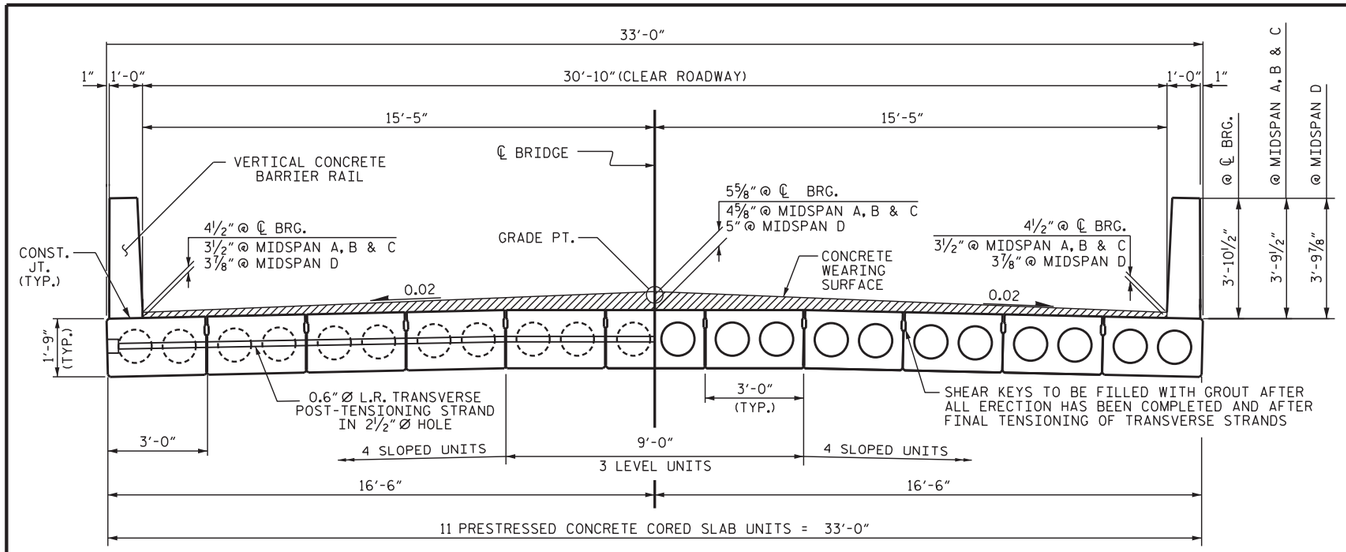
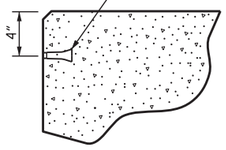


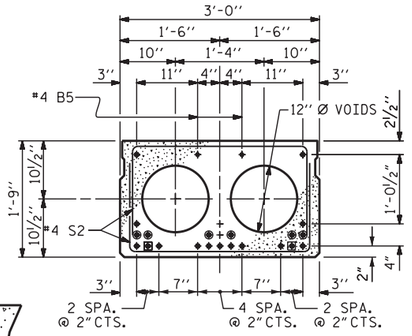
HALF SECTION
AT INTERMEDIATE DIAPHRAGMS

HALF SECTION
THROUGH VOIDS

PERMITTED THREADED INSERT CAST IN OUTSIDE FACE OF EXTERIOR UNIT AND RECESSED ⅜". SIZE TO BE DETERMINED BY CONTRACTOR.



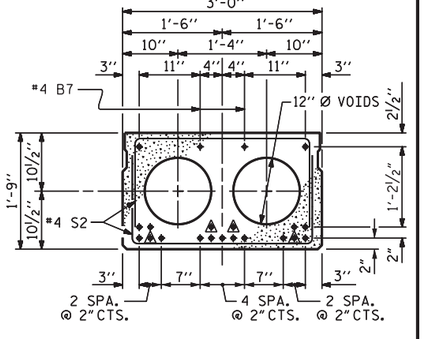
THREADED INSERT DETAIL



INTERIOR SLAB SECTION
(45'-10½" UNIT)

(15 STRANDS REQUIRED)
SPANS D

0.6" Ø LOW RELAXATION STRAND LAYOUT



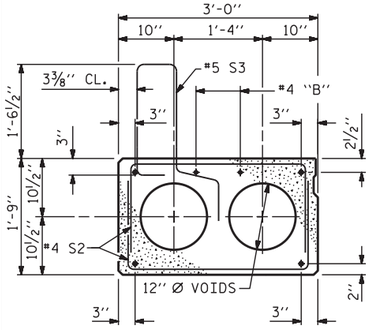
INTERIOR SLAB SECTION
(52'-9¾", 53'-10½" UNIT)

(19 STRANDS REQUIRED)
SPANS A, B & C

0.6" Ø LOW RELAXATION STRAND LAYOUT

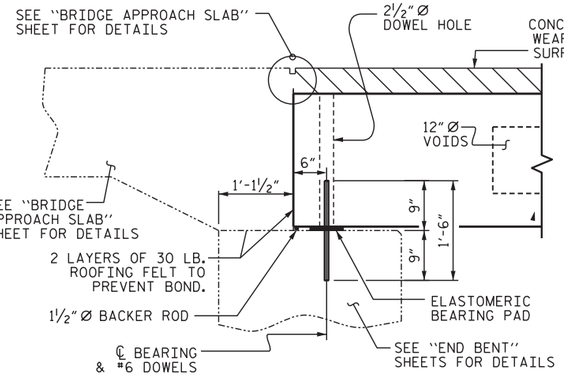
TYPICAL SECTION

THE MAXIMUM BARRIER RAIL HEIGHT AND ASPHALT THICKNESS IS SHOWN. THE HEIGHT OF THE BARRIER RAIL AND ASPHALT THICKNESS VARIES WHILE THE TOP OF THE BARRIER RAIL FOLLOWS THE PROFILE OF THE GUTTERLINE. FOR RAIL HEIGHT DETAILS AND ASPHALT THICKNESS SEE THE "VERTICAL CONCRETE BARRIER RAIL SECTION" DETAIL.

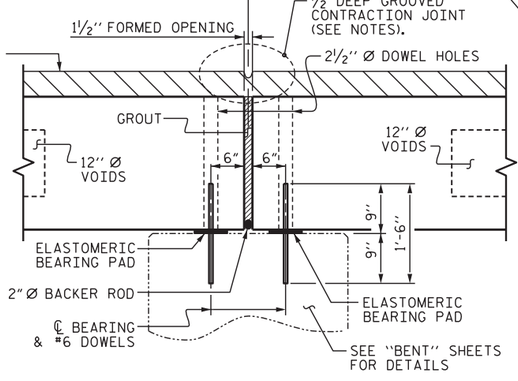


EXT. SLAB SECTION

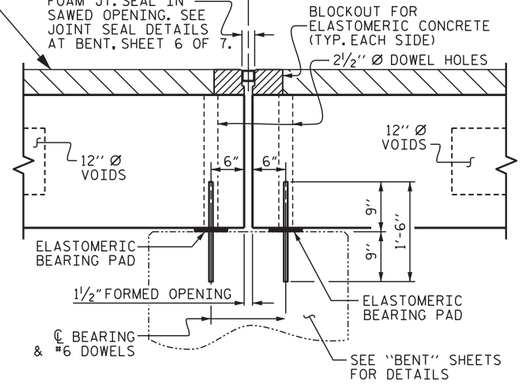
(FOR PRESTRESSED STRAND LAYOUT, SEE INTERIOR SLAB SECTION.)



SECTION AT END BENT



SECTION AT BENT 1 & 3



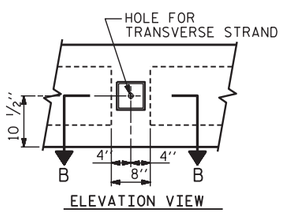
SECTION AT BENT 2

◉ OPTIONAL FULL LENGTH DEBONDED STRANDS. THESE STRANDS ARE NOT REQUIRED. IF THE FABRICATOR CHOOSES TO INCLUDE THESE STRANDS IN THE CORED SLAB UNIT, THE STRANDS SHALL BE DEBONDED FOR THE FULL LENGTH OF THE UNIT AT NO ADDITIONAL COST. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

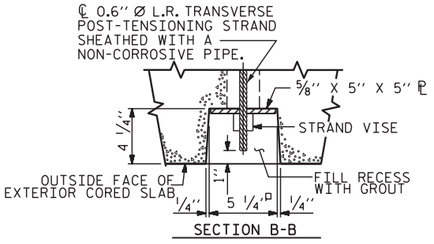
◙ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 4'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

▲ BOND SHALL BE BROKEN ON THESE STRANDS FOR A DISTANCE OF 6'-0" FROM END OF CORED SLAB UNIT. SEE STANDARD SPECIFICATIONS, ARTICLE 1078-7.

DEBONDING LEGEND

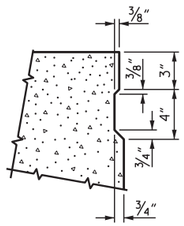


ELEVATION VIEW



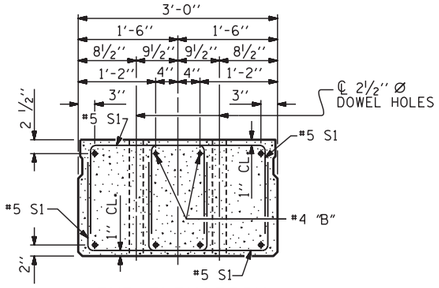
SECTION B-B

GROUTED RECESS AT END OF POST-TENSIONED STRAND CORED SLABS



SHEAR KEY DETAIL

NOTE: OMIT SHEAR KEY ON OUTSIDE FACE OF EXTERIOR CORED SLABS.



END ELEVATION

SHOWING PLACEMENT OF DOUBLE STIRRUPS AND LOCATION OF DOWEL HOLES. (STRAND LAYOUT NOT SHOWN.) INTERIOR SLAB SECTION SHOWN-EXTERIOR SLAB SECTION SIMILAR EXCEPT SHEAR KEY LOCATION.

PROJECT NO. 41665.13A
BURKE COUNTY
STATION: 110095
SHEET 1 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
STANDARD

3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLAB UNIT

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by: Amber Miller
B0495A12FFAD484...
04/06/2022

ASSEMBLED BY : E. BAYISSA	DATE : 02/2021
CHECKED BY : JA. TILMAN	DATE : 12/2021

DRAWN BY : WJH 4/89	REV. 10/1/11 MAA/GM
CHECKED BY : FCJ 5/89	REV. 1/15 RWW/TMG
	REV. 12/17 MAA/THC

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(SHT 1C) STD. NO. PCS2

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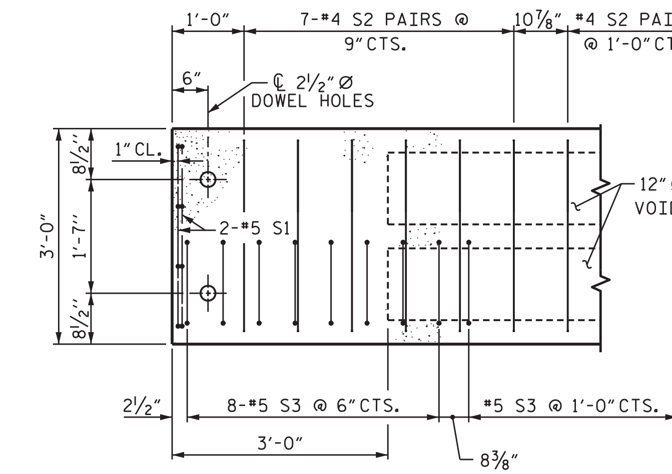
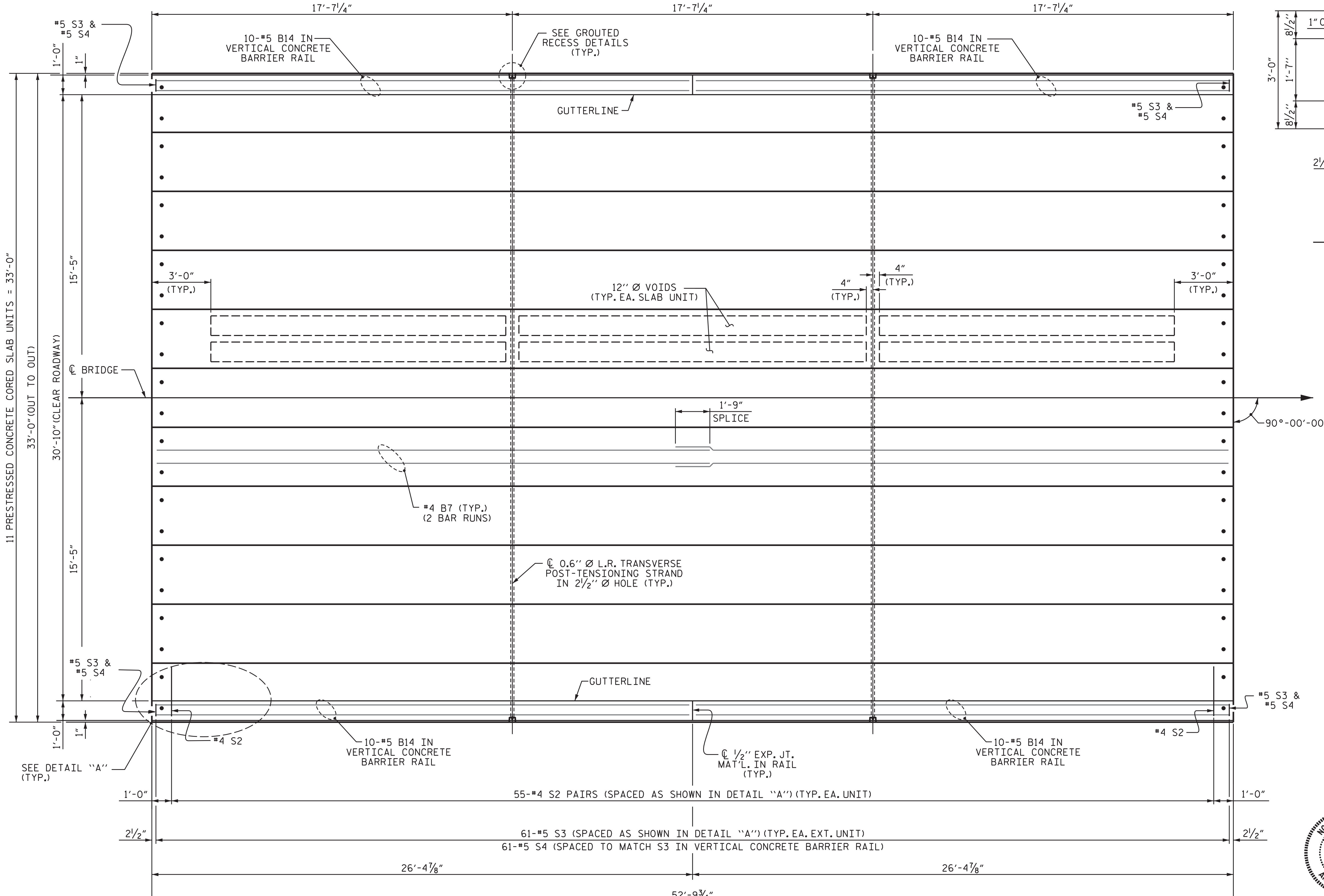


DETAIL "A"

(TYPICAL EACH END OF UNIT)
NOTE: EXTERIOR UNIT SHOWN - INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S3 BARS.



PLAN OF UNIT

PROJECT NO. 41665.13A
BURKE COUNTY
BRIDGE NO. 110095
SHEET 2 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF 52'-9¾" UNIT
30'-10" CLEAR ROADWAY
SPAN A
90° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE
DocuSigned by:
04/06/2022

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-05
1			3			TOTAL SHEETS
2			4			26

ASSEMBLED BY : E.BAYISSA	DATE : 01/2021		
CHECKED BY : JA. TILMAN	DATE : 12/2021		
DRAWN BY : DGE 3/09	REV. 12/5/11	MAA/AAC	
CHECKED BY : BCH 3/09	REV. 8/14	MAA/TMG	

4/6/2022
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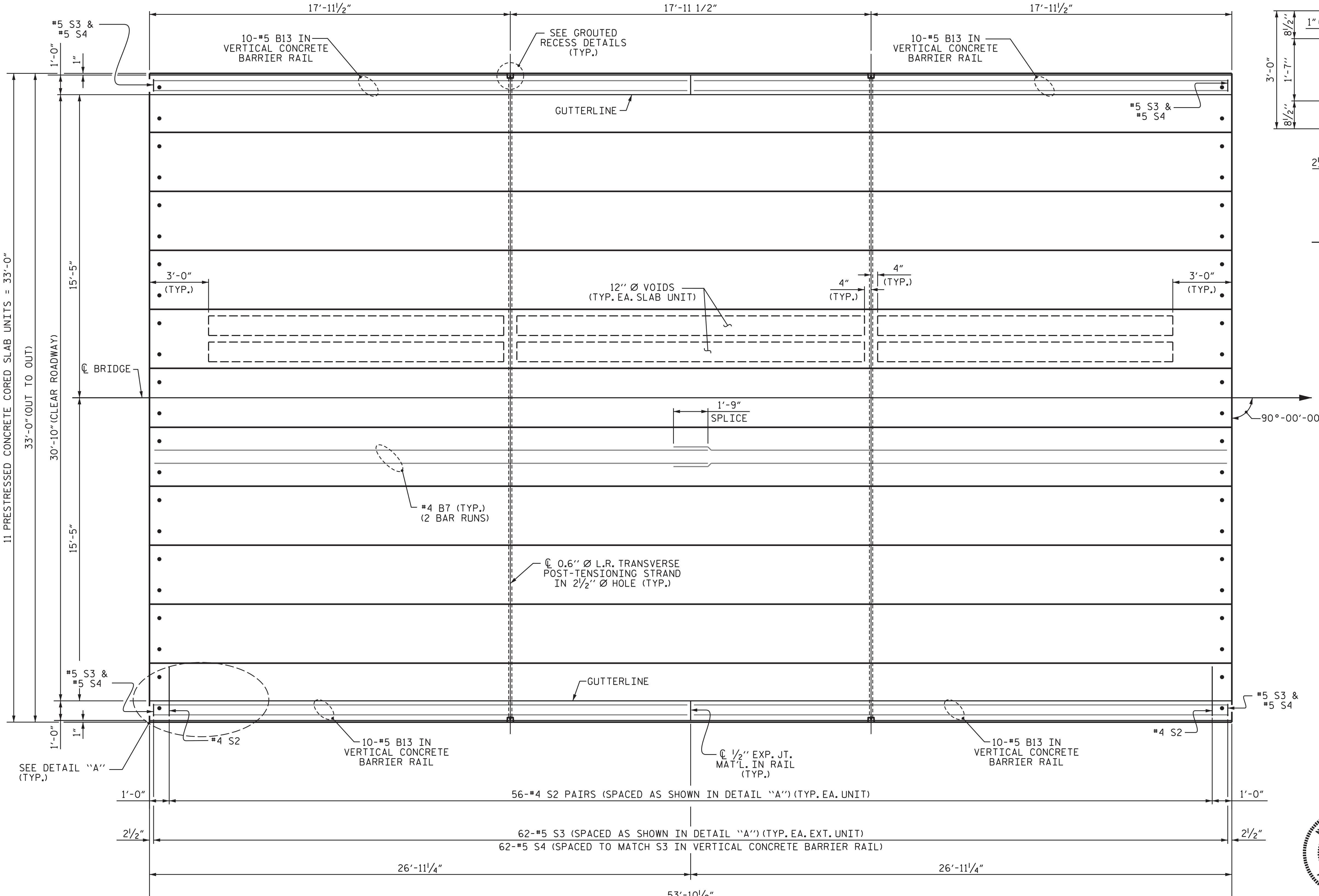
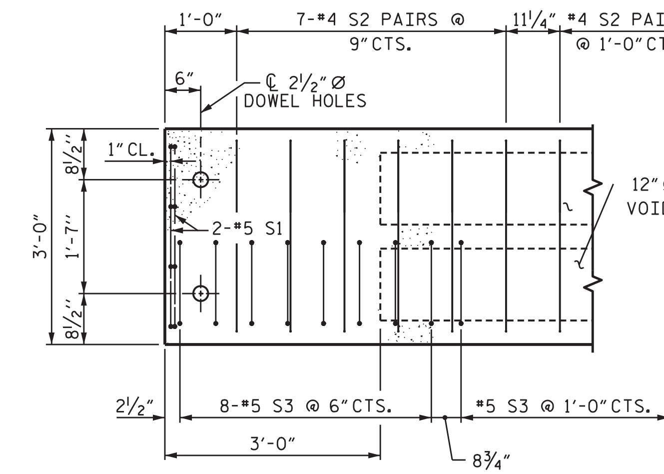


PLAN OF UNIT



DETAIL "A"

(TYPICAL EACH END OF UNIT)
NOTE: EXTERIOR UNIT SHOWN - INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S3 BARS.

PROJECT NO. 41665.13A
BRUKE COUNTY
BRIDGE NO. 110095

SHEET 3 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PLAN OF 53'-10½" UNIT 30'-10" CLEAR ROADWAY SPANS B & C 90° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE
DocuSigned by:
04/06/2022

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-06
1			3			TOTAL SHEETS
2			4			26

ASSEMBLED BY : E.BAYISSA	DATE : 01/2021		
CHECKED BY : JA. TILMAN	DATE : 12/2021		
DRAWN BY : DGE 3/09	REV. 12/5/11	MAA/AAC	
CHECKED BY : BCH 3/09	REV. 8/14	MAA/TMG	

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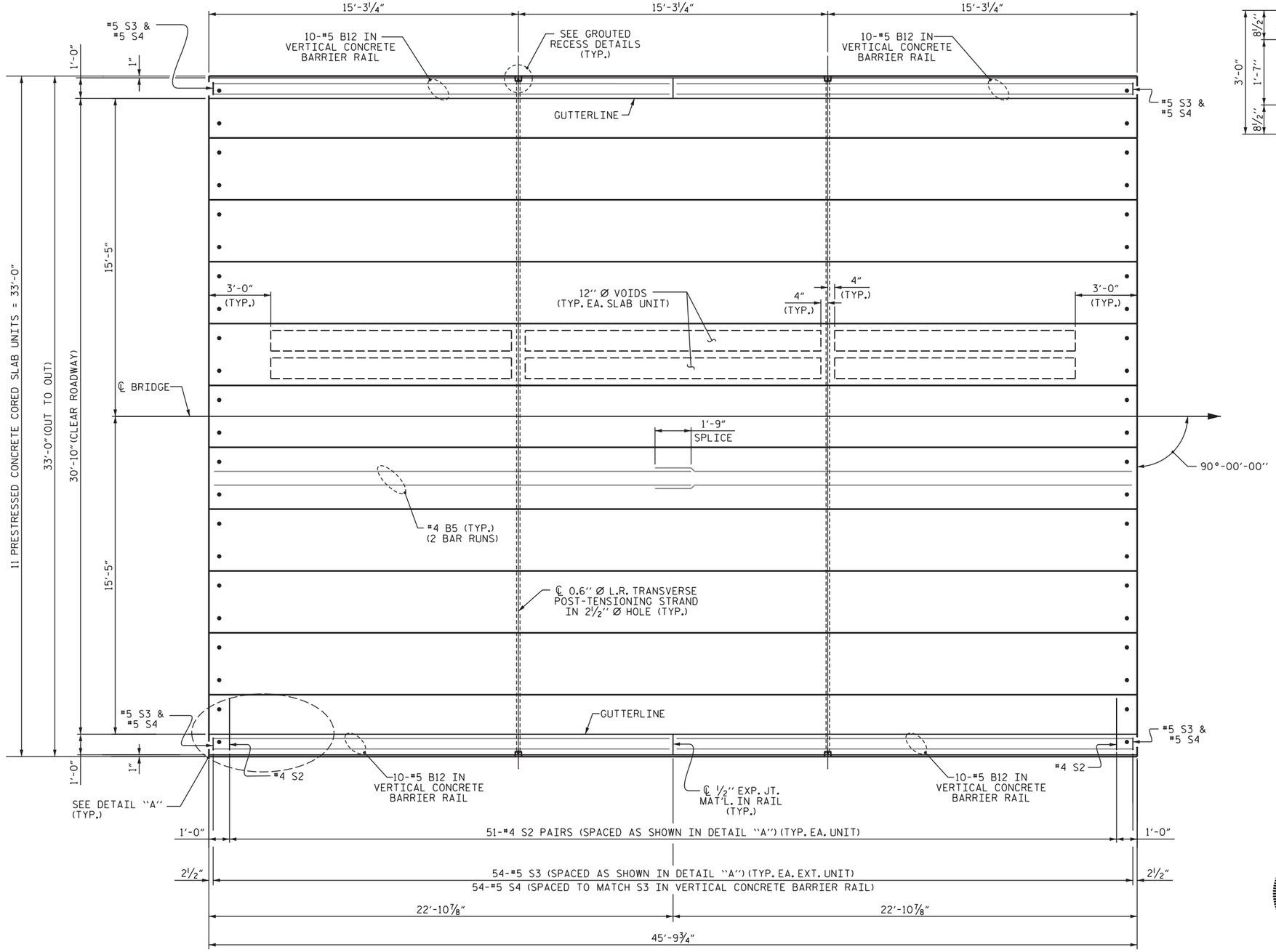
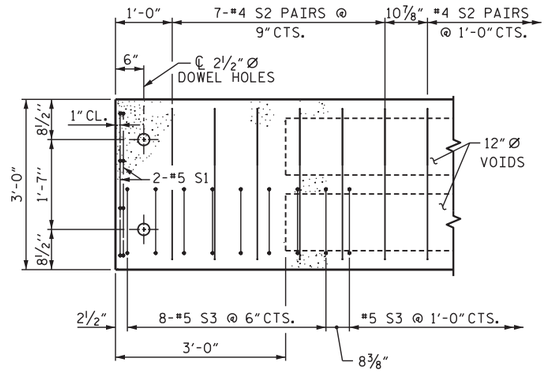


PLAN OF UNIT



DETAIL "A"

(TYPICAL EACH END OF UNIT)
NOTE: EXTERIOR UNIT SHOWN - INTERIOR UNIT SIMILAR EXCEPT OMIT #5 S3 BARS.

ASSEMBLED BY : E.BAYISSA	DATE : 01/2021
CHECKED BY : JA. TILMAN	DATE : 12/2021
DRAWN BY : DGE 3/09	REV. 12/5/11 MAA/AAC
CHECKED BY : BCH 3/09	REV. 8/14 MAA/TMG

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amlee

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NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by: Amber Lee
B04B5A12FAD484...
04/06/2022

PROJECT NO. 41665.13A
BURKE COUNTY
STATION: 110095

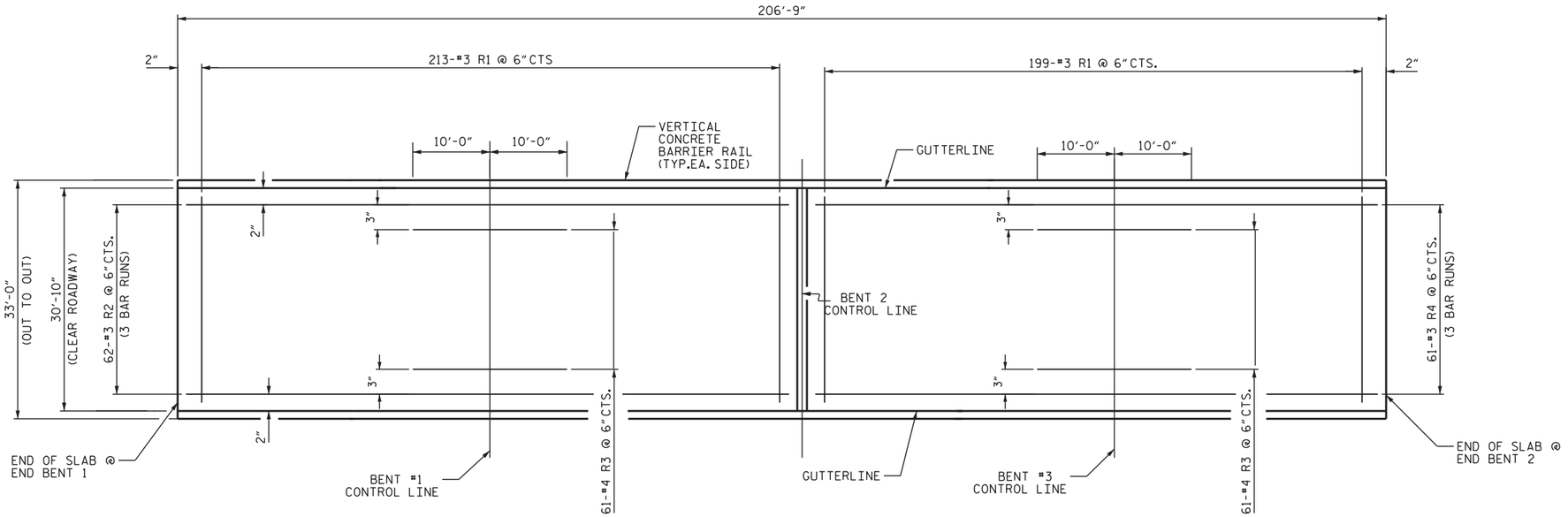
SHEET 4 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

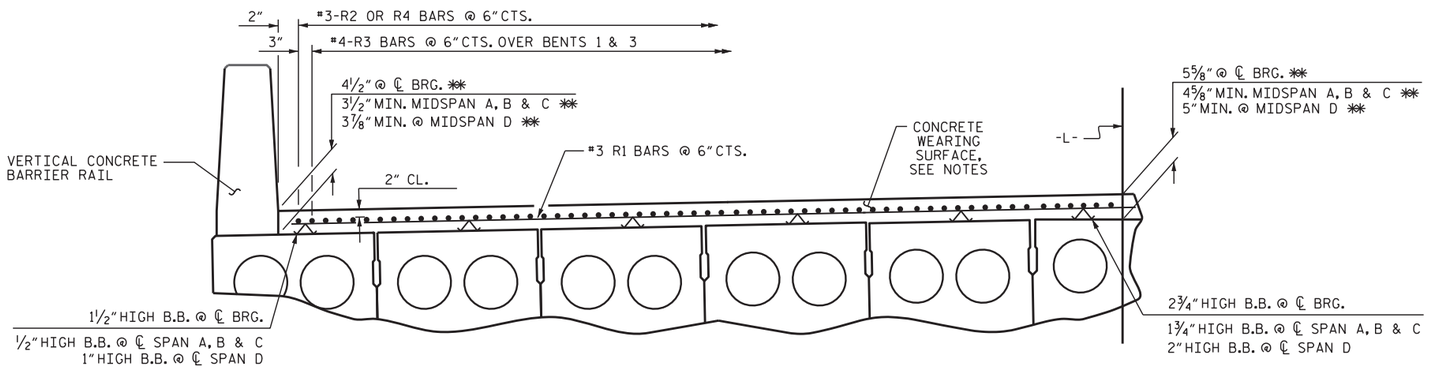
PLAN OF 45'-9¾" UNIT 30'-10" CLEAR ROADWAY SPAN D

90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-07
1			3			TOTAL SHEETS
2			4			26



PLAN SHOWING CONCRETE WEARING SURFACE REINFORCING STEEL



REINFORCING FOR CONCRETE WEARING SURFACE

** BASED ON PREDICTED FINAL CAMBER AND THEORETICAL GRADE LINE ELEVATIONS

NOTES

PLACEMENT OF THE CONCRETE WEARING SURFACE SHALL OCCUR AFTER CASTING THE VERTICAL CONCRETE BARRIER RAILS.

THE COST OF THE #3 BARS CAST WITH THE CONCRETE WEARING SURFACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONCRETE WEARING SURFACE.

FOR CONCRETE WEARING SURAFCE, SEE SPECIAL PROVISIONS.

ALL REINFORCING STEEL FOR CONCRETE WEARING SURAFCE SHALL BE EPOXY COATED.

BILL OF MATERIAL FOR CONCRETE WEARING SURFACE

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*R1	412	#3	STR	30'-6"	4,712
*R2	186	#3	STR	36'-4"	2,541
*R3	122	#4	STR	20'-0"	1,630
*R4	186	#3	STR	34'-0"	2,372
*EPOXY COATED REINFORCING STEEL				LBS.	11,255
CONCRETE WEARING SURFACE				SQ. FT.	6,343

GROOVING BRIDGE FLOORS

BRIDGE DECK	5,736	SQ. FT.
APPROACH SLAB	789	SQ. FT.
TOTAL	6,525	SQ. FT.

SPLICE LENGTH CHART

BAR SIZE	EPOXY COATED
#3	1'-3"

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO.: 110095

SHEET 5 OF 7

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by: Amber Lee 934B5547CFFA484...

04/06/2022

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CONCRETE WEARING SURFACE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-08
1			3			TOTAL SHEETS
2			4			26

DRAWN BY : E.BAYISSA DATE : 02/2021
CHECKED BY : JA. TILMAN DATE : 12/2021

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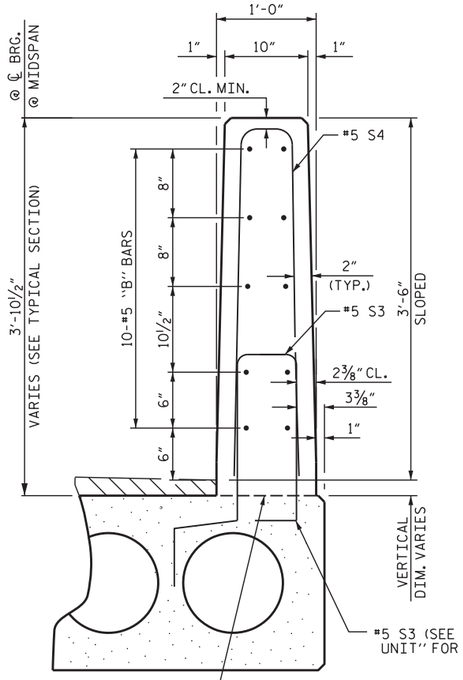
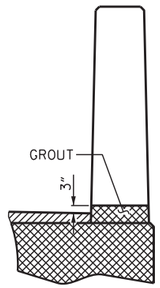
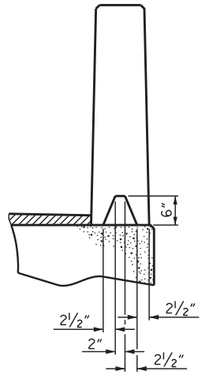
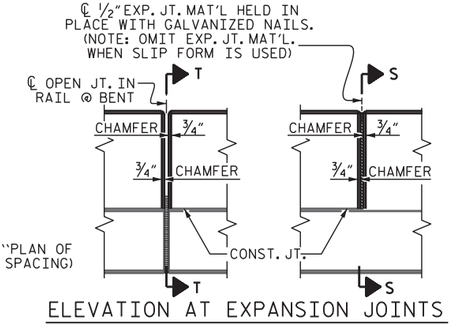




SECTION T-T
AT OPEN JOINT AT BENT
(THIS IS TO BE USED WHERE FOAM JOINT IS NOT USED)

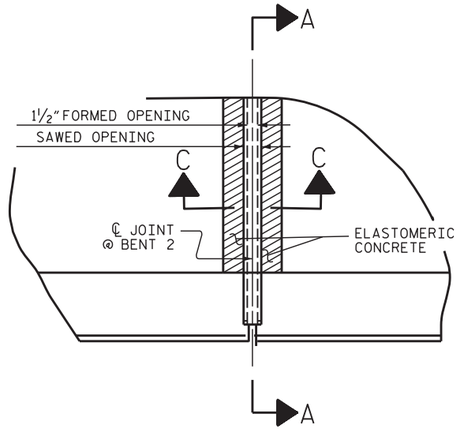


SECTION S-S
AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)

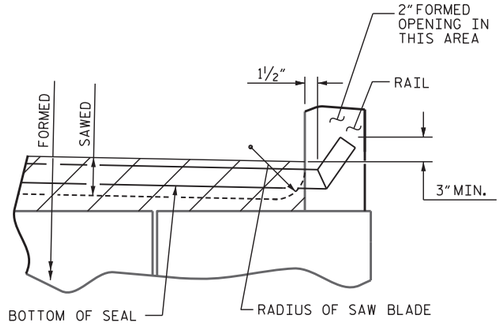


ELEVATION AT EXPANSION JOINTS

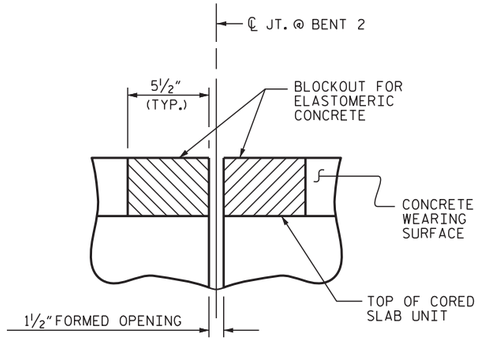
VERTICAL CONCRETE BARRIER RAIL SECTION



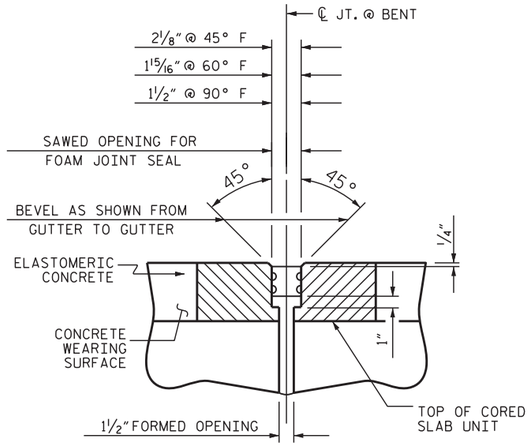
PLAN



SECTION A-A



SECTION C-C
FOAM JOINT SEAL
(PRE-SAWED ELASTOMERIC CONCRETE DIMENSIONS)



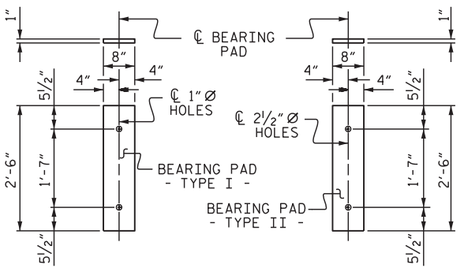
SECTION C-C
FOAM JOINT SEAL

JOINT SEAL DETAILS AT BENT 2

(SHOWING FULL DEPTH BLOCKOUT)

ELASTOMERIC CONCRETE	
BENT NO.	ELASTOMERIC CONCRETE * (CU. FT.)
2	11.9
TOTAL	11.9

* BASED ON THE MINIMUM BLOCKOUT SHOWN.

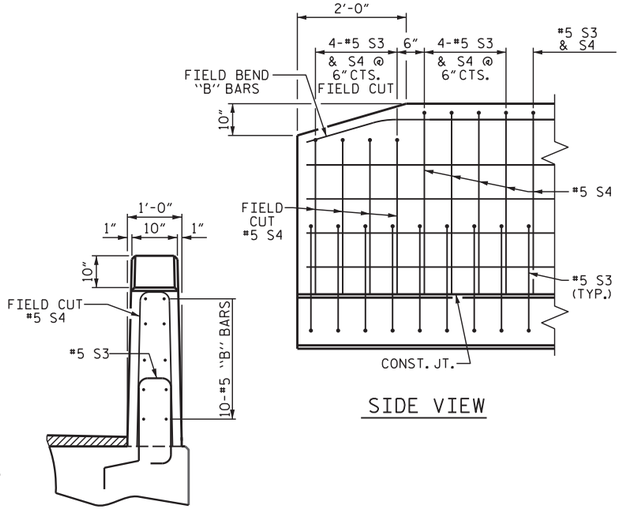


FIXED END
(TYPE I - 66 REQ'D)

EXPANSION END
(TYPE II - 22 REQ'D)

ELASTOMERIC BEARING DETAILS

ELASTOMER IN ALL BEARINGS SHALL BE 50 DUROMETER HARDNESS.



END VIEW

SIDE VIEW

END OF RAIL DETAILS

PROJECT NO. 41665.13A
BURKE COUNTY
BRIDGE NO. 110095

SHEET 6 OF 7

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

3'-0" X 1'-9"
PRESTRESSED CONCRETE
CORED SLAB UNIT
90° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by:
B94B5A42FAD484...
04/06/2022

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REVISIONS						SHEET NO.
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DRAWN BY : E. BAYISSA DATE : 12/2021
CHECKED BY : JA. TILLMAN DATE : 12/2021

4/6/2022
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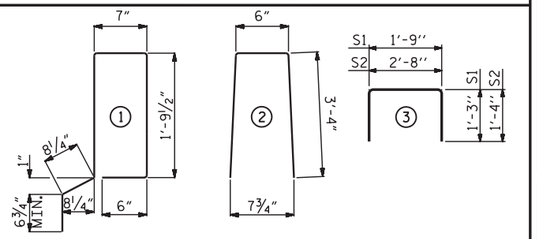
amlee

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL FOR ONE 52'-9¾" CORED SLAB UNIT (SPAN A)

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B7	4	#4	STR	27'-7"	74	27'-7"	74
S1	8	#5	3	4'-3"	36	4'-3"	36
S2	110	#4	3	5'-4"	392	5'-4"	392
✱ S3	61	#5	1	5'-11"	377		
REINFORCING STEEL		LBS.			502		502
✱EPOXY COATED REINFORCING STEEL		LBS.			377		
6000 P.S.I. CONCRETE		CU. YDS.			7.5		7.5
0.6" Ø L.R. STRANDS		No.			19		19

BILL OF MATERIAL FOR ONE 53'-10½" CORED SLAB UNIT (SPANS B & C)

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B7	4	#4	STR	27'-7"	74	27'-7"	74
S1	8	#5	3	4'-3"	36	4'-3"	36
S2	112	#4	3	5'-4"	399	5'-4"	399
✱ S3	62	#5	1	5'-11"	383		
REINFORCING STEEL		LBS.			509		509
✱EPOXY COATED REINFORCING STEEL		LBS.			383		
6500 P.S.I. CONCRETE		CU. YDS.			7.6		7.6
0.6" Ø L.R. STRANDS		No.			19		19

BILL OF MATERIAL FOR ONE 45'-9¾" CORED SLAB UNIT (SPAN D)

				EXTERIOR UNIT		INTERIOR UNIT	
BAR	NUMBER	SIZE	TYPE	LENGTH	WEIGHT	LENGTH	WEIGHT
B5	4	#4	STR	23'-7"	63	23'-7"	63
S1	8	#5	3	4'-3"	36	4'-3"	36
S2	102	#4	3	5'-4"	364	5'-4"	364
✱ S3	54	#5	1	5'-11"	334		
REINFORCING STEEL		LBS.			463		432
✱EPOXY COATED REINFORCING STEEL		LBS.			334		
5000 P.S.I. CONCRETE		CU. YDS.			6.6		6.6
0.6" Ø L.R. STRANDS		No.			15		15

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL

BAR	BARS PER PAIR OF EXTERIOR UNITS 52'-9¾" UNIT (SPAN A)	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
✱B14	40	40	#5	STR	25'-11"	1082
✱ S4	122	122	#5	2	7'-2"	912
✱EPOXY COATED REINFORCING STEEL				LBS.		1994
CLASS AA CONCRETE				CU.YDS.		13.9
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.		105.6

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL

BAR	BARS PER PAIR OF EXTERIOR UNITS 53'-10½" UNIT (SPANS B & C)	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
✱B13	40	80	#5	STR	26'-6"	2212
✱ S4	124	248	#5	2	7'-2"	1854
✱EPOXY COATED REINFORCING STEEL				LBS.		4066
CLASS AA CONCRETE				CU.YDS.		14.2
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.		107.8

BILL OF MATERIAL FOR VERTICAL CONCRETE BARRIER RAIL

BAR	BARS PER PAIR OF EXTERIOR UNITS 45'-9¾" UNIT (SPAN D)	TOTAL NO.	SIZE	TYPE	LENGTH	WEIGHT
✱B12	40	40	#5	STR	22'-5"	936
✱ S4	108	108	#5	2	7'-2"	808
✱EPOXY COATED REINFORCING STEEL				LBS.		1744
CLASS AA CONCRETE				CU.YDS.		12.1
TOTAL VERTICAL CONCRETE BARRIER RAIL				LN. FT.		91.6

DEAD LOAD DEFLECTION AND CAMBER

	3'-0" x 1'-9"
52'-9¾" UNIT (SPAN A)	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1⅝"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD ✱✱	⅝"
FINAL CAMBER	1"

✱✱ INCLUDES FUTURE WEARING SURFACE

DEAD LOAD DEFLECTION AND CAMBER

	3'-0" x 1'-9"
53'-10½" UNIT (SPAN B & C)	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1⅝"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD ✱✱	⅝"
FINAL CAMBER	1"

✱✱ INCLUDES FUTURE WEARING SURFACE

DEAD LOAD DEFLECTION AND CAMBER

	3'-0" x 1'-9"
45'-9¾" UNIT (SPAN D)	0.6" Ø L.R. STRAND
CAMBER (SLAB ALONE IN PLACE)	1"
DEFLECTION DUE TO SUPERIMPOSED DEAD LOAD ✱✱	⅜"
FINAL CAMBER	⅝"

✱✱ INCLUDES FUTURE WEARING SURFACE

GRADE 270 STRANDS

	0.6" Ø L.R.
AREA (SQUARE INCHES)	0.217
ULTIMATE STRENGTH (LBS. PER STRAND)	58,600
APPLIED PRESTRESS (LBS. PER STRAND)	43,950

CORED SLABS REQUIRED

52'-9¾" UNIT SPAN A	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	2	52.8125'	105'-7½"
INTERIOR C.S.	9	52.8125'	475'-3¾"
TOTAL			580'-11¼"

CORED SLABS REQUIRED

53'-10½" UNIT SPAN B & C	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	4	53.875'	215'-6"
INTERIOR C.S.	18	53.875'	969'-9"
TOTAL			1185'-3"

CORED SLABS REQUIRED

45'-9¾" UNIT SPAN D	NUMBER	LENGTH	TOTAL LENGTH
EXTERIOR C.S.	2	45.8125'	91'-7½"
INTERIOR C.S.	9	45.8125'	405'-3¾"
TOTAL			503'-11¼"

CONCRETE RELEASE STRENGTH

UNIT	PSI
45'-9¾" UNITS	4000
52'-9¾" UNITS	4900
53'-10½" UNITS	5000

NOTES

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PRESTRESSED CONCRETE CORED SLABS.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE 2½" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS SHALL BE FILLED WITH NON-SHRINK GROUT.

THE BACKER RODS SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER. SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS.

WHEN CORED SLABS ARE CAST, AN INTERNAL HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. AT LEAST SIX WEEKS PRIOR TO CASTING CORED SLABS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

ALL REINFORCING STEEL IN THE VERTICAL CONCRETE BARRIER RAIL SHALL BE EPOXY COATED.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

GROOVED CONTRACTION JOINTS, ½" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

FLAME CUTTING OF THE TRANSVERSE POST-TENSIONING STRAND IS NOT ALLOWED.

THE TRANSFER OF LOAD FROM THE ANCHORAGES TO THE CORED SLAB UNIT SHALL BE DONE WHEN THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF NOT LESS THAN THE REQUIRED STRENGTH SHOWN IN THE "CONCRETE RELEASE STRENGTH" TABLE.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

THE PERMITTED THREADED INSERTS ARE DETAILED AS AN OPTION FOR THE CONTRACTOR TO ATTACH FALSEWORK AND FORMWORK DURING CONSTRUCTION.

THE PERMITTED THREADED INSERTS IN THE EXTERIOR UNITS SHALL BE SIZED BY THE CONTRACTOR, SPACED AT 4'-0" CENTERS AND GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS. STAINLESS STEEL THREADED INSERTS MAY BE USED AS AN ALTERNATE.

THE PERMITTED THREADED INSERTS SHALL BE GROUTED BY THE CONTRACTOR IMMEDIATELY FOLLOWING REMOVAL OF THE FALSEWORK.

THE COST OF THE PERMITTED THREADED INSERTS SHALL BE INCLUDED IN THE PRICE BID FOR THE PRECAST UNITS.

POST-TENSIONING SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO.: 110095

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by: Amber Miller B0485A42F2FAD484...

04/06/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

3'-0" X 1'-9" PRESTRESSED CONCRETE CORED SLAB UNIT 90° SKEW

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1			3			TOTAL SHEETS
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DRAWN BY : E.BAYISSA DATE : 02/2021
CHECKED BY : JA. TILMAN DATE : 12/2021

4/6/2022
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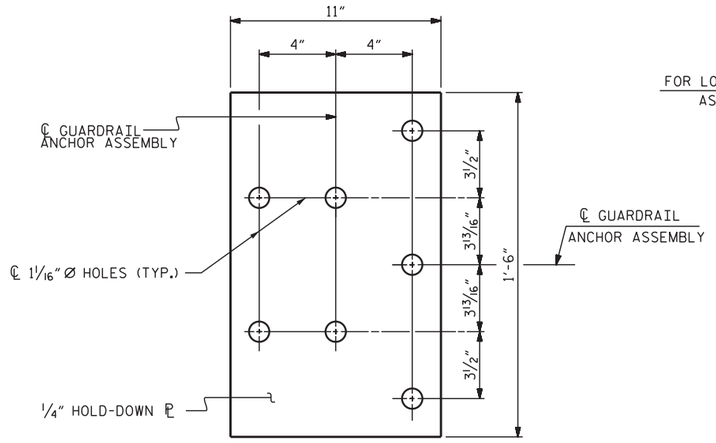
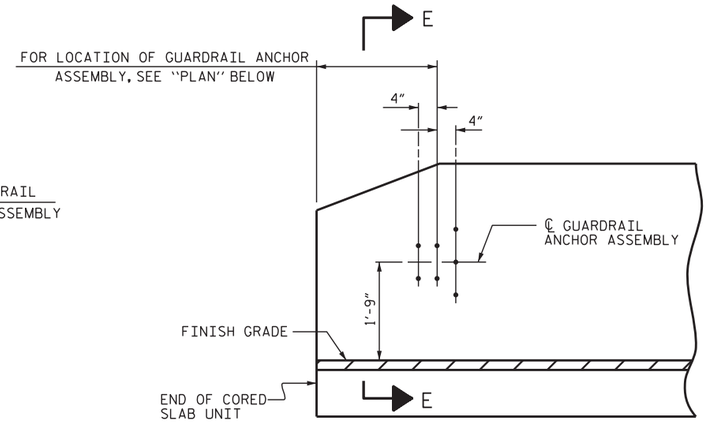


PLAN



ELEVATION

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4" HOLD DOWN PLATE AND 7 - 7/8" Ø BOLTS WITH NUTS AND WASHERS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36. AFTER FABRICATION, THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

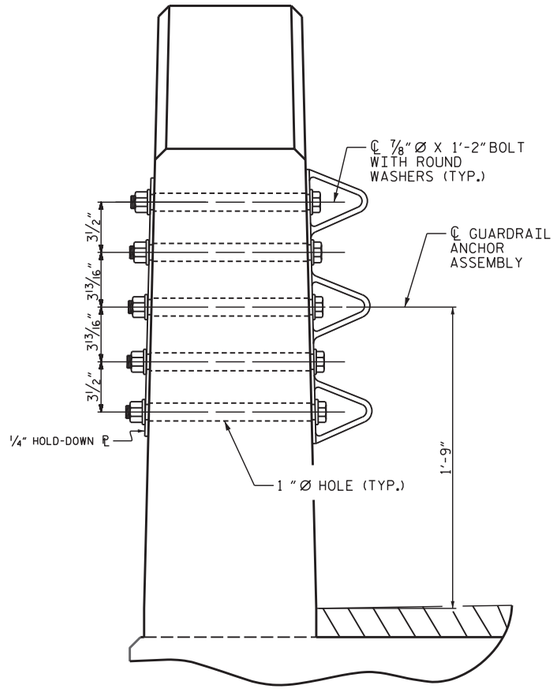
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR VERTICAL CONCRETE BARRIER RAIL.

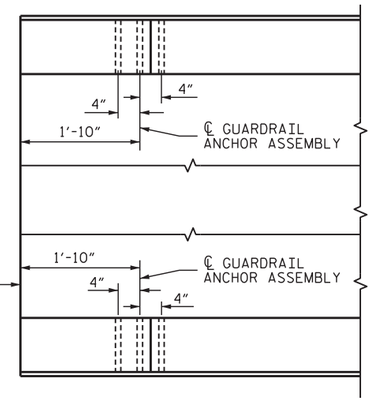
THE VERTICAL REINFORCING BARS MAY BE SHIFTED SLIGHTLY IN THE VERTICAL CONCRETE BARRIER RAIL TO CLEAR ASSEMBLY BOLTS.

THE 1 1/4" Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.



SECTION E-E

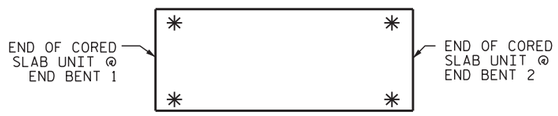
GUARDRAIL ANCHOR ASSEMBLY DETAILS



PLAN

LOCATION OF ANCHORS FOR GUARDRAIL

END BENT #1 SHOWN, END BENT #2 SIMILAR.



SKETCH SHOWING POINTS OF ATTACHMENT

✳ DENOTES GUARDRAIL ANCHOR ASSEMBLY

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO.: 110095

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
GUARDRAIL ANCHORAGE DETAILS
FOR VERTICAL CONCRETE BARRIER RAIL

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by:
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04/06/2022

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CHECKED BY : JA. TILMAN		DATE : 12/2021
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CHECKED BY : GM 5/10	REV. 12/17	MAA/THC
	REV. 5/18	MAA/THC

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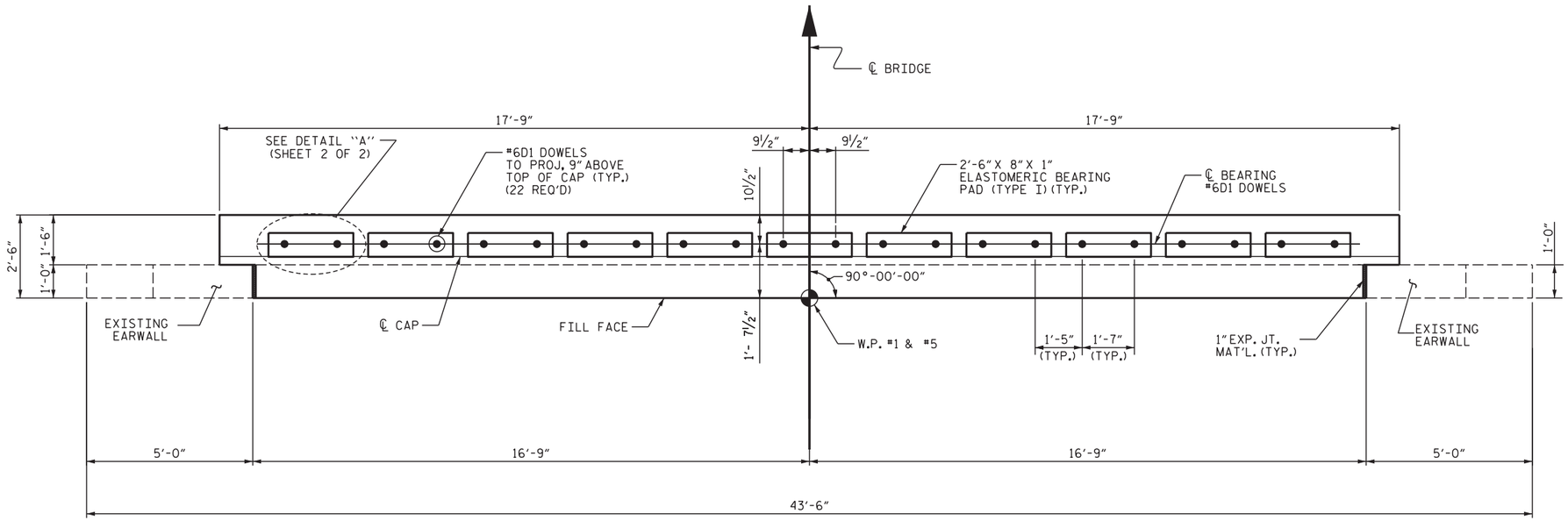
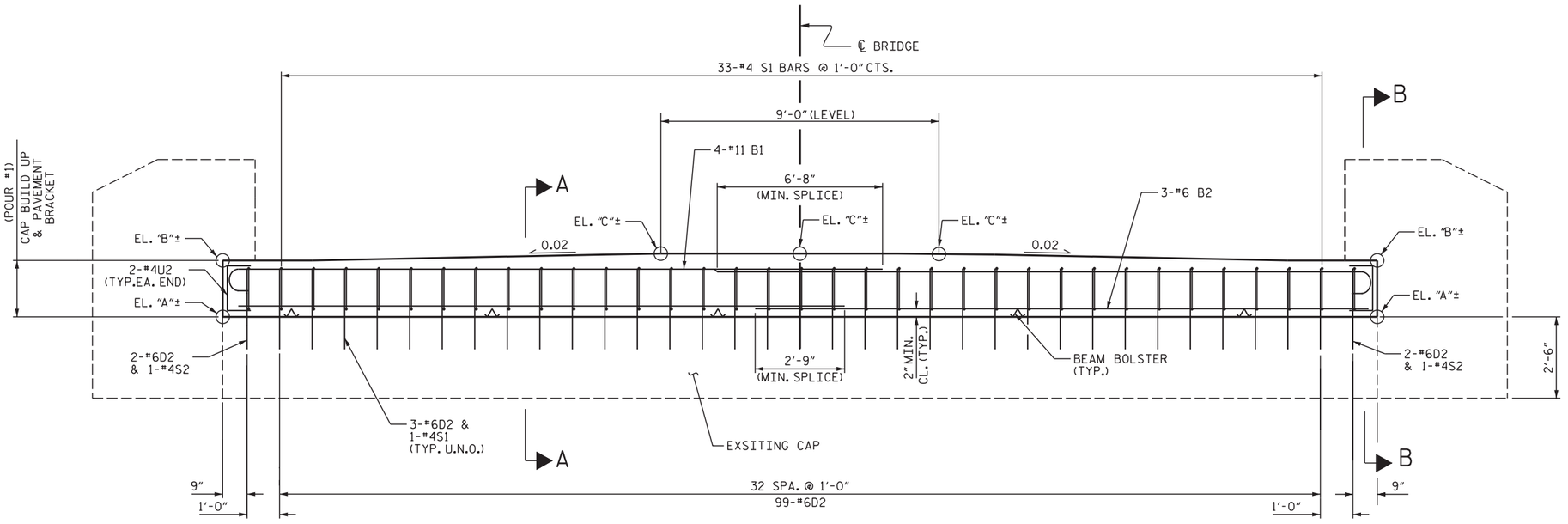


PLAN
(PILES NOT SHOWN FOR CLARITY)



ELEVATION
(END BENT 1 SHOWN END BENT 2 SIMILAR)
(PILES NOT SHOWN FOR CLARITY)

NOTE

REINFORCING STEEL MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

#6D2 DOWELS SHALL BE ADHESIVELY ANCHORED USING AN APPROVED ADHESIVE AND IN ACCORDANCE WITH SUBARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. DOWELS SHALL BE INSTALLED TO THE MINIMUM EMBEDMENT INDICATED ON THE PLANS, UNLESS DEEPER EMBEDMENT IS REQUIRED BY THE ADHESIVE MANUFACTURER. LEVEL ONE FIELD TESTING IS REQUIRED AND THE YIELD LOAD OF THE #6D2 DOWELS IS 26 KIPS.

ELEVATIONS INDICATED ON THESE PLANS ARE TAKEN FROM THE ORIGINAL BRIDGE PLANS FROM 1956. CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS AND ANY CORRELATIONS BETWEEN ORIGINAL AND CURRENT DATUM INFORMATION, THE ORIGINAL PLAN ELEVATIONS, AND THE EXISTING CURRENT ELEVATIONS.

DIMENSIONS AND ELEVATIONS ARE BASED ON AS-BUILT DIMENSIONS AND SCOPING SURVEY INFORMATION. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. REINFORCING AND CONCRETE CAP EXTENSIONS SHALL BE ADJUSTED TO MATCH FIELD VERIFIED DIMENSIONS PROVIDED THAT THE OUT-TO-OUT DIMENSIONS REMAIN AS DETAILED.

AFTER REPAIRS TO END BENT CAP, TOP OF END BENT CAP SHALL BE ROUGHEND AND BONDING AGENT SHALL BE PLACED APPRORIATELY PRIOR TO PLACING NEW CONCRETE.

CAP DIMENSIONS		
	END BENT 1	END BENT 2
"A"	1275.41	1273.92
"B"	1277.29	1275.75
"C"	1277.50	1276.02

PROJECT NO. 41665.13A
BURKE COUNTY
BRIDGE NO. 110095
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 1 & 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

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04/06/2022

DRAWN BY : E. BAYISSA DATE : 02/2021
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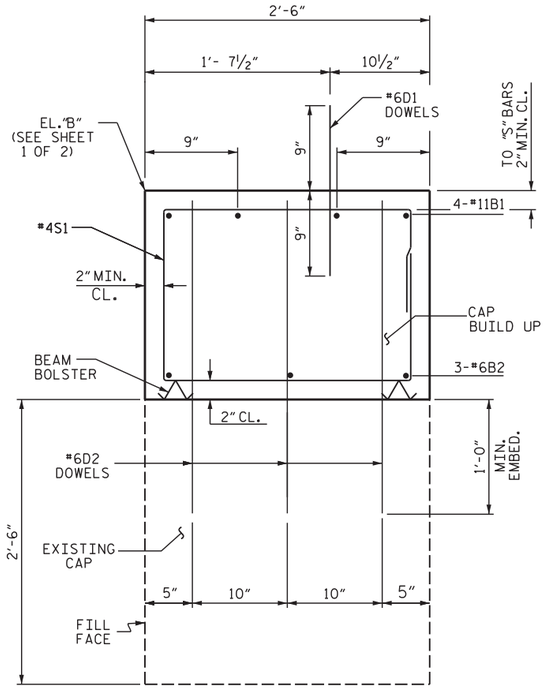
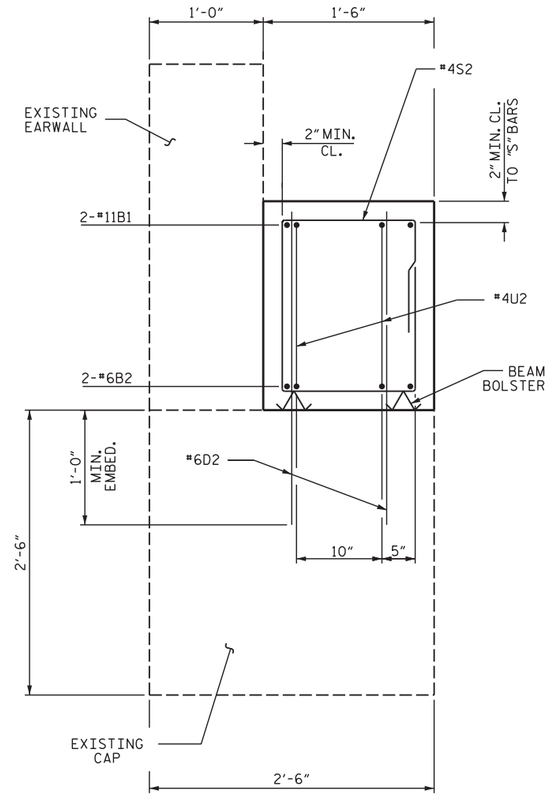


SECTION A-A



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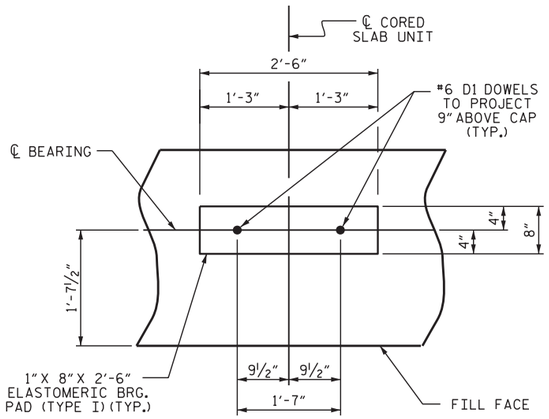
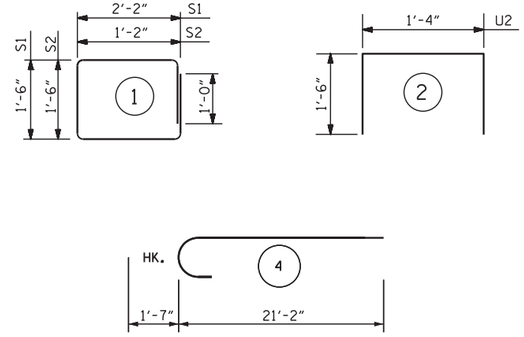


DETAIL ''A''

(END BENT No. 1 SHOWN, END BENT No. 2 SIMILAR BY ROTATION)

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIAL

END BENT 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#11	4	22'-9"	967
B2	6	#6	STR.	19'-0"	171
D1	22	#6	STR.	1'-6"	50
D2	103	#6	STR.	2'-8"	413
S1	33	#4	1	8'-10"	195
S2	4	#4	1	6'-10"	18
U2	4	#4	2	4'-4"	12
REINFORCING STEEL				LBS.	1826
CLASS "A" CONCRETE BREAKDOWN :					
(POUR 1) CAP				C.Y.	6.6
TOTAL CLASS "A" CONCRETE:				C.Y.	6.6

END BENT 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#11	4	22'-9"	967
B2	6	#6	STR.	19'-0"	171
D1	22	#6	STR.	1'-6"	50
D2	103	#6	STR.	2'-8"	413
S1	33	#4	1	8'-10"	195
S2	4	#4	1	6'-10"	18
U2	4	#4	2	4'-4"	12
REINFORCING STEEL				LBS.	1826
CLASS "A" CONCRETE BREAKDOWN :					
(POUR 1) CAP				C.Y.	6.6
TOTAL CLASS "A" CONCRETE:				C.Y.	6.6

PROJECT NO. 41665.13A

BURKE COUNTY

STATION: 110095

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE END BENT 1 & 2 DETAIL

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

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B04B5AA72FAD484
04/06/2022

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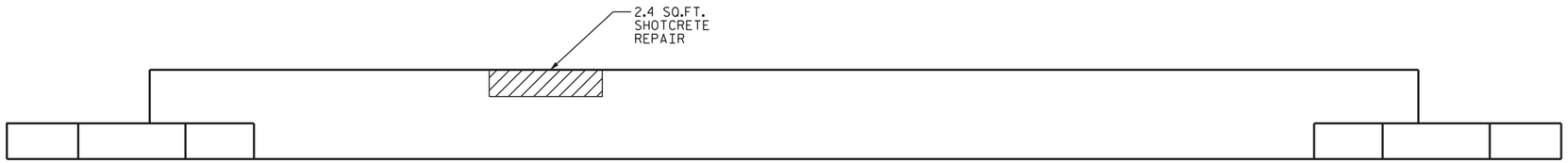
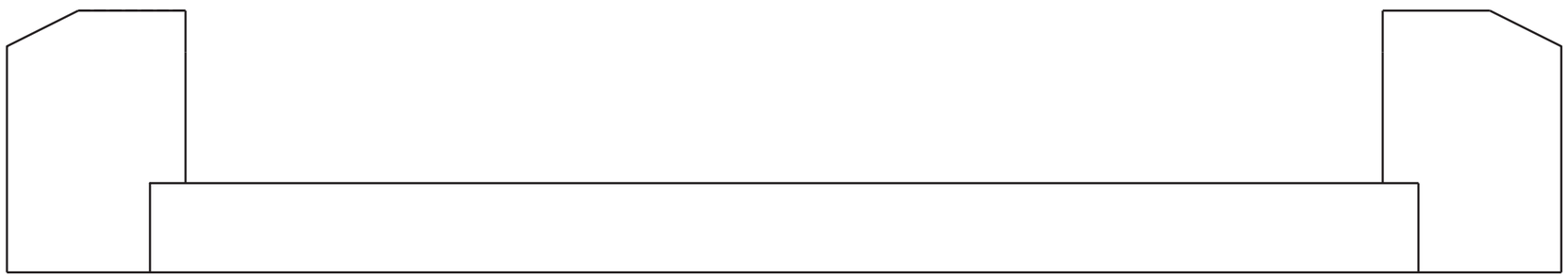


PLAN



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

END BENT 1	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	2.4	1.2		
CURTAIN WALL	0.0	0.0		
WING WALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	0.0	0.0		
WING WALL	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.	LIN. FT.	
CAP		0.0		
EAR WALL		0.0		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOND 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.

CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR CAP AND COLUMN REPAIR DETAILS, SEE SHEET S-25.

FOR ADDITIONAL END BENT 1 PLANS, SEE SHEETS S-12 THRU S-13.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO.: 110095

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by: Amber Miller B048B5A42FFA0484

04/06/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE END BENT 1

DRAWN BY : E.BAYISSA DATE : 04/2021
CHECKED BY : JA. TILLMAN DATE : 12/2021

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REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
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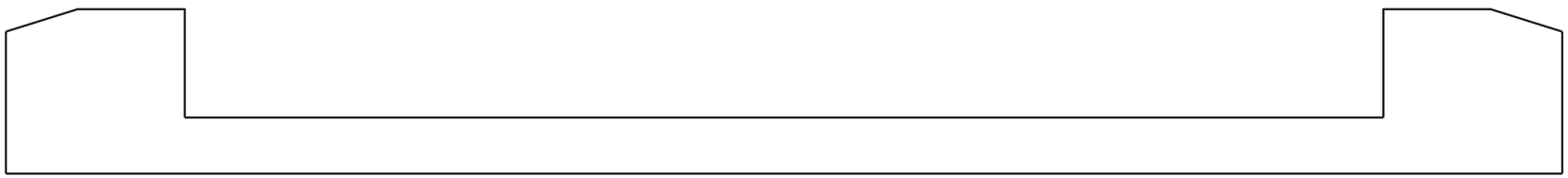
PLAN



ELEVATION

AS-BUILT REPAIR QUANTITY TABLE

END BENT 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	0.0	0.0		
WING WALL	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
CURTAIN WALL	0.0	0.0		
WING WALL	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.	LIN. FT.	
CAP		0.0		
EAR WALL		0.0		

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

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FOR ADDITIONAL END BENT PLANS, SEE SHEETS S-12 THRU S-13.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO.: 110095

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by: Amber Lee
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04/06/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE END BENT 2

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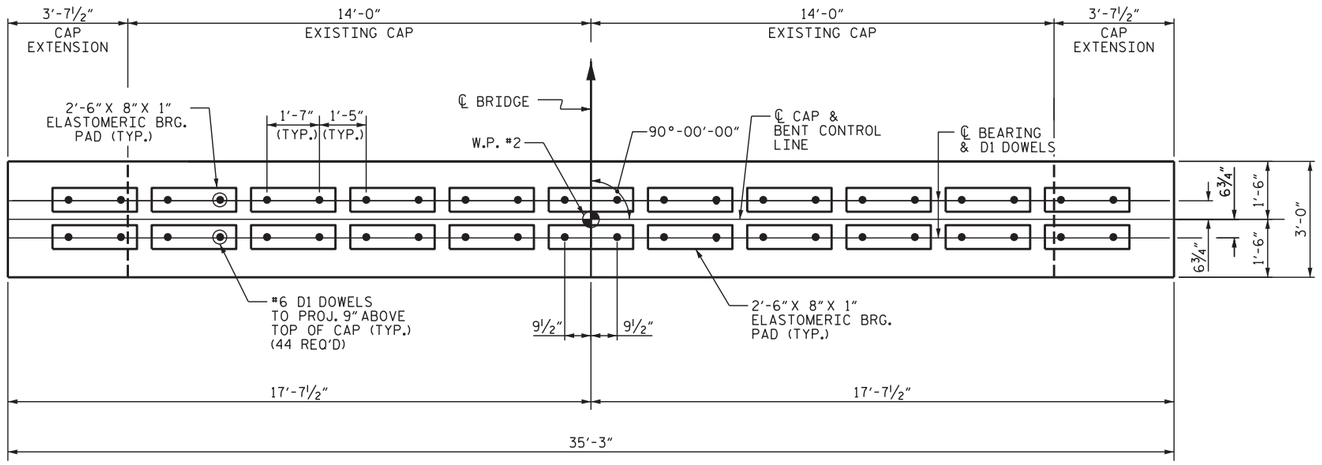
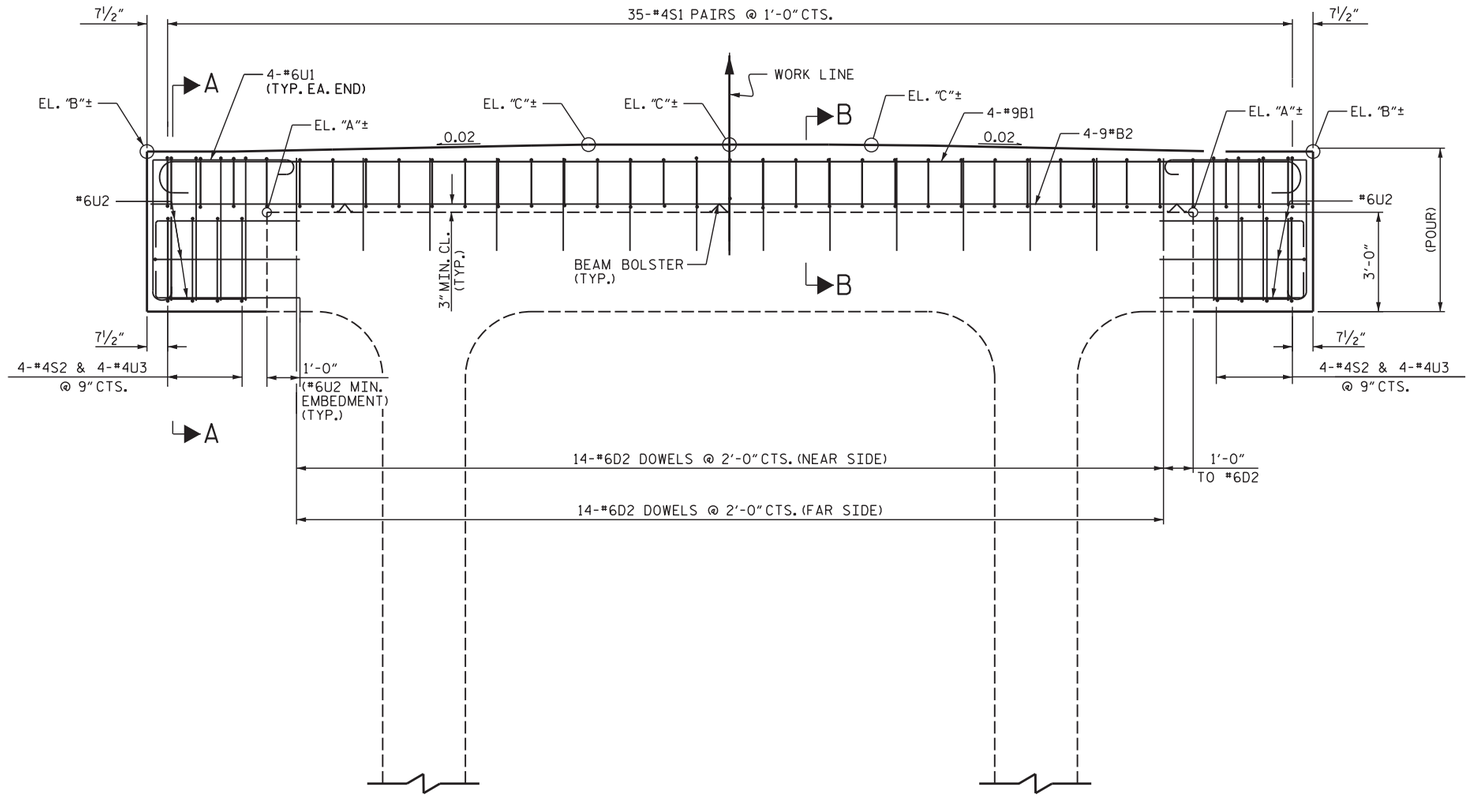


PLAN



ELEVATION

NOTE:

REINFORCING STEEL MAY BE SHIFTED AS NECESSARY TO CLEAR DOWELS.

#6D2 & #6U2 DOWELS SHALL BE ADHESIVELY ANCHORED USING AN APPROVED ADHESIVE AND IN ACCORDANCE WITH SUBARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. DOWELS SHALL BE INSTALLED TO THE MINIMUM EMBEDMENT INDICATED ON THE PLANS, UNLESS DEEPER EMBEDMENT IS REQUIRED BY THE ADHESIVE MANUFACTURER. LEVEL ONE FIELD TESTING IS REQUIRED AND THE YIELD LOAD OF THE #6D2 & #6U2 DOWELS IS 26 KIPS.

DIMENSIONS AND ELEVATIONS ARE BASED ON AS-BUILT DIMENSIONS AND SCOPING SURVEY INFORMATION, CONTRACTOR SHALL FIELD VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. REINFORCING AND CONCRETE CAP EXTENSIONS SHALL BE ADJUSTED TO MATCH FIELD VERIFIED DIMENSIONS PROVIDED THAT THE OUT-TO-OUT DIMENSIONS REMAIN AS DETAILED.

ELEVATIONS INDICATED ON THESE PLANS ARE TAKEN FROM THE ORIGINAL BRIDGE PLANS FROM 1956. CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS AND ANY CORRELATIONS BETWEEN ORIGINAL AND CURRENT DATUM INFORMATION, THE ORIGINAL PLAN ELEVATIONS, AND THE EXISTING CURRENT ELEVATIONS.

AFTER REPAIRS TO BENT CAP, TOP AND ENDS OF BENT CAP SHALL BE ROUGHEND AND BONDING AGENT SHALL BE PLACED APPROPRIATELY PRIOR TO PLACING NEW CONCRETE.

USE ELASTOMERIC BEARING PAD, TYPE I AT BENTS 1 & 3.

USE ELASTOMERIC BEARING PAD, TYPE II AT BENT 2.

CAP ELEVATIONS			
	BENT 1	BENT 2	BENT 3
"A"	1275.60	1275.39	1274.76
"B"	1277.44	1277.23	1276.59
"C"	1277.70	1277.49	1276.87

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
BENT 1, 2 & 3

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

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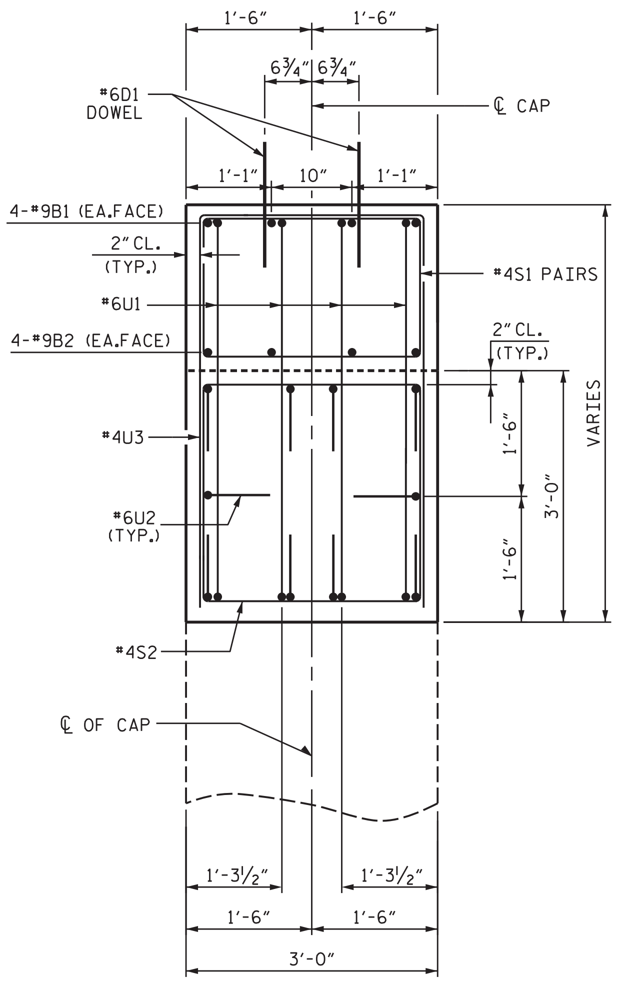
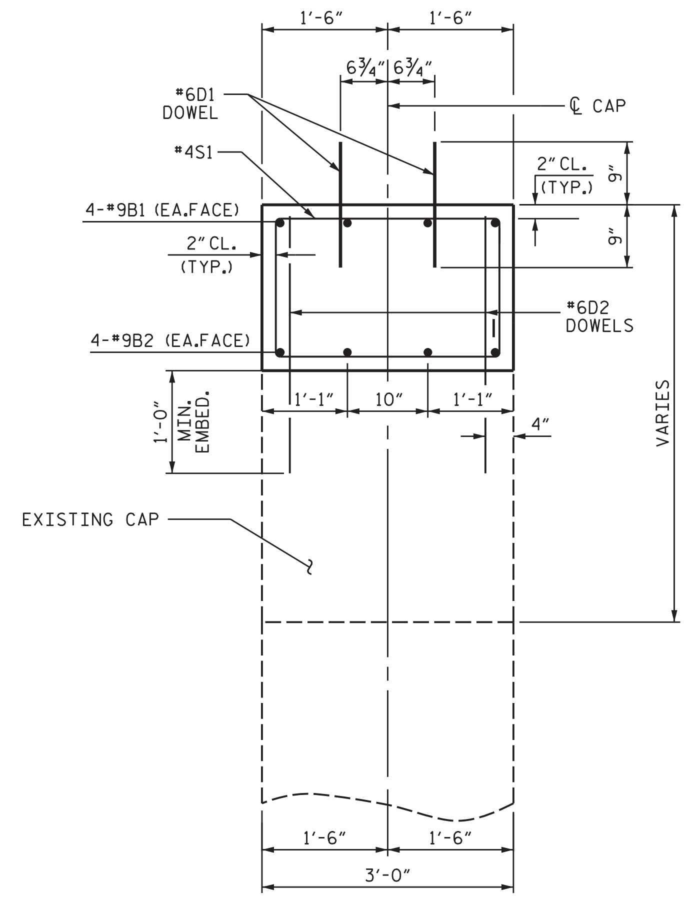
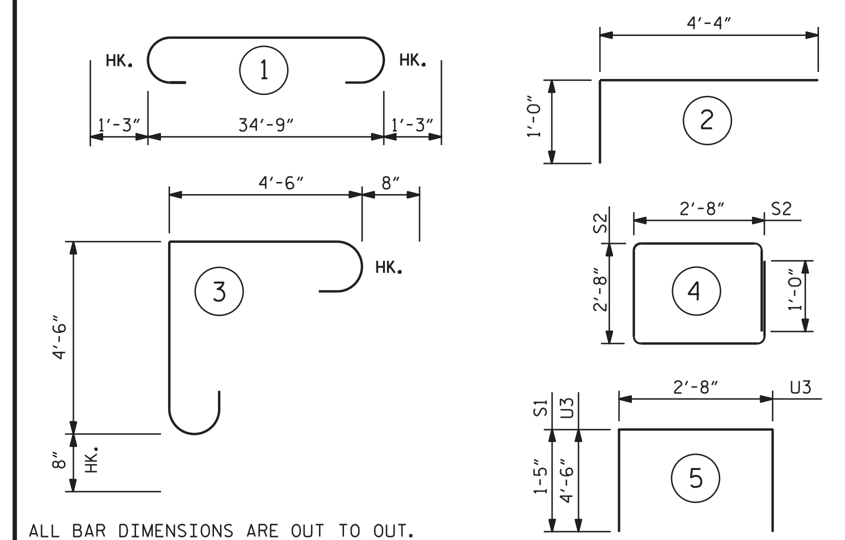


SECTION A-A



SECTION B-B

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT.

BILL OF MATERIALS

FOR BENT 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	#9	1	37'-3"	507
B2	4	#9	STR	34'-9"	473
D1	44	#6	STR.	1'-6"	99
D2	28	#6	STR.	2'-8"	112
S1	70	#4	5	5'-6"	257
S2	8	#4	4	11'-8"	62
U1	8	#4	3	10'-4"	55
U2	20	#4	2	5'-4"	71
U3	8	#4	5	11'-8"	62
REINFORCING STEEL				LBS.	1698

CLASS "A" CONCRETE BREAKDOWN :		
CAP	C.Y.	10.4
TOTAL CLASS "A" CONCRETE:	C.Y.	10.4

FOR BENT 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	#9	1	37'-3"	507
B2	4	#9	STR	34'-9"	473
D1	44	#6	STR.	1'-6"	99
D2	28	#6	STR.	2'-8"	112
S1	70	#4	5	5'-6"	257
S2	8	#4	4	11'-8"	62
U1	8	#4	3	10'-4"	55
U2	20	#4	2	5'-4"	71
U3	8	#4	5	11'-8"	62
REINFORCING STEEL				LBS.	1698

CLASS "A" CONCRETE BREAKDOWN :		
CAP	C.Y.	10.4
TOTAL CLASS "A" CONCRETE:	C.Y.	10.4

FOR BENT 3

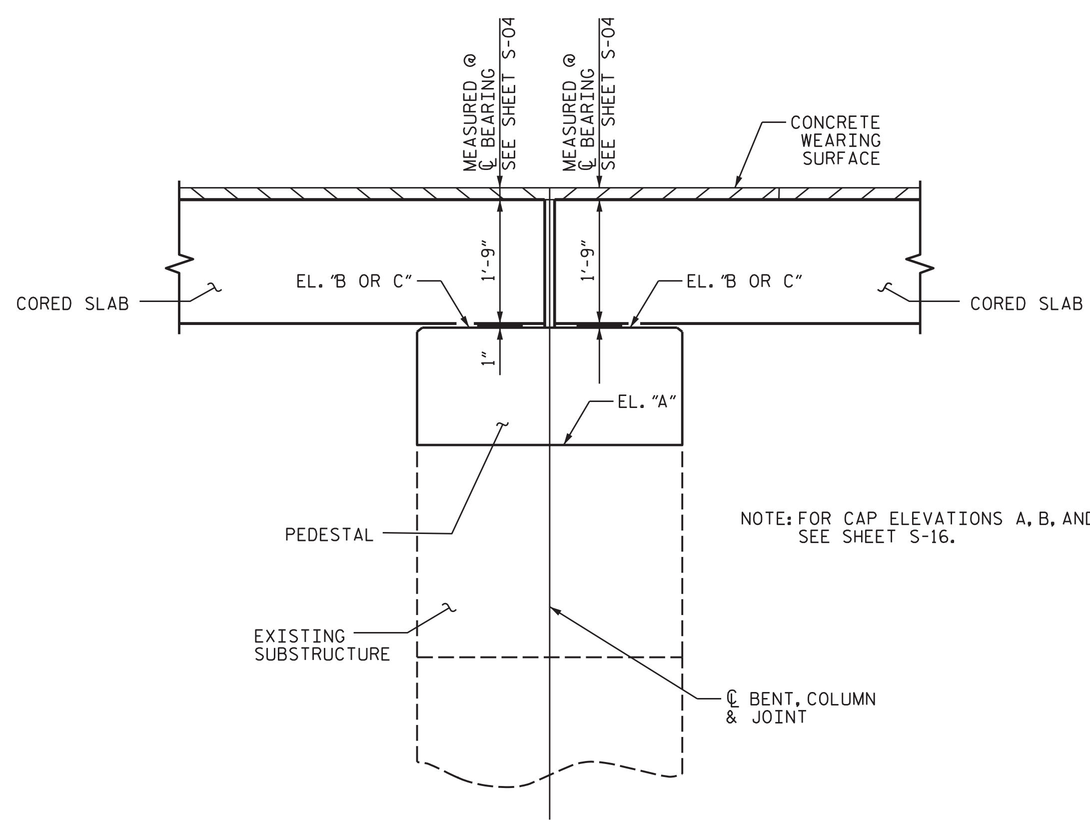
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	#9	1	37'-3"	507
B2	4	#9	STR	34'-9"	473
D1	44	#6	STR.	1'-6"	99
D2	28	#6	STR.	2'-8"	112
S1	70	#4	5	5'-6"	257
S2	8	#4	4	11'-8"	62
U1	8	#4	3	10'-4"	55
U2	20	#4	2	5'-4"	71
U3	8	#4	5	11'-8"	62
REINFORCING STEEL				LBS.	1698

CLASS "A" CONCRETE BREAKDOWN :		
CAP	C.Y.	10.4
TOTAL CLASS "A" CONCRETE:	C.Y.	10.4

NOTE

DIMENSIONS AND ELEVATIONS SHOWN ARE TAKEN FROM THE ORIGINAL BRIDGE PLANS FROM 1956. CONTRACTOR MUST VERIFY THE EXISTING ELEVATIONS AND CORRELATIONS BETWEEN ORIGINAL AND CURRENT DATUM INFORMATION, THE ORIGINAL PLAN ELEVATIONS, AND THE EXISTING CURRENT ELEVATIONS.

THE CONTRACTOR SHALL MAKE ADJUSTMENTS TO PEDESTAL EL. "B" AND "C" TO MAINTAIN MINIMUM 3½" CONCRETE WEARING SURFACE @ ℄ BEARING. IF ANY ELEVATIONS ARE MODIFIED, THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE REINFORCING TO FIT THE PEDESTAL HEIGHT.



NOTE: FOR CAP ELEVATIONS A, B, AND C, SEE SHEET S-16.

PEDESTAL HEIGHT

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE

BENT 1, 2 & 3

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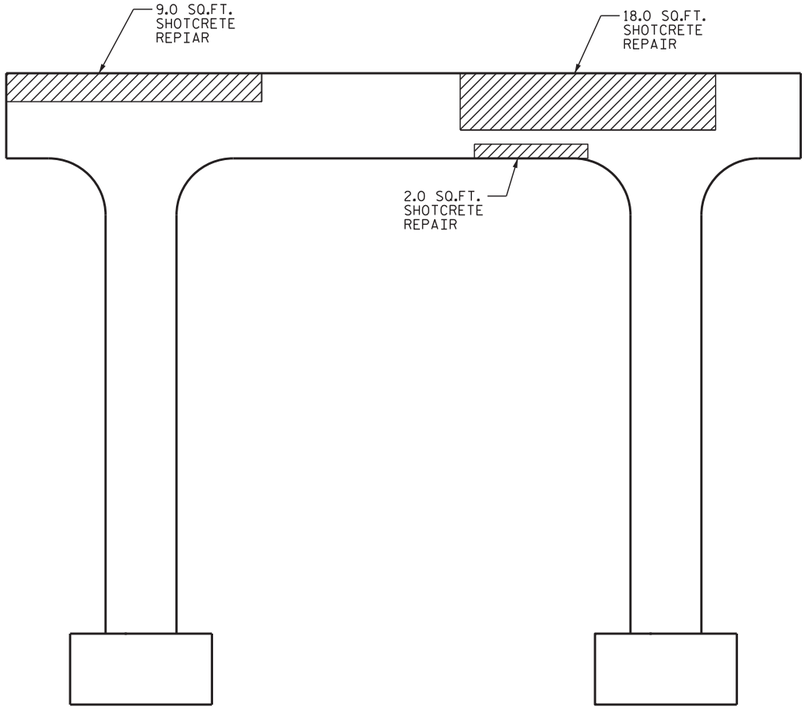
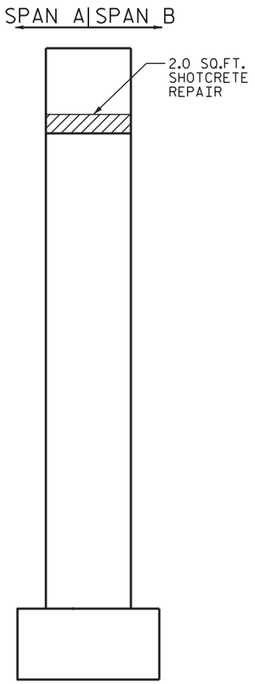
SPAN B
SPAN A

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	31.0	16.0		
COLUMN	0.0	0.0		
CONCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	0.0	0.0		
COLUMN	0.0	0.0		
EPOXY RESIN INJECTION		LIN. FT.	LIN. FT.	
CAP		0.0		
COLUMN		0.0		

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

NOTES

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CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR CAP AND COLUMN REPAIR DETAILS, SEE SHEET S-25.

FOR ADDITIONAL BENT 1 PLANS, SEE SHEETS S-16 THRU S-17.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

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DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR BENT 1 SPAN A FACE

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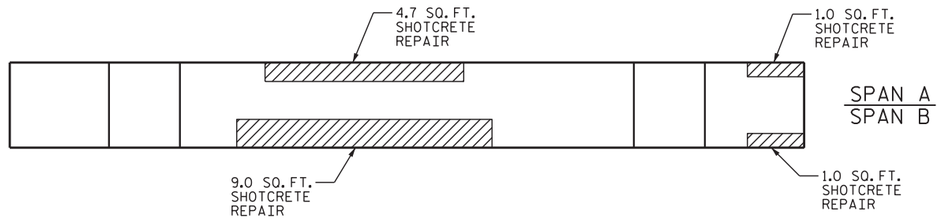
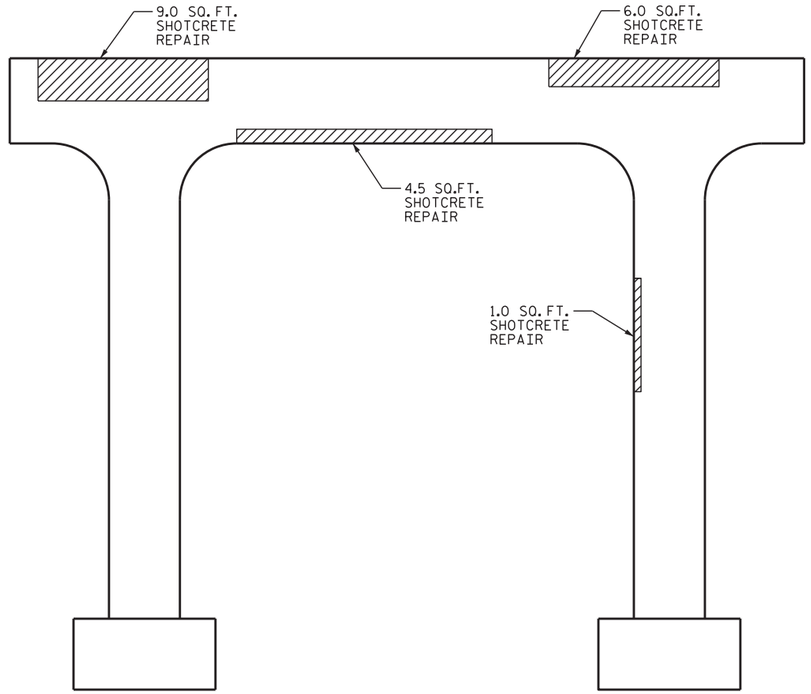
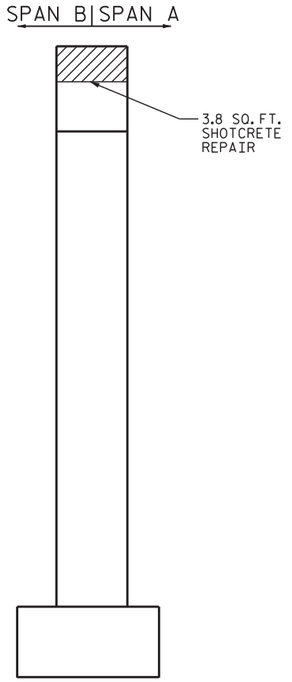


BOTTOM OF CAP



ELEVATION



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 1 SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	39.0	19.5		
COLUMN	1.0	0.5		
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		

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.

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SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

SHEET 2 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR BENT 1 SPAN B FACE

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

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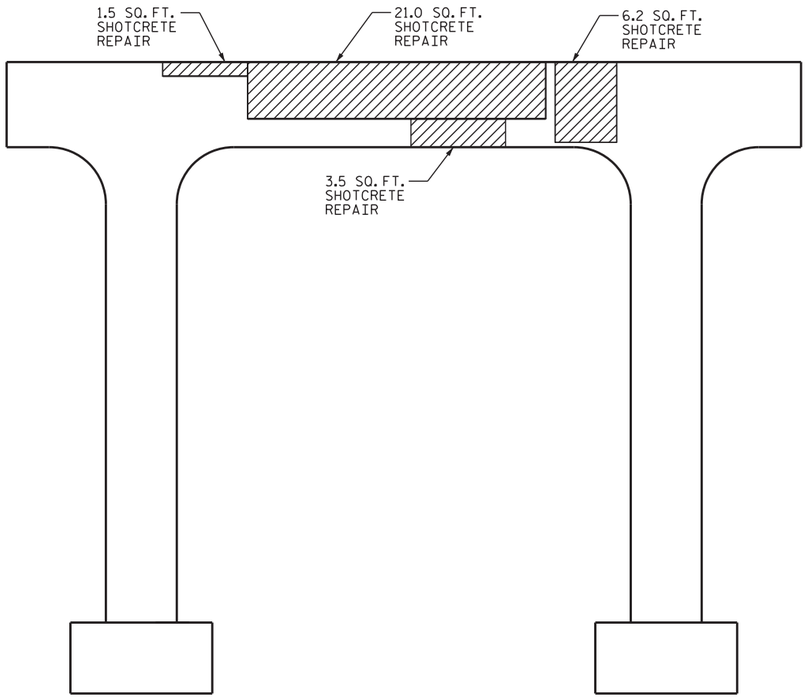
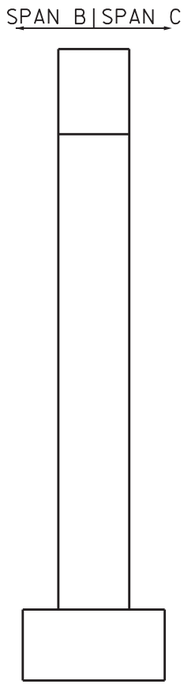
SPAN C
SPAN B

TOP OF CAP



ELEVATION



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SPAN B FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	32.2	16.1		
COLUMN	0.0	0.0		
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		

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.

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FOR ADDITIONAL BENT 2 PLANS, SEE SHEETS S-16 THRU S-17.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A
BURKE COUNTY
BRIDGE NO. 110095

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

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RALEIGH

SUBSTRUCTURE REPAIR
BENT 2
SPAN B FACE

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1			3			TOTAL SHEETS
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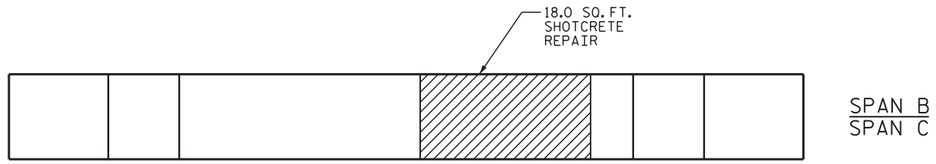
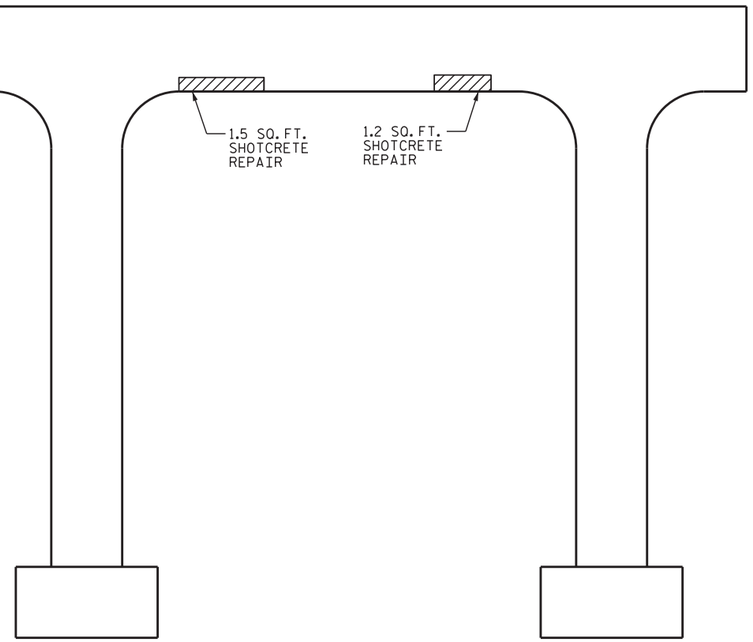
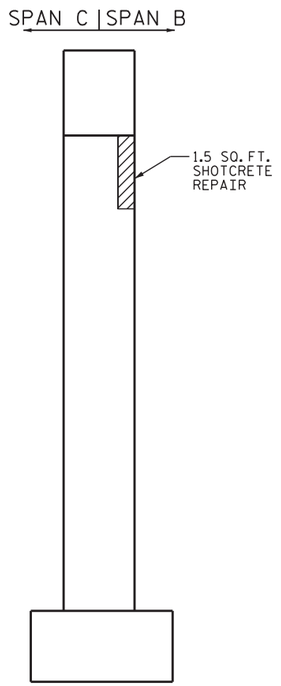


SPAN B
SPAN C

BOTTOM OF CAP



ELEVATION



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 2 SPAN C FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	20.7	10.4		
COLUMN	1.5	0.8		
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		

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.

CONCRETE REPAIRS MAYBE SUBSTITUTED IN LIEU OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR CAP AND COLUMN REPAIR DETAILS, SEE SHEET S-25.

FOR ADDITIONAL BENT 2 PLANS, SEE SHEETS S-16 THRU S-17.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by:
Amber Lee
B0485A42FAD484...
04/06/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR
BENT 2
SPAN C FACE

REVISIONS						SHEET NO.
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1			3			TOTAL SHEETS
2			4			26

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DRAWN BY : E. BAYISSA DATE : 11/2020
CHECKED BY : JA. TILLMAN DATE : 12/2021

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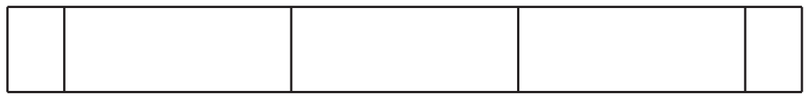
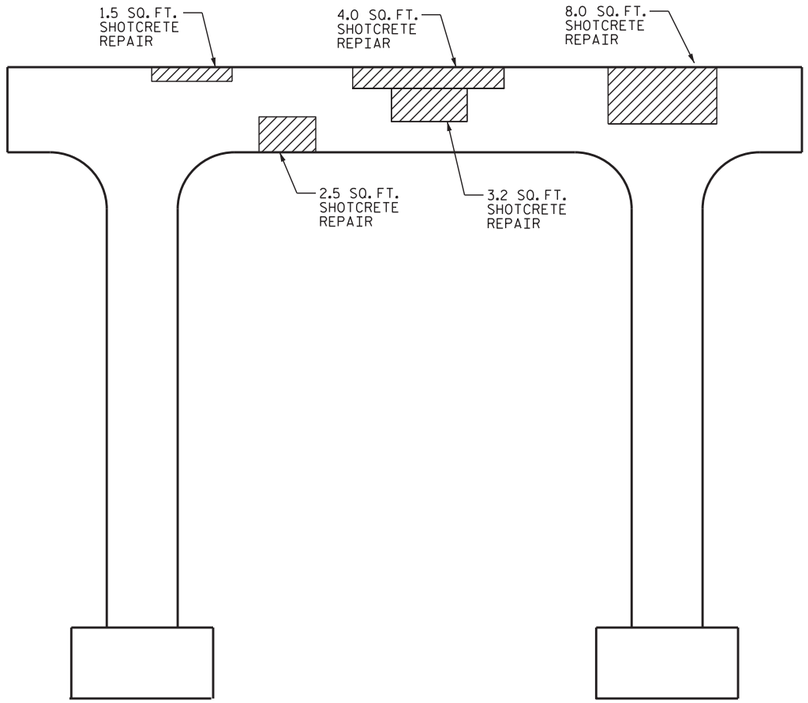


SPAN D
SPAN C

TOP OF CAP



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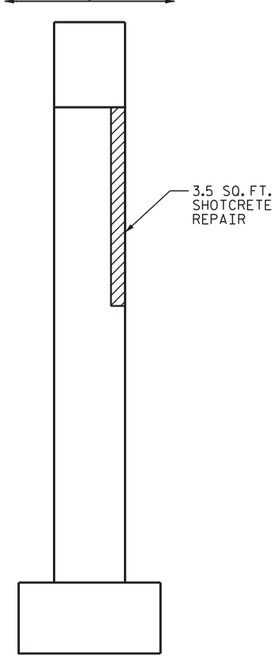
SPAN D|SPAN C



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 SPAN C FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	19.2	9.6		
COLUMN	3.5	1.8		
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		

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.

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FOR CAP AND COLUMN REPAIR DETAILS, SEE SHEET S-25.

FOR ADDITIONAL BENT 3 PLANS, SEE SHEETS S-16 THRU S-17.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A
BURKE COUNTY
BRIDGE NO. 110095

SHEET 1 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by:
B048B5A42FFAD484
04/06/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR
BENT 3
SPAN C FACE

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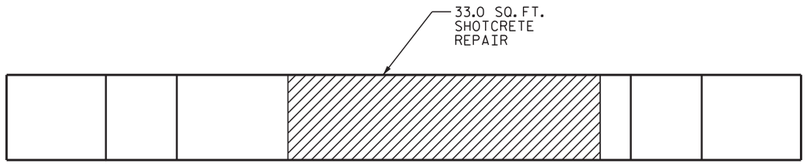
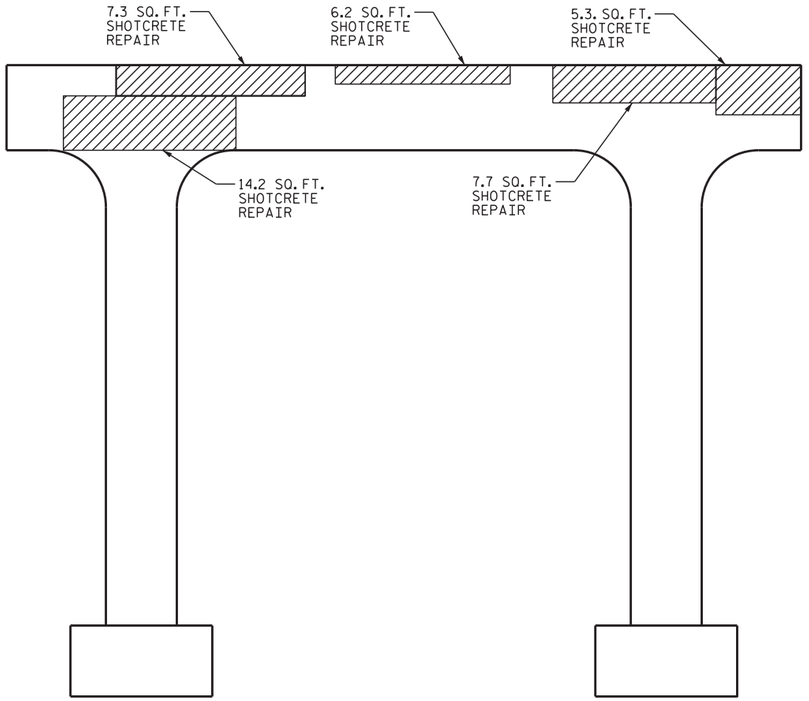


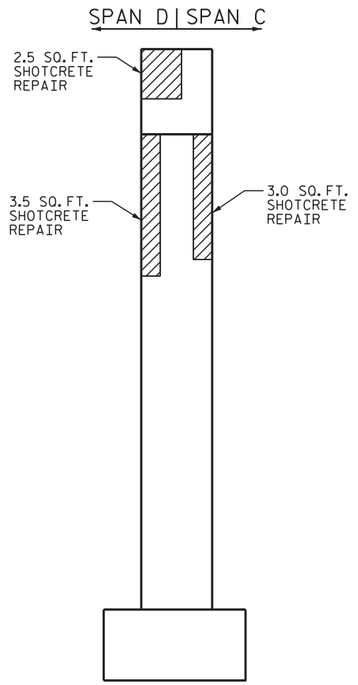
SPAN D
SPAN C

BOTTOM OF CAP



ELEVATION

SPAN D | SPAN C



END VIEW

AS-BUILT REPAIR QUANTITY TABLE

BENT 3 SPAN D FACE	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SQ. FT.	VOLUME CU. FT.	AREA SQ. FT.	VOLUME CU. FT.
CAP	76.2	38.1		
COLUMN	6.5	3.3		
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		

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.

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FOR CAP AND COLUMN REPAIR DETAILS, SEE SHEET S-25.

FOR ADDITIONAL BENT 3 PLANS, SEE SHEETS S-16 THRU S-17.

SHOTCRETE REPAIR AREA

CONCRETE REPAIR AREA

AREA PREVIOUSLY ACCOUNTED FOR ON ADJACENT FACE

ERI - EPOXY RESIN INJECTION

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by: Amber Miller B048B5A42FFAD484

04/06/2022

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RALEIGH

SUBSTRUCTURE REPAIR BENT 3 SPAN D FACE

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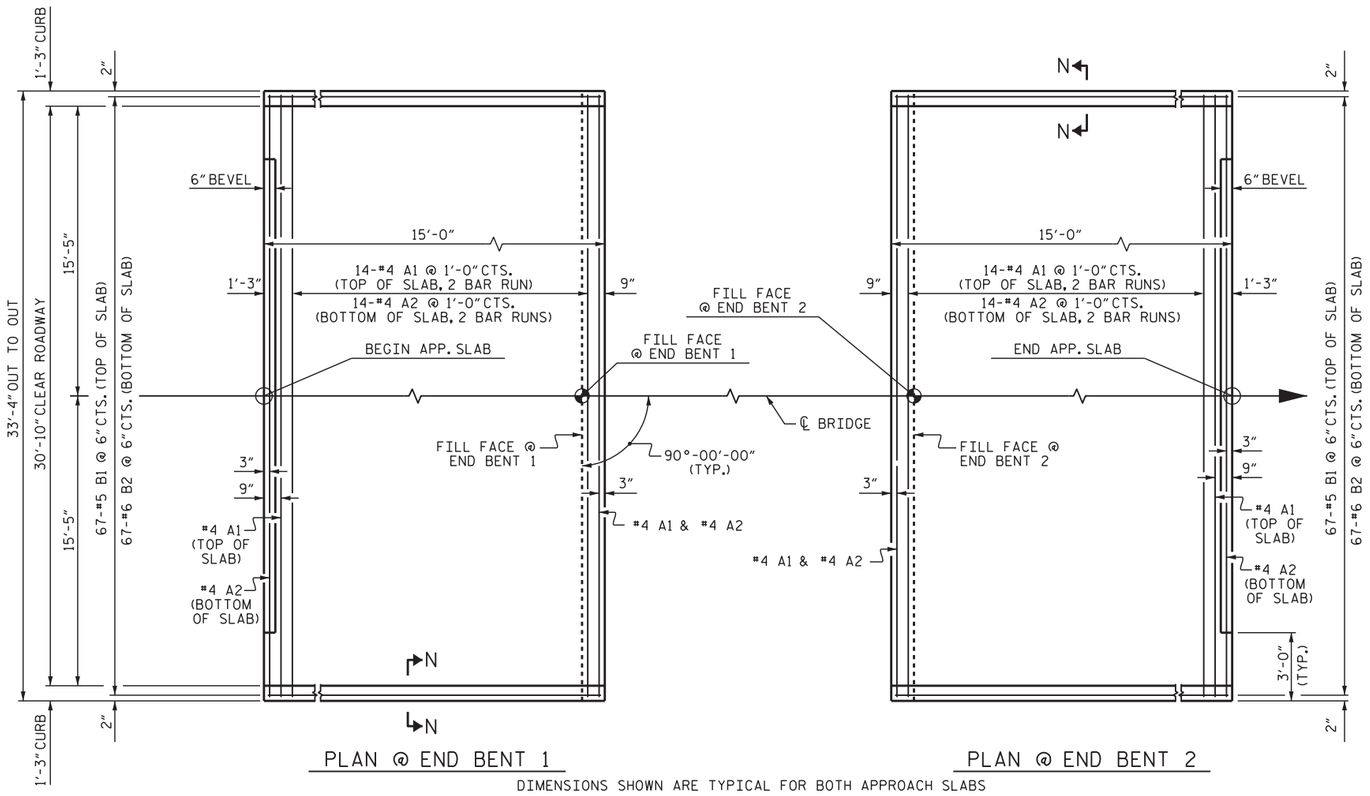


PLAN @ END BENT 1

PLAN @ END BENT 2

DIMENSIONS SHOWN ARE TYPICAL FOR BOTH APPROACH SLABS

NOTES

FOR BRIDGE APPROACH FILL INCLUDING GEOTEXTILE, 6" Ø DRAINAGE PIPE, AND SELECT MATERIAL BACKFILL, SEE ROADWAY PLANS.

GEOTEXTILE SHALL BE TYPE 1 IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

SELECT MATERIAL BACKFILL (CLASS V OR CLASS VI) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

SELECT MATERIAL BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF BACKWALL FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED. SEE ROADWAY PLANS.

FOR THE 6" Ø DRAINAGE PIPE OUTLET(S), SEE ROADWAY STANDARD DRAWINGS.

APPROACH SLABS SHALL BE POURED AFTER CONCRETE WEARING SURFACE IS POURED.

THE JOINT OPENING AT THE APPROACH SLAB/DECK INTERFACE SHALL BE SAWED NO MORE THAN 12 HOURS AFTER THE APPROACH SLAB IS CAST. THE JOINT SHALL BE CLEANED OF ALL DEBRIS BEFORE THE SEALANT IS APPLIED. THE JOINT SEALER MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1028-3 OF THE STANDARD SPECIFICATIONS.

BILL OF MATERIAL

APPROACH SLAB AT EB 1

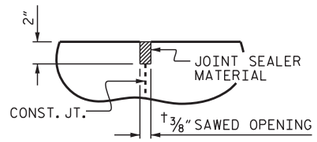
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✱ A1	32	#4	STR	17'-6"	374
A2	32	#4	STR	17'-4"	370
✱ B1	67	#5	STR	14'-8"	1025
B2	67	#6	STR	14'-4"	1442
REINFORCING STEEL				LBS.	1812
✱ EPOXY COATED REINFORCING STEEL				LBS.	1399
CLASS AA CONCRETE				C. Y.	24.8

APPROACH SLAB AT EB 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
✱ A1	32	#4	STR	17'-6"	374
A2	32	#4	STR	17'-4"	370
✱ B1	67	#5	STR	14'-8"	1025
B2	67	#6	STR	14'-4"	1442
REINFORCING STEEL				LBS.	1812
✱ EPOXY COATED REINFORCING STEEL				LBS.	1399
CLASS AA CONCRETE				C. Y.	24.8

SPLICE LENGTHS

BAR SIZE	EPOXY COATED	UNCOATED
#4	1'-11"	1'-7"
#5	2'-5"	2'-0"
#6	3'-7"	2'-5"



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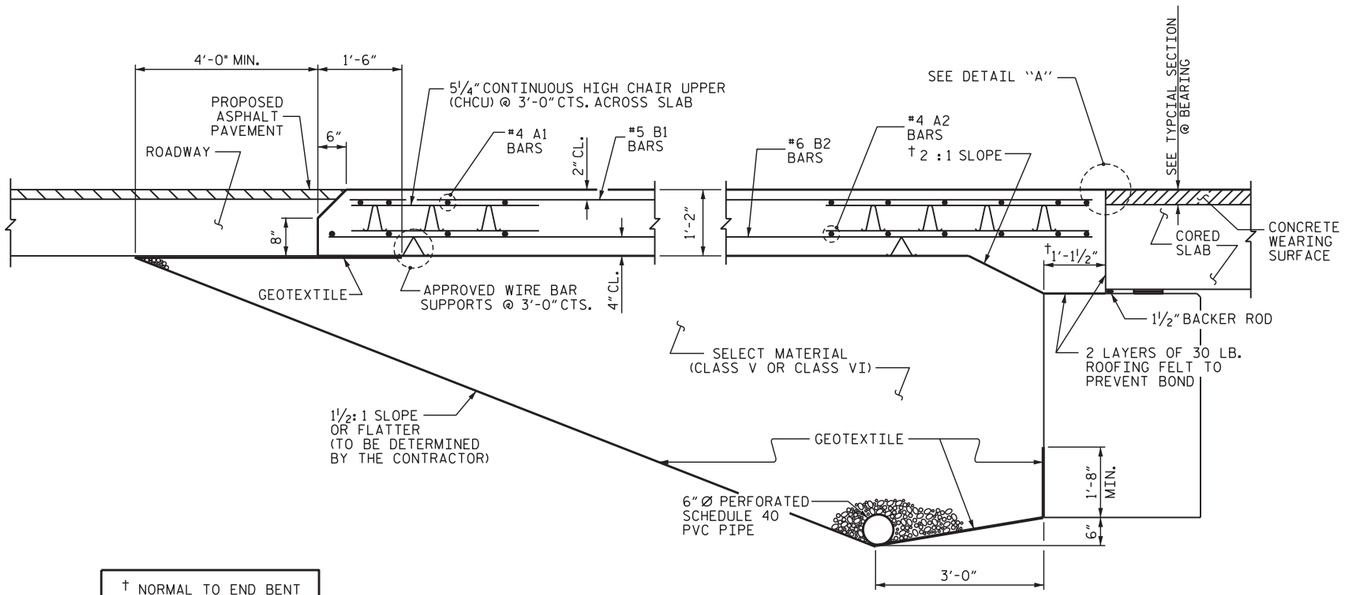
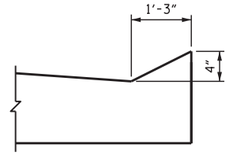


† NORMAL TO END BENT

SECTION THRU SLAB

(TYPE I - STANDARD APPROACH FILL)



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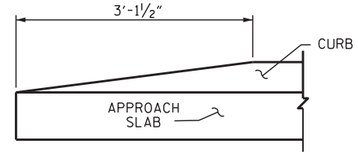

END OF CURB WITHOUT SHOULDER BERM GUTTER

CURB DETAILS

PROJECT NO. 41665.13A

BURKE COUNTY

BRIDGE: 110095

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD

BRIDGE APPROACH SLAB FOR PRESTRESSED CONCRETE CORED SLAB

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

DocuSigned by: Amber Miller 824854A729AD484...
04/06/2022

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ASSEMBLED BY : E. BAYISSA		DATE : 12/2021
CHECKED BY : JA. TILLMAN		DATE : 12/2021
DRAWN BY : FCJ 6/87	REV. 12/21/11	MAA/GM
CHECKED BY : EGA 6/87	REV. 6/13	MAA/GM
	REV. 12/17	MAA/THC

(SHT 2) STD. NO. BAS3

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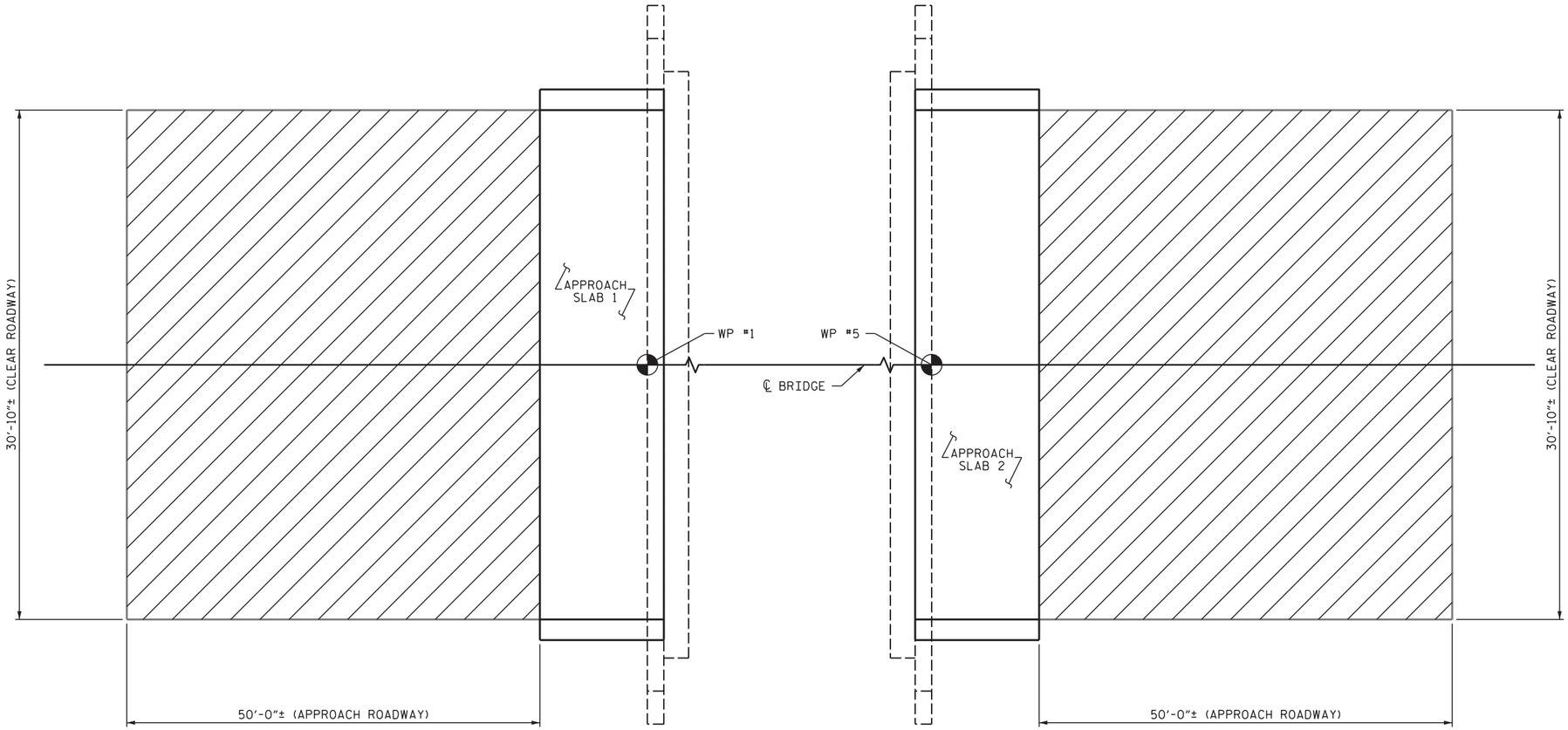


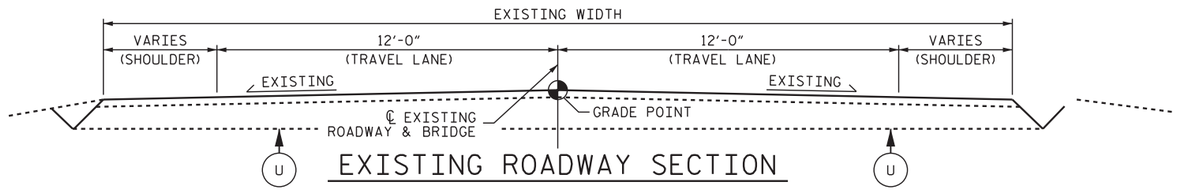
NOTES

INCIDENTAL MILLING - EXISTING APPROACH ASPHALT PAVEMENT TO BE MILLED AS NECESSARY TO ATTAIN MINIMUM 1½" DEPTH OF NEW ASPHALT PAVEMENT. NEW ASPHALT PAVEMENT SHALL BE OF THICKNESS NECESSARY TO PROVIDE A SMOOTH TRANSITION BETWEEN THE ROADWAY AND THE BRIDGE DECK. THE NEW ASPHALT PAVEMENT THICKNESS MAY EXCEED 1½" DUE TO SETTLEMENT OF THE EXISTING APPROACH.

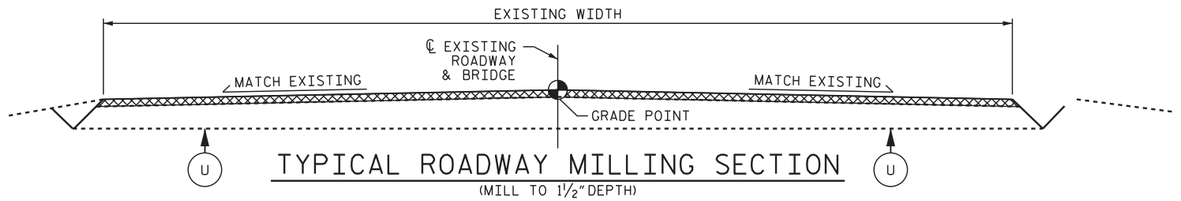
SUMMARY OF QUANTITIES

	ESTIMATE	ACTUAL
INCIDENTAL MILLING	342.6 SQ. YD.	
ASPHALT CONCRETE BASE COURSE, TYPE B25.0B	60.0 TONS	
ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B	30.0 TONS	
ASPHALT BINDER FOR PLANT MIX	5.0 TONS	

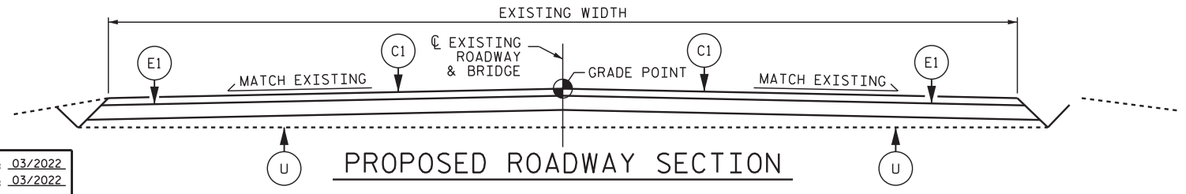
C1	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1½" IN DEPTH OR GREATER THAN 2" IN DEPTH.
E1	PROPOSED VARIABLE DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5" IN DEPTH.
U	EXISTING PAVEMENT



EXISTING ROADWAY SECTION



TYPICAL ROADWAY MILLING SECTION
(MILL TO 1½" DEPTH)



PROPOSED ROADWAY SECTION

PROJECT NO. 41665.13A
BURKE COUNTY
BRIDGE NO. 110095

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

INCIDENTAL MILLING & TYPICAL ROADWAY SECTIONS

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by: Amber Lee
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04/06/2022

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DRAWN BY : E. CABBELL DATE : 03/2022
CHECKED BY : A.M. LEE DATE : 03/2022

4/6/2022
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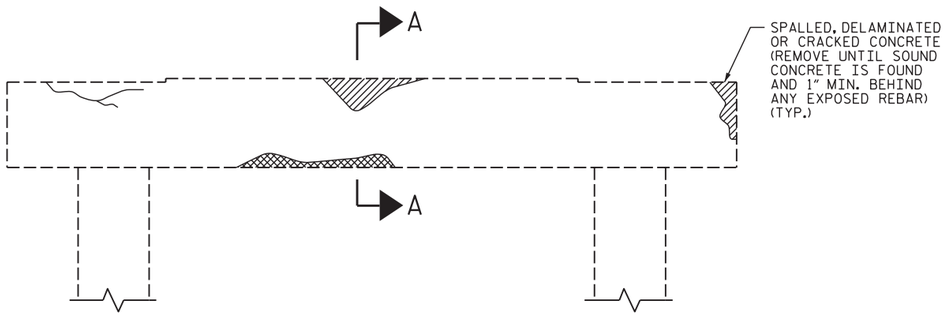
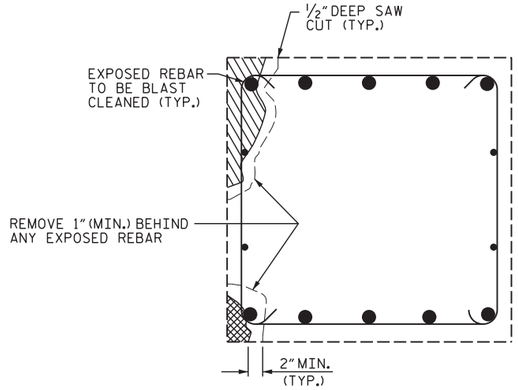
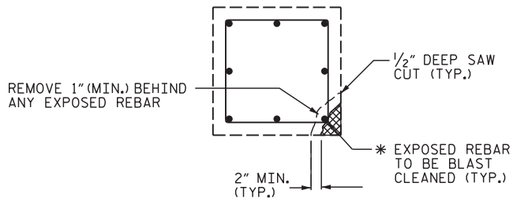


BENT CAP REPAIRS



SECTION A-A



PLAN OF COLUMN

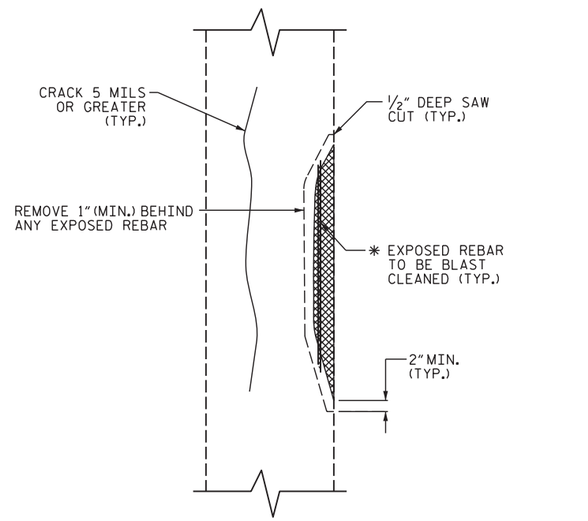
REPAIR KEY

CONCRETE REPAIR AREA (FORM AND POUR)

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)

CAP REPAIR

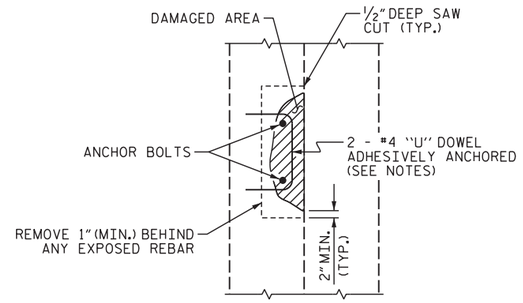


* REPAIR LENGTH SHALL NOT EXCEED 10 FEET.

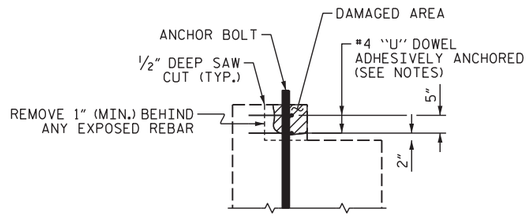
ELEVATION OF COLUMN

COLUMN REPAIR

SPLICE LENGTH TABLE	
BAR SIZE	MIN. SPLICE LENGTH
#4	2'-4"
#5	2'-9"
#6	4'-0"
#7	5'-3"
#8	6'-9"
#9	8'-6"
#10	10'-11"
#11	13'-4"



PLAN



ELEVATION

PEDESTAL WALL REPAIR

NOTES

TYPICAL BENT CAP REPAIRS ARE SHOWN. REPAIR DETAILS SIMILAR FOR END BENT CAPS AND STRUTS.

THE METHOD USED TO DELINEATE THE AREAS OF UNSOUND CONCRETE TO BE REPAIRED SHALL NOT PERMANENTLY MARK THE CONCRETE, LEAVE ANY RESIDUE AFTER REMOVAL OR REQUIRE HARSH CHEMICALS TO REMOVE.

THE CONTRACTOR SHALL REMOVE THE DETERIORATED CONCRETE IN ACCORDANCE WITH THE GUIDELINES SET IN THESE NOTES, IN THE SPECIAL PROVISIONS AND THE STANDARD SPECIFICATIONS.

REMOVE UNSOUND CONCRETE TO THE EXTENT NECESSARY, MINIMUM OF 1" BEHIND REBAR AND MINIMUM OF 2" CLEARANCE TO SAWCUT.

NO MORE THAN ONE-THIRD OF THE CAP OR COLUMN CROSS SECTIONAL AREA SHALL BE REMOVED AT ONE TIME. SHOULD IT BECOME NECESSARY TO REMOVE MORE THAN 30% OF A CAP OR COLUMN CROSS SECTIONAL AREA, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

SIMULTANEOUS REMOVAL OF UNSOUND CONCRETE MAY BE PERMITTED ON MORE THAN ONE FACE OF A CAP AND/OR COLUMN, IF THE AREAS OF REMOVAL ARE NOT ADJACENT TO OR DIRECTLY OPPOSITE ONE ANOTHER. IF REMOVAL EXTENDS MORE THAN 1½" BEHIND THE MAIN REINFORCING BARS, NOTIFY THE ENGINEER PRIOR TO PROCEEDING.

REINFORCING STEEL WHICH IS DETERMINED BY THE ENGINEER TO BE REPLACED, SHALL BE REMOVED TO A POINT WHERE IT IS SOUND. THE PATCH SHALL EXTEND A SUFFICIENT DISTANCE BEYOND THIS POINT TO DEVELOP A SPLICE LENGTH SPECIFIED IN THE TABLE ON THIS SHEET.

THE #4 "U" DOWELS ARE REQUIRED ONLY AROUND THE ANCHOR BOLTS. THE EXISTING REINFORCING STEEL IN THE PEDESTAL WALL SHALL BE CLEANED, STRAIGHTENED AND REMAIN IN PLACE.

FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE STANDARD SPECIFICATIONS.

COAT ALL REPAIR SURFACE AREAS ON THE TOP OF CAPS, INCLUDING CHAMFERS, WITH EPOXY PROTECTIVE COATING, OVERLAPPING THE REPAIR AREA BY A MINIMUM OF 3" ON ALL POSSIBLE SIDES.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

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

PROJ. NO. 41665.13A

BURKE COUNTY

BRIDGE NO. 110095

NORTH CAROLINA PROFESSIONAL SEAL 031021 ENGINEER AMBER M. LEE

Docusigned by: Amber Miller B0495AA72FFAD484...

04/06/2022

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
TYPICAL CAP AND COLUMN REPAIR DETAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-26
1			3			TOTAL SHEETS
2			4			26

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ASSEMBLED BY : R. SAHA	DATE : 02/2022
CHECKED BY : H.A. LOCKLEAR	DATE : 02/2022
DRAWN BY : NAP 8/18	
CHECKED BY :	

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