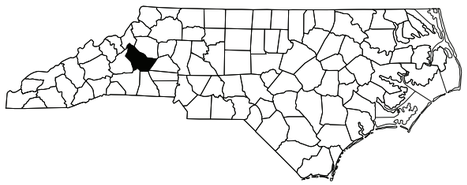
CONTRACT NO.: DM00533 FEDERAL AID PROJECT: 84013.LAJA.002



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

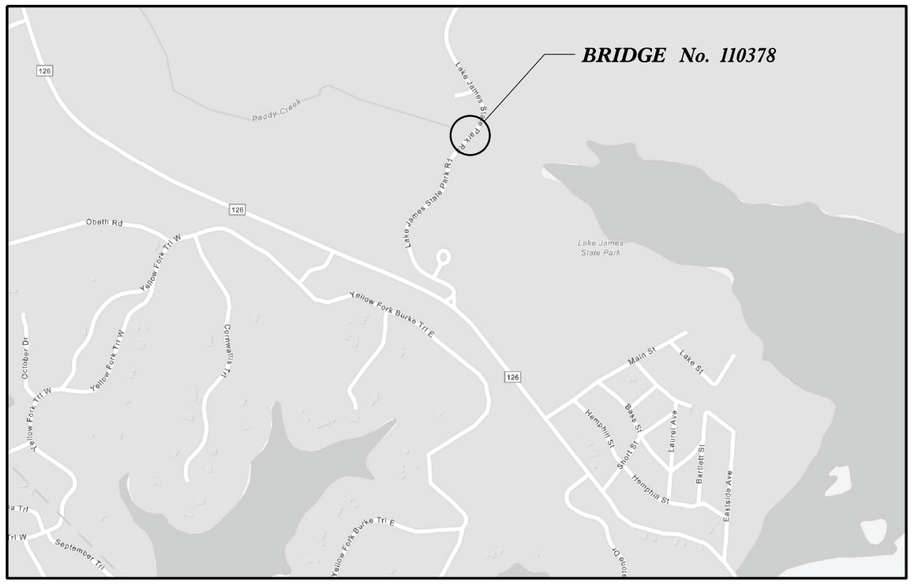
BURKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	84013.LAJA.002	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
84013.LAJA.002		P.E.
84013.LAJA.002		CONST.

LOCATION: ***BRIDGE #110378 ON SA 8972 OVER PADDY CREEK***

TYPE OF WORK: ***BRIDGE PRESERVATION – REPLACE ELASTOMERIC BEARINGS; PLACE NEOPRENE BEARING PAD STRIPS; REPAIR SUBSTRUCTURE CONCRETE; CAP EPOXY COATING AND DEBRIS REMOVAL; RAISE PEDESTRIAN TIMBER WALKWAY TO LEVEL; CLEAN AND REPAIR DECAYED GLULAM ARCHES; INSTALL GLULAM ARCH COPING; REPLACE DAMAGED GLULAM TRAFFIC RAIL; POLYMER CONCRETE (PC) OVERLAY; REPLACE BRIDGE DECK SEALS WITH FOAM JOINT SEALS FOR PRESERVATION***



DESIGN DATA

BURKE COUNTY
BRIDGE No. 110378 ADT 2016 = 880

PROJECT LENGTH

BURKE COUNTY
BRIDGE No. 110378 = 0.02 MILE

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

2024 STANDARD SPECIFICATIONS

LETTING DATE :

NOVEMBER 4, 2026

TREY H. CARROLL, P.E.
PROJECT ENGINEER

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

CONTRACT NO.: DM00533 PROJECT: 84013.LAJA.002

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

BURKE COUNTY

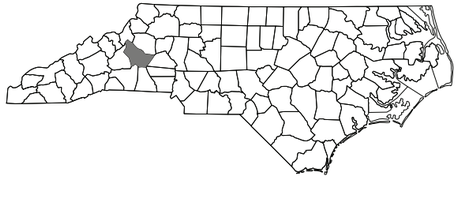
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	84013.LAJA.002	1A	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
84013.LAJA.002		P.E.
84013.LAJA.002		CONST.

LOCATION: BRIDGE No. 110378 ON SA 8972 OVER PADDY CREEK

INDEX OF SHEETS

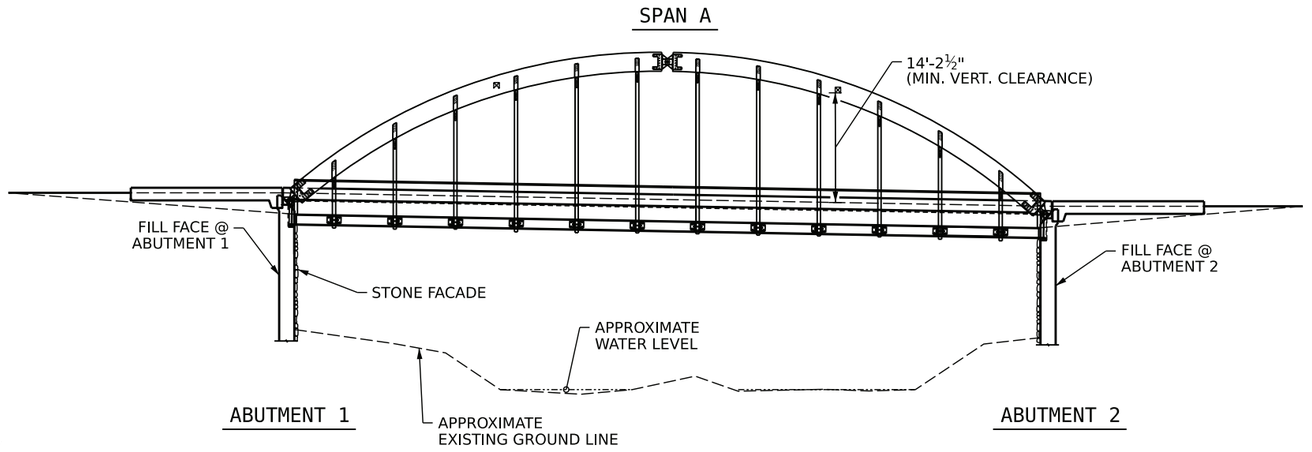
SHEET No.	DESCRIPTION
STRUCTURE No. 110378	
1	TITLE SHEET
1A	INDEX OF SHEETS
S1–01	GENERAL DRAWING
S1–02	GENERAL DRAWING – BOM
S1–03	TYPICAL SECTION
S1–04 THRU S1–05	SUBSTRUCTURE REPAIR
S1–06	ELASTOMERIC BEARING PAD DETAILS
S1–07 THRU S1–08	PEDESTRIAN BRIDGE TIMBER ARCH
S1–09	GLULAM ROD SPACER COLLAR DETAILS
S1–10	TIMBER / GLULAM REPAIR
S1–11	GLULAM ARCH COPING DETAILS
S1–12	CONCRETE DECK REPAIRS
S1–13	FOAM JOINT SEAL DETAILS
S1–14	TYPICAL CAP AND COLUMN REPAIR DETAILS
S1–15	BRIDGE JACKING DETAILS
SN	STANDARD NOTES
TMP–1 THRU TMP–2	TRAFFIC MANAGEMENT PLANS
PMP–1 THRU PMP–3	PAVEMENT MANAGEMENT PLANS
EC–1	EROSION CONTROL PLAN



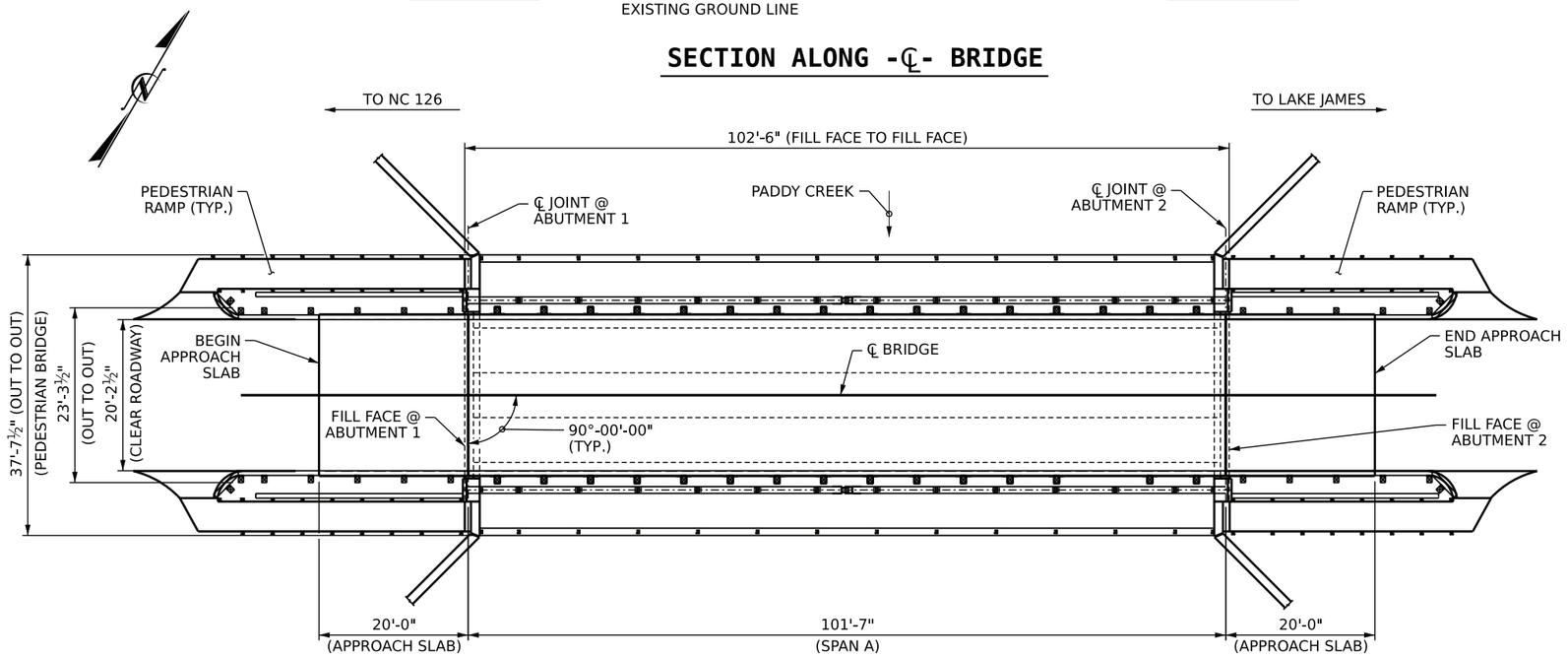
TYPE OF WORK:

BRIDGE PRESERVATION – REPLACE ELASTOMERIC BEARINGS; PLACE NEOPRENE BEARING PAD STRIPS; REPAIR SUBSTRUCTURE CONCRETE; CAP EPOXY COATING AND DEBRIS REMOVAL; RAISE PEDESTRIAN TIMBER WALKWAY TO LEVEL; CLEAN AND REPAIR DECAYED GLULAM ARCHES; INSTALL GLULAM ARCH COPING; REPLACE DAMAGED GLULAM TRAFFIC RAIL; POLYMER CONCRETE (PC) OVERLAY; REPLACE BRIDGE DECK SEALS WITH FOAM JOINT SEALS FOR PRESERVATION.

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



SECTION ALONG -℄- BRIDGE



PLAN

(FOOTINGS AND PILES NOT SHOWN FOR CLARITY)
(FLOORBEAMS AND CROSSFRAMES NOT SHOWN FOR CLARITY)

NOTES

GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND THE ROUTINE INSPECTION REPORT DATED 09/30/2025

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

SCOPE OF WORK

1 - JACK BRIDGE, REMOVE EXISTING BEARING PADS, INSTALL NEW BEARING PADS AND INSTALL NEW ½" THICK NEOPRENE BEARING PAD BETWEEN TOP OF ABUTMENT AND BOTTOM OF DECK TURNDOWN.

2 - REMOVE UNSOUND CONCRETE AT EXISTING ABUTMENT AREAS AND PERFORM SHOTCRETE AND CONCRETE REPAIRS.

3 - RAISE WALKWAY TO LEVEL, ADJUST SAWN FLOORBEAMS, AND PEDESTRIAN WALKWAY.

4 - CLEAN AND REPAIR EXISTING GLULAM ARCHES AND GLULAM CROSS BRACES.

5 - INSTALL GLULAM ARCH COPING.

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

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

8 - REMOVE EXISTING JOINT MATERIAL AND INSTALL FOAM JOINTS.

9 - GROOVE PC BRIDGE DECK.

10 - REPLACE DAMAGED GLULAM TRAFFIC RAIL AT NORTHEAST CORNER OF BRIDGE.

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

RESIDENT ENGINEER DATE

DRAWN BY : R.L.PUTEK DATE : 03/2025
CHECKED BY : T.M.SHERRILL DATE : 09/2025

PROJECT NO. 84013.LAJA.002
BURKE COUNTY
BRIDGE NO. 110378

SHEET 1 OF 2

DocuSigned by: Timothy M. Sherrill
A0560810677A8DCC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

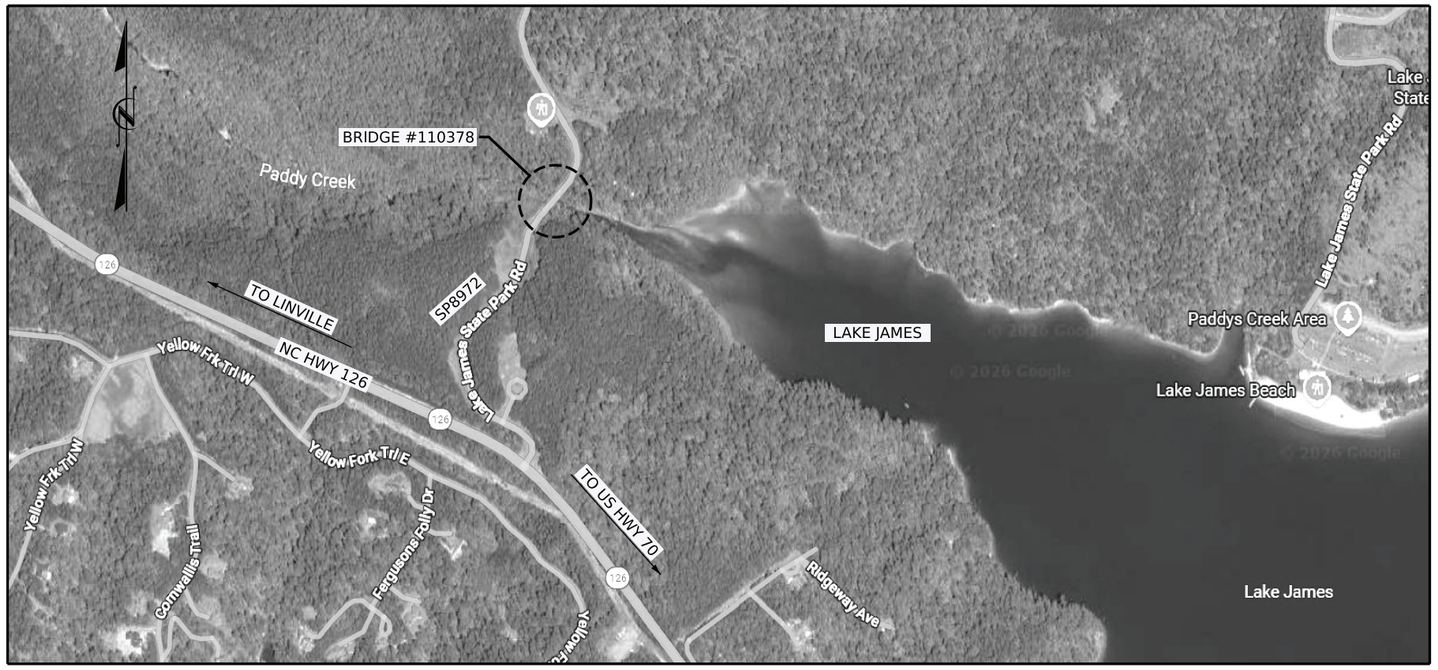
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

FOR BRIDGE ON
SP8972 OVER
PADDY CREEK

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-01
1			3			TOTAL SHEETS
2			4			15



LOCATION SKETCH

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

BRIDGE COORDINATES	
LATITUDE	LONGITUDE
35°-45'-11.46''	81°-53'-30.75''

TOTAL BILL OF MATERIAL

BRIDGE NO.	GROOVING BRIDGE FLOORS	SHOTCRETE REPAIRS	FOAM JOINT SEALS FOR PRESERVATION	SILICONE SEALANT	NEOPRENE BEARING PADS	GLULAM ARCH COPING	REPLACEMENT OF GLULAM TRAFFIC RAIL	POLYESTER POLYMER CONCRETE MATERIALS
	SQ. FT.	CU. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	CU. YDS.
100378	2416.0	28.6	42.0	73.5	44.7	100.0	33.0	7.4
TOTAL	2416.0	28.6	42.0	73.5	44.7	100.0	33.0	7.4

TOTAL BILL OF MATERIAL

BRIDGE NO.	EPOXY POLYMER CONCRETE MATERIALS (ALTERNATE)	GLULAM REPAIRS	EPOXY COATING	SCARIFYING BRIDGE DECK	SHOTBLASTING BRIDGE DECK	PLACING & FINISHING PC OVERLAY	BRIDGE JACKING (TYPE II)	MODIFIED ELASTOMERIC BEARINGS	GLULAM ROD SPACER COLLAR
	CU. YDS.	CU. FT.	SQ. FT.	SQ. YDS.	SQ. YDS.	SQ. YDS.	EACH	EACH	EACH
100378	7.4	2.8	37.2	317.6	317.6	317.6	2	8	24
TOTAL	7.4	2.8	37.2	317.6	317.6	317.6	2	8	24

GENERAL NOTES

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

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

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

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

WORK ON THE BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR'S PLAN USED PLATFORMS, NETS, SCREEN OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS. ANY DAMAGE TO EXISTING REINFORCING STEEL DURING CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

FOR CONTROL OF TRAFFIC AND LIMITS OF PHASING OF CONSTRUCTION, SEE CONTRACT DOCUMENTS.

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 WILL WILL BE NECESSARY TO PROPERLY COMPLETE THE INTENDED BRIDGE PRESERVATION/ REHABILITATION WORK. THE CONTRACTOR SHALL BE PREPARED TO PERFORM SUCH WORK AS 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 THE 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:

- CLASS II SURFACE PREPARATION SY
- CLASS III SURFACE PREPARATION SY
- CONCRETE REPAIRS CF
- EPOXY RESIN INJECTION LF

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

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

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

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

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

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

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

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR TYPE II BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR GLULAM REPAIRS, SEE SPECIAL PROVISIONS.

FOR NEOPRENE BEARING PADS, SEE SPECIAL PROVISIONS.

FOR MODIFIED ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

FOR GLULAM ARCH COPING, SEE SPECIAL PROVISIONS.

FOR SILICONE SEALANT, SEE SPECIAL PROVISIONS.

FOR GLULAM ROD SPACER COLLAR, SEE SPECIAL PROVISIONS.

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

SHEET 2 OF 2

NORTH CAROLINA PROFESSIONAL SEAL 041992 ENGINEER TRENT H. CARROLL II

DocuSigned by: Trey Carroll C81628E0D9C746E...

07/09/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING

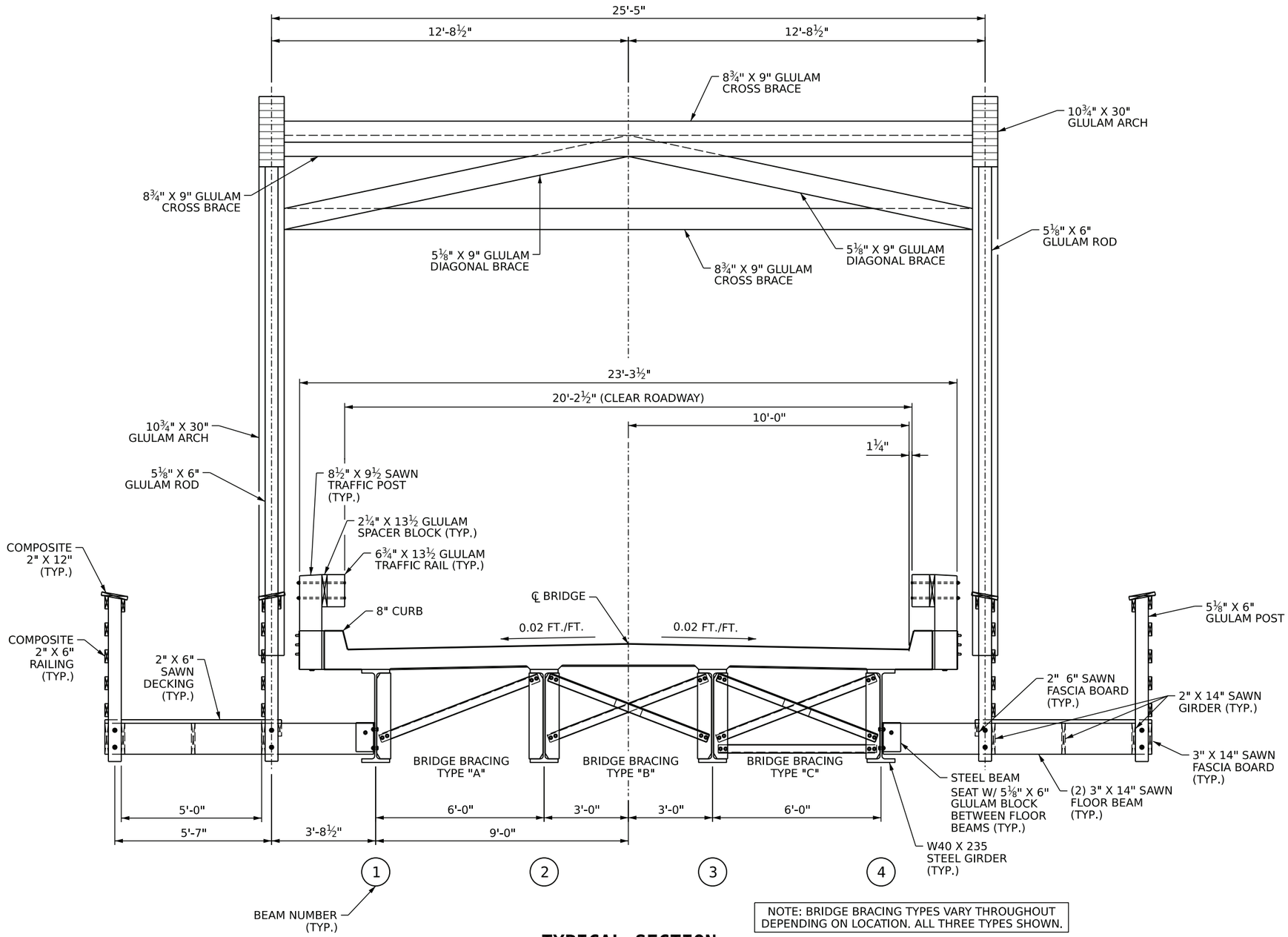
FOR BRIDGE ON SP8972 OVER PADDY CREEK

DRAWN BY : R.L.PUTEK DATE : 09/2025

CHECKED BY : T.M.SHERRILL DATE : 09/2025

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1			3			TOTAL SHEETS
2			4			



NOTE: BRIDGE BRACING TYPES VARY THROUGHOUT DEPENDING ON LOCATION. ALL THREE TYPES SHOWN.

TYPICAL SECTION

(EXISTING)

NOTES

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

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

DocuSigned by:
Timothy M. Sherrill
A0660B1D8772488...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

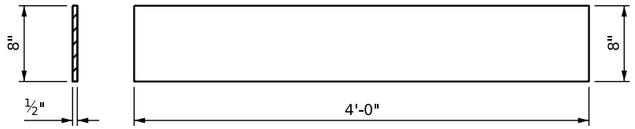
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TYPICAL SECTION

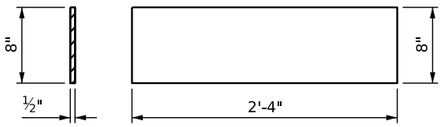
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DRAWN BY : R.L.PUTEK DATE : 03/2025
CHECKED BY : T.M.SHERRILL DATE : 09/2025



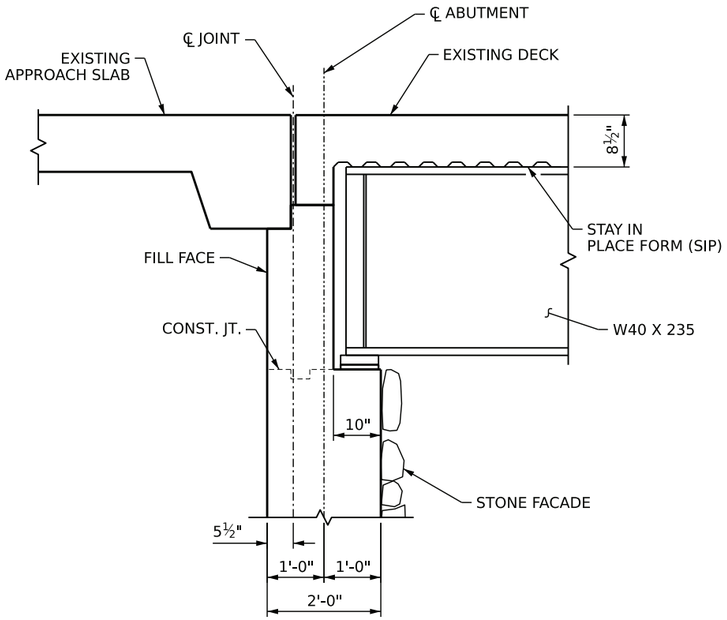
NBP1 (10 REQ'D)



NBP2 (2 REQ'D)

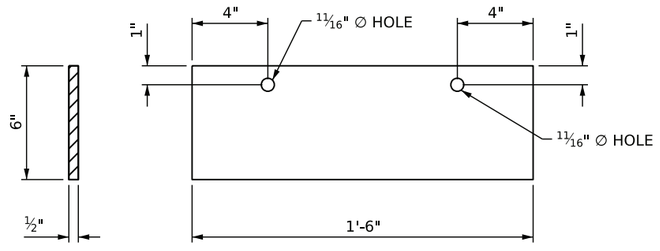
NEOPRENE BEARING PAD

(NOT TO SCALE)



SECTION VIEW

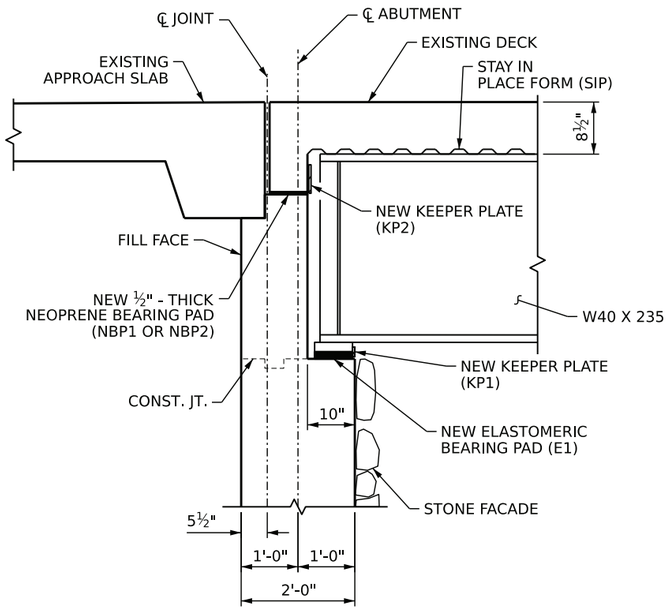
(EXISTING)



KP2 (10 REQ'D)

KEEPER PLATE DETAILS

(NOT TO SCALE)



SECTION VIEW

(PROPOSED)

(PC OVERLAY NOT SHOWN FOR CLARITY)

NOTES

PRIOR TO MAKING REPAIRS TO CONCRETE SPALLS AND DELAMINATIONS, AT EACH ABUTMENT, THE SPAN END SHALL BE JACKED AND TEMPORARILY SUPPORTED, SO THAT ½" - THICK NEOPRENE PADS MAY BE PLACED BETWEEN THE DECK SLAB TURN-DOWN AND THE TOP OF THE BACKWALL.

ALSO WHILE THE SPAN END IS JACKED, THE EXISTING BEARING PADS BENEATH THE EXISTING GIRDERS SHALL BE REMOVED AND REPLACED WITH NEW BEARING PADS AS INDICATED IN THE BEARING PADS DETAILS SHEET.

ONCE NEW NEOPRENE PADS AND NEW BEARING PADS ARE IN PLACE, THE SPAN END MAY BE LOWERED INTO POSITION AND THE JACKS REMOVED.

AFTER JACKING APPARATUS IS REMOVED, INSTALL KEEPER PLATES FOR THE NEW ELASTOMERIC BEARING PADS.

AFTER JACKING APPARATUS IS REMOVED, REPAIR THE SPALLS, DELAMINATIONS, AND CRACKS OF THE SLAB TURN-DOWN AND THE ABUTMENT BACKWALL.

AFTER CONCRETE SPALLS AND DELAMINATIONS ARE COMPLETED, INSTALL THE KEEPER PLATES FOR SLAB TURN-DOWN WHERE INDICATED. THE PLATES SHALL BE INSTALLED ON THE SLAB TURN-DOWN AT AN ELEVATION SUCH THAT NEOPRENE PADS WILL BE RETAINED, BUT THE PLATE WILL NOT STRIKE THE BACKWALL WITH THE EXPANSION AND CONTRACTION OF THE BRIDGE.

KEEPER PLATES SHALL BE FABRICATED WITH MINIMUM 36 KSI STEEL TO THE DIMENSIONS INDICATED. KEEPER PLATES ARE TO BE GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS.

NEOPRENE PAD KEEPER PLATES SHALL BE INSTALLED WITH ⅝" DIAMETER ADHESIVELY ANCHORED BOLTS. ADHESIVELY ANCHORED BOLTS SHALL BE INSTALLED TO MINIMUM 5" DEPTH AND IN ACCORDANCE WITH SUBARTICLE 420-13 OF THE STANDARD SPECIFICATIONS. NO FIELD TESTING WILL BE REQUIRED. USED AN APPROVED ADHESIVE SYSTEM.

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

SHEET 1 OF 2

DocuSigned by: Timothy M. Sherrill
A2606109477A4CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

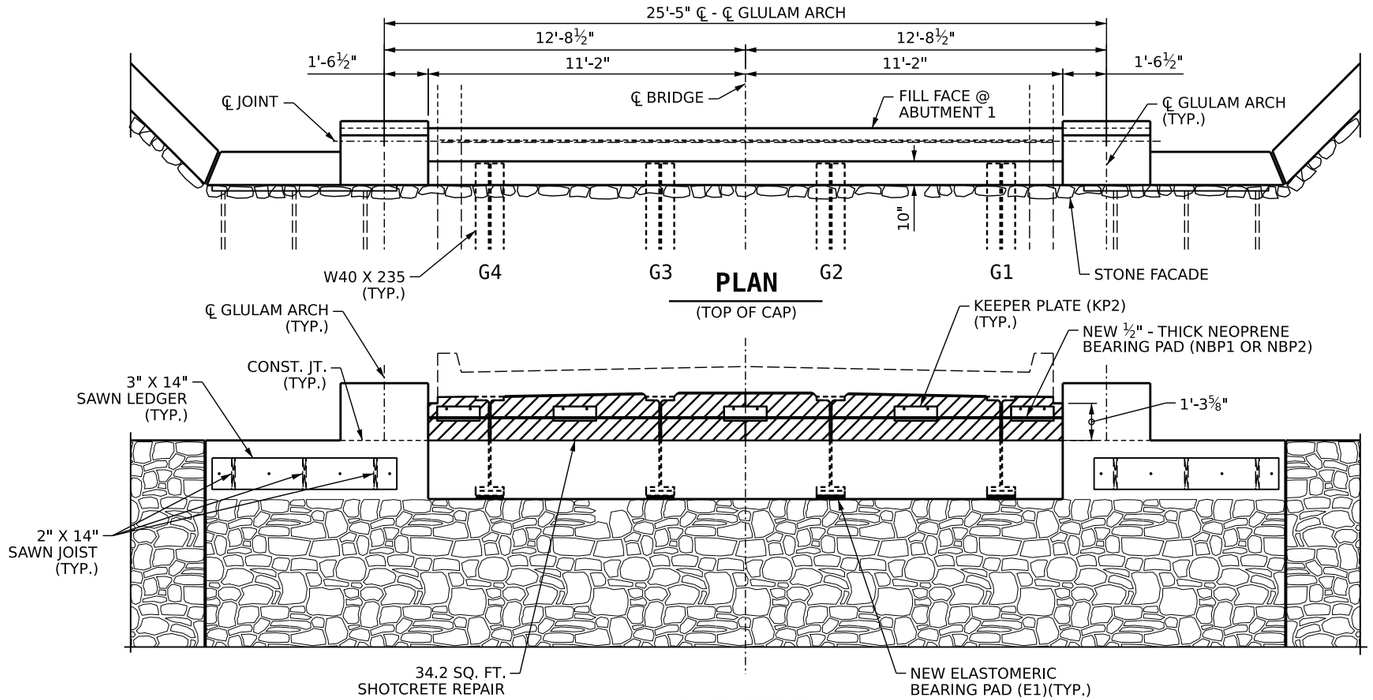
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

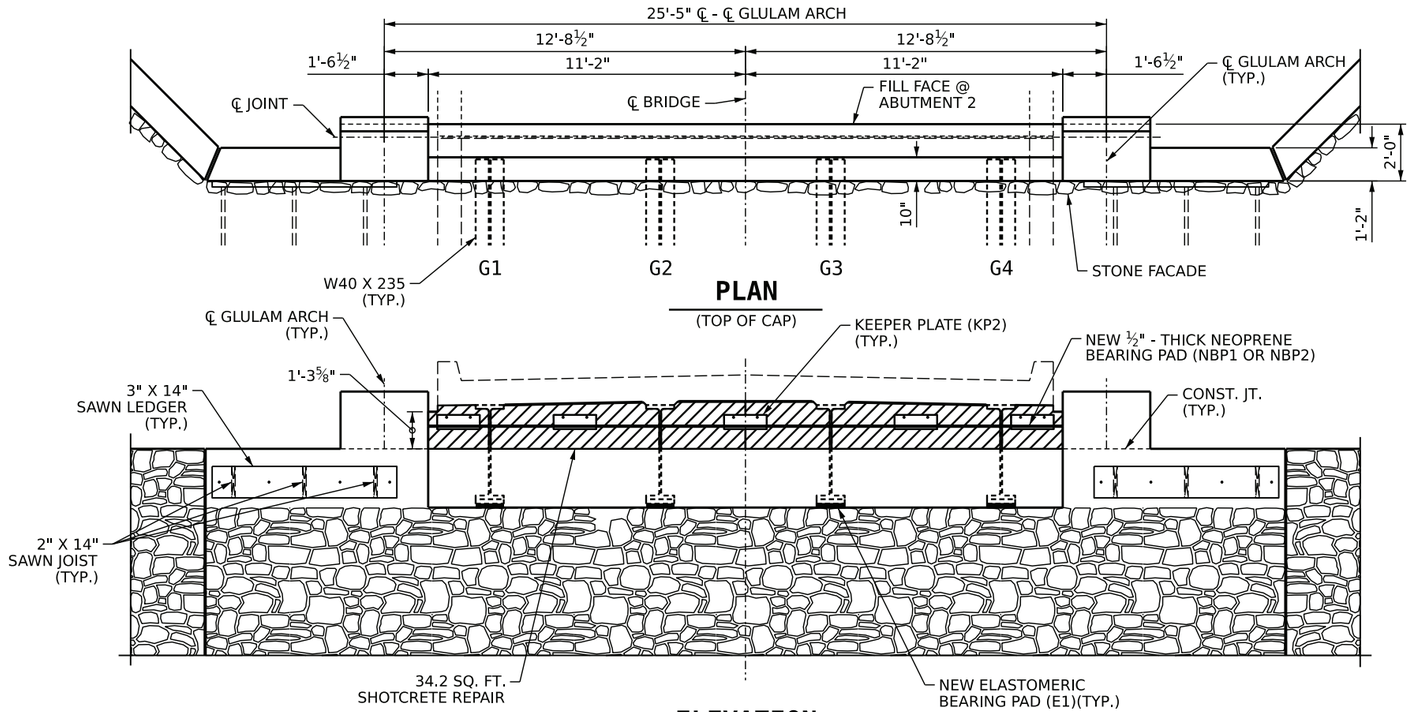
SUBSTRUCTURE REPAIR ABUTMENT 1 AND 2

DRAWN BY : R.L.PUTEK DATE : 04/2025
CHECKED BY : T.M.SHERRILL DATE : 09/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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2			4			15





AS-BUILT REPAIR QUANTITY TABLE

REPAIRS-ABUTMENT 1 & 2	QUANTITIES			
	ESTIMATE		ACTUAL	
SHOTCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
ABUTMENT 1	34.2	14.3		
ABUTMENT 2	34.2	14.3		
CONCRETE REPAIRS	AREA SF	VOLUME CF	AREA SF	VOLUME CF
ABUTMENT 1	0	0		
ABUTMENT 2	0	0		
EPOXY COATING		AREA SF		AREA SF
ABUTMENT 1		18.6		
ABUTMENT 2		18.6		

VALUES IN CHART REPRESENT ESTIMATED REPAIR TOTALS AFTER REMOVAL OF UNSOUND CONCRETE, MIN. OF 1" BEHIND REBAR AND MIN. 1" CLEAR TO SAWCUT.
SEE REPAIR DETAILS, 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 REPAIR QUANTITY TABLE.

LOCATION OF NEOPRENE PADS NBP1 OR NBP2 IS NOT SPECIFIED, BUT SHALL BE COORDINATED WITH LOCATIONS OF KEEPER PLATES (KP2) AND ADJUSTED TO ENSURE THAT KEEPER PLATES WILL BE EFFECTIVE IN RETAINING PADS IN PLACE.

FOR EPOXY RESIN INJECTION, SEE SPECIAL PROVISIONS.

FOR SHOTCRETE REPAIRS, SEE SPECIAL PROVISIONS.

FOR CONCRETE REPAIRS, SEE SPECIAL PROVISIONS.

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

FOR EPOXY COATING AND DEBRIS REMOVAL, SEE SPECIAL PROVISIONS.

CLEAN AND REMOVE DEBRIS FROMM TOP OF THE CAP AND APPLY EPOXY PROTECTIVE COATING, EPOXY COATING SHALL BE APPLIED TO THE TOP OF THE SURFACE OF THE CAP. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP UNDERNEATH THE BEARING PAD.

SHOTCRETE REPAIR

CONCRETE REPAIR (FORM & POUR)

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

SHEET 2 OF 2

DocuSigned by:
ADE6B1D8774484CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

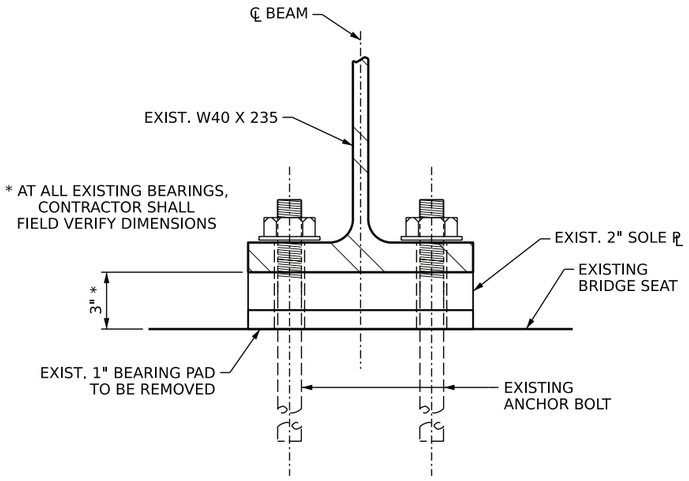
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DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE REPAIR ABUTMENT 1 AND 2

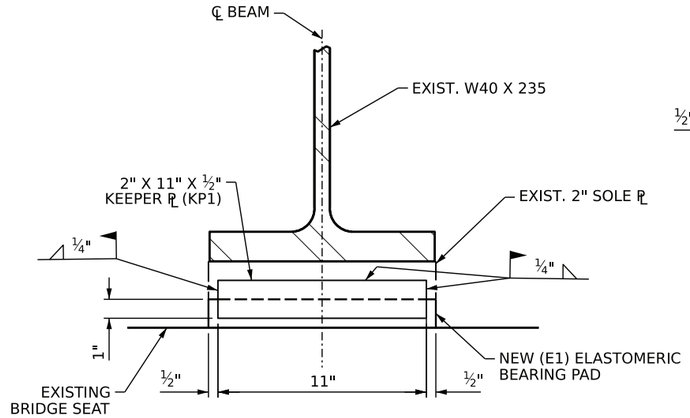
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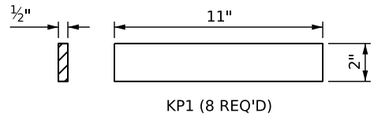
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END VIEW
(EXISTING BEARINGS)



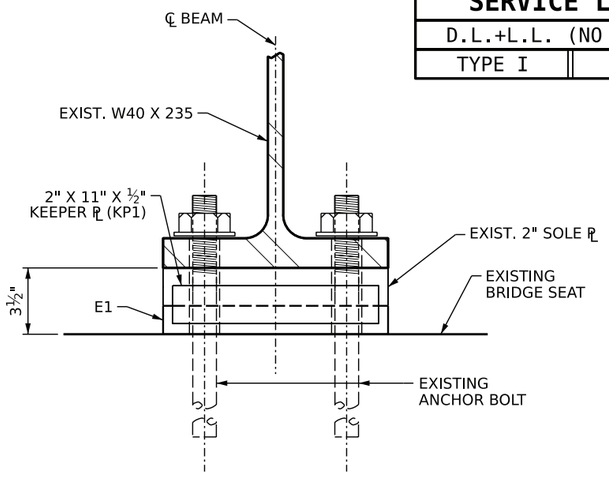
KEEPER PLATE (KP1)
(ANCHOR BOLTS REMOVED FOR CLARITY)



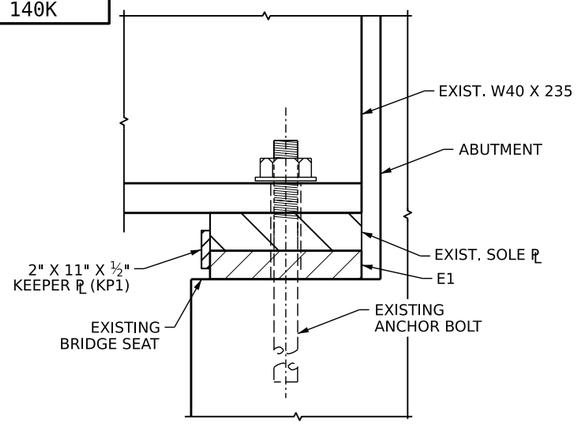
KP1 (8 REQ'D)

KEEPER PLATE DETAILS
(NOT TO SCALE)

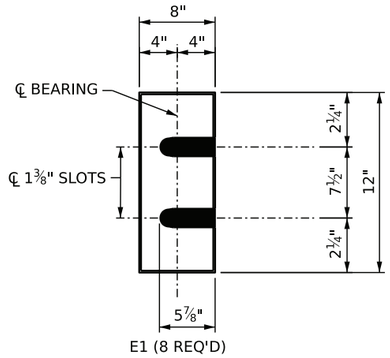
MAXIMUM ALLOWABLE SERVICE LOADS	
D.L.+L.L. (NO IMPACT)	
TYPE I	140K



END VIEW
(PROPOSED BEARINGS)

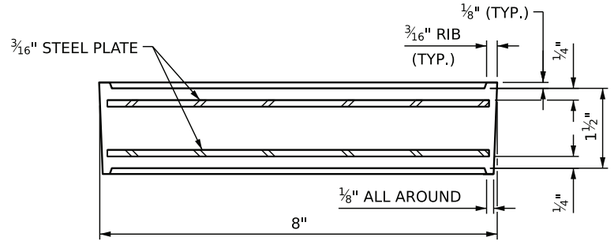


SECTION VIEW
(PROPOSED BEARINGS)



E1 (8 REQ'D)

PLAN VIEW OF ELASTOMERIC BEARING



TYPICAL SECTION OF ELASTOMERIC BEARING

MODIFIED TYPE I
ELASTOMER IN ALL BEARINGS SHALL BE 60 DUROMETER HARDNESS

NOTES

THE EXISTING BEARING PADS SHALL BE REMOVED AND REPLACED WITH BEARING PADS AS SHOWN.

PRIOR TO FABRICATION OF NEW BEARING PADS, CONTRACTOR SHALL FIELD MEASURE THE EXISTING BEARINGS AND COORDINATE WITH THE BEARING PAD FABRICATOR TO CONFIRM THE THE PROPOSED BEARING PADS WILL PROVIDE AN ADDITIONAL ½" HEIGHT TO CORRESPOND WITH THE NEOPRENE PADS TO BE INSTALLED BETWEEN THE SLAB TURN-DOWN AND THE BACKWALL.

KEEPER PLATES SHALL BE FABRICATED WITH MINIMUM 36 KSI STEEL TO THE DIMENSIONS INDICATED. KEEPER PLATES ARE TO BE GALVANIZED IN ACCORDANCE WITH SECTION 1076 OF THE STANDARD SPECIFICATIONS.

ALL WELDING SHALL BE IN ACCORDANCE WITH CURRENT APPLICABLE AWS AND NCDOT STANDARD SPECIFICATIONS.

WELDS WILL BE INSPECTED AND TESTED BY THE NCDOT MATERIALS AND TESTS UNIT IN ACCORDANCE WITH THE CURRENT AWS BRIDGE WELDING CODE AND STANDARD SPECIFICATIONS.

AFTER WELDING KEEPER PLATES IN PLACE, THOROUGHLY CLEAN AND PAINT WELD AREAS AND AREAS WHERE GALVANIZING HAS BEEN REMOVED IN ACCORDANCE WITH SUBSECTION 1076-7 OF THE STANDARD SPECIFICATIONS.

THE ELASTOMER IN THE STEEL REINFORCED BEARINGS SHALL HAVE A SHEAR MODULUS OF 0.160 KSI, IN ACCORDANCE WITH AASHTO M251.

FOR MODIFIED ELASTOMERIC BEARINGS, SEE SPECIAL PROVISIONS.

WHEN INSTALLATION OF THE ELASTOMERIC BEARINGS IS COMPLETED, CLEAN AND REMOVE DEBRIS FROM THE TOP OF THE BENT CAPS AND APPLY EPOXY PROTECTIVE COATING TO THE TOP SURFACE OF THE CAPS. THE CONTRACTOR SHALL NOT COAT THE AREA OF THE CAP BENEATH THE ELASTOMERIC BEARINGS. FOR EPOXY COATING, SEE SPECIAL PROVISIONS.

PROJECT NO. 84013.LAJA.002
BURKE COUNTY
BRIDGE NO. 110378

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

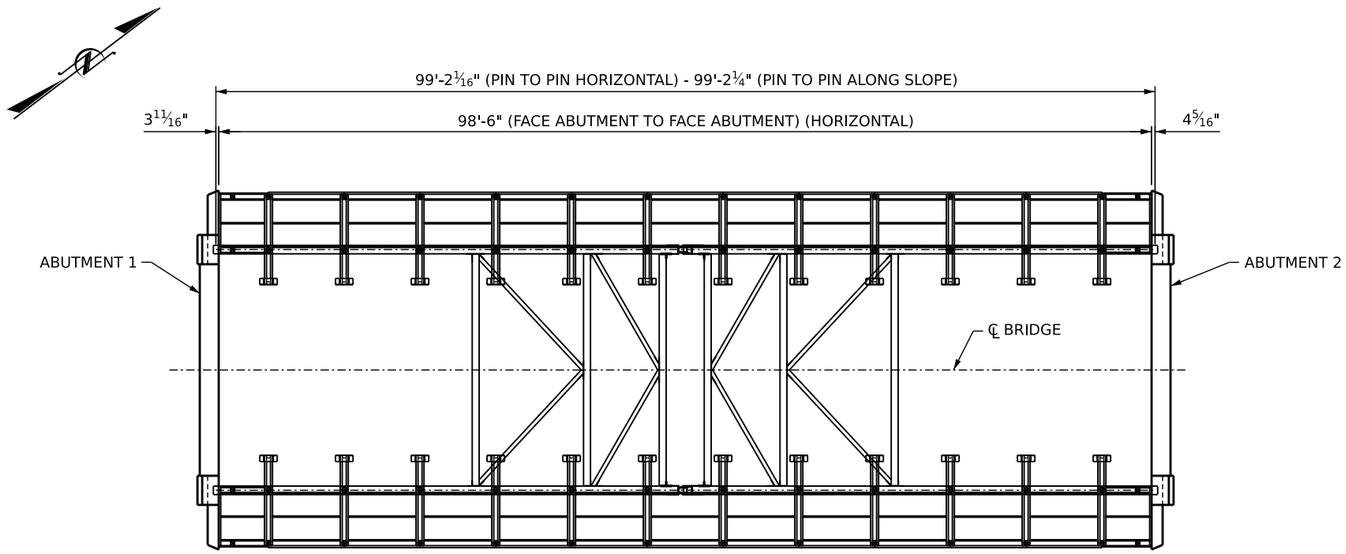
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ELASTOMERIC BEARING PAD
DETAILS

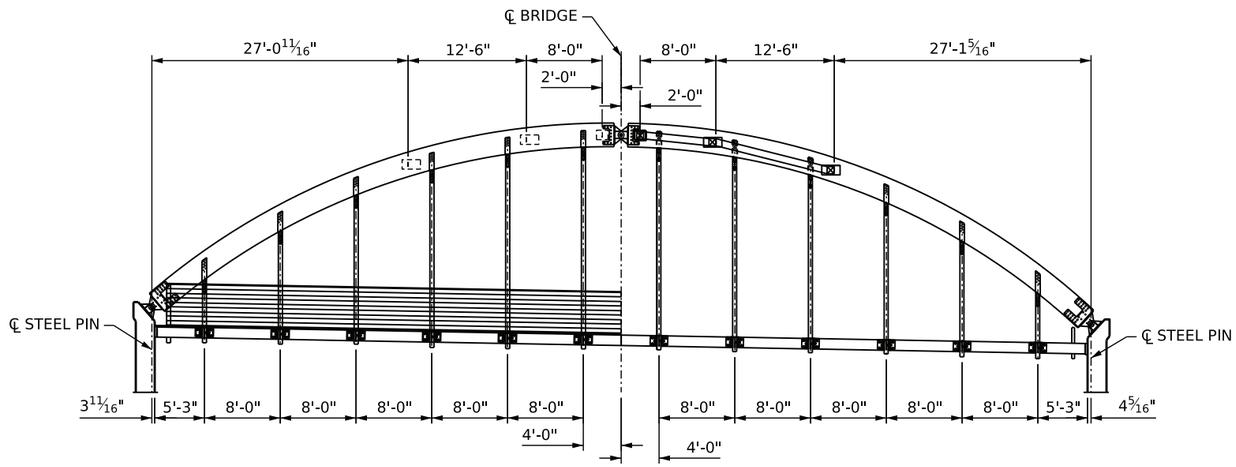
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PEDESTRIAN BRIDGE PLAN VIEW



ABUTMENT 1 ABUTMENT 2

CUT-AWAY BRIDGE ELEVATION VIEW

(VEHICULAR BRIDGE NOT SHOWN FOR CLARITY)

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

SHEET 1 OF 2

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DEPARTMENT OF TRANSPORTATION
RALEIGH

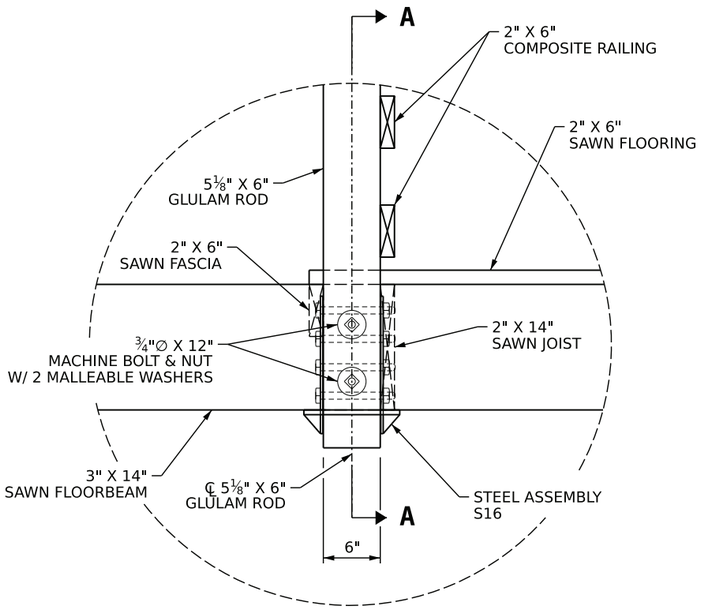
PEDESTRIAN BRIDGE TIMBER ARCH

DRAWN BY : R.L.PUTEK DATE : 05/2025

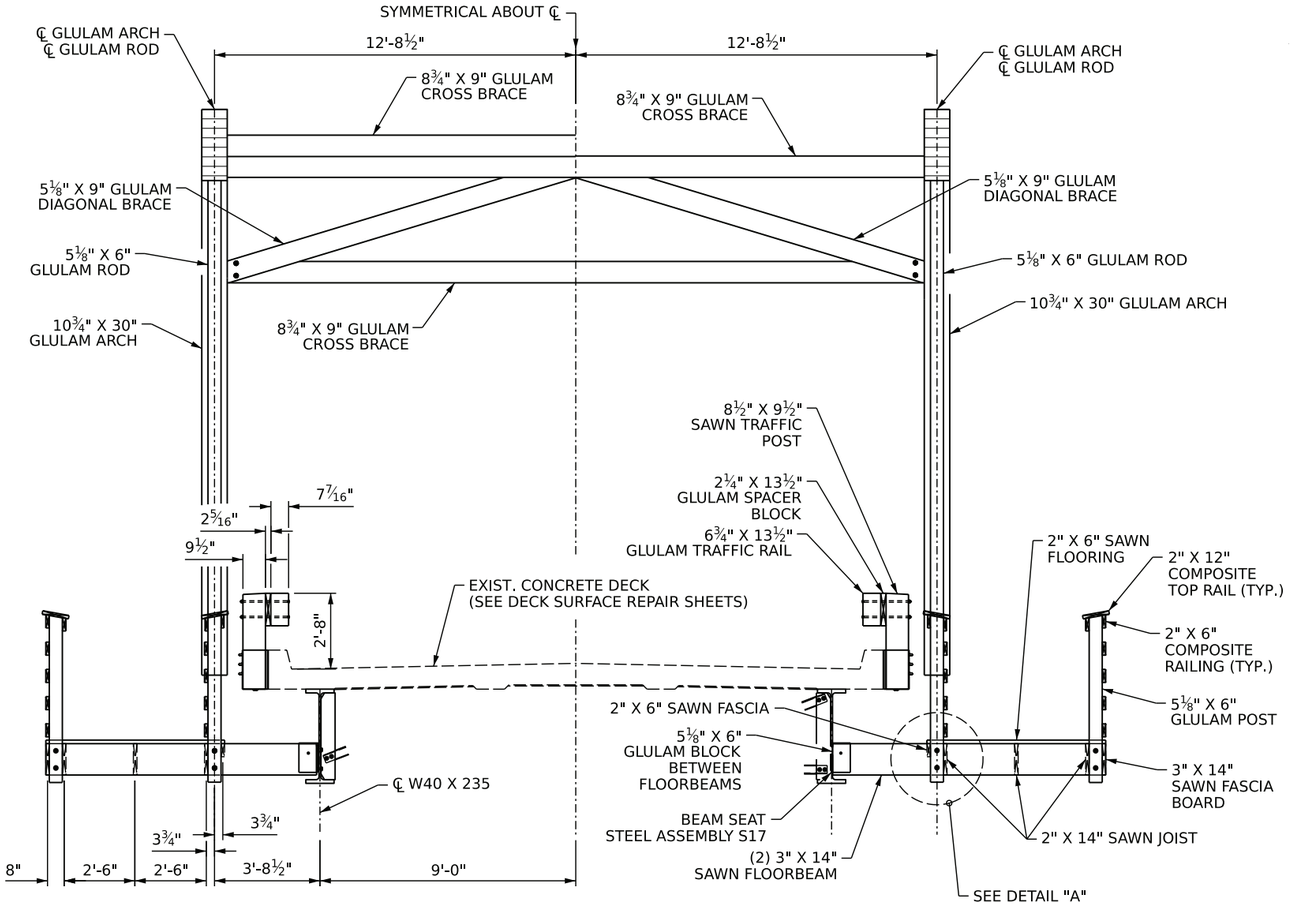
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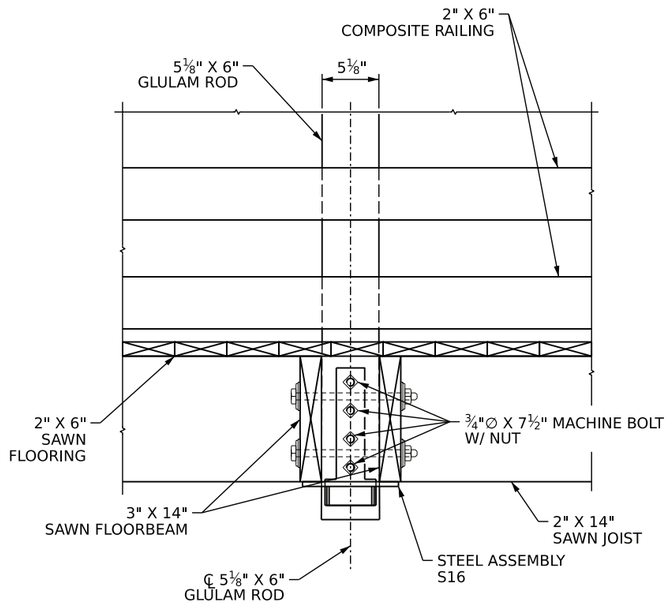


DETAIL "A"

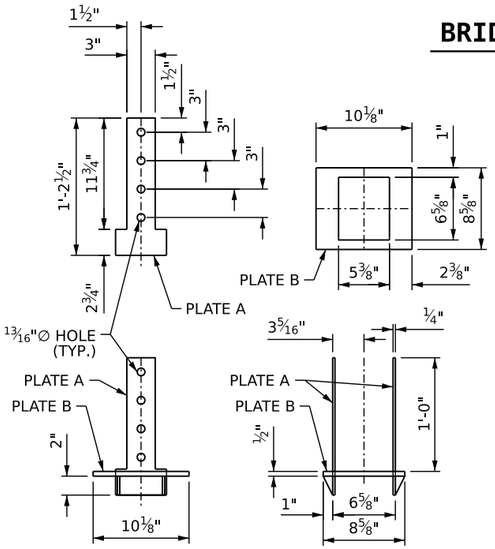


BRIDGE SECTION AT MIDSPAN

(EXISTING)



SECTION A-A



STEEL ASSEMBLY S16

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CHECKED BY : T.M.SHERRILL DATE : 09/2025

PROJECT NO. 84013.LAJA.002
BURKE COUNTY
BRIDGE NO. 110378

SHEET 2 OF 2

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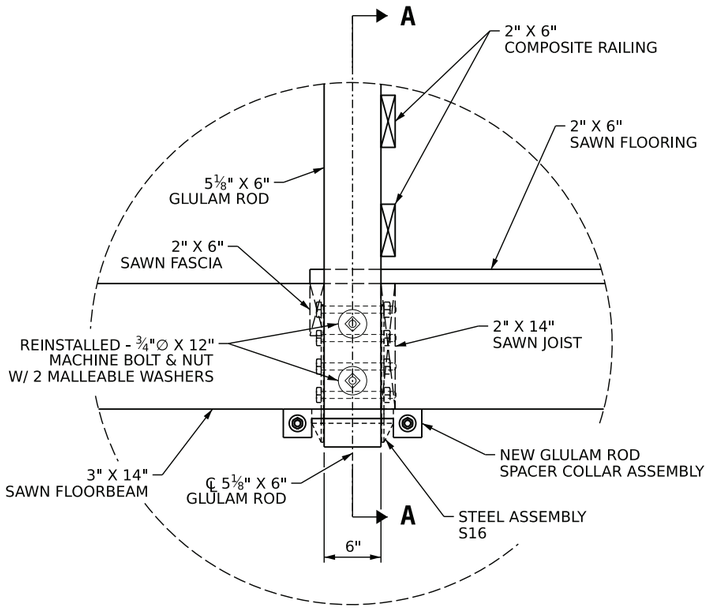
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RALEIGH

PEDESTRIAN BRIDGE TIMBER ARCH

SECTION VIEW

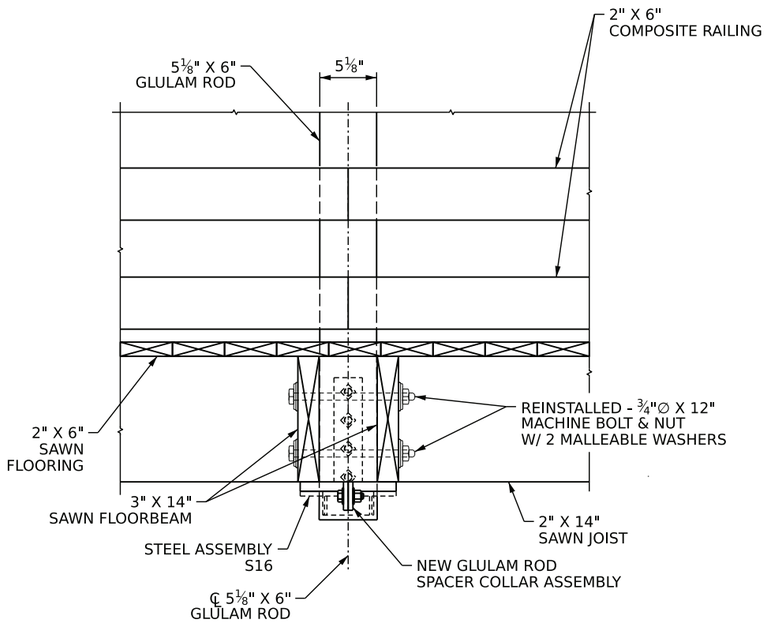
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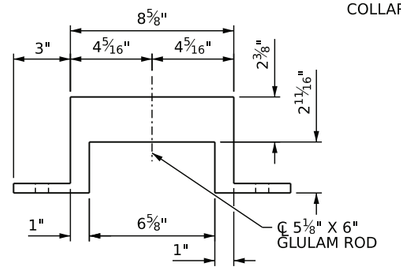


DETAIL "A"

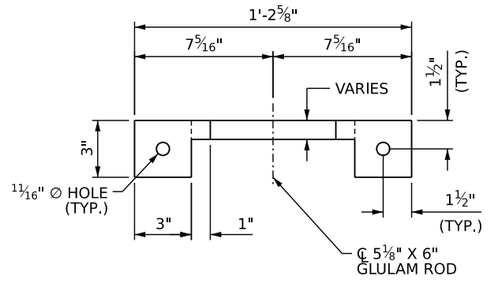
COMPOSITE RAILING, AND TOP RAIL ATTACHED TO THE GLULAM ROD TO BE REMOVED, CLEANED AND REUSED. SPACING OF REINSTALLED RAILS SHALL MATCH THAT OF THE EXISTING.



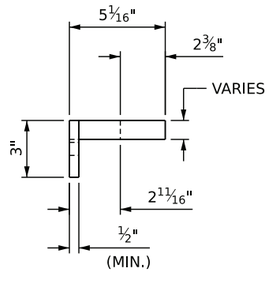
SECTION A-A



PLAN



ELEVATION



END VIEW

GLULAM ROD SPACER COLLAR DETAIL

COMPLETE COLLAR ASSEMBLY AT EACH GLULAM ROD LOCATION SHALL CONSIST OF TWO MIRRORED HALVES, BOLTED TOGETHER WITH ⅝" ∅ BOLTS WITH NUTS, WASHERS, AND DTIS.

NOTES

CONTRACTOR SHALL FABRICATE AND INSTALL SPACER COLLARS ON EACH GLULAM ROD TO MAKE THE PEDESTRIAN WALKWAY FLOOR BEAMS LEVEL. THE HEIGHT OF EACH SPACER COLLAR WILL VARY DUE TO VARYING SETTLEMENT ACROSS THE BRIDGE SPAN. ANTICIPATED SPACER COLLAR HEIGHTS VARY BETWEEN APPROXIMATELY ½" AND 2½".

PRIOR TO FABRICATION, THE HEIGHT OF THE SPACER COLLAR SHALL TAKE INTO ACCOUNT THAT THE VEHICULAR BRIDGE WILL BE RAISED ½" FOR INSTALLATION OF THE NEOPRENE PAD BETWEEN THE SLAB TURN-DOWN AND THE TOP OF THE BACKWALL.

THE CONTRACTOR SHALL FIELD MEASURE AND VERIFY EXISTING DIMENSIONS AND EXTENT OF SLOPING OF THE PEDESTRIAN WALKWAY.

CONTRACTOR SHALL DETERMINE THE NECESSARY HEIGHT OF SPACER COLLAR AT EACH FLOOR BEAM LOCATION TO MAKE THE PEDESTRIAN WALKWAY FLOOR BEAMS LEVEL.

CONTRACTOR SHALL SUBMIT FIELD MEASUREMENTS AND CALCULATIONS FOR DETERMINING SPACER COLLAR HEIGHT.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR SPACER COLLARS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

SPACER COLLARS SHALL BE MINIMUM 36 KSI STEEL.

ALL BOLTS SHALL MEET ASTM F3125, GRADE A325.

ALL NUTS SHALL MEET ASTM A194.

ALL FLAT WASHERS SHALL MEET ASTM F436.

TENSION ON THE BOLTS SHALL BE CALIBRATED USING DIRECT TENSION INDICATOR WASHERS (DTIS) IN ACCORDANCE WITH ARTICLE 440-8 OF THE NCDOT.

ALL DTIS SHALL MEET ASTM F959.

GALVANIZE ANCHOR BOLTS, NUTS, WASHERS, DTIS AND SPACER COLLARS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TO INSTALL THE SPACER COLLAR AT EACH GLULAM ROD, TEMPORARILY SUPPORT FLOOR BEAM AND REMOVE THE TWO ¾" X 12" BOLTS THAT CONNECT THE FLOOR BEAMS TO THE GLULAM ROD. LIFT THE FLOOR BEAMS (AND OTHER MEMBER ATTACHED TO THE FLOOR BEAMS) AND INSERT THE SPACER COLLAR. AS NECESSARY, RE-DRILL HOLES FOR THE TWO ¾" X 12" BOLTS THOUGH THE GLULAM ROD AND RE-INSTALL THE TWO BOLTS. AVOID THE FOUR BOLTS OF THE S16 ASSEMBLY.

AFTER INSTALLATION OF THE BOLTS AT THE NEW LOCATIONS, FILL ASSOCIATED BOLT HOLES OR PARTIAL BOLT HOLES THAT WILL REMAIN FROM THE EXISTING CONSTRUCTION. FILLER SHALL BE FOR EXTERIOR TIMBER CONSTRUCTION AND SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER. COST FOR FILLING OF THE HOLES SHALL BE CONSIDERED INCIDENTAL TO THE PEDESTRIAN WALKWAY LEVELING AND INSTALLATION OF THE GLULAM ROD SPACER COLLAR.

LOOSEN ADJACENT FLOOR BEAMS / ROD LOCATIONS AS NECESSARY TO LIFT PARTICULAR FLOOR BEAM LOCATIONS.

CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A PLAN FOR LIFTING AND SUPPORTING FLOOR BEAMS AND INSERTING SPACER COLLARS.

ACCESS AND LIFTING METHODS - INCLUDING DECK BOARD REMOVAL AND REPLACEMENT AND ANY OTHER ACTIONS NECESSARY TO LIFT AND LEVEL THE FLOOR BEAMS AND TO INSTALL THE GLULAM ROD SPACER COLLAR - SHALL BE CONSIDERED INCIDENTAL TO THE GLULAM SPACER COLLAR PAY ITEM.

PRIOR TO LIFTING OPERATIONS, THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE LIFTING PROCEDURE(S) SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA TO THE ENGINEER FOR APPROVAL.

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

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

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Timothy M. Sherrill
A060B1D6774842C...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

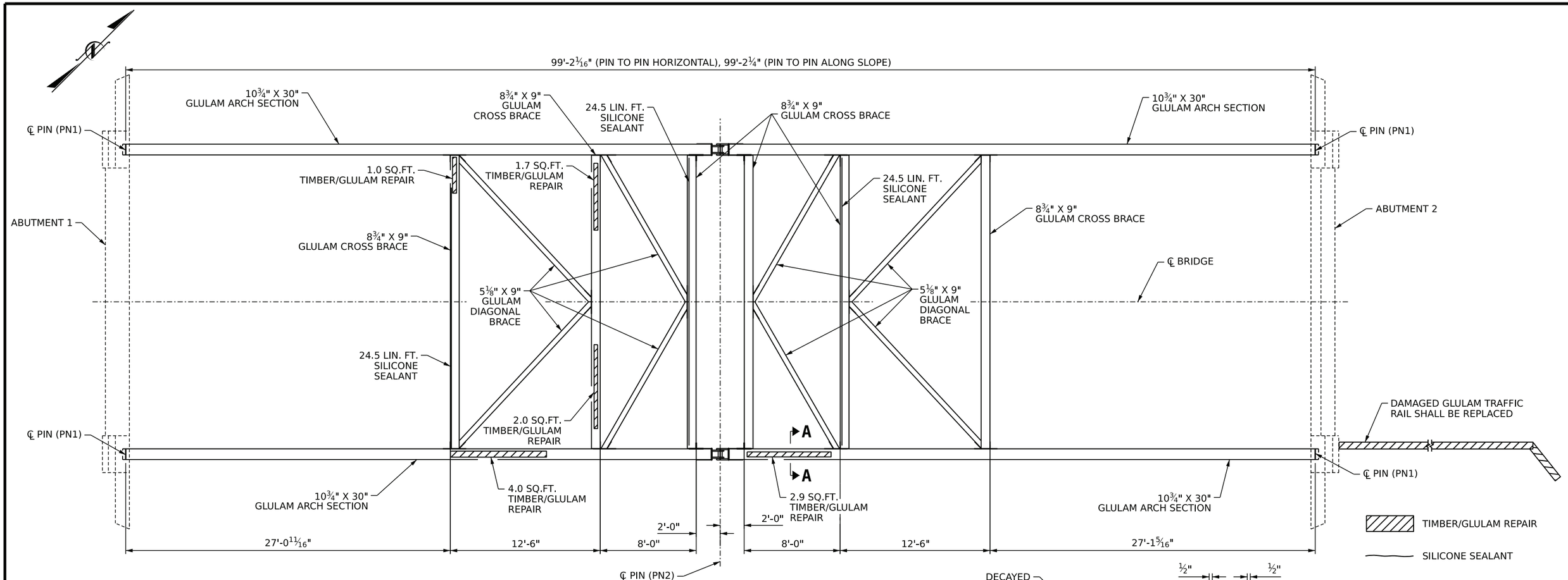
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RALEIGH

GLULAM ROD SPACER COLLAR DETAILS

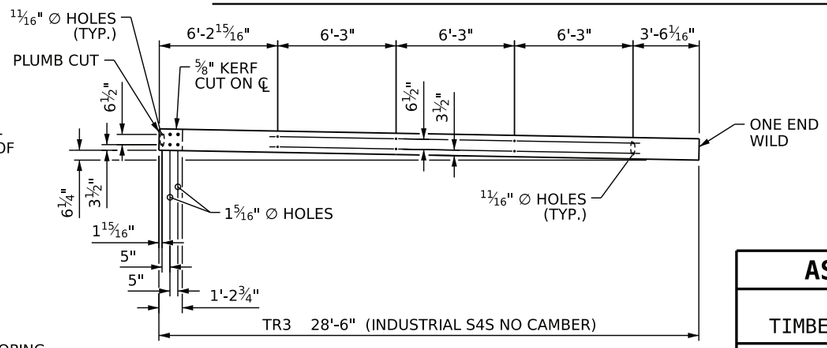
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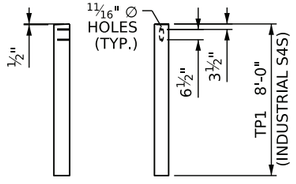
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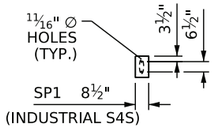
PEDESTRIAN BRIDGE TIMBER ARCH PLAN VIEW



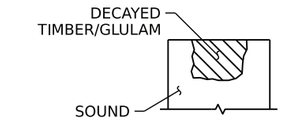
6 3/4" X 13 1/2" GLULAM TRAFFIC RAIL-TR3



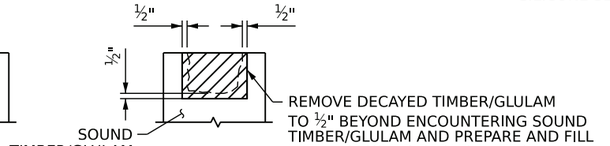
9 X 10 SAWN TRAFFIC POST-TP1



2 1/4" X 13 1/2" GLULAM TRAFFIC SPACER-SP1



EXISTING



PROPOSED

TIMBER/GLULAM REPAIR DETAIL

SECTION A-A

NOTES

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

FOR GLULAM REPAIR, SEE GLULAM REPAIR SPECIAL PROVISION.

FOR SILICONE SEALANT, SEE SPECIAL PROVISIONS.

SILICONE SEALANT SHALL BE USED TO FILL TIMBER CHECKS/SHAKES (CRACKS IN TIMBER).

GLULAM REPAIRS SHALL BE COMPLETED PRIOR TO INSTALLATION OF ARCH COPING.

FOR REPLACEMENT OF GLULAM TRAFFIC RAIL, SEE SPECIAL PROVISIONS.

DIMENSIONS, CONNECTION HOLE LOCATIONS, AND OTHER REQUIRED INFORMATION SHALL BE FIELD VERIFIED PRIOR TO ORDERING AND FABRICATION OF MEMBERS TO REPLACE THE DAMAGED GLULAM TRAFFIC RAIL AT THE NORTHEAST CORNER OF THE BRIDGE.

AS-BUILT QUANTITY REPAIR TABLE

REPAIRS TIMBER/GLULAM ARCH	QUANTITIES			
	ESTIMATE		ACTUAL	
GLULAM REPAIR	AREA S.F.	VOLUME C.F.	AREA S.F.	VOLUME C.F.
SPAN A	11.6	2.8		
SILICONE SEALANT	LIN. FT.		LIN. FT.	
SPAN A	73.5			
GLULAM TRAFFIC RAIL	LIN. FT.		LIN. FT.	
SPAN A	33.0			

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

TIMBER / GLULAM REPAIR

DRAWN BY : R.L.PUTEK DATE : 04/2025
CHECKED BY : T.M.SHERRILL DATE : 09/2025

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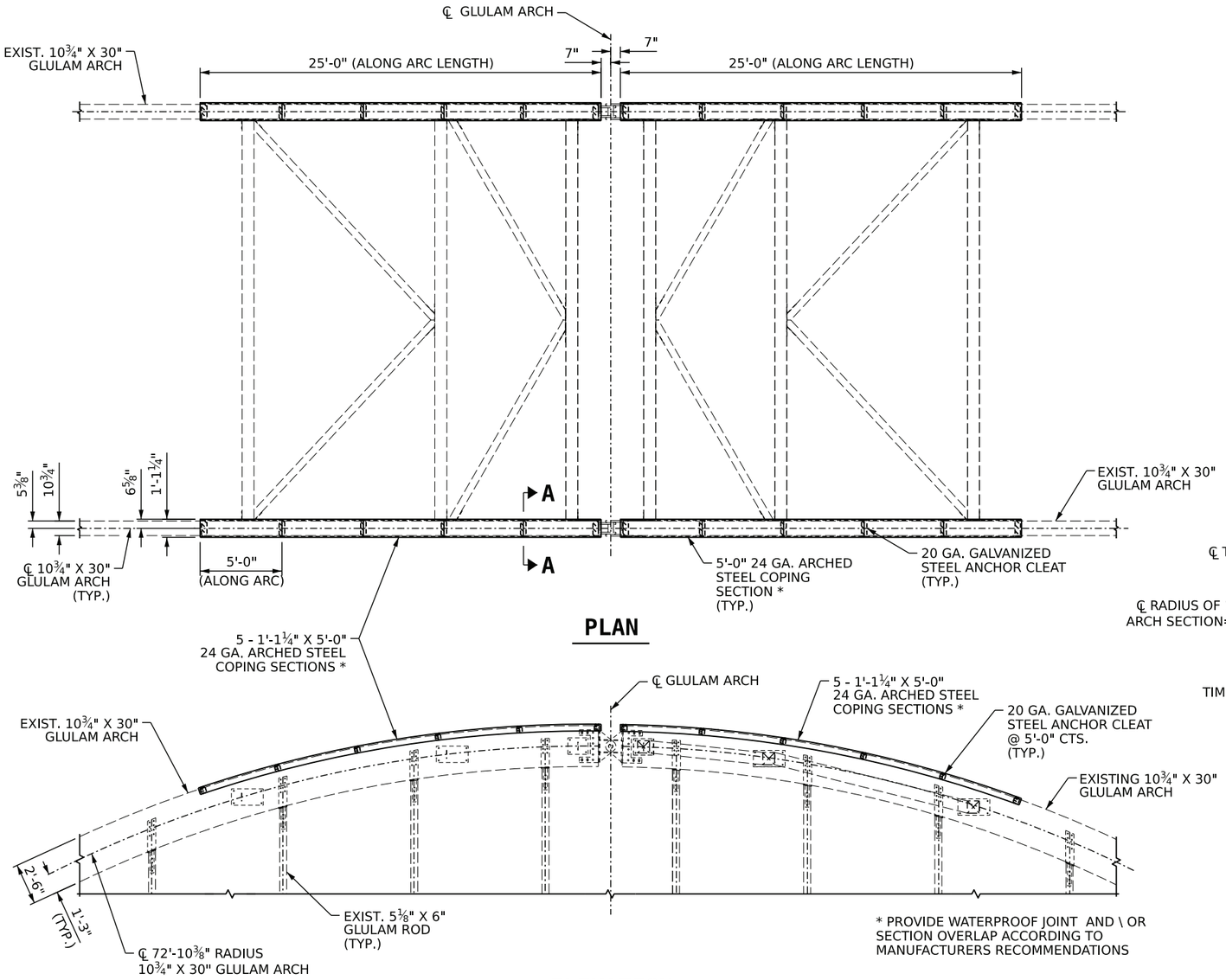
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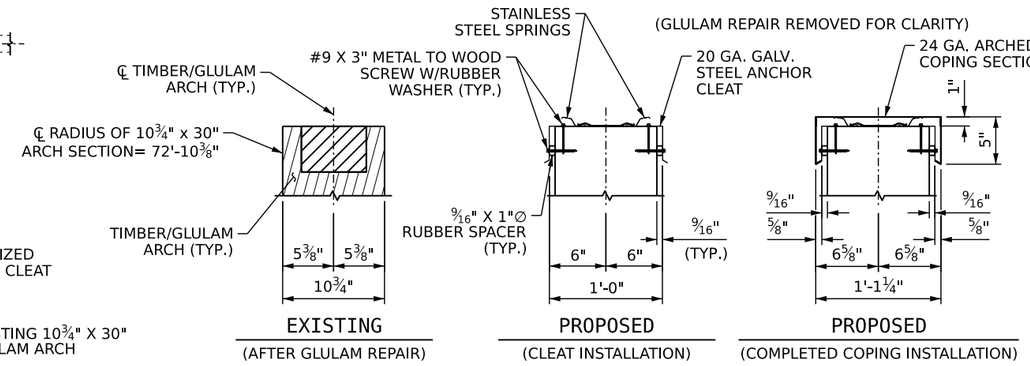
PRIOR TO FABRICATION OR INSTALLATION OF ANY GLULAM ARCH COPING SECTIONS, CONTRACTOR SHALL FIELD MEASURE AND VERIFY DIMENSIONS INDICATED ON THESE PLANS AND TO ADDRESS ANY UNANTICIPATED CONFLICTS. SHOP DRAWINGS FOR THE COPING SYSTEM, INCLUDING TECHNICAL DATA INFORMATION, SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.

FOR GLULAM ARCH COPING, SEE SPECIAL PROVISIONS.

GLULAM REPAIRS SHALL BE COMPLETED PRIOR TO INSTALLATION OF ARCH COPING.

AS-BUILT QUANTITY REPAIR TABLE		
GLULAM ARCH COPING	QUANTITIES	
	ESTIMATE	ACTUAL
24 GAUGE ARCHED STEEL COPING	LIN. FT.	LIN. FT.
GLULAM ARCH COPING	100.0	





PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

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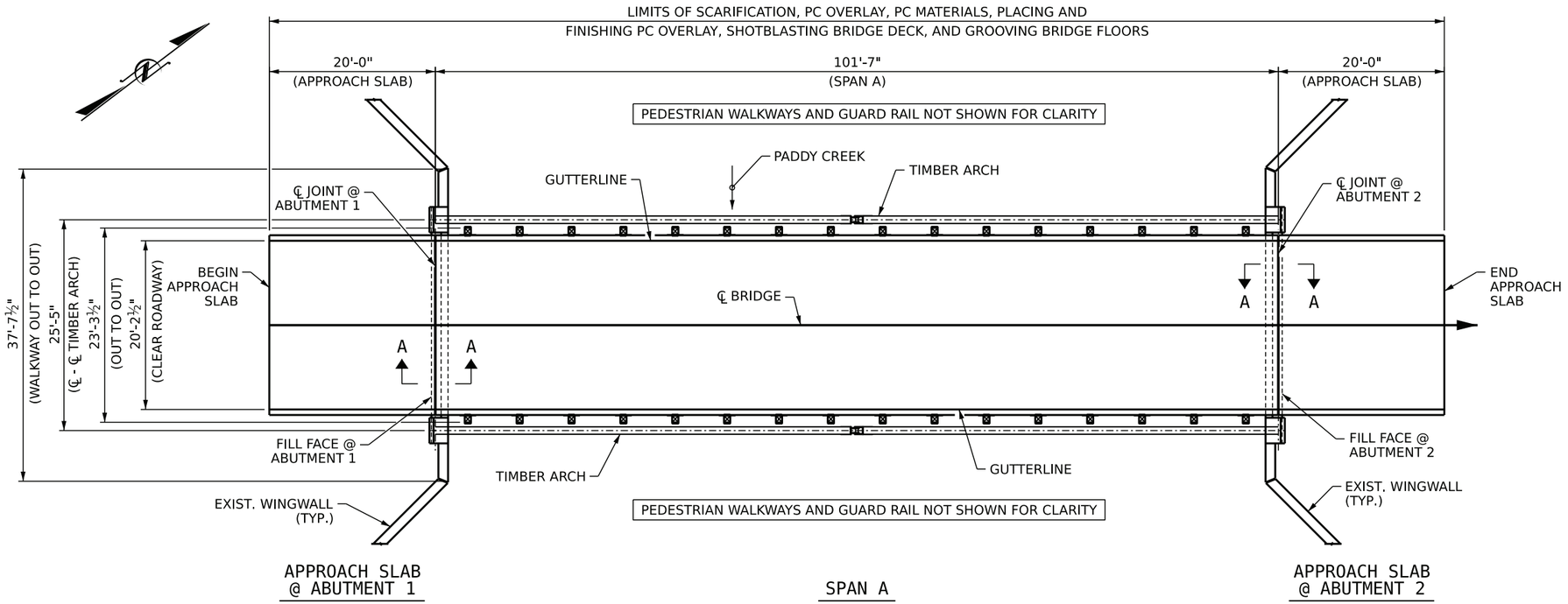
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GLULAM ARCH COPING DETAILS

DRAWN BY : R.L.PUTEK DATE : 08/2025
CHECKED BY : T.M.SHERRILL DATE : 09/2025

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PAY LIMITS FOR OVERLAY BID ITEMS

AS-BUILT QUANTITY REPAIR TABLE

DECK SURFACE REPAIR & APPROACH SLAB REPAIR

		ESTIMATE	ACTUAL
SCARIFYING BRIDGE DECK	APPROACH SLAB @ ABUTMENT 1	45.2 SQ. YDS.	
	SPAN A	227.2 SQ. YDS.	
	APPROACH SLAB @ ABUTMENT 2	45.2 SQ. YDS.	
SHOTBLASTING BRIDGE DECK	APPROACH SLAB @ ABUTMENT 1	45.2 SQ. YDS.	
	SPAN A	227.2 SQ. YDS.	
	APPROACH SLAB @ ABUTMENT 2	45.2 SQ. YDS.	
CLASS II SURFACE PREPARATION	APPROACH SLAB @ ABUTMENT 1		
	SPAN A		
	APPROACH SLAB @ ABUTMENT 2		
PC MATERIALS	APPROACH SLAB @ ABUTMENT 1	1.3 CU. YDS.	
	SPAN A	4.8 CU. YDS.	
	APPROACH SLAB @ ABUTMENT 2	1.3 CU. YDS.	
PLACING AND FINISHING PC OVERLAY	APPROACH SLAB @ ABUTMENT 1	45.2 SQ. YDS.	
	SPAN A	227.2 SQ. YDS.	
	APPROACH SLAB @ ABUTMENT 2	45.2 SQ. YDS.	
GROOVING BRIDGE FLOORS	APPROACH SLAB @ ABUTMENT 1	332 SQ. FT.	
	SPAN A	1752 SQ. FT.	
	APPROACH SLAB @ ABUTMENT 2	332 SQ. FT.	

SCARIFICATION AND SHOTBLASTING OF BRIDGE DECK

CLASS II SURFACE PREPARATION

POLYMER CONCRETE (PC) OVERLAY

NOTES

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

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

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

FOR SCARIFYING BRIDGE DECK, SEE SPECIAL PROVISIONS.

FOR SHOT BLASTING BRIDGE DECK, SEE SPECIAL PROVISIONS.

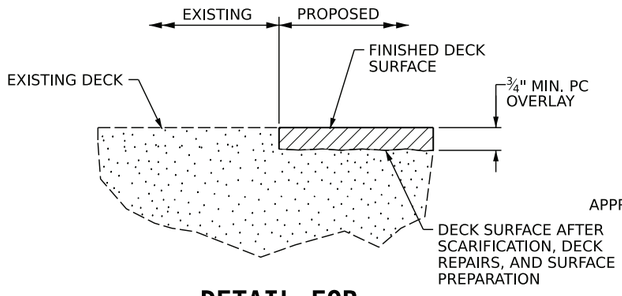
FOR CLASS II SURFACE PREPARATION, SEE SPECIAL PROVISIONS.

FOR PC (POLYMER CONCRETE) MATERIALS, SEE SPECIAL PROVISIONS.

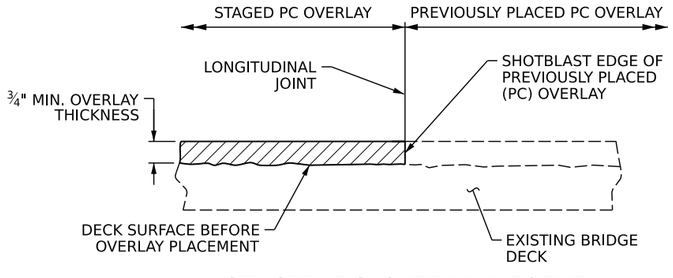
FOR PLACING AND FINISHING PC (POLYMER CONCRETE) OVERLAY, SEE SPECIAL PROVISIONS.

FOR GROOVING BRIDGE FLOORS, SEE SPECIAL PROVISIONS.

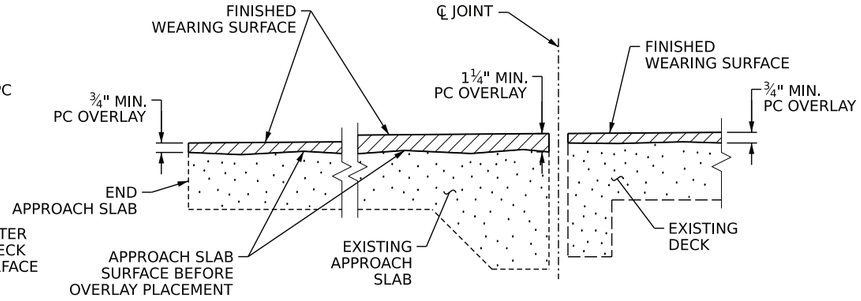
FOR SECTION A-A. SEE "FOAM JOINT SEAL DETAILS" SHEET.



DETAIL FOR POLYMER CONCRETE (PC) OVERLAY



STAGED PC OVERLAY JOINT



DETAIL FOR (PC) OVERLAY WEDGE

AFTER BRIDGE JACKING IS COMPLETED
PC OVERLAY OF APPROACH SLAB SHALL VARY FROM
1¼" MIN. THICKNESS AT THE BRIDGE JOINT TO ¾" MIN.
THICKNESS AT ROADWAY END TO FORM A WEDGE SHAPE

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

DocuSigned by:
AD5681D977484CC...

NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

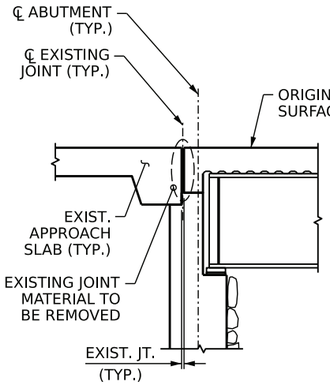
CONCRETE DECK REPAIRS

SPAN A
W/APPROACH SLABS

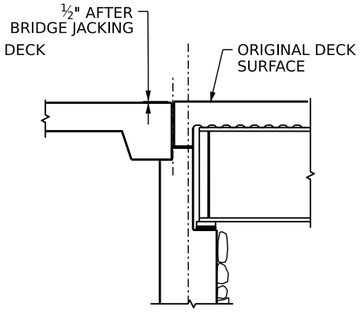
DRAWN BY : R.L.PUTEK DATE : 04/2025
CHECKED BY : T.M.SHERRILL DATE : 09/2025

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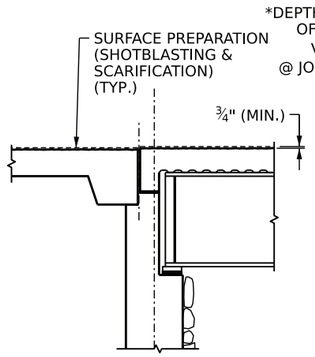
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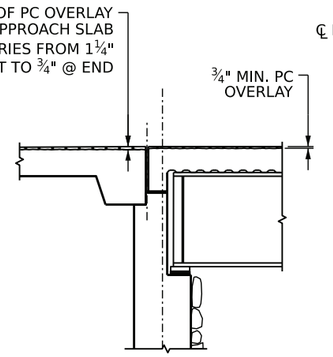
EXISTING JOINT



EXISTING JOINT AFTER BRIDGE JACKING

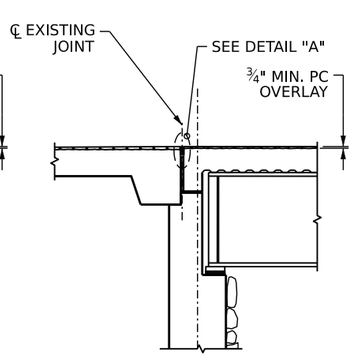


EXISTING JOINT AFTER SURFACE PREPARATION



* OVERLAY DEPTH VARIES AND IS WEDGE SHAPED DUE TO RAISING OF BRIDGE DECK

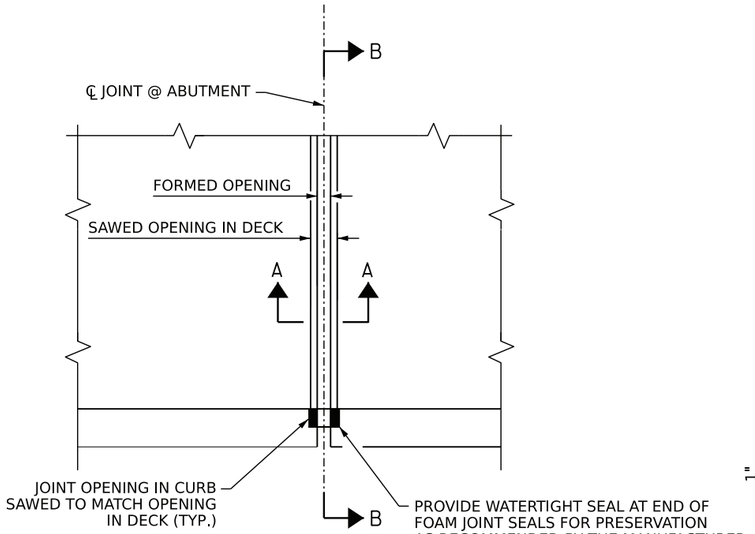
PROPOSED JOINT PRIOR TO SAWING



PROPOSED FOAM JOINT SEAL

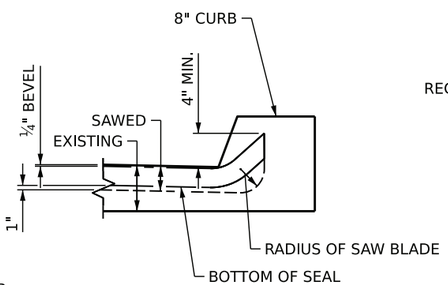
SECTION A-A

(NOT TO SCALE)



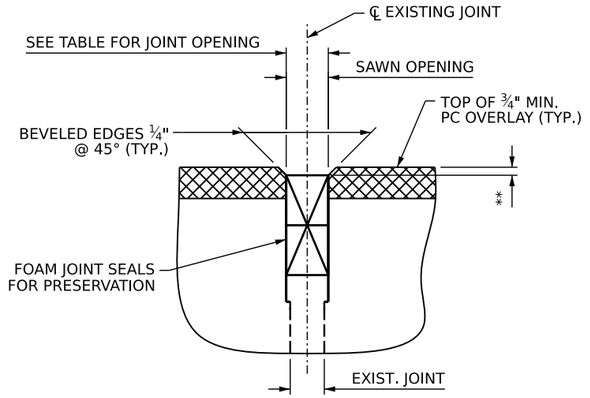
PLAN

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SECTION B-B

(NOT TO SCALE)



DETAIL "A"

(PROPOSED)

** FOAM JOINT SEALS FOR PRESERVATION SHALL BE RECESSED AS PER MANUFACTURER'S RECOMMENDATIONS.

JOINT SEAL DETAILS @ ABUTMENT 1 & 2

FOAM JOINT SEAL TO BE CUT, HEAT WELDED AND TURNED UP PARALLEL TO SLOPED FACE OF 8" CURB

NOTES

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

THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING JOINT OPENING PRIOR TO ORDERING JOINT SEAL MATERIAL. IF THE ACTUAL JOINT OPENING VARIES FROM THE OPENING INDICATED IN THE DETAILS BY MORE THAN ¼", NOTIFY THE ENGINEER.

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

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

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

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

THE INSTALLED FOAM JOINTS SHALL BE WATERTIGHT.

THE CONTRACTOR SHALL SAW CUT TO A NOMINAL DEPTH OF ½" BUT REINFORCING STEEL SHALL NOT BE DAMAGED. CONTRACTOR SHALL REMOVE SURFACE CONCRETE TO VERIFY THAT SAWCUT DEPTH WILL NOT DAMAGE EXISTING REINFORCING STEEL.

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

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

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

FOR FOAM JOINT SEALS FOR PRESERVATION, SEE SPECIAL PROVISIONS.

AS-BUILT SUMMARY OF QUANTITIES

ITEM	LOCATION	ESTIMATED (LIN. FT.)	ACTUAL (LIN. FT.)
FOAM JOINT SEALS FOR PRESERVATION	ABUTMENT 1	21.0 LIN.FT.	
	ABUTMENT 2	21.0 LIN.FT.	

SAWED JOINT OPENING TABLE

LOCATION	SKEW ANGLE	PERPENDICULAR JOINT OPENING AT 45°	PERPENDICULAR JOINT OPENING AT 60°	PERPENDICULAR JOINT OPENING AT 90°
ABUTMENT 1	90°-00'-00"	$1\frac{11}{16}$"	$1\frac{9}{16}$"	$1\frac{5}{16}$"
ABUTMENT 2	90°-00'-00"	$1\frac{11}{16}$"	$1\frac{9}{16}$"	$1\frac{5}{16}$"

DocuSigned by: Timothy M. Sherrill
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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

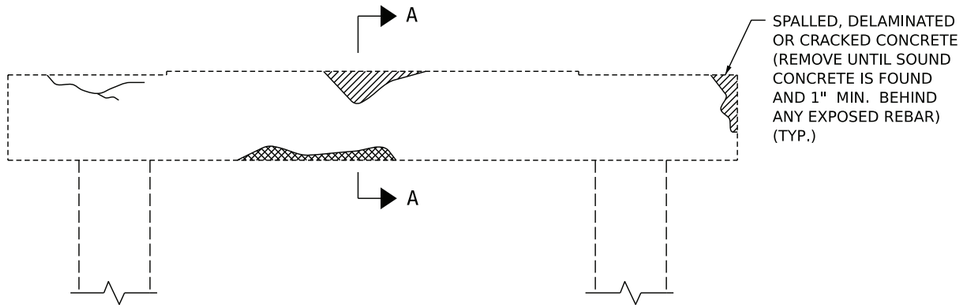
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

FOAM JOINT SEAL DETAILS

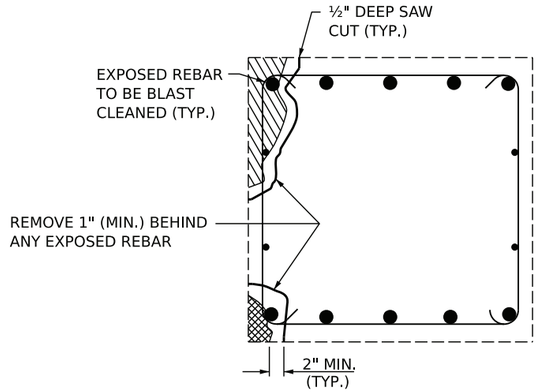
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CHECKED BY : T.M.SHERRILL DATE : 09/2025

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BENT CAP REPAIRS



SECTION A-A

CAP REPAIR

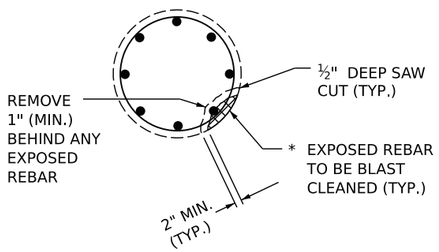
SPLICE LENGTH TABLE	
BAR SIZE	MIN. SPLICE LENGTH
#4	2'-5"
#5	3'-0"
#6	3'-7"
#7	4'-2"
#8	4'-9"
#9	5'-4"
#10	6'-0"
#11	6'-8"

REPAIR KEY

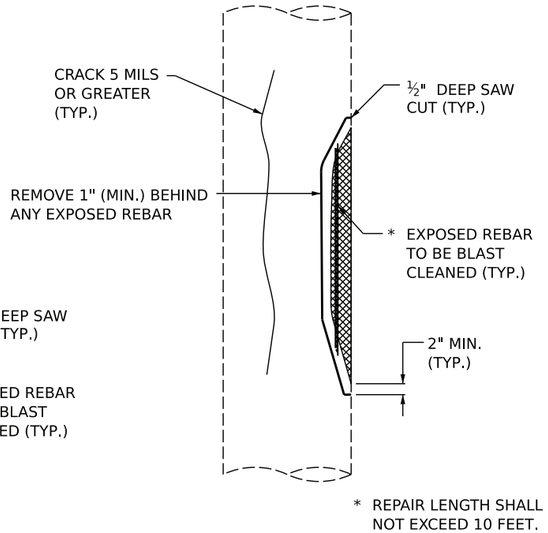
CONCRETE REPAIR AREA (FORM AND POUR)

SHOTCRETE REPAIR AREA

EPOXY RESIN INJECTION (ERI)



PLAN OF COLUMN



ELEVATION OF COLUMN

COLUMN 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 REPAIR AREA SHALL EXTEND A SUFFICIENT DISTANCE BEYOND THIS POINT TO DEVELOP A SPLICE LENGTH SPECIFIED IN THE TABLE ON THIS SHEET.

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.

THE CONTRACTOR MAY USE CONCRETE REPAIRS INSTEAD OF SHOTCRETE REPAIRS WITH THE APPROVAL OF THE ENGINEER.

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

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

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

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STATE OF NORTH CAROLINA
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RALEIGH

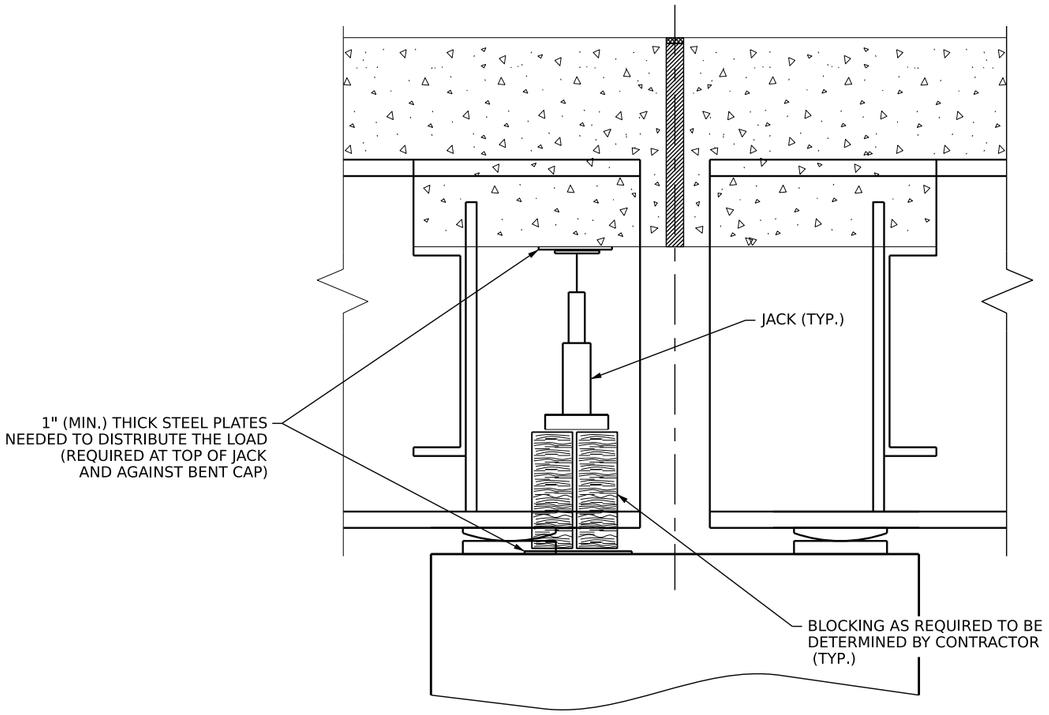
STANDARD

TYPICAL CAP AND COLUMN REPAIR DETAILS

DRAWN BY : R.L.PUTEK DATE : 05/2025
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BRIDGE JACKING NOTES

THIS DETAIL IS A GENERIC EXAMPLE OF A JACKING SCHEME AND DOES NOT NECESSARILY REPRESENT SPECIFIC CONDITIONS AT A PARTICULAR BRIDGE.

ACTUAL BRIDGE GEOMETRIES, DIMENSIONS, AND CONDITIONS MAY DIFFER FROM THIS DETAIL.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL INVESTIGATE THE BRIDGES ON THE PROJECT AND DEVELOP A JACKING PLAN TO BE SUBMITTED FOR REVIEW AND APPROVAL. SEE BRIDGE JACKING SPECIAL PROVISIONS.

PRIOR TO BRIDGE JACKING OPERATIONS, THE ENGINEER AND CONTRACTOR SHALL INSPECT THE STRUCTURE FOR ANY NOTABLE DEFECTS TO THE PRIMARY AND SECONDARY STRUCTURAL MEMBERS.

ALL NOTABLE DEFECTS SHALL BE DOCUMENTED AND REPORTED TO THE AREA BRIDGE MAINTENANCE ENGINEER PRIOR TO COMMENCEMENT OF ANY BRIDGE JACKING.

THE CONTRACTOR SHALL PROVIDE SAFE AND SUFFICIENT ACCESS TO ALL STRUCTURAL MEMBERS FOR THE ENGINEER TO ESTABLISH PROPER DOCUMENTATION.

PRIOR TO JACKING THE CONTRACTOR SHALL ENSURE THERE ARE NO OBSTACLES PREVENTING THE BEAM FROM BEING LIFTED.

THE BEAM SHALL BE LIFTED ENOUGH THAT THE BEAM CLEARS THE BEARINGS, PROVIDES ROOM FOR INSTALLATION OF THE NEOPRENE PADS BETWEEN THE SLAB TURN-DOWN AND ABUTMENT WALL AND THE NEW GIRDER BEARINGS, AND ALL LOAD IS SUPPORTED BY THE JACKS.

AFTER JACKING IS COMPLETE, THE CONTRACTOR SHALL PROVIDE FOR A METHOD TO REMOVE THE JACKS AND SUPPORT THE BEAM FOR DEAD AND LIVE LOAD DURING THE REPAIR OPERATIONS.

IF THE JACKS REMAIN IN PLACE DURING THE ENTIRE JACKING AND REPAIR OPERATION, THEY SHALL HAVE MECHANICAL LOCK OFF CAPABILITIES.

IF, DURING THE JACKING PROCESS, OR WHILE THE BEAM IS BEING SUPPORTED, THE BEAM SHIFTS FROM ITS ORIGINAL POSITION, ALL WORK SHALL CEASE AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

BEARINGS ADJACENT TO THE BEAM BEING JACKED MAY BE LOOSENED TO DECREASE THE RESISTANCE OF THE DECK SLAB DURING JACKING. ALL BEARINGS LOOSENED SHALL BE TIGHTENED BACK AFTER REPAIR OPERATIONS ARE COMPLETED AND THE JACKS AND BLOCKING HAVE BEEN REMOVED.

THE MAXIMUM DIFFERENTIAL BETWEEN ADJACENT BEAMS THAT ARE BEING JACKED IS ⅛".LOADS PROVIDED IN THE ``BRIDGE JACKING TABLE'' ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR'S ENGINEER SHALL DETERMINE THE EXPECTED LOADS TO BE LIFTED DURING THE BRIDGE JACKING OPERATIONS.

THE CONTRACTOR SHALL SUBMIT WORKING DRAWINGS AND CALCULATIONS OF THE JACKING PROCEDURE(S) SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF NORTH CAROLINA TO THE ENGINEER FOR APPROVAL PRIOR TO BRIDGE JACKING OPERATIONS.

FOR TYPE I OR TYPE II BRIDGE JACKING, SEE SPECIAL PROVISIONS.

FOR WORKING DRAWING SUBMITTALS, SEE SPECIAL PROVISIONS.

ANY STEEL THAT HAS BEEN WELDED TO THE EXISTING STRUCTURE SHALL REMAIN IN PLACE.

TYPE II BRIDGE JACKING SHALL BE DONE WITH A HYDRAULIC JACKING SYSTEM THAT LIFTS EACH BEAM ALONG THE ENTIRE SPAN END WITH EQUAL FORCE AND AT AN EQUAL RATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED TO EXISTING STRUCTURE BY BRIDGE JACKING OPERATIONS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PROJECT NO. 84013.LAJA.002

BURKE COUNTY

BRIDGE NO. 110378

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NORTH CAROLINA PROFESSIONAL SEAL 18565 ENGINEER TIMOTHY M. SHERRILL

01/28/2026

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE JACKING DETAILS

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STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	AASHTO (CURRENT)
LIVE LOAD	SEE PLANS
IMPACT ALLOWANCE	SEE AASHTO
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 AASHTO
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 2024 "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" ∅ SHEAR STUDS FOR THE ¾" ∅ STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - ⅞" ∅ STUDS FOR 4 - ¾" ∅ STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF ⅞" ∅ STUDS ALONG THE BEAM AS SHOWN FOR ¾" ∅ STUDS BASED ON THE RATIO OF 3 - ⅞"∅ STUDS FOR 4 - ¾" ∅ 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" 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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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

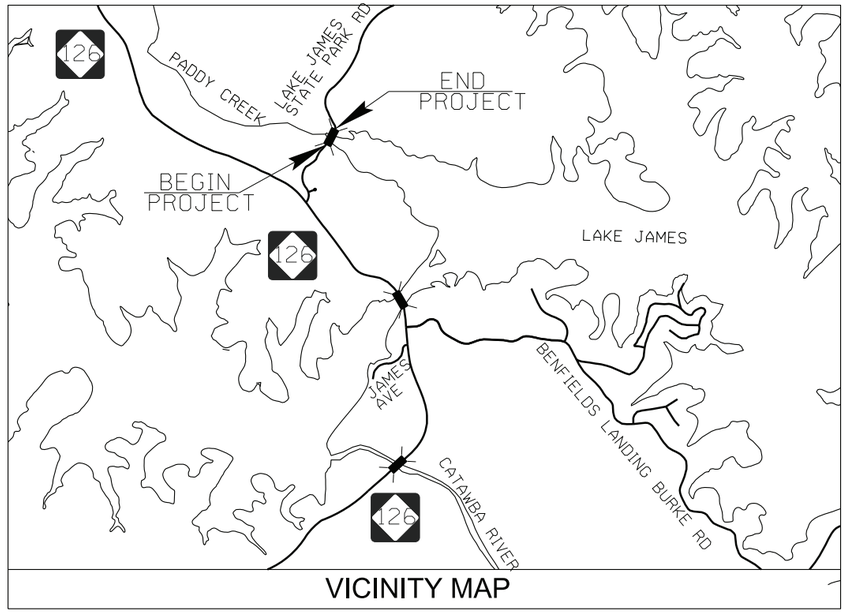
TRANSPORTATION MANAGEMENT PLAN

BURKE COUNTY

DIVISION 13



BRIDGE NO. 110378 SA 8972 (LAKE JAMES STATE PARK RD) OVER PADDY CREEK



VICINITY MAP



WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

JAY W. WOOLARD, PE
SENIOR TRANSPORTATION ENGINEER

ANDREW N. GOOD
TRANSPORTATION DESIGNER

NCDOT CONTACT:

TREY CARROLL, PE
NCDOT CONTACT

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND
TMP-2	GENERAL NOTES AND PHASING

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.03	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1145.01	BARRICADES

LEGEND

BARRICADE (TYPE III)

PORTABLE SIGN

CONE

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL
Signed by: J.W. Woolard, Jr. BBC02F49EE95C4EC...
AL 36262
ENGINEER
J. W. WOOLARD, JR.
5/28/2026

SHEET NO.
TMP-1

84013.LAJA.002

5/28/2026
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PROJ. REFERENCE NO.	SHEET NO.
84013.LAJA.002	TMP-2

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SA 8972 (LAKE JAMES STATE PARK ROAD)	MAR - APR: 7:00 A.M.-9:00 P.M. MONDAY THRU SUNDAY MAY - SEP: 7:00 A.M.-10:00 P.M. MONDAY THRU SUNDAY OCT: 7:00 A.M.-9:00 P.M. MONDAY THRU SUNDAY

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

SA 8972 (LAKE JAMES STATE PARK ROAD)

HOLIDAY

1) FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

2) FOR NEW YEAR'S, BETWEEN THE HOURS OF 7:00 A.M. DECEMBER 31ST TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 10:00 P.M. THE FOLLOWING TUESDAY.

3) FOR EASTER, BETWEEN THE HOURS OF 7:00 A.M. THURSDAY AND 10:00 P.M. MONDAY.

4) FOR MEMORIAL DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY TO 10:00 P.M. TUESDAY.

5) FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 7:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 10:00 P.M. THE DAY AFTER INDEPENDENCE DAY. IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY; THEN BETWEEN THE HOURS OF 7:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 10:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.

6) FOR LABOR DAY, BETWEEN THE HOURS OF 7:00 A.M. FRIDAY AND 10:00 P.M. TUESDAY.

7) FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 7:00 A.M. TUESDAY TO 10:00 P.M. MONDAY.

8) FOR CHRISTMAS, BETWEEN THE HOURS OF 7:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 10:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
SA 8972 (LAKE JAMES STATE PARK ROAD)	DEC - FEB: 7:00 A.M.-7:00 P.M. MONDAY THRU SUNDAY MAR - APR: 7:00 A.M.-9:00 P.M. MONDAY THRU SUNDAY MAY - SEP: 7:00 A.M.-10:00 P.M. MONDAY THRU SUNDAY OCT: 7:00 A.M.-9:00 P.M. MONDAY THRU SUNDAY NOV: 7:00 A.M.-8:00 P.M. MONDAY THRU SUNDAY	30 MINUTE BRIDGE JACKING OPERATION

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 FT OF AN OPEN TRAVEL LANE ON AN UNDIVIDED FACILITY, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRANSPORTATION MANAGEMENT PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

H) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

TRAFFIC PATTERN ALTERATIONS

I) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

J) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

SIGNING

K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

L) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRANSPORTATION MANAGEMENT PLANS.

M) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

TRAFFIC CONTROL DEVICES

N) PLACE TYPE III BARRICADES WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE ENTIRE ROADWAY.

MISCELLANEOUS

O) MAINTAIN VEHICULAR ACCESS TO ALL DRIVEWAYS DURING THE LIFE OF THE CONTRACT, UNLESS OTHERWISE NOTED IN THE PHASING OR DIRECTED BY THE ENGINEER. USE INCIDENTAL STONE WHEN NECESSARY.

PHASING

STEP 1:

PRIOR TO ANY WORK OPERATIONS, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON SA 8972 (LAKE JAMES STATE PARK RD) PER RSD 1101.01 SHEET 3.

STEP 2:

- USING RSD 1101.03, SHEET 8, TEMPORARILY CLOSE SA 8972 (LAKE JAMES STATE PARK ROAD) AND SIDEWALKS, PERFORM BRIDGE JACKING OPERATION, USING RESTRICTIONS IN GENERAL NOTE C. REPLACE EXISTING BRIGE BEARING PADS.
- REPEAT STEP UNTIL BRIDGE JACKING OPERATION IS COMPLETE.

STEP 3:

USING A FLAGGING OPERATION PER RSD 1101.02, SHEET 1, PERFORM THE FOLLOWING (HALF OF THE BRIDGE AT A TIME):

- PERFORM ABUTMENT SHOTCRETE AND CONCRETE REPAIRS,
- RAISE PEDESTRIAN WALKWAY,
- CLEAN AND REPAIR EXISTING GLULAM ARCHES AND CROSS BRACES,
- PREPARE BRIDGE DECK WITH SHOTBLASTING METHODS,
- OVERLAY BRIDGE DECK WITH POLYMER CONCRETE,
- REMOVE AND REPLACE EXISTING JOINT MATERIAL,
- GROOVE BRIDGE DECK.
- PLACE FINAL PAVEMENT MARKINGS AS SHOWN IN THE FINAL PAVEMENT MARKING PLAN.
- OPEN ALL TRAVEL LANES TO TRAFFIC AT THE END OF EACH WORK PERIOD

STEP 4:

- REMOVE ALL TRAFFIC CONTROL DEVICES. OPEN SA 8972 (LAKE JAMES STATE PARK RD) TO TRAFFIC.

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NORTH CAROLINA PROFESSIONAL ENGINEER J.W. WOOLARD, JR. SEAL 162
Signed by: J.W. Woolard, Jr. BBC02F49E99C4EC...
6/18/2026

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DIVISION OF HIGHWAYS • STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION • WORK ZONE TRAFFIC CONTROL

GENERAL NOTES AND PHASING

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TIP NO.	SHEET NO.
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
BURKE COUNTY

BRIDGE NO. 110378 SA 8972 (LAKE JAMES STATE PARK RD) OVER PADDY CREEK

84013.LAJA.002

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE & MULTILANE ROADWAYS

FINAL PAVEMENT MARKING SCHEDULE

SYMBOL	DESCRIPTION		PAY ITEM
P13	YELLOW DOUBLE CENTER	(4")	4810000000-E

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
BRIDGE DECKS	PAINT	NONE

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
D) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE DECKS PRIOR TO PLACING PAINT PAVEMENT MARKING MATERIAL.

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE AND SCHEDULE SHEET
PMP-2	PAVEMENT MARKING DETAIL

PLAN REVIEWED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT

JOSE MARTINEZ, P.E. SIGNING & DELINEATION REGIONAL ENGINEER

ASHLEY MATTHEWS, P.E. SIGNING & DELINEATION PROJECT DESIGN ENGINEER

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SIGNING AND DELINEATION UNIT

PLAN PREPARED BY:

JAY W. WOOLARD, P.E. SENIOR TRANSPORTATION ENGINEER

ANDREW N. GOOD TRANSPORTATION DESIGNER

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TIP NO.	SHEET NO.
84013.LAJA.002	PMP - 2

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PADDY CREEK

SA 8972 (LAKE JAMES STATE PARK RD)

BEGIN BRIDGE

END BRIDGE

BRIDGE #110378

10'

10'

10'

10'

P13

SA 8972 (LAKE JAMES STATE PARK RD)

PADDY CREEK

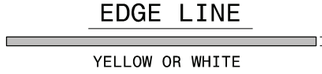
PAVEMENT MARKING DETAIL

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PROJECT REFERENCE NO.	SHEET NO.
84013.LAJA.002	PMP-3

CONTINUOUS LINES

EDGE LINE



LANE LINE



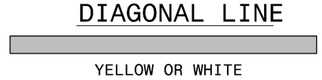
CENTER LINE



GORE LINE



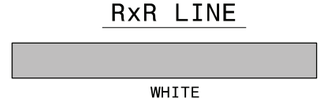
DIAGONAL LINE



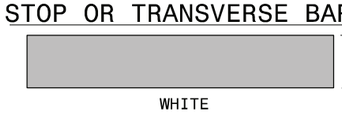
CROSSWALK LINE



RxR LINE

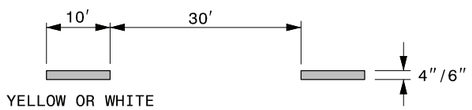


STOP OR TRANSVERSE BAR



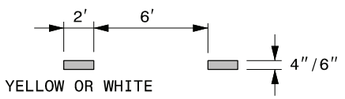
10′-30′/SP SKIP LINE

UNLESS OTHERWISED SHOWN, USE 10′-30′/SP SKIPS FOR SKIP LANE LINES AND SKIP CENTER LINES.



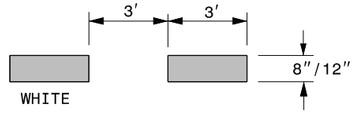
2′-6′/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 2′-6′/SP MINI-SKIPS FOR LANE LINE EXTENSIONS THROUGH INTERSECTIONS, EDGE LINE EXTENSIONS THROUGH INTERSECTIONS AND BICYCLE LANE EXTENSIONS.



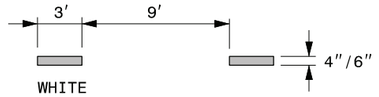
3′-3′/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 3′-3′/SP MINI-SKIPS FOR THE WHITE EDGE LINE ENTENSIONS AT ROUNDABOUTS.



3′-9′/SP MINI-SKIP LINE

UNLESS OTHERWISED SHOWN, USE 3′-9′/SP MINI-SKIPS FOR MINI-SKIP LANE LINES, LINE EXTENSIONS THROUGH TAPERS, AND MINI-SKIPS USED FOR BICYCLE LANE LINES.



GENERAL NOTES:

1- USE 6″ LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES AND OTHER ROUTES AS DIRECTED BY THE ENGINEER.

2- LANE LINES INDICATED AS "WIDE" ON THE ROADWAY STANDARD DRAWINGS SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

STATE OF
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

PAVEMENT MARKINGS

LINE TYPES AND OFFSETS

SHEET 1 OF 2

1205D01

NORTH CAROLINA PROFESSIONAL SEAL 042546 ENGINEER MATTHEW V. SPRINGER

Signed by: Matthew V Springer, PE
BC50F6EEB5844D3...

07/09/2026

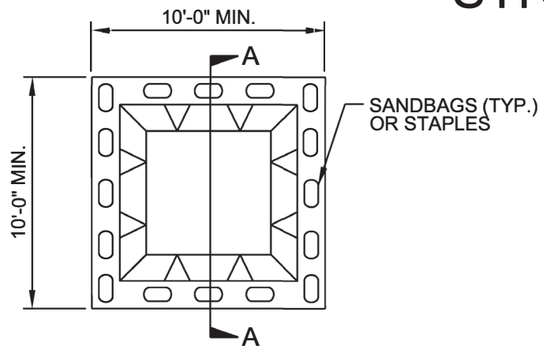
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SEE TITLE BLOCK

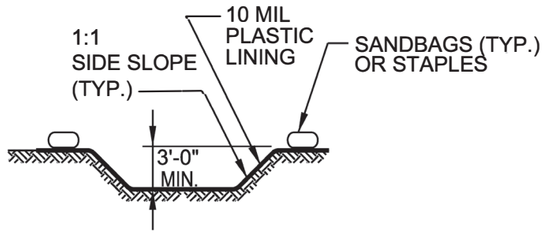
ORIGINAL BY: M.V. SPRINGER DATE: 2-15-24
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

PROJECT REFERENCE NO.	SHEET NO.
84013.LAJA.002	EC-1
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

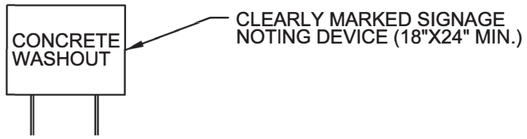
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN



SECTION A-A



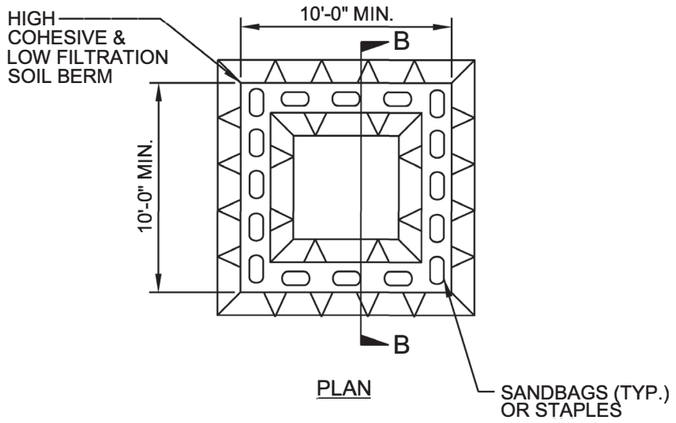
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

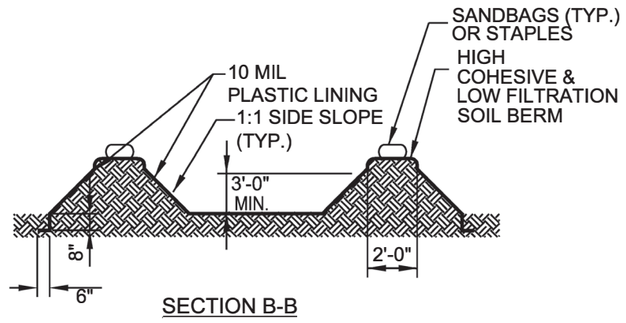
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

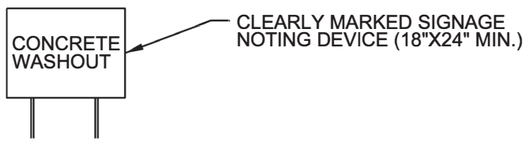
NOT TO SCALE



PLAN



SECTION B-B



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE