

DEKALB COUNTY COMMISSION

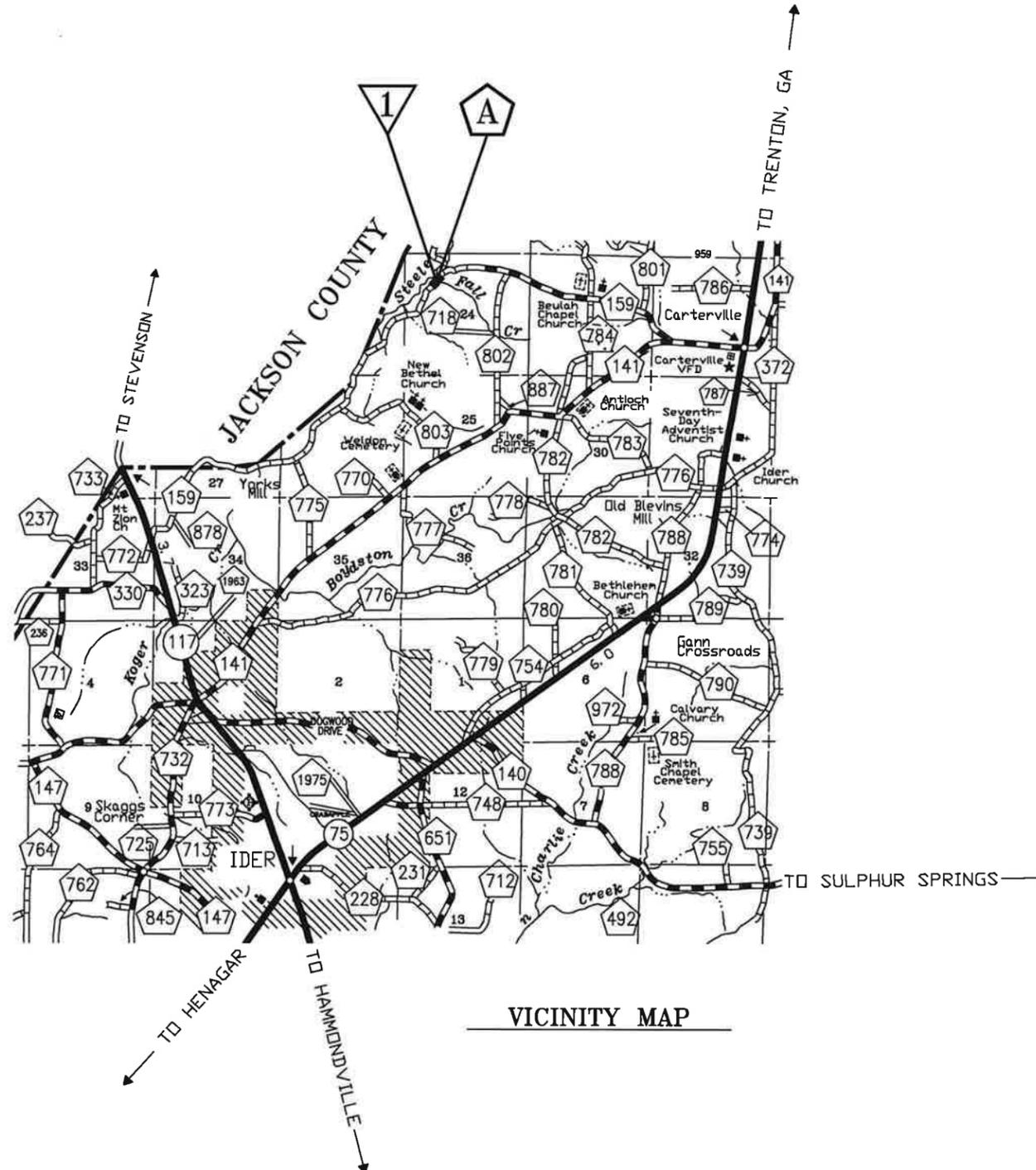
PLANS OF PROPOSED PROJECT NUMBER
RA-DCP-25-01-2026

BRIDGE REPLACEMENT ON COUNTY ROAD 159
OVER FALL CREEK



INDEX TO SHEETS:

1. PROJECT NOTES
2. SUMMARY OF QUANTITIES
3. EXISTING STRUCTURE LAYOUT / DEMOLITION PLAN
4. PROPOSED SUBSTRUCTURE LAYOUT
5. PROPOSED SUBSTRUCTURE CROSS SECTION VIEW
6. TRAFFIC CONTROL PLAN
7. CONTECH MODULAR BRIDGE DRAWINGS (9 SHEETS)



VICINITY MAP

REQUIRED BRIDGE:

1 28' ROLLED STEEL GIRDER MODULAR BRIDGE
SINGLE SPAN - 0° SKEW
BIN 22025

TOTAL EFFECT = 28.0 L.F.

IN-PLACE BRIDGE (REMOVE):

A BIN 14278
LENGTH = 28.0 L.F.

Ben Guttha
COUNTY ENGINEER

PROJECT NOTES

1. DEKALB COUNTY ALREADY HAS IN ITS POSSESSION THE COMPONENTS LISTED IN THE MODULAR BRIDGE DRAWINGS. CONTRACTOR WILL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL ANCHOR BOLTS WITH NUTS AND WASHER, REINFORCING STEEL (REBAR) AND CONCRETE FOR THE BRIDGE DECK. COST FOR ANCHOR BOLTS, WITH NUTS AND WASHER FOR EACH, SHALL BE INCLUDED IN THE BID FOR STEEL REINFORCEMENT FOR BRIDGE SUPERSTRUCTURE.
2. MODULAR COMPONENTS ARE ON THE ROAD DEPARTMENT YARD, ACROSS BRIARWOOD AVENUE FROM THE OFFICE LOCATED AT 1001 LEBANON ROAD SW., FORT PAYNE. CONTRACTOR WILL BE RESPONSIBLE FOR TRANSPORTING THE COMPONENTS FROM THE ROAD DEPARTMENT YARD TO THE BRIDGE SITE. LIFTING WEIGHTS ARE PROVIDED ON CONTECH BRIDGE SHEET NO. 3. COMPONENTS ARE SO PACKAGED THAT THEY CAN BE LIFTED TOGETHER AND PLACED ON A SINGLE TRACTOR TRAILER FLATBED. THERE IS ALSO ONE BOXED CRATE CONTAINING BEARING PADS AND BOLTS FOR BRIDGE COMPONENTS AND GUARDRAIL CONNECTIONS. COUNTY ROAD DEPARTMENT PERSONNEL AND EQUIPMENT WILL BE UTILIZED TO LOAD COMPONENTS ONTO CONTRACTOR'S PREFERRED METHOD OF TRANSPORTATION. CONTRACTOR WILL BE RESPONSIBLE FOR OFF-LOADING AND SETTING OF BRIDGE COMPONENTS ON BRIDGE SITE. COST FOR TRANSPORTATION, OFF-LOADING AND INSTALLATION OF ALL MODULAR COMPONENTS, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED IN THE BID FOR MOBILIZATION.
3. MINOR UNCLASSIFIED EXCAVATION WILL BE REQUIRED BY THE CONTRACTOR TO FACILITATE DEMOLITION OF EXISTING ABUTMENTS AND CONSTRUCTION OF NEW ABUTMENTS. EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF PROPERLY. COST SHALL BE A SUBSIDIARY OBLIGATION OF PAY ITEM FOR REMOVAL OF OLD BRIDGE.
4. ALL EXISTING BRIDGE COMPONENTS REMOVED UNDER THE DEMOLITION PLAN SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE SITE. ANY AND ALL TRANSPORTATION AND DISPOSAL COSTS SHALL BE A SUBSIDIARY OBLIGATION OF PAY ITEM FOR REMOVAL OF OLD BRIDGE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR AND TAKE ALL NECESSARY MEASURES TO PROTECT THE WATERWAY FROM ANY SEDIMENTATION DURING AND AFTER DEMOLITION OF EXISTING BRIDGE COMPONENTS AND EXCAVATION OF APPROACH ROADWAY. COSTS FOR INSTALLATION AND REMOVAL OF ANY AND ALL STRUCTURAL BMPs SHALL BE A SUBSIDIARY OBLIGATION OF PAY ITEM FOR REMOVAL OF OLD BRIDGE. ALL NECESSARY BMPs SHALL BE INSTALLED AND MAINTAINED TO THE SATISFACTION OF THE ENGINEER.
6. COUNTY ROAD DEPARTMENT WILL BE RESPONSIBLE FOR BORROW EXCAVATION TO RE-ESTABLISH APPROACH ROADWAY AFTER COMPLETION OF BRIDGE INSTALLATION BY CONTRACTOR. CONTRACTOR'S TRAFFIC CONTROL ITEMS SHALL REMAIN IN-PLACE FOR A MINIMUM OF THIRTY (30) WORKING DAYS, WITHOUT EXTRA COMPENSATION, AFTER COMPLETION AND ACCEPTANCE OF ALL DESIGNATED BRIDGE WORK, TO FACILITATE THE COMPLETION OF THE APPROACH ROADWAY BY COUNTY FORCES. AFTER STATED TIME, CONTRACTOR MAY REMOVE SAID TRAFFIC CONTROL ITEMS OR COUNTY MAY NEGOTIATE WITH THE CONTRACTOR FOR AN EXTENSION IN TIME AND ADDITIONAL COMPENSATION FOR SAID TRAFFIC CONTROL ITEMS TO REMAIN IN-PLACE FOR AN ADDITIONAL SPECIFIED TIME.
7. ALL WORK SHALL BE IN ACCORDANCE WITH ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2026 EDITION, EVEN THOUGH ALDOT HAS NO INVOLVEMENT WITH THIS PROJECT.

DEKALB COUNTY ENGINEERING DEPARTMENT	DRAWN BY: BPL
PROJECT DESCRIPTION: RA-DCP-25-01-2026	CHECKED BY: BPL
BRIDGE REPLACEMENT ON COUNTY ROAD 159 OVER FALL CREEK	SCALE: N/A
CONSTRUCTION OF ABUTMENTS & INSTALLATION OF PREFABRICATED MODULAR STEEL BRIDGE SYSTEM	DATE: 03/04/2026

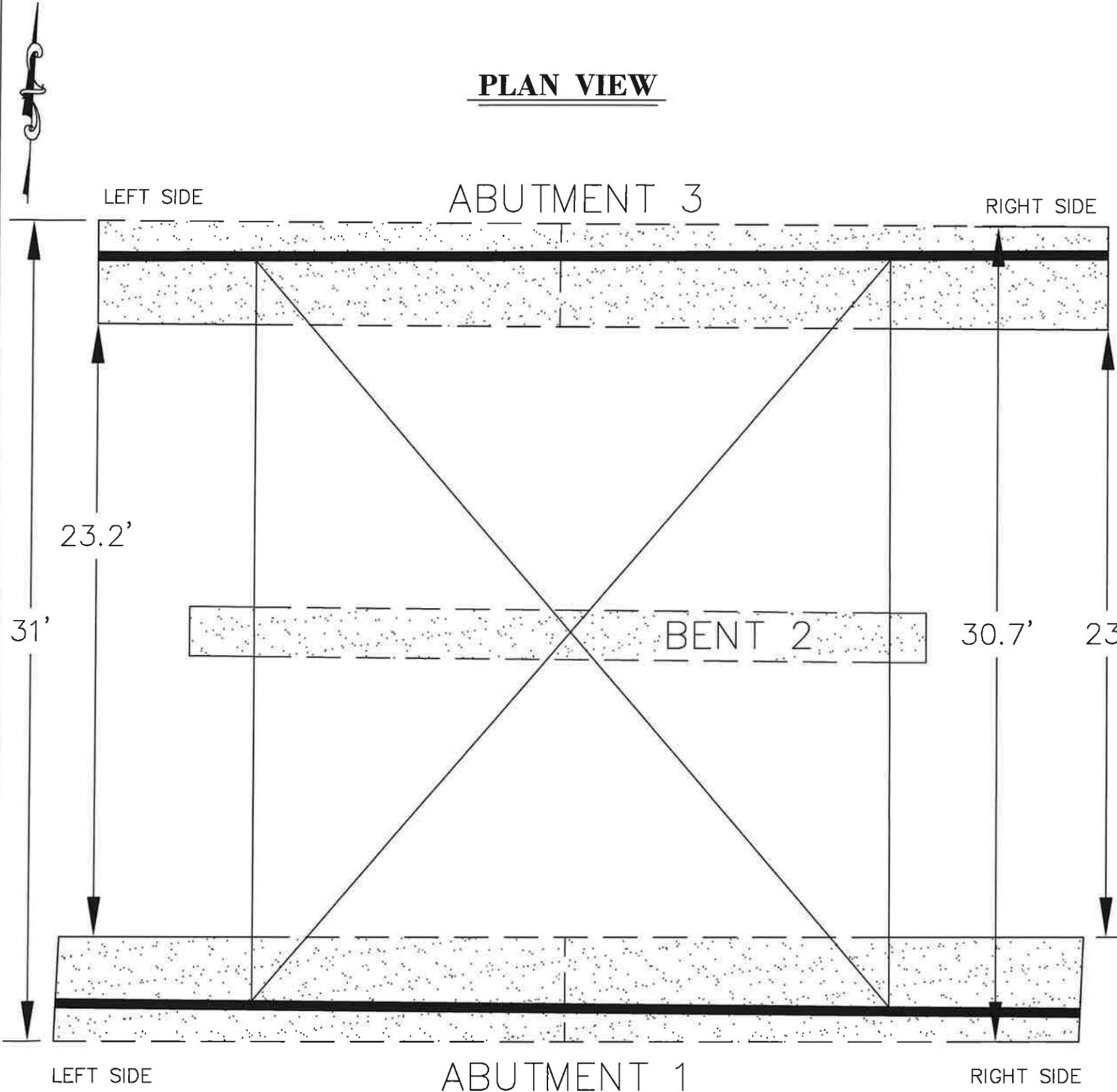
SUMMARY OF QUANTITIES

ESTIMATED QUANTITY	UNIT	ITEM NO.	DESCRIPTION
1	LUMP SUM	206A	REMOVAL OF OLD BRIDGE, 28 LINEAR FEET
1328	POUND	502A	STEEL REINFORCEMENT
1	LUMP SUM	502B	STEEL REINFORCEMENT FOR BRIDGE SUPERSTRUCTURE, 3142 POUNDS
13	CUBIC YARD	510A	BRIDGE SUBSTRUCTURE CONCRETE
1	LUMP SUM	510C	BRIDGE CONCRETE SUPERSTRUCTURE, 13 CUBIC YARDS
1	LUMP SUM	600A	MOBILIZATION
88	SQ. FT.	740B	CONSTRUCTION SIGNS
8	EACH	740F	TYPE III BARRICADES
6	EACH	740I	WARNING LIGHTS TYPE B (DETACHABLE HEAD)

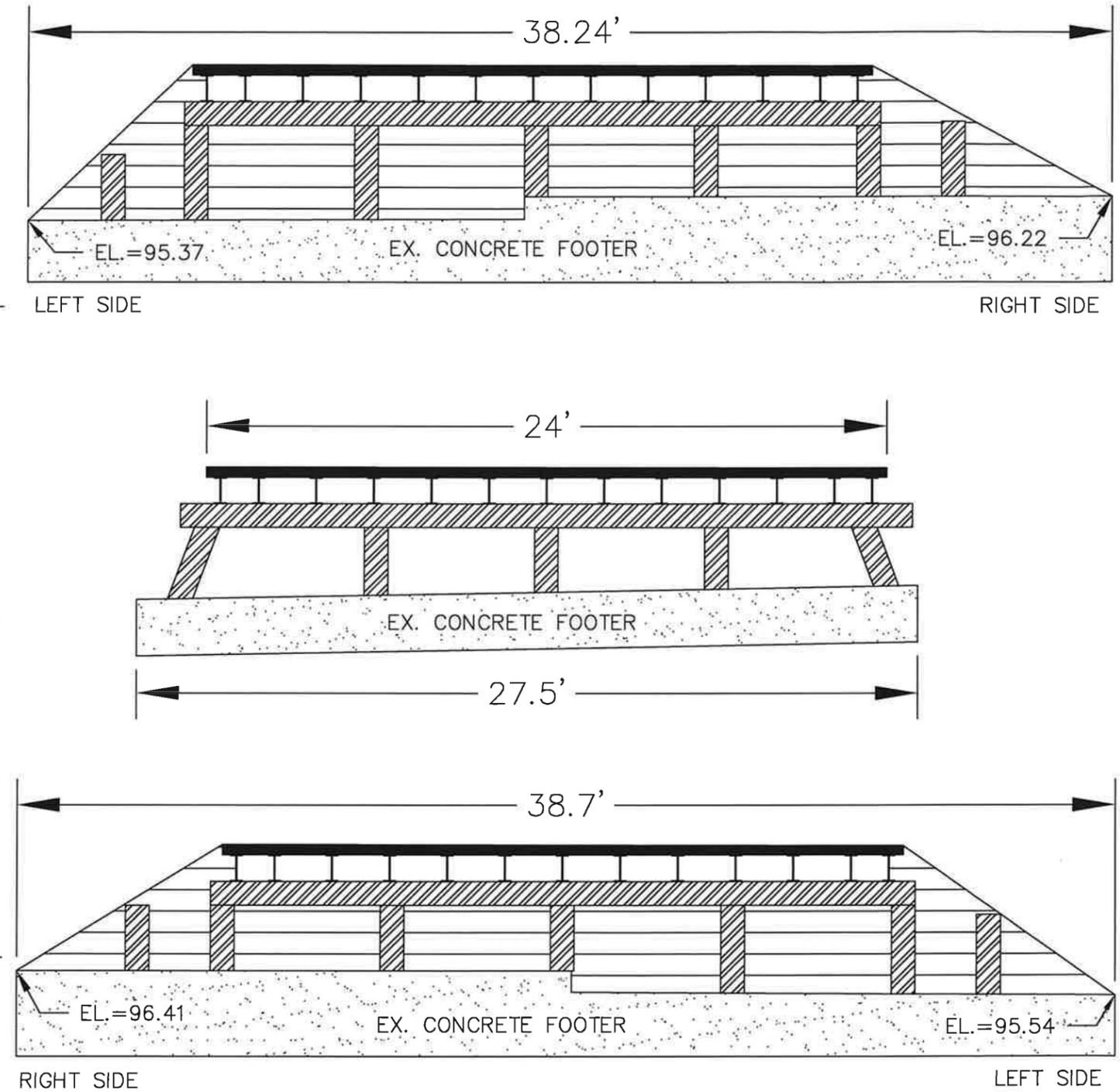
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CONSTRUCTION OF ABUTMENTS & INSTALLATION OF PREFABRICATED MODULAR STEEL BRIDGE SYSTEM	DATE: 03/04/2026

EXISTING STRUCTURE LAYOUT / DEMOLITION PLAN

PLAN VIEW



ELEVATION VIEW



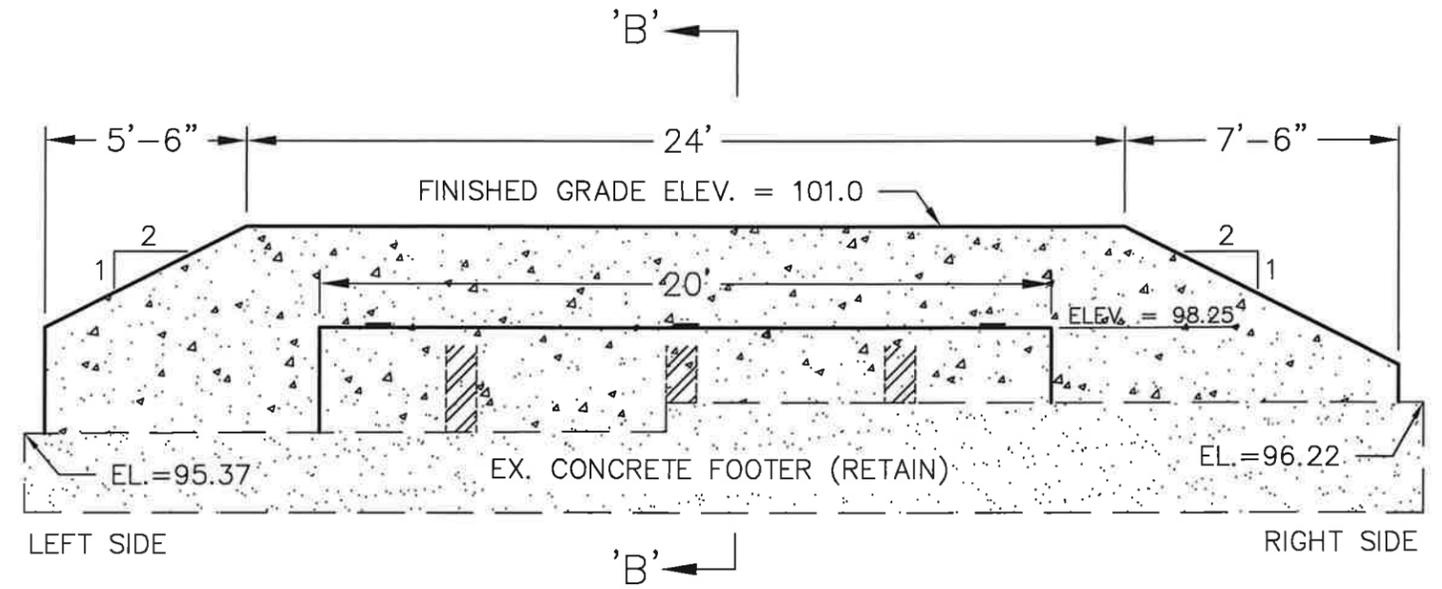
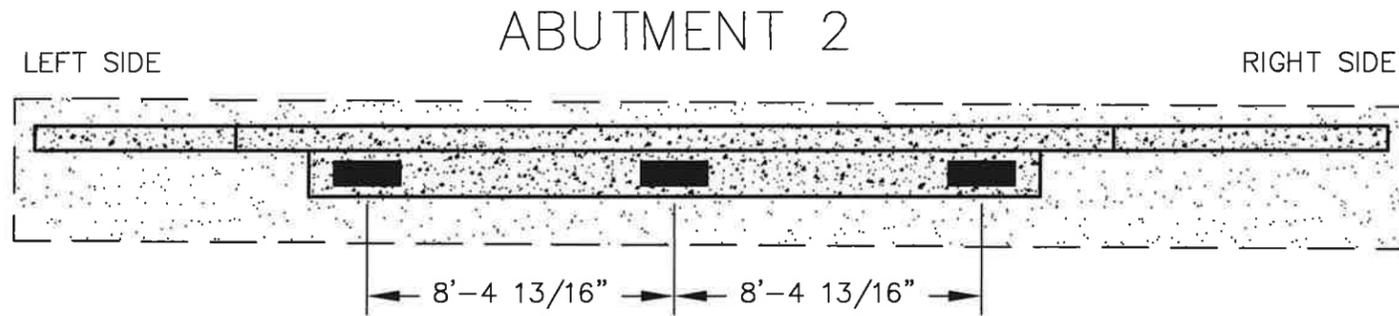
DEMOLITION PLAN (ITEMS TO BE REMOVED):

- 1) ALL PORTIONS OF THE DECK (CORRUGATED METAL DECKING WITH ASPHALT) & SUPERSTRUCTURE (STEEL BEAMS).
- 2) ABUTMENTS: TIMBER BACKWALL, STEEL PILE CAP, ALL VERTICAL PILES SHALL BE CUTOFF FLUSH WITH THE TOP OF THE EXISTING CONCRETE FOOTER, WITH THE EXCEPTION OF THE THREE (3) MOST INTERIOR PILES, WHICH SHALL BE RETAINED AND CUTOFF AT AN APPROXIMATE ELEVATION OF 97.75, TO BE ENCASED WITHIN THE NEW CONCRETE BACKWALL.
- 3) BENT: ALL ELEMENTS SHALL BE REMOVED.

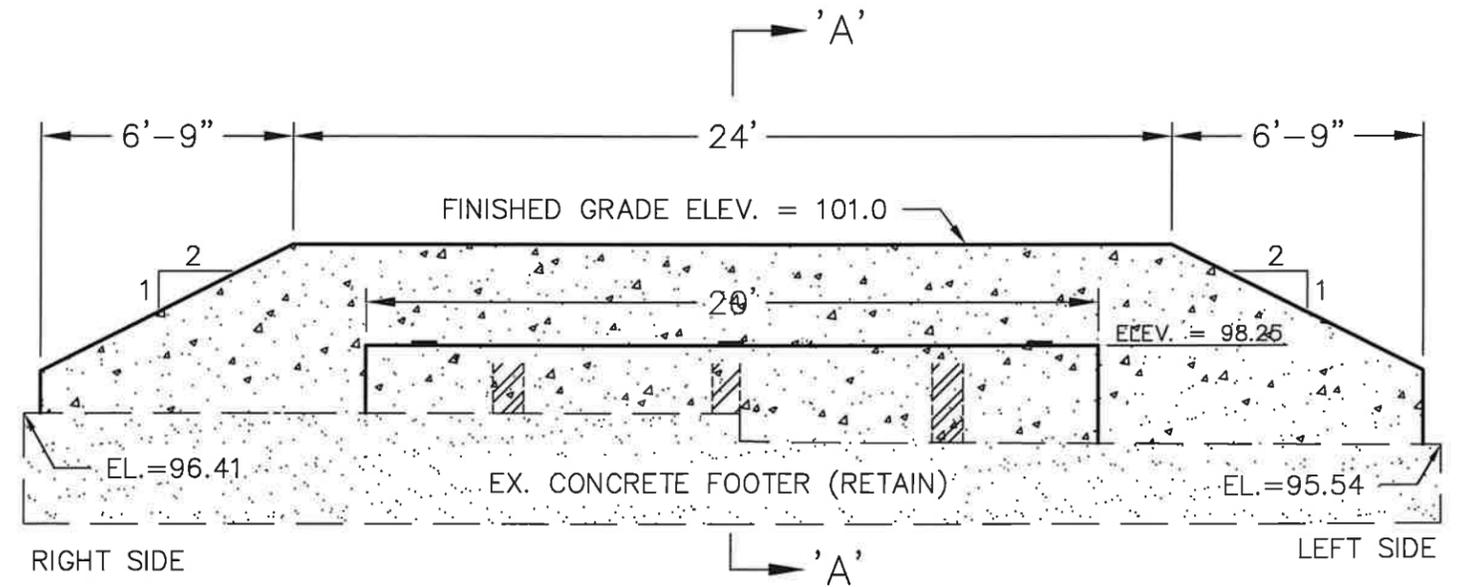
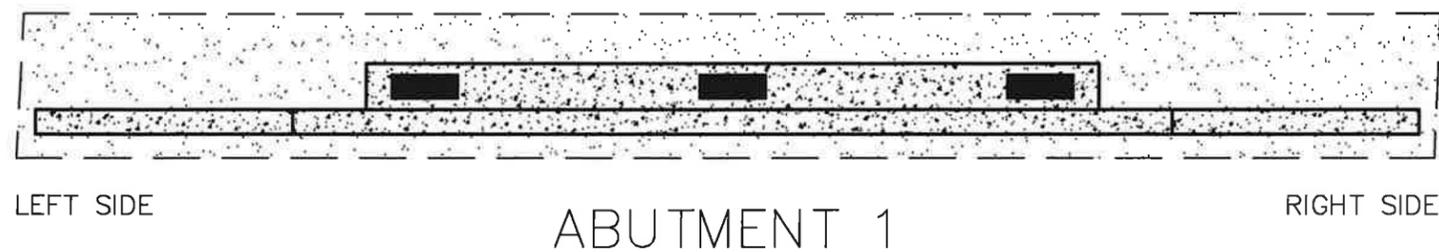
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PROJECT DESCRIPTION: RA-DCP-25-01-2026	CHECKED BY: BPL
BRIDGE REPLACEMENT ON COUNTY ROAD 159 OVER FALL CREEK	SCALE: 1" = 5'
CONSTRUCTION OF ABUTMENTS & INSTALLATION OF PREFABRICATED MODULAR STEEL BRIDGE SYSTEM	DATE: 03/04/2026

PROPOSED SUBSTRUCTURE LAYOUT

PLAN VIEW



ELEVATION VIEW



T.B.M.: MAGNAIL LOCATED 18 FT. SOUTH OF AND 2.5' WEST OF THE SOUTHWEST CORNER OF THE EXISTING BRIDGE DECK, MEASURED PARALLEL WITH THE WESTERN EDGE OF THE DECK. ELEV. = 100.0.

DEKALB COUNTY ENGINEERING DEPARTMENT

PROJECT DESCRIPTION: RA-DCP-25-01-2026

BRIDGE REPLACEMENT ON COUNTY ROAD 159
OVER FALL CREEK
CONSTRUCTION OF ABUTMENTS & INSTALLATION OF
PREFABRICATED MODULAR STEEL BRIDGE SYSTEM

DRAWN BY: BPL

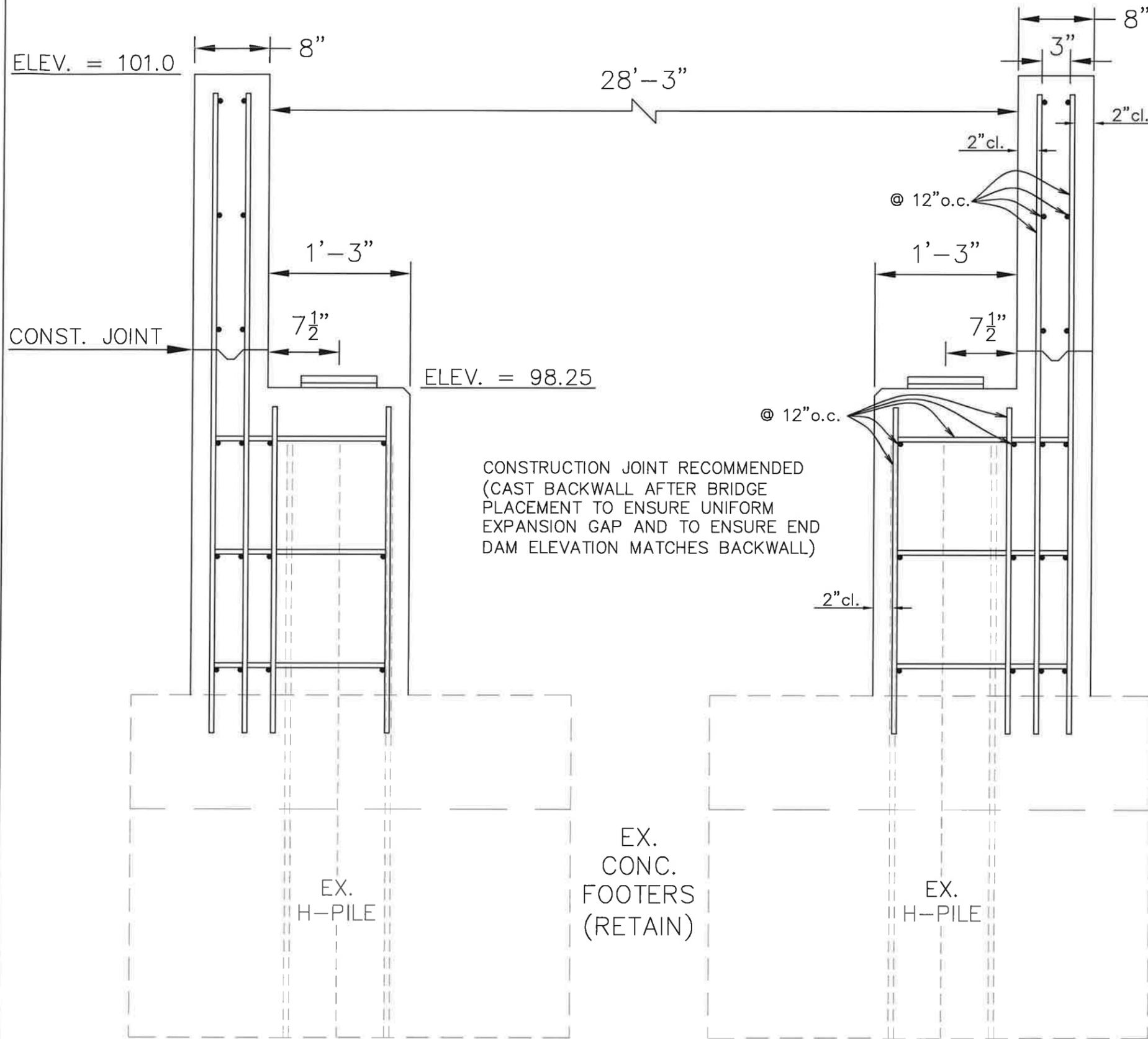
CHECKED BY: BPL

SCALE: 1" = 5'

DATE: 03/04/2026

PROPOSED SUBSTRUCTURE CROSS SECTION VIEW

T.B.M.: MAGNAIL LOCATED 18 FT. SOUTH OF AND 2.5' WEST OF THE SOUTHWEST CORNER OF THE EXISTING BRIDGE DECK, MEASURED PARALLEL WITH THE WESTERN EDGE OF THE DECK. ELEV. = 100.0.



CONSTRUCTION JOINT RECOMMENDED
(CAST BACKWALL AFTER BRIDGE
PLACEMENT TO ENSURE UNIFORM
EXPANSION GAP AND TO ENSURE END
DAM ELEVATION MATCHES BACKWALL)

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2026 EDITION.
2. ALL SUBSTRUCTURE CONCRETE SHALL BE CLASS B, 4,000 PSI.
3. REINFORCING STEEL SHALL BE DEFORMED BARS #4, GRADE 60. VERTICAL BARS SHALL BE EPOXY GROUDED IN DRILLED HOLES, A MINIMUM OF FOUR (4) INCHES DEEP, INTO THE EXISTING CONCRETE FOOTER. ALL REINFORCING STEEL SHALL HAVE A MINIMUM OF TWO (2) INCHES OF CONCRETE COVER. HORIZONTAL BARS SHALL PASS THROUGH THE EXISTING H-PILE WHERE NECESSARY.
3. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE A 3/4 INCH, 45 DEGREE CHAMFER.
4. ANCHOR BOLTS SHALL BE 1 1/4" Ø GALVANIZED ASTM F1554 GRADE 105, WITH (2) NUTS AND (1) WASHER EACH. EACH BOLT SHALL BE EMBEDDED A MINIMUM OF 12 INCHES INTO CONCRETE ABUTMENTS AND SHALL PROTRUDE OUT 4 1/2 INCHES PER CONTECH DRAWING SHEET NO. 3. ANCHOR BOLTS MAY BE CAST IN PLACE OR EPOXY GROUDED IN DRILLED HOLES. ANCHOR BOLTS ARE NOT PROVIDED BY CONTECH.
5. THE LAYOUT OF ABUTMENT 1 ('A') IS IDENTICAL TO AND MIRRORRED TO ABUTMENT 2 ('B').
6. CONCRETE DECK MINIMUM MATERIAL REQUIREMENTS ARE SHOWN ON CONTECH DRAWING SHEET NO. 2, ALONG WITH REINFORCING STEEL LAYOUT ON SHEET NO. 9. PAY ITEMS FOR DECK MATERIALS SHALL BE PAID AS LUMP SUMS UNDER PAY ITEMS 502B & 510C.

ABUTMENT 1
SECTION 'A'

ABUTMENT 2
SECTION 'B'

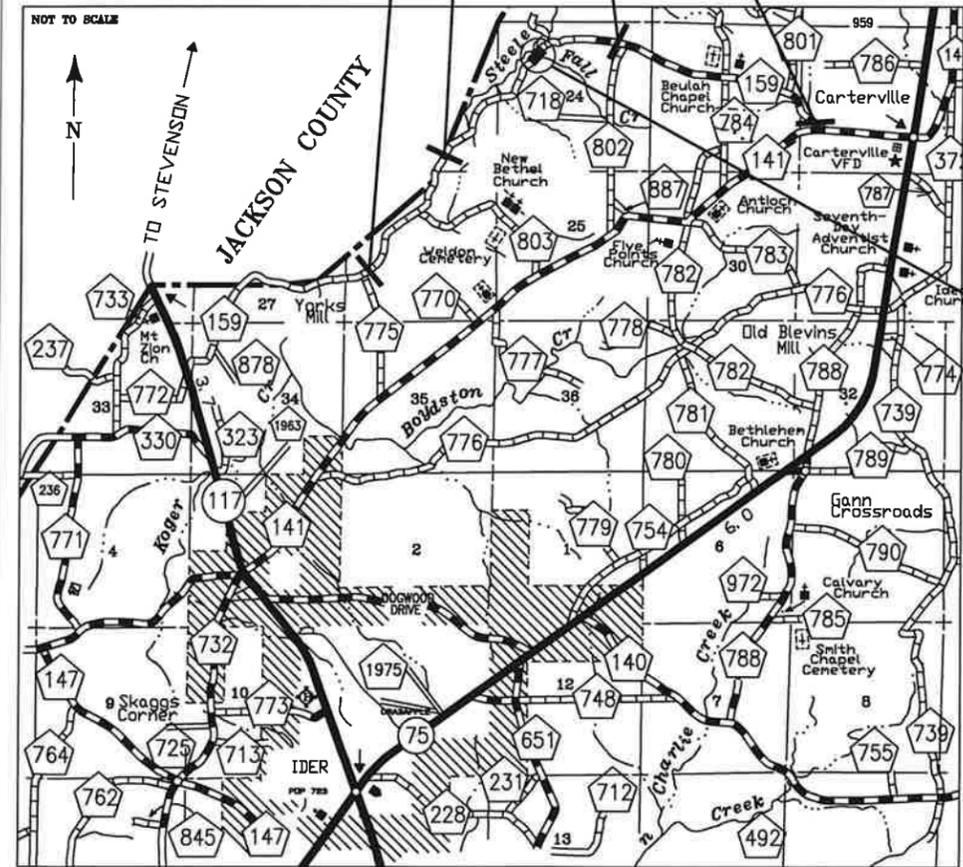
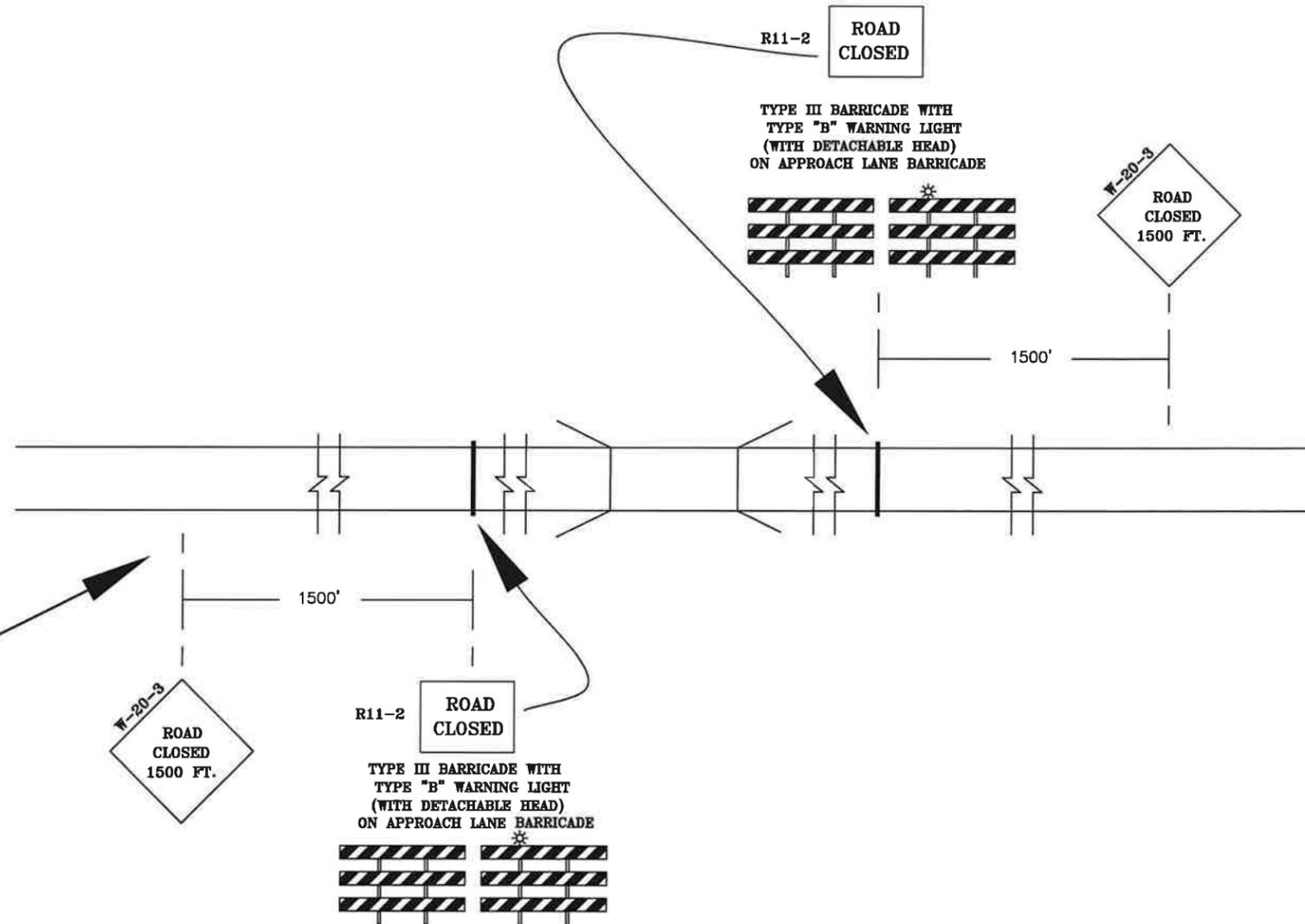
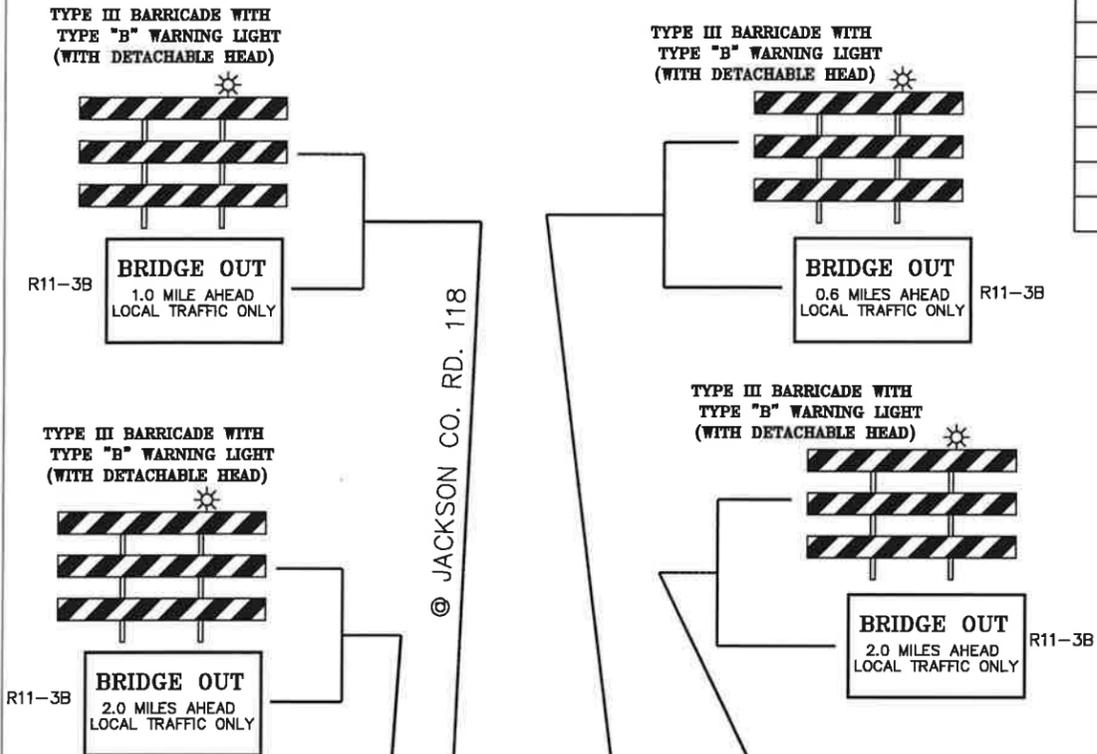
DEKALB COUNTY ENGINEERING DEPARTMENT	DRAWN BY: BPL
PROJECT DESCRIPTION: RA-DCP-25-01-2026	CHECKED BY: BPL
BRIDGE REPLACEMENT ON COUNTY ROAD 159 OVER FALL CREEK	SCALE: 1" = 1'
CONSTRUCTION OF ABUTMENTS & INSTALLATION OF PREFABRICATED MODULAR STEEL BRIDGE SYSTEM	DATE: 03/04/2026

TRAFFIC CONTROL PLAN

REQUIRED CONSTRUCTION SIGNS						
DESCRIPTION	740-B CONST. SIGNS		SIZE	MOUNT	M.U.T.C.D NUMBER	STD. DWG. NUMBER
	NO.	SQ. FT.				
BRIDGE OUT 0.6 MILES AHEAD	1	12.5	60" x 30"	BARR.	R11-3B	SHS-3
BRIDGE OUT 1.0 MILES AHEAD	1	12.5	60" x 30"	BARR.	R11-3B	SHS-3
BRIDGE OUT 2.0 MILES AHEAD	2	25.0	60" x 30"	BARR.	R11-3B	SHS-3
ROAD CLOSED	2	20.0	48" x 30"	BARR.	R11-2	SHS-3
ROAD CLOSED 1500 FEET	2	18.0	36" x 36"	POST	W20-3	SHS-11
TOTAL		88				

SUMMARY OF REQUIRED CONSTRUCTION SIGNS & TRAFFIC CONTROL DEVICES				
ITEM NO.	DESCRIPTION	UNIT	TOTAL	SPEC. DWGS.
740B-000	CONSTRUCTION SIGNS	SQ. FT.	88	
740F-002	TYPE III BARRICADES	EACH	8	B-107-2
740I-005	WARNING LIGHTS TYPE B (DETACHABLE HEAD)	EACH	6	

SLOPE OF STRIPES ON BARRICADES SHALL BE IN ACCORDANCE WITH SECTION 6F.60 OF THE M.U.T.C.D. AND ALDOT DRAWING B-107-2.



DEKALB COUNTY ENGINEERING DEPARTMENT	DRAWN BY: BPL
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BRIDGE REPLACEMENT ON COUNTY ROAD 159	SCALE: N/A
CONSTRUCTION OF ABUTMENTS & INSTALLATION OF PREFABRICATED MODULAR STEEL BRIDGE SYSTEM	DATE: 03/04/2026

28'-0" X 18'-0"

CR 159 BRIDGE REPLACEMENT

DeKALB COUNTY, AL

APPROVED



I:\MERLIN\PROJECTS\ACTIVE\700305-10-BIG R MODULAR ROLLED GIRDER\DRAWINGS\FABRICATION\700305-010-REV 0.DWG 9/12/2025 10:30 AM

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MARK	DATE	REVISION DESCRIPTION	BY
0	9/10/2025	RELEASED FOR FABRICATION	DBA

CONTECH
ENGINEERED SOLUTIONS LLC
A QUIKRETE COMPANY
4021 Gault Ave S. Fort Payne, AL 35967
800-328-2047 320-345-9126 320-566-3148 FAX

BIG R
CONTECH
FABRICATION
DRAWING

28'-0" X 18'-0"
CR 159 BRIDGE REPLACEMENT
ROLLED GIRDER - SITE-SPECIFIC MODULAR
DeKALB COUNTY, AL

PROJECT No: 700305	SEG No: 010	DATE: 8/27/2025
DESIGNED: DBA	DRAWN: DBA	APPROVED: BAH
SHEET NO: 1		OF 9

GENERAL NOTES

1. CONTECH ENGINEERED SOLUTIONS IS RESPONSIBLE FOR THE DESIGN AND SHOP FABRICATION OF THE BRIDGE STRUCTURE ONLY. ALL MEANS, METHODS, AND EQUIPMENT USED FOR FIELD ASSEMBLY AND INSTALLATION OF THE BRIDGE STRUCTURE, INCLUDING PREPARATION OR REVIEW AND APPROVAL OF PROJECT SPECIFIC ERECTION PLANS, ARE OUTSIDE OF CONTECH'S RESPONSIBILITY.
2. DESIGN IS IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 10th EDITION 2024
3. MATERIALS (UNLESS NOTED OTHERWISE):
 - a. STRUCTURAL STEEL: ASTM A588 WEATHERING STEEL
 - b. STRUCTURAL BOLTS: ASTM F3125 GRADE A325 TYPE 3
 - c. ELASTOMERIC PADS: GRADE 4, 60 DUROMETER
 - d. BRIDGE RAIL/CURB: AASHTO M180 TYP I OR II GALV.
 - e. BRIDGE RAIL BOLTS: AASHTO M180 GALV.
4. DESIGN BASED ON LOAD COMBINATIONS OF THE FOLLOWING LOADS:
 - a. BRIDGE DEAD LOAD
 - b. FUTURE WEARING SURFACE OF 25 PSF
 - c. VEHICLE LIVE LOAD:
 - DESIGN VEHICLE: HL-93, MAX ADTT = 226, LL DEFLECTION LIMIT = L/500
 - d. WIND LOADING PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 3.8:
 - WIND SPEED = 115 MPH
 - WIND EXPOSURE CATEGORY = C
 - MAX HEIGHT OF STRUCTURE = 33 FT
 - e. SEISMIC LOADING PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 3.10. TRANSVERSE LOADS CALCULATED USING THE TRANSVERSE PERIOD OF THE BRIDGE AND LONGITUDINAL LOADS CALCULATED USING A PERIOD OF ZERO. A RESPONSE MODIFICATION FACTOR OF 1.0 IS USED FOR THE CALCULATION OF BEARING REACTIONS. IT SHALL BE THE RESPONSIBILITY OF THE FOUNDATION ENGINEER TO DETERMINE THE FORCES USED FOR THE FOUNDATION DESIGN. SEISMIC PARAMETERS USED ARE AS FOLLOWS:
 - SITE CLASS: D
 - LATITUDE = 34.7666
 - LONGITUDE = -85.6479
 - TRANSVERSE PERIOD OF BRIDGE = $T_m = 0.009$ SEC
5. BRIDGE RAIL DESIGNED FOR TL-1 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS APPENDIX A13.2 (RAIL HAS NOT BEEN CRASH TESTED)
6. BRIDGE STRUCTURE SHALL BE SHOP FABRICATED IN ACCORDANCE WITH AWS D1.5.
7. ALL SHOP WELDING SHALL USE THE GAS METAL ARC WELDING OR FLUX CORED ARC WELDING PROCESS
8. CLEANING: ALL EXPOSED SURFACES OF STEEL TO BE CLEANED IN ACCORDANCE WITH STEEL STRUCTURES PAINTING COUNCIL SURFACE PREPARATION SPECIFICATIONS NO. 6, SSPC-SP6 COMMERCIAL BLAST CLEANING. EXPOSED SURFACES OF STEEL SHALL BE DEFINED AS THOSE SURFACES SEEN FROM THE DECK OR FROM THE OUTSIDE AND BOTTOM OF THE STRUCTURE. ALL OTHER SURFACES TO HAVE STANDARD MILL FINISH.
9. ALL STRUCTURAL BOLTED CONNECTIONS ARE TO BE PRETENSIONED CONNECTIONS. ALL BOLTS ARE TO BE PRETENSIONED PER THE REQUIREMENTS OF SECTION 8.2 OF THE SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS BY RCSC.
10. ALL FIELD INSTALLED BOLTS, NUTS AND WASHERS SHALL BE FURNISHED IN THE AMOUNT OF 5% IN EXCESS OF THE NUMBER REQUIRED FOR EACH SIZE AND LENGTH. IF FIELD INSTALLED BOLTS DO NOT SMOOTHLY ENGAGE UP TO SNUG-TIGHT, THERE MAY BE AN OBSTRUCTION WITHIN THE THREADS, THE BOLTS SHOULD BE REMOVED, THE THREADS ON THE BOLT AND NUT CLEANED AND RETAPPED IF NECESSARY TO ALLOW SMOOTH INSTALLATION OF THE BOLT.
11. MAINTENANCE NOTE: CONTECH ENGINEERED SOLUTIONS RECOMMENDS NOT APPLYING DE-ICING OR DUST PROHIBITIVE CHEMICALS OR SALTS TO ANY PART OF THE BRIDGE STRUCTURE. IF DE-ICING OR DUST PROHIBITIVE CHEMICALS OR SALTS ARE APPLIED TO ANY PART OF THE BRIDGE STRUCTURE, CONTECH ENGINEERED SOLUTIONS WILL NOT BE RESPONSIBLE FOR ANY RESULTANT ACCELERATED CORROSION.
12. SURFACE WATER DRAINAGE OFF OF THE BRIDGE DECK IS NOT THE RESPONSIBILITY OF CONTECH ENGINEERED SOLUTIONS. IF DECK DRAINS OR ANY OTHER MODIFICATIONS TO THE DECK SYSTEM ARE NEEDED FOR DECK DRAINAGE, THEY MAY BE ADDED, HOWEVER THE DETAILS MUST BE APPROVED BY CONTECH ENGINEERED SOLUTIONS PRIOR TO THE MODIFICATIONS BEING MADE.

CONCRETE DECK NOTES:

1. CONTECH ENGINEERED SOLUTIONS IS RESPONSIBLE FOR THE STRUCTURAL DESIGN OF THE CONCRETE DECK. ALL ITEMS RELATED TO MATERIAL SUPPLY, TESTING, AND INSTALLATION, INCLUDING REVIEW AND APPROVAL OF MIX DESIGNS AND REINFORCING SHOP PLANS, ARE OUTSIDE OF CONTECH'S RESPONSIBILITY.
2. CONCRETE MIX DESIGN, MATERIALS, MIXING, PLACEMENT, FINISHING AND TESTING SHALL BE IN ACCORDANCE WITH THE PROJECT CONTRACT DOCUMENTS. IF THESE ITEMS ARE NOT COVERED IN THE PROJECT CONTRACT DOCUMENTS THE REQUIREMENTS OF SECTION 552 OF FEDERAL HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL HIGHWAY PROJECTS (FP-24) SHALL BE USED. FP-24 CAN BE VIEWED OR DOWNLOADED AT: <https://highways.dot.gov/federal-lands/specs>. DECK CONCRETE PLACEMENT AND FINISHING SHALL BE DONE USING HAND SCREEDS OR LIGHT WEIGHT ROLLER SCREEDS, DECK FINISHING MACHINES CANNOT BE USED TO SCREED OR FINISH THE DECK.
3. MINIMUM MATERIAL REQUIREMENTS:
 - a. CONCRETE:
 - STRENGTH (f_c) = 4500 PSI
 - AIR CONTENT OF 5.5% +/- 1.5%
 - UNIT WEIGHT OF 145 PCF MAX
 - b. REINFORCING STEEL: ASTM A615 OR AASHTO M31 GRADE 60
4. THE USE OF EPOXY COATED REBAR, GALVANIZED REBAR, DECK SEALERS OR ANY OTHER FORM OF PROTECTION OF THE REBAR SHALL BE DONE AS NEEDED FOR LOCAL CONDITIONS OR AS REQUIRED PER THE PROJECT CONTRACT DOCUMENTS AND IS NOT THE RESPONSIBILITY OF CONTECH ENGINEERED SOLUTIONS.
5. THE CONTRACTOR MUST EXERCISE CARE TO CONTROL TRAFFIC AND STORAGE OF MATERIALS ON THE FORM DECK BEFORE CONCRETE IS PLACED.
6. REINFORCING BARS MAY BE SPLICED IF REQUIRED. SPLICES SHALL BE STAGGERED EVERY OTHER BAR. TRANSVERSE BAR SPLICES SHALL BE LOCATED AT OR NEAR THE 1/3 POINTS BETWEEN GIRDERS. REQUIRED SPLICE LENGTHS ARE AS FOLLOWS:

BAR	MINIMUM LAP
TOP TRANSVERSE #5 BARS	22"
BOTTOM TRANSVERSE #5 BARS	32"
TOP LONGITUDINAL #4 BARS	18"
BOTTOM LONGITUDINAL #5 BARS	22"

QUALITY ASSURANCE NOTES:

1. BRIDGE STRUCTURE SHALL BE INSPECTED IN ACCORDANCE WITH AWS D1.5 AND CONTECH'S QUALITY MANUAL. ADDITIONAL INSPECTIONS, INCLUDING FIELD, AND ANY SPECIAL INSPECTIONS, ARE OUTSIDE OF CONTECH'S RESPONSIBILITY.

I:\MERU\PROJECT\ACTIVE\7003005\700305\10-BIG R MODULAR ROLLED GIRDER\DRAWINGS\FABRICATION\700305-010-REV 0 DWG 9/12/2025 10:30 AM

APPROVED



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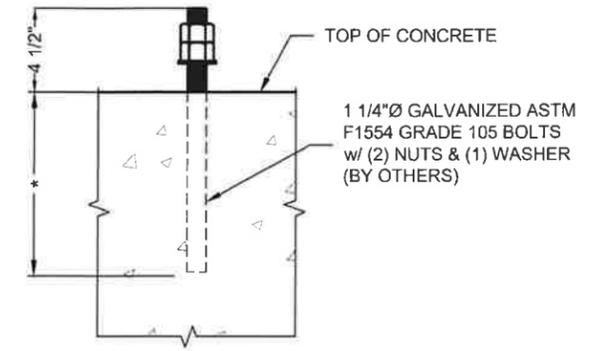
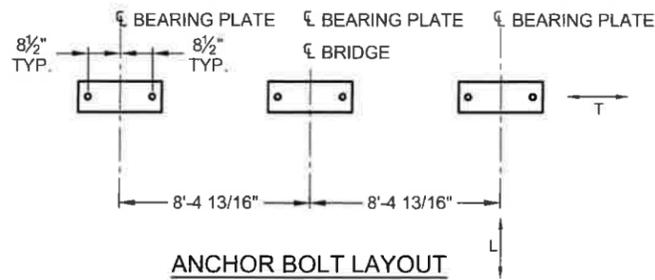
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BIG R
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DRAWING

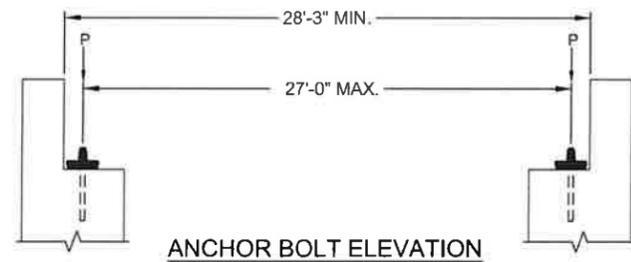
28'-0" X 18'-0"
CR 159 BRIDGE REPLACEMENT
ROLLED GIRDER - SITE-SPECIFIC MODULAR
DeKALB COUNTY, AL

PROJECT No.: 700305	SEQ No.: 010	DATE: 8/27/2025
DESIGNED: DBA	DRAWN: DBA	
CHECKED: DBA	APPROVED: BAH	
SHEET NO: 2 OF 9		



ANCHOR BOLT DETAIL

***NOTE:**
 ANCHOR BOLTS ARE DESIGNED BY CONTECH FOR STEEL STRENGTH IN SHEAR AND TENSION OF THE ANCHOR BOLT ONLY. ALL DESIGN CONSIDERATIONS REGARDING CONCRETE BREAKOUT STRENGTH IN SHEAR AND TENSION, PULLOUT STRENGTH, CONCRETE SIDE-FACE BLOWOUT STRENGTH, CONCRETE PRYOUT STRENGTH, EMBEDMENT DEPTH, TYPE OF ANCHORAGE OR ANY OTHER CONCRETE FAILURE MODES ARE NOT CONSIDERED AND ARE NOT THE RESPONSIBILITY OF CONTECH. IF LARGER DIAMETER BOLTS ARE REQUIRED TO MEET ANY OF THESE REQUIREMENTS, THAT INFORMATION MUST BE PROVIDED TO CONTECH PRIOR TO BEGINNING ANY FABRICATION ON THE BRIDGE. IT SHALL BE THE RESPONSIBILITY OF THE FOUNDATION ENGINEER TO DETERMINE THE SEISMIC CONNECTION FORCES IN ACCORDANCE WITH GENERAL NOTE 2.



ANCHOR BOLT ELEVATION

BEARING REACTION IN KIPS	MAX AT INTERIOR GIRDER			MAX AT EXTERIOR GIRDER			TOTAL AT ABUTMENT		
	P	T	L	P	T	L	P	T	L
DEAD LOAD (DC)	15.30			9.78			34.87		
WEARING SURFACE LOAD (DW)	2.10			2.10			6.30		
HL-93 DESIGN VEHICLE	VEHICLE LOAD (LL)	50.20		34.61			56.05		
	VEHICLE LOAD + DYNAMIC LOAD ALLOWANCE (LL+IM)	64.22		44.27			71.69		
WIND LOAD (WS)	-0.00*	1.40		-5.04*	1.40		-5.04*	4.20	
THERMAL LOAD (TU)			3.35			3.35			10.05
BRAKING FORCE (BR)			7.20			7.20			21.60
SEISMIC LOAD (EQ)		2.87	5.24		2.87	5.24		8.61	15.73

LIFTING WEIGHTS			
ITEM	QTY	UNIT WEIGHT (LBS)	TOTAL WEIGHT (LBS)
BRIDGE MODULE #1	1	5,990	5,990
BRIDGE MODULE #2	1	2,630	2,630
LOOSE ITEMS	LS	-	3,620
TOTAL BRIDGE WEIGHT:			12,240

"P": VERTICAL LOAD
 "T": HORIZONTAL LOAD TRANSVERSE TO THE STRUCTURE
 "L": HORIZONTAL LOAD LONGITUDINAL TO THE STRUCTURE
 * WIND LOAD UPLIFT ASSUMES FULL 20 PSF TO DECK AREA IS APPLIED TO ONE GIRDER LINE

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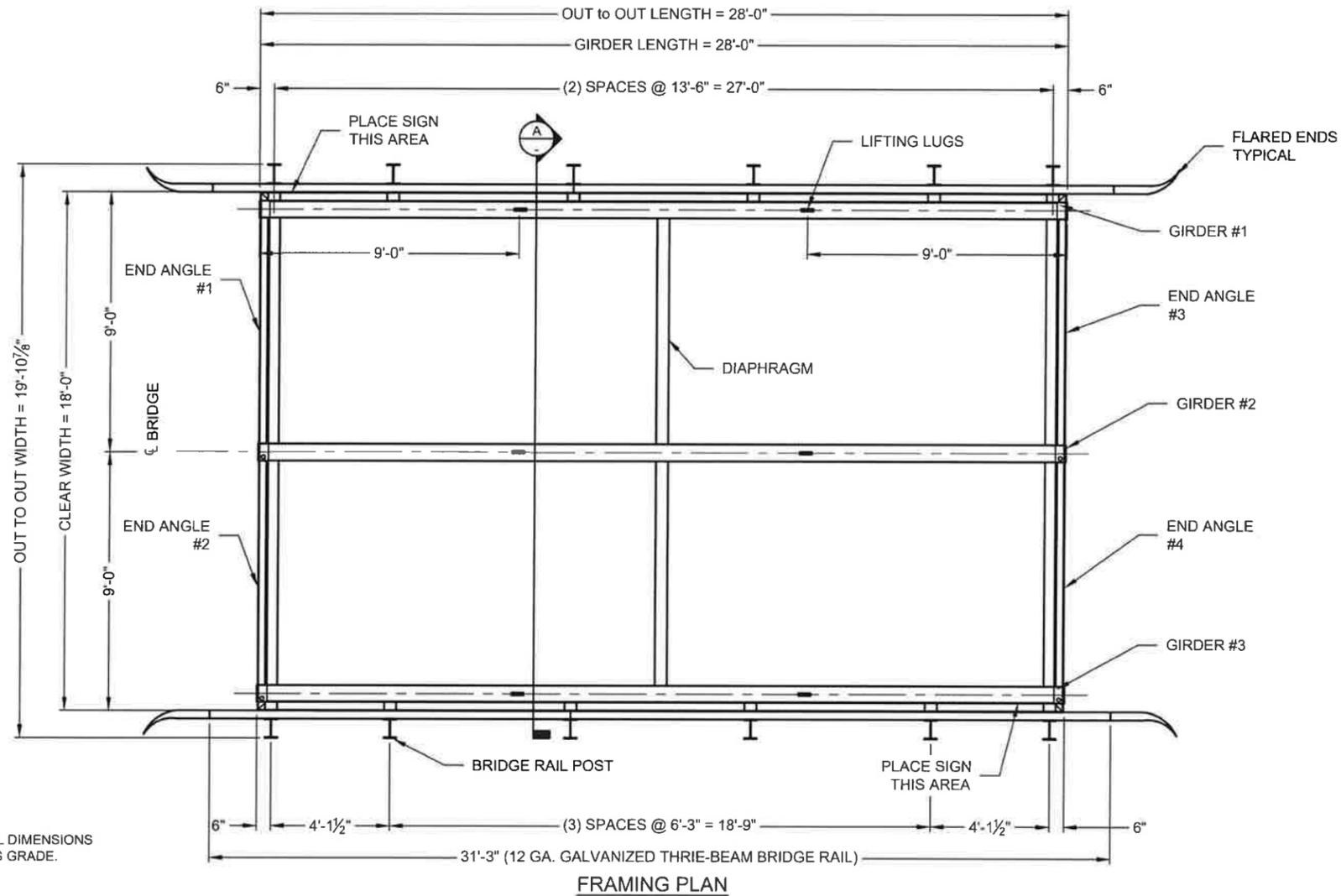
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28'-0" X 18'-0"
 CR 159 BRIDGE REPLACEMENT
 ROLLED GIRDER - SITE-SPECIFIC MODULAR
 DeKALB COUNTY, AL

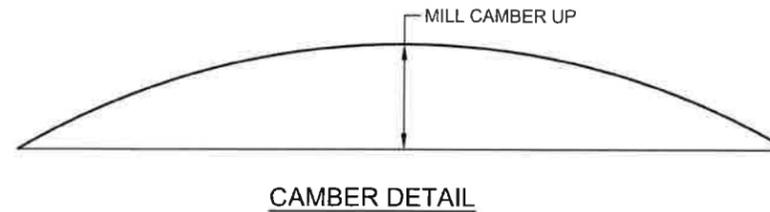
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700305	010	8/27/2025
DESIGNED: DBA	DRAWN: DBA	
CHECKED: DBA	APPROVED: BAH	
SHEET NO: 3 OF 9		

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NOTE:
ALL LONGITUDINAL DIMENSIONS
MEASURED ALONG GRADE.

MEMBERS	DESCRIPTION
GIRDER	W 24x62
SIP FORMS	DMAC 2.5x8 19 GA
SIP SUPPORT ANGLE	L 3x2x12 GA
DIAPHRAGM	W 14x22
POST BLOCK	W 14x22
SIDE ANGLE	L 8 x 4 x 1/2"
END ANGLE	L 8 x 4 x 1/2"



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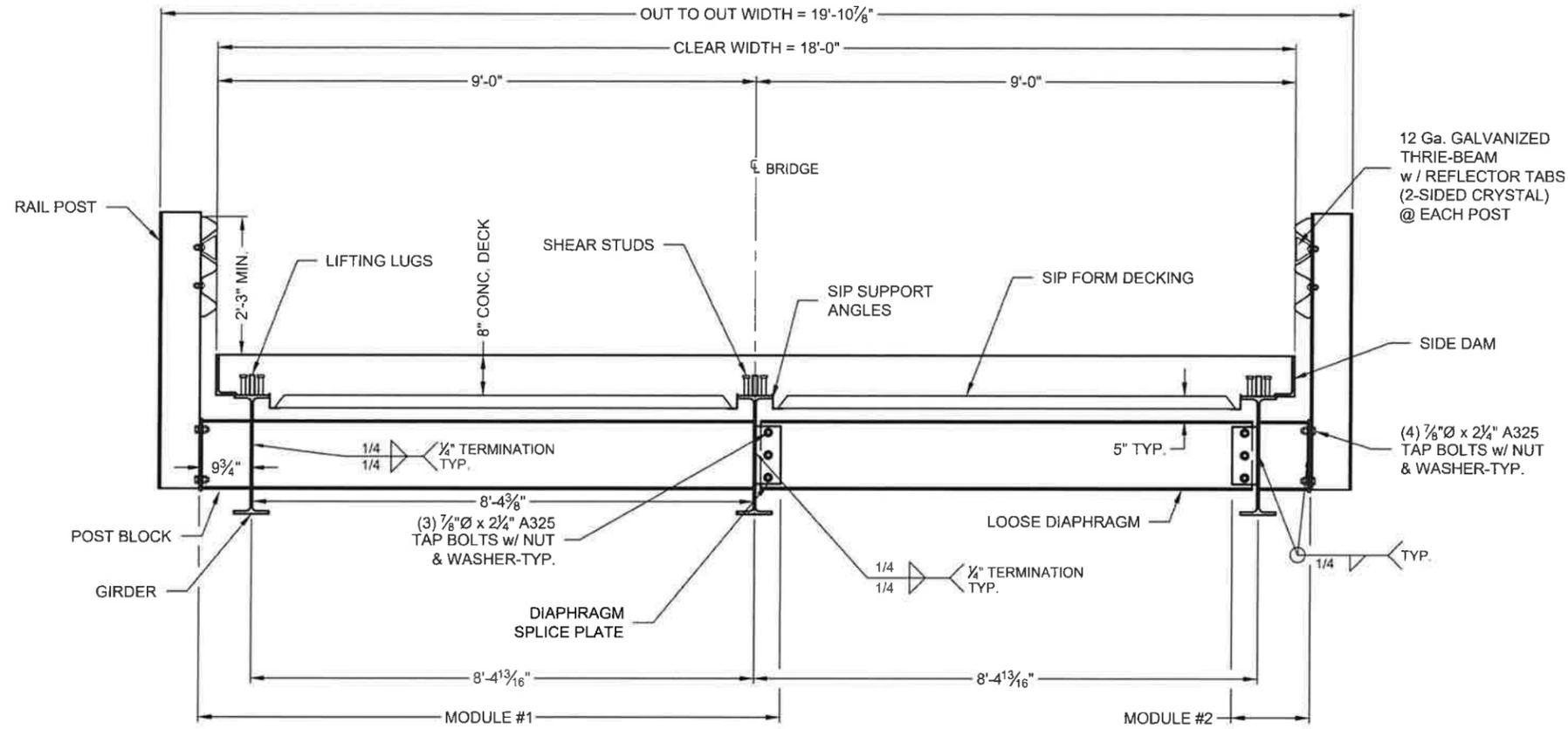
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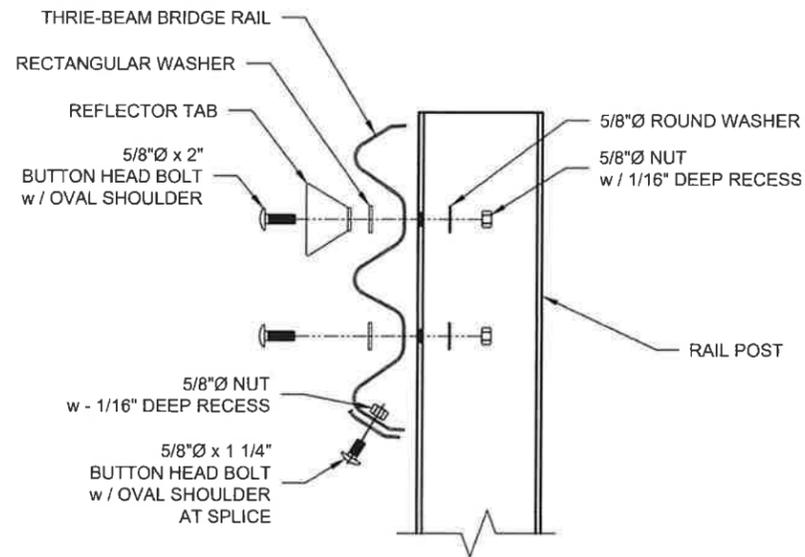
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ROLLED GIRDER - SITE-SPECIFIC MODULAR
DeKALB COUNTY, AL

PROJECT No.: 700305	SEQ No.: 010	DATE: 8/27/2025
DESIGNED: DBA	DRAWN: DBA	
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SHEET NO.: 4 OF 9		



SECTION A



THRIE-BEAM RAIL ATTACHMENT DETAIL
(W 8x18 POSTS)

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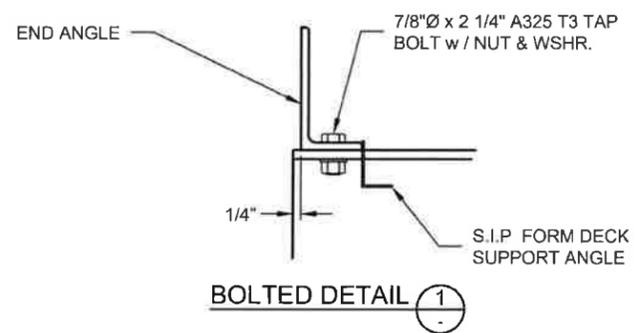
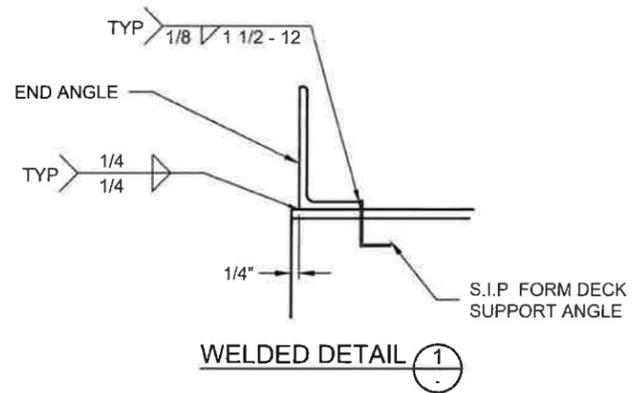
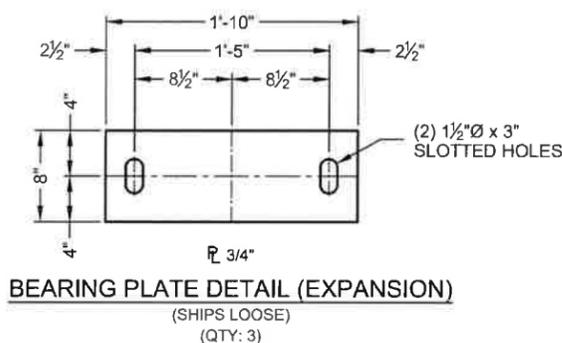
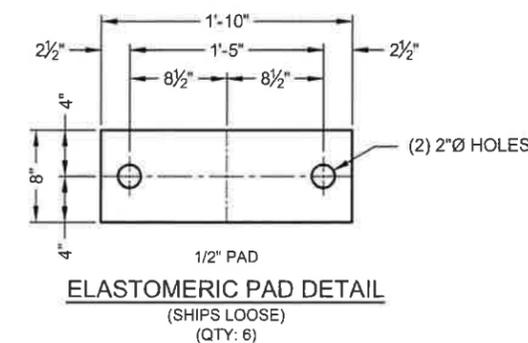
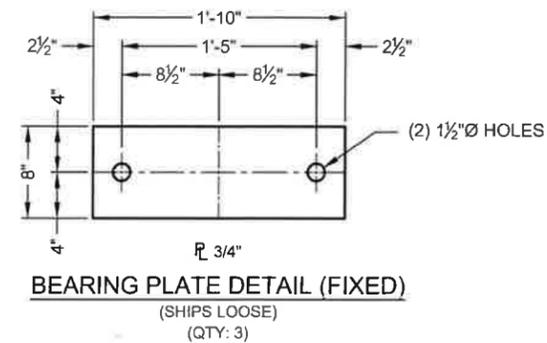
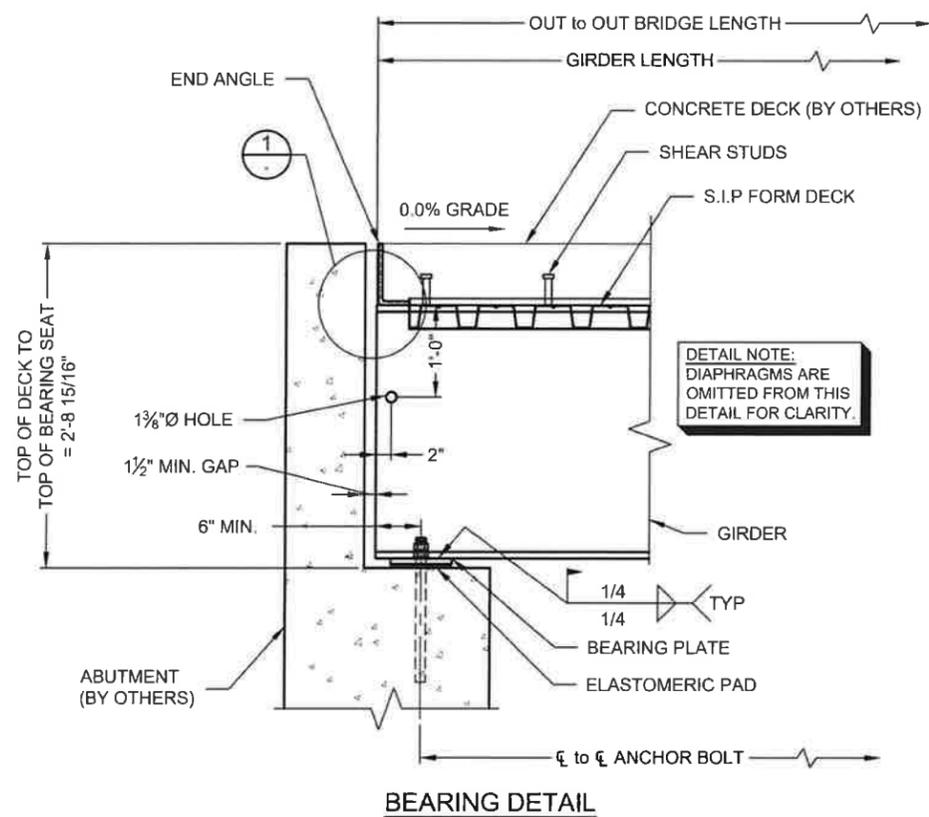
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28'-0" X 18'-0"
CR 159 BRIDGE REPLACEMENT
ROLLED GIRDER - SITE-SPECIFIC MODULAR
DeKALB COUNTY, AL

PROJECT No: 700305	SEQ No.: 010	DATE: 8/27/2025
DESIGNED: DBA	DRAWN: DBA	APPROVED: BAH
CHECKED: DBA	SHEET NO: 5 OF 9	

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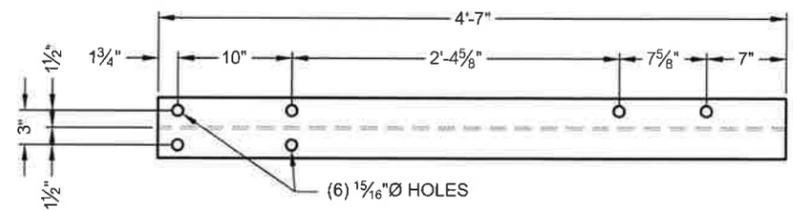
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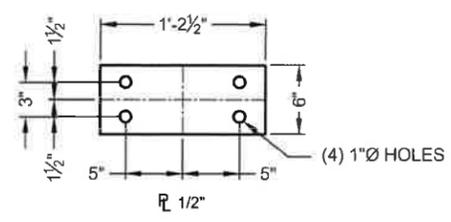
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DeKALB COUNTY, AL

PROJECT No: 700305	SEQ No: 010	DATE: 8/27/2025
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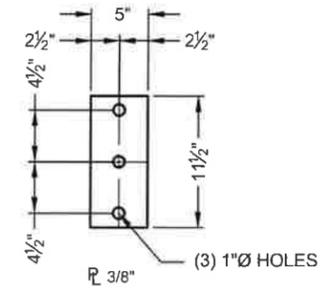
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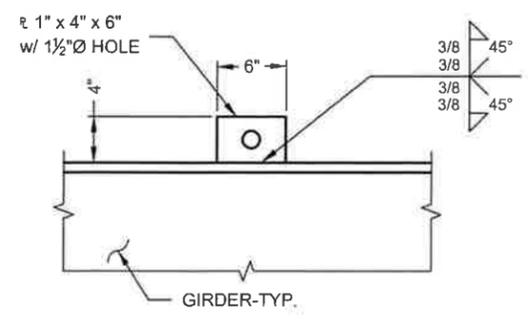
BRIDGE RAIL POST DETAIL
(SHIPS LOOSE)
(QTY: 12)



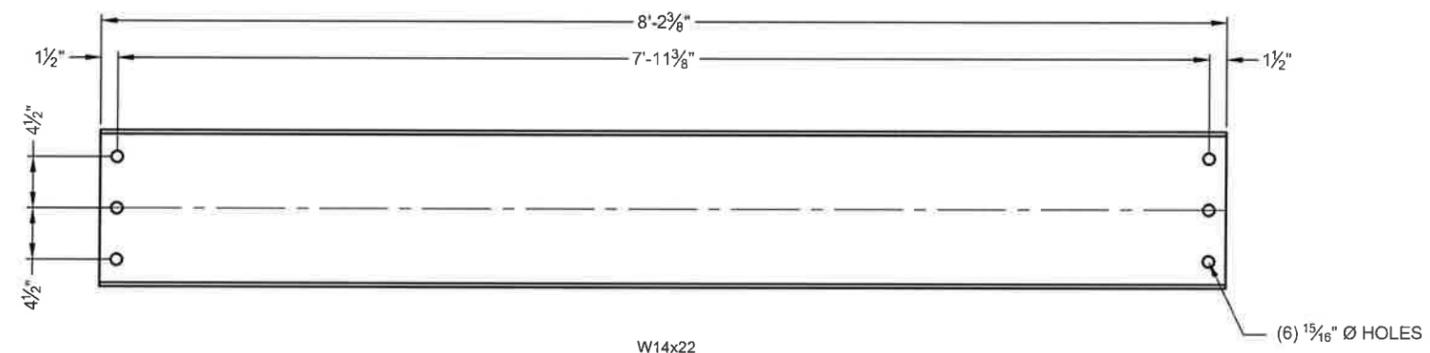
POST BLOCK PLATE DETAIL
(QTY: 12)



DIAPHRAGM ATTACHMENT PLATE DETAIL
(QTY: 6)



LIFTING LUG DETAIL
MAX. 24,000 # @ 45° LIFT ANGLE
(QTY: 6)



LOOSE DIAPHRAGM DETAIL
(SHIPS LOOSE)
(QTY: 3)

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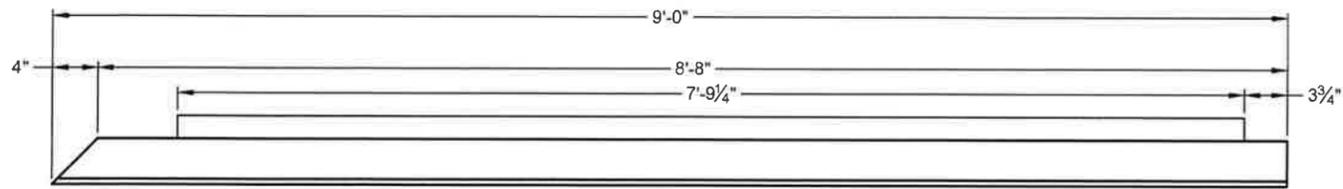
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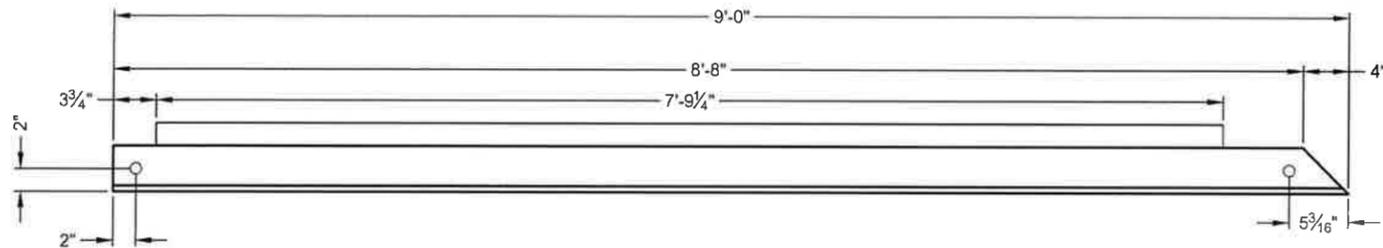
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ROLLED GIRDER - SITE-SPECIFIC MODULAR
DeKALB COUNTY, AL

PROJECT No. 700305	SEQ No. 010	DATE 8/27/2025
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CHECKED DBA	APPROVED BAH	
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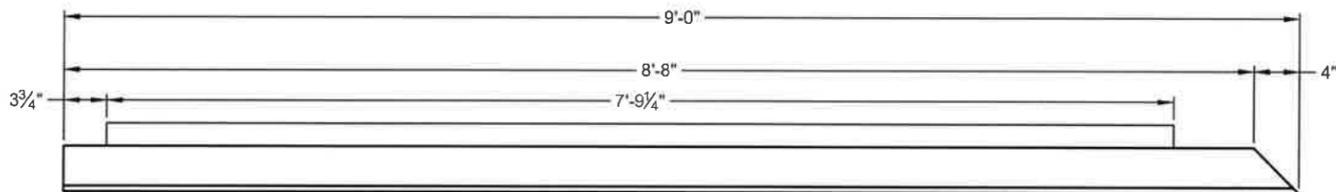
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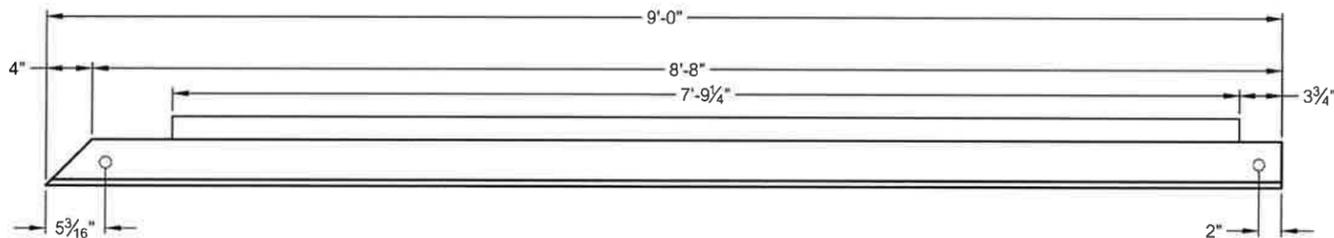
L 8x4x1/2
END ANGLE #1 DETAIL
(QTY: 1)



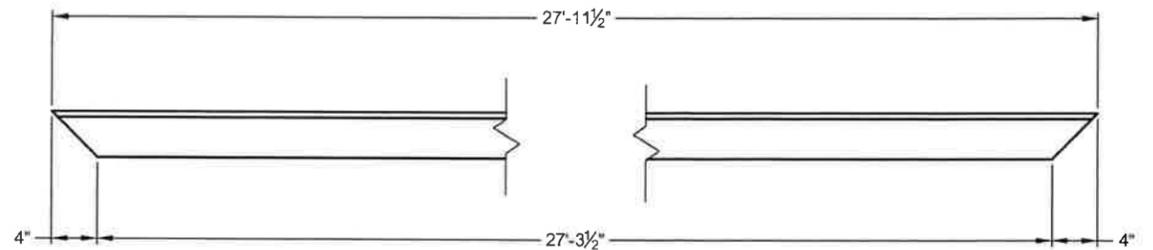
L 8x4x1/2
END ANGLE #2 DETAIL
(SHIPS LOOSE)
(QTY: 1)



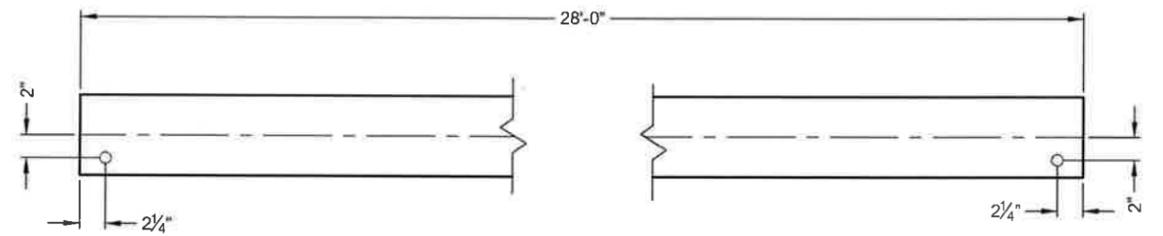
L 8x4x1/2
END ANGLE #3 DETAIL
(QTY: 1)



L 8x4x1/2
END ANGLE #4 DETAIL
(SHIPS LOOSE)
(QTY: 1)



L 8x4x1/2
SIDE DAM DETAIL
(QTY: 2)



W 24x62
GIRDER #2 & #3 HOLE DETAIL

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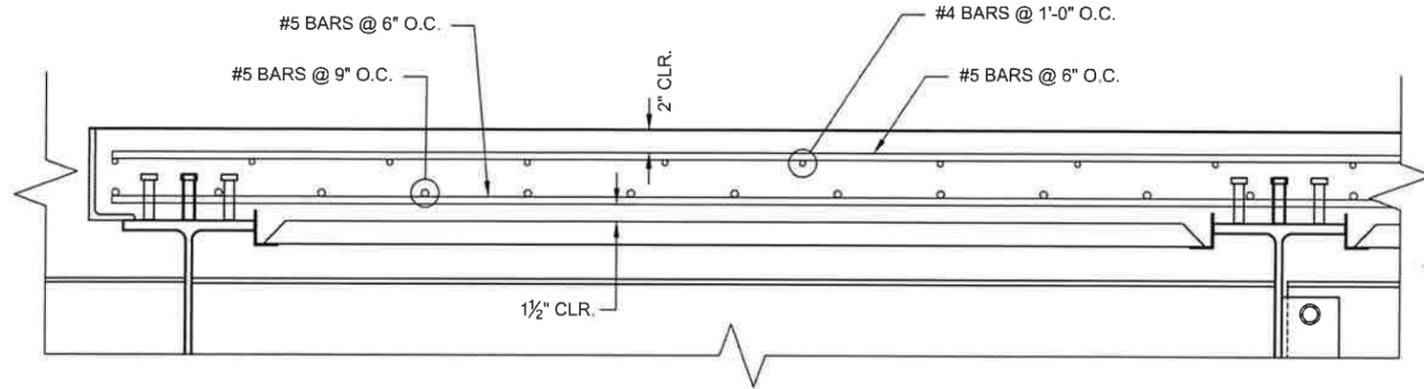
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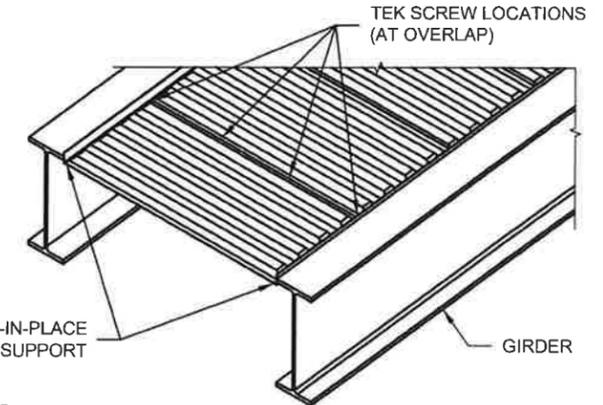
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DeKALB COUNTY, AL

PROJECT No: 700305	SEQ No: 010	DATE: 8/27/2025
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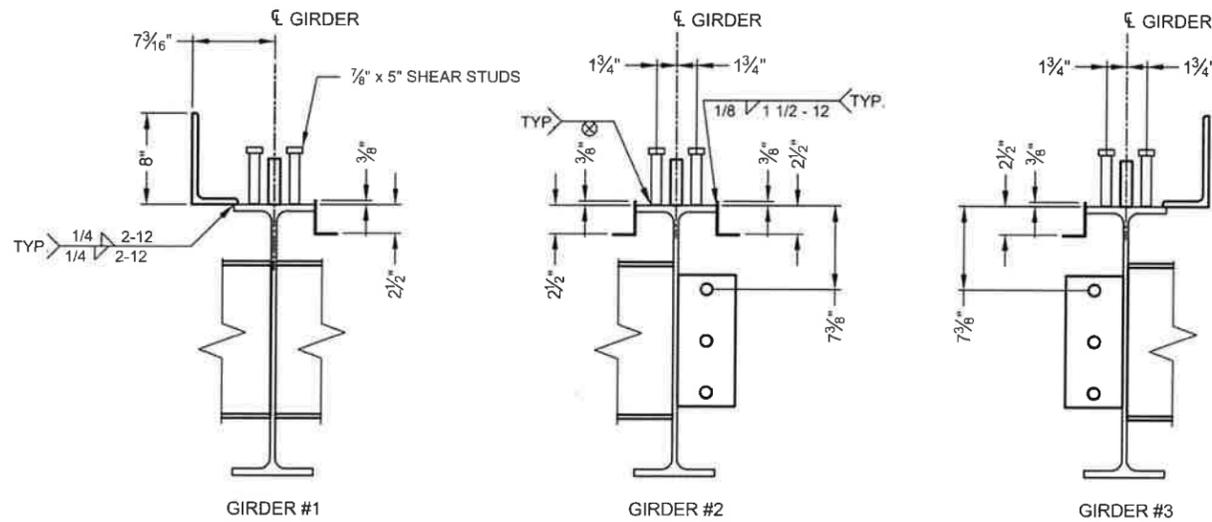
DECK REBAR DETAIL



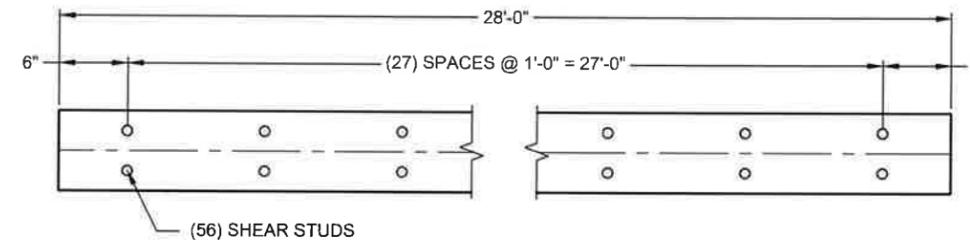
NOTES:

- 1) END DAM NOT SHOWN FOR CLARITY.
- 2) STAY-IN-PLACE DECK PANS TO BE ATTACHED TO THE SUPPORT ANGLE WITH SELF-TAPPING TEK SCREWS PLACED AT THE FOUR PAN CORNERS AND AT THE 1/3 POINTS ALONG THE LONGITUDINAL OVERLAPS. (4 PER SHEET).

TYPICAL STAY-IN-PLACE DECK MOUNTING DETAIL



SIP SUPPORT ANGLE DETAIL



GIRDER SHEAR STUD LAYOUT (TYPICAL ALL GIRDERS)

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