

LETTING DATE

CONSTRUCTION PROJECT NO.

TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS

CAMPBELL COUNTY I-275 OVER OHIO RIVER COMBS HEHL WB & EB BRIDGE TRUSS REPAIRS

INDEX OF SHEETS

Sheet No.	Description
S1	TITLE SHEET
S2-S3	GENERAL NOTES
S4	BILL OF MATERIALS
S5	WB BRIDGE REPAIR LOCATIONS
S6	EB BRIDGE REPAIR LOCATIONS
S7	REPAIR LOCATIONS
S8	REPAIR DETAILS
S9-S10	WB US L5 OB REPAIR DETAIL
S11-S13	WB US L29 IB REPAIR DETAIL
S14-S15	WB DS L7 OB REPAIR DETAIL
S16-S17	EB US U15 OB REPAIR DETAIL
S18-S20	EB US U17 IB REPAIR DETAIL
S21-S22	EB US L27 TOP REPAIR DETAIL
S23-S24	EB DS & US L29 TOP REPAIR

SPECIAL NOTES

FOR TRAFFIC CONTROL ON BRIDGE REPAIR CONTRACTS
 FOR CONTRACT COMPLETION DATE AND LIQUIDATED DAMAGES ON BRIDGE REPAIR CONTRACT
 FOR PORTABLE CHANGEABLE MESSAGE SIGNS
 FOR TEMPORARY WORKSITE SPEED LIMIT SIGN ASSEMBLY
 FOR PORTABLE QUEUE WARNING ALERT SYSTEM
 FOR TRAFFIC QUEUE PROTECTION SYSTEM
 FOR BOLTING PROCEDURES OF FULLY THREADED RODS

SPECIAL PROVISIONS

SPECIFICATIONS

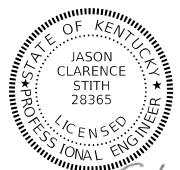
2019 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

MOT ESTIMATE OF QUANTITIES


BID ITEM CODE	02003	02650	02652	02671	02775	02898	03171	06550	06551	06556	06557	08903	22664EN	25075EC	25117EC	26136EC	26137EC	26138EC
BID ITEM	RELOCATE TEMP. CONC. MEDIAN BARRIER	MAINTAIN AND CONTROL TRAFFIC	TEMPORARY SIGNS	PORTABLE CHANGEABLE MESSAGE SIGNS	ARROW PANEL	RELOCATE CRASH CUSHION	CONC. BARRIER WALL, TYPE 9T	PAVE STRIPING - TEMP REM TAPE - W	PAVE STRIPING - TEMP REM TAPE - Y	PAVE STRIPING - DUR TY 1-6 IN W	PAVE STRIPING - DUR TY 1-6 IN Y	CRASH CUSHION TY V1 CLASS BY TL3	WATER BLASTING EXISTING STRIPE	QUEUE PROTECTION VEHICLE	FURNISH QUEUE PROTECTION VEHICLES	PORTABLE QUEUE WARNING ALERT SYSTEM	QUEUE WARNING PCMS	QUEUE WARNING PORTABLE RADAR SENSORS
UNIT	LF	LS	SQFT	EACH	EACH	EACH	LF	LF	LF	LF	LF	EACH	LF	HOUR	MONTH	MONTH	MONTH	MONTH
BRIDGE TOTALS	6420	1	672	4	1	3	2400	38161	12200	9723	6400	1	16123	1008	3	3	12	12

ESTIMATE OF QUANTITIES

BID ITEM CODE	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC	24879EC
BID ITEM	STEEL REPAIR - WB US L4-L5 AT L5	STEEL REPAIR - WB US L29-L30 AT L29	STEEL REPAIR - WB DS L6-L7 AT L7	STEEL REPAIR - EB US U14-U15 AT U15	STEEL REPAIR - EB US U17-U18 AT U17	STEEL REPAIR - EB US L26-L27 AT L27	STEEL REPAIR - EB US L28-L29 AT L29	STEEL REPAIR - EB DS L28-L29 AT L29	STEEL REPAIR - CORING TYPICAL
UNIT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
BRIDGE TOTALS	1	1	1	1	1	1	1	1	8



Jason Stith, P.E.
KY NO. 28365



Logan Clark, P.E.
KY NO. 36807

GENERAL NOTES

SCOPE OF WORK: THESE PLANS ARE TO BE USED TO REMEDIATE DISCONTINUITIES DISCOVERED IN COMPLETE JOINT PENETRATION WELDS OF THE MAIN TRUSS MEMBERS. THE REMEDIATION INCLUDES BOTH CORINGS AND PLATING ATTACHED TO THE TRUSS.

SPECIFICATIONS: REFERENCES TO THE SPECIFICATIONS ARE TO THE CURRENT EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION INCLUDING ANY CURRENT SUPPLEMENTAL SPECIFICATIONS. ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE FOURTH EDITION 2017 AASHTO LRFD CONSTRUCTION SPECIFICATIONS AND THE 2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, NINTH EDITION.

DESIGN LIVE LOAD: THE DESIGN LIVE LOAD IS HS20-44.

DESIGN METHOD: ALL STRUCTURAL MEMBERS ARE DESIGNED TO HAVE A CAPACITY EQUIVALENT OR GREATER THAN THEIR REQUIRED CAPACITY PER LOAD AND RESISTANCE FACTOR DESIGN METHOD, AS SPECIFIED IN THE REFERENCED AASHTO SPECIFICATIONS.

MATERIALS DESIGN SPECIFICATIONS:

FOR STRUCTURAL STEEL (NEW)

F_y = 50000 PSI FOR GRADE 50

F_y = 70000 PSI FOR GRADE HPS 70W

FOR STRUCTURAL STEEL (EXISTING)

F_y = 36000 PSI FOR ASTM A36

F_y = 50000 PSI FOR ASTM A572 ≤ 1½" AND ASTM A588 ≤ 4"

F_y = 100000 PSI FOR ASTM A514

MATERIAL SPECIFICATIONS: AASHTO SPECIFICATIONS OR ASTM, CURRENT EDITION, AS DESIGNATED BELOW SHALL GOVERN THE MATERIALS FURNISHED.

STRUCTURAL STEEL

AASHTO	A.S.T.M.
M270 GR 50	A709 GR 50
M270 GR HPS 70W (NSTM)	A709 GR HPS 70W (NSTM)

HIGH STRENGTH BOLTS FOR STRUCTURAL JOINT

AASHTO	A.S.T.M.
M164	F3125 GRADE A325, TYPE 1
M253	F3125 GRADE A490, TYPE 1

CARBON AND ALLOY STEEL NUTS	A563 (DH), F436-1
HARDENED STEEL WASHERS	F436, TYPE 1

ALL NEW STRUCTURAL STEEL SPLICE PLATES SHALL BE ASTM A709 GRADE HPS 70W (NSTM). ALL OTHER STRUCTURAL STEEL INCLUDING FILLER PLATES, CHEESE PLATES, CONNECTION PLATES, AND ANGLES SHALL BE ASTM A709 GRADE 50. STRUCTURAL STEEL SPLICE PLATES SHALL MEET THE SUPPLEMENTAL REQUIREMENTS FOR FRACTURE CRITICAL MEMBERS IN TABLE II (AASHTO M270) FOR ZONE 2.

MEMBERS IDENTIFIED AS A NONREDUNDANT STEEL TENSION MEMBER (NSTM) ARE THE SAME AS THE FORMER IDENTIFICATION AS FRACTURE CRITICAL MEMBER (FCM). NSTM MATERIAL AND FABRICATION REQUIREMENTS ARE THE SAME AS FCM REQUIREMENTS IN THE KYTC STANDARD SPECIFICATIONS AND THE AASHTO/AWS D1.5 BRIDGE WELDING CODE.

ASTM F3125 GRADE A490 BOLTS ARE TO BE COATED WITH A ZINC/ALUMINUM COATING IN ACCORDANCE WITH ASTM F1136/F1136M OR F2833.

THREADED ROD SHALL BE ASTM A354 GRADE BD WITH ASTM A563 HEAVY HEX NUTS AND ASTM F436, TYPE 1 WASHERS. ASTM A354 GRADE BD THREADED ROD SHALL HAVE PROTECTIVE COATING PER ASTM F3393 CLASSIFICATION CODE D. ALL ASTM A354 GRADE BD THREADED RODS REQUIRE MAGNETIC PARTICLE TESTING, SIMILAR TO THE REQUIREMENTS OF ASTM F3125 GRADE A490 BOLTS. ASTM A354 GRADE BD THREADED RODS SHALL BE CLEANED WITH GRIT BLASTING OR SIMILAR. ACID CLEANING OF ASTM A354 GRADE BD THREADED RODS IS NOT PERMITTED. INSTALLATION OF ASTM A354 GRADE BD THREADED RODS AND ASTM A563 NUTS SHOULD NOT EXCEED MINIMUM PRETENSIONING FORCES OF THE THREADED ROD BY MORE THAN 10%. THE USE OF DIRECT TENSION INDICATORS (DTI), IS PERMITTED AS SHOWN IN THREADED ROD INSTALLATION SEQUENCE, AND IN ACCORDANCE WITH KYTC STANDARD SPECIFICATION SECTION 607.03.05.

HIGH STRENGTH BOLT CONNECTIONS: ALL EXISTING BOLTS TO BE REPLACED ARE TO BE REPLACED WITH THE SAME DIAMETER REPLACEMENT BOLT. SEE SHEET S4 FOR BOLT SIZE LEGEND USED THROUGHOUT THE PLAN SET. ALL NEW BOLTS THROUGH HOLES DRILLED IN THE FIELD SHALL BE 1" DIAMETER HIGH STRENGTH BOLTS WITH 1½" DIAMETER FIELD DRILLED HOLES USING THE NEW SPLICE PLATES AS THE TEMPLATE. ALL BOLTED CONNECTIONS ARE DESIGNED AS CLASS A FRICTION TYPE CONNECTIONS. TIGHTENING SHALL BE IN ACCORDANCE WITH SECTION 607.03.05 OF THE STANDARD SPECIFICATIONS.

REMOVAL OF EXISTING BOLTS: THE CONTRACTOR WILL BE PERMITTED TO REMOVE BOLTS IN ANY MANNER WHICH DOES NOT DAMAGE ADJACENT STRUCTURAL STEEL. THIS MAY INCLUDE MECHANICAL REMOVAL OR OTHER METHOD APPROVED BY THE ENGINEER. USE OF CUTTING TORCHES WILL NOT BE PERMITTED.

REMOVE STEEL: ALL EXISTING STEEL THAT IS REMOVED AND NOT REUSED IN THE COMPLETED STRUCTURE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE BRIDGE SITE.

BOLT HOLES: BOLT HOLE SIZE AND LOCATIONS SHOWN ON THE PLANS ARE BASED ON THE SHOP DRAWINGS OF THE BRIDGE. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THESE SHOP PLANS BY FIELD INSPECTION.

SHOP DRAWINGS: FABRICATORS SHALL SUBMIT ALL REQUIRED SHOP PLANS BY E-MAIL TO THE DIVISION OF STRUCTURAL DESIGN COORDINATOR FOR REVIEW. THESE SUBMISSIONS SHALL DEPICT THE SHOP PLANS IN .PDF FORMAT AS EITHER 11"x17" OR 22"x36" SHEETS. THE DIVISION OF STRUCTURAL DESIGN WILL MAKE REVIEW COMMENTS ON THESE ELECTRONIC SUBMISSIONS AS NEEDED. UPON RECONCILIATION OF THE COMMENTS, FILES SHALL BE RETURNED TO THE DESIGNER. EACH SHEET WILL BE ELECTRONICALLY STAMPED BY THE DESIGNER AND DIVISION OF STRUCTURES. ONLY PLANS ELECTRONICALLY STAMPED ARE TO BE USED FOR FABRICATION.

CLEANING AND PAINTING: ALL NEW STRUCTURAL STEEL SHALL RECEIVE SURFACE PREPARATION AND SHOP-APPLIED PRIME COATING IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS. NECESSARY TOUCH-UP/REPAIR OF THE SHOP-APPLIED PRIME COAT ON THE NEW STEEL MAY BE PERFORMED IN THE FIELD. INTERMEDIATE AND FINISH COATINGS ARE NOT REQUIRED. PRIME COAT TO BE CAPABLE OF ACHIEVING CLASS A SLIP RESISTANT COEFFICIENT IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS. THE PRIME COAT SHALL CONFORM TO SECTION 821 OF THE STANDARD SPECIFICATIONS.

ALL EXISTING STEEL FAYING SURFACES WHERE NEW STEEL IS TO BE INSTALLED SHALL BE CLEANED AND RECEIVE THE PRIME COAT IN ACCORDANCE WITH SECTION 607 OF THE STANDARD SPECIFICATIONS. LEVEL OF CLEANING SHALL BE TO AN SSPC-SP15 (COMMERCIAL GRADE POWER TOOL CLEANING). ALL POWER TOOLS SHALL BE EQUIPPED WITH VACUUM SHROUDS AND FITTED WITH HEPA FILTERS AT THEIR AIR EXHAUSTS. MAINTAIN AND OPERATE ALL VACUUM SHROUD POWER TOOLS TO COLLECT GENERATED DEBRIS. UNLESS NOTED OTHERWISE ON THE PLANS, ALL NEW AND EXISTING STEEL WITHIN 12" OF THE WORK LIMITS OF EACH RETROFIT LOCATION SHALL BE CLEANED AND PAINTED WITH ONE COAT OF PRIMER CAPABLE OF ACHIEVING CLASS A SLIP RESISTANT COEFFICIENT AS DIRECTED BY THE ENGINEER.

ALL ITEMS NECESSARY TO COMPLETE CLEANING AND PAINTING OF EXISTING AND NEW STEEL SHALL BE INCIDENTAL TO THE APPROPRIATE BID ITEM.

TOUCH UP PAINTING: ALL AREAS OF NEW OR EXISTING STRUCTURAL STEEL ON WHICH THE PAINT HAS BEEN DAMAGED BY THE CONTRACTOR WITH A CUTTING TORCH OR BY OTHER MEASURING CONSTRUCTION OR AFTER FINAL PAINTING SHALL BE WIRE BRUSH CLEANED AND SPOT PAINTED AS DIRECTED BY THE ENGINEER. THE COST OF THIS TOUCH UP PAINTING IS INCIDENTAL TO THE WORK.

DIMENSIONS: DIMENSIONS SHOWN ON THESE PLANS ARE TAKEN FROM ORIGINAL CONSTRUCTION CONTRACT PLANS AND SUBSEQUENT RETROFIT PLANS, AND DO NOT NECESSARILY REFLECT REVISIONS MADE DURING CONSTRUCTION. THE CONTRACTOR SHALL VERIFY DIMENSIONS, INCLUDING THICKNESSES OF PARTS, WITH FIELD MEASUREMENTS PRIOR TO ORDERING MATERIALS OR FABRICATING STEEL. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS.

PROHIBITED FIELD WELDING: EXCEPT AS SHOWN ON PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR AN AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

DAMAGE TO STRUCTURE: THE CONTRACTOR SHALL BEAR FULL RESPONSIBILITY AND EXPENSE FOR ANY AND ALL DAMAGE TO THE STRUCTURE, INCLUDING TRUSS MEMBERS, DURING THE REPAIR AND RETROFIT WORK; EVEN TO THE REMOVAL AND REPLACEMENT OF TRUSS MEMBERS AND FALLEN SPANS, SHOULD THE DAMAGE RESULT FROM THE CONTRACTOR'S ACTIONS.

RESIDUAL LEAD PAINT: RESIDUAL LEAD PAINT MAY STILL BE ON THE BRIDGE. THE CONTRACTOR IS ADVISED TO TAKE ALL NECESSARY PROTECTIVE MEASURES INCLUDING WORKER SAFETY AND ENVIRONMENTAL REGULATIONS WHEN PERFORMING SURFACE PREPARATION AND OTHER WORK. THE DEPARTMENT WILL NOT CONSIDER ANY CLAIMS BASED ON RESIDUAL LEAD PAINT.

PROTECTION OF VEHICLES: NO WORK WILL BE ALLOWED OVER MOVING TRAFFIC BEFORE INSTALLING FALL PROTECTION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT VEHICLES FROM DAMAGE AND HARM CAUSED BY FALLING DEBRIS OR OTHER OBJECTS RESULTING FROM THEIR OPERATIONS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL THEIR ACTIONS IN ACCORDANCE WITH SECTION 107 OF THE STANDARD SPECIFICATIONS.

MAINTAINING TRAFFIC: TRAFFIC SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE PLANS AND SPECIAL NOTES FOR MAINTENANCE OF TRAFFIC.

PLANS OF EXISTING STRUCTURE: AS AN AID TO THE CONTRACTOR, A PORTION OF THE PLANS AND SHOP DRAWINGS OF THE EXISTING STRUCTURE ARE AVAILABLE FROM THE DIVISION OF MAINTENANCE UPON REQUEST. THE COMPLETENESS OF THESE DRAWINGS IS NOT GRANTED AND NO RESPONSIBILITY IS ASSUMED BY KYTC FOR THEIR ACCURACY. THE EXISTING DRAWING NUMBERS FOR THIS STRUCTURE INCLUDE: 18927, 18928, 18929, AND 18649. SHOP DRAWINGS FOR 18928 ARE ALSO AVAILABLE.




ON-SITE INSPECTION: THE CONTRACTOR SHALL MAKE A THOROUGH INSPECTION OF THE BRIDGE AND THE WORK SITE PRIOR TO SUBMITTING THE FEE AND SHALL BE THOROUGHLY FAMILIARIZED WITH THE EXISTING CONDITIONS SO THAT THE WORK CAN BE EXPEDITIOUSLY PERFORMED AFTER A CONTRACT CHANGE ORDER IS AWARDED. A SUITABLE METHOD OF PERFORMING THE WORK DESCRIBED HEREIN SHOULD BE INVESTIGATED. SUBMISSION OF THE FEE WILL BE CONSIDERED EVIDENCE OF THIS INSPECTION HAVING BEEN MADE. ANY CLAIMS RESULTING FROM SITE CONDITIONS WILL NOT BE HONORED BY KYTC.

PAYMENT: THE LUMP SUM FEE FOR REPAIRS SHALL INCLUDE STRUCTURAL STEEL, BOLTS, WASHERS, PAINT, BOLTS, TOOLS, EQUIPMENT, INCIDENTAL MATERIALS AND CLEANUP NECESSARY TO COMPLETE THE WORK IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

FABRICATION: WITH THE EXCEPTION OF ONE LANE CLOSURE TO VERIFY DIMENSIONS, NO LANE CLOSURES WILL BE PERMITTED UNTIL THE CONTRACTOR HAS ACQUIRED AND FABRICATED ALL STRUCTURAL STEEL.

ALL HOLES ARE TO BE DRILLED FULL SIZE OR SUB-PUNCHED AND REAMED TO SIZE. THE SHOP DETAIL DRAWINGS SHALL INDICATE CLEARLY SUB-PUNCHED HOLES WHICH ARE TO BE REAMED AND/OR ASSEMBLED TO A TEMPLATE IN THE SHOP. HOLES WHICH ARE TO BE REAMED IN THE FIELD SHALL BE INDICATED ON THE SHOP DRAWINGS. ALL STEEL SHALL BE SO POSITIONED IN THE SPLICE PLATES AS TO PLACE THE DIRECTIONS OF FINISHED ROLLING PARALLEL TO THE DIRECTION OF PRIMARY STRESS. WELDED SPLICES WILL NOT BE PERMITTED.

PRE-FABRICATION CONFERENCE: PRIOR TO THE START OF FABRICATION, THE CONTRACTOR, THE INSPECTOR AND THE ENGINEER SHALL HAVE A CONFERENCE TO ENSURE THAT AGREEMENT HAS BEEN REACHED REGARDING THE FABRICATION AND CONSTRUCTION PROCEDURES AND THE INSPECTION THEREOF. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CALL THIS CONFERENCE AT A TIME AND PLACE MUTUALLY CONVENIENT TO ALL PARTIES CONCERNED.

 <p>COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS</p>	 <p>TEAM KENTUCKY TRANSPORTATION CABINET</p>	REVISION	DATE	PREPARED BY 	DATE: 07/12/2024	CHECKED BY	<p style="font-size: 1.2em;"><i>GENERAL NOTES - 1</i></p> CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
					DESIGNED BY: J STITH	L CLARK		I-275	SHEET NO.	CAMPBELL
				DETAILED BY: MJ DWYER	J STITH		S2	DRAWING NUMBER	28910	

GENERAL NOTES

CONSTRUCTION PROCEDURE: THE CONTRACTOR SHALL FOLLOW THE GENERAL SEQUENCE OF CONSTRUCTION INCLUDED IN THESE PLANS. ALTERNATIVE SEQUENCES SHALL NOT BE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR AN AUTHORIZED REPRESENTATIVE.

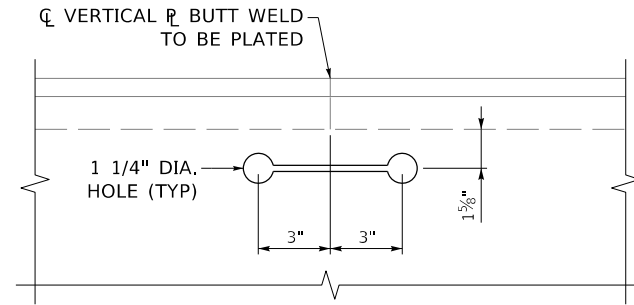
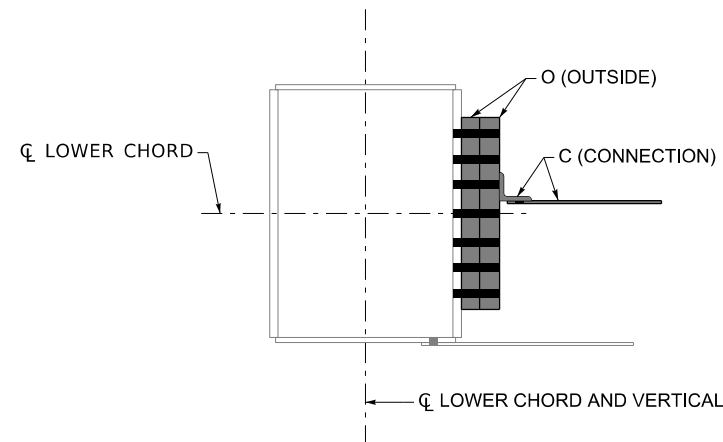
UNLESS NOTED OTHERWISE, WHERE BOLTS ARE REPLACED IN EXISTING CONDITIONS UNDER LOAD, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE GEOMETRY OF THE CONNECTIONS IS NOT CHANGED DURING REPLACEMENT OF BOLTS. A MAXIMUM OF TWO BOLTS MAY BE REMOVED AT ANY GIVEN TIME. STAGGER REMOVAL OF BOLTS SO THAT NO TWO ADJACENT BOLTS ARE REMOVED FROM THE CONNECTION AT THE SAME TIME.

CONTRACTOR'S SUBMITTALS: STABILITY OF PARTIAL EXISTING STRUCTURAL MEMBERS AND REMAINING STRUCTURAL MEMBERS ARE TO BE MAINTAINED BY THE CONTRACTOR DURING REPAIR, UNTIL ALL STEEL MEMBERS ARE IN-PLACE AND ALL BOLTS ARE PROPERLY INSTALLED. ERECTION LOADS INCLUDING SELF-WEIGHT OF THE STEEL MEMBERS, WIND LOADING AND CONSTRUCTION LIVE LOAD EFFECTS ARE TO BE EVALUATED BY THE CONTRACTOR FOR STABILITY OF THE STEEL MEMBERS DURING ANY STAGE OF CONSTRUCTION. CONTRACTOR IS TO SUBMIT CALCULATIONS, CONSTRUCTION SEQUENCES AND PROCEDURES, AND DETAILS OF TEMPORARY SUPPORT DEVICES AND STRUCTURES REQUIRED TO ACCOMPLISH THE REPAIRS INTENDED BY THIS CONTRACT.

PLATE MARKING CONVENTION

PLATE MARK	JOINT LOCATION	OUTSIDE/INSIDE	PLATE NUMBER
L5-O-1	L5	O	1
L29-C-2	L29	C	2

*REFER TO BELOW SKETCH DEFINING OUTSIDE AND CONNECTION PLATE MARKS

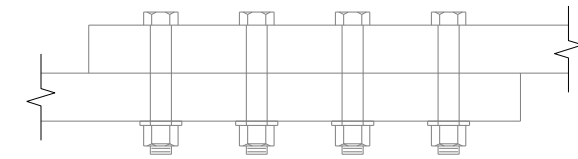


TYPICAL DOG-BONE RETROFIT DETAIL

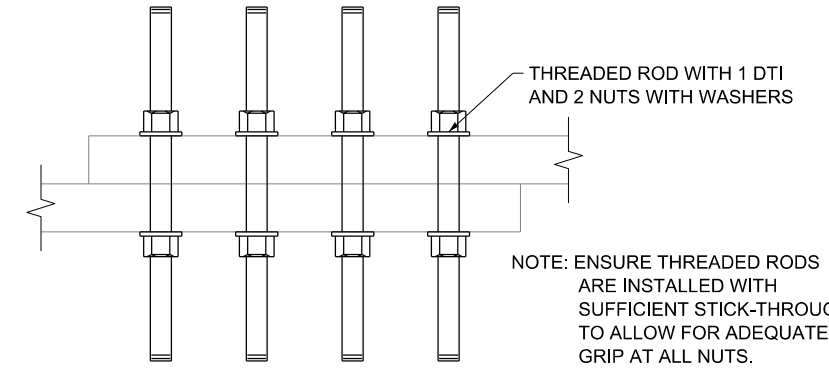
INSTALL AT EACH BUTT WELD AT EACH LOCATION AS SPECIFIED IN THE PLANS

DOG-BONE RETROFIT PROCEDURE:

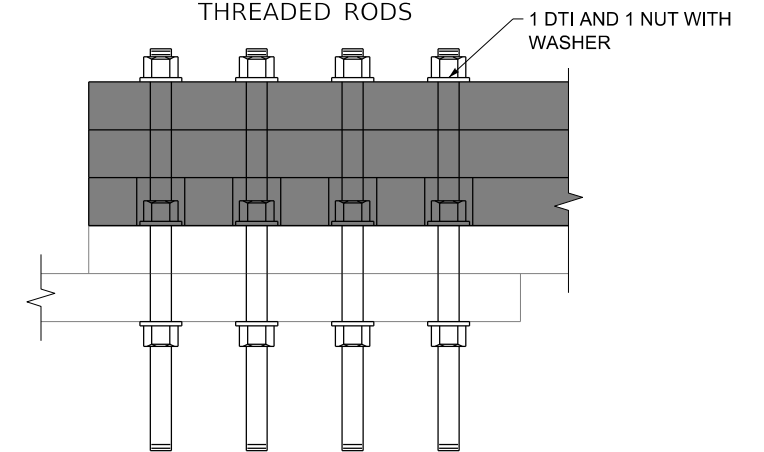
1. DRILL 1 1/4" DIA. HOLES IN HORIZONTAL PLATE.
2. WITH A CUTTING WHEEL OR PORTABLE PLASMA USE HOLES AS A START/STOP POINT FOR CUTTING SLOT PARALLEL TO VERTICAL PLATE.
3. IF LATERAL CONNECTION PLATES ARE PRESENT, CONSTRUCT WEB DOG-BONE AT EDGE OF LATERAL GUSSET PLATE.



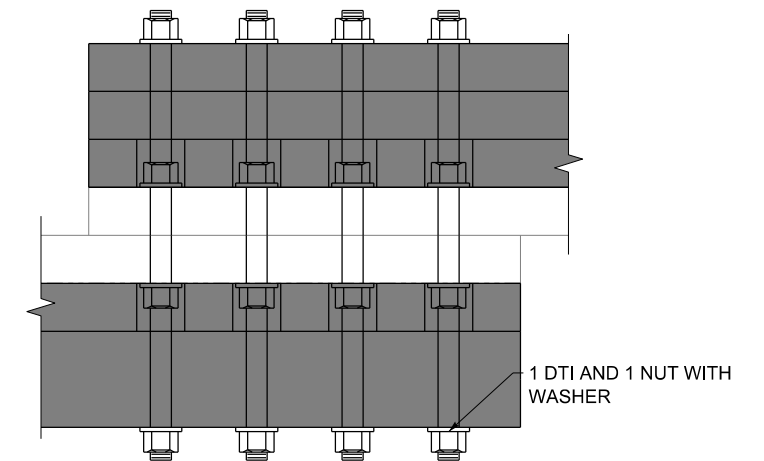
EXISTING CONDITION



REPLACE EXISTING BOLTS WITH
THREADED RODS



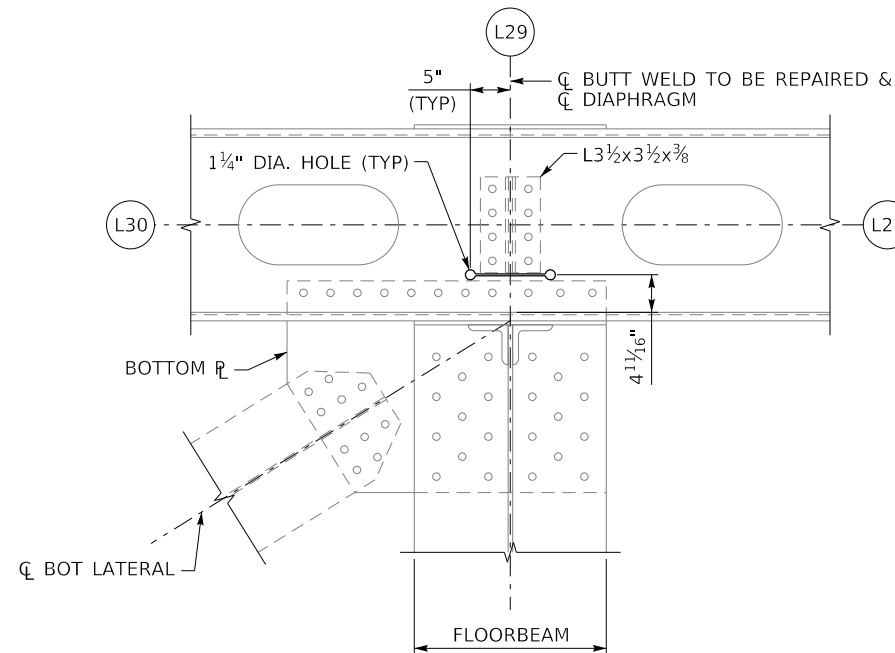
INSTALL CHEESE PLATE AND OUTSIDE PLATES ON ONE SIDE



INSTALL CHEESE PLATE AND OUTSIDE PLATES ON REMAINING SIDE

THREADED ROD INSTALLATION SEQUENCE

(SEE SPECIAL NOTE FOR BOLTING PROCEDURES OF FULLY THREADED RODS)



DOG-BONE RETROFIT AT WB US L29 IB

(SECTION AT BOTTOM LATERAL GUSSET PLATE)

WESTBOUND BRIDGE - BILL OF MATERIALS

PLATE MARK	TYPE	GRADE	NO. PLATES	PLATE WIDTH (IN)	PLATE THICKNESS (IN) **	PLATE LENGTH		HOLE SIZE (IN)	GRADE 50 WEIGHT (LBS.)	GRADE 70W WEIGHT (LBS.)
						(ft)	(IN)			
L5-O-1	CHEESE	50	1	31	1 1/2	2	0	2 3/4	316	---
L5-O-2	FILL	50	2	31	2	4	1	1 1/8	1,723	---
L5-O-3	SPLICE	HPS 70W (NSTM)	1	31	2 1/2	10	2 1/4	1 1/8	---	2,687
L29-O-1	FILL	50	1	24	1	0	10 5/8	1 1/8	72	---
L29-O-2	FILL	50	1	24	2 1/4	5	8 3/8	1 1/8	1,047	---
L29-O-3	FILL	50	1	24	2 1/4	5	1	1 1/8	934	---
L29-O-4	SPLICE	HPS 70W (NSTM)	1	24	2 1/2	12	9 5/8	1 1/8	---	2,614
L29-C-1	ANGLE CONNECTION	50	2	L5x5	3/4	0	10 3/8	*	41	---
L29-C-2	ANGLE CONNECTION	50	2	L5x5	3/4	0	9 7/8	*	39	---
L29-C-3	ANGLE CONNECTION	50	1	L4x3 1/2	1/2	2	3 1/2	*	27	---
L29-C-4	CONNECTION	50	1	19 1/4	3/8	3	3 1/4	15/16	80	---
L7-O-1	CHEESE	50	1	31	1 1/2	2	0	2 3/4	316	---
L7-O-2	FILL	50	2	31	2	3	7	1 1/8	1,512	---
L7-O-3	SPLICE	HPS 70W (NSTM)	1	31	2	9	2 1/4	1 1/8	---	1,938
TOTAL									6,109	7,239

NOTES

- ANGLE DIMENSIONS IN THE BILL OF MATERIALS ARE GIVEN WITH THE FIRST DIMENSION BEING THE LENGTH OF THE HORIZONTAL LEG AND THE SECOND DIMENSION BEING THE LENGTH OF THE VERTICAL LEG.
- FOR MATERIAL AND FABRICATION, NONREDUNDANT STEEL TENSION MEMBER ABBREVIATED AS NSTM IN THE BILL OF MATERIALS IS THE SAME AS THE FORMER FRACTURE CRITICAL MEMBER (FCM) DESIGNATION.
- PLATES WITH A 2 3/4" HOLE SIZE IN THE BILL OF MATERIAL ARE CHEESE PLATES. DETAIL SHEETS PROVIDE BOLT SYMBOLS WITH HOLE SIZES DIFFERING FROM THE 2 3/4" HOLE SIZE FOR THE CHEESE PLATES. USE 2 3/4" HOLES FOR ALL PLATES MARKED WITH 2 3/4" HOLES IN THE BILL OF MATERIAL.
- ALL FILL PLATE THICKNESSES CAN BE INCREASED OR DECREASED BY 1/16" AS NEEDED BY THE CONTRACTOR TO SIMPLIFY THE PLATE ORDER.

EASTBOUND BRIDGE - BILL OF MATERIALS

PLATE MARK	TYPE	GRADE	NO. PLATES	PLATE WIDTH (IN)	PLATE THICKNESS (IN) **	PLATE LENGTH		HOLE SIZE (IN)	GRADE 50 WEIGHT (LBS.)	GRADE 70W WEIGHT (LBS.)
						(ft)	(IN)			
U15-O-1	CHEESE	50	1	31	1 1/2	1	10 3/4	2 3/4	300	---
U15-O-2	FILL	50	2	31	2	5	10	1 1/8	2,461	---
U15-O-3	SPLICE	HPS 70W (NSTM)	1	31	3 1/2	13	7	1 1/8	---	5,015
U17-O-1	CHEESE	50	1	23 1/4	1 1/2	1	10 3/4	*	225	---
U17-O-2	FILL	50	1	23 1/4	2	7	4	*	1,160	---
U17-O-3	FILL	50	1	23 1/4	2	7	6	*	1,187	---
U17-O-4	SPLICE	HPS 70W (NSTM)	1	23 1/4	4 1/2	16	9	1 1/8	---	5,963
L27-T-1	SPLICE	HPS 70W (NSTM)	1	22 1/2	1	3	2	1 1/8	---	---
L29-T-1	SPLICE	HPS 70W (NSTM)	2	22 1/2	1	3	2	1 1/8	---	485
TOTAL									5,333	11,463

* FOR BOLT HOLE SIZES, SEE DETAIL SHEETS.

** TO PROVIDE CONTRACTOR FLEXIBILITY IN PLATE ORDERS, THE THICKNESS OF THE FILL PLATES AND CHEESE PLATES ARE NOMINAL THICKNESSES THAT CAN BE MADE UP OF UP TO 2 PLATES IF DESIRED AS LONG AS NO PLATE THICKNESS IS LESS THAN 3/4". THE THICKNESS OF SPLICE PLATES IS THE MINIMUM THICKNESS REQUIRED BUT CAN BE MADE UP OF MULTIPLE PLATES IF DESIRED AS LONG AS NO PLATE THICKNESS IS LESS THAN 1".

LEGEND

- INDICATES DRILL 1 1/8" DIA. HOLE IN EXISTING PLATE AND/OR NEW STEEL FOR INSTALLATION OF NEW 1" DIA. (A490) BOLTS. THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.
- ⊗ INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1" DIA. (A490) BOLTS WITH 1 1/8" DIA. HOLES IN NEW STEEL, UNLESS NOTED OTHERWISE. THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.
- ⊕ INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 1" DIA. A354 GR. BD THREADED RODS WITH 1 1/8" DIA. HOLES IN NEW STEEL, UNLESS NOTED OTHERWISE.
- INDICATES REMOVE EXISTING BOLTS AND REPLACE WITH NEW 7/8" DIA. (A325) BOLTS WITH 15/16" DIA. HOLES IN EXISTING AND NEW STEEL, UNLESS NOTED OTHERWISE. THREADS SHALL BE EXCLUDED FROM SHEAR PLANE.
- INDICATES EXISTING BOLTS AND BOLT HOLES.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



REVISION

DATE

Michael Baker
INTERNATIONAL

PREPARED BY
1850 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 07/12/2024

CHECKED BY

DESIGNED BY: MJ DWYER

P COZZENS

DETAILED BY: MJ DWYER

P COZZENS

BILL OF MATERIALS

CROSSING
OHIO RIVER

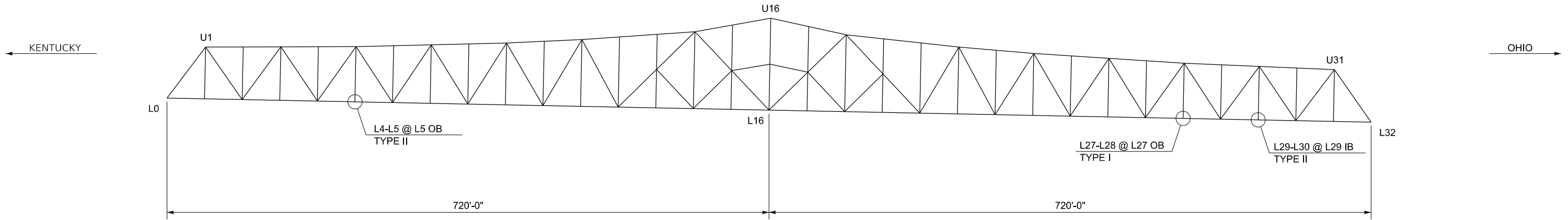
ROUTE
I-275

ITEM NO.

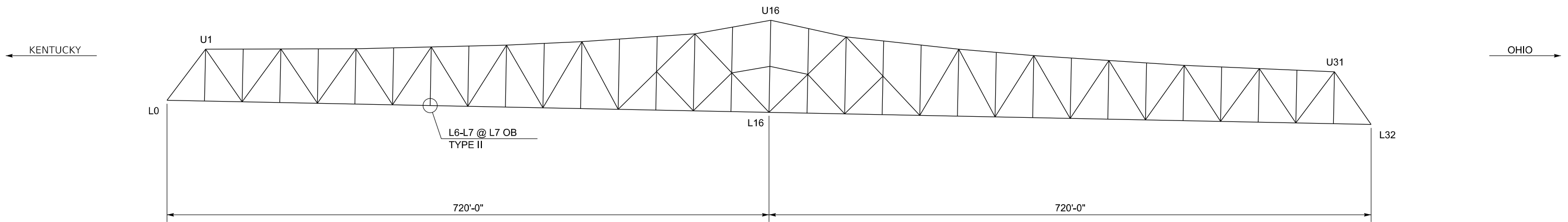
SHEET NO.
S4

COUNTY OF
CAMPBELL

DRAWING NUMBER
28910



WESTBOUND BRIDGE - UPSTREAM TRUSS ELEVATION



WESTBOUND BRIDGE - DOWNSTREAM TRUSS ELEVATION

LEGEND

① ② ③ ④
EXAMPLE: L6-L7 @ L7 OB TYPE II

- ① TRUSS MEMBER
 - ② @ PANEL POINT
 - ③ IB = INBOARD VERTICAL PLATE
OB = OUTBOARD VERTICAL PLATE
BOT = BOTTOM COVER PLATE
TOP = TOP COVER PLATE
 - ④ TYPE I = CORING
TYPE II = PLATING
- (SEE SHEET NO. S8 FOR MORE DETAILS ON REPAIR TYPE)



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

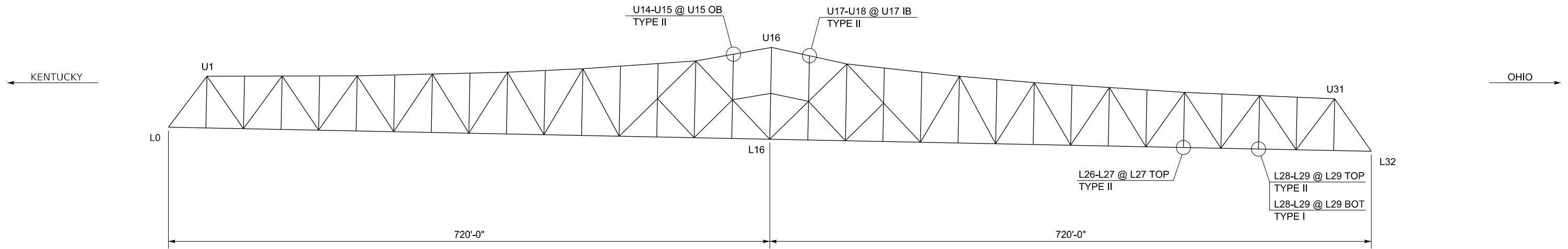
DATE PLOTTED: 23-AUG-2024

PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

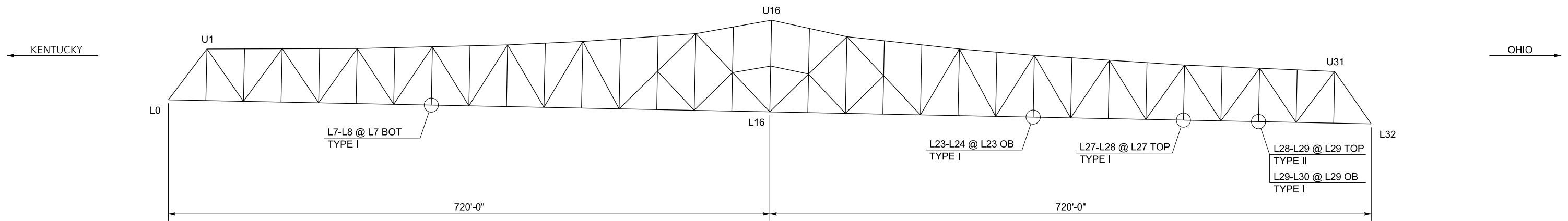
DATE: 07/12/2024	CHECKED BY:
DESIGNED BY: L CLARK	P COZZENS
DETAILED BY: MJ DWYER	P COZZENS

WB BRIDGE REPAIR LOCATIONS
CROSSING
OHIO RIVER

ROUTE	ITEM NO.	COUNTY OF
I-275	S5	CAMPBELL
	DRAWING NUMBER	
	28910	



EASTBOUND BRIDGE - UPSTREAM TRUSS ELEVATION



EASTBOUND BRIDGE - DOWNSTREAM TRUSS ELEVATION

LEGEND

① ② ③ ④
EXAMPLE: L6-L7 @ L7 OB TYPE II

① TRUSS MEMBER

U = UPPER CHORD
L = LOWER CHORD
M = MIDDLE PANEL

④ TYPE I = CORING
TYPE II = PLATING

② @ PANEL POINT

(SEE SHEET NO. S8 FOR MORE DETAILS ON REPAIR TYPE)

③ IB = INBOARD VERTICAL PLATE
OB = OUTBOARD VERTICAL PLATE
BOT = BOTTOM COVER PLATE
TOP = TOP COVER PLATE



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024

PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 07/12/2024	CHECKED BY:
DESIGNED BY: L CLARK	P COZZENS
DETAILED BY: MJ DWYER	P COZZENS

EB BRIDGE REPAIR LOCATIONS
CROSSING
OHIO RIVER

ROUTE
I-275

ITEM NO.	COUNTY OF
SHEET NO. S6	CAMPBELL
DRAWING NUMBER	28910

WESTBOUND BRIDGE - UPSTREAM TRUSS REPAIRS

MEMBER	LOCATION	PLATE	NON-DESTRUCTIVE TESTING				REMEDICATION PLAN		REMEDICATION					REMARKS	
			INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE TESTED	REPAIR TYPE	CORE DIAMETER (IN)	INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE + REMEDIATED	NDT TECHNICIAN INITIALS +		
L4-L5	L5	OB-FLANGE	0.75	-0.25	19.50	5/3/2023	II**	N/A							
			10.50	-0.30	6.50	5/3/2023	II**	N/A							
L27-L28	L27	OB-FLANGE #	3.00	-0.50	18.25	5/5/2023	I***	2							SNOWMAN RETROFIT
L29-L30	L29	IB-FLANGE	7.25	+0.75	8.75	5/5/2023	II**	N/A							

WESTBOUND BRIDGE - DOWNSTREAM TRUSS REPAIRS

MEMBER	LOCATION	PLATE	NON-DESTRUCTIVE TESTING				REMEDICATION PLAN		REMEDICATION					REMARKS	
			INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE TESTED	REPAIR TYPE	CORE DIAMETER (IN)	INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE + REMEDIATED	NDT TECHNICIAN INITIALS +		
L6-L7	L7	OB-FLANGE	17.50	0.00	4.50	6/1/2023	II**	N/A							

EASTBOUND BRIDGE - UPSTREAM TRUSS REPAIRS

MEMBER	LOCATION	PLATE	NON-DESTRUCTIVE TESTING				REMEDICATION PLAN		REMEDICATION					REMARKS	
			INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE TESTED	REPAIR TYPE	CORE DIAMETER (IN)	INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE + REMEDIATED	NDT TECHNICIAN INITIALS +		
L26-L27	L27	TOP	16.00	0.00	4.50	5/15/2023	II**	N/A							
L28-L29	L29	TOP	6.00	0.00	6.50	5/15/2023	II**	N/A							
		BOTTOM	3.00	0.00	1.00	5/15/2023	I***	2							SNOWMAN RETROFIT
U14-U15	U15	OB-FLANGE	12.00	-0.50	9.50	5/15/2023	II**	N/A							
U17-U18	U17	IB-FLANGE	5.00	-0.75	22.00	5/15/2023	II**	N/A							

EASTBOUND BRIDGE - DOWNSTREAM TRUSS REPAIRS

MEMBER	LOCATION	PLATE	NON-DESTRUCTIVE TESTING				REMEDICATION PLAN		REMEDICATION					REMARKS	
			INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE TESTED	REPAIR TYPE	CORE DIAMETER (IN)	INDICATION LENGTH (IN.)	X* (IN)	Y (IN)	DATE + REMEDIATED	NDT TECHNICIAN INITIALS +		
L7-L8	L7	BOTTOM	2.00	0.00	6.50	4/21/2023	I	2							
L23-L24	L23	OB-FLANGE #	2.00	0.00	13.00	4/20/2023	I	2							
L27-L28	L27	TOP	1.25	0.00	17.50	4/24/2023	I	2							
L28-L29	L29	TOP	19.50	0.00	2.50	4/24/2023	II**	N/A							
L29-L30	L29	OB-FLANGE #	1.70	0.00	16.60	4/26/2023	I	2							

* + X DIMENSION REPRESENTS DEFECT BEING ON THE AHEAD/GREATER PANEL POINT SIDE OF THE WELD.
 - X DIMENSION REPRESENTS DEFECT BEING ON THE BACK/SMALLER PANEL POINT OF THE WELD.
 (EX: U4-U5 AT U5 WITH X = -0.4" REPRESENTS DEFECT BEING ON U4 SIDE OF THE WELD,
 U7-U8 AT U8 WITH X = +0.8" REPRESENTS DEFECT BEING ON U8 SIDE OF THE WELD.)

REPAIR TYPE LEGEND

I CORE HOLE AND PLATE
 II PLATING (SEE DETAIL SHEETS INCLUDED IN THIS PLAN SET)

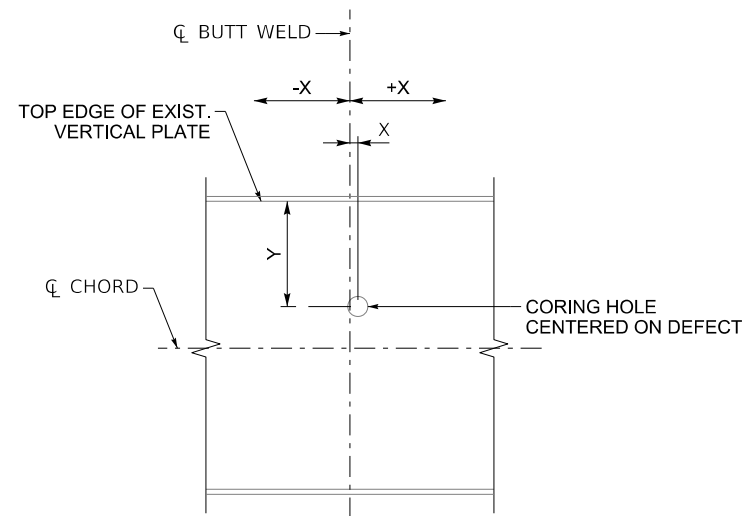
** SEE DETAIL SHEETS FOR TYPE II PLATING REPAIRS

*** USE 2-2" CORES WITH NO LESS THAN 1/2" OVERLAP TO CAPTURE THE INDICATION(S). GRIND SMOOTH ANY ROUGH EDGES AT THE INTERFACES OF THE TWO CORINGS

+ THE CONTRACTOR IS TO FILL OUT THIS INFORMATION ONCE REMEDIATION HAS BEEN COMPLETED. PROVIDE A COPY OF THE COMPLETED TABLE TO KYTC.

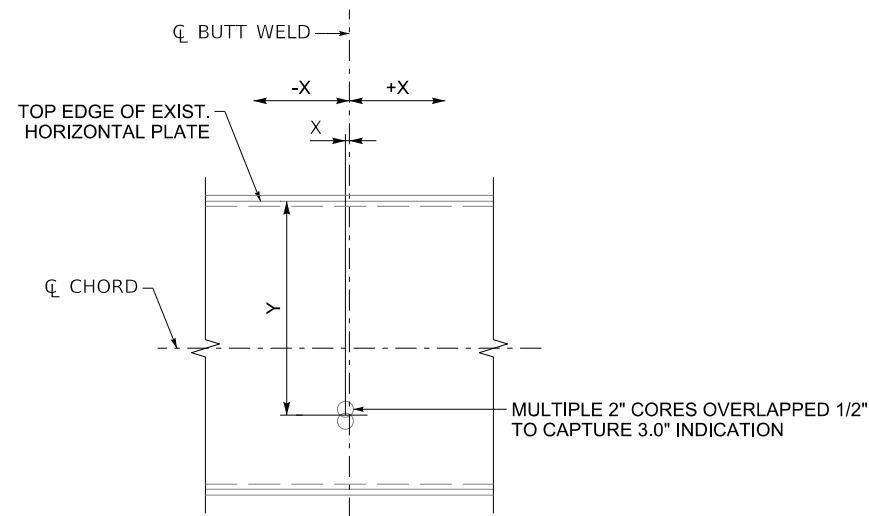
SEE DIAPHRAGM DISCONNECTION AND REATTACHMENT FOR TYPE I REPAIR ON SHEET NO. S8.

COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS	REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL	1850 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM	DATE: 07/12/2024 DESIGNED BY: MJ DWYER CHECKED BY: P COZZENS DETAILED BY: MJ DWYER P COZZENS	REPAIR LOCATIONS CROSSING OHIO RIVER	ROUTE I-275	ITEM NO. SHEET NO. S7	COUNTY OF CAMPBELL DRAWING NUMBER 28910
	MICROSTATION v10.17.01.58 USER: MaryJo.Dwyer DATE PLOTTED: 23-AUG-2024		FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/019B00040L Combs Hehl WB/4) Remediation/CADD/SHEETS/Combs Repair Tables.dgn						



ELEVATION

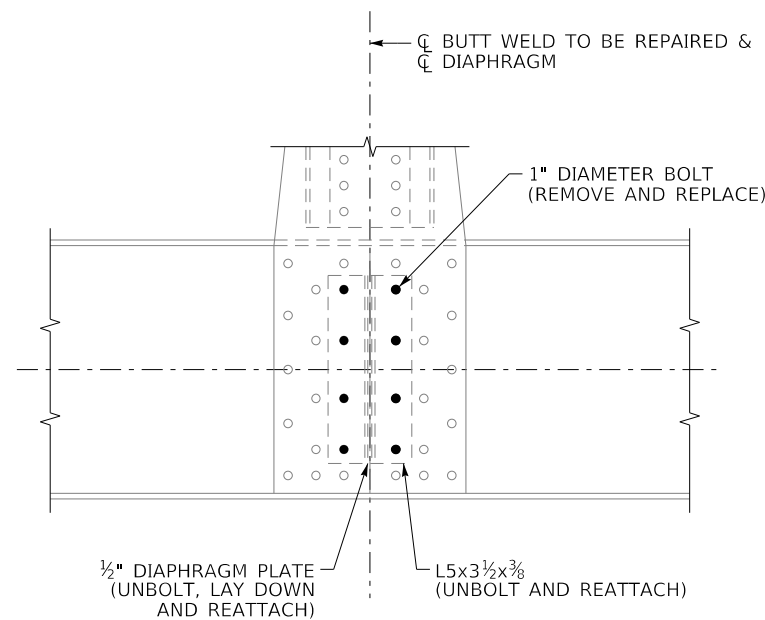
INBOARD AND OUTBOARD VERTICAL PLATE REPAIRS



PLAN

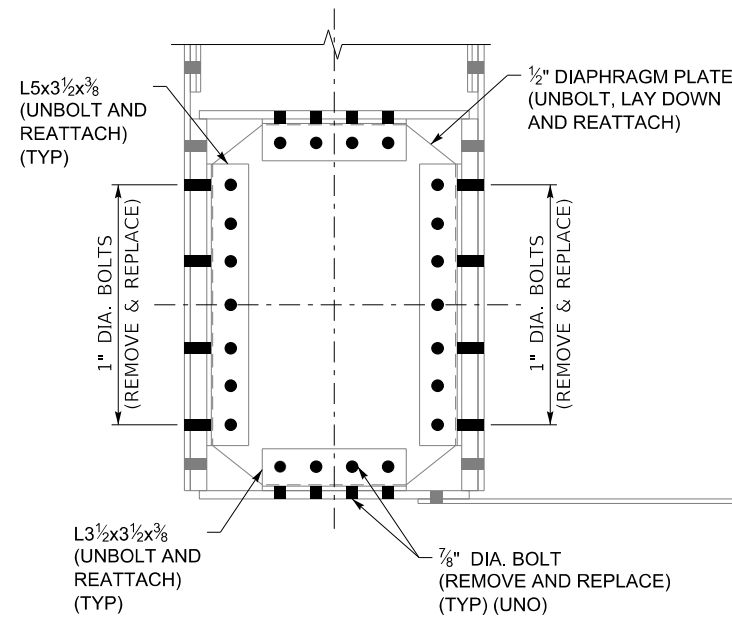
EXAMPLE SNOWMAN DETAIL
L28-L29 @ L29
BOTTOM COVER PLATE

TYPE I REPAIRS



DIAPHRAGM DISCONNECTION AND REATTACHMENT FOR TYPE I REPAIR - TYPICAL ELEVATION

(LOOKING AT OUTBOARD FACE)



DIAPHRAGM DISCONNECTION AND REATTACHMENT FOR TYPE I REPAIR - TYPICAL SECTION

NOTES

1. FOR WELD REPAIR TYPE I, THE INDICATION IS TO BE FIELD LOCATED BY A QUALIFIED NDT TECHNICIAN WITH A MINIMUM OF AN ASNT LEVEL II UT CERTIFICATE PRIOR TO PERFORMANCE OF ANY WORK. ALL CORING REPAIRS IN IB OR OB VERTICAL FLANGE PLATES OF A LOWER CHORD MEMBER WILL REQUIRE THE TEMPORARY DISCONNECTION OF A DIAPHRAGM. CONTRACTOR SHALL REATTACH DIAPHRAGM USING NEW ASTM F3125 GRADE 325 BOLTS OF THE SAME DIAMETER AS EXISTING. THE COST TO COMPLETE THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF CORING REPAIRS AND IS INCLUDED IN BID ITEM 24879EC STEEL REPAIR - CORING TYPICAL.
2. FOR WELD REPAIR TYPE I, CENTER THE CORE HOLE ON THE LENGTH OF THE INDICATION TO ENSURE THE INDICATION IS FULLY CONTAINED WITHIN THE CORED HOLE. CONTRACTOR MAY INSTALL CORES THROUGH THE EXISTING VERTICAL GUSSET PLATE AT IB OR OB VERTICAL FLANGE PLATES OF A LOWER CHORD MEMBER AS SPECIFIED IN THE TRUSS REPAIR TABLES ON SHEET NO. S7 TO AVOID DISCONNECTING THE GUSSET PLATE AND EMPLOYING TEMPORARY SHORING. ANY CORING THROUGH THESE GUSSETS BEYOND THE LIMITS SPECIFIED IN THE TRUSS REPAIR TABLES ON SHEET NO. S7 SHALL REQUIRE WRITTEN APPROVAL OF THE ENGINEER.
3. AFTER CORING HAS BEEN PERFORMED, PERFORM MT, OR PT, ON THE REMAINING HOLE TO CONFIRM SURFACE BREAKING INDICATIONS ARE NOT FOUND ON THE SURFACE OF THE CORED HOLE. IF ANY SUCH INDICATIONS ARE FOUND, USE LIGHT SURFACE DIE GRINDING TO REMOVE THEM.
4. IF ANY CORE INTERSECTS WITH A PERPENDICULAR PLATE, CUT CORE FROM THE PLATE AND USE A DIE GRINDER TO SMOOTH OUT TRANSITION AND REMOVE ANY SHARP CORNERS, NOTCHES, OR CUTS.

NOTES FOR DIAPHRAGM DISCONNECTION AND REATTACHMENT FOR TYPE I REPAIR

1. UNBOLT 22 - 7/8" DIAMETER A325 BOLTS CONNECTING DIAPHRAGM PLATE TO ANGLES.
2. UNBOLT 1 TOP AND 1 BOTTOM L3 1/2x3 1/2x3/8 FROM THE LOWER CHORD, INCLUDING 8 - 7/8" DIAMETER BOLTS.
3. UNBOLT 1 INBOARD L5x3 1/2x3/8 FROM THE LOWER CHORD, INCLUDING 4 - 1" DIAMETER BOLTS.
4. UNBOLT 2 OUTBOARD L5x3 1/2x3/8s FROM THE LOWER CHORD, INCLUDING 8 - 1" DIAMETER BOLTS.
5. LAY DIAPHRAGM DOWN ON THE INSIDE OF THE LOWER CHORD, CLEAN STEEL, AND LOCATE THE UT INDICATION PER NOTE 1.
6. INSTALL CORE HOLE PER NOTES 2 AND 3.
7. REATTACH DIAPHRAGM AND ALL ANGLES USING NEW ASTM F3125 GRADE A325 BOLTS, A563 NUTS AND F436 HARDENED WASHERS.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024

PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

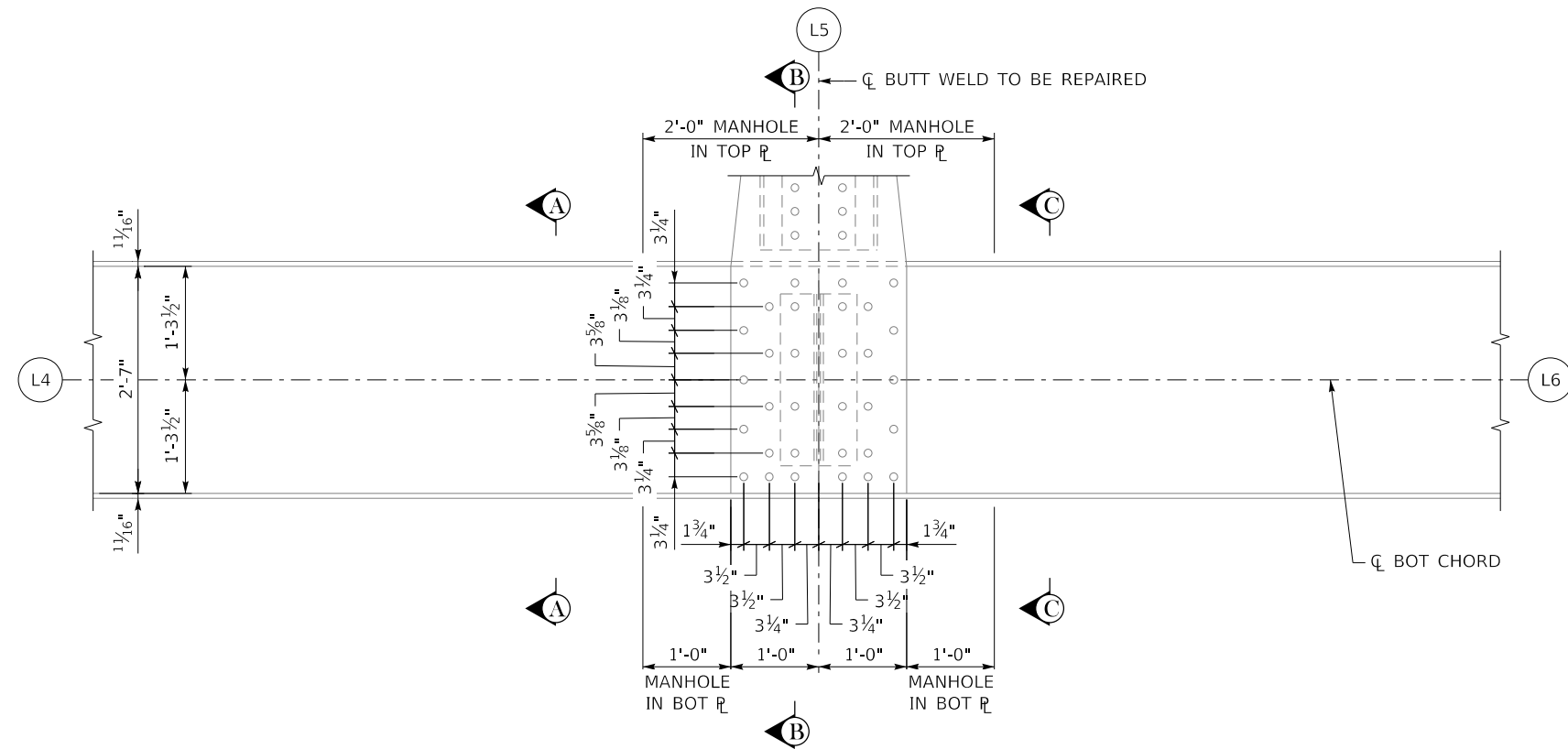
DATE: 07/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	L CLARK
DETAILED BY: MJ DWYER	P COZZENS

REPAIR DETAILS
CROSSING
OHIO RIVER

ROUTE
I-275

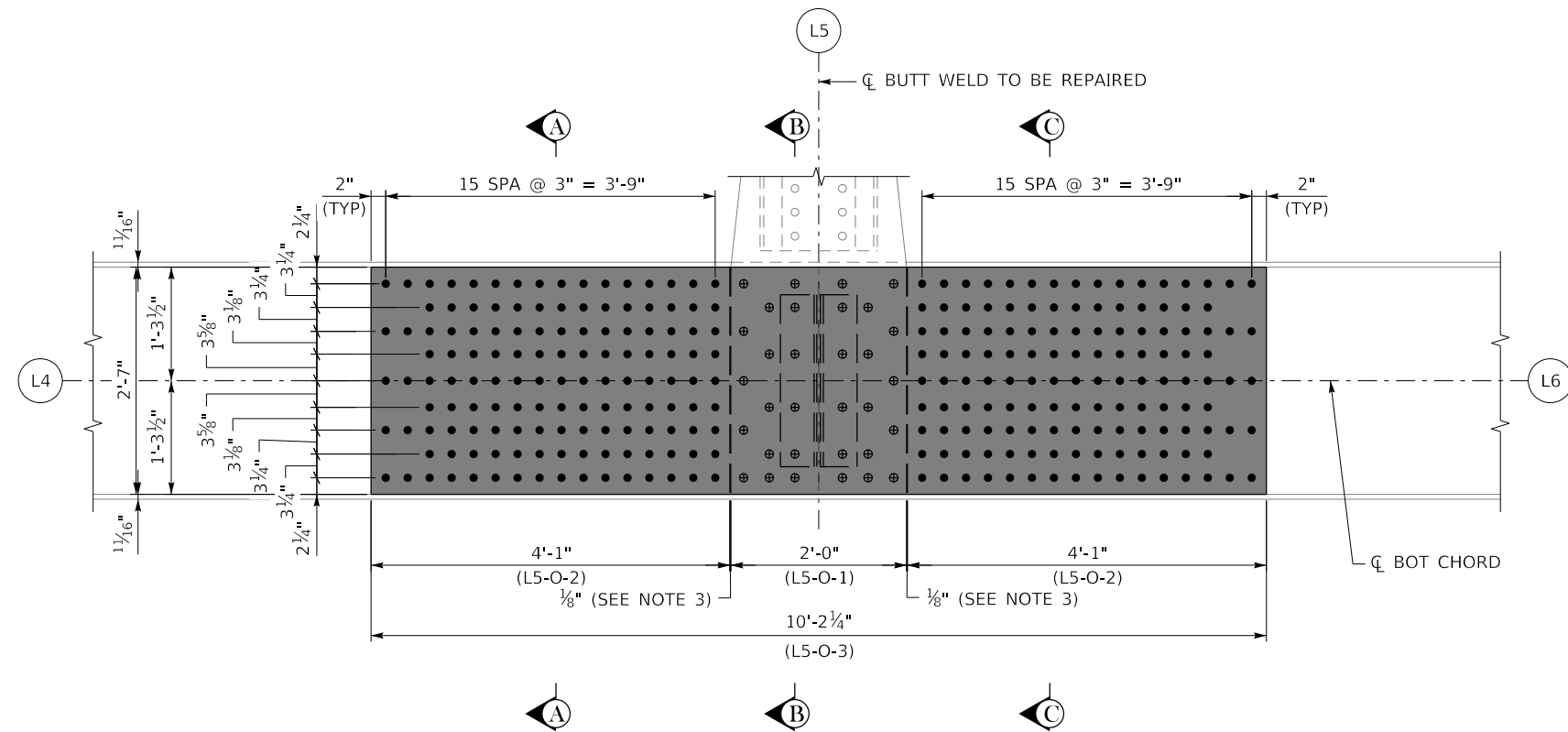
ITEM NO.
S8

COUNTY OF
CAMPBELL
DRAWING NUMBER
28910



EXISTING ELEVATION - L5

(WESTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)



PROPOSED ELEVATION - L5

(WESTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)

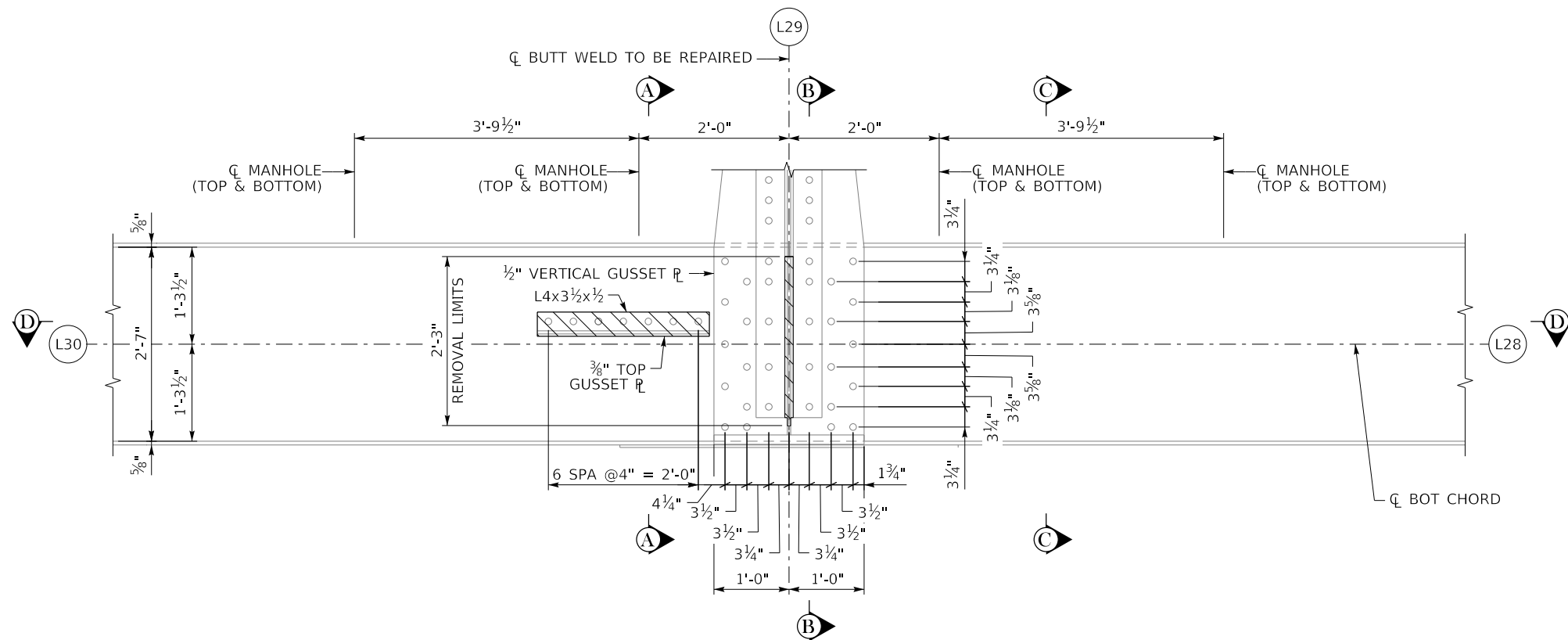
CONSTRUCTION SEQUENCE

1. CONSTRUCT TOP AND BOTTOM COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET NO. S3.
2. REMOVE EXISTING BOLTS AS SPECIFIED AND INSTALL THREADED RODS AT VERTICAL GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL, AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

NOTES

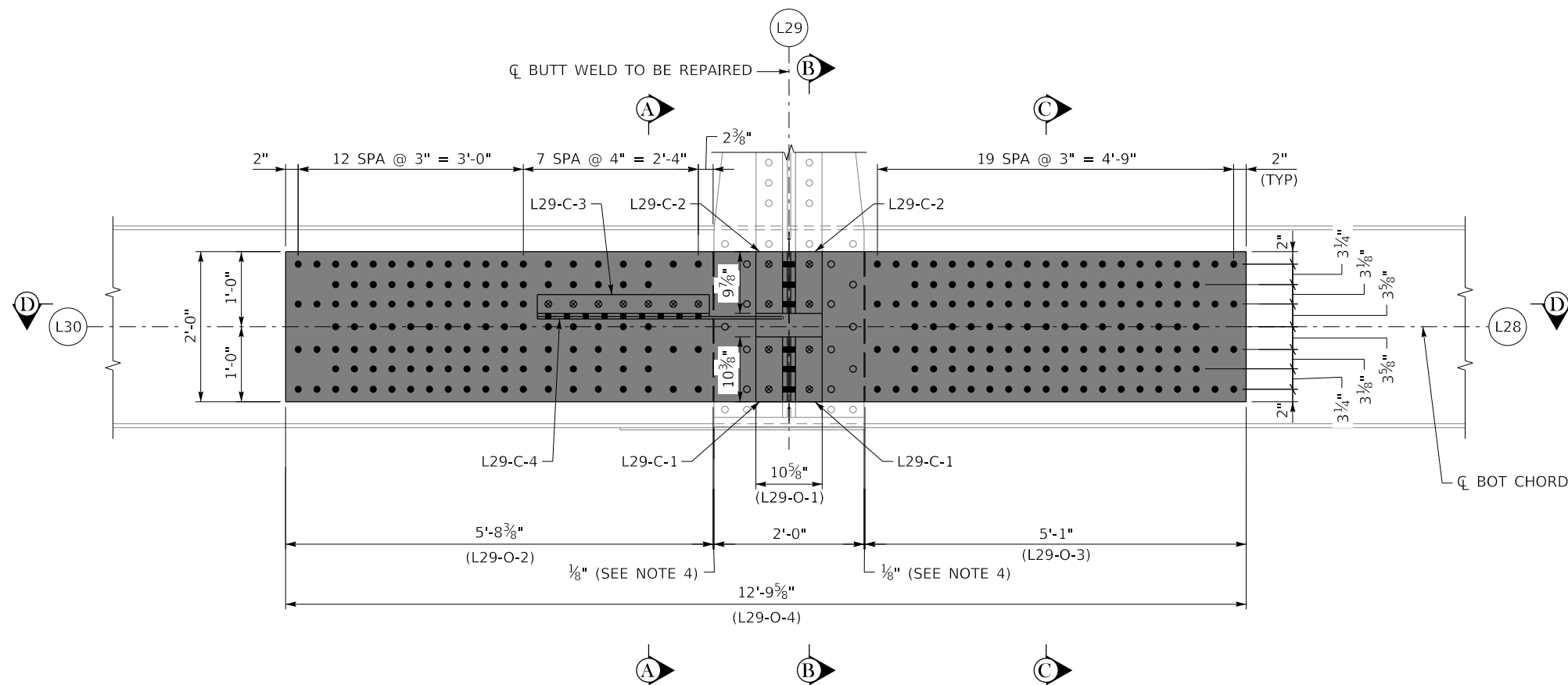
1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S10.
2. FOR BOLT LEGEND, SEE SHEET NO. S4.
3. ASSUMED 1/8" GAP BETWEEN EXISTING GUSSET PLATE AND NEW FILL PLATE.

	REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL	DATE: 07/12/2024 DESIGNED BY: P COZZENS DETAILED BY: MJ DWYER	CHECKED BY L CLARK P COZZENS	WB US L5 OB REPAIR DETAIL - 1 CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
							I-275	S9	CAMPBELL
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS TEAM KENTUCKY TRANSPORTATION CABINET									DRAWING NUMBER 28910



EXISTING ELEVATION - L29

(WESTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)



PROPOSED ELEVATION - L29

(WESTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)

CONSTRUCTION SEQUENCE

1. CONSTRUCT TOP AND BOTTOM COVER PLATE DOG-BONES AT IB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET NO. S3. CONTRACTOR SHALL INSTALL DOG-BONES ADJACENT TO LATERAL GUSSET PLATES, NOT THROUGH THEM.
2. REMOVE 3/8" TOP LATERAL BRACING GUSSET PLATE.
3. REMOVE L4x3 1/2x1/2 IB LATERAL BRACING CONNECTION ANGLE AS SHOWN ON SHEET NO. S13.
4. COPE TOP FLANGE OF LATERAL BRACING MEMBER AS SHOWN ON SHEET NO. S13.
5. COPE WEB OF FLOORBEAM AS SHOWN ON SHEET NO. S12, REMOVING THE PORTION OF THE INBOARD LEGS OF (2) L5x5x3/4s AS SHOWN ON SHEET NO. S12. CONTRACTOR SHALL ENSURE THE OUTBOARD LEG OF THESE ANGLES IS INTACT AND GRIND THE INBOARD LEGS OF THE L5x5x3/4s FLUSH AFTER REMOVAL.
6. INSTALL NEW FILL AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED, AND INSTALL NEW L5x5x3/4s CONNECTING THE NEW SPLICE PLATES TO THE FLOORBEAM WEB. CONTRACTOR SHALL NOT REMOVE FROM THE EXISTING 1/2" VERTICAL GUSSET PLATE CONNECTION MORE THAN THE 8 BOLTS NECESSARY TO REMOVE THE INTERIOR DIAPHRAGM FOR UT REJECTABLE CONFIRMATION.
7. INSTALL NEW L4x3 1/2x1/2 IB LATERAL BRACING CONNECTION ANGLE TO THE LOWER CHORD.
8. INSTALL NEW 3/8" TOP LATERAL BRACING GUSSET PLATE.

NOTES

1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S12.
2. FOR SECTION D-D, SEE SHEET NO. S13.
3. FOR BOLT LEGEND, SEE SHEET NO. S4.
4. ASSUMED 1/8" GAP BETWEEN EXISTING GUSSET PLATE AND NEW FILL PLATE.

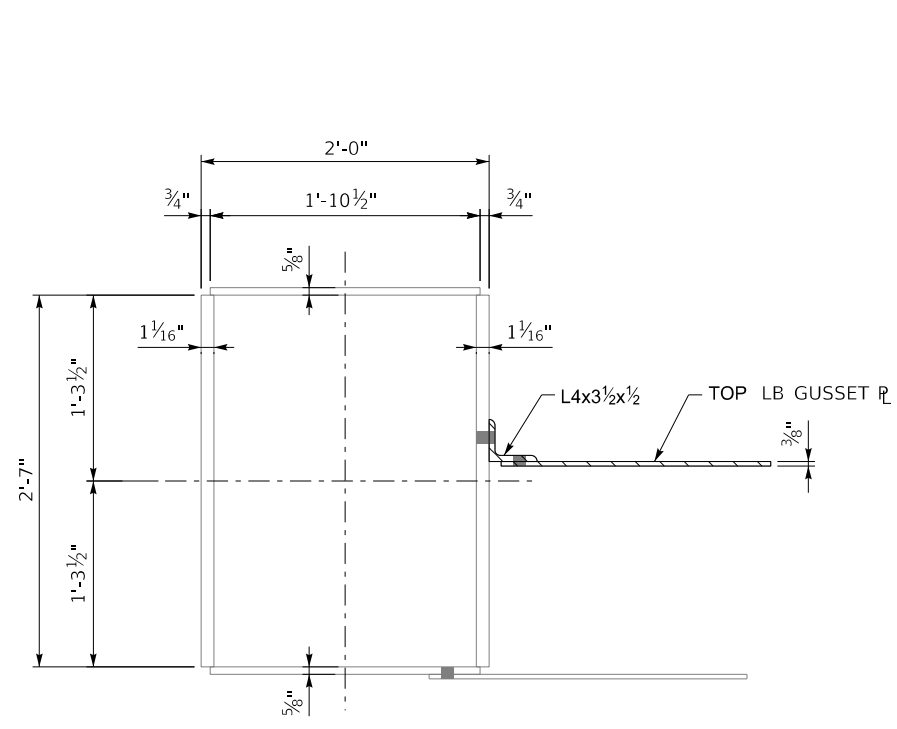
LEGEND

■ INDICATES HOLE IN EXISTING PLATE AND NEW STEEL. FOR BOLT HOLE AND SIZE, SEE SHEET NO. S4.

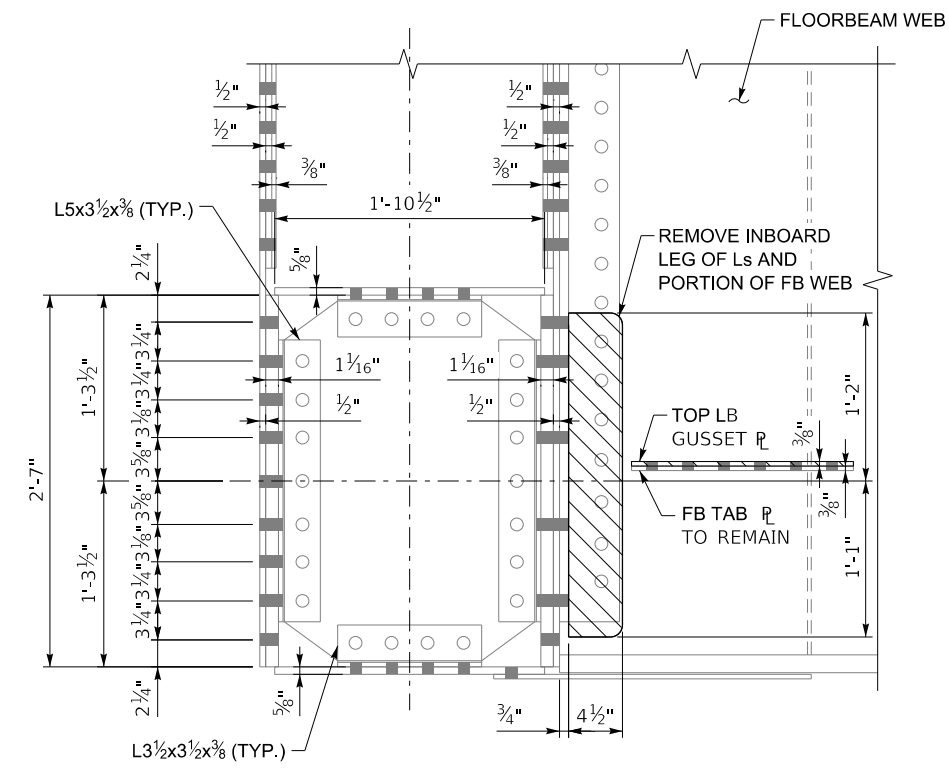
Ⓐ 2 EQUAL SPACES = 6 3/8"

NOTES

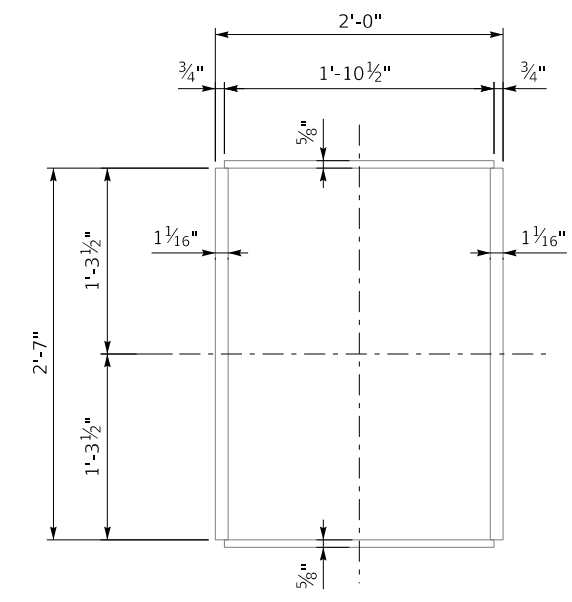
- LATERAL BRACING NOT SHOWN FOR CLARITY.
- FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S11.



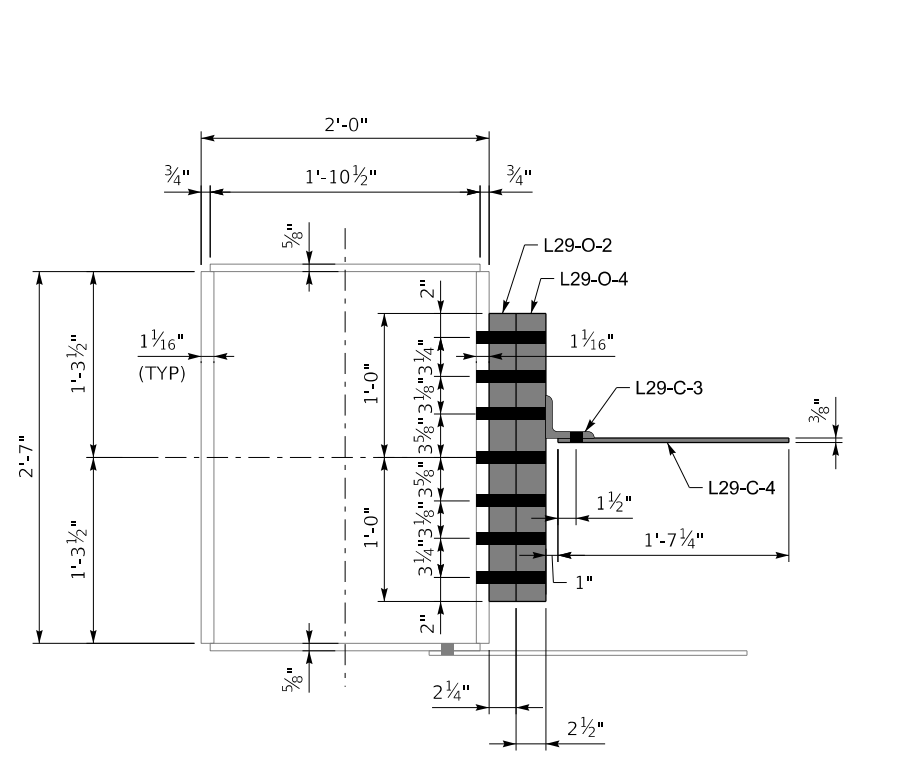
SECTION A-A
(EXISTING CONDITION)



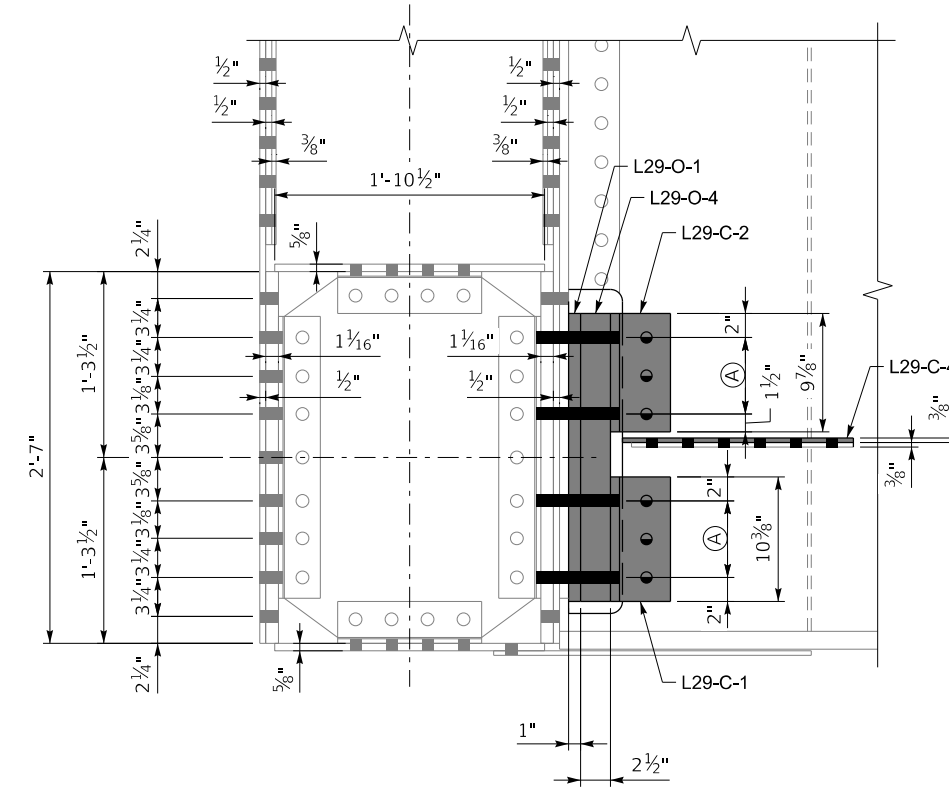
SECTION B-B
(EXISTING CONDITION)



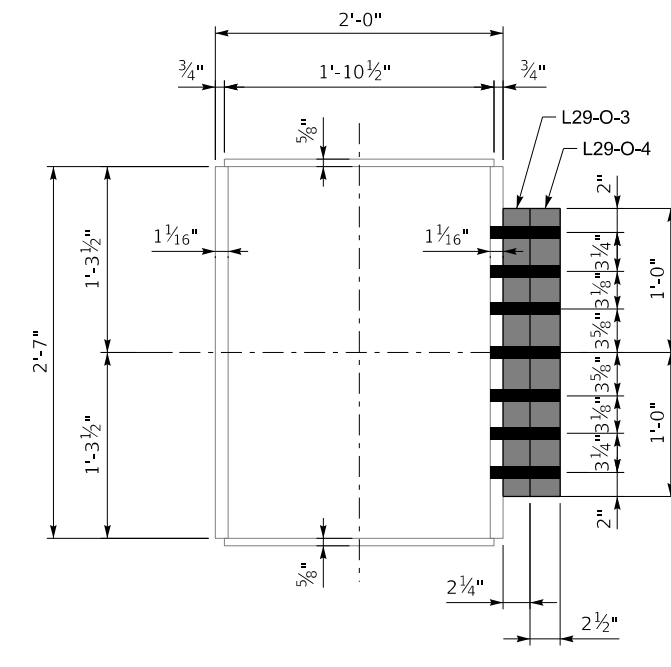
SECTION C-C
(EXISTING CONDITION)



SECTION A-A
(PROPOSED CONDITION)

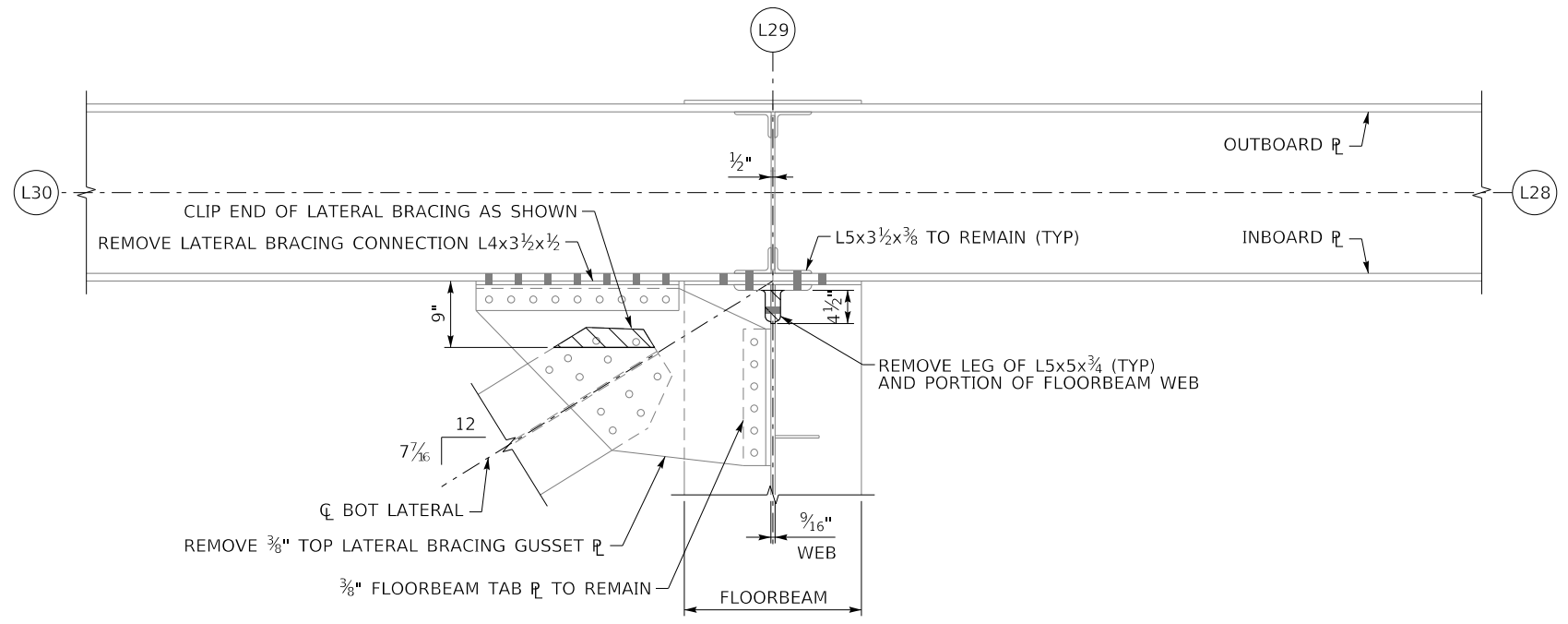


SECTION B-B
(PROPOSED CONDITION)



SECTION C-C
(PROPOSED CONDITION)

	REVISION	DATE	PREPARED BY Michael Baker INTERNATIONAL	DATE: 07/12/2024 DESIGNED BY: P COZZENS DETAILED BY: MJ DWYER	CHECKED BY L CLARK P COZZENS	WB US L29 IB REPAIR DETAIL - 2 CROSSING OHIO RIVER	ROUTE	ITEM NO.	COUNTY OF
				1650 Lyndon Farm Court Louisville, KY Phone: (502)-339-3557 MBAKERINTL.COM				I-275	S12
MicroStation v10.17.01.58	USER: MaryJo.Dwyer	DATE PLOTTED: 23-AUG-2024		FILE NAME: pw://mb-us-pw.bentley.com/mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/019B00040L Combs Hehl WB/4) Remediation/CADD/SHEETS/Combs_02_L29-DETAIL_02.dgn					DRAWING NUMBER 28910



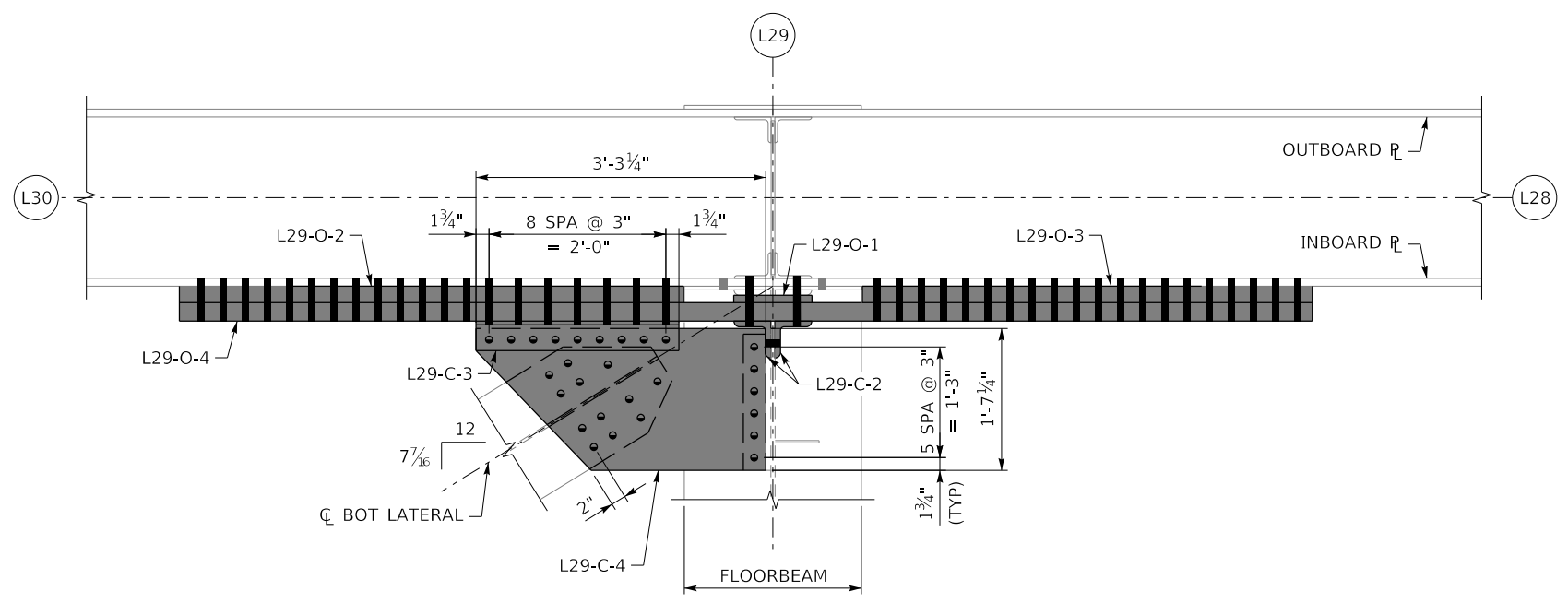
SECTION D-D
(EXISTING CONDITION)

LEGEND

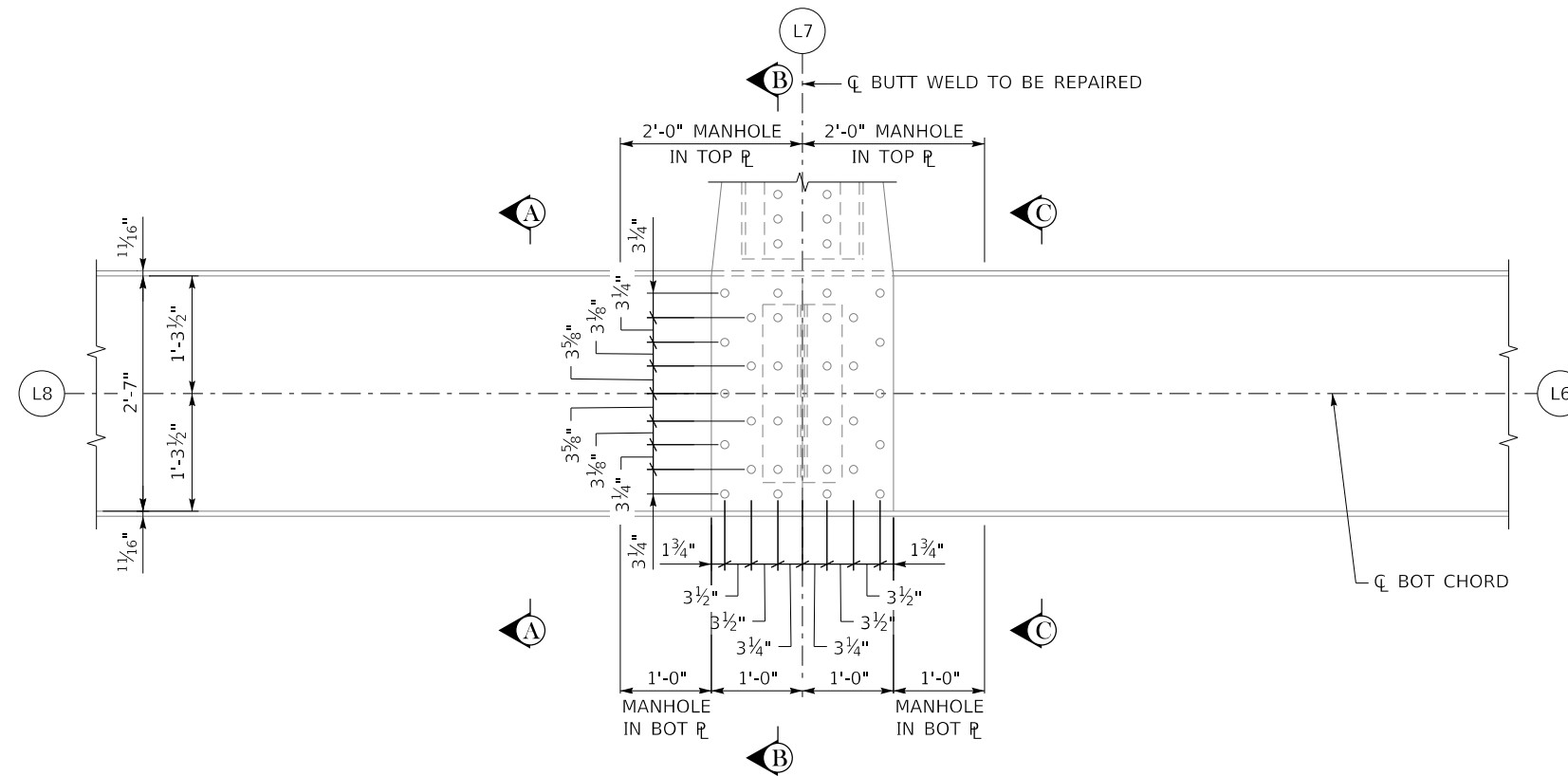
INDICATES HOLE IN EXISTING PLATE AND NEW STEEL.
FOR BOLT HOLE AND SIZE, SEE SHEET NO. S4.

NOTES

1. FOR LOCATION OF SECTION D-D, SEE SHEET NO. S11.

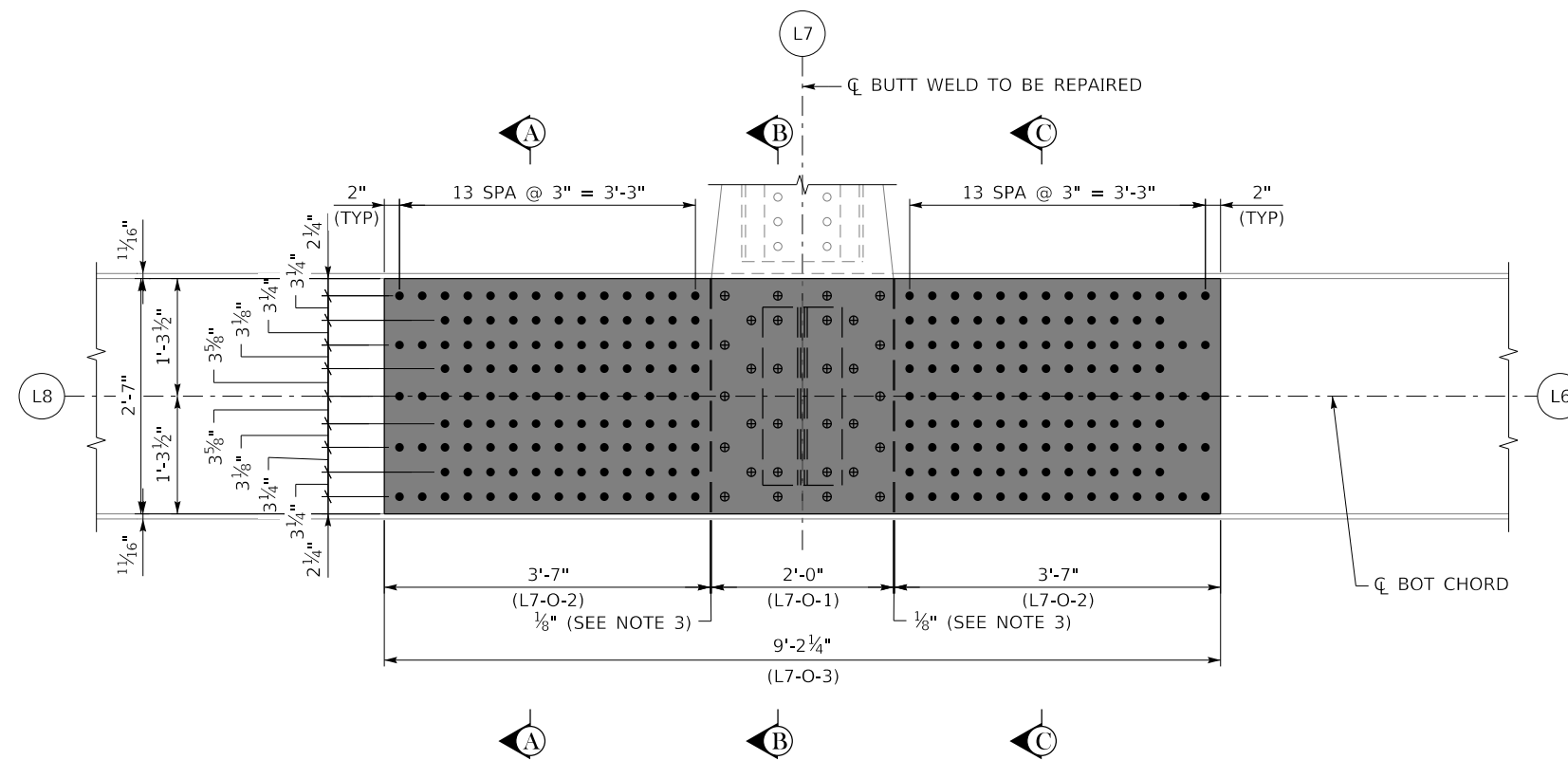


SECTION D-D
(PROPOSED CONDITION)



EXISTING ELEVATION - L7

(WESTBOUND BRIDGE, DOWNSTREAM TRUSS, LOOKING UPSTREAM AT OUTBOARD FACE)



PROPOSED ELEVATION - L7

(WESTBOUND BRIDGE, DOWNSTREAM TRUSS, LOOKING UPSTREAM AT OUTBOARD FACE)

CONSTRUCTION SEQUENCE

1. CONSTRUCT TOP AND BOTTOM COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET NO. S3.
2. REMOVE EXISTING BOLTS AS SPECIFIED AND INSTALL THREADED RODS AT VERTICAL GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL, AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

NOTES

1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S15.
2. FOR BOLT LEGEND, SEE SHEET NO. S4.
3. ASSUMED 1/8\"/>



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

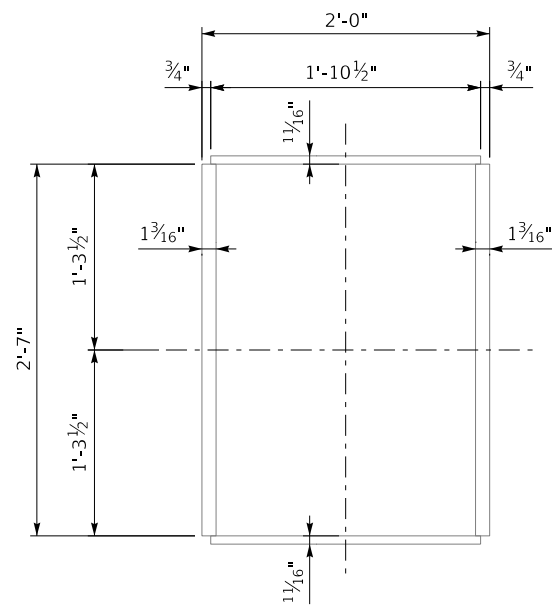
DATE PLOTTED: 23-AUG-2024

PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
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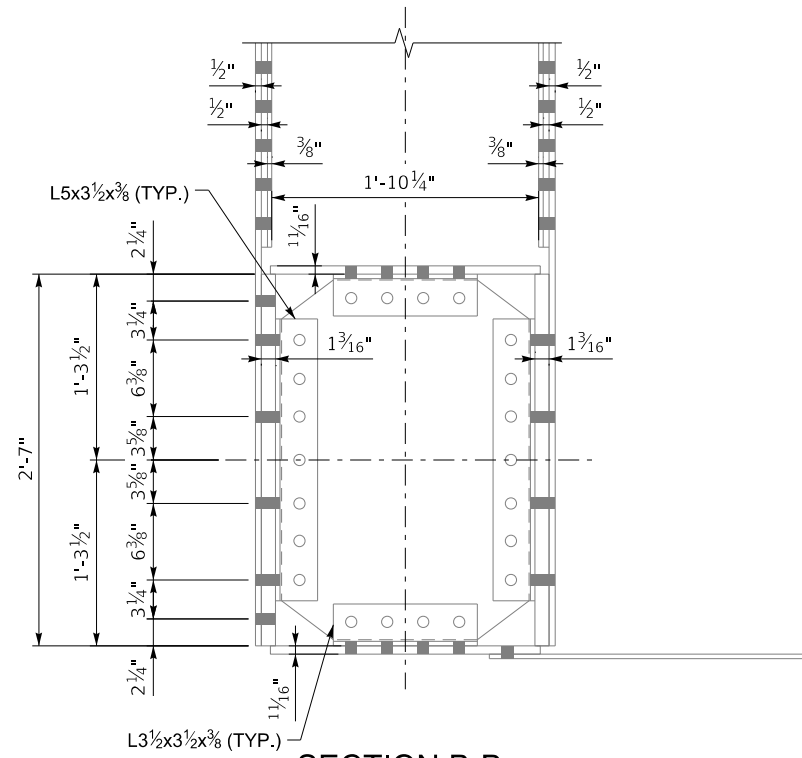
DATE: 07/12/2024	CHECKED BY: L CLARK
DESIGNED BY: P COZZENS	DETAILED BY: MJ DWYER
	P COZZENS

WB DS L7 OB REPAIR DETAIL - 1
CROSSING
OHIO RIVER

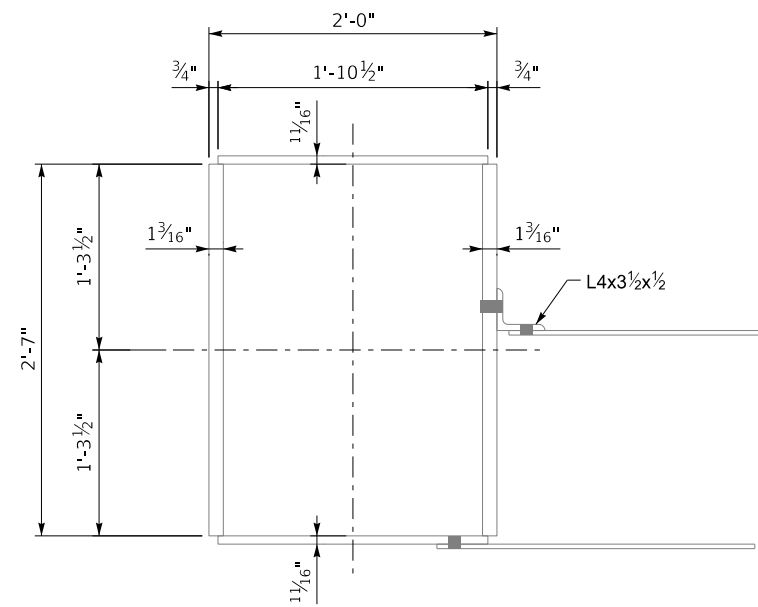
ROUTE: I-275	ITEM NO.:	COUNTY OF: CAMPBELL
	SHEET NO. S14	DRAWING NUMBER: 28910



SECTION A-A
(EXISTING CONDITION)



SECTION B-B
(EXISTING CONDITION)



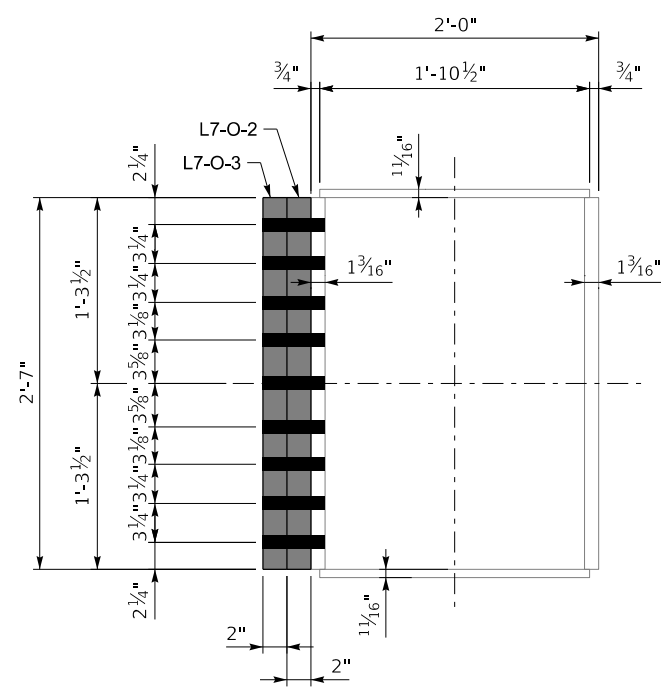
SECTION C-C
(EXISTING CONDITION)

LEGEND

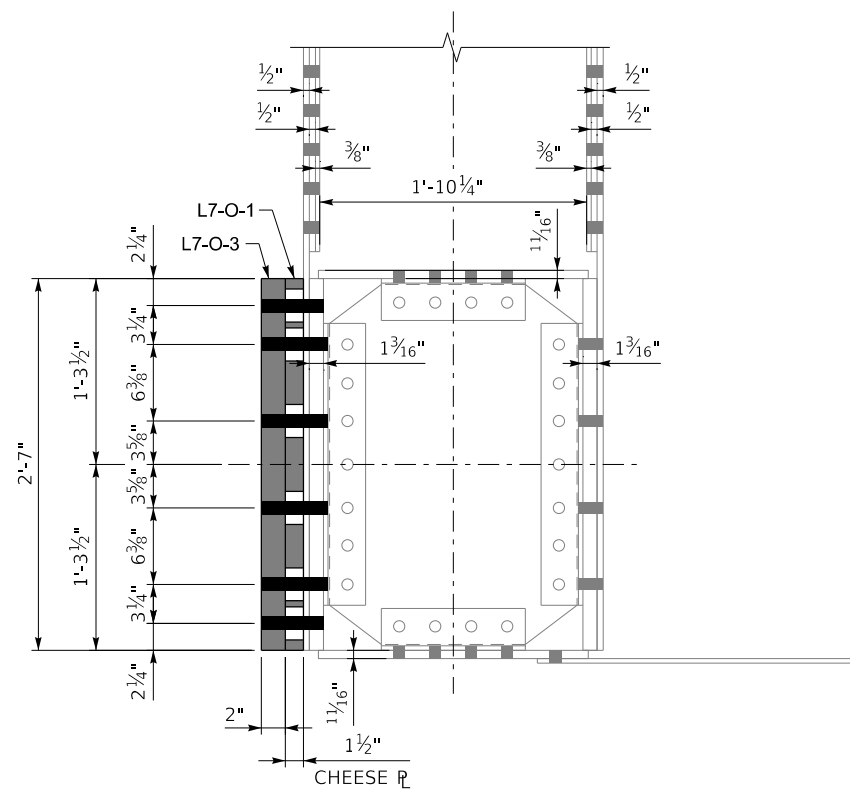
■ INDICATES HOLE IN EXISTING PLATE AND NEW STEEL.
FOR BOLT HOLE AND SIZE, SEE SHEET NO. S4.

NOTES

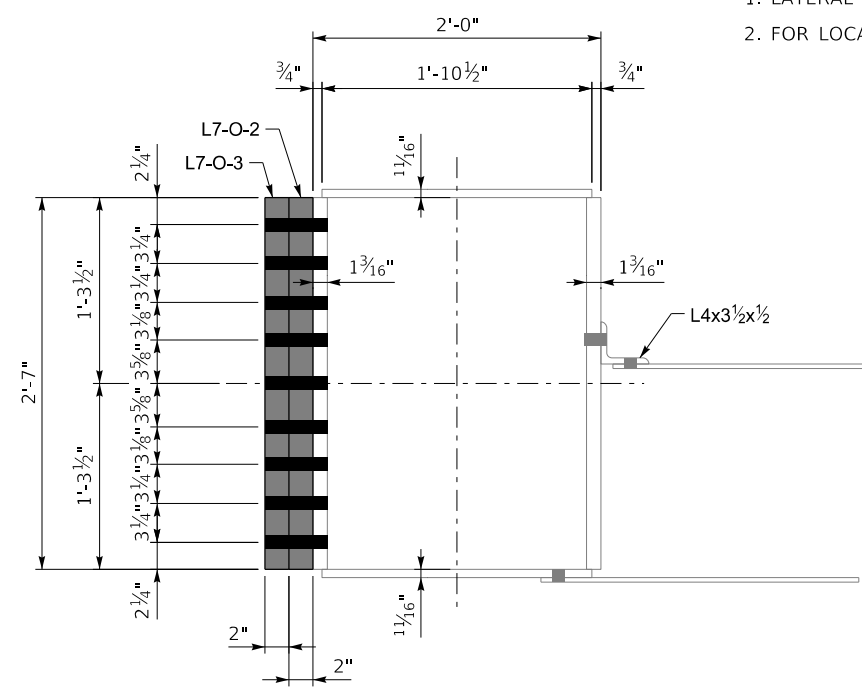
1. LATERAL BRACING NOT SHOWN FOR CLARITY.
2. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S14.



SECTION A-A
(PROPOSED CONDITION)



SECTION B-B
(PROPOSED CONDITION)



SECTION C-C
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



TEAM KENTUCKY
TRANSPORTATION
CABINET

REVISION DATE

REVISION DATE

REVISION DATE

REVISION DATE

PREPARED BY
Michael Baker
INTERNATIONAL

1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 07/12/2024
DESIGNED BY: P COZZENS
DETAILED BY: MJ DWYER

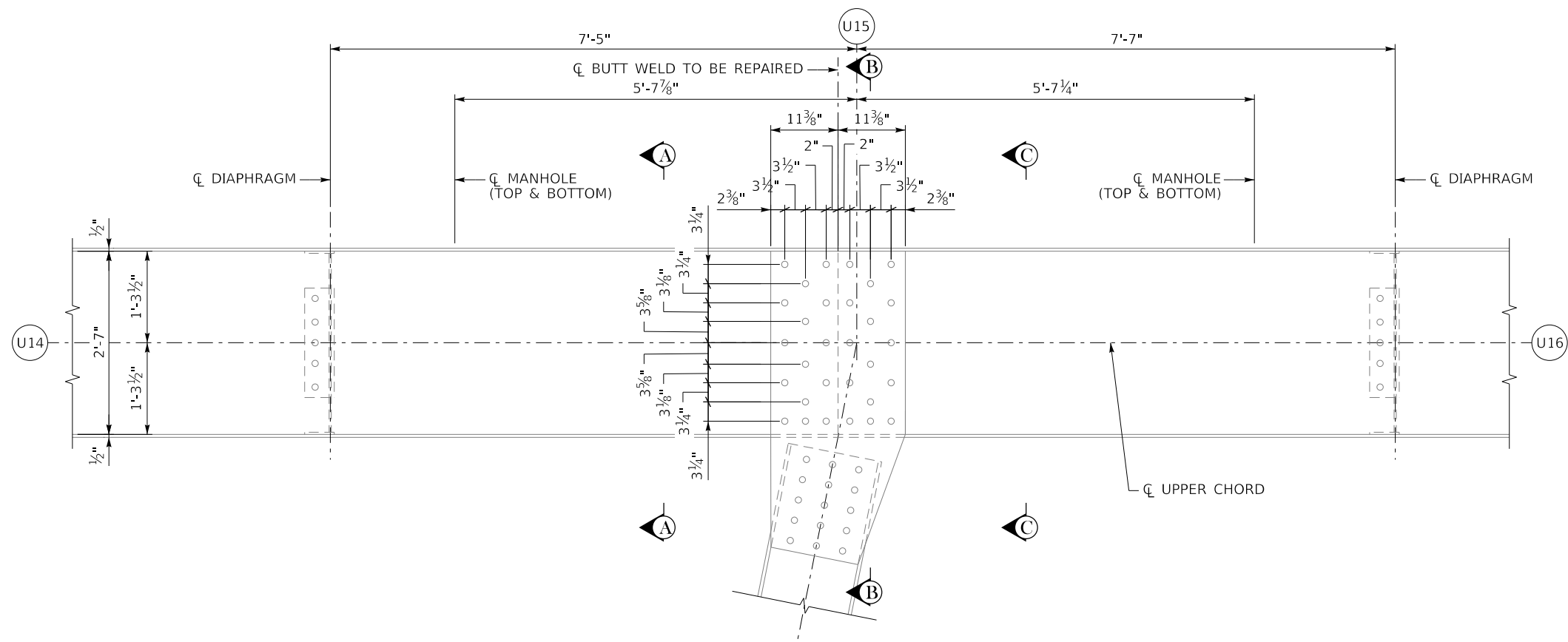
CHECKED BY
L CLARK
P COZZENS

WB DS L7 OB REPAIR DETAIL - 2
CROSSING
OHIO RIVER

ROUTE
I-275

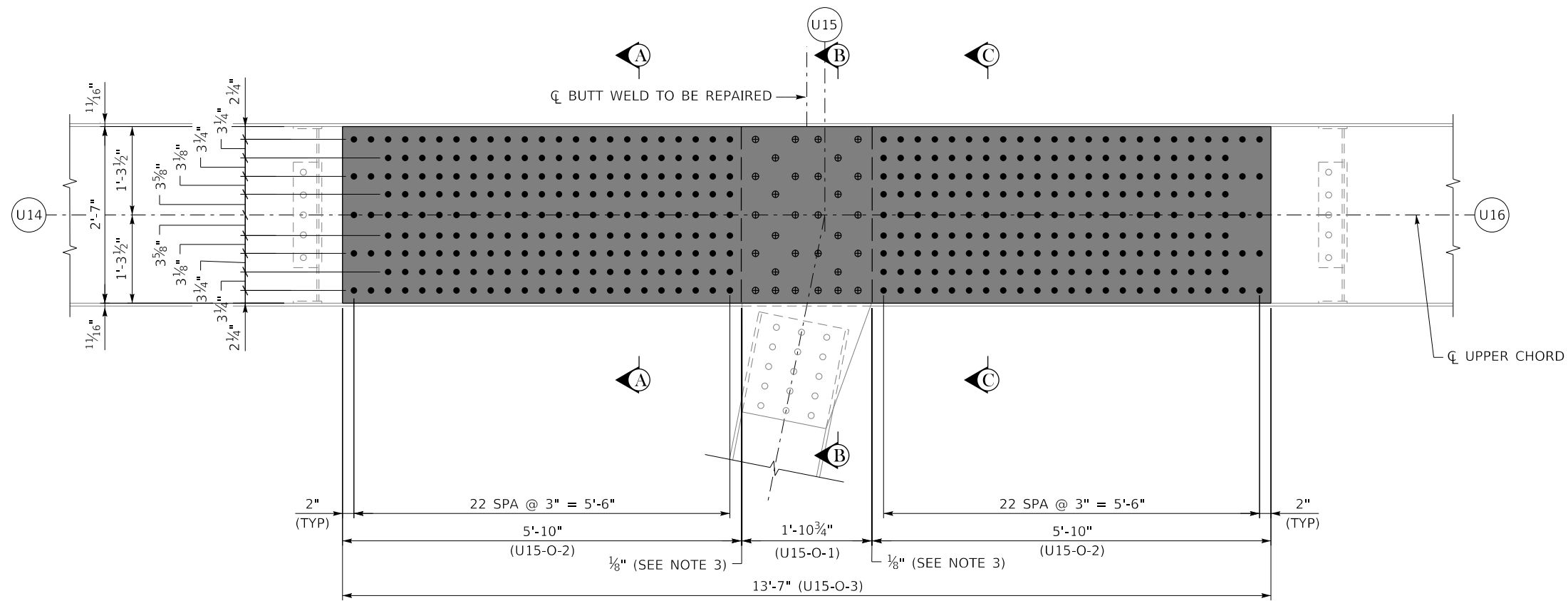
ITEM NO.
S15

COUNTY OF
CAMPBELL
DRAWING NUMBER
28910



EXISTING ELEVATION - U15

(EASTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)



PROPOSED ELEVATION - U15

(EASTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING DOWNSTREAM AT OUTBOARD FACE)

CONSTRUCTION SEQUENCE

1. CONSTRUCT TOP AND BOTTOM COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET NO. S3.
2. REMOVE EXISTING BOLTS AS SPECIFIED AND INSTALL THREADED RODS AT VERTICAL GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
3. INSTALL CHEESE, FILL, AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

NOTES

1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S17.
2. FOR BOLT LEGEND, SEE SHEET NO. S4.
3. ASSUMED 1/8" GAP BETWEEN EXISTING GUSSET PLATE AND NEW FILL PLATE.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024

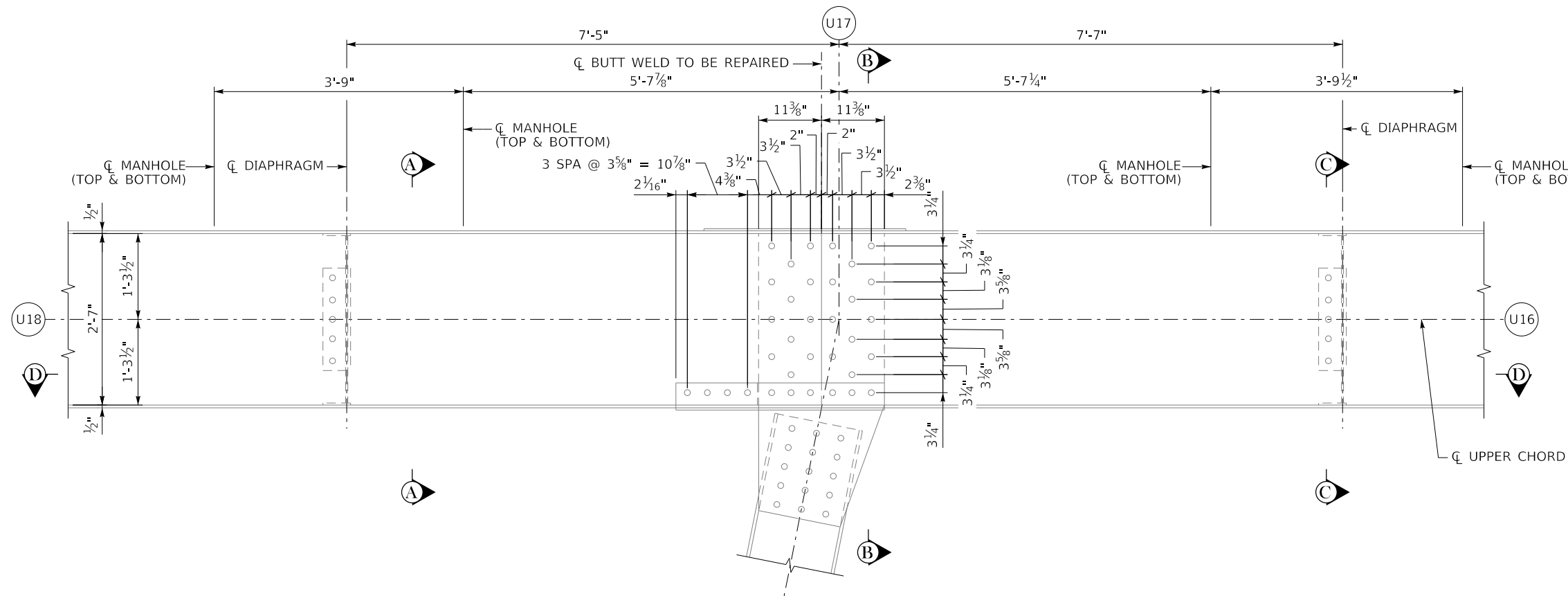
PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 07/12/2024	CHECKED BY: L CLARK
DESIGNED BY: P COZZENS	DETAILED BY: MJ DWYER
	P COZZENS

EB US U15 OB REPAIR DETAIL - 1
CROSSING
OHIO RIVER

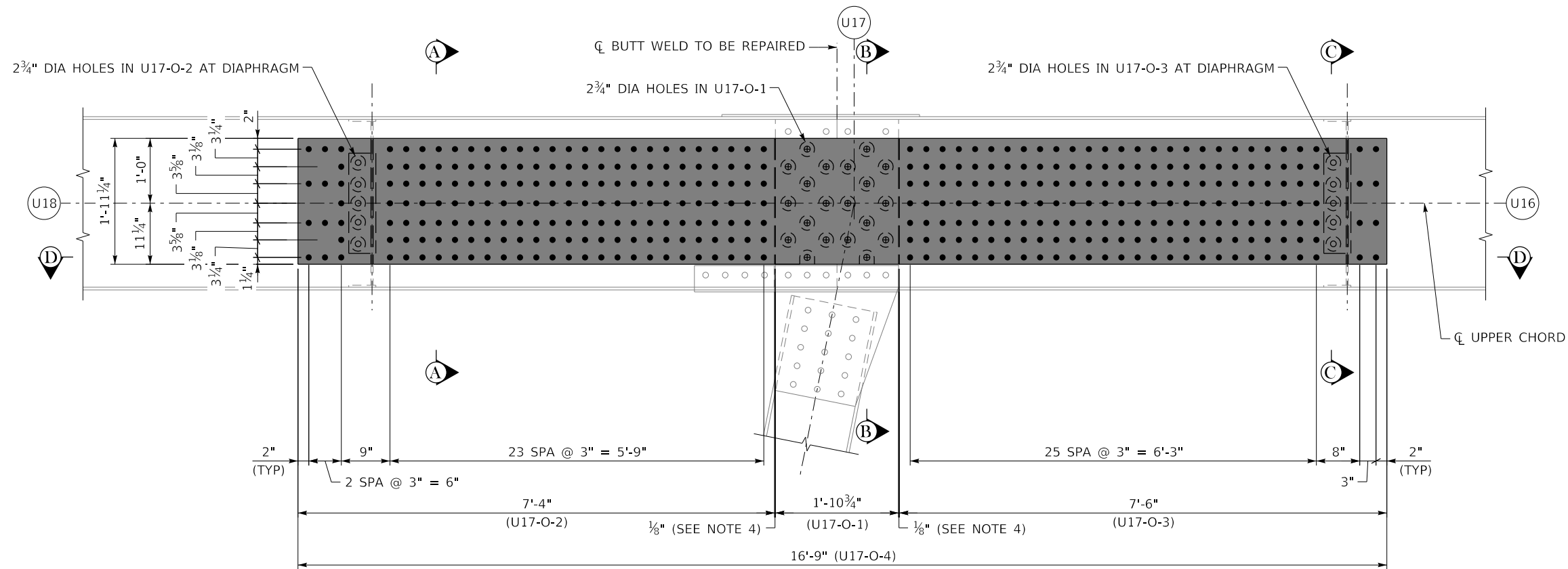
ROUTE: I-275	ITEM NO.:
	SHEET NO. S16

COUNTY OF CAMPBELL
DRAWING NUMBER 28910



EXISTING ELEVATION - U17

(EASTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)



PROPOSED ELEVATION - U17

(EASTBOUND BRIDGE, UPSTREAM TRUSS, LOOKING UPSTREAM AT INBOARD FACE)

CONSTRUCTION SEQUENCE

1. CONSTRUCT TOP AND BOTTOM COVER PLATE DOG-BONES AT OB BUTT WELDS. SEE RETROFIT DETAIL ON SHEET NO. S3.
2. COPE WEB OF STRUT AS SHOWN ON SHEET NO. S19.
3. REMOVE EXISTING BOLTS AS SPECIFIED AND INSTALL THREADED RODS AT VERTICAL GUSSET CONNECTION ONE AT A TIME, TENSIONING EACH ROD BEFORE REMOVING THE NEXT BOLT.
4. INSTALL CHEESE, FILL, AND SPLICE PLATES WITH NEW FASTENERS AS INDICATED.

NOTES

1. FOR SECTIONS A-A, B-B, AND C-C, SEE SHEET NO. S19.
2. FOR SECTION D-D, SEE SHEET NO. S20.
3. FOR BOLT LEGEND, SEE SHEET NO. S4.
4. ASSUMED 1/8" GAP BETWEEN EXISTING GUSSET PLATE AND NEW FILL PLATE.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024



PREPARED BY
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

INTERNATIONAL

DATE: 07/12/2024	CHECKED BY: L CLARK
DESIGNED BY: P COZZENS	DETAILED BY: MJ DWYER

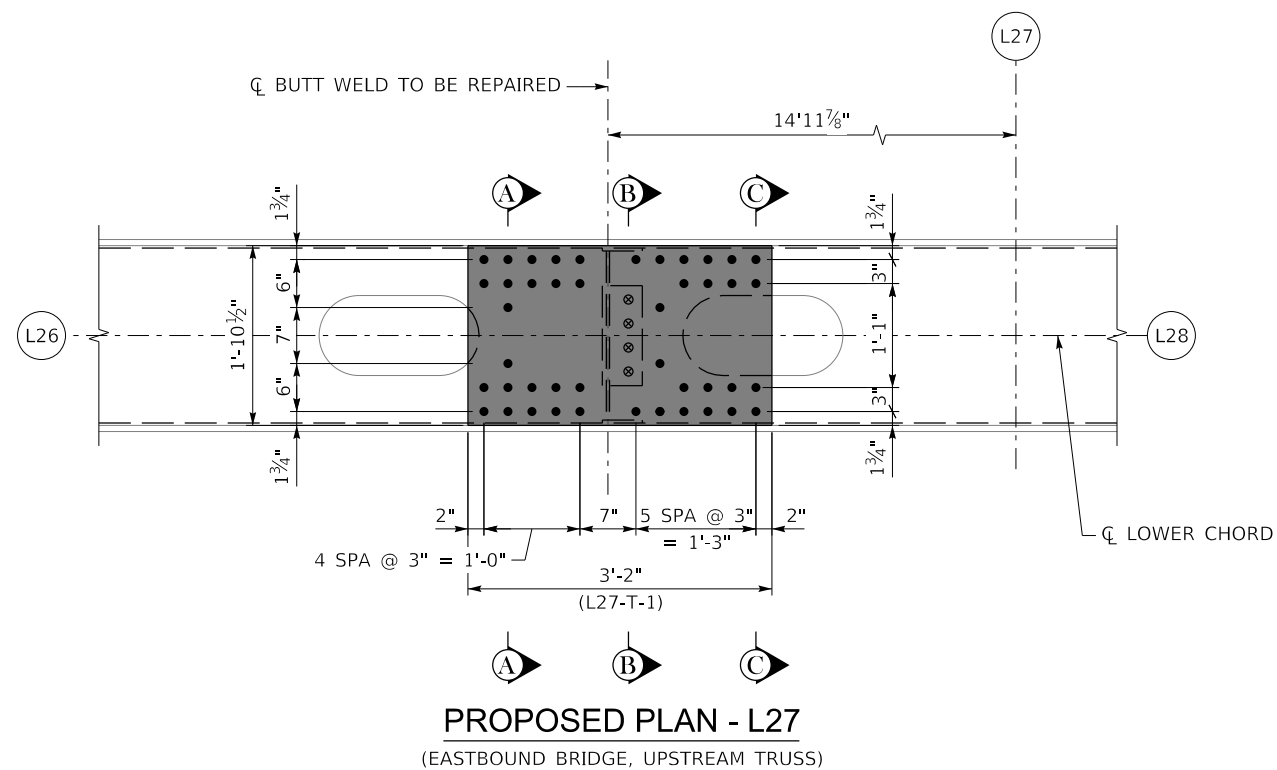
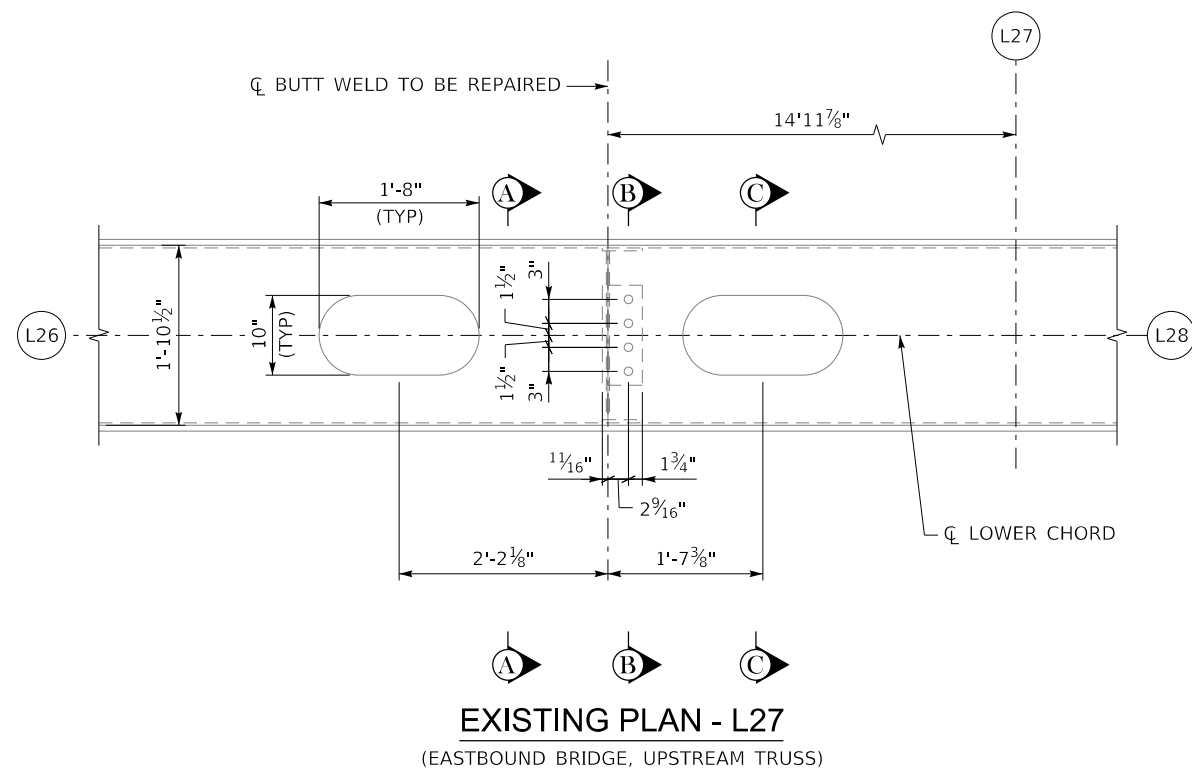
DATE: 07/12/2024	CHECKED BY: P COZZENS
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EB US U17 IB REPAIR DETAIL - 1

ROUTE
I-275

ITEM NO.
S18

COUNTY OF
CAMPBELL
DRAWING NUMBER
28910



CONSTRUCTION SEQUENCE

1. CONSTRUCT IB AND OB VERTICAL PLATE DOG-BONES AT TOP COVER PLATE BUTT WELDS. SEE RETROFIT DETAIL ON SHEET NO. S3.
2. REMOVE BOLTS IN TOP COVER PLATE CONNECTION TO DIAPHRAGM.
3. INSTALL SPLICE PLATE WITH NEW FASTENERS AS INDICATED.

NOTES

1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S22.
2. FOR BOLT LEGEND, SEE SHEET NO. S4.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024



PREPARED BY
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

FILE NAME: pw://mb-us-pw.bentley.com:mb-us-pw-03/Documents/Louisville_KY/01_Projects/KYTC T1 Steel Bridges/019B00040L Combs Hehl WB/4) Remediation/CADD/SHEETS/Combs_06_L27 TOP-DETAIL_01.dgn

DATE: 07/12/2024	CHECKED BY: L CLARK
DESIGNED BY: P COZZENS	DETAILED BY: MJ DWYER

CHECKED BY: L CLARK
DETAILED BY: MJ DWYER

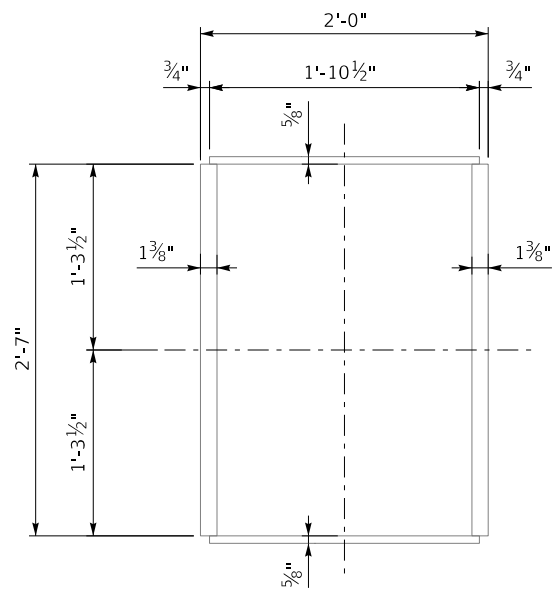
EB US L27 TOP REPAIR DETAIL - 1

CROSSING
OHIO RIVER

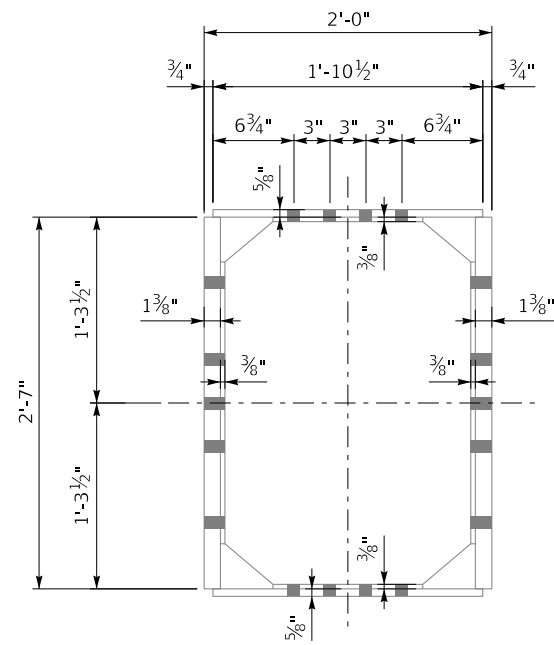
ROUTE
I-275

ITEM NO.	SHEET NO.
	S21

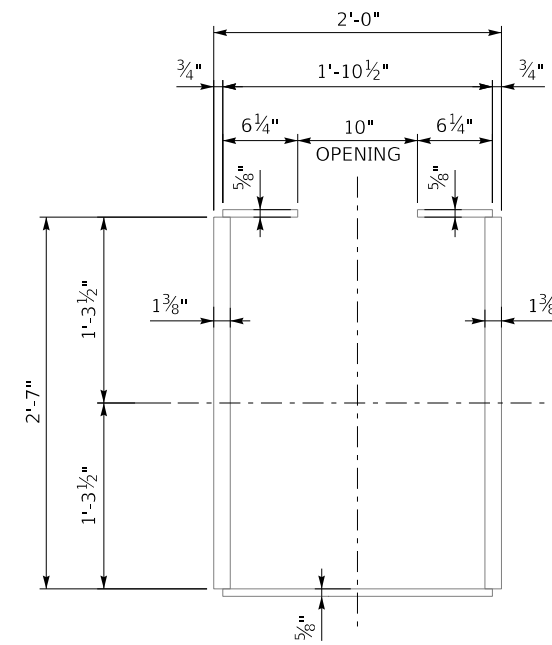
COUNTY OF
CAMPBELL
DRAWING NUMBER
28910



SECTION A-A
(EXISTING CONDITION)



SECTION B-B
(EXISTING CONDITION)



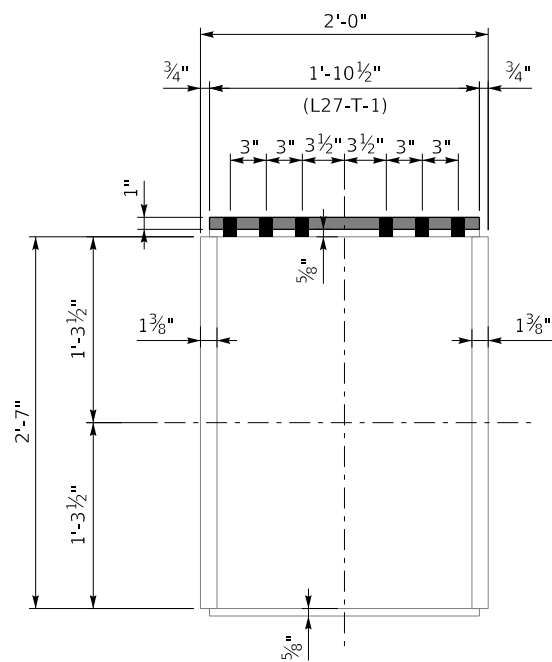
SECTION C-C
(EXISTING CONDITION)

LEGEND

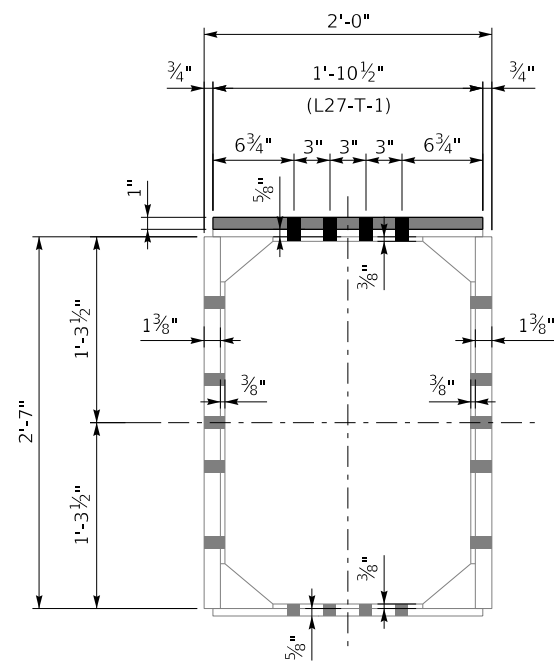
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FOR BOLT HOLE AND SIZE, SEE SHEET NO. S4.

NOTES

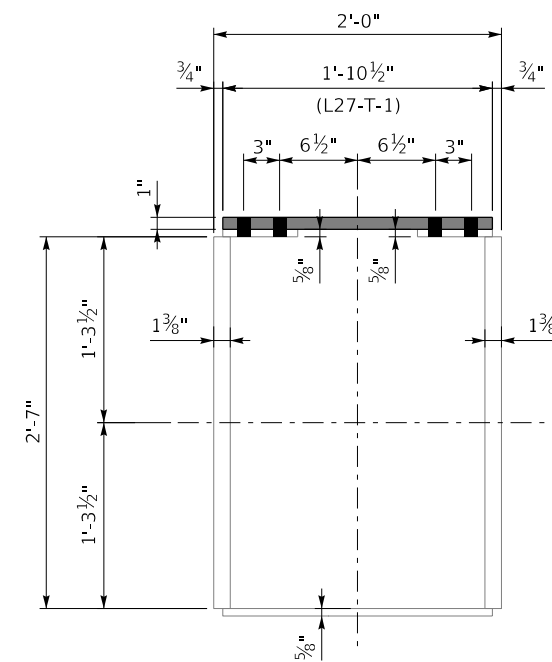
1. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S21.



SECTION A-A
(PROPOSED CONDITION)



SECTION B-B
(PROPOSED CONDITION)



SECTION C-C
(PROPOSED CONDITION)



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024

PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 07/12/2024	CHECKED BY: L CLARK
DESIGNED BY: P COZZENS	DETAILED BY: MJ DWYER

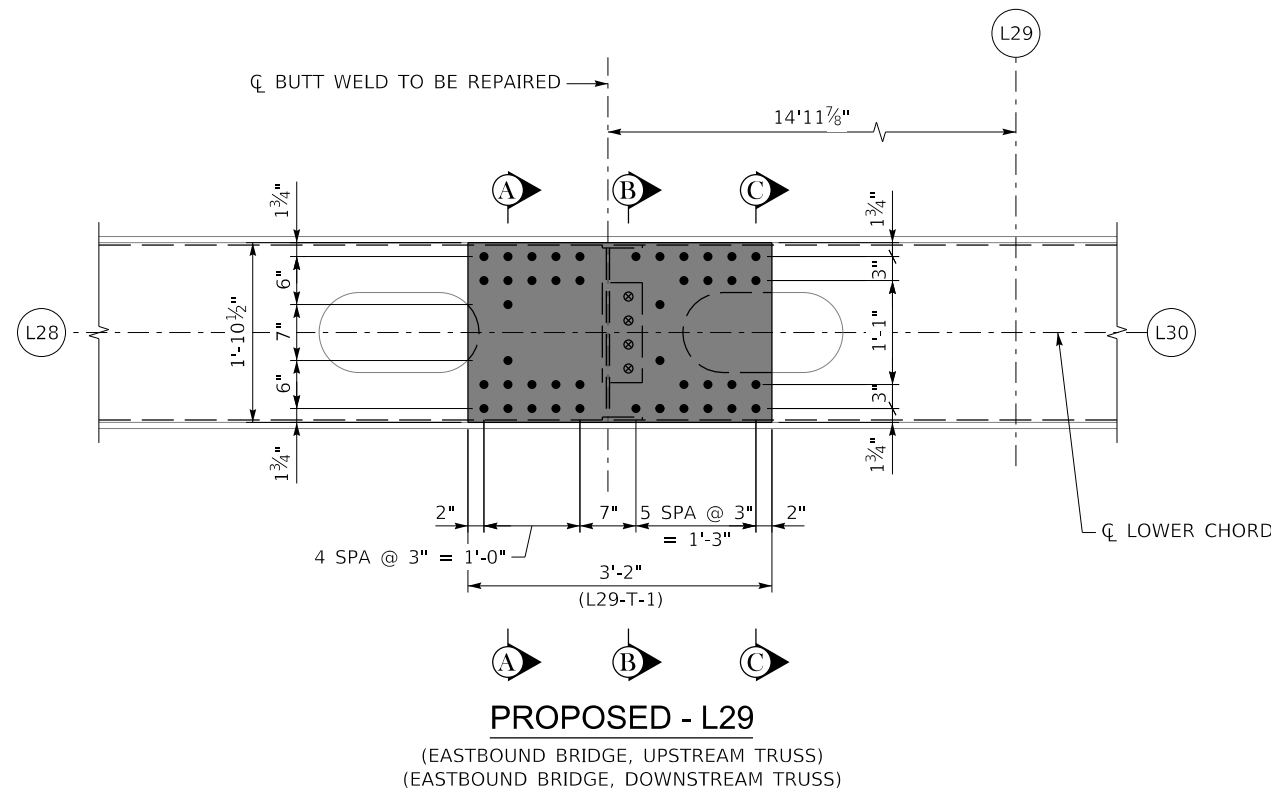
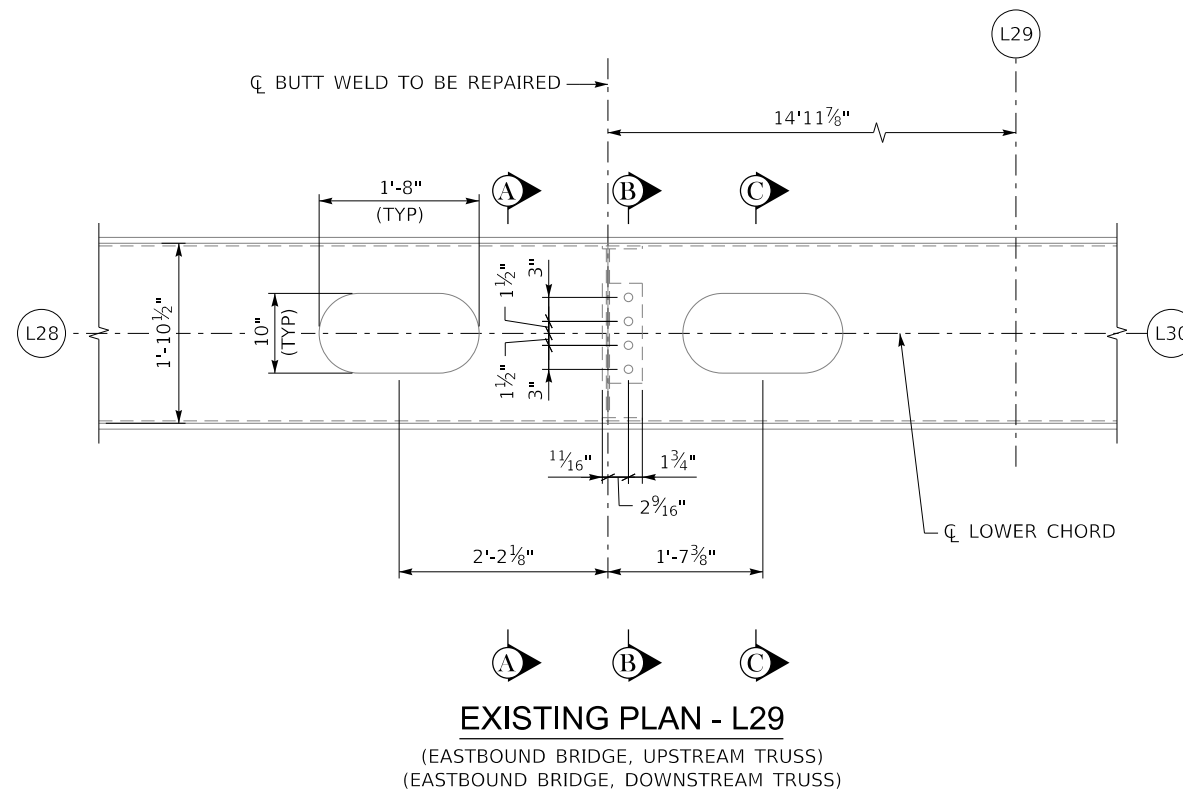
CHECKED BY: L CLARK
DETAILED BY: MJ DWYER

EB US L27 TOP REPAIR DETAIL - 2
CROSSING
OHIO RIVER

ROUTE I-275

ITEM NO.
SHEET NO. S22

COUNTY OF CAMPBELL
DRAWING NUMBER 28910



CONSTRUCTION SEQUENCE

1. CONSTRUCT IB AND OB VERTICAL PLATE DOG-BONES AT TOP COVER PLATE BUTT WELDS. SEE RETROFIT DETAIL ON SHEET NO. S3.
2. REMOVE BOLTS IN TOP COVER PLATE CONNECTION TO DIAPHRAGM.
3. INSTALL SPLICE PLATE WITH NEW FASTENERS AS INDICATED.

NOTES

1. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S24.
2. FOR BOLT LEGEND, SEE SHEET NO. S4.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024

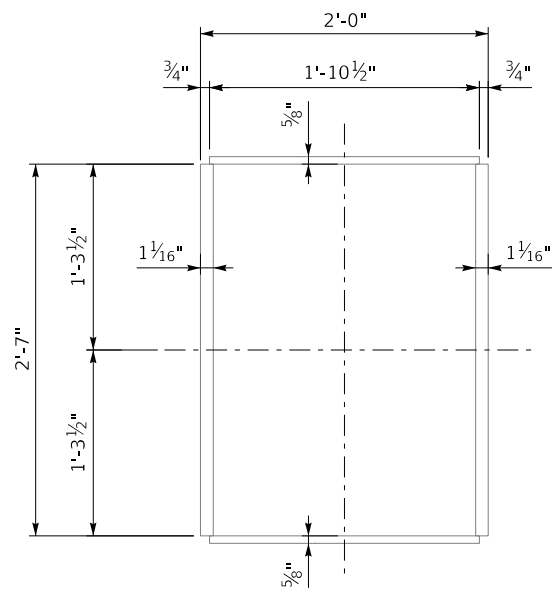
PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 07/12/2024	CHECKED BY:
DESIGNED BY: P COZZENS	L CLARK
DETAILED BY: MJ DWYER	P COZZENS

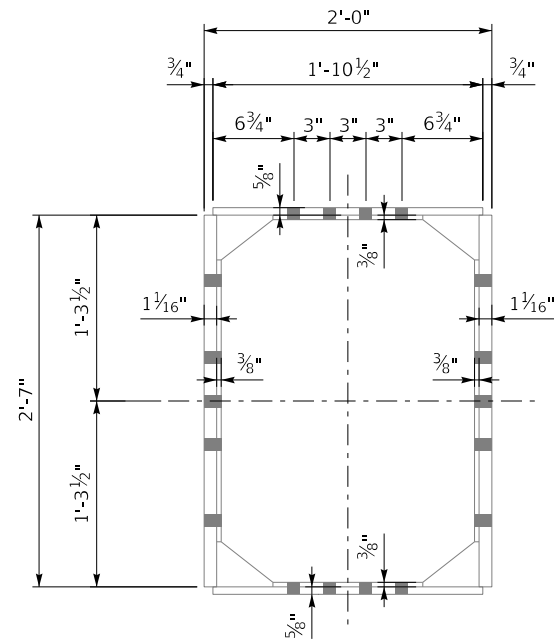
EB DS & US L29 TOP REPAIR - 1

CROSSING
OHIO RIVER

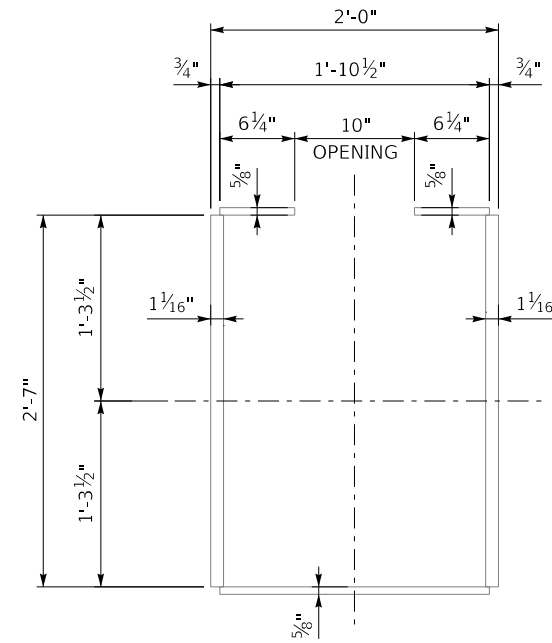
ROUTE I-275	ITEM NO. S23	COUNTY OF CAMPBELL
DRAWING NUMBER 28910		



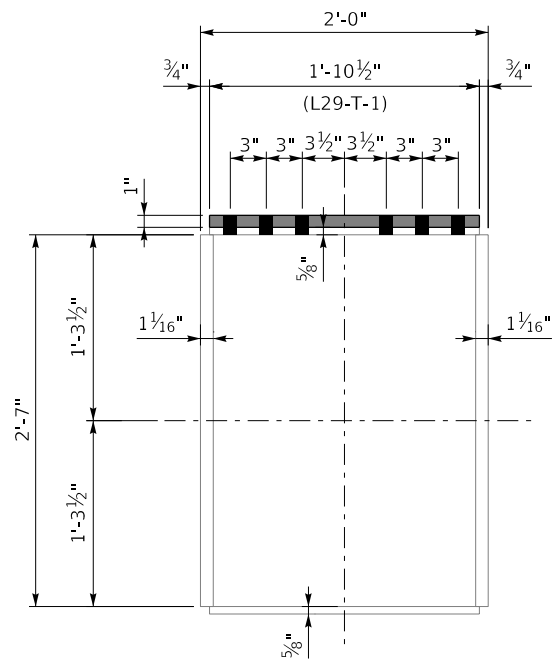
SECTION A-A
(EXISTING CONDITION)



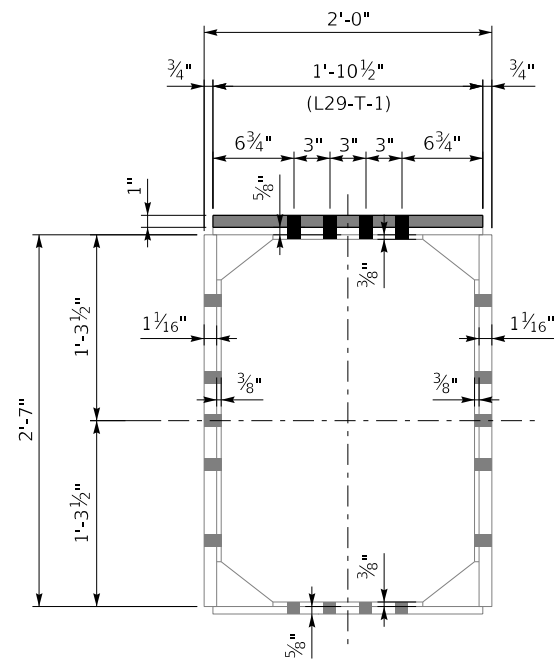
SECTION B-B
(EXISTING CONDITION)



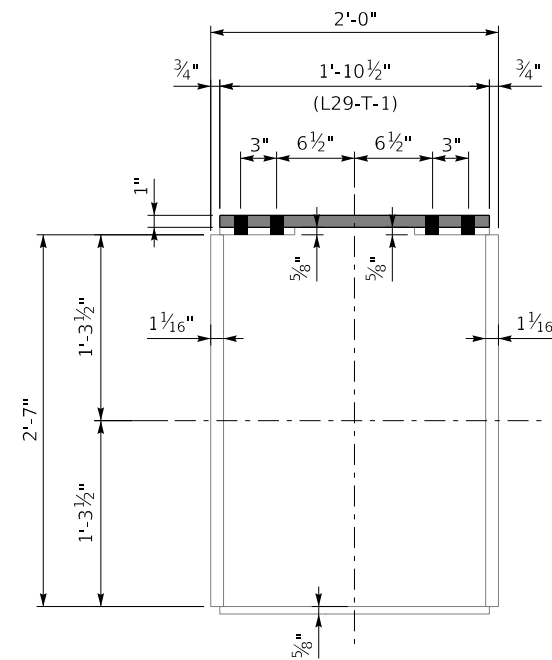
SECTION C-C
(EXISTING CONDITION)



SECTION A-A
(PROPOSED CONDITION)



SECTION B-B
(PROPOSED CONDITION)



SECTION C-C
(PROPOSED CONDITION)

LEGEND

INDICATES HOLE IN EXISTING PLATE AND NEW STEEL.
FOR BOLT HOLE AND SIZE, SEE SHEET NO. S4.

NOTES

1. FOR LOCATION OF SECTIONS A-A, B-B AND C-C, SEE SHEET NO. S23.



COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS



USER: MaryJo.Dwyer

REVISION	DATE

DATE PLOTTED: 23-AUG-2024

PREPARED BY
Michael Baker INTERNATIONAL
1650 Lyndon Farm Court
Louisville, KY
Phone: (502)-339-3557
MBAKERINTL.COM

DATE: 07/12/2024	CHECKED BY: L CLARK
DESIGNED BY: P COZZENS	DETAILED BY: MJ DWYER
	P COZZENS

EB DS & US L29 TOP REPAIR - 2
CROSSING
OHIO RIVER

ROUTE: I-275	ITEM NO.:	COUNTY OF: CAMPBELL
	SHEET NO. S24	DRAWING NUMBER: 28910