

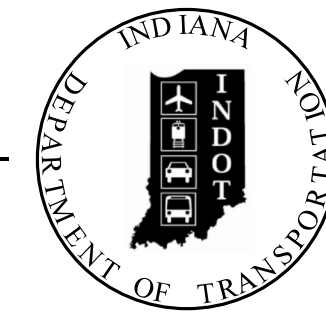
PROJECT 1298275	BRIDGE FILE 041-93-5000SBL
CONTRACT B-33539	DESIGNATION 1298275

STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
051B00007L (KYTC)	CONTINUOUS WELDED STEEL PLATE GIRDER AND STEEL THROUGH TRUSS	33-SPANS 0° SKEW	OHIO RIVER	38+51.29 TO 92+78.17

KIN PROJECT INFORMATION	
DESIGNATION	PROJECT DESCRIPTION
0100482	U.S. 41 over SB Cheatam Slough
9620260	U.S. 41 over NB Cheatam Slough
0200633	U.S. 41 over SB Ohio River Overflow
0200636	U.S. 41 over NB Ohio River Overflow
0200635	U.S. 41 over SB Eagle Creek
0200634	U.S. 41 over NB Eagle Creek
1298275	U.S. 41 over SB Ohio River
1592481	Roadway Plans from Cheatam Slough to Eagle Creek

NOTE: SEE ROAD PLANS FOR REMOVAL OF EXISTING GUARDRAIL, PROPOSED GUARDRAIL, PAVEMENT MARKINGS, EROSION CONTROL MEASURES AND MAINTAINANCE OF TRAFFIC DETAILS

INDIANA DEPARTMENT OF TRANSPORTATION



BRIDGE PLANS FOR SPANS OVER 20 FEET

ROUTE US 41 SOUTHBOUND OVER OHIO RIVER

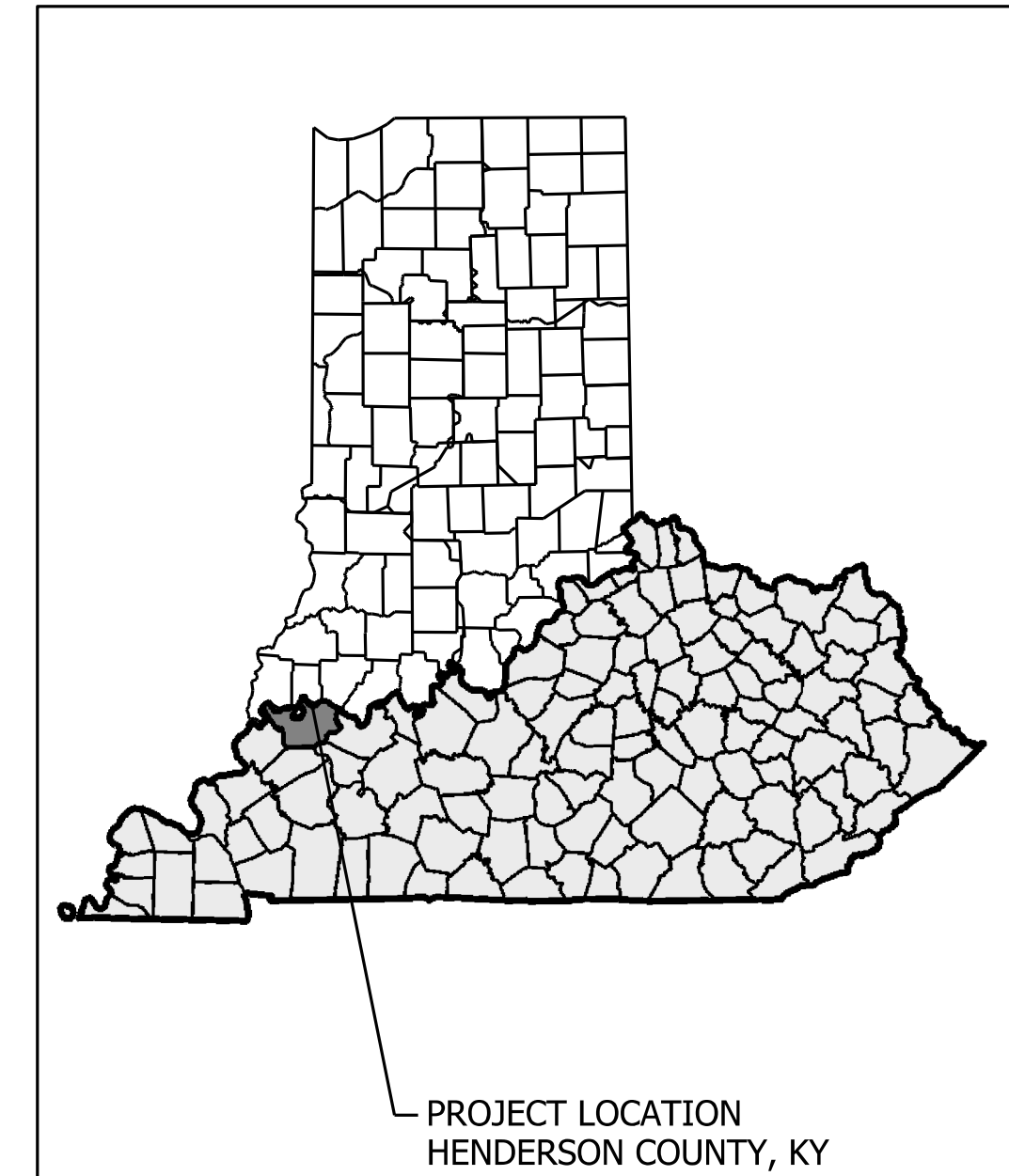
PROJECT NO. 1298275

P.E.
R/W
CONST.

NO ADDITIONAL RIGHT-OF-WAY
REQUIRED FOR THIS PROJECT

TRAFFIC DATA		
A.A.D.T. (2013)	20,153	V.P.D.
A.A.D.T. (2017)	21,260	V.P.D.
D.H.V. (2037)	26,720	V.P.H.
DIRECTIONAL DISTRIBUTION	100	%
TRUCKS	-	% D.H.V.
	9	% A.A.D.T.

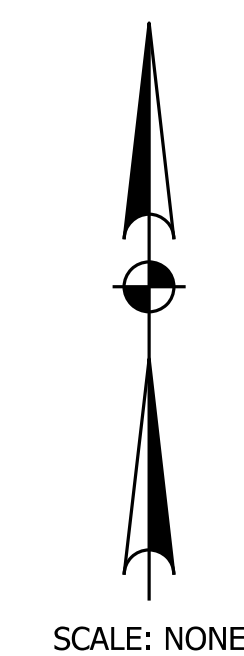
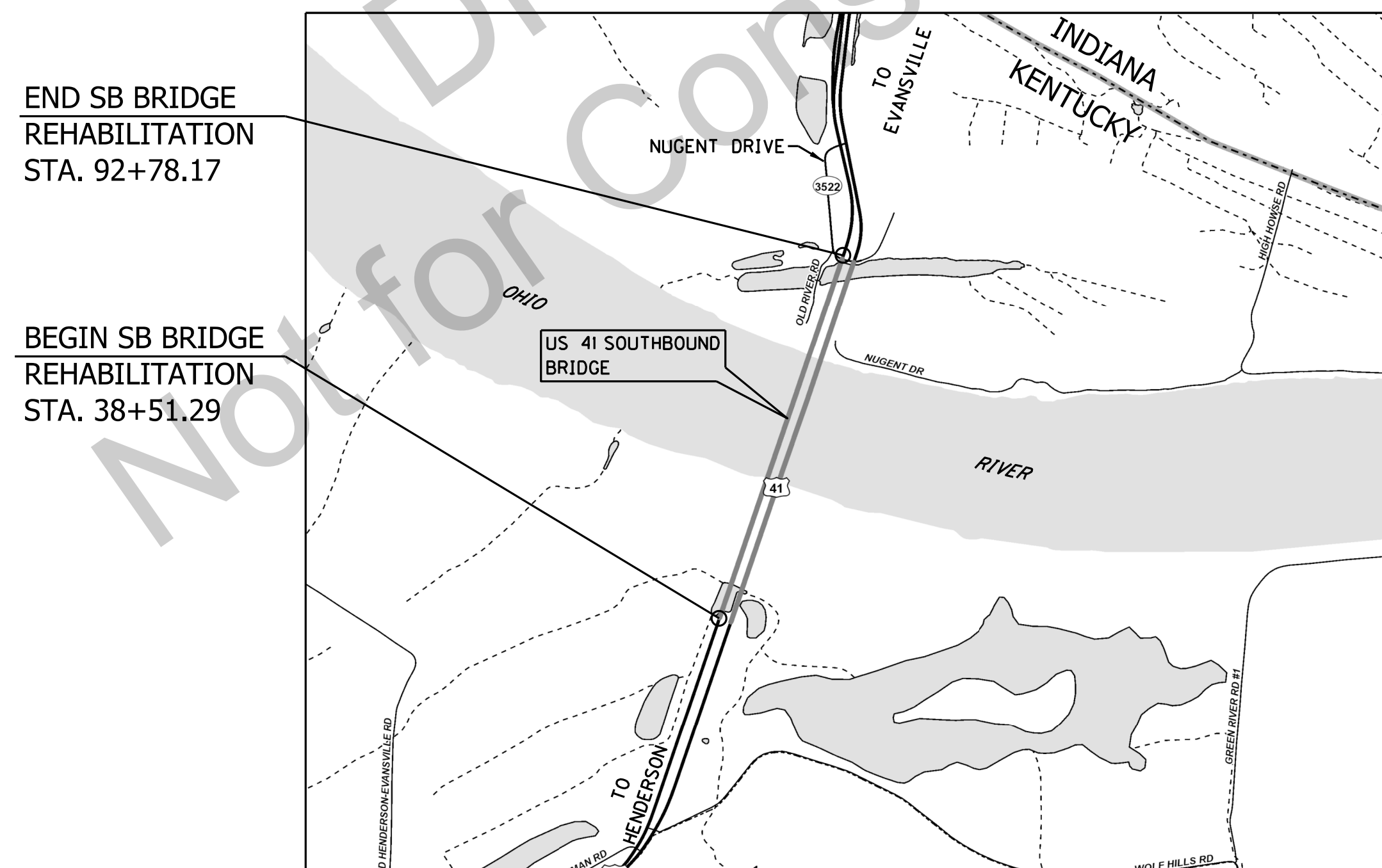
DESIGN DATA	
DESIGN SPEED	50 M.P.H.
POSTED SPEED	50 M.P.H.
PROJECT DESIGN CRITERIA	3R NON-FREEWAY
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL
RURAL/URBAN	URBAN
TERRAIN	LEVEL
ACCESS CONTROL	NONE



LATITUDE: 37°54'18" N. LONGITUDE: 87°33'04" W.

BRIDGE LENGTH:	1.03	MI.
ROADWAY LENGTH:		MI.
TOTAL LENGTH:		MI.
MAX. GRADE:	2.75	%

Overlay and Superstructure Rehabilitation of the US 41 Southbound Bridge over the Ohio River. Located north of the town of Henderson, Henderson County Kentucky and approximately 1,560 feet south of the intersection of KY 3522 (Nugent Drive).

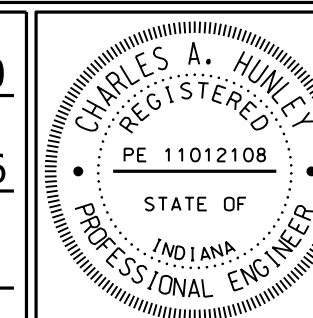


VICINITY MAP
HENDERSON COUNTY, KENTUCKY

INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 2016 TO
BE USED WITH THESE PLANS.

KYTC DRAWING NO. 27600

PLANS PREPARED BY:	Stantec	(859)233-2100
CERTIFIED BY:	<i>Tony Hawley</i>	11/04/2016
APPROVED FOR LETTING:	INDIANA DEPARTMENT OF TRANSPORTATION	DATE



BRIDGE FILE 041-93-5000SBL	
DESIGNATION 1298275	
DRAWING	SHEET
00 OF 00	S1 OF S21
CONTRACT B-33539	PROJECT 1298275

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GENERAL NOTES

SPECIFICATIONS

REFERENCES TO THE SPECIFICATIONS ARE TO THE CURRENT EDITION OF THE INDIANA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS. ALL REFERENCES TO THE AASHTO SPECIFICATIONS ARE TO THE 17TH EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

DESIGN LOAD AND METHOD

NEW STEEL FINGER EXPANSION DAMS AND NEW GIRDER BEARINGS ARE DESIGNED FOR HS25 LIVE LOAD. ALL REINFORCED CONCRETE AND STRUCTURAL STEEL MODIFICATIONS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED IN THE CURRENT AASHTO SPECIFICATIONS.

MATERIALS DESIGN SPECIFICATIONS

FOR CLASS "C" MODIFIED REINFORCED CONCRETE, SEE UNIQUE SPECIAL PROVISIONS
F'c = 4000 PSI

FOR STEEL REINFORCEMENT
Fy = 60000 PSI

FOR STRUCTURAL STEEL (NEW)
Fy = 50000 PSI FOR GRADE 50

FOR STRUCTURAL STEEL (EXISTING)
Fy = 36000 PSI FOR ASTM A36

MATERIALS

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

STRUCTURAL STEEL	ASTM	AASHTO
HIGH STRENGTH BOLTS FOR STRUCTURAL STEEL JOINT	A709, GR 50	M270 GR 50
CARBON AND ALLOY STEEL NUTS	A325	M164
HARDENED STEEL WASHERS		M291
PIPE, STEEL, BLACK AND HOT-DIPPED, ZINC COATED WELDED AND SEAMLESS	A53	M293
DEFORMED AND PLAIN BILLET - STEEL BARS FOR CONCRETE REINFORCEMENT (GRADE 60)		M31

ALL STRUCTURAL STEEL SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TOUGHNESS TEST APPLICABLE TO ZONE 2 MINIMUM SERVICE TEMPERATURE FROM -1° TO -30° F, IN ACCORDANCE WITH THE FOLLOWING: M270 GR 50 OF 15 FT-LBS AT 40°F. - ALL OTHER STRUCTURAL STEEL

SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO T243 CURRENT EDITION, UTILIZING (H) FREQUENCY TESTING. WHEN PLATE THICKNESS EXCEEDS 1/2", FREQUENCY OF TESTING SHALL BE (P).

CONCRETE

CLASS "C" MODIFIED CONCRETE IS TO BE USED IN PARTIAL AND FULL DEPTH PATCHING OF DECK, EXPANSION JOINT REPLACEMENTS AND FINGER JOINT REPLACEMENTS AND CURB REPAIRS, SEE UNIQUE SPECIAL PROVISIONS

CLEANING AND PAINTING

ALL NEW STRUCTURAL STEEL SHALL BE BLAST CLEANED IN THE SHOP TO A NEAR WHITE CONDITION AND SHOP PAINTED WITH ONE COAT OF INORGANIC ZINC RICH PRIMER. EXISTING STEEL AREAS OF THE BRIDGE TO BE IN CONTACT WITH NEW STEEL, INCLUDING AREAS UNDER BOLT HEADS, SHALL BE CLEANED OF ALL DIRT, RUST AND FOREIGN MATTER USING HAND CLEANING METHODS BEFORE INSTALLING THE NEW STEEL. UNLESS NOTED OTHERWISE ON THE PLANS, ALL NEW AND EXISTING STEEL WITHIN 12' OF THE WORK LIMITS OF EACH RETROFIT LOCATION SHALL BE CLEANED AS NECESSARY USING HAND METHODS AND PAINTED AS DIRECTED BY THE ENGINEER. HAND METHODS FOR FIELD CLEANING SHALL CONSIST OF SCRAPING AND WIRE BRUSHING. NO BLAST CLEANING WILL BE ALLOWED ON THE BRIDGE.

THE COLOR OF THE FIELD COATING SHALL MATCH THE PRESENT COLOR OF THE EXISTING BRIDGE STEEL AS NEAR AS POSSIBLE, AND SHALL BE APPROVED BY THE ENGINEER BEFORE ANY APPLICATION. CLEANING AND PAINTING SHALL BE INCIDENTAL TO THE APPROPRIATE BID ITEMS AND SHALL BE IN ACCORDANCE WITH THE UNIQUE SPECIAL PROVISIONS.

TOUCH-UP PAINTING

ALL AREAS OF NEW OR EXISTING STRUCTURAL STEEL ON WHICH THE PAINT HAS BEEN DAMAGED BY THE CONTRACTOR WITH WELD BURNS OR BY OTHER MEANS DURING 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 TO BE INCLUDED IN THE PRICE BID FOR APPROPRIATE ITEMS.

WELDING SPECIFICATIONS

ALL WELDING AND WELDING MATERIALS EXCEPT FOR REINFORCEMENT, SHALL CONFORM TO JOINT SPECIFICATIONS ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE. MODIFICATION AND ADDITIONS AS STATED ON THE PLANS AND UNIQUE SPECIAL PROVISIONS FOR WELDING STEEL BRIDGES SHALL SUPERSEDE THE ANSI/AASHTO/AWS SPECIFICATIONS. NONDESTRUCTIVE TESTING BY THE CONTRACTOR (QC) WILL NOT BE REQUIRED. WELDING PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER AND APPROVED PRIOR TO THE START OF FABRICATIONS AND RETROFIT. THE COST OF WELDING, WELDING MATERIALS, STRAIGHTENING, ALTERING AND BURNING NEW OR EXISTING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ITEMS.

HIGH STRENGTH BOLT CONNECTIONS

UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL NEW BOLTS SHALL BE 3/8" DIAMETER HIGH STRENGTH BOLTS. OPEN HOLES SHALL BE 1/8" DIAMETER. ALL BOLTED CONNECTIONS ARE DESIGNED AS FRICTION TYPE CONNECTIONS.

ELASTOMERIC BEARING PADS

ELASTOMERIC BEARING PADS SHALL CONFORM TO THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.

BEARINGS SHALL BE LOW TEMPERATURE GRADE 3 WITH DUROMETER HARDNESS OF 50 AND SHALL BE SUBJECT TO THE LOAD TESTING REQUIREMENTS CORRESPONDING TO DESIGN METHOD B. THE COST OF BEARING PADS IS TO BE INCLUDED IN THE UNIT PRICE FOR "BEARING ASSEMBLY ELASTOMERIC".

REINFORCEMENT

DIMENSIONS SHOWN FROM THE FACE OF CONCRETE TO BARS ARE CLEAR DISTANCES UNLESS OTHERWISE SHOWN. SPACING OF BARS IS FROM CENTER TO CENTER OF BARS. ALL REINFORCEMENT SHALL BE EPOXY COATED.

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. ALL PLAN DIMENSIONS ARE FOR A NORMAL TEMPERATURE OF 60° F. LAYOUT DIMENSIONS ARE HORIZONTAL MEASUREMENTS.

PROHIBITED FIELD WELDING

EXCEPT AS SHOWN ON THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE.

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.

MAINTAINING TRAFFIC

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES IN ACCORDANCE WITH THE PLANS AND OTHER UNIQUE SPECIAL PROVISIONS 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 STRUCTURES ARE AVAILABLE FROM THE KENTUCKY TRANSPORTATION CABINET, DIVISION OF MAINTENANCE, UPON REQUEST. THE COMPLETENESS OF THESE DRAWINGS IS NOT GUARANTEED AND NO RESPONSIBILITY IS ASSUMED BY KYTC FOR THEIR ACCURACY. THE ORIGINAL EXISTING BRIDGE CONTRACT AND BRIDGE FILE NUMBERS FOR THESE STRUCTURES INCLUDE: SOUTH APPROACH BRIDGE - BRIDGE CONTRACT: 5980, BRIDGE FILE: 41-A-4995; SUPERSTRUCTURE TRUSS BRIDGE - BRIDGE CONTRACT: 5839, BRIDGE FILE 41-A-5000; SUPERSTRUCTURE SUBSTRUCTURE TRUSS BRIDGE - BRIDGE CONTRACT: 5195, BRIDGE FILE: 41-A-5000 SUBSTRUCTURE AND NORTH APPROACH BRIDGE - BRIDGE CONTRACT: 6078, BRIDGE FILE: 41-A-4996.

ON-SITE INSPECTION

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

CONCRETE REMOVAL

THE CONTRACTOR SHALL REMOVE CONCRETE WITH A METHOD THAT WILL NOT DAMAGE EXISTING REINFORCEMENT OR STRUCTURAL STEEL THAT IS TO REMAIN IN THE STRUCTURE. ALL REMOVAL SHALL BE TO NEAT SAW CUT LINES AND FEATHER EDGES WILL NOT BE PERMITTED. REINFORCING BARS WHICH ARE SHOWN ON THE PLANS AS REMAINING AND WHICH ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH NEW EPOXY COATED BARS OF THE SAME SIZE AND SHAPE, AS DIRECTED BY THE ENGINEER. NO PAYMENT WILL BE MADE FOR THE REPLACEMENT BARS.

EXISTING STEEL REINFORCEMENT

THE COST OF CUTTING, BENDING AND CLEANING EXISTING REINFORCING BARS IS TO BE INCIDENTAL TO THE APPROPRIATE BID ITEMS.

SAWCUTTING

PRIOR TO THE REMOVAL OF THE EXISTING CONCRETE MASONRY, CUT THE SURFACE WITH A CONCRETE SAW TO THE DEPTH NOTED ON THE PLANS OR ONE INCH TO FACILITATE A NEAT LINE. THE COST OF CUTTING CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ITEMS.

REMOVAL OF EXISTING RIVETS AND BOLTS

THE CONTRACTOR WILL BE PERMITTED TO REMOVE RIVETS AND 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 BE REUSED IN THE COMPLETED STRUCTURE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE BRIDGE SITE.

STEEL REPAIR

THE UNIT PRICE BID FOR "STRUCTURAL STEEL" SHALL INCLUDE ALL COSTS AND MATERIALS REQUIRED TO COMPLETE THE REPLACEMENT OF THE DIAPHRAGMS, DIAPHRAGM GUSSET PLATE REPAIRS AND STRINGER REPAIR AS NOTED IN THE PLANS.

REMOVE AND REPLACE GIRDER BEARINGS

THE UNIT PRICE BID FOR "JACKING AND SUPPORTING GIRDERS" SHALL INCLUDE ALL COSTS TO JACK AND SUPPORT THE ENDS OF THE EXISTING STEEL GIRDERS AT PIERS N-5 AND N-8, DURING THE REMOVAL AND REPLACEMENT OF THE EXISTING BEARINGS.

THE JACKING AND SUPPORT SYSTEM MUST BE DESIGNED TO SUPPORT BOTH LIVE LOAD AND DEAD LOAD IN ACCORDANCE WITH THE UNIQUE SPECIAL PROVISION FOR GIRDER BEARING REPLACEMENT. DURING JACKING OPERATIONS THE BRIDGE WILL BE POSTED FOR A REDUCED LIVE LOAD LEVEL. LIMITATIONS ON THE DURATION OF THE JACKING AND BEARING REPLACEMENT OPERATION ARE INCLUDED IN THE UNIQUE SPECIAL PROVISION.

THE CONTRACTOR SHALL SUBMIT A JACKING PLAN AND TEMPORARY SUPPORT SYSTEM CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL BEFORE BEGINNING THE JACKING OPERATION. THE DESIGN MUST BE PERFORMED BY A PROFESSIONAL ENGINEER LICENSED IN KENTUCKY.

THE COST TO REMOVE THE EXISTING BEARINGS IS INCLUDED IN THE UNIT PRICE FOR "PRESENT STRUCTURE, REMOVE PORTIONS". THE UNIT PRICE FOR "BEARING ASSEMBLY ELASTOMERIC" SHALL INCLUDE ALL SUPPLIES AND MATERIALS TO PREPARE INTERFACE SURFACES, INSTALL BEARING ASSEMBLIES AND PAINT THE GIRDERS AS DIRECTED IN THE UNIQUE SPECIAL PROVISION.

REMOVE AND REPLACE FINGER EXPANSION JOINT

THE UNIT PRICE BID FOR "EXPANSION JOINT SLIDING PLATE" SHALL INCLUDE ALL COSTS REQUIRED TO COMPLETE THE REPLACEMENT OF THE FINGER EXPANSION JOINTS AT PIERS S-15, S-11, S-7, S-3, PANEL POINTS L50 AND L50' AND PIER E AND N-5. THIS SHALL INCLUDE REMOVAL OF THE CONCRETE DECK AND EXISTING EXPANSION JOINT ASSEMBLY AS SHOWN IN THE PLANS, FABRICATION AND INSTALLATION OF THE NEW EXPANSION JOINT ASSEMBLY (INCLUDING THE DRAINAGE SYSTEM TO THE LIMITS SHOWN IN THE PLANS), RETROFITS TO THE EXISTING STEEL STRINGERS, DIAPHRAGMS, NEW STEEL REINFORCEMENT, AND FORMING/PLACING CLASS "C" MODIFIED CONCRETE DIAPHRAGMS, AND PAINTING THE STRINGERS AS DIRECTED IN THE UNIQUE SPECIAL PROVISION.

EXPANSION JOINT REPLACEMENT

THE UNIT PRICE BID FOR "PRE-COMPRESSED FOAM JOINT" SHALL INCLUDE ALL COSTS REQUIRED TO COMPLETE THE REPLACEMENT OF ALL EXPANSION JOINTS AT ABUTMENT S-20, PIER A, PANEL POINTS L55, LFO (2 LOCATIONS), LF4, LF8, L50', LA0, LA8 AND PIER N-8. THIS SHALL INCLUDE REMOVAL OF CONCRETE DECK AND EXISTING JOINT PANEL ASSEMBLY AS SHOWN IN THE PLANS, FABRICATION AND INSTALLATION OF NEW JOINT, NEW STEEL REINFORCEMENT AND FORMING/PLACING CLASS "C" MODIFIED CONCRETE.

BONDING NEW CONCRETE TO PREVIOUSLY PLACED CONCRETE

WHERE A BONDED CONSTRUCTION JOINT IS CALLED FOR IN THE PLANS, NEW CONCRETE SHALL BE BONDED TO PREVIOUSLY PLACED (CURED) CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM. THE COST OF THIS WORK, INCLUDING ALL LABOR, TOOLS AND MATERIALS IS TO BE INCIDENTAL TO THE APPROPRIATE BID ITEM.

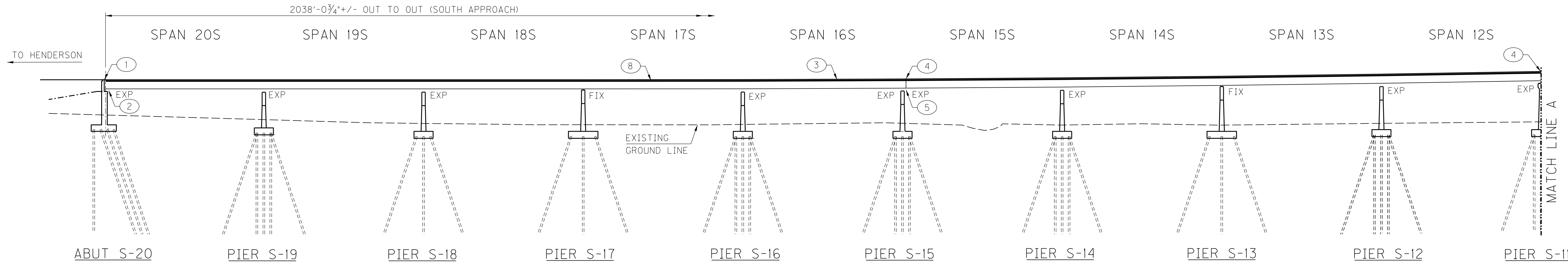
INDEX OF SHEETS	
SHEET NO.	DESIGNATION
S1	TITLE
S2	INDEX, GENERAL NOTES & BRIDGE SUMMARY
S3	ELEVATION & TYP SECTION (SOUTH APPROACH)
S4 & S5	ELEVATION & TYP SECTION (TRUSS)
S6	ELEVATION & TYP SECTION (NORTH APPROACH)
S7	PHASE CONSTRUCTION & MOT
S8	BEARING REPLACEMENT PIER N-5
S9	BEARING REPLACEMENT PIER N-8
S10	EXPANSION JOINT REPLACEMENT
S11	FINGER JT REPLACEMENT ABUT S-20 & PIER N-8
S12	FINGER JT REPLACEMENT PIER A
S13	FINGER JOINT REMOVAL
S14 - S18	FINGER EXPANSION JOINT
S19	STEEL DIAPHRAGM REPAIR
S20	THRIE BEAM & CURB REPAIR
S21	THRIE BEAM POST LAYOUT

SUMMARY OF BRIDGE QUANTITIES																
ITEM	PRESENT STRUCTURE REMOVE PORTIONS	BRIDGE DECK OVERLAY REMOVE	GUARDRAIL THRIE BEAM	CLEAN DRAINS	REINFORCING BARS, EPOXY COATED	PATCHING CONCRETE STRUCTURES	STRUCTURAL STEEL	JACKING & SUPPORTING, GIRDERS	BRIDGE DECK PATCHING, FULL DEPTH	BRIDGE DECK OVERLAY	BRIDGE DECK PATCHING, PARTIAL DEPTH	SURFACE MILLING	EXPANSION JOINT SLIDING PLATE	PRE-COMPRESSED FOAM JOINT	BEARING ASSEMBLY ELASTOMERIC	
	202-51328	202-51822	601-08182	619-98427	703-06029	710-09158	711-51035	711-51878	722-51401	722-51842	722-51852	722-60824	724-03855	724-12103	726-92406	
	LS	SYS	LFT	EACH	LB	SFT	LBS	LS	SFT	SYS	SFT	SYS	LFT	LFT	EACH	
SB 41	SOUTH APPROACH															
	TRUSS SPANS															
	NORTH APPROACH															
NB 41	APPROACH & TRUSS SPANS															
	TOTAL															

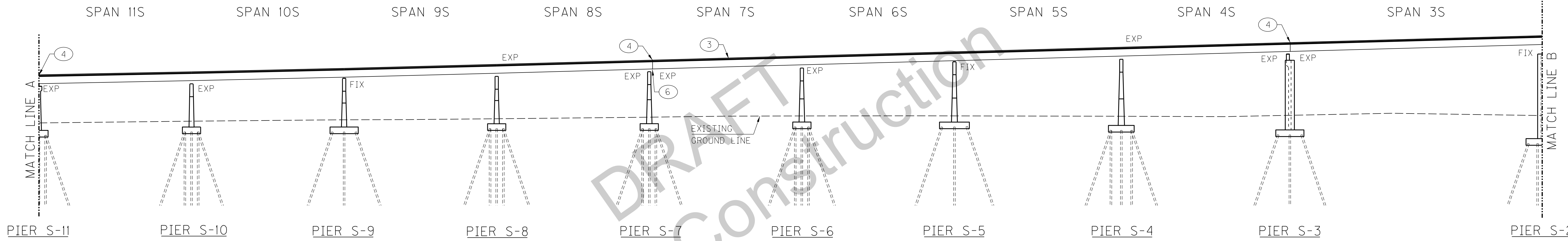
KYTC DRAWING NO. 27600

	RECOMMENDED FOR APPROVAL: <u>Tony Anley</u> 11/04/2016 DATE DESIGN ENGINEER	INDIANA DEPARTMENT OF TRANSPORTATION HENDERSON COUNTY, KENTUCKY US 41 SB BRIDGE REHAB OVER THE OHIO RIVER INDEX, GENERAL NOTES & BRIDGE SUMMARY	SCALE N/A	BRIDGE FILE 041-93-5000SBL
	DESIGNED: <u>M. LAWLER</u> DRAWN: <u>C. ELLISON</u>		DRAWING 00 [OF] 00	SHEET S2 [OF] S21
	CHECKED: <u>A. FARMER</u> CHECKED: <u>M. LAWLER</u>		CONTRACT B-33539	PROJECT 1298275

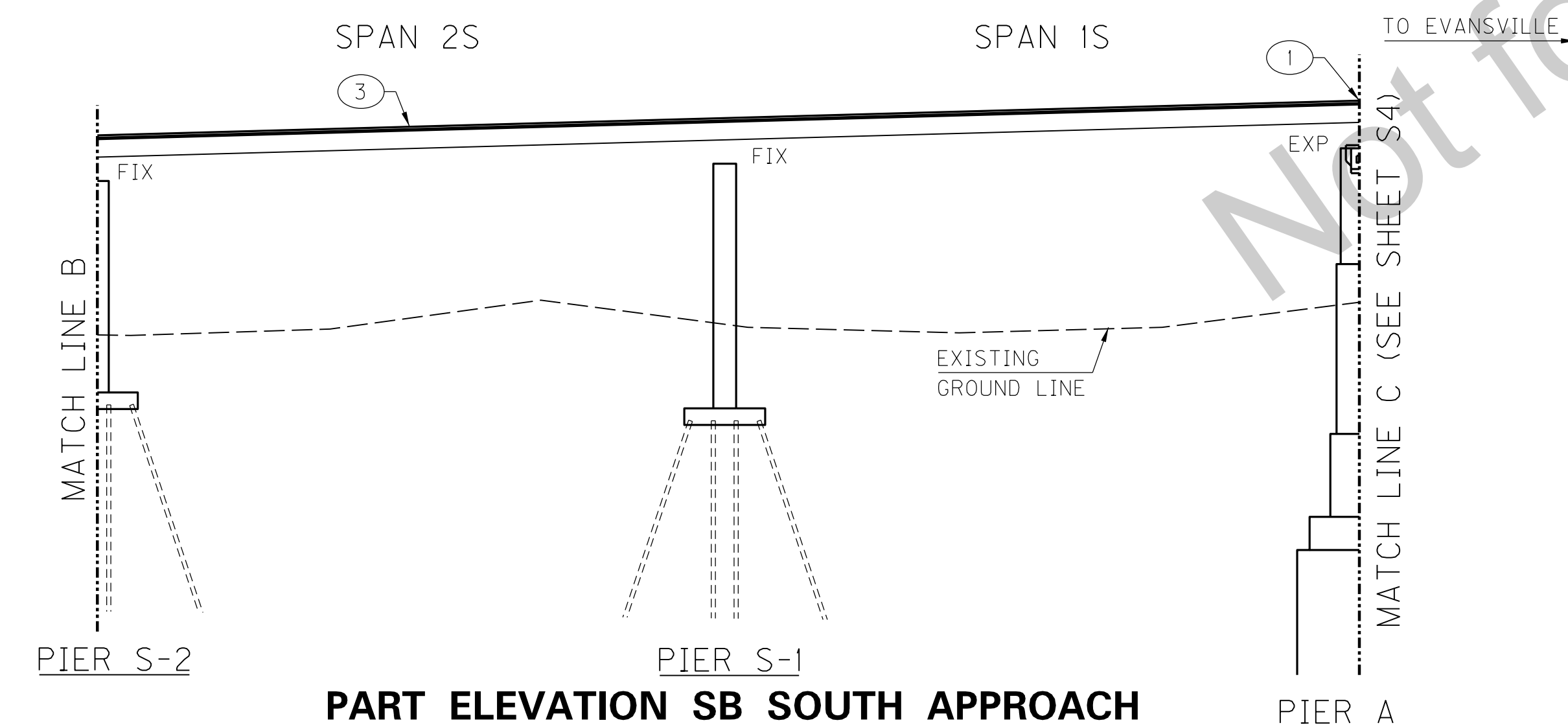
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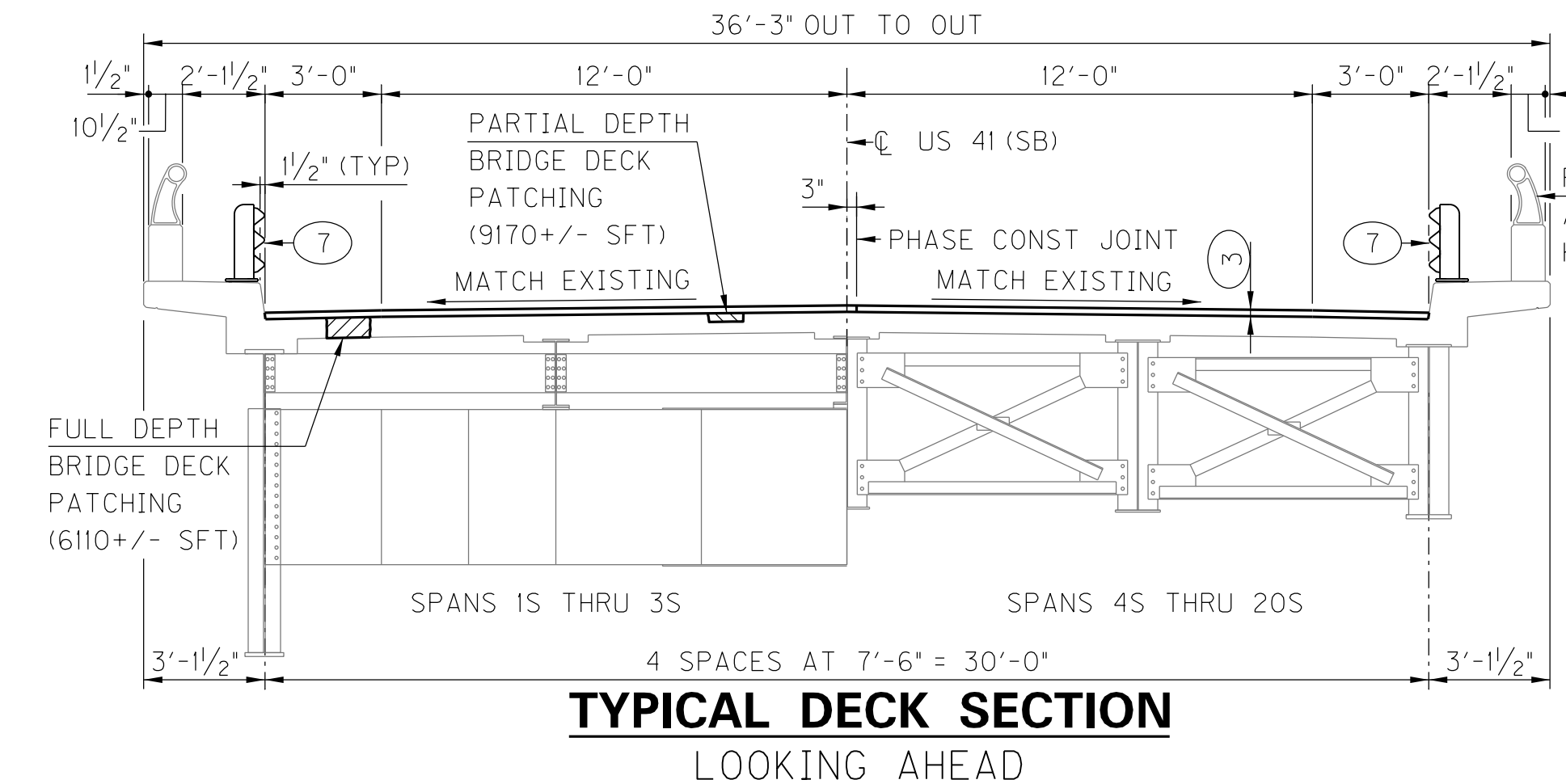
PART ELEVATION SB SOUTH APPROACH



PART ELEVATION SB SOUTH APPROACH



PART ELEVATION SB SOUTH APPROACH



**TYPICAL DECK SECTION
LOOKING AHEAD**

- NOTATIONS:
- ① REMOVE EXISTING FINGER EXPANSION JOINT AND REPLACE WITH PREFORMED, PRECOMPRESSED SELF EXPANDING EXPANSION JOINT (SEE SHEETS S11 OR S12 FOR DETAILS)
 - ② REMOVE AND REPLACE DIAPHRAGMS (ALL BAYS), (SEE SHEET S19 FOR DETAILS)
 - ③ 2" ASPHALT WATERPROOFING MIX OVERLAY. REMOVE EXISTING LATEX OVERLAY AND SCARIFY DECK 1/4" PRIOR TO PLACING NEW OVERLAY.
 - ④ REMOVE AND REPLACE EXISTING EXPANSION JOINT (SEE SHEETS S13 - S18 FOR DETAILS)
 - ⑤ REMOVE AND REPLACE DIAPHRAGM (BAY 1 - BETWEEN GIRDER 1 & 2) (SEE SHEET S19 FOR DETAILS)
 - ⑥ REPAIR DIAPHRAGM GUSSET PLATE (BAYS 3 & 4) (SEE SHEET S19 FOR DETAILS)
 - ⑦ INSTALL THRIE BEAM GUARDRAIL (SEE SHEETS S20 & S21 FOR DETAILS).
 - ⑧ CLEAN BRIDGE DECK AND SCUPPERS. SOUTHBOUND BRIDGE SHOWN, NORTHBOUND BRIDGE SIMILAR.

NOTES:
 SEE SHEETS S4 & S5 FOR TRUSS BRIDGE.
 SEE SHEET S6 FOR SB NORTH APPROACH.
 SEE SHEET S7 FOR PHASE CONSTRUCTION.

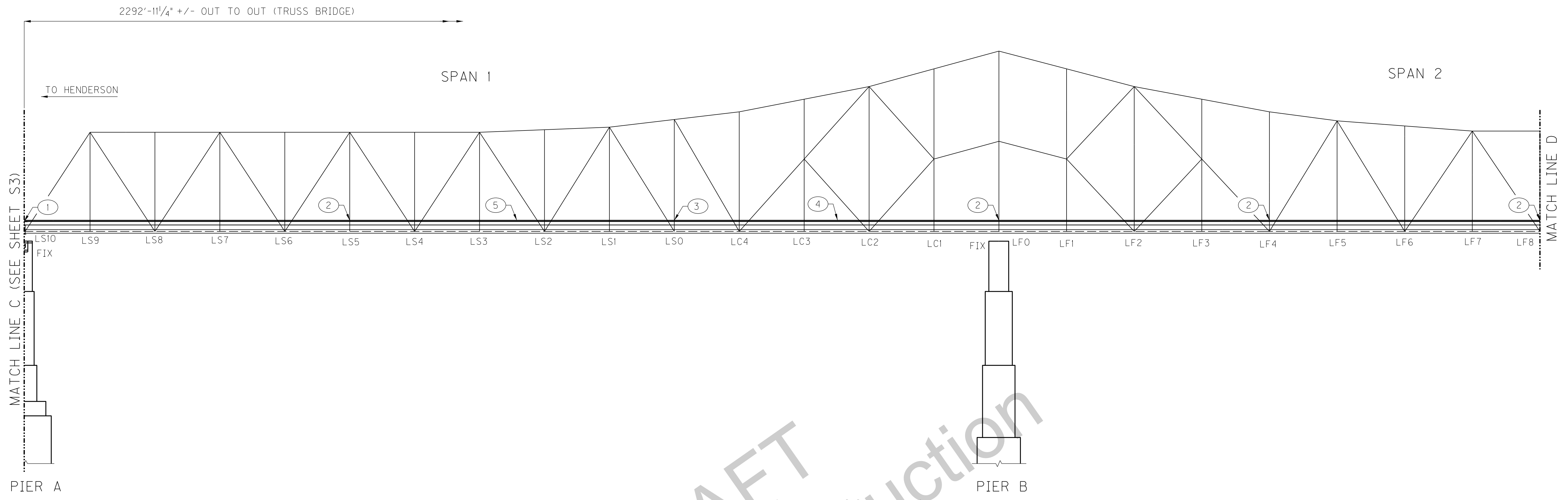
	RECOMMENDED FOR APPROVAL: <i>Tony Hunley</i> DESIGN ENGINEER	11/04/2016 DATE
	DESIGNED: M. LAWLER	DRAWN: R. YOUNG
	CHECKED: R. YOUNG	CHECKED: M. LAWLER

INDIANA
 DEPARTMENT OF TRANSPORTATION
 HENDERSON COUNTY, KENTUCKY
 US 41 SB BRIDGE OVER THE OHIO RIVER
 ELEVATION & TYP SECTION (SOUTH APPROACH)

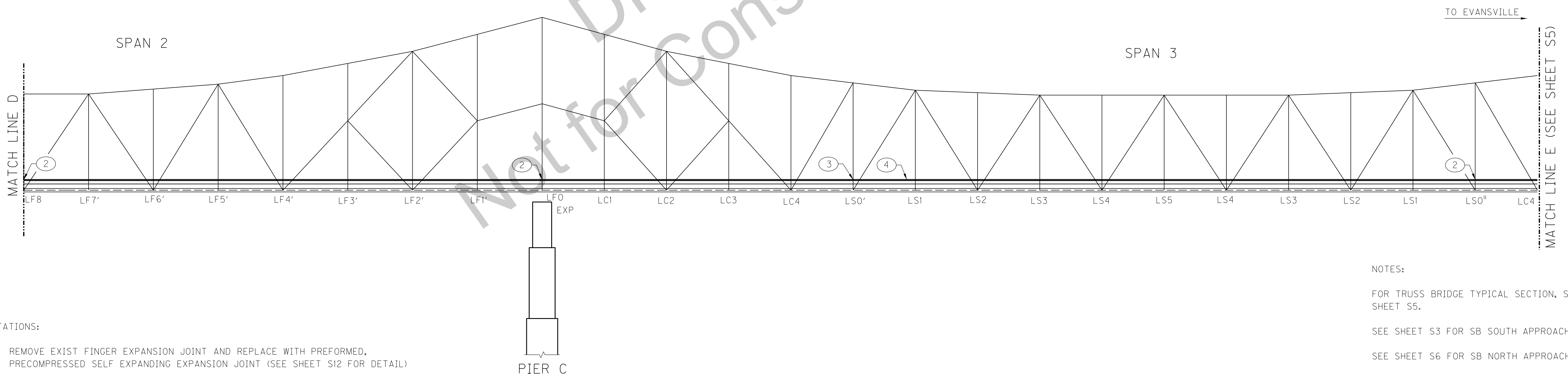
SCALE NTS		BRIDGE FILE 041-93-5000SBL	
		DESIGNATION 1298275	
DRAWING 00	OF 00	SHEET S3	OF S21
CONTRACT B-33539		PROJECT 1298275	

KYTC DRAWING NO. 27600

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PART ELEVATION TRUSS BRIDGE



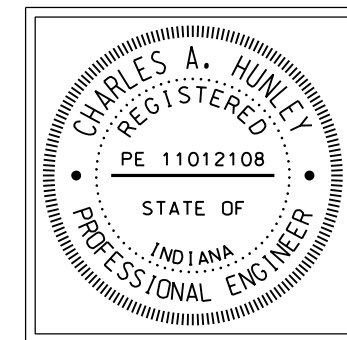
PART ELEVATION TRUSS BRIDGE

- NOTATIONS:
- ① REMOVE EXIST FINGER EXPANSION JOINT AND REPLACE WITH PREFORMED, PRECOMPRESSED SELF EXPANDING EXPANSION JOINT (SEE SHEET S12 FOR DETAIL)
 - ② REMOVE EXIST EXPANSION JOINT AND REPLACE WITH PREFORMED, PRECOMPRESSED SELF EXPANDING EXPANSION JOINT (SEE SHEET S10 FOR DETAILS)
 - ③ REMOVE & REPLACE EXIST FINGER EXP JOINT (SEE SHEETS S13 - S18 FOR DETAILS)
 - ④ 2" ASPHALT WATERPROOFING MIX OVERLAY. REMOVE EXISTING LATEX OVERLAY AND SCARIFY DECK 1/4" PRIOR TO PLACING NEW OVERLAY.
 - ⑤ CLEAN BRIDGE DECK AND SCUPPERS. SOUTHBOUND BRIDGE SHOWN, NORTHBOUND BRIDGE SIMILAR.

NOTES:

- FOR TRUSS BRIDGE TYPICAL SECTION, SEE SHEET S5.
- SEE SHEET S3 FOR SB SOUTH APPROACH.
- SEE SHEET S6 FOR SB NORTH APPROACH.
- SEE SHEET S7 FOR PHASE CONSTRUCTION.
- WORK THIS SHEET WITH SHEET S5.

K:\1785\active\178566011\structural\Henderson_SB_Bridge\drawing\IN_S4-S5_Truss_Br.dgn Foy, Sheila Plot:11/3/2016 1:37 PM Save:11/3/2016 1:37 PM



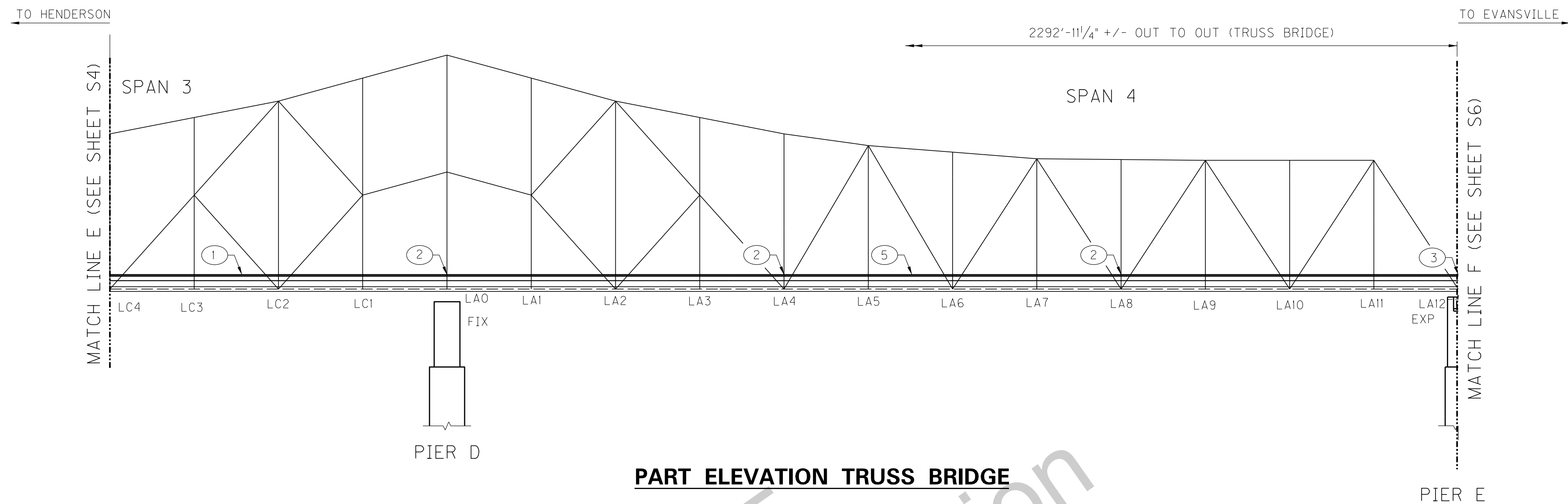
RECOMMENDED FOR APPROVAL:	<i>Tony Hawley</i>	11/04/2016
	DESIGN ENGINEER	DATE
DESIGNED:	M. LAWLER	DRAWN: R. YOUNG
CHECKED:	R. YOUNG	CHECKED: M. LAWLER

INDIANA
DEPARTMENT OF TRANSPORTATION

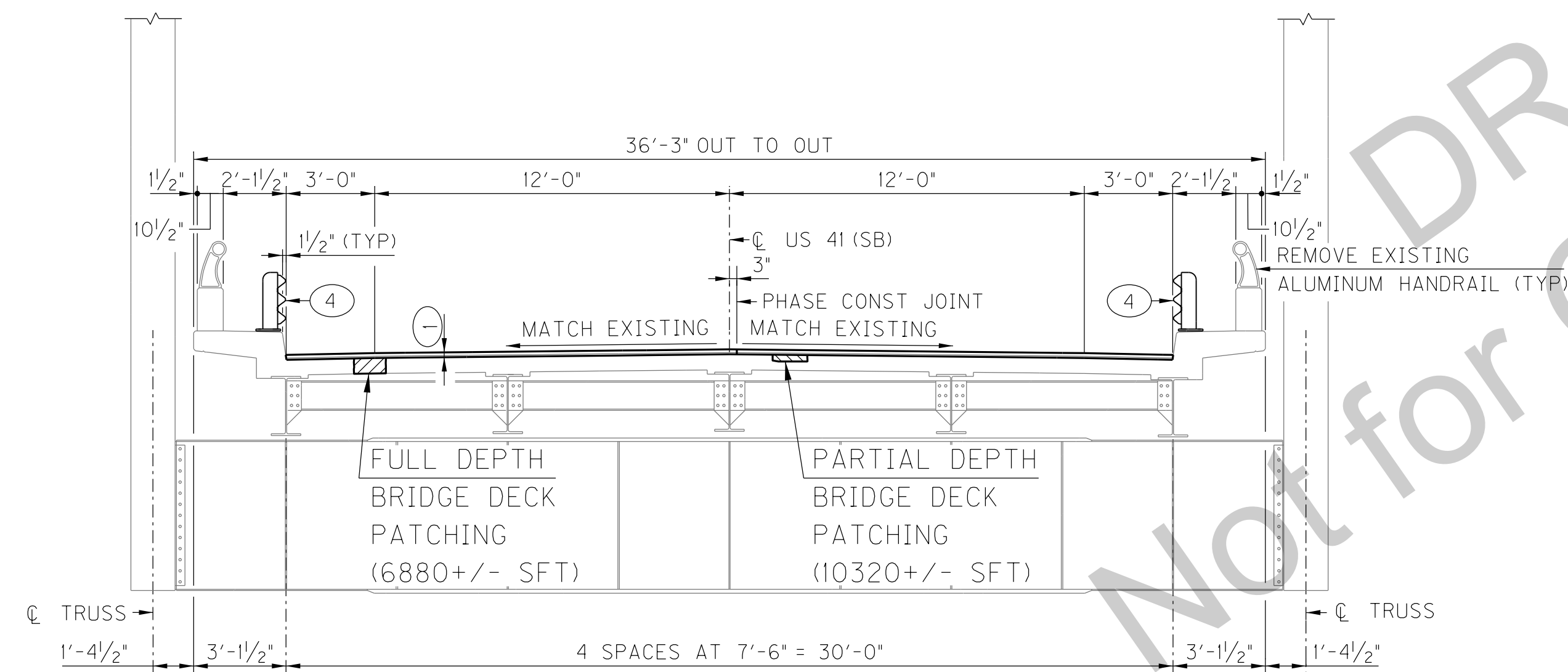
HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE OVER THE OHIO RIVER
ELEVATION & TYPICAL SECTION (TRUSS)

SCALE	BRIDGE FILE
NTS	041-93-5000SBL
	DESIGNATION
	1298275
DRAWING	SHEET
00 OF 00	S4 OF S21
CONTRACT	PROJECT
B-33539	1298275

KYTC DRAWING NO. 27600



PART ELEVATION TRUSS BRIDGE



TYPICAL DECK SECTION
LOOKING AHEAD STATION

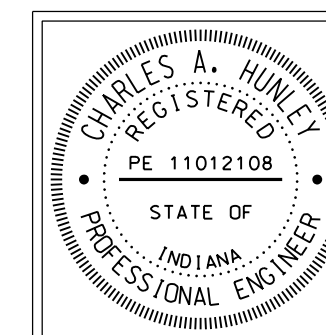
NOTATIONS:

- ① 2" ASPHALT WATERPROOFING MIX OVERLAY. REMOVE EXISTING LATEX OVERLAY AND SCARIFY DECK 1/4" PRIOR TO PLACING NEW OVERLAY.
- ② REMOVE EXIST EXPANSION JOINT AND REPLACE WITH PREFORMED, PRECOMPRESSED SELF EXPANDING EXPANSION JOINT. (SEE SHEET S10 FOR DETAILS)
- ③ REMOVE & REPLACE EXIST FINGER EXP JOINT (SEE SHEETS S13 - S18 FOR DETAILS)
- ④ INSTALL THRIE BEAM GUARDRAIL (SEE SHEETS S20 & S21 FOR DETAILS)
- ⑤ CLEAN BRIDGE DECK AND SCUPPERS. SOUTHBOUND BRIDGE SHOWN, NORTHBOUND BRIDGE SIMILAR.

NOTES:

- SEE SHEET S3 FOR SB SOUTH APPROACH.
- SEE SHEET S6 FOR SB NORTH APPROACH.
- SEE SHEET S7 FOR PHASE CONSTRUCTION.
- WORK THIS SHEET WITH SHEET S4.

KYTC DRAWING NO. 27600



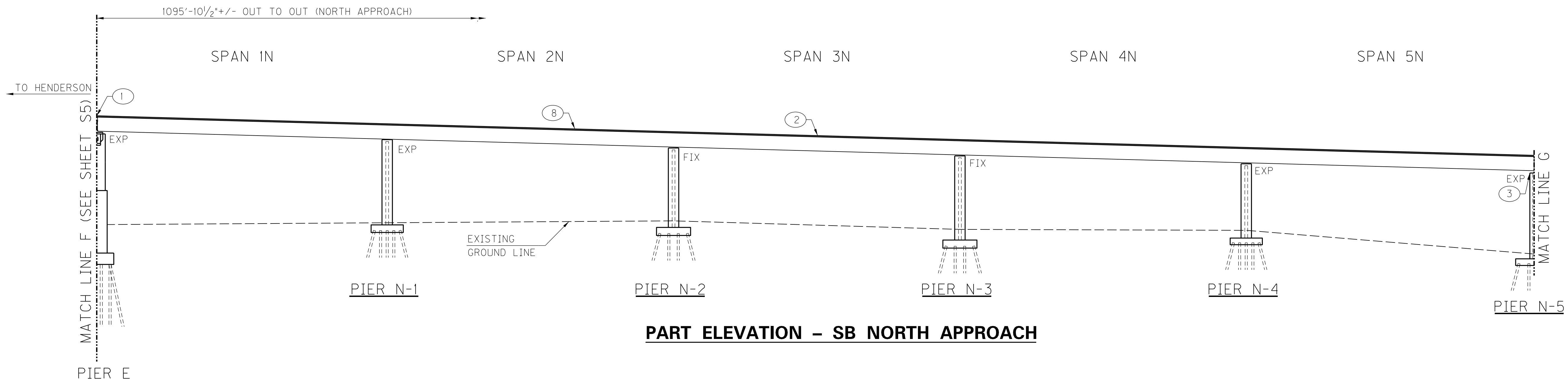
RECOMMENDED FOR APPROVAL:	<i>Tony Hulley</i>	DESIGN ENGINEER	11/04/2016	DATE
DESIGNED:	M. LAWLER	DRAWN:	R. YOUNG	
CHECKED:	R. YOUNG	CHECKED:	M. LAWLER	

INDIANA
DEPARTMENT OF TRANSPORTATION

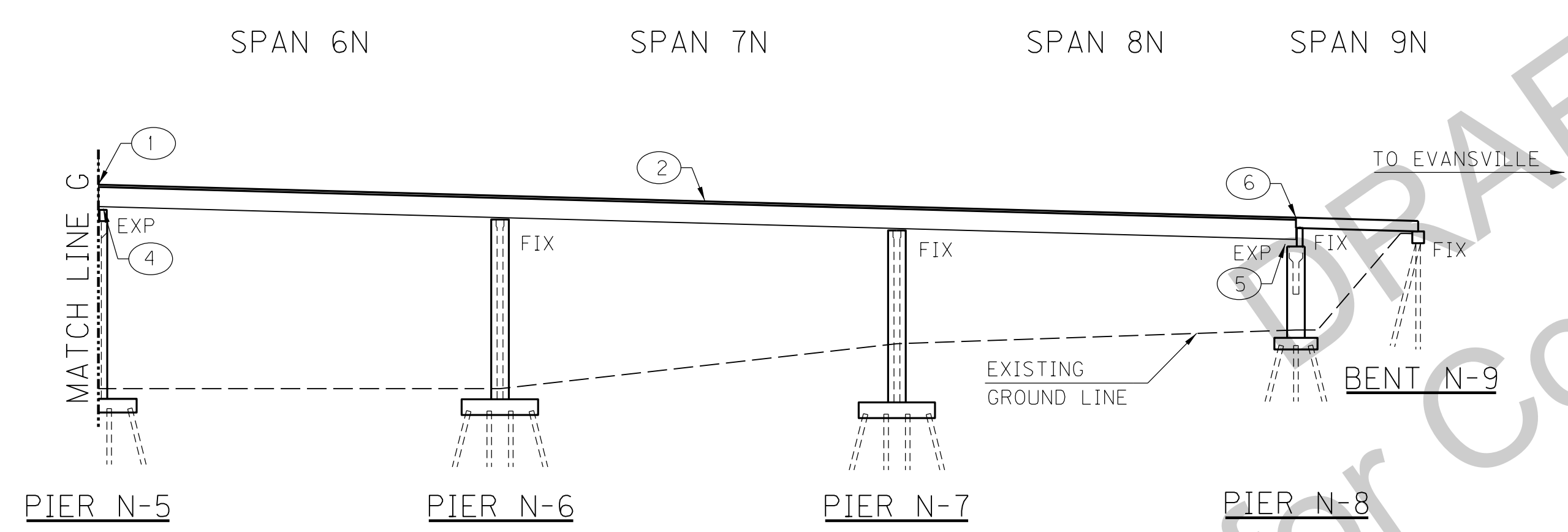
HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE OVER THE OHIO RIVER
ELEVATION & TYPICAL SECTION (TRUSS)

SCALE	BRIDGE FILE
NTS	041-93-5000SBL
	DESIGNATION
	1298275
DRAWING	SHEET
00 OF 00	S5 OF S21
CONTRACT	PROJECT
B-33539	1298275

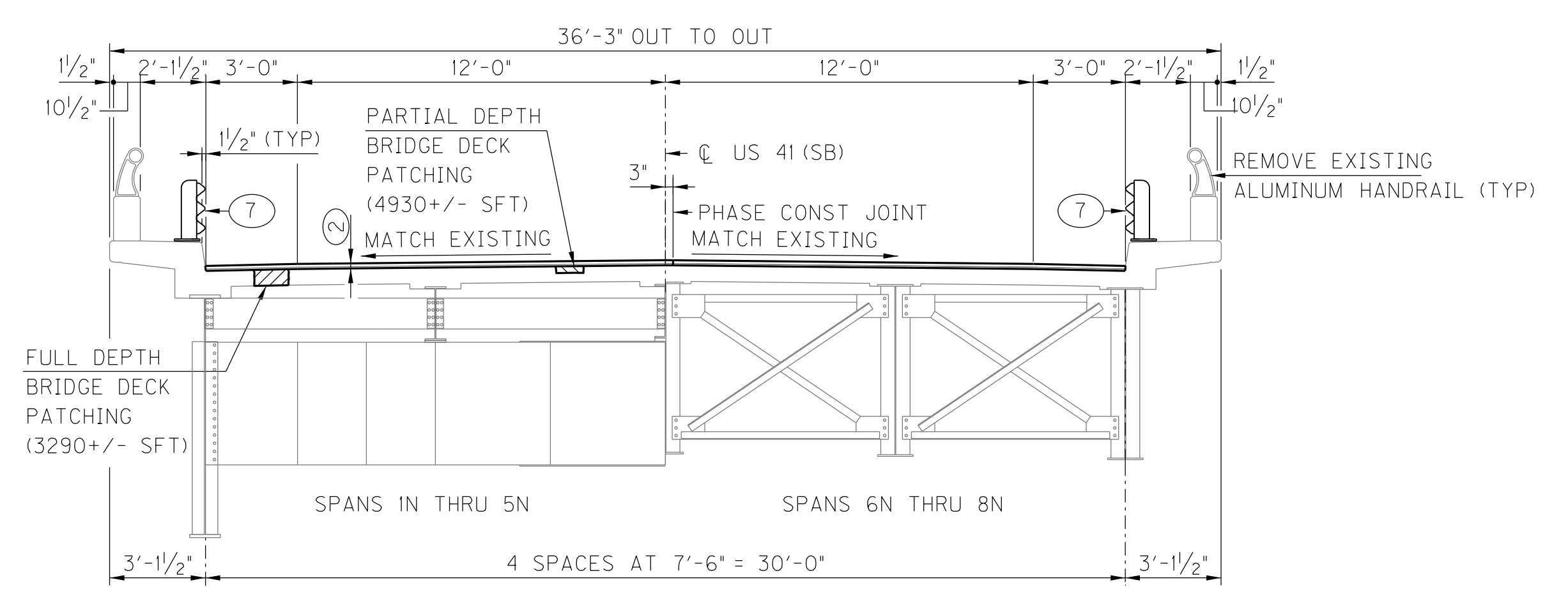
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PART ELEVATION - SB NORTH APPROACH



PART ELEVATION - SB NORTH APPROACH



TYPICAL DECK SECTION
LOOKING AHEAD

- NOTATIONS:
- ① REMOVE & REPLACE EXIST FINGER EXP JOINT (SEE SHEETS S13-S18 FOR DETAILS)
 - ② 2" ASPHALT WATERPROOFING MIX OVERLAY. REMOVE EXISTING LATEX OVERLAY AND SCARIFY DECK 1/4" PRIOR TO PLACING NEW OVERLAY.
 - ③ REPAIR STRINGER 3 (SEE SHEET S19 FOR DETAILS)
 - ④ REMOVE & REPLACE GIRDER BEARINGS (SEE SHEET S8 FOR DETAILS)
 - ⑤ REMOVE & REPLACE GIRDER BEARINGS (SEE SHEET S9 FOR DETAILS) AND CROSS FRAMES (ALL BAYS) (SEE SHEET S19 FOR DETAILS)
 - ⑥ REMOVE EXIST FINGER EXP JOINT AND REPLACE WITH PREFORMED, PRECOMPRESSED SELF EXPANDING EXPANSION JOINT (SEE SHEET S11 FOR DETAILS)
 - ⑦ INSTALL THRIE BEAM GUARDRAIL (SEE SHEETS S20 & S21 FOR DETAILS)
 - ⑧ CLEAN BRIDGE DECK AND SCUPPERS. SOUTHBOUND BRIDGE SHOWN, NORTHBOUND BRIDGE SIMILAR.

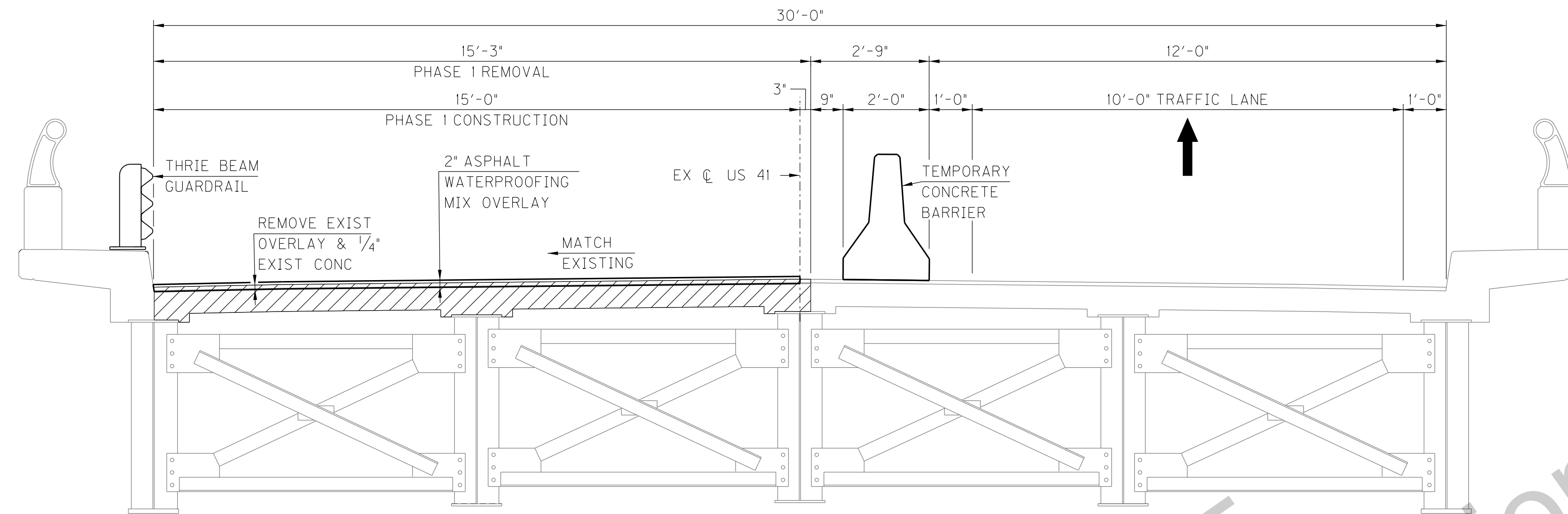
- NOTES:
- SEE SHEET S3 FOR SB SOUTH APPROACH.
 - SEE SHEETS S4 & S5 FOR SB TRUSS.
 - SEE SHEET S7 FOR PHASE CONSTRUCTION.

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Not for Construction

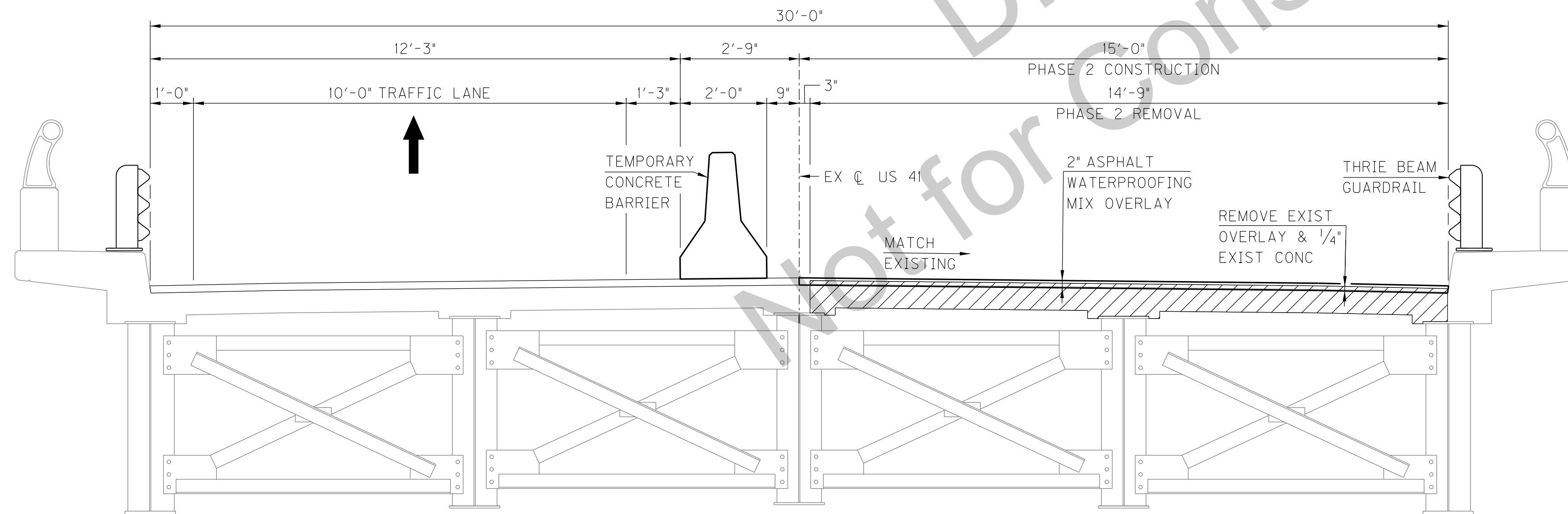
KYTC DRAWING NO. 27600

	RECOMMENDED FOR APPROVAL: <i>Tony Hulley</i> DESIGN ENGINEER	11/04/2016 DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE: NTS	BRIDGE FILE: 041-93-5000SBL
	DESIGNED: M. LAWLER DRAWN: E. TRIMBLE	CHECKED: E. TRIMBLE CHECKED: M. LAWLER			DRAWING: 00 OF 00
HENDERSON COUNTY, KENTUCKY US 41 SB BRIDGE REHAB OVER THE OHIO RIVER ELEVATION & TYP SECTION (NORTH APPROACH)				CONTRACT: B-33539	PROJECT: 1298275



PHASE 1 REMOVAL & CONSTRUCTION
 TYPICAL FOR SOUTH APPROACH, TRUSS,
 AND NORTH APPROACH

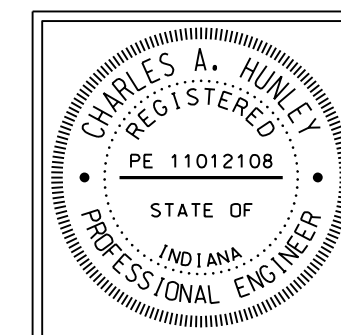
LEGEND:
 INDICATES LIMITS OF FULL DEPTH REMOVAL AT EXPANSION AND FINGER JOINT LOCATIONS



PHASE 2 REMOVAL & CONSTRUCTION
 TYPICAL FOR SOUTH APPROACH, TRUSS,
 AND NORTH APPROACH

R:\client\KYTC\cell\SSSTRU_Sheet_Startec.cel Foy, Sheila Plot: 8/9/2013 9:01 AM Save: 7/1/2016 1:40 PM

KYTC DRAWING NO. 27600

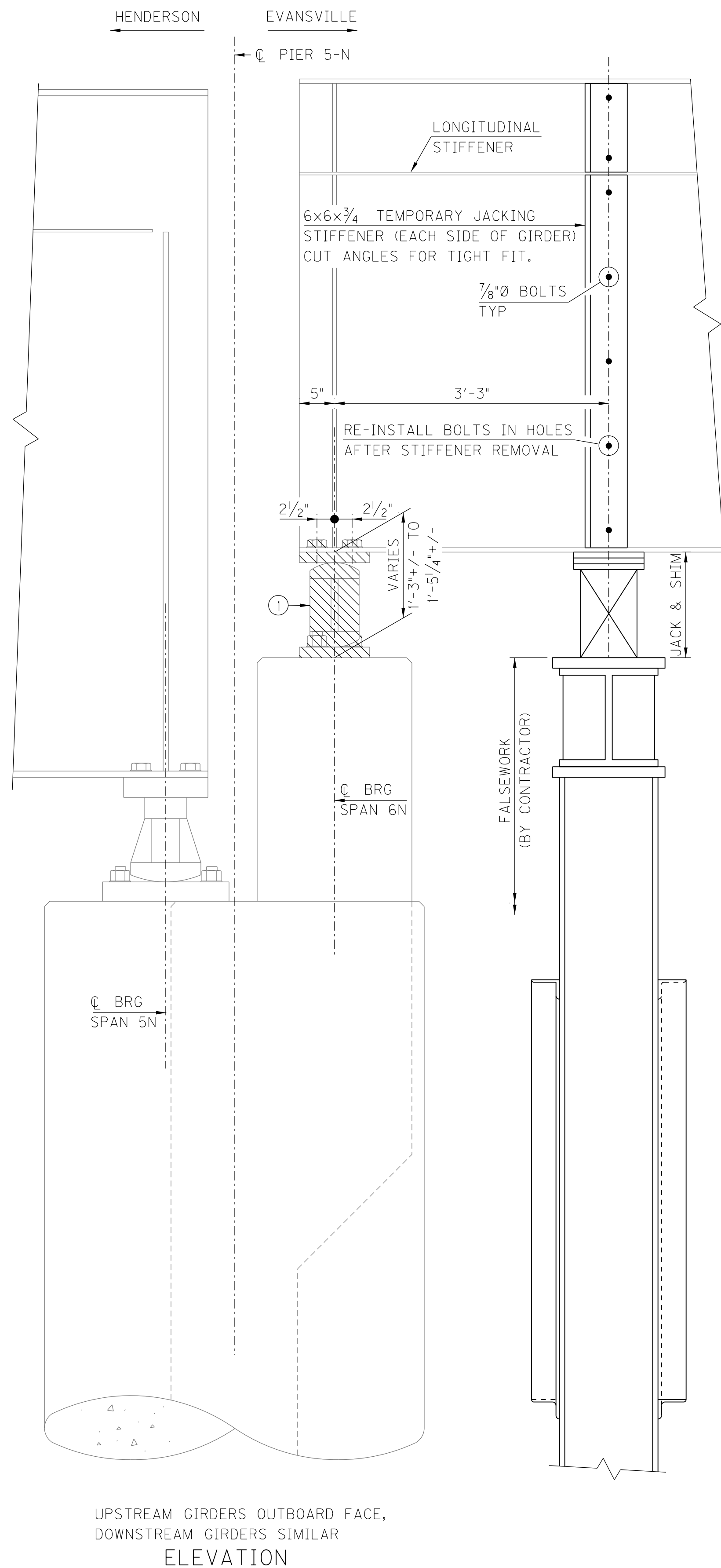


RECOMMENDED FOR APPROVAL: Tony Hunley DESIGN ENGINEER 11/04/2016 DATE
 DESIGNED: M. LAWLER DRAWN: R. YOUNG
 CHECKED: R. YOUNG CHECKED: M. LAWLER

INDIANA DEPARTMENT OF TRANSPORTATION
 HENDERSON COUNTY, KENTUCKY
 US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
 PHASE CONSTRUCTION & MOT

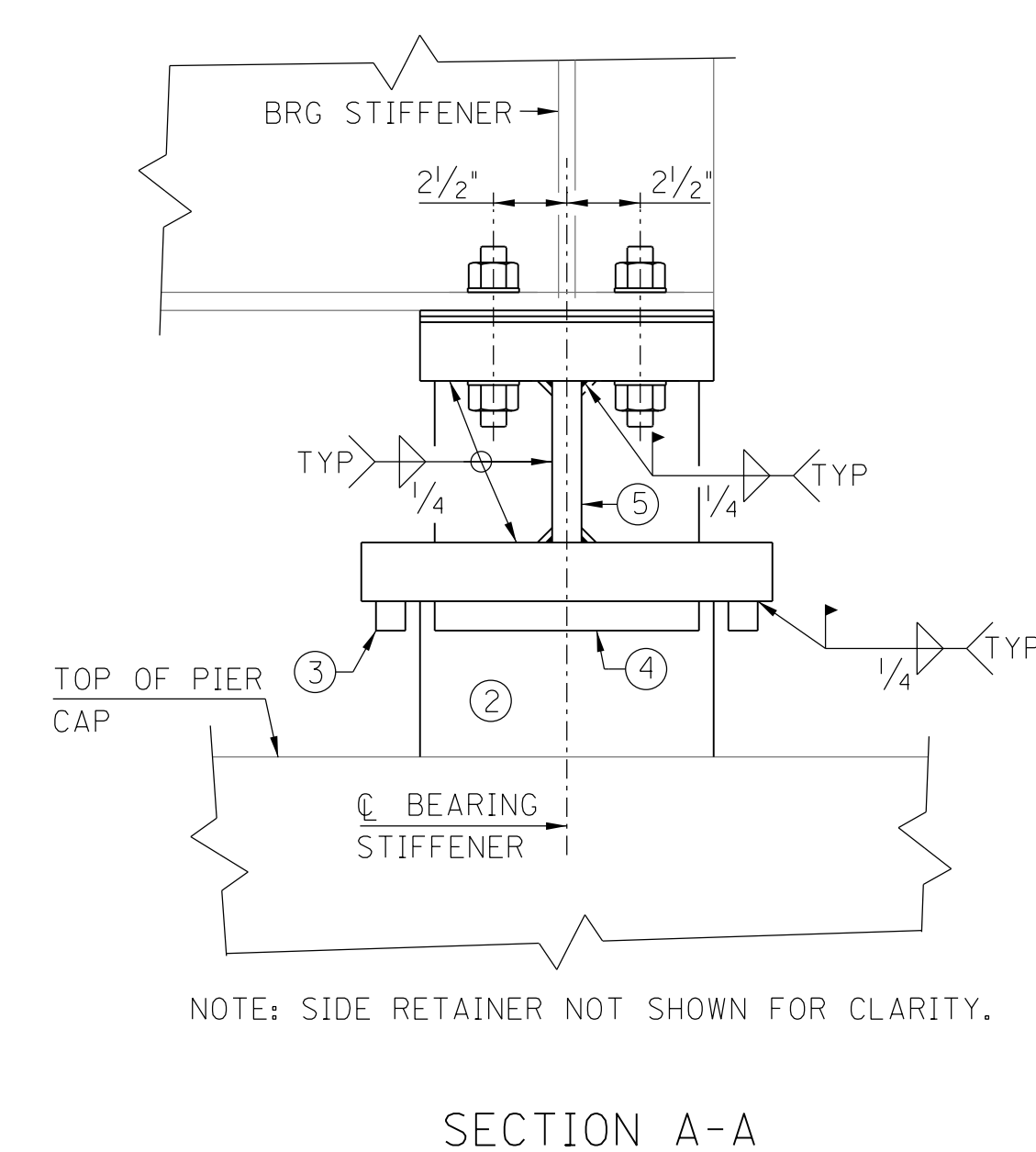
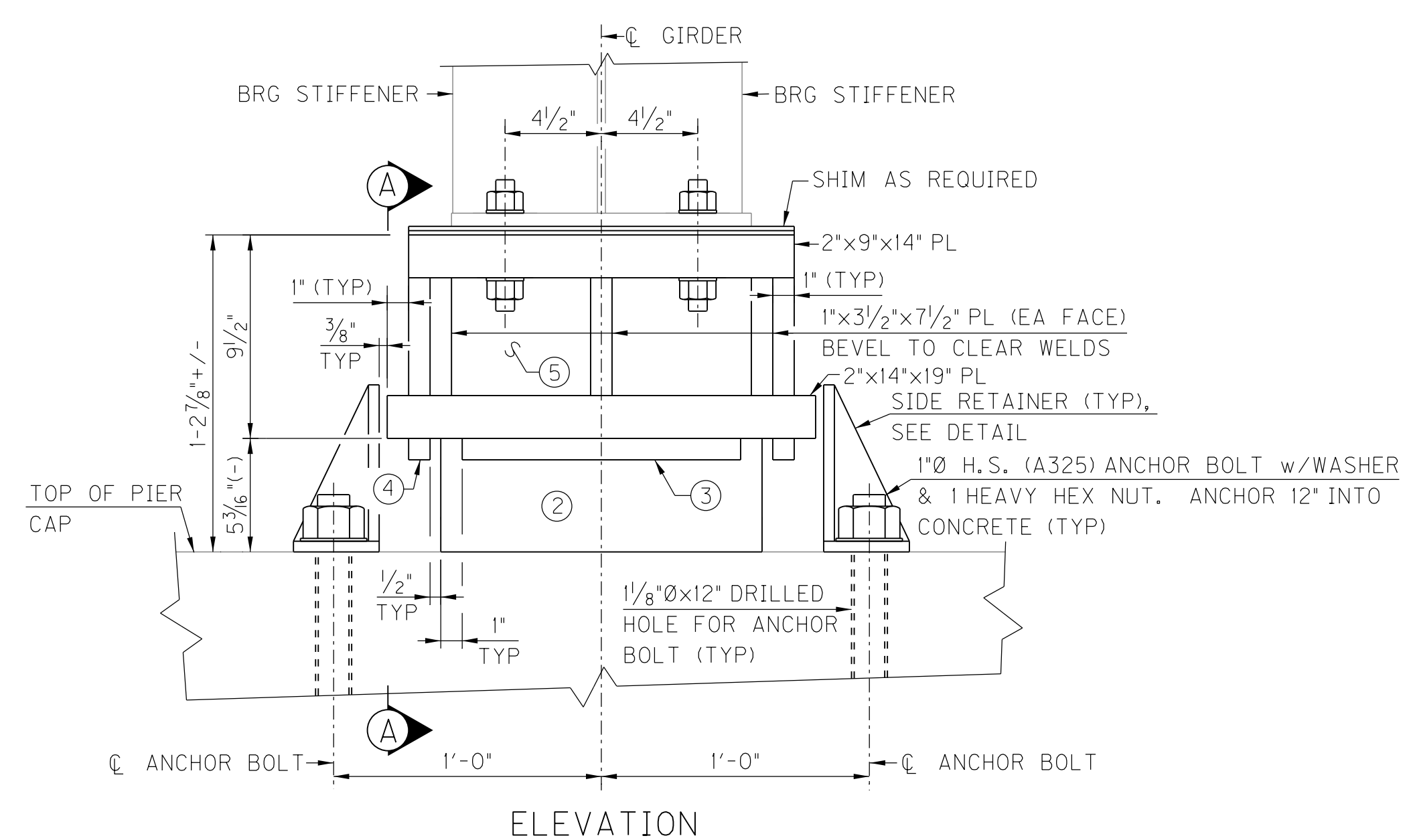
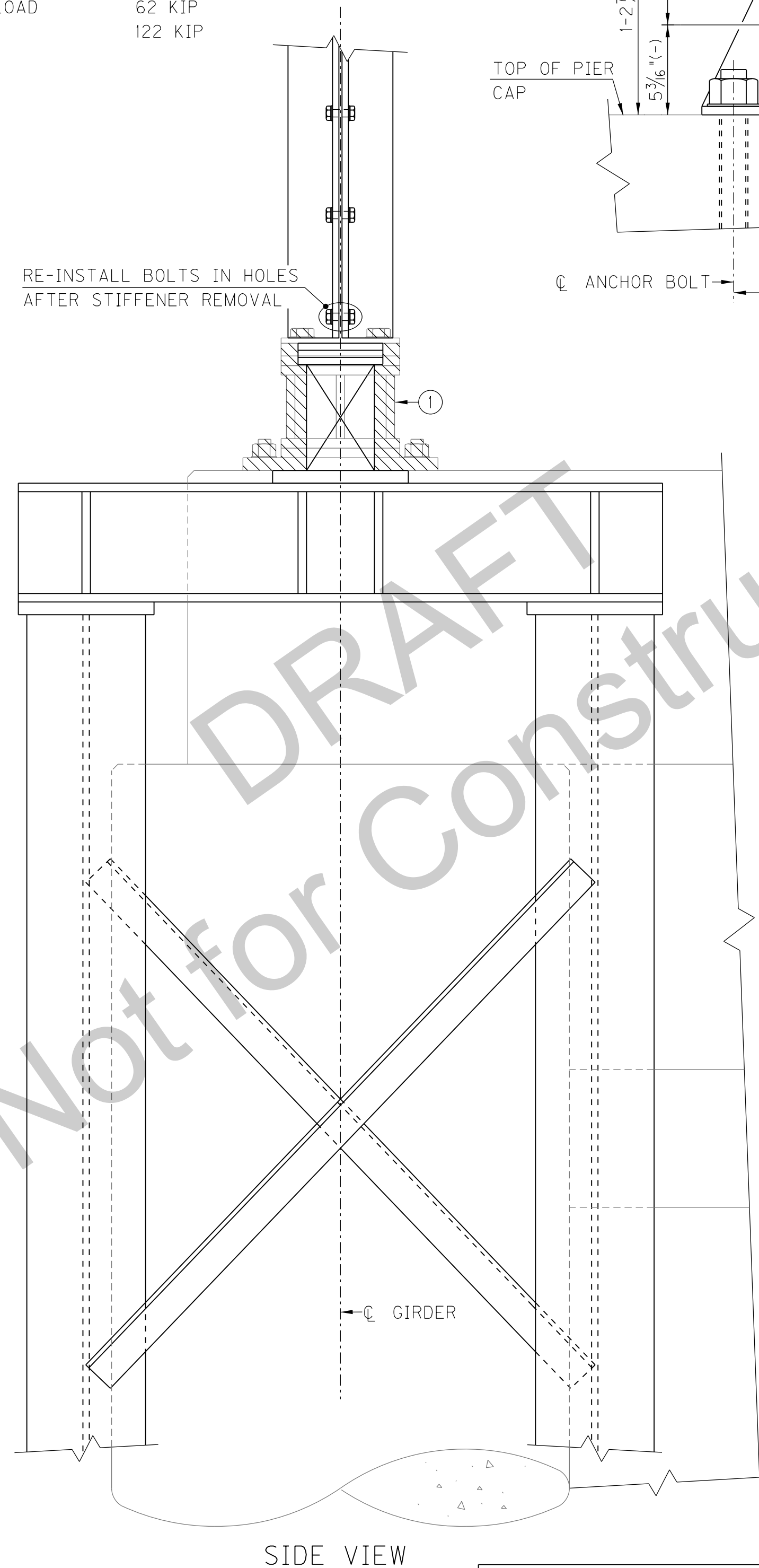
SCALE NTS	BRIDGE FILE 041-93-5000SBL DESIGNATION 1298275
DRAWING 00 OF 00	SHEET S7 OF S21
CONTRACT B-33539	PROJECT 1298275

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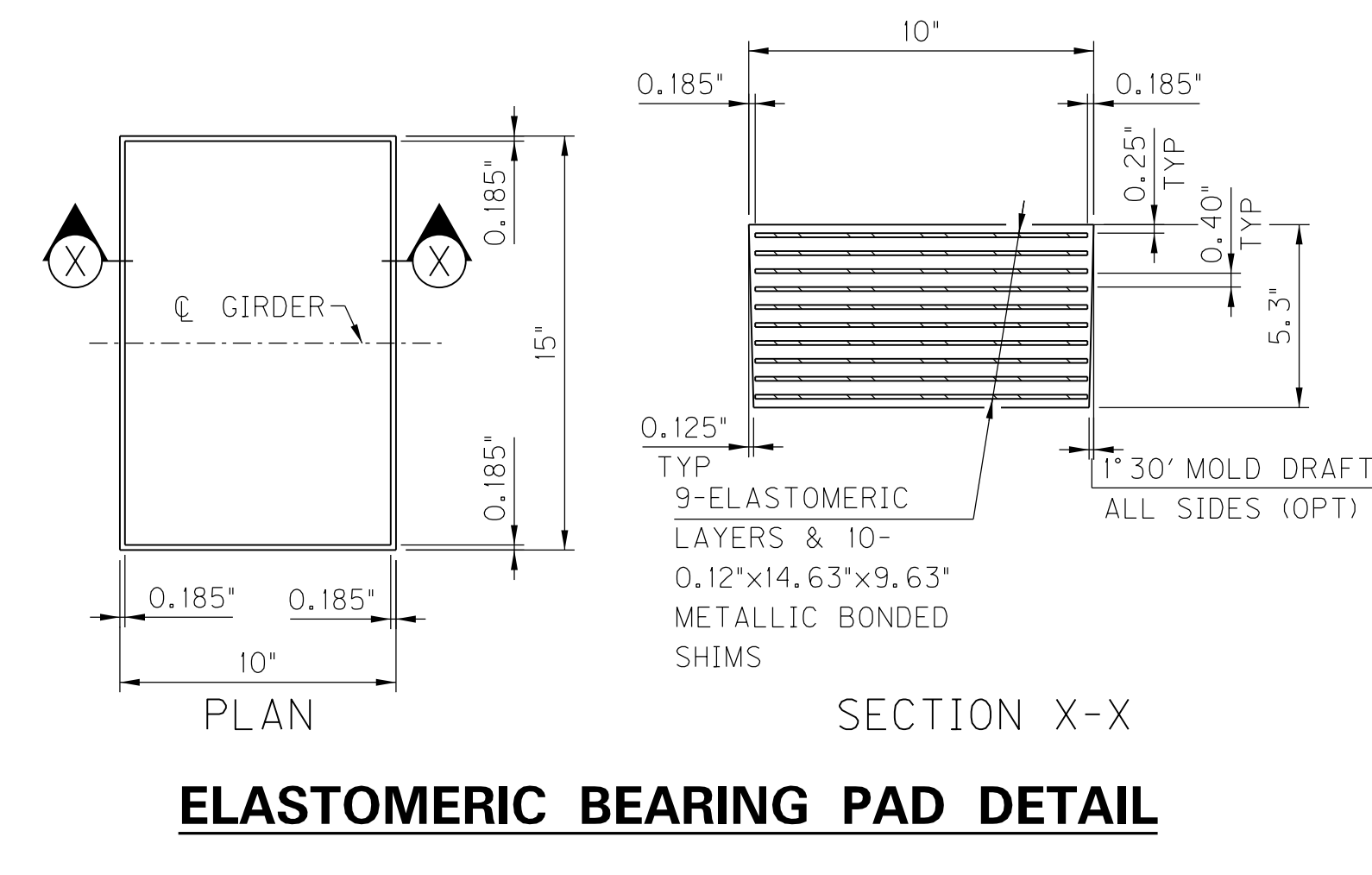
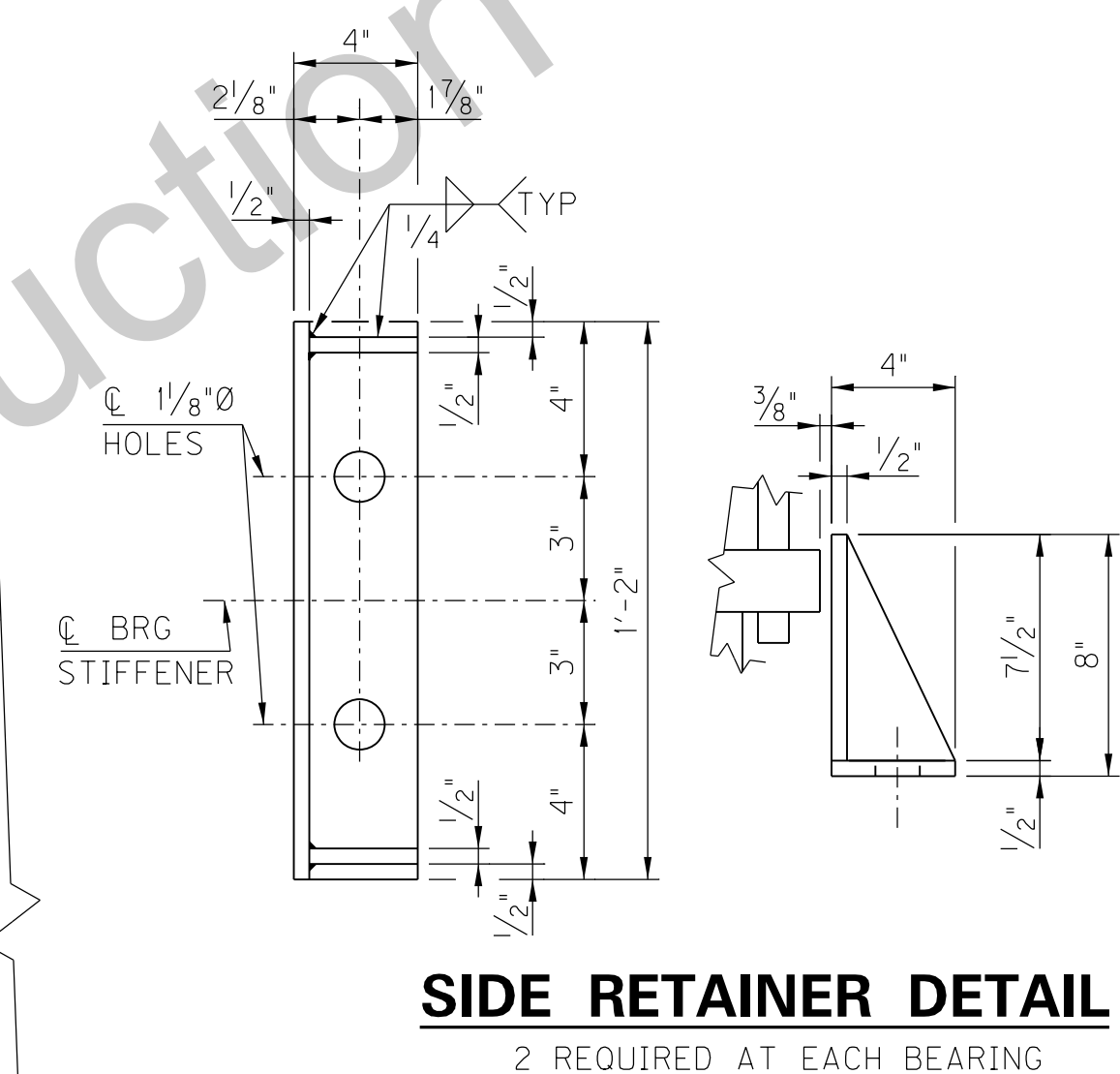


LEGEND
 INDICATES TO BE REMOVED

JACKING LOADS (PER GIRDER LINE)
 DEAD LOAD 60 KIP
 LIVE LOAD 62 KIP
 TOTAL 122 KIP



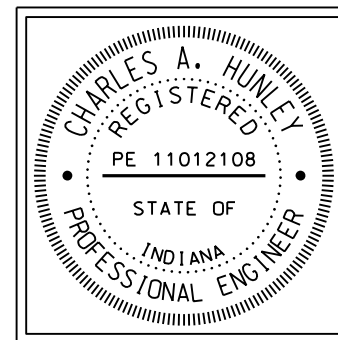
ELASTOMERIC BEARING REPLACEMENT



- NOTATIONS:
- ① REMOVE EXPANSION SHOE ASSEMBLY, INCLUDING BOLTS AND PLATES.
 - ② 5.3"x10"x15" ELASTOMERIC BEARING PAD, SEE DETAIL.
 - ③ 1"x1"x12" KEEPER PLATE (EACH FACE)
 - ④ 1"x1"x8" KEEPER PLATE (EACH FACE)
 - ⑤ 1"x6 1/2"x1'-2" PL

- NOTES:
- ALL JACKING AND BEARING REMOVAL/REPLACEMENT, PER PHASE, SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF THE JOINT REPLACEMENT AND OVERLAY REPLACEMENT WORK DURING THAT PHASE.
 - ALL DIMENSIONS SHOWN ARE BASED ON EXISTING PLANS, CONTRACTOR SHALL FIELD VERIFY.
 - SEE UNIQUE SPECIAL PROVISION FOR ADDITIONAL DETAILS AND REQUIREMENTS.
 - INSTALL 1" DIA. ANCHOR BOLT SET IN 12" DEEP FIELD DRILLED HOLE WITH AN APPROVED ANCHOR SYSTEM, (MINIMUM PULLOUT = 28,300 POUNDS).

GIRDER JACKING AND BEARING REMOVAL AT PIER N-5



RECOMMENDED FOR APPROVAL: Tony Hawley 11/04/2016 DATE
 DESIGN ENGINEER
 DESIGNED: S. KING DRAWN: R. YOUNG
 CHECKED: M. LAWLER CHECKED: M. LAWLER

INDIANA DEPARTMENT OF TRANSPORTATION
 HENDERSON COUNTY, KENTUCKY
 US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
 BEARING REPLACEMENT PIER N-5

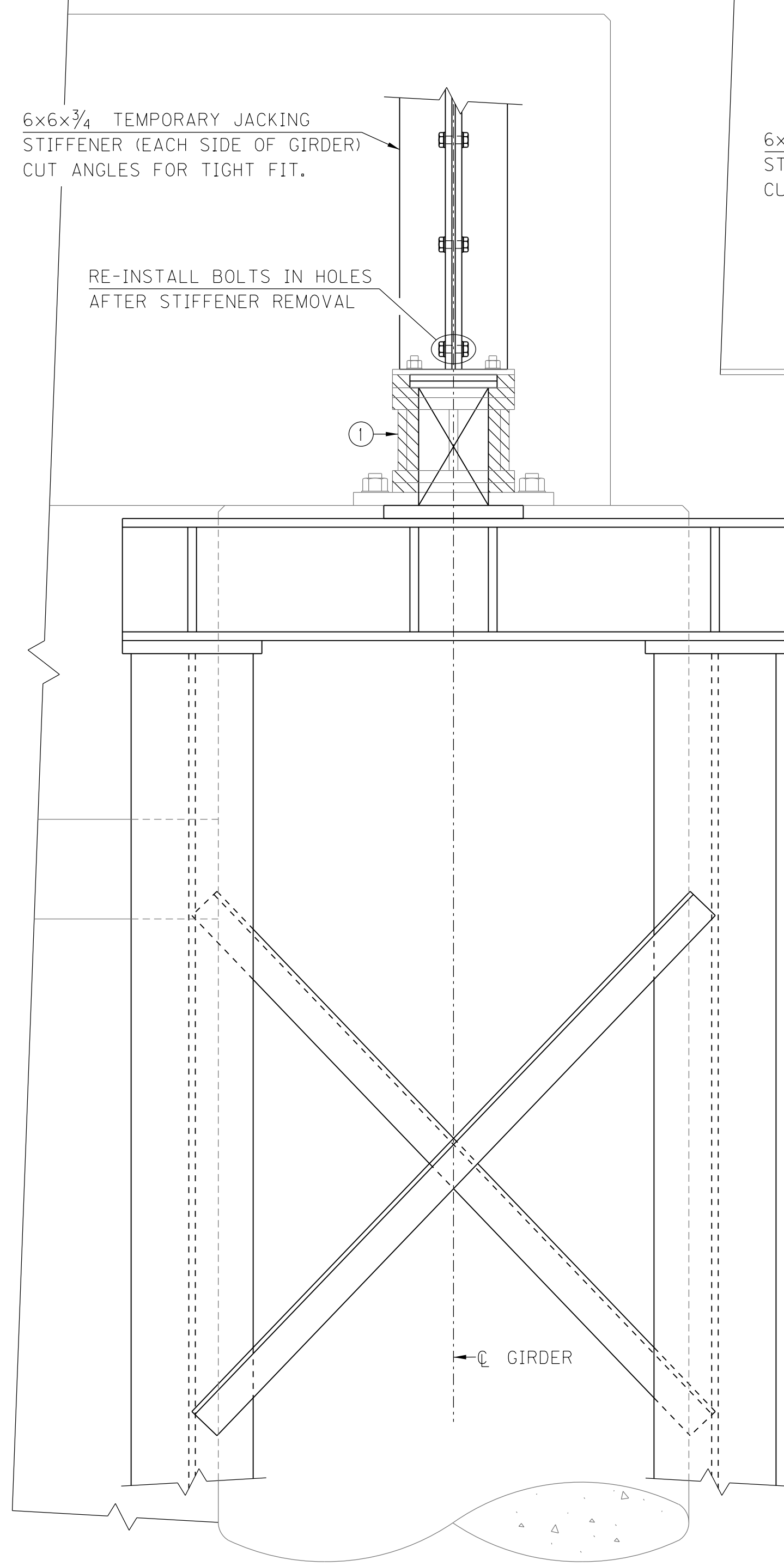
SCALE NTS		BRIDGE FILE 041-93-5000SBL DESIGNATION 1298275	
DRAWING 00 OF 00		SHEET S8 OF S21	
CONTRACT B-33539		PROJECT 1298275	

KYTC DRAWING NO. 27600

LEGEND
 INDICATES TO BE REMOVED

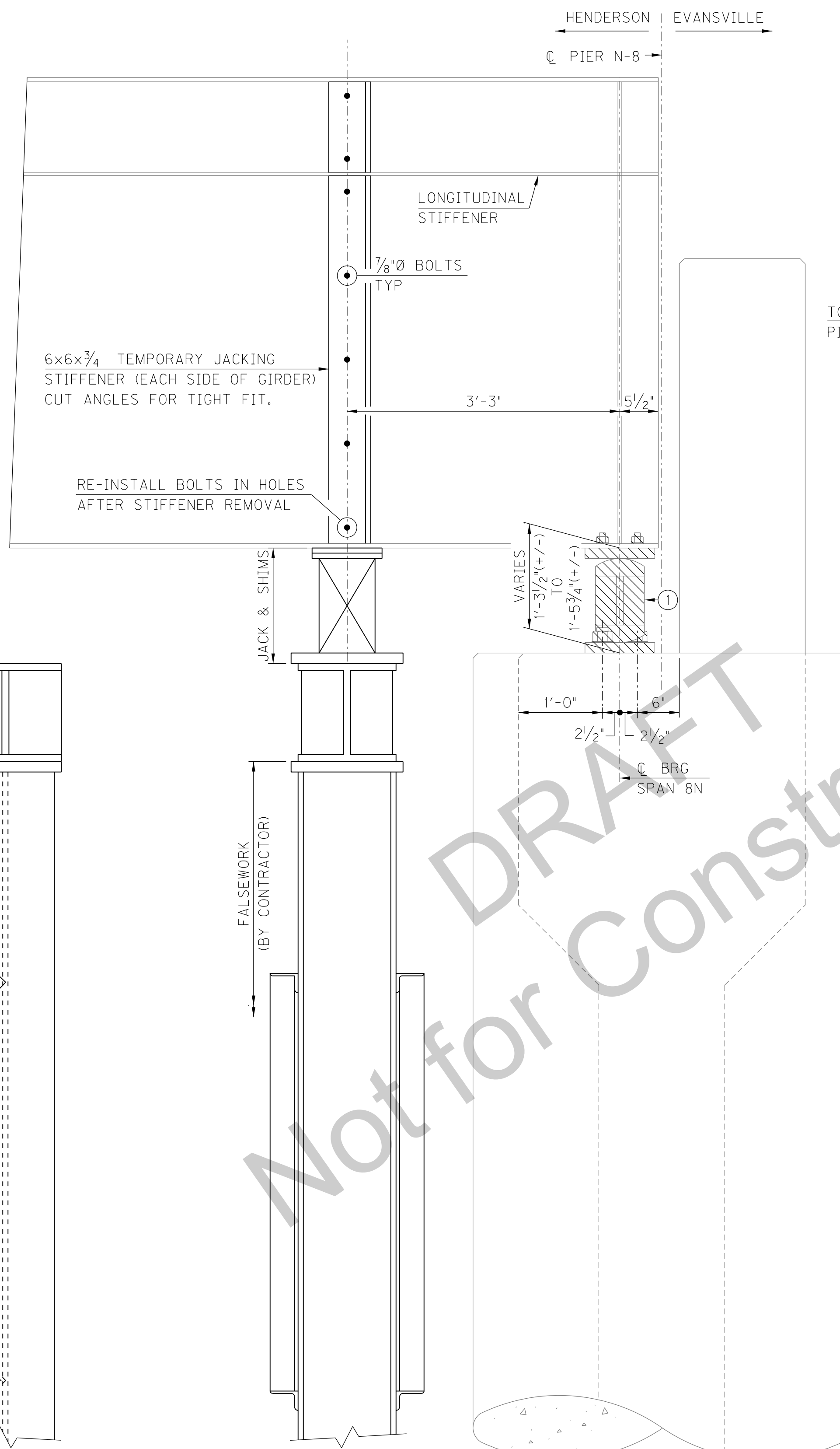
**JACKING LOADS
(PER GIRDER LINE)**

DEAD LOAD 60 KIP
LIVE LOAD 62 KIP
TOTAL 122 KIP

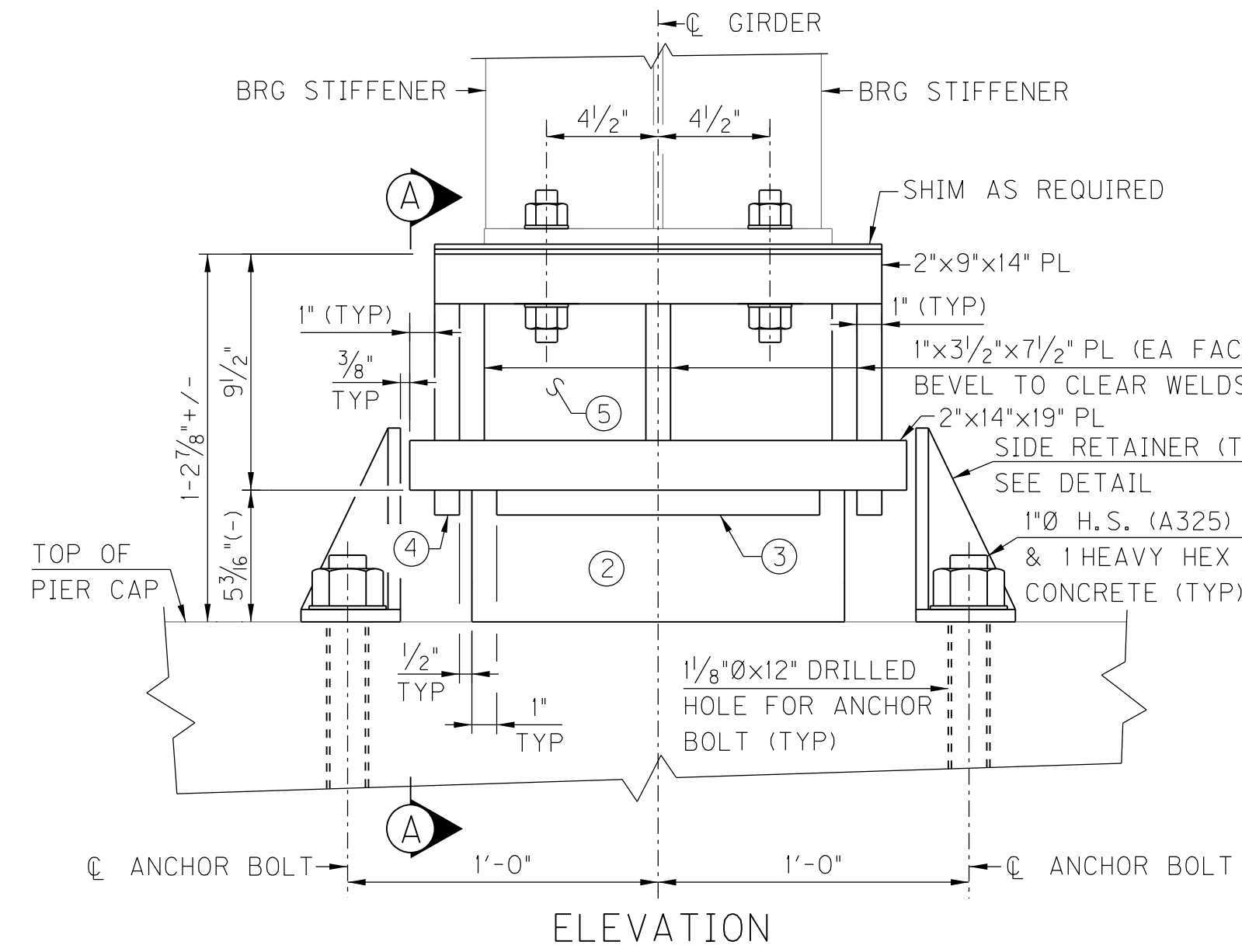


SIDE VIEW

GIRDER JACKING AND BEARING REMOVAL AT PIER N-8



ELEVATION

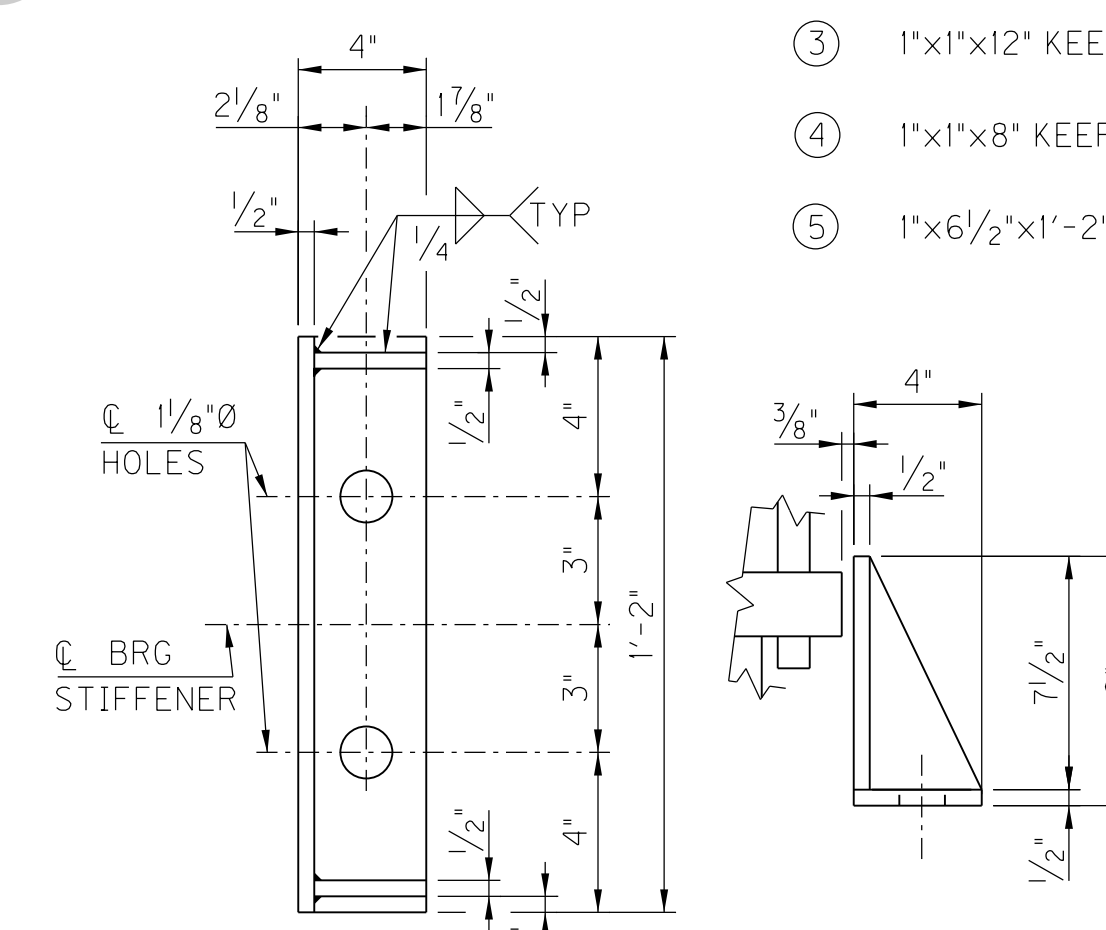


ELEVATION

ELASTOMERIC BEARING REPLACEMENT

NOTATIONS:

- ① REMOVE EXPANSION SHOE ASSEMBLY, INCLUDING BOLTS AND PLATES.
- ② 5.3"x10"x15" ELASTOMERIC BEARING PAD, SEE DETAIL, SHEET S8.
- ③ 1"x1"x12" KEEPER PLATE (EACH FACE)
- ④ 1"x1"x8" KEEPER PLATE (EACH FACE)
- ⑤ 1"x6/2"x1'-2" PL



SIDE RETAINER DETAIL

2 REQUIRED AT EACH BEARING

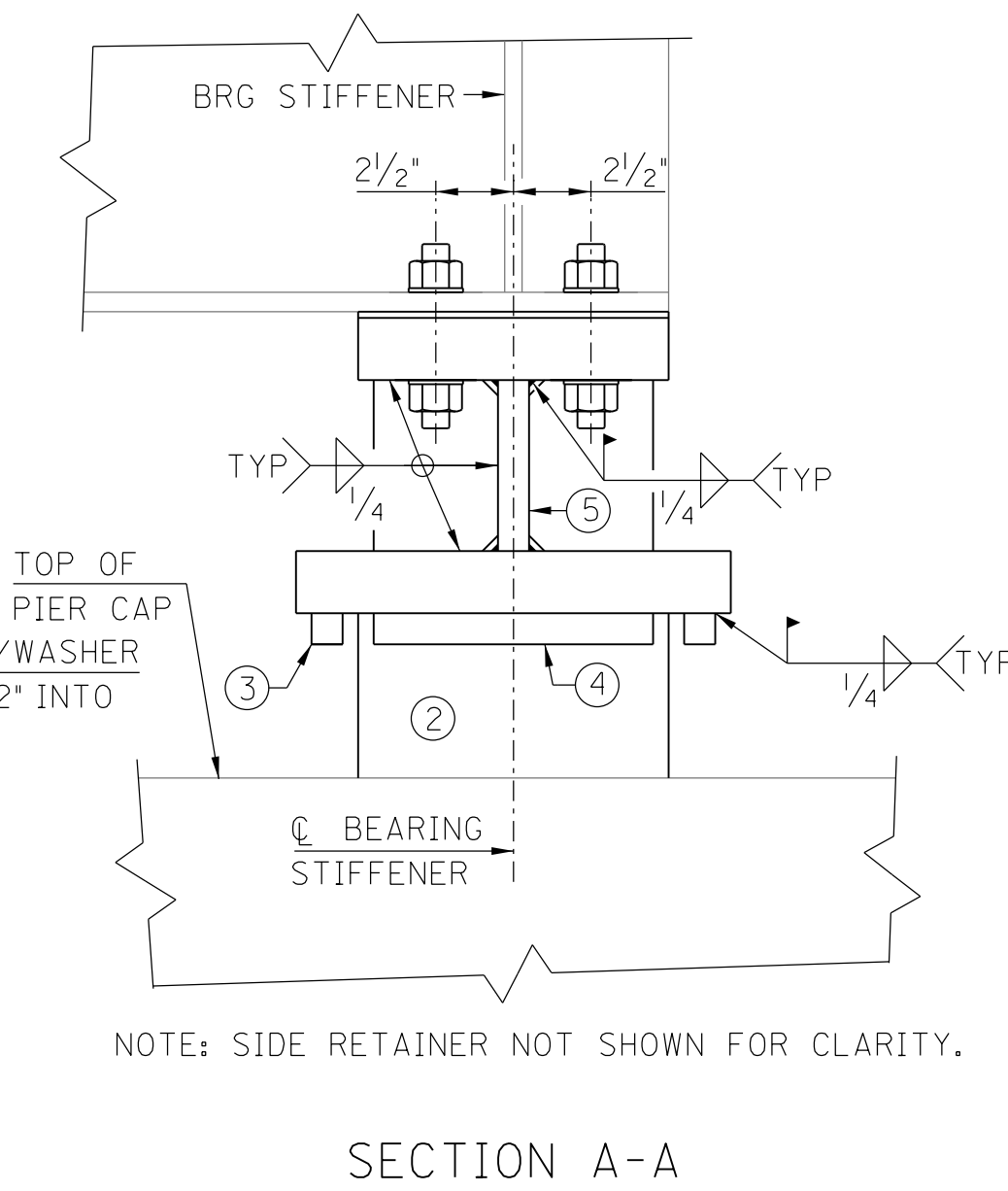
NOTES:

ALL JACKING AND BEARING REMOVAL/REPLACEMENT, PER PHASE, SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF THE JOINT REPLACEMENT AND OVERLAY REPLACEMENT WORK DURING THAT PHASE.

ALL DIMENSIONS SHOWN ARE BASED ON EXISTING PLANS, CONTRACTOR SHALL FIELD VERIFY.

SEE UNIQUE SPECIAL PROVISION FOR ADDITIONAL DETAILS AND REQUIREMENTS.

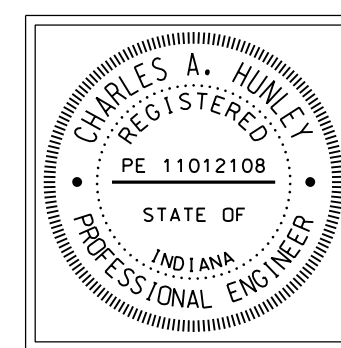
INSTALL 1" DIA. ANCHOR BOLT SET IN 12" DEEP FIELD DRILLED HOLE WITH AN APPROVED ANCHOR SYSTEM, (MINIMUM PULLOUT = 28,300 POUNDS).



SECTION A-A

I:\1785\active\178566011\structural\Henderson_SB_Bridge\drawing\N_S9_Brg_Rep_L\N8.dgn Foy, Sheila Plot:11/4/2016 9:22 AM Save:11/4/2016 9:22 AM

KYTC DRAWING NO. 27600

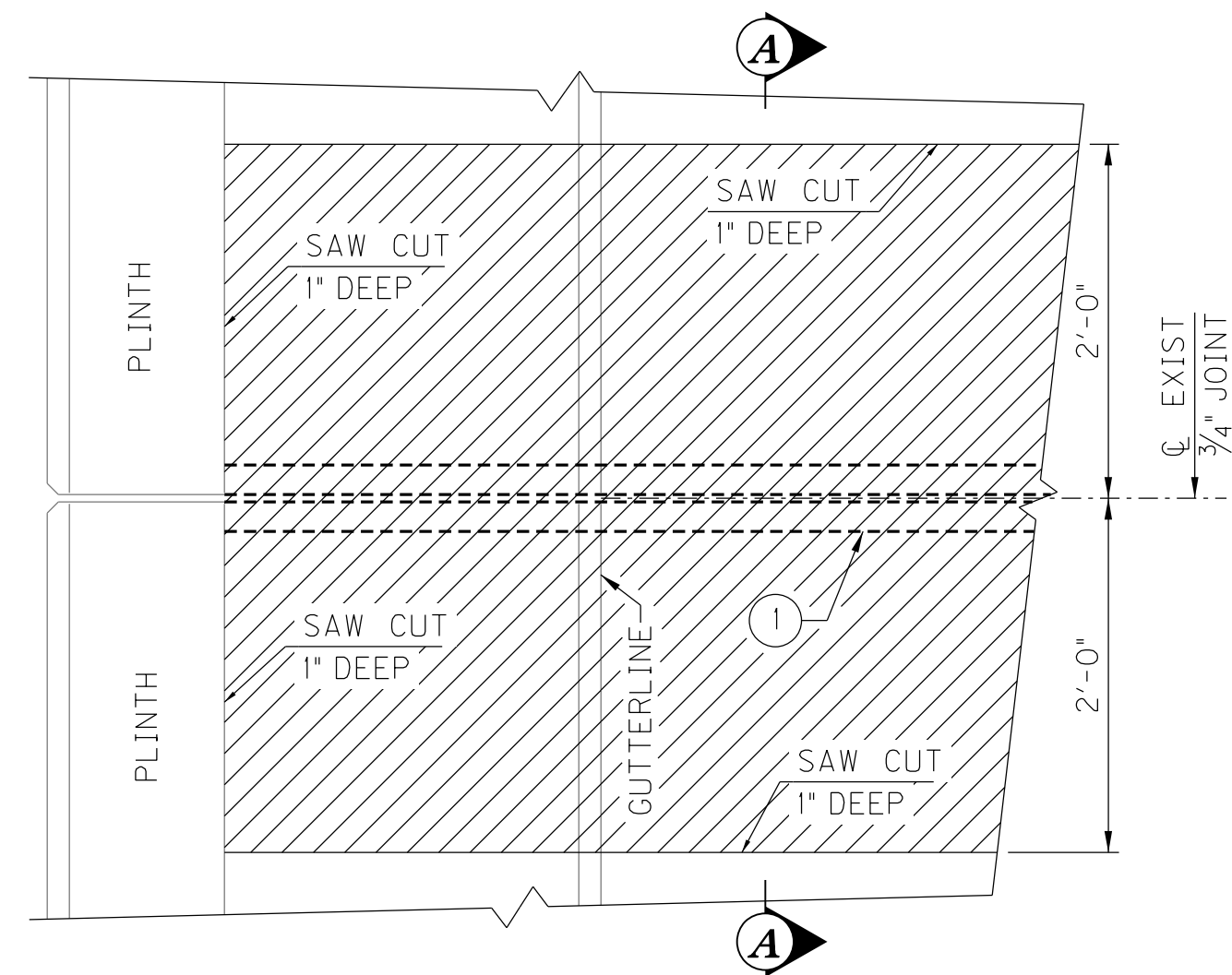


RECOMMENDED FOR APPROVAL: *Tony Hunley* 11/04/2016 DATE
DESIGN ENGINEER
DESIGNED: S. KING DRAWN: R. YOUNG
CHECKED: M. LAWLER CHECKED: M. LAWLER

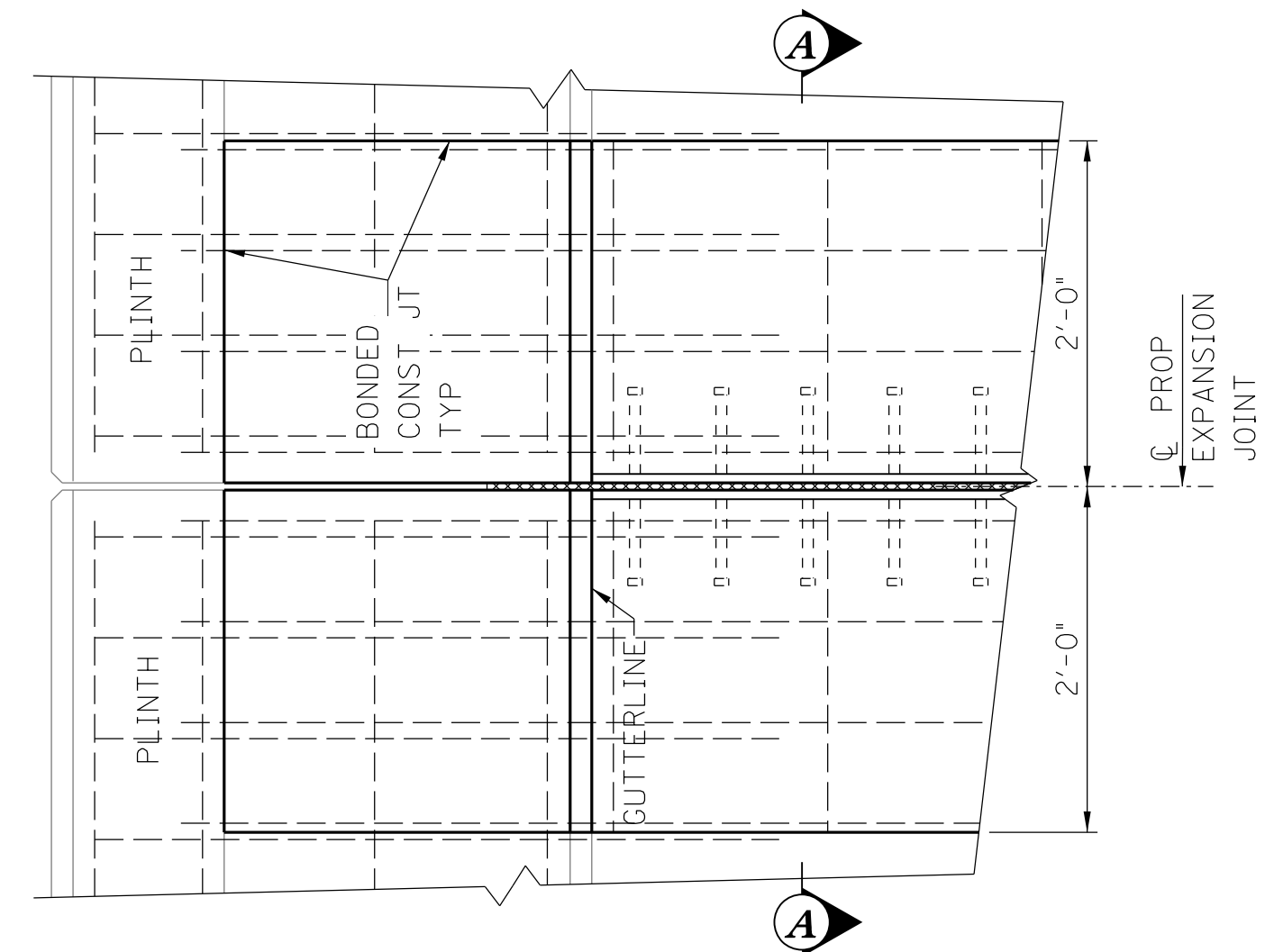
INDIANA DEPARTMENT OF TRANSPORTATION
HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
BEARING REPLACEMENT PIER N-8

SCALE NTS	BRIDGE FILE 041-93-5000SBL DESIGNATION 1298275
DRAWING 00 OF 00	SHEET S9 OF S21
CONTRACT B-33539	PROJECT 1298275

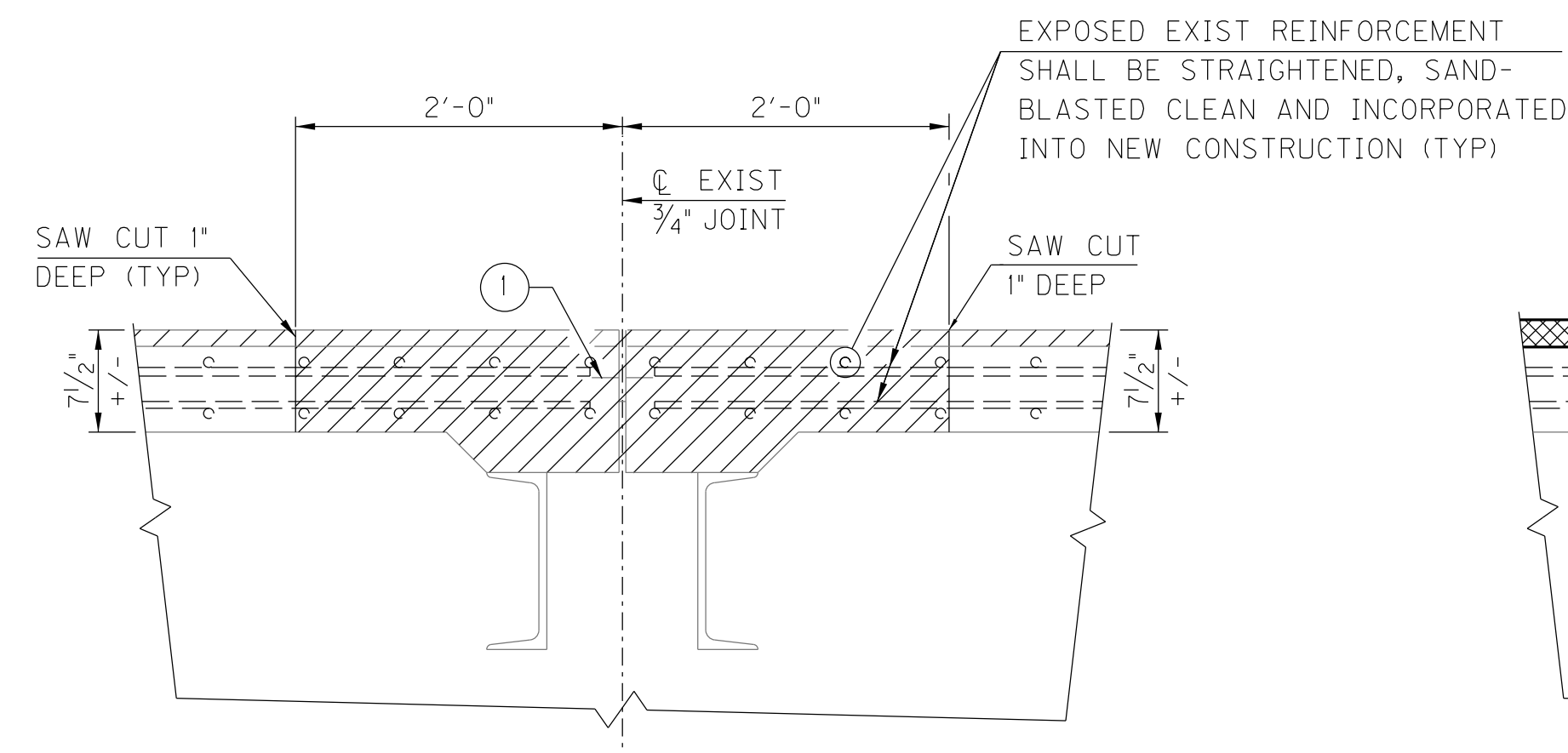
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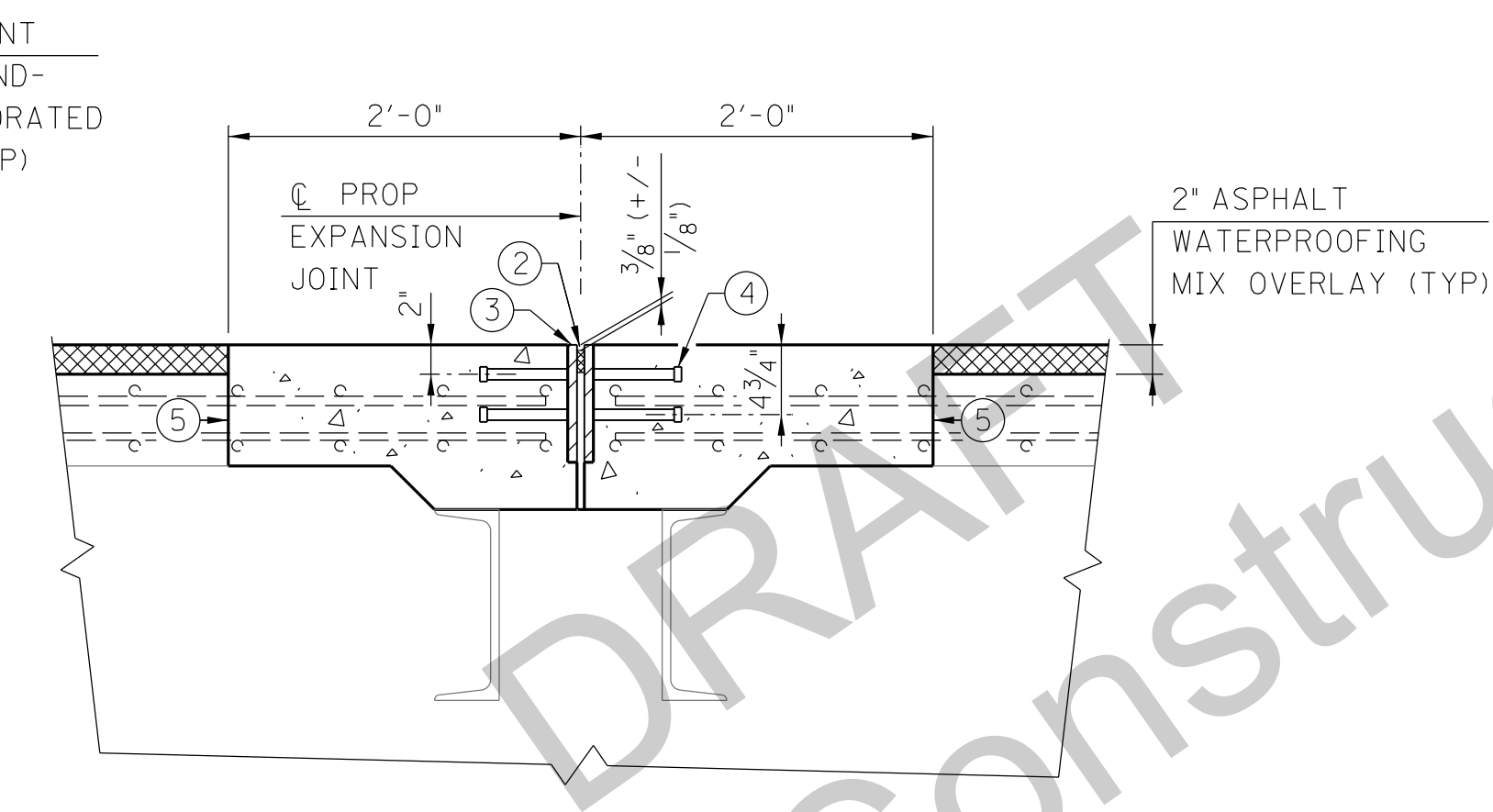
EXISTING PLAN
SHOWING REMOVAL



PROPOSED PLAN
SHOWING NEW CONSTRUCTION



EXISTING SECTION A-A
SHOWING REMOVAL



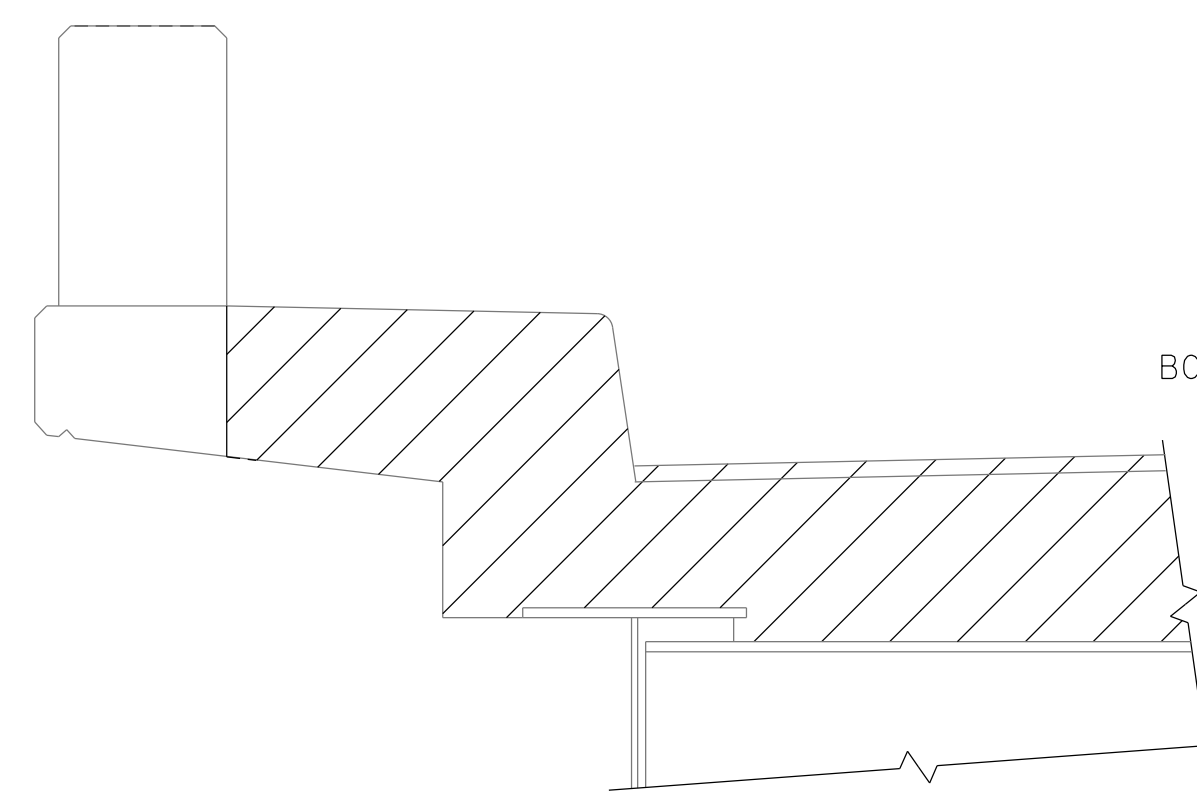
PROPOSED SECTION A-A
SHOWING NEW CONSTRUCTION

EXISTING EXPANSION JOINT 3/4" REMOVAL & REPLACEMENT

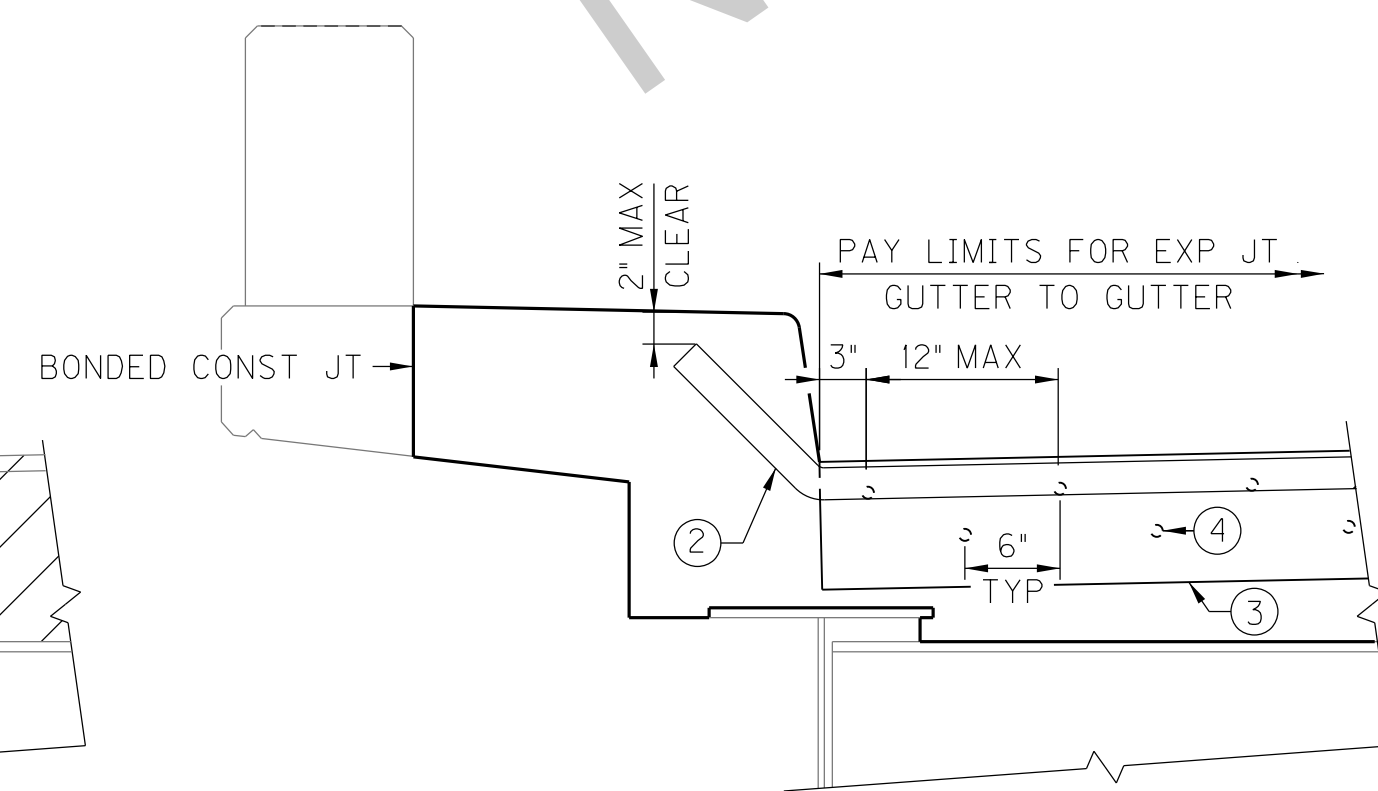
AT TRUSS JOINTS LS5, LFO (2 LOCATIONS), LF4, LF8, LSO^{II}, LA0, LA4 & LA8

LEGEND

 INDICATES AREA OF EXISTING CONCRETE TO BE REMOVED



SECTION THRU EXISTING JOINT
SHOWING REMOVAL



SECTION THRU PROPOSED JOINT
SHOWING PROPOSED

NOTATIONS:

- ① EXISTING COPPER STRIP TO BE REMOVED
- ② 3/4" PREFORMED, PRECOMPRESSED, SELF EXPANDING SEALANT SYSTEM WITH SILICONE PRE-COATED SURFACE
- ③ PL 5/8"x8"
- ④ 3/4"x6" STUD
- ⑤ BONDED CONSTRUCTION JOINT

NOTES:
CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN REMOVING EXIST CONCRETE FOR PROP EXP JOINT, AS NOT TO CUT EXIST TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.

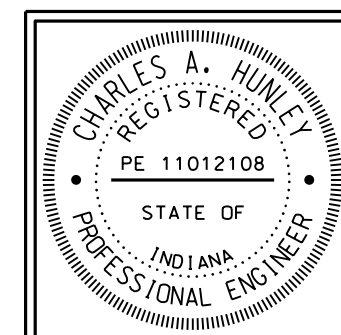
SEE GENERAL NOTES FOR BONDING NEW CONCRETE TO EXIST CONCRETE.

ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.

THE AREA WITHIN THE LIMITS OF EXPANSION JOINT REPLACEMENT IS EXCLUDED FROM THE MEASURED QUANTITY FOR 2" ASPHALT WATERPROOFING MIX OVERLAY BID ITEM.

FOR LIMITS OF PHASED CONSTRUCTION SEE SHEET S7.

KYTC DRAWING NO. 27600



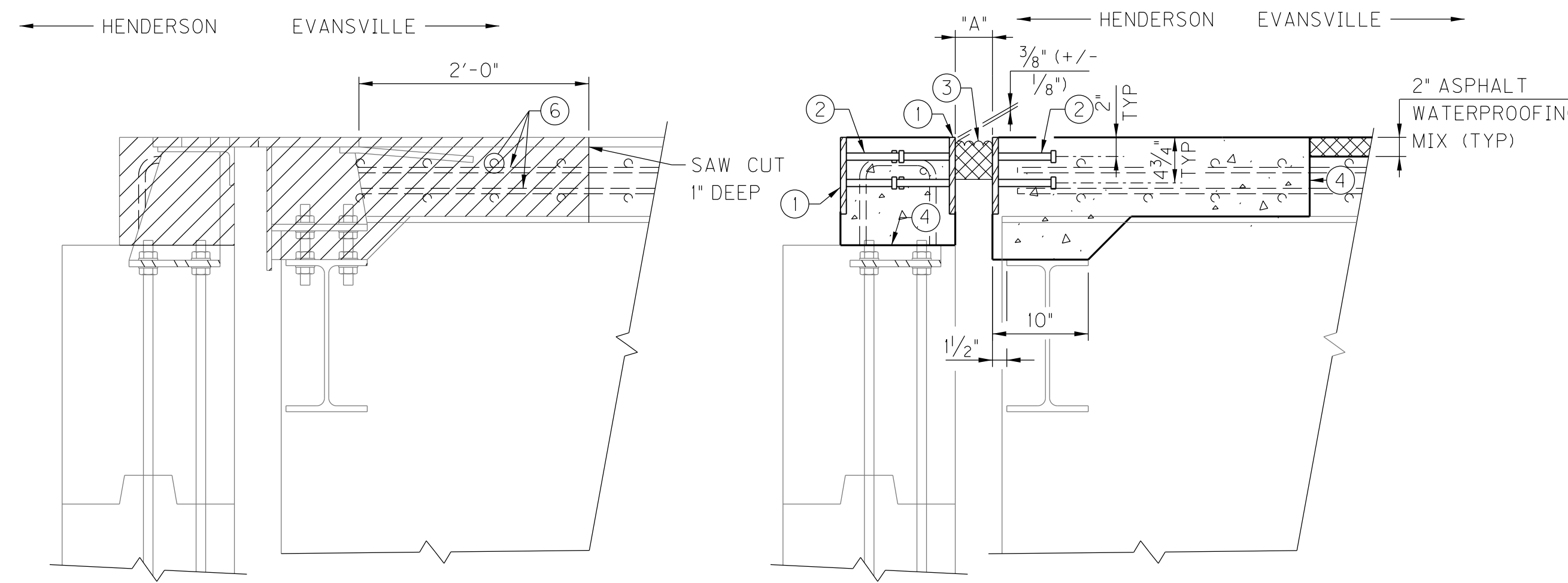
RECOMMENDED FOR APPROVAL:	<i>Tony Hulley</i>	11/04/2016
	DESIGN ENGINEER	DATE
DESIGNED:	M. LAWLER	DRAWN: R. YOUNG
CHECKED:	R. YOUNG	CHECKED: M. LAWLER

INDIANA
DEPARTMENT OF TRANSPORTATION

HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
EXPANSION JOINT REPLACEMENT

SCALE	BRIDGE FILE
NTS	041-93-5000SBL
	DESIGNATION
	1298275
DRAWING	SHEET
00	OF 00
CONTRACT	S10
B-33539	OF S21
	PROJECT
	1298275

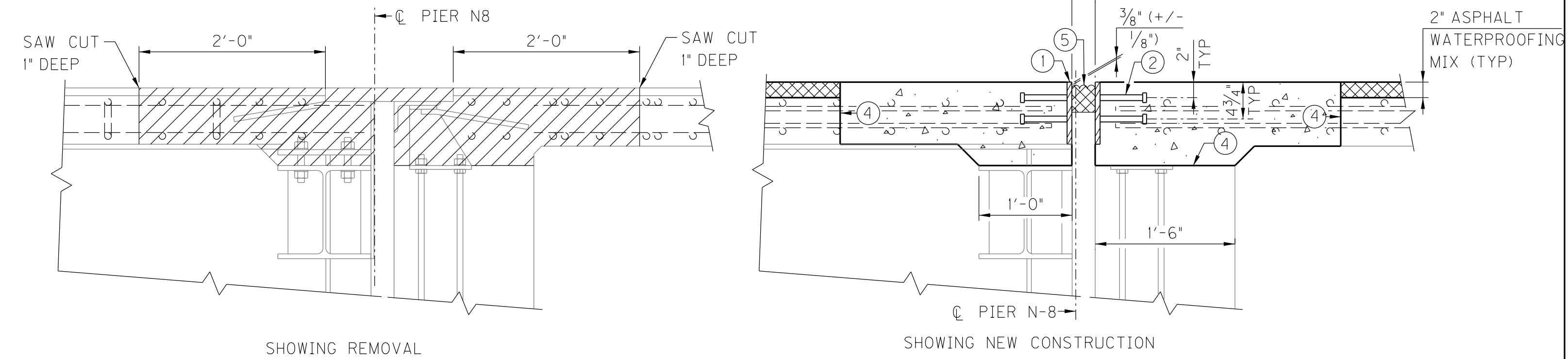
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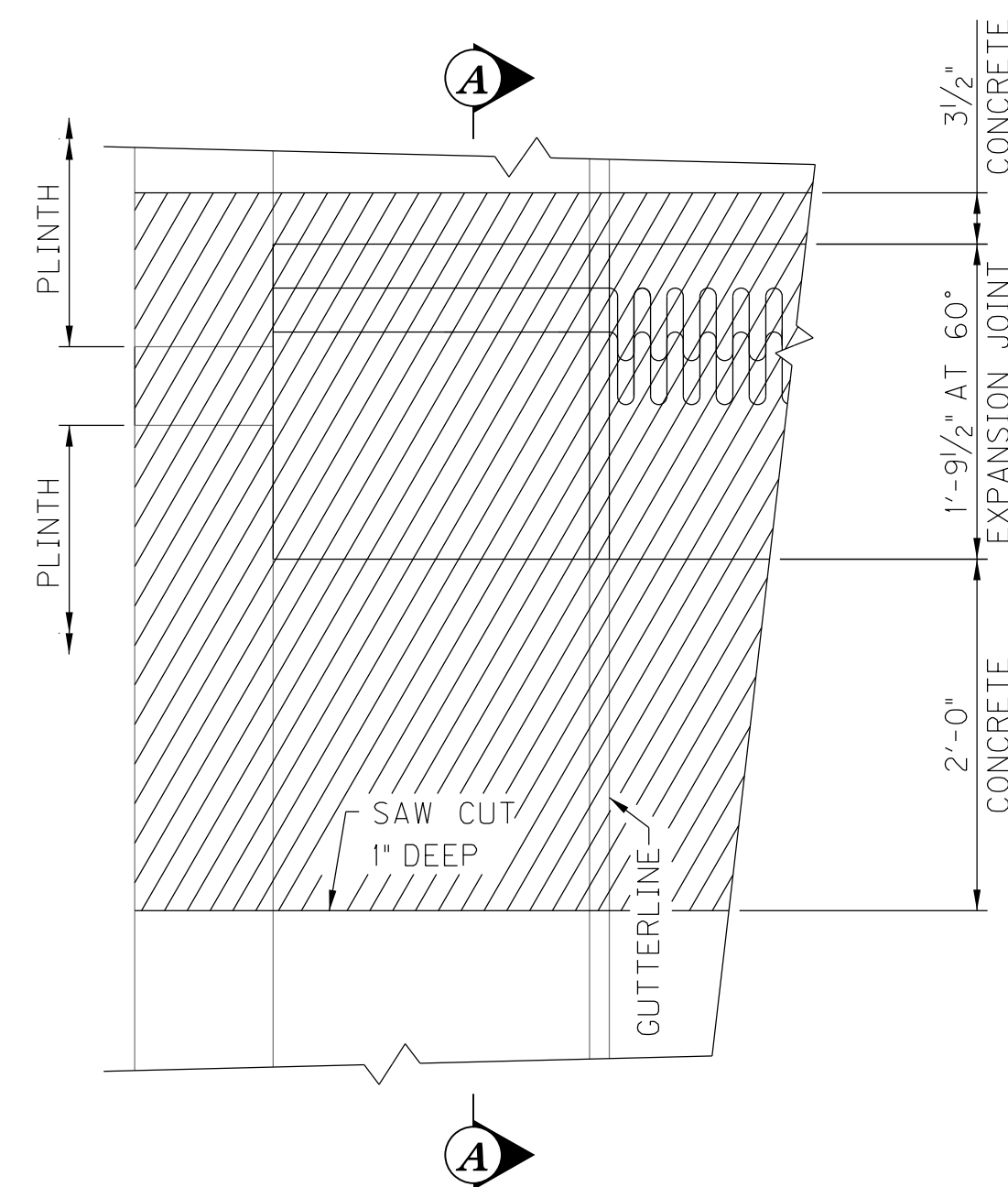
SECTION A-A
SHOWING REMOVAL

SECTION A-A
SHOWING PROPOSED

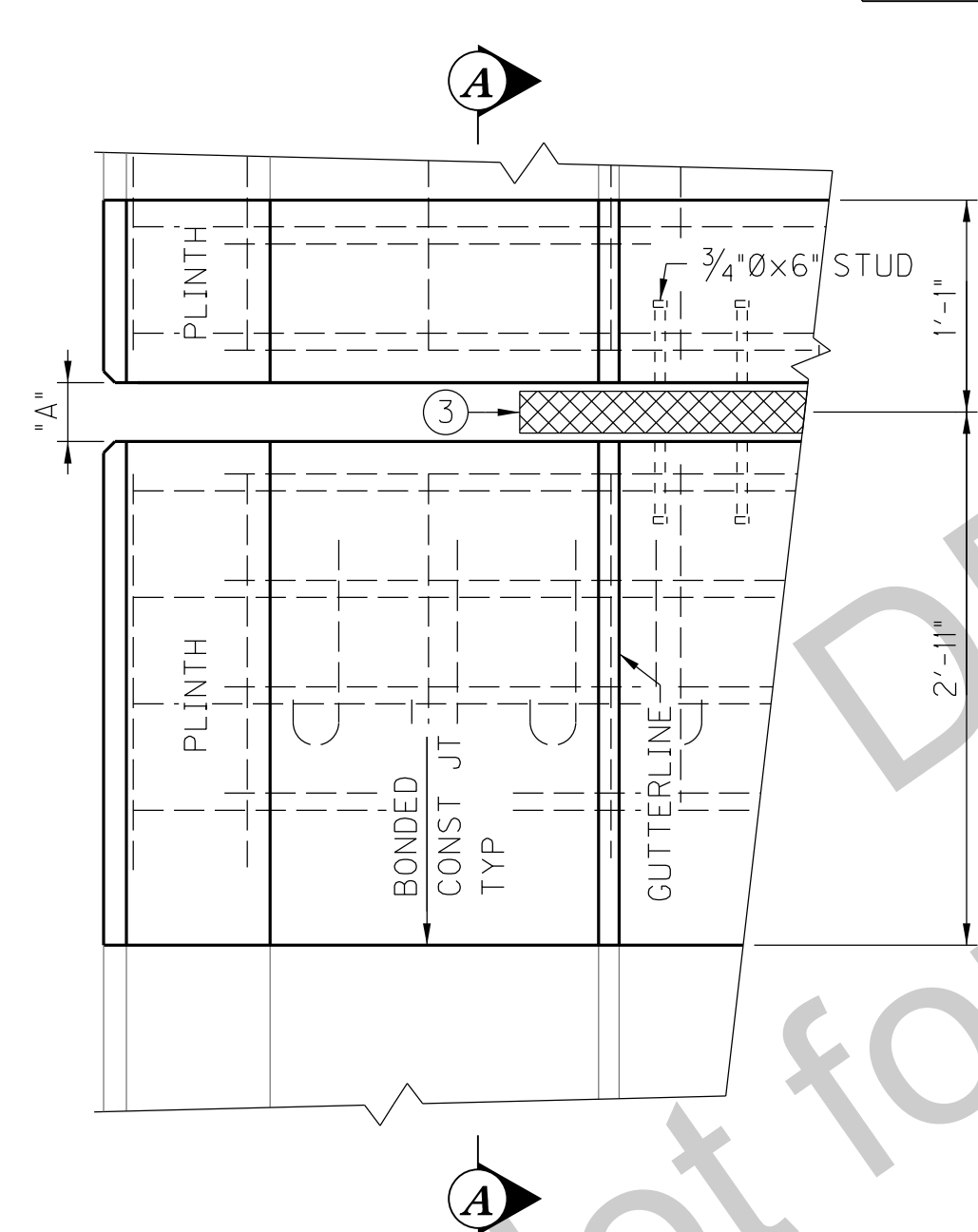
MOVEMENT TABLE	
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120	1.875



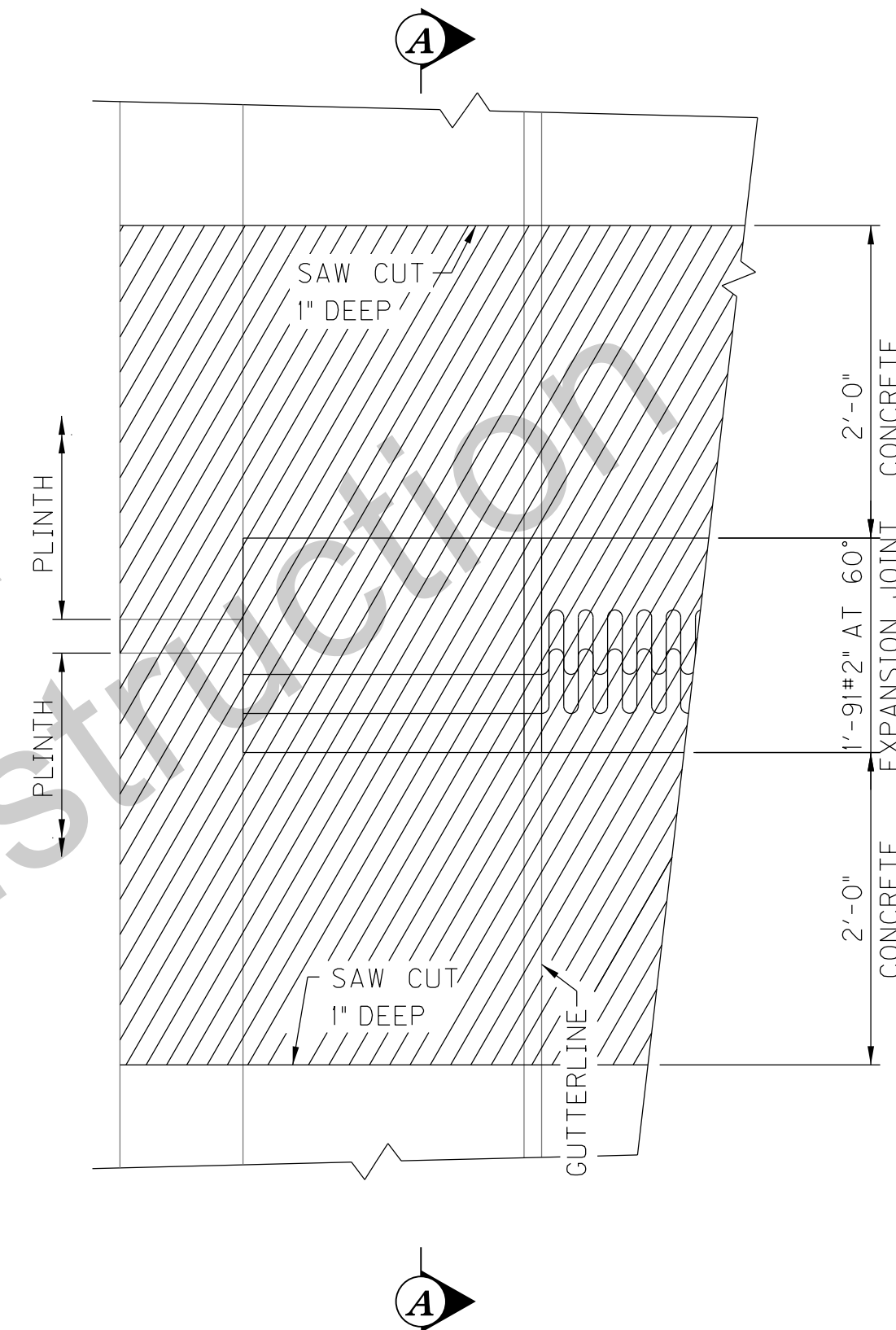
MOVEMENT TABLE	
B (°F)	MOVEMENT (IN)
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60	2.25
120	1.25



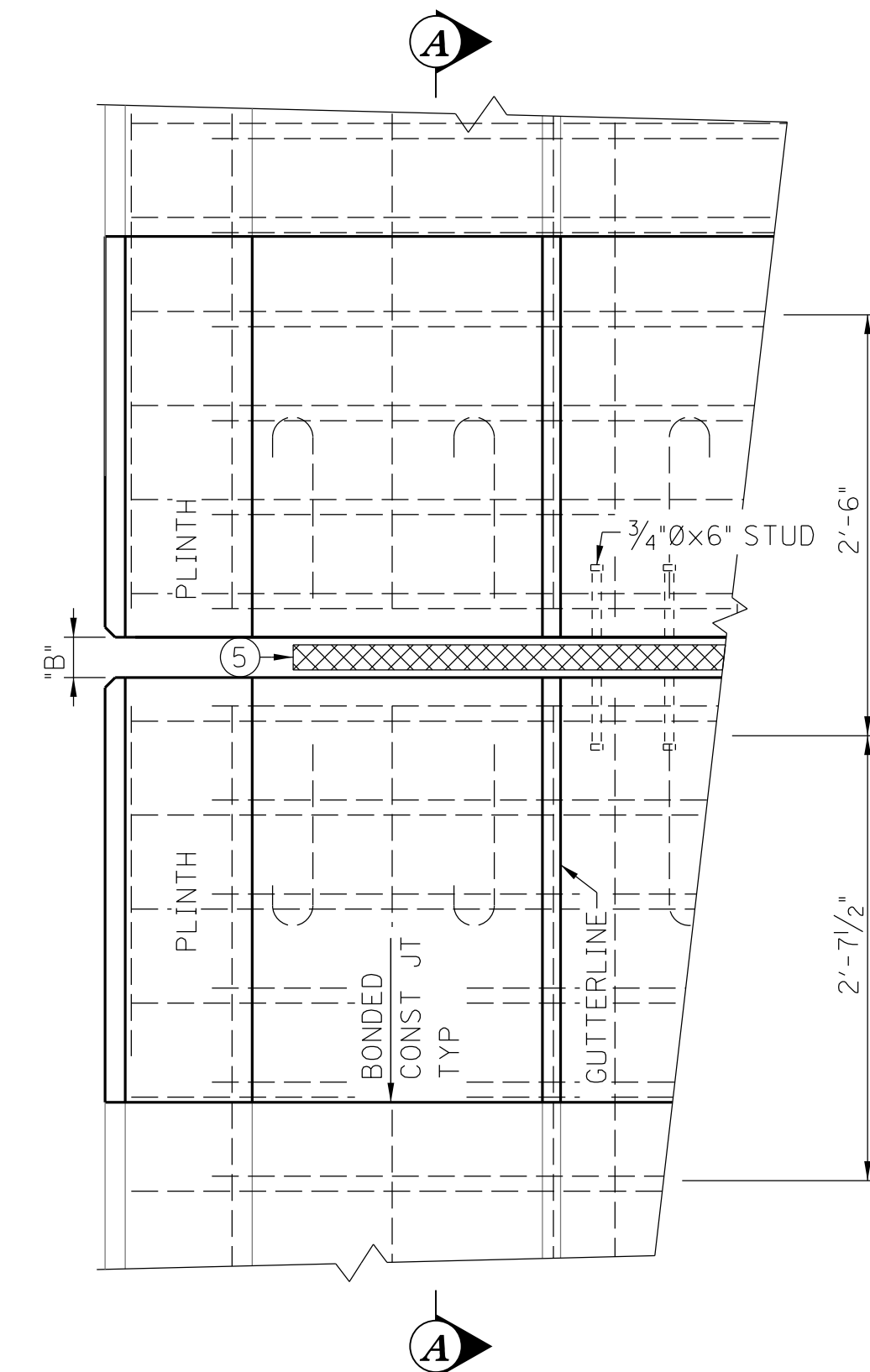
EXISTING PLAN
SHOWING REMOVAL



PROPOSED PLAN
SHOWING NEW CONSTRUCTION



EXISTING PLAN
SHOWING REMOVAL



PROPOSED PLAN
SHOWING NEW CONSTRUCTION

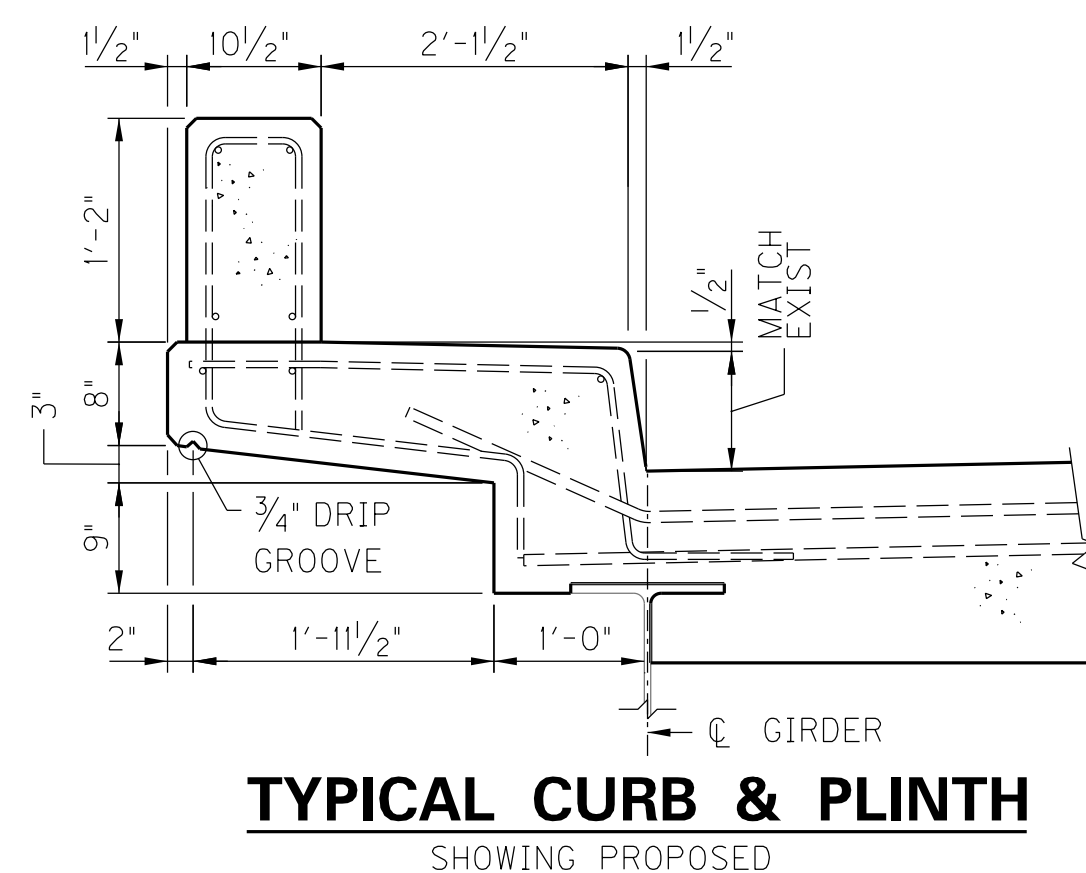
ABUTMENT S-20

PIER N-8

EXISTING FINGER JOINT REMOVAL & EXPANSION JOINT REPLACEMENT AT ABUTMENT S-20, PIER N-8

NOTATIONS:

- ① PL 5/8"x8"
- ② 3/4"x6" STUD (SEE SECTION THRU PROP JOINT FOR SPACING, SHEET S10)
- ③ 3/8" PREFORMED, PRECOMPRESSED, SELF EXPANDING SEALANT SYSTEM WITH SILICONE PRE-COATED SURFACE
- ④ BONDED CONSTRUCTION JOINT
- ⑤ 2/4" PREFORMED, PRECOMPRESSED, SELF EXPANDING SEALANT SYSTEM WITH SILICONE PRE-COATED SURFACE
- ⑥ EXPOSED EXSIT REINFORCEMENT SHALL BE STRAIGHTENED, SAND BLASTED CLEAN, AND INCORPORATED INTO NEW CONSTRUCTION.



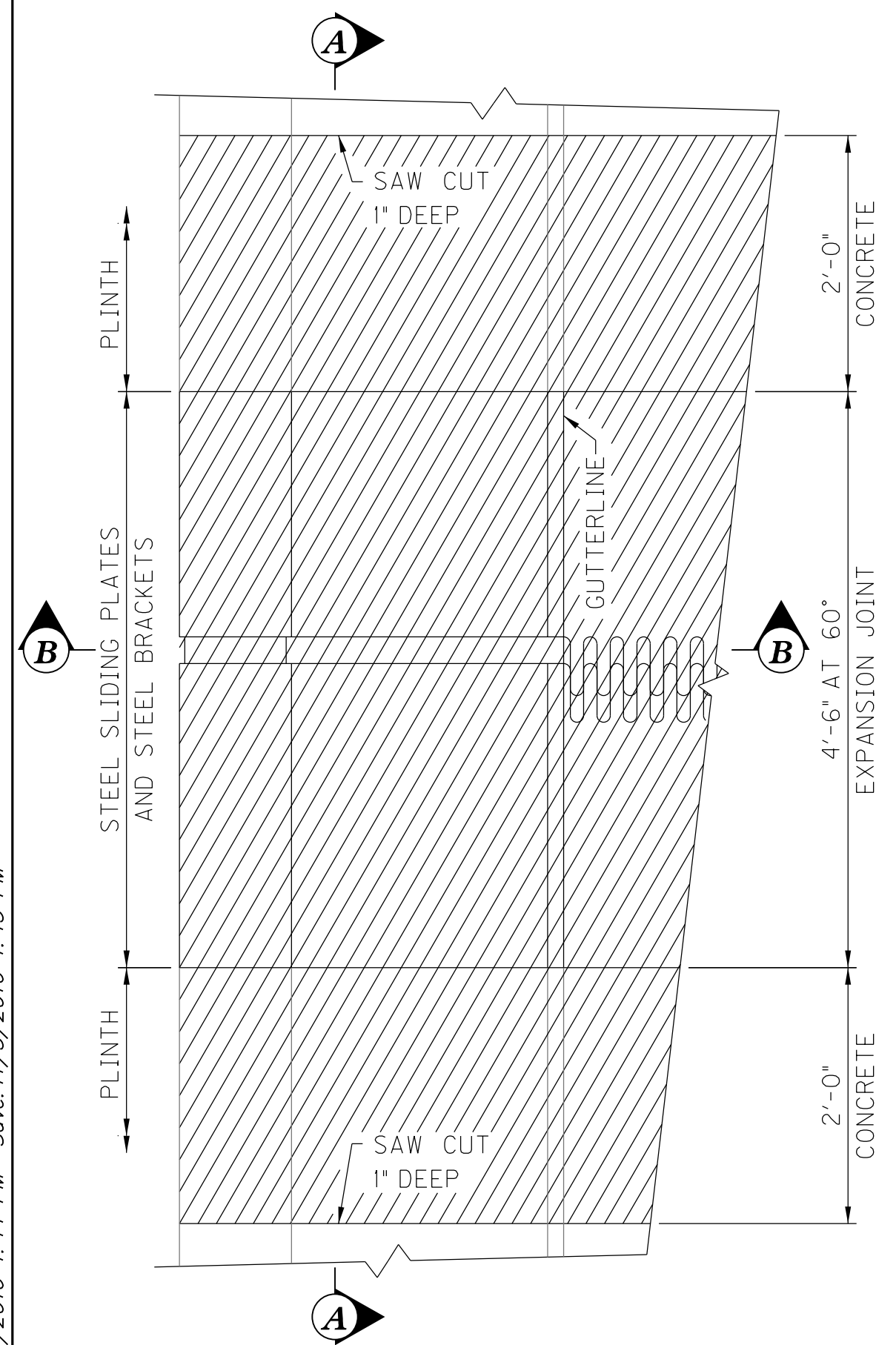
TYPICAL CURB & PLINTH
SHOWING PROPOSED

NOTES:
 CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN REMOVING EXIST CONCRETE FOR PROP EXP JOINT, AS NOT TO CUT EXIST TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.
 SEE GENERAL NOTES FOR BONDING NEW CONCRETE TO EXIST CONCRETE.
 ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.
 THE AREA WITHIN THE LIMITS OF EXPANSION JOINT REPLACEMENT IS EXCLUDED FROM THE MEASURED QUANTITY FOR 2" ASPHALT WATERPROOFING MIX OVERLAY BID ITEM.
 FOR LIMITS OF PHASED CONSTRUCTION SEE SHEET S7.

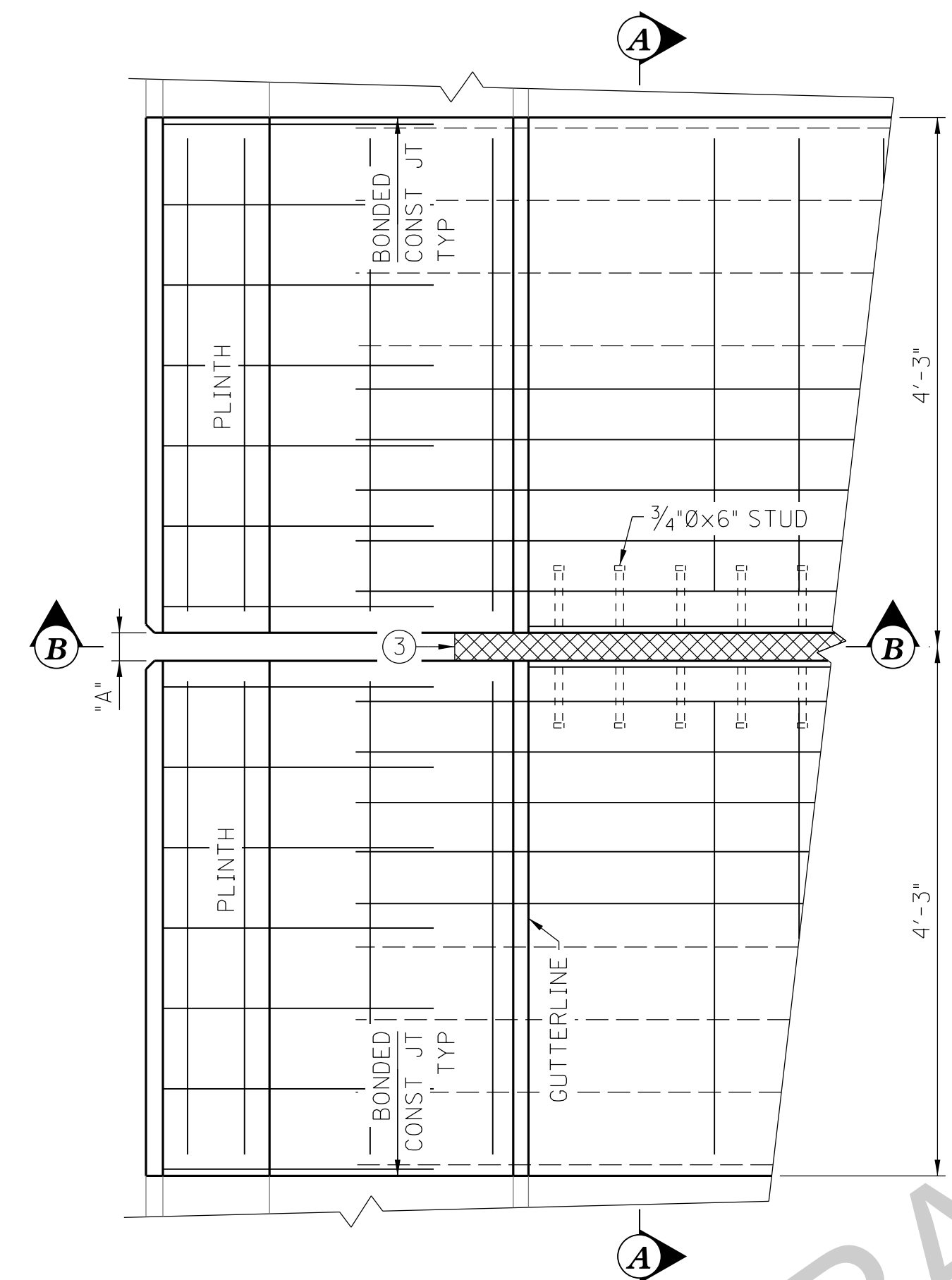
KYTC DRAWING NO. 27600

	RECOMMENDED FOR APPROVAL: <u>Tony Huxley</u> 11/04/2016 DATE	INDIANA DEPARTMENT OF TRANSPORTATION	SCALE: NTS	BRIDGE FILE: 041-93-5000SBL
	DESIGNED: M. LAWLER DRAWN: R. YOUNG		DESIGNATION: 1298275	
	CHECKED: R. YOUNG CHECKED: M. LAWLER	HENDERSON COUNTY, KENTUCKY US 41 SB BRIDGE REHAB OVER THE OHIO RIVER FINGER JT REPLACEMENT ABUT S-20 & PIER N-8	DRAWING: 00 OF 00	SHEET: S11 OF S21
			CONTRACT: B-33539	PROJECT: 1298275

K:\1785\active\178566011\structural\Henderson_SB_Bridge\drawing\IN_S10-S11-S12_Exp & Finger_Jt_Repl.dgn Foy, Sheila Plot: 11/13/2016 1:44 PM Save: 11/13/2016 1:43 PM



EXISTING PLAN
SHOWING REMOVAL



PROPOSED PLAN
SHOWING NEW CONSTRUCTION

NOTES:
CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN REMOVING EXIST CONCRETE FOR PROP EXP JOINT, AS NOT TO CUT EXIST TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.

SEE GENERAL NOTES FOR BONDING NEW CONCRETE TO EXIST CONCRETE.

ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.

THE AREA WITHIN THE LIMITS OF EXPANSION JOINT REPLACEMENT IS EXCLUDED FROM THE MEASURED QUANTITY FOR 2\"/>

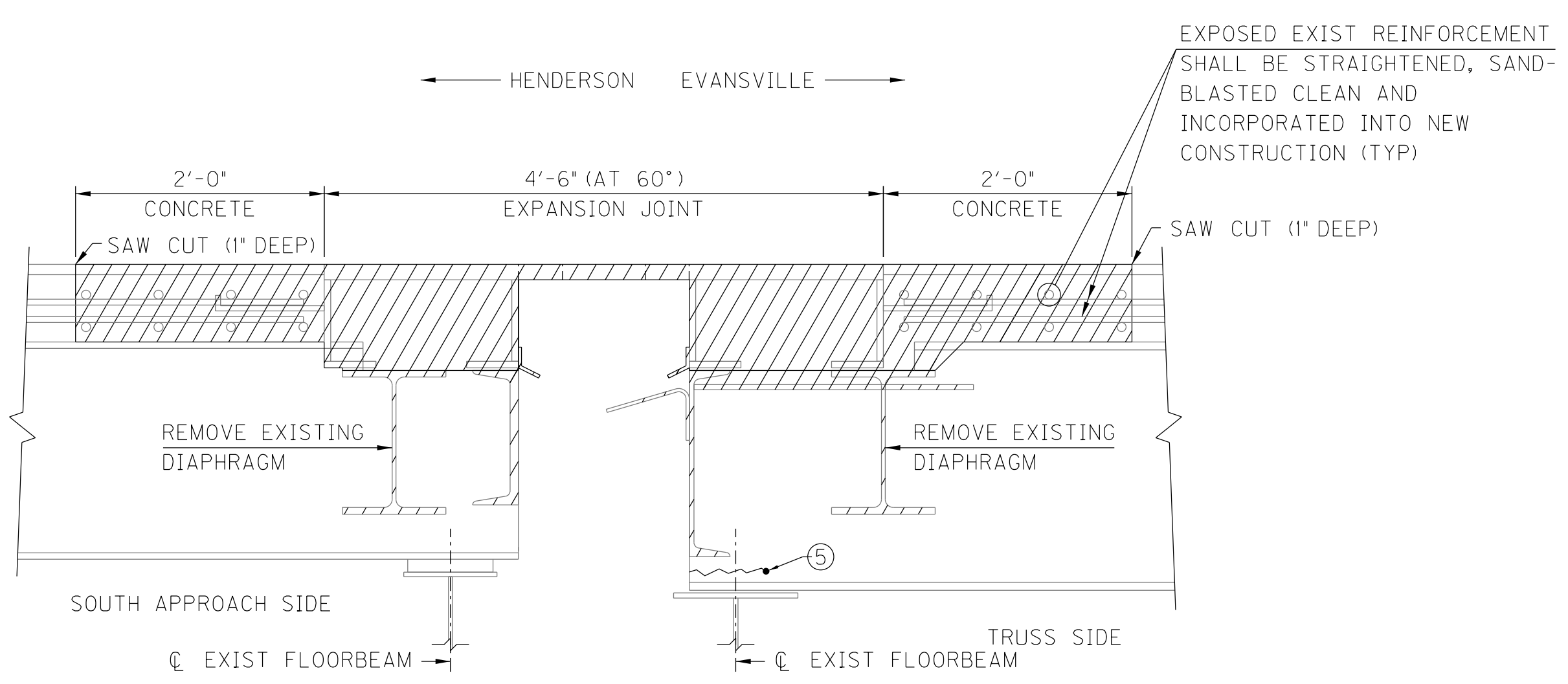
FOR LIMITS OF PHASED CONSTRUCTION SEE SHEET S7.

NOTATIONS:

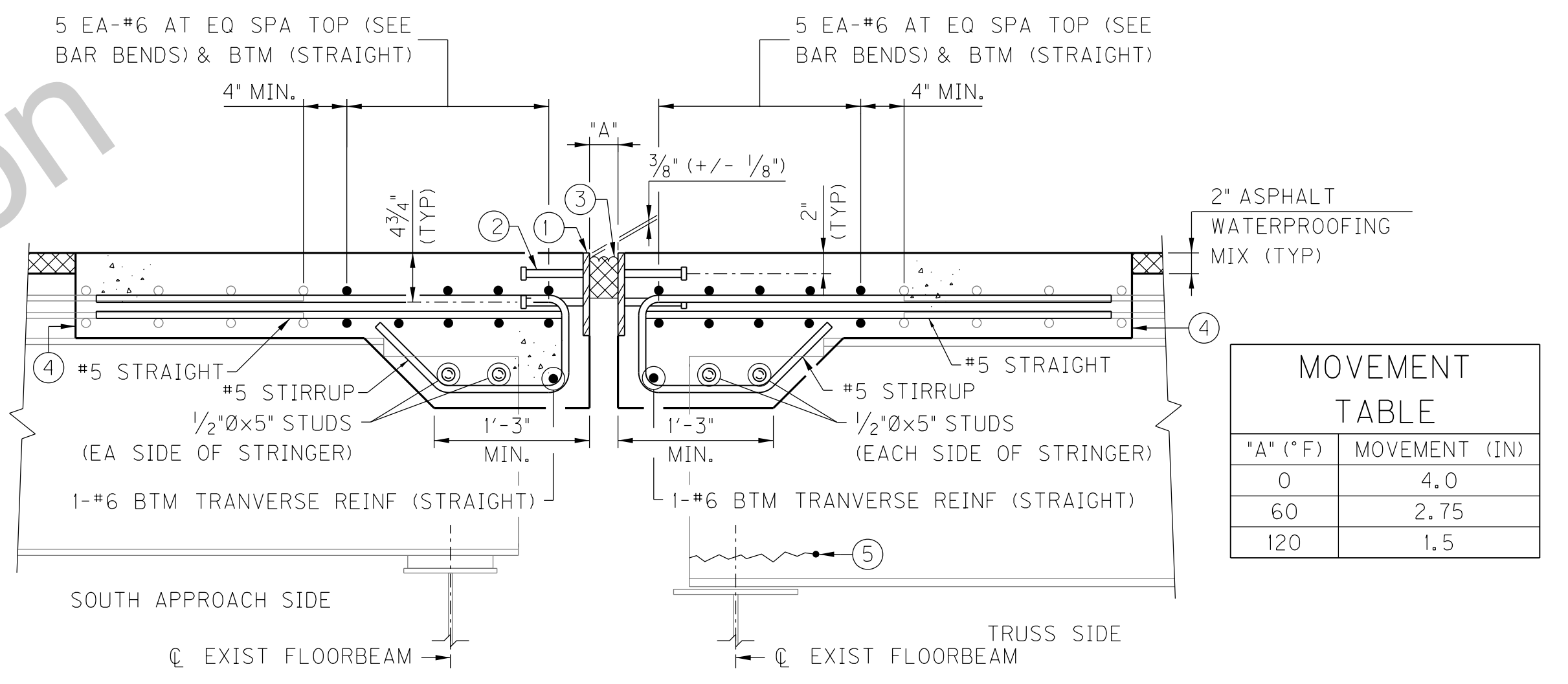
- ① PL 5/8"x8"
- ② 3/4"x6" STUD (SEE SECTION THRU PROPOSED JOINT FOR SPACING, SHEET S10)
- ③ 2 3/4" PREFORMED, PRECOMPRESSED, SELF EXPANDING SEALANT SYSTEM WITH SILICONE PRE-COATED SURFACE
- ④ BONDED CONSTRUCTION JOINT
- ⑤ DRILL 1" DIA. CRACK ARREST HOLES THROUGH CRACKS IN STRINGER WEBS (4 LOCATIONS)

LEGEND

INDICATES AREA OF EXISTING FINGER JOINTS, PLATES, SLIDING PLATES, AND CONCRETE TO BE REMOVED

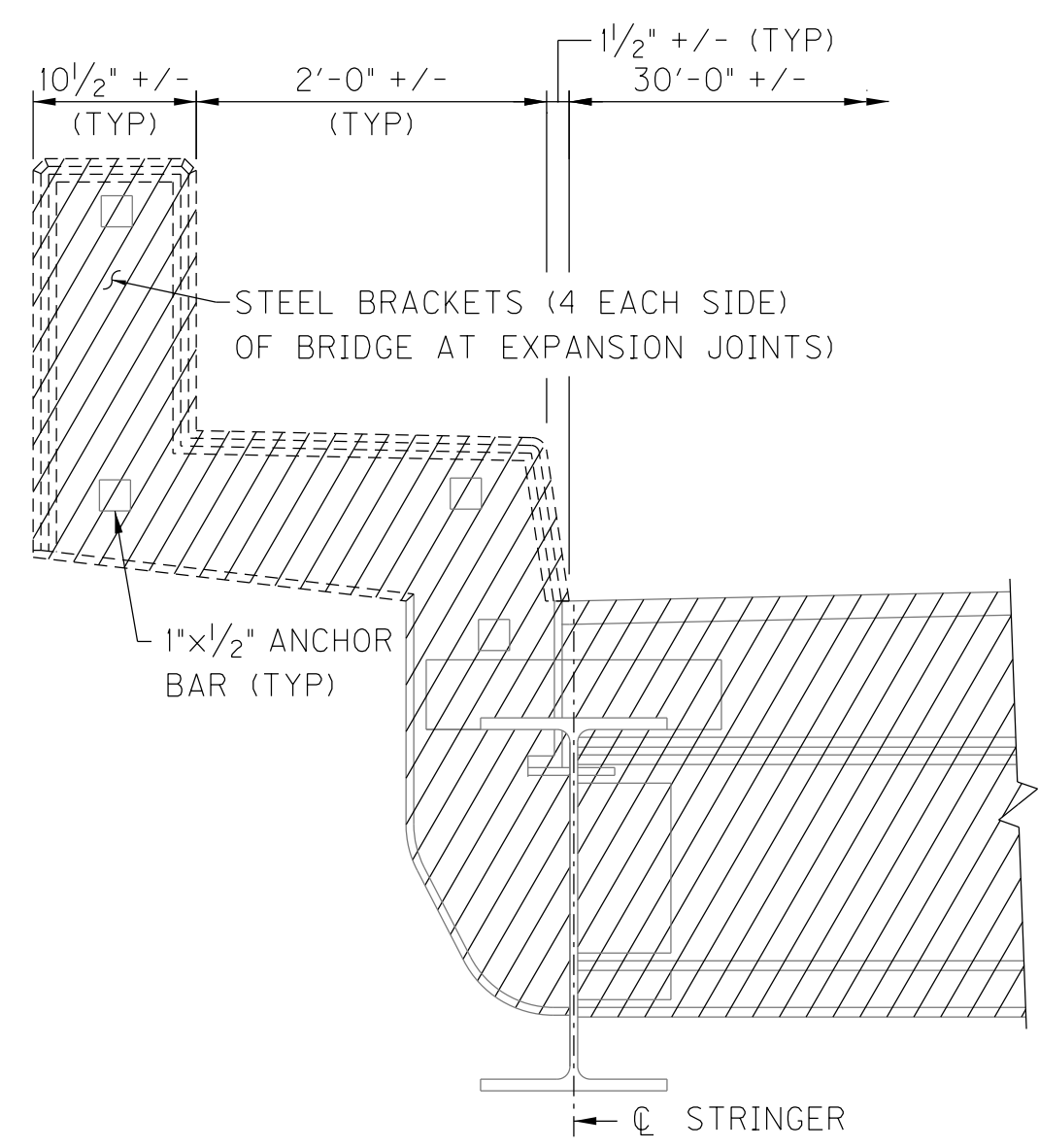


SECTION A-A
SHOWING REMOVAL

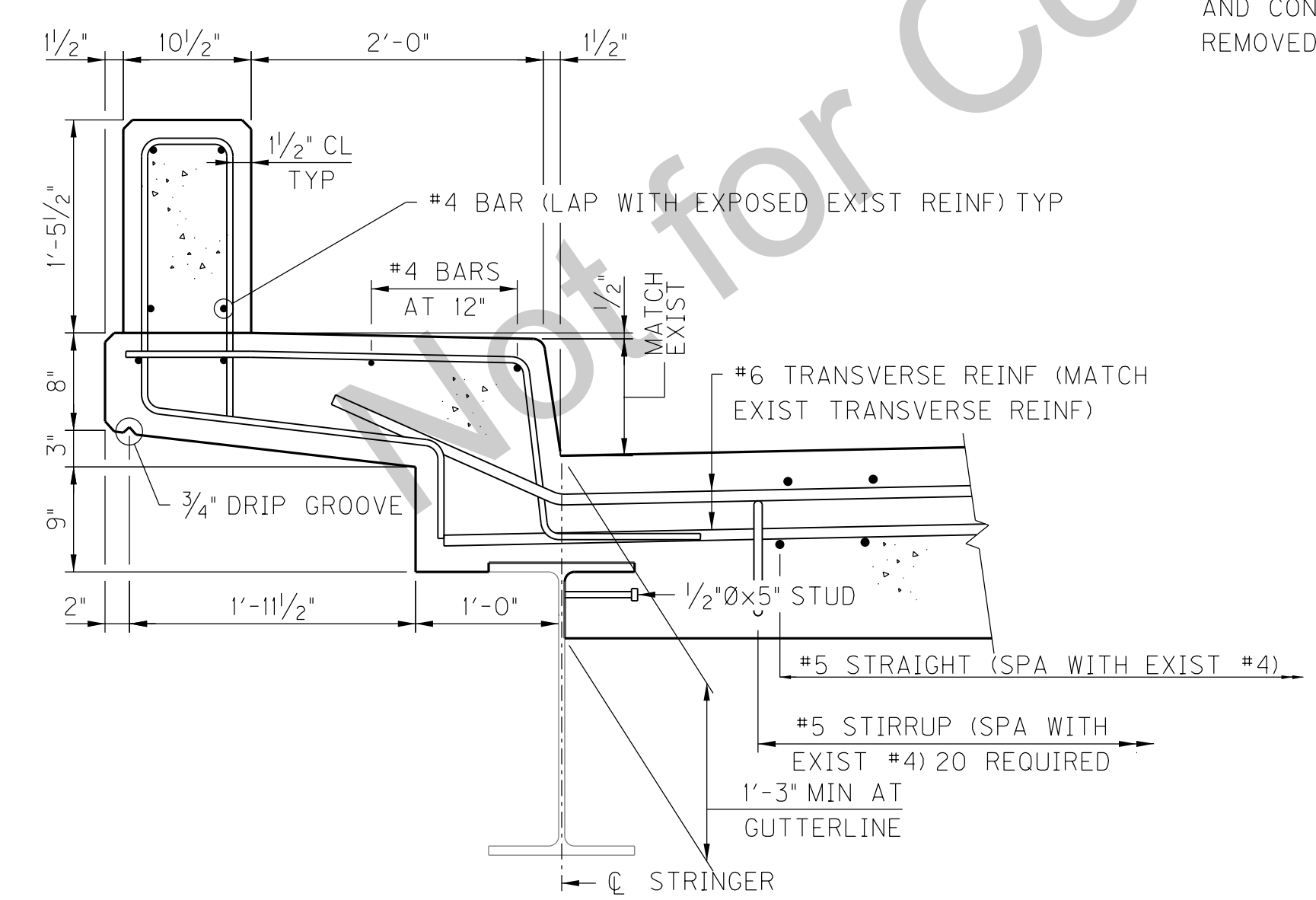


SECTION A-A
SHOWING PROPOSED

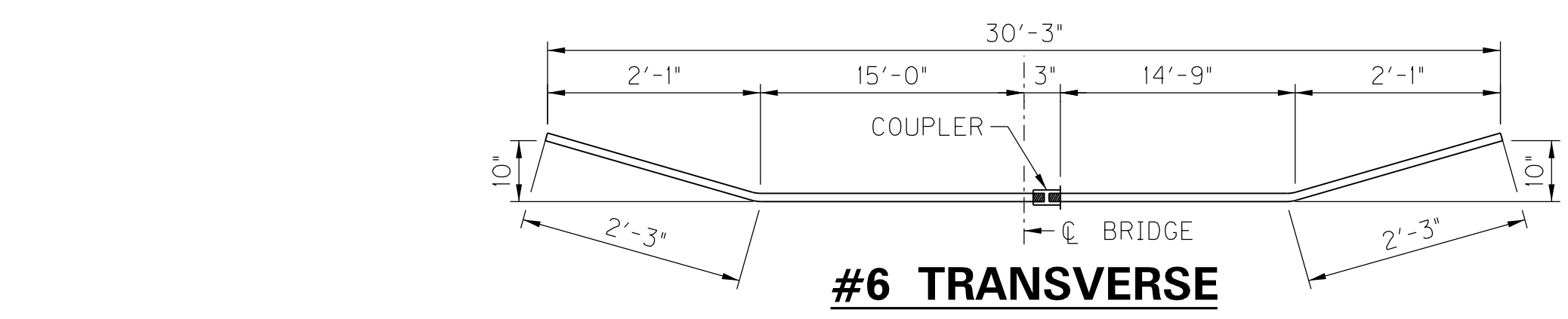
MOVEMENT TABLE	
A (*F)	MOVEMENT (IN)
0	4.0
60	2.75
120	1.5



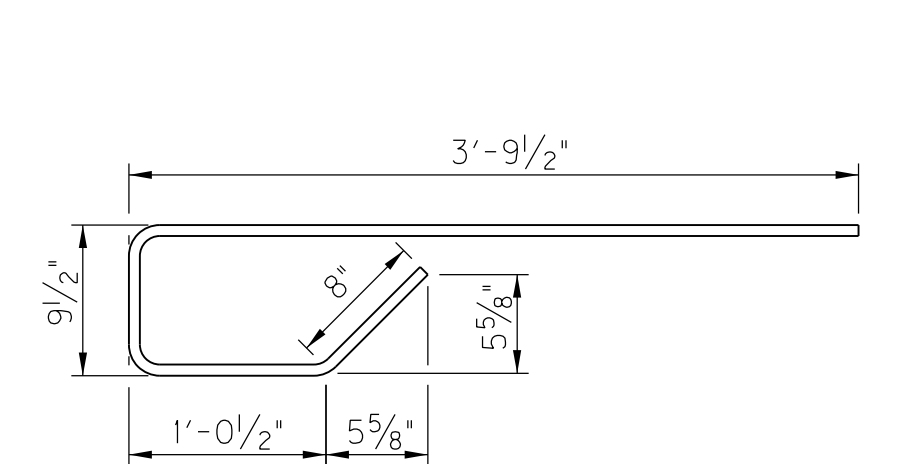
SECTION B-B
SHOWING REMOVAL



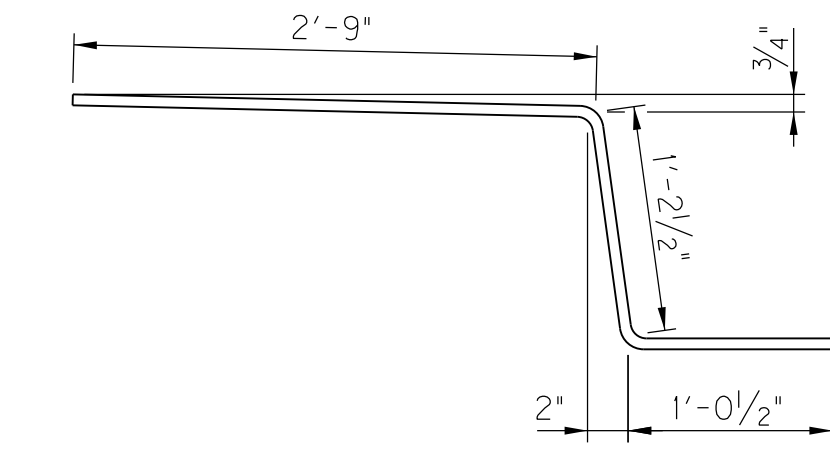
SECTION B-B
SHOWING PROPOSED



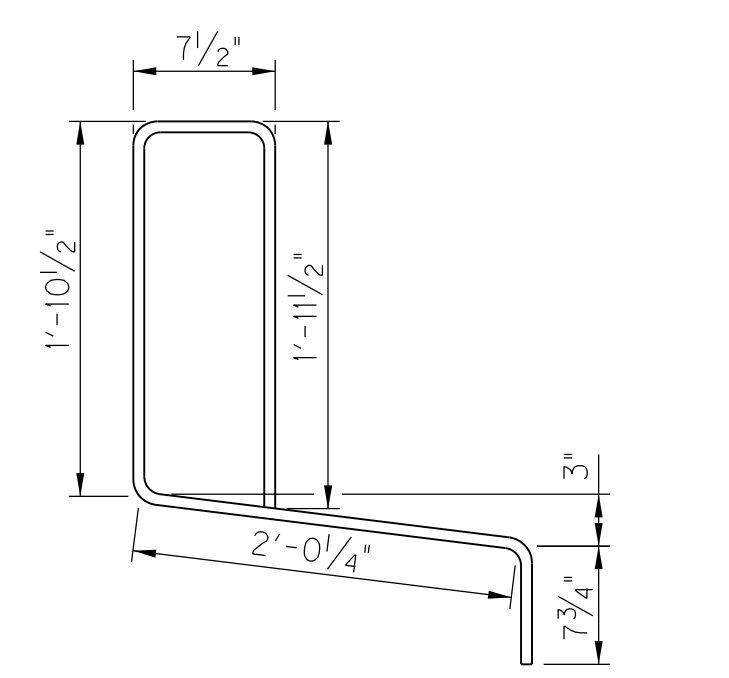
#6 TRANSVERSE



#5 STIRRUP

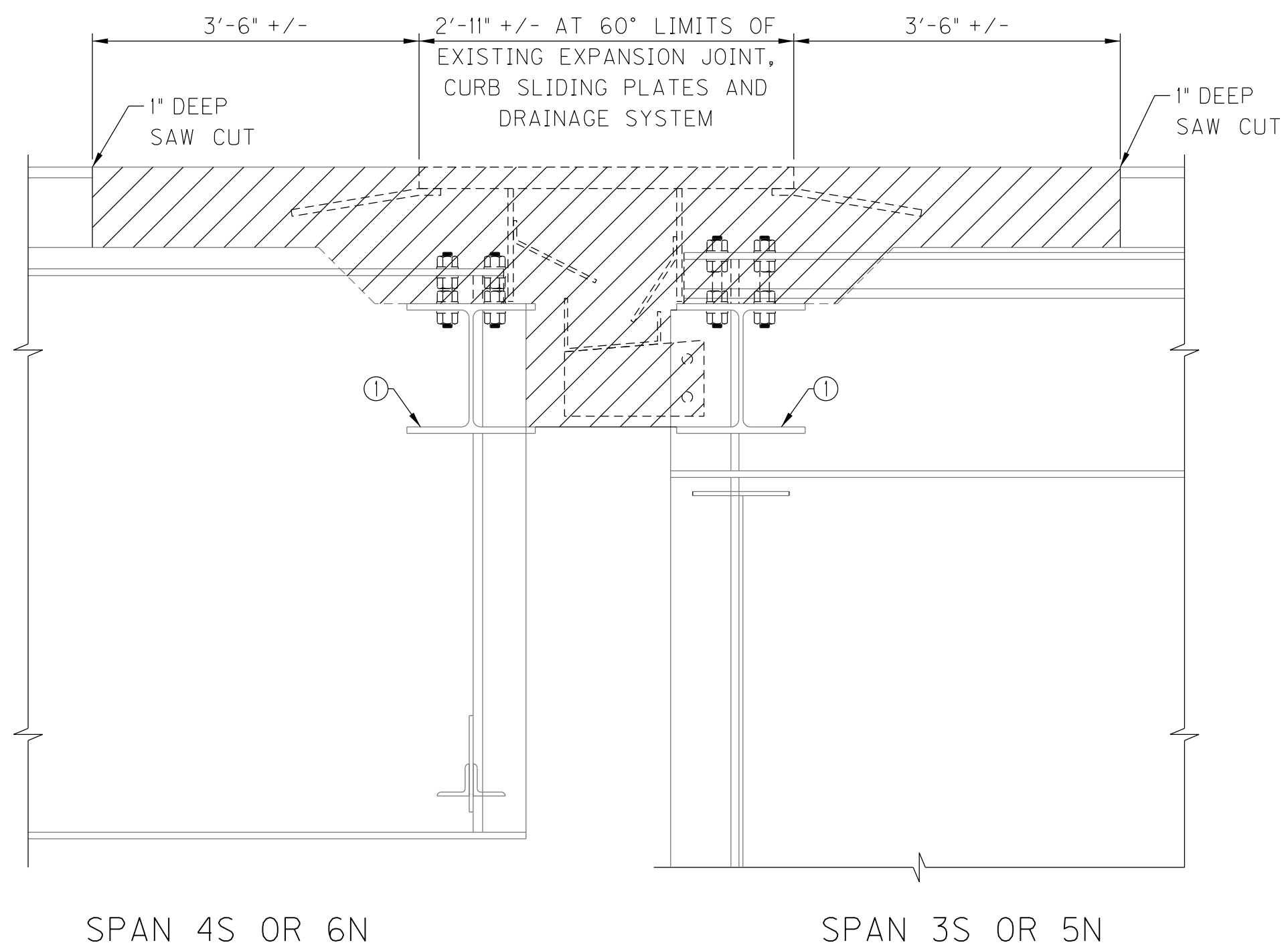


#4 OVERHANG BAR

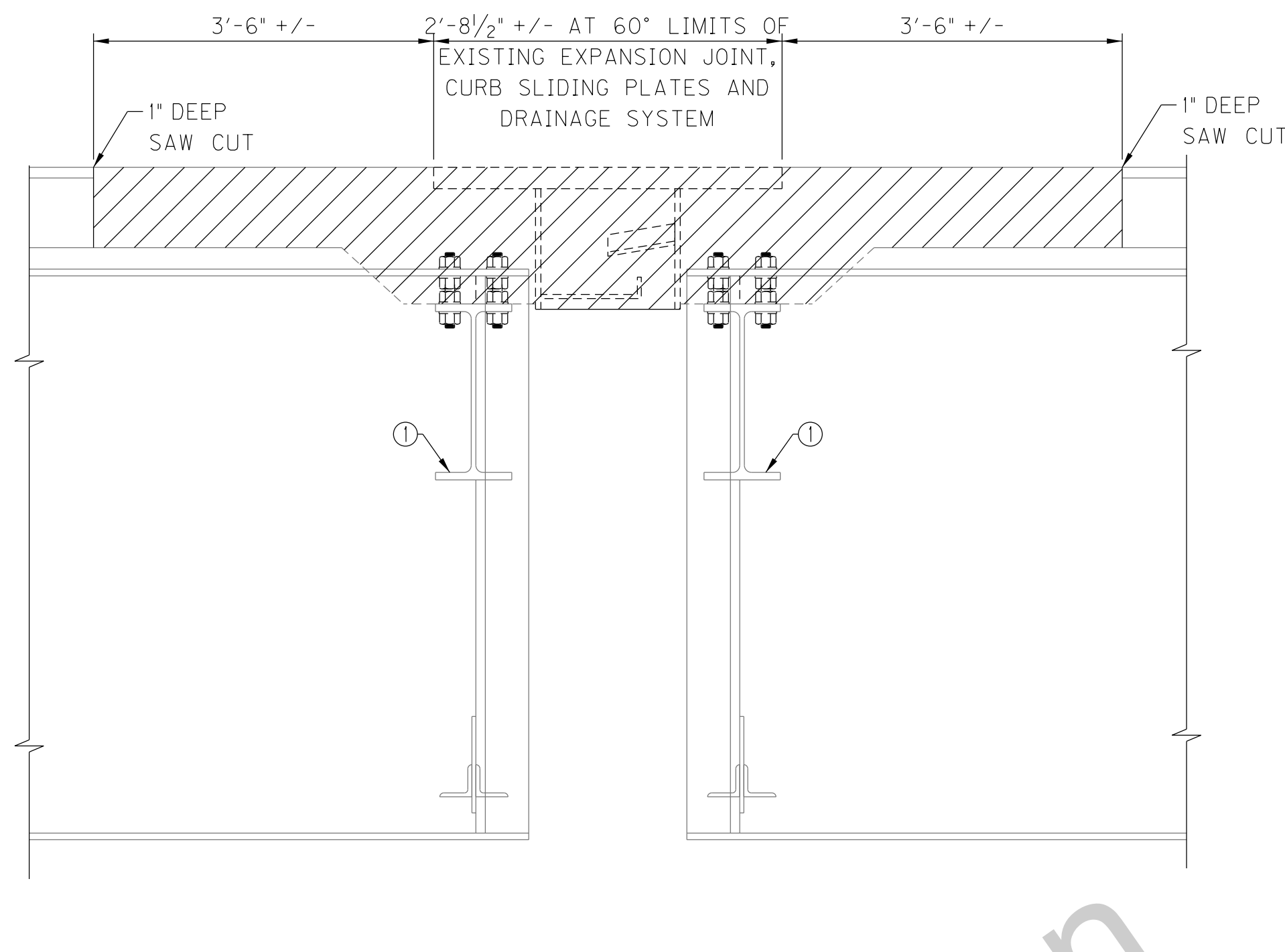


#4 OVERHANG BAR

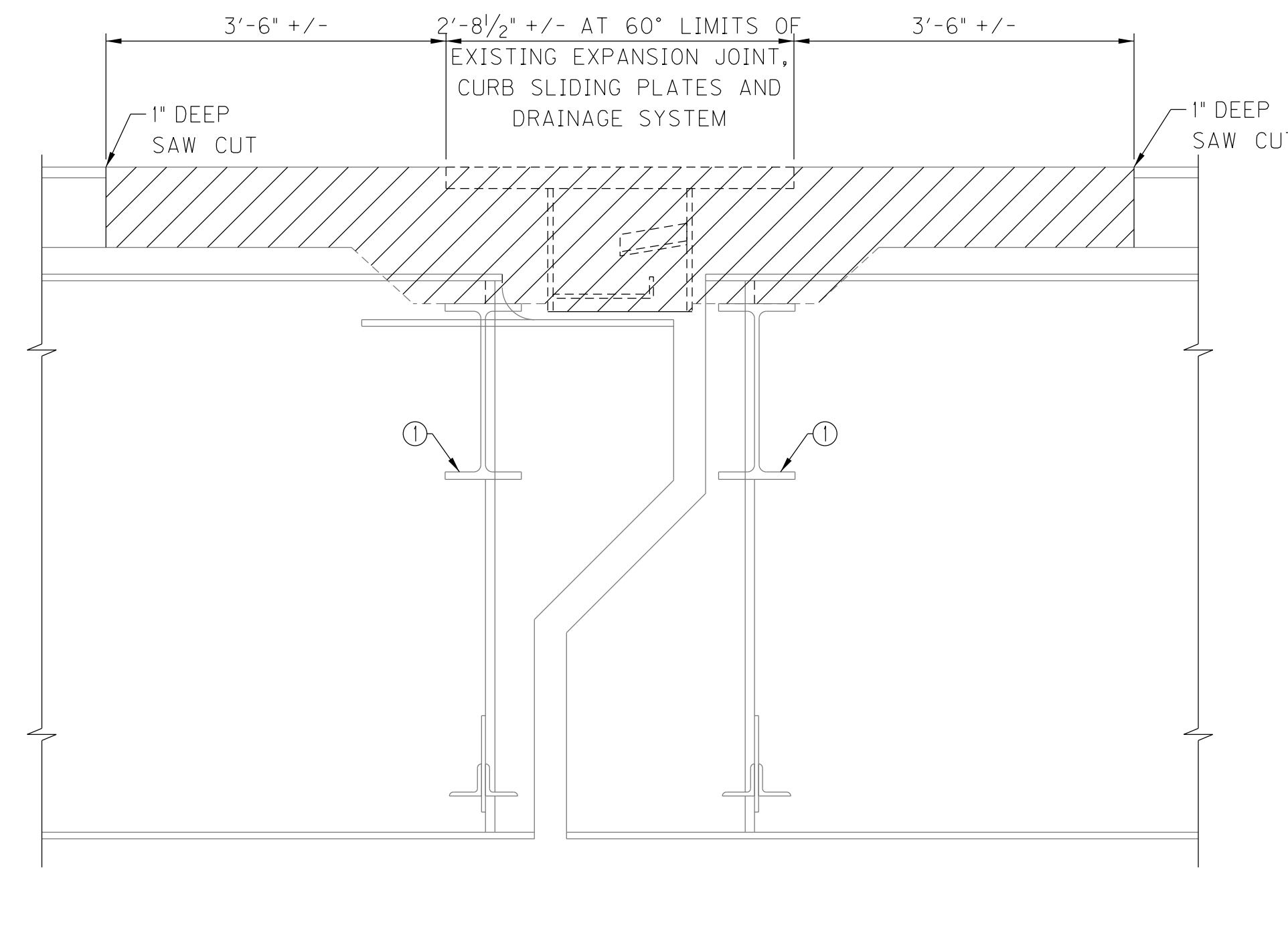
	RECOMMENDED FOR APPROVAL: <u>Tony Hulley</u> 11/04/2016 DATE	INDIANA DEPARTMENT OF TRANSPORTATION HENDERSON COUNTY, KENTUCKY US 41 SB BRIDGE REHAB OVER THE OHIO RIVER FINGER JOINT REPLACEMENT PIER A	SCALE: NTS	BRIDGE FILE: 041-93-5000SBL
	DESIGNED: M. LAWLER DRAWN: J. HUMBERT		DRAWING: 00 OF 00	SHEET: S12 OF S21
	CHECKED: R. YOUNG CHECKED: M. LAWLER		CONTRACT: B-33539	PROJECT: 1298275
	KYTC DRAWING NO. 27600			



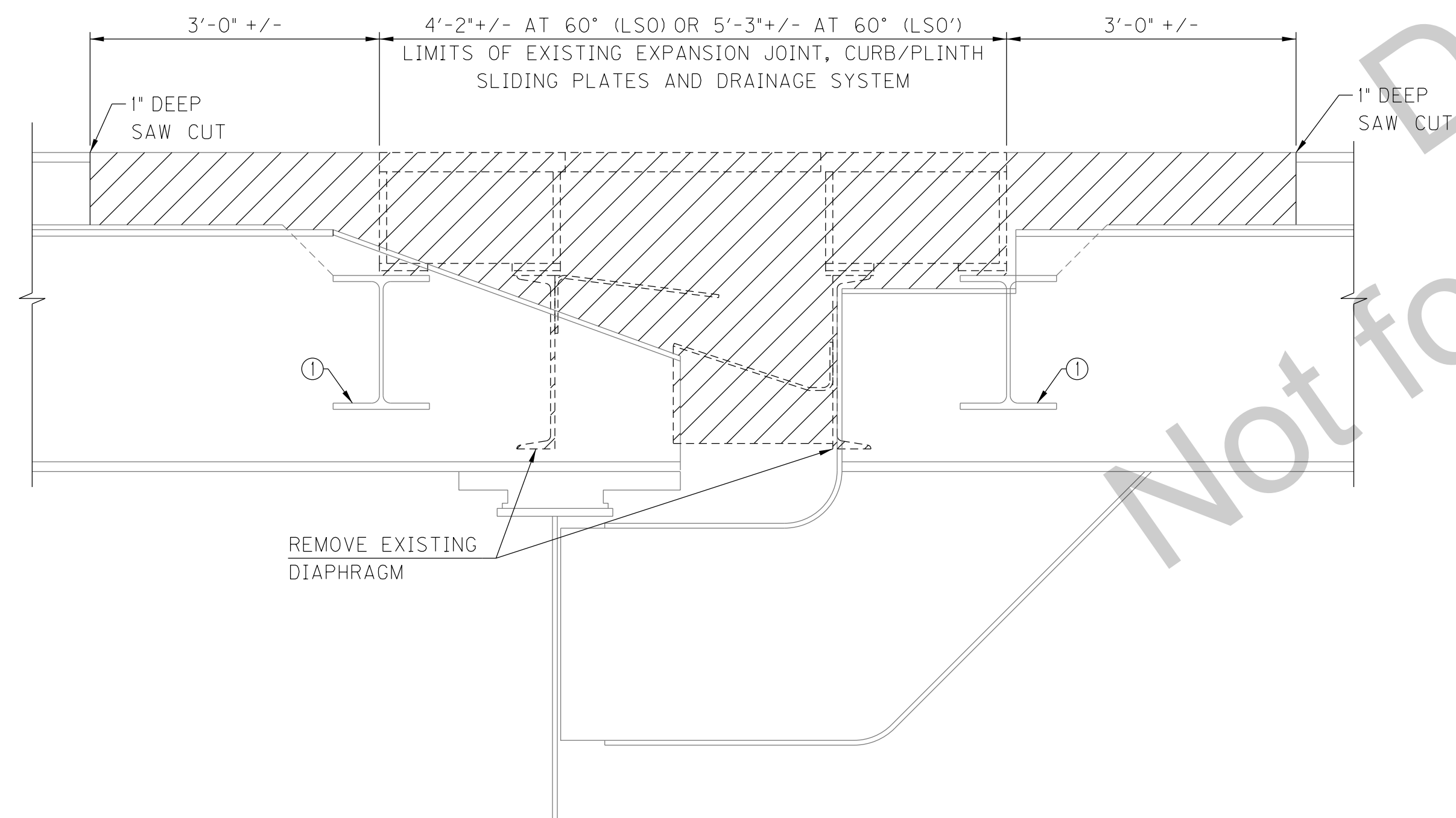
SPAN 4S OR 6N
**JOINT AND DRAINAGE SYSTEM REMOVAL
 AT PIERS S-3 AND N-5**



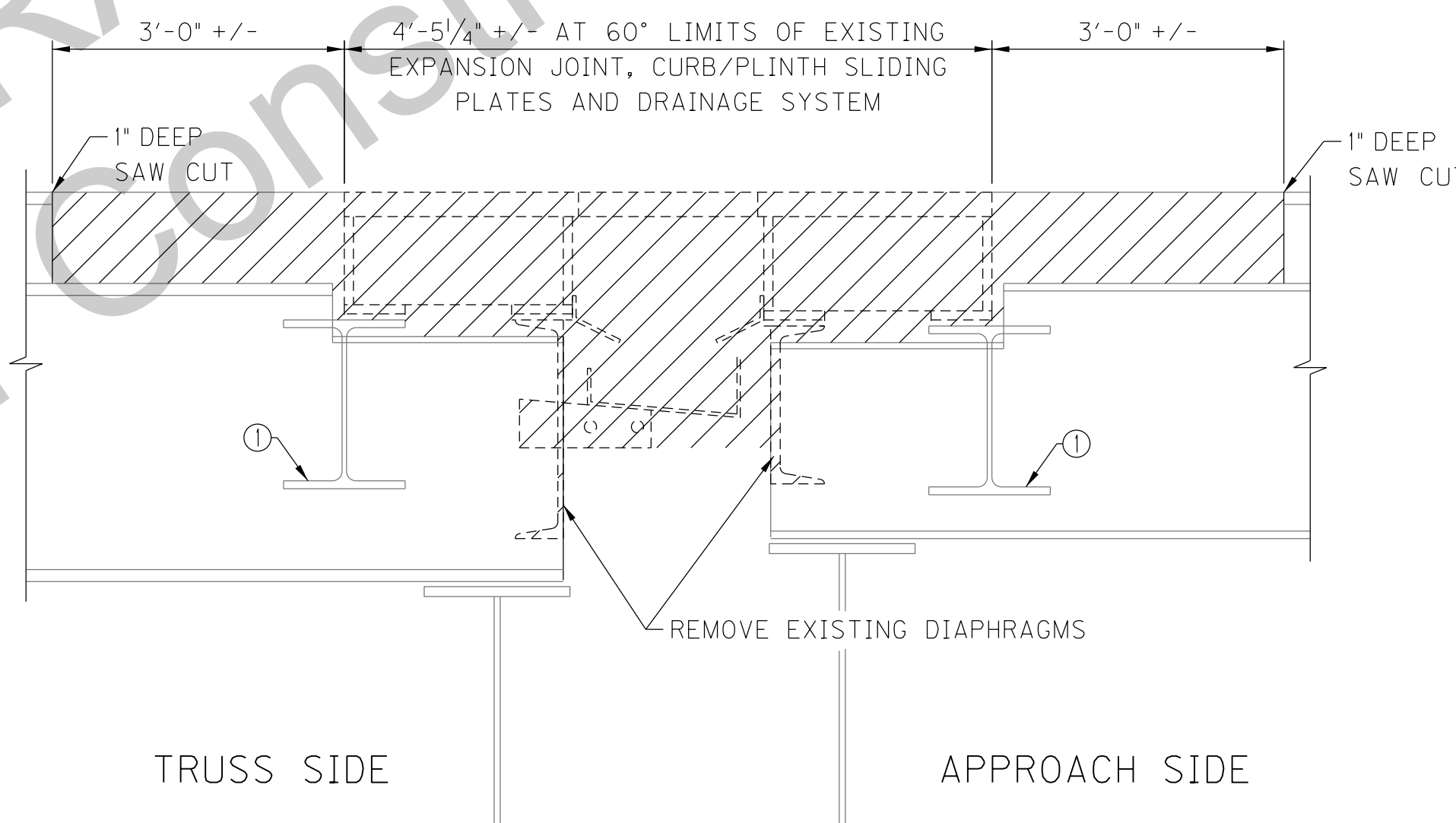
JOINT AND DRAINAGE SYSTEM REMOVAL AT PIER S-11



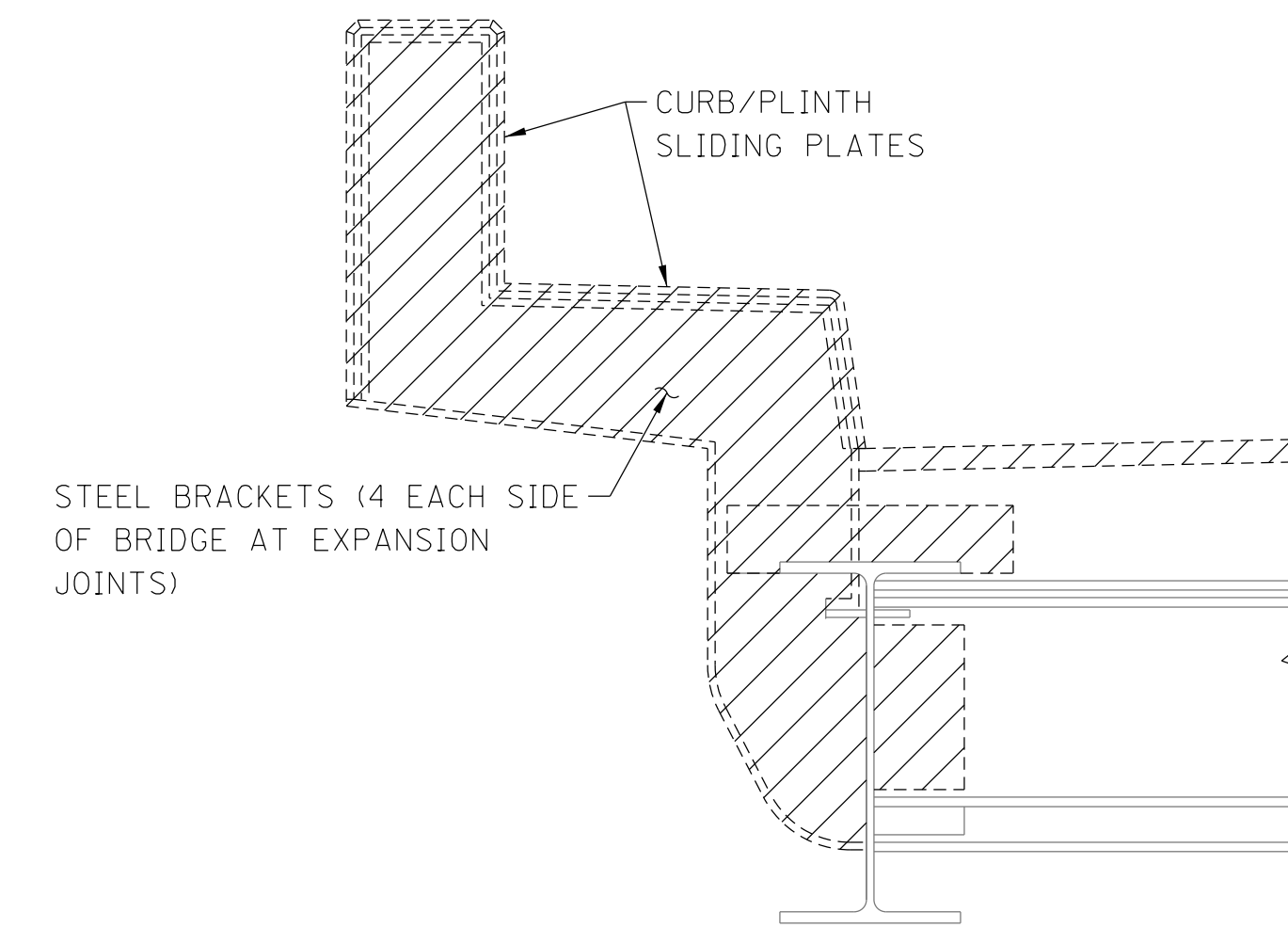
**JOINT AND DRAINAGE SYSTEM REMOVAL
 AT PIERS S-7 & S-15**



**JOINT AND DRAINAGE SYSTEM REMOVAL
 AT PANEL POINTS LS0 AND LS0'**



**JOINT AND DRAINAGE SYSTEM REMOVAL
 AT PIER E**



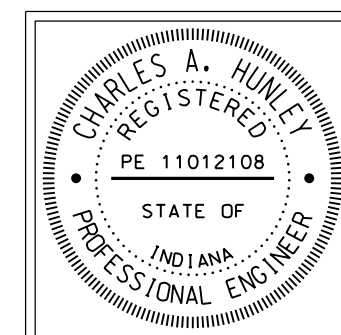
**PLINTH AND CURB REMOVAL
 AT LS0, LS0' AND PIER E**

NOTATIONS

- ① EXISTING DIAPHRAGM/CROSS FRAME TO REMAIN

NOTE:
 CLEAN AND STRAIGHTEN EXISTING REINFORCEMENT. REPLACE ANY DAMAGED REINFORCEMENT.

REMOVE EXISTING DRAINAGE SYSTEM AT JOINTS.



RECOMMENDED FOR APPROVAL:	<i>Tony Hawley</i>	DESIGN ENGINEER	11/04/2016	DATE
DESIGNED:	M. LAWLER	DRAWN:	S. PARSONS	
CHECKED:	S. PARSONS	CHECKED:	M. LAWLER	

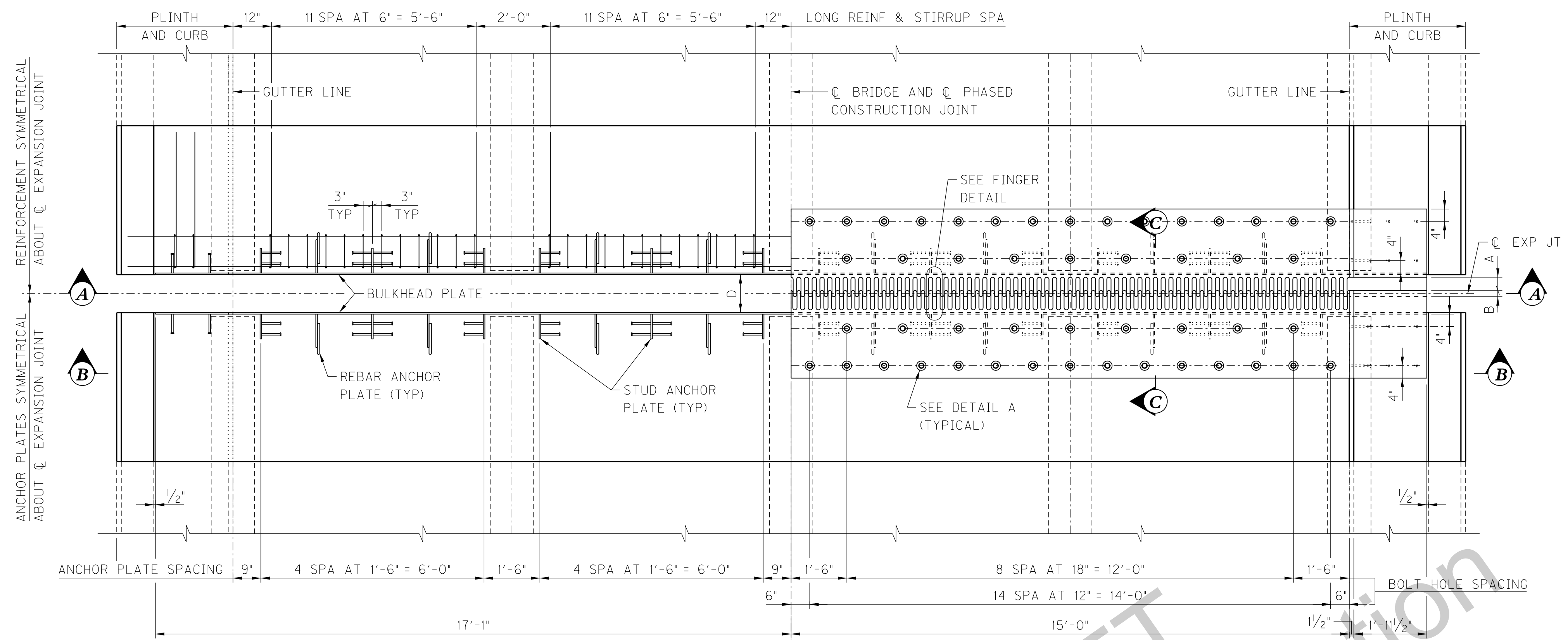
INDIANA
 DEPARTMENT OF TRANSPORTATION
 HENDERSON COUNTY, KENTUCKY
 US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
 FINGER JOINT REMOVAL

SCALE	BRIDGE FILE
NTS	041-93-5000SBL
	DESIGNATION
	1298275
DRAWING	SHEET
00 OF 00	S13 OF S21
CONTRACT	PROJECT
B-33539	1298275

KYTC DRAWING NO. 27600

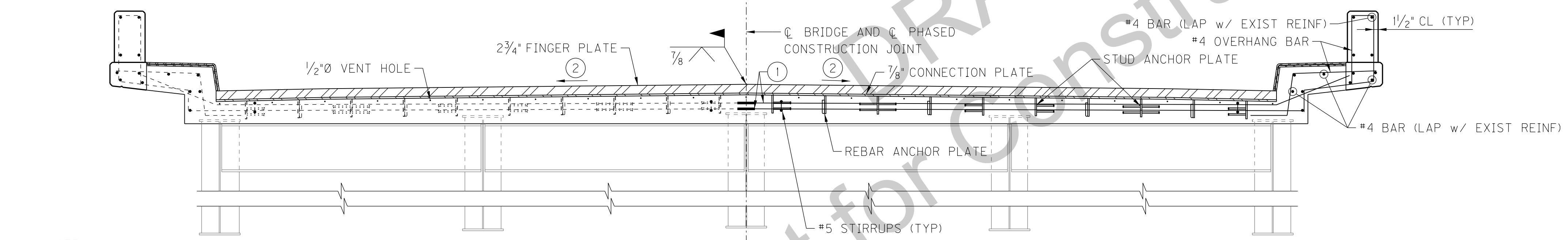
V:\1785\active\178566011\structural\Henderson_SB_Bridge\drawing\IN_S13_Finger_Joint_Removal.dgn Foy, Sheila Plot: 11/3/2016 1:44 PM Save: 11/3/2016 1:45 PM

I:\1785\active\178566011\structural\Henderson_SB_Bridge\drawing\IN_S14_Finger_Jt_Plan&Elev.dgn Foy, Sheila Plot: 11/3/2016 1:55 PM Save: 11/3/2016 1:55 PM



PART PLAN - SHOWING ANCHOR PLATES AND REINFORCEMENT
(FINGER PLATES NOT SHOWN FOR CLARITY)

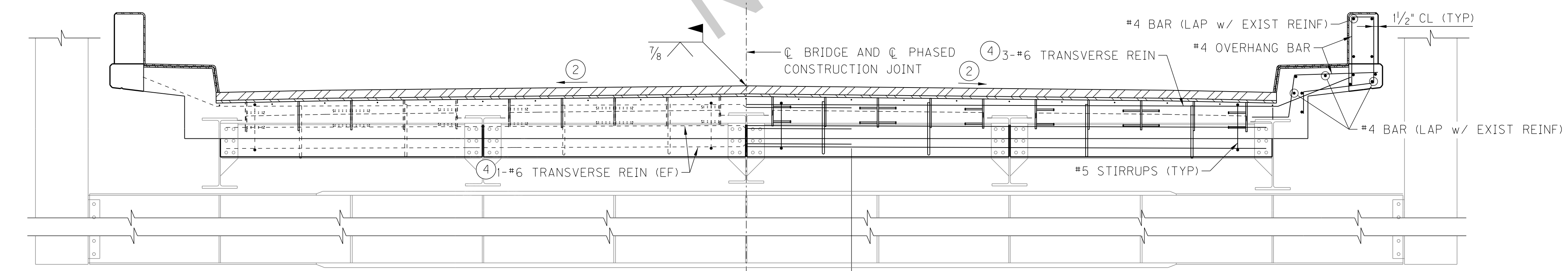
PART PLAN - SHOWING FINGER PLATES



PART SECTION A-A

PART SECTION B-B

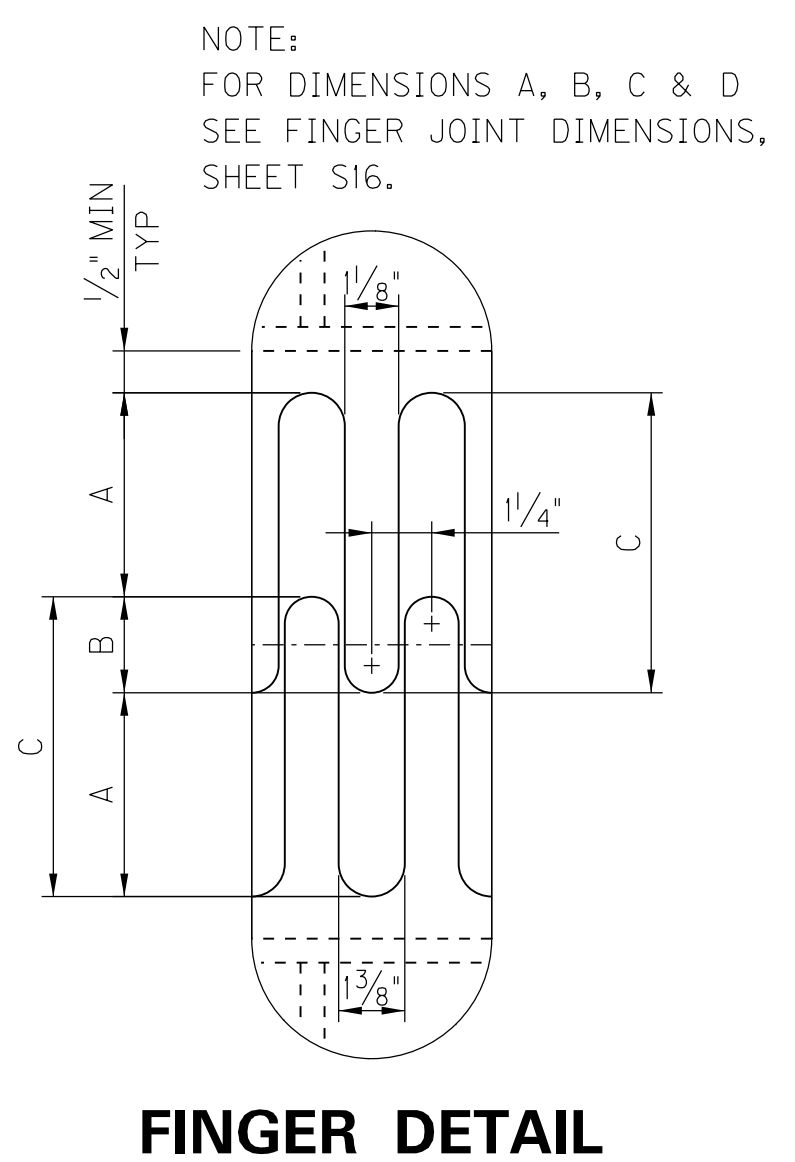
NOTE:
DRAINAGE NOT SHOWN FOR CLARITY



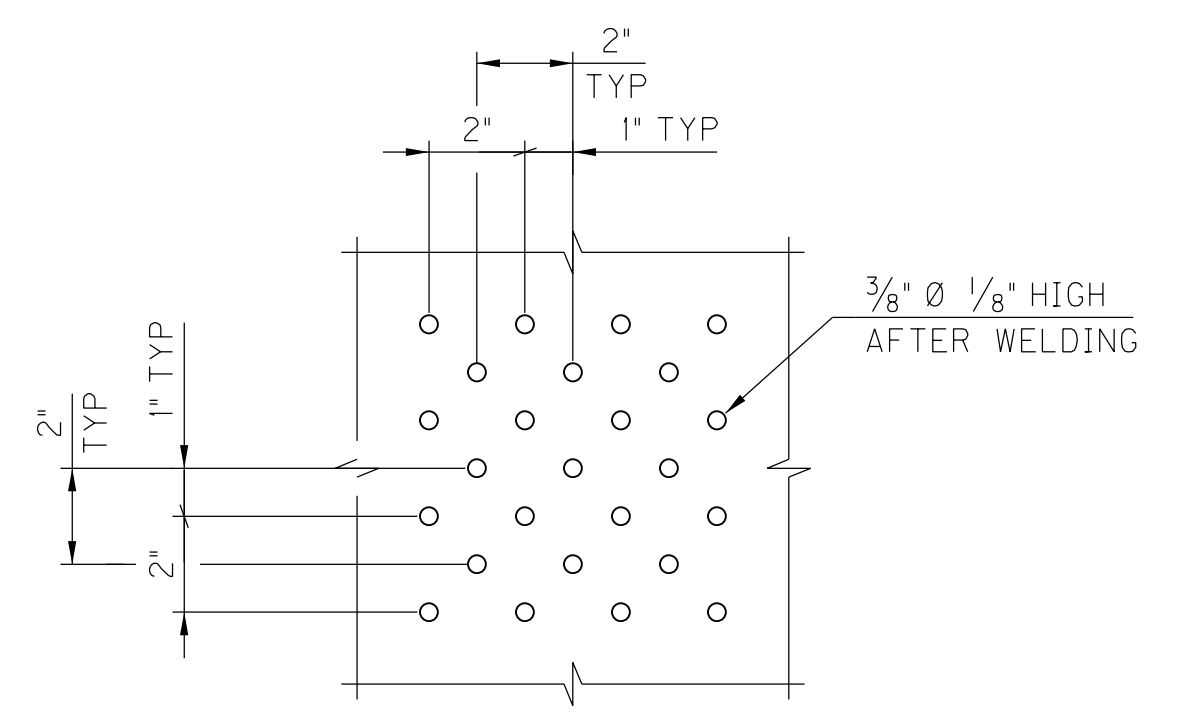
PART SECTION A-A

PART SECTION B-B

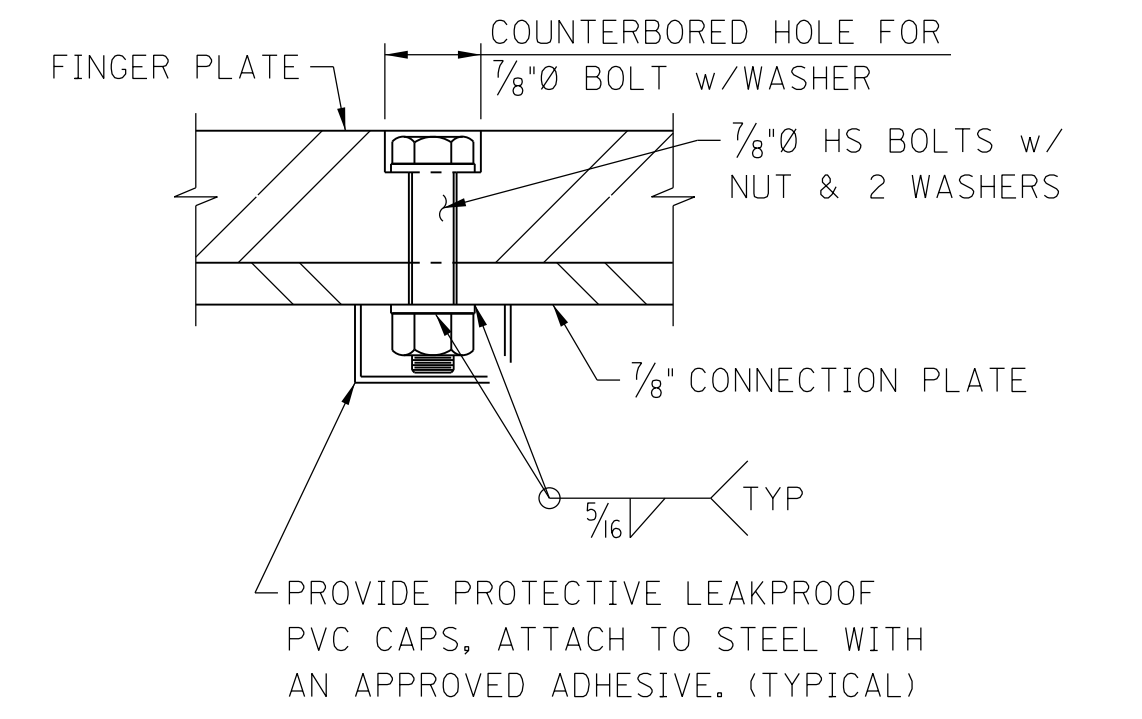
TRUSS BRIDGE



FINGER DETAIL

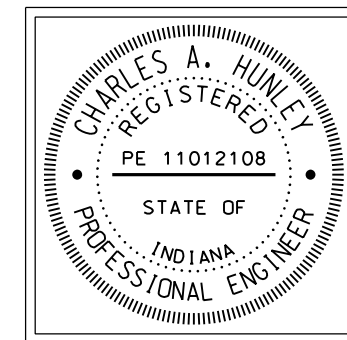


ANTI-SKID PATTERN ON FINGER PLATES



DETAIL A

- NOTATION:
- ① #6 TRANSVERSE REINFORCEMENT WITH #6 MECHANICAL COUPLERS (EF)
 - ② MATCH BRIDGE CROSS SLOPE.
 - ③ TYPICAL FOR JOINTS AT PIERS S-15, S-11, S-7, S-3, PANEL POINTS LSO, LSO', PIERS E AND N-5.
 - ④ EXTEND PHASE 1 BARS 3'-0" (MIN) PAST CENTERLINE OF BRIDGE. LAP PHASE 2 BARS WITH PHASE 1 BARS.
 - ⑤ TYPICAL FOR JOINTS AT PIERS S-15, S-11, S-7, S-3 AND N-5.
 - ⑥ TYPICAL FOR JOINTS AT PANEL POINTS LSO, LSO' AND PIERS E.



RECOMMENDED FOR APPROVAL: *Tony Hulley* DESIGN ENGINEER 11/04/2016 DATE

DESIGNED: M. LAWLER DRAWN: S. PARSONS

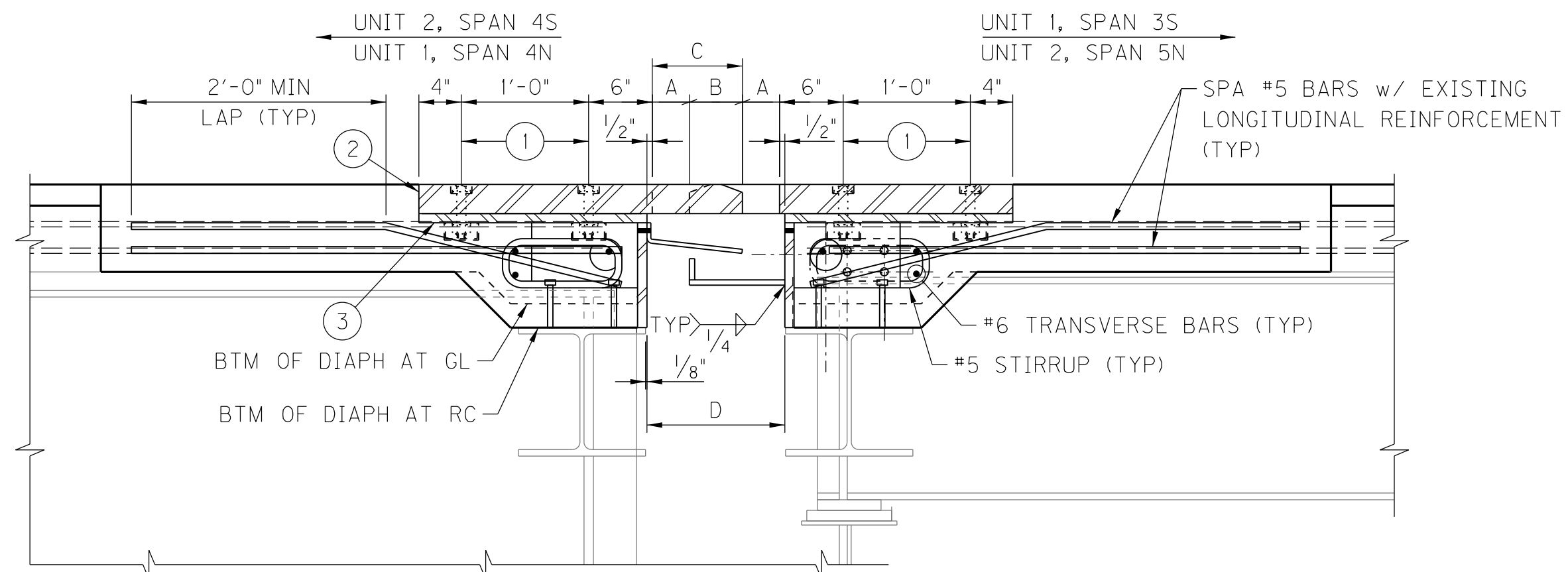
CHECKED: R. CATRON CHECKED: M. LAWLER

INDIANA DEPARTMENT OF TRANSPORTATION

HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
FINGER EXPANSION JOINT

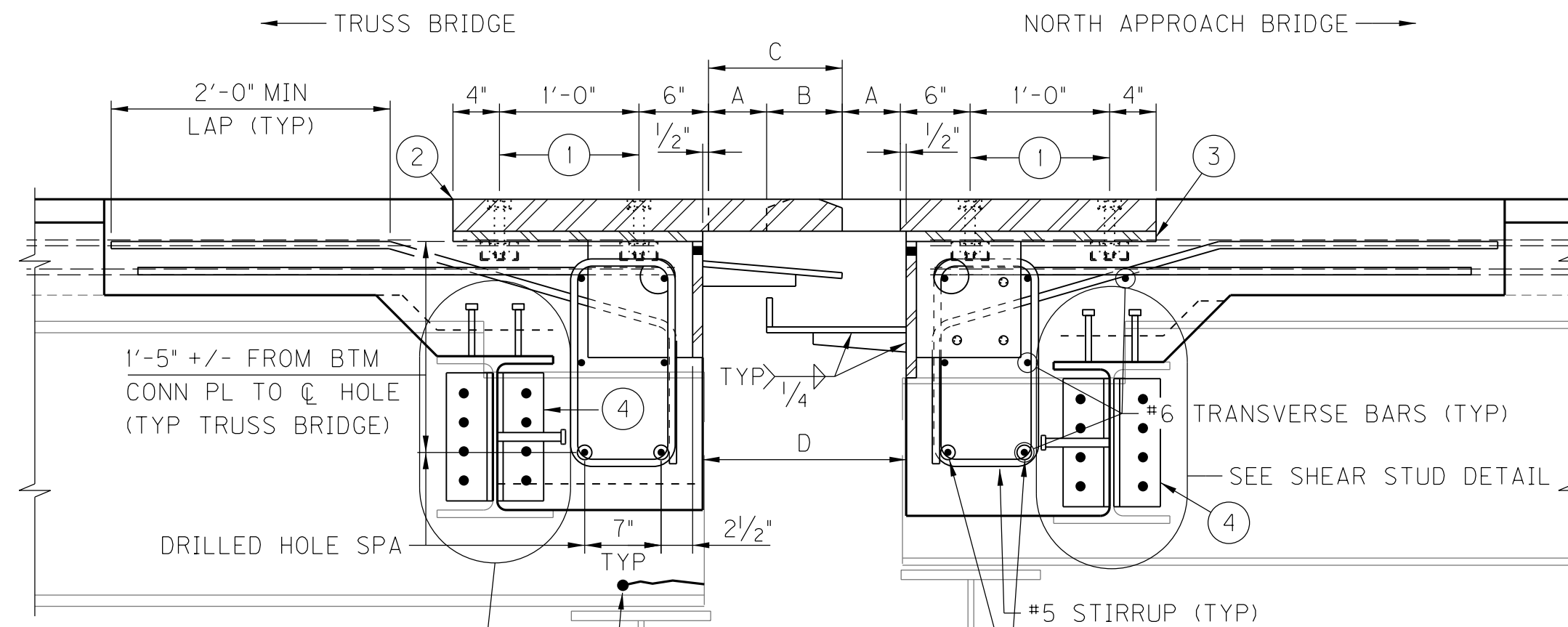
SCALE NTS		BRIDGE FILE 041-93-5000SBL	
		DESIGNATION 1298275	
DRAWING 00	OF 00	SHEET S14	OF S21
CONTRACT B-33539		PROJECT 1298275	

KYTC DRAWING NO. 27600



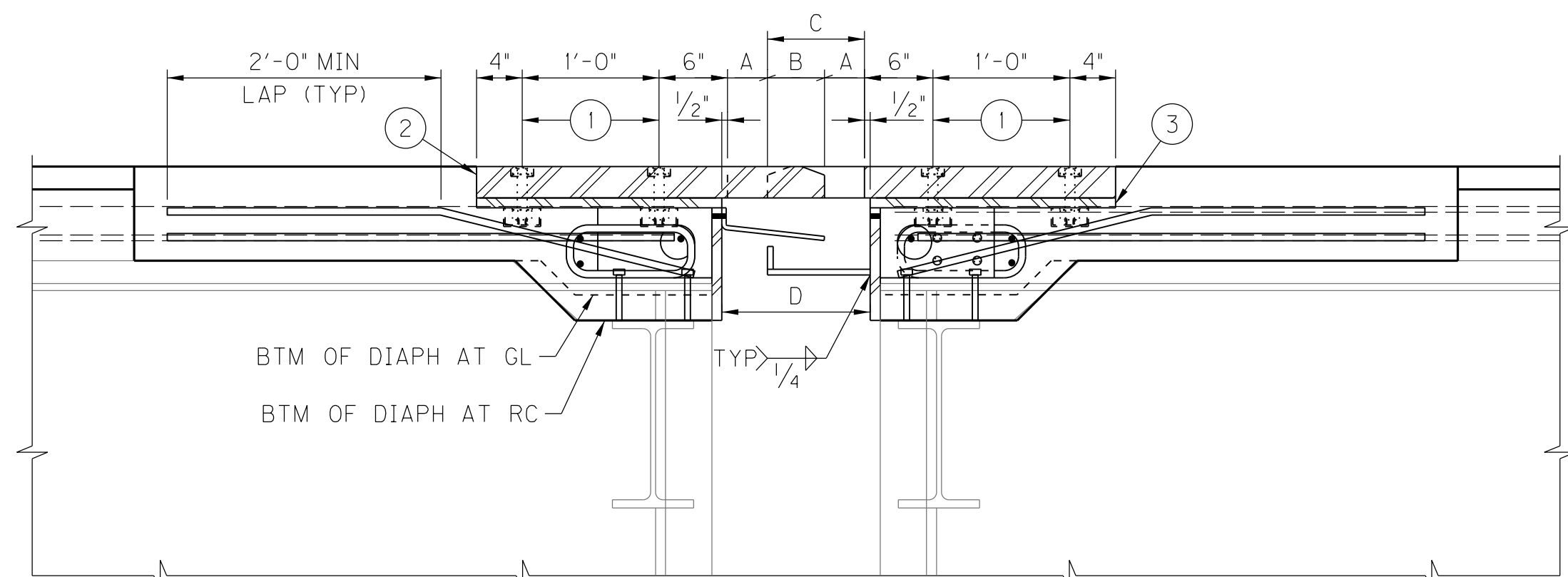
SECTION C-C
AT PIER S-3 & N-5

NOTES:
SEE SHEET S16 FOR ANCHOR PLATE DETAILS.
SEE SHEET S17 FOR DRAINAGE SYSTEM DETAILS.

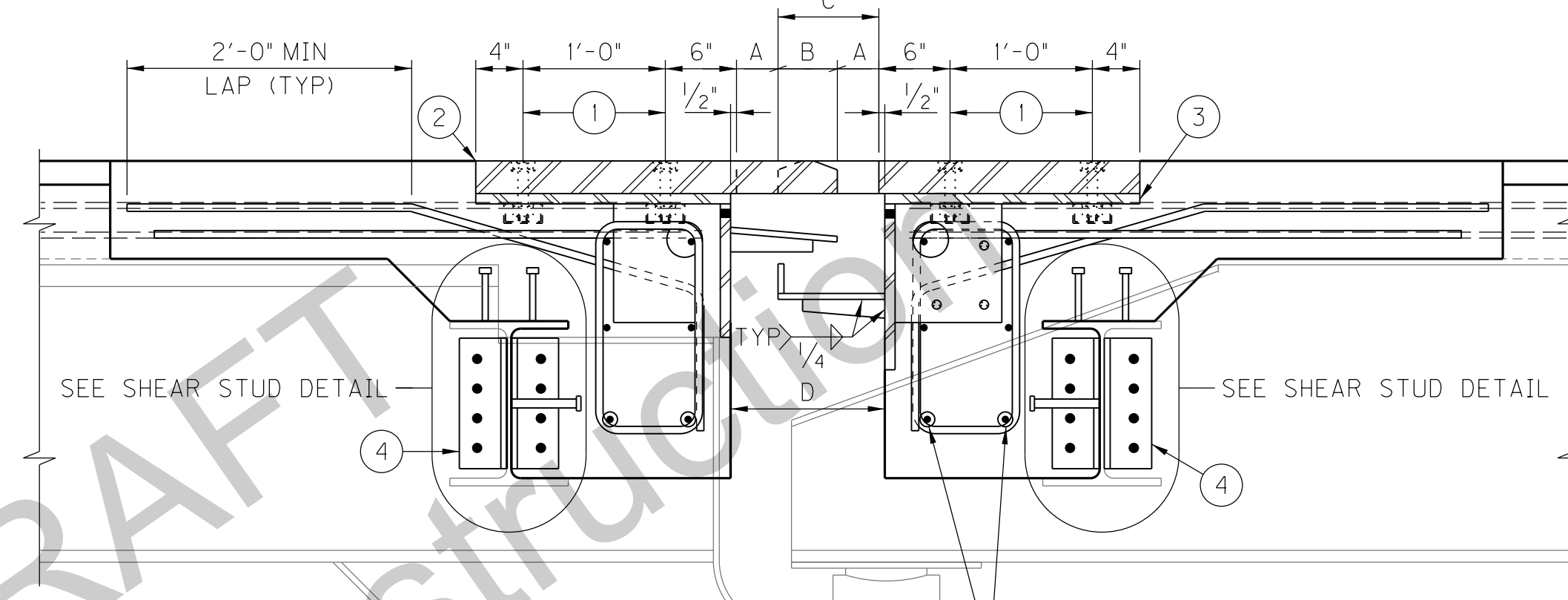


SECTION C-C
AT PIER E

DRILL 1/2"Ø HOLES IN STRINGERS FOR REINFORCING TO PASS THRU. (TYPICAL)

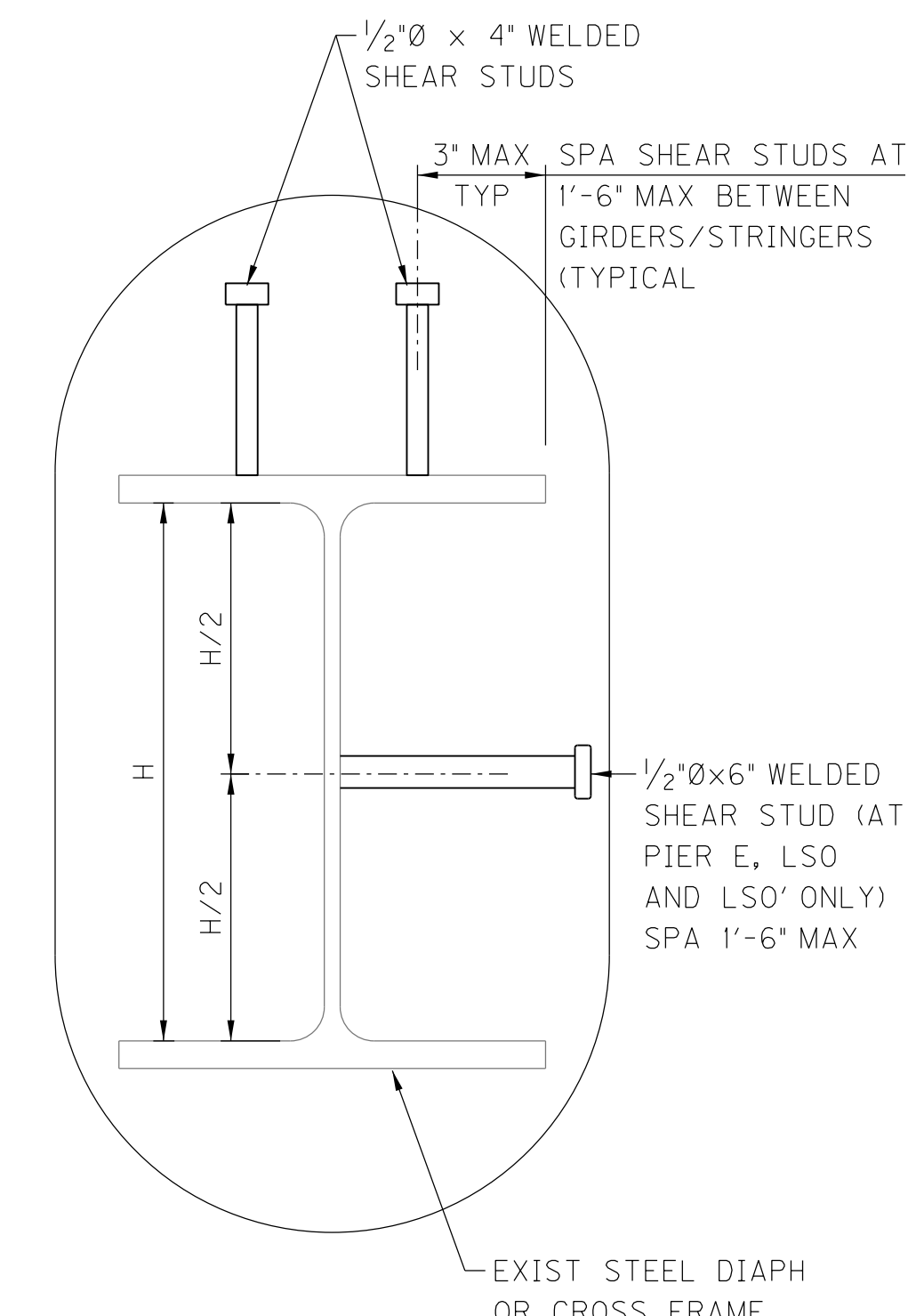


SECTION C-C
AT PIER S-II

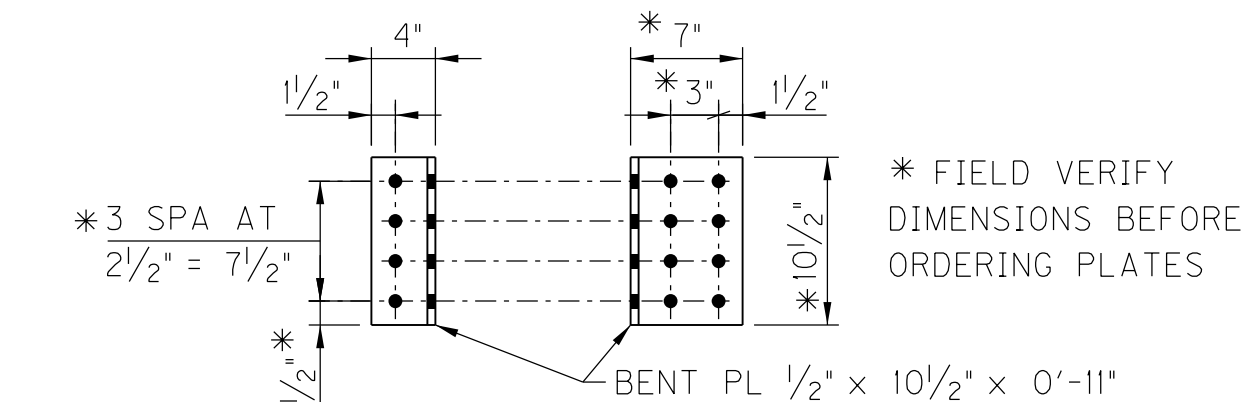


SECTION C-C
JOINT AT LSO

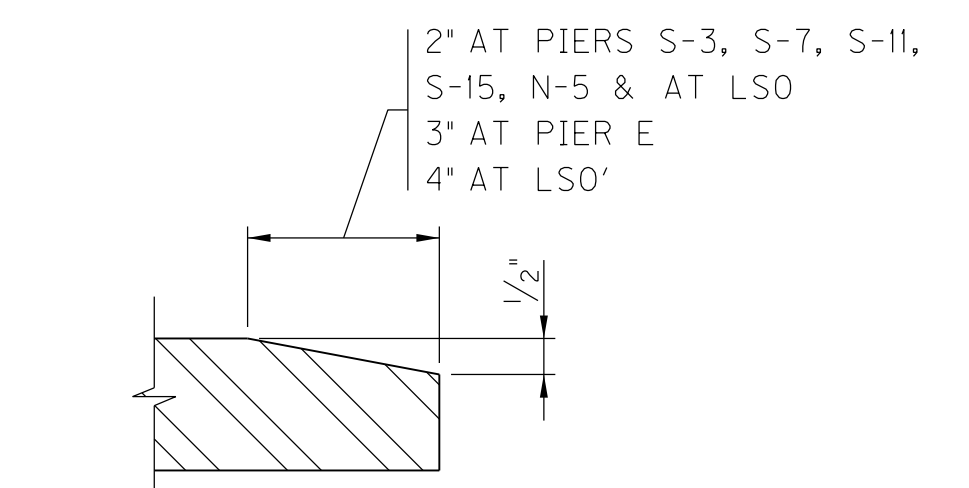
DRILL 1/2"Ø HOLES IN STRINGERS FOR REINFORCING TO PASS THRU. (TYPICAL)



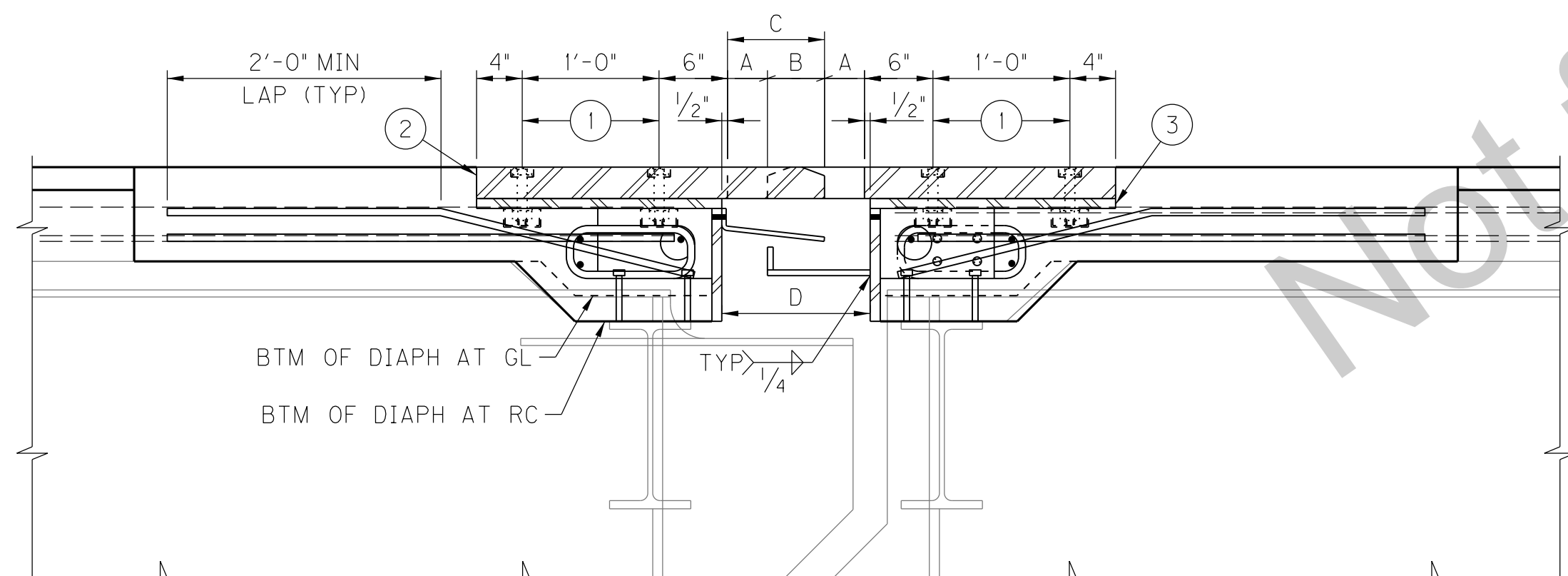
SHEAR STUD DETAIL



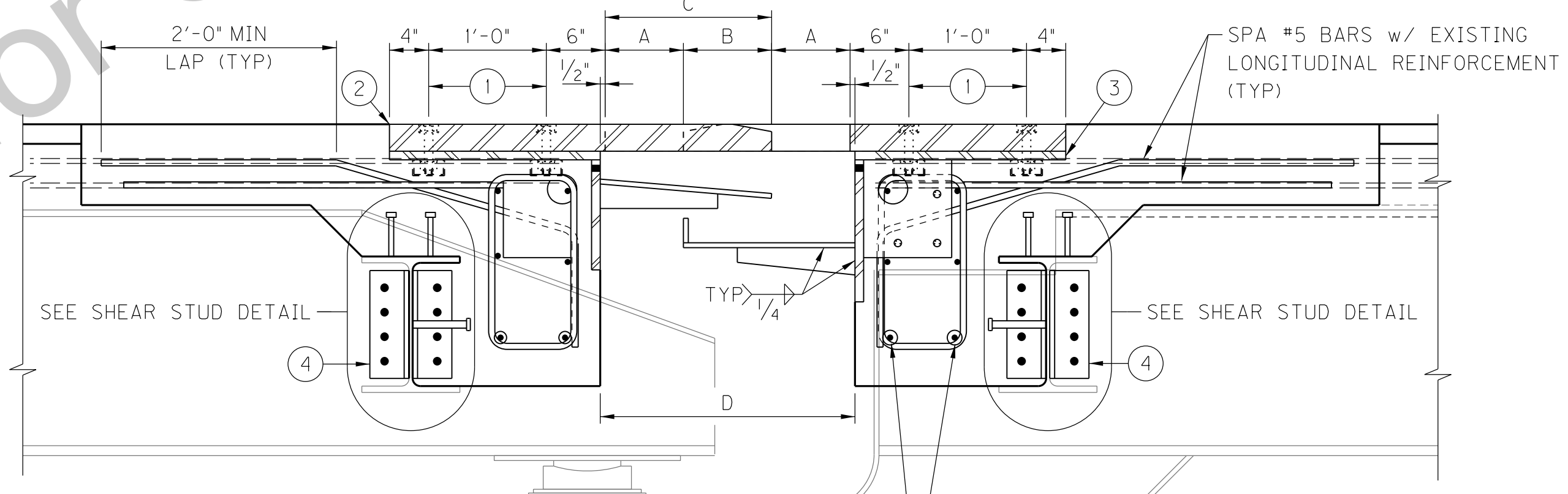
DIAPHRAGM CONNECTION PLATE



FINGER TAPER DETAIL



SECTION C-C
AT PIERS S-15 & S-7

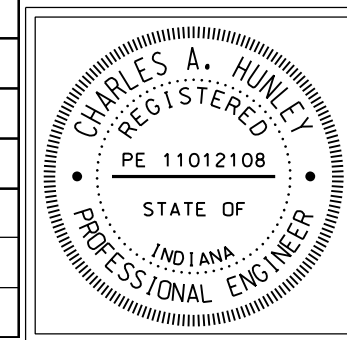


SECTION C-C
JOINT AT LSO'

DRILL 1/2"Ø HOLES IN STRINGERS FOR REINFORCING TO PASS THRU. (TYPICAL)

- NOTATION:
- ① 1/2" COUNTERBORED HOLE FOR 7/8"Ø BOLT WITH WASHER. SEE DETAIL A, SHEET S14.
 - ② 2 3/4" FINGER PLATE
 - ③ 7/8" CONNECTION PLATE
 - ④ REMOVE CONNECTION TAB (STRINGER TO DIAPHRAGM IN ALL BAYS. GRIND WELD SMOOTH PRIOR TO INSTALLING DIAPHRAGM CONNECTION BENT PLATE.
 - ⑤ DRILL 1"Ø CRACK ARREST HOLES THRU CRACKS IN STRINGER WEB.

Location	Total Movement	FINGER JOINT DIMENSIONS (All dimensions are in inches)									
		A		B		C		D			
		120°	0°	120°	0°	120°	0°	120°	0°		
Pier S-3	4.83	1.09	3.50	5.92	7.42	5.00	2.59	8.50	10.59	13.00	15.42
Pier S-7, S-11, S-15	4.13	1.44	3.50	5.57	7.07	5.00	2.94	8.50	10.94	13.00	15.07
LSO	6.06	0.47	3.50	6.53	8.03	5.00	1.97	8.50	9.97	13.00	16.03
LSO'	14.83	0.59	8.00	15.42	19.92	12.50	5.09	20.50	22.09	29.50	36.92
Pier E	9.12	0.94	5.50	10.06	13.06	8.50	3.94	14.00	15.94	20.50	25.06
Pier N-5	5.98	0.51	3.50	6.49	8.99	6.00	3.01	9.50	11.01	14.00	16.99



RECOMMENDED FOR APPROVAL: *Tony Hawley* DESIGN ENGINEER 11/04/2016 DATE

DESIGNED: M. LAWLER DRAWN: S. PARSONS

CHECKED: R. CATRON CHECKED: M. LAWLER

INDIANA DEPARTMENT OF TRANSPORTATION

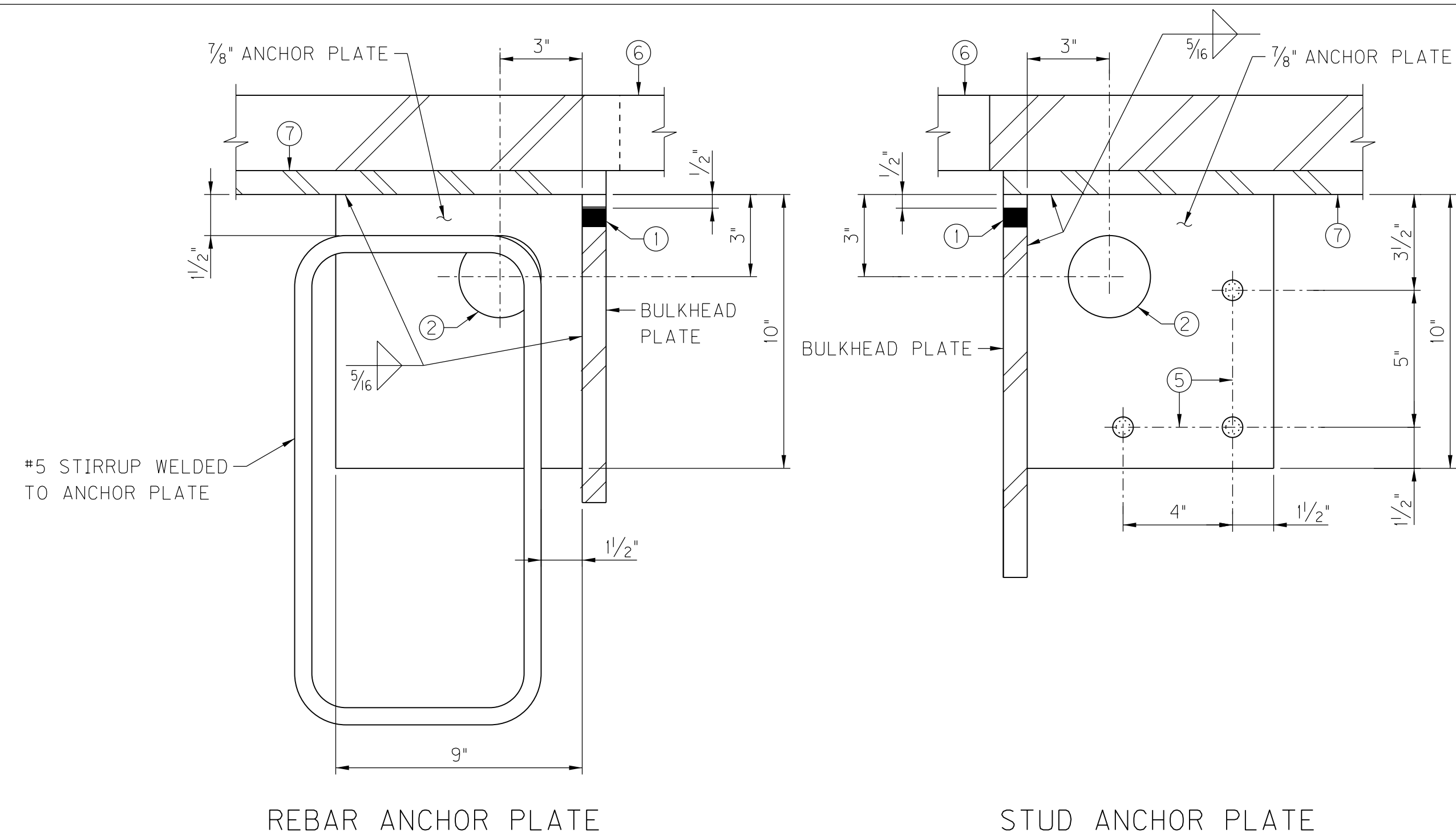
HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
FINGER EXPANSION JOINT

SCALE		BRIDGE FILE	
NTS		041-93-5000SBL	
		DESIGNATION	
		1298275	
DRAWING		SHEET	
00	OF 00	S15	OF S21
CONTRACT		PROJECT	
B-33539		1298275	

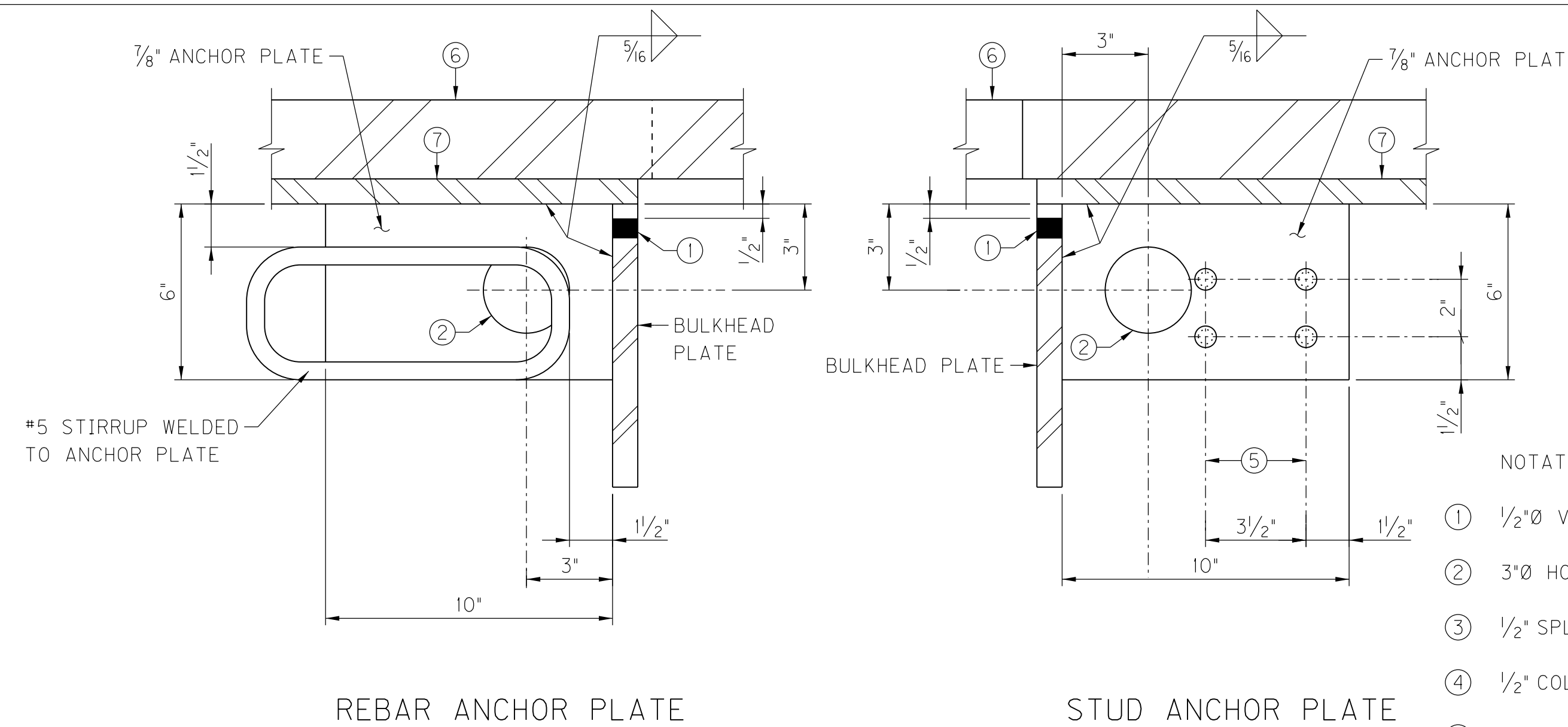
KYTC DRAWING NO. 27600

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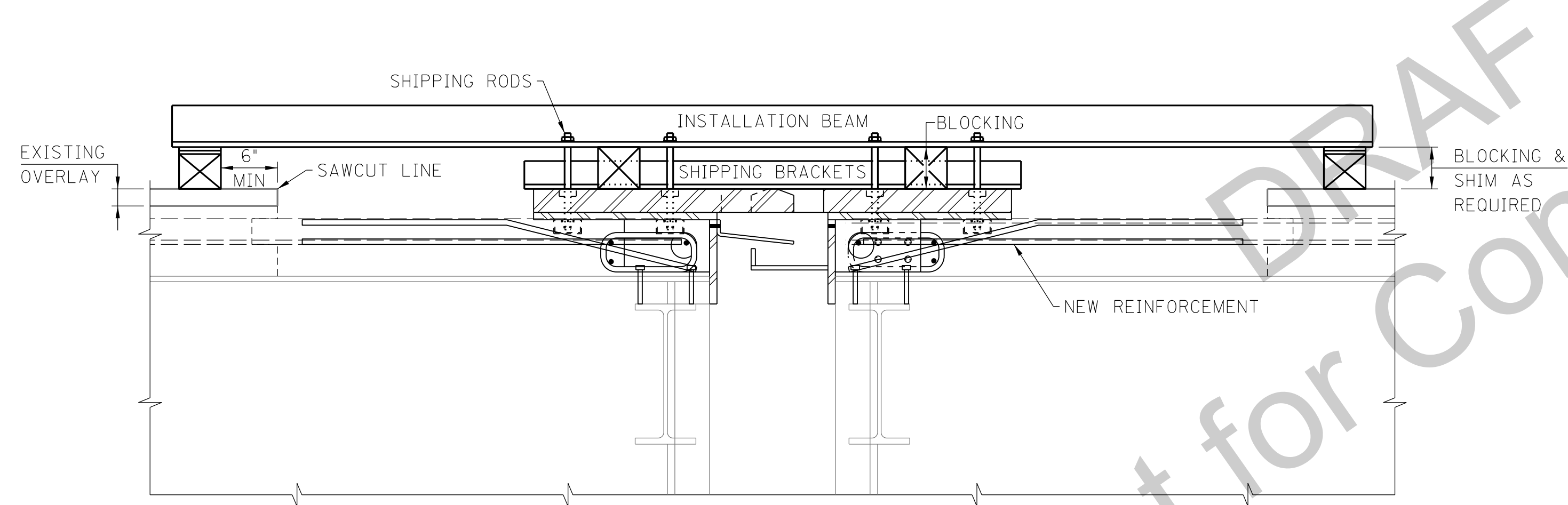


TRUSS BRIDGE ANCHOR PLATE DETAILS



APPROACH BRIDGE ANCHOR PLATE DETAILS

- NOTATIONS
- ① 1/2" Ø VENT HOLE
 - ② 3" Ø HOLE FOR REINFORCEMENT PASS THRU
 - ③ 1/2" SPLASH PLATE
 - ④ 1/2" COLLECTOR PLATE
 - ⑤ 6 1/2" Ø x 6" SHEAR STUDS (ONE SIDE ONLY AT STRINGERS, EACH SIDE BETWEEN STRINGERS, AS SHOWN IN PLAN, SHEET S14.)
 - ⑥ 2 3/4" FINGER PLATE
 - ⑦ 7/8" CONNECTION PLATE

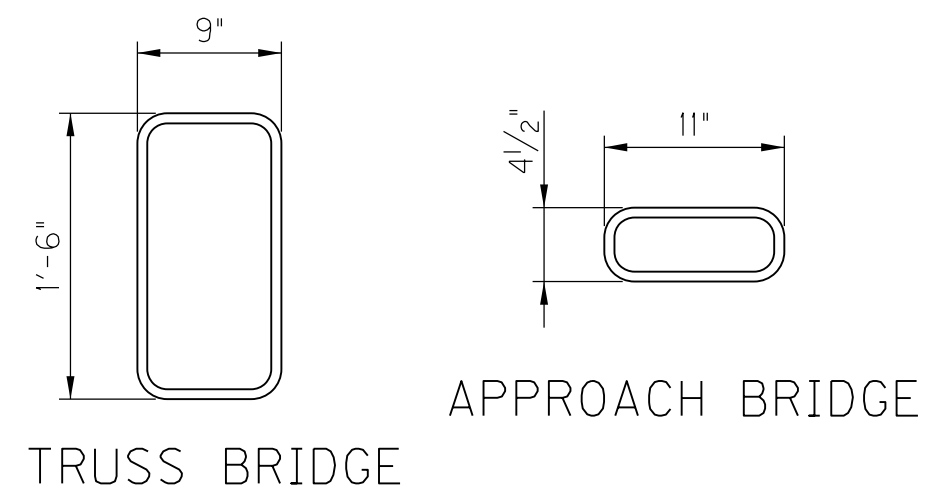


JOINT INSTALLATION DETAIL

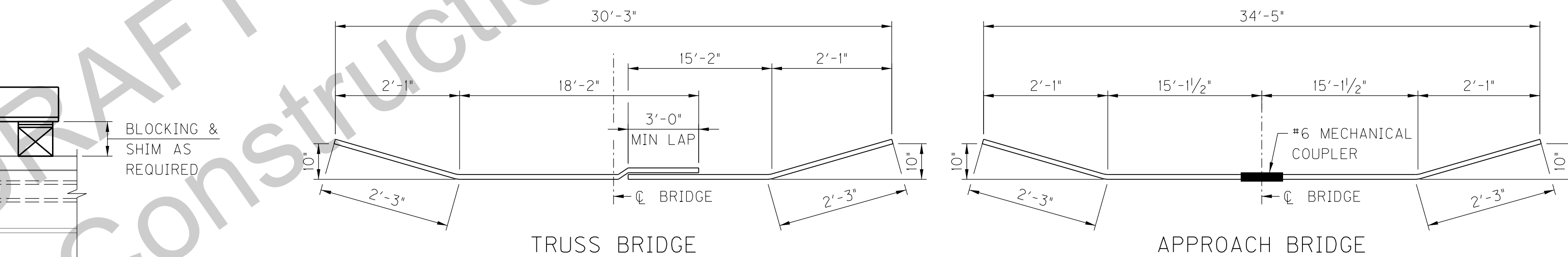
SHOWN AT PIER S-3 JOINT
DETAIL SIMILAR AT ALL OTHERS

INSTALLATION NOTES:

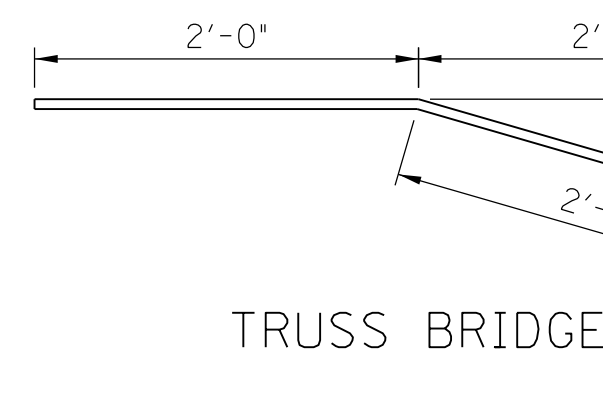
1. TRANSPORT FINGER JOINT ASSEMBLIES WITH A MINIMUM OF TWO INSTALLATION BEAMS.
2. SUPPORT INSTALLATION BEAMS ON BLOCKING AND SHIMS AS REQUIRED TO ALIGN THE TOP SURFACE OF THE FINGER PLATES WITH THE TOP OF THE DECK OVERLAY.
3. REPLACE DAMAGED TRANSVERSE REINFORCEMENT AS REQUIRED, PLACE NEW REINFORCING
4. FORM AND PLACE THE CONCRETE DIAPHRAGM
5. AFTER CONCRETE HAS REACHED 4000 PSI COMPRESSIVE STRENGTH, REMOVE THE INSTALLATION BEAMS AND SHIPPING BRACKETS, THEN REPLACE SHIPPING RODS WITH CONNECTION BOLTS.



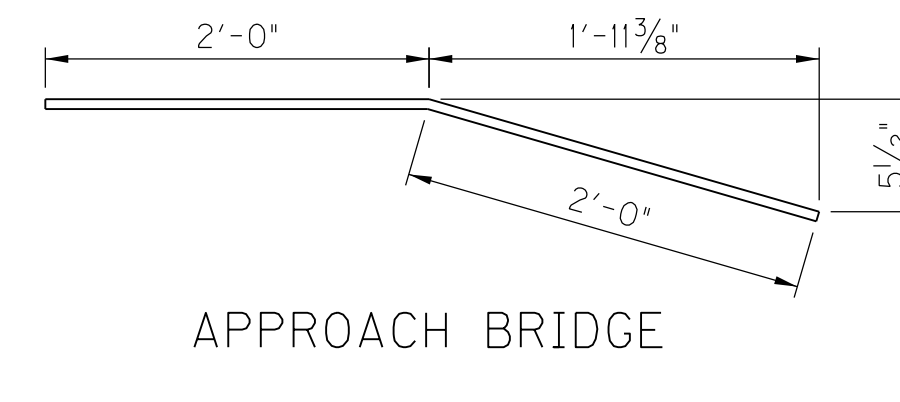
#5 DIAPHRAGM STIRRUP



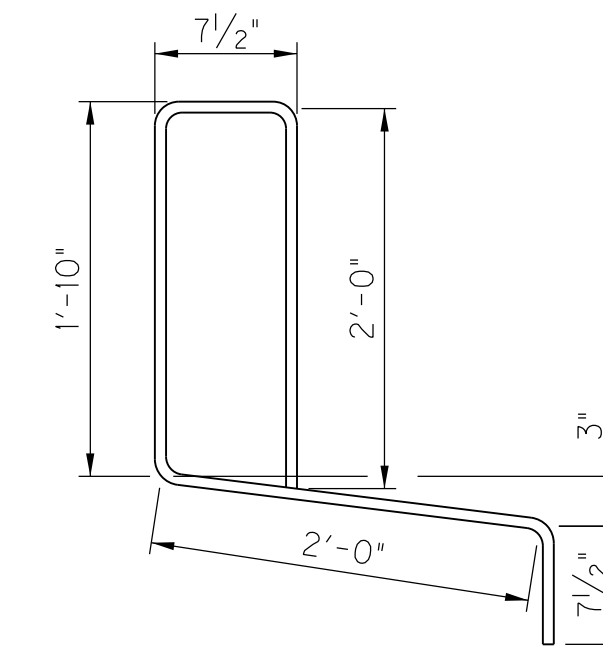
#6 TRANSVERSE



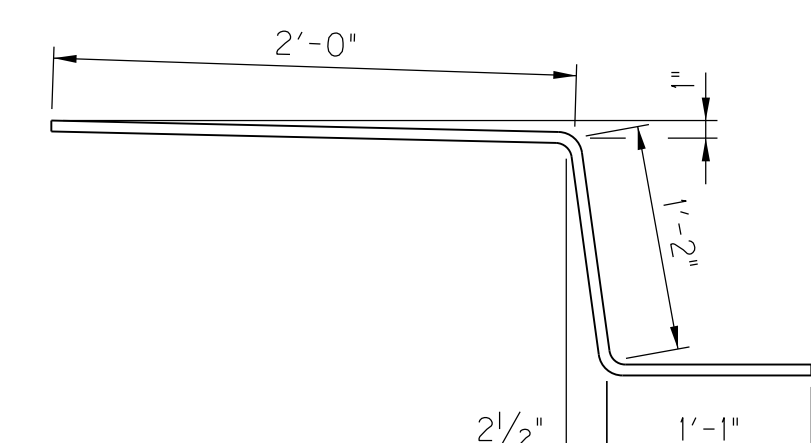
#5 SLAB REINFORCEMENT



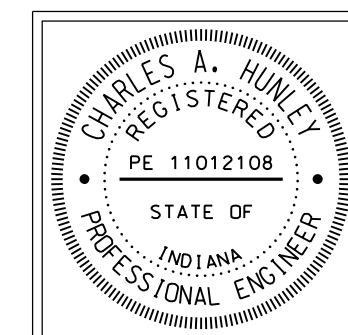
APPROACH BRIDGE



#4 OVERHANG BAR



#4 OVERHANG BAR



RECOMMENDED FOR APPROVAL:	<i>Tony Hulley</i>	DESIGN ENGINEER	11/04/2016	DATE
DESIGNED:	M. LAWLER	DRAWN:	S. PARSONS	
CHECKED:	R. CATRON	CHECKED:	M. LAWLER	

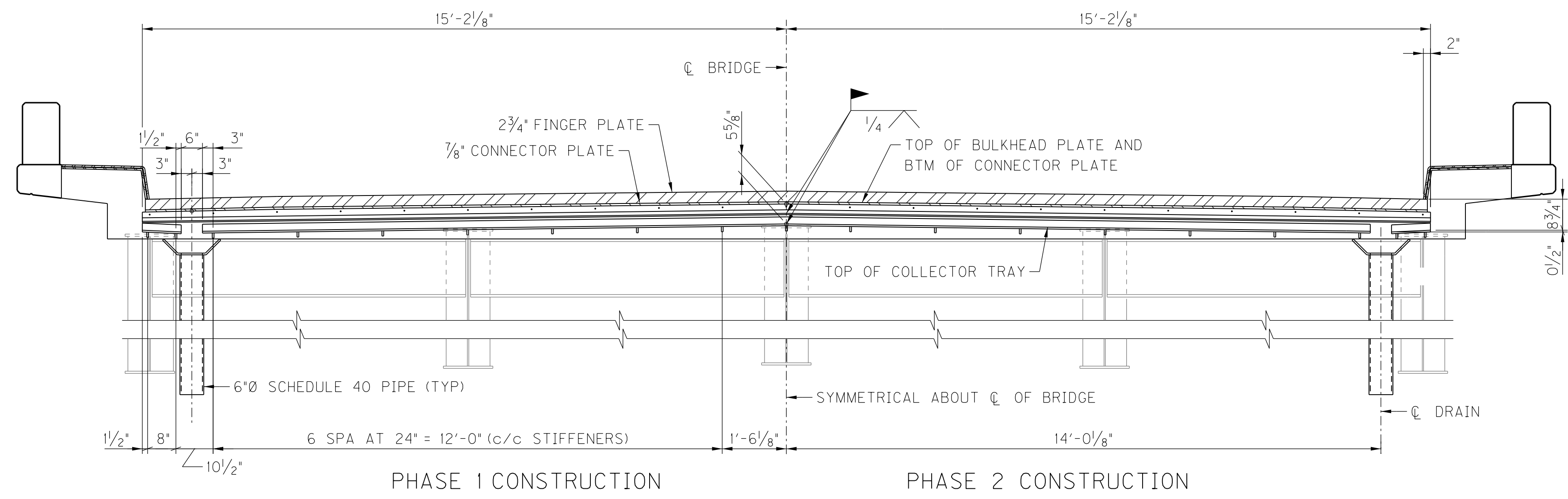
INDIANA
DEPARTMENT OF TRANSPORTATION

HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
FINGER EXPANSION JOINT

SCALE		BRIDGE FILE	
NTS		041-93-5000SBL	
		DESIGNATION	
		1298275	
DRAWING	00	SHEET	00
CONTRACT	B-33539	PROJECT	S21
			1298275

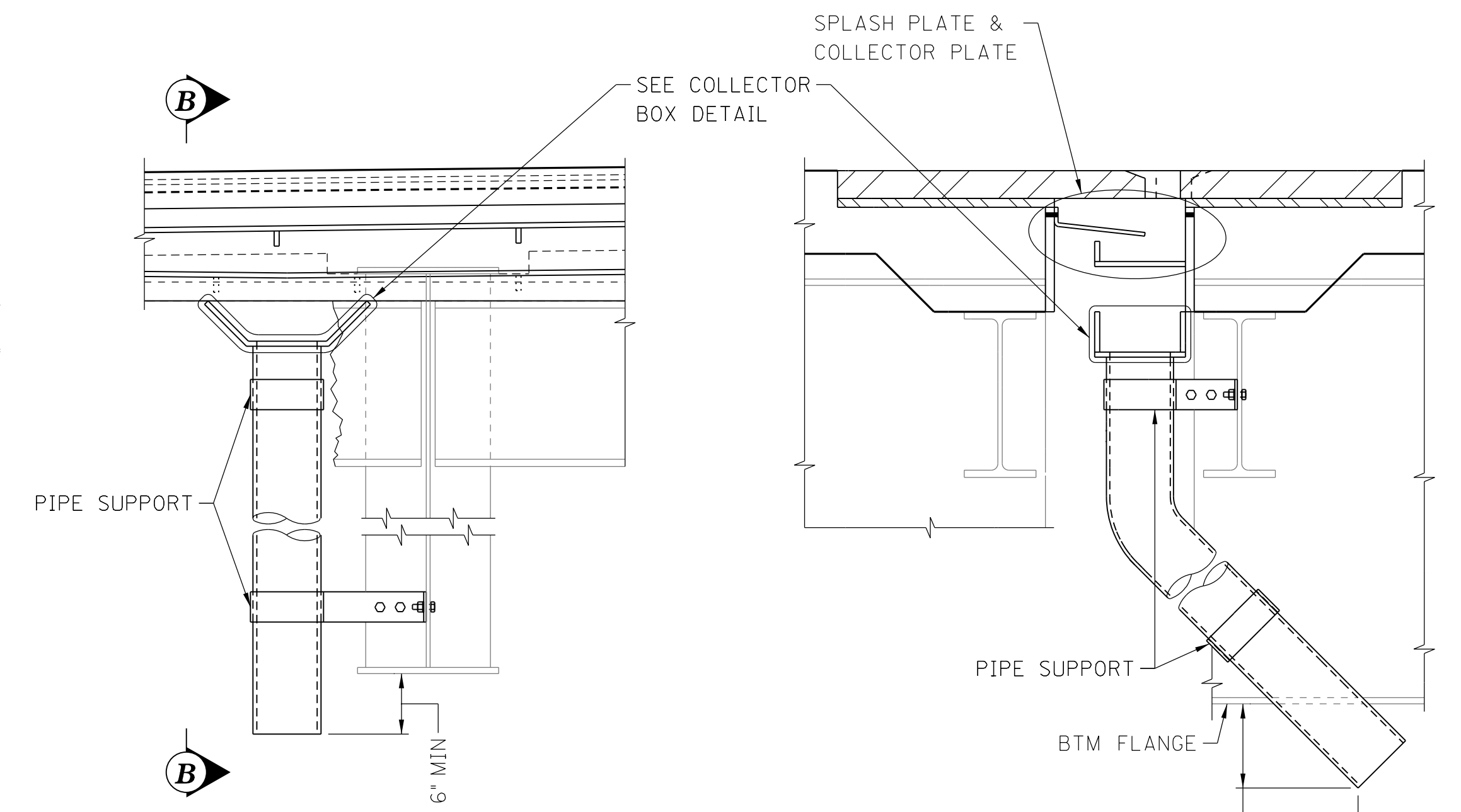
KYTC DRAWING NO. 27600

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PHASE 1 CONSTRUCTION PHASE 2 CONSTRUCTION

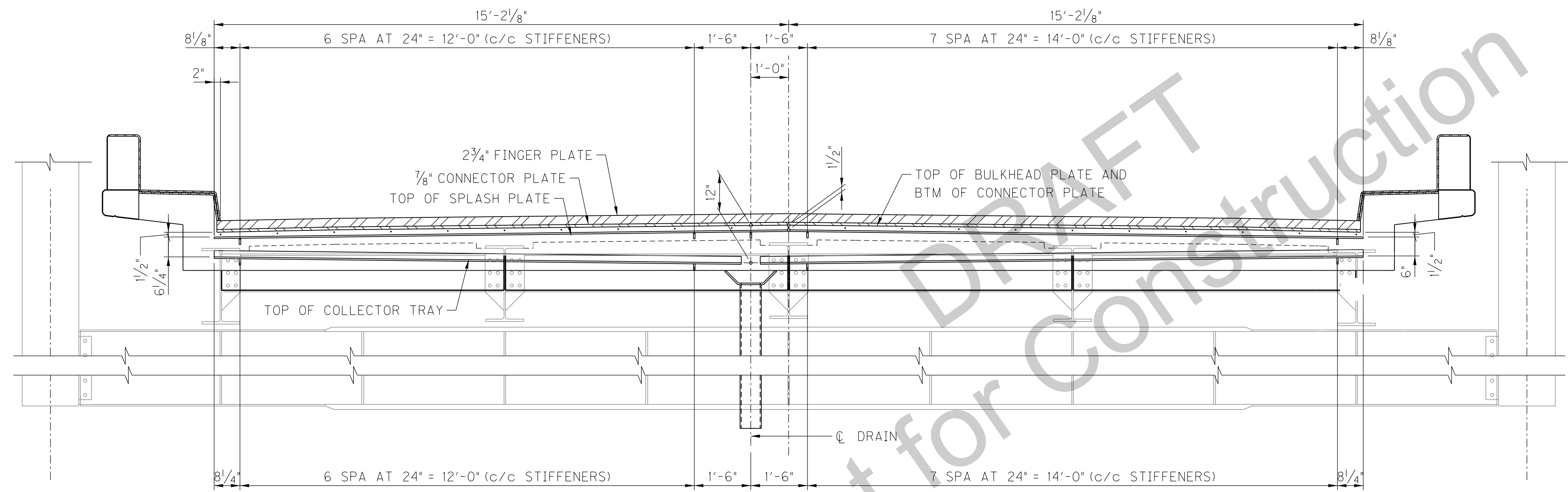
TYPICAL SECTION AT APPROACH JOINT



ELEVATION

SECTION B-B

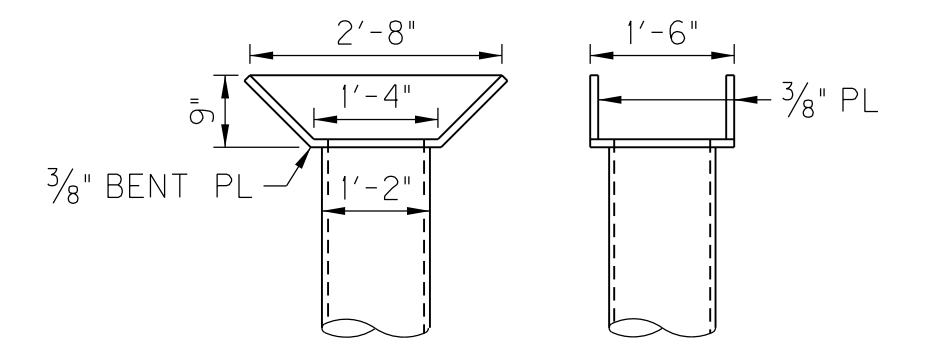
FINGER JOINT DRAIN ELEVATION & SECTION



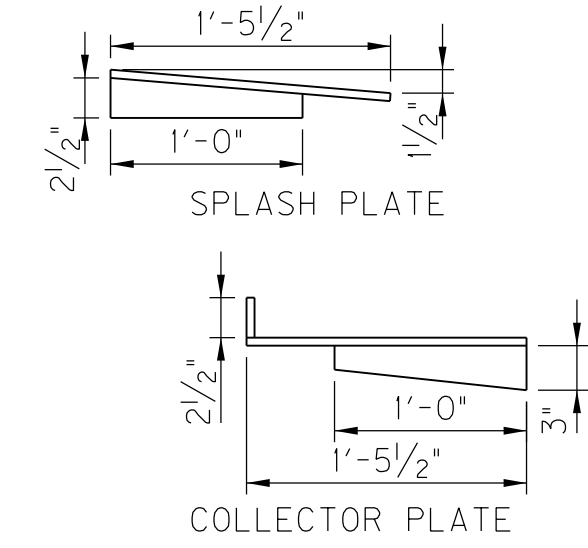
PHASE 1 CONSTRUCTION PHASE 2 CONSTRUCTION

TYPICAL SECTION AT TRUSS JOINT

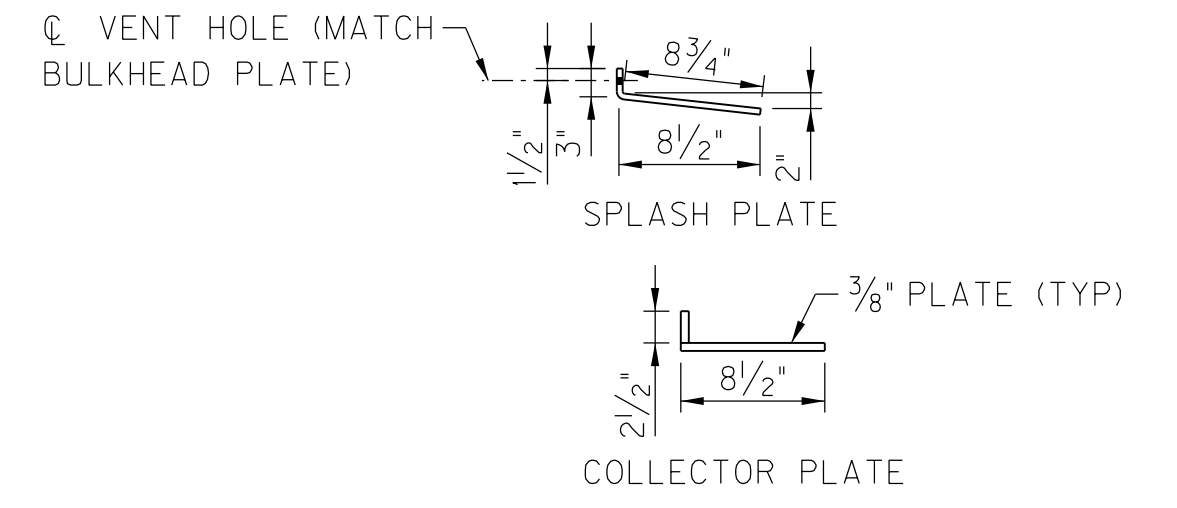
NOTE:
WHEN EXP JOINT IS NOT OVER
PIER, A STRAIGHT DRAIN PIPE
WITH NO ELBOW SHOULD BE
USED.



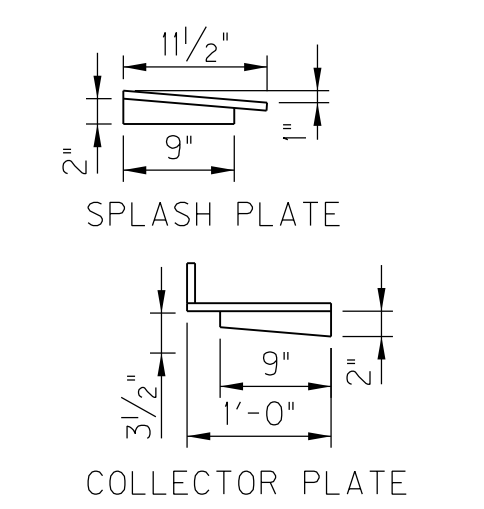
COLLECTOR BOX ELEVATION & SECTION



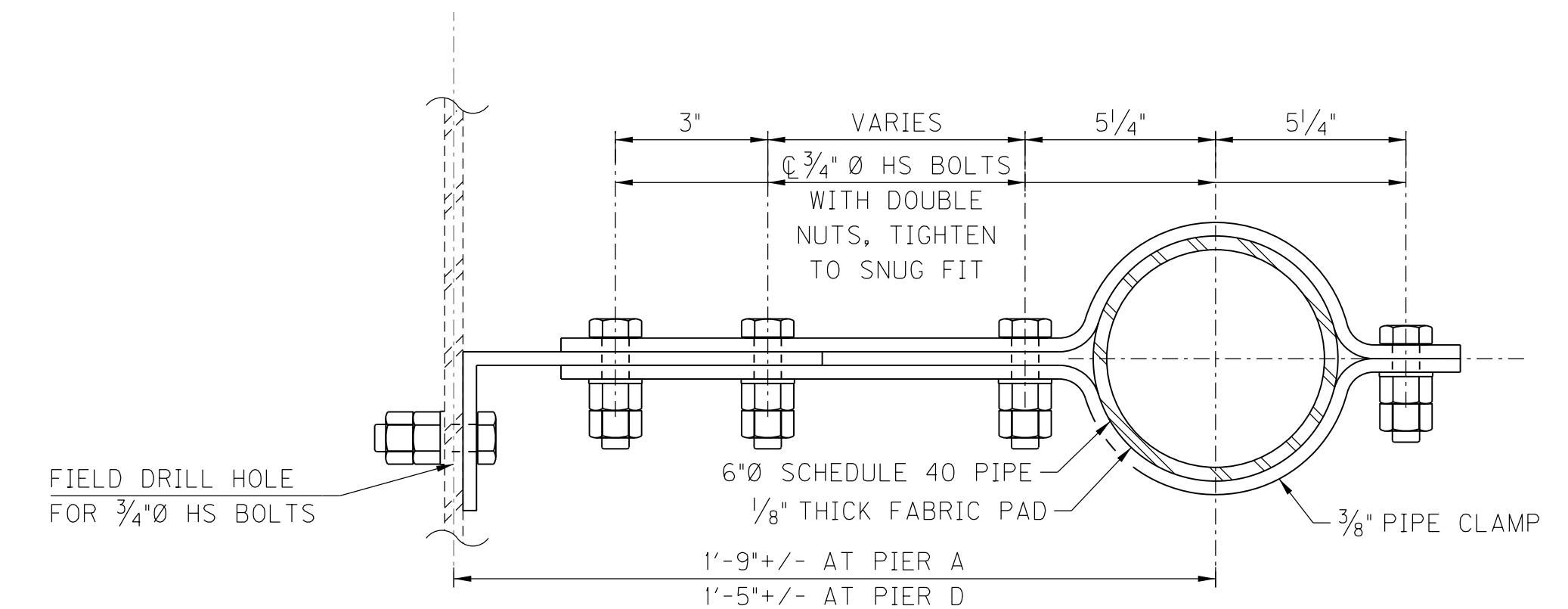
TROUGH AT LSO'



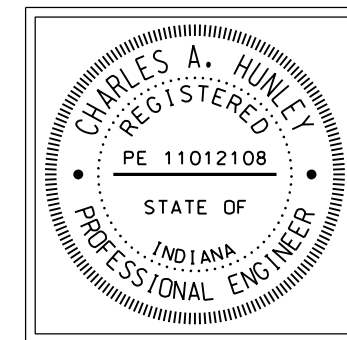
TROUGH AT PIER E, S-3, S-7, S-11, S-15, & N-5



TROUGH AT PIER E



PIPE SUPPORT SECTION



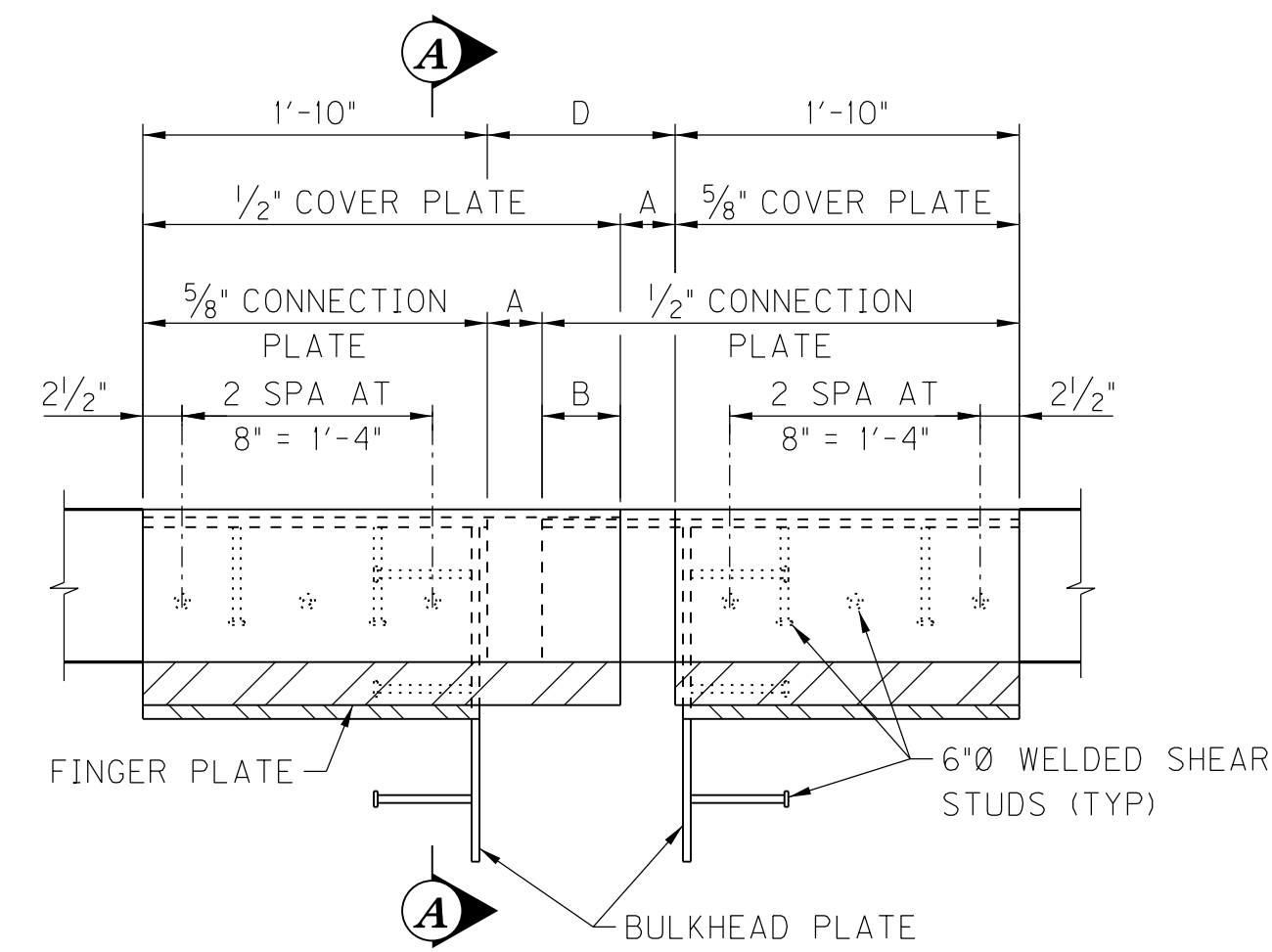
RECOMMENDED FOR APPROVAL:	<i>Tony Hulley</i> DESIGN ENGINEER	11/04/2016 DATE
DESIGNED:	M. LAWLER	DRAWN: S. PARSONS
CHECKED:	R. CATRON	CHECKED: M. LAWLER

INDIANA
DEPARTMENT OF TRANSPORTATION
HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
FINGER EXPANSION JOINT

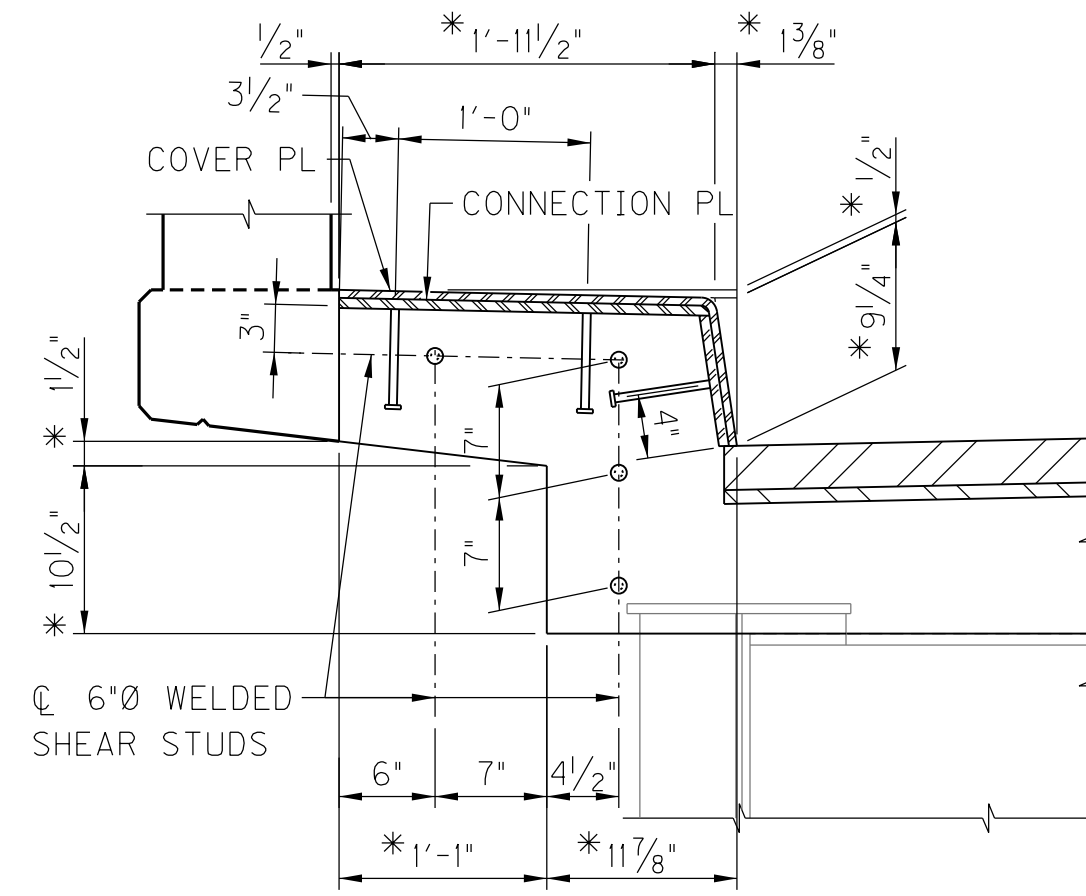
SCALE		BRIDGE FILE	
NTS		041-93-5000SBL	
		DESIGNATION	
		1298275	
DRAWING		SHEET	
00	OF 00	S17	OF S21
CONTRACT		PROJECT	
B-33539		1298275	

KYTC DRAWING NO. 27600

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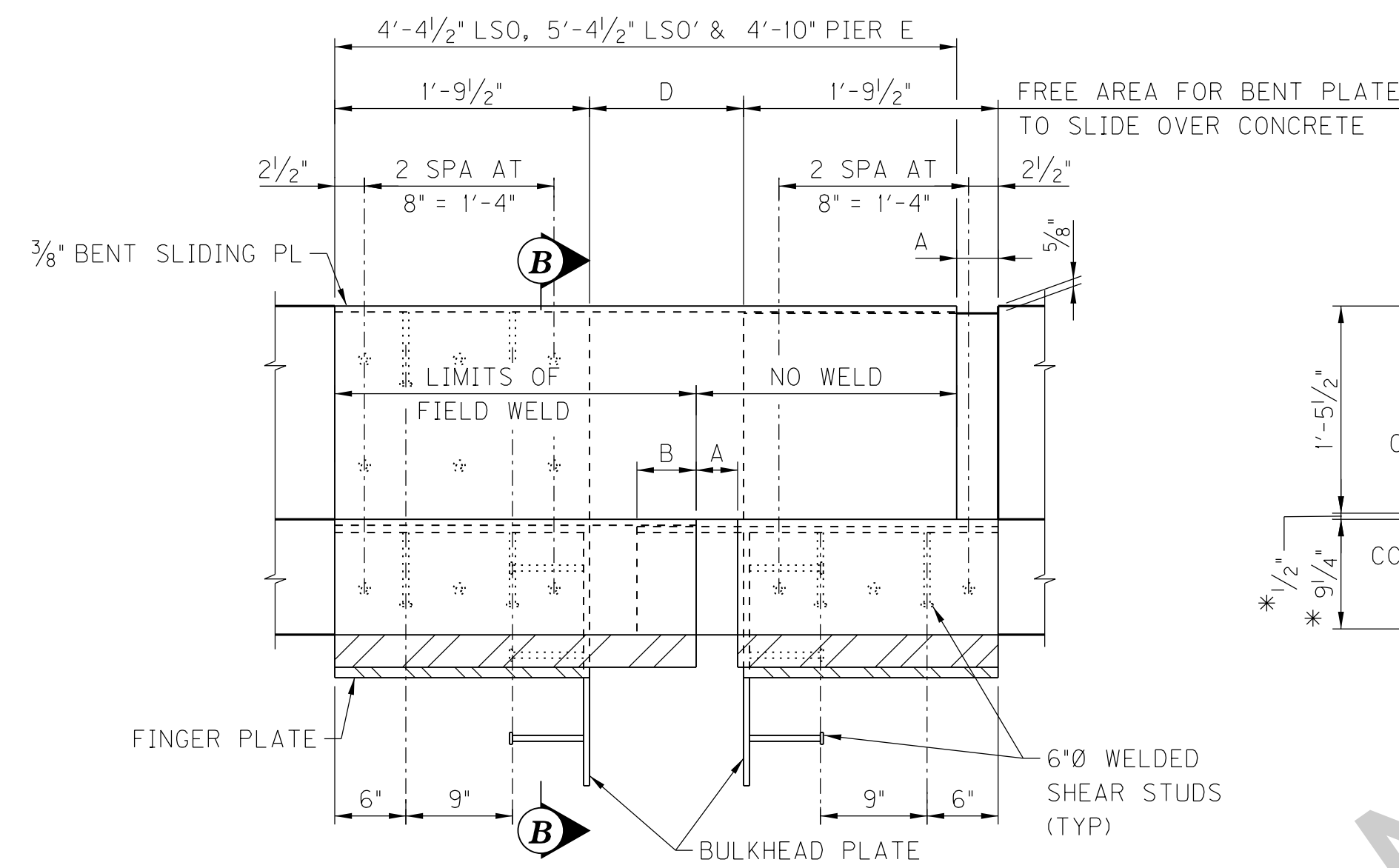


ELEVATION - PLATING FOR CURB
 (TYPICAL AT PIERS S-15, S-11, S-7, S-3 & N-5)

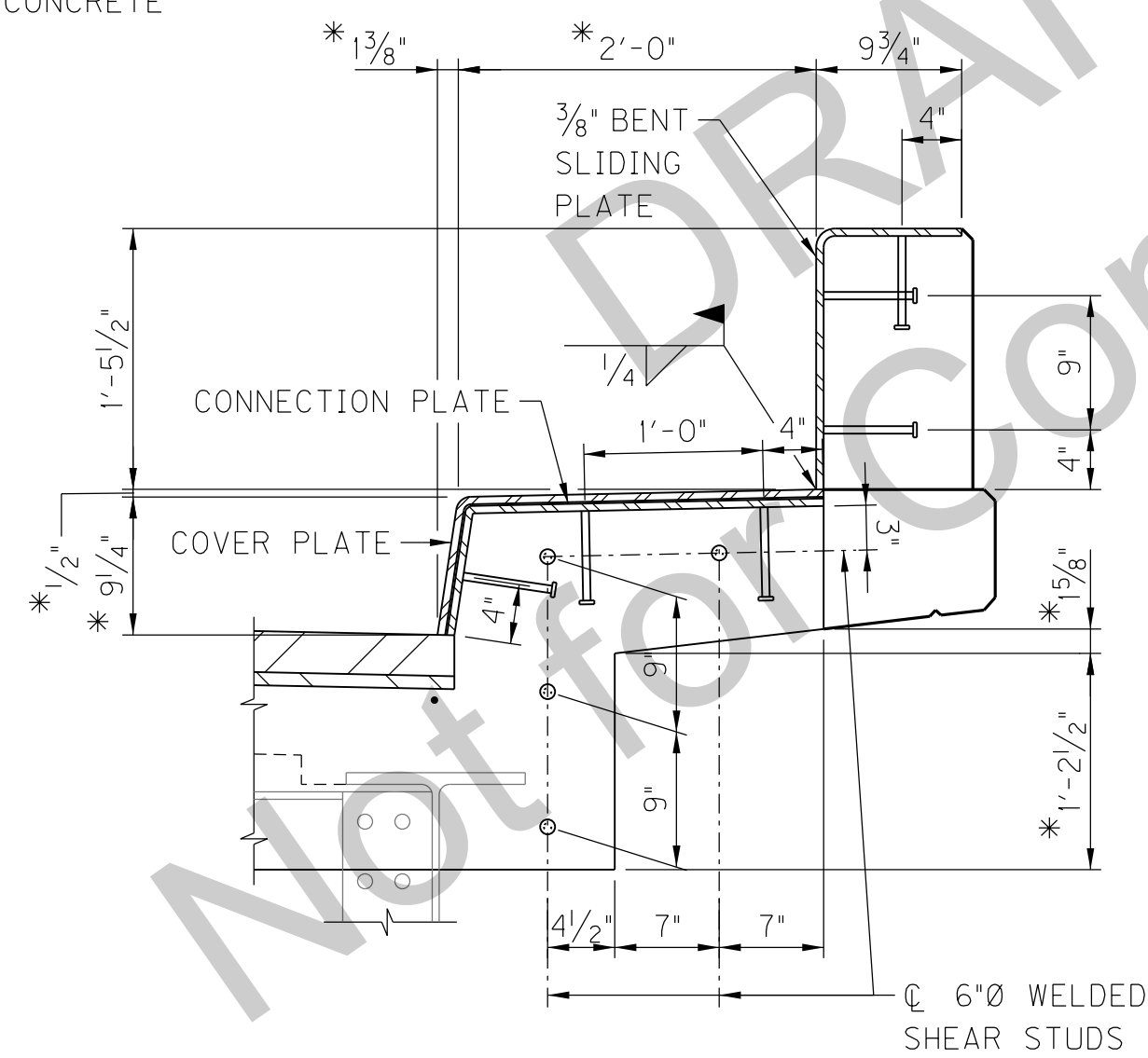


SECTION A-A
 *FIELD VERIFY TO MATCH EXISTING DECK / CURB

NOTE:
 FOR DIMENSIONS A THRU D,
 SEE FINGER JOINT DIMENSIONS,
 SHEET S15.

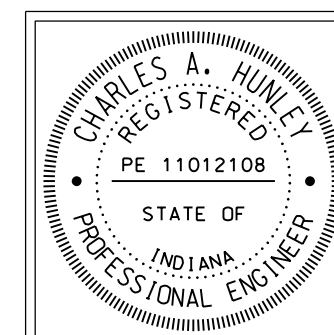


ELEVATION - PLATING FOR CURB & PLINTH
 (TYPICAL AT LSO, LSO' & PIER E)



SECTION B-B

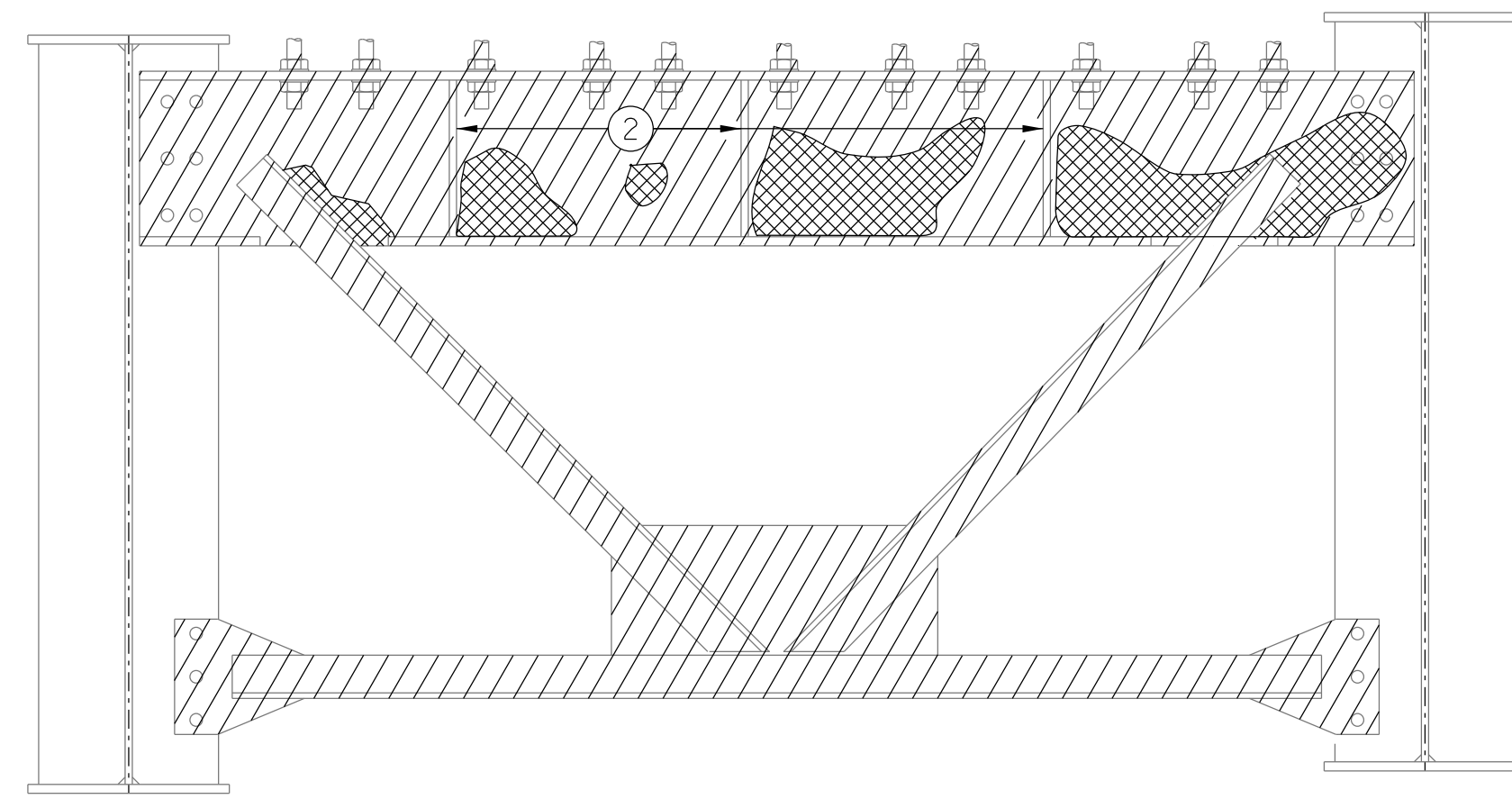
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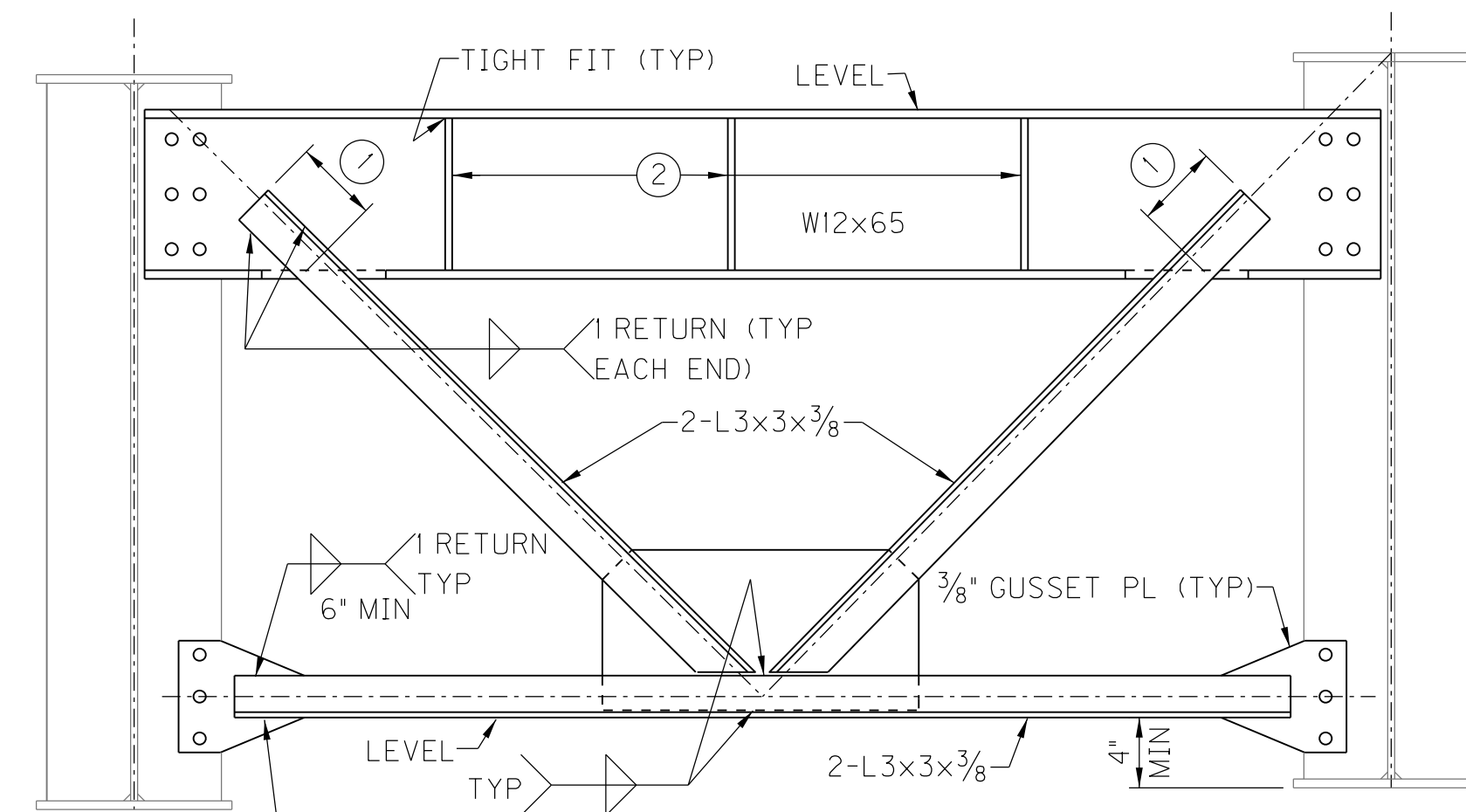
RECOMMENDED FOR APPROVAL:	<i>Tony Hawley</i>	DESIGN ENGINEER	11/04/2016	DATE
DESIGNED:	M. LAWLER	DRAWN:	S. PARSONS	
CHECKED:	R. CATRON	CHECKED:	M. LAWLER	

INDIANA
 DEPARTMENT OF TRANSPORTATION
 HENDERSON COUNTY, KENTUCKY
 US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
 FINGER JOINT REMOVAL

SCALE	BRIDGE FILE
NTS	041-93-5000SBL
	DESIGNATION
	1298275
DRAWING	SHEET
00 OF 00	S18 OF S21
CONTRACT	PROJECT
B-33539	1298275



SHOWING LIMITS OF CORROSION & STRUCTURAL STEEL DIAPHRAGM REMOVAL



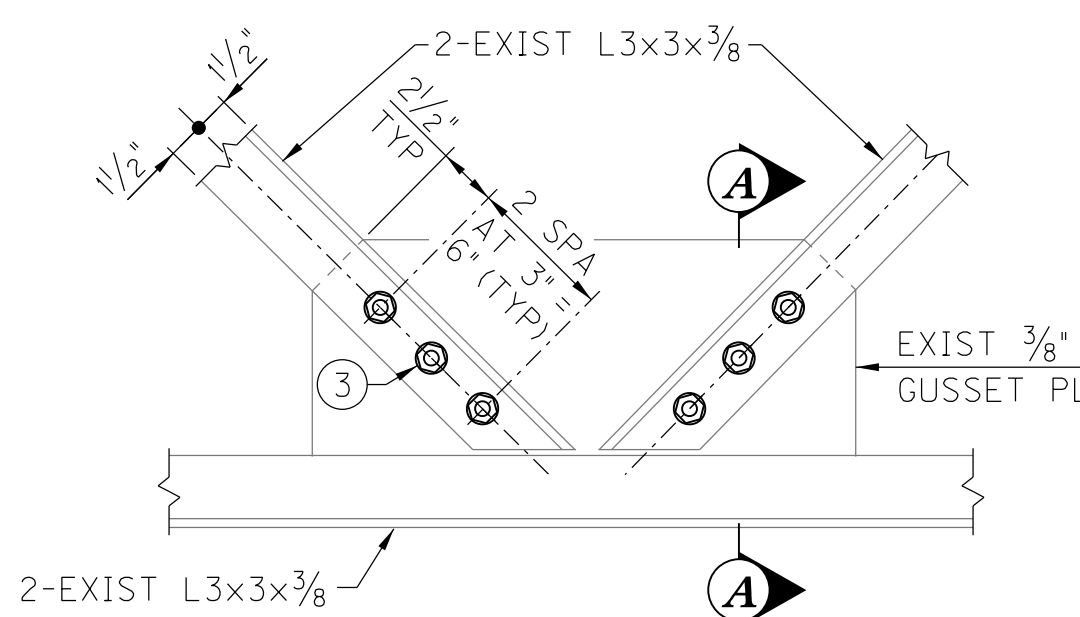
SHOWING REPLACEMENT OF STRUCTURAL STEEL DIAPHRAGM

REMOVAL AND REPLACEMENT OF DIAPHRAGM

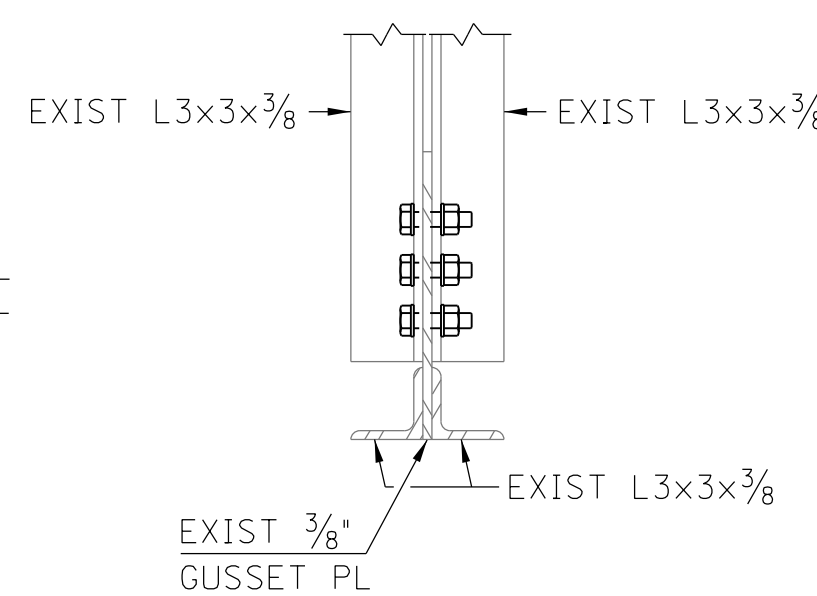
AT ABUT S-20: REPLACE ALL (4) DIAPHRAGMS
AT PIER S-15: REPLACE BAY 1 (SPAN 15S) DIAPHRAGM

LEGEND

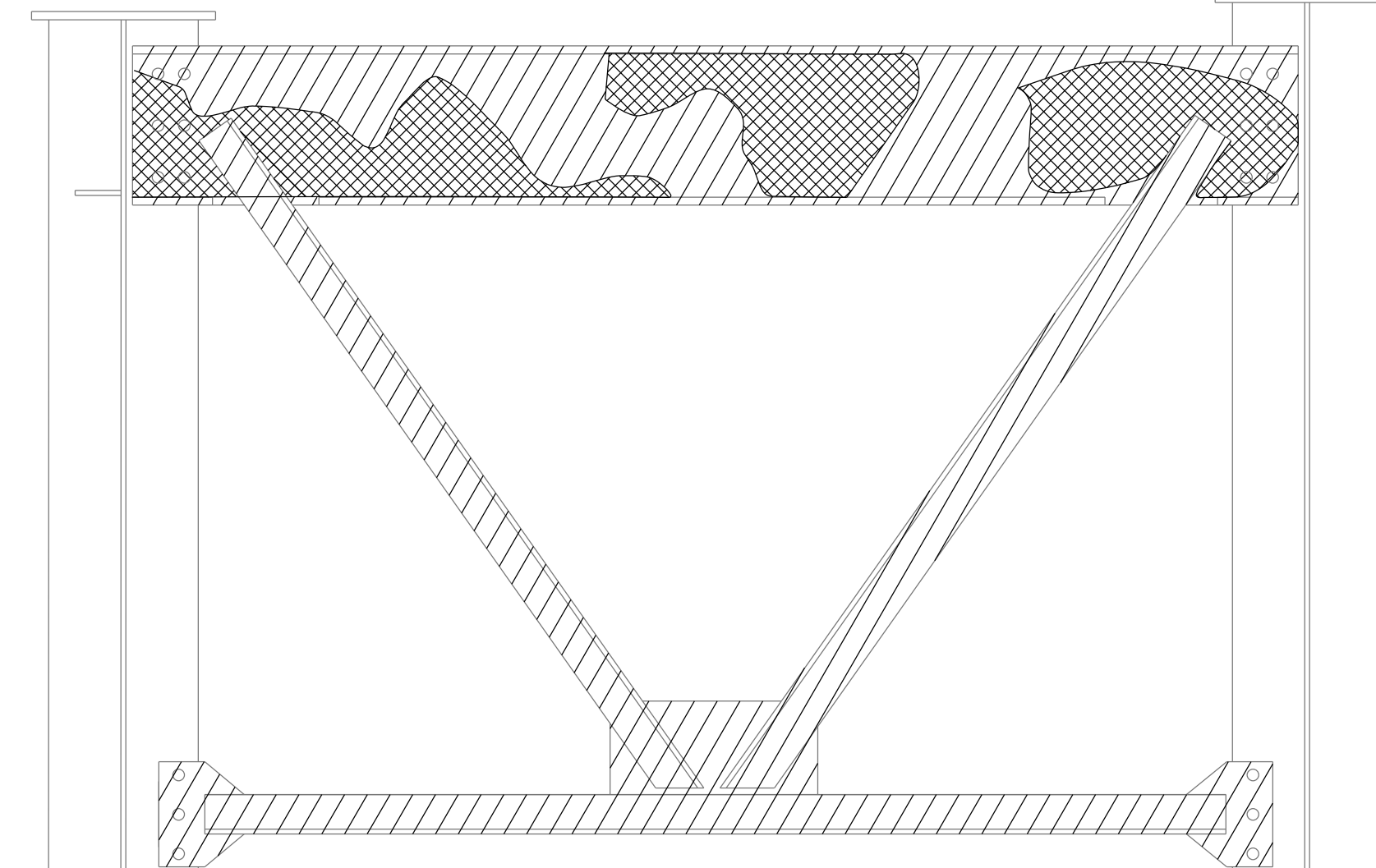
- INDICATES LIMITS OF SEVERE CORROSION
- INDICATES STRUCTURAL STEEL TO BE REMOVED AND REPLACED



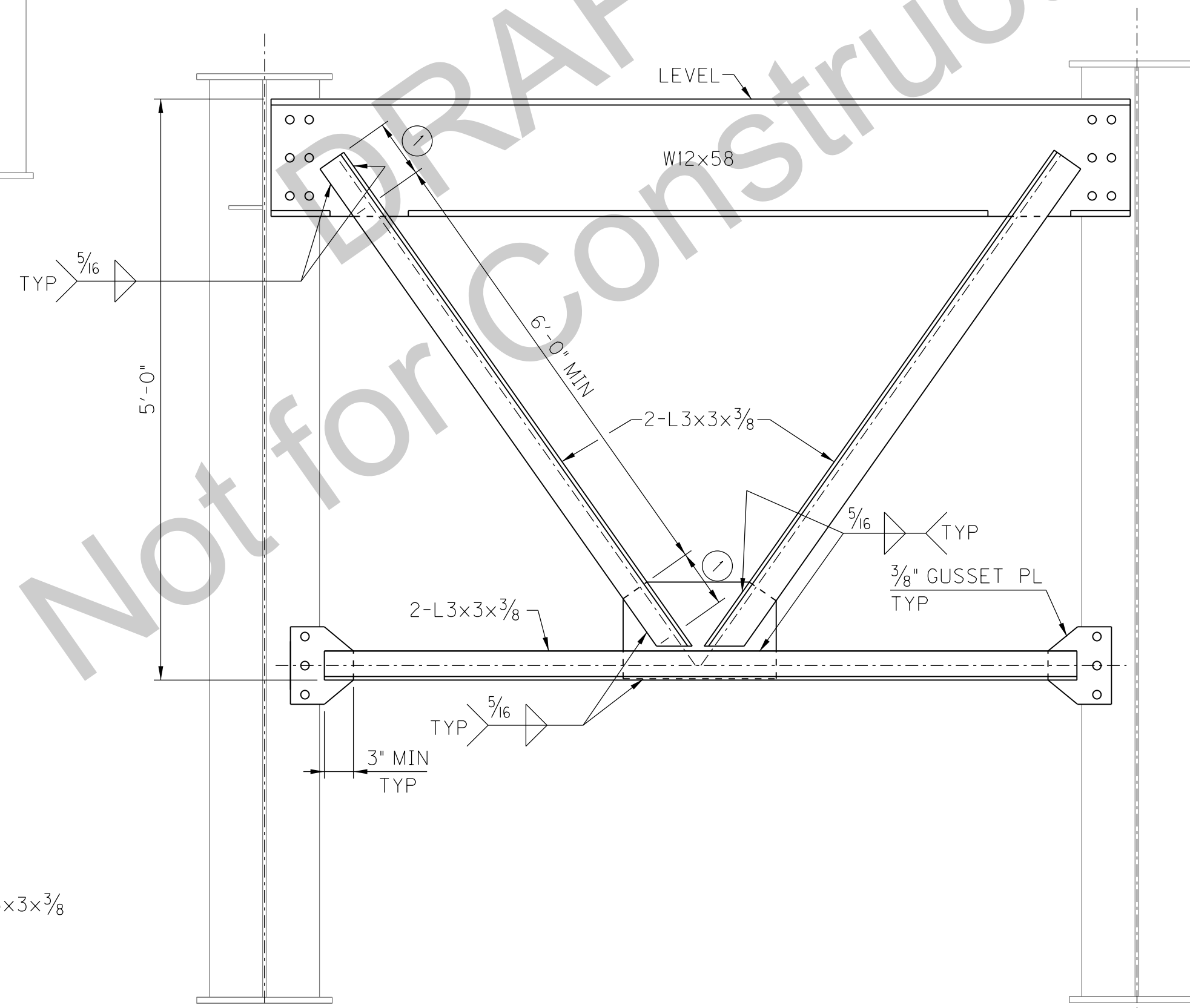
**GUSSET PLATE BOLT CONNECTION
AT PIER S-7 (SPAN 7S, BAYS 3 & 4)**



SECTION A-A



SHOWING LIMITS OF CORROSION & STRUCTURAL STEEL DIAPHRAGM REMOVAL

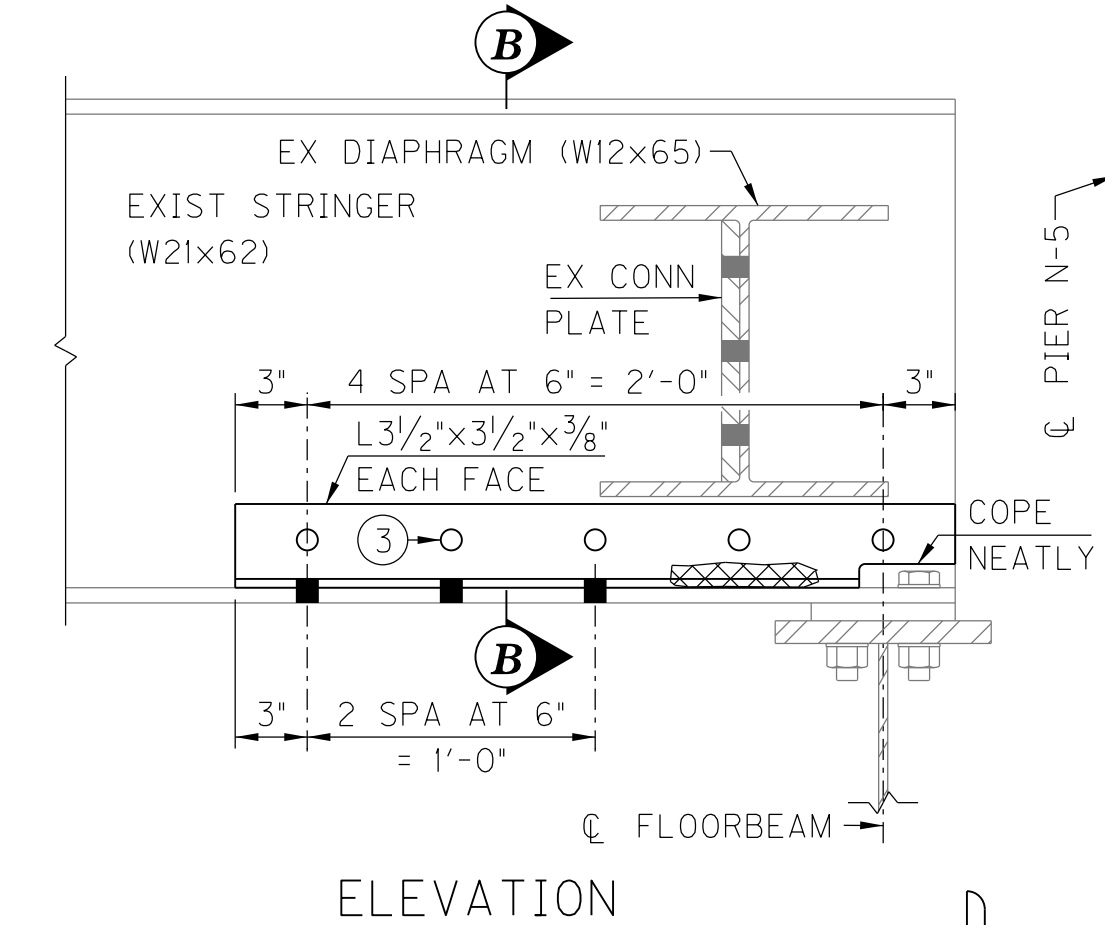


SHOWING REPLACEMENT OF STRUCTURAL STEEL DIAPHRAGM

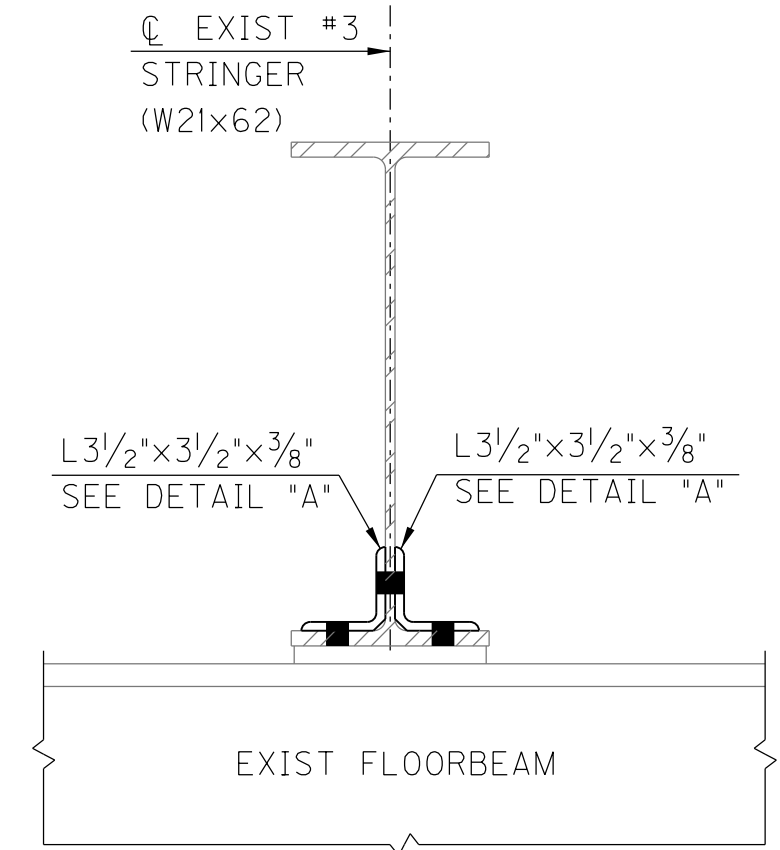
REMOVAL AND REPLACEMENT OF DIAPHRAGM AT PIER N-8

AT PIER N-8: REPLACE ALL (4) DIAPHRAGMS

NOTE:
CONTRACTOR SHALL HAVE THE OPTION
TO REMOVE & REPLACE DIAPHRAGM (W12x65)
TO ACCESS WORK AREA EASILY.



ELEVATION



SECTION B-B

GRIND ANGLE (FULL LENGTH) TO FIT TIGHT AGAINST EXIST STRINGER

DETAIL "A"

STRINGER REPAIR AT PIER N-5

NOTATIONS:

- ① 6" MIN
- ② 5"x3/8" PL STIFFENERS. CONTRACTOR SHALL FIELD VERIFY THE NUMBER OF EXISTING STIFFENERS AND REPLICATE THE SAME AMOUNT IN THE REPLACEMENT DIAPHRAGM PRIOR TO PLACING ORDER WITH FABRICATION SHOP.
- ③ BOLT HOLES SHALL BE 1/16" Ø. USE 5/8" Ø H.S. HEX BOLTS W/NUTS AND WASHERS (TYP)

NOTE:
CONTRACTOR SHALL ENSURE THE PROPER FIT BETWEEN THE NEW STEEL COMPONENTS AND THE ORIGINAL IN-SITU BRIDGE MEMBERS.

KYTC DRAWING NO. 27600

	RECOMMENDED FOR APPROVAL: <u>Tony Hunley</u> DESIGN ENGINEER	11/04/2016 DATE
	DESIGNED: M. LAWLER	DRAWN: R. YOUNG
	CHECKED: R. YOUNG	CHECKED: M. LAWLER

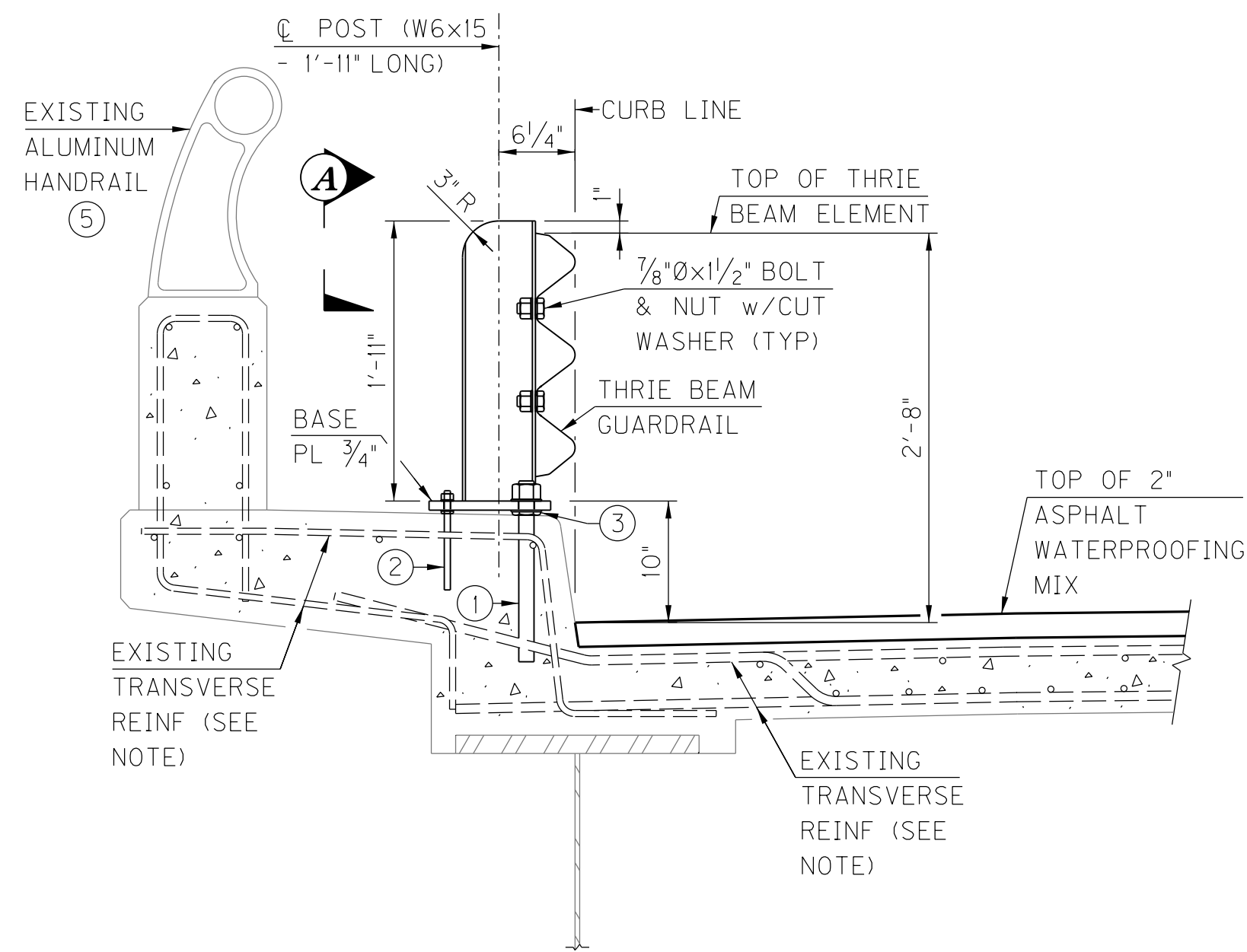
INDIANA
DEPARTMENT OF TRANSPORTATION

HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
STEEL DIAPHRAGM REPAIR

SCALE NTS	BRIDGE FILE 041-93-5000SBL DESIGNATION 1298275
DRAWING 00 OF 00	SHEET S19 OF S21
CONTRACT B-33539	PROJECT 1298275

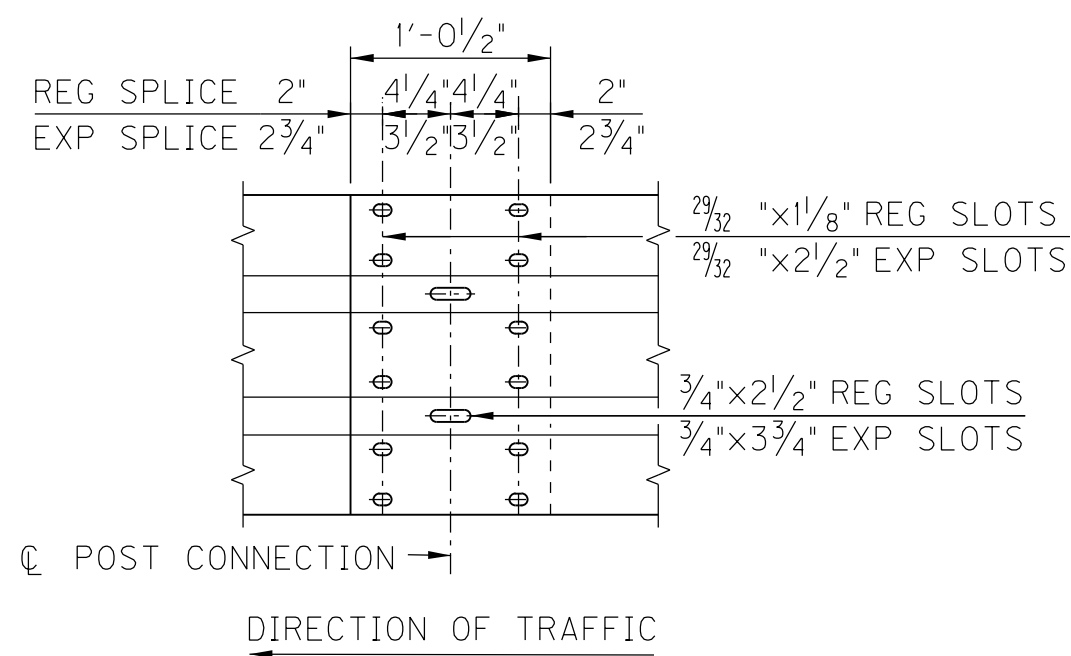
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I:\1785\active\178566011\structural\Henderson_SB_Bridge\drawing\IN_S20_Thrie_Beam_Rail & Curb_Repair.dgn Foy_Sheila_Plot:11/3/2016 2:03 PM Save:11/3/2016 2:03 PM



TYPICAL STEEL POST ANCHORAGE

NOTE: CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN DRILLING HOLES FOR ANCHOR BOLTS AT POSTS, AS NOT TO CUT EXIST TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.



BEAM MEMBER SPLICE

5/8" DIA. BUTTON HEAD OVAL SHOULDER BOLTS WITH HEX NUTS AT ALL SLOTS.

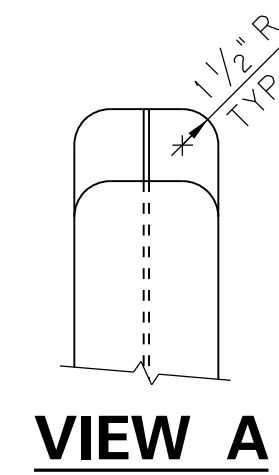
NOTES

MATERIAL SPECIFICATIONS
 STEEL SHAPES & PLATES ASTM A 36 OR ASTM A 992
 BOLTS, NUTS & WASHERS, ASTM A 307 AND STD SPEC SEC 9-16.3(4)
 UNLESS OTHERWISE NOTED RESIN BONDED ANCHORS (ALL THREAD) ASTM A 193 GRADE4 B7 OR ASTM A 449

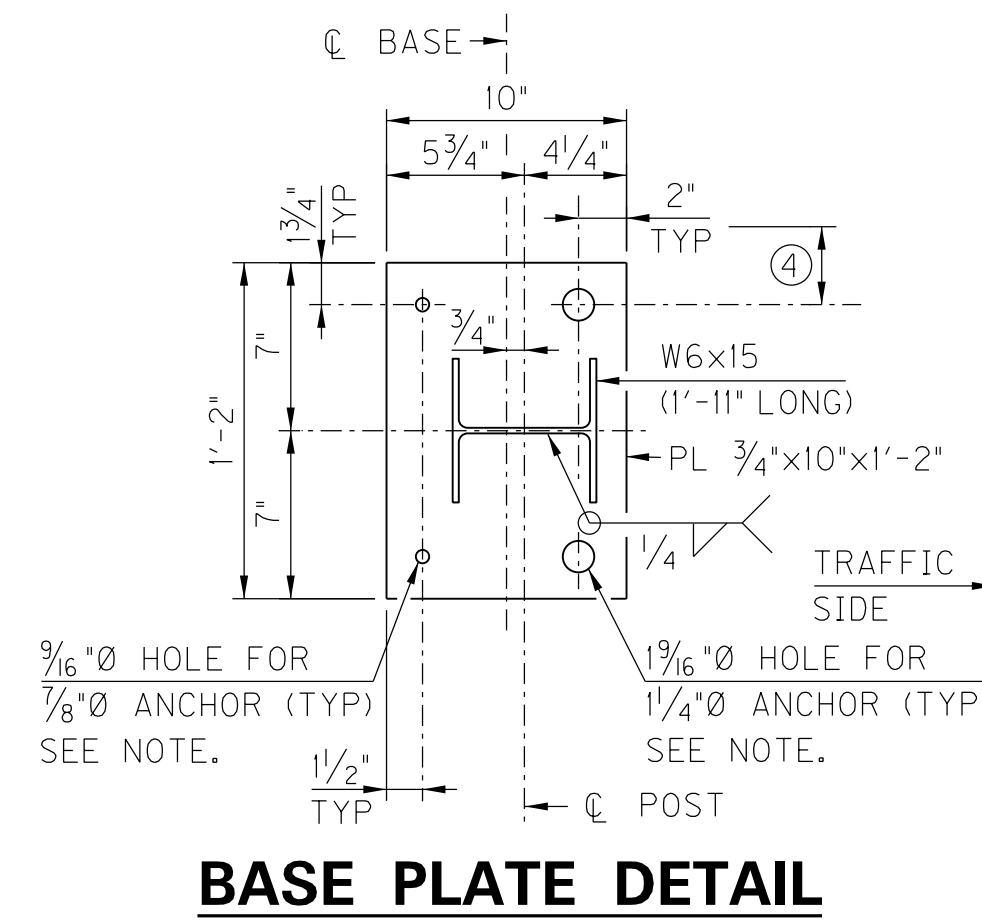
ALL STEEL POSTS AND PLATES SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M III AFTER FABRICATION. BOLTS AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232.

ALL BOLT HOLES SHALL BE 1/16" LARGER THAN THE BOLT DIAMETER UNLESS OTHERWISE SPECIFIED. USE TEMPLATE TO LOCATE HOLES IN CONCRETE. BOLT LENGTHS NOT SHOWN SHALL BE SIZED TO PROVIDE A 1/4" MIN OF THREAD EXPOSED BEYOND NUT.

THE DIMENSIONS SHOWN IN THE PLANS ARE BASED ON ORIGINAL CONSTRUCTION RECORDS. THESE DIMENSIONS SHALL BE MEASURED IN THE FIELD BY THE CONTRACTOR PRIOR TO FABRICATION OF ANY COMPONENTS.



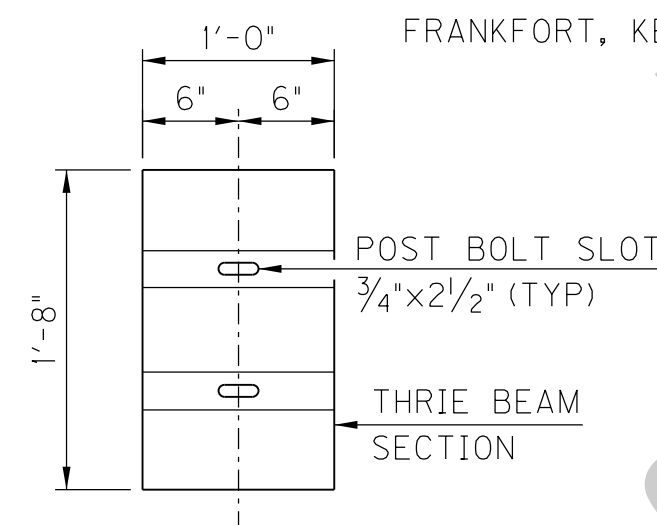
VIEW A



BASE PLATE DETAIL

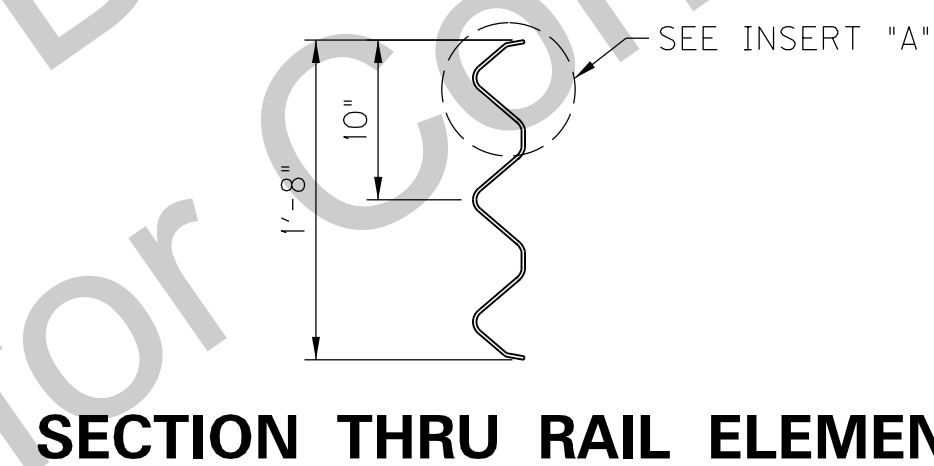
NOTATIONS:

- ① FIELD DRILL FOR 2 - 1/4"Ø RESIN BONDED ANCHORS WITH HARDENED WASHERS (EMBEDMENT AND HOLE SIZE PER MANUFACTURER'S RECOMMENDATION, 1'-0" MIN)
- ② FIELD DRILL FOR 2 - 1/2"Ø RESIN BONDED ANCHORS WITH HARDENED WASHERS (EMBEDMENT AND HOLE SIZE PER MANUFACTURER'S RECOMMENDATIONS, 6/4" MIN)
- ③ HEAVY HEX LEVELING NUT AND HARDENED WASHERS
- ④ 3 3/4" CL MIN EDGE OF JOINT IN CURB (TYP). ADJUST POST SPACING WITHIN SPECIFIED TOLERANCE TO MAINTAIN CLEARANCE TO CURB JOINT.
- ⑤ REMOVE EXISTING ALUMINUM RAIL. DELIVER RAIL & COMPONENTS TO THE KYTC MAINTENANCE FACILITY LOCATED ON WILKINSON BLVD, FRANKFORT, KENTUCKY.

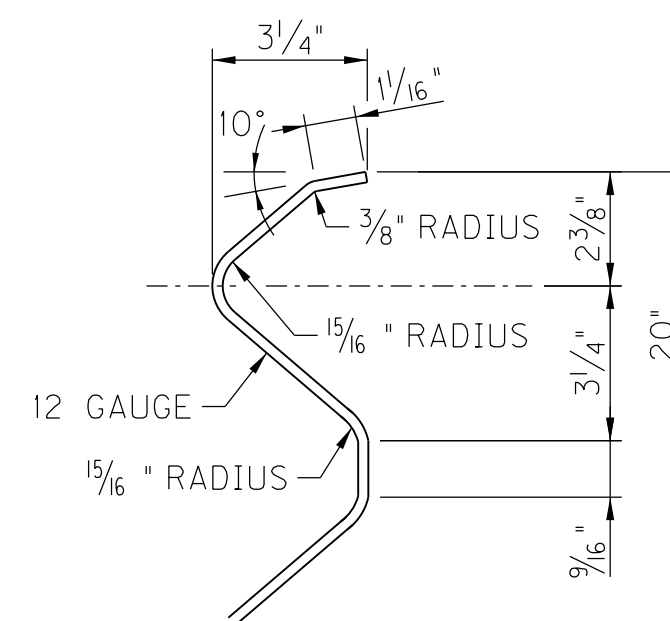


BACKUP PLATE

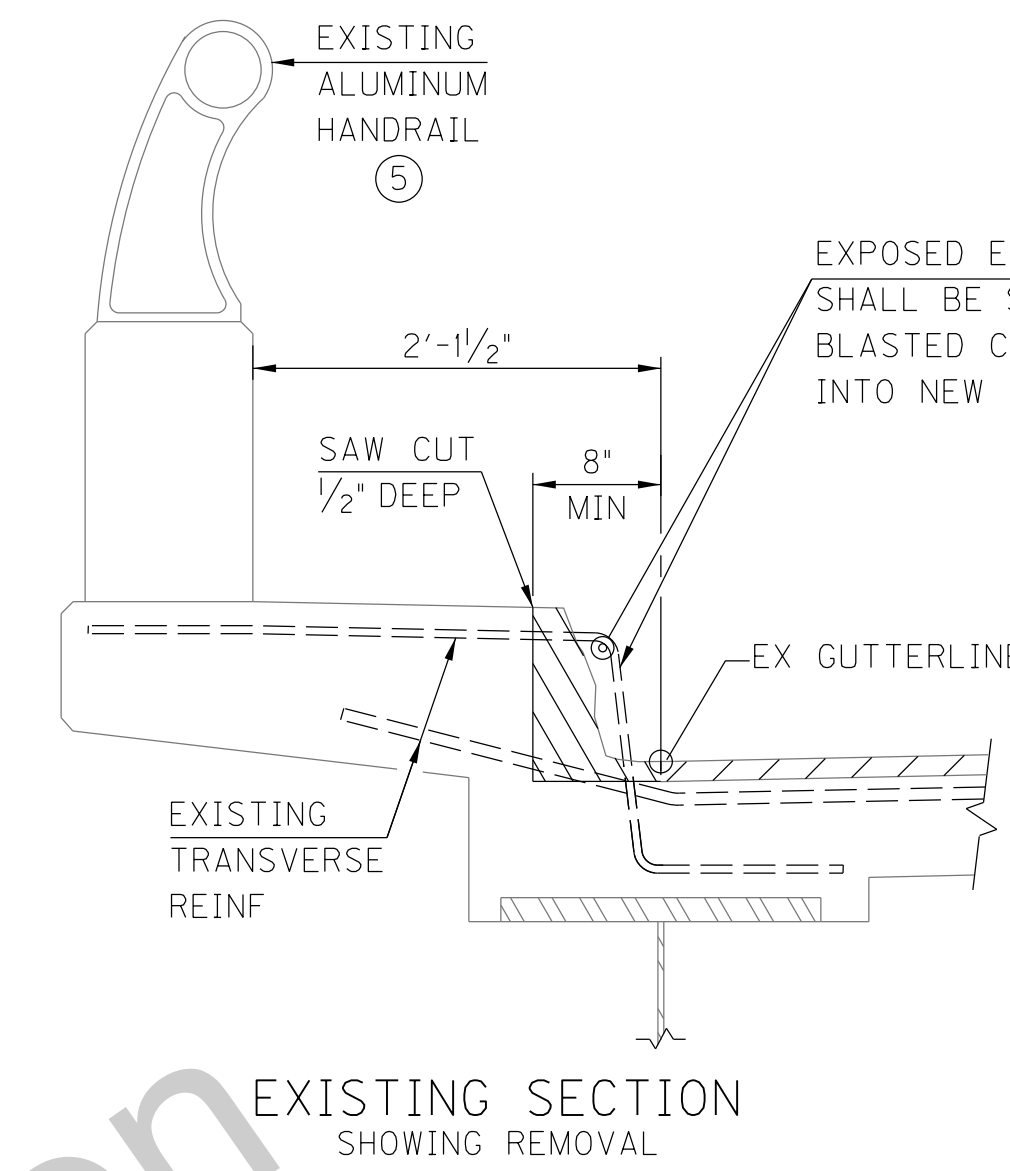
BACKUP PLATE REQUIRED AT POST WHERE NO THRIE BEAM GUARDRAIL SPLICE OCCURS.



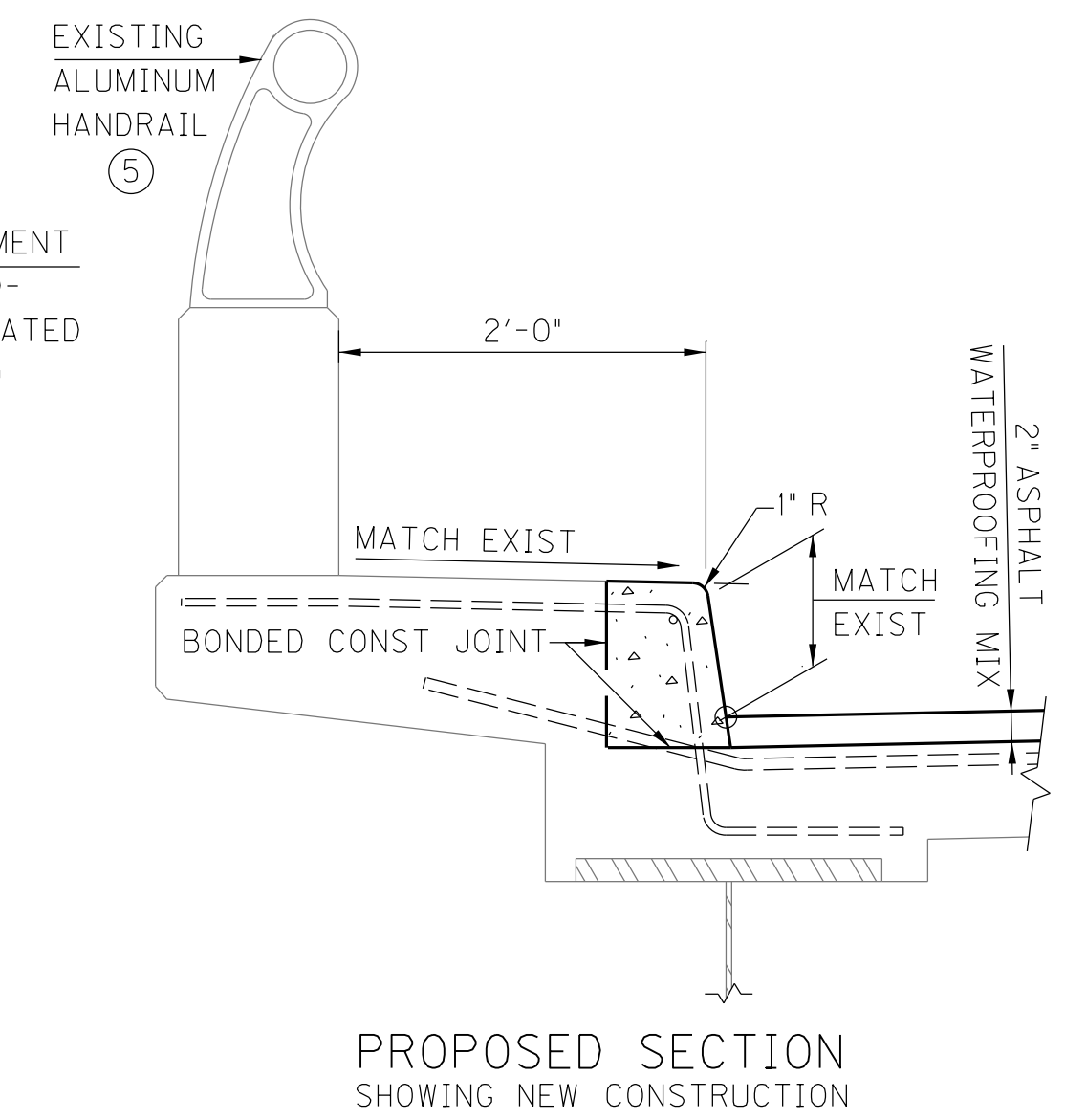
SECTION THRU RAIL ELEMENT



INSERT "A"



EXISTING SECTION SHOWING REMOVAL



PROPOSED SECTION SHOWING NEW CONSTRUCTION

CONCRETE CURB REPAIR

LEGEND

INDICATES AREA OF EXISTING CONCRETE TO BE REMOVED

NOTES:

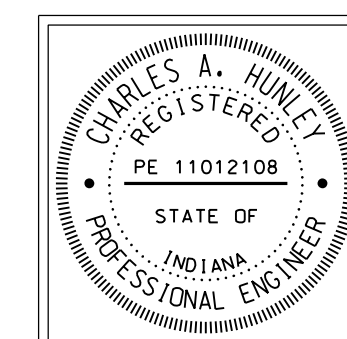
CONCRETE REMOVAL -
 CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN REMOVING EXIST CONCRETE FOR CURB REPAIR, AS NOT TO CUT EXIST TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.

CONTRACTOR SHALL REMOVE EXISTING CONCRETE 1'-6" Laterally BEYOND DAMAGED OR CRACKED CURB INTO SOUND CONCRETE ON EACH SIDE OF REPAIR AREA, WITH APPROVAL OF RESIDENT ENGINEER.

REMOVE HATCHED AREAS OF CONCRETE AND SAND-BLAST CLEAN, STRAIGHTEN, & REUSE EXISTING REINFORCEMENT. THE CONTRACTOR HAS THE OPTION TO REPLACE EXISTING TRANSVERSE REINFORCEMENT.

BONDING NEW CONCRETE TO EXISTING CONCRETE -
 WHERE REPAIR TO CONCRETE IS REQUIRED, NEW CONCRETE SHALL BE BONDED TO EXISTING CONCRETE WITH A TWO-COMPONENT EPOXY RESIN SYSTEM. ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.

KYTC DRAWING NO. 27600



RECOMMENDED FOR APPROVAL: *Tony Hawley* DESIGN ENGINEER 11/04/2016 DATE

DESIGNED: M. LAWLER DRAWN: R. YOUNG

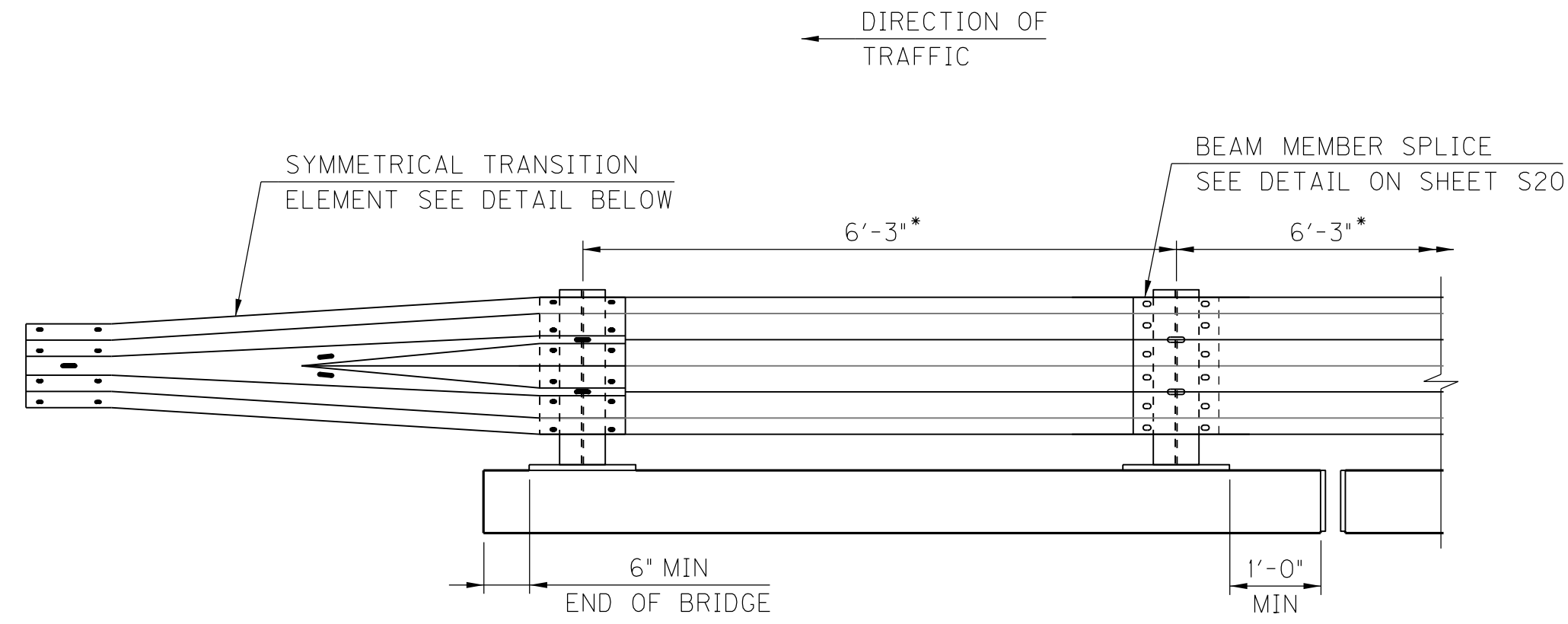
CHECKED: R. YOUNG CHECKED: M. LAWLER

INDIANA DEPARTMENT OF TRANSPORTATION

HENDERSON COUNTY, KENTUCKY
 US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
 THRIE BEAM RAIL AND CURB REPAIR

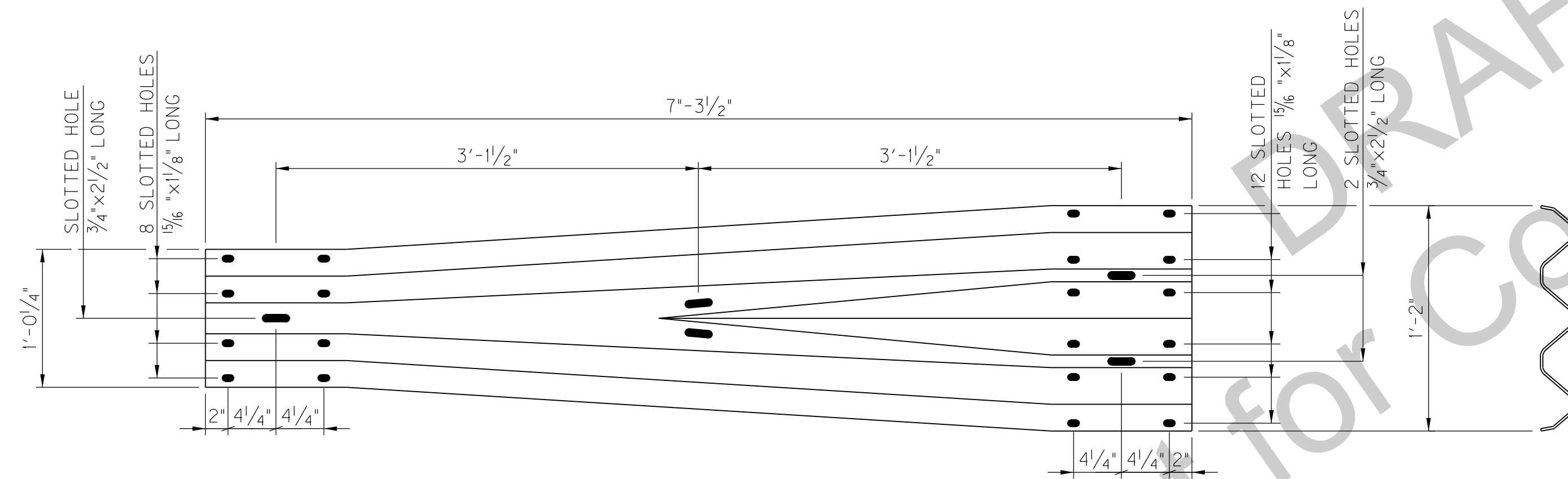
SCALE NTS	BRIDGE FILE 041-93-5000SBL DESIGNATION 1298275
DRAWING 00 OF 00	SHEET S20 OF S21
CONTRACT B-33539	PROJECT 1298275

I:\1785\active\178566011\structural\Henderson_SB_Bridge\drawing\IN_S21_Thrie_Beam_Post_Layout.dgn Foy_Sheila Plot:11/3/2016 2:04 PM Save:11/3/2016 2:04 PM



THRIE BEAM EXPANSION AT JOINTS LESS THAN 2"

• SINCE THE LENGTH OF RAILING REQUIRED WILL NOT BE DIVISIBLE BY 6'-3", ODD PANEL LENGTHS SHALL BE PROVIDED NEAR THE CENTER OF UNIT (BETWEEN BRIDGE JOINTS). THE PANEL LENGTHS MAY VARY FROM TYPICAL BY PLUS ONE FOOT OR MINUS TWO FEET MAXIMUM.



ELEVATION - SYMMETRICAL TRANSITION ELEMENT

NOTES:

ALL BOLTS, NUTS, WASHERS, PLATES AND STRUCTURAL TUBING ARE CONSIDERED AS PARTS OF THE THRIE BEAM RAIL FOR PAYMENT.

ALL STEEL CONNECTING BOLTS AND FASTENERS FOR POSTS AND RAILING, AND ALL ANCHOR BOLTS, NUTS, WASHERS AND PLATES SHALL BE GALVANIZED AFTER FABRICATION.

AT THE EXPANSION SLOTS IN THE THRIE BEAM RAILS TIGHTEN BOLTS, BACK OFF ONE-HALF TURN AND BURR THREADS.

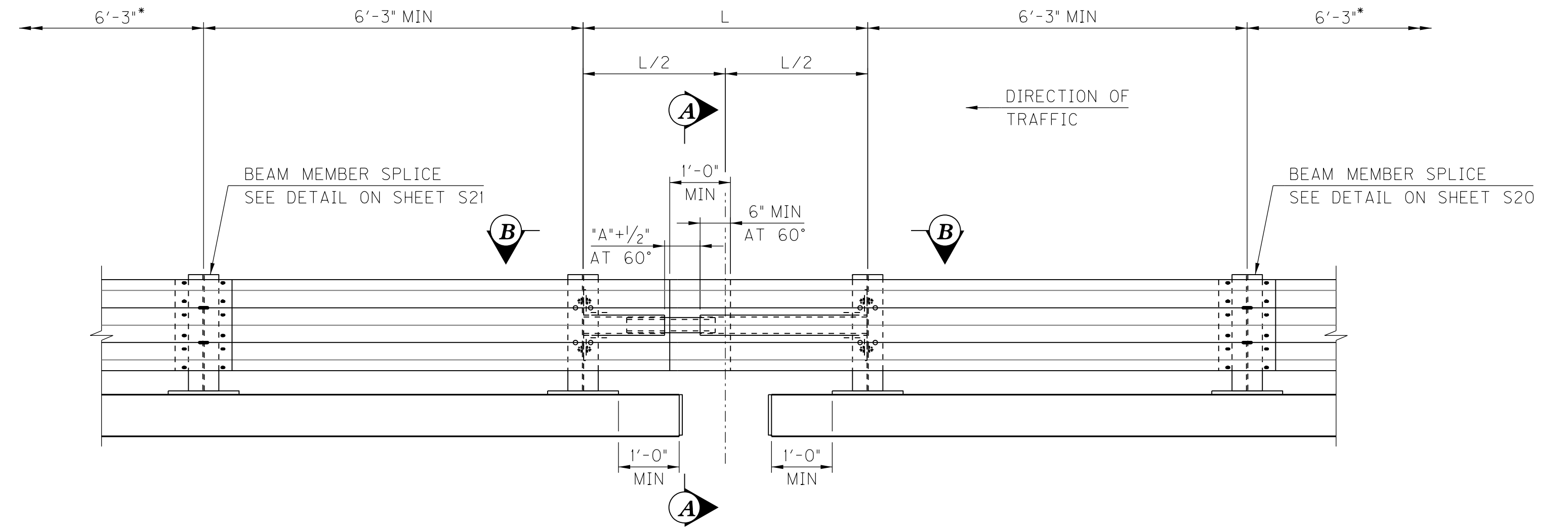
MINIMUM LENGTH OF THRIE BEAM SECTIONS IS EQUAL TO ONE POST SPACE.

USE 5/8" Ø BUTTON-HEAD, OVAL SHOULDER BOLTS WITH HEX NUTS AT ALL SLOTS. (THICKNESS OF HEX NUTS=3/8" MIN)

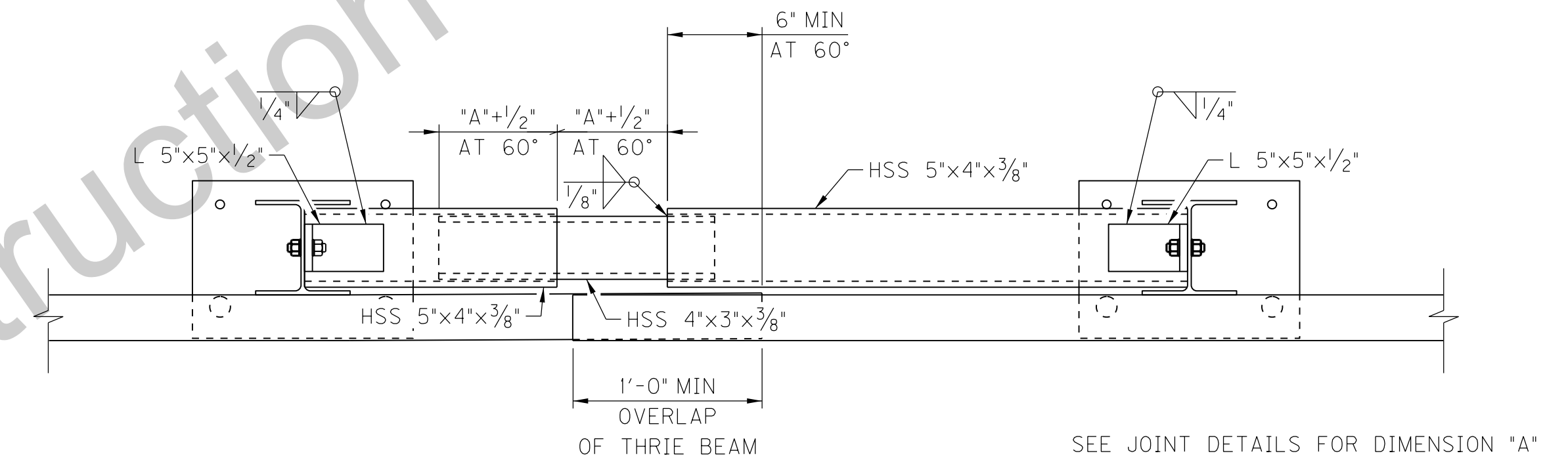
THRIE BEAM GUARDRAIL ON THE BRIDGE SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE.

SPECIAL DRILLING OF THE THRIE BEAM MAY BE REQUIRED AT THE SPLICES.

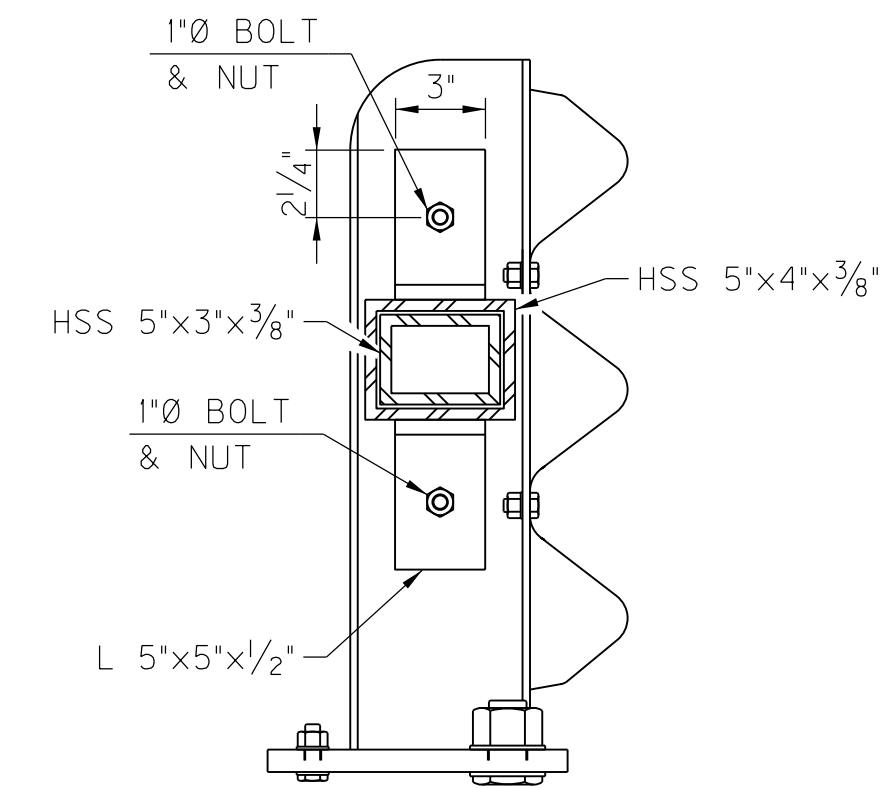
IN ADDITION TO THE EXPANSION JOINTS, EXPANSION SPLICES IN THE THRIE BEAM RAIL AND THE CHANNEL SHALL BE PROVIDED AT OTHER LOCATIONS SO THAT THE MAXIMUM LENGTH WITHOUT EXPANSION PROVISIONS DOES NOT EXCEED 200 FT.



THRIE BEAM EXPANSION AT JOINTS GREATER THAN 2"

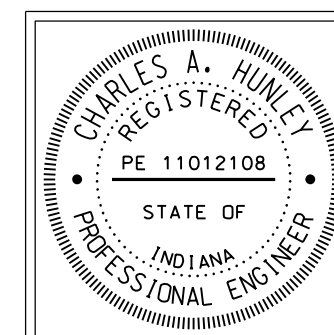


SECTION B-B



SECTION A-A

KYTC DRAWING NO. 27600



RECOMMENDED FOR APPROVAL:	<i>Tony Huley</i>	11/04/2016
	DESIGN ENGINEER	DATE
DESIGNED:	M. LAWLER	DRAWN: C. HUTCHINSON
CHECKED:	C. HUTCHINSON	CHECKED: M. LAWLER

INDIANA
DEPARTMENT OF TRANSPORTATION

HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
THRIE BEAM POST LAYOUT

SCALE	BRIDGE FILE
NTS	041-93-5000SBL
	DESIGNATION
	1298275
DRAWING	SHEET
00 OF 00	S21 OF S21
CONTRACT	PROJECT
B-33539	1298275