2nd O.REV.

STATE	PROJECT NO.
MISS.	BR-0015-01(120)

WORKING NUMBER	SHEET NUMBER	DESCRIPTION OF SHEET
A01	8001	DETAILED INDEX, SCOPE OF WORK & QUANTITIES
A02	8002	GENERAL NOTES
A03	8003	GENERAL PLAN & ELEVATION WESTBOUND BRIDGE
A04	8004	SUGGESTED SEQUENCE OF CONSTRUCTION
A05-A13	8005-8013	U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE
A14-A17	8014-8017	L28 & L48 TEMPORARY LOWER BYPASS ANCHORAGE
A18-A23	8018-8023	U29 & U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT
A24-A28	8024-8028	L29 & L49 TEMPORARY LOWER LONGITUDINAL RESTRAINT
A29-A39	8029-8039	U29 & U49 TEMPORARY SPLICE PLATE
A40	8040	U29 & U49 LINK AND PIN REPLACEMENT (1 OF 2)
A41	8041	U29 & U49 LINK AND PIN REPLACEMENT (2 OF 2)
A42	8042	DAILY MAXIMUM AND MINIMUM TEMPERATURES
	8043-8069	AS-BUILT PLANS - 1939 SUPERSTRUCTURE CONTRACT PLANS
	8070-8104	AS-BUILT PLANS - 1939 SHOP DRAWINGS
	8105-8126	AS-BUILT PLANS - 2003 CONTRACT PLANS

SCOPE OF WORK

In General, The Scope Of Work Shall Consist Of Replacing U29 Downstream And U49 Upstream Upper And Lower Pins And Links. The Following Is An Overview Of The Scope Of Work Required To Replace The Upper And Lower Pins And Links:

U29 Downstream Truss

Install Temporary Longitudinal Restraint On U29 And L29 Upstream And Downstream Trusses.
Install Temporary Bypass On U29 Downstream Truss.
Install Temporary Splice ℙ On U29 Downstream Truss.
Remove Existing 10$\frac{1}{16}$" Diameter Lower And Upper Pins At U29 Downstream Truss.
Remove Existing 10"x16"x 7'-6" Link At U29 Downstream Truss.
Bore New 10$\frac{9}{32}$" Diameter Holes Through Existing Gussets At Upper And Lower Pin Locations.
Fabricate And Replace U29 Downstream Truss Links.
Fabricate And Replace U29 Downstream Truss Lower And Upper Pin With New 10$\frac{1}{4}$" Diameter Pins.
Provide And Maintain Traffic Control In Accordance With These Plans And Mississippi Standard Specifications.

U49 Upstream Truss

Install Temporary Longitudinal Restraint On U49 And L49 Upstream And Downstream Trusses.
Install Temporary Bypass On U49 Upstream Truss.
Install Temporary Splice ℙ On U49 Upstream Truss.
Remove The Existing 10$\frac{1}{16}$" Diameter Lower And Upper Pins At U49 Upstream Truss.
Remove Existing 10"x16"x 7'-6" Link At U49 Upstream Truss.
Bore New 10$\frac{9}{32}$" Diameter Holes Through Existing Gussets At Upper And Lower Pin Locations.
Fabricate And Replace U49 Upstream Truss Links.
Fabricate And Replace U49 Upstream Truss Lower And Upper Pins With New 10$\frac{1}{4}$" Diameter Pins.
Provide And Maintain Traffic Control In Accordance With These Plans And Mississippi Standard Specifications.

Link Inspection

Temporarly Remove Top Lateral And Cover Plates At U19 And U69 Upstream And Downstream Trusses, U29 Upstream Truss And U49 Downstream Truss.

SUMMARY OF BRIDGE QUANTITIES

NUMBER	ITEM	UNIT	QUANTITY
STRUCTURAL			
620-A001	MOBILIZATION	LS	1
907-824-A001	BRIDGE REPAIR, PIN AND LINK REMOVAL AND REPLACEMENT	EA	2
907-824-A001	BRIDGE REPAIR, LINK INSPECTION	EA	6
907-824-A001	BRIDGE REPAIR, TRUSS MONITORING	EA	22
907-810-D001	REPAIRS TO KNEE BRACE AT TRUSS CONTRACTION JOINTS	EA	1

DISTRICT 7

PS & E PLANS-DATE 09-12-14		
FMS CON. # 106487/301000		
REVISIONS		
DATE	SHEET NO.	BY
09/23/14	8001,8002,8004,8018,8019	JPG
10/23/14	8001	JPG
4/7/15	8015, 8016, 8040	JPG

SEAL:
JAMES P. GREGG
LICENSED PROFESSIONAL ENGINEER
19496
STATE OF MISSISSIPPI
DATE: 4/13/15

HNTB

DATE	REVISIONS	BY
10/23/14	ADDED PAY ITEM	JPG
9/24/14	ADDED REVISION BLOCK, UPDATED PAY ITEMS	JPG

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

DETAILED INDEX, SCOPE OF WORK & QUANTITIES

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A01
SHEET NUMBER 8001

DESIGNED J. Gregg DETAILED B. Gautreau TRACED
CHECKED J. Bernard ISSUED J. Gregg DATE

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1st O.REV.

STATE	PROJECT NO.
MISS.	BR-0015-01(120)

GENERAL NOTES

SPECIFICATIONS:

Construction Specifications: Mississippi Standard Specifications For Road and Bridge Construction, 2004.
AASHTO LRFD Bridge Construction Specifications, 3rd Ed. With 2010 Interim Revisions.
Design Specifications: AASHTO Standard Specifications For Highway Bridges, 17th Ed, 2002.
AISC Manual Of Steel Construction, 9th Ed, 1989 (Temporary Structures)

DIMENSIONS:

All Dimensions Are Horizontal Unless Noted Otherwise On The Plans At A Normal Temperature Of 80 Fahrenheit.
The Dimensions Shown, Are Based On The Existing Bridge Plans And Shop Drawings.
It Is The Contractor's Responsibility To Field Verify All Dimensions Before Beginning Construction Or Fabrication Of Temporary Assemblies.

DESIGN CRITERIA:

All Temporary Restraints Have Been Designed By The Service Load Method.

STRUCTURAL STEEL:

All New And Temporary Structural Steel Shall Conform To ASTM A709 (Grade 50) Unless Otherwise Noted On The Plans.
All Temporary Thread Post-Tensioning Bars Shall Conform To ASTM A722, Type II (Grade 150) Unless Noted Otherwise On The Plans.
All Temporary Post-Tensioning Bars Shall Not Be Reused.
All New Pin Steel Shall Conform To ASTM A668, Class G.
All New Eyebar Steel Shall Be ASTM A709 (Grade 50F3).
U29 And U49 New Pins And Links Are Designated Fracture Critical Members (FCM).
All Temporary Bolts For Temporary Restraints And Shim ℙ Shall Be ASTM A490 Unless Noted Otherwise.
All Temporary All-Thread Rods For Temporary Restraints And Shim ℙ's Shall Be ASTM A 354, Grade BD, Unless Noted Otherwise.
All Permanent Bolts Shall Be ASTM A325 Unless Noted Otherwise.
Unless Noted Otherwise, Structural Steel Removed From The Bridge And All Temporary Structural Steel Shall Become The Property Of The Contractor And Its Removal From The Job Site Shall Be Included In The Bid Prices.
All Open Holes Shall Be Filled With New ASTM A325 Bolts.
U29 And U49 Existing Pins And Links Shall Become Property Of MDOT After Removal. Contractor Shall Deliver Pin And Link To MDOT Headquarters In Jackson, MS Or As Directed By The Project Engineer.
Post-Tensioning Bars In Each Temporary Restraint Shall Be Post-Tensioned Simultaneously.
Contractor Shall Limit The Differental Stress Between Any Post-Tensioning Bar In Each Temporary Restraint To No More Than 5% At All Times.

WELDING NOTES:

All Welds Shall Conform To ANSI/AASHTO/AWS D1.5 Bridge Welding Code.
All Welding Shall Be Done By The Electric Arc Process. Welding Shall Be Done With Approved Electrodes And By Certified Welders.
All Welds That Are To Be Made On Any Structural Steel Shall Be Shown In The Structural Steel Shop Drawings And Matching Weld Metal Shall Be Used. All Welds Are Subject To Approval Of The Director Of Structures, State Bridge Engineer.
100% Ultrasonic Testing (UT) Is Required On All Complete Joint Penetration (CJP) Welds.
All Fillet Welds Shall Have 10% Minimum Magnetic-Particle Testing.

SHOP DRAWINGS:

Contractor Shall Submit Shop Drawings For All Structural Steel And Temporary Structures To The Director Of Structures, State Bridge Engineer For Conformance Prior To Fabrication.

PIN AND LINK REMOVAL PLAN:

Contractor Shall Submit Detailed Procedures Outlining Means And Methods For Removing Pins And Link At U29 And U49 To The Director Of Structures, State Bridge Engineer For Approval. Submittal Shall Include Use Of Temporary Restraints, Equipment (Weights And Locations During Pin And Link Removal), Schedule, Sequence Of Construction, Etc.
Contractor Shall Be Permitted To Use Destructive Measures On The Existing Pins And Links To Be Removed.
Contractor Shall Install Both New Pins For Eybars Within 72 Hours From Time Of Cutting The Existing Link.

ERECTION AND JACKING:

For Suggested Sequence Of Construction For Removing U29 Downstream And U49 Upstream Truss Pins And Link, See Sheet A04.
Contractor Shall Remove And Replace Only One Location (U29 Or U49) Pins And Link Prior To Replacing The Opposite Location Pins And Links.
Contractor Shall Only Be Permitted To Install Temporary Restraints For One Pin And Link Location At A Time.

PAINTING NOTES:

Any Existing Paint Removed Or Damaged During Construction Shall Be Re-Painted In Accordance With Mississippi Standard Specifications.
All Steel To Remain Shall Be Painted In Accordance With The Mississippi Standard Specifications.

LIGHTING:

Contractor Shall Be Responsible For Maintaining All Navigational And Aerial Lighting.
Contractor May Temporarly Disconnect Aesthetic Lighting With Approval From The Project Engineer.

ACCESS PLATFORMS:

U29 Downstream Truss And U49 Upstream Truss Access Platforms May Be Temporarily Removed Or Modified.
If Removed, Contractor Shall Reinstall Platforms In-Kind. If Modified, Contractor Shall Submit Plans And Calculations Of Modifications For Review And Approval By The Director Of Structures, State Bridge Engineer.

△ PAYMENT OF WORK:

All Labor And Materials (Including Temporary Restraints) Required To Remove And Replace The Upper And Lower Pins And Link Shall Be Paid For Under 907-824-A001 "Bridge Repair, Pin And Link Removal And Replacement".
All Labor And Materials Associated With Link Inspection Shall Be Paid For Under 907-824-A001 "Bridge Repair, Link Inspection".
All Labor And Materials Associated With Installing Strain Gauges And Monitoring Member Stresses Shall Be Paid For Under 907-824-A001 "Bridge Repair, Truss Monitoring".
All Work For Which No Pay Items Are Required In The Proposal Will Not Be Paid For Directly And Compensations Therefore Will Be Considered Included In The Prices And Payment For Other Items.

PLAN CHANGES BY CONTRACTOR:

No Changes Of The Plans Will Be Permitted Except By Written Authority Of The Director Of Structures, State Bridge Engineer.
Changes In Details Of Design Or Construction May Be Authorized In Writing By The Director Of Structures State Bridge Engineer, Provided Such Changes Are Not Justifiable Reasons For Contract Price Adjustments.
Alternative Temporary Jack Assembly And Procedures For Removing The U29 And U49 Pins And Links Are Allowed, But Will Be Considered A Re-Design And Must Be Signed And Sealed By The Contractor's Construction Engineer. Contractor's Construction Engineer Is As Defined In The Request For Qualifications (RFQ). The Contractor's Construction Engineer Shall Be A Professional Engineer Registered In The State Of Mississippi With Experience In Rehabilitating Truss Bridges. MDOT Will Only Review The Contractors Re-Design For General Conformance With The Plans.

TEMPERATURE:

Contractor Shall Be Responsible For Monitoring And Recording The Fluctuations In Daily Temperatures.
Contractor Shall Not Be Permitted To Engage Any Temporary Restraints Nor Remove The Pins And Link When The 10 Day Daily Forcasted Low Temperature Is Expected To Be Lower Than 40 Degrees Fahrenheit (October - May).
Contractor Shall Engage Longitudinal Restraints At Daily Low Temperature.
For The Last Four (4) Year Maximum And Minimum Temperatures, See Sheet A42.

WIND SPEED:

Contractor Shall Be Responsible For Monitoring The Wind Speeds As Reported From The Natchez-Adams County Airport.
Contractor Shall Not Remove Pins And Link When The Forcasted Wind Speed Is To Exceed 30 Miles Per Hour.
Contractor Shall Not Proceed With Pin Removal When A Tropical Storm Or Hurricane Is In The Gulf Of Mexico And Expected To Make Landfall Near Louisiana, Mississippi, Or Alabama.

ELECTRICAL CONDUITS:

Contractor Shall Remove, Maintain And Replace Existing Bridge Electrical Conduits, Hardware And Wiring As Required To Make Bridge Repairs.
Electrical Conduit Systems Damaged Or Requiring Modification Shall Be Replaced In Accordance With The Standard Specifications And National Electrical Code.
Conduit Shall Be Rigid Aluminum With Stainless Steel Hardware, Conduit And Wiring Shall Be Size And Type Compatible With Existing Electrical Conduit And The Components To Be Connected.
This Item Will Not Be Paid For Directly, And Compensation Therefore Will Be Considered Included In The Price And Payment Of Other Bid Items.
Conduits Located On The Westbound US 84 Mississippi River Bridge Belong To Either MDOT Or AT&T.
Contact Information:
AT&T
Linda King
601-445-0189

LINK INSPECTION:

Contractor Shall Temporarily Remove Top Lateral And Cover Plates And Allow MDOT To Inspect U19 & U69 Upstream And Downstream Trusses, U29 Upstream Truss, And U49 Downstream Truss Links.
Contractor Shall Perform All Link Inspections During Bridge Closure And Prior To Removing The First Pins And Link.
For Location Of Top Lateral And Cover Plates, See Sheet A03.

MAINTENANCE OF TRAFFIC:

Contractor Shall Be Permitted To Close The Westbound Bridge To Traffic During Installation Of Temporary Restraints And Removal And Replacement Of Pins And Link.
Contractor Shall Redirect Westbound Traffic To The Eastbound Bridge As Outlined On Traffic Control Sheets.
Contractor Shall Not Be Permitted To Close The Westbound Bridge To Traffic For More Than 7 Weeks Without Written Permission From The Project Engineer.
Contractor Will Not Be Permitted To Re-Open The Westbound Bridge To Traffic Until U29-U30 And U49-U50 Splice Plates Have Been Installed (Refer To Sheets A12 And A13) And All Temporary Restraints Disengaged.
The Contractor May Be Required To Re-Open The Westbound Bridge In The Event Of An Emergency Except For When The Existing Pins Have Been Removed And New Pins And Links Are Not Installed.
Westbound Bridge Closure Dates Shall Be Approved By MDOT.
Contractor Shall Limit Equipment On The Westbound Bridge When Replacing U29 And U49 Pins And Link.
Contractor Shall Maintain And Not Interfere With Marine Traffic.
Contractor Shall Not Be Permitted To Install Temporary Restraints When A 100 Year, Or Similar, Flood Occurs On The Mississippi River At Natchez.
Contractor Shall Be Permitted To Close One Lane Of Traffic On The Westbound Bridge From 7:00 AM To 4:00 PM Monday Thru Friday And From 7:00 AM To 6:00 PM Saturday And Sunday, Except For Days Which Include Events, In Order To Take Field Measurements.

LINE BORE:

Contractor Shall Line Bore 10 9/32" Hole Through Existing Gussets And Washer.
Line Bore Shall Be Continuous From One Direction.
Contractor Shall Not Exceed A 1/32" Tolerance When Straight-Line Boring Through The Existing Gussets And Washer.
All Bored Hole Finishes Shall Be ANSI 125 Or Better.

RIVET/BOLT REPLACEMENT:

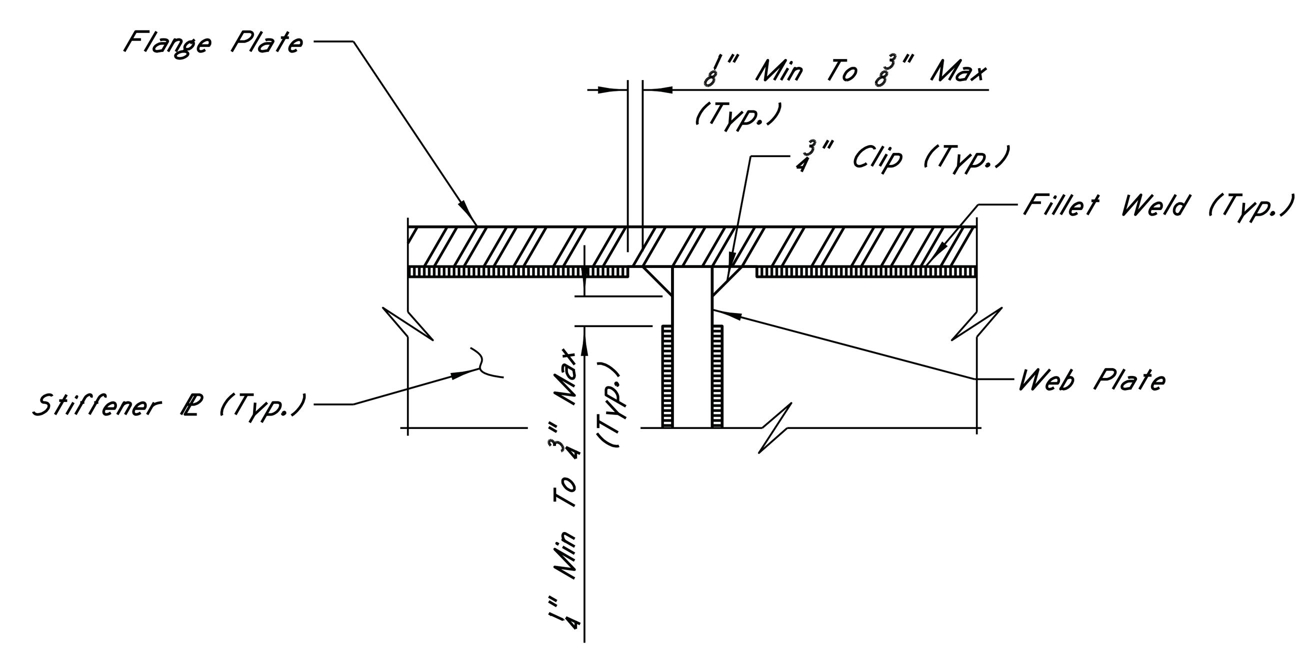
Contractor Shall Submit Their Rivet Removal Plan To The Director Of Structures, State Bridge Engineer For Approval.
Rivets Shall Be Removed By Knocking Off The Rivet Heads Using A Pneumatic Rivet Buster And Then Forcing The Rivet Shanks Out Of Its Holes Using A Powered Impact Tool.
If Necessary, The Rivet Holes Should Be Drilled Out To Obtain An Aligned Hole Though The Connected Parts.
Rivet Heads And Rivet Shanks Shall Be Removed Only By Using Approved Mechanical Methods.
Flame Cutting Shall Not Be Used To Remove Rivet Heads, Shanks Or Bolts.
Rivets Or Bolts Shall Be Removed One At A Time And At No Time Shall There Be More Than One Rivet Or Bolt Removed In A Given Connection Unless Noted Otherwise In The Plans.
Rivet Or Bolt Removal Process Shall Not Gouge Or Damage The Adjacent Metal In The Structure.
Payment For Rivet Or Bolt Removal And Replacement Will Not Be Paid Directly, And Compensation Therefore Will Be Considered Included In Price Payment Of Other Bid Items.

△ TRUSS MONITORING:

Contractor Shall Be Responsible For Monitoring The Load On Existing And New Members Using Strain Gauges.
Strain Gauges Shall Be Surface Mounted To Members
Strain Gauges Shall Continuously Collect Data Prior To Installation Of Temporary Restraints And Until The Links Have Been Successfully Installed And Temporary Restraints Removed.
Strain Gauges Shall Report Data To MDOT On A Five (5) Minute Sample Rate.
Strain Gauges Shall Measure Changes In Strain/Stress Less Than +/- 5 Micro-strain.
Members To Be Monitored (22 Total)
- U19, U29, And U49 Existing Links (6 Locations)
- U29 Downstream Truss New Eyebar (1 Location)
- U49 Upstream Truss New Eyebar (1 Location)
- U28-U29 Downstream Truss (1 Location)
- U29-U30 Downstream Truss (1 Location)
- L28-U29 Downstream And Upstream Trusses (2 Location)
- U29-L30 Downstream Truss (1 Location)
- L28-L29 Downstream And Upstream Trusses (2 Location)
- U48-U49 Upstream Truss (1 Location)
- U49-U50 Upstream Truss (1 Location)
- L48-U49 Downstream And Upstream Trusses (2 Location)
- U49-L50 Upstream Truss (1 Location)
- L48-L49 Downstream And Upstream Trusses (2 Location)

FACING OF BEARING SURFACES:

The Surface Finish Of Bearing And Base Plates And Other Bearing Surfaces That Are To Come In Contact With Each Other (New And Existing Steel) Shall Meet 810.03.7 Of The Construction Specifications



TYPICAL STIFFENER FILLET WELD DETAIL

SEAL:
STEVEN T. HAGUE LICENSED PROFESSIONAL ENGINEER 12891 STATE OF MISSISSIPPI
DATE: 11/5/14

HNTB

△	JPG	9/24/14
REVISIONS	REVISED NOTES	
	BY	DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

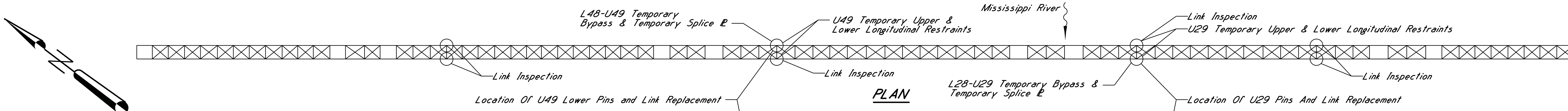
GENERAL NOTES

PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

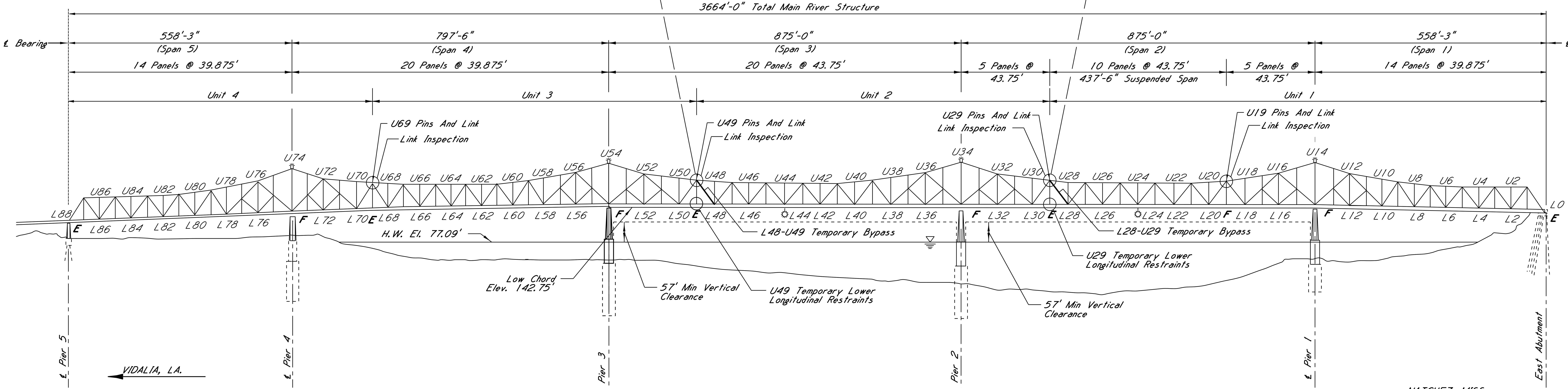
WORKING NUMBER A02
SHEET NUMBER 8002

DESIGNED J.Gregg DETAILED L.Evans TRACED
CHECKED T.Bastion ISSUED J.Gregg DATE

STATE	PROJECT NO.
MISS.	BR-0015-01(120)

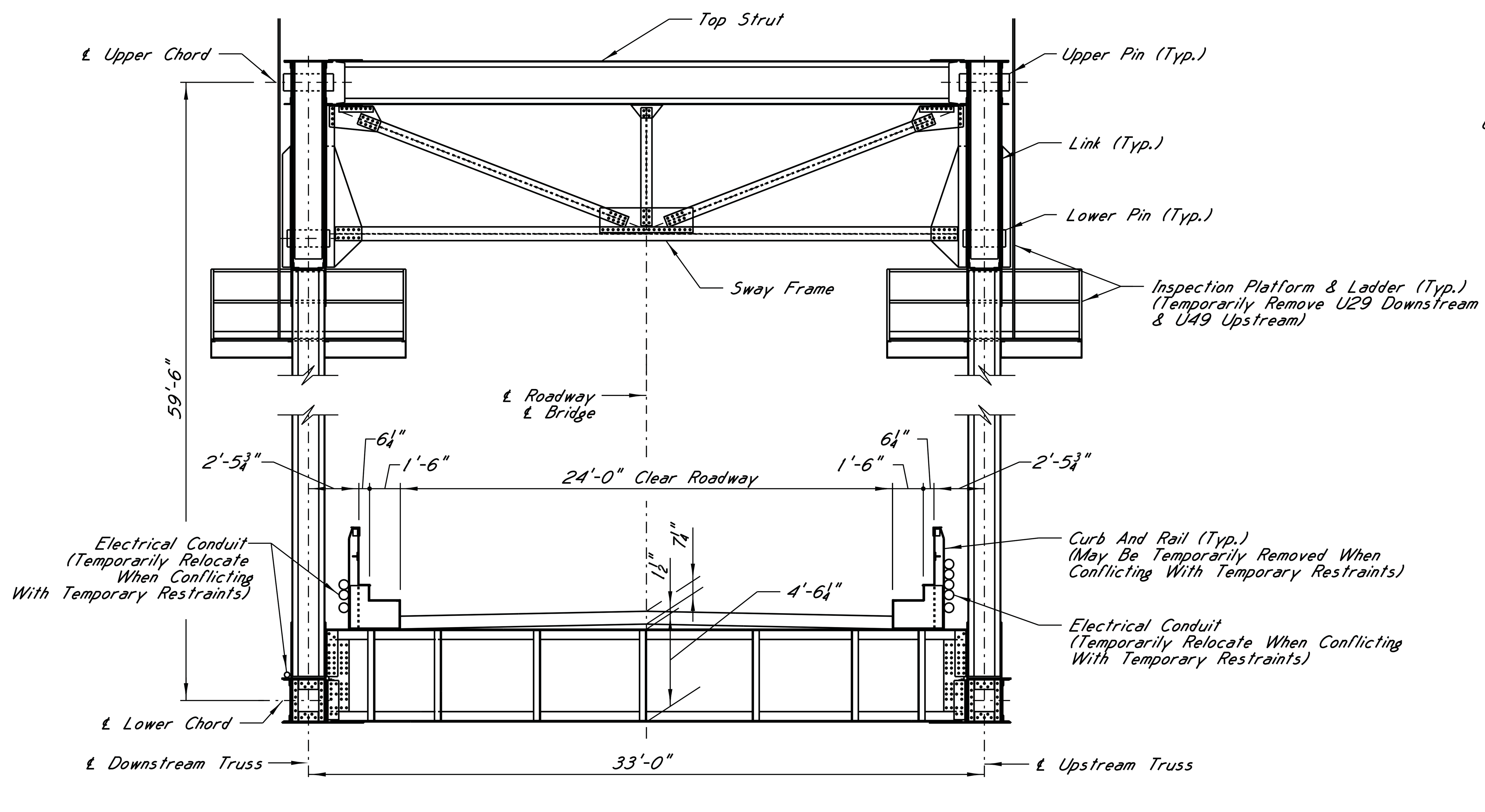


PLAN



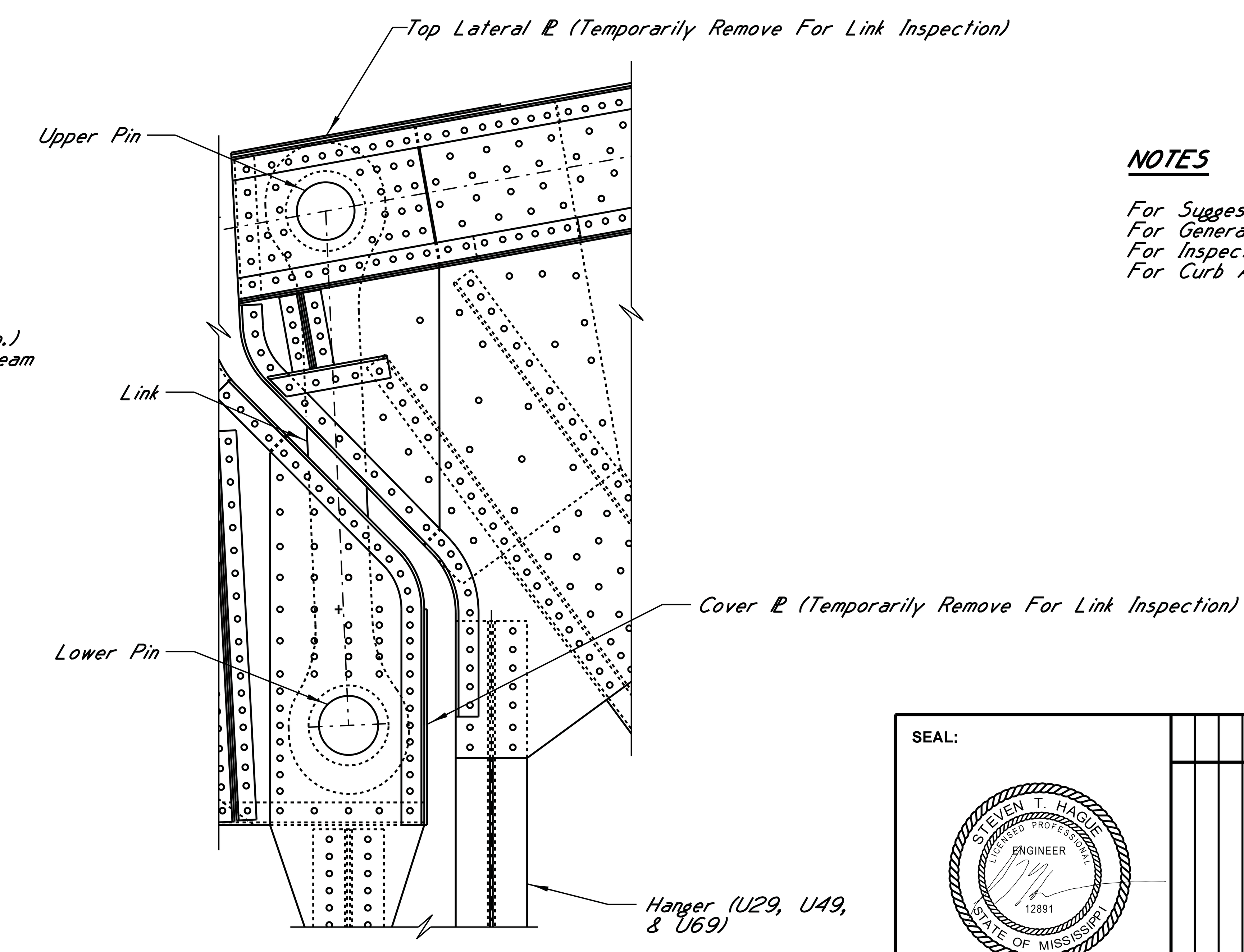
ELEVATION

(Westbound Bridge)
(Eastbound Bridge Not Shown For Clarity)



TYPICAL SECTION AT PANEL POINT 19, 29, 49 & 69

Looking Upstation



ELEVATION VIEW (U19, U29, U49 & U69)

NOTES

For Suggested Sequence of Construction, See Sheet A04.
For General Notes, See Sheet A02.
For Inspection Platform Plans, Refer To As-Built Plans.
For Curb And Rail Plans, Refer To As-Built Plans.

SEAL: STEVEN T. HAGUE, REGISTERED PROFESSIONAL ENGINEER, 12891, STATE OF MISSISSIPPI

DATE: 11/5/14

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REVISIONS | BY | DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

GENERAL PLAN & ELEVATION
WESTBOUND BRIDGE

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A03

SHEET NUMBER 8003

DESIGNED M.Xin DETAILED L.Kalita TRACED
CHECKED J.Gregg ISSUED J.Gregg DATE

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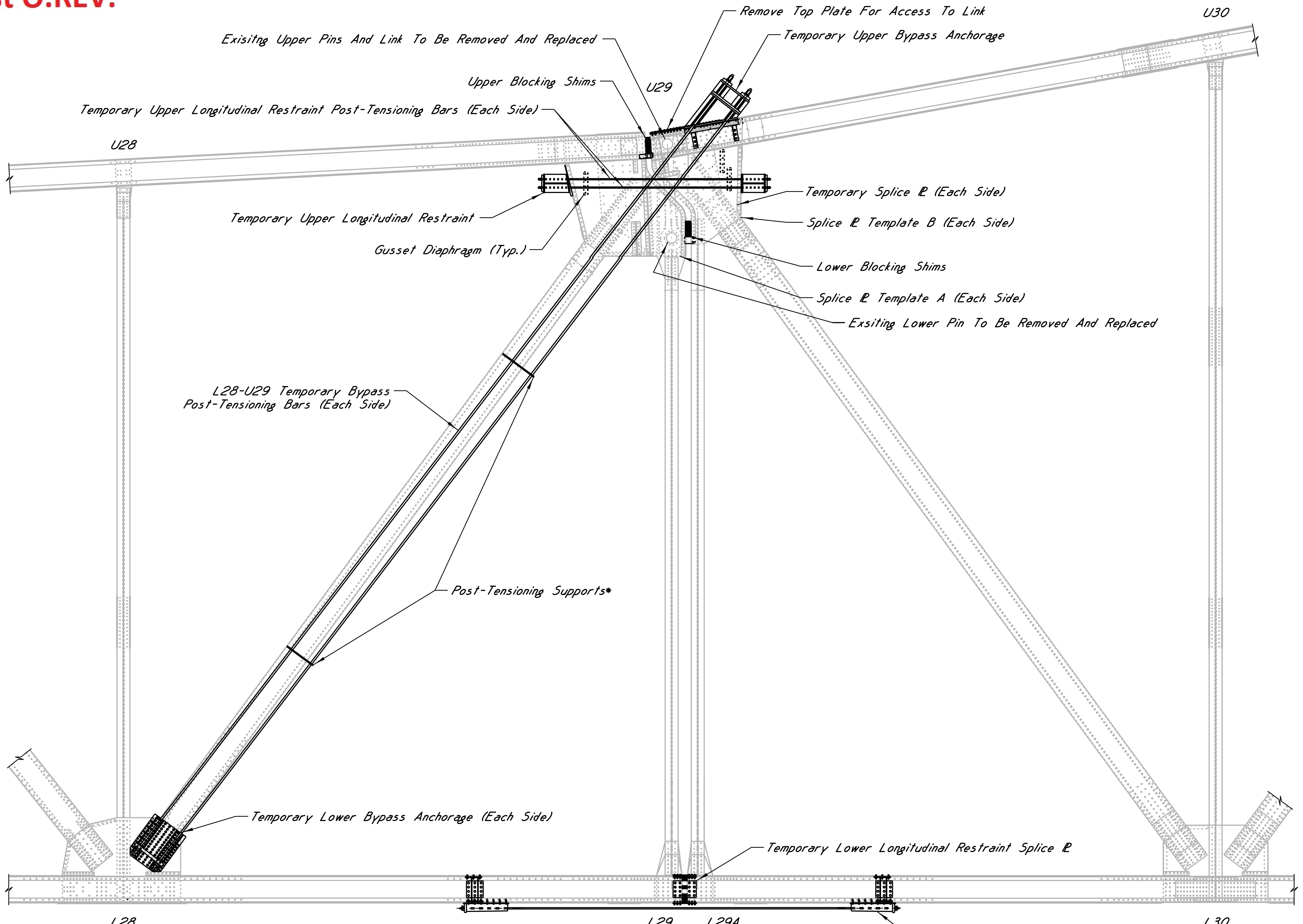
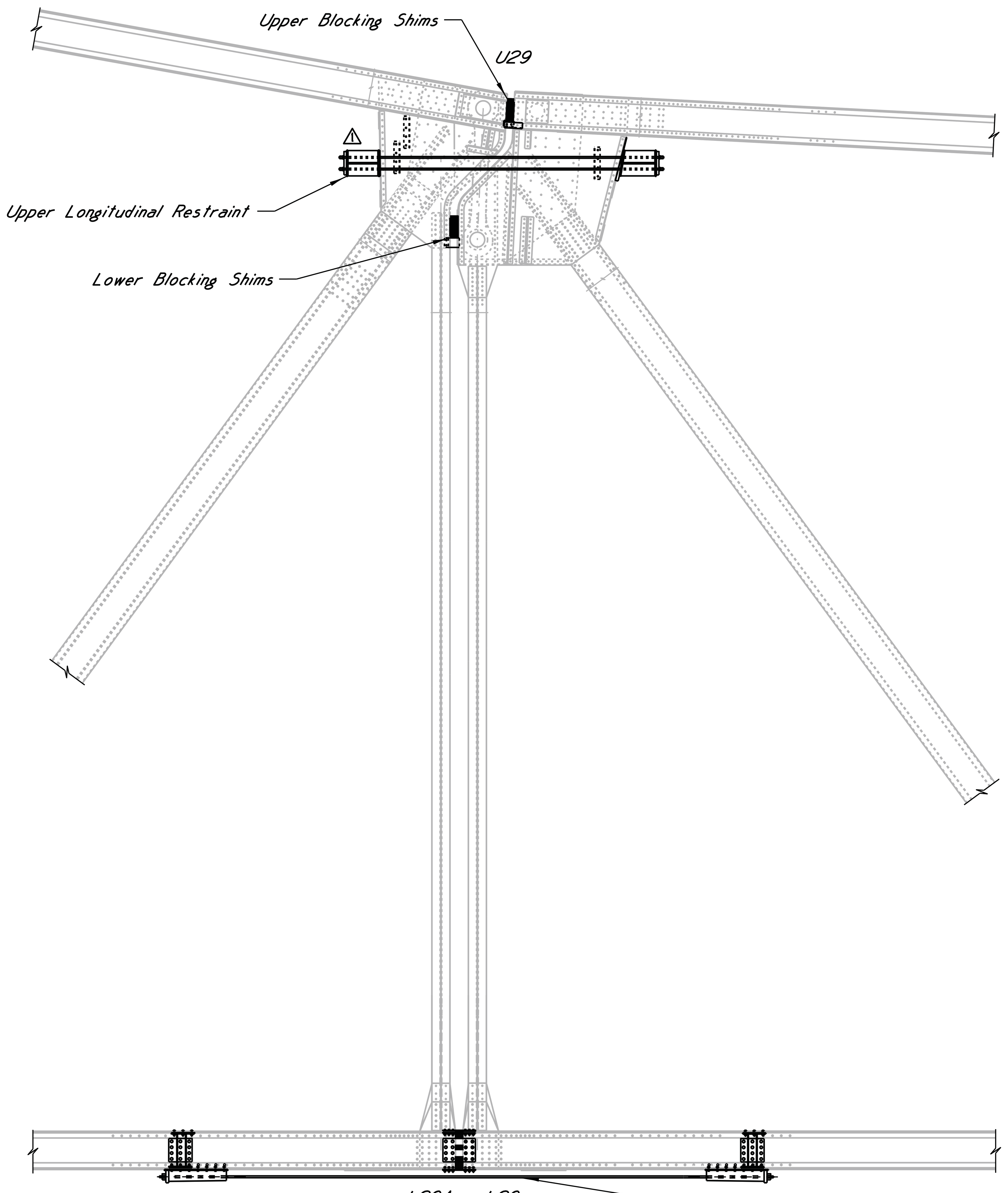
STATE	PROJECT NO.
MISS.	BR-0015-01(120)



U29 DOWNSTREAM TRUSS TEMPORARY RESTRAINTS

Looking Downstream
U49 Upstream Truss Similar



U29 UPSTREAM TRUSS TEMPORARY RESTRAINTS

Looking Upstream
U49 Downstream Truss Similar

SUGGESTED SEQUENCE OF CONSTRUCTION

1. Remove Traffic From Westbound Bridge And Redirect To Eastbound Bridge
2. Relocate Conduits, Temporarily Remove Curb And Rail Near L28/L48, Temporarily Remove Access Platform At U29 Downstream Truss And U49 Upstream Truss
3. (In Any Order)
   a. Install Splice Plate Template A and Template B. (Remove And Replace Existing Rivets, Field Drill And Install New A490 Bolts). (Do Not Weld Template A And B Together).
   b. Install Temporary Upper Bypass Anchorage
   c. Install Temporary Lower Bypass Anchorage (Do Not Install Post-Tensioning Bars)
4. Install Upper And Lower Longitudinal Restraints And Restraining Blocks (Upstream And Downstream Truss)
5. Tension Upper Longitudinal Restraints (Tension Upstream And Downstream Truss At The Same Time And At The Daily Low Temperature)
6. Tension Lower Longitudinal Restraints And Install Lower Longitudinal Restraints Splice ℘'s
7. Install And Tension L28-U29 Or L48-U49 Temporary ByPass
8. Weld Splice ℘ Template A And B Together. Remove Template A And B And Use To Field Drill Holes In Temporary Splice Plate. Install Temporary Fill ℘'s, Spacer ℘'s, Cheek ℘'s and Splice ℘'s
9. Cut Link And Transfer Any Remaining Load In Link To Temporary Restraints And Splice ℘
10. Cut Upper And Lower Pins Past Existing Gusset ℘'s
11. Remove Link And Pins From Top
12. Line Bore New 10 3/32" Diameter Hole Through Existing Gusset ℘'s At Upper And Lower Pin Locations
13. Field Measure ℄ To ℄ Of Bored Holes
14. Finish Fabricating Holes In Eyebars Based Off Of Field Measurements
15. Install New Pins And Eyebars
16. Remove Temporary Restraints In Reverse Order

• Post-Tensioning Supports Shall Support The Post-Tensioning Bars When Bars Are Not Stressed. Contractor Shall Be Responsible For Designing Supports And Shall Include Supports In Shop Drawings.

NOTES

For General Notes, See Sheet A02.
Contractor Shall Install Both New Pins For Eyebars Within 72 Hours From Time Of Cutting The Existing Link.

SEAL: STEVEN T. HAGUE, REGISTERED PROFESSIONAL ENGINEER, 12891, STATE OF MISSISSIPPI

DATE: 11/5/14

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DATE	BY	REVISIONS
9/24/14	JPG	ADDED IMAGE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

SUGGESTED SEQUENCE OF CONSTRUCTION

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A04

SHEET NUMBER 8004

DESIGNED M.Xin DETAILED L.Kalita TRACED
CHECKED J.Gregg ISSUED J.Gregg DATE

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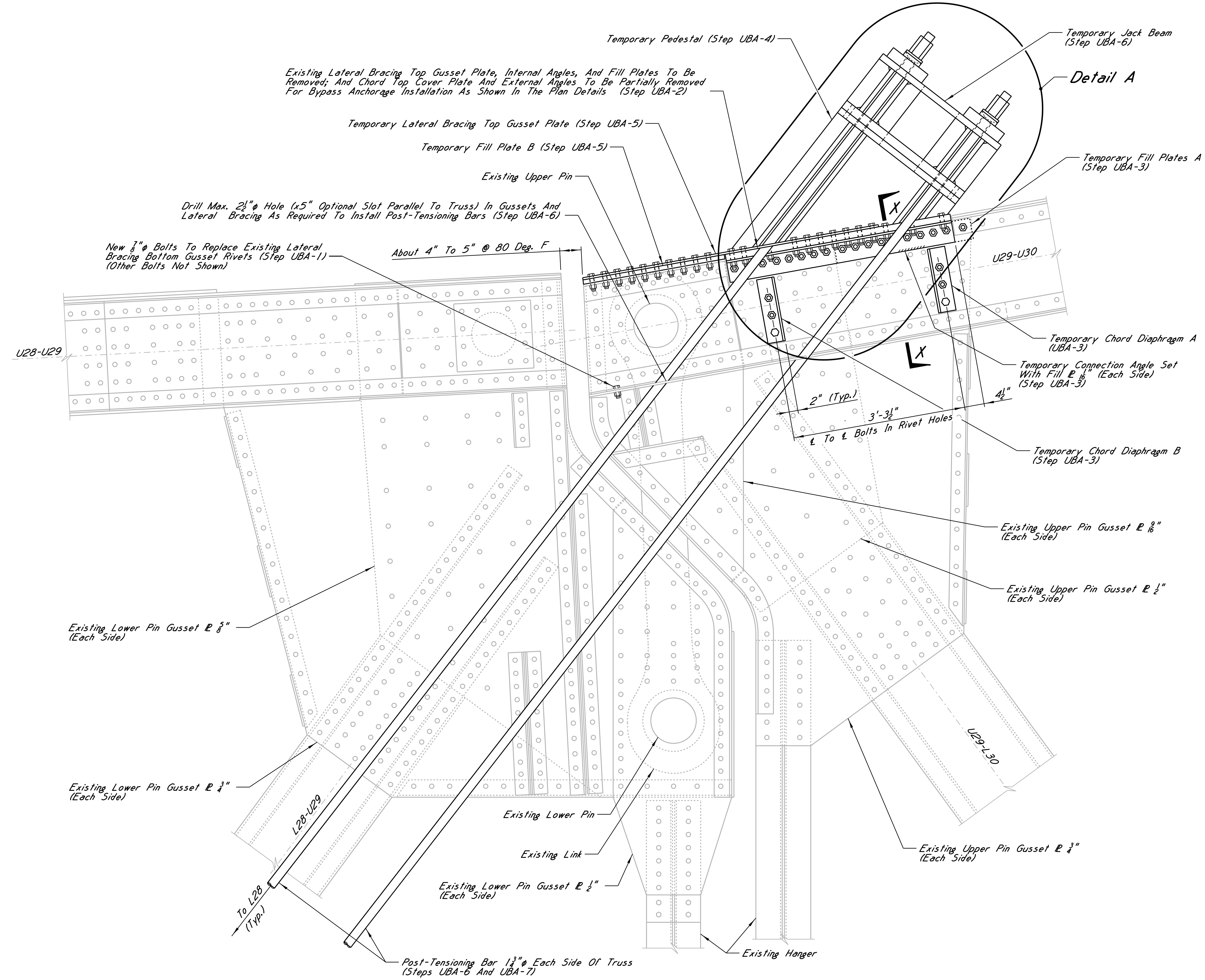
STATE	PROJECT NO.
MISS.	BR-0015-01(120)



U29 DOWNSTREAM TEMPORARY UPPER BYPASS ANCHORAGE

Other Temporary Works That May Be In Place And Existing Lateral Bracing Are Not Shown For Clarity.
Looking Downstream

LEGEND

- ○ Existing Rivet
- ◎ New 7/8"φ Bolt In Existing Rivet Holes And New 15/16"φ Holes
- ○ New 7/8"φ Bolt In New 15/16"φ Holes

UPPER BYPASS ANCHORAGE DESIGN NOTES

Upper Bypass Anchorage Is Designed To Transfer The Anchorage Resultant Force That Is Normal To The Top Gusset Edge To The Existing Gusset Plates By Directly Bearing Upon The Gusset Edges. The Slots In The Vertical Leg Of The Temporary Connection Angles Are Provided To Facilitate This Direct Bearing. The Bolts In The Connection Angles Are Designed To Transfer The Anchorage Resultant Force That Is Parallel To The Top Gusset Edge To The Existing Gusset Plates.

SUGGESTED UPPER BYPASS ANCHORAGE INSTALLATION STEPS

Step UBA-1:	One At A Time, Remove Existing Rivets And Install New Bolts At Lateral Bracing Bottom Gusset Plate.
Step UBA-2:	Remove Lateral Bracing Top Gusset Plate, Internal Angles, And Fill Plates; And Partially Remove Top Cover Plate And External Angels.
Step UBA-3:	Install Both Sets Of Connection Angles With Fill Plates A To The Truss With Bolts Not Tightened. Install Chord Diaphragms A And B.
Step UBA-4:	Install Pedestal Without Bolts For Lateral Bracing Gusset Plates. Then Tighten The Connection Angle Bolts To The Truss.
Step UBA-5	Install Fill Plate B And Lateral Bracing Fill Plates & Top Gusset Plate By Fully Tightening Bolts At The Pedestal First.
Step UBA-6:	Install Jack Beam And Field Drill Holes In Existing Lateral Bracing And Lateral Bracing Gusset Plate To Allow For Proper Post-Tensioning Bar Installation. When The Lower Bypass Anchorage Is In Place, Install Post-Tensioning Bars (Not Tensioned).
Step UBA-7:	Only After Tensioning The Upper And Lower Longitudinal Restraints, Tension The Post-Tensioning Bars As Directed (185 Kips Each Bar At U29 And 190 Kips Each Bar At U49).

NOTES

For General Notes, See Sheet A02.
For Suggested Sequence Of Construction, See Sheet A04.
For Detail A, See Sheet A07.
For Section X-X (Chord Diaphragm) Sheet A06.

The Bypass Post-Tensioning Bars Shall Be Tensioned Simultaneously.
Jacks Shall Be Connected Together Using A Manifold With The Ability To Apply Force To All Jacks Independently Or Simultaneously.
Faying Surfaces Of Bolted Parts With The Connection Angles Shall Be Blast-Cleaned And Coated With A Paint That Has Been Quaified By Test As A Class B Coating For Slip Resistance.
Facing Of Existing Gusset Plate Edges For Pedestal Bearing Shall Be Finished Per Standard Specifications, Section 810.03.07.
Pedestal Bottom Flange Shall Have Rotation Tolerances From Being Parallel With Centerline Of The Top Chord. Rotations That Make The PT-Bars More Horizontal Shall Have A Tolerance Of 0.001 Radians And More Vertical 0.003 Radians.
Existing Lateral Bracing And Gusset Plates That Require Holes To Install Bypass Post-Tensioning Shall Be Repaired By Approved Method Following Link Replacement To The Satisfaction Of The Engineer.

SEAL: JOHN R. BERNARD, REGISTERED PROFESSIONAL ENGINEER, 19068, STATE OF MISSISSIPPI

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (1 OF 9)
PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

WORKING NUMBER A05
SHEET NUMBER 8005

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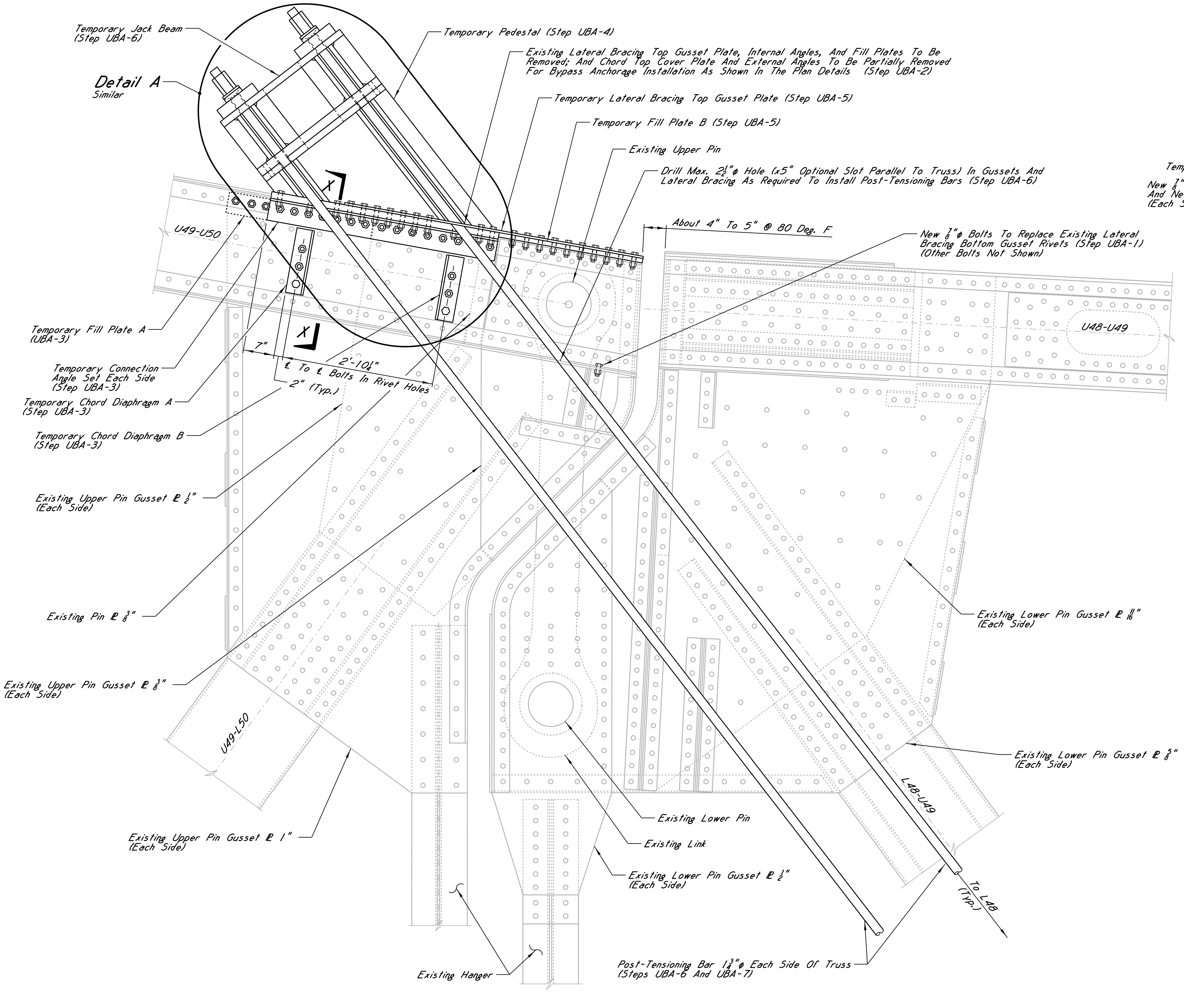
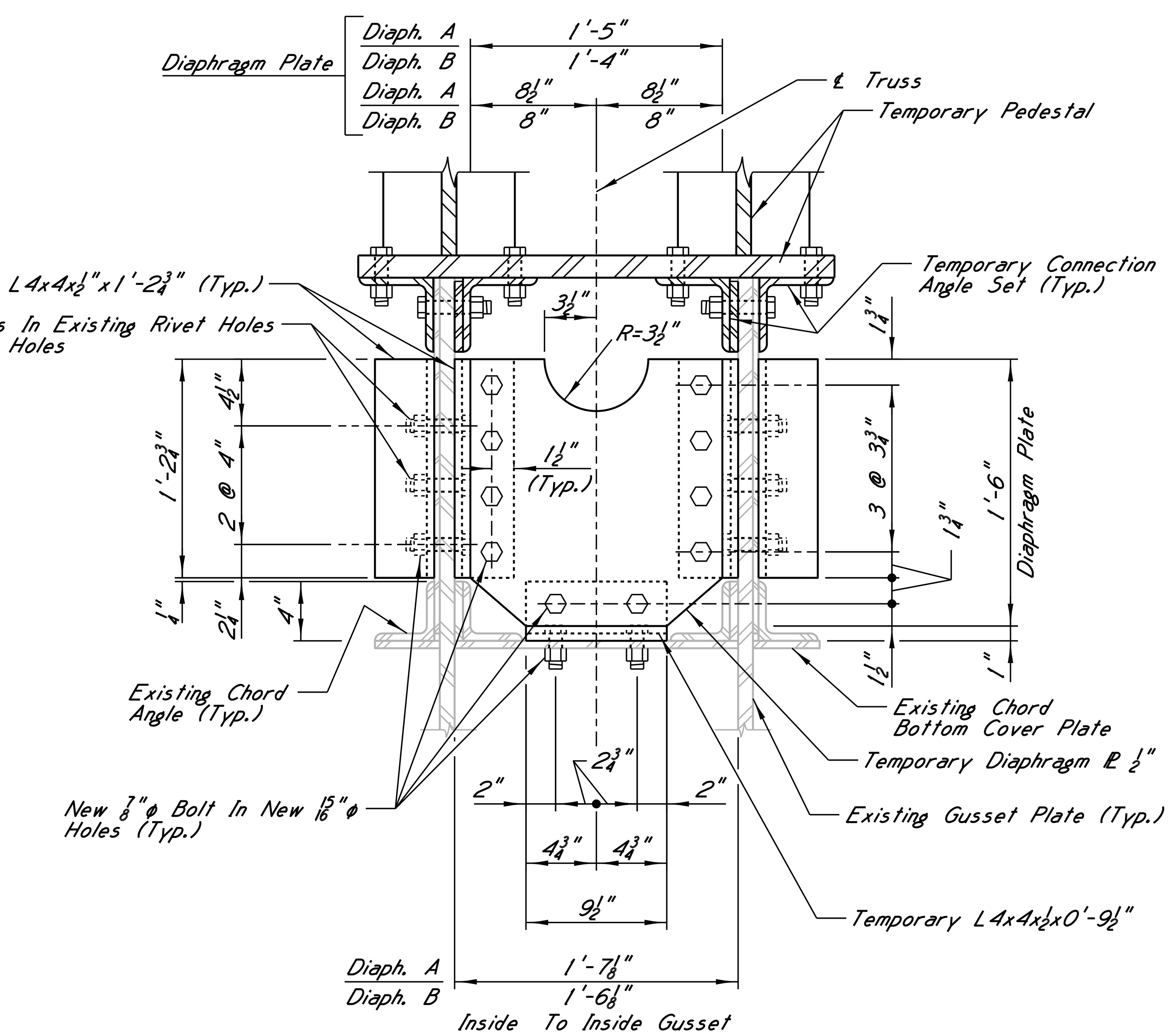
MISS.	BR-0015-01(120)



U49 UPSTREAM TEMPORARY UPPER BYPASS ANCHORAGE

Other Temporary Works That May Be In Place And Existing Lateral Bracing Are Not Shown For Clarity.
Looking Upstream



TEMPORARY CHORD DIAPHRAGM

Diaphragm A Shown, Diaphragm B Similar

SECTION X-X

LEGEND

- ○ Existing Rivet
- ◎ New ⅞"ϕ Bolt In Existing Rivet Holes And New 15/16"ϕ Holes
- ○ New ⅞"ϕ Bolt In New 15/16"ϕ Holes

NOTES

For Detail A, See Sheet A07.
For Temporary Upper Bypass Notes, Installation Steps And Design Notes, See Sheet A05.

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (2 OF 9)
PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

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SHEET NUMBER 8006

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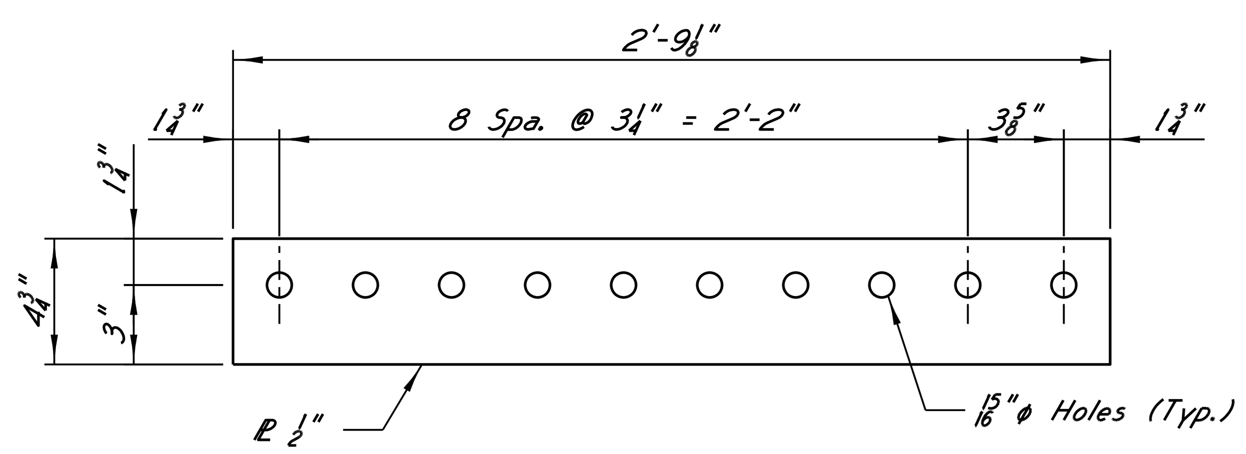
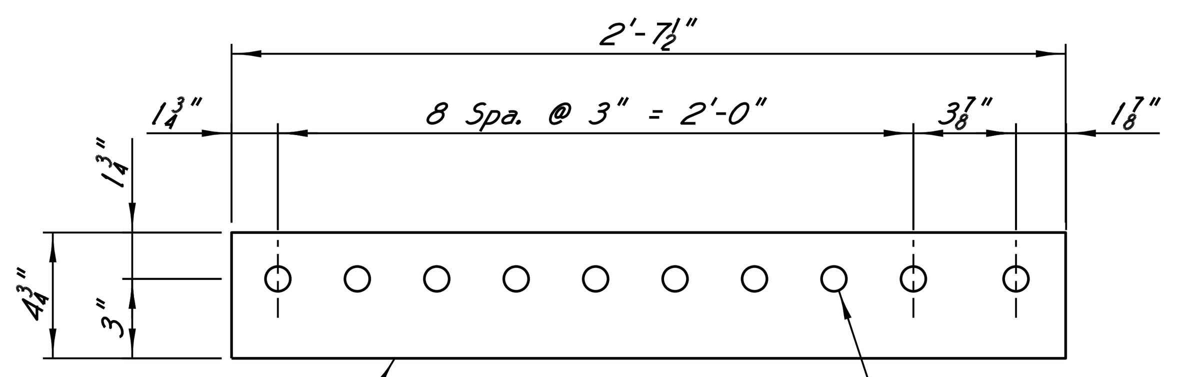


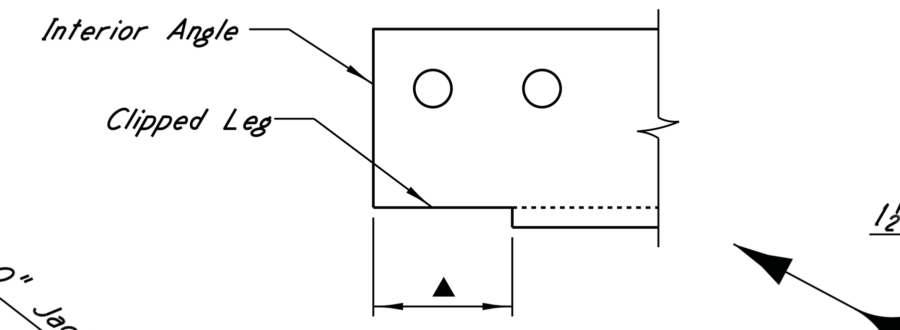
U49 FILL PLATE A

Two (2) Plates Required



U29 FILL PLATE A

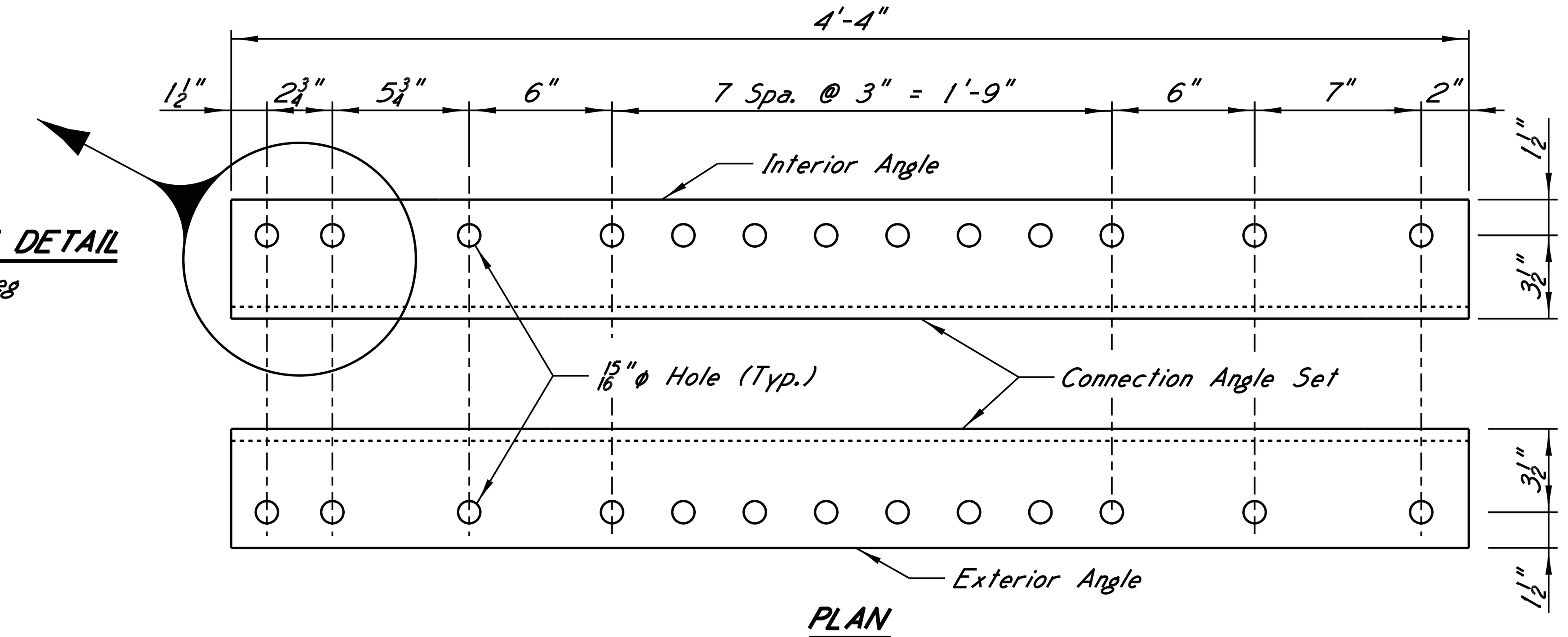
Two (2) Plates Required



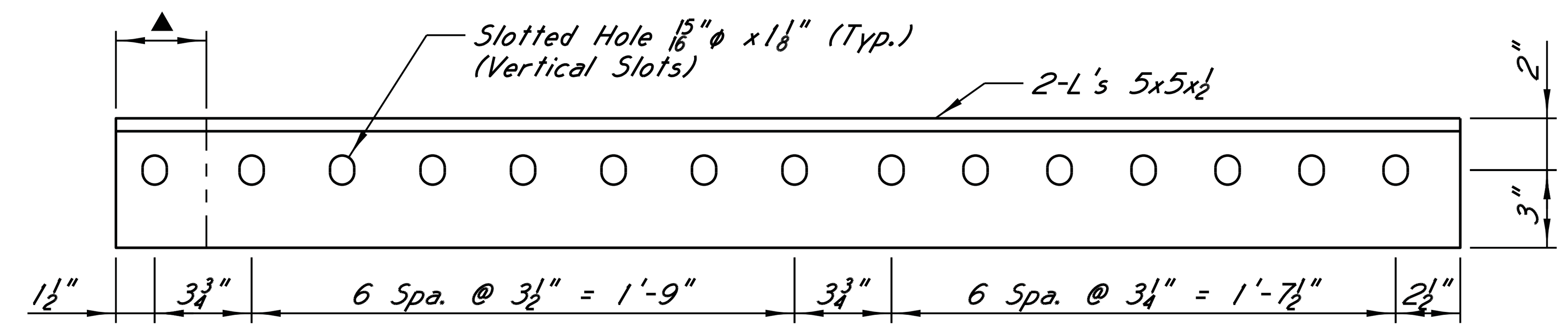
U49 INTERNAL ANGLE DETAIL

Showing Clipped Leg

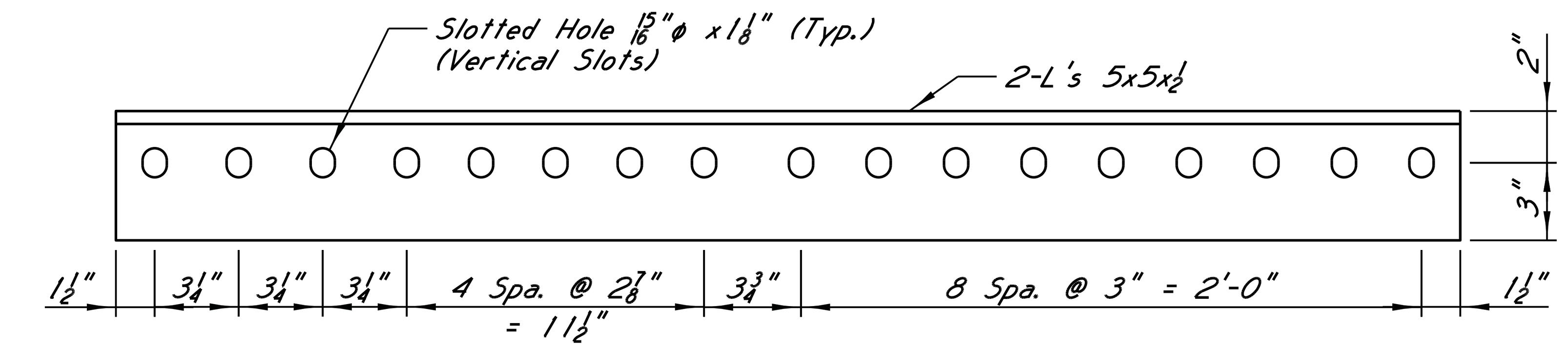
▲ 3 1/2" Clip Of Interior Angle Vertical Leg For Fit At Existing Pin Plate (U49 Only)



PLAN



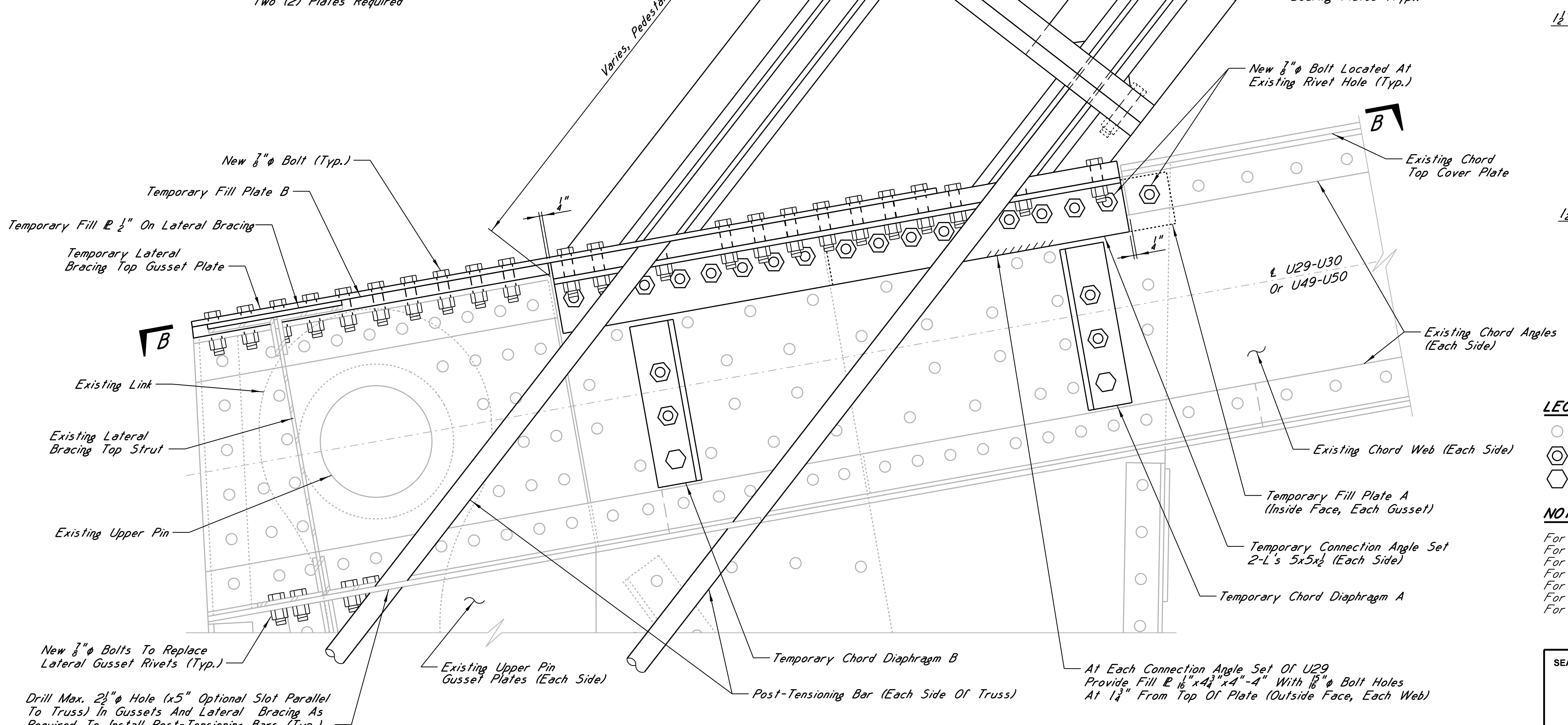
U49 ELEVATION



U29 ELEVATION

CONNECTION ANGLE SET

2-Sets Required Per Upper Bypass Anchorage.
Slot In Connection Angle Vertical Leg Is Required To Allow Pedestal To Bear Directly On Gusset Plate Edges.



TEMPORARY UPPER BYPASS ANCHORAGE

DETAIL A

Some Existing Lateral Bracing Details Not Shown For Clarity
U29 Downstream Shown, U49 Upstream Similar

LEGEND

○ Existing Rivet
New 7/8"φ Bolt In Existing Rivet Holes And New 15/16"φ Holes
New 7/8"φ Bolt In New 15/16"φ Holes

NOTES

For Location Of Detail A, See Sheets A05 And A06.
For View B-B, Existing Removal And Existing Modification, See Sheet A08.
For Section B-B, Temporary Upper Bypass Anchorage On Existing Truss, See Sheet A09.
For View B-B, Repair Of Existing Truss, See Sheet A12 And A13.
For Chord Diaphragm Detail, See Sheet A06.
For Pedestal Details, See Sheet A10.
For Jack Beam Details, See Sheet A11.

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19068
STATE OF MISSISSIPPI

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (3 OF 9)
PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

WORKING NUMBER A07
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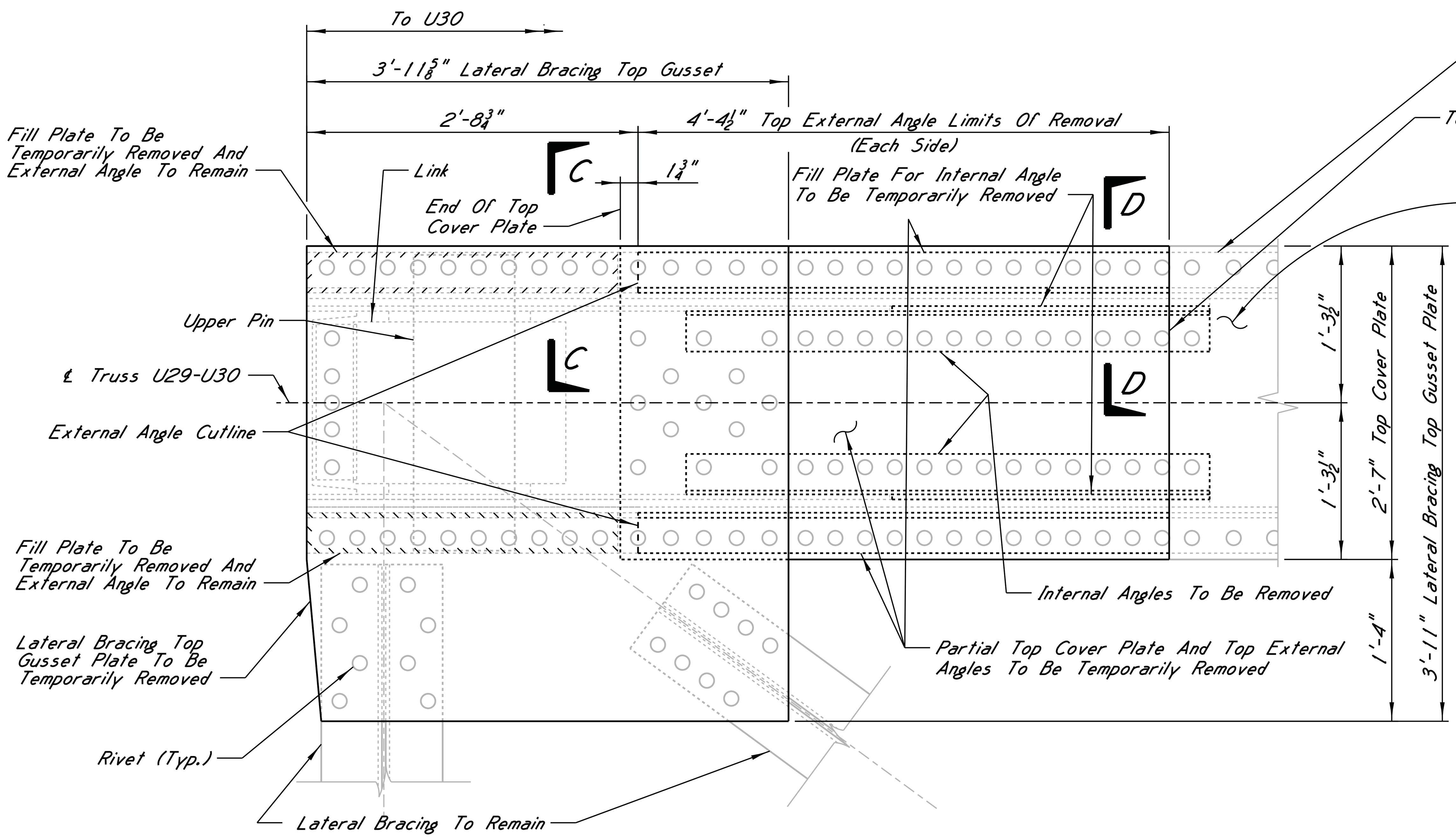
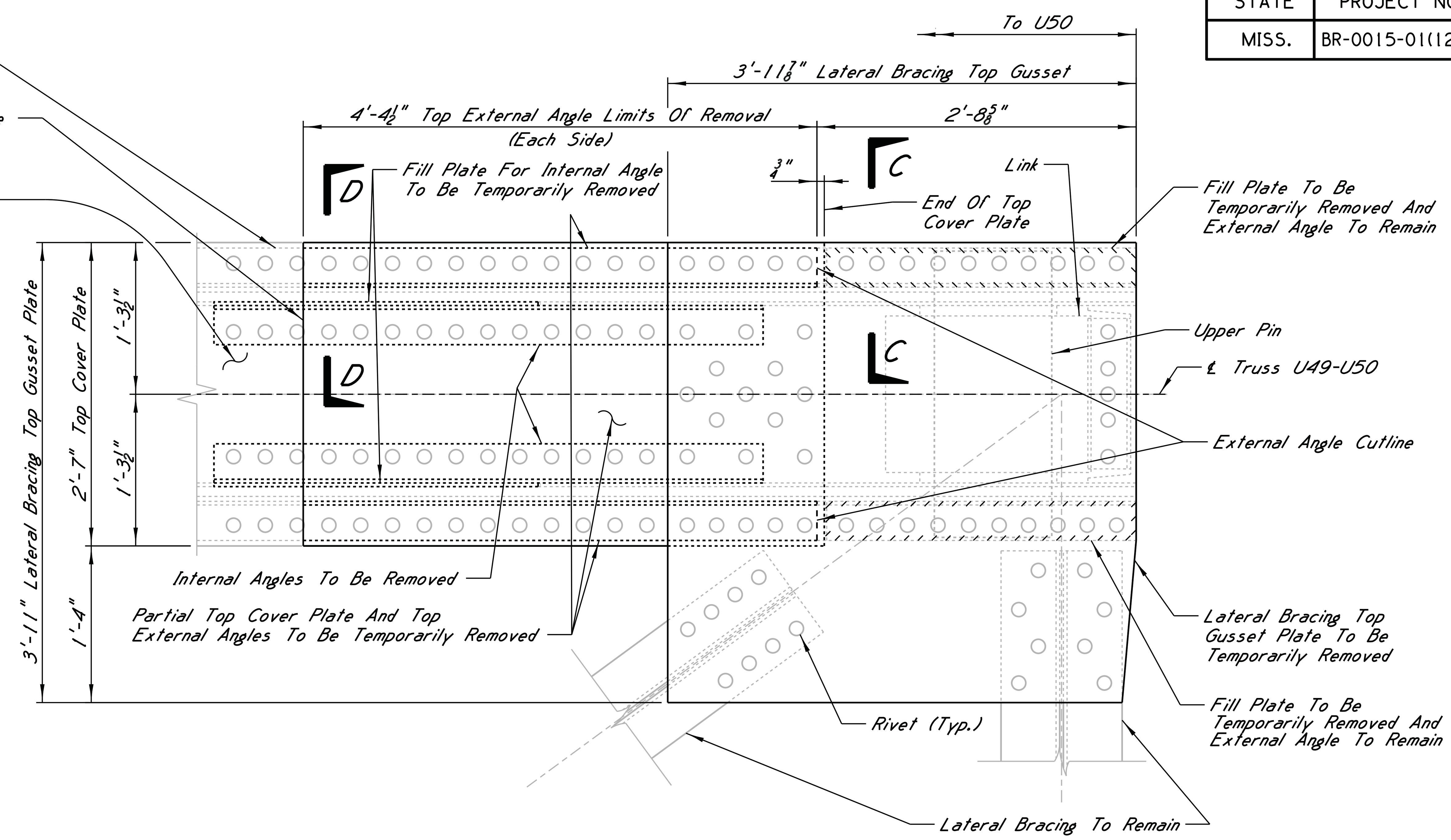


EXISTING REMOVAL

U29 VIEW B-B

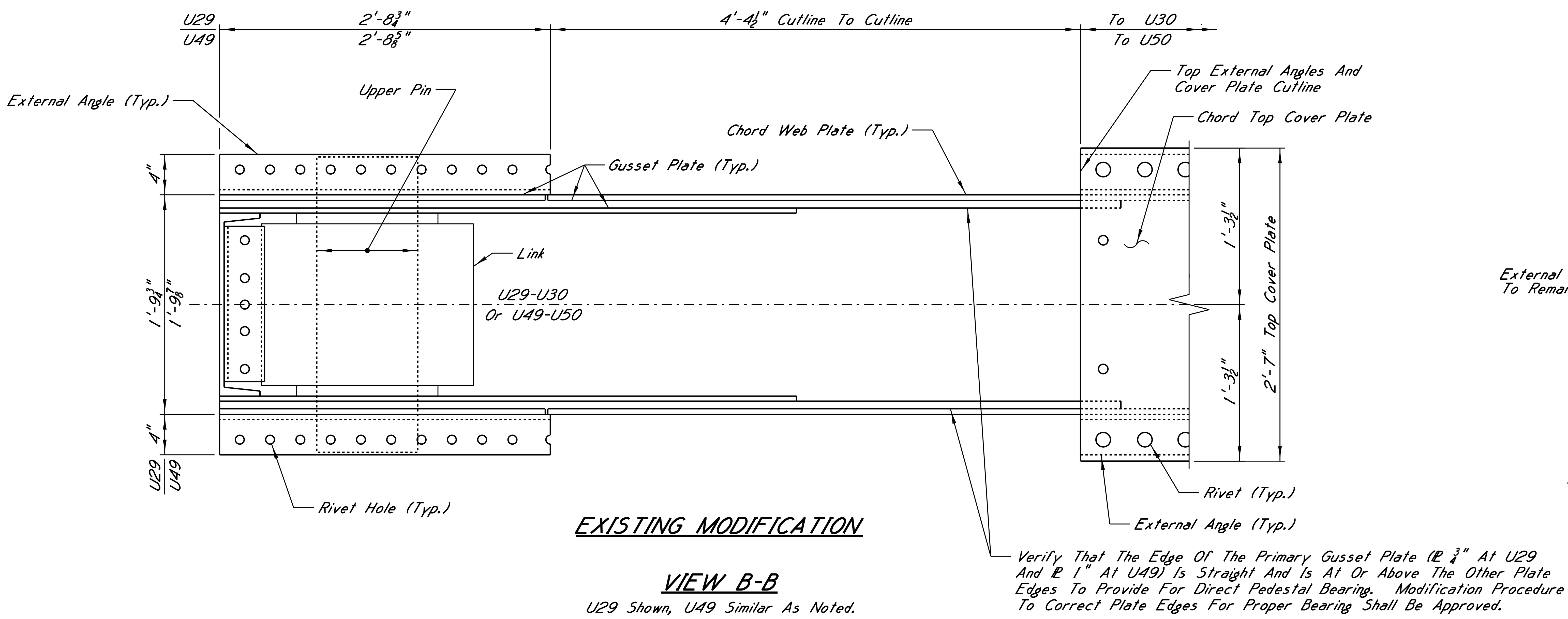
Showing Necessary Removal To Install Temporary Bypass Anchorage. Torch Cutting Will Not Be Allowed.



EXISTING REMOVAL

U49 VIEW B-B

Showing Necessary Removal To Install Temporary Bypass Anchorage. Torch Cutting Will Not Be Allowed.

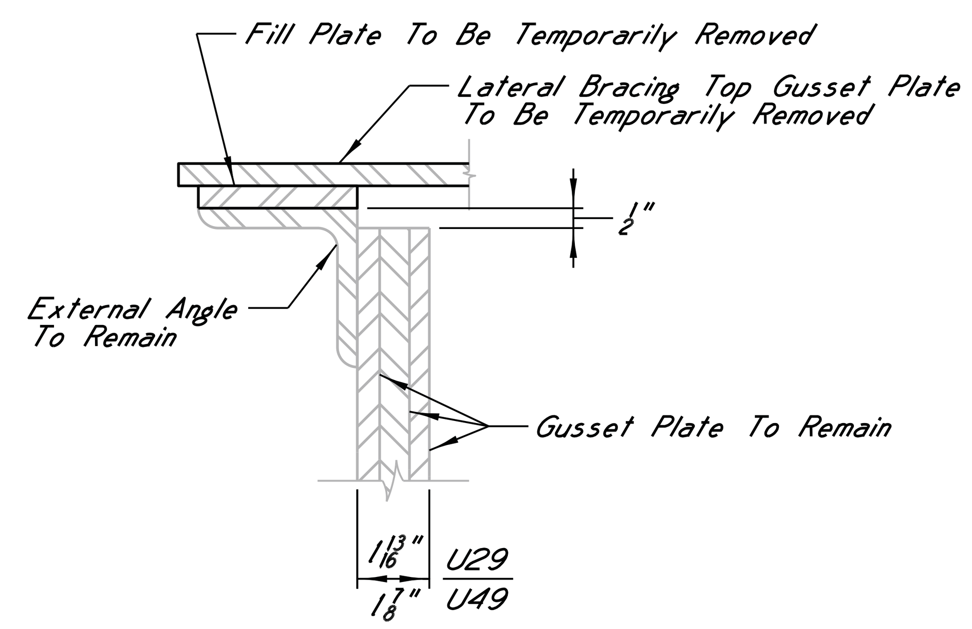


EXISTING MODIFICATION

VIEW B-B

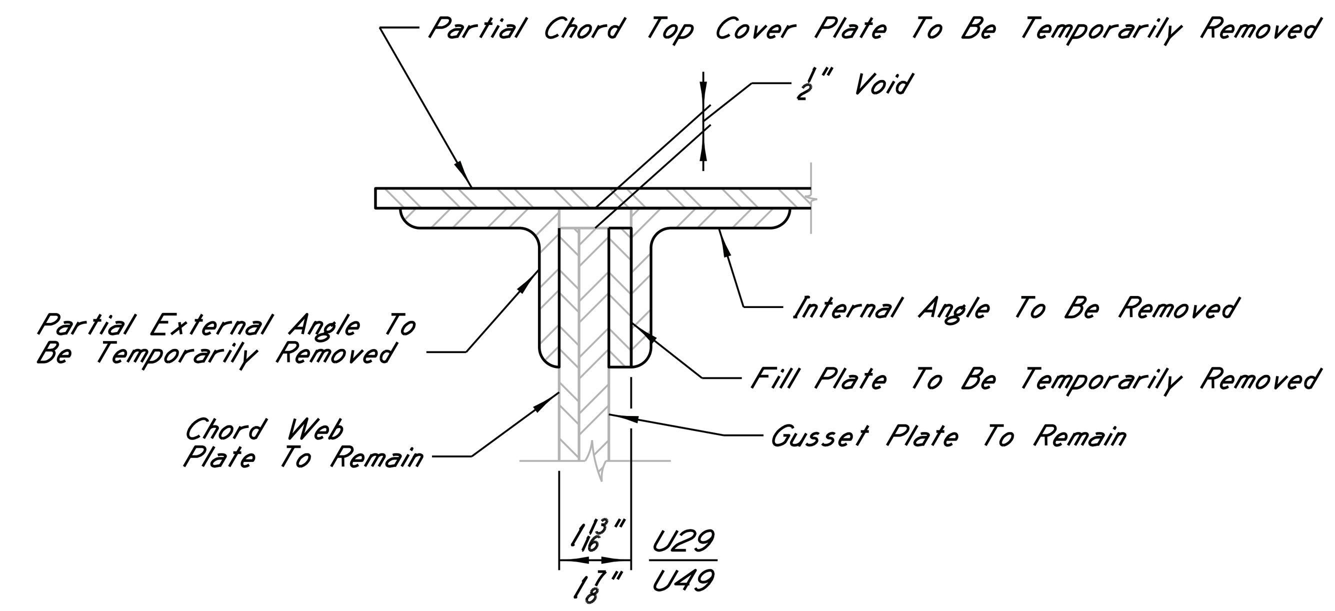
U29 Shown, U49 Similar As Noted.

Showing Existing To Remain After Removal At Top Of The Chord Consisting Of Lateral Bracing Top Gusset Plate, Internal Angles, And Fill Plates; And Partial Removal Of Top Cover Plate And External Angles. (See Existing Removal Details Above)



SECTION C-C

Existing



SECTION D-D

Existing

NOTES

For Location Of Views B-B, See Sheet A07.

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (4 OF 9)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

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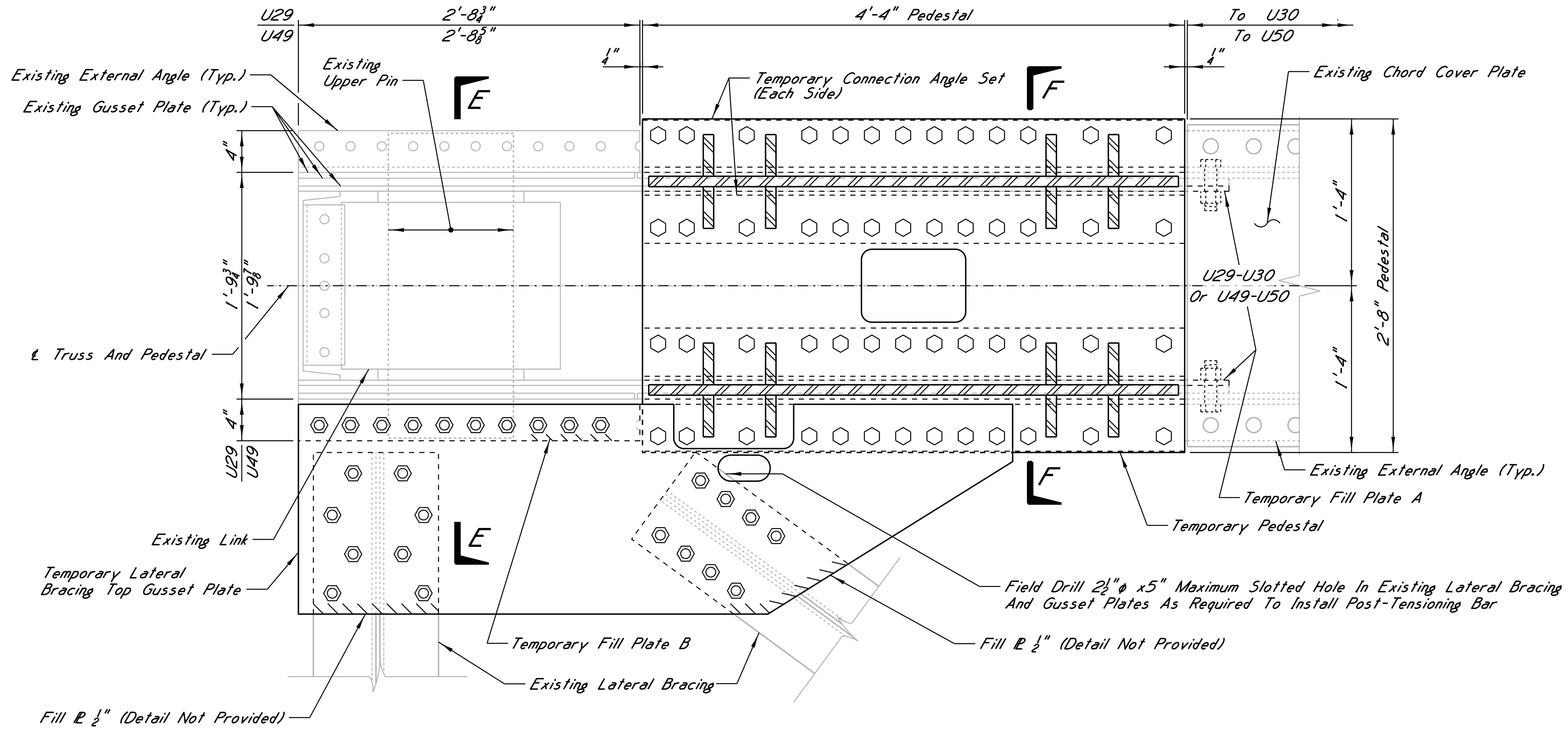
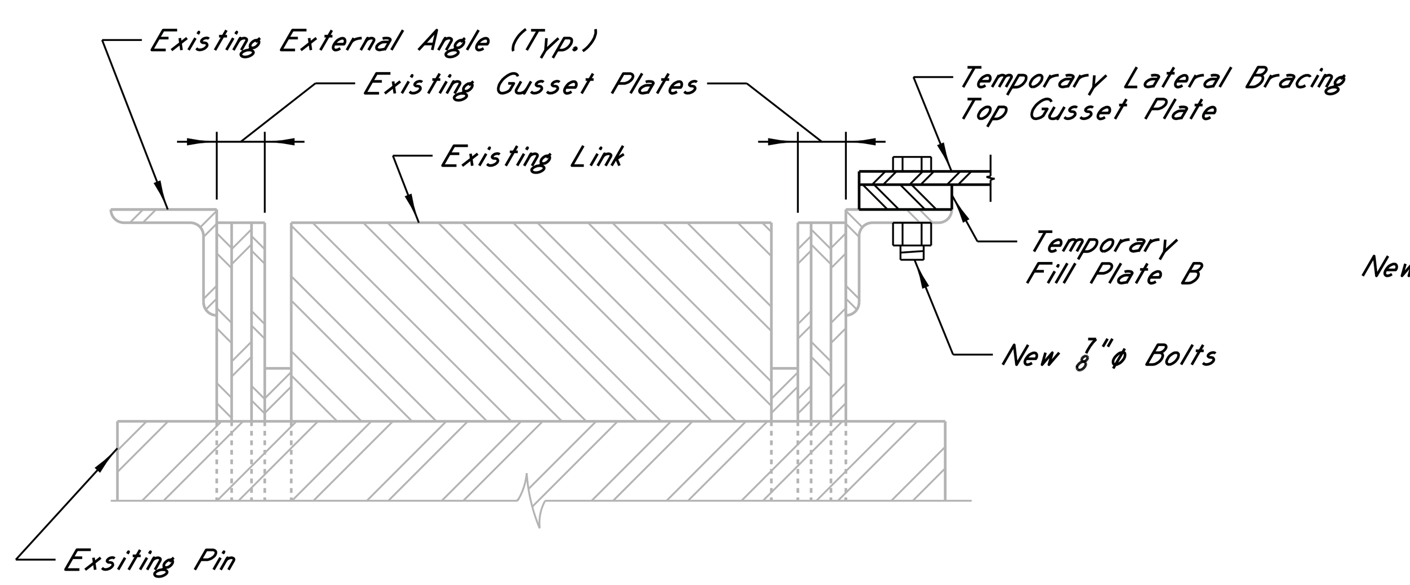


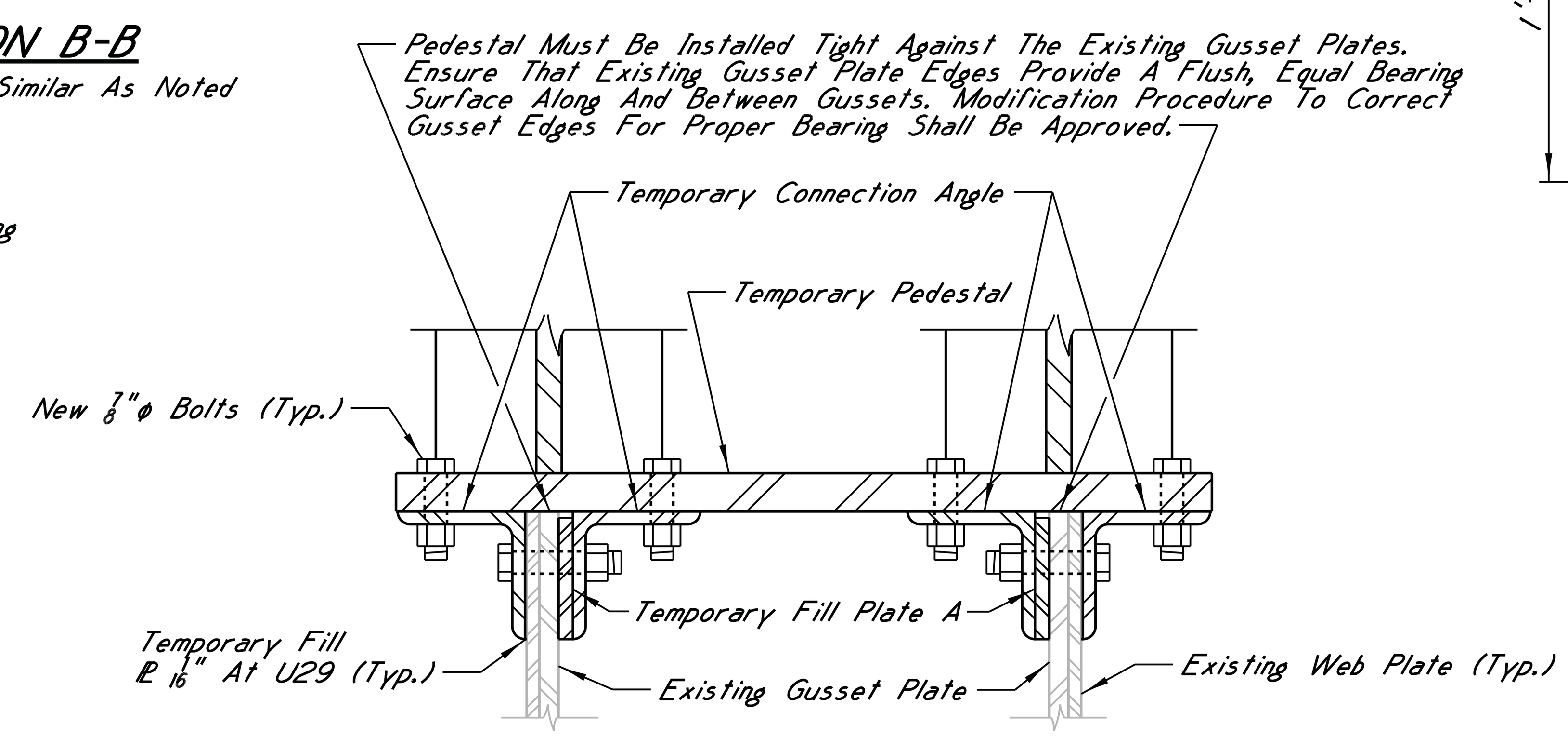
TEMPORARY UPPER BYPASS ANCHORAGE ON EXISTING TRUSS

SECTION B-B

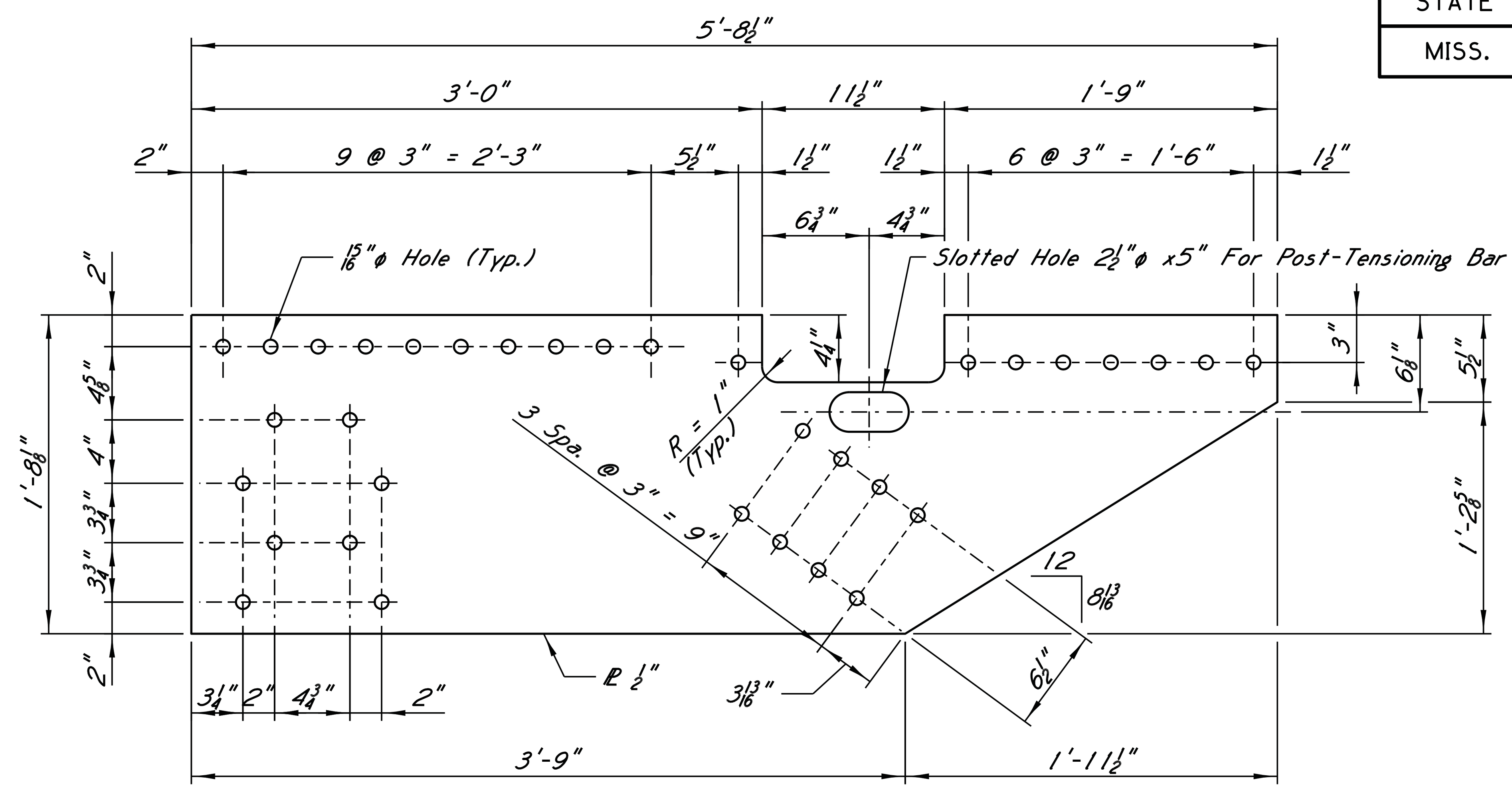
U29 Shown, U49 Similar As Noted



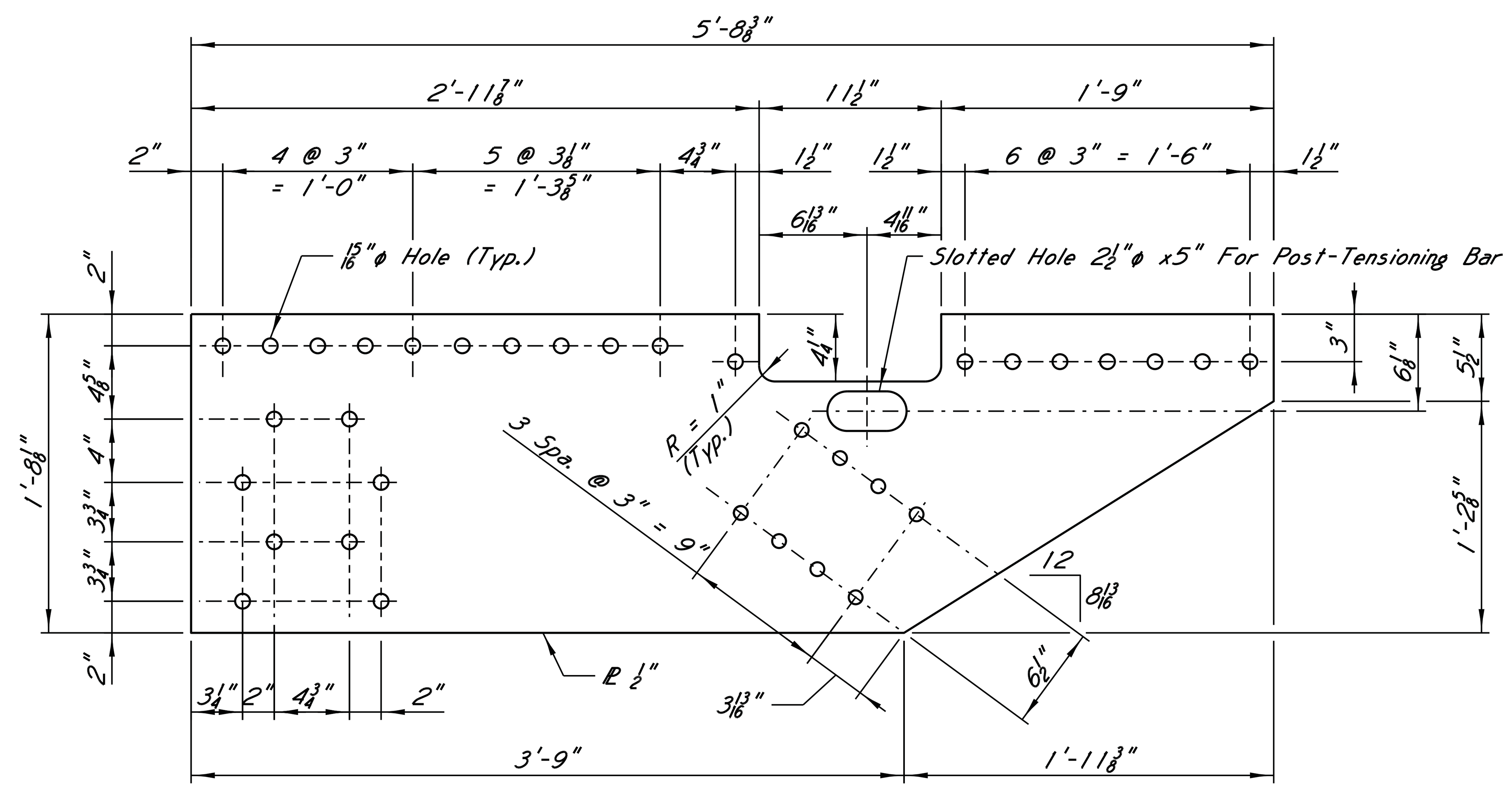
SECTION E-E



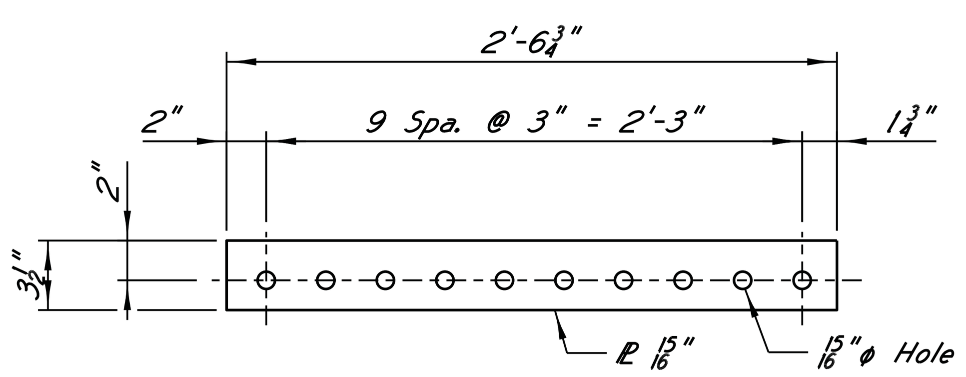
SECTION F-F



U29 LATERAL BRACING TOP GUSSET PLATE

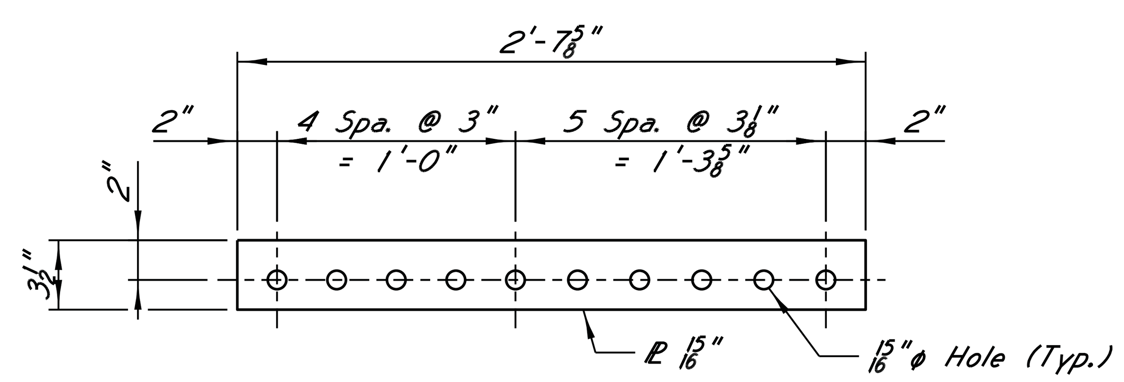


U49 LATERAL BRACING TOP GUSSET PLATE



U29 FILL PLATE B

One (1) Plate Required



U49 FILL PLATE B

One (1) Plate Required

LEGEND

- Existing Rivet Hole (Rivet Removed)
- Existing Rivet To Remain
- Remove Existing Rivet And Replace With New ⅞"φ Bolt In Existing Rivet Hole
- New ⅞"φ Bolt In New 15/16"φ Holes

NOTES

For Location Of Section B-B, See Sheet A07.
Top Of Pedestal Bottom Flange Sits 1/16" Higher Than The Top Of Fill Plate B And Existing Lateral Bracing To Facilitate Proper Bearing Of The Pedestal On The Gusset Plates.

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U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (5 OF 9)
PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

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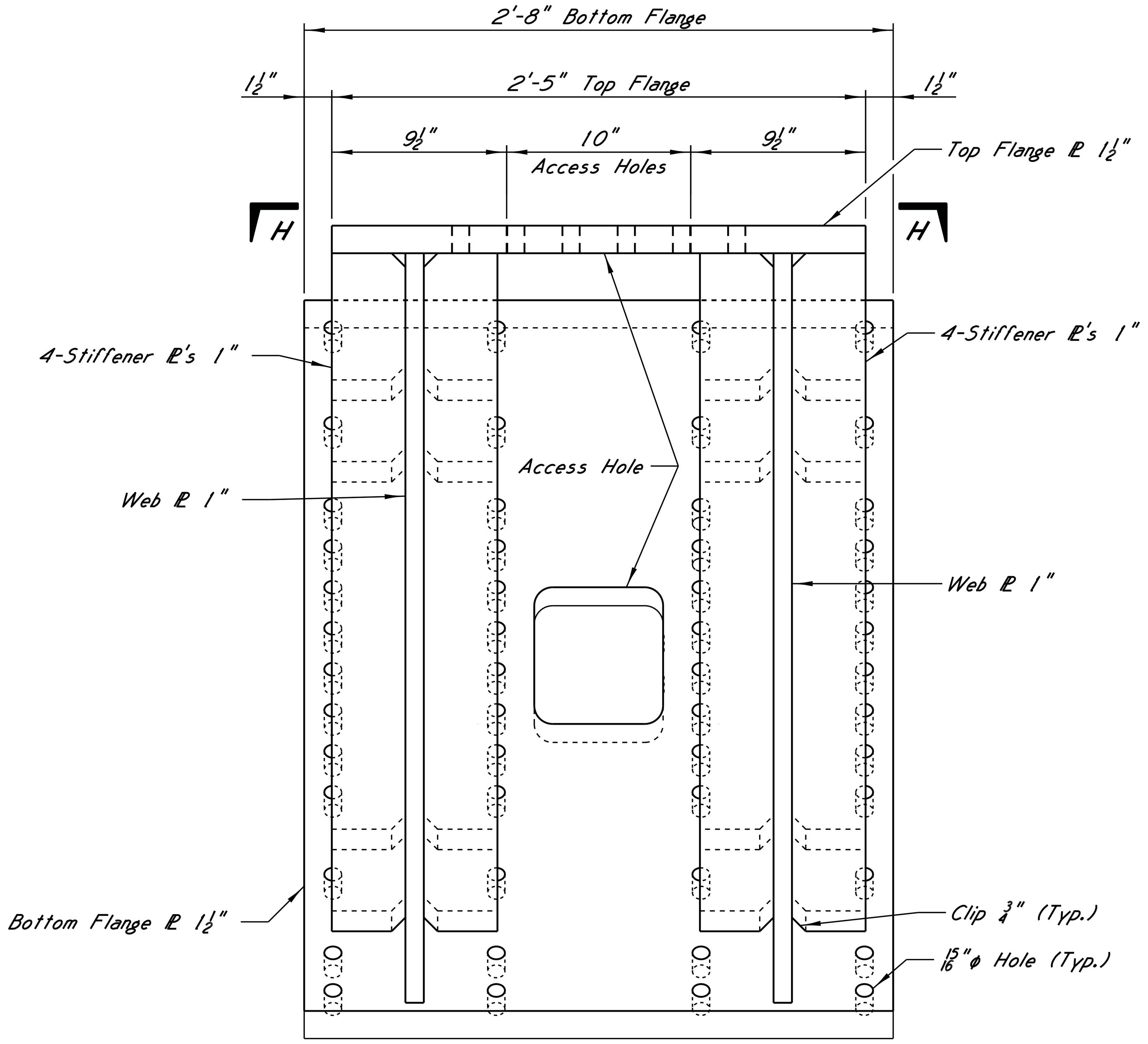
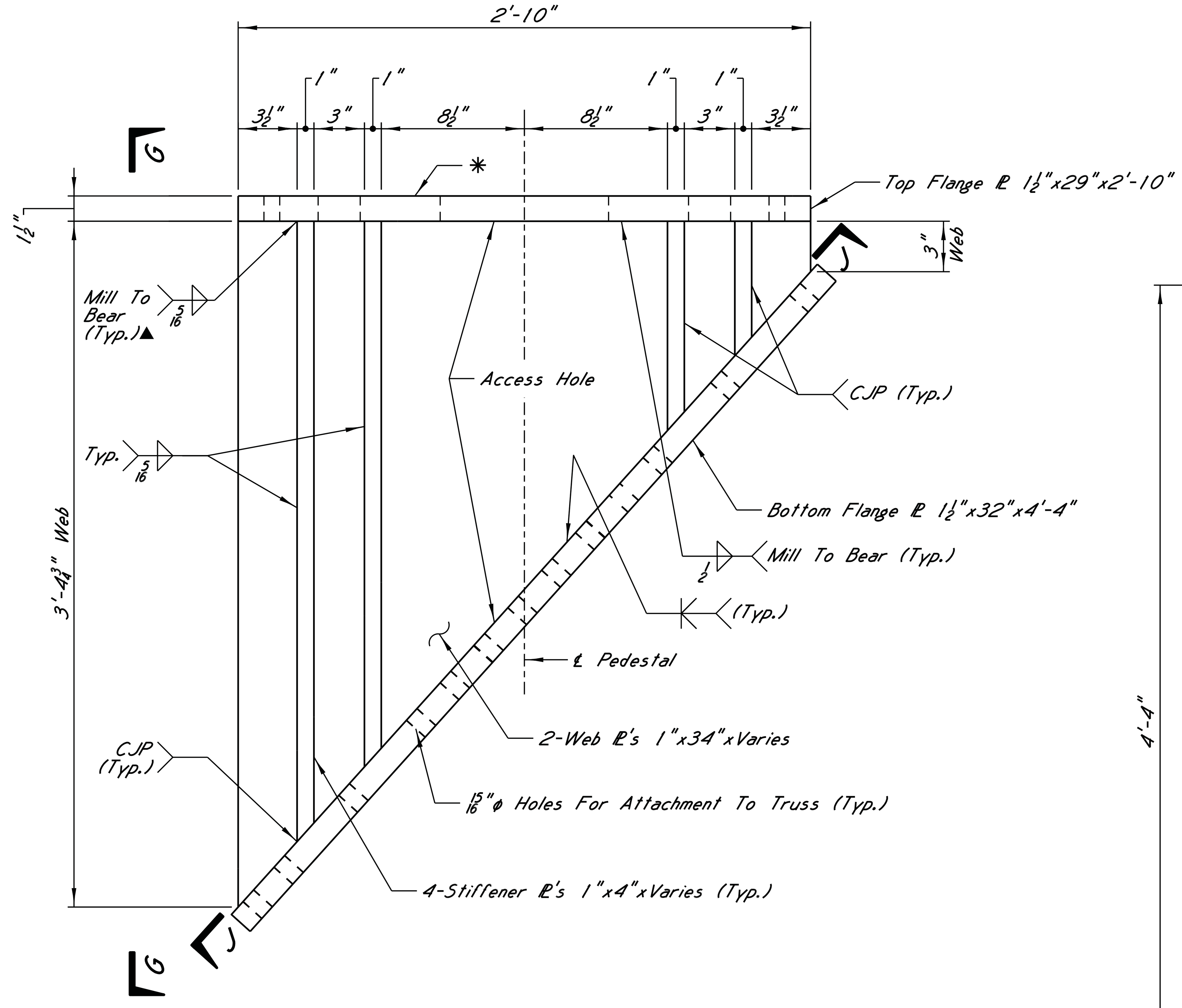


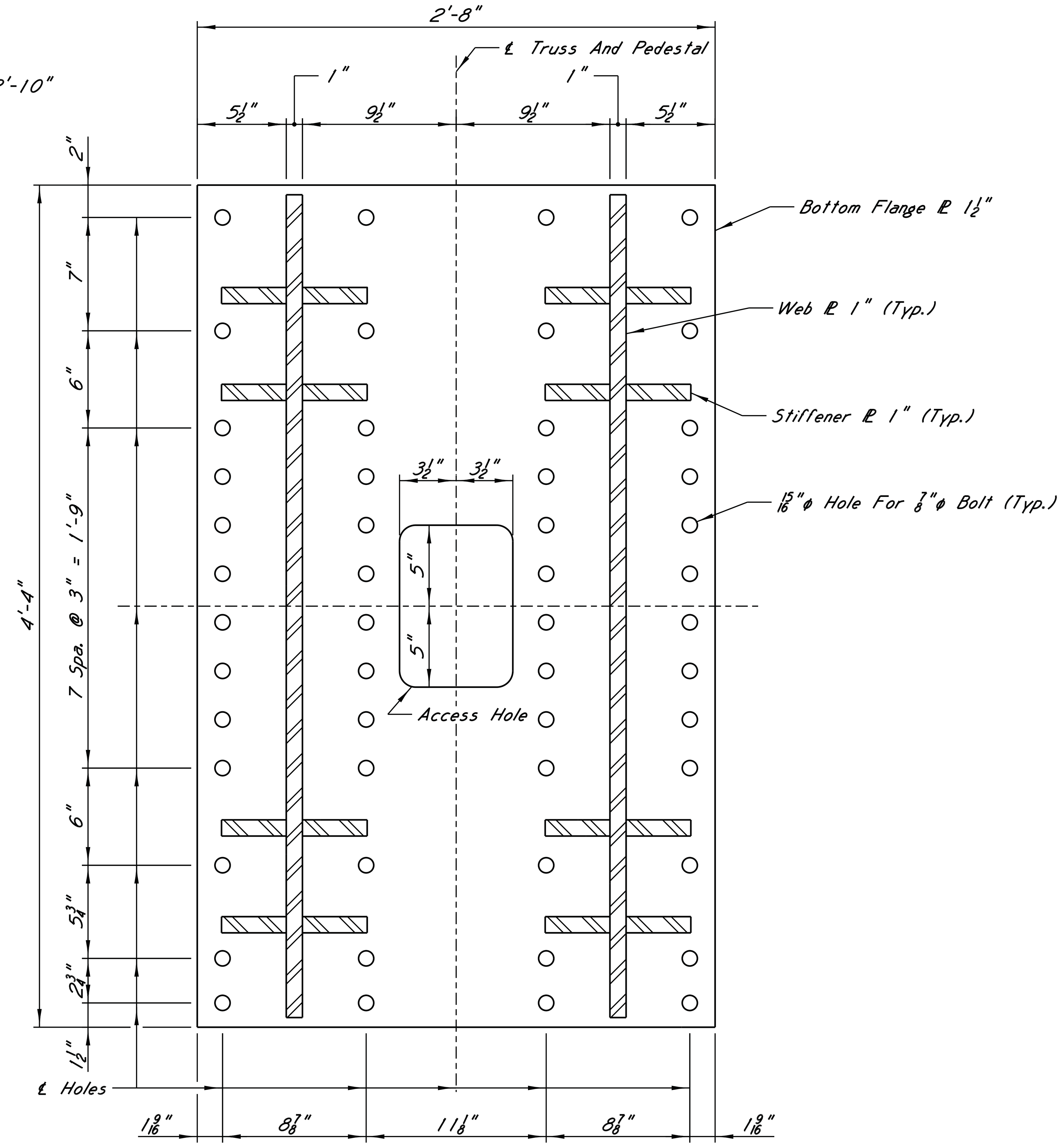
VIEW G-G



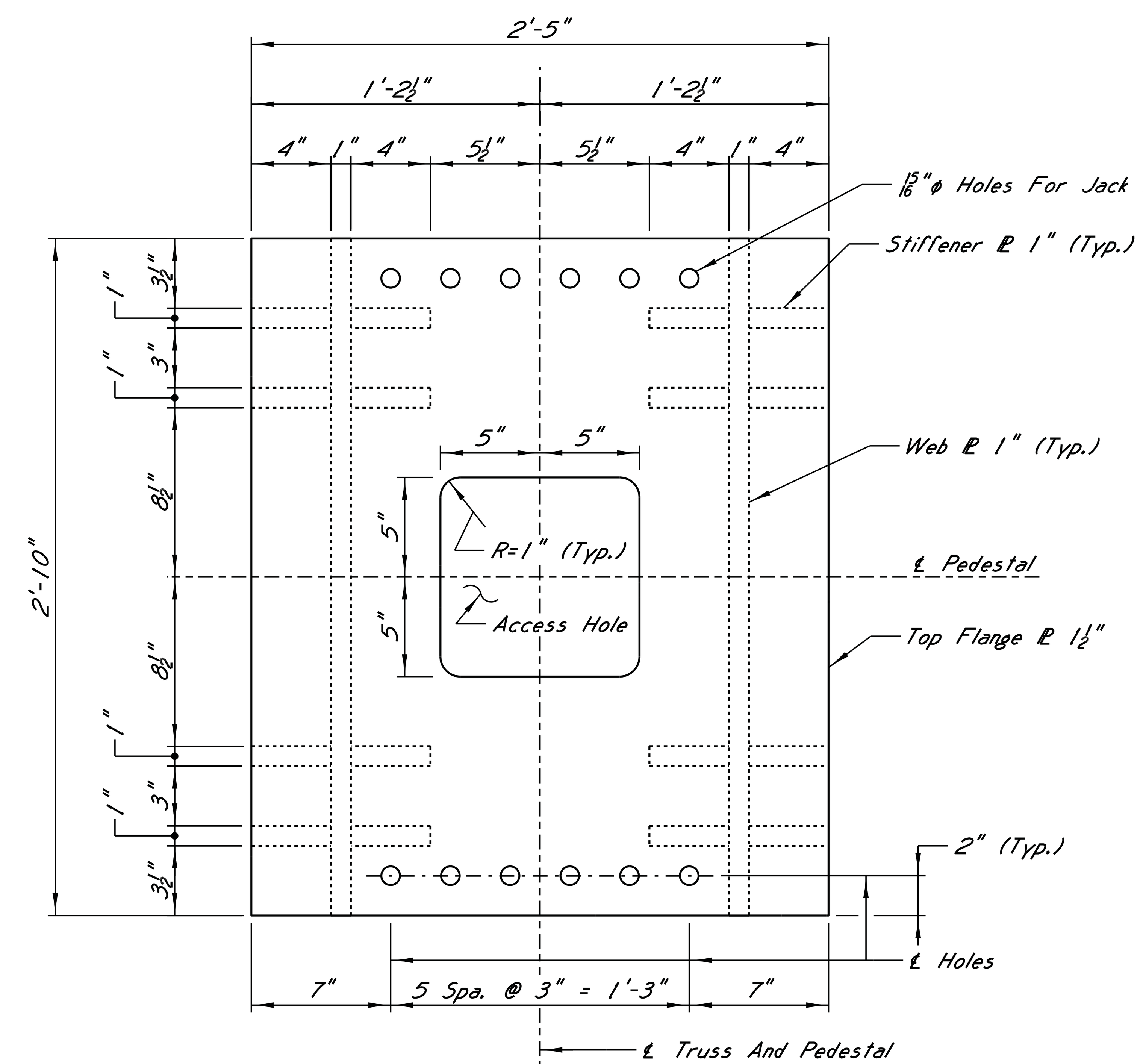
PEDESTAL DETAIL

✱ Pedestal Top Flange Shall Be Installed Normal To Required Post-Tensioning Bar Alignment. Contractor Shall Field Verify Required Installed Post-Tensioning Bar Geometry Prior To Shop Drawings And Fabrication Of Pedestal To Ensure Proper Alignement. (Installation Orientation Not Shown)

▲ Stiffeners Located Between The Webs May Substitute (At The Top Flange Weld) ¼" Fillet Weld To One Side In Lieu Of 3/16" Fillet Welds To Both Sides



SECTION J-J



VIEW H-H

NOTES

For Location Of Pedestal (As Part Of The Temporary Upper Bypass Anchorage) See Sheet A07.
For Typical Stiffener Fillet Weld Detail, See Sheet A02.

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY
UPPER BYPASS ANCHORAGE
(6 OF 9)
PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

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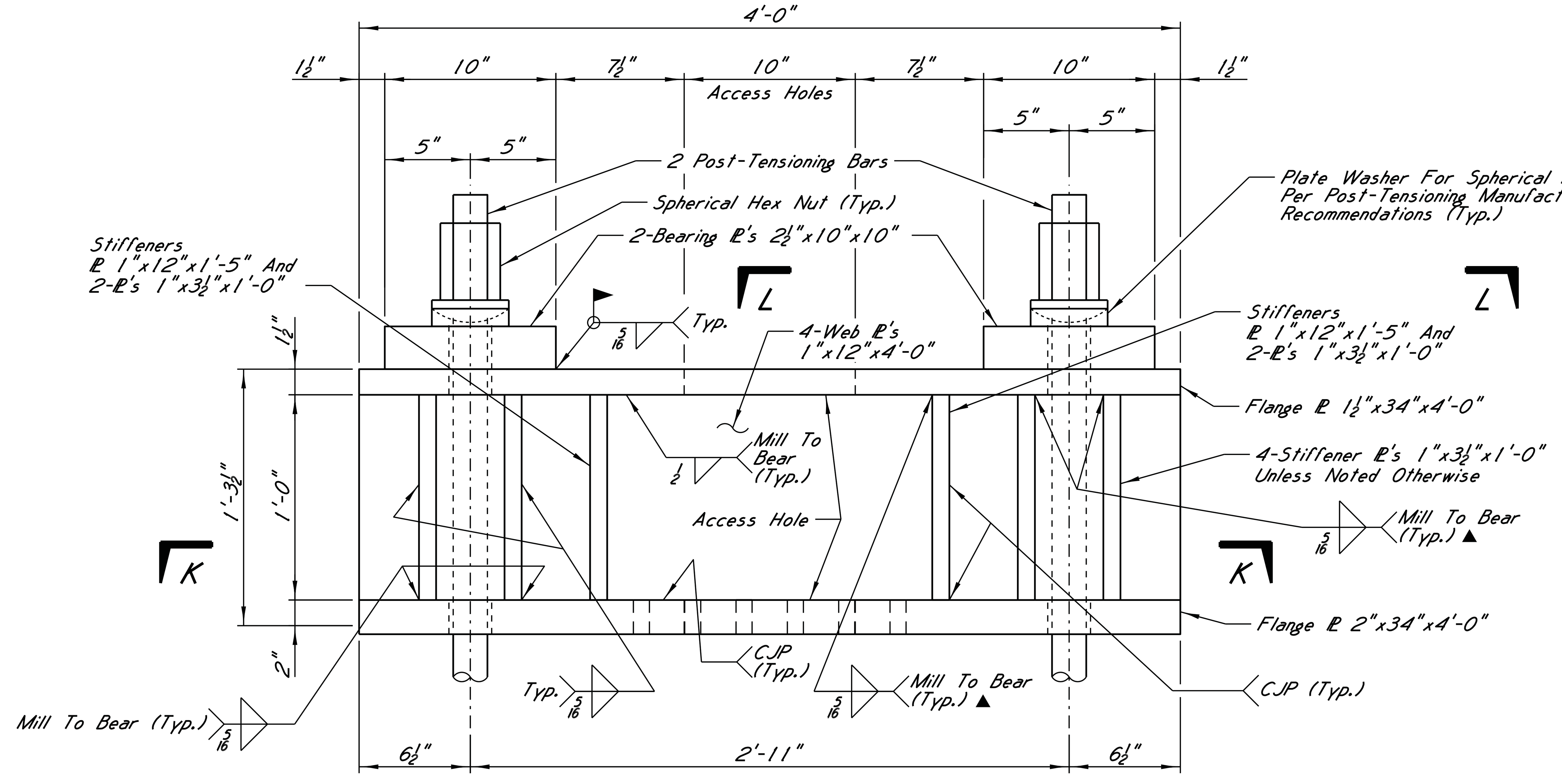
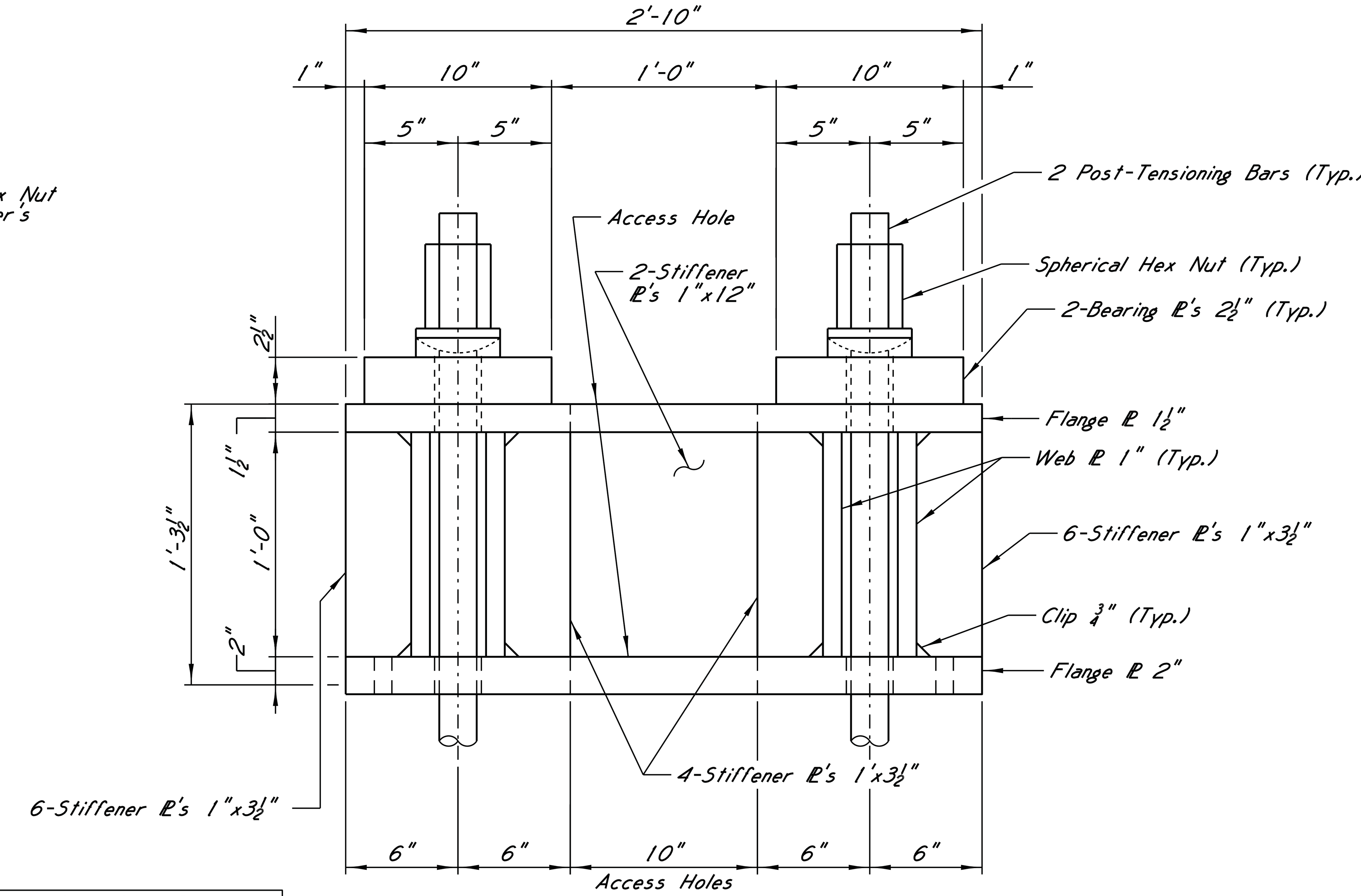
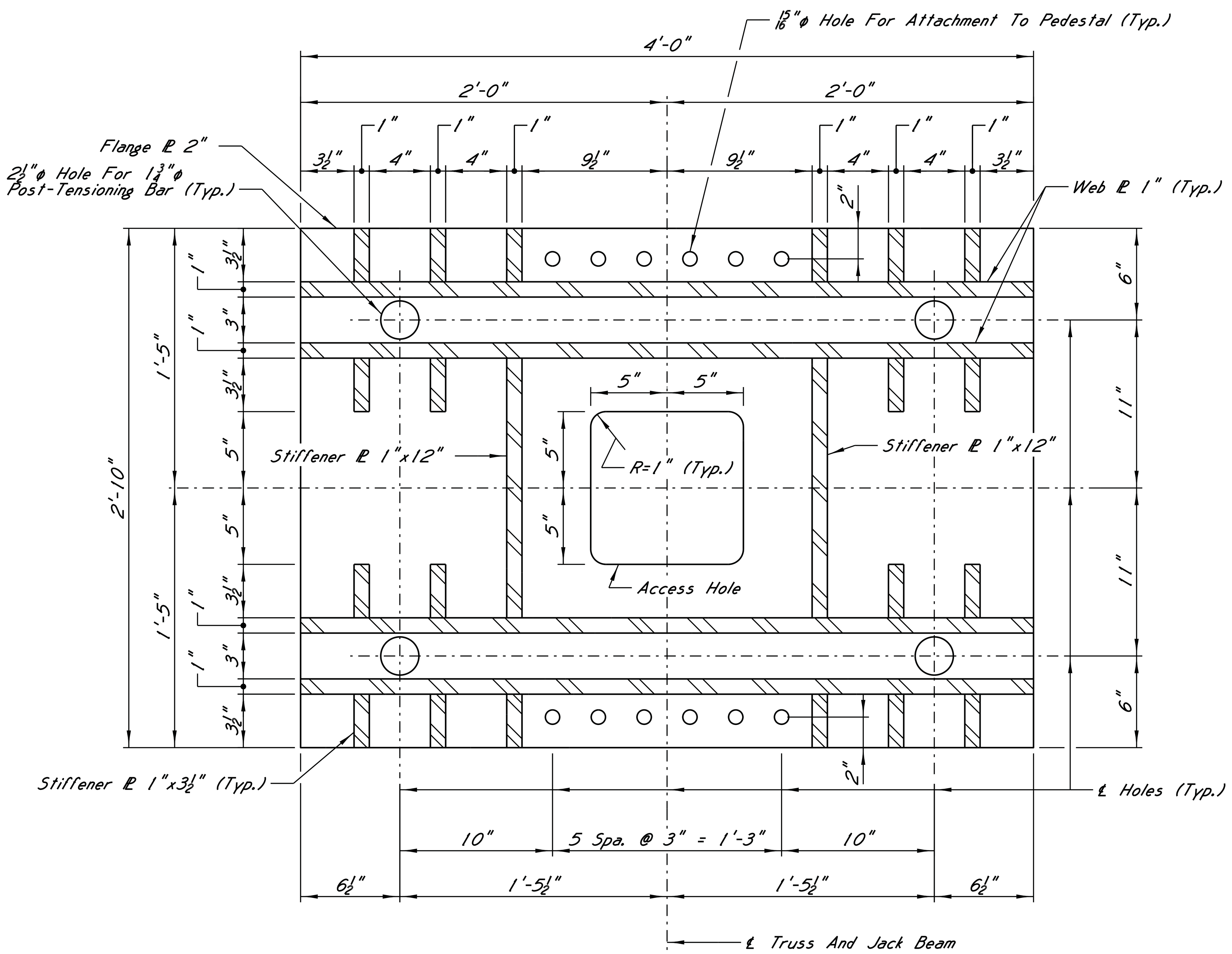


JACK BEAM ELEVATION

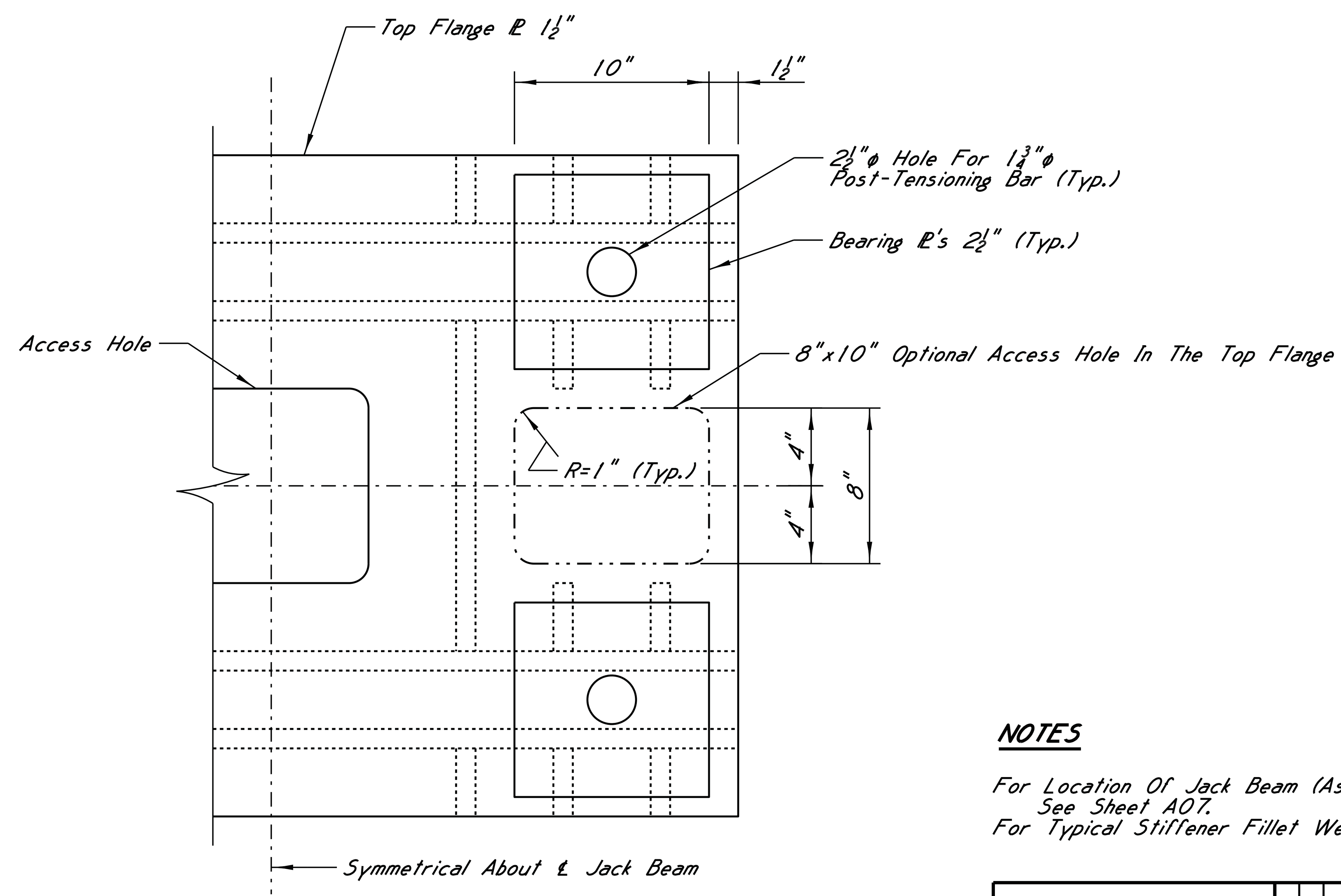
▲ Stiffeners Located Between The Internal Webs May Substitute (At The Top Flange Weld) ½" Fillet Weld To One Side In Lieu Of 5/16" Fillet Welds To Both Sides



JACK BEAM END ELEVATION



SECTION K-K



VIEW L-L

Showing Optional Access Holes In The Top Flange

NOTES

For Location Of Jack Beam (As Part Of The Temporary Upper Bypass Vertical Restraint), See Sheet A07.
For Typical Stiffener Fillet Weld Detail, See Sheet A02.

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U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (7 OF 9)
PROJECT BR-0015-01(120)
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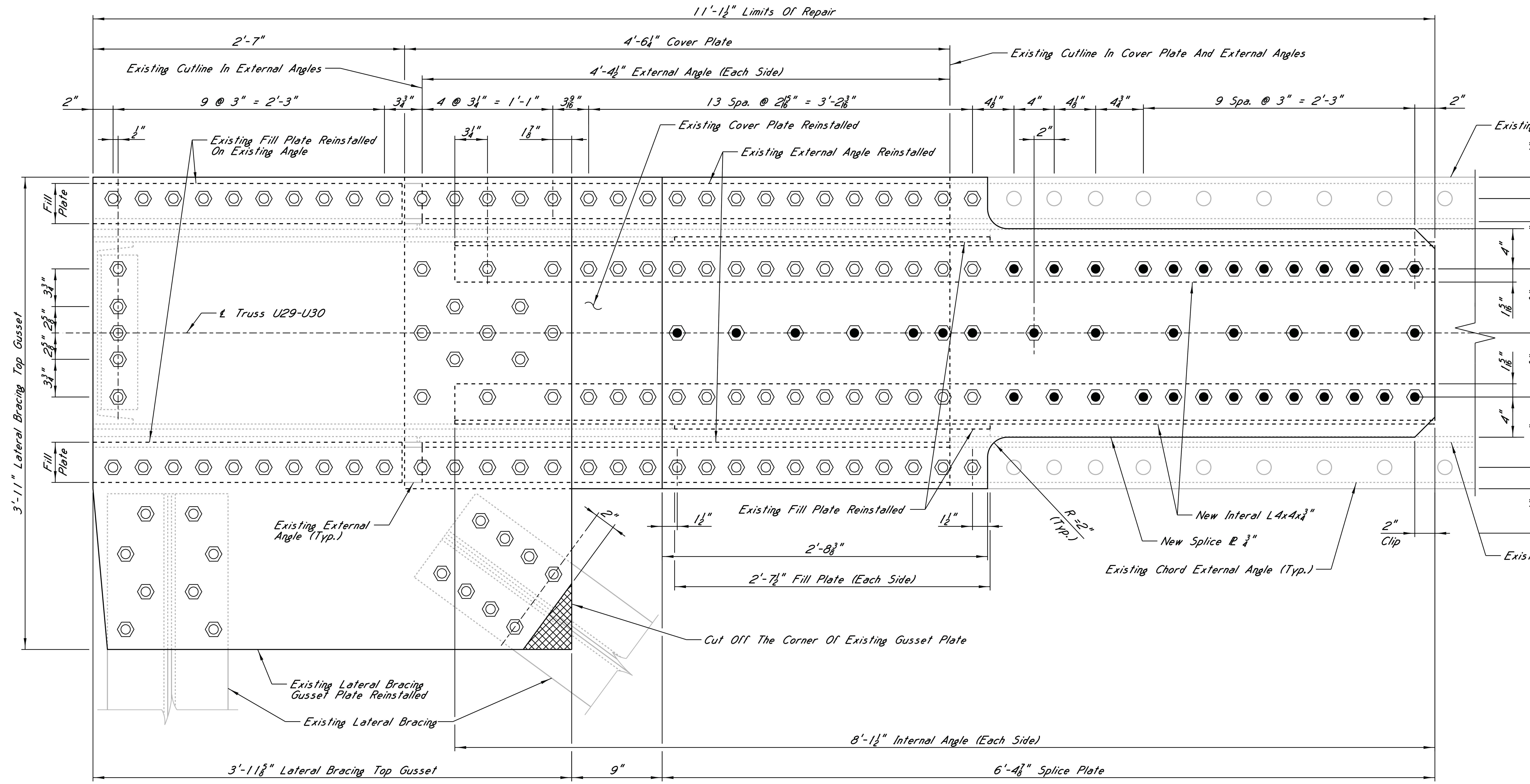


LEGEND

- Existing Rivet To Remain
- New ⅞"ϕ Bolt In Existing Rivet Holes And New 15/16"ϕ Holes As Applicable
- New ⅞"ϕ Bolt In New 15/16"ϕ Holes

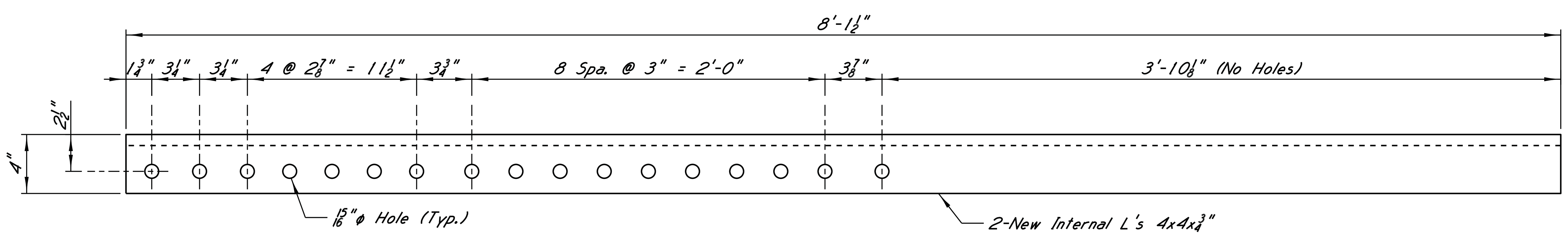
REPAIR OF EXISTING TRUSS

U29 VIEW B-B

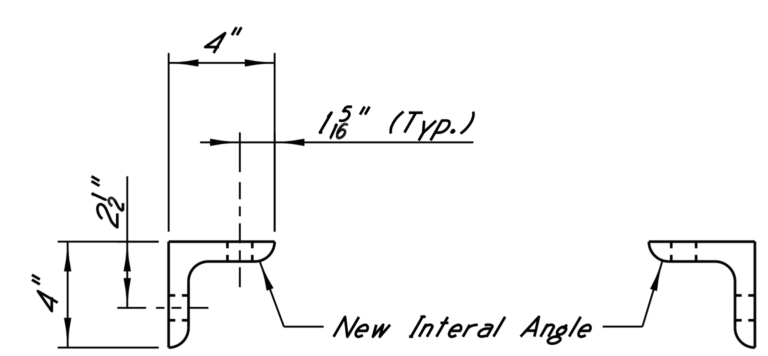
Showing Repair Of Existing Truss Following Link Replacement

NOTES

For Location Of View B-B, See Sheet A07.
Existing Plates And Angles To Be Reinstalled Shall Be Approved By The Engineer To Be In Satisfactory Condition. Rejected Materials Shall Be Replaced In-Kind.



U29 INTERNAL ANGLES ELEVATION



END VIEW

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U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (8 OF 9)

PROJECT BR-0015-01(120)
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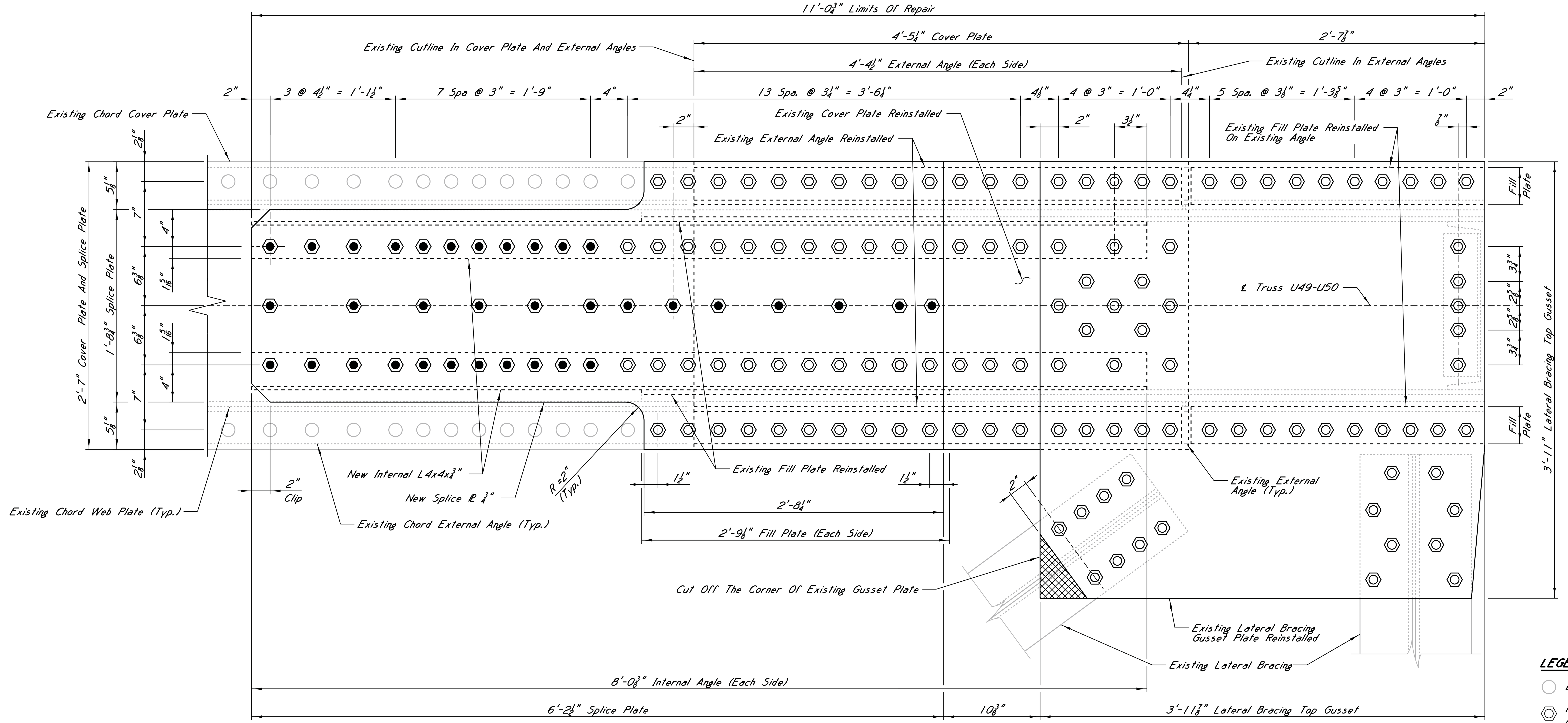


LEGEND

- Existing Rivet To Remain
- New 7/8"ø Bolt In Existing Rivet Holes And New 15/16"ø Holes As Applicable
- New 7/8"ø Bolt In New 15/16"ø Holes

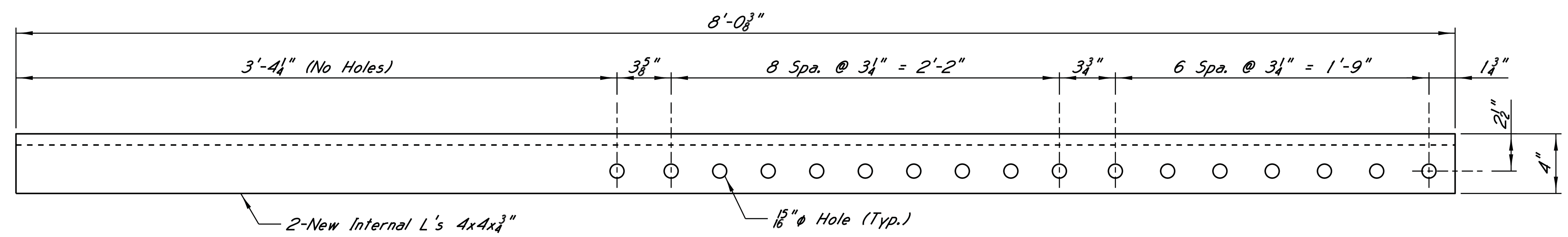
REPAIR OF EXISTING TRUSS

U49 VIEW B-B

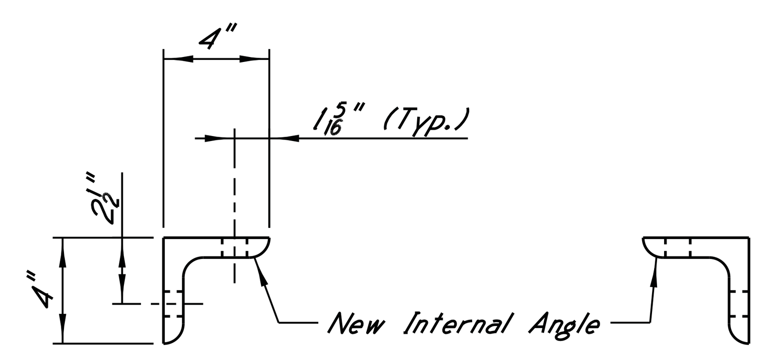
Showing Repair Of Existing Truss Following Link Replacement

NOTES

For Location Of View B-B, See Sheet A07.
Existing Plates And Angles To Be Reinstalled Shall Be Approved By The Engineer To Be In Satisfactory Condition. Rejected Materials Shall Be Replaced In-Kind.



U49 INTERNAL ANGLES ELEVATION



END VIEW

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19068
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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE
U29 & U49 TEMPORARY UPPER BYPASS ANCHORAGE (9 OF 9)
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SHEET NUMBER 8013

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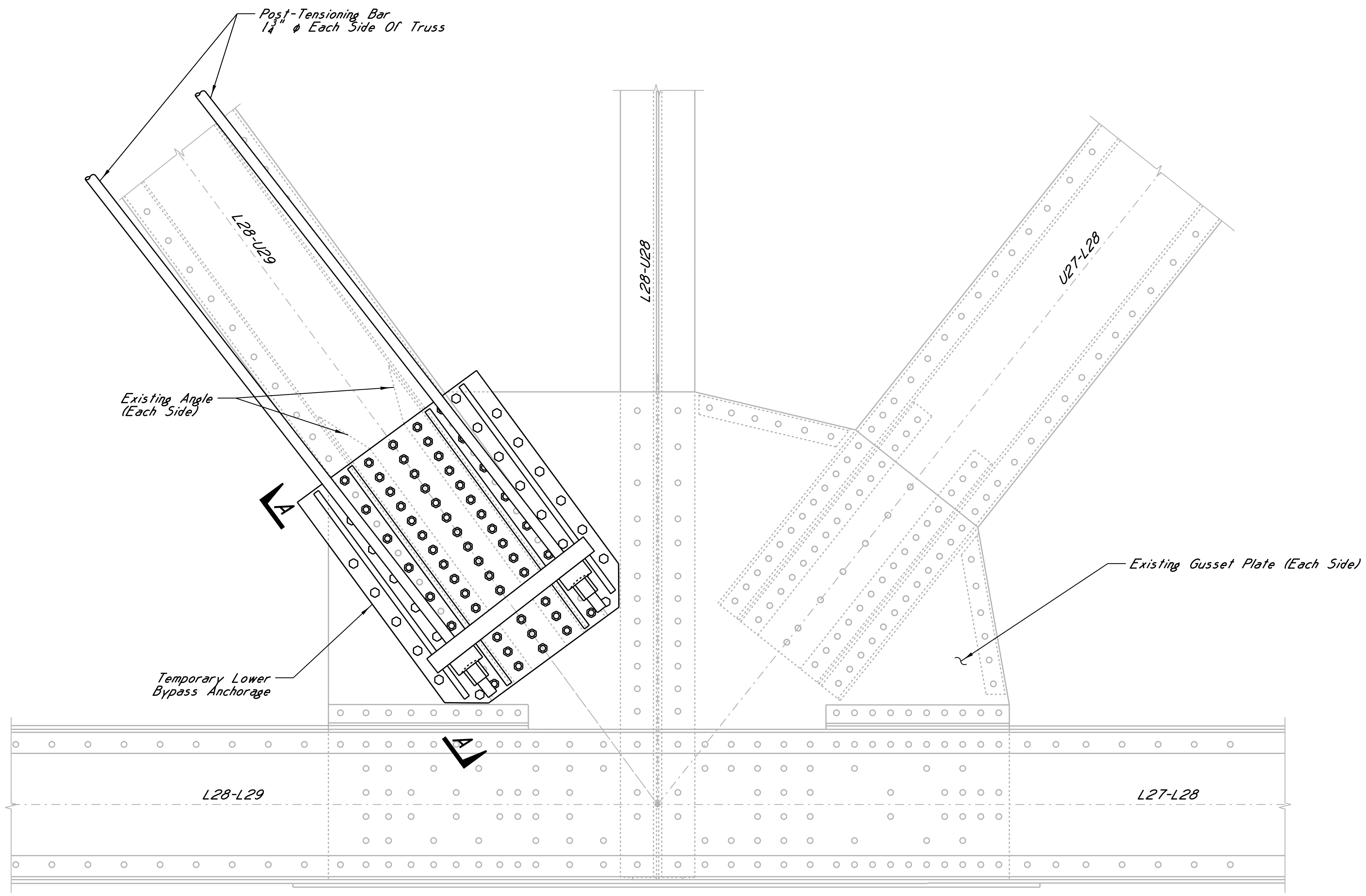

L28 DOWNSTREAM (SHOWN) AND L48 UPSTREAM (SIMILAR) TEMPORARY LOWER BYPASS ANCHORAGE

Floorbeam And Lateral Bracing Not Shown For Clarity

LOWER BYPASS ANCHORAGE INSTALLATION STEPS

Step LBA-1: Remove Existing Affected Rivets And Replace With New All-Thread Rods With A Nut And Washer Each Side, Tightened. Rivets To Be Removed And Replaced One At A Time.

Step LBA-2: Field Drill Remaining Holes In Gusset Plates And Place New All-Tread Rod With A Nut And Washer Each Side At Each Location.

Step LBA-3: Install Exterior Plate Assemblies (2 Required) And Interior Plate Assemblies (4 Required).

Step LBA-4: Determine Locations Of Required Field Drilled Holes In Diaphragm Plates And Drill Holes. Then Install The Diaphragm Plates (14 Required).

Step LBA-5: Install Post-Tensioning Bars In Coordination With Upper Bypass Anchorage Installation.

NOTES

For General Notes, See Sheet A02.
For Suggested Sequence Of Construction, See Sheet A04.
For Section A-A, See Sheet A15.
For Installation And Tensioning Of The Post-Tensioning Bars, See Upper Bypass Anchorage Sheets A05 Through A13.

LEGEND

- ○ Existing Rivet To Remain
- New ⅞"φ A354, Grade BD All-Thread Rod In Existing Rivet Hole
- New ⅞"φ A354, Grade BD All-Thread Rod In New 15/16"φ Holes (Field Drilled Into Gussets)

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James P. Gregg

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE
L28 AND L48 TEMPORARY LOWER BYPASS ANCHORAGE (1 OF 4)
PROJECT BR-0015-01(120) 106487/301000
ADAMS COUNTY

WORKING NUMBER A14
SHEET NUMBER 8014

DESIGNED M.Xin DETAILED B.Gautreau TRACED
CHECKED J.Gregg ISSUED DATE

2nd O.REV.

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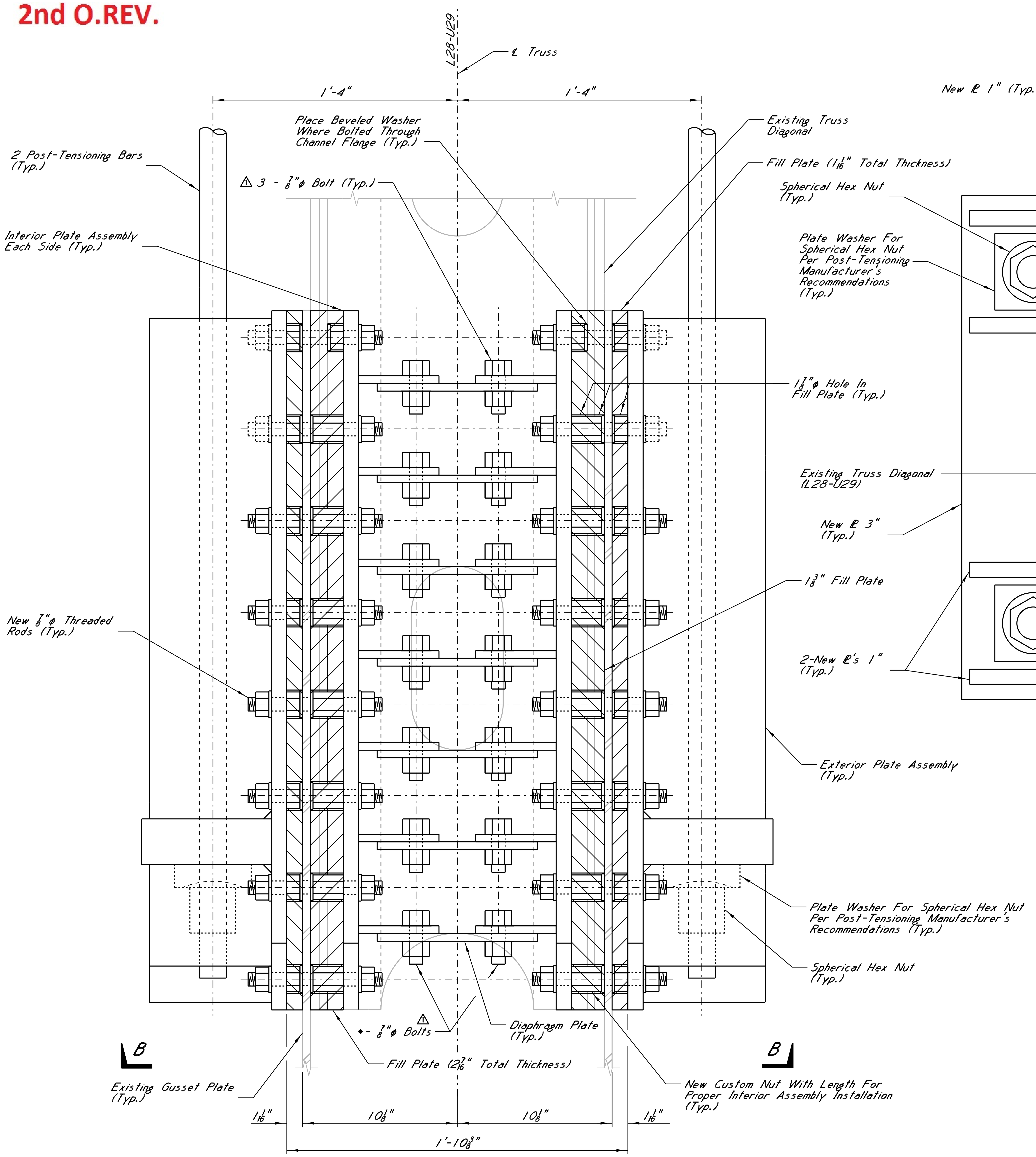
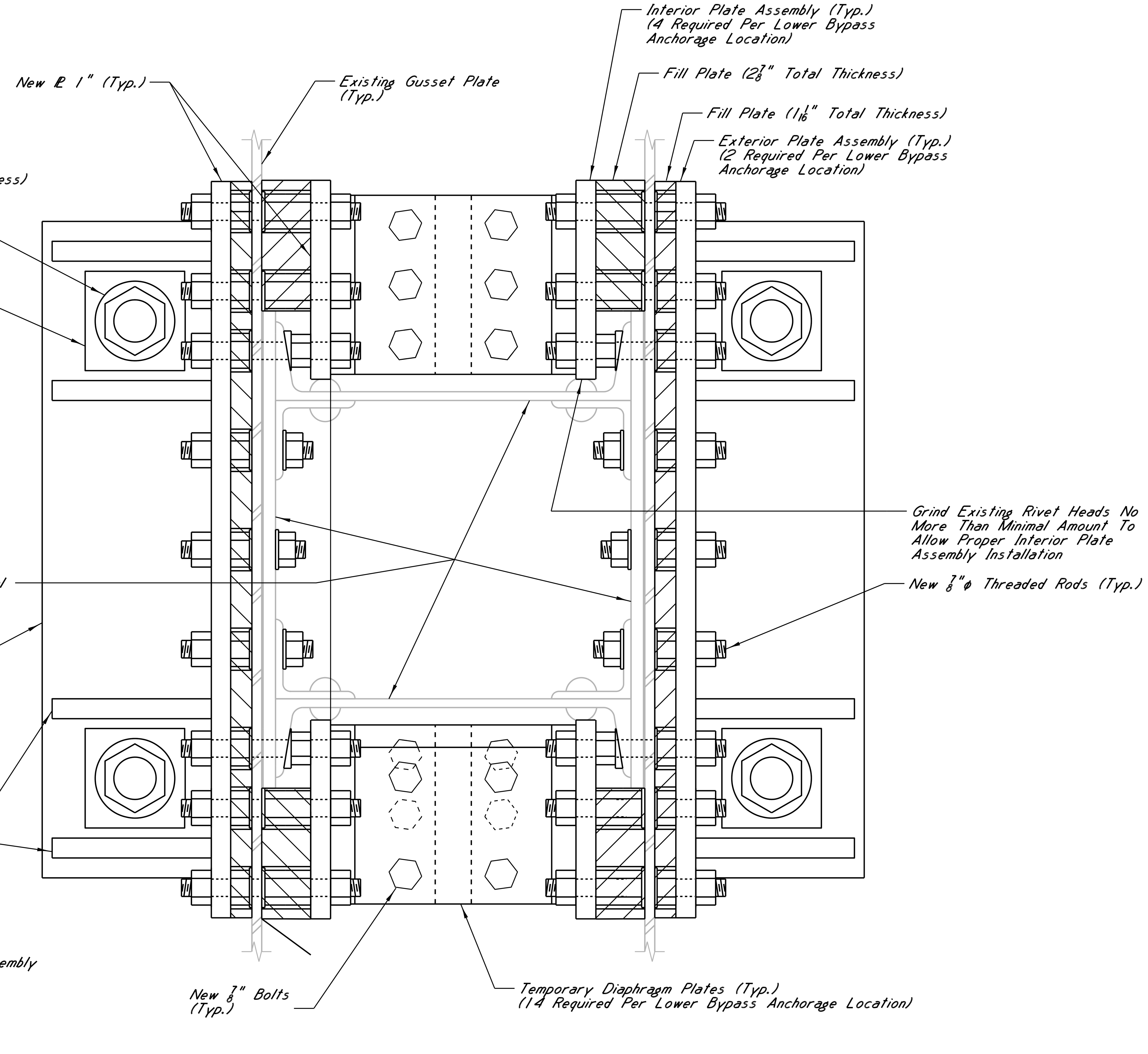
MISS.	BR-0015-01(120)



• 3 Bolts Near Side, 2 Bolts Far Side

L28 SECTION A-A

Section A-A Rotated 90° For Perspective
L48 Similar



L28 SECTION B-B

L48 Similar

NOTES

For Location Of Section A-A, See Sheet A14.
All Fill Plates Shall Bear On Adjacent Plates.

SEAL:

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REGISTERED PROFESSIONAL ENGINEER
19496
STATE OF MISSISSIPPI

DATE: 4/13/15

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4/7/15	UPDATED SECTION A-A AND B-B	JPG

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE
L28 AND L48 TEMPORARY LOWER BYPASS ANCHORAGE (2 OF 4)
PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

WORKING NUMBER A15
SHEET NUMBER 8015

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jgregg
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2nd O.REV.

* Provide 3-15/16"⌀ Holes In 9" Wide Plates. When Plate Width Is Reduced, Omit Hole As Necessary.

** Contractor Shall Field Measure Dimension And Field Drill Plate.

*** Bolt Locations Could Conflict With Post-Tensioning Rod Plate Washer. If Conflict is Unavoidable, Prior To Fabrication, Contractor, Shall Relocate Holes To A More Suitable Location Pending Engineer's Approval.

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REVISIONS: 4/7/15 — ADDED SECTION F-F, DIA. PLATE DETAIL — JPG

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

L28 AND L48 TEMPORARY LOWER BYPASS ANCHORAGE (3 OF 4)

PROJECT BR-0015-01(120) 106487/301000

ADAMS COUNTY

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SHEET NUMBER 8016

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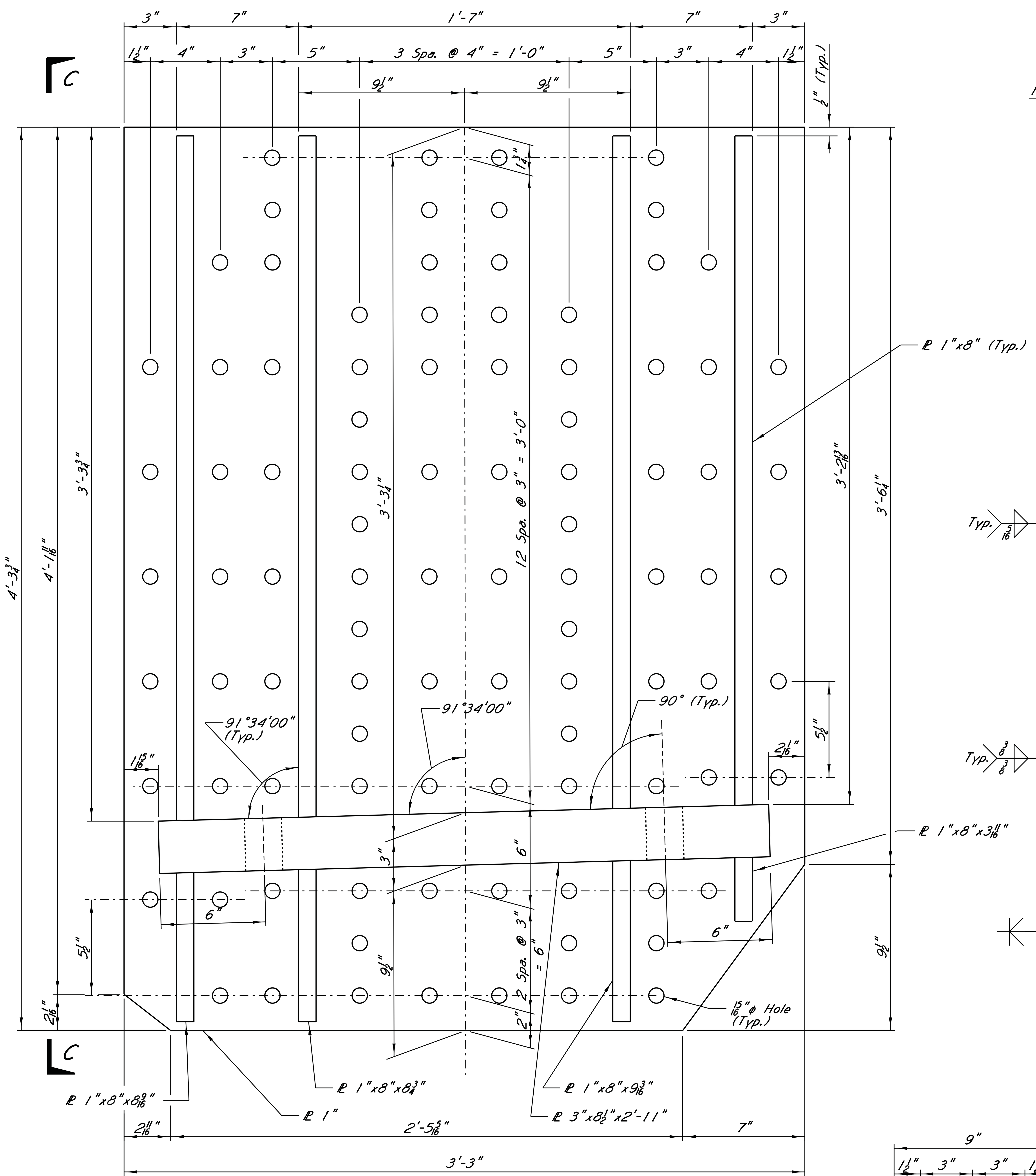
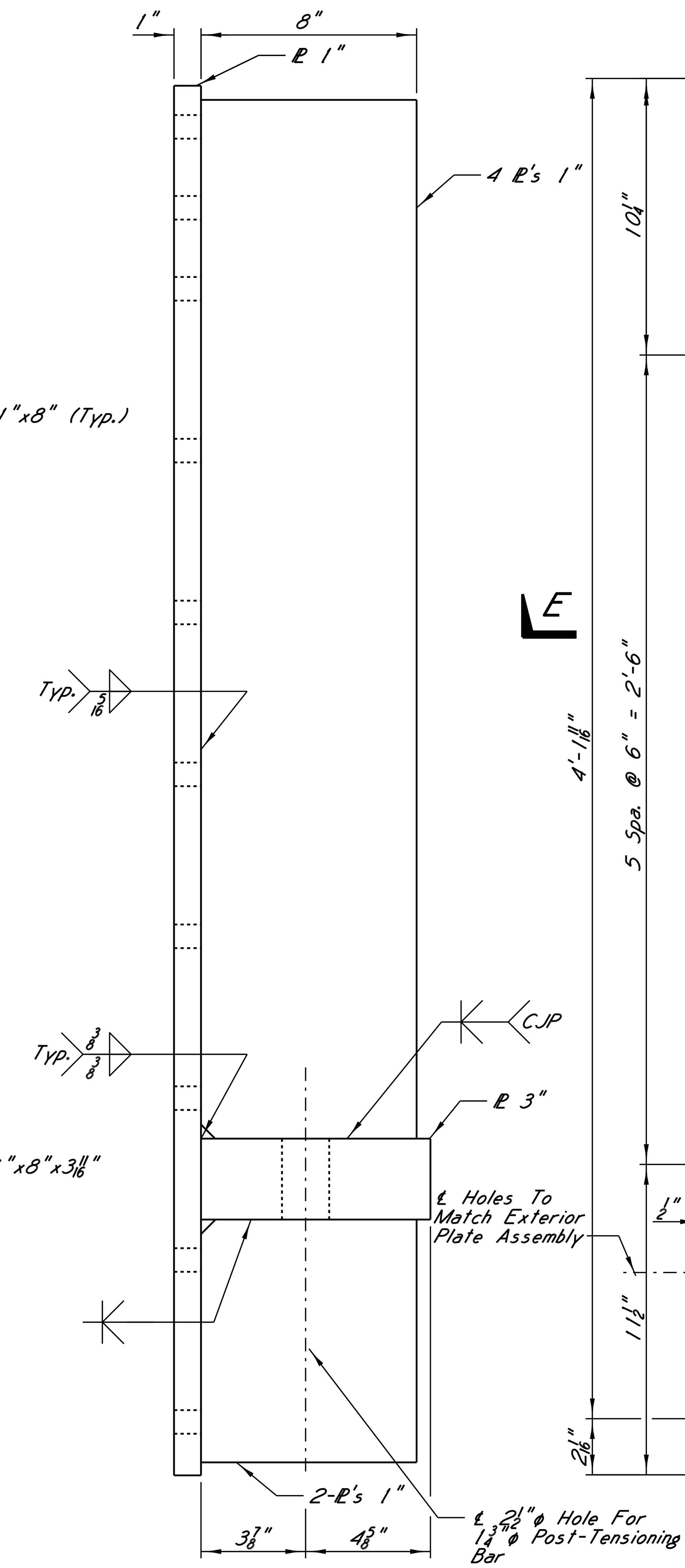
MISS.	BR-0015-01(120)

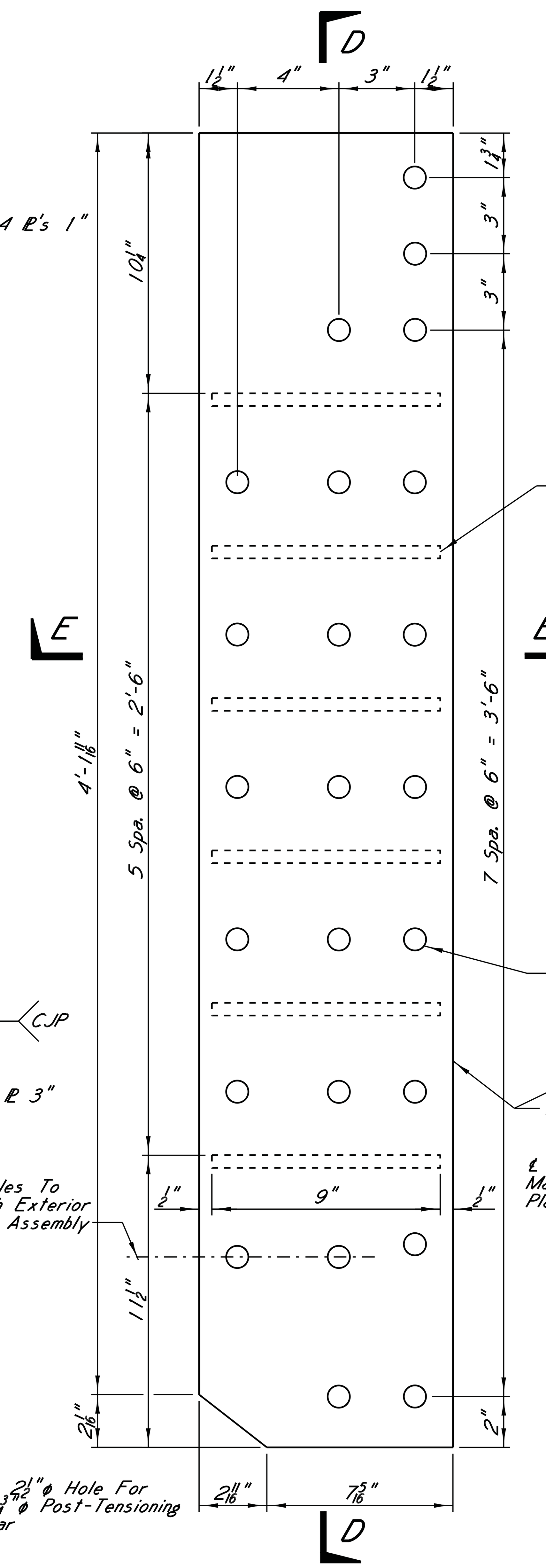


L48 EXTERIOR PLATE ASSEMBLY

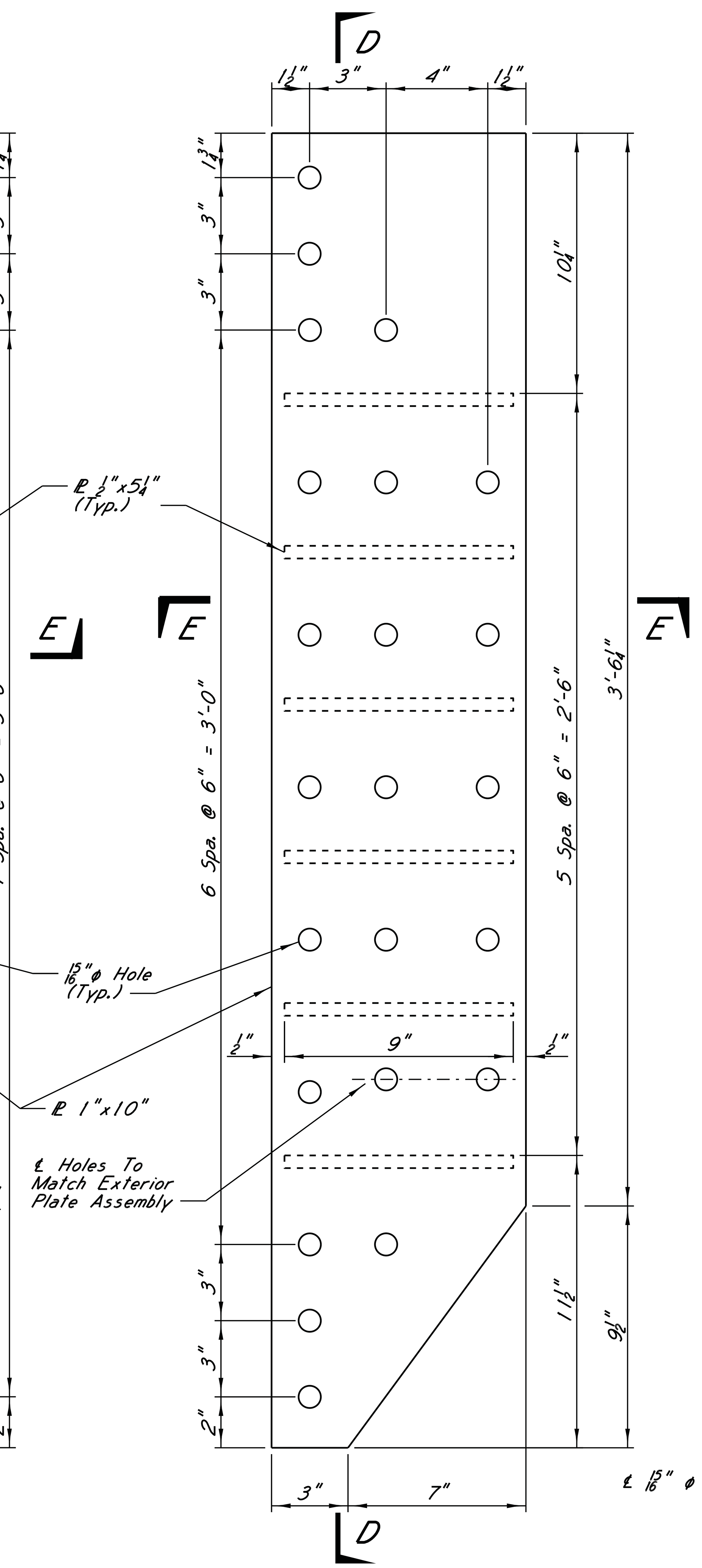
2 Required, Each Opposite Hand



VIEW C-C



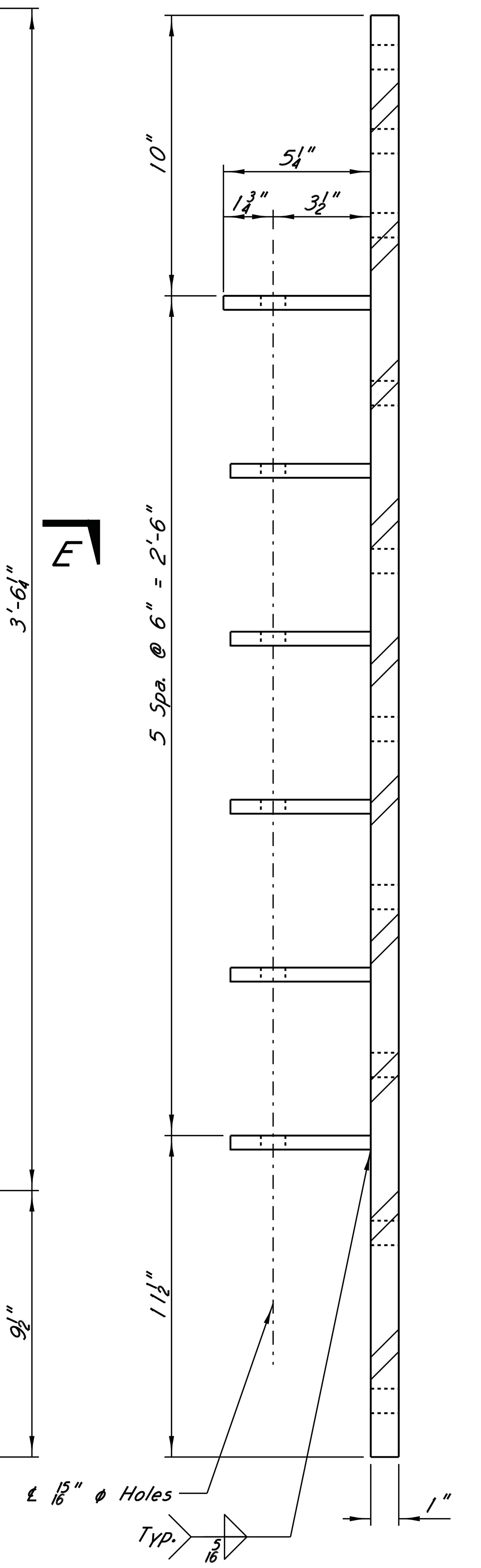
TYPE 1



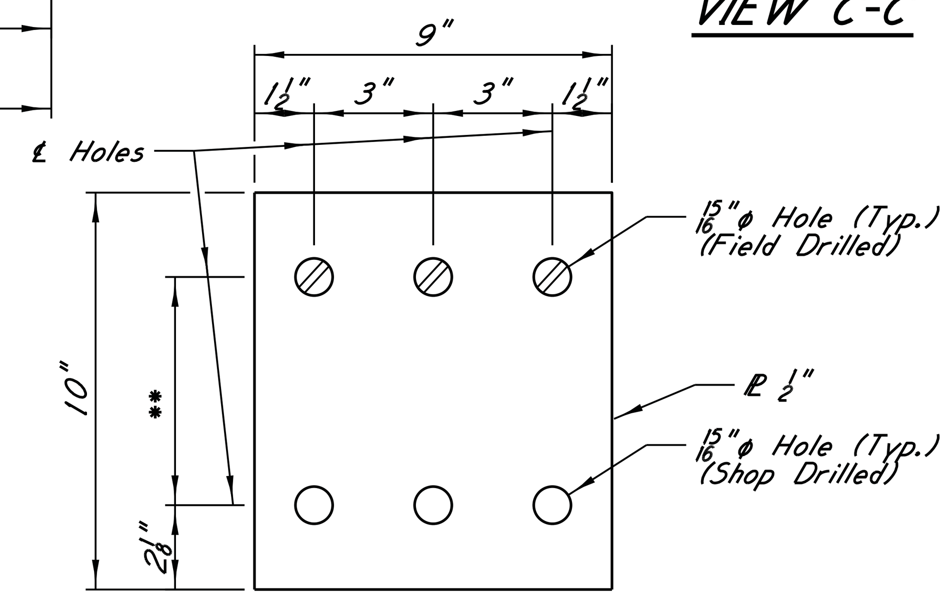
TYPE 2

L48 INTERIOR PLATE ASSEMBLIES

4 Required, 2 Each Type, Each Opposite Hand

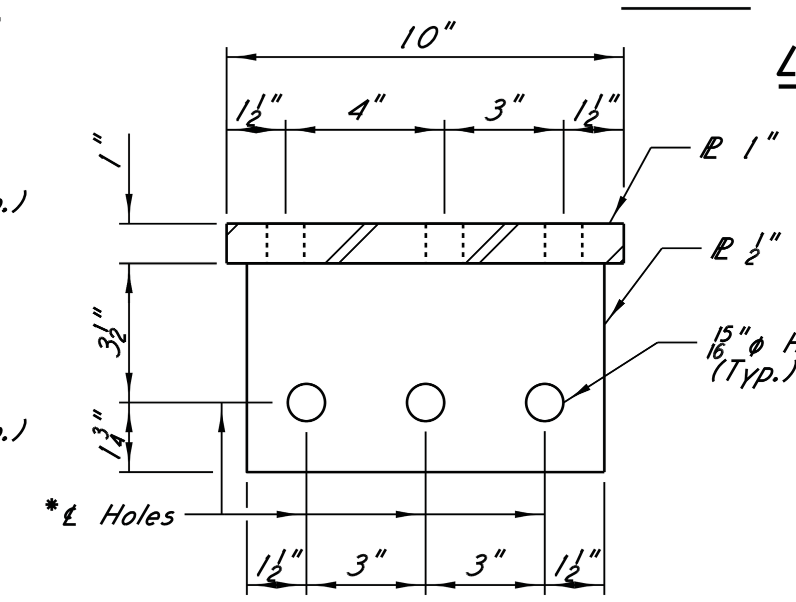


SECTION D-D



L48 DIAPHRAGM PLATE

12 Required



SECTION E-E

* Provide 3-15/16"φ Holes In 9" Wide Plates. When Plate Width Is Reduced, Omit Hole As Necessary.

** Contractor Shall Field Measure Dimension And Field Drill Plate.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION

U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

L28 AND L48 TEMPORARY LOWER BYPASS ANCHORAGE (4 OF 4)

PROJECT BR-0015-01(120) 106487/301000

ADAMS COUNTY

WORKING NUMBER A17

SHEET NUMBER 8017

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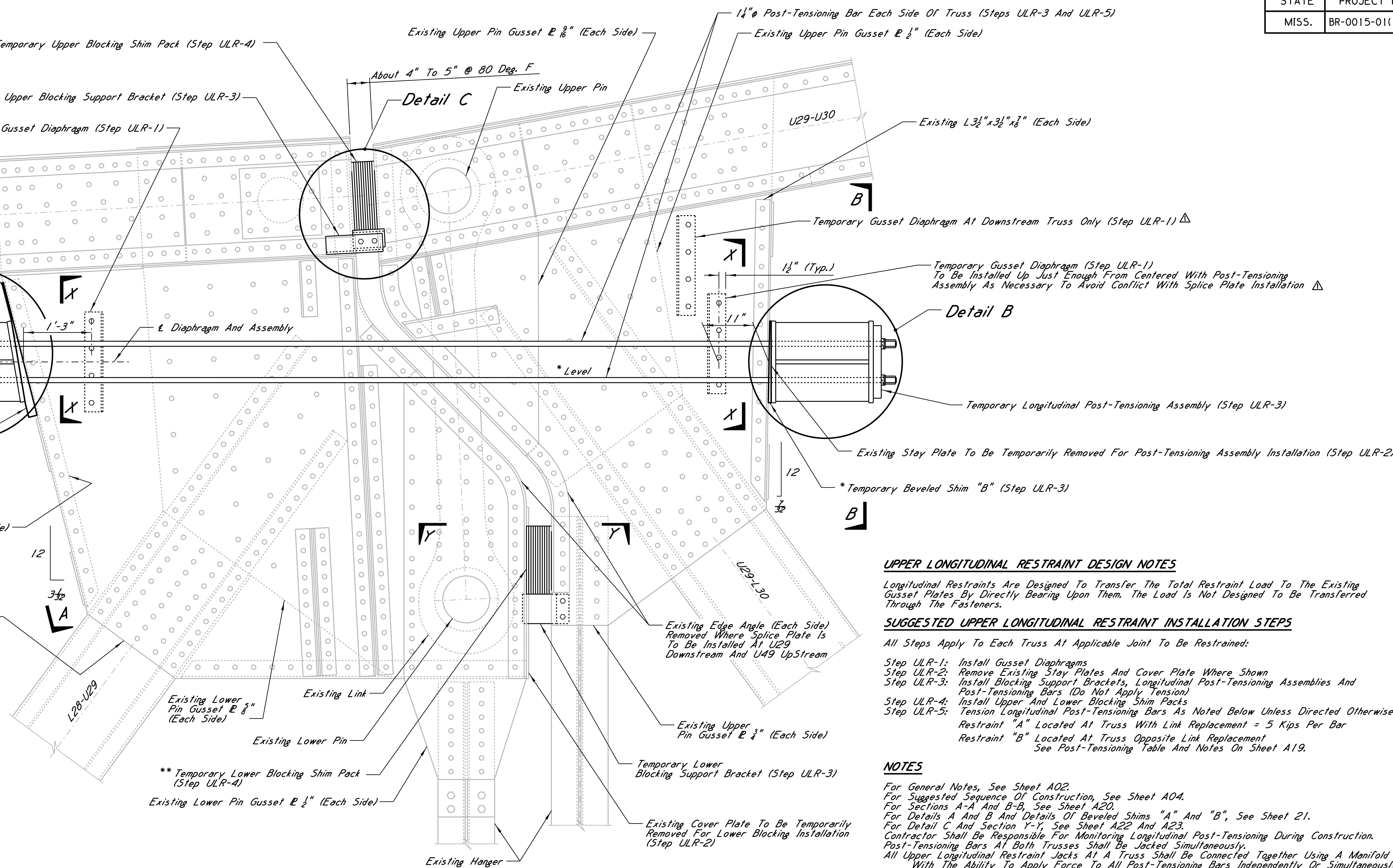
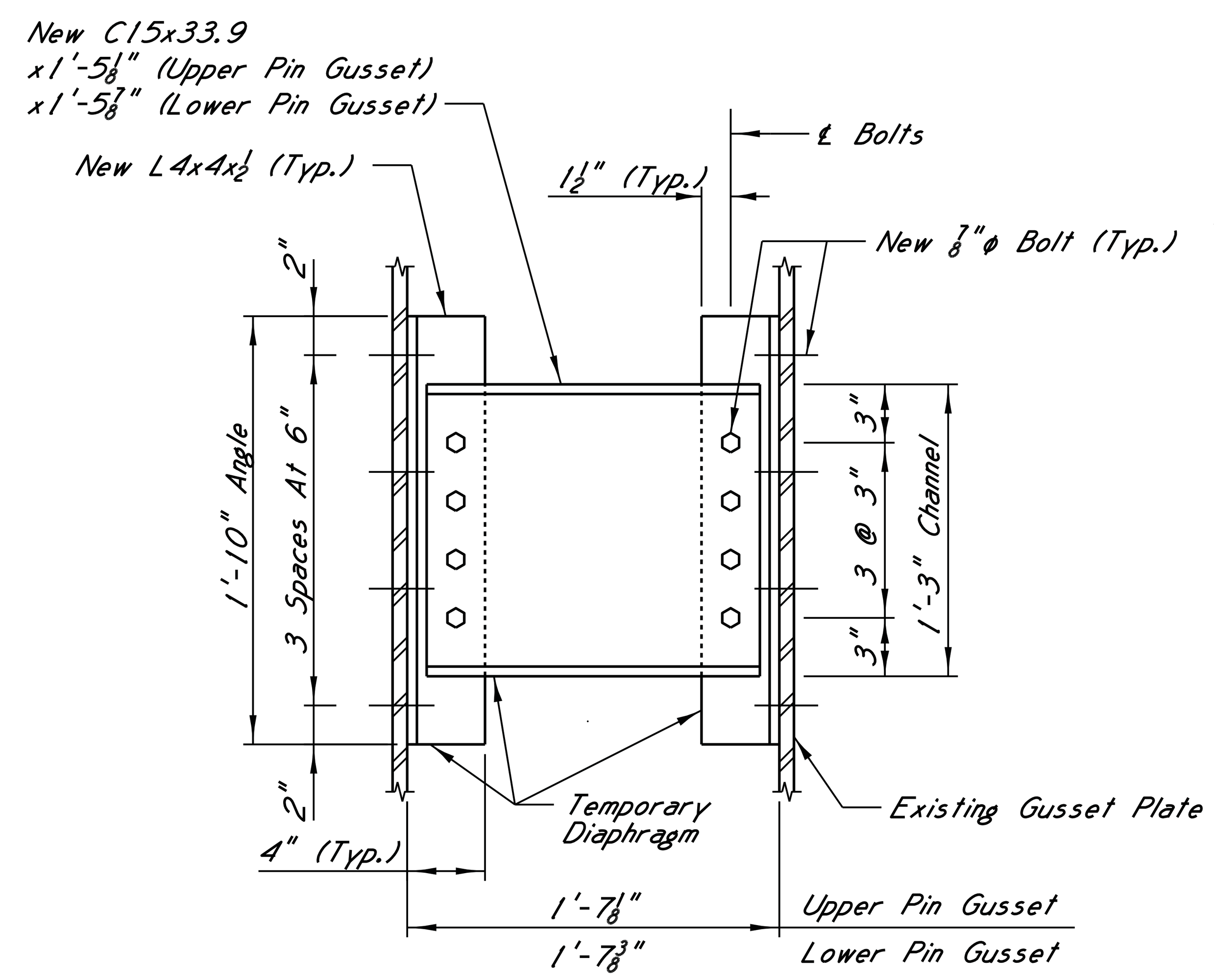
STATE	PROJECT NO.
MISS.	BR-0015-01(120)



U29 TEMPORARY UPPER LONGITUDINAL RESTRAINT

Looking Downstream At Downstream Truss

Provide Longitudinal Restraint At Each Truss.
Other Temporary Works That May Be In Place While Installing The Longitudinal Restraint Are Not Shown For Clarity.



TEMPORARY GUSSET DIAPHRAGM
SECTION X-X

Field Drill Holes In Gusset Plates

*Longitudinal Post-Tensioning Bars Shall Be Installed Horizontal. Contractor Shall Field Verify All Gusset Plate Geometry Prior To Shop Drawings And Fabrication Of Longitudinal Post-Tensioning Assemblies And Beveled Shims "A" And "B" To Ensure Level Installation.

**Blocking Shim Plates Shall Be Installed Tight. Contractor Shall Ensure Equal Bearing At Upper And Lower Blocking Shims And On Each Set Of Existing Gusset Plates For Equal Load Distribution.

UPPER LONGITUDINAL RESTRAINT DESIGN NOTES

Longitudinal Restraints Are Designed To Transfer The Total Restraint Load To The Existing Gusset Plates By Directly Bearing Upon Them. The Load Is Not Designed To Be Transferred Through The Fasteners.

SUGGESTED UPPER LONGITUDINAL RESTRAINT INSTALLATION STEPS

All Steps Apply To Each Truss At Applicable Joint To Be Restrained:

- Step ULR-1: Install Gusset Diaphragms
- Step ULR-2: Remove Existing Stay Plates And Cover Plate Where Shown
- Step ULR-3: Install Blocking Support Brackets, Longitudinal Post-Tensioning Assemblies And Post-Tensioning Bars (Do Not Apply Tension)
- Step ULR-4: Install Upper And Lower Blocking Shim Packs
- Step ULR-5: Tension Longitudinal Post-Tensioning Bars As Noted Below Unless Directed Otherwise:
  Restraint "A" Located At Truss With Link Replacement = 5 Kips Per Bar
  Restraint "B" Located At Truss Opposite Link Replacement
  See Post-Tensioning Table And Notes On Sheet A19.

NOTES

For General Notes, See Sheet A02.
For Suggested Sequence Of Construction, See Sheet A04.
For Sections A-A And B-B, See Sheet A20.
For Details A And B And Details Of Beveled Shims "A" And "B", See Sheet 21.
For Detail C And Section Y-Y, See Sheet A22 And A23.
Contractor Shall Be Responsible For Monitoring Longitudinal Post-Tensioning During Construction.
Post-Tensioning Bars At Both Trusses Shall Be Jacked Simultaneously.
All Upper Longitudinal Restraint Jacks At A Truss Shall Be Connected Together Using A Manifold With The Ability To Apply Force To All Post-Tensioning Bars Independently Or Simultaneously.
Contractor Shall Not Be Permitted To Remove The Existing Stay Plates Until The Temporary Gusset Diaphragms Have Been Installed.
Facing Of Exsiting Gusset Plate Edges For Blocking Shim And Longitudinal Post-Tensioning Assemlby Bearing Shall Be Finished Per Standard Specifications, Section 810.03.07.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT (1 OF 6)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A18
SHEET NUMBER 8018

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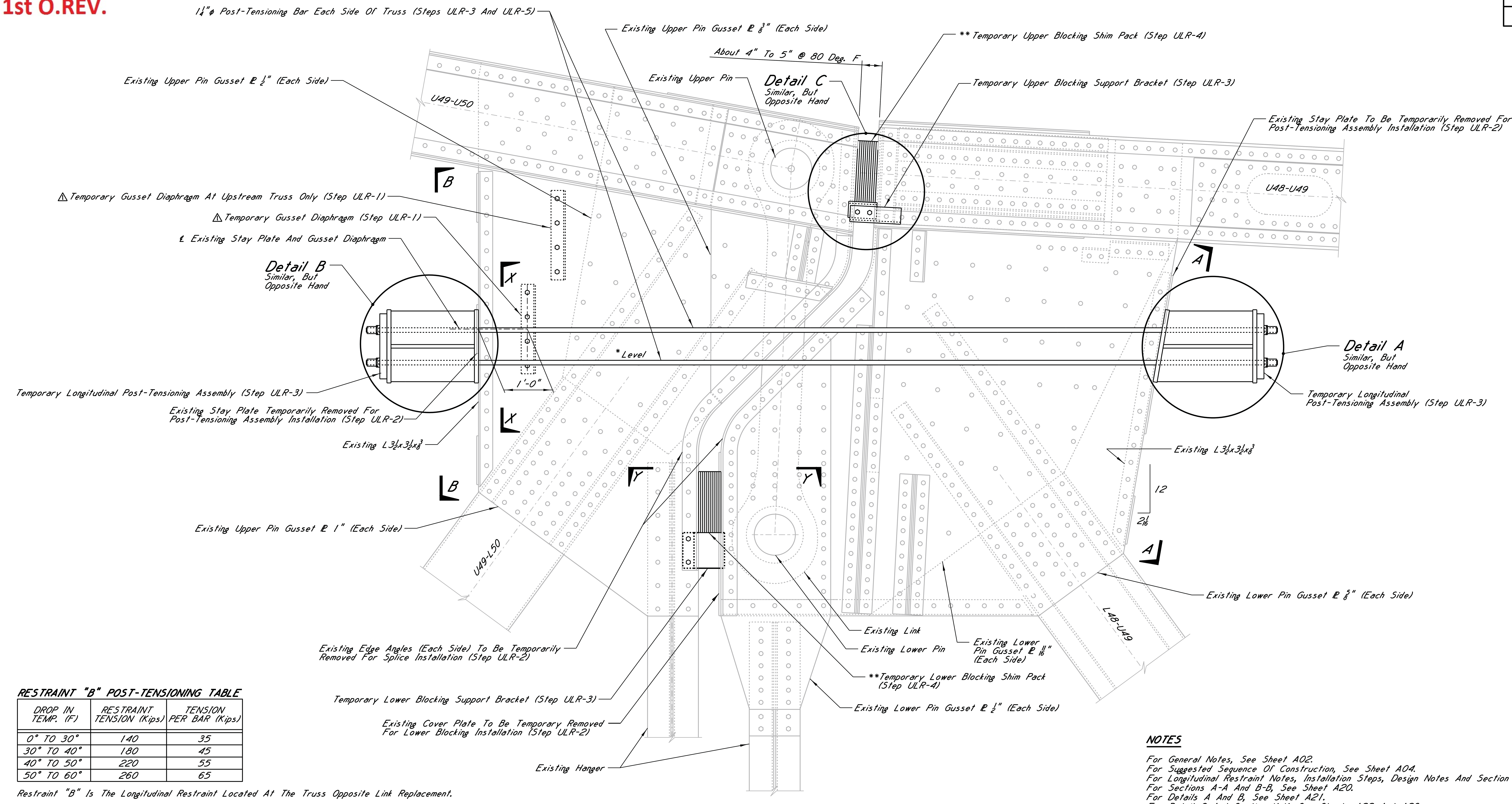

U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT

Looking UpStream At Upstream Truss

Provide Longitudinal Restraint At Each Truss.
Other Temporary Works That May Be In Place While Installing The Longitudinal Restraint Are Not Shown For Clarity.

RESTRAINT "B" POST-TENSIONING TABLE

DROP IN TEMP. (F)	RESTRAINT TENSION (Kips)	TENSION PER BAR (Kips)
0° TO 30°	140	35
30° TO 40°	180	45
40° TO 50°	220	55
50° TO 60°	260	65

Restraint "B" Is The Longitudinal Restraint Located At The Truss Opposite Link Replacement.

Contractor Shall Record The "Start" Temperature At Time Of Initial Post-Tensioning Of Upper Longitudinal Restraints. Starting At The Initial Post-Tensioning, The Contractor Shall Monitor Daily The Forecasted Seven (7) Day Maximum Low Temperature In Order To Maintain The Required Restraint "B" Post-Tensioning. The Contractor Shall Adjust The Restraint "B" Post-Tensioning As Necessary In Accordance With The Post-Tensioning Table For The Maximum Expected Seven (7) Day Low Temperature Change From The "Start" Temperature. Contractor Shall Not Over Tension The Restraint For Temperatures Beyond The Forecasted Unless Directed Otherwise. The Tension In Restraint "B" Does Not Need To Be Reduced For Tempoerature Change, But Rather Increased As Required Unless Directed Otherwise.

NOTES

For General Notes, See Sheet A02.
For Suggested Sequence Of Construction, See Sheet A04.
For Longitudinal Restraint Notes, Installation Steps, Design Notes And Section X-X, See Sheet A18.
For Sections A-A And B-B, See Sheet A20.
For Details A And B, See Sheet A21.
For Detail C And Section Y-Y, See Sheets A22 And A23.

* Longitudinal Post-Tensioning Bars Shall Be Installed Horizontal. Contractor Shall Field Verify All Gusset Plate Geometry Prior To Shop Drawings And Fabrication Of Longitudinal Post-Tensioning Assemblies And Beveled Shims "A" And "B" To Ensure Level Installation.

** Blocking Shim Plates Shall Be Installed Tight. Contractor Shall Ensure Equal Bearing At Upper And Lower Blocking Shims And On Each Set Of Existing Gusset Plates For Equal Load Distribution.

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PROFESSIONAL ENGINEER
19068
STATE OF MISSISSIPPI

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT (2 OF 6)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A19

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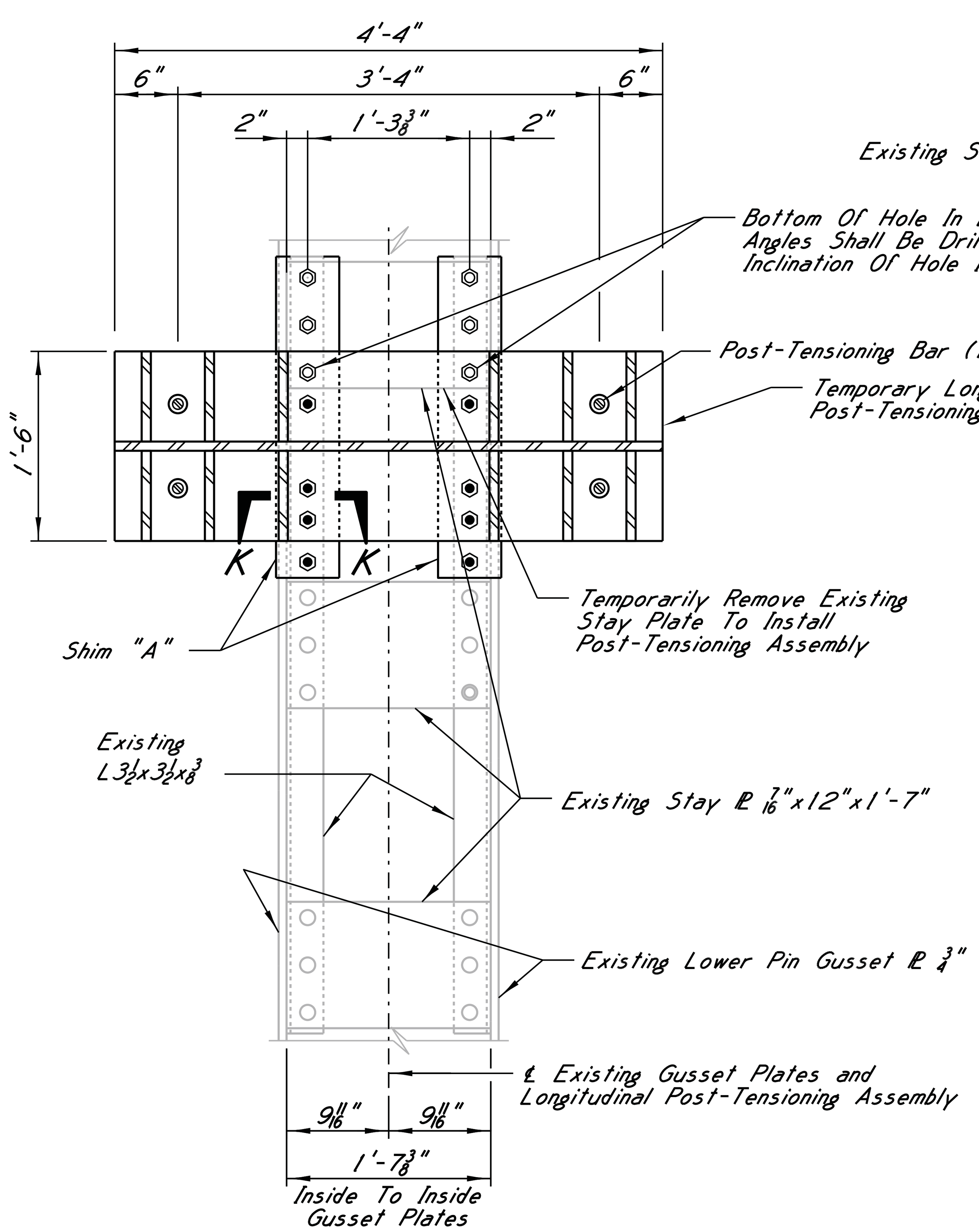
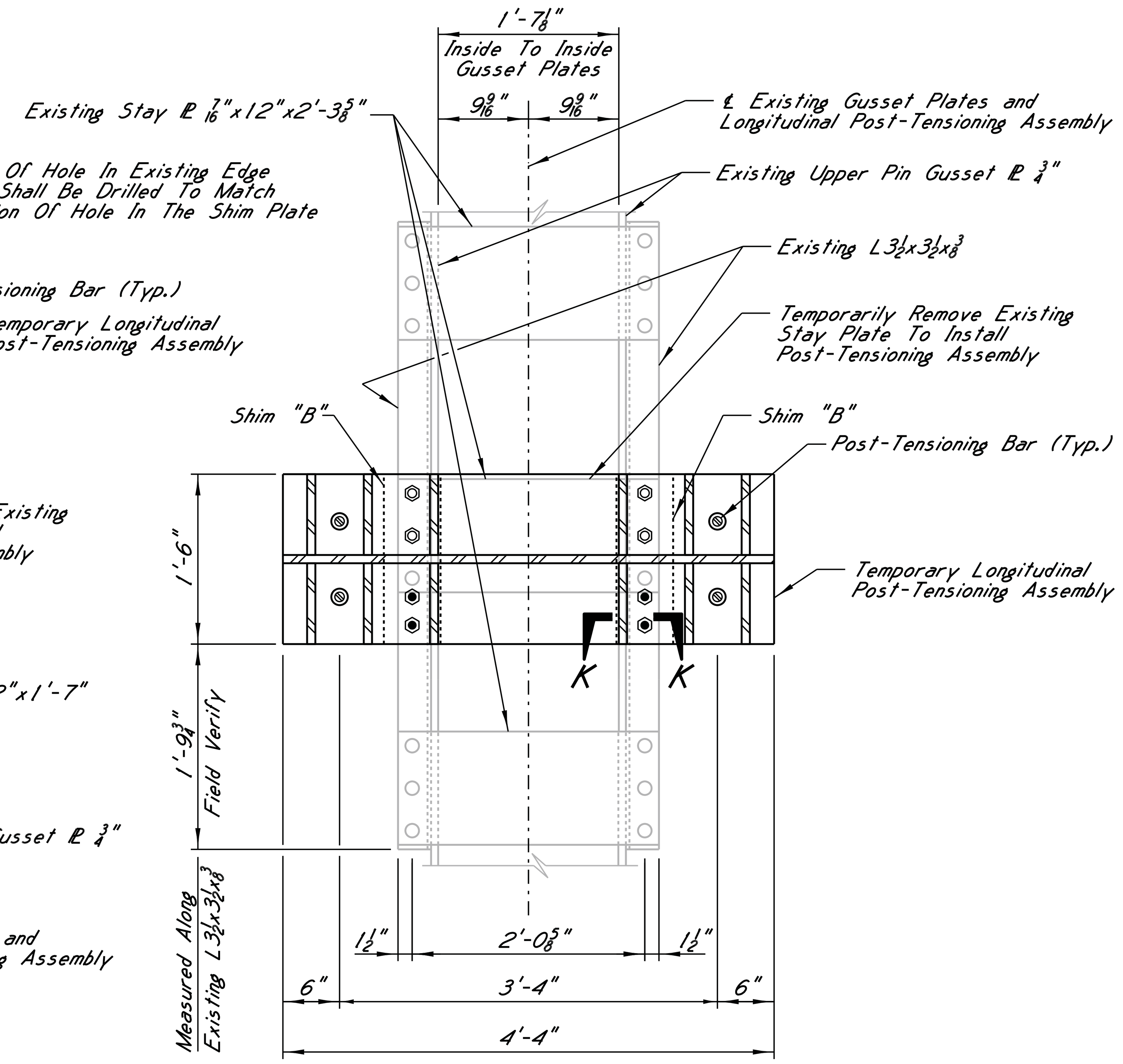


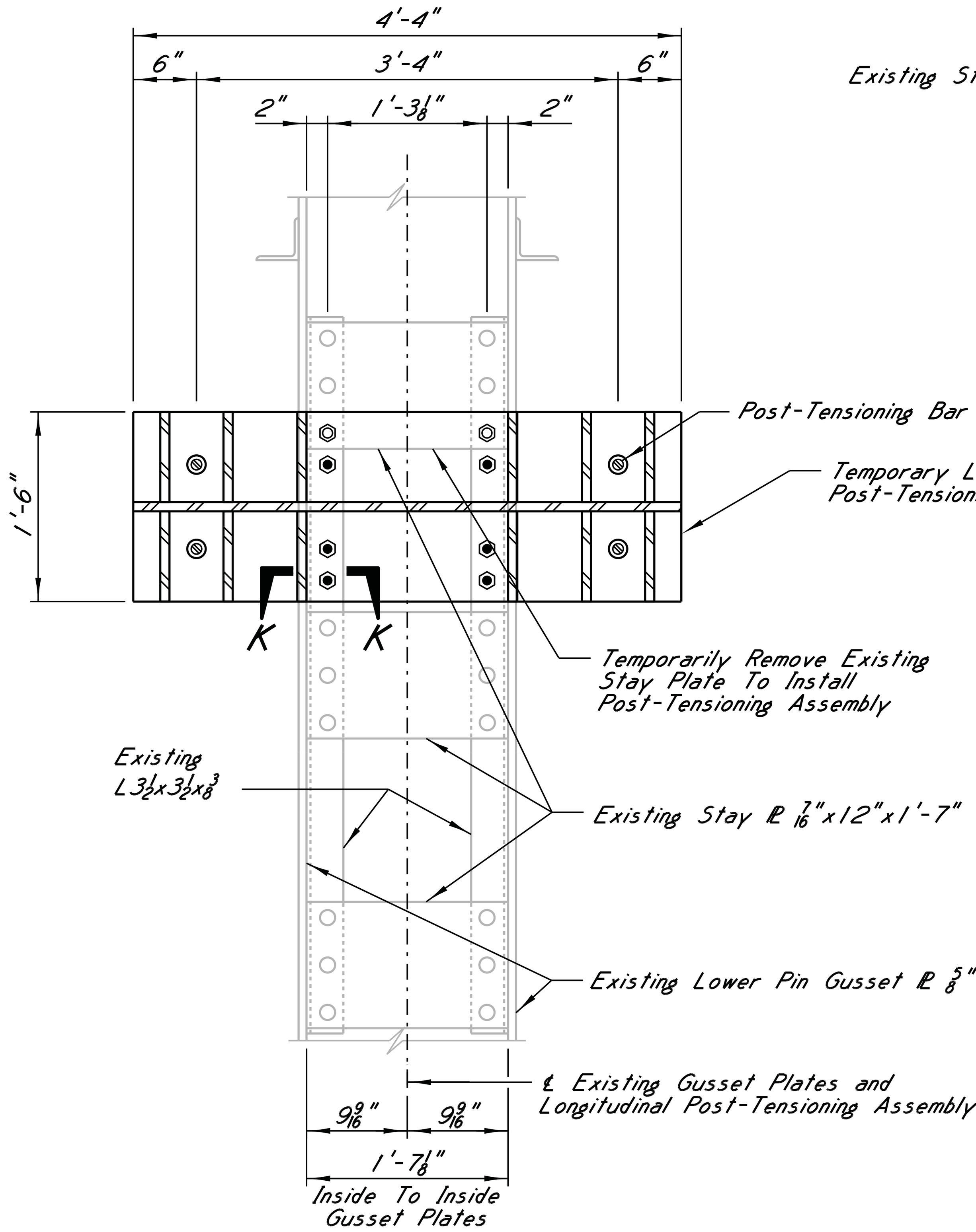
U29 SECTION A-A

Showing Location Of PT Assembly On Lower Pin Gussets. The Four (4) Post-Tensioning Assembly Connection Bolts Require Beveled Washers At The Existing Edge Angles.



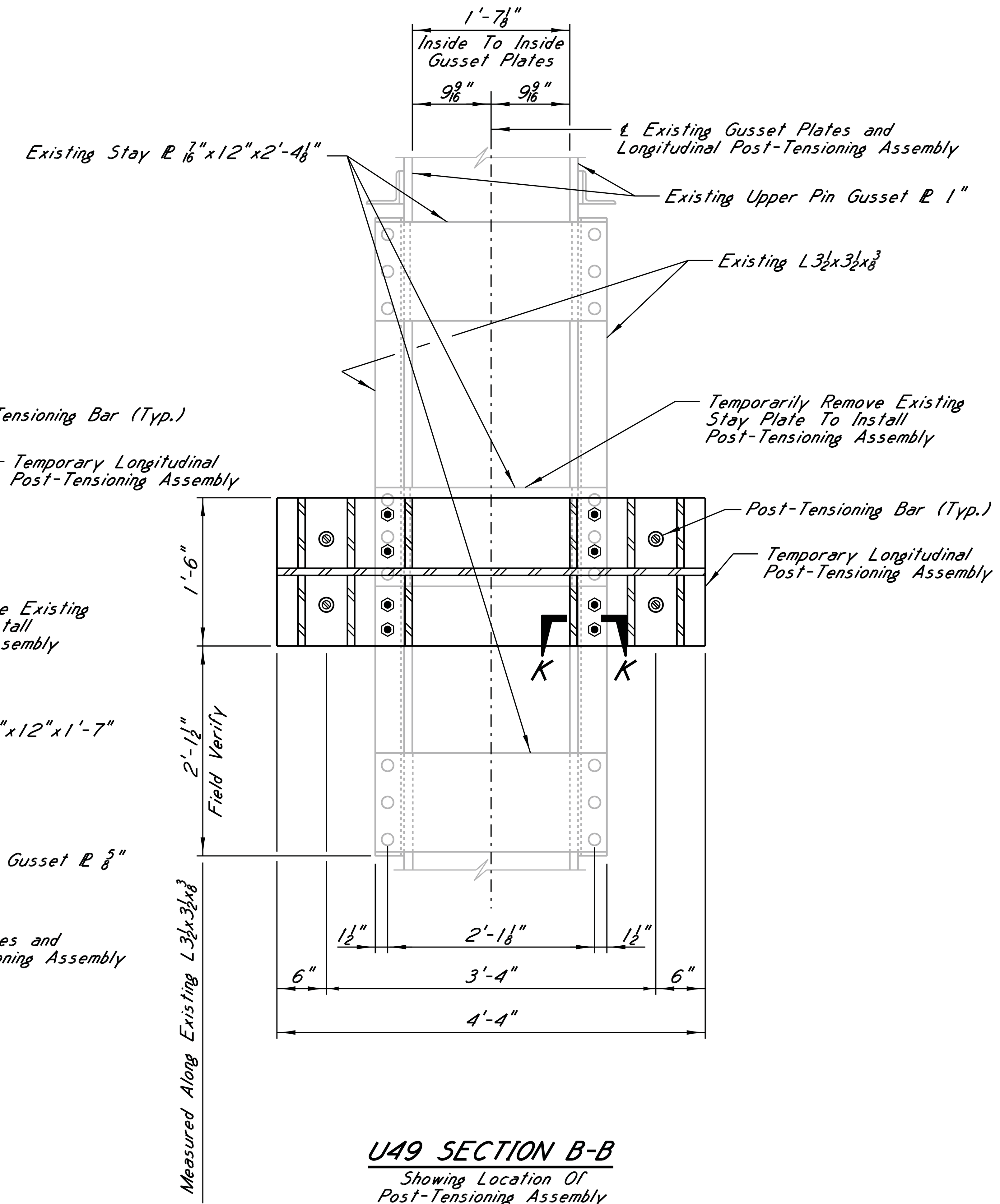
U29 SECTION B-B

Showing Location Of PT Assembly On Upper Pin Gussets. It Is Expected That The Post-Tensioning Assembly May Be Required To Be Postioned Slightly Lower Than Shown. If So, Drill Bottom Of Existing Holes For New Bolts. Positioning Holes Higher Than Shown Shall Be Brought To The Engineer's Attention For Corrective Measures.



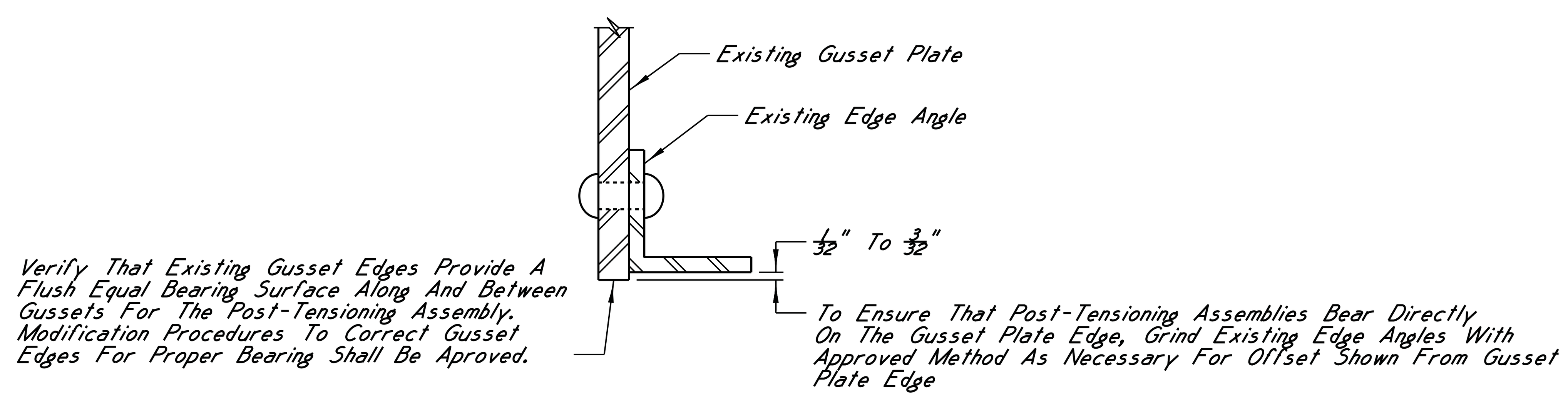
U49 SECTION A-A

Showing Location Of Post-Tensioning Assembly On Lower Pin Gusset Plates



U49 SECTION B-B

Showing Location Of Post-Tensioning Assembly On Upper Pin Gusset Plates



EXISTING SURFACE PREPARATION
SECTION K-K

Typical Each Gusset
Post-Tensioning Assembly Not Shown

LEGEND

- ○ Existing Rivet To Remain
- ⊗ New 7/8"φ Bolt In Existing Rivet Hole
- ◉ New 7/8"φ Bolt In New 15/16"φ Hole

NOTES

For Location Of Sections A-A And B-B, See Sheet A18 And A19.
For Details Of Longitudinal Post-Tensioning Assembly And Beveled Shims "A" And "B", See Sheet A21.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT (3 OF 6)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER: A20
SHEET NUMBER: 8020

DESIGNED: J.Bernard DETAILED: S. Hebert TRACED: ____
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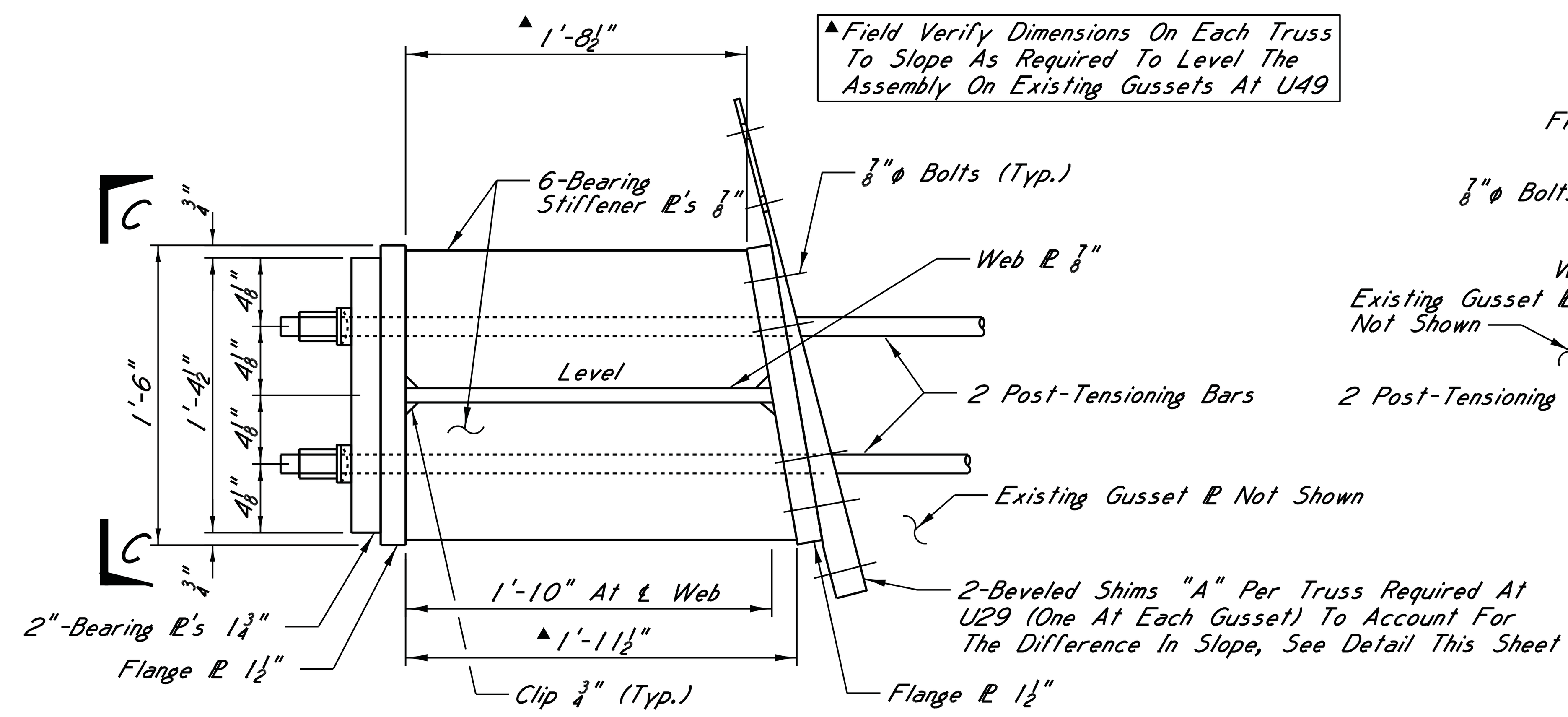
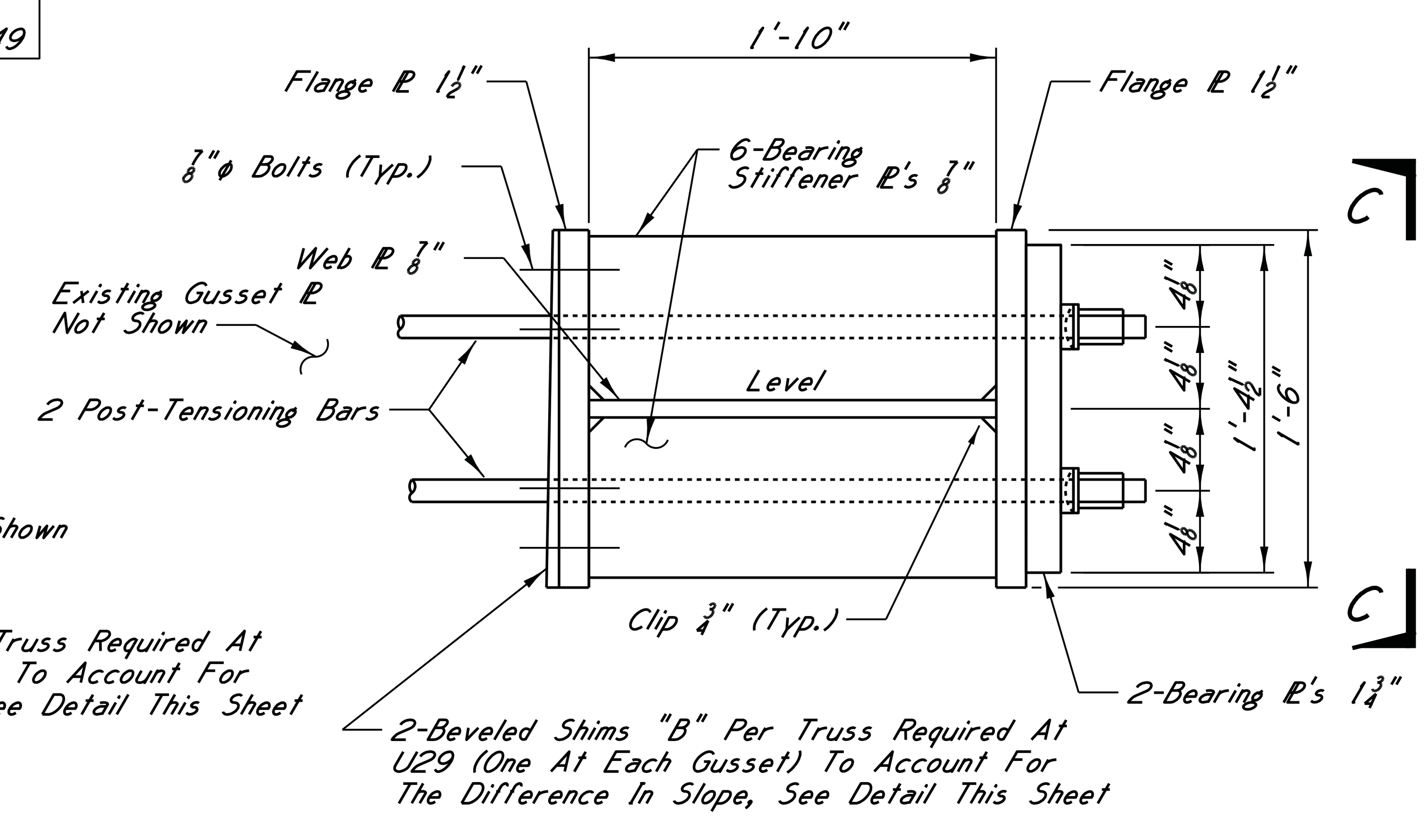


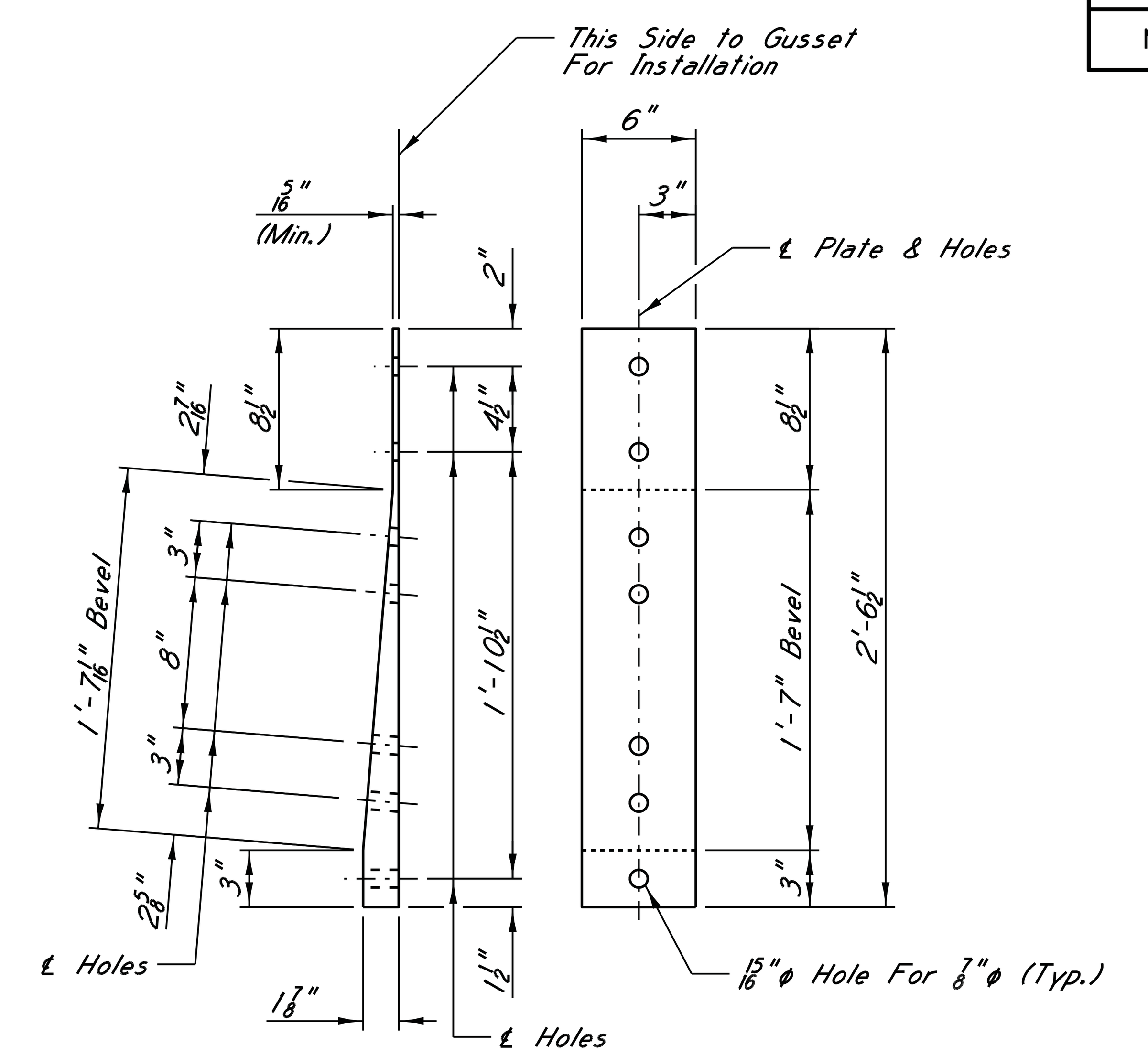
LONGITUDINAL POST-TENSIONING ASSEMBLY DETAIL A

At Upper Pin Gussets



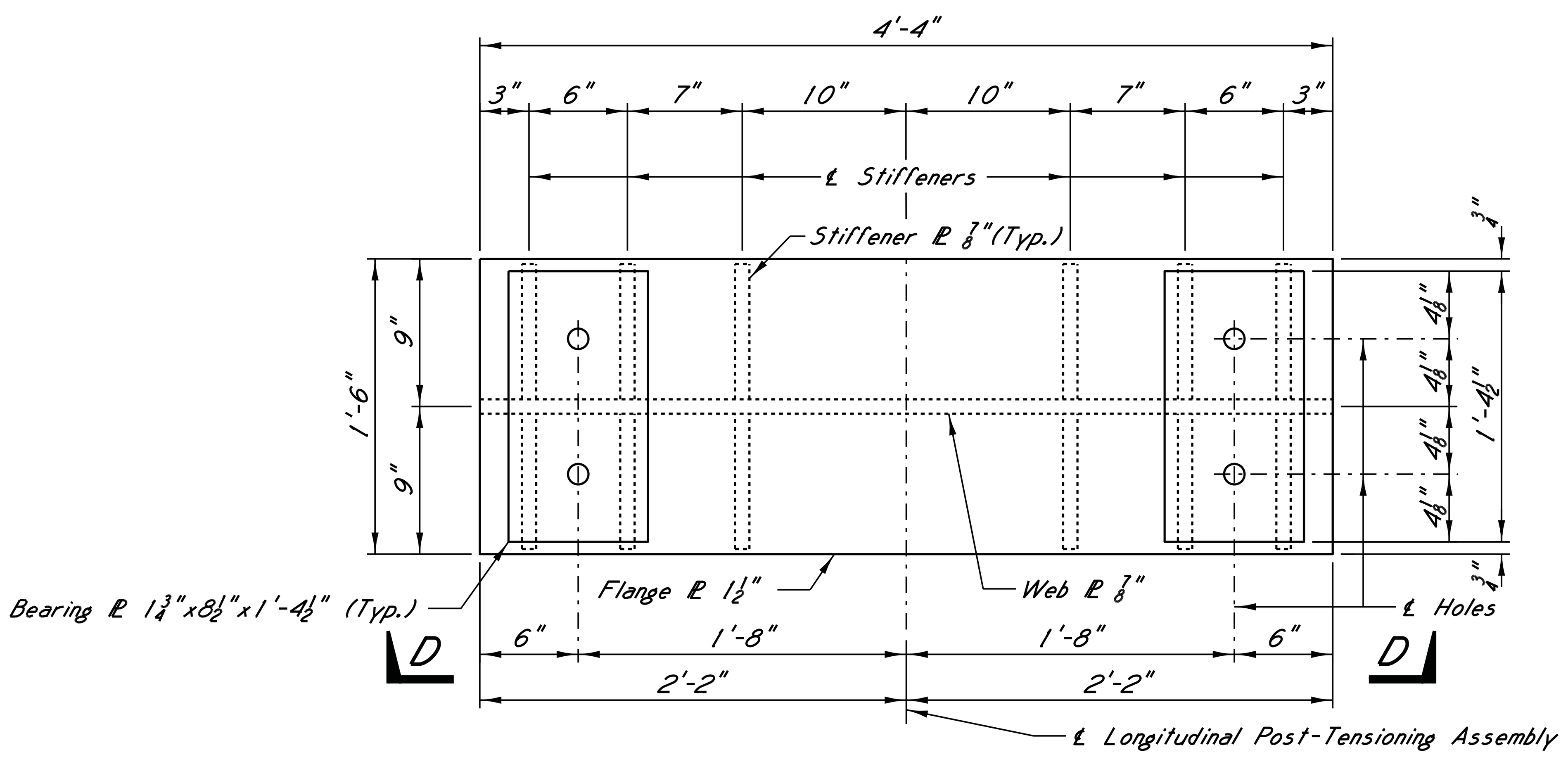
LONGITUDINAL POST-TENSIONING ASSEMBLY DETAIL B

At Lower Pin Gussets

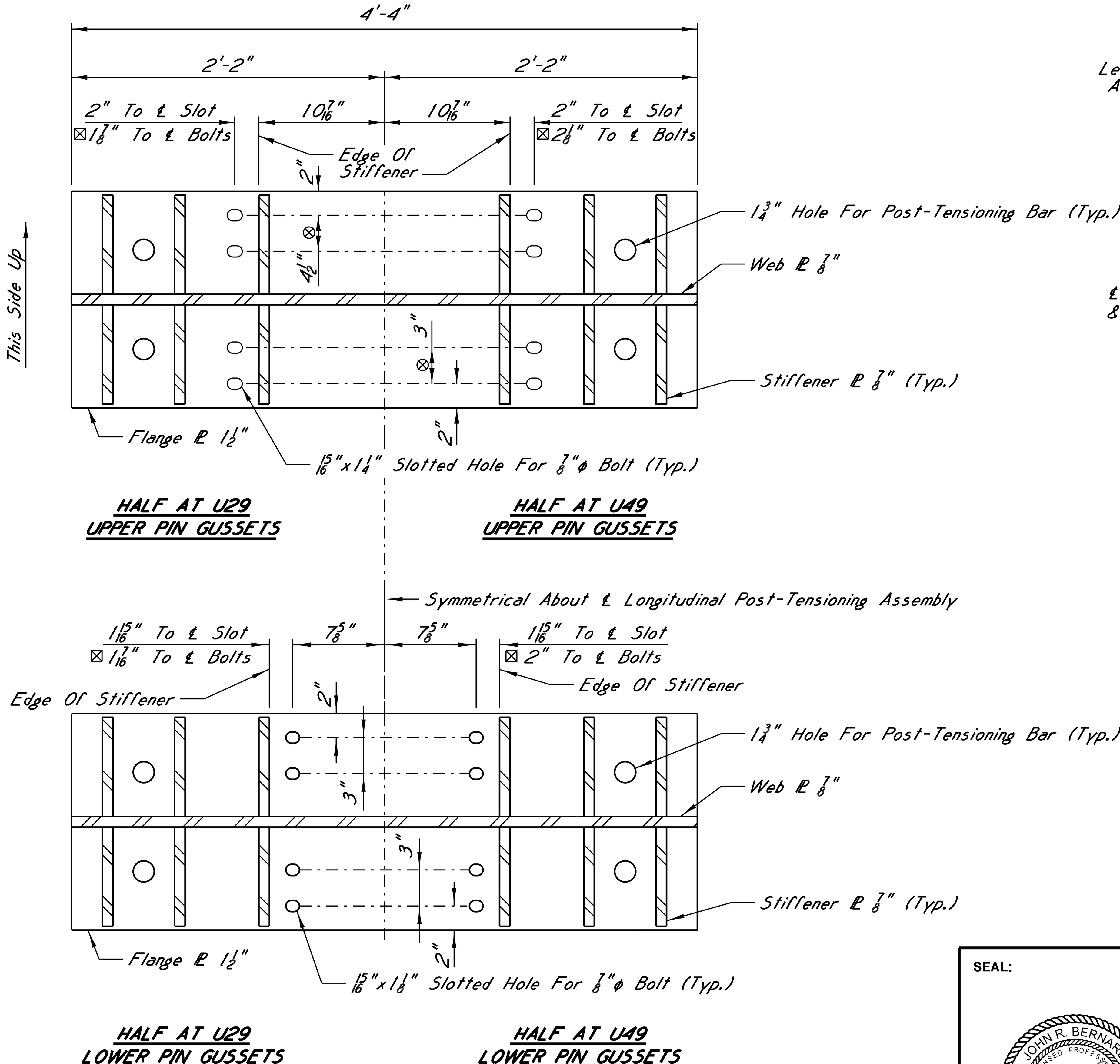


BEVELED SHIMS "A"

2-Beveled Shims "A" Are Required To Level The Longitudinal Post-Tensioning Assemblies At Each Truss Joint U29 (Field Verify Bevel)



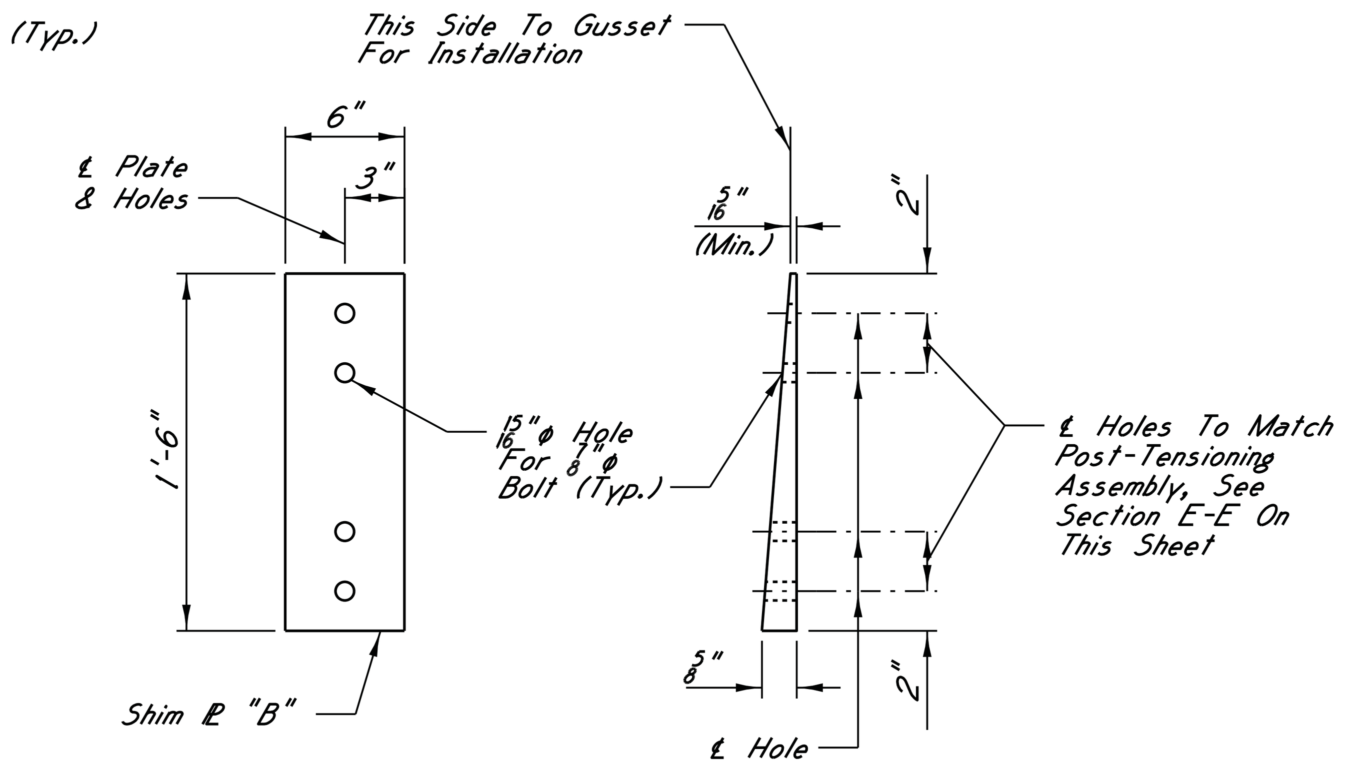
VIEW C-C



SECTION E-E

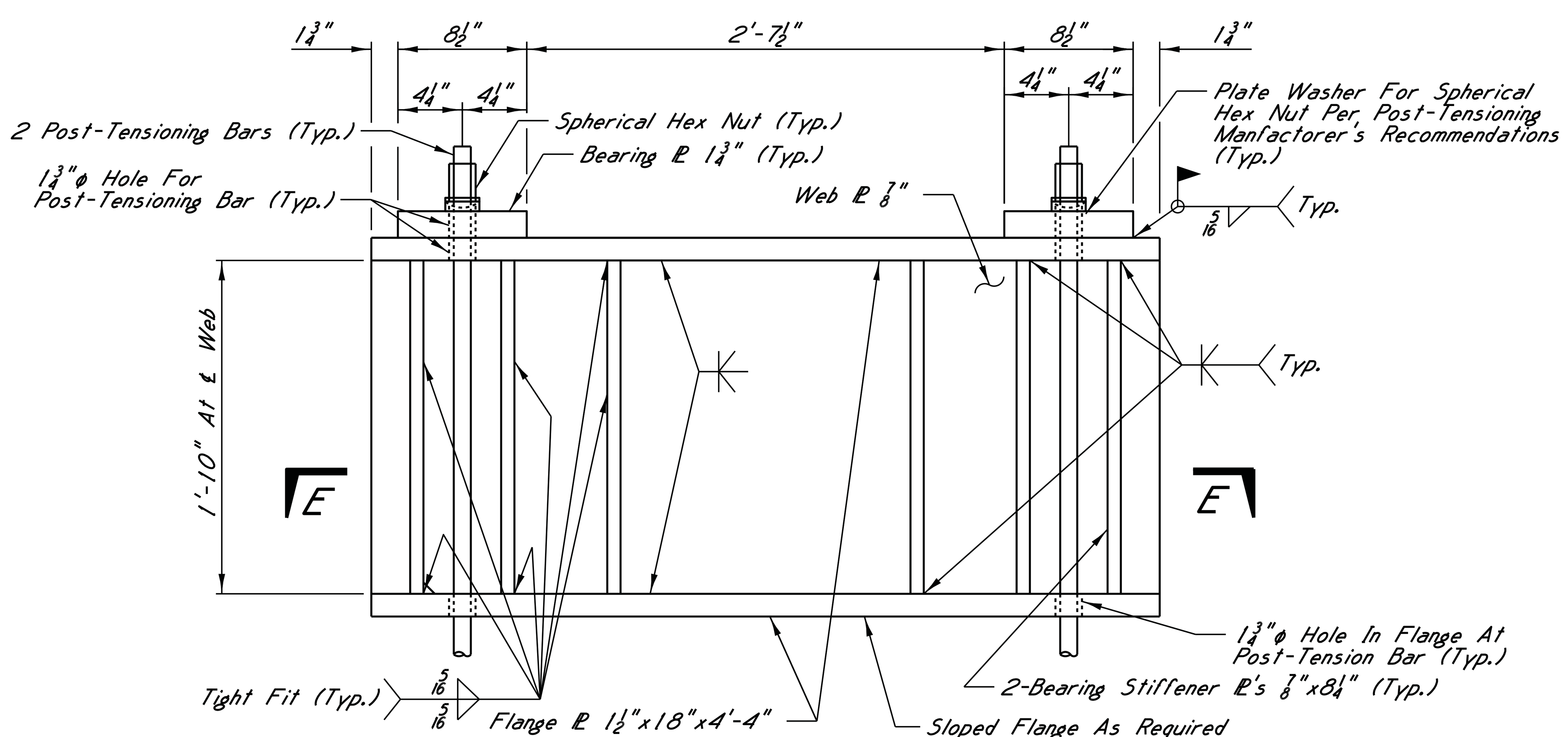
Showing Locations Of Bolt Holes In The Flange
Dimensions Are Normal To The Flange

⊠ ℄ Bolts Correspond With ℄ Existing Rivets In Gusset Edge Angles
⊗ With Approval, Contractor May Adjust Spacing Based On Field Measurements (3" Min. And 4½" Max. Spacing)



BEVELED SHIMS "B"

2-Beveled Shims "B" Are Required To Level The Longitudinal Post-Tensioning Assemblies At Each Truss Joint U29 (Field Verify Bevel)



VIEW D-D

NOTES

For Location Of Details A And B, See Sheets A18 And A19.
For Typical Stiffener Fillet Weld Detail, See Sheet A02.

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT (4 OF 6)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A21
SHEET NUMBER 8021

DESIGNED J.Bernard DETAILED S. Hebert TRACED
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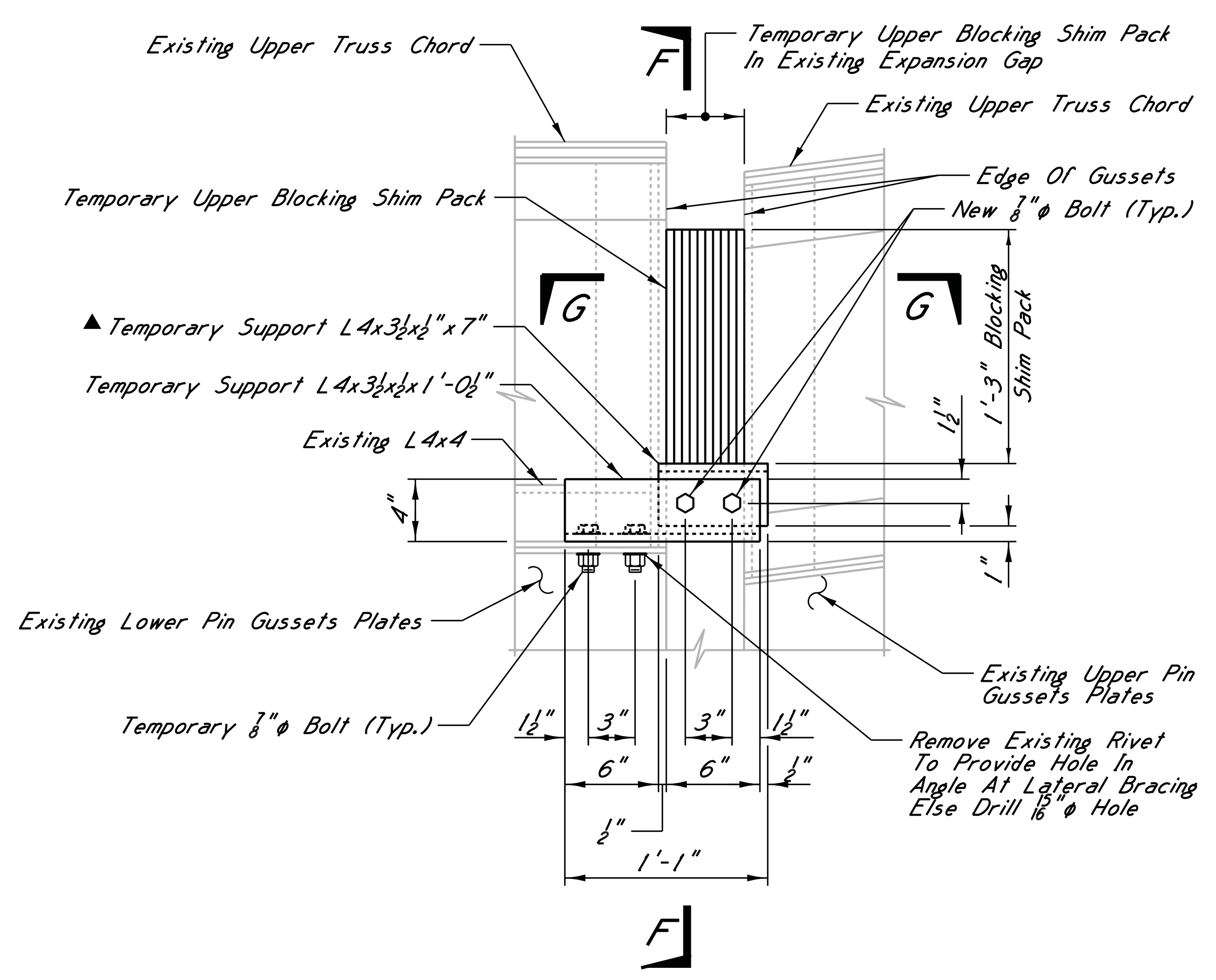
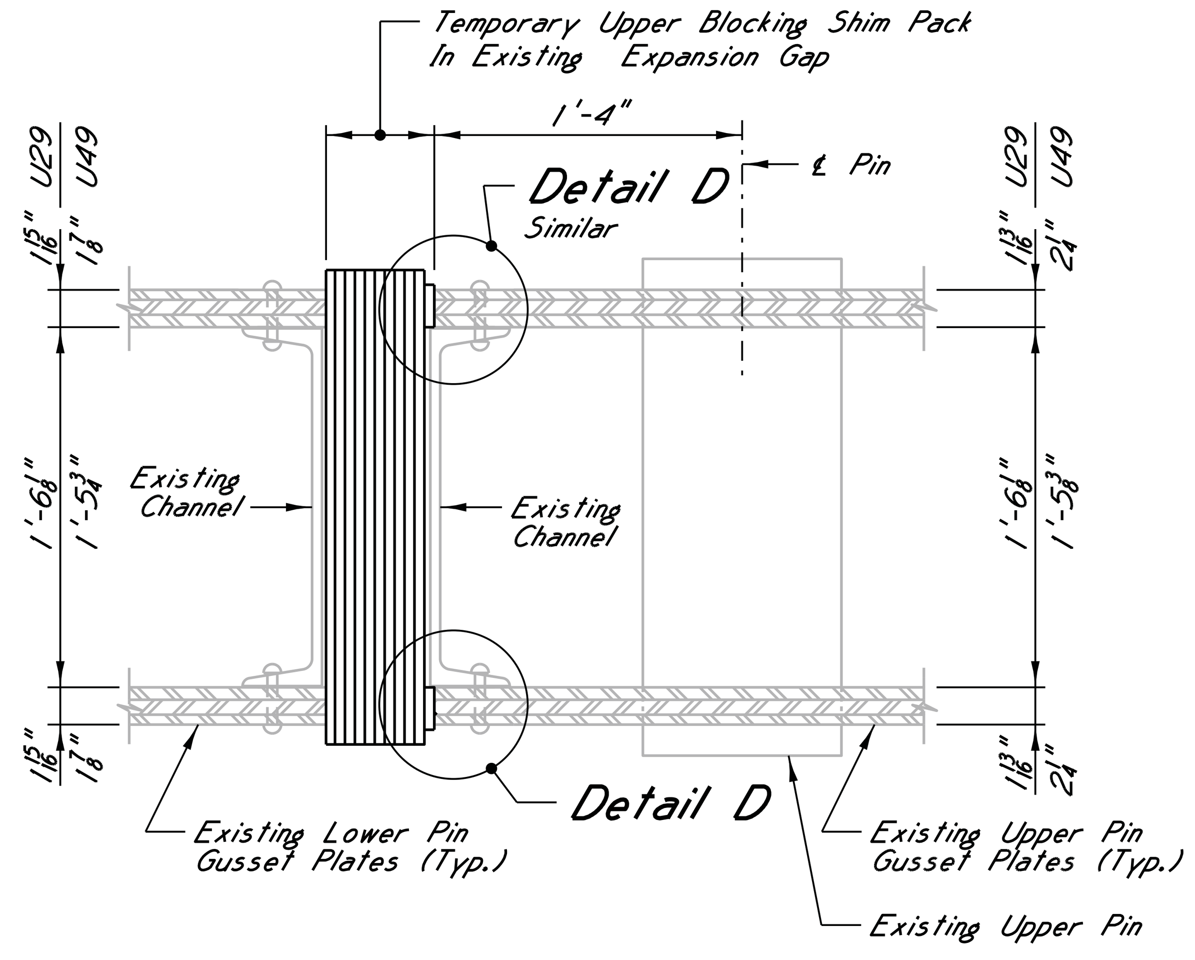


TEMPORARY UPPER BLOCKING

DETAIL C

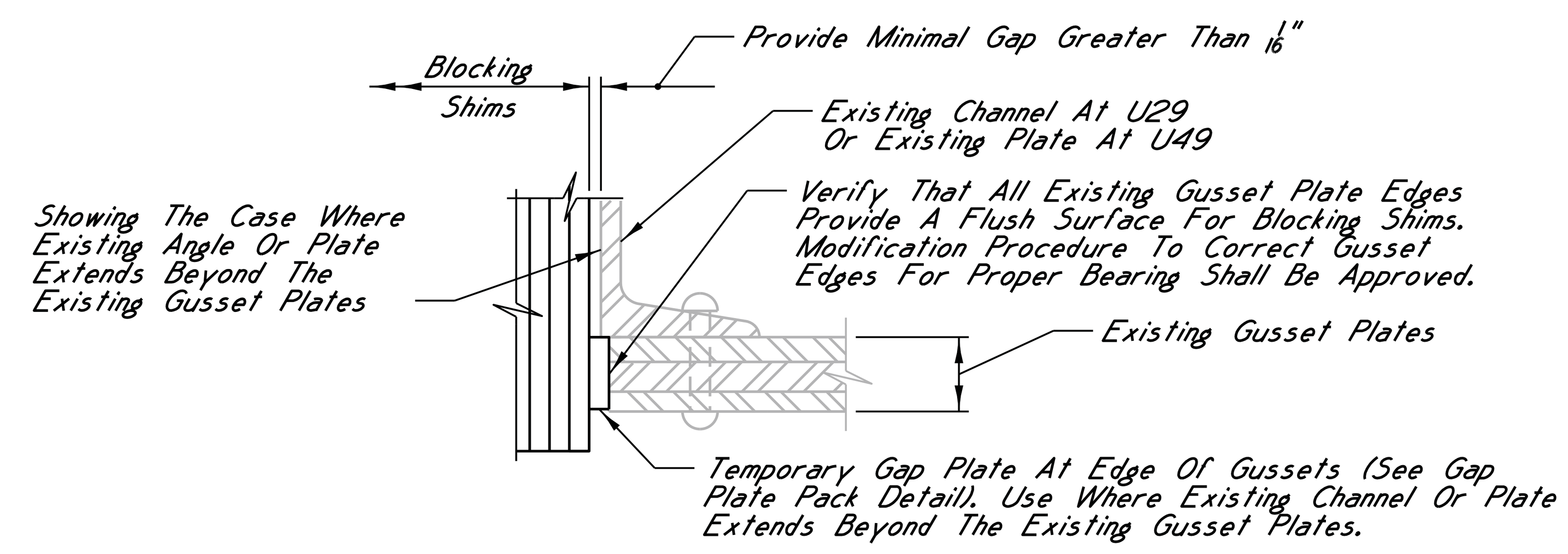
▲ Verify Length Required Based On The Existing Expansion Gap During Installation And Post-Tensioning



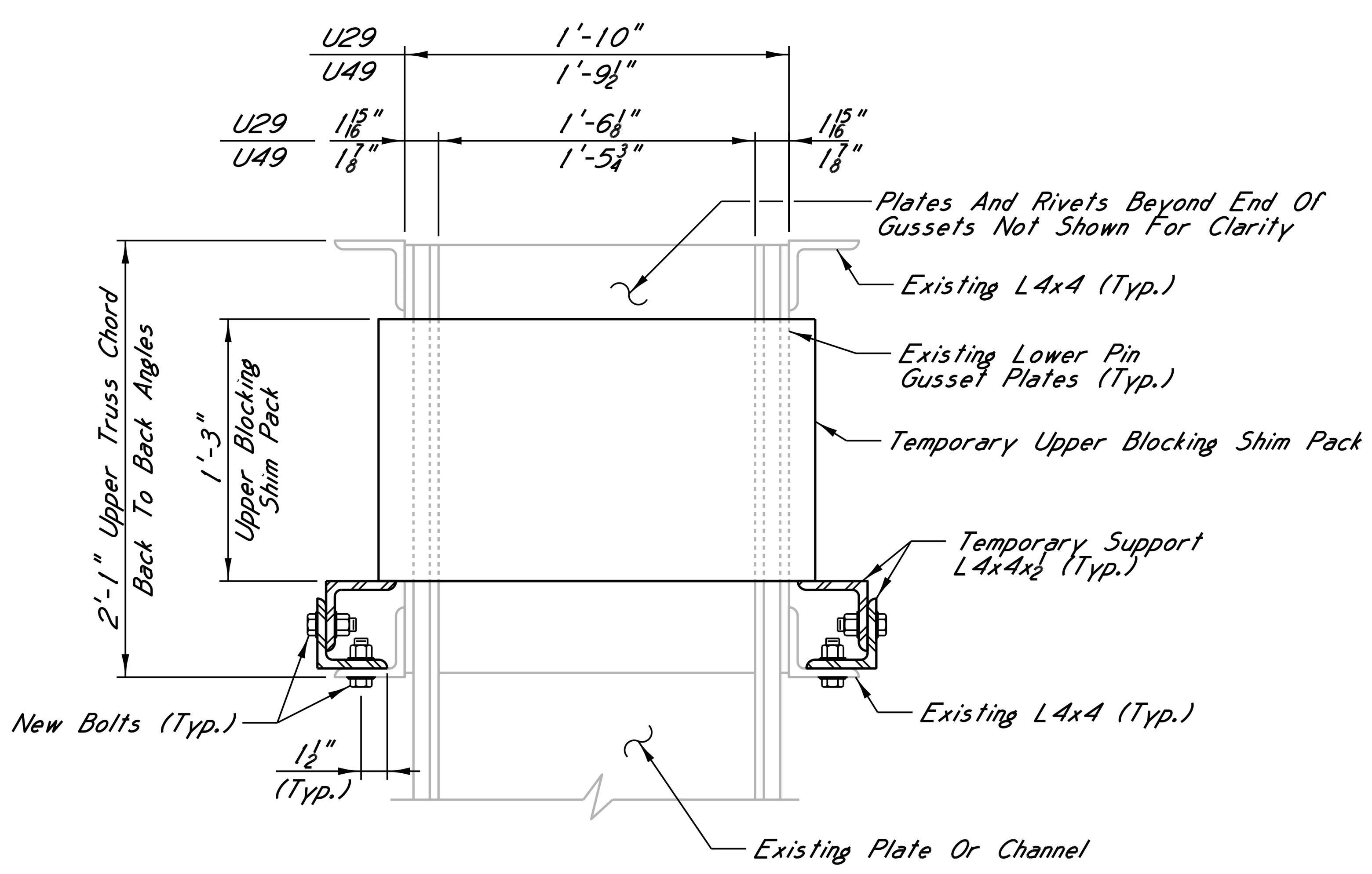
TEMPORARY UPPER BLOCKING

SECTION G-G

U29 Shown, U49 Similar As Noted



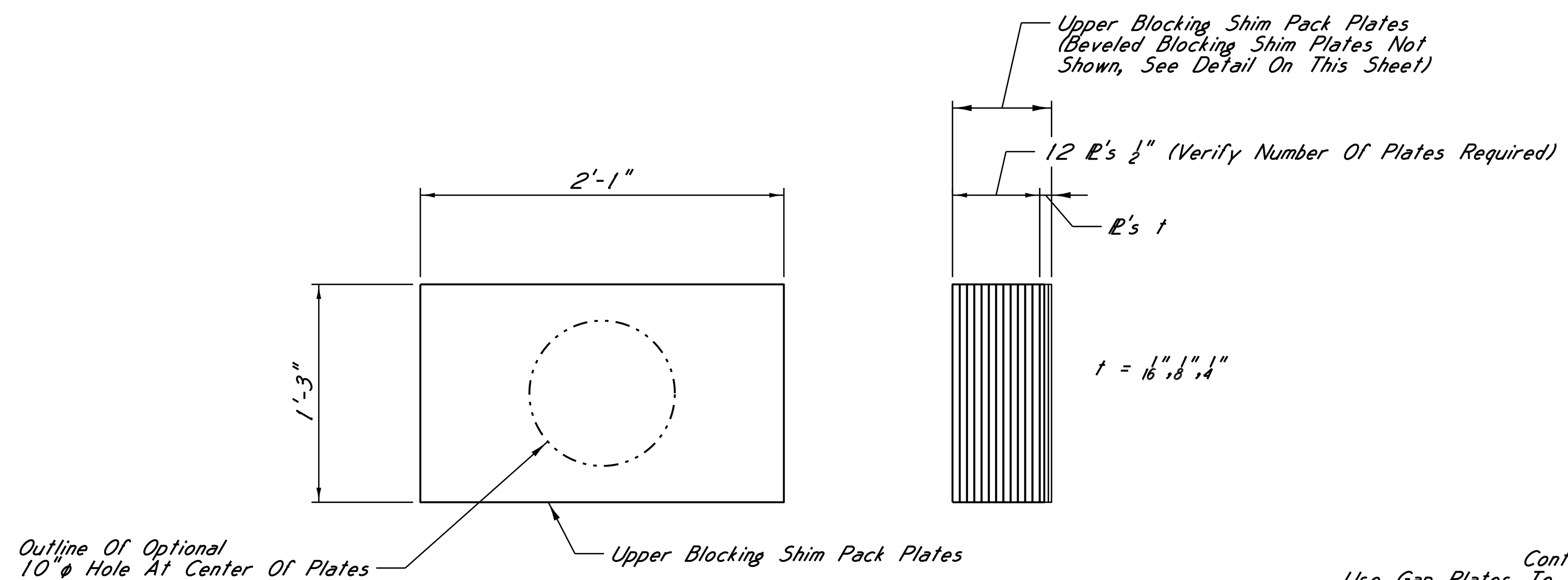
DETAIL D



TEMPORARY UPPER BLOCKING

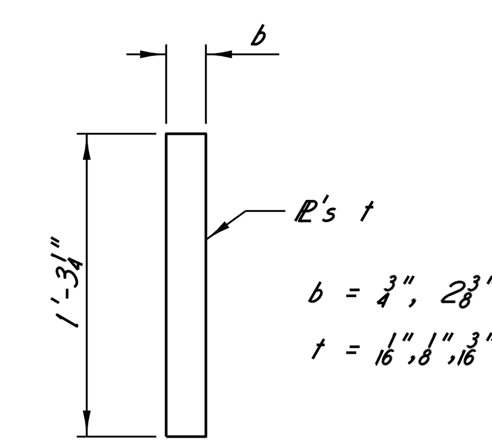
SECTION F-F

Looking At Existing Lower Pin Gusset Plates Showing Temporary Blocking Shims And Support Angles



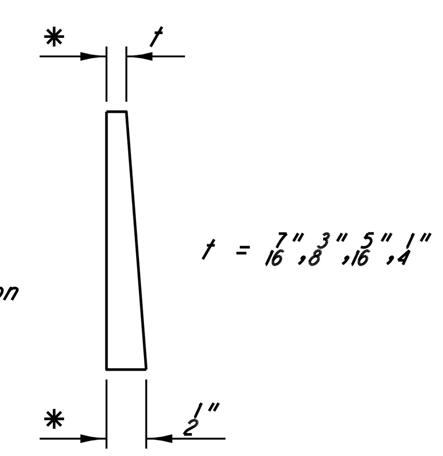
UPPER BLOCKING SHIM PACK

See Also Shimmed Plate Detail And Detail Of Beveled Blocking Shim Plates (Minimum 2 Shim Packs Required)



GAP PLATE PACK

Contractor To Determine Number Of Gap Plate Packs Required.
Use Gap Plates To Provide Equal Bearing Due To Misalignment Between Sets Of Gusset Plates On Each Side Of The Truss. Use Minimal Thickness Required And Only Where Necessary. Bond The Gap Plate To The Gusset Edge With An Approved Bonding Material To Ensure Proper Postioning.



∗ The Shim Thicknesses Shown Are Based On The Assumption That The Horizontal Blocking Width Is Nearly Equal Along The Vertical Length Of The Blocking. The Contractor Shall Field Verify This Assumption At Each Location And Supply A Minimum Of 4-Beveled Shims For Each Location In 1/16 Inch Increments. Use Shims As Necessary To Obtain Equal Bearing Pressure Along Existing Gusset Plates For The Total Blocking Height.

BEVELED BLOCKING SHIM PLATES

For Plate Length And Width, See Upper And Lower Blocking Shim Pack Details

NOTES

For Location Of Detail C, See Sheets A18 And A19.
For Lower Blocking Details, See Sheet A23.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT (5 OF 6)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

DESIGNED J.Bernard DETAILED S. Hebert TRACED
CHECKED J.Gregg ISSUED J.Gregg DATE

WORKING NUMBER A22

SHEET NUMBER 8022

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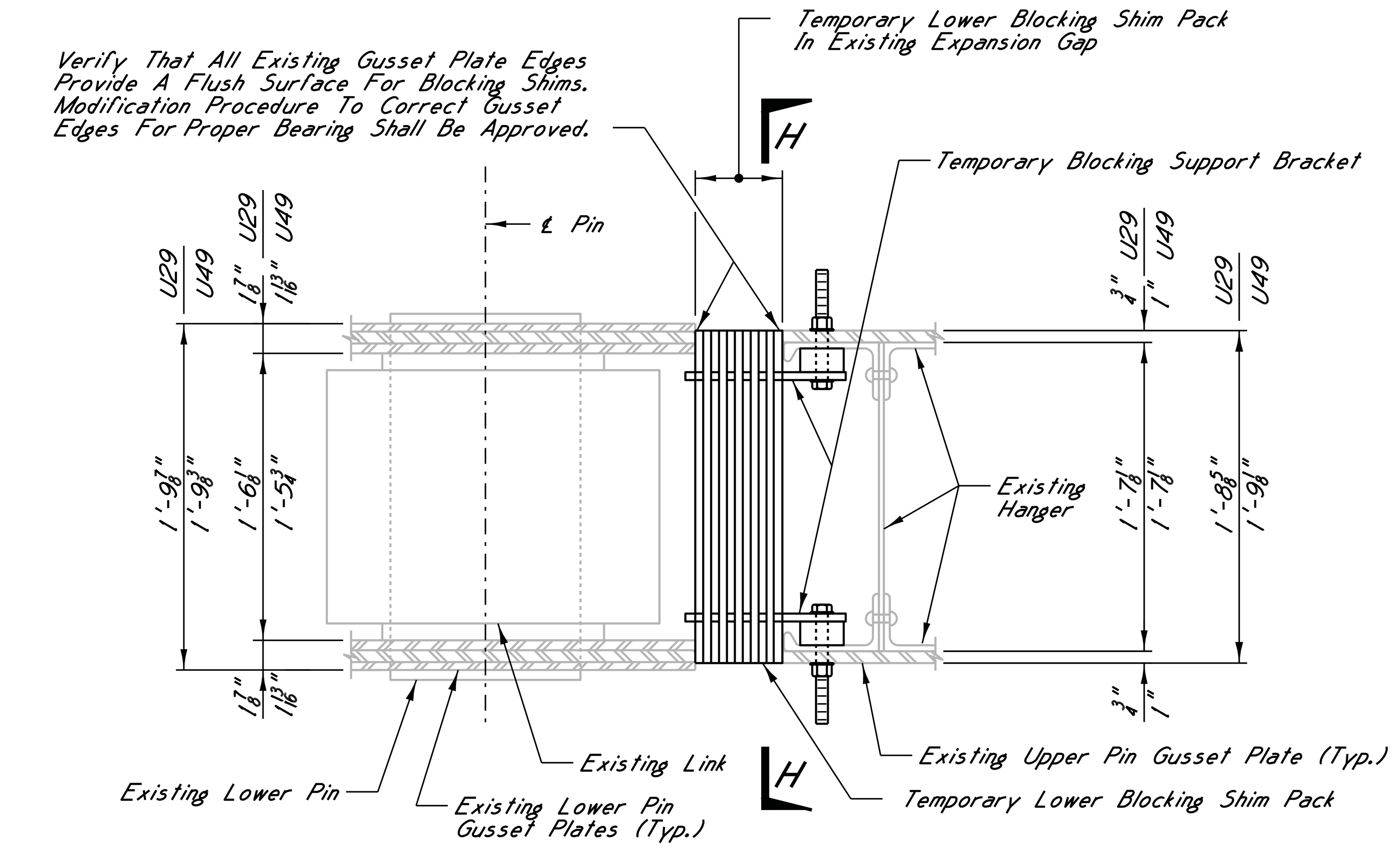
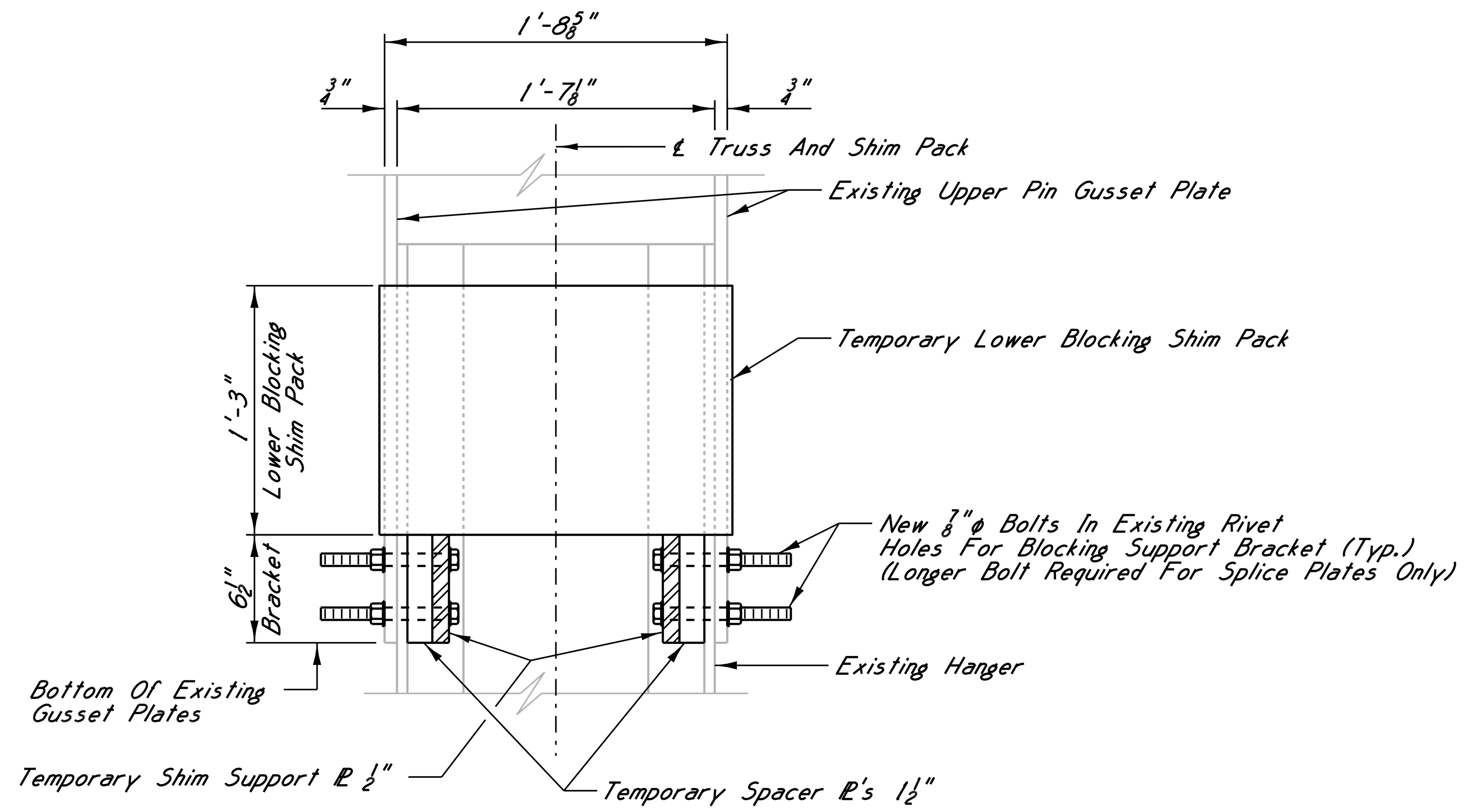


TEMPORARY LOWER BLOCKING
U29 DOWNSTREAM AND U49 UPSTREAM

SECTION Y-Y

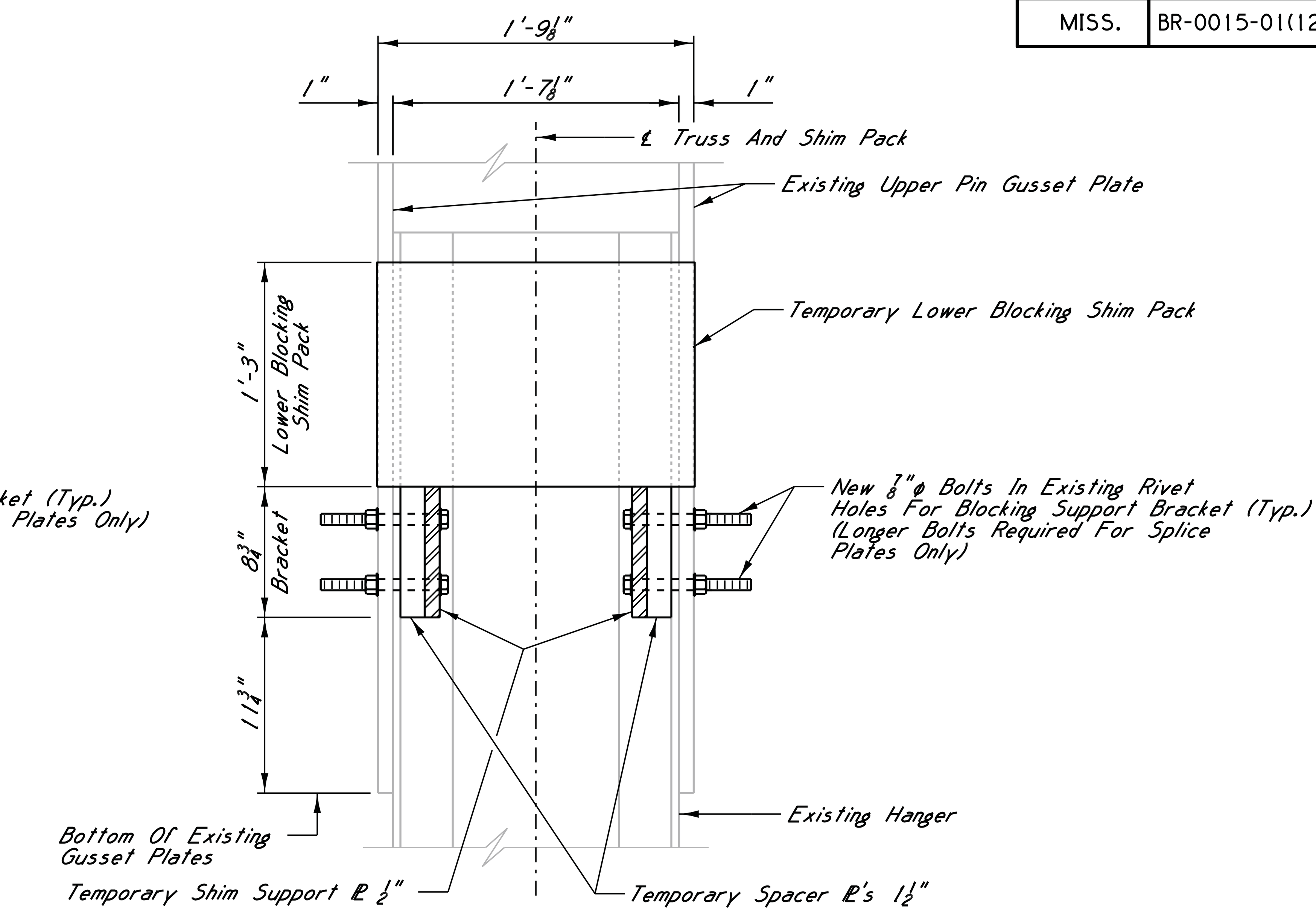
Existing Edge Angles And Plates Removed As Required To Install Temporary Splice Plates And Blocking. Fill Plates, Bolts, Etc. Required For Temporary Splice Plate Connections Are Not Shown For Clarity.



TEMPORARY LOWER BLOCKING

U29 SECTION H-H

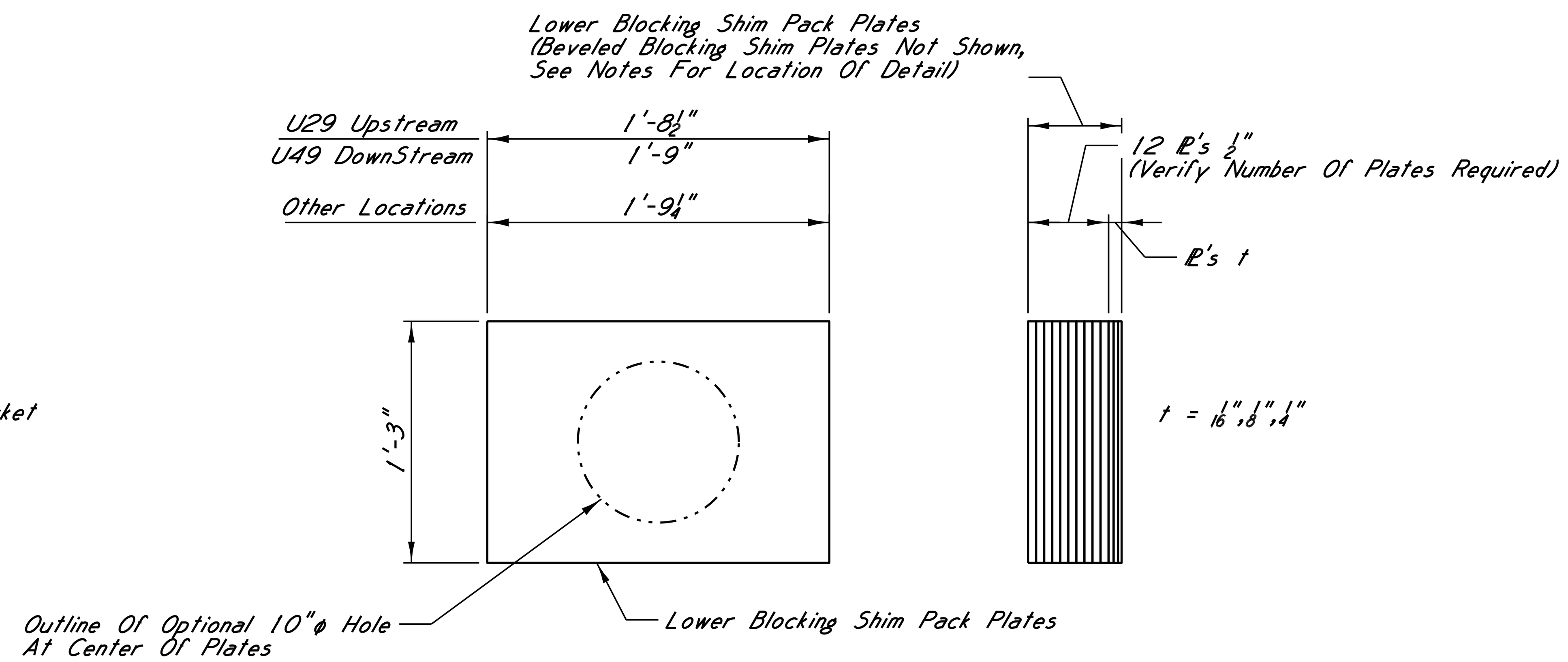
Showing Existing Upper Pin Gusset Plates With Existing Edge Angles And Plates Removed As Required To Install Temporary Splice Plates At U29 Downstream and U49 Upstream. Fill Plates, Bolts, Etc. Required For Temporary Splice Plate Connections Are Not Shown For Clarity.



TEMPORARY LOWER BLOCKING

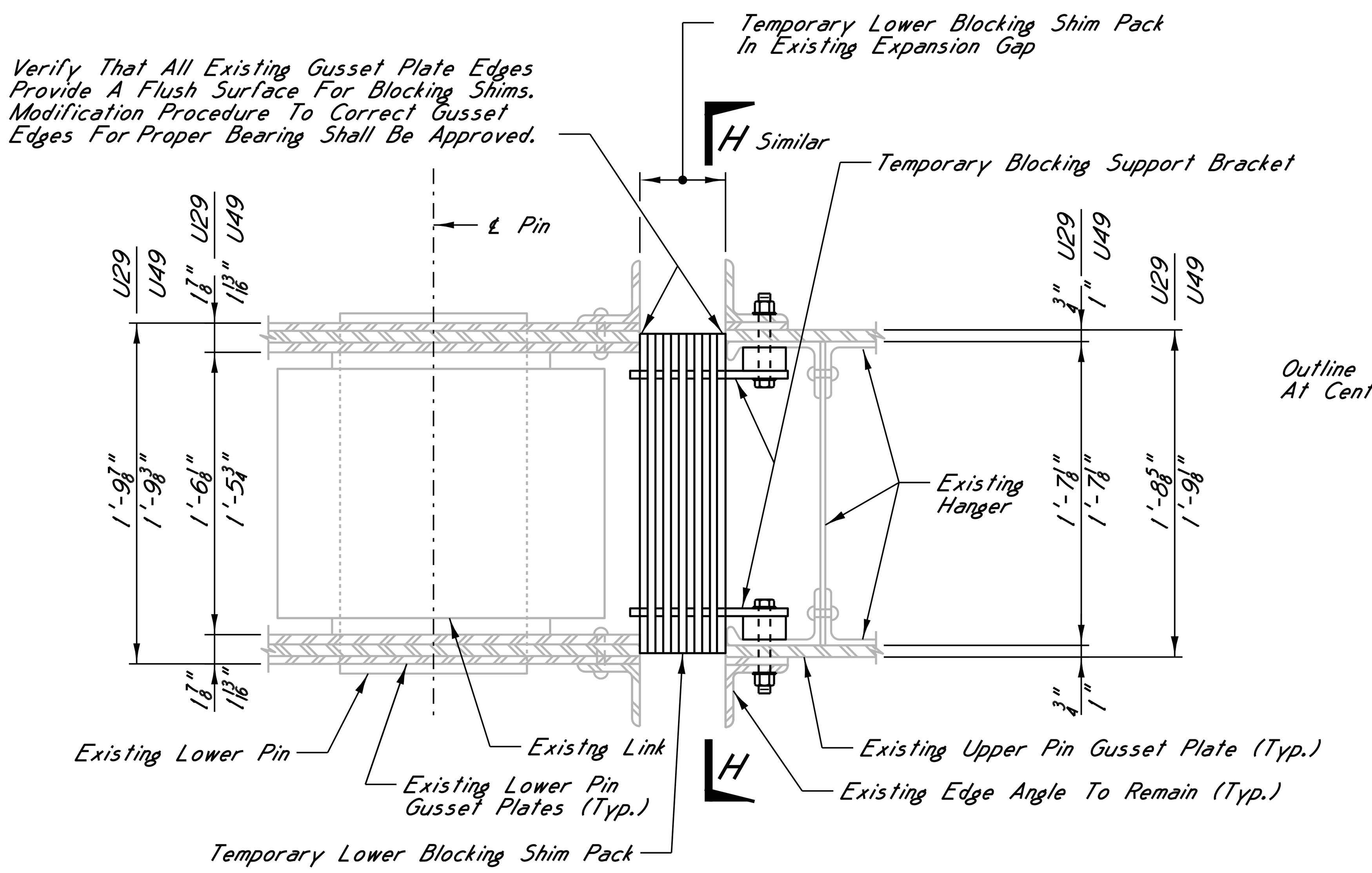
U49 SECTION H-H

Showing Existing Upper Pin Gusset Plates With Existing Edge Angles And Plates Removed As Required To Install Temporary Splice Plates At U29 Downstream and U49 Upstream. Fill Plates, Bolts, Etc. Required For Temporary Splice Plate Connections Are Not Shown For Clarity.



LOWER BLOCKING SHIM PACK

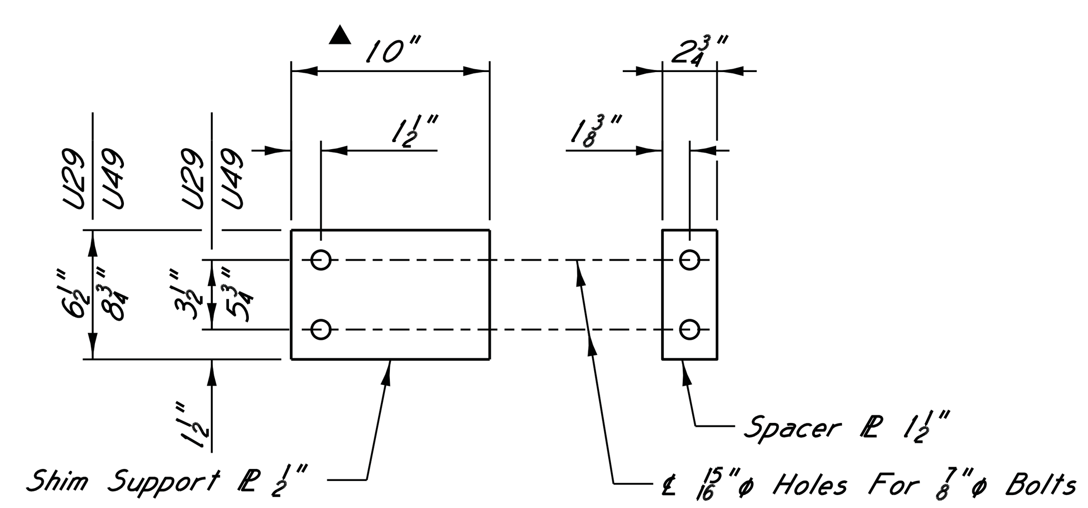
See Also Beveled Blocking Shim Plates And Gap Plates To Be Used Where Required



TEMPORARY LOWER BLOCKING
U29 UPSTREAM AND U49 DOWNSTREAM

SECTION Y-Y

Existing Cover Plate Temporary Removed To Expose Edge Of Lower Pin Gussets



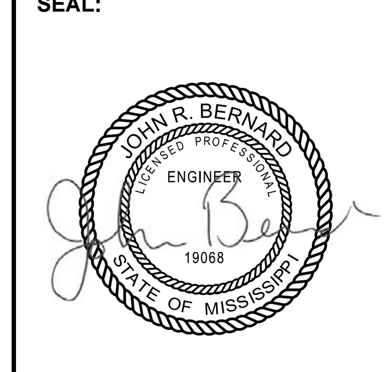
LOWER BLOCKING SUPPORT BRACKET

▲ Verify Length Required Based On The Existing Expansion Gap During Installation And Post-Tensioning

NOTES

For Additional Notes And Location Of Section Y-Y, See Sheets A18 And A19.
For Beveled Blocking Shim Plates And Gap Plate Details, See Sheet A22.

SEAL:



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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY UPPER LONGITUDINAL RESTRAINT (6 OF 6)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A23
SHEET NUMBER 8023

DESIGNED J.Bernard DETAILED D.Linenberger TRACED ____
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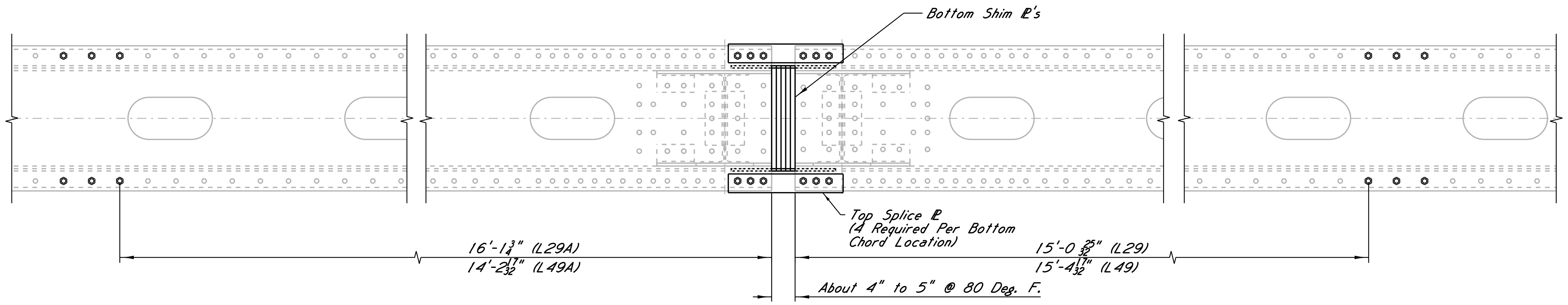
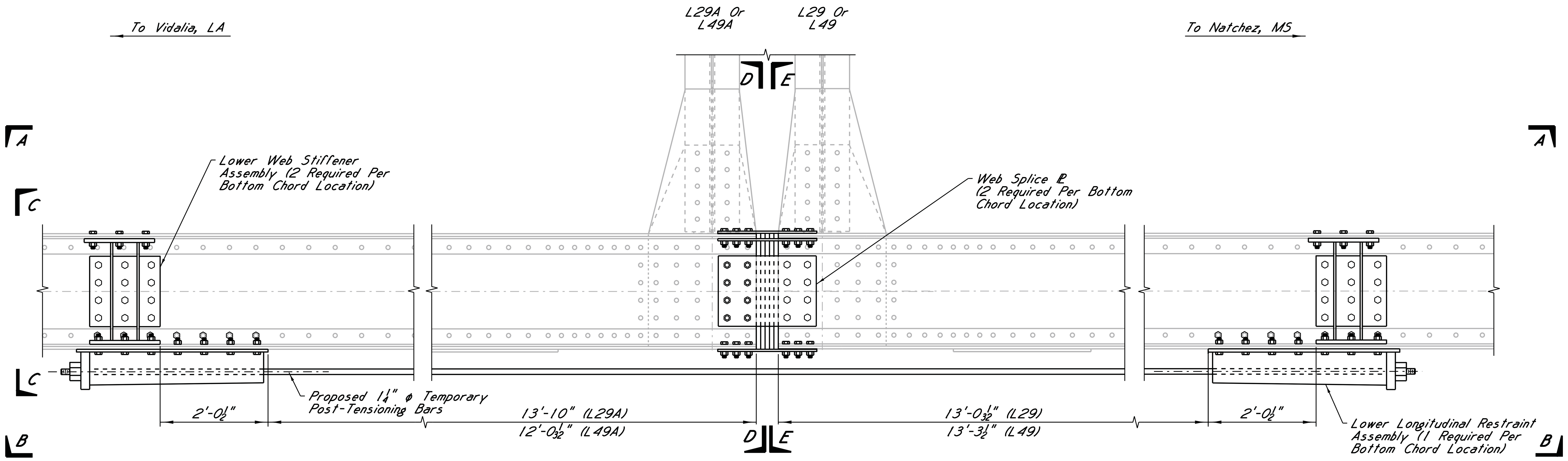


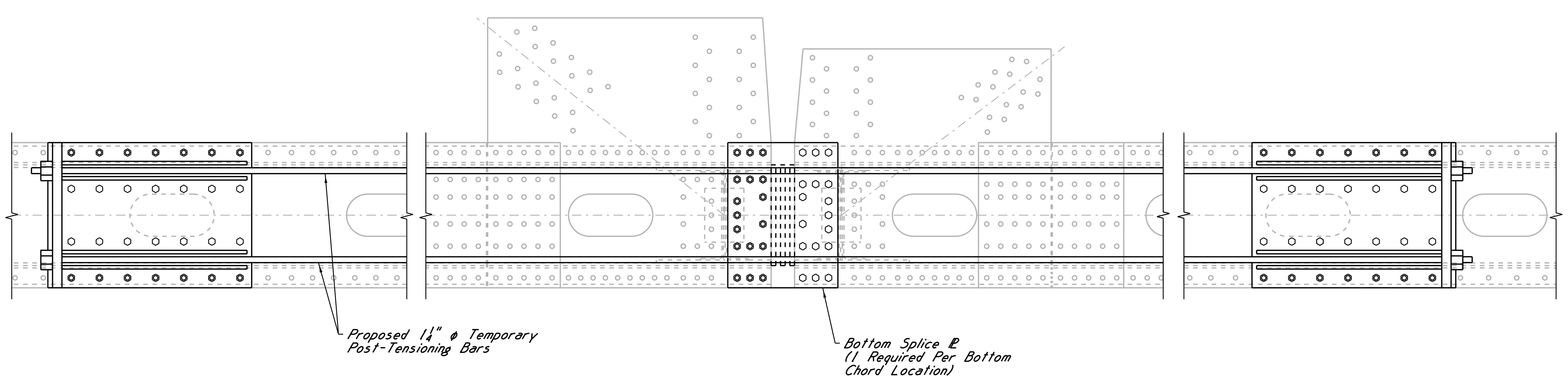
VIEW A-A*

Floorbeams Not Shown For Clarity



L29 AND L49 TEMPORARY LOWER LONGITUDINAL RESTRAINT*

Floorbeams Not Shown For Clarity



VIEW B-B*

Floorbeams Not Shown For Clarity

*L29 Shown, L49 Similar

NOTES

For General Noes, See Sheet A02

All Bolt Holes Shown Shall Be 15/16" Diameter Holes Unless Otherwise Shown.

All Post-Tensioning Bars To Be Used Shall Be 1¼" Diameter, ASTM A722, Type II (Grade 150) Designation And Shall Not Be Reused.

SUGGESTED LOWER LONGITUDINAL RESTRAINT INSTALLATION STEPS

The Suggested Lower Longitudinal Restraint Installation Steps Provided Below Are For The Placement Of A Lower Longitudinal Restraint At One Bottom Chord Location. Four Individual Operations Will Be Required. The Two Operations At L29 Shall Be Performed At The Same Time. L49 Shall Be Similar.

Step LLR-1: Install Lower Longitudinal Restraint Assemblies And 6x4x⅞" Angles. (4 Locations) (Bolts Finger Tight)

Step LLR-2: Install Lower Web Stiffener Assemblies (4 Locations) And Fully Tighten Bolts In Longitudinal Restraint Assemblies And Web Stiffener Assemblies.

Step LLR-3: Place Top, Web And Bottom Splice Plates On L29A Or L49A Side (Fully Tighten Bolts), And Install Post-Tensioning Rods In Lower Longitudinal Restraint Assemblies. (Do Not Tension)

Step LLR-4: Place Shim Plates And Tension Post-Tensioning Rods To 10 Kips Per Rod.

Step LLR-5: Field Drill And Bolt Splice Plates To L29 Or L49 Sides, Then Detension Post-Tensioning Rods.

LEGEND

○ Existing Rivets To Remain

⬡ Remove Existing Rivet For Temporary ⅞"ϕ A490 Bolt.

⬡ Temporary ⅞"ϕ A490 Bolt In 15/16"ϕ Hole To Be Field Drilled.

SEAL:

JAMES P. GREGG
REGISTERED PROFESSIONAL ENGINEER
19496
STATE OF MISSISSIPPI

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION

U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

L29 AND L49 TEMPORARY LOWER LONGITUDINAL RESTRAINT (1 OF 5)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A24

SHEET NUMBER 8024

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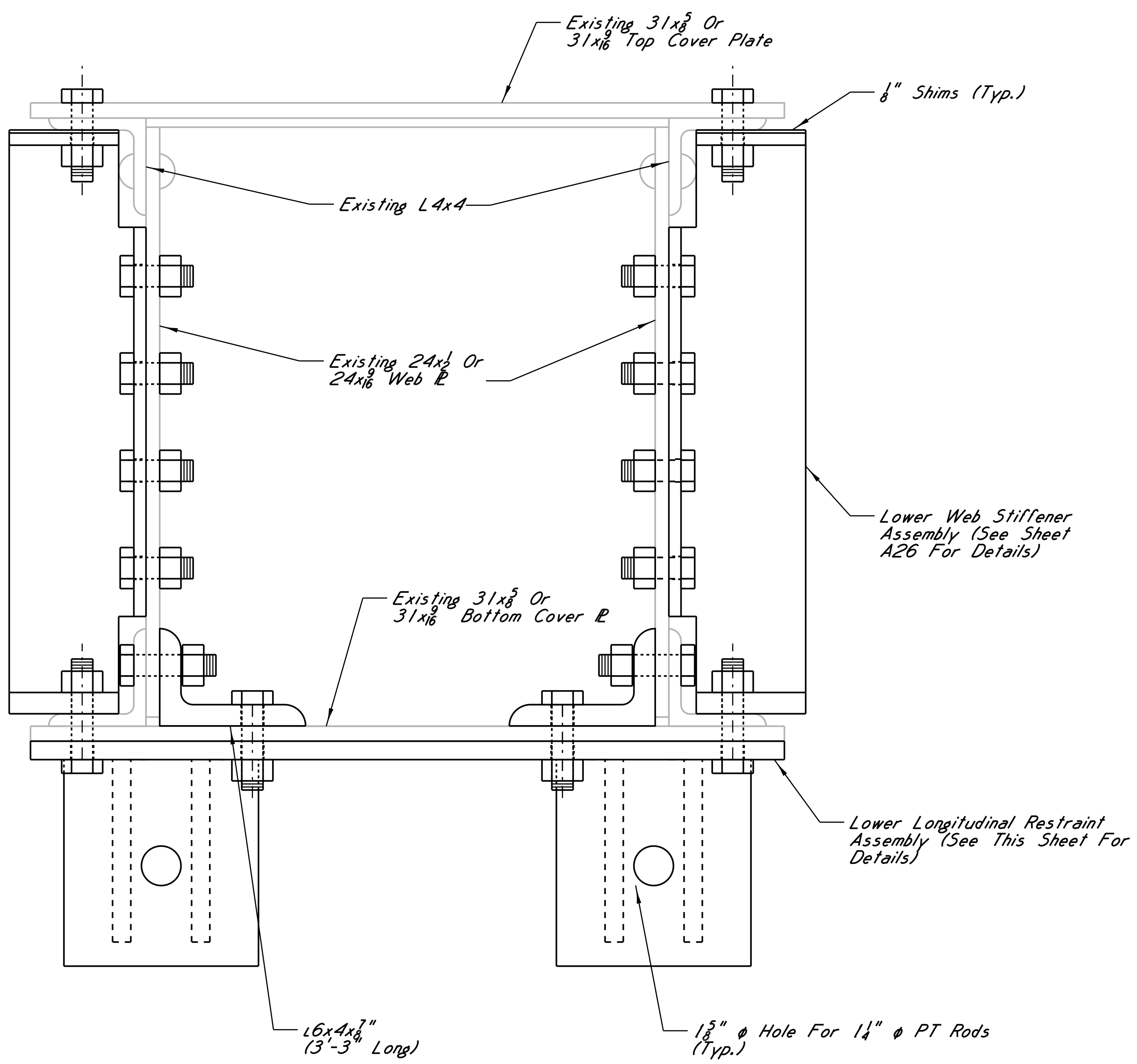
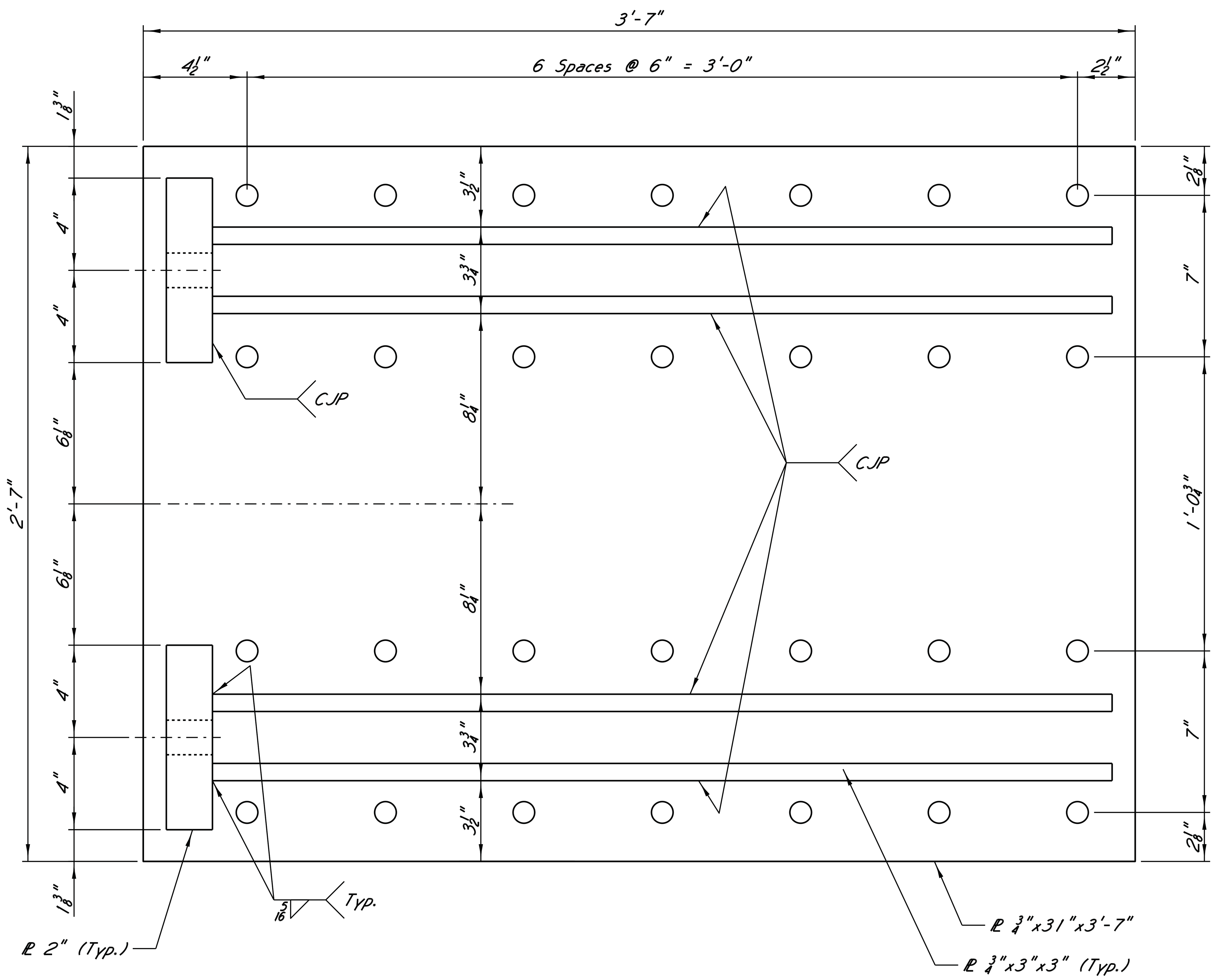
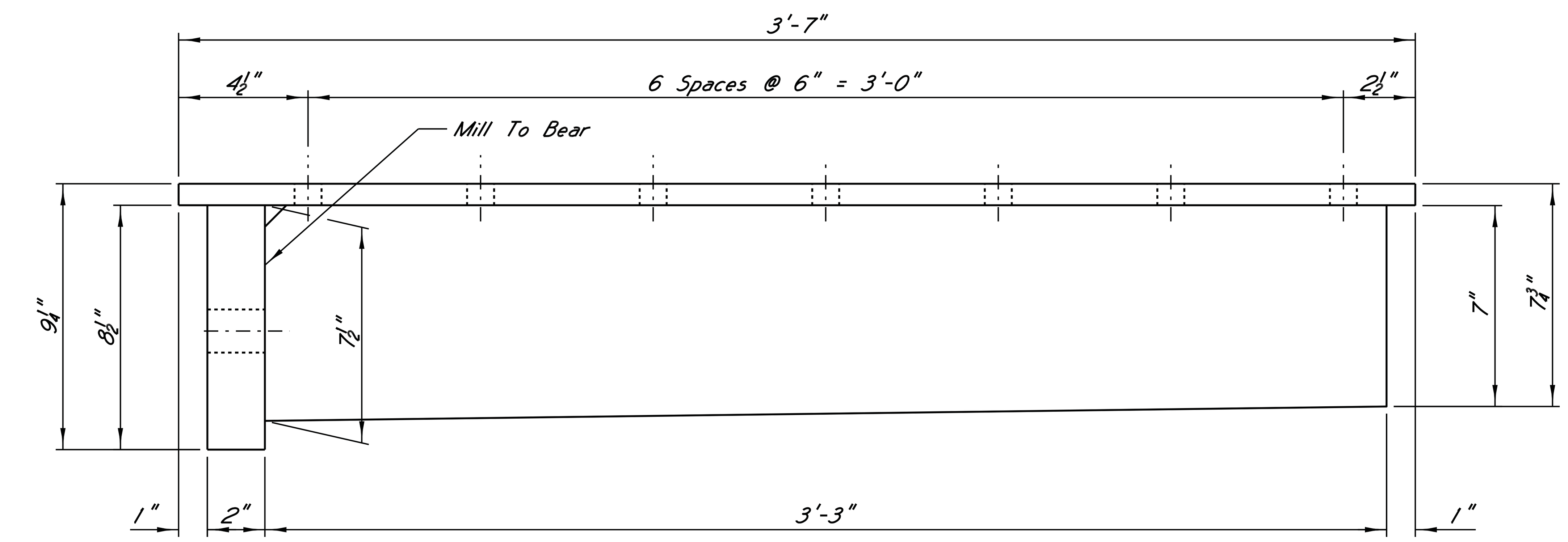


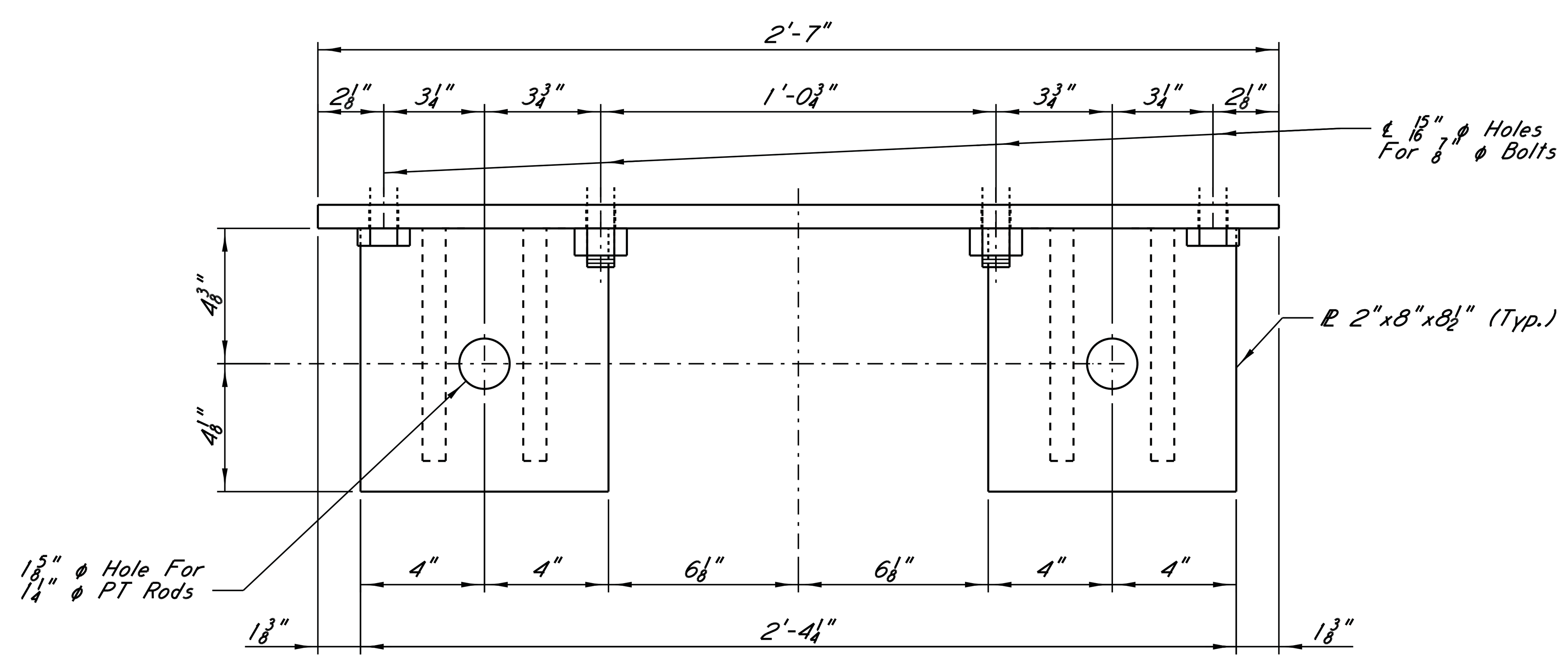
SECTION C-C



PLAN



ELEVATION



END ELEVATION

LOWER LONGITUDINAL RESTRAINT ASSEMBLY

NOTES

For Lower Longitudinal Restraint Assembly Notes, See Sheets A24.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

L29 AND L49 TEMPORARY LOWER LONGITUDINAL RESTRAINT (2 OF 5)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A25

SHEET NUMBER 8025

DESIGNED M.Xin DETAILED B.Gautreau TRACED
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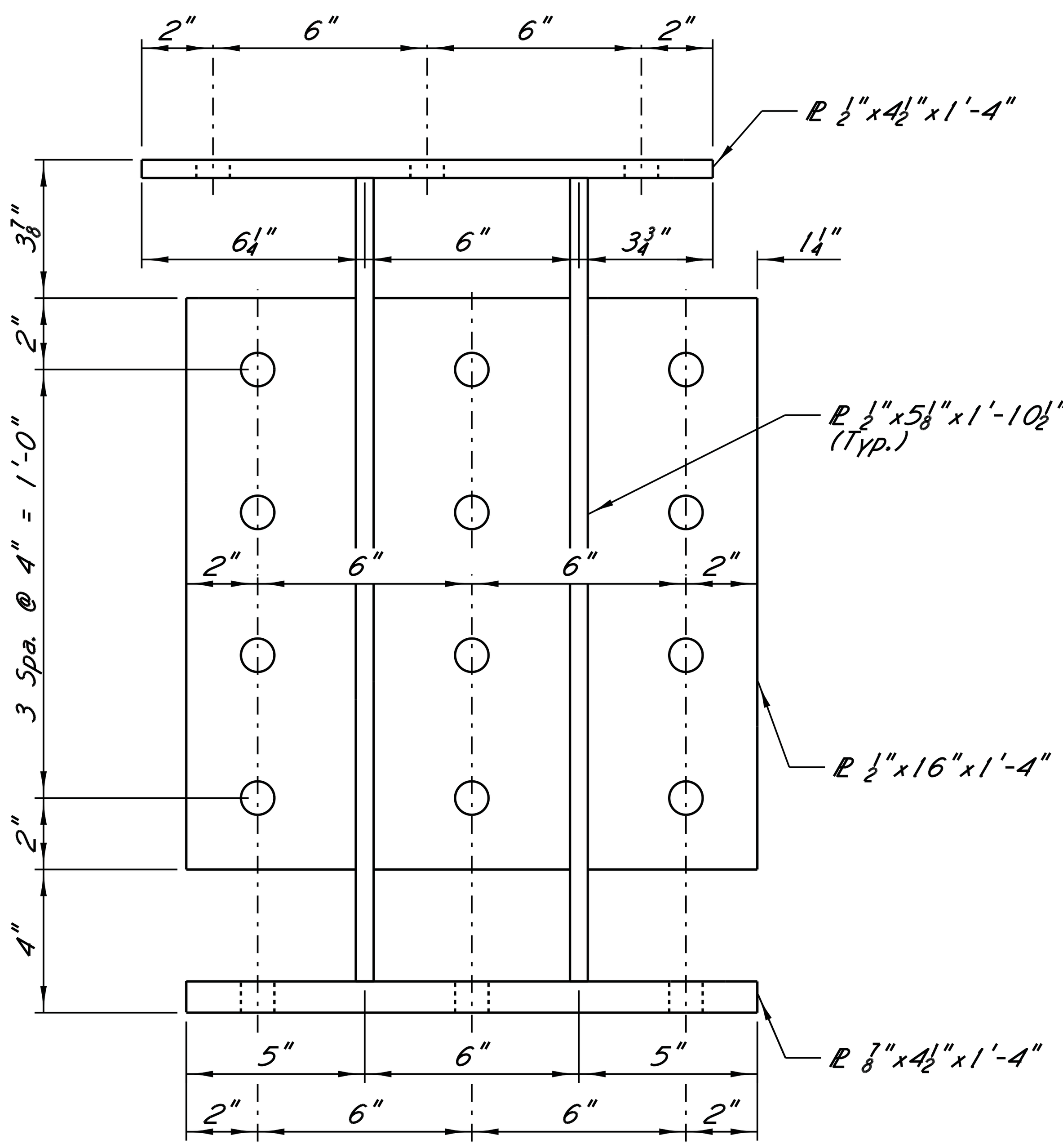
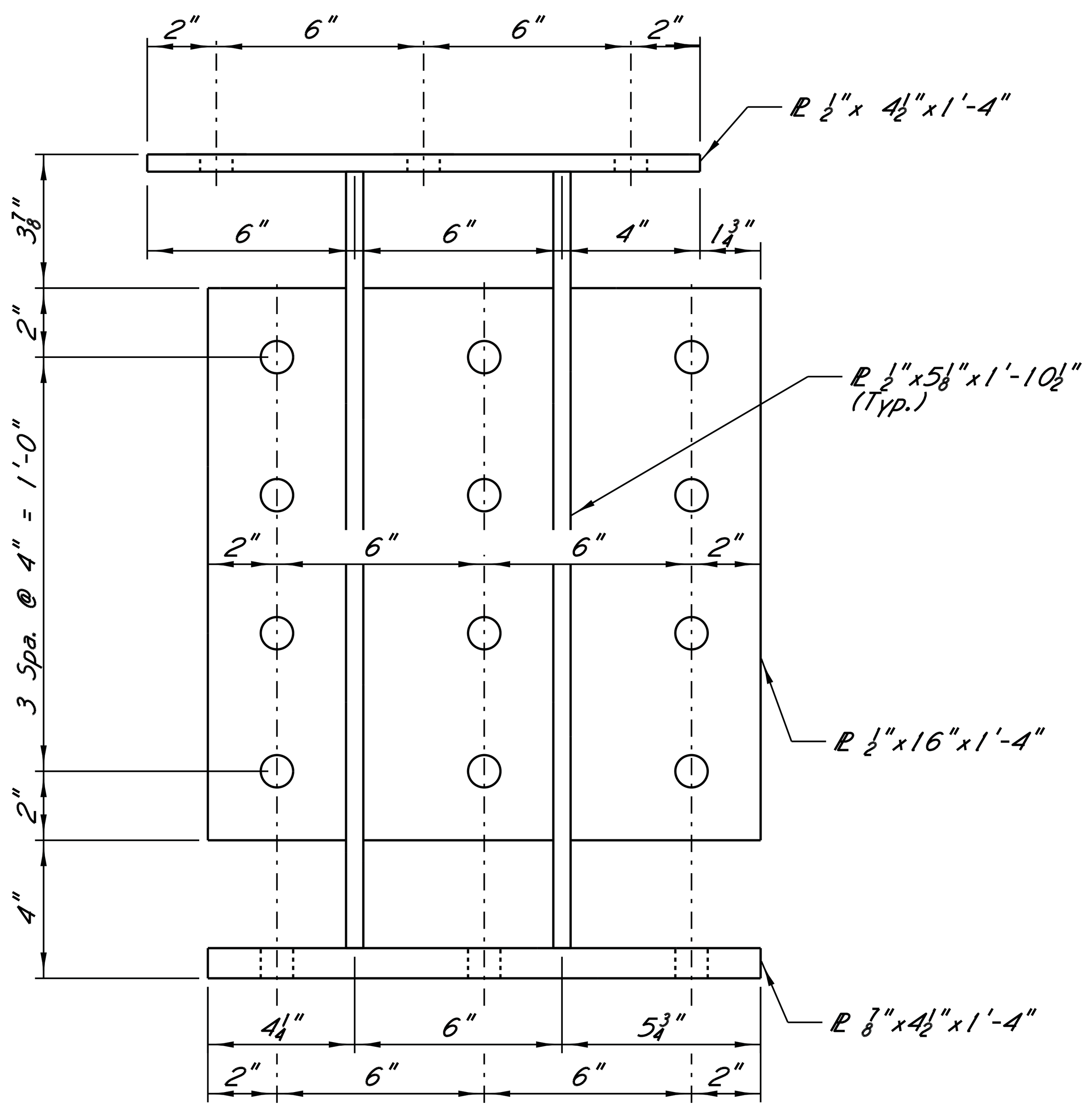
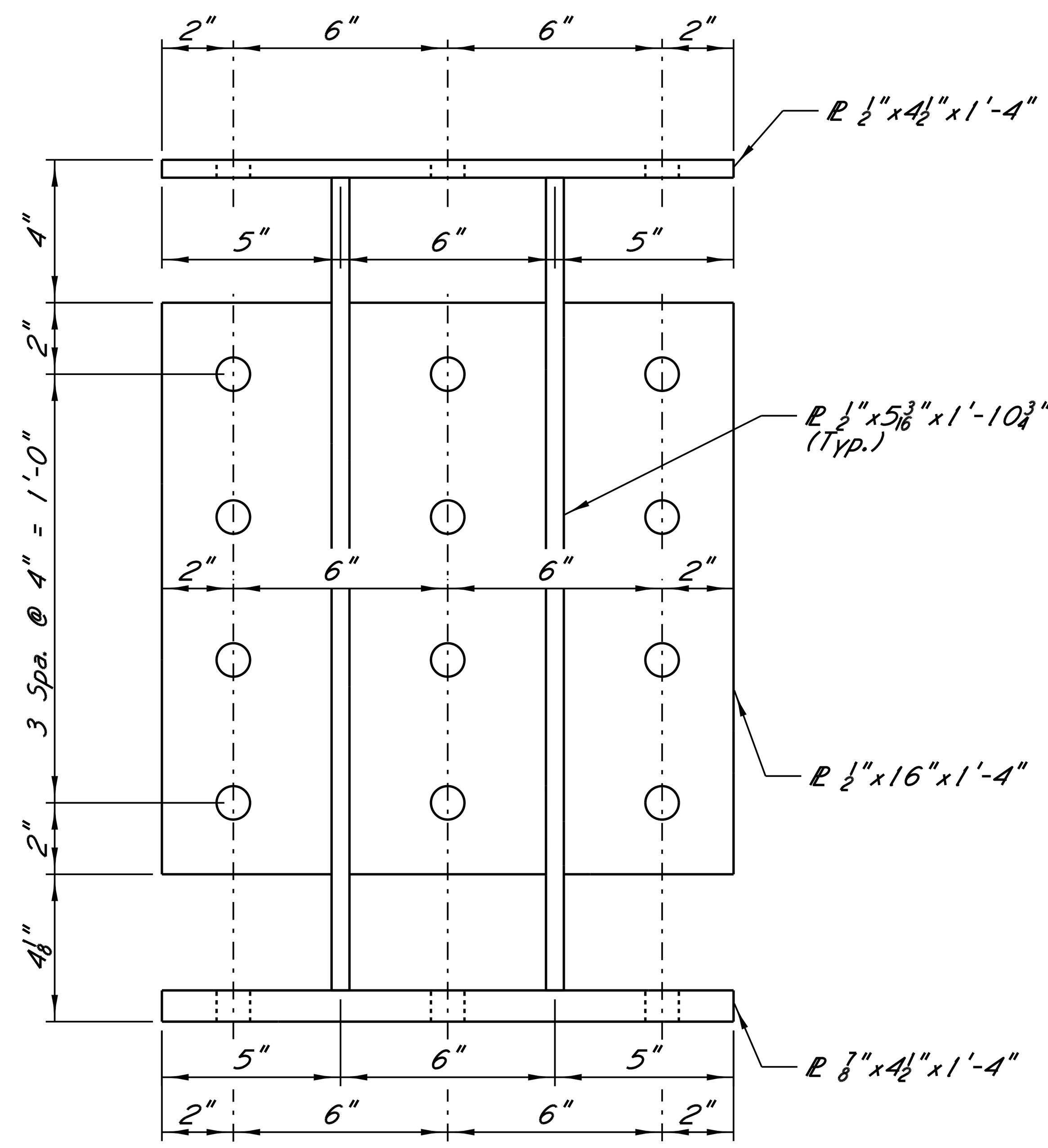


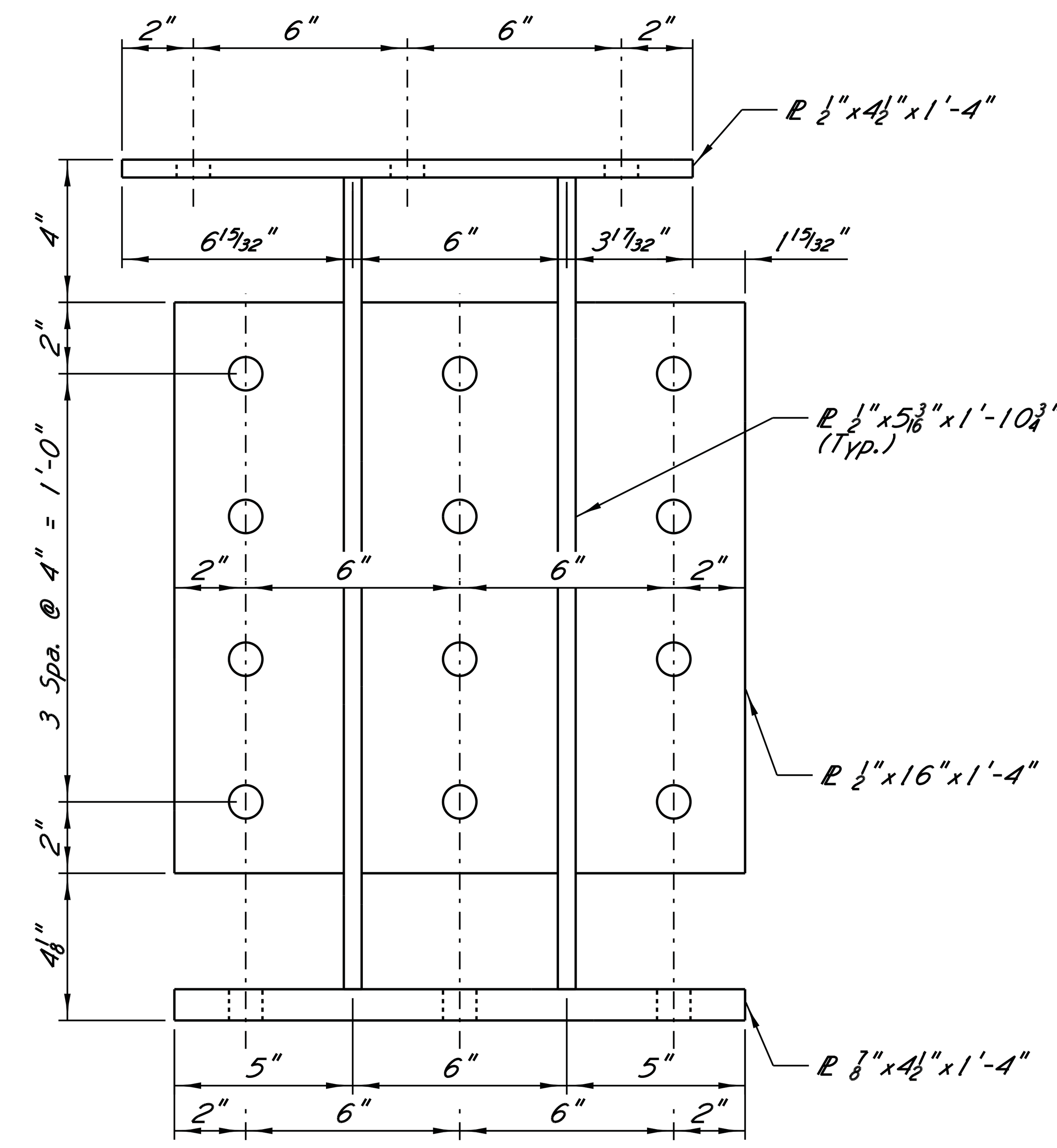
ELEVATION-L29A
2 Assemblies Required
1 As Shown, 1 Opposite



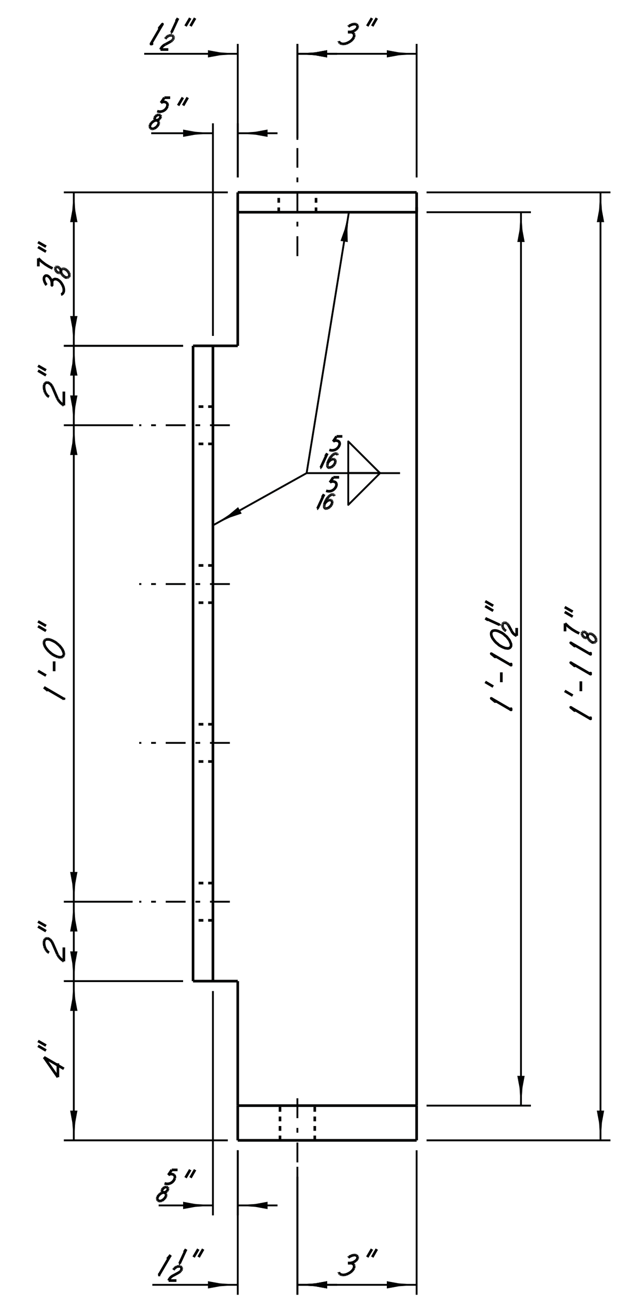
ELEVATION-L29
2 Assemblies Required
1 As Shown, 1 Opposite



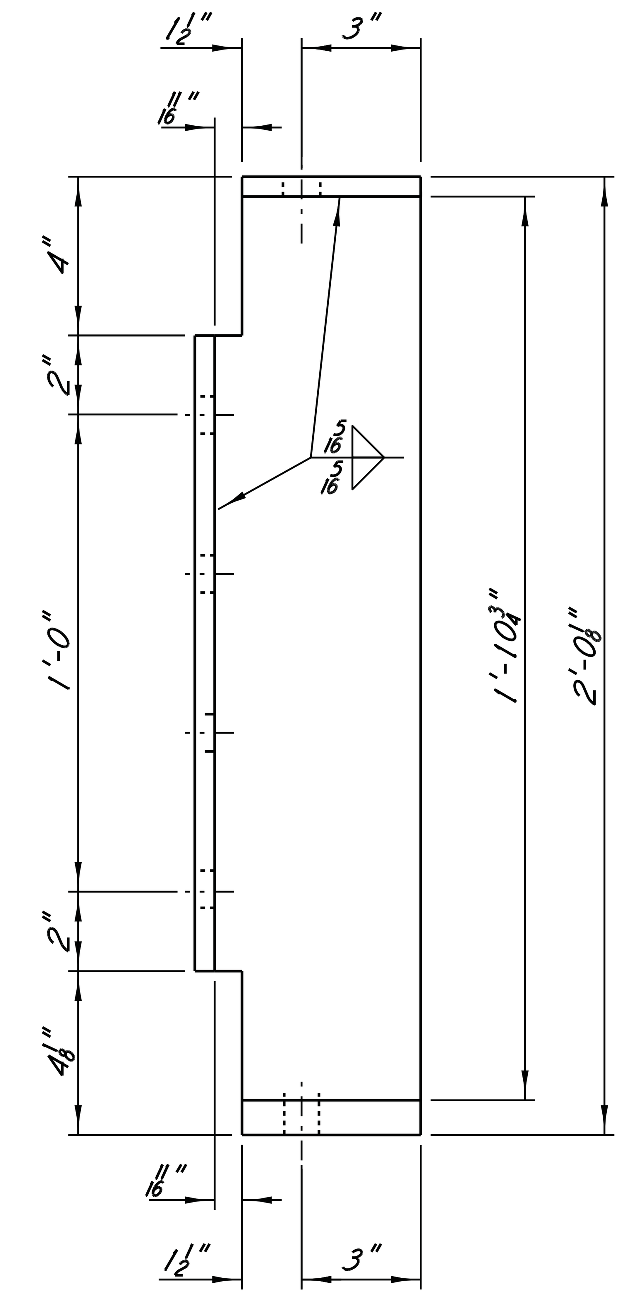
ELEVATION-L49A
2 Assemblies Required
1 As Shown, 1 Opposite



ELEVATION-L49
2 Assemblies Required
1 As Shown, 1 Opposite



SECTION - L29A, L29



SECTION - L49A, L49

NOTES

For Lower Web Stiffener Assembly Notes, See Sheets A24.

LOWER WEB STIFFENER ASSEMBLY

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JAMES P. GREGG
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19496
STATE OF MISSISSIPPI
DATE: 11/5/14

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

L29 AND L49 TEMPORARY LOWER LONGITUDINAL RESTRAINT (3 OF 5)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A26

SHEET NUMBER 8026

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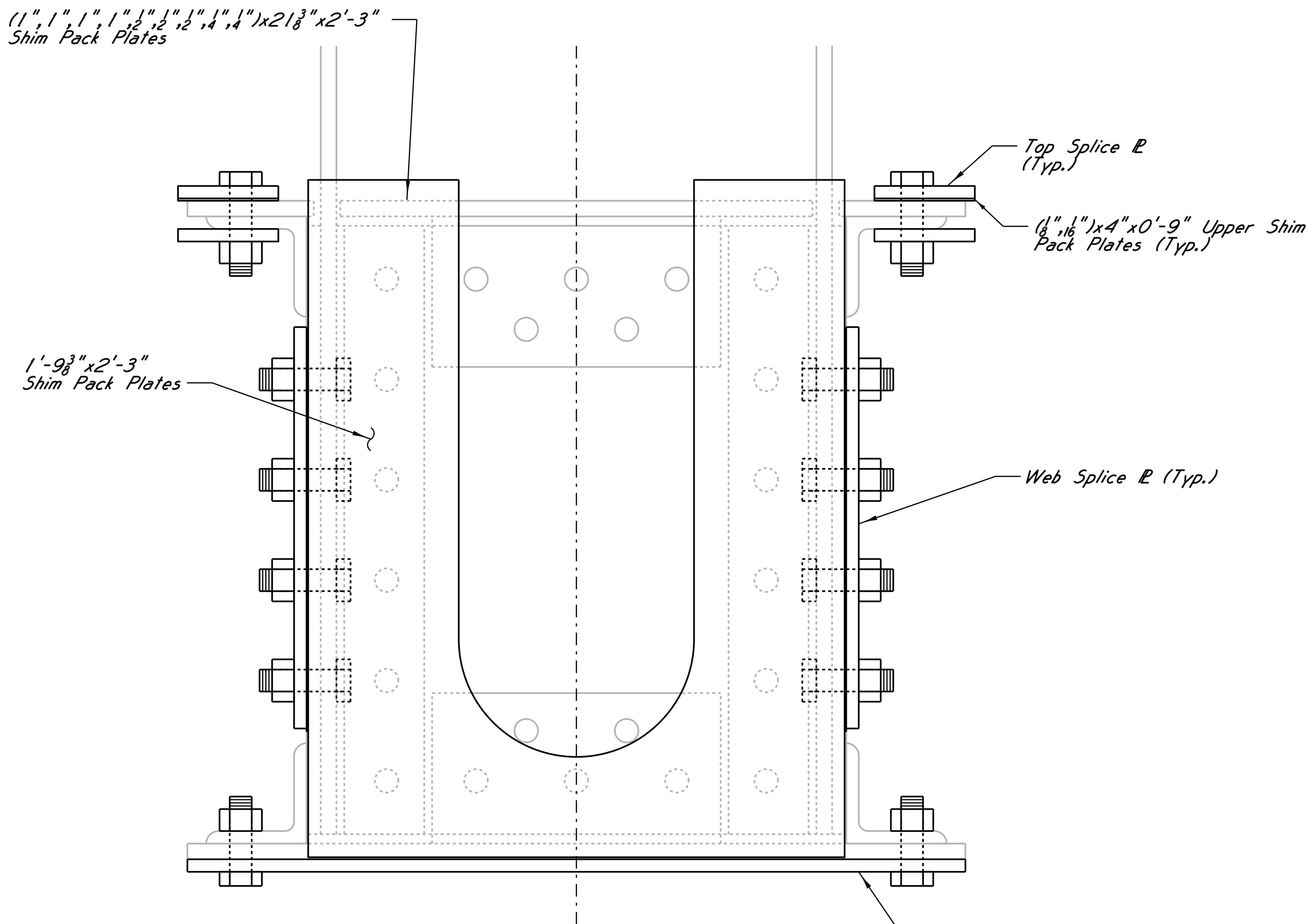
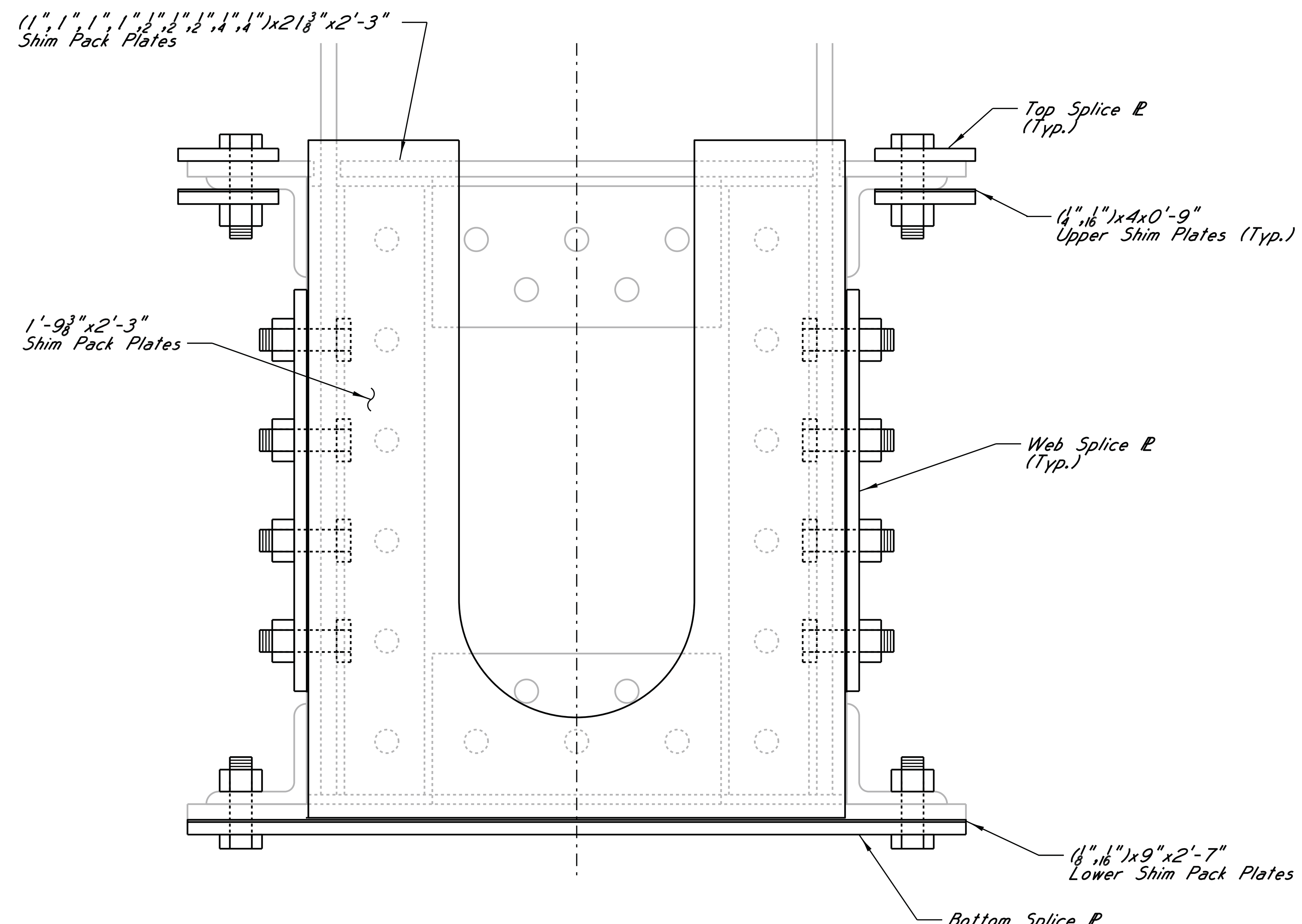
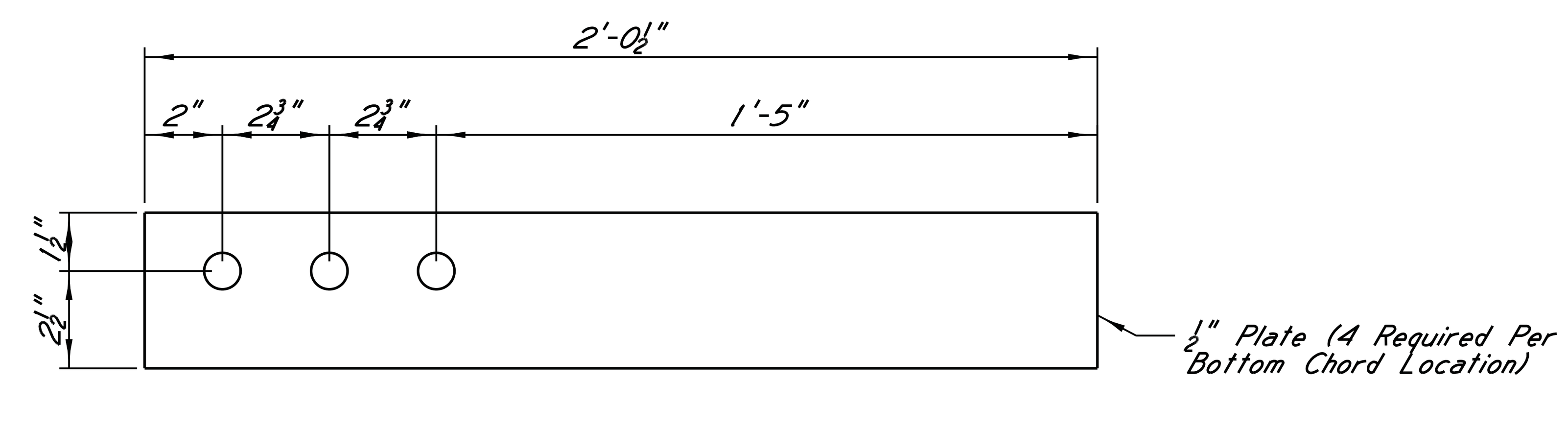


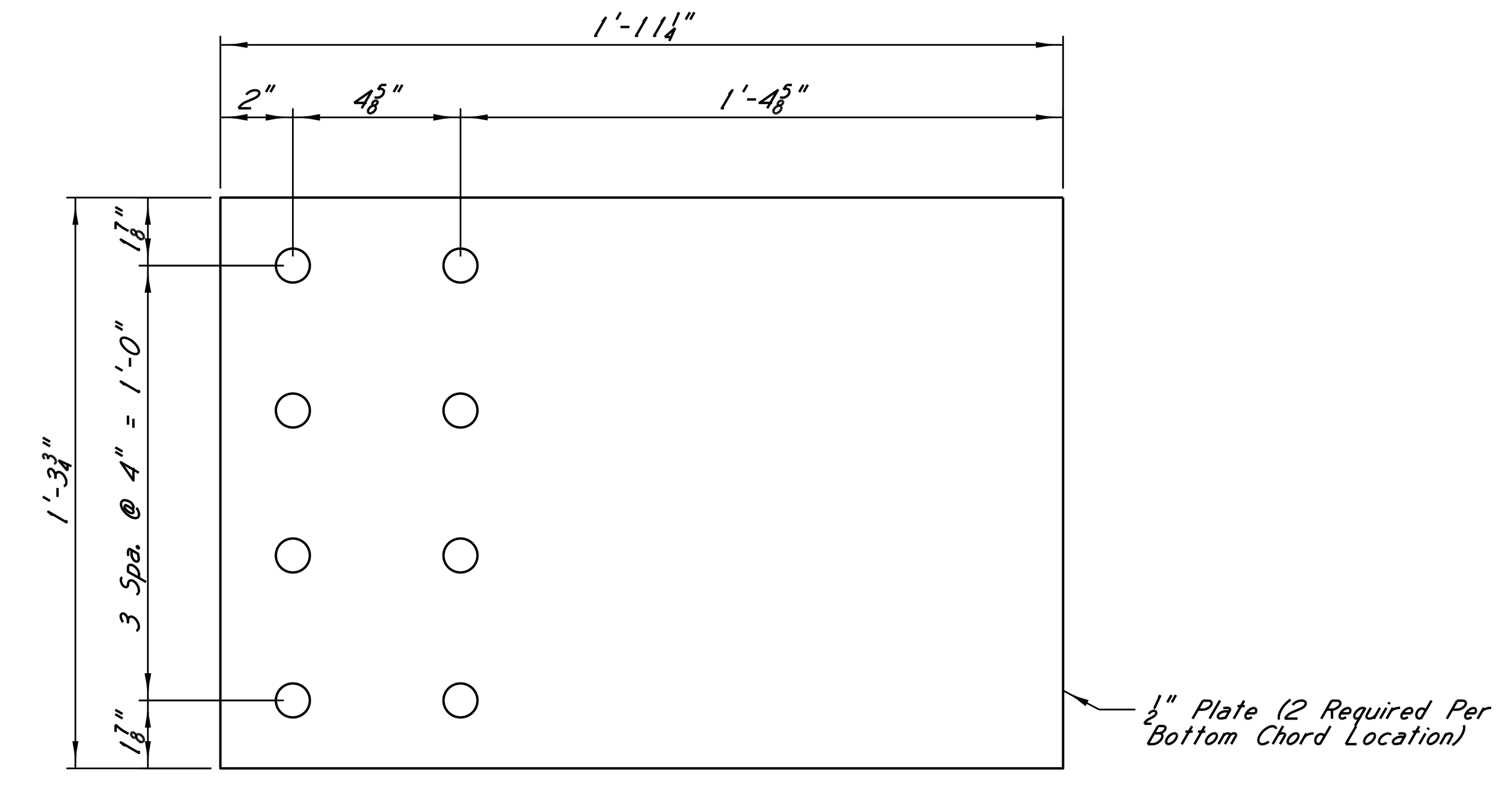
SECTION D-D
L29A Side



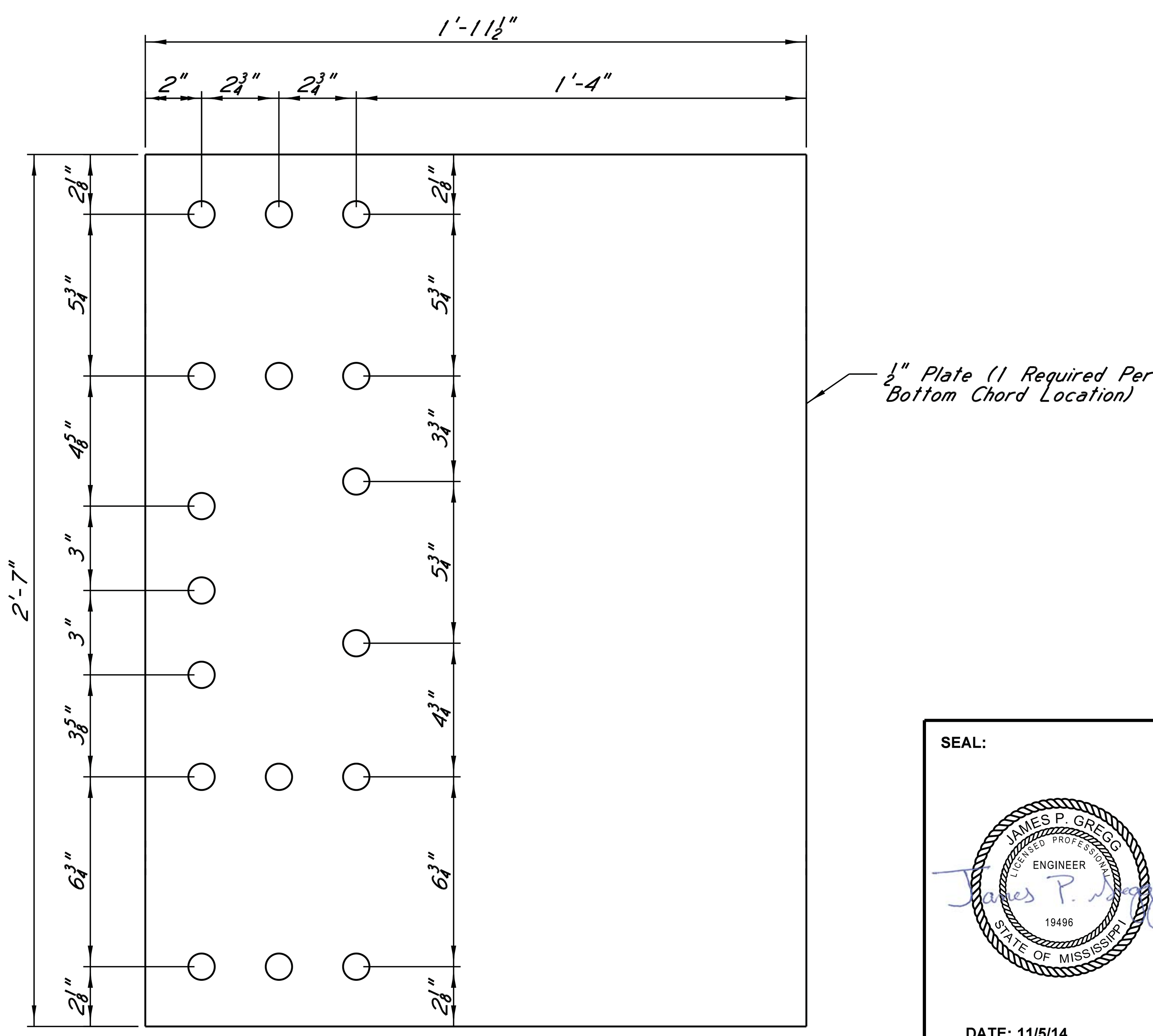
SECTION E-E
L29 Side



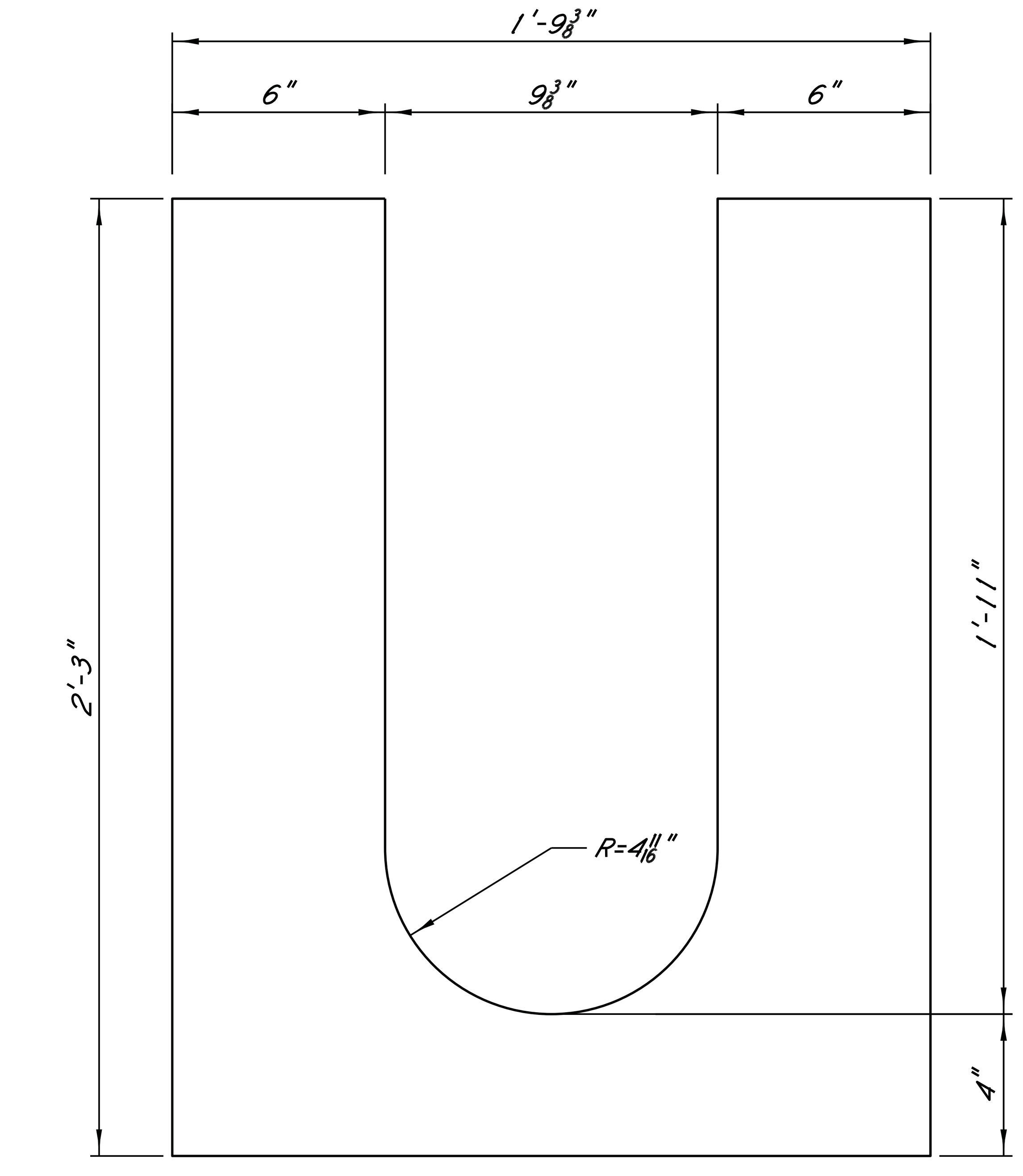
TOP SPLICE PLATE - L29, L29A
Field Drill Holes Not Shown



WEB SPLICE PLATE - L29, L29A
Field Drill Holes Not Shown



BOTTOM SPLICE PLATE - L29, L29A
Field Drill Holes Not Shown



BOTTOM SHIM PLATE

NOTES

For Location Of Sections D-D And E-E, Sheet A24

6" Opening Has Been Assumed When Sizing Splice ℙ Thickness, Contractor Shall Adjust As Needed To Achieve Proper Fit.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

L29 AND L49 TEMPORARY LOWER LONGITUDINAL RESTRAINT (4 OF 5)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

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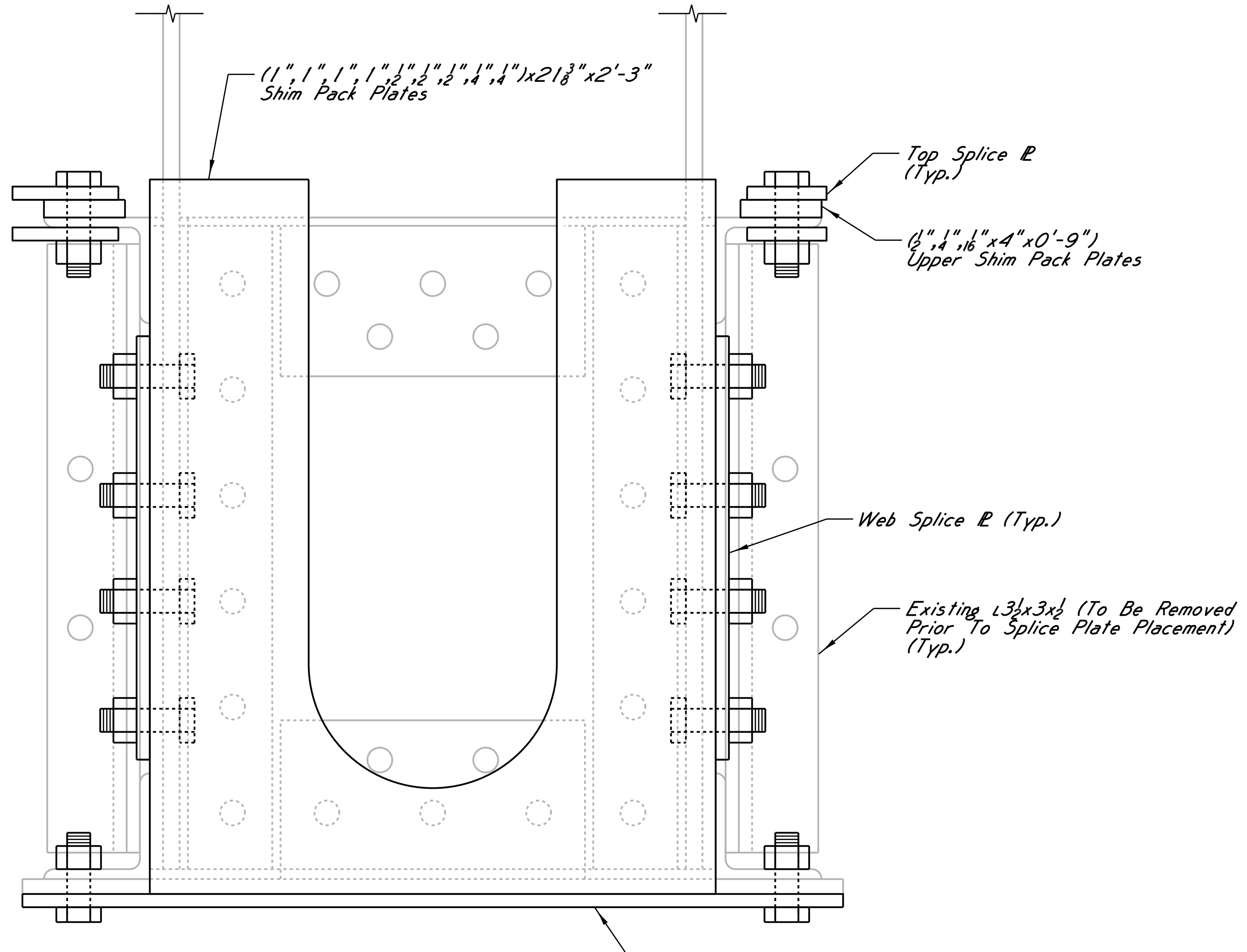
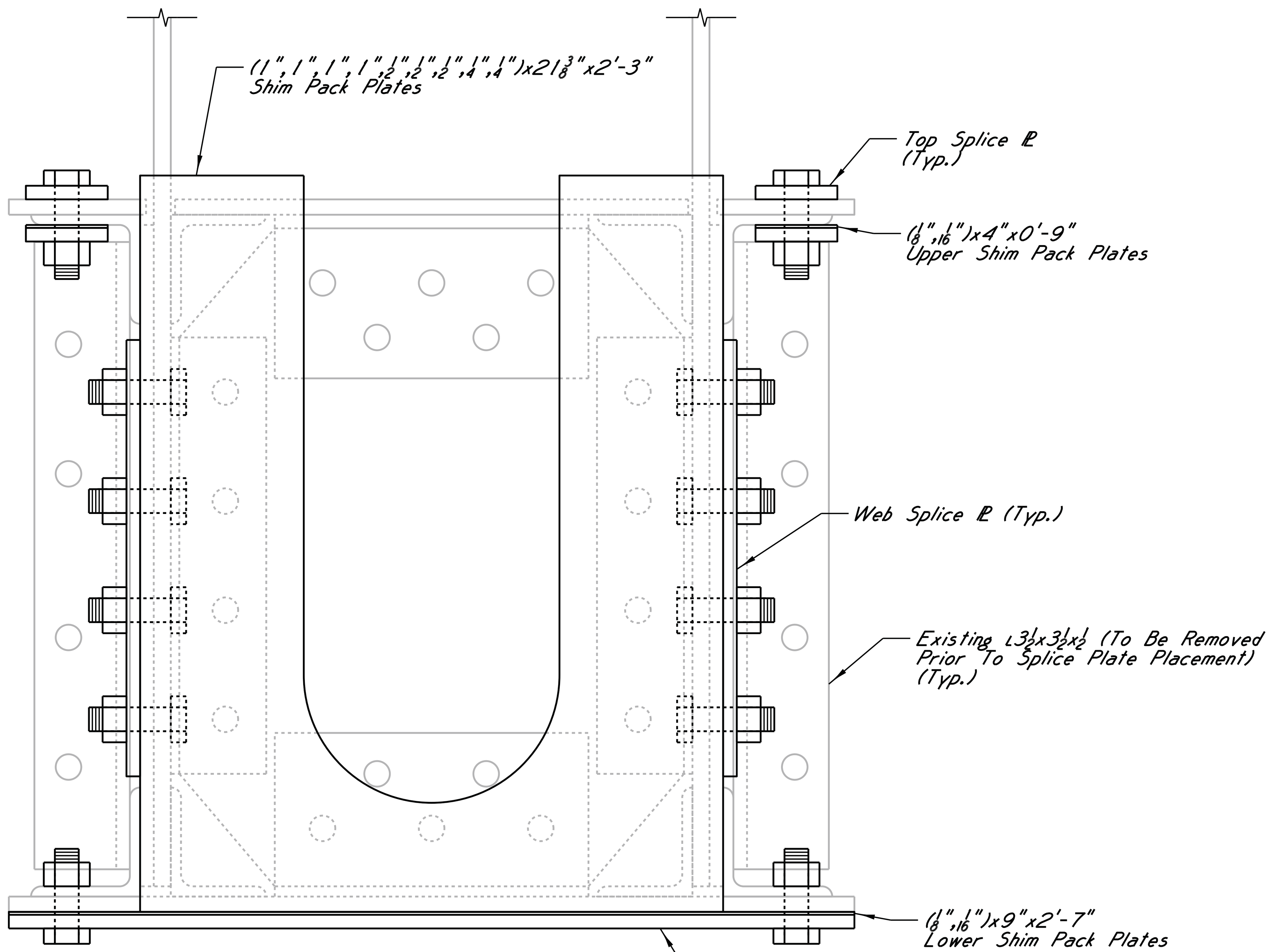
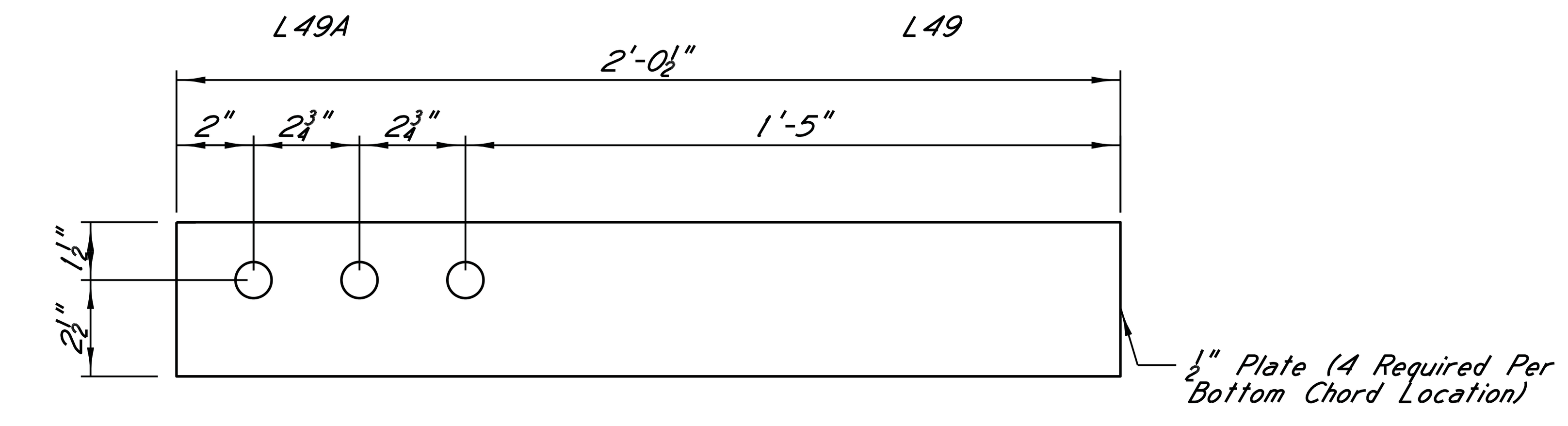


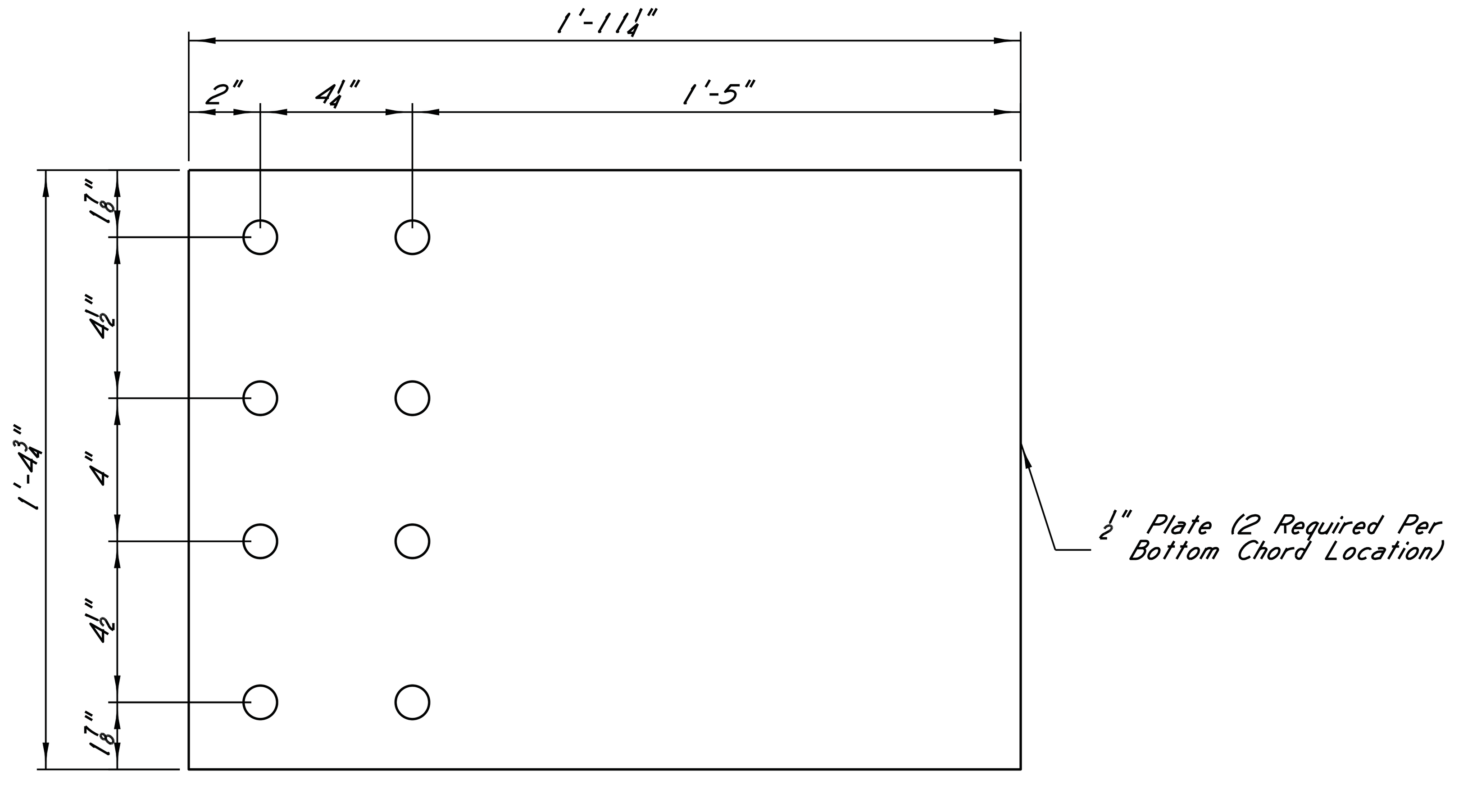
SECTION D-D
L49A Side



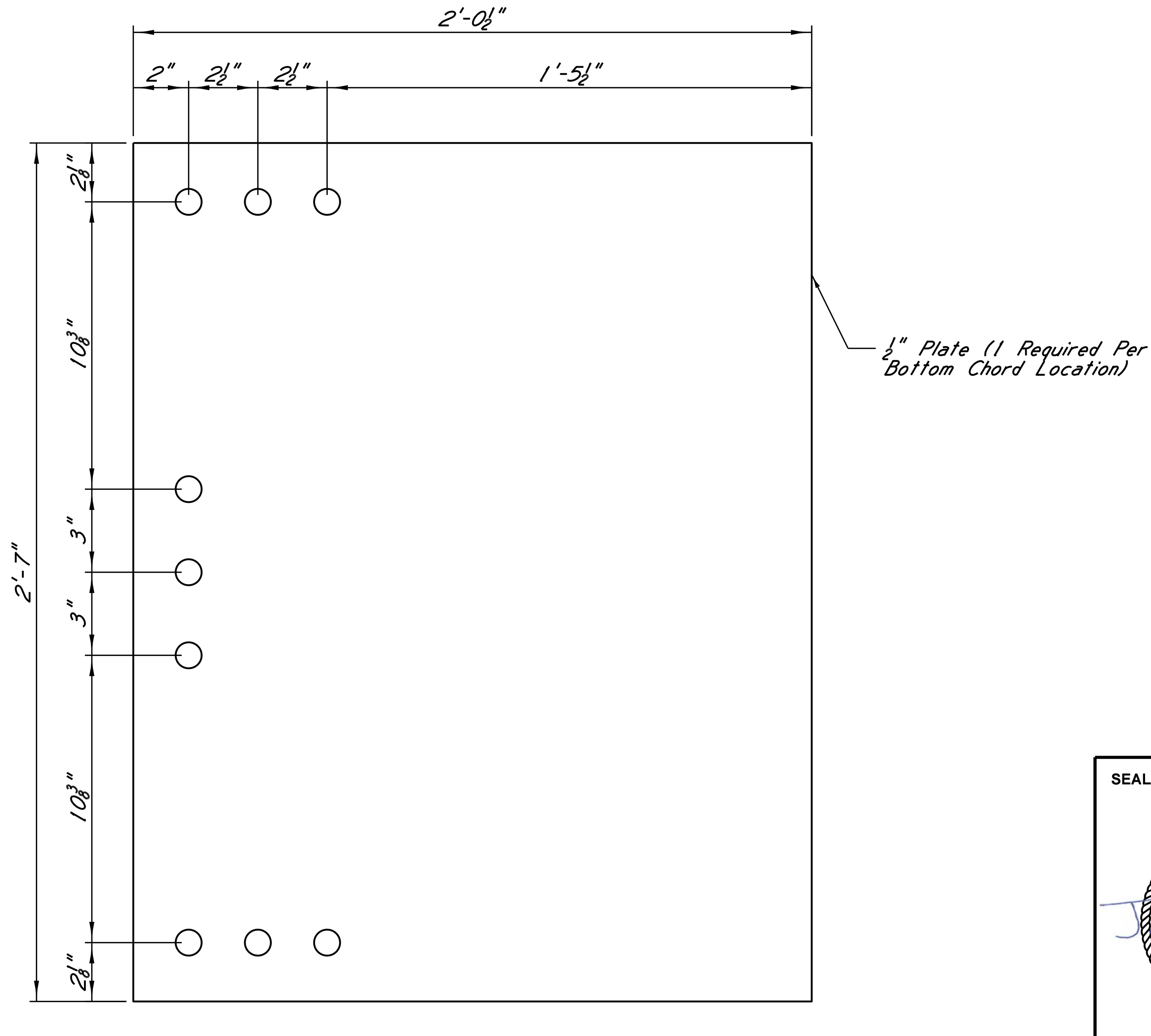
SECTION E-E
L49 Side



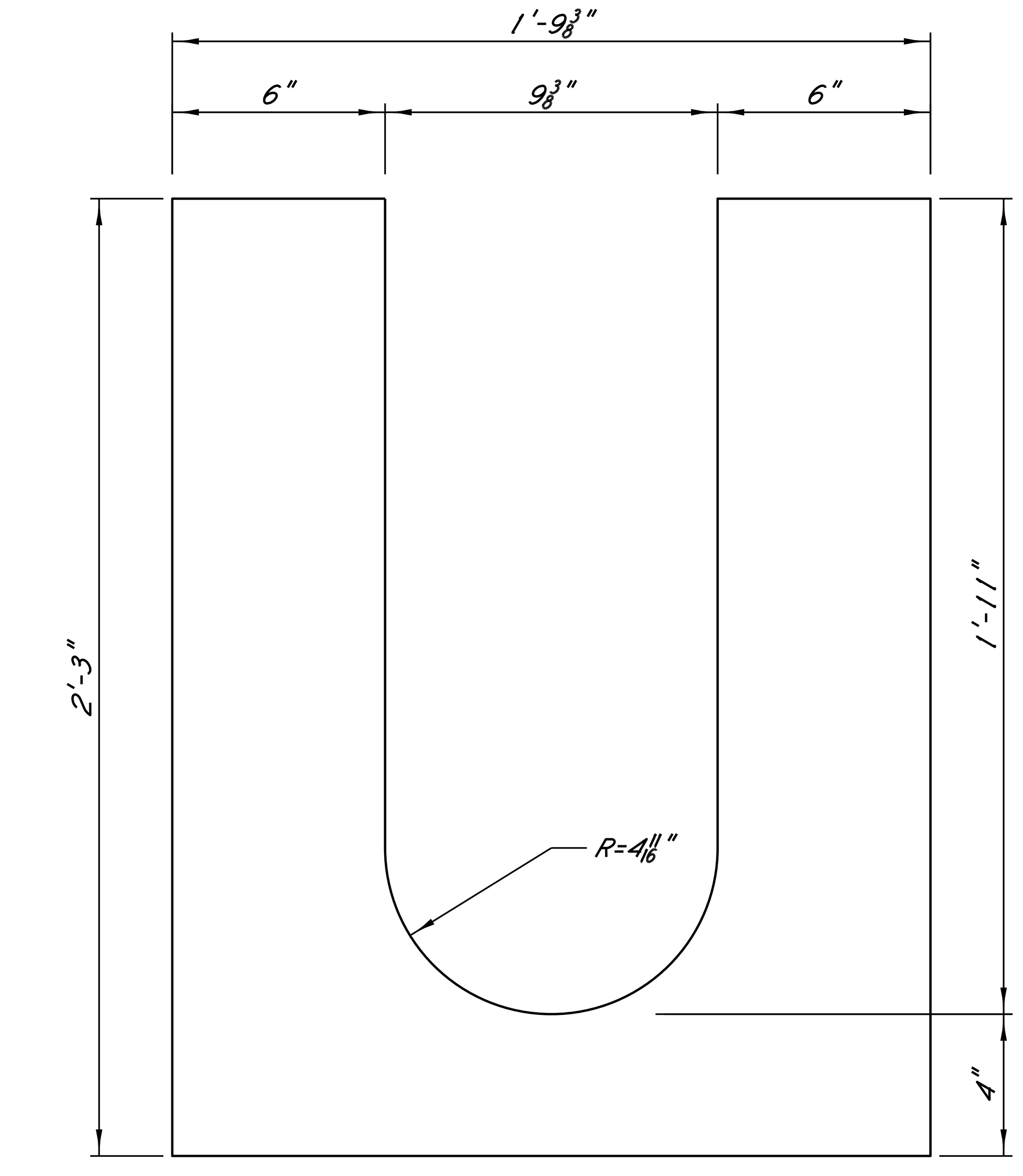
TOP SPLICE PLATE - L49, L49A
Field Drill Holes Not Shown



WEB SPLICE PLATE - L49, L49A
Field Drill Holes Not Shown



BOTTOM SPLICE PLATE - L49, L49A
Field Drill Holes Not Shown



BOTTOM SHIM PLATE

NOTES

For Splice Plate Notes, See Sheet A27.

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19496
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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

L29 AND L49 TEMPORARY LOWER LONGITUDINAL RESTRAINT (5 OF 5)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A28

SHEET NUMBER 8028

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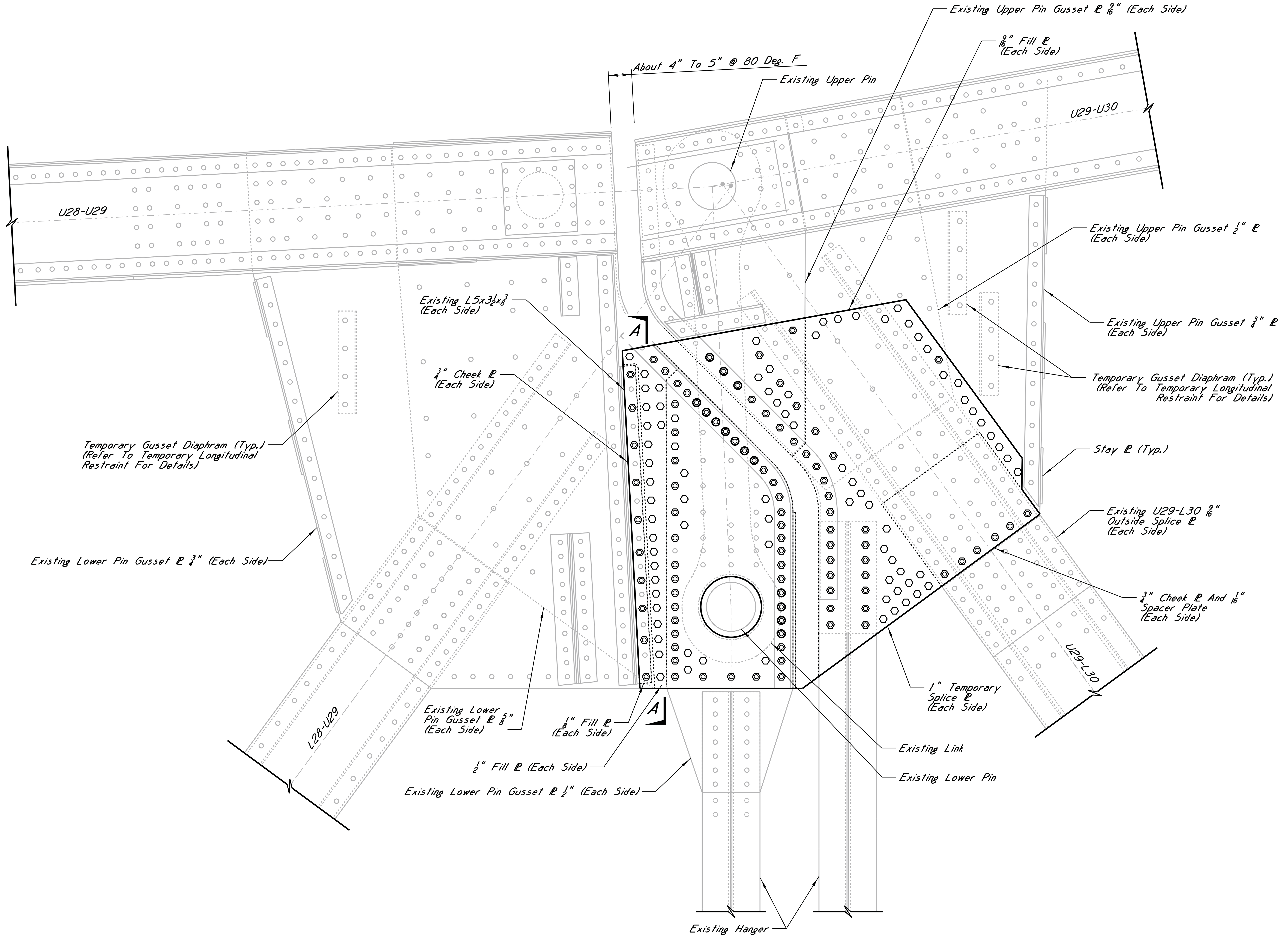

LEGEND

- ○ Existing Rivet To Remain
- Temporary 7/8"φ A490 Bolt In Existing Rivet Hole
- Temporary 7/8"φ A490 Bolt In New 15/16"φ Hole (Field Drilled)
- 1 7/16" Hole In Splice ℄, Cheek ℄ And Fill ℄ For A325 Bolt

U29 DOWNSTREAM TRUSS SPLICE PLATE

(Jacking Beam, Upper Longitudinal Restraints, And Shims Not Shown For Clarity)
(Looking Downstream)

SPLICE PLATE NOTES

Traffic Must Be Removed From Bridge Prior To Performing Any Splice Plate Work.

Dimensions Shown On These Sheets Are Based On The Shop Drawings And As-Built Plans And May Vary In The Field. It Is The Contractor's Responsibility To Verify All Dimensions Prior To Submitting Shop Drawings. Plan Dimensions Are Based On A 5" Opening At Joint.

Temporary Gusset Diaphragm Must Be Installed Prior To Removing Any Stay Plates. Refer To U29 And U49 Temporary Longitudinal Restraint Plans For Location Of Temporary Gusset Diaphragm.

Contractor May Only Remove One Stay Plate At A Time.

All Splice Plate Bolts Shall Be A490 And Shall Have Proper Thread Length.

Temporary Upper And Lower Longitudinal Restraints And Shim Packs Shall Be Installed And Properly Tensioned Prior To Step SP-5.

All Rivets Shall Be Replaced One At A Time Except As Noted Otherwise.

Splice Plates Shall Be Placed At U29 Downstream Truss (Both Faces) And U49 Upstream Truss (Both Faces).

Fill Plates And Cheek Plates Shall Be Sized To Ensure Tight Fit Between The Entire Splice Plate And Existing Gusset

For General Notes, See Sheet A02.

For Suggested Sequence Of Construction, See Sheet A04.

For Location Of Upper And Lower Longitudinal Restraints, See Sheet A18 Thru A28.

For Location Of U29 Temporary Gusset Diaphragm, See Sheet A18.

For Section A-A, See Sheet A30.

For Typical Bolt Detail Thru Splice, See Sheet A30.

Contractor Shall Use Cardboard Template To Field Verify Location Of Existing Rivets Prior To Submitting Shop Drawings.

SUGGESTED SPLICE PLATE INSTALLATION STEPS

The Suggested Splice Plate Installation Steps Provided Below Are For The Placement Of Splice Plates At One Upper Gusset Location. Two Individual Operations Will Be Required, And These Operations Cannot Occur Concurrently. The Contractor Shall Fully Complete Work At One Location Before Beginning Work On The Second.

Step Sp-1: Prepare Exterior Surfaces Of Gusset Plates To Ensure Uniform Contact Between Existing And Temporary Plates To Be Placed. (Any Damages To Paint System Shall Be Repaired After The Temporary Plates Are Removed.)

Step Sp-2: Remove Existing 4x4x½ Angles (4 Locations). Contractor May Remove Multiple Rivets At A Time For Angle Removal Except At Existing Hanger Connection (See Detail B On Sheet A31 And A32). All Removed Rivets Shall Be Replaced With Long Shank A490 Bolts With Bolt Head Placed On Inside Of Gusset Plate. Fully Tighten Nut To Gusset Plates.

Step Sp-3: Remove Remaining Affected Rivets And Replace With Long Shank A490 Bolts With Bolt Head Placed On Inside Of Gusset Plate. Fully Tighten Nut To Gusset Plates. Rivets To Be Removed And Replaced One At A Time.

Step Sp-4: Install Fill Plates, Cheek Plates And Templates A And B. Hand Tighten Nut On Template A And B. Once Templates Are Secure, Field Drill Remaining Holes Thru All Temporary Plates And Existing Gusset Plates. Remove Cheek Plates And Template A And B And Fill All Holes With Long Shank A490 Bolts With Bolt Head Placed On Inside Of Gusset Plate And Inside Nut (Fully Tighten). Replace Template A And B And Install Outside Nut (Hand Tighten)

All Work To Follow Shall Be Performed After Upper Longitudinal, Lower Longitudinal And Bypass Post-Tensioning Operations Are Completed.

Step Sp-5: Weld Templates A And B Together, Remove From Upper Gusset Location And Use To Fabricate Splice Plates.

Step Sp-6: Install Splice Plates And Fully Tighten Nuts.

Step Sp-7: After The Existing Link Is Removed, Place Short Shank A325 Bolt At Locations Where Link Blocked Installation (See Detail A).

Step Sp-8: After New Link And Pins Have Been Installed, Remove Splice Places, Cheek Plates And Fill Plates. Replace Temporary Long Shank A490 Bolts With Permanent Short Shank A325 Bolts One At A Time. Replace Existing Cover Plates And Existing Angles.

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (1 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER: A29
SHEET NUMBER: 8029

DESIGNED M.Xin DETAILED B.Steib TRACED
CHECKED J.Gregg ISSUED J.Gregg DATE

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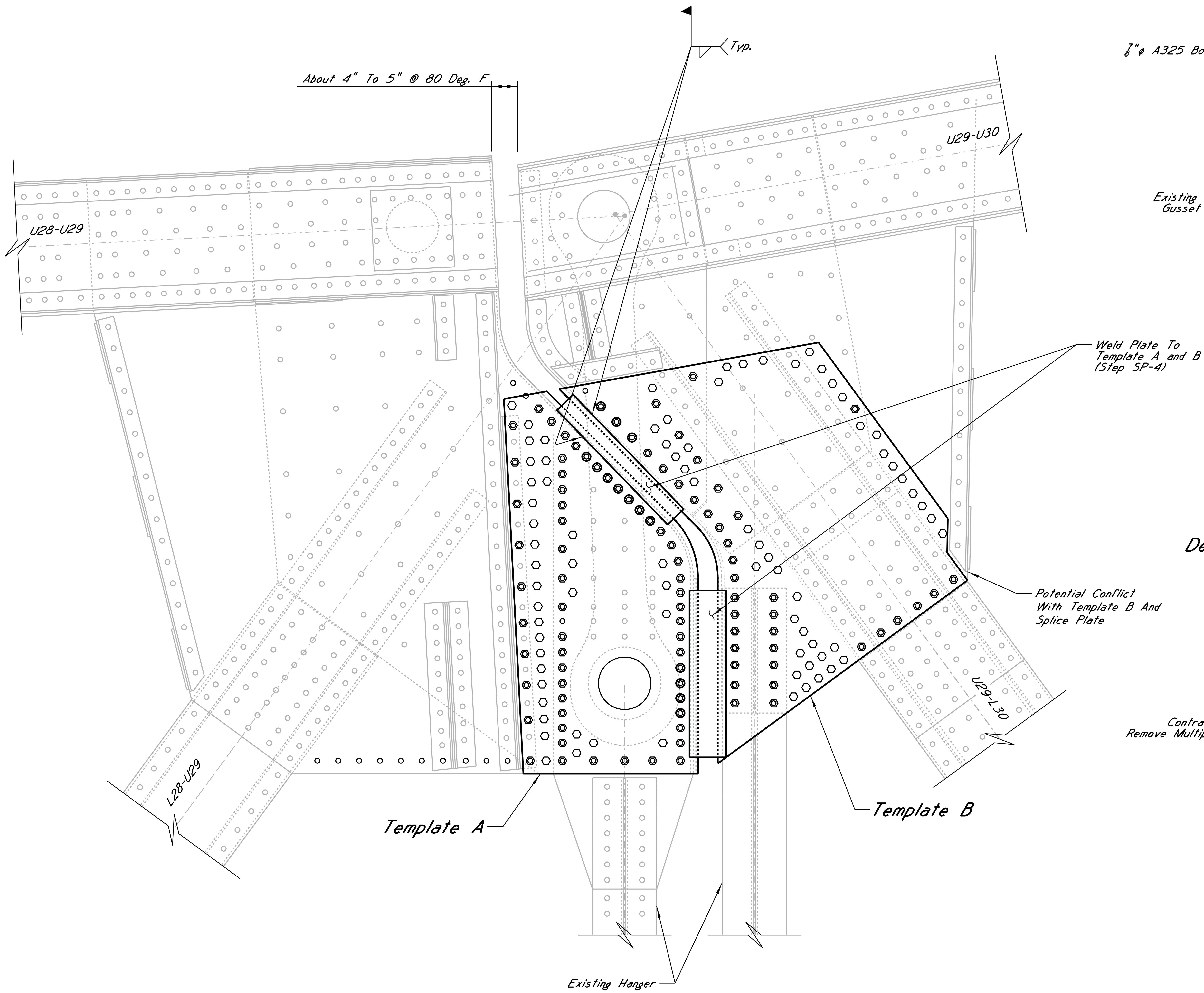
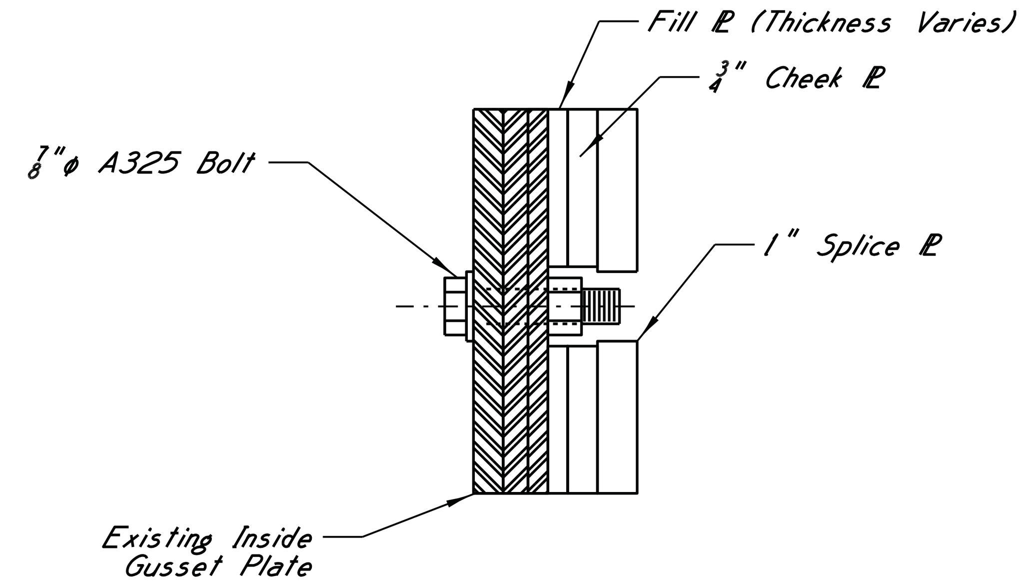
MISS.	BR-0015-01(120)



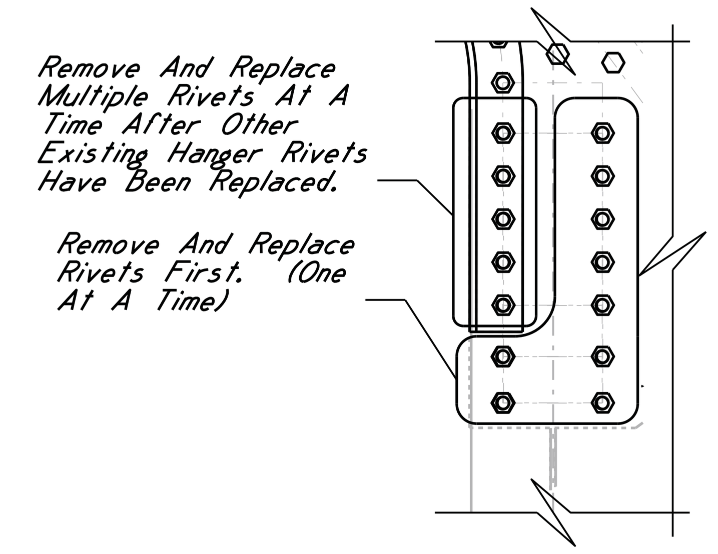
U29 DOWNSTREAM TRUSS SPLICE PLATE TEMPLATE LAYOUT

(Access Platform, Upper Laterals And Swayframe Not Shown For Clarity)

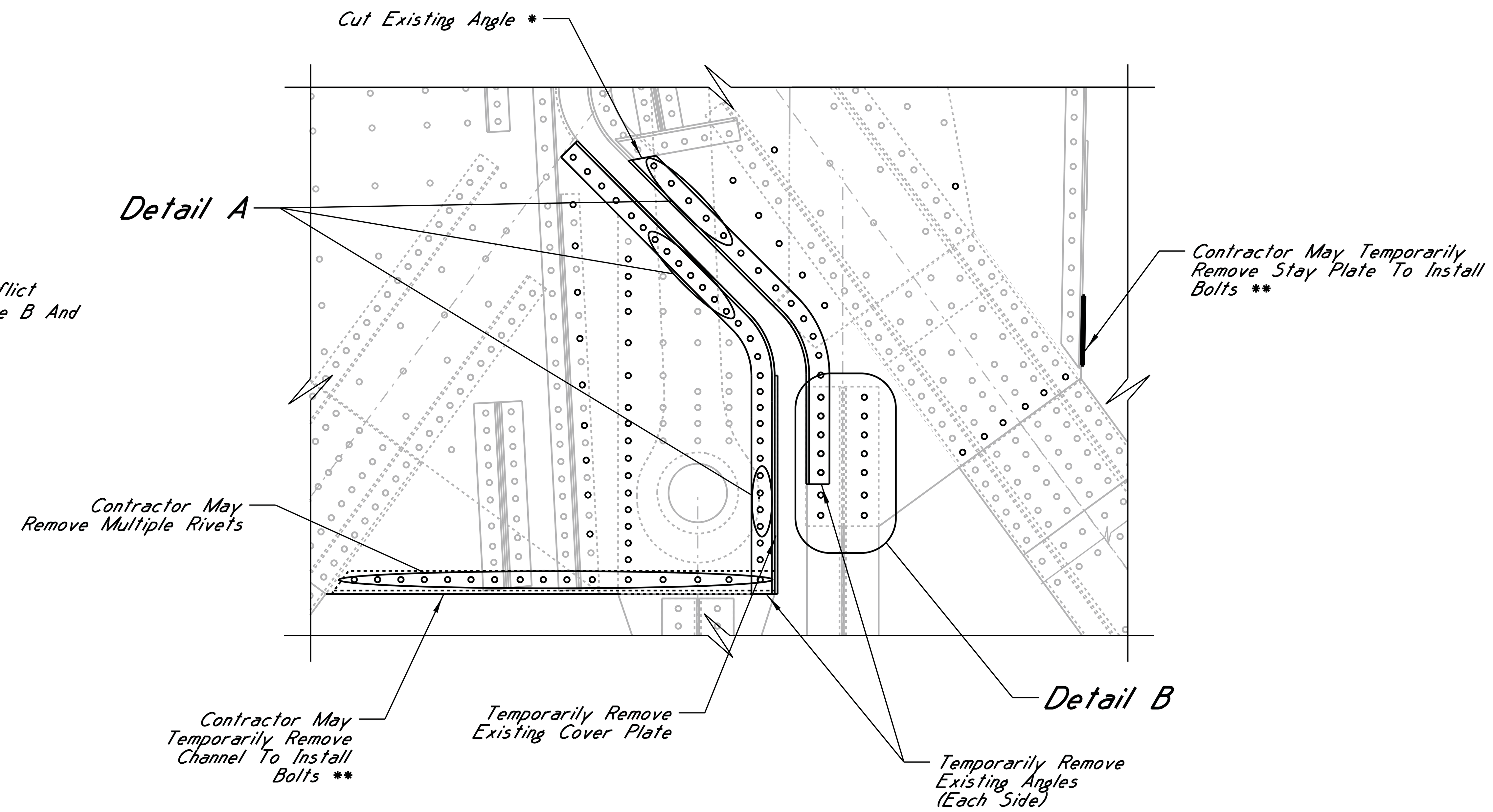
(Looking Downstream, Upstream Side Similar But Opposite)



DETAIL A ***



DETAIL B



U29 DOWNSTREAM TRUSS COMPONENT REMOVAL LAYOUT ****

NOTES

For Splice Plate Notes And Suggested Installation Steps, See Sheet A29.
For Splice Plate Dimensions, See Sheet A33.
For Template A And B Dimensions, See Sheet A34 And A35.

* Contractor May Not Use Heat To Cut Angle. Contractor Shall Take Caution Not To Damage Existing Gusset.

** Stay Plate And Bottom Channel Must Be Reinstalled Prior To Post-Tensioning Upper Longitudinal Restraints.

*** Contractor Shall Remove Rivet Heads At Locations Shown Prior To Installing New Plates. After Removing Link, Contractor Shall Drive Out Rivet Shank And Replace With An A325 Bolt With Hand Tightened Nut. Contractor Shall Remove Nut After Removing Splice Plate To Re-Install Angle. Contractor Shall Install Washer Between Existing Angle And Nut.

**** Contractor Shall Remove All Bold Components Shown In This Detail. Note That Some Components Shown Are Removed In Previous Installation Steps.

LEGEND

- ○ Existing Rivet To Remain
- ◎ Temporary ⅞"φ A490 Bolt In Existing Rivet Hole
- ⬡ Temporary ⅞"φ A490 Bolt In New 15/16"φ Hole (Field Drilled)
- ◎ 1⅛" Hole In Splice ℘, Cheek ℘ And Fill ℘ For A325 Bolt

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (3 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A31

SHEET NUMBER 8031

DESIGNED M.Xin DETAILED B.Steib TRACED
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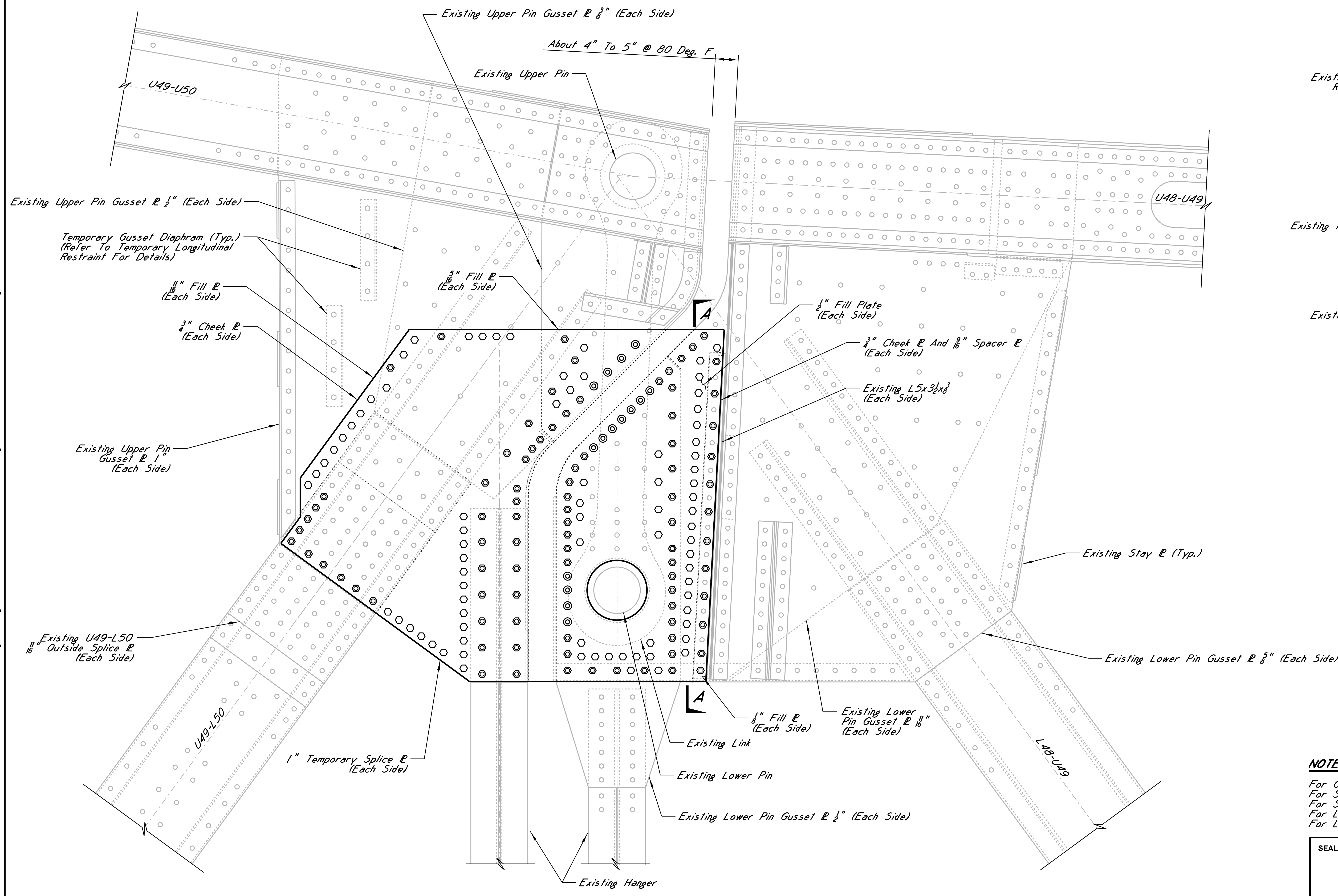
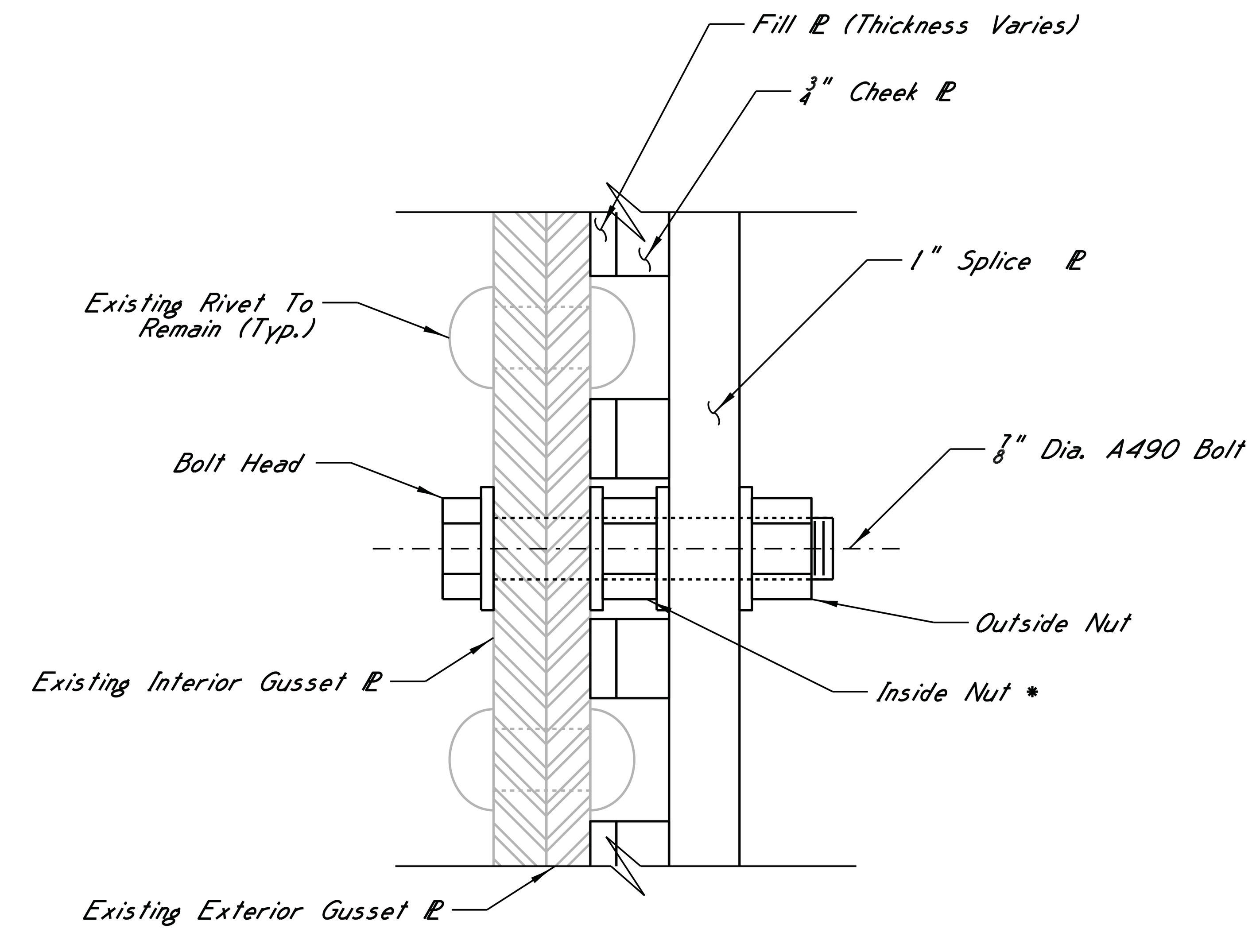


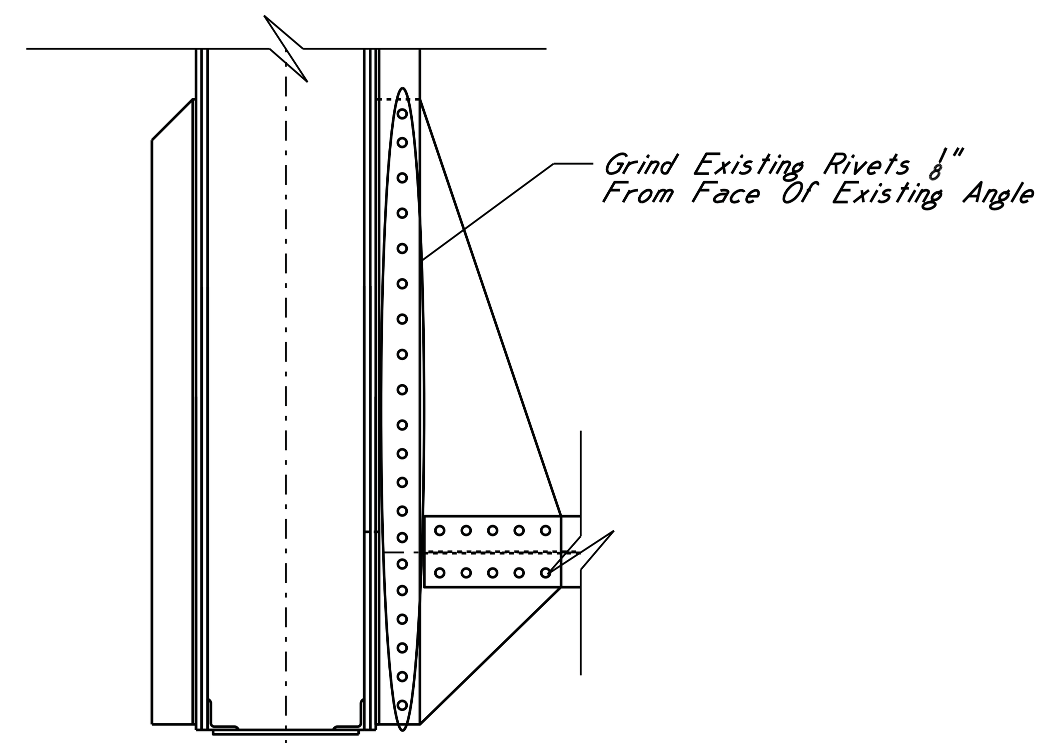
U49 UPSTREAM TRUSS TEMPORARY SPLICE PLATE

(Upper Bypass Anchorage, Upper Longitudinal Restrains And Shims Not Shown For Clarity)
(Looking Upstream)



TYPICAL BOLT DETAIL

• Fabricated Threaded Hex Nut (Grade 50 Steel) Or ASTM A563 Nut Cut To Fit. Hex Nut And Washer Shall Be Tight Between Existing Gusset And Splice PL. Machined Hex Nut Shall Have Simiar Dimensions As ASTM A563



SECTION A-A

LEGEND

- Existing Rivet To Remain
- Temporary $\frac{7}{8}$"ϕ A490 Bolt In Existing Rivet Hole
- Temporary $\frac{7}{8}$"ϕ A490 Bolt In New $\frac{15}{16}$"ϕ Hole (Field Drilled)
- 1$\frac{7}{8}$" Hole In Splice PL, Cheek PL And Fill PL For A325 Bolt

NOTES

For General Notes, See Sheet A02.
For Suggested Sequence Of Construction, See Sheet A04.
For Suggested Splice Plate Installation Steps And Splice Plate Notes, See Sheet A29.
For Location Of Upper And Lower Longitudinal Restraints, See Sheet A18-A28.
For Location Of U49 Temporary Gusset Diaphragm, See Sheet A19.

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (2 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

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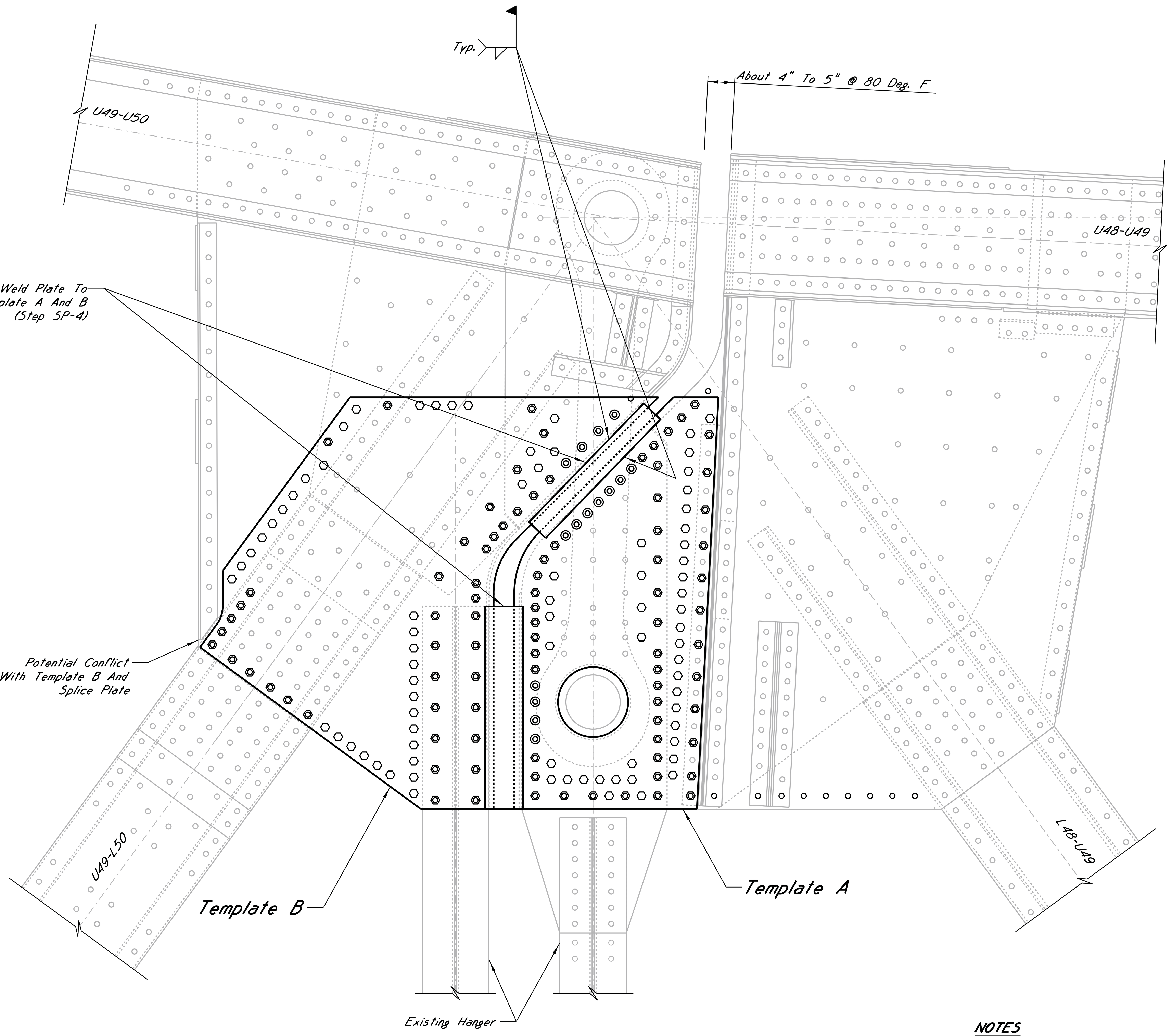
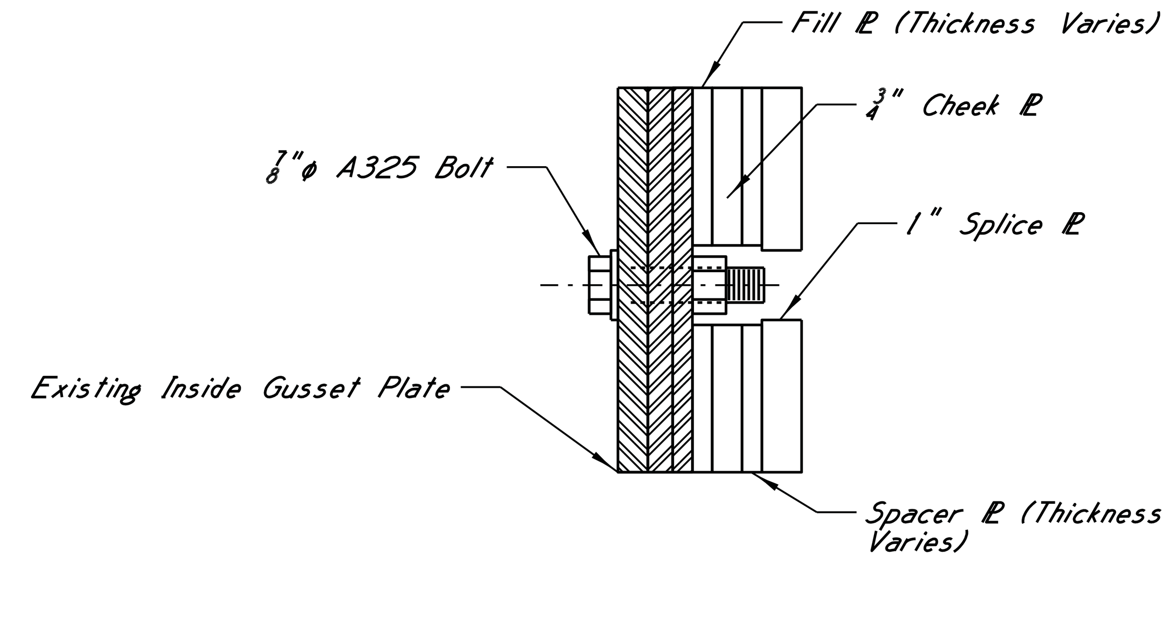
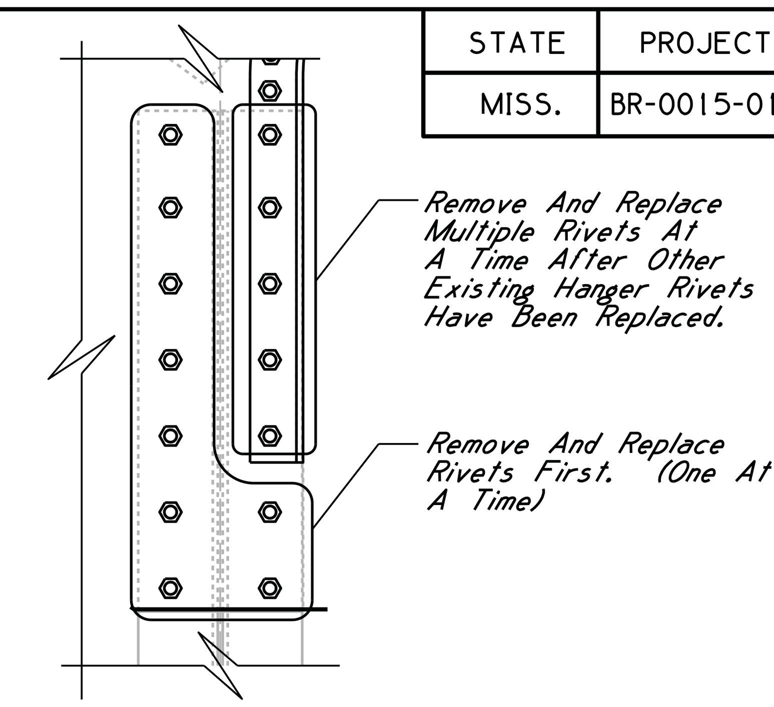


U49 UPSTREAM TRUSS SPLICE PLATE TEMPLATE LAYOUT

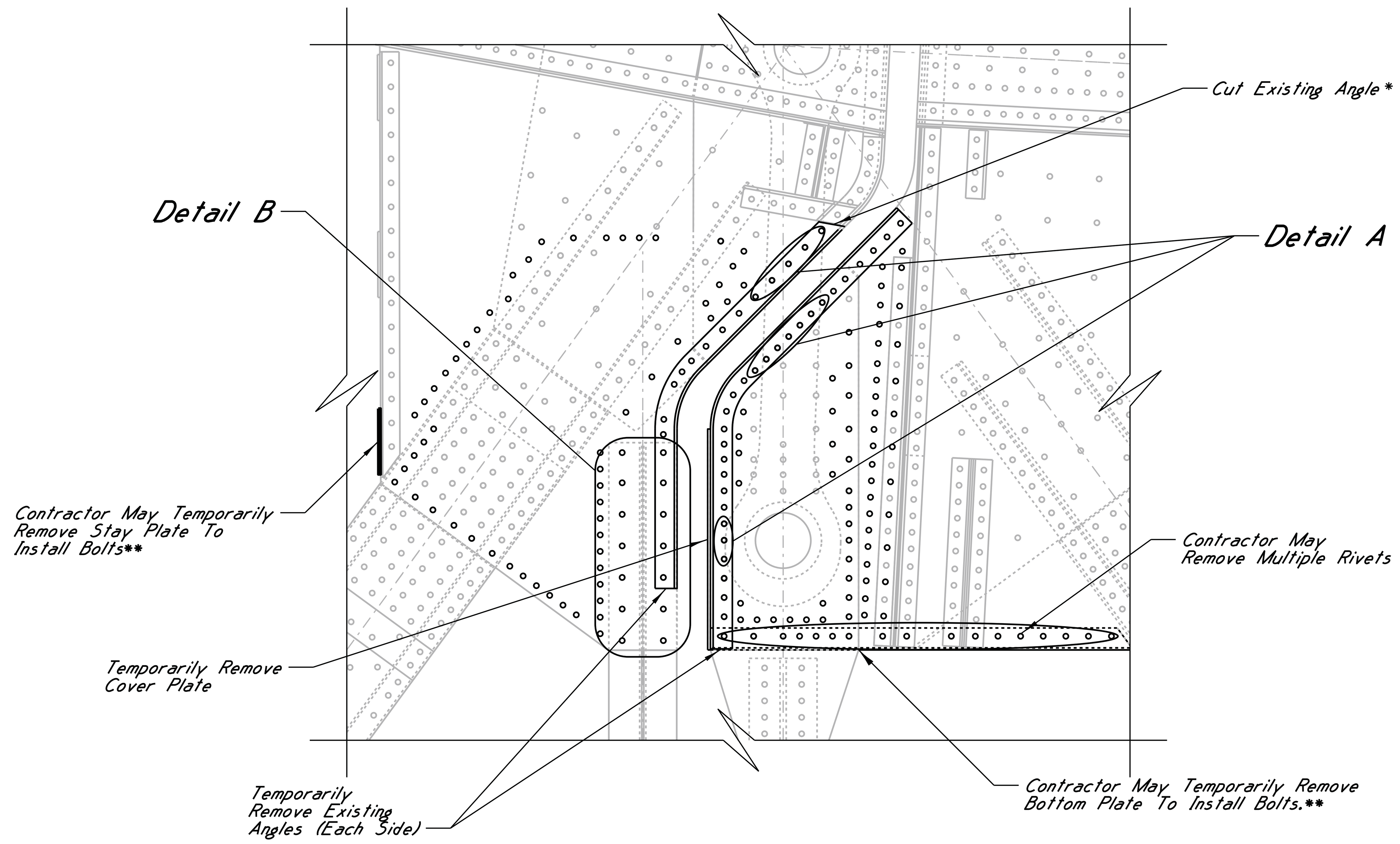
Access Platform, Upper Laterals And Swayframe (Not Shown For Clarity)
(Looking Upstream, Downstream Side Similar But Opposite)



DETAIL A ***



DETAIL B



U49 UPSTREAM TRUSS COMPONENT REMOVAL LAYOUT ****

(Looking Upstream)

NOTES

For Splice Plate Notes And Suggested Installation Steps, See Sheet A29.
For Splice Plate Dimensions, See Sheet A33.
For Template A And B Dimensions, See Sheet A36 And A37.

* Contractor May Not Use Heat To Cut Angle. Contractor Shall Take Caution Not To Damage Existing Gusset.

** Stay Plate And Bottom Channel Must Be Reinstalled Prior To Post-Tensioning Upper Longitudinal Restraints.

*** Contractor Shall Remove Rivet Heads At Locations Shown Prior To Installing New Plates. After Removing Link, Contractor Shall Drive Out Rivet Shank And Replace With An A325 Bolt With Hand Tightened Nut. Contractor Shall Remove Nut After Removing Splice Plate To Re-Install Angle. Contractor Shall Install Washer Between Existing Angle And Nut.

**** Contractor Shall Remove All Bold Components Shown In This Detail. Note That Some Components Shown Are Removed In Previous Installation Steps.

LEGEND

- Existing Rivet To Remain
- Temporary 7/8"φ A490 Bolt In Existing Rivet Hole
- Temporary 7/8"φ A490 Bolt In New 15/16"φ Hole (Field Drilled)
- 1 1/8" Hole In Splice ℙ, Cheek ℙ, Fill ℙ And Spacer ℙ For A325 Bolt

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U29 AND U49 TEMPORARY SPLICE PLATE (4 OF 11)

PROJECT BR-0015-01(120)
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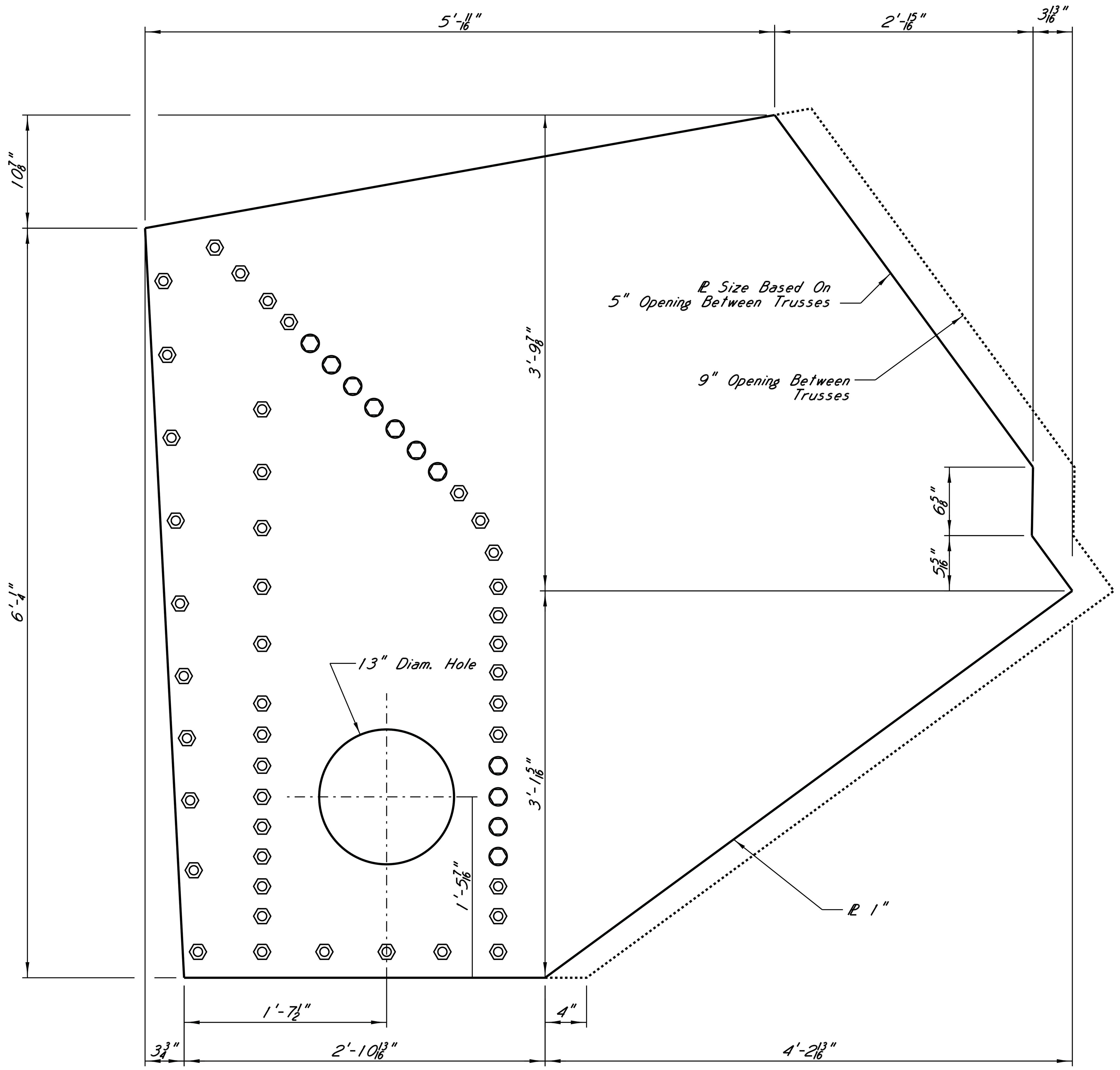
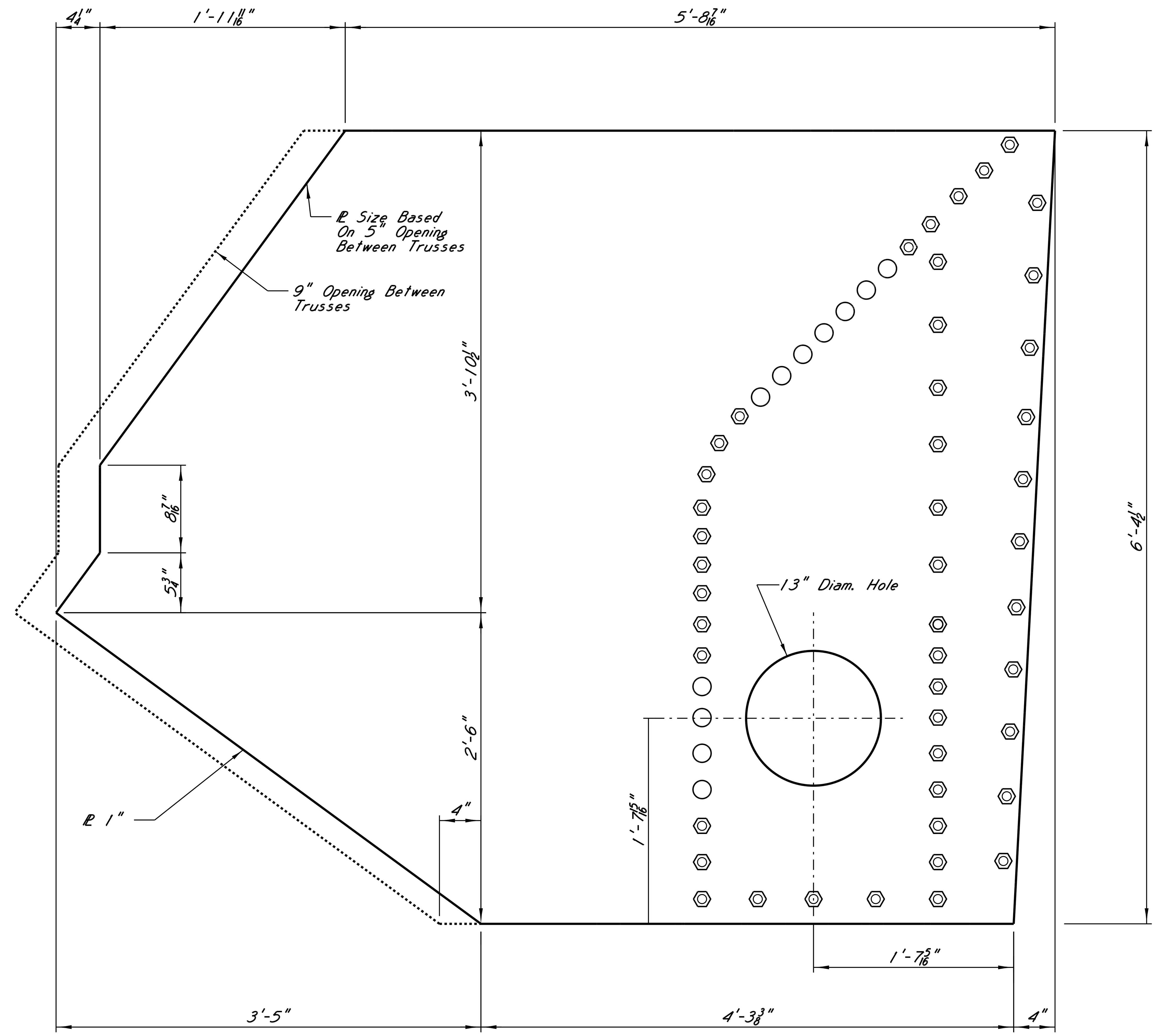


U29 SPLICE PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To Shop Drawings For Location Of 15/16"φ Holes)
(Splice Plate Detailed Assuming A 5" Opening Between Trusses)
(Contractor To Field Cut Based On Actual Opening)



U49 SPLICE PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To Shop Drawings For Location Of 15/16"φ Holes)
(Splice Plate Detailed Assuming A 5" Opening Between Trusses)
(Contractor To Field Cut Based On Actual Opening)

LEGEND

- ○ 1 7/8"φ Hole (Shop Drill)
- ◎ 15/16"φ Hole (Shop Drill)

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (5 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

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SHEET NUMBER 8033

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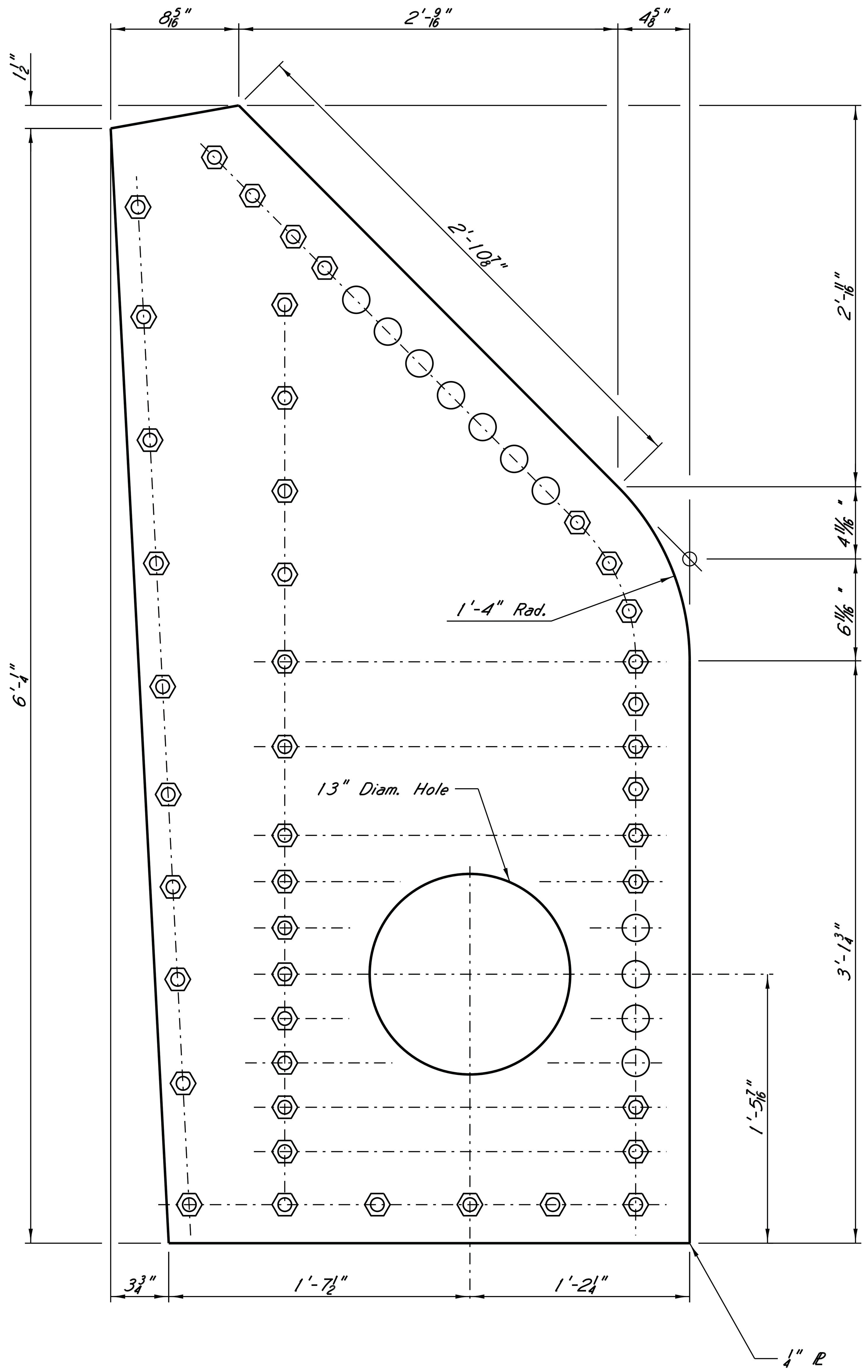
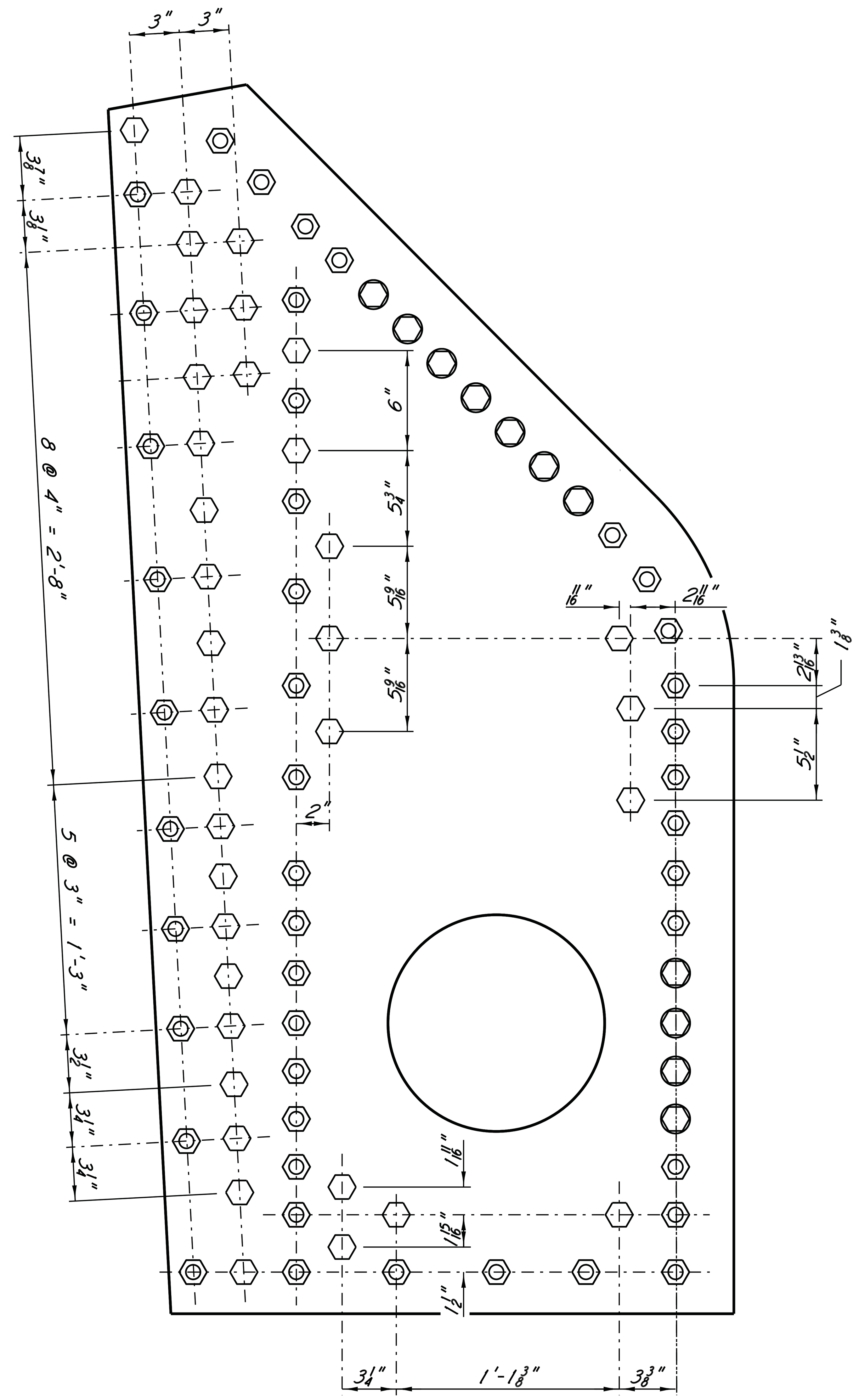


U29 TEMPLATE A

(2 Required, 1 As Shown, 1 Opposite)
(Shop Drill Holes Shown,
Field Drill Holes Not Shown For Clarity)



U29 TEMPLATE A

(Field Drill Holes)

NOTES

The Contractor Shall Be Responsible For Locating All Holes Designated To Be Shop Drilled By Use Of Existing Drawings And Site Verification. The Location Of These Holes Shall Be Shown On The Shop Drawings For Review.

LEGEND

- $1\frac{7}{8}$"φ In Splice Plate (Shop Drill)
- $\frac{15}{16}$"φ Hole For $\frac{7}{8}$"φ Bolt (Shop Drill)
- Shop Drill $\frac{5}{8}$"φ Hole. Field Drill $\frac{15}{16}$"φ Hole For $\frac{7}{8}$"φ Bolt

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (6 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A34

SHEET NUMBER 8034

DESIGNED M. Xin DETAILED B. Steib TRACED
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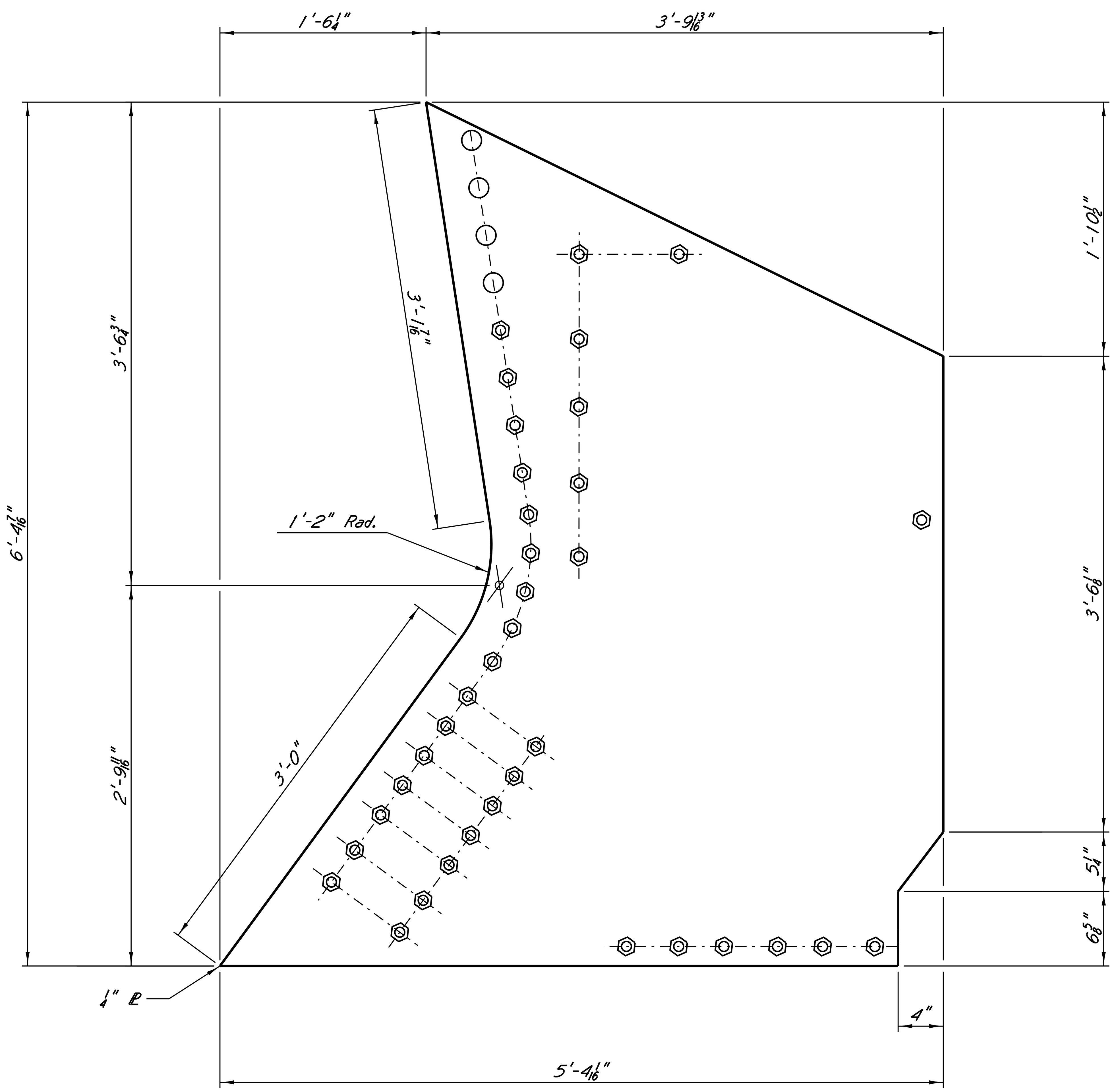
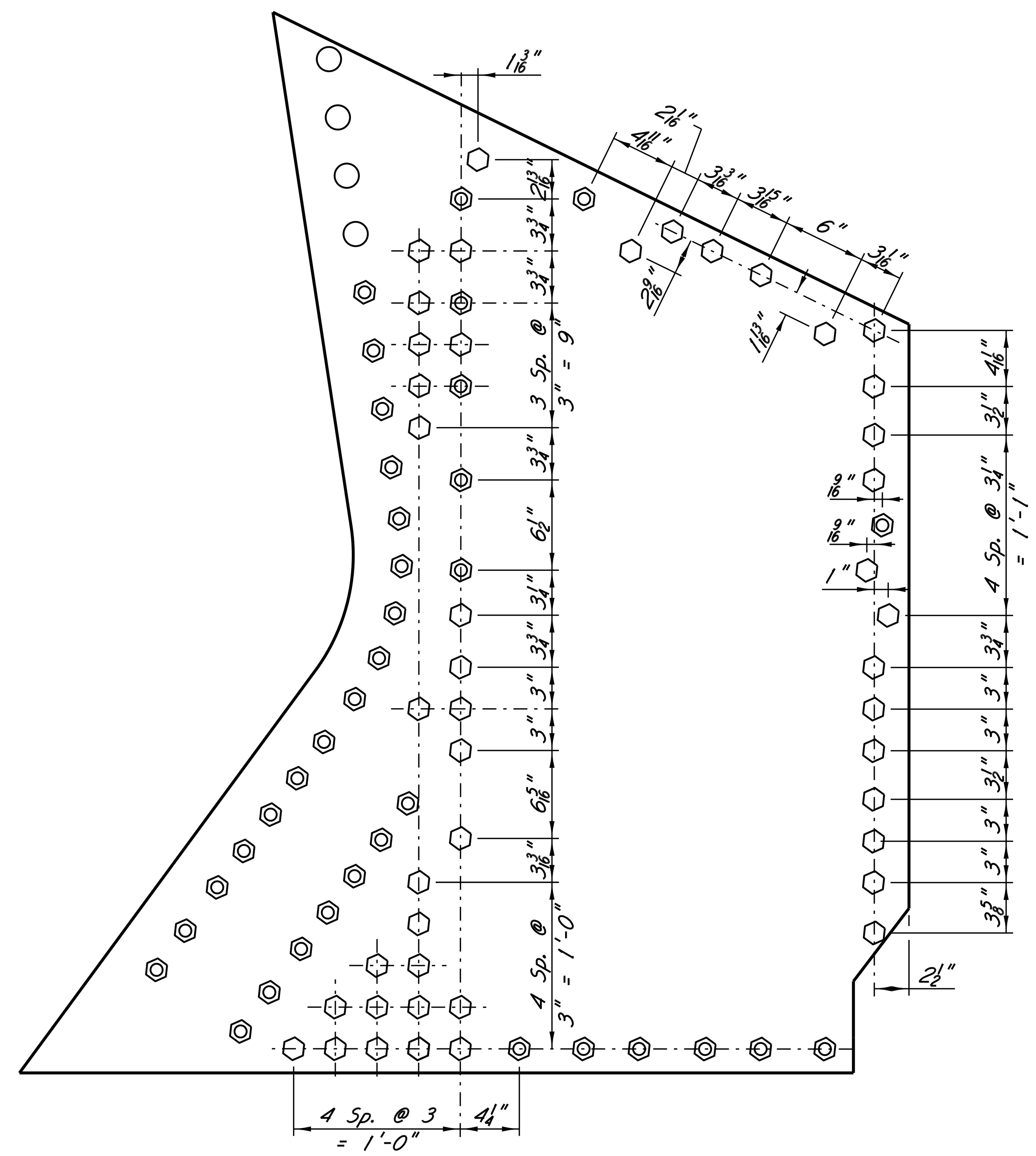


U29 TEMPLATE B

(2 Required, 1 As Shown, 1 Opposite)
(Shop Drill Holes Shown,
Field Drill Holes Not Shown For Clarity)



U29 TEMPLATE B

(Field Drill Holes)

NOTES

The Contractor Shall Be Responsible For Locating All Holes Designated To Be Shop Drilled By Use Of Existing Drawings And Site Verification. The Location Of These Holes Shall Be Shown On The Shop Drawings For Review.

LEGEND

- $1\frac{7}{8}$"ϕ Hole (Splice ℙ, Fill ℙ, Cheek ℙ Only) (Shop Drill)
- $\frac{15}{16}$"ϕ Hole For $\frac{7}{8}$"ϕ A490 Bolt (Shop Drill)
- Shop Drill $\frac{5}{8}$" ϕ Hole. Field Drill $\frac{15}{16}$"ϕ Hole For $\frac{7}{8}$"ϕ Bolt
- Working Point

SEAL:

JAMES P. GREGG
ENGINEER
19496
STATE OF MISSISSIPPI

DATE: 11/5/14

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY
SPLICE PLATE (7 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A35

SHEET NUMBER 8035

DESIGNED M.Xin DETAILED B.Steib TRACED
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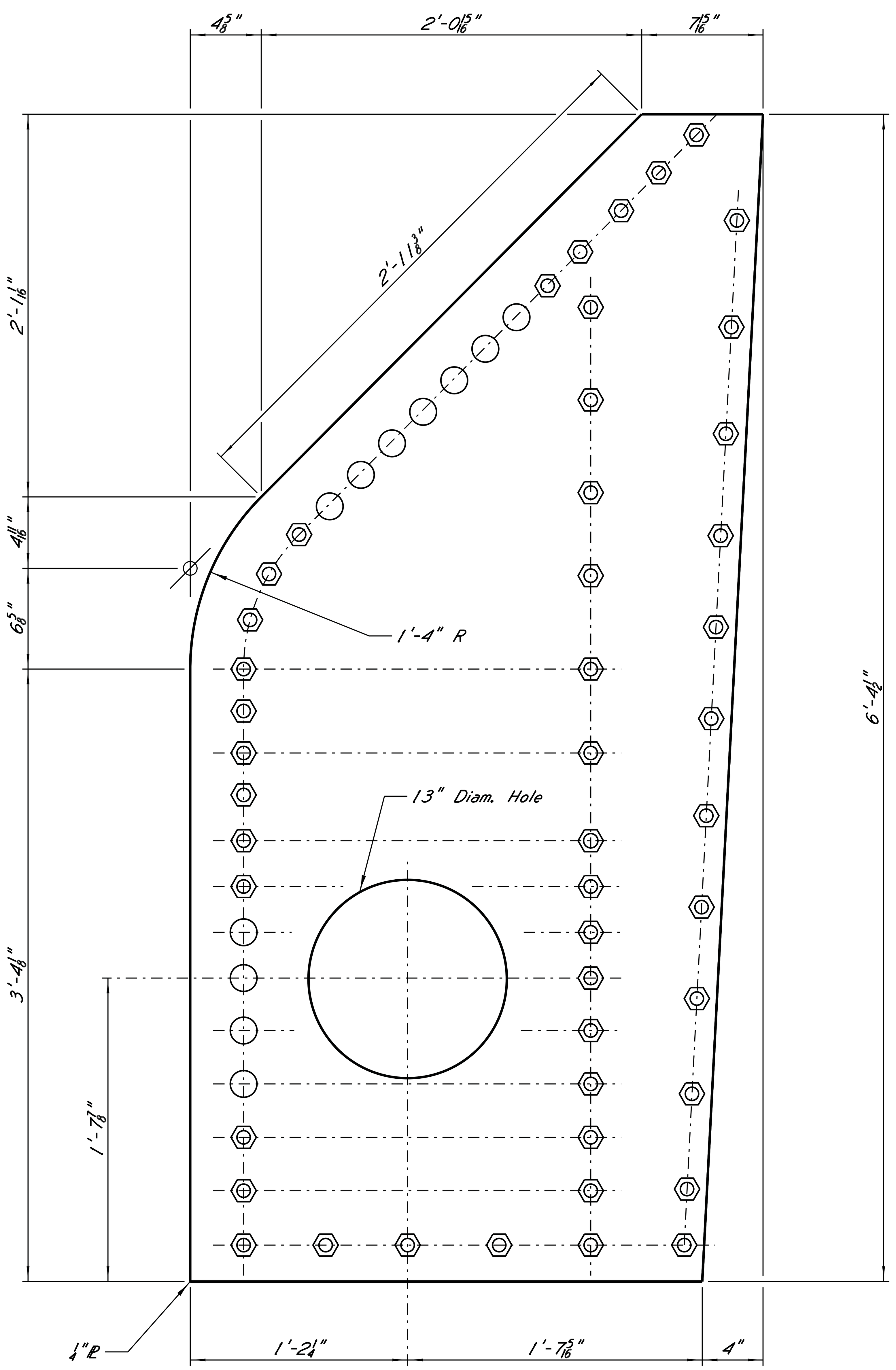
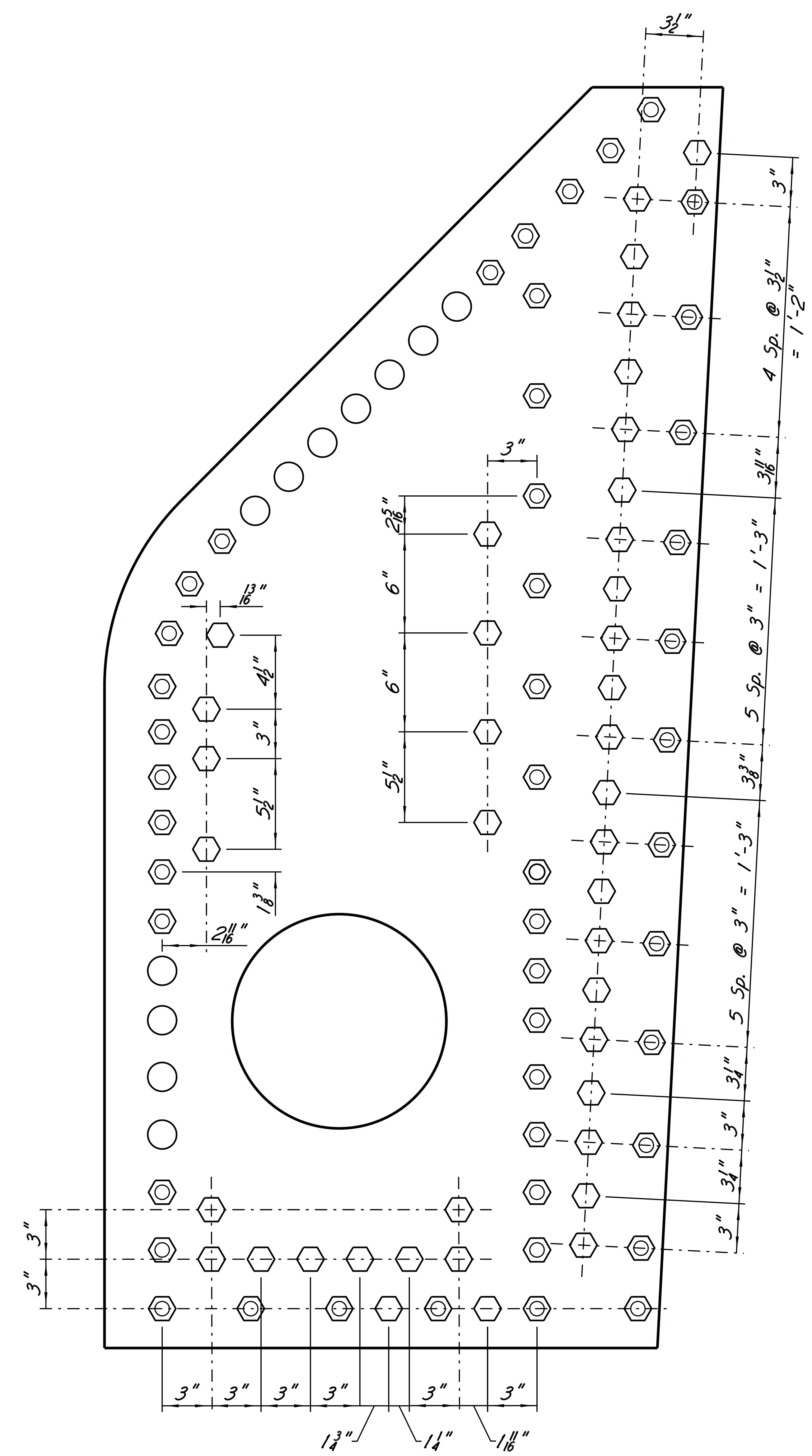
MISS.	BR-0015-01(120)



U49 TEMPLATE A

(2 Required, 1 As Shown, 1 Opposite)
(Shop Drill Holes Shown)
(Field Drill Holes Not Shown For Clarity)



U49 TEMPLATE A

(Field Drill Holes)

NOTES

The Contractor Shall Be Responsible For Locating All Holes Designated To Be Shop Drilled By Use Of Existing Drawings And Site Verification. The Location Of These Holes Shall Be Shown On The Shop Drawings For Review.

LEGEND

- 1 7/8"φ In Splice Plate (Shop Drill)
- 15/16"φ Hole For 7/8"φ A490 Bolt
- Shop Drill 5/8"φ Hole. Field Drill 15/16"φ Hole For 7/8"φ Bolt
- Working Point

SEAL:

JAMES P. GREGG
REGISTERED PROFESSIONAL ENGINEER
19496
STATE OF MISSISSIPPI

DATE: 11/5/14

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (8 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

WORKING NUMBER A36

SHEET NUMBER 8036

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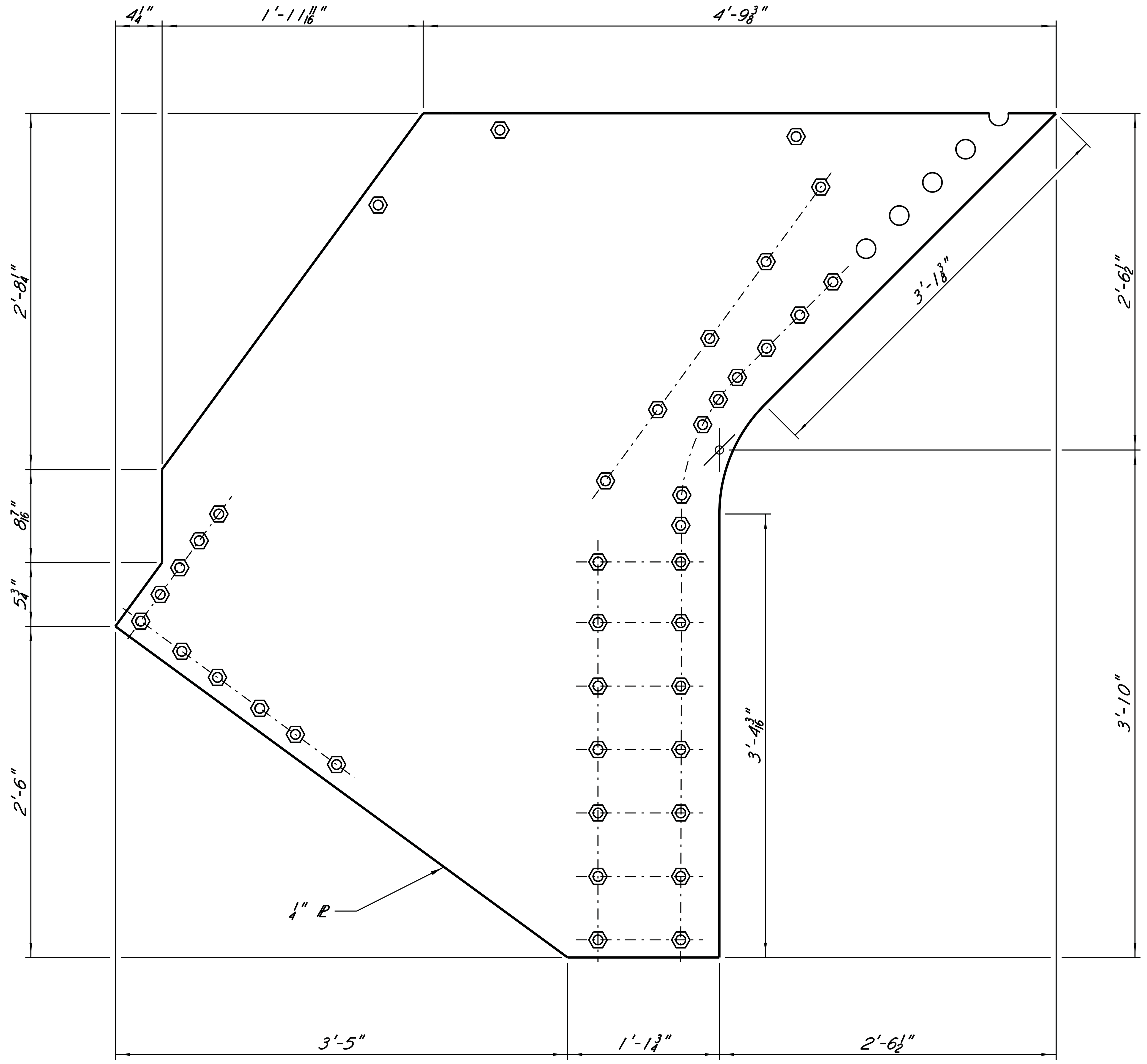
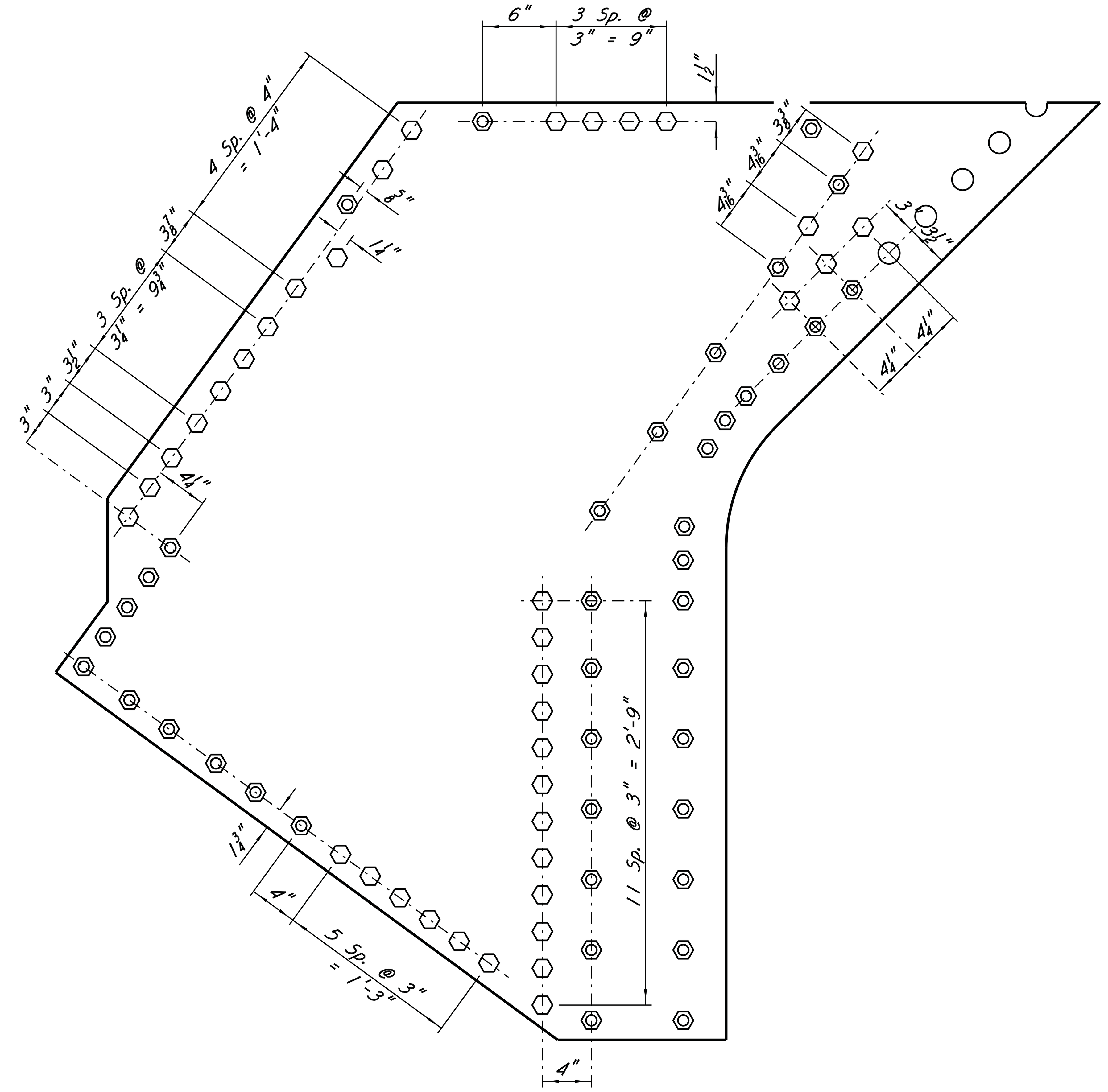


U49 TEMPLATE B

(2 Required, 1 As Shown, 1 Opposite)
(Shop Drill Holes Shown)
(Field Drill Holes Not Shown For Clarity)



U49 TEMPLATE B

(Field Drill Holes)

NOTES

The Contractor Shall Be Responsible For Locating All Holes Designated To Be Shop Drilled By Use Of Existing Drawings And Site Verification. The Location Of These Holes Shall Be Shown On The Shop Drawings For Review.

LEGEND

- $1\frac{7}{8}$"φ In Splice Plate (Shop Drill)
- $\frac{15}{16}$"φ Hole For $\frac{7}{8}$"φ Bolt (Shop Drill)
- Shop Drill $\frac{5}{8}$"φ Hole. Field Drill $\frac{15}{16}$"φ Hole For $\frac{7}{8}$"φ Bolt
- Working Point

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (9 OF 11)

PROJECT BR-0015-01(120)
106487/301000

ADAMS COUNTY

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SHEET NUMBER 8037

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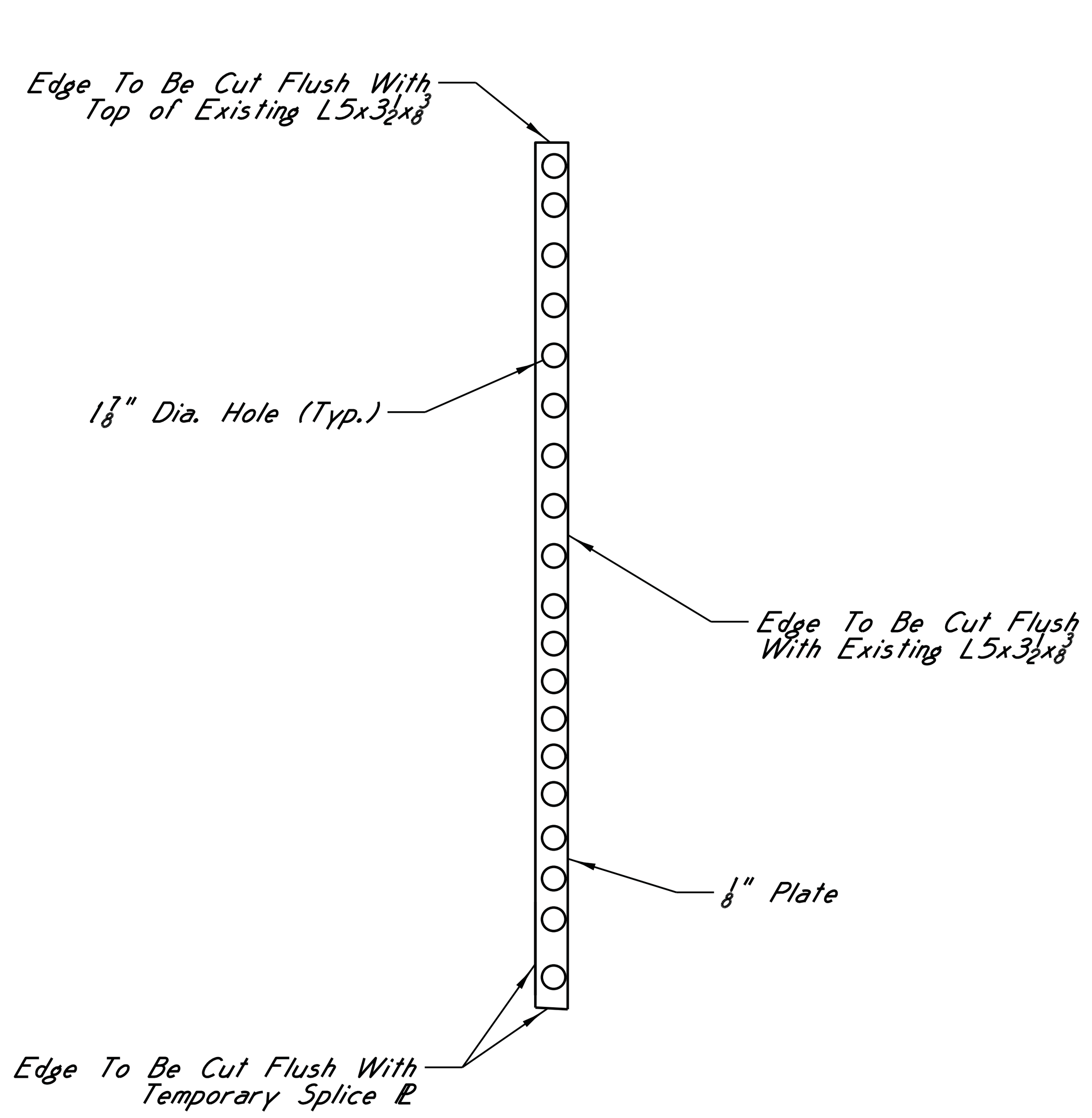
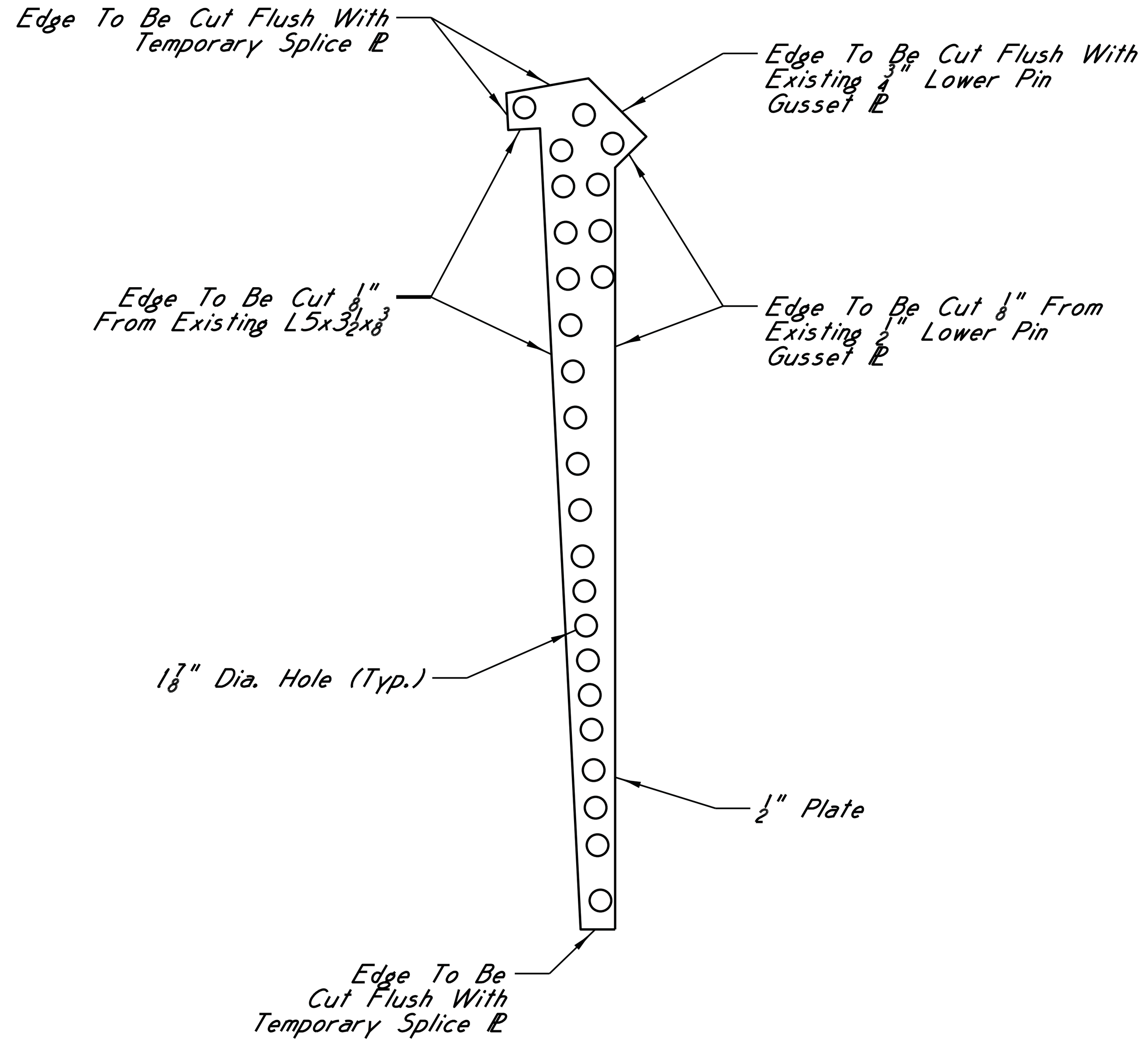


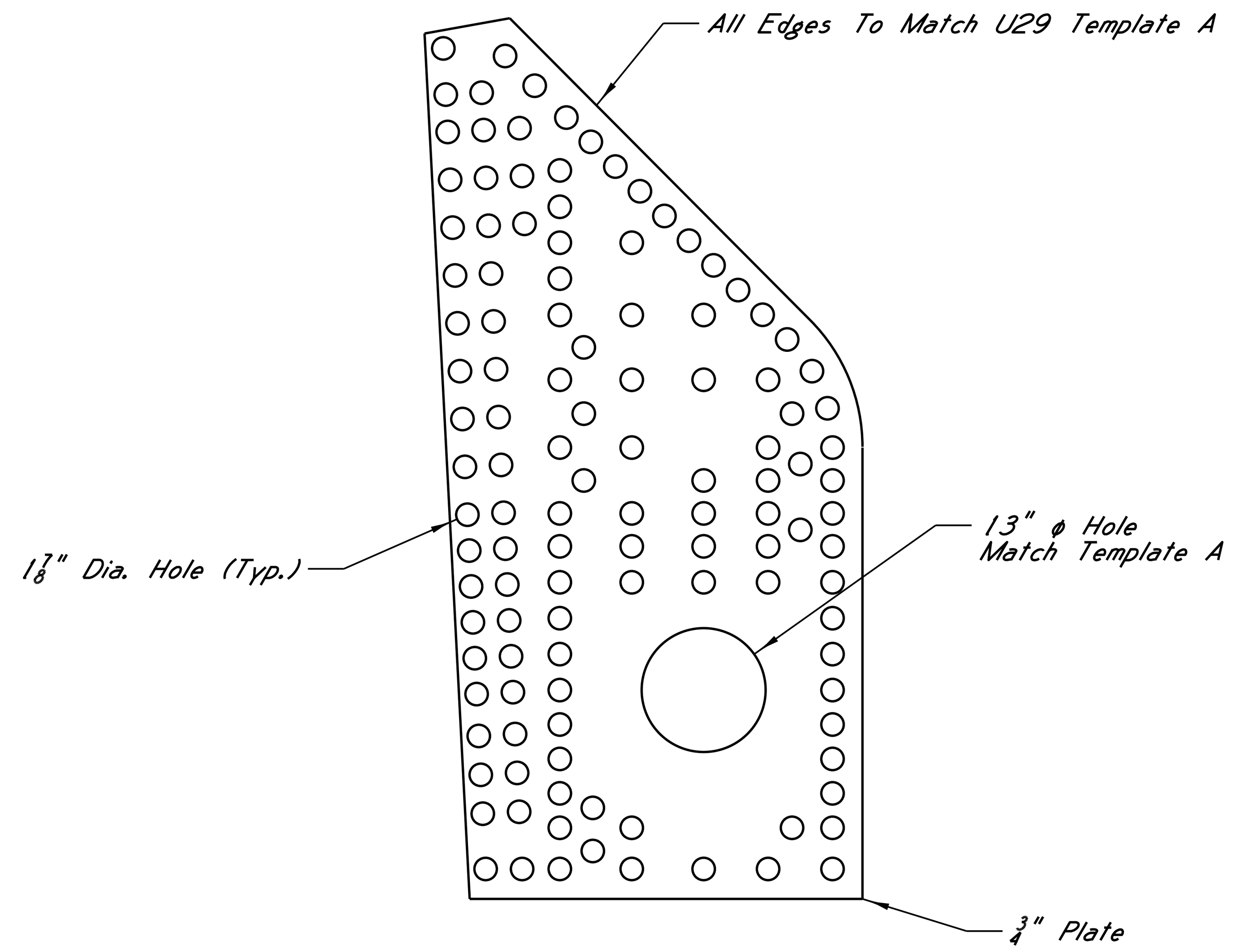
U29 LOWER PIN ⅛" FILL PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice ℙ, And Splice ℙ Template Plans For Location Of Bolts And Existing Rivets)



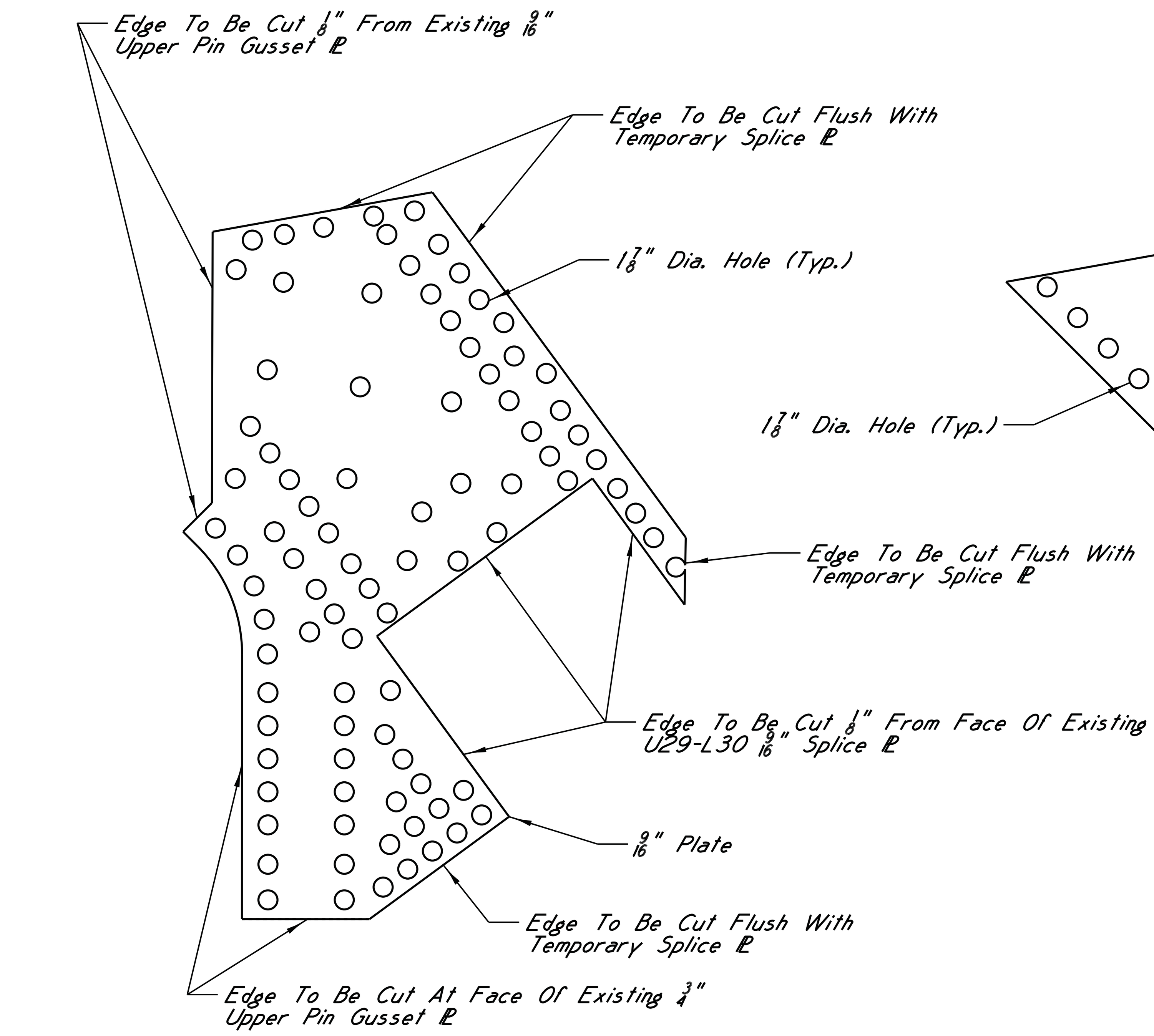
U29 LOWER PIN ½" FILL PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice ℙ, And Splice ℙ Template Plans For Location Of Bolts And Existing Rivets)



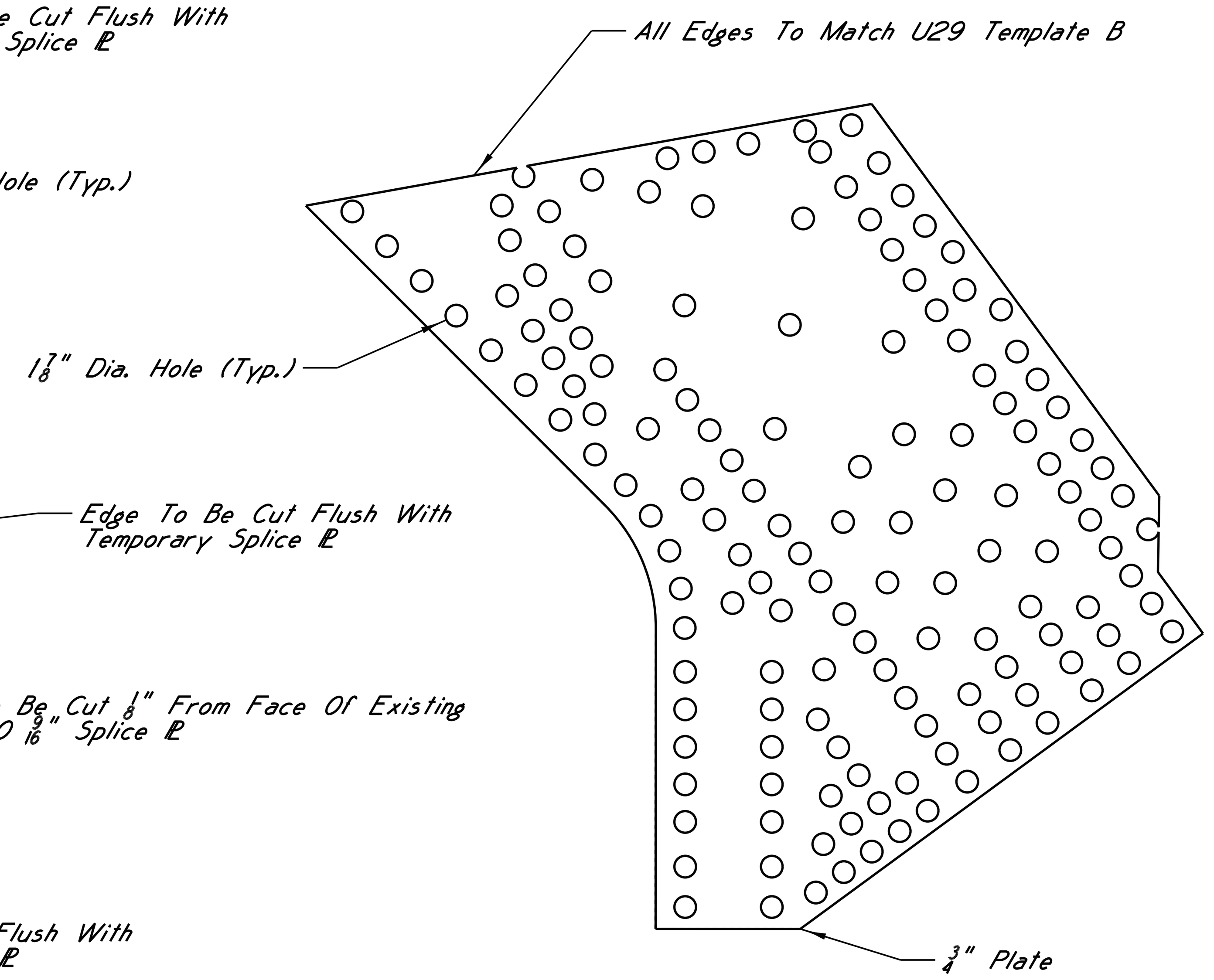
U29 LOWER PIN ¾" CHEEK PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice ℙ, And Splice ℙ Template Plans For Location Of Bolts And Existing Rivets)



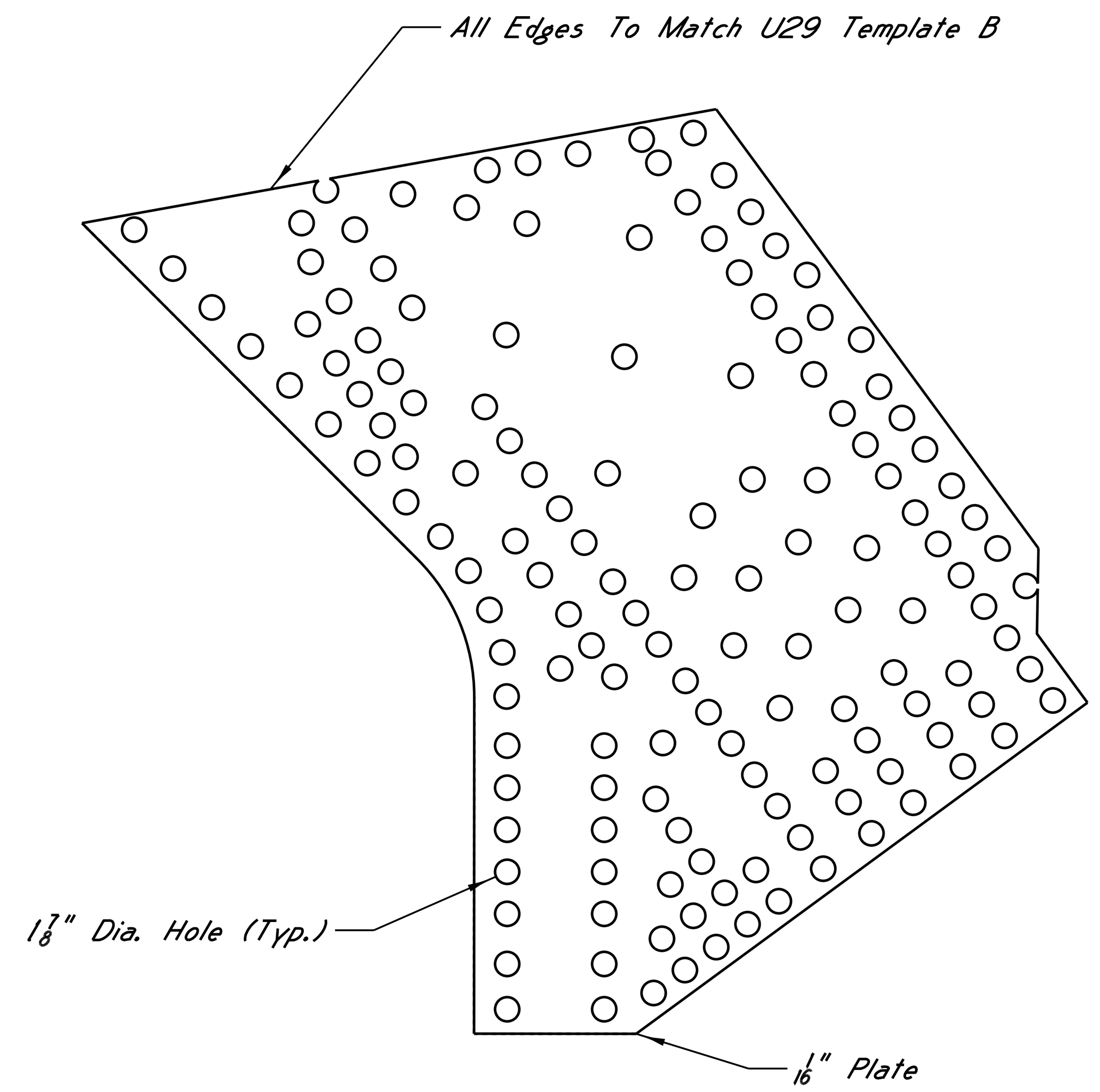
U29 UPPER PIN 9/16" FILL PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice ℙ, And Splice ℙ Template Plans For Location Of Bolts And Existing Rivets)



U29 UPPER PIN ¾" CHEEK PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice ℙ, And Splice ℙ Template Plans For Location Of Bolts And Existing Rivets)



U29 UPPER PIN 1/16" SPACER PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice ℙ, And Splice ℙ Template Plans For Location Of Bolts And Existing Rivets)

NOTES

For Location Of Rivets Refer To As-Built Plans
For U29 Splice Plate And Template Dimensions, See Sheet A33 Thru A35

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U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (10 OF 11)

PROJECT BR-0015-01(120)
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ADAMS COUNTY

WORKING NUMBER A38
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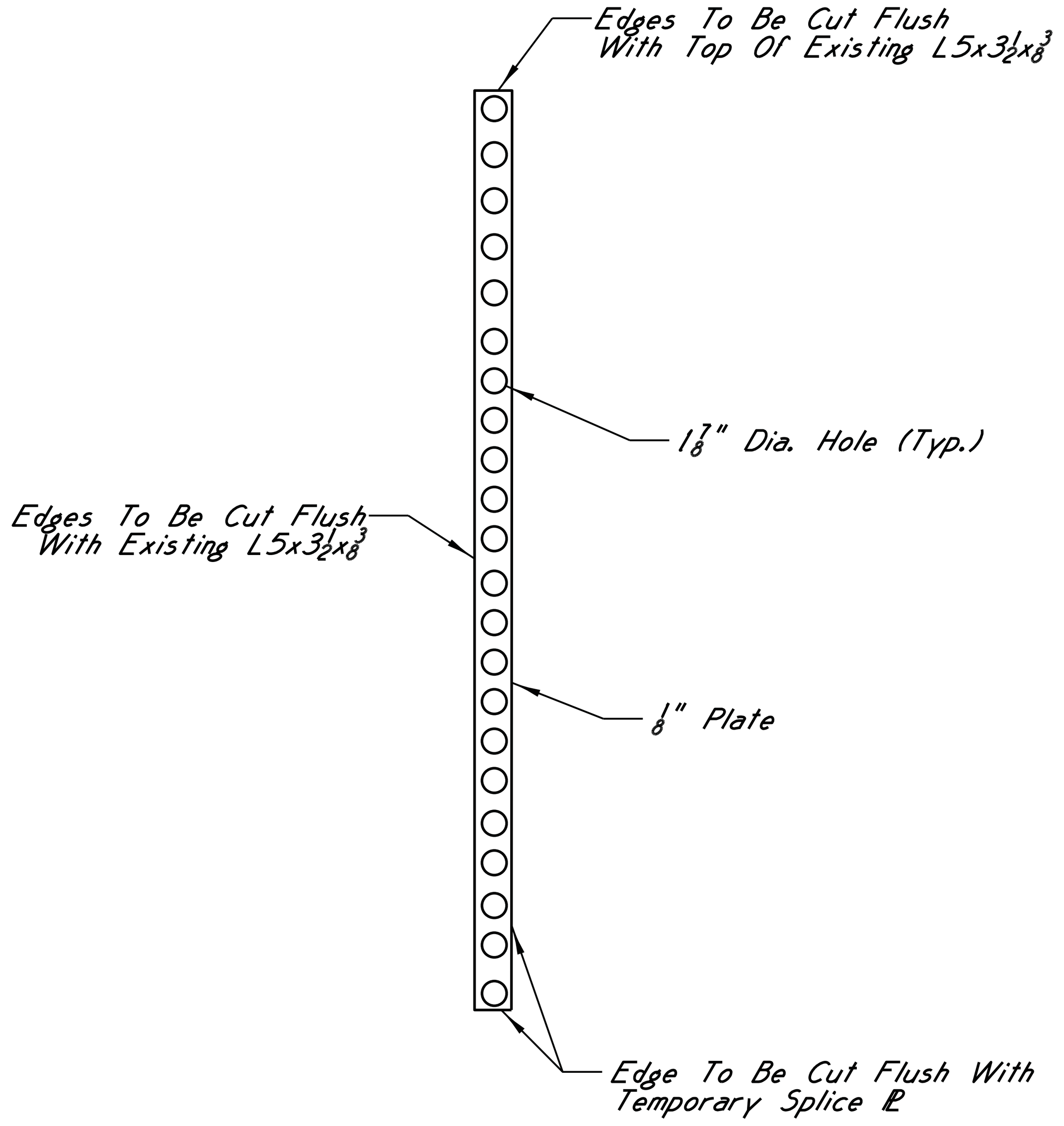
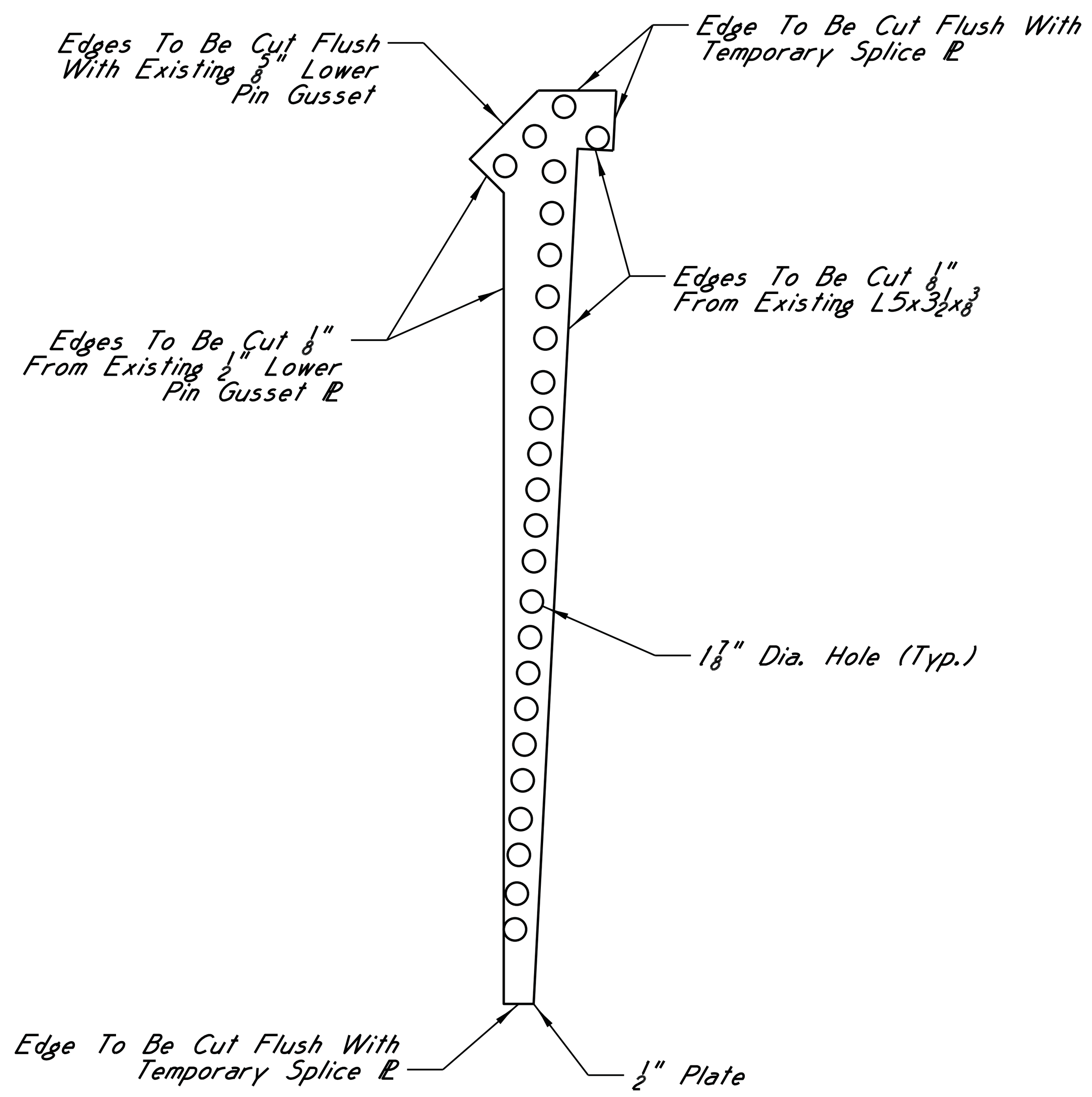


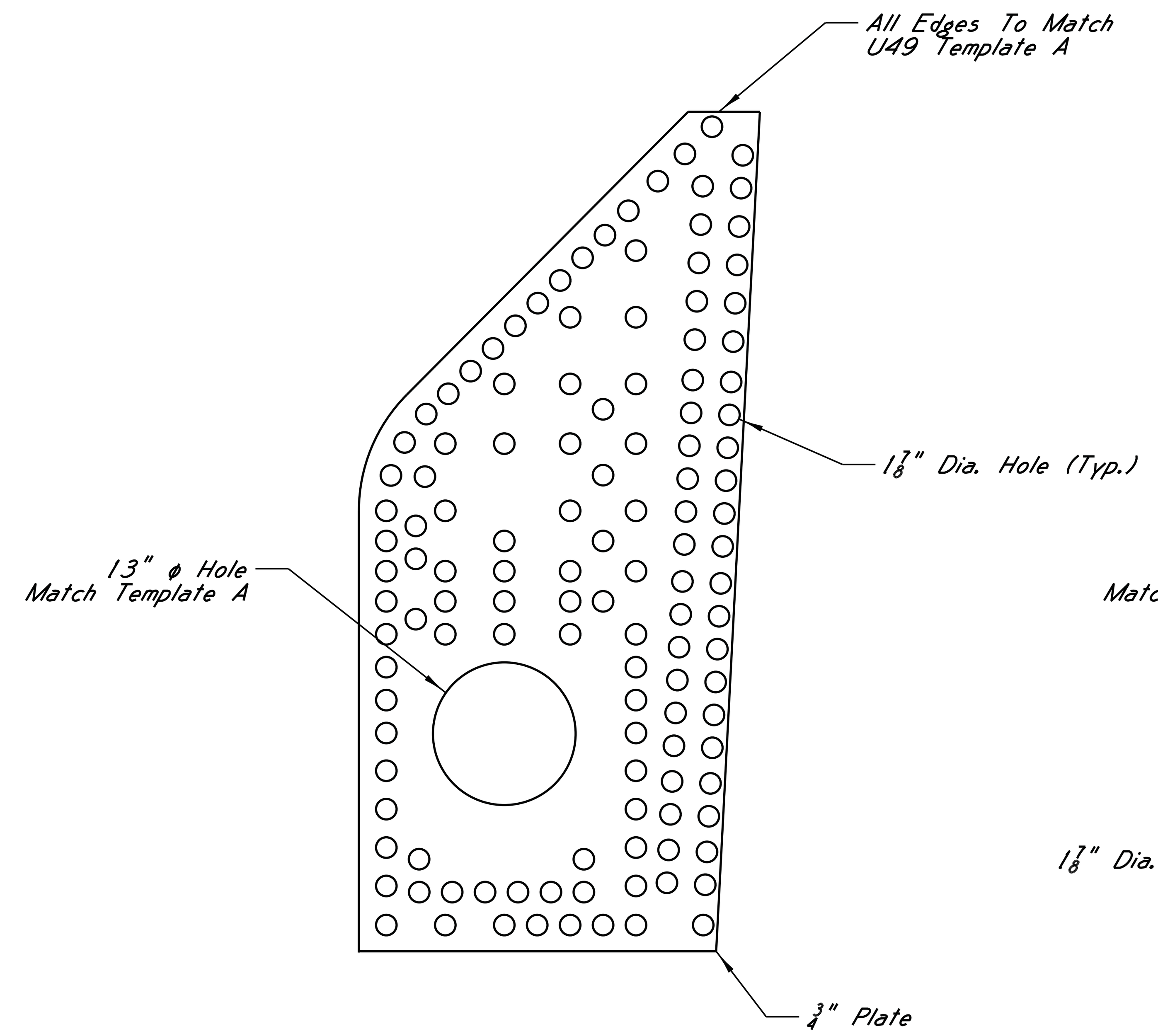
U49 LOWER PIN ⅛" FILL PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice PL, And Splice PL Template Plans For Location Of Bolts And Existing Rivets)



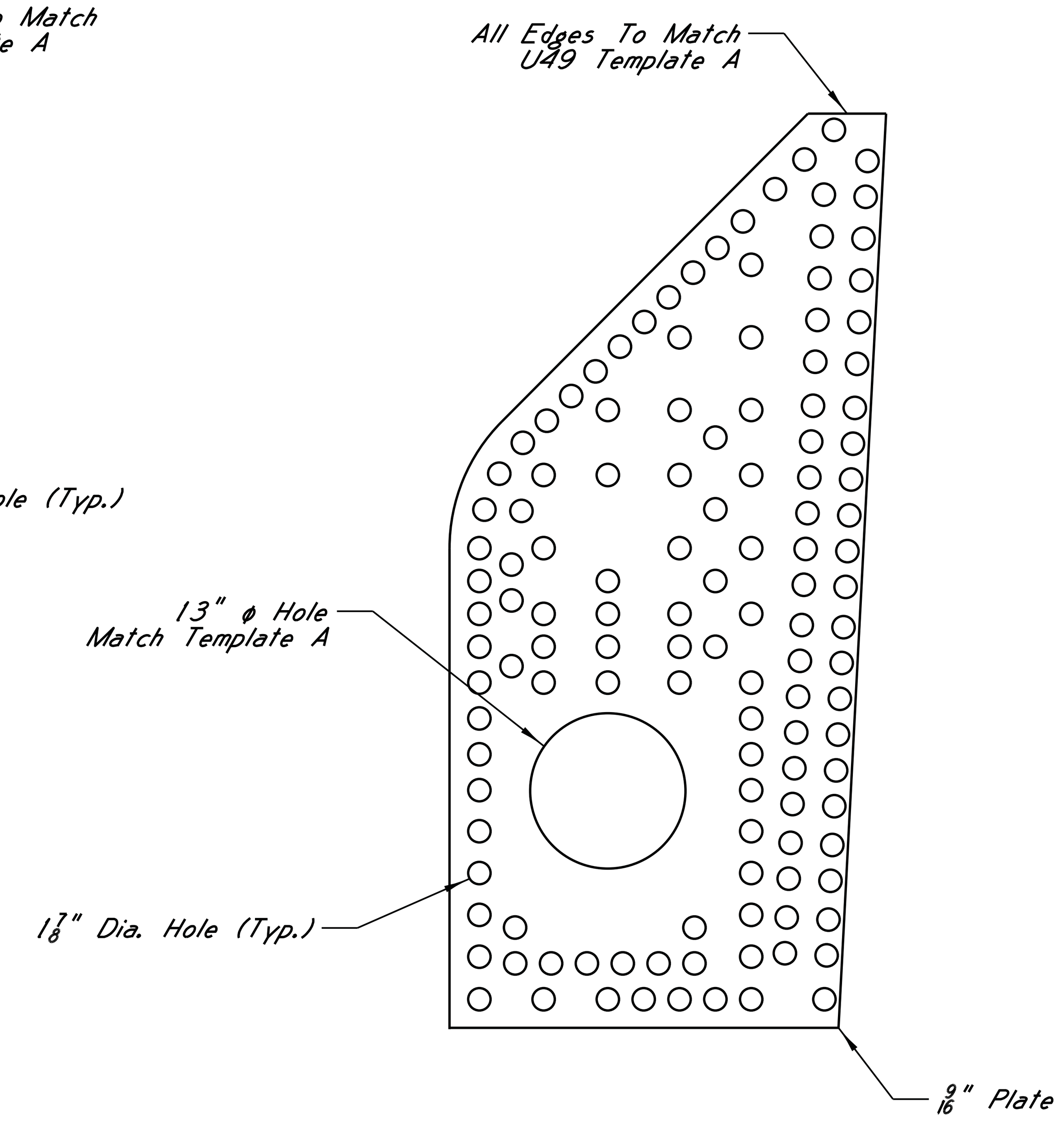
U49 LOWER PIN ½" FILL PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice PL, And Splice PL Template Plans For Location Of Bolts And Existing Rivets)



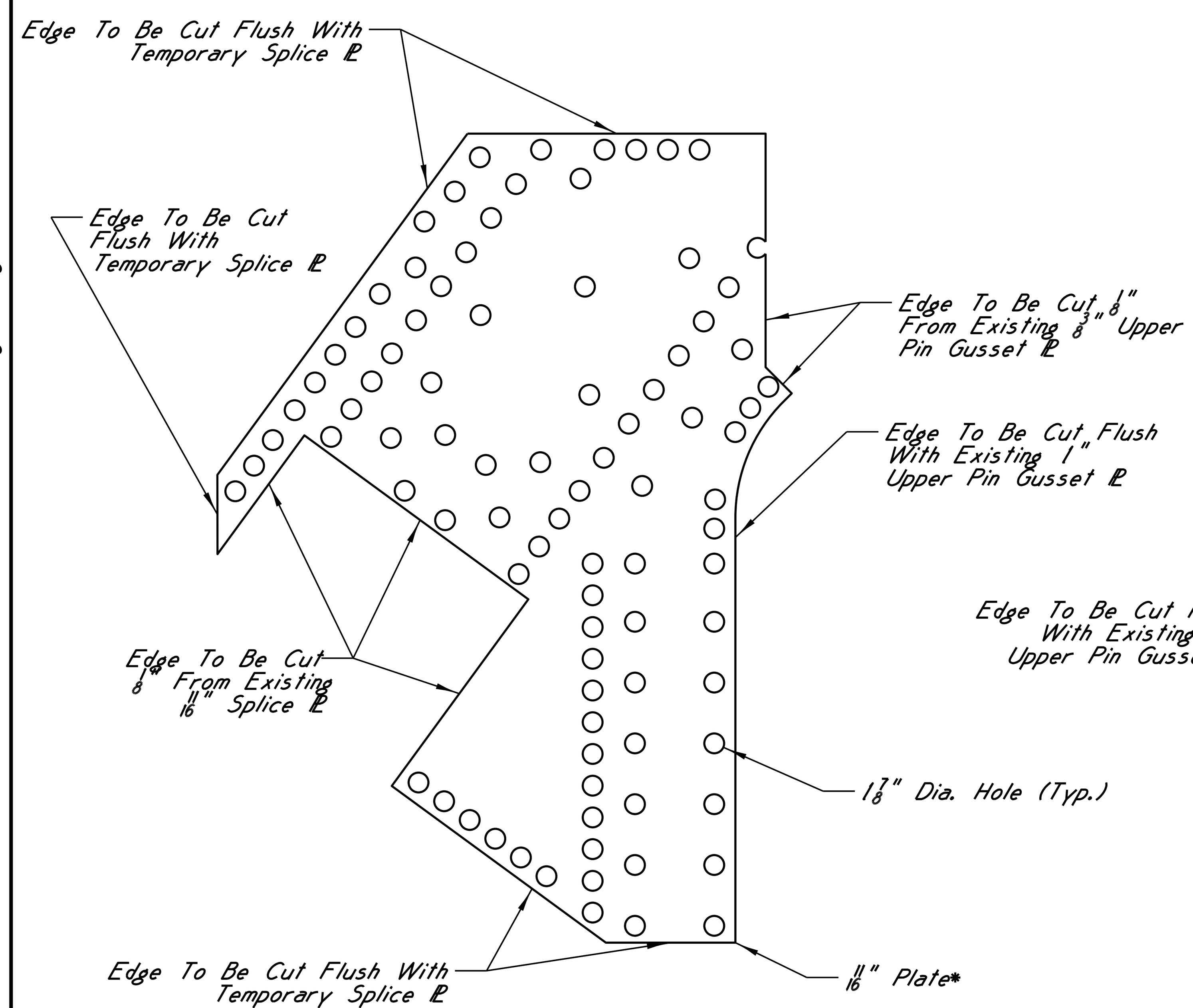
U49 LOWER PIN ¾" CHEEK PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice PL, And Splice PL Template Plans For Location Of Bolts And Existing Rivets)



U49 LOWER PIN 9/16" SPACER PLATE

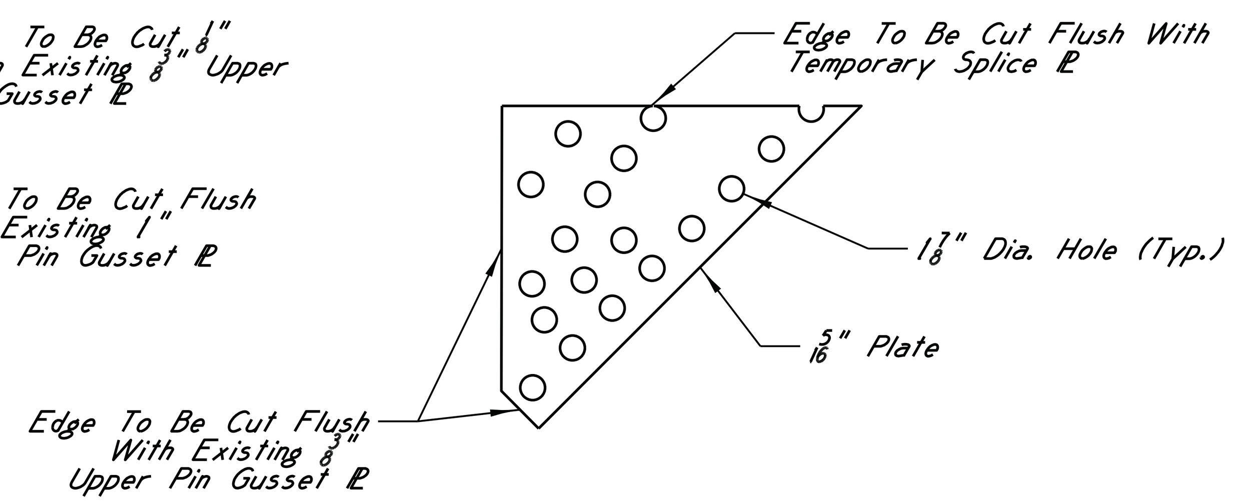
(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice PL, And Splice PL Template Plans For Location Of Bolts And Existing Rivets)



U49 UPPER PIN 11/16" FILL PLATE

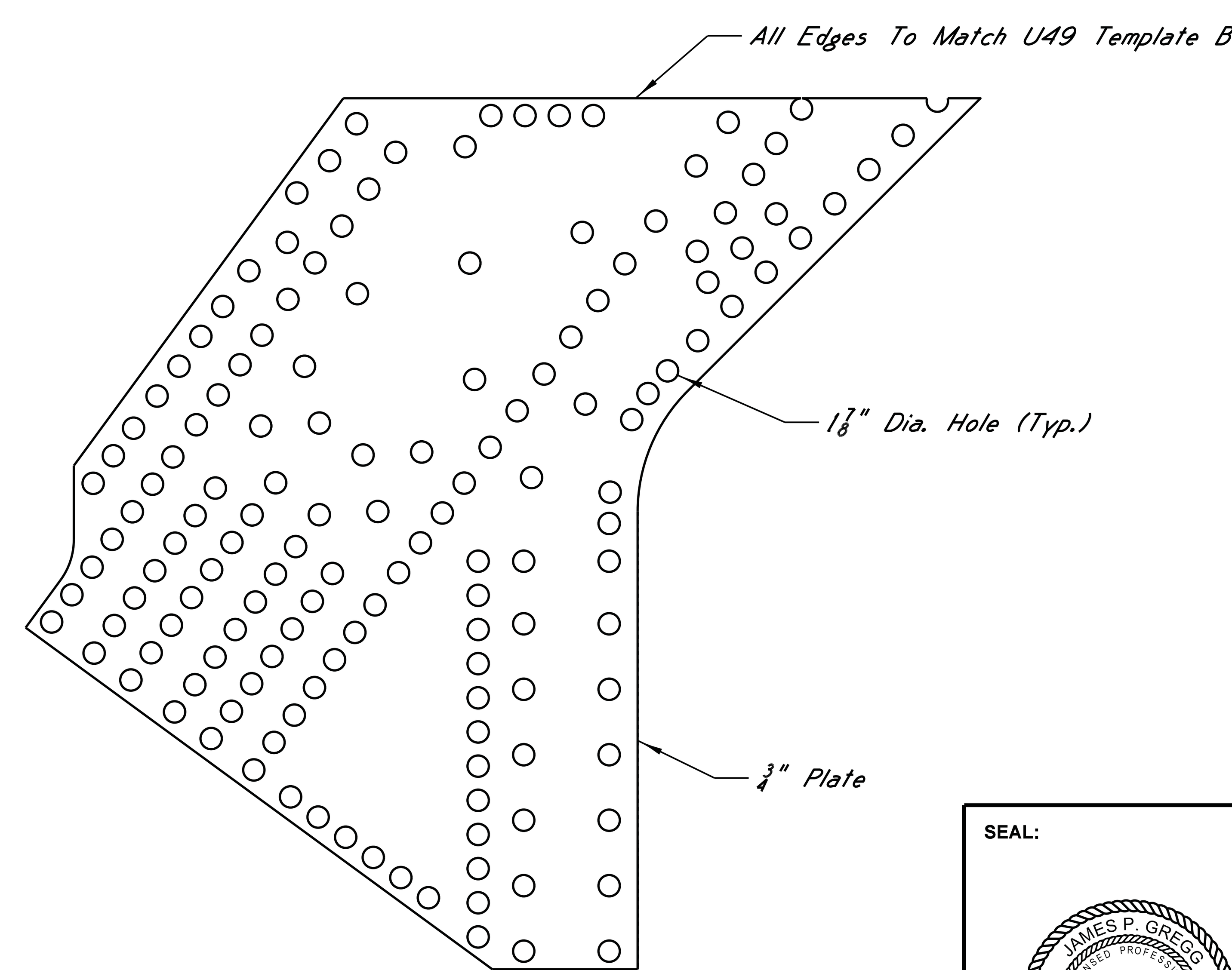
(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice PL, And Splice PL Template Plans For Location Of Bolts And Existing Rivets)

- Contractor May Use ⅜" PL And 5/16" PL In Liu Of 11/16" PL



U49 UPPER PIN 5/16" FILL PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice PL, And Splice PL Template Plans For Location Of Bolts And Existing Rivets)



U49 UPPER PIN ¾" CHEEK PLATE

(2 Required, 1 As Shown, 1 Opposite)
(Refer To As-Built Plans, Splice PL, And Splice PL Template Plans For Location Of Bolts And Existing Rivets)

NOTES

For Location Of Rivets Refer To As-Built Plans
For U49 Splice Plate And Template Dimensions, See Sheet A33, A36 And A37

SEAL: JAMES P. GREGG, ENGINEER, 19496, STATE OF MISSISSIPPI
DATE: 11/5/14

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 AND U49 TEMPORARY SPLICE PLATE (11 OF 11)

PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

DESIGNED M.Xin DETAILED B.Steib TRACED ____
CHECKED J.Gregg ISSUED J.Gregg DATE ____

WORKING NUMBER A39
SHEET NUMBER 8039

REVISIONS | BY | DATE

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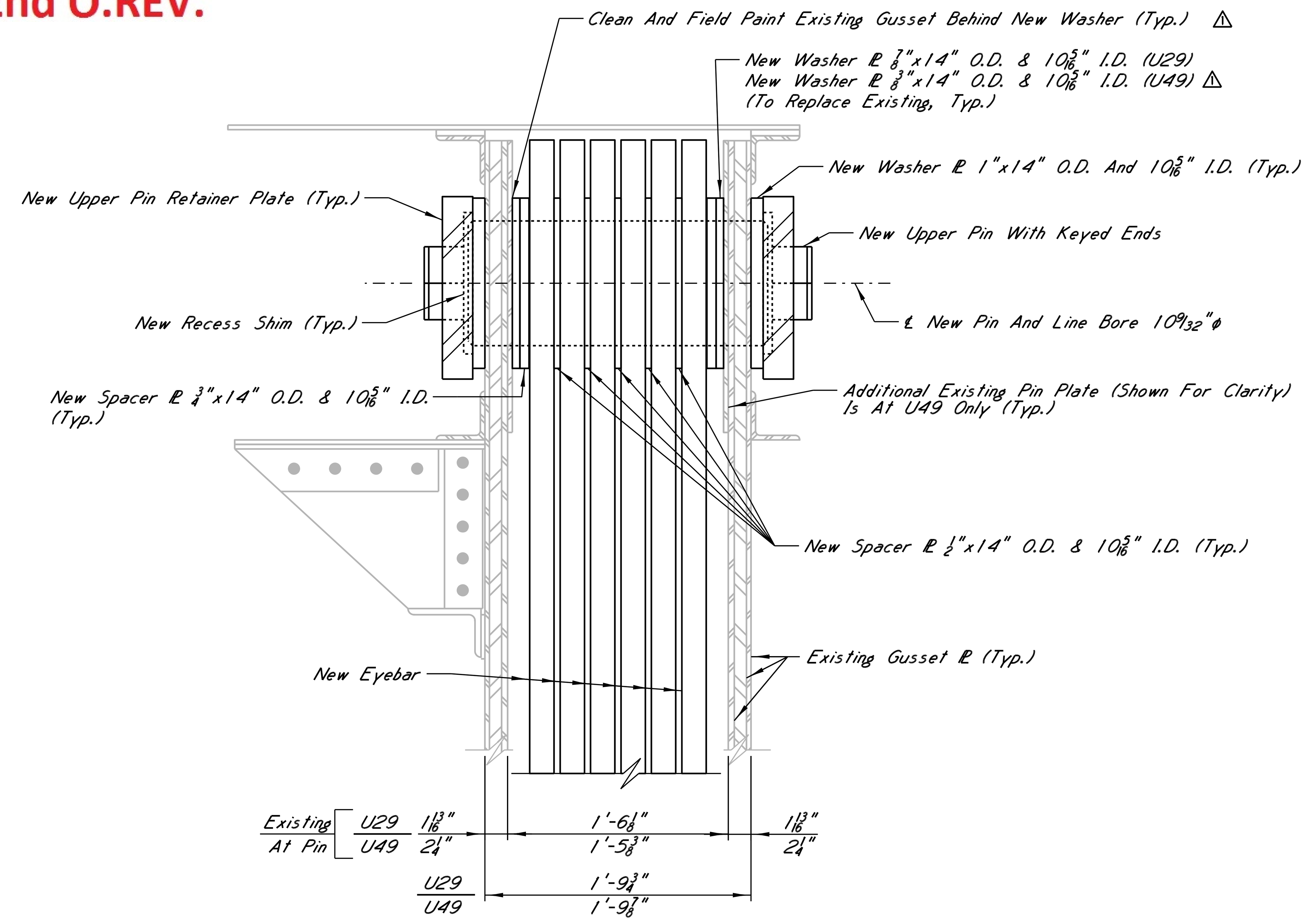
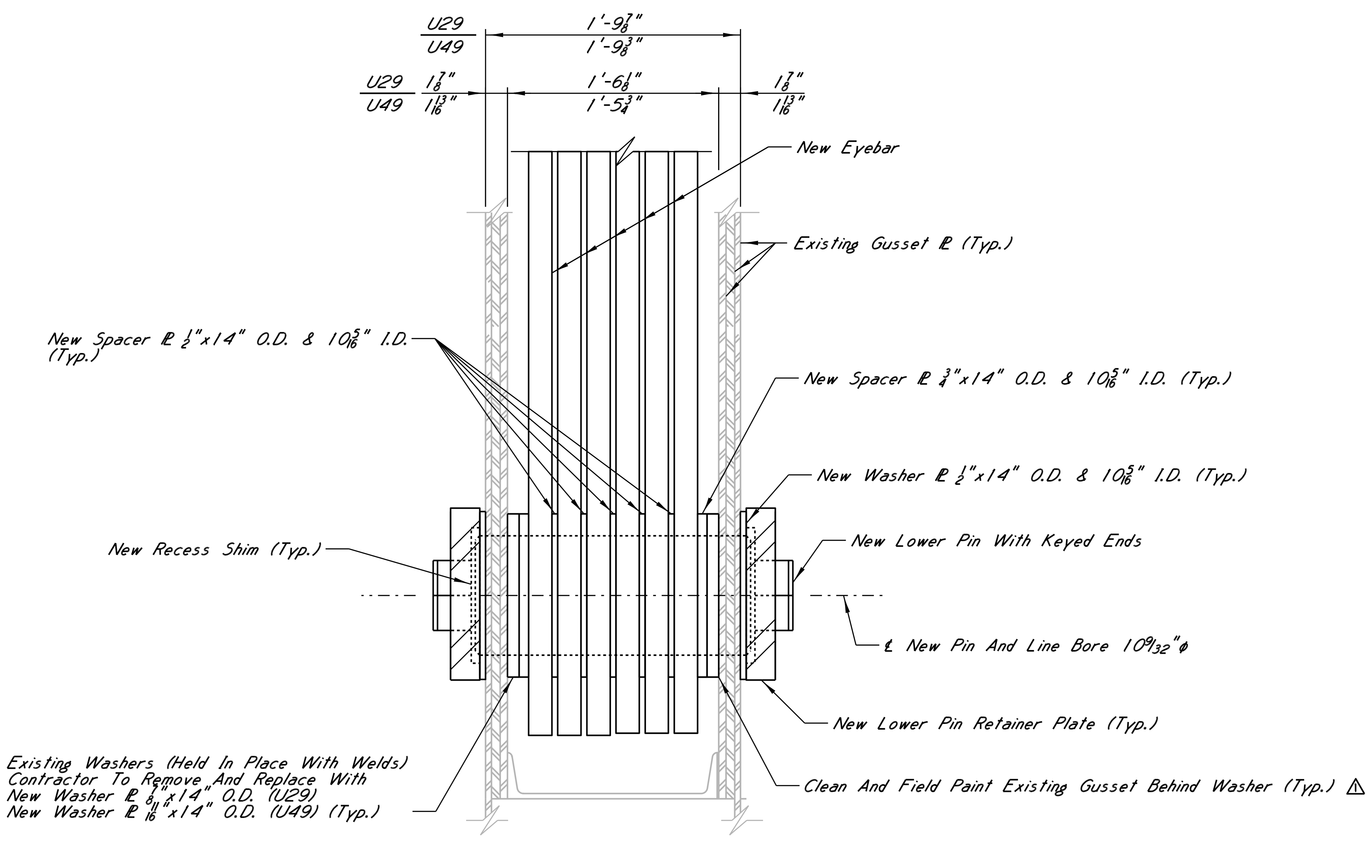
2nd O.REV.



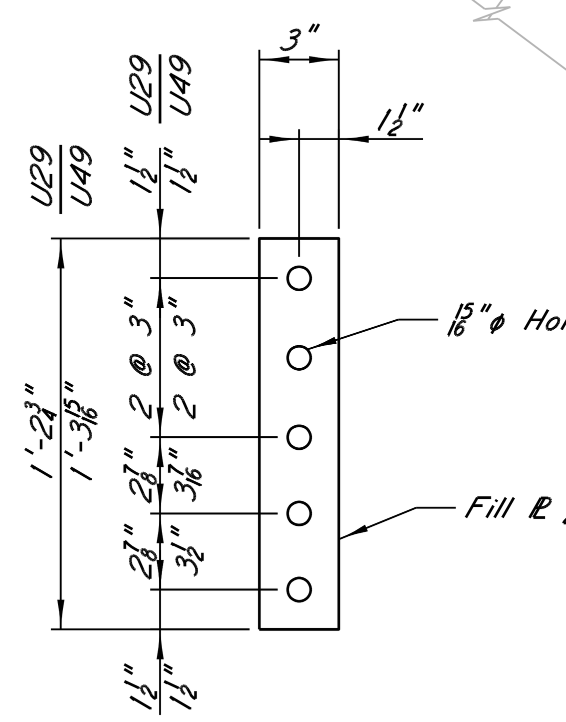
SECTION A-A

O.D. = Outside Diameter
I.D. = Inside Diameter

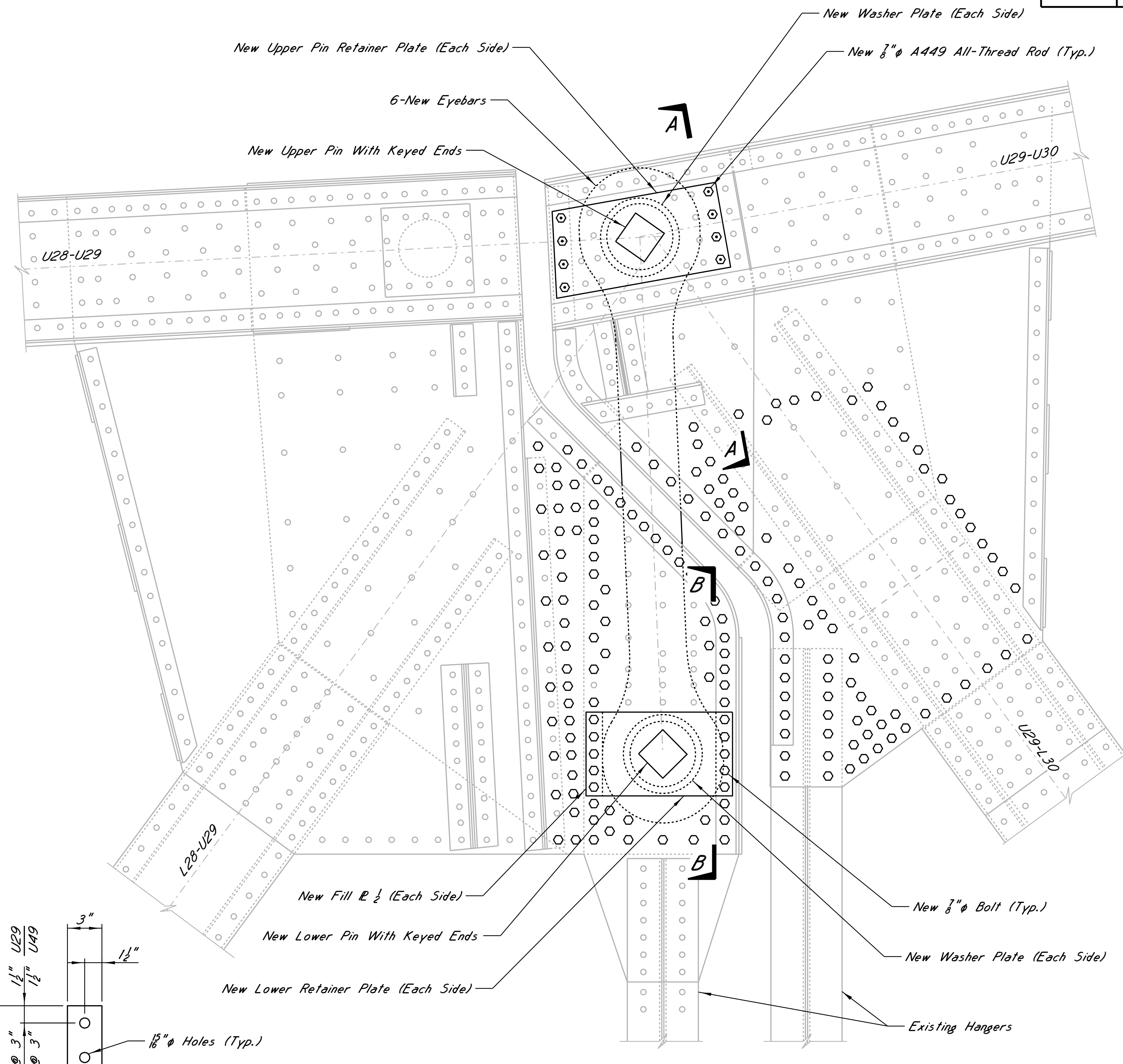


Existing Washers (Held In Place With Welds) Contractor To Remove And Replace With
New Washer ℙ 5/8"x14" O.D. (U29)
New Washer ℙ 11/16"x14" O.D. (U49) (Typ.)

SECTION B-B



FILL PLATE



U29 DOWNSTREAM (SHOWN) & U49 UPSTREAM (SIMILAR) LINK AND PIN REPLACEMENT

NOTES

For Notes, Installation Steps, Pin & Eyebars Details, And Pin Retainer Plate Details, See Sheet A41.

Line Bore Diameter Tolerance Shall Not Exceed 1/32 Inch.

STATE	PROJECT NO.
MISS.	BR-0015-01(120)

SEAL: JAMES P. GREGG, PROFESSIONAL ENGINEER, 19496, STATE OF MISSISSIPPI
DATE: 4/13/15

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REVISIONS: 4/7/15 — MODIFIED WASHER THICKNESS, FIELD PAINT — JPG

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49 TEMPORARY LINK AND PIN REPLACEMENT (1 OF 2)
PROJECT BR-0015-01(120) 106487/301000
ADAMS COUNTY

DESIGNED J.Bernard DETAILED S.Hebert TRACED
CHECKED J.Gregg ISSUED J.Gregg DATE

WORKING NUMBER A40
SHEET NUMBER 8040

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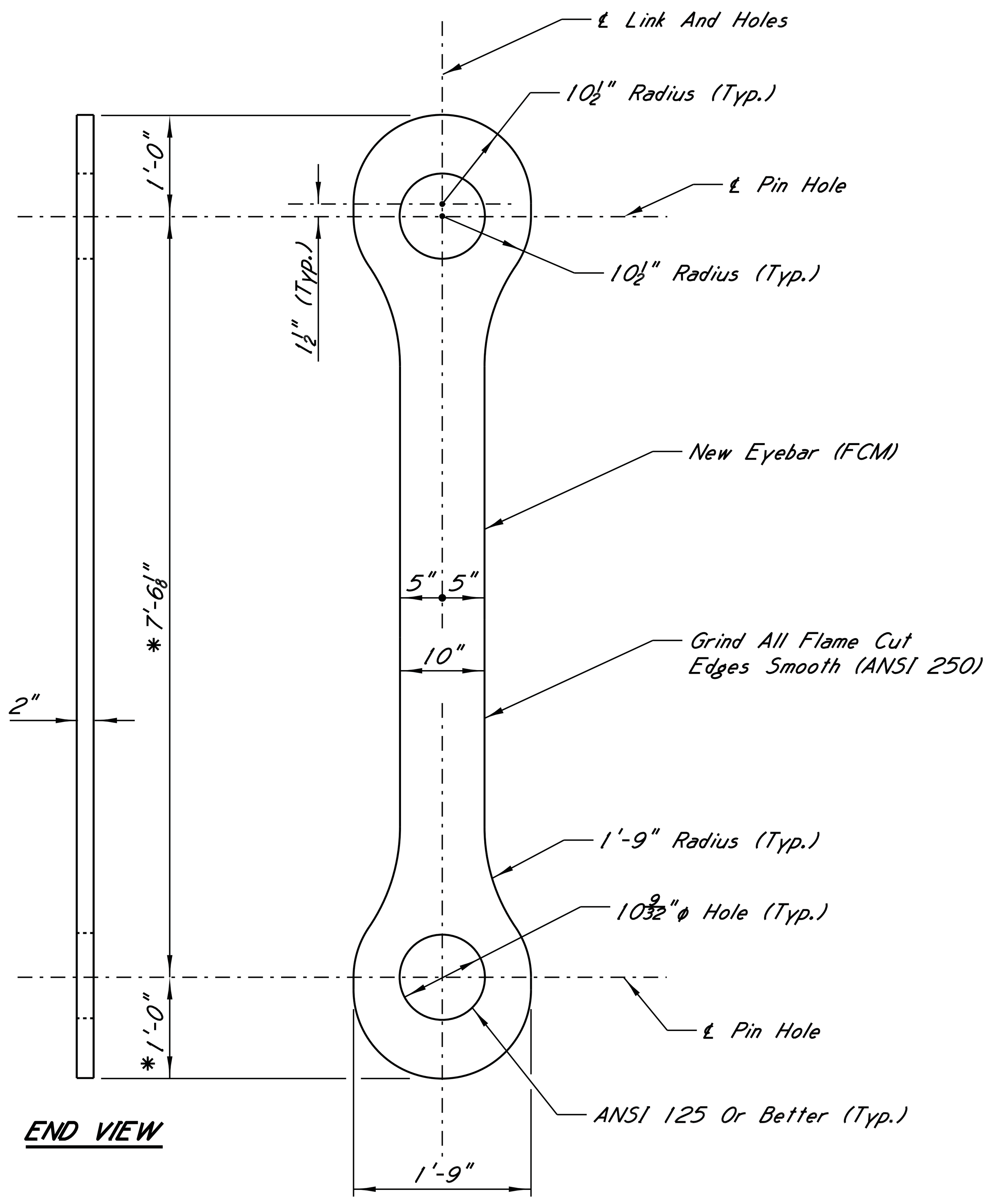
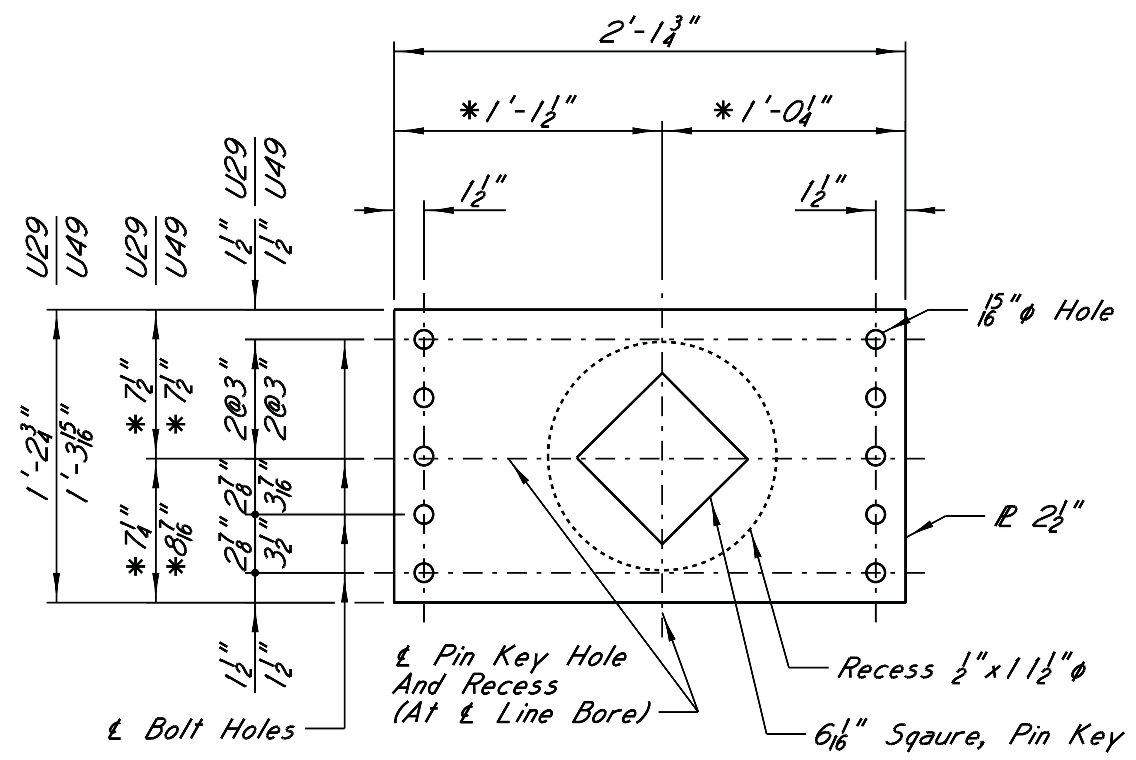
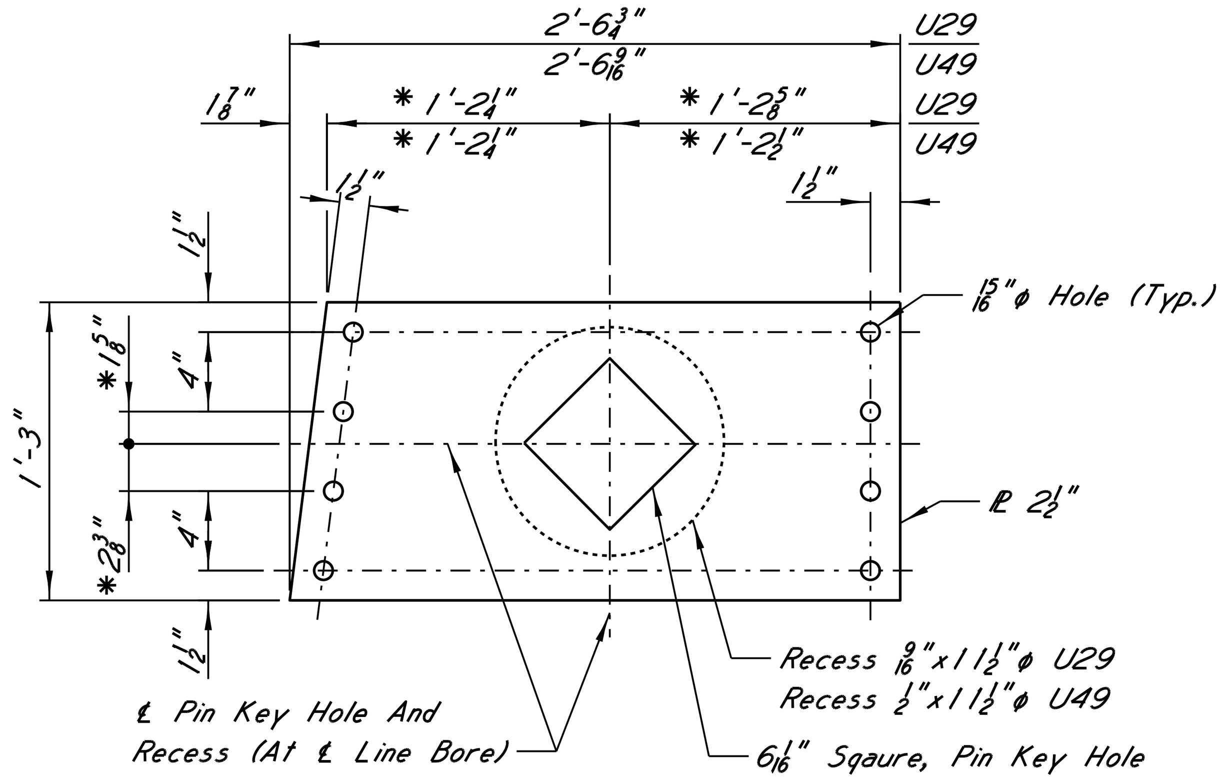
STATE	PROJECT NO.
MISS.	BR-0015-01(120)



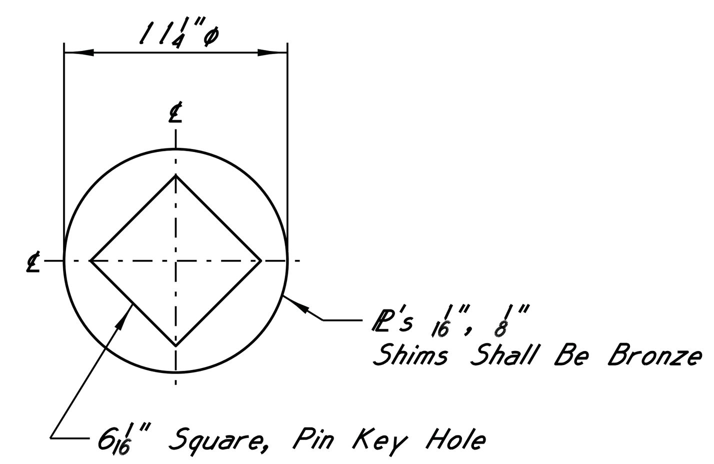
EYEBAR
6 Total Required Per Location



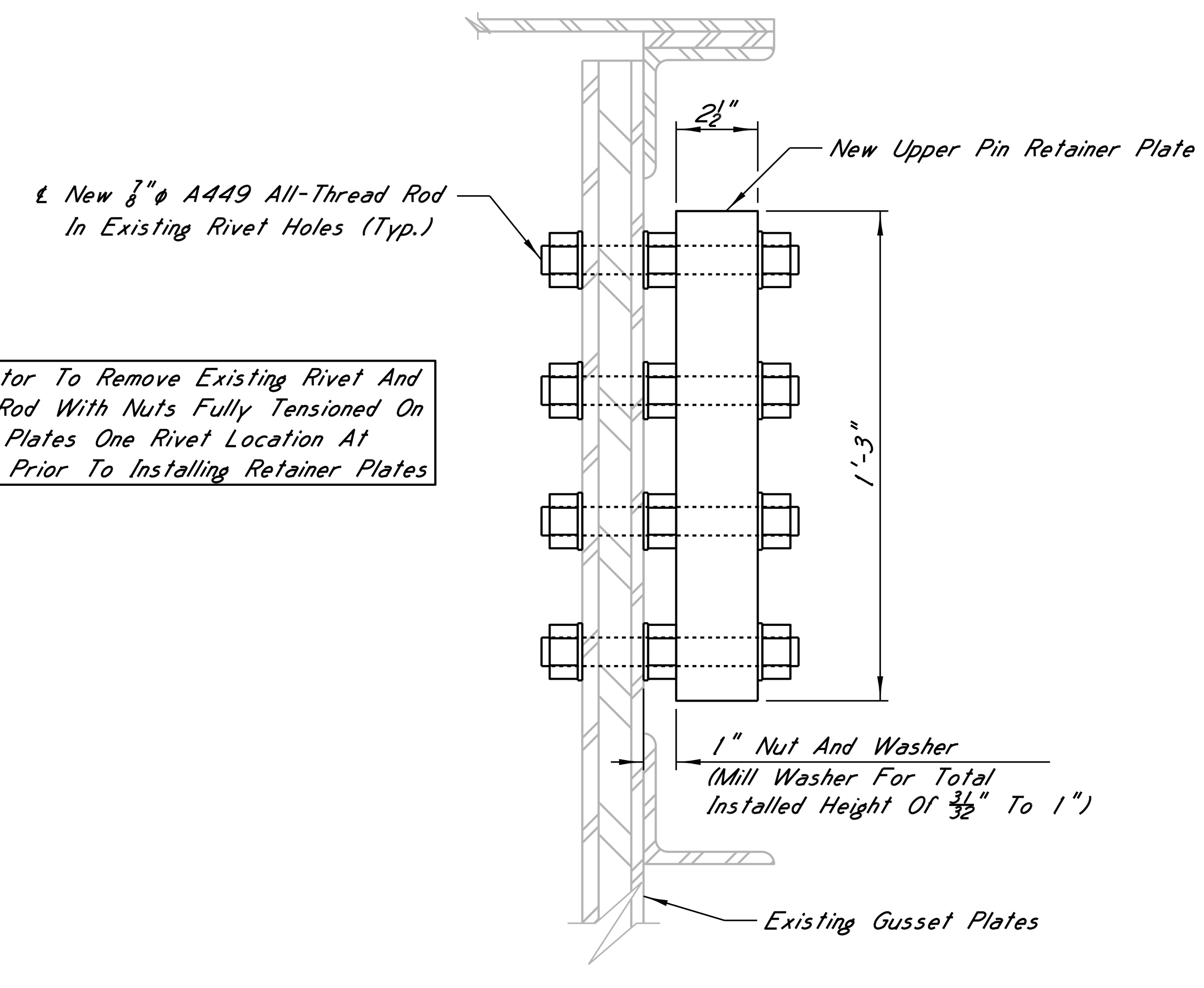
LOWER PIN RETAINER PLATE
One Plate As Shown With Recess On Far Side
Other Plate With Recess On Near Side.



UPPER PIN RETAINER PLATE
One Plate As Shown With Recess On Far Side
Other Plate With Recess On Near Side.

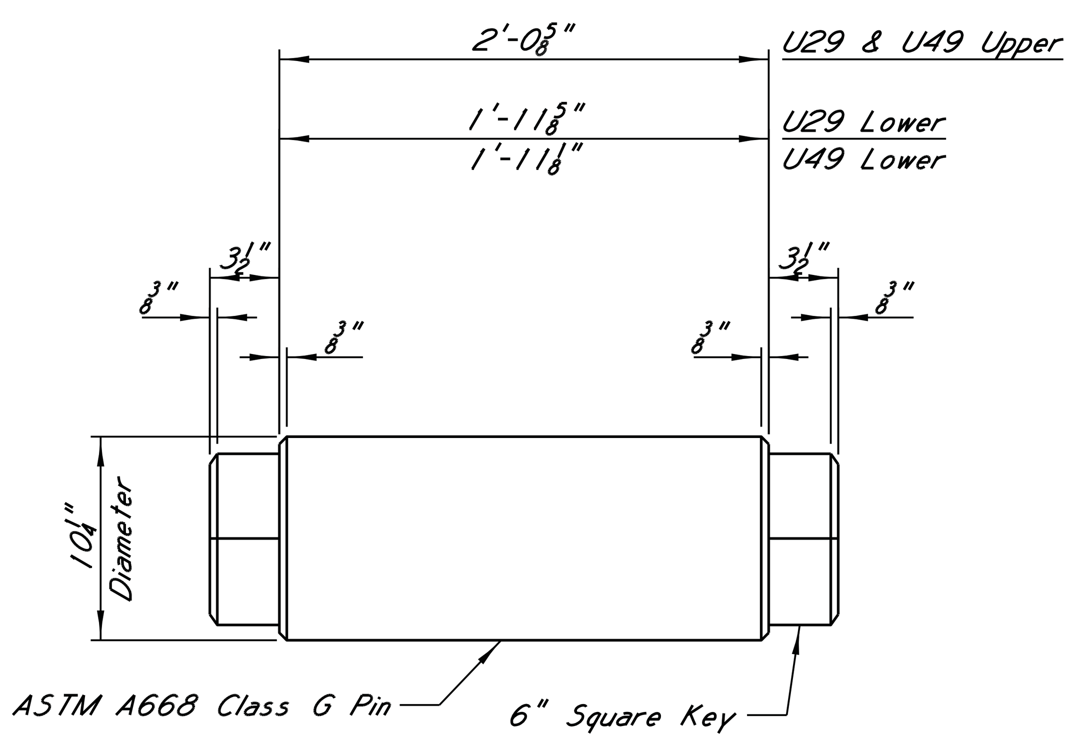


RECESS SHIM PACK
Contractor To Supply Shims As Necessary For Tight Fit At Retainer Plate Recess Against Pin (Install As Directed)

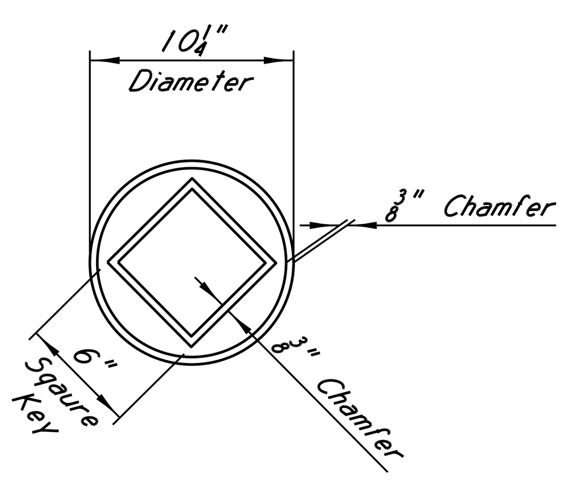


SECTION AT END OF UPPER PIN RETAINER PLATE
Showing Bolted Connection

▲ Contractor To Remove Existing Rivet And Install Rod With Nuts Fully Tensioned On Gusset Plates One Rivet Location At A Time Prior To Installing Retainer Plates



UPPER & LOWER PIN



END VIEW

LINK & PIN REMOVAL AND REPLACEMENT INSTALLATION STEPS

Step 1: Cut Existing Link To Remove Load By Approved Method.

Step 2: Remove Existing Link And Upper & Lower Pins By Approved Method.

Step 3: Locate Approved Best Fit Centerlines For Line Bores Thru Existing Pin Holes And Make New Line Bores By Approved Method.

* Step 4: Make Exact Measurements To ℄ Line Bores And Use Them To Correctly Fabricate Lower Hole In Eyebars And Pin Key Hole & Recess In Retainer Plates.

Step 5: Install New Pins & Eyebars With Spacers & Washers Between The Existing Gusset Plates. Ensure Proper Pin Rotation To Accept Retainer Plates.

Step 6: Remove Splice Plates.

▲ Step 7: Install Pin Retainer Plates With Washers And Fill Plates.

NOTES

For General Notes, See Sheet A02.
For Suggested Sequence Or Construction, See Sheet A04.
Pin Steel Shall Conform To ASTM A668, Class G.
Eyebars And Pins Are Designated As Fracture Critical Members (FCM).
Eyebars Shall Be ASTM A709 (Grade 50F3).
Spacer Plates Shall Be Lubricant Impregnated Bronze.
Washer Plates And Recess Shims Shall Be Bronze (Not Lubricated).
After Fabrication, Finished Surfaces Of Pins With The Exception Of The Bearing Areas, Shall Be Abrasive Blast Cleaned In Accordance With SSPC-10 Near White Blast Cleaning To Achieve A Surface Profile Depth Of 1.5 To 2.5 Mils. Entire Pin Surface Shall Then Be Given A Coat Of An Approved Protective Coating. Immediately Prior To Erection, The Protective Coating Shall Be Thoroughly Removed From The Entire Pin, And Only The Bearing Surfaces Shall Then Be Coated With High Grade Lubricant Grease Having Non-Corrosive Properties. Immediately After Erection, Any Corrosion, Excess Grease, And Any Other Contaminants That Would Prevent Adherence Of Paint Shall Be Completely Removed. The Exposed Surfaces Of The Pin Shall Then Be Coated Per MDOT Standard Specifications.
Contractor Shall Install Both New Pins For Eyebars Within 72 Hours From Time Of Cutting The Existing Link.
* Fabrication Of Lower Pin Hole In Eyebars And Pin Key Hole & Recess In Retaining Plates Shall Not Be Made Until Dimensions Are Field Verified By Exact Measurements To ℄ Line Bores.

SEAL:

DATE: 11/5/14

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

U29 & U49
LINK AND PIN REPLACEMENT
(2 OF 2)
PROJECT BR-0015-01(120)
106487/301000
ADAMS COUNTY

WORKING NUMBER A41
SHEET NUMBER 8041

DESIGNED J.Bernard DETAILED S.Hebert TRACED ____
CHECKED J.Gregg ISSUED J.Gregg DATE ____

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STATE	PROJECT NO.
MISS.	BR-0015-01(120)

NOTES

For General Notes, See Sheet A02.
The Daily Maximum And Minimum Temperatures Are For Informational Purposes Only.
Daily Maximum And Minimum Temperatures Were Obtained From WeatherUnderground.com Historical Weather Data.

DAILY MAXIMUM AND MINIMUM TEMPERATURES

Natchez, MS

SEAL: JAMES P. GREGG, REGISTERED PROFESSIONAL ENGINEER, 19496, STATE OF MISSISSIPPI

DATE: 11/5/14

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BY

REVISIONS

DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

U.S. HIGHWAY 84 MISSISSIPPI RIVER BRIDGE

DAILY MAXIMUM AND MINIMUM TEMPERATURES

PROJECT BR-0015-01(120) 106487/301000

ADAMS COUNTY

DESIGNED J.Gregg DETAILED J.Gregg TRACED

CHECKED J.Bernard ISSUED DATE

WORKING NUMBER A42

SHEET NUMBER 8042

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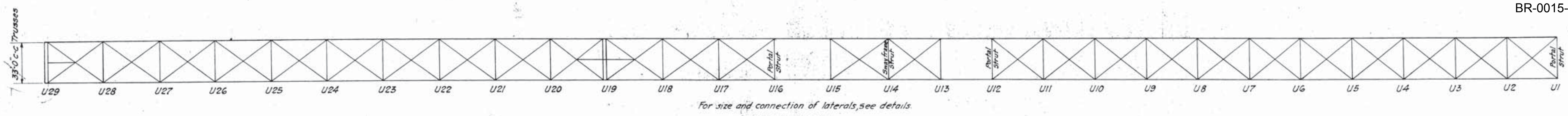
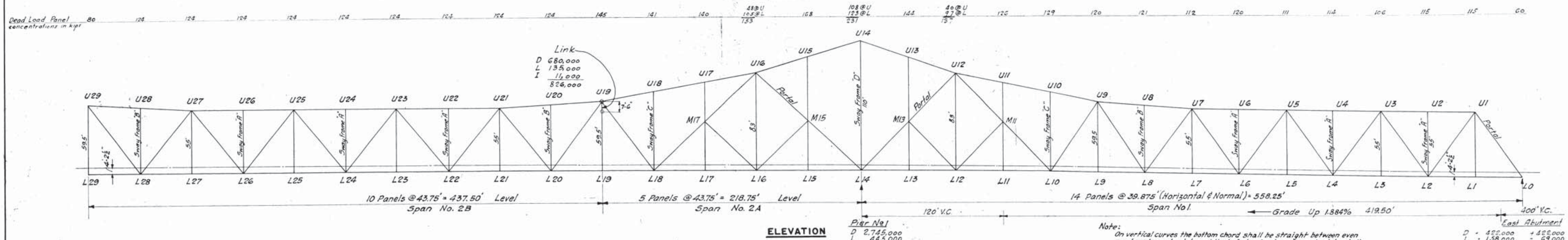
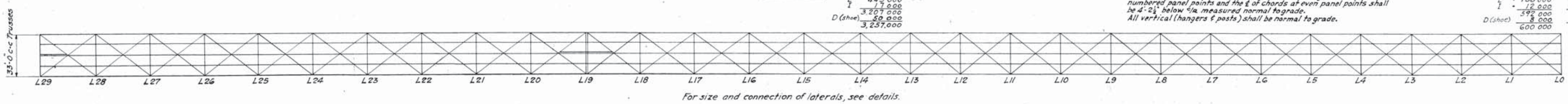


TOP LATERALS



ELEVATION



BOTTOM LATERALS

FOR INFORMATION ONLY

Stresses are given in kips. C = compression; T = tension. The stress S_R is the design stress for the connection of the member; where not given see detail of connections.
A_g = Effective gross area. A_n = Effective net area. f_c and f_t are the normal allowable unit stresses in lbs per sq in for compression and tension respectively.

Member	Stresses: Dead Load	Live Load	Impact	Total	S_R	Area Provided: Ag.	An.	L/r	Unit Stress: fc	ft	Make up of Section	Material	Type (see sh. #26)
U1-U3	447C	182C	13C	642C	664	71.82		48.	10800		2 Cov. Pls. 31×9/16, 4 Ls 4×4×1/2, 2 Web Pls 24×9/16	C	A
U3-U5	575C	304C	22C	901C	920	75.12		48.	12200		2 Cov. Pls 31×5/8, 4 Ls 4×4×1/2, 2 Web Pls 24×11/16	C	A
U5-U7	373C	367C	27C	767C	783	75.12		48	12200		2 Cov. Pls. 31×5/8, 4 Ls 4×4×1/2, 2 Web Pls 24×11/16	C	A
U7-U9	175T	353C / 374T	26C / 24T	256C / 573T	860	65.3	51.			18000	2 Cov. Pls. 31×7/16, 4 Ls 4×4×3/8, 2 Web Pls 24×1/2	C	A
U9-U12	900T	407T	26T	1333T	1360	71.82	56.65			24000	2 Cov Pls 31×9/16, 4 Ls 4×4×1/2, 2 Web Pls 24×9/16	S	A
U12-U14	2090T	360T	23T	2473T	2485	131.57	102.84			24000	2 Cov Pls 35×5/8, 4 Ls 8×6×5/8, 4 Web Pls 24×5/8	S	B
U14-U16	2080T	357T	23T	2460T	2485	131.57	102.84			24000	2 Cov Pls 35×5/8, 4 Ls 8×6×5/8, 4 Web Pls 24×5/8	S	B
U16-U19	470T	85T	7T	562T	1030*	71.82	56.65			18000	2 Cov Pls 31×9/16, 4 Ls 4×4×1/2, 2 Web Pls 24×9/16	C	A
L0-L2	259T	99T	7T	365T		60.19 / 35.44	47.7 / 27.8			18000	L0L1 {2 Cov. Pls 31×9/16, 4 Ls 4×4×5/8, 2 Web Pls 24×1/2}; L1L2 {4 Ls 4×4×3/8, 2 Pls 24×1/2, + Tie Pls See L4L6}	C	D & G
L2-L4	549T	251T	18T	818T	822	43.72	34.2			24000	4 Ls 4×4×9/16, 2 Pls 24×9/16, Tie Pls see L4L6	S	G
L4-L6	516T	343T	25T	884T	910	48.44	37.9			24000	4 Ls 4×4×5/8, 2 Pls 24×5/8, Tie Pls End 34×9/16 - C, Int 18×5/16 @ 4'6" ctrs.	S	G
L6-L8	135T	339C / 376T	22C / 28T	267C / 539T	673	60.19	47.7	48.	9950	18000	2 Cov. Pls 31×9/16, 4 Ls 4×4×5/8, 2 Web Pls 24×1/2	C	D
L8-L10	540C	402C	26C	968C	978	75.50		47.	14450		2 Cov Pls 31×5/8, 4 Ls 4×4×1/2, 2 Web Pls 24×11/16	C	D
L10-L12	1480C	386C	24C	1890C	1890	99.25		45.	19100		2 Cov. Pls. 35×13/16, 4 Ls 8×6×1/2, 2 Web Pls 24×5/8	S	D
L12-L14	1447C	386C	24C	1857C		99.25		45.	19100		2 Cov Pls 35×13/16, 4 Ls 8×6×1/2, 2 Web Pls 24×5/8, For reinforcing material see details	S	D
L14-L16	12[illegible]C	237C	16C	1513C		107.25		(14-15) 54, (15-16) 49	18600, 18900		2 Cov Pls 35×13/16, 4 Ls 8×6×1/2, 2 Web Pls 24×5/8, 2 Web Pls 8×1/2, For reinforcing material see details	S	E
L16-L18	1273C	226C	16C	1515C		L17-L18 84.0, L16-L17 100.0		52.	18730		L17L18 {2 Cov Pls 31×3/4, 4 Ls 4×4×1/2, 2 Web Pls 24×3/4}; L16L17 {Same as L17-L18 plus 2 Pls 16×1/2}	S	D & E
L18-L19	0	0	0	0	827*	69.5		52.5	12150		2 Cov. Pls. 31×5/8, 4 Ls 4×4×1/2, 2 Web Pls 24×9/16	C	D
L0-U1	441C	180C	13C	634C		75.12		75.	11500		2 Cov Pls 31×5/8, 4 Ls 4×4×1/2, 2 Web Pls 24×11/16, For reinforcing material see details	C	A
U1-L2	316T	159T	12T	481T	533	36.81	29.2			18000	2 Pls 17×7/16, 4 Ls 4×3½×3/8, 2 Pls 22×7/16	C	M
L2-U3	171C	131C	11C	313C	376	40.93		116.	11600		2 Pls 17×5/8, 4 Ls 4×3½×3/8, 2 Pls 22×1/2	C	M
U3-L4	35T	101C / 110T	8C / 10T	84C / 155T	233	32.56	25.31	128.	7100	18000	2 Pls 17×7/16, 4 Ls 4×3½×3/8, 2 Pls 20×3/8	C	M1
L4-U5	113T	92C / 110T	9C / 9T	22C / 232T	348	32.56	25.31	128.	7100	18000	2 Pls 17×7/16, 4 Ls 4×3½×3/8, 2 Pls 20×3/8	C	M1
U5-L6	250C	120C	10C	380C	464	43.68		117.	11600		2 Pls 17×5/8, 4 Ls 4×3½×3/8, 2 Pls 22×9/16	C	M
L6-U7	392T	131T	11T	534T	583	42.31	33.6			18000	2 Pls 17×7/16, 4 Ls 4×3½×3/8, 2 Pls 22×7/16	C	M
U7-L8	523C	132C	12C	667C	760	53.0		108.	14620		2 Pls 17×1/2, 4 Ls 4×4×1/2, 2 Pls 24×9/16	S	M
L8-U9	644T	147T	13T	804T	850	45.56	35.6			24000	2 [18 @ 42.7, 2 Pls 26×1/2	S	N1

* These stresses are intended to provide for cantilever erection of suspended span.

Member	Stresses: Dead Load	Live Load	Impact	Total	S_R	Area Provided: Ag.	An.	L/r	Unit Stress: fc	ft	Make up of Section	Material	Type (see sh. #26)
U9-L10	610C	130C	12C	752C	845	58.5		108.	14550		2 Pls 17×1/2, 4 Ls 4×4×1/2, 2 Pls 26×5/8	S	M
L10-M11	864T	184T	16T	1064T	1096	58.69	46.55			24000	2 Pls 17×5/8, 4 Ls 4×4×3/8, 2 Pls 26×1/2	S	M1
M11-U12	946T	195T	16T	1157T	1190	62.25	49.3			24000	2 Pls 17×5/8, 4 Ls 4×4×1/2, 2 Pls 26×3/4	S	M1
U12-M13	663C	174C	14C	851C	930	81.12		69.	13800		2 Cov Pls 31×3/4, 4 Ls 4×4×1/2, 2 Web Pls 24×11/16	C	A
M13-L14	762C	202C	15C	979C		90.75		68	17870		2 Cov Pls 31×3/4, 4 Ls 4×4×1/2, 2 Web Pls 24×3/4, For reinforcing material see details	S	A
L14-M15	1006C	178C	11C	1195C		106.56		67	17950		2 Cov Pls 35×13/16, 4 Ls 8×6×1/2, 2 Web Pls 24×5/8, For reinforcing material see details	S	A
M15-U16	895C	158C	10C	1063C	1170	90.75		71.	13750		2 Cov Pls 31×3/4, 4 Ls 4×4×1/2, 2 Web Pls 24×3/4	C	A
U16-M17	1217T	224T	15T	1456T	1510	81.31	64.2			24000	2 [18" @ 42.7, 2 Pls 26×1/2, 2 Pls 26×9/16	S	C
M17-L18	1117T	209T	15T	1341T	1406	74.81	59.0			24000	2 [18" @ 42.7, 2 Pls 26×1/2, 2 Pls 26×7/16	S	C
L18-U19	780C	148C	11C	939C	1080	76.01		109	14500		2 [18" @ 45.8, 2 Pls 26×1/2, 2 Pls 26×9/16	S	C
U19-U21	426C	82C	7C	515C		71.56		52.	11900		2 Cov. Pls. 31×5/8, 4 Ls 4×4×3/8, 2 Web Pls 24×5/8, For reinforcing material see details.	C	A
U21-U23, U25-U27	1037C	198C	18C	1253C	1278	89.16		51.5	14340		2 Cov Pls 31×11/16, 4 Ls 4×4×9/16, 2 Web Pls 24×3/4	C	A
U23-U25	1234C	236C	21C	1491C	1548	87.44		51.5	17700		2 Cov Pls 31×11/16, 4 Ls 4×4×1/2, 2 Web Pls 24×3/4	S	A
U27-U29	426C	82C	7C	515C		71.56		52.	11900		2 Cov. Pls 31×5/8, 4 Ls 4×4×3/8, 2 Web Pls 24×5/8, For reinforcing material see details.	C	A
L19-L20, L28-L29	0	0	0	0	827*	69.5		52.5	12150		2 Cov. Pls 31×5/8, 4 Ls 4×4×1/2, 2 Web Pls 24×9/16	C	D
L20-L22, L26-L28	788T	151T	13T	952T	956	66.75	52.8			18000	2 Cov. Pls. 31×9/16, 4 Ls 4×4×1/2, 2 Web Pls 24×9/16	C	D
L22-L24, L24-L26	1181T	226T	20T	1427T	1440	75.75	60.0			24000	2 Cov. Pls 31×9/16, 4 Ls 4×4×1/2, 2 Web Pls 24×3/4	S	D
U19-L20	719T	145T	14T	878T	937	54.96	39.0			24000	2 [18" @ 42.7, 2 Pls 24×5/8	S	N
L28-U29	719T	145T	14T	878T	937	54.96	39.0			24000	2 [18" @ 42.7, 2 Pls 24×5/8	S	N
L20-U21, U27-L28	582C	121C	13C	716C	810	55.66		104.	15000		2 [18" @ 51.9, 2 Pls 26×5/8	S	N
U21-L22, L26-U27	396T	93T	11T	500T	558	39.56	31.4			18000	2 Pls 17×7/16, 4 Ls 4×3½×3/8, 2 Pls 22×1/2	C	M
L22-U23, U25-L26	238C	71C	9C	318C	399	43.67		120.	11400		2 Pls 17×5/8, 4 Ls 4×3½×3/8, 2 Pls 22×9/16	C	M
U23-L24, L24-U25	79T	53T	8T	140T	210	28.36	22.0			18000	2 Pls 18×7/16, 4 Ls 3½×3½×5/16, 2 Pls 20×3/8	C	M1
L14-U14	1406C	221C	14C	1641C		138.76		89.	13000		2 Cov. Pls 31×3/4, 4 Ls 8×4×3/4, 2 Pls 36×1, For reinforcing material see details.	C	D
Hangers at panel points 12, 16, 32, 36, 52, 56, 72, 76	270T	62T	10T	342T	342	26.87	22.54			18000	4 Bulb Ls 7×3½ @ 17.1#, 1 Pl 18×3/8	C	K
Posts at panel points 10, 18, 30, 38, 48, 58, 68, [illegible] 78						21.55					4 Bulb Ls 7×3½ @ 13.6#, 1 Pl 18×5/16	C	K
Post at panel points 50 & 70						23.63					4 Bulb Ls 7×3½ @ 15.3#, 1 Pl 18×7/16	C	K
All other hangers and Posts						20.03	16.7				4 Bulb Ls 6×3½ @ 12.3#, 1 Pl 18×3/8	C	K
All sub-diagonals into panel points 12, 16, 32, 36, 52, 56, 72, 76	120C	32C	8C	160C	214	32.25		116.	9640		2 Cov. Pls. 20×3/8, 4 Ls 4×3½×5/16, 2 Pls 17×3/8	C	M

GENERAL NOTES

General Design Specifications :- A.A.S.H.O.-1935 except as otherwise shown.

Live Load

For Floor System, Hangers and Similar Members.

On each 9 ft. traffic lane, 1-20 Ton Truck or H15 truck train placed to give maximum effect.

For Trusses

H15 equivalent loading on 12 ft. traffic lanes.

Impact

$I = \frac{50}{L+125}$, where

I = Impact factor of Live Load Stress

L = Loaded length of span in feet

Allowable Unit Stresses

For Dead + Live + Impact

	Carbon Steel	Silicon Steel
Axial Tension on Net Section	18,000	24,000
Axial Compr. on Effective Gross Area	$15{,}000 - 0.25\left(\frac{l}{r}\right)^2$	$20{,}000 - 0.46\left(\frac{l}{r}\right)^2$

Dimensions

Dimensions are normal unless otherwise noted. Normal dimensions are for 60°F with full dead load on Structure.

Camber

The length of truss members shall be such that under full dead load, all truss members will have their normal length, and the trusses their normal or theoretical outline. For correction of secondary stresses, see Spec. In computing deformation of members under stress, the area of the members shall be taken as the gross area.

Carbon and Silicon Steel

On the drawings, silicon steel is designated by the letter "S" and carbon steel by the letter "C".

Lateral Bracing - Shop Length and Field Riveting

Where dead load stress in chords is tension, shop length of lateral bracing shall conform to shop length of chords.

Where dead load stress in chords is compression, shop length of lateral bracing shall conform to the length of chord for half the dead load stress and bracing shall not be riveted until span is swung, or until an erection condition is reached which will give stress in chord equal to half the dead load stress.

Portal Bracing - Shop Length and Field Riveting

Same as for lateral bracing above.

NOTES

For sway frames see sheet #26.
For portals, see sheets 27 & 28.
For notes on steelwork see sheet #32.

P.W.A. DOCKET NO., MISS. 1126-F

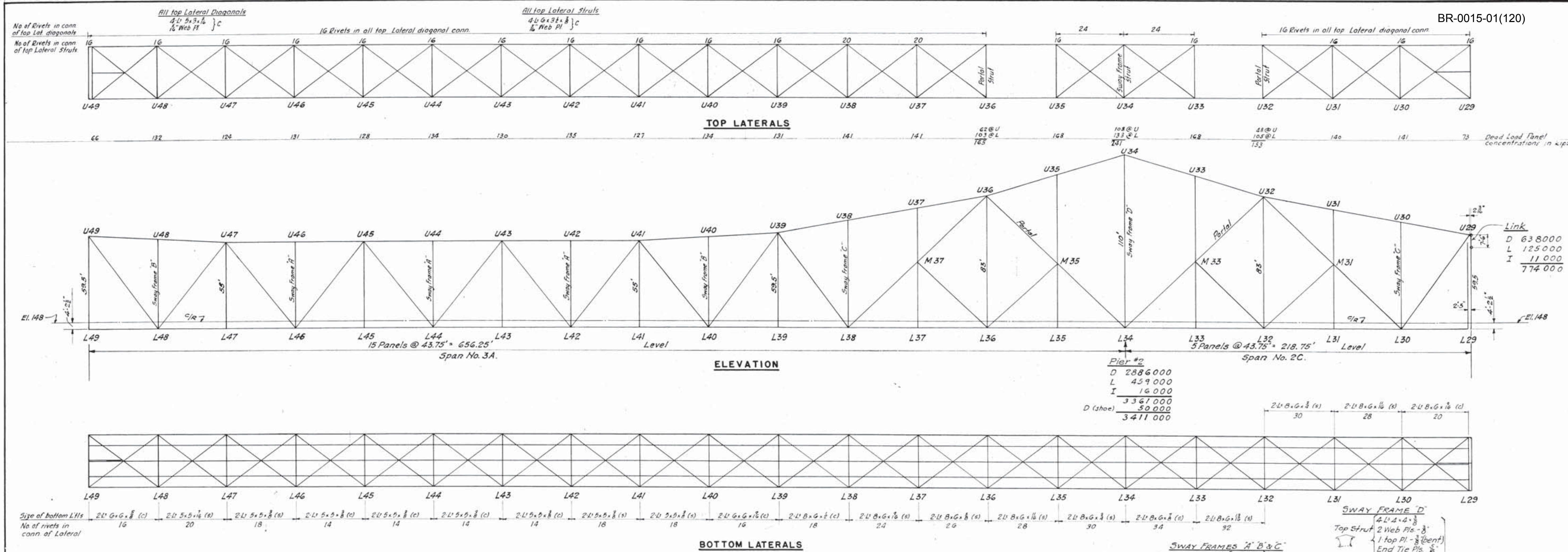
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSS SPANS
STRESS SHEET—0 TO 29

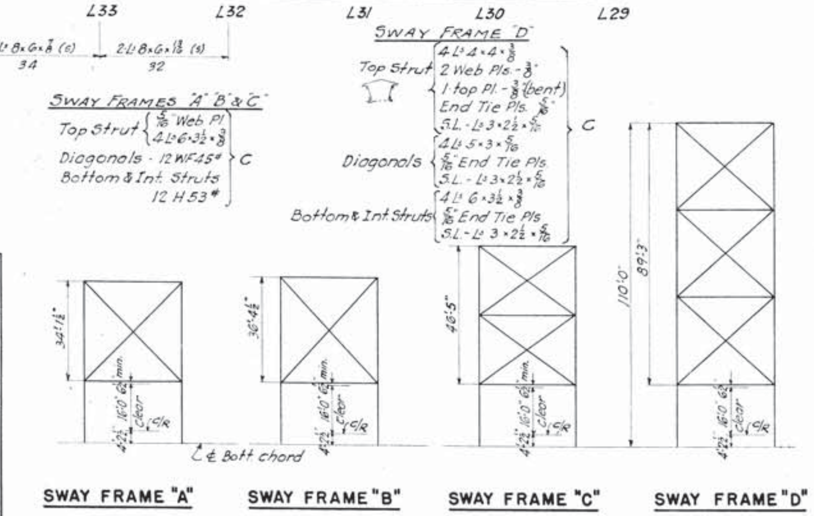
SCALE: 1" = 40'
MADE BY J.V. - W.G. DATE 3-14-39
TRACED BY L.M. - W.G. DATE 3-28-39
CHECKED BY R.E.K. DATE 5-29-39

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 25

BR-0015-01(120)



FOR INFORMATION ONLY



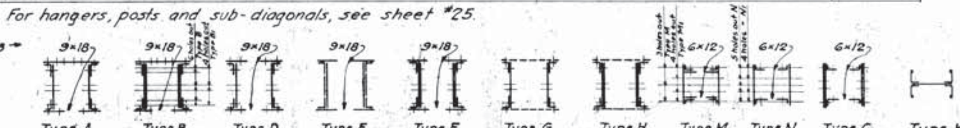
Stresses are given in kips. C=compression; T=tension. The stress S_R is the design stress for the connection of the member; where not given see detail of connections.
Ag=Effective gross area. An=Effective net area. fc and ft are the normal allowable unit stresses in lbs per sq.in for compression and tension respectively.

Member	Stresses: Dead Load	Live Load	Impact	Total	S_R	Area Provided: Ag.	An.	l/r	Unit Stress: fc	ft	Make up of section	Material	Type (see below)
U29-U32	Same as U16-U19												A
U32-U34	Same as U14-U16												B
U34-U36	2094T	357T	23T	2474T	2485	131.57	102.84			24000	2-Cov. Pls. 35×5/8, 4-L 8×6×5/8, 4-Web Pls. 24×5/8	S	B
U36-U39	 452T	329C 413T	21C 26T	33C 891T	 928	65.26	51.5			18000	2-Cov. Pls. 31×9/16, 4-Ls 4×4×3/8, 2-Web Pls. 24×1/2	C	A
U39-U41	484C	472C 392T	30C 25T	986C 79T	1026	78.12		52	13200		2-Cov. Pls. 31×5/8, 4-L 4×4×1/2, 2-Web Pls. 24×5/8	C	A
U41-U43	1135C	509C	33C	1677C	1700	90.75		52	18760		2-Cov. Pls. 31×5/8, 4-L 4×4×1/2, 2-Web Pls. 24×3/4	S	A
U43-U45	1332C	453C	29C	1814C	1830	97.47		52	18760		2-Cov. Pls. 31×3/4, 4-L 4×4×3/4, 2-Web Pls. 24×3/4	S	A
U45-U47	1107C	327C	21C	1455C	1545	87.44		51.5	17700		2-Cov. Pls. 31×11/16, 4-L 4×4×1/2, 2-Web Pls. 24×3/4	S	A
U47-U49	454C	125C	8C	587C	886	75.12		52	11800		2-Cov. Pls. 31×5/8, 4-L 4×4×1/2, 2-Web Pls. 24×9/16, 2-Reinf. Pls. 4×3/4" same as for U19-U21 see detail on Sheet 38.	C	A
L29-L30	Same as L18-L19												D
L30-L32	Same as L16-L18												D & E
L32-L34	Same as L14-L16												E
L34-L36	1256C	390C	25C	1671C		99.25		49	18900		2 Cov. Pls. 35×11/16, 4 L 8×6×1/2, 2 Web Pls. 24×5/8, For reinforcing material see details	S	D
L36-L38	1266C	390C	25C	1681C	1726	92.00		52	18760		2-Cov. Pls. 31×3/4, 4-L 6×4×1/2, 2-Web Pls. 24×3/4	S	D
L38-L40	 23T	419C 419T	27C 27T	430C 469T	 684	60.19		53	9850		2-Cov. Pls. 31×9/16, 4-L 4×4×3/8, 2-Web Pls. 24×1/2	C	D
L40-L42	870T	510T	33T	1413T	1440	75.75	59.9			24000	2-Cov. Pls. 31×9/16, 4-Ls 4×4×1/2, 2-Web Pls. 24×3/4	S	D
L42-L44	1278T	489T	31T	1798T	1800	93.75	74.3			24000	2-Cov. Pls. 31×9/16, 4-L 4×4×1/2, 2 Web Pls. 24×1/2, 2 Web Pls. 24×5/8	S	F
L44-L46	1271T	401T	26T	1698T	1726	90.75	71.9			24000	2-Cov. Pls. 31×9/16, 4-L 4×4×1/2, 2-Web Pls. 24×1/2, 2-Web Pls. 24×9/16	S	F
L46-L48	844T	240T	15T	1099T	1117	58.72	46.1			24000	4L 4×4×7/16, 2 Pls. 24×1/2, 2 Pls. 24×3/8, Tie Pls. End-34×7/16, Int. 18×7/16 @ 4'6" ctrs. }C	S	H
L48-L49	0	0	0	0		35.44		61	14100		4-L 4×4×3/8, 2-Pls. 24×1/2, Tie Pls. End 34×7/16, Int. 18×7/16 @ 4'6" ctrs.	C	G
U29-L30	Same as L18-U19												C
L30-M31	Same as M17-L18												C

Member	Stresses: Dead Load	Live Load	Impact	Total	S_R	Area Provided: Ag.	An.	l/r	Unit Stress: fc	ft	Make up of section	Material	Type (see below)
M31-U32	Same as U16-M17												C
U32-M33	Same as M15-U16												A
M33-L34	Same as L14-M15												A
L34-M35	1038C	247C	16C	1301C		94.19		67	17600		2-Cov. Pls. 31×3/4, 4-L 4×4×3/8, 2-Web Pls. 24×3/4, For reinforcing material see details	S	A
M35-U36	909C	215C	15C	1139C	1255	100.19		70	13700		2-Cov. Pls. 31×3/4, 4-L 4×4×5/8, 2-Web Pls. 24×7/8	C	A
U36-M37	1232T	248T	18T	1498T	1560	81.31	64.2			24000	2-[18" @ 42.7, 2-Pls. 26×1/2, 2-Pls. 26×11/16	S	C
M37-L38	1132T	227T	17T	1376T	1430	74.81	59.0			24000	2-[18" @ 42.7, 2-Pls. 26×1/2, 2-Pls. 26×7/16	S	C
L38-U39	791C	164C	14C	969C	1118	76.01		109	14500		2-[18" @ 45.8, 2-Pls. 26×1/2, 2-Pls. 26×9/16	S	C
U39-L40	747T	161T	13T	921T	982	52.19	41.35			24000	2-Pls. 17×3/8, 4-L 4×4×3/8, 2-Pls. 26×5/8	S	M_1
L40-U41	612C	144C	12C	768C	870	58.50		106	14810		2-Pls. 17×1/2, 4-L 4×4×1/2, 2-Pls. 26×5/8	S	M
U41-L42	420T	137T	11T	568T	610	34.06	26.9			24000	2-Pls. 17×7/16, 4-L 4×3½×7/16, 2-Pls. 22×3/8	S	M
L42-U43	247C	123C	10C	380C	480	43.68		120	11350		2-Pls. 17×3/8, 4-L 4×3½×3/8, 2-Pls. 22×7/16	C	M
U43-L44	 82T	96C 111T	9C 9T	48C 202T	 303	32.56	25.31	139		18000	2-Pls. 17×7/16, 4-L 4×3½×3/8, 2-Pls. 20×3/8	C	M_1
L44-U45	 89T	100C 115T	8C 10T	46C 214T	 303	32.56	25.31	133		18000	2-Pls. 17×7/16, 4-L 4×3½×3/8, 2-Pls. 20×3/8	C	M_1
U45-L46	256C	137C	11C	404C	512	45.06		120	11350		2-Pls. 17×7/16, 4-L 4×3½×3/8, 2-Pls. 22×9/16	C	M
L46-U47	426T	160T	12T	598T	638	34.06	26.9			24000	2-Pls. 17×7/16, 4L 4×3½×3/8, 2-Pls. 22×3/8	S	M
U47-L48	614C	197C	13C	824C	930	65.00		106	14800		2-Pls. 17×1/2, 4-L 4×4×1/2, 2-Pls. 26×3/4	S	M
L48-U49	761T	220T	14T	995T	1055	55.44	49.95			24000	2-Pls. 17×3/8, 4-L 4×4×3/8, 2-Pls. 26×11/16	S	M_1
L34-U34	1343C	210C	11C	1564C		Same as L14-U14							D

For hangers, posts and sub-diagonals, see sheet #25.

Hand Holes →



NOTES

For general notes see sheet #25.
For notes on steelwork see sheet #32.
For portals see sheet #27.

P.W.A. DOCKET NO. MISS. 1126-F

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

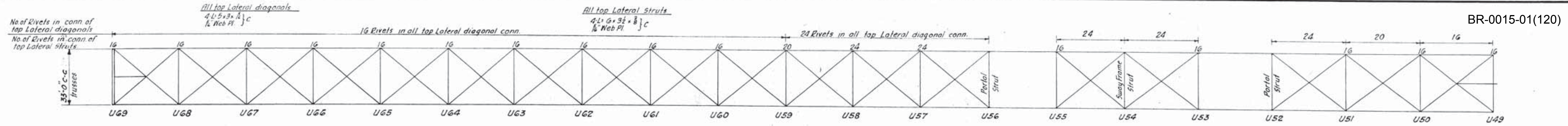
TRUSS SPANS
STRESS SHEET—29 TO 49

SCALE 1"=30'

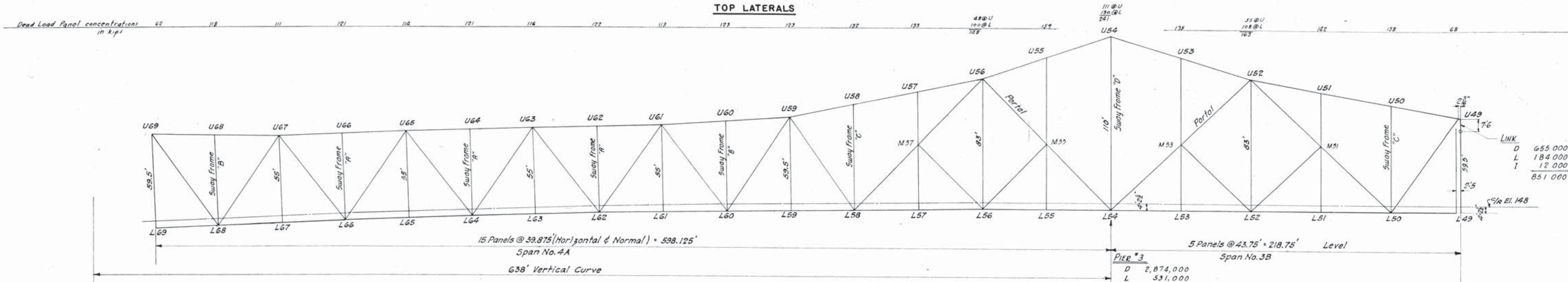
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SHEET No. 26

8044

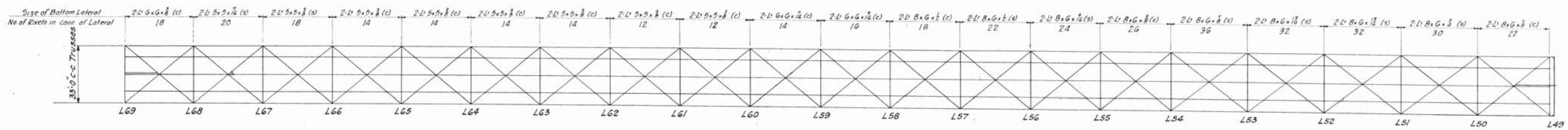


TOP LATERALS



Note: On vertical curve the bottom chords are to be straight between even panel points and the ℄ of bottom chords at even panel points is 4·2½" below ℄/R measured normal to grade. All hangers and posts shall be normal to grade.

ELEVATION



BOTTOM LATERALS

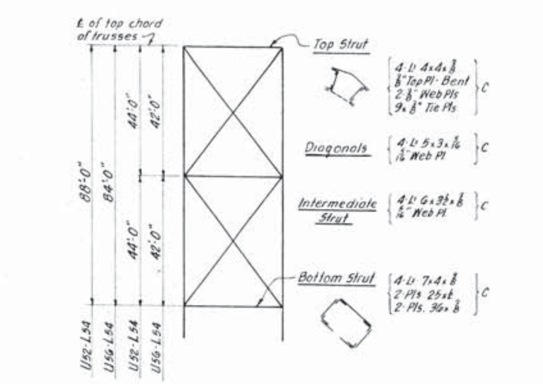
FOR INFORMATION ONLY

Stresses are given in kips. C = compression; T = tension. The stress S_R is the design stress for the connection of the member; where not given see detail of connections. Ag = Effective gross area. An = Effective net area. fc and ft are the normal allowable unit stresses in lbs per sq.in. for compression and tension respectively.

Member	Stresses: Dead Load	Live Load	Impact	Total	S_R	Area Provided: Ag.	An.	L/r	Unit Stress: fc	ft	Make up of section	Material	Type (see sh. #26)
U49-U52	474T	123T	7T	604T	780	55.94	43.9			18000	2-Cov. Pls. 31x½ 4-L 4x4x3/8 2-Pls. 24x3/8	C	A
U52-U54	2120T	475T	24T	2619T	2625	140.73	109.9			24000	2-Cov. Pls. 35x5/8 4-L 8x6x11/16 2-Web Pls 24x3/4 2-Web Pls 24x5/8	S	B
U54-U56	2135T	479T	24T	2638T	2680	143.9	111.7			24000	2-Cov. Pls 35x5/8 2-Web Pls 24x3/4 4-L 8x6x3/4 2-Web Pls 24x5/8	S	B
U56-U59	804T	555T	28T	1387T	1415	74.82	58.9			24000	2-Cov Pls 31x7/16 4-L 4x4x½ 2-Web Pls 24x3/8	S	A
U59-U61	15T	527C / 526T	36C / 26T	563C / 567T	850	65.26	51.5	48	9900	18000	2-Cov Pls 31x7/16 4-L 4x4x3/8 2-Web Pls 24x½	C	A
U61-U63	602C	540C / 426T	36C / 21T	1178C / 26T	1191	84.12		47	14450		2-Cov. Pls 31x5/8 4-L 4x4x½ 2-Web Pls 24x3/4	C	A
U63-U65	861C	464C	32C	1357C	1375	95.16		47	14450		2-Cov Pls 31x9/16 4-L 4x4x9/16 2-Web Pls 24x7/8	C	A
U65-U67	783C	329C	23C	1135C	1172	81.12		47	14450		2-Cov. Pls 31x5/8 4-L 4x4x½ 2-Web Pls 24x11/16	C	A
U67-U69	347C	127C	9C	483C	495	68.56		48	11100		2-Cov Pls 31x3/8 4-L 4x4x3/8 2-Web Pls 24x½	C	A
L49-L50	0	0	0	0		35.44		61	14100		4-L 4x4x½ 2-Pls 24x½ Tie Pls End 34x7/16 Int. 18x7/16 @ 4'-6" ctrs	C	G
L50-L52	1280C	316C	18C	1614C	1640	87.44		52	18760		L50-L51 {2-Cov Pls 31x3/8 4-L 4x4x3/8 2-Web Pls 24x3/8} L51-L52 {Same as L50-L51 plus 2-Pls 16x½}	S	D & E
L52-L54	1268C	327C	18C	1613C		115.69		50	18850		2-Cov Pls 35x11/16 2-Pls 8x3/8 4-L 8x6x3/8 2-Web Pls 24x5/8 For reinforcing material see details	S	E
L54-L56	1443C	521C	26C	1990C		105.69		45	19100		2-Cov Pls 35x11/16 4-L 8x6x3/8 2-Web Pls 24x5/8 For reinforcing material see details	S	D
L56-L58	1447C	521C	26C	1994C	2020	105.69		44	19100		2-Cov Pls 35x11/16 4-L 8x6x5/8 2-Web Pls 24x5/8	S	D
L58-L60	406C	559C / 492T	28C / 33T	993C / 241T	1114	73.5		47	14450		2-Cov Pls 31x5/8 4-L 4x4x½ 2-Pls 24x11/16	C	D
L60-L62	340T	484C / 547T	24C / 37T	270C / 924T	1060	66.75	52.8			18000	2-Cov Pls 31x7/16 4-L 4x4x½ 2-Web Pls 24x7/16	C	D
L62-L64	777T	508T	35T	1320T	1320	69.75	55.1			24000	2-Cov Pls 31x7/16 4-L 4x4x½ 2-Web Pls 24x5/8	S	D
L64-L66	862T	400T	27T	1289T	1320	69.75	55.1			24000	2-Cov Pls 31x7/16 4-L 4x4x½ 2-Web Pls 24x5/8	S	D
L66-L68	603T	233T	16T	852T	855	45.0	35.3			24000	4-L 4x4x½ 2-Pls 24x3/8 Tie Pls End 34x7/16 Int 18x7/16 @ 4'-6" ctrs }C	S	G
L68-L69	0	0	0	0		35.44		55	14250		4-L 4x4x3/8 2-Pls 24x½ Tie Pls End 34x7/16 Int 18x7/16 @ 4'-6" ctrs	C	G
U49-L50	789C	213C	13C	1015C	1175	82.51		109.	14300		2-[18" @ 45.8 2-Pls 26x½ 2-Pls 26x7/16	S	C
L50-M51	1134T	284T	16T	1434T	1500	81.31	64.2			24000	2-[18" @ 42.7 2-Pls 26x½ 2-Pls 26x7/16	S	C

Member	Stresses: Dead Load	Live Load	Impact	Total	S_R	Area Provided: Ag.	An.	L/r	Unit Stress: fc	ft	Make up of section	Material	Type (see sh. #26)
M51-U52	1238T	300T	16T	1554T	1620	85.76	67.7			24000	2-[18" @ 45.8 2-Pls 26x½ 2-Pls 26x3/8	S	C
U52-M53	905C	190C	10C	1105C	1190	94.19		67	13850		2-Cov. Pls 31x5/8 4-L 4x4x3/8 2-Web Pls 24x5/8	C	A
M53-L54	1028C	210C	11C	1249C	1342	106.56		67	17950		2-Cov Pls 35x11/16 4-L 8x6x½ 2-Web Pls 24x5/8 For reinforcing material see details	S	A
L54-M55	829C	243C	16C	1088C	1168	90.75		68	17870		2-Cov Pls 31x5/8 4-L 4x4x½ 2-Web Pls 24x3/4 For reinforcing material see details	S	A
M55-U56	725C	214C	15C	954C	1040	81.13		64	13840		2-Cov Pls 31x5/8 4-L 4x4x½ 2-Web Pls 24x7/16	C	A
U56-M57	1060T	226T	17T	1303T	1340	71.56	56.4			24000	2-[18" @ 42.7 2-Pls 26x½ 2-Pls 26x½	S	C
M57-L58	962T	213T	17T	1192T	1224	68.31	53.8			24000	2-[18" @ 42.7 2-Pls 26x½ 2-Pls 26x7/16	S	C
L58-U59	678C	154C	13C	845C	950	65.0		107		14700	2-Pls 17x½ 4-L 4x4x½ 2-Pls 26x3/4	S	M
U59-L60	714T	170T	13T	897T	940	52.19	41.35			24000	2-Pls 17x3/8 4-L 4x4x3/8 2-Pls 26x5/8	S	M_1
L60-U61	578C	156C	12C	746C	830	58.5		103	15100		2-Pls 17x½ 4-L 4x4x½ 2-Pls 26x5/8	S	M
U61-L62	442T	161T	12T	615T	648	34.06	26.9			24000	2-Pls 17x5/16 4-L 4x3½x3/8 2-Pls 22x3/8	S	M
L62-U63	283C	150C	11C	444C	555	48.0		118	11500		2-Pls 17x½ 4-L 4x4x½ 2-Pls 22x½	C	M
U63-L64	150T	111C / 138T	10C / 10T	16C / 298T	333	32.56	25.31	128	7100	18000	2-Pls 17x5/16 4-L 4x3½x3/8 2-Pls 20x3/8	C	M_1
L64-U65	8T	129C / 129T	9C / 11T	138C / 148T	217	32.25	25.2	130	8920	18000	2-Pls 17x3/8 4-L 4x3½x5/16 2-Pls 20x3/8	C	M_1
U65-L66	144C	146C / 120T	12C / 8T	302C / 34T	370	38.2		115	10,400		2-Pls 17x3/8 4-L 4x3½x3/8 2-Pls 22x7/16	C	M
L66-U67	296T	171T	13T	480T	536	38.2	30.3			18000	2-Pls 17x3/8 4-L 4x3½x3/8 2-Pls 22x7/16	C	M
U67-L68	457C	199C	14C	670C	745	53.0		108	14650		2-Pls 17x½ 4-L 4x4x½ 2-Pls 24x7/16	S	M
L68-U69	590T	220T	15T	825T	885	46.69	36.57			24000	2-Pls 17x3/8 4-L 4x4x3/8 2-Pls 24x7/16	S	M
U54-L54	1400C	294C	15C	1709C		143.92		89	13000		2-Cov Pls 31x3/4 4-L 8x4x7/8 2-Pls 36x1 For reinforcing material see details	C	D

For hangers, posts and sub-diagonals see sheet #25



PORTALS AT U52-L54 AND U56-L54

Portals at U16-L14, U32-L34 & U36-L34 same as at U52-L54
Portals at U12-L14, U72-L74 & U76-L74 same as at U56-L54

NOTES

For general notes see sheet #25.
For notes on steelwork see sheet #32.
For sway frames see sheet #26.

P.W.A. DOCKET NO., MISS. 1126-F

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

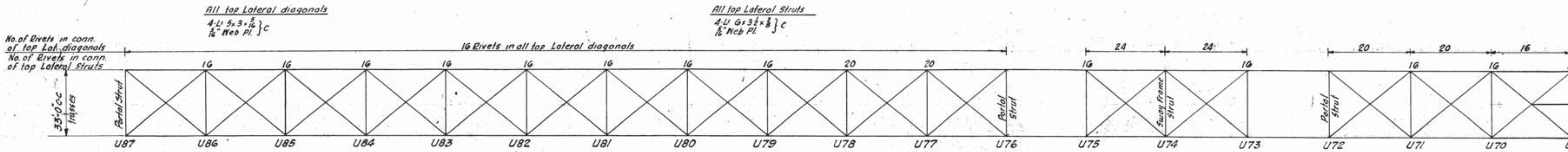
TRUSS SPANS
STRESS SHEET 49 TO 69

SCALE: 1" = 30'
MADE BY H.G. & A.V.B. DATE 3-15-39
TRACED BY L.M. & W.G. DATE 3-28-39
CHECKED BY R.E.K. DATE 5-29-39

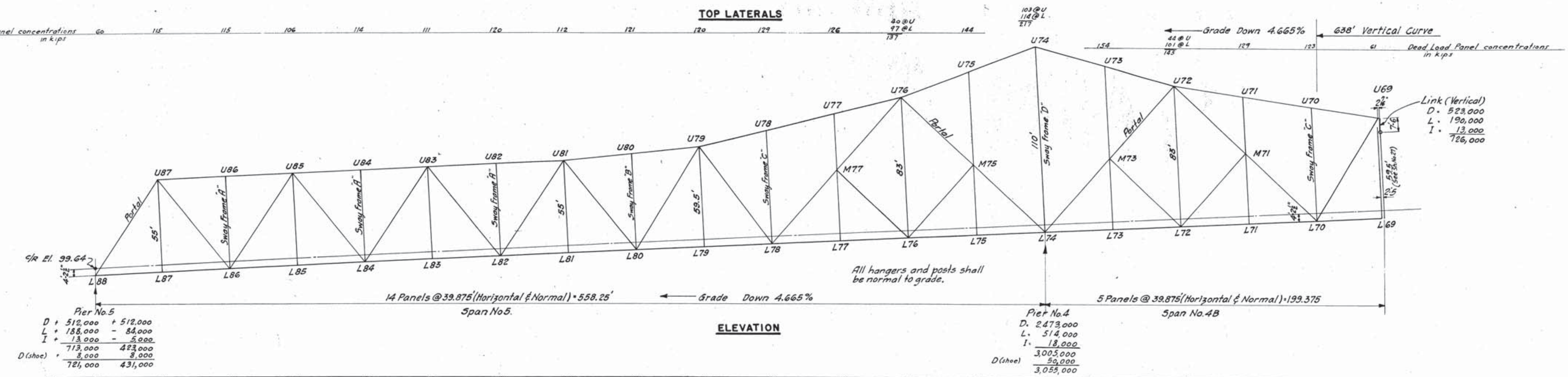
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SHEET No. 27

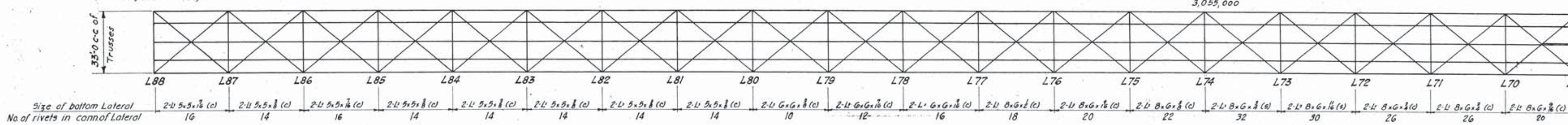
BR-0015-01(120)



TOP LATERALS



ELEVATION



BOTTOM LATERALS

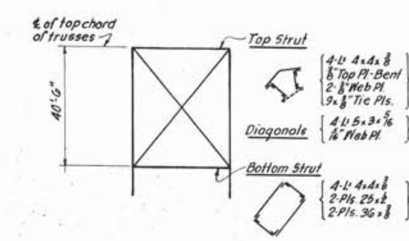
FOR INFORMATION ONLY

Stresses are given in kips. C = compression; T = tension. The stress S_R is the design stress for the connection of the member; where not given see detail of connections.
Ag = Effective gross area. An = Effective net area. fc and ft are the normal allowable unit stresses in lbs. per sq. in. for compression and tension respectively.

Member	Dead Load	Live Load	Impact	Total	S_R	Ag.	An.	L/r	fc	ft	Make up of section	Material	Type (see sh. #26)
U69-U72	330T	105T	7T	442T	663	55.94	43.9			18000	2-Cov. Pls. 31x½ 4-L 4x4x⅜ 2-Web Pls. 24x⅜	C	A
U72-U74	1615T	439T	24T	2078T	2100	110.82	87.5			24000	2-Cov. Pls. 31x$\frac{9}{16}$ 4-L 4x4x½ 2-Web Pls. 24x⅝ 2-Web Pls. 24x¾	S	B1
U74-U76	1615T	437T	24T	2076T	2125	110.82	87.5			24000	2-Cov. Pls. 31x$\frac{9}{16}$ 4-L 4x4x½ 2-Web Pls. 24x⅝ 2-Web Pls. 24x¾	S	B1
U76-U79	358T	432C 489T	28C 27T	214C 868T	975	65.26	51.5			18000	2-Cov. Pls. 31x$\frac{7}{16}$ 4-L 4x4x⅜ 2-Web Pls. 24x½	C	A
U79-U81	323C	516C 462T	35C 25T	874C 251T	992	75.12		48	12200		2-Cov. Pls. 31x⅝ 4-L 4x4x½ 2-Web Pls. 24x$\frac{9}{16}$	C	A
U81-U83	768C	494C	33C	1295C	1310	90.75		47	14450		2-Cov. Pls. 31x¾ 4-L 4x4x½ 2-Web Pls. 24x¾	C	A
U83-U85	835C	391C	27C	1253C	1270	87.44		47	14450		2-Cov. Pls. 31x$\frac{11}{16}$ 4-L 4x4x½ 2-Web Pls. 24x¾	C	A
U85-U87	576C	228C	16C	820C	910	75.12		48	12200		2-Cov. Pls. 31x⅝ 4-L 4x4x½ 2-Web Pls. 24x$\frac{9}{16}$	C	A
L69-L70	0	0	0	0		35.44		55	14250		4-L 4x4x⅜ 2-Pls. 24x½ Tie Pls. End 34x$\frac{7}{16}$ Int. 18x$\frac{7}{16}$ @ 4'-6" ctrs	C	G
L70-L72	974C	296C	19C	1289C	1308	90.44		47	14450		L70-L71 {2-Cov. Pls. 31x¾ 4-L 4x4x⅜ 2-Web Pls. 24x¾} L71-L72 {Same as L70-L71 plus 2-Pls. 16x⅝}	C	D & E
L72-L74	984C	308C	18C	1310C		99.25		45	19070		2-Cov. Pls. 35x$\frac{11}{16}$ 4-L 8x6x½ 2-Web Pls. 24x⅝ For reinforcing material see details	S	D
L74-L76	915C	463C	26C	1404C		81.0		47	18500		2-Cov. Pls. 31x¾ 4-L 4x4x½ 2-Web Pls. 24x$\frac{11}{16}$ For reinforcing material see details.	S	D
L76-L78	948C	463C	26C	1437C	1500	81.0		47	18500		2-Cov. Pls. 31x¾ 4-L 4x4x½ 2-Web Pls. 24x$\frac{11}{16}$	S	D
L78-L80	3T	485C 497T	27C 32T	512C 532T	796	60.19		48	10000		2-Cov. Pls. 31x$\frac{7}{16}$ 4-L 4x4x⅜ 2-Web Pls. 24x½	C	D
L80-L82	596T	407C 523T	23C 35T	13C 1154T	1165	61.72	48.5			24000	4-L 4x4x$\frac{7}{16}$ 2-Pls. 24x½ 2-Pls. 24x$\frac{7}{16}$ Tie Pls. End 34x$\frac{7}{16}$ Int. 18x$\frac{7}{16}$ @ 4'-6" ctrs. } C	S	H
L82-L84	846T	448T	30T	1324T	1325	69.75	55.2			24000	2-Cov. Pls. 31x$\frac{7}{16}$ 4-L 4x4x½ 2-Web Pls. 24x⅝	S	D
L84-L86	751T	312T	21T	1084T	1105	58.72	46.1			24000	4-L 4x4x$\frac{7}{16}$ 2-Pls. 24x½ 2-Pls. 24x⅜	S	H
L86-L88	531T	116T	8T	455T		39.0 63.75	30.5 50.3			18000	L86-L87 {4-L 4x4x½ 2-Pls. 24x½ Tie Pl. Same as L84-L86} L87-L88 {2-Cov. Pls. 31x$\frac{7}{16}$ 4-L 4x4x½ 2-Web Pls. 24x½}	C	G & D
L74-U74	1140C	280C	15C	1435C		123.62	↑	94	12780		2-Cov. Pls. 31x¾ 4-L 8x4x$\frac{9}{16}$ 2-Pls. 34x¾ For reinforcing material see details	C	D

Member	Dead Load	Live Load	Impact	Total	S_R	Ag.	An.	L/r	fc	ft	Make up of section	Material	Type (see sh. #26)
U69-L70	626C	214C	14C	854C	950	65.00		107	14700		2-Pls. 17x½ 4-L 4x4x½ 2-Pls. 26x¾	S	M
L70-M71	894T	278T	17T	1189T	1224	63.97	50.7			24000	2-Pls. 17x⅜ 4-L 4x4x$\frac{7}{16}$ 2-Pls. 26x¾	S	M1
M71-U72	976T	292T	17T	1285T	1320	71.56	56.4			24000	2-[18" @ 42.7 4-Pls. 26x½	S	C
U72-M73	751C	182C	10C	943C	1020	81.12		65	13940		2-Cov. Pls. 31x⅝ 4-L 4x4x½ 2-Web Pls. 24x$\frac{11}{16}$	C	A
M73-L74	857C	198C	11C	1066C	1110	106.56		64	18100		2-Cov. Pls. 35x$\frac{11}{16}$ 4-L 8x6x½ 2-Web Pls. 24x⅝ For reinforcing material see details.	S	A
L74-M75	836C	233C	16C	1085C	1162	90.75		68	17870		2-Cov. Pls. 31x¾ 4-L 4x4x½ 2-Pls. 24x¾ For reinforcing material see details	S	A
M75-U76	737C	205C	15C	957C	1045	81.12		65	13940		2-Cov. Pls. 31x⅝ 4-L 4x4x½ 2-Web Pls. 24x$\frac{11}{16}$	C	A
U76-M77	969T	202T	16T	1187T	1212	63.97	50.7			24000	2-Pls. 17x⅜ 4-L 4x4x$\frac{7}{16}$ 2-Pls. 26x¾	S	M1
M77-L78	887T	189T	16T	1092T	1115	59.0	46.70			24000	2-Pls. 17x⅜ 4-L 4x4x½ 2-Pls. 26x$\frac{11}{16}$	S	M1
L78-U79	617C	136C	13C	766C	867	58.50		108	14650		2-Pls. 17x½ 4-L 4x4x½ 2-Pls. 26x⅝	S	M
U79-L80	568T	158T	13T	739T	786	41.69	33.2			24000	2-Pls. 17x⅜ 4-L 4x4x⅜ 2-Pls. 22x½	S	M
L80-U81	445C	144C	12C	601C	698	51.24		109	14540		2-Pls. 17x½ 4-L 4x4x$\frac{7}{16}$ 2-Pls. 24x$\frac{9}{16}$	S	M
U81-L82	282T	150T	11T	443T	482	35.45	28.15			18000	2-Pls. 17x⅜ 4-L 4x3½x⅜ 2-Pls. 22x⅜	C	M
L82-U83	138C	138C	10C	286C	366	38.2		116	10,200		2-Pls. 17x⅜ 4-L 4x3½x⅜ 2-Pls. 22x$\frac{7}{16}$	C	M
U83-L84	7T	129C 128T	11C 10T	140C 145T	215	32.25	25.2	130	8920	18000	2-Pls. 17x⅜ 4-L 4x3½x$\frac{5}{16}$ 2-Pls. 20x⅜	C	M
L84-U85	147T	119C 147T	8C 12T	29C 306T	348	32.56	25.31			18000	2-Pls. 17x$\frac{7}{16}$ 4-L 4x3½x⅜ 2-Pls. 20x⅜	C	M1
U85-L86	285C	168C	13C	466C	552	48.0		118	11510		2-Pls. 17x½ 4-L 4x4x½ 2-Pls. 22x½	C	M
L86-U87	425T	191T	14T	630T	672	35.45	28.15			24000	2-Pls. 17x⅜ 4-L 4x3½x⅜ 2-Pls. 22x⅜	S	M
U87-L88	553C	217C	15C	785C	878	78.12		75	12600		2-Cov. Pls. 31x⅝ 4-L 4x4x½ 2-Web Pls. 24x⅝ For reinforcing material see details.	C	A

For hangers, posts and sub-diagonals see sheet #25



PORTALS AT L88-U87 AND LO-U1

NOTES

For general notes, see sheet #25.
For notes on steelwork, see sheet #32.
For sway frames see sheet #26.
For other portals, see sheet #27.

P.W.A. DOCKET NO. MISS. 1126-F

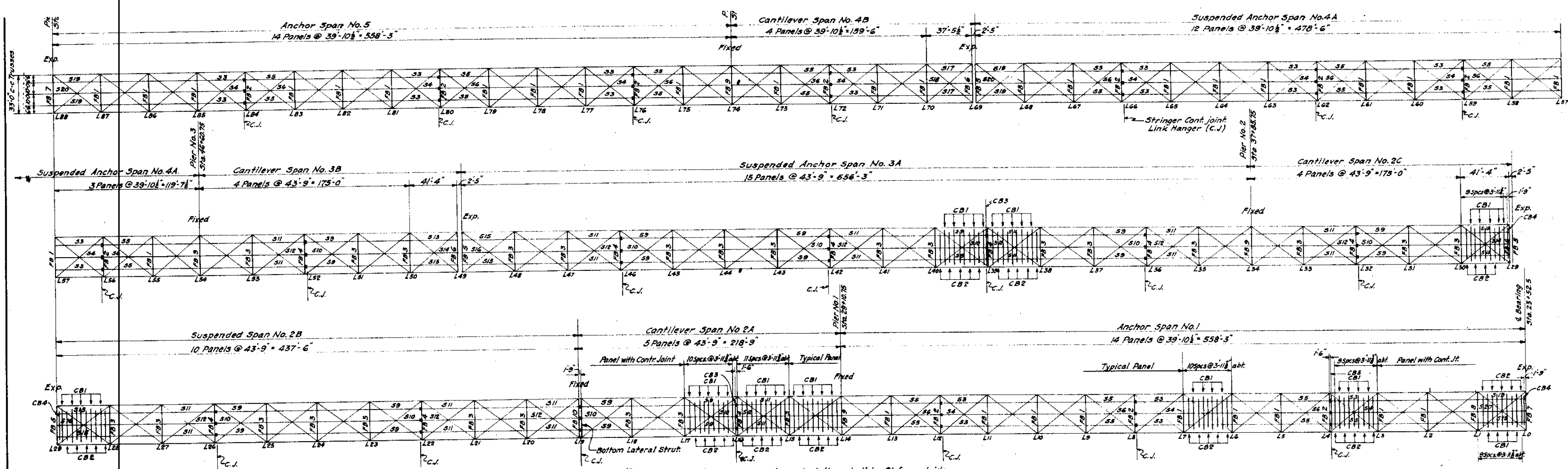
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSS SPANS
STRESS SHEET—69 TO 88

SCALE: 1"=30'
MADE BY H.G.M.A.L. DATE 3-16-37
TRACED BY L.M.H.G. DATE 3-26-37
CHECKED BY K.E.K. DATE 3-29-37

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 28

12/16/98



In 39'-10½" panels where stringers are not marked they shall be S1 for outside stringers and S2 for inside stringer. In 43'-9" panels, where not marked the stringers shall be S7 for outside & S8 for inside stringers.
All lateral bracing members to be connected to inside & outside stringers as shown on Sheet #40

MARKING DIAGRAM
Scale: 1" = 40'

NOTES ON FLOOR

All dimensions given are horizontal and at normal conditions - full dead load at 60°F.

ROADWAY SLAB:
On vertical curves the bottom of the slab shall be a straight line parallel to chord between panel points. Transversely top and bottom of slab shall conform to crown of roadway. Slab concrete shall be Class 35.

CROSSBEAMS:
Crossbeams shall be bent to curve of crown of roadway, unless otherwise noted.

STRINGERS:
Webs of stringers shall be normal to crown of roadway. Where on vertical curve flanges of stringers shall be parallel to chord of curve. All stringers shall be cambered 5/16".
Shop lengths of stringers shall conform to distance between floor beams with all steel erected and span swung. Connections to floor beams shall not be riveted until this stage of erection is reached.

FLOORBEAMS:
Webs of floorbeams shall be normal to grade.

CURBS:
Lengths shall conform to dimensions of structure under full dead load.
Connections to supports shall not be riveted until floor slabs are completed.
Curbs to be in sections about 39.9' long. Gap between sections not to exceed 1/8" (for full dead load on span), except at expansion and contraction joints, (See details sheet #30.)
Cut & finish ends so as to insure neat joints.

FOR INFORMATION ONLY

NOTES
For General Notes see sheet No. 25.
For notes on steelwork see sheet No. 32.

10018

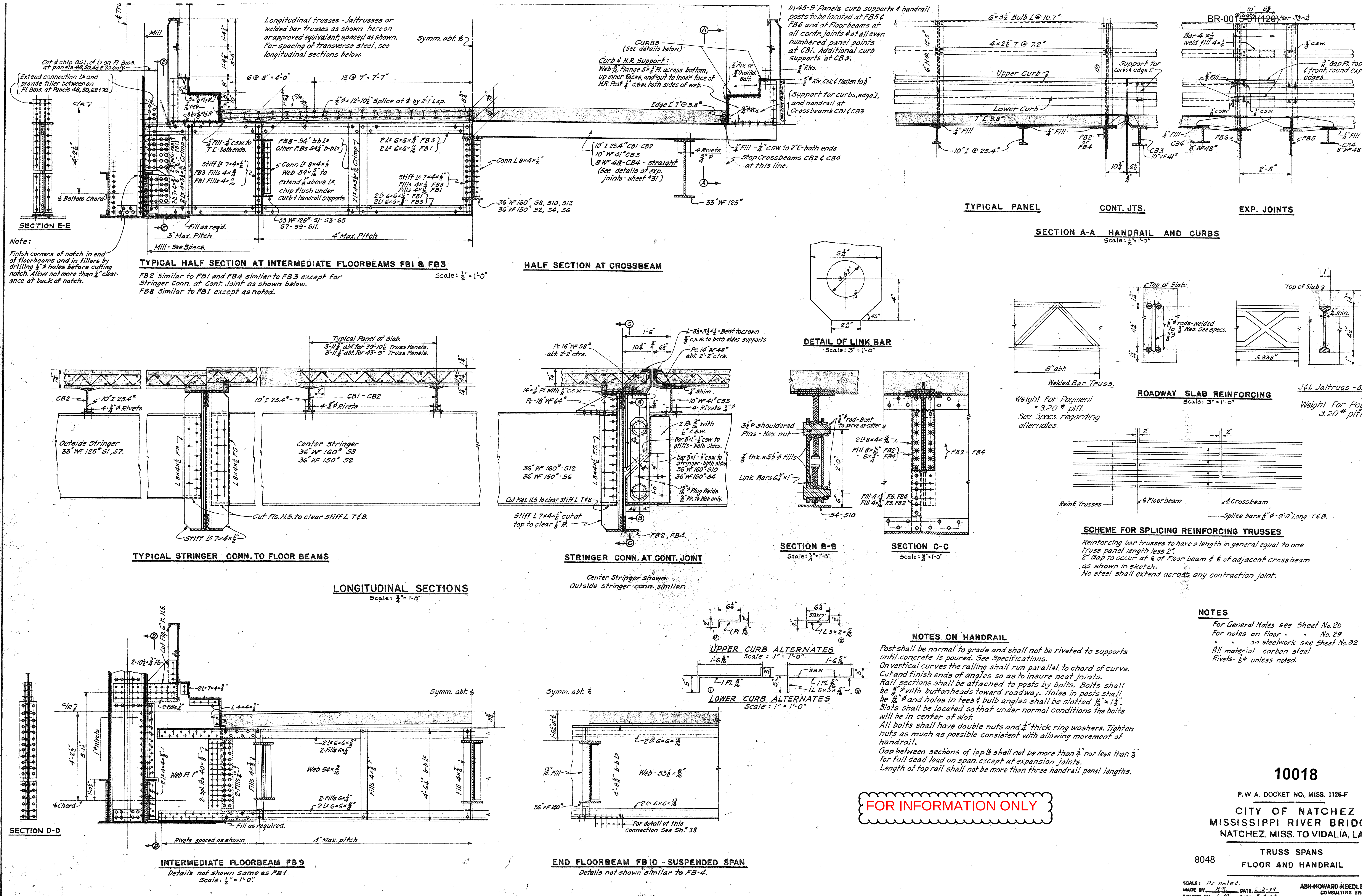
P.W.A. DOCKET NO., MISS. 1136-F

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSS SPANS – FLOOR SYSTEM

SCALE: 1" = 40'
MADE BY H.G. DATE 2-23-39
TRACED BY L.M. DATE 2-28-39
CHECKED BY E.K.T. DATE 6-2-39

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 29



NOTES ON HANDRAIL

Post shall be normal to grade and shall not be riveted to supports until concrete is poured. See Specifications.
On vertical curves the railing shall run parallel to chord of curve.
Cut and finish ends of angles so as to insure neat joints.
Rail sections shall be attached to posts by bolts. Bolts shall be 5/8"φ with buttonheads toward roadway. Holes in posts shall be 11/16"φ and holes in tees & bulb angles shall be slotted 11/16" × 1 3/8".
Slots shall be located so that under normal conditions the bolts will be in center of slot.
All bolts shall have double nuts and 1/4" thick ring washers. Tighten nuts as much as possible consistent with allowing movement of handrail.
Gap between sections of top Ls shall not be more than 1/4" nor less than 1/8" for full dead load on span except at expansion joints.
Length of top rail shall not be more than three handrail panel lengths.

NOTES

For General Notes see Sheet No. 25
For notes on Floor " " No. 29
" " on steelwork see Sheet No. 32
All material carbon steel
Rivets - 7/8"φ unless noted.

FOR INFORMATION ONLY

10018

P.W.A. DOCKET NO., MISS. 1126-F

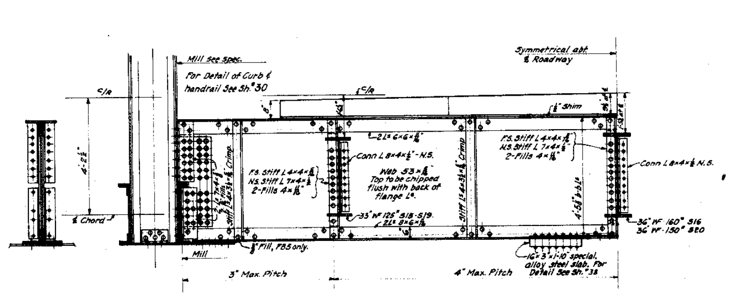
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

8048

TRUSS SPANS
FLOOR AND HANDRAIL

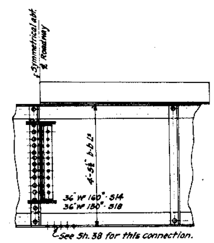
SCALE: As noted.
MADE BY HG DATE 3-3-39

ASH-HOWARD-NEEDLES
CONSULTING ENGINEERS

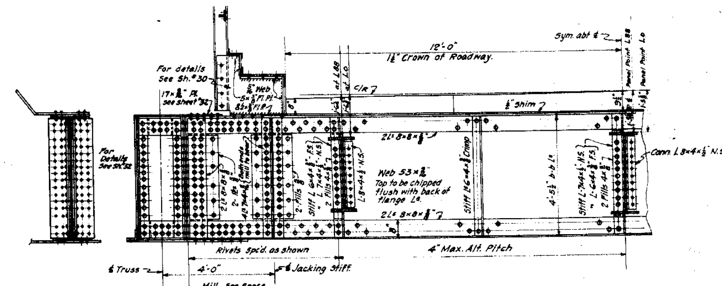


END FLOORBEAM - FB5
SUSPENDED SPANS
AT EXPANSION JOINTS

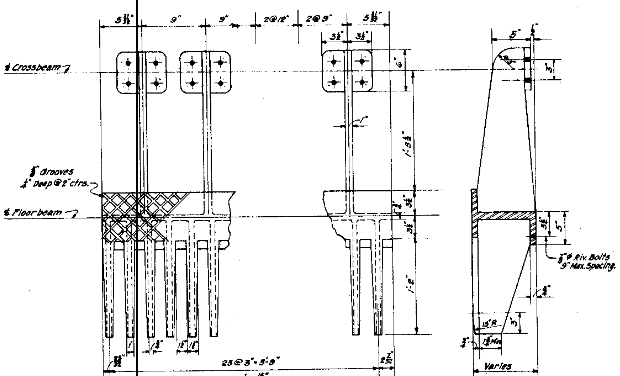
Scale: $\frac{1}{2}$" = 1'-0"



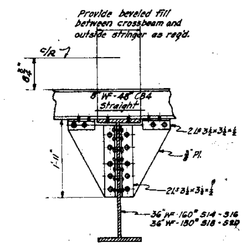
END FLOORBEAM - FB6
CANTILEVER SPANS
Details not shown same as FB5.



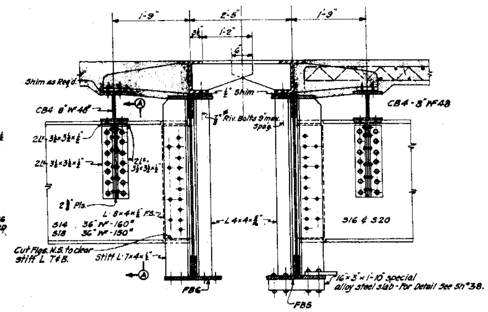
END FLOORBEAM - FB7
Scale: $\frac{1}{2}$" = 1'-0"



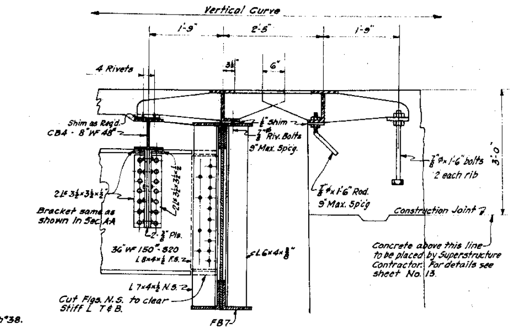
EXPANSION JOINT TOOTH CASTING
Scale: $1\frac{1}{2}$" = 1'-0"



SECTION A-A



EXPANSION JOINT - L29 - L49 - L69
Scale: $\frac{3}{4}$" = 1'-0"
Center Stringer Shown, Outside Stringer Similar



DETAIL OF EXPANSION JOINT - Lo
Scale: $\frac{3}{4}$" = 1'-0"

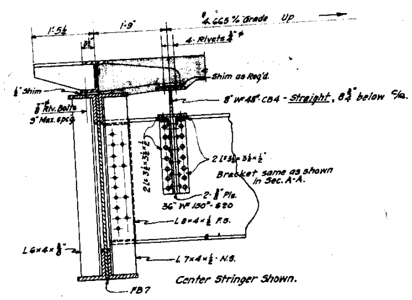
NOTES

For General Notes see Sheet No. 25
For notes on floor " " No. 29
" " " steelwork see Sheet No. 32
All material carbon steel unless noted.
Rivets $\frac{7}{8}$" ⌀ unless noted.

NOTES ON CASTINGS

All dimensions given between the two sides of expansion joints are for normal conditions - full dead load and 60°F. Castings shall be of steel, hot dipped galvanized after shop assembly and any necessary correction to castings. Castings in expansion joints shall be made in 4 sections in 24' Roadway width. Bottom of castings shall be straight ¢ top shall conform to curve of crown of roadway. Shop assemble full roadway joint. Side clearance between mating teeth shall not be less than $\frac{1}{8}$" for $\frac{1}{4}$" minimum longitudinal tooth clearance during such assembly and erection. Matchmark castings and floor beams for erection. Castings shall be machined to a smooth finish on all surfaces in contact with metal. Top surfaces of castings shall be smooth, conforming to required outline and shall be finished as may be necessary, by grinding or as otherwise approved, to secure this result.

Tooth Casting on other side of this Rd'y Joint shall be furnished with Approach Girder Span. See Sheet #23.



DETAIL OF EXPANSION JOINT L88
Details not shown similar to Joint at Lo
Scale: $\frac{3}{4}$" = 1'-0"

FOR INFORMATION ONLY

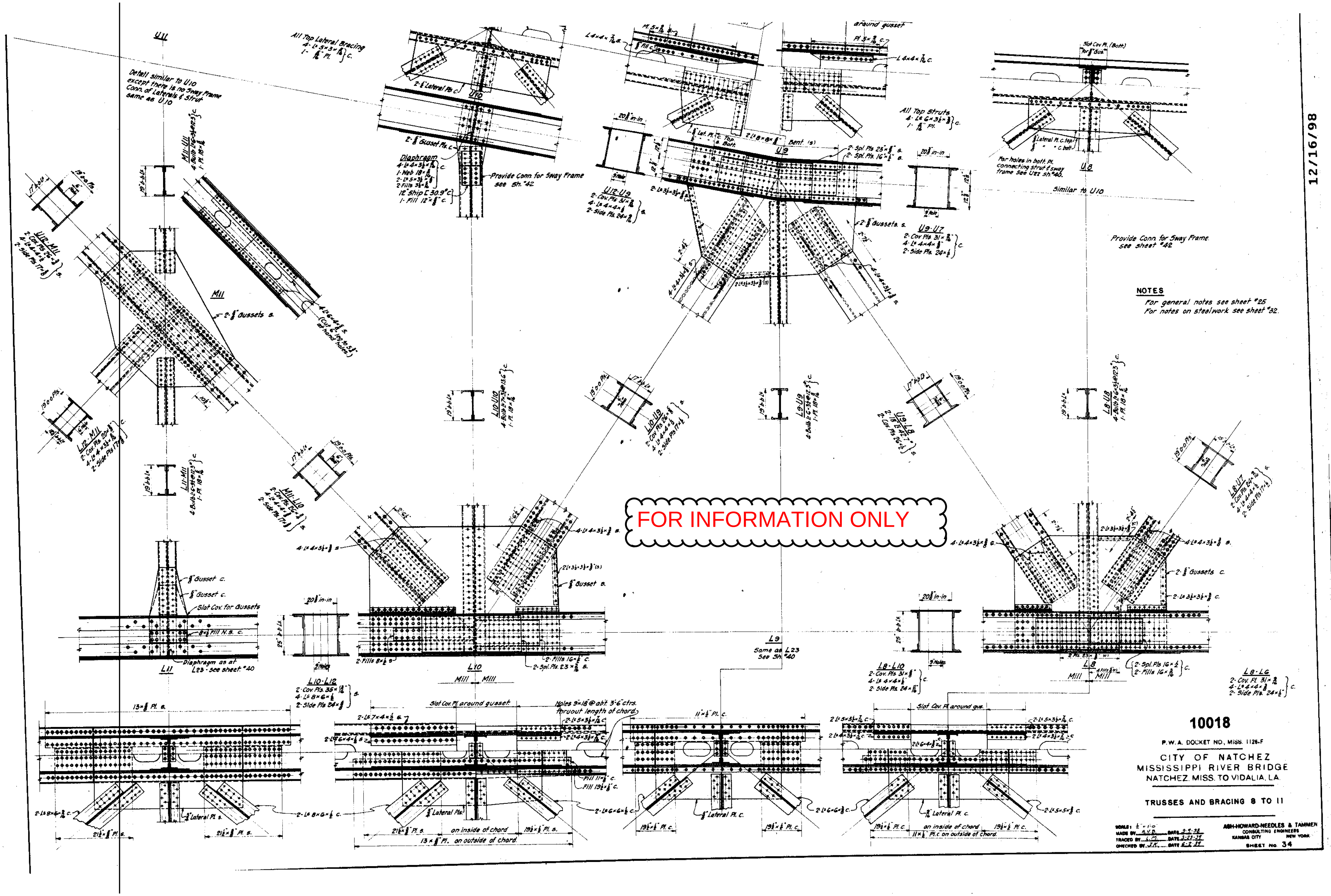
10018

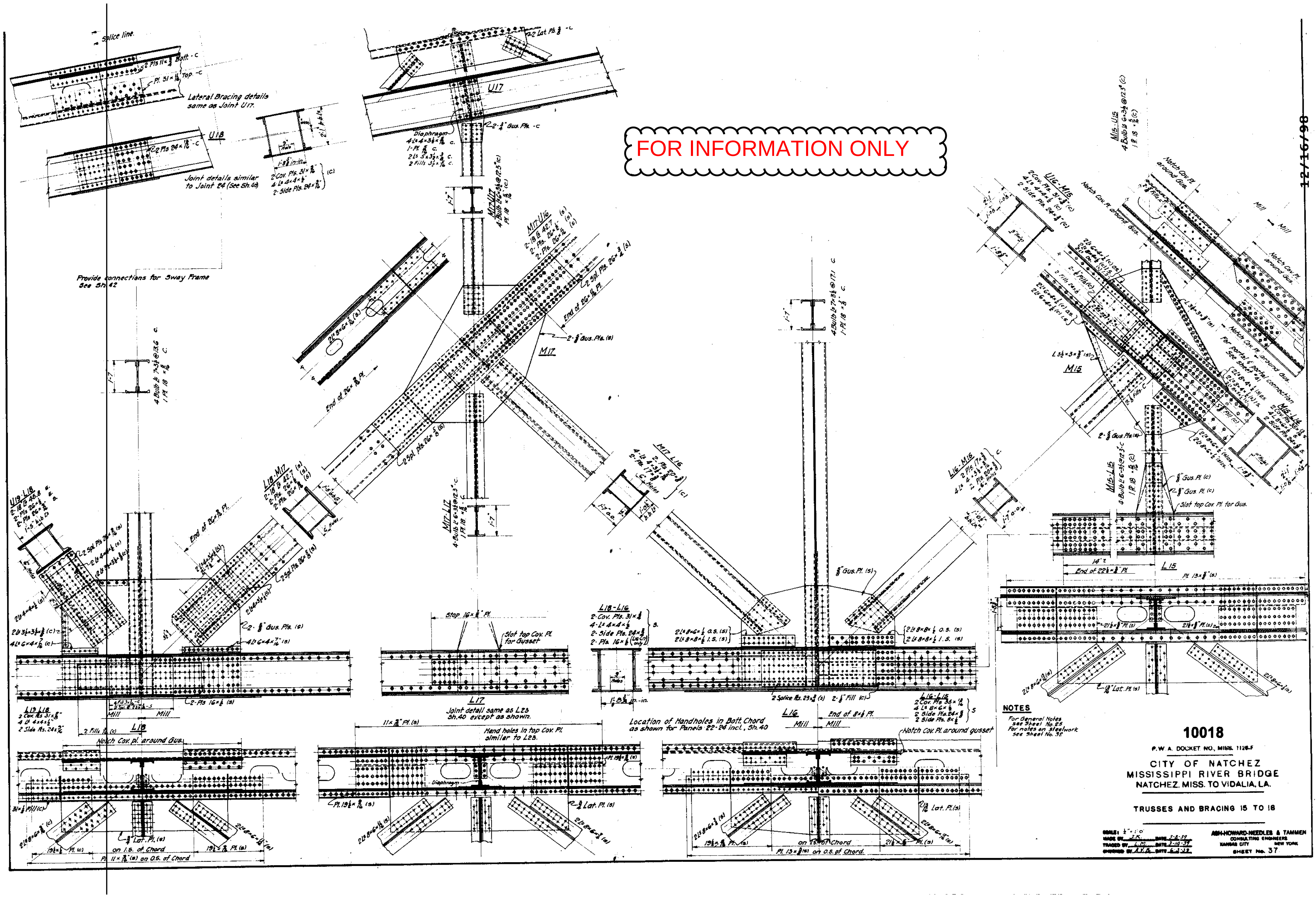
P.W.A. DOCKET NO. MISS. 1126-F

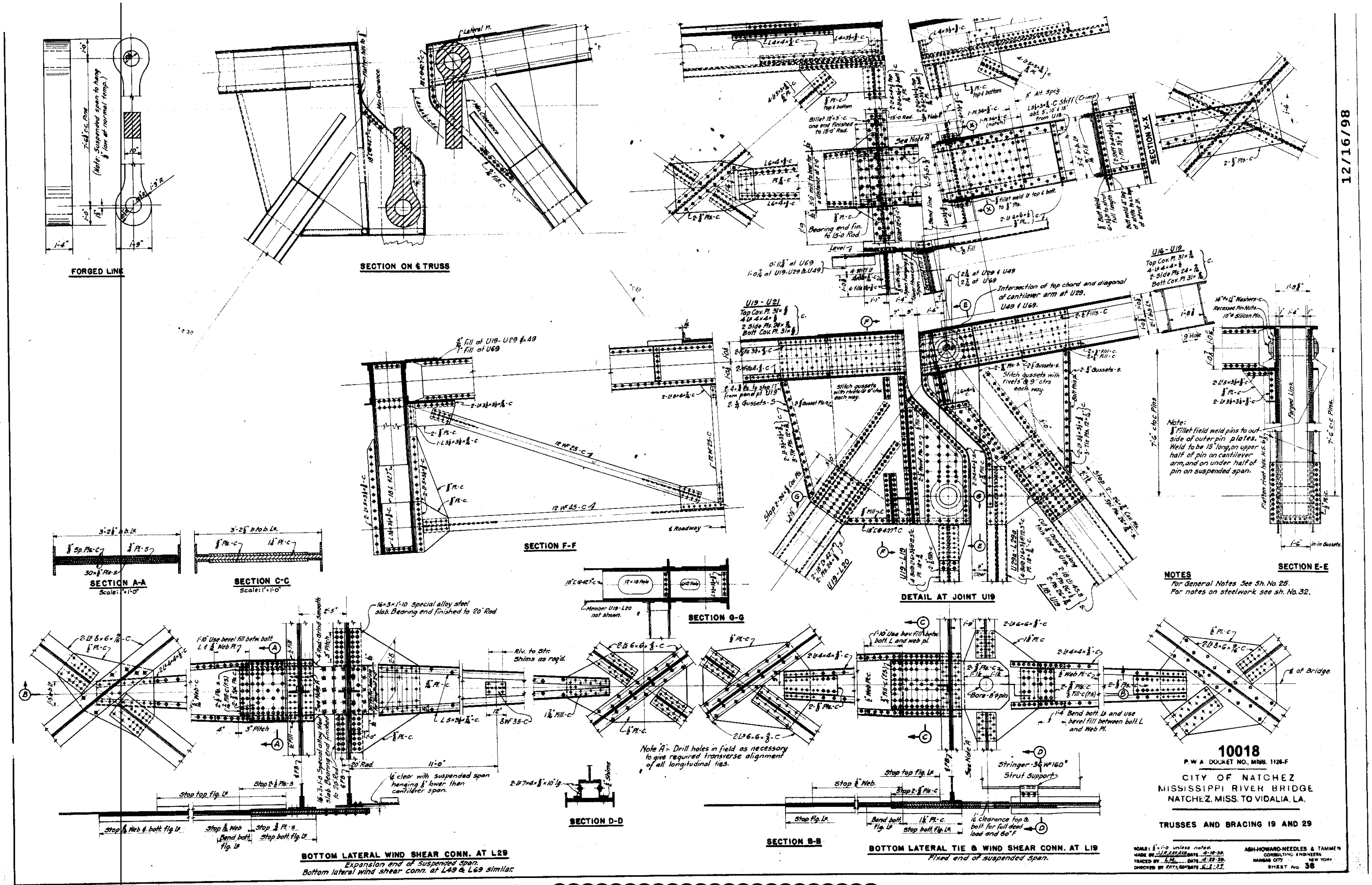
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSS SPANS
FLOOR-EXPANSION JOINTS

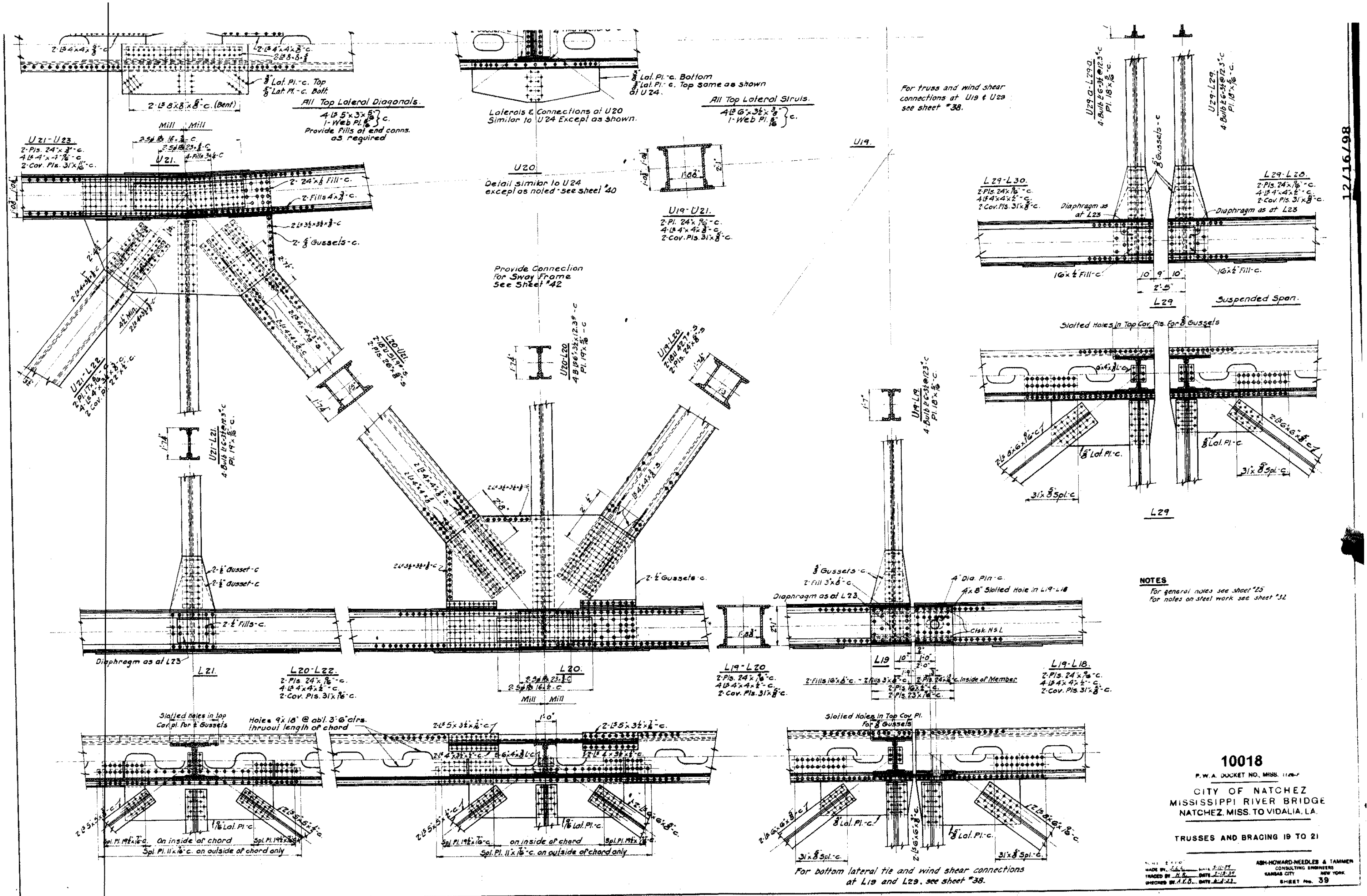
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 31


12/16/98
FOR INFORMATION ONLY
NOTES
For general notes see sheet #25
For notes on steelwork see sheet #32.
Provide Conn. for Sway Frame see sheet #42
All Top Lateral Bracing
All Top Struts
Detail similar to U10 except there is no Sway Frame Conn. of Laterals & Strut same as U10
Similar to U10
L9 Same as L23 See Sh. #40
10018
P.W.A. DOCKET NO. MISS. 1126-F
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.
TRUSSES AND BRACING 8 TO 11
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 34

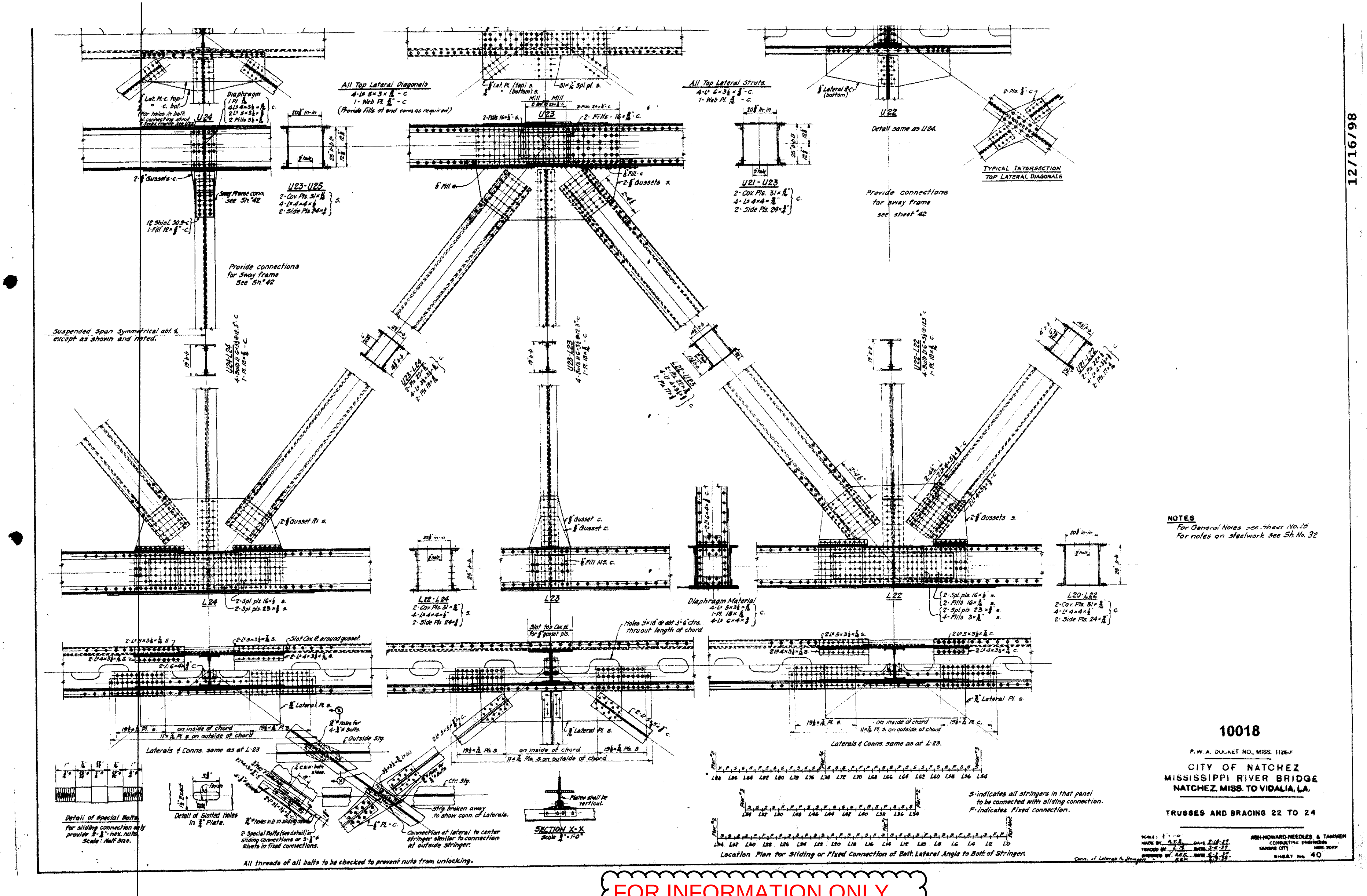

FOR INFORMATION ONLY
12/16/98
Splice line
Lateral Bracing details same as Joint U17.
U18
Joint details similar to Joint 24 (See Sh.40)
U17
M17
M15
M17-U16
L18-M17
U19-L18
M17-L16
L16-M15
M15-L16
M17-L17
L16-M15
Provide connections for Sway Frame See Sh. 42
End of 26×⅜ Pl.
L19-L18
L18
L17
Joint detail same as L23 Sh.40 except as shown.
L18-L16
L16
L15
L16-L15
Location of Handholes in Bott. Chord as shown for Panels 22-24 incl., Sh.40
Hand holes in top Cov. Pl. similar to L23.
Notch Cov. Pl. around Gus.
Notch Cov. Pl. around gusset
Slot top Cov. Pl. for Gusset
Mill
NOTES
For General Notes see Sheet No. 25
For notes on steelwork see Sheet No. 32
10018
P.W.A. DOCKET NO., MISS. 1126-F
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.
TRUSSES AND BRACING 15 TO 18
SCALE: ½" = 1'0"
MADE BY J.K. DATE 2-8-39
TRACED BY L.M. DATE 3-14-39
CHECKED BY A.Y.B. DATE 6-3-39
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 37



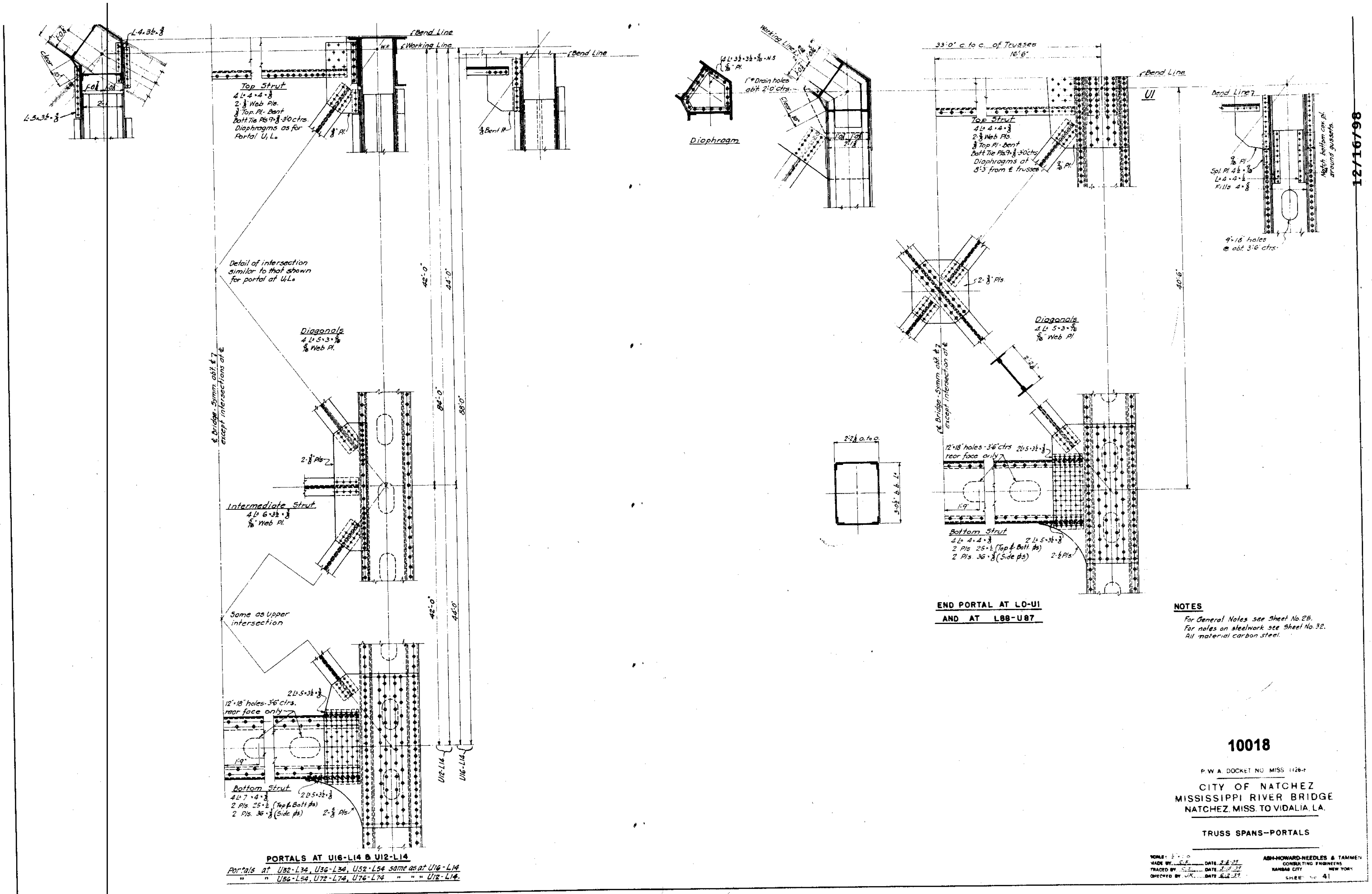
FOR INFORMATION ONLY



FOR INFORMATION ONLY



12/16/98
All Top Lateral Diagonals
All Top Lateral Struts
U24
U23
U22
U23-U25
U21-U23
Detail same as U24
Typical Intersection Top Lateral Diagonals
Provide connections for Sway Frame see sheet #42
Suspended Span Symmetrical abt. ℄ except as shown and noted.
L24
L22-L24
L23
Diaphragm Material
L22
L20-L22
NOTES
For General Notes see Sheet No. 28
For notes on steelwork see Sh No. 32
Laterals & Conns. same as at L-23
Detail of Special Bolts
Detail of Slotted Holes in ¾" Plate.
SECTION X-X
All threads of all bolts to be checked to prevent nuts from unlocking.
S-indicates all stringers in that panel to be connected with sliding connection.
F-indicates Fixed connection.
Location Plan for Sliding or Fixed Connection of Bott. Lateral Angle to Bott. of Stringer.
10018
P.W.A. DOCKET NO. MISS. 1126-F
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.
TRUSSES AND BRACING 22 TO 24
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 40



12/16/98

NOTES

For General Notes see Sheet No. 25.
For notes on steelwork see Sheet No. 32.
All material carbon steel.

10018

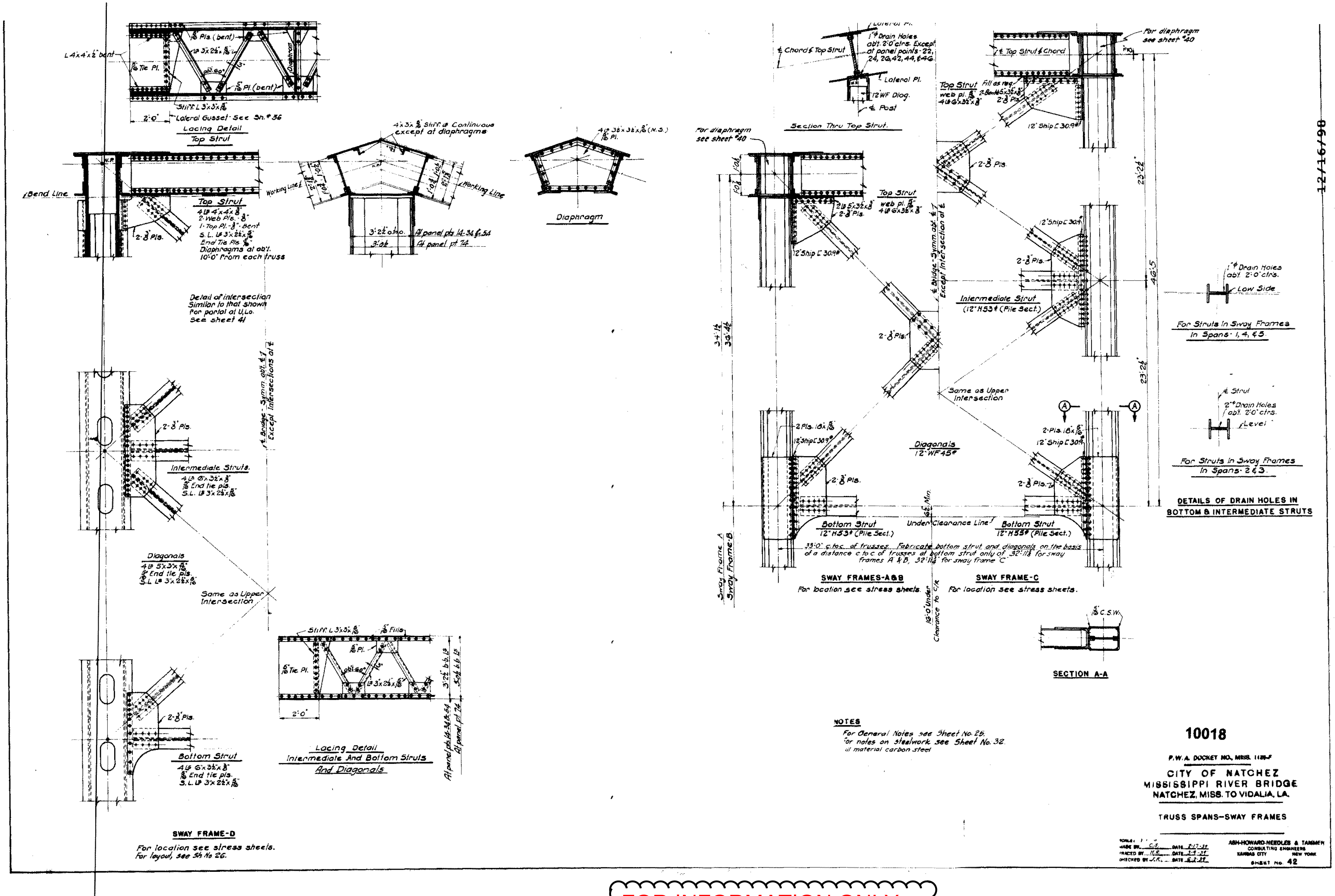
P.W.A. DOCKET NO. MISS. 1126-F

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

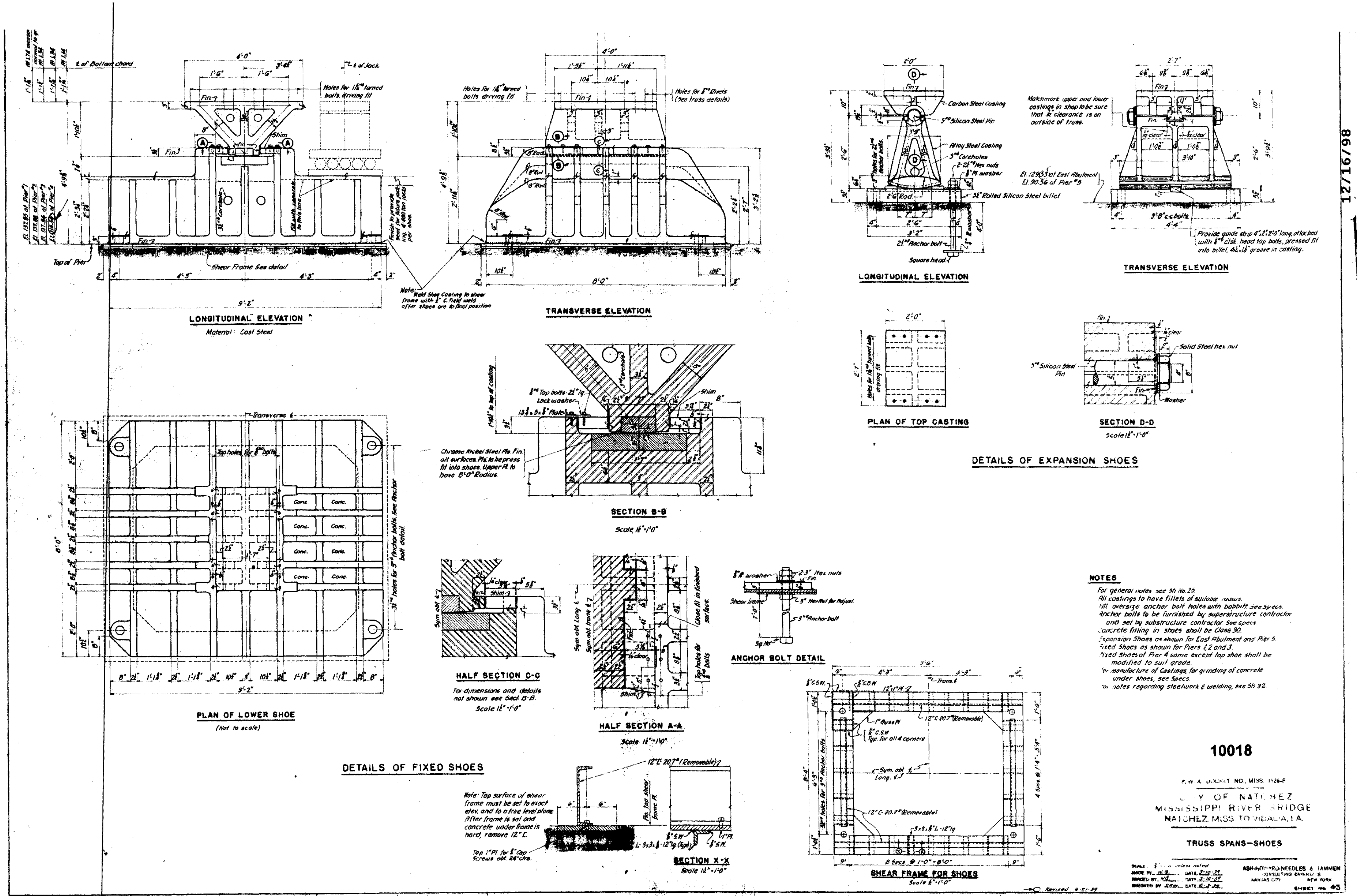
TRUSS SPANS—PORTALS

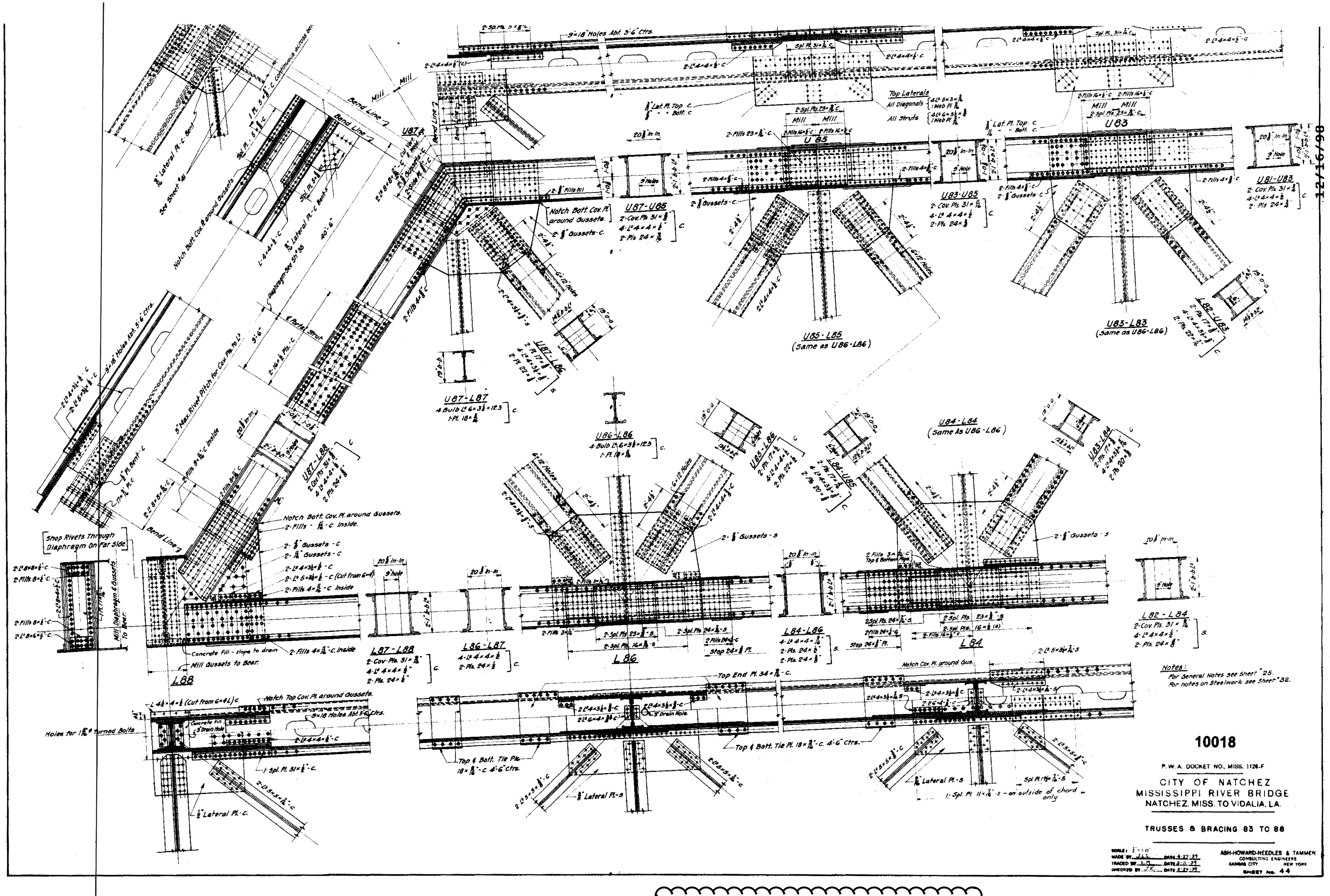
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SHEET No. 41

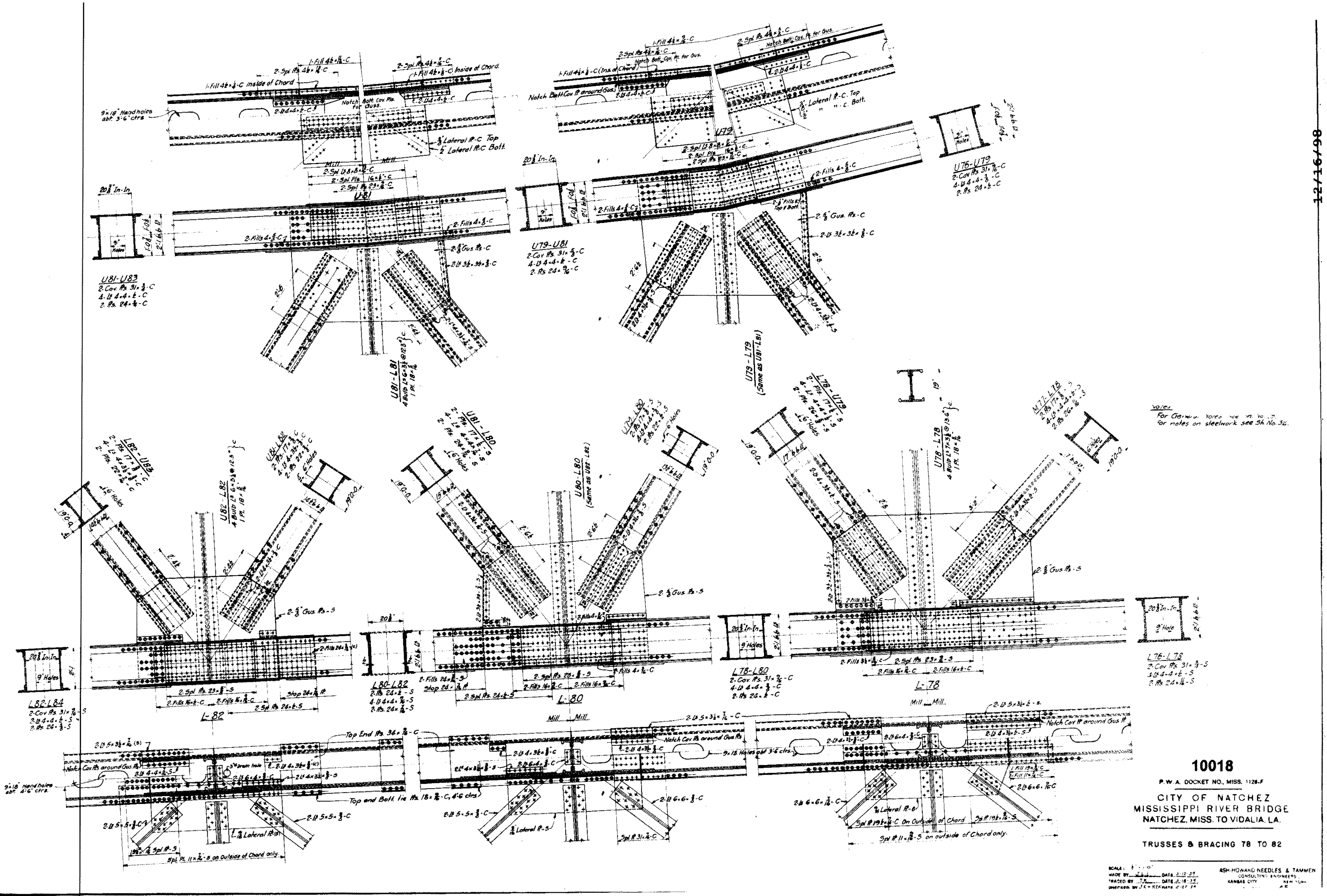


FOR INFORMATION ONLY


12/16/98
LONGITUDINAL ELEVATION
Material: Cast Steel
TRANSVERSE ELEVATION
SECTION B-B
Scale 1½"=1'-0"
PLAN OF LOWER SHOE
(Not to scale)
HALF SECTION C-C
For dimensions and details not shown see Sect. B-B.
Scale 1½"=1'-0"
HALF SECTION A-A
Scale 1½"=1'-0"
ANCHOR BOLT DETAIL
DETAILS OF FIXED SHOES
SECTION X-X
Scale 1½"=1'-0"
SHEAR FRAME FOR SHOES
LONGITUDINAL ELEVATION
TRANSVERSE ELEVATION
PLAN OF TOP CASTING
SECTION D-D
Scale 1½"=1'-0"
DETAILS OF EXPANSION SHOES
Carbon Steel Casting
5" Silicon Steel Pin
Alloy Steel Casting
5½" Rolled Silicon Steel billet
Matchmark upper and lower castings in shop to be sure that ⅛" clearance is on outside of truss.
Chrome Nickel Steel Pls. Fin. all surfaces. Pls. to be press fit into shoes. Upper Pl. to have 8'-0" Radius
Note: Weld Shoe Casting to shear frame with ⅜" C. field weld after shoes are in final position
Note: Top surface of shear frame must be set to exact elev. and to a true level plane. After frame is set and concrete under frame is hard, remove 12" [.
NOTES
For general notes see Sh. No. 25.
All castings to have fillets of suitable radius.
Fill oversize anchor bolt holes with babbitt, see Specs.
Anchor bolts to be furnished by superstructure contractor and set by substructure contractor. See Specs.
Concrete filling in shoes shall be Class 30.
Expansion Shoes as shown for East Abutment and Pier 5.
Fixed Shoes as shown for Piers 1, 2 and 3.
Fixed Shoes of Pier 4 same except top shoe shall be modified to suit grade.
For manufacture of Castings, for grinding of concrete under shoes, see Specs.
For notes regarding steelwork & welding, see Sh. 32.
10018
F. W. A. DOCKET NO. MISS. 1126-F
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.
TRUSS SPANS—SHOES
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 43



FOR INFORMATION ONLY



10018

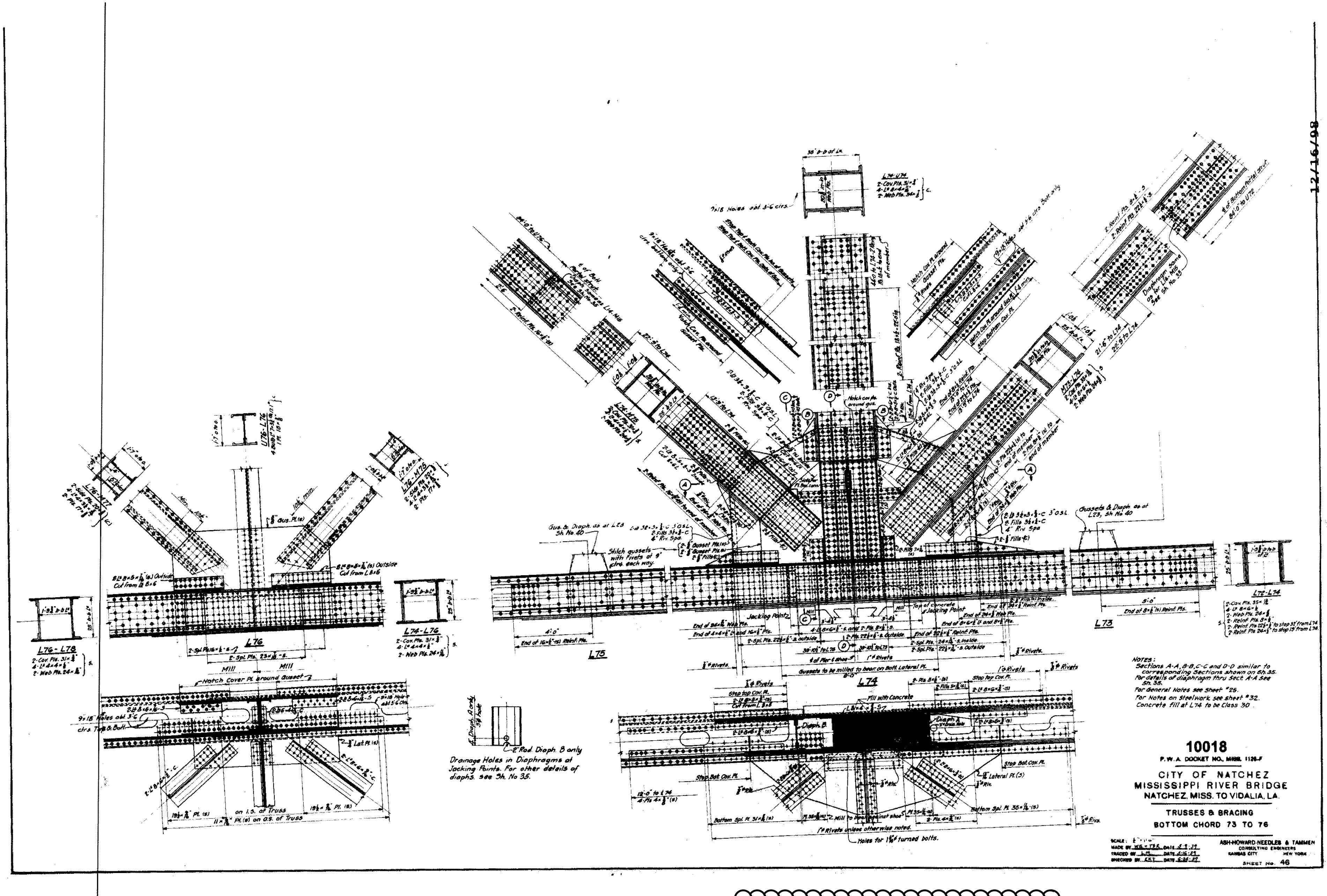
P. W. A. DOCKET NO., MISS. 1126-F

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSSES & BRACING 78 TO 82

ASH-HOWARD NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

FOR INFORMATION ONLY



NOTES:
Sections A-A, B-B, C-C and D-D similar to corresponding Sections shown on Sh. 35.
For details of diaphragm thru Sect. A-A See Sh. 35.
For General Notes see Sheet #25.
For Notes on Steelwork see sheet #32.
Concrete fill at L74 to be Class 30.

10018

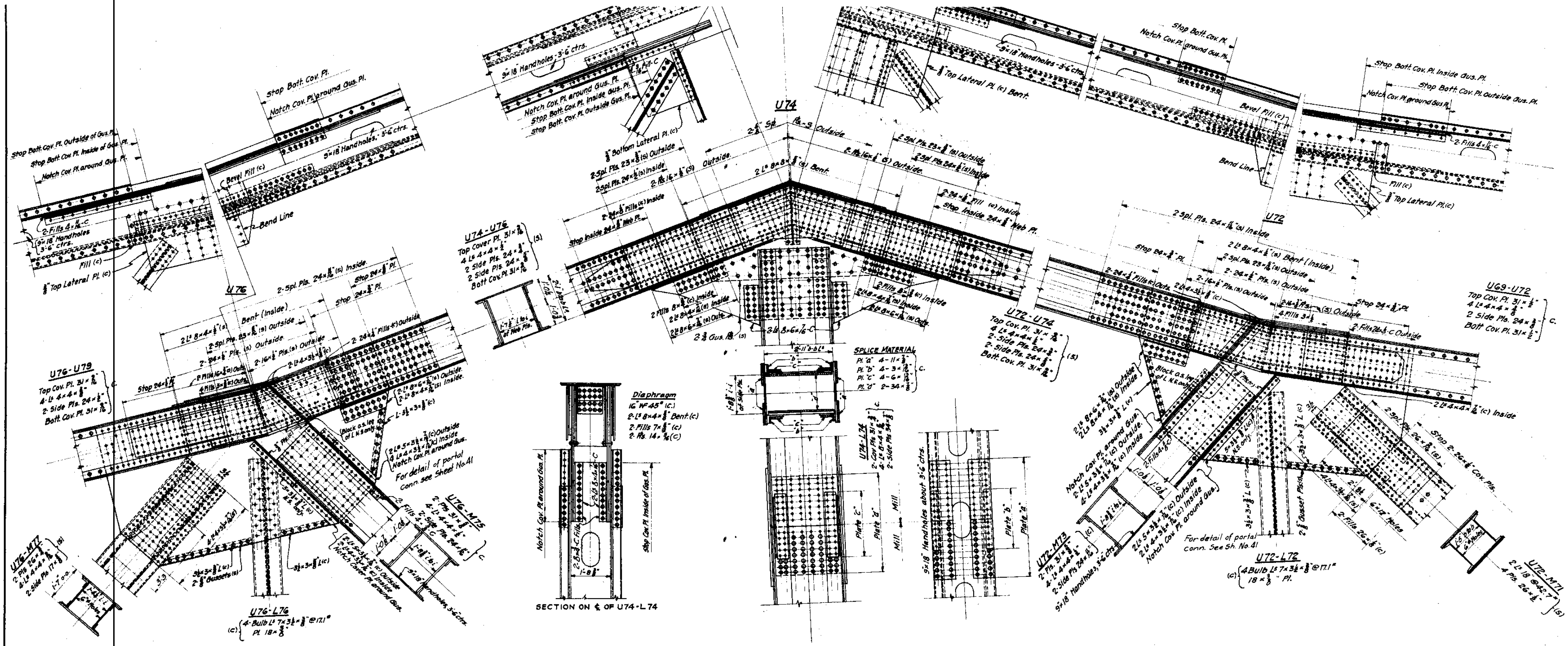
P.W.A. DOCKET NO., MISS. 1126-F

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSSES & BRACING
BOTTOM CHORD 73 TO 76

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SHEET No. 46



NOTES:
For General notes see sheet #25.
For notes on steelwork see sheet #32.

10018
P.W.A. DOCKET NO., MISS. 1126-F

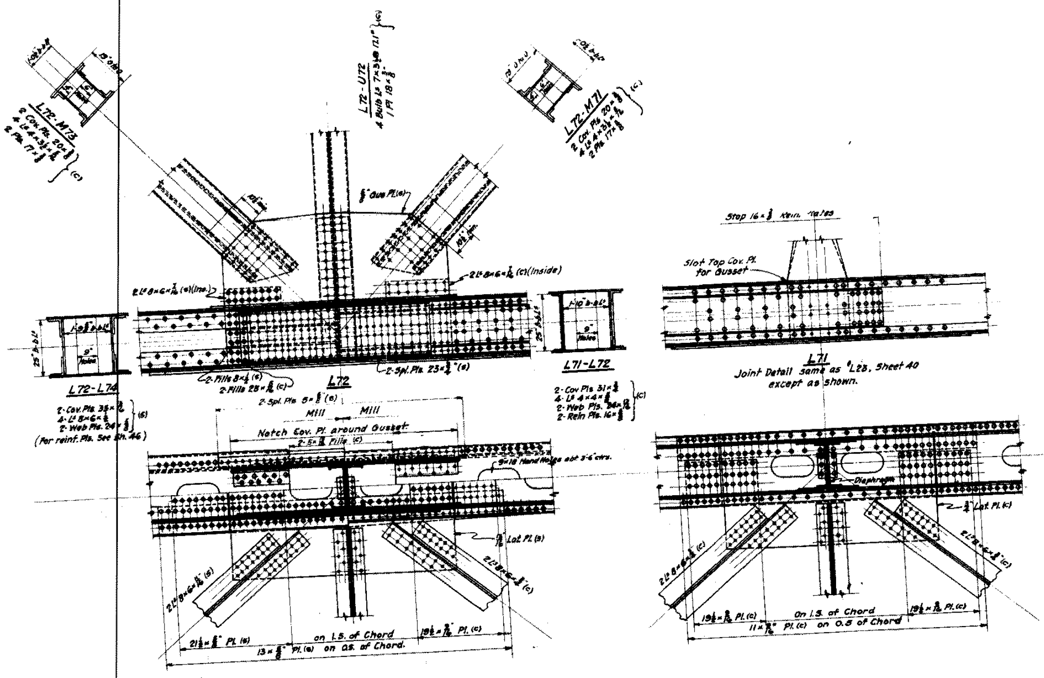
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSSES AND BRACING
TOP CHORD 72, 74 & 76

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 47

12/16/98

FOR INFORMATION ONLY



NOTES:
For general notes see sheet *29
For notes on steelwork see sheet *32.

10018

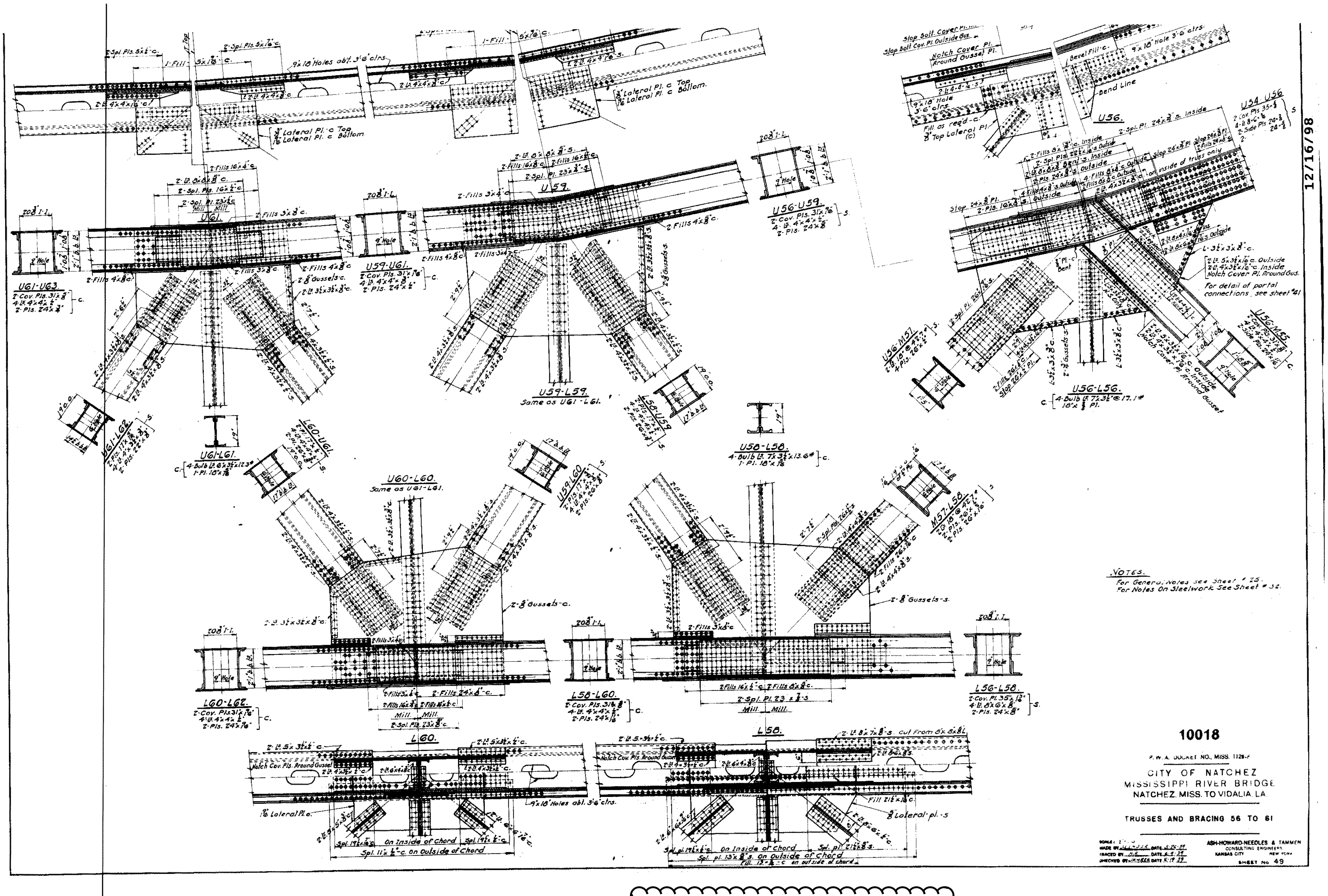
DOCKET NO., MISS.

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

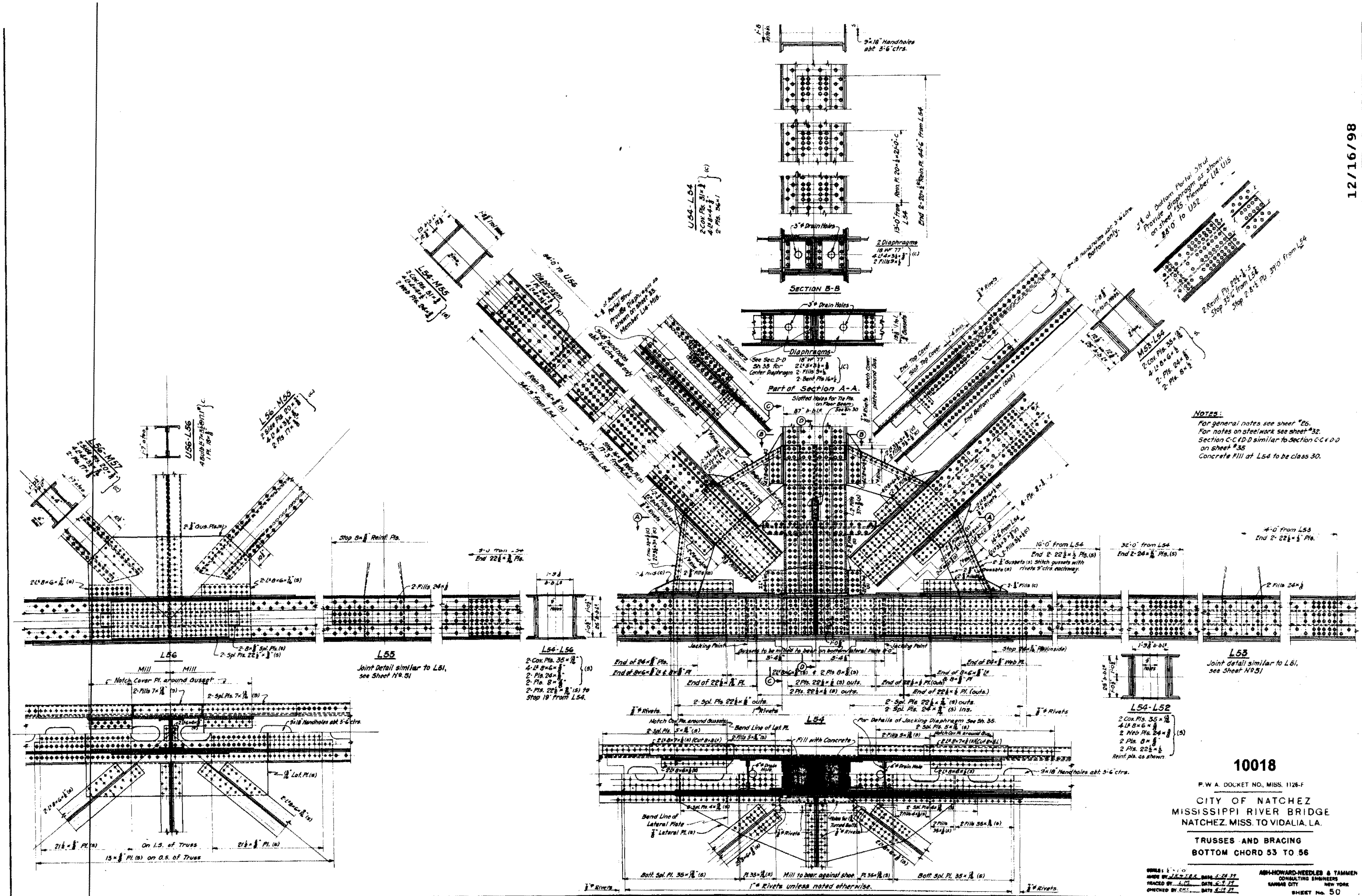
TRUSSES AND BRACING
BOTTOM CHORD 71 & 72

MADE BY C.A.S. DATE 6-9-39
TRACED BY L.M. DATE 6-26-39
CHECKED BY J.K. DATE 6-20-39

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK
SHEET No. 48

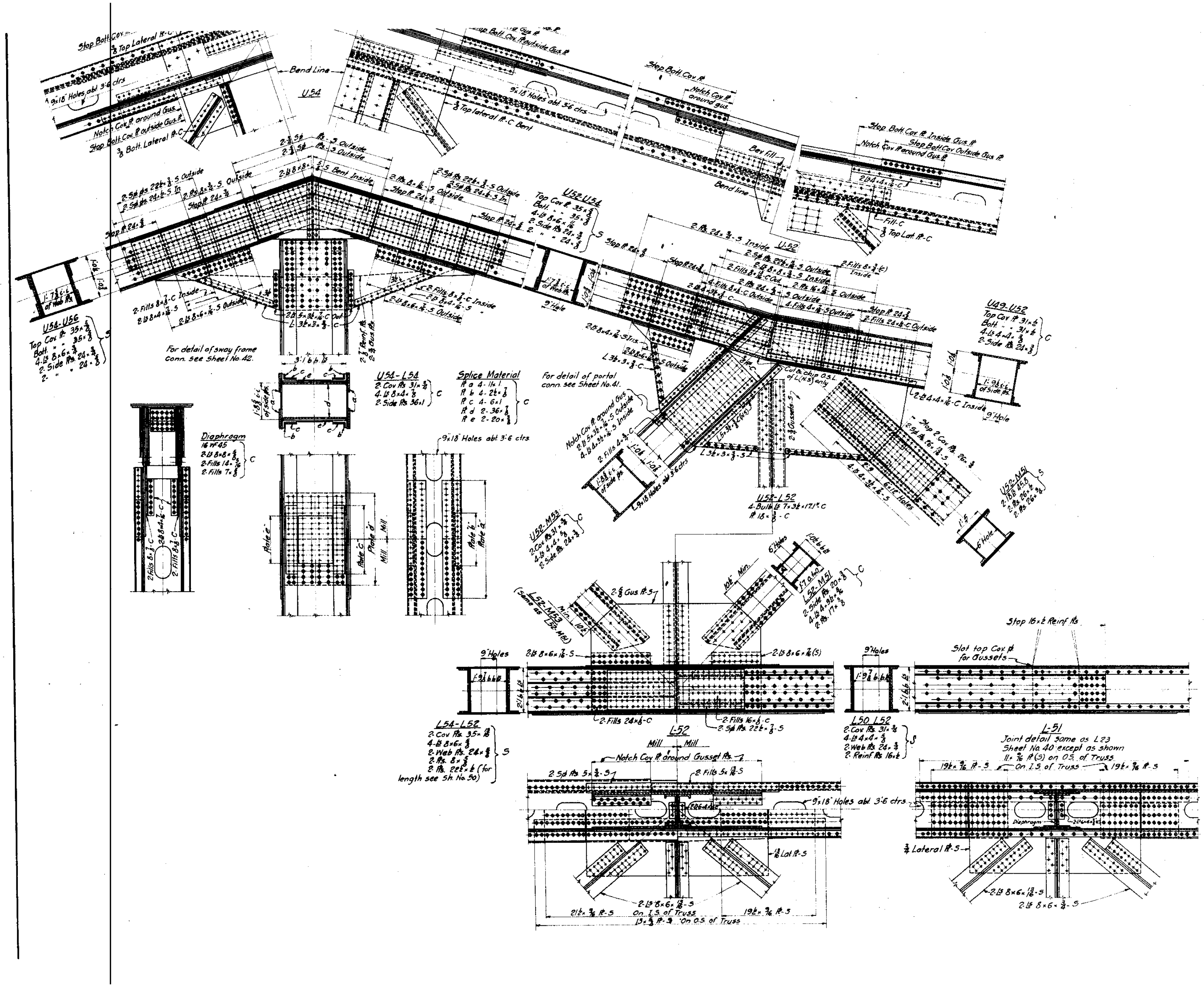


FOR INFORMATION ONLY



FOR INFORMATION ONLY

12/16/98



Notes:

For General Notes see Sheet #25

For Notes on Steelwork see Sheet #32.

10018

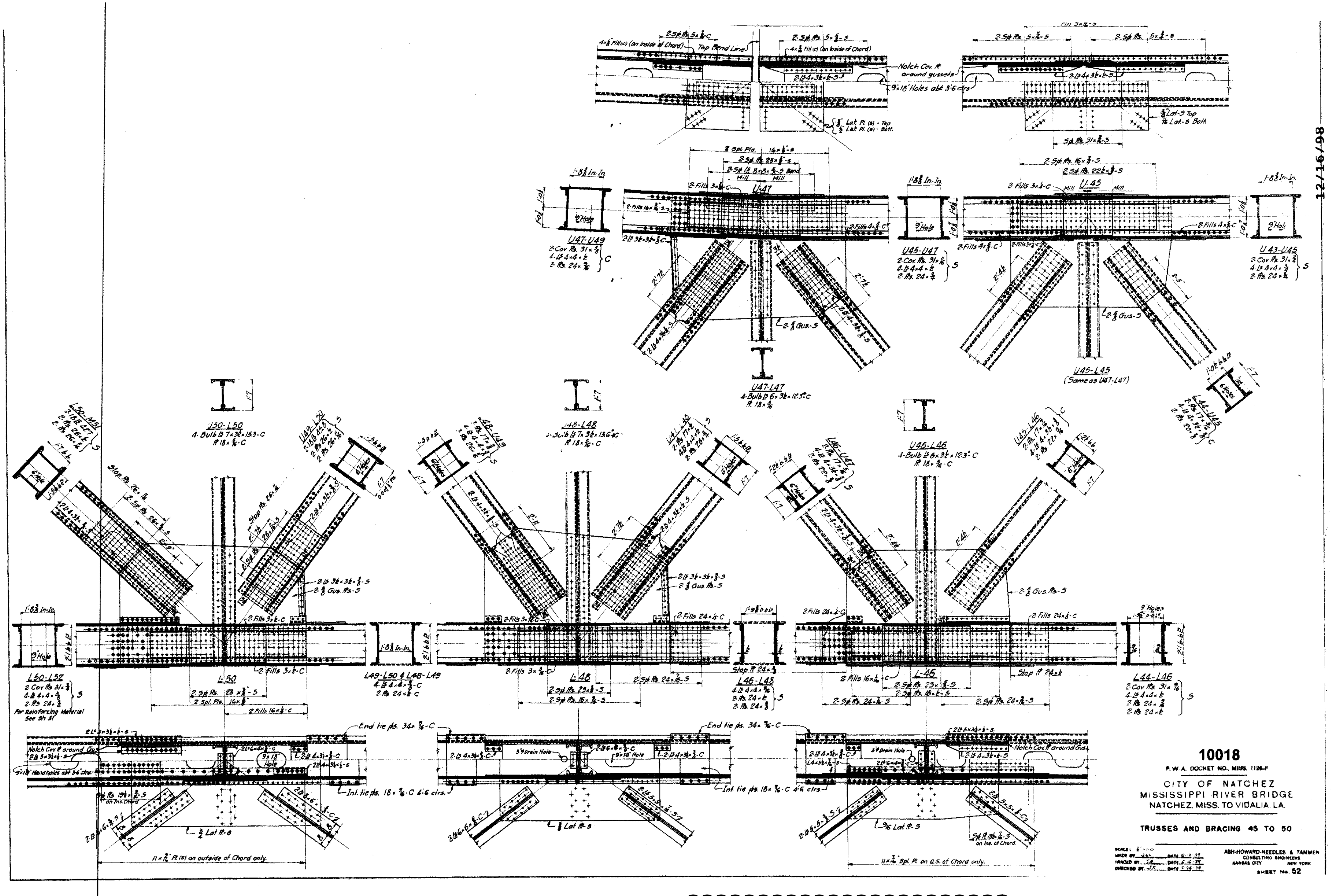
P. W. A. DOCKET NO. MISS. 1126-F

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSSES AND BRACING 51 TO 54

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

FOR INFORMATION ONLY



10018

P.W.A. DOCKET NO., MISS. 1126-F

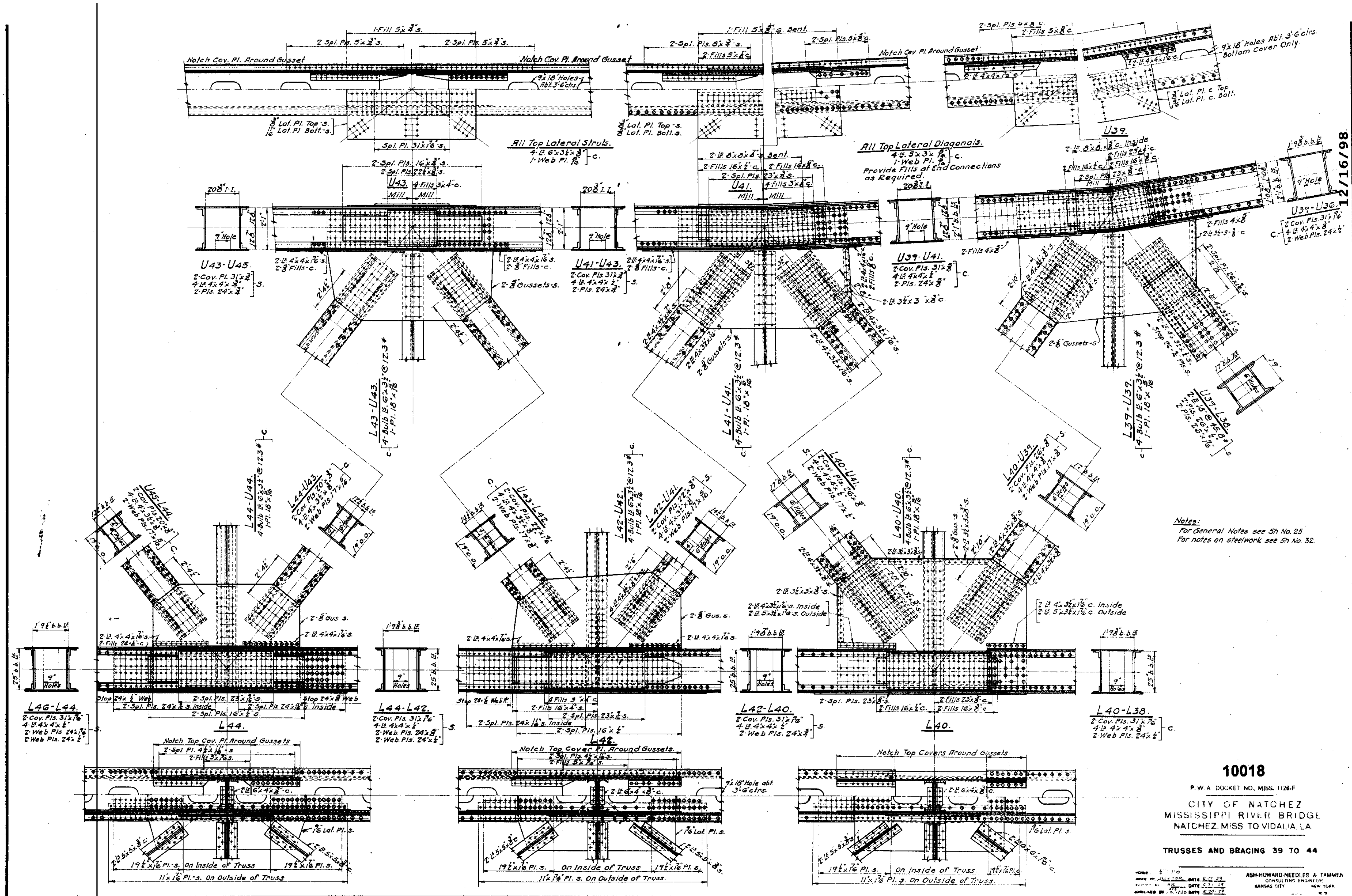
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

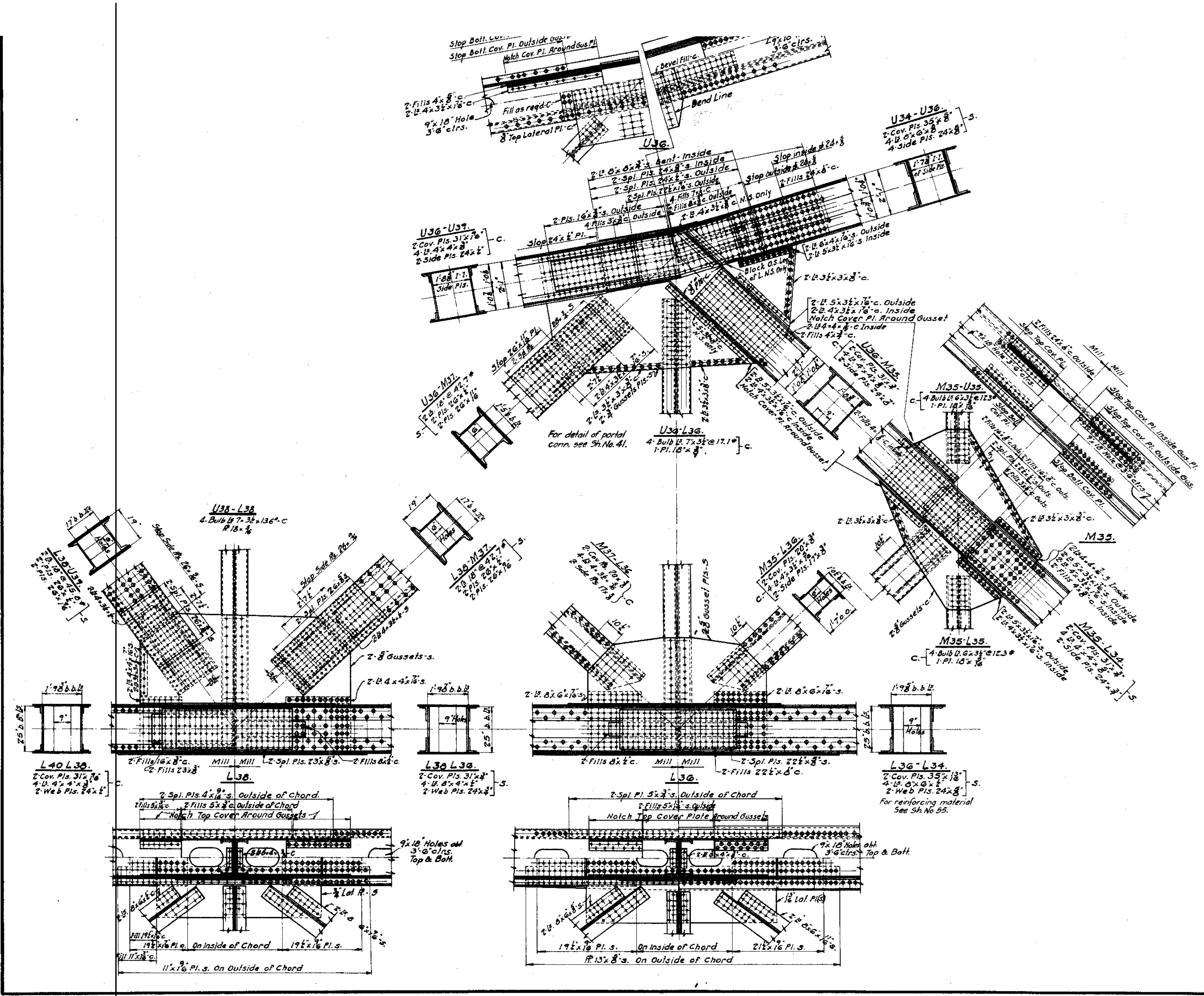
TRUSSES AND BRACING 45 TO 50

ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY NEW YORK

SHEET No. 52

FOR INFORMATION ONLY


All Top Lateral Struts.
All Top Lateral Diagonals.
U43
U41
U39
U43-U45
U41-U43
U39-U41
U39-U36
L43-U43
L41-U41
L39-U39
L37-L38
U45-L44
L44-U44
L44-U43
U43-L42
L42-U42
L42-U41
L40-U41
L40-U40
L40-U39
L46-L44
L44
L44-L42
L42
L42-L40
L40
L40-L38
Notes:
For General Notes see Sh No. 25
For notes on steelwork see Sh No. 32
12/16/98
10018
P.W.A. DOCKET NO. MISS. 1126-F
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ MISS TO VIDALIA LA.
TRUSSES AND BRACING 39 TO 44
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY
NEW YORK



12/16/98

Notes:-
For General Notes see Sh. No. 25.
For notes on steelwork see Sh. No. 32.

10018

P.W.A. DOCKET NO. MISS. 1126-F

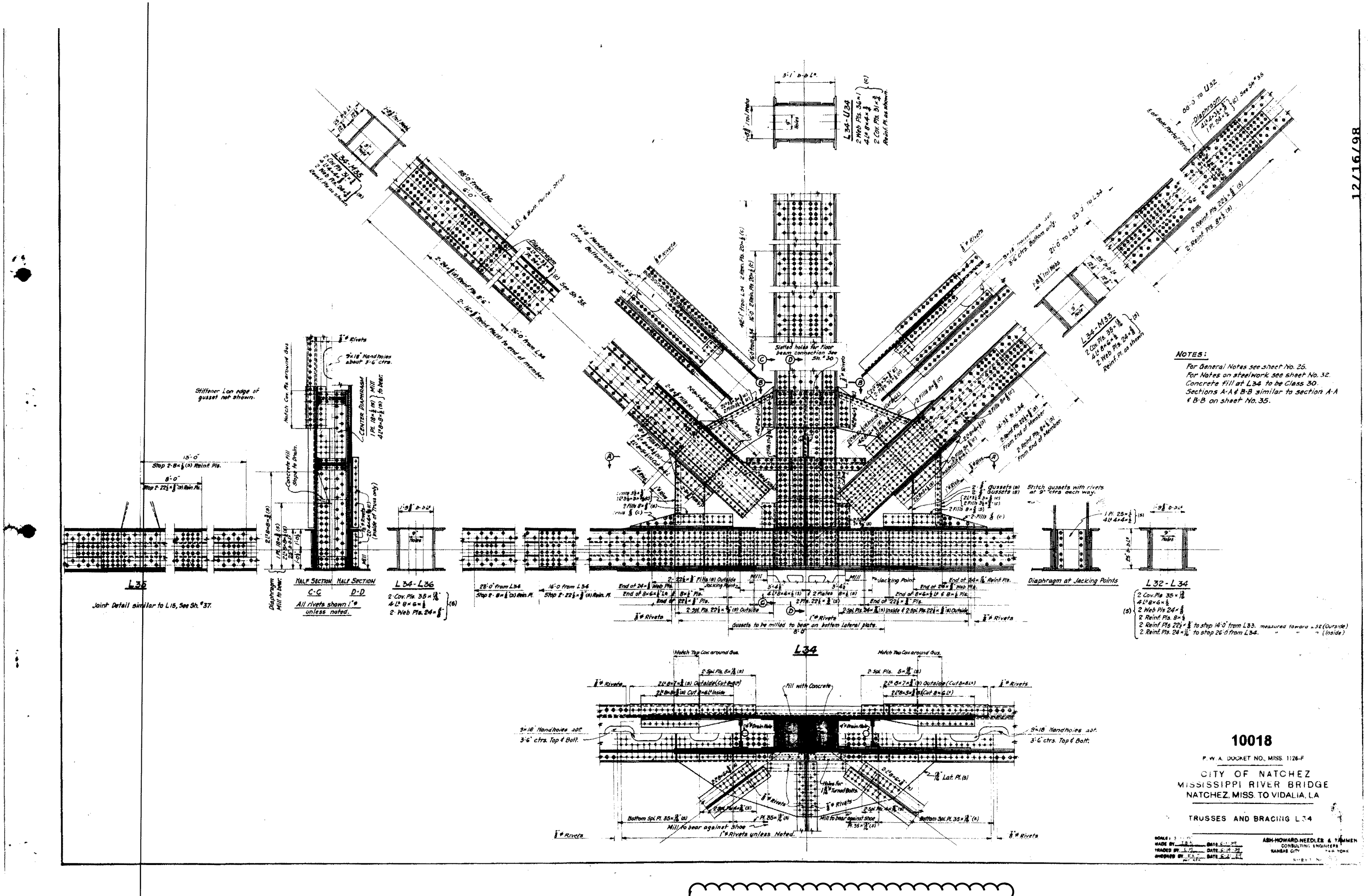
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
NATCHEZ, MISS. TO VIDALIA, LA.

TRUSSES AND BRACING 35 TO 38

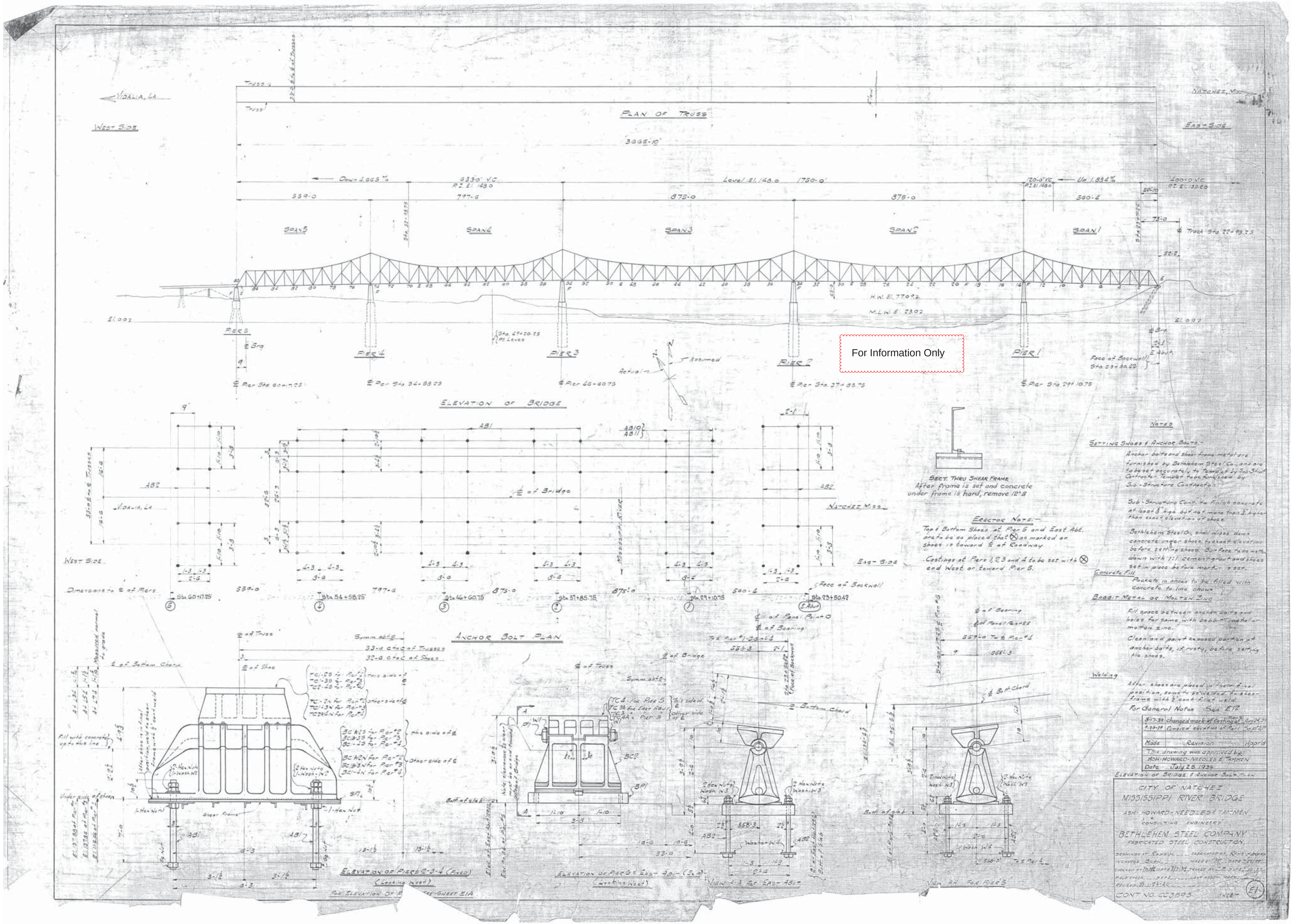
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
KANSAS CITY

SHEET No. 54

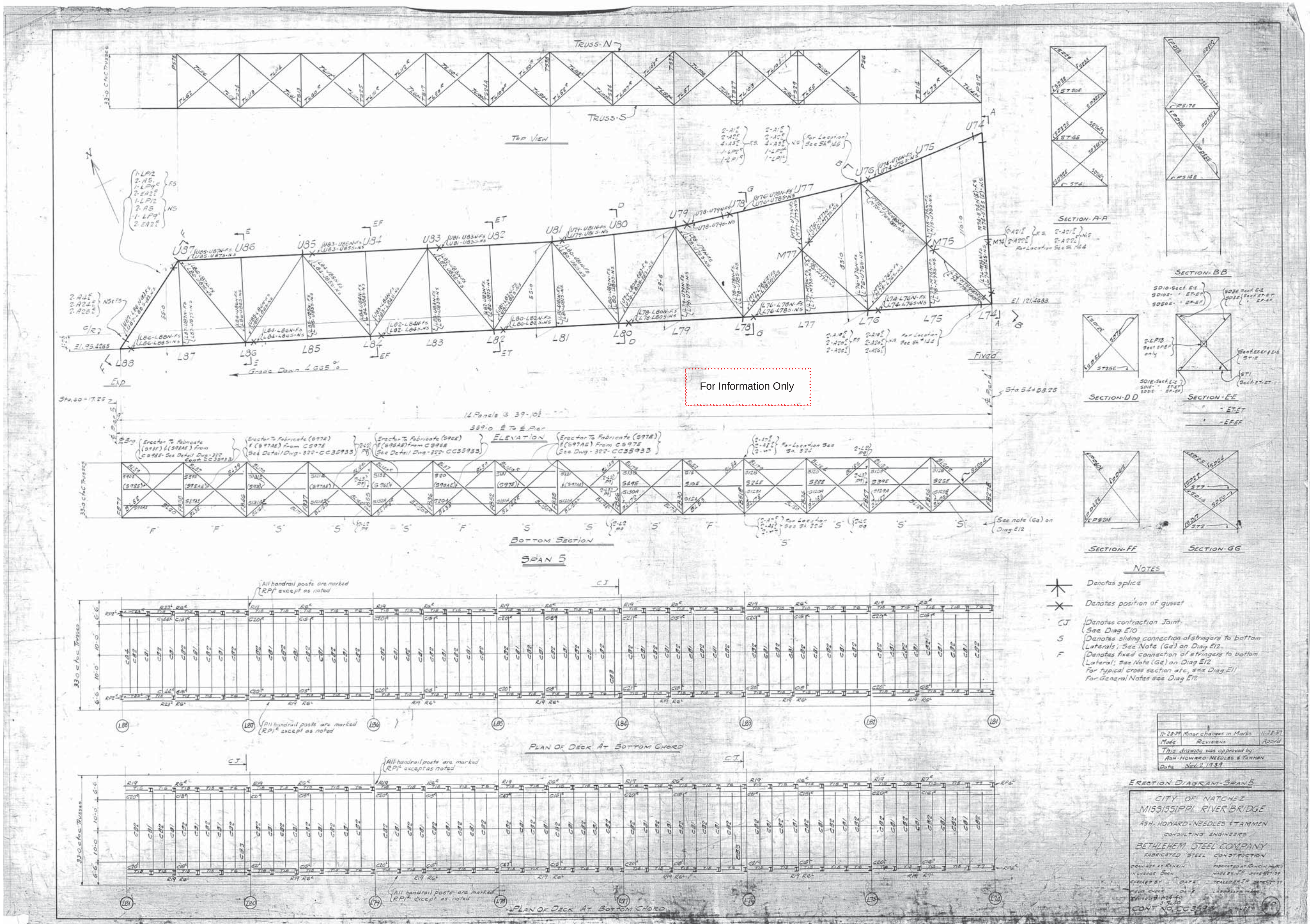
FOR INFORMATION ONLY



FOR INFORMATION ONLY



PLAN OF TRUSS
ELEVATION OF BRIDGE
ANCHOR BOLT PLAN
Vidalia, La
Natchez, Miss.
West Side
East Side
Span 5
Span 4
Span 3
Span 2
Span 1
Pier 5
Pier 4
Pier 3
Pier 2
Pier 1
For Information Only
SECT. THRU SHEAR FRAME
After frame is set and concrete under frame is hard, remove 12" ⅊
ERECTOR NOTE:-
Castings at Piers 1, 2, 3 and 4 to be set with ⊗ and West or toward Pier 5.
NOTES
SETTING SHOES & ANCHOR BOLTS.-
Anchor bolts and shear frame metal are furnished by Bethlehem Steel Co., and are to be set accurately to templet by Sub-Struct. Contractor. Templet to be furnished by Sub-Structure Contractor.
Sub-Structure Cont. to finish concrete at least ⅛" high but not more than ½" higher than exact elevation of shoes.
Bethlehem Steel Co., shall dress down concrete under shoes to exact elevation before setting shoes. Surface to be wet down with 1:1 cement grout and shoes set in place before mortar is set.
Concrete Fill
Pockets in shoes to be filled with concrete to line shown
BABBIT METAL OR MOLTEN ZINC
Fill space between anchor bolts and holes for same with babbit metal or molten zinc.
Clean and paint exposed portion of anchor bolts, if rusty, before setting the shoes.
Welding
After shoes are placed in their final position, same to be welded to shear frame with ½" cont. fillet weld.
For General Notes See E12
8-17-39 changed mark of casting at Pier 2 Aug 24.39
9-20-39 Revised elevation of Pier 1 Sept 21
Made Revision Appr'd
This drawing was approved by
ASH-HOWARD-NEEDLES & TAMMEN
Date July 25 1939
ELEVATION OF BRIDGE & ANCHOR BOLT PLAN
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION
CONT NO. CC3593
SHEET E1



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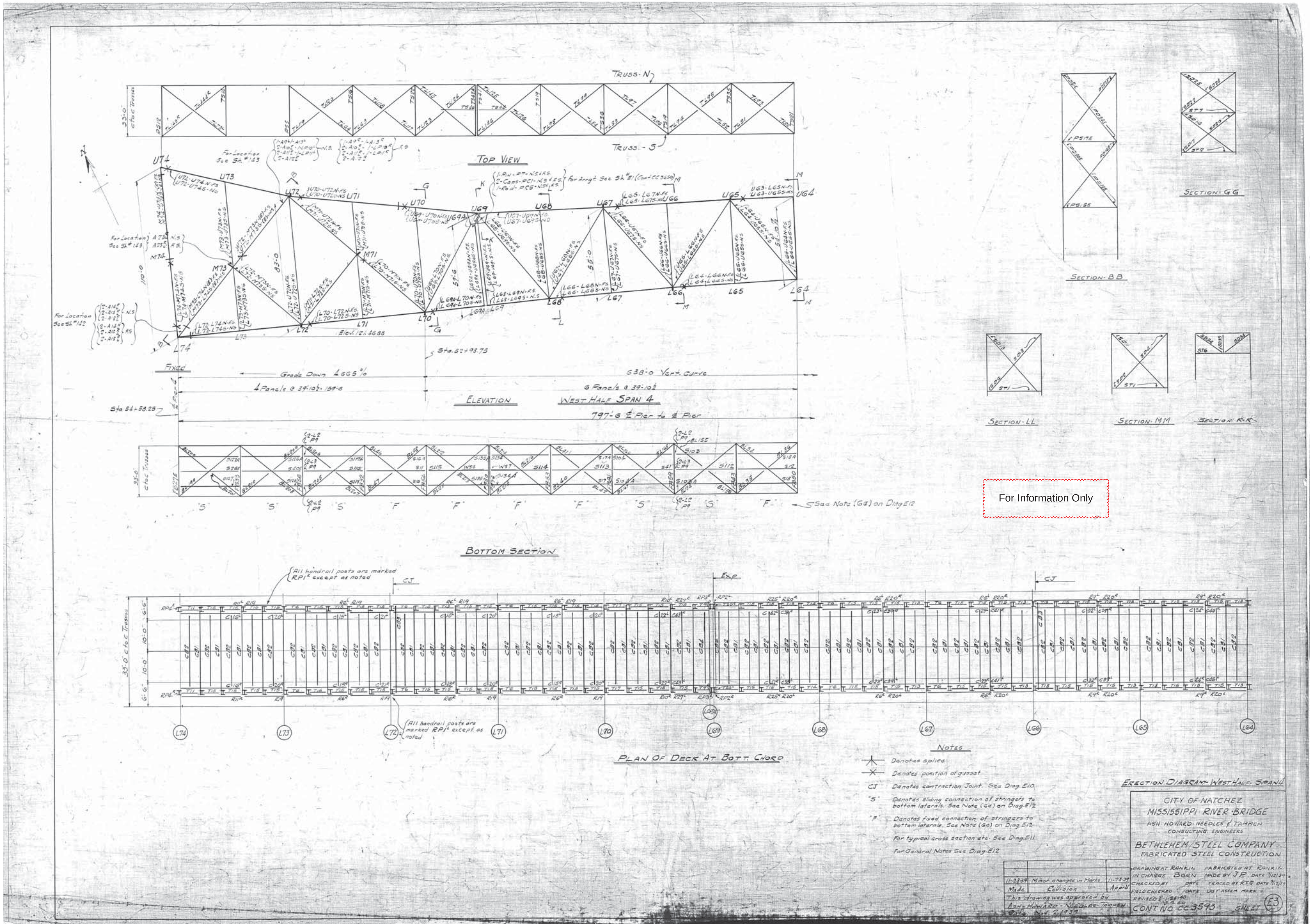
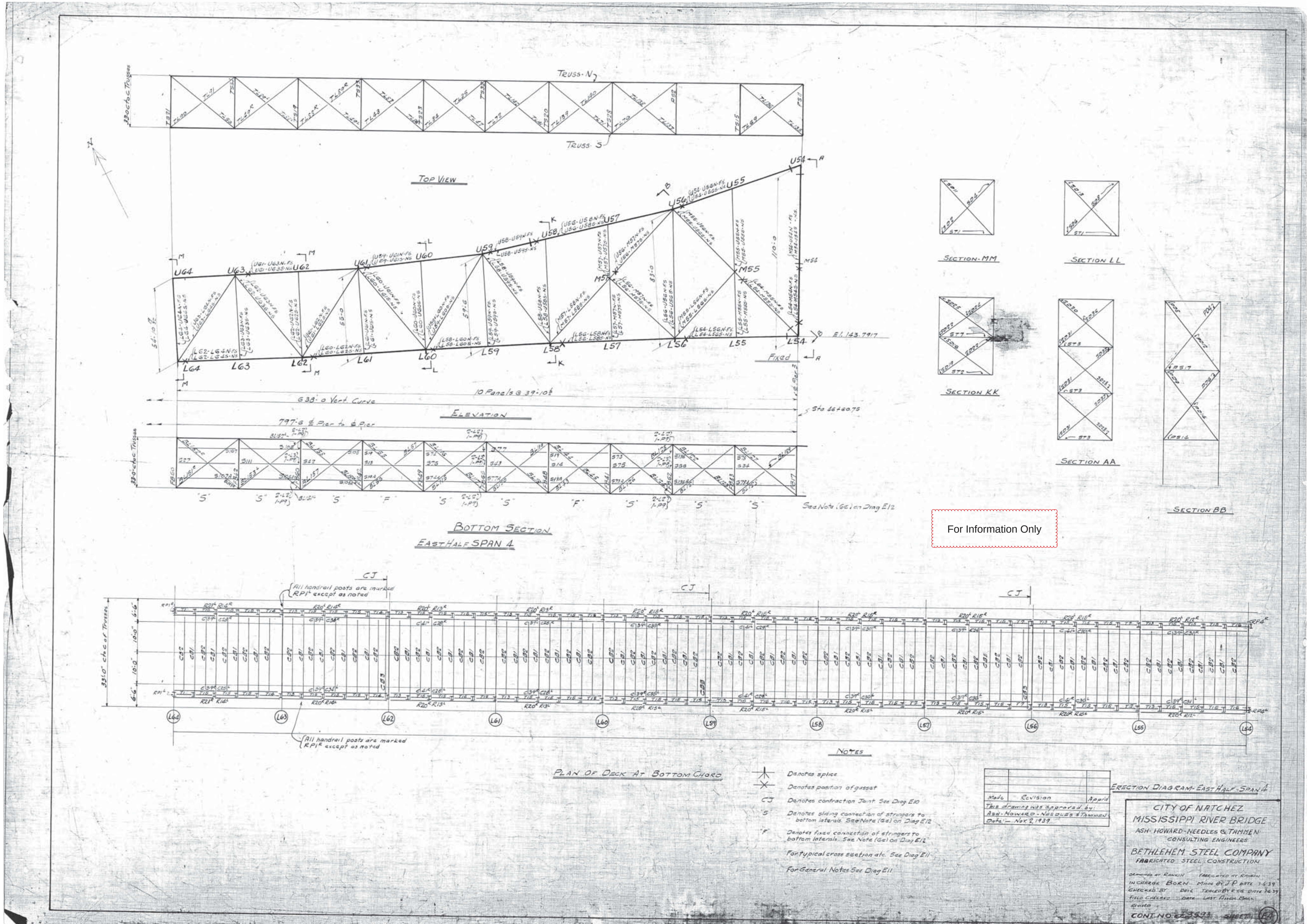
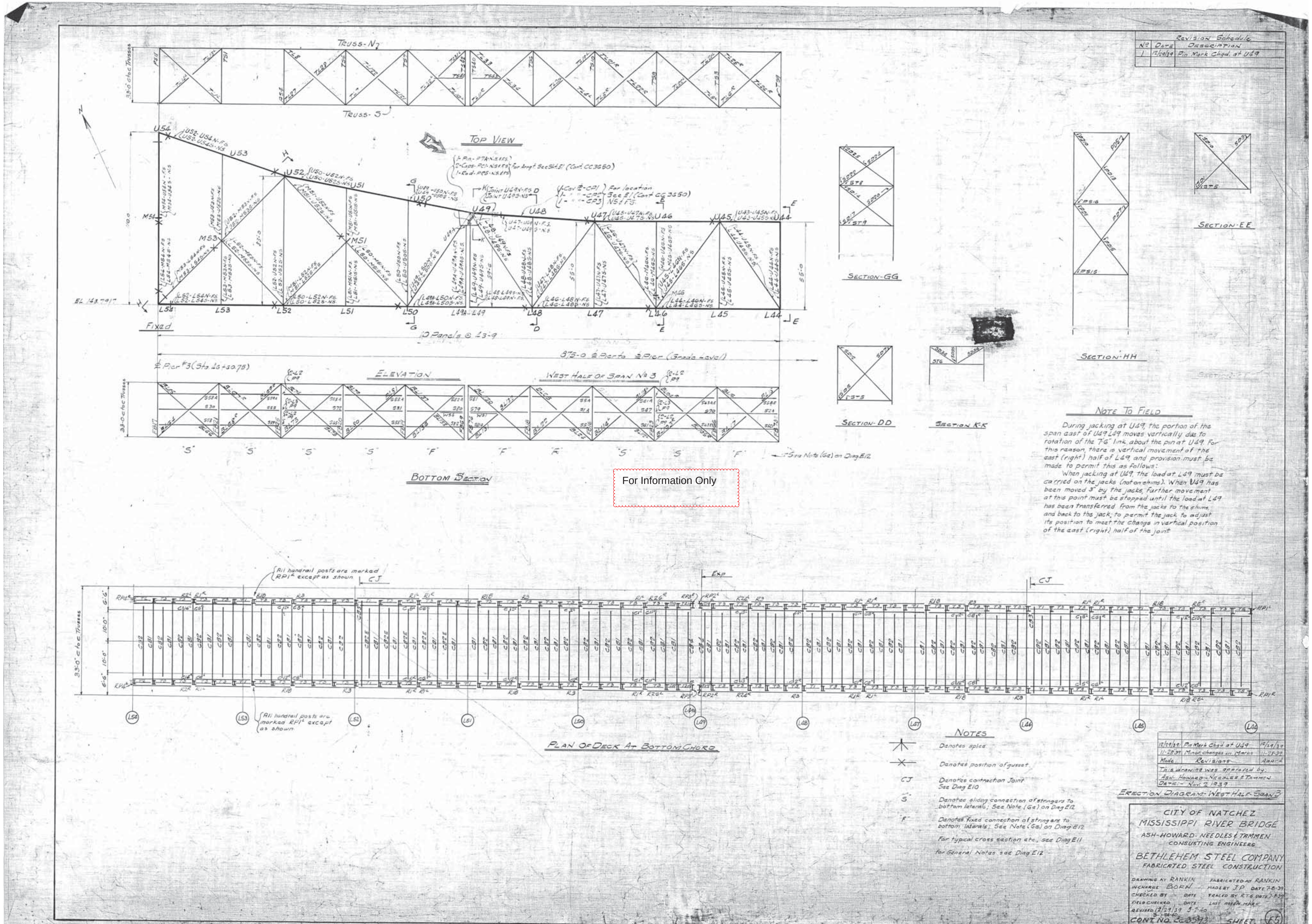


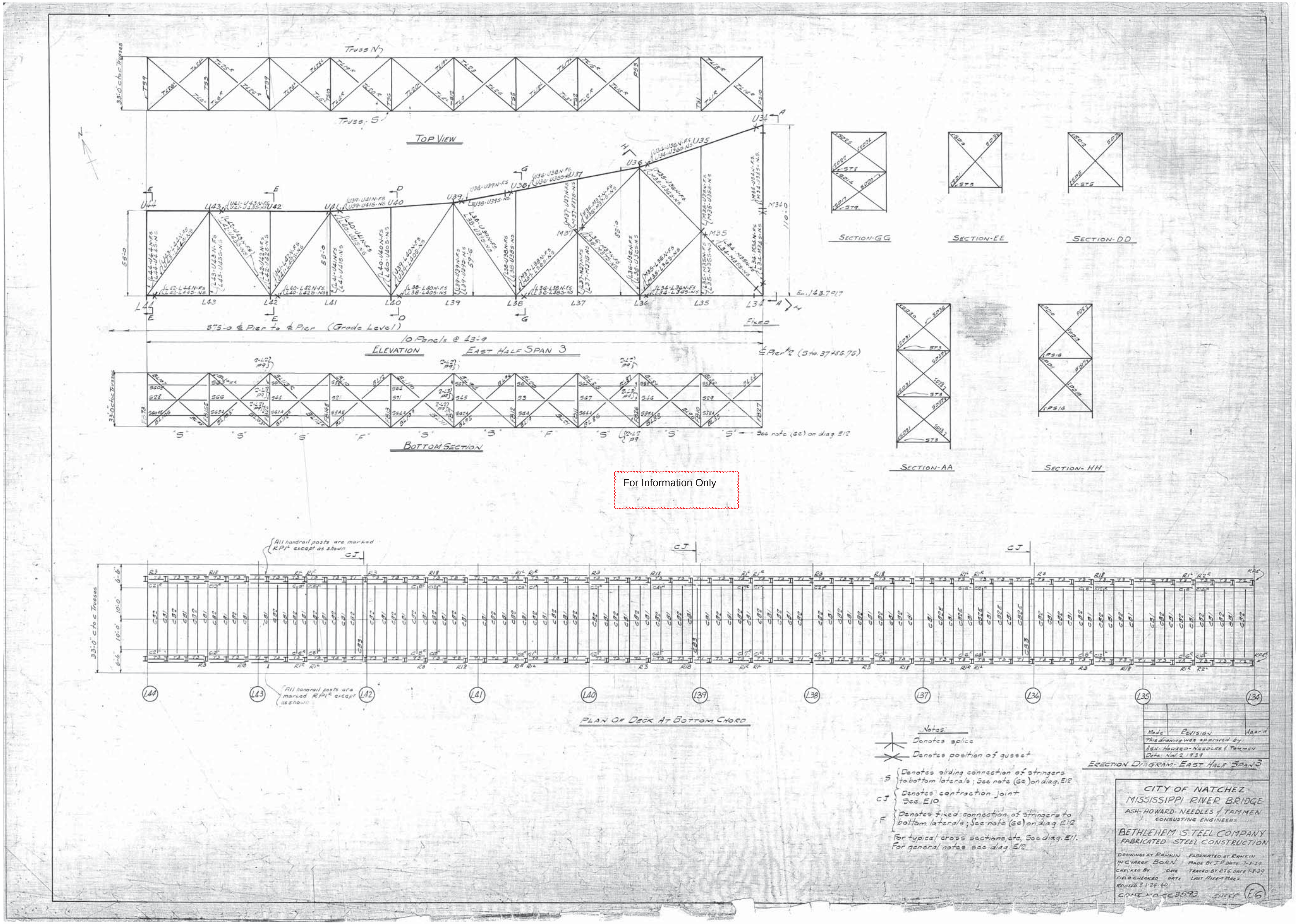
For Information Only

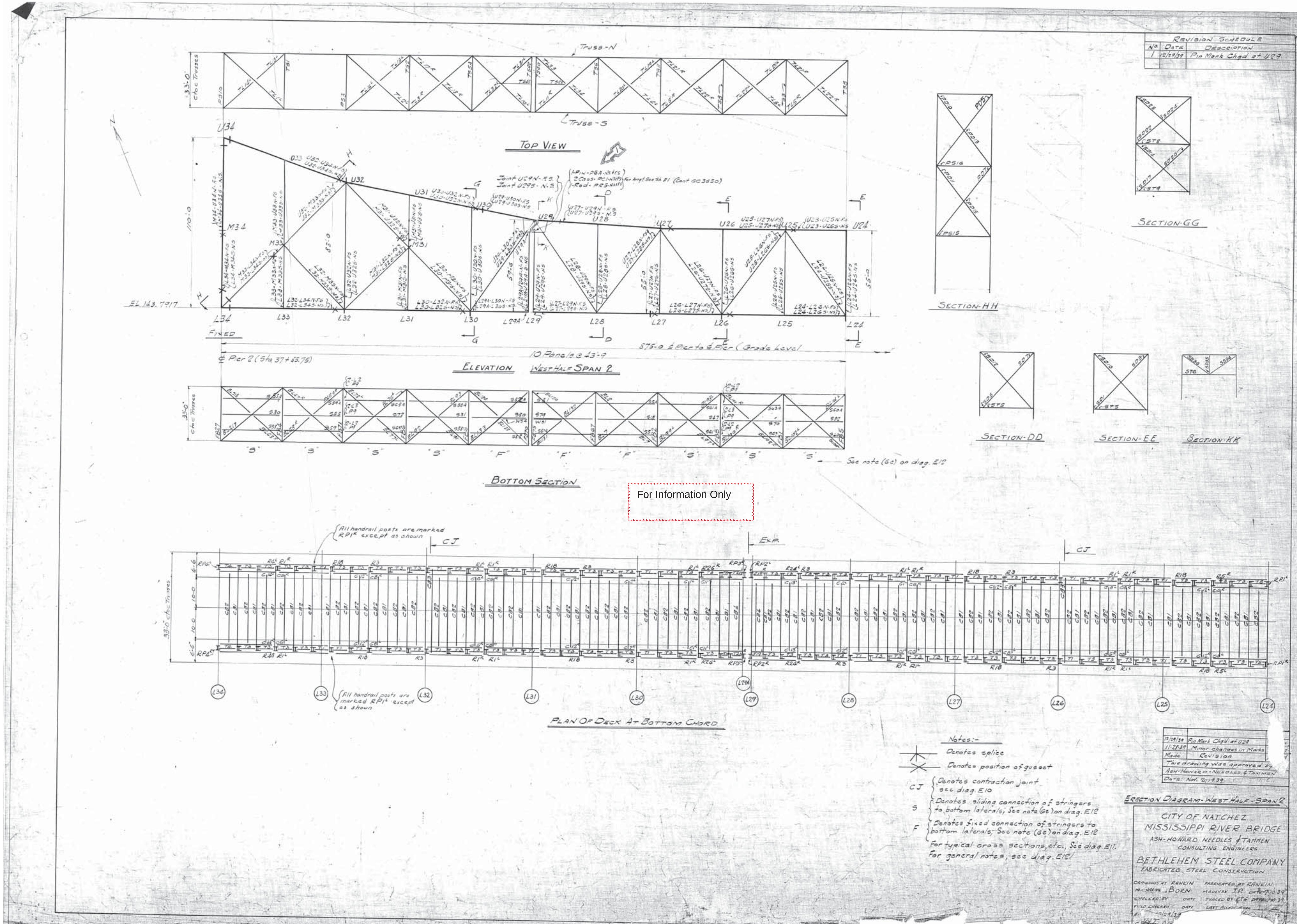


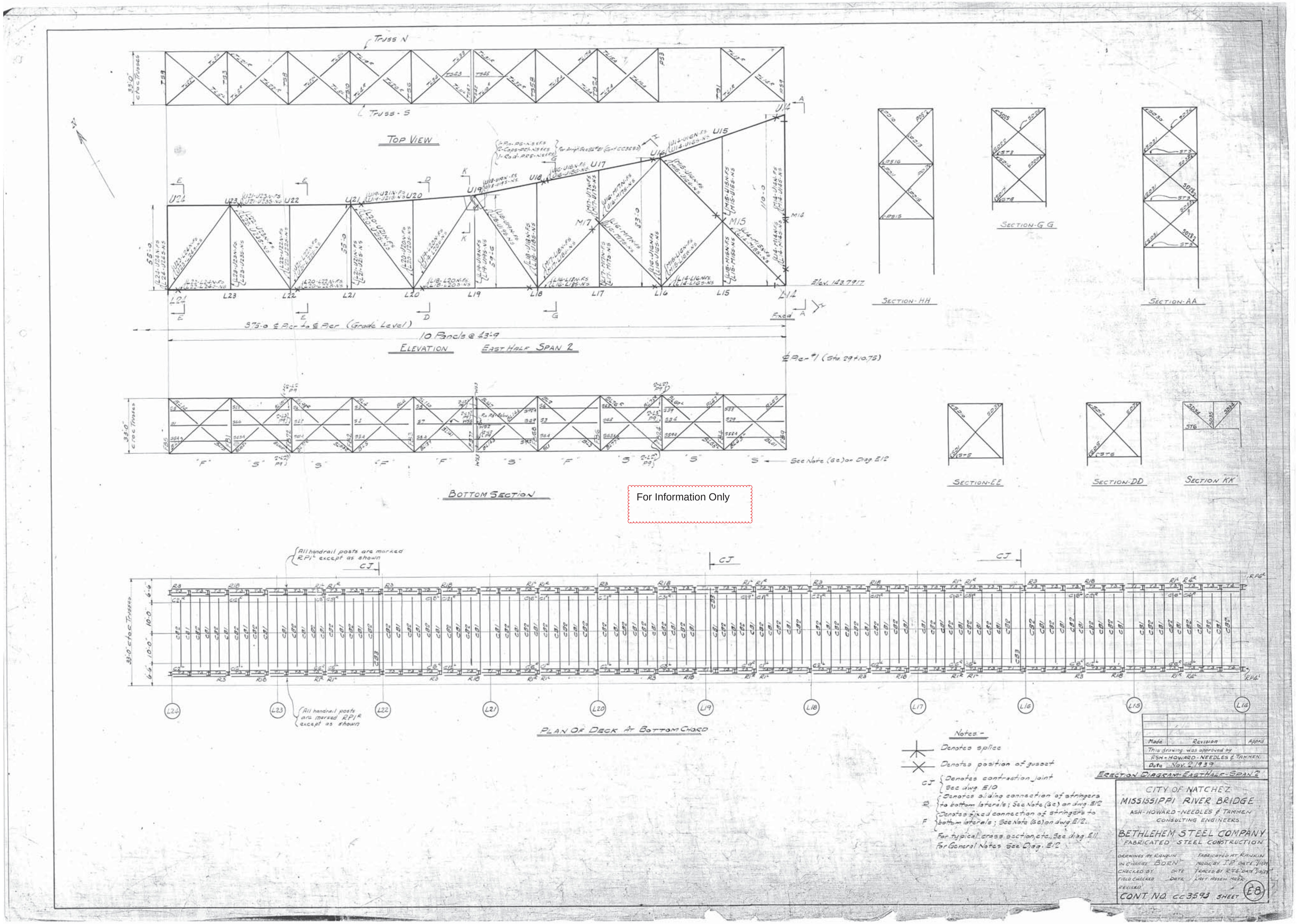
Top View
Truss-N
Truss-S
Elevation
10 Panels @ 39'-10½
633'-0 Vert. Curve
797'-6 ℄ Pier to ℄ Pier
El. 143.7917
Fixed
Bottom Section
East Half Span 4
Section MM
Section LL
Section KK
Section AA
Section BB
See Note (Gc) on Diag E12
Plan of Deck at Bottom Chord
All handrail posts are marked RP1 except as noted
Notes
Denotes splice
Denotes position of gusset
CJ Denotes contraction joint See Diag E10
"S" Denotes sliding connection of stringers to bottom laterals. See Note (Gc) on Diag E12
"F" Denotes fixed connection of stringers to bottom laterals. See Note (Gc) on Diag E12
For typical cross section etc. See Diag E11
For General Notes See Diag E1
Made
Revision
Appr'd
This drawing was approved by Ash-Howard-Needles & Tammen
Date - Nov 2, 1939
Erection Diagram - East Half - Span 4
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

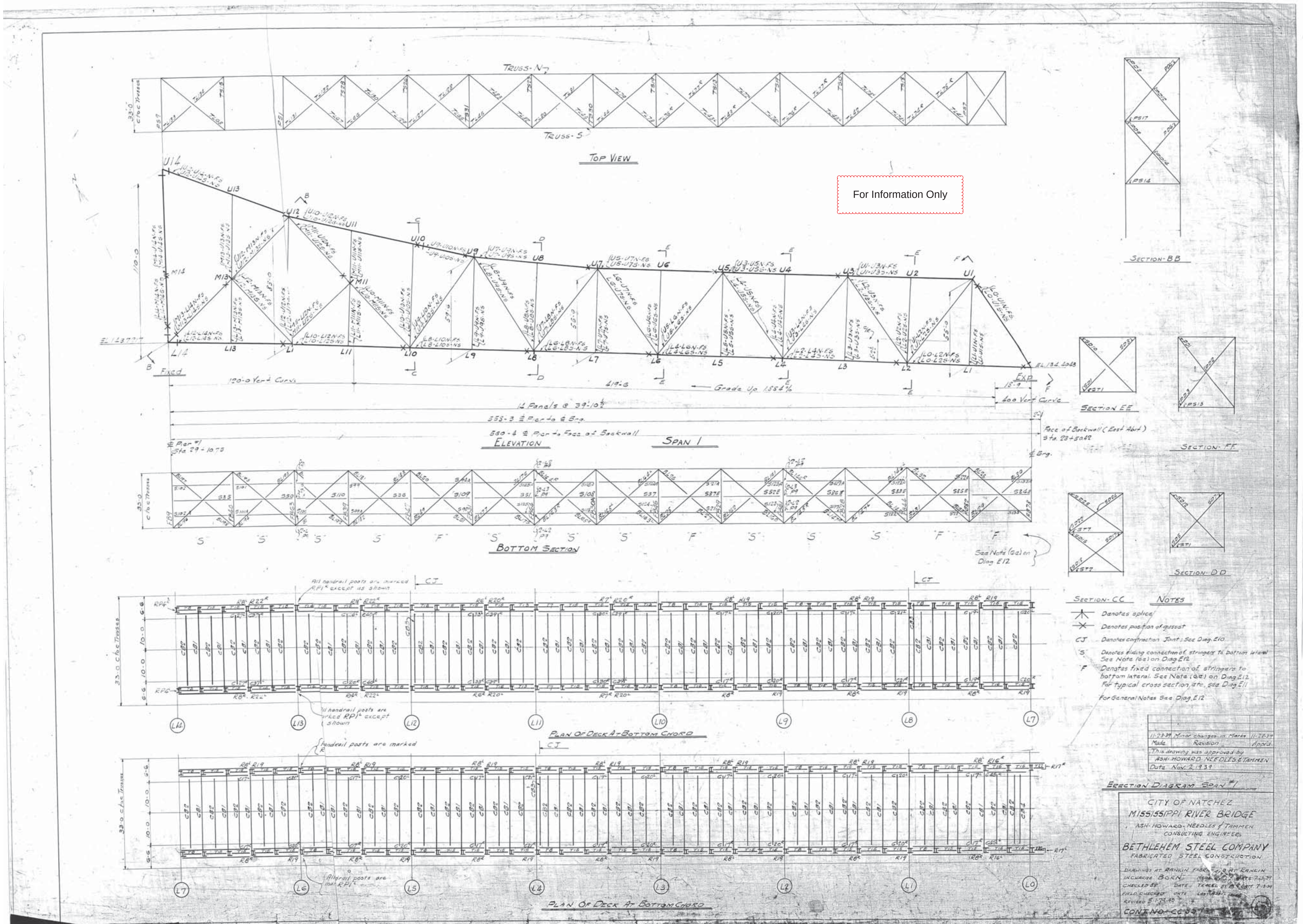


For Information Only

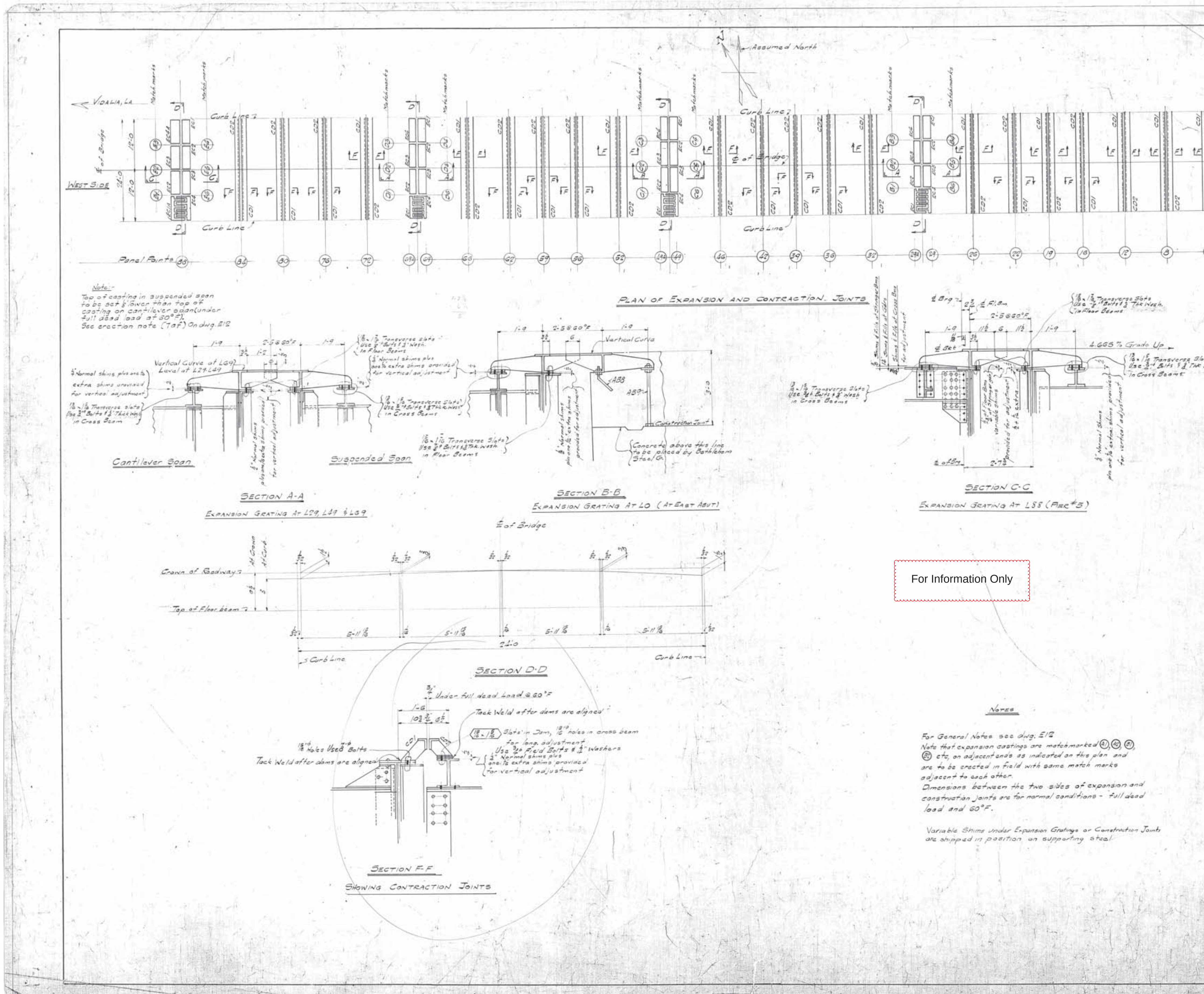

Truss N
Truss S
Top View
33'-0" c to c Trusses
U44
U43
U42
U41
U40
U39
U38
U37
U36
U35
U34
M37
M35
M34
L44
L43
L42
L41
L40
L39
L38
L37
L36
L35
L34
56'-0
110'-0
El. 143.797
375-0 ℄ Pier to ℄ Pier (Grade Level)
10 Panels @ 43'-9
Elevation
East Half Span 3
Fixed
℄ Pier 2 (Sta. 37+86.75)
Bottom Section
See note (6c) on diag E12
Section-GG
Section-EE
Section-DD
Section-AA
Section-HH
All handrail posts are marked RPI except as shown
CJ
33'-0" c to c Trusses
Plan Of Deck At Bottom Chord
Notes:
Denotes splice
Denotes position of gusset
S Denotes sliding connection of stringers to bottom laterals; See note (6c) on diag. E12
CJ Denotes contraction joint See E10
F Denotes fixed connection of stringers to bottom laterals; See note (6c) on diag. E12
For typical cross sections, etc. See diag. E11.
For general notes see diag. E12
Made
Revision
App'd
This drawing was approved by
Ash-Howard-Needles & Tammen
Date: Nov. 2 1939
Erection Diagram- East Half Span 3
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION
Drawings at Rankin
In Charge Born
Checked By Date
Field Checked Date
Revised 8 1-24-40
Fabricated at Rankin
Made by J.P. Date 7-1-39
Traced by R.T.G. Date 7-8-39
Last Assem Mark
Cont No. CC3593
Sheet E6


Revision Schedule
No. Date Description
1 12/29/39 Pin Mark Chgd at U29
Truss-N
Truss-S
Top View
Elevation
West Half Span 2
10 Panels @ 43'-9"
875'-0 ℄ Pier to ℄ Pier (Grade Level)
℄ Pier 2 (Sta 37+85.75)
Fixed
EL 143.7917
Bottom Section
See note (6c) on diag. E12
Section-HH
Section-GG
Section-DD
Section-EE
Section-KK
All handrail posts are marked RP1 except as shown
CJ
Exp.
Plan Of Deck At Bottom Chord
Notes:-
Denotes splice
Denotes position of gusset
CJ Denotes contraction joint see diag. E10
S Denotes sliding connection of stringers to bottom laterals; See note (6c) on diag. E12
F Denotes fixed connection of stringers to bottom laterals; See note (6c) on diag. E12
For typical cross sections, etc., See diag. E11.
For general notes, see diag. E12
12/29/39 Pin Mark Chgd at U29
11-28-39 Minor changes in Marks
Made Revision
This drawing was approved by Ash-Howard-Needles & Tammen
Date: Nov. 2, 1939
Erection Diagram - West Half - Span 2
City of Natchez
Mississippi River Bridge
Ash-Howard-Needles & Tammen
Consulting Engineers
Bethlehem Steel Company
Fabricated Steel Construction
Drawings at Rankin
Fabricated at Rankin
Born
Checked by
Date
Traced by
Field Checked
Date
Last Assembly


Truss N
Truss - S
Top View
Elevation
East Half Span 2
10 Panels @ 37-9
Bottom Section
Section-HH
Section-GG
Section-AA
Section-EE
Section-DD
Section KK
Plan Of Deck At Bottom Chord
Notes -
Denotes splice
Denotes position of gusset
Denotes contraction joint
For typical cross section, etc. See diag. E11
For General Notes See Diag. E12
This drawing was approved by
ASH-HOWARD-NEEDLES & TAMMEN
Date Nov. 2, 1939
Erection Diagram-East Half-Span 2
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION
CONT NO CC3593 SHEET E8



For Information Only



For Information Only

NOTES

For General Notes see dwg. E12
Note that expansion castings are matchmarked (A1), (A2), (B1), (B2) etc, on adjacent ends as indicated on this plan and are to be erected in field with same match marks adjacent to each other.
Dimensions between the two sides of expansion and construction joints are for normal conditions - full dead load and 60°F.

Variable Shims under Expansion Gratings or Construction Joints are shipped in position on supporting steel.

11-28-39	Section A-A Revised	11-28-39
Made	Revision	Appr'd

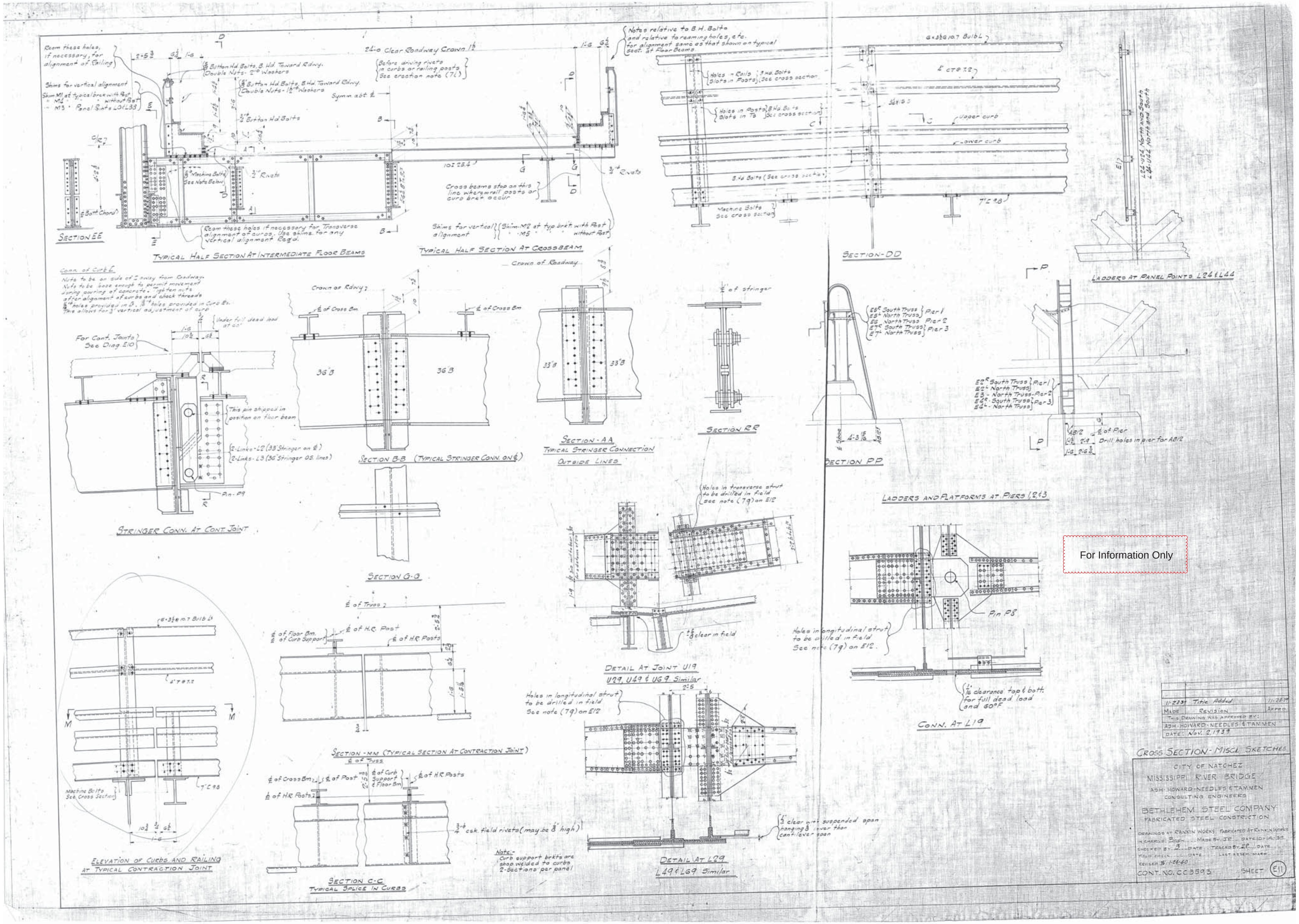
This drawing was approved by:
ASH- HOWARD - NEEDLES & TAMMEN
Date: Nov. 2, 1939

ERECTION DIAGRAM FOR
EXPANSION AND CONSTRUCTION JOINTS

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS

BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN
IN CHARGE Born MADE BY [illegible] DATE
CHECKED BY [illegible] DATE [illegible] TRACED BY J.P. DATE [illegible]
FIELD CHECK DATE LAST ASSEM. MARK
REVISED 8-1-24-40
CONT. NO. CC3593 SHEET E10



Cross Section - Misc. Sketches

City of Natchez
Mississippi River Bridge
Ash-Howard-Needles & Tammen
Consulting Engineers

Bethlehem Steel Company
Fabricated Steel Construction

Date: Nov. 2, 1939

Cont. No. CC3593 Sheet E11

GENERAL NOTES

① LIST OF DRAWINGS

DIAGRAMS

- E1A, E1 – Elevation of Bridge & Anchor bolt plan
- E2 to E9 – Truss erection diagrams
- E10 – Expansion & Contraction joints
- E11 – Cross Section – Miscl. sketches.
- E12 – General Erection Notes
- E13 – Platforms & Ladders for river Gauge at Pier #2
- E51 – Elevation of Approach Spans & Anchor boltplan
- E52 – Erect. diag. approach spans – simple spans
- E53 – " " " " – cantilever spans.

CONTRACT CC35931

TRUSS MEMBERS
DIVISION-A – PANELS 12 TO 38 INC.
- Bottom Chords – 1 to 13 Inc. – 36, 37
- Top Chords – 14 to 22 Inc. – 38, 39, 40
- Diagonals – 23 to 31 inc. – 35
- Verticals – 32 to 34 Inc.

TRUSS MEMBERS
DIVISION-B – PANELS 38 TO 63
- Bottom Chords 57 to 71 Inc.
- Top Chords – 41 to 44 Inc. 44A, 45 to 47 Inc. 51 to 56 Inc.
- Diagonals – 72 to 81 Inc. 83,
- Verticals – 82, 84 to 87 Inc., 50.

TRUSS MEMBERS
DIVISION-C – PANELS 0 TO 12
- Bottom Chords – 98 to 103 Inc.
- Top Chords – 91 to 97 Inc.
- Diagonals – 104, 105, 106
- Verticals – 107, 108, 109

TRUSS MEMBERS
DIVISION-D – PANELS 63 to 88
- Bottom Chords – 125 to 140 Inc.
- Top Chords – 111 to 124 Inc.
- Diagonals – 141 to 151 Inc.
- Verticals – 152 to 155 Inc.

CONTRACT CC35932

Truss Bracing
DIVISION-E – PANELS – 14 TO 60;
- Top chord bracing – 201, 202, 204, 205, 206,
- Top chord struts – 203, 207,
- Portal struts – 208, 209,
- Sway bracing – 211, 212
- Sway & Portal bracing – 213
- Portal – 214, 215
- Struts top of tower – 216
- Wind struts – 218, 228
- Bottom chord bracing – 219, 220, 221, 223 to 227 Inc., 230, 231

TRUSS BRACING
DIVISION-F – PANELS – 0 to 14 & 60 to 88
- Top chord bracing – 204, 205, 206
- Top chord struts – 207
- Portal struts – 208, 209, 210
- Sway bracing – 211, 212
- Sway & Portal bracing – 213
- Portal – 214, 215
- Struts top of tower – 217
- Wind struts – 218, 228
- Bottom chord bracing – 221, 222, 231 to 235 Inc., 229

CONTRACT CC35933

TRUSS FLOOR SYSTEM
DIVISION-E – PANELS 14 to 60
- Floor beams – 301 & 303 Inc. 305 to 310 Inc.
- Cross beams – 312
- Stringers – 313 to 319 Inc.

TRUSS FLOOR SYSTEM
DIVISION-F – PANELS 0 to 14; 60 to 88
- Floor beams – 303 to 309 Inc. 311
- Cross beams – 312
- Stringers – 314, 315, 320 to 327 Inc.

CONTRACT CE3593

DIVISION – E & F (Truss Span)
- Curbs – 411 to 416 Inc.

DIVISION G (Approach Spans)
- Curbs – 457 & 458

CONTRACT CC35934

DIVISION – E & F (Truss Span)
- Railing – 401
- Contraction joints – 402 – Ladders, etc. 403
- Expansion grating – 431

DIVISION G (Approach Spans)
- Brgs., railing, dams, etc., 451 to 456 Incl.

CONTRACT CC35935

- Bearings – 501, 502 (Truss Span)
- Links, pins, etc., 503, 504 (Truss Span)
- Bearings – 551 (Approach Spans)

CONTRACT CC35936

- Girders 651 to 658 (Approach Spans)
- Floor Beams 659 to 660 (Approach Spans)

CONTRACT CC3593X3

- Ladders, platforms, etc, for river gauge at Pier 2; 701, 702 & 703

② ANCHOR BOLTS

(a) Furnished by Bethlehem Steel Co. and set by others. See notes on sheets E1, E1A and E51 relative to setting same. Note that wind anchorage (shear frame) is to be set by substructure contractor.

(b) Holes are to be drilled in field to suit for swedge bolts anchoring ladders at piers 1, 2 & 3 – see diag. E11.

(c) See note on sheet E1 relative to filling space between anchor bolts and holes with babbit or zinc.

③ ERECTION

By Bethlehem Steel Co. – Pittsburgh District

④ FIELD PAINT

Furnished and applied by Bethlehem Steel Co.
First field coat – one coat of Brown
Second field coat – one coat of Alumimun

(a) 1 coat of touch up paint (approved shop paint) is to be applied to rivet heads or where abrasions occur in shop paint also to those surfaces (except contact surfaces) where iron oxide paint has been applied in the shop.

(b) Field paint need not be applied to top flanges of cross beams, floor beams, girders, stringers or to inside webs of curb channels, or to surfaces of contraction dams, expansion grating, etc., where concrete abuts.

(c) The first field coat has been applied in the shop to surfaces which will be inaccessible after erection. These surfaces can easily be identified by their color. The second field coat (aluminum) is to be applied shortly before erection of same. In general this condition exists around pin connected joints and expansion connections of curbs, railing, etc.

(d) No field paint is to be applied below the concrete floor until all concrete is in place and steel is cleaned from splash, etc.

(e) Setting drain pipe & tie rods in Pier Nº 1 Shown on dwg. E1A.

⑤ MISCELLANEOUS MATERIAL & WORK BY OTHERS

(a) Setting anchor bolts shown on sheets E1, E1A, E13 & E51.

(b) Setting wind anchorage shown on sheets E1 & E1A.

(c) Providing holes, etc. in steelwork for other trades (except those connections shown on design sheet M1 – Lighting diagram and details).

(d) Miscellaneous conduits, junction boxes, navigation lights, roadway lights, etc., shown on design sheet M1.

(e) Setting drain pipe & tie rods in Pier Nº 1 shown on dwg E1A.

⑥ FIELD CONNECTIONS

All field connections to be riveted except as listed below. Note that where bolted connections are used that threads are to be burred to prevent loosening of nuts.

(a) Top shoes to trusses at L0 and L88 – 1 15/16" turned bolts, driving fit and flat washers.

(b) Shoes to truss joints at L14, L34, L54 and L74 – 1 15/16" turned bolts, driving fit, thru chord angles, 7/8" rivets thru lateral plates.

(c) Top shoes to girders at Pier 6 – 1 15/16" turned bolts, driving fit and flat washers.

(d) Top shoes to girders at Piers and abutment, except Pier 6, turned bolts and flat washers.

(e) Panels are noted S or F on diagrams E2 to E9 Inc. "S" denotes "Sliding Connection" – "F" denotes "Fixed Connection". For those marked "S" the bottom lateral connection to stringers is to be made by 3/4" machine bolts in 13/16" holes. (for panels L2 to L5 incl., L6 to L9 incl., L10 to L17 incl., L18 to L19, L21 to L23 incl., L24 to L27 incl., L30 to L37 incl., L38 to L40 incl., L41 to L44 incl., L43 to L47 incl., L50 to L57 incl., L58 to L60 incl., L61 to L64 incl., L65 to L67 incl., L71 to L78 incl., L79 to L82 incl., L83 to L86 incl.) Connection in balance of panels, those marked "F", are to be riveted.

(f) Curb channels to curbs at splices – machine bolts, see cross section on sheets E11 and E52.

(g) 18" curb plate to curbs at splices – vertical portion of plate, button head bolts, horizontal portion of plate riveted – see cross section on sheets E11 and E52.

(h) Expansion or contraction dams to floor beams, cross beams, girders, cross frames, etc; machine bolts, use 1/4" washers where slotted holes occur. See drawing E10 and E52. For contraction dams also see note (o) for welding.

(i) Expansion grating to floor beams, cross beams, girders, etc., machine bolts. Use washers where slotted holes occur. See sketches on sheets E10 and E52.

(j) Railing to posts – button head machine bolts, double nuts and washers – 2" washers for angle rails and 1 1/2" washers for tee rails. Button heads to be on roadway side. Tighten nuts as much as possible, consistant with allowing movement of handrail.

(k) Pins to truss gussets at U19-29-49 & 69. Field welded – see drawing E1 (CC3650).

(l) Ladder connections shown on drawing E13 – Machine Bolts except connections to Truss – Field Riveted

FIELD CONNECTIONS (CONT'D.)

(m) Pin cap plates to pipe sleeves at U19-29-49 & 69. Field welded – see drawing E1 (CC3650)

(n) Mayari-R rivets are to be driven at certain points in bottom chords at L18 and L22. See detail drawings 6 and 8 on CC35931 or Bethlehem Erection Department's drawings ER115 and ER117. Rivet takeoff pages RA1 and 2, Summary MSR401.

(o) Shoes at Piers 1, 2, 3 and 4 to shear frames, 3/8" fillet continuous field weld after shoes are in final position. See drawings E1 and E1A.

(p) Contraction joints to floor beams and cross beams, tack welded after they are aligned, see drawing E10.

(q) Certain bracket connecting stringers to bottom laterals are bolted for shipment to web of stringers while stringers are used as falsework. They are to be field welded, probably before erection in final position. See instructions on drawings 20 and 21, CC36501 and drawings 320, 321, 322, 313, 316, CC35933.

⑦ SPECIAL ERECTION FEATURES

(a) For erection procedure see drawing ER2. For general plan of erection stages see drawing ER101.

For distribution of steel dead loads see drawings ER102.

For erection stages and loads see drawings ER103 and ER104.

For alterations to members and summary of erection stresses see drawings ER105 and ER106.

For erection deflections see sheets ER107 and ER108.

For division of steel into barge shipments see drawing ER9.

(b) Members should be erected so that marked end is in same relative position as shown on the plan. If on erection diagram the mark is shown at the center of the member the piece is symmetrical and can be turned end for end.

(c) Portions of falsework and grillages are to be used as members of permanent structure after they have served their purpose as falsework. Instructions for converting these members into permanent members are given on dwg 5, 6, 7, 10, 12, 13, 20 and 21 on Contract CC36501.

Erector will note that all members of permanent structure used temporarily as falsework, etc, have piece marks with suffix "E" as SD10E, M73-L74N (E) etc.

For falsework see diagrams E2, E201 & E202 (CC36501), also see Erection Department's drawings ER20, ER21, ER22, ER23, ER25, ER113, ER114, ER115, ER116, ER117, ER118, ER119, ER120, ER126, ER127, ER131, and ER132, ER133, ER135, ER136, ER137, for instructions relative to burning off brackets in field at L18, L20 or other various instructions.

Note that at various points plug rivets will have to be driven after temporary lateral plates, etc. have been removed.

(d) Truss verticals are marked ⊗ at low end on face toward L0.

(e) All diagonals are marked ⊗ at low end on upper face of member.

(f) Stringers have been fabricated with lengths conforming to distance between floor beams with all steel erected and span swung. Connections to floorbeams shall not be riveted until this stage of erection is reached.

(g) Lengths of lateral, portal and sway bracing.

(1) Where dead load stress in bridge member is tension the length of bracing conforms to shop length of bridge member.

(2) Where dead load stress in bridge member is compression the length of bracing conforms to length of bridge member for half the dead load stress.

(3) Connections to bracing should not be riveted until an erection condition is reached that will give fair holes in connections.

(h) Curbs and handrail have been detailed with lengths conforming to dimensions of structure under full dead load. Connections of curbs to cross beams, floor beams or brackets shall not be riveted until floor slabs are completed and curbs are aligned. Connections of railing posts to curb support brackets shall not be riveted until floor slabs are completed and railing is aligned. Curb channels, however, must be riveted before concrete is poured.

The tops of curbs or tops of handrails may vary from the required grades and elevations by not more than 1/2" in any 10'-0" of length.

SPECIAL ERECTION FEATURES (CONT'D)

(h cont'd) Vertical adjustment of curbs may be obtained by use of shims under curb support brackets. See cross section on dwgs. E11, E52 and E53. One 1/8" shim has been furnished for 10% of the number of connections. If erector requires more he is to advise (shims are detailed on sheets 416 and 458). Vertical adjustment of rail posts may be obtained by reaming holes in connection of post to curb support brackets.

The curbs and top angle of handrail shall be adjusted to lateral alignment in straight lines parallel to center line of roadway, departing there from not more than 1/8" in 20' of length for curbs or not more than 1/8" at any handrail post. Lateral adjustment of curbs may be obtained by reaming holes in connection of curb support to cross beam or floor beams. Lateral adjustment of railing posts may be obtained by reaming holes in connection of post to curb support brackets. See cross section on E11, E52 and E53.

Rivets have been furnished for normal size holes in normal lengths for above connections. If erector desires oversize rivets due to reaming, or longer rivets due to use of shims, he should so advise.

(i) Forward floor beam should be erected before bottom lateral bracing.

(j) Bottom lateral bracing should be erected before stringers.

(k) 12" channels on shear frame must be removed before shoes are placed at Piers 1, 2, 3 and 4. See section on drawing E1.

(l) See drawings ER124, E1A and (E3 – CC3650) for special condition in erecting shoes etc., at Pier Nº 1 (panel point L14). Note that shims are to be driven around shoes. Shoe is to be welded to shims and shims welded to shear frame, space between rollers filled with grout, etc. after shoes are in final position. Grouting around rollers is to be with such pressures or heads, and forced into the various groups of holes in such order as to insure complete filling of all spaces with grout, all as approved by the engineer. Note anchor bolt detail to be used after shoe is fixed. See sketch on drawing E1A.

(m) Bottom shoe at Piers 1, 2, 3, and 4 are to be partially filled with concrete, class 30 see drawings E1 and E1A.

(n) Portions of truss joints over upper shoe at panel points L14, L34, L54, and L74 are to be filled with concrete up to top of diaphragm on either side of panel point. Top of concrete to be sloped for drainage

(o) See diagram E1 (CC36501). This drawing shows temporary and permanent conditions at panel points U19, U29, U49 and U69.

U19	also shown on erection Dept's drawing	ER112
U29	" " " "	ER125
U49	" " " "	ER128-129
U69	" " " "	ER125

(1) Note welding to be done in field (Pins to gussets and cap plates to pipe sleeves)

(2) Note that certain rods are to be used in driving assembly and then used in temporary erected condition.

(3) Note that a total of 2 driving nut DC1 and 3 pilot nuts DN1 are furnished for driving all 10" pins at U19, U29, U49 and U69.

(4) Note that joints at U29 and U49 should probably be riveted to diagonals L8-U29 and L48-U49 respectively before erection of same.

(5) Note that temporary pins, links, etc, at U19 are to be removed after suspended span is swung and then pin hole covers, etc, are to be bolted in permanent position.

(6) Note that temporary links and temporary pins at U29 and U69 are to be removed after they have served their purpose and patch plates bolted in position.

(7) Note that miscellaneous erection links, jacking shoes, shims, etc, are to be removed at U49 after they have served their purpose. For certain field work at this point see Section H-H on E1 (3650). Cover plates CP1, CP2, CP3 are then to be riveted in proper position, see sheet E1, CC3650.

(p) Wind strut W52 must be erected before bottom laterals BL143, Panel L18 – L19.

(q) Holes are to be drilled in the field for connection of certain longitudinal struts at joints U19, U29, U49, U69, L19, L29, L49, and L69 as called for in sketches on diagram E11. Full size holes 15/16" are provided in upper members, four small holes 11/16" are provided in lower piece for bolting pieces together.

(r) Longitudinal strut TS45 at U19, U29, U49 and TS46 at U69 will have to be erected, temporarily, out of position until rivets are driven in connection of longitudinal struts TS43 or TS44 to transverse struts TS47, TS40 or TS41.

SPECIAL ERECTION FEATURES (CONT'D)

(s) Floor beams that occur at splices in bottom chord must be erected before next bottom chord section is erected.

(t) Erector should take care to turn struts in top chord, sway and portal bracing so that drain holes are in proper position for drainage.

(u) Stringers SG3E and SG3AE detailed on dwg 316 and S5BE & S5CE detailed on dwg 313 are furnished 4-0 longer than required in finished structure, for temporary use in falsework at L60 and later at L70. Erector is to burn off portions of stringer, cut flanges, etc and weld on brackets, etc., before erecting in final position between panel points L44 to L46. See detail drawings 313 and 316 for instructions.

(v) Refer to drawings 20 and 21 (CC36501). After stringers shown on these drawings have served their purpose as falsework grillages at F20, they shall be converted into permanent stringers for use in structure at L0 to 6, 72 to 80, 86 to 88, plugging certain holes with rivets, welding bottom lateral connections, etc., as shown on detail drawings 320 and 321, CC35933.

(w) Refer to drawing 322. Double length stringers have been furnished for use as grillage at F18. After they have served their purpose erector will convert same into permanent stringers, welding bottom lateral connections, etc in place. See instructions on detail drawings 322, CC 35933.

(x) Gussets at U14, U54, U74 and U12 have been bolted for shipment at request of erection department.

(y) Holes have been provided in top chord for B, C, D and E derricks, panel points U20 to U54 incl. at locations indicated on drawings ER5 and ER6. Plug rivets shall be driven after traveler has been removed. Holes also have been provided in certain lateral plates for rod tie down. In certain cases these holes have been located on a slight stagger so that bottom strut of tie down will clear gusset plate at vertical. In certain cases the bottom strut of tie down will rest against a sloping edge of gusset plate. In these cases this strut will probably have to be lashed with cable to prevent slipping.

(z) Sheet ER10 and diagram E3 (CC36501) shows the high level floor in truss over Piers 2 & 3. After members of same have served their purpose and have been removed, plug rivets are to be driven in verticals where connections have been provided.

(aa) Special conditions exist at L19, L29, L49 and L69. See special notes to erector on erection department's drawings ER118 and ER130. Various members cut in field, certain splice plates to be removed, etc. General arrangement of jacks, etc. at L49 is shown, etc. Note especially instructions on drawing ER118 before cutting chord at L19. See note at L29 relative to bolting up floor beam connections above chord before moving traveler. Also note especially instructions on sheet ER130 relative to jacking at U49 and L49.

The note relative to jacking at U49 and L49 is also shown on erection diagram E5. It has been copied from that shown on drawing ER130.

Erector to also note that a loose diaphragm is shipped in position at L49A. It will have to be removed before entering jack at this point.

(ab) See drawings E3 and ER134 showing information for temporary erection ties in trusses. Note that certain members are interchangeable and are used over again in various positions. Note that portion of certain gussets will have to be burned off and others removed after they have served their purpose as connections for these ties.

(ac) Erector should investigate each joint when driving to discover if certain web rivets should be driven before flange rivets or if certain flange rivets should be driven before web rivets. Also, note that certain rivets in web of both top and bottom chords will have to be driven from inside of chords due to interference of top or bottom laterals.

(ad) Top lateral plates in general are shop riveted to chords. Certain beveled fills on top chord struts are left loose to allow struts to be entered between lateral plates.

(ae) Reinforcing trusses and bars in roadway slab may have to be moved slightly to avoid fouling connections for contraction dams.

(af) Expansion castings at L29, L49 & L69 shall be so adjusted vertically that under normal conditions (full dead load at 60°F) the top of the casting on the suspended span will be 1/8" lower than the top of the casting on the cantilever span, and due allowance shall be made for any variation from the normal condition at time of setting and adjusting the castings. Also, transversely, the castings shall be so set that side clearance between mating teeth will not be less than 3/8" for 1/2" longitudinal tooth clearance.

SPECIAL ERECTION FEATURES (CONT'D)

(ag) Field rivets in top flg. of girder splice for span #6 must be flattened to 3/8" high on top side. See note on sheet #E53.

(ah) Holes have been provided in certain top chords & diagonals for hitch angles. Erector shall drive plug rivets after hitch angles have served their purpose.

(ai) Portion of backwall at east abutment and west abutment is to be poured by Beth. Steel Co. See diagram E10 and E52.

(aj) Erector should burr threads on Pins at links, etc.

(ak) Continuous girders for approach spans have been shop assembled and match marked. See diagram E53.

(al) Certain holes at panel point U87 in connection of flange splice plates of end post U87-L88 to top chord member U85-U87 are to be reamed in the field by erector. Holes in member have been subpunched 13/16" in shop and are to be reamed to 15/16" by erector after members are assembled. See detail dwgs 123 & 124.

(am) See Erection Dept. dwgs ER136 and ER137 for lower falsework at L7, L60, L64, L70 & L82. Note that certain permanent stringers are used as grillages

1/9/40	(l) added under field connections	
MADE	REVISION	APPR'D.

THIS DRAWING WAS APPROVED BY:
ASH-HOWARD-NEEDLES & TAMMEN
DATE: Nov. 28, 1939

GENERAL ERECTION NOTES

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH-HOWARD-NEEDLES & TAMMEN
CONSULTING ENGINEERS

BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS | FABRICATED AT RANKIN WORKS
IN CHARGE BORN | MADE BY V.R.B. DATE 10/7/39
CHECKED BY [illegible] DATE [illegible] | TRACED BY J.P.O.N. 10/3/39
FIELD CHECK DATE | LAST ASSEM. MARK
REVISED J.P. 1-9-40, 3-7-40, 8-1-24-40
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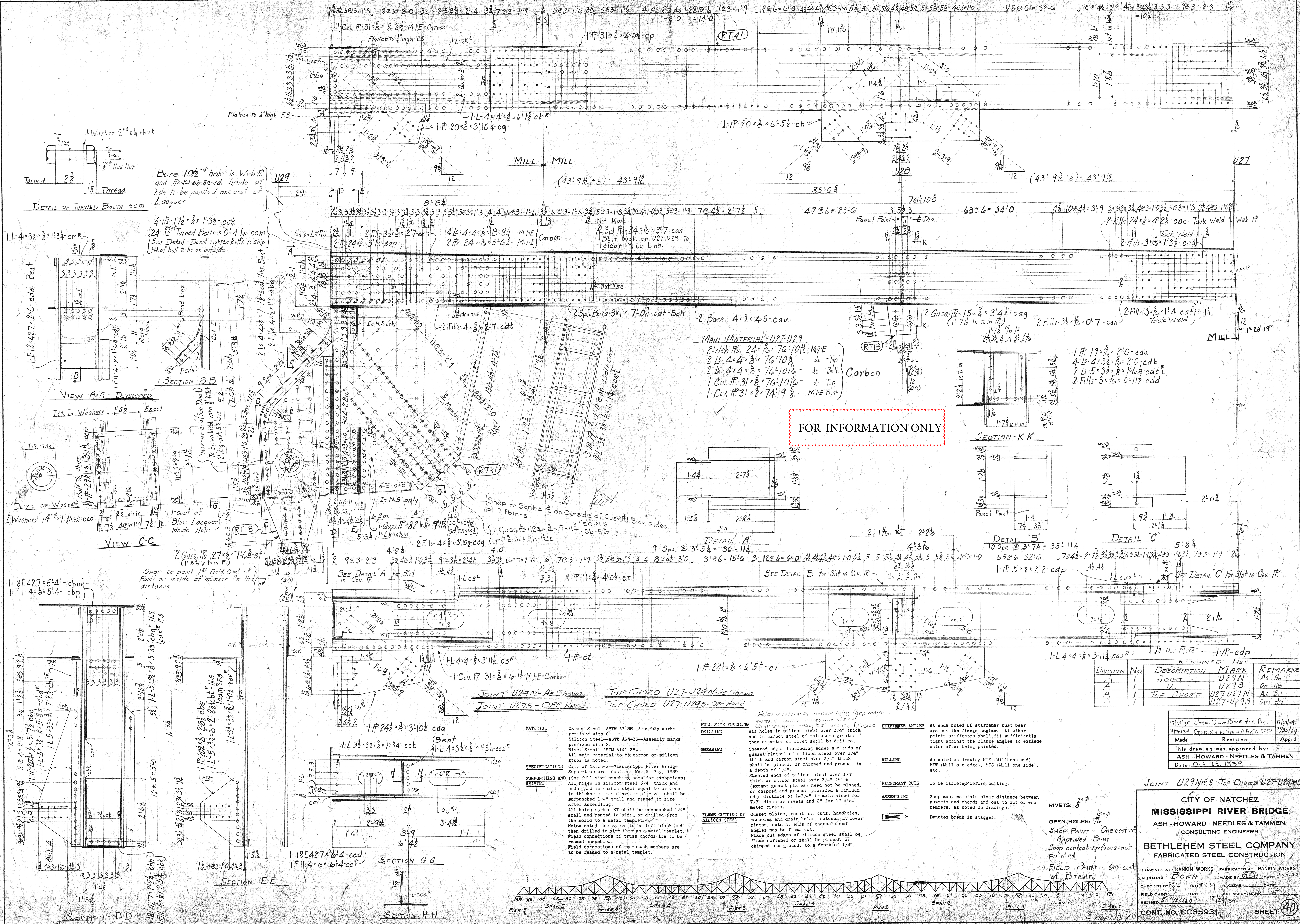

Holes in Lateral Pls., except holes thru main material, bottom plates and web of Diaphragms may be punched full size

MATERIAL	Carbon Steel--ASTM A7-36--Assembly marks prefixed with C. Silicon Steel--ASTM A94-36--Assembly marks prefixed with S. Rivet Steel--ASTM A141-36. All main material to be carbon or silicon steel as noted.
SPECIFICATIONS	City of Natchez--Mississippi River Bridge Superstructure--Contract No. 5--May, 1939.
SUBPUNCHING AND REAMING	(See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling. All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet. Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet. Field connections of truss chords are to be reamed assembled. Field connections of truss web members are to be reamed to a metal templet.
FULL SIZE PUNCHING DRILLING	All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.
SHEARING	Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4". Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.
FLAME CUTTING OF SILICON STEEL	Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut. Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".
STIFFENER ANGLES	At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.
MILLING	As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.
REENTRANT CUTS	To be filleted before cutting.
ASSEMBLING	Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.
⊠ :-	Denotes break in stagger.

RIVETS: 7/8" φ

OPEN HOLES: 15/16" φ

Shop Paint :- One coat of Approved Paint. Shop contact surfaces not painted.

Field Paint :- One coat of Brown.

REQUIRED LIST

Division	No	Description	Mark	Remarks
A	1	Joint	U29N	As. Sh
A	1	Do.	U29S	Op. Hp
A	1	Top Chord	U27-U29N	As. Sh
A	1		U27-U29S	Op. Hp

Made	Revision	Appr'd
12/29/39	Chgd. Diam. Bore for Pin.	12/29/39
11/30/39	Ctsk. Riv. in View AA, CC, DD	11/30/39

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct. 25, 1939

Joint U29N&S - Top Chord U27-U29N&S

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS

BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

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REVISED R 11/30/39 - 12/29/39
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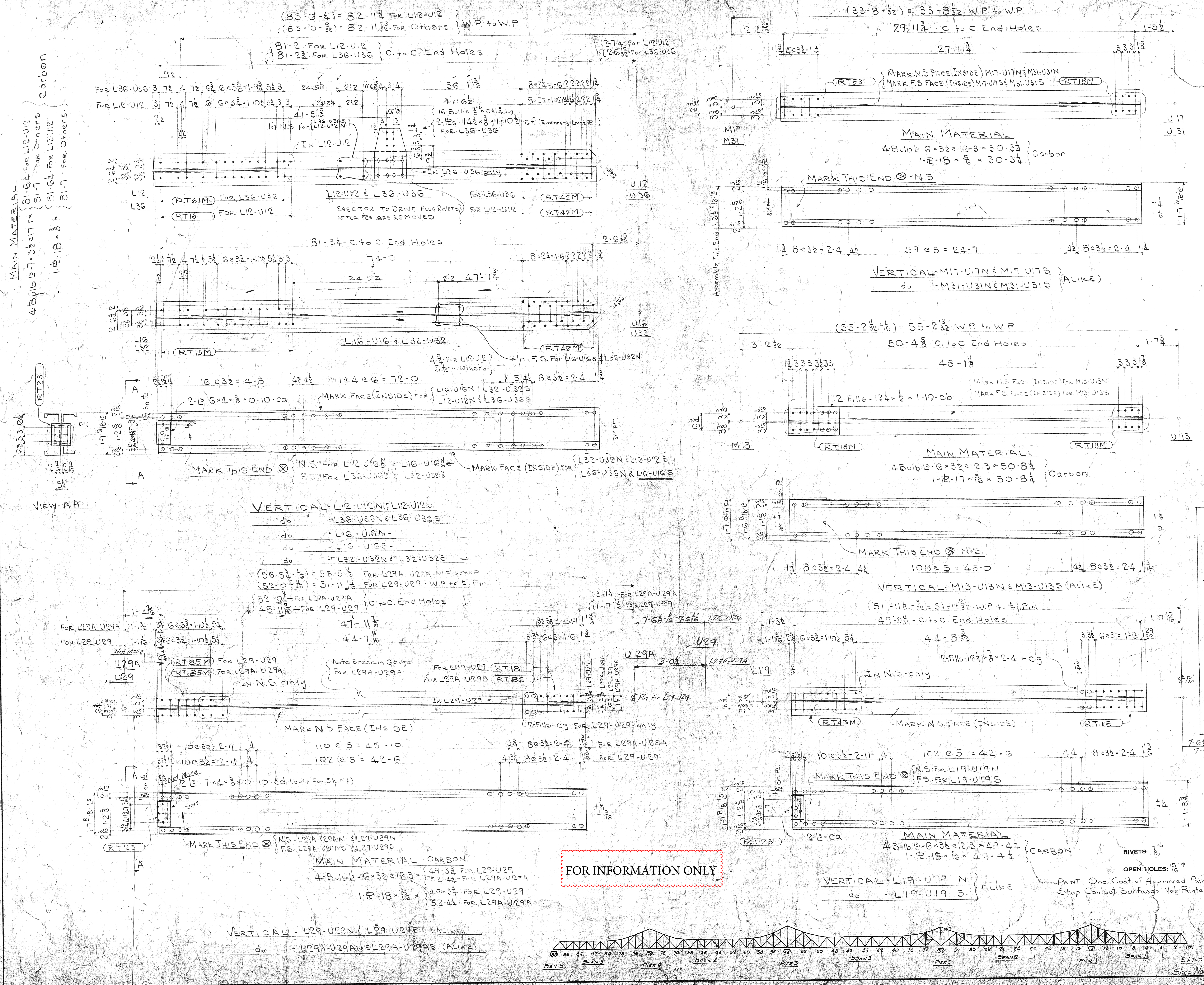


MATERIAL — Carbon Steel--ASTM A7-36--Assembly marks prefixed with C.
Silicon Steel--ASTM A94-36--Assembly marks prefixed with S.
Rivet Steel--ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS — City of Natchez--Mississippi River Bridge Superstructure--Contract No. 5--May, 1939.

SUBPUNCHING AND REAMING — (See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet.
Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING — None

DRILLING — All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING — Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL — Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut.
Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES — At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING — As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS — To be filleted before cutting.

ASSEMBLING — Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

:- Denotes break in stagger.

REQUIRED LIST — DIVISION - A

No	Description	Mark	Remark
1	VERTICAL	L12-U12N	—
1	do	L12-U12S	—
1	do	L36-U36N	—
1	do	L36-U36S	—
1	do	L16-U16N	—
1	do	L16-U16S	—
1	do	L32-U32N	—
1	do	L32-U32S	—
1	do	M17-U17N	ALIKE
1	do	M17-U17S	ALIKE
1	do	M31-U31N	ALIKE
1	do	M31-U31S	ALIKE
1	do	M13-U13N	ALIKE
1	do	M13-U13S	ALIKE
1	do	L19-U19N	ALIKE
1	do	L19-U19S	ALIKE
1	do	L29-U29N	ALIKE
1	do	L29-U29S	ALIKE
1	do	L29A-U29AN	ALIKE
1	do	L29A-U29AS	ALIKE

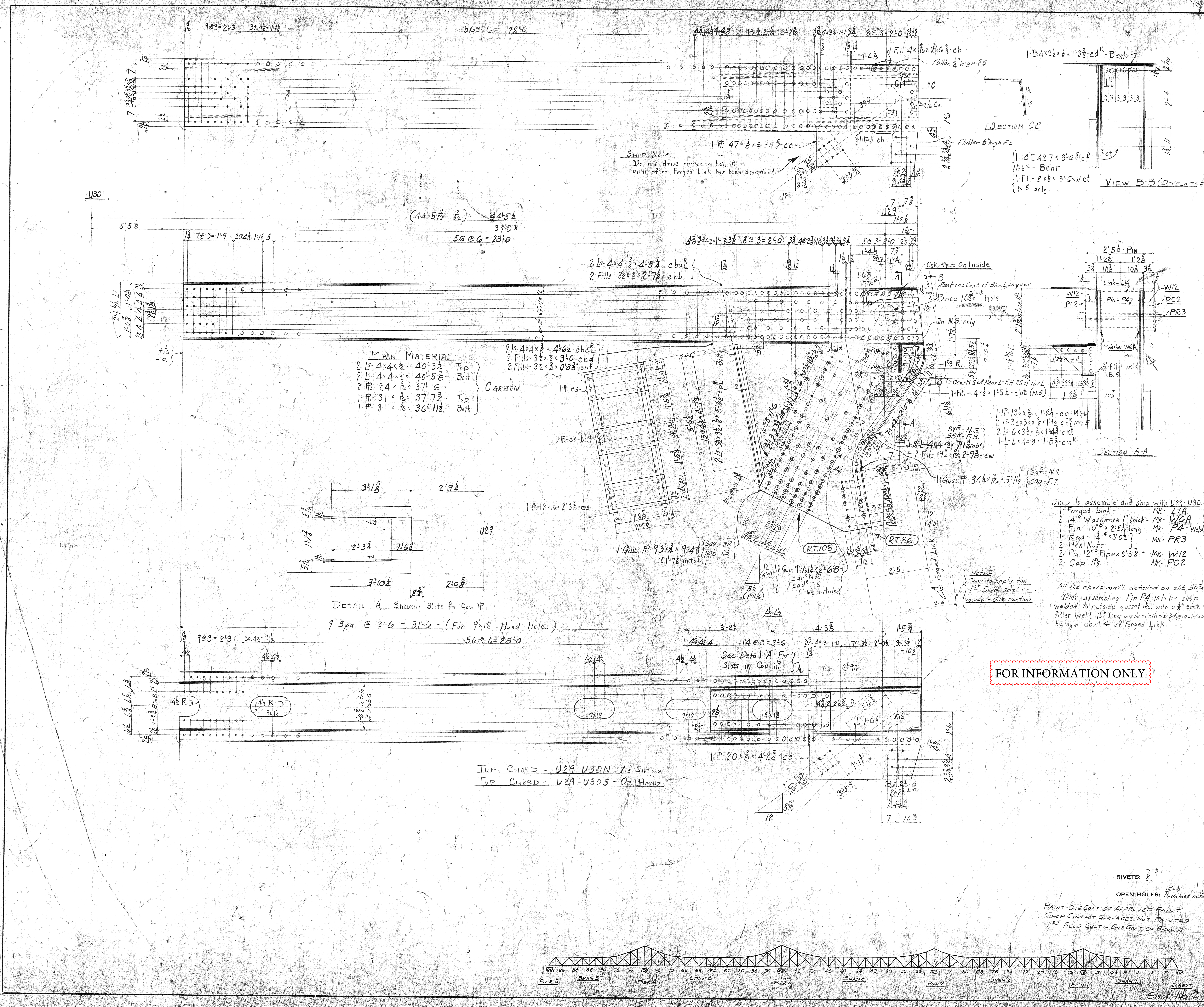
Made	Revision	Appr'd
9-21-39	TOOK OUT HOLES FOR HI LEVEL FL. FROM L16-U16	9-21-39
Aug-24/39	Holes add Hi. Level Fl. For L16-U16; Strut Conn. added - L36-U36; L29-U29, L29A-U29A & L19-U19 - added	Aug 28/39

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: AUG-22-1939

VERTICALS

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE BORN MADE BY JV DATE 7-17-39
CHECKED BY RL HAG DATE 8-1-39 8-24-39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK
REVISED (9-21) (10-5)
CONT. NO. CC3593 SHEET 34



REQUIRED LIST				
Division	No.	Description	Mark	Remarks
A	1	Top Chord	U29-U30N	As Sh.
A	1	Do	U29-U30S	Op. Hd.

Made	Revision	Appr'd
12/29/39	Chgd. Diam. Bore for Pin	12/29/39
11/30/39	CTSK. RIV. IN VIEW BB	11/30/39

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: September 20, 1939

Top Chord - U29 - U30

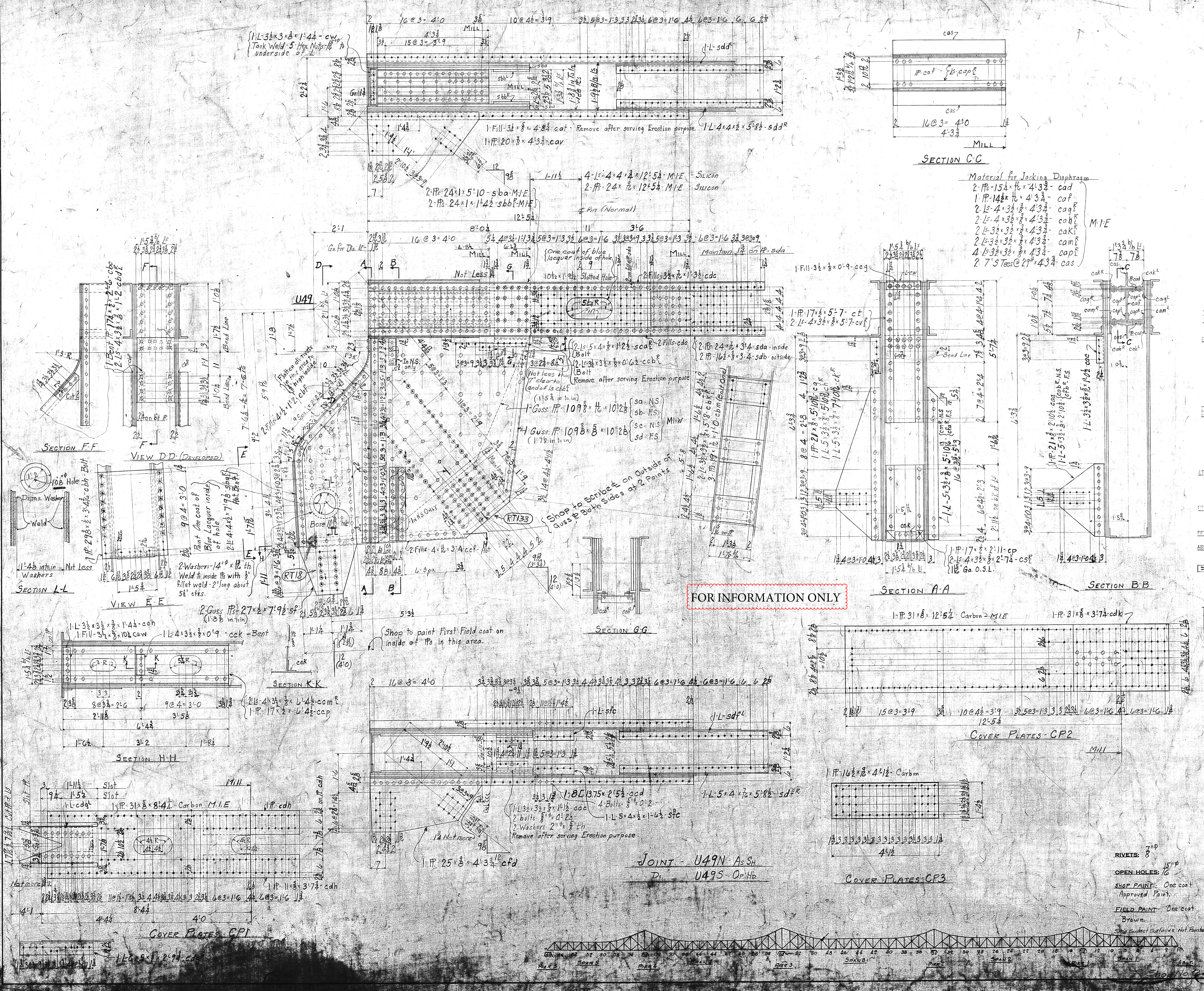
RIVETS: ⅞"
OPEN HOLES: 15/16" Unless noted

Paint - One Coat of Approved Paint
Shop Contact Surfaces Not Painted
1st Field Coat - One Coat of Brown

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY REW DATE
CHECKED BY LGM DATE 8/30/39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK Cbf
REVISED (9-19) P 11/30/39 12/29/39
CONT. NO. CC35931 SHEET 39

Shop No. 2



FOR INFORMATION ONLY

MATERIAL — Carbon Steel--ASTM A7-36--Assembly marks prefixed with C.
Silicon Steel--ASTM A94-36--Assembly marks prefixed with S.
Rivet Steel--ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS — City of Natchez--Mississippi River Bridge Superstructure--Contract No. 5--May, 1939.

SUBPUNCHING AND REAMING — (See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet.
Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

Holes in carbon steel Lateral Plates except thru main material, holes in Web of Diaphragms and batten plates may be punched fullsize.

FULL SIZE PUNCHING — All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING — Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF STEEL — Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and [illegible] may be flame cut.
[illegible] of silicon steel shall be [illegible] planed, or [illegible], to a depth of 1/4".

STIFFENER ANGLES — At ends noted [illegible] stiffener must bear [illegible] flange [illegible] stiffeners shall [illegible] tly [illegible] angles to exclude water after being painted.

MILLING — As noted on drawing [illegible] (Mill one end) MIW (Mill one edge), [illegible] (Mill one side), etc.

REENTRANT CUTS — To be filleted before cutting.

ASSEMBLING — Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

[symbol] :- Denotes break in stagger.

Division B

Required List

No	Description	Mark	Remarks
1	Joint	U49N	As Sh.
1	Do	U49S	Op. Hd.
2	Cover Plates	CP1	
2	Do	CP2	
4	Do	CP3	

Made	Revision	Appr'd
12/29/39	Chgd. Diam. Bore for Pin	
11/30/39	Flattened additional riv. at link in web view. Ctsk. riv. in view A	11/30/39 A.D.D.F.E.

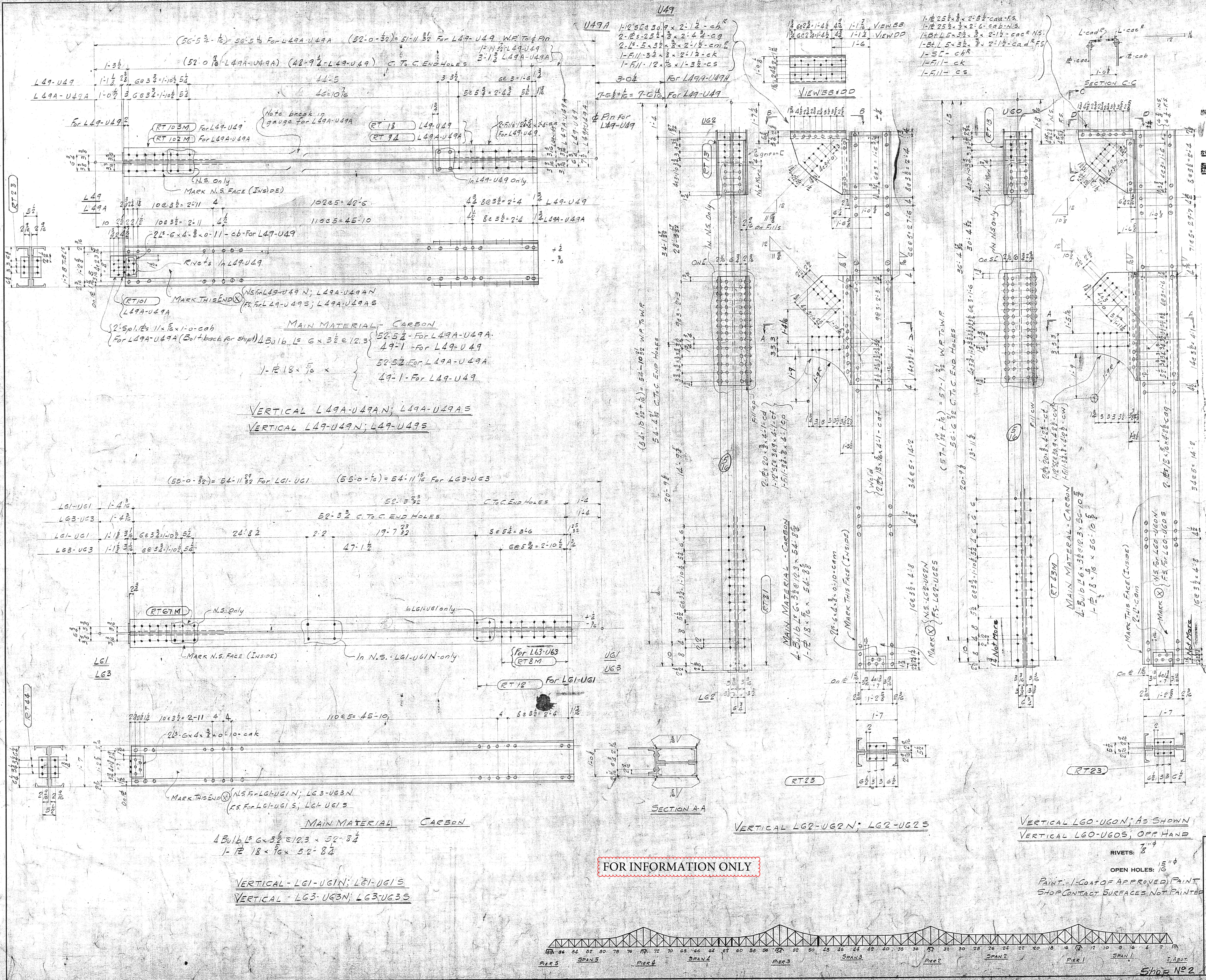
This drawing was approved by: ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct 9, 1939

Rivets: 7/8" ⌀
Open Holes: 15/16" ⌀
Shop Paint: One coat Approved Paint.
Field Paint: One coat Brown.
Shop Contact Surfaces Not Painted

Joint U49 & Cover Plates

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

Drawings at: Rankin Works — Fabricated at: Rankin Works
In Charge: Born — Made by: [illegible] — Date:
Checked by: RL — Date: 9-28-39 — Traced by: — Date:
Field Check: — Date: — Last Assem. Mark:
Revised: 11/30/39, 12/29/39
CONT. NO. CC35931 — SHEET 44



MATERIAL — Carbon Steel—ASTM A7-36—Assembly marks prefixed with C. Silicon Steel—ASTM A94-36—Assembly marks prefixed with S. Rivet Steel - ASTM A141-36. All main material to be carbon or silicon steel as noted.

SPECIFICATIONS — City of Natchez-Mississippi River Bridge Superstructure—Contract No. 5 May, 1939.

SUBPUNCHING AND REAMING — (See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling. All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet. Holes noted thus 0 are to be left blank and then drilled to size through a metal templet. Field connections of truss chords are to be reamed assembled. Field connections of truss web members are to be reamed to a metal templet.

Bracing connections, except holes thru main material, may be punched full size

FULL SIZE PUNCHING — All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING — Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4". Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL — Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut. Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES — At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING — As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS — To be filleted before cutting.

ASSEMBLING — Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

Denotes break in stagger.

REQUIRED LIST

	No	Description	Mark	Remarks
DIVISION "B"	1	VERTICALS	L49-U49N	ALIKE
	1	Do	L49-U49S	
	1	Do	L49A-U49AN	ALIKE
	1	Do	L49A-U49AS	
	1	Do	L63-U63N	ALIKE
	1	Do	L63-U63S	
	1	Do	L61-U61N	ALIKE
	1	Do	L61-U61S	
	1	Do	L62-U62N	ALIKE
	1	Do	L62-U62S	
	1	Do	L60-U60N	AS SHOWN
	1	Do	L60-U60S	OPP HAND

Made	Revision	Appr'd

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct. 19, 1939

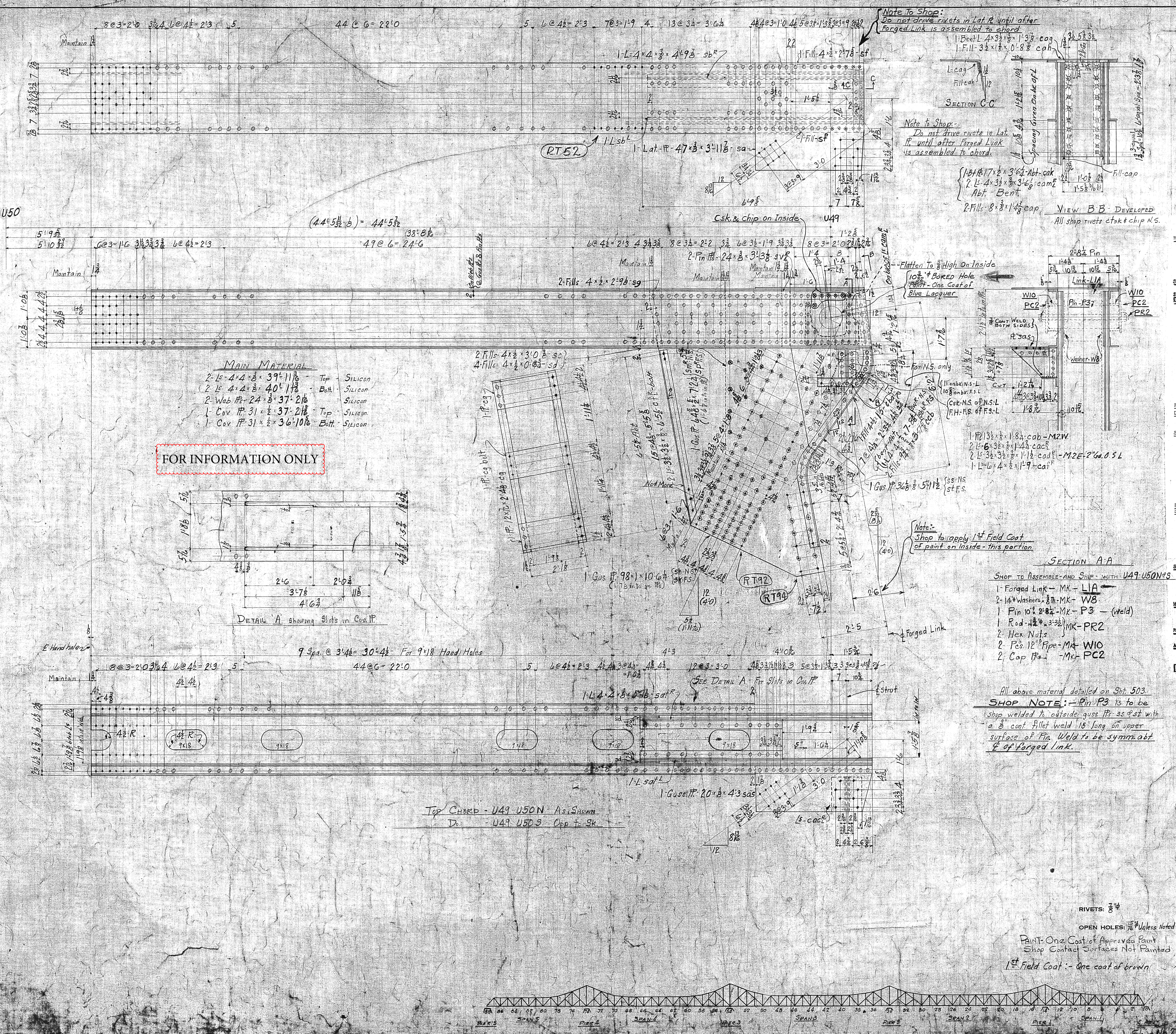
RIVETS: 7/8"φ
OPEN HOLES: 15/16"φ
PAINT - 1 COAT OF APPROVED PAINT
SHOP CONTACT SURFACES NOT PAINTED

FOR INFORMATION ONLY

VERTICALS

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY J.P. DATE 9/29
CHECKED BY J.V. DATE 10-12-39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK
REVISED
CONT. NO. CC35931 SHEET 82



MATERIAL — Carbon Steel—ASTM A7-36—Assembly marks prefixed with C.
Silicon Steel—ASTM A94-36—Assembly marks prefixed with S.
Rivet Steel—ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS — City of Natchez—Mississippi River Bridge Superstructure—Contract No. 5—May, 1939.

SUBPUNCHING AND REAMING — (See full size punching note for exceptions)
All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet.
Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING — Carbon Steel Lateral Plates & Web of Diaphragms may be punched Full Size

DRILLING — All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING — Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL — Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut.
Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES — At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING — As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS — To be filleted before cutting.

ASSEMBLING — Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

Denotes break in stagger.

REQUIRED LIST

Division	No.	Description	Mark	Remarks
B	1	Top Chord	U49-U50N	As Sh.
B	1	Do	U49-U50S	Op. Hd.

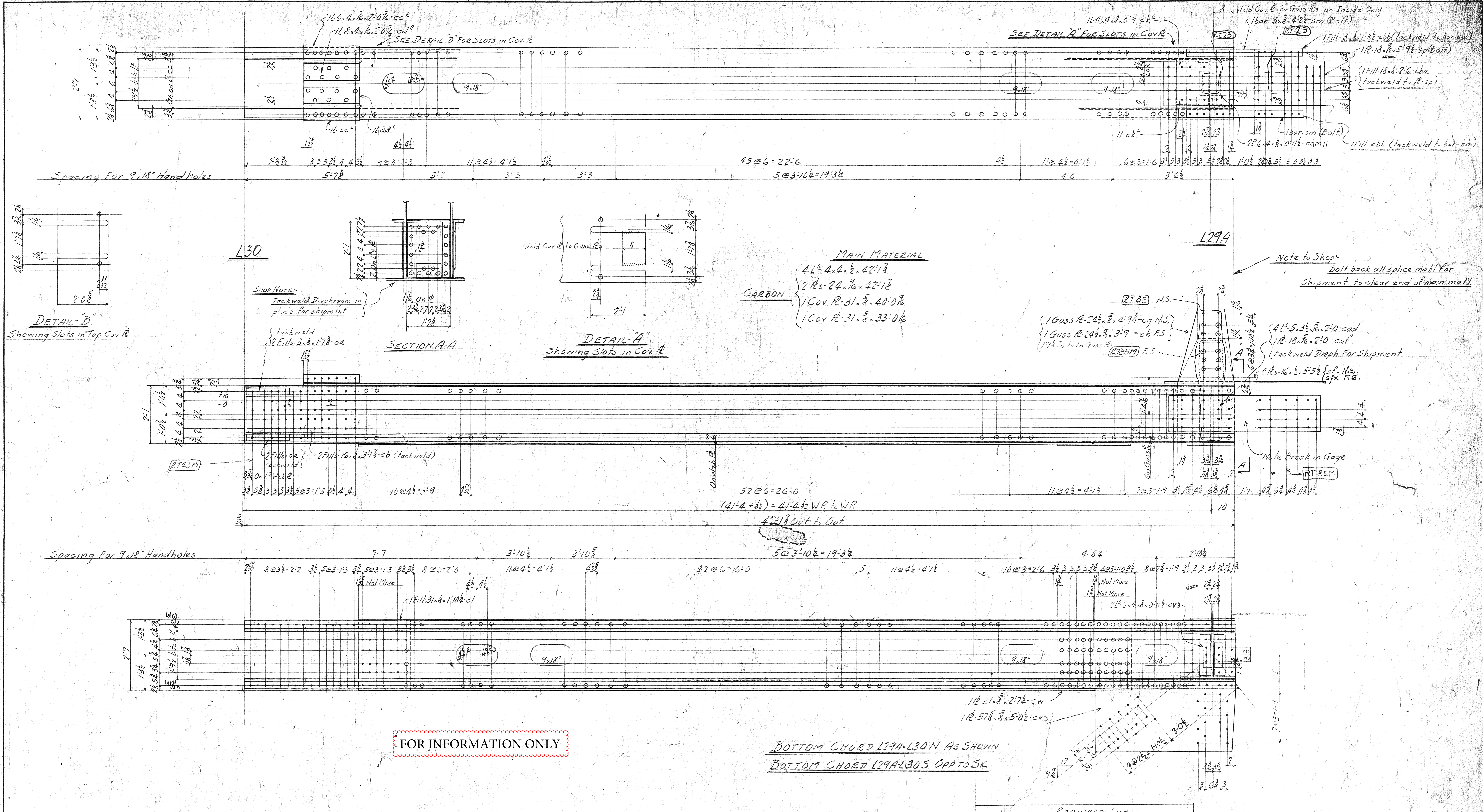
Made	Revision	Appr'd
12/19/39	Chgd. Diam. Bore for Pin	12/19/39
11/30/39	Ctsk Rivets In Sect BB	11/30/39

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: September 1, 1939

TOP CHORD U49-U50

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY RCD DATE
CHECKED BY LGM DATE 8/22/39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK
REVISED LGM 11/30/39 12/19/39
CONT. NO. CC35931 SHEET 43



FOR INFORMATION ONLY

MATERIAL
Carbon Steel--ASTM A7-36--Assembly marks prefixed with C.
Silicon Steel--ASTM A94-36--Assembly marks prefixed with S.
Rivet Steel--ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS
City of Natchez--Mississippi River Bridge Superstructure--Contract No. 5--May, 1939.

SUBPUNCHING AND REAMING
(See full size punching note for exceptions)
All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet.
Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING
Carbon Steel Lateral Plates & Web of Diaphragms may be punched Full Size

DRILLING
All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING
Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL
Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut.
Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES
At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING
As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS
To be filleted before cutting.

ASSEMBLING
Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

:- Denotes break in stagger.

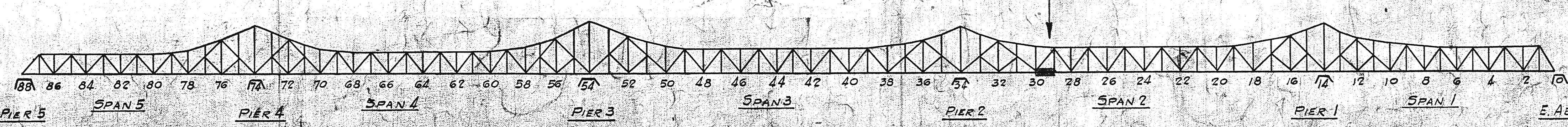
Division	Required List			
	Nº	Description	Mark	Remark
A	1	Bott. Chord	L29A-L30N	As Sh.
A	1	do	L29A-L30S	Opp. Hd.

Made	Revision	Appr'd
11-14-39	Spl. Pl. removed at Bottom Flg. L29A end. Fills added at top flange L29A end	11-14-39

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: September 27, 1939

RIVETS: 7/8 ϕ
OPEN HOLES: 15/16 ϕ

Paint: One Coat of Approved Paint
Shop Contact Surfaces Not Painted



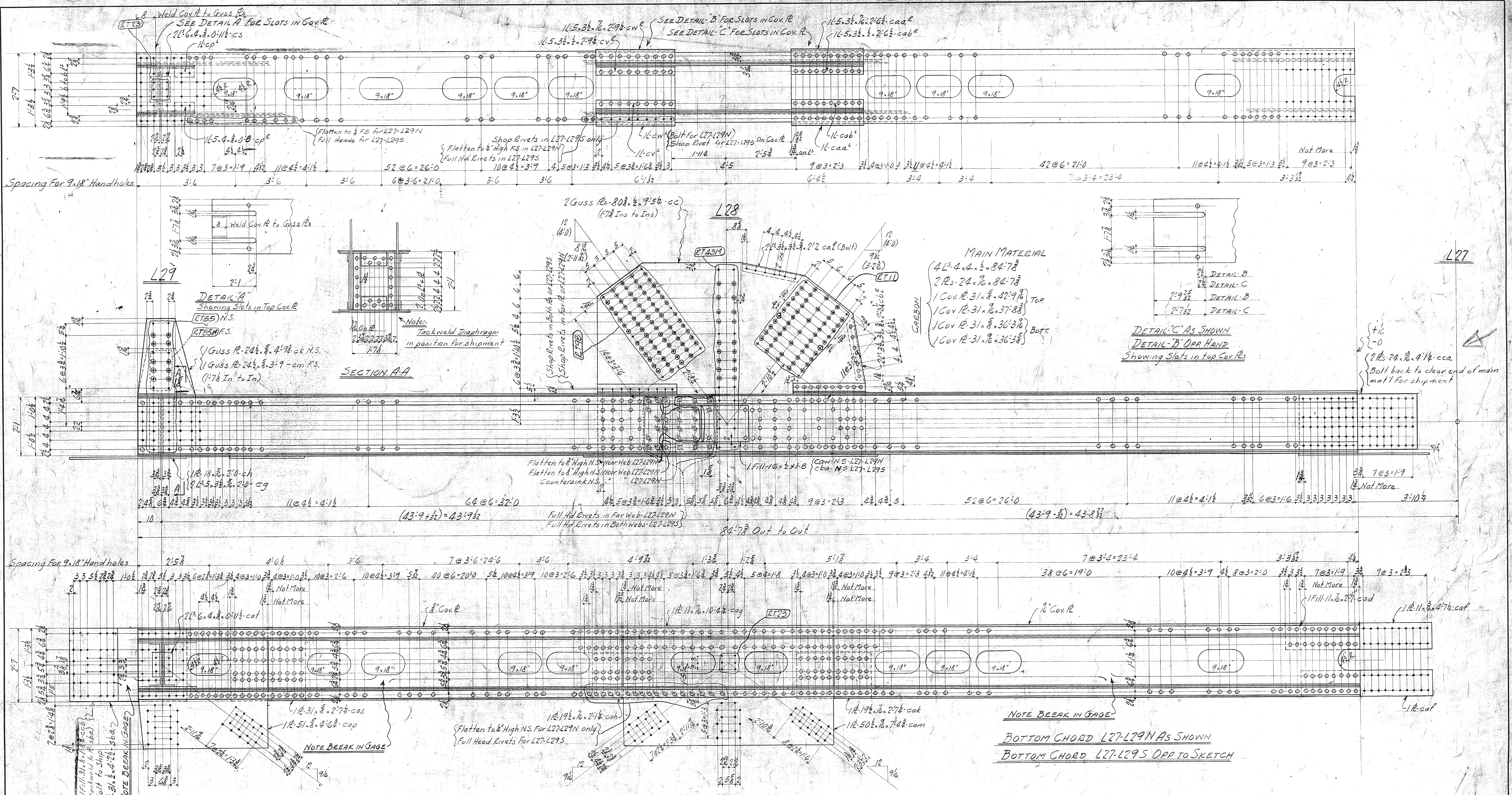
Shop #2

BOTTOM CHORDS L29A-L30

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS

BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY Hon DATE 8-24-39
CHECKED BY [illegible] DATE 8/30/39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK 66
REVISED
CONT. NO. CC35931 SHEET 7



FOR INFORMATION ONLY

MATERIAL Carbon Steel—ASTM A7-36—Assembly marks prefixed with C. Silicon Steel—ASTM A94-36—Assembly marks prefixed with S. Rivet Steel—ASTM A141-36. All main material to be carbon or silicon steel as noted.

SPECIFICATIONS City of Natchez—Mississippi River Bridge Superstructure—Contract No. 5—May, 1939.

SUBPUNCHING AND REAMING (See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling. All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet. Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet. Field connections of truss chords are to be reamed assembled. Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING Carbon Steel Lateral Pls & Web of Diaphragms may be punched Full Size.

DRILLING All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4". Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut. Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS To be filleted before cutting.

ASSEMBLING Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

:- Denotes break in stagger.

REQUIRED LIST

Division	No	Description	Mark	Remark
A	1	Bott. Chord	L27-L29N	As Sh.
A	1	do	L27-L29S	Opp Hd.

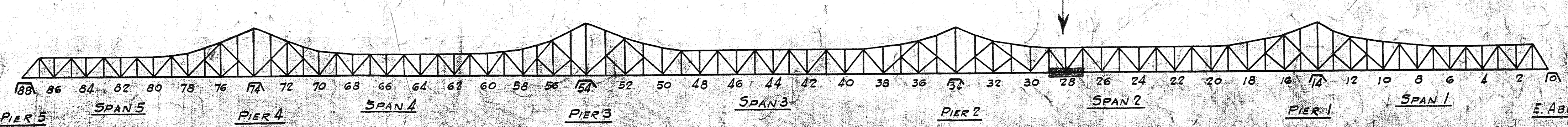
Made	Revision	Appr'd
11-14-39	Web Spl. added at L27 end. Fills added on Bott. Flg Spl Pls at L29 end.	11-14-39

This drawing was approved by: ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct 3, 1939

RIVETS: 7/8 ⌀

OPEN HOLES: 15/16 ⌀

Paint- One Coat of Approved Paint
Shop Contact Surfaces Not Painted



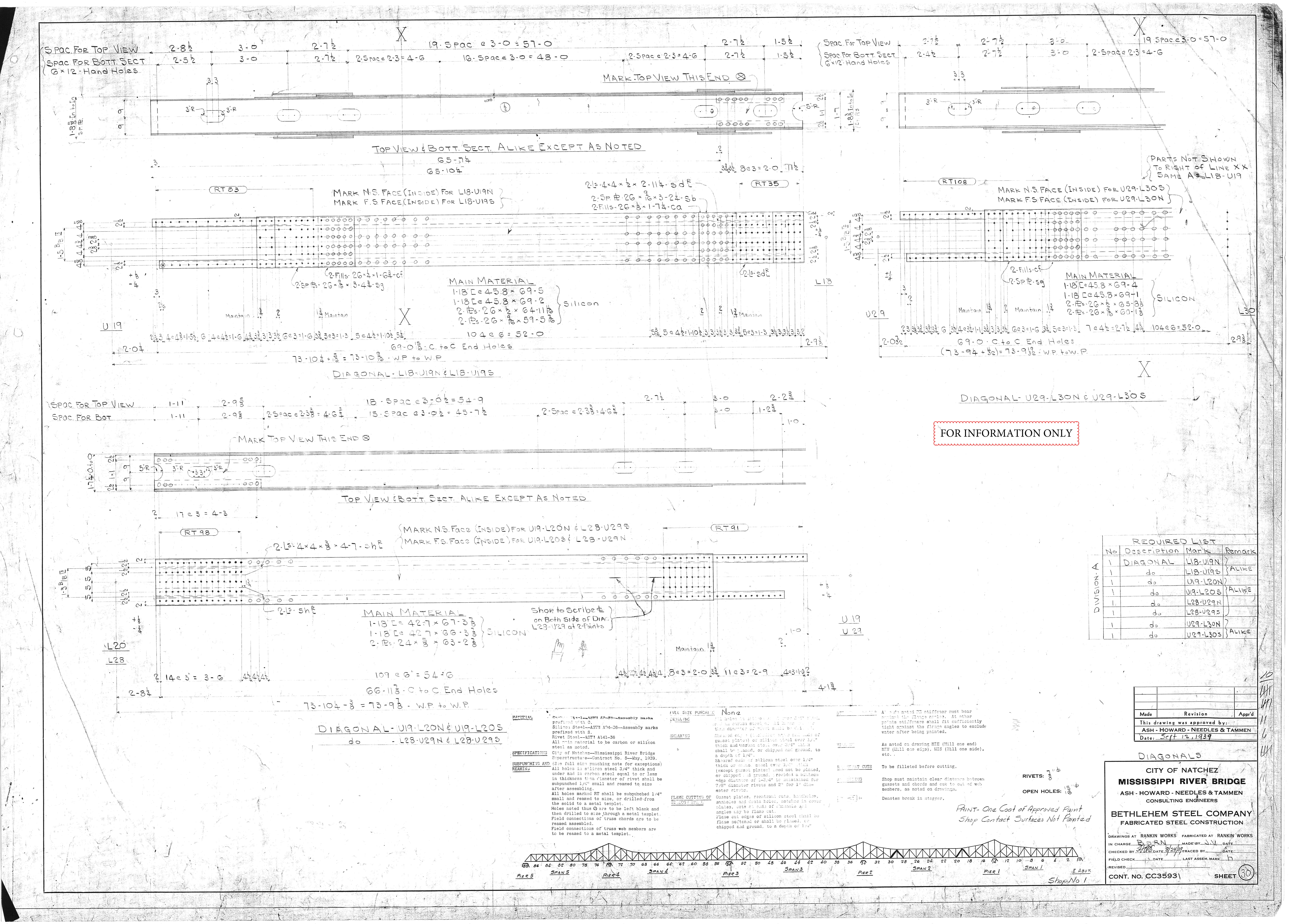
Shop No 2

BOTTOM CHORDS L27-L29

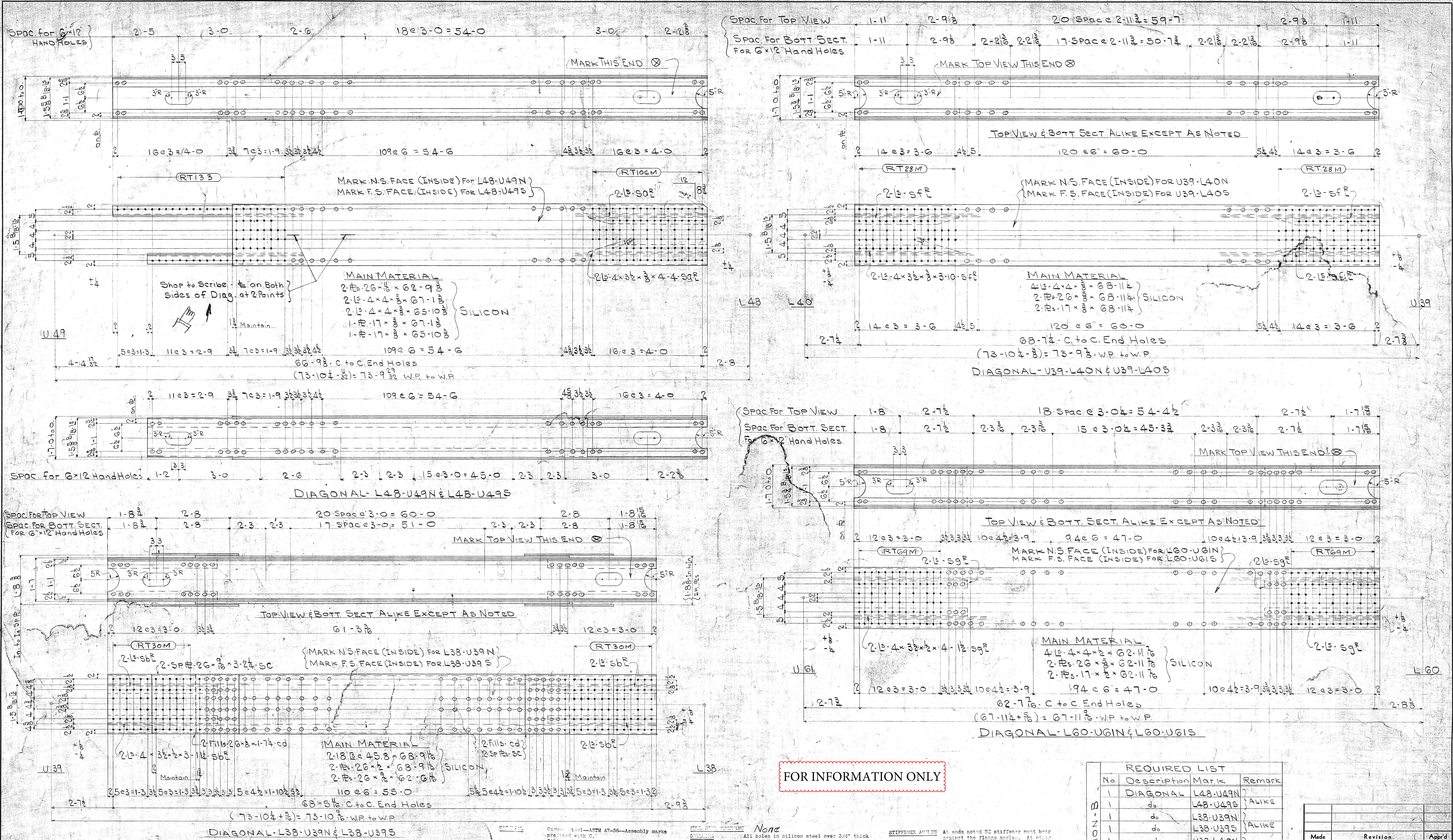
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY Hen DATE 9-1-39
CHECKED BY [illegible] DATE 9/13/39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK Cb
REVISED

CONT. NO. CC35931 SHEET 37



Spac For Top View
Spac For Bott Sect
6×12 Hand Holes
19 Spac e 3-0 = 57-0
16 Space 3-0 = 48-0
Mark Top View This End
Top View & Bott. Sect. Alike Except As Noted
RT 83
RT 35
RT 108
Mark N.S. Face (Inside) For L18-U19N
Mark F.S Face (Inside) For L18-U19S
Mark N.S. Face (Inside) For U29-L30S
Mark F.S Face (Inside) For U29-L30N
Parts Not Shown To Right of Line XX Same As L18-U19
Main Material
1-18 [e 45.8 × 69-5
1-18 [e 45.8 × 69-2
Silicon
104 e 6 = 52-0
69-0 3/8 C. to C End Holes
73-10 1/4 + 1/8 = 73-10 3/8 W.P. to W.P.
Diagonal - L18-U19N & L18-U19S
Diagonal - U29-L30N & U29-L30S
18-Spac e 3-0 1/2 = 54-9
15-Spac e 3-0 1/2 = 45-7 1/2
Mark Top View This End
Top View & Bott Sect Alike Except As Noted
RT 98
RT 91
Mark N.S. Face (Inside) For U19-L20N & L28-U29S
Mark F.S. Face (Inside) For U19-L20S & L28-U29N
Main Material
1-18 [e 42.7 × 67-3 3/8
1-18 [e 42.7 × 66-3 3/8
2-Ps 24 × 3/8 × 63-2 3/8
Silicon
Shop to Scribe ℄ on Both Side of Dia. L28-U29 at 2 Points
107 e 6 = 54-6
66-11 3/8 C to C End Holes
73-10 1/4 - 3/8 = 73-9 7/8 W.P. to W.P.
Diagonal - U19-L20N & U19-L20S
do - L28-U29N & L28-U29S
Required List
No | Description | Mark | Remarks
1 | Diagonal | L18-U19N | Alike
1 | do | L18-U19S |
1 | do | U19-L20N | Alike
1 | do | U19-L20S |
1 | do | L28-U29N |
1 | do | L28-U29S |
1 | do | U29-L30N | Alike
1 | do | U29-L30S |
Division A
This drawing was approved by: Ash - Howard - Needles & Tammen
Date: Sept 12, 1939
Paint - One Coat of Approved Paint
Shop Contact Surfaces Not Painted
Rivets: 7/8
Open Holes: 15/16
Diagonals
City of Natchez
Mississippi River Bridge
Ash - Howard - Needles & Tammen
Consulting Engineers
Bethlehem Steel Company
Fabricated Steel Construction
Drawings at Rankin Works
Fabricated at Rankin Works
Cont. No. CC3593
Sheet 30
Pier 5
Span 5
Pier 4
Span 4
Pier 3
Span 3
Pier 2
Span 2
Pier 1
Span 1
Shop No 1
FOR INFORMATION ONLY



FOR INFORMATION ONLY

MATERIAL	Carbon Steel—ASTM A7-36—Assembly marks prefixed with C. Silicon Steel—ASTM A94-36—Assembly marks prefixed with S. Rivet Steel—ASTM A141-36. All main material to be carbon or silicon steel as noted.
SPECIFICATIONS	City of Natchez—Mississippi River Bridge Superstructure—Contract No. 5—May, 1939.
SUBPUNCHING AND REAMING	(See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling. All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet. Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet. Field connections of truss chords are to be reamed assembled. Field connections of truss web members are to be reamed to a metal templet.
FULL SIZE PUNCHING	None
DRILLING	All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.
SHEARING	Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4". Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.
FLAME CUTTING OF SILICON STEEL	Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut. Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".
STIFFENER ANGLES	At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.
MILLING	As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.
REENTRANT CUTS	To be filleted before cutting.
ASSEMBLING	Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.
[⋈] :-	Denotes break in stagger.

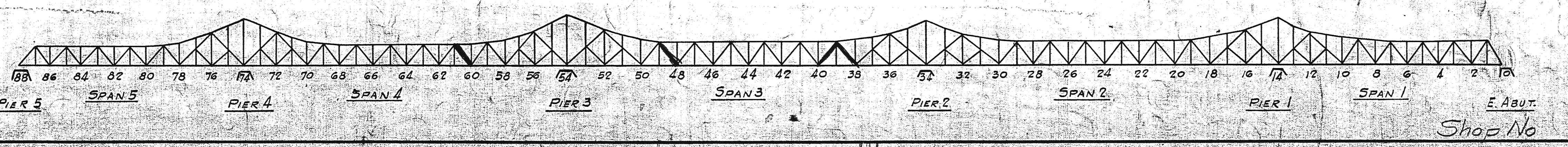
REQUIRED LIST

Division	No	Description	Mark	Remark
DIVISION-B	1	DIAGONAL	L48-U49N	ALIKE
	1	do	L48-U49S	
	1	do	L38-U39N	ALIKE
	1	do	L38-U39S	
	1	do	U39-L40N	ALIKE
	1	do	U39-L40S	
	1	do	L60-U61N	ALIKE
	1	do	L60-U61S	

RIVETS: $\frac{7}{8}$"ϕ

OPEN HOLES: $\frac{15}{16}$"ϕ

PAINT. - One Coat of Approved Paint
Shop Contact Surfaces Not Painted



Shop No

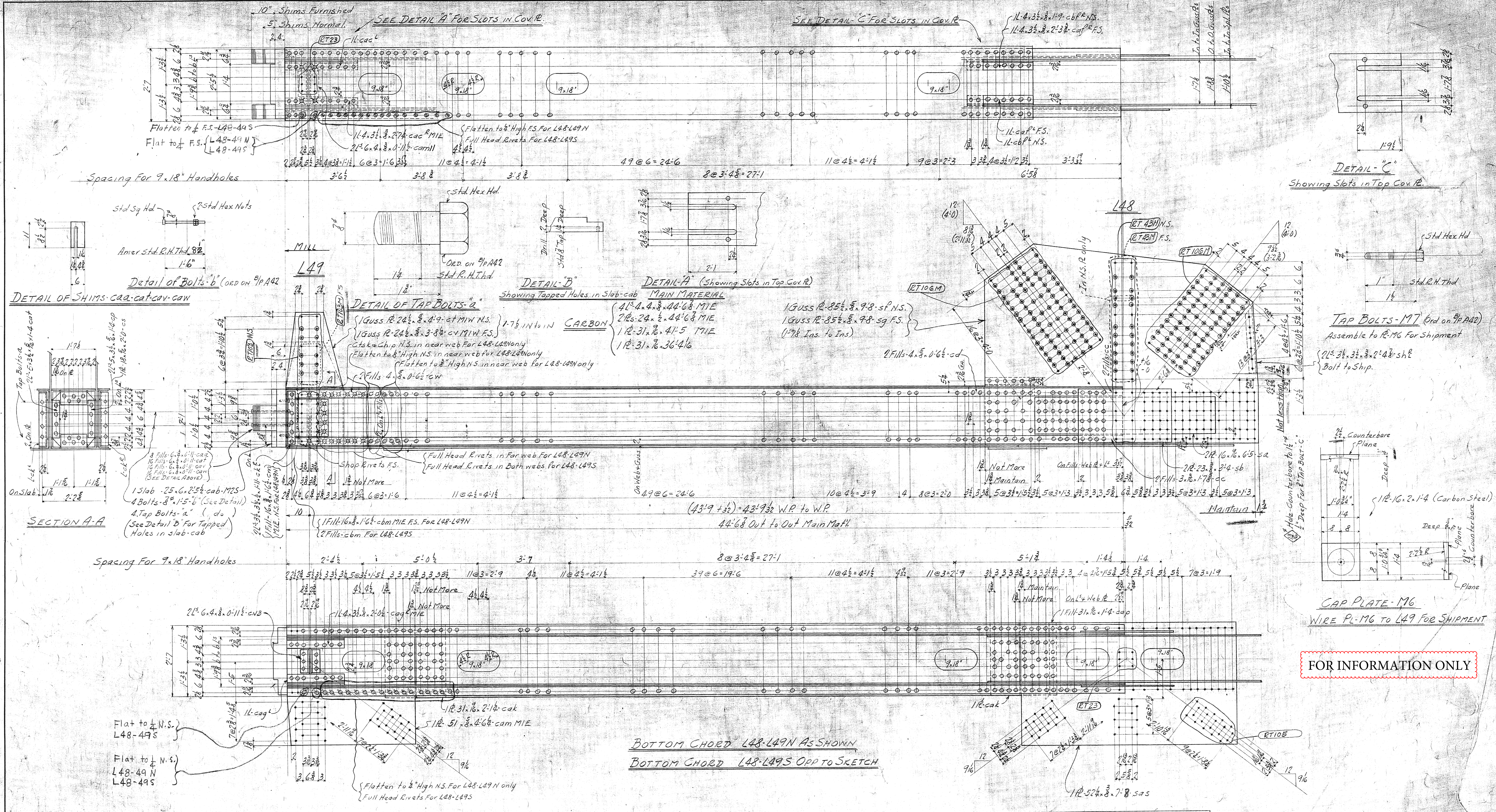
Made	Revision	Appr'd

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct 9, 1939

DIAGONALS

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE BORN MADE BY J.V. DATE
CHECKED BY HBC DATE 10/3/39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK
REVISED
CONT. NO. CC3593\ SHEET 80



MATERIAL Carbon Steel--ASTM A7-36--Assembly marks prefixed with C.
Silicon Steel--ASTM A94-36--Assembly marks prefixed with S.
Rivet Steel--ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS City of Natchez--Mississippi River Bridge Superstructure--Contract No. 5--May, 1939.

SUBPUNCHING AND REAMING (See full size punching note for exceptions)
All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet.
Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING Carbon Steel Lateral Plates & Webs of Diaphragms may be punched Full Size

DRILLING All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut.
Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS To be filleted before cutting.

ASSEMBLING Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

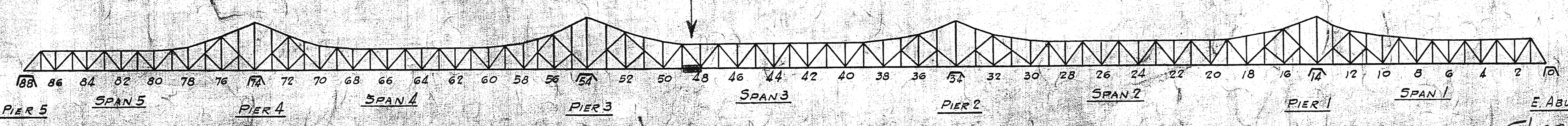
[X]:- Denotes break in stagger.

Required List				
Division	Nº	Description	Mark	Remark
B	1	Bott. Chord	L48-L49N	As Shown
B	1	do	L48-L49S	Opp. Hand
B	2	Tap Bolts	M7	
B	2	Cap Plates	M6	

RIVETS: 7/8 ⌀

OPEN HOLES: 15/16 ⌀

Paint- One Coat of Approved Paint.
Shop Contact Surfaces Not Painted



Shop No 2

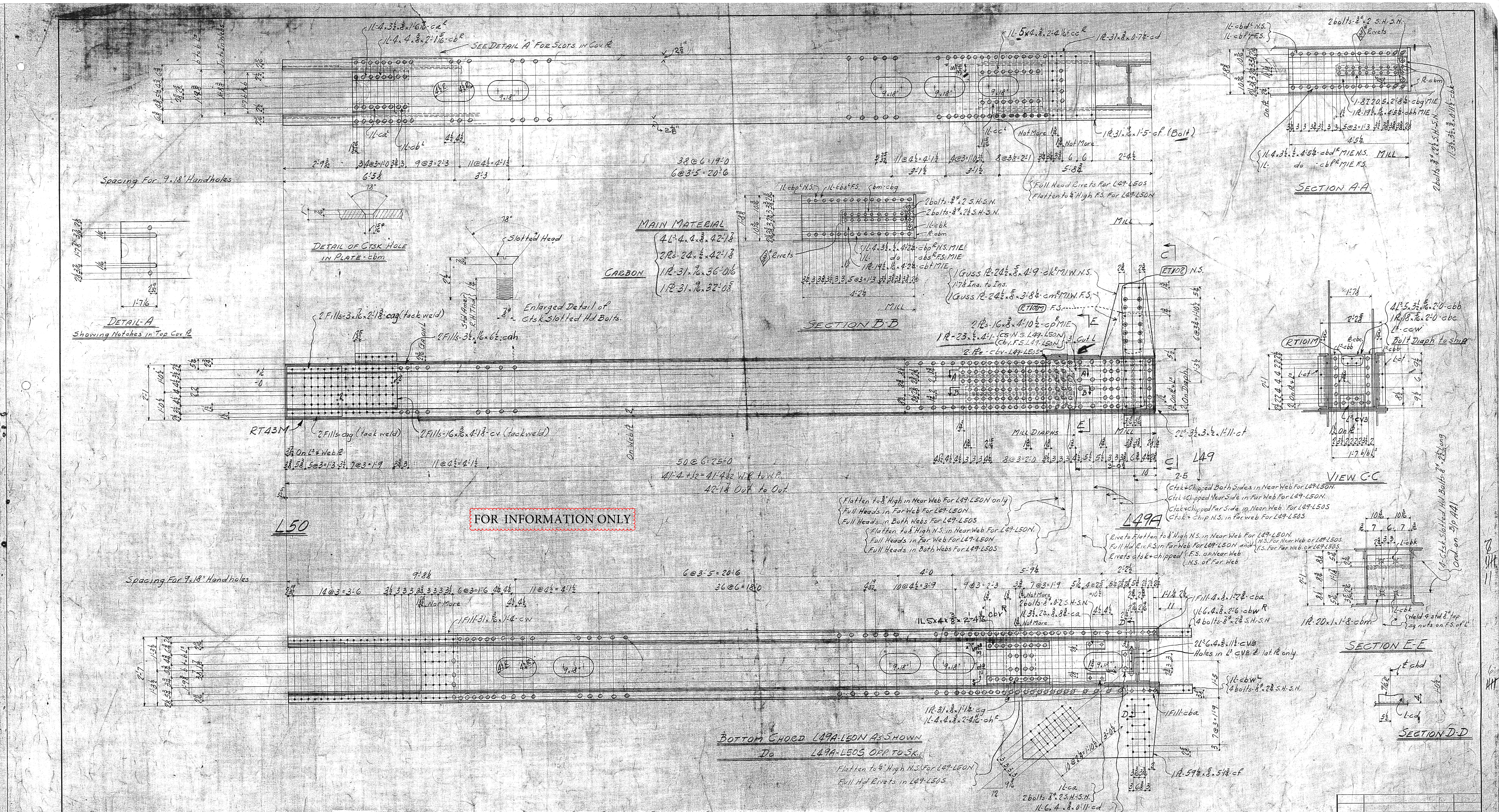
Made	Revision	Appr'd

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Sept 18, 1939

Bottom Chords L48-L49

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Boen MADE BY Hcn DATE 8-29-39
CHECKED BY AHG DATE 8/31/39 TRACED BY ____ DATE ____
FIELD CHECK ____ DATE ____ LAST ASSEM. MARK at
REVISED ____
CONT. NO. CC35931 SHEET 62



FOR INFORMATION ONLY

MATERIAL — Carbon Steel--ASTM A7-36--Assembly marks prefixed with C.
Silicon Steel--ASTM A94-36--Assembly marks prefixed with S.
Rivet Steel--ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS — City of Natchez--Mississippi River Bridge Superstructure--Contract No. 5--May, 1939.

SUBPUNCHING AND REAMING — (See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size or drilled from the solid to a metal templet.
Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING — Carbon Steel Lateral Plates & Webs of Diaphragms may be punched Full Size

DRILLING — All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING — Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL — Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut.
Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES — At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING — As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS — To be filleted before cutting.

ASSEMBLING — Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

⊠ :- Denotes break in stagger.

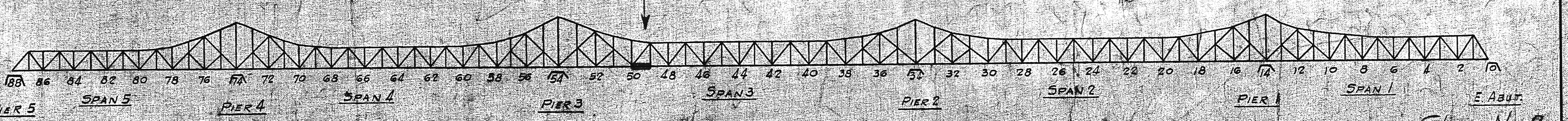
REQUIRED LIST

Division	Nº	Description	Mark	Remark
B	1	Bott. Chord	L49A-L50N	As SH.
B	1	do	L49A-L50S	OPP. Hd.

RIVETS: 7/8" unless noted.

OPEN HOLES: 15/16" Unless Noted

PAINT- One Coat of Approved Paint
Shop Contact Surfaces Not Painted



Shop No 2

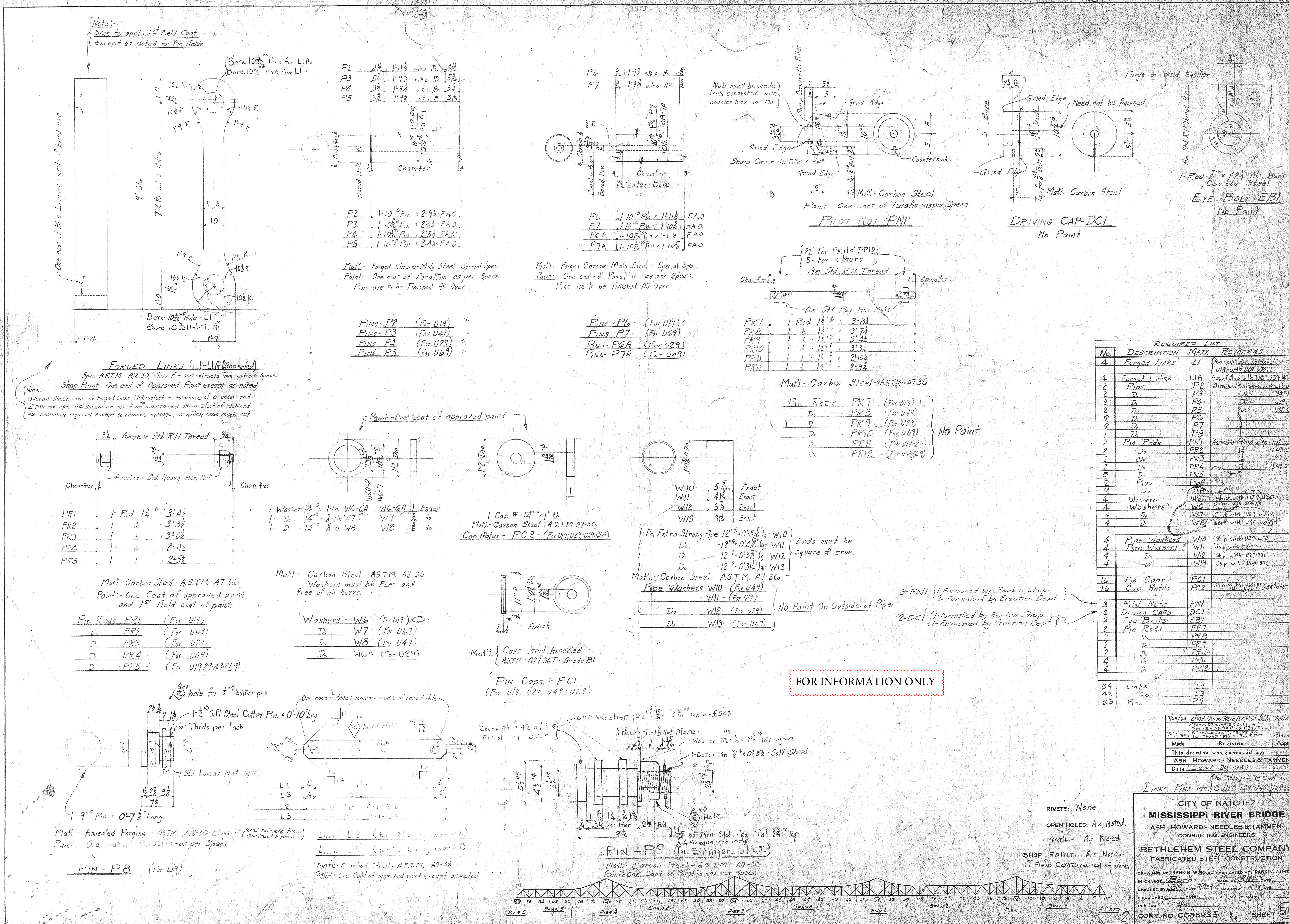
Made	Revision	Appr'd

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: September 12, 1939

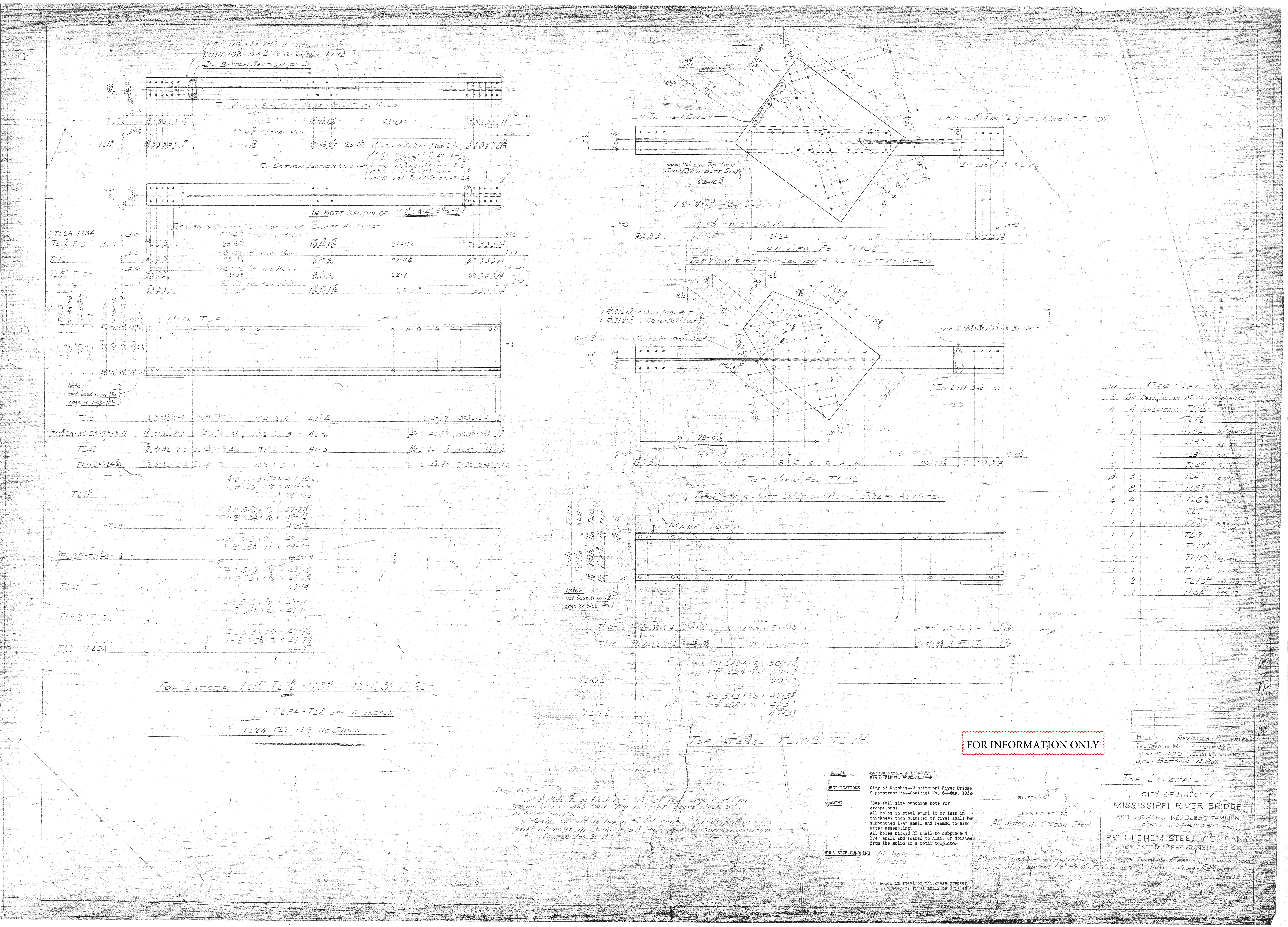
BOTTOM CHORDS L49A-L50

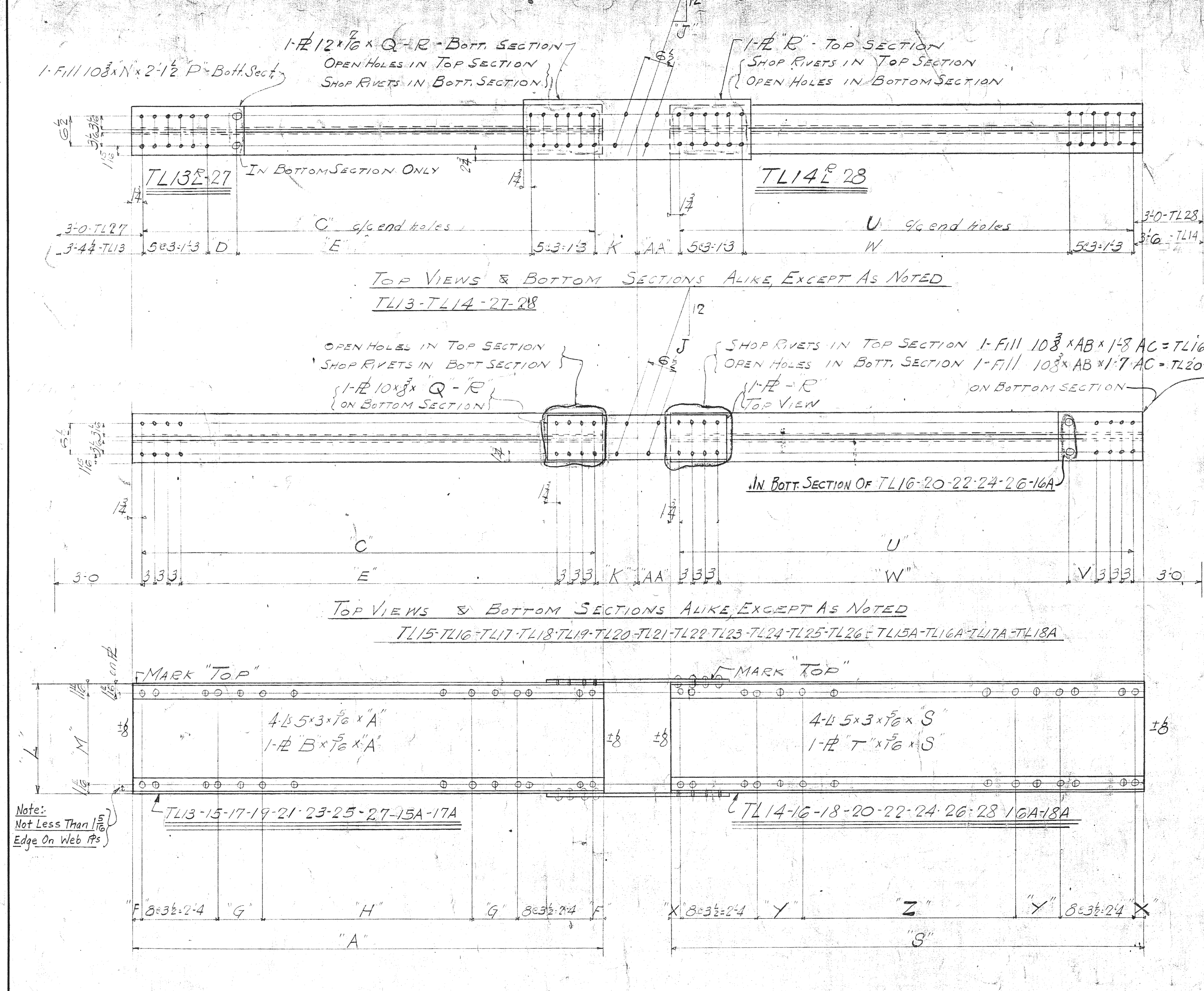
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

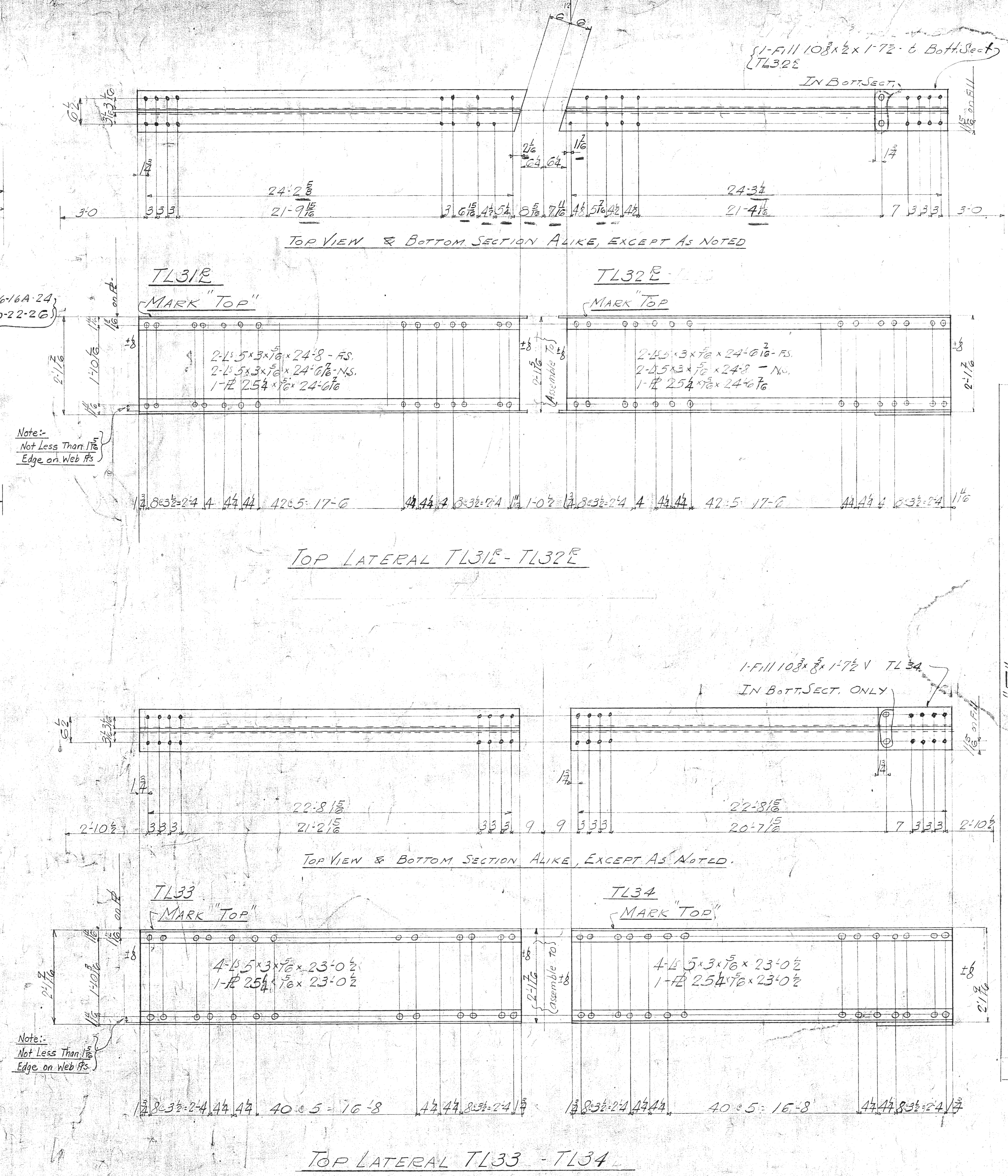
DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Boen MADE BY Hen DATE 8-22-39
CHECKED BY HBG DATE 8/29/39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK 6V
REVISED (9-25) (10-16)
CONT. NO. CC35931 SHEET 61



Note:- Shop to apply 1st Field Coat except as noted for Pin Holes
Forged Links L1-L1A (Annealed)
Spec: A.S.T.M. A18-30, Class F - and extracts from contract Specs.
Shop Paint: One coat of Approved Paint except as noted
Pins - P2 (For U19)
Pins - P3 (For U49)
Pins - P4 (For U29)
Pins - P5 (For U69)
Mat'l - Forged Chrome-Moly Steel - Special Spec.
Paint: One coat of Paraffin - as per Specs.
Pins are to be Finished All Over
Pins - P6 (For U19)
Pins - P7 (For U69)
Pins - P6A (For U29)
Pins - P7A (For U49)
Pilot Nut PN1
Mat'l - Carbon Steel
Paint: One coat of Paraffin as per Specs
Driving Cap - DC1
No Paint
Eye Bolt EB1
No Paint
Mat'l - Carbon Steel - A.S.T.M. A7-36
Pin Rods - PR7 (For U19)
Do - PR8 (For U49)
Do - PR9 (For U29)
Do - PR10 (For U69)
Do - PR11 (For U19-29)
Do - PR12 (For U49-69)
No Paint
Pin Rods - PR1 (For U19)
Do - PR2 (For U49)
Do - PR3 (For U29)
Do - PR4 (For U69)
Do - PR5 (For U19-29-49-69)
Washers - W6 (For U19)
Do - W7 (For U69)
Do - W8 (For U49)
Do - W6A (For U29)
Cap Plates - PC2 (For U19-U29-U49-U69)
Pipe Washers W10 (For U49)
- W11 (For U19)
Do - W12 (For U29)
Do - W13 (For U69)
No Paint On Outside of Pipe
Pin Caps - PC1 (For U19-U29-U49-U69)
Mat'l. Cast Steel Annealed A.S.T.M. A27-36T - Grade B1
Pin - P8 (For U19)
Link L2 (for 33' Stringers at C.T.)
Link L3 (for 36' Stringers at C.T.)
Mat'l: Carbon Steel - A.S.T.M. - A7-36
Pin - P9 (for Stringers at C.T.)
Mat'l: Carbon Steel - A.S.T.M. - A7-36
Paint: One Coat of Paraffin - as per Specs.
3-PN1 {1-Furnished by Rankin Shop, 2-Furnished by Erection Dept.
2-DC1 {1-Furnished by Rankin Shop, 1-Furnished by Erection Dept.
Required List
No. | Description | Mark | Remarks
FOR INFORMATION ONLY
This drawing was approved by: Ash - Howard - Needles & Tammen
Date: Sept 29 1939
Rivets: None
Open Holes: As Noted.
Mat'l: As Noted.
Shop Paint: As Noted.
1st Field Coat: one coat of brown
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION
Drawings at Rankin Works. Fabricated at Rankin Works.
CONT. NO. CC35935
SHEET 58
Pier 5 Span 5 Pier 4 Span 4 Pier 3 Span 3 Pier 2 Span 2 Pier 1 Span 1


Top Lateral TL1E-TL2E-TL3E-TL4E-TL5E-TL6E
- TL3A-TL8 opp. to sketch
- TL2A-TL7-TL9- As Shown
Top View for TL10E
Top View & Bottom Section Alike Except As Noted
Top View for TL11E
Top View & Bott. Section Alike Except As Noted
Top Lateral TL10E-TL11E
Mark Top
Note:- Not Less Than 1 3/8 Edge on Web
In Top View Only
In Bott. Sect. Only
On Bottom Section Only
Required List
FOR INFORMATION ONLY
Material: Rivet Steel
Specifications: City of Natchez--Mississippi River Bridge. Superstructure--Contract No. 5--May, 1939.
Reaming: (See full size punching note for exceptions) All holes in steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling. All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal template.
Full Size Punching: All holes may be punched full size
Drilling: All holes in steel of thickness greater than diameter of rivet shall be drilled.
Rivets: 7/8
Open Holes: 15/16
All material Carbon Steel
Paint: One Coat of Approved Paint. Shop Contact Surfaces Not Painted
Shop Notes: Web Plate to be flush with back of top flange Ls at end connections. Web Plate may project where back of L at other points. Care should be taken to fit center lateral plate so that bevel of holes in center of plate are in correct position with reference to bevel.
This Drawing Was Approved By:- Ash-Howard-Needles & Tammen
Date: September 13, 1939
Top Laterals
City of Natchez
Mississippi River Bridge
Ash-Howard-Needles & Tammen Consulting Engineers
Bethlehem Steel Company
Fabricated Steel Construction
Drawings at Rankin Works
Fabricated at Rankin Works
Cont. No. CC35252
Sheet 20
Shop No. 1





Mark	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
TL13 R/L	24-3 7/8	25 1/4	24-0 3/8	7	20-11 3/8	1 15/16	2-4 1/4-8 1/2	43@5=17-11	4 1/32	9 15/16	2-1 1/2	1-10 8	5/8	a	4-5 1/2	b									9 15/16		
TL14 R/L									4 1/32	9 15/16	2-1 1/2	1-10 8			4-5 1/2	b	24-2 1/8	25 1/4	23-10 5/8		21-4 5/8	1 13/16	3@4 1/4-10 3/4	41@5=17-1	9 15/16		
TL15 R/L	24-1 7/8	25 3/4	23-10 3/8		22-4 3/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	3 5/8	9 3/4	2-2	1-10 5/8			3-5	d									9 3/4		
TL16 R/L									3 5/8	9 3/4	2-2	1-10 5/8			3-5	d	24-1 7/8	25 3/4	23-10 3/8	7 1/2	21-8 7/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	9 3/4	3/16	c
TL17 R/L	24-1 7/8	25 3/4	23-10 3/8		22-4 3/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	3 5/8	9 3/4	2-2	1-10 5/8			3-5	d									9 3/4		
TL18 R/L									3 5/8	9 3/4	2-2	1-10 5/8			3-5	d	24-1 7/8	25 3/4	23-10 3/8		22-4 3/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	9 3/4		
TL19 R/L	23-10 7/8	25 1/2	23-7 5/16		22-1 5/16	1 15/16	2@4 4-8 1/2	42@5=17-6	3 7/16	9 3/4	2-1 5/8	1-10 4			3-5	g									9 3/4		
TL20 R/L									3 7/16	9 3/4	2-1 5/8	1-10 4			3-5	g	23-10 7/8	25 1/2	23-7 5/16	6 1/2	21-6 7/8	1 15/16	2@4 4-8 1/2	42@5=17-6	9 3/4	1/2	f
TL21 R/L	23-10 9/16	25 1/4	23-7 1/16		22-1 1/16	1 25/32	2@4 4-8 1/2	42@5=17-6	3 7/16	9 3/4	2-1 5/8	1-10 1/4			3-5	g									9 3/4		
TL22 R/L									3 7/16	9 3/4	2-1 5/8	1-10 1/4			3-5	g	23-10 9/16	25 1/4	23-7 1/16	6 1/2	21-6 9/16	1 25/32	2@4 4-8 1/2	42@5=17-6	9 3/4	5/8	h
TL23	24-1 7/8	25 1/4	23-10 3/8		22-4 3/8	1 11/16	3@4 1/4-10 3/4	41@5=17-1	3 5/8	9 3/4	2-1 5/8	1-10 8			3-5	m									9 3/4		
TL24									3 5/8	9 3/4	2-1 5/8	1-10 8			3-5	m	24-1 7/8	25 1/4	23-10 3/8	7 1/2	21-8 7/8	1 11/16	3@4 1/4-10 3/4	41@5=17-1	9 3/4	3/8	k
TL25 R/L	23-10 9/16	25 1/4	23-7 1/16		22-1 1/16	1 25/32	2@4 4-8 1/2	42@5=17-6	3 7/16	9 3/4	2-1 5/8	1-10 1/4			3-5	g									9 3/4		
TL26 R/L									3 7/16	9 3/4	2-1 5/8	1-10 1/4			3-5	g	23-10 9/16	25 1/4	23-7 1/16	6 1/2	21-6 9/16	1 25/32	2@4 4-8 1/2	42@5=17-6	9 3/4	3/4	p
TL27	24-1 7/8	25 3/4	23-10 3/8	7	20-9 3/8	1 1/4	3@4 1/4-10 3/4	41@5 17-1	3 5/8	9 3/4	2-1 7/8	1-10 1/2	3/8	s	4-5	w									9 3/4		
TL28									3 5/8	9 3/4	2-1 7/8	1-10 1/2			4-5	n	24-1 7/8	25 3/4	23-10 3/8		21-4 3/8	1 11/16	3@4 1/4-10 3/4	41@5=17-1	9 3/4		
TL15A	24-1 7/8	25 3/4	23-10 3/8		22-4 3/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	3 5/8	9 3/4	2-1 7/8	1-10 1/2			3-5	d									9 3/4		
TL16A									3 5/8	9 3/4	2-1 7/8	1-10 1/2			3-5	d	24-1 7/8	25 3/4	23-10 3/8	7 1/2	21-8 7/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	9 3/4	5/16	ag
TL17A	24-1 7/8	25 3/4	23-10 3/8		22-4 3/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	3 5/8	9 3/4	2-1 7/8	1-10 1/2			3-5	d									9 3/4		
TL18A									3 5/8	9 3/4	2-1 7/8	1-10 1/2			3-5	d	24-1 7/8	25 3/4	23-10 3/8		22-4 3/8	1 7/8	3@4 3/16-10 9/16	41@5=17-1	9 3/4		

Top Lateral TL13 R/L-TL14 R/L-TL15 R/L-TL16 R/L-TL17 R/L-TL18 R/L-TL19 R/L-TL20 R/L-TL21 R/L-TL22 R/L TL25 R/L-TL26 R/L

" " TL27-TL28 TL17A-TL18A - Opp to Sketch

" " TL23-TL24-TL15A-TL16A - As Shown

Division "E"

Required List			
No	Description	Mark	Remarks
4	Top Lateral	TL13 R/L	
4	"	TL14 R/L	
1	"	TL15 R	As SH.
1	"	TL15 L	Opp HD.
1	"	TL16 R	As SH.
1	"	TL16 L	Opp HD.
1	"	TL17 R	As SH
1	"	TL17 L	Opp HD
1	"	TL18 R	As SH
1	"	TL18 L	Opp HD
2	"	TL19 R	As SH
3	"	TL19 L	Opp HD
2	"	TL20 R	As SH
3	"	TL20 L	Opp HD
8	"	TL21 R/L	
8	"	TL22 R/L	
1	"	TL23	
1	"	TL24	
4	"	TL25 R/L	
4	"	TL26 R/L	
1	"	TL27	Opp HD
1	"	TL28	Opp HD
1	"	TL31 R	As SH
2	"	TL31 L	Opp HD.
1	"	TL32 R	
3	"	TL33	
3	"	TL34	
2	"	TL32 L	Opp HD
1	"	TL15A	As SH
1	"	TL16A	As SH
1	"	TL17A	Opp HD
1	"	TL18A	Opp HD

FOR INFORMATION ONLY

Shop Note -
Web Plate to be flush with back of flange L's at field Connections. Web Plate may project above back of L's at other points.
Care should be taken to fit center lateral Plates so that bevel of holes in center of Plate are in correct position with reference to bevel.

MATERIAL Carbon Steel—ASTM A7-36
Rivet Steel—ASTM A141-36

SPECIFICATIONS City of Natchez—Mississippi River Bridge.
Superstructure—Contract No. 5—May, 1939.

REAMING (See full size punching note for exceptions)
All holes in steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal template.

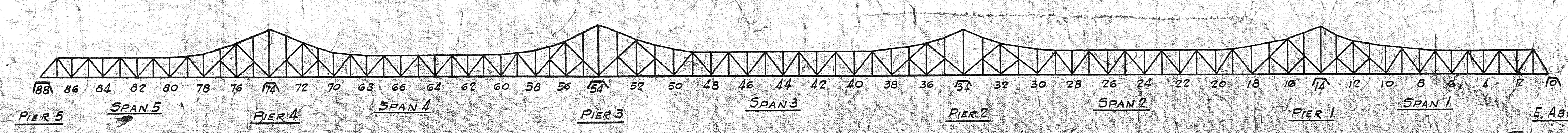
FULL SIZE PUNCHING All holes may be punched full size

DRILLING All holes in steel of thickness greater than diameter of rivet shall be drilled.

RIVETS: 7/8"

OPEN HOLES: 15/16

All Mat'l. Carbon Steel
Paint - One Coat of Approved Paint
Shop Contact Surfaces Not Painted



Shop No 1

Made	Revision	Appr'd

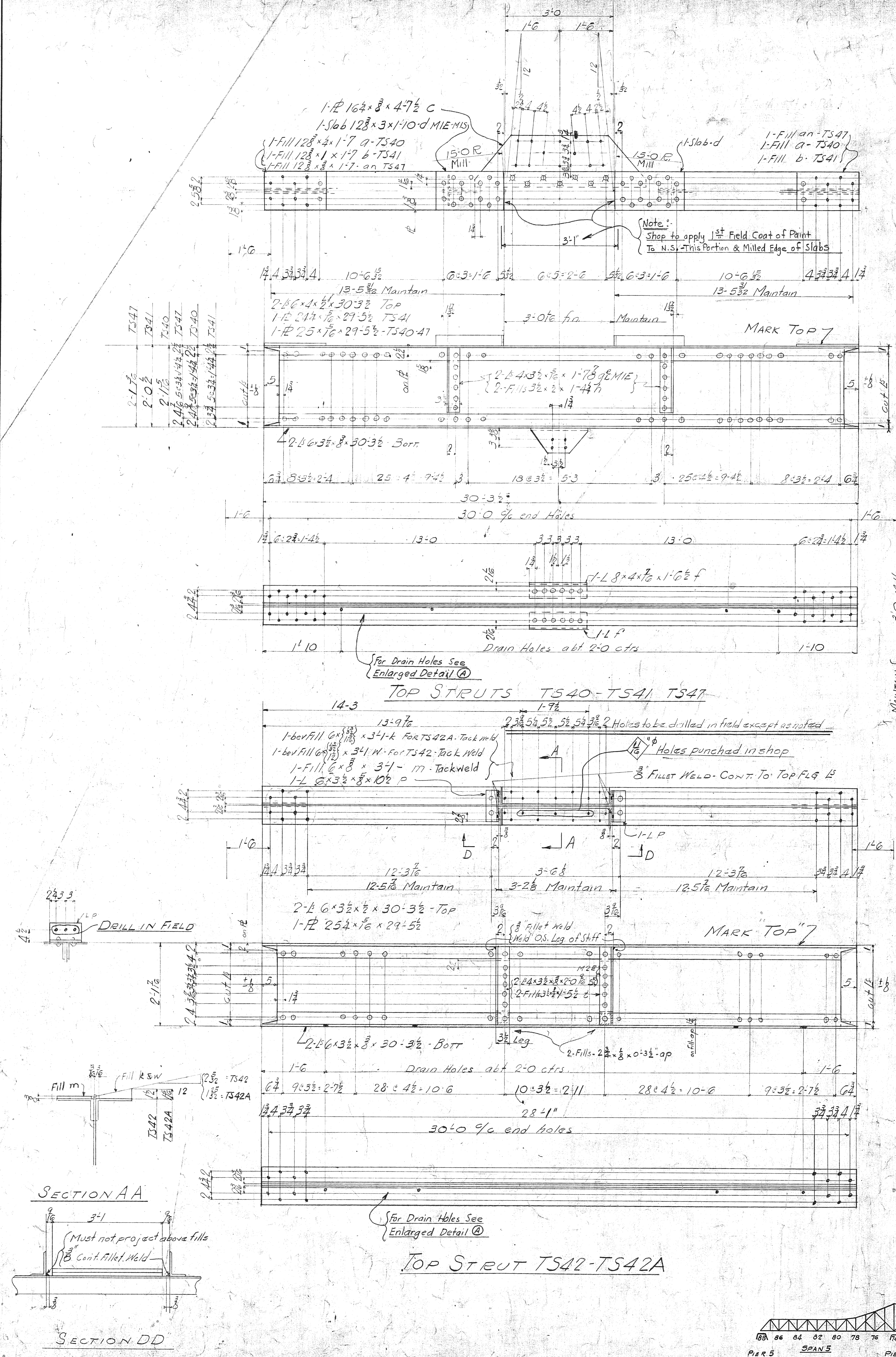
This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: September 13, 1939

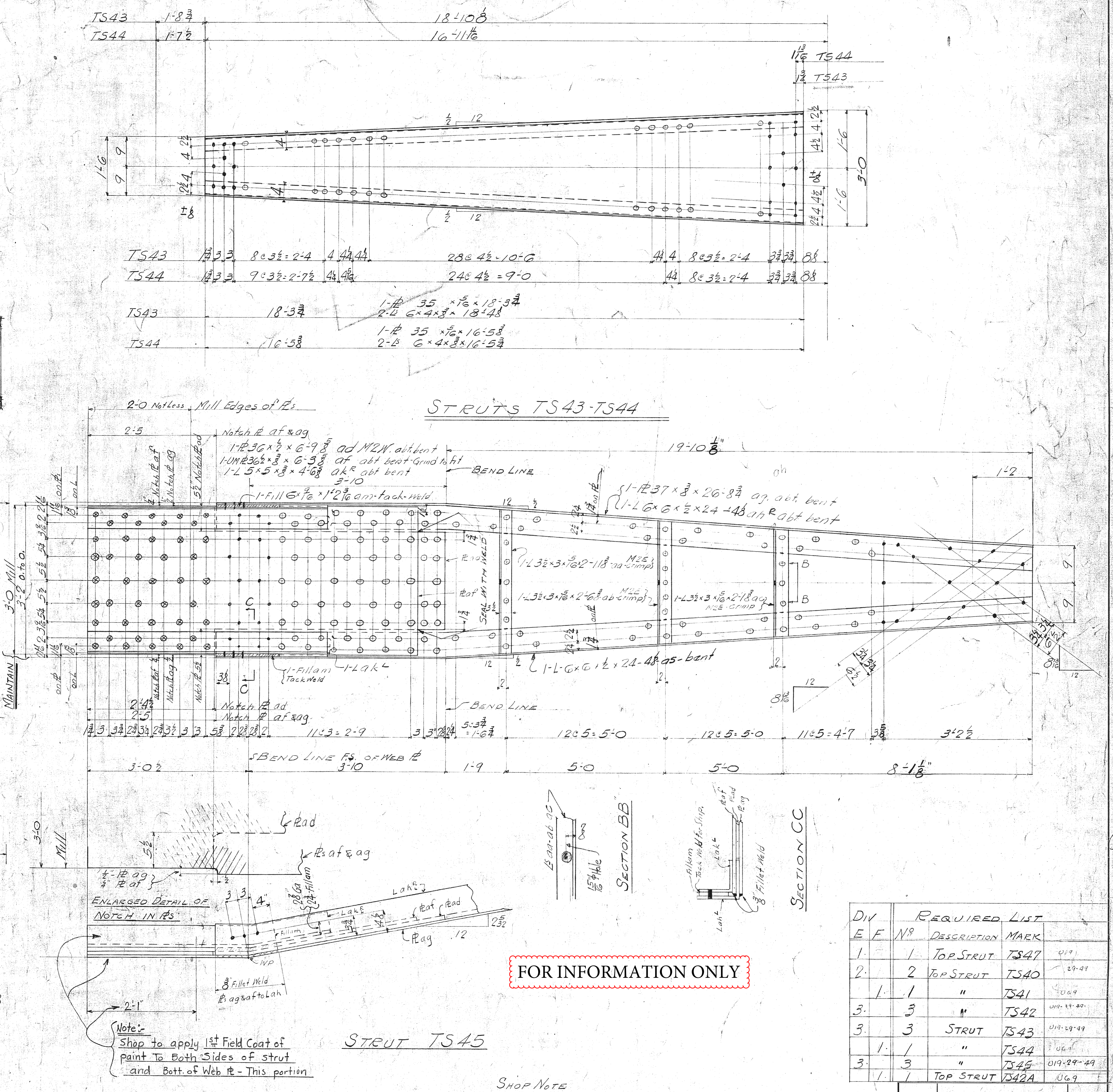
Top Laterals

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

Drawings at Rankin Works Fabricated at Rankin Works
In Charge Born Made by Joy Date 6-29-39
Checked by D. Date 8/23/39 Traced by Date
Field Check Date Last Assem. Mark W
Revised

CONT. NO. CC35932 SHEET 202





FOR INFORMATION ONLY

DIV E	DIV F	No	Description	Mark	
1.		1	Top Strut	TS47	U19
2.		2	Top Strut	TS40	29-49
	1.	1	"	TS41	U69
3.		3	"	TS42	U19-29-49
3.		3	Strut	TS43	U19-29-49
	1.	1	"	TS44	U69
3.		3	"	TS45	U19-29-49
	1.	1	Top Strut	TS42A	U69

SHOP NOTE

WEB PL OF TOP STRUTS TO BE FLUSH WITH TOP OF FLANGE ANGLES AT FIELD CONNECTIONS. WEB PLATE MAY PROJECT ABOVE FLANGE ANGLES AT OTHER POINTS

MATERIAL Carbon Steel--ASTM A7-36
Rivet Steel--ASTM A141-36

SPECIFICATIONS City of Natchez--Mississippi River Bridge. Superstructure--Contract No. 5--May, 1939.

REAMING (See full size punching note for exceptions)
All holes in steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal template.

FULL SIZE/PUNCHING All material may be punched full size, except holes in material 15/16" thick or over shall be drilled

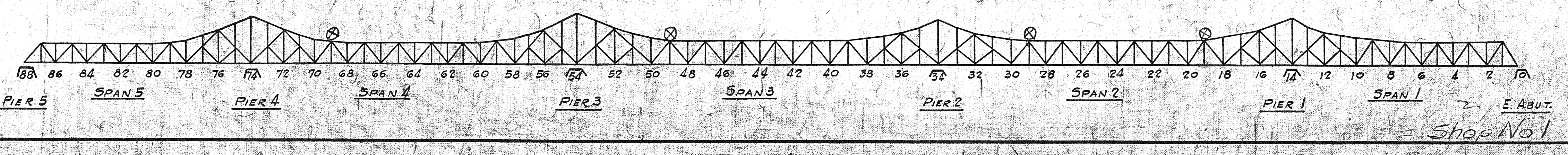
DRILLING All holes in steel of thickness greater than diameter of rivet shall be drilled.

RIVETS: 7/8"φ

OPEN HOLES: 15/16"φ Unless Noted

All Mat'l. Carbon Steel

Paint:- One Coat of Approved Paint
Shop Cont. Surf. Not Painted



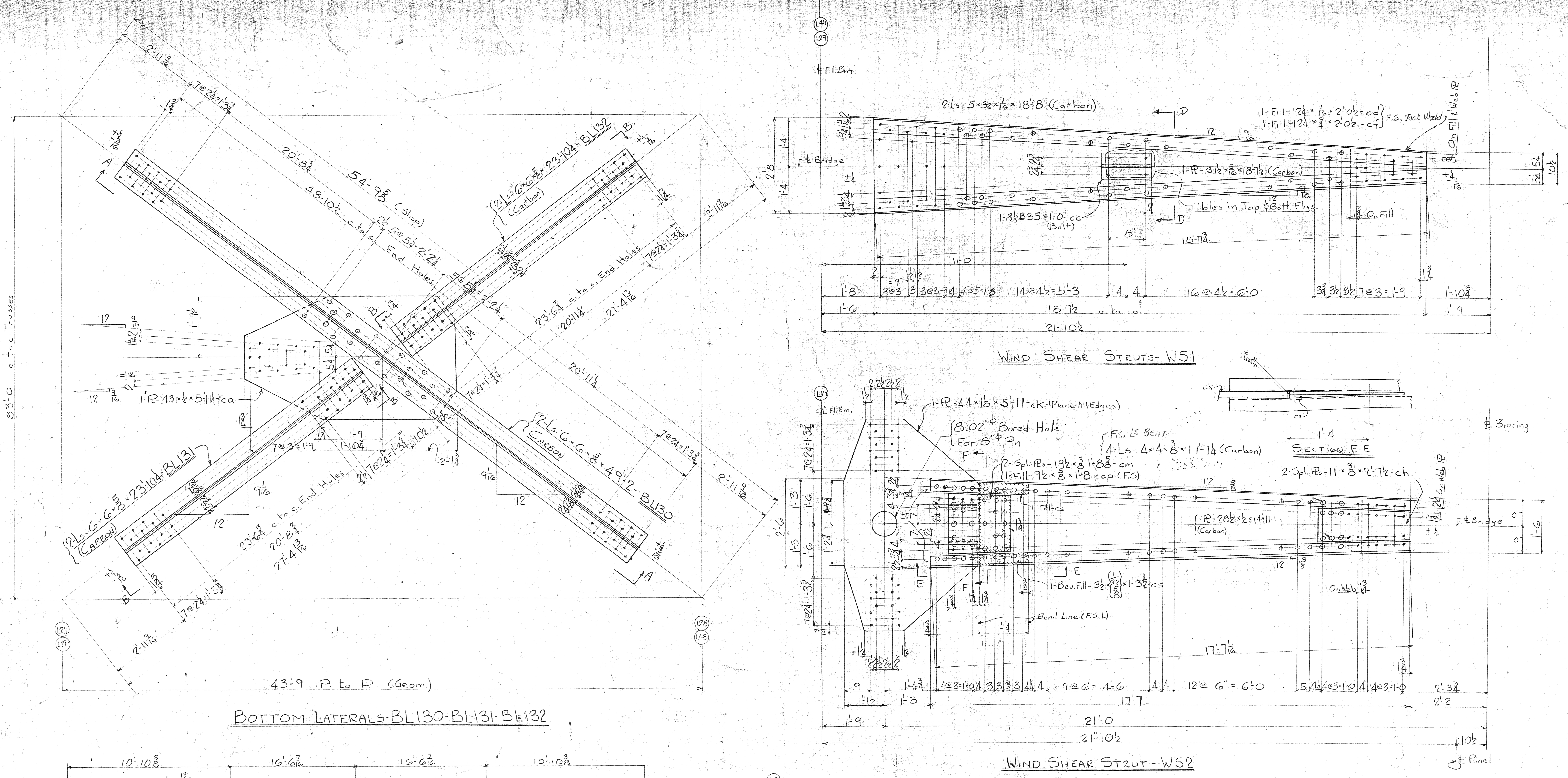
Made	Revision	Appr'd

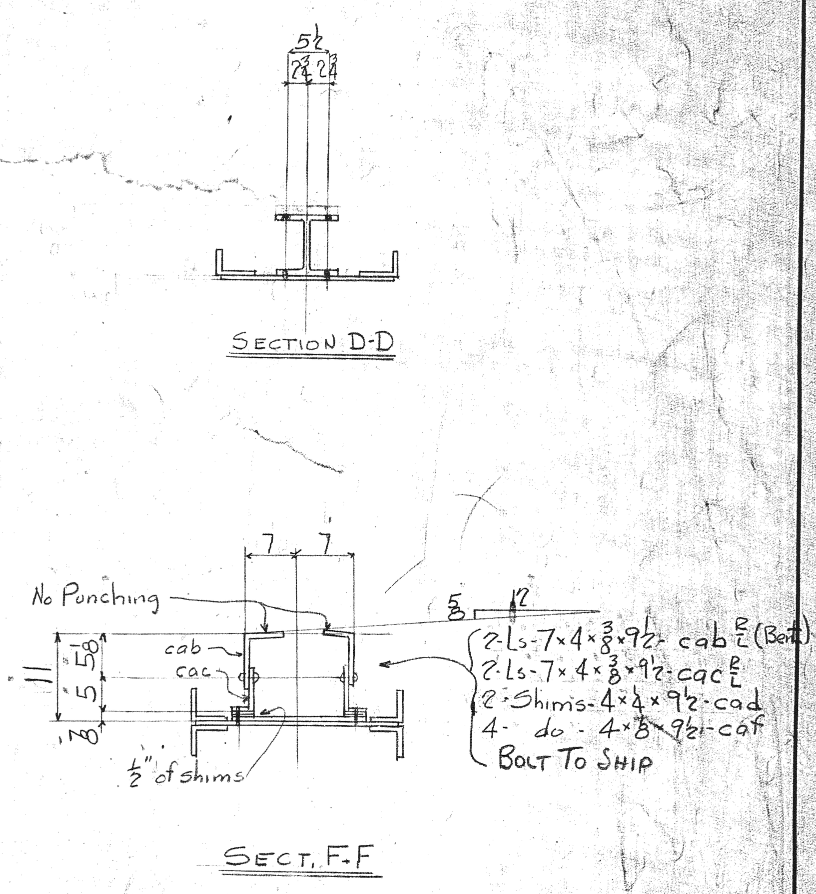
This drawing was approved by: ASH - HOWARD - NEEDLES & TAMMEN
Date: September 21, 1939

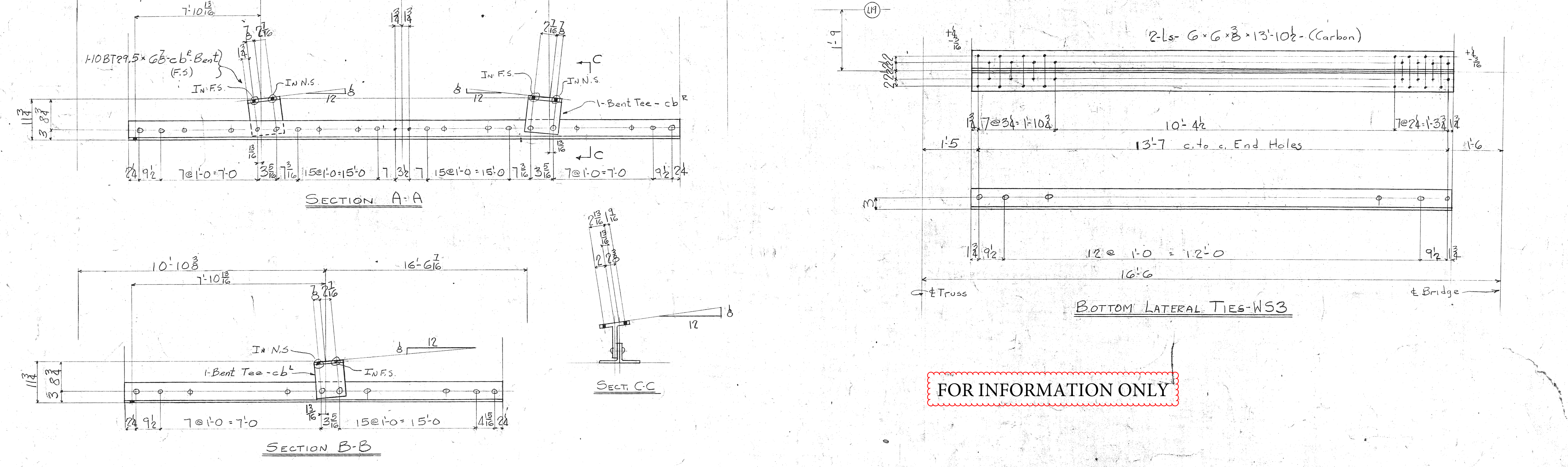
STRUTS - U19-29-49-69

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY Roy DATE 8/-/39
CHECKED BY LGM DATE 8/23/39 TRACED BY ____ DATE ____
FIELD CHECK ____ DATE ____ LAST ASSEM. MARK ap
REVISED (10-18)
CONT. NO. CC35932 SHEET 218







FOR INFORMATION ONLY

Div. E	Div. F	No	Descrip	Mark	Remarks
2		2	Bott. Laterals	BL130	
2		2	do	BL131	
2		2	do	BL132	
2		2	Struts	WS1	
1		1	do	WS2	
2		2	do	WS3	

REQUIRED LIST

Reaming Cont'd: All holes in Silicon Steel ¾" thick and under shall be subpunched ¼" small and reamed to size after assembling.
All holes in Silicon Steel over ¾" Thick shall be drilled

MATERIAL — Silicon Steel- ASTM A94-36
Carbon Steel--ASTM A7-36
Rivet Steel--ASTM A141-36

SPECIFICATIONS — City of Natchez--Mississippi River Bridge. Superstructure--Contract No. 5--May, 1939.

REAMING — (See full size punching note for exceptions)
~~All holes in steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.~~
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal template.

FULL SIZE PUNCHING — All holes may be punched full size except holes marked RT or except holes in silicon steel

DRILLING — All holes in carbon steel of thickness greater than diameter of rivet shall be drilled.

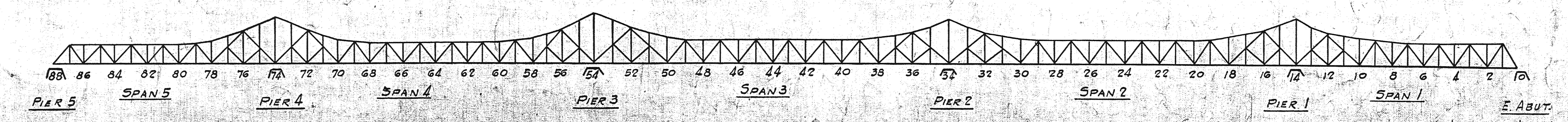
Made	Revision	Appr'd

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct. 9, 1939

RIVETS: ⅞"φ

OPEN HOLES: 15/16"φ

PAINT- One Ct. of Approved Paint
Shop Cont. Surfaces Not Painted



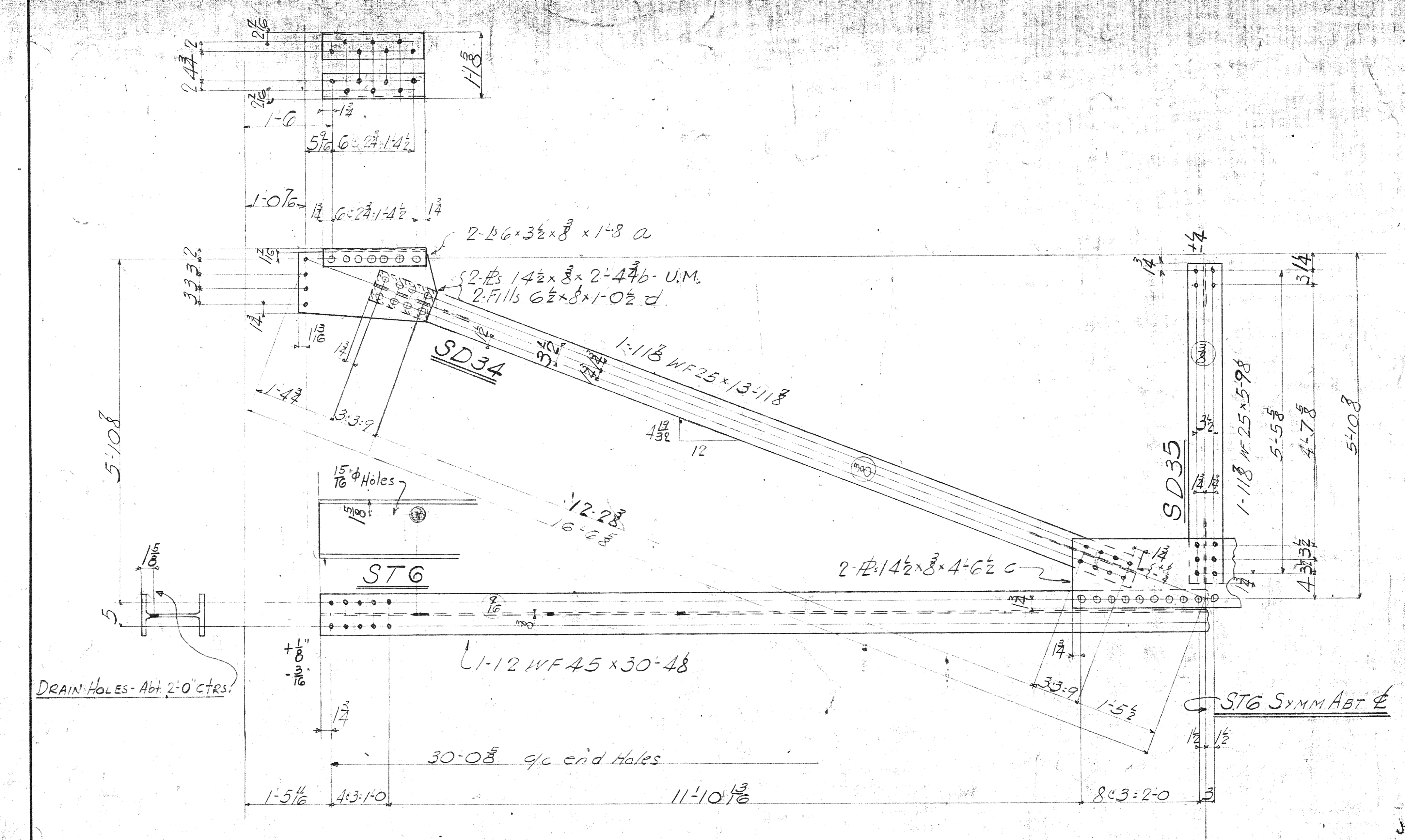
Shop No. 1

WIND SHEAR BRACING - BOTT. CHORD

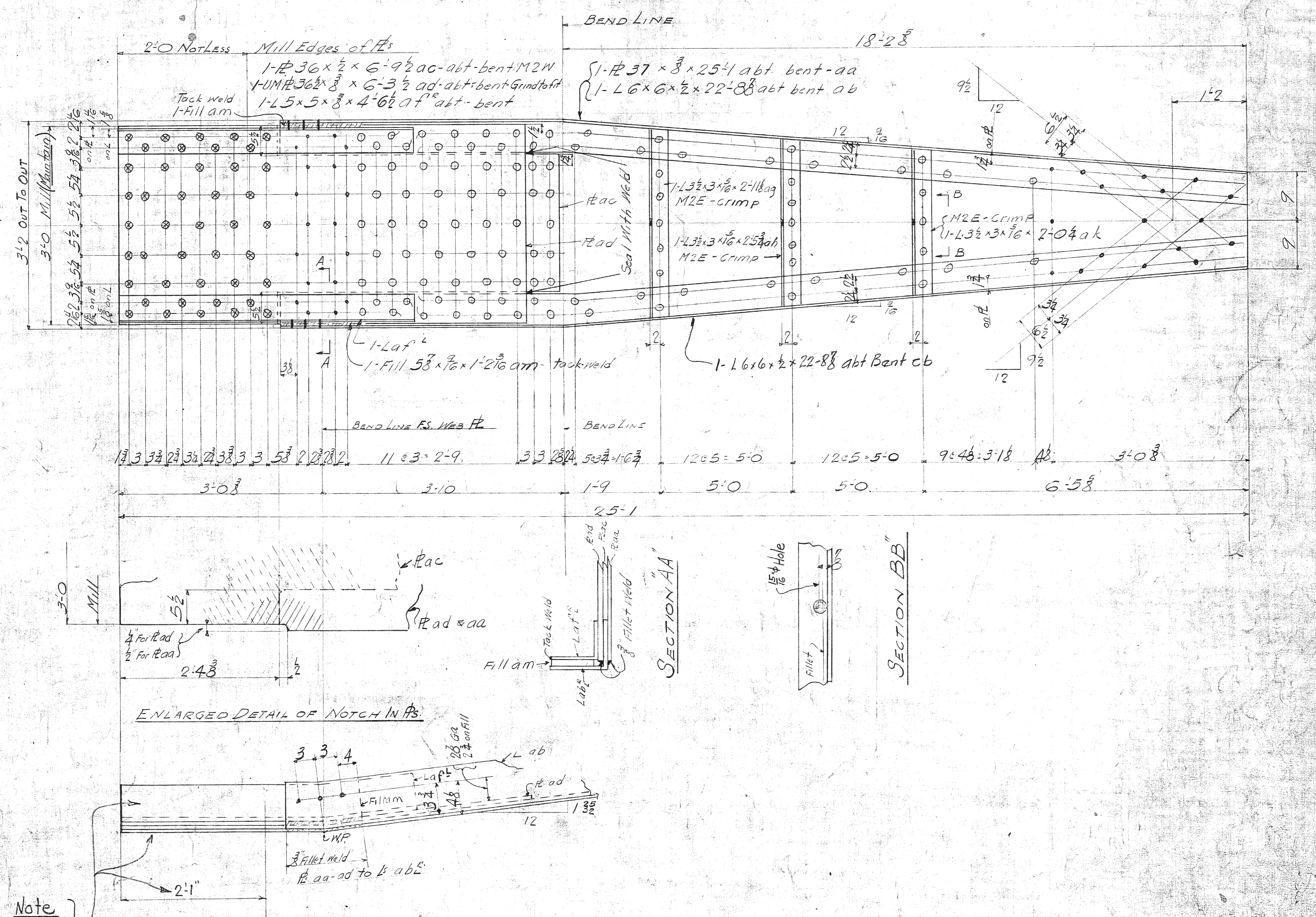
CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS

BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY ACME DATE 9-11-39
CHECKED BY Frola DATE 9-25-39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK S
REVISED (10-12)
CONT. NO. CC35932 SHEET 227



SWAY DIAGONAL SD34-SD35
SWAY STRUT ST6



Note
Shop to apply 1st Field Coat of Paint to both sides of strut and bottom of Web Pl - This Portion

TOP STRUT TS46

FOR INFORMATION ONLY

DIV E	DIV F	REQUIRED LIST Nº	DESCRIPTION	MARK	REMARKS
6	2	8	SWAY DIAG	SD34	
3	1	4	" "	SD35	
3	1	4	SWAY STRUT	ST6	
	1	1	TOP STRUT	TS46	U69

Made	Revision	Appr'd

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: SEPT. 21, 1939

MATERIAL — Carbon Steel--ASTM A7-36
Rivet Steel--ASTM A141-36

SPECIFICATIONS — City of Natchez--Mississippi River Bridge. Superstructure--Contract No. 5--May, 1939.

REAMING — (See full size punching note for exceptions)
All holes in steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal template.

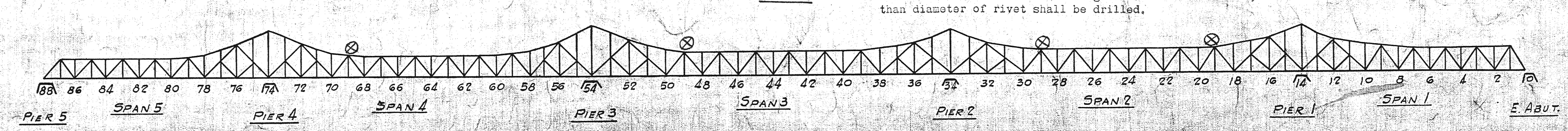
FULL SIZE PUNCHING — All holes may be punched full size.

DRILLING — All holes in steel of thickness greater than diameter of rivet shall be drilled.

RIVETS: 7/8" ϕ

OPEN HOLES: 15/16" ϕ Unless Noted

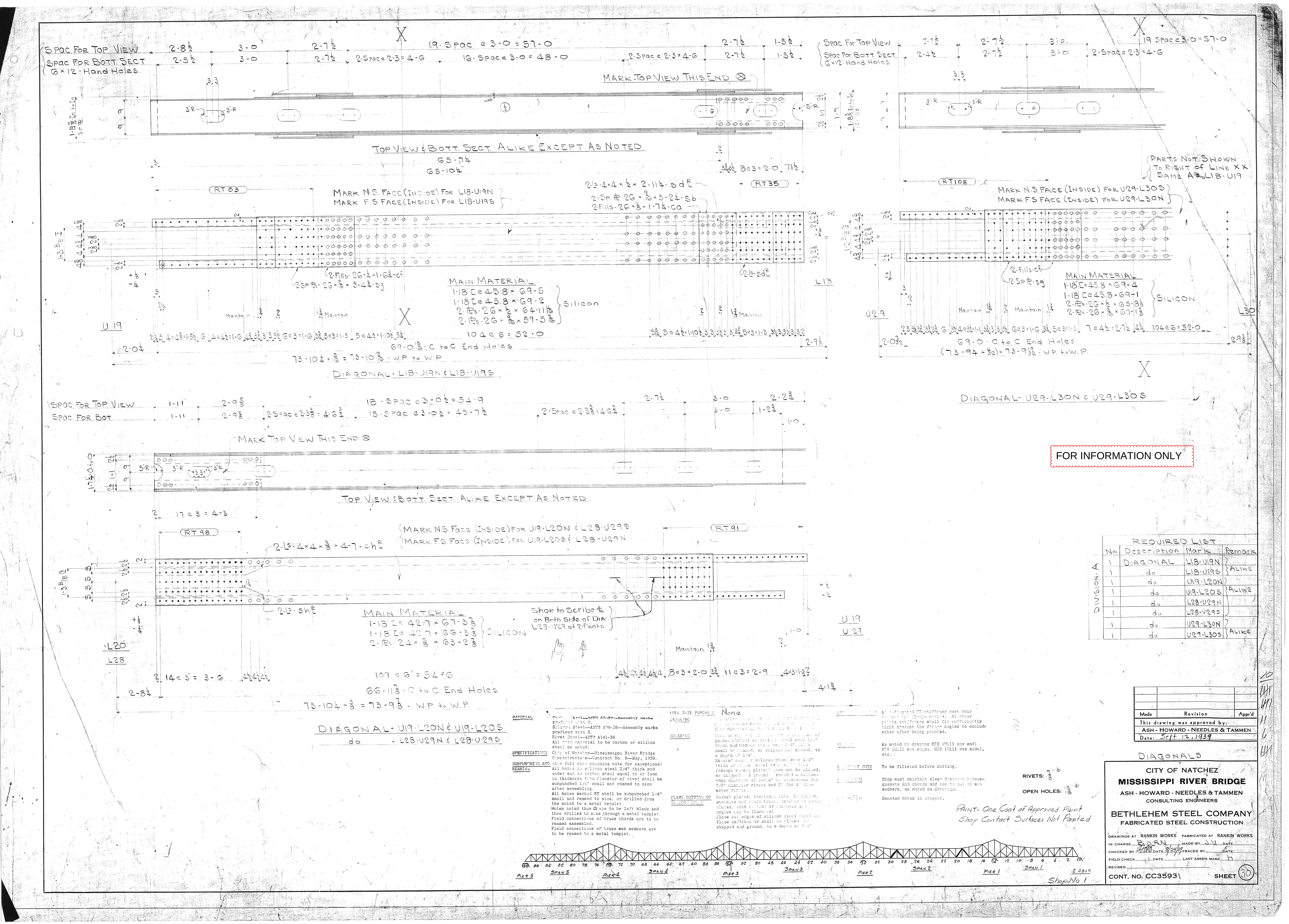
All Mat'l. Carbon Steel
Paint:- One Coat of Approved Paint
Shop Cont Surf Not Painted



SWAY & WIND STRUTS - U19-29-49-69

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Born MADE BY Roy DATE 8-14-39
CHECKED BY LGM DATE 8/23/39 TRACED BY ____ DATE ____
FIELD CHECK ____ DATE ____ LAST ASSEM. MARK am
REVISED (10-18)
CONT. NO. CC35932 SHEET 228



No	Description	Mark	Remark
1	Diagonal	L18-U19N	Alike
1	do	L18-U19S	
1	do	U19-L20N	Alike
1	do	U19-L20S	
1	do	L28-U29N	
1	do	L28-U29S	
1	do	U29-L30N	Alike
1	do	U29-L30S	

Made	Revision	App'd

This drawing was approved by: Ash - Howard - Needles & Tammen
Date: Sept 12, 1939

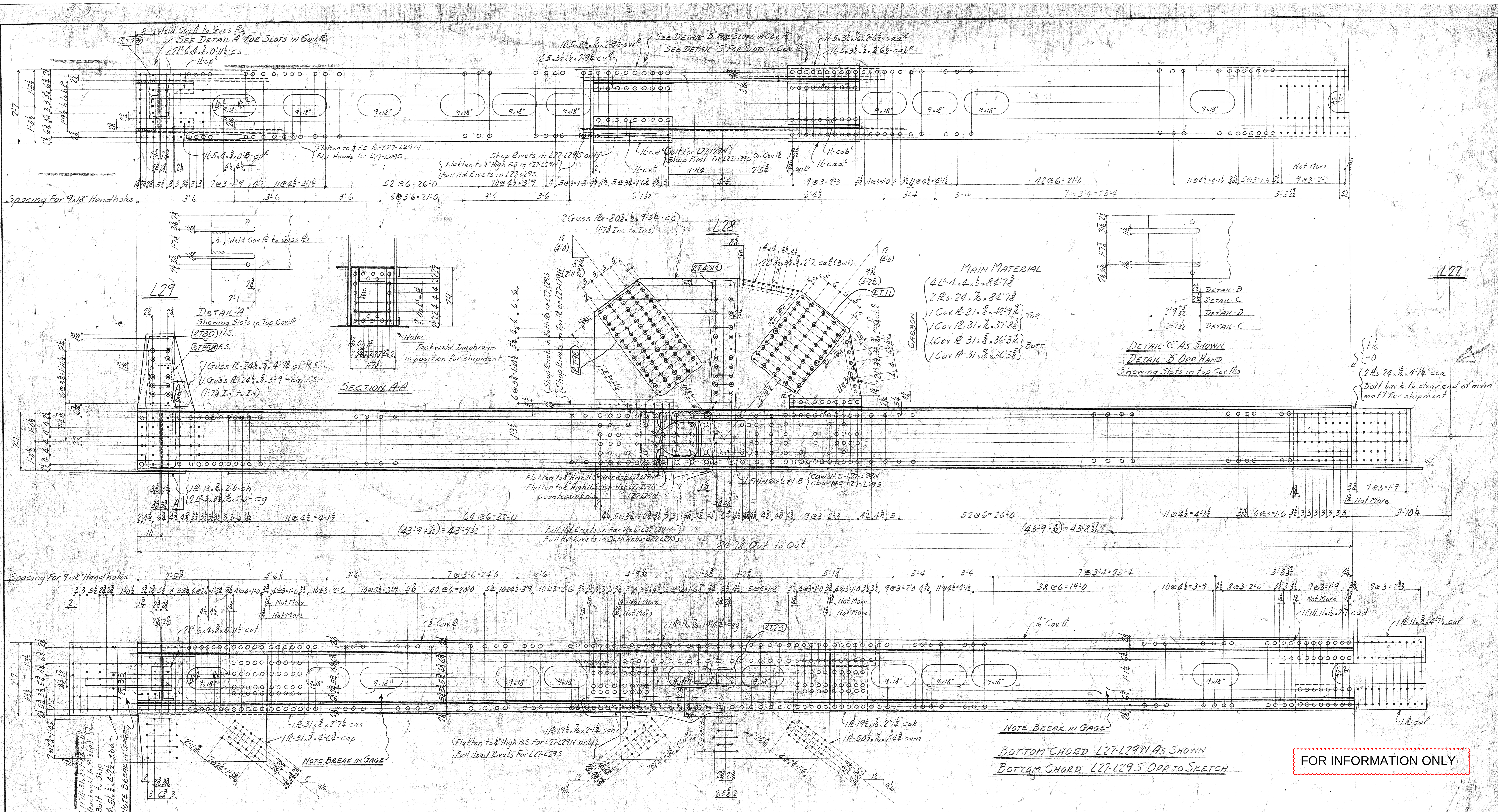
Diagonals

City of Natchez
Mississippi River Bridge
Ash - Howard - Needles & Tammen
Consulting Engineers

Bethlehem Steel Company
Fabricated Steel Construction

Drawings at Rankin Works — Fabricated at Rankin Works

Cont. No. CC3593 — Sheet 30



FOR INFORMATION ONLY

Division	No	Description	Mark	Remark
		Required List		
A	1	Bott. Chord	L27-L29N	As Sh.
A	1	do	L27-L29S	Opp Hd.

MATERIAL Carbon Steel—ASTM A7-36—Assembly marks prefixed with C.
Silicon Steel—ASTM A94-36—Assembly marks prefixed with S.
Rivet Steel—ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS City of Natchez—Mississippi River Bridge Superstructure—Contract No. 5—May, 1939.

SUBPUNCHING AND REAMING (See full size punching note for exceptions)
All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet.
Holes noted thus ◎ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING Carbon Steel Lateral Pls & Web of Diaphragms may be punched Full Size.

DRILLING All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut.
Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

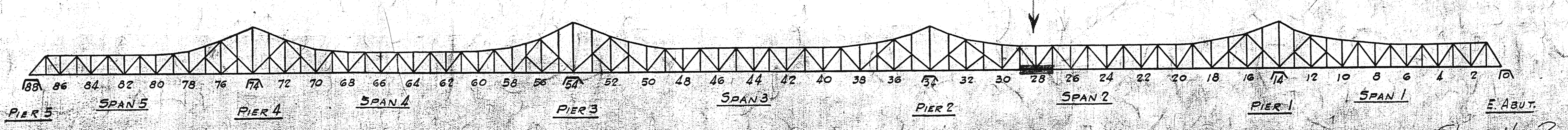
REENTRANT CUTS To be filleted before cutting.

ASSEMBLING Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

:- Denotes break in stagger.

RIVETS: 7/8"
OPEN HOLES: 15/16"

Paint- One Coat of Approved Paint
Shop Contact Surfaces Not Painted



Shop No 2

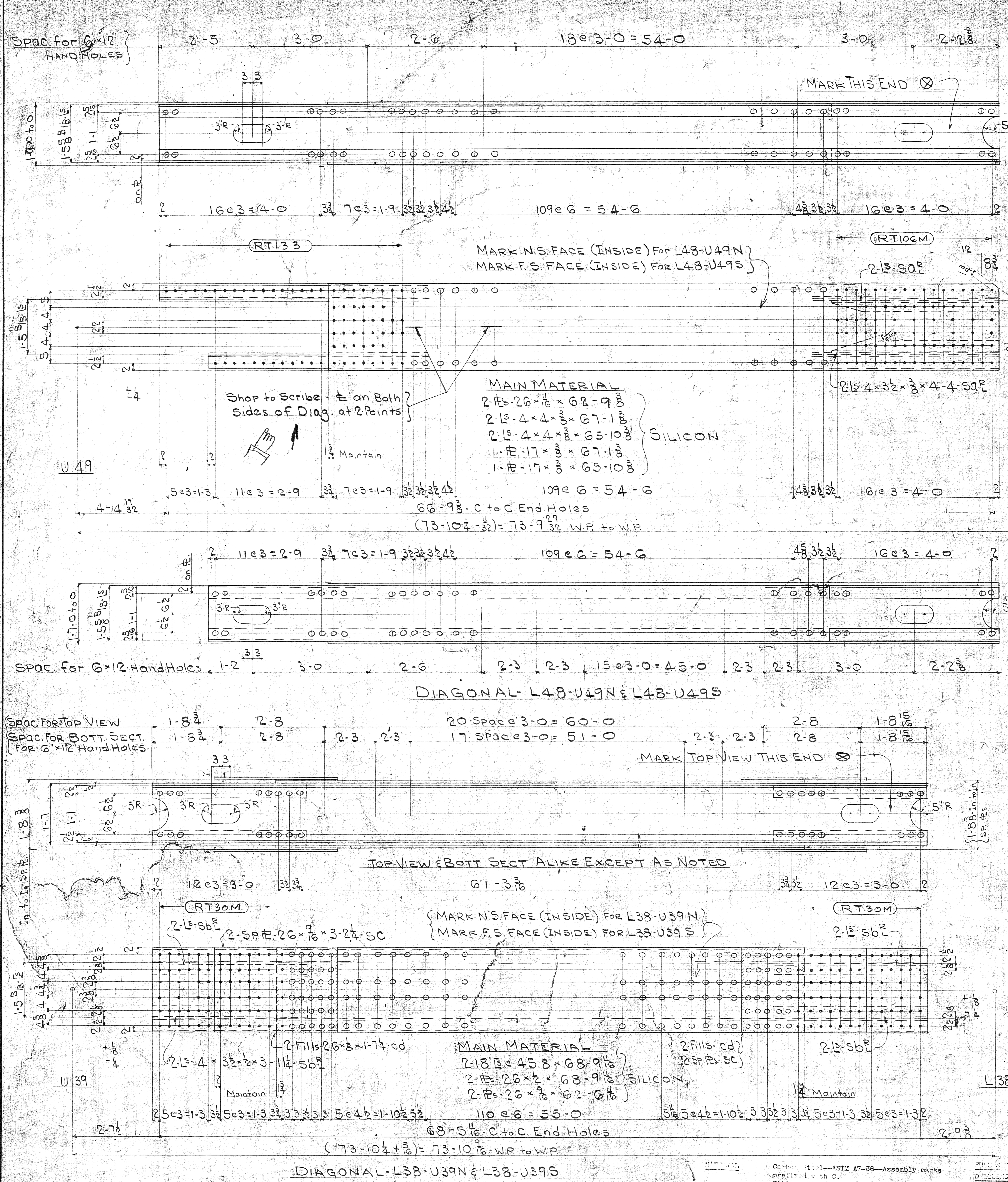
Made	Revision	Appr'd
11-14-39	Web Spl. added at L27 end; Fills added on Bott. Flg Spl Pls at L29 end.	11-14-39

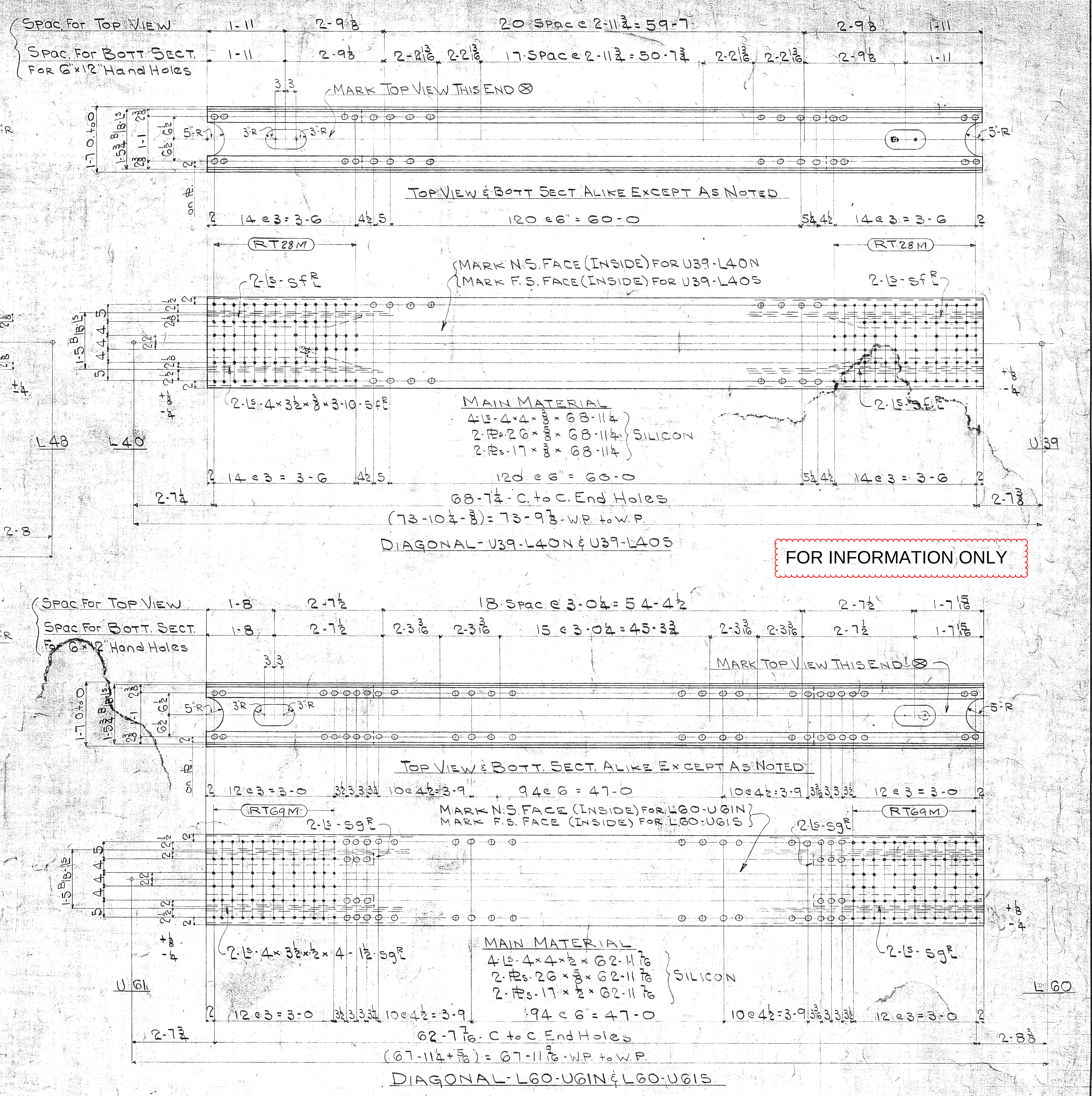
This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct 3, 1939

Bottom Chords L27-L29

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Boen MADE BY Hen DATE 9-1-39
CHECKED BY [illegible] DATE 9/13/39 TRACED BY ____ DATE ____
FIELD CHECK ____ DATE ____ LAST ASSEM. MARK Cb
REVISED ____
CONT. NO. CC35931 SHEET 37





MATERIAL — Carbon Steel—ASTM A7-36—Assembly marks prefixed with C. Silicon Steel—ASTM A94-36—Assembly marks prefixed with S. Rivet Steel—ASTM A141-36. All main material to be carbon or silicon steel as noted.

SPECIFICATIONS — City of Natchez—Mississippi River Bridge Superstructure—Contract No. 5—May, 1939.

SUBPUNCHING AND REAMING — (See full size punching note for exceptions) All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling. All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet. Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet. Field connections of truss chords are to be reamed assembled. Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING — None

DRILLING — All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING — Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4". Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL — Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut. Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

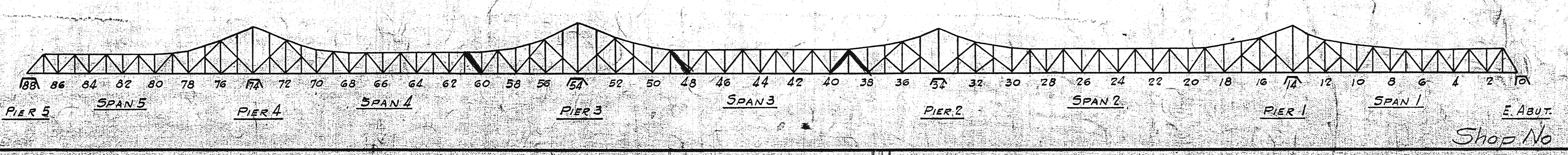
STIFFENER ANGLES — At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING — As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS — To be filleted before cutting.

ASSEMBLING — Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

:- Denotes break in stagger.



REQUIRED LIST — DIVISION-B

No	Description	Mark	Remark
1	DIAGONAL	L48-U49N	ALIKE
1	do	L48-U49S	
1	do	L38-U39N	ALIKE
1	do	L38-U39S	
1	do	U39-L40N	ALIKE
1	do	U39-L40S	
1	do	L60-U61N	ALIKE
1	do	L60-U61S	

RIVETS: 7/8"⌀

OPEN HOLES: 15/16"⌀

PAINT - One Coat of Approved Paint
Shop Contact Surfaces Not Painted

Made	Revision	Appr'd

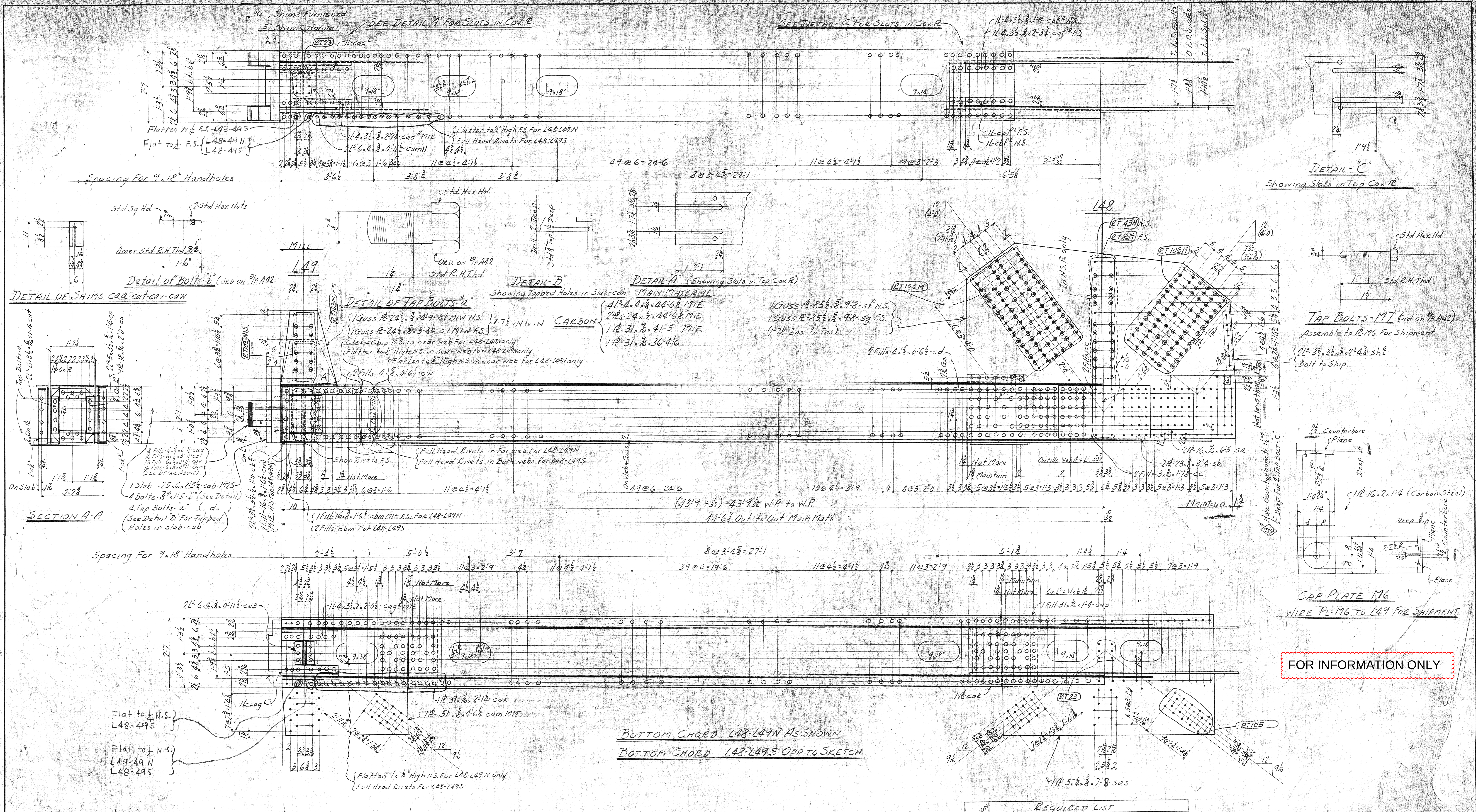
This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct 9, 1939

DIAGONALS

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE BORN MADE BY J.V. DATE
CHECKED BY HBE DATE 10/3/39 TRACED BY DATE
FIELD CHECK DATE LAST ASSEM. MARK
REVISED
CONT. NO. CC3593 SHEET 80

Shop No



FOR INFORMATION ONLY

MATERIAL
Carbon Steel--ASTM A7-36--Assembly marks prefixed with C.
Silicon Steel--ASTM A94-36--Assembly marks prefixed with S.
Rivet Steel--ASTM A141-36
All main material to be carbon or silicon steel as noted.

SPECIFICATIONS
City of Natchez--Mississippi River Bridge Superstructure--Contract No. 5--May, 1939.

SUBPUNCHING AND REAMING
(See full size punching note for exceptions)
All holes in silicon steel 3/4" thick and under and in carbon steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal templet.
Holes noted thus ⊙ are to be left blank and then drilled to size through a metal templet.
Field connections of truss chords are to be reamed assembled.
Field connections of truss web members are to be reamed to a metal templet.

FULL SIZE PUNCHING {Carbon Steel Lateral Plates & Webs of Diaphragms may be punched Full Size

DRILLING
All holes in silicon steel over 3/4" thick and in carbon steel of thickness greater than diameter of rivet shall be drilled.

SHEARING
Sheared edges (including edges and ends of gusset plates) of silicon steel over 1/4" thick and carbon steel over 3/4" thick shall be planed, or chipped and ground, to a depth of 1/4".
Sheared ends of silicon steel over 1/4" thick or carbon steel over 3/4" thick (except gusset plates) need not be planed, or chipped and ground, provided a minimum edge distance of 1-3/4" is maintained for 7/8" diameter rivets and 2" for 1" diameter rivets.

FLAME CUTTING OF SILICON STEEL
Gusset plates, reentrant cuts, handholes, manholes and drain holes, notches in cover plates, cuts at ends of channels and angles may be flame cut.
Flame cut edges of silicon steel shall be flame softened or shall be planed, or chipped and ground, to a depth of 1/4".

STIFFENER ANGLES
At ends noted BE stiffener must bear against the flange angles. At other points stiffeners shall fit sufficiently tight against the flange angles to exclude water after being painted.

MILLING
As noted on drawing MIE (Mill one end) MIW (Mill one edge), MIS (Mill one side), etc.

REENTRANT CUTS
To be filleted before cutting.

ASSEMBLING
Shop must maintain clear distance between gussets and chords and out to out of web members, as noted on drawings.

⊠ :- Denotes break in stagger.

REQUIRED LIST

Division	No	Description	Mark	Remark
B	1	Bott Chord	L48-L49N	As Shown
B	1	do	L48-L49S	Opp Hand
B	2	Tap Bolts	M7	
B	2	Cap Plates	M6	

RIVETS: 7/8"
OPEN HOLES: 15/16"

Paint- One Coat of Approved Paint.
Shop Contact Surfaces Not Painted

Made	Revision	Appr'd

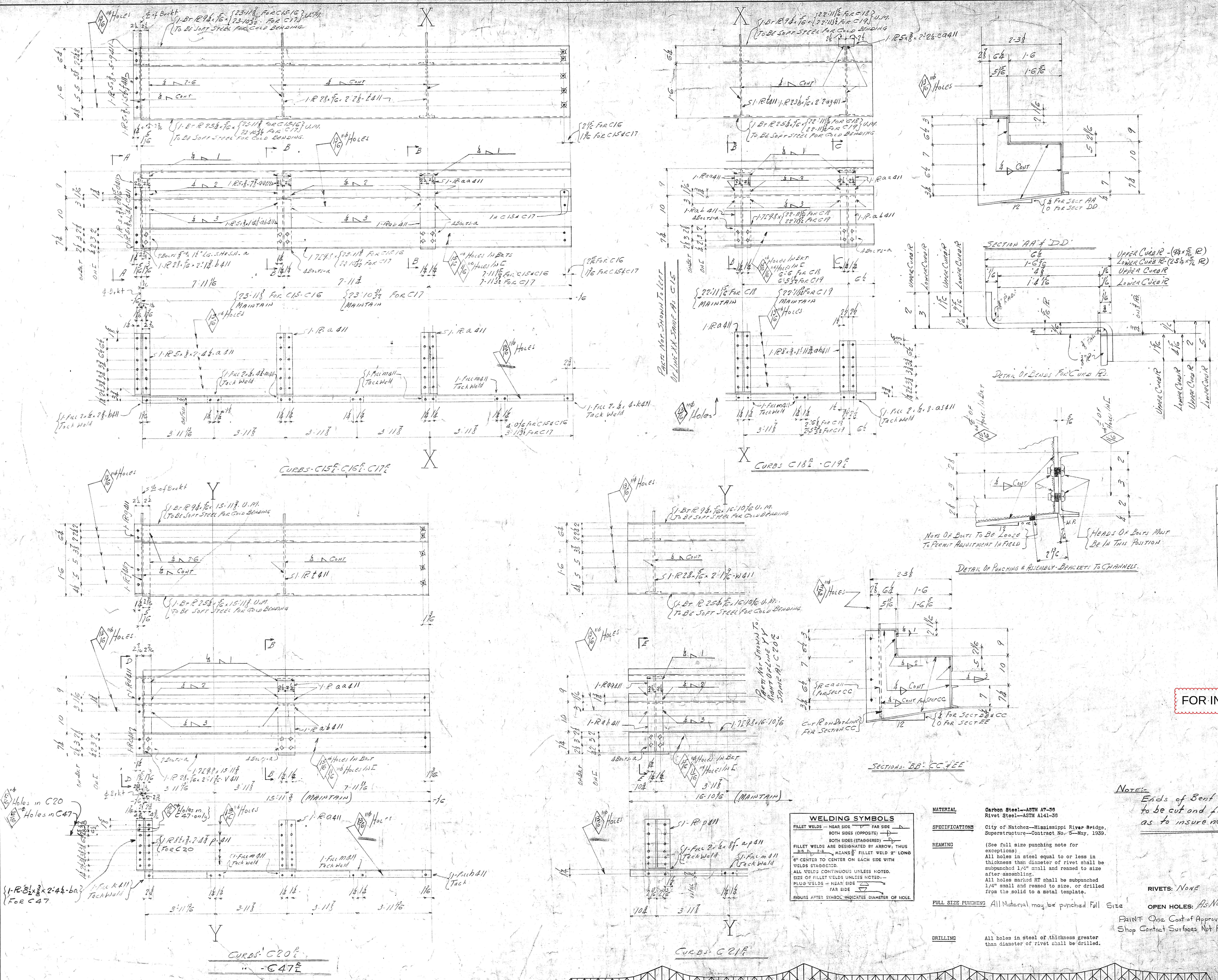
This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Sept 18, 1939

BOTTOM CHORDS L48-L49

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT RANKIN WORKS
IN CHARGE Boen MADE BY Hen DATE 8-29-39
CHECKED BY HBG DATE 8/31/39 TRACED BY ____ DATE ____
FIELD CHECK ____ DATE ____ LAST ASSEM. MARK at
REVISED ____
CONT. NO. CC35931 SHEET 62

Shop No 2



Division		Required List			
	F	Tot.	Description	Mark	Remarks
	24	24	Curbs.	C15^R_L	
	4	4	"	C16^R_L	
	16	16	"	C17^R_L	
	8	8	"	C18^R_L	
	4	4	"	C19^R_L	
	38	38	"	C20^R_L	
	12	12	"	C21^R_L	
	2	2	"	C47^R_L	

FOR INFORMATION ONLY

WELDING SYMBOLS

FILLET WELDS — NEAR SIDE FAR SIDE
BOTH SIDES (OPPOSITE)
BOTH SIDES (STAGGERED)
FILLET WELDS ARE DESIGNATED BY ARROW; THUS 3/8 2-6 MEANS $\frac{3}{8}$" FILLET WELD 2" LONG 6" CENTER TO CENTER ON EACH SIDE WITH WELDS STAGGERED.
ALL WELDS CONTINUOUS UNLESS NOTED.
SIZE OF FILLET WELDS UNLESS NOTED:—
PLUG WELDS — NEAR SIDE
FAR SIDE
FIGURE AFTER SYMBOL INDICATES DIAMETER OF HOLE.

MATERIAL: Carbon Steel--ASTM A7-36
Rivet Steel--ASTM A141-36

SPECIFICATIONS: City of Natchez--Mississippi River Bridge, Superstructure--Contract No. 5--May, 1939.

REAMING: (See full size punching note for exceptions)
All holes in steel equal to or less in thickness than diameter of rivet shall be subpunched 1/4" small and reamed to size after assembling.
All holes marked RT shall be subpunched 1/4" small and reamed to size, or drilled from the solid to a metal template.

FULL SIZE PUNCHING: All Material may be punched Full Size

DRILLING: All holes in steel of thickness greater than diameter of rivet shall be drilled.

NOTE:- Ends of Bent Curb PLs to be cut and finished so as to insure neat joints

RIVETS: None
OPEN HOLES: As Noted
PAINT One Coat of Approved Paint
Shop Contact Surfaces Not Painted

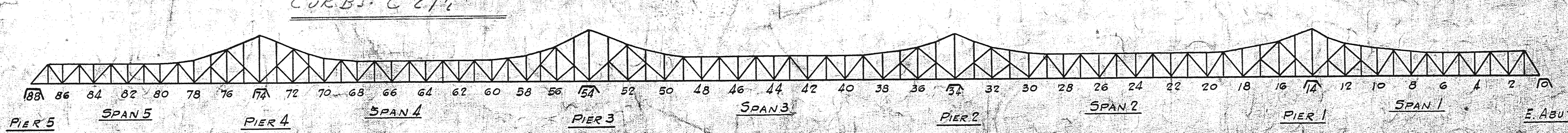
Made	Revision	Appr'd

This drawing was approved by:
ASH - HOWARD - NEEDLES & TAMMEN
Date: Oct 3, 1939

CURBS - DIV. F - SPANS 1-4-5

CITY OF NATCHEZ
MISSISSIPPI RIVER BRIDGE
ASH - HOWARD - NEEDLES & TAMMEN
CONSULTING ENGINEERS
BETHLEHEM STEEL COMPANY
FABRICATED STEEL CONSTRUCTION

DRAWINGS AT RANKIN WORKS FABRICATED AT LEETSDALE WORKS
IN CHARGE V.R. BORN MADE BY F.M. DATE 7/25/39
CHECKED BY A.M. DATE 8-10-39 TRACED BY ______ DATE ______
FIELD CHECK ______ DATE ______ LAST ASSEM. MARK ______
REVISED ______
CONT. NO. CE3593 SHEET 4B



1 st O. REV.

STATE	PROJECT NO.
MISS.	BR-0015-01(106)

GENERAL INDEX

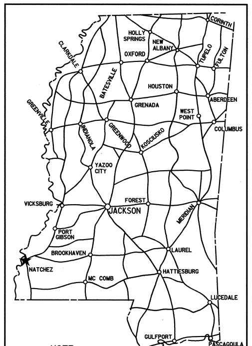
DESCRIPTION	NUMBER OF SHEETS
TITLE SHEET	1
GENERAL NOTES	2
PAY ITEMS / SUMMARY OF QUANTITIES	3
TRAFFIC CONTROL SHEETS	251–252
NORTH BRIDGE PLAN & ELEVATION	766–780
SOUTH BRIDGE PLAN & ELEVATIONS	781–791
EXISTING CONDITIONS NORTH & SOUTH BRIDGES	792–793
ELECTRICAL DRAWINGS	794–798
INFORMATIONAL SHEETS	799–800
TOTAL SHEETS	40

STATE OF MISSISSIPPI

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY FMS CON 103771 / 301000
FEDERAL AID PROJECT NUMBER BR–0015–01(106)
LOUISIANA PROJ. 026–01–023
FAP BR–1501(504)

MAIN SPANS
U.S. 65 & 84 / MISSISSIPPI RIVER BRIDGES
ADAMS COUNTY, MISSISSIPPI
CONCORDIA PARISH, LOUISIANA



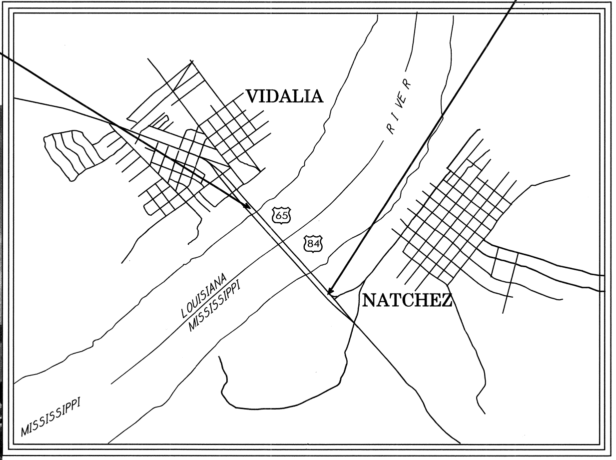
NOTE
★ INDICATES APPROXIMATE LOCATION OF PROJECT.

END OF PROJ. STA. 60+17.25 c/l PIER 5

BEG. PROJ. STA 25+50.25 FACE OF BACKWALL

BRIDGE STRUCTURES REQ'D.

STA. 23+50.25 TO 60+23.75 = 3673.50 FT.



ENVIRONMENTAL PERMITS

P.E. NO.

TYPE	REQUIRED YES	REQUIRED NO	BY
N.W.	☐	☒	CKP
G.P.	☐	☒	CKP
404	☐	☒	CKP
STORMWATER	☐	☒	CKP
LEVEE BOARD	☒	☐	

BRIDGE DIVISION REVISIONS

DATE	SHEET NO.	BY
3-11-03	3	JB
12-02-03	2, 768, 769, 770, 772, 778, 779, 780	NPK

FOR INFORMATION ONLY

LENGTH DATA

	TOTAL	
LENGTH OF ROADWAY	0	FT.
LENGTH OF BRIDGES	7347.0	FT.
LENGTH OF PROJECT (NET)	7347.0	FT.
LENGTH OF EXCEPTIONS	0	FT.
LENGTH OF PROJECT (GROSS)	7347.0	FT.

DAVID M. ROGOWSKI REGISTERED PROFESSIONAL ENGINEER 12084 STATE OF MISSISSIPPI
02/07/03

MDOT
DEPARTMENT OF TRANSPORTATION CADD MISSISSIPPI

STRUCTURE KEY:

BY
REVISIONS
DATE

APPROVED:
Harry Lee James — CHIEF ENGINEER — 2/13/03 DATE
Larry L. Brown — EXECUTIVE DIRECTOR — 02-13-03 DATE
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

APPROVED:
DIVISION ADMINISTRATOR — DATE
FEDERAL HIGHWAY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

HNTB ARCHITECTS ENGINEERS PLANNERS
Baton Rouge, Louisiana
Kansas City, Missouri

WORKING NUMBER title2

DESIGNED JSK	CHECKED NPK	ISSUED
DETAILED RJC	DATE X	DATE

SHEET NUMBER 1

rchatelain
PLOTTED: 06-FEB-2003 09:57
M: 28883-Natchez Cont Bridge title2.dgn

STATE	PROJECT NO.
MISS.	BR-0015-01(106)

GENERAL NOTES:

DESIGN SPECIFICATIONS

AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES," SIXTEENTH EDITION. 1996 AND INTERIM SPECIFICATIONS THRU 1999.

ANSI/ASCE 7-95 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

ANSI/AASHTO/AWS BRIDGE WELDING CODE D1.5-96.

OSHA REGULATIONS 29 CFR PARTS 1910, 1915 & 1926

AISC "MANUAL OF STEEL CONSTRUCTION" NINTH EDITION, 1989

CONSTRUCTION SPECIFICATIONS

"MISSISSIPPI STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 1990 AND SUPPLEMENTAL SPECIFICATIONS.

NO CHANGE OF BRIDGE PLANS WILL BE PERMITTED EXCEPT BY WRITTEN AUTHORITY OF THE BRIDGE ENGINEER. MINOR CHANGES IN DETAILS OF DESIGN OR CONSTRUCTION MAY BE AUTHORIZED IN WRITING BY THE BRIDGE ENGINEER, PROVIDED SUCH CHANGES ARE NOT JUSTIFIABLE REASONS FOR CONTRACT PRICE ADJUSTMENTS.

AISC CERTIFICATION IS NOT REQUIRED FOR THE FABRICATION OF THE STRUCTURAL STEEL USED ON THIS PROJECT. IF A FABRICATOR IS NOT AISC CERTIFIED, IT MUST SHOW THAT IT IS CURRENTLY AND HAS BEEN CONTINUALLY ACTIVE IN THE STEEL FABRICATION BUSINESS FOR THE PAST TWO YEARS AND MUST UTILIZE WELDERS THAT ARE PREQUALIFIED, AS DEFINED BY ANSI/AASHTO/AWS D1.1-90 STRUCTURAL WELDING CODE, TO PERFORM THE REQUIRED WELDS. THE FABRICATOR MUST HAVE A QC PROCEDURE AND MUST SUBMIT IT FOR APPROVAL BY MDOT PRIOR TO BEGINNING FABRICATION. MILL TEST REPORTS WILL BE REQUIRED FOR ALL MATERIALS UTILIZED ON THIS PROJECT. SHOP DRAWINGS AND WELDING PROCEDURES IN ACCORDANCE WITH THE BRIDGE WELDING CODE MUST BE SUBMITTED TO THE BRIDGE ENGINEER FOR APPROVAL,

SHOP DRAWINGS OF STRUCTURAL STEEL, INCLUDING AN ERECTION PLAN, SHALL BE SUBMITTED IN TRIPLICATE TO THE BRIDGE ENGINEER FOR APPROVAL. WRITTEN NOTIFICATION OF WHEN THE ITEMS WILL BE FABRICATED SHALL BE GIVEN TO THE BRIDGE DESIGN ENGINEER AT LEAST FOUR WEEKS PRIOR TO THE MANUFACTURE OF FABRICATED ITEMS.

DIMENSIONS

ELEVATIONS AND STATIONING SHOWN ON THE PLANS ARE GIVEN IN FEET. ALL OTHER DIMENSIONS SHOWN ON THE PLANS ARE GIVEN IN FEET AND INCHES MEASURED HORIZONTALLY AT 60 DEGREES FAHRENHEIT UNLESS OTHERWISE NOTED. DIMENSIONS GIVEN ON THE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS FROM EXISTING BRIDGE SHOP DRAWINGS AND THE CONTRACTOR'S OWN FIELD MEASUREMENTS, PRIOR TO FABRICATION OF COMPONENTS TO BE FABRICATED AND INSTALLED.

DESIGN LOADS

DEAD LOAD	MASS DENSITY
STRUCTURAL STEEL	490 lbs./cu.ft.

LIVE LOAD:

RAILING = 200 POUNDS IN ANY DIRECTION
PLATFORMS = 100 POUNDS PER SQUARE FOOT
ANCHORAGES & LIFELINES = 5000 POUNDS MINIMUM

SEISMIC: NOT USED

DESIGN METHODS

STRUCTURAL STEEL: AISC SERVICE LOAD METHOD

LOAD COMBINATIONS

LOAD COMBINATIONS FOR SERVICE LOAD ARE IN ACCORDANCE WITH ANSI/ASCE 7

MATERIALS

CABLE FOR FALL PROTECTION SYSTEM SHALL BE ½ IN. DIA. ASTM A 475-98 GALVANIZED (A90) WIRE ROPE, 19 STRAND, EXTRA-HIGH STRENGTH GRADE, BREAK STRENGTH 26,700 LBS, CLASS A COATING. WIRE ROPE SHALL COMPLY WITH FEDERAL SPECIFICATIONS RR-W-410D.

PIPE FOR RAILING SHALL BE 1-1/2" DIA. , EXTRA STRONG, ASTM A53, GRADE B (WALL THICKNESS = 0.200") AND HOT- DIPPED GALVANIZED AFTER FABRICATION.

CONCRETE ANCHORS SHALL BE MAXI-BOLTS, CADMIUM PLATED UNDER CUT TYPE ANCHORS, MINIMUM EMBEDMENT OF 7½" OR APPROVED EQUAL.

GRID FLOORS SHALL BE GALVANIZED AND WELDED AND SHALL HAVE 1¼"x⅛" BEARING BARS. GRID FLOORS SHALL BE SLIP RESISTANTAND SHALL BE BY NICHOLS CATALOG #GW-125A OR APPROVED EQUAL. FLOOR SHALL BE ATTACHED TO SUPPORT MEMBERS BY WELDING.

ALL TOE PL'S TO BE 4"x¼" UNLESS OTHERWISE NOTED.

PINS USED IN THE STRINGER FLOOR BEAM REPAIRS SHALL BE ASTM A 668, CLASS G AND SHALL HAVE AN ANSI 125, CLASS A FINISH.

STRUCTURAL STEEL

SPECIAL ATTENTION IS CALLED TO SECTION 810 OF THE MISSISSIPPI STANDARD SPECIFICATIONS CONCERNING SHOP DRAWINGS, ASSEMBLY AND ERECTION OF STEEL STRUCTURES.

NO FIELD WELDING, EITHER PERMANET OR TEMPORARY, NOR FLAME CUTTING ON BRIDGE MEMBERS WILL BE ALLOWED.

STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO A.S.T.M. DESIGNATION A709, GRADE 36, UNLESS OTHERWISE NOTED.

ALL WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS AND SHALL CONFORM TO THE ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE. ALL FILET WELDS SHALL BE ¼" WELDS UNLESS OTHERWISE NOTED.

CERTIFICATION FOR ALL WELDERS TO BE USED ON THIS PROJECT SHALL BE SUBMITTED TO THE BRIDGE ENGINEER THROUGH THE SHOP INSPECTOR.

PRIOR TO ANY FABRICATION, THE FABRICATOR SHALL HAVE SHOP DRAWINGS, WELDING PROCEDURES AND A PROCEDURE FOR STORAGE AND HANDLING OF WELDING ELECTRODES, WIRE AND FLUX WHICH HAVE BEEN APPROVED BY THE BRIDGE ENGINEER.
NO FABRICATION SHALL BEGIN UNTIL A PRE-FABRICATION CONFERENCE HAS BEEN HELD AND THE FACILITIES HAVE BEEN INSPECTED AND APPROVED BY THE BRIDGE ENGINEER.

ALL FABRICATED STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A-123 AFTER FABRICATION, UNLESS OTHERWISE NOTED

DAMAGED ZINC COATING SHALL BE REPAIRED BY THOROUGHLY WIRE BRUSHING THE DAMAGED AREAS AND REMOVING LOOSE OR CRACKED COATING AND THEN REPAIRED BY THE APPLICATION OF A COLD GALVANIZING REPAIR COMPOUND SUCH AS CRC-ZINC RE-NU OR APPROVED EQUAL.

FABRICATED STEEL CONNECTIONS

ALL FIELD CONNECTIONS SHALL BE BOLTED

FIELD CONNECTIONS SHALL BE 7/8 INCH DIAMETER HIGH STRENGTH BOLTS PER A.S.T.M. A325, TYPE 1, UNLESS OTHERWISE NOTED.

HIGH STRENGTH BOLTS SHALL MEET THE REQUIREMENTS OF A.S.T.M. A325, TYPE 1, AND SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. A153, CLASS C COATING OR GALVANIZED BY THE MECHANICAL PROCESS IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. B695, CLASS 50 COATING.

MAXIMUM HARDNESS FOR HIGH STRENGTH BOLTS SHALL BE 33 ROCKWELL C (RC).

NUTS FOR HIGH STRENGTH BOLTS SHALL BE HEAVY HEX AND MEET THE REQUIREMENTS OF A.S.T.M. A563, GRADE DH GALVANIZED.

HARDENED STEEL WASHERS SHALL MEET THE REQUIREMENTS OF A.S.T.M. F436, GALVANIZED.

DIRECT TENSION INDICATORS SHALL WILL BE USED WITH ALL A-325 BOLTS AND MEET THE REQUIREMENTS OF A.S.T.M. F959 AND SHALL BE GALVANIZED BY THE MECHANICAL PROCESS MEETING THE REQUIREMENTS OF A.S.T.M. B695, CLASS 50 COATING.

NUTS FOR HIGH STRENGTH BOLTS SHALL BE TAPPED OVERSIZE THE MINIMUM AMOUNT REQUIRED FOR PROPER ASSEMBLY AND LUBRICATED WITH A LUBRICANT CONTAINING A DYE OF ANY COLOR THAT CONTRASTS WITH THE COLOR OF GALVANIZING.

HIGH STRENGTH BOLTS, NUTS, OR DIRECT TENSION INDICATORS SHALL NOT BE REUSED AFTER TIGHTENING.

MILL TEST REPORTS, CERTIFIED TEST REPORTS, AND CERTIFICATES OF COMPLIANCE ARE REQUIRED FOR HIGH STRENGTH BOLTS, NUTS, HARDENED WASHERS AND DIRECT TENSION INDICATORS.
EACH HIGH STRENGTH BOLT SHALL BE TIGHTENED TO PROVIDE, WHEN ALL BOLTS IN THE JOINT ARE TIGHT, AT LEAST A MINIMUM TENSION AS FOLLOWS:

1" DIA. BOLTS --- 51,500 LBS.	3/4" DIA. BOLTS --- 28,400 LBS.
7/8" DIA. BOLTS --- 39,250 LBS.	3/8" DIA. BOLTS --- 19,200 LBS.

HIGH STRENGTH BOLTS, NUTS, WASHERS AND DIRECT TENSION INDICATORS SHALL BE DOMESTIC PRODUCTS AND SHALL BE SHIPPED TO THE PROJECT SITE IN SEALED METAL CONTAINERS OR APPROVED EQUAL. EACH CONTAINER SHALL BE PERMANENTLY MARKED WITH THE ROTATIONAL CAPACITY LOT NUMBER SUCH THAT IDENTIFICATION WILL BE POSSIBLE AT ANY STAGE PRIOR TO INSTALLATION. THEY SHALL BE STORED OUT OF THE WEATHER IN A LOCATION APPROVED BY THE ENGINEER. THE CONTAINER SHALL REMAIN UNOPENED UNTIL THE CONTENTS ARE NEEDED FOR ERECTION.

PADEYES SHALL BE S264 BY CROSBY, CAT. NO 1090820, SIZE 5 OR APPROVED EQUAL.

TURNBUCKLES SHALL BE CROSBY JAW & EYE HG-227, ¾x18, STOCK NO. 1032117 OR APPROVED EQUAL.

MAGNETIC PARTICLE INSPECTION

MAGNETIC PARTICLE INSPECTION WILL BE PERFORMED ON THE LINK PINS IN ACCORDANCE WITH ASTM A 257, GUIDE SPECIFICATIONS ASTM E 709-95 AND ASTM SPECIFICATION E-1444-01 USING A YOKE TO MAGNETIZE THE AREA BEING EXAMINED.

THE CONTRACTOR SHALL SUBMIT A WRITTEN PROCEDURE AND TECHNIQUE TO THE ENGINEER FOR APPROVAL AT LEAST 4 WEEKS PRIOR TO INITIALIZATION.

FALL PROTECTION SYSTEM

FALL PROTECTION SYSTEM SHALL CONSIST OF ALL WIRE ROPE, STRUCTURAL TUBING, PLATES, ANGLES, PADEYES, SADDLE CLAMPS, TURN BUCKLES, NUTS, BOLTS, WASHERS AND ALL MISCELLANEOUS MATERIALS, LABOR AND EQUIPMENT REQUIRED TO COMPLETELY INSTALL THE SYSTEM. ALL MATERIALS SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED. PAYMENT FOR MATERIALS, LABOR AND EQUIPMENT REQUIRED FOR THE COMPLETE INSTALLATION SHALL BE MADE UNDER THE PRICE BID ITEM 907-810-K.

SAFETY GATES ARE TO BE OSHA APPROVED, FABENCO, MODEL 71, SIZE 21, SELF-CLOSING, GALVANIZED STEEL GATES OR APPROVED EQUAL AND SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.

MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL PROVIDE FOR AND MAINTAIN THROUGH AND LOCAL TRAFFIC AT ALL TIMES AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO CAUSE THE LEAST INTERFERENCE POSSIBLE WITH TRAFFIC ON THE BRIDGE.
ONLY ONE (1) LANE MAY BE CLOSED TO HIGHWAY TRAFFIC UNDER NORMAL WORKING CONDITIONS. LANE CLOSURE WILL BE ALLOWED FROM 9 AM MONDAY MORNING UNTIL 3 PM SATURDAY AFTERNOON. LANE CLOSURES WILL NOT BE ALLOWED ON HOLIDAYS OR SUNDAY UNLESS REQUESTED IN WRITING AT LEAST ONE WEEK IN ADVANCE OF THE PROPOSED CLOSURE, AND APPROVED BY THE ENGINEER.

NOTE: TRAFFIC CONTROL SHEET WAS PREPARED SEPARATELY BY MDOT AND ADDED TO THE PLANS BY MDOT.

JOINT REPAIRS

DRAINAGE TROUGH TO BE FABREEKA, 2 PLY FABSYN CONVEYER BELT MATERIAL, 5/32" THICK x 3' x 42', CUT TO FIT OR APPROVED EQUAL.

NAVIGATION

CONTRACTOR MUST MAINTAIN VERTICAL CLEARANCE FOR HOSES, PLATFORMS AND ALL EQUIPMENT AND PROVIDE FOR MAINTENANCE OF MARINE TRAFFIC. NO SPRAYING WILL BE ALLOWED WHILE MARINE TRAFFIC PASSES BENEATH.

ELECTRICAL WORK

ELECTRICAL WORK SHALL INVOLVE THE FURNISHING AND INSTALLATION OF ROADWAY LIGHTING, NAVIGATION LIGHTS, AVIATION BEACONS AT NEW LOCATIONS AND SYSTEM REPAIRS TO THE NORTH BRIDGE. ALL ELECTRICAL WORK NOTED IN THE SPECIFICATIONS AND SHOWN ON SHEETS 794 THRU 798, INCLUDING REWIRING THE NAVIGATION LIGHTS AND AVIATION BEACONS, SHALL BE PAID FOR UNDER ITEM 907-674-A-LUMP SUM. ADDITIONALLY, IT IS ANTICIPATED THAT THE EXISTING WIRING THAT IS IN PLACE IS ADEQUATE AND FUNCTIONING. IN THE EVENT THAT IT IS NECESSARY TO REPLACE ANY OF THE WIRING, IT WILL BE PAID FOR AT THE PRICES SHOWN IN THE SUPPLEMENTAL SPECIFICATIONS AS ITEM 907-674-B PER LINEAR FOOT.

SPECIAL PROVISIONS

CLEANING AND REPAIR OF DECK DRAINAGE SYSTEM	NO. 907-603-C
ELECTRICAL WORK.	NO. 907-674-A
ELECTRICAL WORK (REWIRING)	NO. 907-674-B
INSTALLATION OF PLATFORMS, LADDERS, RAILING AND ⚠ FALL PROTECTION SYSTEM (NORTH BRIDGE/SOUTH BRIDGE) . .	NO. 907-810-K
INSPECTION WALK REPAIRS AND ADDITIONS AND MODIFICATIONS.	NO. 907-810-L
ULTRASOUND TESTING OF LINK PINS ON NORTH BRIDGE	NO. 907-810-M
LUBRICATION OF LINK PINS	NO. 907-810-N
ULTRASONIC TESTING OF LINKS ON NORTH AND SOUTH BRIDGES .	NO. 907-810-O
MAGNETIC PARTICLE EXAMINATION OF LINKS ON NORTH BRIDGE	NO. 907-810-PP
MISCELLANEOUS REPAIRS.	NO. 907-810-Q
STRINGER TO FLOOR BEAM CONNECTION REPAIRS	NO. 907-810-R
MAINTENANCE PAINTING OF METAL STRUCTURES NORTH BRIDGE.	NO. 907-816-A
MAINTENANCE PAINTING OF METAL STRUCTURES (PANEL POINT CONNECTIONS AND SHEAR KEYS) SOUTH BRIDGE.	NO. 907-816-B

FOR INFORMATION ONLY

MDOT

DEPARTMENT OF TRANSPORTATION CADD MISSISSIPPI

STRUCTURE KEY:

DATE	DESCRIPTION	REVISIONS	BY
12-02-03	⚠ DESCRIPTION 907-810-K		NPK

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

GENERAL NOTES

STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

HNTB ARCHITECTS ENGINEERS PLANNERS
Baton Rouge, Louisiana
Kansas City, Missouri

WORKING NUMBER 115r

DESIGNED JSK	CHECKED NPK	ISSUED	SHEET NUMBER
DETAILED RJC	DATE 9/29/01	DATE	2

1 st O. REV.

STATE	PROJECT NO.
MISS.	BR-0015-01(106)

SUMMARY OF ESTIMATED QUANTITIES

PAY ITEM NUMBER	ITEM
202-A	REMOVAL OF DEBRIS
	CLEANING TOPS OF CAP BEAMS AND ABUTMENTS NORTH & SOUTH BRIDGES PIERS 1,2,3,4,5 & EAST ABUTMENTS
	ALL GUSSET PLATES ON NORTH BRIDGE AND GUSSET PLATES ON SOUTH BRIDGE AS DIRECTED BY PROJECT ENGINEER
202-B	REMOVAL OF ATTACHMENTS (NORTH AND SOUTH BRIDGE) 2
	REMOVE USGS PLATFORMS & LADDERS ON THE NORTH BRIDGE, NORTH & SOUTH SIDES PIER 2
	REMOVE PIPE ON NORTH BRIDGE, (ATTACHED TO NORTH RAILING)
	REMOVE ACCESS LADDERS AND PLATFORMS ON PIERS 1,2,3 & 4 ON NORTH BRIDGE
	REMOVE ACCESS LADDERS & PLATFORMS ON PIERS 4 & 5 SOUTH BRIDGE
	REMOVE CHECKERED PLATE L25S & L47S FOR NAVIGATION LIGHTS SOUTH BRIDGE
	REMOVE OUTSIDE PLATFORM PLATES AND CABLES AT L31S & L63S SOUTH BRIDGE
618-A	MAINTENANCE OF TRAFFIC 4
620-A	MOBILIZATION
907-603-C	CLEANING AND REPAIR OF DECK DRAINAGE SYSTEM (SOUTH BRIDGE)
	CLEANING OF FINGER JOINTS AT PP L1, L63 & L92
	CLEANING OF ALL DECK DRAINS & SCUPPERS WITH HIGH PRESSURE WATER
	POURING OF CONCRETE PADS AT PIER 5
	REPAIR OF DRAINAGE SYSTEM AT SPAN 5
	CLEAN PIPE AND DRAINAGE TROUGH AT PP31
	REPLACE EXISTING MEMBRANE WITH FABREEKA, 2PLY FABSYN CONVEYER BELT MATERIAL AT PP31 5
907-674-A	ELECTRICAL WORK, NORTH & SOUTH BRIDGES
907-810-K	INSTALLATION OF PLATFORMS, LADDERS, RAILING AND FALL PROTECTION SYSTEM (NORTH BRIDGE)
	NORTH BRIDGE-FABRICATE & INSTALL TOP CHORD AVIATION BEACON PLATFORM, LADDERS AND SAFETY GATES (PIERS 1,2,3 & 4)
	NORTH BRIDGE-FABRICATE & INSTALL LINK ACCESS PLATFORMS & LADDERS U19N, U29N, U19S, U29S, U49N, U49S, U69N, U69S.
	NORTH BRIDGE-FABRICATE & INSTALL TOP CHORD FALL PROTECTION ON NORTH AND SOUTH CHORDS AND CROSS MEMBERS AT LINKS & STRUTS.
	NORTH BRIDGE-FABRICATE & INSTALL BOTTOM CHORD FALL PROTECTION ON NORTH AND SOUTH CHORDS
	NORTH BRIDGE-FABRICATE & INSTALL RAILING SYSTEMS AND SAFETY GATES ON PIERS 1,2,3,4&5
	NORTH BRIDGE-FABRICATE & INSTALL LADDERS & PLATFORMS ON PIERS 1,2,3,4 & 5 (FROM BOTTOM OF PIERS TO TOP CHORD)
	NORTH BRIDGE-FABRICATE & INSTALL PLATFORMS AND LADDERS FOR NAVIGATION LIGHTS AT L24N & L44N
907-810-K	INSTALLATION OF PLATFORMS, LADDERS, RAILING AND FALL PROTECTION SYSTEM. (SOUTH BRIDGE)
	SOUTH BRIDGE-FABRICATE & INSTALL TOP CHORD AVIATION BEACON PLATFORM, LADDERS AND SAFETY GATES (PIERS 1,2,3 & 4)
	SOUTH BRIDGE-FABRICATE & INSTALL TOP CHORD FALL PROTECTION ON NORTH AND SOUTH CHORDS AND CROSS MEMBERS AT LINKS
	SOUTH BRIDGE-FABRICATE & INSTALL LINK ACCESS PLATFORMS & LADDERS AT U19 N & S, U31 N & S, U63 N &S, U73 N & S.
	SOUTH BRIDGE-FABRICATE & INSTALL TOE PLATES AND SAFETY GATES FOR EXISTING RAILING ON PIERS 1,2,3 & 4
	SOUTH BRIDGE-FABRICATE & INSTALL PLATFORMS FOR NAVIGATION LIGHTS AT L25S & L47S
	SOUTH BRIDGE-FABRICATE & INSTALL PLATFORMS WITH SAFETY GATES FOR INSPECTION WALKS ON OUTSIDE OF BRIDGE AT EXPANSION JOINTS
	SOUTH BRIDGE-FABRICATE & INSTALL RAILING SYSTEMS ON PIER 5

PAY ITEM NUMBER	ITEM
907-810-L	INSPECTION WALK REPAIRS, ADDITIONS AND MODIFICATIONS ON SOUTH BRIDGE.
	REMOVE 40 FEET OF INSPECTION WALK ON EAST END OF BRIDGE.
	PLACE NEW TOE PLATES AT LOWER LATERAL CROSSINGS.
	PLACE MIDRAILS ON LATERAL INSPECTION WALKS AT TWO BAYS EACH.
	ADD MID RAILS AND TOE PLATES AND SAFETY GATES AT ENDS OF INSPECTION WALKS OVER PIERS.
	REATTACH LOOSE GRATING ON INSPECT. WALK AT PP63 OF THE SOUTH BRIDGE AND ALL OTHER LOOSE GRATINGS IDENTIFIED DURING THE PROJECT.
907-810-M	ULTRASOUND TESTING OF LINK PINS. 3
	U19S UPPER PIN, U29N LOWER PIN, U49S LOWER PIN, U69N UPPER PIN ON NORTH BRIDGE
	U19N LOWER PIN, U31S UPPER PIN, U63S LOWER PIN, U73N UPPER PIN ON SOUTH BRIDGE
907-810-N	LUBRICATION OF LINK PINS (2 PINS PER LOCATION, 16 LOCATIONS)
	PINS AT U19N, U19S, U29N, U29S, U49N, U49S, U69N, U69S ON NORTH BRIDGE
	PINS AT U19N, U19S, U31N, U31S, U63N, U63S, U73N, U73S ON SOUTH BRIDGE
907-810-O	ULTRASONIC TESTING OF LINKS ON NORTH BRIDGE
	TEST LINKS AT U19S UPPER LINK, U29N LOWER LINK, U49S LOWER LINK AND U69N UPPER LINK OF NORTH BRIDGE
907-810-PP	MAGNETIC PARTICLE EXAMINATION OF LINKS ON NORTH BRIDGE 7
	TEST LINKS AT U19S UPPER LINK, U29N LOWER LINK, U49S LOWER LINK AND U69N UPPER LINK OF NORTH BRIDGE
907-810-Q	MISCELLANEOUS REPAIRS
	WELL COVERS ON PIER 4 NORTH BRIDGE
	REPAIRS TO LOWER LATERAL SYSTEM AT 8 LOCATIONS ON NORTH BRIDGE
	DRILLING HOLES ON GUSSET PLATES ON NORTH BRIDGE TO FACILITATE DRAINAGE AND AS DIRECTED BY THE PROJECT ENGINEER
	REPLACE MISSING AND DAMAGED DOORS ON PIER 2, N & S BRIDGES
	MODIFICATIONS FOR ACCESS PLATFORMS (PIERS 1-4), S BRIDGE
	REPLACE BROKEN NAVIGATION LIGHT PEDESTAL BASES ON PIERS 2 AND 3, SOUTH BRIDGE
907-810-R	STRINGER TO FLOOR BEAM LINK REPAIRS (AT 3 LOCATIONS), N BRIDGE 6
907-816-A	MAINTENANCE PAINTING OF METAL STRUCTURES 1
	ALL PANEL POINTS ON NORTH AND SOUTH SIDE OF BRIDGE OF NORTH BRIDGE
	2 WINDSHEAR KEYS TO BE CLEANED, LUBRICATED AND PAINTED, NORTH BRIDGE
907-816-B	MAINTENANCE PAINTING OF METAL STRUCTURES 1
	63 PANEL POINTS LISTED ON THE GENERAL PLAN & ELEVATION ON SOUTH BRIDGE-
	ADDITIONAL PANEL POINTS ON THE SOUTH BRIDGE AS APPROVED BY THE PROJECT ENGINEER
	2 WINDSHEAR KEYS TO BE CLEANED, LUBRICATED AND PAINTED, SOUTH BRIDGE

NOTE:

UNLESS OTHERWISE NOTED, PAYMENT FOR BID ITEMS WILL BE FOR ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETELY INSTALL THE ITEMS OR PERFORM THE WORK REQUIRED.

SHOP DRAWINGS FOR ALL FABRICATED MATERIALS SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION AND ERECTION.

PAY ITEM NUMBER	ITEM	UNITS	QUANTITY
202-A	REMOVAL OF DEBRIS 2	LUMP	LUMP SUM
202-B	REMOVAL OF ATTACHMENTS (NORTH AND SOUTH BRIDGE)	LUMP	LUMP SUM
618-A	MAINTENANCE OF TRAFFIC 4	LUMP	LUMP SUM
620-A	MOBILIZATION	LUMP	LUMP SUM
907-603-C	CLEANING AND REPAIR OF DECK DRAINAGE SYSTEM 5	LUMP	LUMP SUM
907-674-A	ELECTRICAL WORK	LUMP	LUMP SUM
907-810-K	INSTALLATION OF PLATFORMS, LADDERS, RAILING AND FALL PROTECTION SYSTEM (NORTH BRIDGE).	LUMP	LUMP SUM
907-810-K	INSTALLATION OF PLATFORMS, LADDERS, RAILING AND FALL PROTECTION SYSTEM (SOUTH BRIDGE).	LUMP	LUMP SUM
907-810-L	INSPECTION WALK REPAIRS AND ADDITIONS AND MODIFICATIONS	LUMP	LUMP SUM
907-810-M	ULTRASOUND TESTING OF LINK PINS 3	EACH	8
907-810-N	LUBRICATION OF LINK PINS	EACH	32
907-810-O	ULTRASONIC TESTING OF LINKS	EACH	4
907-810-PP	MAGNETIC PARTICLE EXAMINATION OF LINKS ON NORTH BRIDGE	EACH	4
907-810-Q	MISCELLANEOUS REPAIRS	LUMP	LUMP SUM
907-810-R	STRINGER TO FLOOR BEAM CONNECTIONS REPAIRS 6	EACH	3
907-816-A	MAINTENANCE PAINTING OF METAL STRUCTURES 1	LUMP	LUMP SUM
907-816-B	MAINTENANCE PAINTING OF METAL STRUCTURES (PANEL POINT CONNECTIONS AND SHEAR KEYS)-SOUTH BRIDGE 1	EACH	65

1. ALL OF THE PANEL POINT CONNECTIONS ON BOTH TRUSSES OF THE NORTH BRIDGE AND 61 PANEL POINT CONNECTIONS ON THE SOUTH BRIDGE (AS IDENTIFIED ON SHEET 781), AND THE WIND SHEAR DEVICES HAVE BEEN IDENTIFIED TO BE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE NORTH BRIDGE PANEL POINT CONNECTIONS AND THE WIND SHEAR DEVICES WILL BE PAID FOR UNDER ITEM 907-816-A, LUMP SUM. THE SOUTH BRIDGE PANEL POINT CONNECTIONS AND THE WIND SHEAR DEVICES WILL BE PAID FOR UNDER ITEM 907-816-B, PER EACH. ADDITIONAL PANEL POINT CONNECTIONS MAY BE IDENTIFIED AS IN NEED OF CLEANING AND PAINTING AS THE PROJECT PROCEEDS. THESE ADDITIONAL LOCATIONS WILL BE PAID FOR, PER EACH,UNDER ITEM 907-816-B, AT THE PRICE INITIALLY BID FOR THAT ITEM.
2. TWO USGS PLATFORMS ARE LOCATED AT PIER 2 (NORTH AND SOUTH SIDES) ON THE NORTH BRIDGE AND ARE SHOWN ON SHEET31 (PHOTOS 1, 2 , 3 & 4) . BID FOR THIS ITEM SHALL INCLUDE ALL LABOR AND EQUIPMENT REQUIRED FOR THE REMOVAL AND DISPOSAL OF THE PLATFORMS AND ALL LADDERS USED TO ACCESS THE PLATFORMS, PIPES, CHECKED PLATFORM PLATES AND CABLES ON THE SOUTH BRIDGE, AND LADDERS AND PLATFORMS ON NORTH BRIDGE (SHEET 31, PHOTO #9). REMOVED MATERIALS ARE TO BECOME THE PROPERTY OF THE CONTRACTOR AND BE DISPOSED OF BEYOND THE LIMITS OF THE RIGHT-OF-WAY.
3. ANY ADDITIONAL ULTRASOUND TESTING OF PINS OR LINKS WILL BE DONE UNDER THE SAME PAY ITEM AT THE PER EACH PRICE BID FOR THIS ITEM. ADDITIONAL PINS OR LINKSSHALL BE TESTED ONLY AS DIRECTEDBY THE PROJECT ENGINEER.
4. ALL TRAFFIC SIGNS AND TRAFFIC CONTROL ITEMS ARE TO BE PAID FOR UNDER MAINTENANCE OF TRAFFIC, ITEM 618-A. MAINTENANCE OF TRAFFIC INCLUDES MARINE TRAFFIC. NO WORK THAT PRODUCES SPARKS WILL BE ALLOWED WHILE MARINE TRAFFIC PASSES UNDERNEATH WORK AREA. VEHICULAR TRAFFIC SHALL BE PROTECTED DURING ALL OPERATIONS INCLUDING ELECTRICAL WORK, STEEL ERECTION, CLEANING AND PAINTING. FLUORENSCENT ORANGE SHEETING SHALL BE USED ON ALL CONSTRUCTION AND TRAFFIC CONTROL SIGNS.
5. ALL DEBRIS REMOVED WILL BE CAPTURED AND DISPOSED OF BEYOND THE LIMITS OF THE RIGHT-OF-WAY IN AN APPROVED MANNER. THE COST OF REMOVAL, TRANSPORTING AND DISPOSAL OF THE DEBRIS IS AT NO DIRECT PAY AND WILL BE INCLUDED IN THE PRICE BID FOR PAY ITEM. ALL DECK DRAINS ON THE SOUTH BRIDGE WILL BE CLEANED OF DIRT AND DEBRIS AS DIRECTED BY THE PROJECT ENGINEER.
6. STRINGER TO FLOOR BEAM LINK REPAIRS ARE DESIGNATED TO BE MADE AT L42, L72 AND L80. REPAIRS TO LINKS AT PANEL POINT 72 WILL BE MADE FIRST, AND A DECISION WILL THEN BE MADE BY THE ENGINEER WHETHER OR NOT TO PROCEED WITH REPAIRS AT THE OTHER TWO PANEL POINTS. IF DURING THE PROJECT OTHER CONNECTIONS ARE IDENTIFIED AS NEEDING REPAIRS, THE REPAIRS WILL BE MADE AT THE UNIT PRICE BID FOR ITEM 907-810-R, PER EACH.
7. MAGNETIC PARTICLE INSPECTION WILL BE DONE IN ACCORDANCE WITH ASTM E-709 USING THE YOKE MAGNETIZING TECHNIQUE. THE LIFTING FORCE OF THE YOKE WILL BE DETERMINED IN ACCORDANCE WITH SECTION 20.3.6.

FOR INFORMATION ONLY

DEPARTMENT OF TRANSPORTATION CADD MISSISSIPPI

STRUCTURE KEY:

REVISIONS: 1 — 3-11-03 — Added Units + Quantity — BKC (DATE / REVISIONS / BY)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

SUMMARY OF ESTIMATED QUANTITIES

STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

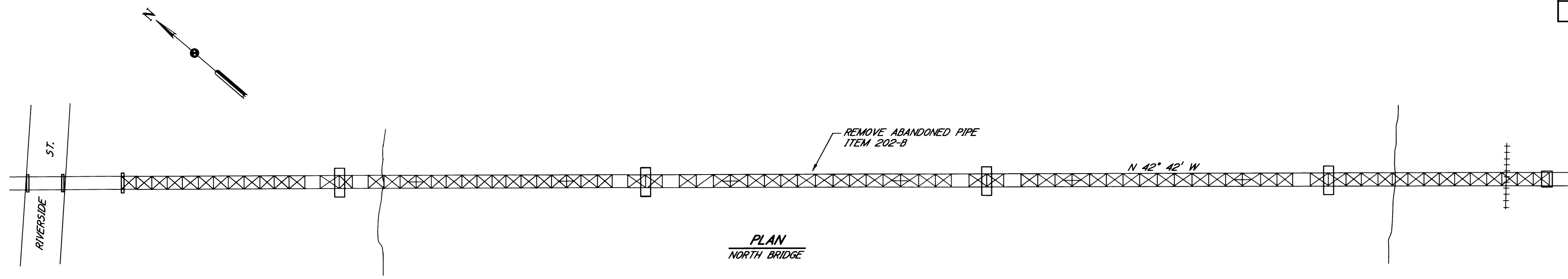
HNTB ARCHITECTS ENGINEERS PLANNERS
Baton Rouge, Louisiana
Kansas City, Missouri

WORKING NUMBER 130†

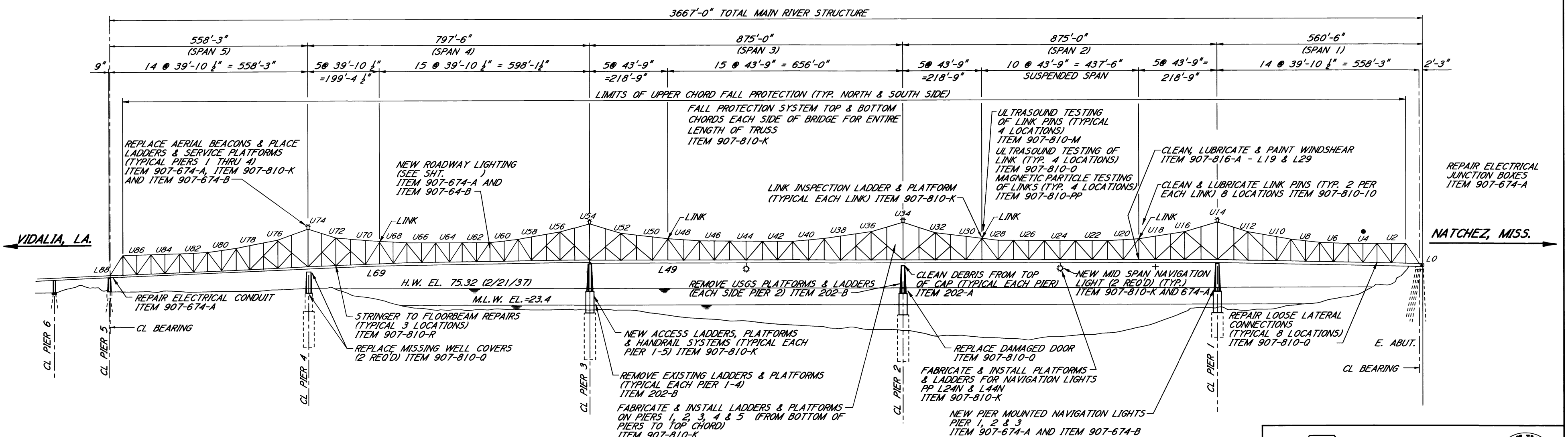
DESIGNED JSK — CHECKED NPK — ISSUED
DETAILED RJC — DATE 9/29/01 — DATE

SHEET NUMBER 3

STATE	PROJECT NO.
MISS.	BR-0015-01(106)



PLAN
NORTH BRIDGE



-CLEAN TOP OF GUSSET PLATES OF DEBRIS & CLEAN AND PAINT RUSTED AREAS ON GUSSETS ITEM 907-816-A/ITEM (202-A)
-DRILL 2" DIA. HOLES IN GUSSETS TO FACILITATE DRAINAGE ITEM 907-810-O

ELEVATION
NORTH BRIDGE

ALL LOWER CHORD CONNECTIONS TO BE CLEANED AND PAINTED AS PER SPECIAL PROVISIONS (UNDER PAY ITEM 907-816-A)

NORTH BRIDGE TRUSS PINS TO BE ULTRASOUND INSPECTED (UNDER PAY ITEM 907-810-M)

U69N UPPER PIN
U495 LOWER PIN
U29N LOWER PIN
U195 UPPER PIN

- U4 DENOTES UPPER CONNECTION AT PANEL POINT 4
+ L18N DENOTES LOWER CONNECTION AT PANEL POINT 18, NORTH SIDE OF THE BRIDGE

NORTH BRIDGE SHEAR KEYS:
DRILL 2" DIA. DRAIN HOLE AS DIRECTED BY THE PROJECT ENGINEER & CLEAN AND MAINTENANCE PAINT.
(UNDER PAY ITEM 907-810-O & 907-816-A)

L19
L29
L49
L69

REPAIR OF LOOSE BOTTOM LATERAL CONNECTONS (UNDER PAY ITEM 907-810-O)

L3-L4
L25-L26
L26-L27
L51-L52
L72-L73
L73-L74
L75-L76
L84-L85

STRINGER TO FLOORBEAM REPAIRS (UNDER PAY ITEM 907-810-R)

L42-MIDDLE STRINGER
L72-MIDDLE STRINGER
L80-MIDDLE STRINGER

FOR INFORMATION ONLY

MDOT
CADD
DEPARTMENT OF TRANSPORTATION MISSISSIPPI

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NORTH BRIDGE
GENERAL PLAN & ELEVATION

STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

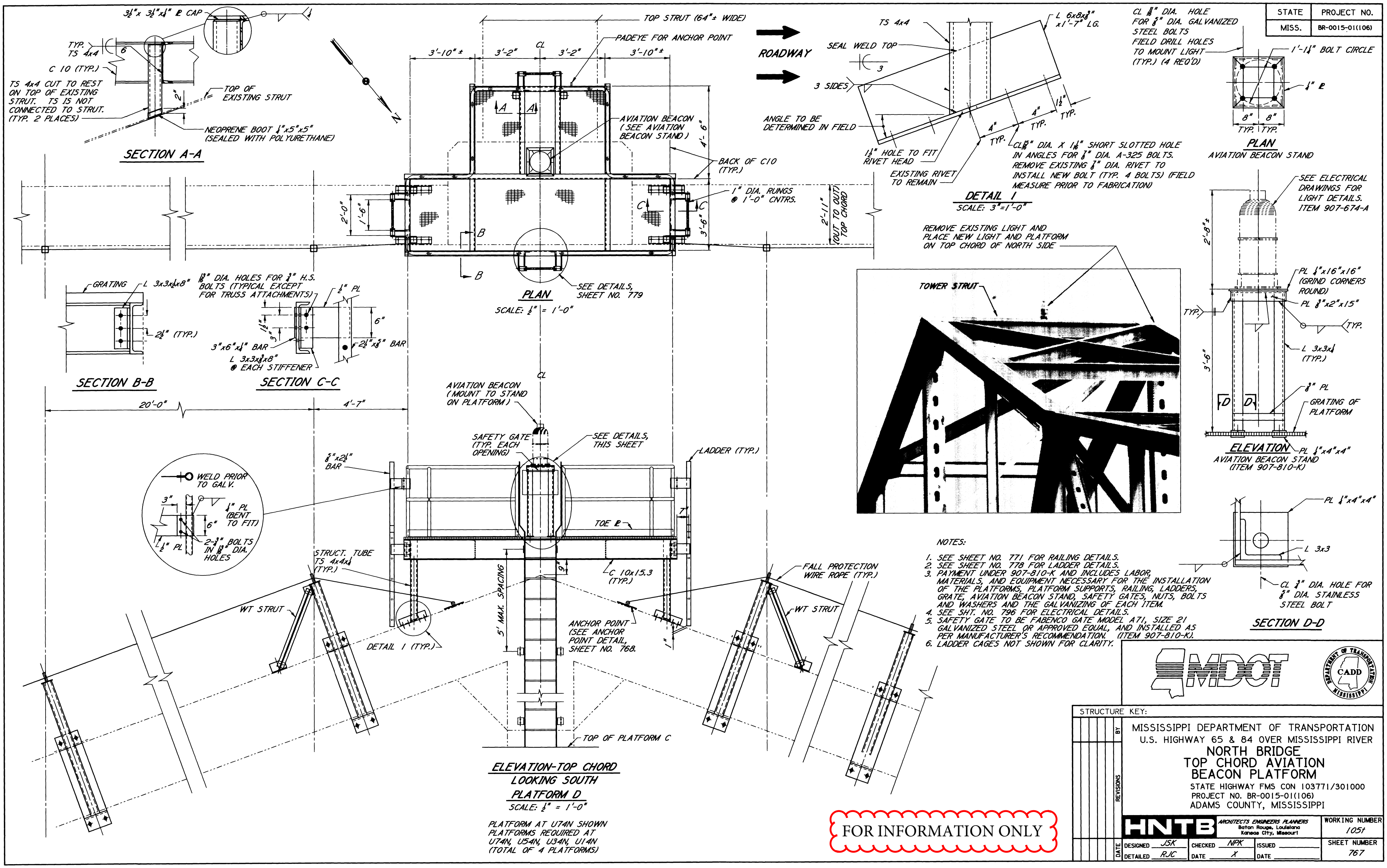
REVISIONS | BY | DATE

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

WORKING NUMBER	SHEET NUMBER
110t	766

DESIGNED JSK | CHECKED NPK | ISSUED
DETAILED RJC | DATE X | DATE

rchatsigner
PLOTTED: 08-FEB-2003 09:26 M:\28883-Natchez\Cadd\Bridge\110t.dgn



NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. SEE SHEET NO. 778 FOR LADDER DETAILS.
3. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, GRATE, AVIATION BEACON STAND, SAFETY GATES, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
4. SEE SHT. NO. 796 FOR ELECTRICAL DETAILS.
5. SAFETY GATE TO BE FABENCO GATE MODEL A71, SIZE 21 GALVANIZED STEEL OR APPROVED EQUAL, AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATION. (ITEM 907-810-K).
6. LADDER CAGES NOT SHOWN FOR CLARITY.

MDOT

DEPARTMENT OF TRANSPORTATION MISSISSIPPI CADD

STRUCTURE KEY:

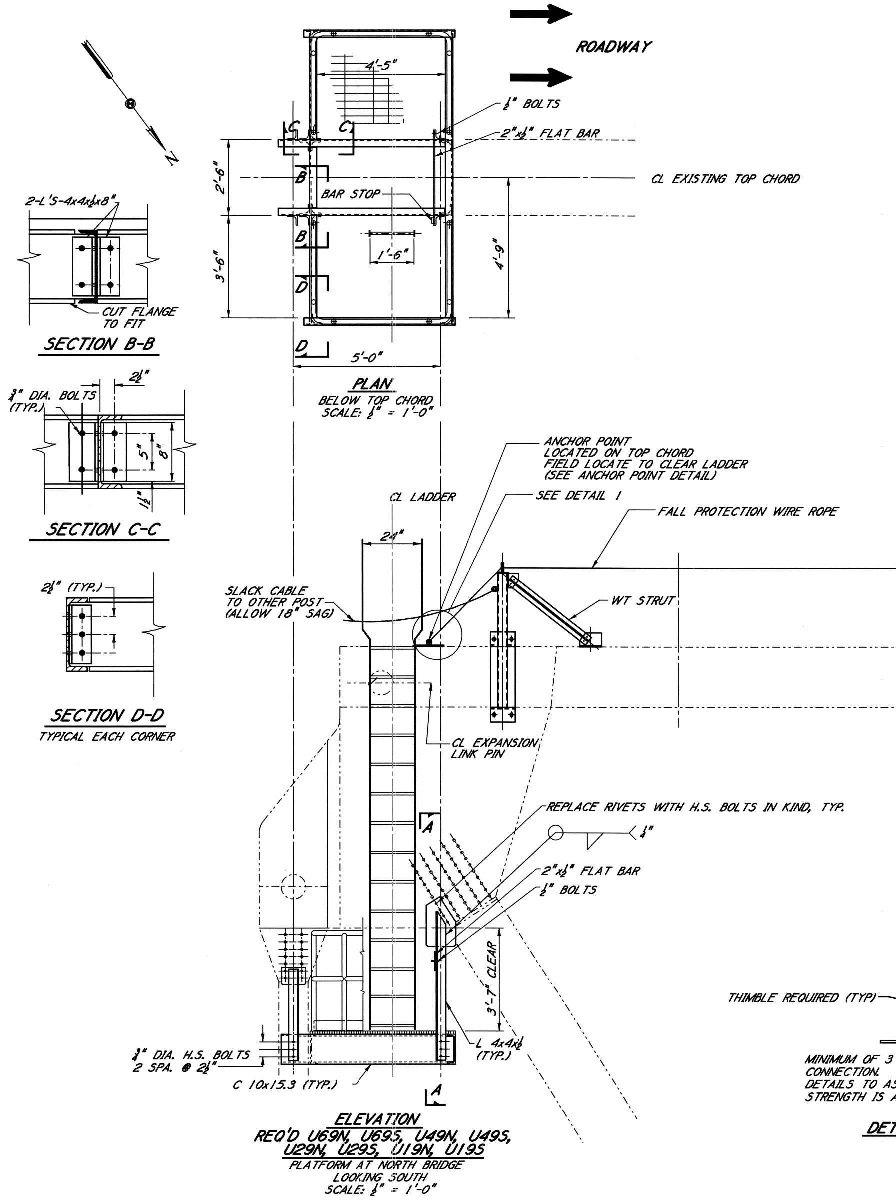
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH BRIDGE
TOP CHORD AVIATION BEACON PLATFORM
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

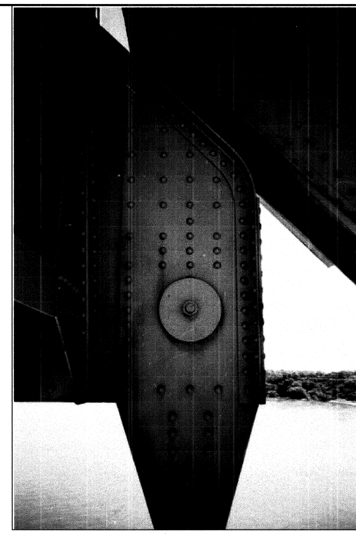
HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

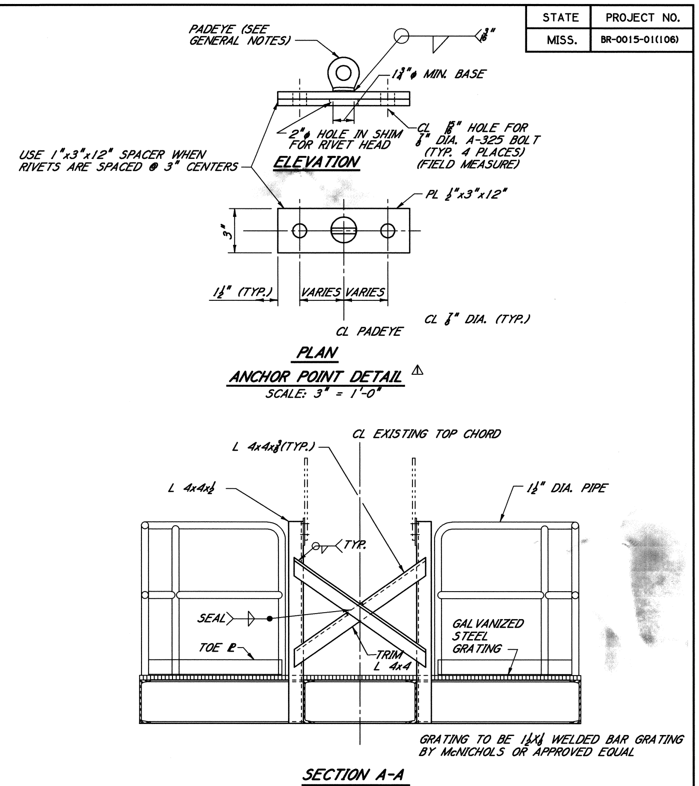
DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 1051
DETAILED RJC	DATE X	DATE	SHEET NUMBER 767

FOR INFORMATION ONLY

STATE	PROJECT NO.
MISS.	BR-0015-01(106)







NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. SEE SHEET NO. 778 FOR LADDER DETAILS.
3. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE 8 PLATFORMS, PLATFORM SUPPORTS, RAILING, FALL PROTECTION SYSTEM, LADDERS, GRATE, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
4. LINK HANGER ACCESS SHOULD BE INSTALLED PRIOR TO INSPECTION OF PINS & HANGER.

FOR INFORMATION ONLY

MDOT

CADD

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NORTH BRIDGE PLATFORM
LOOKING SOUTH
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

REVISIONS: ANCHOR POINT DETAIL — NPK — 12-02-03 — DATE — BY

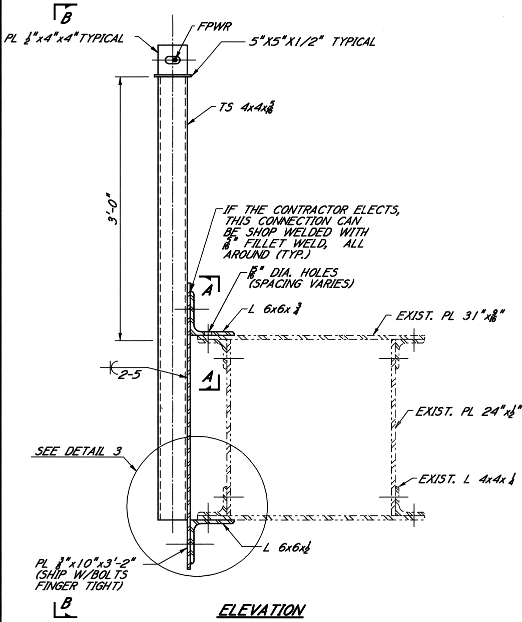
HNTB — ARCHITECTS ENGINEERS PLANNERS — Baton Rouge, Louisiana — Kansas City, Missouri

WORKING NUMBER 114r

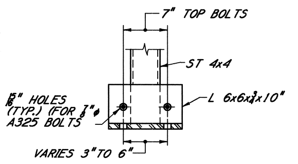
DESIGNED JSK — DETAILED RJC — CHECKED NPK — DATE X — ISSUED — DATE

SHEET NUMBER 768

STATE	PROJECT NO.
MISS.	BR-0015-01(106)

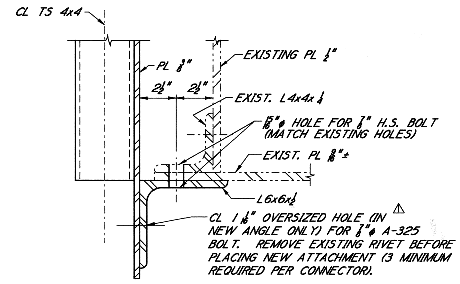


ELEVATION LOOKING WEST FPWR POST
SCALE: 1 1/2" = 1'-0"



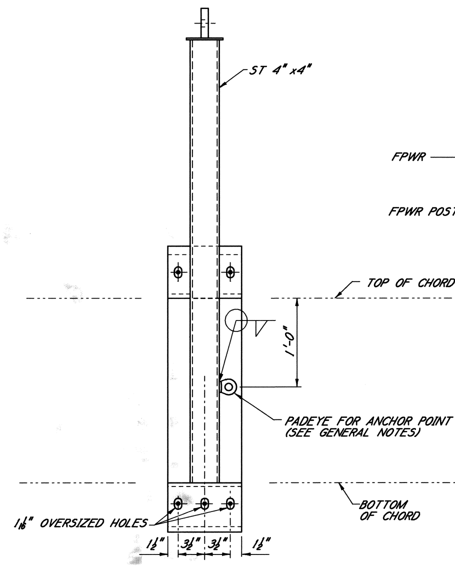
NOTE: HOLE SPACING AND LENGTH MAY VARY DEPENDING ON LOCATION ON THE TOP CHORD (MINIMUM 4 BOLTS REQUIRED IN EACH LEG OF ANGLES)

SECTION A-A
SCALE: 1 1/2" = 1'-0"

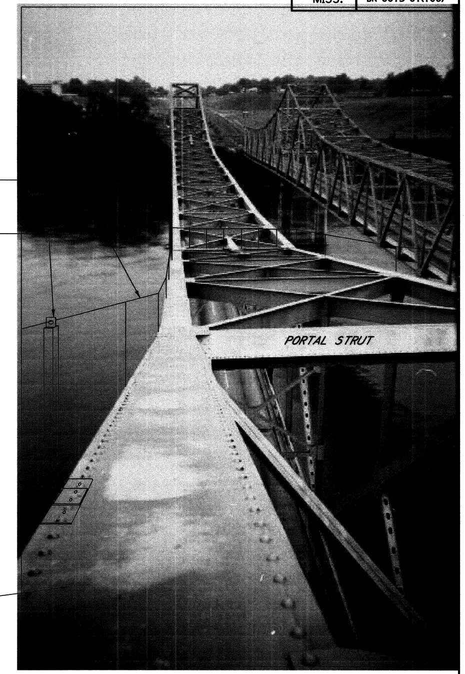


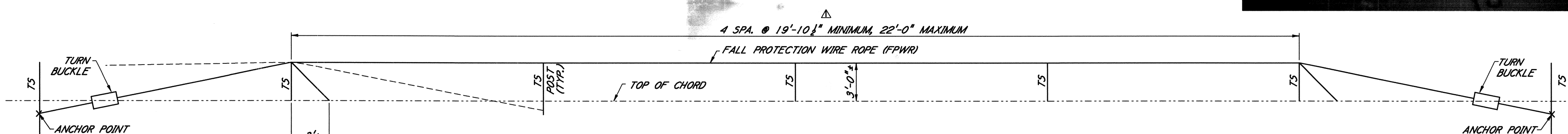
NOTE:
VERIFY RIVET SIZE AND SPACING FROM SHOP DRAWINGS AND CONTRACTOR'S FIELD MEASUREMENTS.

DETAIL 3
SCALE: 3" = 1'-0"

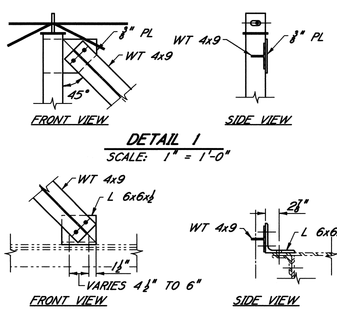


SECTION B-B
SCALE: 1 1/2" = 1'-0"



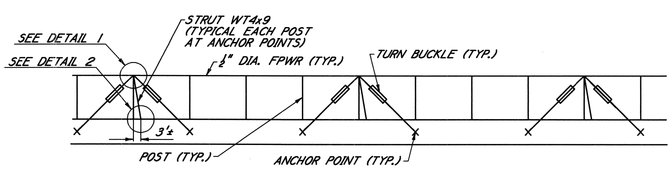


ELEVATION - ONE CABLE
SCALE: 1/4" = 1'-0"



DETAIL 1
SCALE: 1" = 1'-0"

DETAIL 2
SCALE: 1" = 1'-0"



ELEVATION - CABLE SYSTEM
SCALE: 1" = 10' V
1" = 40' H
EXAGGERATED SCALE FOR CLARITY

NOTES:

1. FOR TURN BUCKLE SEE GENERAL NOTES.
2. POST CONNECTION TO CHORD SHALL BE SNUG TIGHT PLUS 1/4 TURN OF THE NUT.
3. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE POST, WIRE ROPE, CONNECTORS, PLATES, STRUCTURAL TEES, TURNBUCKLES, PADEYES, CLIPS, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
4. TS DENOTES STRUCTURAL TUBING.
5. FWPR SYSTEM REQUIRED ON NORTH & SOUTH CHORDS.

FOR INFORMATION ONLY

MDOT

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

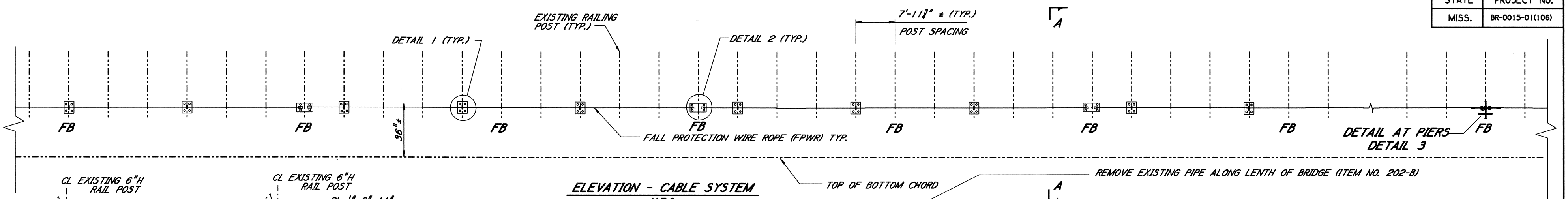
NORTH BRIDGE
TOP CHORD FALL PROTECTION
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

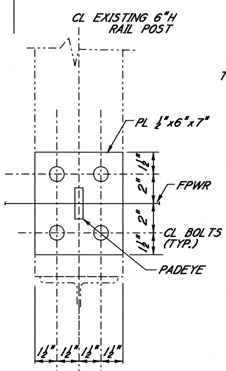
REVISIONS: POST SPACING/HOLES — NPK — 12-02-03

DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 102r
DETAILED RJC	DATE X	DATE	SHEET NUMBER 769

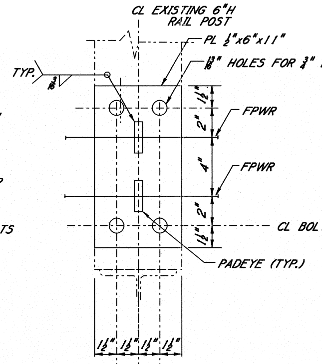
STATE	PROJECT NO.
MISS.	BR-0015-01(106)



ELEVATION - CABLE SYSTEM
N.T.S.



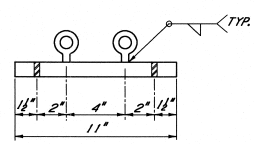
DETAIL 1
SCALE: 3" = 1'-0"



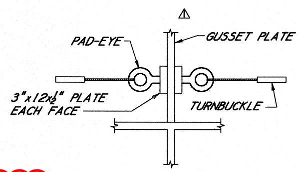
DETAIL 2
SCALE: 3" = 1'-0"
(EVERY 2nd FLOORBEAM)
(PLAN VIEW)

PADEYE CONNECTOR DETAILS

FOR INFORMATION ONLY

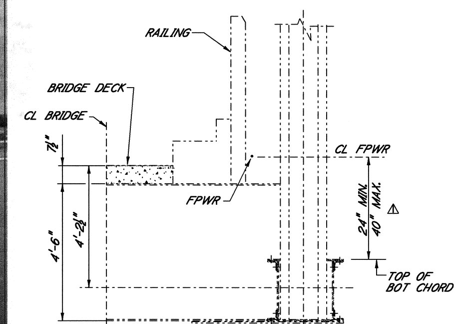


PROFILE VIEW
(EVERY OTHER FLOORBEAM)



DETAIL AT PIERS
DETAIL 3

CONNECT PADEYE TO POST (TYP.)



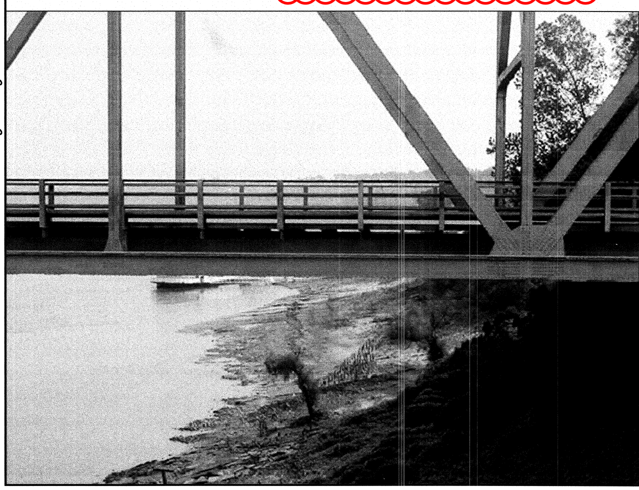
SECTION A-A
FALL PROTECTION WIRE ROPE (FPWR) ALONG BOTTOM CHORD
SCALE: 1" = 1'-0"

NOTES:

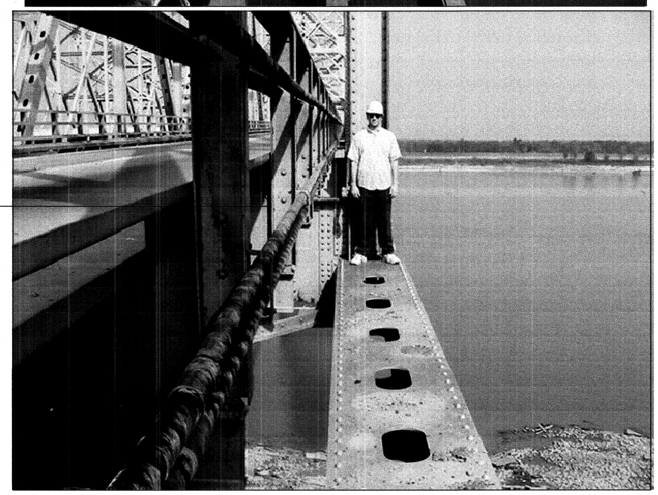
1. MAXIMUM LENGTH OF EACH SEGMENT OF FPWR IS APPROX. 130 FEET.

2. PAYMENT FOR FALL PROTECTION SYSTEM WILL BE MADE AT PRICE BID UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE WIRE ROPE, CONNECTORS, TURNBUCKLES, PADEYES, CLIPS, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.

3. BOTTOM CHORD FALL PROTECTION SYSTEM IS TO BE PROVIDED FULL LENGTH OF ALL TRUSSES ON BOTH SIDES OF THE BRIDGE.



CONNECT PADEYE DETAILS 1 & 2 TO POST (TYP.)



MDOT
DEPARTMENT OF TRANSPORTATION CADD MISSISSIPPI

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH BRIDGE
FALL PROTECTION FOR
BOTTOM CHORD
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

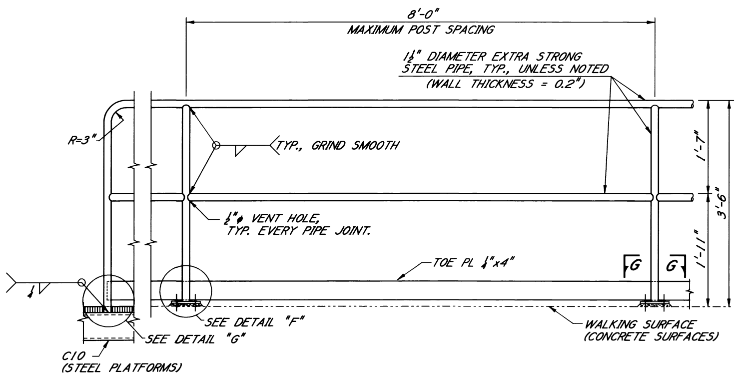
HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

CONNECTION DETAILS NPK 12-02-03
REVISIONS BY DATE

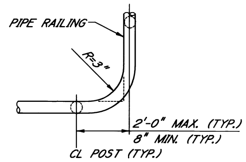
DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 125r
DETAILED RJC	DATE X	DATE	SHEET NUMBER 770

rcholgeler
PLOTTED: 23-DEC-2003 11:31
M: 28883-Natchez Cant Bridge 125r.dgn

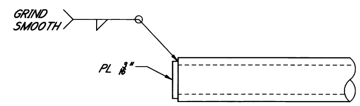
STATE	PROJECT NO.
MISS.	BR-0015-01(106)



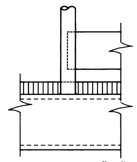
TYPICAL RAILING ELEVATION
SCALE: 1" = 1'-0"



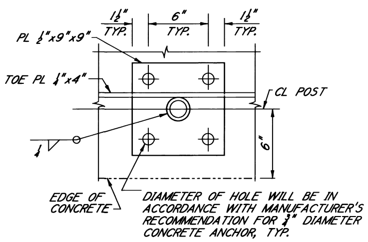
CORNER RAILING PLAN
N.T.S.



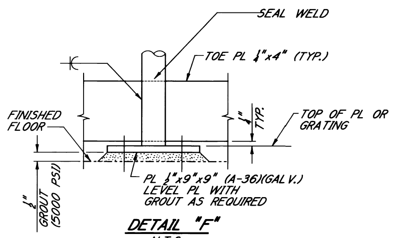
END CAP DETAIL
N.T.S.



DETAIL "G"
N.T.S.



SECTION G-G
N.T.S.



DETAIL "F"
N.T.S.

FOR INFORMATION ONLY

NOTES:

COST OF MATERIAL, LABOR & EQUIPMENT NECESSARY TO INSTALL THE RAIL & POST SYSTEM DESIGNATED AT LOCATIONS SPECIFIED ON SHEETS 773, 775 & 776 SHALL BE INCLUDED IN THE PRICE BID ITEM 907-810-K.

PIPE WILL BE ASTM A 53 GRADE B GALVANIZED. SEE GENERAL NOTE.

ANCHORS SHALL BE ¾" ϕ x 7" MAXI-BOLTS (GALVANIZED) OR APPROVED EQUAL.

MDOT CADD

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

RAILING DETAILS

STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

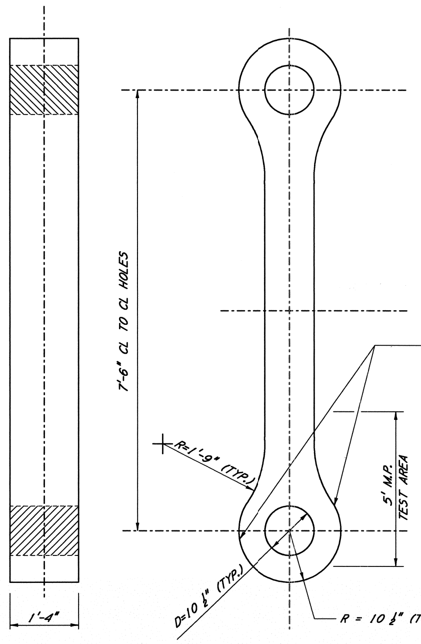
HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

WORKING NUMBER 1201
SHEET NUMBER 771

BY / REVISIONS / DATE

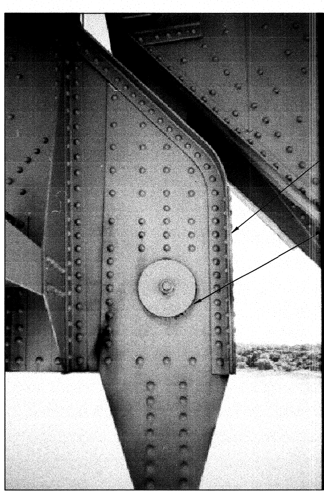
DESIGNED JSK | CHECKED NPK | ISSUED
DETAILED RJC | DATE X | DATE

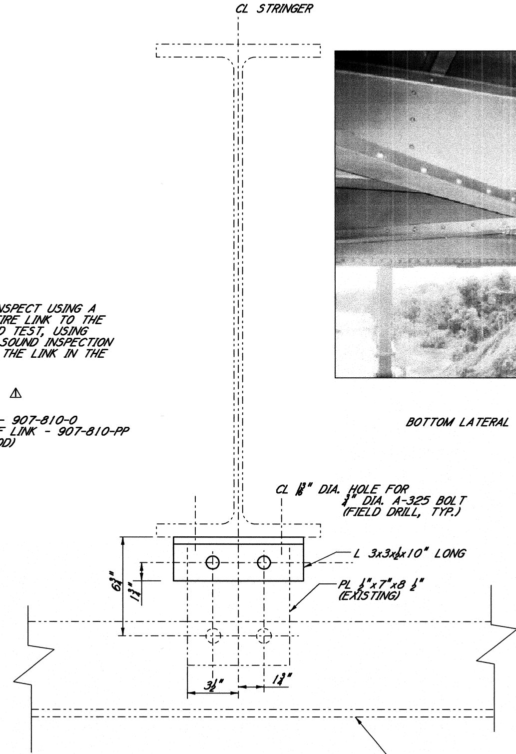
STATE	PROJECT NO.
MISS.	BR-0015-01(106)



TRUSS LINKS
N. T. S.

INSPECTION LOCATIONS OF PINS ARE AS INDICATED ON GENERAL PLAN & ELEVATION (SHT. 766)



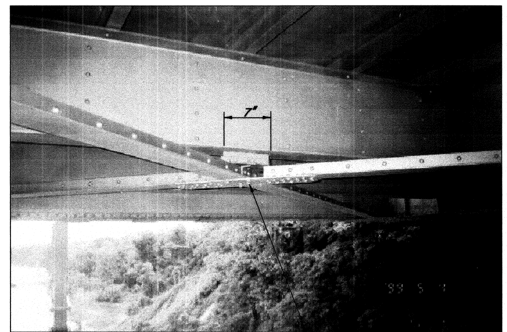


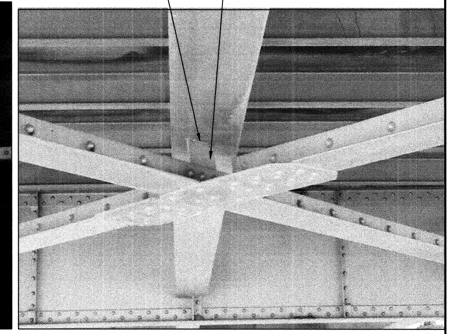
LOWER LATERAL REPAIRS

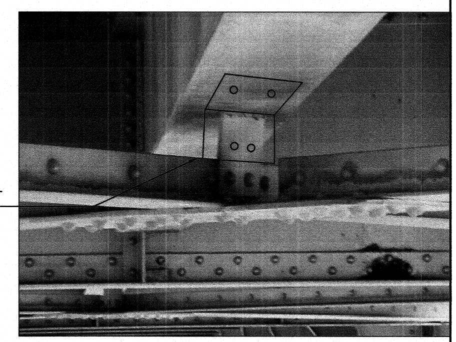
ELEVATION
SCALE: 3" = 1'-0"

THIS REPAIR IS REQUIRED BETWEEN PANEL POINTS AT 8 LOCATIONS:

03 TO 04
25 TO 26
26 TO 27
51 TO 52
72 TO 73
73 TO 74
75 TO 76
84 TO 85







FOR INFORMATION ONLY

NOTES:

1. PAYMENT FOR REPAIRS UNDER 907-810-O AND INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF ANGLES, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.

2. PAYMENT FOR INSPECTION UNDER 907-810-M, 907-801-O AND 907-810-PP AND INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSPECTION OF THE PINS AND LINKS.

MDOT

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH BRIDGE
LOWER LATERAL CONNECTION REPAIR & TRUSS LINK INSPECTION DIAGRAM
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

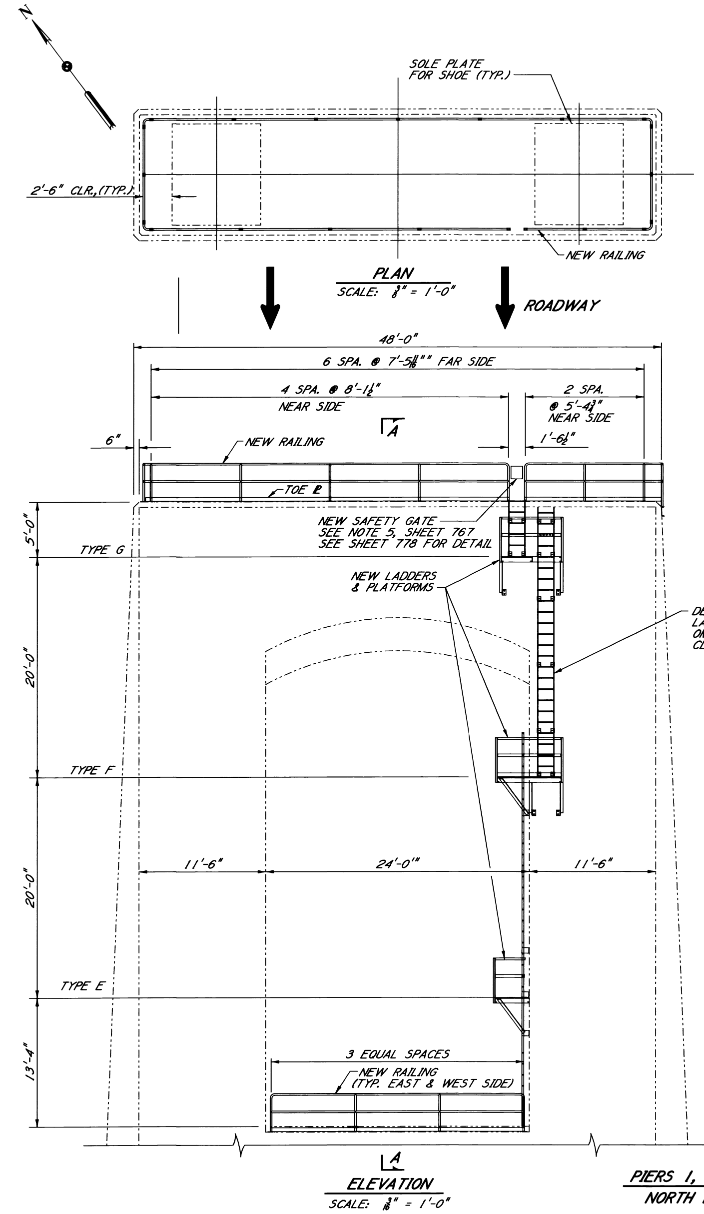
REVISIONS: INSPECTION LOCATIONS — NPK — 12-02-03

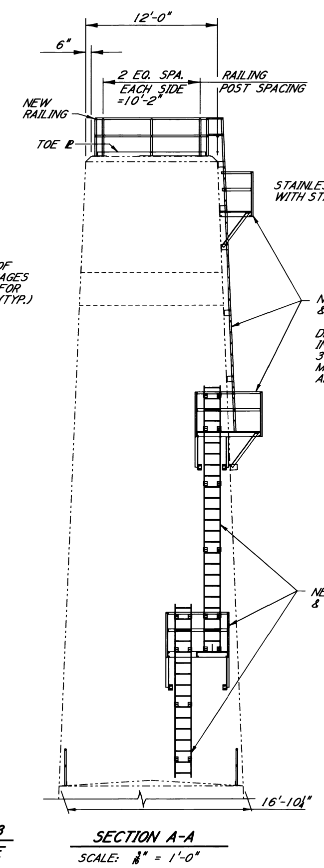
HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

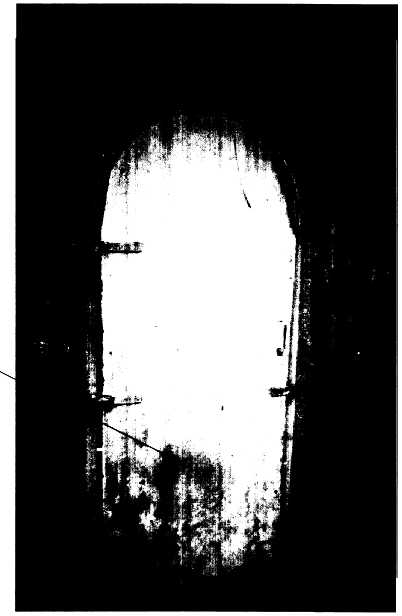
DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 128r
DETAILED RJC	DATE X	DATE	SHEET NUMBER 772

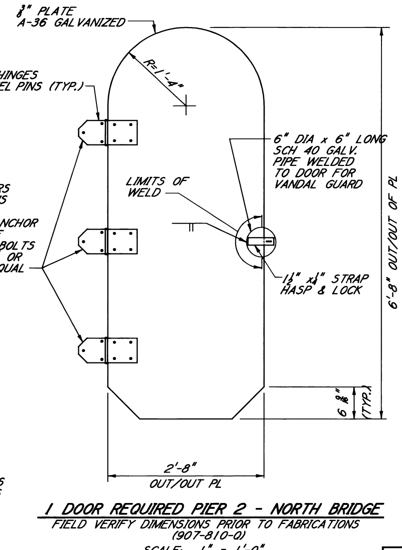
rchatojoler
PLOTTED: 23-DEC-2003 11:31
M: 28883-Natchez Cont Bridge 128r.dgn

STATE	PROJECT NO.
MISS.	BR-0015-01(106)









NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. SEE SHEET NO. 778 & 780 FOR LADDER DETAILS.
3. SEE SHEET NO. 780 FOR PLATFORM DETAILS.
4. PAYMENT FOR PLATFORMS, LADDERS & RAILINGS WILL BE MADE UNDER PRICE BID FOR 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, SAFETY GATES, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
5. SUBMIT HINGE & HASP & LOCK DETAILS TO P.E. FOR APPROVAL.
6. PAYMENT FOR REPLACING DOOR WILL BE MADE UNDER PRICE BID FOR ITEM 907-810-O AND WILL INCLUDE ALL LABOR, MATERIALS, AND EQUIPMENT, INCLUDING ATTACHMENTS, NECESSARY TO MAKE THE INSTALLATION.

FOR INFORMATION ONLY

MDOT

STRUCTURE KEY:

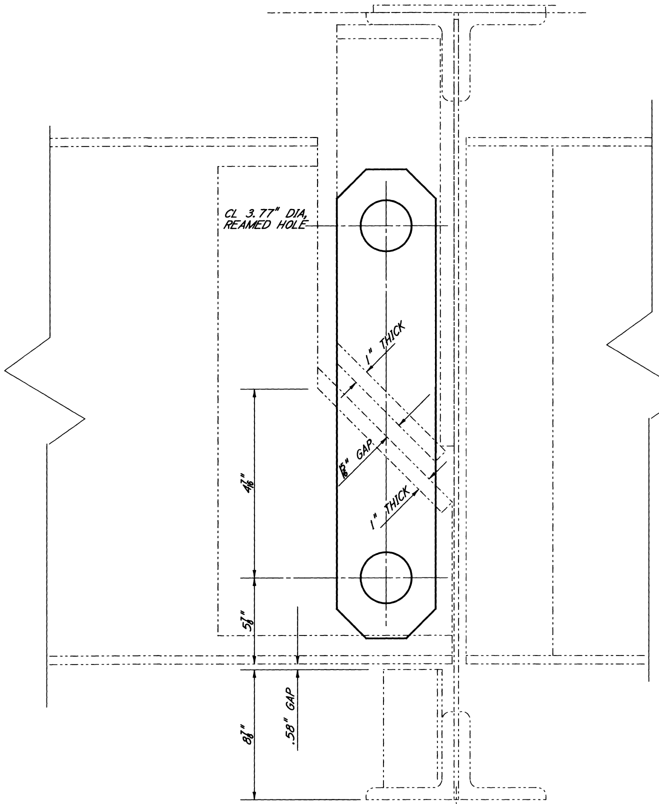
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH BRIDGE
PIERS 1, 2 & 3
FALL PROTECTION
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

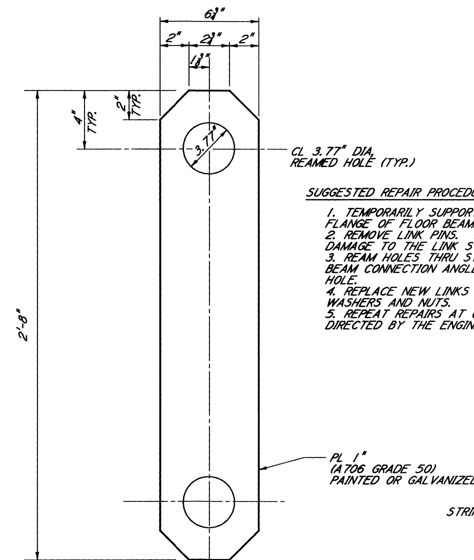
DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 1031
DETAILED RJC	DATE X	DATE	SHEET NUMBER 773

FOR INFORMATION ONLY

STATE	PROJECT NO.
MISS.	BR-0015-01(106)



ELEVATION



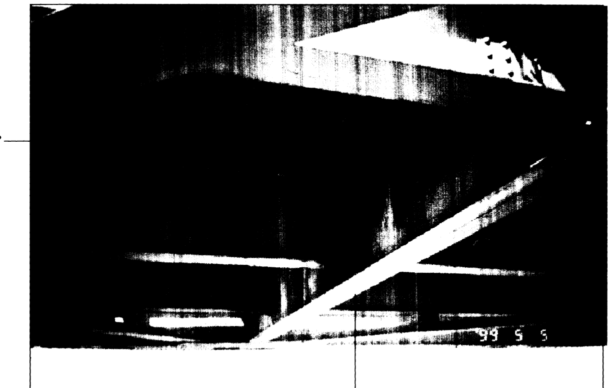
SUGGESTED REPAIR PROCEDURE

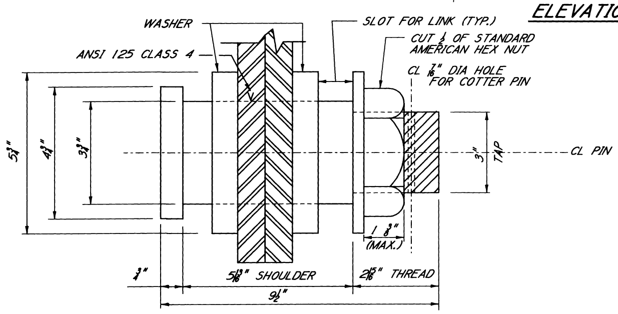
1. TEMPORARILY SUPPORT STRINGER ON BOTTOM FLANGE OF FLOOR BEAM.
2. REMOVE LINK PINS. INVESTIGATE EXTENT OF DAMAGE TO THE LINK SYSTEM.
3. REAM HOLES THRU STRINGER WEB AND FLOOR BEAM CONNECTION ANGLES TO 3.77" DIA. HOLE.
4. REPLACE NEW LINKS AND NEW 3 3/4" DIA. PIN, WASHERS AND NUTS.
5. REPEAT REPAIRS AT OTHER PANEL POINTS AS DIRECTED BY THE ENGINEER.

STRINGER LINK DETAILS

2 REQUIRED AT EACH REPAIRED PANEL POINT

SCALE: 3"=1'-0"





DETAIL OF PIN & WASHERS

2 REQUIRED EACH PANEL POINT (6 TOTAL)
PIN TO BE ASTM A 668 CLASS G

NOTES:

1. INSPECTION & REPAIRS REQUIRED AT PP 42, 72 & 80.

2. CONTRACTOR IS TO MAKE REPAIR OF MIDDLE STRINGER CONNECTION AT PANEL POINT 72 FIRST. AFTER THE LINKS HAVE BEEN REMOVED, THE CONNECTION WILL BE EXAMINED BY THE ENGINEER TO DETERMINE WHETHER TO PROCEED FURTHER WITH THE REPAIRS TO THE OTHER 2 PANEL POINTS.

3. AFTER THE LINKS AND PINS ARE REMOVED, THE CONTRACTOR SHALL REAM THE 3.52 IN. DIA. HOLES IN THE EXISTING CL STRINGER AND FLOORBEAM CONNECTION TO 3.77 IN. DIA. AND INSTALL THE NEW LINKS AND PINS.

4. PAYMENT WILL BE MADE UNDER ITEM 907-810-R AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE NEW LINKS AND PINS AND THE MODIFICATIONS OF THE EXISTING FLOOR BEAMS AND STRINGERS AND THE GALVANIZING OF EACH ITEM. ITEM 907-810-R SHALL ALSO INCLUDE THE DESIGN AND INSTALLATION OF A TEMPORARY SUPPORT SYSTEM THAT WILL CARRY THE LOAD FROM THE STRINGER TO THE FLOORBEAM WHILE REPAIRS ARE BEING MADE. THE CONTRACTOR SHALL SUBMIT HIS PROPOSED SUPPORT SYSTEM TO THE ENGINEER FOR APPROVAL AT LEAST 2 WEEKS PRIOR TO UTILIZING THE SYSTEM. THE SYSTEM MUST BE DESIGNED TO ACCOMODATE LONGITUDINAL MOVEMENT DUE TO TEMPERATURE CHANGE AND TRAFFIC ON THE SPAN.

5. THE REPAIRS WILL BE MADE WHILE CARRYING AUTO TRAFFIC. TRUCK TRAFFIC SHALL BE HALTED FOR A MAXIMUM OF 4 HOURS FOR EACH REPAIR. COMPLETE CLOSURE OF THE BRIDGE WILL BE ALLOWED FOR A MAXIMUM OF 1 HOUR DURING THE REAMING OF THE HOLES AND THE INSTALLATION OF THE NEW LINKS AND PINS. (SEE TRAFFIC NOTE ON GENERAL NOTES SHEET.)

6. REPAIRS MADE TO OTHER DAMAGED STRINGER FLOOR BEAM CONNECTIONS WILL DEPEND ON THE DAMAGE FOUND DURING THE INSPECTION OF PP 72. CONTRACTOR WILL SUBMIT A REPAIR PROCEDURE TO THE PROJECT ENGINEER FOR APPROVAL AT LEAST 4 WEEKS BEFORE EACH REPAIR IS PERFORMED.

MDOT

CADD DEPARTMENT OF TRANSPORTATION MISSISSIPPI

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH BRIDGE
STRINGER CONNECTION REPAIR
AT CONTINUITY JOINT
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

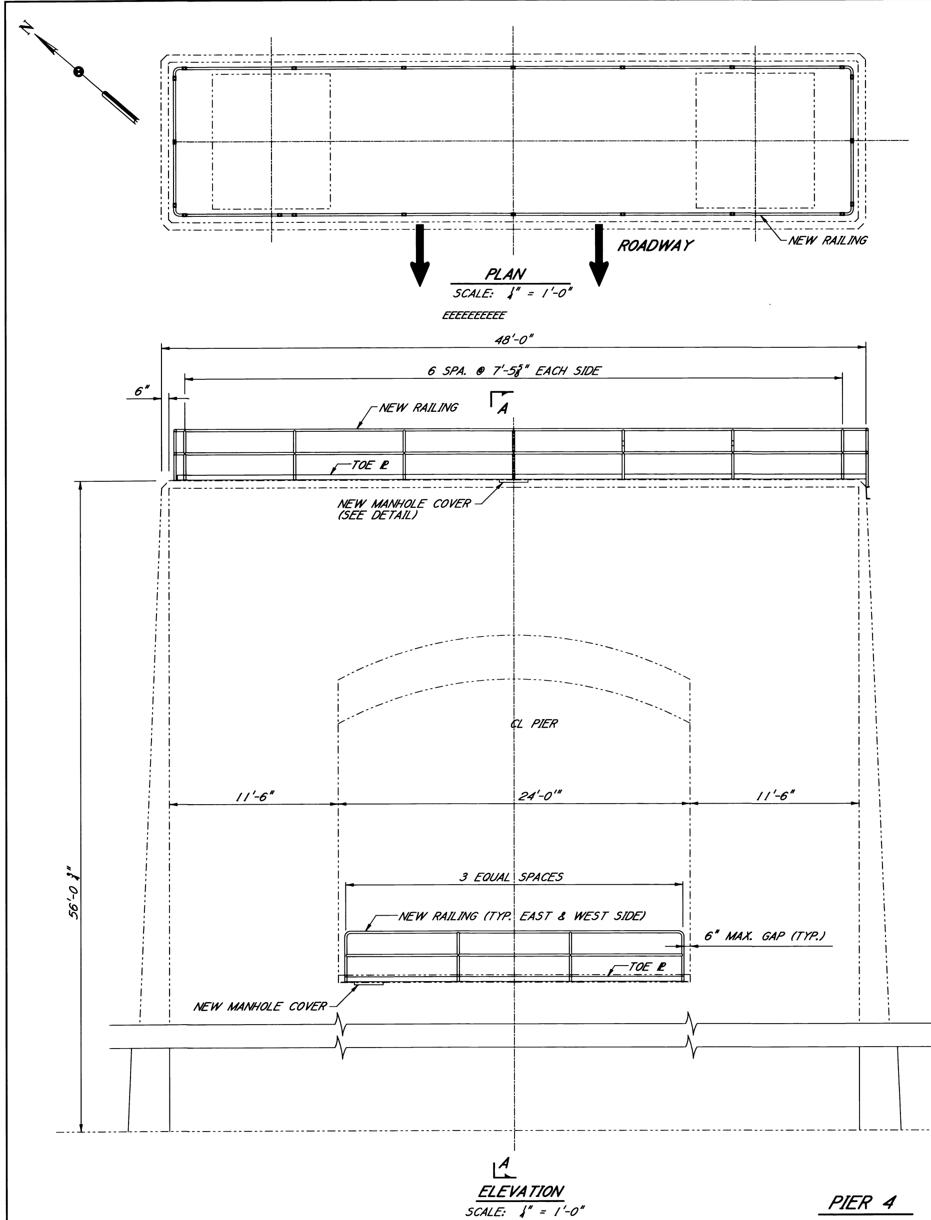
BY | REVISIONS | DATE

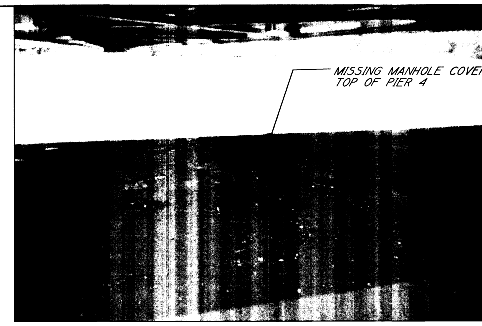
HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

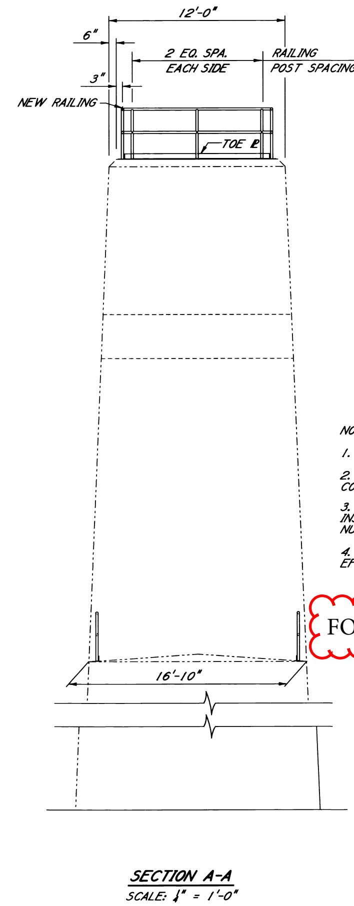
DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 1291
DETAILED RJC	DATE X	DATE	SHEET NUMBER 774

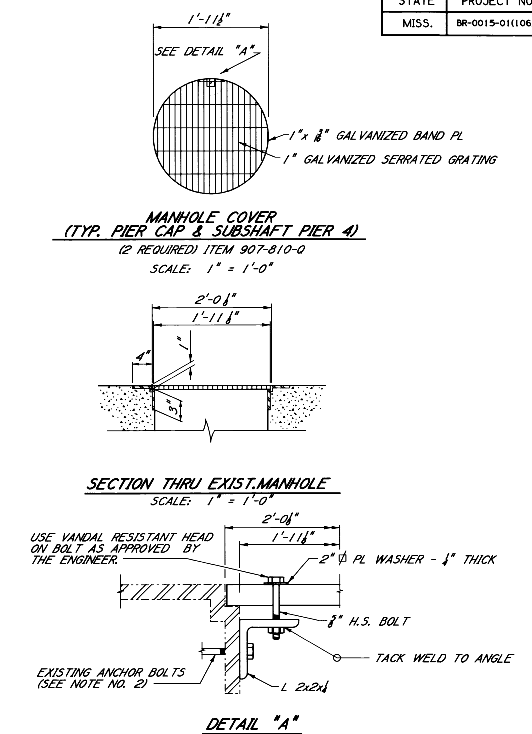
rchatelain
PLOTTED: 08-FEB-2003 10:08 M: 28883-Natchez Cold Bridge 1291.dgn

STATE	PROJECT NO.
MISS.	BR-0015-01(106)









NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. LOCATION OF CINCH ANCHORS THROUGH THE EXISTING RINGS MUST BE ESTABLISHED BY THE CONTRACTOR SO AS TO MATCH THE LOCATION OF HOLD-DOWN BOLTS AS SUPPLIED BY THE FABRICATOR.
3. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
4. PAYMENT UNDER ITEM 907-810-0 INCLUDES ALL LABOR, MATERIALS & EQUIPMENT NECESSARY TO EFFECT THE REPAIRS LISTED UNDER THAT ITEM ON SHEET 3.

FOR INFORMATION ONLY

MDOT
CADD

STRUCTURE KEY:

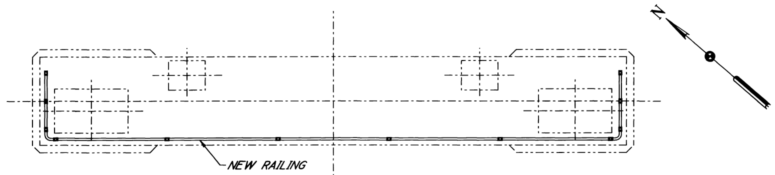
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH BRIDGE
PIER 4
FALL PROTECTION
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

BY
REVISIONS
DATE

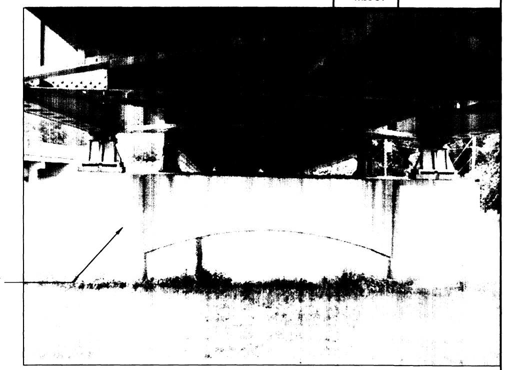
HNTB ARCHITECTS ENGINEERS PLANNERS
Baton Rouge, Louisiana
Kansas City, Missouri

DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 1041
DETAILED RJC	DATE X	DATE	SHEET NUMBER 775

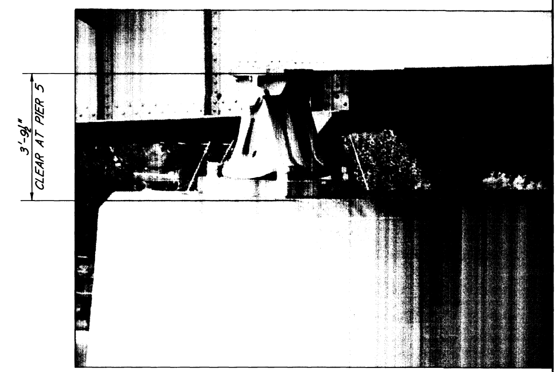
STATE	PROJECT NO.
MISS.	BR-0015-01(106)

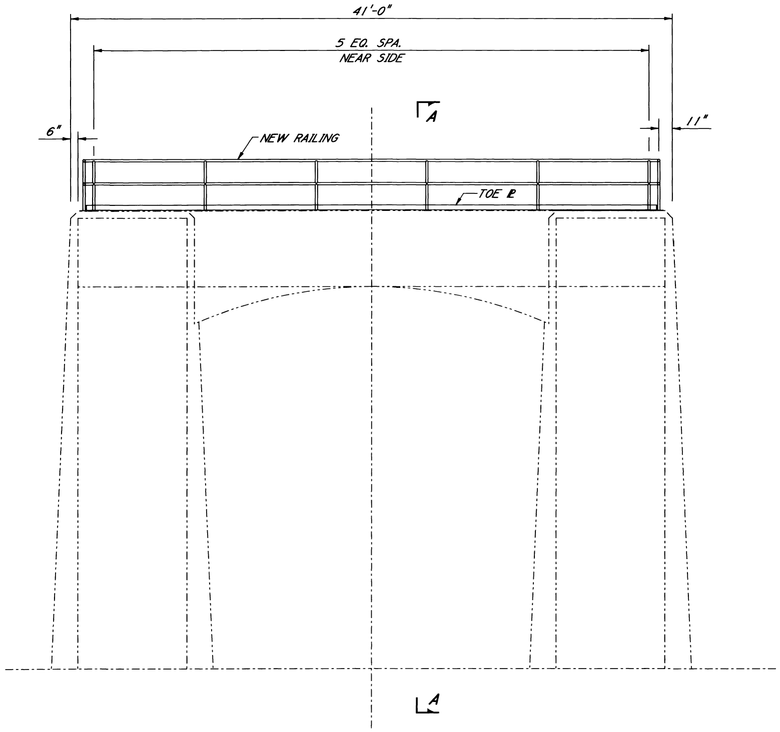


PLAN
SCALE: ¼" = 1'-0"

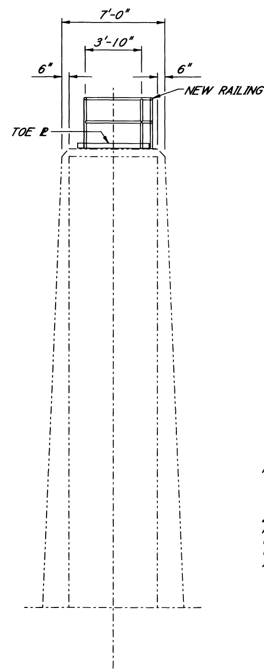


PIER 5
LOOKING WEST AT EAST FACE





ELEVATION
SCALE: ¼" = 1'-0"



SECTION A-A
SCALE: ¼" = 1'-0"

PIER 5 - NORTH BRIDGE

FOR INFORMATION ONLY

NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.

2. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, GRATE, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.

MDOT
DEPARTMENT OF TRANSPORTATION CADD MISSISSIPPI

STRUCTURE KEY:

BY
REVISIONS
DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NORTH BRIDGE
PIER 5

STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

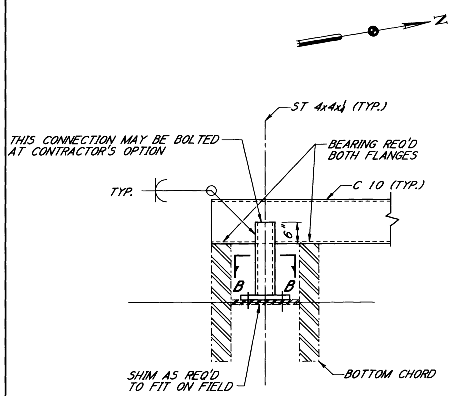
WORKING NUMBER 1061

DESIGNED JSK | CHECKED NPK | ISSUED
DETAILED RJC | DATE X | DATE

SHEET NUMBER 776

rchalaignier
PLOTTED: 08-FEB-2003 09:20 M: 28883-Natchez Card Bridge 1061.dgn

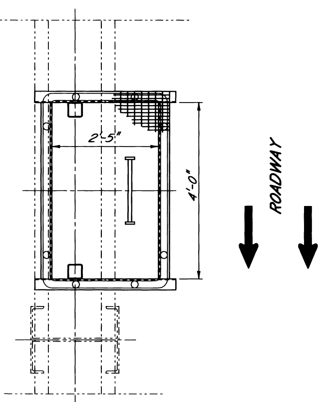
STATE	PROJECT NO.
MISS.	BR-0015-01(106)



DETAIL 1

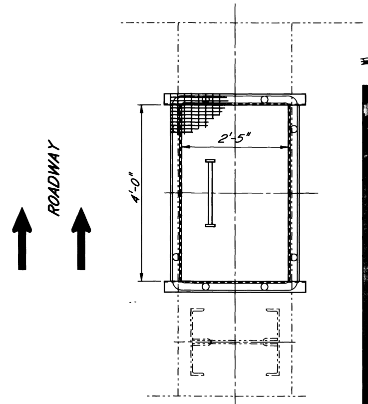
SCALE: 1" = 1'-0"

NOTE: TOP EDGES OF BOTTOM FLANGE THAT WILL BE IN CONTACT WITH THE C 10 AND THE AREA OF THE WEB WHERE THE SUPPORT STRUT SHIMS WILL BE IN CONTACT ARE TO BE COATED WITH A COLD GALVANIZING COMPOUND SUCH AS ZINC RE-NU OR APPROVED EQUAL.



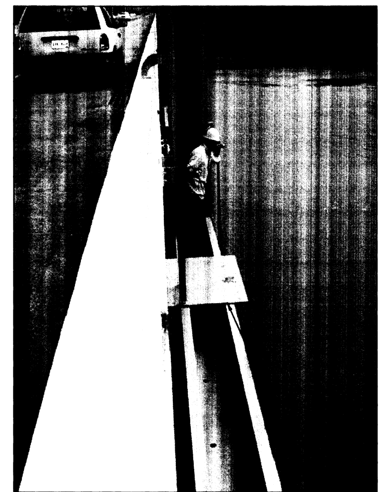
PLAN

SCALE: ⅜" = 1'-0"

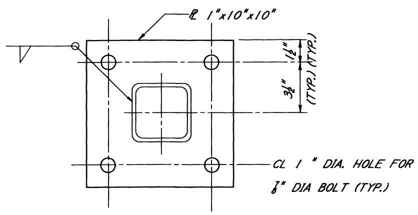


PLAN

SCALE: ⅜" = 1'-0"

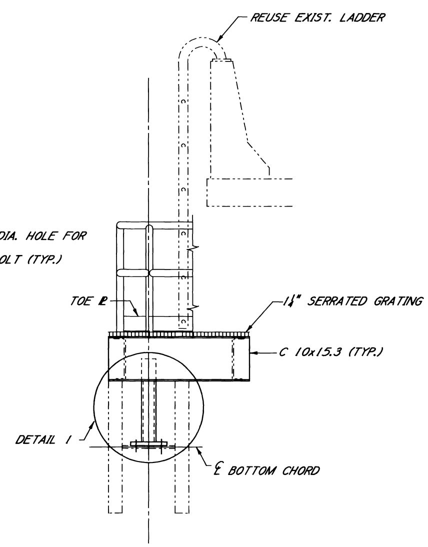


REMOVE CHECK PLATE (ITEM 202B)



SECTION B-B

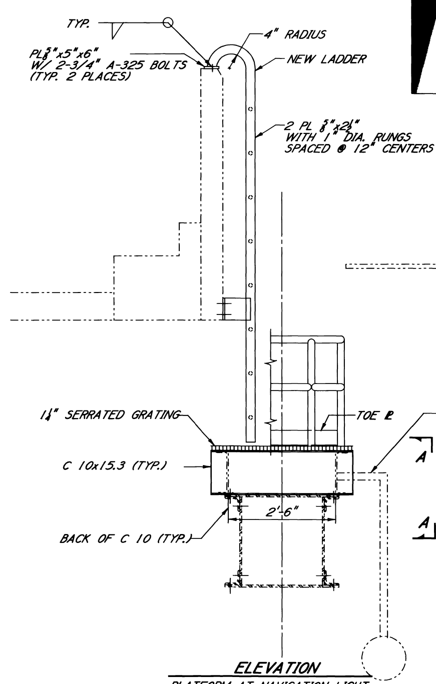
SCALE: 3" = 1'-0"



ELEVATION

PLATFORM AT NAVIGATION LIGHT SOUTH BRIDGE @ L25S & L47S (ITEM 907-810-K)

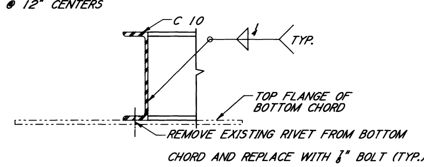
SCALE: ⅜" = 1'-0"



ELEVATION

PLATFORM AT NAVIGATION LIGHT NORTH BRIDGE @ L24N & L44N (ITEM 907-810-K)

SCALE: ⅜" = 1'-0"



SECTION A-A

NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. SEE SHEET NO. 778 FOR LADDER DETAILS.
3. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, GRATE, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
4. FOUR NAVIGATION LIGHT ACCESS PLATFORMS REQUIRED

FOR INFORMATION ONLY

MDOT

DEPARTMENT OF TRANSPORTATION MISSISSIPPI CADD

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH & SOUTH BRIDGE
PLATFORMS FOR CHANNEL
NAVIGATION LIGHT ACCESS
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

BY | REVISIONS | DATE

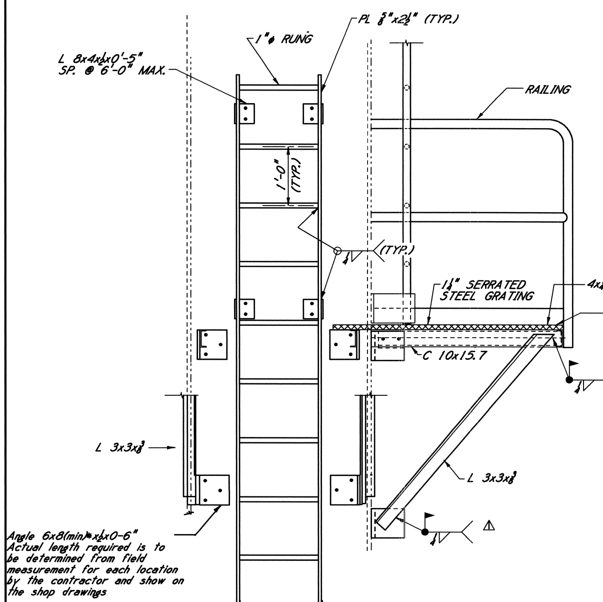
HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

WORKING NUMBER 1131

DESIGNED JSK | CHECKED NPK | ISSUED
DETAILED RJC | DATE X | DATE

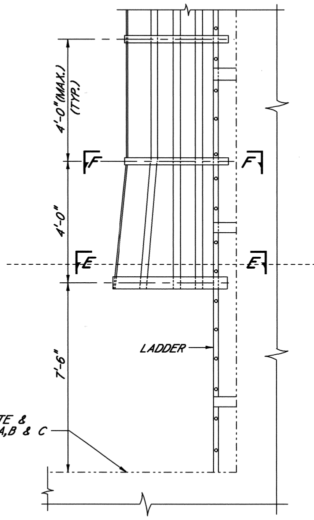
SHEET NUMBER 777

STATE	PROJECT NO.
MISS.	BR-0015-01(106)



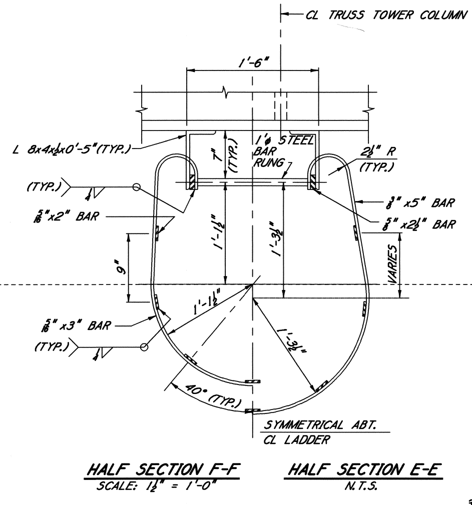
SECTION C-C (SHT. NO. 779)

SCALE: 1" = 1'-0"



ACCESS TO LANDING PLATFORM THROUGH LADDER

N.T.S.



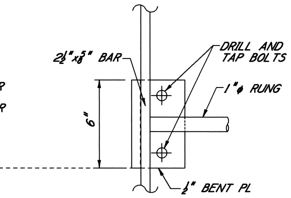
HALF SECTION F-F

SCALE: 1½" = 1'-0"

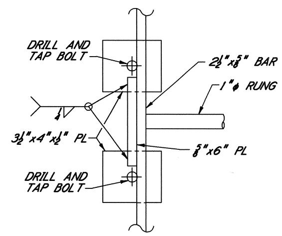
HALF SECTION E-E

N.T.S.

BASKET GUARD HOOP DETAILS

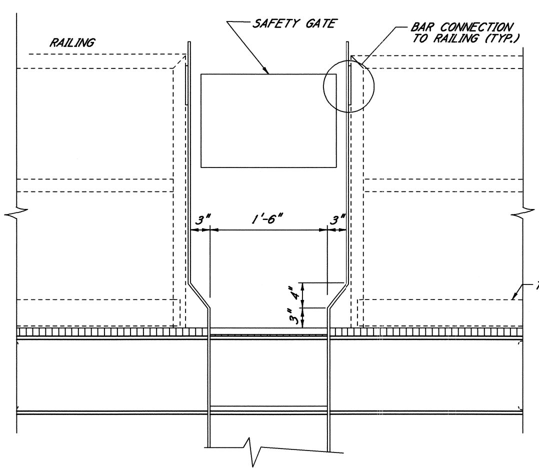


CONNECTION X-1



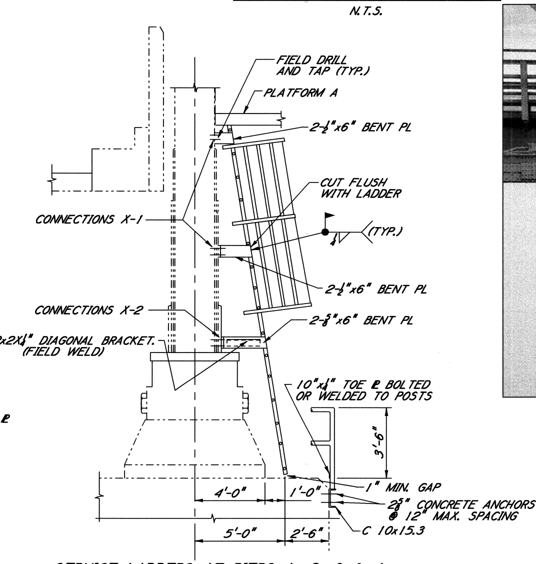
CONNECTION X-2

ADD PLATFORM AND LADDER



LADDER STEP-THROUGH DETAIL

N.T.S.



SERVICE LADDERS AT PIERS 1, 2, 3 & 4

N.T.S.

NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, GRATE, SAFETY GATES, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
3. SEE NOTE 5, SHEET 767.

MDOT

DEPARTMENT OF TRANSPORTATION MISSISSIPPI CADD

FOR INFORMATION ONLY

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NORTH BRIDGE
ACCESS LADDER DETAILS

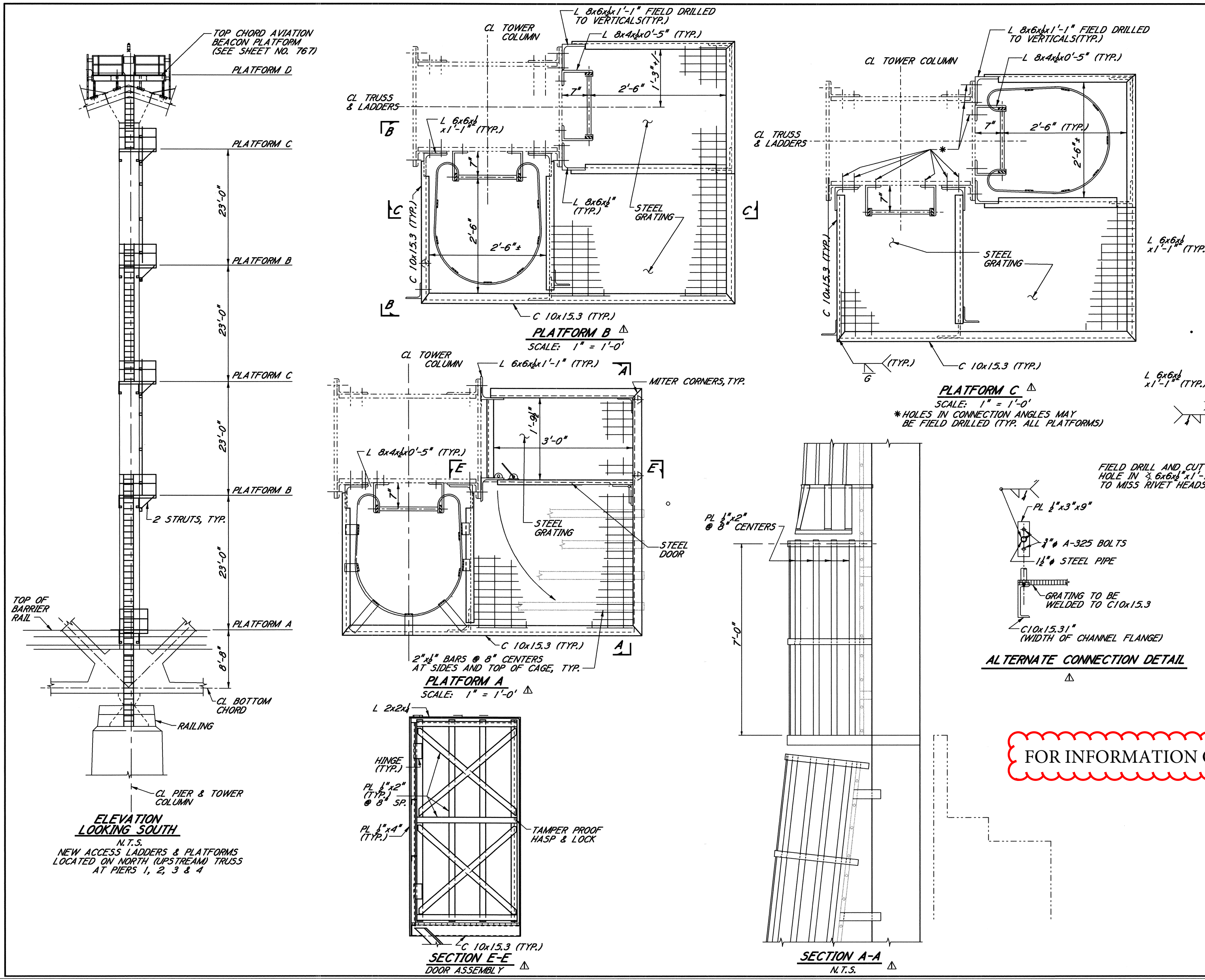
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

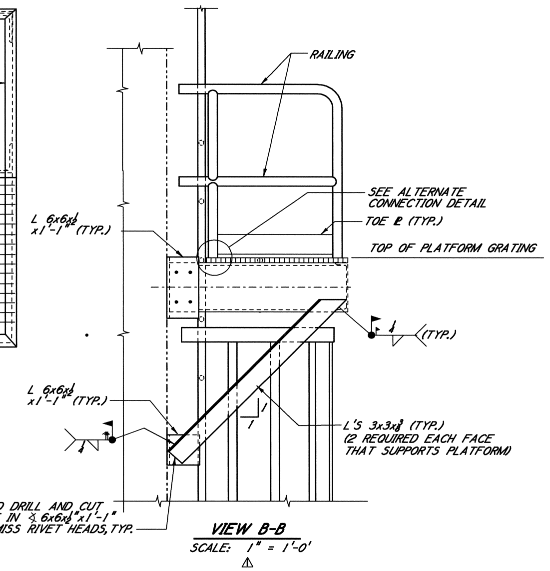
REVISIONS | CONNECTION DETAILS | NPK | BY | DATE

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 111r
DETAILED RJC	DATE X	DATE	SHEET NUMBER 778

STATE	PROJECT NO.
MISS.	BR-0015-01(106)





NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. SEE SHEET NO. 778 FOR LADDER DETAILS.
3. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, GRATE, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE BALVANIZING OF EACH ITEM.
4. DRILL & TAP BOLTED CONNECTIONS WHICH ARE INACCESSIBLE TO THE INSIDE OF THE TOWER COLUMN.
5. FIELD DRILLING IS ALLOWED FOR PLATFORM CONNECTION ANGLES.

FOR INFORMATION ONLY

MDOT

CADD

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NORTH BRIDGE
ACCESS LADDER DETAILS

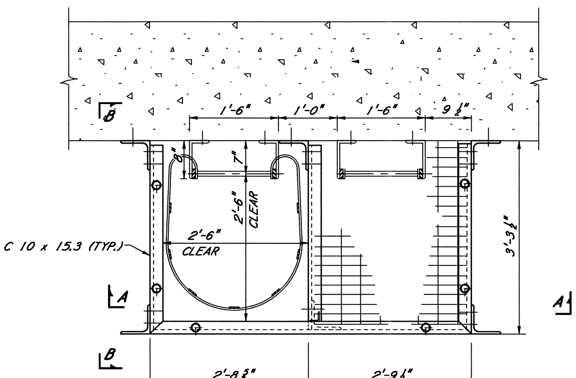
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

REVISIONS: ACCESS PLATFORM & CONN. — NPK — 11-02-03

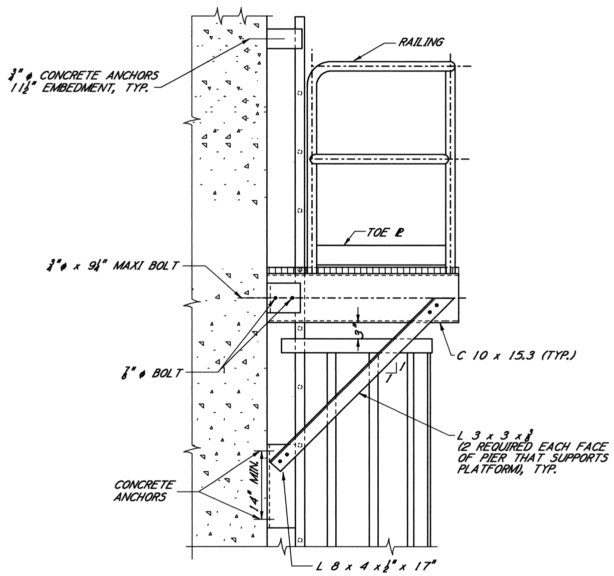
HNTB ARCHITECTS ENGINEERS PLANNERS, Baton Rouge, Louisiana, Kansas City, Missouri

DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 112r
DETAILED RJC	DATE X	DATE	SHEET NUMBER 779

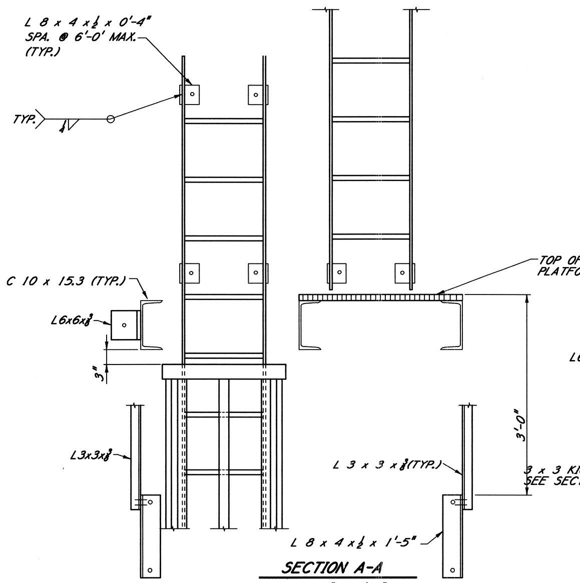
STATE	PROJECT NO.
MISS.	BR-0015-01(106)



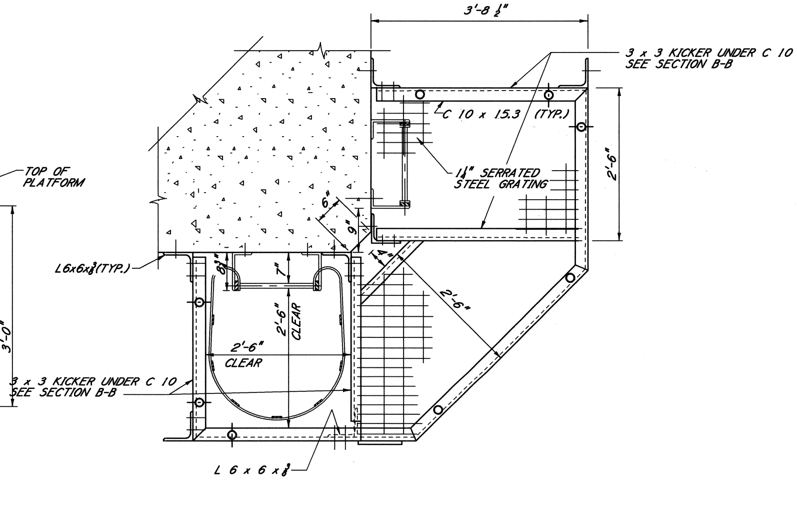
TYPE E AND G
LANDING PLATFORM PLAN
SCALE: 1" = 1'-0"
NOTE: TYPE E IS SHOWN, TYPE G IS OPPOSITE HAND.



SECTION B-B
SCALE: 1" = 1'-0"



SECTION A-A
SCALE: 1" = 1'-0"



TYPE F
LANDING PLATFORM PLAN
SCALE: 1" = 1'-0'
(SEE SHEET NO. 773 FOR LOCATION)

FOR INFORMATION ONLY

NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. SEE SHEET NO. 778 FOR LADDER DETAILS.
3. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE PLATFORMS, PLATFORM SUPPORTS, RAILING, LADDERS, GRATE, AVIATION BEACON STAND, NUTS, BOLTS AND WASHERS AND THE GALVANIZING OF EACH ITEM.
4. CONCRETE ANCHORS SHALL BE ¾"⌀ AND INSTALLED PER MANUFACTURERS RECOMMENDED SPACING AND INSTALLATION PROCEDURES.

MDOT
DEPARTMENT OF TRANSPORTATION CADD MISSISSIPPI

STRUCTURE KEY:

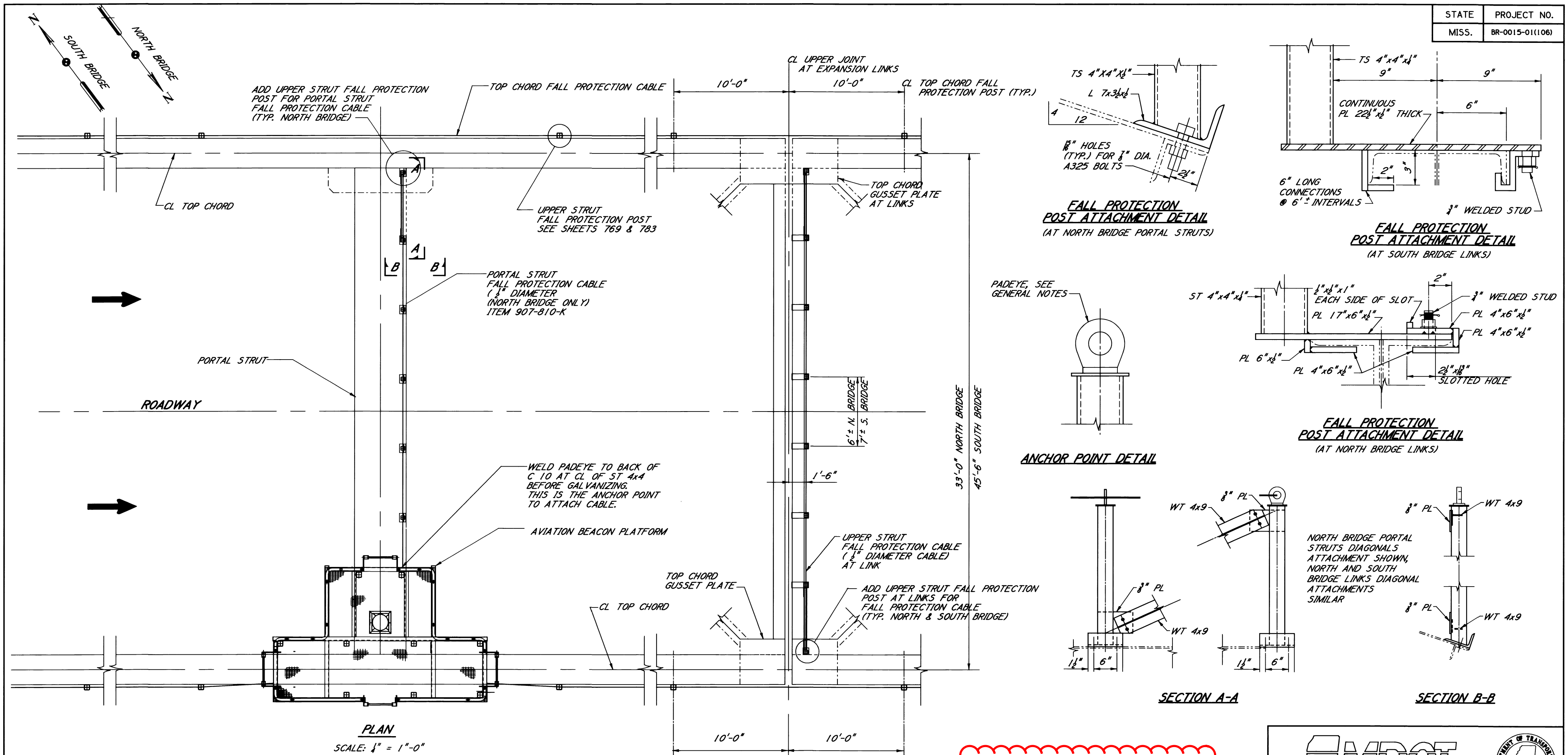
PLATFORM DESIGNATIONS — REVISIONS — NPK — BY — 12-02-03 — DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH BRIDGE
ACCESS WALKWAYS
& LADDER DETAILS
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

DESIGNED JSK	CHECKED NPK	ISSUED	WORKING NUMBER 117r
DETAILED RJC	DATE X	DATE	SHEET NUMBER 780

STATE	PROJECT NO.
MISS.	BR-0015-01(106)



FOR INFORMATION ONLY

PORTAL STRUT FALL PROTECTION REQUIRED ON NORTH BRIDGE:

U74N TO U74S
U54N TO U54S
U34N TO U34S
U14N TO U14S

UPPER STRUT FALL PROTECTION REQUIRED ON NORTH BRIDGE AT LINKS:

U69N TO U69S
U49N TO U49S
U29N TO U29S
U19N TO U19S

UPPER STRUT FALL PROTECTION REQUIRED ON SOUTH BRIDGE AT LINKS:

U73N TO U73S
U63N TO U63S
U31N TO U31S
U19N TO U19S

NOTES:

1. SEE SHEET NO. 771 FOR RAILING DETAILS.
2. SEE SHEET NO. 778 FOR LADDER DETAILS.
3. SEE SHEET NO. 767 FOR NORTH BRIDGE AVIATION BEACON PLATFORM
4. SEE SHEET NO. 782 FOR SOUTH BRIDGE AVIATION BEACON PLATFORM.
5. SEE SHEET NO. 769 FOR NORTH BRIDGE TOP CHORD FALL PROTECTION DETAILS.
6. SEE SHEET NO. 783 FOR SOUTH BRIDGE TOP CHORD FALL PROTECTION DETAILS.
7. PAYMENT UNDER 907-810-K AND INCLUDES LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF THE RAILING, LADDERS, GRATE, NUTS, BOLTS AND WASHERS AND FALL PROTECTION SYSTEM AND THE GALVANIZING OF EACH ITEM.

MDOT

DEPARTMENT OF TRANSPORTATION CADD MISSISSIPPI

STRUCTURE KEY:

BY
REVISIONS
DATE

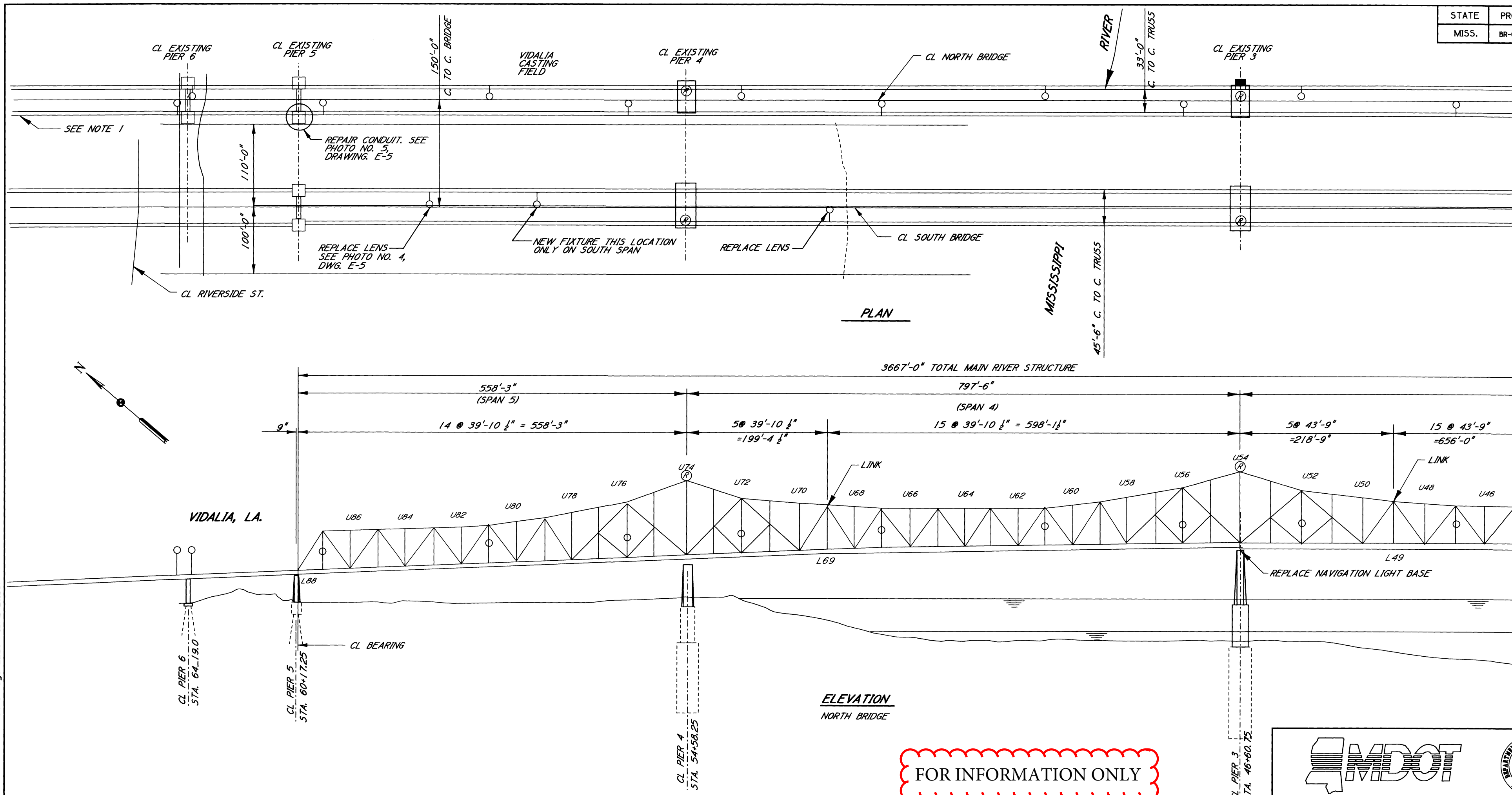
MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER
NORTH & SOUTH BRIDGE
PORTAL & UPPER STRUT
FALL PROTECTION
STATE HIGHWAY FMS CON 103771/301000
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MISSISSIPPI

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

WORKING NUMBER 1241

DESIGNED JSK	CHECKED NPK	ISSUED	SHEET NUMBER
DETAILED RJC	DATE X	DATE	791

STATE	PROJECT NO.
MISS.	BR-0015-01(106)



FOR INFORMATION ONLY

KEY

- 180 DEGREE RED PIER NAVIGATION LIGHT
- 360 DEGREE GREEN CHANNEL NAVIGATION LIGHT
- Ⓡ 360 DEGREE RED FLASHEING AVIATION BEACON LIGHT
- 250W H.P.S. ROADWAY LIGHT

NOTES:

1. LIGHT FIXTURES ALSO LOCATED AT STATIONS: 66+94.5, 69+70.0, 71+70.0, 73+70.0, 75+70.0. THESE FIXTURES ARE EMBANKMENT MOUNTED. SEE DETAILS ON SHEET .
2. SELECTED REPAIRS TO THE SOUTH BRIDGE ROADWAY LIGHTING AS SHOWN.
3. EXISTING FIXTURES ARE G.E. TYPE M400-A, IES M-C-III, 250W, 480 VOLT.

MDOT

CADD — DEPARTMENT OF TRANSPORTATION — MISSISSIPPI

STRUCTURE KEY:

REVISIONS — BY — DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NORTH BRIDGE
LIGHTING PLAN

PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MS

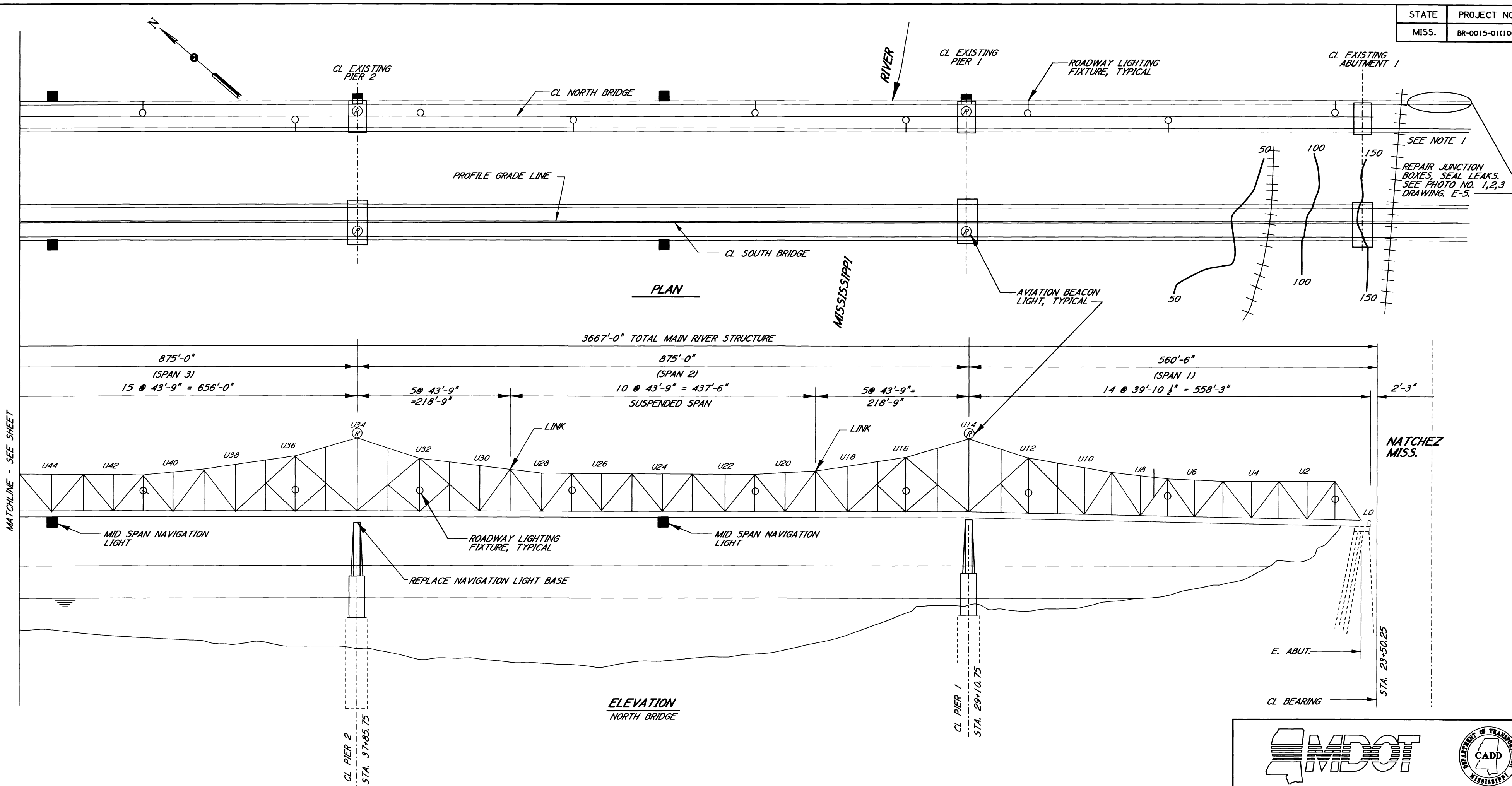
HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

WORKING NUMBER E-1

DESIGNED GLP	CHECKED LEL	ISSUED	SHEET NUMBER 794
DETAILED TGM	DATE 7-00	DATE	

rchatsigner PLOTTED: 08-FEB-2003 10:22 M:\28883-Natchez\Cadd\Bridge\ELECTRICAL\E1.DGN

STATE	PROJECT NO.
MISS.	BR-0015-01(106)



KEY

- 180 DEGREE RED PIER NAVIGATION LIGHT
- 360 DEGREE GREEN CHANNEL NAVIGATION LIGHT
- Ⓡ 360 DEGREE RED FLASHEING AVIATION BEACON LIGHT
- 250W H.P.S. ROADWAY LIGHT

NOTES:

1. LIGHT FIXTURES ALSO LOCATED AT STATIONS: 21+75, 19+67.0, 17+59.0, 15+51.0, 13+43.0, 11+35.0, 9+27.0. THESE FIXTURES ARE EMBANKMENT MOUNTED. SEE DETAILS ON SHEET .

FOR INFORMATION ONLY

MDOT

CADD

STRUCTURE KEY:

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NORTH BRIDGE
LIGHTING PLAN

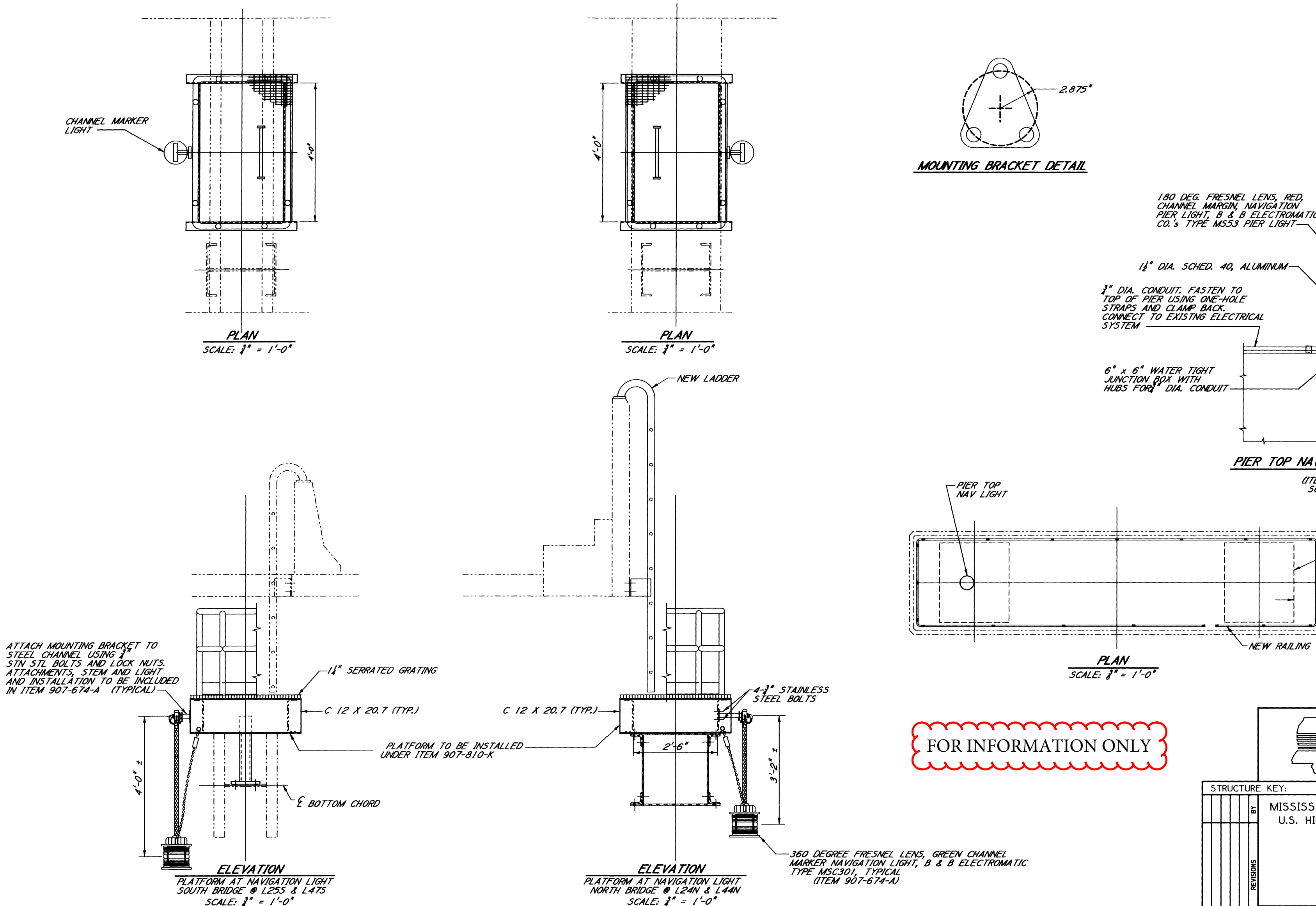
PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MS

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

WORKING NUMBER E-2

DESIGNED GLP	CHECKED LEL	ISSUED	SHEET NUMBER
DETAILED TGM	DATE 7-00	DATE	795

STATE	PROJECT NO.
MISS.	BR-0015-01(106)



NOTE:
LENGTH OF HANGER STEM SHOWN SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO SHOP DRAWING SUBMITTAL.

FOR INFORMATION ONLY

MDOT

CADD

STRUCTURE KEY:

BY

REVISIONS

DATE

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
U.S. HIGHWAY 65 & 84 OVER MISSISSIPPI RIVER

NAVIGATION LIGHTING
MOUNTING DETAILS

PROJECT NO. BR-0015-01(106)
ADAMS COUNTY, MS

HNTB ARCHITECTS ENGINEERS PLANNERS Baton Rouge, Louisiana Kansas City, Missouri

DESIGNED GLP	CHECKED LEL	ISSUED	WORKING NUMBER E-4
DETAILED TGM	DATE 07-00	DATE	SHEET NUMBER 797