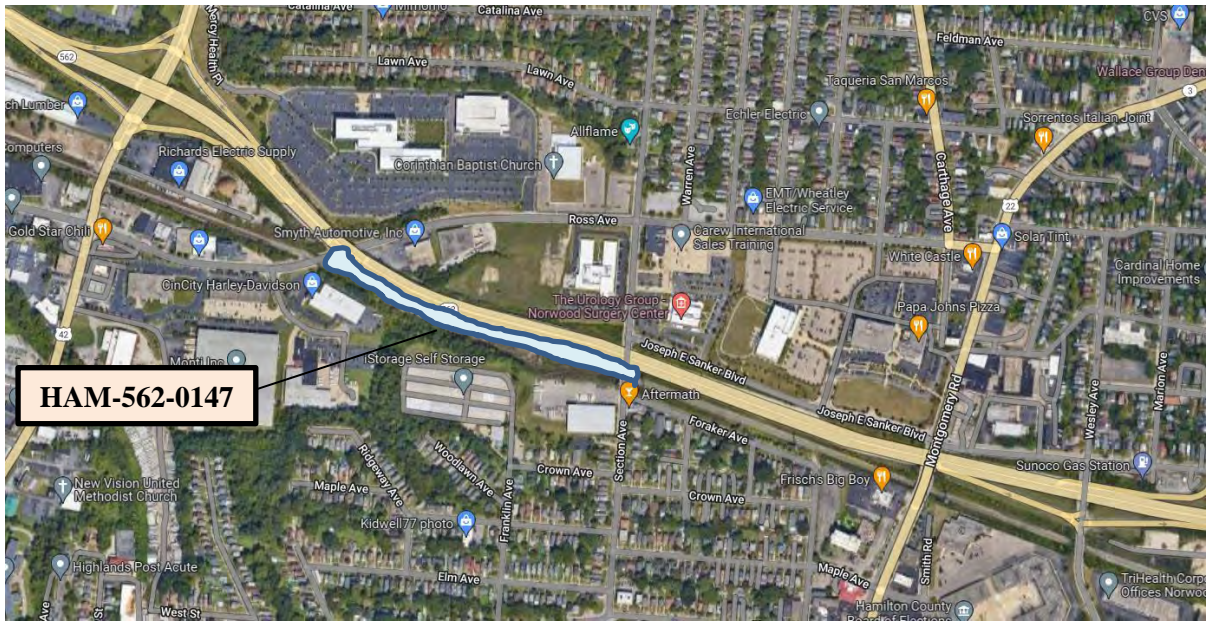


April 4, 2023

BRIDGE NO HAM-562-0147
PID No. 105476



NORWOOD LATERAL PARKWAY OVER ROSS AVENUE

INSPECTION DETAILS:

Bridge No.:	HAM-562-0147
Features intersected:	Ross Road and Indiana & Ohio Railroad
Locations to Inspect:	Six (6) steel pier caps, pier 4 – pier 9
No. of Inspection Days:	Anticipated 5 days
No. of Caps to Inspect:	6
Anticipated Inspection Dates:	Week of July 17 2023 (tentative)
Inspection Hours:	7:00 AM to 5:00 PM
Inspection Access Equipment:	60' Manlift, Ladders

FRACTURE CRITICAL INSPECTION REQUIREMENTS:

The inspection will consist of an In-Depth “Arms-Reach” inspection, performed in accordance with the guidelines of the current FHWA National Bridge Inspection Standards for Fracture Critical Members.

To perform an effective Fracture Critical Inspection, the following tasks must be performed:

1. Determine Resource Requirements.
(Identify qualified inspection staff, use appropriate inspection access and inspection equipment).
2. Identify the Fracture Critical Members.
3. Develop the Inspection Procedure.
(Contained in this document)
4. Prepare Follow-up Procedure.
(Recommendations will be made as part of this current project)
5. Provide Quality Control/Quality Assurance for the inspection and report.
(Procedures outlined in this document)
6. Develop a Periodic Inspection Plan
(Already in place with the Ohio Department of Transportation, District 8)

BRIDGE DESCRIPTION:

Bridge HAM-562-0147 is a 13-span welded steel plate girder structure with a reinforced concrete deck that carries State Route 562 over Ross Avenue and two (2) Indiana & Ohio Railroad lines. The bridge consists of a left superstructure that carries the westbound lanes, and a right superstructure that carries the eastbound lanes. The total bridge length of over 1400' with clear roadway widths of 36'-0" in each direction. The bridge is on a horizontal and vertical curve with the eastbound and westbound lanes, separated by an open joint and concrete median barrier.

The structure has six (6) fracture critical pier caps located at Piers 4, 5, 6, 7, 8, and 9. At Pier 4, only the right superstructure is supported while the remaining caps dually support both superstructures. All the pier caps are welded steel box girders that support a varying number of welded steel plate girders. Pier Caps 4, 5, 6, 7 and 9 are simply supported with cantilevers over the left pier columns. Pier Cap 8 is a two-span continuous unit. The nomenclature and girder descriptions shown on the design plans will be used during the inspection.

The bridge was rehabilitated in 1993 to address fatigue prone details. Girder tie plate connections to the pier caps were modified with stress relief holes or hole- and-sawcut retrofits in the pier cap web plates adjacent to filled weld intersections. Welded knee braces were removed from the pier cap web plates below every girder bottom flange tie plate. In the tension zones of the pier cap webs, the ends of the longitudinal stiffeners were clipped and tapered. The ends of the longitudinal stiffener welds were ground flush with the pier cap webs, and stress relief holes were drilled through the web plates near the ends of the stiffeners.

The bridge was again rehabilitated in 2015 to clean and paint steel areas with corrosion, retrofit the deck drainage system, remove extraneous welds and regrade the embankments.

FRACTURE CRITICAL MEMBER LOCATIONS:



INSPECTION METHOD & PLAN:

The Collins Team will perform inspections of the six (6) fracture critical steel pier caps in cooperation with the Indiana & Ohio Railroad while supervised by a flag-man during approved hours. A 60-foot man-lift and ladders will be utilized to access all pier caps. Previously reported train volume is approximately 3 to 4 trains per day. The inspection will adhere to the Confined Space Entry Procedures defined herein, and in the GF safety procedures.

FIELD COORDINATION

The following entities will be involved in coordinating and performing all field work associated with the inspection of these structures.

COLLINS – Field Team Contacts:

Michael Seal, P.E., CBI: Team Leader, Project Manager (614) 849-2277 (C)
mseal@collinsengr.com

Matt Rogers, P.E., CBI: Team Leader (859) 630-2238 (C)
mrogers@collinsengr.com

Kevin Mitchell, CBI, Asst. Team Leader, (606) 344-3000 (C)

kmitchell@collinsengr.com

ODOT (Project and Permitting Contacts) – A right of entry permit is necessary through ODOT District 8. See Appendix A. The following ODOT personnel will be contacts.

Brandon Collett: Project Manager (513) 933-6643
Brandon.Collett@dot.state.oh.us

Jeff Meyer: Assistant Structures Engineer (513) 933-6630

Scott Kraus: District Work Zone Traffic Manager (513) 933-6519
Scott.Kraus@dot.state.oh.us

Chris Bass: Right-of-Way Use Permits (513) 933-6575
Christopher.Bass@dot.state.oh.us

CENTRAL RAILROAD OF INDIANA – A right of entry permit is required through CROI (care of Rail America) to access railroad right of way. Gannett Fleming will also be required to purchase or show proof of insurance that meets Rail America railroad liability requirements. Railroad flagging is provided by a pre-approved flagging subcontractor through the local office of CROI. Contacts are:

CROI (Local Office) (513) 860-1000x133

Donna Killingsworth: Right of Entry Permits (904) 538-6365

Railroad Flagging (724) 809-9232

Railroad Information: AAR DOT 524816G

Mile Post 0008.35

Approved right of entry permits from ODOT and Central Railroad of Indiana will be kept on the job site throughout the inspection period.

CONFINED SPACE ENTRY PROCEDURE: See below.

INSPECTION PLAN:

The condition inspection of the steel box girder pier caps will involve a 4-day field effort to completely inspect both the interior and exterior of the caps. The exteriors will be inspected from the 60' manlift and ladders for access and the interiors will be inspected by entering the box girders per the procedures outlined below. A 3-man inspection team will perform the confined space inspections.

Collins will open the pier caps 1 hr prior to entering to ventilate the piers. Prior to the start of the inspection each day, the inspection team shall meet at the site for a safety meeting and review the details of this inspection plan.

Entry will be performed in accordance with permit-required confined space entry procedures. This includes the use of an entry permit system, pre-entry and continuous air monitoring, and designating qualified entrants, attendants, and supervisor(s). The Project Work Plan will outline safety procedures for confined space work and contain contact information for local EMS services and for the local Hospital.

Prior to the inspection, initial air monitoring for O₂, %LEL, CO, and H₂S will be performed by one designated certified entrant climbing the length of the steel box girder pier caps and the certified attendant documenting the readings every 25 feet. Radios will be used for team communications during the inspection. At the conclusion of the initial entry and air monitoring, the confined space air readings will be evaluated and if no hazards exist, the space will be designated a non-permit required confined space. Members of the inspection team entering the confined space will continuously monitor the air, and the attendant will document readings in the box every 30 minutes for the duration of the work inside of the confined space.

If the monitor alarms go off during the initial entrance indicating that unsafe atmospheric conditions exist, the entrant will immediately exit the steel box girder (using a 10-minute escape pack if needed). If unsafe atmospheric conditions continue to exist, further ventilation will continue and the initial air monitoring performed again at a later time after proper ventilation. A blower and generator will be used to provide proper ventilation to the box girder, if necessary. If the atmospheric hazards cannot be removed from the confined space, the box girder will NOT be entered and the District's Project Manager will be contacted to notify and to receive further instructions.

FOLLOW-UP PROCEDURES FOR INSPECTION FINDINGS:

Fracture critical inspection findings shall be documented in the final inspection report.

Quality Control/Quality Assurance

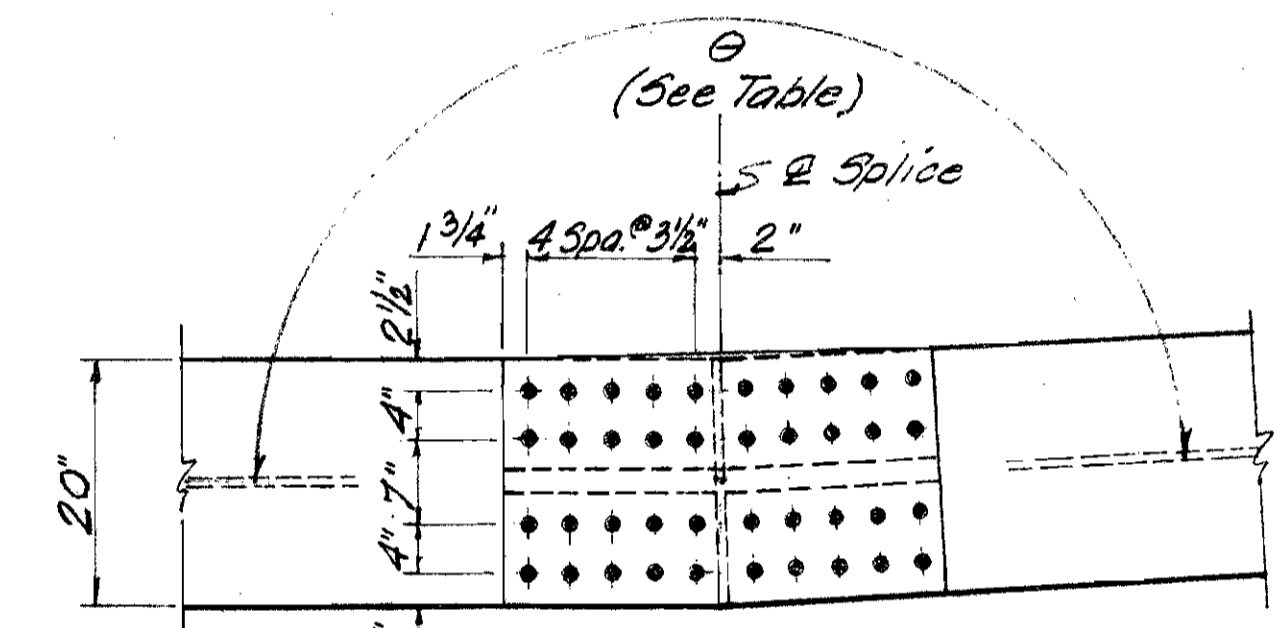
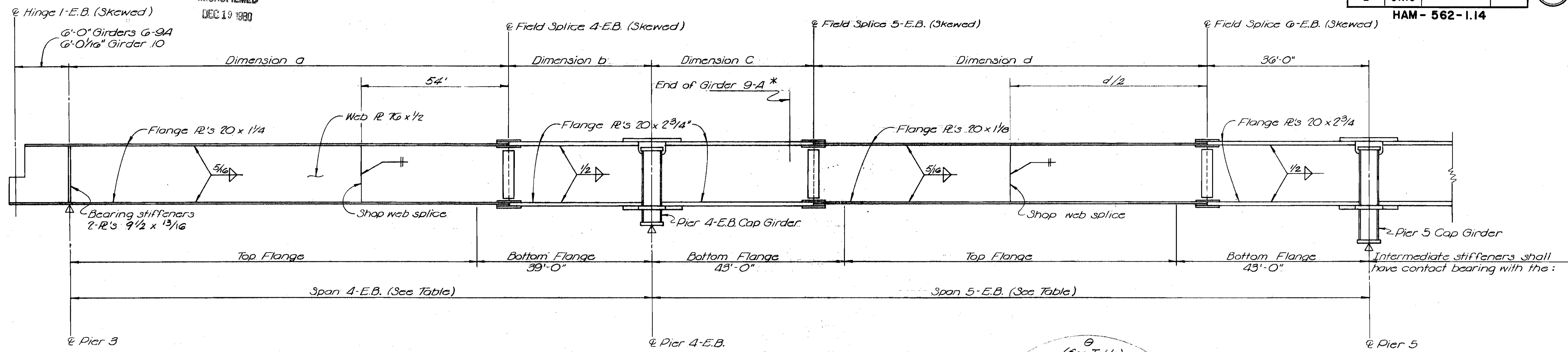
The standard Collins Quality Control Plan will be utilized. Such steps include: completion of field task checklist prior to leaving site, team leader review of all field notes and photographs before leaving the site, either the report originator or checker will be part of the field team, the report checker will be an NBI Team Leader, the report corrector cannot be the checker, the backchecker cannot be the corrector, and the field team leader will be involved for at least one phase of the reporting process.

APPENDIX A – RIGHT OF ENTRY PERMIT APPLICATIONS

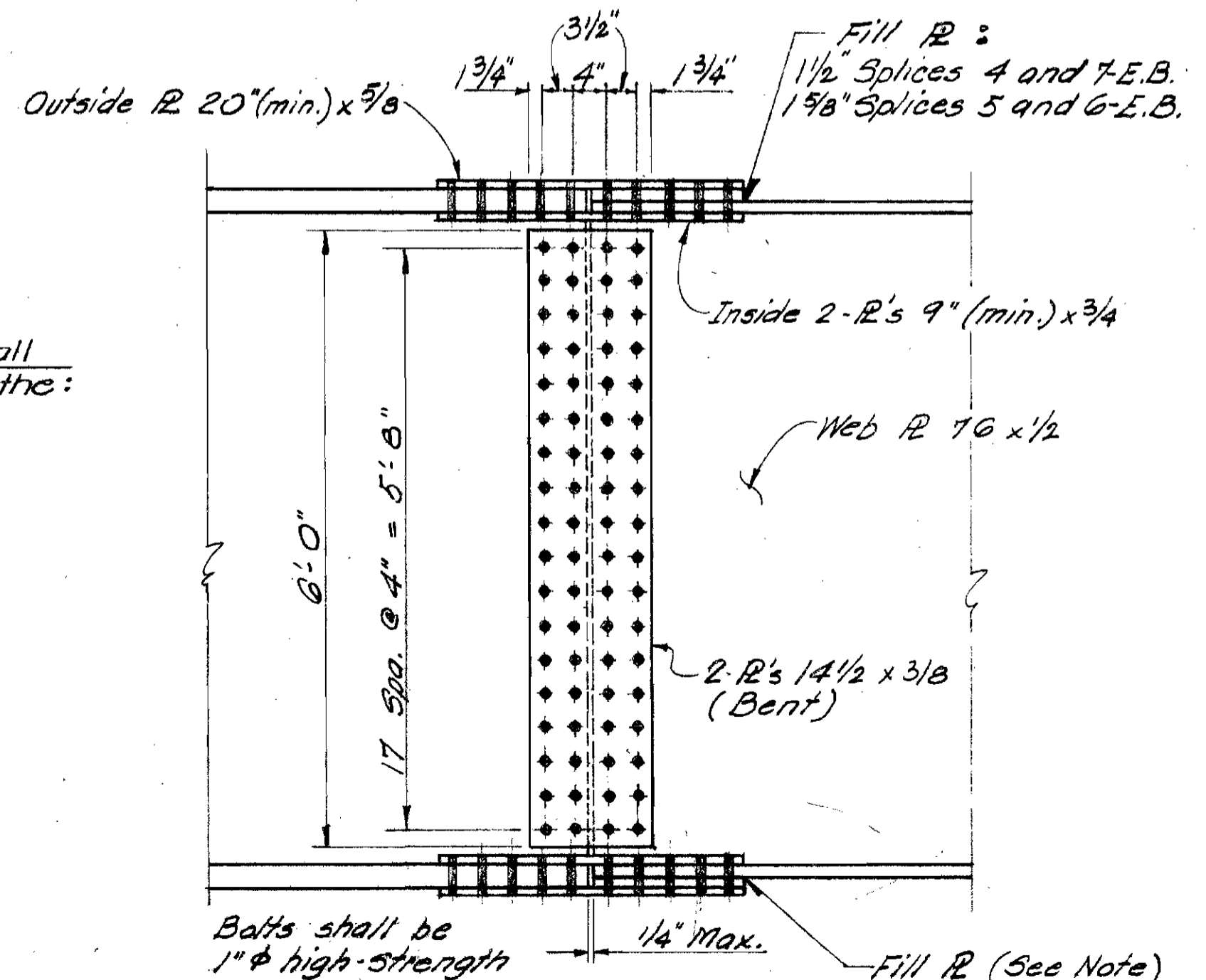
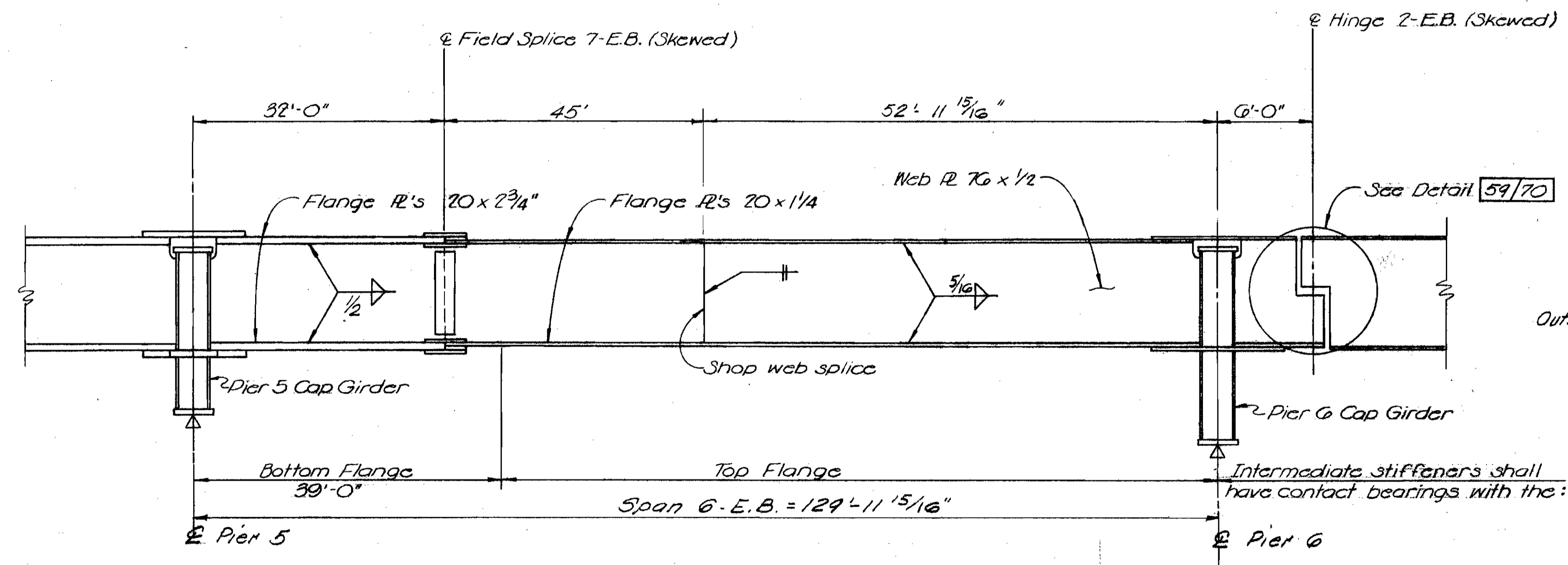
APPENDIX B – TRAFFIC CONTROL DETAILS

**APPENDIX C – FATIGUE PRONE DETAILS FOR
HAM-562-0147**

MICROFILMED
DEC 19 1980

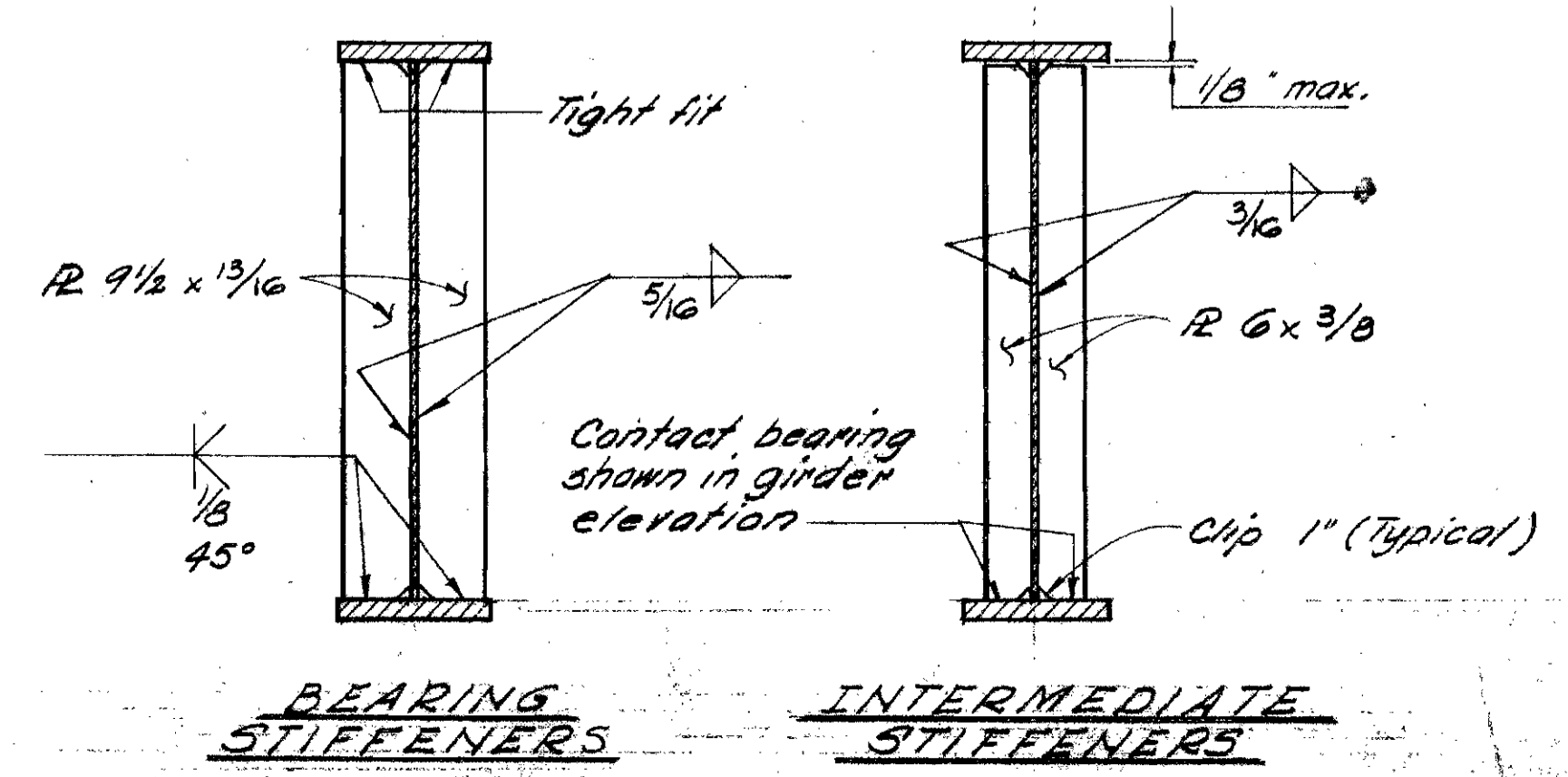


GIRDER	SPLICE 4	SPLICE 5	SPLICE 6	SPLICE 7
6	177° 35' 42"	178° 06' 10"	177° 10' 53"	177° 32' 58"
7	177° 35' 42"	178° 06' 10"	177° 10' 53"	177° 32' 58"
8	177° 35' 42"	178° 06' 10"	177° 10' 53"	177° 32' 58"
9	177° 35' 42"	178° 06' 10"	177° 10' 53"	177° 32' 58"
9-A	177° 49' 55"	—	—	—
10	178° 23' 16"	177° 31' 13"	178° 05' 44"	177° 32' 58"



For joint preparations see 37/70

Girder Line	DIMENSIONS					
	Span 4	Span 5	a	b	c	d
6	125'-6 3/8"	160'-0 9/16"	93'-6 3/8"	32'-0"	36'-0"	88'-0 9/16"
7	127'-5 3/4"	160'-0 9/16"	95'-5 3/4"	32'-0"	36'-0"	88'-0 9/16"
8	129'-5 1/16"	160'-0 9/16"	97'-5 1/16"	32'-0"	36'-0"	88'-0 9/16"
9	131'-4 1/16"	160'-0 9/16"	99'-4 1/16"	32'-0"	36'-0"	88'-0 9/16"
9-A	132'-6 3/4"	*28'-9 1/8"	100'-7 1/8"	31'-11 1/16"	*28'-9 1/8"	—
10	133'-9 3/8"	159'-10 7/16"	101'-9 1/16"	31'-11 1/16"	35'-11 7/8"	87'-10 1/16"



NOTE:
 Splices 5 and 7 - E.B. Shown.
 Splices 4 and 6 - E.B. opposite hand.
 FIELD SPLICES 4, 5, 6 AND 7 - E.B. LANES

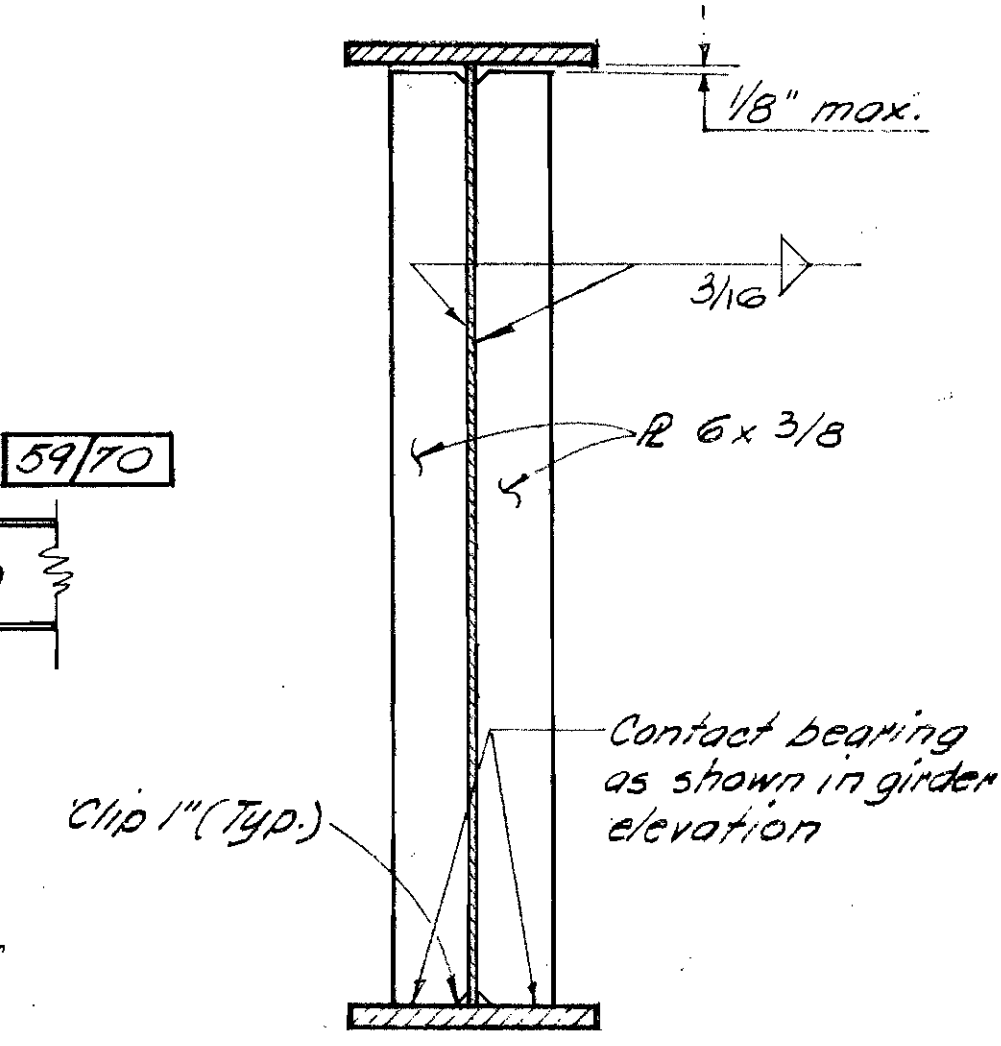
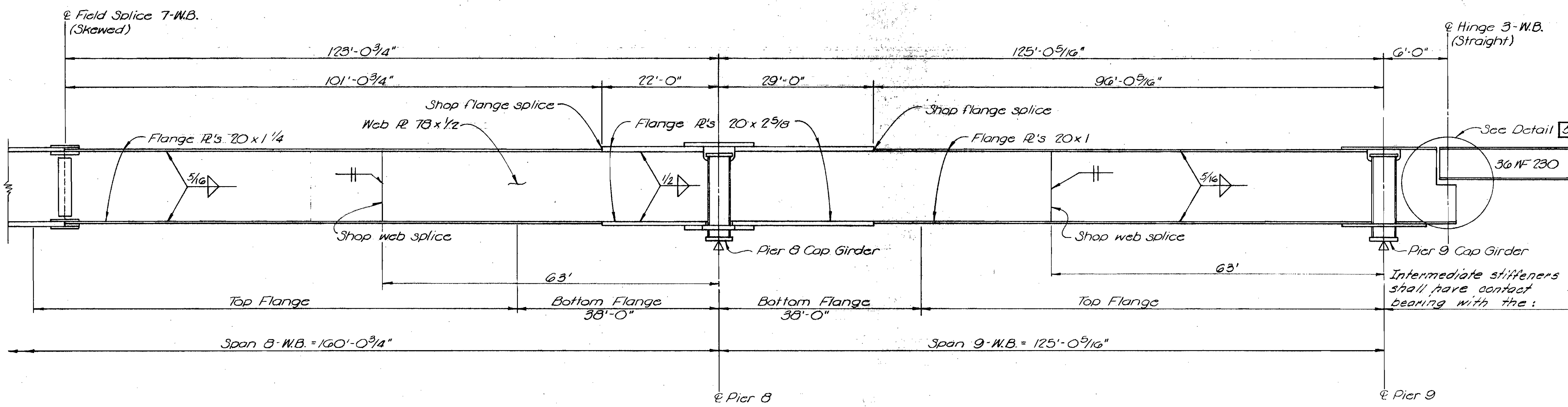
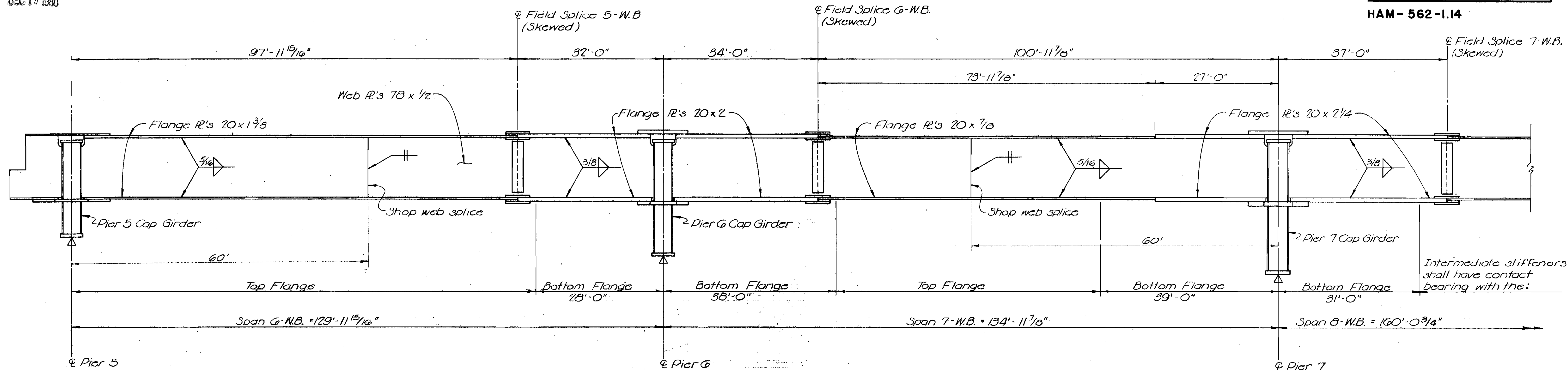
VOGT, IVERS, & ASSOCIATES
 ENGINEERS ARCHITECTS
 CINCINNATI CHICAGO
 40/70
GIRDERS - UNIT 2 E.B.
 BRIDGE NO. HAM-562-0150
 NORWOOD LATERAL OVER
 ROSS AVE. AND B.O.R.R.
 HAMILTON COUNTY STA. 79+47.35
 STA. 93+52.25
 DESIGNED DRAWN TRACED CHECKED REVIEWED DATE REVISED
 M.M. M.M. L.B.F. L.F.L. M.M. 2-20-68

MICROFILMED
DEC 19 1980

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

271
353

HAM-562-1.14



INTERMEDIATE STIFFENERS

For joint preparations see 37/70
For field splice see 39/70

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
GIRDERS - UNIT 3 W.B. BRIDGE NO. HAM-562-0150 NORWOOD LATERAL OVER ROSS AVE. AND B.&O. R.R. HAMILTON COUNTY STA. 79+47.35 STA. 93+52.25					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
M.M.	M.M.	L.B.F.	L.F.L.	lll	2-20-68

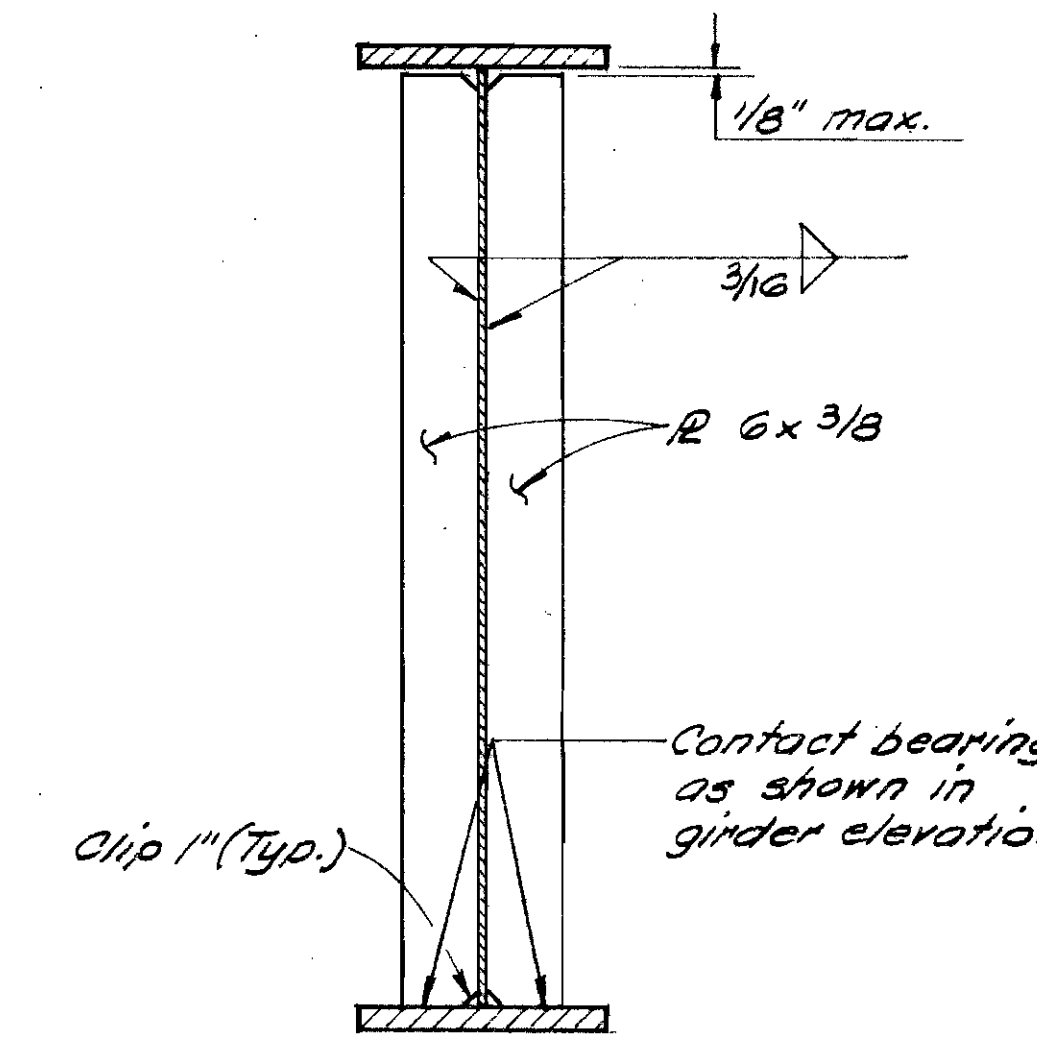
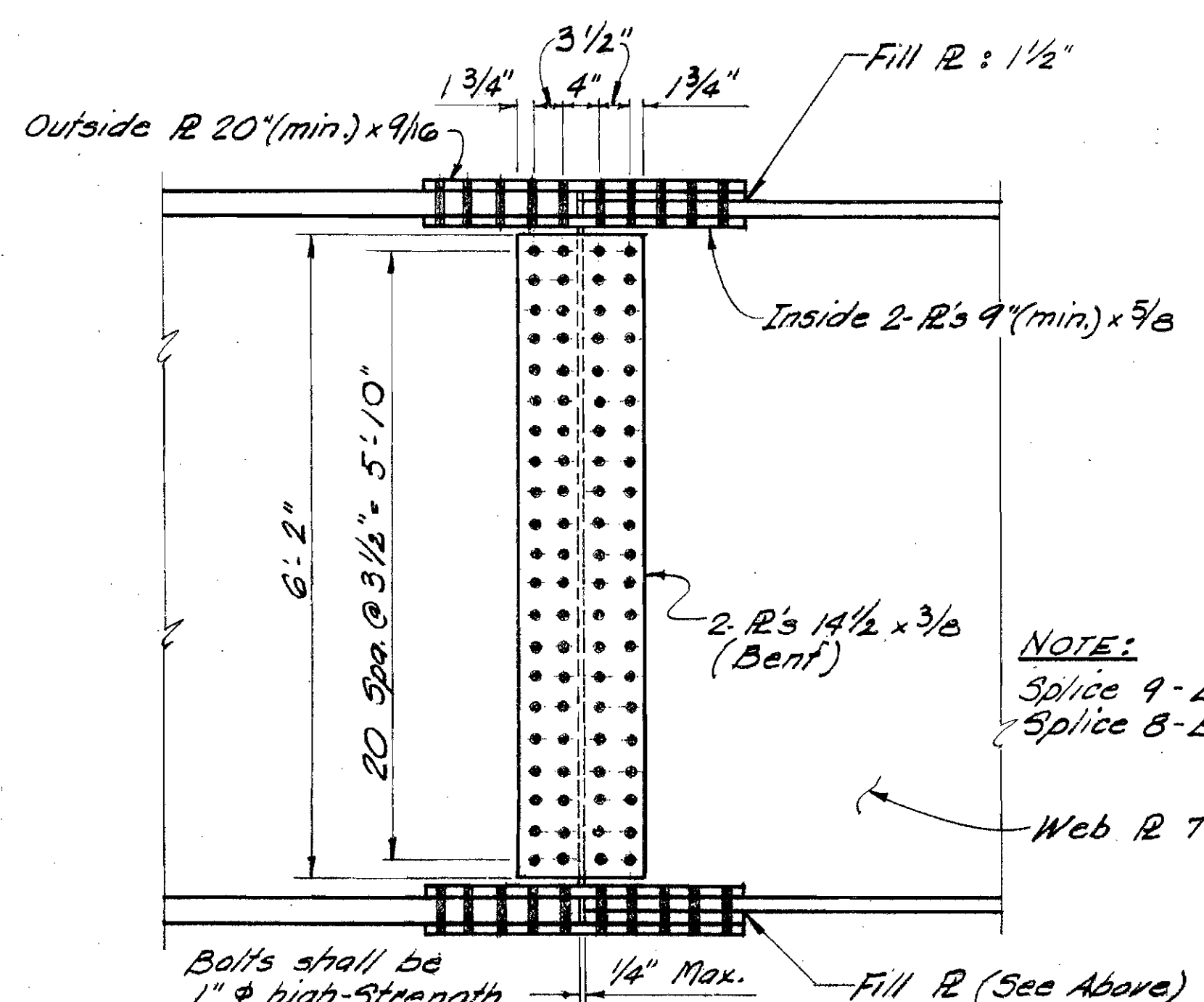
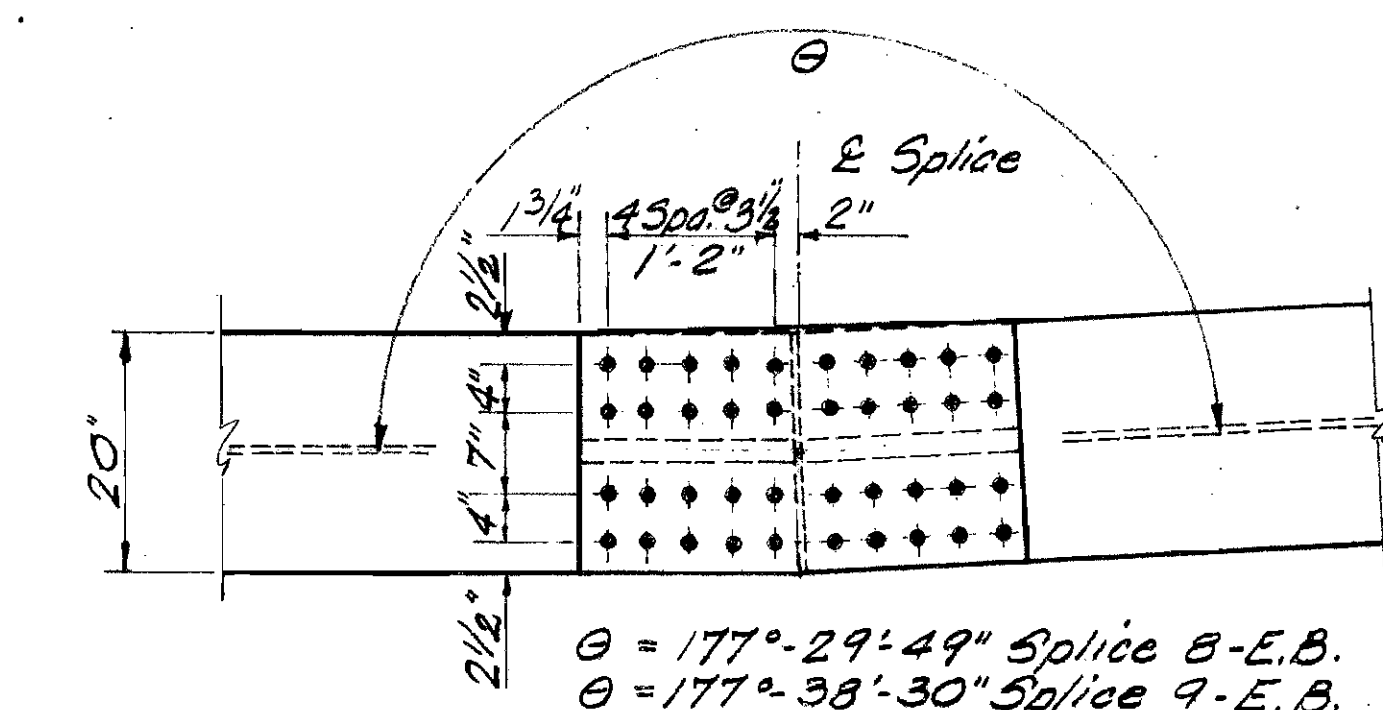
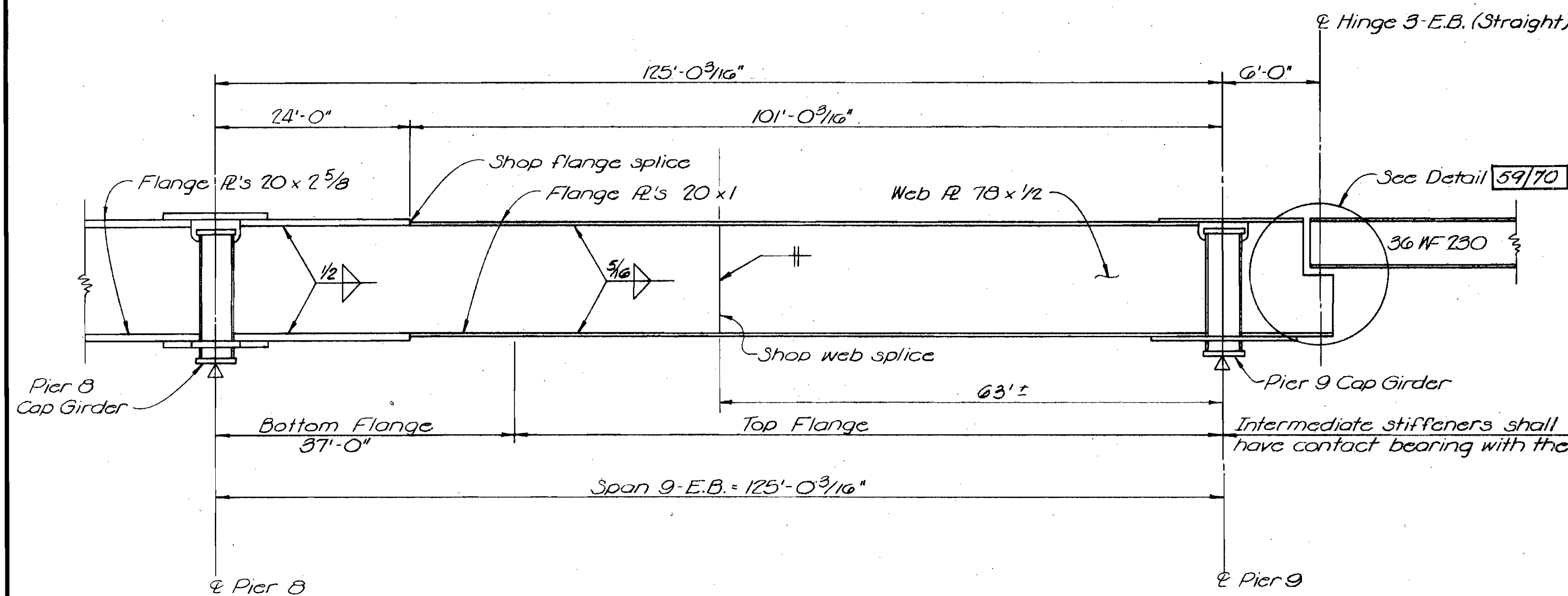
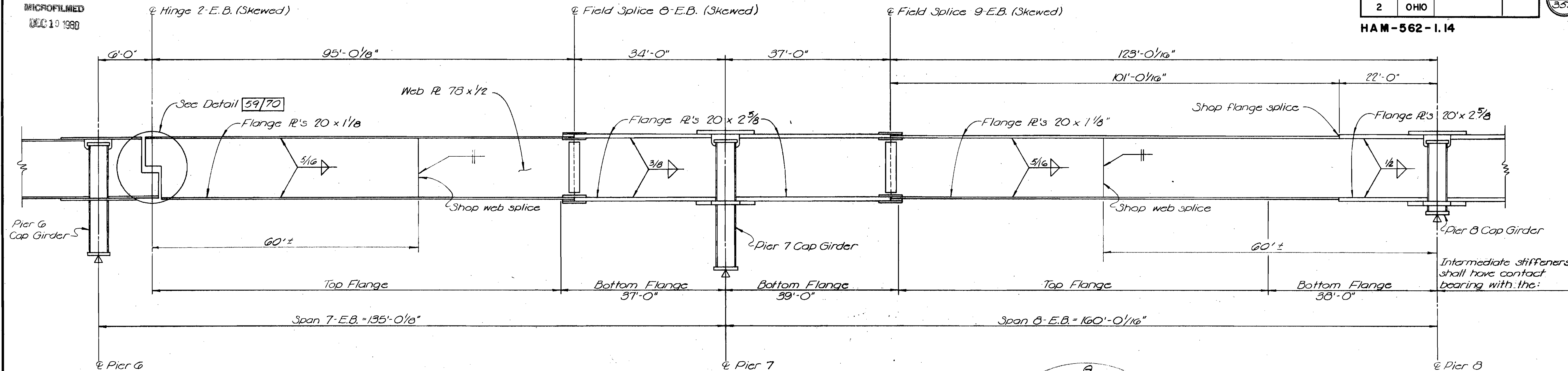
41/70

MICROFILMED
DEC 10 1980

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

272
353

HAM-562-1.14

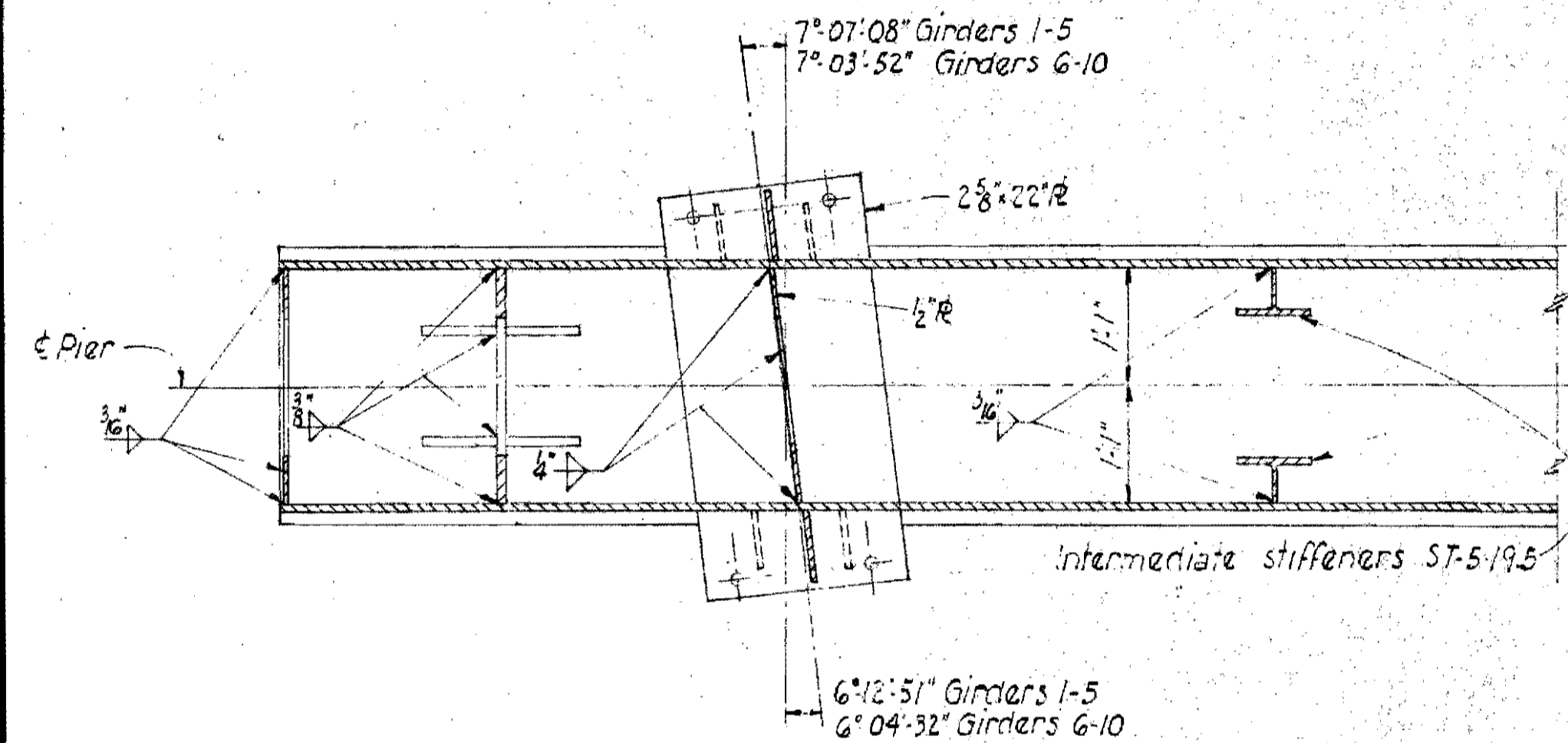
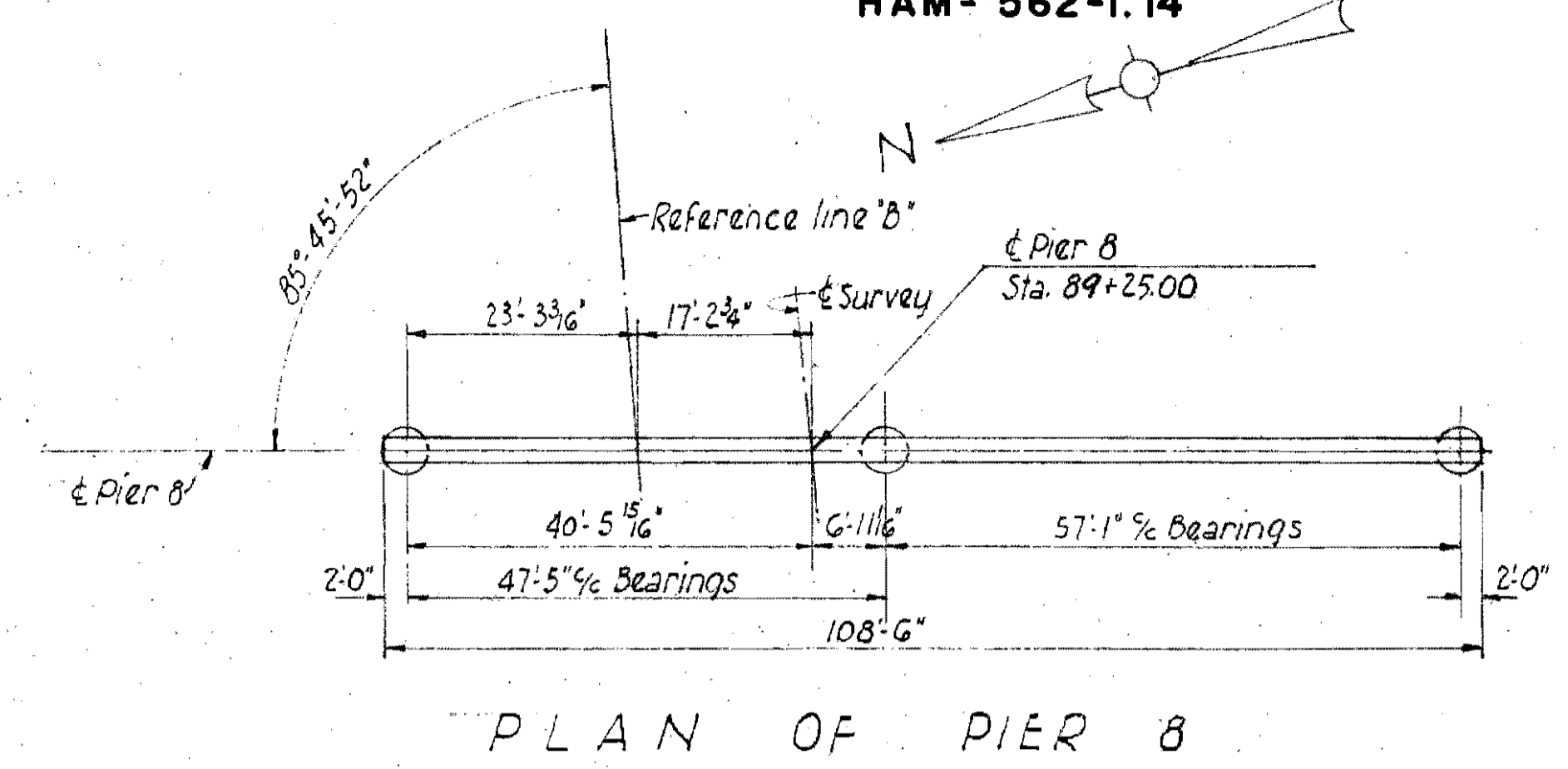
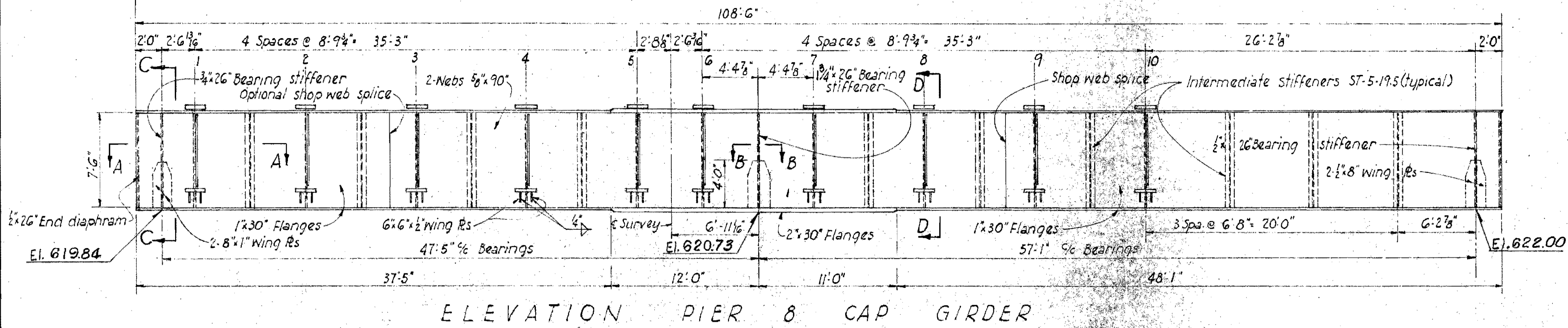


INTERMEDIATE STIFFENERS
For joint preparations see 37/70

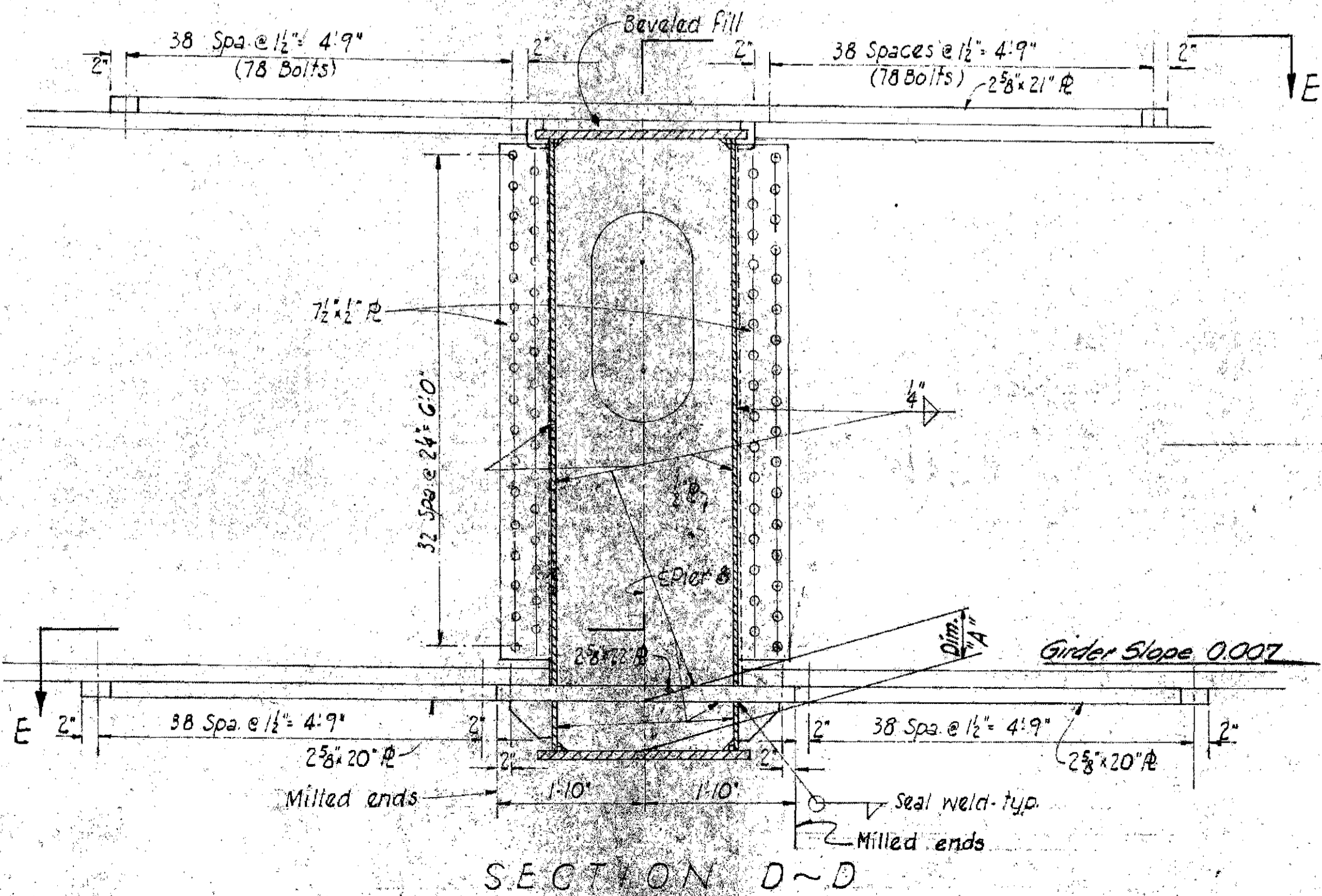
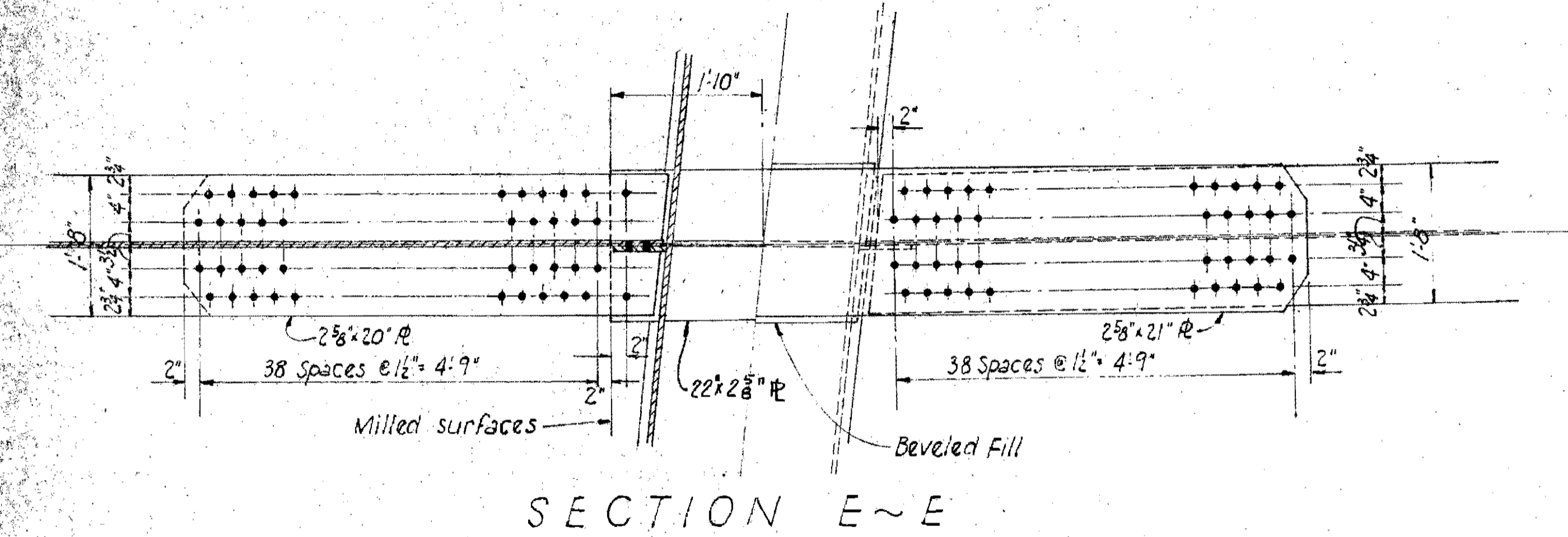
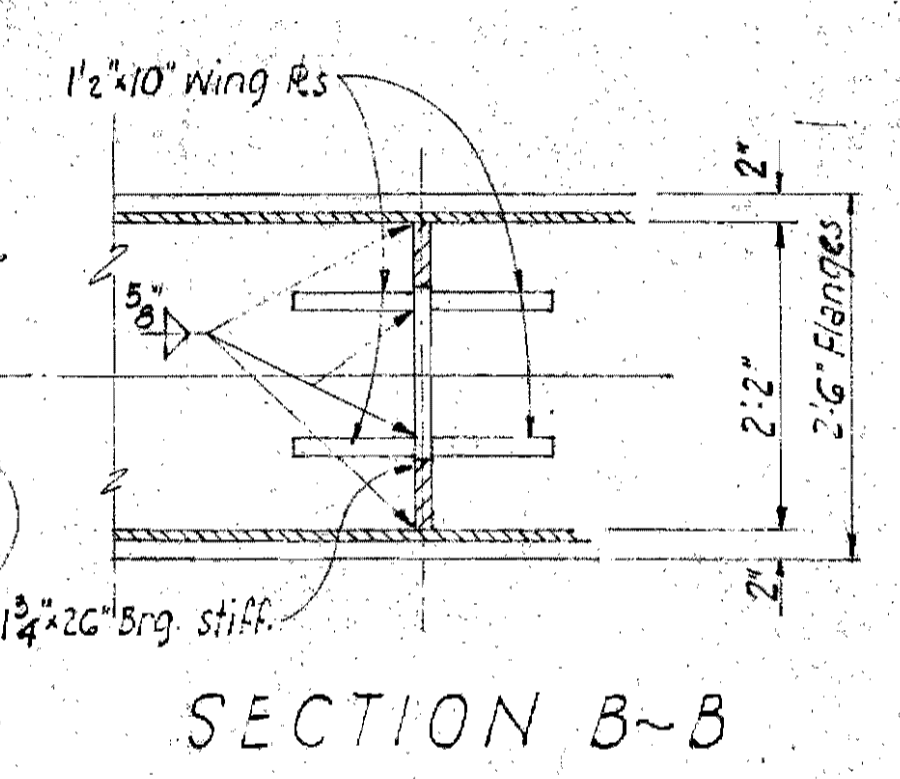
NOTE:
Splice 9-E.B. Shown.
Splice 8-E.B. opposite hand.

FIELD SPLICES 8 AND 9-E.B. LANES

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO			
GIRDERS - UNIT 3 E.B.			
BRIDGE NO. HAM-562-0150 NORWOOD LATERAL OVER ROSS AVE. AND B.O.R.R.			
HAMILTON COUNTY		STA. 79+47.35 STA. 93+52.25	
DESIGNED	DRAWN	TRACED	CHECKED
M.M.	M.M.	L.B.F.	L.F.L.
		REVIEWED	DATE
		lll	220-68

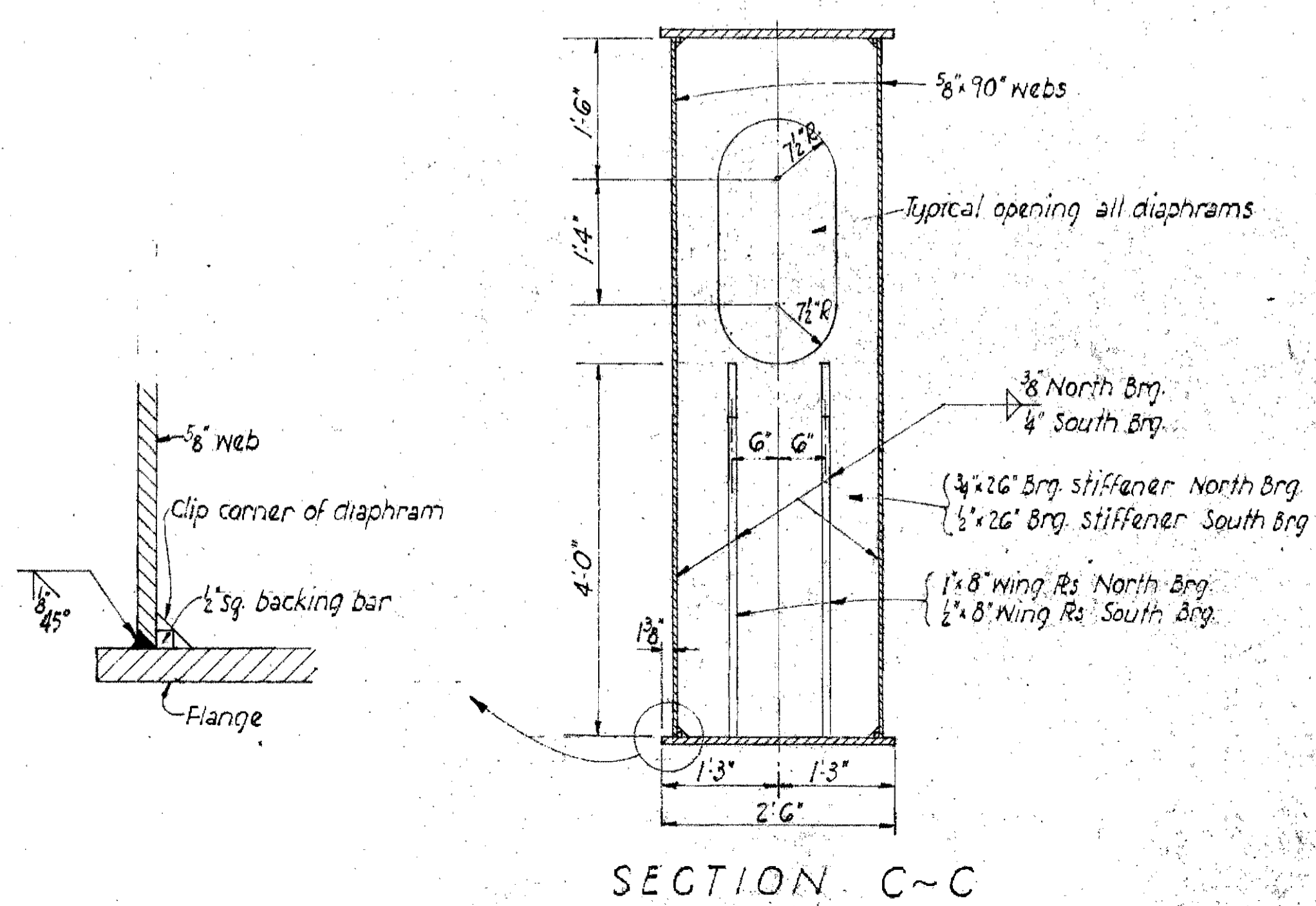


Note! A bend line exists at the center line for Girders 1-10



GIRDER NO.	Dim. "A"
1	7 3/16"
2	7 1/16"
3	7"
4	6 15/16"
5	6 7/8"

GIRDER NO.	Dim. "A"
6	6 1/16"
7	6 3/4"
8	6 9/16"
9	6 15/16"
10	7 1/16"

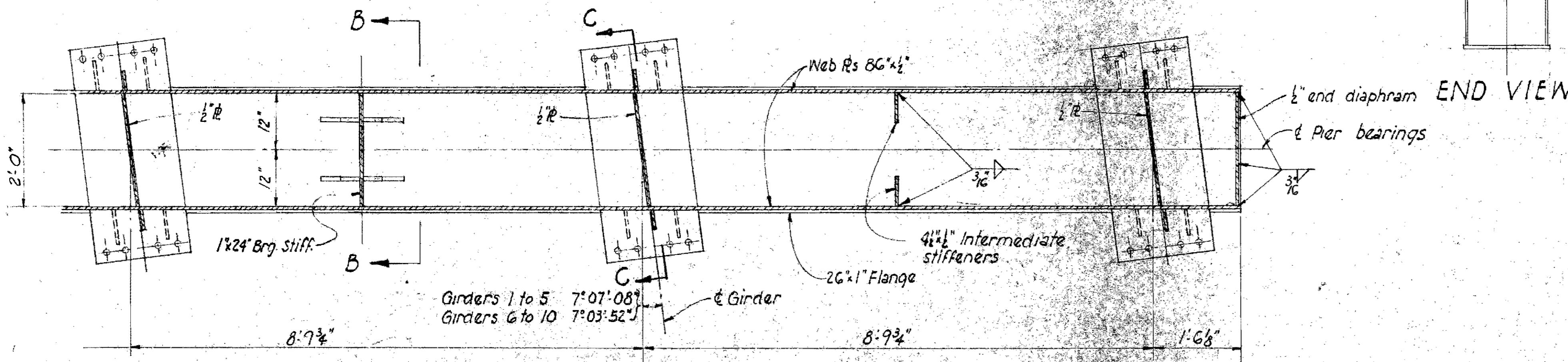
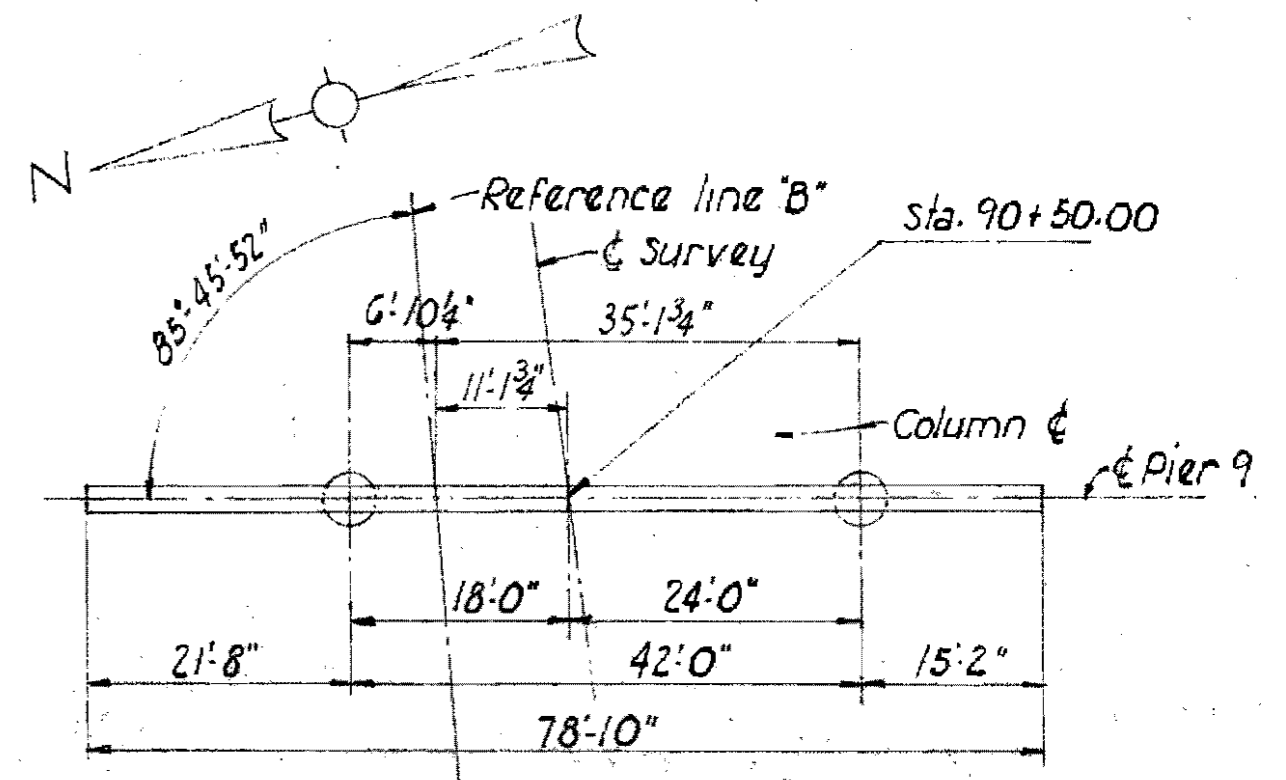
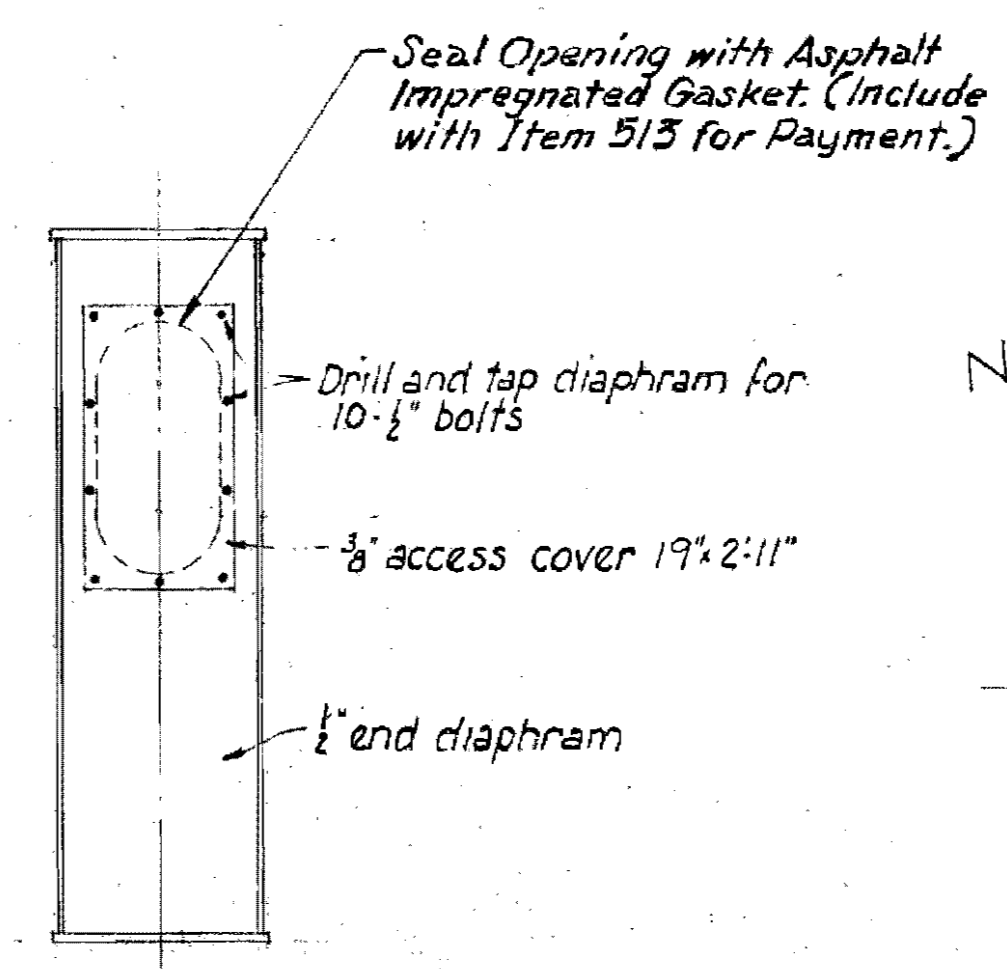
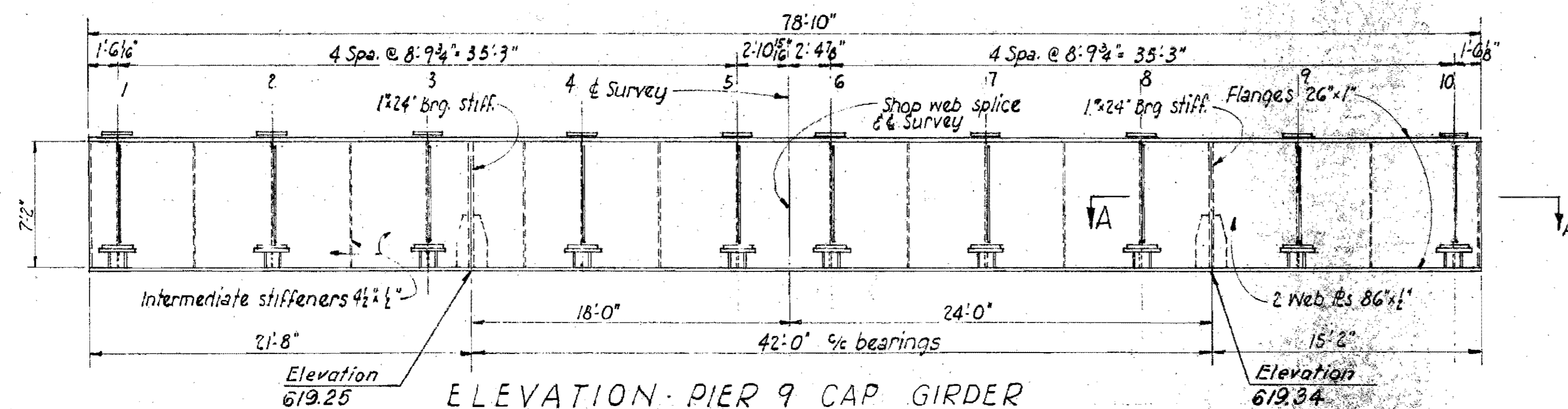


For additional notes and end diaphragm cover see 54/70
For joint preparation see 37/70

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

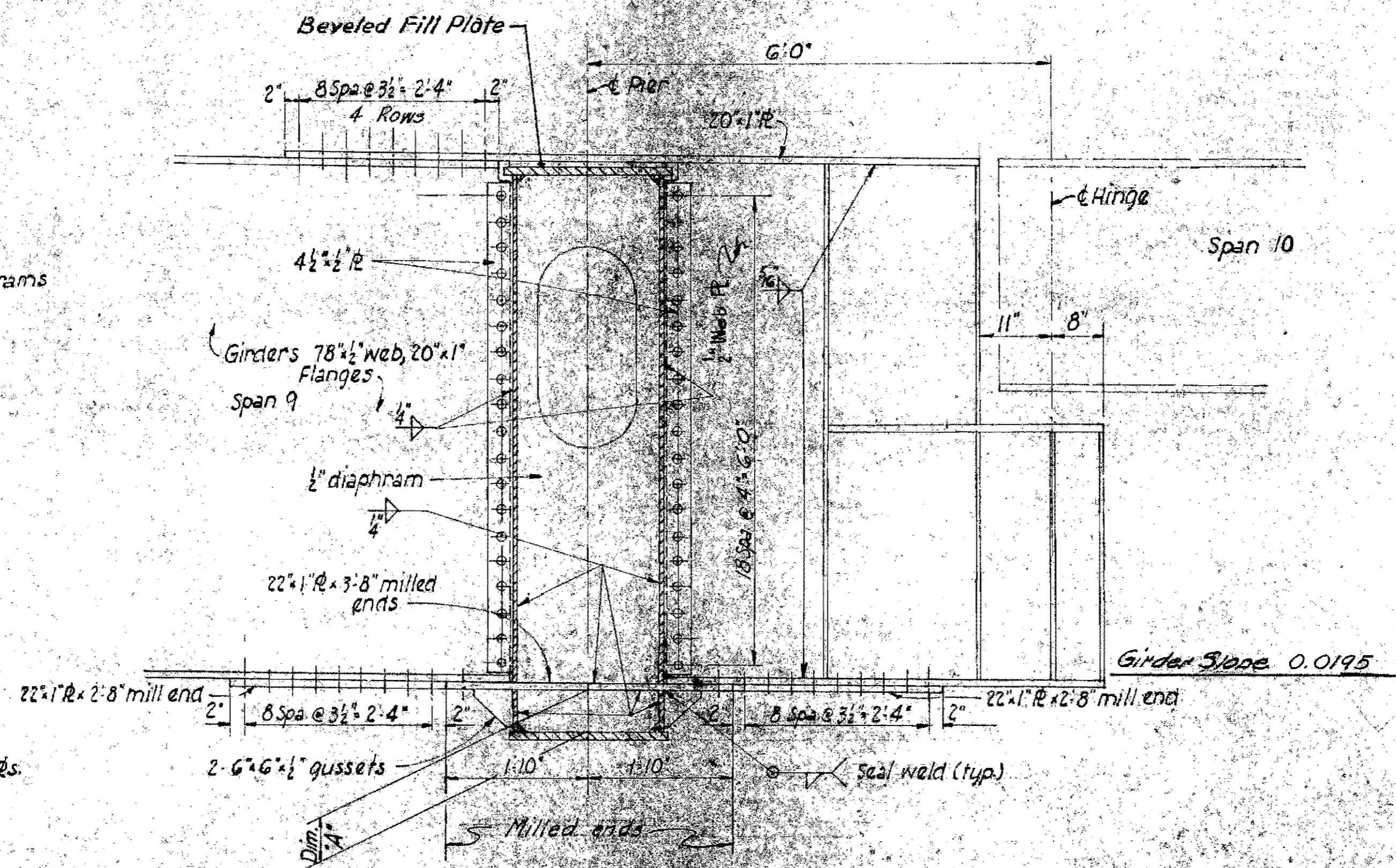
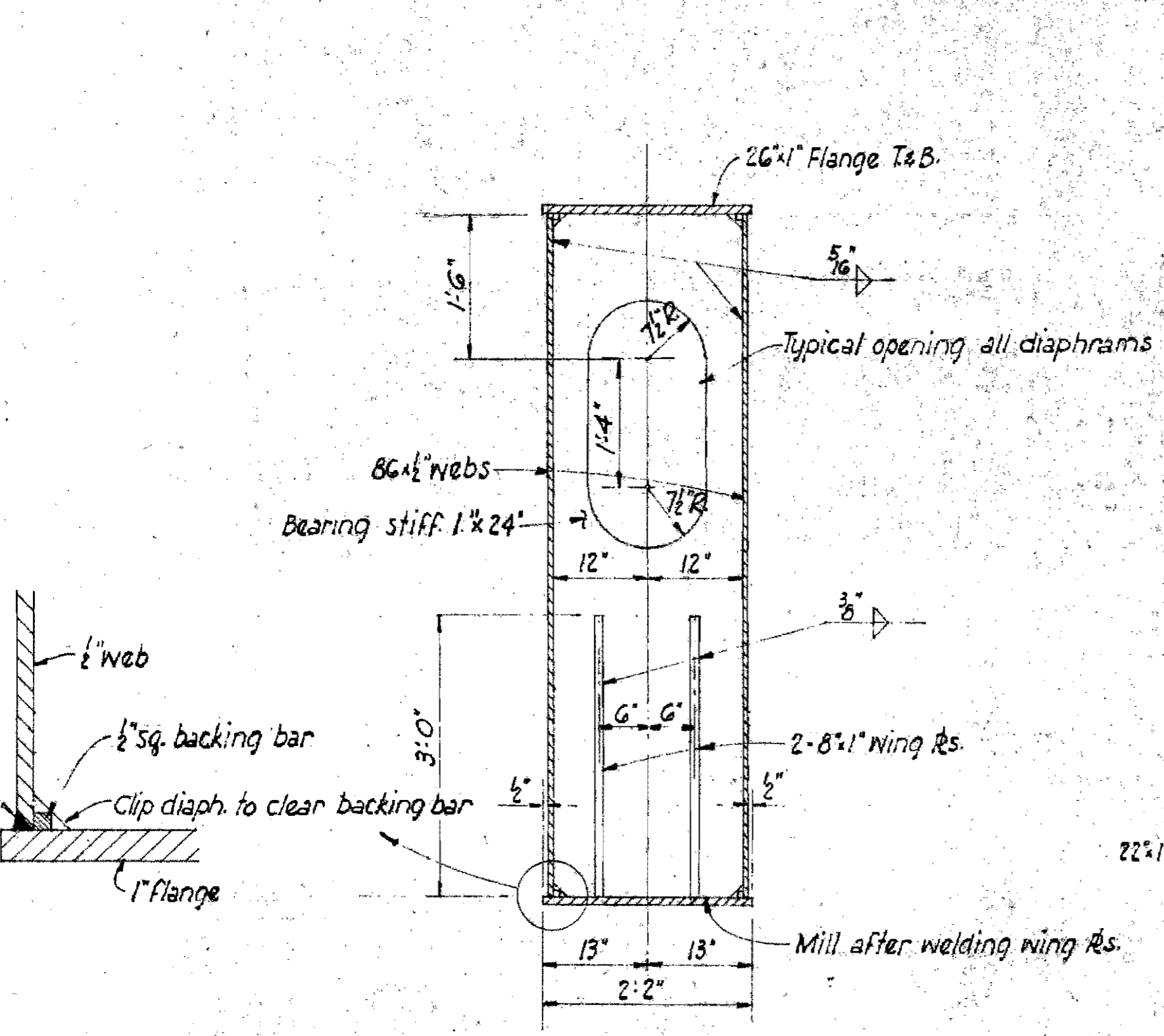
PIER 8 CAP GIRDER
BRIDGE NO. HAM-562-0150
NORWOOD LATERAL OVER
ROSS AVE. AND B.&O.R.R.
HAMILTON COUNTY STA. 79 + 47.35
STA. 93 + 52.25

DESIGNED	DRAWN	TRACES	CHECKED	REVIEWED	DATE	REVISED
J.R.	J.R.		J.C.P.	llt	2/20/68	



NOTES FOR PIER CAP GIRDERS (Sheet 49 through 54/70)

1. Field paint shall be omitted from the inside of the box girder section.
2. In order to secure full bearing on the milled ends of the compression flanges of the longitudinal girders the compression plates and the girder flanges shall be sub-punched or sub-drilled in the shop and thereafter drilled full size in the field.



GIRDER No.	DIM. "A"
1	7 15/16"
2	7 1/8"
3	7"
4	6 13/16"
5	6 7/8"

GIRDER No.	DIM. "A"
6	6 11/16"
7	6 4/16"
8	6 3/4"
9	6 13/16"
10	6 15/16"

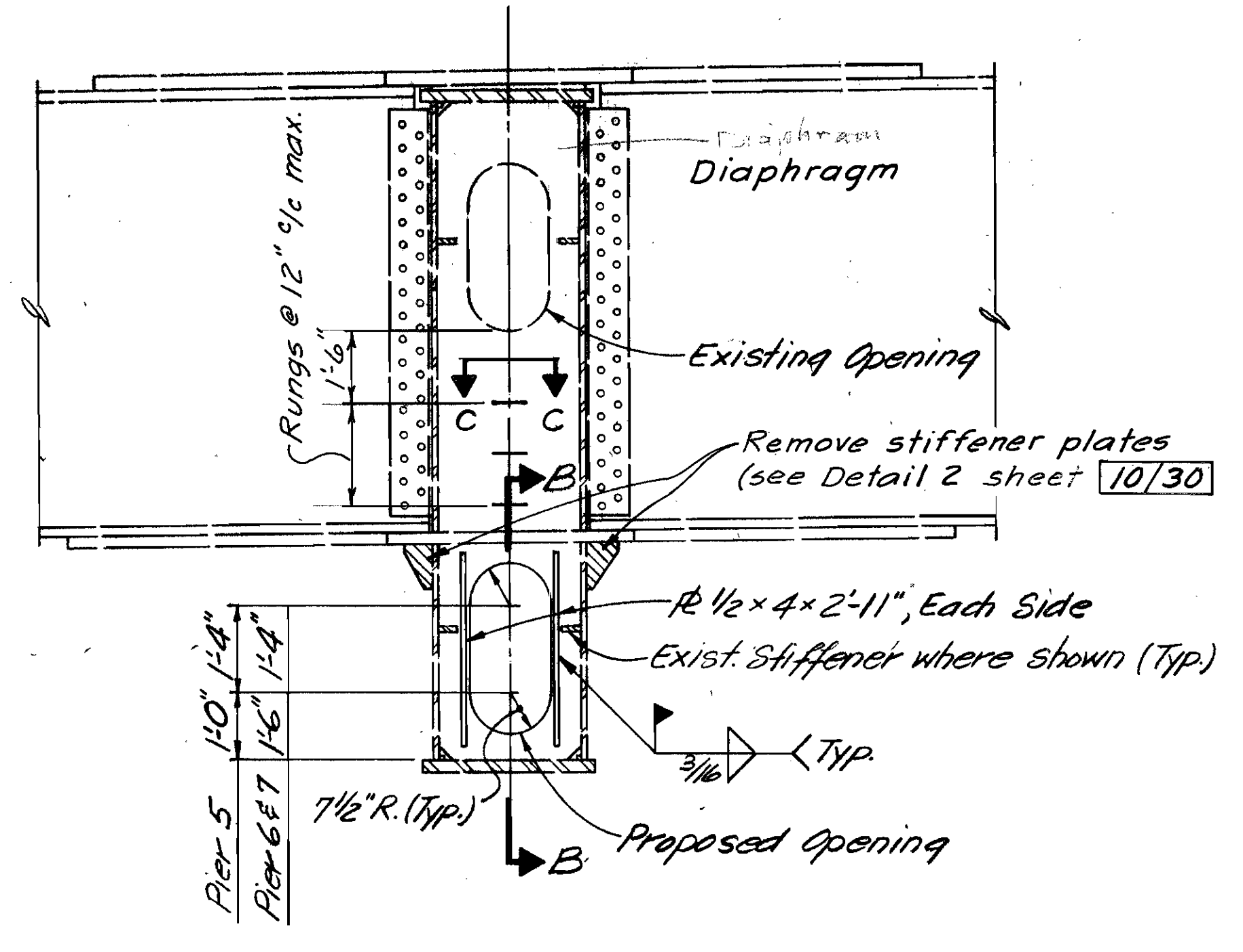
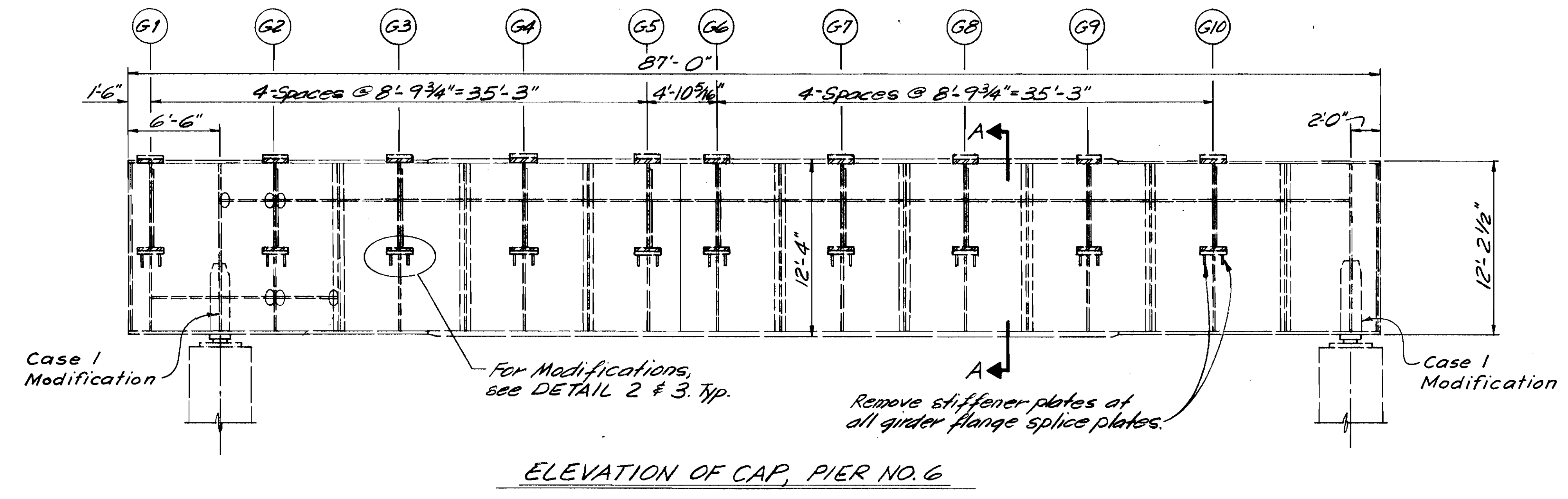
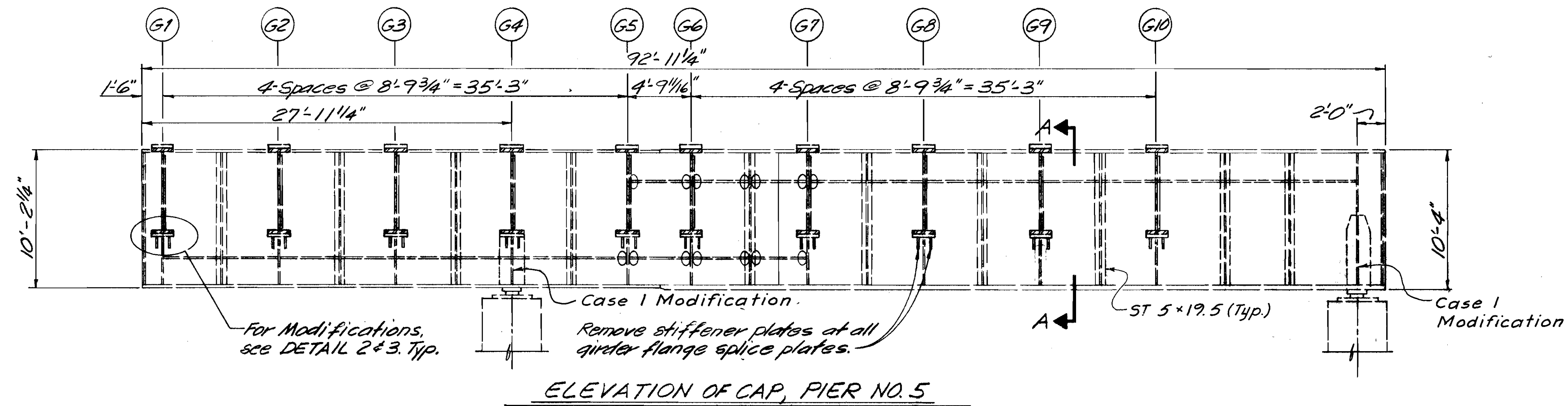
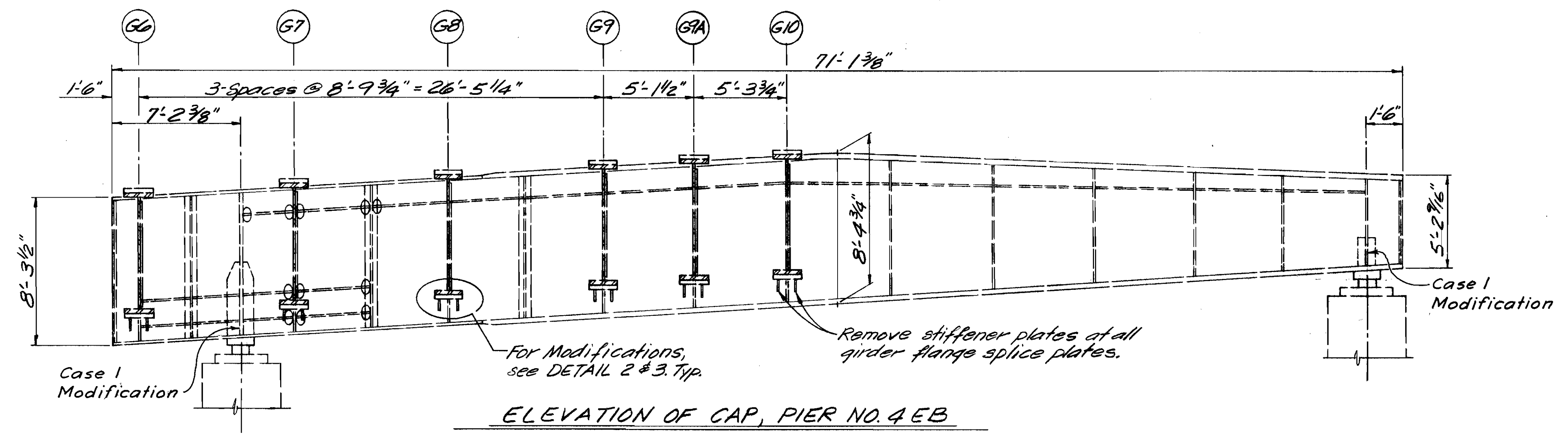
For joint preparations see 37/70

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

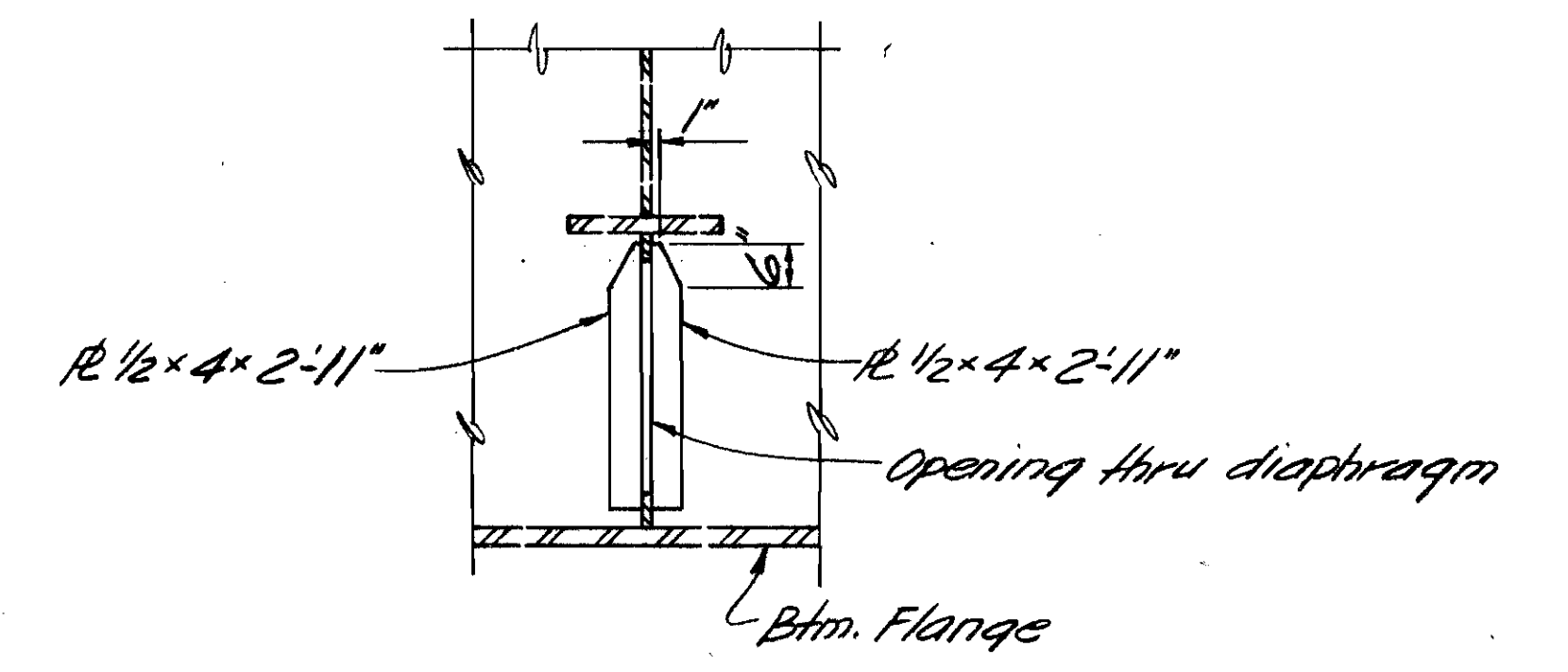
PIER 9 CAP GIRDER
BRIDGE NO. HAM-562-0150
NORWOOD LATERAL OVER
ROSS AVE. AND B.O.R.R.

HAMILTON COUNTY STA. 79+47.35
STA. 93+52.28

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE
J.R.	J.R.	J.C.P.	666	22068

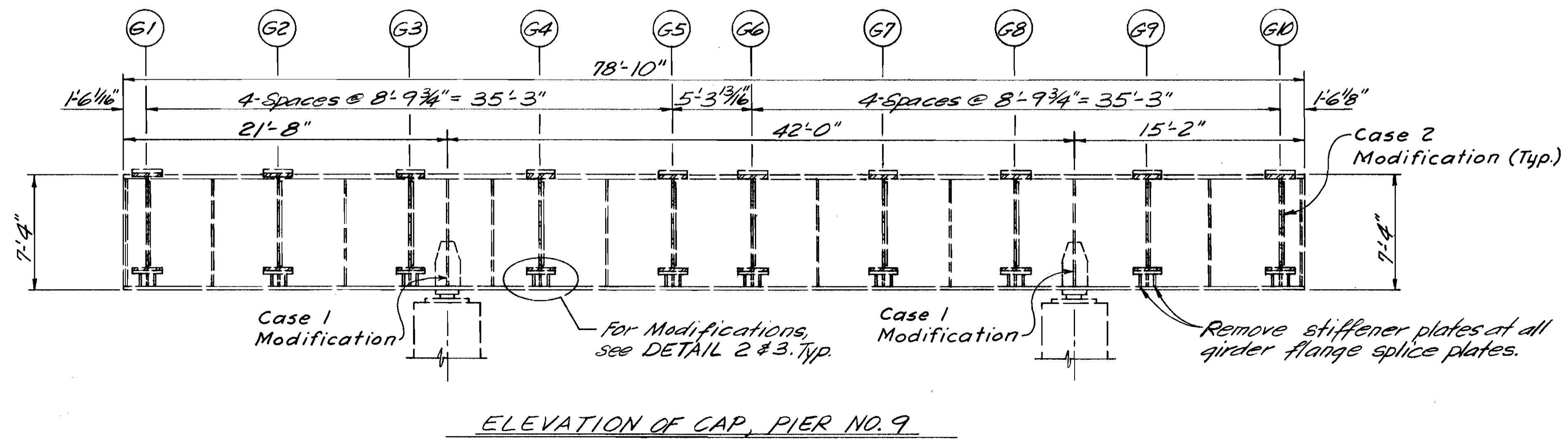
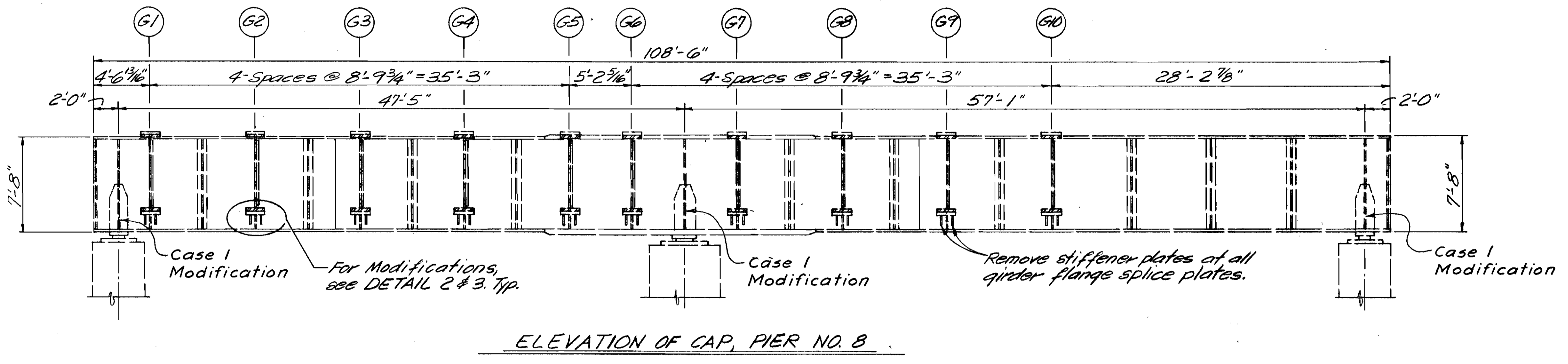
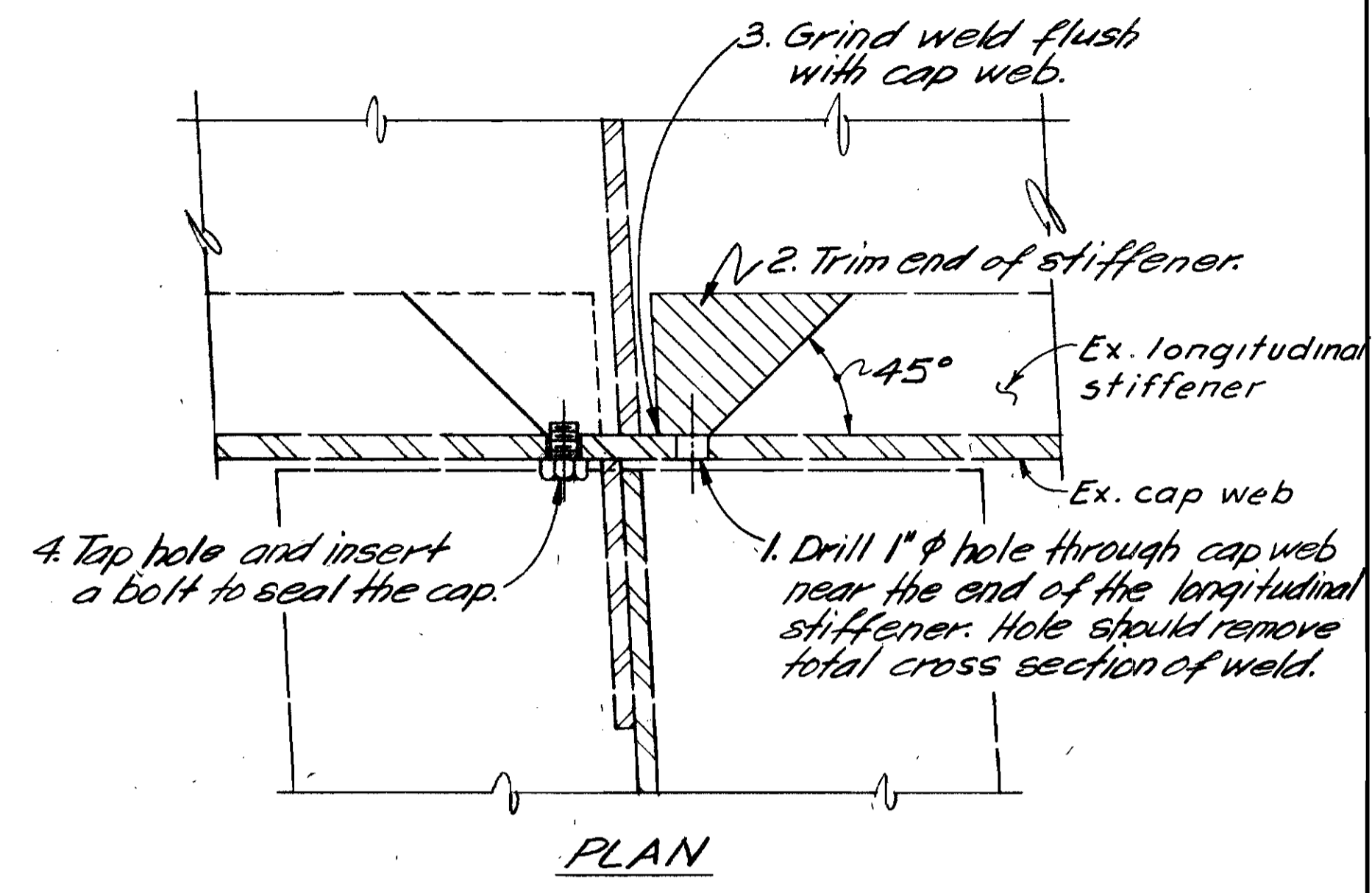
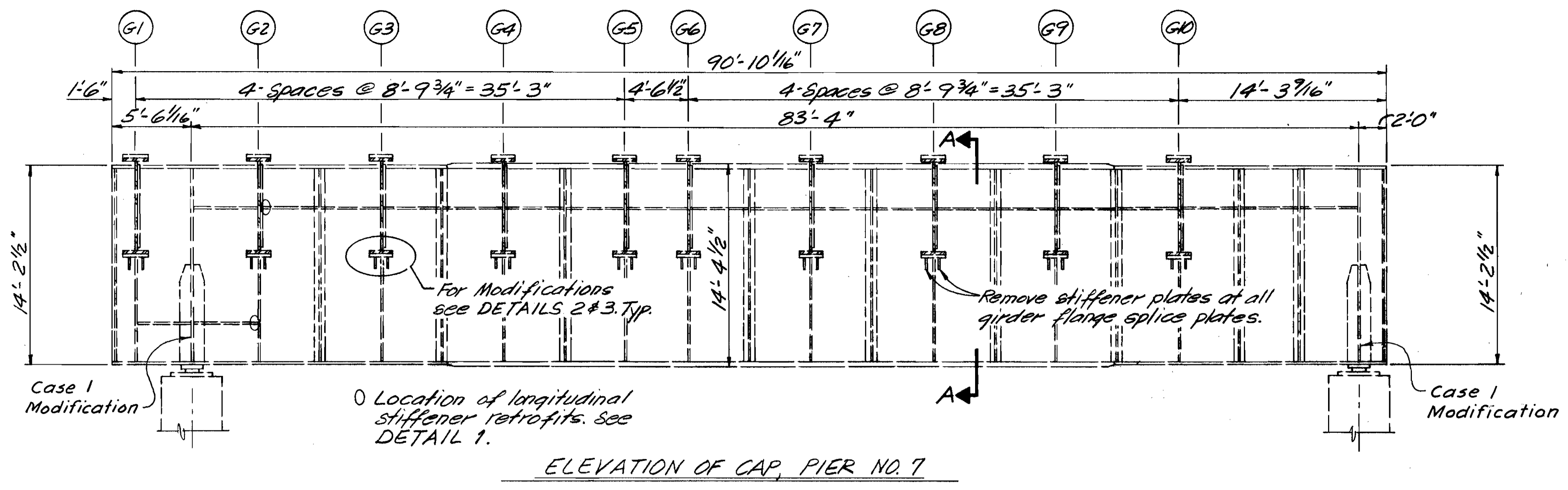


Pier No. 5: G2, G3, G5 thru G10
 Pier No. 6: G2 thru G10
 Pier No. 7: G2 thru G10



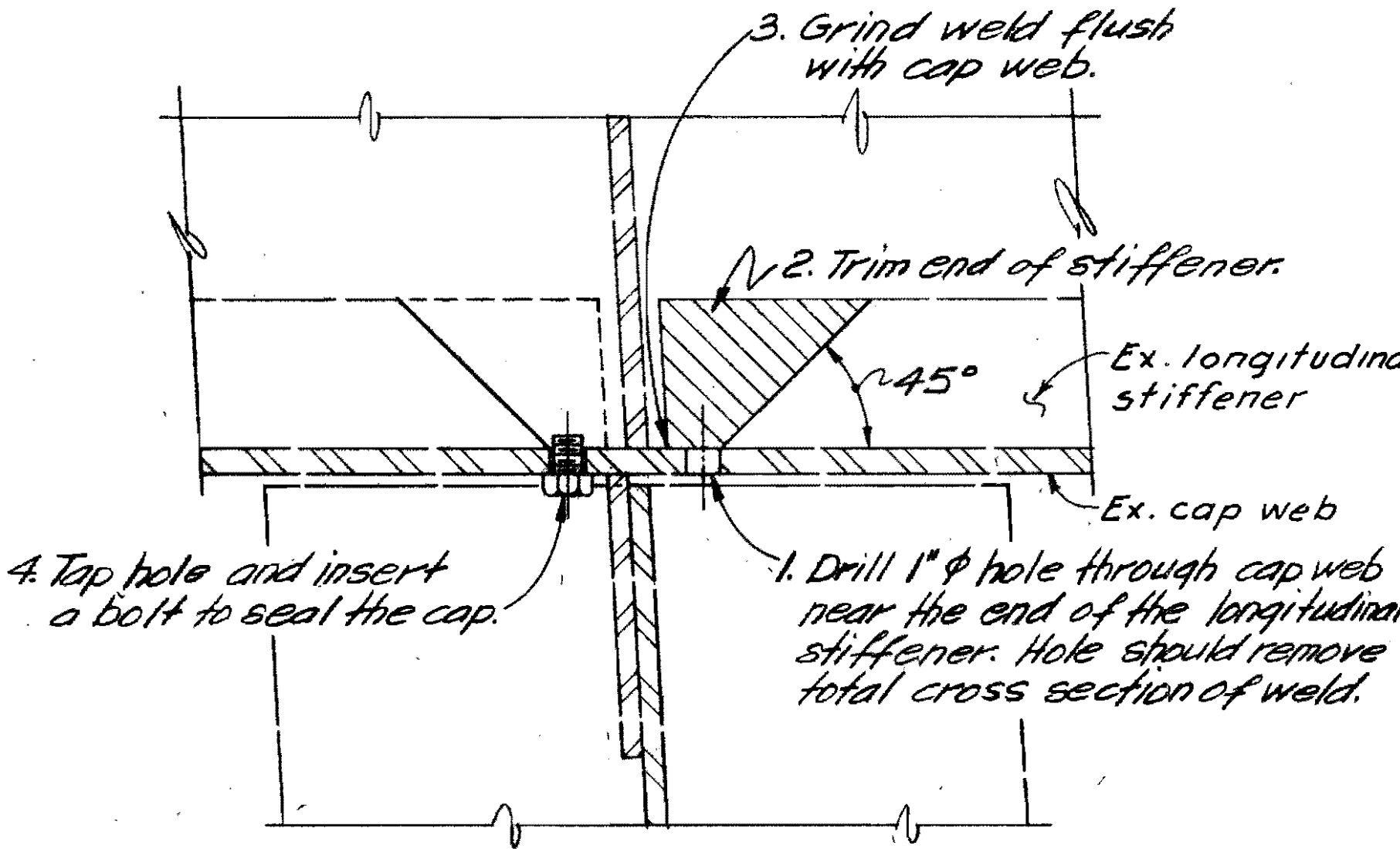
NOTES:
 Unless noted otherwise, all diaphragm shall be modified per Case 2 detail as shown on sheet 10/30.
 For Case 1 modification see sht. 10/30.
 O denotes location of longitudinal stiffener retrofits. See DETAIL 1 on Sheet 9/30.
 For DETAIL 2 & 3, see sht. 10/30.
 For SECTION C-C see sht. 10/30.

BALKE ENGINEERS 8/30					
1848 SUMMIT RD. CINCINNATI, OHIO 45227					
PIER CAP DETAILS					
BRIDGE NO. HAM-562-0147					
NORWOOD LATERAL OVER					
ROSS AVE. AND B. & O. R.R.					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MRS	WJH	~	VDG	CRS 3/93	



NOTES
 Unless noted otherwise, all diaphragms shall be modified per Case 2 detail as shown on sheet 10/30
 For Case 1 modification see sheet 10/30
 For SECTION A-A see sheet 8/30
 For DETAIL 2 & 3 see sheet 10/30

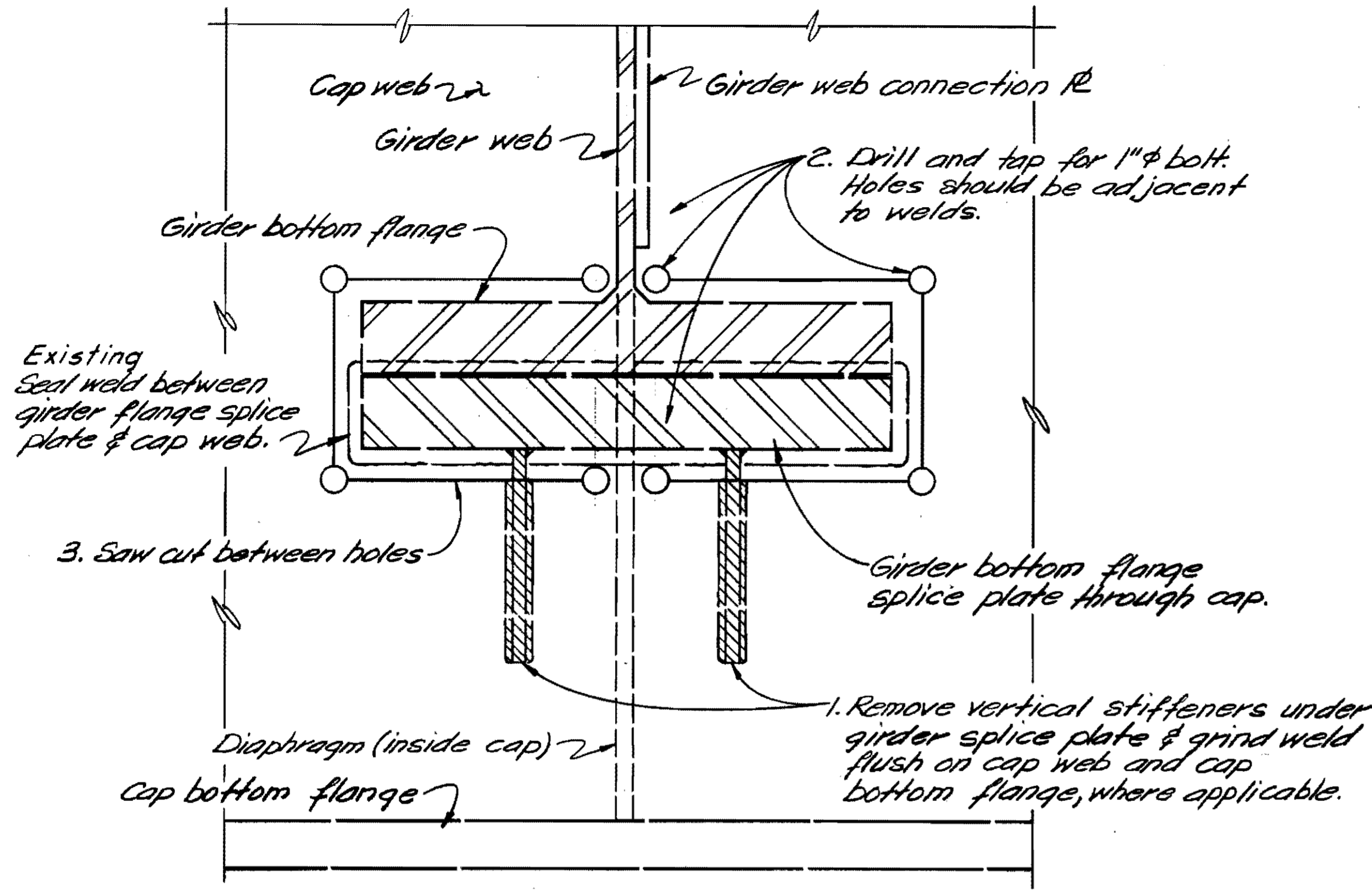
BALKE ENGINEERS 9/30 1848 SUMMIT RD. CINCINNATI, OHIO 45237					
PIER CAP DETAILS BRIDGE NO. HAM-562-01A7 NORWOOD LATERAL OVER ROSS AVE. AND B. & O. R.R.					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
MRS	WJH	~	VDG	CRS 3/93	



PLAN

DETAIL 1

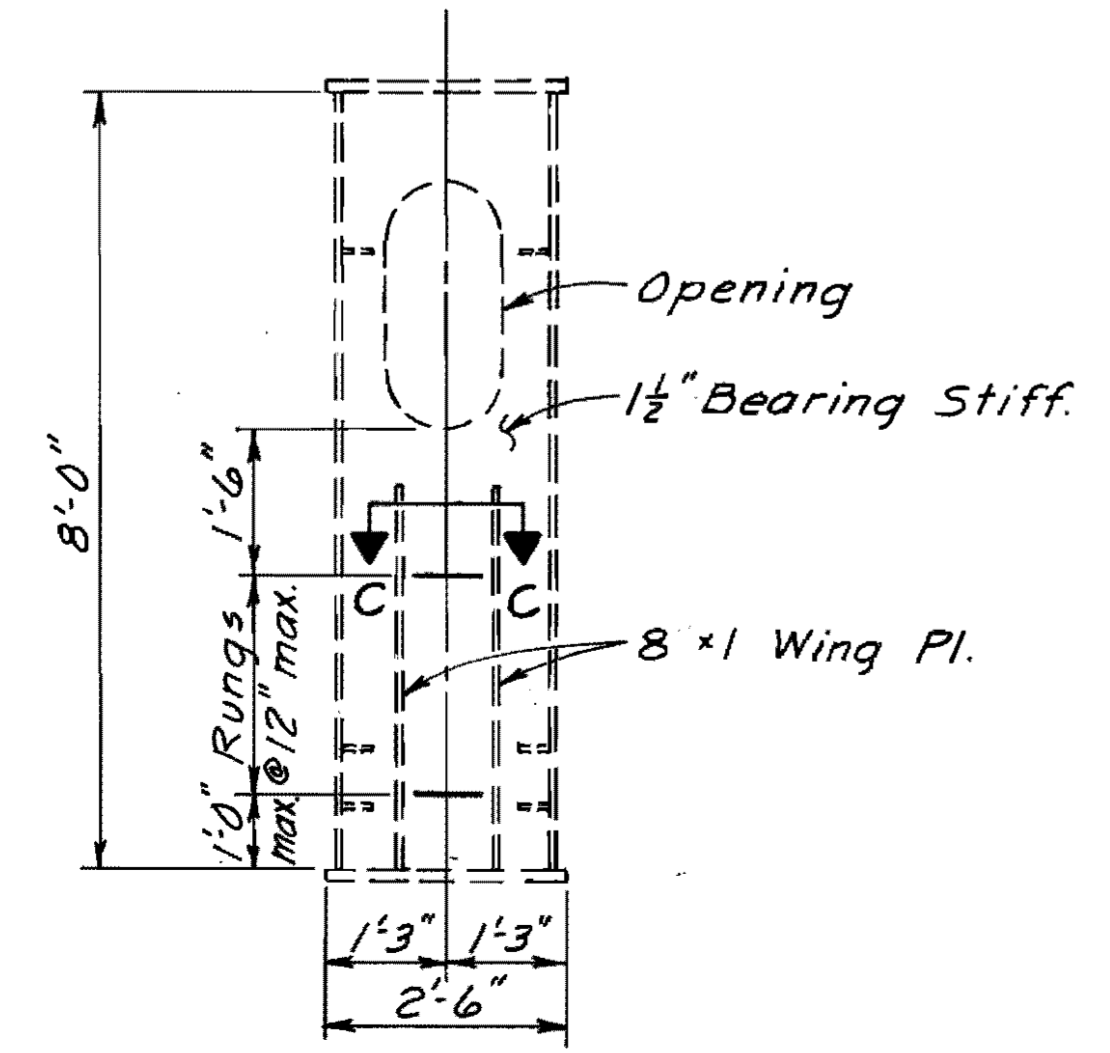
Retrofit detail for termination of longitudinal stiffener in tension zone of cap.



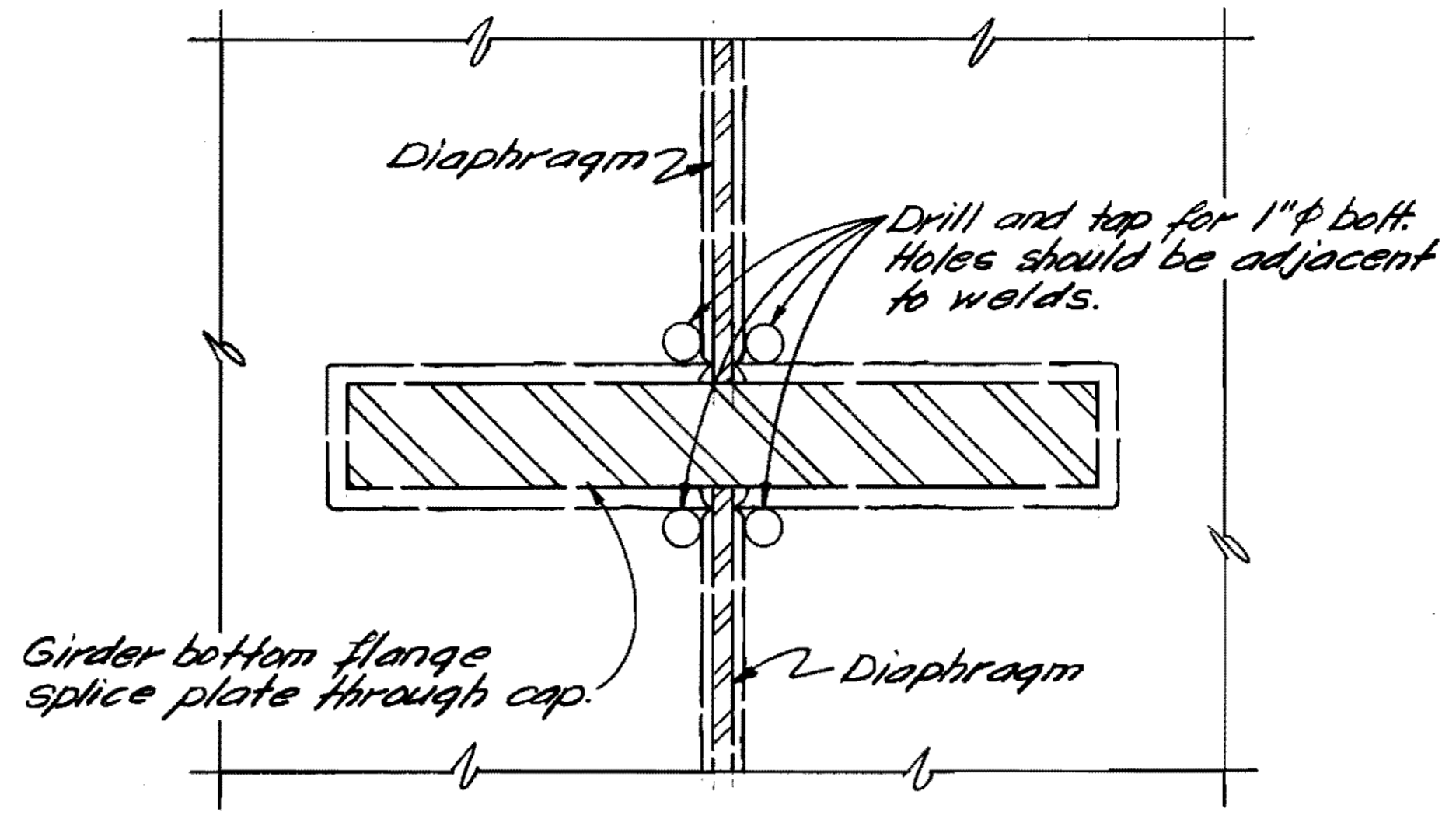
4. Place bolts in holes and caulk-in saw cut to seal the cap. Caulk shall be a two compound, 100% solids epoxy mastic. The material shall be Mark 244 from Poly-Carb, Sikador Injection Gel from Sika Chemical Corp., A-188 Splash Zone Compound from Koppers Co., Inc., or approved equal.

DETAIL 2

- TYPICAL AS NOTED
- Pier 4 E.B. : G8 thru G10
 - Pier 5 : G5 thru G10
 - Pier 6 : G3 thru G10
 - Pier 7 : G1 thru G3
 - Pier 8 : G1 thru G4, G8 thru G10
 - Pier 9 : G5 thru G7



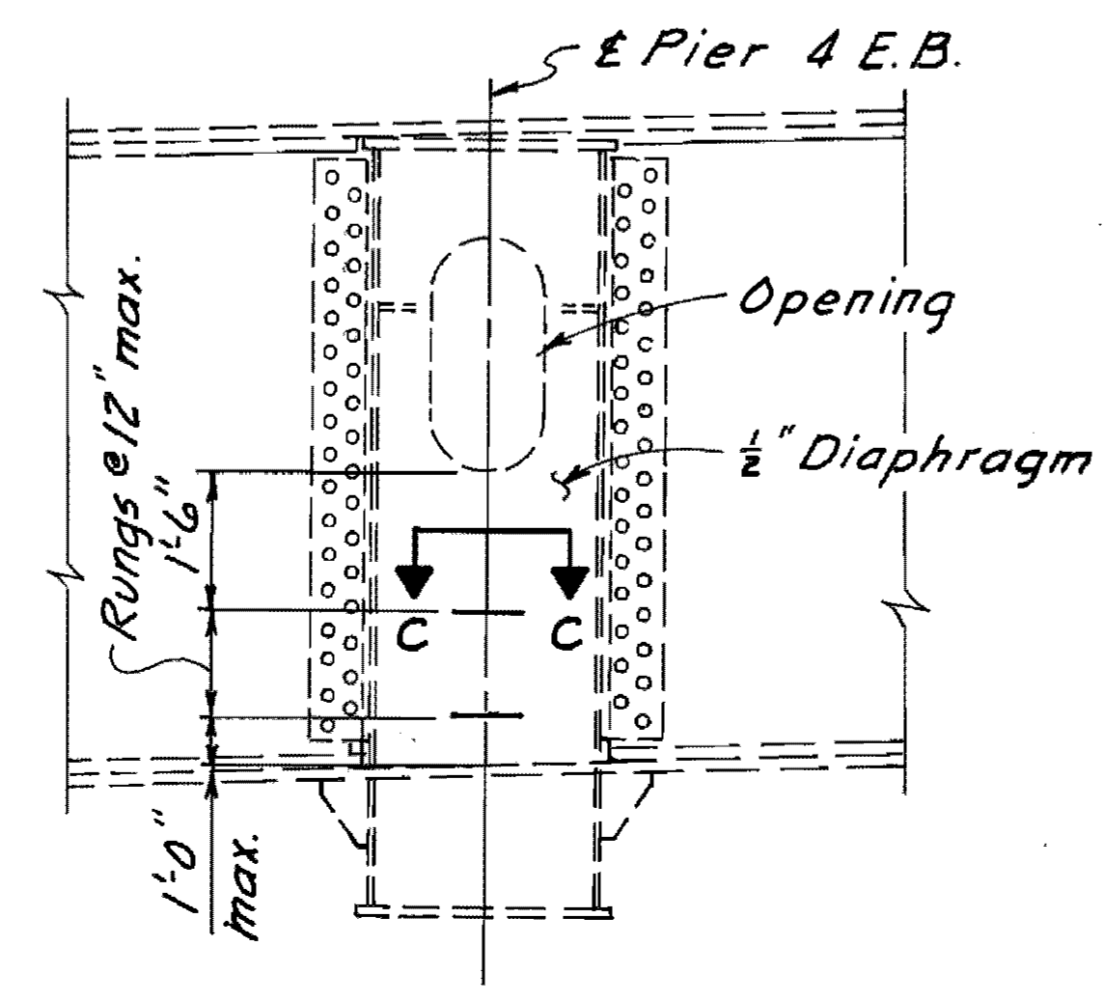
CASE 1
Stiffener Modification



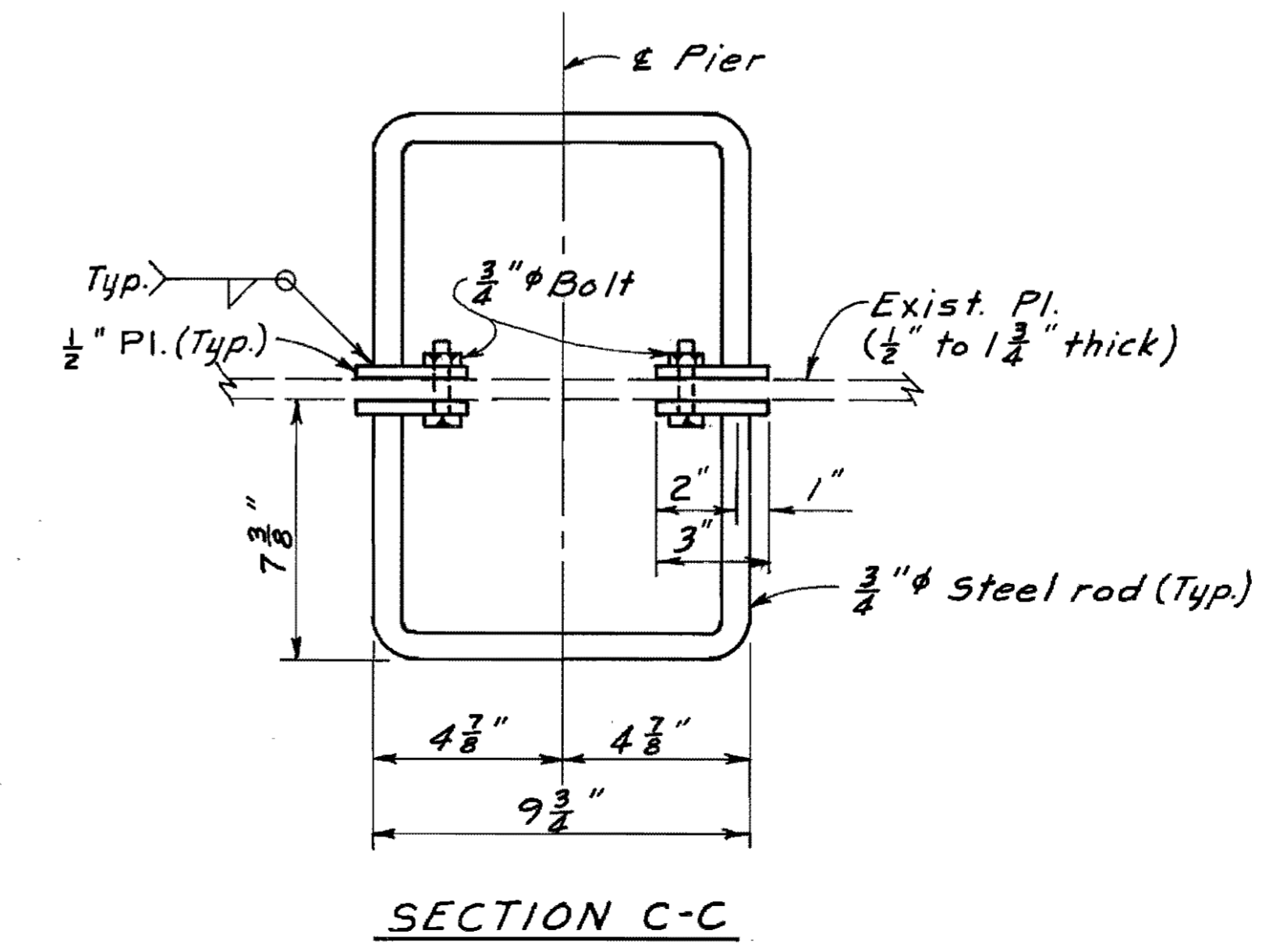
Note: View from inside cap.

DETAIL 3

- TYPICAL AS NOTED
- Pier 4 E.B. : G6 & G7
 - Pier 5 : G1 thru G4
 - Pier 6 : G1 & G2
 - Pier 7 : G4 thru G10
 - Pier 8 : G5 thru G7
 - Pier 9 : G1 thru G4, G8 thru G10



CASE 2
Diaphragm Modification



SECTION C-C

Notes
In addition to the work detailed on the plans, sheets 8-10, the following work is required on the box girder pier caps at Piers No. 4 E.B., 5, 6, 7, 8, and 9.

Remove pigeon droppings, debris and corrosion from exterior of all pier caps. Remove concrete between girder bottom flanges and cap web plates on all pier caps.

Remove rags and debris from the inside of all pier caps.

On cap of Piers No. 4 E.B., 5, 6, 7, 8 clean corroded and burned areas inside cap. Paint cleaned areas with primer coat of paint and apply final coat of paint, silver or white, to entire inside of cap, per System EEU.

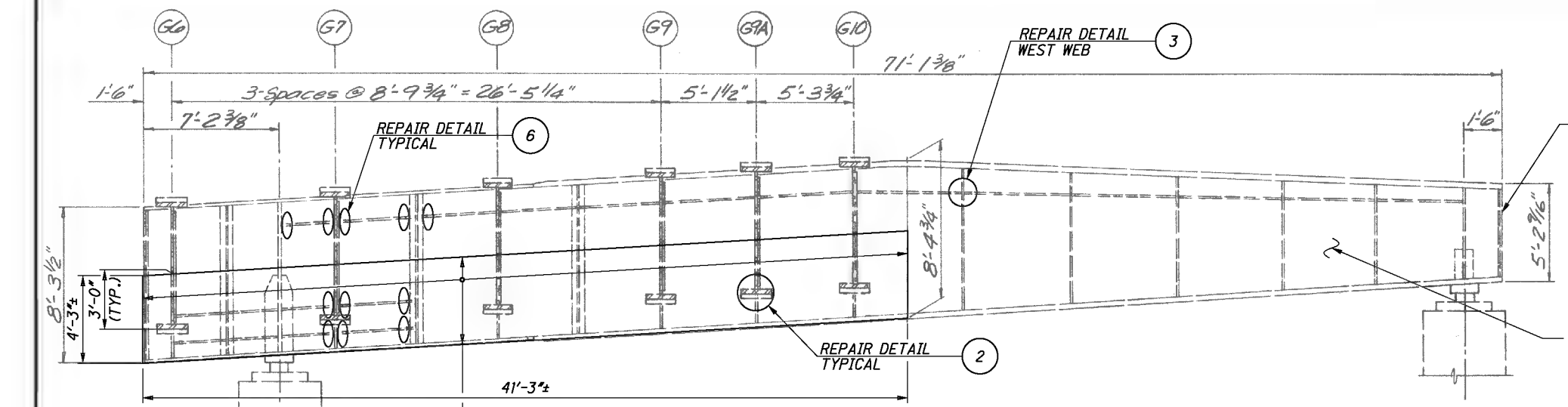
On cap of Pier No. 4 E.B. replace deteriorated seal at north access hatch with elastomeric gasket of 1/8" thick neoprene closed cell sponge. Apply neoprene caulking around access hatch cover. Caulking should be applied to bare steel.

The cap of Piers No. 4 E.B. and 8 is bearing on anchor rod at south bearing device. Remove portion of anchor rod on which cap is bearing.

Clean and paint all bearings per System OZEU.

All labor, material and equipment necessary to execute the above work shall be included for payment in the unit price bid for Item 513 Structural steel misc. Repair of fracture-critical box girder pier cap.

BALKE ENGINEERS 10/30				
1848 SUMMIT RD. CINCINNATI, OHIO 45237				
PIER CAP DETAILS BRIDGE NO. HAM-562-0147 NORWOOD LATERAL OVER ROSS AVE. AND B.&O. R.R.				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
MRS	WJH	~	VDG	CRS 3/93

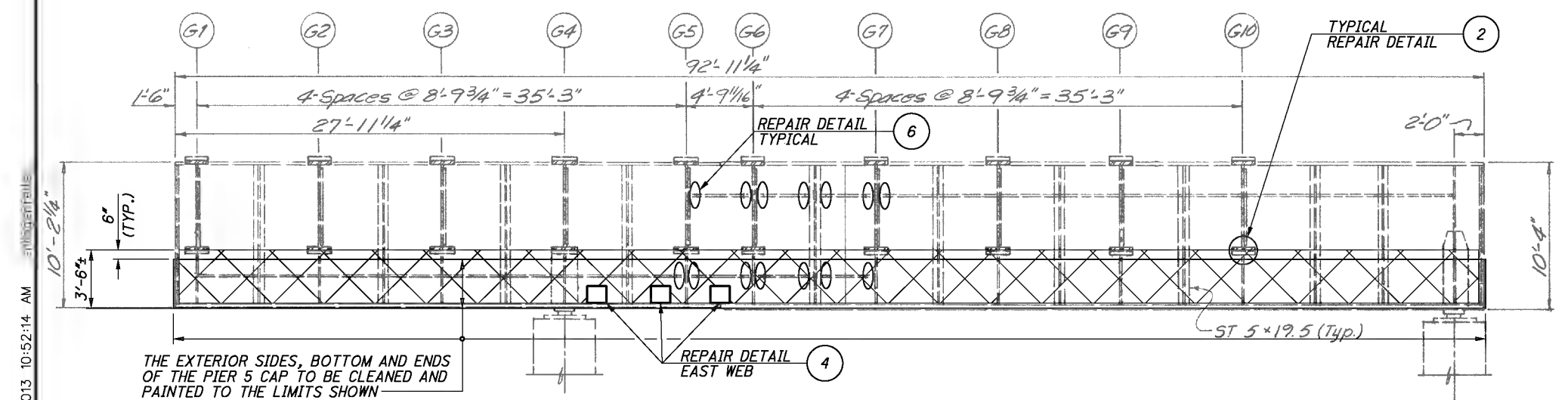


THE EXTERIOR SIDES, BOTTOM AND END OF THE PIER 4 E.B. CAP TO BE CLEANED AND PAINTED TO THE LIMITS SHOWN

WEST ELEVATION OF CAP, PIER NO. 4 E.B.
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)

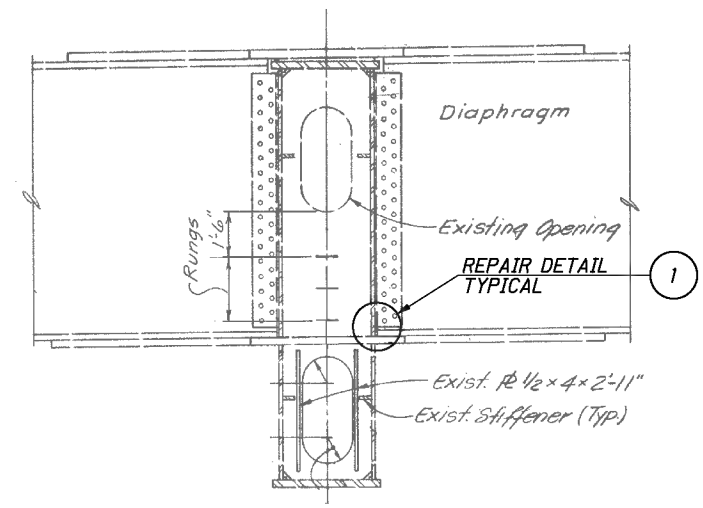
RESEAL SOUTH ACCESS HATCH WITH NEW NEOPRENE GASKET

THE ENTIRE INTERIOR SURFACE AREA OF PIER 4 E.B. CAP TO BE CLEANED AND PAINTED USING THE EEU PAINT SYSTEM.

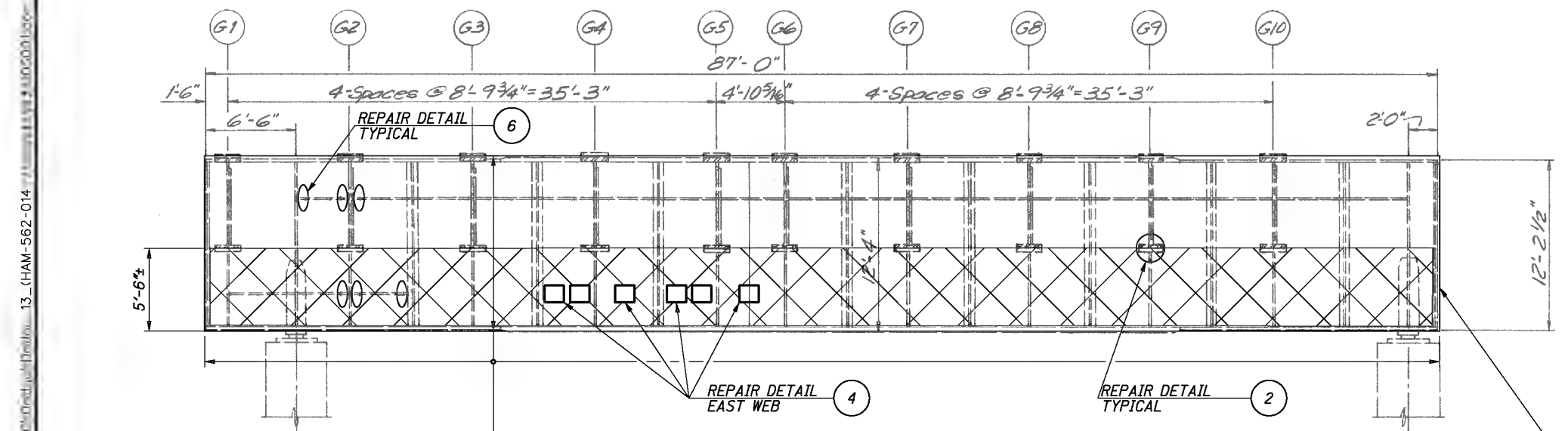


THE EXTERIOR SIDES, BOTTOM AND ENDS OF THE PIER 5 CAP TO BE CLEANED AND PAINTED TO THE LIMITS SHOWN

WEST ELEVATION OF CAP, PIER NO. 5
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)



TYPICAL SECTION
PIERS 5, 6 AND 7 SHOWN
PIERS 4 E.B., 8 AND 9 SIMILAR
(SECTION TAKEN FROM 1991 REHAB. DRAWINGS)






THE EXTERIOR EASTERN SIDE AND BOTTOM OF THE PIER 6 CAP TO BE CLEANED AND PAINTED TO THE LIMITS SHOWN

WEST ELEVATION OF CAP, PIER NO. 6
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)

RESEAL SOUTH ACCESS HATCH WITH NEW NEOPRENE GASKET. REPLACE 7 MISSING BOLTS AT SOUTH WHICH SHALL BE INCIDENTAL TO THE STEEL PIER CAP SEAL, AS PER PLAN.

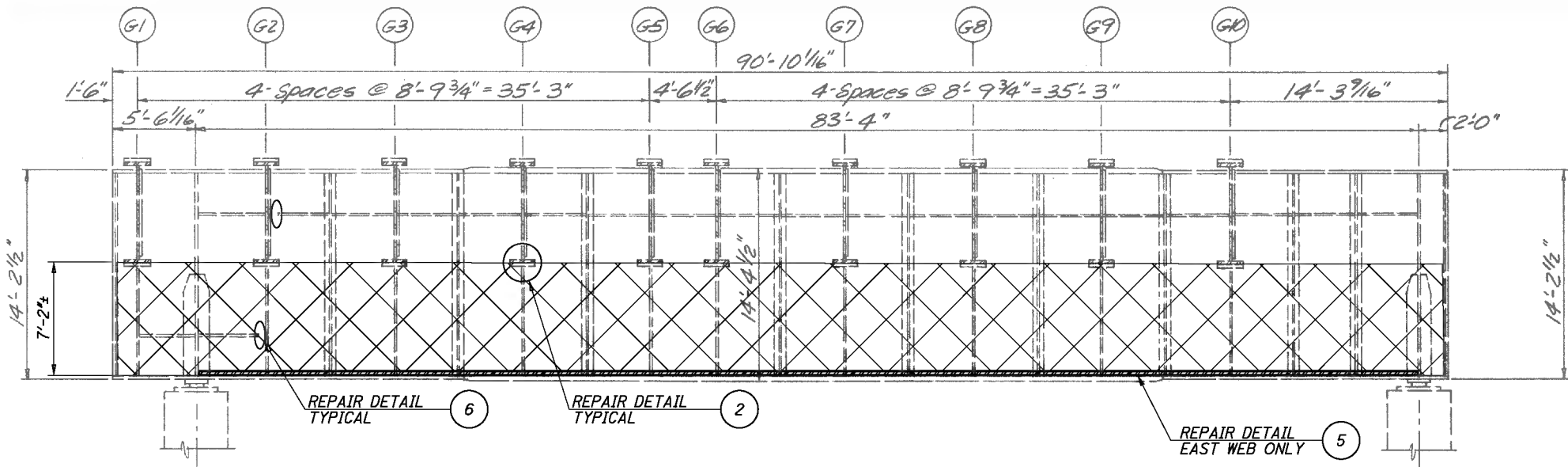
LEGEND:

-  - INDICATES THE LIMITS OF INTERIOR ZONE PAINTING USING THE EEU PAINT SYSTEM AT PIERS 5 AND 6 ONLY (FOR LIMITS OF INTERIOR PAINTING AT PIER 4 E.B., SEE WEST ELEVATION OF CAP, PIER NO. 4 E.B.). CLEAN AND PAINT ALL SURFACES (DIAPHRAGMS, WEBS, STIFFENERS, ETC) FROM THE TOP OF THE TIE PLATES TO AND INCLUDING THE BOTTOM FLANGE.
-  - INDICATES REPAIR DETAIL 4
-  - INDICATES REPAIR DETAIL 6

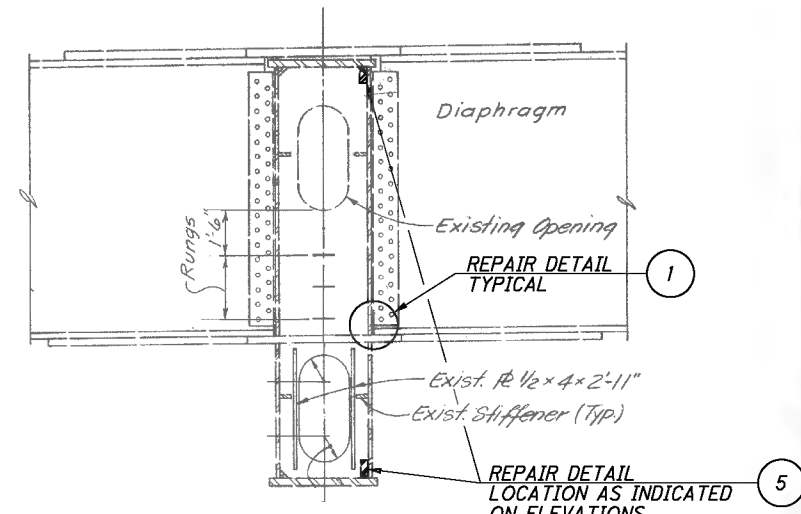
NOTES:

1. FOR DETAILS AND PAYMENT FOR REPAIR DETAILS 1 THRU 4 AND 6, SEE SHEET 8/16.
2. SEALING THE ACCESS HATCHES WITH NEW NEOPRENE GASKETS IS INCLUDED FOR PAYMENT UNDER ITEM SPECIAL STRUCTURE MISC.: STEEL PIER CAP SEAL. SEE THE STRUCTURE GENERAL NOTES ON SHEET 2/16.
3. FOR NOTES AND PAYMENT INFORMATION ON THE EEU PAINT SYSTEM, SEE SHEET 2/16. ANY PAINT DISTURBED BY THE INTERIOR REPAIRS PERFORMED OUTSIDE OF THE ZONE PAINTING SHALL BE REPAIRED AND PAID FOR UNDER THE EEU PAINT SYSTEM PAY ITEMS.

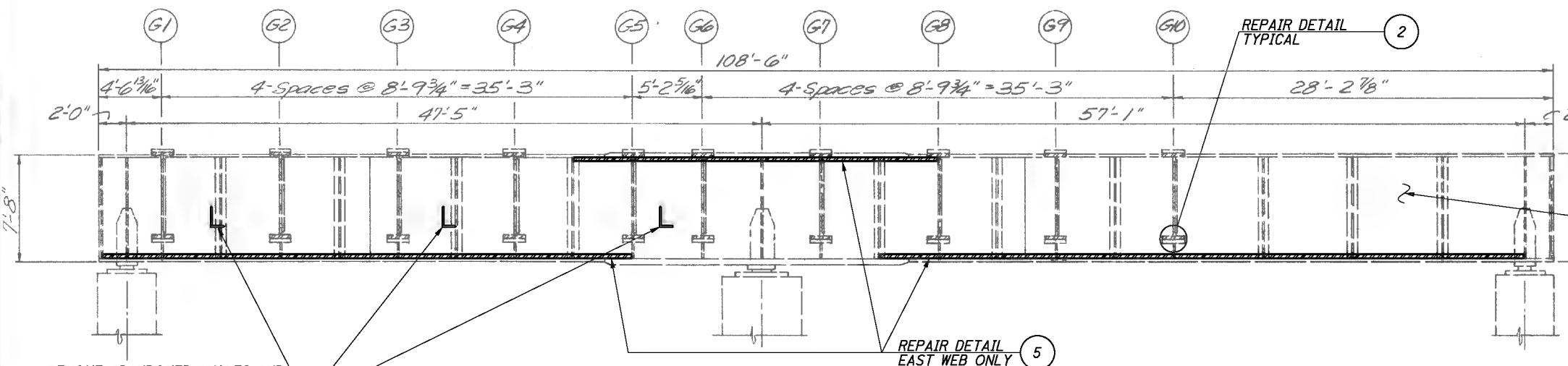
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WEST ELEVATION OF CAP, PIER NO. 7
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)



TYPICAL SECTION
PIERS 5, 6 AND 7 SHOWN
PIERS 4 E.B., 8 AND 9 SIMILIAR
(SECTION TAKEN FROM 1991 REHAB. DRAWINGS)



WEST ELEVATION OF CAP, PIER NO. 8
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)

THE ENTIRE INTERIOR SURFACE AREA OF PIER 8 CAP TO BE CLEANED AND PAINTED USING THE EEU PAINT SYSTEM.



REMOVE ABANDONED ANGLES AND GRIND WELDS FLUSH ON THE EAST AND WEST WEB & EXTERIORS (SIX TOTAL)



WEST ELEVATION OF CAP, PIER NO. 9
(ELEVATION TAKEN FROM 1991 REHAB. DRAWINGS)

THE EXTERIOR EASTERN SIDE AND BOTTOM OF THE PIER 9 CAP TO BE CLEANED AND PAINTED TO THE LIMITS SHOWN


LEGEND:

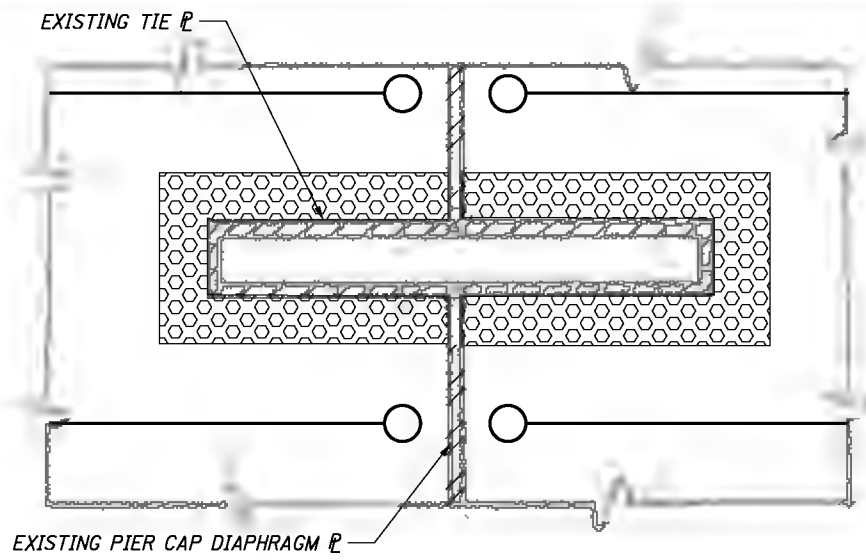
-  - INDICATES THE LIMITS OF INTERIOR ZONE PAINTING USING THE EEU PAINT SYSTEM AT PIERS 7 AND 9 ONLY (FOR LIMITS OF INTERIOR PAINTING AT PIER 8, SEE WEST ELEVATION OF CAP, PIER NO. 8). CLEAN AND PAINT ALL SURFACES (DIAPHRAGMS, WEBS, STIFFENERS, ETC) FROM THE TOP OF THE TIE PLATES TO AND INCLUDING THE BOTTOM FLANGE.
-  - INDICATES REPAIR DETAIL 6

NOTES:

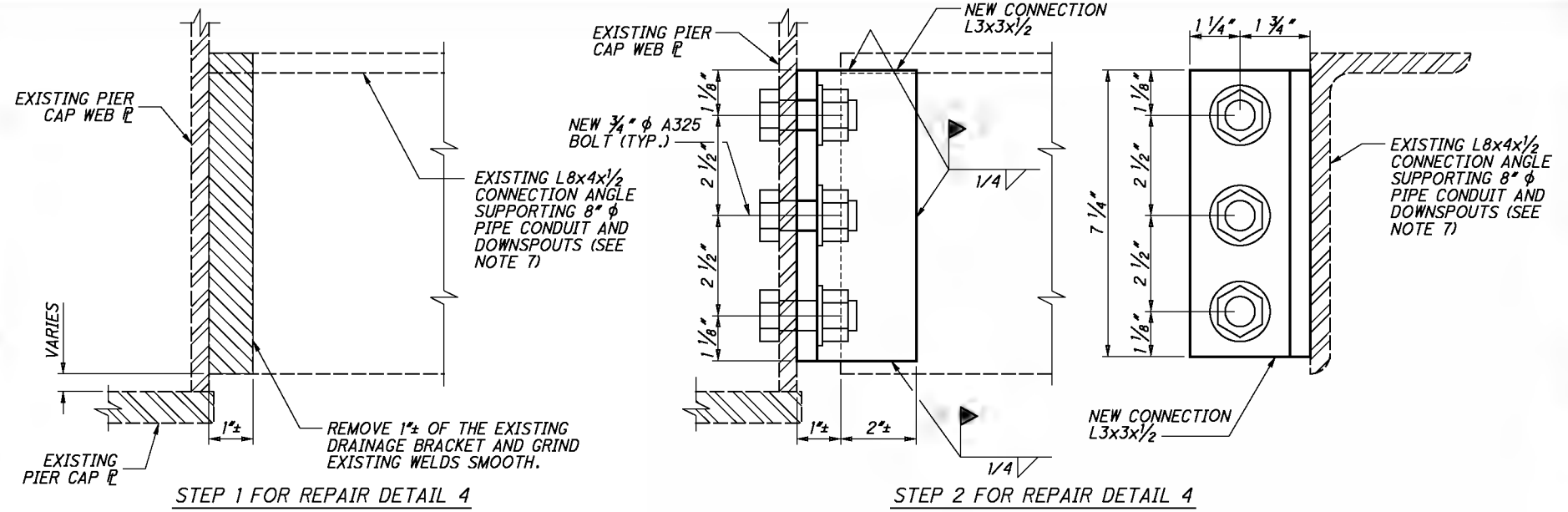
1. FOR DETAILS AND PAYMENT FOR REPAIR DETAILS 1, 2, 4, 5 AND 6, SEE SHEET 8/16.
2. GRINDING THE WELDS AT THE ABANDONED ATTACHMENTS IS INCLUDED FOR PAYMENT UNDER ITEM 513-STRUCTURAL STEEL, MISC.: GRINDING PER FOOT. SEE THE STRUCTURE GENERAL NOTES ON SHEET 1/16.
3. FOR NOTES AND PAYMENT INFORMATION ON THE EEU PAINT SYSTEM, SEE SHEET 2/16. ANY PAINT DISTURBED BY THE INTERIOR REPAIRS PERFORMED OUTSIDE OF THE ZONE PAINTING SHALL BE REPAIRED AND PAID FOR UNDER THE EEU PAINT SYSTEM PAY ITEMS.

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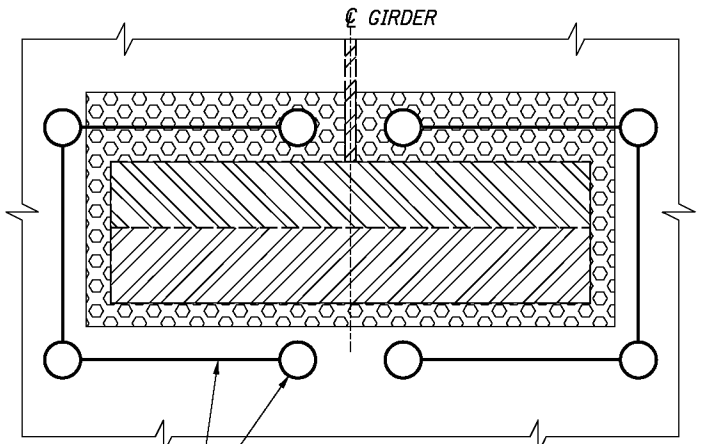

PIER CAP RETROFIT DETAILS BRIDGE NO. HAM-562-0147 SR-562 OVER ROSS AVENUE AND CENTRAL RAILROAD OF INDIANA
DESIGNER: NBR CHECKED: CTG DRAWN: RMP REVISIONS:
DATE: 02/26/13 STRUCTURE FILE NUMBER: 3113914
HAM-562-0147 PID No. 93100
7 / 16 22 / 31



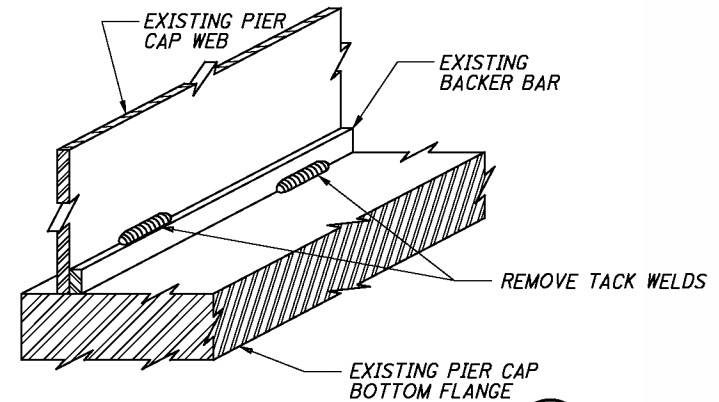
**REPAIR DETAIL
INTERIOR TIE P.** 1



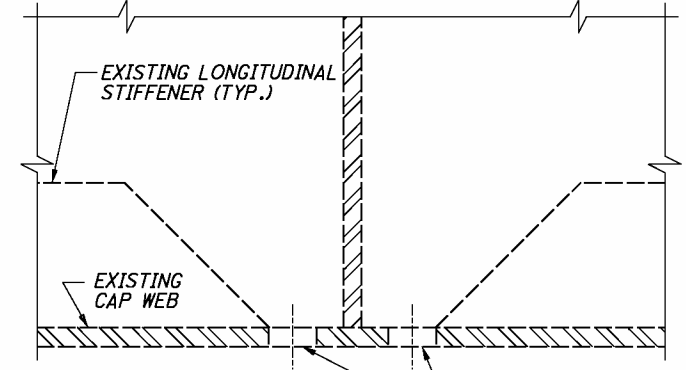
**REPAIR DETAIL
DRAIN BRACKET RETROFIT** 4



**REPAIR DETAIL
EXTERIOR TIE P.** 2



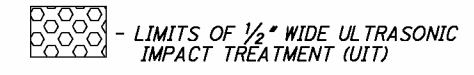
**REPAIR DETAIL
BACKING BAR WELD REMOVAL DETAIL** 5
(BOTTOM FLANGE SHOWN, TOP FLANGE SIMILAR)



**REPAIR DETAIL
LONGITUDINAL STIFFENERS** 6
REPLUG AND CAULK THE EXISTING STRESS HOLES WITH NEW 1" EXPANSION PLUGS (TYP.)

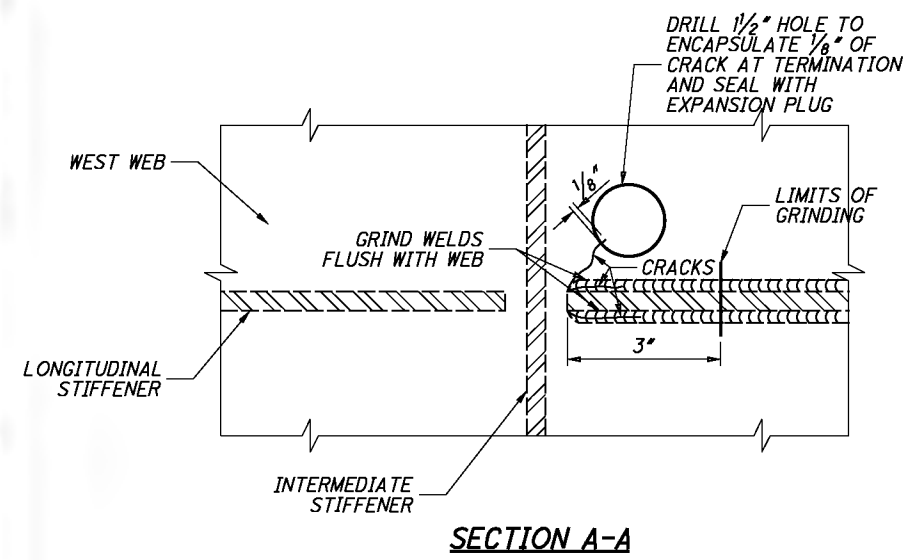
CLEAN AND RECAULK EX. SAW CUTS AND REPLUG THE STRESS HOLES WITH 1" EXPANSION PLUGS (TYP.)

LEGEND FOR REPAIR DETAILS 1 AND 2:

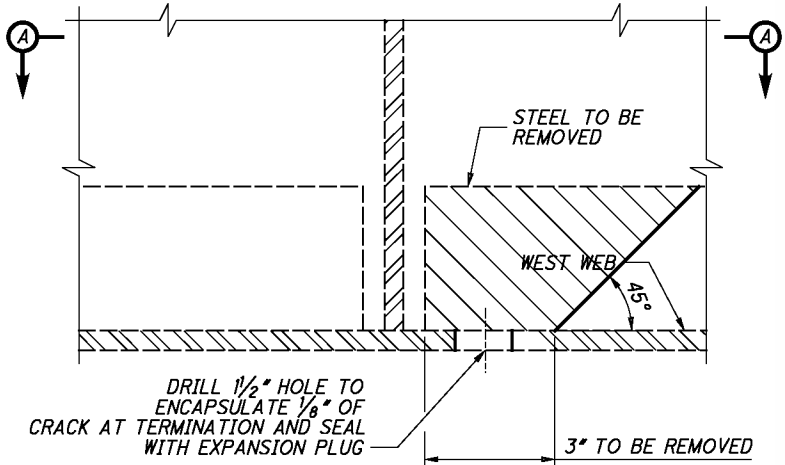


NOTES:

- FOR LOCATIONS OF REPAIR DETAILS 1 THRU 6, SEE SHEETS 6/16 AND 7/16. FOR THE GENERAL NOTES, SEE SHEETS 1/16 AND 2/16.
- THE ULTRASONIC IMPACT TREATMENT IS INCLUDED FOR PAYMENT UNDER ITEM STRUCTURAL STEEL, MISC.: ULTRASONIC IMPACT TREATMENT.
- THE CLEANING AND RE-CAULKING OF THE SAW CUTS AND PLUGGING THE STRESS RELIEF HOLES IS INCLUDED FOR PAYMENT UNDER ITEM SPECIAL MISC.: 1" RUBBER EXPANSION PLUGS.
- ALL WORK ASSOCIATED WITH THE CRACK REPAIR RETROFIT AT THE LONGITUDINAL STIFFENER AT PIER 4 E.B. IS INCLUDED FOR PAYMENT UNDER ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" STRESS RELIEF HOLE RETROFIT.
- THE NEW DRAINAGE BRACKET CONNECTIONS, INCLUDING GRINDING THE WELDS, NEW CONNECTION ANGLES AND THEIR BOLTED CONNECTIONS, WELDING THE EXISTING BRACKET TO THE NEW ANGLES AND TEMPORARY SUPPORT OF THE EXISTING DOWNSPOUTS AND DRAINAGE CONDUITS ARE INCLUDED IN ITEM 513 - STRUCTURAL STEEL MISC.: STRUCTURAL STEEL REHABILITATION.
- THE GRINDING OF THE BACKER BAR TACK WELDS IS INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: GRINDING PER FOOT.
- THE CONTRACTOR SHALL ADEQUATELY SUPPORT THE EXISTING 8" phi PIPE CONDUIT AND DOWNSPOUTS DURING THESE REPAIRS TO THE SATISFACTION OF THE ENGINEER.



REPAIR DETAIL 3



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