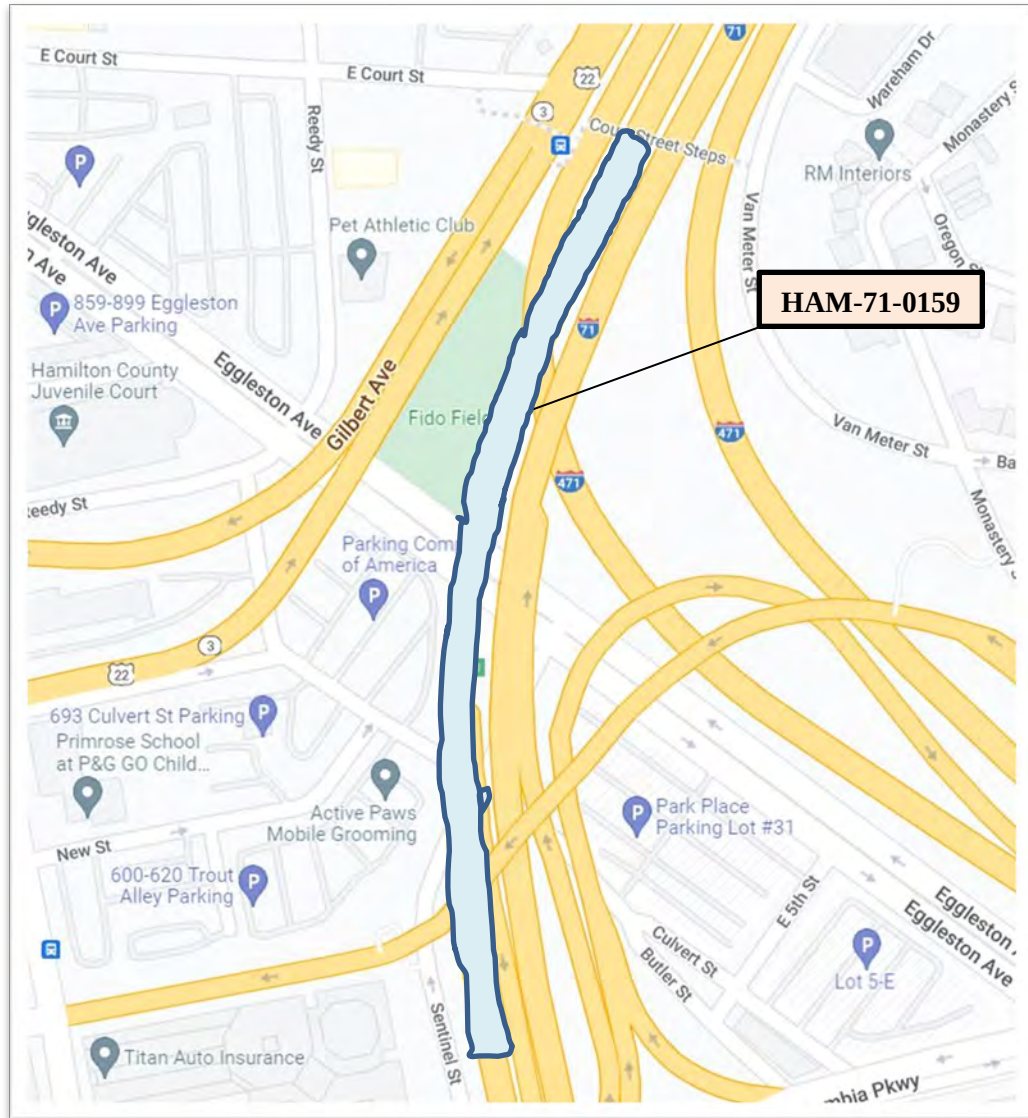


April 4, 2023

PRE-INSPECTION REPORT

BRIDGE NO HAM-71-0159

PID No. 105476



I-71 OVER EGGLESTON AVENUE, SENTINEL STREET,
CULVERT STREET AND I-471 RAMP SB

INSPECTION DETAILS:

Bridge Nos.:	HAM-71-0159
Features intersected:	Eggleston Avenue, I-471 SB Ramp, Local Parking Lots, Sentinel Street, Culvert Street
Locations to Inspect:	HAM-71-0159: 8 steel pier caps (Piers 1W, 2E, 2W, 3W, 4W, 7E, 8W, 9W)
No. of Inspection Days:	Anticipated 3-4 days and 1 night
No. of Caps to Inspect:	8
Anticipated Inspection Dates:	Week of June 26 (tentative, subject to approval)
Inspection Hours:	9:00 AM to 3:00 PM Weekdays and 10:00 PM to 5:00 AM (I-471 Ramp)
Inspection Access Equipment:	Bucket Truck, 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)

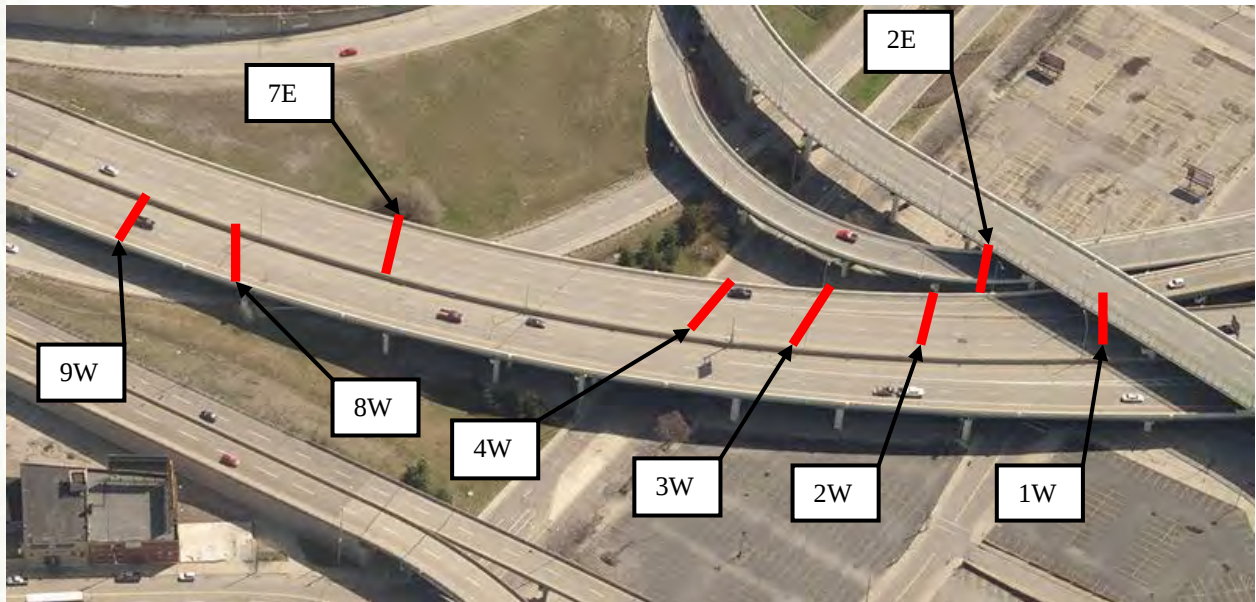
BRIDGE DESCRIPTION:

This ten-span welded steel plate girder bridge carries northbound and southbound Interstate I-71 over Eggleston Avenue, I-471 southbound, and other local streets. It was built in 1970 and has a reinforced concrete deck which varies in width. The supported roadway has both a vertical and horizontal curve. The overall length of the bridge is approximately 1,034 feet. The bridge numbering system follows the convention set in the design plans (from south to north). The bridge is divided into West and East units with the West structure carrying the southbound lanes and the East structure carrying the northbound lanes. Access to the structure will be from ladders and a bucket truck.

FRACTURE CRITICAL MEMBER LOCATIONS:

This structure has eight fracture critical steel pier caps supported by concrete columns at Piers 1W, 2E, 2W, 3W, 4W, 7E, 8W, and 9W. The caps are simply supported welded box members with cantilevered ends ranging from 2'-9" to 15'-10 7/8". Six to eight welded plate girders frame into the box section.

The girder webs are bolted by vertical double angles to the cap web. The girder top flange splice plate is bolted to the top flange of the cap. The girder bottom flange at Piers 1W, 2W, 7E, and 8W passes through the cap and is welded to the cap webs. The girder bottom flange splice plate at Piers 2E, 3W, 4W, and 9W is bolted to the bottom flange. Select fatigue prone details for the pier caps on this structure were retrofitted in 2010 (See Appendix C for the fatigue prone details).

**INSPECTION METHODS & PLAN:**

The Collins Team will perform inspections of eight fracture critical pier caps on HAM-71-0159, as defined by the Scope of Services. The caps span local streets, local parking lots and I-471 ramp. The work will be performed during 1 night and 3-4 days. The inspection will adhere to the Confined Space Entry Procedures defined herein and in the company safety procedures. Traffic control will be provided by A&A Safety according to the standards shown in Appendix B.

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

FIELD COORDINATION - The following staff 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
mseal@collinsengr.com

(614) 849-2277 (C)

Matt Rogers, P.E., CBI: Team Leader
mrogers@collinsengr.com

(859) 630-2238 (C)

Kevin Mitchell, CBI, Asst. Team Leader,
kmitchell@collinsengr.com

(606) 344-3000 (C)

ODOT (Project and Permitting Contacts) – A right of entry permit is necessary through ODOT District 8. See Appendix C. 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

CITY OF CINCINNATI (Permitting) – A right of entry permit is required through the City of Cincinnati. This permit will stipulate lane closure limitations and approve any proposed traffic control. Inspection of the piers will require access to the parking lots at Sentinel St. and Culvert St. intersection beneath I-71. The various parking lot management companies and building owners will be notified of the upcoming fieldwork.

DOT Permit and License Center (513) 352-3463

Anthony Bennett: ROW Permitting (513) 352-3405
Anthony.bennett@cincinnati-oh.gov

Tom Klumb: Real Estate (513) 352-1571
Tom.klumb@cincinnati-oh.gov

A&A Safety – A&A Safety will be the traffic control subcontractor for this inspection. Refer to Appendix A for proposed maintenance of traffic schemes. Contacts are:

Don Beagle/Keith Gilbert: A&A Safety (513) 276-2153
donb@asafetyinc.com

Approved right of entry permits from ODOT and City of Cincinnati will be kept on the job site throughout the inspection period.

TRAFFIC CONTROL – A&A Safety will be responsible for installation of traffic control devices to close lanes of Sentinel Street, Culvert Street, local parking lots and the I-471 ramp. A brief description of the anticipated closures is as follows.

Sentinel Street – The interior lanes and median of Sentinel Street will be closed between Eggleston Ave and Culvert St. The lanes will be closed from 8:30 am to 4:30 pm for allowable day activities and 10pm-5am for night work activities.

Procter & Gamble Parking Lot – Parking spots in the Procter & Gamble parking lot will have to be closed off to reach Piers 2W, 3W, & 4W. The daytime work will be from 8:30 am to 4:30 pm.

I-471 Ramp from East Liberty Street – Single lane closures will be anticipated on this ramp during the nighttime hours for access to Piers 7E, 8W and 9W underneath bridge HAM-71-0159. The lanes will be closed from 10:00 pm to 5:00 am.

PARKING LOT INFORMATION: Inspection of multiple pier caps will take place from parking lots at the Sentinel St. and Culvert St. intersection beneath I-71. During the inspection at least four spaces will be occupied and closed off with cones and we will coordinate with the Lessee's for access. To ensure allowance of closure within the lot, Tom Klumb (contact for City of Cincinnati Real Estate Services) will be contacted at least one week prior to inspection to coordinate.

CONFINED SPACE ENTRY PROCEDURE: See below.

INSPECTION PLAN:

The condition inspection of the steel box girder pier caps on HAM-71-0159 will involve a 3-4 day, 1-night field effort to completely inspect both the interior and exterior. The exterior will be inspected from a bucket truck and ladders for access and the interiors will be inspected by entering the box girder per the procedures outlined below. A 3-man inspection team will perform the confined space inspection.

Collins will open the pier caps 1 hour prior to entering to ventilate the piers. Prior to the start of the inspection, 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.

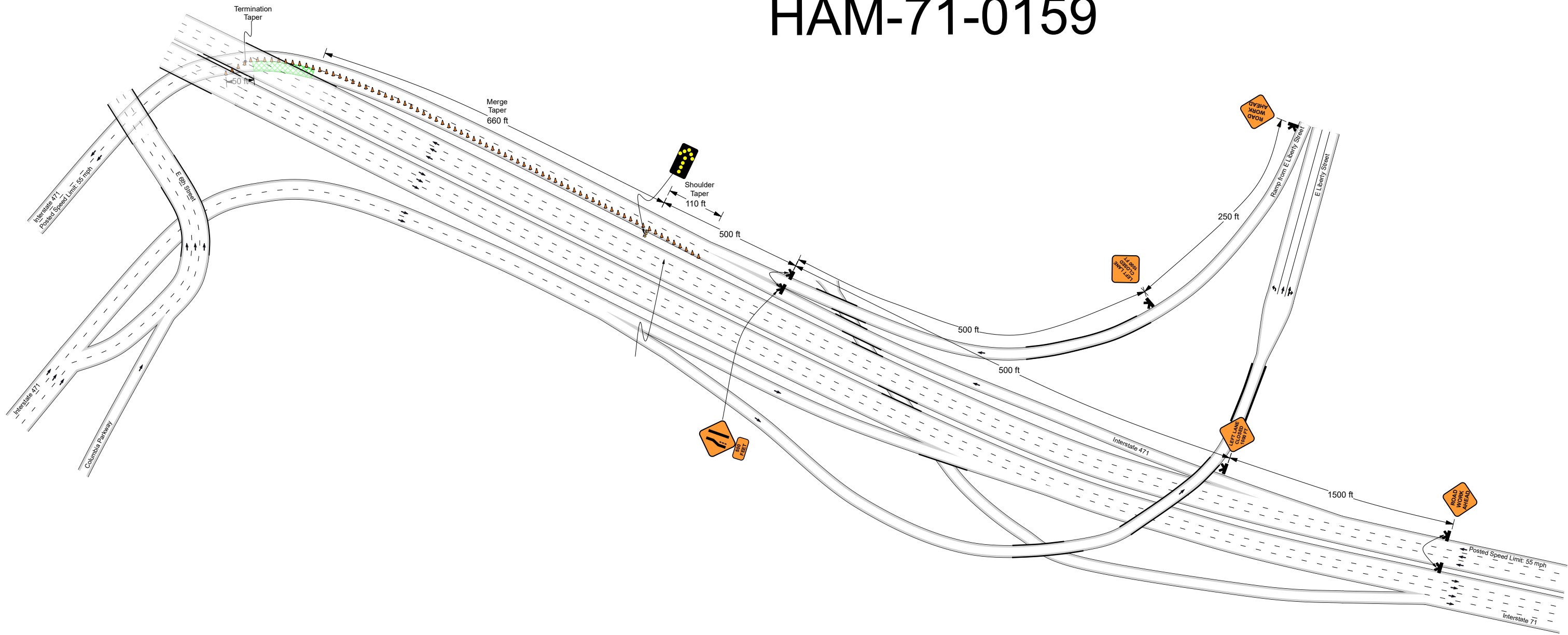
Quality Control/Quality Assurance

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.

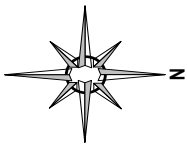
APPENDIX A – RIGHT OF ENTRY PERMIT APPLICATIONS

APPENDIX B – TRAFFIC CONTROL DETAILS

HAM-71-0159



Legend	
	Arrow Board
	Work Area
	Cone
	Portable Sign Stand



Notes:

- Sign spacing and buffer space may be adjusted to fit field conditions.
- "Road Work Ahead" signs shall be placed on all cross streets intersecting within the work area. The signs should be placed a minimum of 100 feet in advance of the intersection.

Date: 1/20/2023 **Author:** P. McCarty **Project:** D8 Steel Pier Caps - Cincinnati, OH
Customer: Collins Engr **Reviewer:** J. McCarty **BridgeONumber:** HAM-71-0159

Comments:

Type of Road: Urban Interstates, Ramps, and Commercial Routes
Traffic Volume: Moderate to Heavy

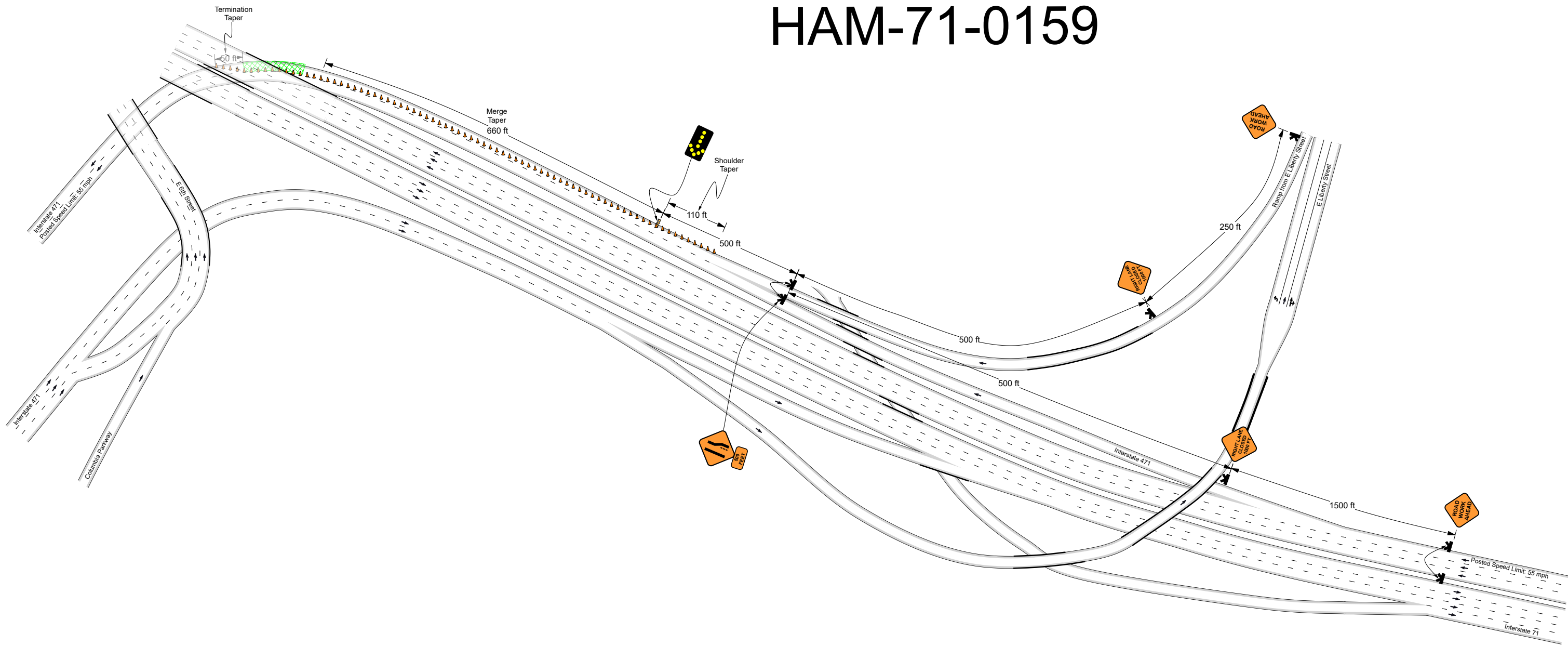
All signs & devices shall be placed in accordance with the latest provisions of Ohio Manual for Uniform Traffic Control Devices (OMUTCD) with respect to any applicable provisions from the City of Cincinnati.

Access to residential and commercial driveways to be maintained at all times.
Flaggers shall be trained in safe temporary traffic control practices.
Flaggers shall remain in constant communications, via two-way radio, at all times.
Parking ban shall be coordinated with the Cincinnati Police Department.

PLANS ARE NOT TO SCALE

Sheet 1 of 5

HAM-71-0159



Notes:

- Sign spacing and buffer space may be adjusted to fit field conditions.
- "Road Work Ahead" signs shall be placed on all cross streets intersecting within the work area. The signs should be placed a minimum of 100 feet in advance of the intersection.

Date: 1/20/2023 **Author:** P. McCarty **Project:** D8 Steel Pier Caps - Cincinnati, OH
Customer: Collins Engr **Reviewer:** J. McCarty **BridgeENumber:** HAM-71-0159

Comments:

Type of Road: Urban Interstates, Ramps, and Commercial Routes
Traffic Volume: Moderate to Heavy

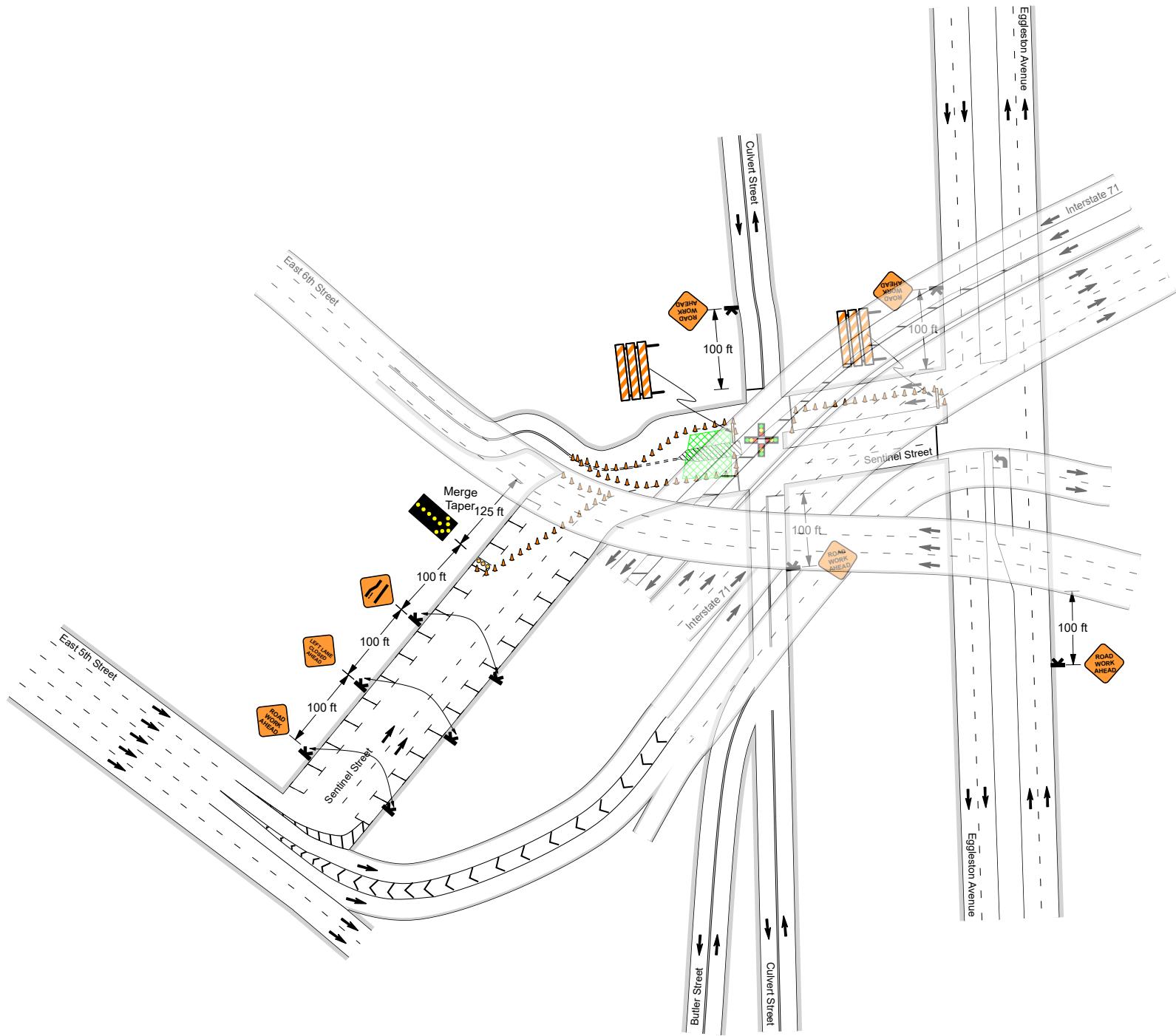
All signs & devices shall be placed in accordance with the latest provisions of Ohio Manual for Uniform Traffic Control Devices (OMUTCD) with respect to any applicable provisions from the City of Cincinnati.

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PLANS ARE NOT TO SCALE

Sheet 2 of 5

HAM-71-0159



Legend	
	Work Area
	Cone
	Portable Sign Stand
	Type 3 Barricade

Notes:

- Sign spacing and buffer space may be adjusted to fit field conditions.
- "Road Work Ahead" signs shall be placed on all cross streets intersecting within the work area. The signs should be placed a minimum of 100 feet in advance of the intersection.

Date: 1/20/2023 **Author:** P. McCarty **Project:** D8 Steel Pier Caps - Cincinnati, OH **Customer:** Collins Engr **Reviewer:** J. McCarty **BridgeENumber:** H M-71-0159

Comments:

Type of Road: Urban Interstates, Ramps, and Commercial Routes
Traffic Volume: Moderate to Heavy

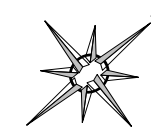
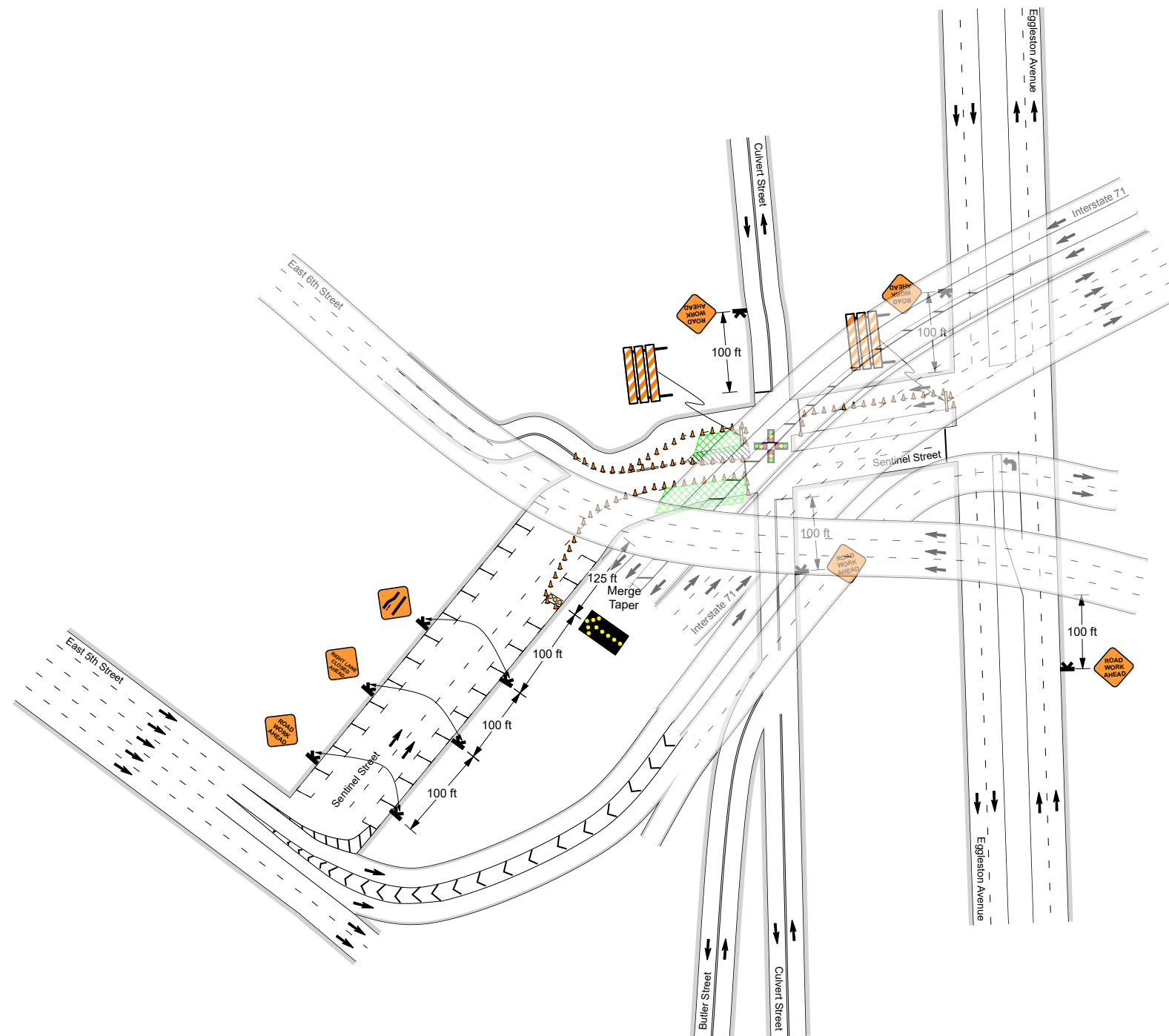
All signs & devices shall be placed in accordance with the latest provisions of Ohio Manual for Uniform Traffic Control Devices (OMUTCD) with respect to any applicable provisions from the City of Cincinnati.

Access to residential and commercial driveways to be maintained at all times.
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Flaggers shall remain in constant communications, via two-way radio, at all times.
Parking ban shall be coordinated with the Cincinnati Police Department.

PLANS ARE NOT TO SCALE

Sheet 3 of 5

HAM-71-0159



Legend

- Arrow Board
- Work Area
- Cone
- Portable Sign Stand
- Type 3 Barricade

Date: 1/20/2023 **Author:** P. McCarty **Project:** D8 Steel Pier Caps - Cincinnati, OH **Customer:** Collins Engr **Reviewer:** J. McCarty **BridgeNumber:** H M-71-0159

Comments:

Type of Road: Urban Interstates, Ramps, and Commercial Routes
Traffic Volume: Moderate to Heavy

All signs & devices shall be placed in accordance with the latest provisions of Ohio Manual for Uniform Traffic Control Devices (OMUTCD) with respect to any applicable provisions from the City of Cincinnati.

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 Flaggers shall be trained in safe temporary traffic control practices.
 Flaggers shall remain in constant communications, via two-way radio, at all times.
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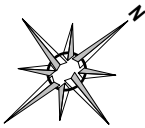
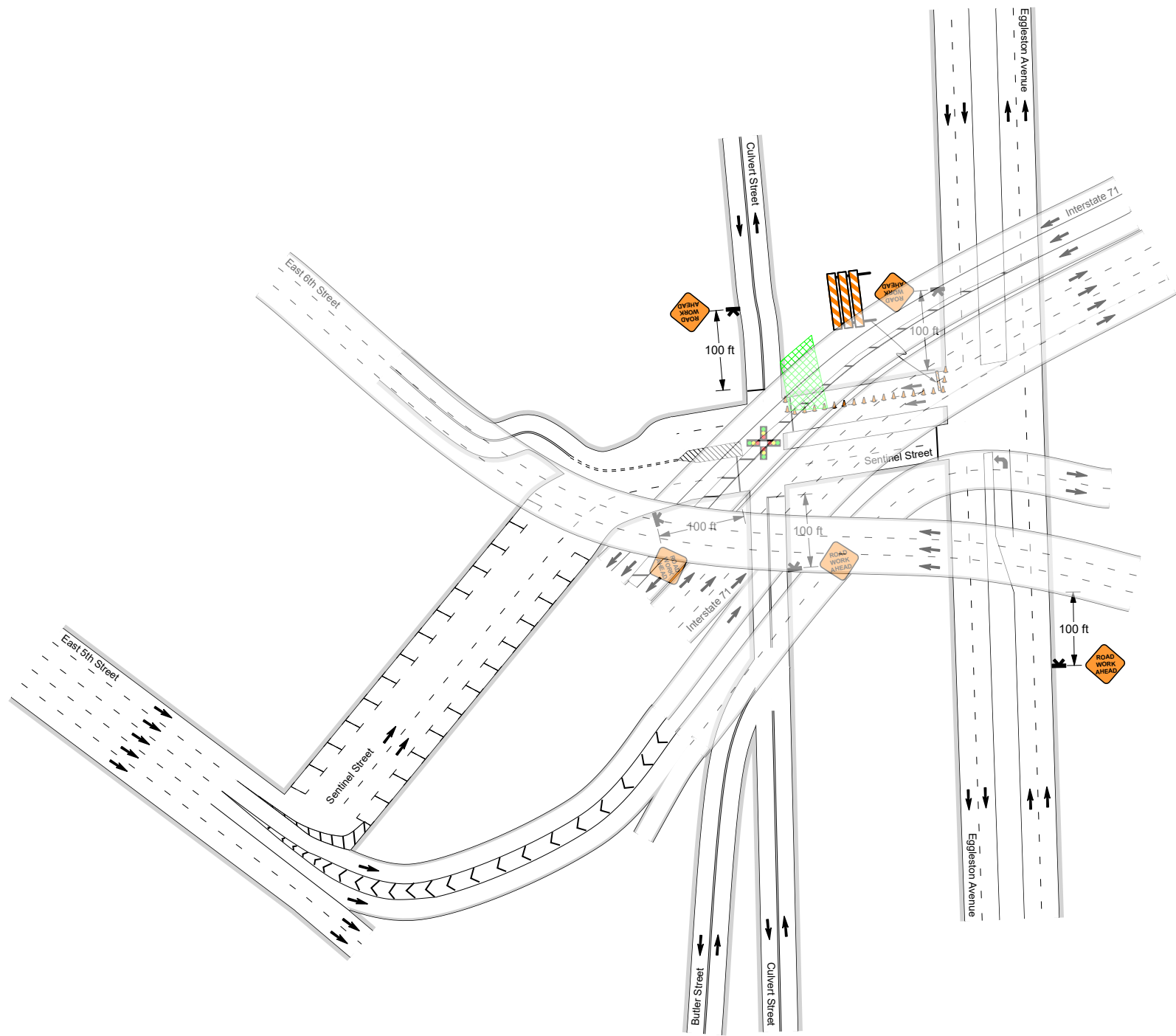
PLANS ARE NOT TO SCALE

Sheet 4 of 5

Notes:

- Sign spacing and buffer space may be adjusted to fit field conditions.
- "Road Work Ahead" signs shall be placed on all cross streets intersecting within the work area. The signs should be placed a minimum of 100 feet in advance of the intersection.

HAM-71-0159



Legend	
	Work Area
	Cone
	Portable Sign Stand
	Type 3 Barricade

Notes:

- Sign spacing and buffer space may be adjusted to fit field conditions.
- "Road Work Ahead" signs shall be placed on all cross streets intersecting within the work area. The signs should be placed a minimum of 100 feet in advance of the intersection.

Date: 1/20/2023 **Author:** P. McCarty **Project:** D8 Steel Pier Caps - Cincinnati, OH **Customer:** Collins Engr **Reviewer:** J. McCarty **BridgeENumber:** H M-71-0159

Comments:

Type of Road: Urban Interstates, Ramps, and Commercial Routes
Traffic Volume: Moderate to Heavy

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Access to residential and commercial driveways to be maintained at all times.
Flaggers shall be trained in safe temporary traffic control practices.
Flaggers shall remain in constant communications, via two-way radio, at all times.
Parking ban shall be coordinated with the Cincinnati Police Department.

PLANS ARE NOT TO SCALE

Notes for Figure 6H-23—Typical Application 23
Left Lane Closure on the Far Side of an Intersection

Guidance:

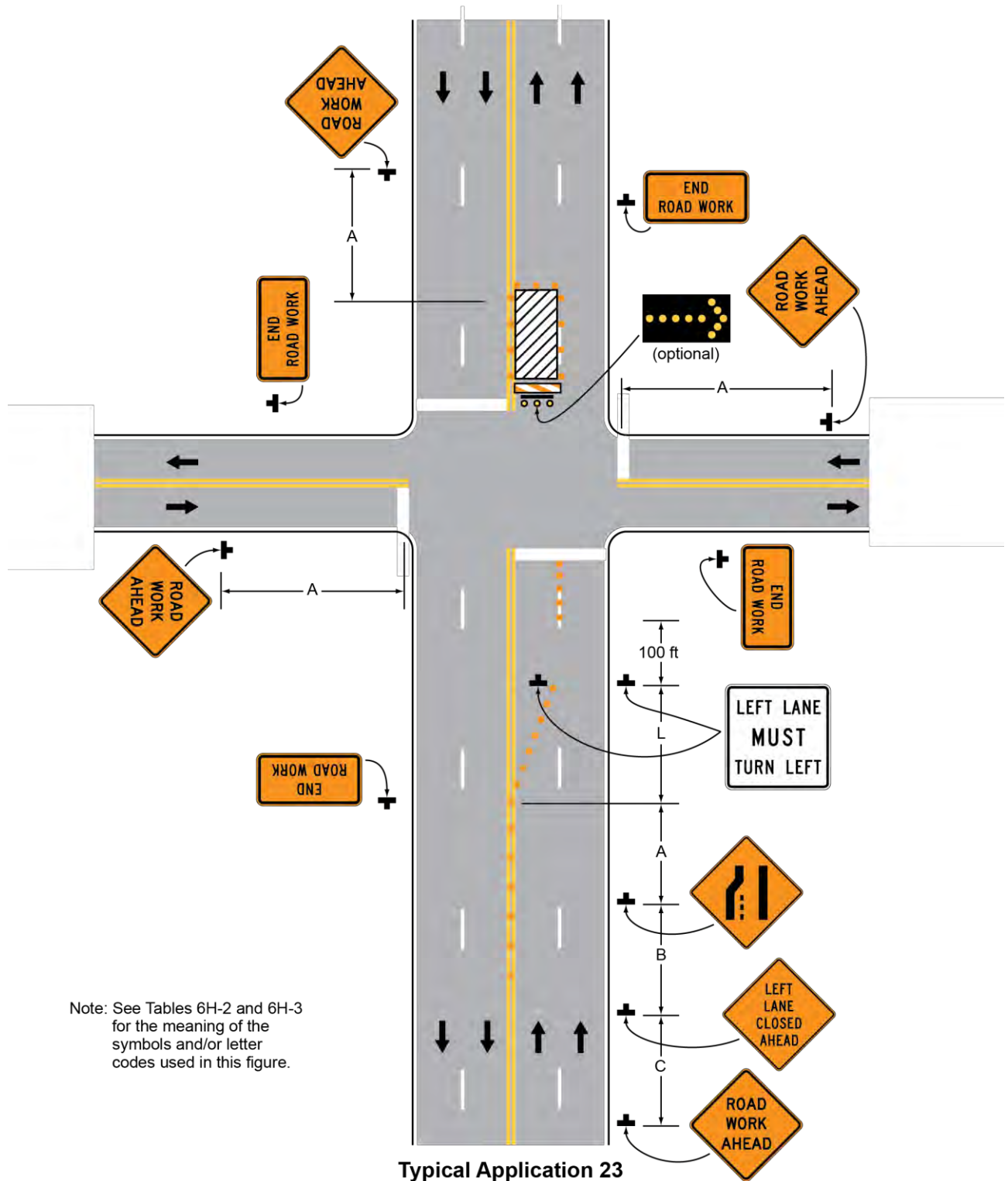
1. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.*

Option:

2. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
3. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, when this results in the closure of a left lane having significant left-turning movements, then the left lane may be reopened as a turn bay for left turns only, as shown.

Support:

4. By first closing off the left lane and then reopening it as a turn bay, the left-turn bay allows storage of turning vehicles so that the movement of through traffic is not impeded. A left-turn bay that is long enough to accommodate all turning vehicles during a traffic cycle will provide the maximum benefit for through traffic. Also, an island is created with channelizing devices that allows the LEFT LANE MUST TURN LEFT sign to be repeated on the left adjacent to the lane that it controls.

Figure 6H-23. Left Lane Closure on the Far Side of an Intersection (TA-23)

Notes for Figure 6H-30—Typical Application 30
Interior Lane Closure on a Multi-lane Street

Guidance:

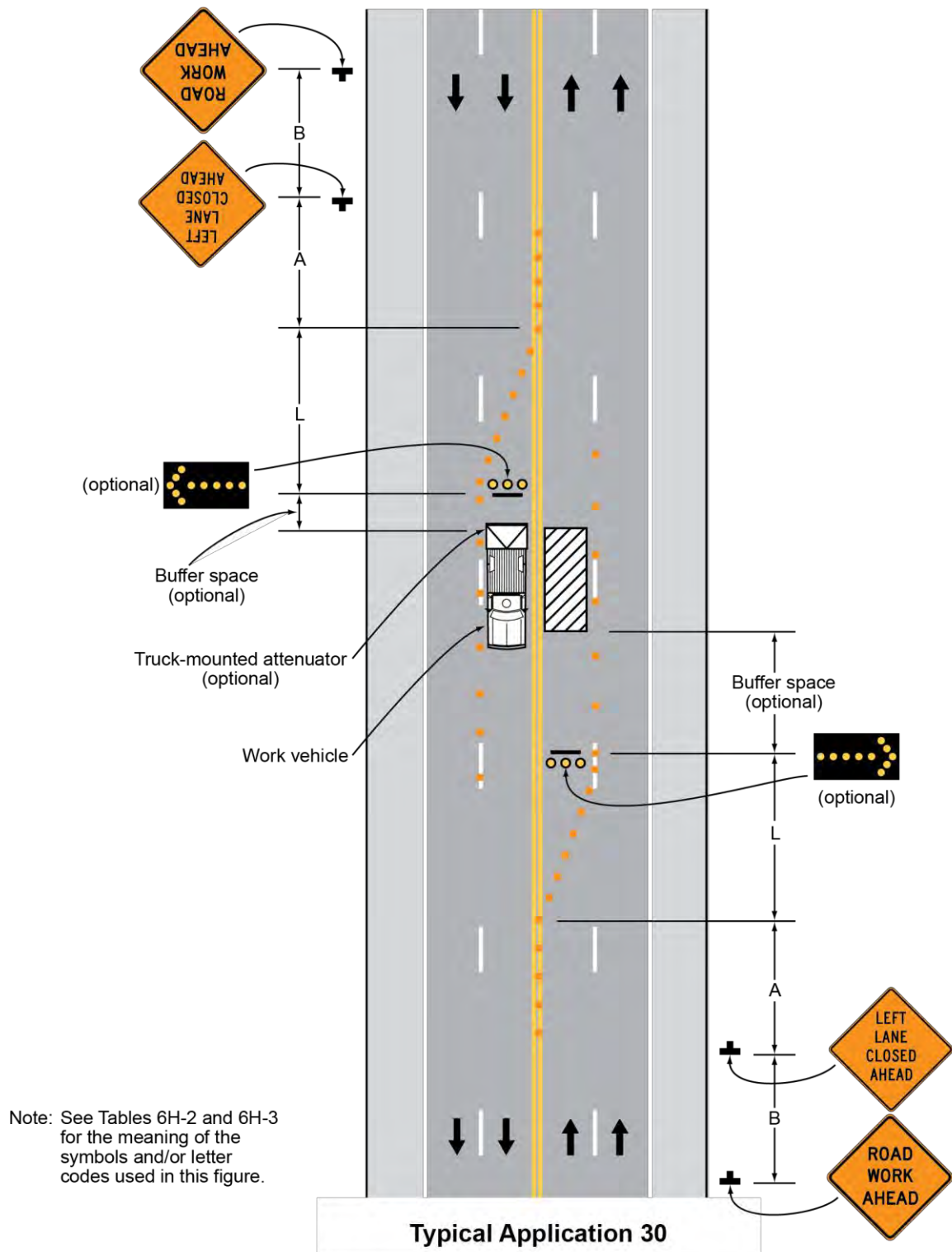
1. *This information applies to low-speed, low-volume urban streets. Where speed or volume is higher, additional signing such as Lane Ends (W4-2) should be used.*

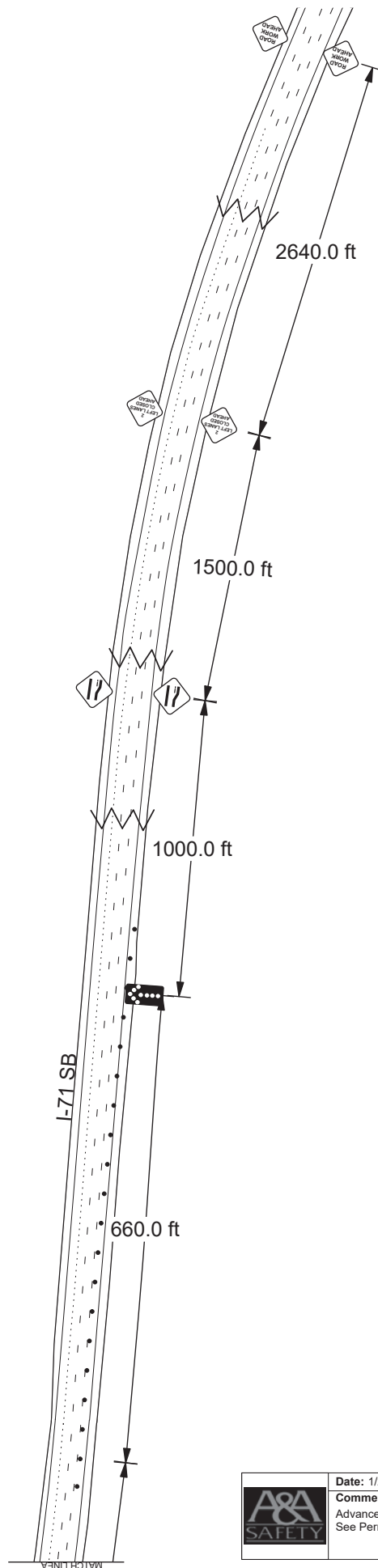
Option:

2. The closure of the adjacent interior lane in the opposing direction may not be necessary, depending upon the activity being performed and the work space needed for the operation.
3. Shadow vehicles with a truck-mounted attenuator may be used.

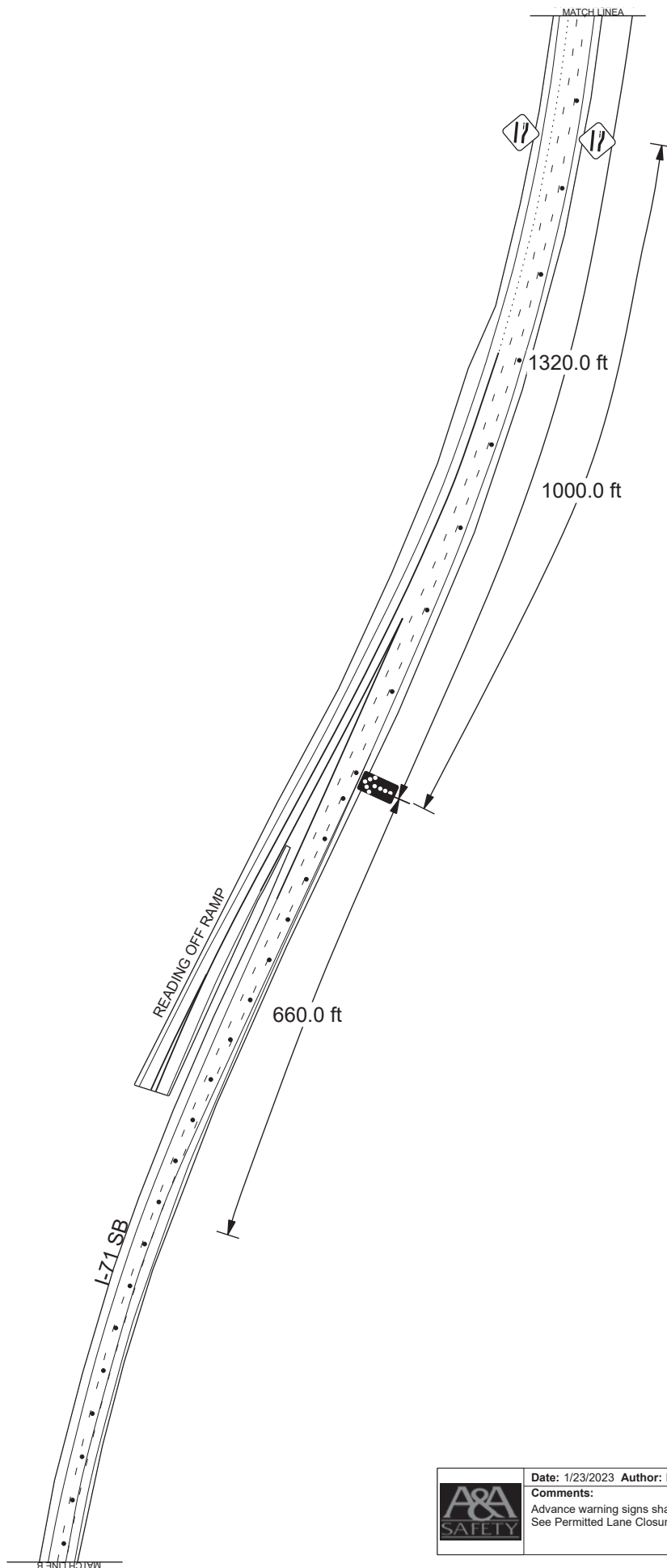
Standard:

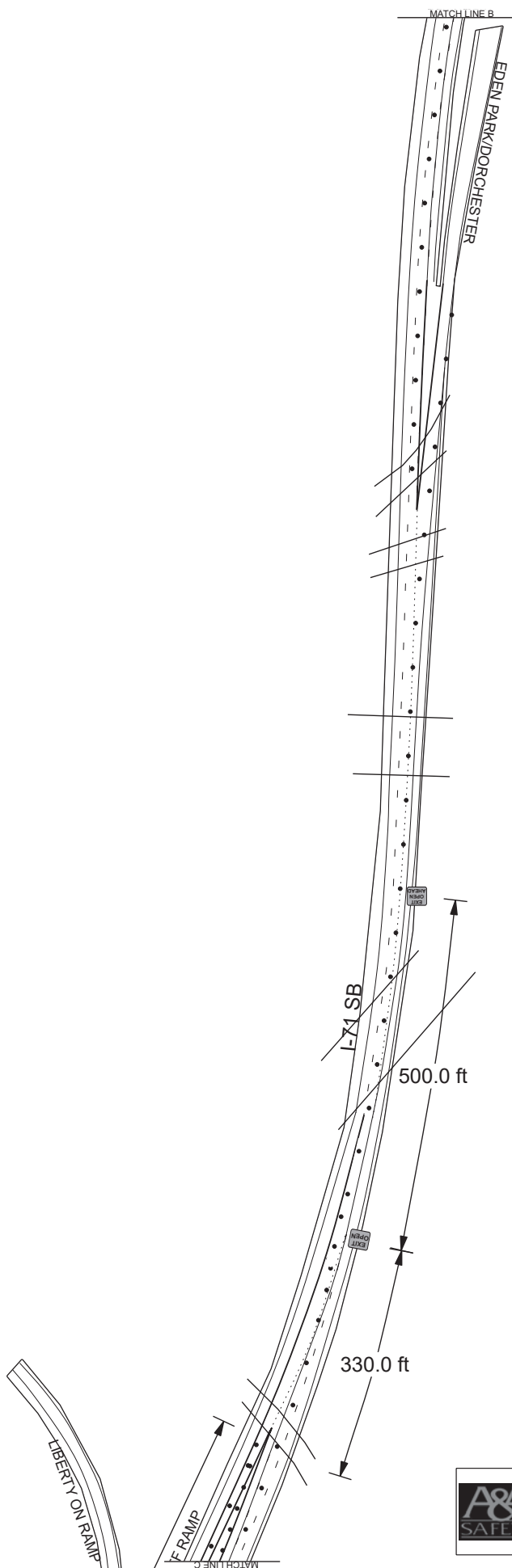
4. **When an additional sign is used (see Note 1), the signs shown shall be relocated to accommodate standard sign spacing for the added sign.**

Figure 6H-30. Interior Lane Closure on a Multi-lane Street (TA-30)



	Date: 1/22/2023 Author: Don Beagle Project: Collins Engineers I-71 Bridge 0159
	Comments: Advance warning signs shall be 48" Diamond Grade See Permitted Lane Closure table for allowable closure times





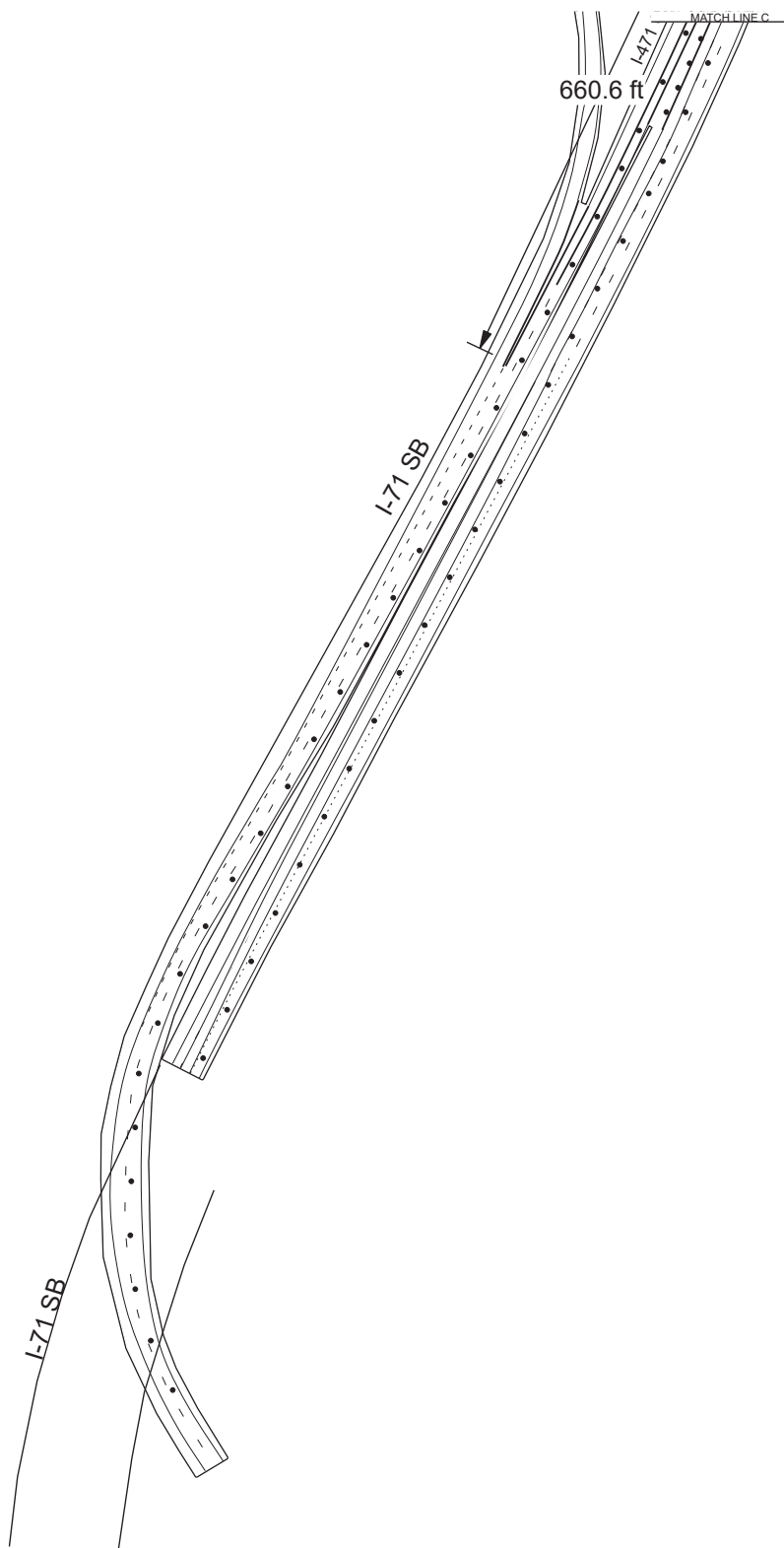
Date: 1/23/2023 Author: Don Beagle Project: Collins Engineers I-71 Bridge 0159

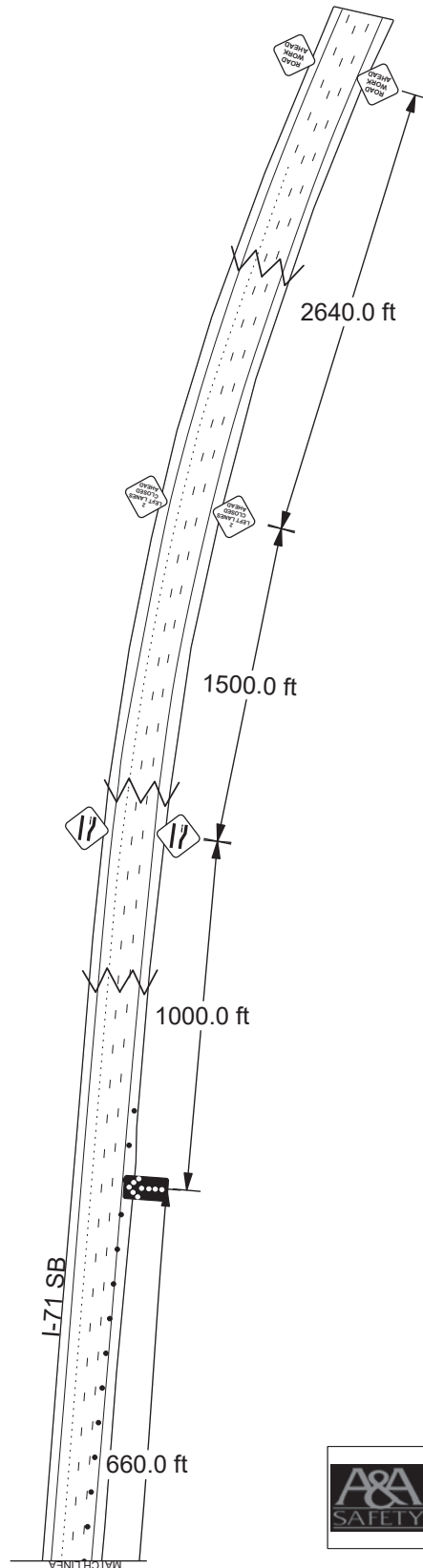
Comments:

Advance warning signs shall be 48" Diamond Grade
See Permitted Lane Closure table for allowable closure times

PHASE 1

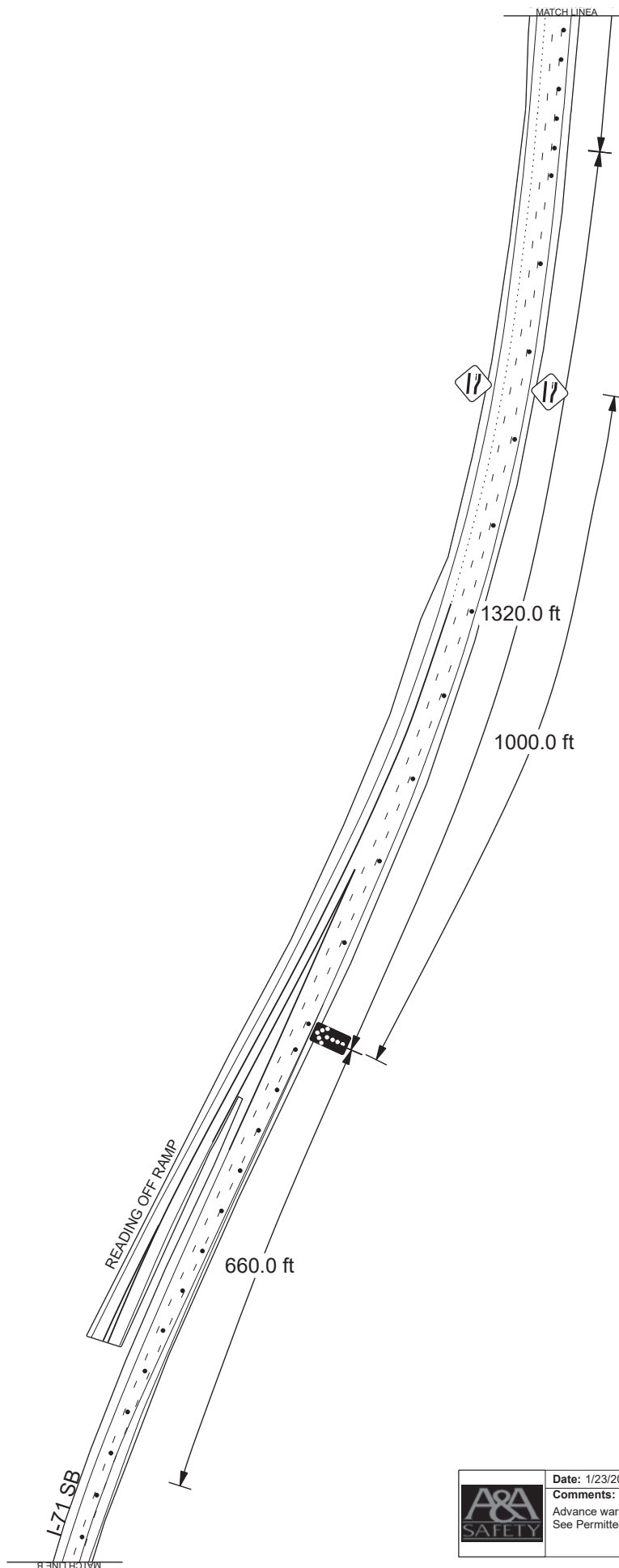
PG 3





	Date: 1/23/2023 Author: Don Beagle Project: Collins Engineers I-71 Bridge 0159
	Comments: Advance warning signs shall be 48" Diamond Grade See Permitted Lane Closure table for allowable closure times

PHASE 2



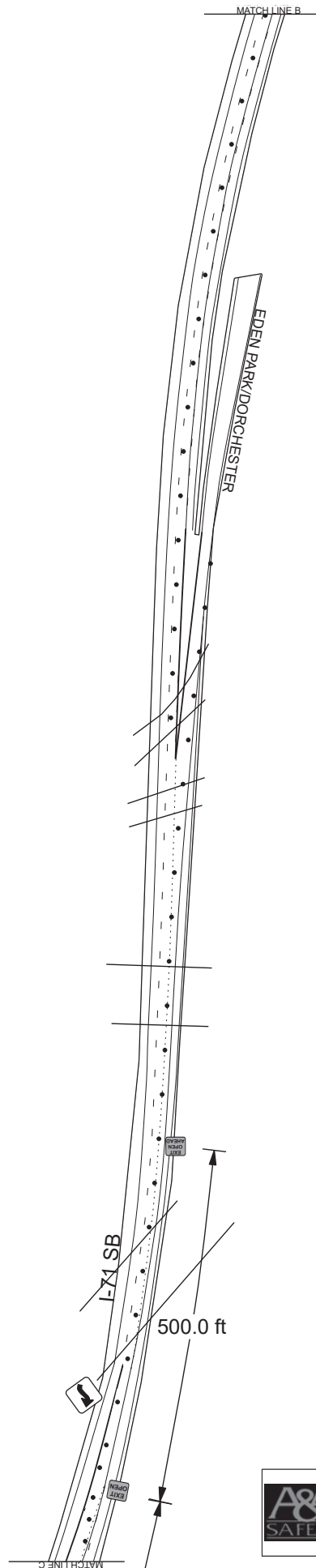
Date: 1/23/2023 Author: Don Beagle Project: Collins Engineers I-71 Bridge 0159

Comments:

Advance warning signs shall be 48" Diamond Grade
See Permitted Lane Closure table for allowable closure times

PHASE 2

▲
PG 6

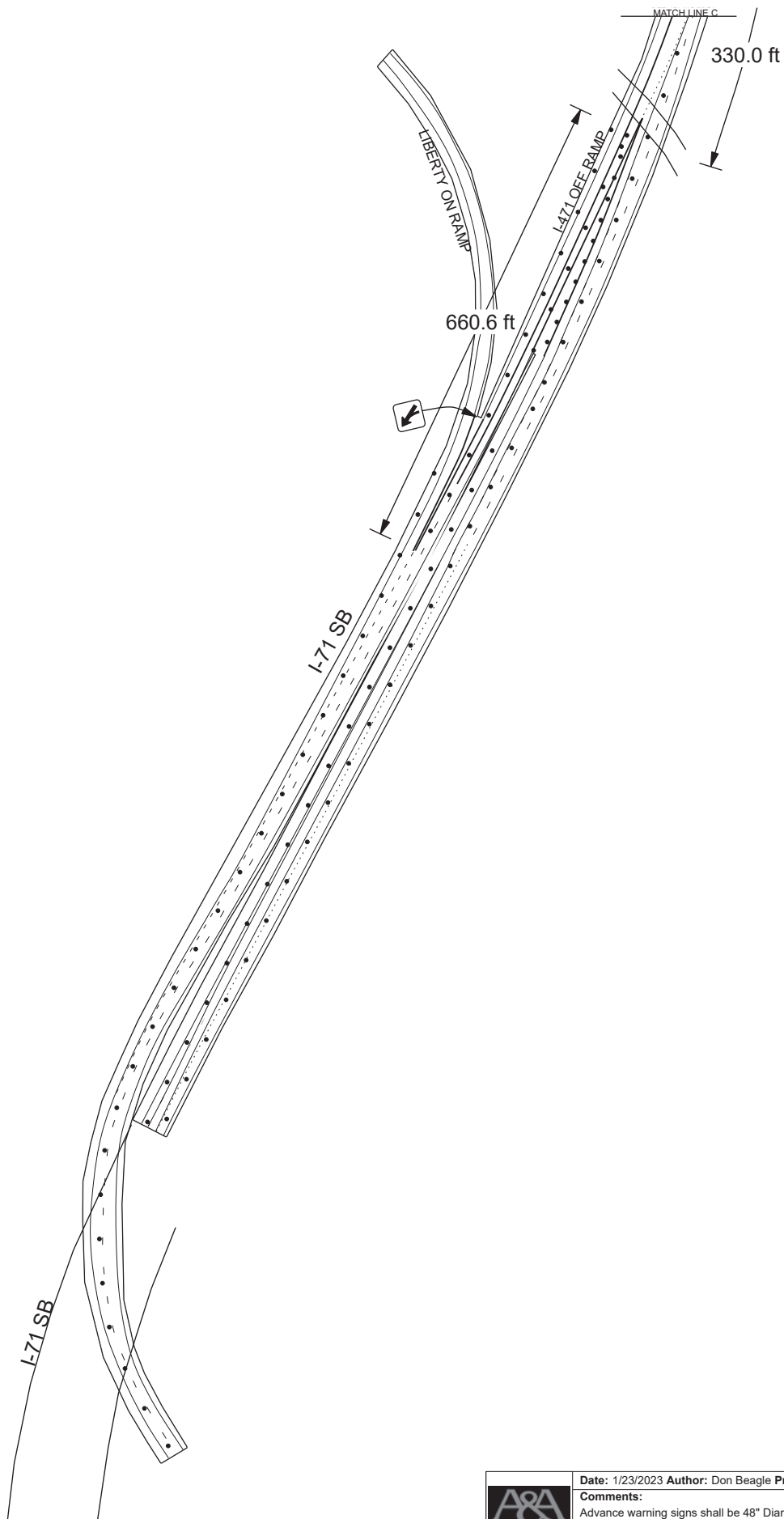


	Date: 1/23/2023 Author: Don Beagle Project: Collins Engineers I-71 Bridge 0159
	Comments: Advance warning signs shall be 48" Diamond Grade See Permitted Lane Closure table for allowable closure times

PHASE 2



PG 7



Notes for Figure 6H-22—Typical Application 22
Right-Hand Lane Closure on the Far Side of an Intersection

Guidance:

1. *If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.*

Option:

2. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, when this results in the closure of a right-hand lane having significant right turning movements, then the right-hand lane may be restricted to right turns only, as shown. This procedure increases the through capacity by eliminating right turns from the open through lane.
3. For intersection approaches reduced to a single lane, left-turning movements may be prohibited to maintain capacity for through vehicular traffic.
4. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
5. Where the turning radius is large, it may be possible to create a right-turn island using channelizing devices or pavement markings.

Notes for Figure 6H-29—Typical Application 29

Crosswalk Closures and Pedestrian Detours

Standard:

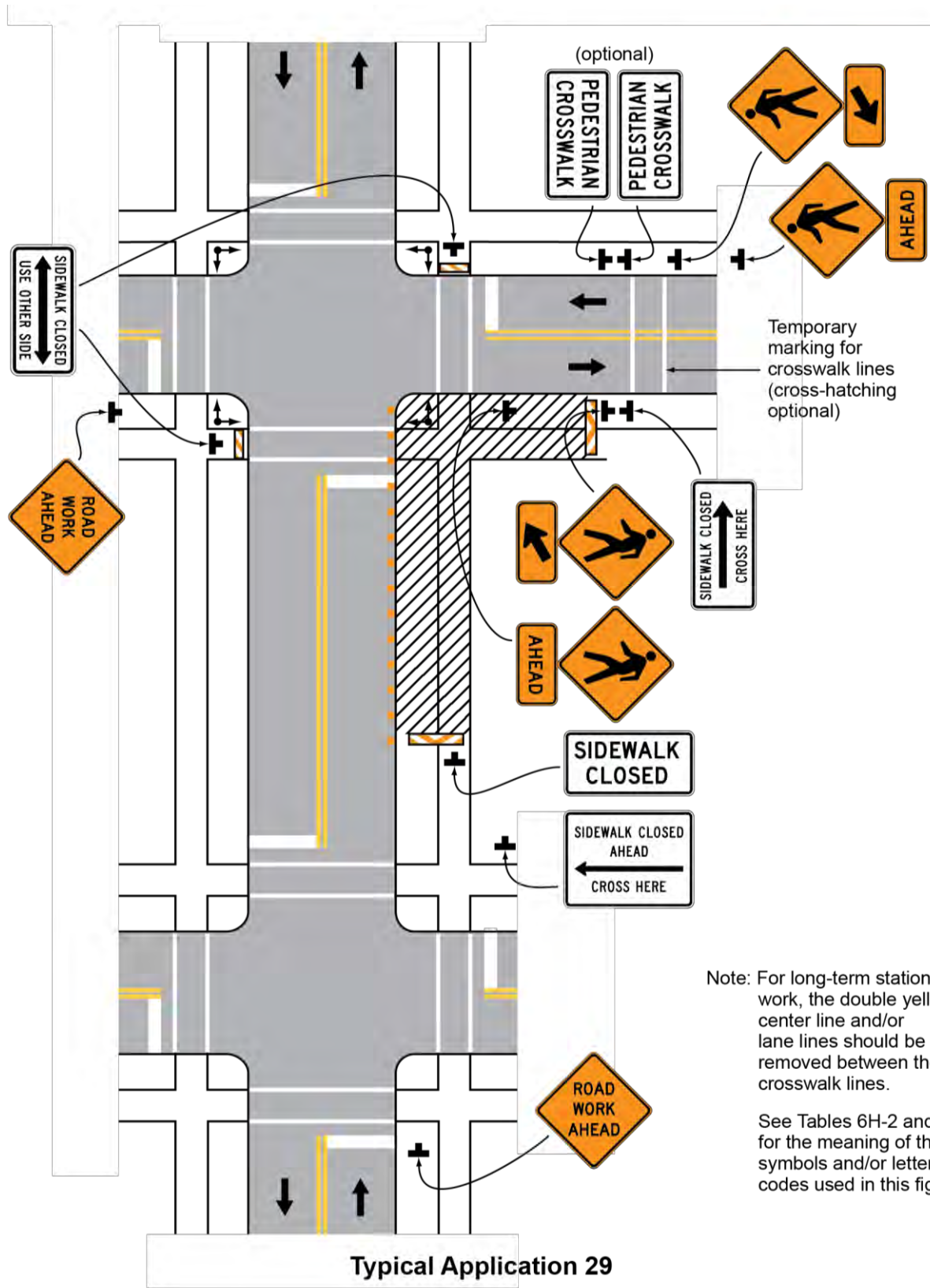
1. When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.
2. Curb parking shall be prohibited for at least 50 feet in advance of the midblock crosswalk.

Guidance:

3. Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.
4. Pedestrian traffic signal displays controlling closed crosswalks should be covered or deactivated.

Option:

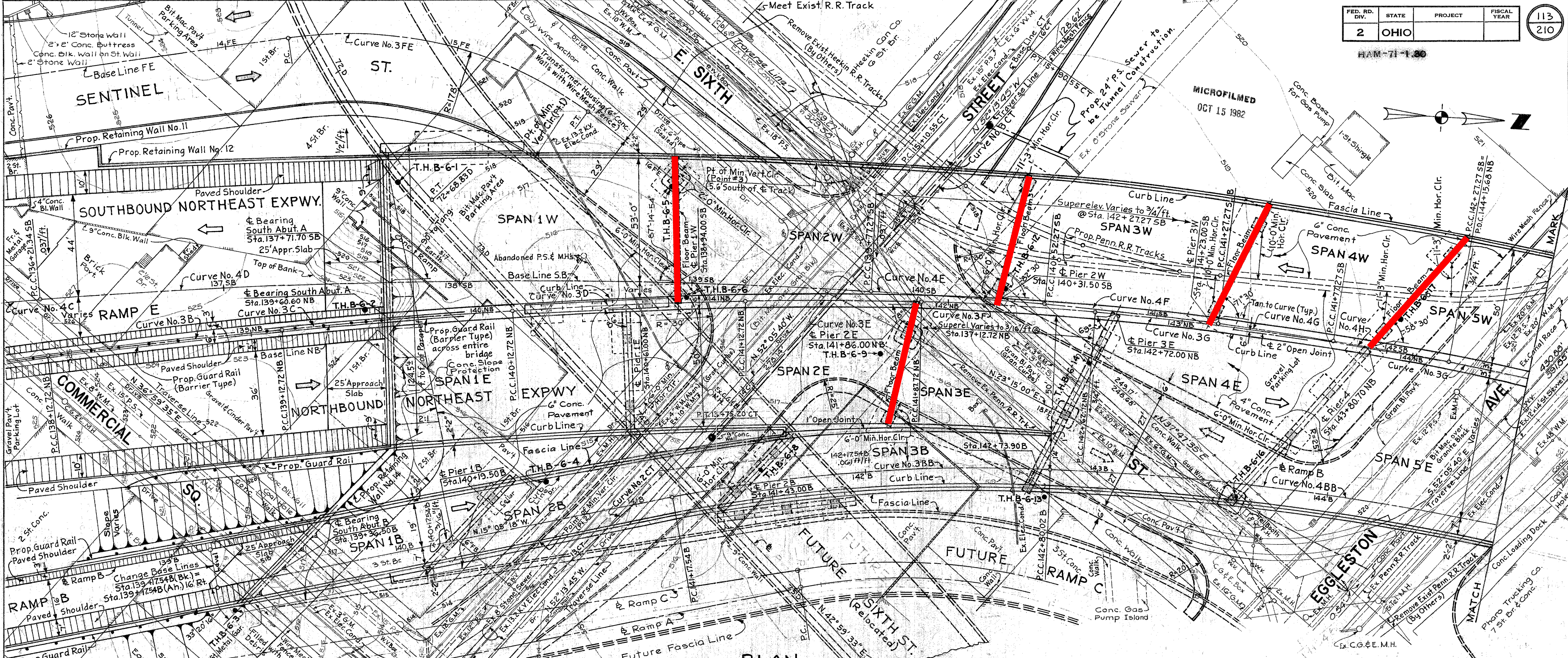
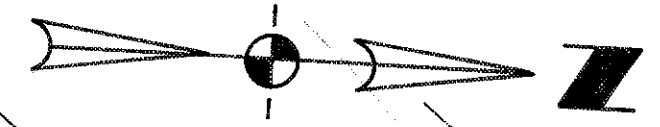
5. Street lighting may be considered.
6. Only the TTC devices related to pedestrians are shown. Other devices, such as lane closure signing or ROAD NARROWS signs, may be used to control vehicular traffic.
7. For nighttime closures, Type A Flashing warning lights may be used on barricades supporting signs and closing sidewalks.
8. Type C Steady-Burn or Type D 360-degree Steady-Burn warning lights may be used on channelizing devices separating the work space from vehicular traffic.
9. In order to maintain the systematic use of the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs in a jurisdiction, the fluorescent yellow-green background for pedestrian, bicycle, and school warning signs may be used in TTC zones.

Figure 6H-29. Crosswalk Closures and Pedestrian Detours (TA-29)

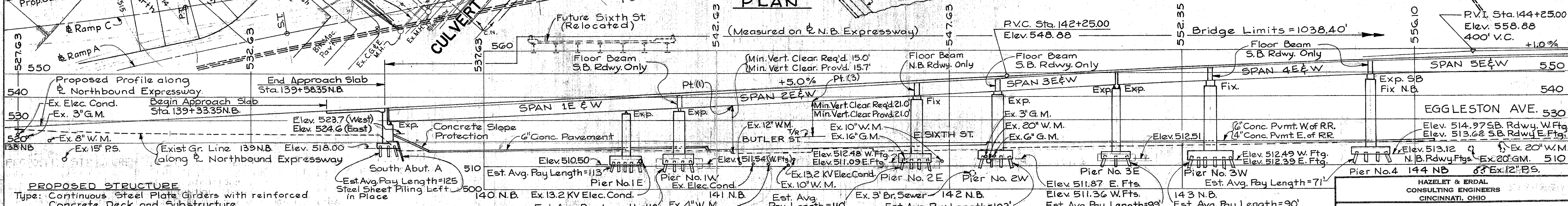
APPENDIX C – FATIGUE PRONE DETAILS FOR HAM-71-0159

HAM-71-1.80

MICROFILMED
OCT 15 1982



PLAN



PROFILE

PROPOSED STRUCTURE
Type: Continuous Steel Plate Girders with reinforced Concrete Deck and Substructure.
Spans: Lengths Vary; see tabulation, sheet No. 115.
Roadway: Northbound Varies 50'-0" min. 1/4 curbs with 1'-0" safety curb and 6'-0" median.
Loading Frequency: CF = 2000 (57) Adequate for AASHO alternate loading.
Wearing Surface: 1" Monolithic Concrete.
Approach Slabs: A5-1-54 (25'-0" long).
Alignment: Varies, see Plan.
Superelevation: Varies, see Plan.

GENERAL NOTES
South Abutment A, Pier 1W & Pier 1E are Parallel.
South Abutment B, Pier 1B & Pier 2B are Parallel.
For Curve Data and Table of Span Lengths see sheet No. 115.
For Profile of Ramp B see sheet No. 115.
● Symbol denotes drill hole.
For Test Boring Data, see sheets 121 thru 124.
For Bench Marks see sheet 35.

(Along N.B. Expressway)

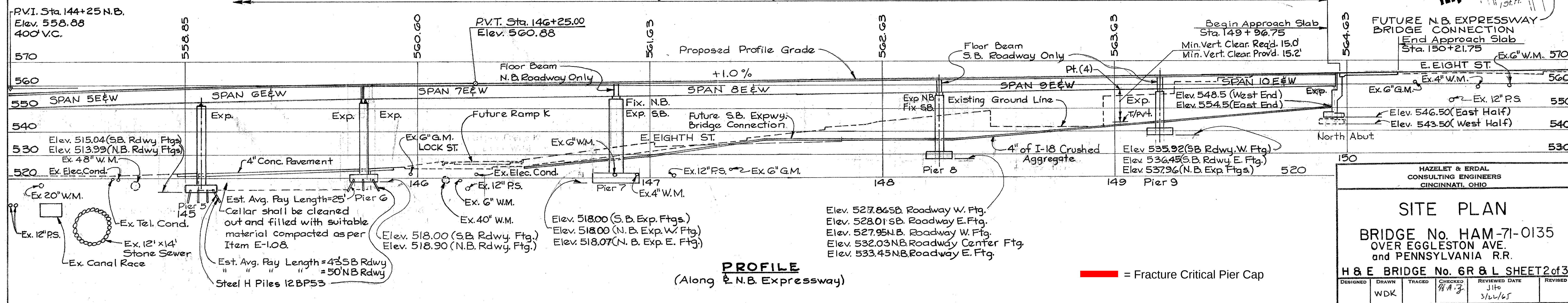
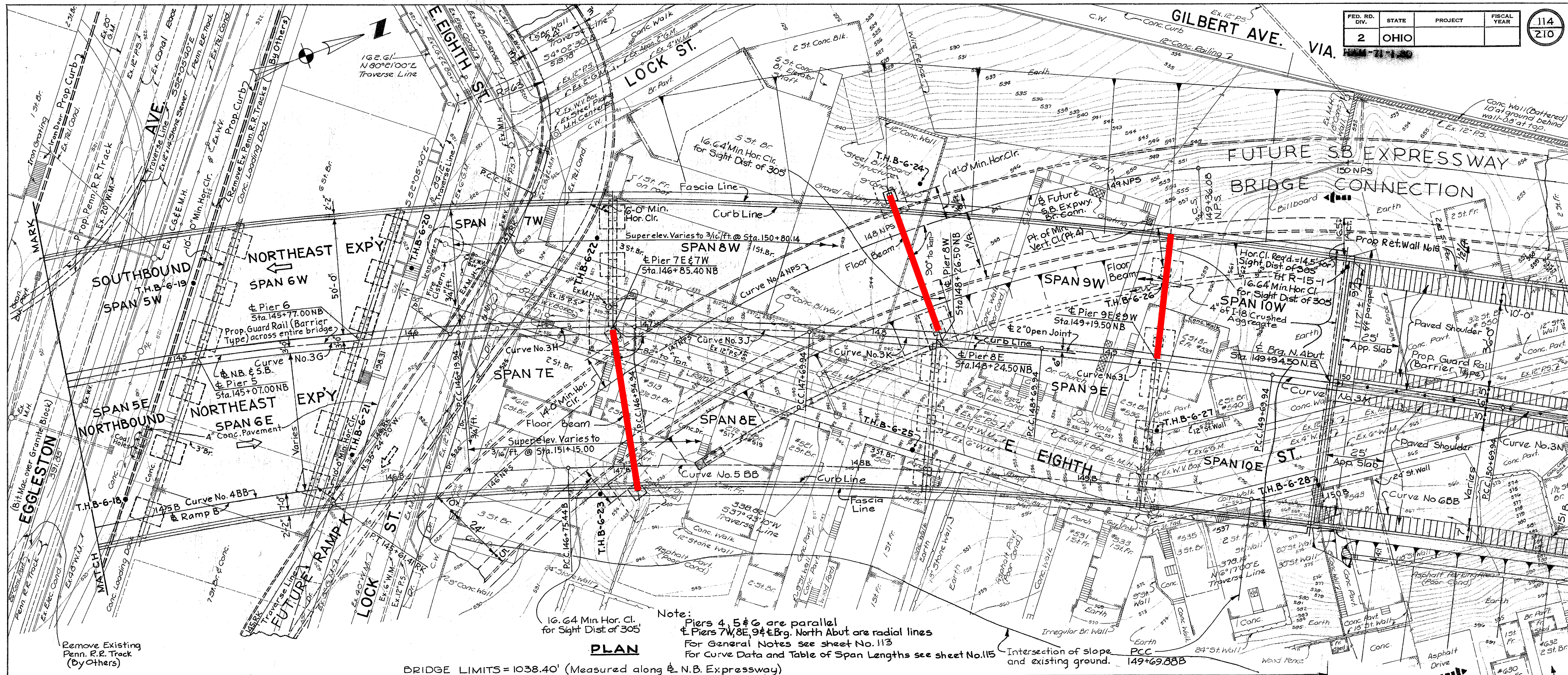
1984 Traffic Count: S.B. Rdwy. ADT = 25,800
DHV = 3,450
N.B. Rdwy. ADT = 31,200
DHV = 3,650

Ex. 8" Stone Sewer (To be relocated)

SITE PLAN
BRIDGE No. HAM-71-0135
OVER EGGLESTON AVE.
and PENNSYLVANIA R.R.

H & E BRIDGE No. 6 R & L SHEET of 3

DESIGNED	DRAWN	CHECKED	REVIEWED	DATE
WDK	M. Dec.	8/4/73	JH	3/22/65



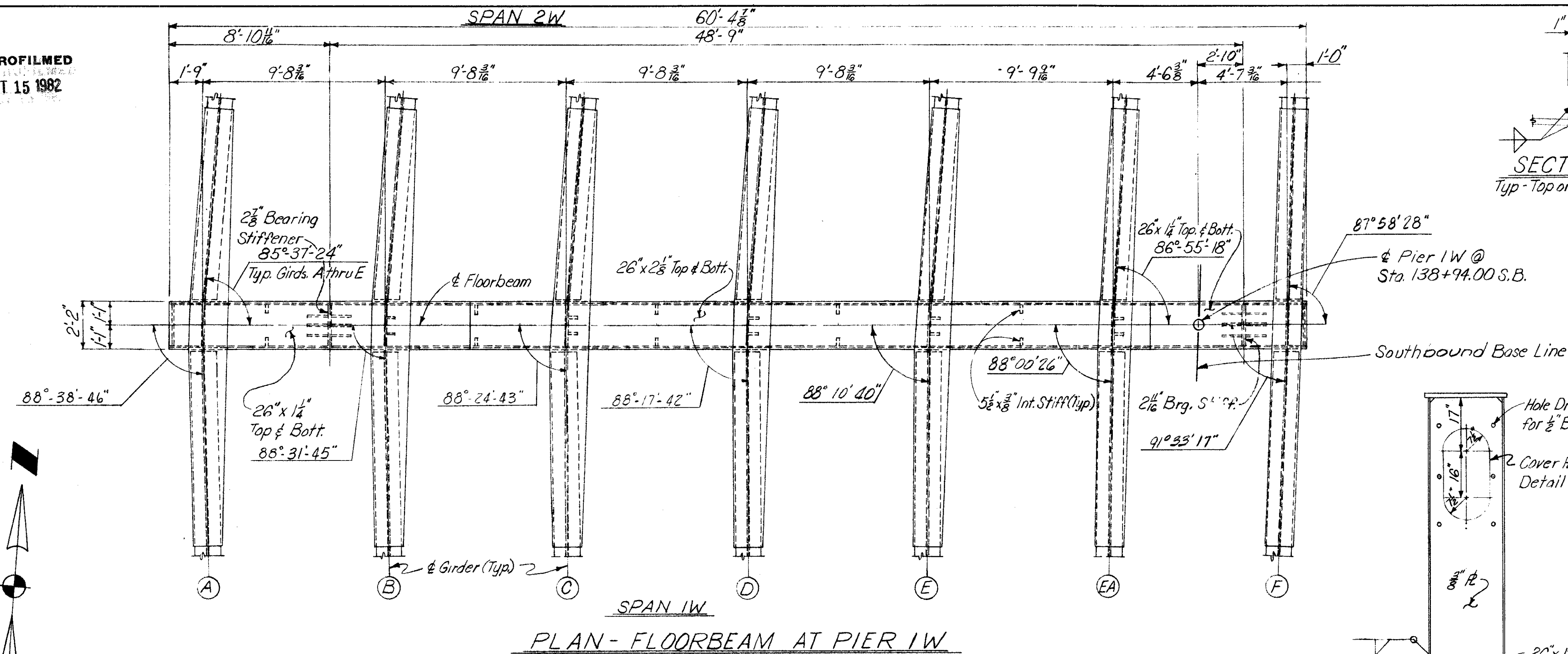
MICROFILMED
OCT 15 1982

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

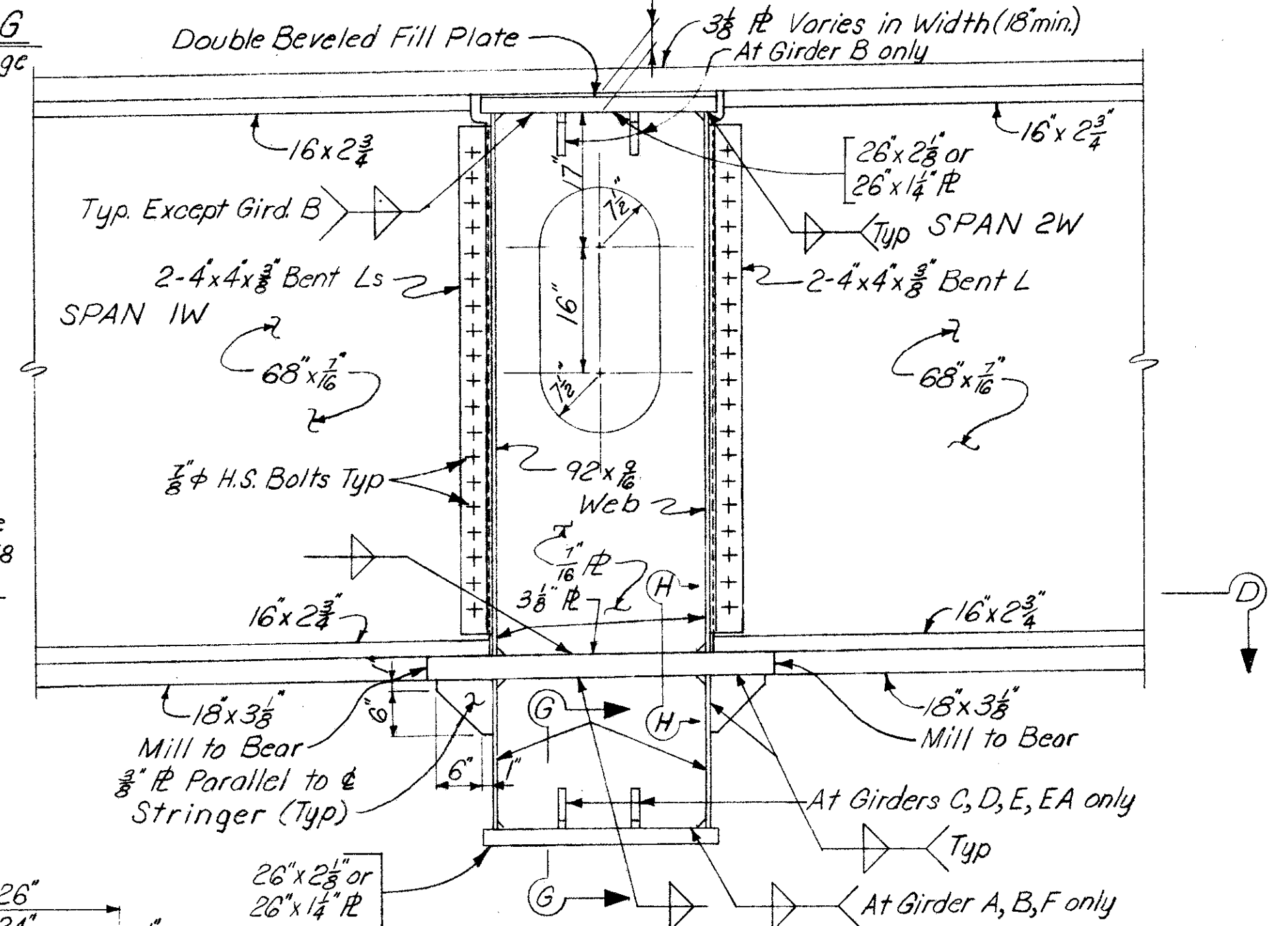
HAM-71-1.30

149
210

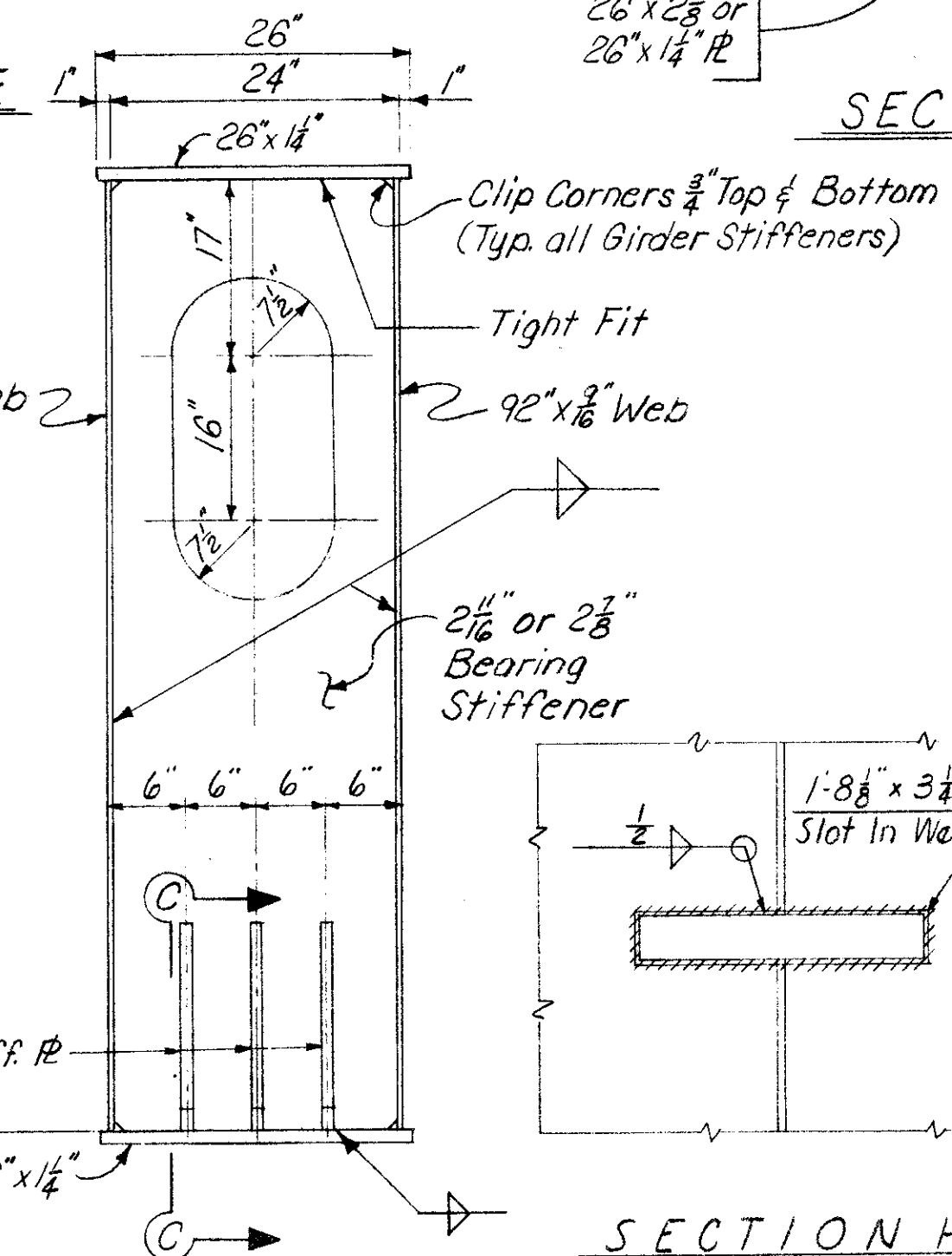
Stringer	A	B	C	D	E	EA	F
Dimension X	3 1/8"	3 3/8"	3 3/8"	3 3/8"	3 3/8"	3 1/2"	3 3/8"



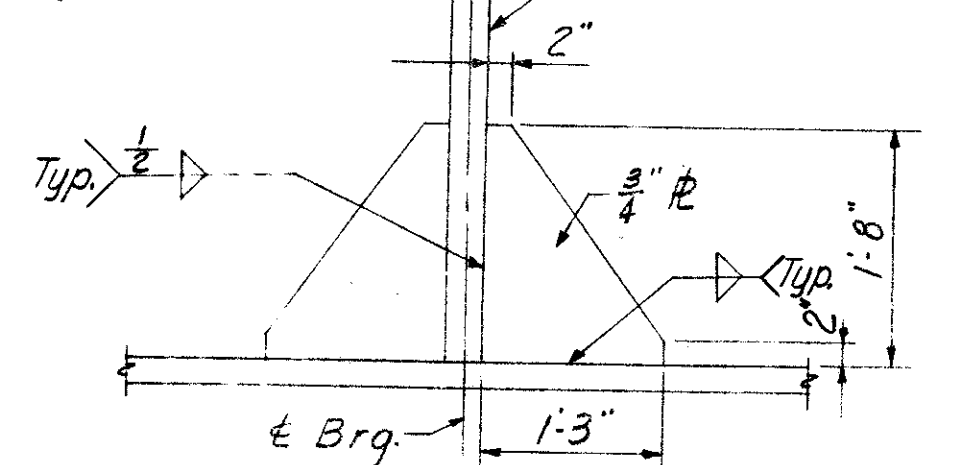
SECTION G-G
Typ - Top or Bott. Flange



SECTION E-E
Typ. @ Ends of Floorbeam



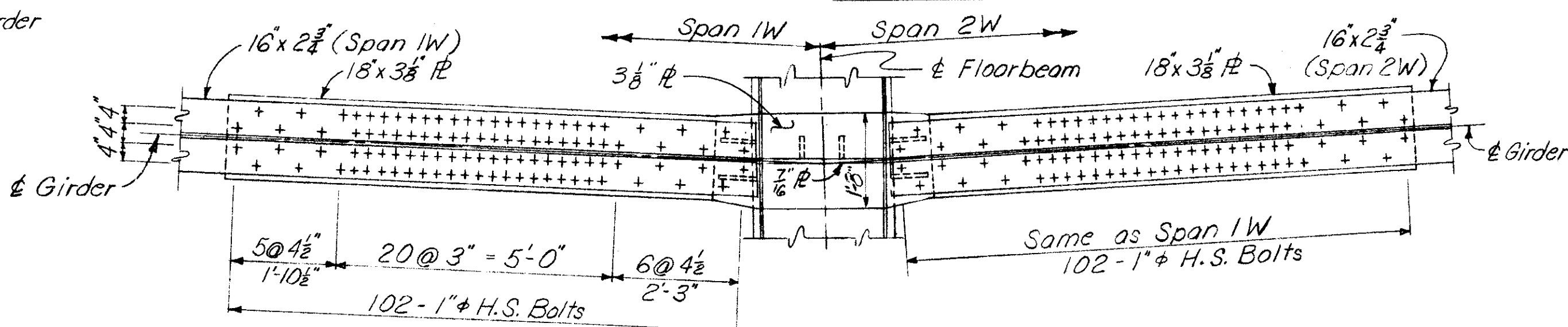
NOTE: Milled ends of compression splice plates on bottom flanges of girders shall be brought to full bearing against milled ends of pier girder brackets before bolts are tightened.



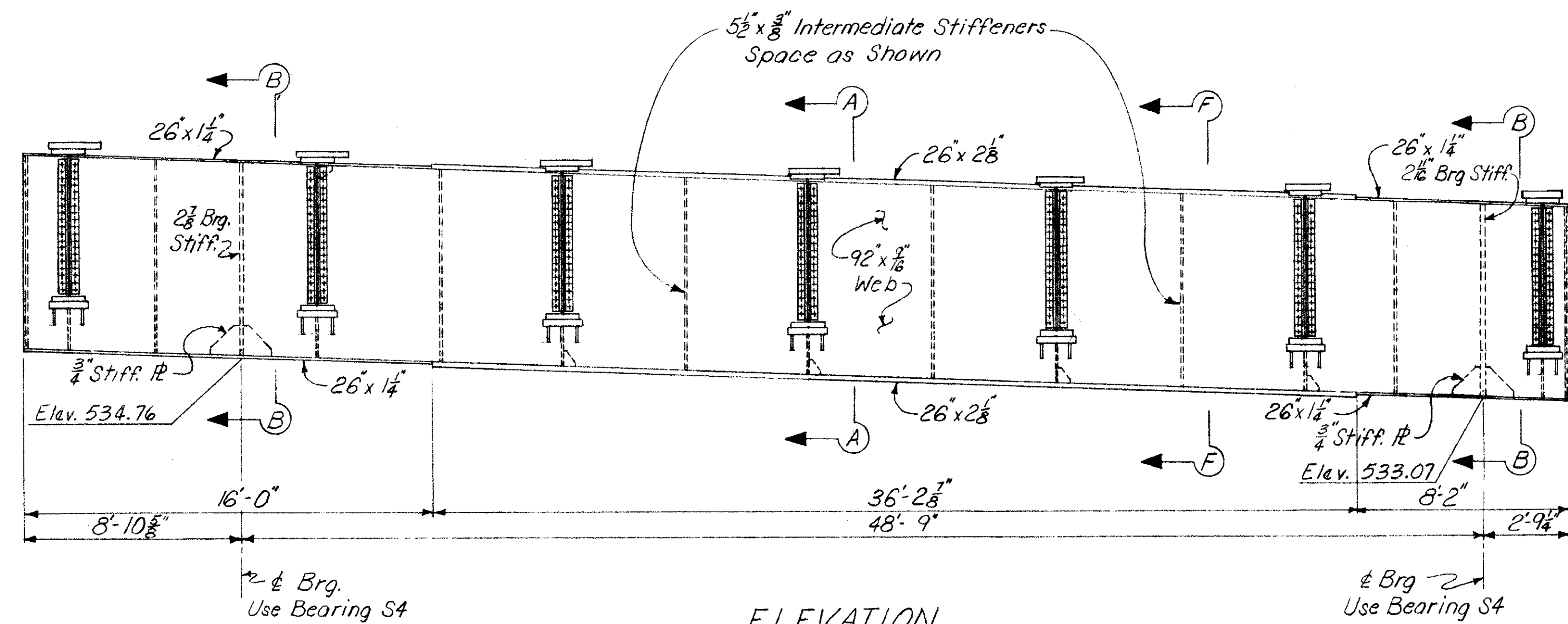
SECTION C-C

SECTION H-H

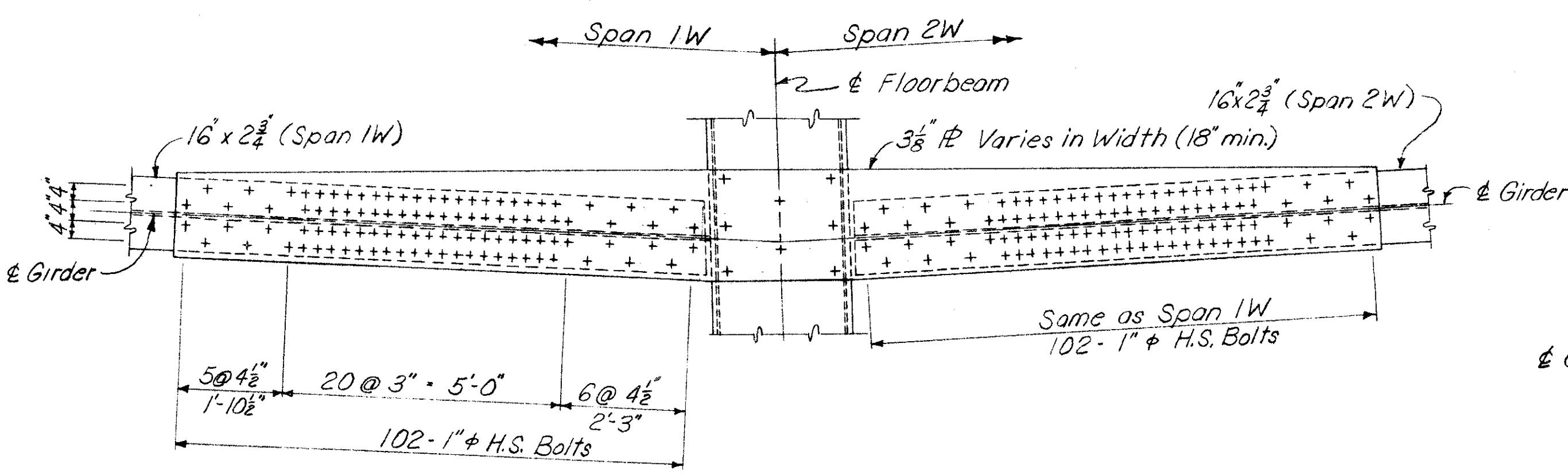
SECTION B-B



SECTION D-D



ELEVATION



PLAN OF TOP SPLICE PLATE

Note: For Cover Plate Details and Section FF See Floorbeam 2E, Sht. No. 158
For Fillet weld sizes not shown, see TABLE OF FILLET WELD SIZES Sht. No. 164
For Bearing Details see sht No. 165

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
DMB	WRT		JHO	3/22/65	

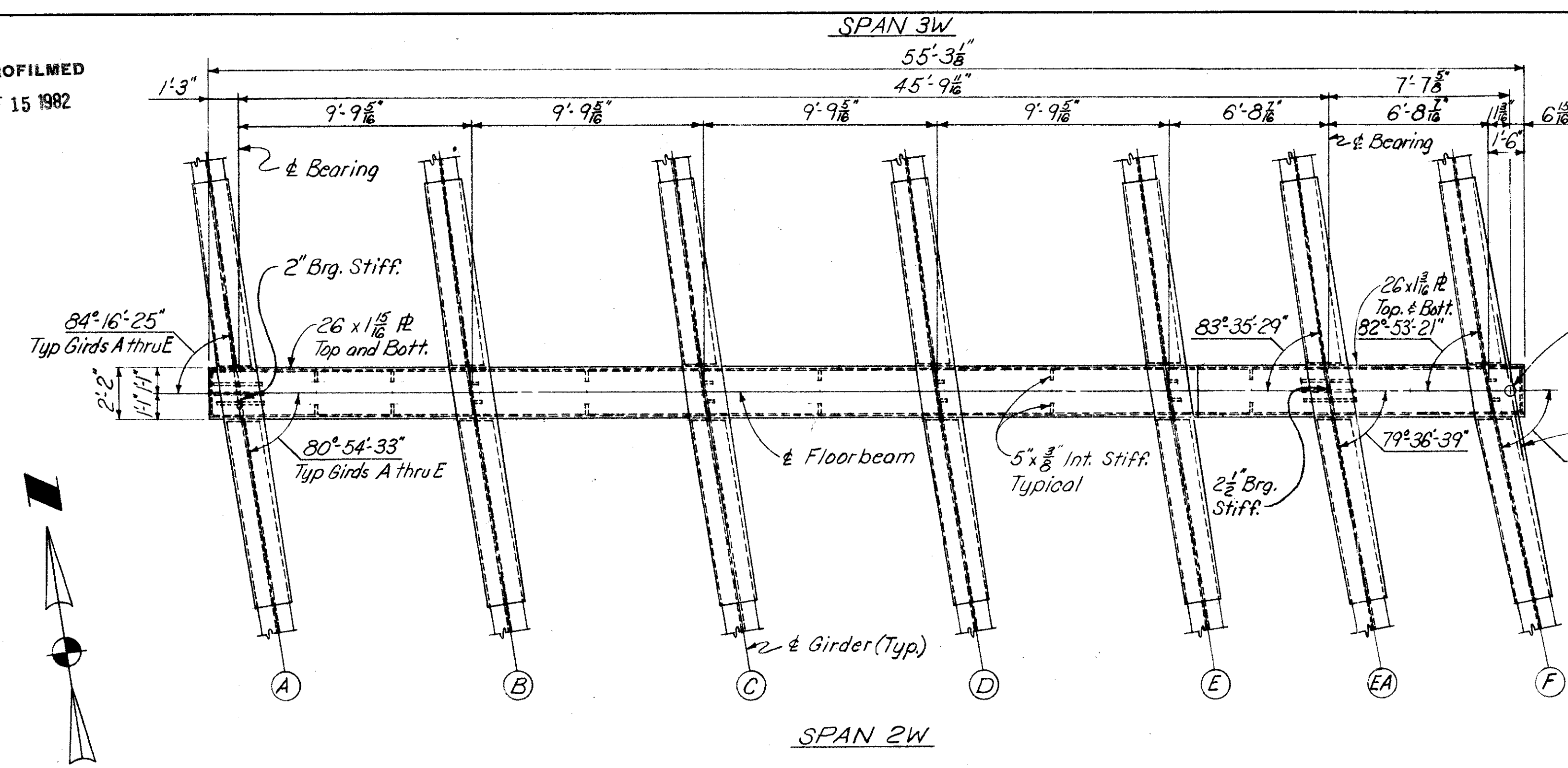
MICROFILMED
OCT 15 1982

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

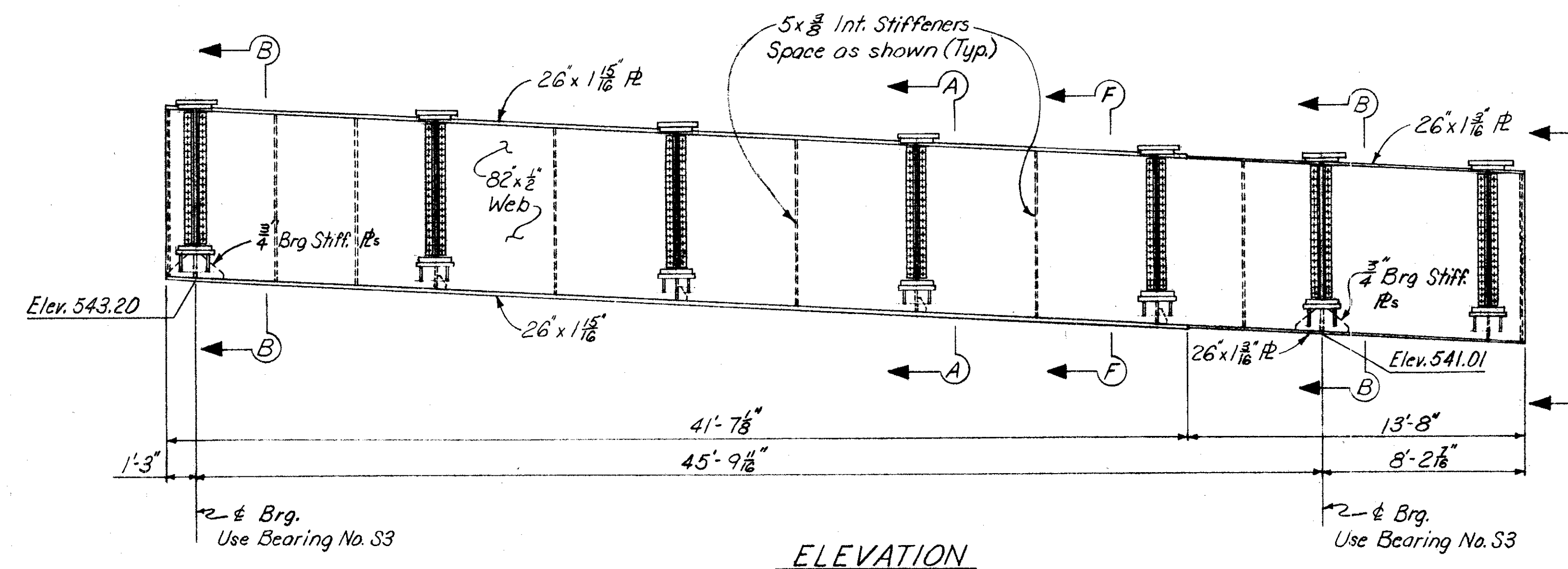
HAM-71-1.30

150
210

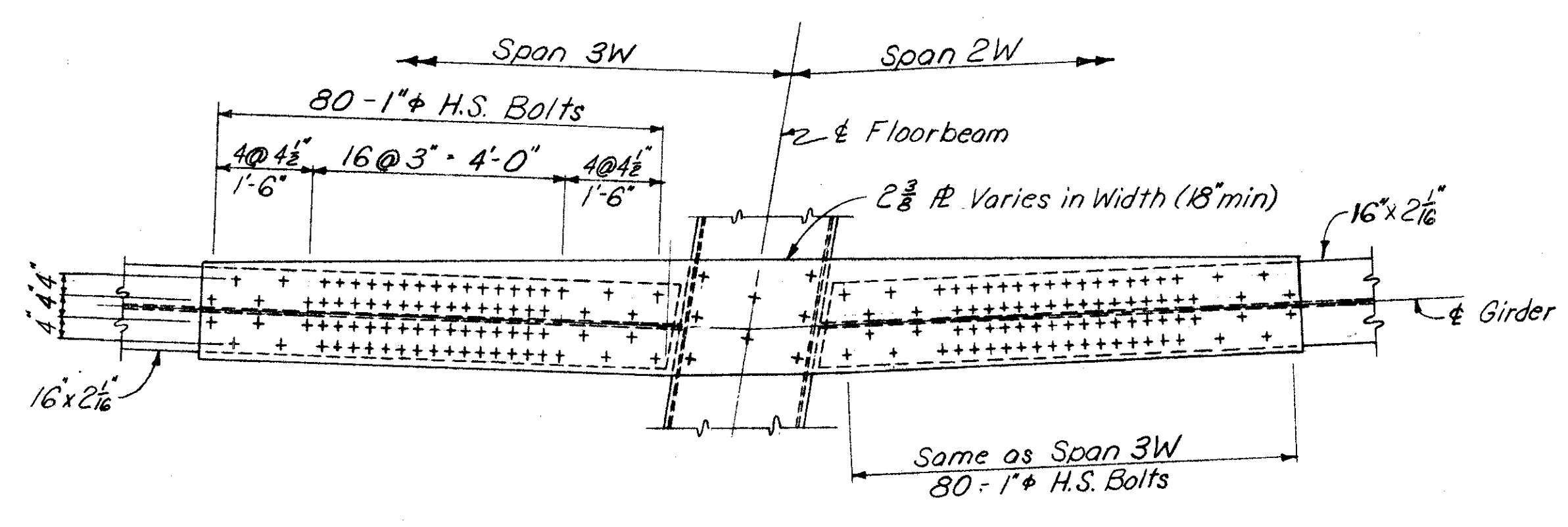
STRINGER	A	B	C	D	E	EA	F
DIMENSION X	3 1/8	3 1/8	3 3/8	3 3/8	3 3/8	3 3/8	3 1/8



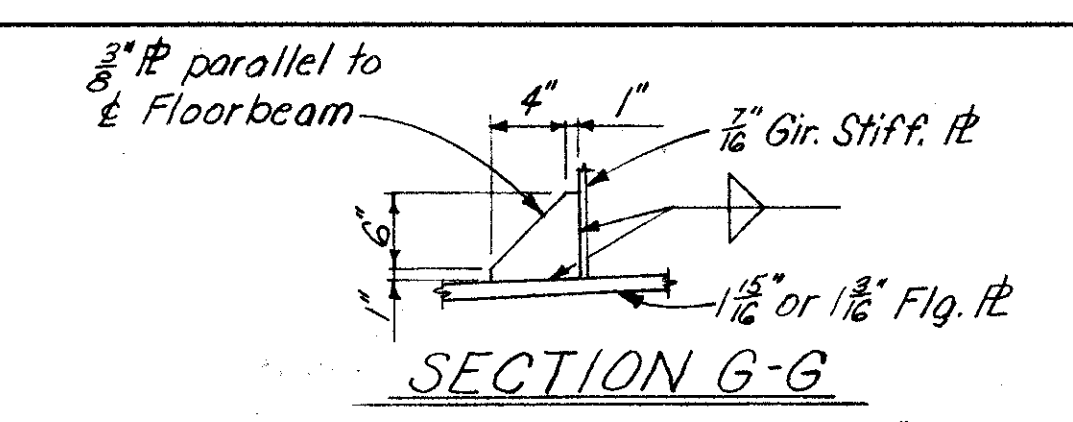
PLAN - FLOORBEAM AT PIER 2W



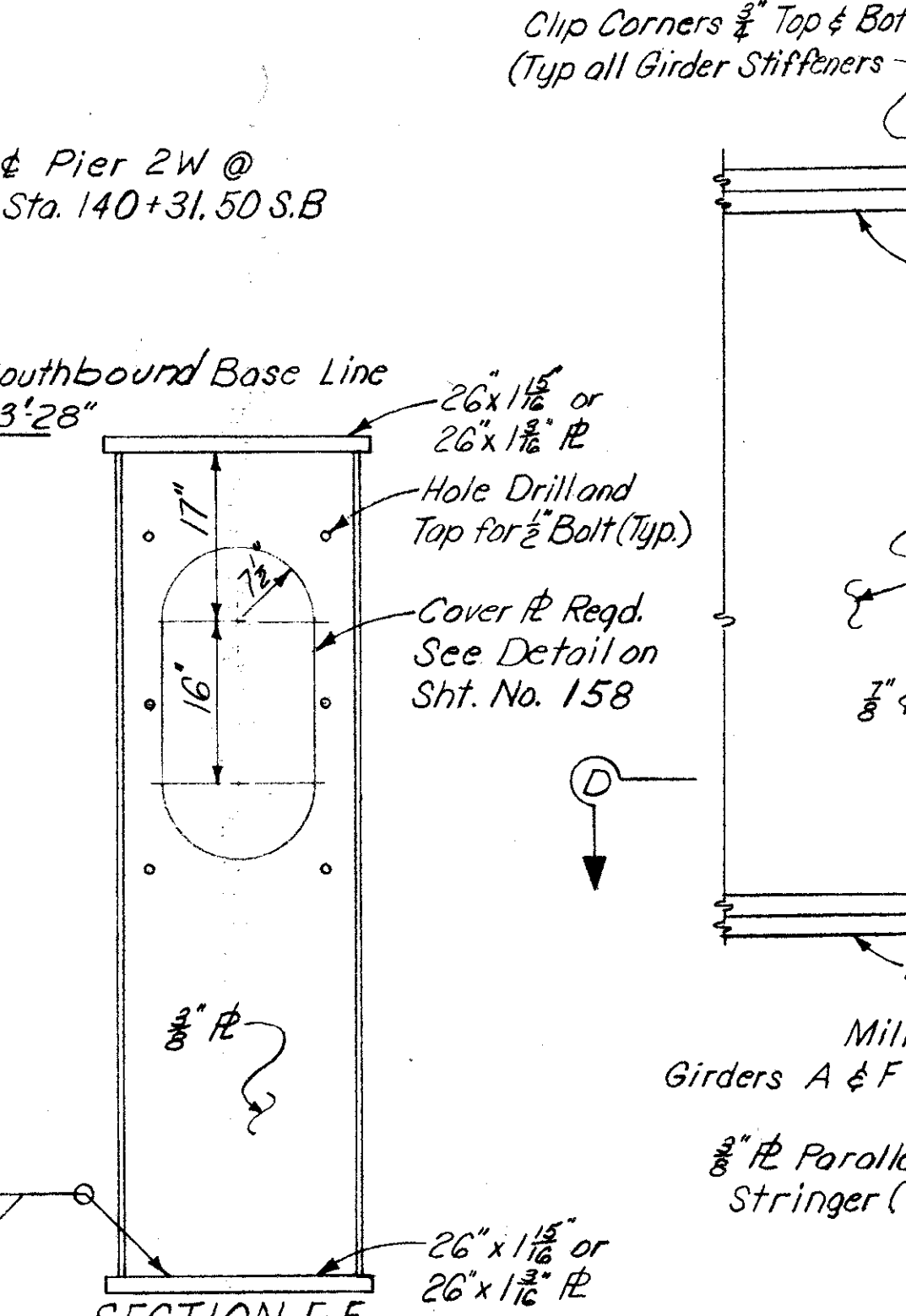
ELEVATION



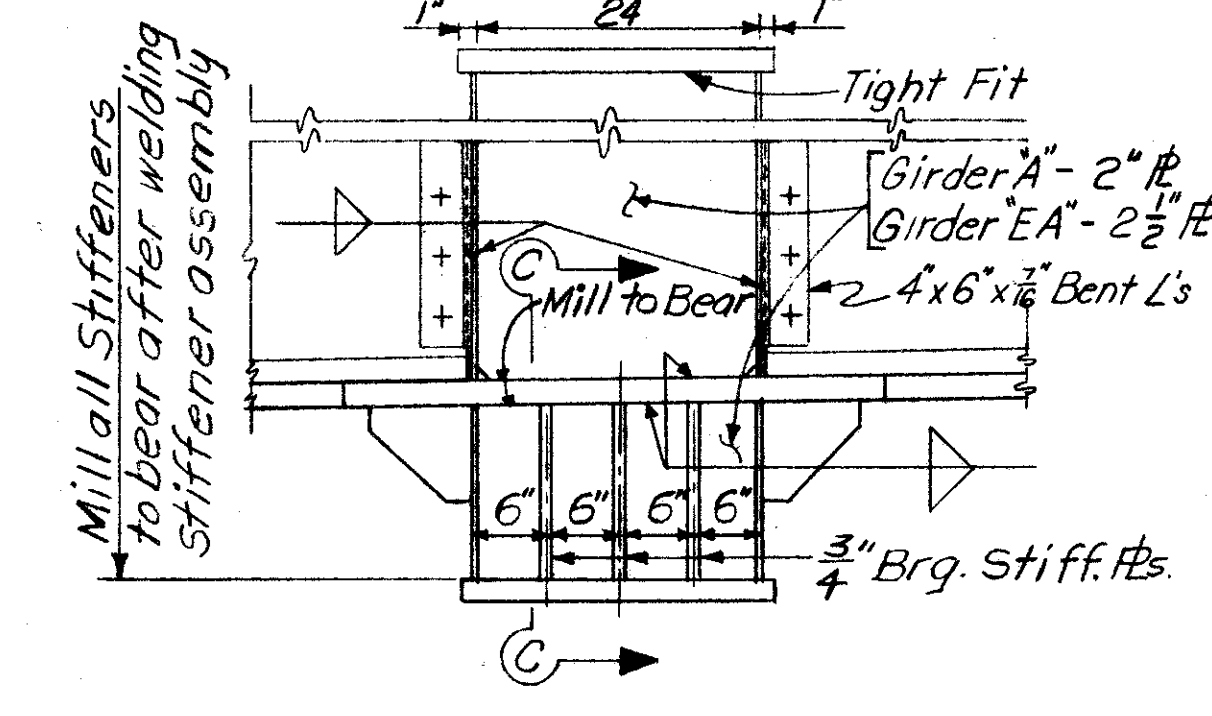
PLAN OF TOP SPLICE PLATE



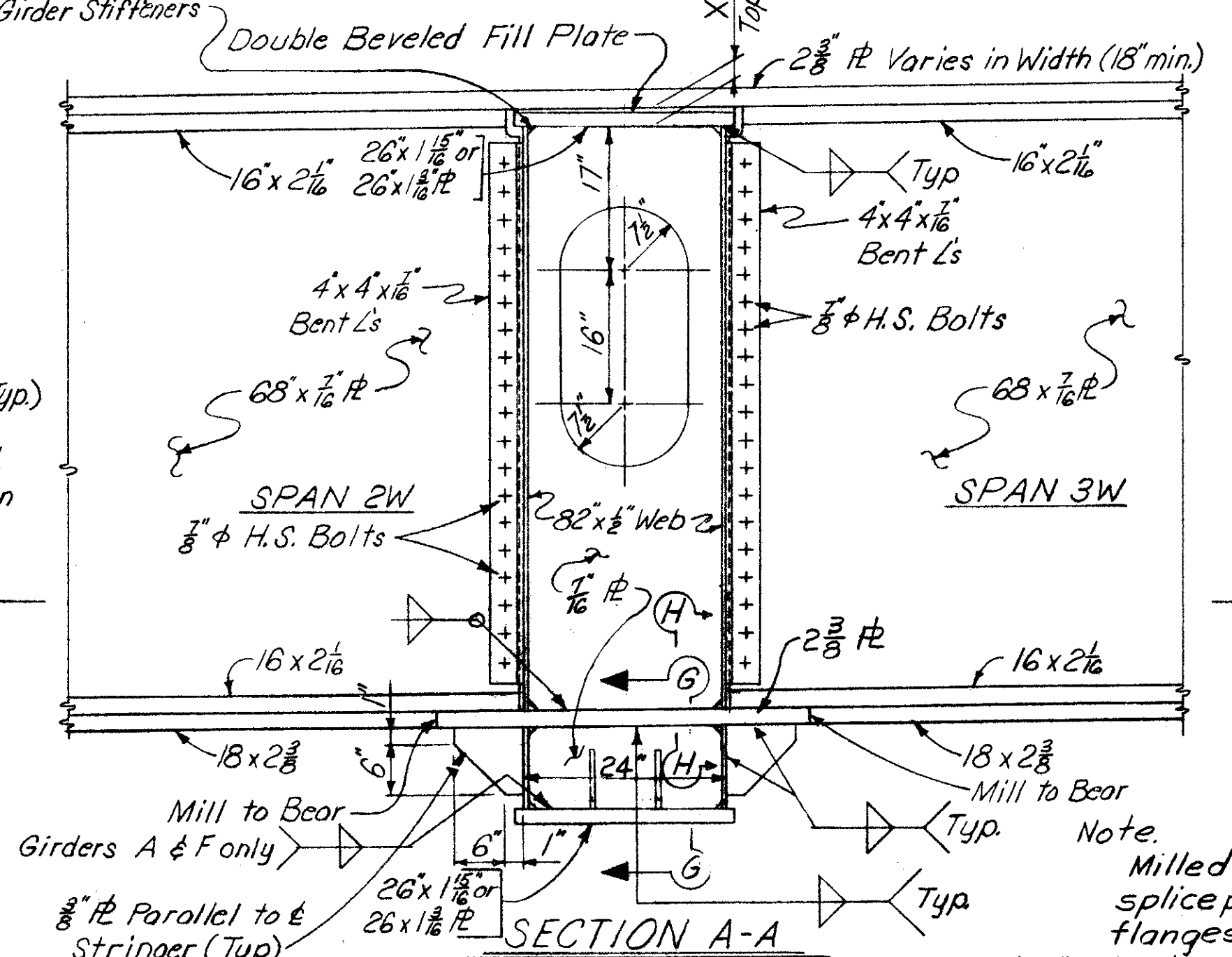
SECTION G-G



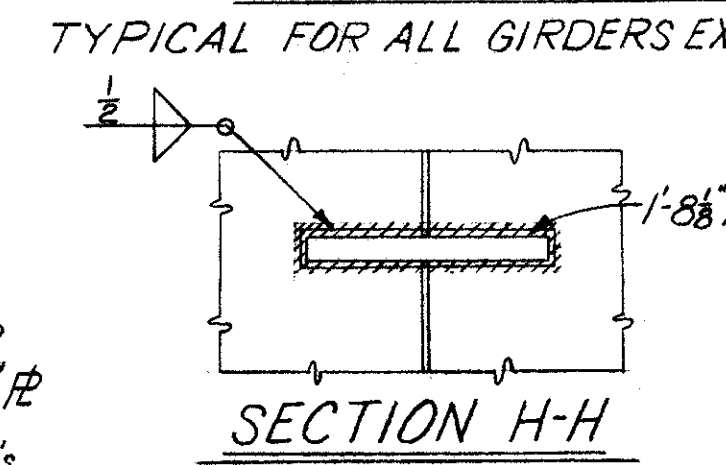
SECTION E-E



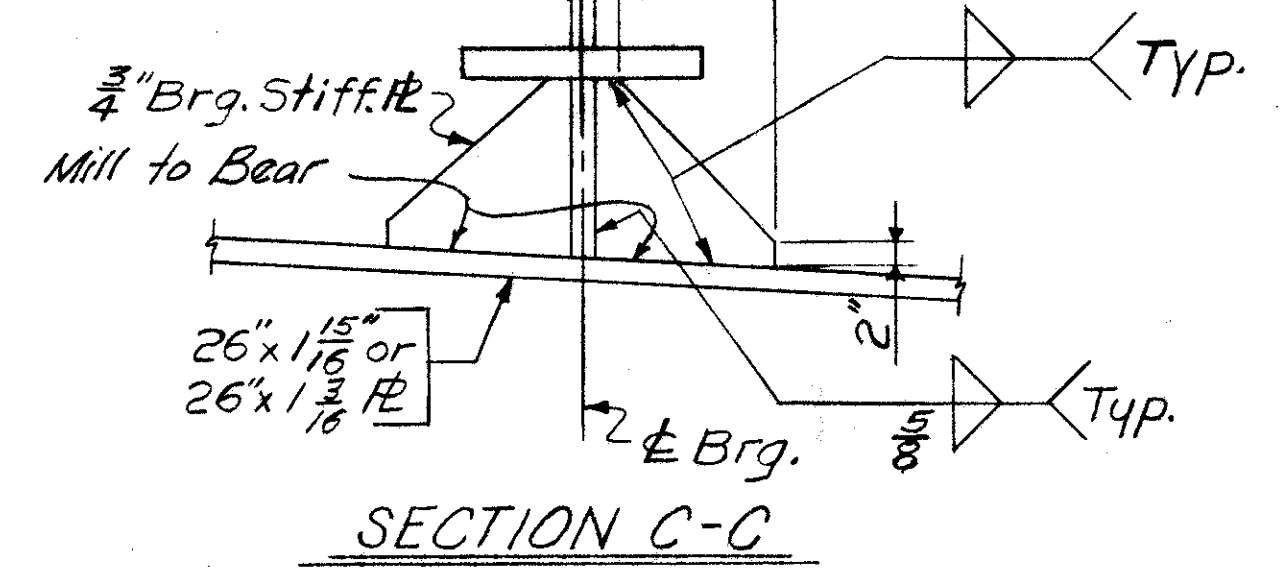
SECTION B-B
(For Details Not Shown See Section A-A)



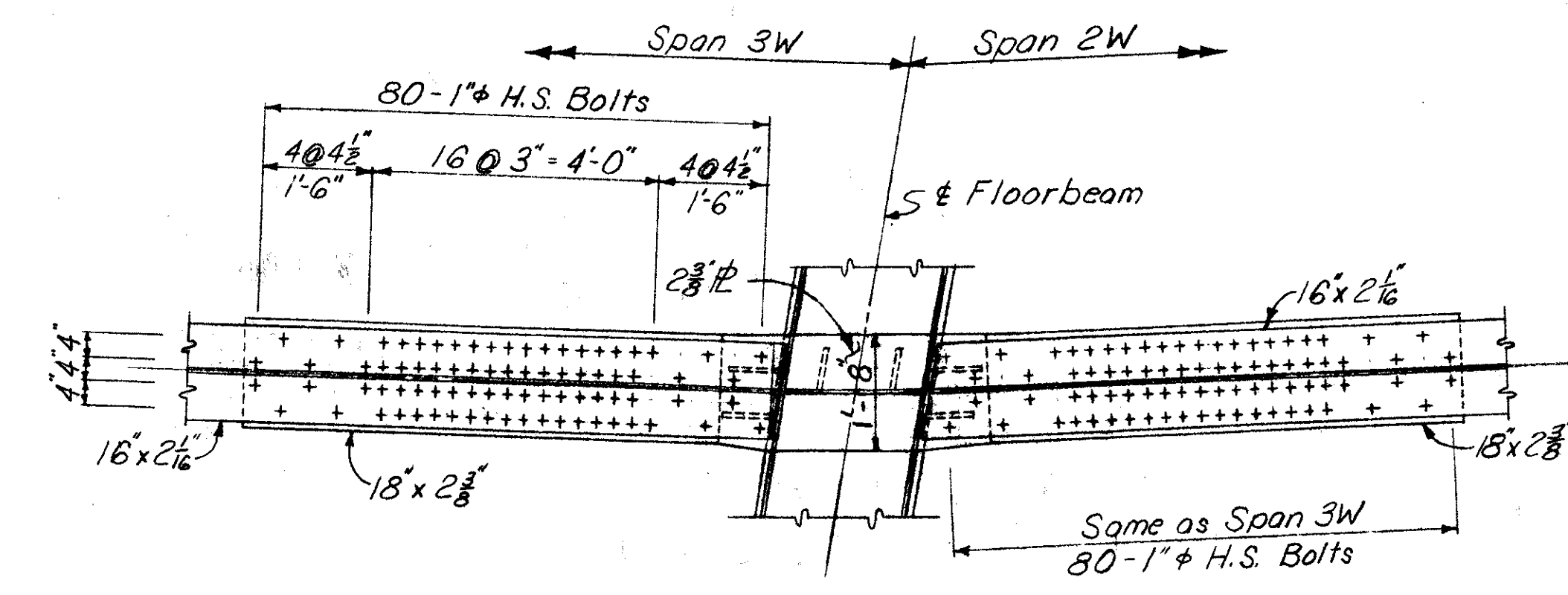
SECTION A-A



SECTION H-H



SECTION C-C



SECTION D-D

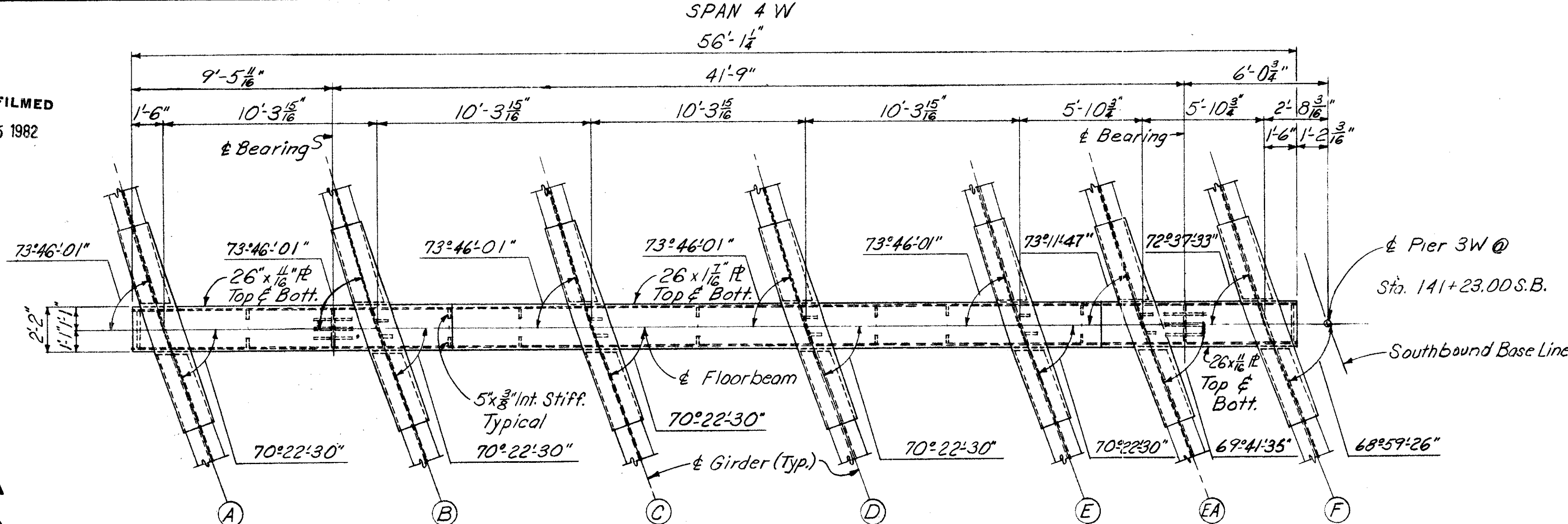
Note:
For Cover Plate Details and Section F-F
See Floorbeam 2E, Sht. No. 158
For fillet weld sizes not shown
see "TABLE OF FILLET WELD SIZES"
Sht. No. 164
For Bearing Details see Sht. No. 165

HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO					
STRUCTURAL STEEL DETAILS					
DESIGNED	D.M.B.	DRAWN	M.R.T.	TRACED	TRACED
CHECKED	Jag	REVIEWED DATE	3/22/65	REVISOR	

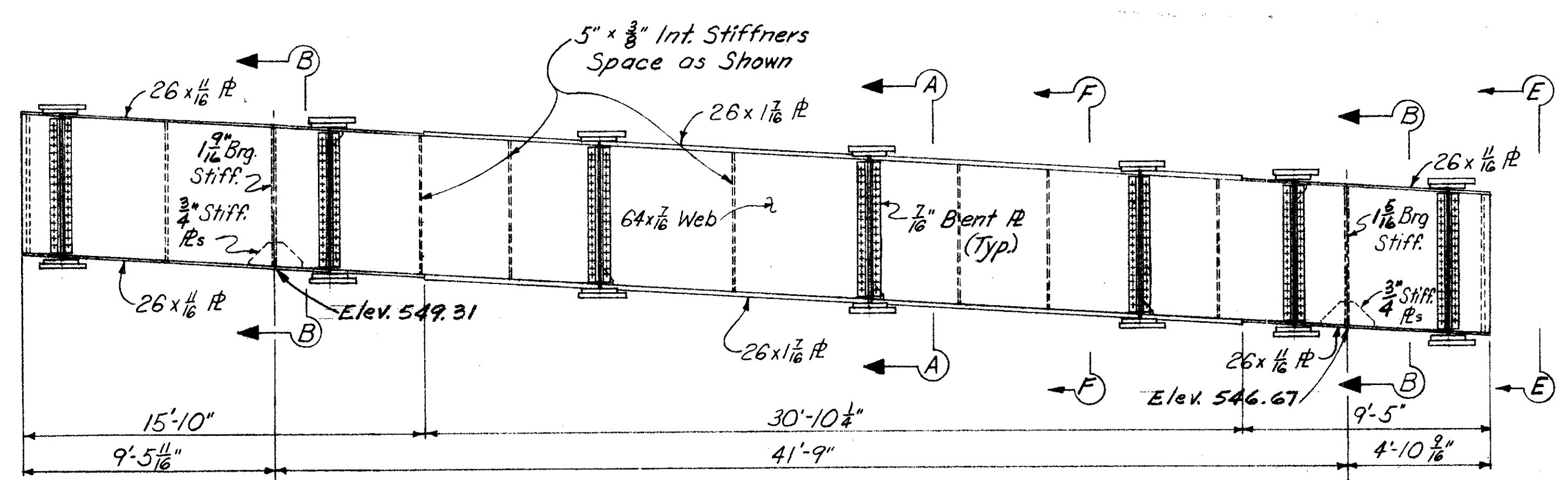
HAM-71-1.30

306 Red
151-210
Plus and purple

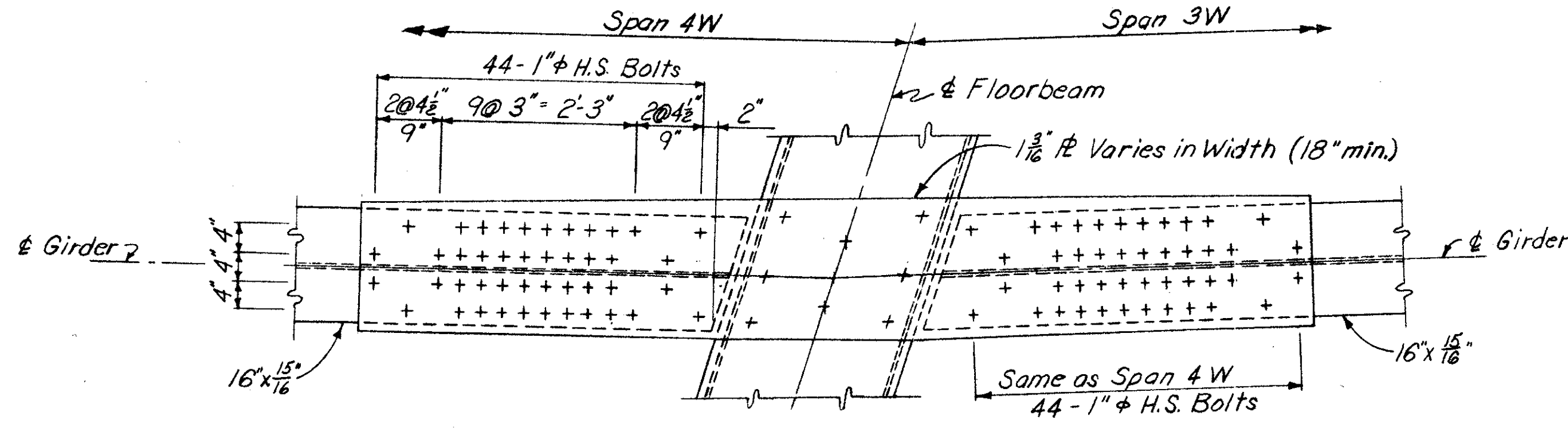
MICROFILMED
OCT 15 1982



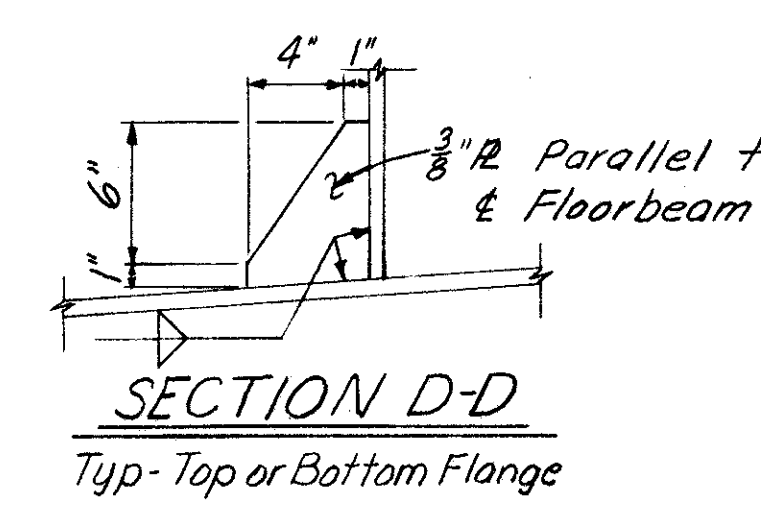
PLAN- FLOORBEAM AT PIER 3W



ELEVATION

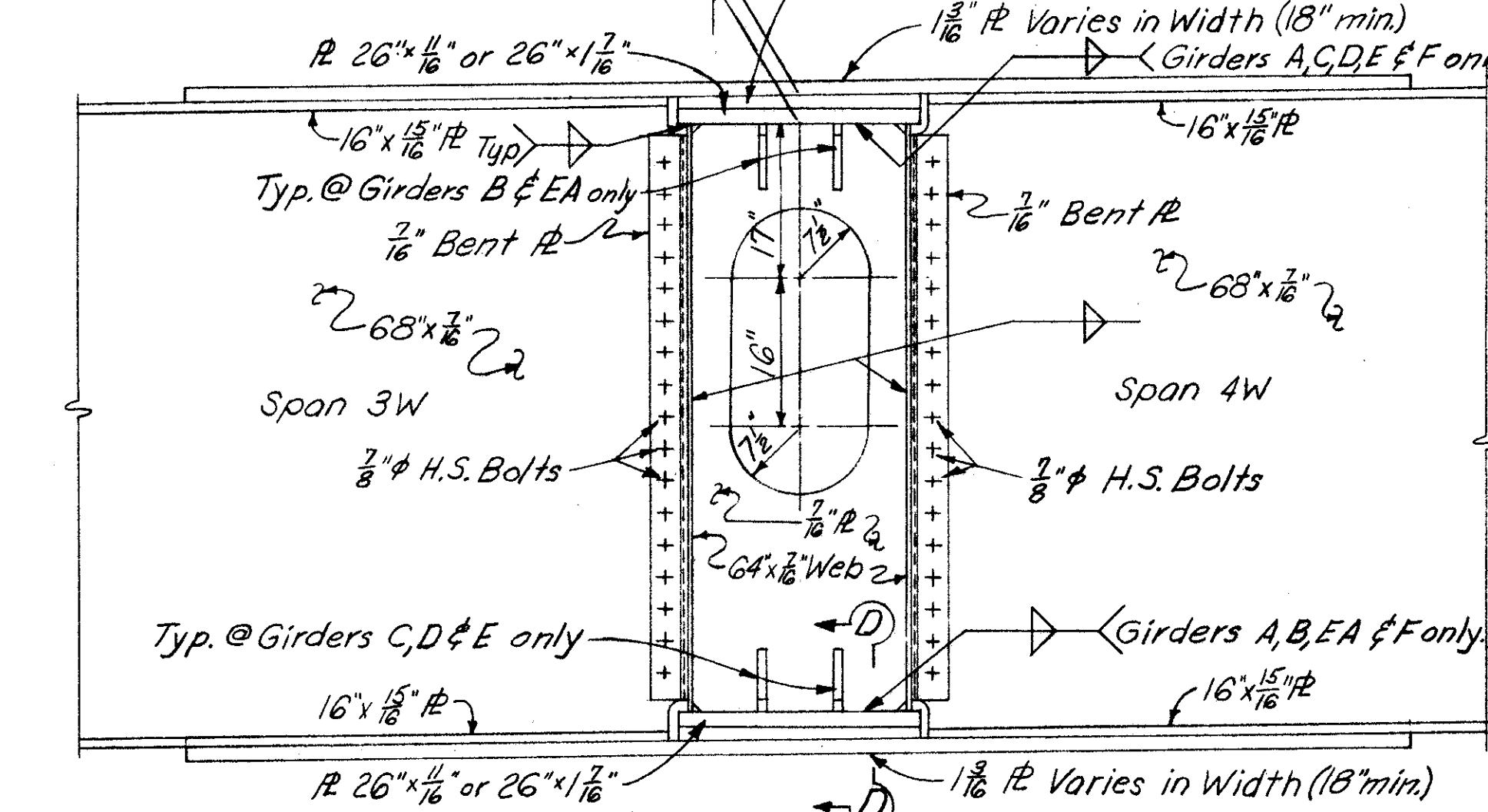


SPLICE PLATE DETAIL

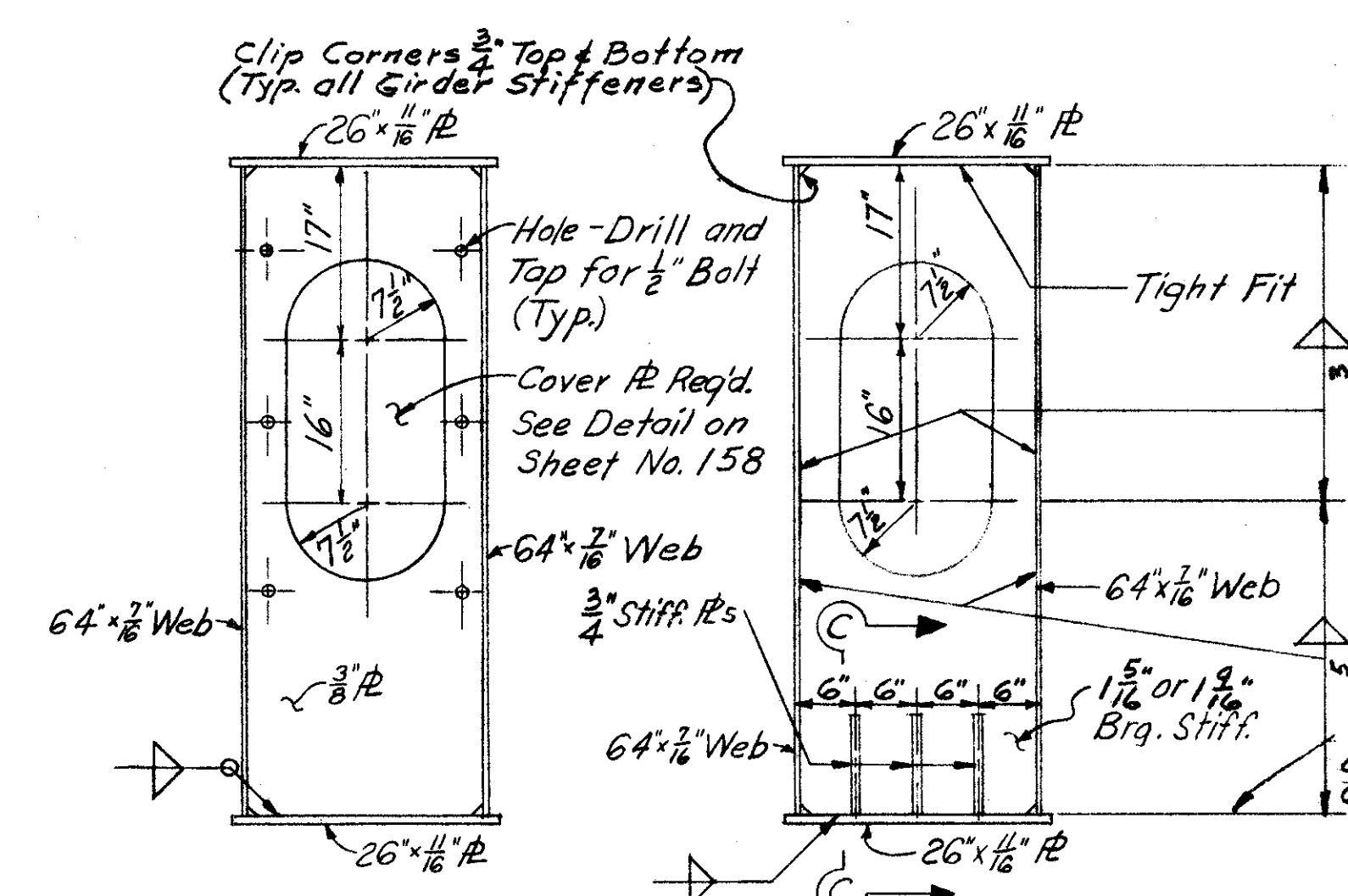


SECTION D-D

Typ- Top or Bottom Flange



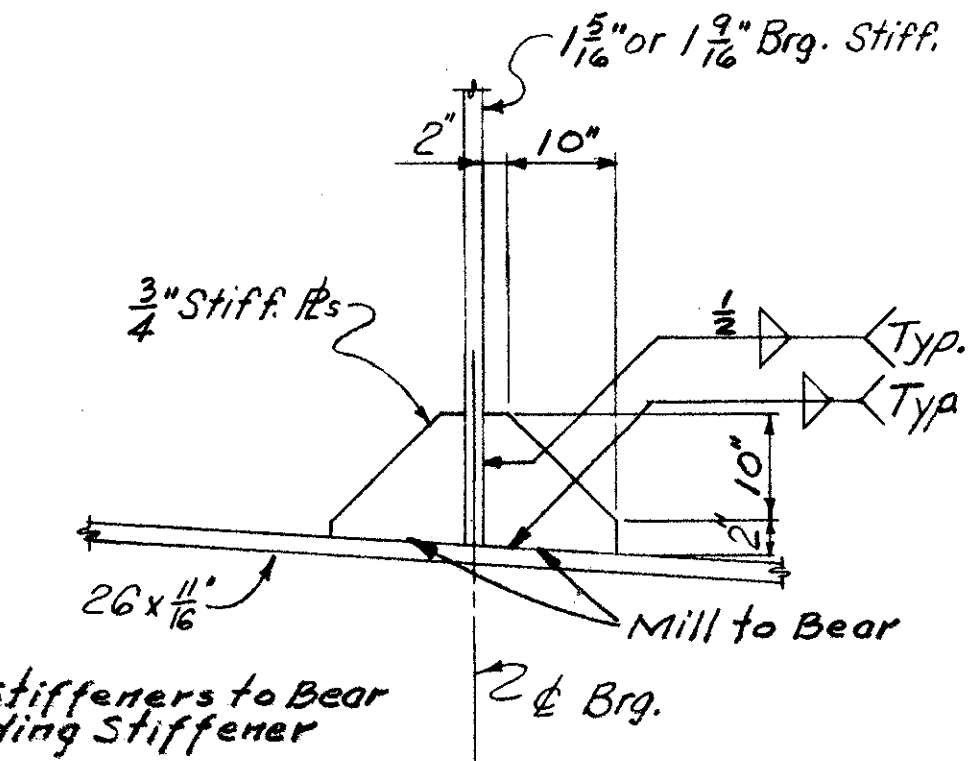
SECTION A-A



SECTION E-E

(Typ. @ Ends of Floor Beam)

SECTION B-B



SECTION C-C

Note:
For Cover Plate Details and Section F-F See
Floorbeam 2E Sht. No. 158
For Fillet Weld Sizes not shown, See "TABLE OF
FILLET WELD SIZES" Sht. No. 164
For Bearing Details see sht. No. 165

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

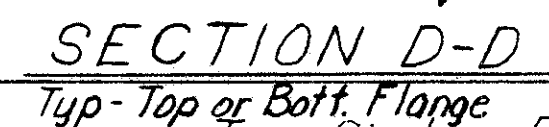
STRUCTURAL STEEL DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVIEWED
G.W.R.	W.R.T.		Jag	3/22/65	

4" 1" 6" 1" $\frac{3}{8}$ " $\varnothing$ Parallel to $\pm$ Floor beam

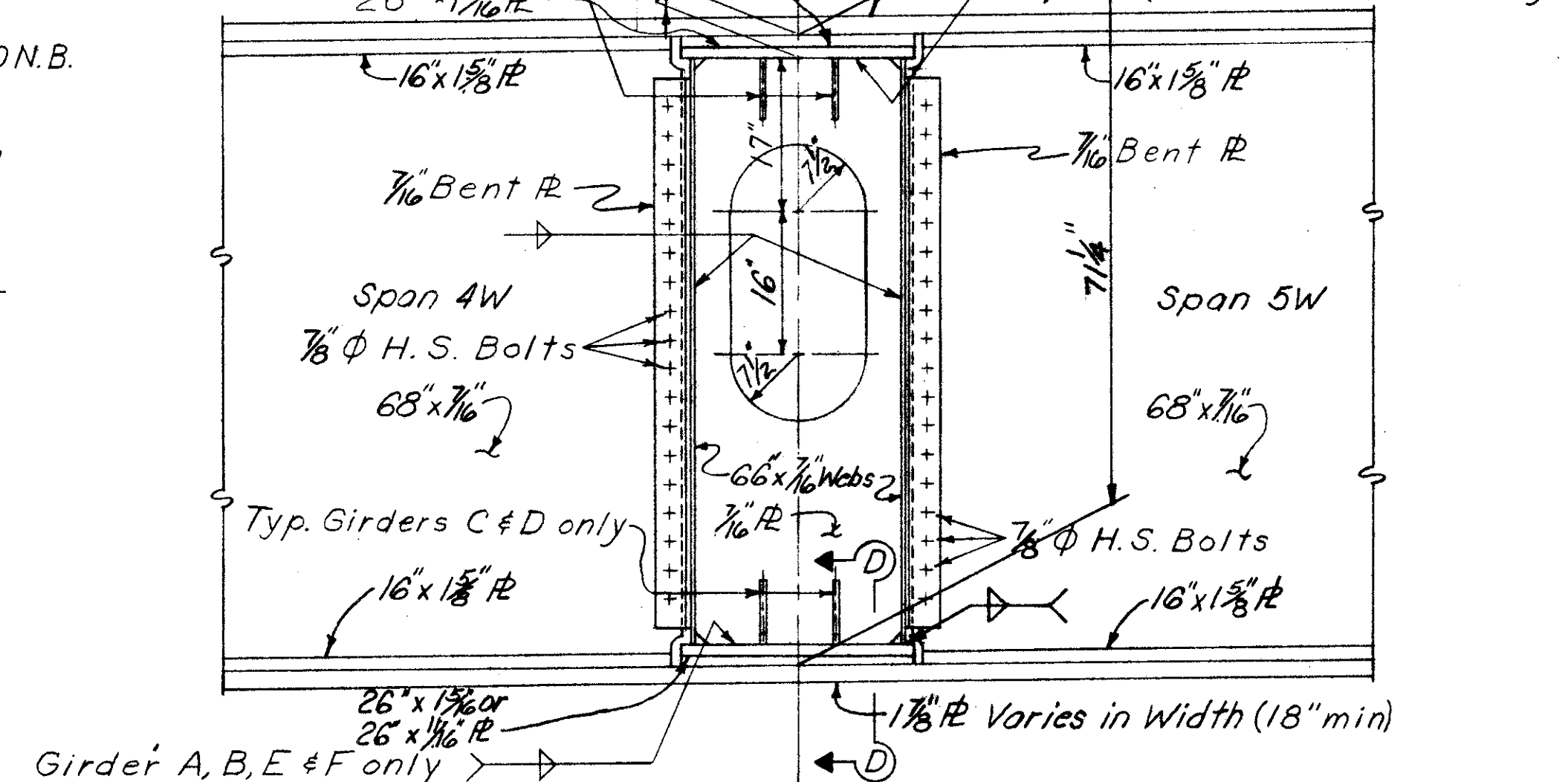
Stringer	A	B	C	D	E	F
Dimension X	25 ⁵ / ₁₆	23 ³ / ₁₆	24 ¹ / ₄	24 ¹ / ₄	23 ³ / ₁₆	25 ⁵ / ₁₆

Double Beveled Fill @ Top and Bottom
18" @ Varies in Width (18" min.)
Girder A, C, D & E only

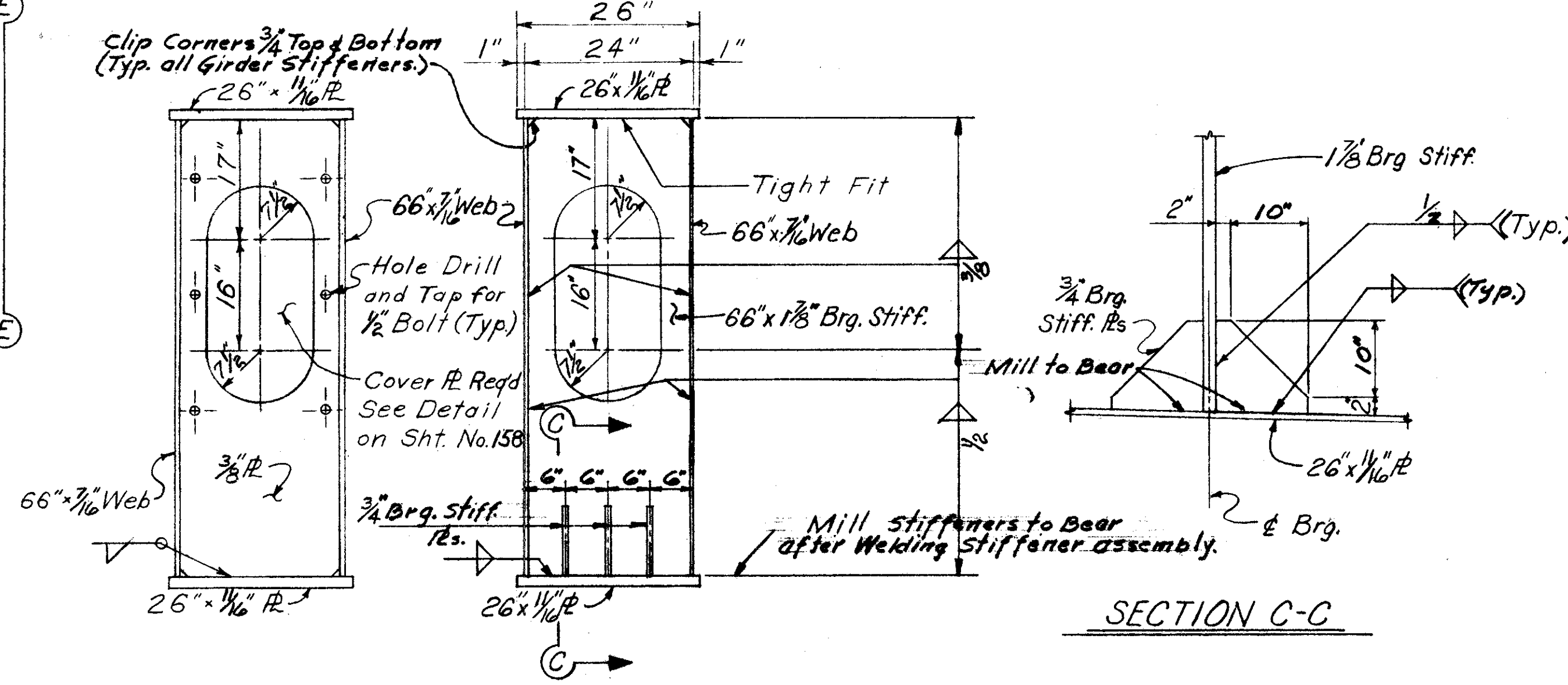


SECTION D-D
Typ - Top or Bott. Flange

Typ. Girders E
26
26



SECTION A-A (Typical @ all Girders)



SECTION C-C

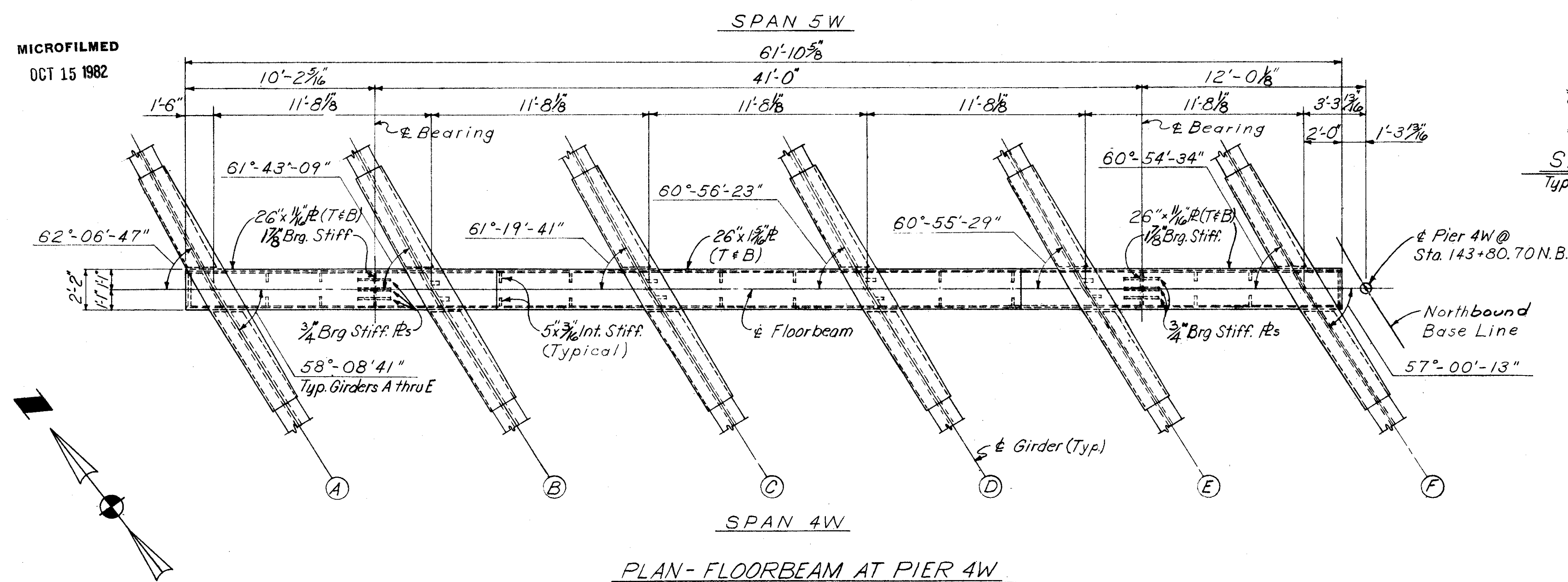
SECTION E-E
(Typ. @ Ends of Floorbeams)

SECTION B-B

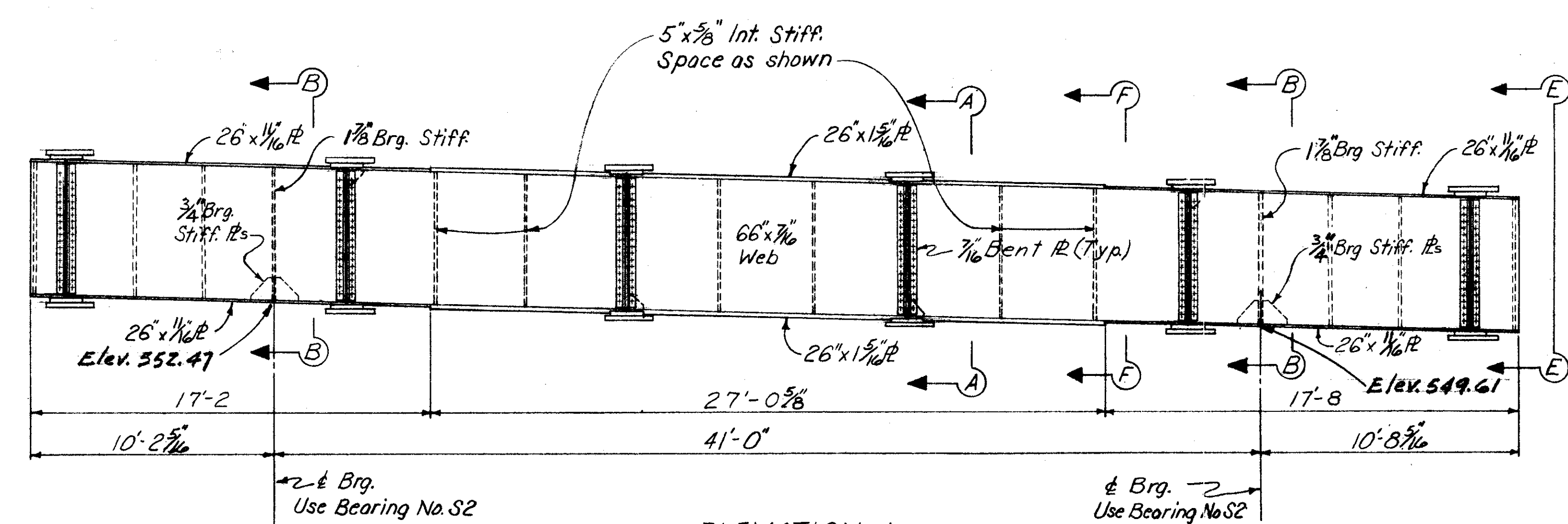
Note:
For Cover Plate Details and Section FF
See Floor Beam 2E Sht. No. 158
For fillet Weld Sizes not shown, See TABLE
OF FILLET WELD SIZES" Sht. No. 164
For Bearing Details see sht. no. 165

STRUCTURAL STEEL DETAILS

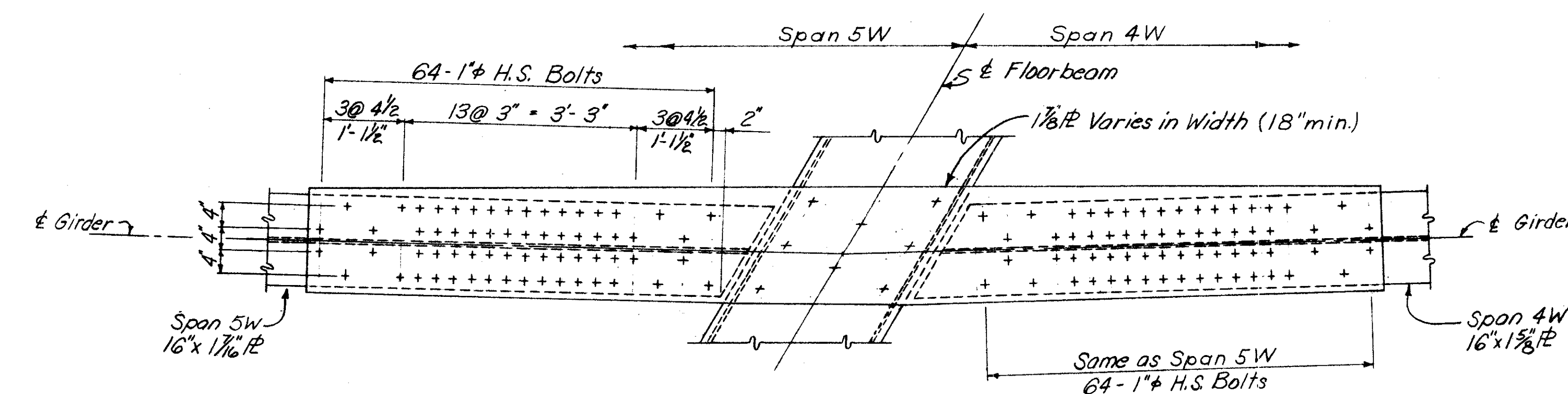
DESIGNED D.M.B.	DRAWN W.R.T. 1-25-65	TRACED	CHECKED Jag 2-2-65	REVIEWED DATE JHO 3/22/65	REVISION
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PLAN - FLOORBEAM AT PIER 4W

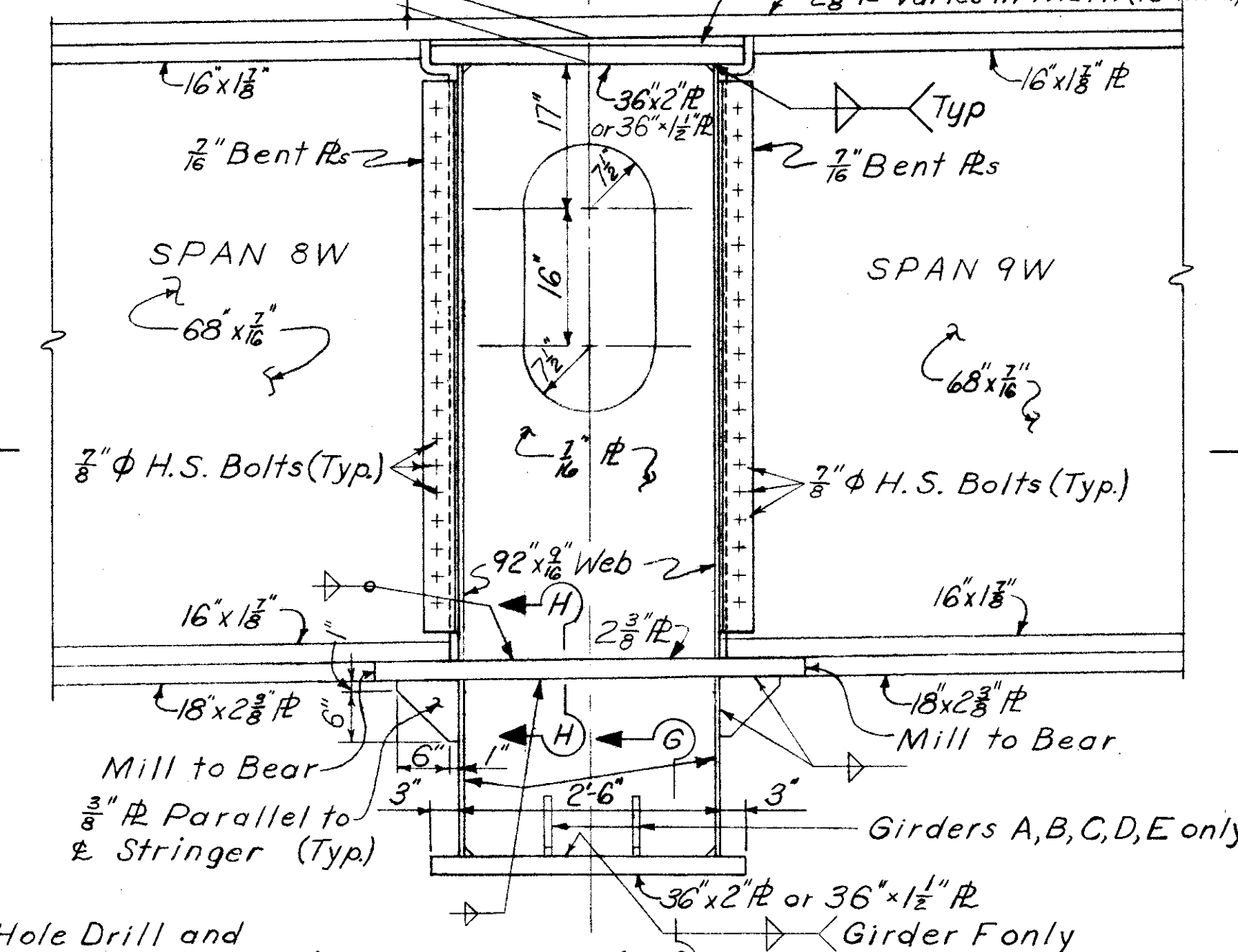
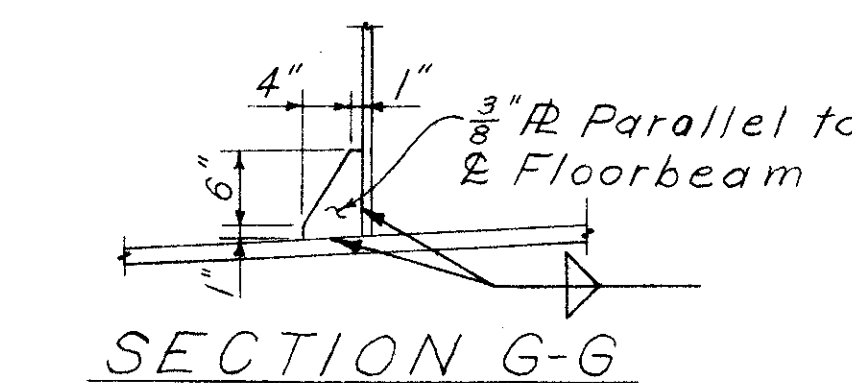


ELEVATION

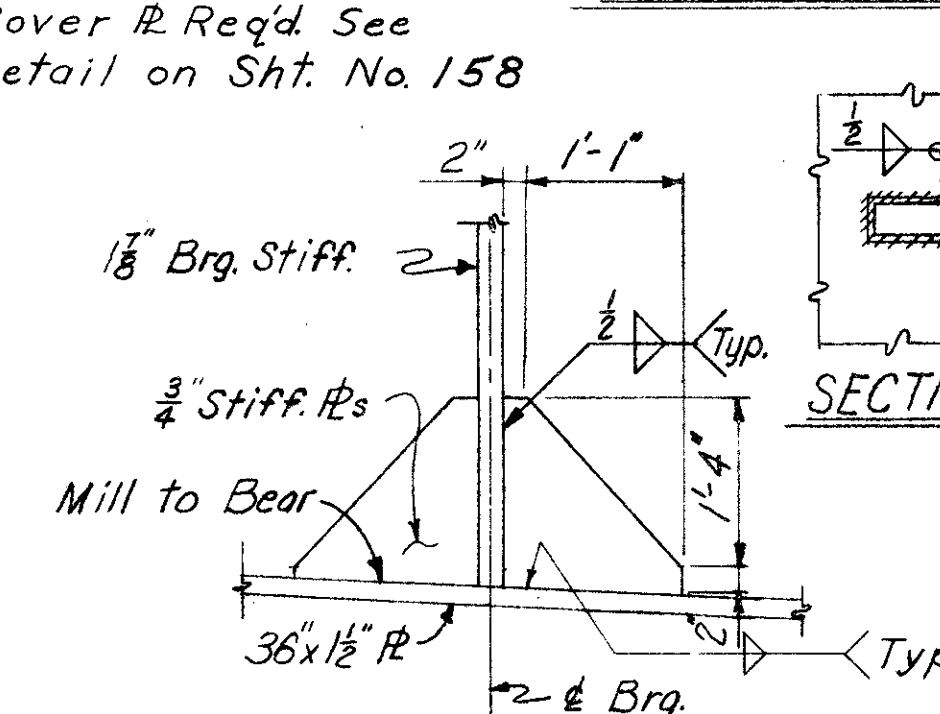


SPLICE PLATE DETAIL

Stringer	A	B	C	D	E	F
Dimension X	3 1/8"	3 1/8"	3 1/8"	3 1/8"	3 1/8"	3 1/8"

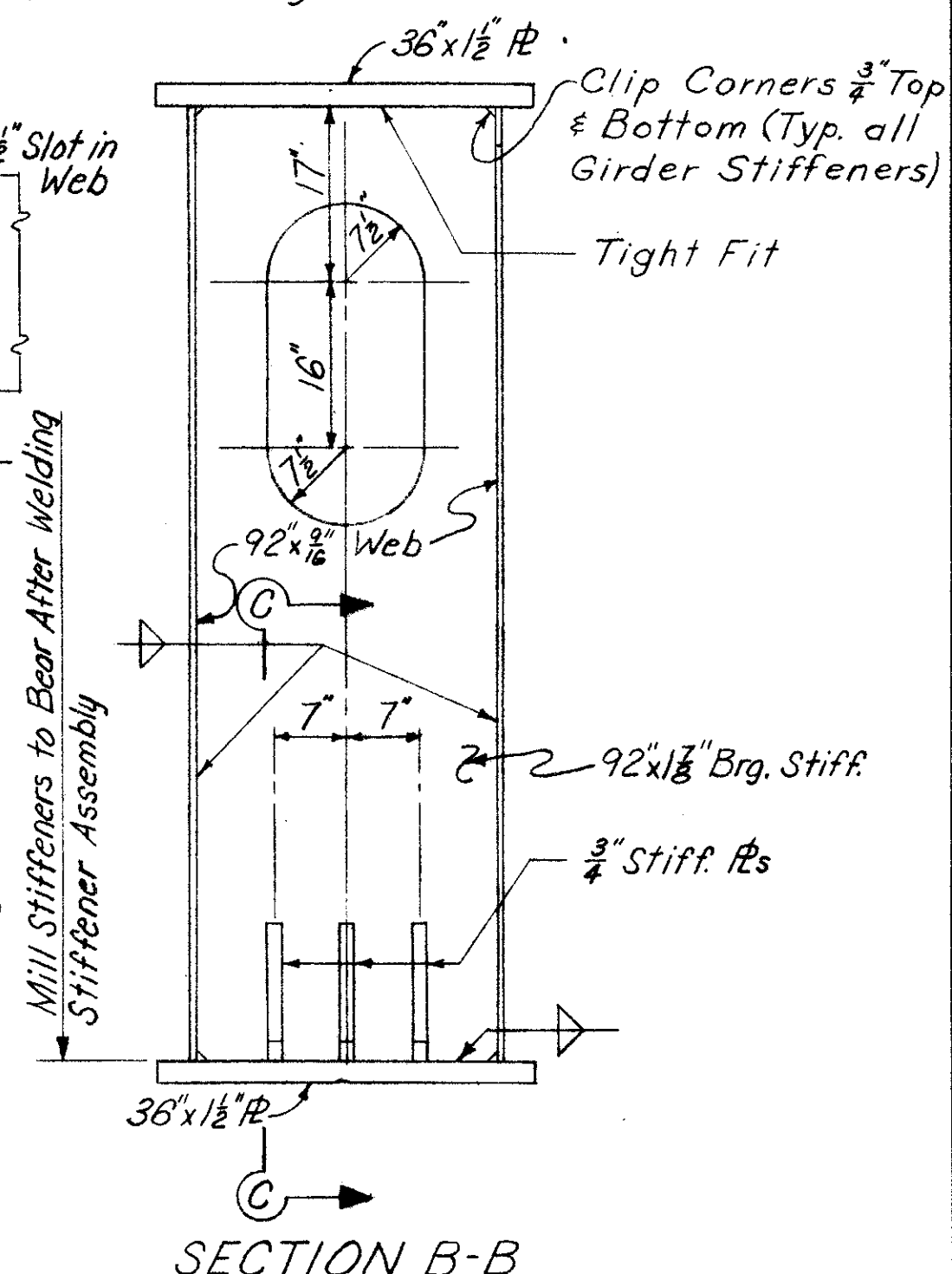


SECTION A-A

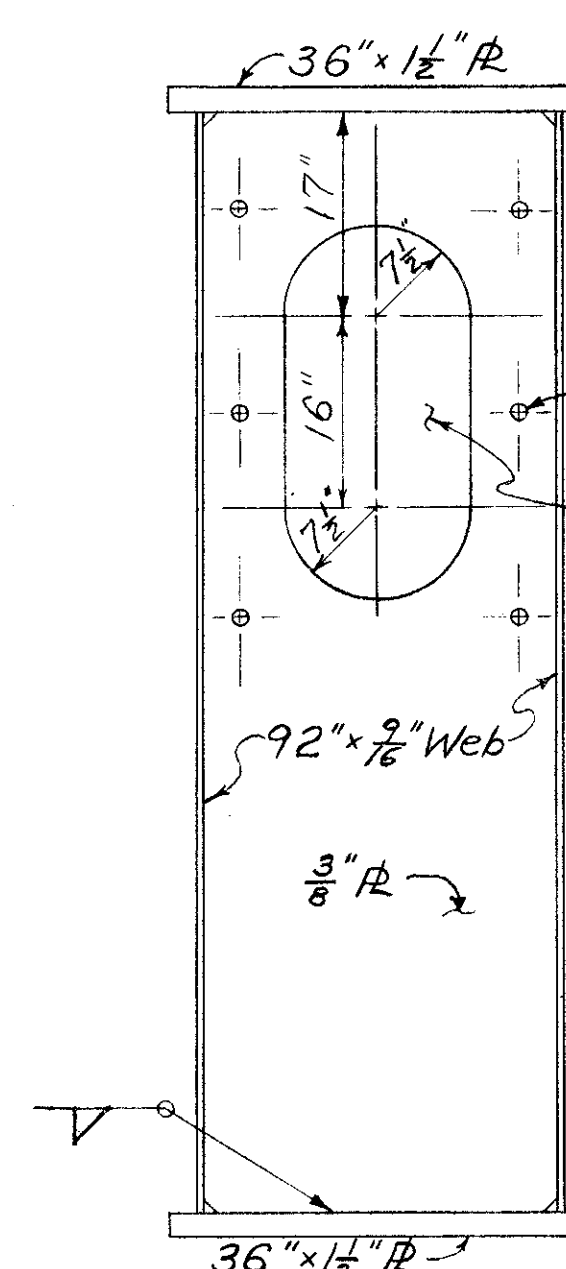


SECTION C-C

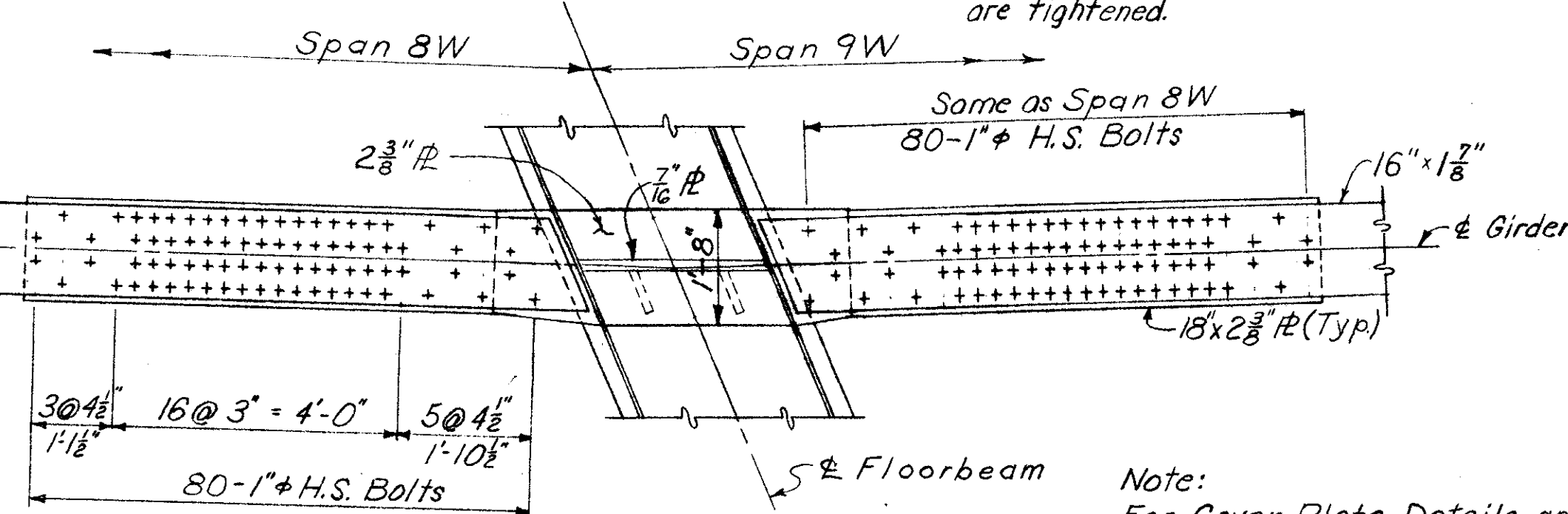
Note: Milled ends of compression splice plates on bottom flanges of girders shall be brought to full bearing against milled ends of pier girder brackets before bolts are tightened.



SECTION B-B

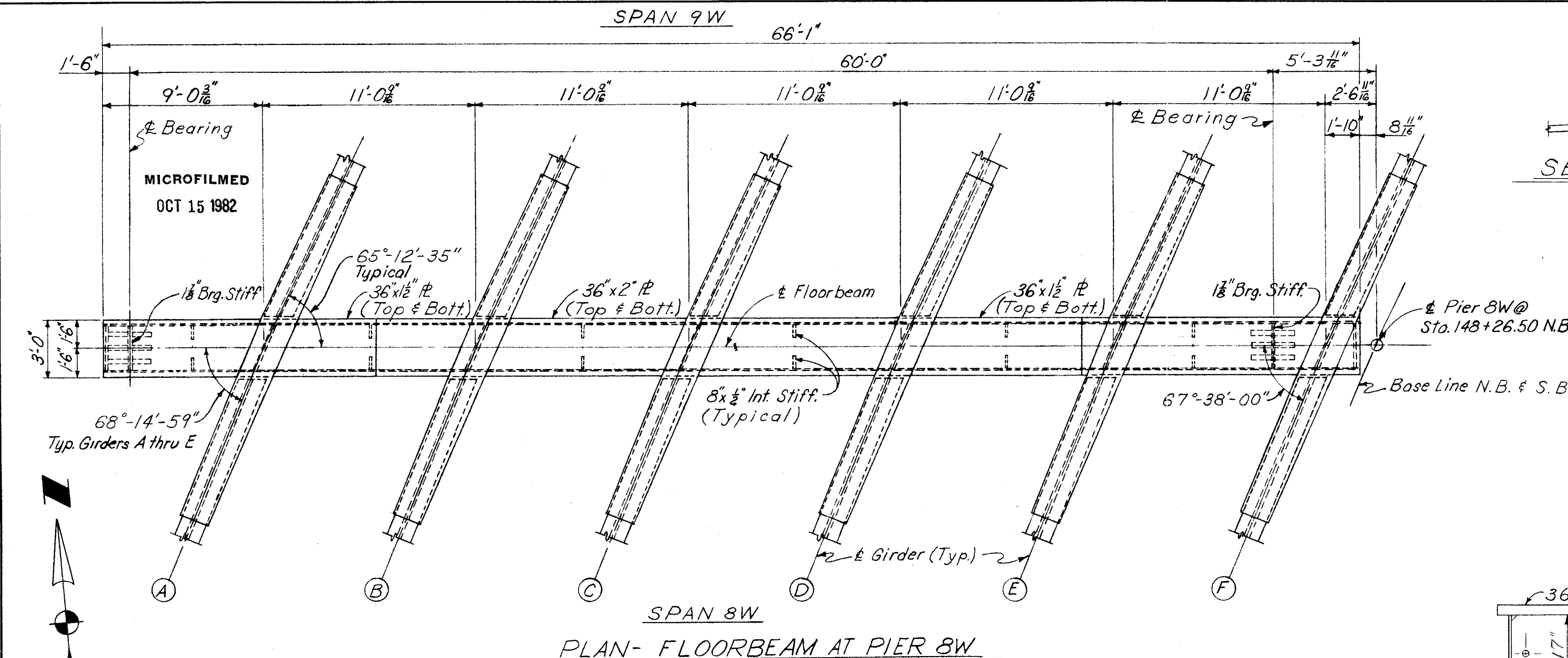


SECTION E-E
(Typ. @ Ends of Floorbeam)

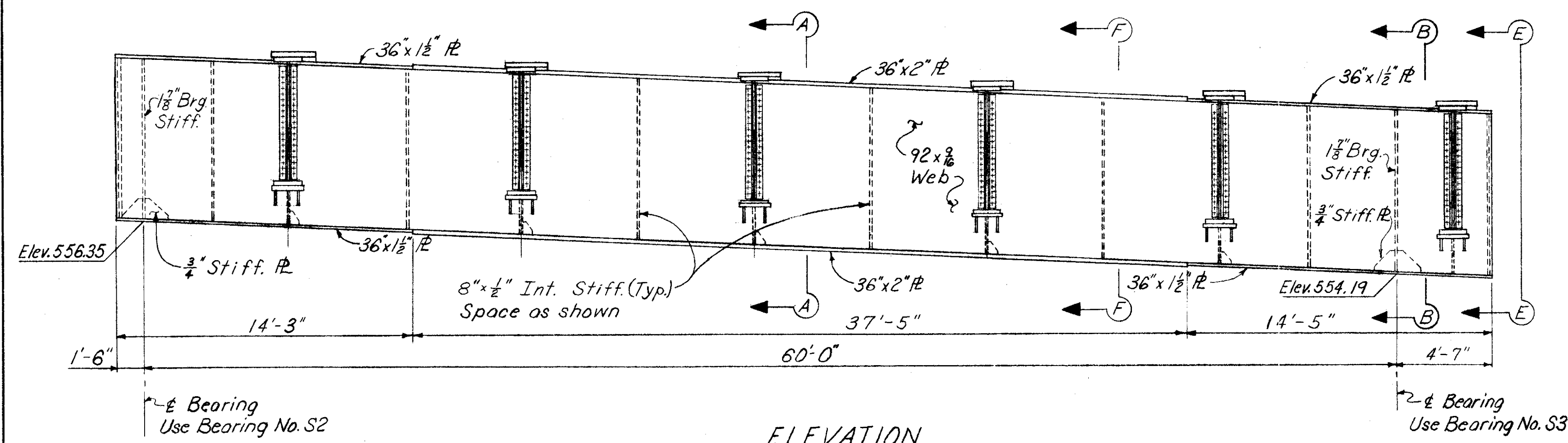


SECTION D-D

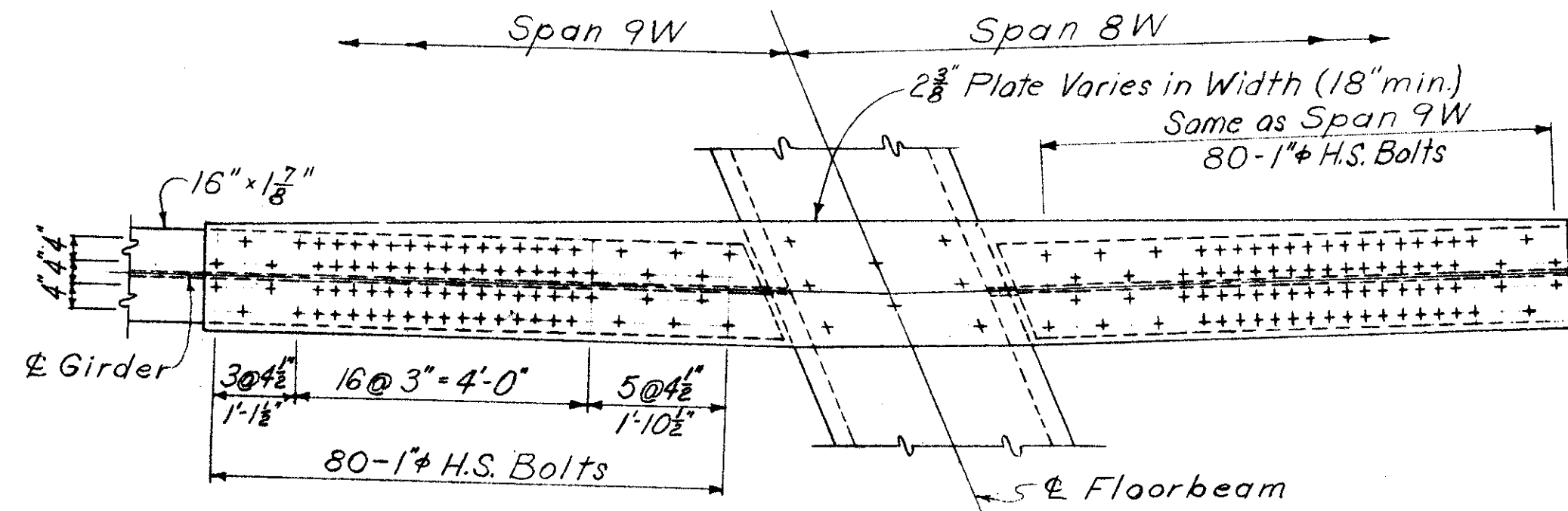
Note:
For Cover Plate Details and Section FF See Floorbeam 2E Sht. No. 158
For fillet Weld Sizes not shown see "TABLE OF FILLET WELD SIZES"
Sht. No. 164
For Bearing Details see sht. 165



PLAN- FLOORBEAM AT PIER 8W



ELEVATION



PLAN OF TOP SPLICE PLATE

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

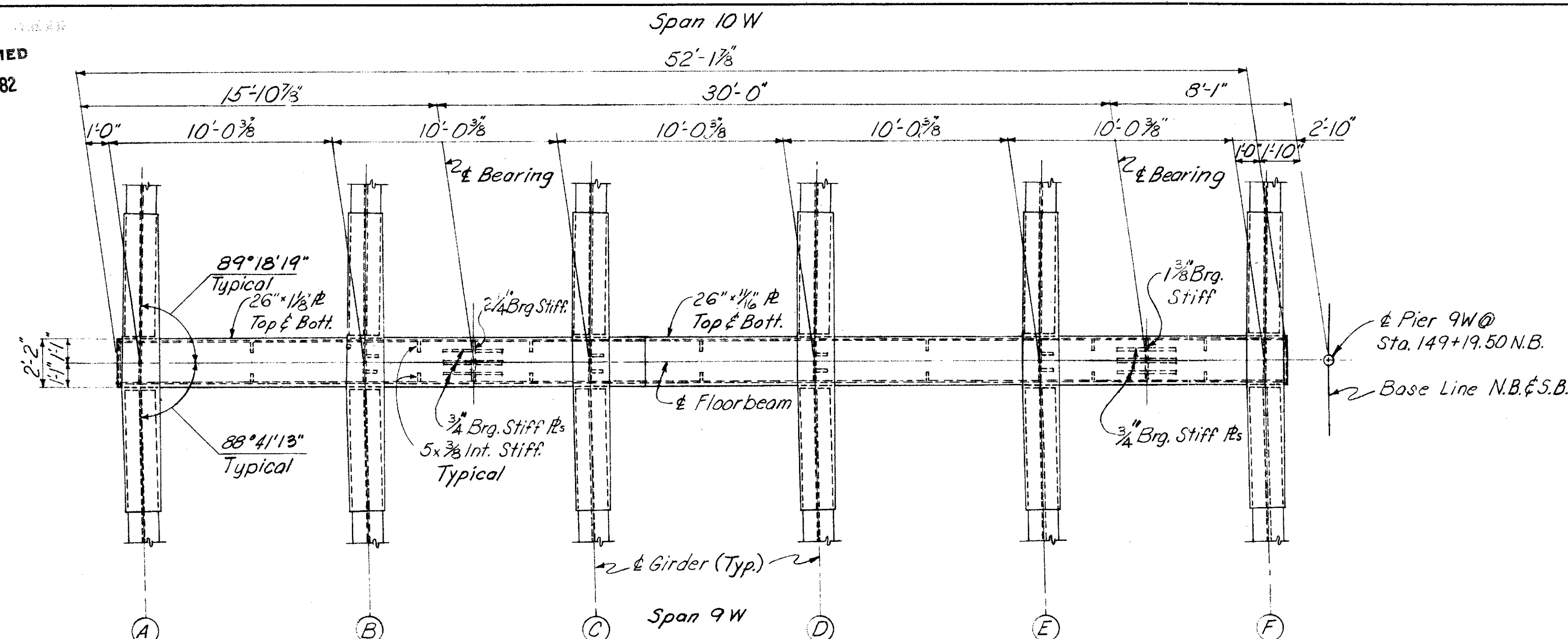
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVIEWED
Jag	W.R.T.		Jag	JH0 3/22/65	

MICROFILMED
OCT 15 1982

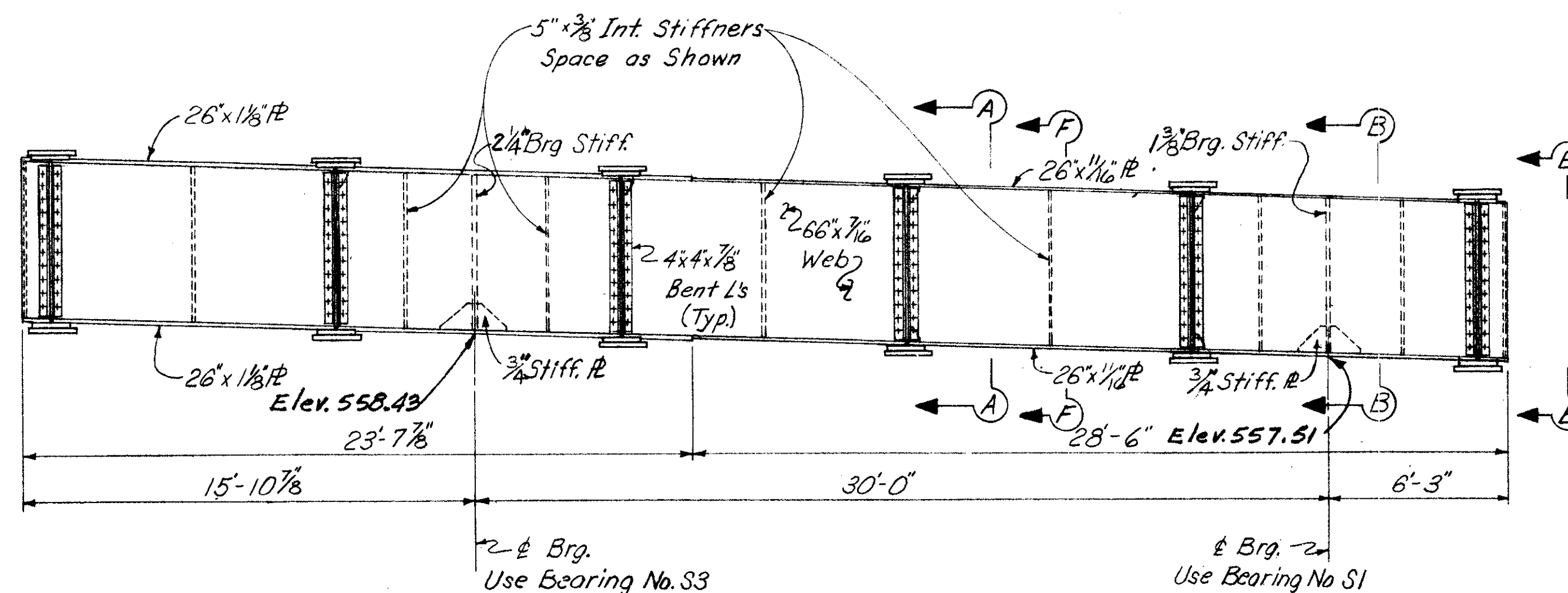
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAM-71-1.80

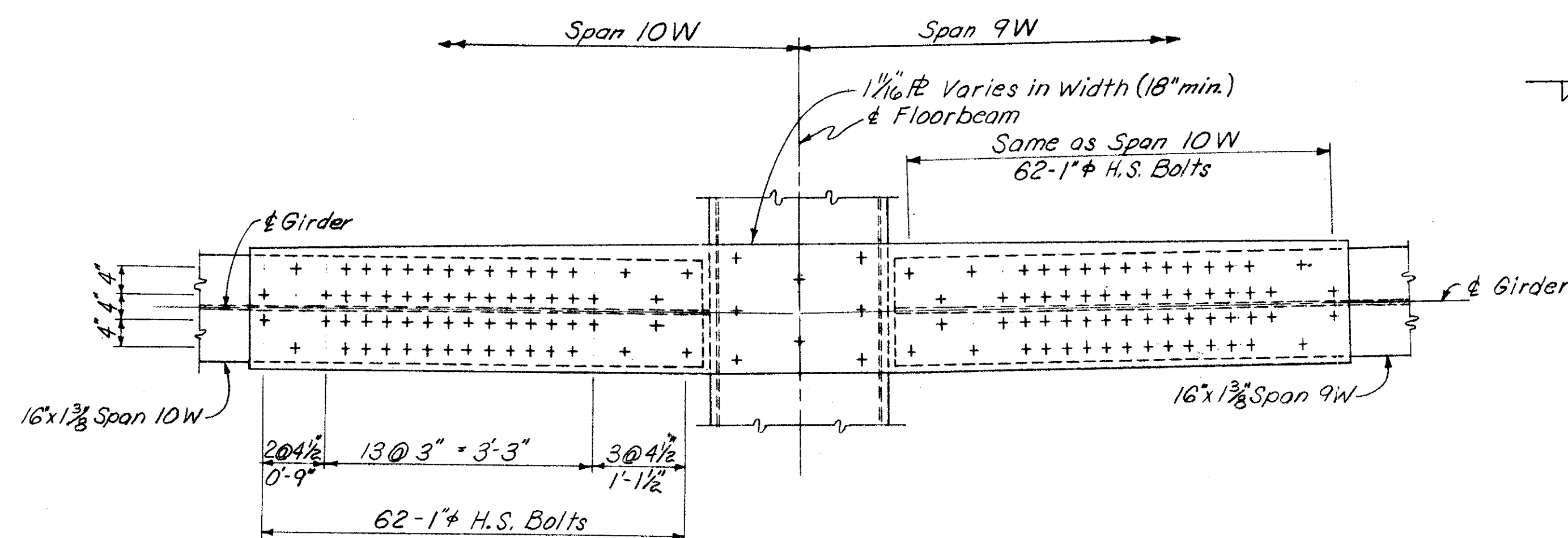
156
210



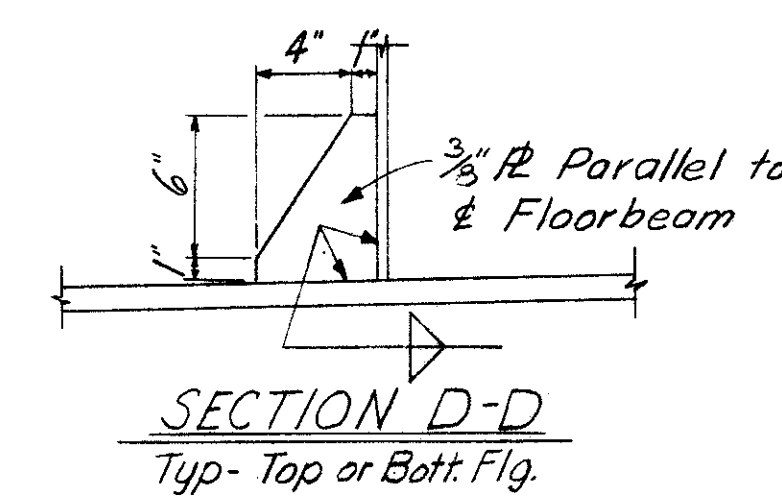
PLAN - FLOORBEAM AT PIER 9W



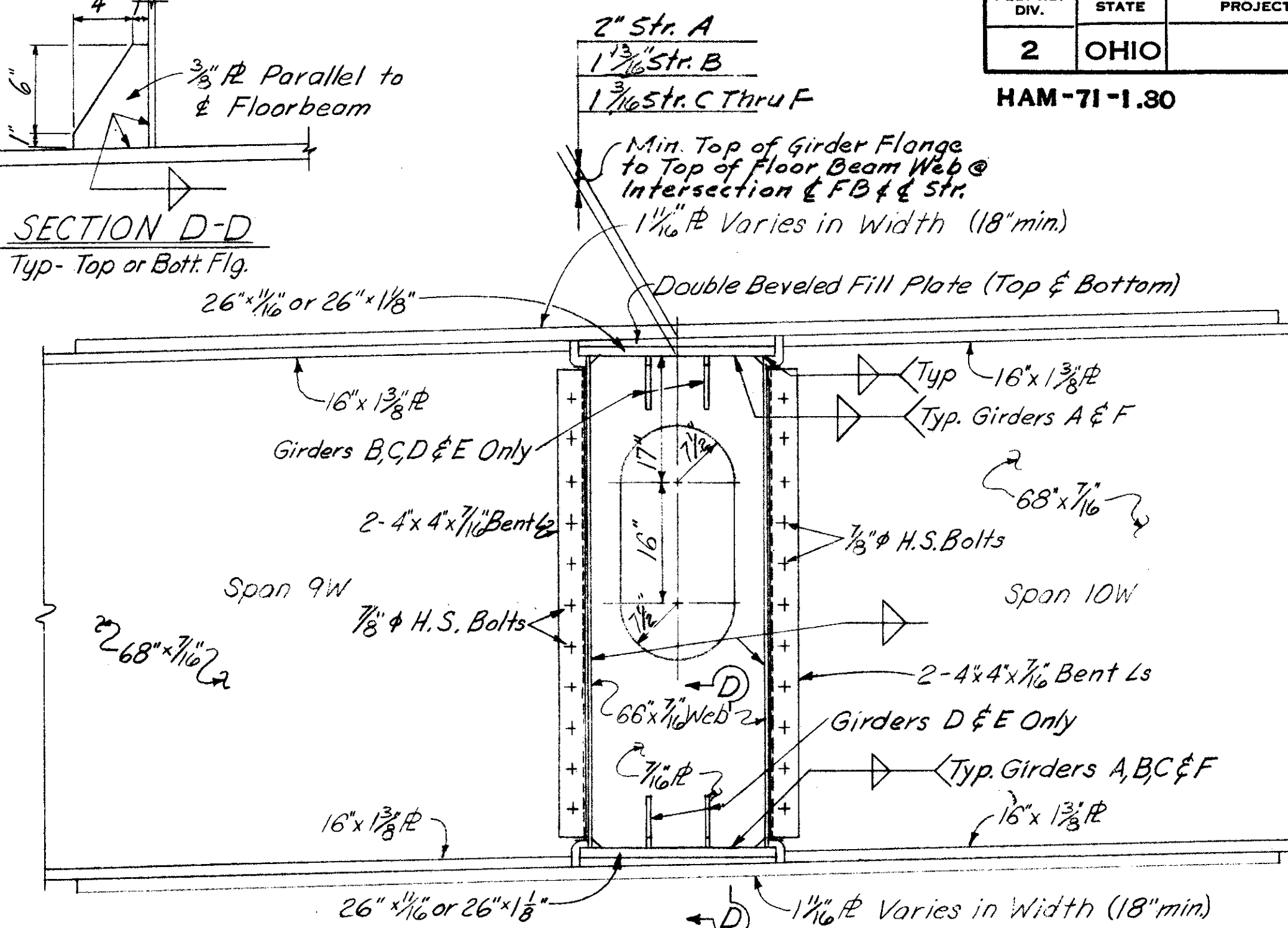
ELEVATION



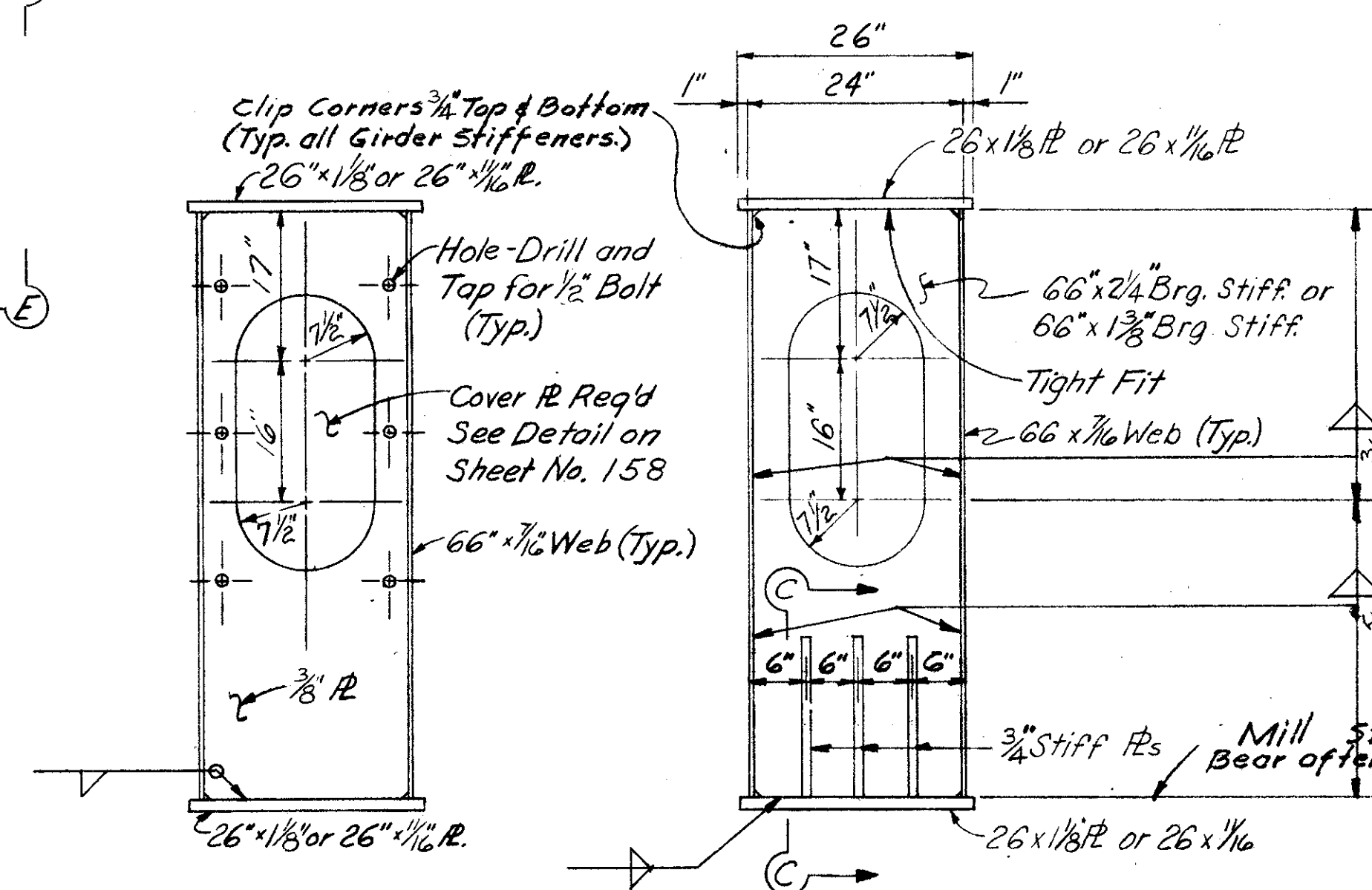
SPLICE PLATE DETAIL



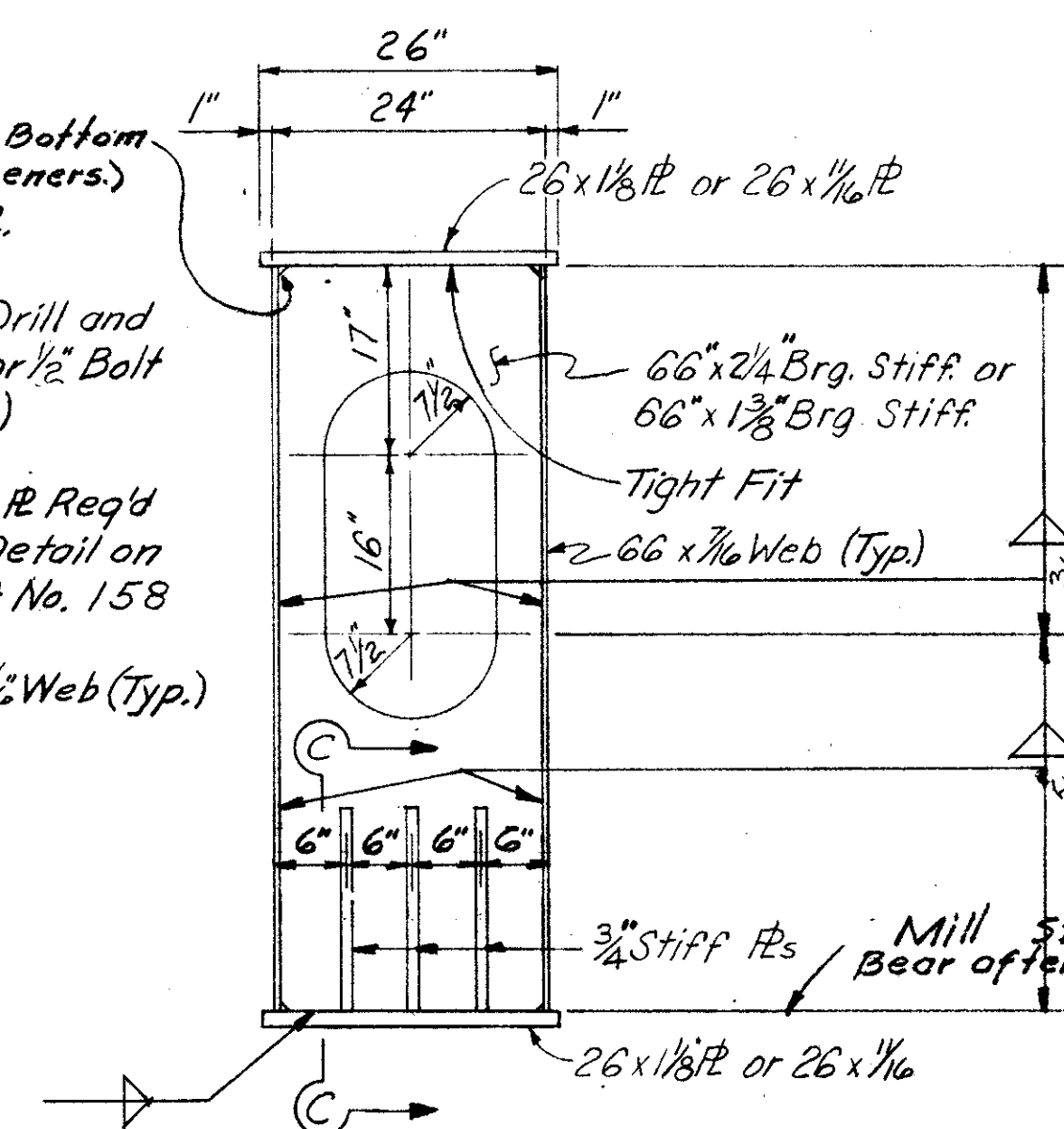
SECTION D-D
Typ - Top or Bott. Flg.



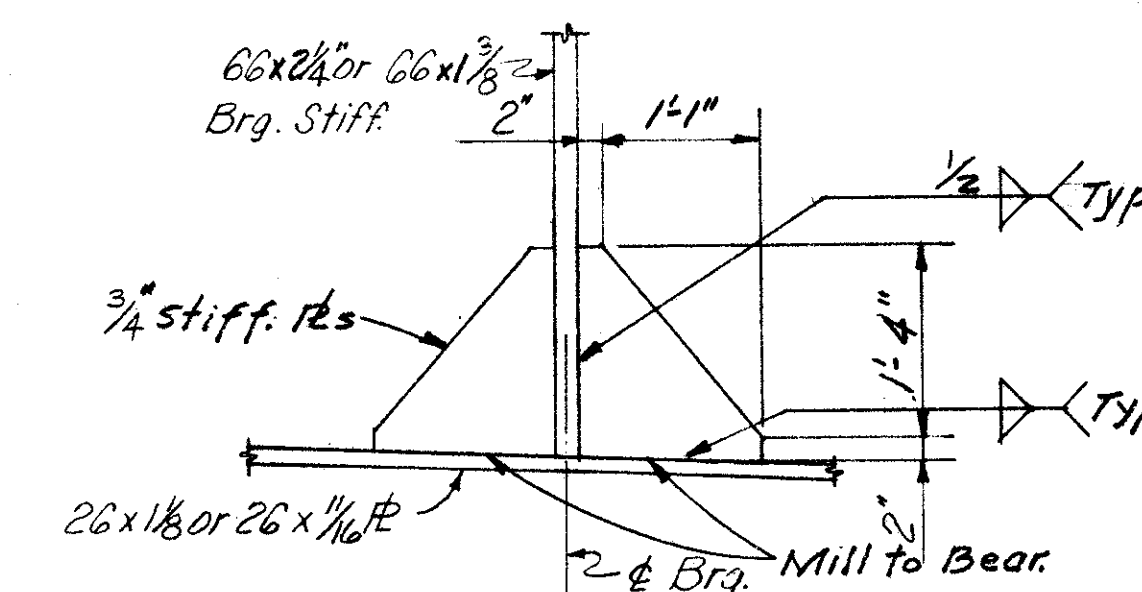
SECTION A-A



SECTION E-E



SECTION B-B



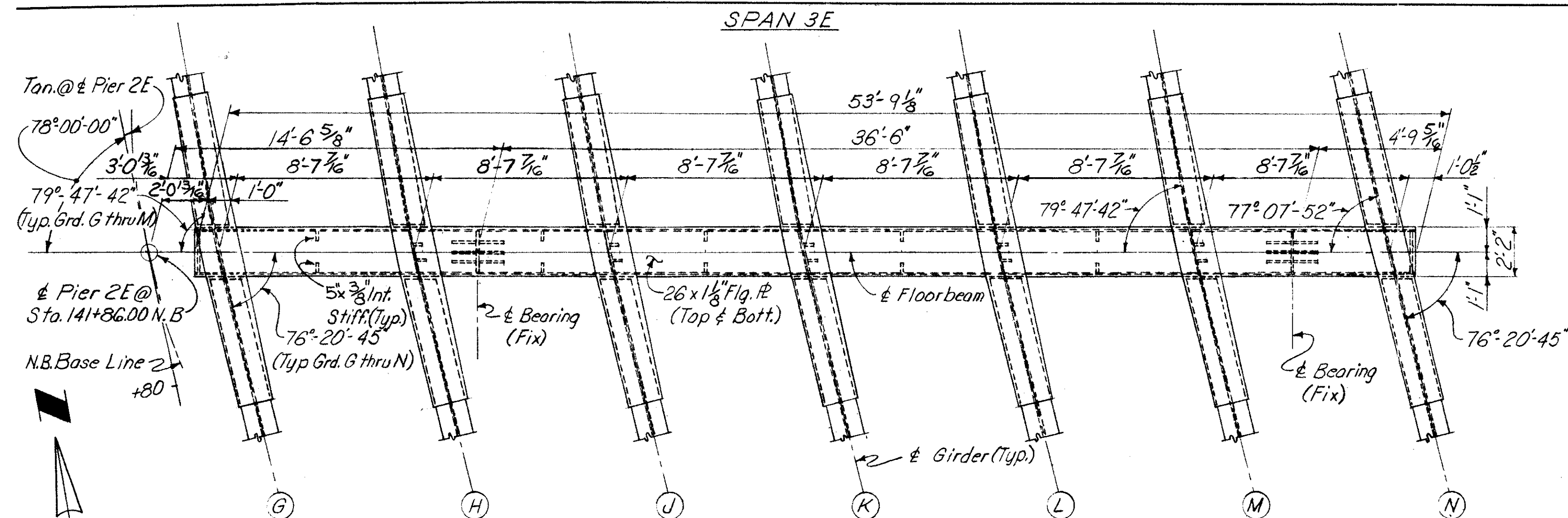
SECTION C-C

Note:
For Cover Plate Details and Section F-F see
Floorbeam 2E Sht. No. 158
For Fillet Weld Sizes not shown, See "TABLE OF FILLET
WELD SIZES" Sht. No. 164
For Bearing Details see sht. No. 165

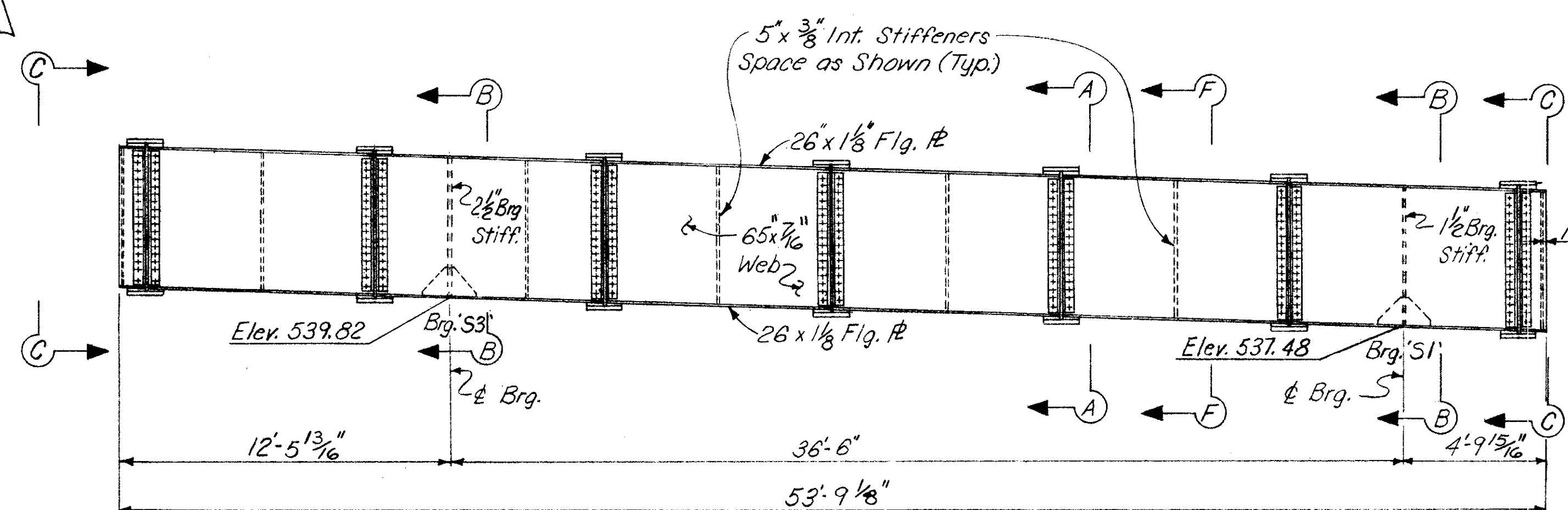
HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

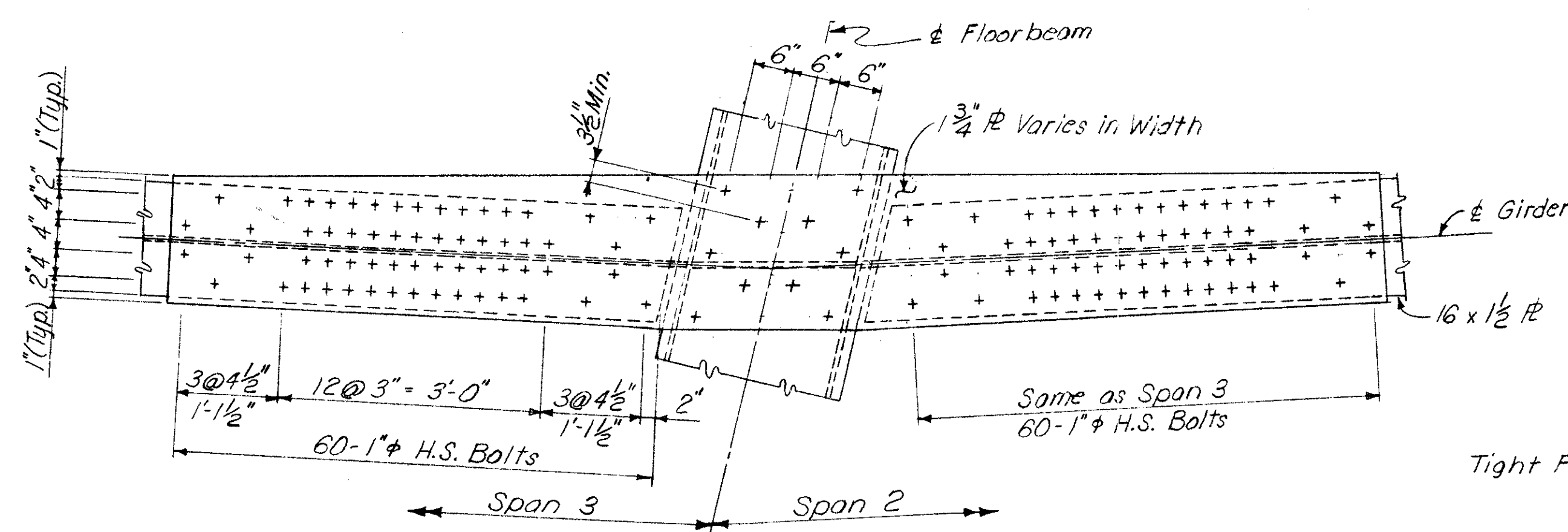
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
ELW	W.R.T.		Jag	3/10/65	



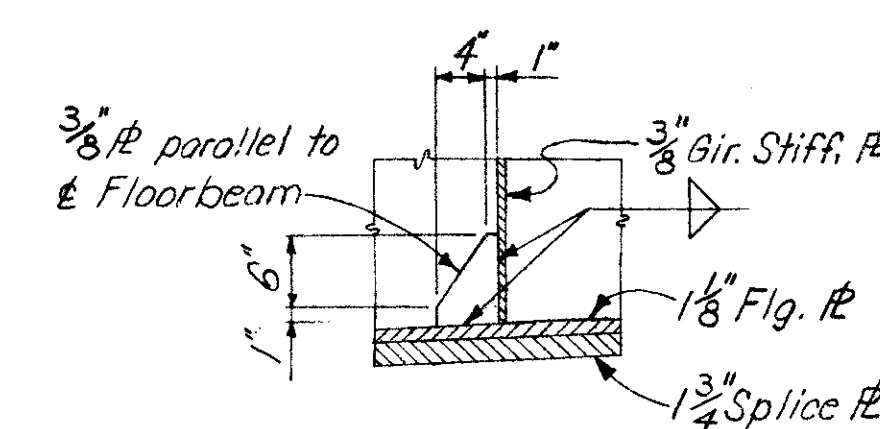
SPAN 2E
PLAN-FLOORBEAM AT PIER 2E



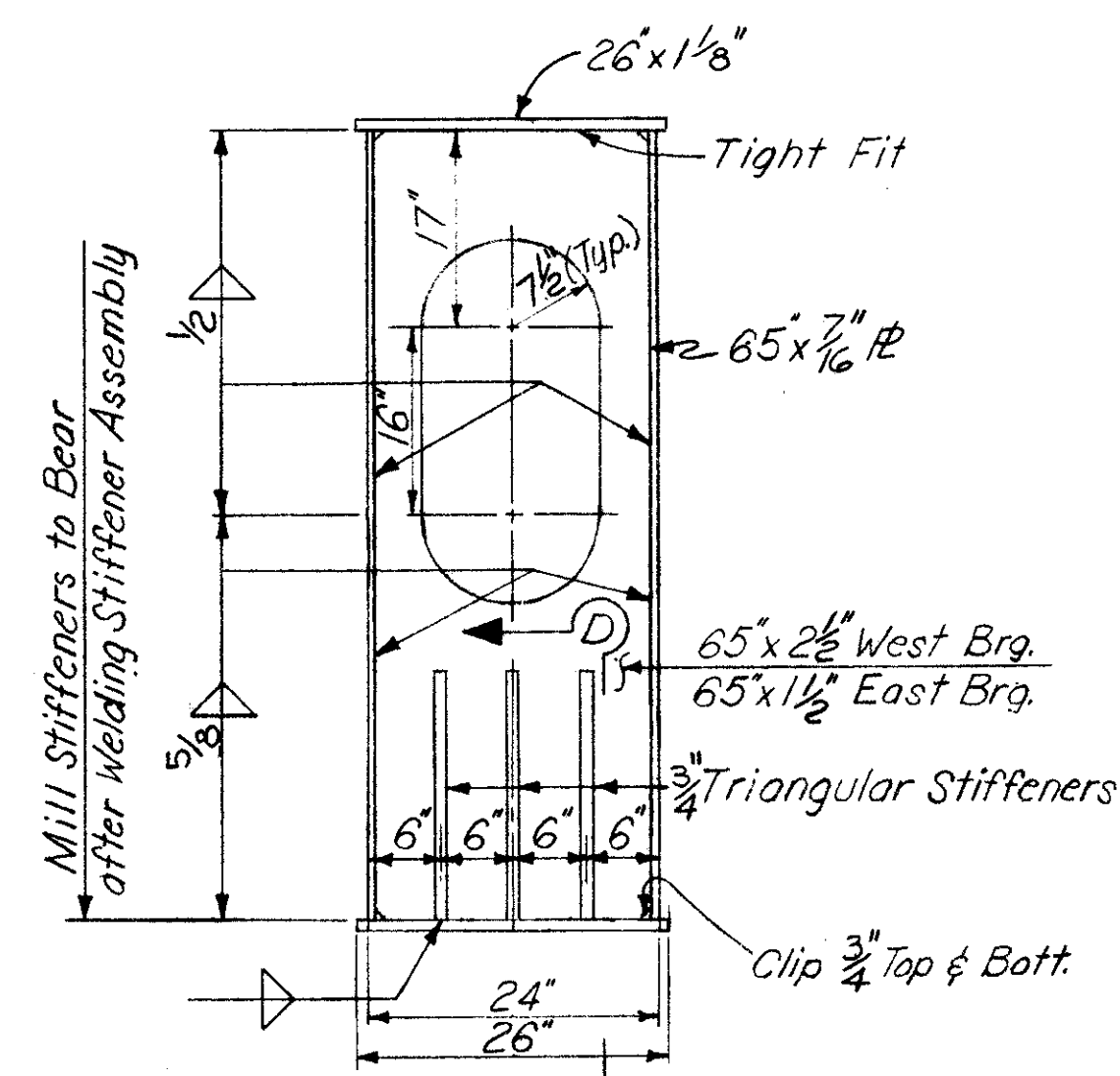
ELEVATION



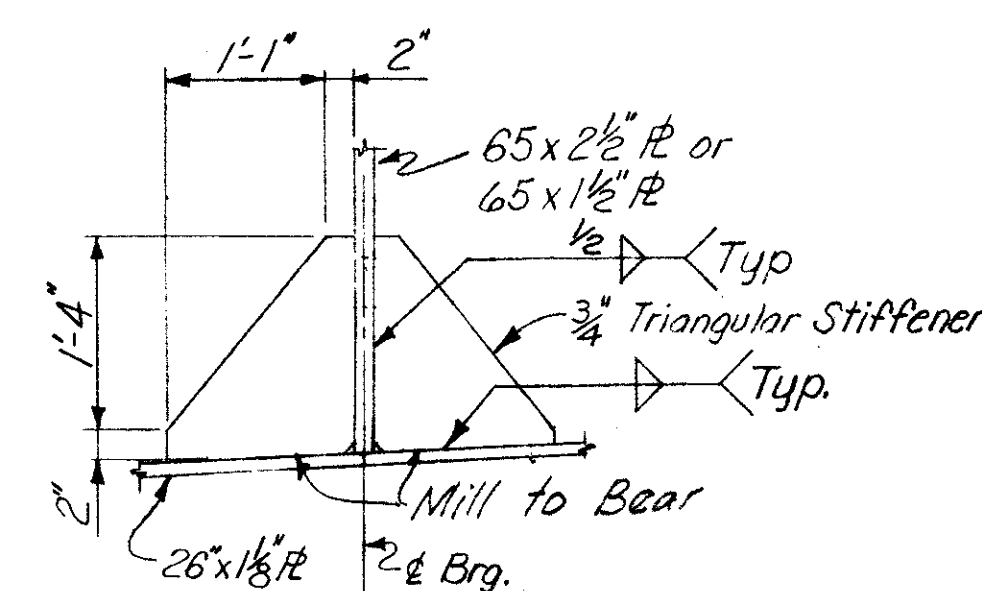
SPLICE PLATE DETAIL
SHOWING TOP SPLICE
(Typ. Bottom)



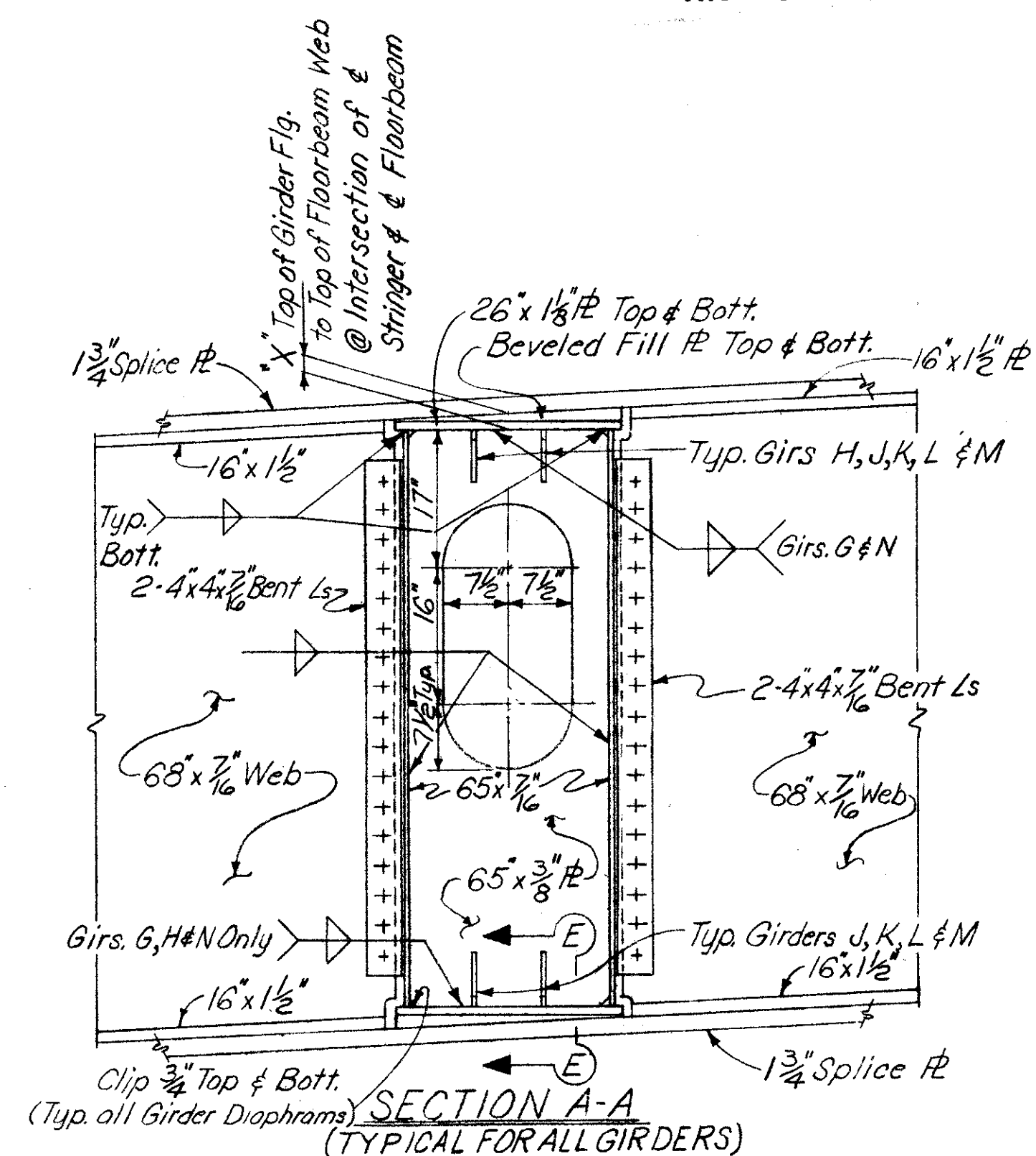
SECTION E-E
(Typ. Top and Bottom)



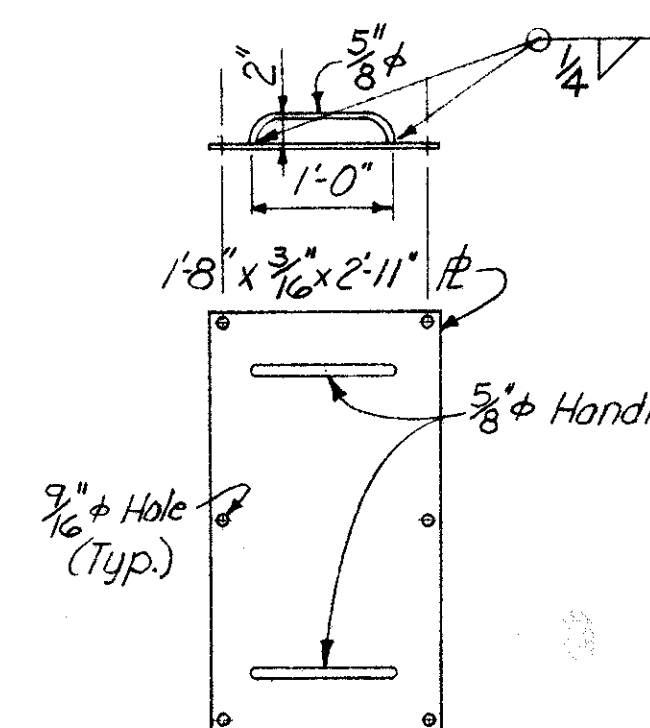
SECTION B-B
SHOWING BEARING STIFFENER



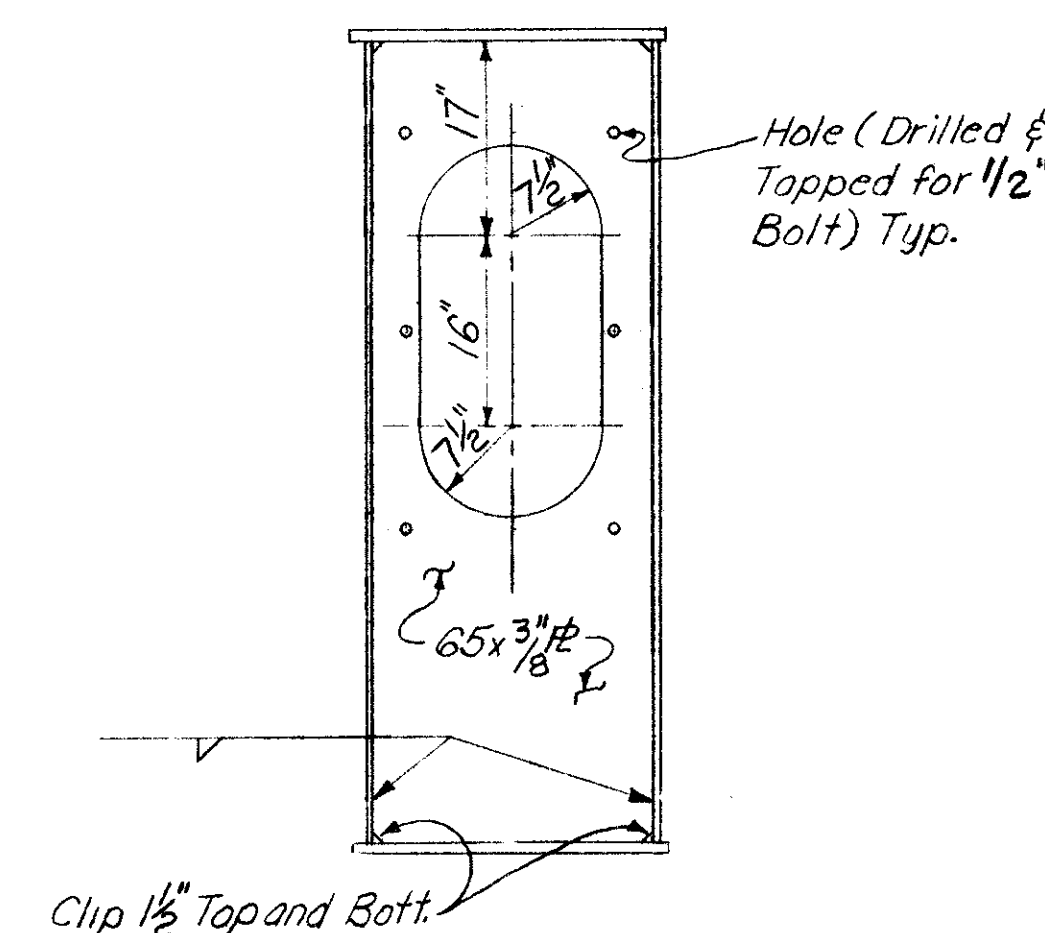
SECTION D-D



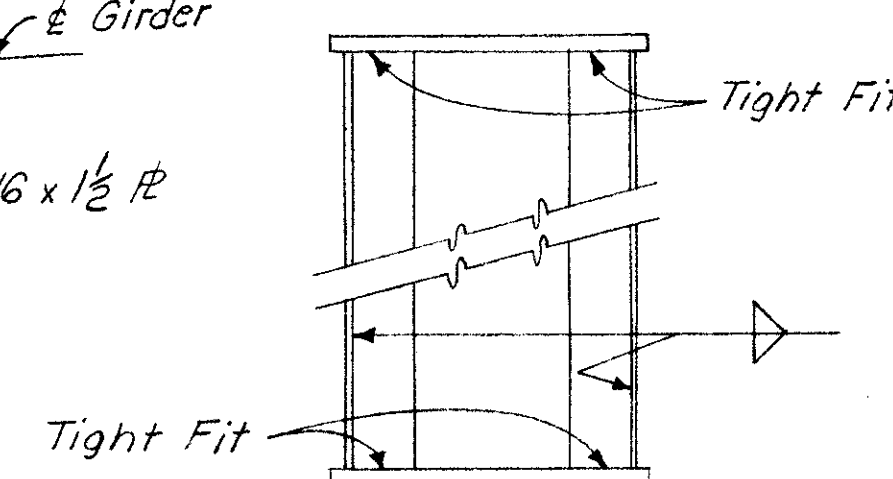
SECTION A-A
(TYPICAL FOR ALL GIRDERS)



COVER PLATE
(For Access Hole)



SECTION C-C



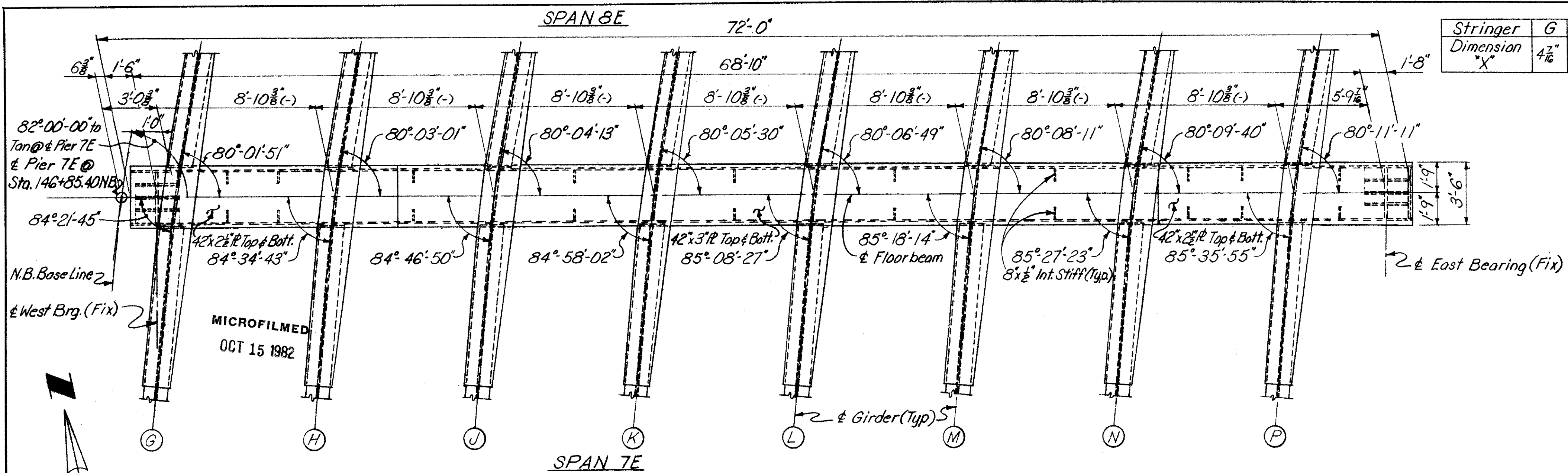
SECTION F-F
TYP. ALL INTERMEDIATE STIFFENERS

NOTE:
For fillet weld sizes not shown see
"TABLE OF FILLET WELD SIZES" sht. no. 164

**HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO**

STRUCTURAL STEEL DETAILS

DESIGNED <i>PME</i>	DRAWN <i>W.R.T. 10-4-64</i>	TRACED	CHECKED <i>CHH 2-2-65</i>	REVIEWED DATE <i>JH 3/22/65</i>	REVISOR
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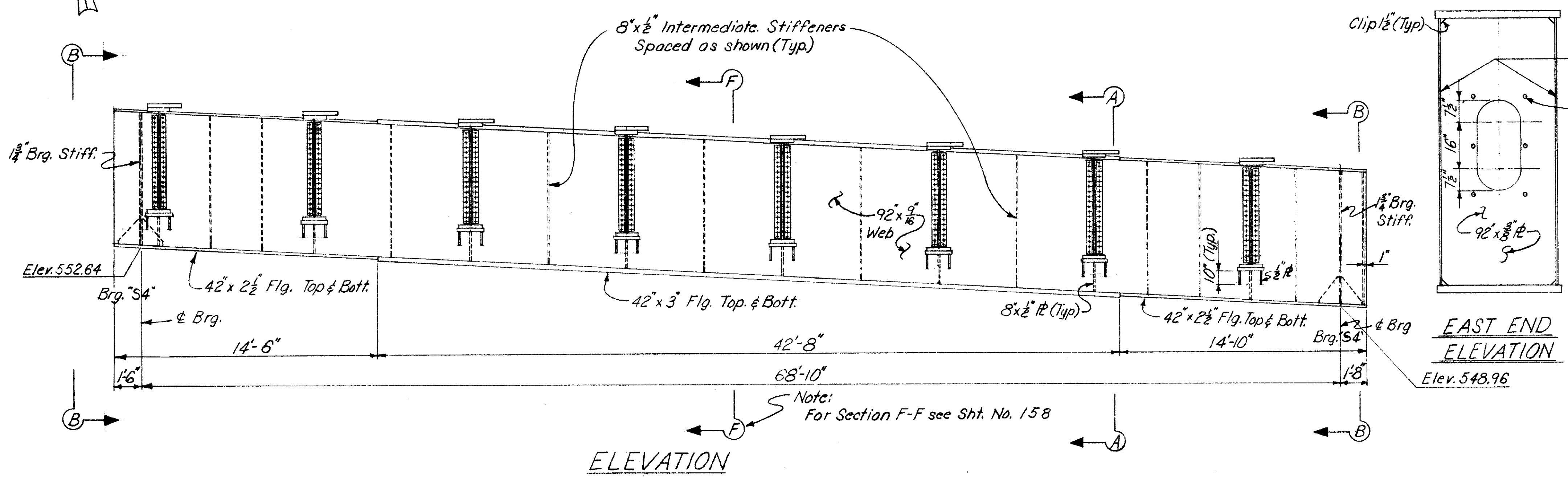
Stringer Dimension X	G	H	J	K	L	M	N	P
	4 1/8"	4 1/8"	4 3/4"	4 3/8"	4 3/8"	4 3/8"	4 3/4"	4 3/8"

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

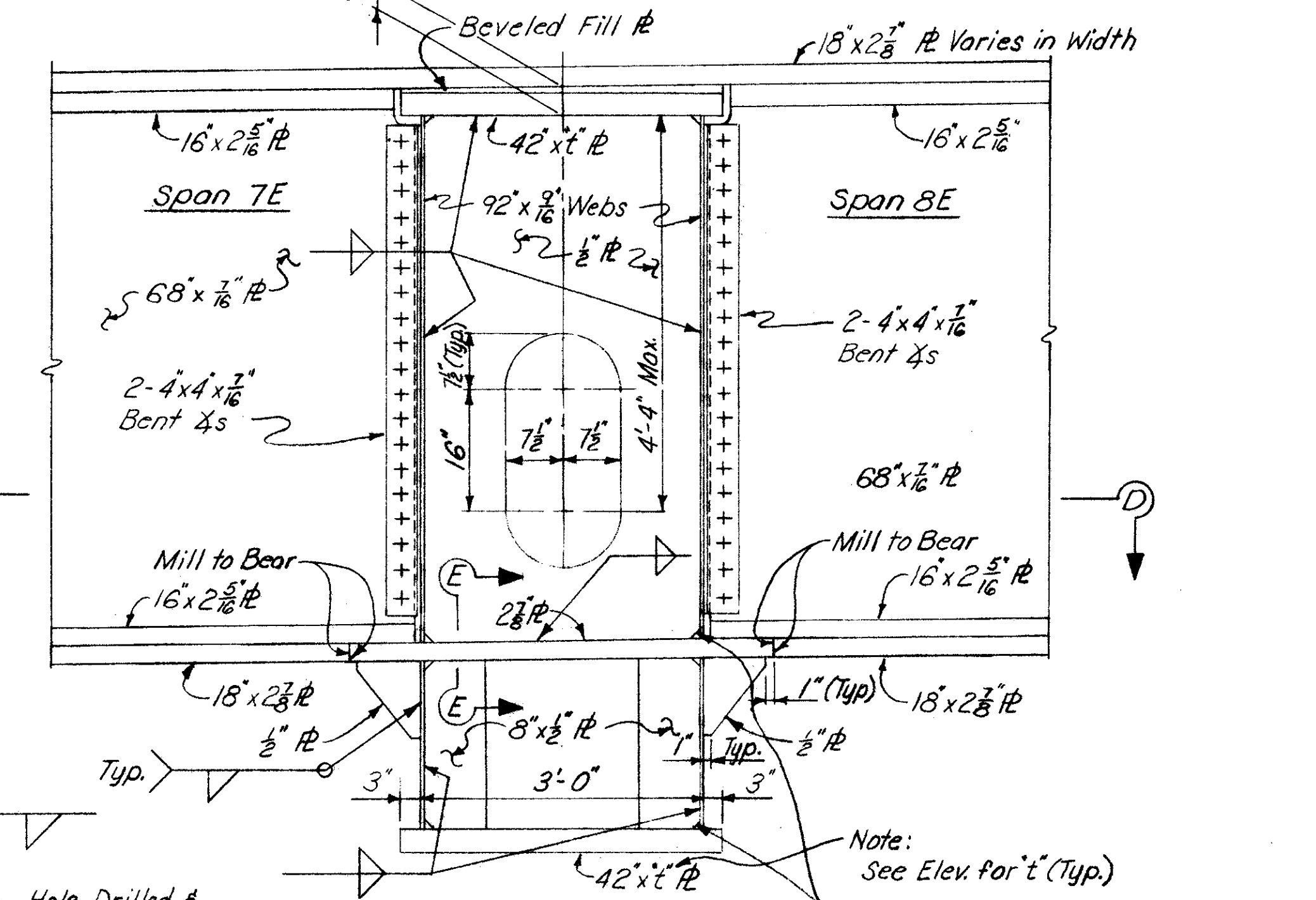
162
210

HAM-71-1.30

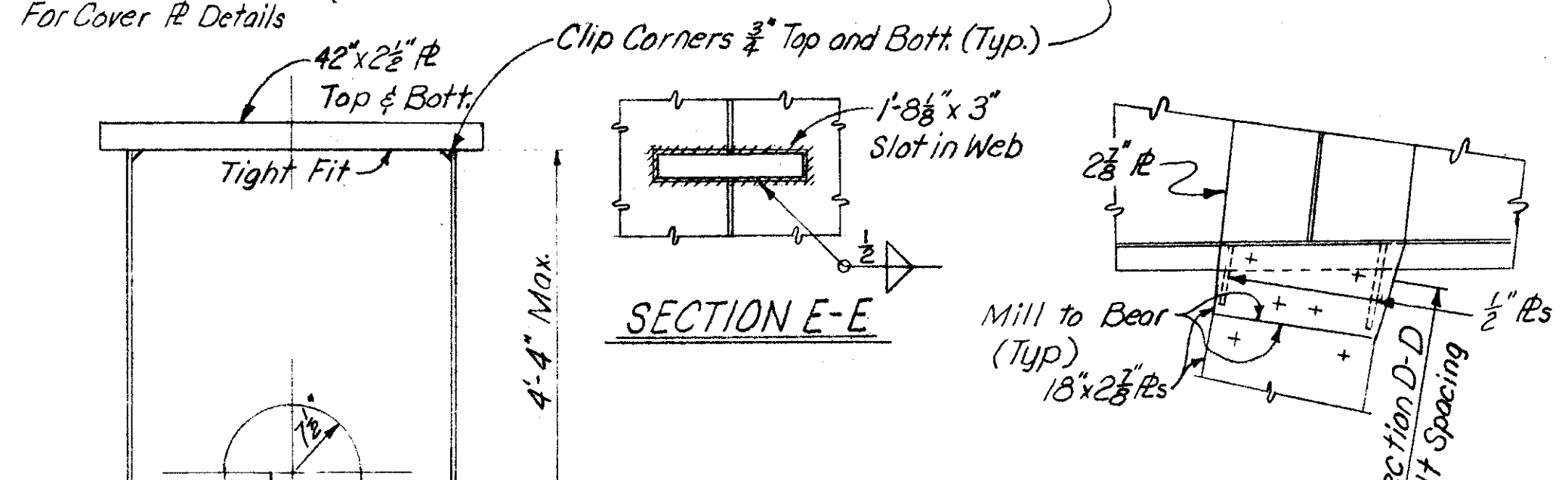
PLAN - FLOORBEAM AT PIER 7E



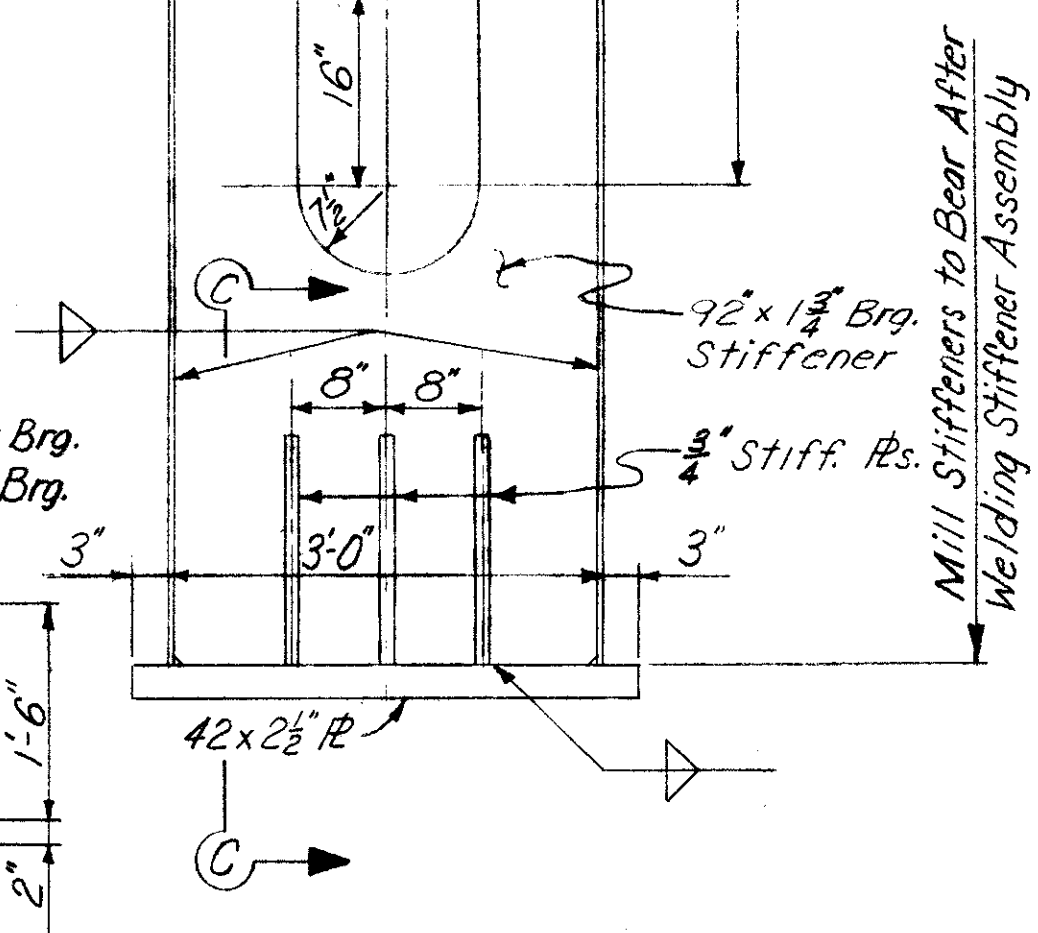
ELEVATION



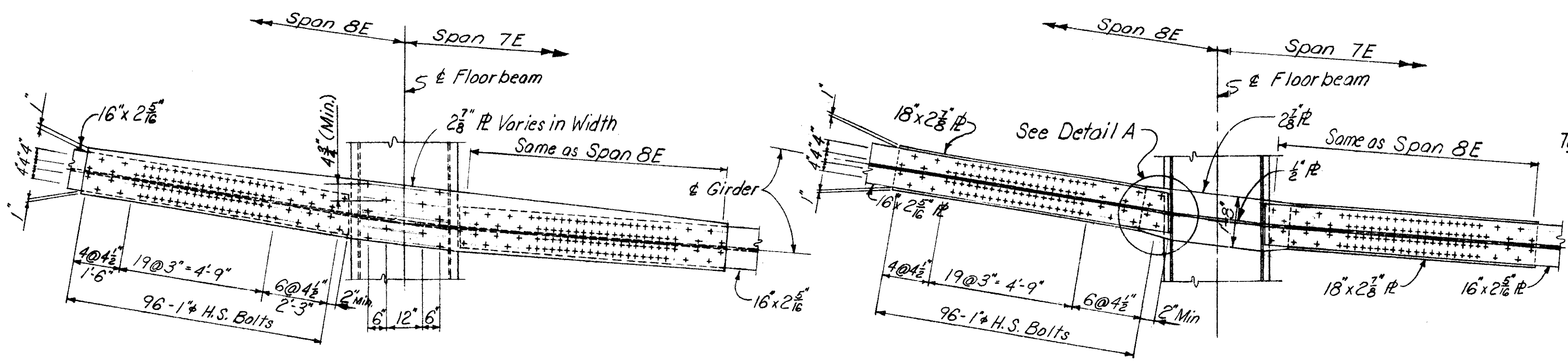
SECTION A-A
(TYPICAL FOR ALL GIRDERS)



SECTION E-E

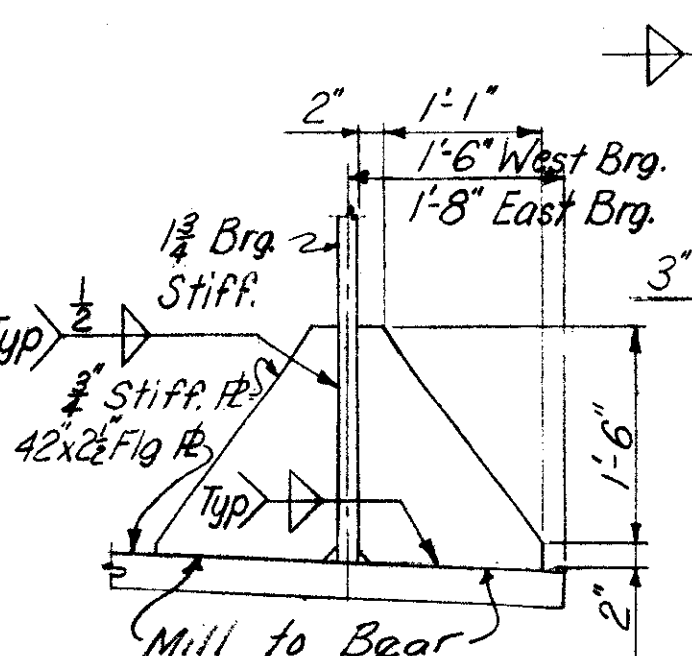


SECTION B-B



SECTION D-D

PLAN OF TOP SPLICE PLATE



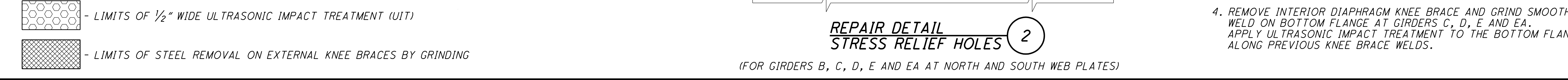
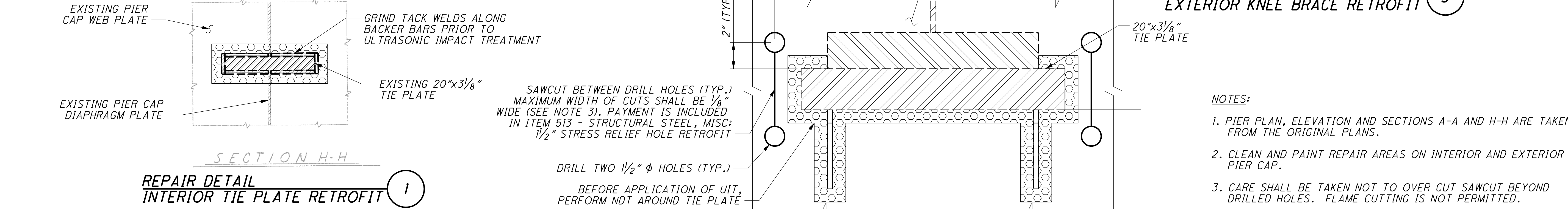
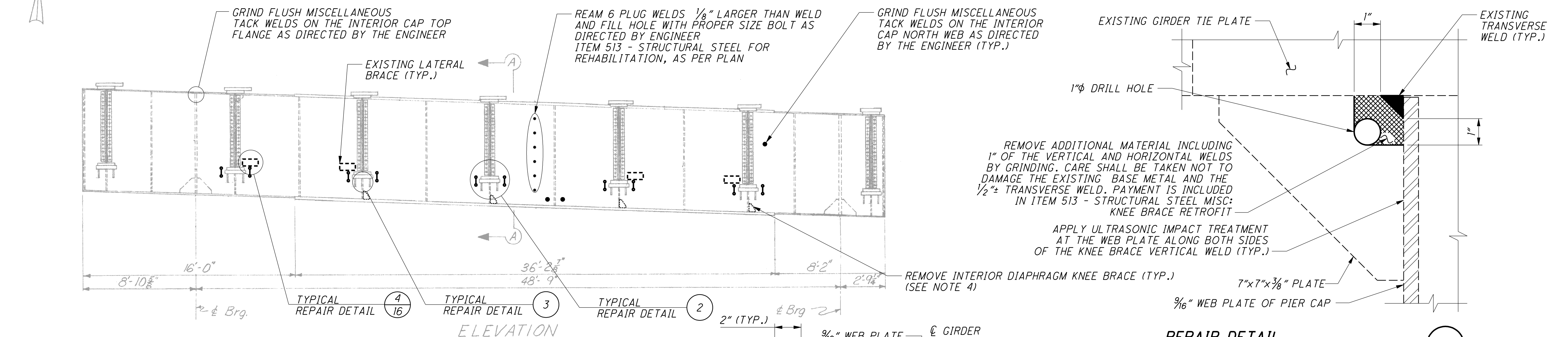
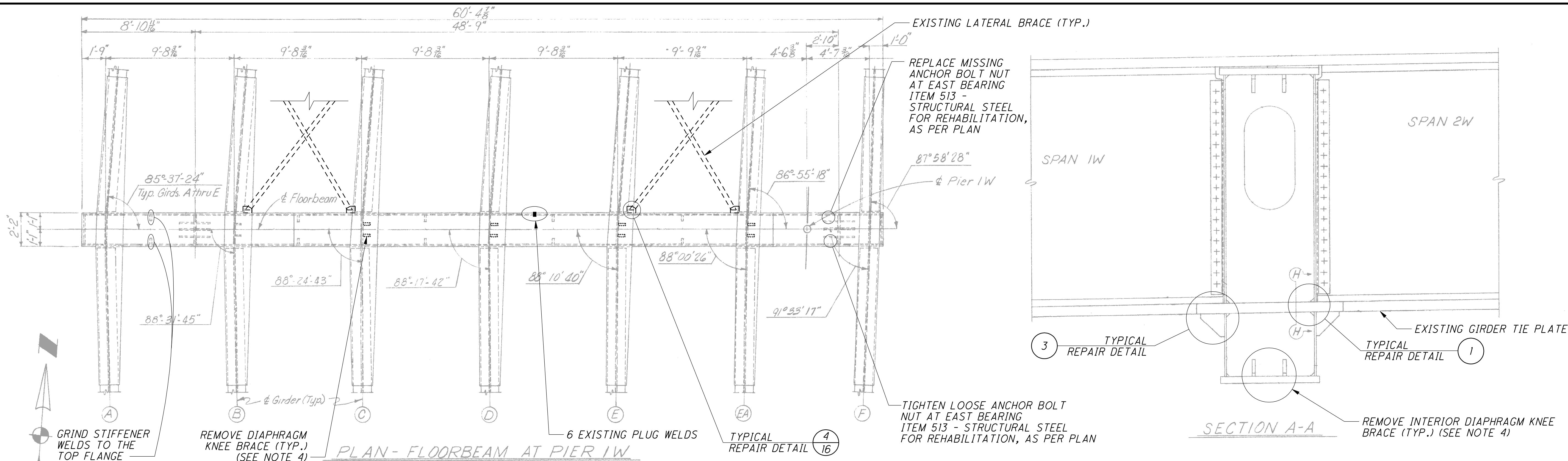
SECTION C-C

DETAIL A
With Bott. Flg. of Girder Removed

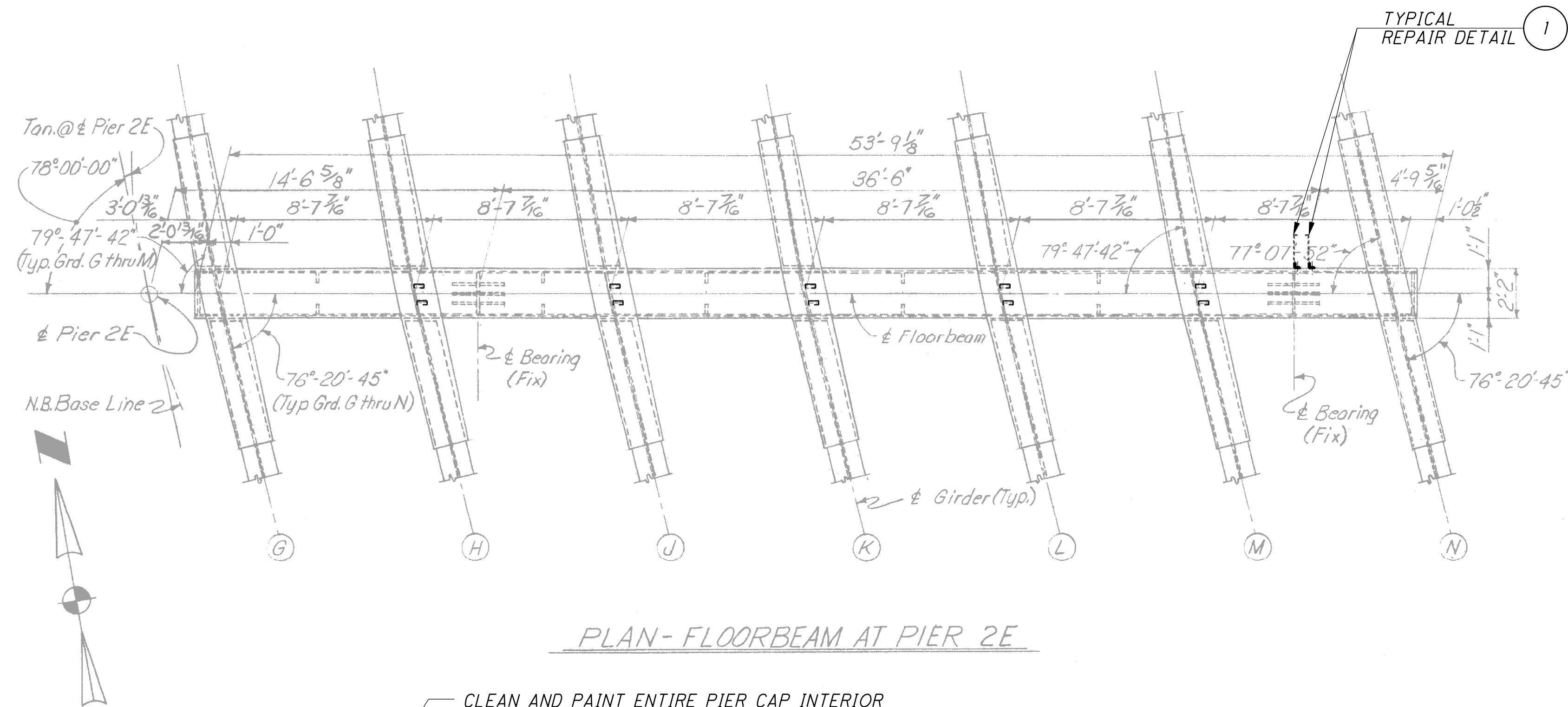
Note: Milled ends of compression splice plates on bottom flanges of girders shall be brought to full bearing against milled ends of pier girder brackets before bolts are tightened.

HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO					
STRUCTURAL STEEL DETAILS					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISION
TIG	WRT		CHH	JH0 3/22/65	

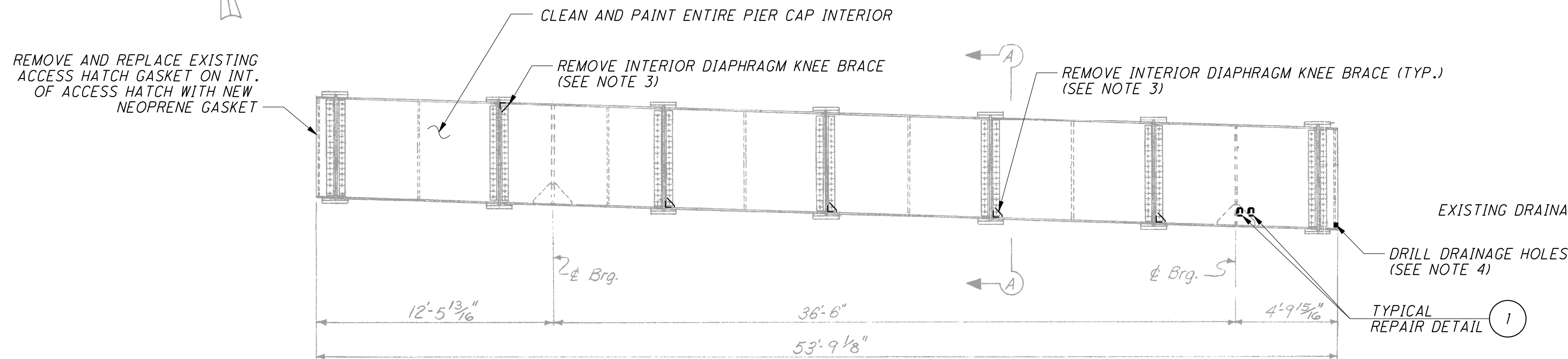
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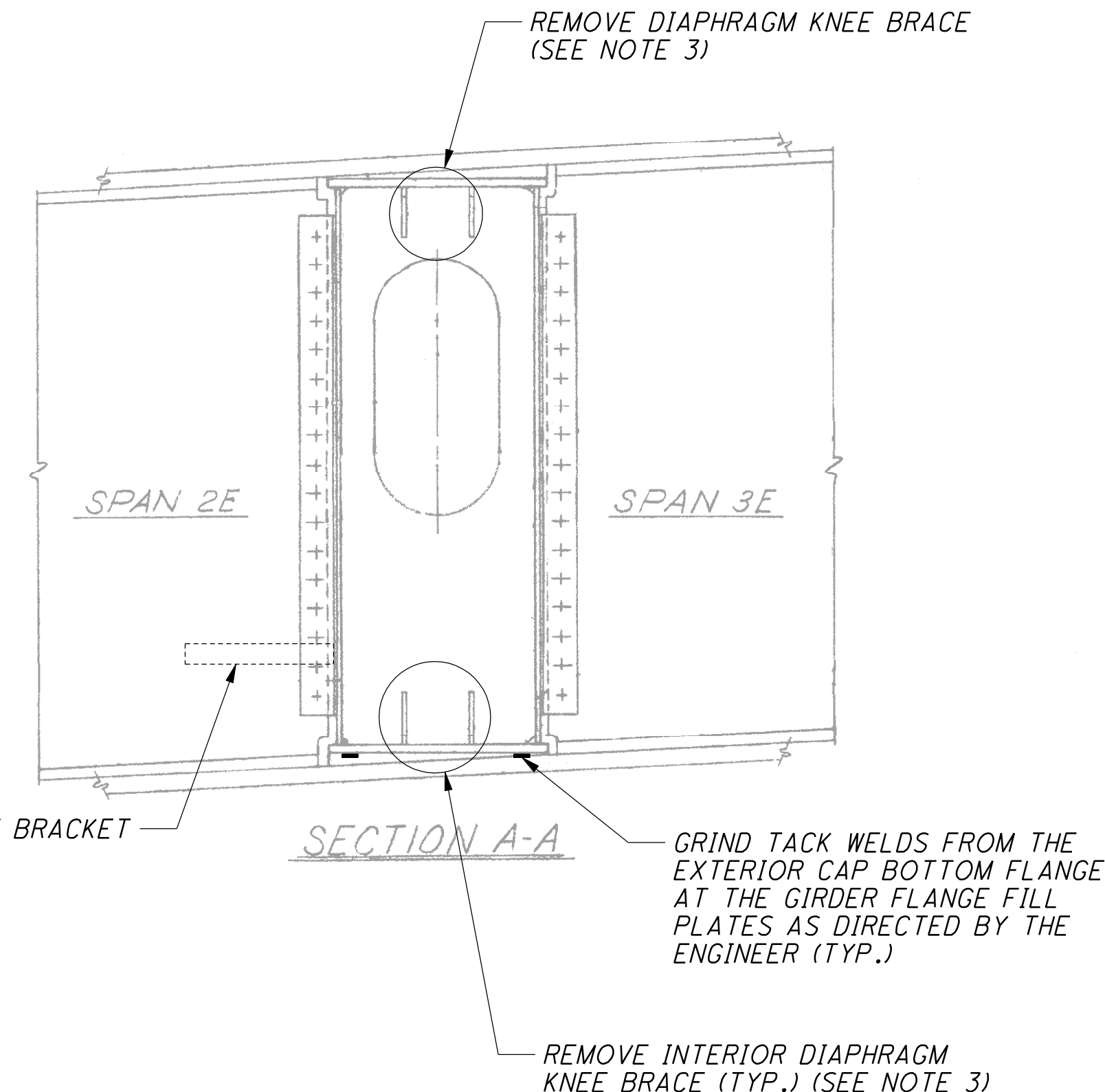
- NOTES:**
1. PIER PLAN, ELEVATION AND SECTIONS A-A AND H-H ARE TAKEN FROM THE ORIGINAL PLANS.
 2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
 3. CARE SHALL BE TAKEN NOT TO OVER CUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
 4. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS C, D, E AND EA. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.



PLAN - FLOORBEAM AT PIER 2E

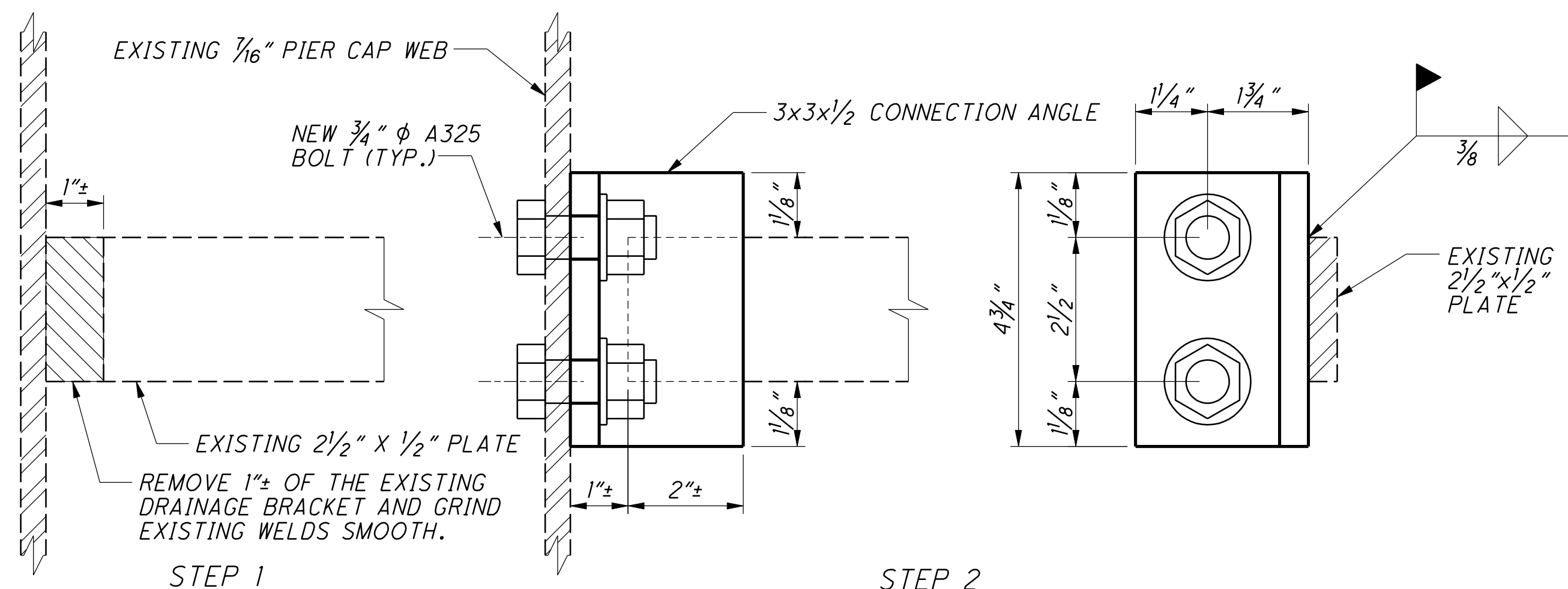


ELEVATION

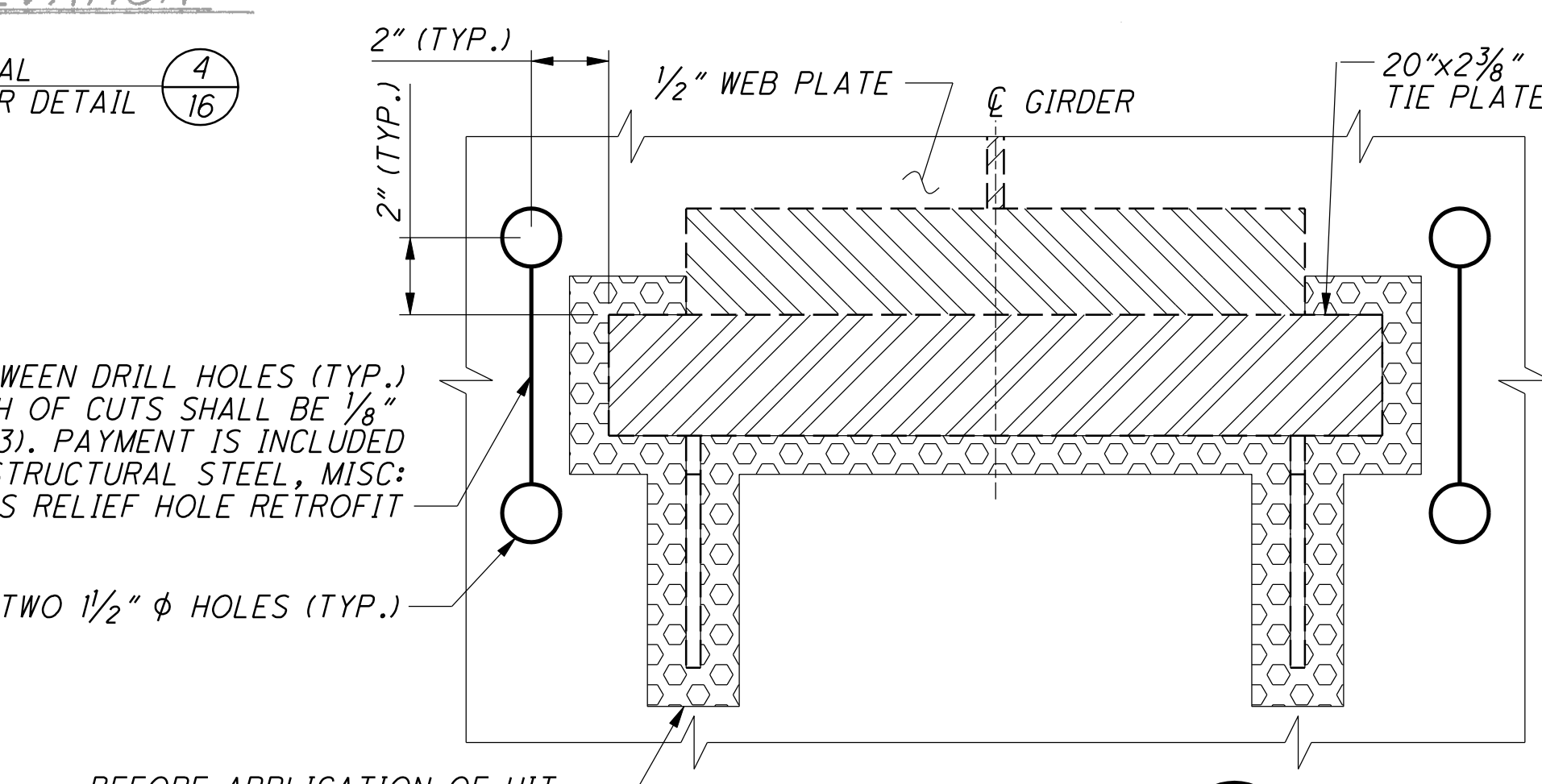
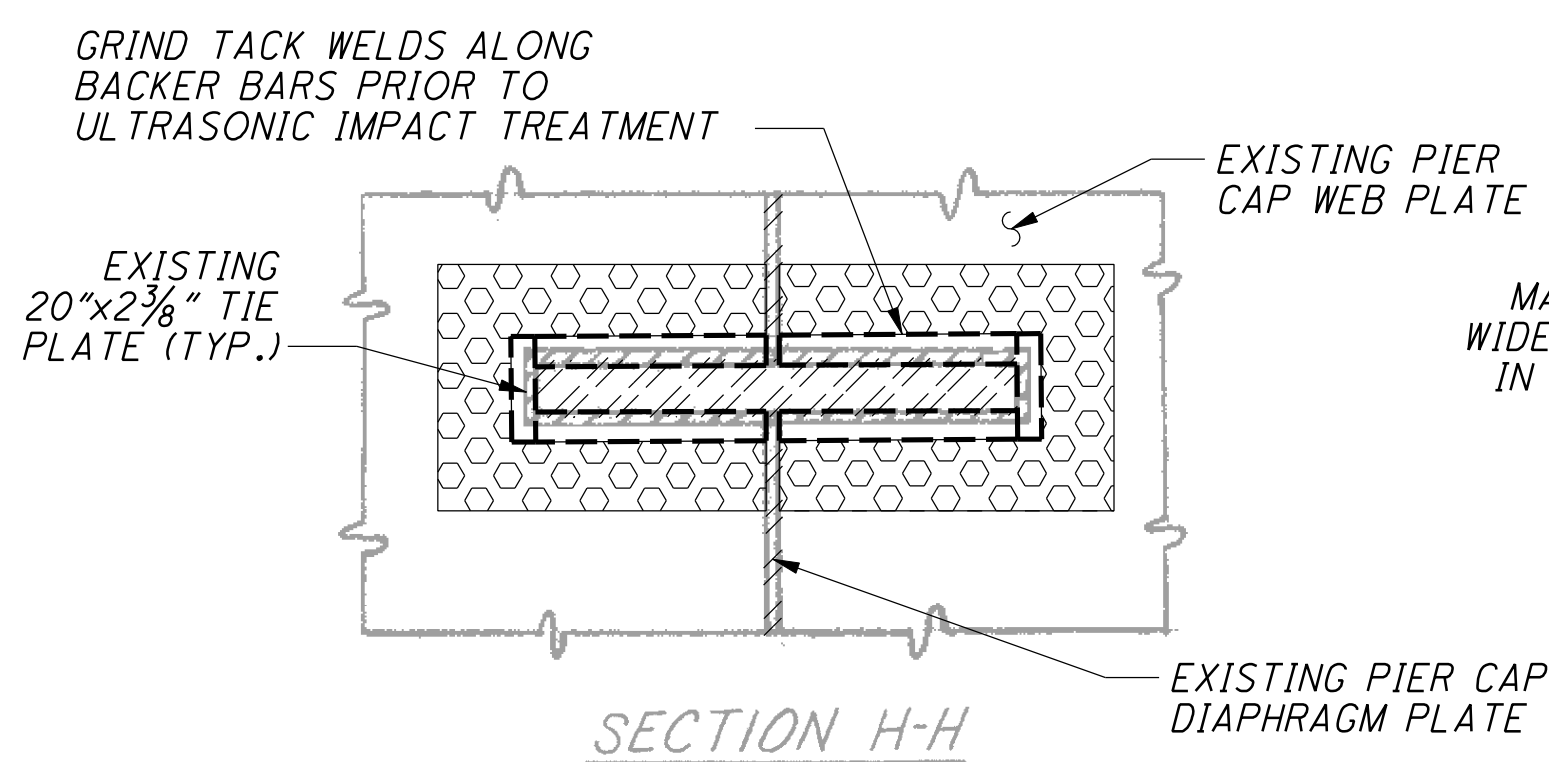
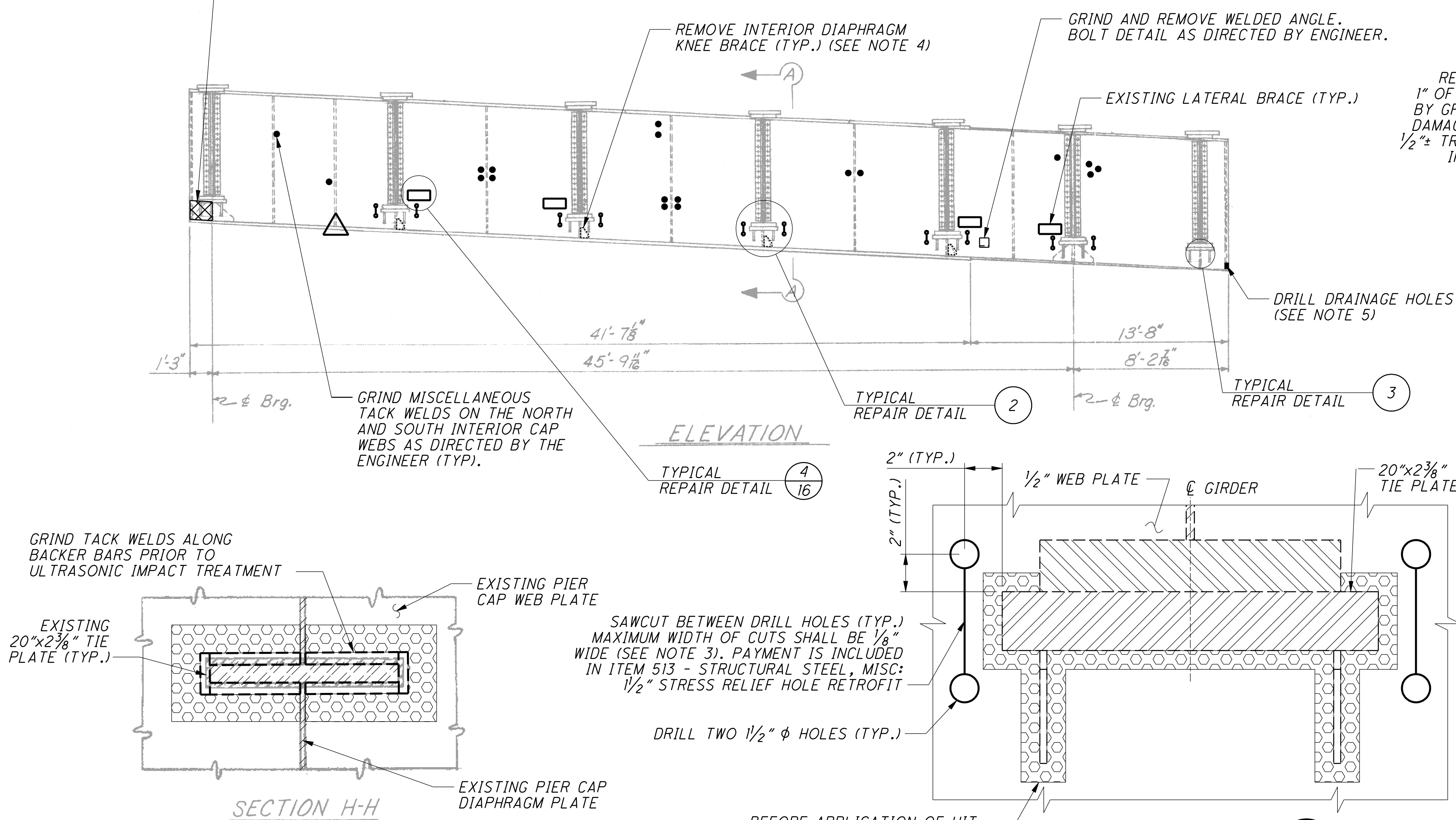
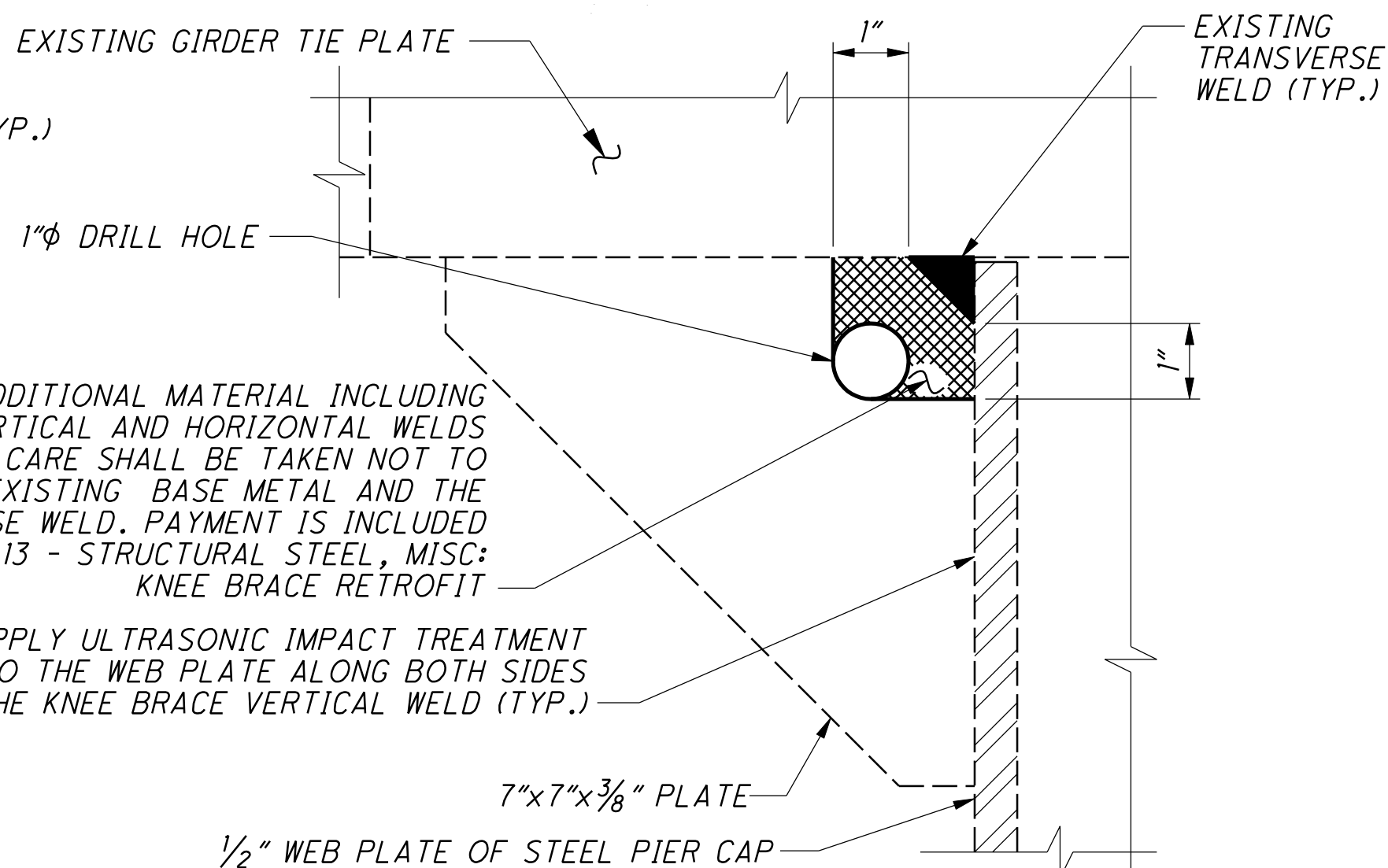
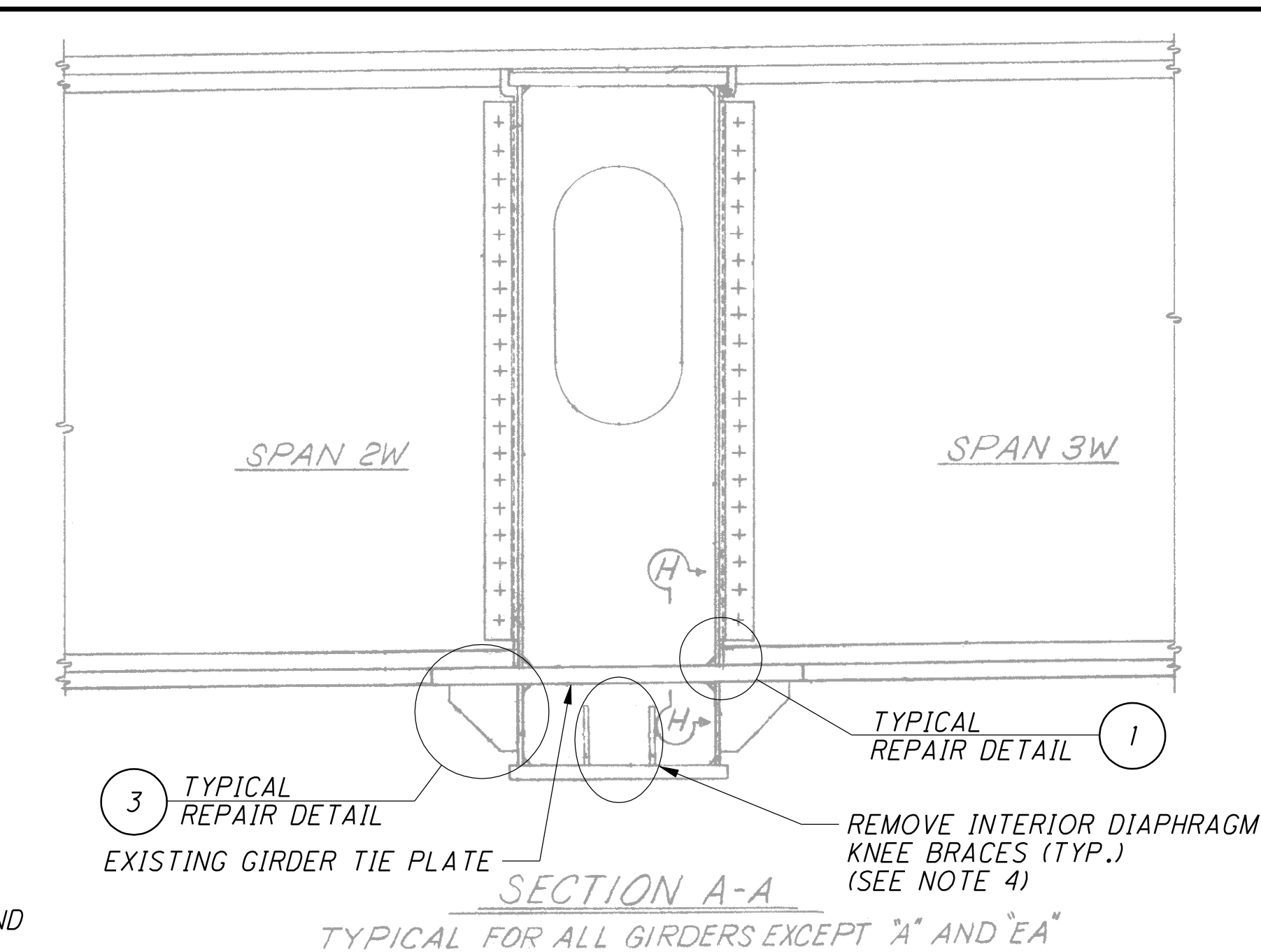
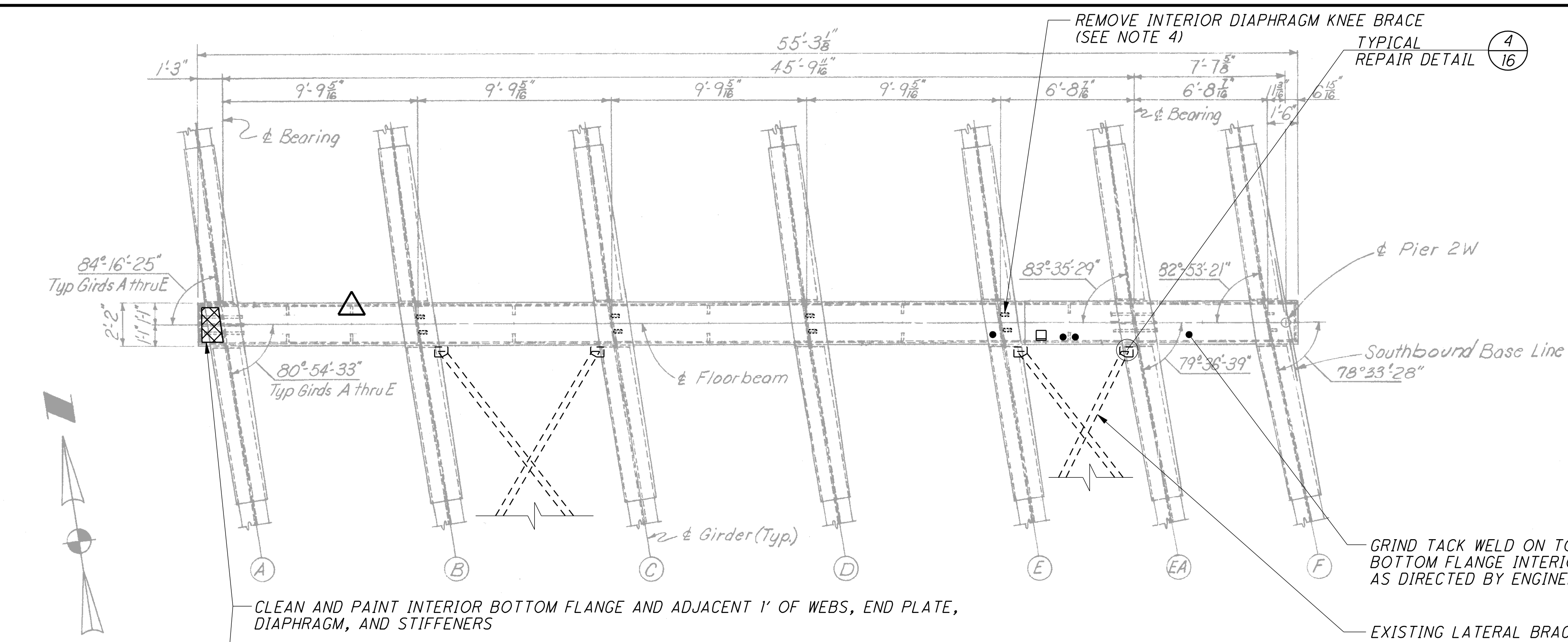


NOTES:

1. PIER PLAN, ELEVATION AND SECTION A-A ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON EXTERIOR OF PIER CAP.
3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS J, K, L AND M. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON TOP FLANGE AT GIRDER H ONLY. APPLY ULTRASONIC IMPACT TREATMENT TO THE TOP OR BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
4. DRILL TWO 1/2" ϕ HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES OR FLANGE PLATE. ALL COSTS SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES, AS PER PLAN.



REPAIR DETAIL
DRAIN BRACKET RETROFIT



NOTES:

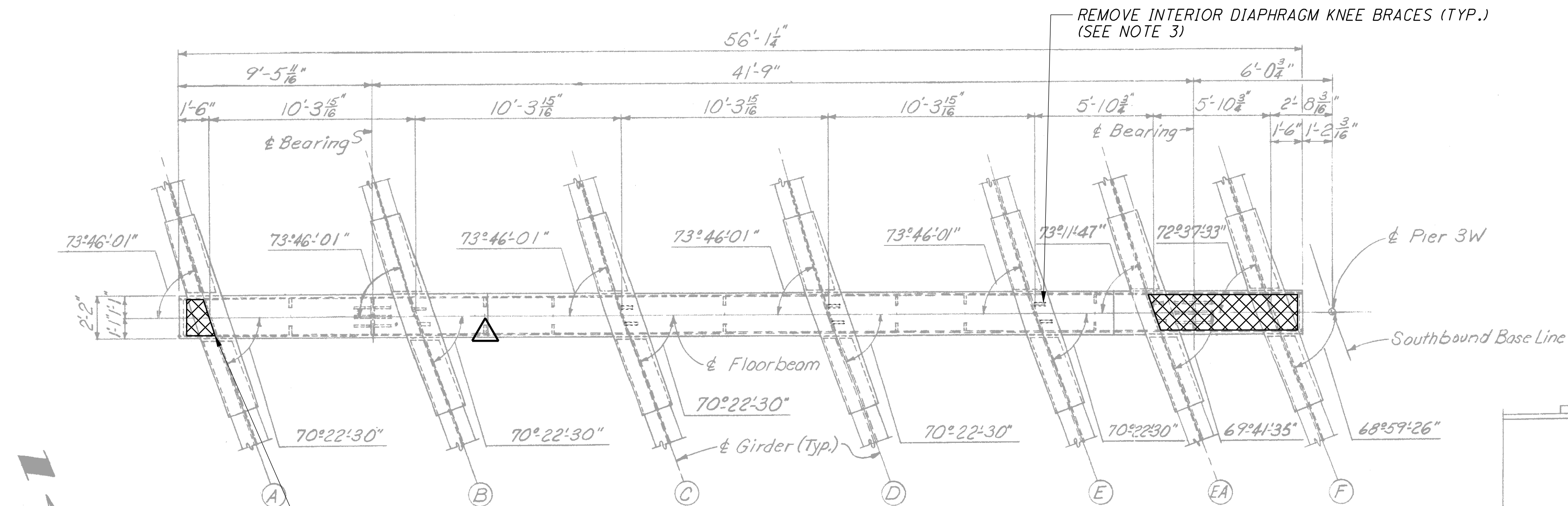
1. PIER PLAN, ELEVATION AND SECTION A-A AND H-H ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
3. CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILLED HOLES. FLAME CUTTING IS NOT PERMITTED.
4. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS B, C, D AND E.
APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
5. DRILL TWO 1/2" ϕ HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES, FLANGE PLATE, OR BEARING STIFFENERS. ALL COSTS SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES, AS PER PLAN.

 - LIMITS OF PAINTING OF INTERIOR OF PIER CAP

 - LIMITS OF STEEL REMOVAL ON EXTERNAL KNEE BRACES BY GRINDING

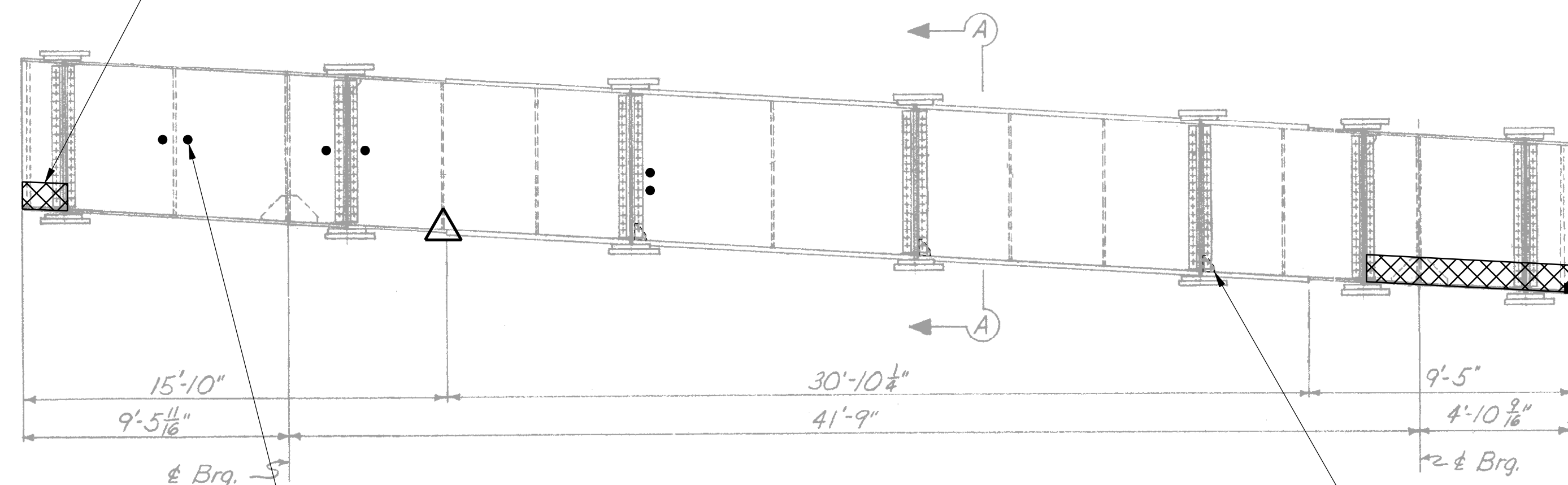
△ - LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING

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PLAN- FLOORBEAM AT PIER 3W

CLEAN AND PAINT INTERIOR BOTTOM FLANGE AND ADJACENT 1' OF WEBS, END PLATES, DIAPHRAGMS, AND STIFFENER PLATES

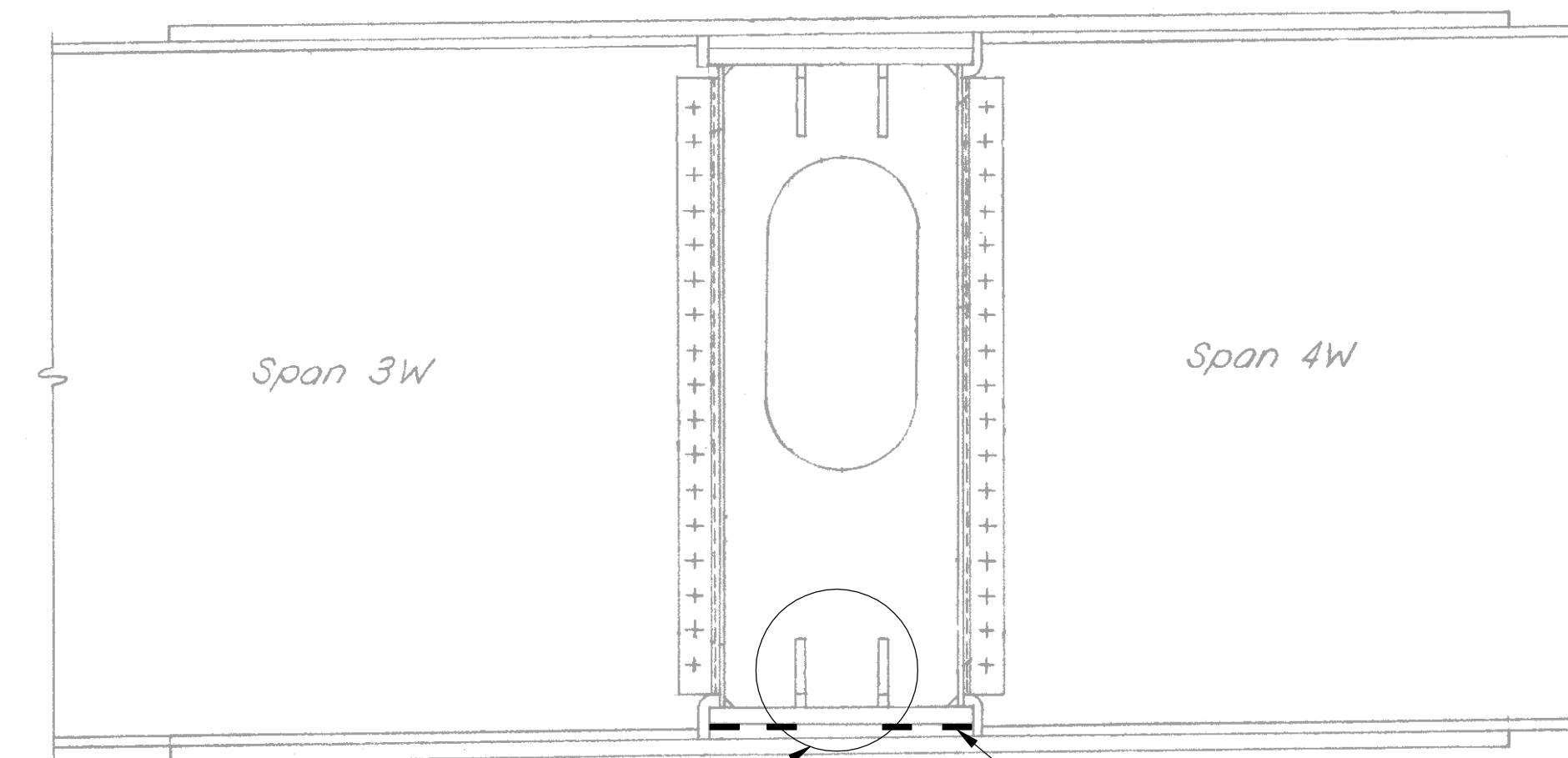


ELEVATION

GRIND MISCELLANEOUS TACK WELDS ON THE INTERIOR CAP WEB PLATES (TYP.) AS DIRECTED BY THE ENGINEER.

REMOVE INTERIOR DIAPHRAGM KNEE BRACES (TYP.) (SEE NOTE 3)

DRILL DRAINAGE HOLES (SEE NOTE 4)

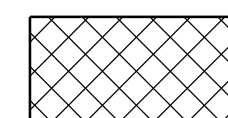


SECTION A-A

GRIND TACK WELDS FROM THE EXTERIOR CAP BOTTOM FLANGE AT THE GIRDER FLANGE FILL PLATES (TYP.) AS DIRECTED BY THE ENGINEER.

NOTES:

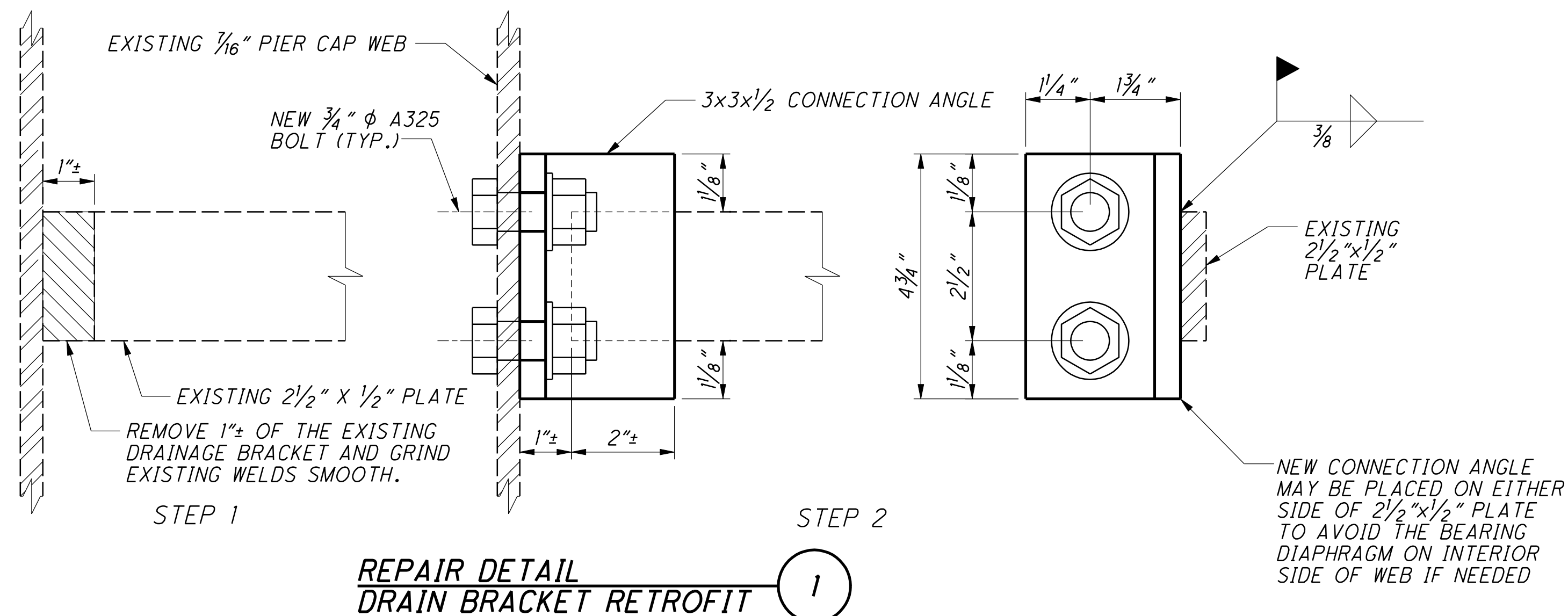
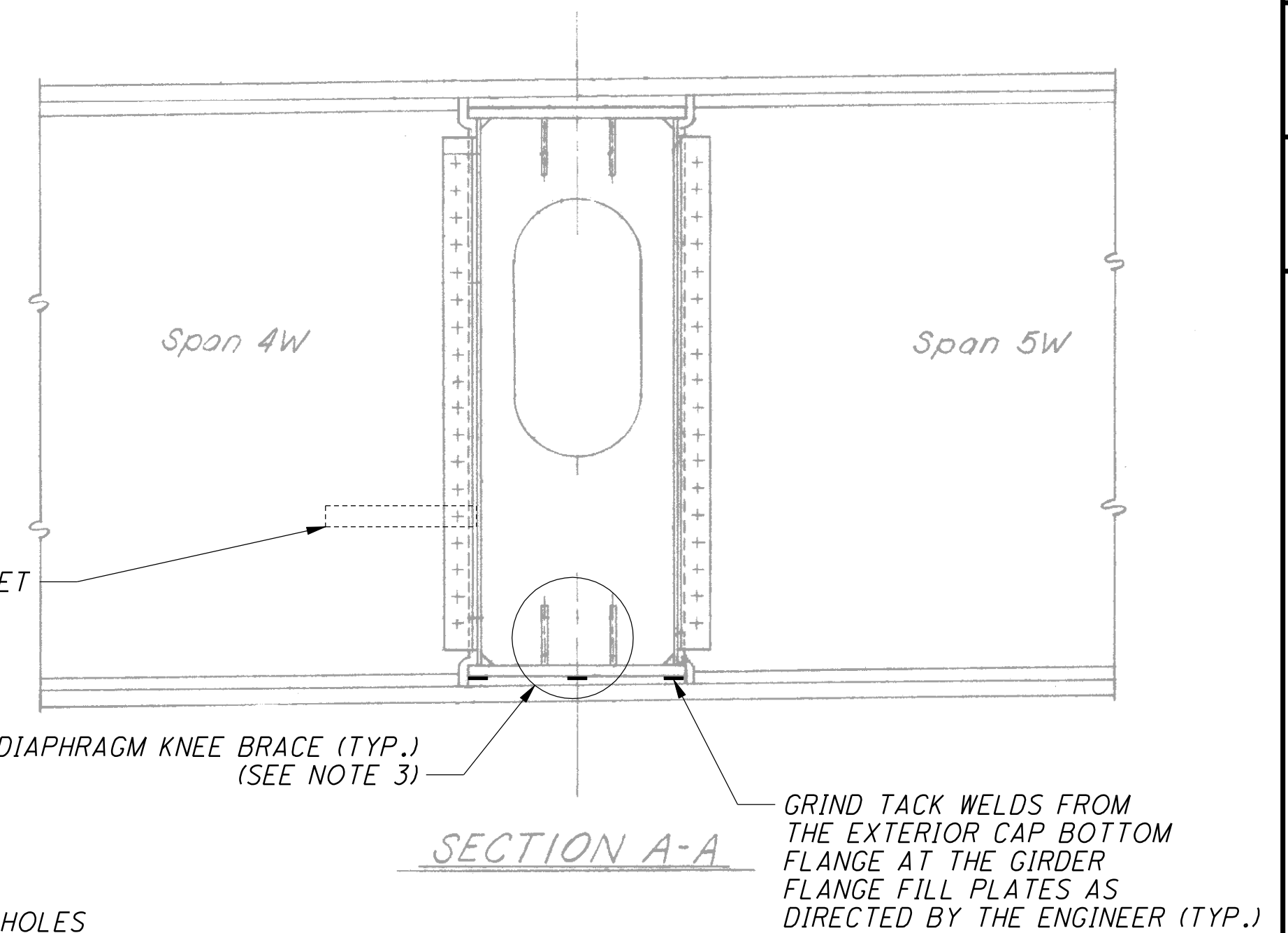
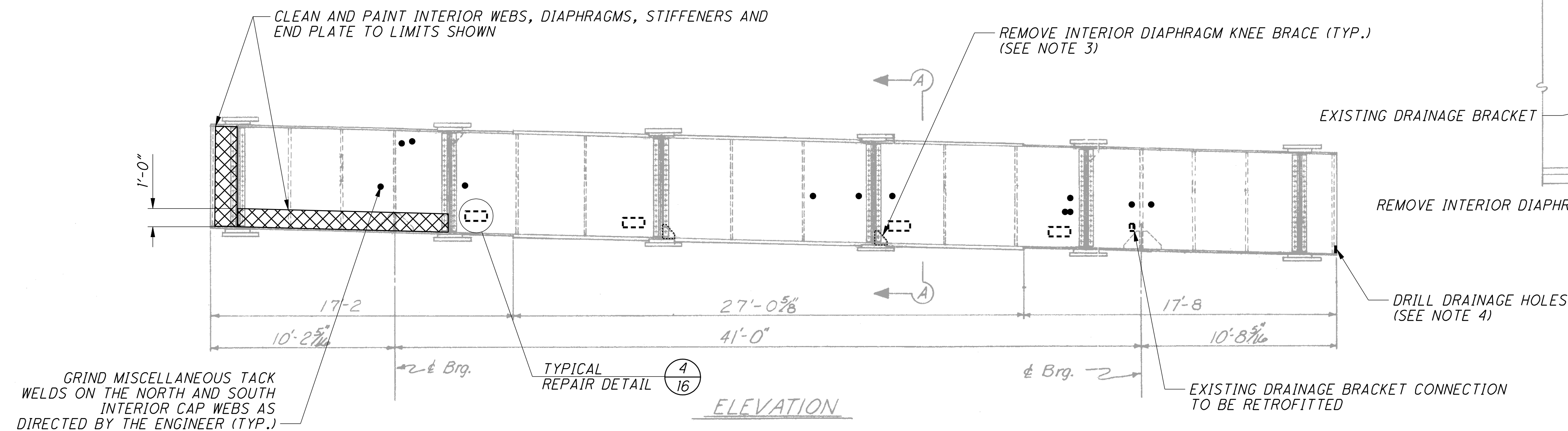
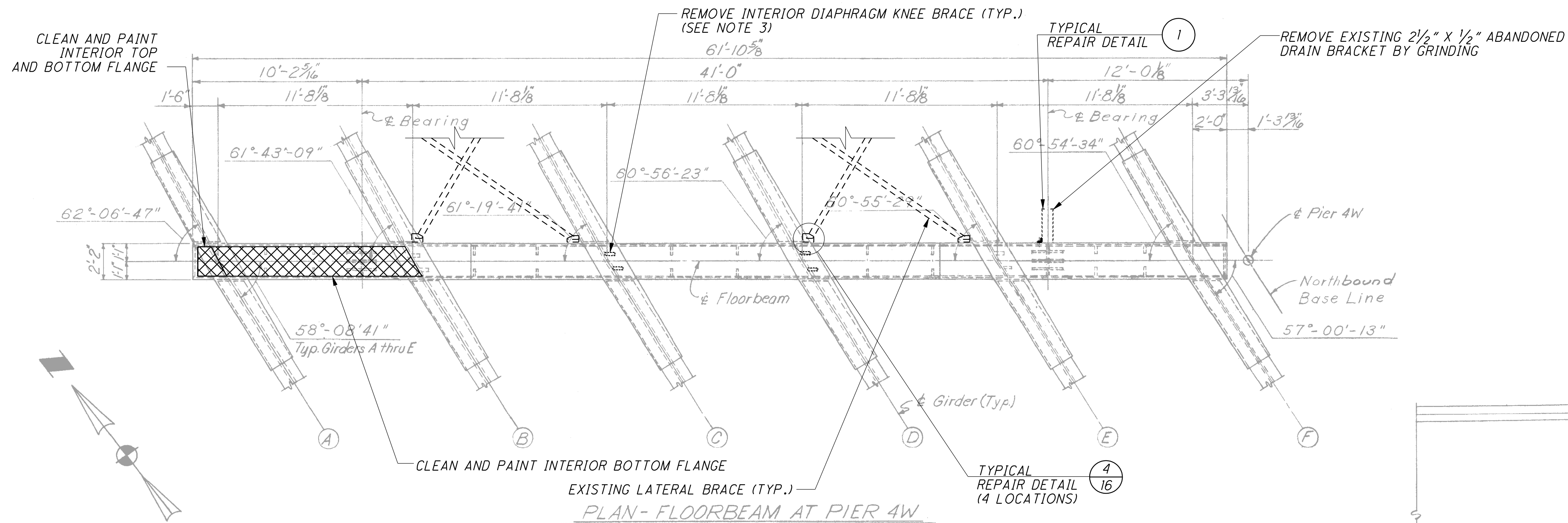
1. PIER PLAN, ELEVATION AND SECTION A-A ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS C, D, AND E. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
4. DRILL TWO 1/2" ϕ HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES OR FLANGE PLATE. ALL COSTS SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES, AS PER PLAN.



- LIMITS OF PAINTING OF INTERIOR OF PIER CAP

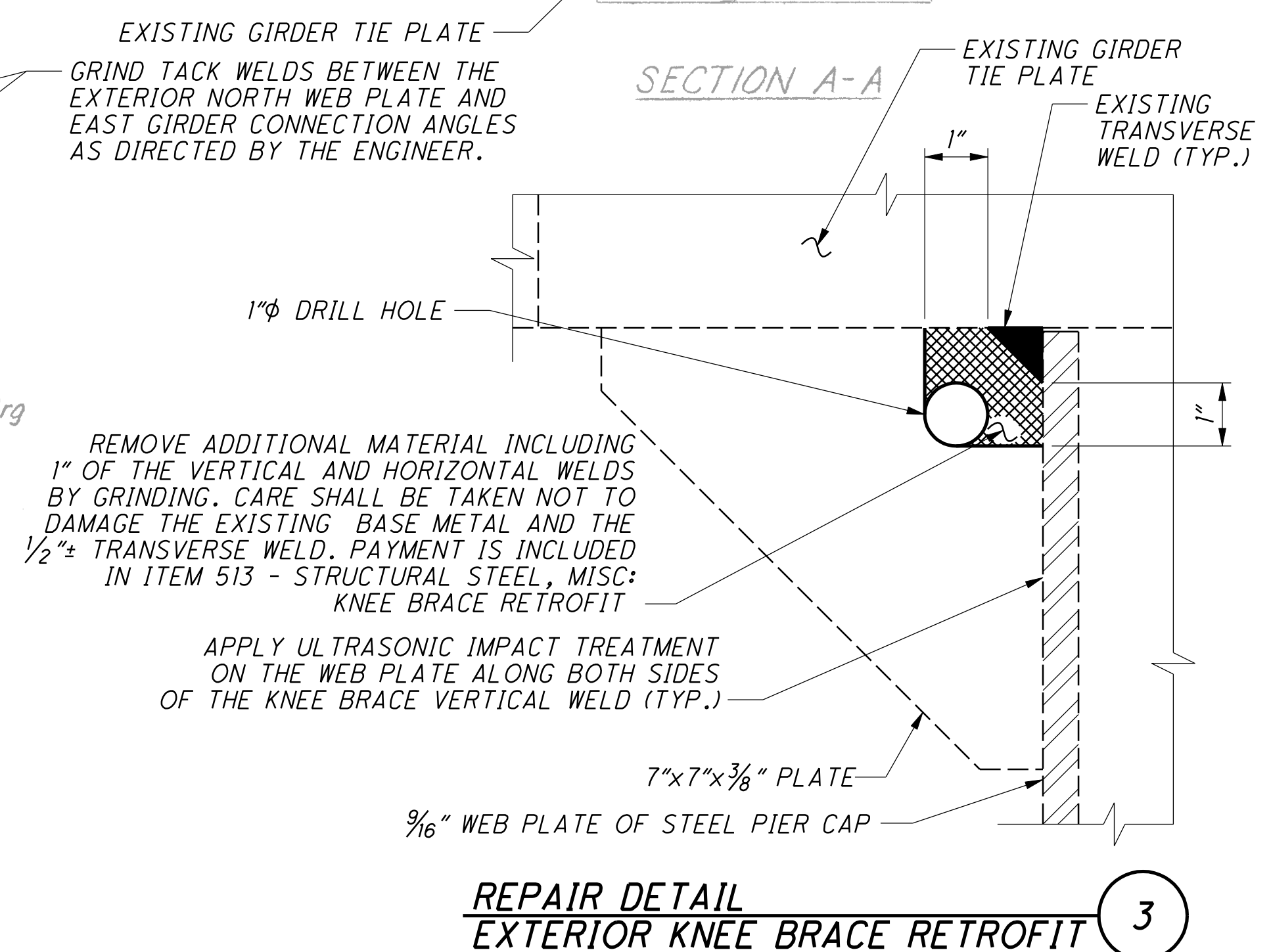
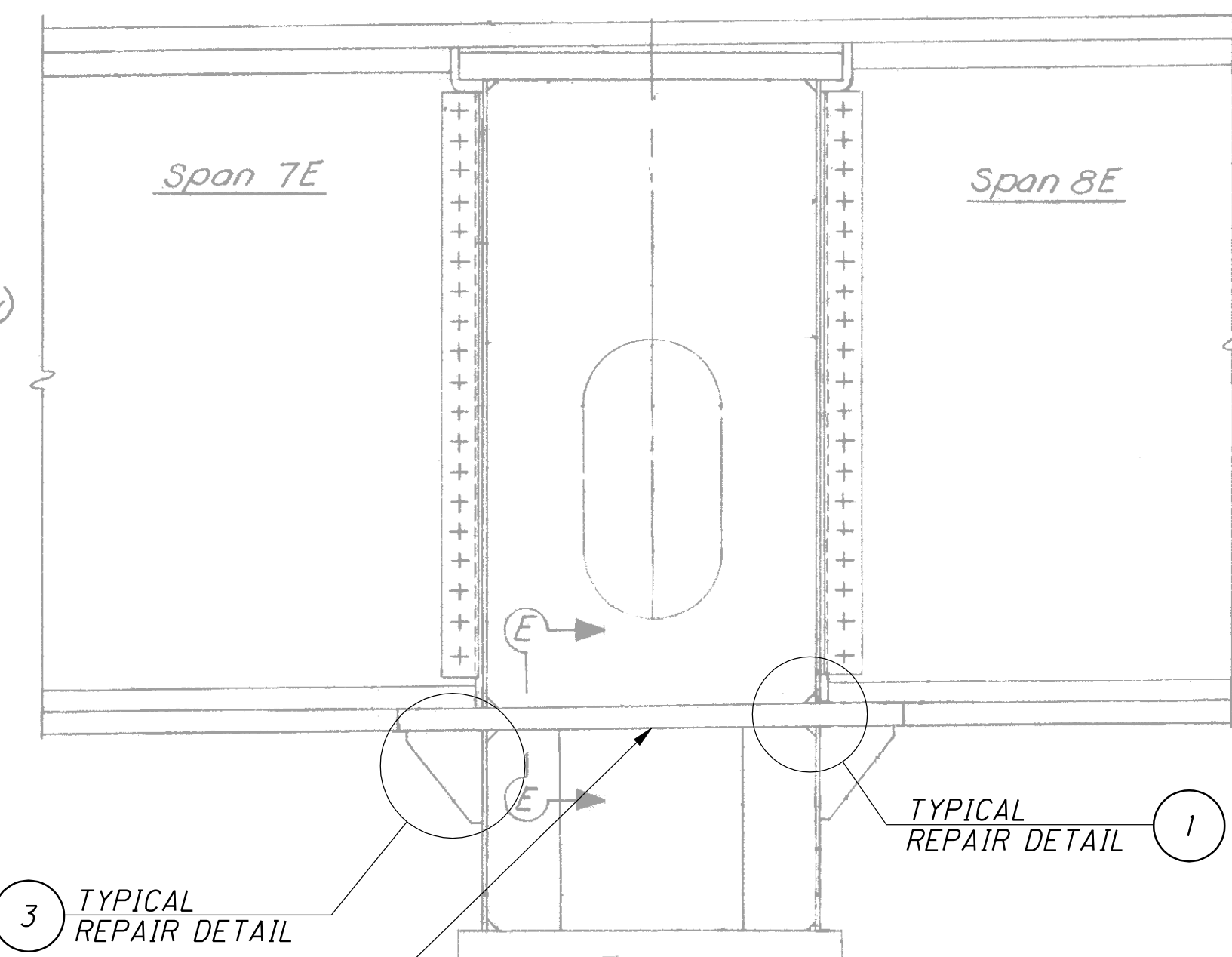
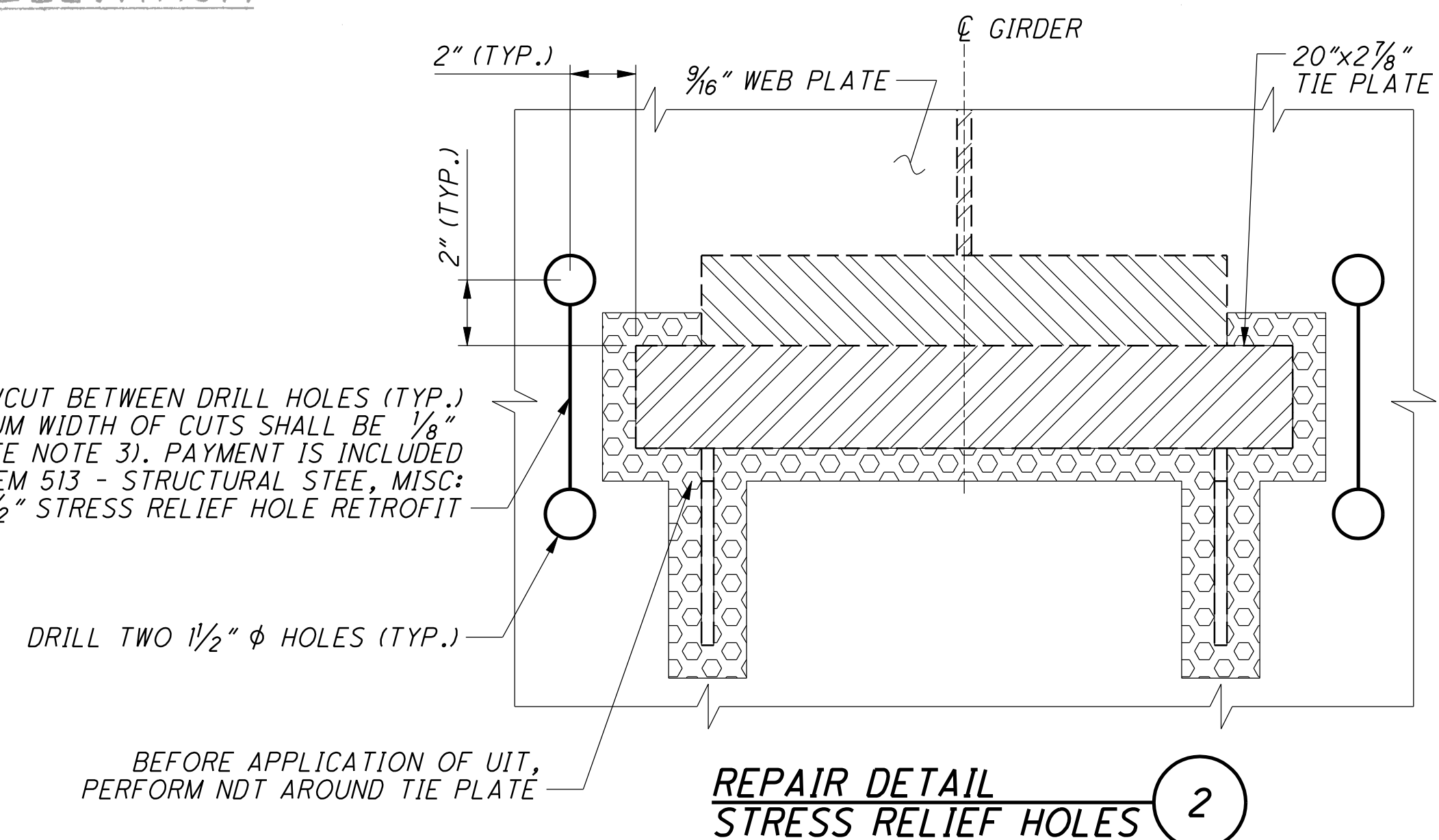
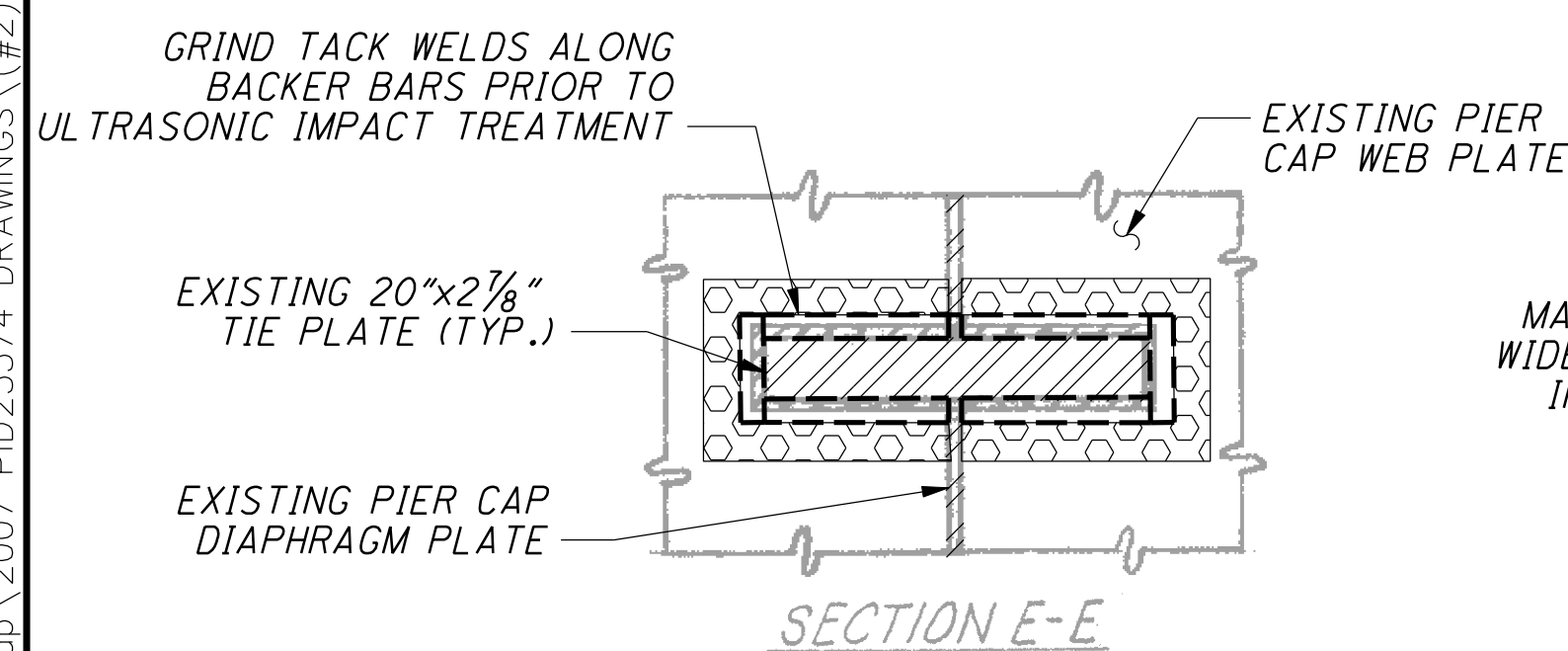
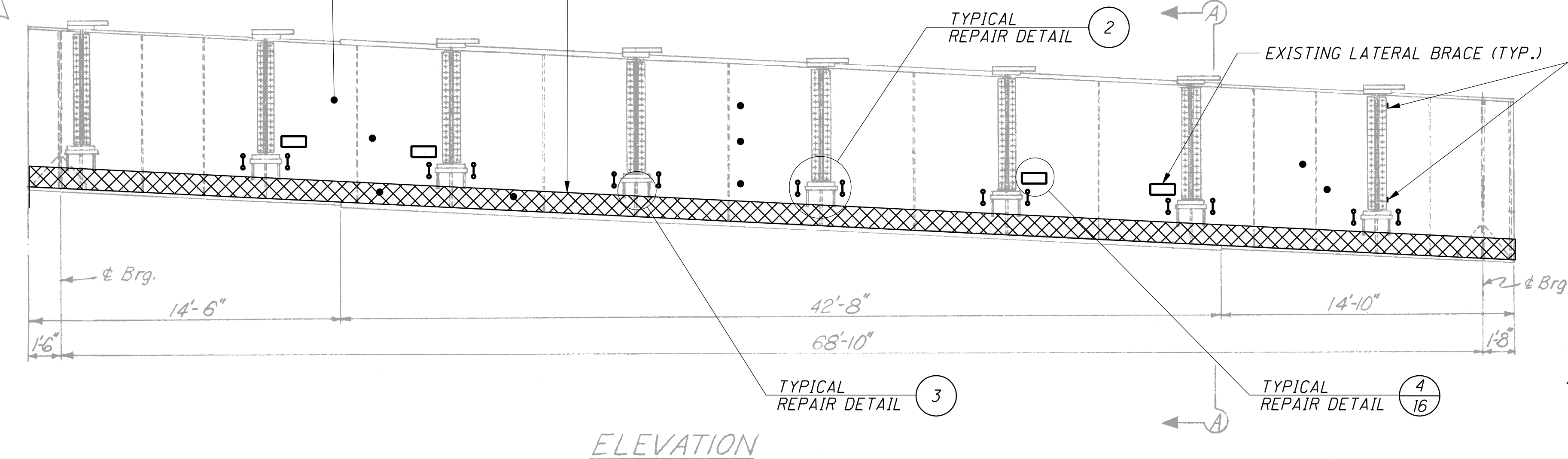
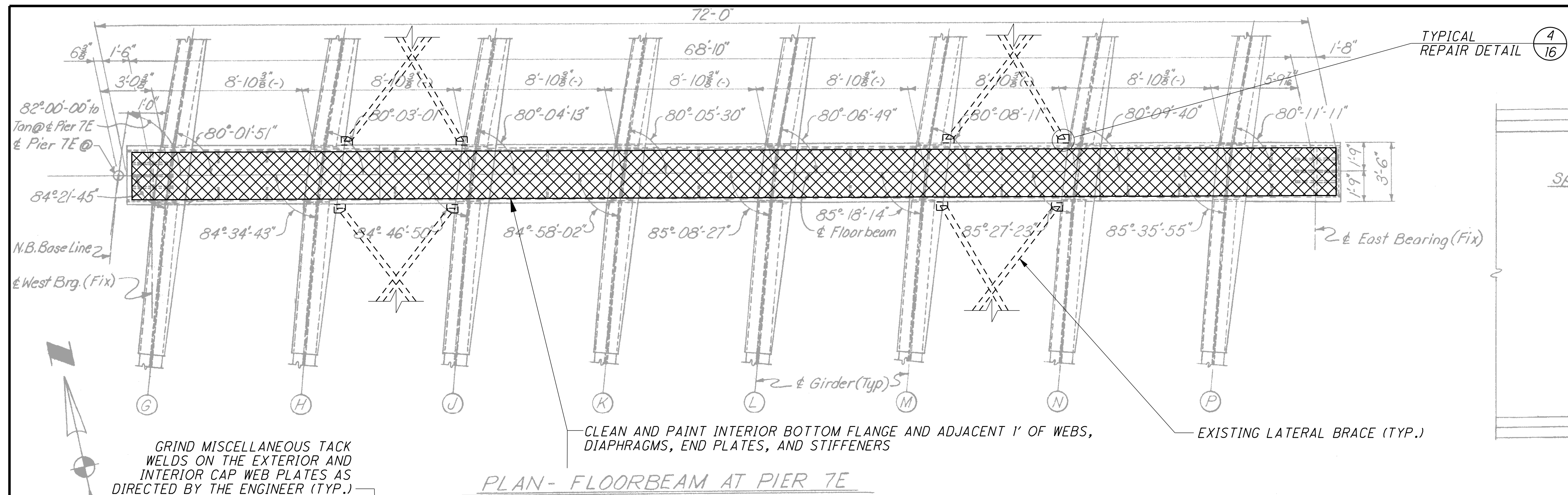


- LOCATION OF INTERSECTING WELD BETWEEN PIER CAP WEB STIFFENER WELD AND PIER CAP FLANGE WELD TO BE REMOVED BY GRINDING



NOTES:

1. PIER PLAN, ELEVATION AND SECTION A-A ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON INTERIOR AND EXTERIOR OF PIER CAP.
3. REMOVE INTERIOR DIAPHRAGM KNEE BRACE AND GRIND SMOOTH WELD ON BOTTOM FLANGE AT GIRDERS C AND D. APPLY ULTRASONIC IMPACT TREATMENT TO THE BOTTOM FLANGE ALONG PREVIOUS KNEE BRACE WELDS.
4. DRILL TWO 1/2" ϕ HOLES THROUGH THE EAST END PLATE. THE BOTTOM OF THE HOLES SHALL BE FLUSH WITH THE PIER CAP BOTTOM FLANGE. HOLES SHALL NOT PENETRATE OR GOUGE PIER CAP WEB PLATES OR FLANGE PLATE. ALL COSTS SHALL BE INCLUDED IN ITEM 513 - STRUCTURAL STEEL, MISC.: 1/2" DRAINAGE HOLES, AS PER PLAN.



- NOTES:

1. PIER PLAN, ELEVATION, SECTION A-A, AND SECTION E-E ARE TAKEN FROM THE ORIGINAL PLANS.
2. CLEAN AND PAINT REPAIR AREAS ON THE INTERIOR AND EXTERIOR OF THE PIER CAP.
3. CARE SHALL BE TAKEN NOT TO OVERCUT SAWCUT BEYOND DRILL HOLES. FLAME CUTTING IS NOT PERMITTED.

-  - LIMITS OF 1/2" WIDE ULTRASONIC IMPACT TREATMENT (UIT)
 - LIMITS OF PAINTING OF INTERIOR OF PIER CAP
 - LIMITS OF STEEL REMOVAL ON EXTERNAL KNEE BRACES BY GRINDING

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