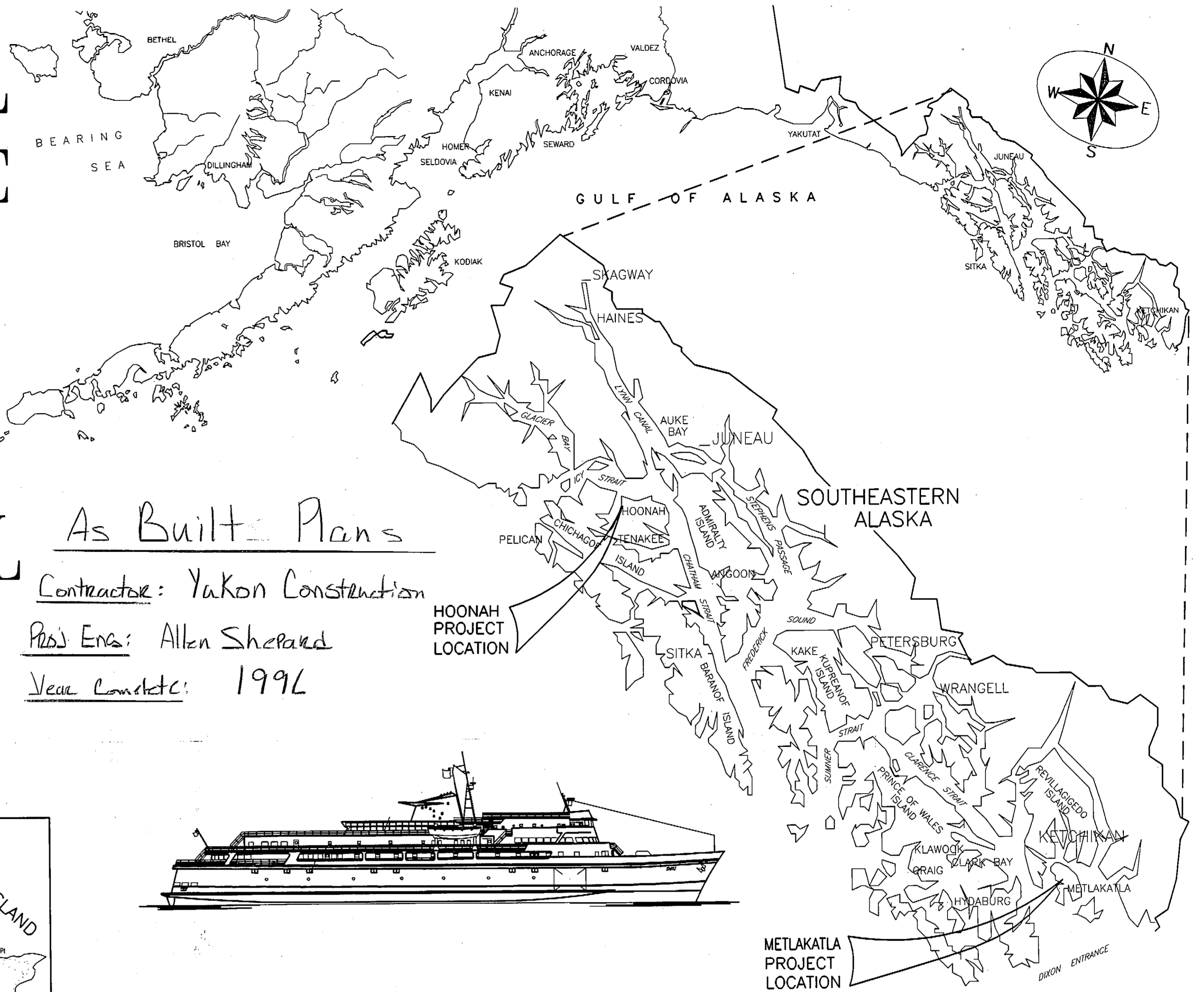


# HOONAH FERRY TERMINAL RAMP & APRON UPGRADE

PROJECT No. STP-0918(6) & No.75455

# METLAKATLA FERRY TERMINAL PONTOON UPGRADE

PROJECT No. STP-0927(4) & No.75269

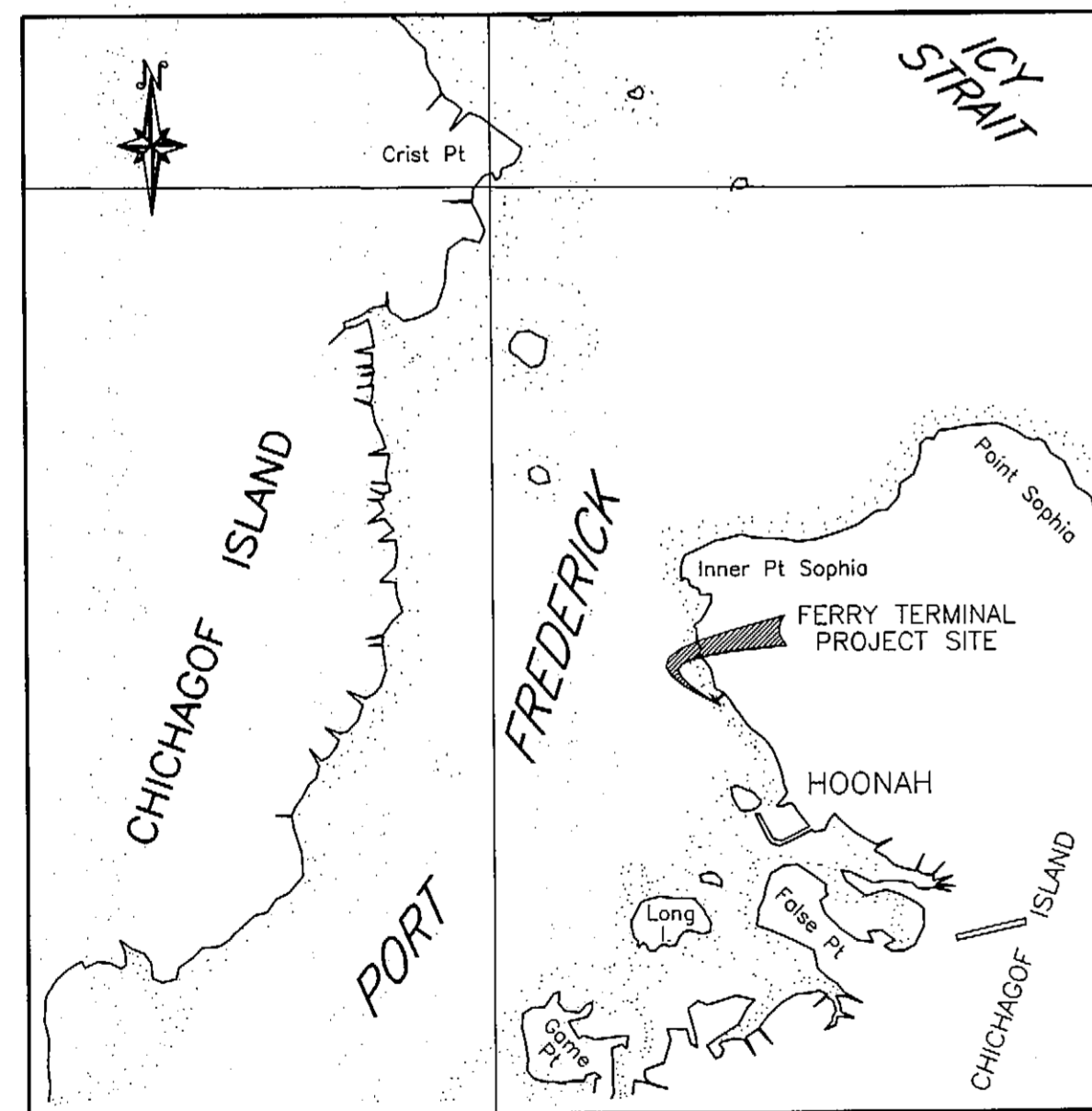
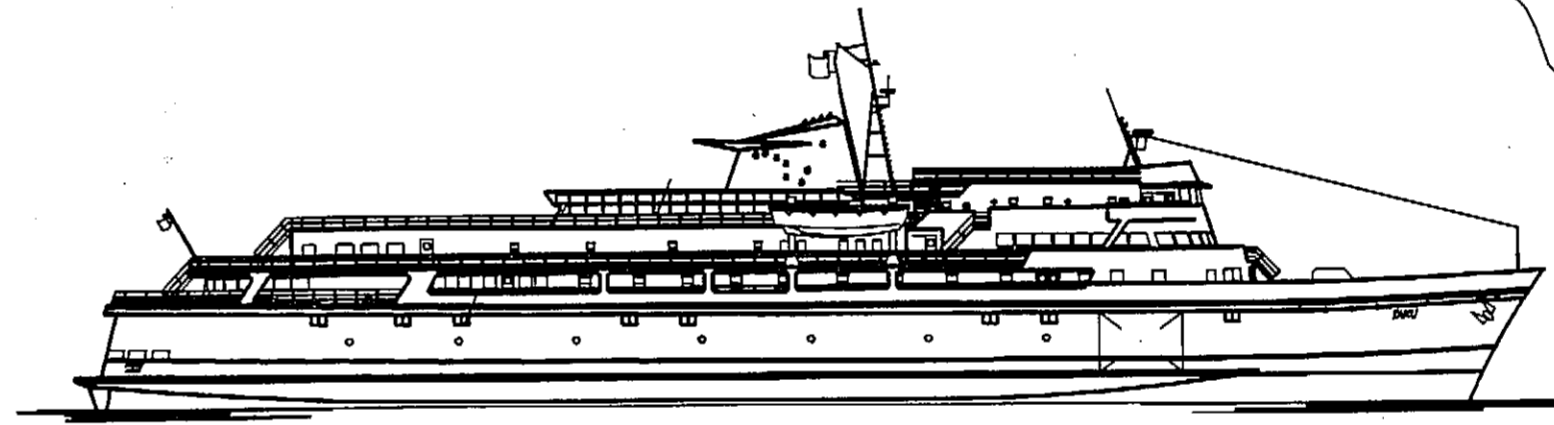


*As Built Plans*

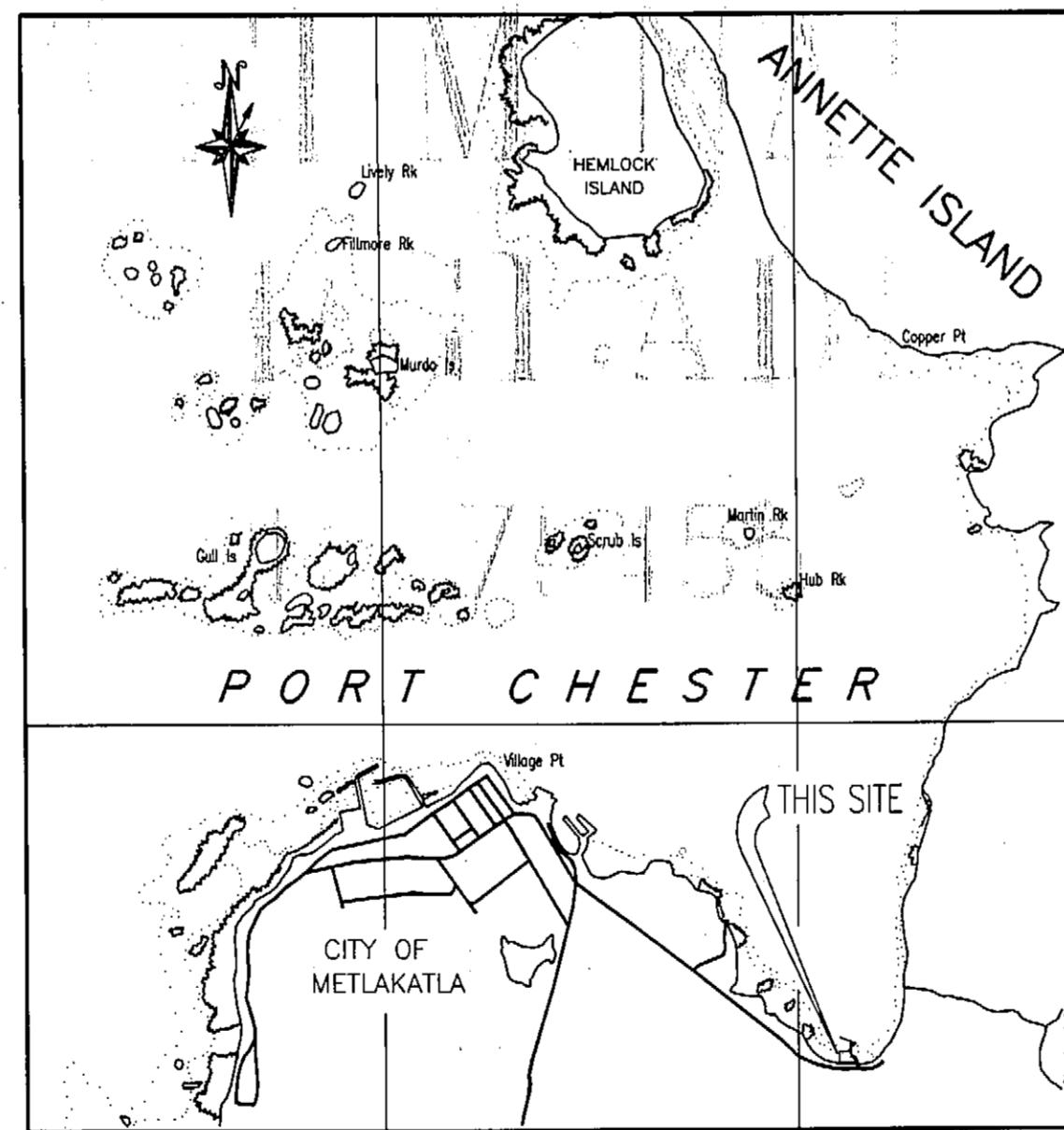
Contractor: Yukon Construction

Proj. Eng: Allen Shepard

Year Complete: 1996



HOONAH SITE, From NOAA Chart 17302 (Icy Strait & Cross Sound)



METLAKATLA SITE, From NOAA Chart 17435 (Harbors In Clarence Strait)

### INDEX TO SHEETS

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2	GENERAL LAYOUT, QUANTITIES & NOTES, HOONAH	18/20	ELECTRICAL POWER E1, E2, E3
3	GENERAL LAYOUT, QUANTITIES & NOTES, METLAKATLA		METLAKATLA PONTOON UPGRADE
	HOONAH RAMP UPGRADE	21	NEW BRIDGE HINGE & NEW BARGE DETAILS
4	BRIDGE LAYOUT	22	NEW BRIDGE HINGE AND FENDER WELDMENT DETAILS
5	FRAME DETAILS	23	AS-BUILT TRANSFER BRIDGE
6	INTERMEDIATE RAMP	24	AS-BUILT BRIDGE & BEARING DETAILS
7	INTERMEDIATE RAMP, DETAILS	25	AS-BUILT ABUT'M'T BEARING & CONNECTIONS
8	HANGER BAR & LOCK-OFF DETAILS	26	AS-BUILT BARGE PLATFORM & HINGE DETAILS
9	SIDING DETAILS	27	AS-BUILT APRON SHEAVES & RIGGING
10	MISCELLANEOUS DETAILS	28	AS-BUILT 13' APRON DETAILS
11	NEW, 13 FT. APRON DETAILS	29	AS-BUILT BARGE FENDER & RESTRAINT
12	AS-BUILT, EXIST. SUPERSTRUCTURE	30	AS-BUILT HYDRAULIC POWER UNIT
13/14	AS-BUILT, EXIST. RAMP & RAMP LIFT DETAILS	31/33	AS-BUILT ELECTRICAL, LAYOUTS, DIAGRAMS & DETAILS
15/16	AS-BUILT, EXIST. BRIDGE/BARGE DETAILS		

SCL = 1:1000

HNHMET-T.DWG

**STATE  
OF  
ALASKA**

**DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES  
SOUTHEAST REGION DESIGN AND CONSTRUCTION FOR  
A M H S MARINE FACILITIES**

APPROVED  
*[Signature]*  
Regional Reconstruction Engineer Date 8/1/95

APPROVED  
*[Signature]*  
Director, Southeast Region Design & Construction Date 8/1/95

Sheet 1 of 33

# ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	ESTIMATED QUANTITIES	UNIT
110(1)	Mobilization/Demobilization - Hoonah	All Req'd	L.S.
111(1)	Erosion & Pollution Control Administration-Hoonah	All Req'd	L.S.
111(2)	Erosion & Pollution Control - Hoonah	All Req'd	C.S.
116(1)	Furnish & Maintain Field Office - Hoonah	All Req'd	L.S.
120	DBE Adjustment	All Req'd	C.S.
201(1)	Removal of Structures and Obstructions - Hoonah	All Req'd	L.S.
302(1)	Intermediate Ramp & Apron - Hoonah	All Req'd	L.S.
501	Electrical Power - Hoonah	All Req'd	L.S.

# GENERAL NOTES

Specifications: Construction: Per Contract Documents for Project No. STP-0918(6) / 75455

Design: Restraint and Mooring Structures: Marine Facilities Design Standards.

Design Loads: Transfer Ramp System: AASHTO 1983 with latest interim specifications  
LL = HS20 - 44 and 85 psf. Pedestrian.

Catwalks and Gangways: LL = 60 psf

Support Barge: DL + LL of Bridge, Ramp and Apron with Ballast

Design Unit Stresses:

Steel: A36  $F_s = 20$  Ksi  
A252 Gr. 2  $F_s = 19.25$  Ksi  
A500 Gr. B  $F_s = 25$  Ksi  
A572  $F_s = 27$  Ksi  
A108  $F_s = 29$  Ksi  
A608 Gr. D  $F_s = 30$  Ksi

Materials:

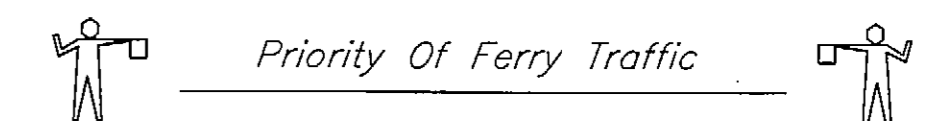
Steel: Tube Sections A500 Gr. B  
Pile A252 Gr. 2, A501 or A53, Gr. B, type E or S  
Pipe A53, Gr. B, type E or S  
Stainless Type 302, 304 or 316  
All other shall be A36 or A572 as noted.  
Charpy Group 2 impact requirements shall apply.

Protective Coatings:

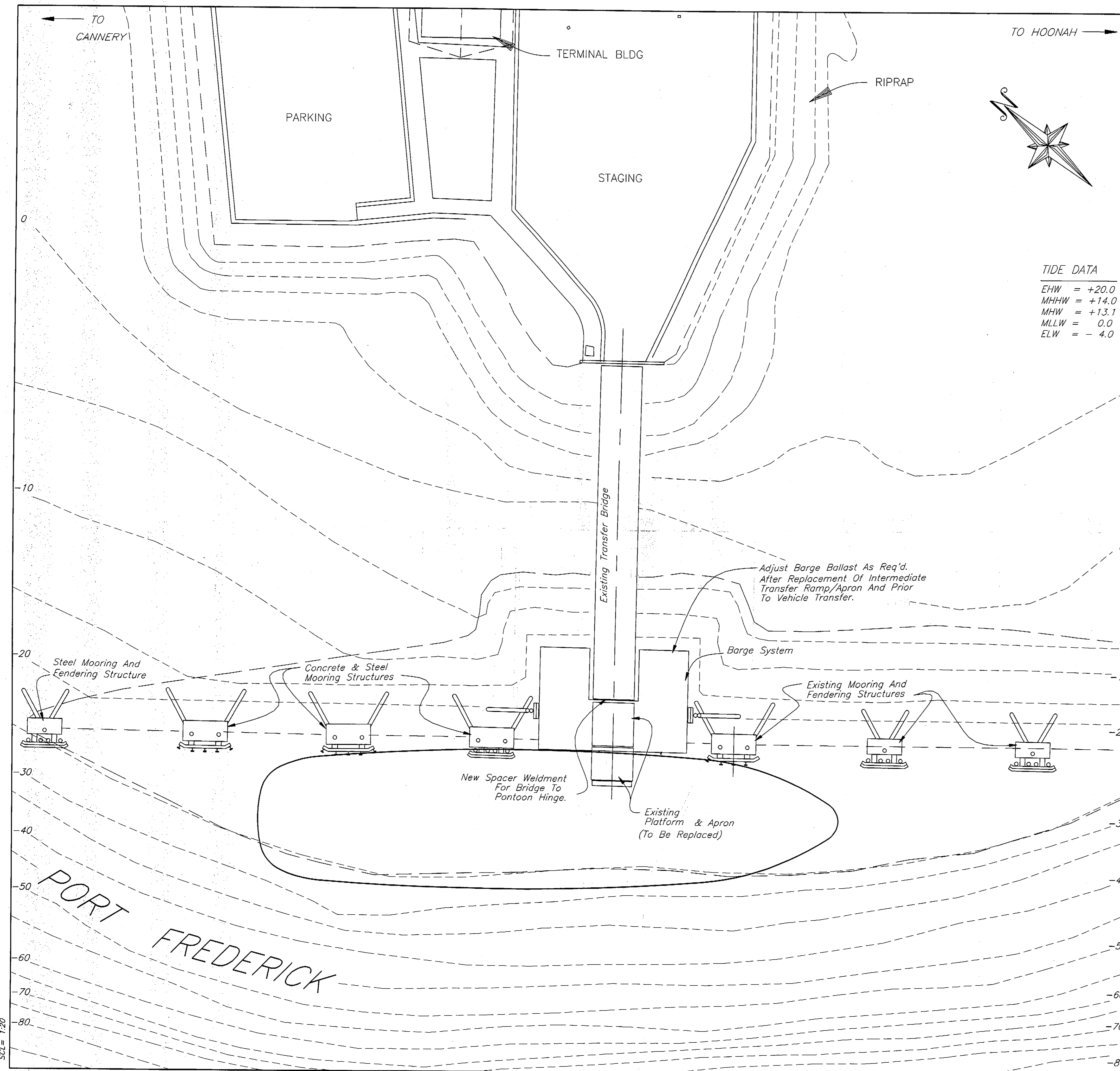
Ramp, Apron and Hardware: Hot Dip Galvanized After Fabrication

Ballast:

Transfer Bridge Pontoon Ballast Shall Be Fresh Potable Water. Ballast Flexifloat Pontoon Units So That Pontoon System Is Approximately Level And Within 1" Of Existing Freeboard.

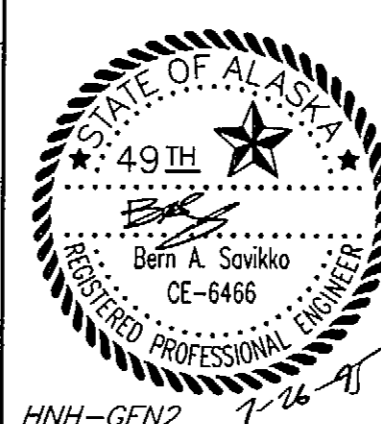


- Once the Contractor begins improvements the following will remain in force until the project is completed.
  - The Contractor shall conduct his operations so as not to interfere with normal scheduled ferry access or vehicular traffic to and from the existing ferry facilities.
  - Ferry traffic shall have priority over construction activities and it shall be the Contractor's responsibility to coordinate his activities with ferry arrivals and departures.
  - A.M.H.S. personnel will stage traffic, and operate the transfer equipment.
  - Contractor shall provide safe access and lighting for A.M.H.S. personnel to tie up points as required throughout the contract.
- The Contractor shall not stockpile any materials in the existing staging area without written approval from the Project Engineer.



STAMP

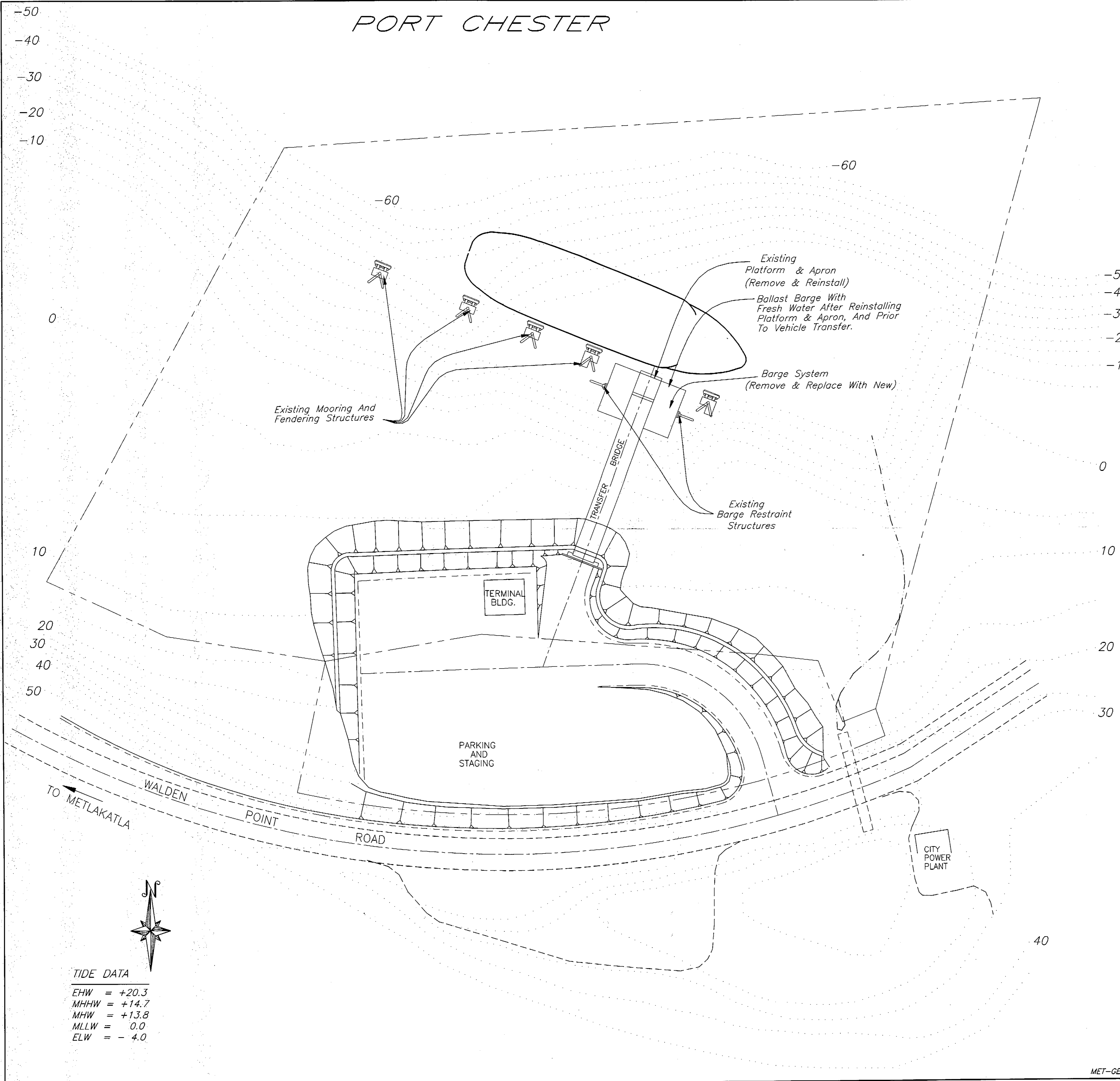
DO NOT SCALE THIS DRAWING - USE DIMENSIONS



STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
HOONAH ALASKA  
**GENERAL LAYOUT, QUANTITIES AND GENERAL NOTES**

DESIGNED STAFF	CHECKED BAS	DRAWN BN	DATE MAY, 1995
PROJECT NUMBER STP-0918(6)/75455	SHEET 2	OF	33

# PORT CHESTER



**TIDE DATA**  
 EHW = +20.3  
 MHHW = +14.7  
 MHW = +13.8  
 MLLW = 0.0  
 ELW = - 4.0

## ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	ESTIMATED QUANTITIES	UNIT
110(2)	Mobilization/Demobilization - Metlakatla	All Req'd	L.S.
111(3)	Erosion & Pollution Control Administration-Metlakatla	All Req'd	L.S.
111(4)	Erosion & Pollution Control - Metlakatla	All Req'd	C.S.
116(2)	Furnish & Maintain Field Office - Metlakatla	All Req'd	L.S.
120	DBE & WBE Adjustment	All Req'd	C.S.
201(2)	Removal of Structures and Obstructions-Metlakatla	All Req'd	L.S.
302(2)	New Barge System - Metlakatla	All Req'd	L.S.

## GENERAL NOTES

**Specifications:**  
 Construction: Per Contract Documents for Project No. STP-0927(4) / 75269  
 Design: Restraint and Mooring Structures: Marine Facilities Design Standards.

**Design Loads:** Transfer Ramp System: AASHTO 1983 with latest interim specifications  
 LL = HS20 - 44 and 85 psf. Pedestrian.  
 Catwalks and Gangways: LL = 60 psf  
 Support Barge: DL + LL of Bridge, Ramp and Apron with Ballast

**Design Unit Stresses:**  
 Steel:  
 A36  $F_s = 20$  Ksi  
 A252 Gr. 2  $F_s = 19.25$  Ksi  
 A500 Gr. B  $F_s = 25$  Ksi  
 A572  $F_s = 27$  Ksi  
 A108  $F_s = 29$  Ksi  
 A608 Gr. D  $F_s = 30$  Ksi

**Materials:** Steel: Tube Sections A500 Gr. B  
 Pile A252 Gr. 2, A501 or A53, Gr. B, type E or S  
 Pipe A53, Gr. B, type E or S  
 Stainless Type 302, 304 or 316  
 All other shall be A36 or A572 as noted.  
 Charpy Group 2 impact requirements shall apply.

**Protective Coatings:**  
 Flexifloat Barges: See Specifications Section 303 - System 1

**Miscellaneous Hardware:**  
 Hot Dip Galvanized After Fabrication

**Ballast:** Transfer Bridge Pontoon Ballast Shall Be Fresh Potable Water. Ballast Flexifloat Pontoon Units So That Pontoon System Is Approximately Level And Within 1" Of Existing Freeboard.

**Priority Of Ferry Traffic**

1. Once the Contractor begins improvements the following will remain in force until the project is completed.  
 A. The Contractor shall conduct his operations so as not to interfere with normal scheduled ferry access or vehicular traffic to and from the existing ferry facilities.  
 B. Ferry traffic shall have priority over construction activities and it shall be the Contractor's responsibility to coordinate his activities with ferry arrivals and departures.  
 C. A.M.H.S. personnel will stage traffic, and operate the transfer equipment.  
 D. Contractor shall provide safe access and lighting for A.M.H.S. personnel to tie up points as required throughout the contract.

2. The Contractor shall not stockpile any materials in the existing staging area without written approval from the Project Engineer.

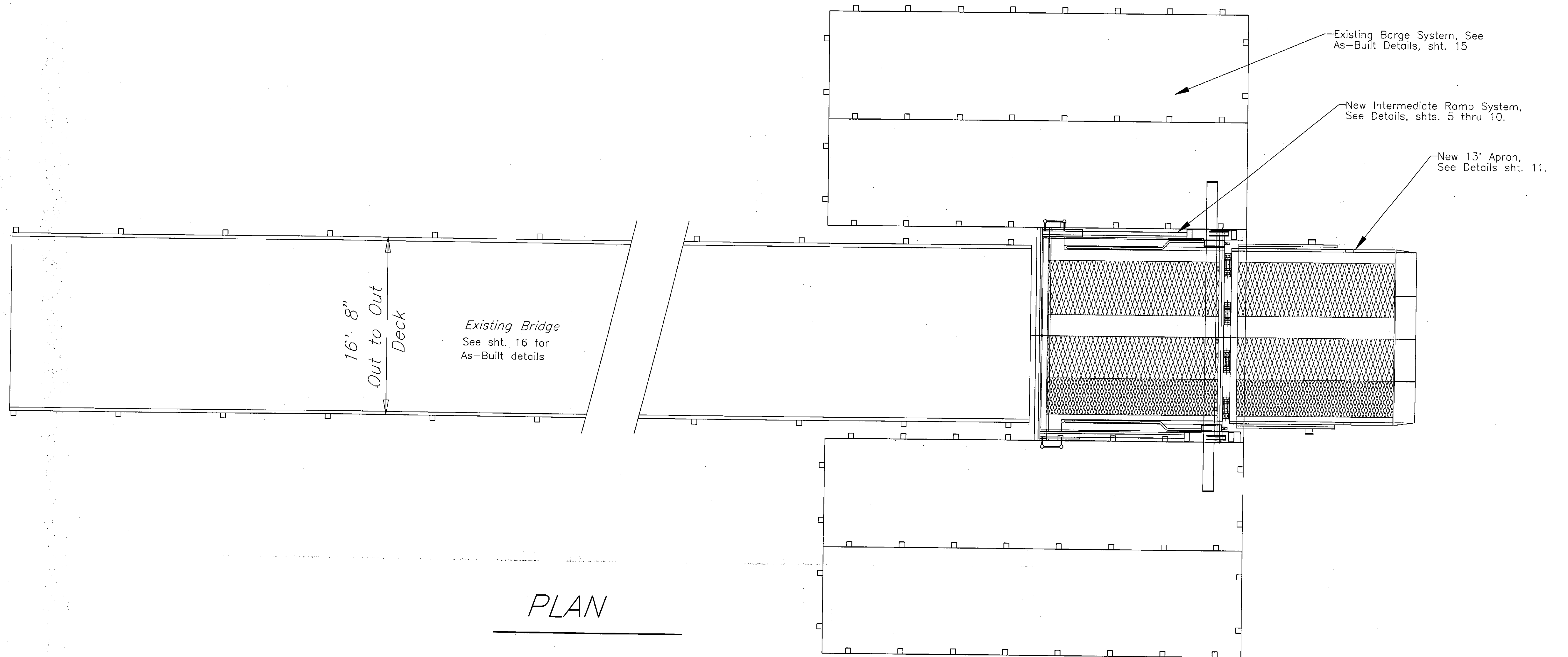
DO NOT SCALE THIS DRAWING - USE DIMENSIONS

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

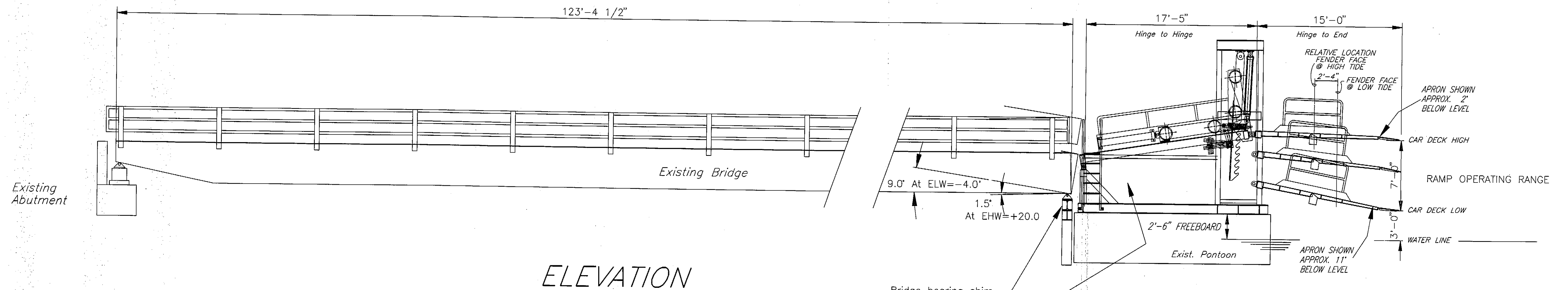
METLAKATLA ALASKA  
**GENERAL LAYOUT, QUANTITIES AND GENERAL NOTES**

DESIGNED: STAFF CHECKED: BAS DRAWN: WN DATE: MAY, 1995  
 PROJECT NUMBER: STP-0927(4)/75269 SHEET 3 OF 33

MET-GEN2 7-26-95

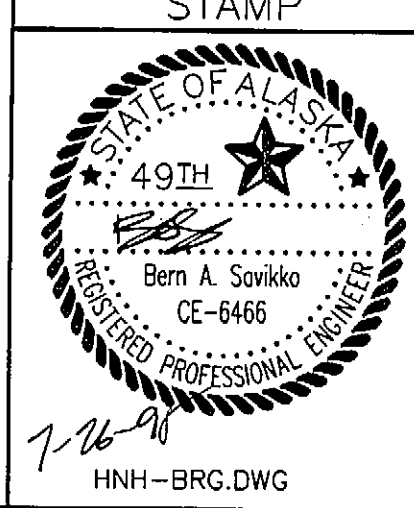


PLAN

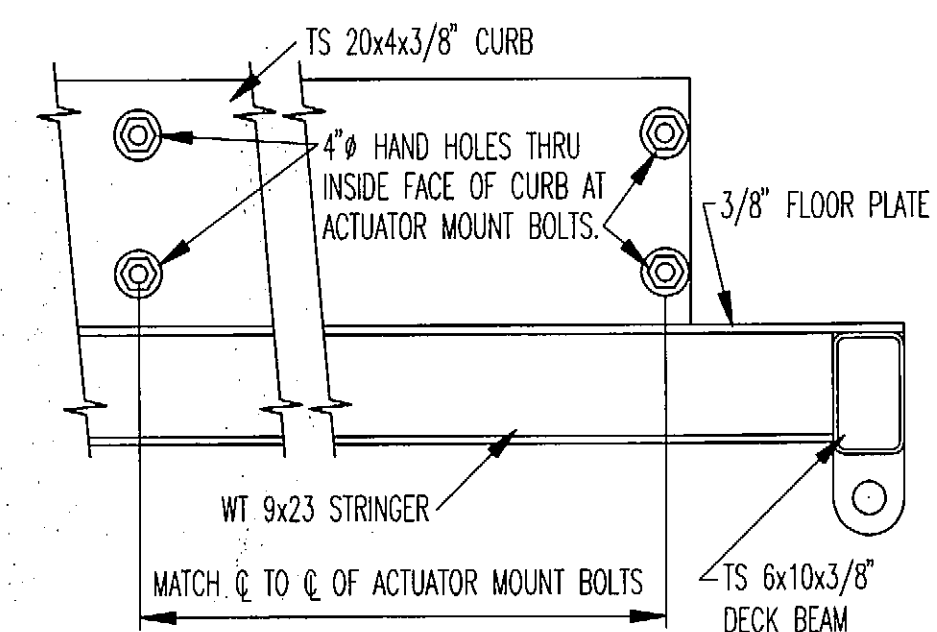


ELEVATION

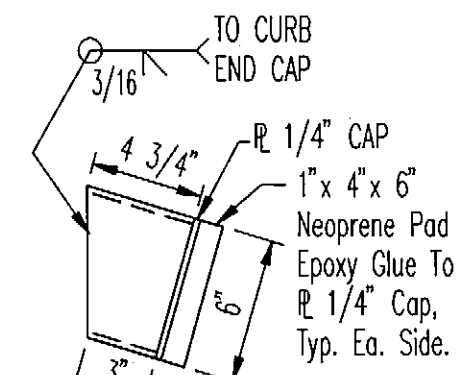
STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
HOONAH		ALASKA	
<b>RAMP/APRON UPGRADE</b>			
<b>BRIDGE LAYOUT</b>			
DESIGNED: STAFF	CHECKED: BAS	DRAWN: BAS	DATE: MAY, 1995
PROJECT NUMBER: STP-0918(6)/75455	SHEET 4	OF 33	



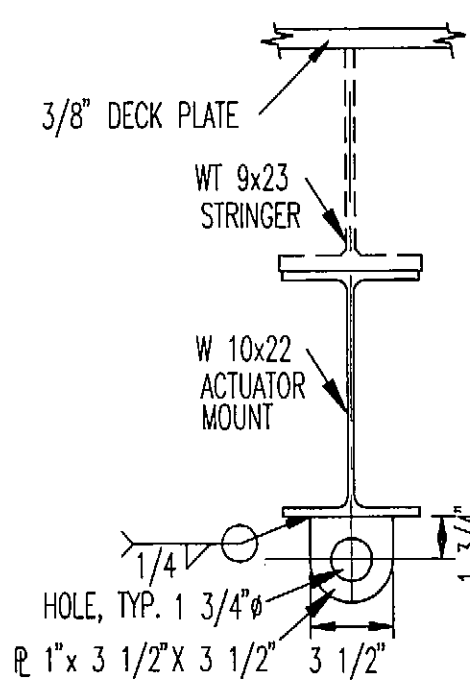




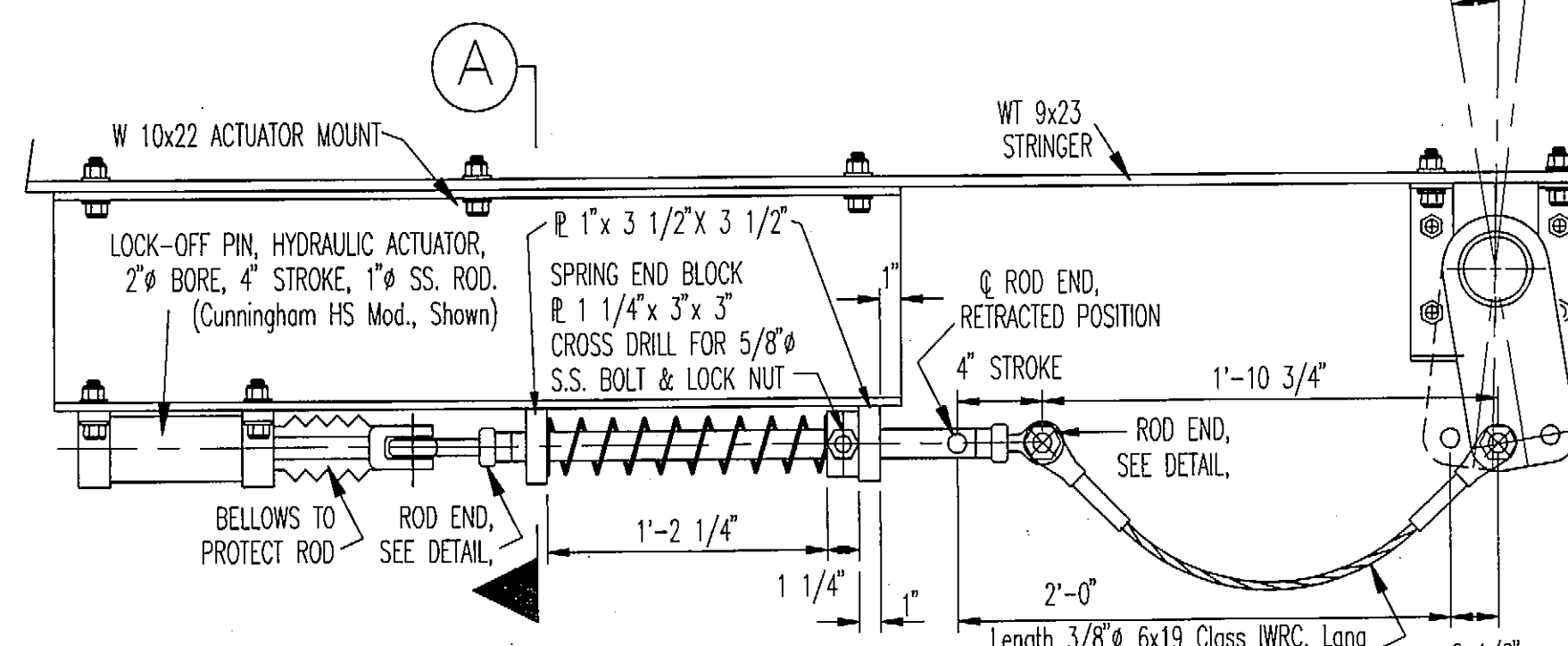
**HAND HOLE DETAIL**



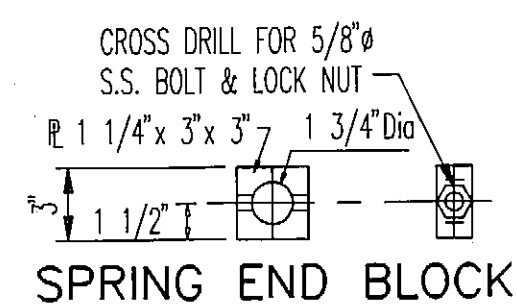
**APRON STOP DETAIL**



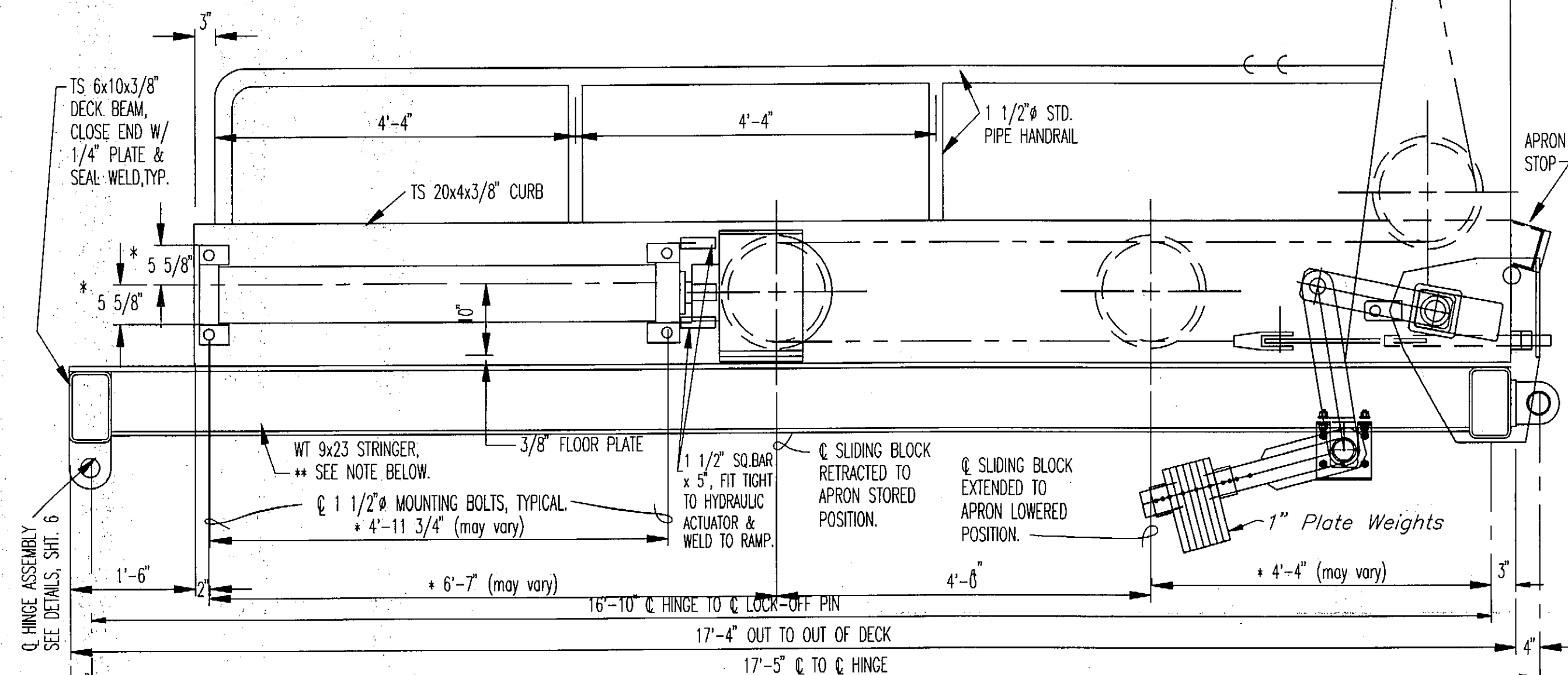
**SECTION \"A\"**



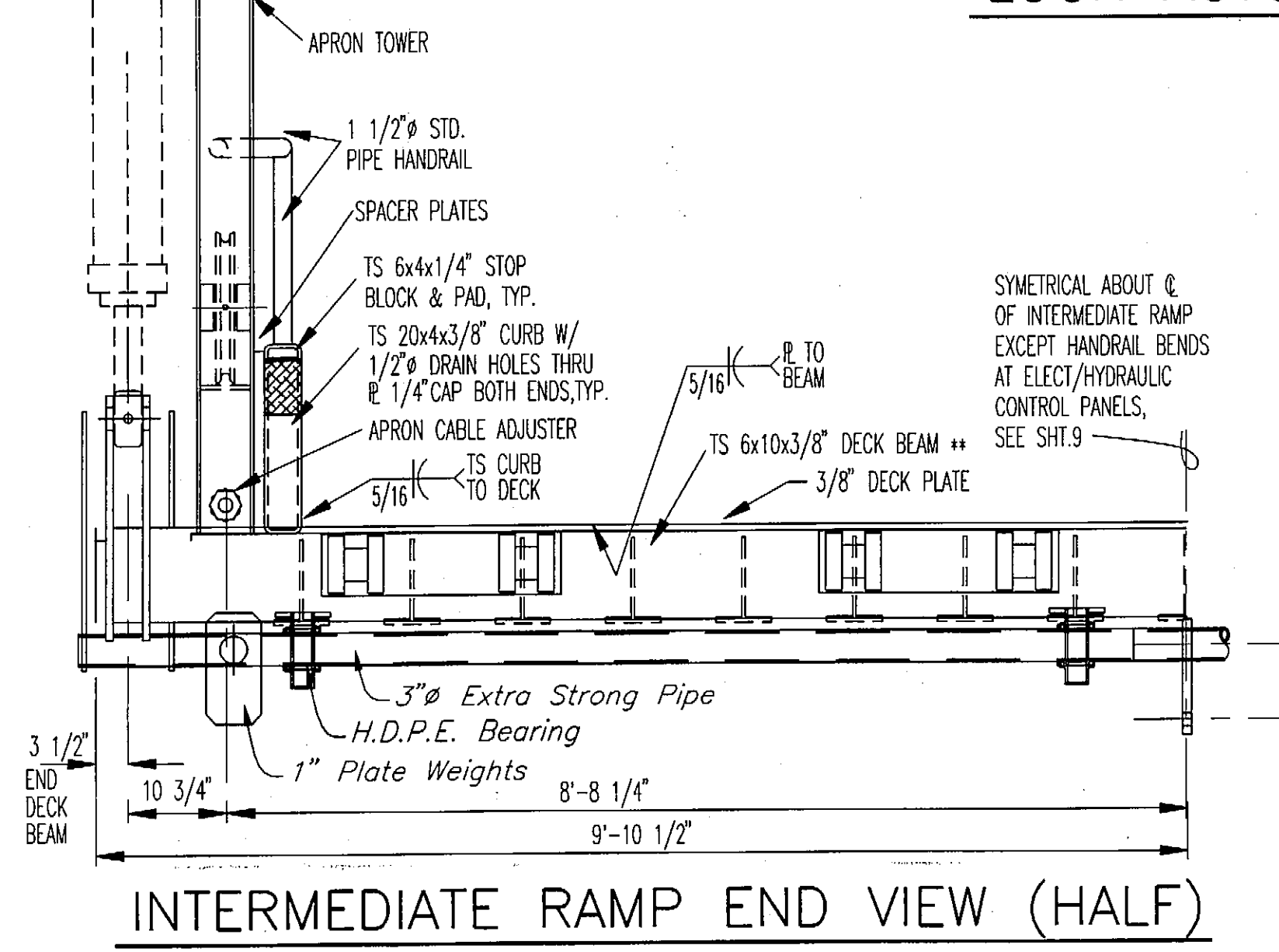
**LOCK ACTUATOR DETAILS**



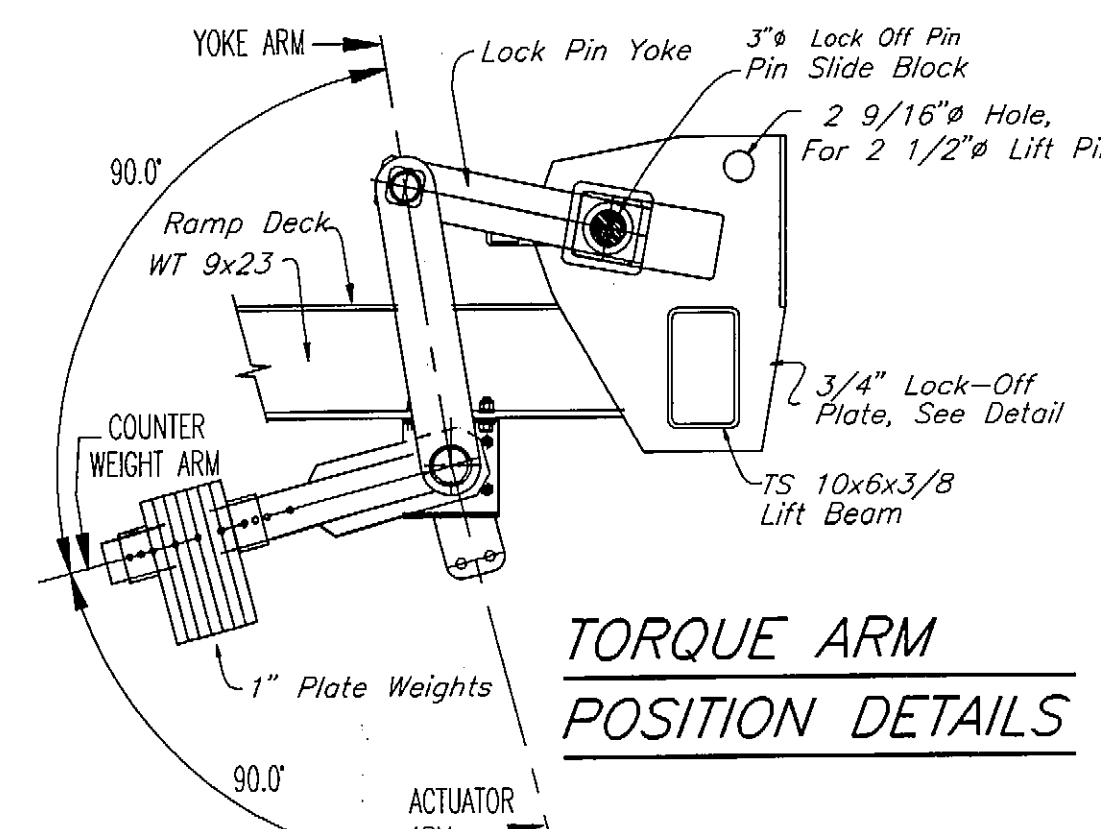
**SPRING END BLOCK**



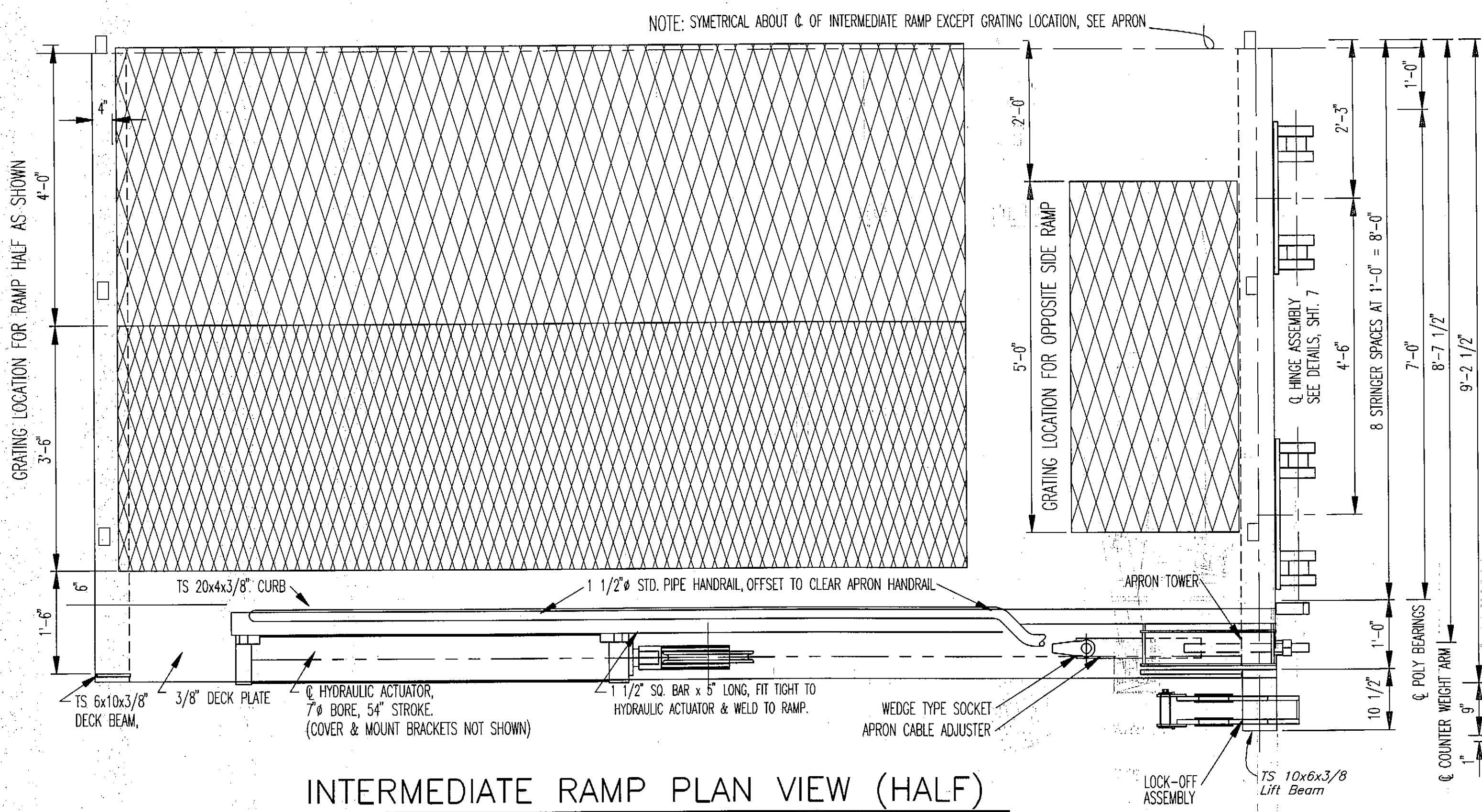
**INTERMEDIATE RAMP ELEVATION**



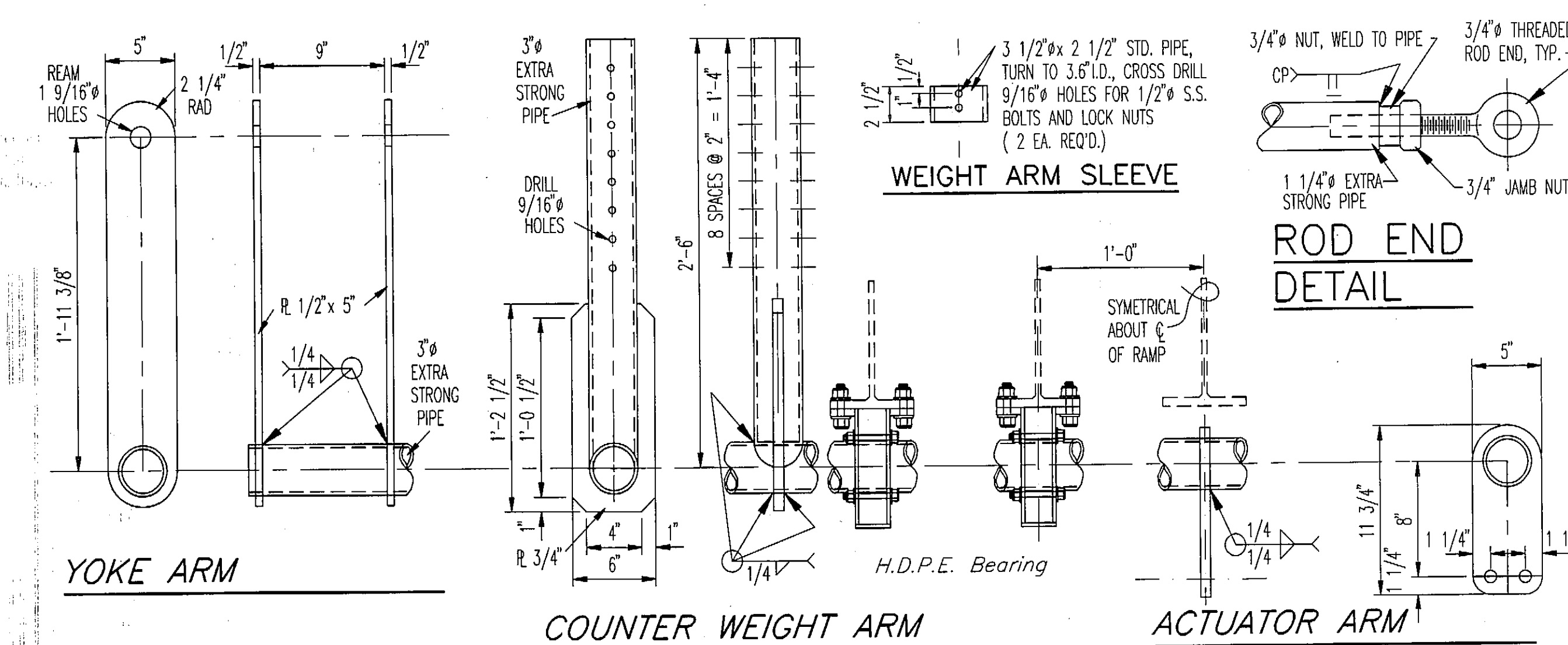
**INTERMEDIATE RAMP END VIEW (HALF)**



**TORQUE ARM POSITION DETAILS**



**INTERMEDIATE RAMP PLAN VIEW (HALF)**



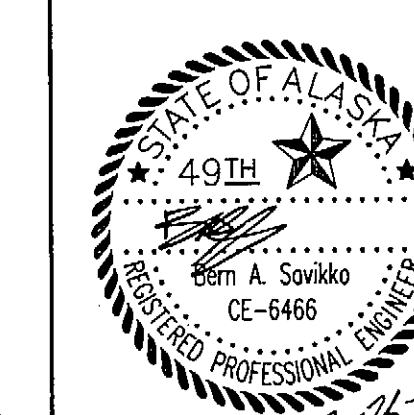
**YOKE ARM**

**COUNTER WEIGHT ARM**

**ACTUATOR ARM**

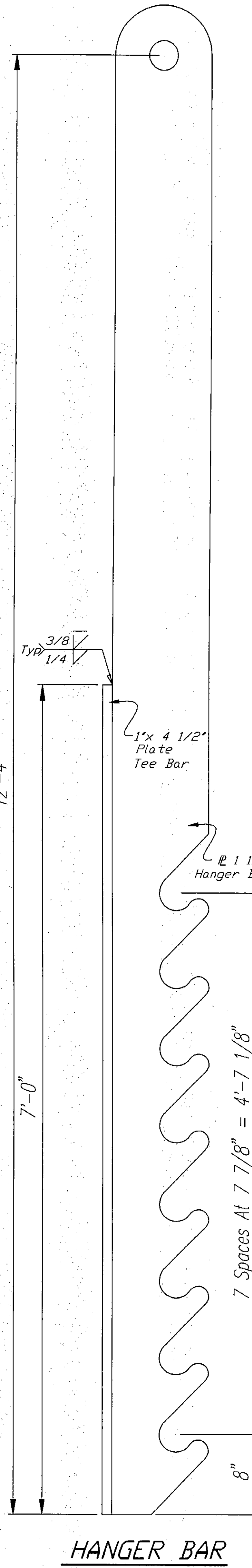
- NOTES:**
1. Approx. Weight Of Intermediate Ramp = 20,000lbs.
  2. Compression Spring: 1 13/16" Rod Size, 15" Free Length, 10 1/4" Max. Solid Height, 4 3/4" Min. Deflection, Approx. Compression 160 lb/in., Install with 3/4" Precompression.
  3. Close all open ended pipe & tube with 1/4" plate & seal weld.
  4. \* Dimensions based on Cunningham Hydraulic Actuator, Adjust Dimensions For Brand Supplied.
  5. Cable shall be 7/8", 6x30 flattened strand, lang lay, IWRC, and Greased. Breaking strength 35.4 tons.
  6. All Sheaves This Sheet shall be: 16" O.D., 1.3" Tread Dia., 2 5/16" Hub Width, and 2" Shaft w/ Bronze Bushing.
  7. \*\* Main Members subject to tensile stress. Charpy Impact Test Required, See Specifications.

DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
HOONAH		ALASKA	
<b>INTERMEDIATE RAMP</b>			
DESIGNED: STAFF	CHECKED: BAS	DRAWN: BN	DATE: MAY, 1995
PROJECT NUMBER: STP-0918(6) 75455		SHEET: 6	OF: 33

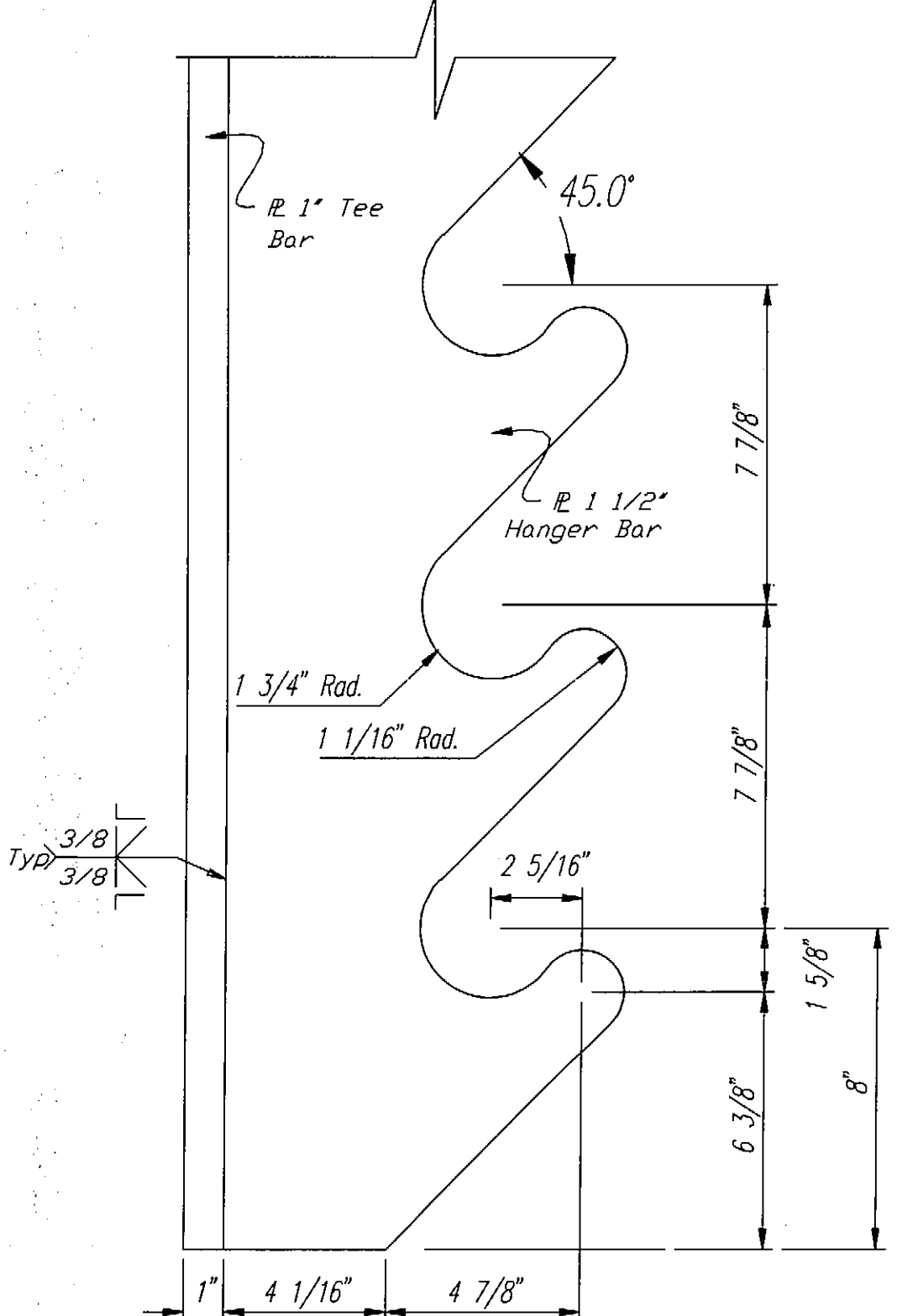


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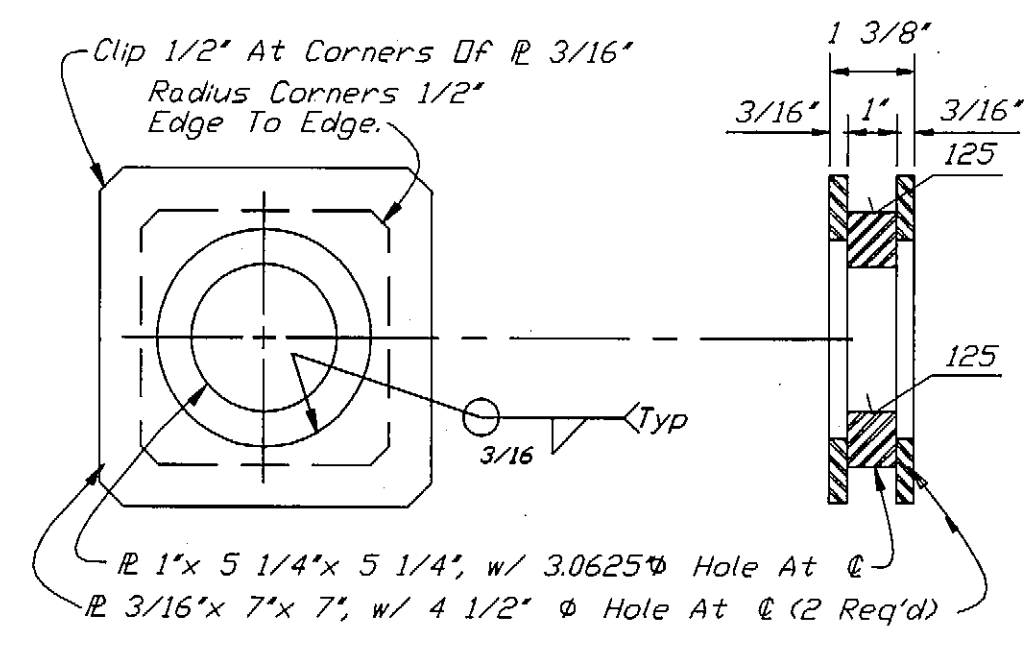




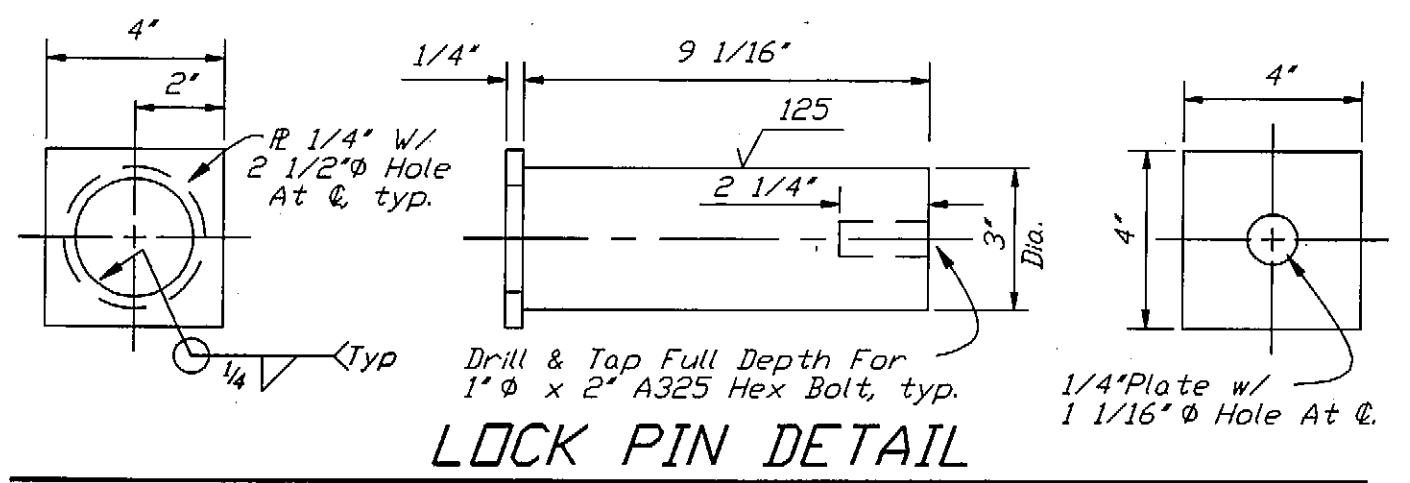
HANGER BAR



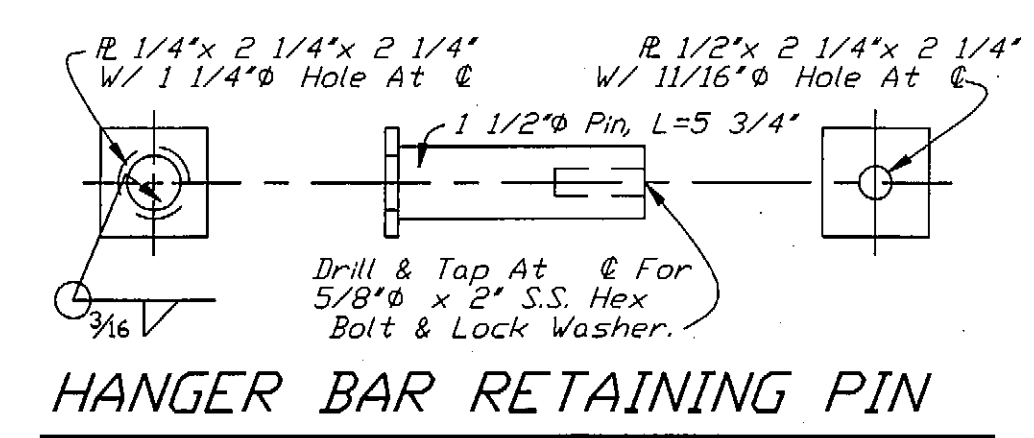
HANGER BAR DETAILS



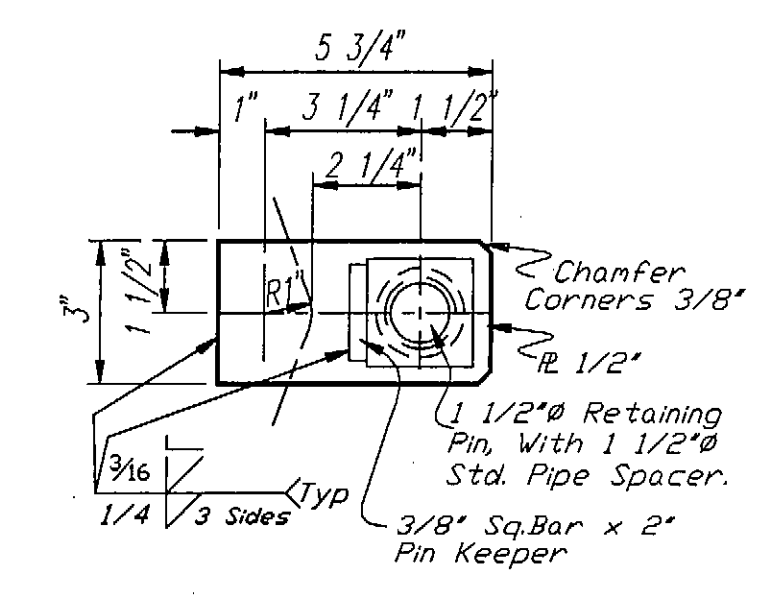
PIN SLIDE BLOCK



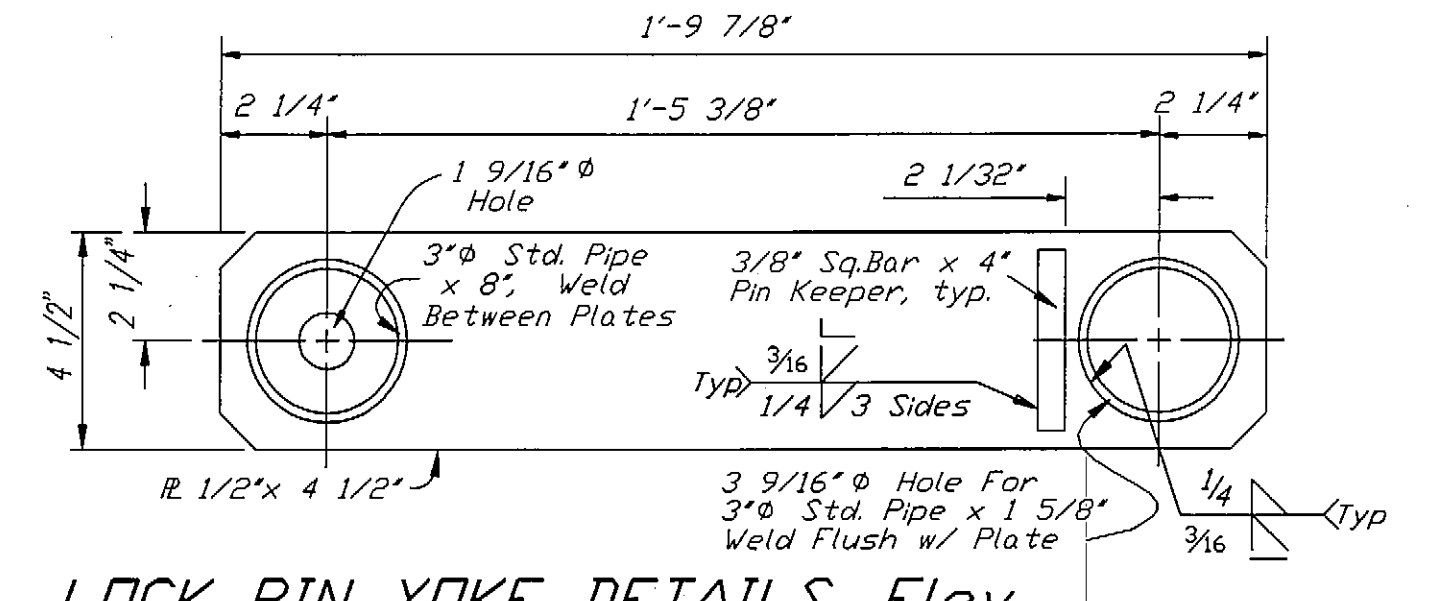
LOCK PIN DETAIL



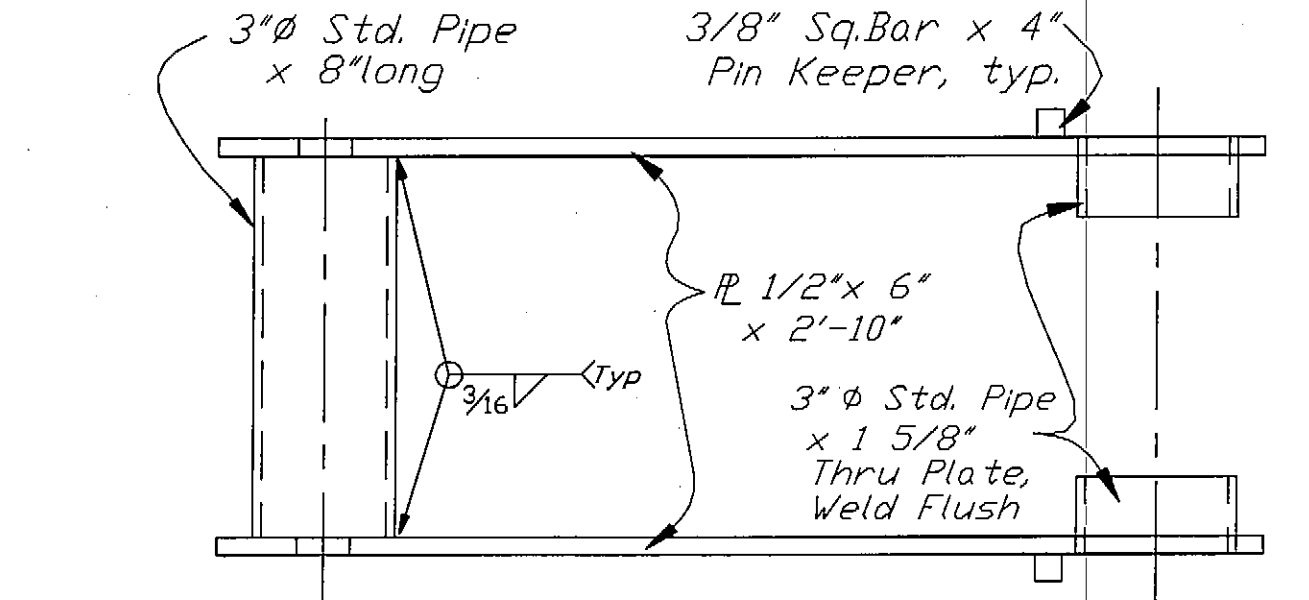
HANGER BAR RETAINING PIN



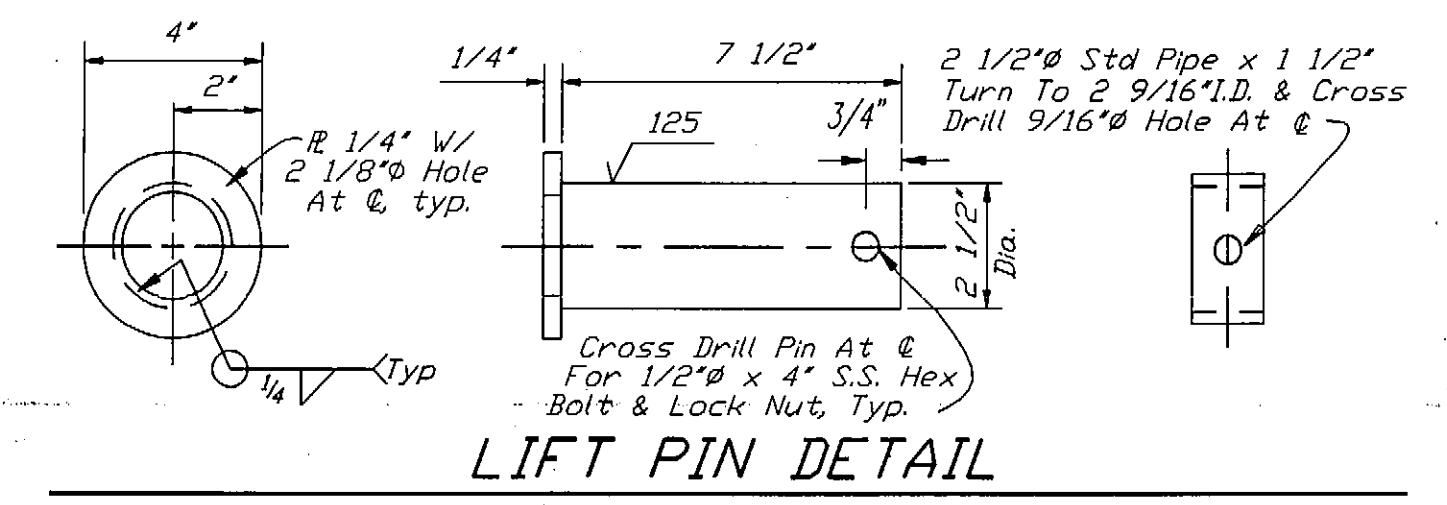
RETAINING PIN STRAP



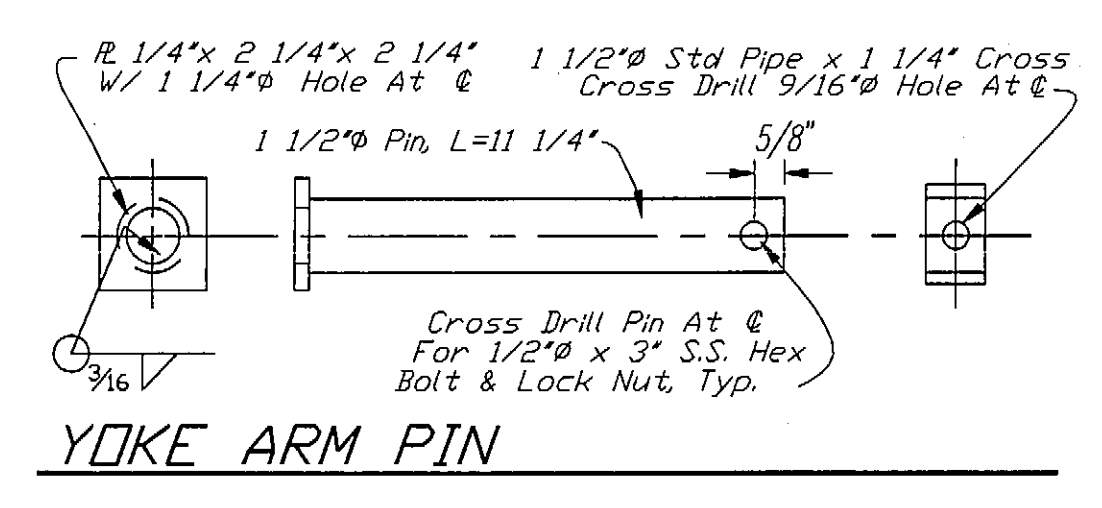
LOCK PIN YOKE DETAILS, Elev.



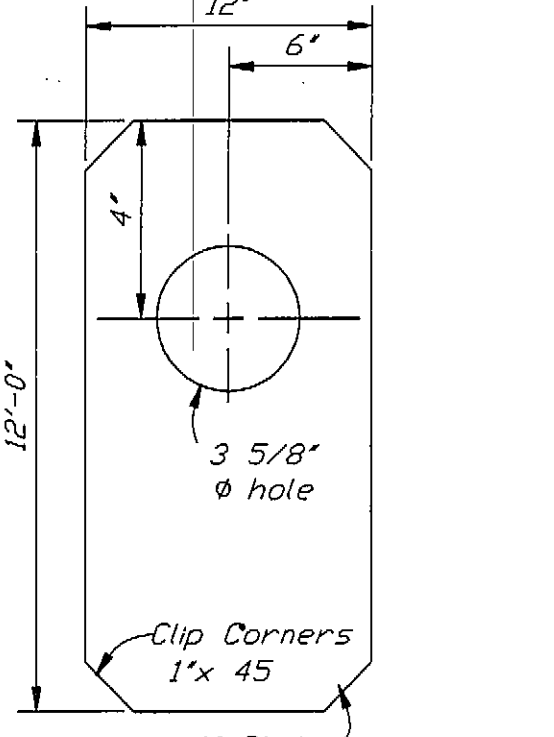
LOCK PIN YOKE DETAILS, Plan



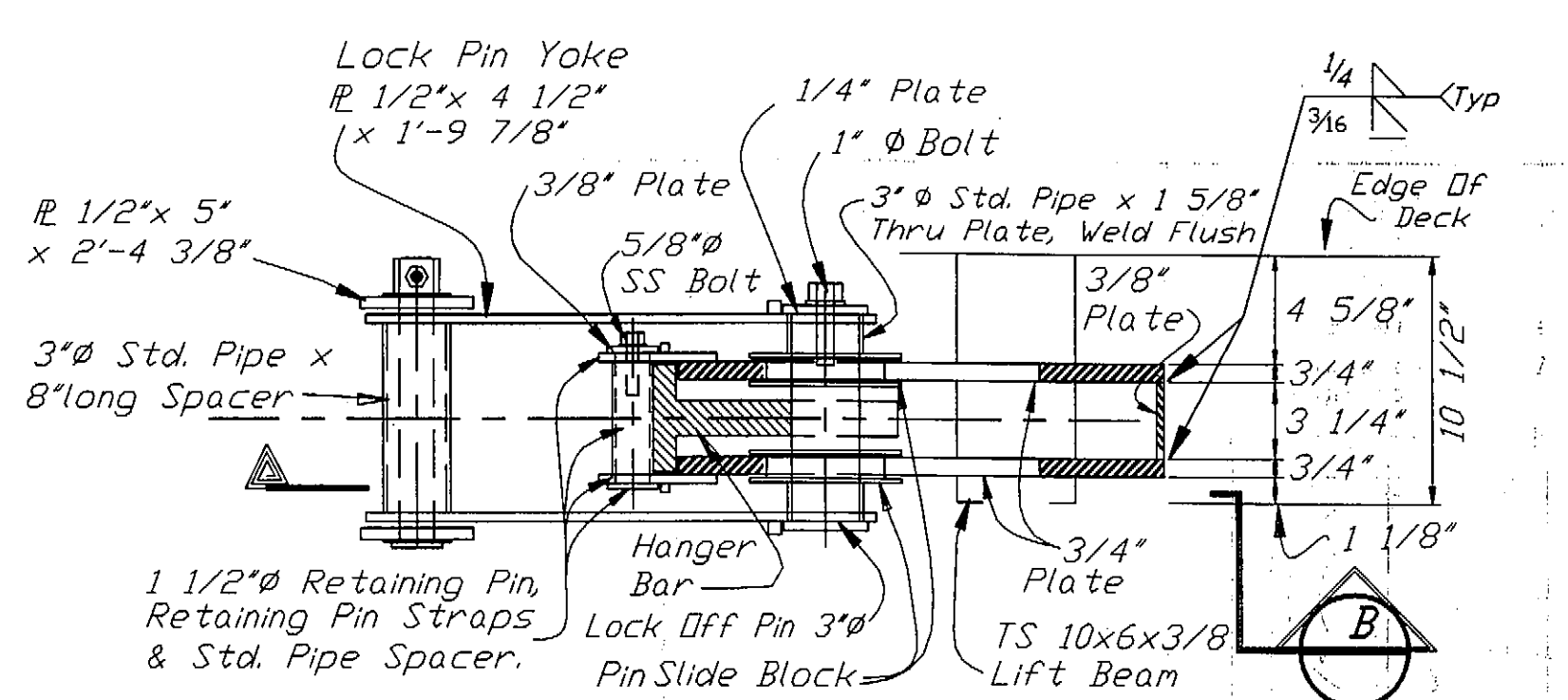
LIFT PIN DETAIL



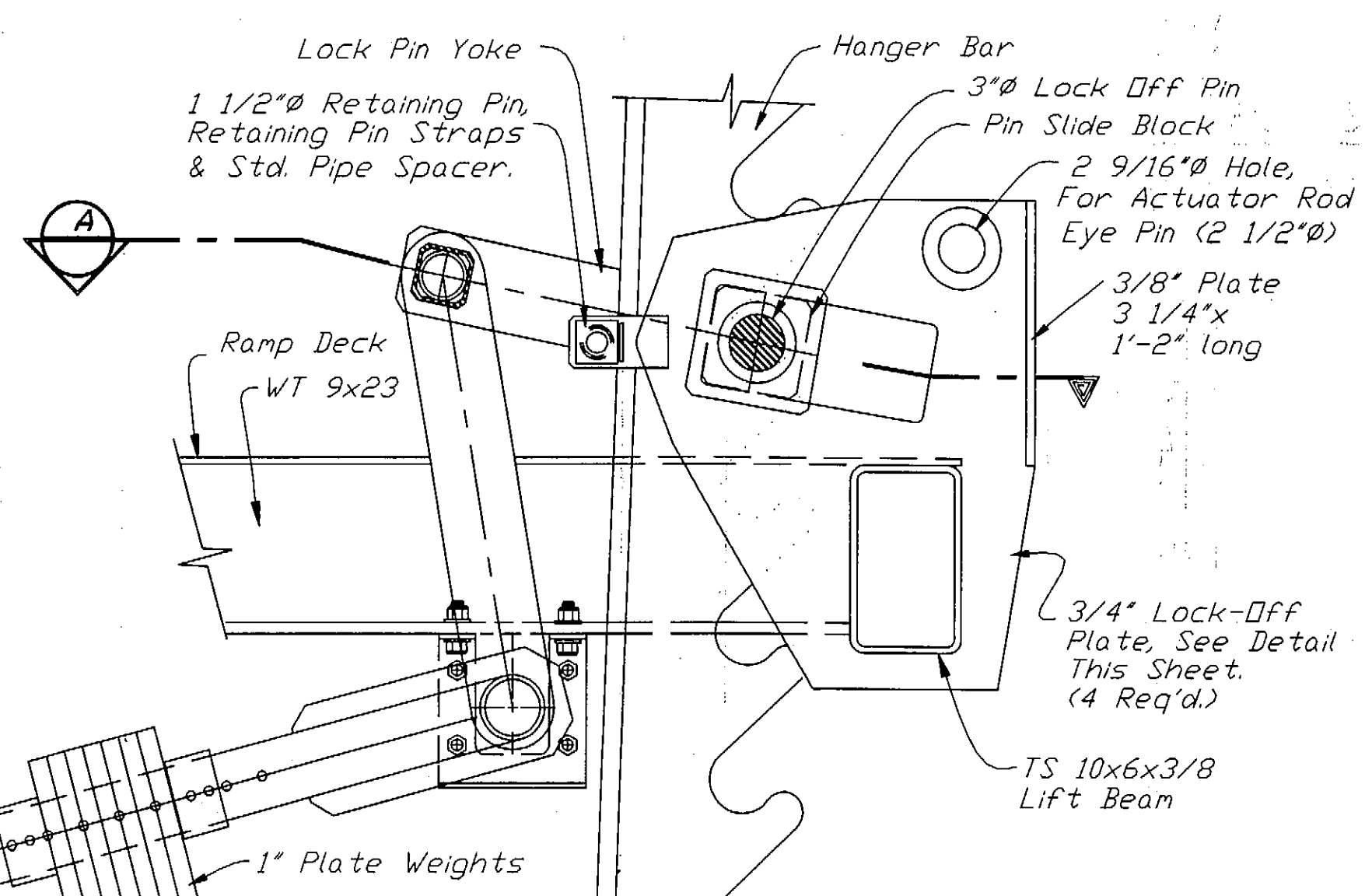
YOKE ARM PIN



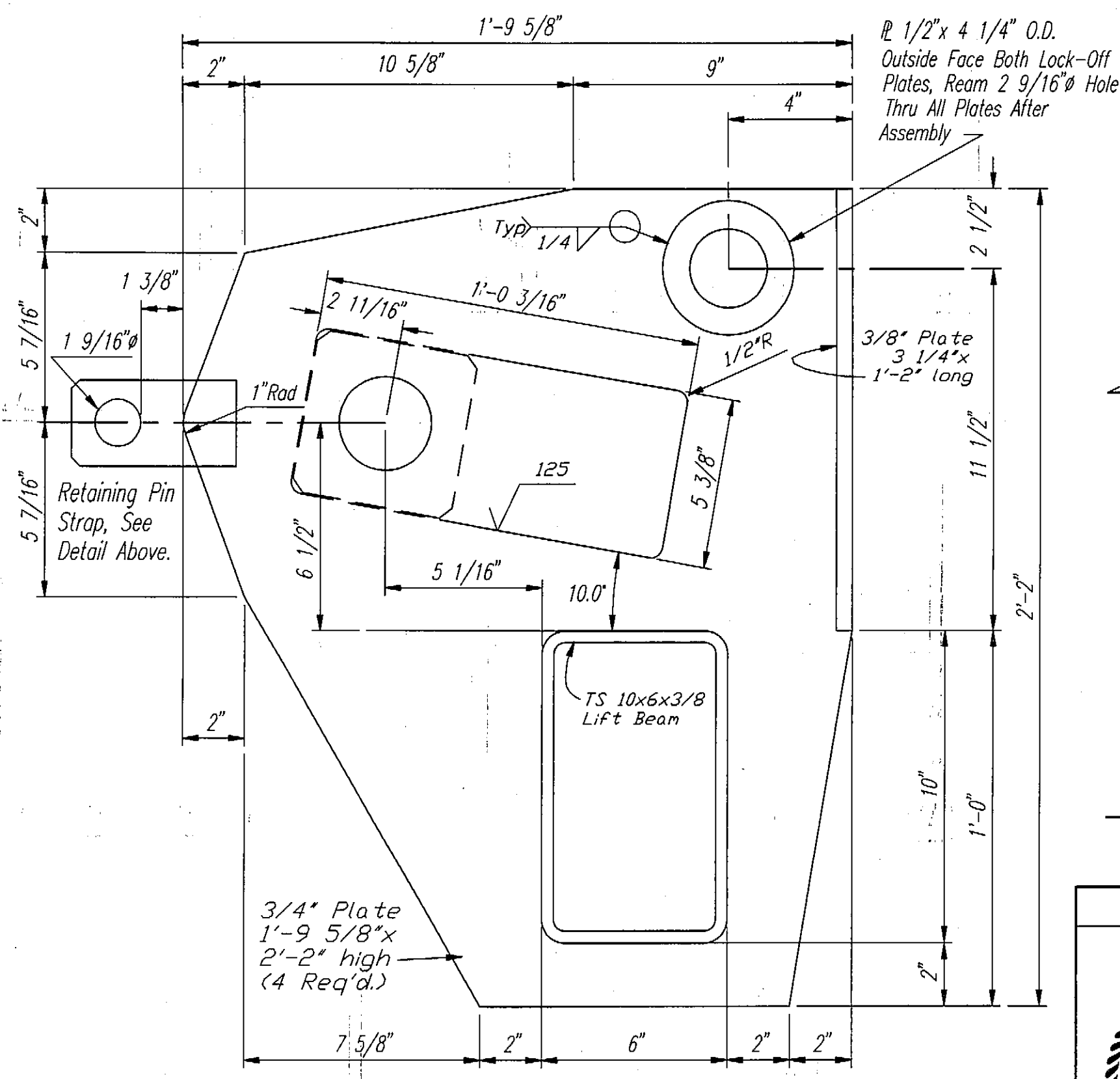
WEIGHT DETAIL



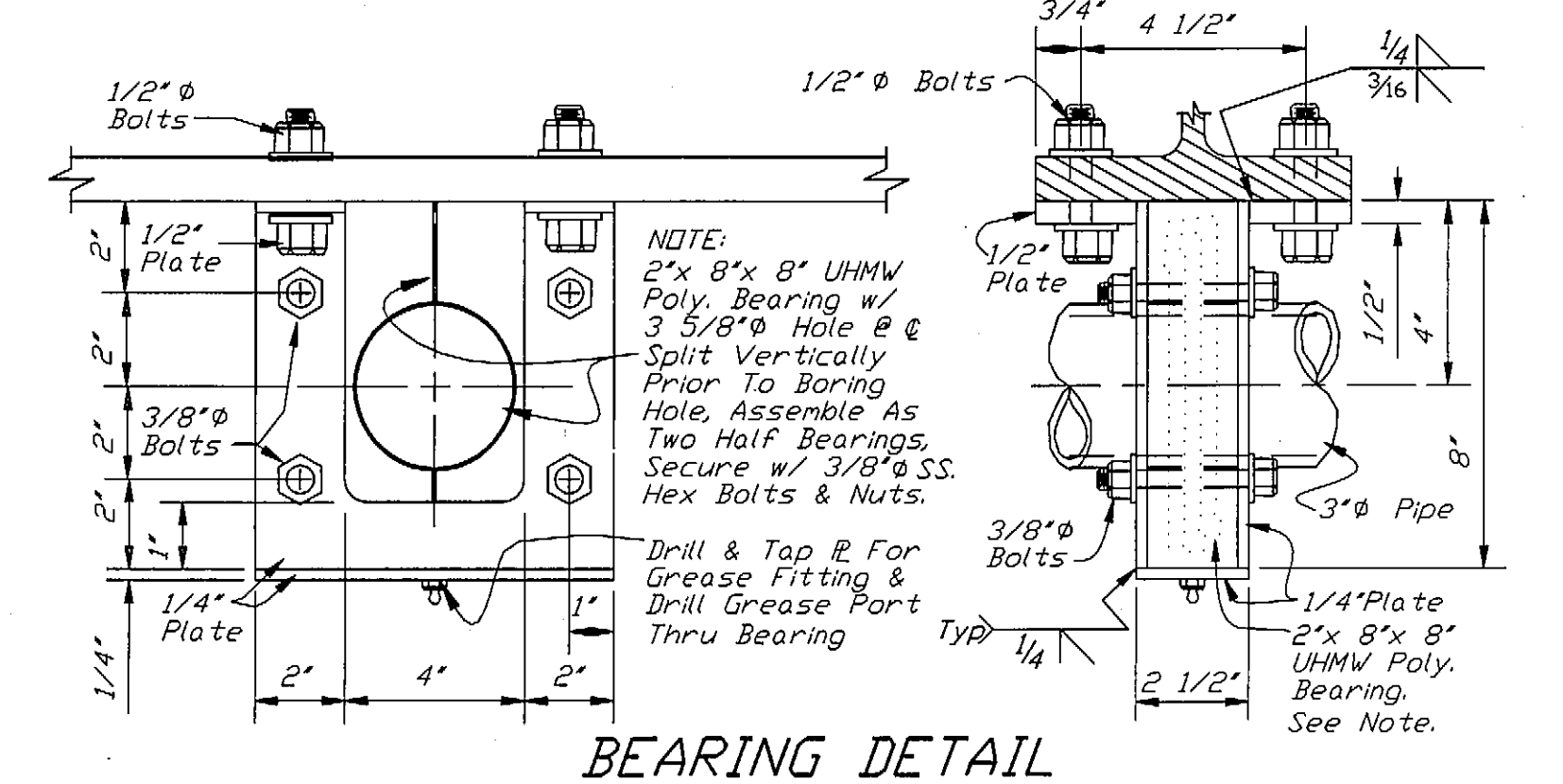
LOCK OFF DETAILS SECTION A



LOCK OFF DETAILS SECTION B



LOCK-OFF PLATE DETAIL



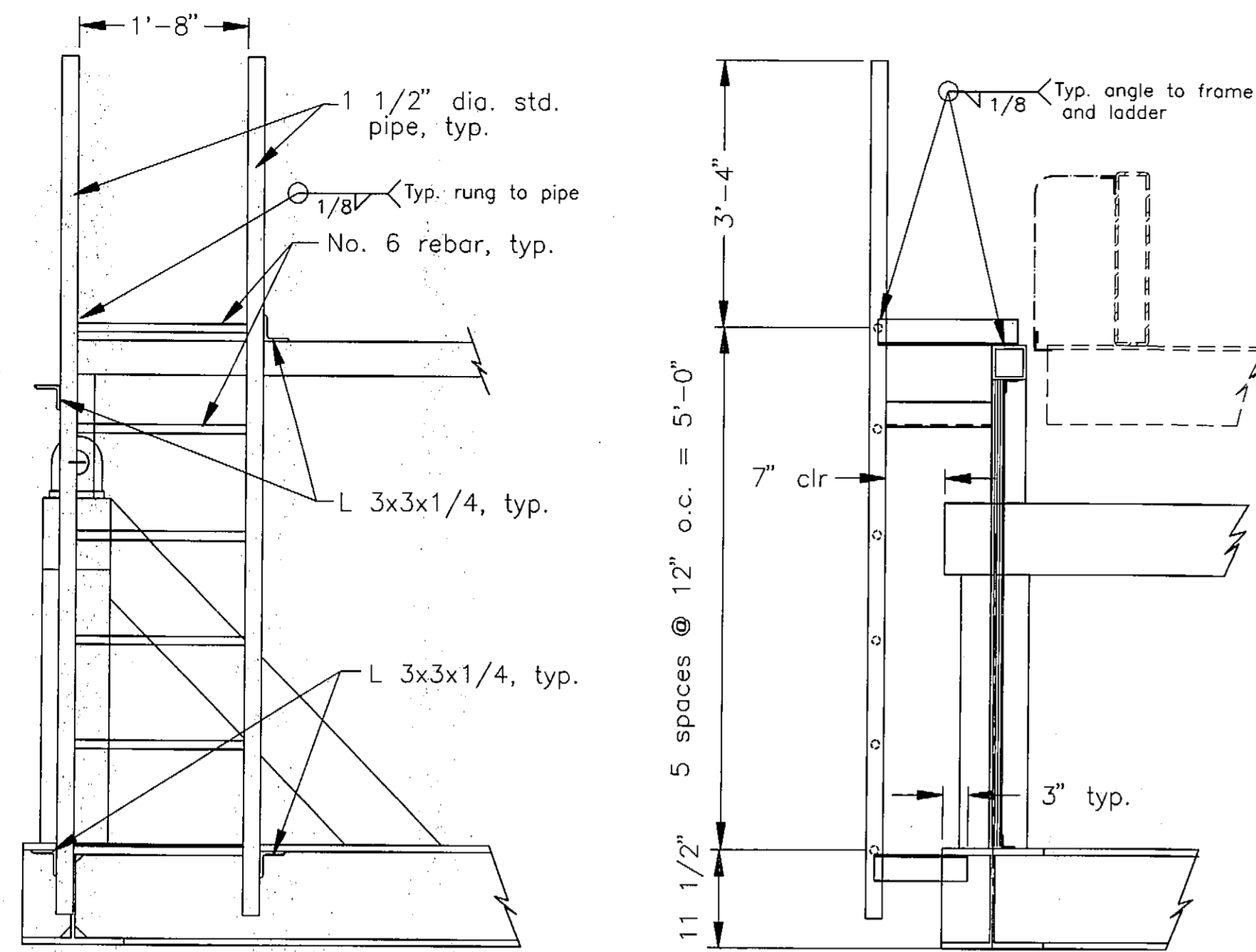
BEARING DETAIL

4 Bearings Req'd. Center In WT9x23 Stringers At 1'-0" & 8'-0" Each Side Of Centerline Of Intermediate Ramp. Grease Both pipe And Bearing During Assembly.

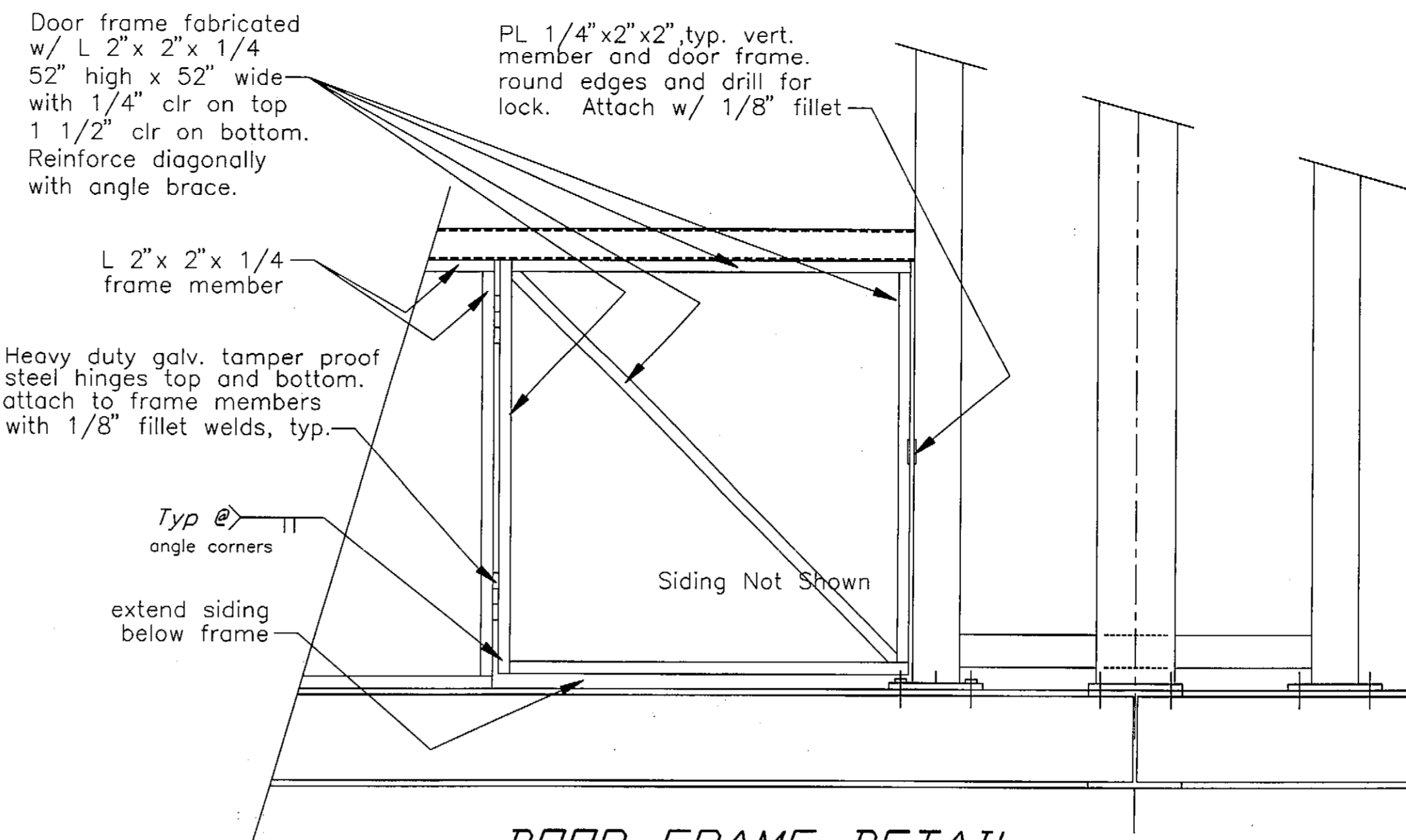
STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
HOONAH		ALASKA	
RAMP / APRON UPGRADE HANGER BAR & LOCK OFF DETAILS			
DESIGNED BAS	CHECKED BAS	DRAWN WN	DATE MAY, 1995
PROJECT NUMBER STP-0918(6)	75455	SHEET 8	OF 33



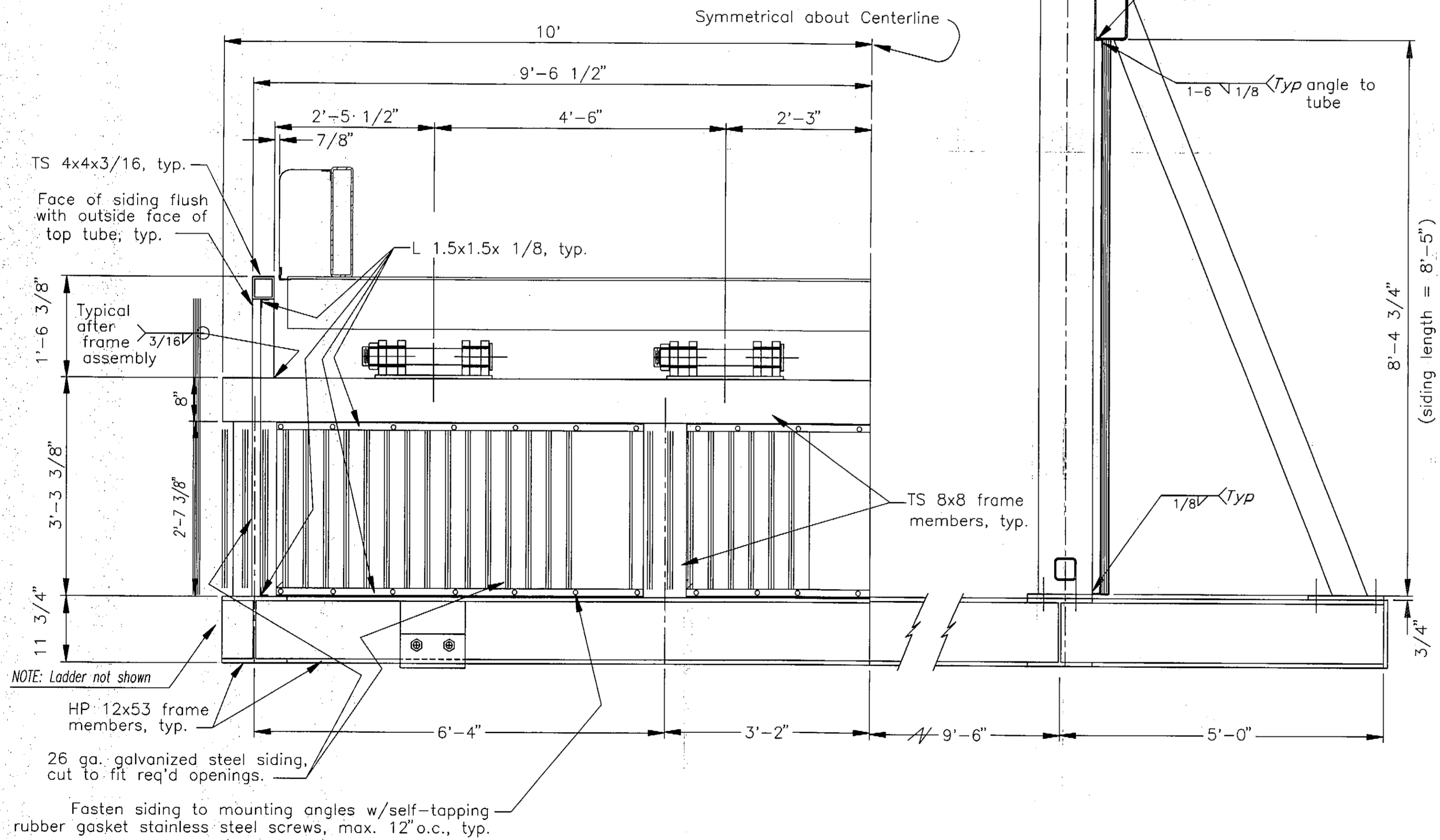
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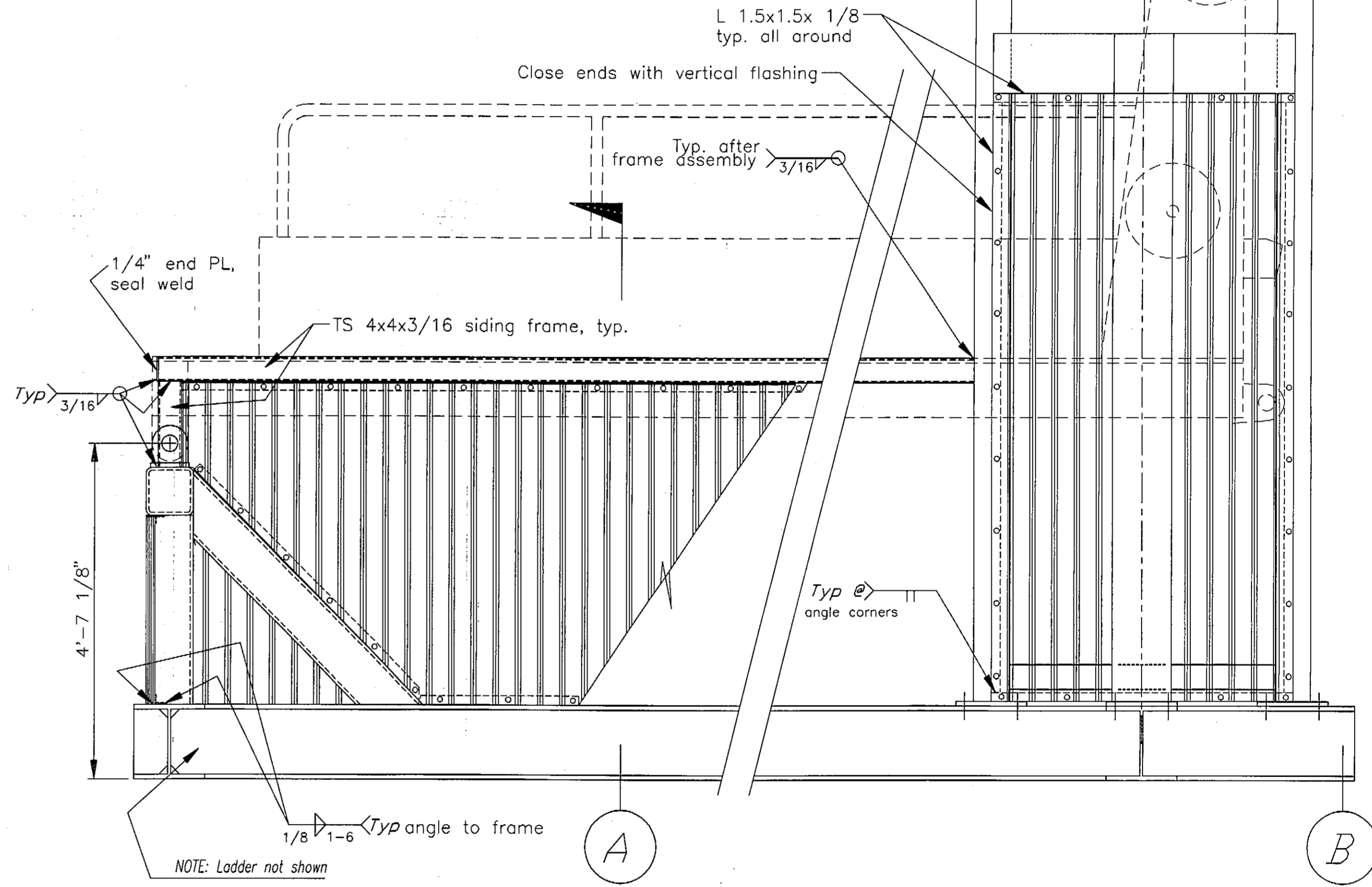
**LADDER DETAIL**  
(Typical both sides of ramp)



**DOOR FRAME DETAIL**  
(Typical ea. side of ramp)



**SECTION A**



**SIDE ELEVATION**

**SECTION B**

DO NOT SCALE THIS DRAWING - USE DIMENSIONS

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Hoonah ALASKA

**RAMP / APRON UPGRADE  
SIDING DETAILS**

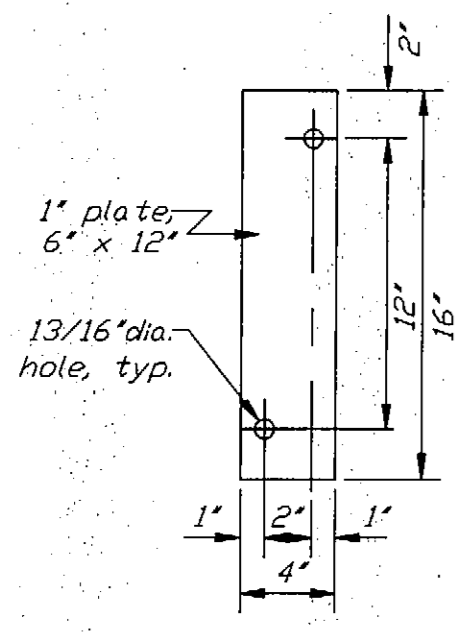
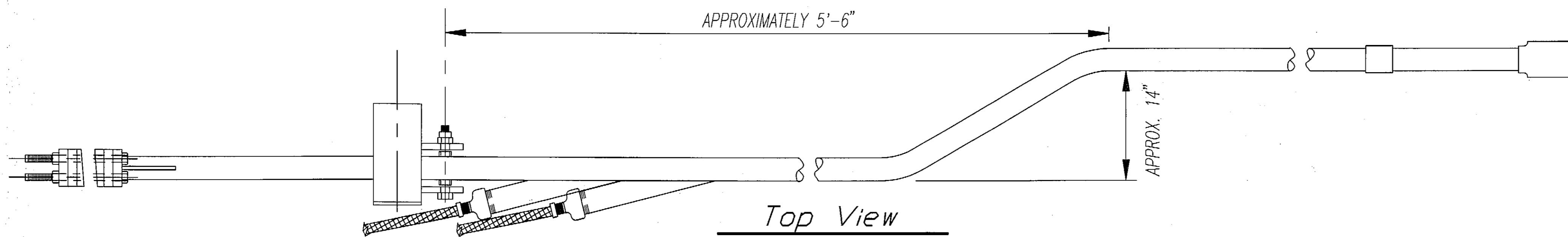
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PROJECT NUMBER: STP-0918(6) / 75455 SHEET 9 OF 33

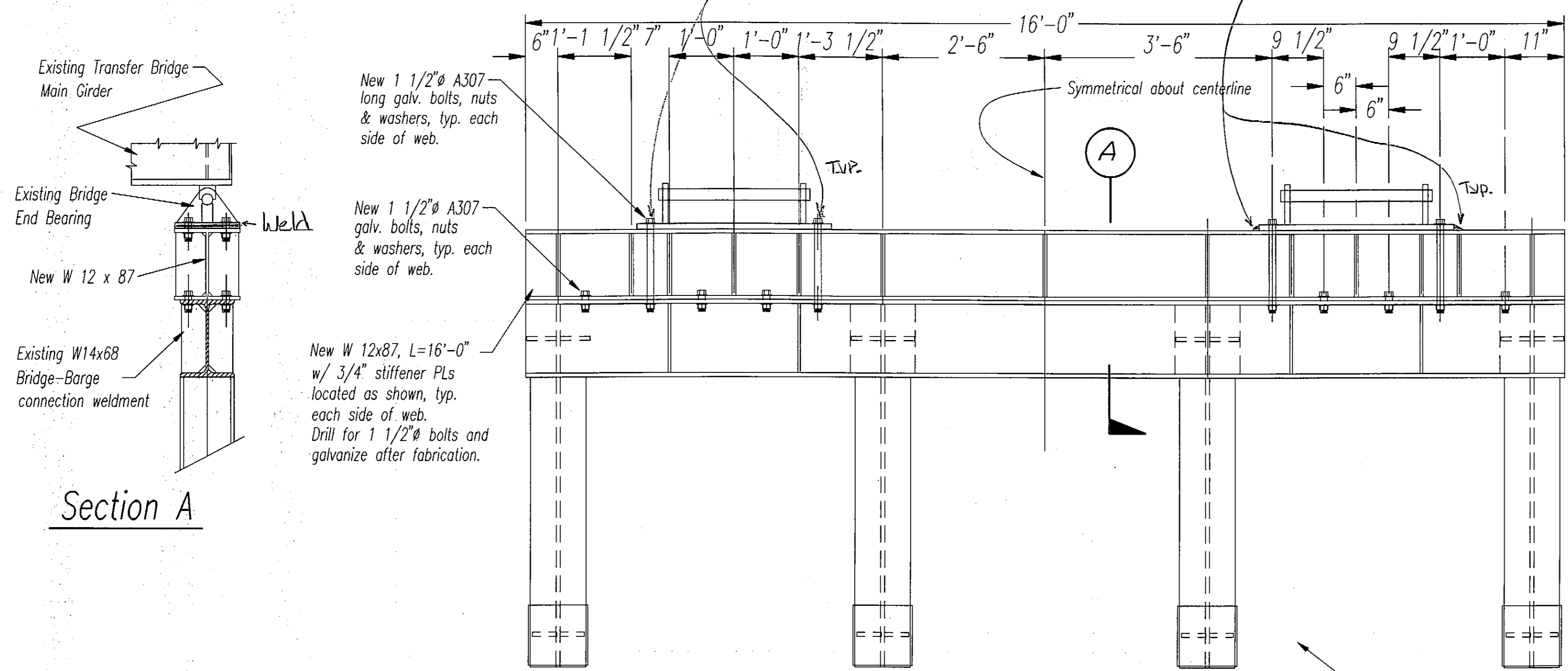
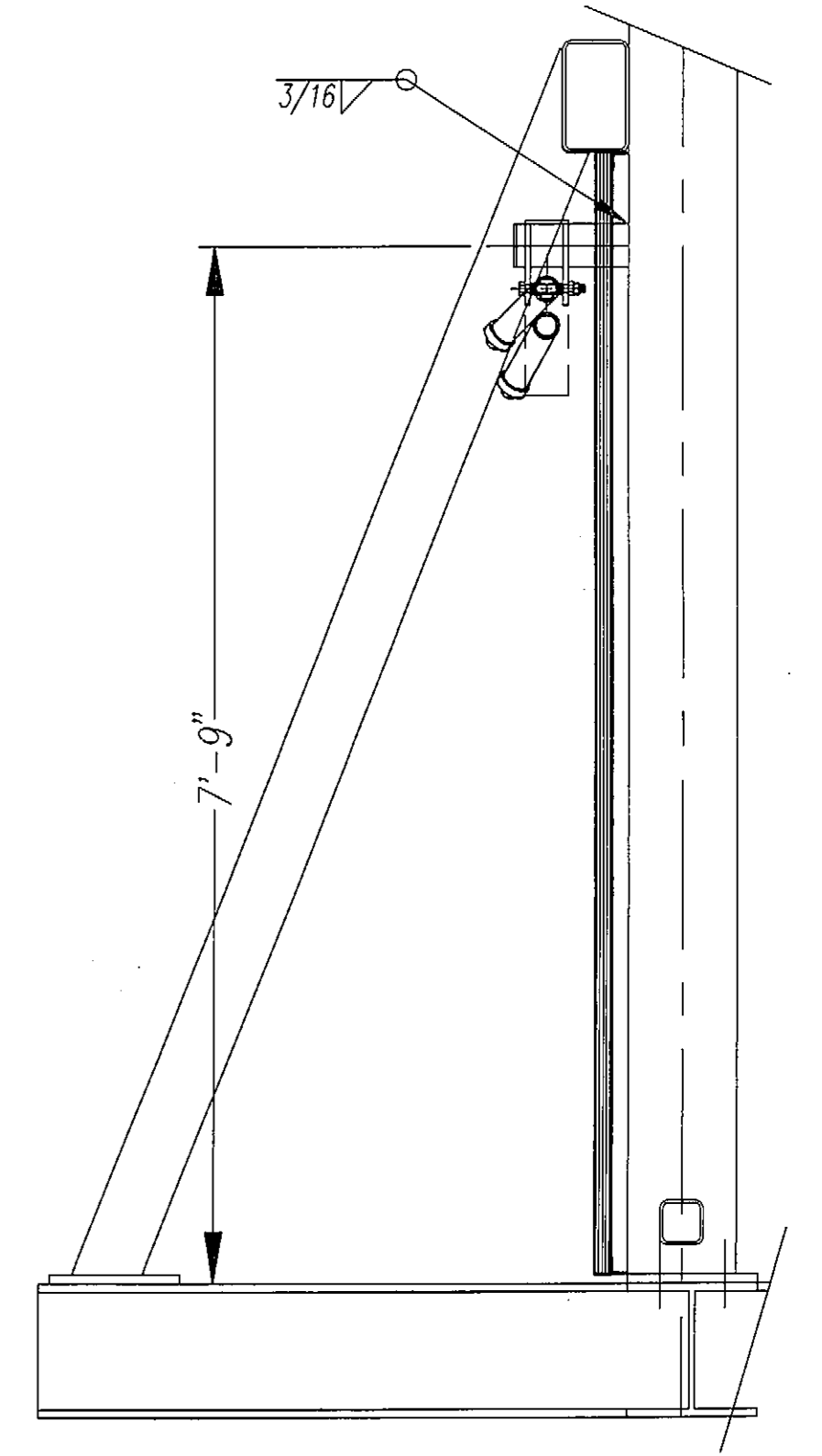
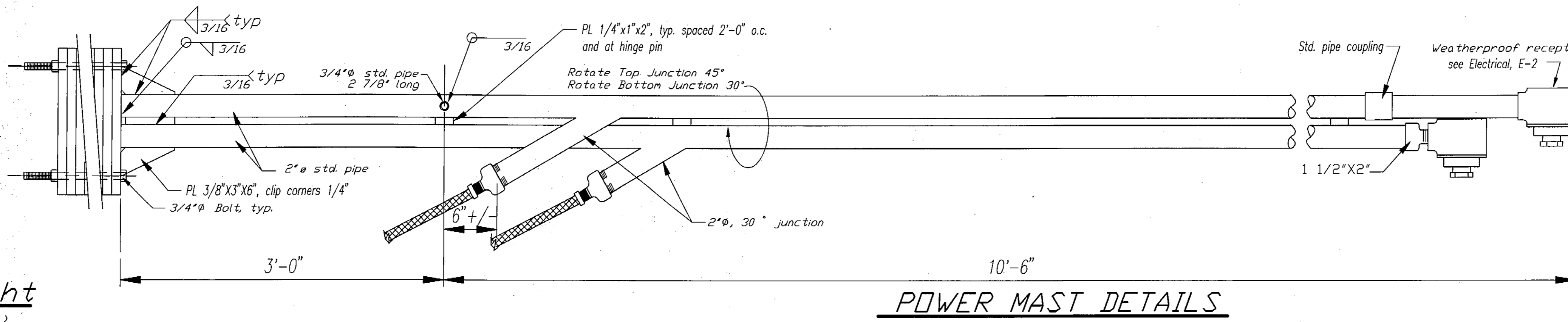
STATE OF ALASKA  
49TH  
Denn A. Savikko  
CE-6466  
REGISTERED PROFESSIONAL ENGINEER

224  
HNH-MSCT.DWG

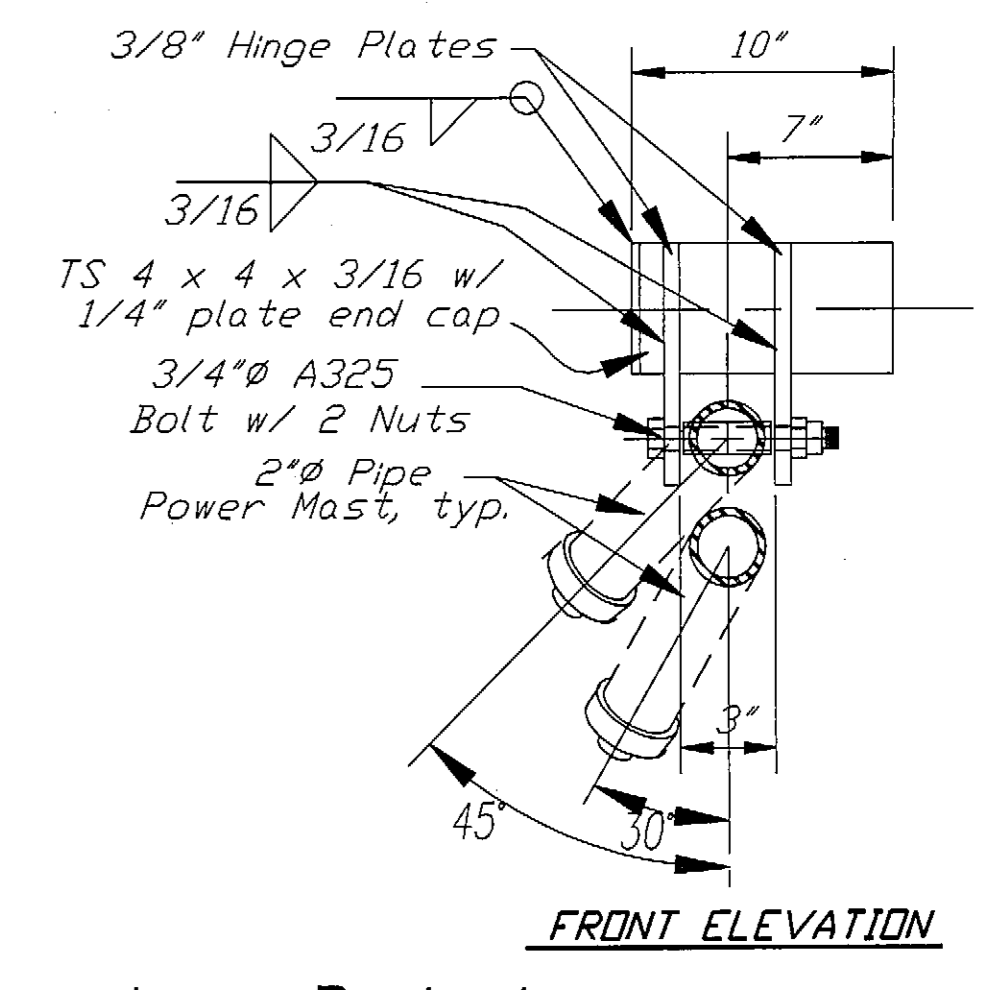
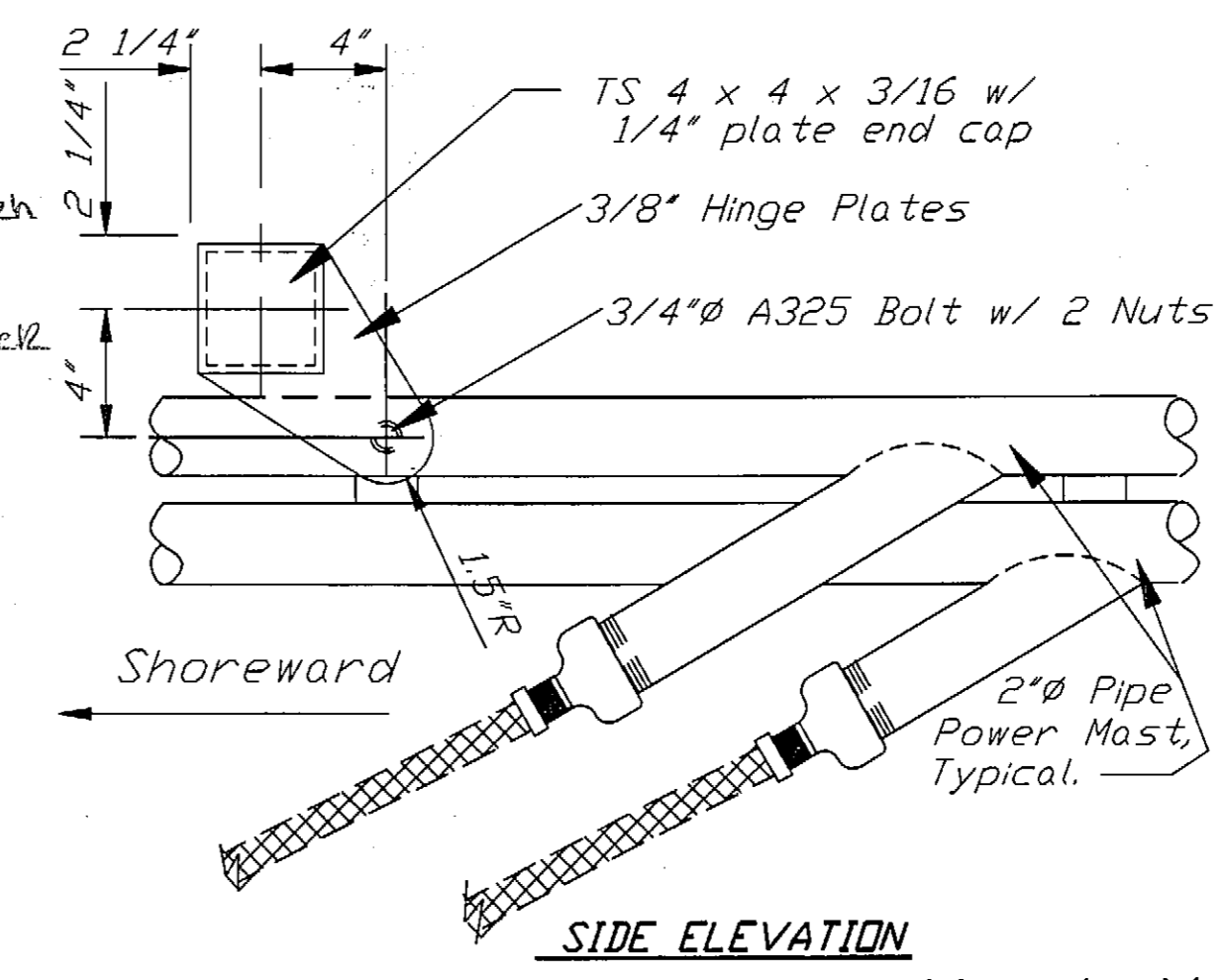
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**Typical Weight**  
(Approximately 12 Required)



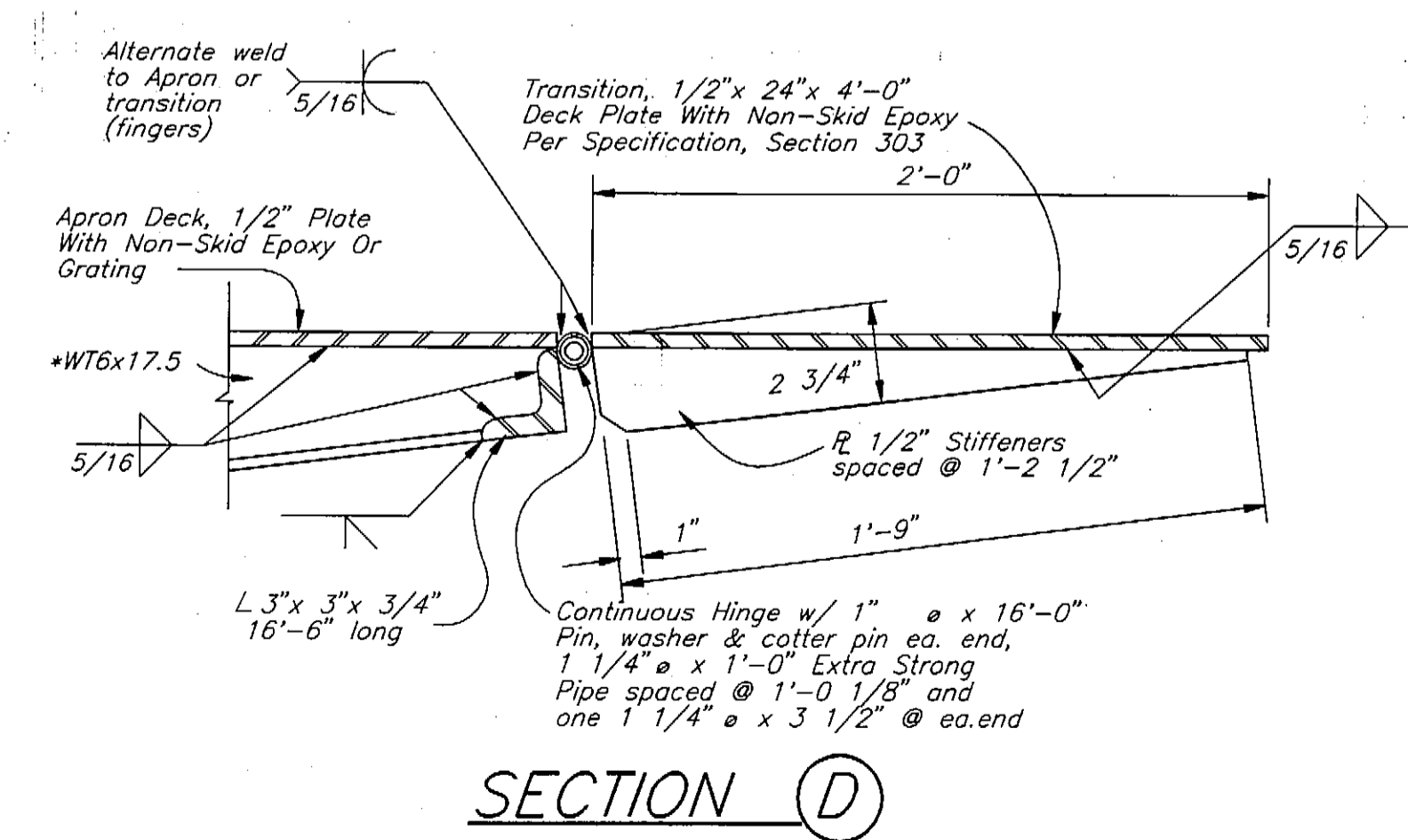
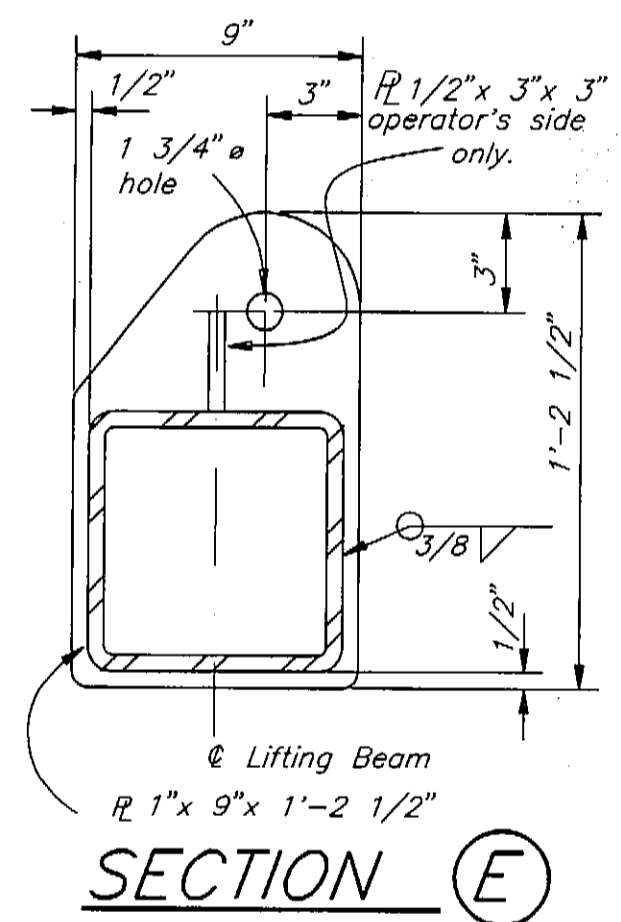
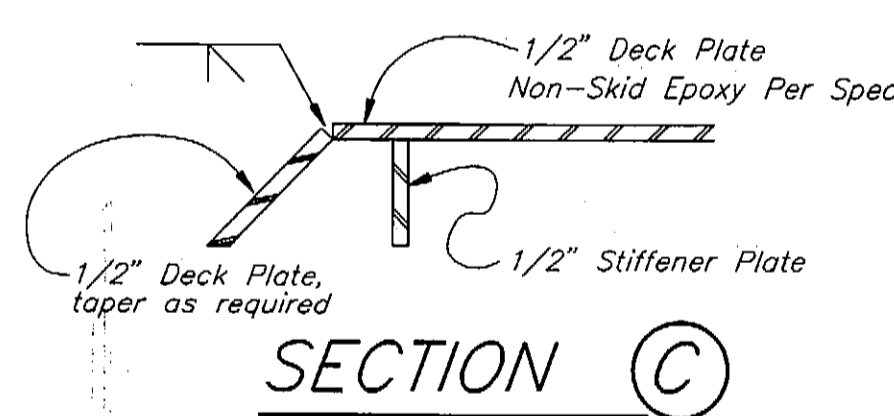
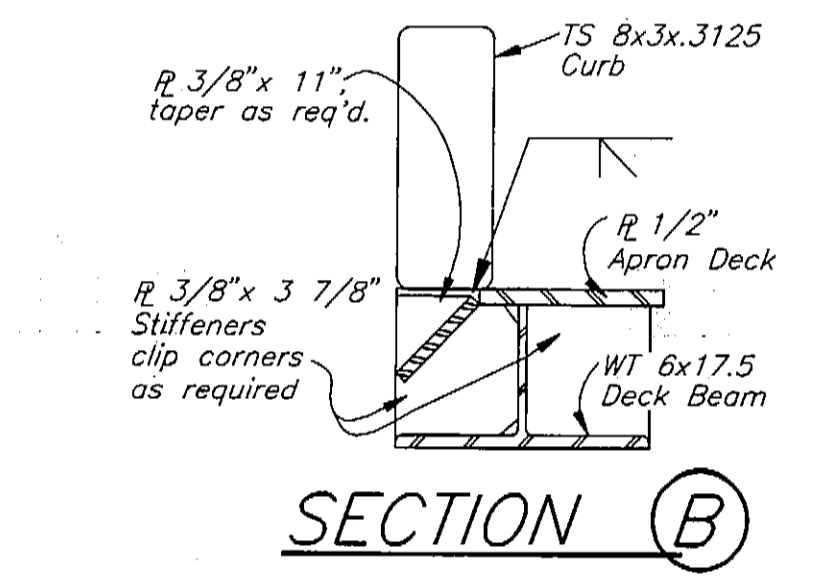
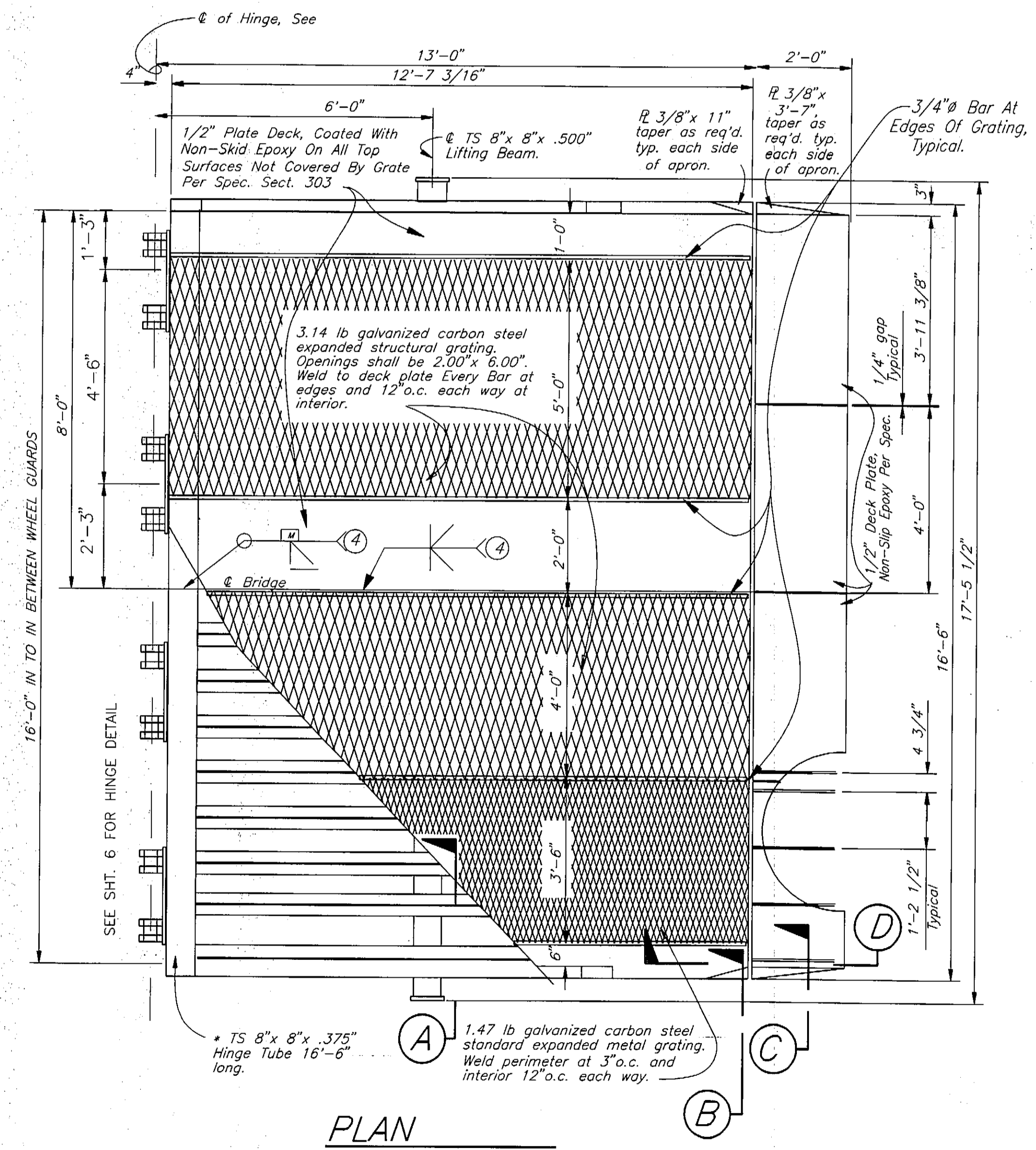
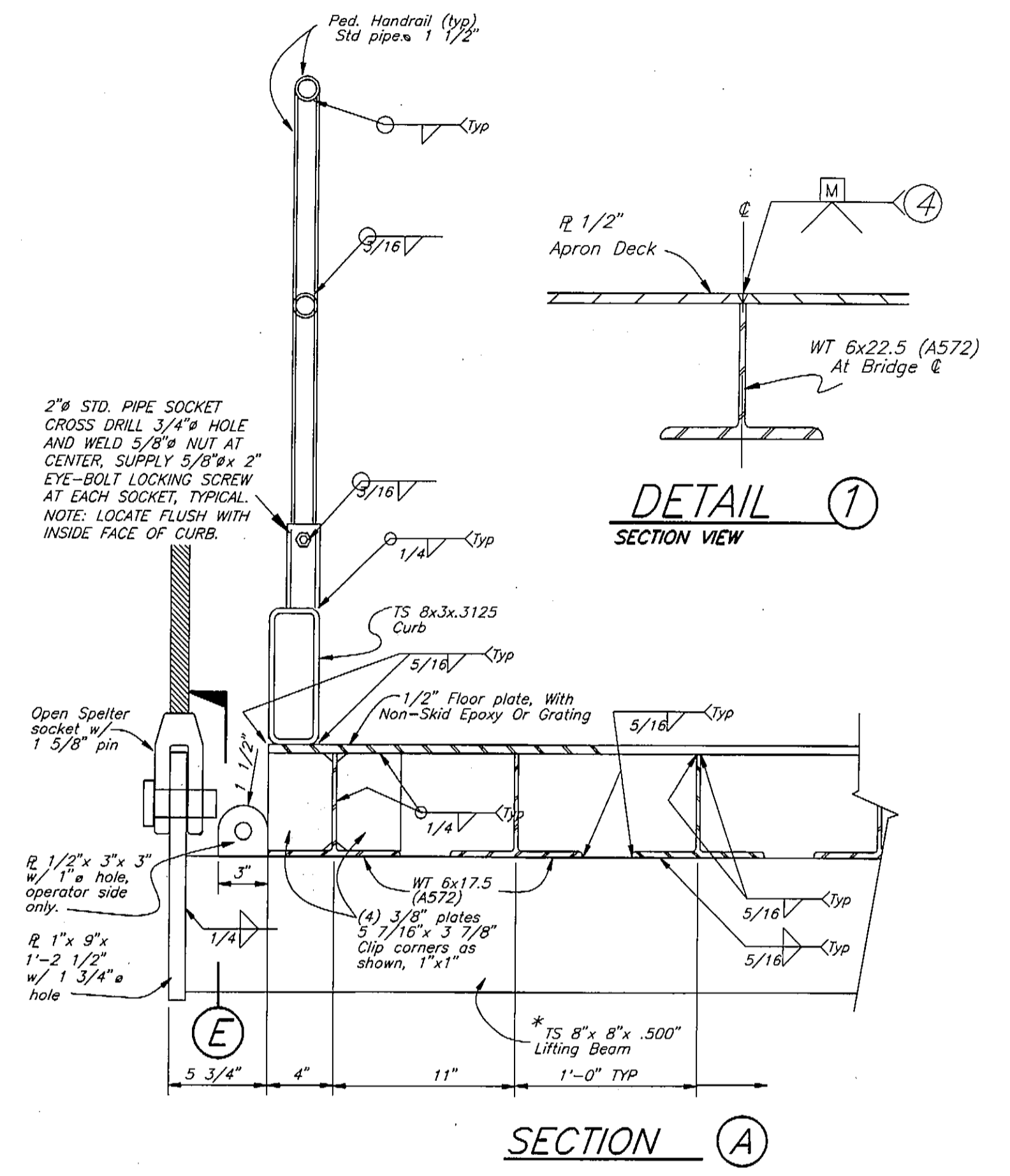
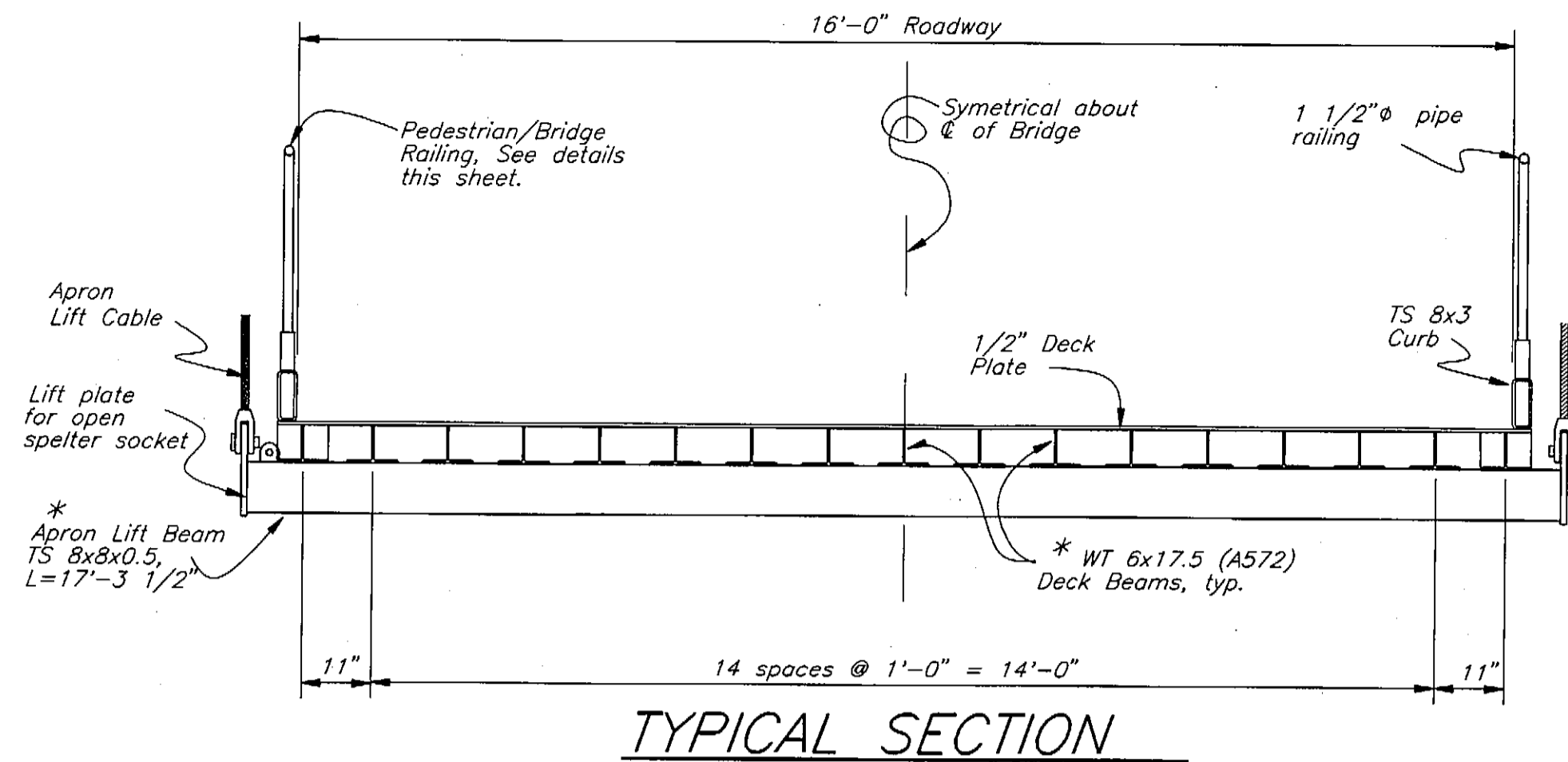
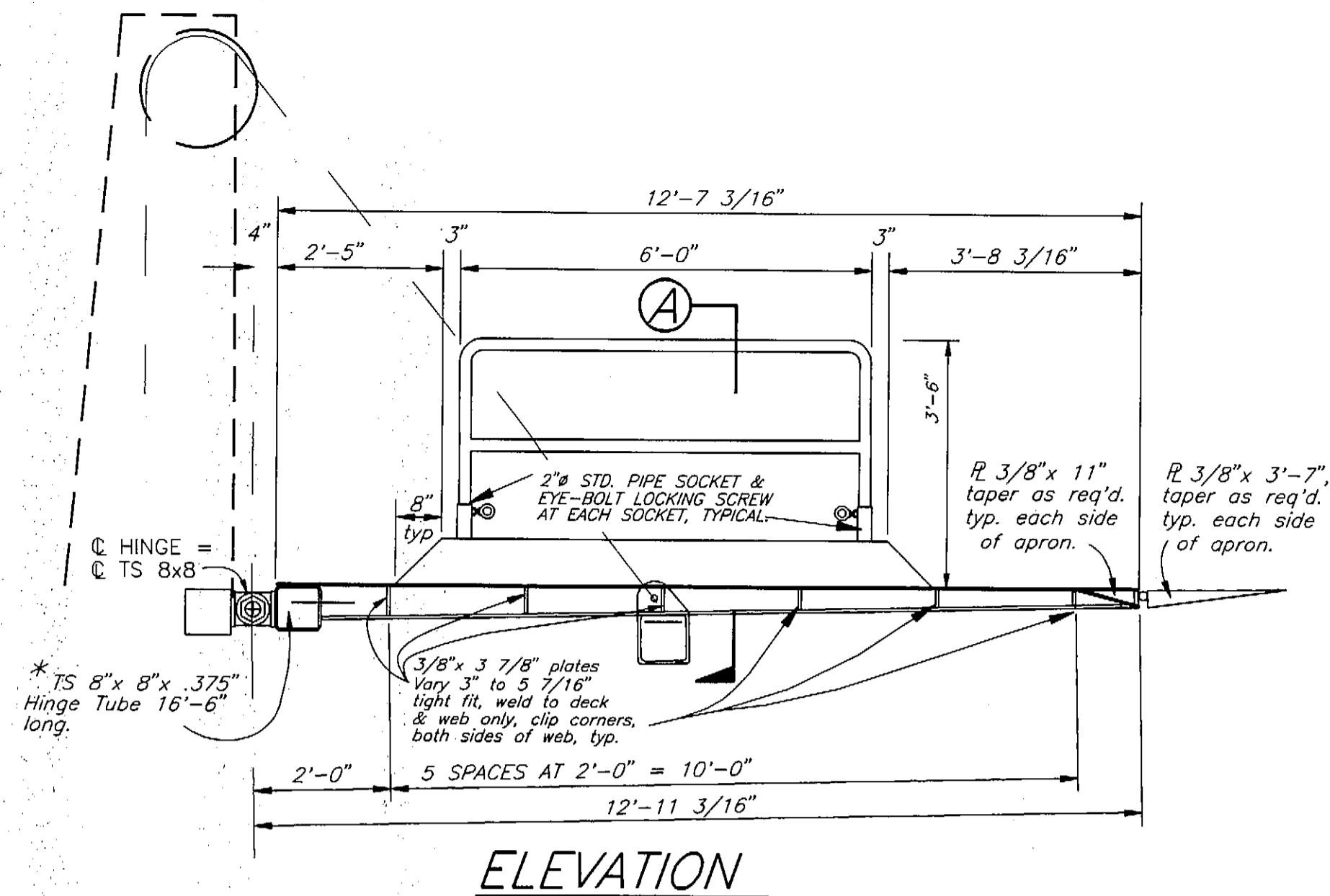
**New Bridge Spacer Weldment**  
(Looking Seaward)



**Mast Mounting Details**

DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
HOONAH		ALASKA	
<b>RAMP / APRON UPGRADE MISC. DETAILS</b>			
DESIGNED: BAS	CHECKED:	DRAWN: BAS	DATE: MAY, 1995
PROJECT NUMBER: STP-0918(6)/75455	SHEET 10	OF	33





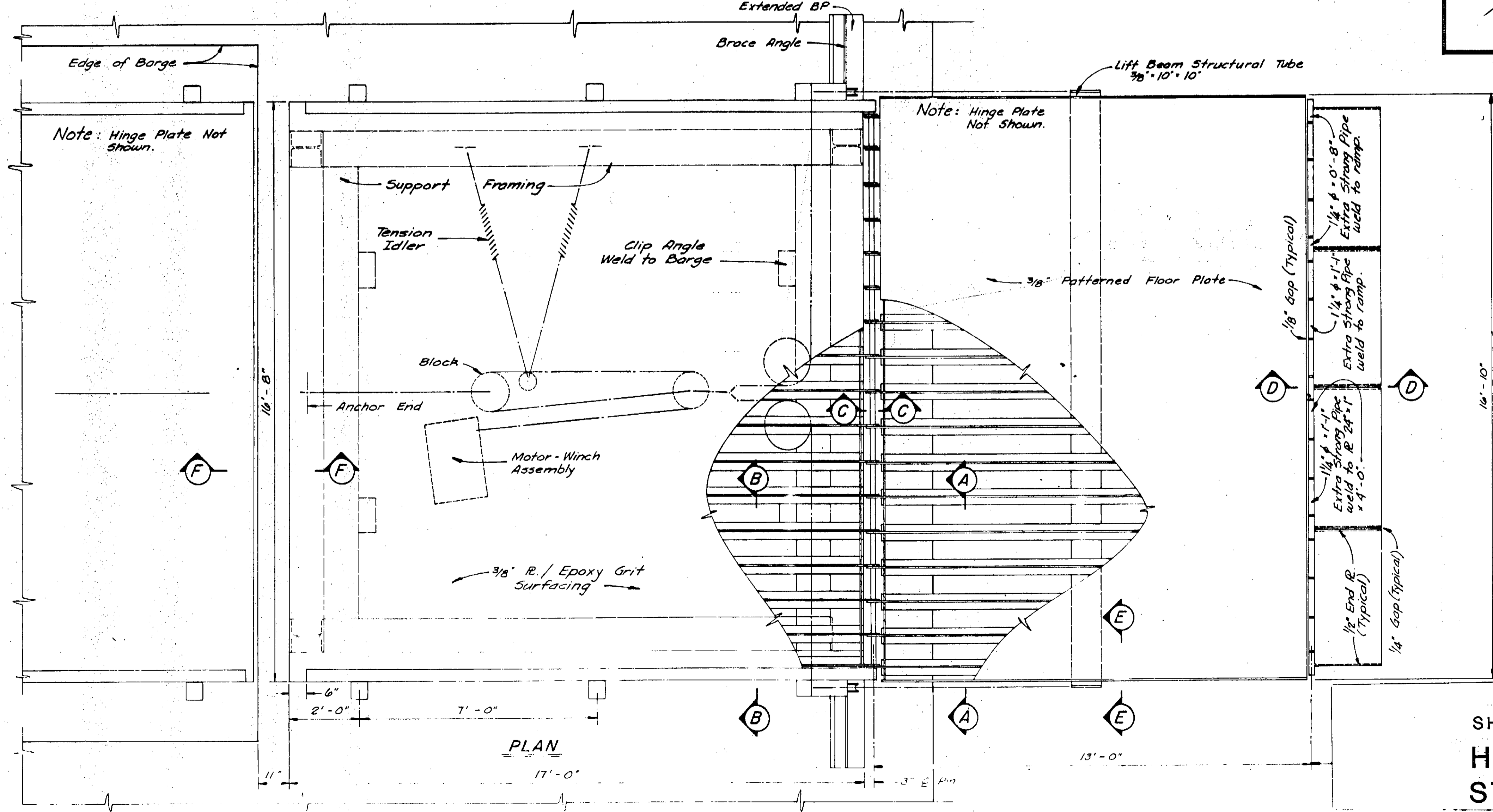
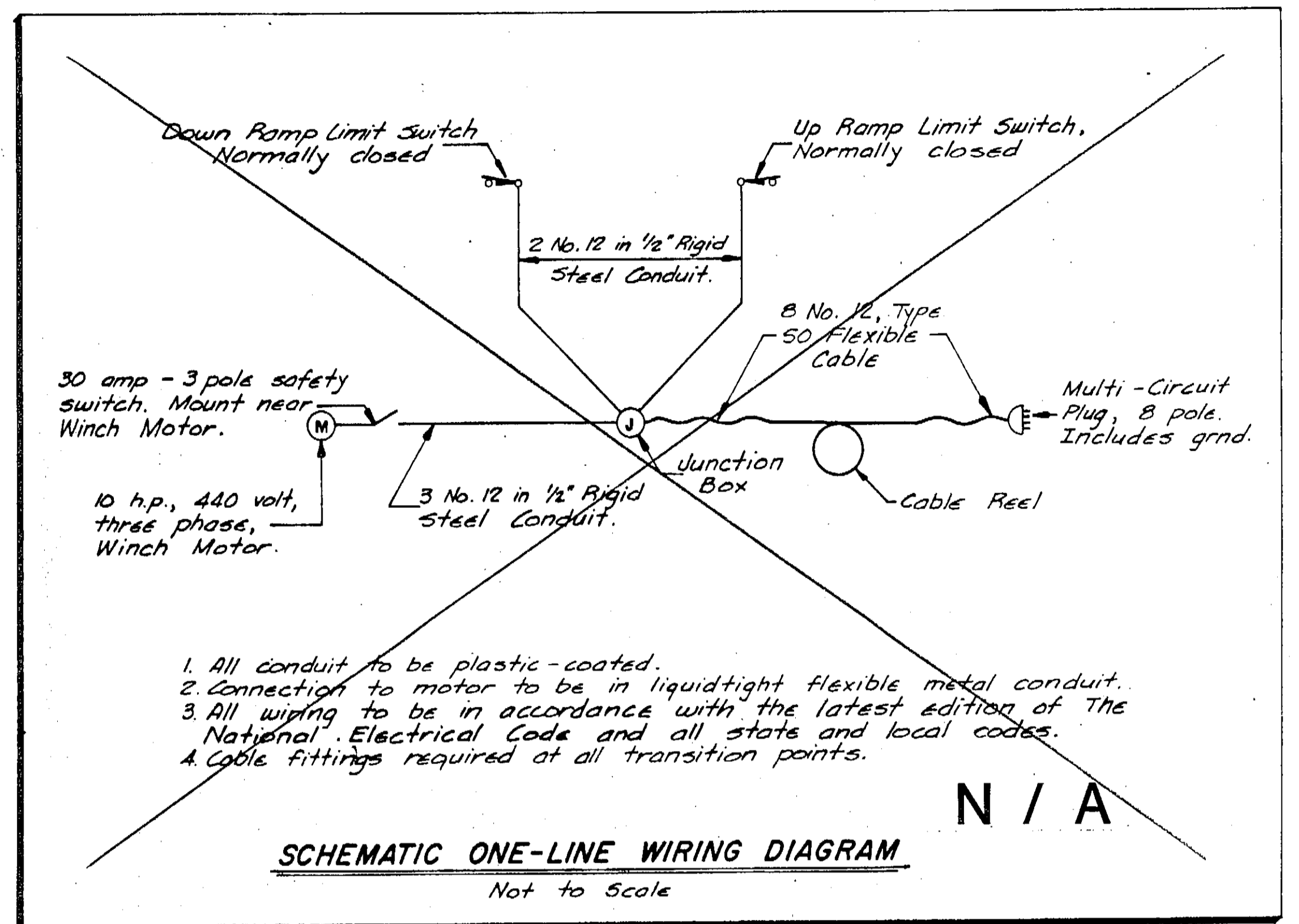
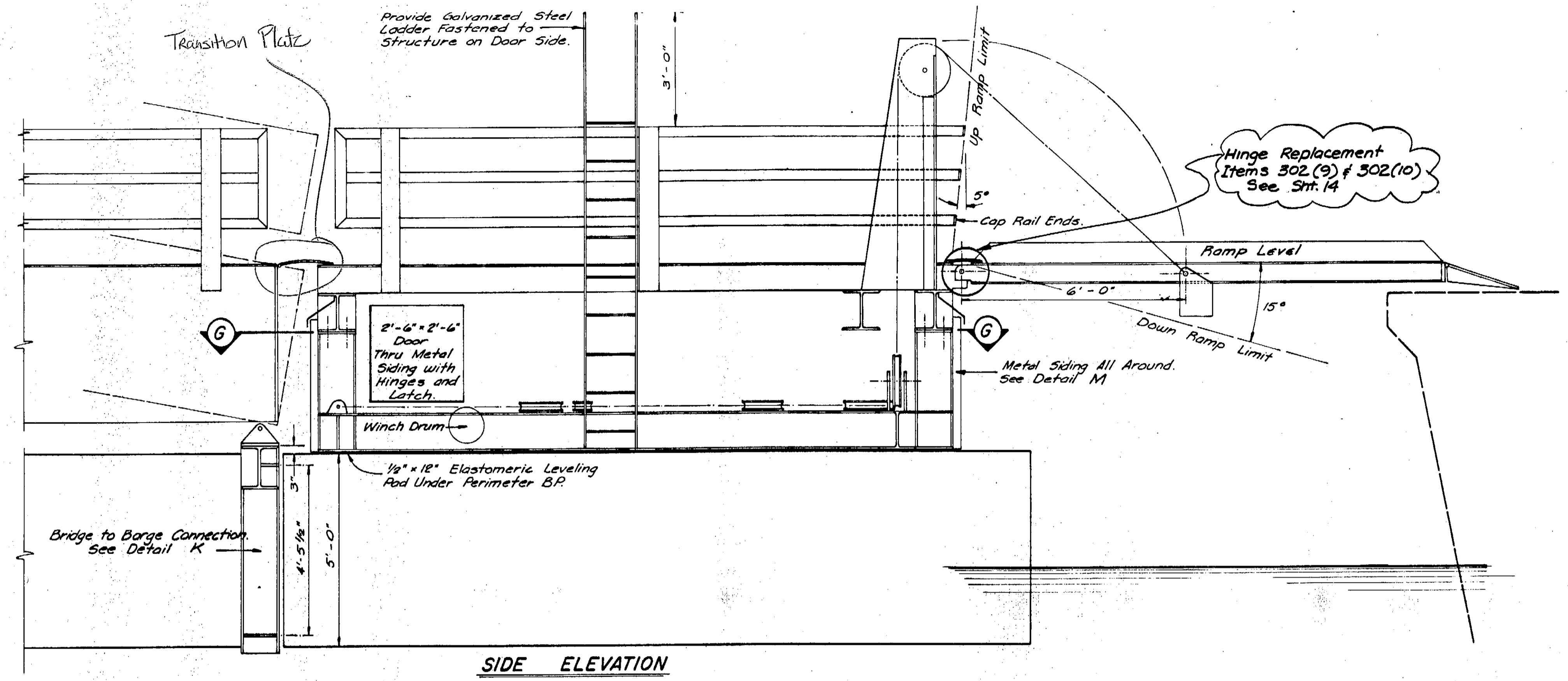
- NOTES:**
- \* Main members subject to tensile stress.
  - Galvanize after fabrication.
  - Close all open ended pipe or tubing with 1/4" R and seal weld.
  - Permissible welds for splice to allow galvanizing must be approved. See Detail 1. Submit any proposed sub-assembly procedures along with shop drawings for Engineer's approval.

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA	
		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
HOONAH		ALASKA	
<b>13 FT. APRON DETAILS</b>			
DESIGNED STAFF	CHECKED BAS	DRAWN BN	DATE MAY, 1995
PROJECT NUMBER STP-0918(6)/75455	SHEET 11		OF 33

scf= 1:24

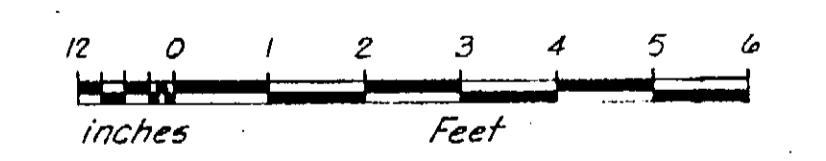
HNH-APR.DWG 7/26/95

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA		1973	X	X



Ramp Wt. - Approx. 26000 lbs.  
Apron Wt. - Approx. 11000 lbs.

**EXISTING DETAILS**



AS-BUILT  
(EXISTING)  
11-1-93

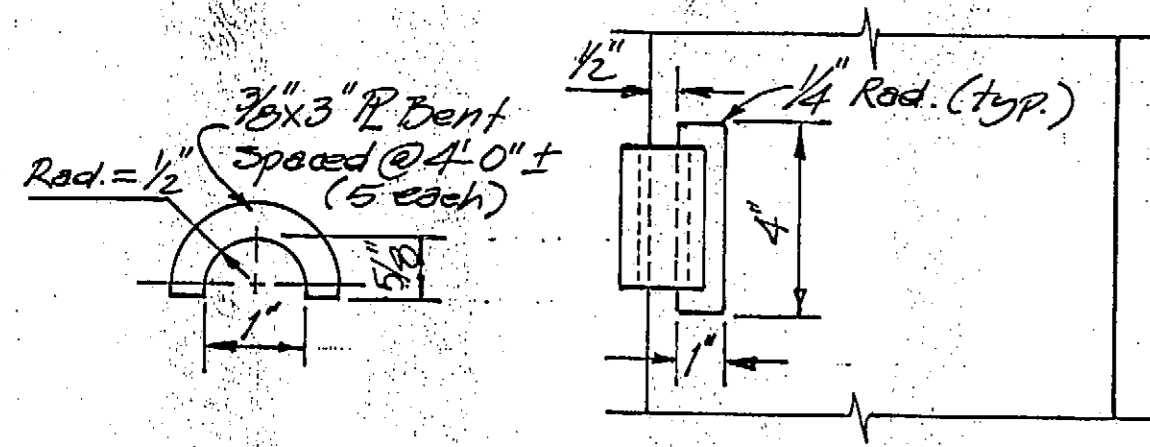
SHEET 12 OF 32  
**HOONAH RAMP UPGRADE**  
STP-0918(6) & 75455

KAKE & HOONAH FERRY TERMINALS  
TRANSFER BARGE SUPERSTRUCTURE

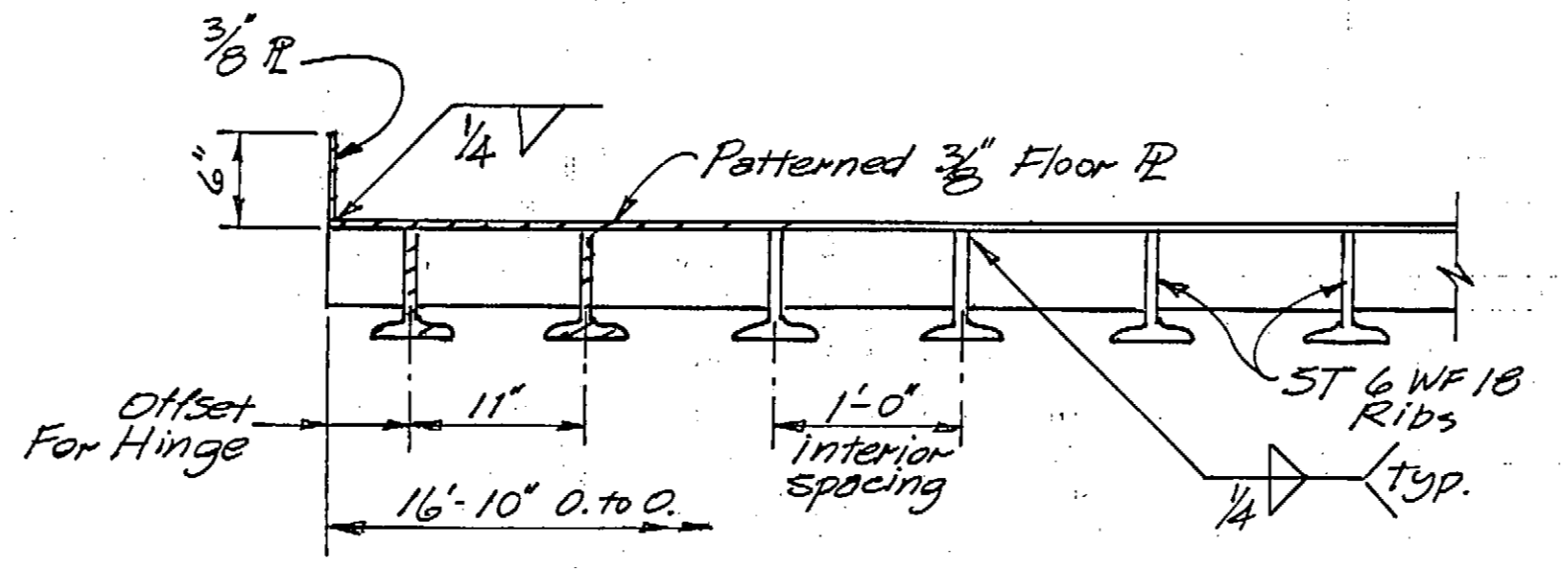
**BOMHOFF & ASSOCIATES**  
Engineering and Surveys  
1020 West Fireweed Lane  
Anchorage, Alaska 99503

DESIGNED BY: D. N.  
DRAWN BY: S. B. L.  
CHECKED BY: D. N.  
SCALE: As Noted  
DATE:  
SHEET: OF

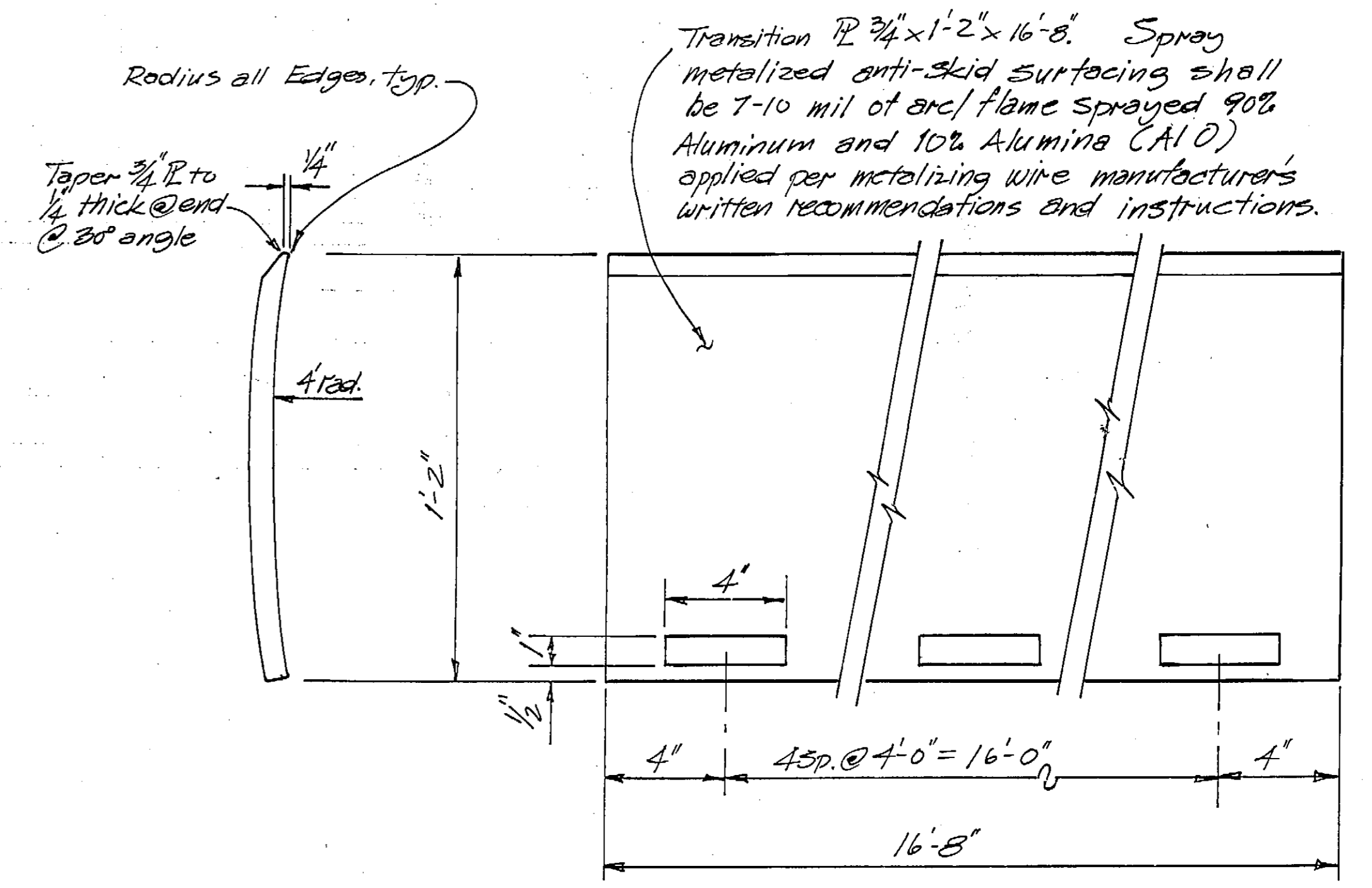
STATE OF ALASKA  
49TH  
NO. 1204-E  
REGISTERED PROFESSIONAL ENGINEER



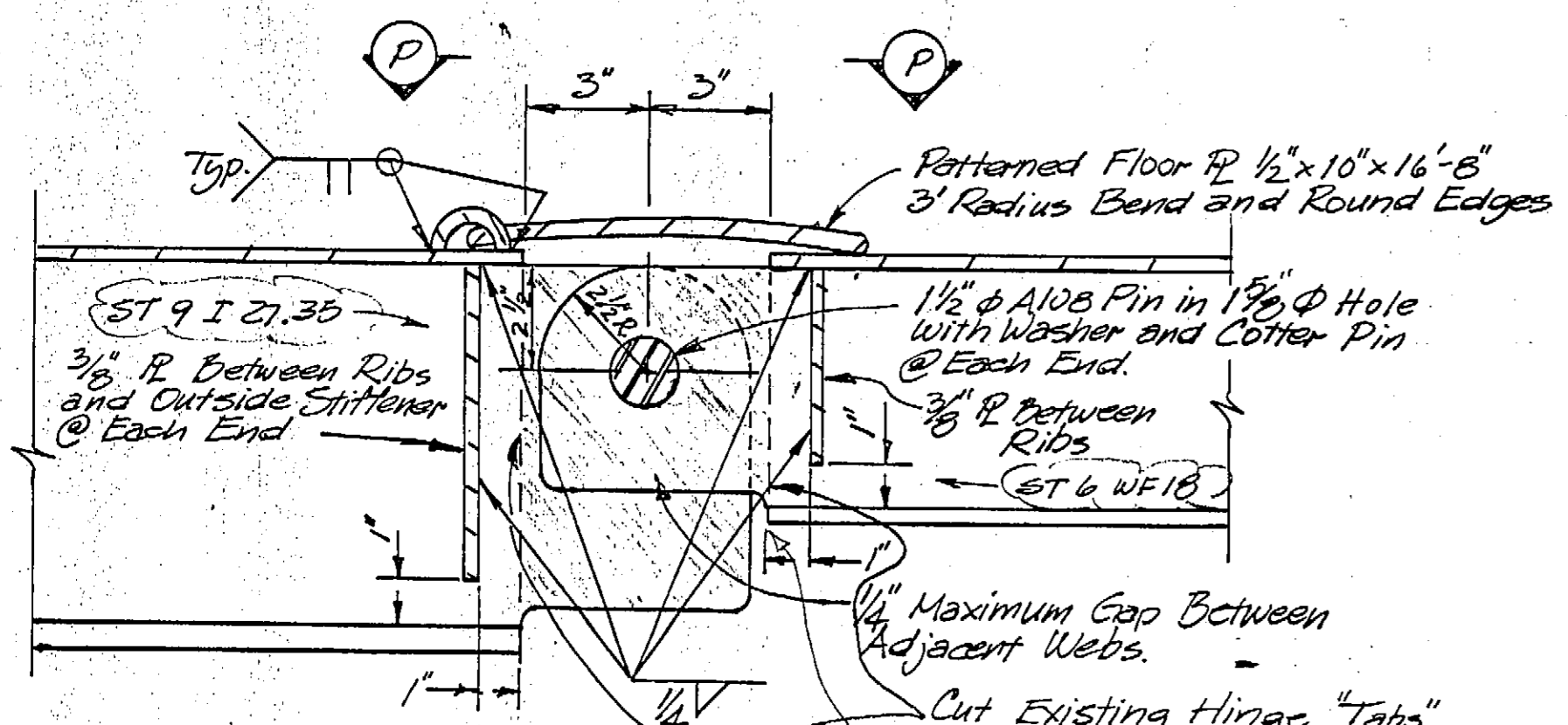
VIEW P-P  
(Sht. 13)



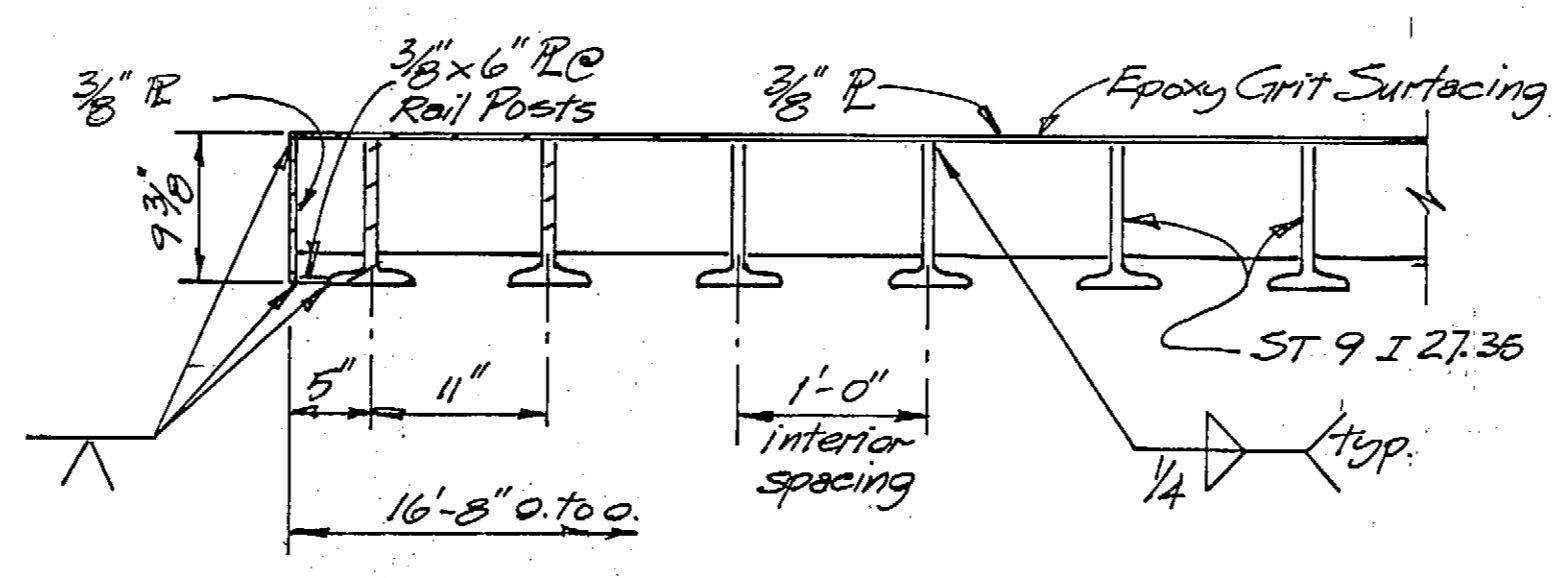
SECTION A-A  
(Sht. 13)



NEW COVER P DETAIL

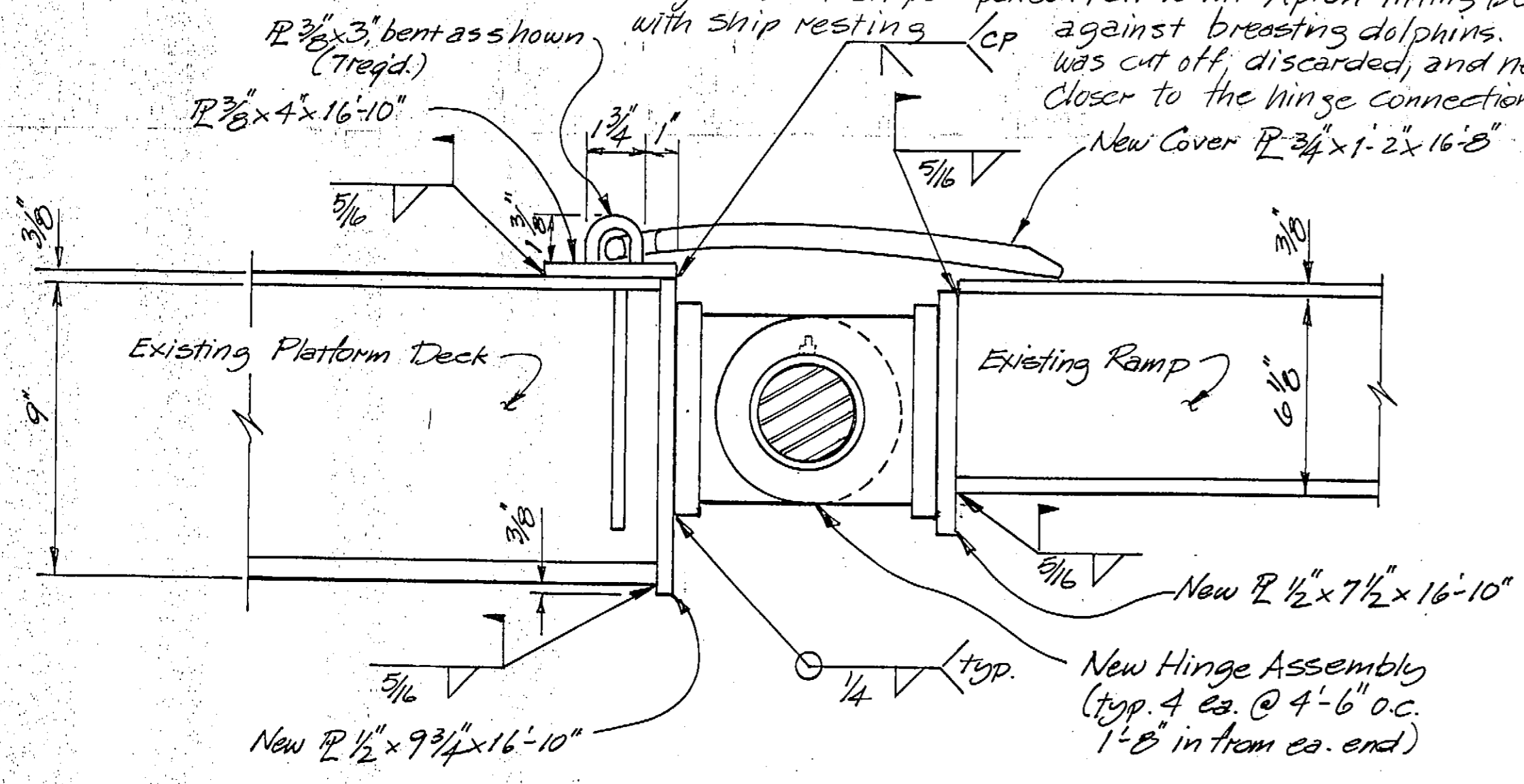


SECTION C-C  
(Sht. 13)

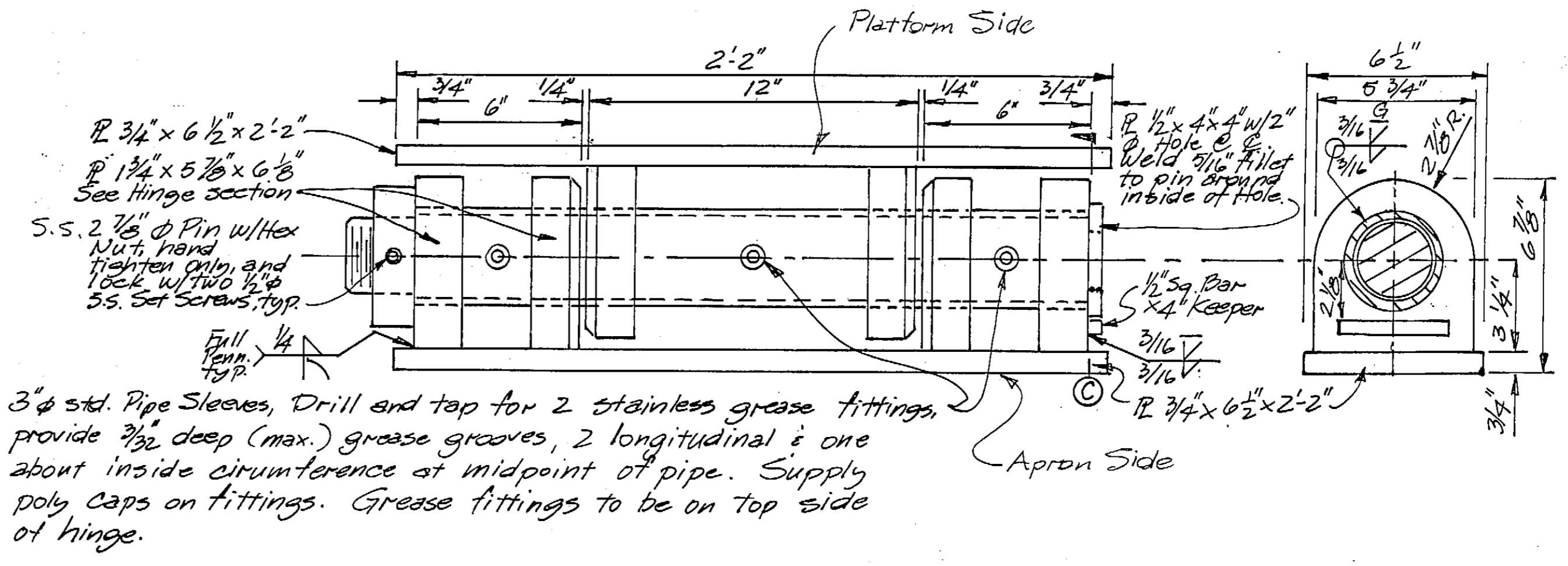


SECTION B-B  
(Sht. 13)

An additional 6" was cut off this end of the keel Apron - new, longer hinge allowed Ship's Sparson rail to hit Apron lifting beam on high tides with ship resting (cp against breasting dolphins. In Hoonah, Apron lifting beam was cut off, discarded, and new beam welded on at a location 6" closer to the hinge connection. See attachments this sheet.



NEW HINGE DETAIL - SECTION



3" std. Pipe Sleeves, Drill and tap for 2 stainless grease fittings, provide 3/32" deep (max.) grease grooves, 2 longitudinal & one about inside circumference at midpoint of pipe. Supply poly caps on fittings. Grease fittings to be on top side of hinge.

NEW HINGE ASSEMBLY  
ITEM 302(9) & 302(10)

NOTE: All new steel to be galvanized per Sec. 302.

SECTION C

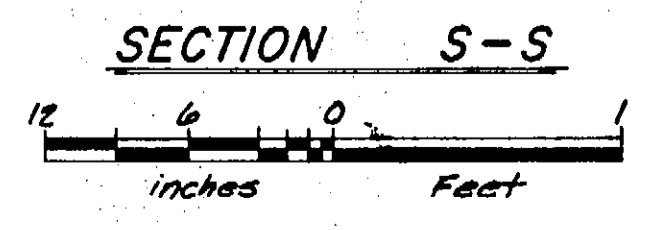
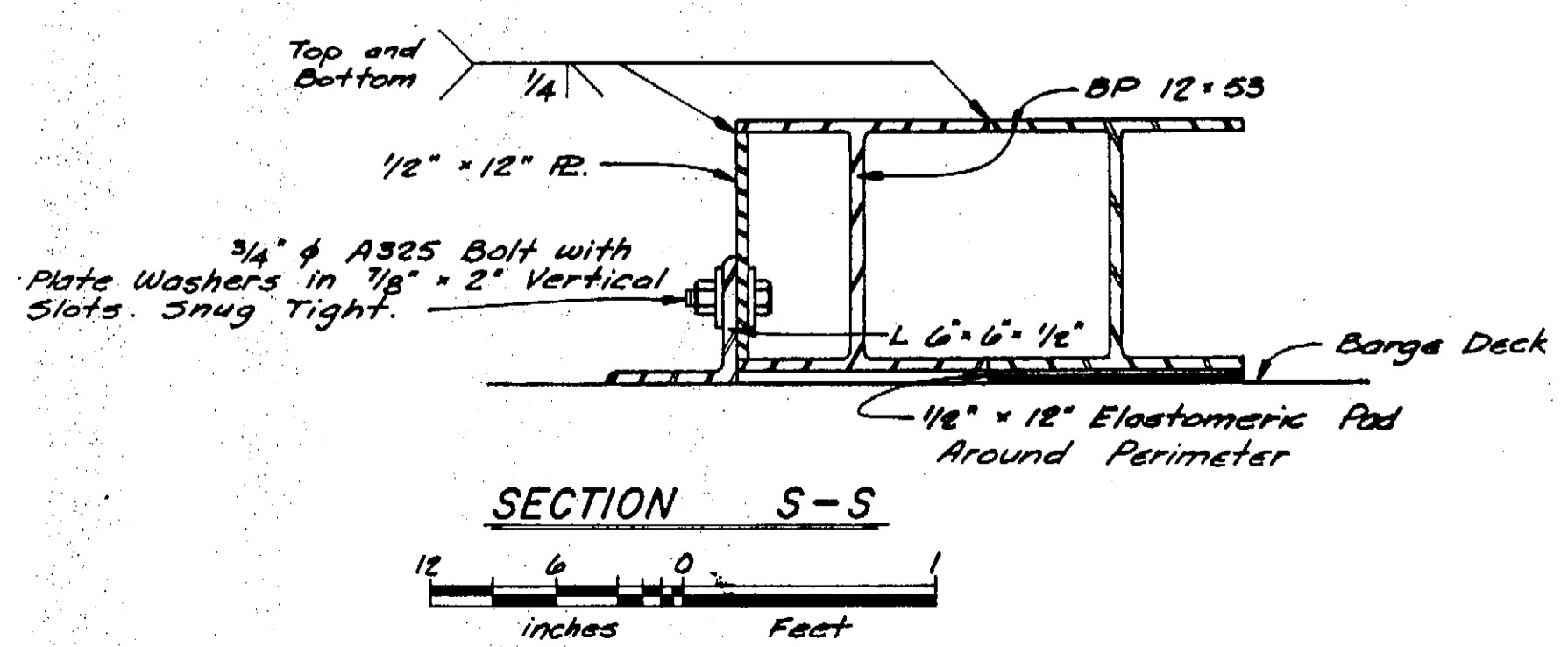
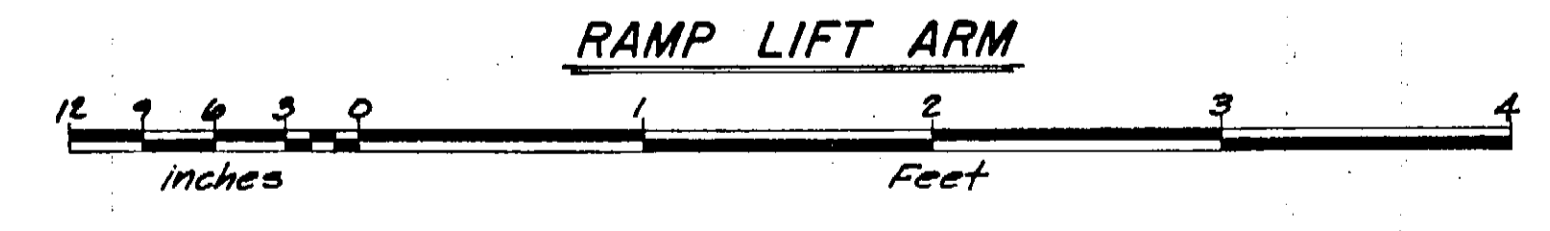
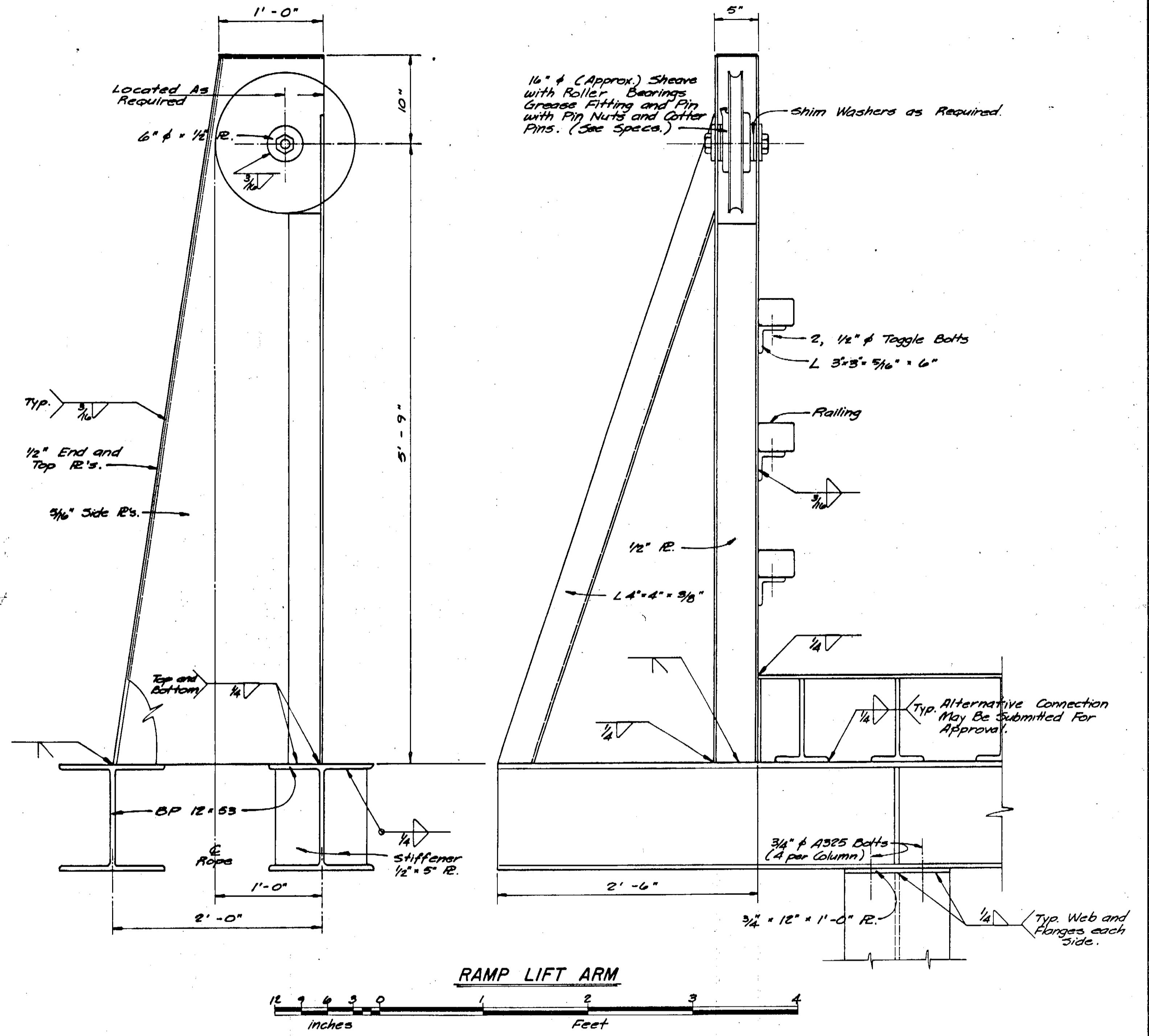
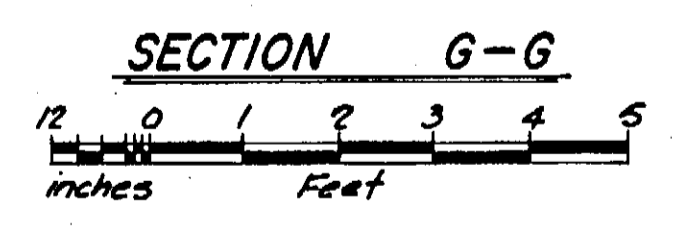
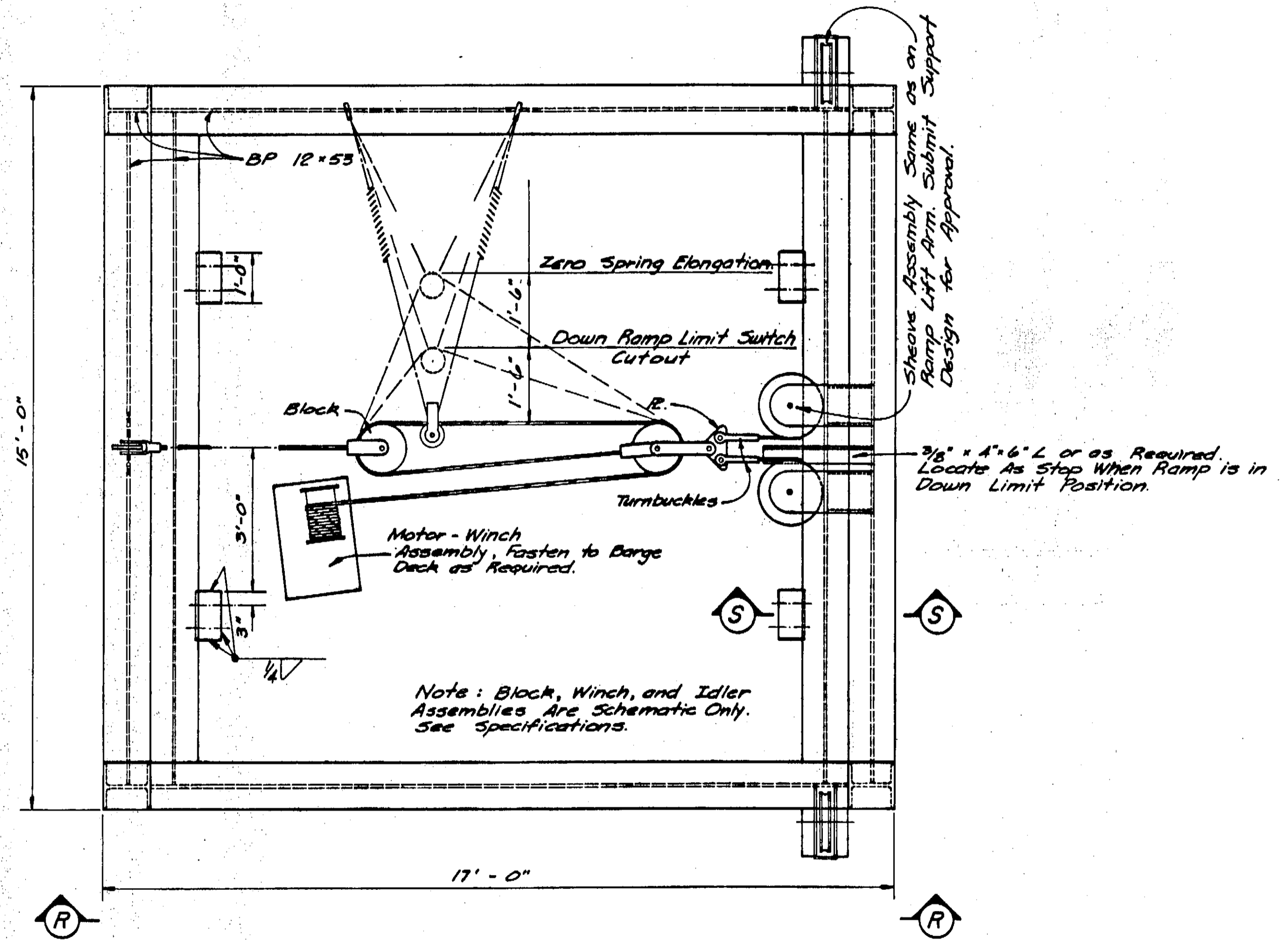
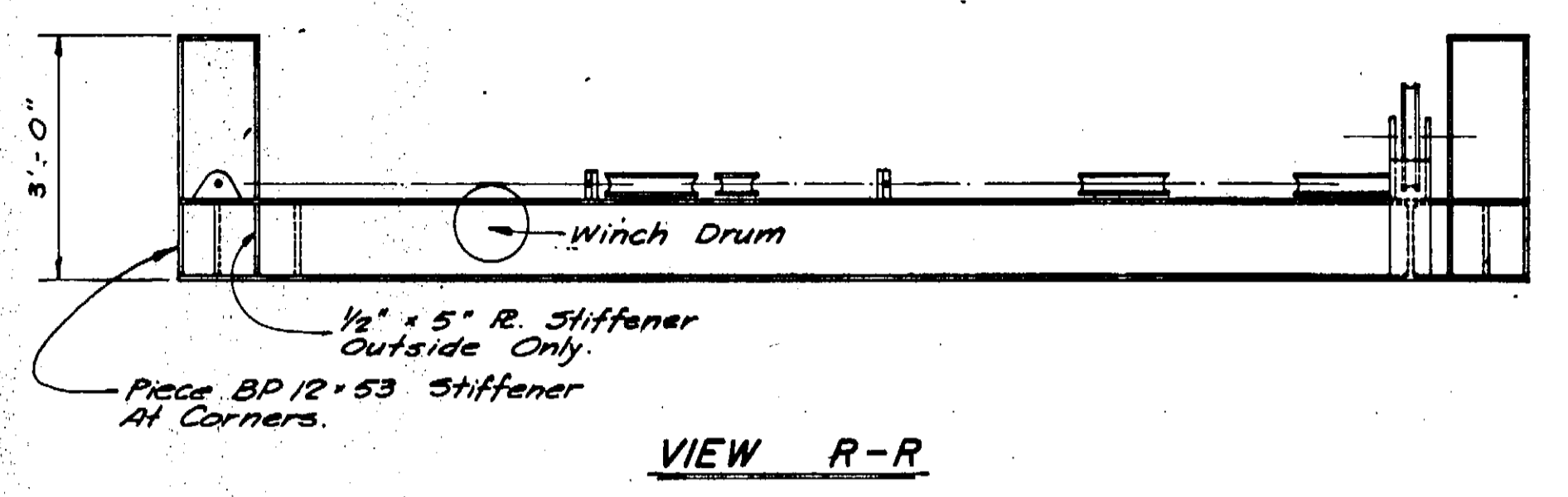
AS-BUILT  
11-1-93

SHEET 13 OF 32  
HOONAH RAMP UPGRADE  
STP-0918(6) & 75455

STAMP	DO NOT SCALE THIS DRAWING - USE DIMENSIONS		
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES		
	Hoonah - Kake Alaska HOONAH - KAKE RAMP HINGE REPLACEMENT		
	DESIGNED BAS	CHECKED	DATE 8-92
PROJECT NUMBER STP-0918(6) / 75455	SHEET 13		OF 17

Welding Notes: Bevel Weld All BP Flange to Flange Connections and 1/4" Fillet Weld Each Side Web Connections or Equivalent.

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA		1973	14	35



EXISTING DETAILS

Project No. RS-0989 (1)  
RS-0915 (3)

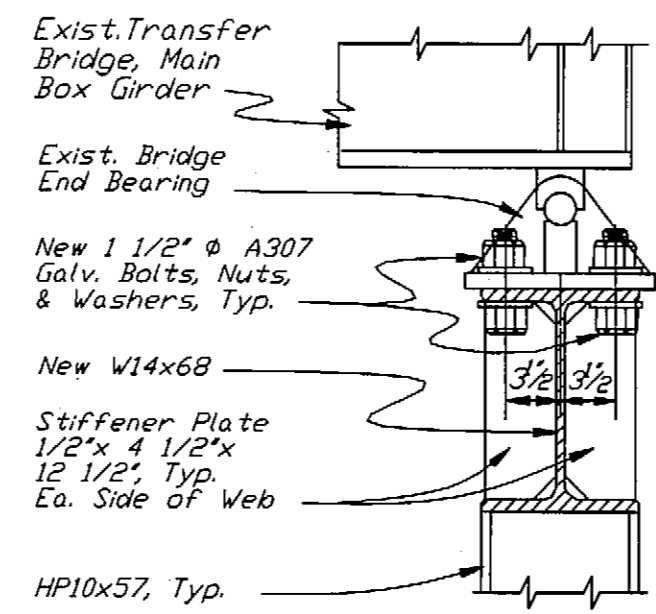
SHEET 14 OF 32  
HOONAH RAMP UPGRADE  
STP-0918(6) & 75455

AS-BUILT  
11-1-93

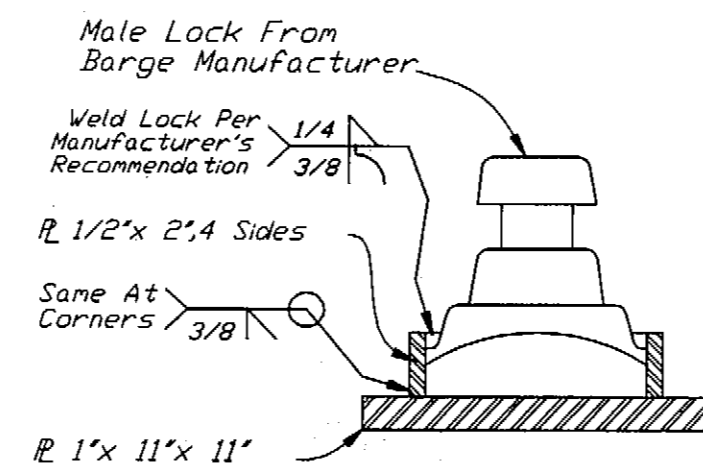
KAKE & HOONAH FERRY TERMINALS  
RAMP LIFT DETAILS

BOMHOFF & ASSOCIATES  
Engineering and Surveys  
1020 West Fireweed Lane  
Anchorage, Alaska 99503

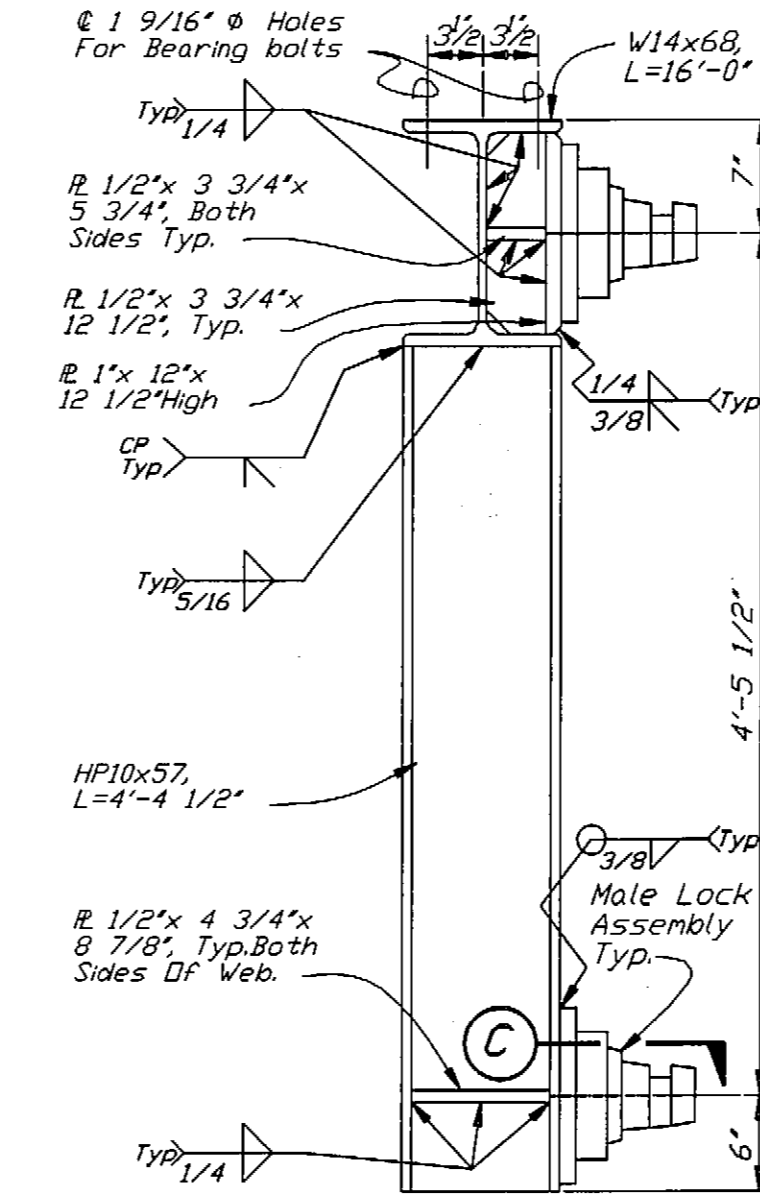
	DESIGNED BY:	D. N.
	DRAWN BY:	S. B. L.
	CHECKED BY:	D. N.
	SCALE:	As Noted
	DATE:	
SHEET		OF



**SECTION B**

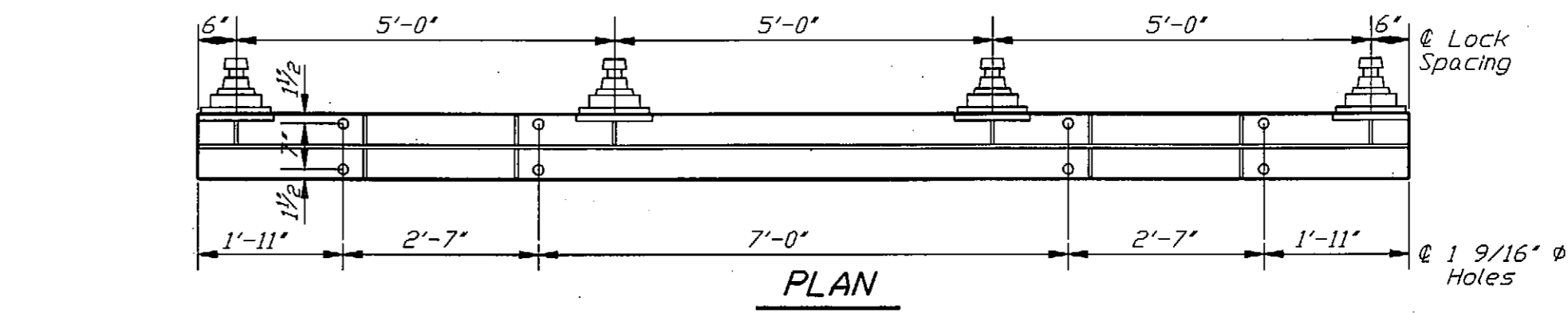


**SECTION C  
MALE LOCK ASSEMBLY**

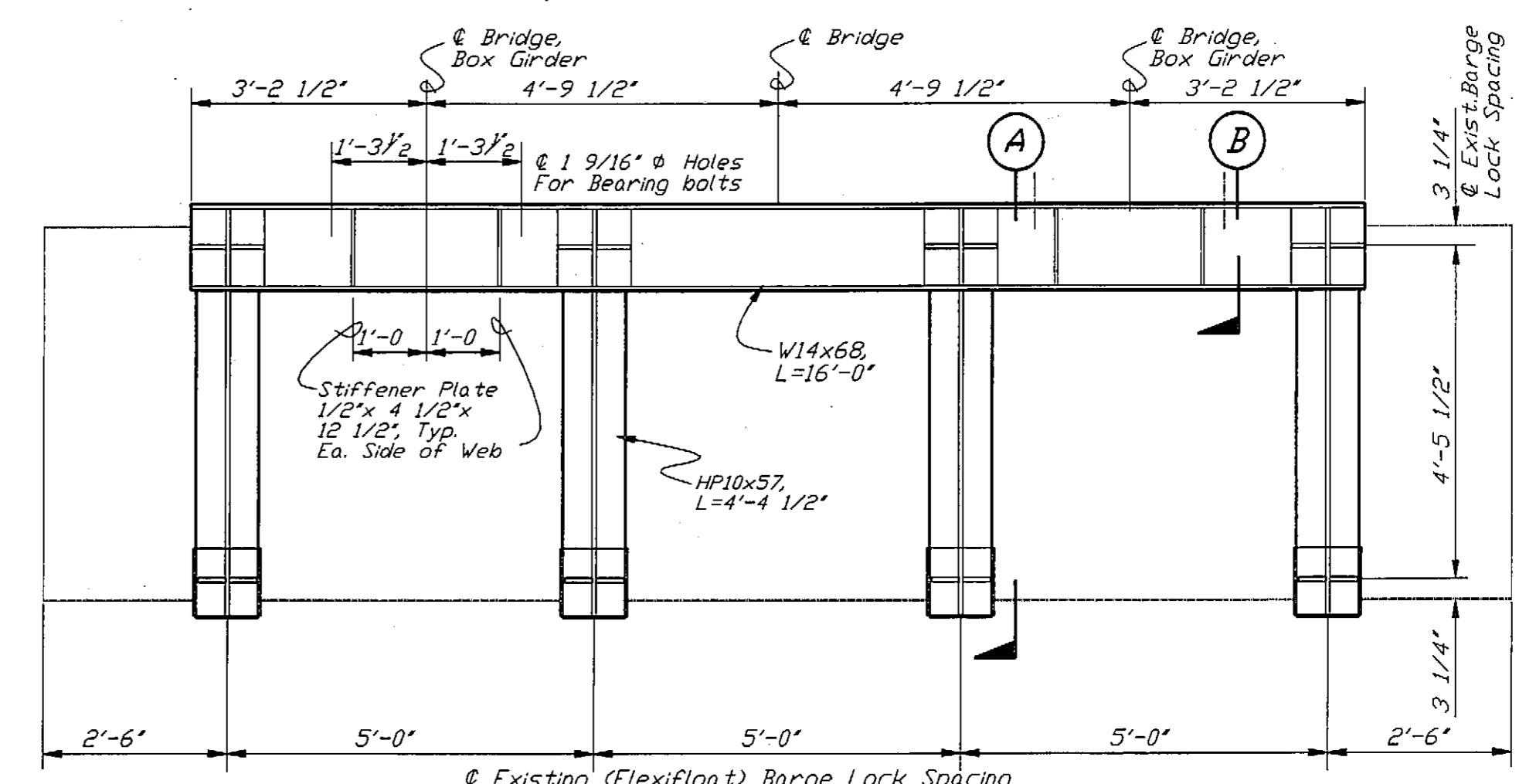


**SECTION A**

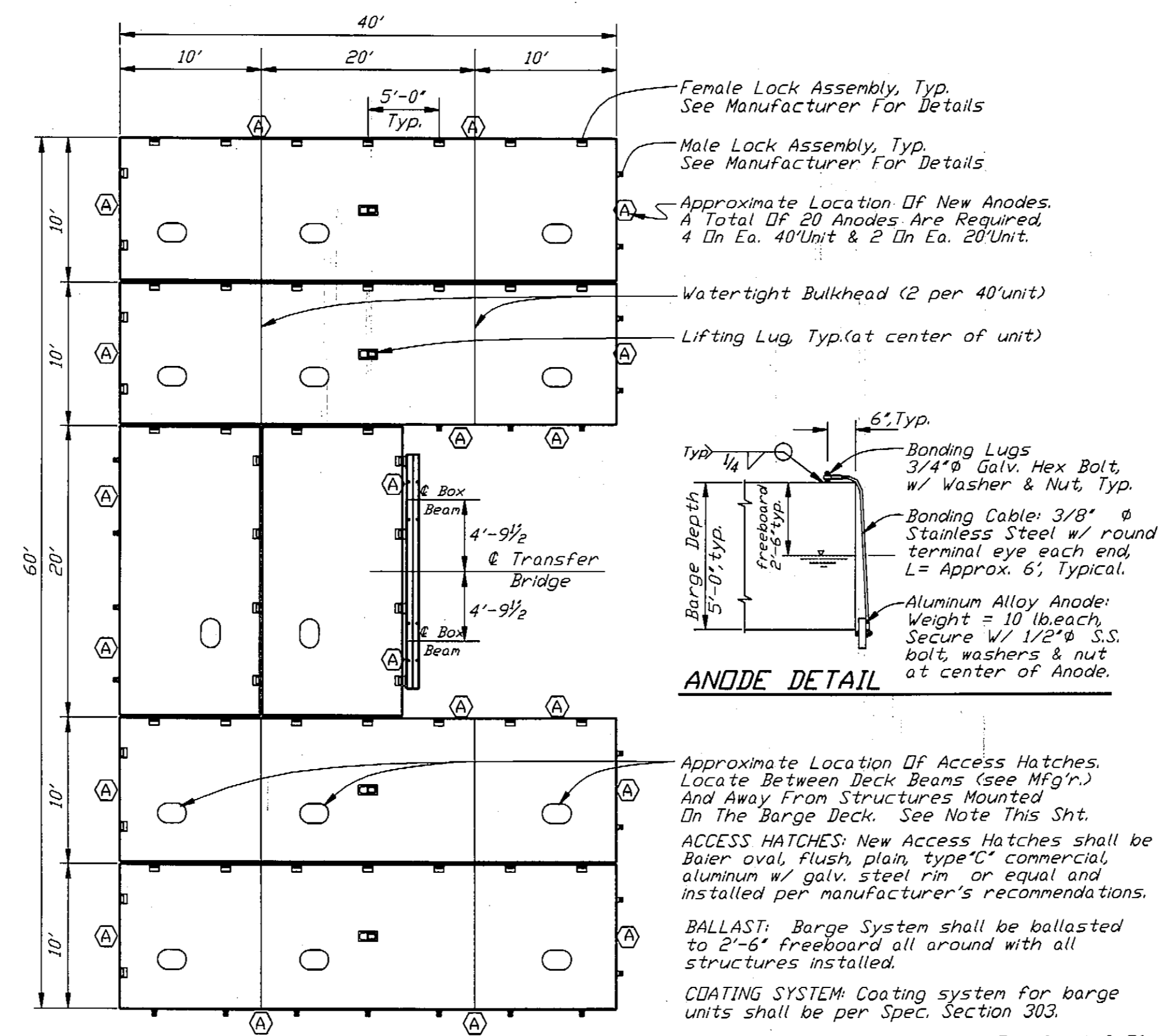
NOTE: Existing Barge Units Are FlexiFloat S-50 Series From Robishaw Engineering, Inc. P.O. Box 19246 Houston, Texas 77224 Phone (713)468-1706



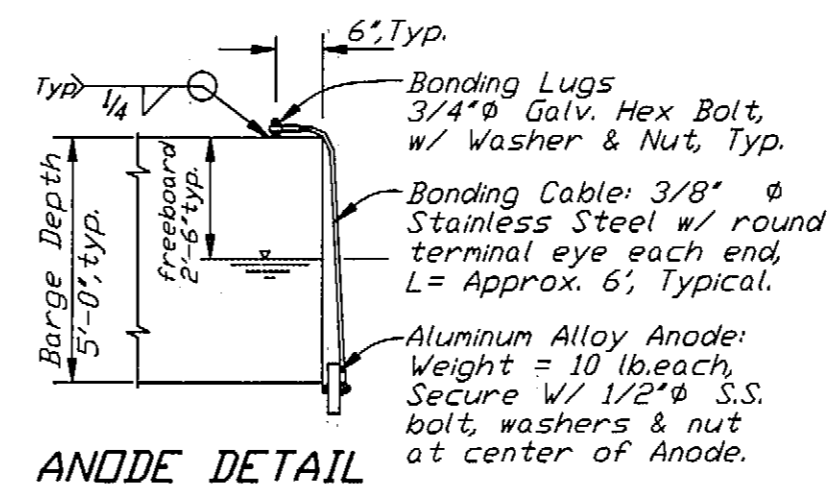
**PLAN**



**ELEVATION  
BRIDGE-BARGE CONNECTION**



**BARGE SYSTEM LAYOUT**



**ANODE DETAIL**

Approximate Location Of New Anodes. A Total Of 20 Anodes Are Required. 4 On Ea. 40' Unit & 2 On Ea. 20' Unit.

WATERTIGHT BULKHEAD (2 per 40' unit)

LIFTING LUG, Typ. (at center of unit)

Approximate Location Of Access Hatches. Locate Between Deck Beams (see Mfg'r.) And Away From Structures Mounted On The Barge Deck. See Note This Sht.

ACCESS HATCHES: New Access Hatches shall be Baier oval, flush, plain, type 'C' commercial, aluminum w/ galv. steel rim or equal and installed per manufacturer's recommendations.

BALLAST: Barge System shall be ballasted to 2'-6" freeboard all around with all structures installed.

COATING SYSTEM: Coating system for barge units shall be per Spec. Section 303.

BARGE UNITS: Barge Units are FlexiFloat S-50 Series from: Robishaw Engineering, Inc. P.O. Box 19246 Houston, TX 77224 Ph: (713)468-1706

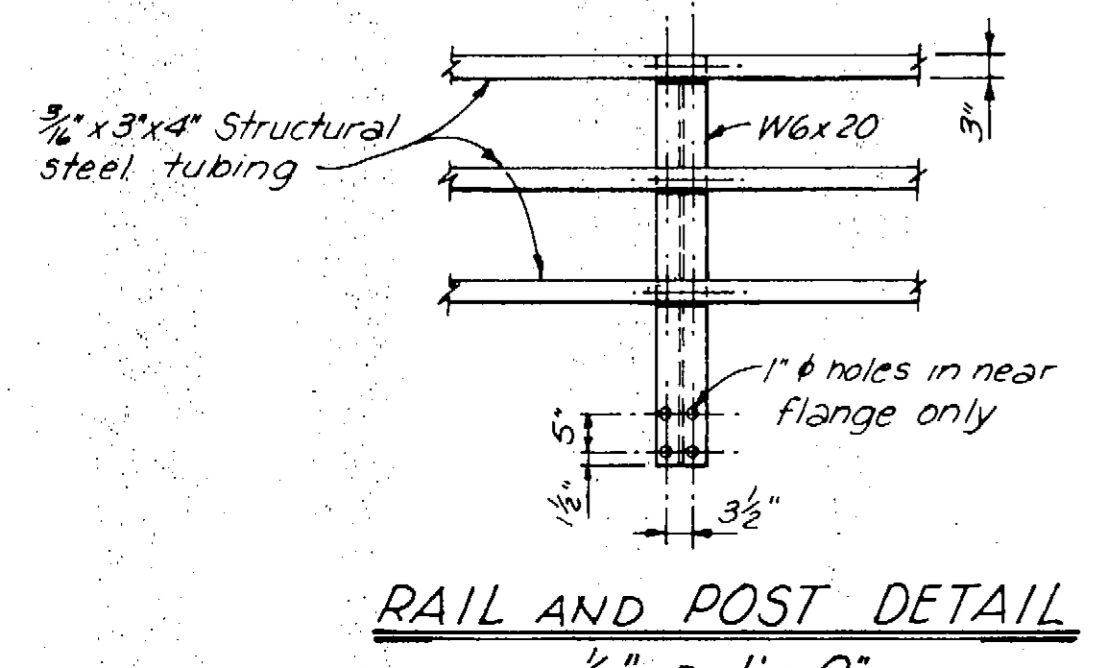
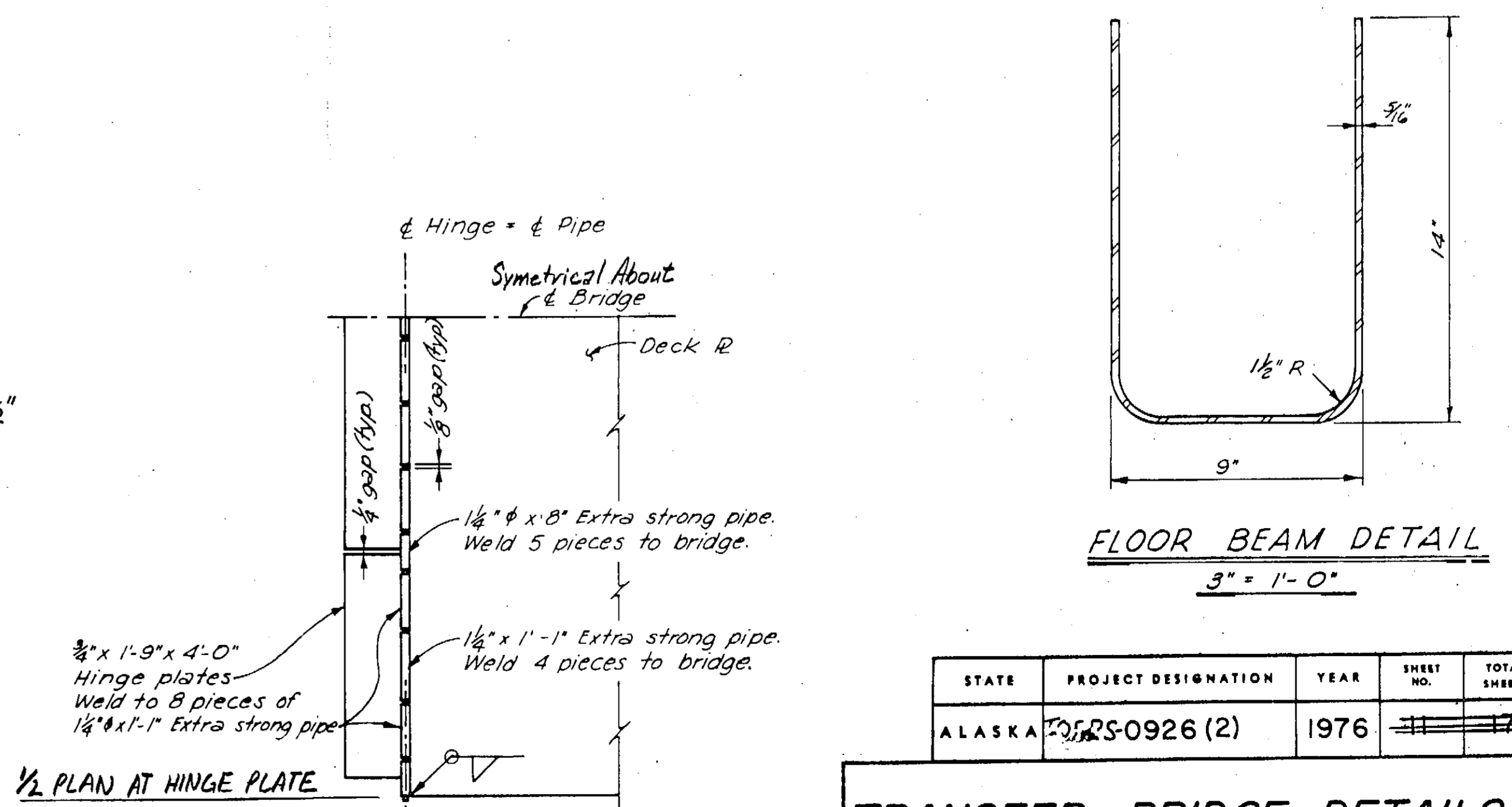
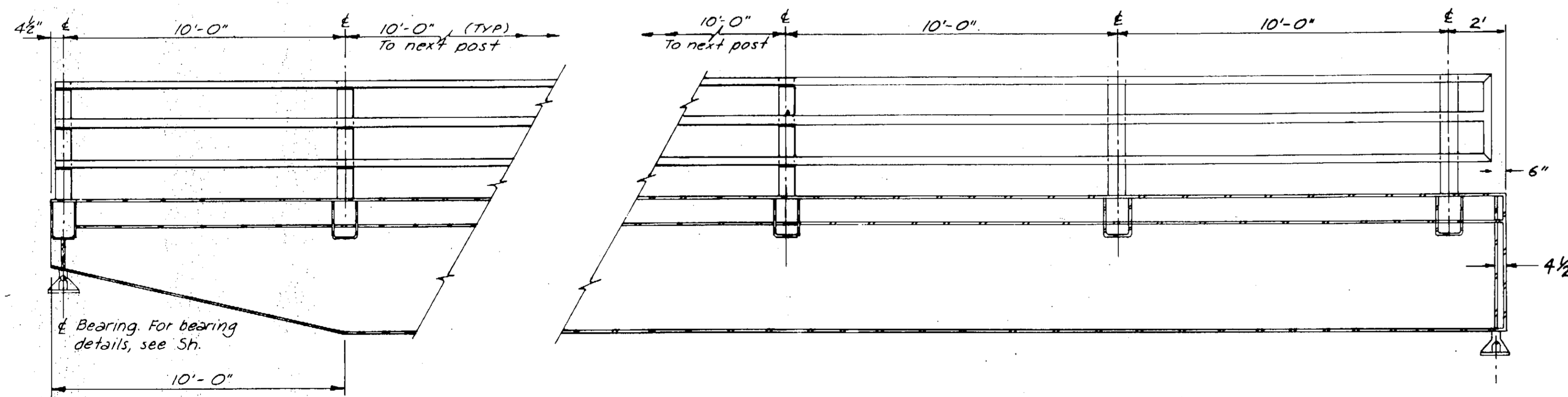
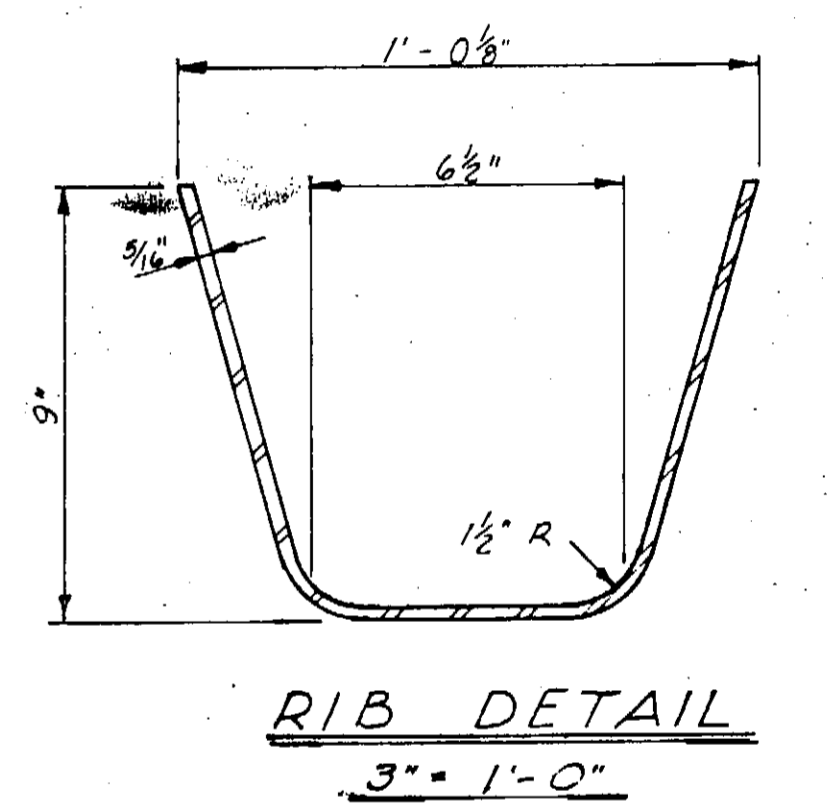
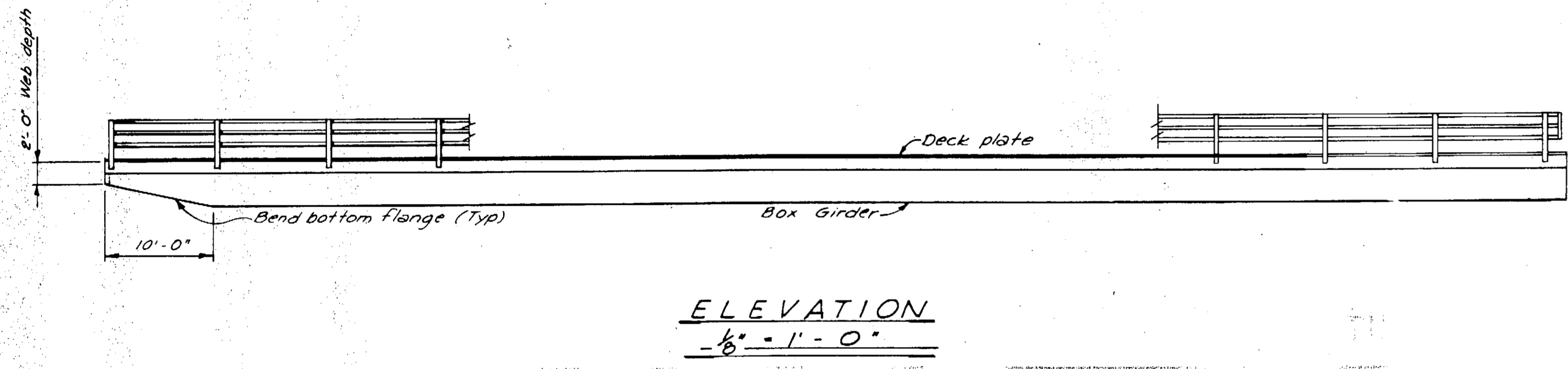
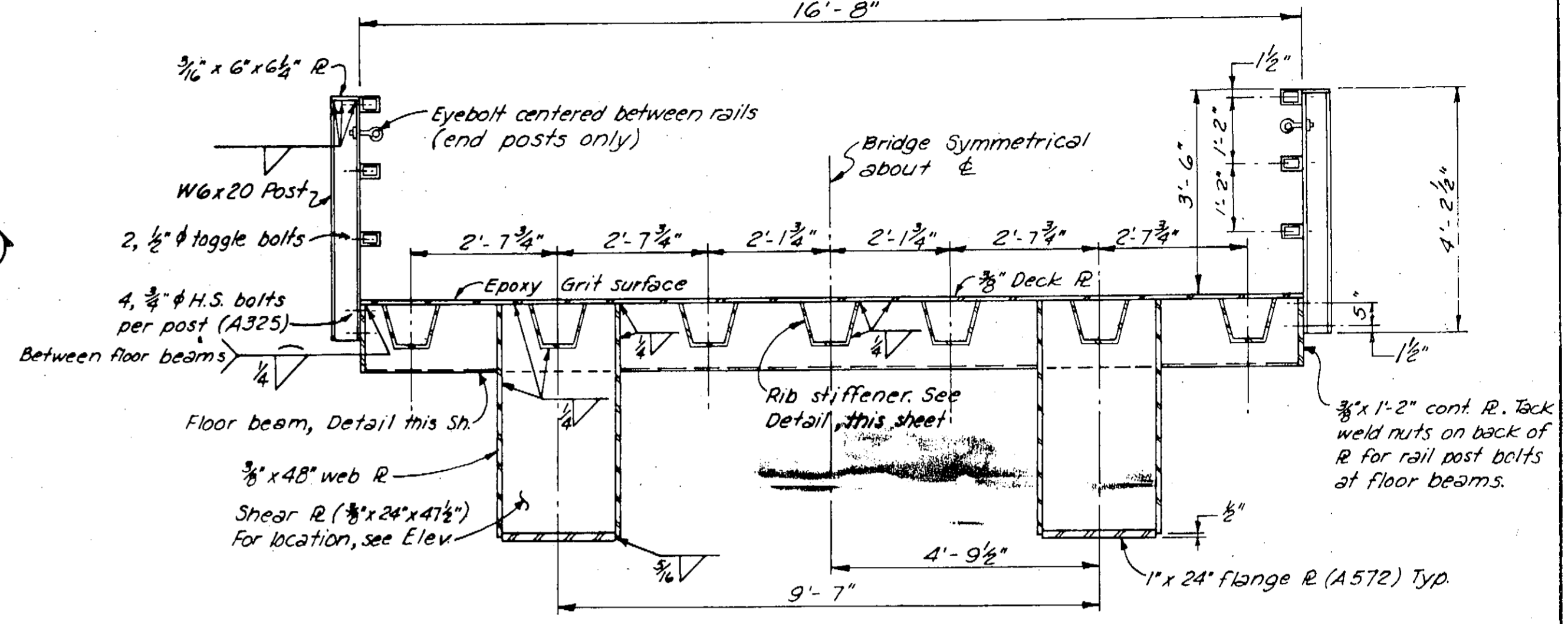
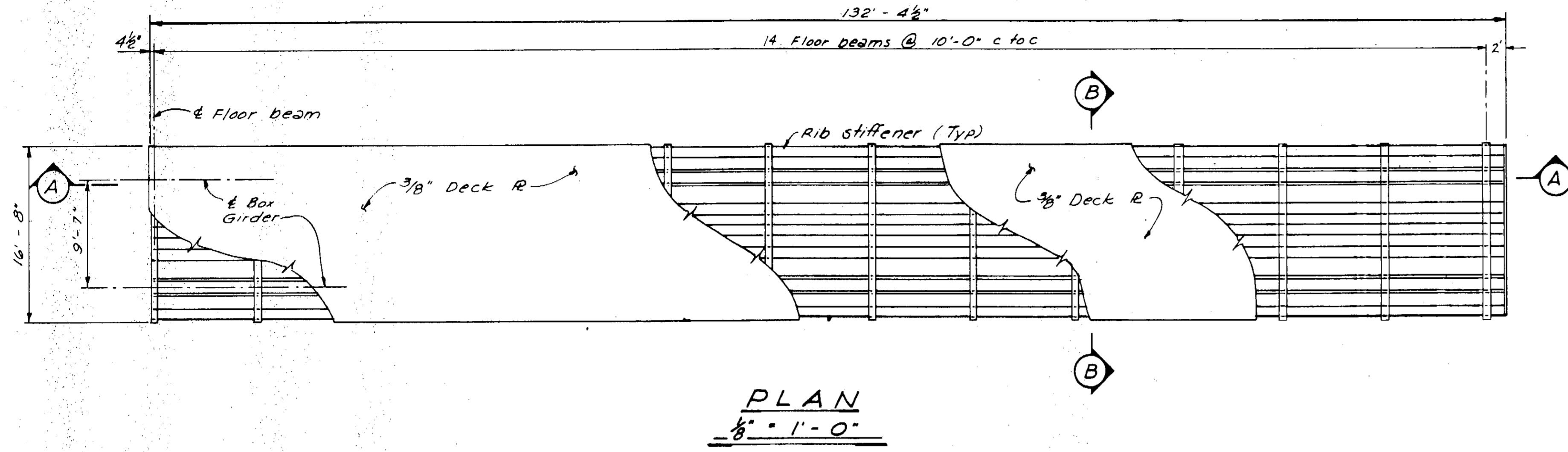
**AS-BUILT INFORMATION**

SHEET 15 OF 33  
HOONAH RAMP UPGRADE  
STP-0918(6) / 75455

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
HOONAH & KAKE		ALASKA	
<b>AS-BUILT BRIDGE &amp; BARGE DETAILS</b>			
DESIGNED BS	CHECKED JS	DRAWN WN	DATE DEC, 1991
PROJECT NUMBER	RS-0989(1)	SHEET	10 OF 17

HNH-HK10.DWG

SEL-124



AS-BUILT  
(EXISTING)  
11-1-93

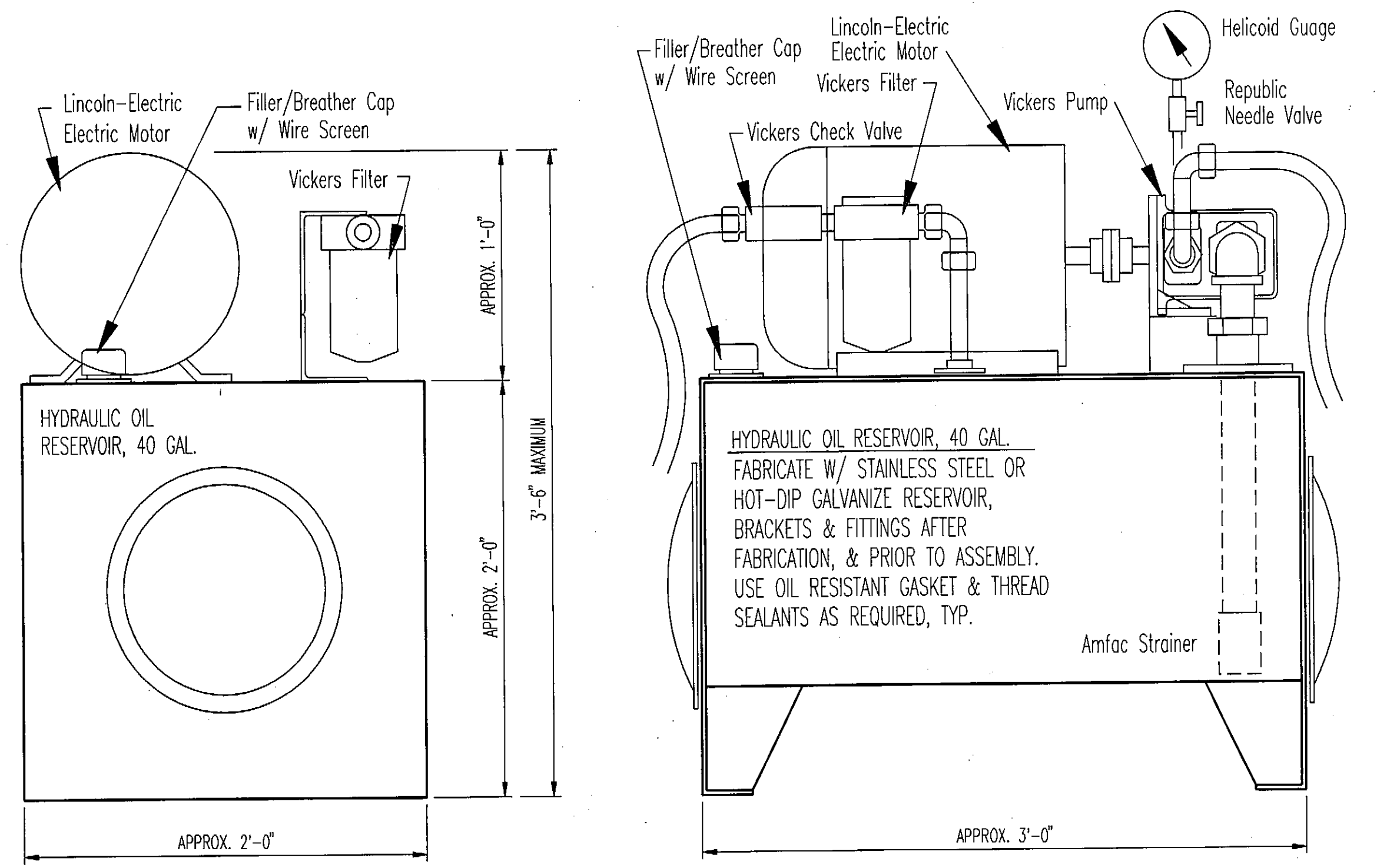
**EXISTING DETAILS**

SHEET 16 OF 32  
**HOONAH RAMP UPGRADE**  
STP-0918(6) & 75455

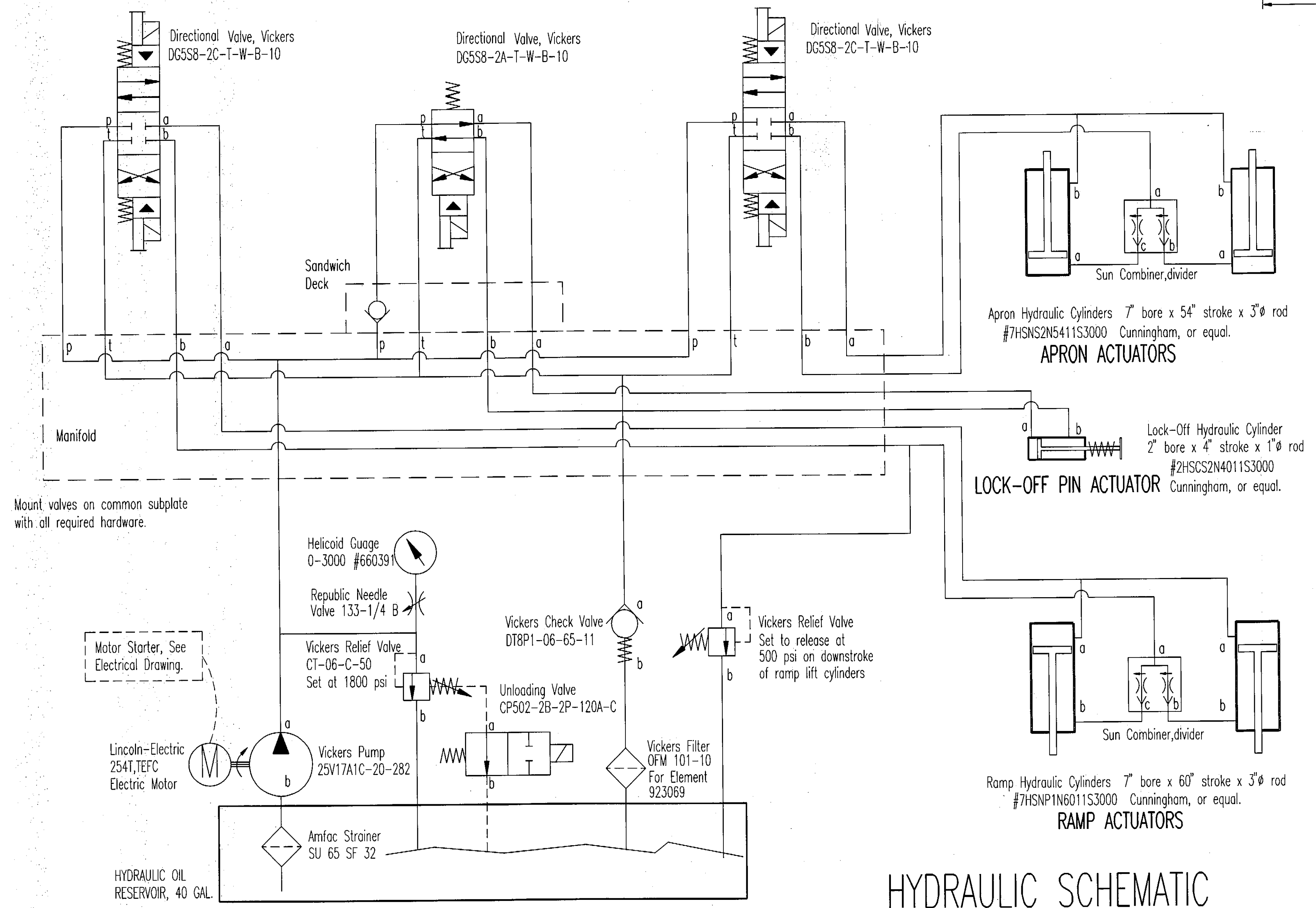
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	STP-0926 (2)	1976	16	32

**TRANSFER BRIDGE DETAILS**

SCALE	SURVEYED	APPROVED
DESIGNED	DRAWN	DIRECTOR
CHECKED	DATE	
PROJECT NUMBER	SHEET	OF



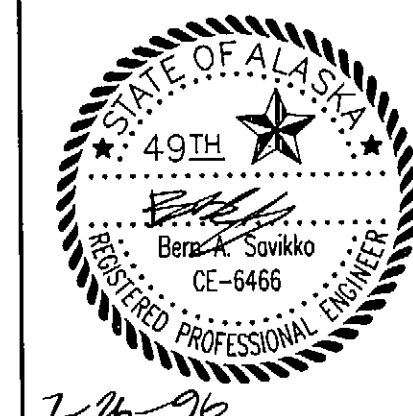
HYDRAULIC POWER UNIT



HYDRAULIC SCHEMATIC

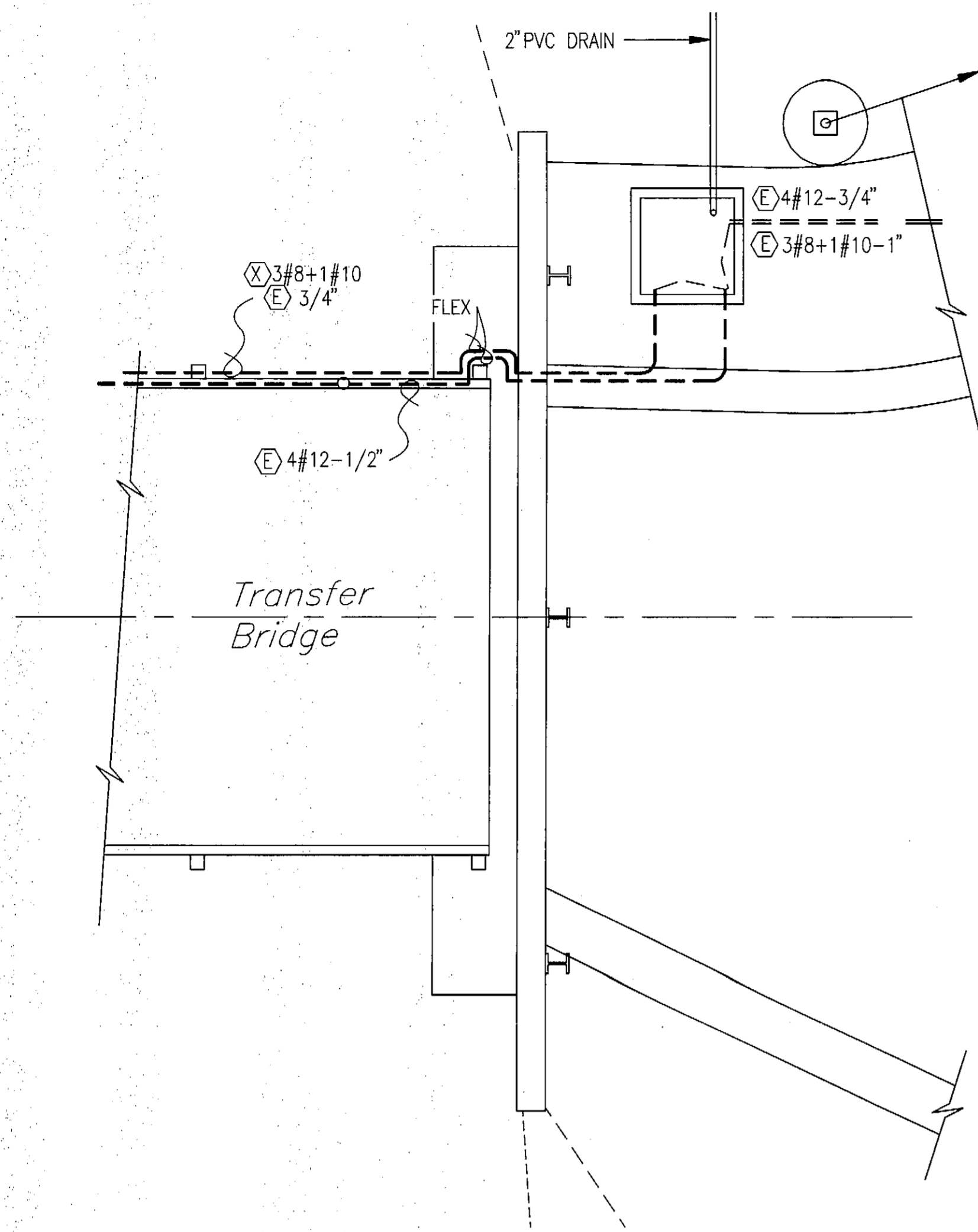
DO NOT SCALE THIS DRAWING - USE DIMENSIONS

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
HOONAH		ALASKA	
<b>HYDRAULIC SCHEMATIC</b>			
DESIGNED: STAFF	CHECKED: BAS	DRAWN: BN	DATE: MAY, 1995
PROJECT NUMBER: STP-0918(6) 75455	SHEET 17 OF 33		

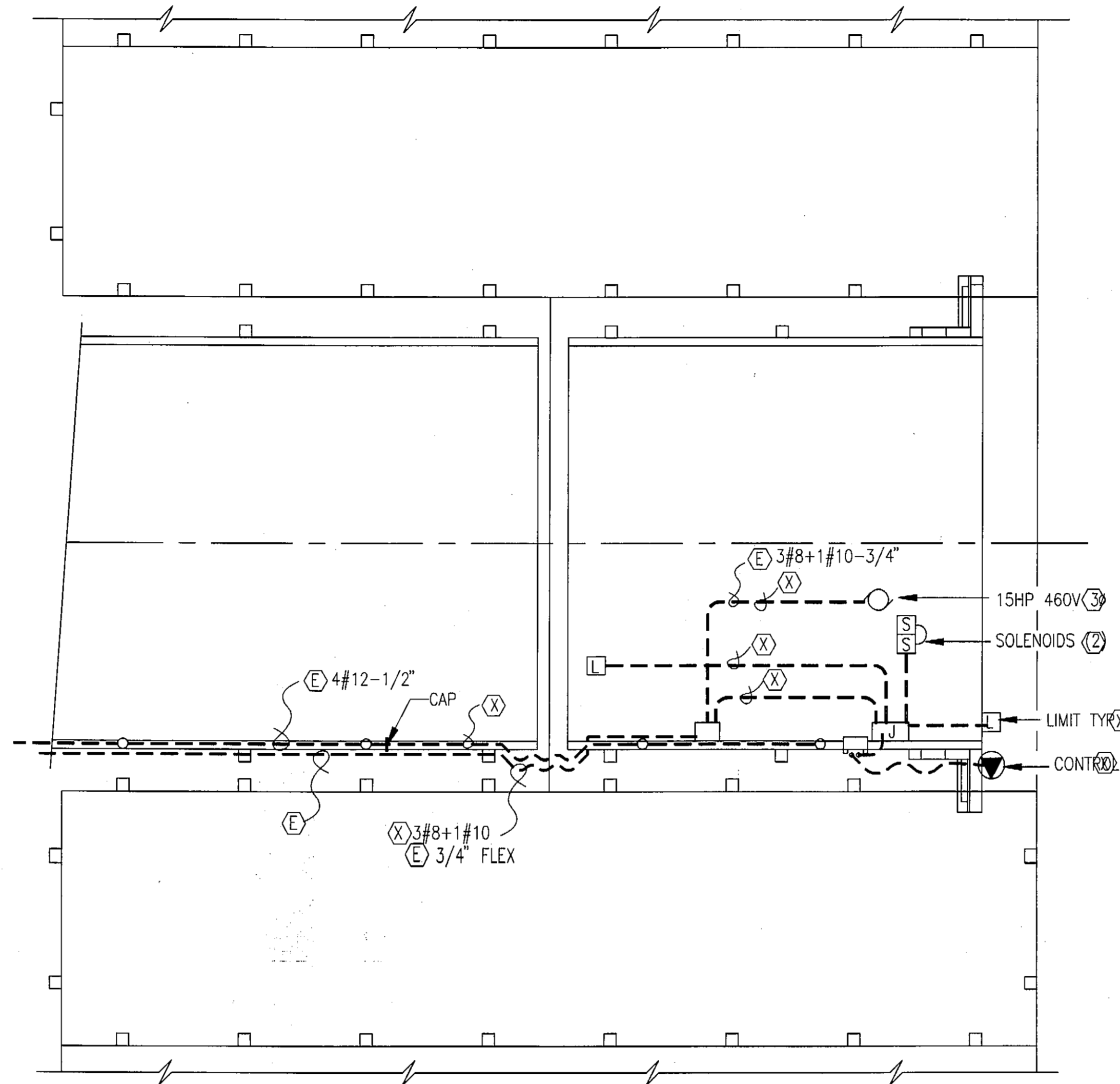


HNH-HYD.DWG 7-26-96

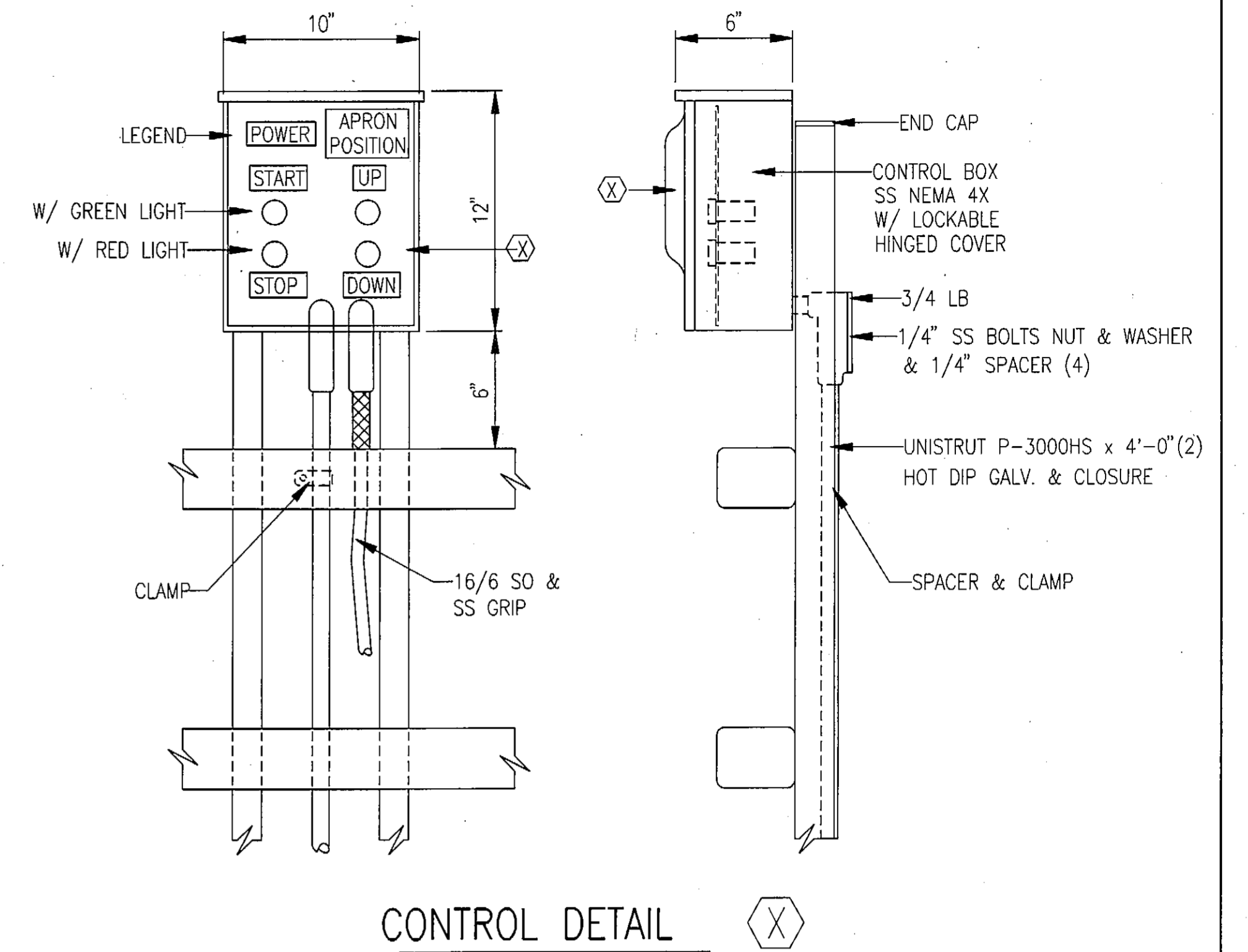
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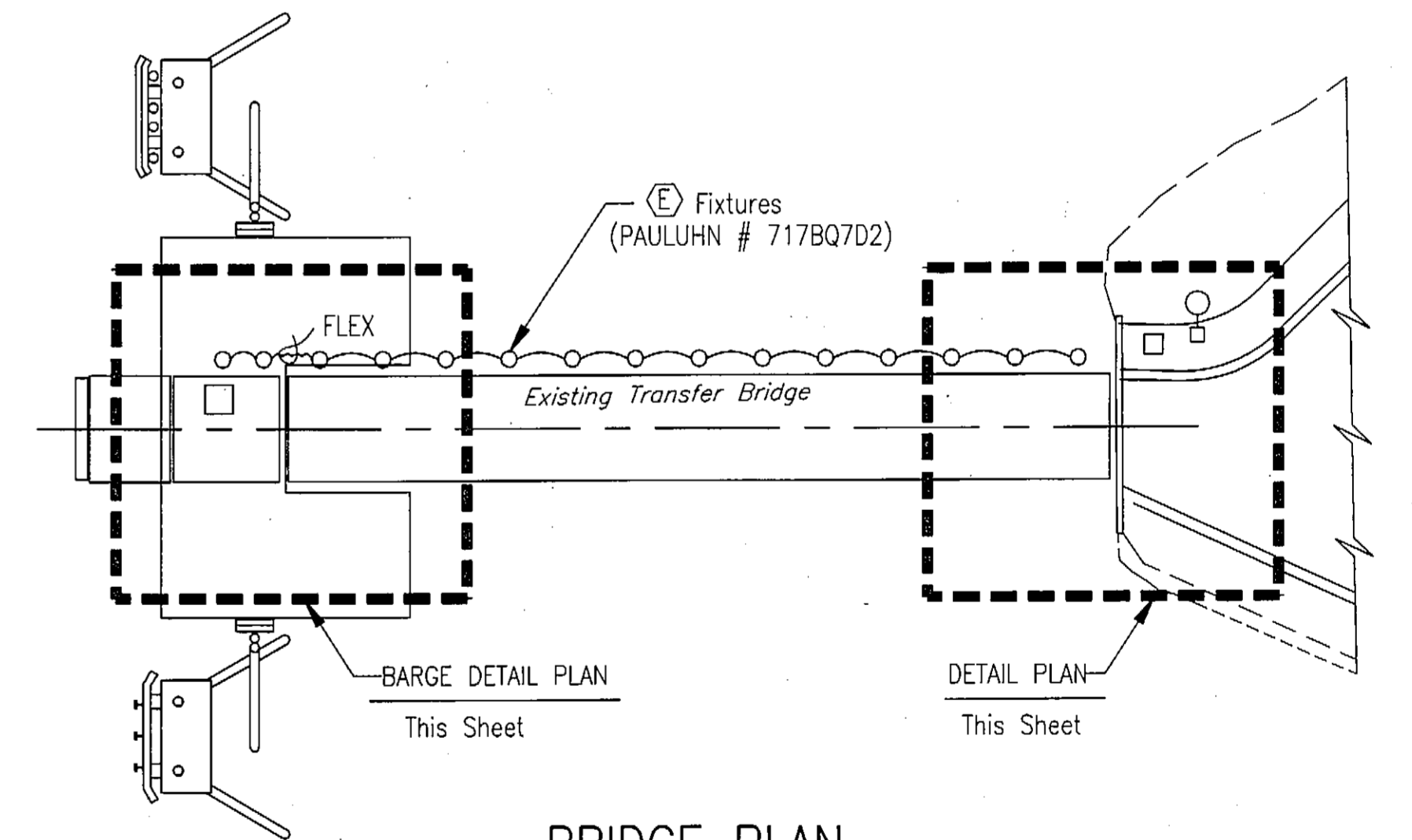
DETAIL PLAN



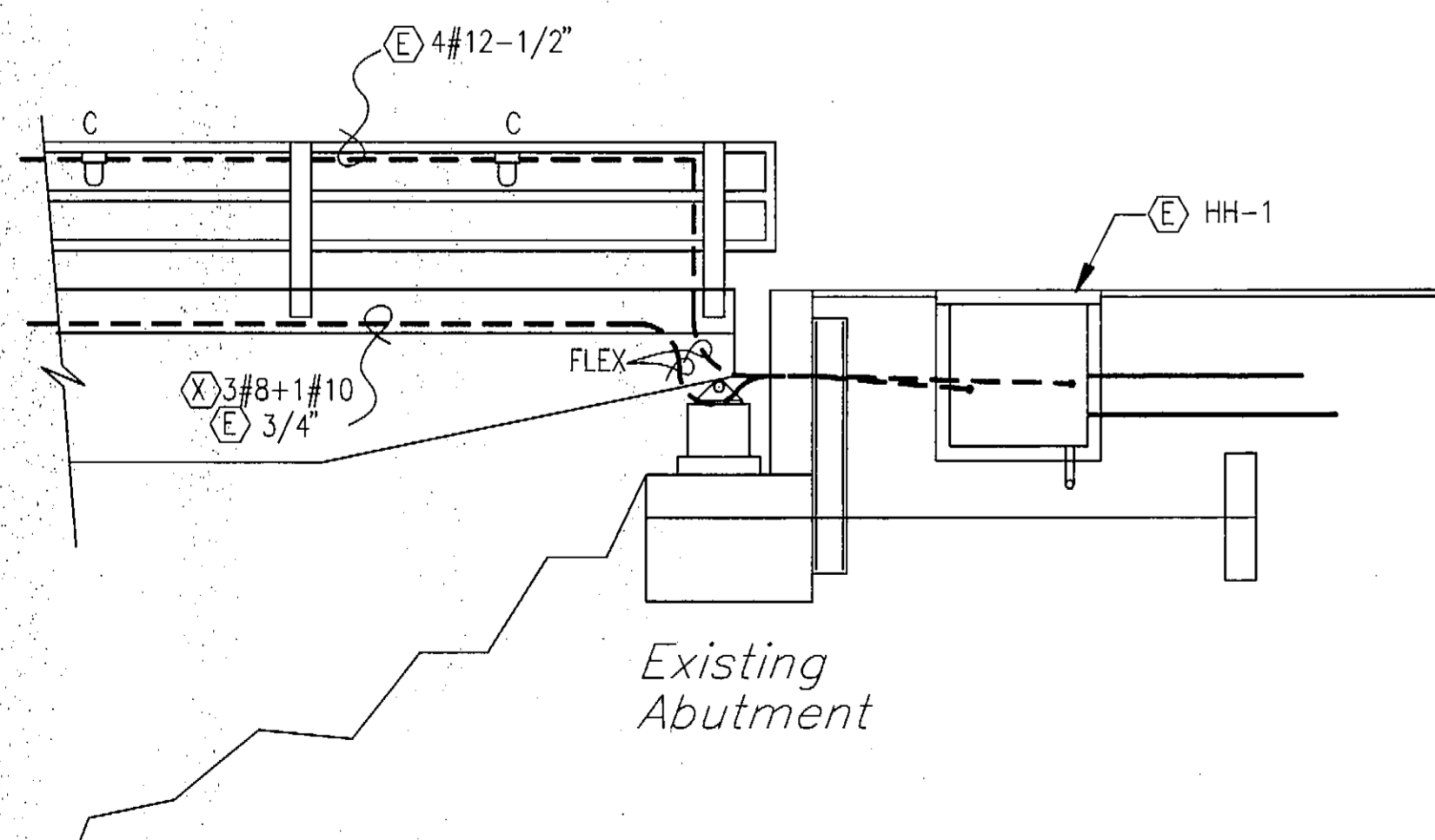
BARGE DETAIL PLAN



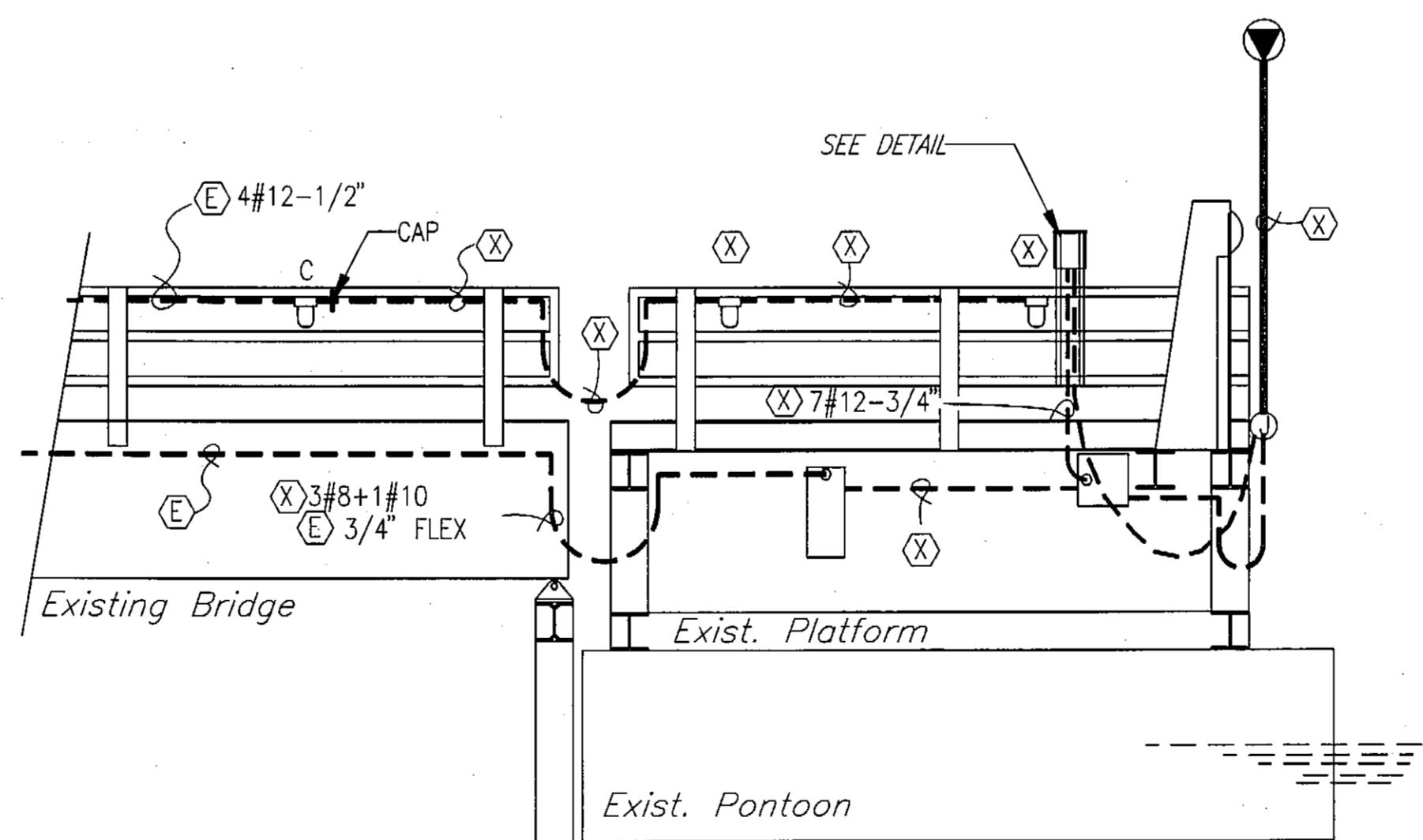
CONTROL DETAIL



BRIDGE PLAN



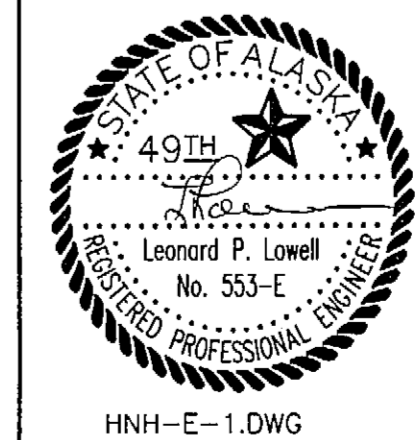
ELEVATION



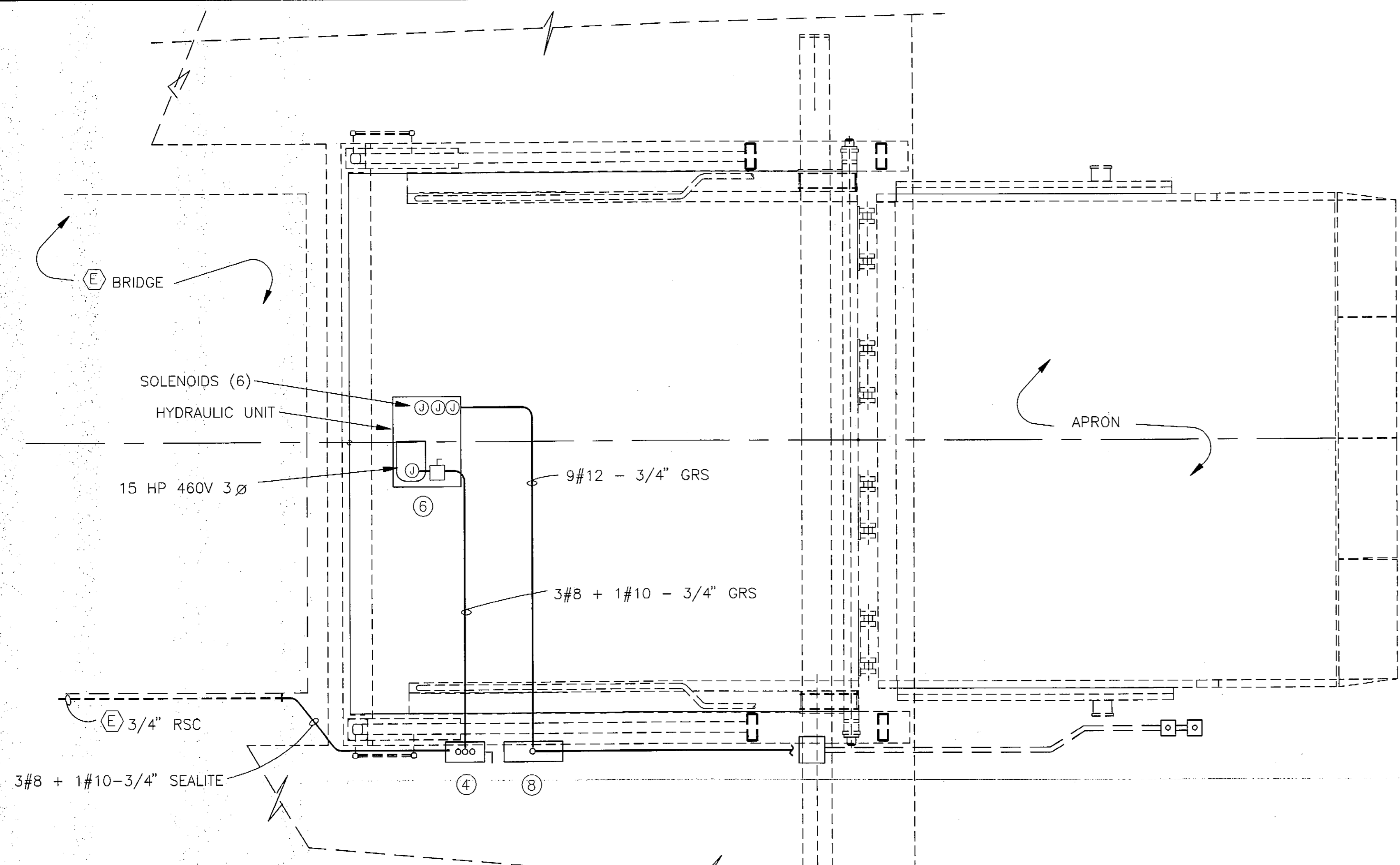
ELEVATION

E-1

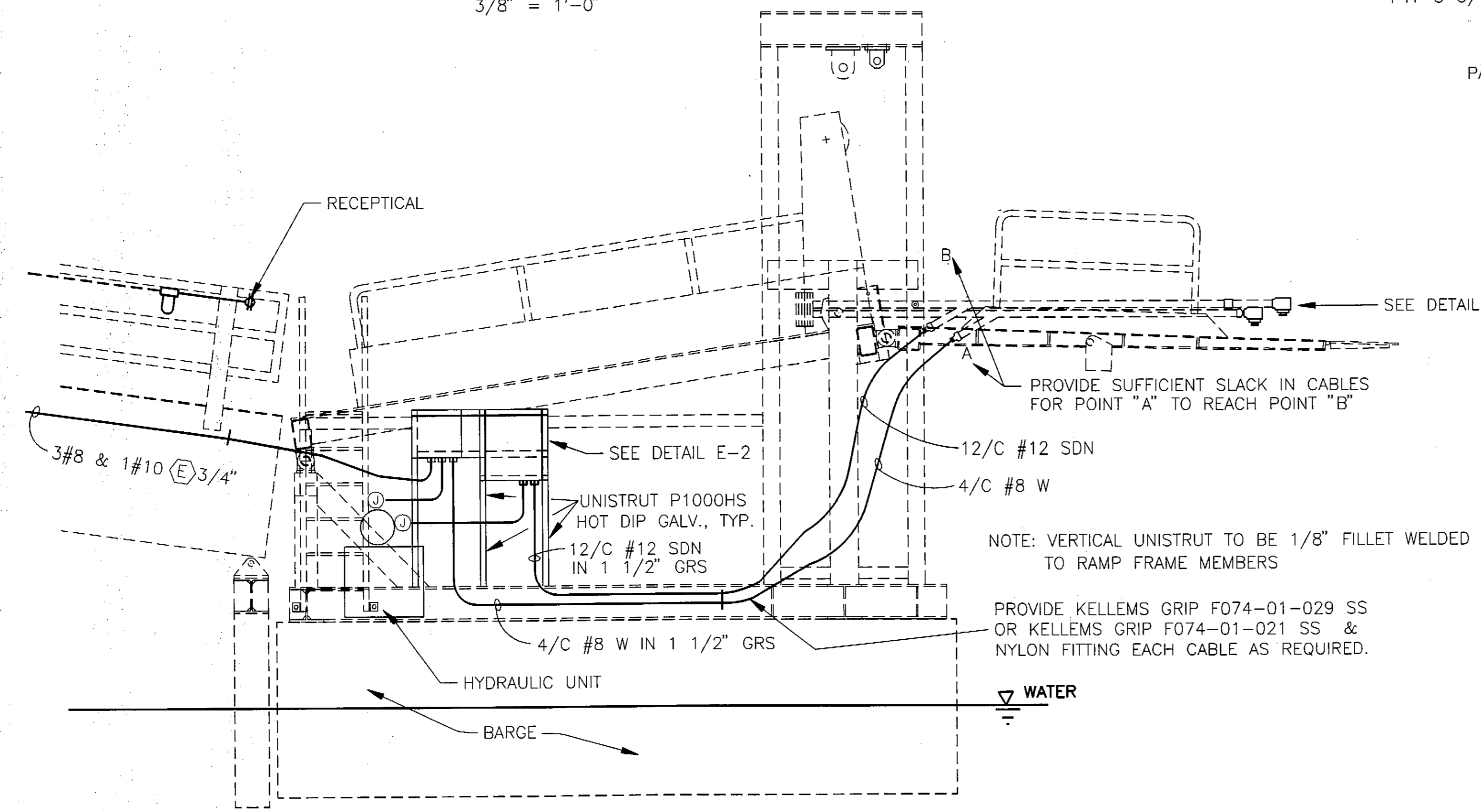
STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
HOONAH		ALASKA	
RAMP/APRON UPGRADE			
ELECTRICAL - DEMOLITION PLAN			
DESIGNED: STAFF	CHECKED: BAS	DRAWN: BAS	DATE: APRIL, 1995
PROJECT NUMBER: STP-0939(5)/75377	SHEET 18	OF 33	



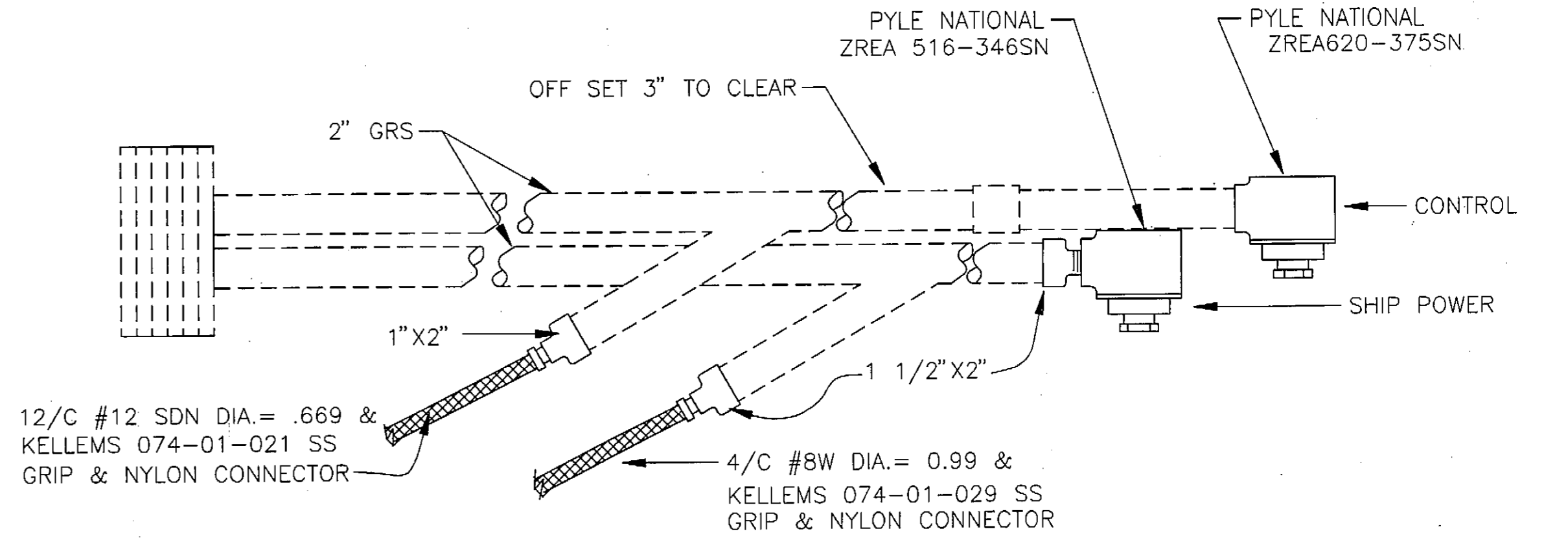
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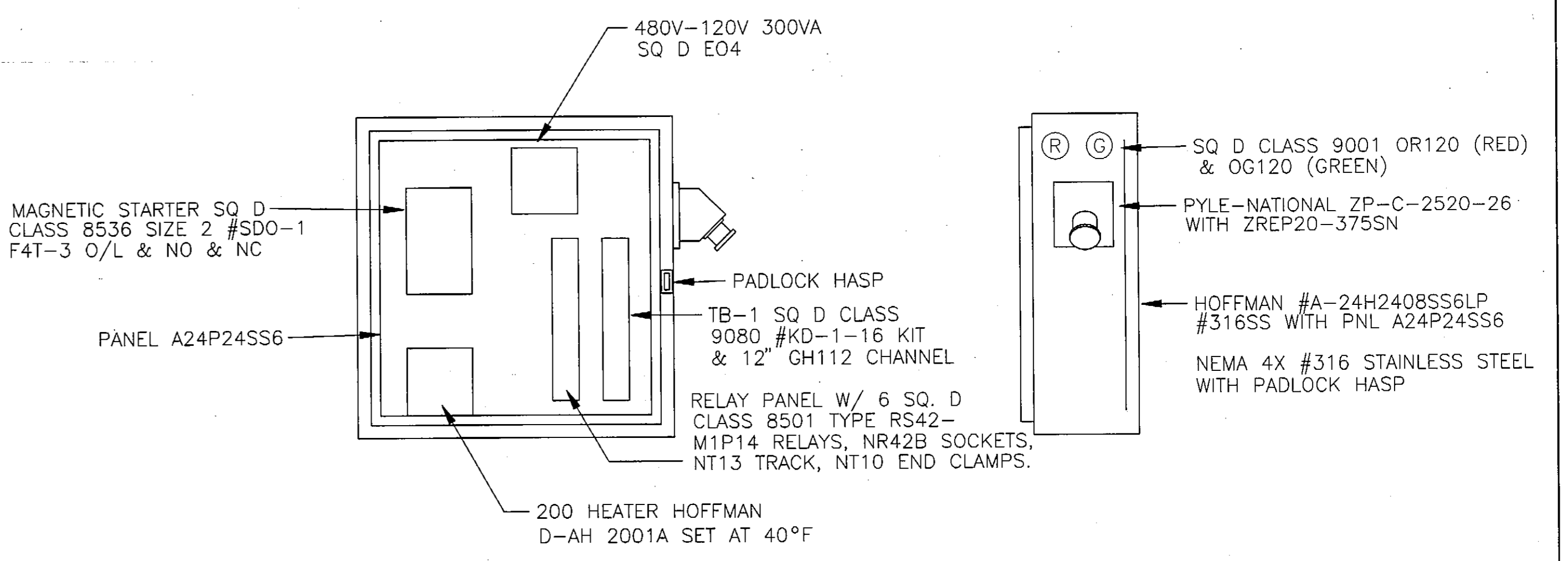
DETAIL PLAN  
3/8" = 1'-0"



DETAIL ELEVATION  
3/8" = 1'-0"



MAST DETAIL  
1 1/2" = 1'-0"  
(SEE SHEET 10 FOR MAST STRUCTURAL DETAILS)

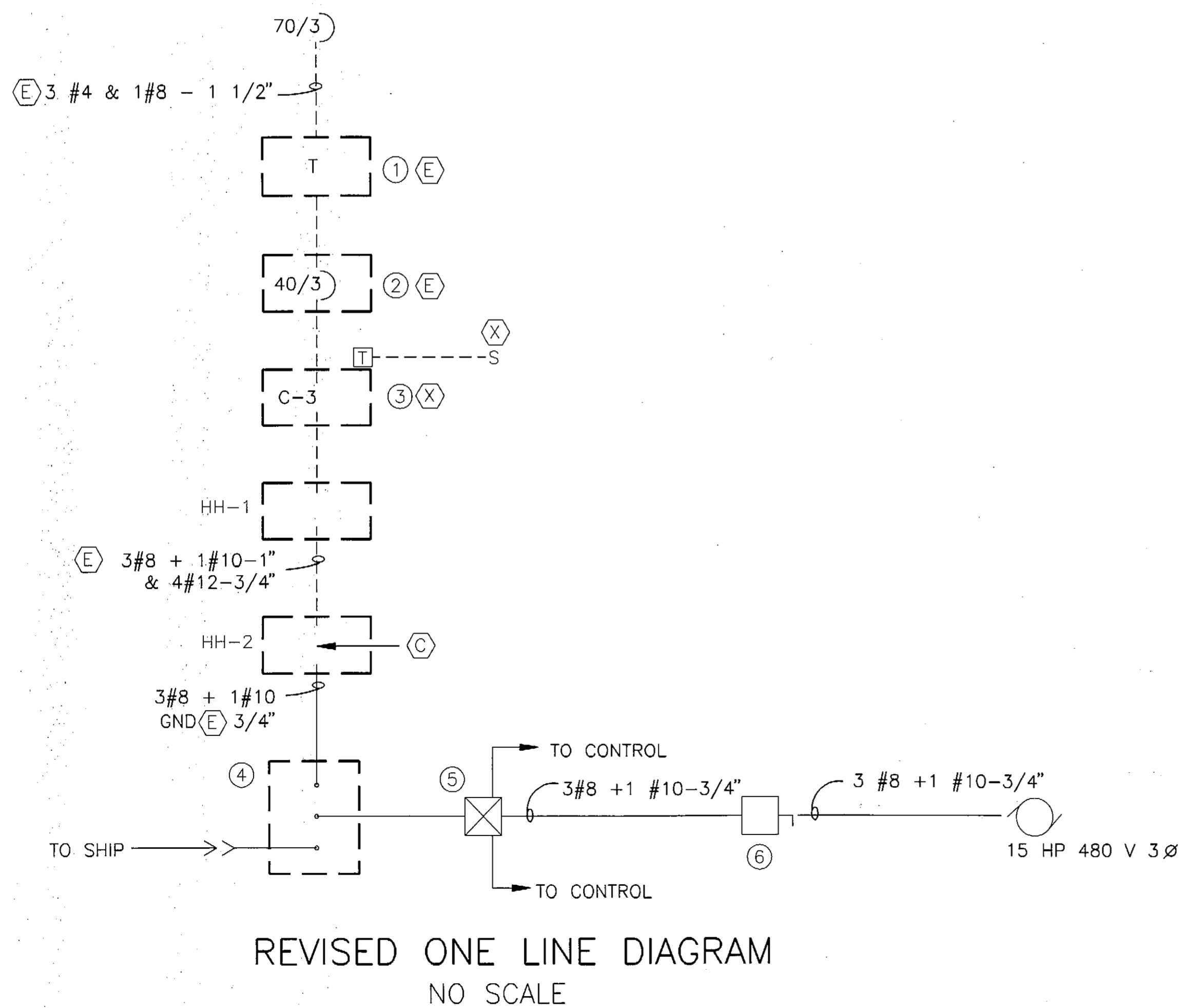
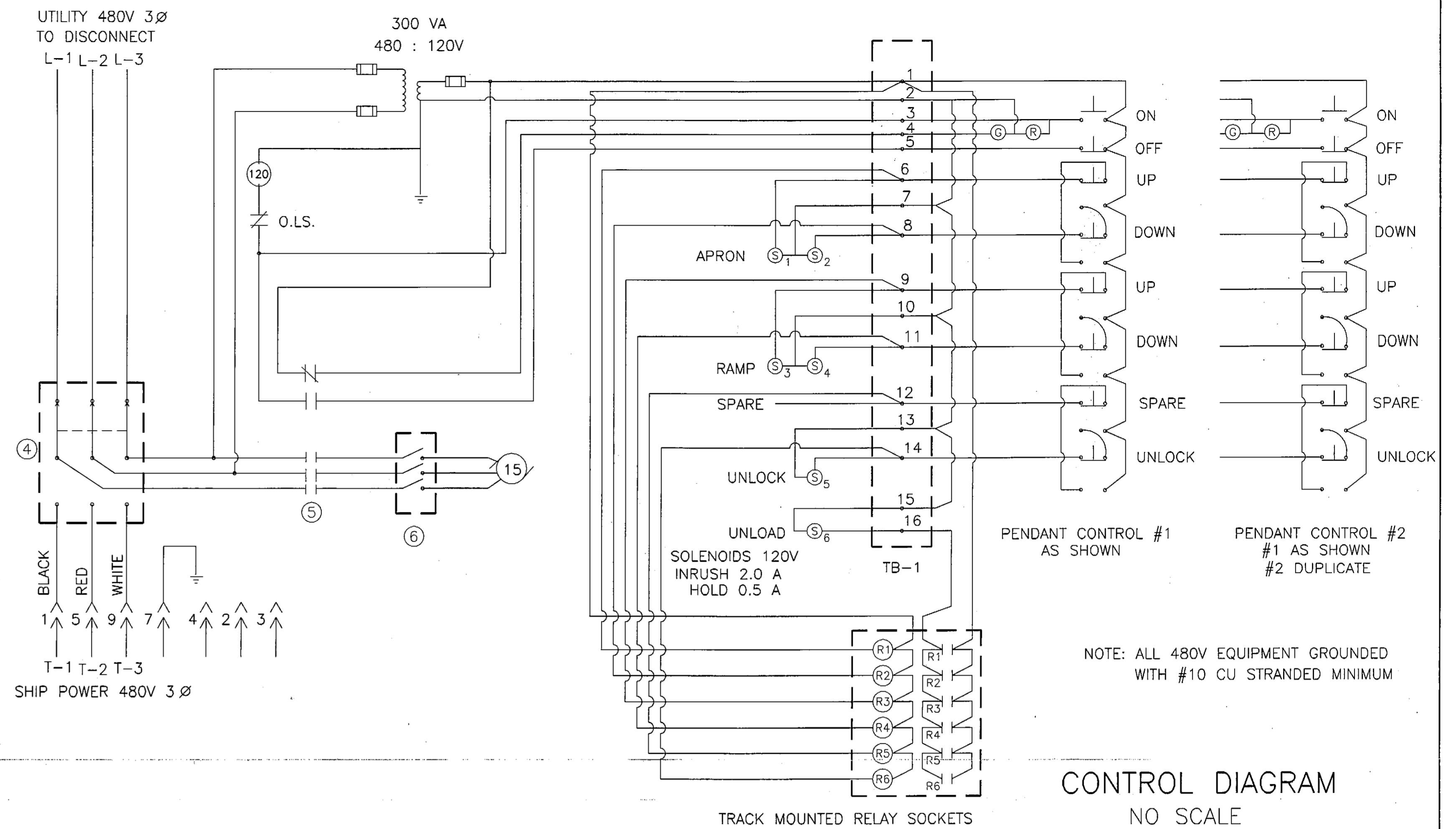
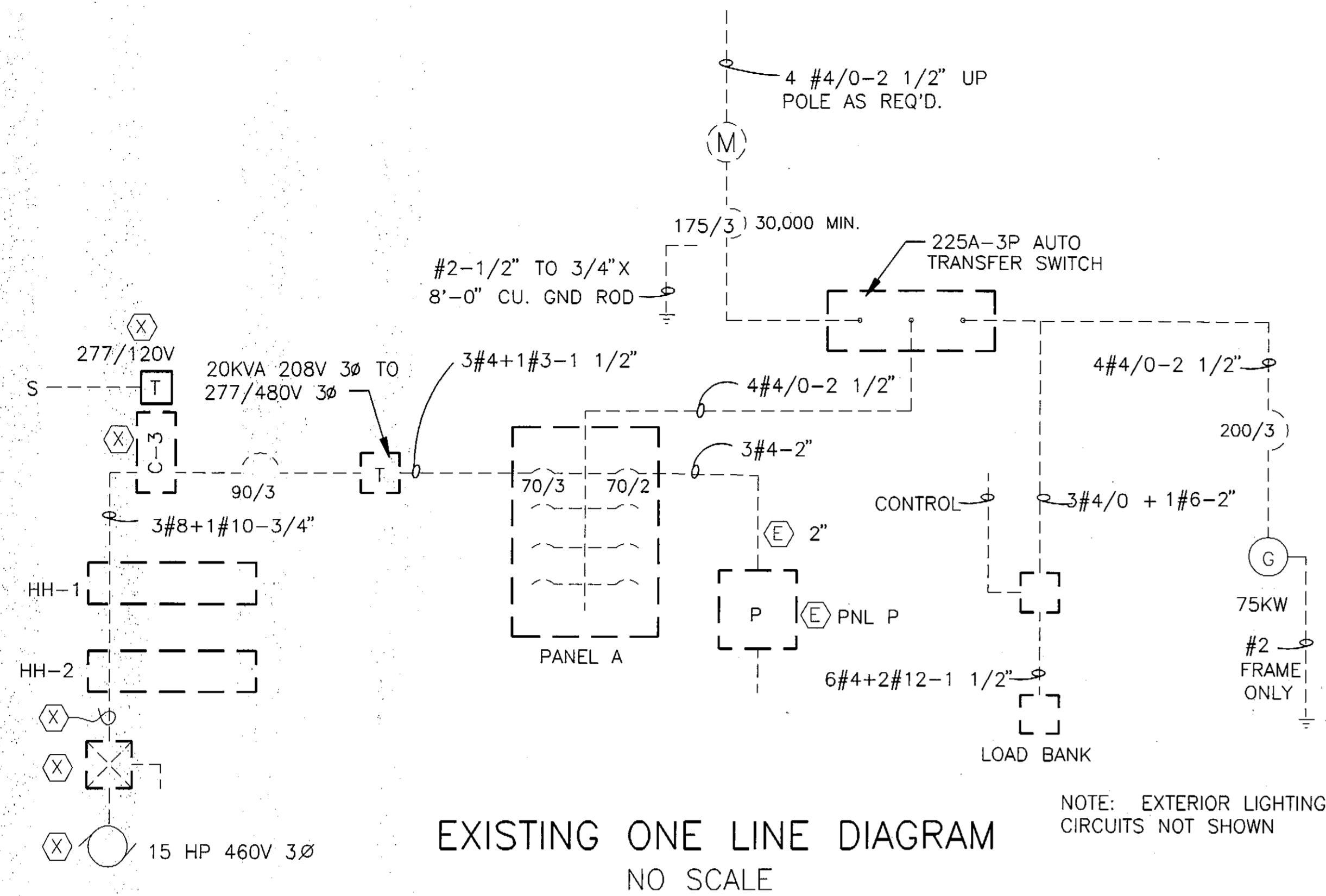


CONTROL ENCLOSURE  
1 1/2" = 1'-0"

E-2

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		HOONAH ALASKA	
ELECTRICAL			
DESIGNED: LPL	CHECKED:	DRAWN: LPL/BAS	DATE: MAY, 1995
PROJECT NUMBER: STP-0918(6)/75455		SHEET 19 OF 33	
HNH-E-2.DWG			

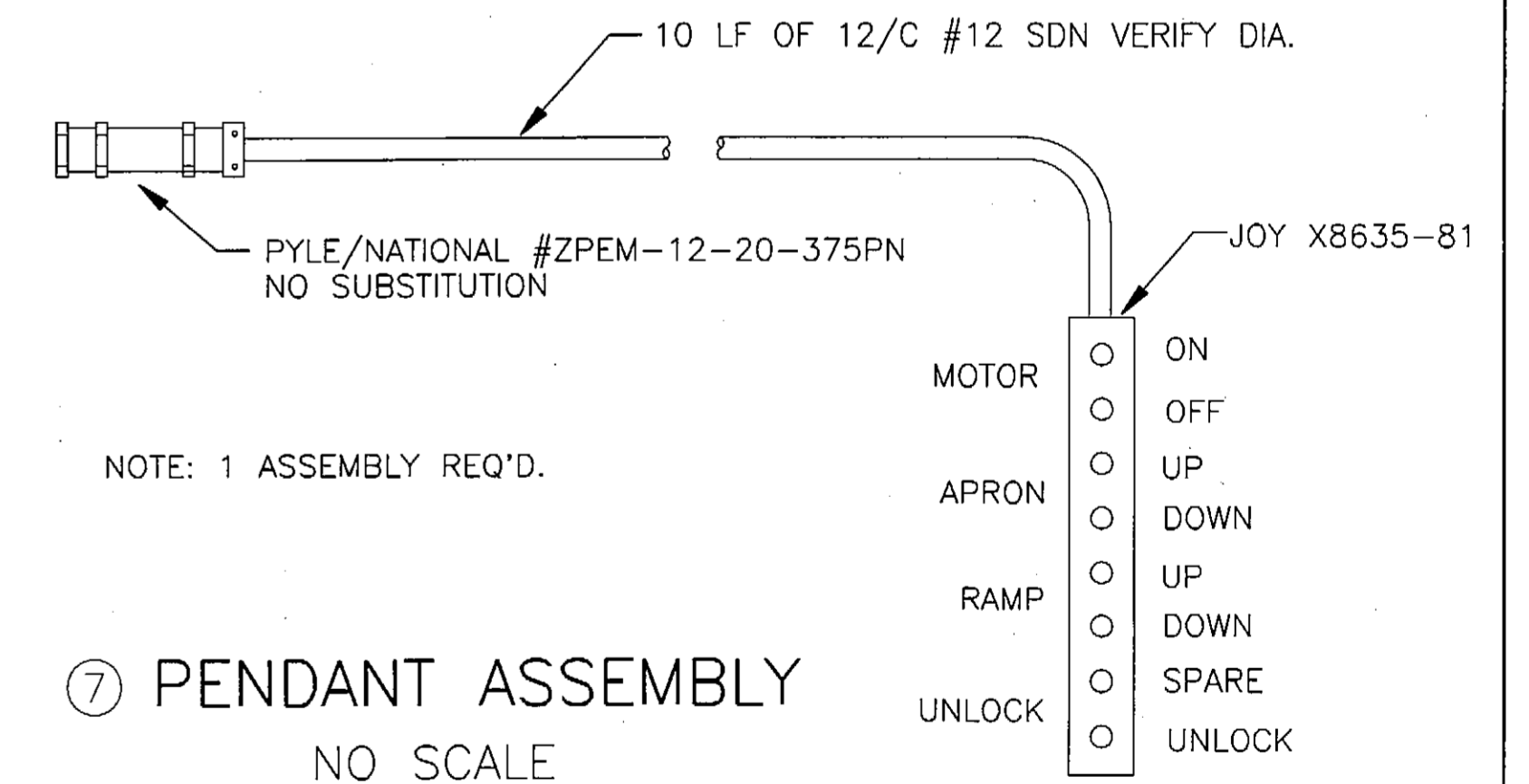
PLOT 1 = 1



LEGEND

	ELECTRIC MOTOR		HYDRAULIC SOLENOID #3
	JUNCTION		RELAY CONTACT NORMALLY OPEN
	EXISTING		RELAY CONTACT NORMALLY CLOSED
	REMOVE		NEW CONDUIT & WIRE 3/C
	CONNECT		EXISTING CONDUIT & WIRE
	NOTE 2		EXISTING CONDUIT & NEW WIRE 3/C
	MAGNETIC STARTER		O.L. OVERLOAD PROTECTION
	DISCONNECT		GRS GALVANIZED RIGID STEEL
	TRANSFER SWITCH		RECEPTACLE
	EQUIPMENT NUMBER		

EQUIPMENT SCHEDULE		
No.	ITEM	REMARKS
1	20KVA 208V3Ø TO 480V3Ø	EXISTING
2	CIRCUIT BREAKER 40/3 480V	EXISTING
3	C-3 CONTACTOR 60-3	EXISTING-REMOVE
4	TRANSFER SW. SQ D82342DS-DT100SG-4X	60A-3P D.T. LOCKABLE ON-OFF-ON
5	MAGNETIC STARTER SQ D SD0-1-F4T	SEE DETAIL E-3
6	DISCONNECT SQ D HU362DS 60-3P 4X	
7	PENDANT CONTROL	SEE DETAIL E-3
8	CONTROL ENCLOSURE	SEE DETAIL E-2



STAMP

DO NOT SCALE THIS DRAWING - USE DIMENSIONS

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

HOONAH ALASKA

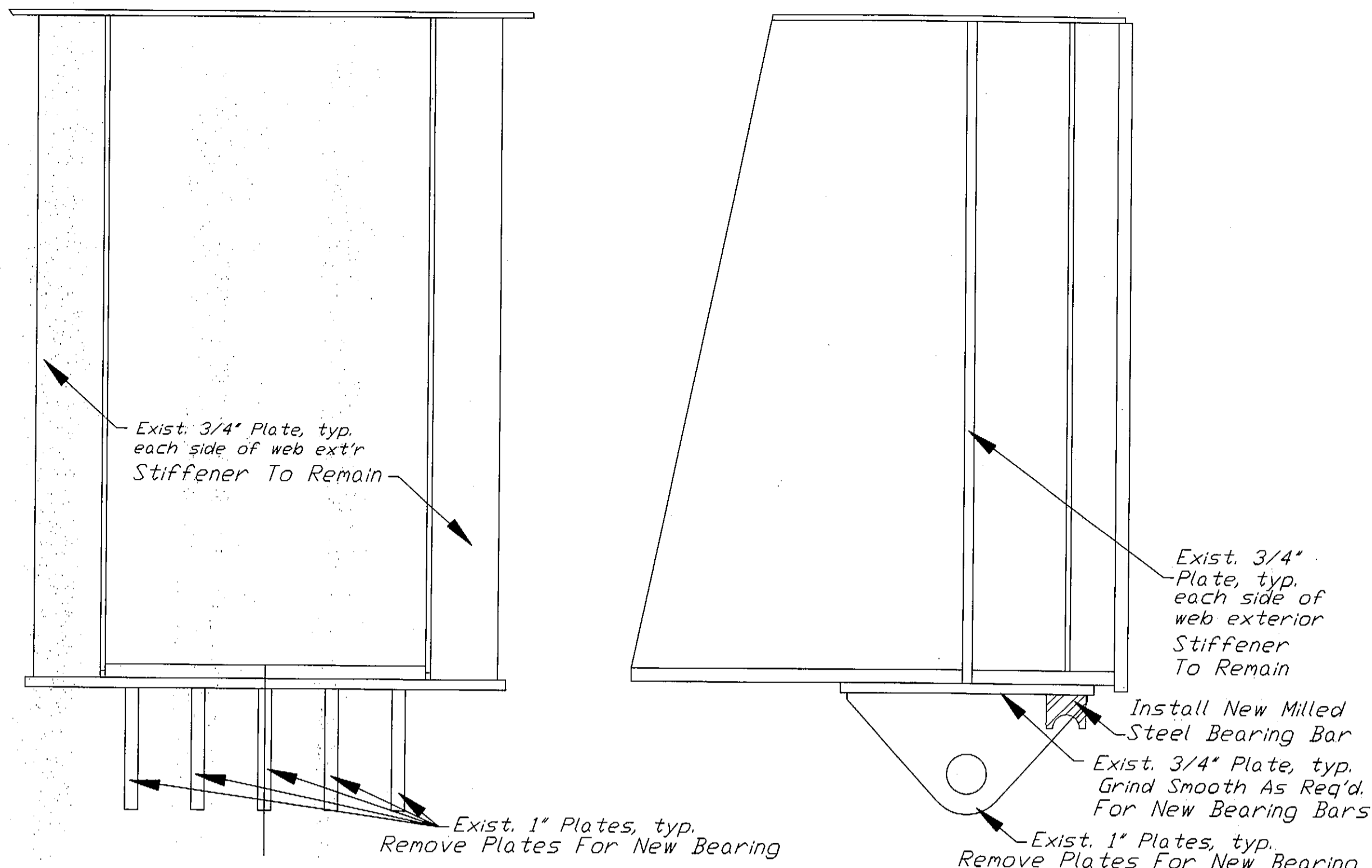
**ELECTRICAL**

DESIGNED: LPL CHECKED: DRAWN: LPL/BAS DATE: APRIL, 1995

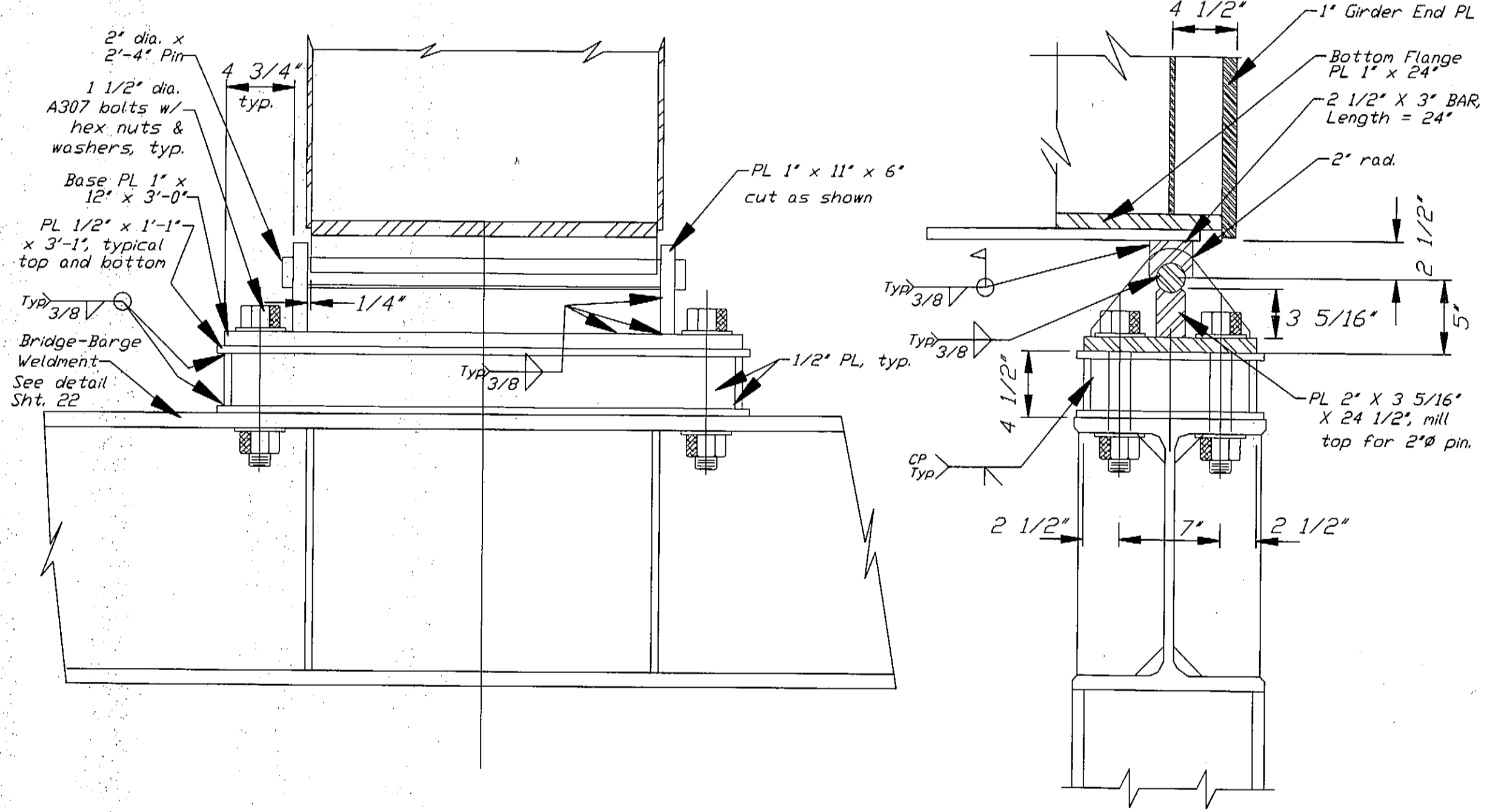
PROJECT NUMBER: STP-0918(6)/75455 SHEET 20 OF 33

HNH-E-3.DWG

PLOT SCL= 1:1

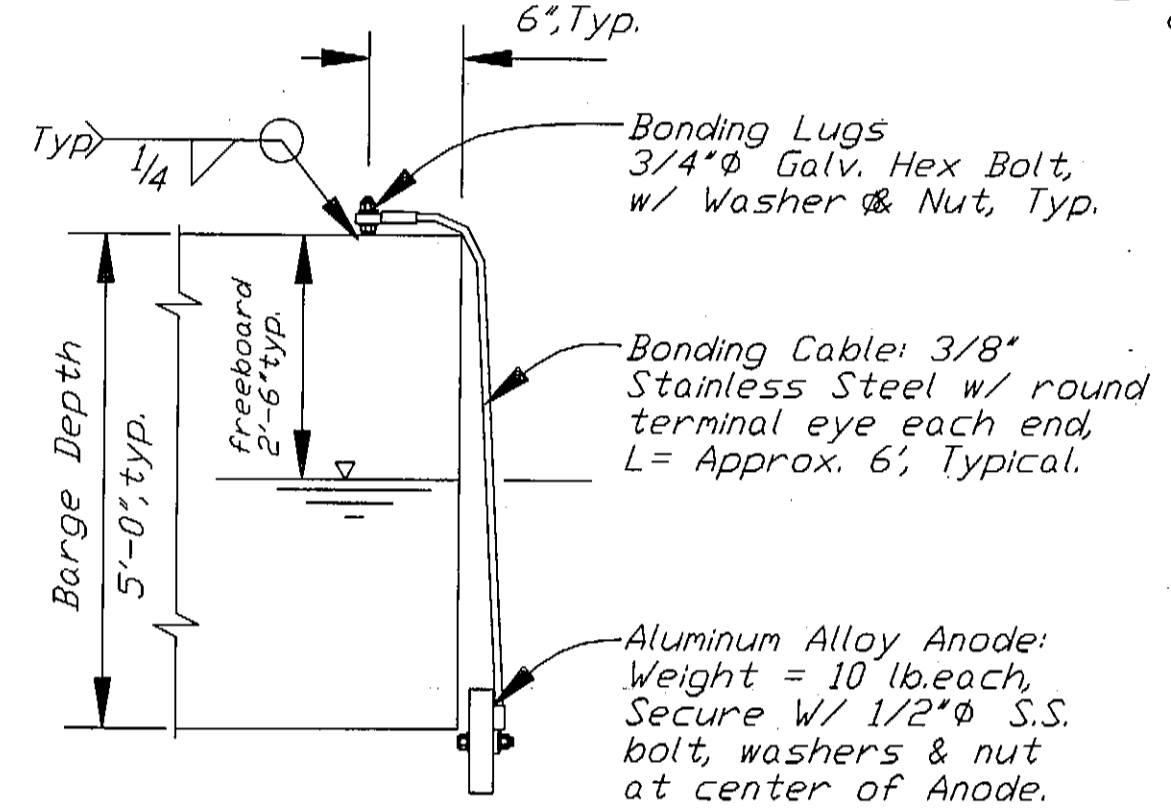
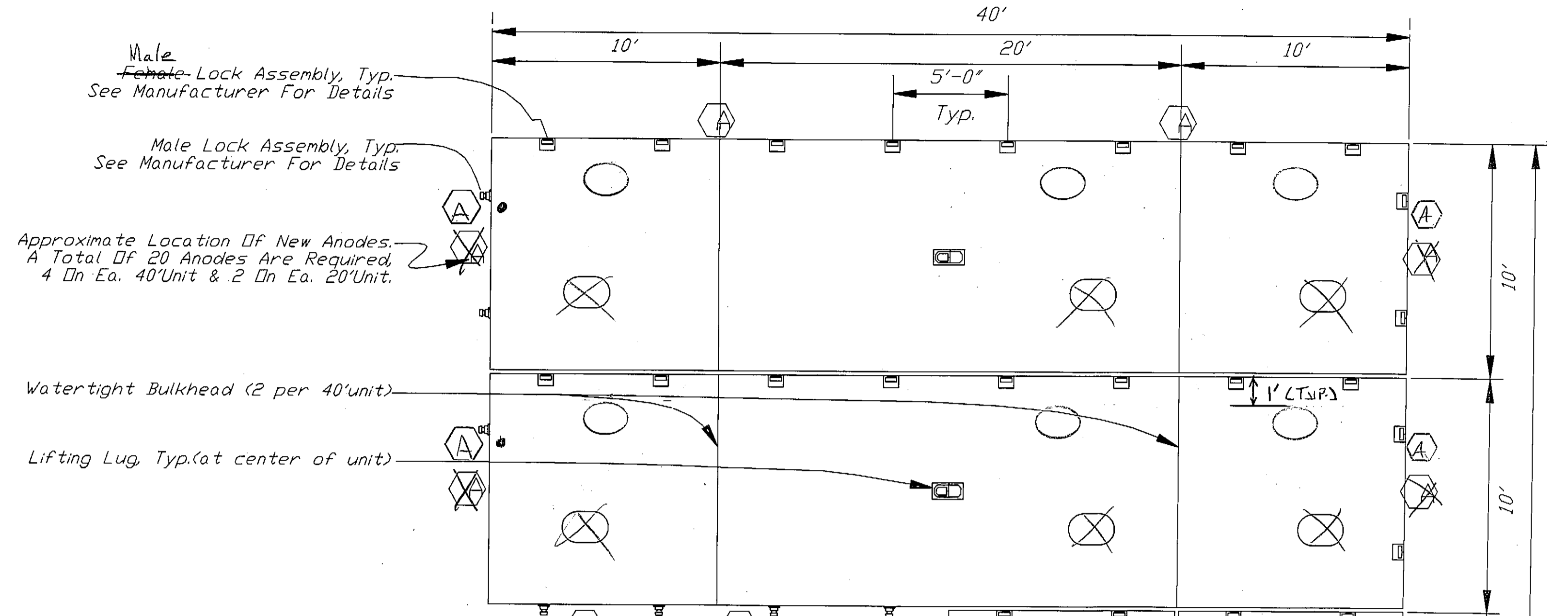


**EXISTING BRIDGE BEARING DETAILS**



**NEW BRIDGE BEARING DETAILS**

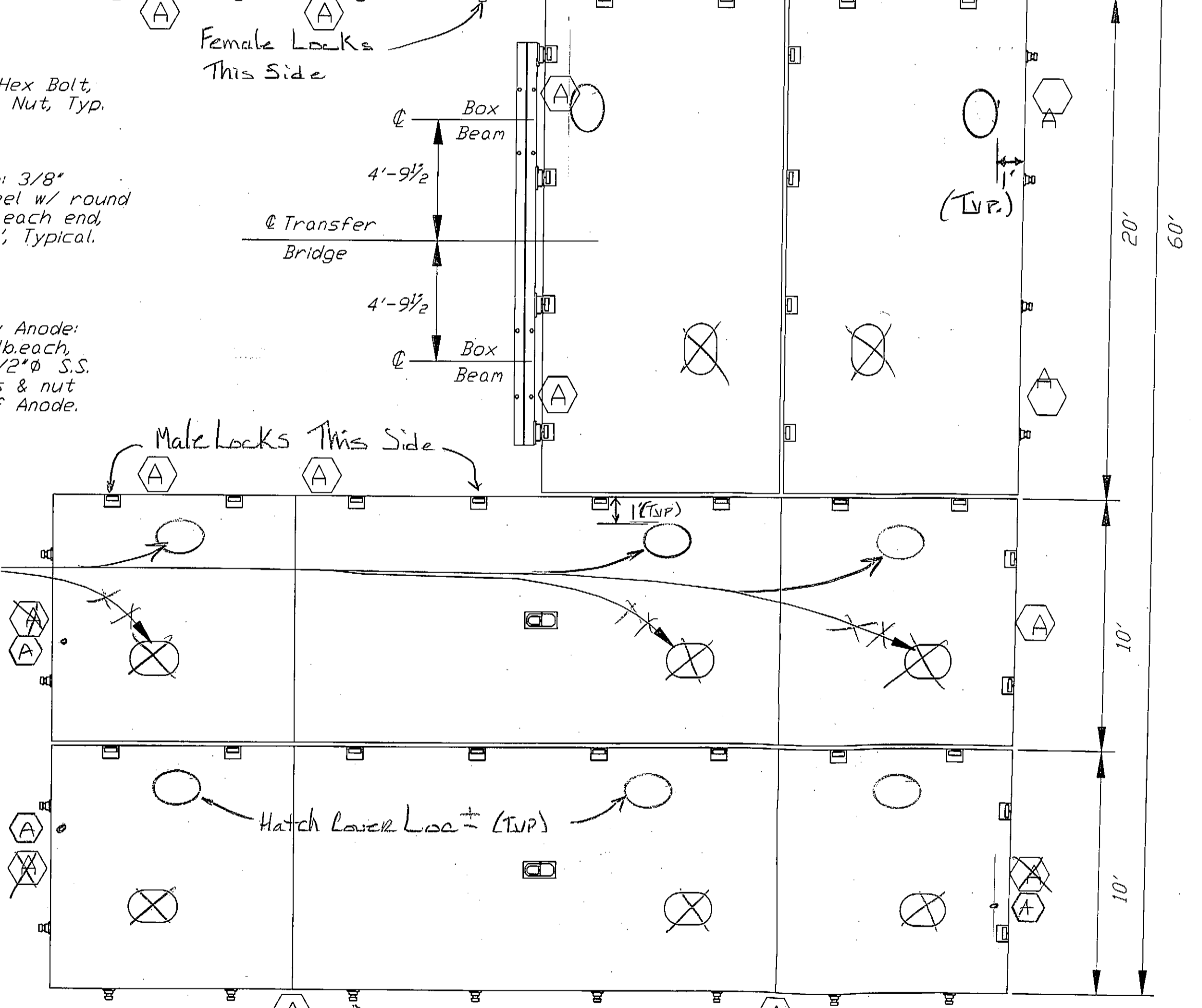
Supply And Install New Bridge Bearing And Spacer. (2 Ea. Req'd.)



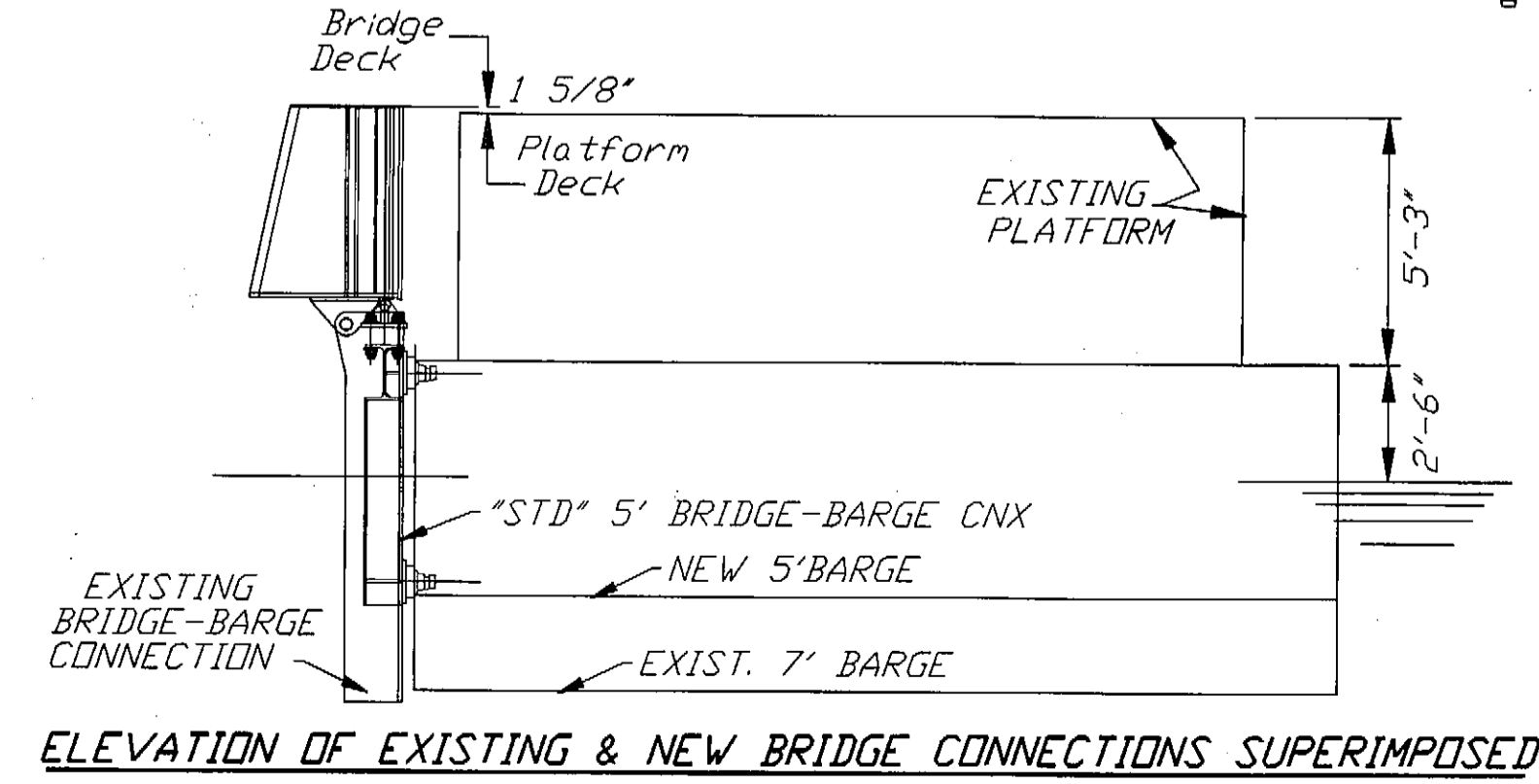
**ANODE DETAIL**

20 Aluminum Alloy Anodes Req'd.

Approximate Location Of Access Hatches. Locate Between Deck Beams (see Mfg'r.) And Away From Structures Mounted On The Barge Deck. See Note This Sht.  
**ACCESS HATCHES:** New Access Hatches shall be Baier oval, flush, plain, type 'C' commercial, aluminum w/ galv. steel rim or equal and installed per manufacturer's recommendations.  
**BALLAST:** Barge System shall be ballasted to 2'-6" freeboard all around with all structures installed.  
**COATING SYSTEM:** Coating system for barge units shall be per Spec. Section 303.  
**BARGE UNITS:** Barge Units Shown Are Flexifloat S-50 Series As Manufactured By: Robishaw Engineering, Inc. P.O. Box 19246 Houston, TX 77224 Ph: (713) 468-1706



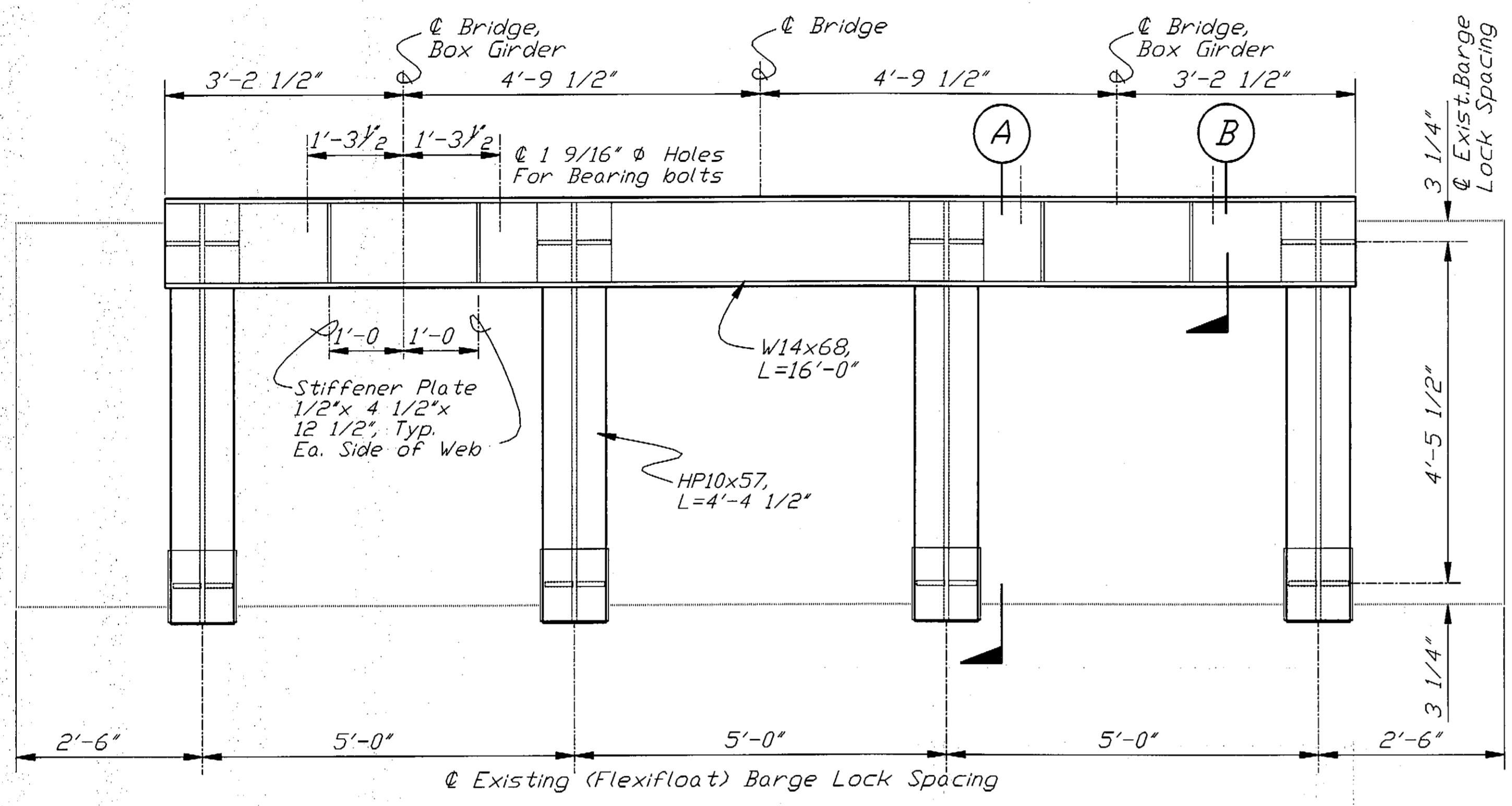
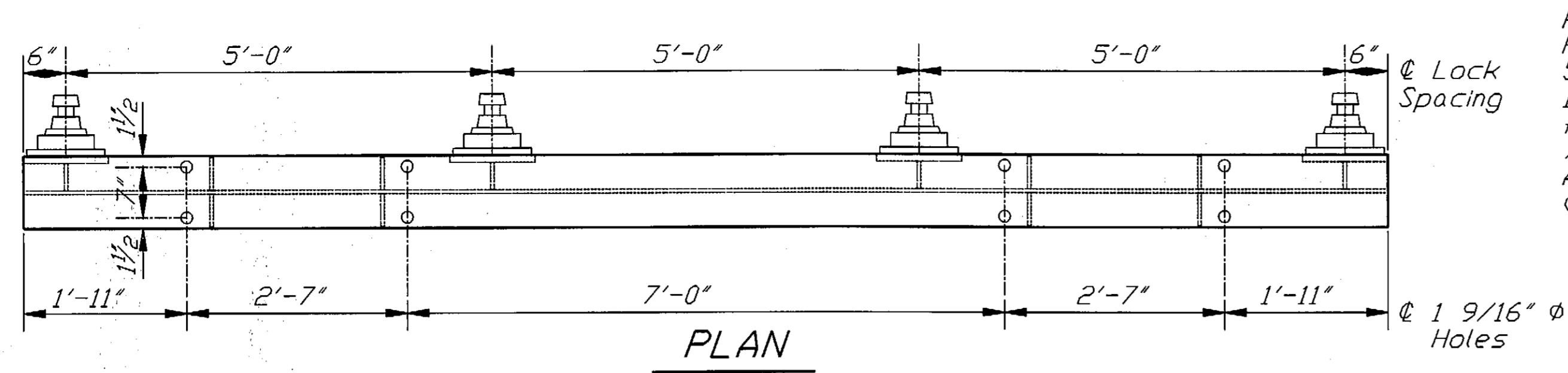
**Supply & Install NEW BARGE SYSTEM**



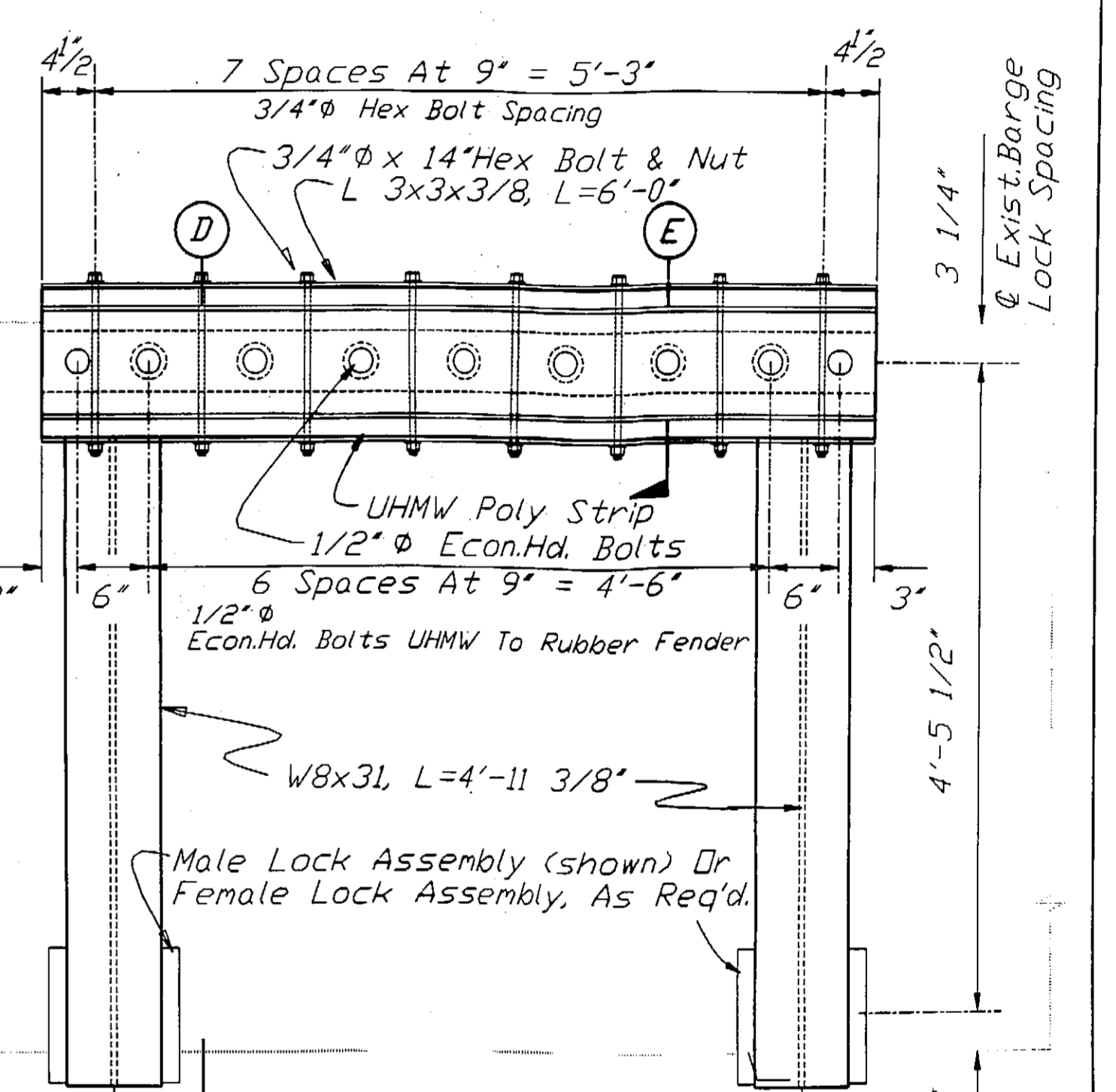
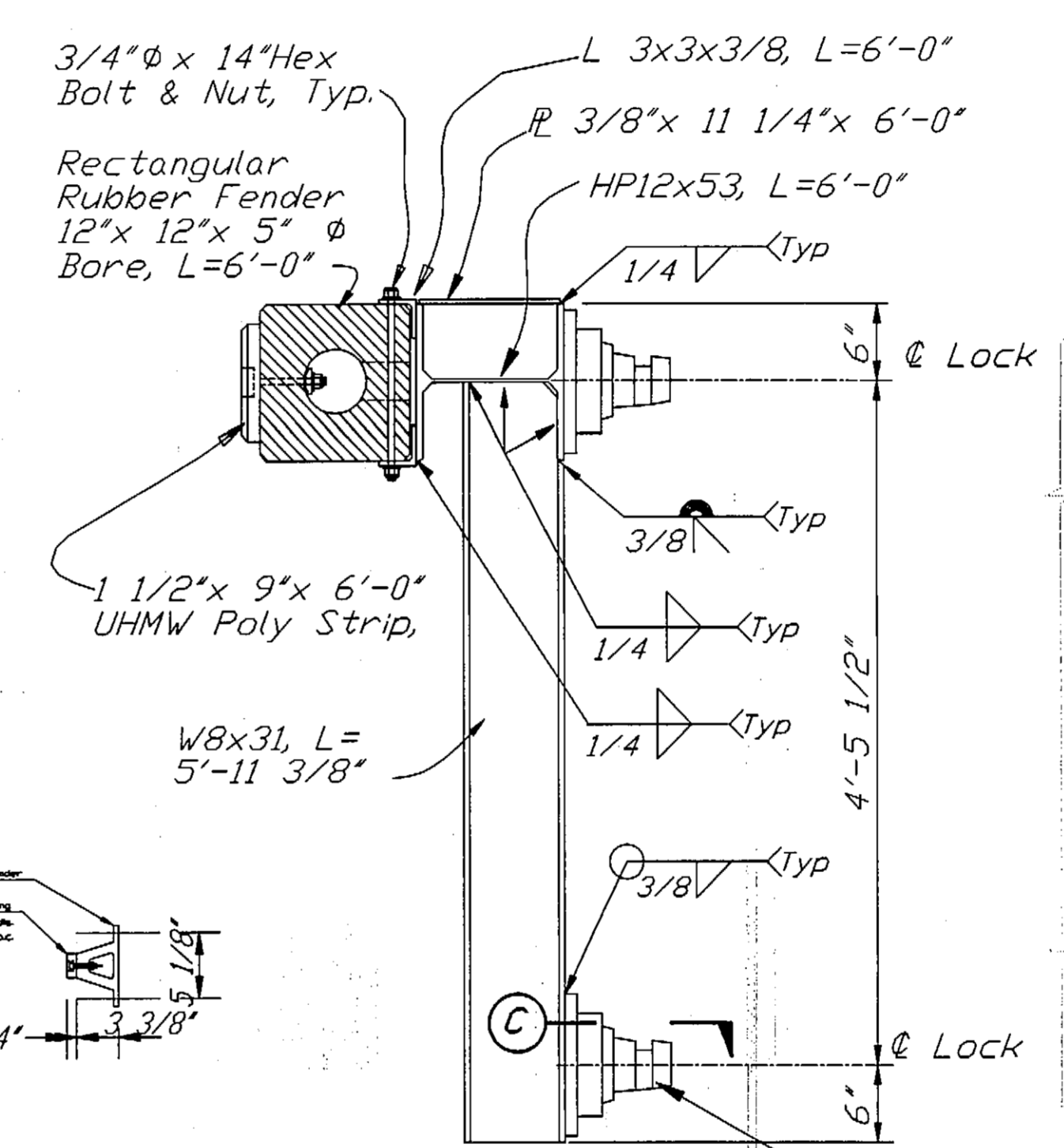
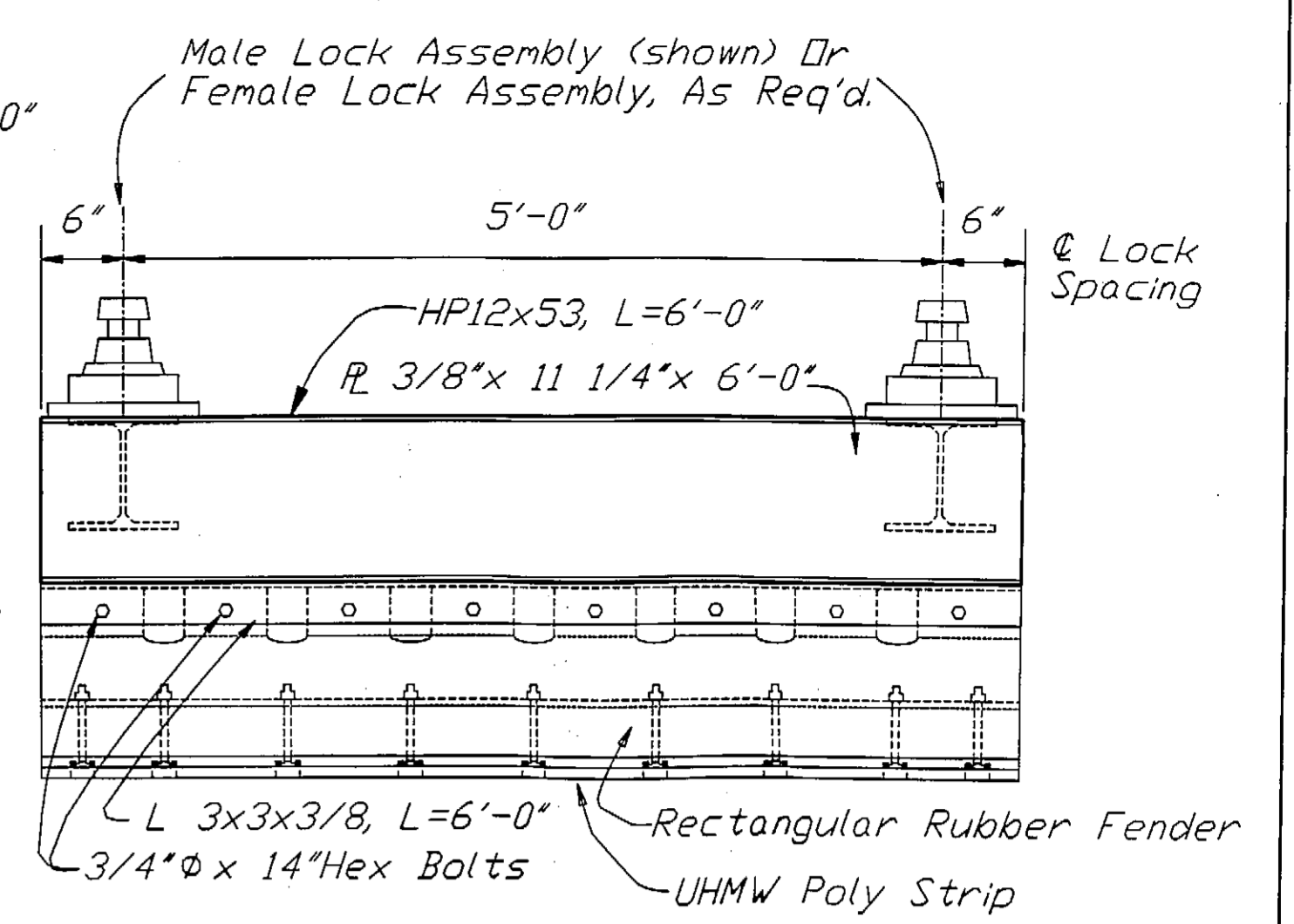
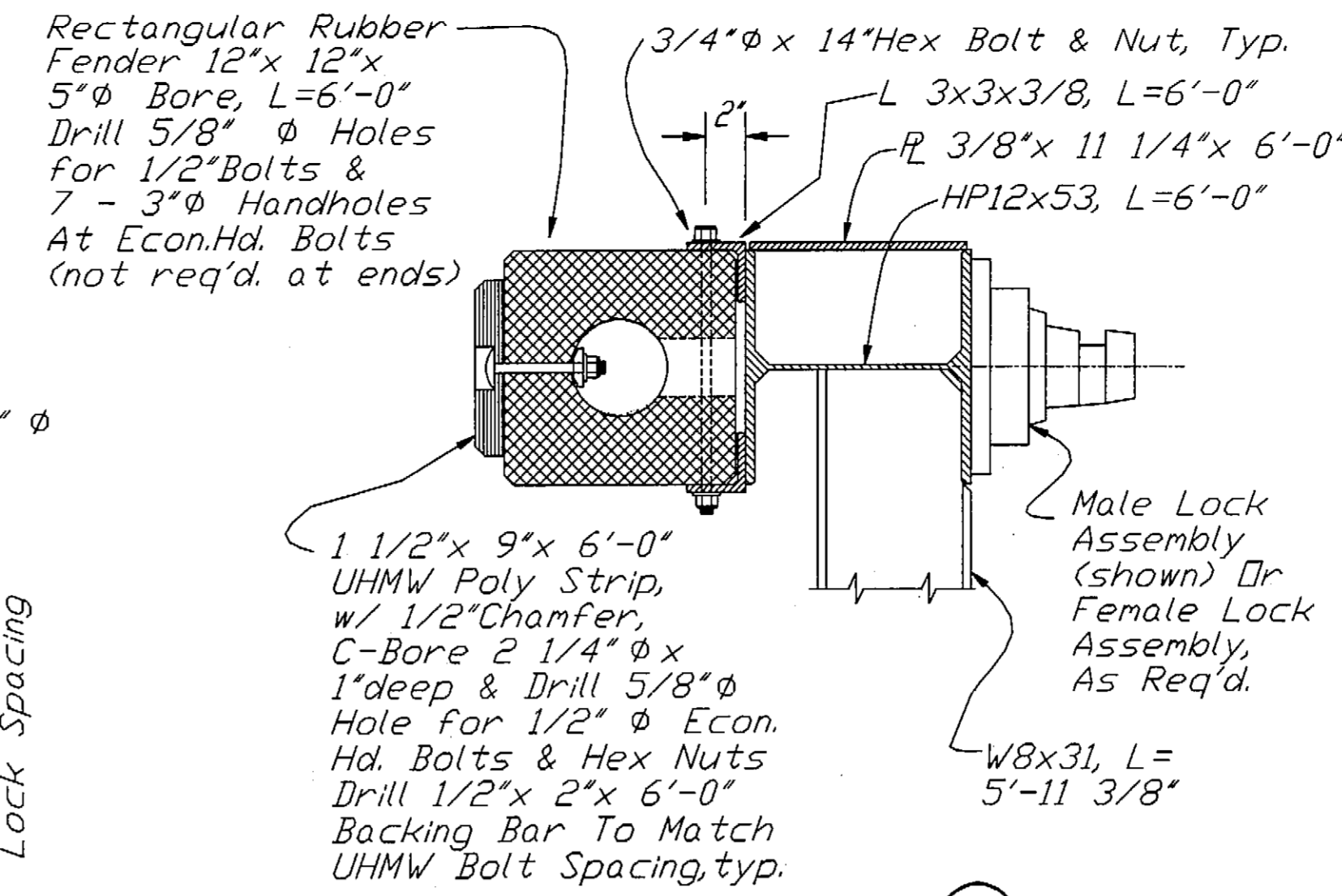
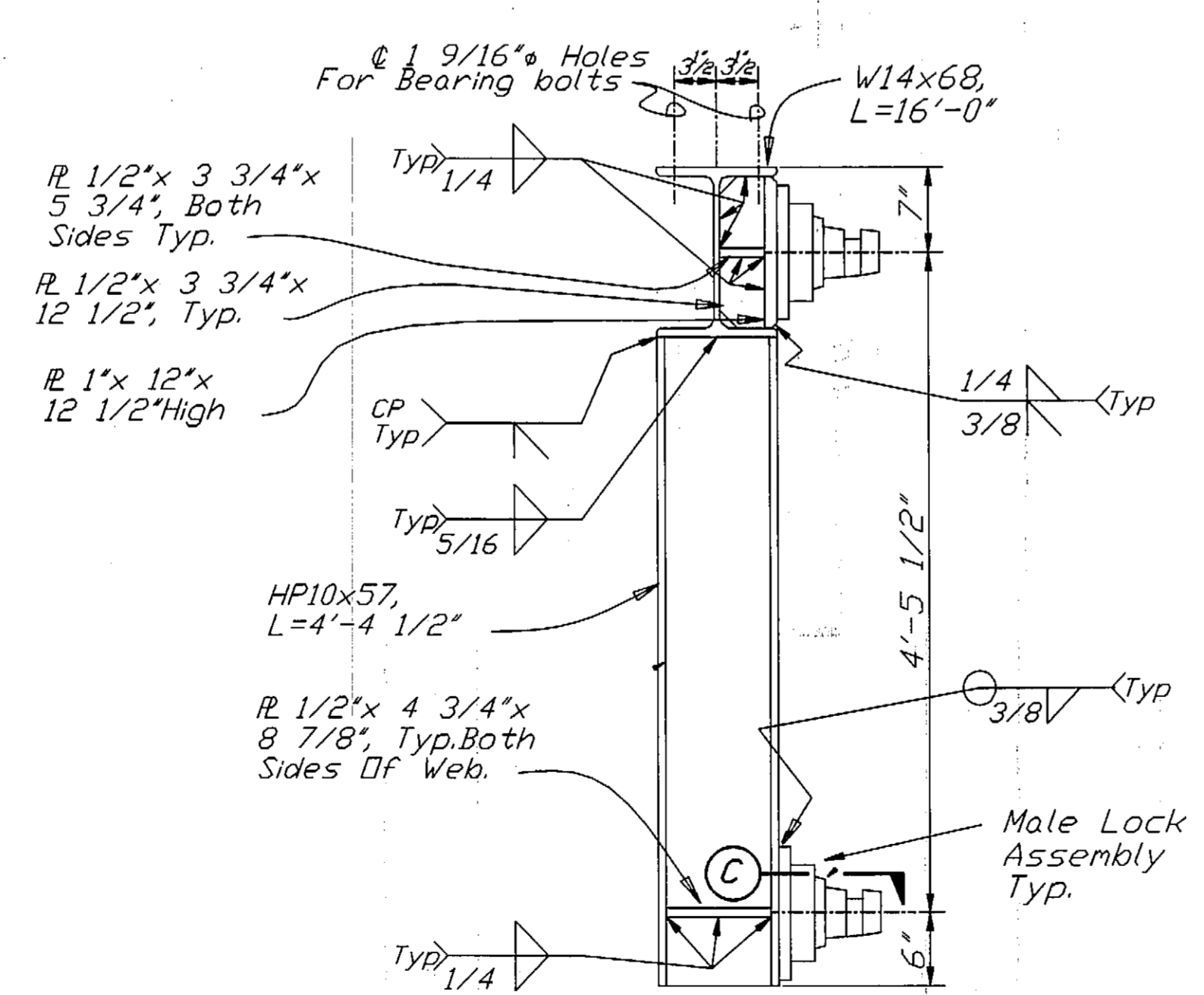
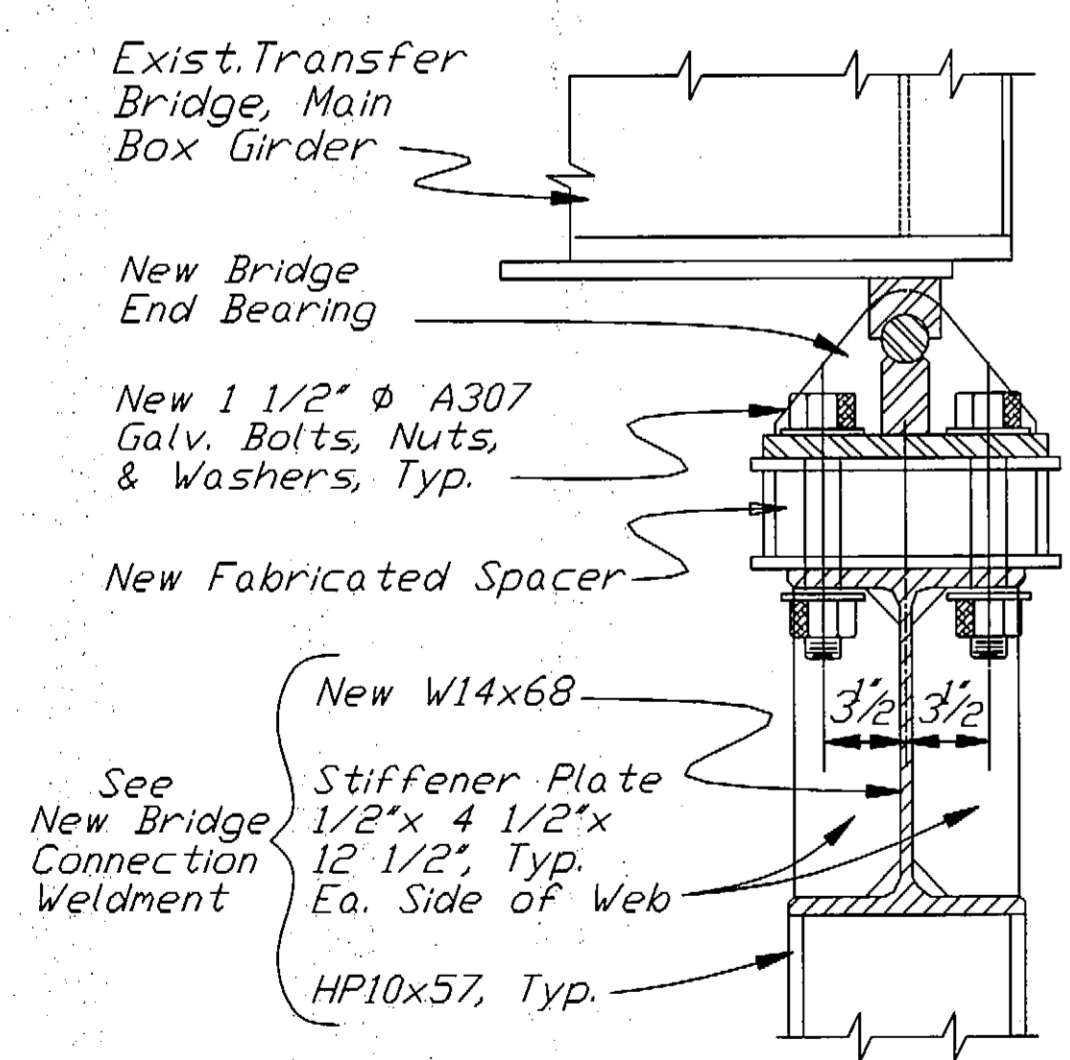
**ELEVATION OF EXISTING & NEW BRIDGE CONNECTIONS SUPERIMPOSED**

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
METLAKATLA		ALASKA	
<b>METLAKATLA</b> <b>BRIDGE HINGE &amp; BARGE DETAILS</b>			
DESIGNED BS	CHECKED JS	DRAWN W/N	DATE APRIL, 1995
PROJECT NUMBER STP-0927(4)/75269		SHEET 21	OF 33

SCL = 1/4"

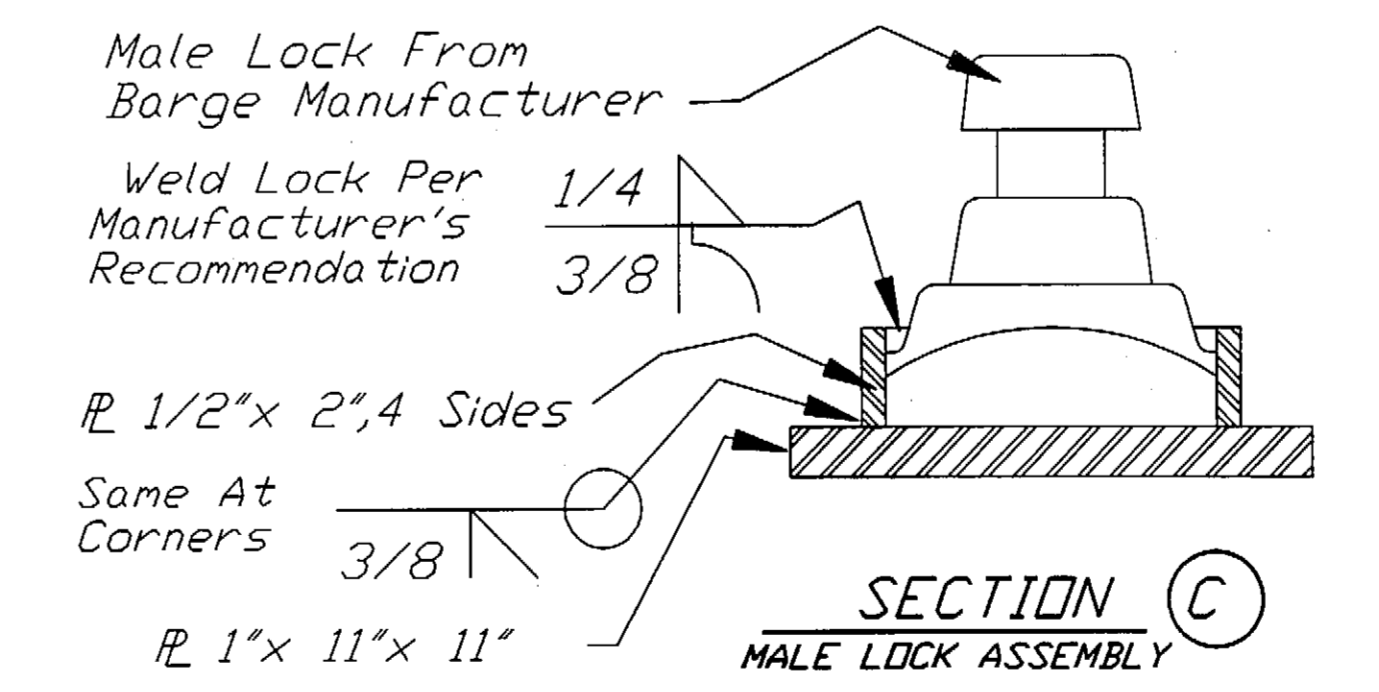


**BRIDGE-BARGE CONNECTION**



**FENDER WELDMENT DETAILS**

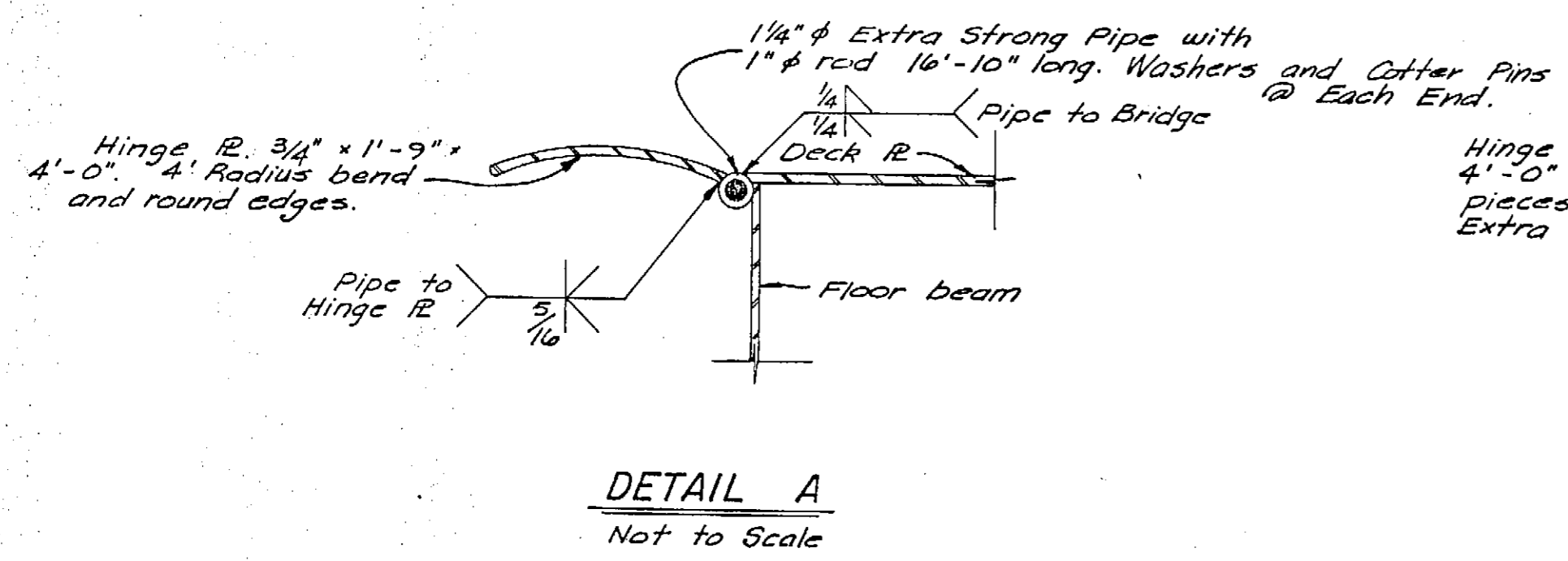
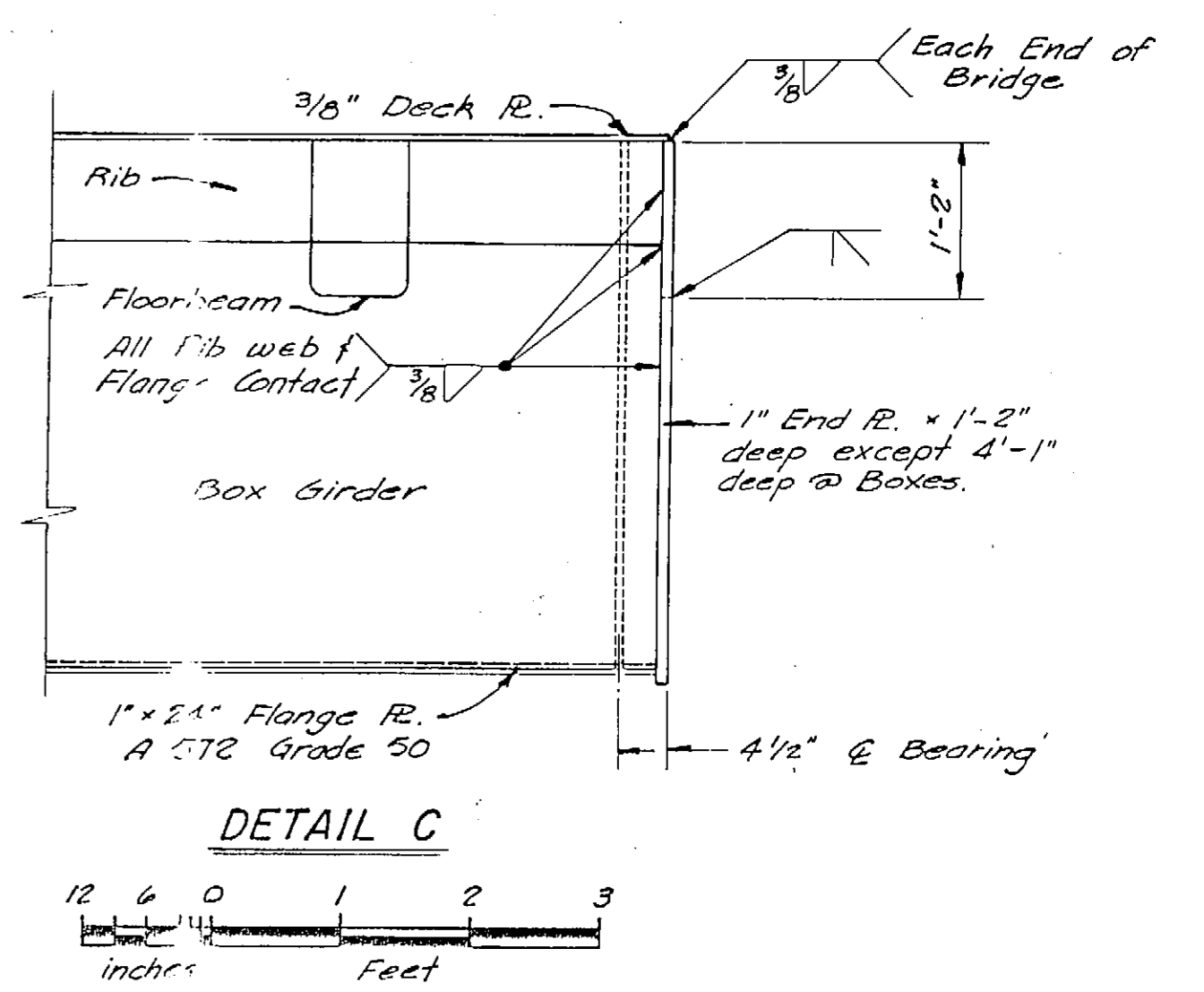
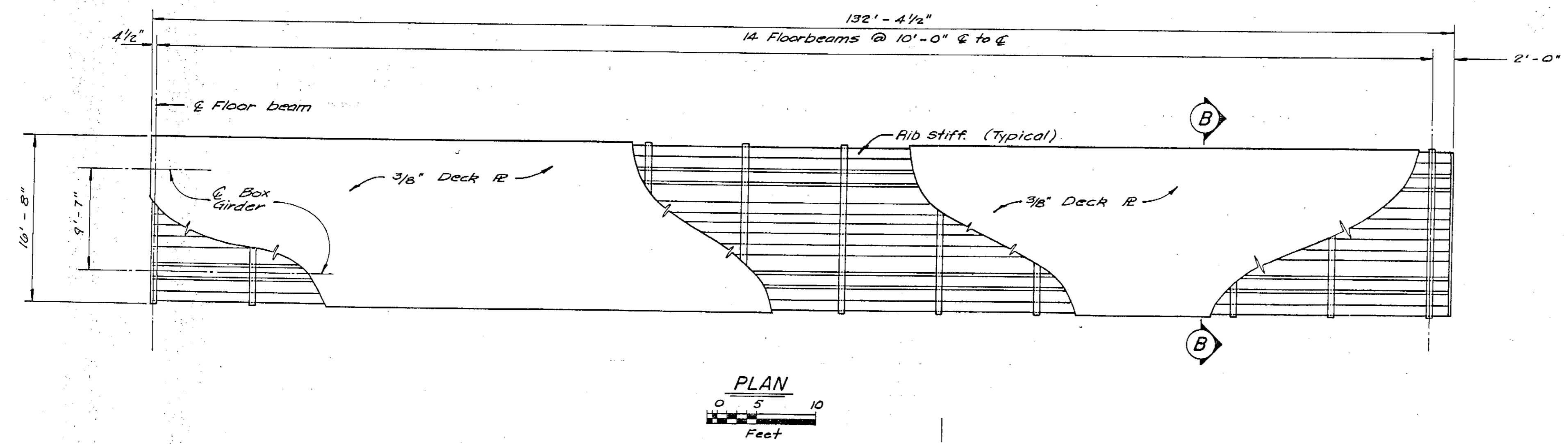
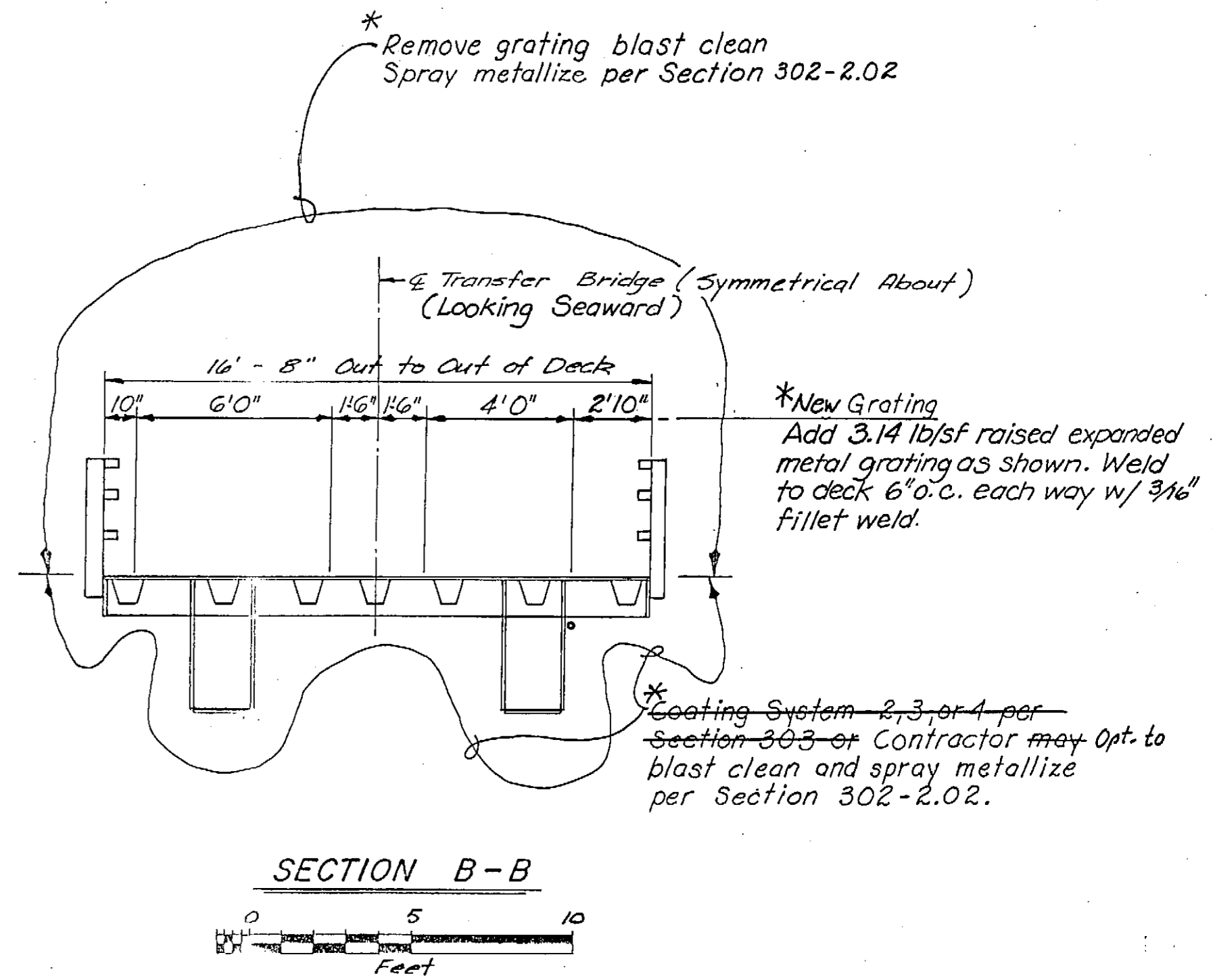
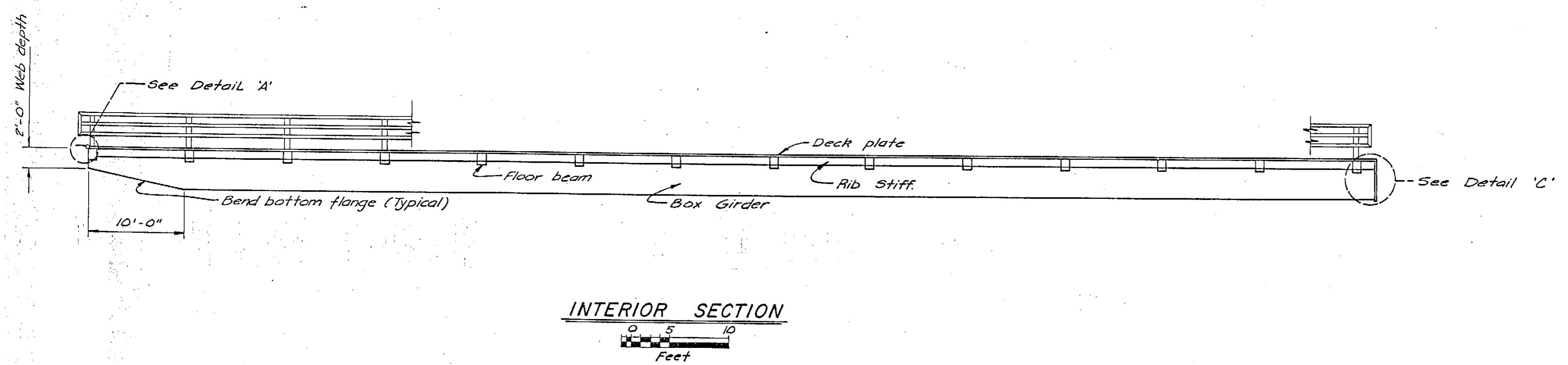
NOTE: Two Req'd., One with Male Locks on south side of barge and One with Female Locks on north side of barge. Hardware per Flexifloat manufacturer.



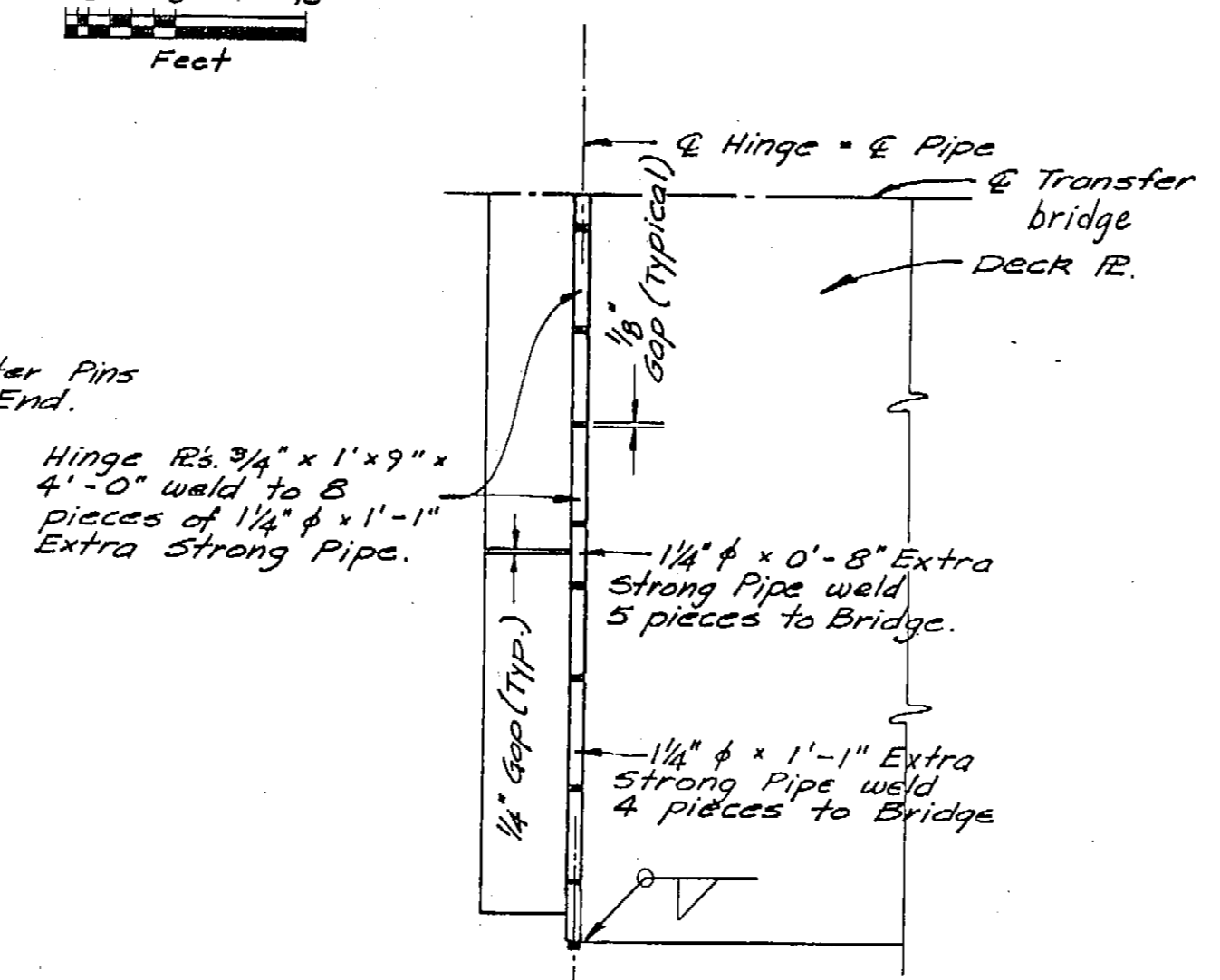
NOTE: Existing Barge Units Are Flexifloat S-50 Series From: Robshaw Engineering, Inc. P.O. Box 19246 Houston, Texas 77224 Phone (713)468-1706

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
METLAKATLA		ALASKA	
<b>NEW BRIDGE HINGE AND BARGE FENDER WELDMENT DETAILS</b>			
DESIGNED BS	CHECKED	DRAWN WN	DATE APRIL, 1995
PROJECT NUMBER STP-0927(4)/75269	SHEET 22	OF 33	

SCL= 1/4"



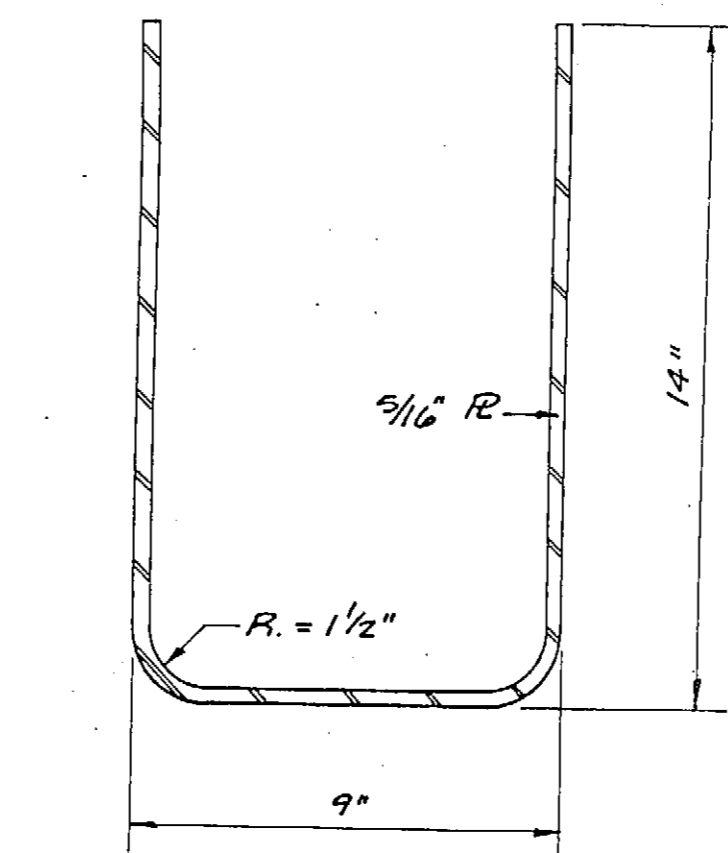
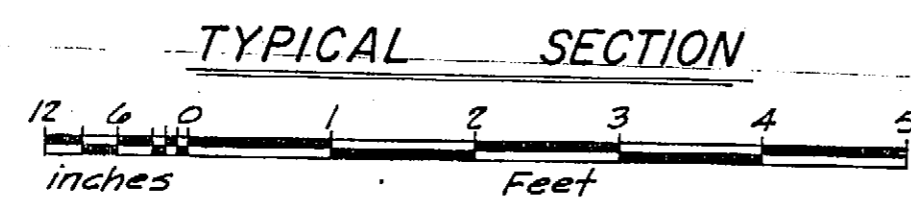
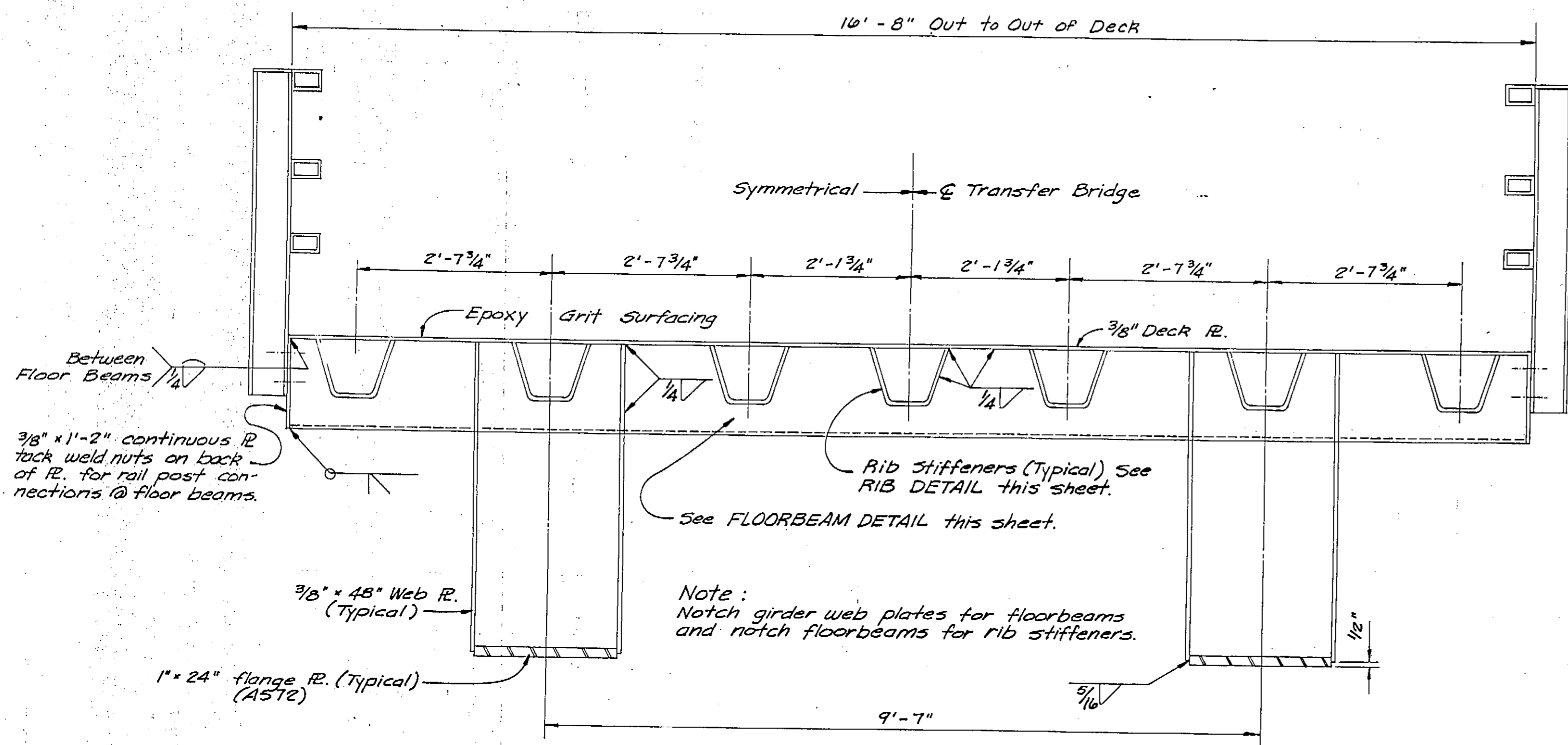
DETAIL A  
Not to Scale



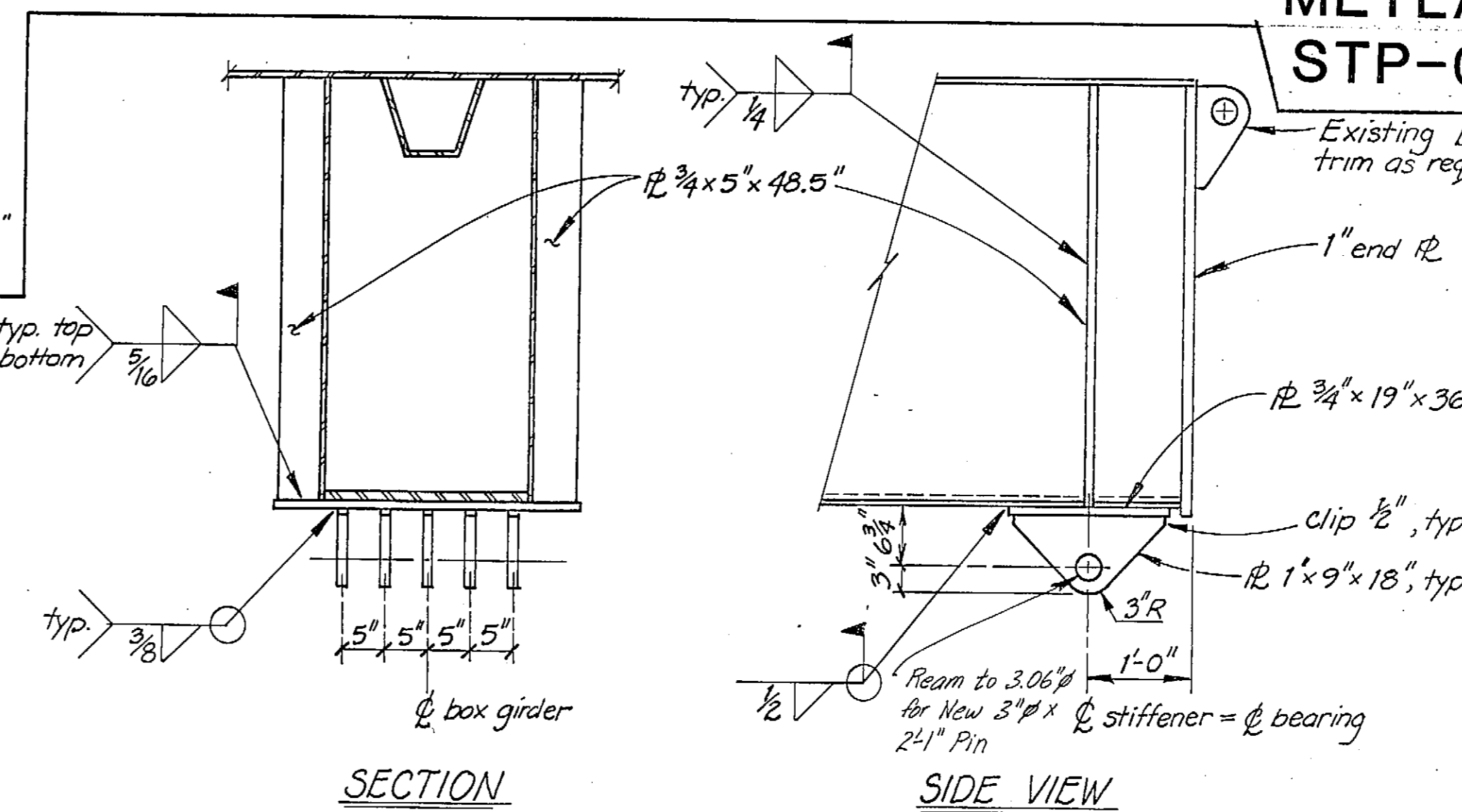
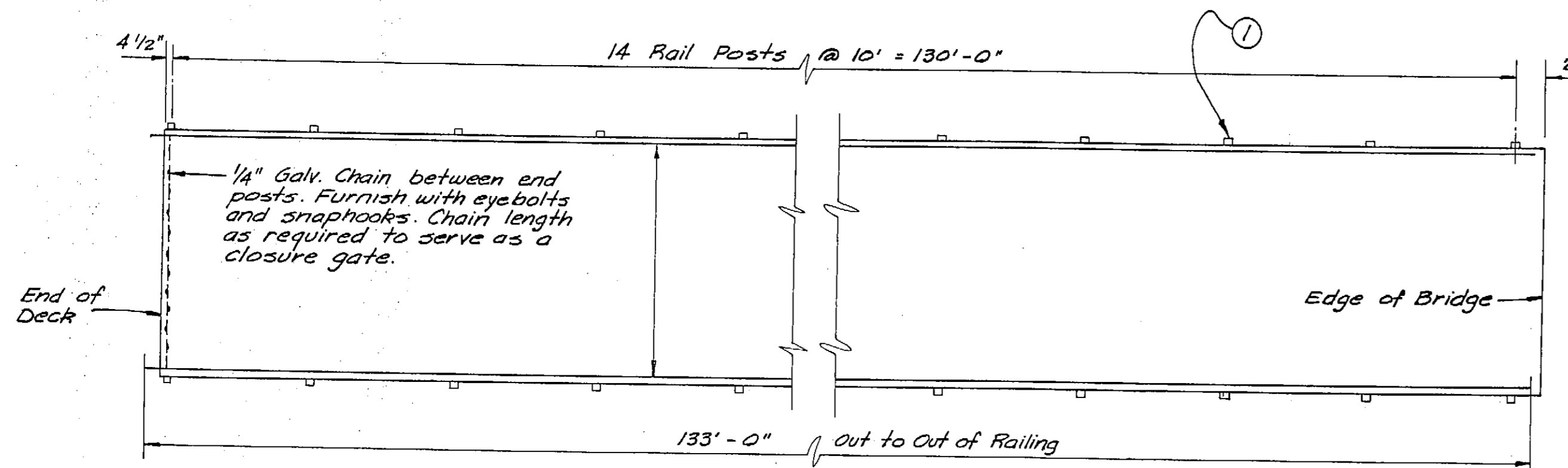
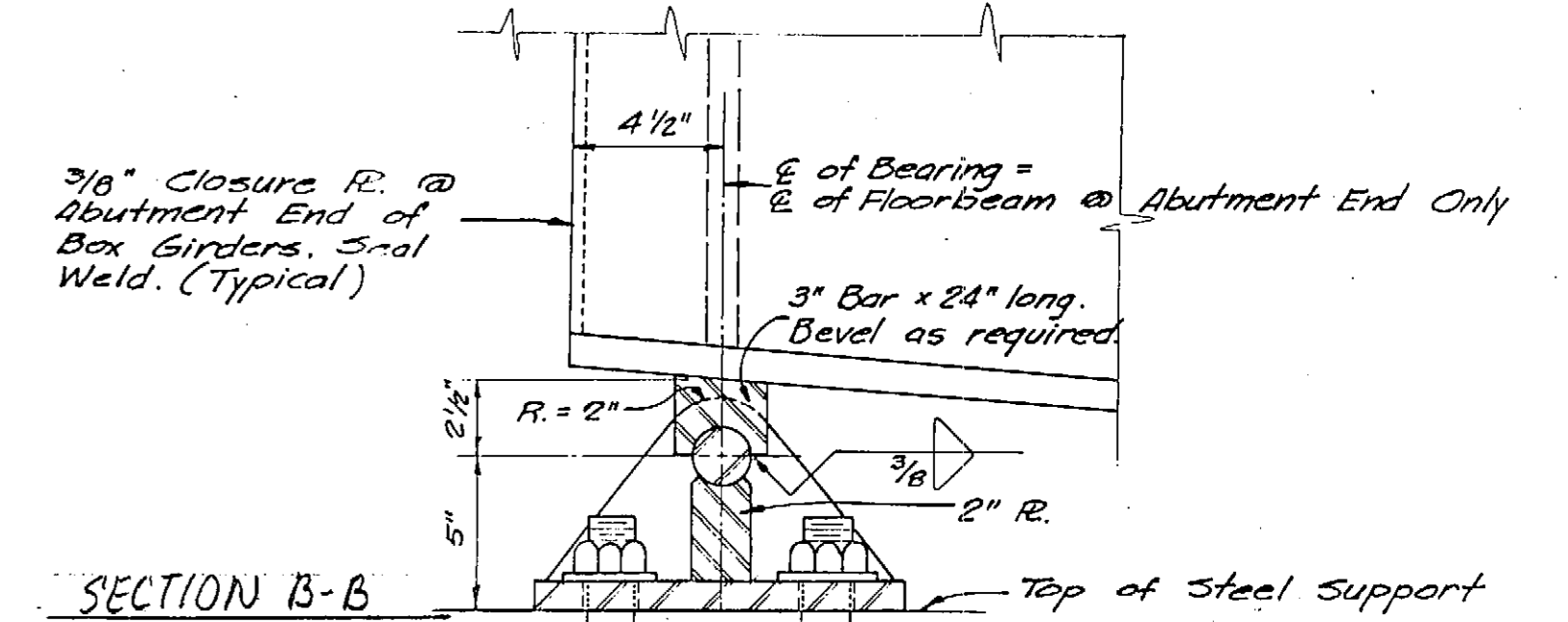
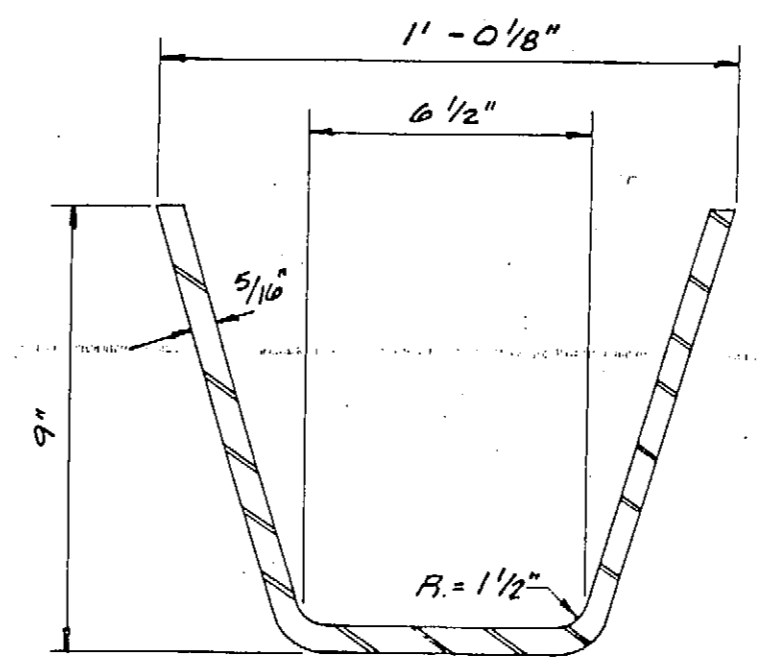
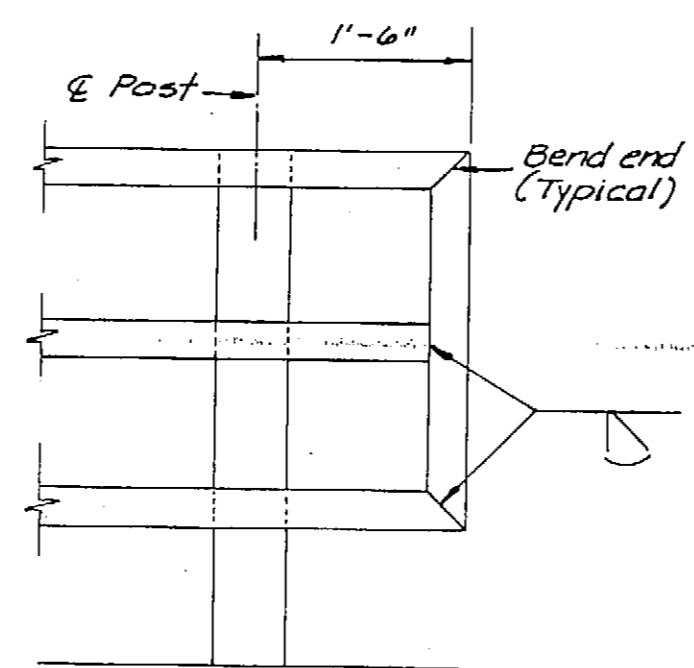
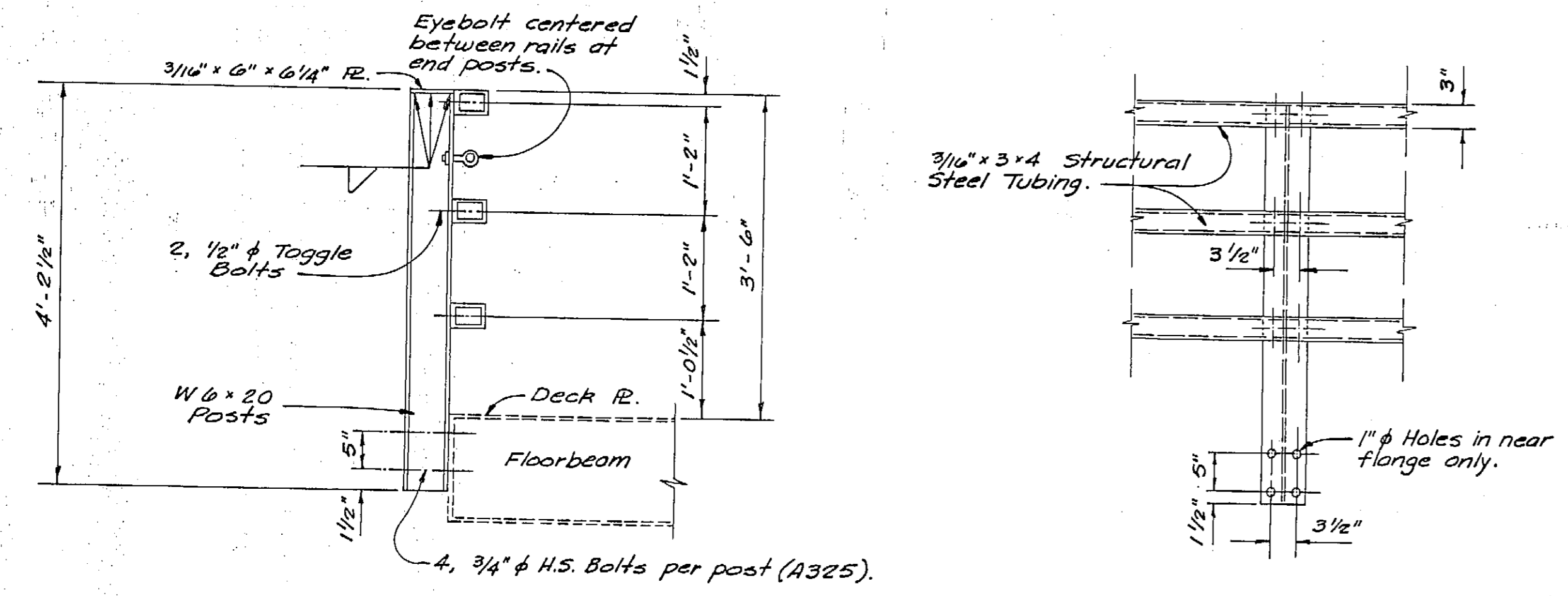
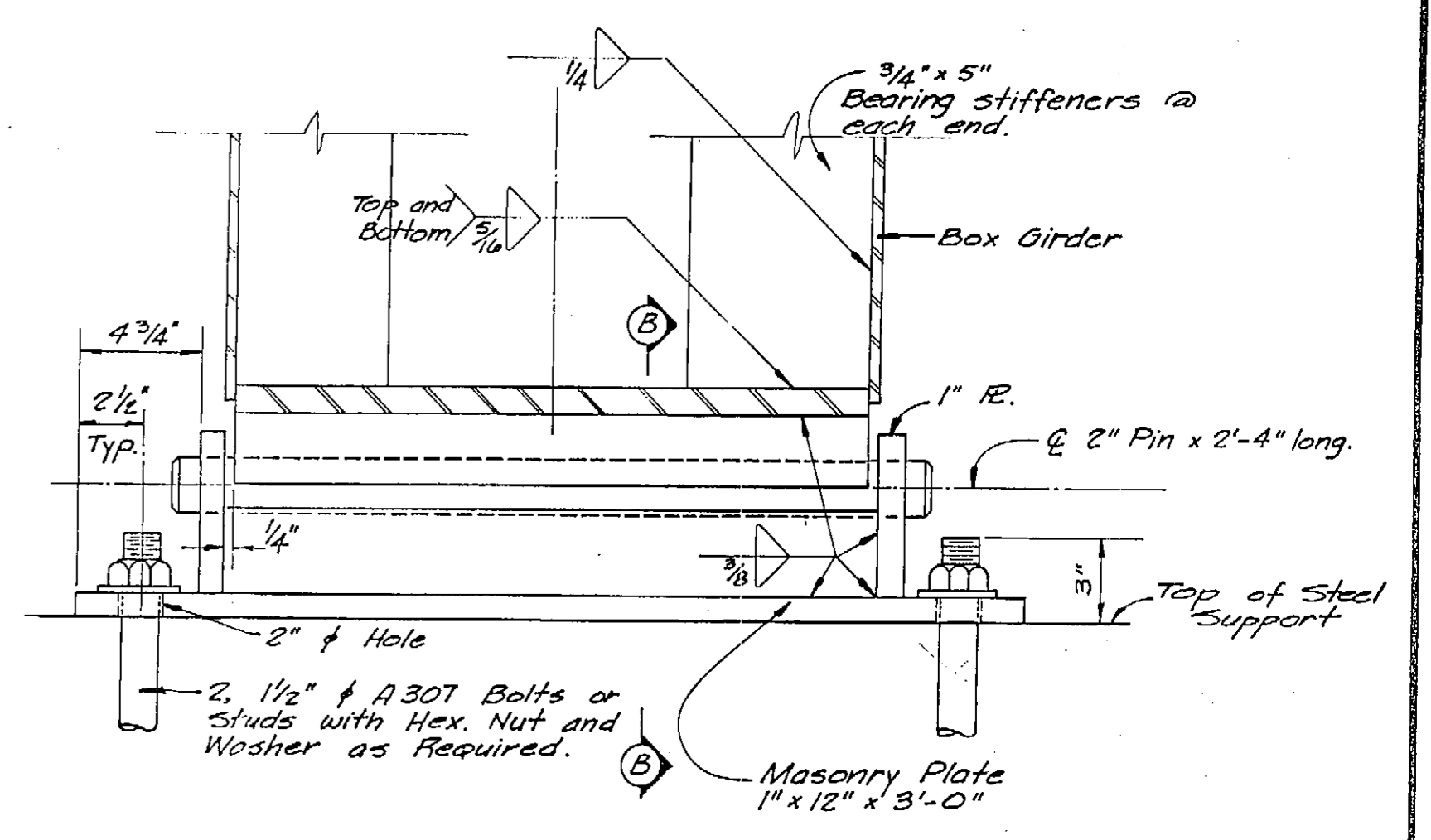
HALF PLAN AT HINGE PLATE  
Not to Scale

SHT 23 OF 33  
**METLAKATLA PONTOON UPGRADE**  
**STP-0927(4) & 75269**  
 AS-BUILT  
 Date: *WMD* 1-28-87

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Metlakatla AS-BUILT INFORMATION Alaska EXISTING TRANSFER BRIDGE			
DESIGNED <i>Bambhoff</i>	CHECKED _____	DRAWN <i>WMD</i>	DATE <i>Dec. 84</i>
PROJECT NUMBER <i>A 70002</i>	SHEET <i>23</i> OF <i>30</i>		



- NOTES
- 1 Replace existing damaged rail post, this contract.
  - 2 Modify Bridge-Barge Connection per detail this sheet.



SHT 24 OF 33

**METLAKATLA PONTOON UPGRADE**

**STP-0927(4) & 75269 AS-BUILT**

Wm.N. 1-28-87

STAMP

James A. Lowell  
#CE-5597  
REGISTERED PROFESSIONAL ENGINEER

DO NOT SCALE THIS DRAWING — USE DIMENSIONS

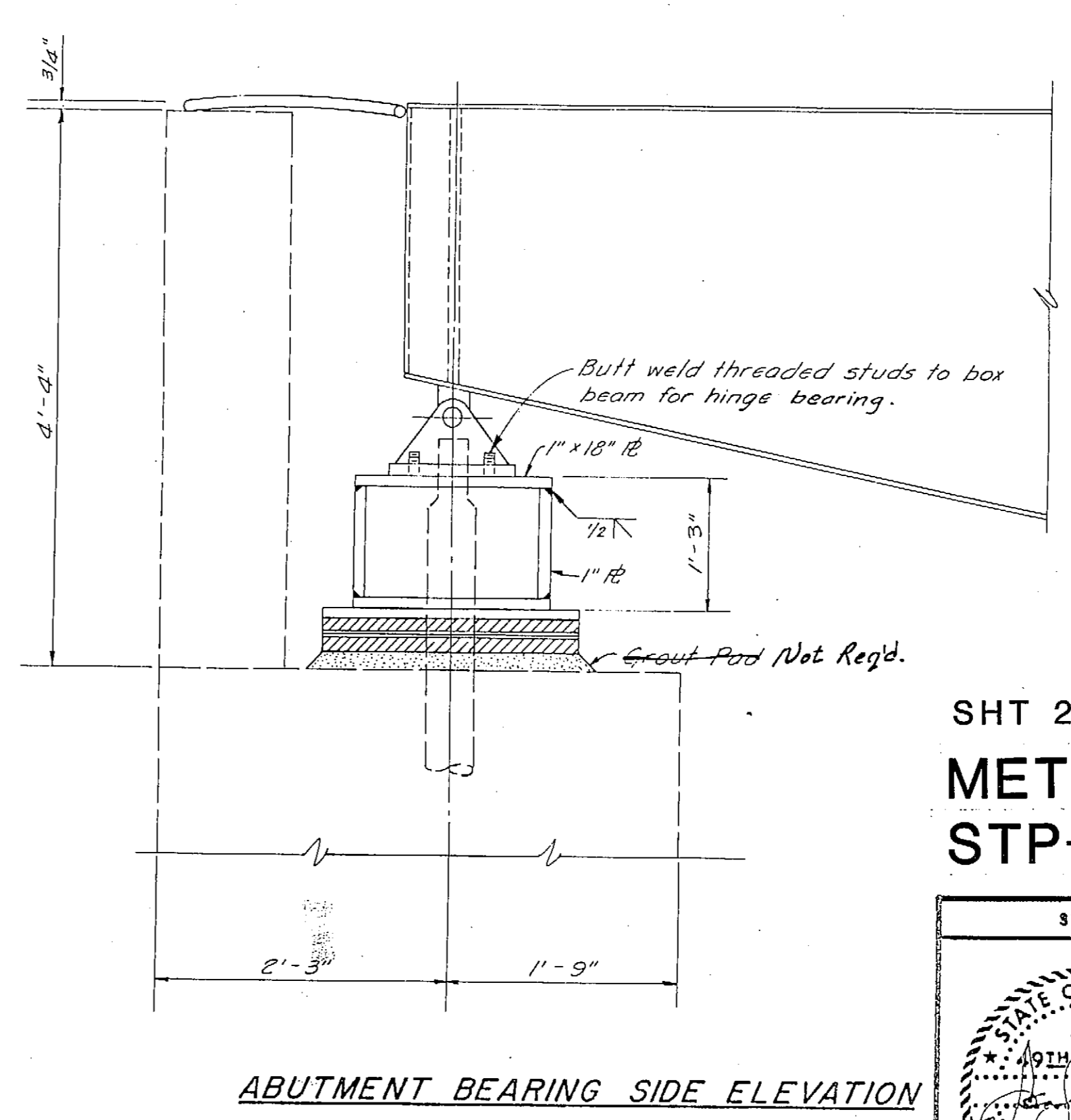
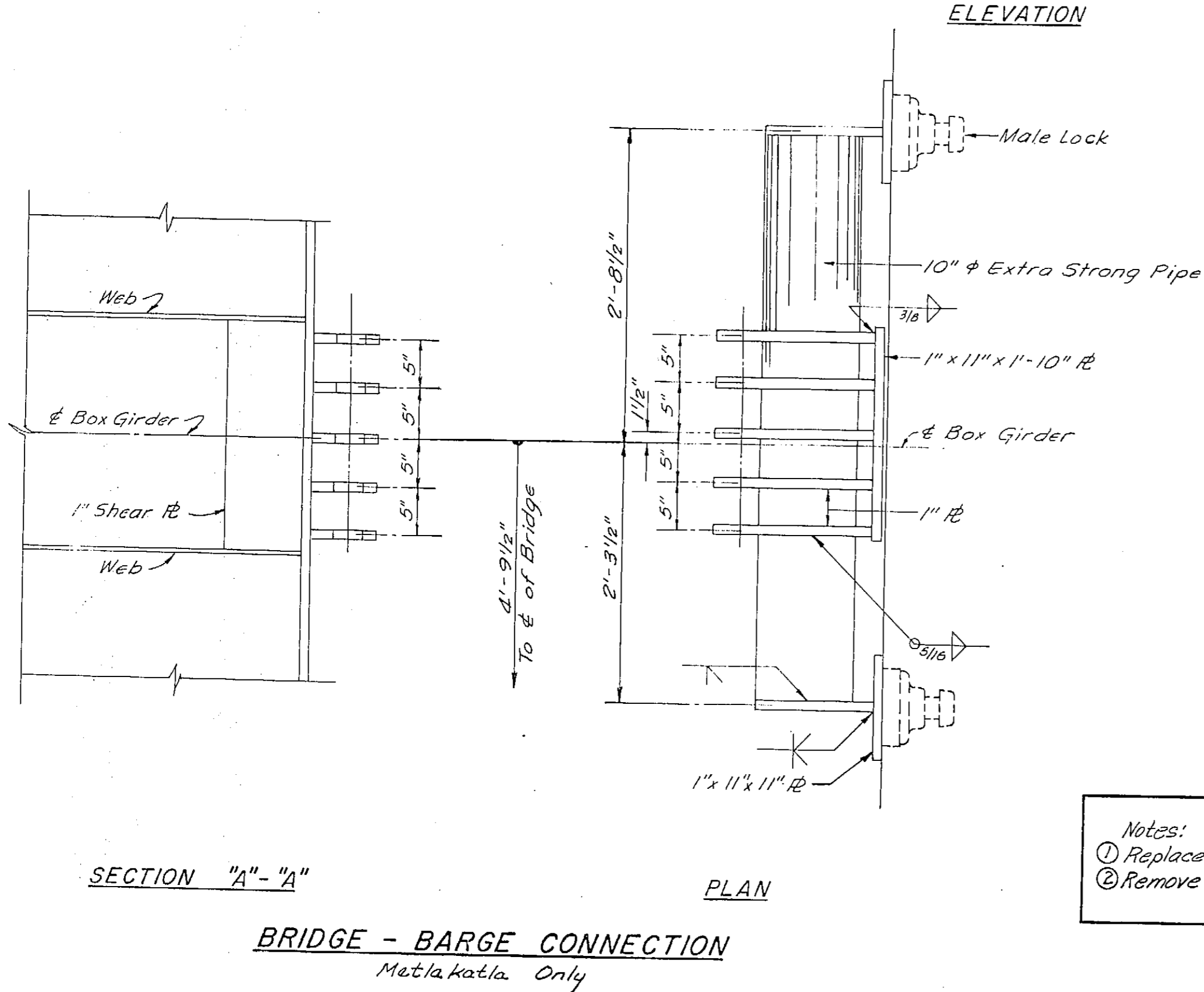
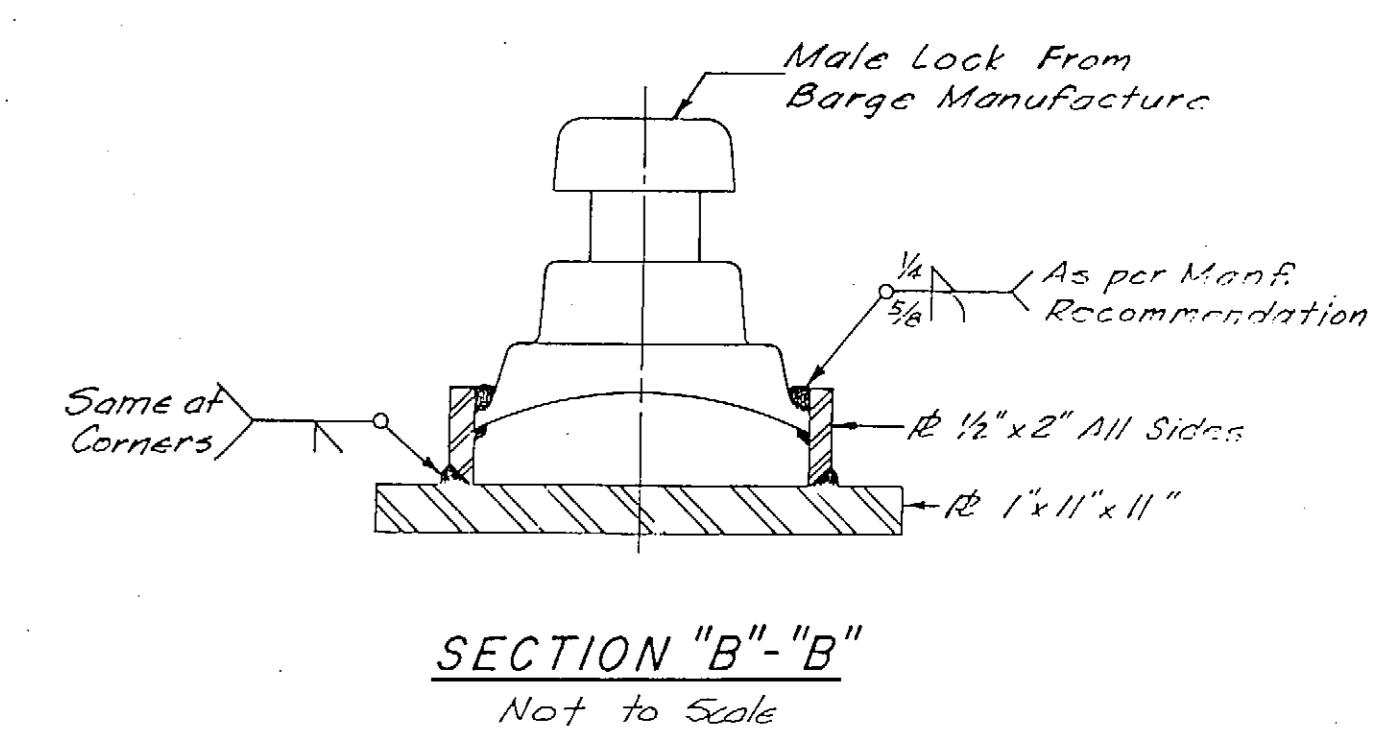
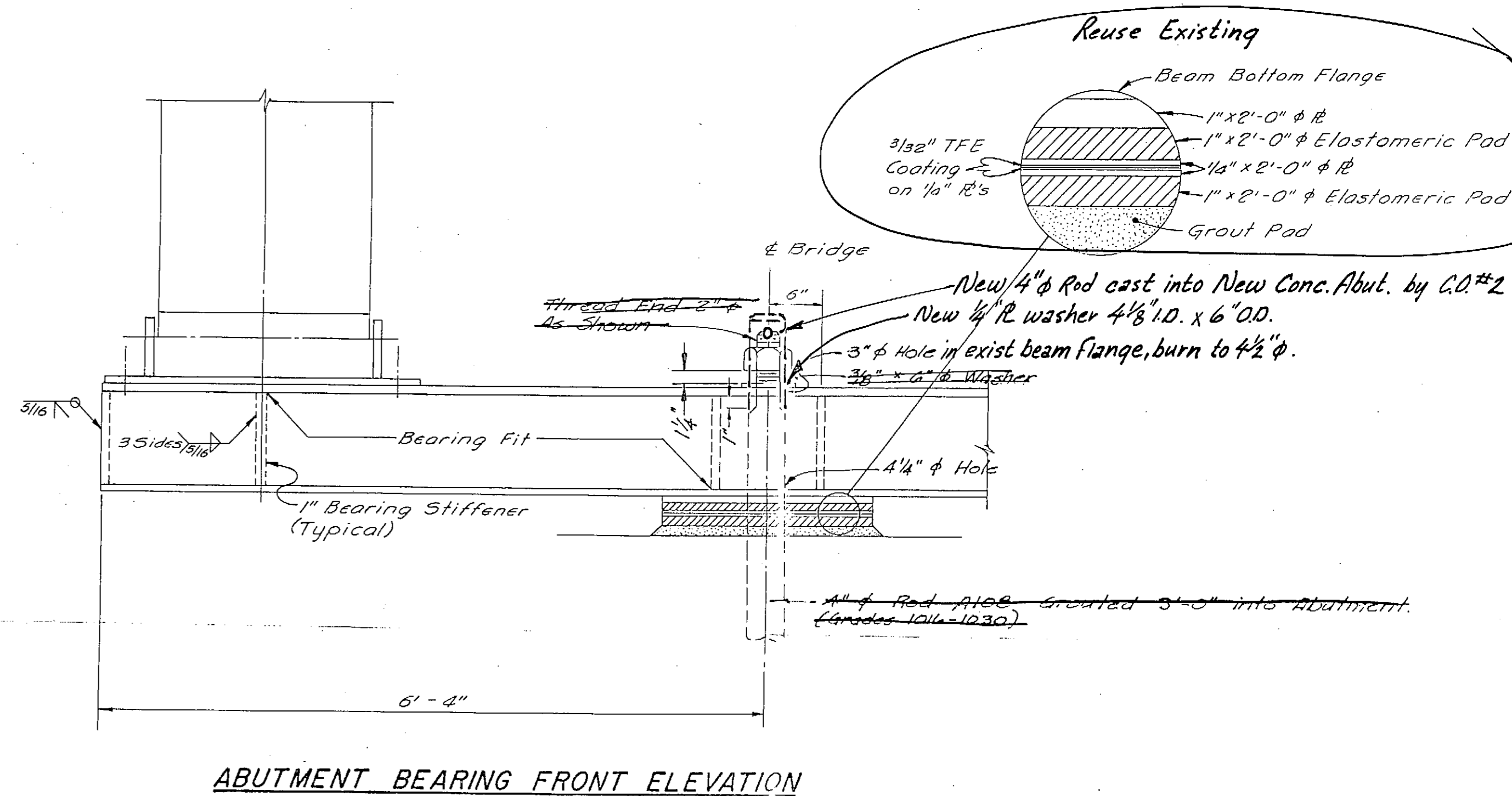
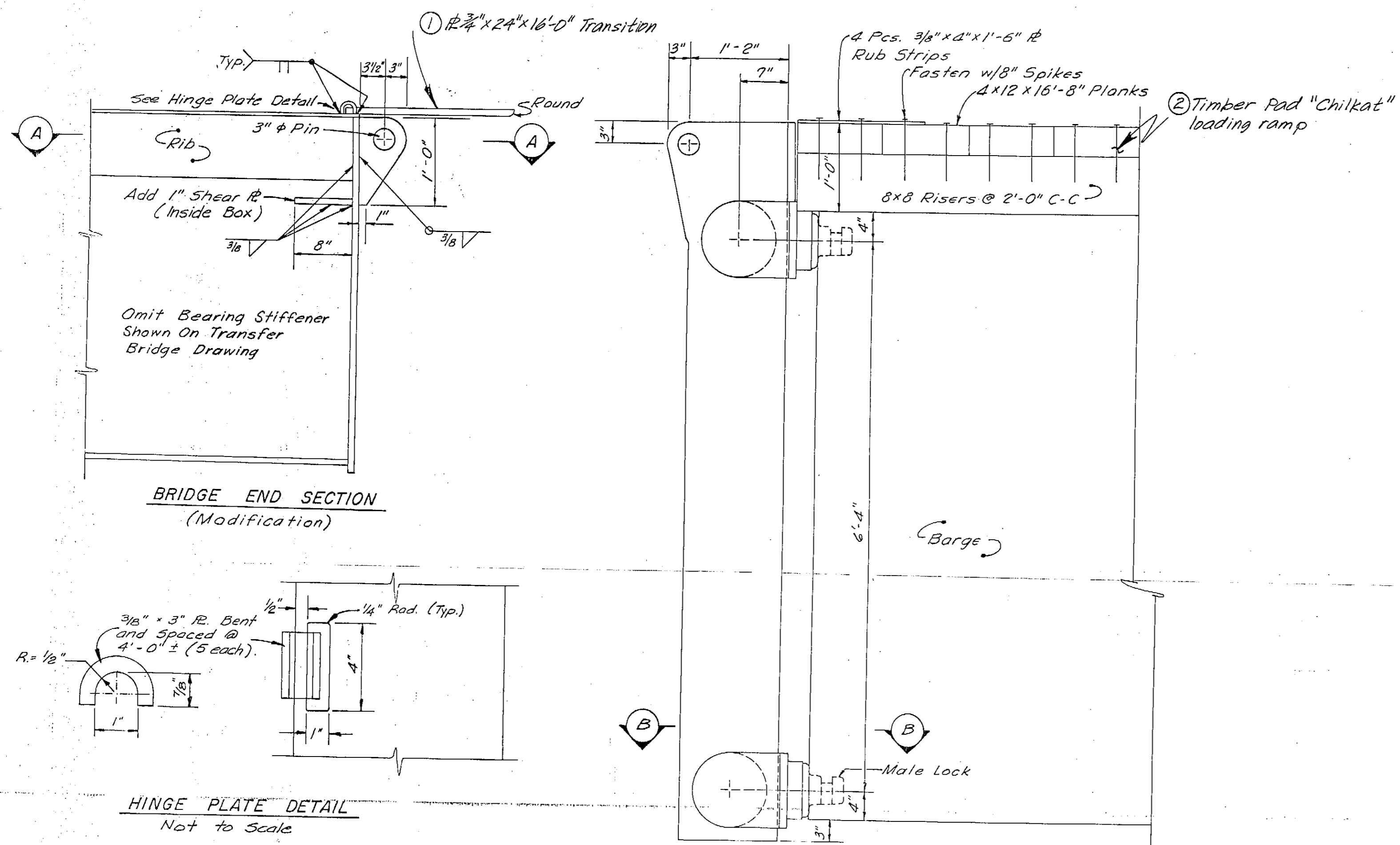
STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Metlakatla, Alaska

**AS-BUILT**  
AS-BUILT BRIDGE & NEW BEARING DETAILS

DESIGNED <u>DN</u>	CHECKED <u>BS</u>	DRAWN <u>SBL</u>	DATE
PROJECT NUMBER <u>A70002</u>	SHEET <u>12</u> OF <u>20</u>		

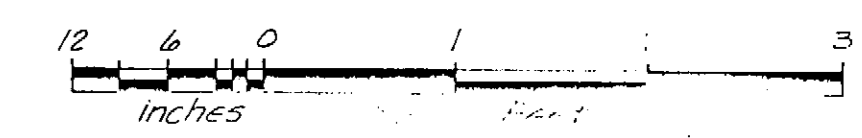
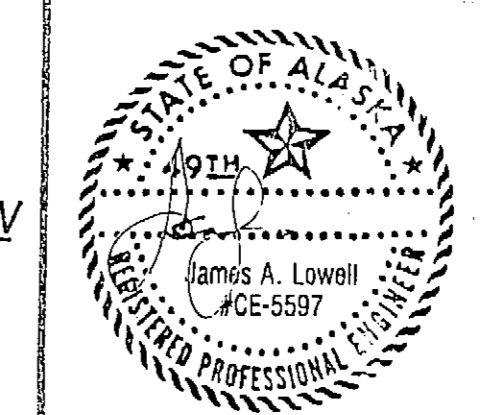
Note:  
All railing, posts, bolts and other steel railing components shall be galvanized after fabrication.



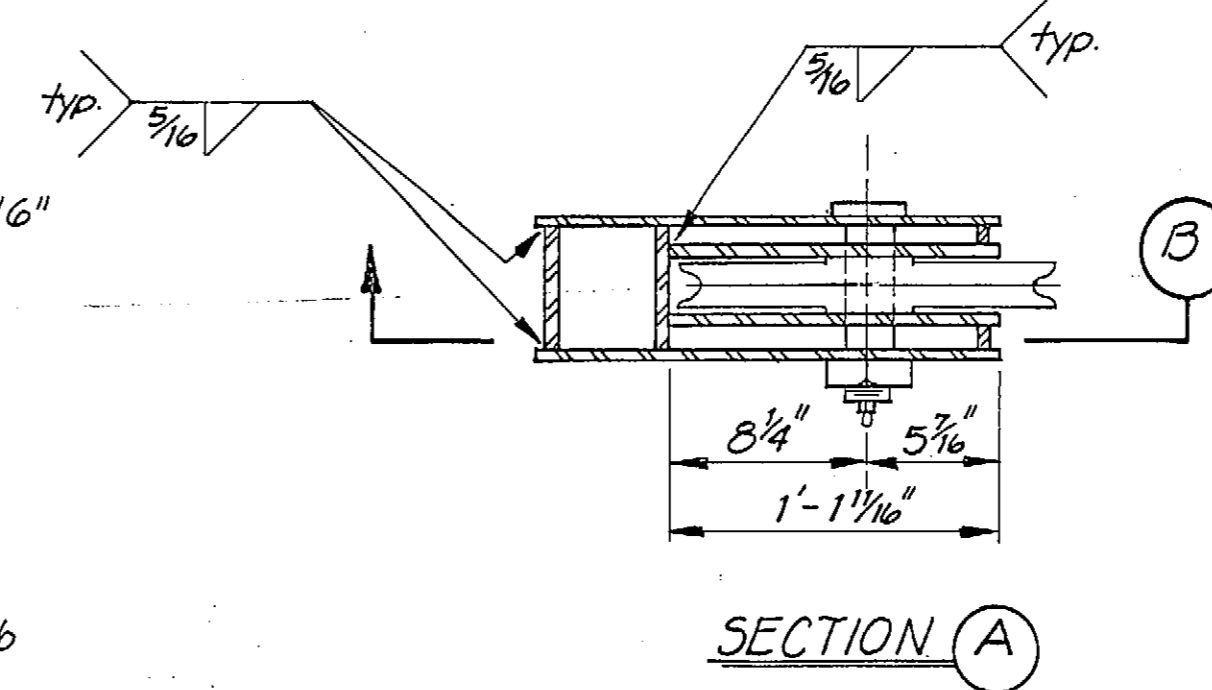
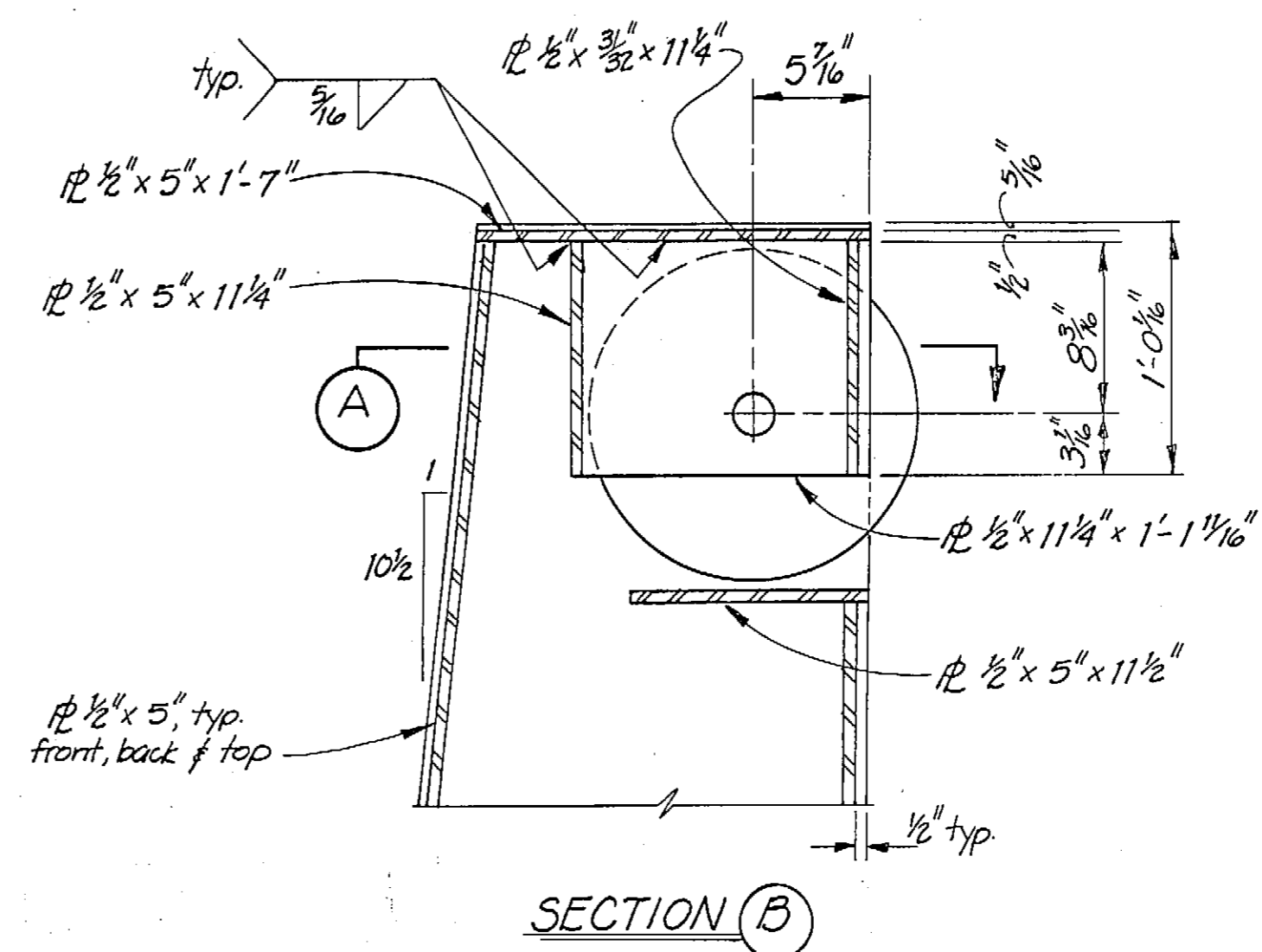
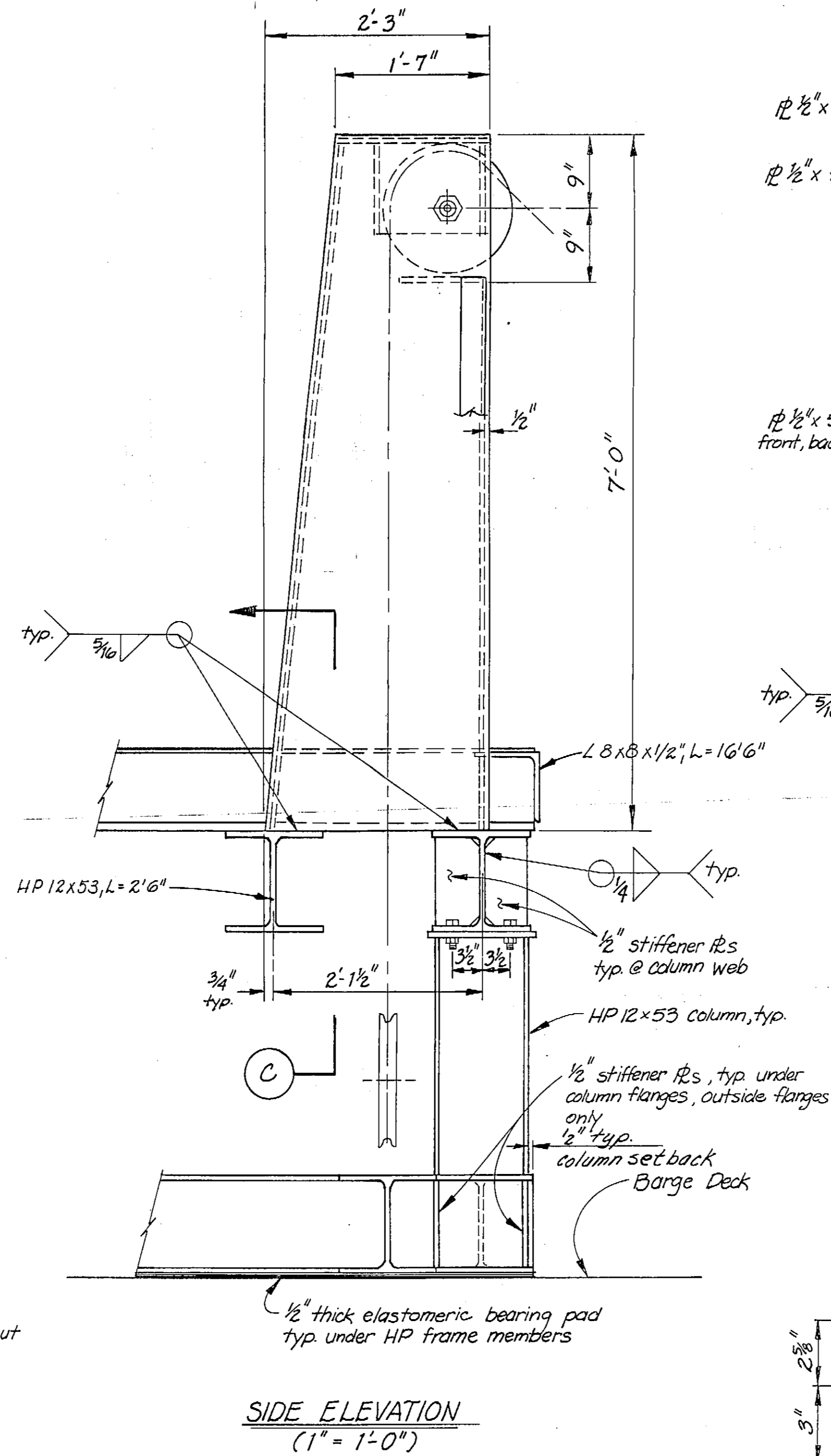
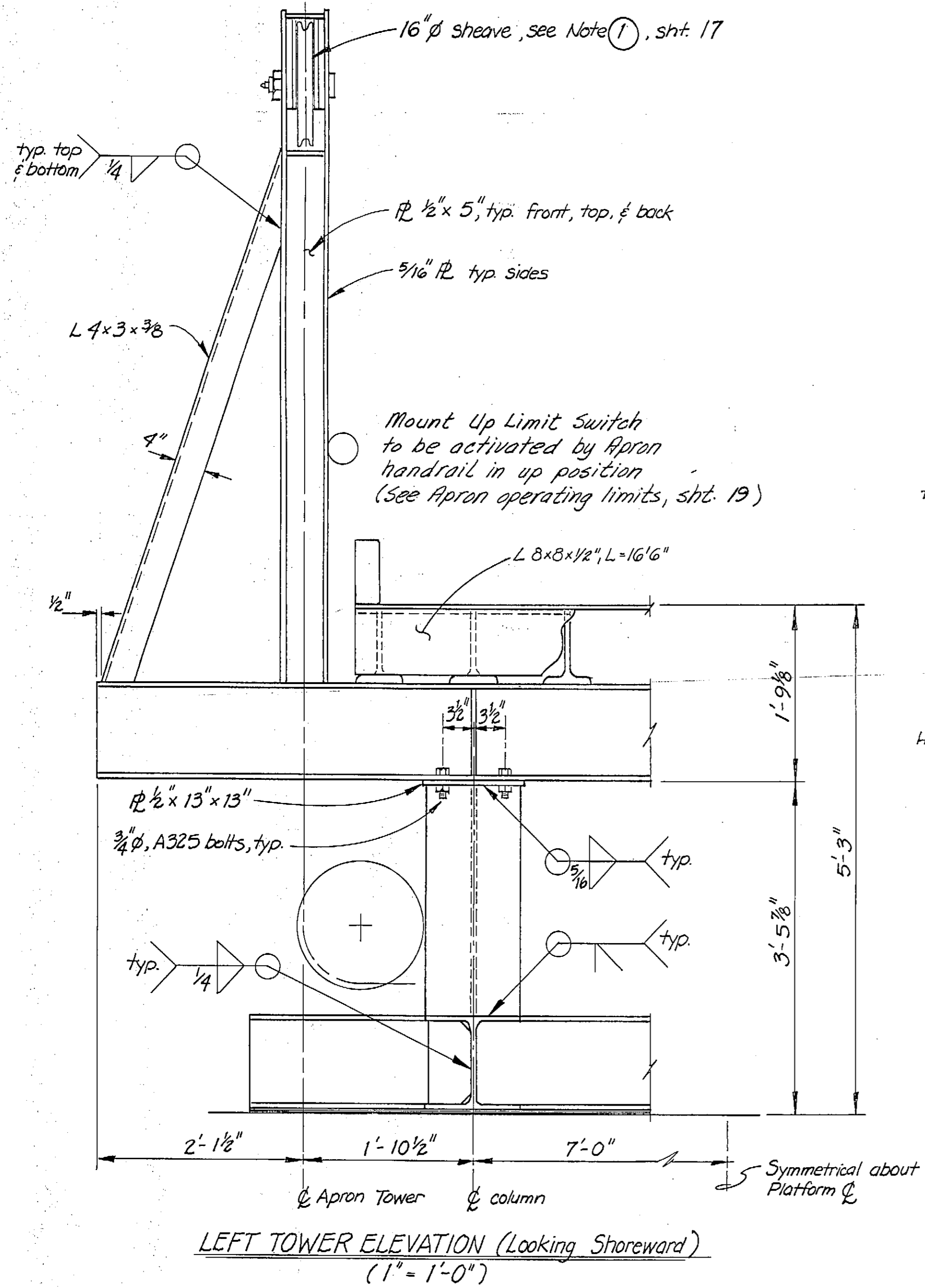
Notes:  
 ① Replace or Modify, see details sheet 15  
 ② Remove and Dispose this contract

SHT 25 OF 33  
**METLAKATLA PONTOON UPGRADE**  
**STP-0927(4) & 75269**  
**AS-BUILT**  
 Date: *WmN 1-28-87*

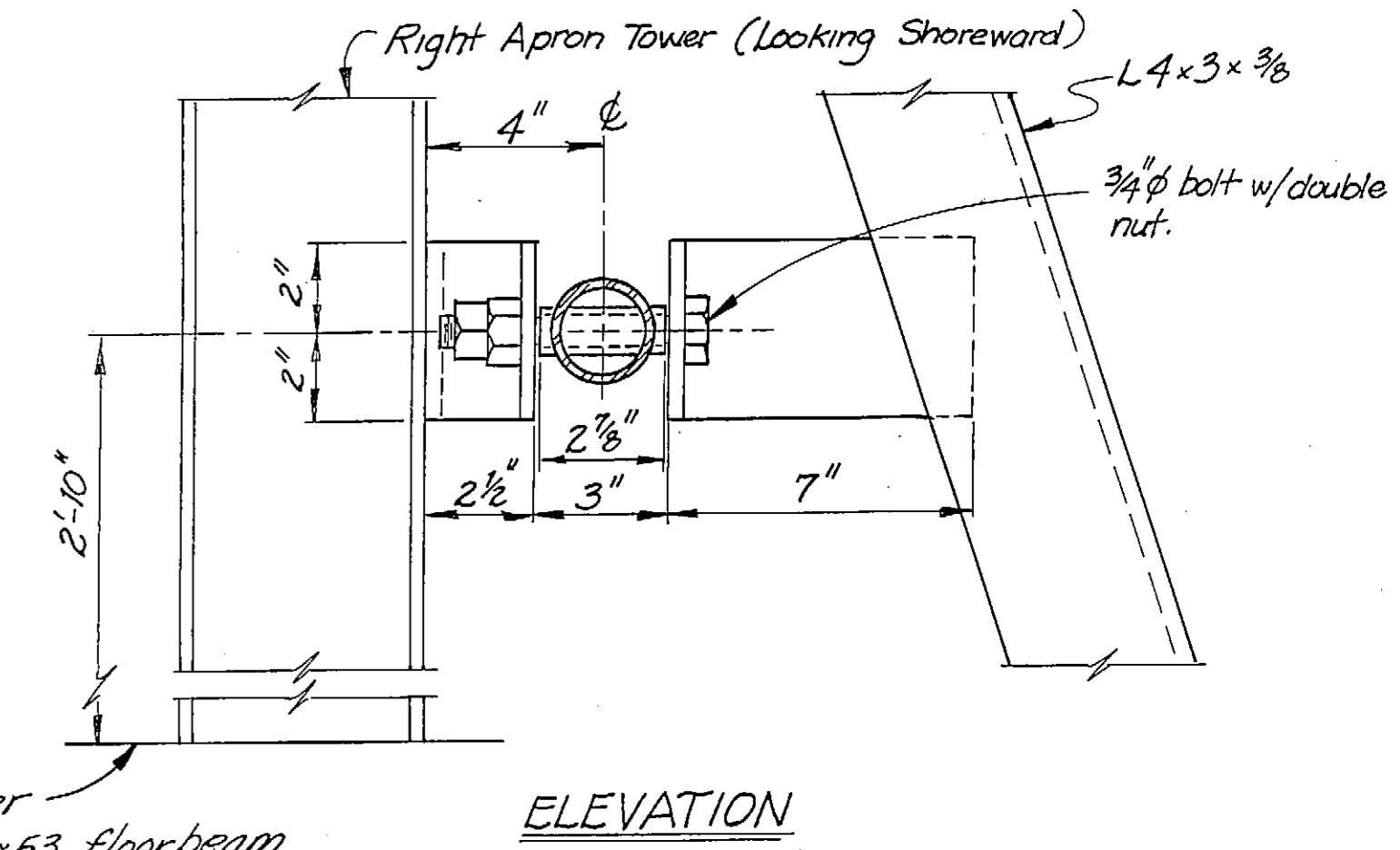
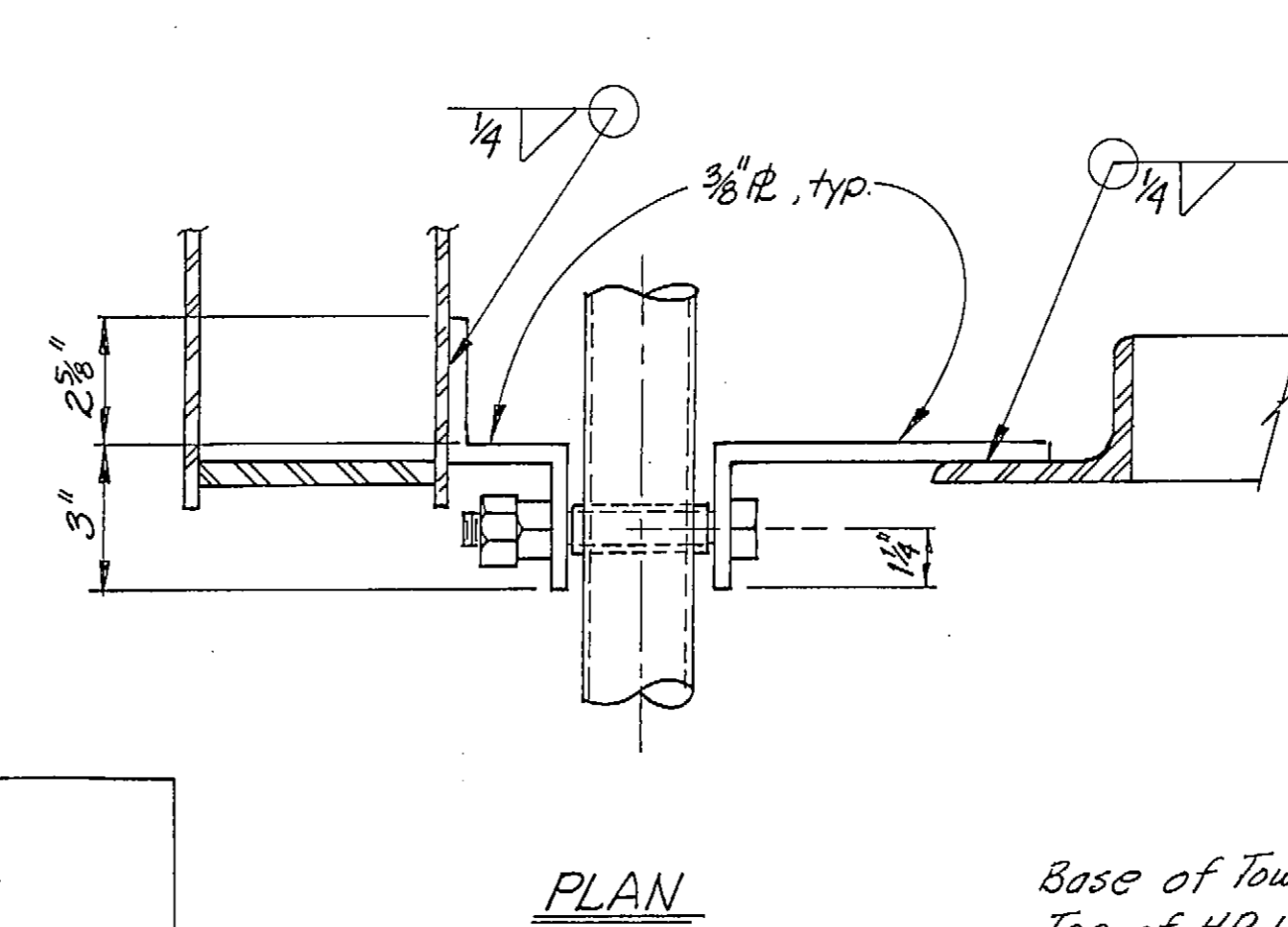
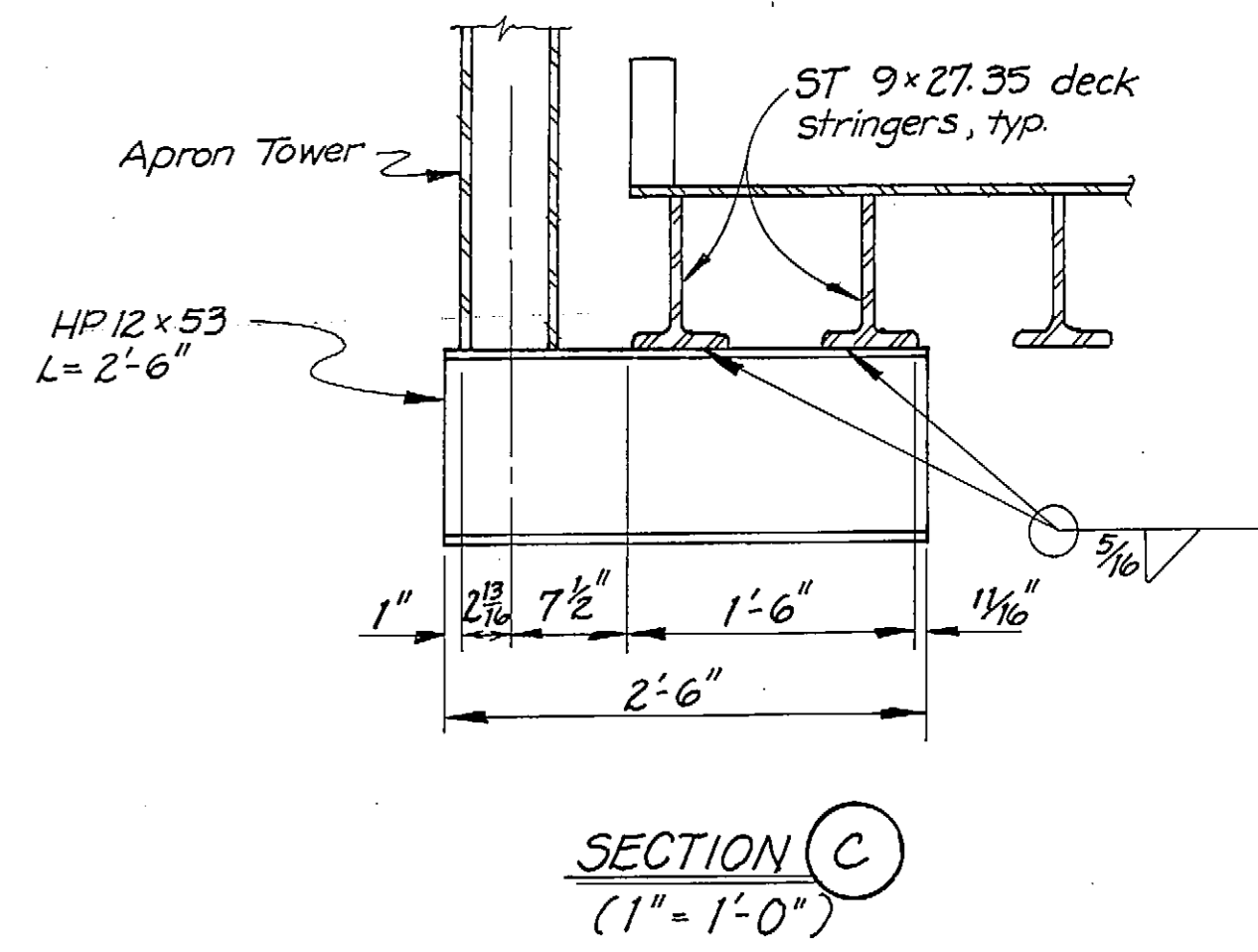
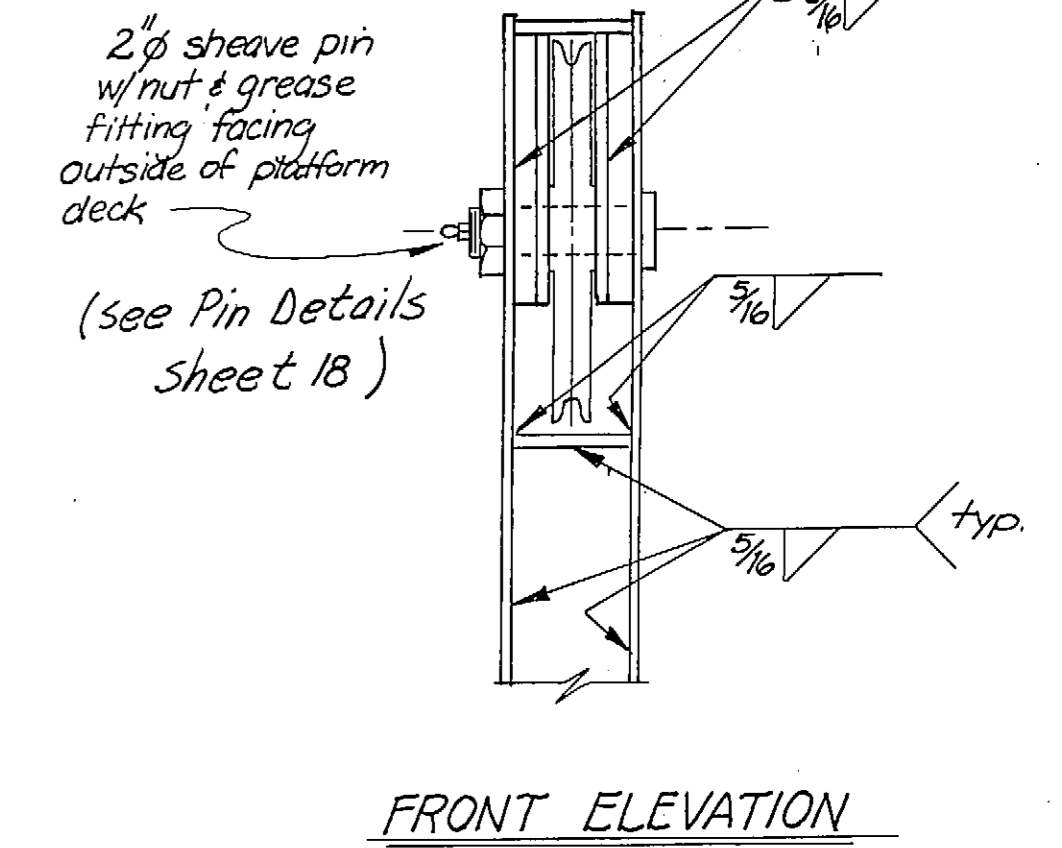
STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Metlakatla		Alaska	
<b>AS-BUILT</b>			
<b>AS-BUILT ABUTMENT BEARING &amp; BRIDGE-BARGE CONN.</b>			
DESIGNED <i>DN</i>	CHECKED <i>BS</i>	DRAWN <i>CLF</i>	DATE
PROJECT NUMBER <i>A20002</i>	SHEET <i>18</i>		OF <i>30</i>







SHEAVE HOUSING DETAILS  
(1 $\frac{1}{2}$ " = 1'-0")

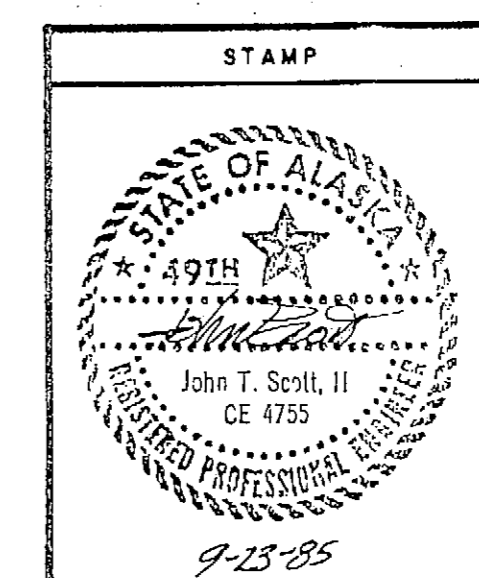


POWER MAST MOUNTING DETAILS

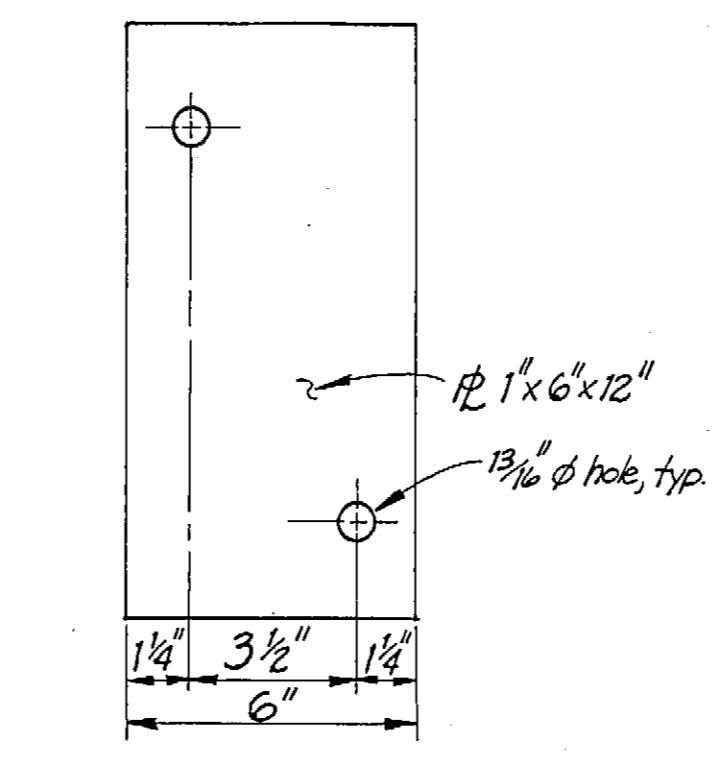
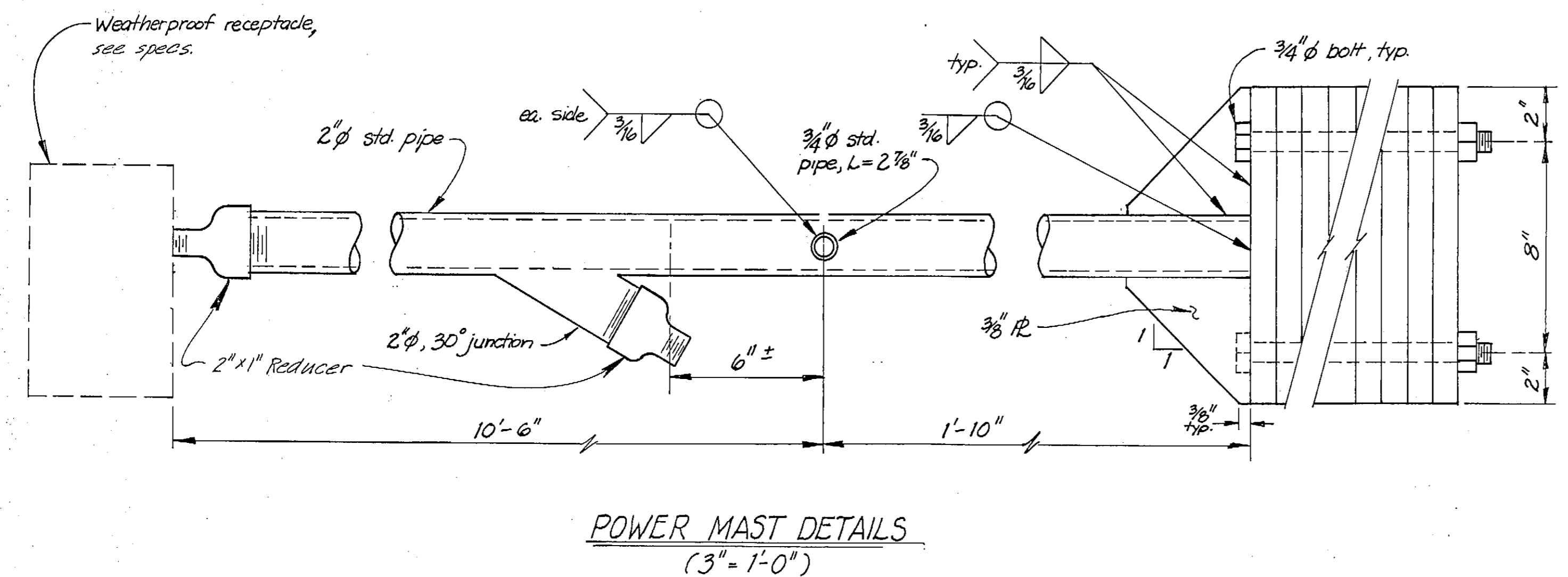
SHT 27 OF 33

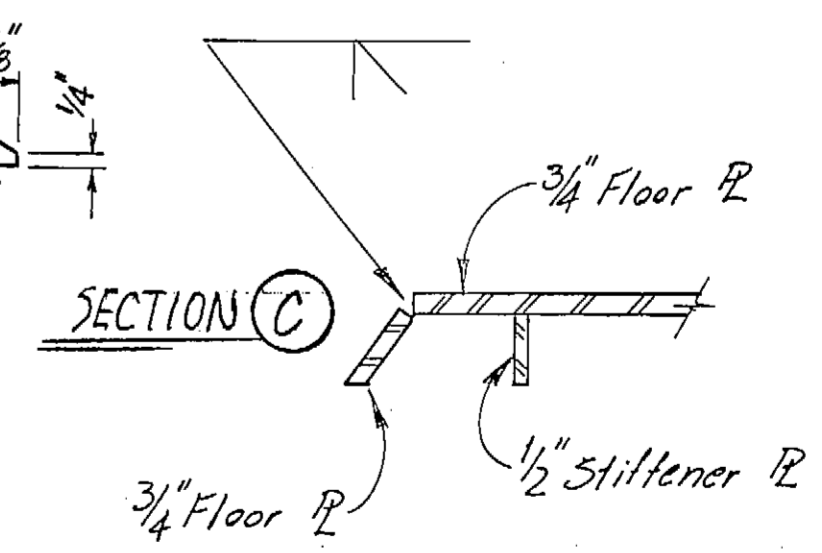
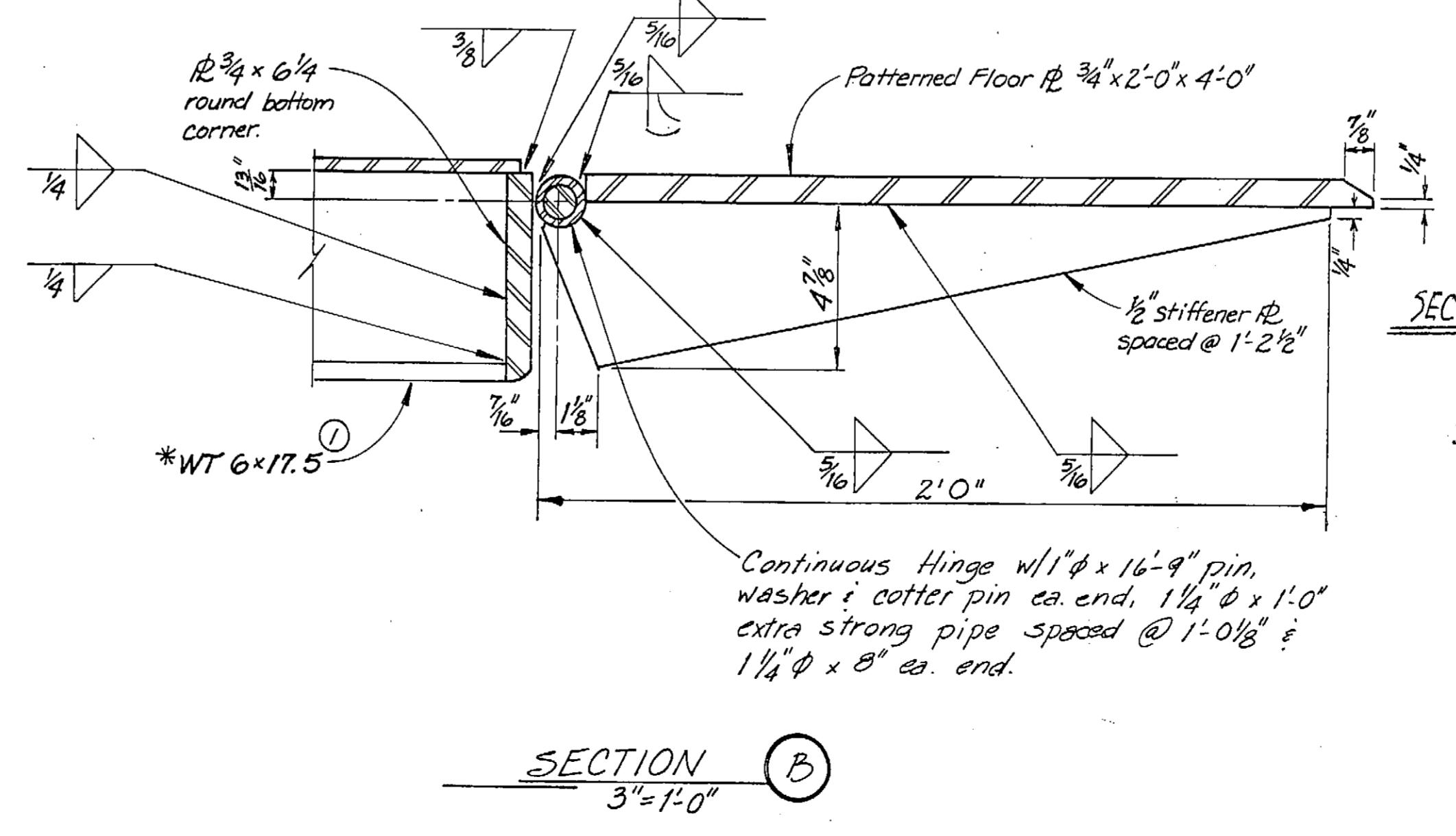
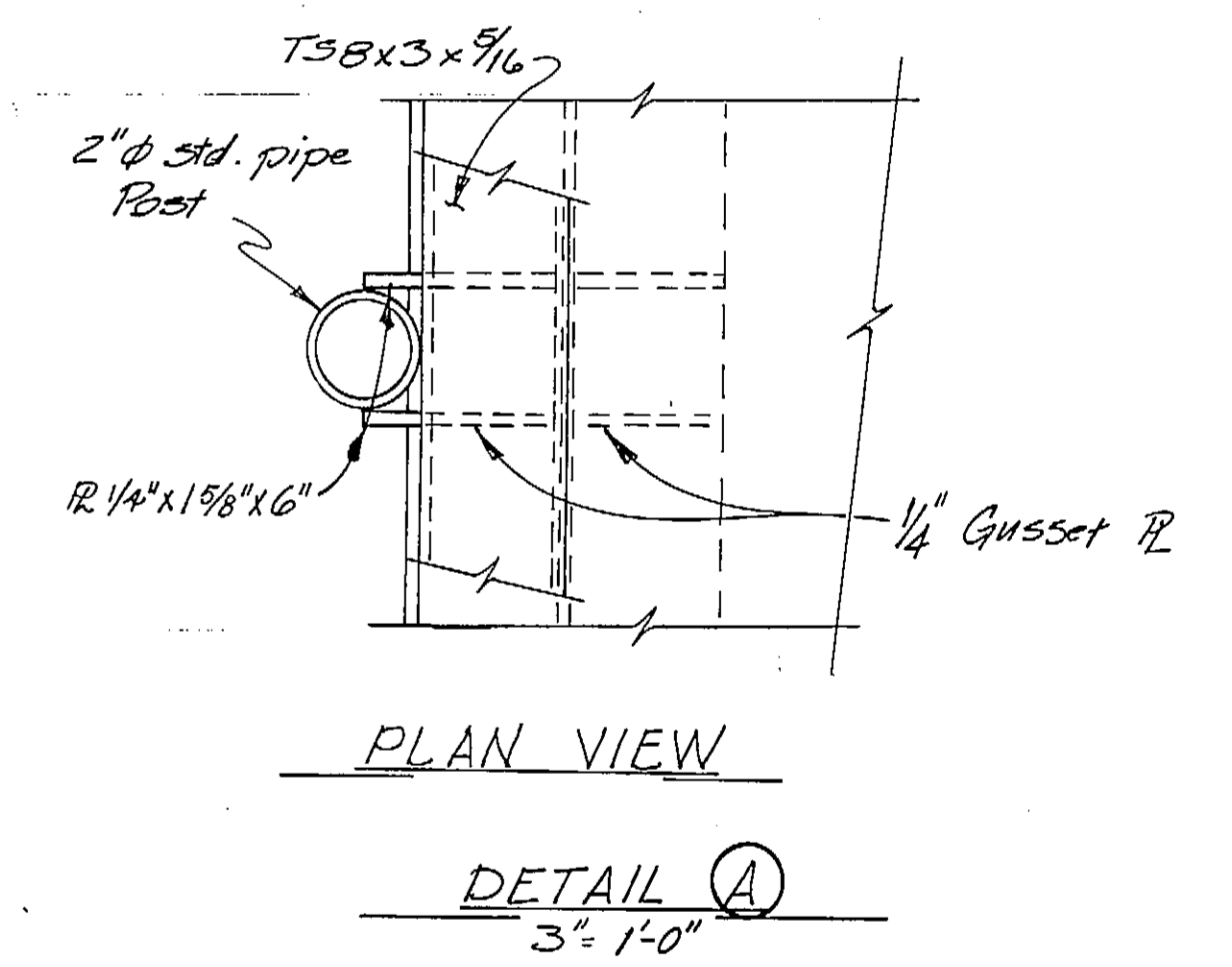
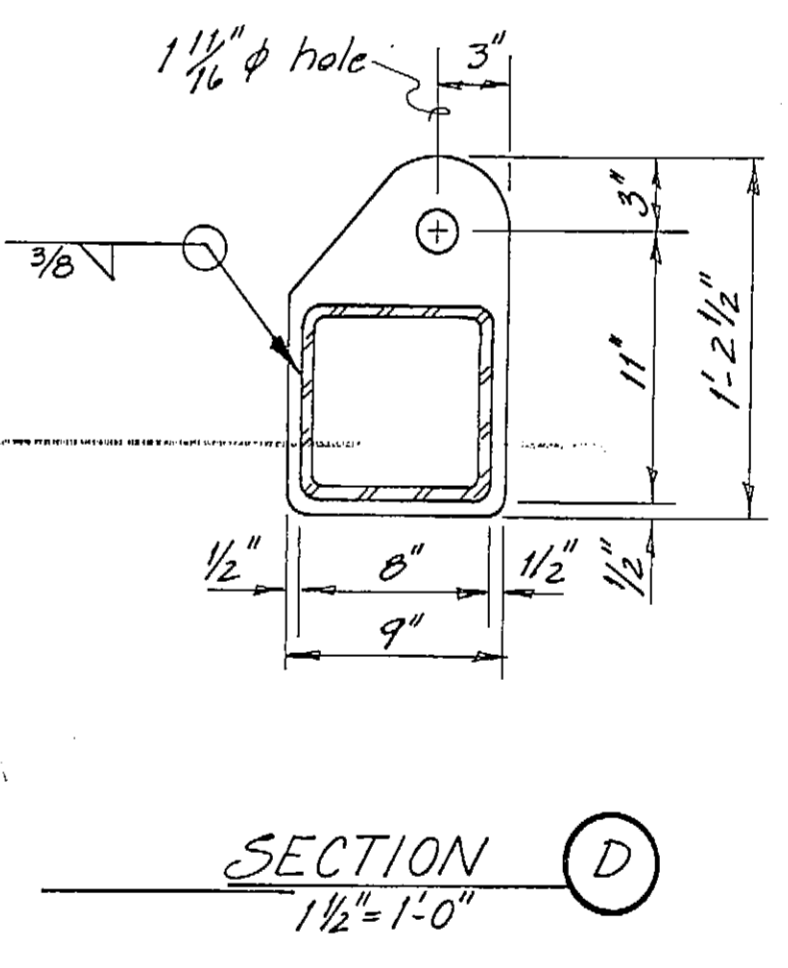
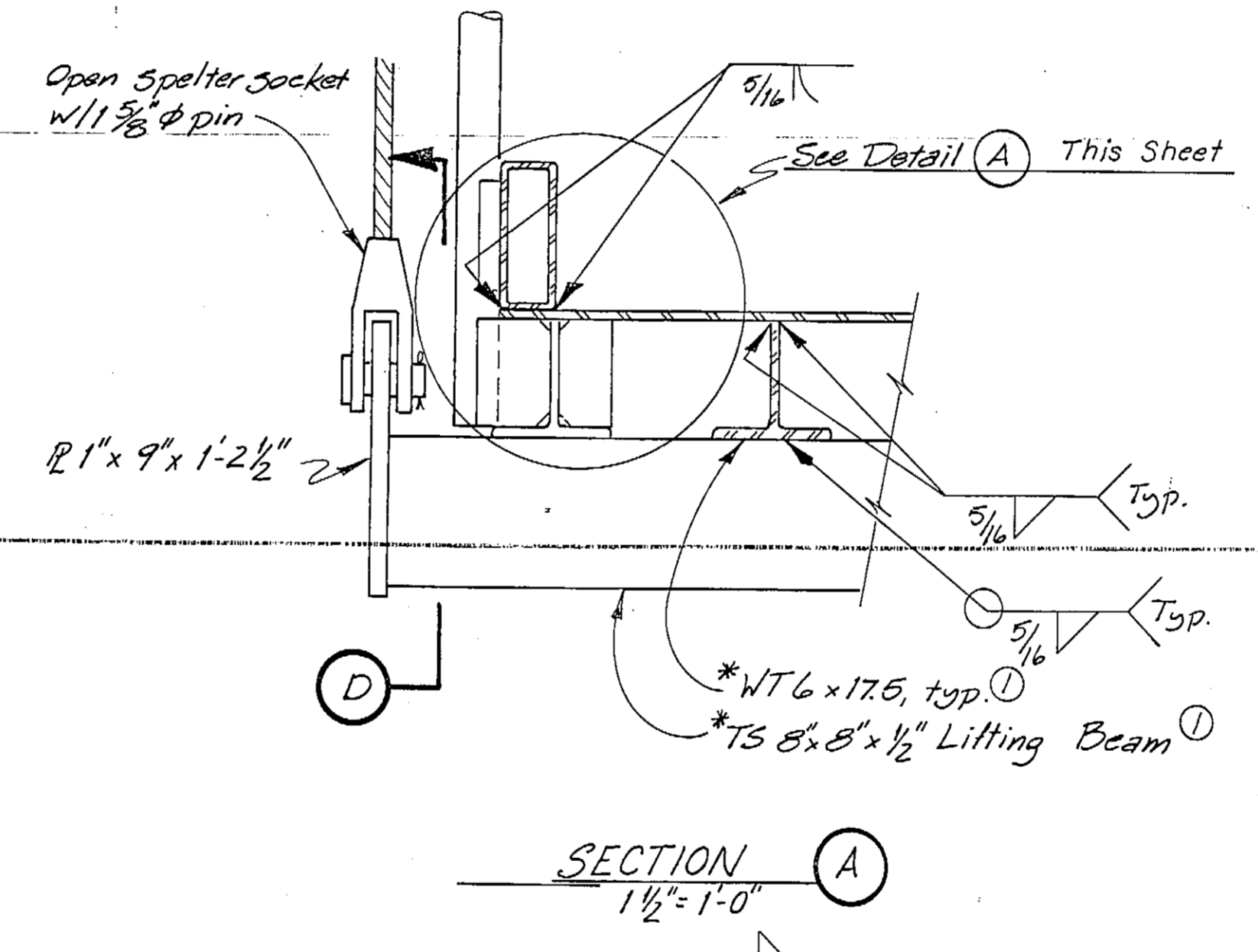
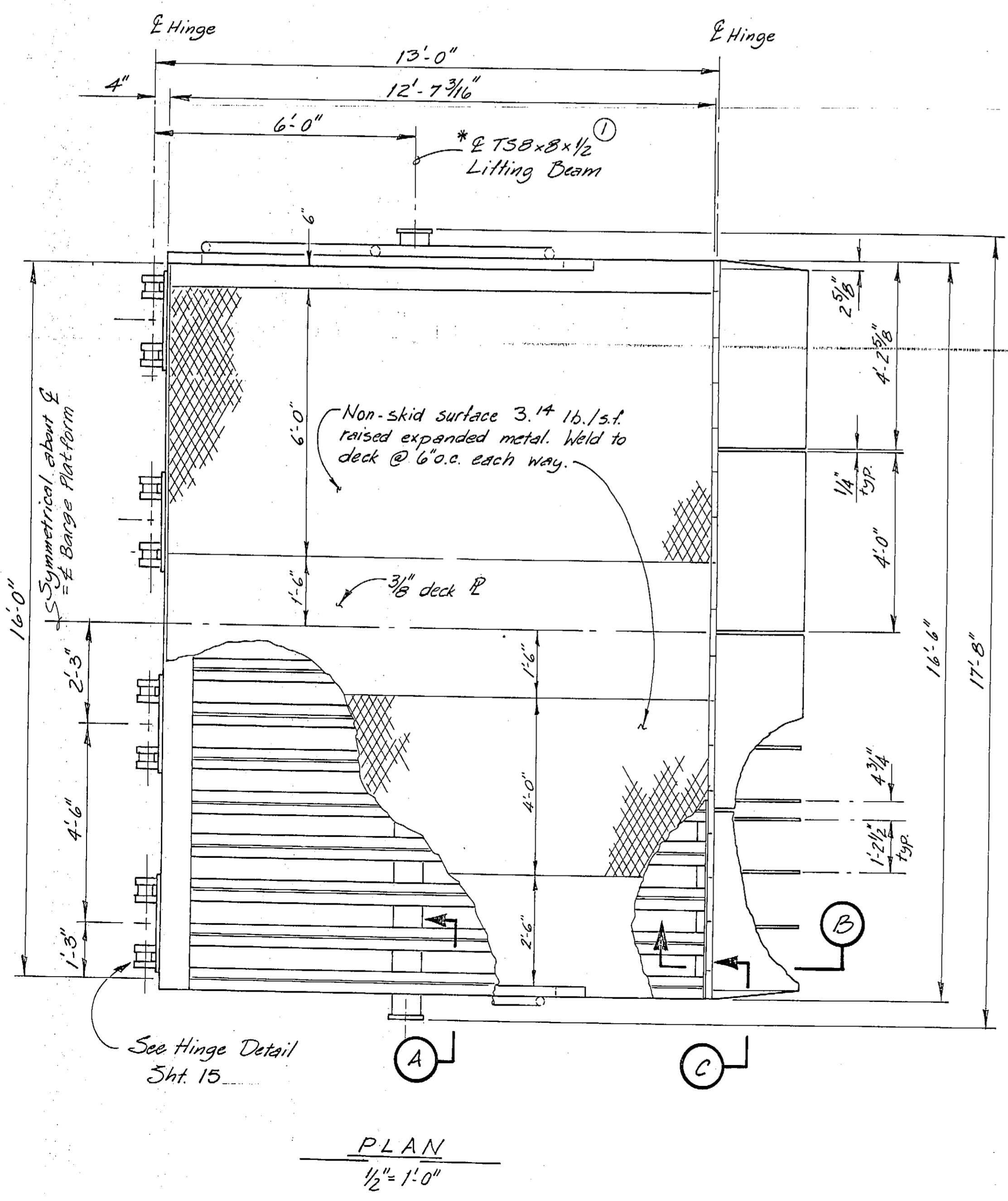
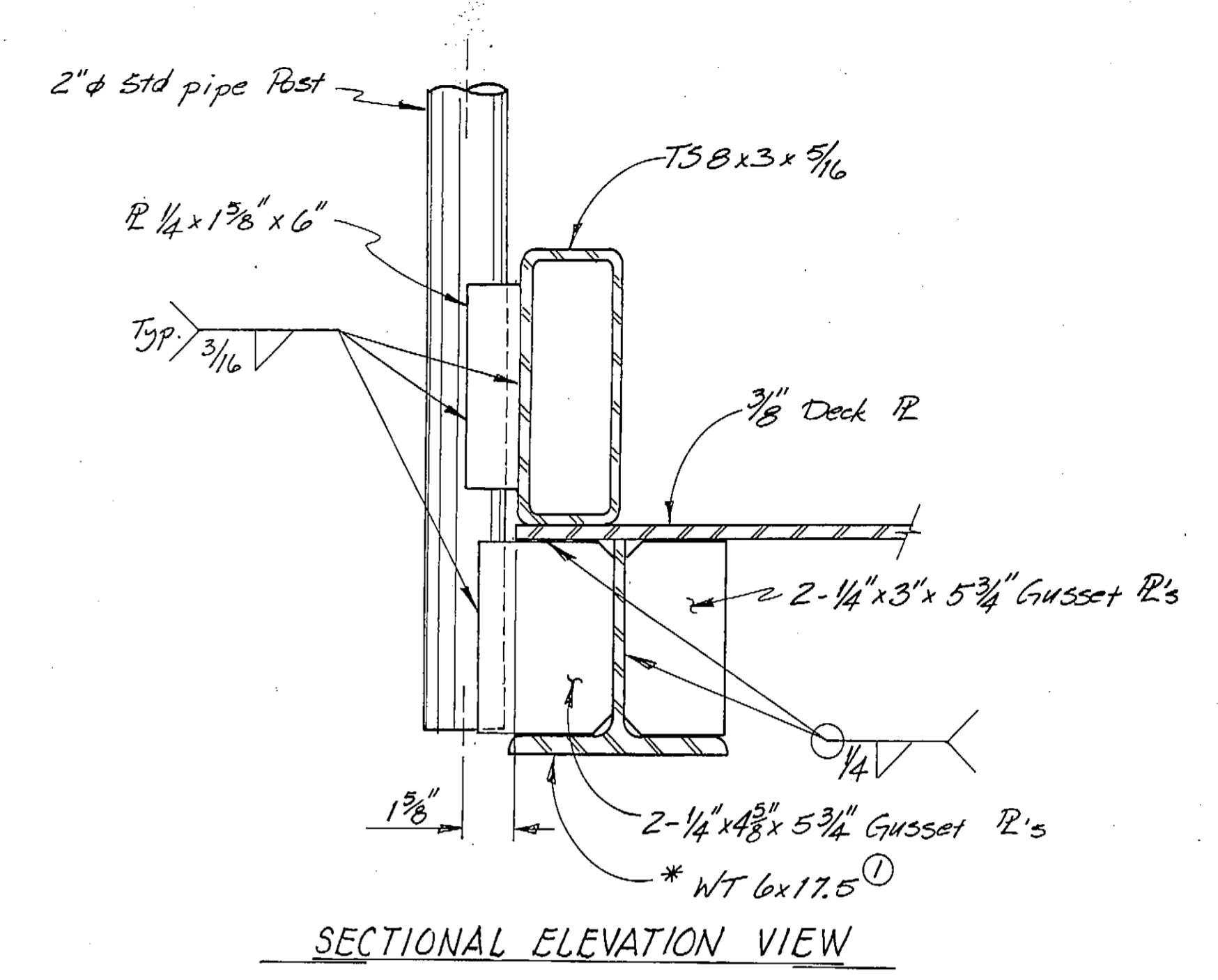
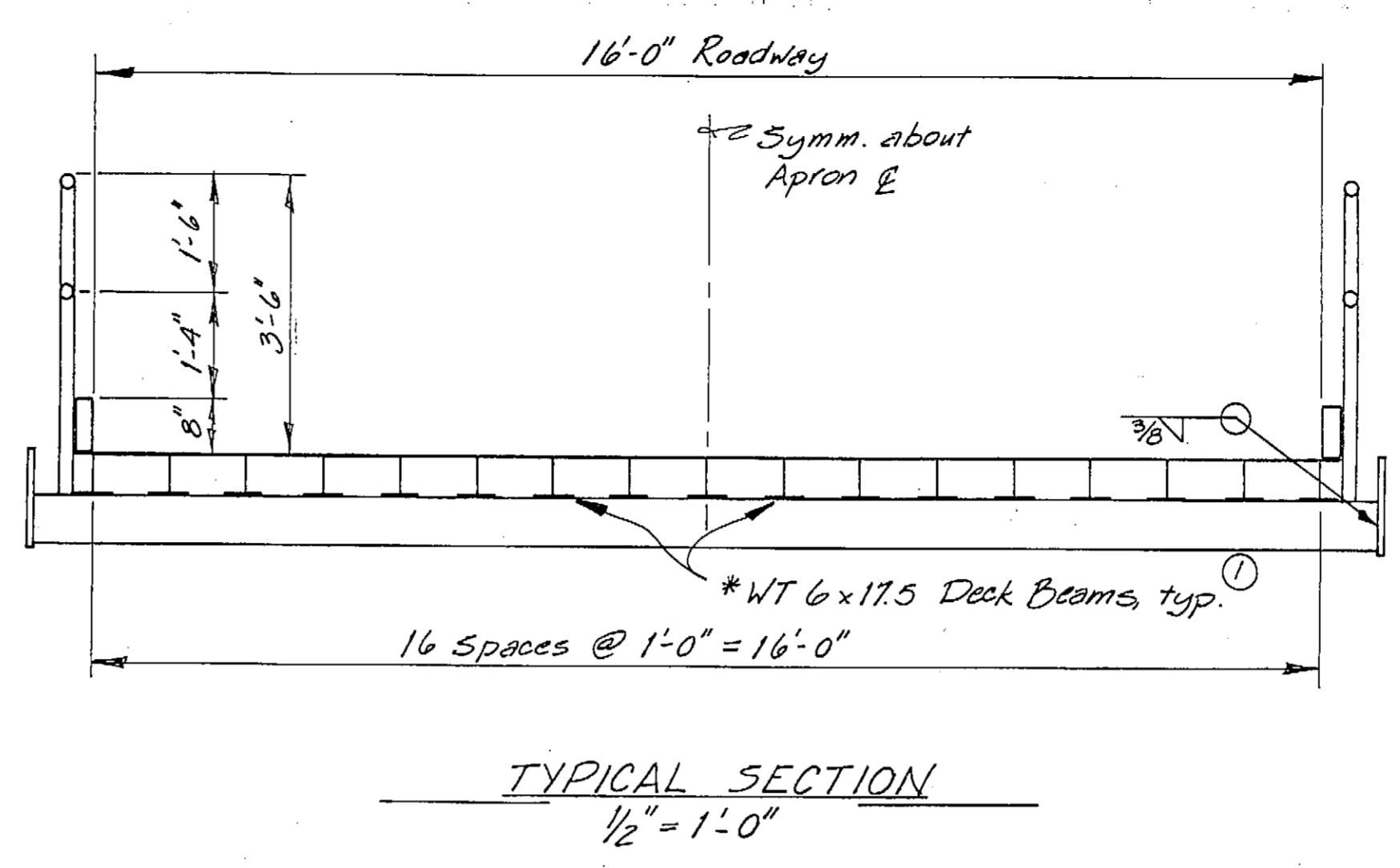
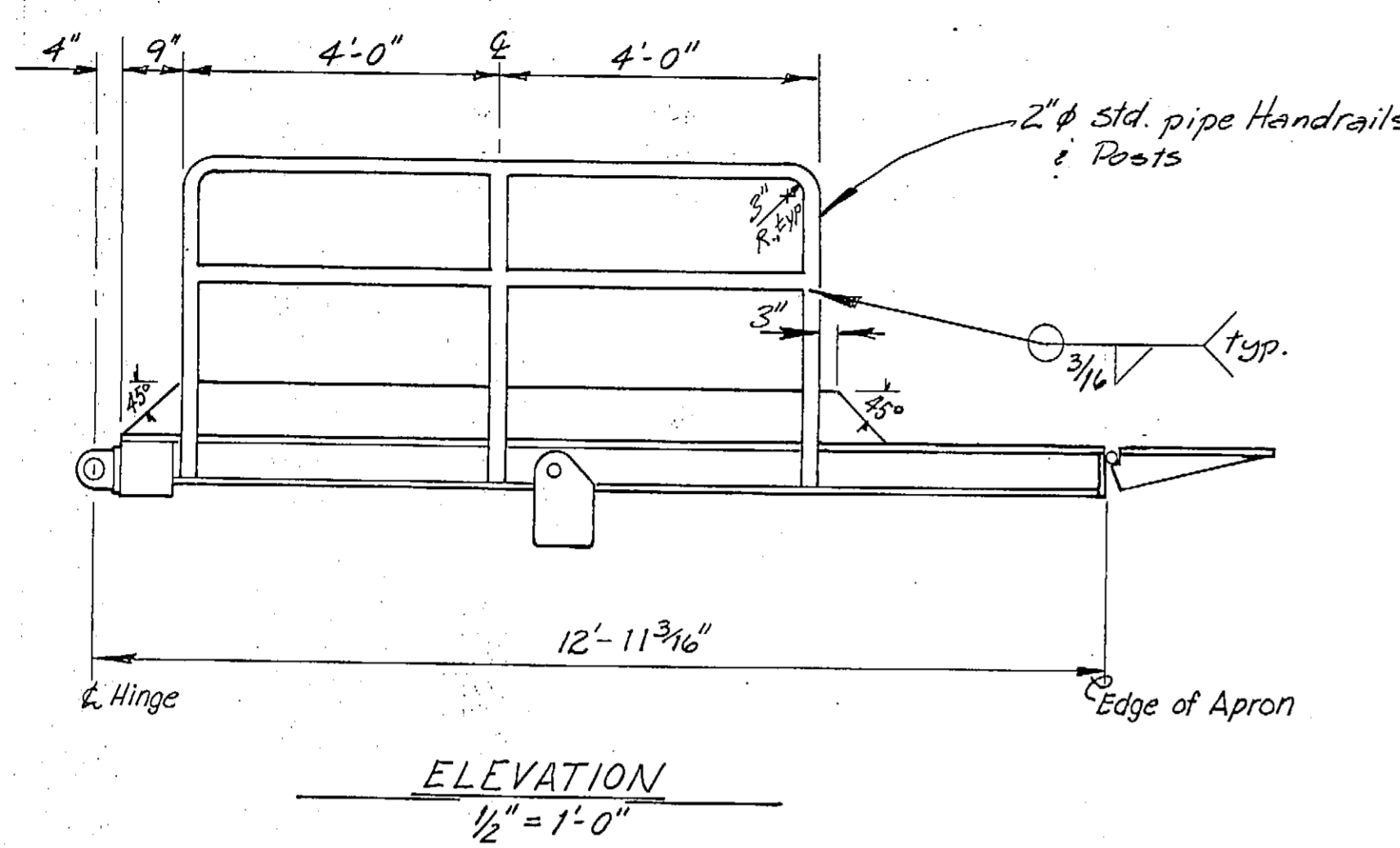
**METLAKATLA PONTOON UPGRADE**  
**AS-BUILT**  
STP-0927(4) & 75269

Date: (initial) 1-28-87



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Metlakatla		Alaska	
<b>AS-BUILT</b>			
APRON TOWER & POWER MAST DETAILS			
DESIGNED BS	CHECKED	DRAWN BS	DATE Nov. '84
PROJECT NUMBER A 10002	SHEET 16	OF 30	



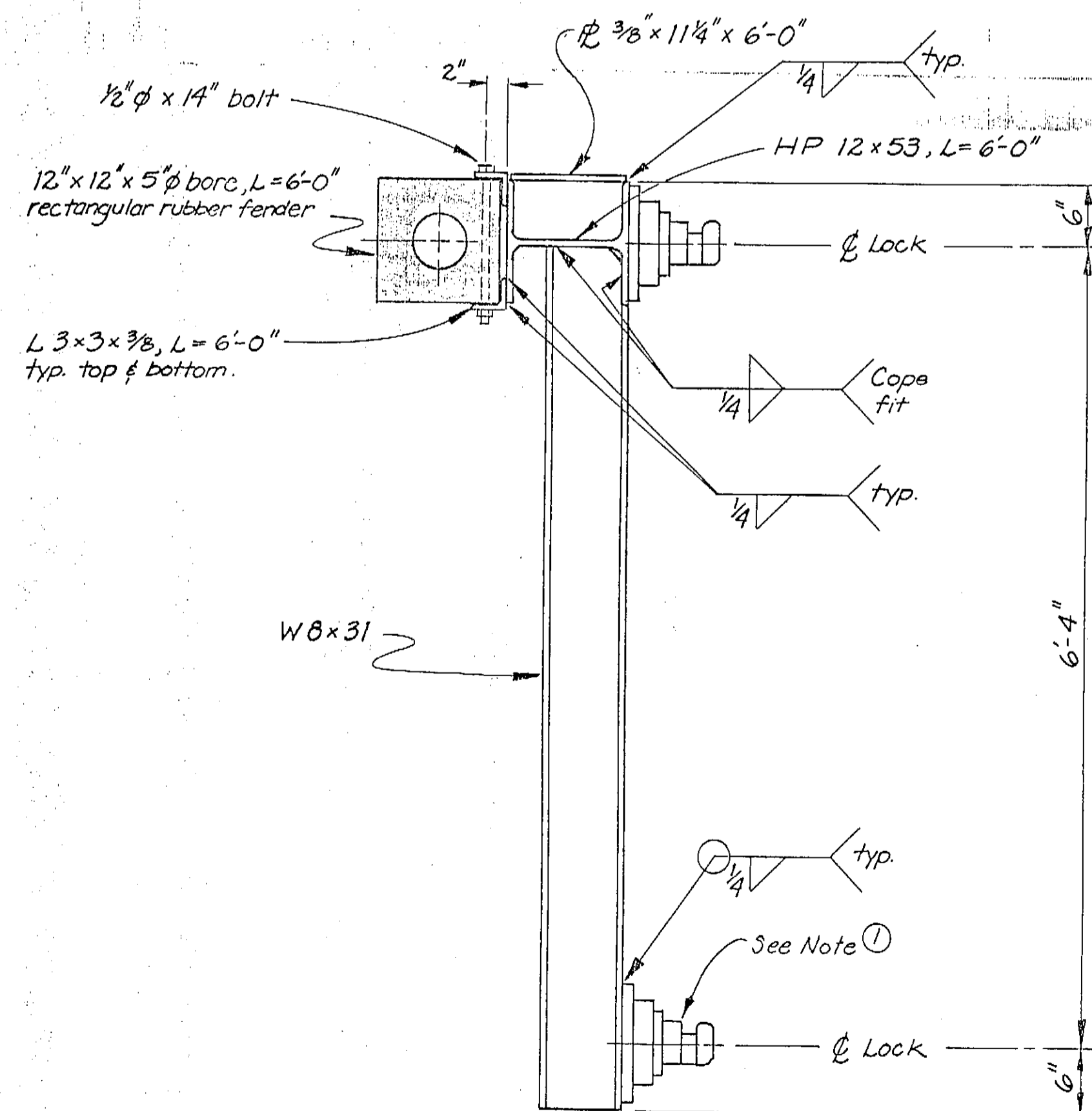
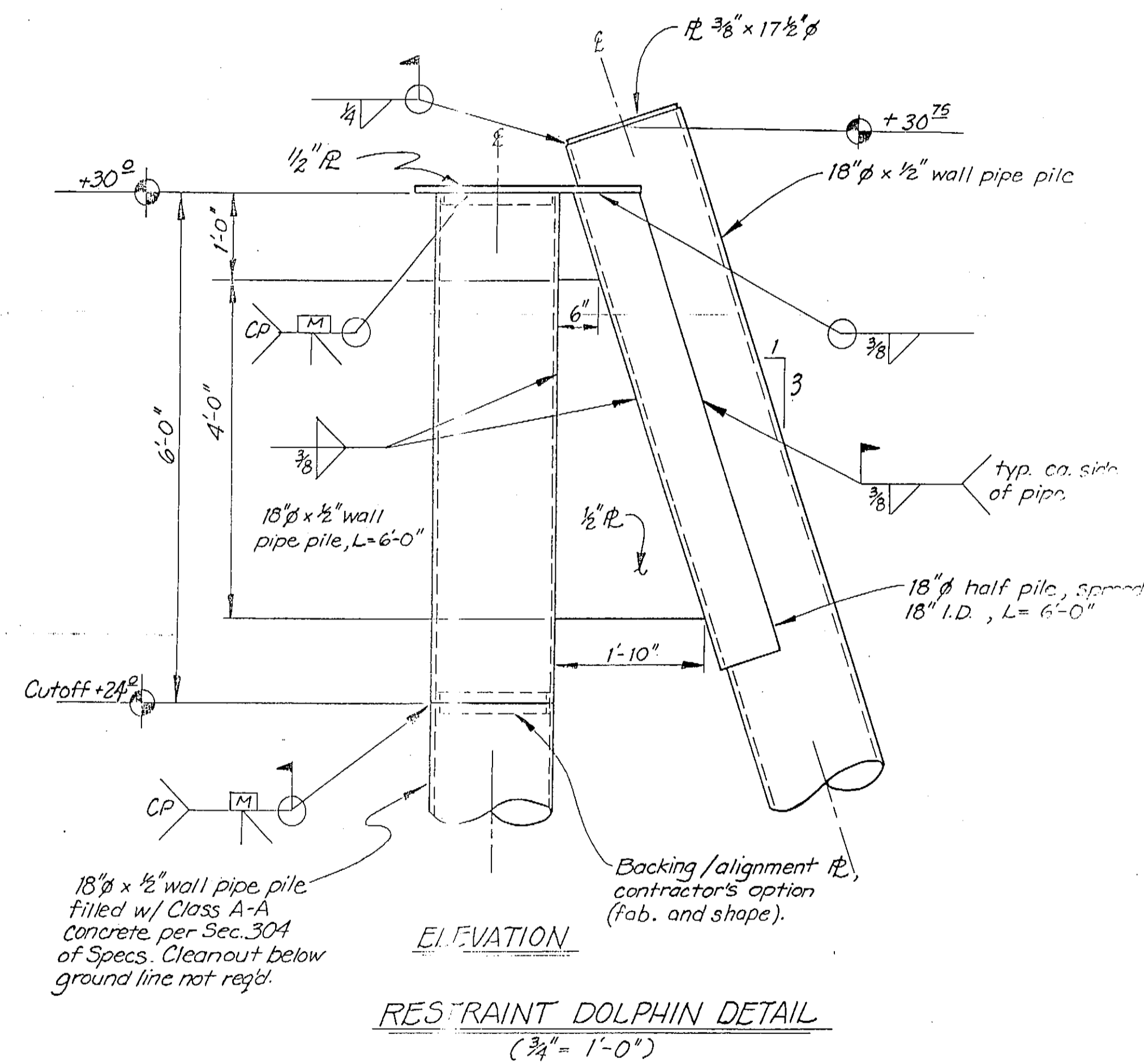
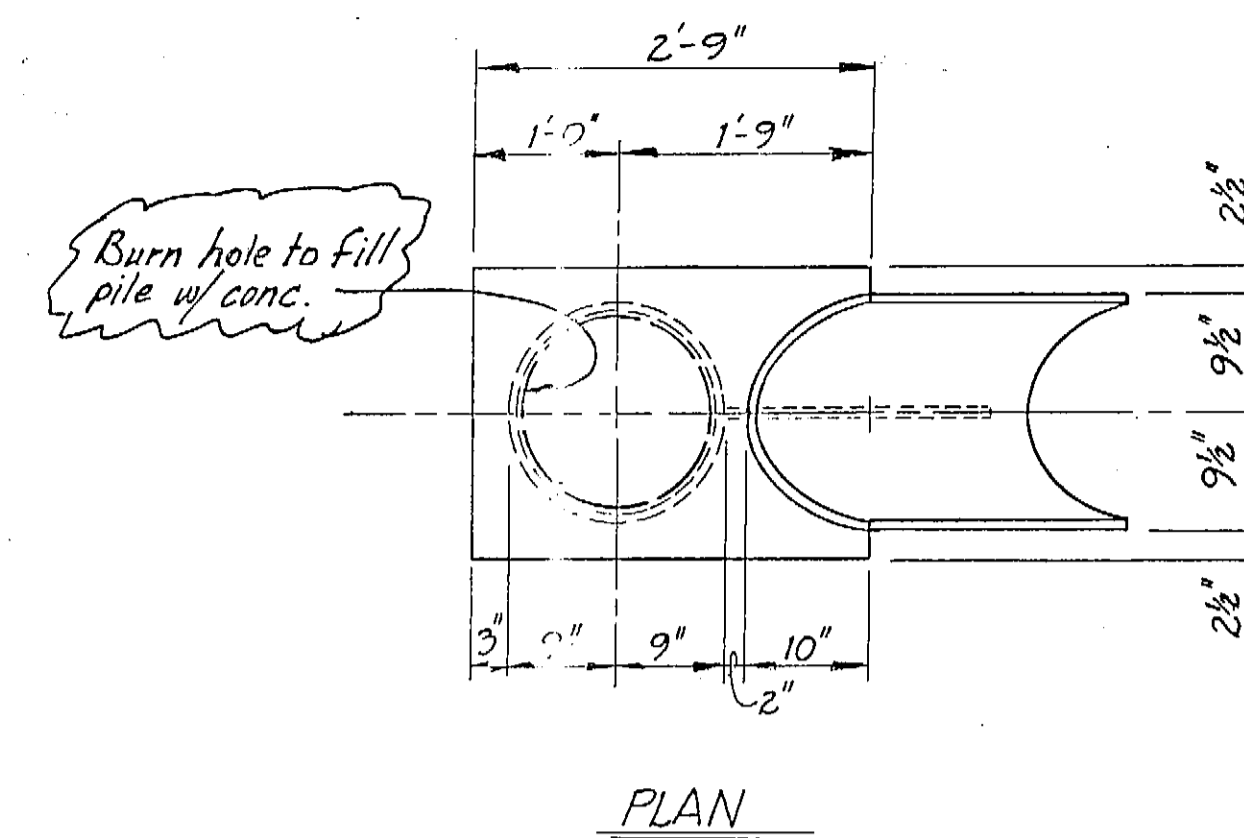
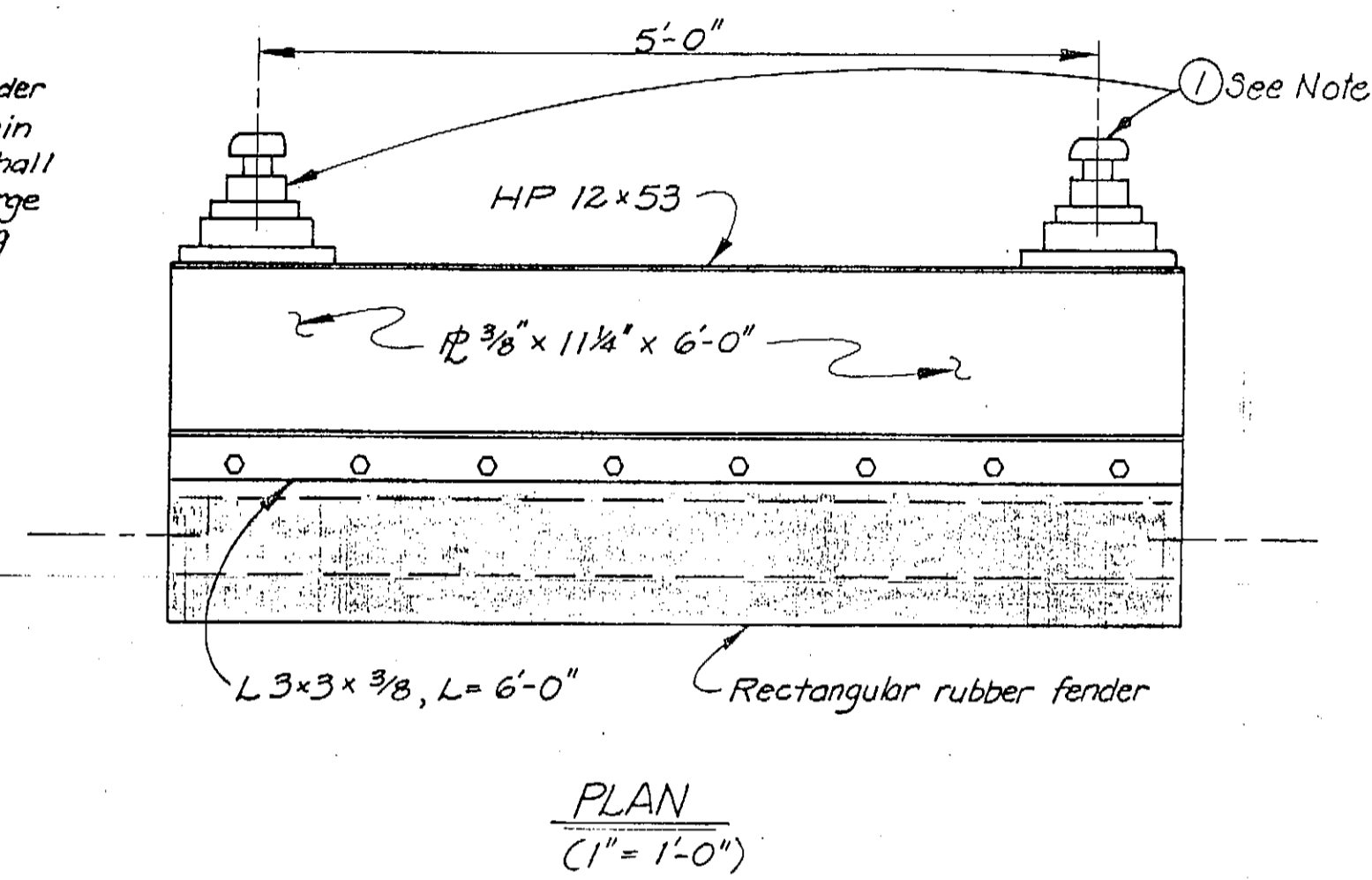
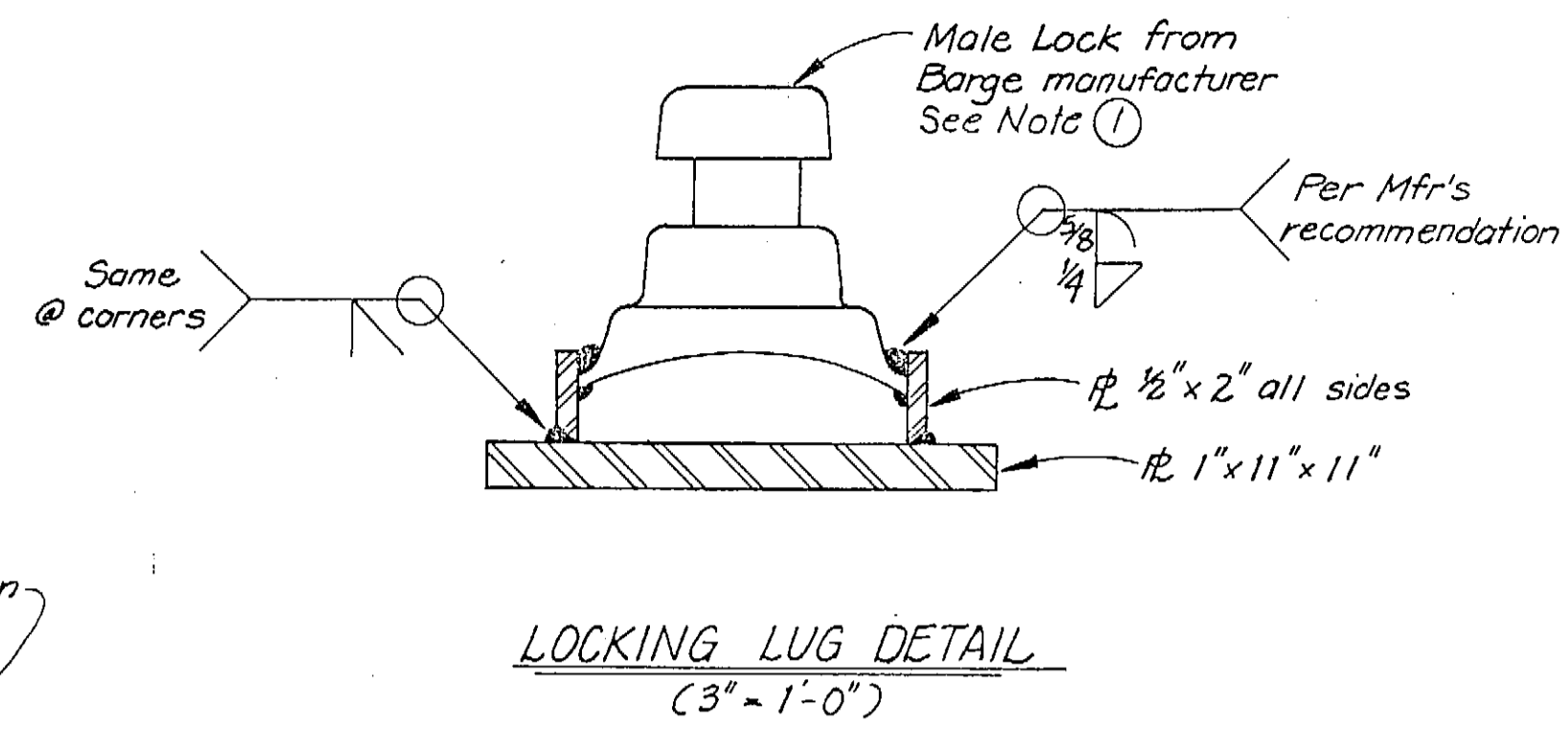
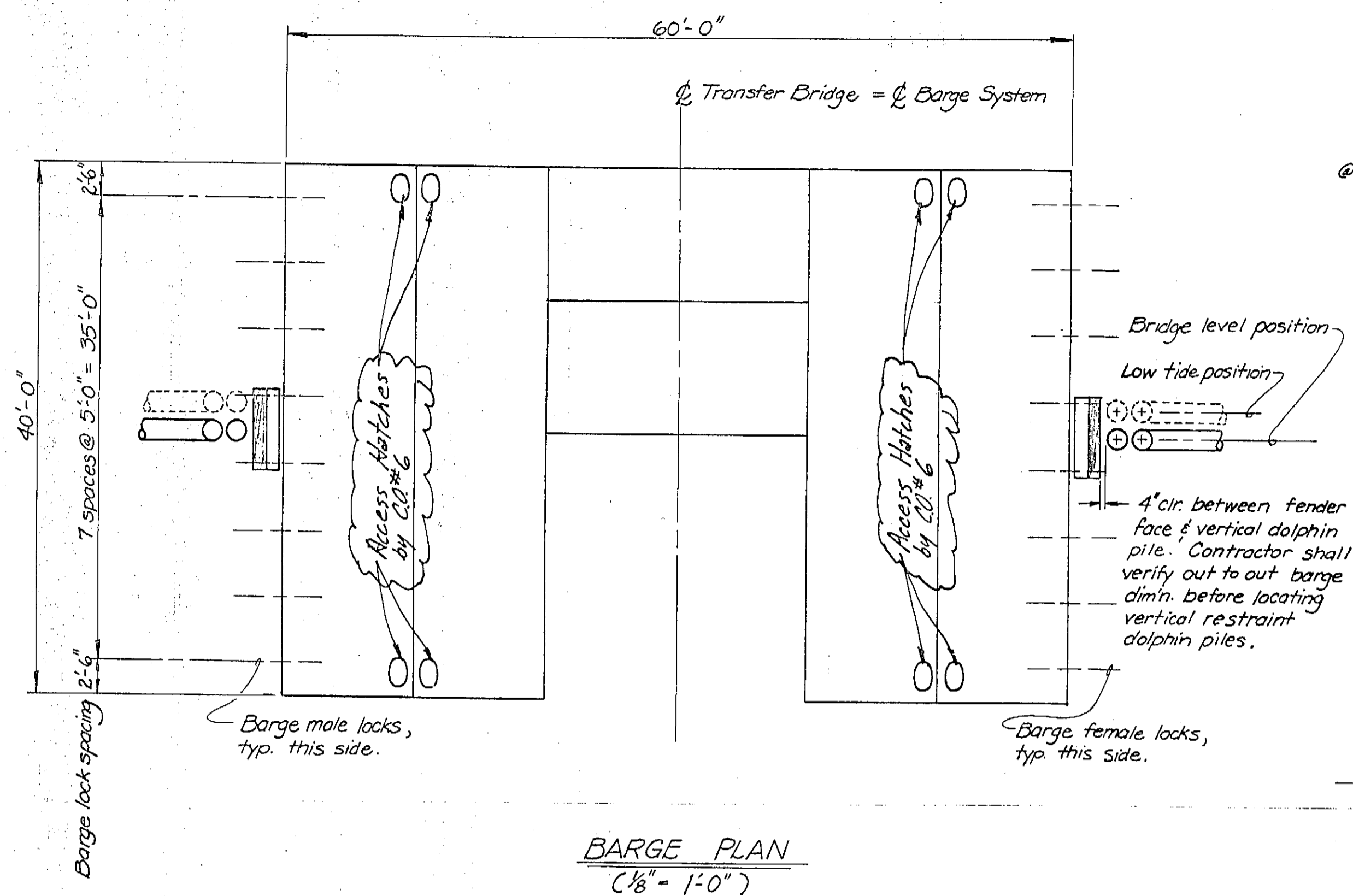


- Notes:
- \*Main members subject to tensile stress. Requires Charpy test per specs.
  - Galvanize after fabrication.
  - Close all open ended tubing with 1/4" P and seal weld.
  - Apron Operating Limits:  
 Up Limit = 5° from vertical  
 Down Limit = 20° below horizontal
  - Approx. Wt = 11,000 lbs.

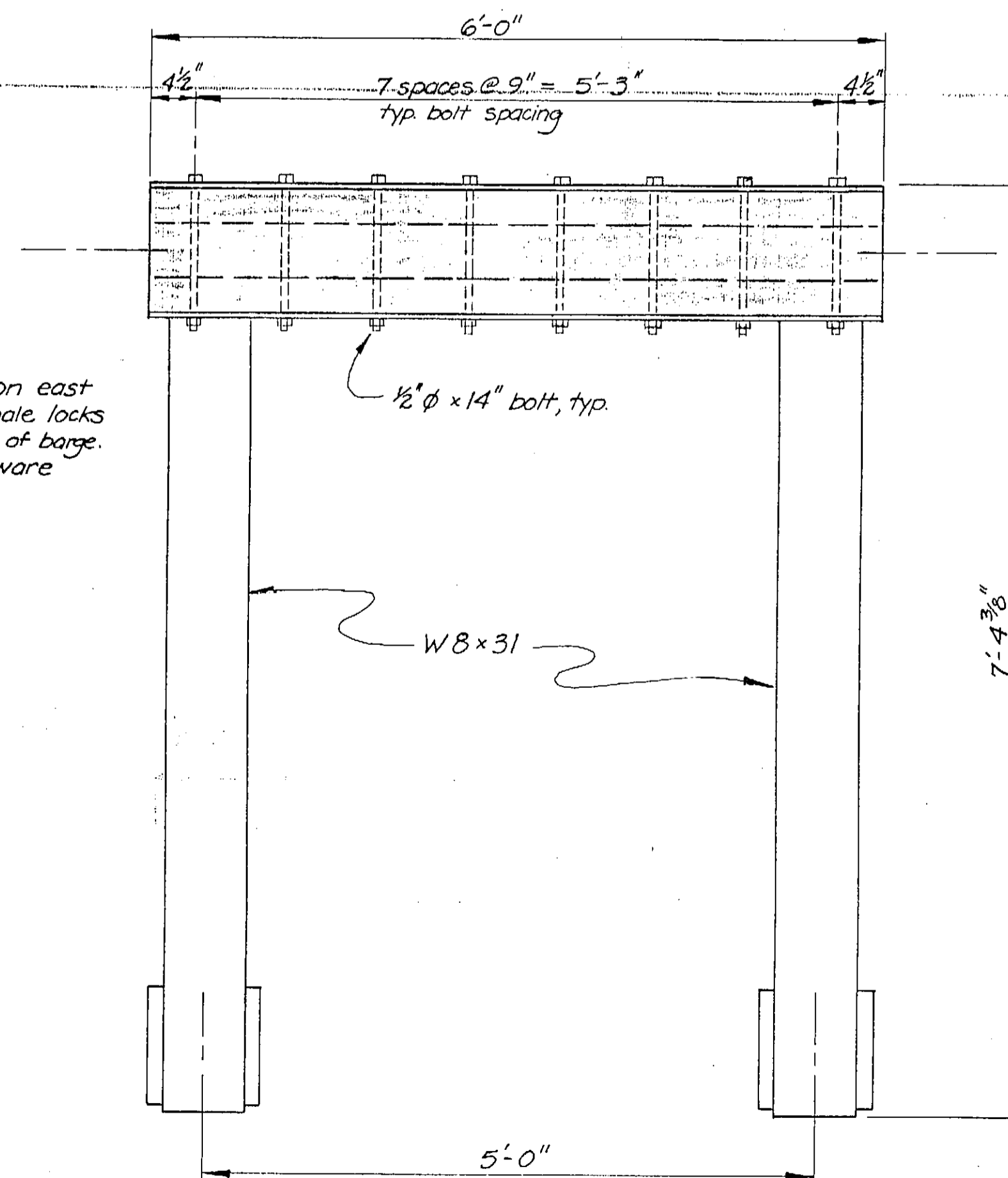
SHT 28 OF 33  
**METLAKATLA PONTOON UPGRADE**  
**STP-0927(4) & 75269**  
 AS-BUILT  
 Date: 10/11/07

DESIGNED <i>BS</i>	CHECKED	DRAWN <i>DB</i>	DATE <i>10-04</i>
PROJECT NUMBER <i>A10002</i>	SHEET <i>18</i> OF <i>30</i>		

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES  
 Metlakatla, Alaska  
**AS-BUILT**  
 13' APRON DETAILS



Note:  
① Male locks req'd. on east side of barge, female locks req'd. on west side of barge. Fender locking hardware per manufacturer.



FENDER WELDMENT DETAILS

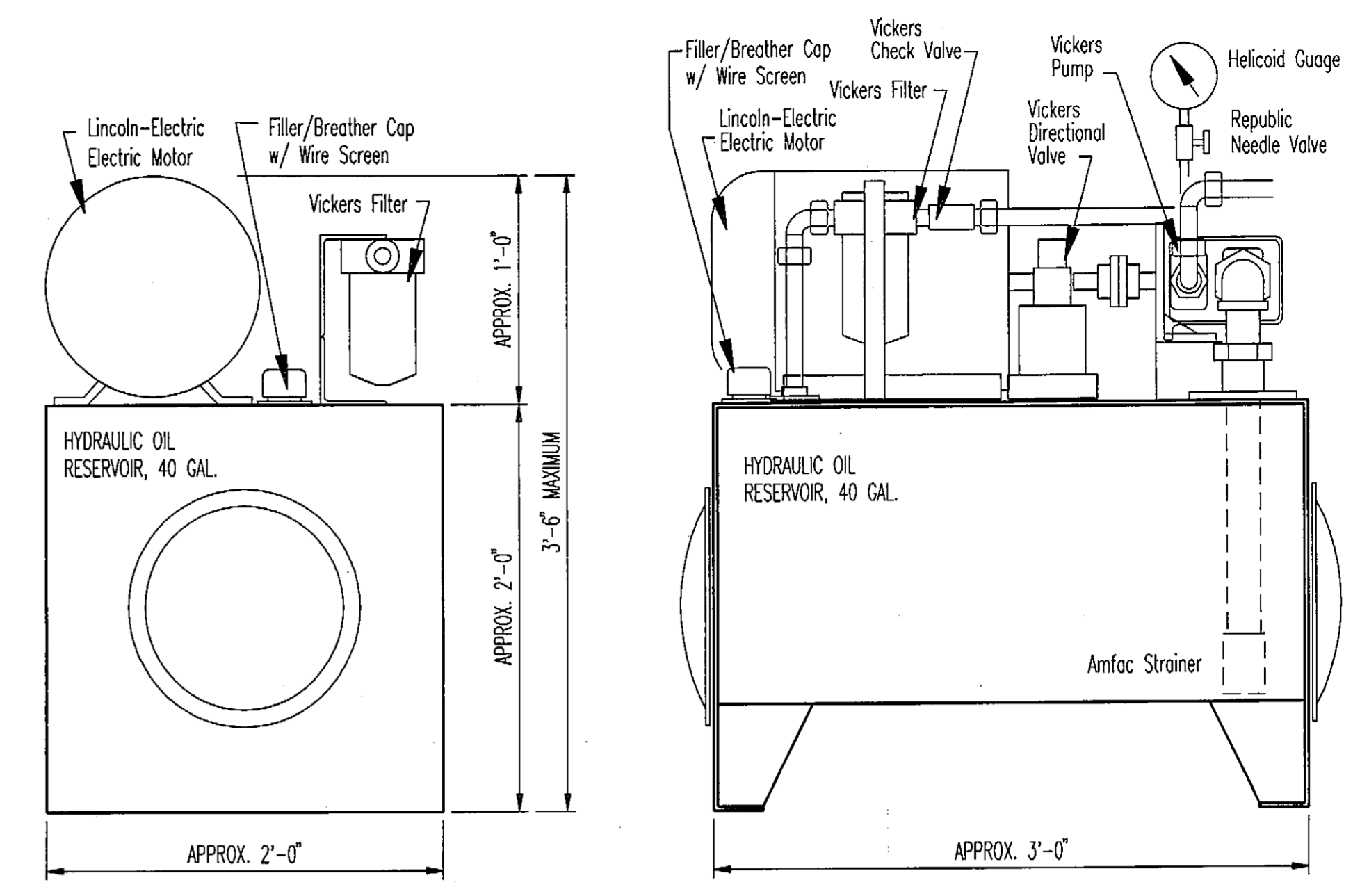
(1" = 1'-0")  
2 req'd: One As Shown (East), One w/ Female Locks (West)

Note:  
Barge Units are Flexifloat S-70 Series from Robishaw Engineering, Inc.  
P.O. Box 19246  
Houston, Texas 77224  
Phone (713) 468-1706

SHT 29 OF 33

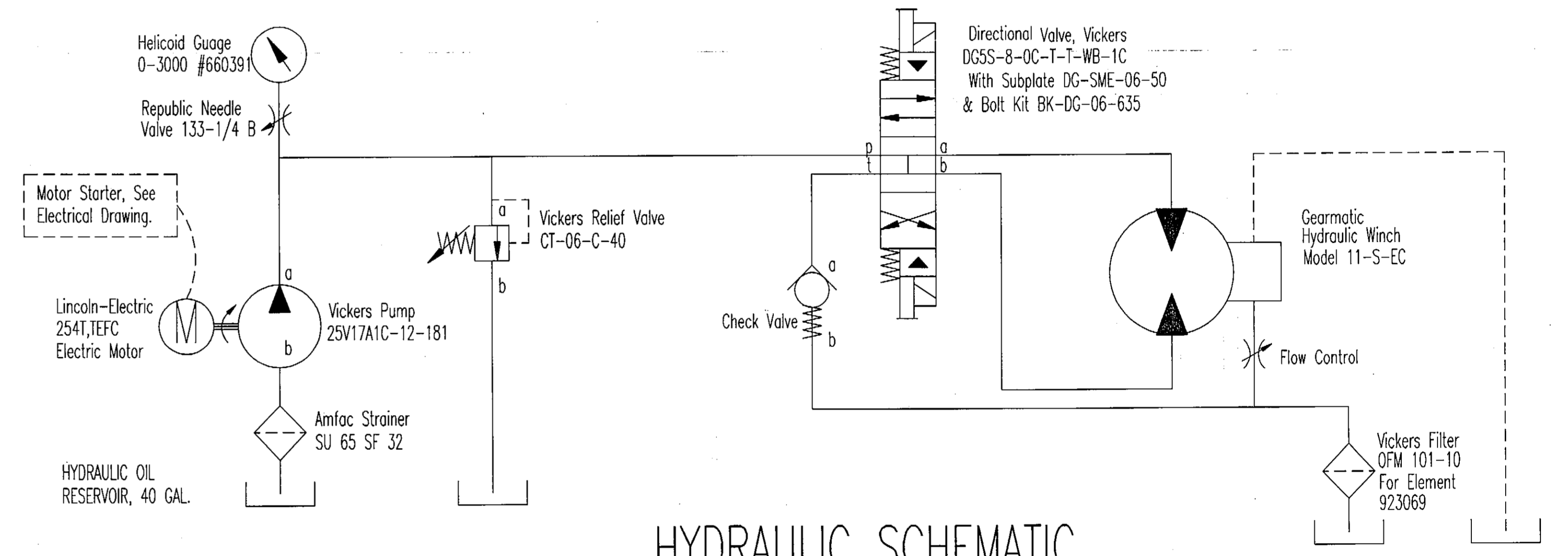
METLAKATLA PONTOON UPGRADE  
STP-0927(4) & 75269

DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
Metlakatla AS-BUILT Metlakatla Alaska BARGE FENDER and RESTRAINT DOLPHIN DETAILS	
DESIGNED BS	CHECKED
DRAWN DS	DATE July 1984
PROJECT NUMBER A7000	SHEET



HYDRAULIC POWER UNIT

AS-BUILT  
COPY FROM CONSTRUCTION PLANS

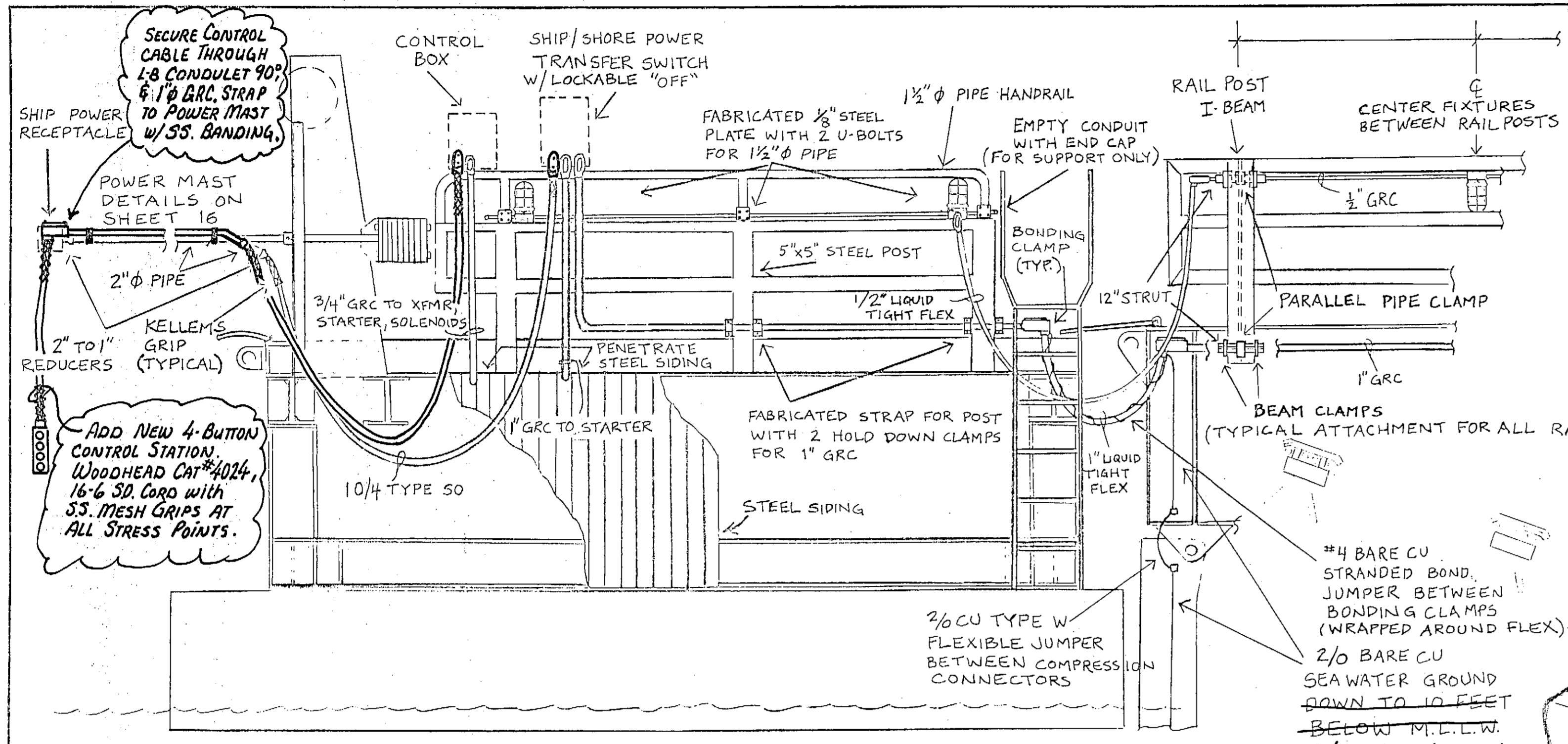


HYDRAULIC SCHEMATIC

SHT 30 OF 33  
METLAKATLA PONTOON UPGRADE  
STP-0927(4) & 75269

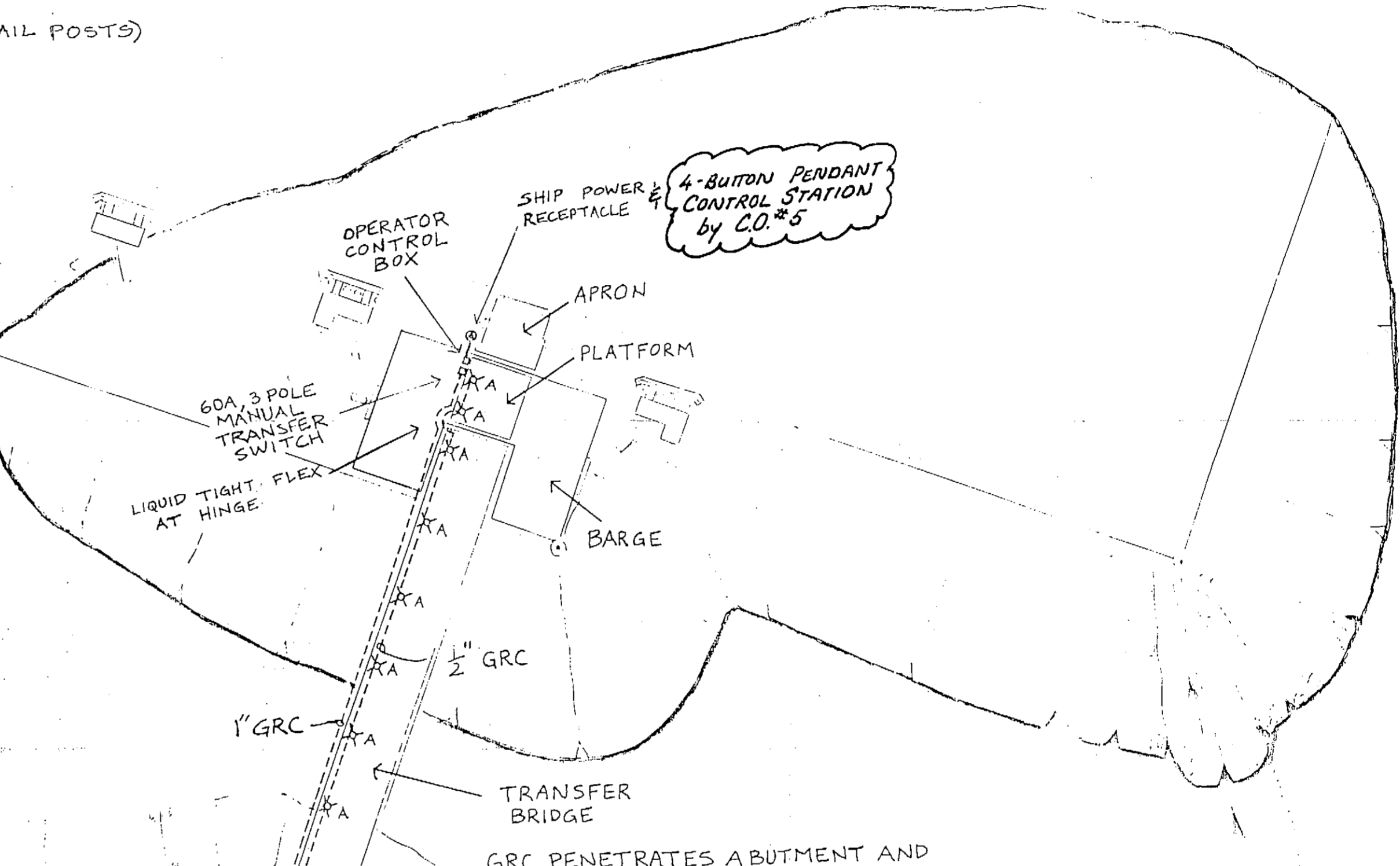
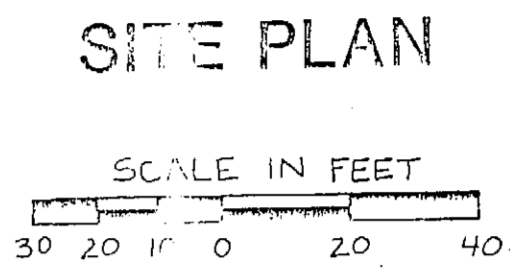
MET-HYD.DWG

DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
METLAKATLA		ALASKA	
<b>AS-BUILT</b> HYDRAULIC SCHEMATIC			
DESIGNED: BAS	CHECKED: JS	DRAWN: BAS/BN	DATE: JULY, 1984
PROJECT NUMBER: A70002		SHEET: 25 OF 30	

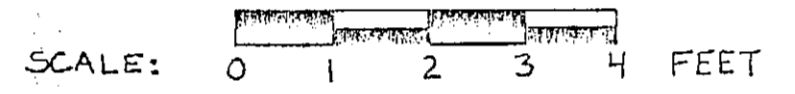


### FIXTURE SCHEDULE OR EQUIVALENT

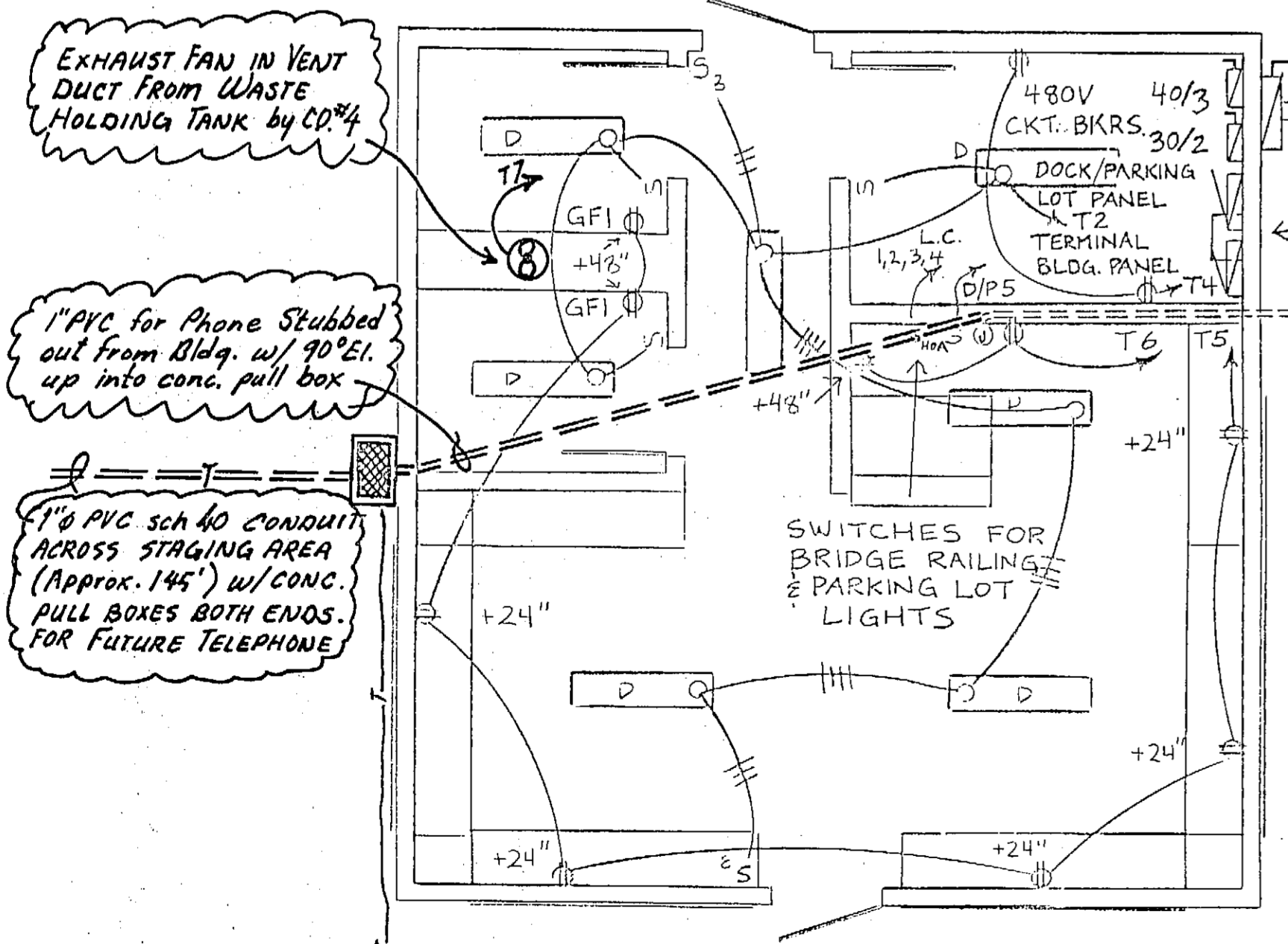
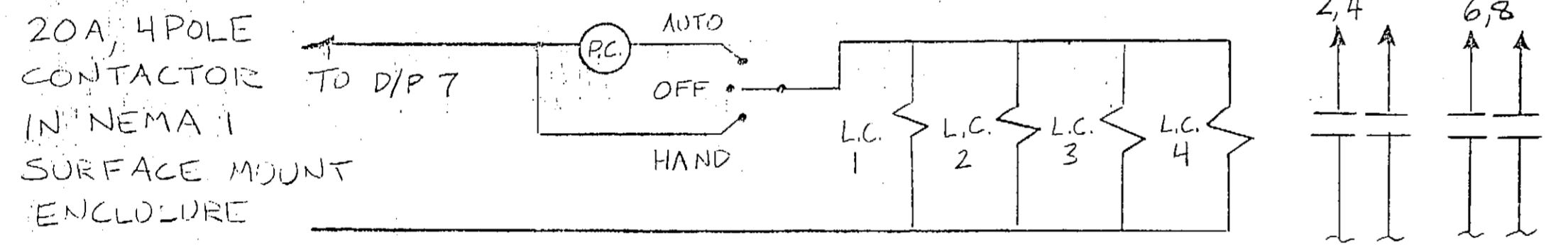
A	CROUSE HINDS VAPORGUARD CLASS II, DIVISION 2 INCANDESCENT #VXHF15GP WITH 150W A21 EXTENDED LIFE BULB
B	G.E. M-400A CUTOFF POWR/DOOR #C646N503 WITH 400W LUCALOX BULB AND 6' ALUMINUM BRACKET #C626G003
C	G.E. M-400A POWR/DOOR #C724N049 WITH 400W METAL HALIDE BULB AND 6' ALUMINUM BRACKET #C626G003 ADD LIGHT DIRECTING CUT-OFF SHIELD by CO.#6
D	LITHONIA DAMP LOCATION 2-TUBE INDUSTRIAL FLUORESCENT WITH ZERO DEG. F. BALLAST, #DL 240 AR 120 CW



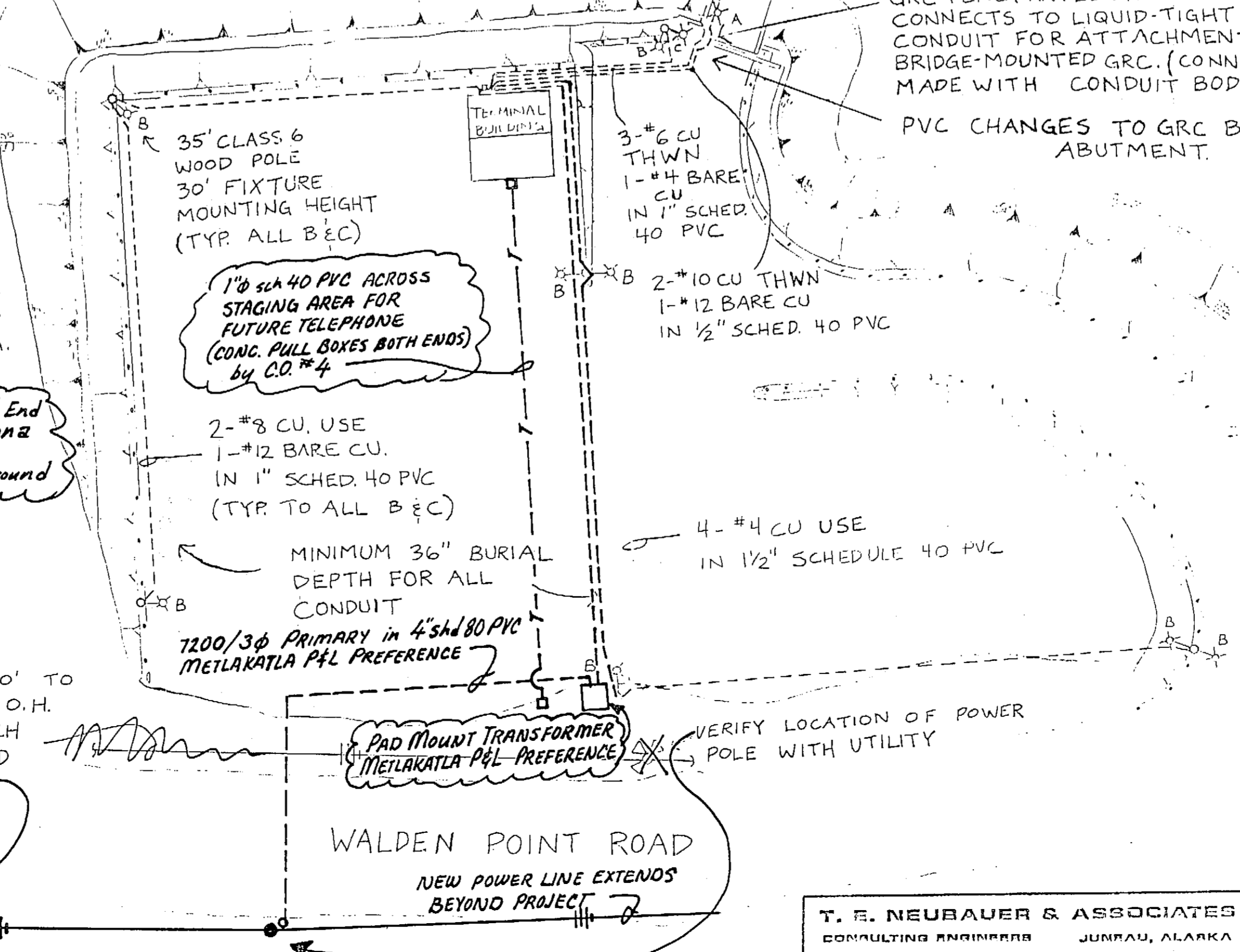
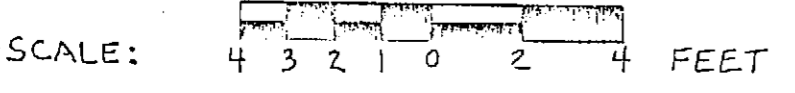
BRIDGE AND BARGE CONDUIT LOCATIONS



LIGHTING CONTACTOR DETAIL



TERMINAL BUILDING PLAN



SHT 31 OF 33

**METLAKATLA PONTOON UPGRADE**

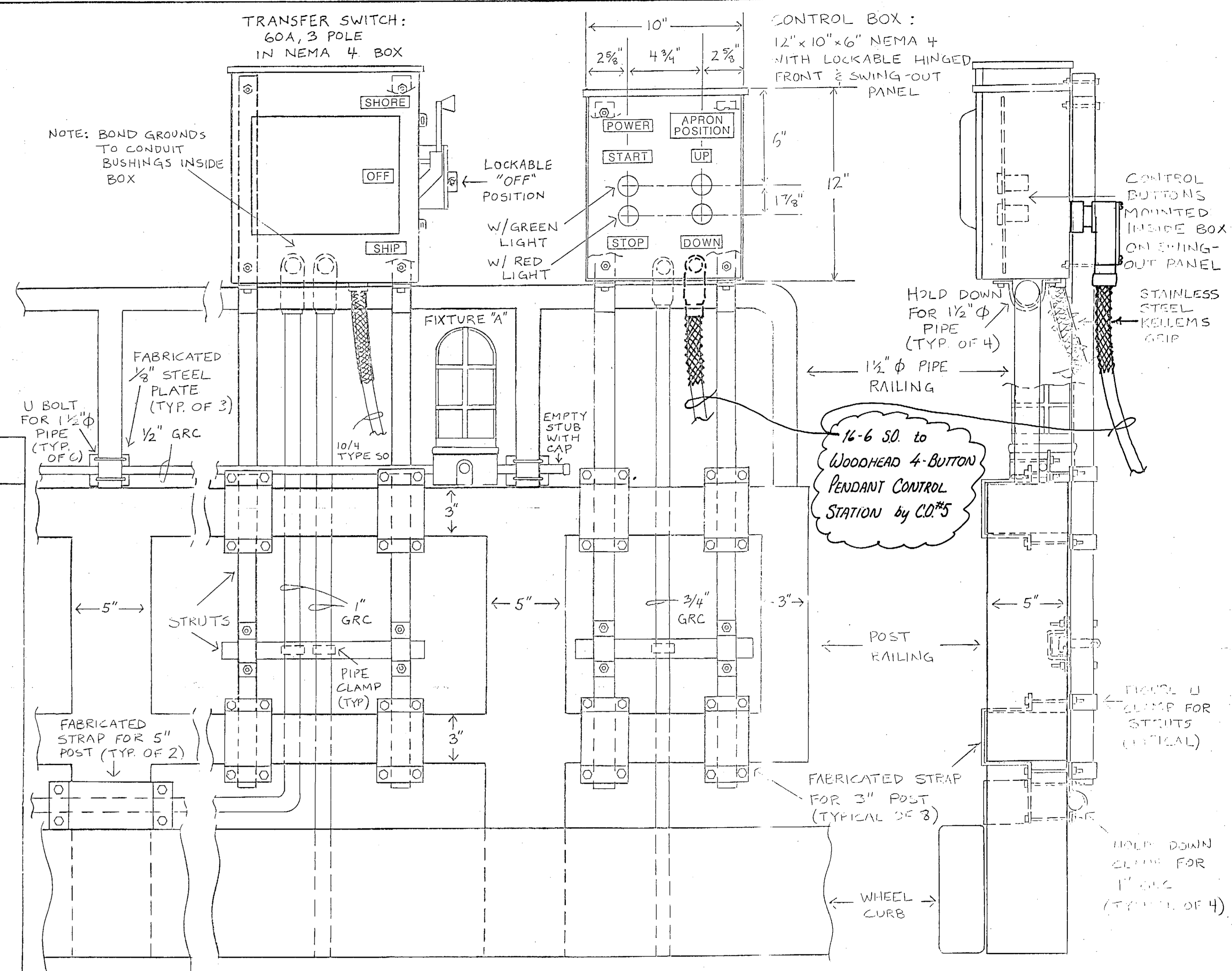
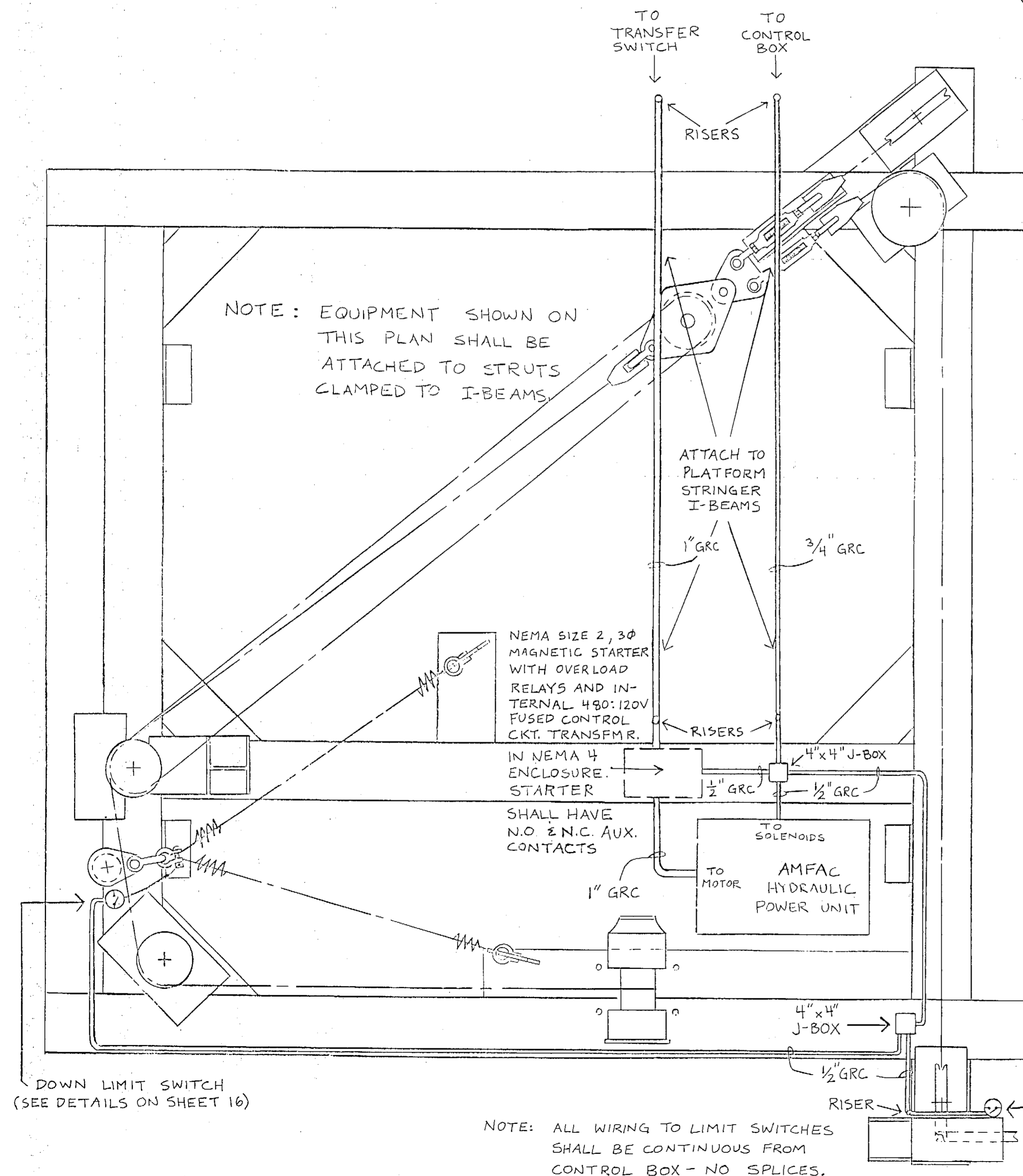
**STP-0927(4) & 75269**

T. E. NEUBAUER & ASSOCIATES  
CONSULTING ENGINEERS JUNEAU, ALASKA  
JOB NUMBER 100.5101

DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
METLAKATLA		ALASKA	
<b>AS-BUILT</b> ELECTRICAL			
CONDUIT PLANS & BUILDING CIRCUITS			
DESIGNED TCO	CHECKED	DRAWN TCO	DATE 7-85
PROJECT NUMBER 10009		SHEET 2	

**BARGE CONDUIT PLAN**

SCALE: 0 1 2 3 4 FEET



**BARGE PLATFORM RAILING MOUNT CONDUIT DETAILS**

VIEW TOWARDS SHORE

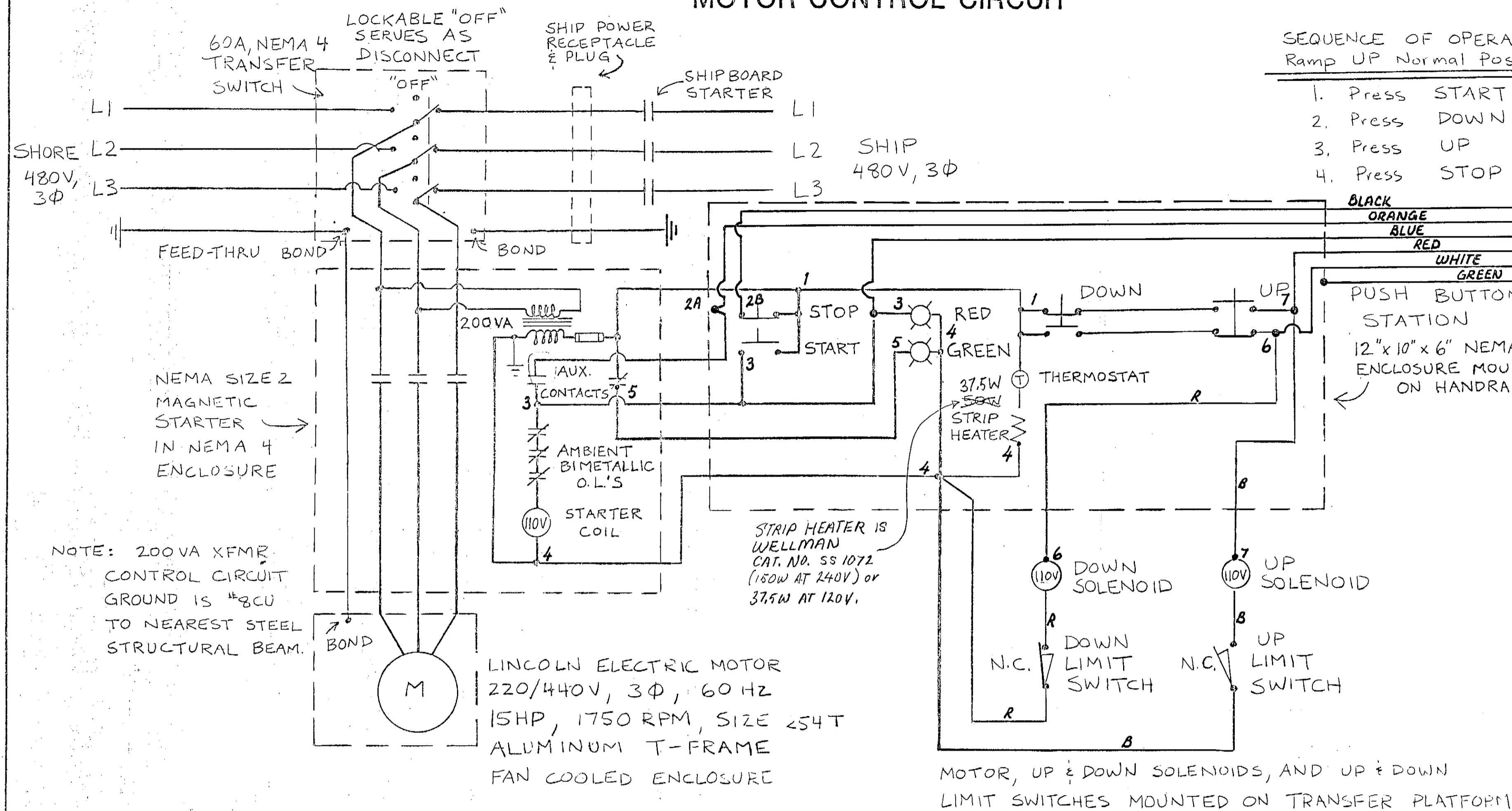
SCALE: 0 3 6 9 12 INCHES

SHT 32 OF 33  
**METLAKATLA PONTOON UPGRADE**  
**STP-0927(4) & 75269**

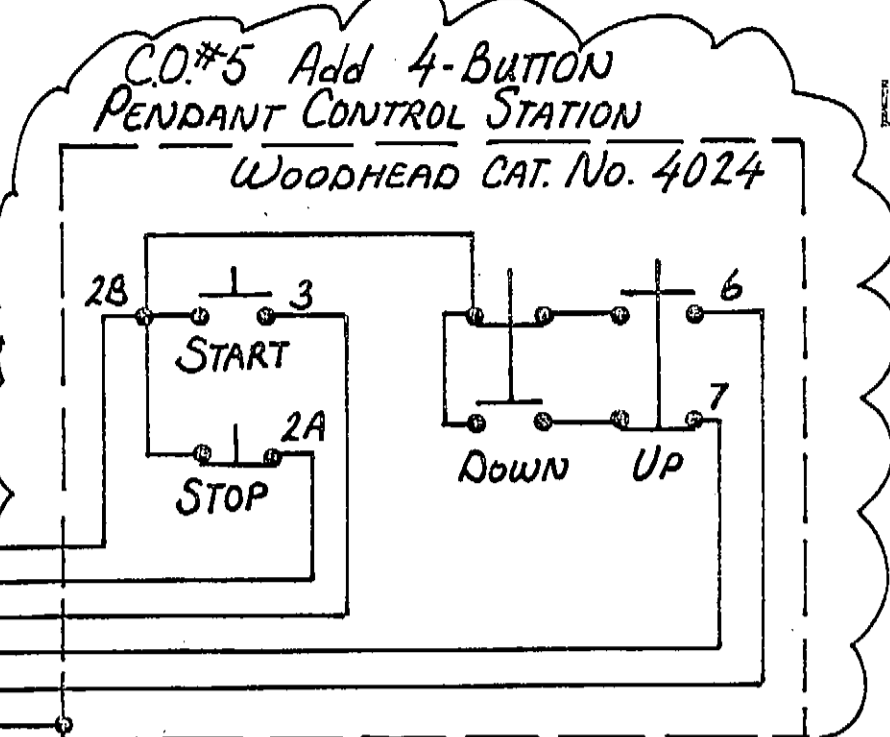
T. E. NEUBAUER & ASSOCIATES  
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 JOB NUMBER 100.5101

DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
METLAKATLA	AS-BUILT ELECTRICAL
CONDUIT PLANS & MOUNTING DETAILS	
DESIGNED TCO	CHECKED
PROJECT NUMBER A10002	SHEET 32 OF 33

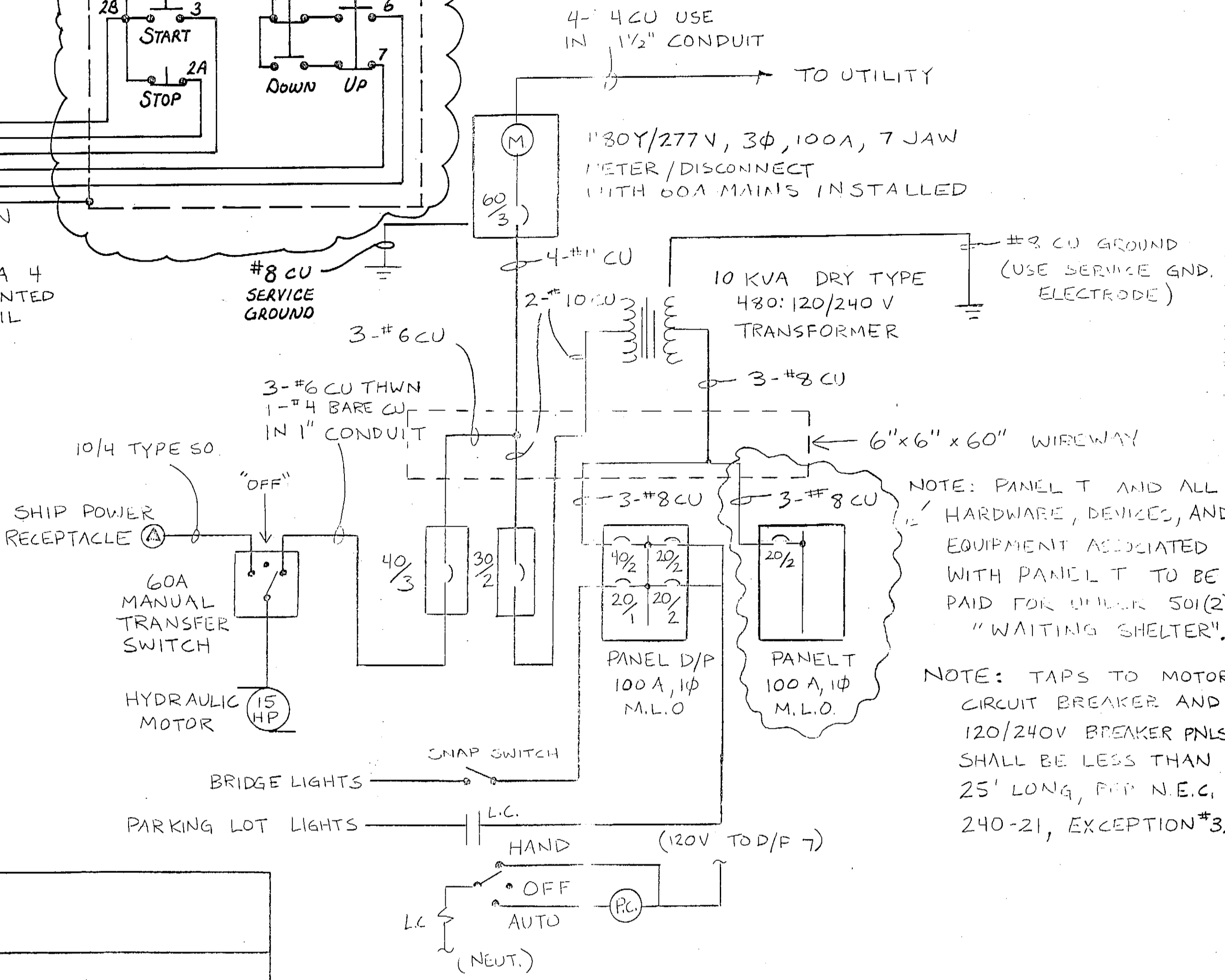
### MOTOR CONTROL CIRCUIT



- SEQUENCE OF OPERATION  
Ramp UP Normal Position
1. Press START
  2. Press DOWN
  3. Press UP
  4. Press STOP



### LINE DIAGRAM



### PANEL SCHEDULES

PANEL DESIGNATION D/P  
LOCATION TERMINAL BLDG. SERVING FERRY DOCK & PARKING LIGHTS  
120/240 VOLTS, 1Ø, 3 WIRE 100 AMP WITH MAIN LUGS

CKT. NO.	DESCRIPTION	WIRE SIZE	KVA	AMP TRIP	AMP TRIP	KVA	WIRE SIZE	DESCRIPTION	CKT. NO.
1	MAIN BREAKER	#8	5.9	40	20	2.5	#8	PARKING LOT	2
3				12	12				4
5	BRIDGE RAILING		1.4	20	20	2.0	#8	PARKING LOT	6
7	LIGHTING CONTACTOR			20					8
9									10
11									12

PANEL DESIGNATION T  
LOCATION TERMINAL BLDG. SERVING TERMINAL BLDG. LIGHT & POWER  
120/240 VOLTS, 1Ø, 3 WIRE 100 AMP WITH MAIN LUGS

CKT. NO.	DESCRIPTION	WIRE SIZE	KVA	AMP TRIP	AMP TRIP	KVA	WIRE SIZE	DESCRIPTION	CKT. NO.
1	MAIN BREAKER	#8	2.7	20	20	0.7		LIGHTS	2
3				12	12				4
5	WAITING RM. REC.		1.3	20	20	0.4		STORAGE RM. REC.	6
7	EXHAUST FAN BY CO#4			20	20	0.4		WAITING RM. REC.	8
9									10
11									12

### EQUIPMENT SCHEDULE

OR EQUIVALENT

PANELS T AND D/P	SQUARE D TYPE NQO, SURFACE MOUNT
30 AMP, 2 POLE CIRCUIT BREAKER	SQUARE D #EHB24030 IN #EHB125NS ENCLOSURE
10 KVA TRANSFORMER	SQUARE D SORGL #10S40F
40 AMP, 3 POLE CIRCUIT BREAKER	SQUARE D #EHB34040 IN #EHB125NS ENCLOSURE
TRANSFER SWITCH	SIMILAR TO, BUT WITH NEMA 4 CONSTRUCTION: SQUARE D #B2342RB WITH #H80LBA LOCKABLE "OFF"
SHIP POWER RECEPTACLE	PLYLE NATIONAL #ZP-16-346SN, NO EXCEPTIONS
MAGNETIC STARTER	SQUARE D CLASS 8536 #SDW-11-B38-FT-12-X
CONTROL CABINET	HOFFMAN #A-12106CHNFSS WITH #A-JCKFK SWING-OUT PANEL AND #A-PLKJIC PADLOCK KIT AND 6-#AL23SS FAST CLAMPS
ILLUMINATED PUSHBUTTONS	SQUARE D #SK1L1GH5 ("START"), #SK1L1RH6 ("STOP")
STANDARD PUSHBUTTONS	SQUARE D #SKR-1B1H3 ("UP" & "DOWN")
LIGHTING CONTACTOR	SQUARE D #LG-40

### SERVICE CALCULATIONS

HYDRAULIC MOTOR	15 HP	21 F.L.A. x 277V x 3φ	17.5 kVA
PANEL D/P:			
BRIDGE LIGHTS	INCANDESCENT	9 x 150W	1.4 kVA
PARKING LOT LIGHTS	H.I.P.	9 x 400W @ 80% P.F.	4.5 kVA
		SUBTOTAL	5.9 kVA ON 25.0 A/φ @ 240V, 1φ
PANEL T:			
BUILDING LIGHTS	FLUORESCENT	7 x 80W @ 80% P.F.	0.7 kVA
BUILDING RECEPTACLES		11 x 180W	2.0 kVA
		SUBTOTAL	2.7 kVA ON 11.0 A/φ @ 240V, 1φ
TOTAL SERVICE			28.1 kVA ON 31.4 A/φ @ 277V, 3φ

SHT 33 OF 33  
**METLAKATLA PONTOON UPGRADE**  
**STP-0927(4) & 75269**

AS-BUILT  
Date: 1-13-87 Wml

T. E. NEUBAUER & ASSOCIATES  
CONSULTING ENGINEERS JUNEAU, ALASKA  
JOB NUMBER 100.5101

STATE OF ALASKA  
DEPARTMENT OF TRANSPORTATION AND PUBLIC UTILITIES

METLAKATLA AS-BUILT ALASKA  
ELECTRICAL CIRCUIT DIAGRAMS & SERVICE CALCULATIONS

DESIGNED TCO	CHECKED	DRAWN TCO	DATE 7-85
PROJECT NUMBER A70002		SHEET 20	OF 20