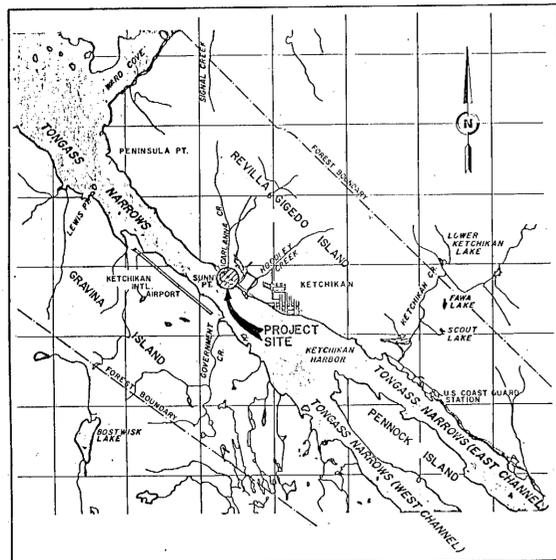


# KETCHIKAN VESSEL MAINTENANCE FACILITY

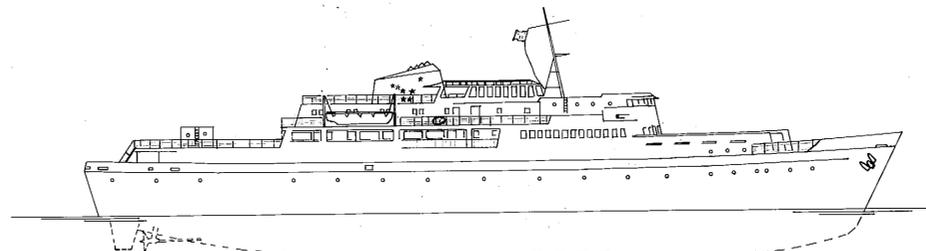
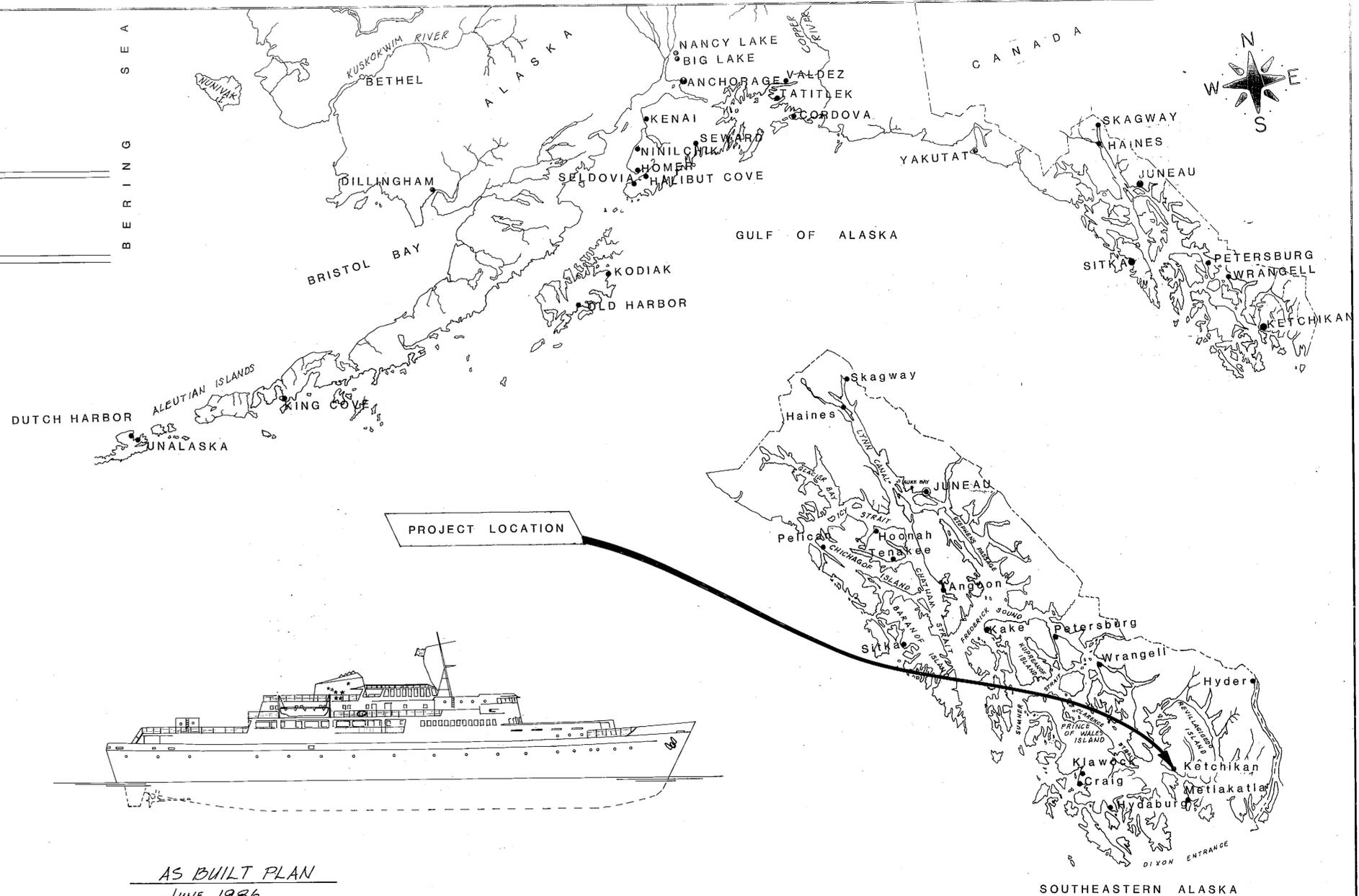
# SOUTH BERTH

PROJECT NO. X70010



VICINITY MAP

0 4 8 16 MILES



AS BUILT PLAN  
JUNE 1986  
CONTRACTOR: WESTERN MARINE CONSTRUCTION, INC.

AS-BUILT  
DATE: 6-86

STATE  
OF  
ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

MARINE FACILITIES

APPROVED

*Handwritten Signature*  
DIRECTOR  
Recommend For Approval Group Design Chief  
Sheet 1 of 57

INDEX TO SHEETS	
1 TITLE	47/50 WHARF EXTENSION
2 QUANTITIES AND GENERAL LAYOUT	51 SHORE LINE TIE-UP POINTS
3 SITE GRADING	52/53 NORTH DOLPHIN EXPANSION
4 GENERAL LAYOUT	54 MAIN WHARF HAWSER RAIL
5 SOUTH BERTH BASIN & UPLANDS	55 WORK FLOAT INTERTIE
6/20 TRANSFER BRIDGE	56 ELECTRICAL
21/32 PONTON	57 LOG OF TEST HOLES
33/43 WORK FLOAT	
44 RESTRAINT DOLPHIN	
45/46 GANGWAY	

# ESTIMATE OF QUANTITIES

No.	Item	Pay Unit	Est. Quan.	Unit	Total
202	Excavation	L.S.	3500	C.Y.	3500
203	Borrow, Type "A"	L.S.	25,000	C.Y.	25,000
205(1)	Riprap, Class II	L.S.	60	C.Y.	60
205(2)	Riprap, Class IV	L.S.	120	C.Y.	120
301(1)	Treated Timber Piles, Furnished	L.F.	2475	L.F.	2475
301(2)	" " " " Driven	Ea.	33	Ea.	33
301(3A)	18" $\phi$ x 1/2" wall Steel Pipe Piles, Furnished	L.F.	5980	L.F.	5980
301(3B)	24" $\phi$ x 1/2" wall " " " " "	L.F.	986	L.F.	986
301(3C)	36" $\phi$ x 1/2" wall " " " " "	L.F.	412	L.F.	412
301(4A)	18" $\phi$ x 1/2" wall " " " " Driven	Ea.	40	Ea.	40
301(4B)	24" $\phi$ x 1/2" wall " " " " "	Ea.	12	Ea.	12
301(4C)	36" $\phi$ x 1/2" wall " " " " "	Ea.	4	Ea.	4
301(5)	Shore Line Tie-up Points	Ea.	2	Ea.	2
302(1)	Structural Steel Trans. Br. and Abut., Furnish, Fab. and Erect	L.S.	253,000	lb.	253,000
302(2)	" " Pontoon and Catwalks, " " " "	L.S.	110,000	lb.	110,000
302(3)	" " Work Floats, " " " "	L.S.	860,000	lb.	860,000
302(4)	" " Rest. Dolphin Cap, " " " "	L.S.	4	Ea.	4
302(5)	N. Dolphin Expansion and Fender System, " " " "	L.S.	1	Ea.	1
302(6)	Wharf Extension Fender System, " " " "	L.S.	1	Ea.	1
302(7)	Gangways and Approaches, " " " "	L.S.	40,000	lb.	40,000
302(8)	Work Float, Steel Grate Decking (Alternate "A")	L.S.	120,000	lb.	120,000
302(9)	Main Wharf Hawser Rail	L.S.	All Req'd.	L.S.	All Req'd.
304	Concrete Wharf Extension	L.S.	200	C.Y.	200
306	Work Float, Glu-lam Decking (Alternate "B")	L.S.	78	M <sup>3</sup> M	78
501	Electrical and Illumination	L.S.	All Req'd.	L.S.	All Req'd.

NOTES: ① Includes approx. 7000 cy waste, remainder to be utilized in embankment construction.  
 ② New material only, quantity does not include salvaged and reused material.  
 ③ Includes concrete filling of piles as shown on the plans (approx. 220 cy total), and sand fill.  
 ④ Includes approx. 24 cy of reinforced concrete in the abutment.

## PILE TABLE

Location / Orientation	Dia. (in.)	Capacity (Tons)		Tip Elevations		Cutoff Elev.
		Bearing	Uplift	Min.	Est.	
N. Dolphin Bearing / Batter	18	100	67	-157.5-0	-175.0	+27.17
N. Dolphin Fender / Vertical	24	N/A	N/A	-60.0	-60.0	+24.00
Bridge Abut. / Vert. & Batter	18	50	N/A	-85.5-0	-150.0	+18.57
Rest. Dolphin / Vertical	36	N/A	N/A	-74.75-0	-75.0	+28.00
Rest. Dolphin / Batter	18	67	50	-71.50-0	-150.0	+32.25
Wharf Int. Brg. / Vertical	18	90	N/A	-83.0-0	-175.0	+21.67
Wharf Center Brg. / Vertical	18	150	N/A	Ⓞ	Ⓞ	+23.67
Wharf Ext. Brg. / Vertical	18	90	N/A	-139.60-0	-175.0	+21.67
Wharf End. Steel / Vert.	24	N/A	N/A	-60.0	-60.0	+21.50
Wharf Fndr. Timber / Vert.	Ⓞ	N/A	N/A	-39.45-0	-45.0	+30.00
Gangway Approach / Vert.	18	20	N/A	-30.30-0	-60.0	+23.71

NOTES: ① Concrete Filled  
 ② Drive to Min. Tip Elev.  
 ③ 56" min. butt circumference treated timber  
 ④ Inside Cells -172.0-0 (4 piles)  
 Outside Cells -165.0-0 (3 piles)

### GENERAL NOTES

Specifications:  
 Construction: Per contract documents for Project No. X70010  
 Design: Transfer Bridge - AASHTO Wharf, Dolphins, Gangways, Pontoon, and Work Floats - Marine Facilities Design Standards  
 Design Loads:  
 Transfer Bridge: DL - No allowance for future wearing surface, includes 400 plf for future utilities.  
 LL - HS20-44 and 60 psf on pedestrian walkway  
 Work Float: Deck - DL + 200 psf or + 10 kip concentrated loads. (4)  
 Bollards - 30 kip line load.  
 Berthing - 100 kip equiv. static load  
 Hull - 10 ft. max. immersion  
 Wharf: DL + 250 psf or + 30 kip loads (4 loads 12' X 24' pattern).  
 Berthing Energy from fender system  
 Bollards - 30 kip line load  
 Wharf Fender System: Curved 30 ft-kips energy service  
 70 ft-kips energy overload  
 Straight 20 ft-kips service  
 40 ft-kips overload  
 Gangways and Approaches: DL + 60 psf on deck surface.  
 North Dolphin and Fender System: 30 ft-kips energy service  
 70 ft-kips energy overload  
 Design Unit Stresses:  
 Steel: A36 F<sub>s</sub> = 20 Ksi  
 A252 Gr. 2 F<sub>s</sub> = 19.25 Ksi  
 A500 Gr. B F<sub>s</sub> = 25 Ksi  
 A572 F<sub>s</sub> = 27 Ksi  
 A108 F<sub>s</sub> = 29 Ksi  
 A608 Gr. D F<sub>s</sub> = 30 Ksi  
 Concrete: F<sub>c</sub> @ 28 days = 5.5 Ksi  
 Reinforcing Steel: F<sub>y</sub> = 60 Ksi  
 Glu-Lam Timber: Comb 2 Wet Use F<sub>b</sub> = 1.4 Ksi  
 Ekki: F<sub>b</sub> = 3.6 ksi  
 F<sub>v</sub> = 0.3 ksi

Material:  
 Tube Sections A500 Gr. B  
 Pipe Piles A252 Gr. 2 or A501 or A53 Gr. B, Type E or S  
 Pipe Sections A53 Gr. B, Type E or S  
 All other shall be A36 or A572 as noted. Charpy Group 2 impact requirements shall apply.  
 Concrete: Class A-A  
 Reinforcing Steel: A615 Gr. 60  
 Timber: Glu-lam Comb 2 Doug Fir/Larch  
 Fender Faces Ekki  
 Protective Treatments/Coatings:  
 Work Floats: Tanks and connections plates - System 1 (Section 303), remainder of work floats to be galvanized after fabrication or spray metallized.  
 Bridge Pontoon: System 1 (Section 303), catwalks to be galvanized after fabrication.  
 Gangways: Galvanize after fabrication.  
 Transfer Bridge: System 2, 3, or 4 (Section 303), except apron, rails and grate decking, galvanize after fabrication.  
 Pipe Piles and Structural Steel Caps, Wales, Rails and Hardware: Galvanized after fabrication.  
 Fender Timbers: Untreated Ekki  
 Timber Fender Piles: Creo. 17 pcf  
 Glu-lam Decking: Penta (in light oil) 0.6 pcf  
 Reinforcing Steel: Galvanize after fabrication or epoxy coated.  
 Hardware: Galvanize unless otherwise noted.

Piling: - 58  
 Size: 18"  $\phi$  X 1/2" wall, 24"  $\phi$  X 1/2" wall, 36"  $\phi$  X 1/2" wall steel pipe and 57" min. butt circumference timber.  
 Tips: Closed end, as shown on the plans, tip reinforcement as required.  
 Driving Requirements: See Pile Table  
 Fill: Reinforced Class A-A concrete, as shown on the plans as required. (Sand pre-fill required on wharf piles.)

**AS-BUILT**  
 Date: 6-86

**LOAD LIMITS  
TRANSFER BRIDGE**

Maximum load per axle = Number of tires on axle X (tire width in inches X 500 lbs.)  
 Minimum axle spacing limitation for above = 10 ft.  
 Maximum Gross Vehicle Weight = 100,000 lbs.  
 Maximum Outrigger load from crane on 2 ft. square dunnage pad = 60,000 lbs. Outriggers to be located over floorbeam, if possible, and on shore side of ramp to apron hinge.  
 Loads or positions of loads not within the above parameters will require approval, prior to use of bridge, by Alaska Marine Highway System at (907) 465-2740.

**LOAD LIMITS  
PERSONNEL AND MATERIAL GANGWAYS**

Maximum axle load = 10,000 lbs., minimum axle spacing = 5 ft.  
 Maximum single tire load on 5 ft. track axle = 5,000 lbs.  
 Maximum Gross Vehicle Weight = 20,000 lbs.  
 Loads or positions of loads not within the above parameters will require approval, prior to use of bridge, by Alaska Marine Highway System at (907) 465-2740.

**LOAD LIMITS  
WORK FLOAT**

Maximum Load uniformly distributed over deck = 180,000 lbs.  
 Maximum load per axle = 20,000 lbs. Tires for maximum loads to be located no closer than 2 ft. to edge of deck. Minimum axle spacing = 8 ft., minimum track width = 5 ft.  
 Maximum Gross Moving Vehicle Weight = 40,000 lbs.  
 Maximum outrigger load from boom crane on 2 ft. square dunnage pad = 30,000 lbs. Outriggers to be located over floorbeam, if possible. Center of crane turret, to be located within middle onethird of float deck width.  
 Loads or positions of loads not within the above parameters will require approval, prior to use of the float, by the Alaska Marine Highway System at (907) 465-2740.

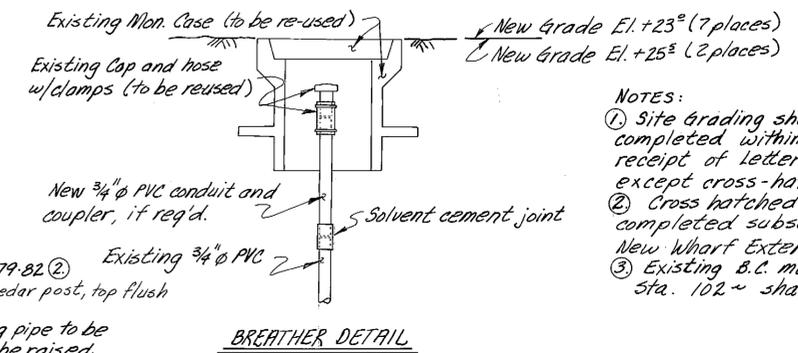
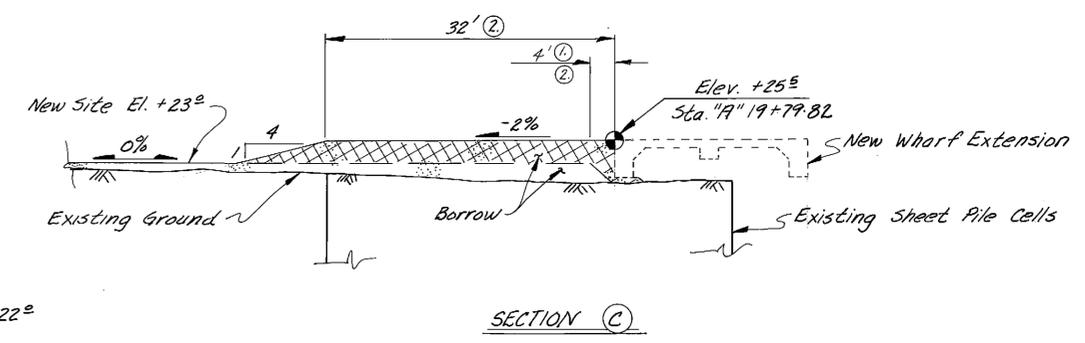
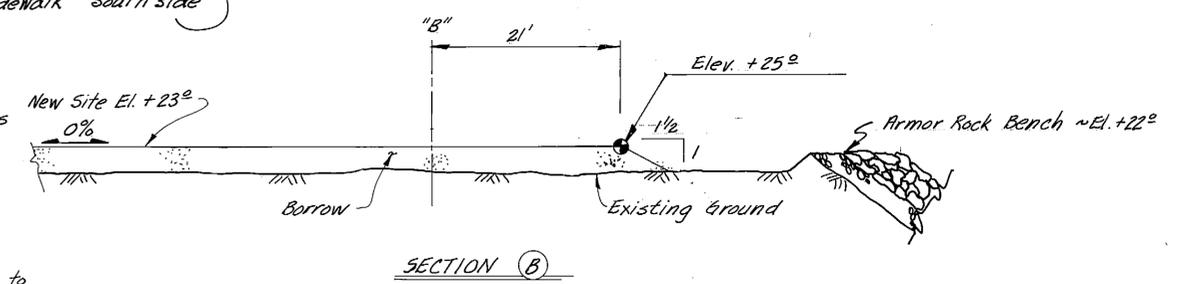
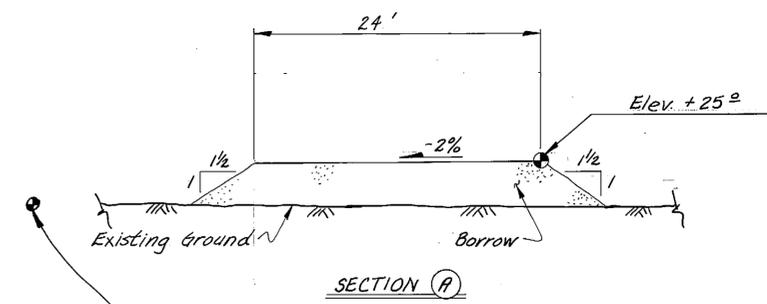
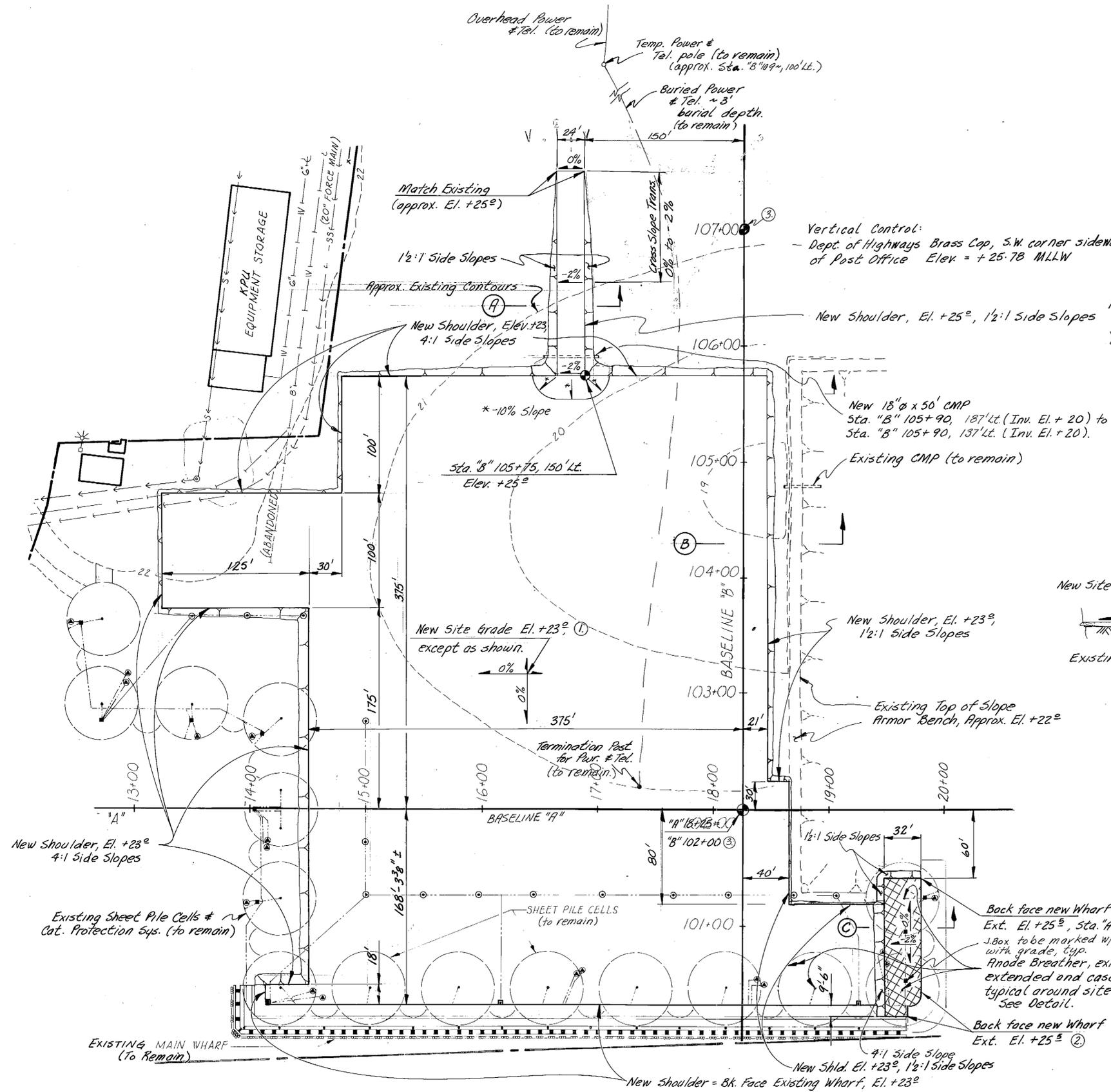
**LOAD LIMITS  
SOUTH BERTH WHARF**  
(Does not apply to Main Wharf parallel to Tongass Narrows)

Maximum Uniform Load over entire deck surface = 250 psf.  
 Maximum Gross Moving Vehicle Weight = 120,000 lbs.  
 Maximum Outrigger load from crane on 2 ft. square, dunnage pad = 60,000 lbs. Outrigger pads, subject to the above, may be located anywhere on the South Berth Wharf deck.  
 Loads or positions of loads not within the above parameters will require approval, prior to use of wharf by Alaska Marine Highway System at (907) 465-2740.

### LOAD LIMIT SIGNS

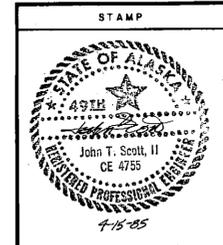
Contractor shall install the above signage. Engraved laminate Red foreground, White 80 pt. letters. Provide 4 of each, adhesive bonded to 10 ga. Stainless sheet metal plates same size as signs. Wharf signs to be attached to 6' x 4' x 4' cedar posts, position as directed by the Engineer, top of sign 36" above finish grade. Gangway signs to be bolted to approach handrail and at work float end of gangway, typ. ea. gangway and approach. Work float signs shall be bolted to the float deck at catwalk and gangway access points to be easily viewed when entering the float, typ. Transfer bridge signs, 2 to mount at abutment end plates, self tap screws acceptable, 2 to mount to each box girder web at the ramp hinge.

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
<b>QUANTITIES AND GENERAL NOTES</b>			
DESIGNED	CHECKED	DRAWN	DATE
PROJECT NUMBER X70010		SHEET 2	OF 57

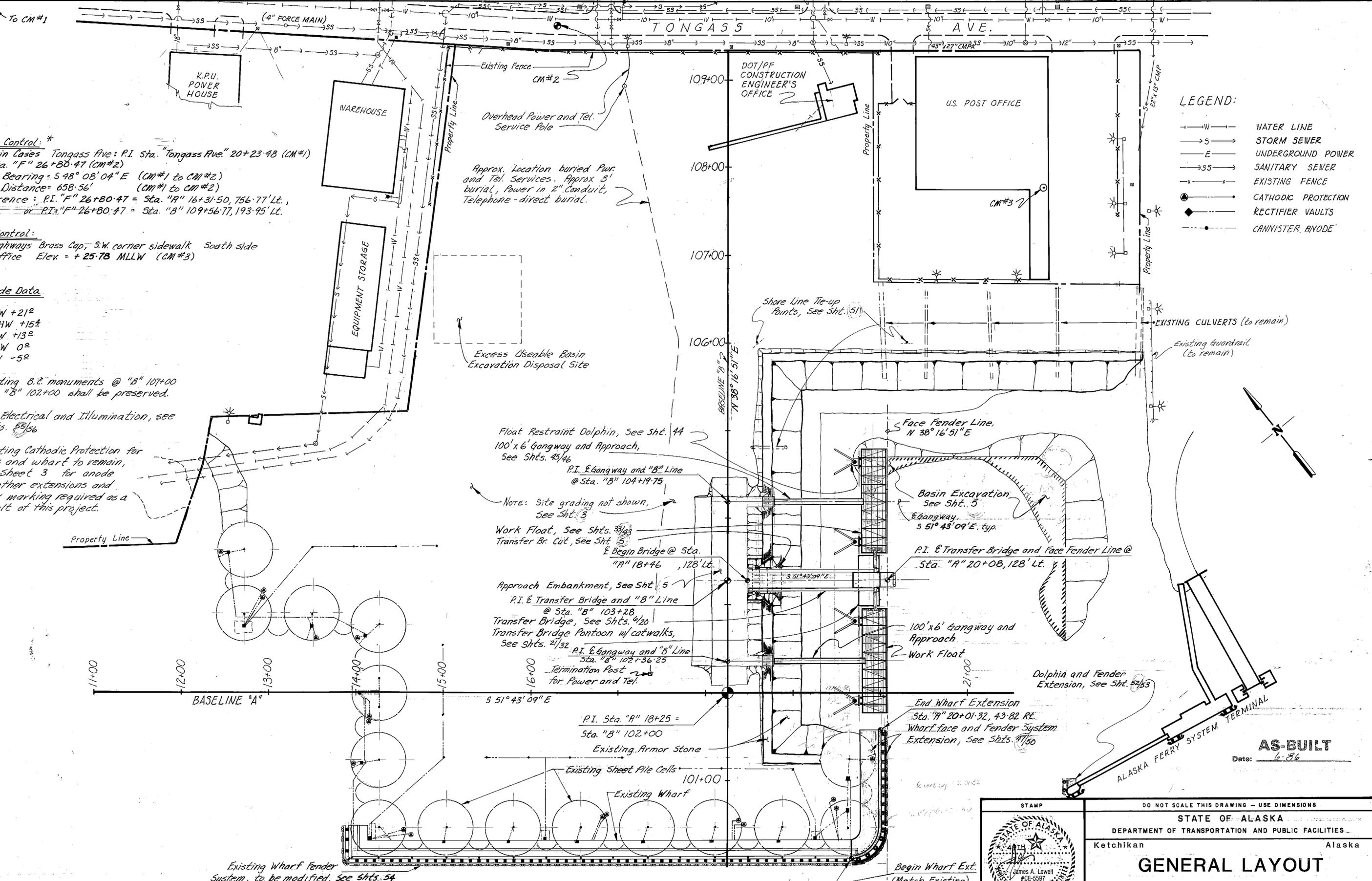


- NOTES:
- Site grading shown on this sheet to be completed within 90 calendar days after receipt of Letter of Award/Notice to Proceed, except cross-hatched area.
  - Cross hatched area of embankment to be completed subsequent to construction of New Wharf Extension.
  - Existing B.C. monuments @ sta. 107~ and sta. 102~ shall be preserved.

AS-BUILT  
DATE 6-86



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STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
<b>SITE GRADING</b>			
DESIGNED	CHECKED	DRAWN	DATE
PROJECT NUMBER X70010		SHEET 3 OF 57	



- LEGEND:**
- W— WATER LINE
  - S— STORM SEWER
  - E— UNDERGROUND POWER
  - SS— SANITARY SEWER
  - x-x- EXISTING FENCE
  - CATHODIC PROTECTION
  - ◆ RECTIFIER VAULTS
  - CANNISTER ANODE

**Horizontal Control: \***  
 Brass Caps in Cases Tongass Ave: P.I. Sta. "Tongass Ave." 20+23.48 (CM#1)  
 to P.I. Sta. "F" 26+80.47 (CM#2)  
 Basis of Bearing =  $S 48^{\circ} 08' 04" E$  (CM#1 to CM#2)  
 Basis of Distance = 658.56' (CM#1 to CM#2)  
 Cross reference: P.I. "F" 26+80.47 = Sta. "A" 18+31.50, 756.77' Lt.,  
 or P.I. "F" 26+80.47 = Sta. "B" 109+56.77, 193.95' Lt.

**Vertical Control:**  
 Dept. of Highways Brass Cap: S.W. corner sidewalk South side  
 of Post Office Elev. = +25.78 MLLW (CM#3)

**Tide Data**

- EHW +21<sup>o</sup>
- MHHW +15<sup>o</sup>
- MHW +13<sup>o</sup>
- MLLW 0<sup>o</sup>
- ELW -5<sup>o</sup>

\* Note: Existing B.M. monuments @ "B" 107+00  
 and "B" 102+00 shall be preserved.

For Electrical and Illumination, see  
 Shts. 55/56

Existing Cathodic Protection for  
 cells and wharf to remain,  
 See Sheet 3 for anode  
 breather extensions and  
 J. Box marking required as a  
 result of this project.

Float Restraint Dolphin, See Sht. 44  
 100' x 6' Gangway and Approach,  
 See Shts. 45/46

P.I. & Gangway and "B" Line  
 @ Sta. "B" 104+19.75

Note: Site grading not shown,  
 See Sht. 3

Work Float, See Shts. 35/36  
 Transfer Br. Cut, See Sht. 5

Begin Bridge @ Sta.  
 "A" 18+46, 128' Lt.

Approach Embankment, See Sht. 5  
 P.I. & Transfer Bridge and "B" Line  
 @ Sta. "B" 103+28

Transfer Bridge, See Shts. 9/20  
 Transfer Bridge Pontoon w/ catwalks,  
 See Shts. 21/32

P.I. & Gangway and "B" Line  
 Sta. "B" 102+36.25

Termination Post  
 for Power and Tel.

P.I. Sta. "A" 18+25 =  
 Sta. "B" 102+00

Existing Armor Stone

Existing Sheet Pile Cells

Existing Wharf

Face Fender Line,  
 $N 38^{\circ} 16' 51" E$

Basin Excavation  
 See Sht. 5  
 & Gangway,  
 $S 51^{\circ} 43' 09" E$ , typ.

P.I. & Transfer Bridge and Face Fender Line @  
 Sta. "A" 20+08, 128' Lt.

100' x 6' Gangway and  
 Approach

Work Float

Dolphin and Fender  
 Extension, See Sht. 52/53

End Wharf Extension  
 Sta. "A" 20+01.32, 43.82' R.E.  
 Wharf face and fender System  
 Extension, See Shts. 47/50

Begin Wharf Ext.  
 (Match Existing)

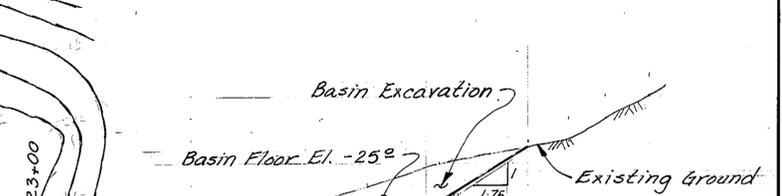
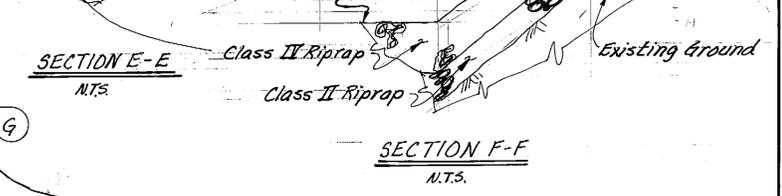
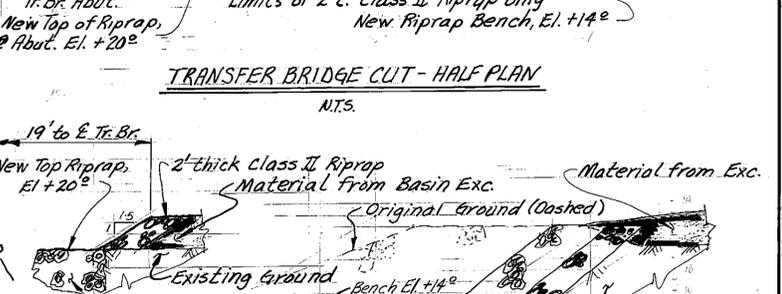
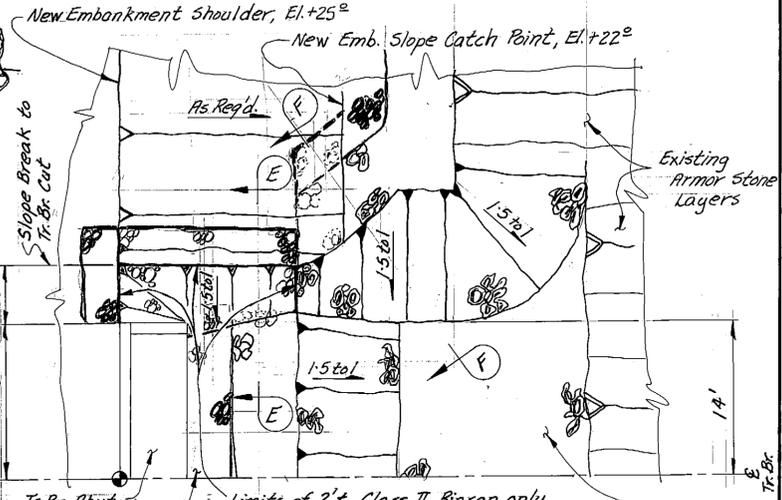
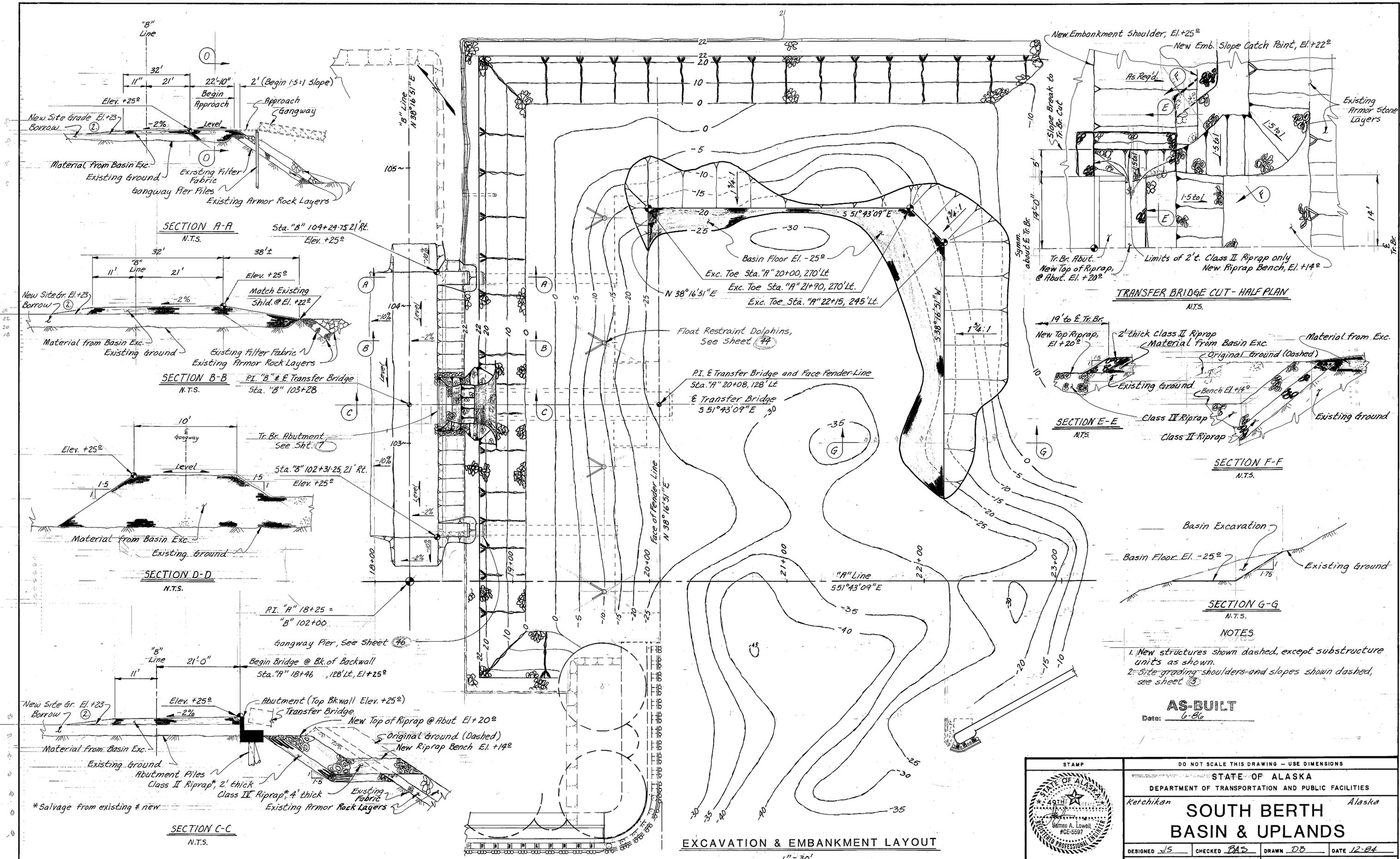
Existing Wharf Fender  
 System, to be modified, See Shts. 54

**SITE PLAN**  
 1" = 50'



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
<b>GENERAL LAYOUT</b>			
DESIGNED <i>JHL</i>	CHECKED <i>BAB</i>	DRAWN <i>LS</i>	DATE <i>1-85</i>
PROJECT NUMBER <i>X70010</i>	SHEET <i>4</i> OF <i>57</i>		

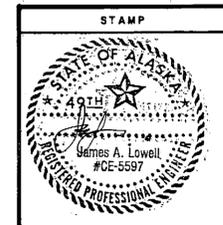
**AS-BUILT**  
 Date: 6-86



**NOTES**

1. New structures shown dashed, except substructure units as shown.
2. Site grading shoulders and slopes shown dashed, see sheet 3.

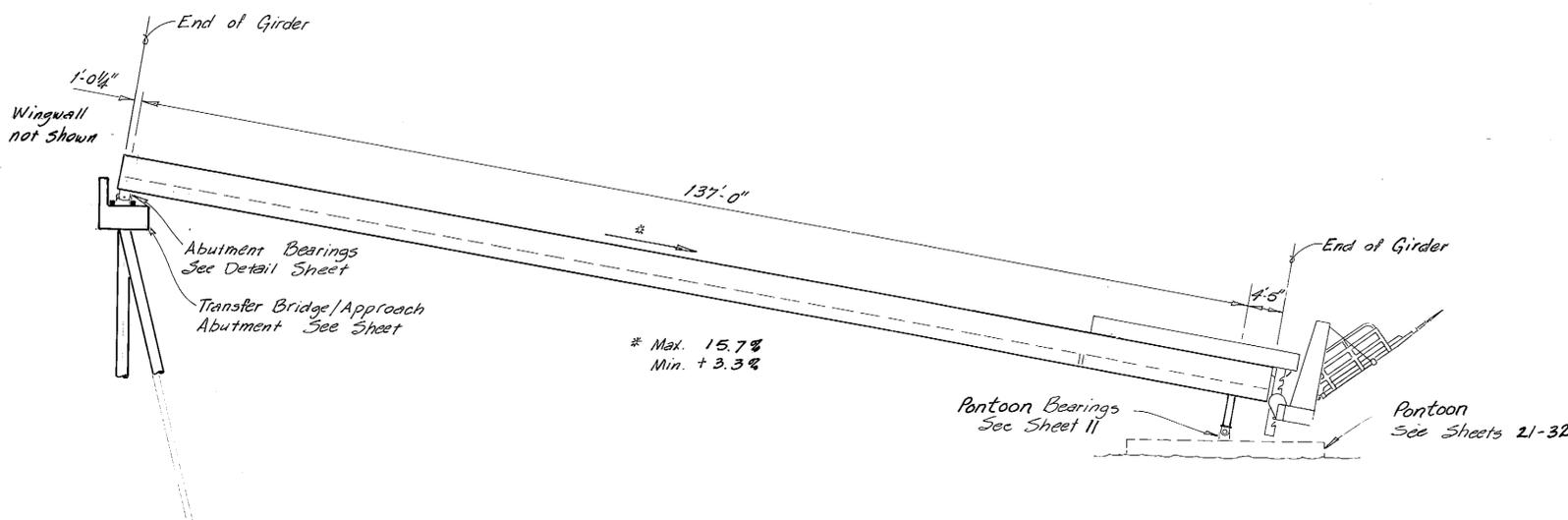
**AS-BUILT**  
Date: 6-86



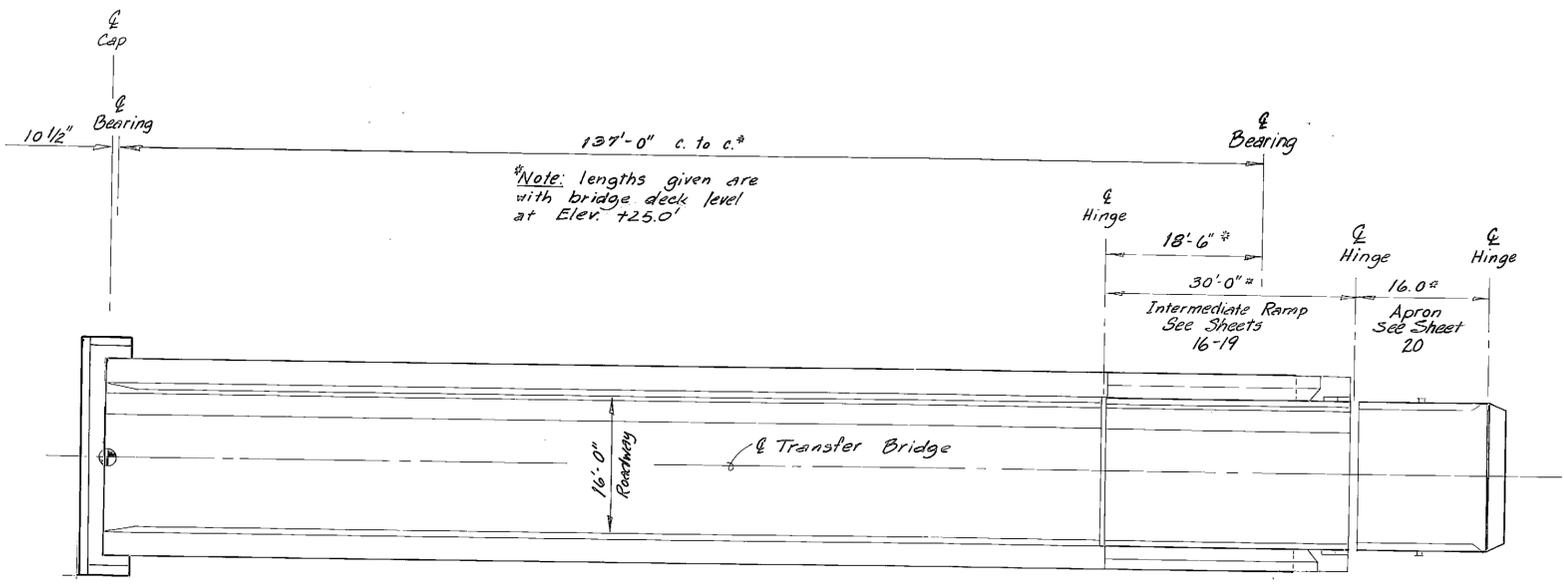
DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
<b>SOUTH BERTH BASIN &amp; UPLANDS</b>			
DESIGNED JS	CHECKED PAS	DRAWN DB	DATE 12-84
PROJECT NUMBER X70010	SHEET 5 OF 57		

**EXCAVATION & EMBANKMENT LAYOUT**  
1" = 30'

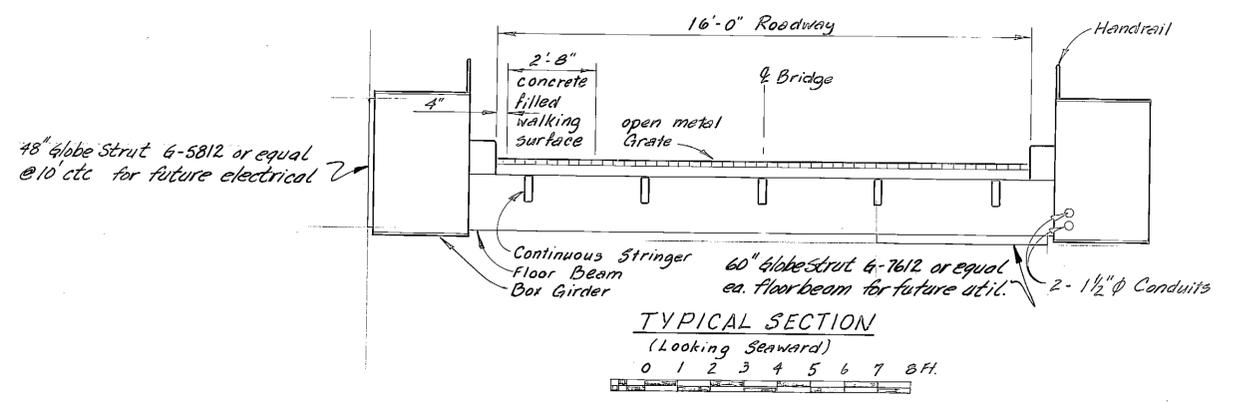
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ELEVATION  
 3/32" = 1'-0"  
 12 0 2 4 6 8 10  
 In Ft.



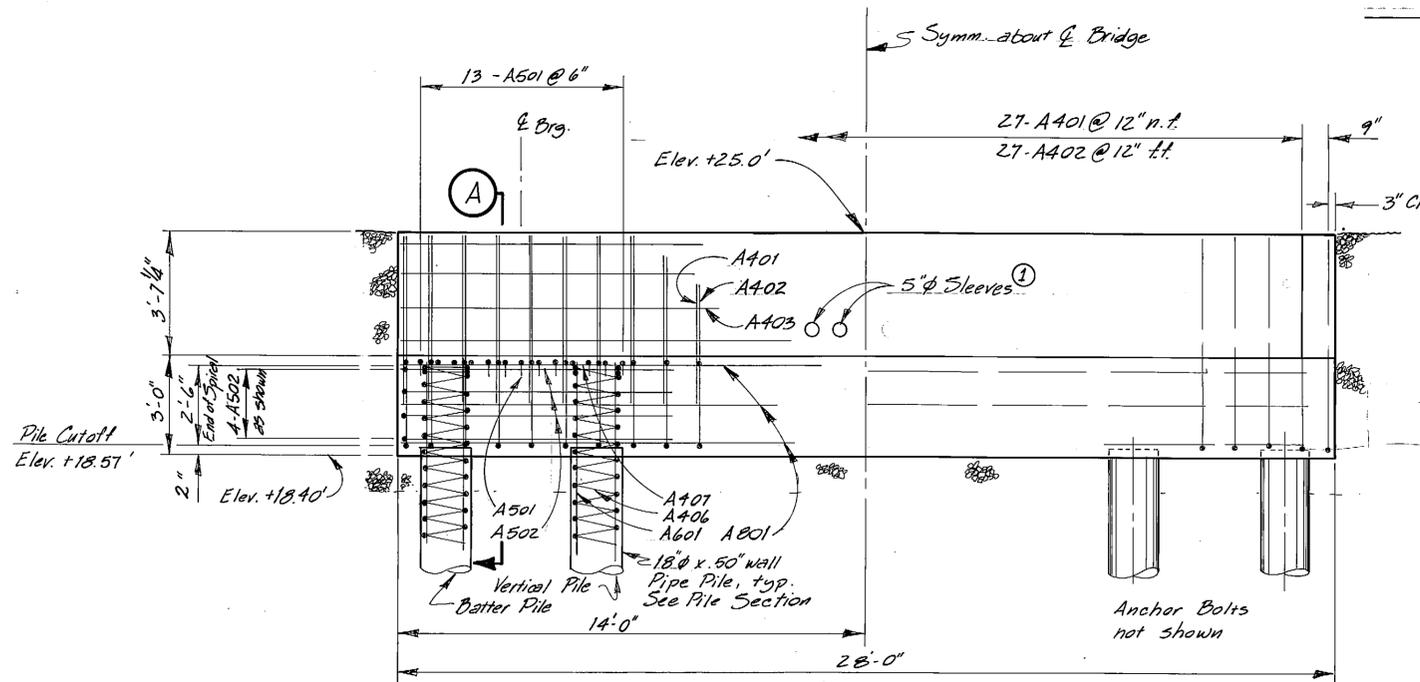
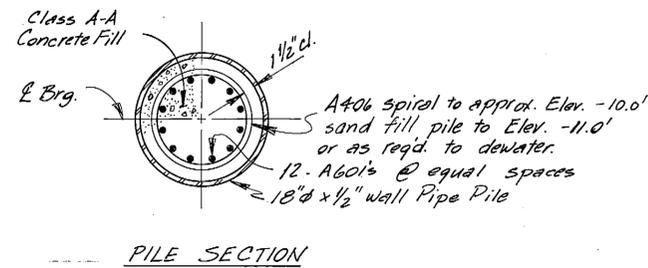
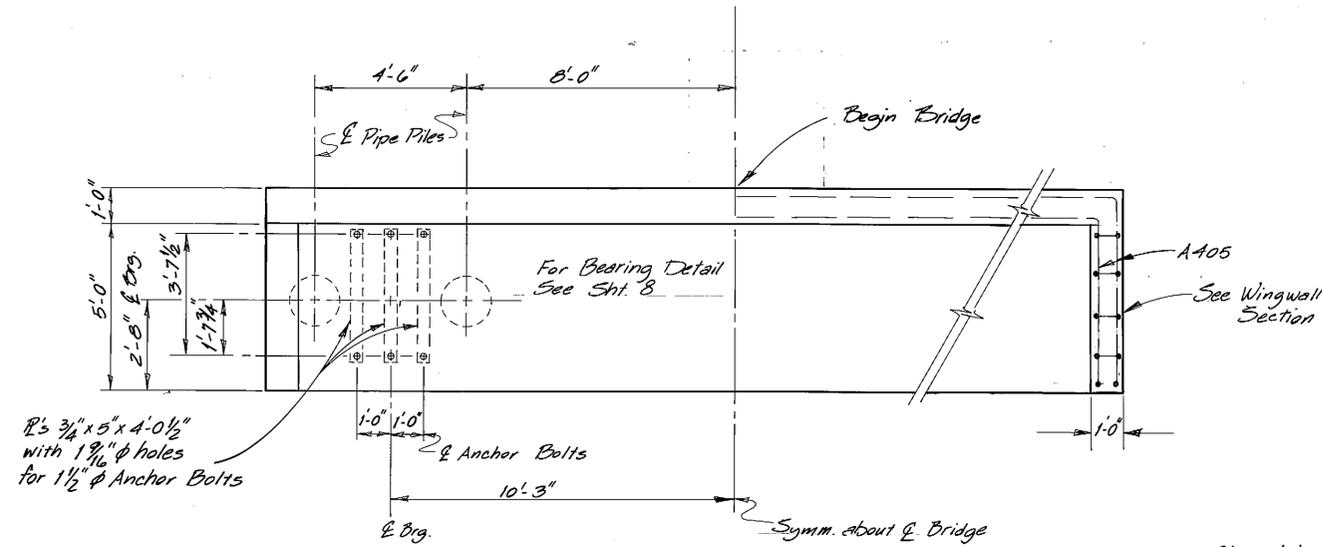
PLAN



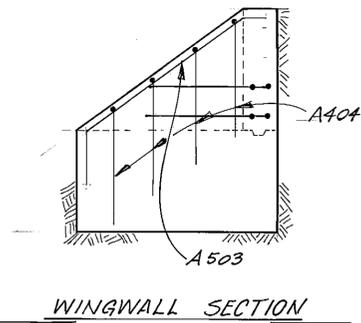
- Notes:  
 1. Approx. Total Wt. of Transfer Bridge w/ deck and rails = 253,000 lbs. (78,000 lbs. A572, 55,000 lbs. A500, 120,000 lbs. A36)  
 2. Transfer Bridge to be painted (See General Notes), except grating, rails and apron which shall be galvanized after fabrication.

AS-BUILT  
 Date: 6-86

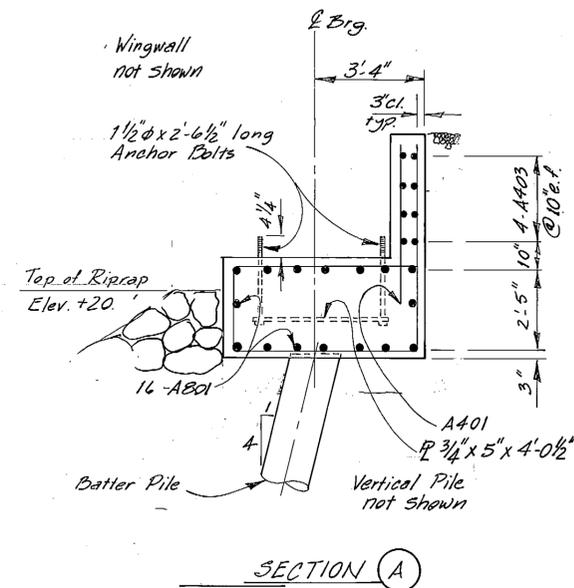
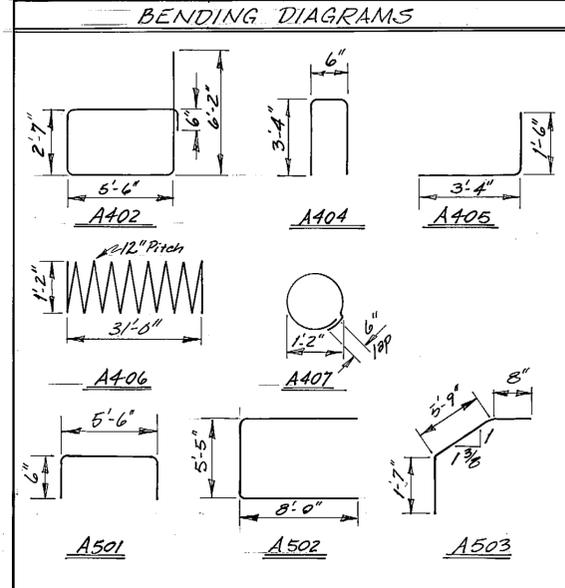
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		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		Ketchikan Alaska	
TRANSFER BRIDGE LAYOUT BRIDGE #			
SCALE As Noted	SURVEYED	APPROVED	
DESIGNED JJP	DRAWN DB		
CHECKED JS	DATE 1-85		
PROJECT NUMBER X70010	SHEET 6 OF 57		



① Sleeves to hold Conduit. Fill annular space with Styrofoam.



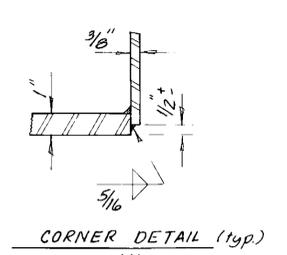
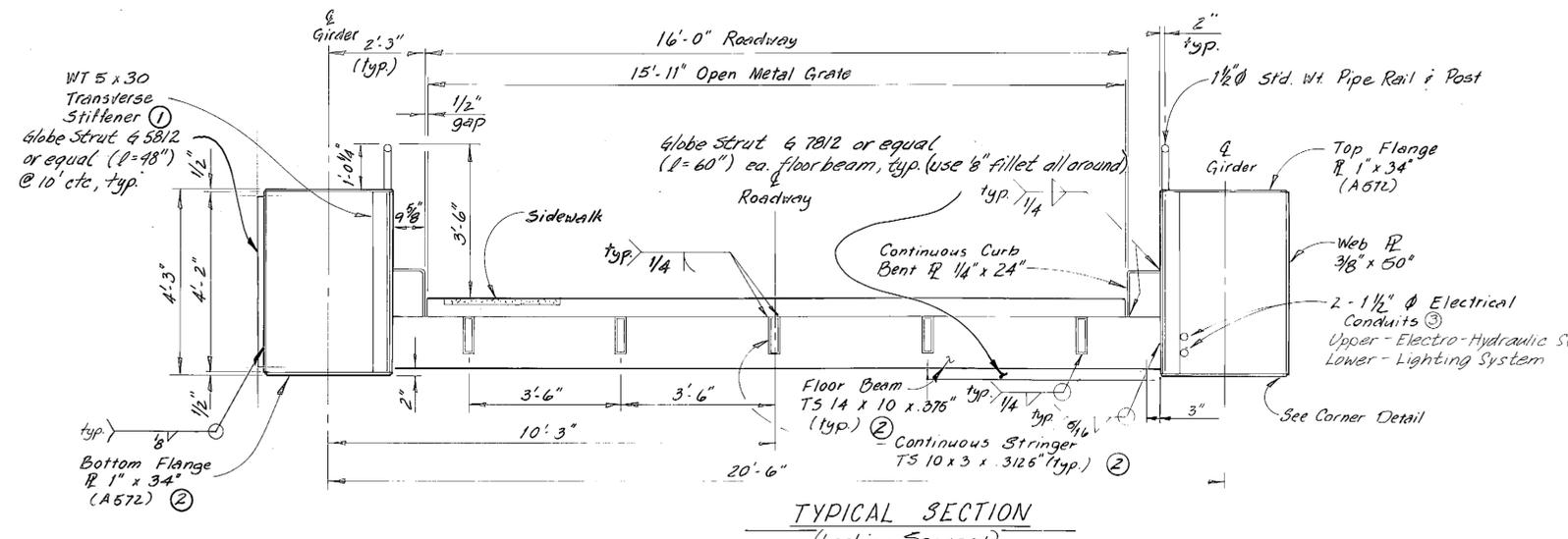
ABUTMENT REINFORCING STEEL				
MARK	SIZE	NO.	LENGTH	TYPE
A401	4	27	5'-0"	
A402	4	27	20'-3"	Bent
A403	4	8	27'-6"	
A404	4	8	7'-2"	Bent
A405	4	8	4'-10"	Bent
A406	4	4	124'-0"	Spiral
A407	4	4	4'-0"	Bent
A501	5	26	6'-6"	Bent
A502	5	8	21'-5"	Bent
A503	5	4	8'-0"	Bent
A601	6	48	11'-6"	
A801	8	16	27'-6"	



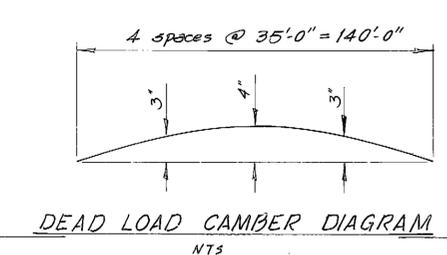
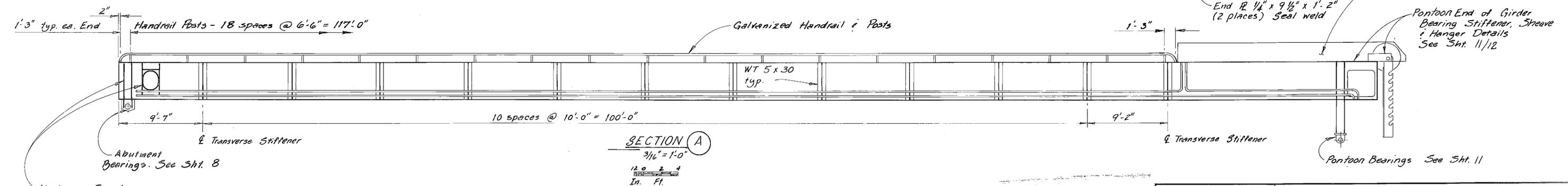
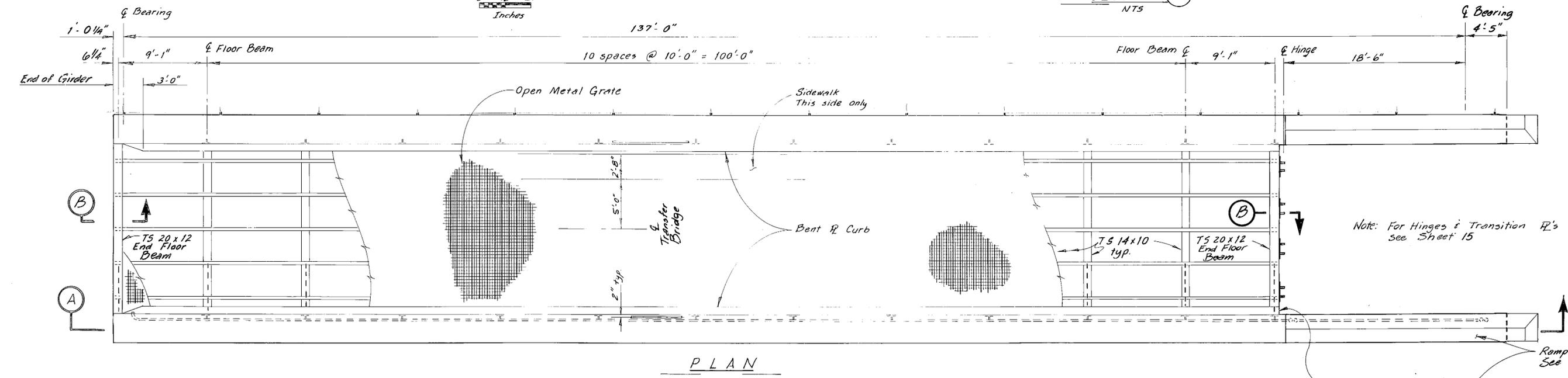
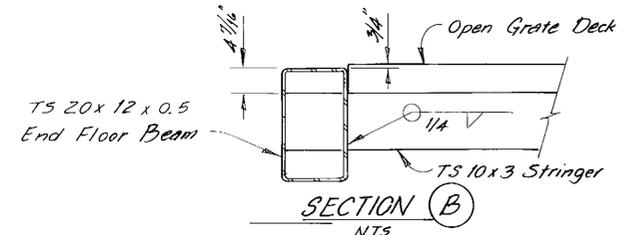
AS-BUILT  
Date: 6-86

	DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
	Ketchikan		Alaska	
<b>ABUTMENT DETAILS</b>				
DESIGNED JLP	CHECKED JS	DRAWN DB	DATE 1-85	
PROJECT NUMBER X70010	SHEET 7		OF 57	

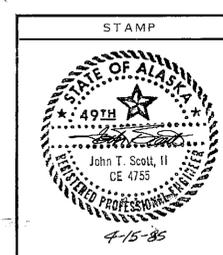




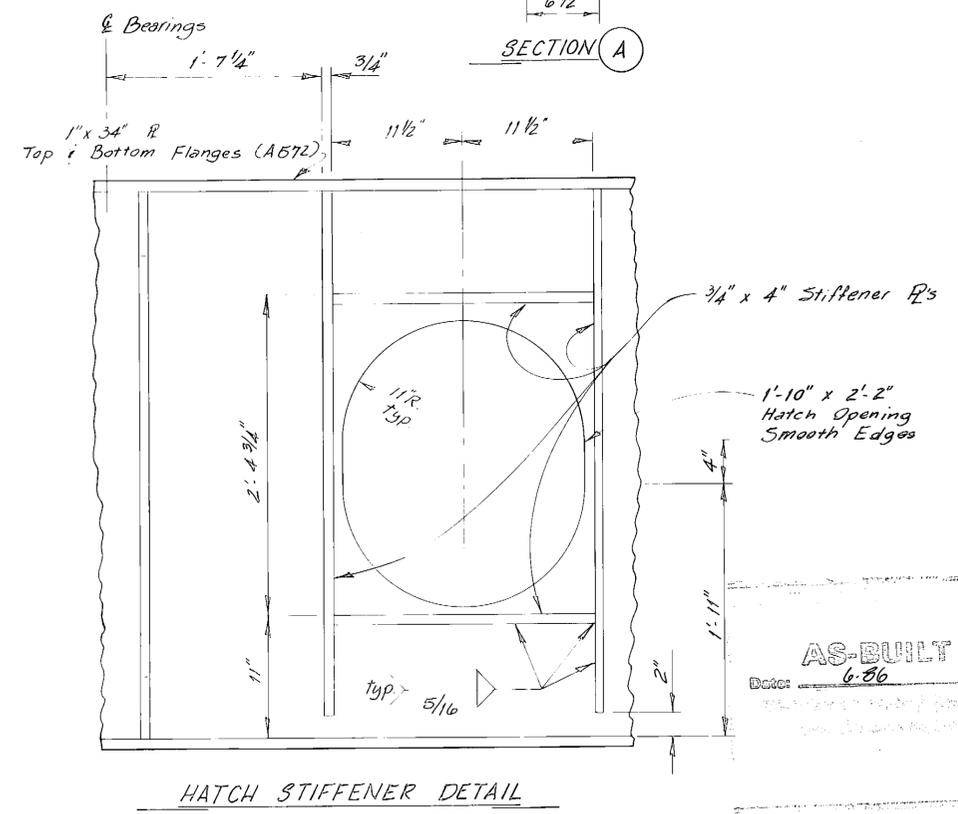
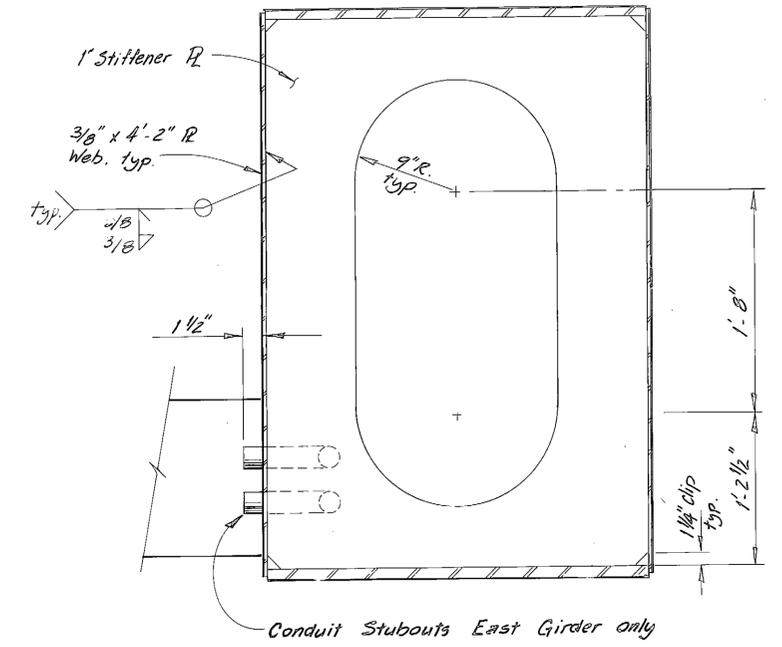
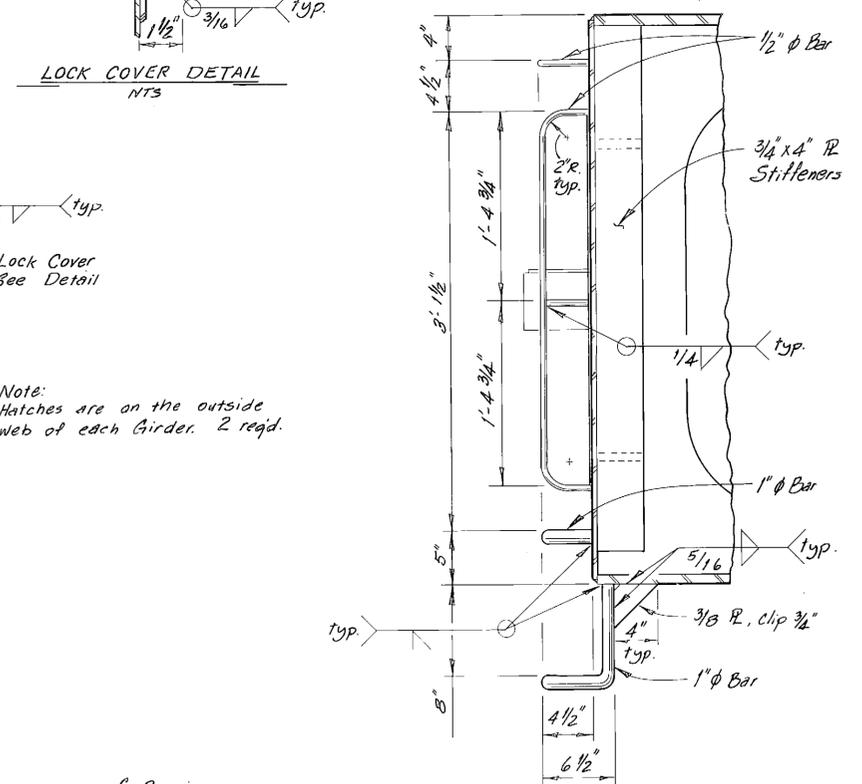
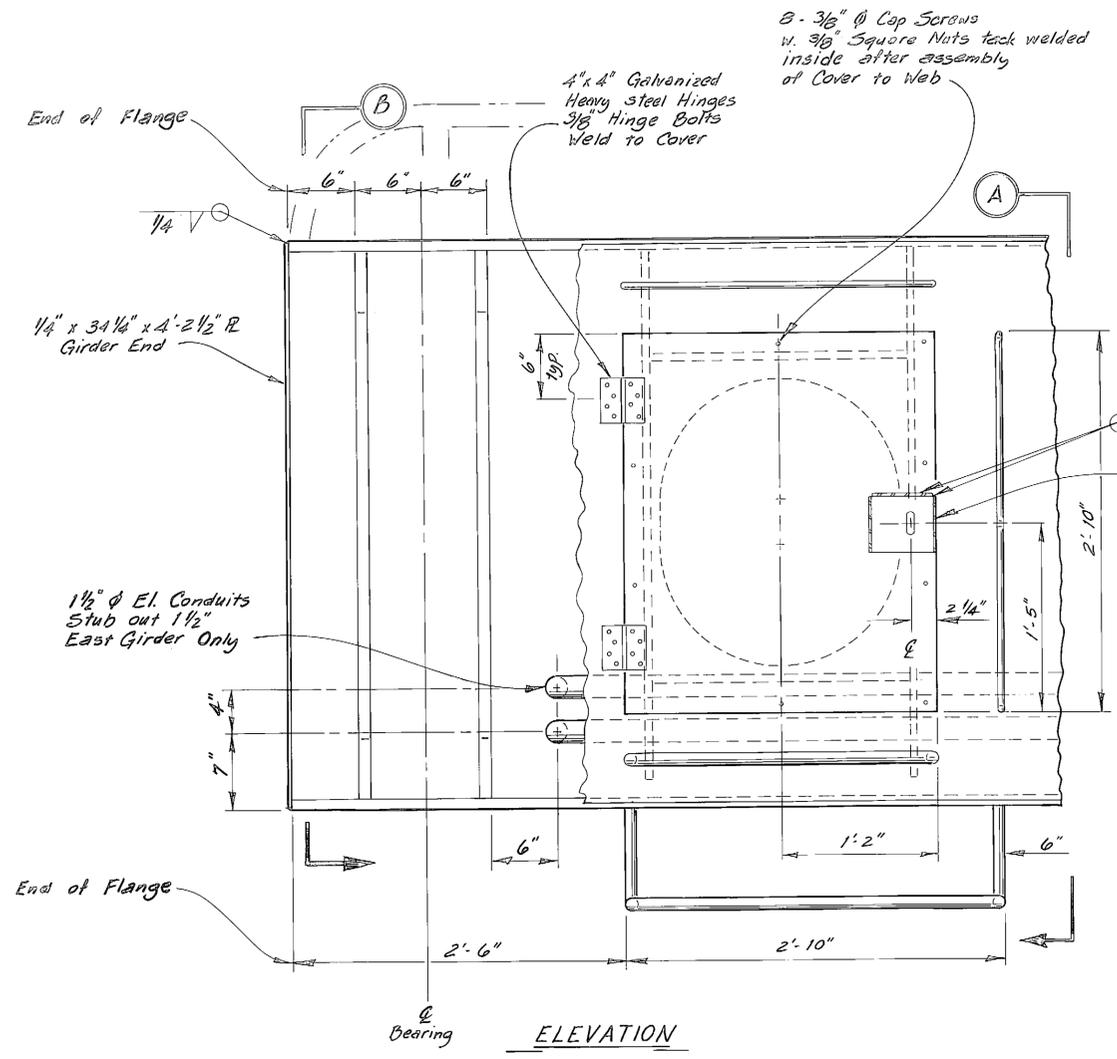
- NOTES:**
- ① Fillet weld ( $\frac{5}{16}$ ) each side of Transverse Stiffener and all contact surfaces except bottom flange tight fit only. Start side weld  $1\frac{1}{2}$ " from bottom of Stiffener.
  - ② Main members subjected to tensile stress.
  - ③ Support conduits at 10'-0" o.c.



**AS-BUILT**  
Date: 6-86

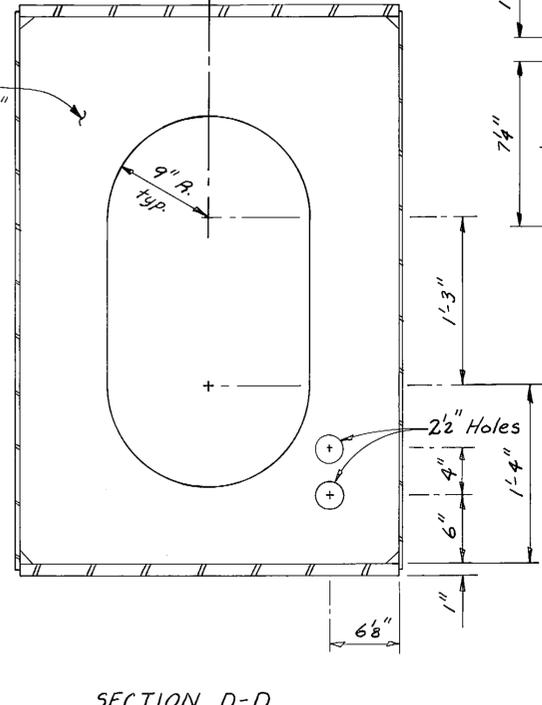
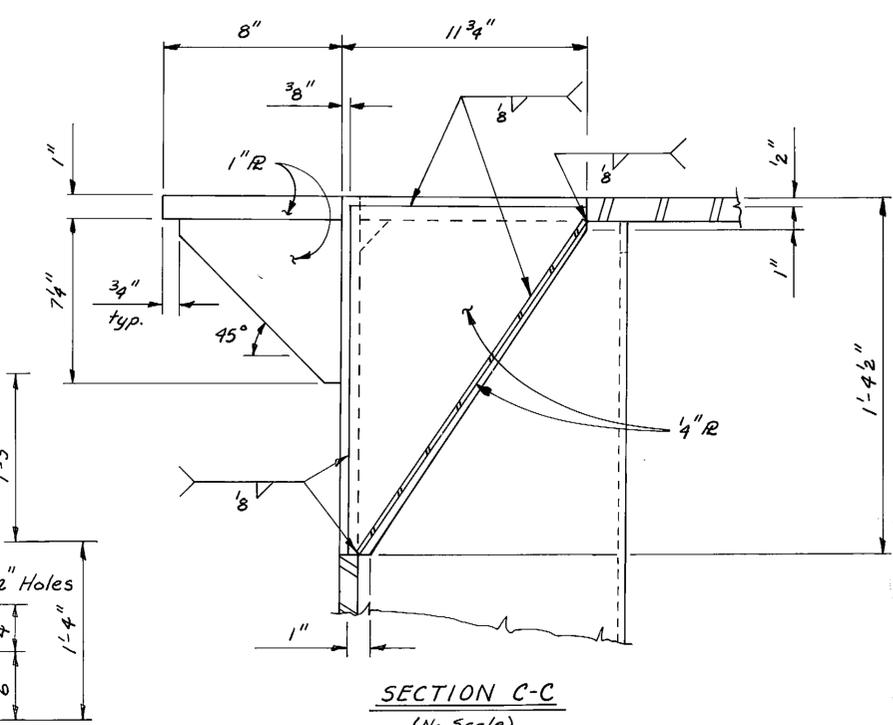
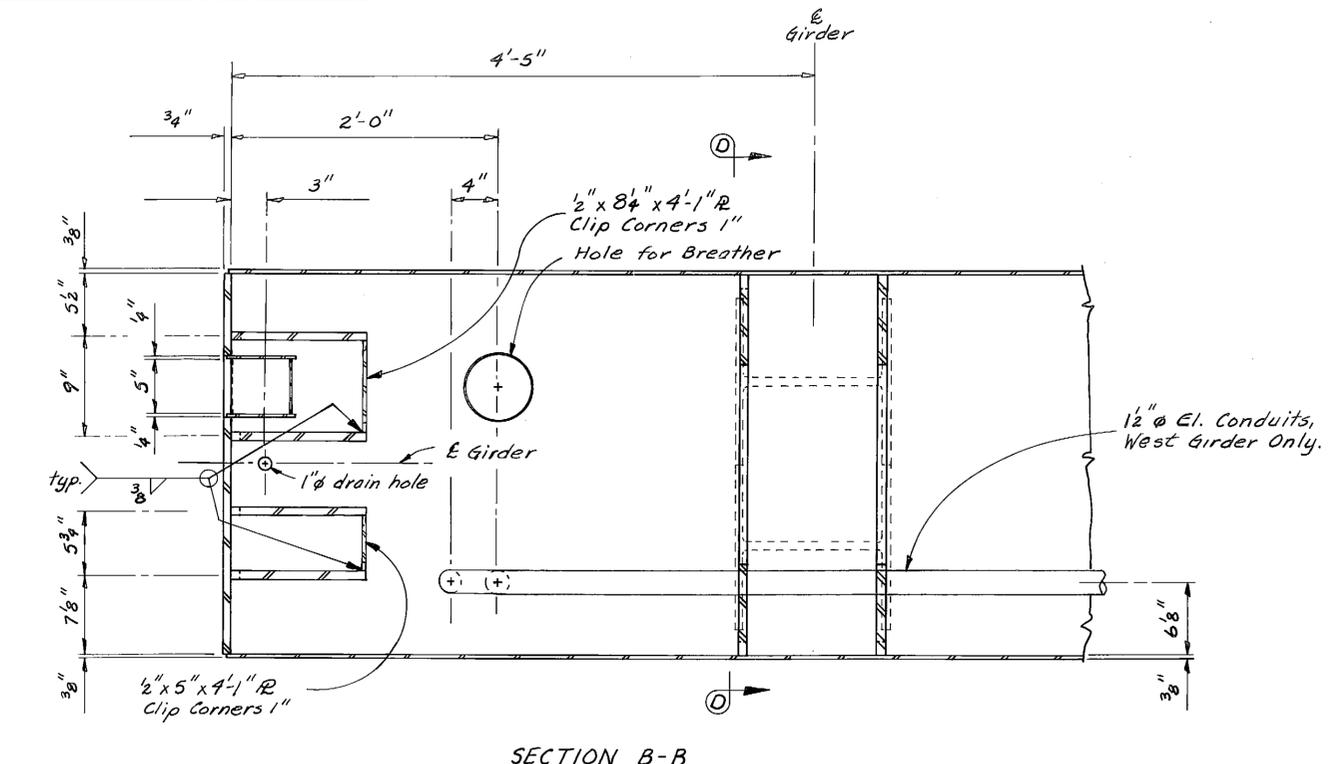
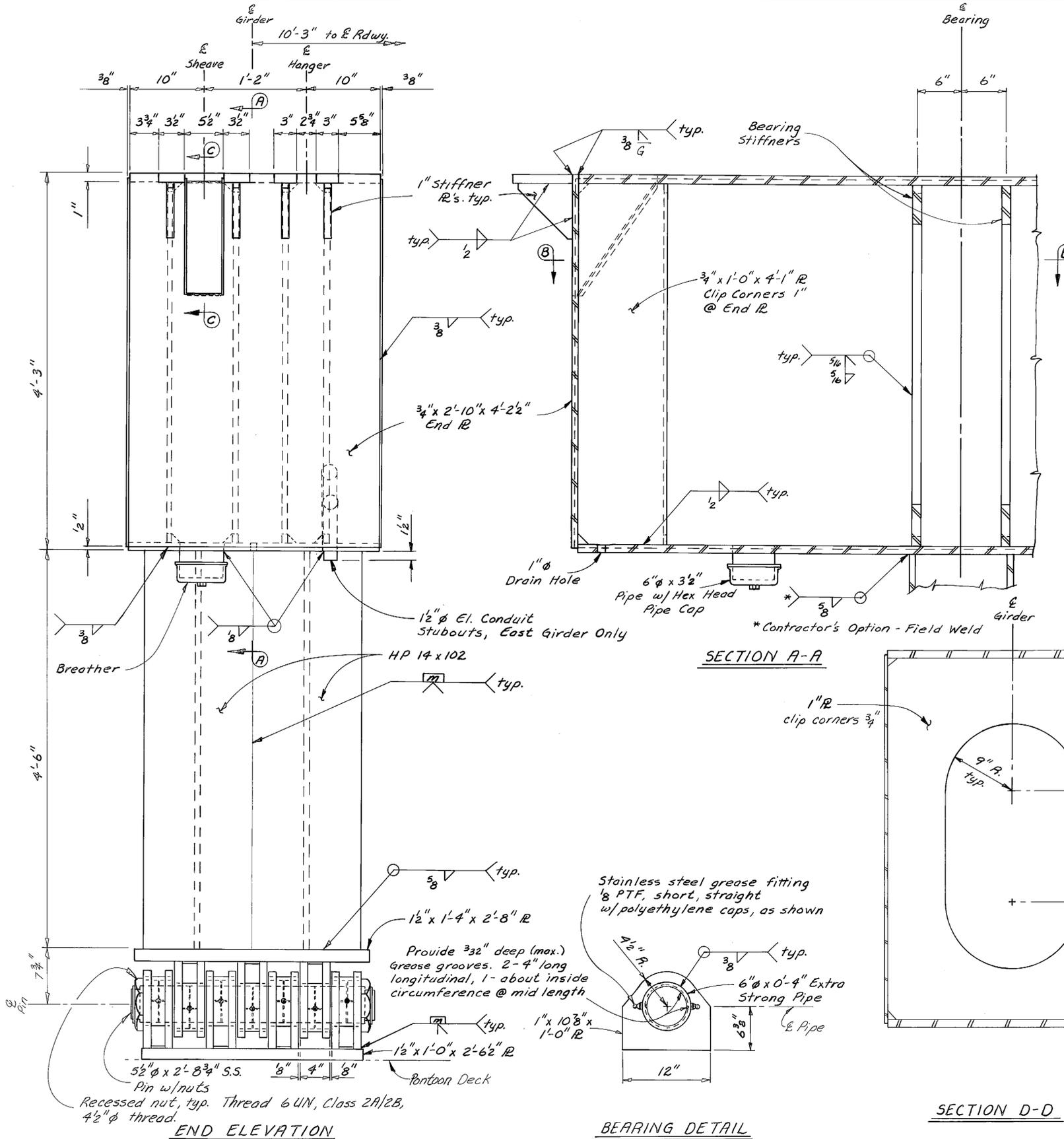


DO NOT SCALE THIS DRAWING - USE DIMENSIONS		
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES		
Ketchikan		Alaska
<b>TRANSFER BRIDGE PLAN</b>		
SCALE: As Noted	SURVEYED: _____	APPROVED: _____
DESIGNED: JLP	DRAWN: DB	
CHECKED: JS	DATE: 1-85	
PROJECT NUMBER: X70010	SHEET 9 OF 57	



Typ. scale except as shown  
1 1/2" = 1'-0"  
0 6 12  
Inches

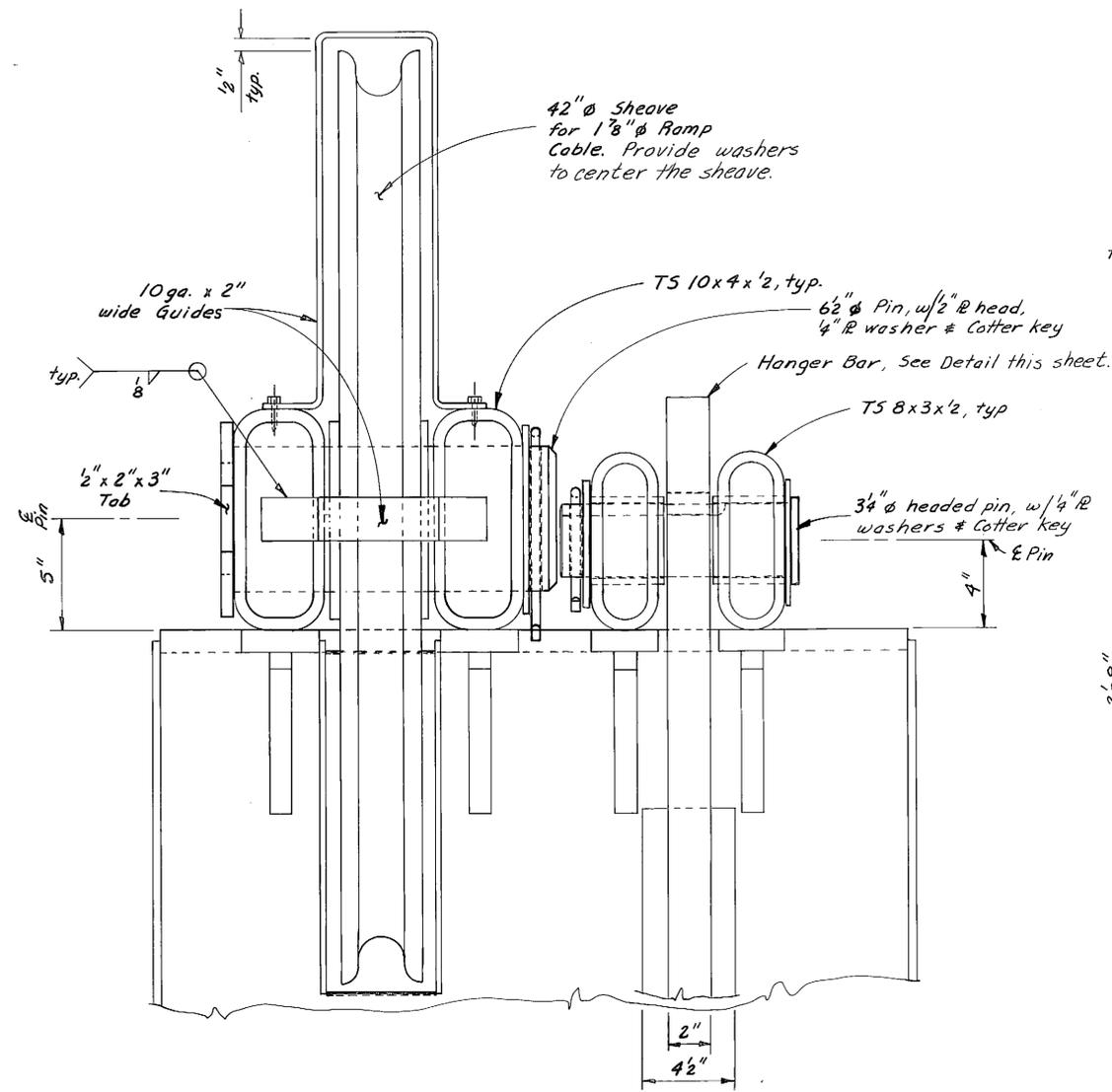
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AS-BUILT Date: 6-86		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		Ketchikan Alaska	
		GIRDER DETAILS ABUTMENT END	
SCALE As Noted	SURVEYED	APPROVED	
DESIGNED LJP	DRAWN DB		
CHECKED JS	DATE 1-85		
PROJECT NUMBER X70010	SHEET 10 OF 57		



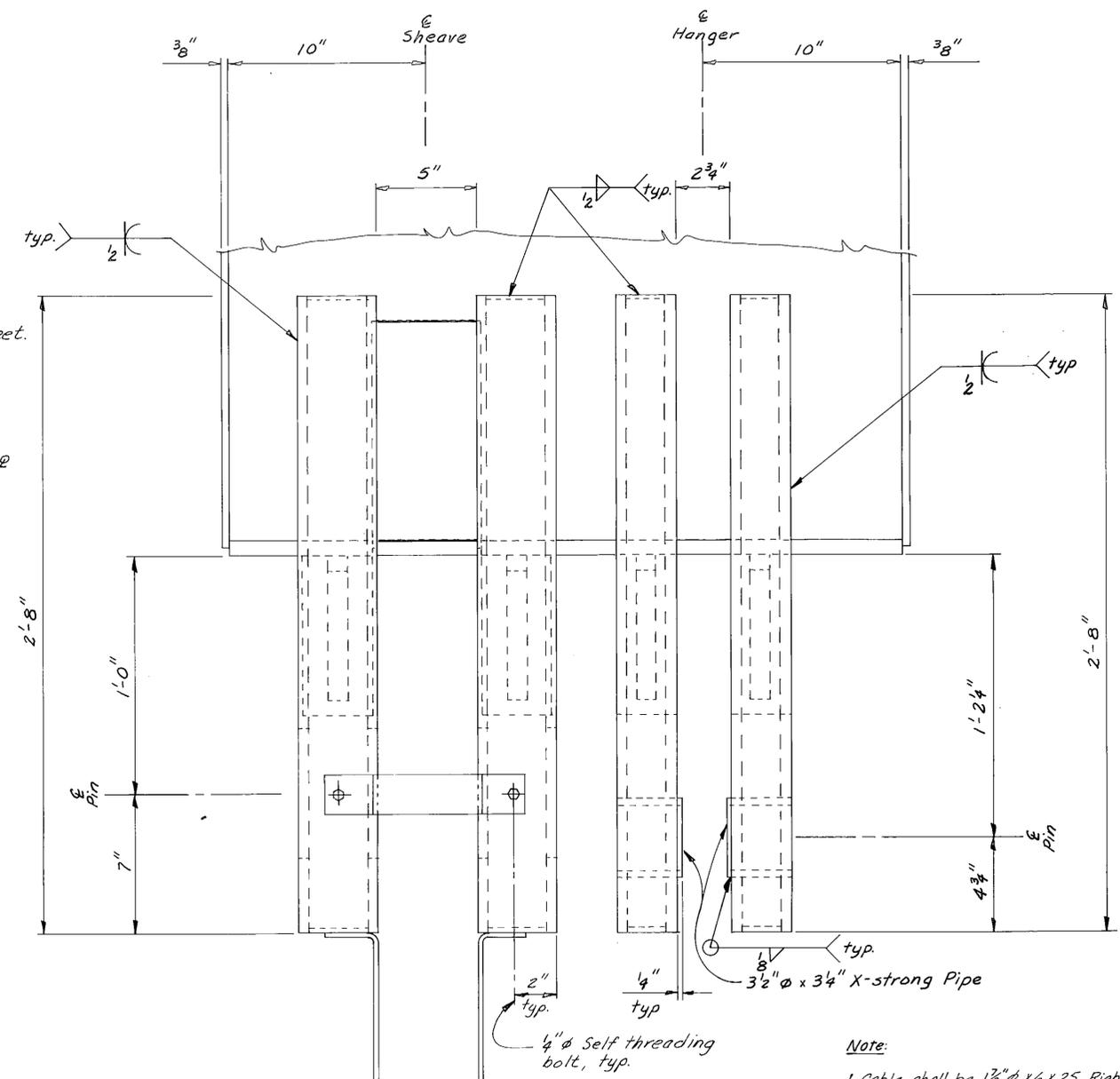
**AS-BUILT**  
Date: 6-86

		DO NOT SCALE THIS DRAWING - USE DIMENSIONS STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES Ketchikan Alaska	
<b>GIRDER DETAILS</b> <b>PONTOON END</b>		SCALE: As Noted DESIGNED: LB CHECKED: LB	SURVEYED: _____ DRAWN: LB DATE: 1-85
		PROJECT NUMBER: X70010	SHEET: 11 OF 57

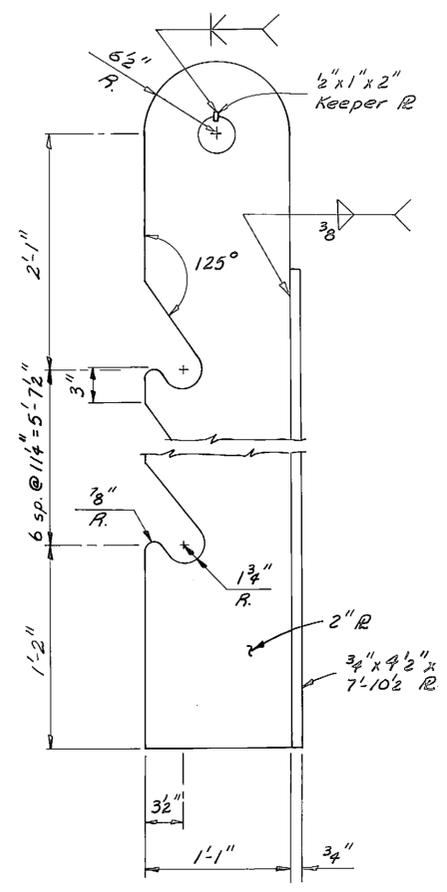




**ELEVATION**



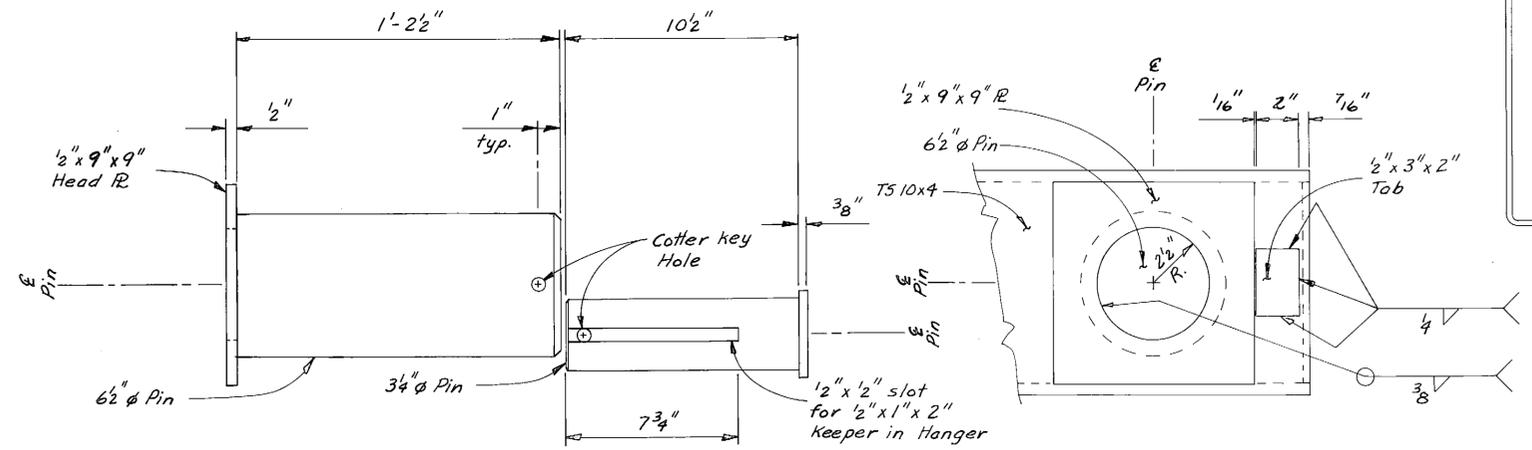
**PLAN**  
(Sheave, Hanger & Pins not shown)



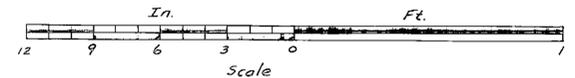
**HANGER BAR**  
(No Scale)

**Note:**

1. Cable shall be 1 7/8"  $\phi$  x 6 x 25, Right regular lay, Extra High Strength IWRC (Minimum Breaking Strength = 170 tons.)
2. The sheave shall have a 37.5" min. tread  $\phi$  & be fitted with roller bearings & grease fittings.
3. Close all tube ends w/ 1/4" R and seal weld.

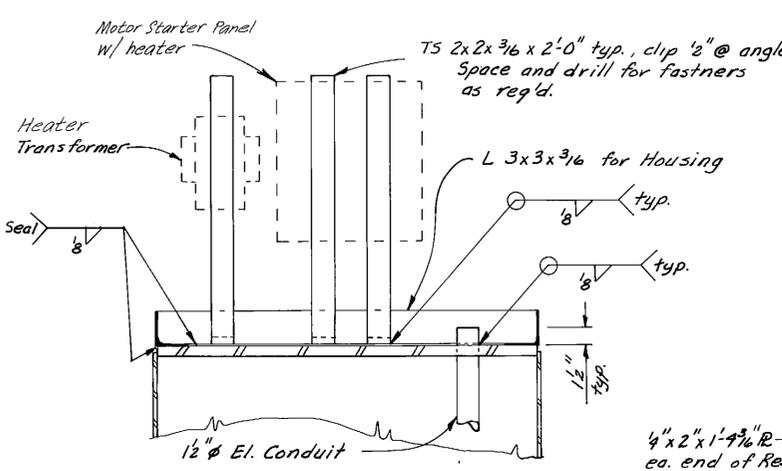
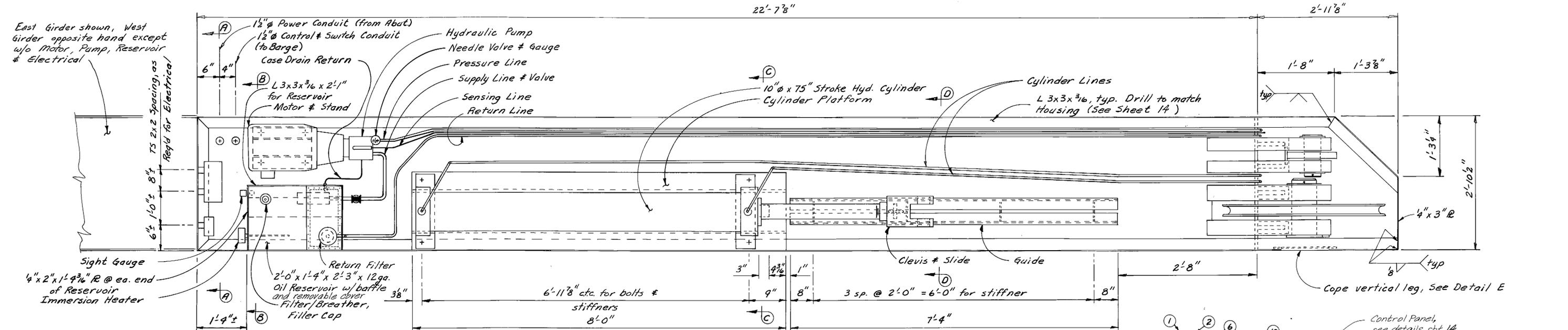


**PIN DETAILS**

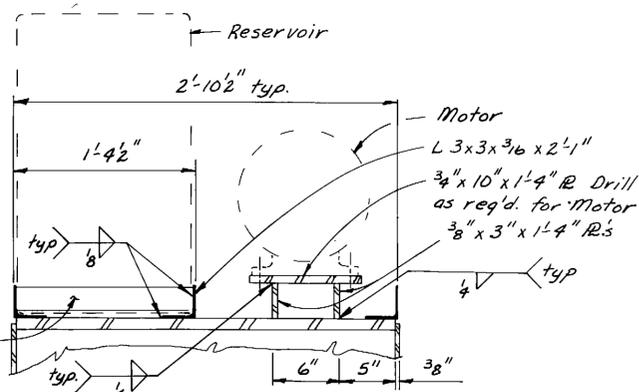


**AS-BUILT**  
Date: 6.86

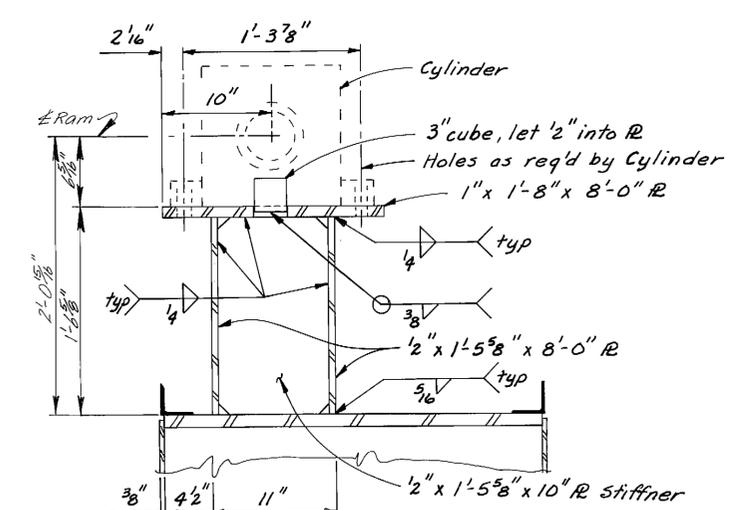
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STATE OF ALASKA 49111 John T. Scott, II DE 4755 REGISTERED PROFESSIONAL ENGINEER 4-15-85		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES Ketchikan Alaska	
<b>GIRDER DETAILS</b>		<b>PONTOON END</b>	
SCALE: As Noted	SURVEYED: _____	APPROVED: _____	
DESIGNED: LJB	DRAWN: _____	DATE: 1-85	
CHECKED: LJB	DATE: _____	PROJECT NUMBER: X70010	
PROJECT NUMBER: X70010		SHEET 12 OF 57	



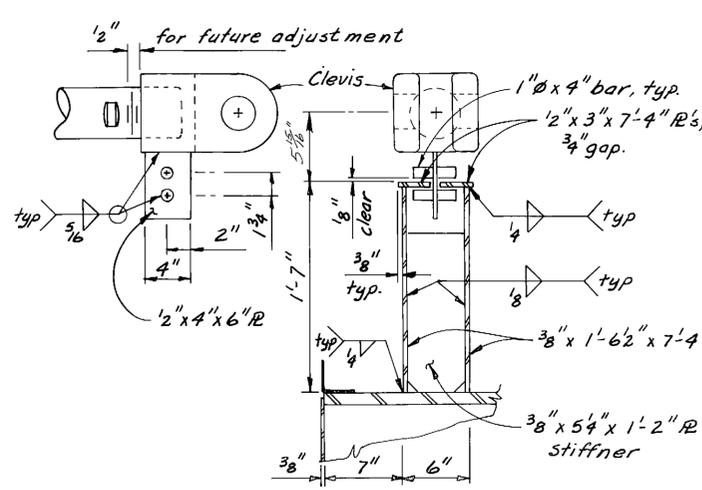
SECTION AA



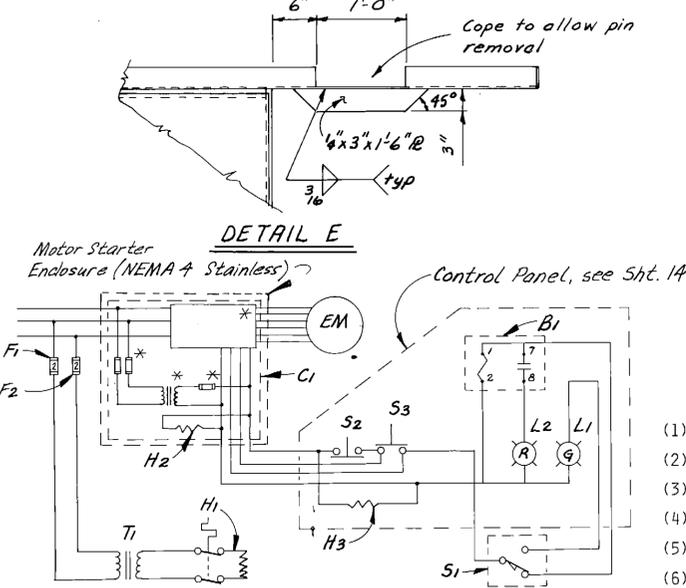
SECTION B-B



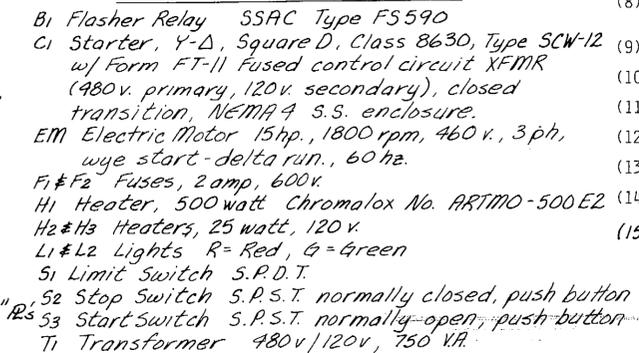
SECTION C-C



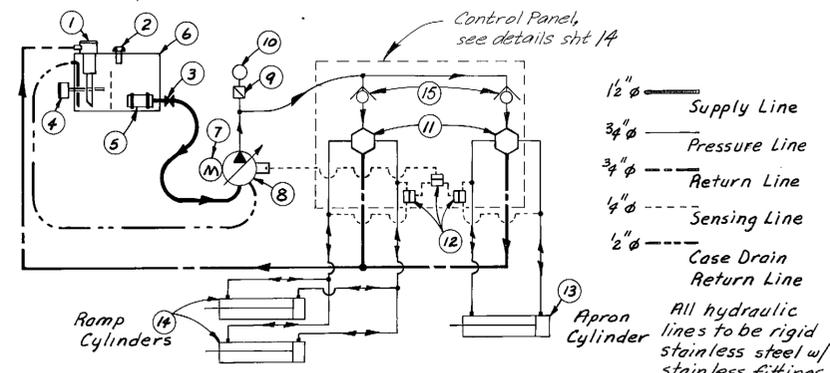
SECTION D-D



ELECTRICAL SCHEMATIC



\* Supplied with C1  
 B1 Flasher Relay SSAC Type F5590  
 C1 Starter, Y-Δ, Square D, Class 8630, Type SCW-12 w/ Form FT-11 Fused control circuit XFMR (480v. primary, 120v. secondary), closed transition, NEMA 4 S.S. enclosure.  
 EM Electric Motor 15hp., 1800 rpm, 460 v., 3 ph, wye start-delta run., 60 Hz.  
 F1 & F2 Fuses, 2 amp, 600v  
 H1 Heater, 500 watt Chromalox No. ARTMO-500E2  
 H2 & H3 Heaters, 25 watt, 120 v.  
 L1 & L2 Lights R= Red, G= Green  
 S1 Limit Switch S.P.D.T.  
 S2 Stop Switch S.P.S.T. normally closed, push button  
 S3 Start Switch S.P.S.T. normally open, push button  
 T1 Transformer 480v/120v, 750 VA.



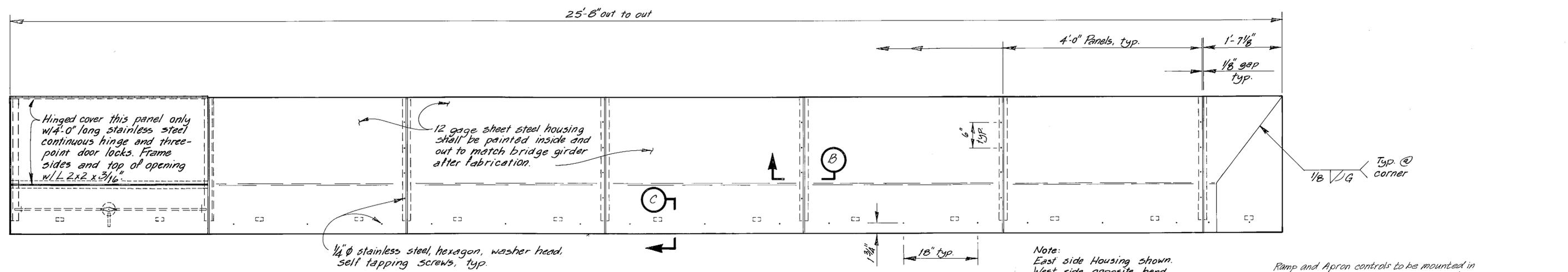
HYDRAULIC SYSTEM SCHEMATIC

- (1) CMPF 33-10 x 10 MICRON RETURN FILTER ELEMENT F33-10
- (2) CF1A-4080-C80 FILTER BREATHER
- (3) 2" GATE VALVE
- (4) ARTMO-500E2 500 WATT IMMERSION HEATER
- (5) P50-2-100 100 MESH STRAINER WITH MAGNETIC STRAPS
- (6) 36 GALLON SPECIAL RESERVOIR
- (7) 15HP TEFC, 1800 RPM, 440 VAC, 3PH, 60HZ ELECTRIC MOTOR
- (8) PFC232-LDB VARIABLE VOLUME, FLOW REGULATED, PRESSURE COMPENSATED, PISTON PUMP, 2.32 C.I.D., 1300 PSI
- (9) KLN250B NEEDLE VALVE
- (10) CFIP-210S PRESSURE GAGE, 0-3000 PSI
- (11) 8144S1HC3-MC 4-WAY, 3 POSITION, CLOSED CENTER, SPRING RETURN, DIRECTIONAL CONTROL VALVE
- (12) 15652 SHUTTLE VALVE
- (13) 8012 10 x 66 CYLINDER WITH 4-1/2 S.S. ROD, CUSHIONS AND LIMIT SWITCH, See Sheet 19
- (14) 8011 10 x 75 CYLINDER WITH 4-1/2 S.S. ROD, fully retracted the rod shall extend 6"
- (15) Pneu-Trol EDC35SS check valves.

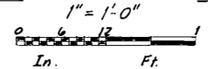
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		Ketchikan	Alaska
<b>MECHANICAL DETAILS</b>			
<b>PONTOON END</b>			
SCALE NONE	SURVEYED	APPROVED	
DESIGNED	DRAWN		
CHECKED LJB	DATE 1-85		
PROJECT NUMBER X70010	SHEET 13 OF 57		

NOTE: Design and Dimensions based on components listed. Contractor shall adjust as necessary to accommodate models used and shall provide all drawings and details required. See Section 302-2.01.

AS-BUILT  
 Date: 6-86

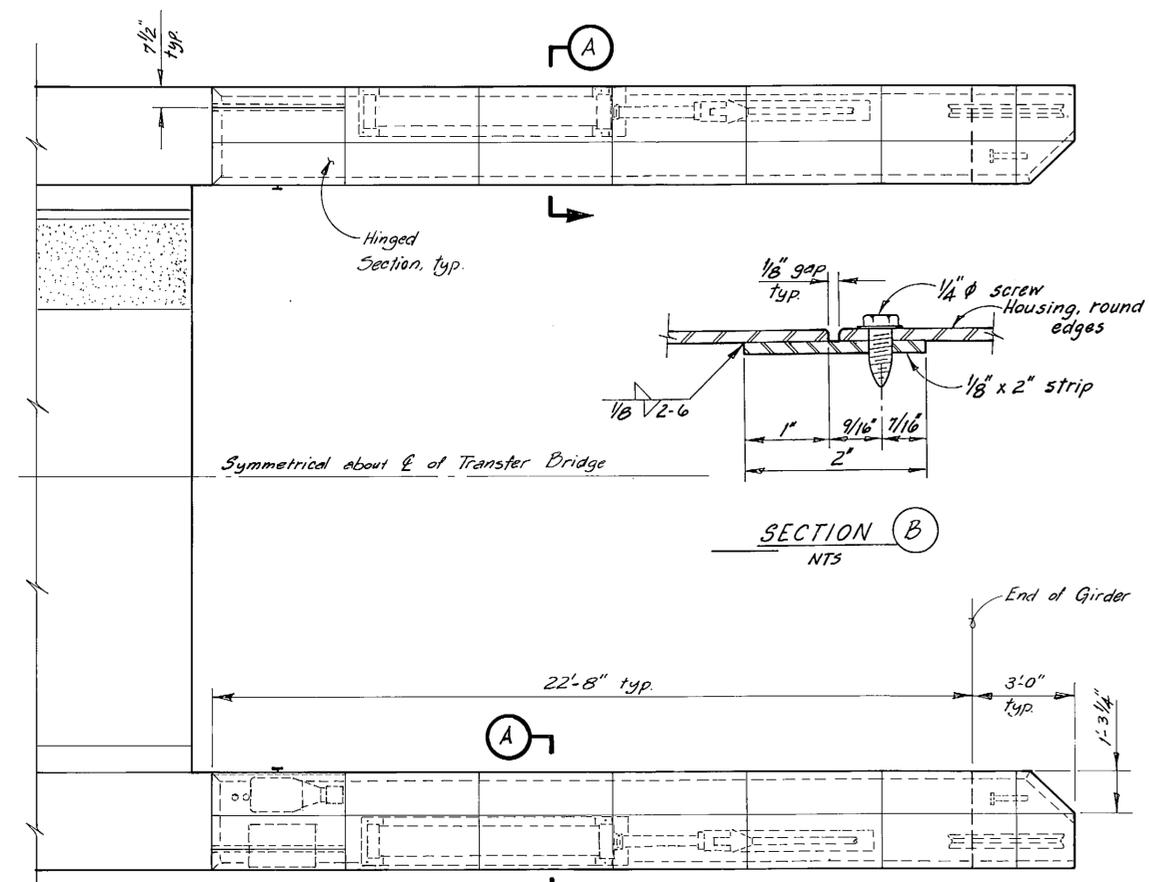


**ELEVATION HOUSING DETAILS**

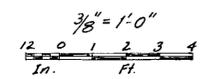


Note:  
East side Housing shown.  
West side opposite hand.

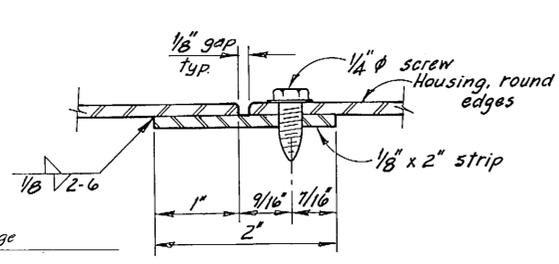
Ramp and Apron controls to be mounted in a 12 gage stainless steel enclosure w/ L 1/4 x 1/4 x 3/16 frame, 24" H x 20" W x 9" D. Enclosure shall have locking cover w/ bottom hinge and gasket, 24" H x 20" W x 3" D. Front panel shall be removable, sides back and top welded, bottom drill for hydraulic and electrical lines.



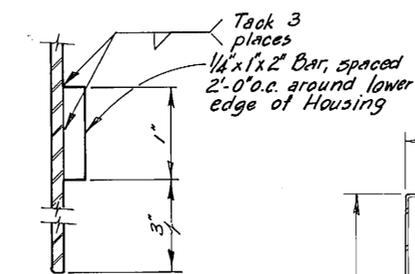
**PLAN**



Pump & Reservoir  
West side only  
See Sheet 13

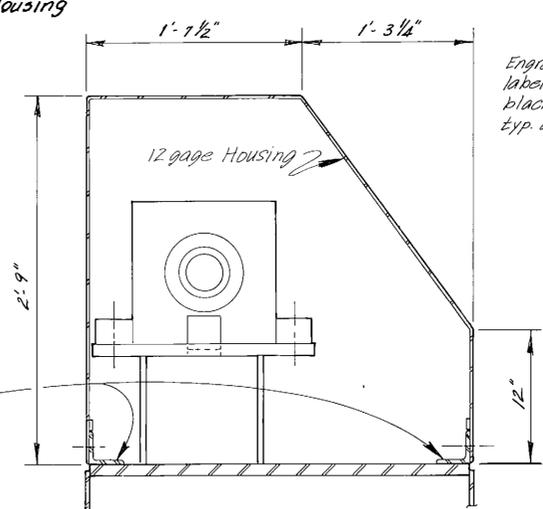


**SECTION B NTS**

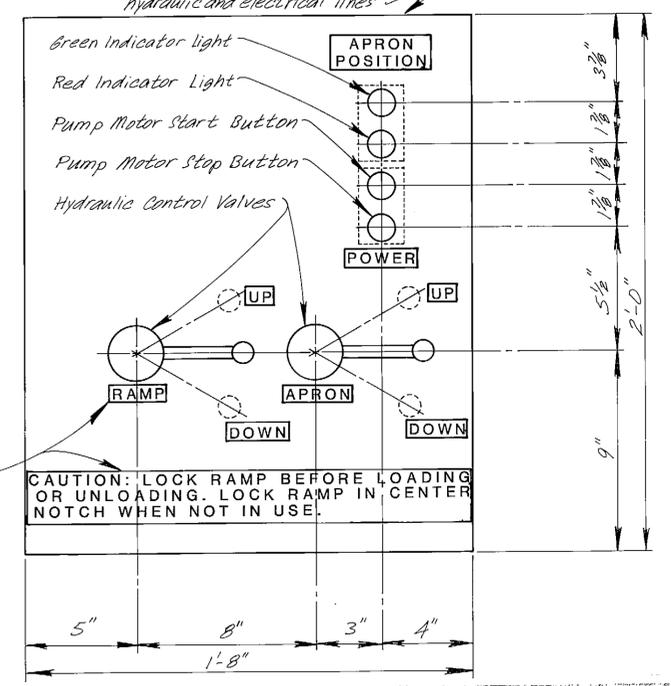
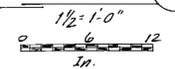


**SECTION C NTS**

L3 x 3 x 3/16 for Housing, see sht 13 Drill to match Housing



**SECTION A NTS**



**CONTROL PANEL NTS**

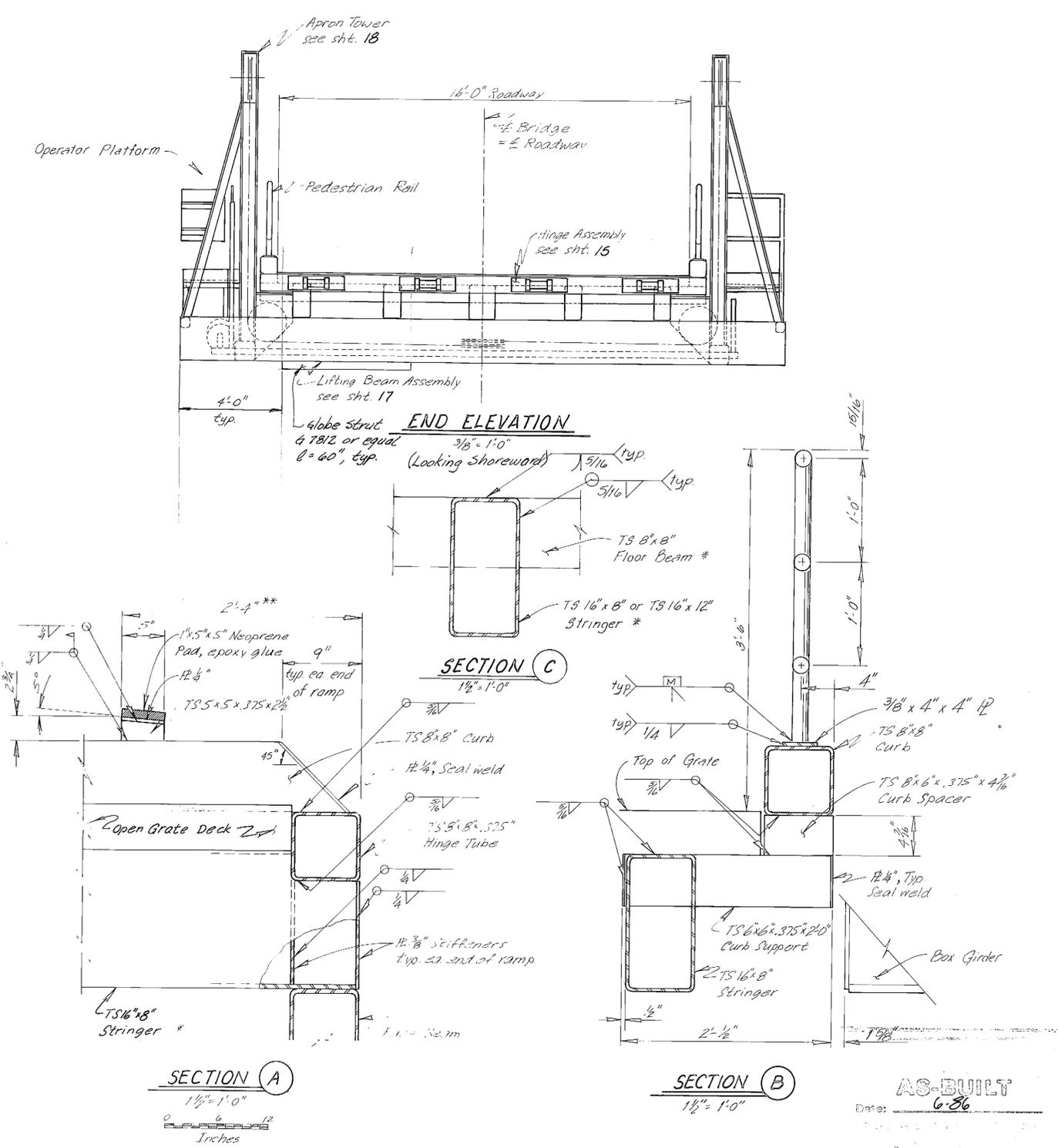
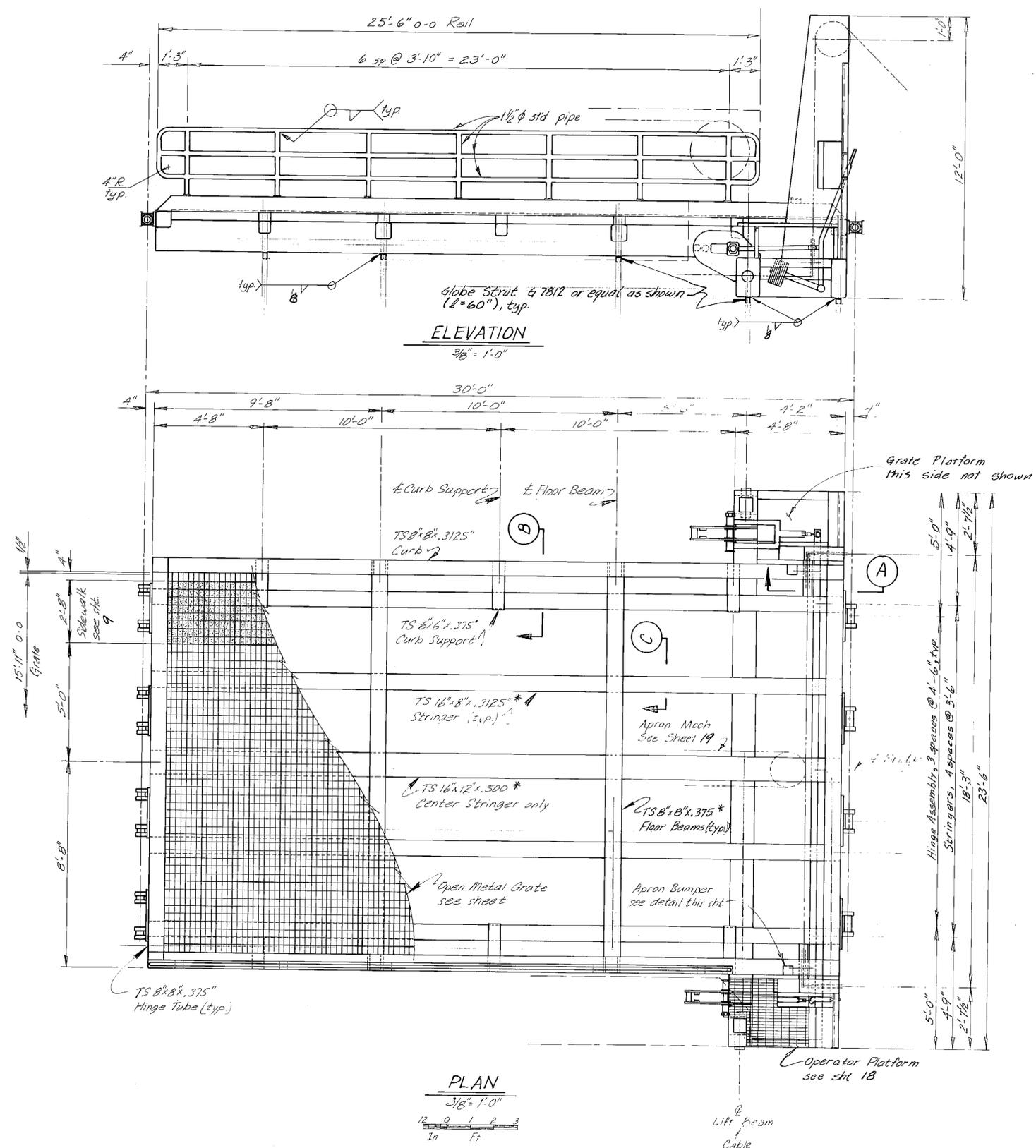
Engraved phenolic labels, white with black lettering, typ. as shown.

CAUTION: LOCK RAMP BEFORE LOADING OR UNLOADING. LOCK RAMP IN CENTER NOTCH WHEN NOT IN USE.

**AS-BUILT**  
6-86

STAMP 	DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
Ketchikan	Alaska	
<b>PONTOON END HOUSING</b>		
SCALE <i>As Noted</i>	SURVEYED _____	APPROVED _____
DESIGNED <i>JJP</i>	DRAWN <i>DB</i>	
CHECKED <i>JLS</i>	DATE <i>1-86</i>	
PROJECT NUMBER <i>X70010</i>	SHEET <i>14</i> OF <i>57</i>	

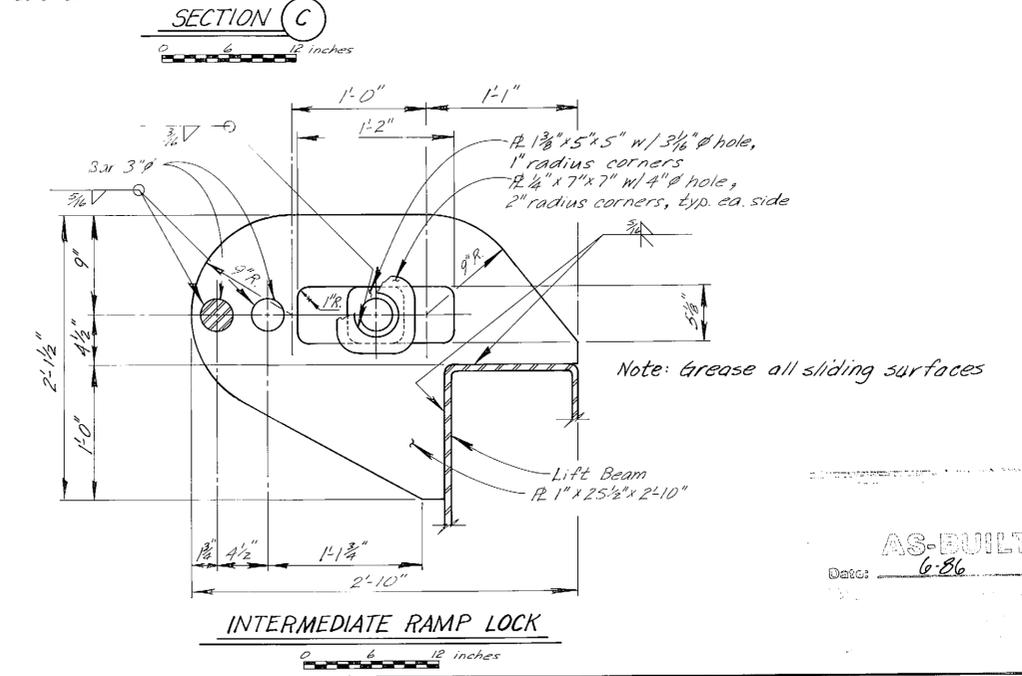
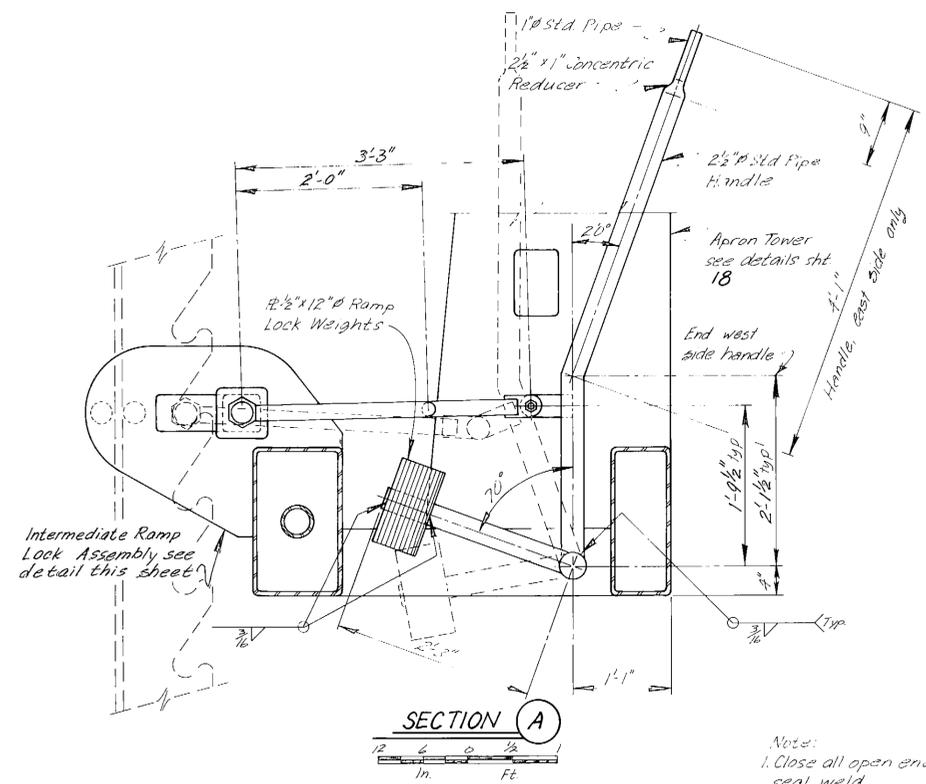
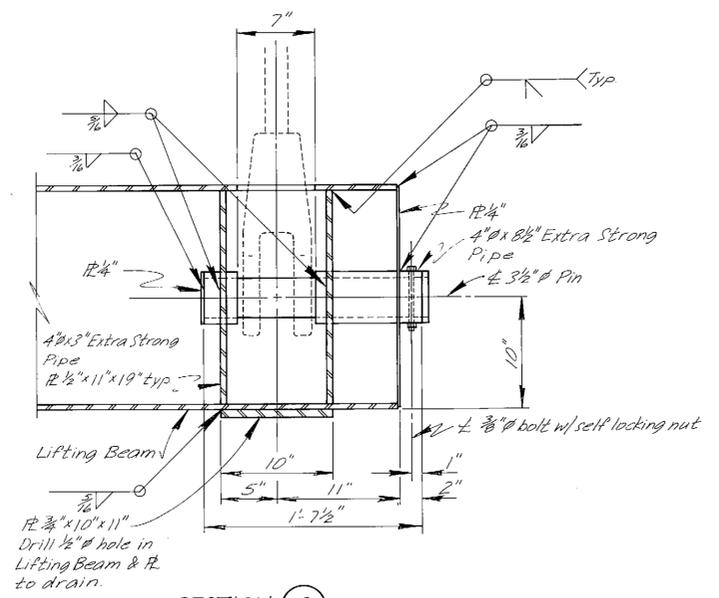
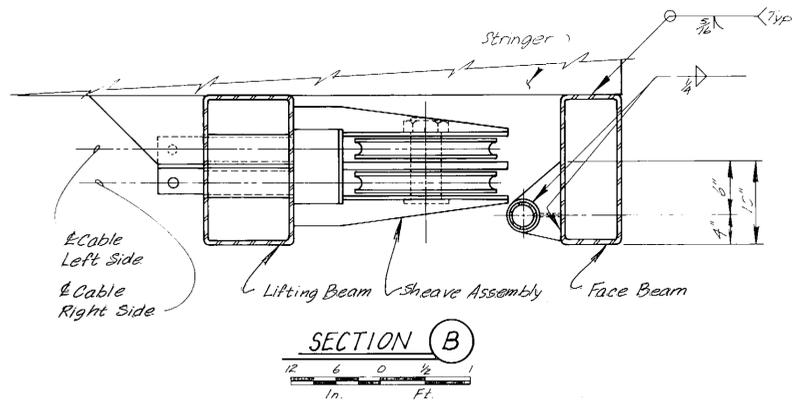
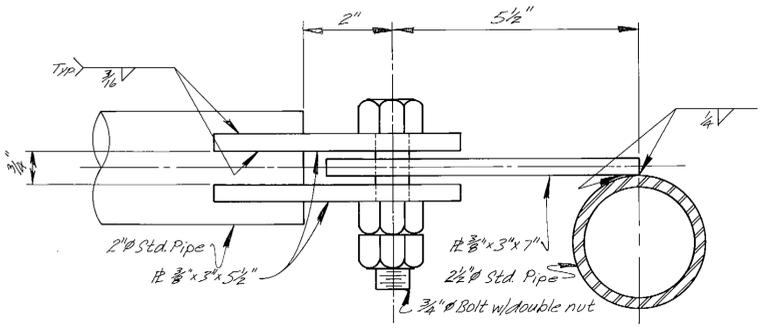
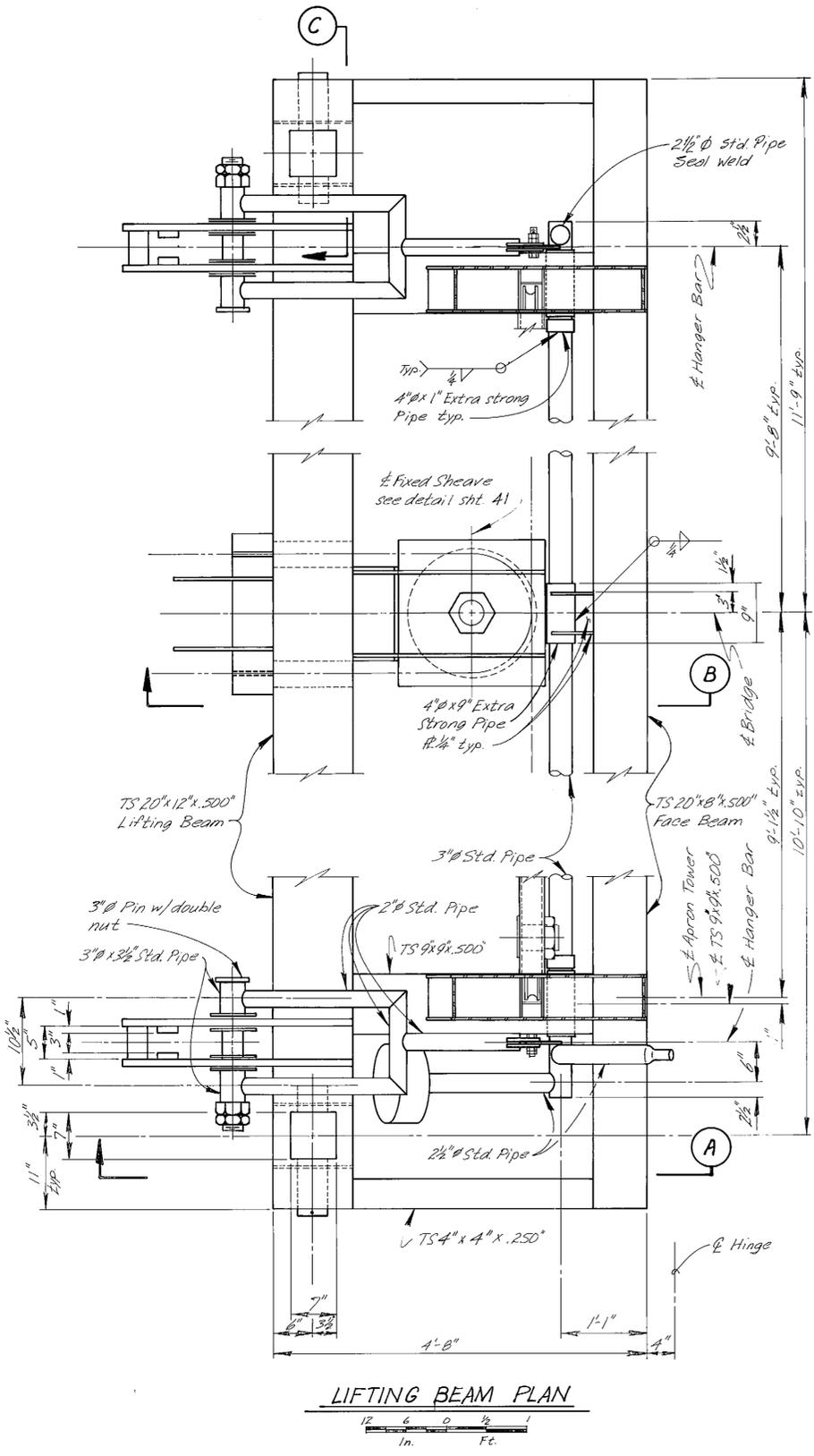




Notes:  
 1. \* Main members subject to tensile stress.  
 2. Close all open ended pipe or tubing with 1/4" R and seal weld.  
 3. \*\* Field Locate.

AS-BUILT  
 6-86

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		Ketchikan Alaska	
<b>INTERMEDIATE RAMP</b>			
SCALE As Noted	SURVEYED	APPROVED	
DESIGNED LJP	DRAWN LWB		
CHECKED JLS	DATE 1-85		
PROJECT NUMBER X70010	SHEET 16		OF 57



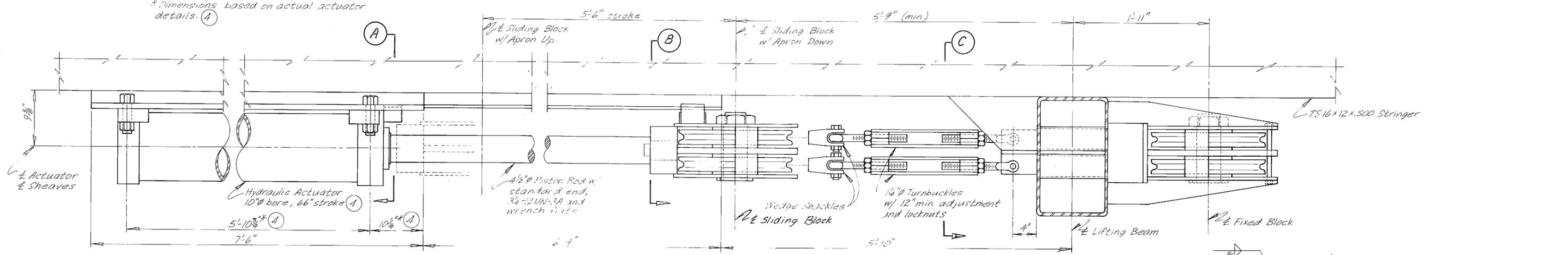
Note:  
1. Close all open ended pipe or tubing with 1/2 inch and seal weld.  
2. Adjust Lock Weights at assembly to cause pin to lock automatically. 1 1/2 inch weights, number as required for adjustment.

AS-BUILT  
Date: 6-86

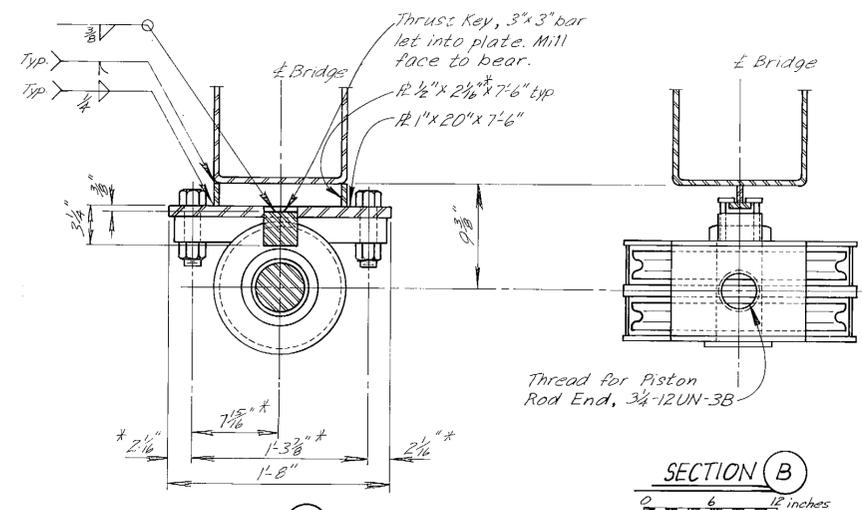
		DO NOT SCALE THIS DRAWING USE DIMENSIONS	
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Ketchikan		Alaska	
<b>LIFTING BEAM DETAILS</b>			
SCALE As Noted	SURVEYED	APPROVED	
DESIGNED JLP	DRAWN LJB		
CHECKED JS	DATE 1-86		
PROJECT NUMBER X70010	SHEET 17		OF 57



\*Dimensions based on actual actuator details. (A)

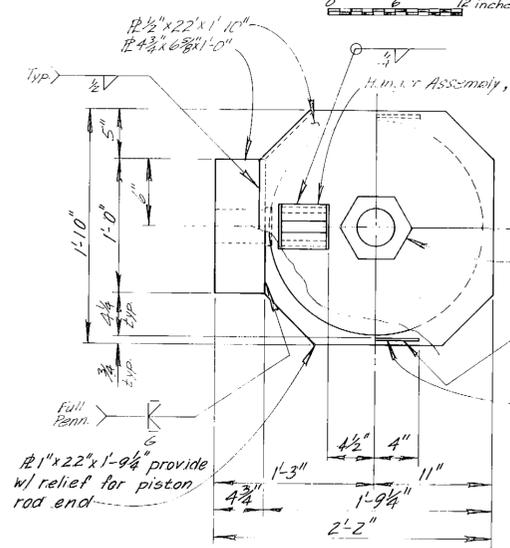


**ELEVATION**

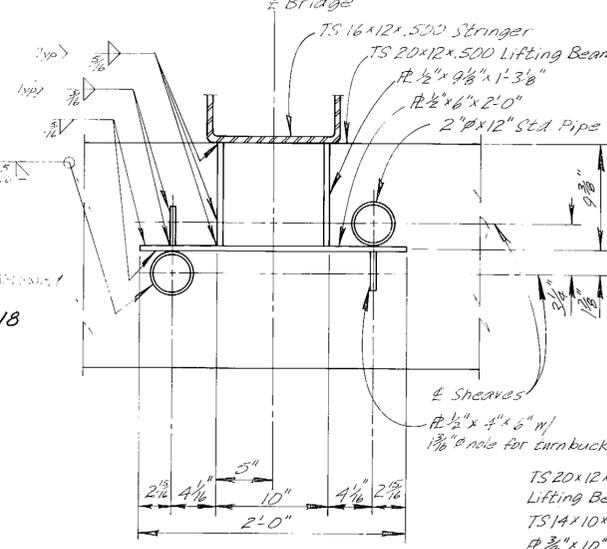


**SECTION A**

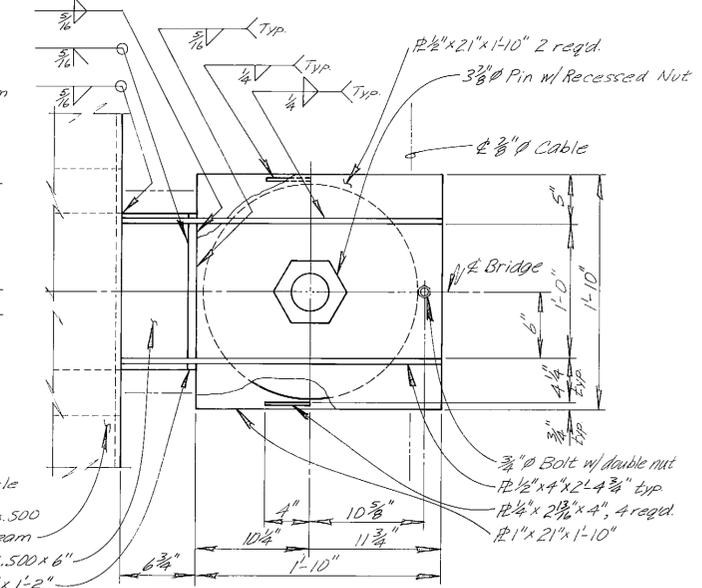
**SECTION B**



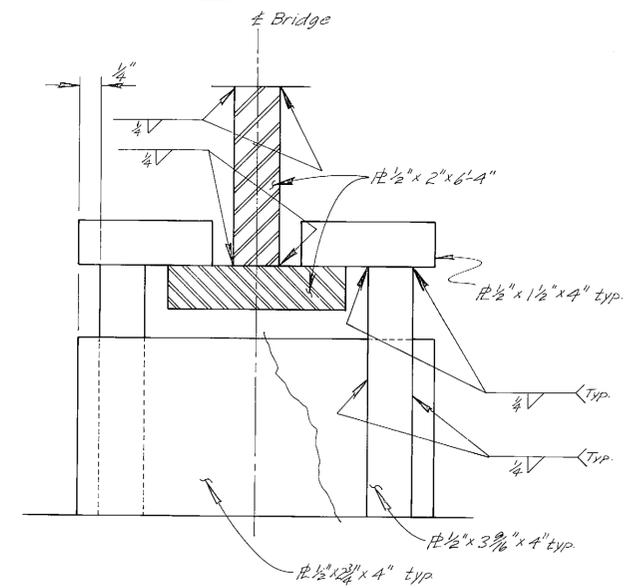
**SLIDING BLOCK**



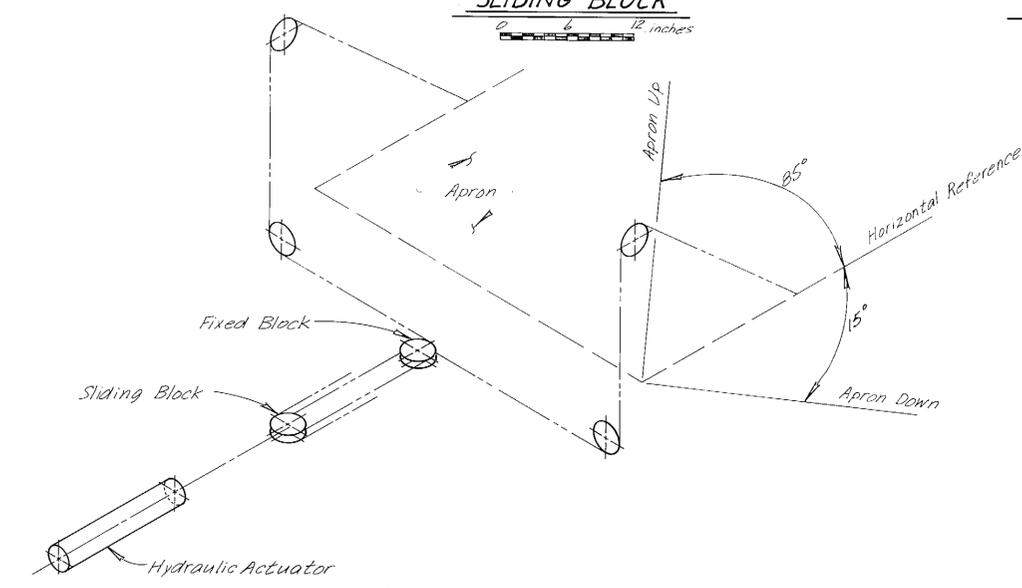
**SECTION C**



**FIXED BLOCK**



**HANGER ASSEMBLY**



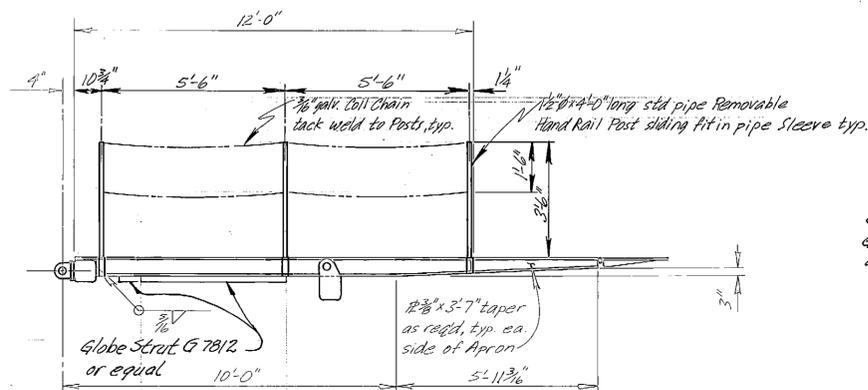
**BLOCK & CABLE SCHEMATIC**

N.T.S.

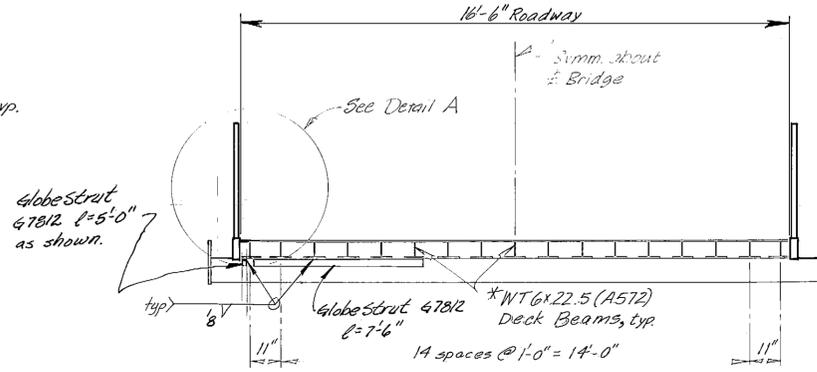
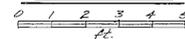
- Notes:
- All sheaves this sheet 20" O.D.  
17 1/4" Tread  
2 3/8" Hub thk.  
3 3/8" shaft
  - Cable shall be 3/8"  $\phi$  ~ 6 x 30 flattened strand, long lay, fibre core. (Breaking strength 35.4 tons)
  - Provide 3 3/8"  $\phi$  sheave pins cross drilled for grease.
  - See Sheet 13

**AS-BUILT**  
Date: 6-86

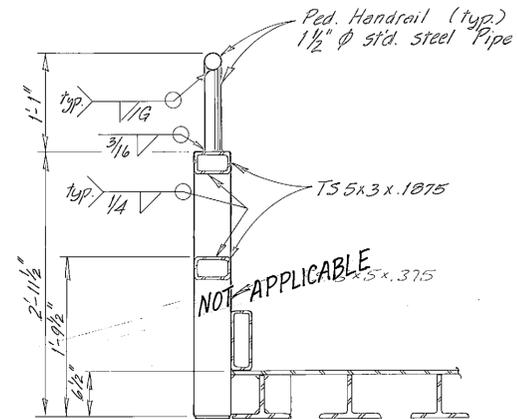
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		<b>APRON MECHANICAL DETAILS</b>	
SCALE As Noted	SURVEYED	APPROVED	
DESIGNED JJP	DRAWN LJB		
CHECKED JLS	DATE 1-85		
PROJECT NUMBER X70010	SHEET 19		OF 57



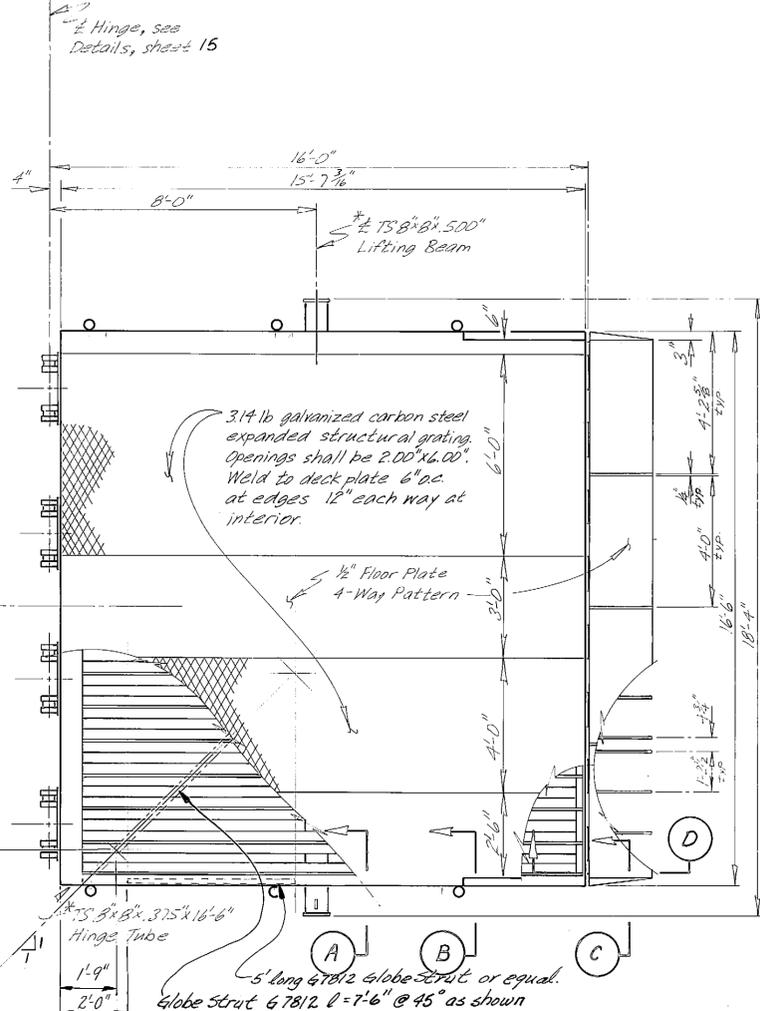
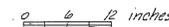
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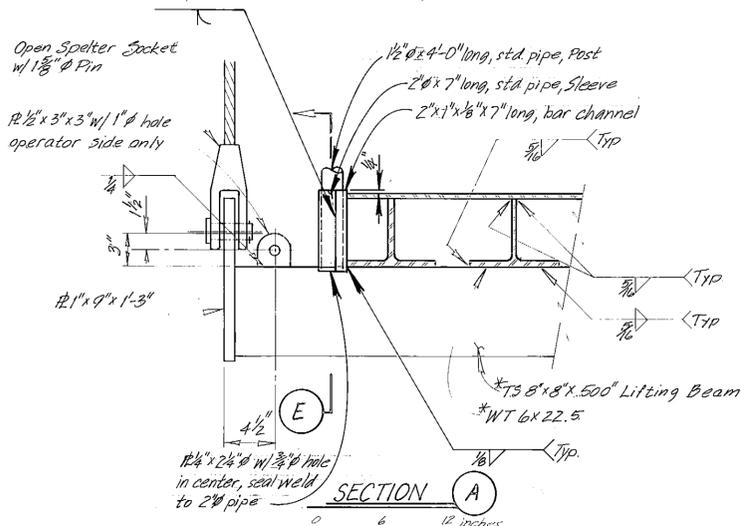
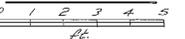
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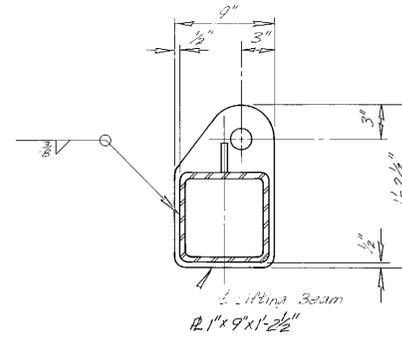
DETAIL A



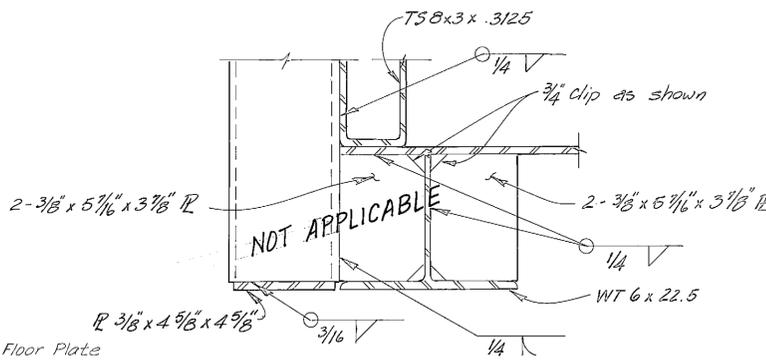
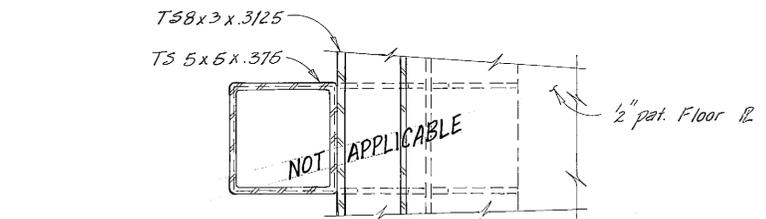
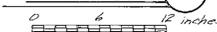
PLAN



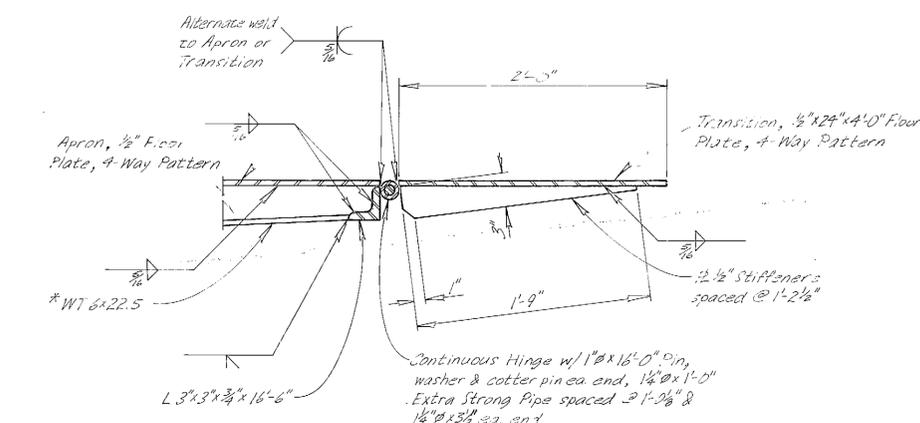
SECTION A



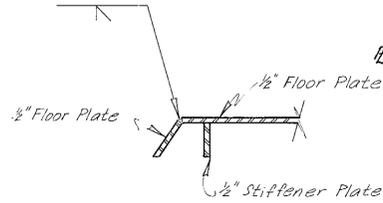
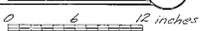
SECTION E



DETAIL B

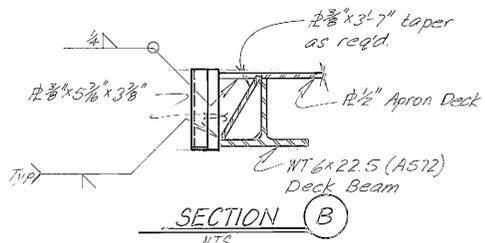


SECTION D



SECTION C

N.T.S.



SECTION B

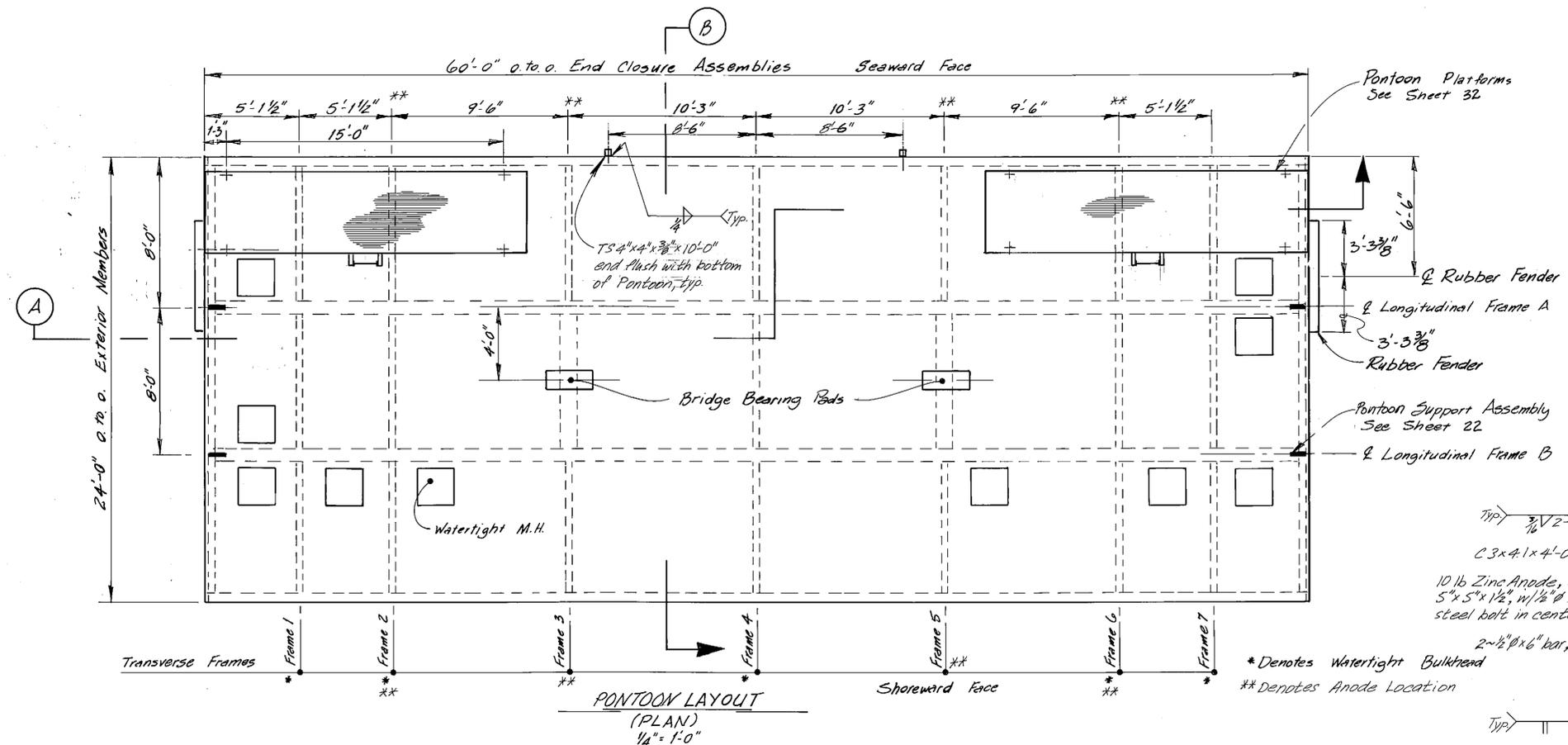
N.T.S.

- Notes:  
 1. \*Main members subject to tensile stress.  
 2. Galvanize after fabrication.  
 3. Close all open ended pipe or tubing with 1/4" R and seal weld.

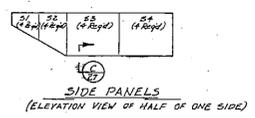
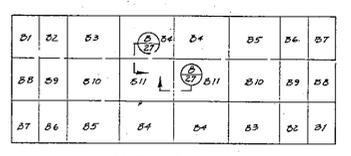
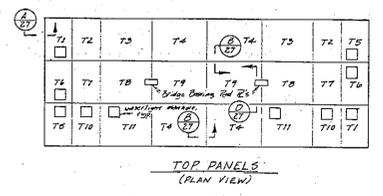
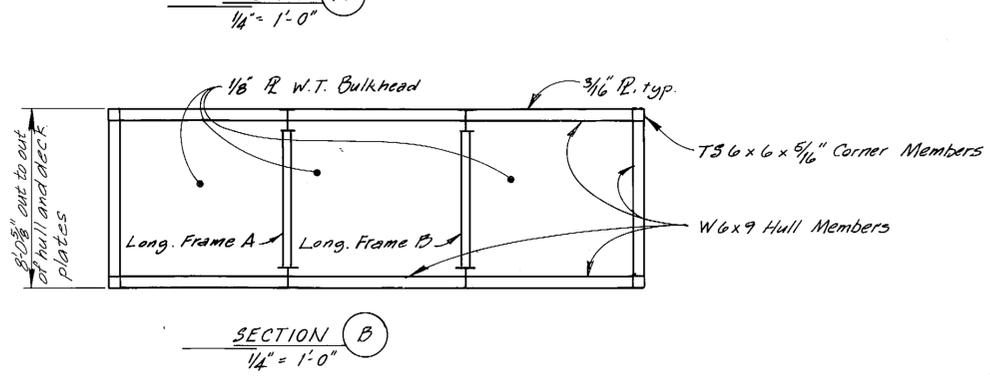
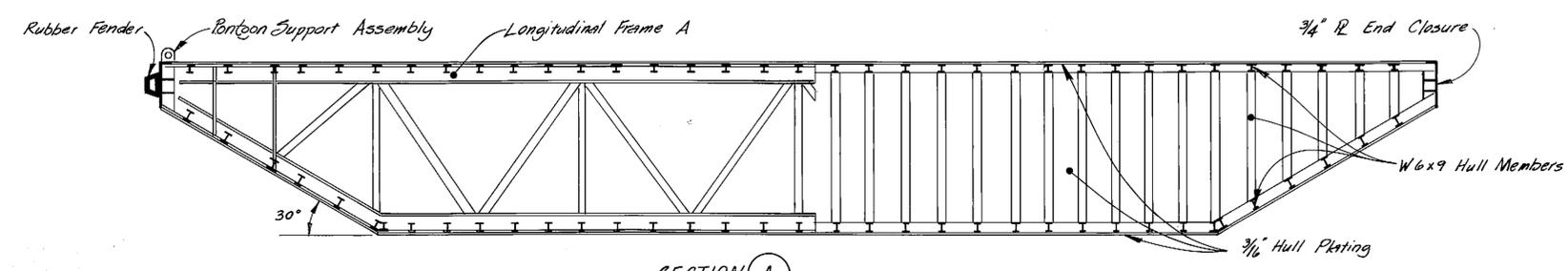
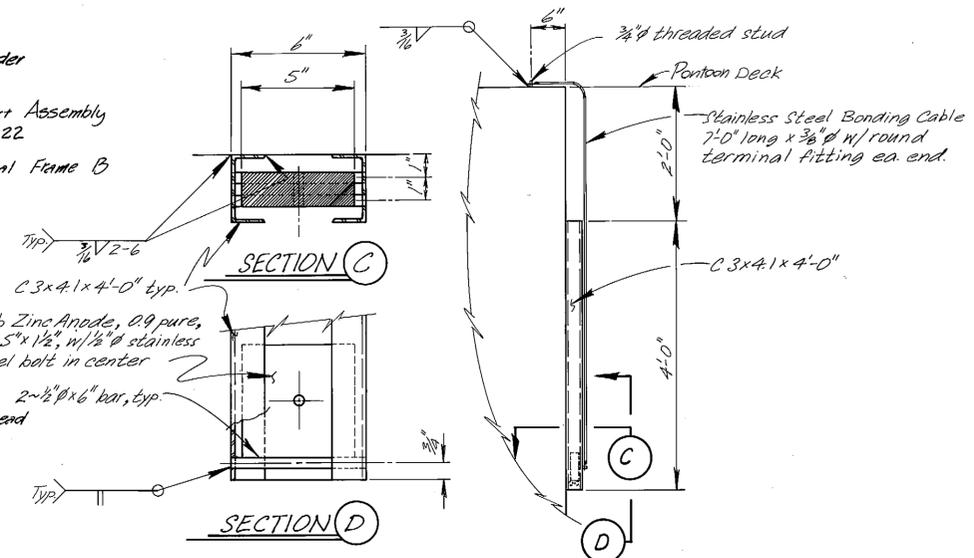
AS-BUILT

Date: 6-86

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		Ketchikan Alaska	
APRON DETAILS			
SCALE: As Noted	SURVEYED: _____	APPROVED: _____	
DESIGNED: J.P.	DRAWN: L.J.B.	DATE: 1-85	
CHECKED: J.S.	PROJECT NUMBER: X70010		
SHEET 20 OF 57			



Notes:  
 1. Pontoon Design Freeboard = 3'-0" (w/ballast)  
 2. Ballast compartments with fresh potable water and 25% ethylene glycol mixture.  
 3. Pontoon deck to be level both ways, longitudinally and laterally, with full dead load, i.e. bridge, barge with ballast, platforms, gangways and incidentals.  
 No ballast placed in tanks between frames 2 & 6.  
 All other tanks full of 10% ethylene glycol/water mixture.



**ZINC ANODE DETAILS**  
 NTS

PONTON SHEETS - REFERENCE INDEX	
Sheet No.	Description
21	Pontoon Layout & Typical Sections
22	Longitudinal Frames A & B
23	Transverse Frames 1-7
24	Details Frames 1-7
25	Details Frames 2, 4 & 6
26	Details Frames 3 & 5
27	Watertight Bulkheads & Bridge Bearing Details
28	Panels T1-T11 & Manhole Details
29	Panels B1-B11 & S1-S4
30	End Closure Assembly & Fender Details
31	Panel Connection & Misc. Details

Note: Approximate total weight of Pontoon and Platforms ≈ 110,000 lbs.

AS-BUILT  
 Date: 6-86

STAMP

DO NOT SCALE THIS DRAWING - USE DIMENSIONS

STATE OF ALASKA  
 DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

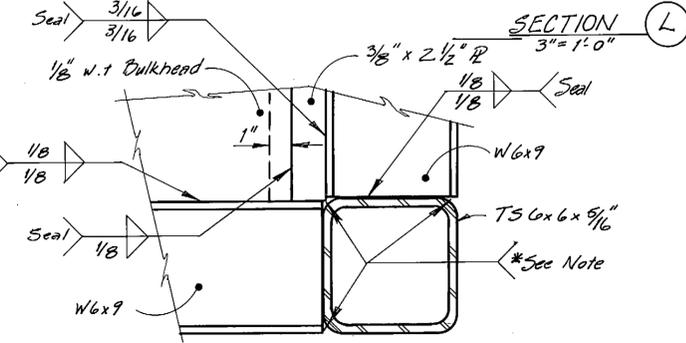
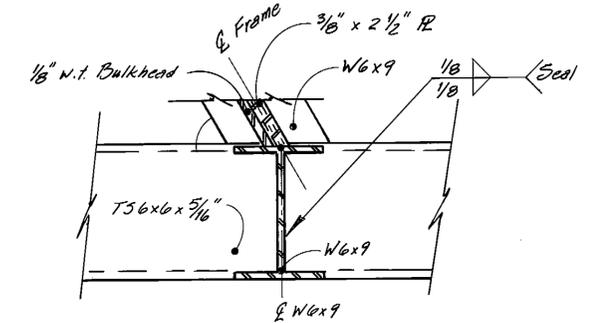
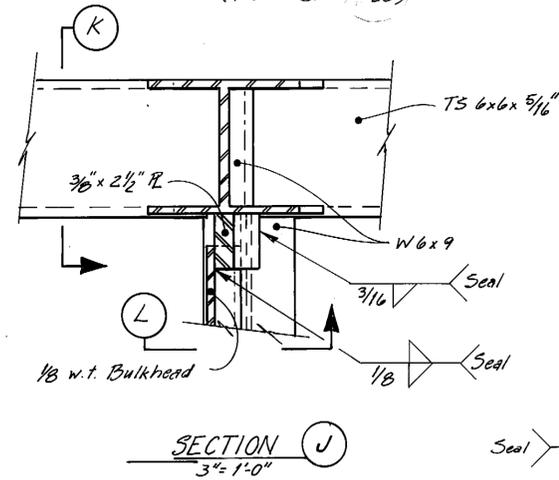
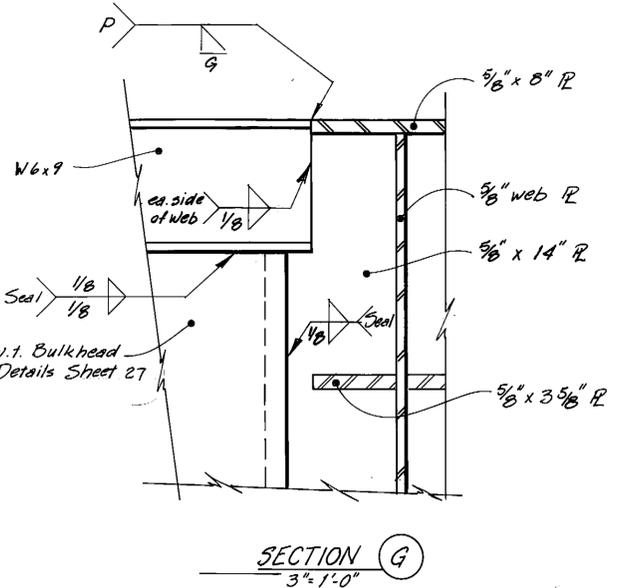
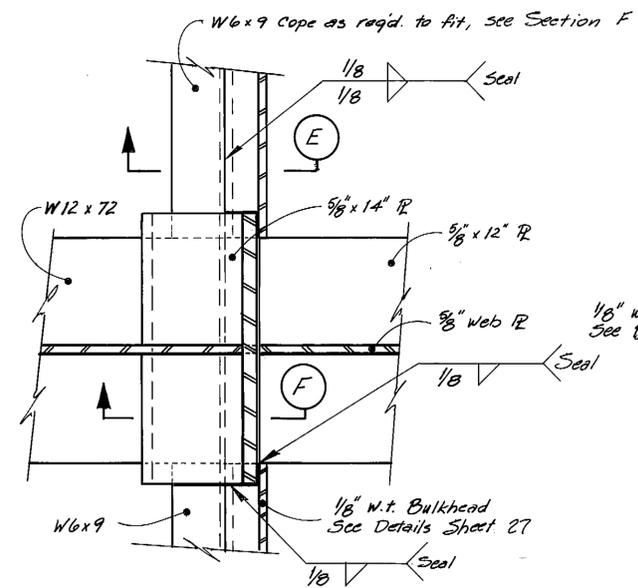
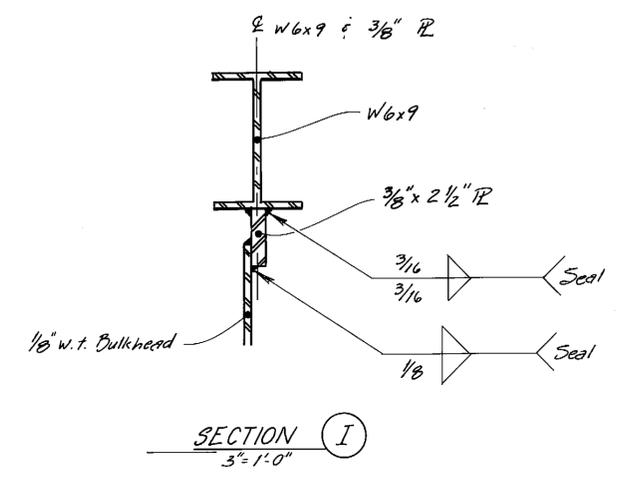
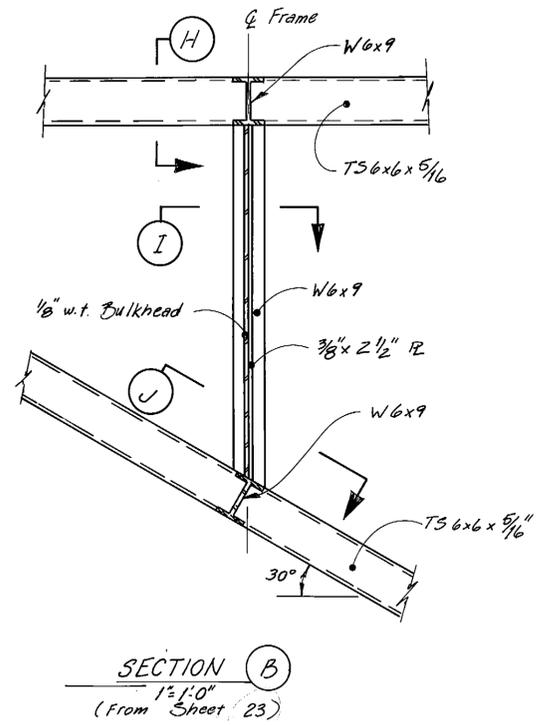
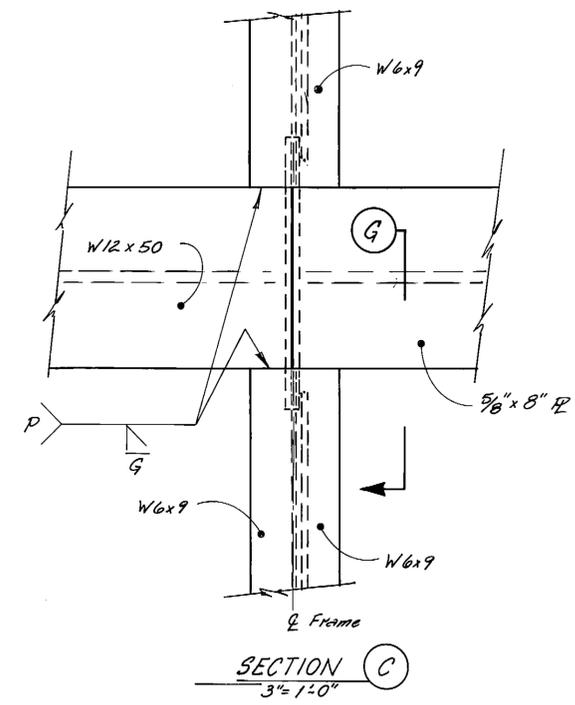
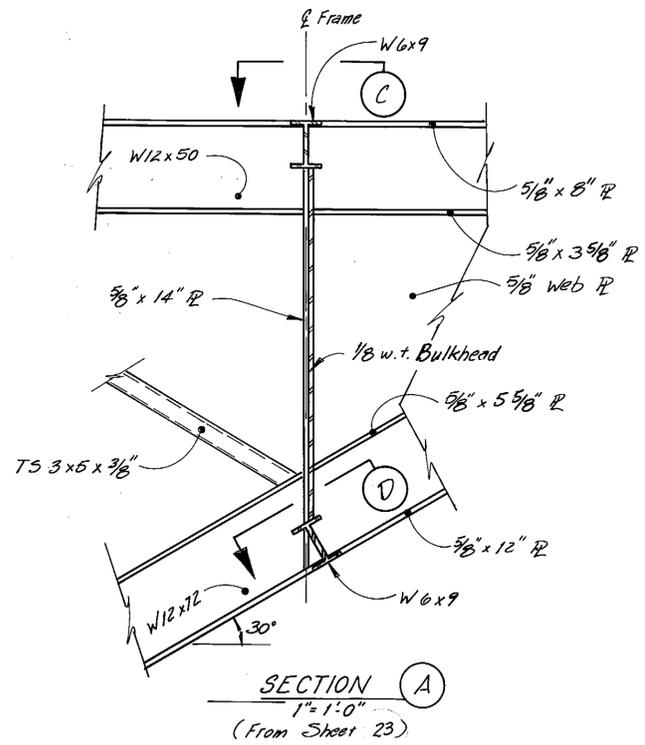
Ketchikan Alaska

PONTON LAYOUT & TYPICAL SECTIONS

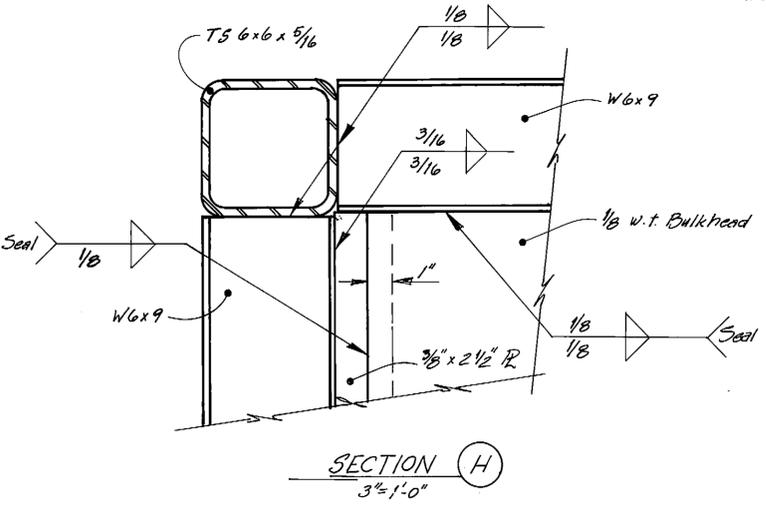
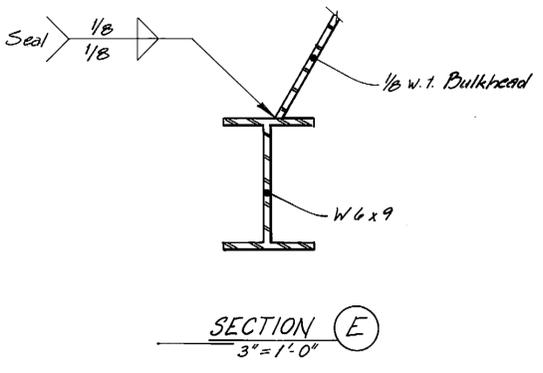
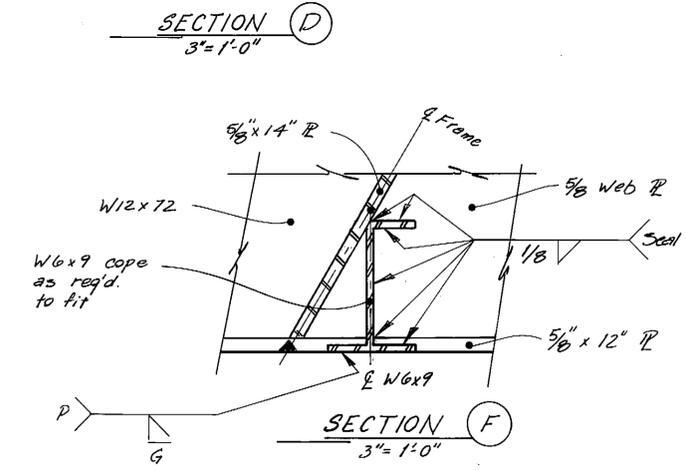
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 PROJECT NUMBER X70010 SHEET 21 OF 57





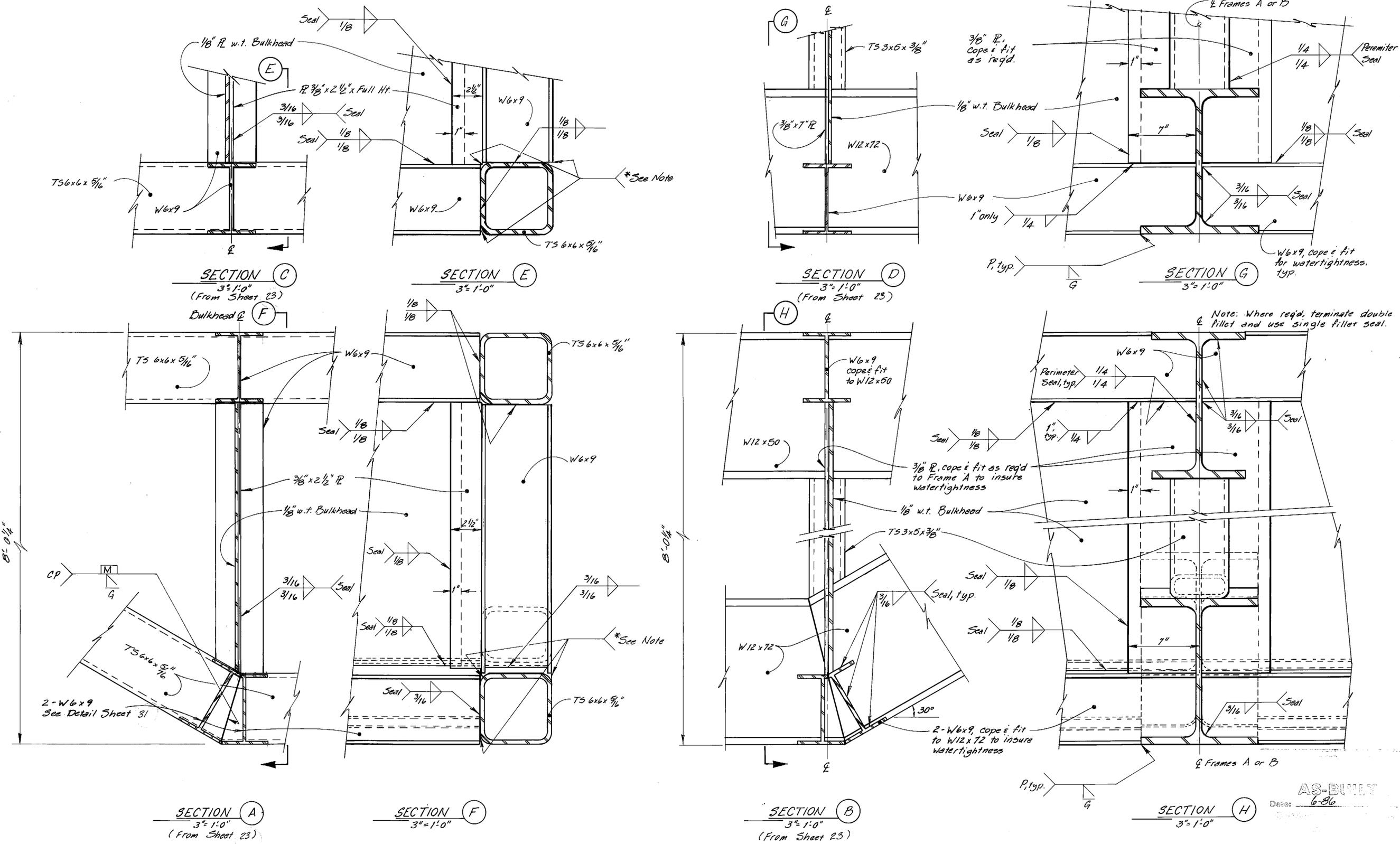


\* Note: Size and type of weld to accommodate seal. On exterior, grind flush to insure proper fit up of hull panels and still maintain watertightness.



**AS-BUILT**  
Date: 6-76

DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
<b>STATE OF ALASKA</b>			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
<b>DETAILS FRAMES 1 : 7</b>			
DESIGNED <i>JAL</i>	CHECKED <i>JS</i>	DRAWN <i>JAL</i>	DATE <i>2-85</i>
PROJECT NUMBER <i>X70010</i>	SHEET <i>24</i> OF <i>57</i>		



**SECTION C**  
3"=1'-0"  
(From Sheet 23)  
Bulkhead @ F

**SECTION E**  
3"=1'-0"

**SECTION D**  
3"=1'-0"  
(From Sheet 23)

**SECTION G**  
3"=1'-0"

**SECTION A**  
3"=1'-0"  
(From Sheet 23)

**SECTION F**  
3"=1'-0"

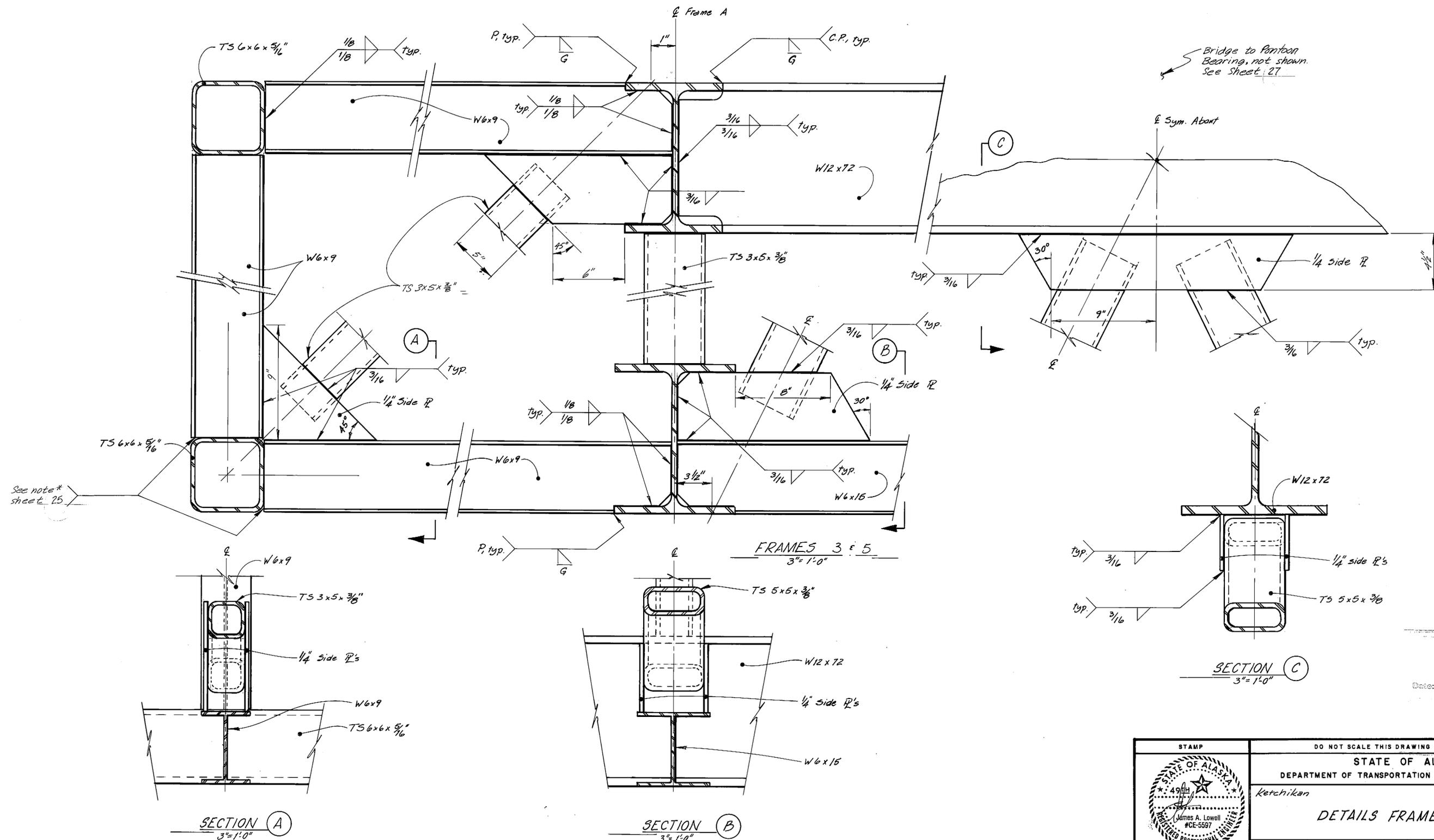
**SECTION B**  
3"=1'-0"  
(From Sheet 23)

**SECTION H**  
3"=1'-0"

\* Note: Size and type of weld to accommodate seal. On exterior, grind flush to insure proper fit up of hull panels and still maintain watertightness.

	DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
	STATE OF ALASKA			
	DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
	Ketchikan		Alaska	
<b>DETAILS FRAMES 2, 4 &amp; 6</b>				
DESIGNED <u>JAL</u>	CHECKED <u>JS</u>	DRAWN <u>JAL</u>	DATE <u>2-85</u>	
PROJECT NUMBER <u>X70010</u>	SHEET <u>25</u> OF <u>57</u>			

AS-BUILT  
Date: 6-86



See note\* sheet 25

Bridge to Pontoon Bearing, not shown. See sheet 27

SECTION A  
3" = 1'-0"

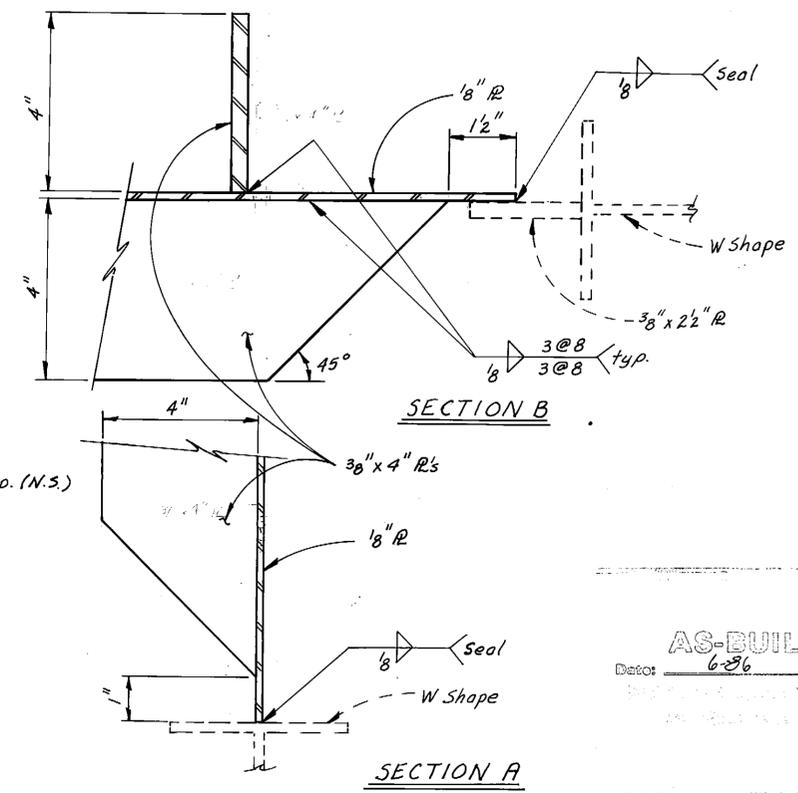
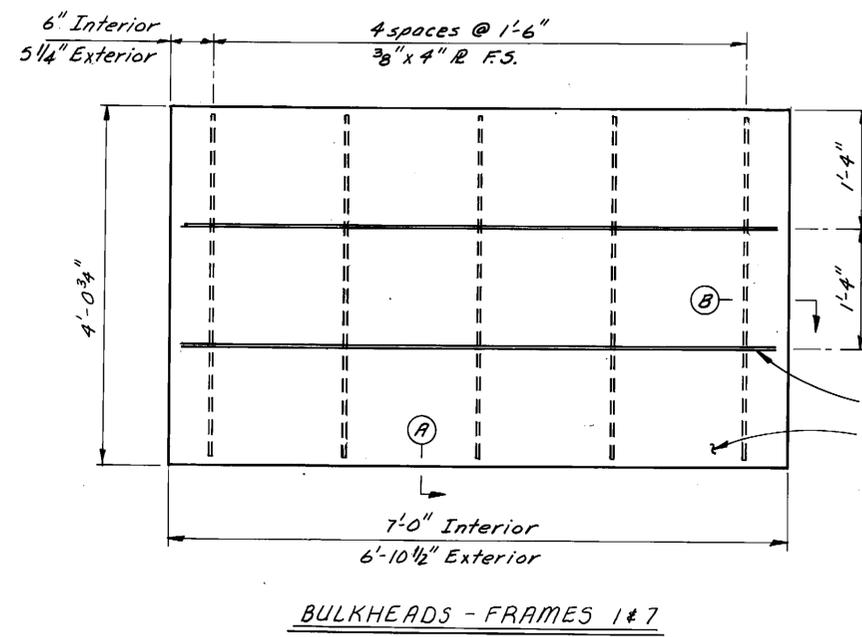
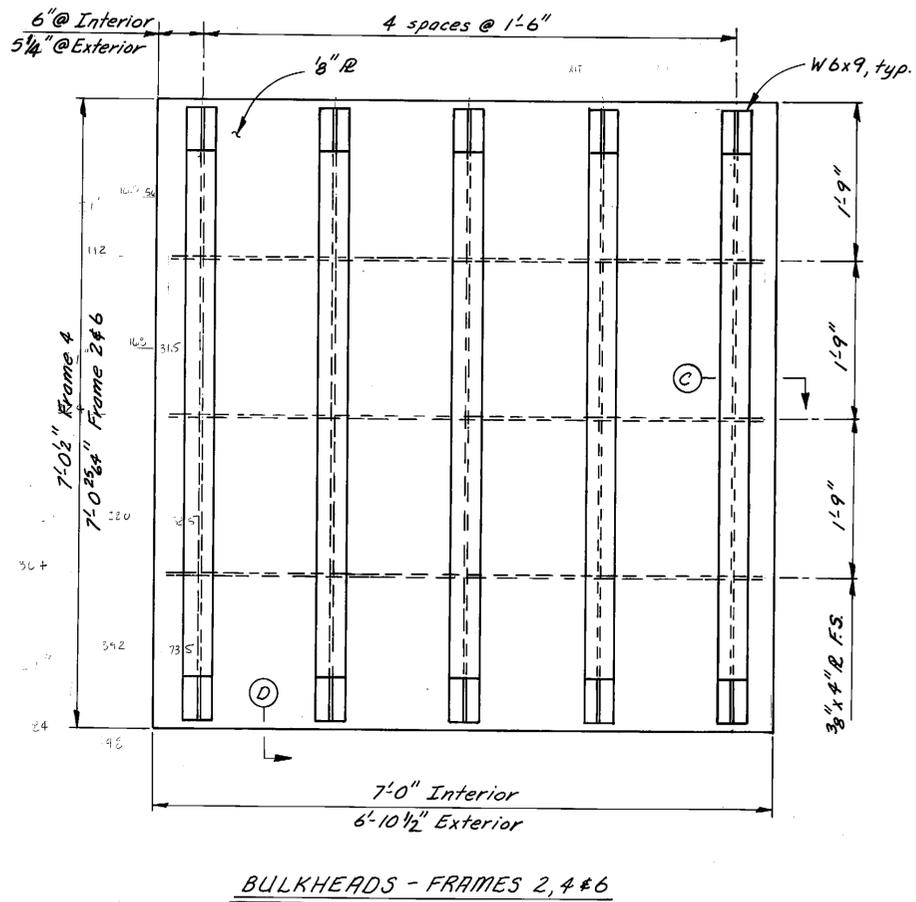
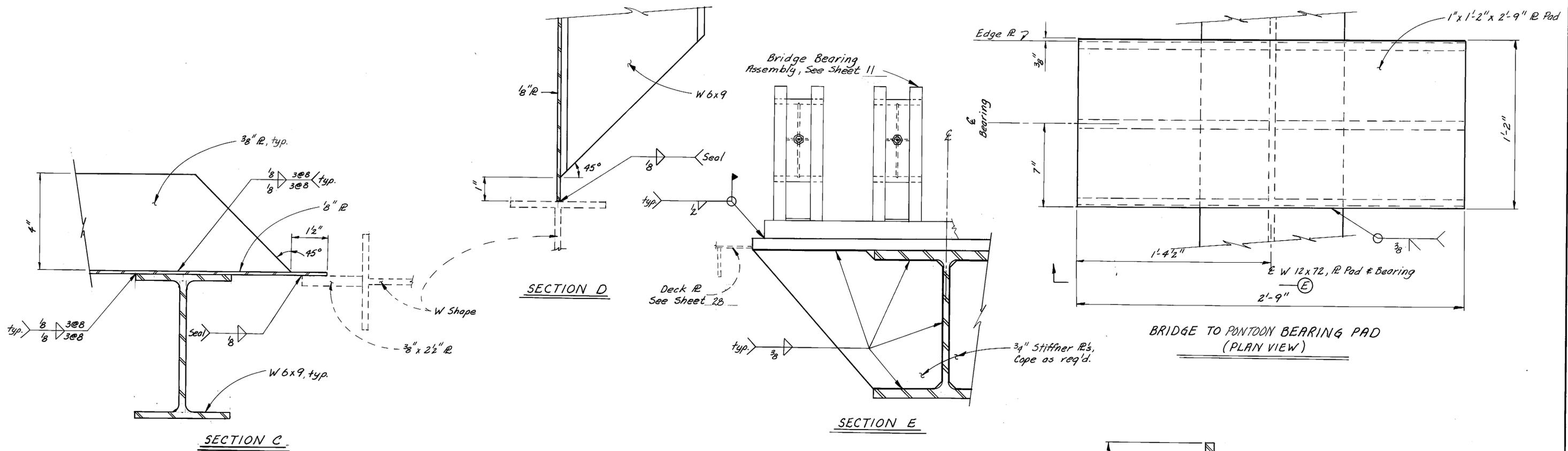
SECTION B  
3" = 1'-0"

SECTION C  
3" = 1'-0"

FRAMES 3 & 5  
3" = 1'-0"

AS-BUILT  
Date: 6-86

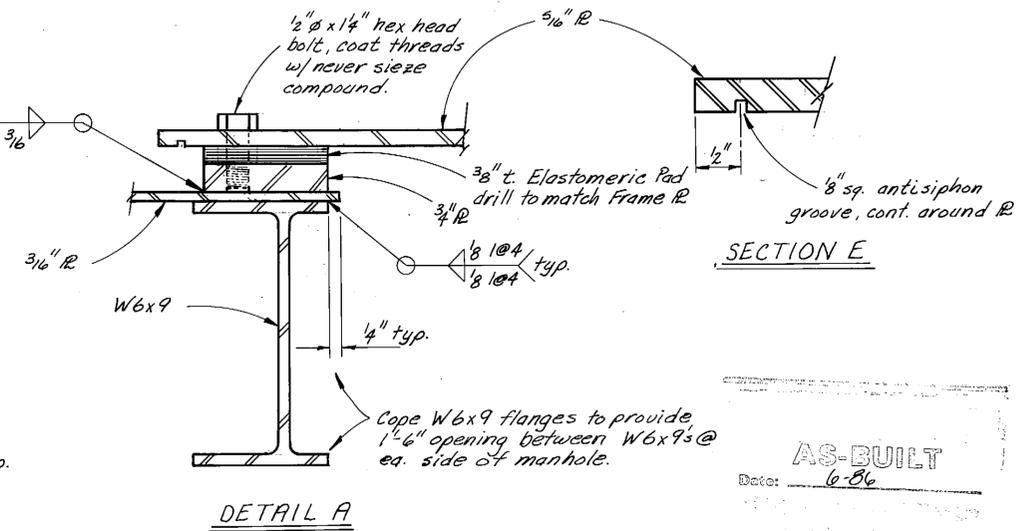
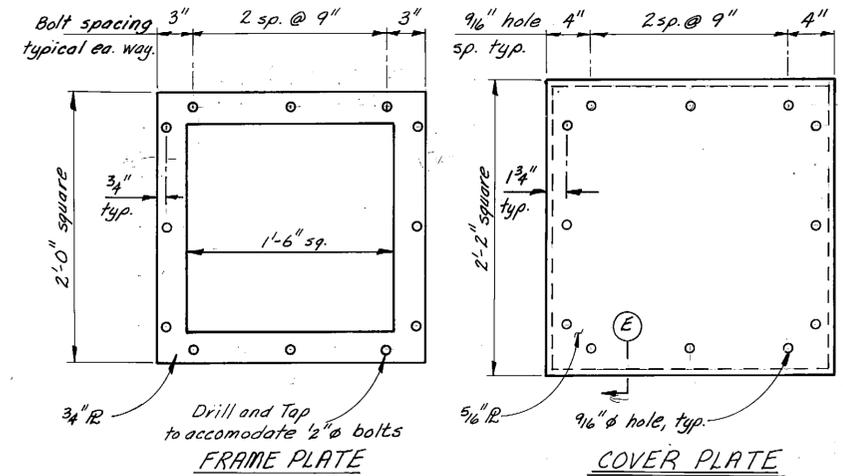
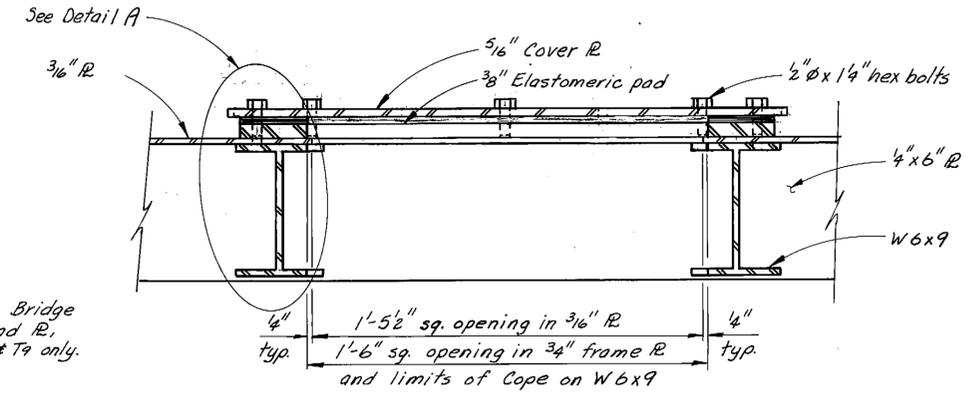
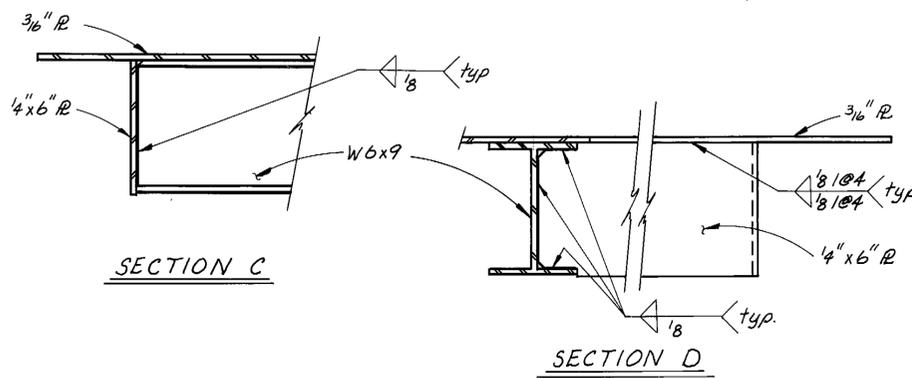
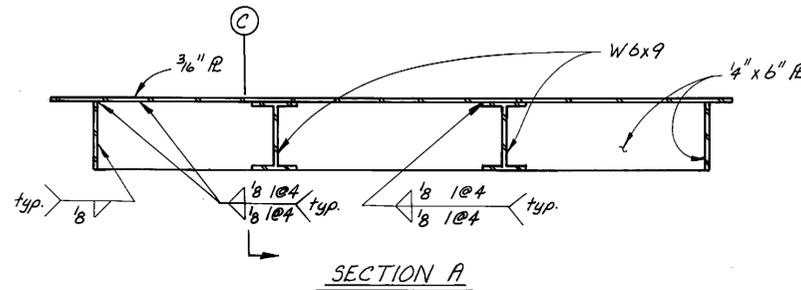
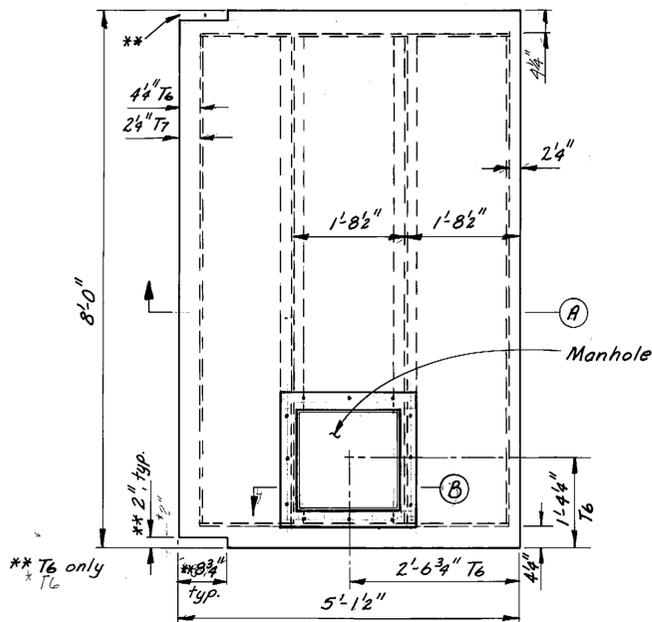
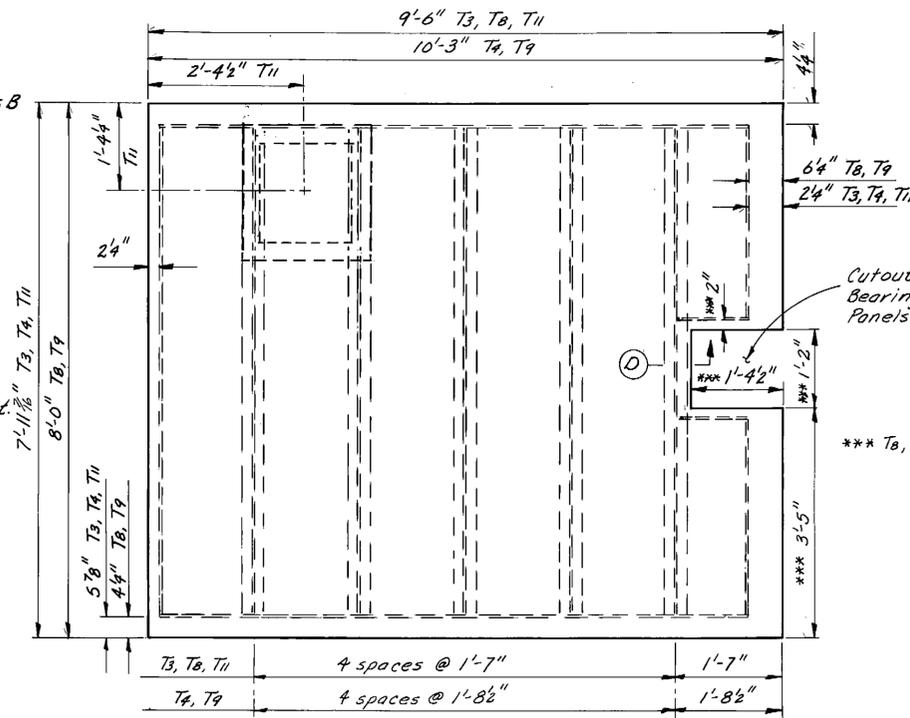
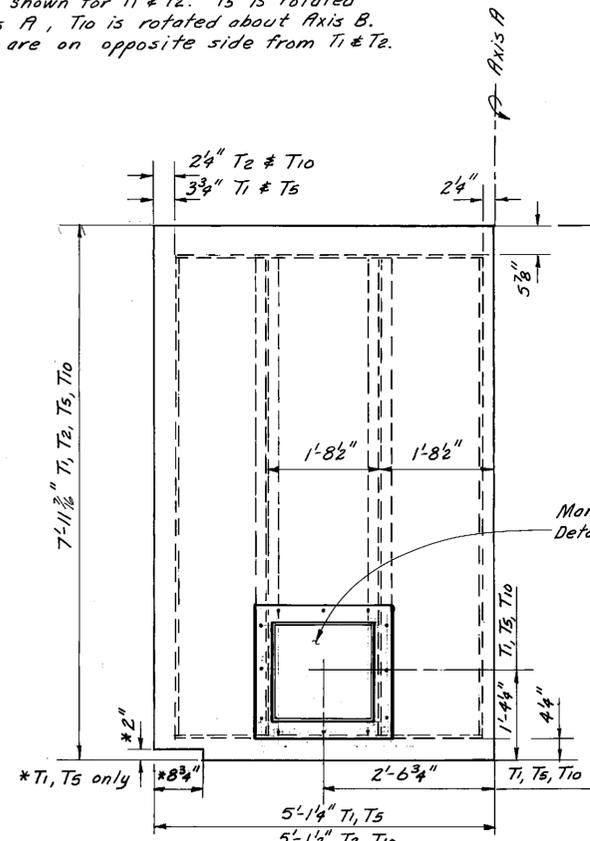
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	Ketchikan		Alaska	
DETAILS FRAMES 3 & 5				
DESIGNED LAL	CHECKED JS	DRAWN LAL	DATE 2-85	
PROJECT NUMBER X70010	SHEET 26		OF 57	



AS-BUILT  
Date: 6-26

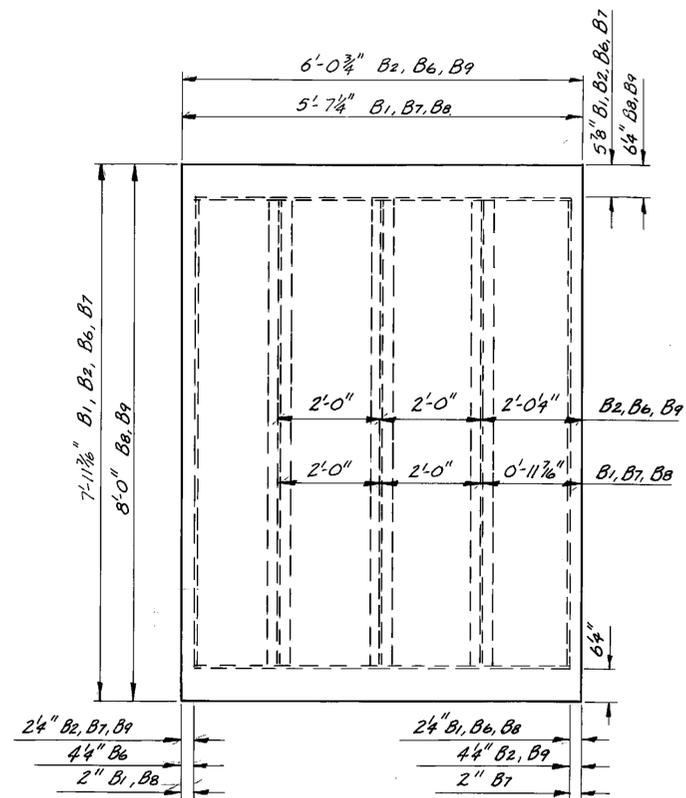
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	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
	Ketchikan, Alaska <b>WATERTIGHT BULKHEADS &amp; BRIDGE BEARING DETAILS</b>			
	DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 2-05
PROJECT NUMBER X70010		SHEET 27 OF 57		

Note: Details are shown for T<sub>1</sub> & T<sub>2</sub>. T<sub>5</sub> is rotated about Axis A, T<sub>10</sub> is rotated about Axis B. Weldments are on opposite side from T<sub>1</sub> & T<sub>2</sub>.

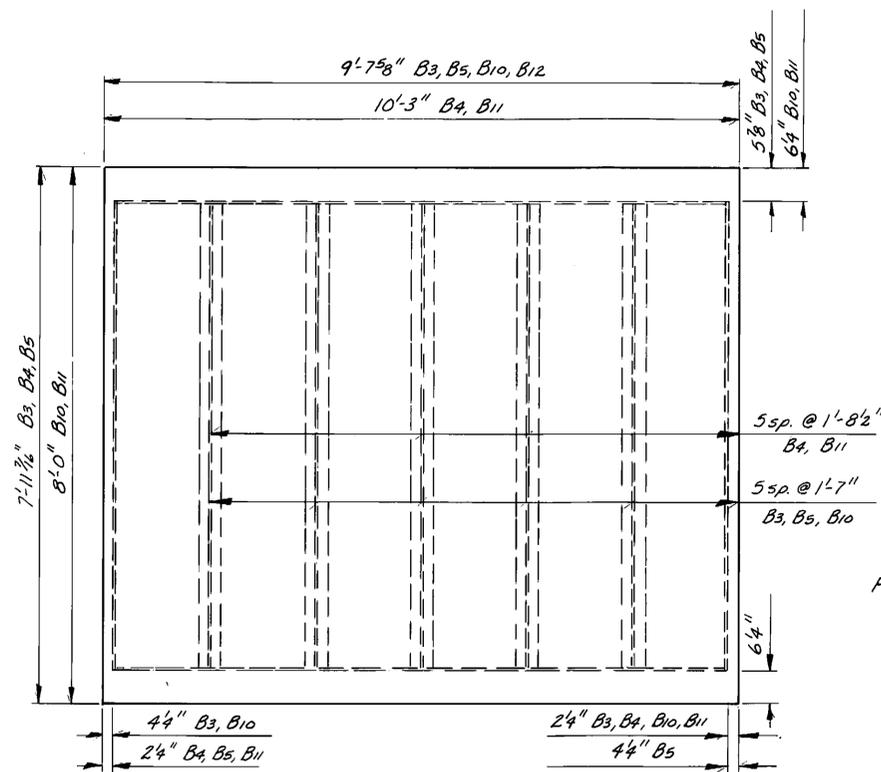


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Date: 6-86

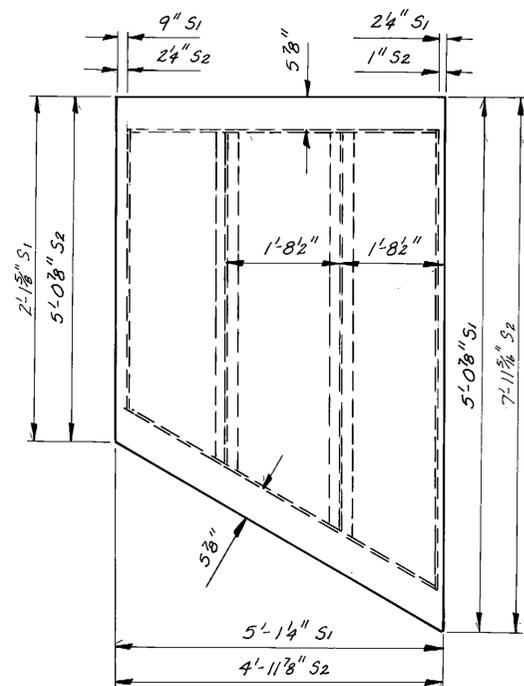
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		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		Ketchikan Alaska	
		PANELS T <sub>1</sub> - T <sub>11</sub>	
		AND MANHOLE DETAILS	
DESIGNED JAL	CHECKED JS	DRAWN JAL/JS	DATE 2-85
PROJECT NUMBER X70010	SHEET 28		OF 57



PANELS B1, B2, B6, B7, B8, B9

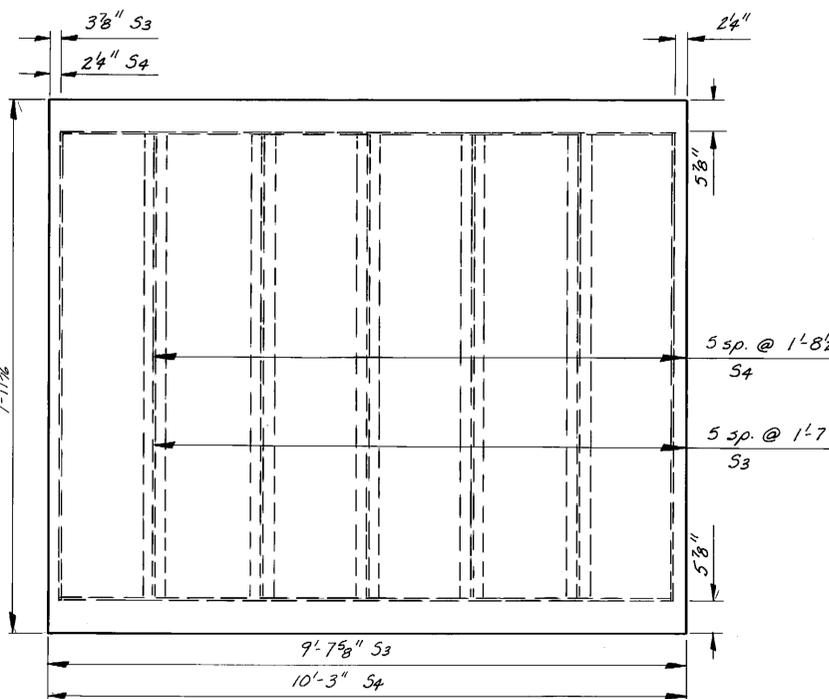


PANELS B3, B4, B5, B10, B11



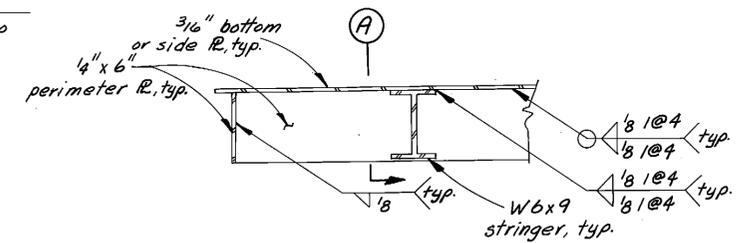
PANELS S1, S2

Note: S1 & S2, 2 req'd. ea. type as shown, 2 req'd. ea. type w/ weldments on near side.

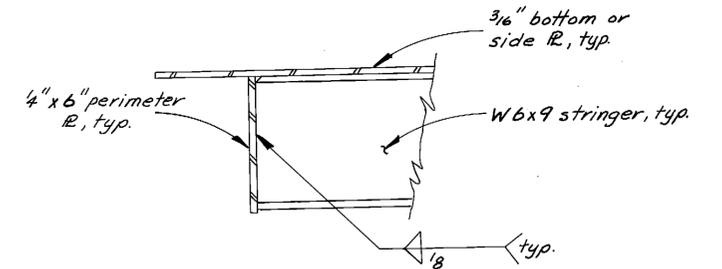


PANELS S3, S4

Note: S3 & S4, 2 req'd. ea. type as shown, 2 req'd. ea. type w/ weldments on near side.



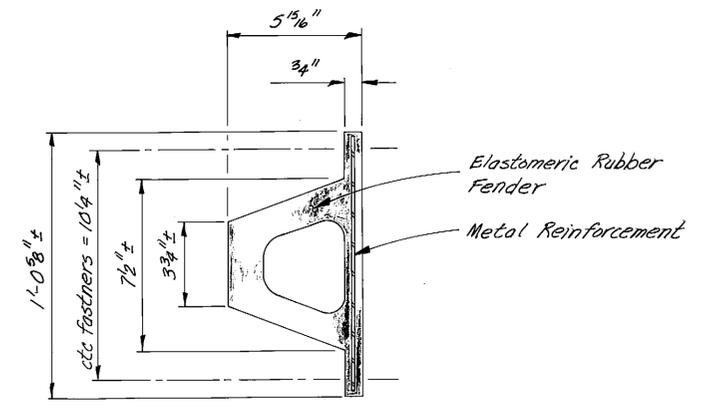
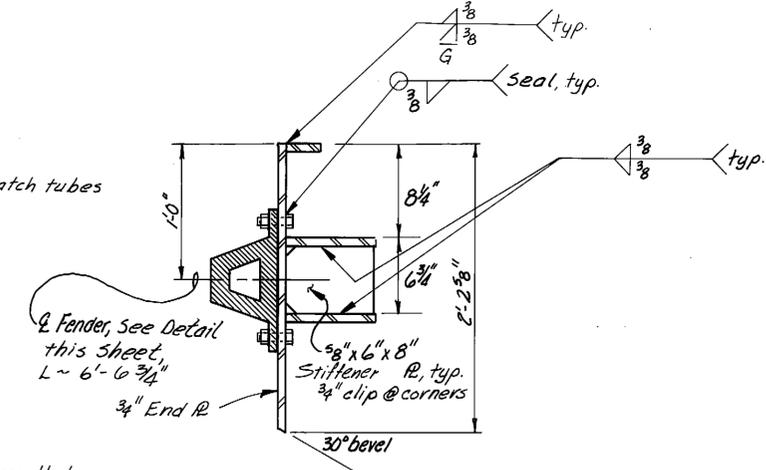
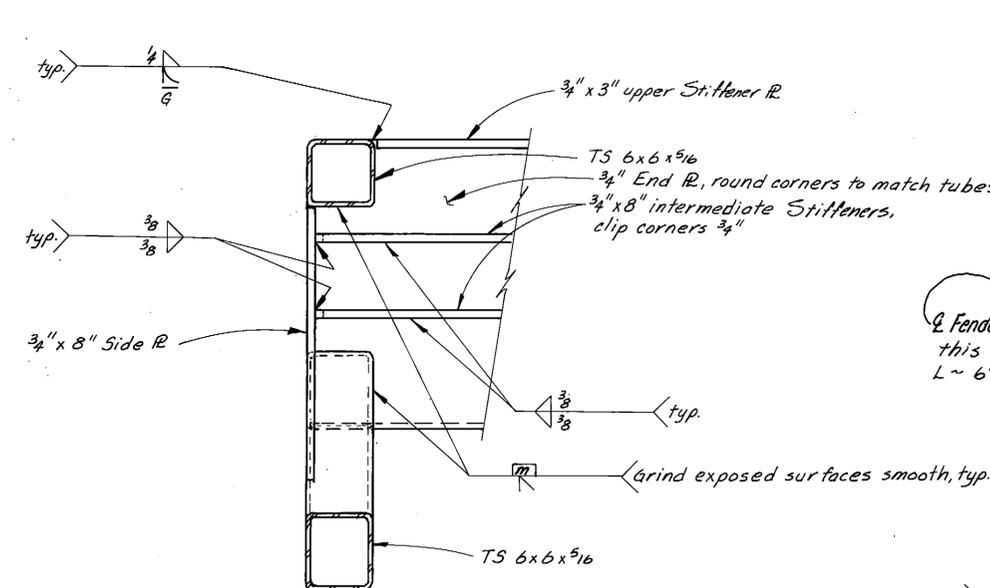
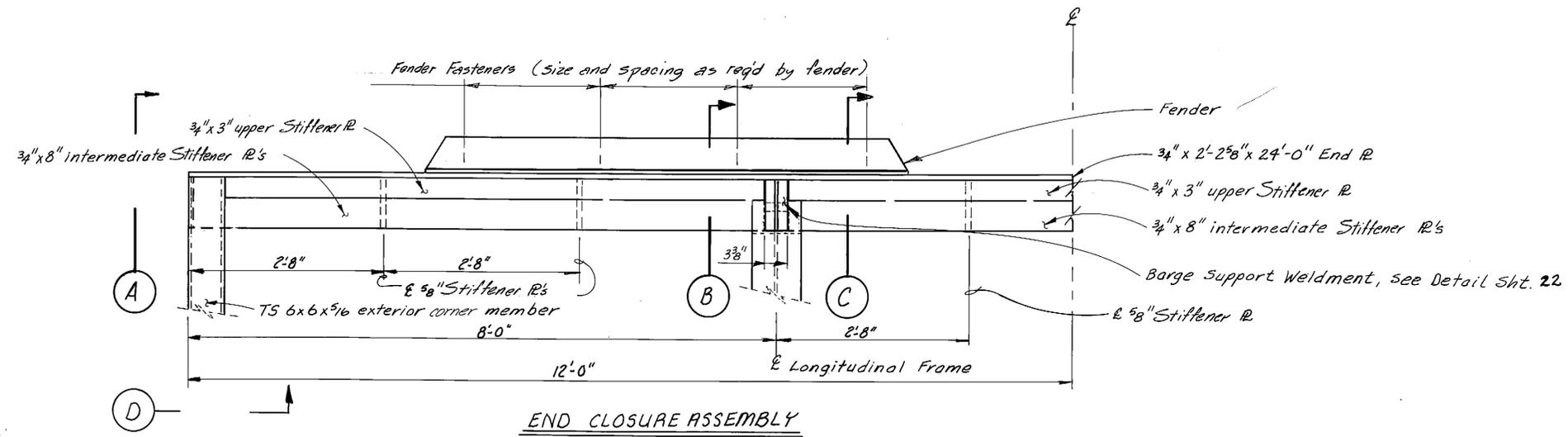
TYPICAL PARTIAL SECTION



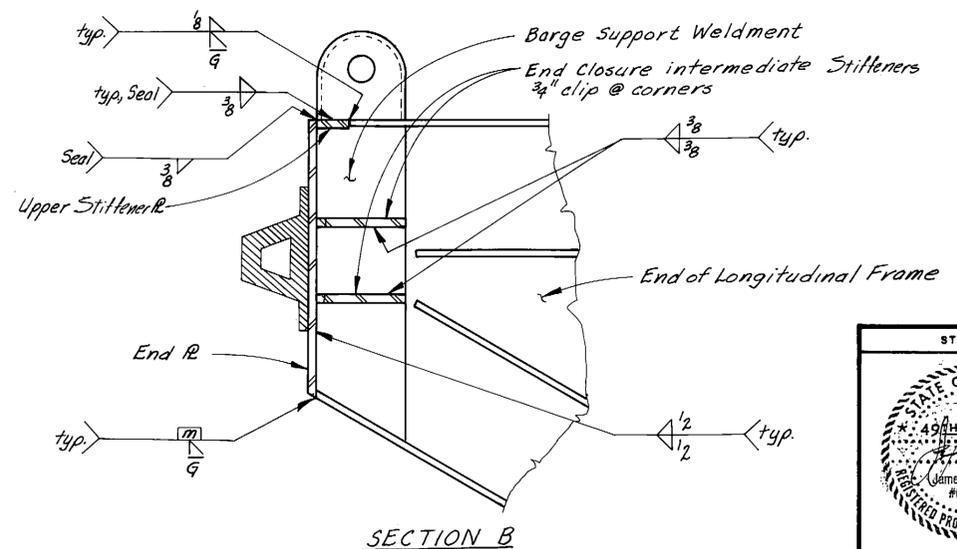
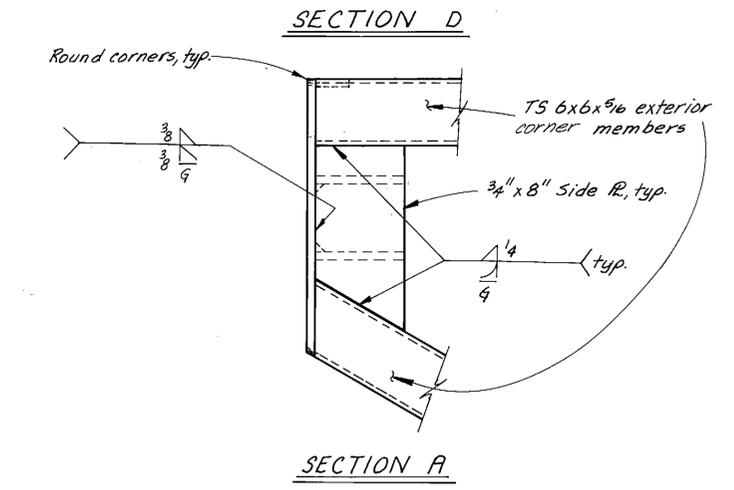
SECTION A

AS-BUILT  
Date: 6-86

STAMP				DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
				STATE OF ALASKA			
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Ketchikan				Alaska			
PANELS B1-B11				S1-S4			
DESIGNED	ML	CHECKED	JS	DRAWN	ML/JS	DATE	2-85
PROJECT NUMBER	X70010			SHEET	29	OF	57

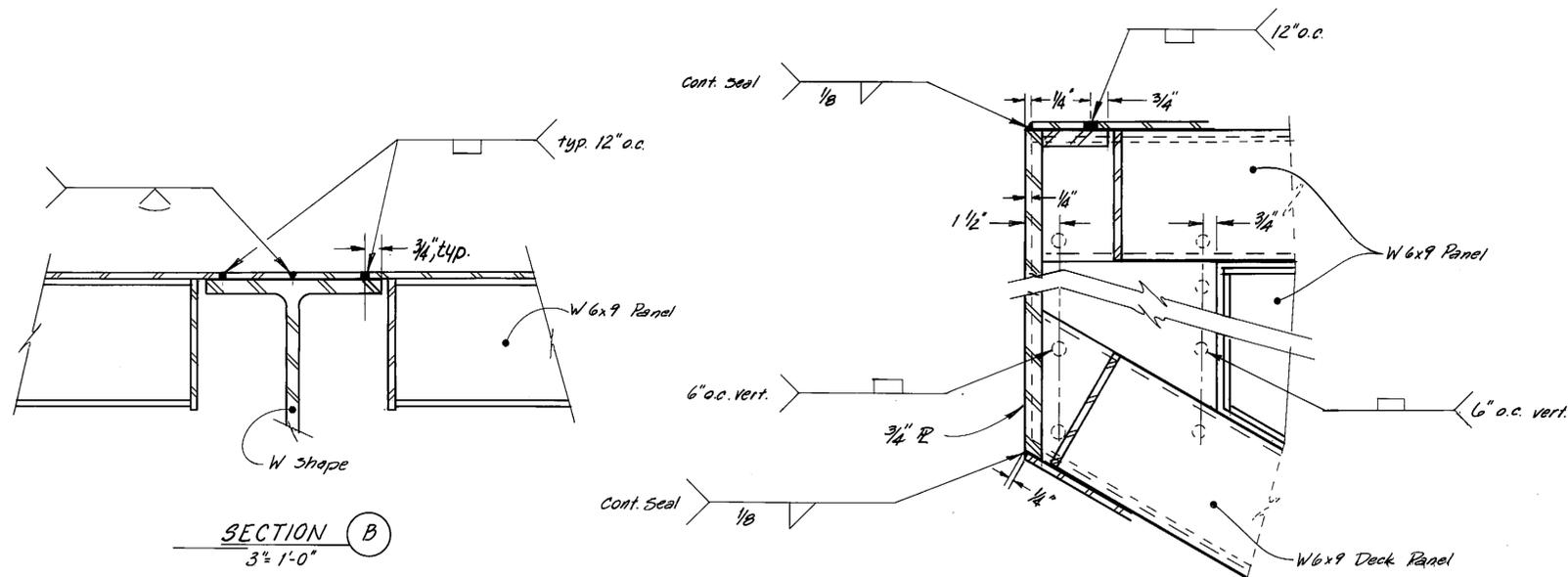


Note: Approx. 8" @ 45% deflection per ft. of length req'd.  
 SEIBH V-TYPE 150H, L = 6'-6 3/4"  
**FENDER DETAIL**

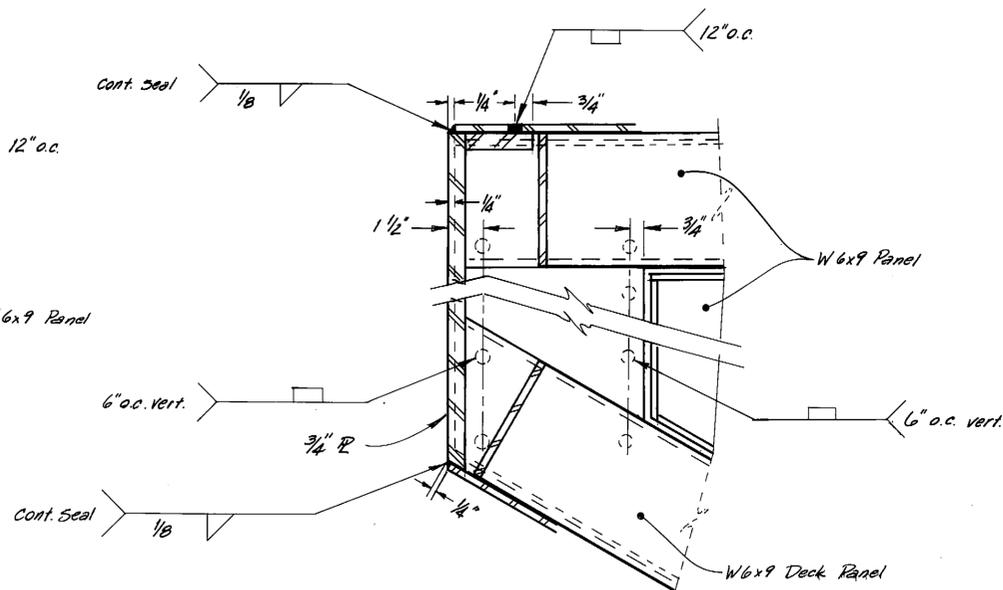


Note: Deck, side and bottom panels, not shown for clarity.

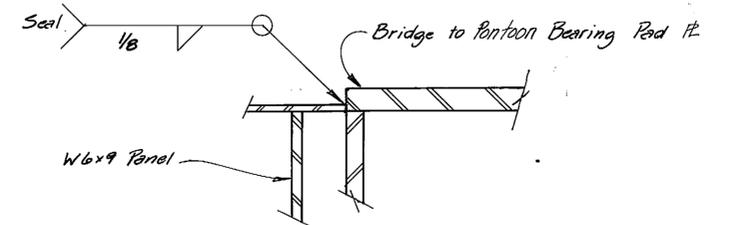
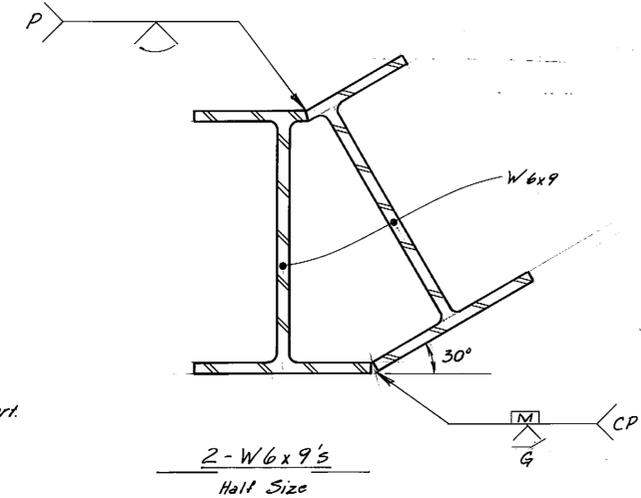
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Ketchikan, Alaska		<b>END CLOSURE ASSEMBLY</b>	
		<b>AND FENDER DETAILS</b>	
DESIGNED <i>SL</i>	CHECKED <i>LS</i>	DRAWN <i>SL/LS</i>	DATE <i>2-86</i>
PROJECT NUMBER <i>X70010</i>	SHEET <i>30</i> OF <i>57</i>		



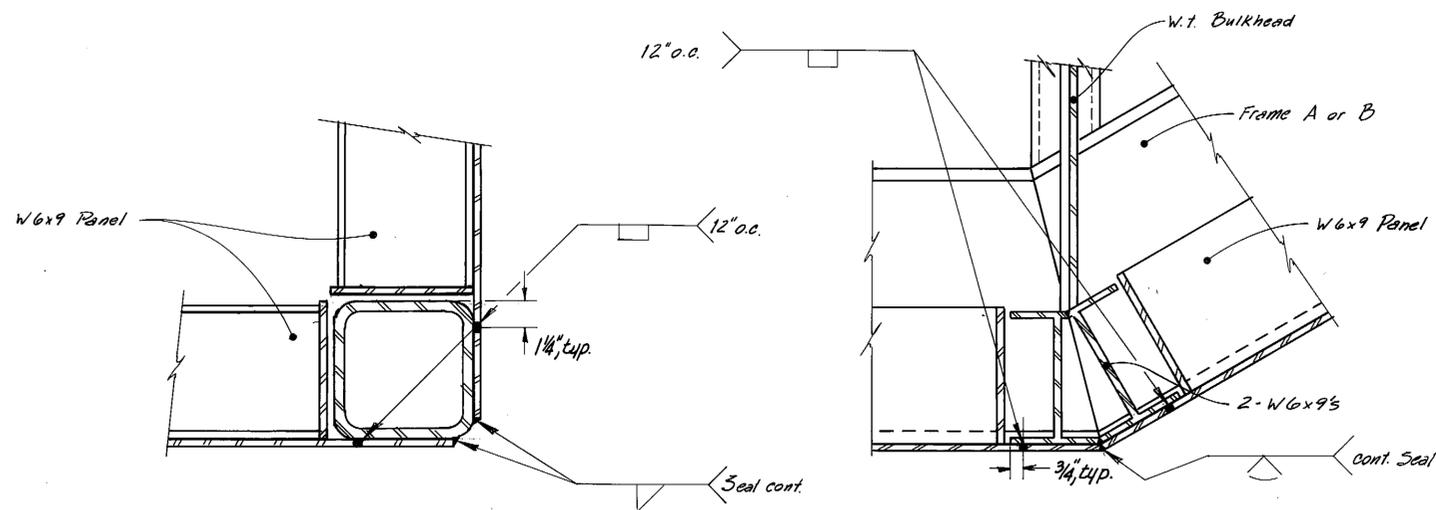
SECTION B  
3" = 1'-0"



SECTION A  
3" = 1'-0"



SECTION D  
3" = 1'-0"



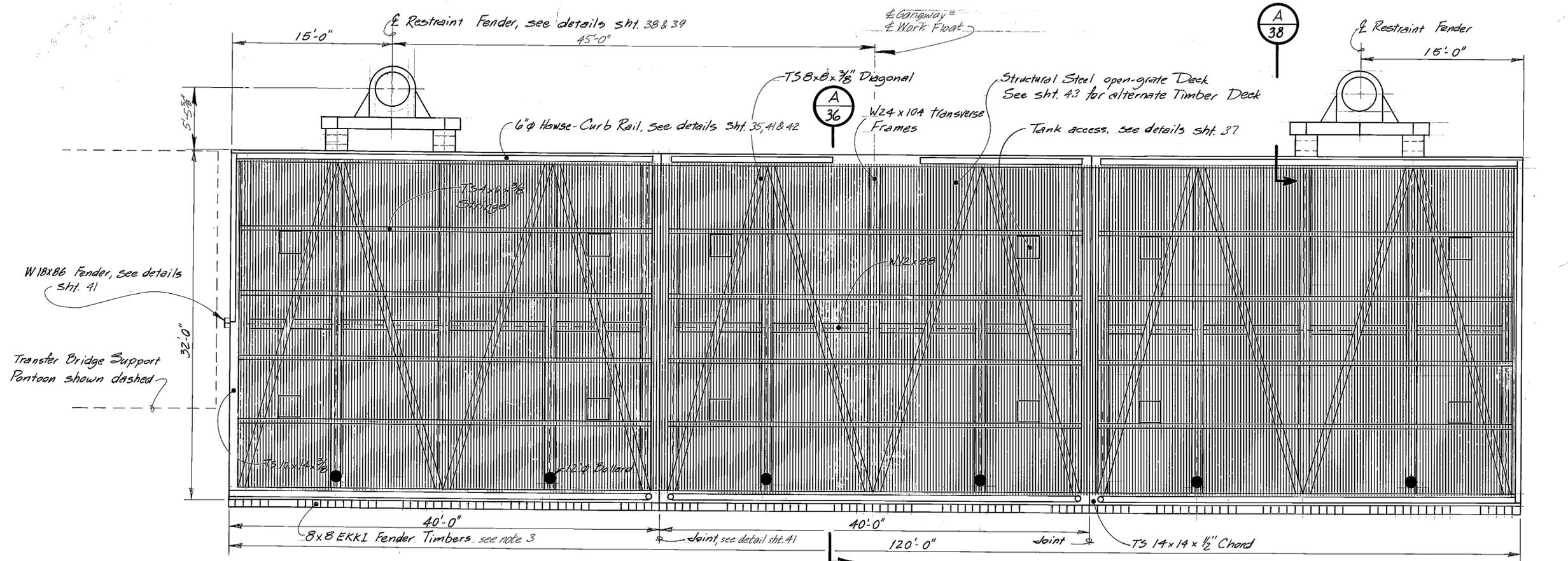
SECTION C  
3" = 1'-0"

ELEVATION  
BOTTOM PANEL CONN. @ MAIN FRAME A OR B  
3" = 1'-0"

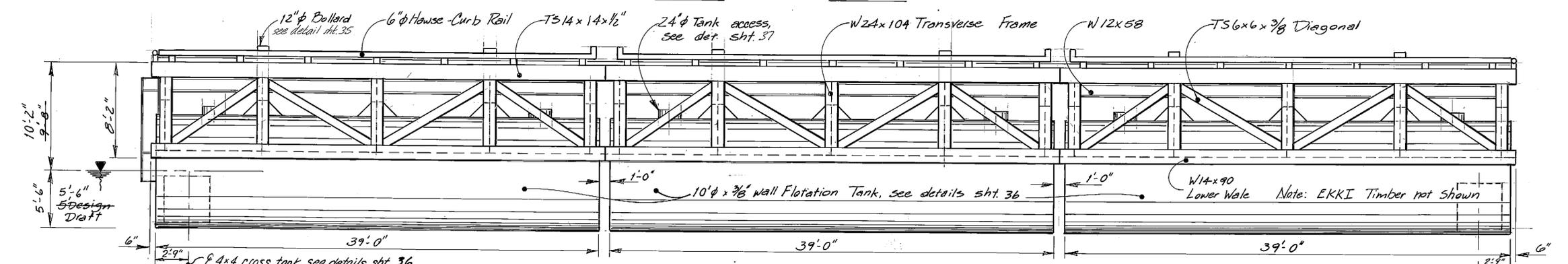
AS-BUILT  
Date: 6/86

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA	
		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		Ketchikan	Alaska
PANEL CONNECTION & MISC. DETAILS			
DESIGNED JAL	CHECKED JS	DRAWN JAL	DATE 2-85
PROJECT NUMBER X70010	SHEET 31 OF 57		





PLAN



ELEVATION

NTS

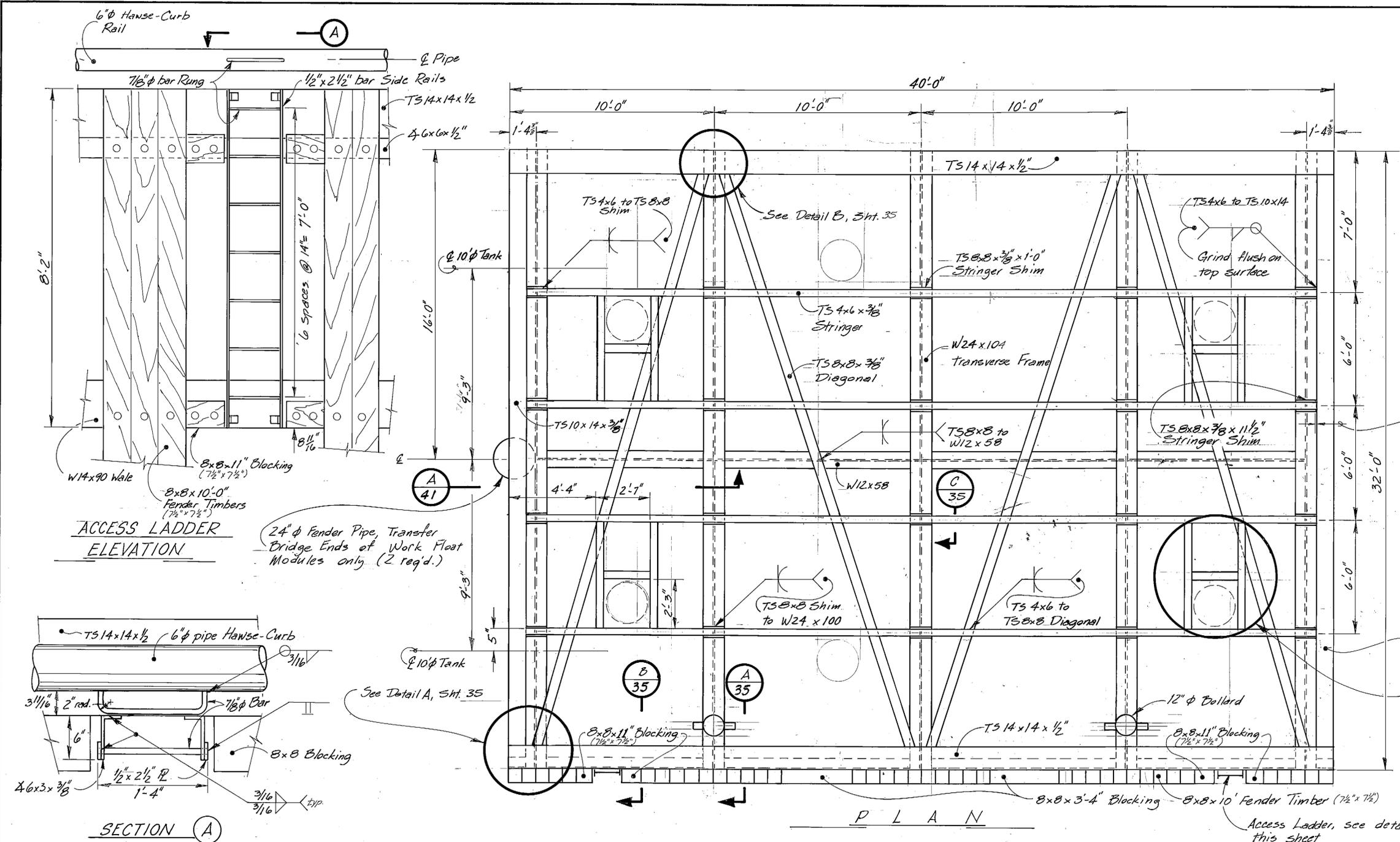
Work Floats: Tanks and connection plates - Section 1 (Section 303), remainder of work floats to be galvanized after fabrication or spray metalized.

- Notes:
- NO BALLAST USED
  - Ballast compartments with fresh potable water and 20% ethylene glycol mixture.
  - Work float deck to be level both ways, longitudinally and laterally, with full dead load, i.e. float with ballast, platforms, gangways and incidentals.
  - All 8x8 EKKI Fender Timber and Blocking shall be 7/2" x 7/2" finished size.

Note:  
Approximate total weight of Work Float -  
430,000 lb. struct. steel  
+ 60,000 lb. grating steel

AS-BUILT  
Date: 6-86

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
		STATE OF ALASKA			
		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
		Ketchikan		Alaska	
32' x 120' WORK FLOAT GENERAL DETAILS					
DESIGNED	JAL	CHECKED	BAS	DRAWN	DB
DATE	3-85				
PROJECT NUMBER	X70010	SHEET	33	OF	57



Note: Grating & Handse-Curb Rail not shown.

Provide 1/2" gap between end of Shim & face of TS10x14, Typical

See Tank access Framing details Sht. 37

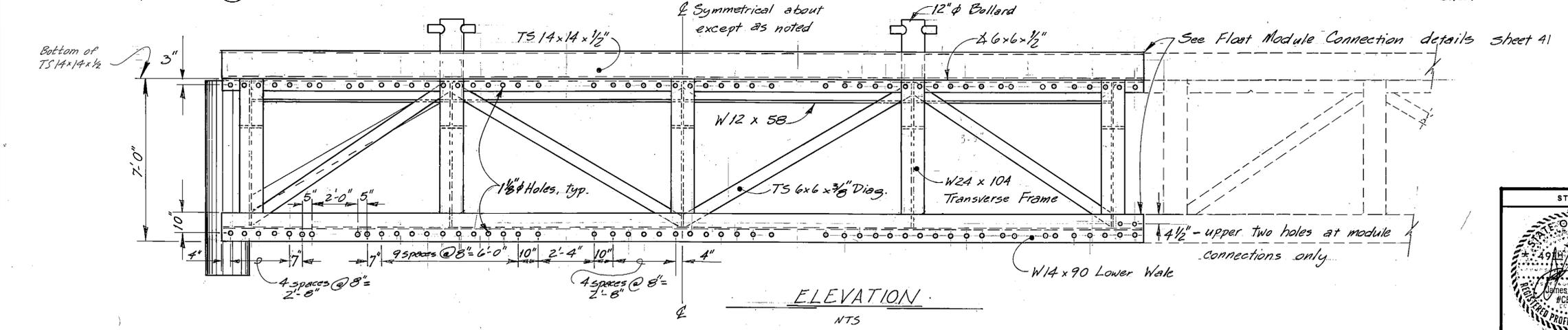
Access Ladder, see details this sheet

ACCESS LADDER ELEVATION

24" Fender Pipe, Transfer Bridge Ends of Work Float Modules only. (2 req'd.)

P L A N

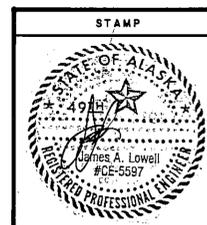
SECTION A



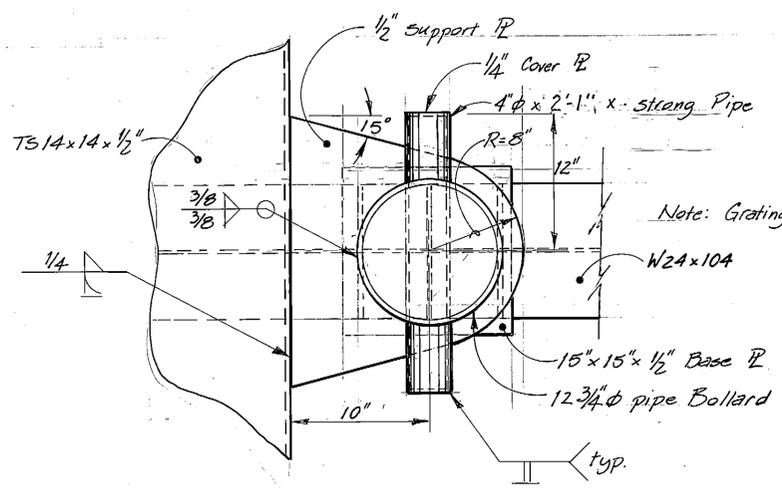
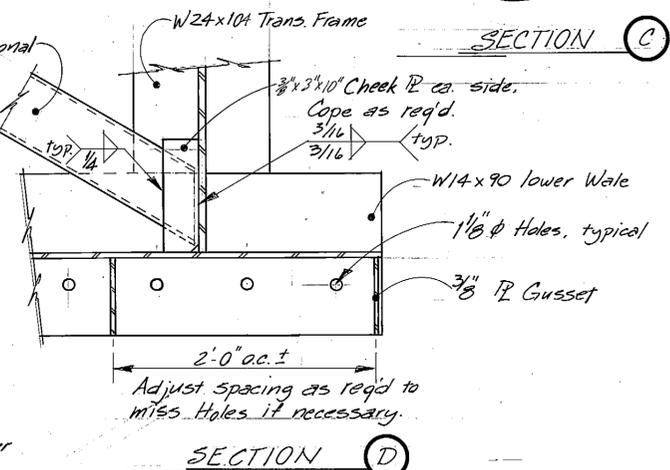
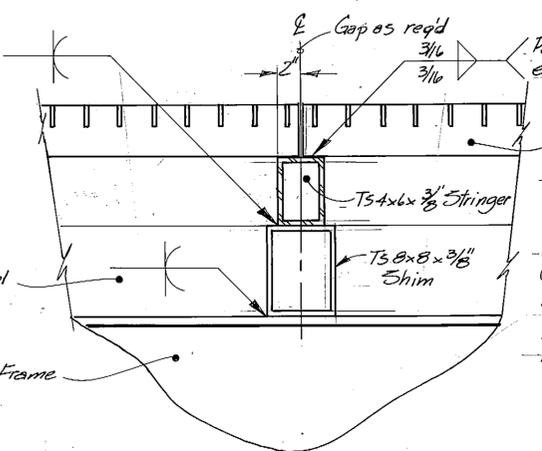
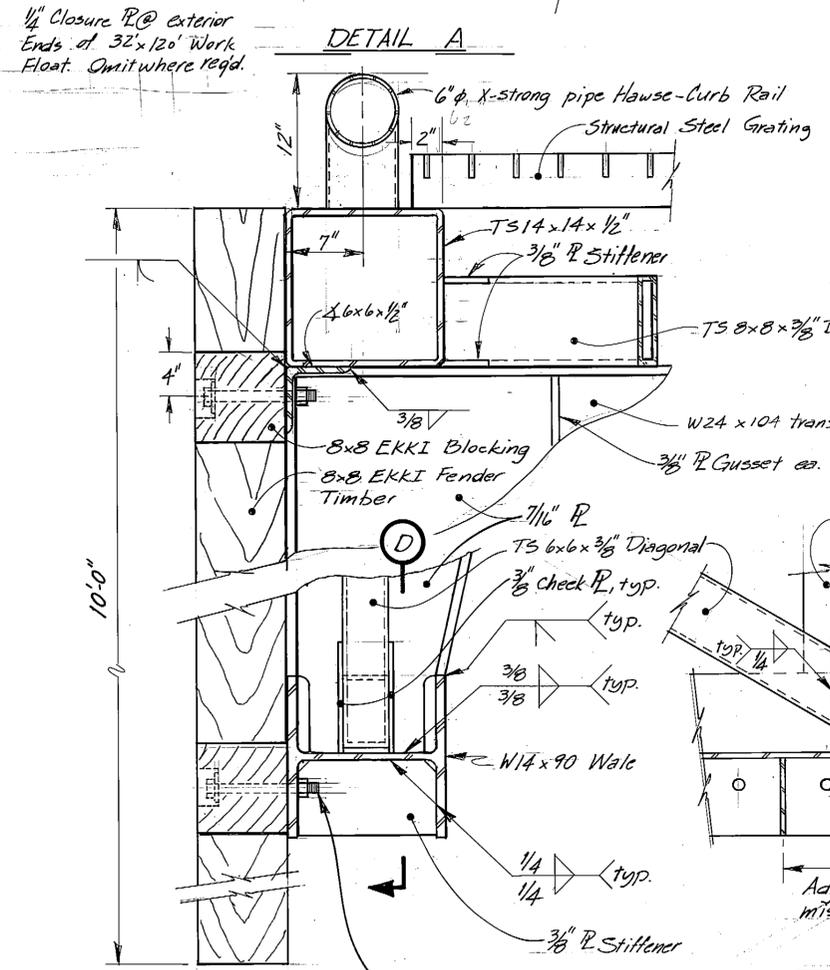
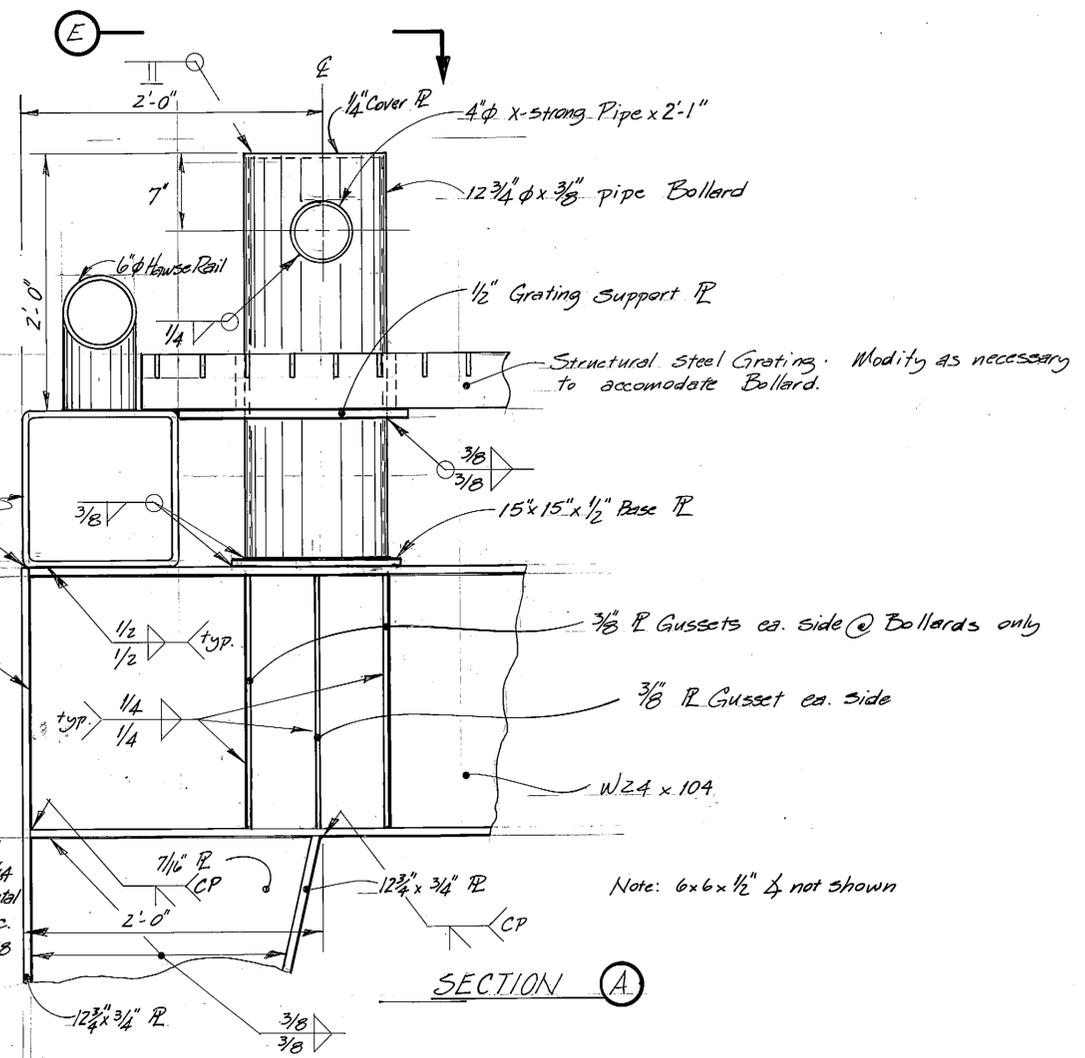
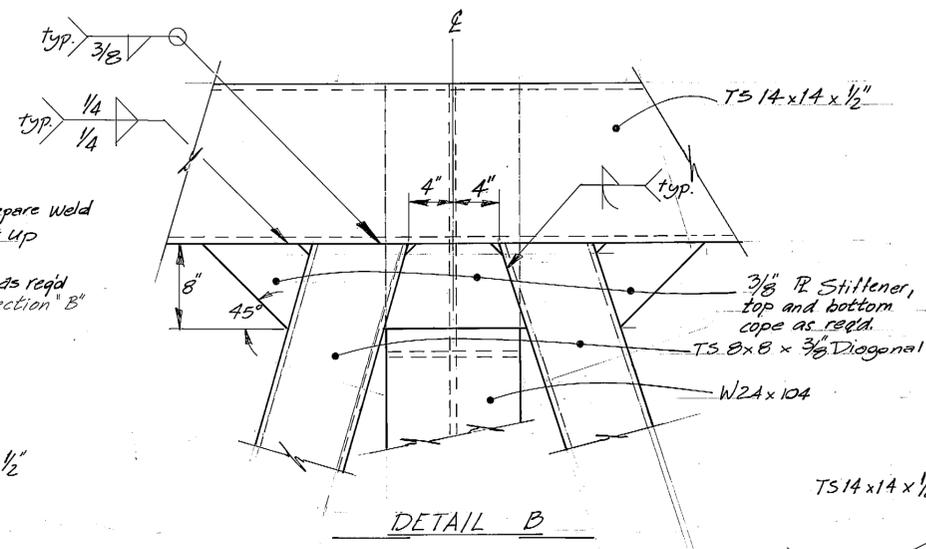
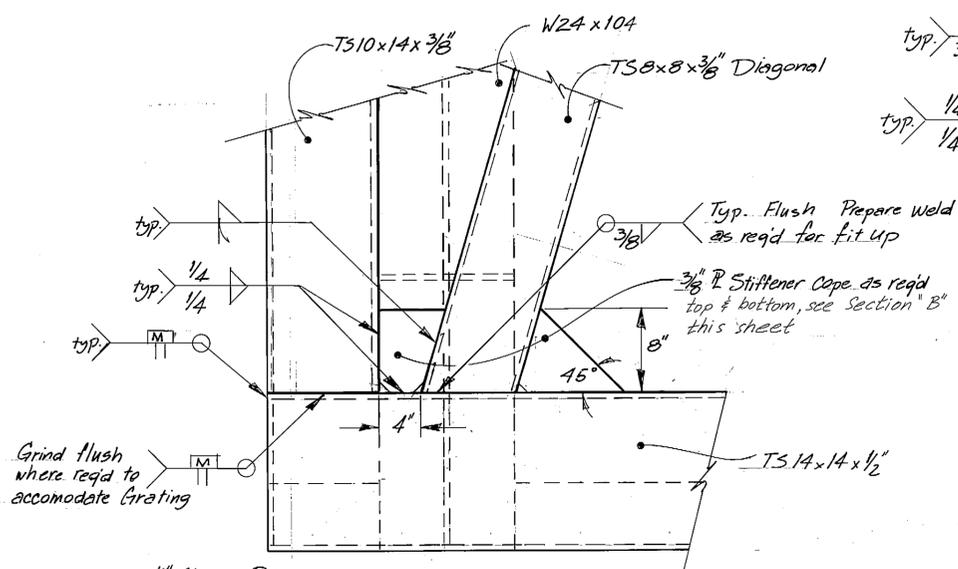
ELEVATION

NTS

AS-BUILT  
Date: 6-86



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
WORK FLOAT MODULE DETAILS			
DESIGNED JAL	CHECKED BAS	DRAWN DB	DATE 1-85
PROJECT NUMBER X70010	SHEET 34 OF 57		



SECTION B

DETAIL B

DETAIL A

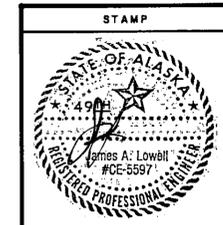
SECTION C

SECTION D

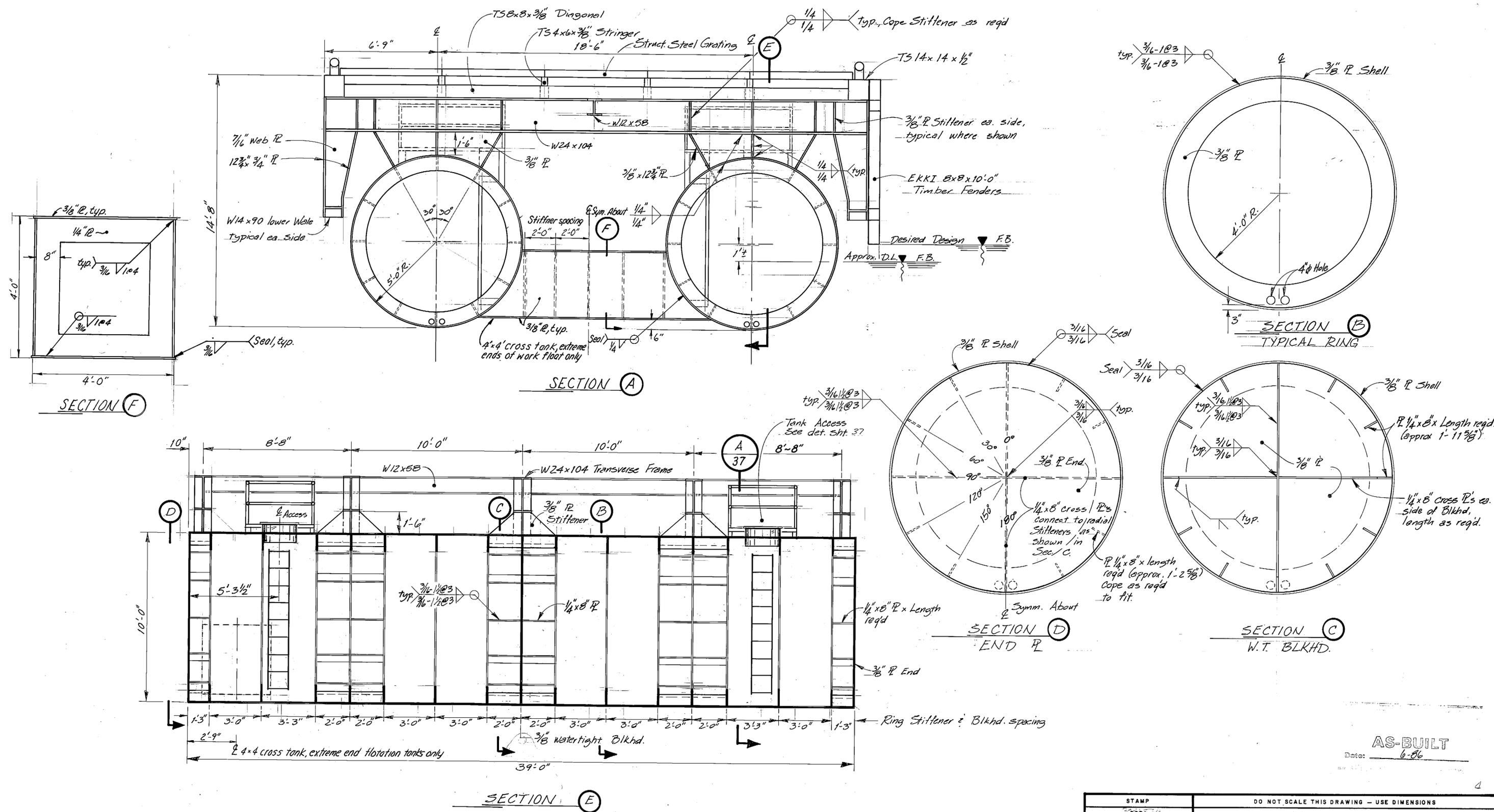
SECTION A

PLAN VIEW E

AS-BUILT  
Date: 6-86

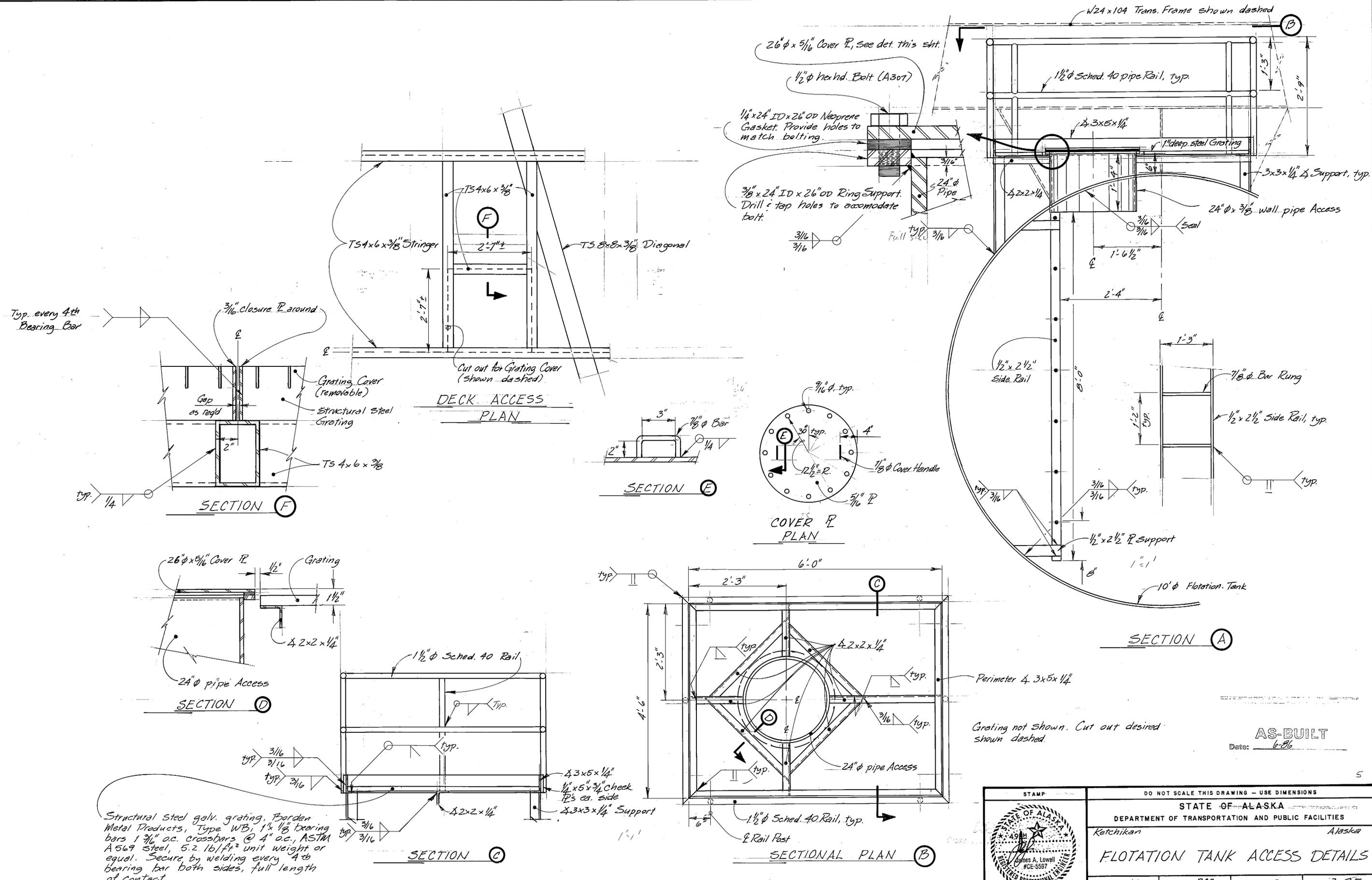


DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
WORK FLOAT FRAMING DETAILS			
DESIGNED JAL	CHECKED BAS	DRAWN DB	DATE 1-85
PROJECT NUMBER X70010	SHEET 35		OF 57



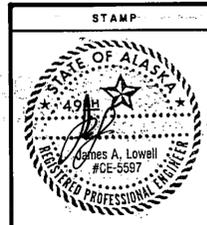
AS-BUILT  
Date: 6-86

	DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
	STATE OF ALASKA			
	DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
	Ketchikan		Alaska	
<b>10' Ø FLOTATION TANK DETAILS</b>				
DESIGNED <u>JAL</u>	CHECKED <u>BAS</u>	DRAWN <u>DD</u>	DATE <u>3-85</u>	
PROJECT NUMBER <u>X70010</u>	SHEET <u>36</u> OF <u>57</u>			

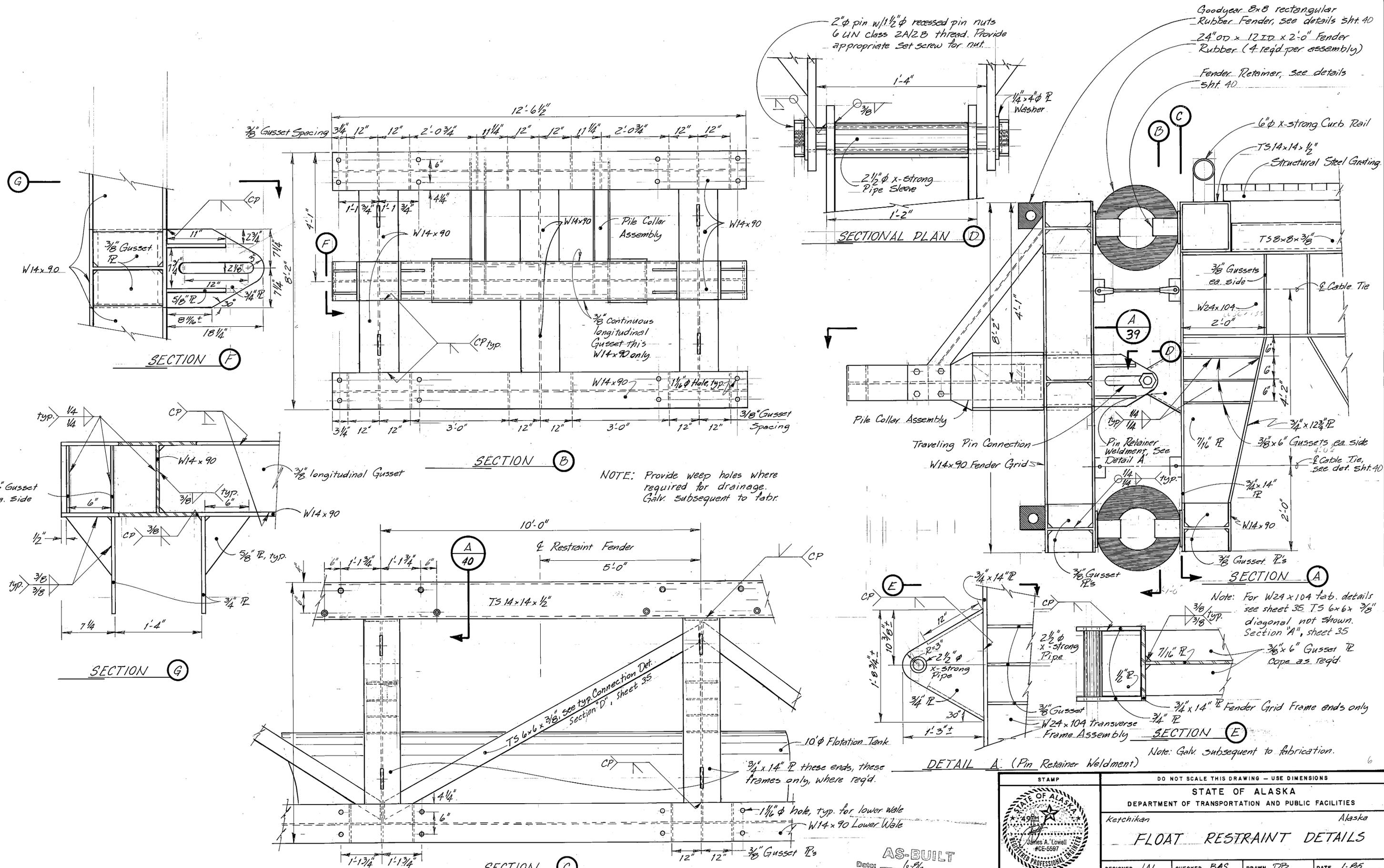


Structural Steel galv. grating, Borden Metal Products, Type WB, 1 1/2" bearing bars 1 3/16" oc. crossbars @ 4" oc., ASTM A569 Steel, 5.2 lb/ft<sup>2</sup> unit weight or equal. Secure by welding every 4th bearing bar both sides, full length of contact.

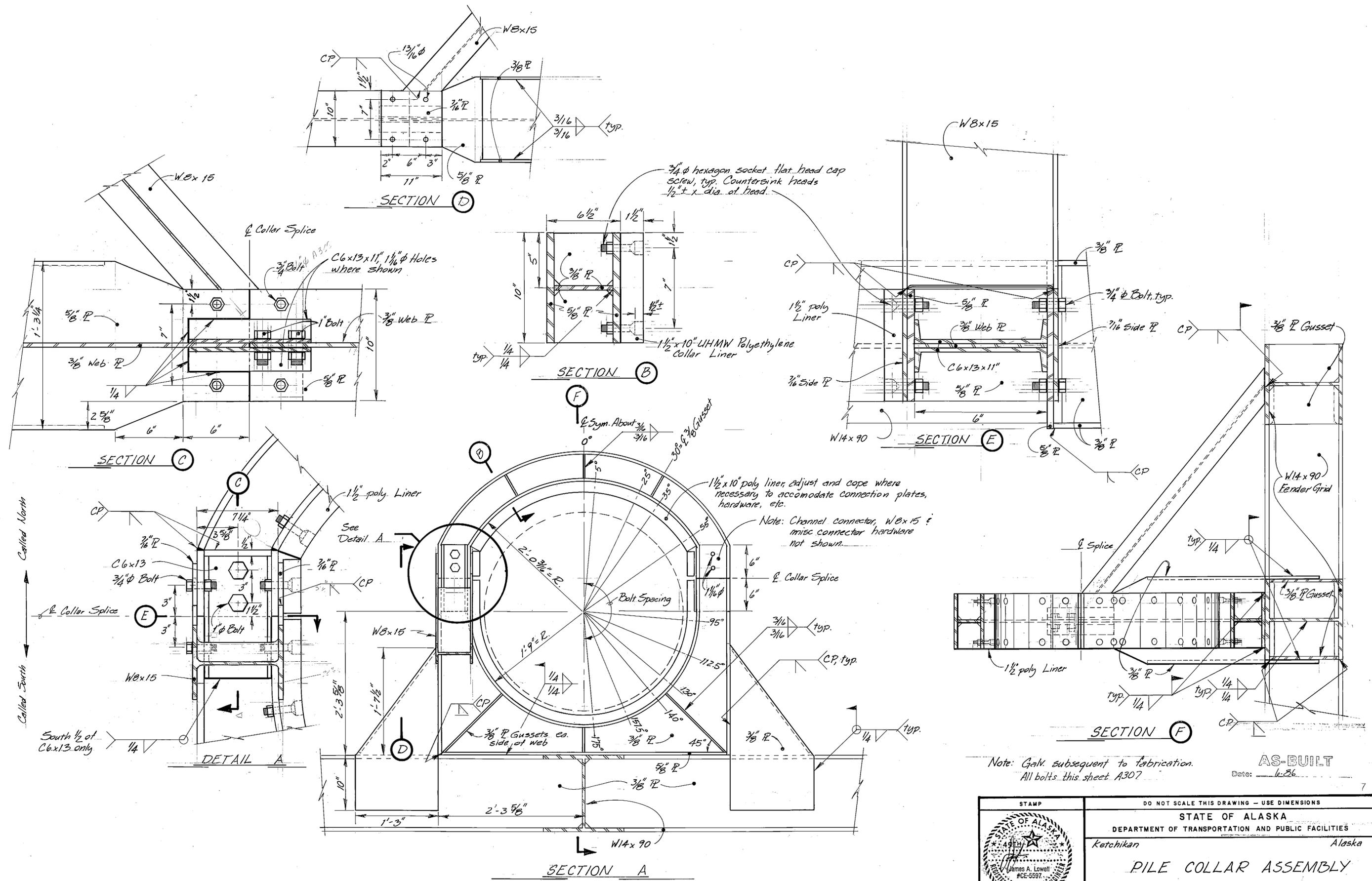
AS-BUILT  
Date: 6-86



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
FLOTATION TANK ACCESS DETAILS			
DESIGNED JAL	CHECKED BAS	DRAWN DB	DATE 3-85
PROJECT NUMBER X70010	SHEET 37		OF 57



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
FLOAT RESTRAINT DETAILS			
DESIGNED JAL	CHECKED BAS	DRAWN DP	DATE 1-86
PROJECT NUMBER XT0010	SHEET 38		OF 57

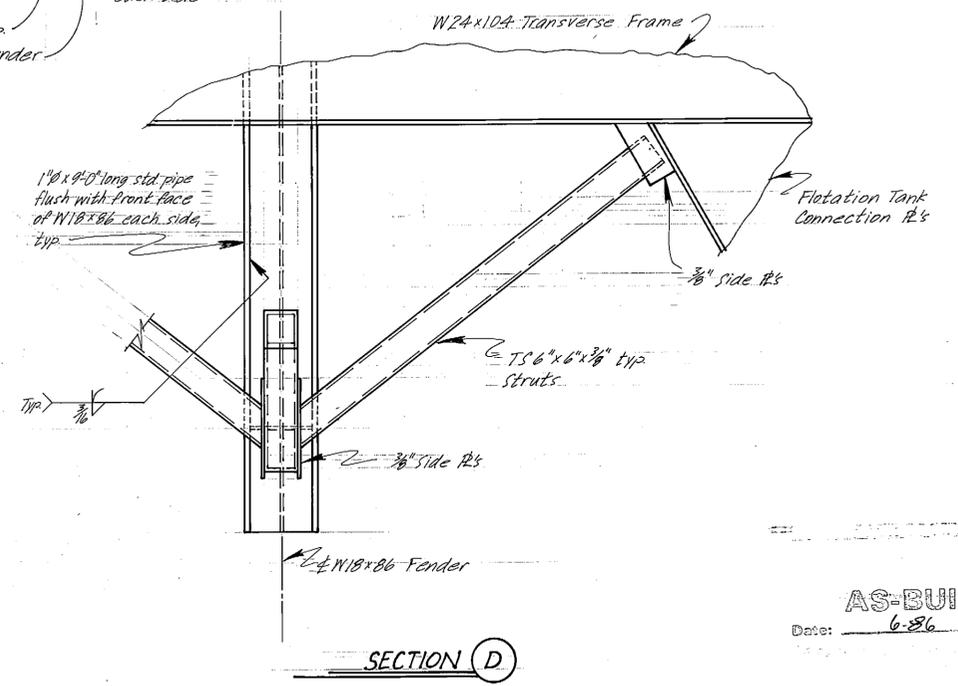
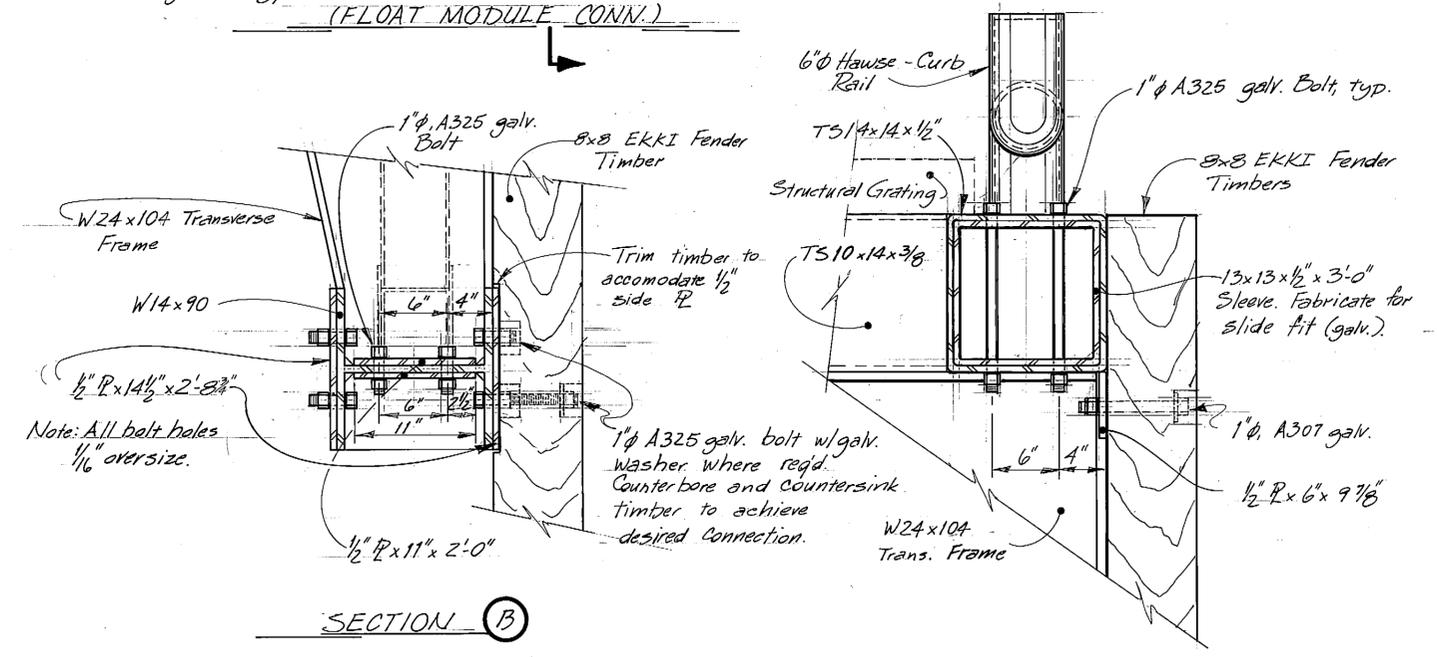
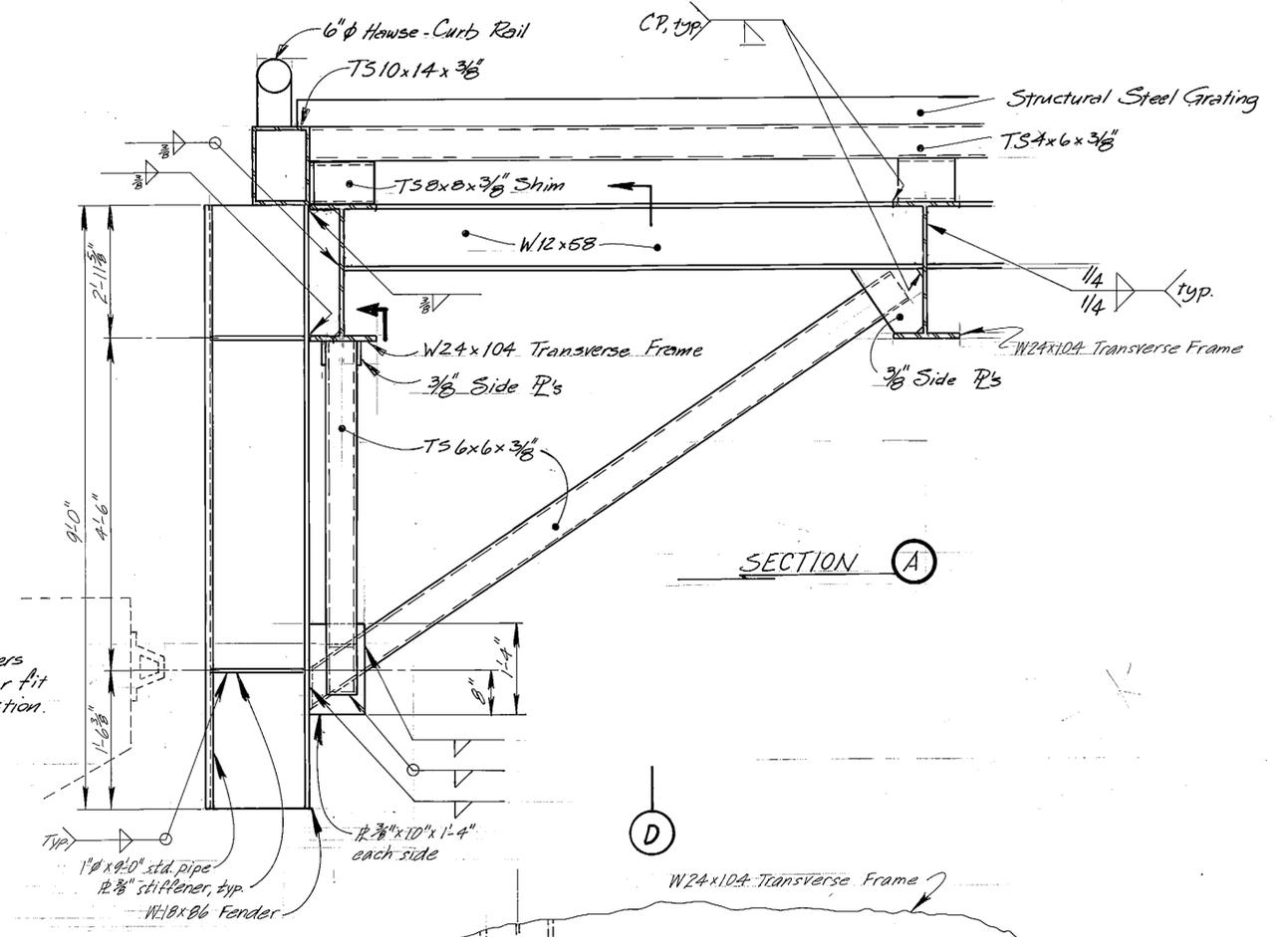
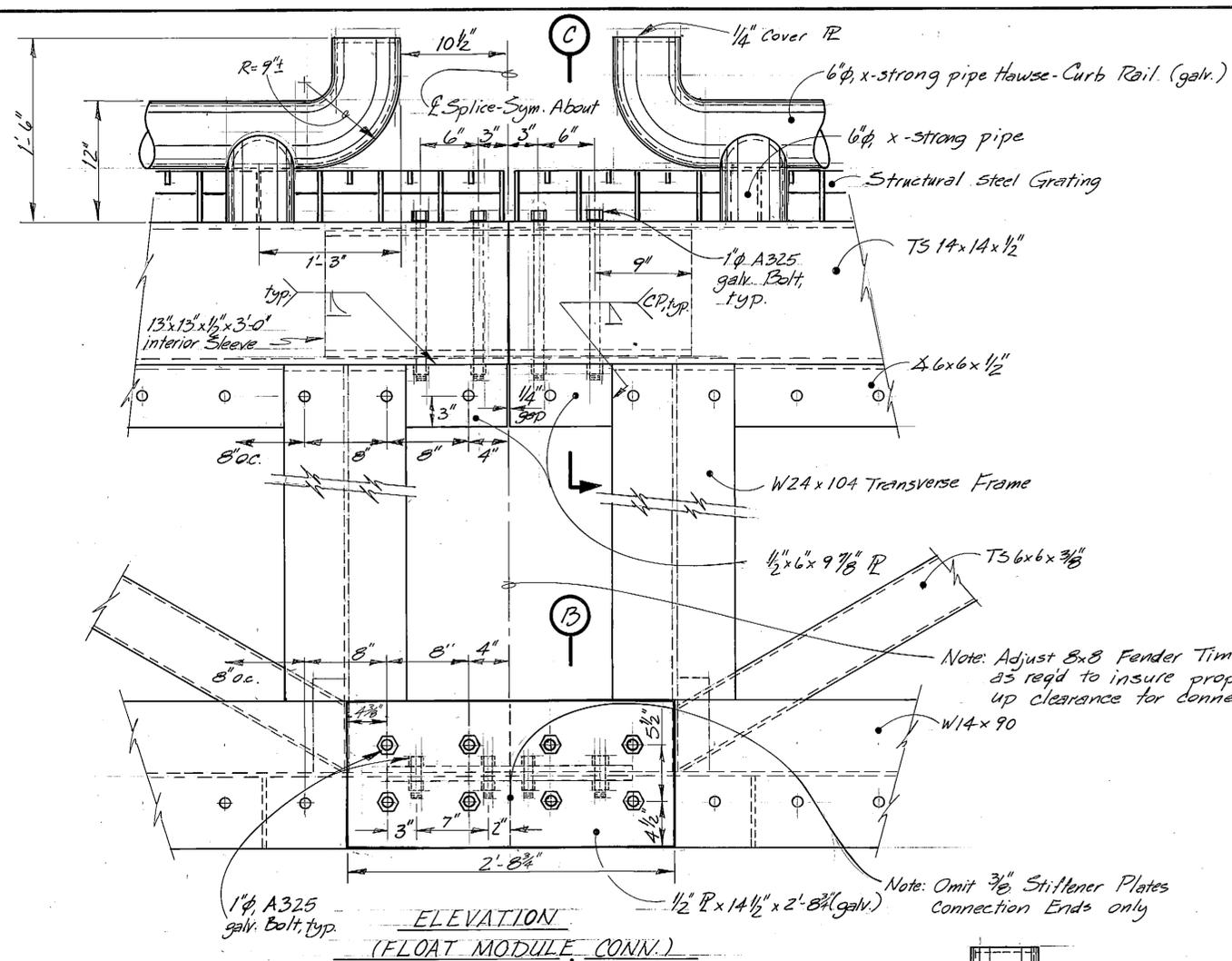


Note: Galv. subsequent to fabrication.  
All bolts this sheet A307

AS-BUILT  
Date: 6-86

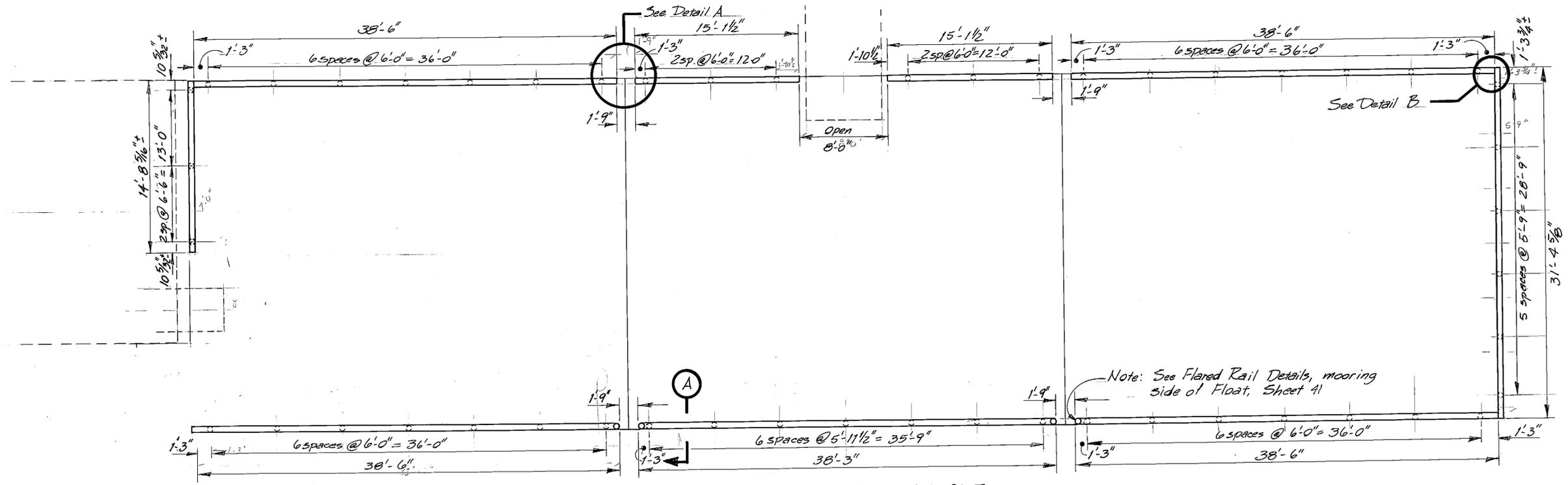
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STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
PILE COLLAR ASSEMBLY			
DESIGNED <u>JAL</u>	CHECKED <u>BAS</u>	DRAWN <u>DB</u>	DATE <u>1-85</u>
PROJECT NUMBER <u>X70010</u>	SHEET <u>39</u> OF <u>57</u>		



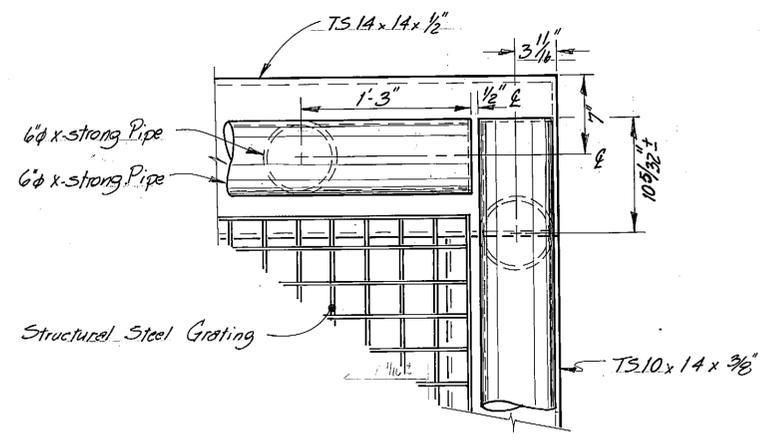


AS-BUILT  
Date: 6-86

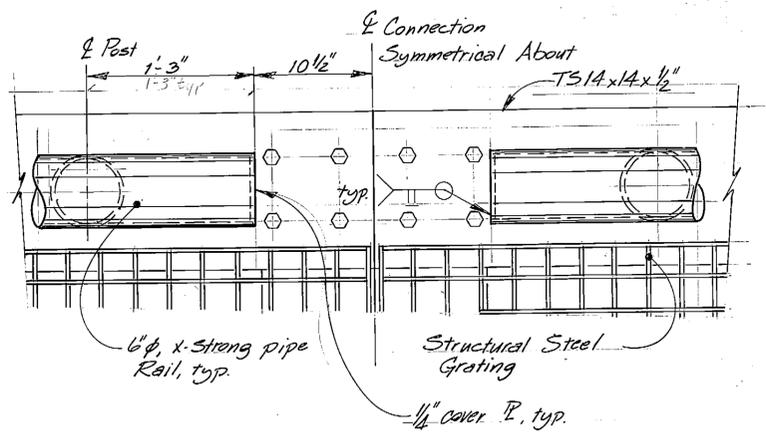
	DO NOT SCALE THIS DRAWING - USE DIMENSIONS				
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES				
	Ketchikan		Alaska		
	PONTON FENDER & FLOAT MODULE CONN. DETAILS				
DESIGNED	JAL	CHECKED	BAS	DATE	3-85
PROJECT NUMBER	X70010	SHEET	41	OF	57



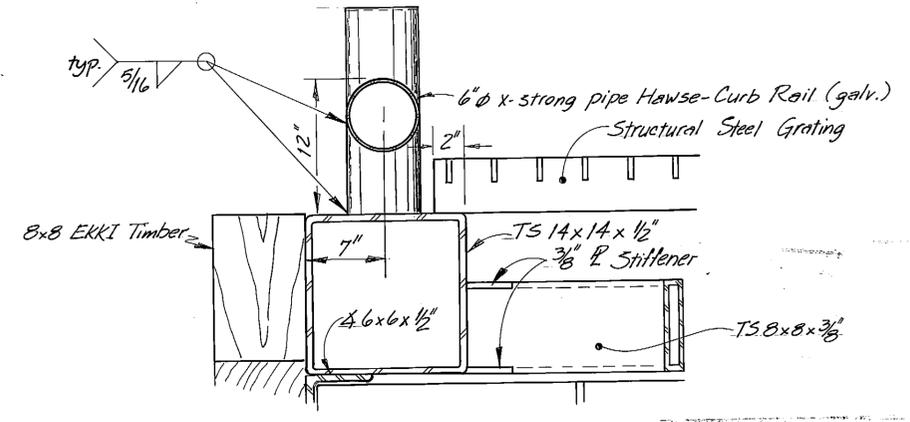
HAWSE-CURB RAIL LAYOUT  
(NE Float Shown, SW Float Opposite Hand)



DETAIL B



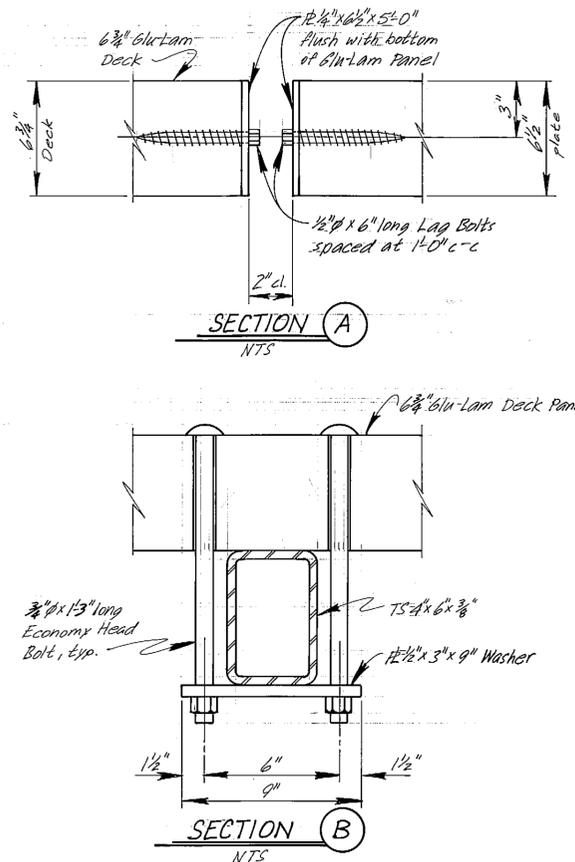
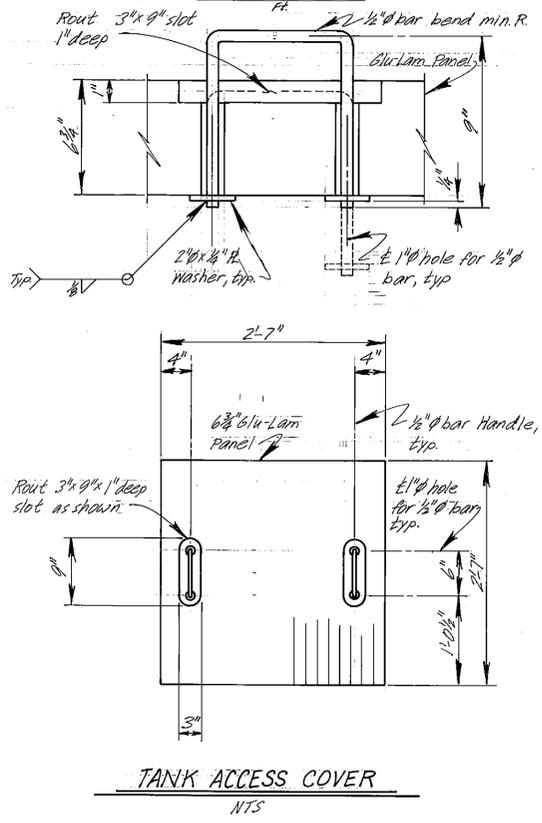
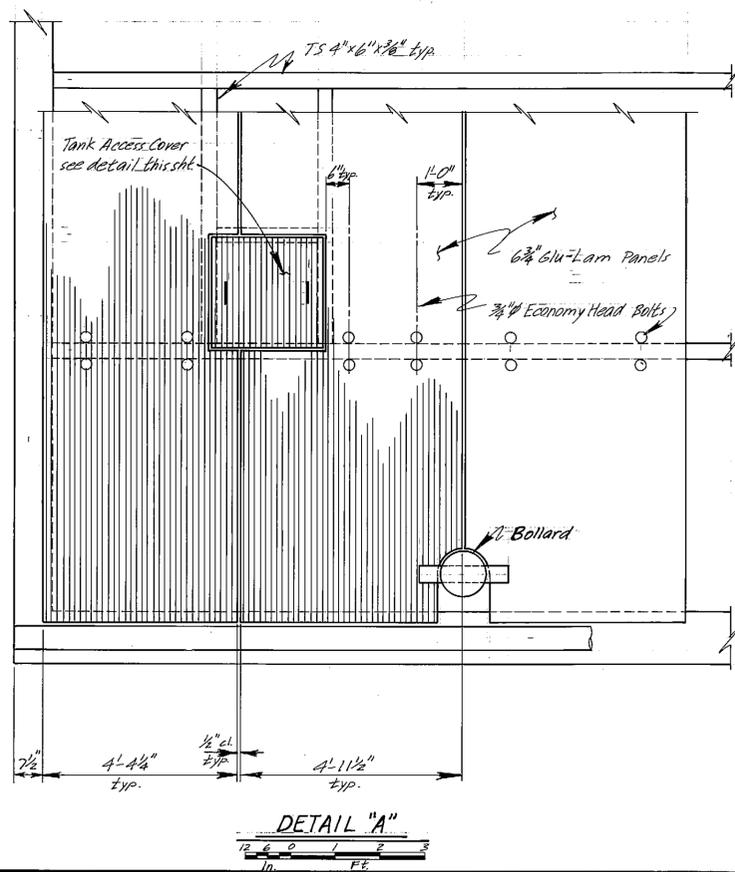
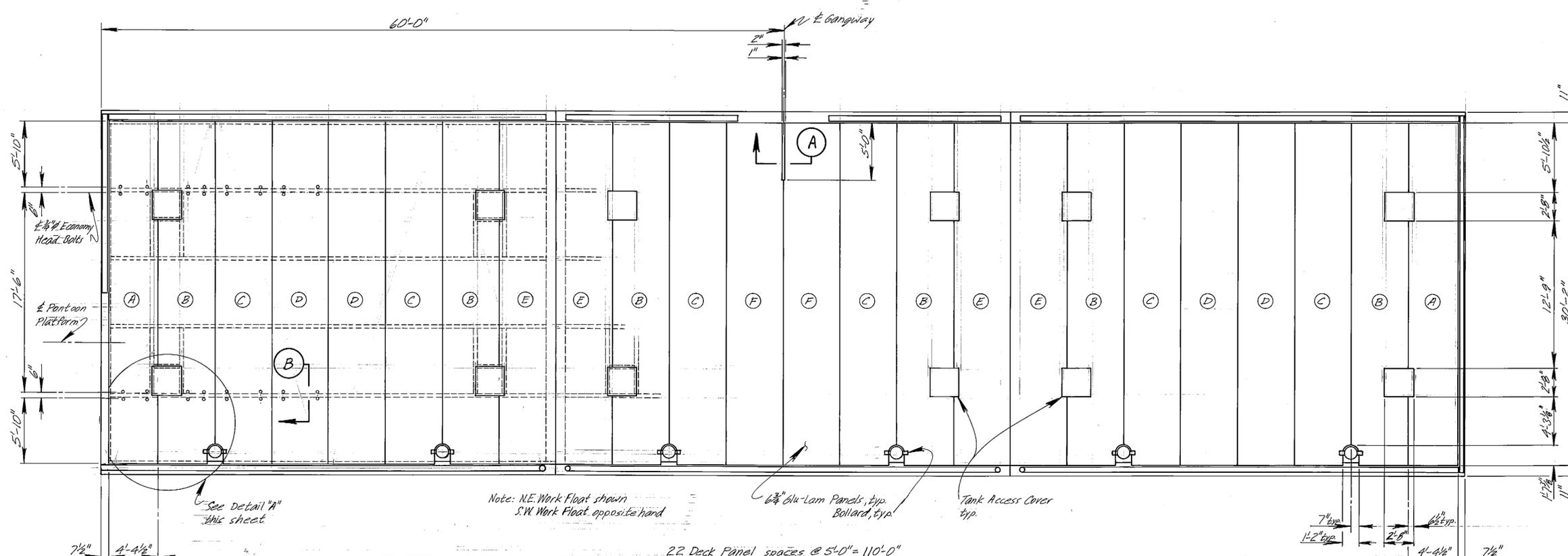
DETAIL A



SECTION A

AS-BUILT  
Date: 6-86

	DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
	Ketchikan		Alaska	
HAWSE-CURB RAIL LAYOUT				
DESIGNED JAL	CHECKED BAS	DRAWN DB	DATE 3-85	
PROJECT NUMBER X70010	SHEET 42		OF 57	



PANEL LAYOUT

AS-BUILT  
Date: 6-86

- Notes:
1. Should Alternate "B" be awarded construct the Deck for the work floats as shown on this sheet. Work this sheet with sheets 33-42.
  2. All metal and hardware to be galvanized after fabrication.
  3. All Glu-Lam Panels this sheet shall be Douglas-Fir Comb 2. Top surface shall have a rough finish.

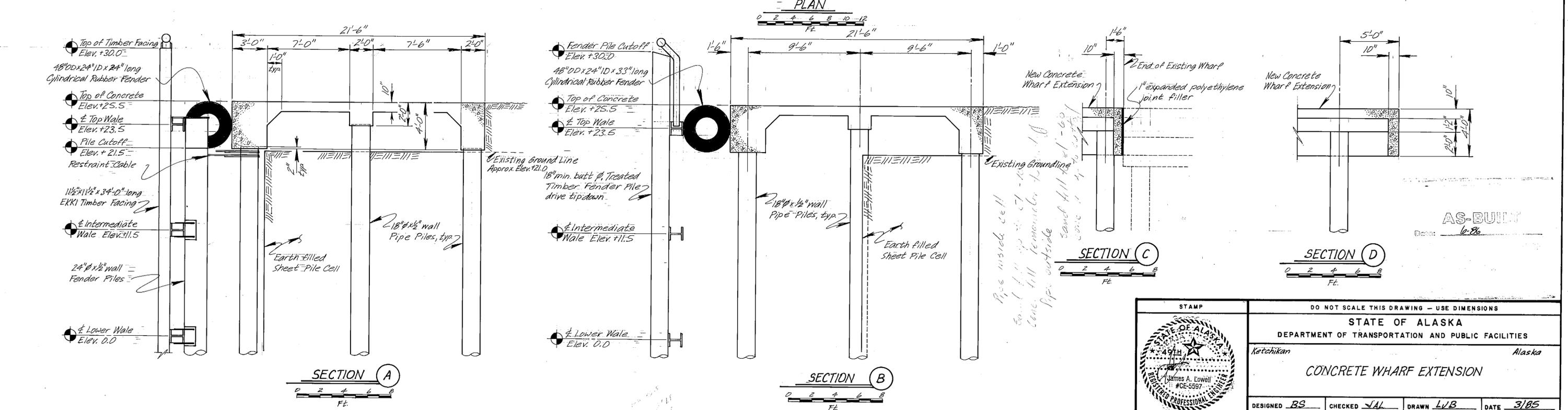
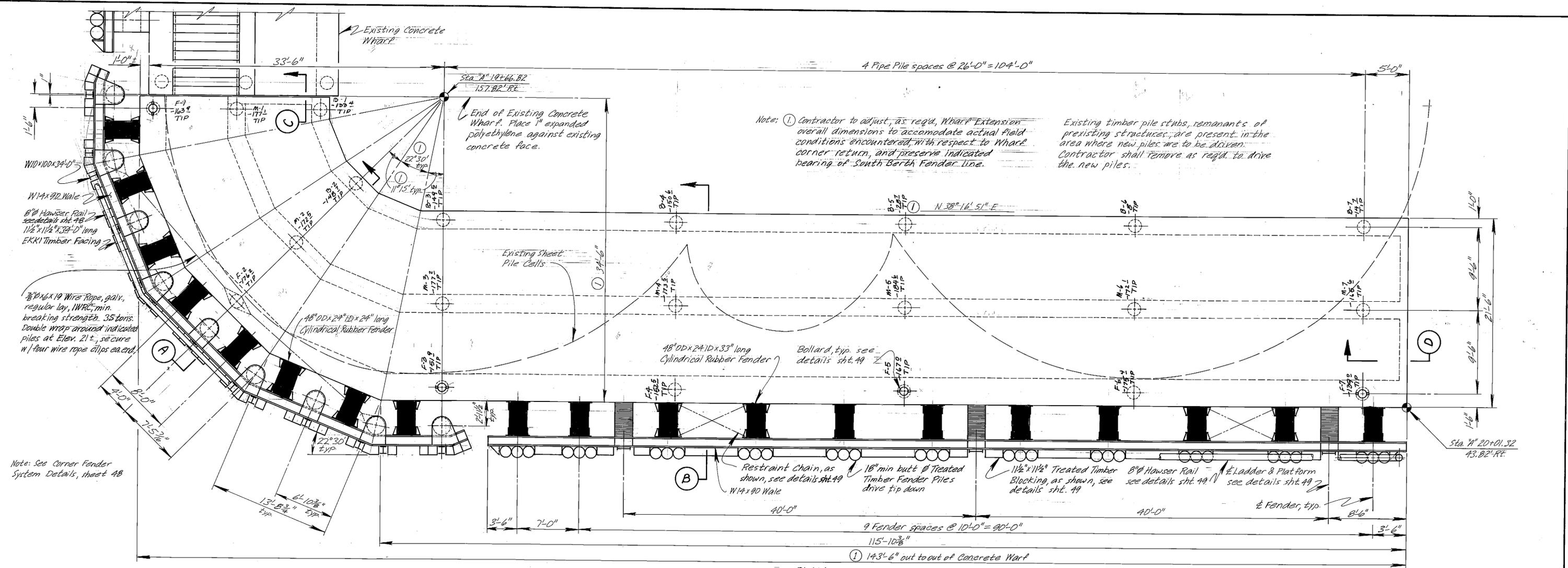
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		STATE OF ALASKA	
		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
Ketchikan		Alaska	
WORK FLOAT, GLU-LAM DECK ALTERNATE B			
DESIGNED JAL	CHECKED VS	DRAWN LUB	DATE 3/85
PROJECT NUMBER X70010	SHEET 43		OF 57

Work float Glu-Lam Deck All B





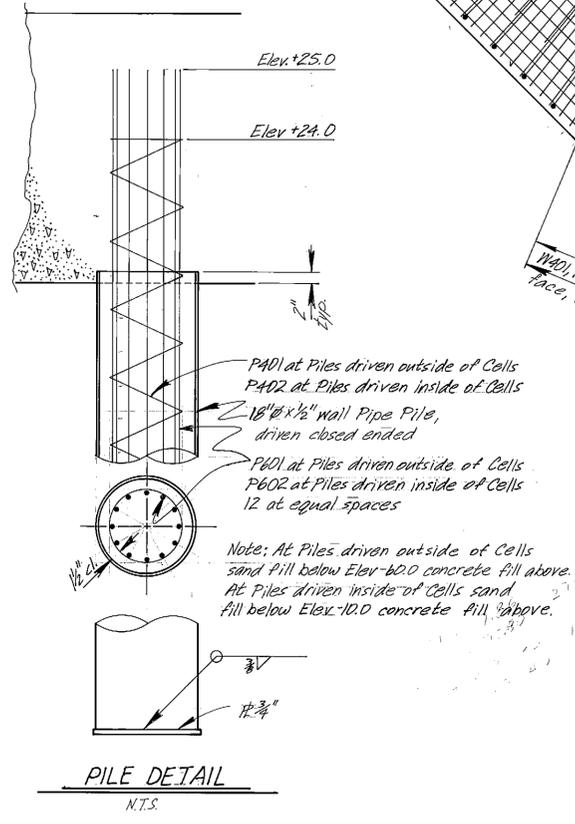
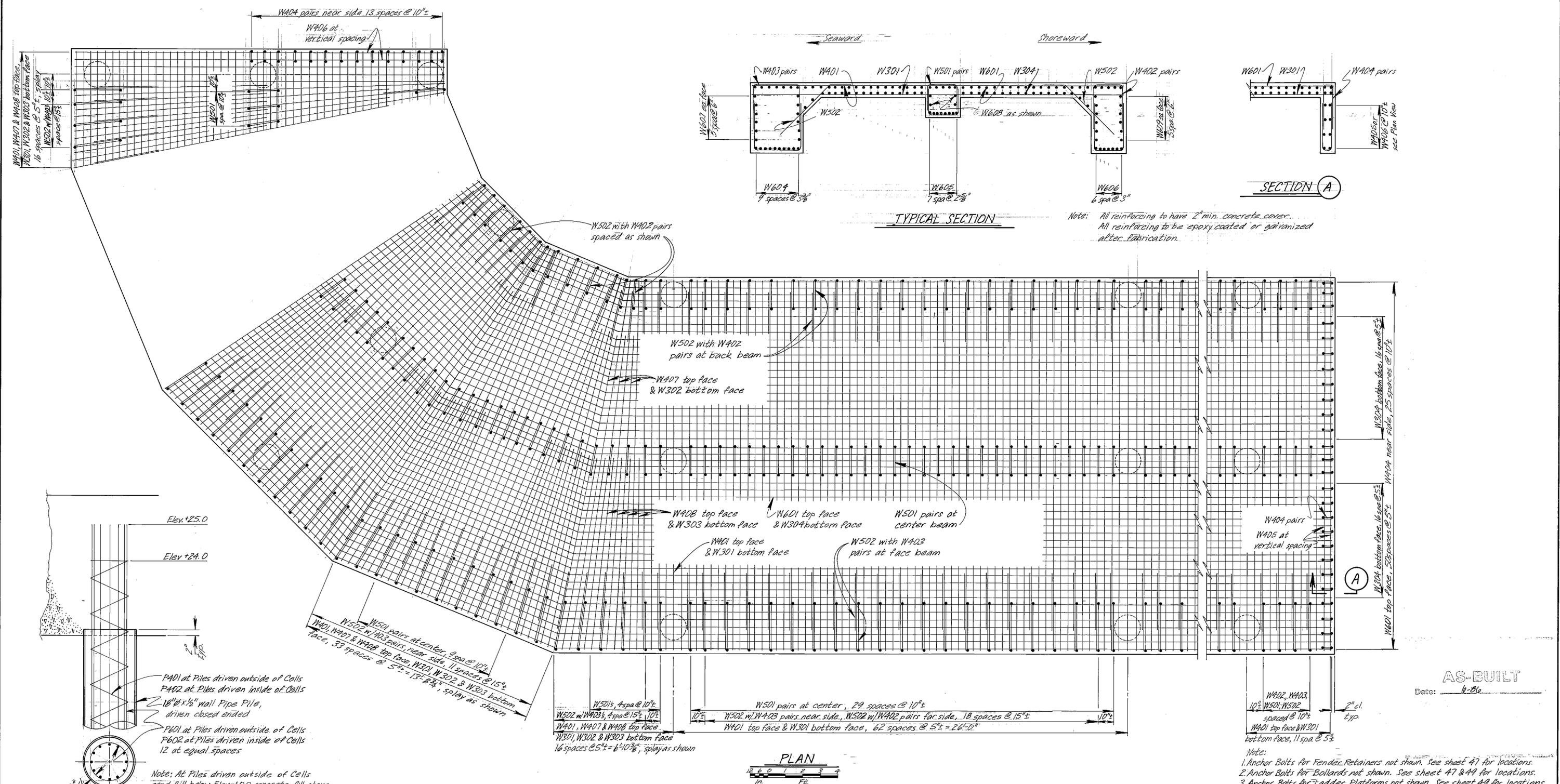




STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA	
		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
Ketchikan		Alaska	
<b>CONCRETE WHARF EXTENSION</b>			
DESIGNED BS	CHECKED JAL	DRAWN LJB	DATE 3/85
PROJECT NUMBER 170010	SHEET 47		OF 57

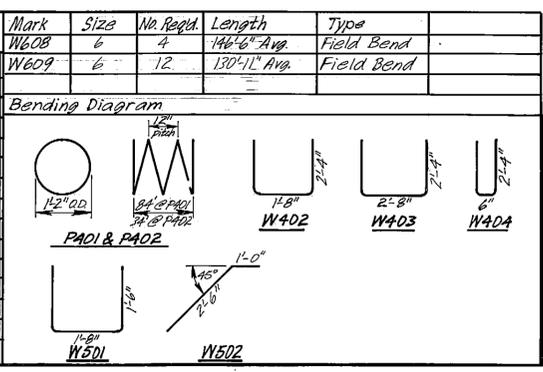






**REINFORCING SCHEDULE - CONCRETE WHARF EXTENSION**

Mark	Size	No. Reqd.	Length	Type	Mark	Size	No. Reqd.	Length	Type
P401	4	10	316'-0"	Spiral	W404	4	80	5'-2"	Bent
P402	4	11	132'-0"	Spiral	W405	4	8	2'-2"	---
P601	6	120	85'-0"	---	W406	4	8	11'-2"	---
P602	6	132	35'-0"	---	W407	4	20	18'-0"	---
W301	3	323	21'-2"	---	W408	4	48	11'-0"	---
W302	3	20	18'-0"	---	W501	5	326	4'-8"	Bent
W303	3	48	11'-0"	---	W502	5	241	3'-6"	Bent
W304	3	34	146'-6" Avg.	Field Bend	W601	6	51	146'-11" Avg.	Field Bend
W401	4	323	21'-2"	---	W604	6	10	161'-2" Avg.	Field Bend
W402	4	220	6'-4"	Bent	W605	6	8	146'-6" Avg.	Field Bend
W403	4	262	7'-4"	Bent	W606	6	7	130'-11" Avg.	Field Bend
					W607	6	12	161'-2" Avg.	Field Bend



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**STATE OF ALASKA**  
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

Ketchikan Alaska

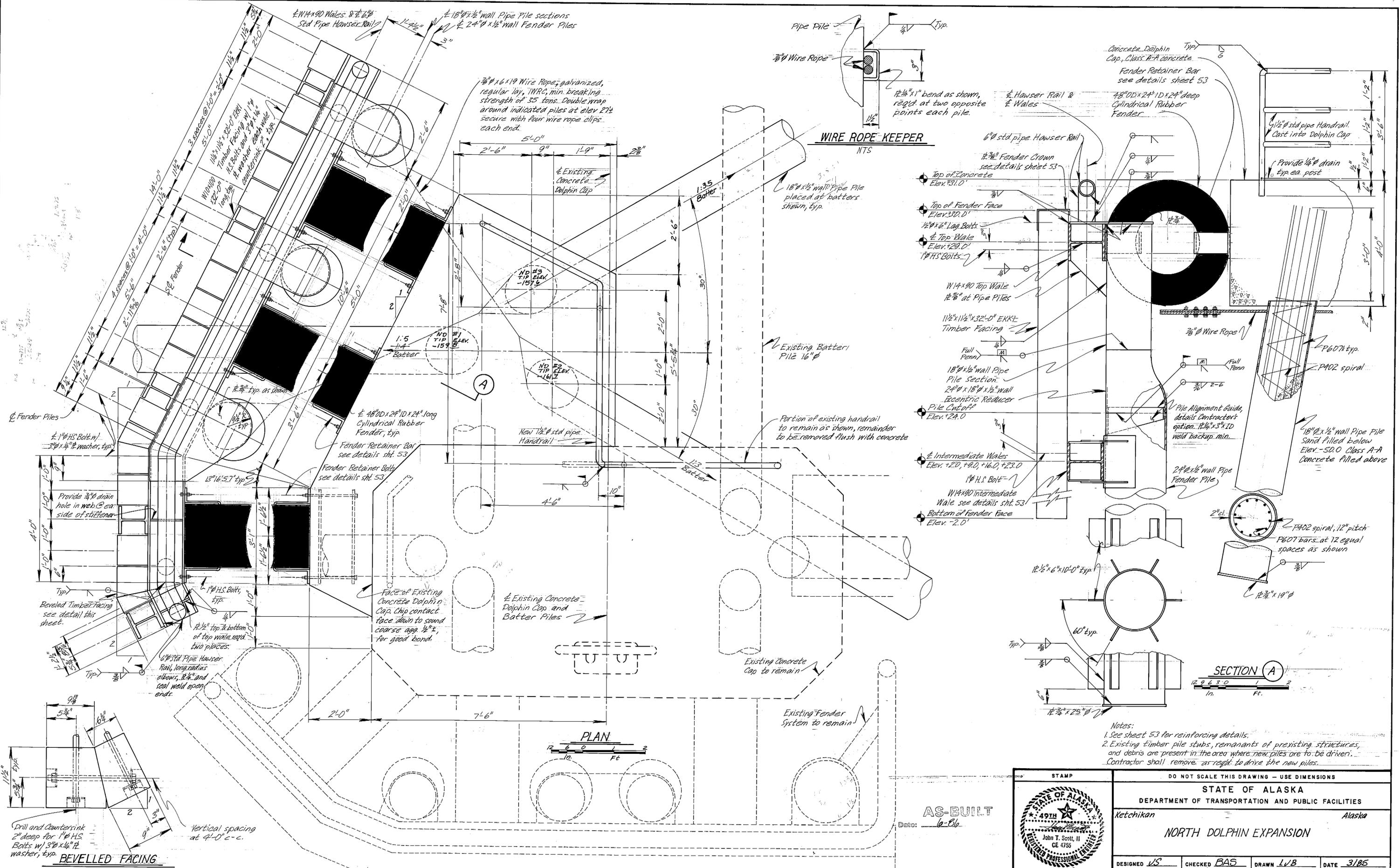
**REINFORCING DETAILS**

DESIGNED <u>BS</u>	CHECKED <u>JAL</u>	DRAWN <u>LUB</u>	DATE <u>3/85</u>
PROJECT NUMBER <u>X70D10</u>	SHEET <u>50</u> OF <u>57</u>		

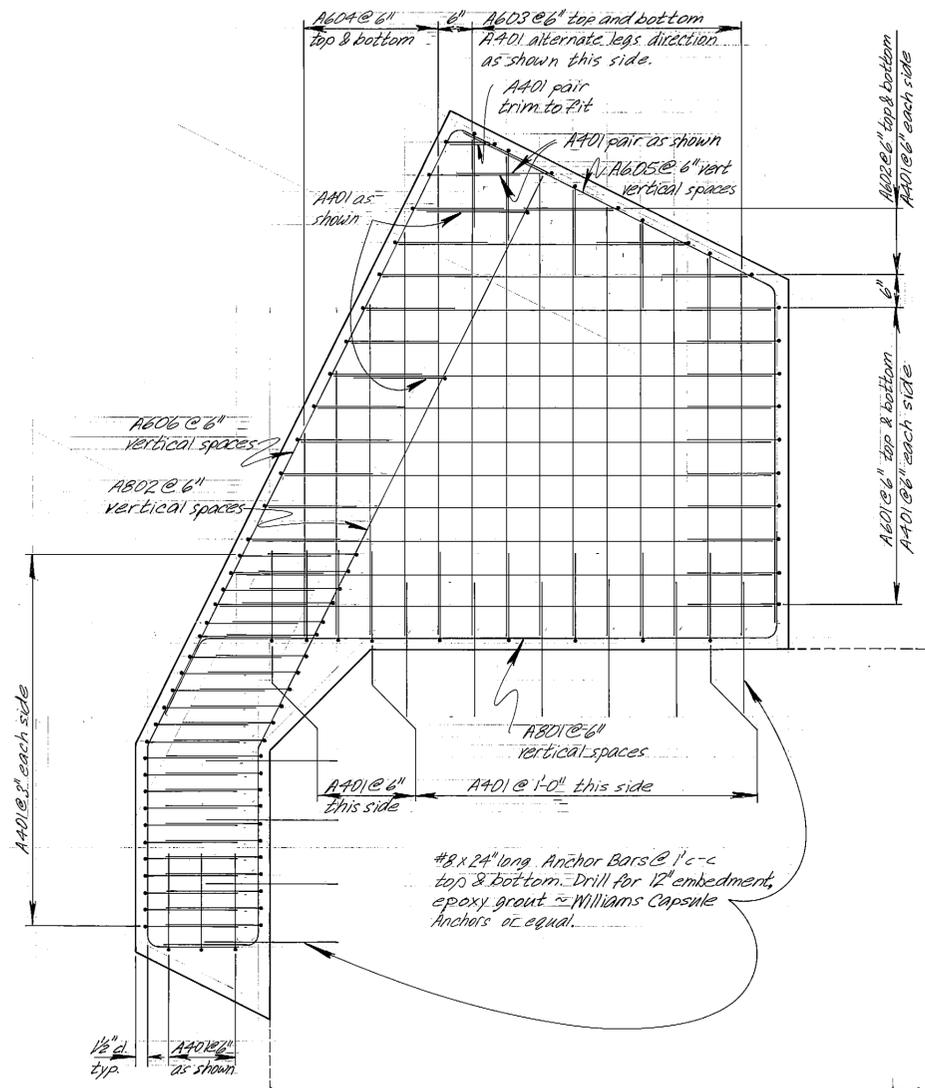
- Note:
- Anchor Bolts for Fender Retainers not shown. See sheet 47 for locations.
  - Anchor Bolts for Bollards not shown. See sheet 47 & 49 for locations.
  - Anchor Bolts for Ladder Platforms not shown. See sheet 49 for locations.
  - Reinforcing lap splices shall be 24" min. lap and staggered 24" min. Mechanical or welded splices which develop 125% of the bar yield strength may be used.
  - All dimensions shown in Reinforcing Schedule are out to out of bar with no allowance made for splices in lengths given.

**AS-BUILT**  
Date: 6-86





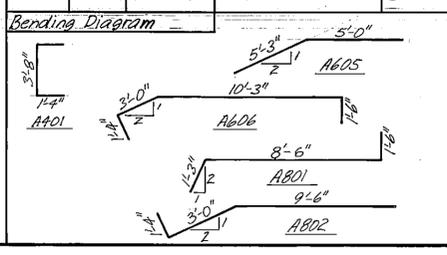
STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA	
		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
Ketchikan		Alaska	
<b>NORTH DOLPHIN EXPANSION</b>			
DESIGNED <i>US</i>	CHECKED <i>BAS</i>	DRAWN <i>LVB</i>	DATE <i>3/85</i>
PROJECT NUMBER <i>X7010</i>	SHEET <i>52</i>		OF <i>57</i>



**REINFORCING DIAGRAM**  
 0 2 4 6 8 10 12  
 In. Ft.

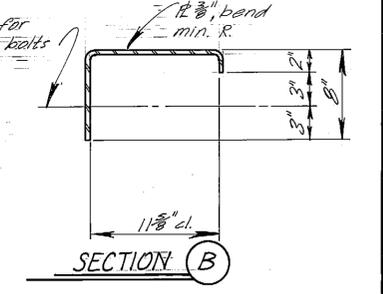
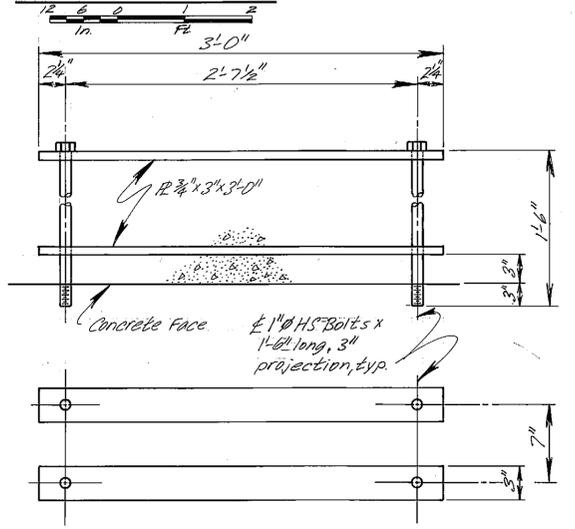
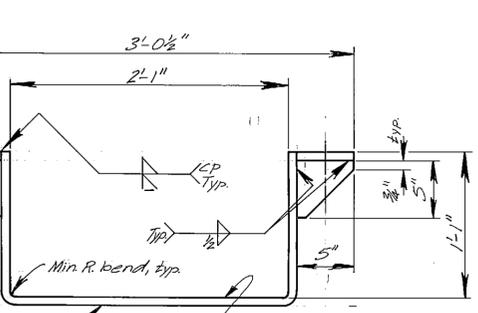
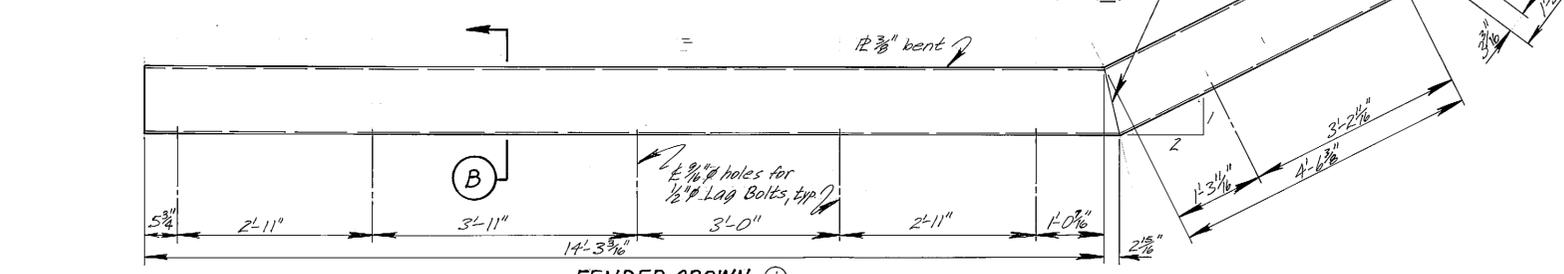
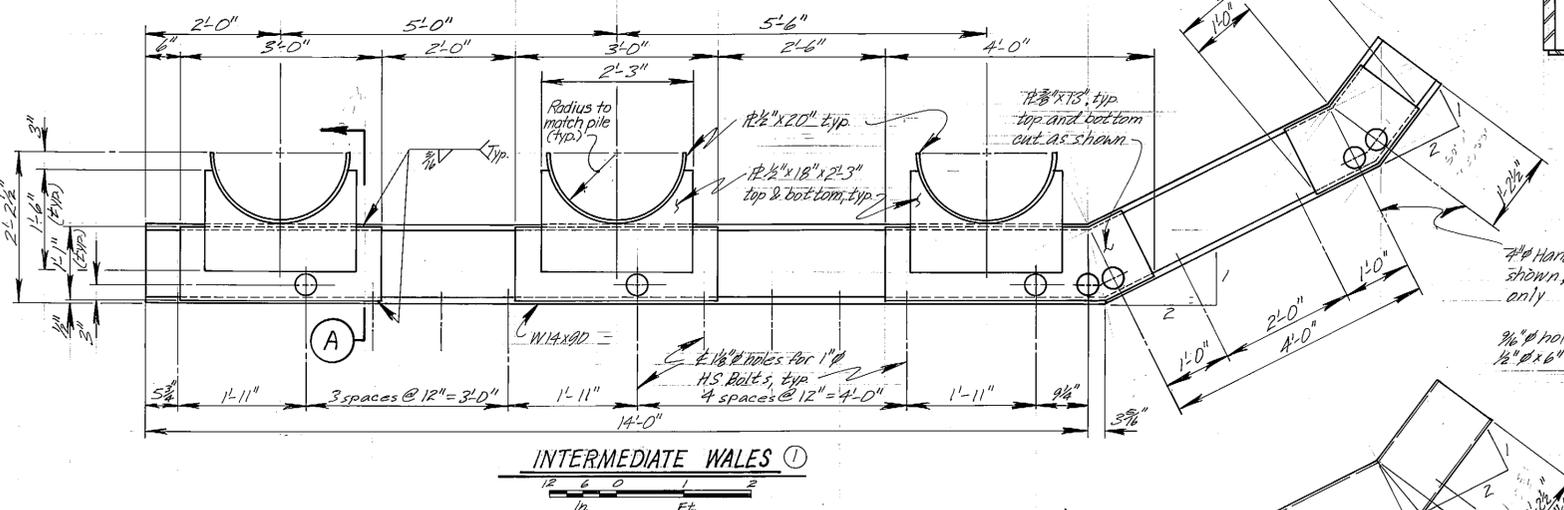
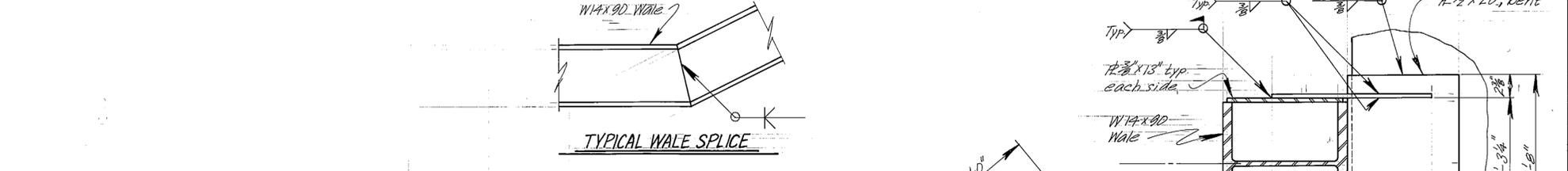
**REINFORCING SCHEDULE (2)**

Mark	Size	No. Req'd	Length	Type
A401	4	93	6'-4"	Bent
P402	4	3	2'90"	Spiral
A601	6	20	6'-0" to 8'-3"	Cut
A602	6	6	2'-9" to 5'-3"	Cut
A603	6	18	5'-6" to 7'-6"	Cut
A604	6	10	3'-0" to 7'-0"	Cut
A605	6	8	10'-3"	Bent
A606	6	8	16'-7"	Bent
P607	6	36	75'-2"	Bent
A801	8	8	11'-3"	Bent
A802	8	8	13'-10"	Bent



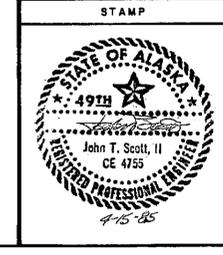
\*Pile Bars, No. Req'd is for all three piling under dolphin cap.  
 Cutting Diagram

6'-0"	8'-3"	A601
2'-9"	5'-3"	A602
5'-6"	7'-6"	A603
3'-0"	7'-0"	A604

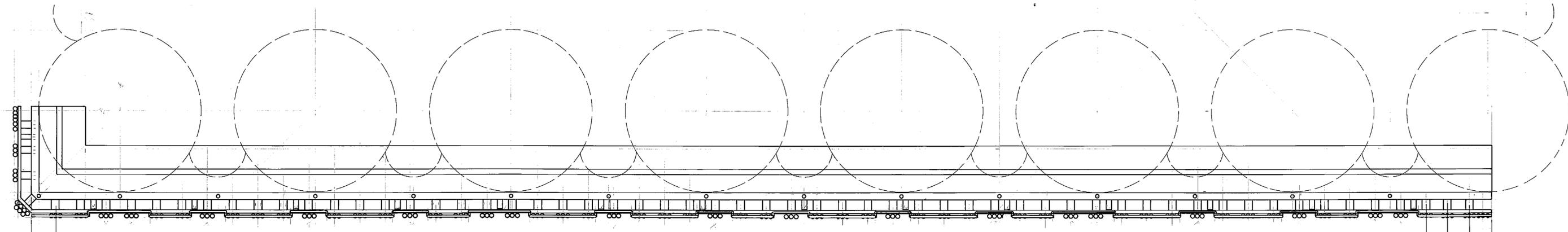


**AS-BUILT**  
 Date: 6-86

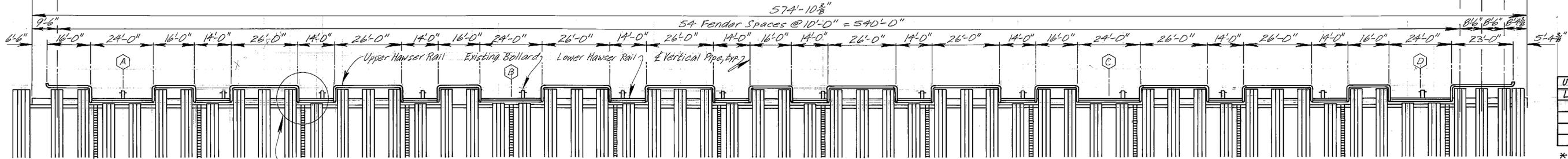
Notes:  
 ① Galvanize after fabrication  
 ② Reinforcing steel to be galvanized after fabrication or epoxy coated.



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
NORTH DOLPHIN DETAILS			
DESIGNED <i>JS</i>	CHECKED <i>BAS</i>	DRAWN <i>LJB</i>	DATE <i>3/85</i>
PROJECT NUMBER <i>X70010</i>	SHEET <i>53</i> OF <i>57</i>		



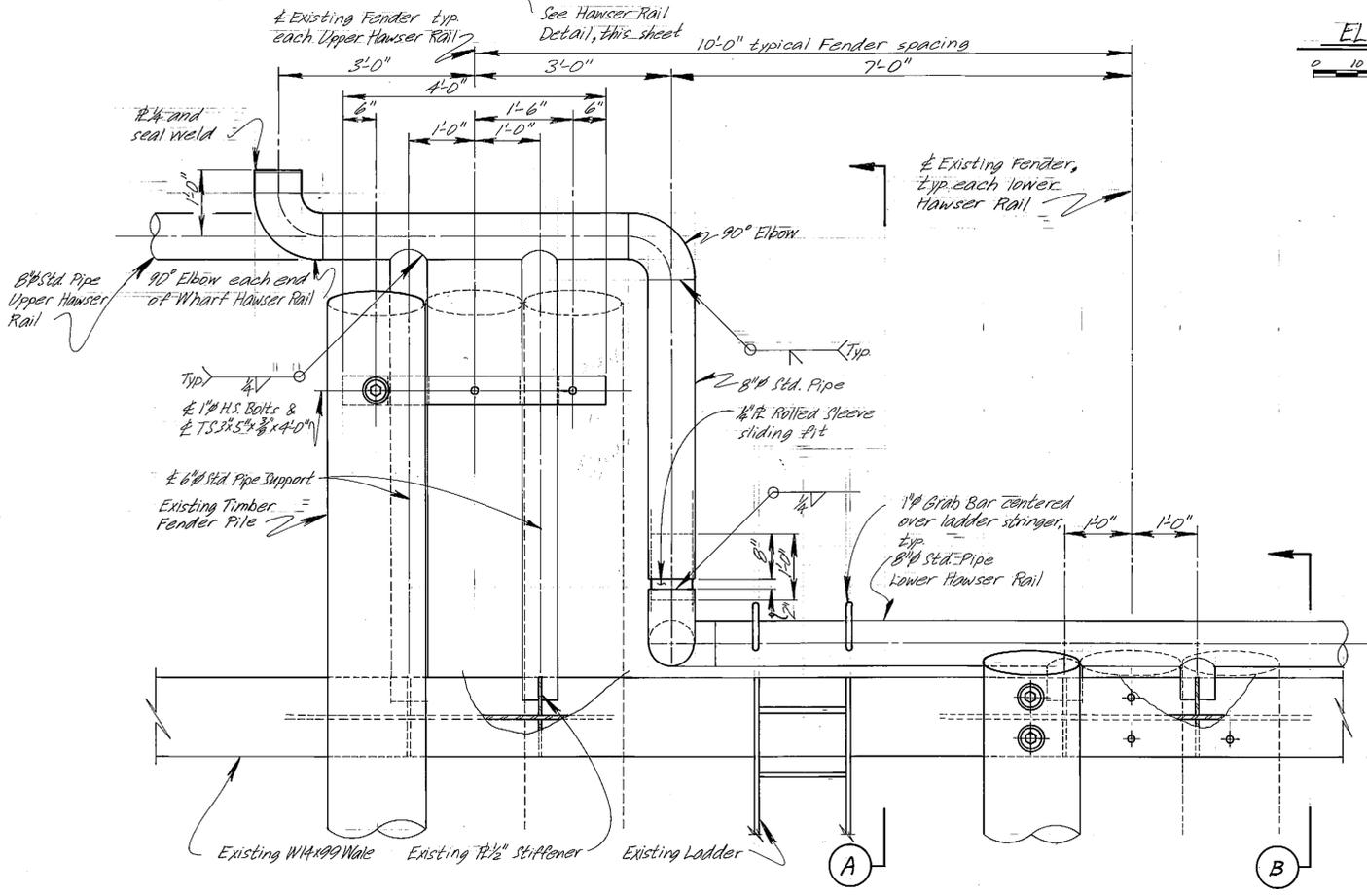
**PLAN**



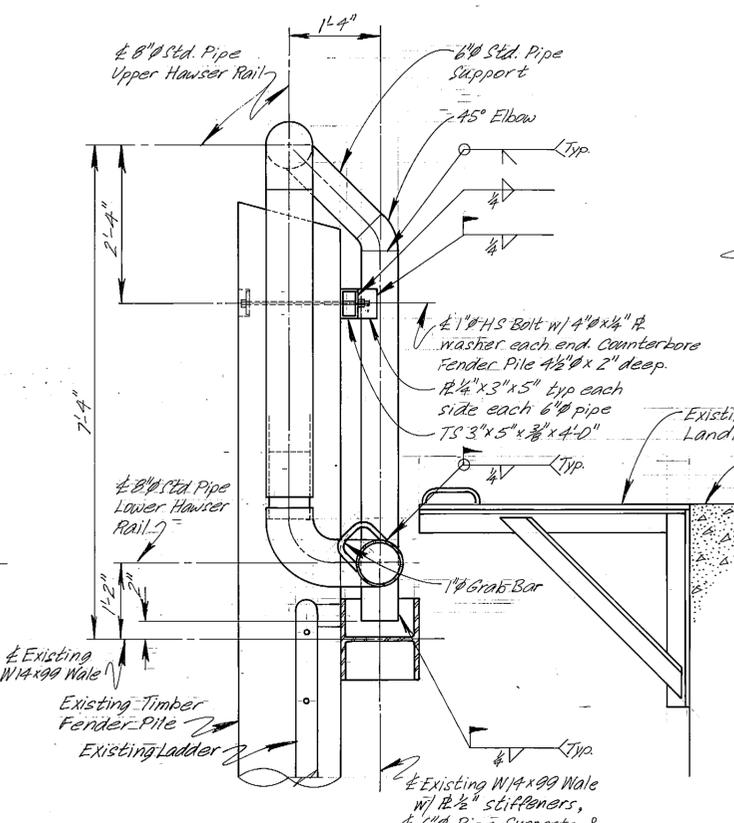
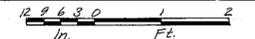
**ELEVATION**

UTILITY OPENINGS	
Location	Station*
(A)	17+14.25
(B)	17+15.75
(C)	17+18.05
(D)	17+19.25

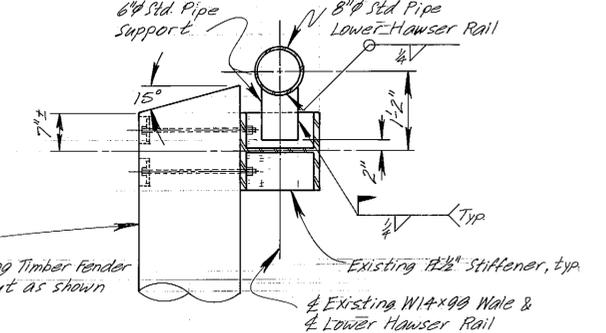
\*Location approx. for opening in fender system for future utilities



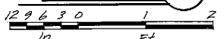
**HAWSER RAIL DETAIL**



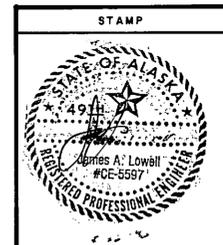
**SECTION A**



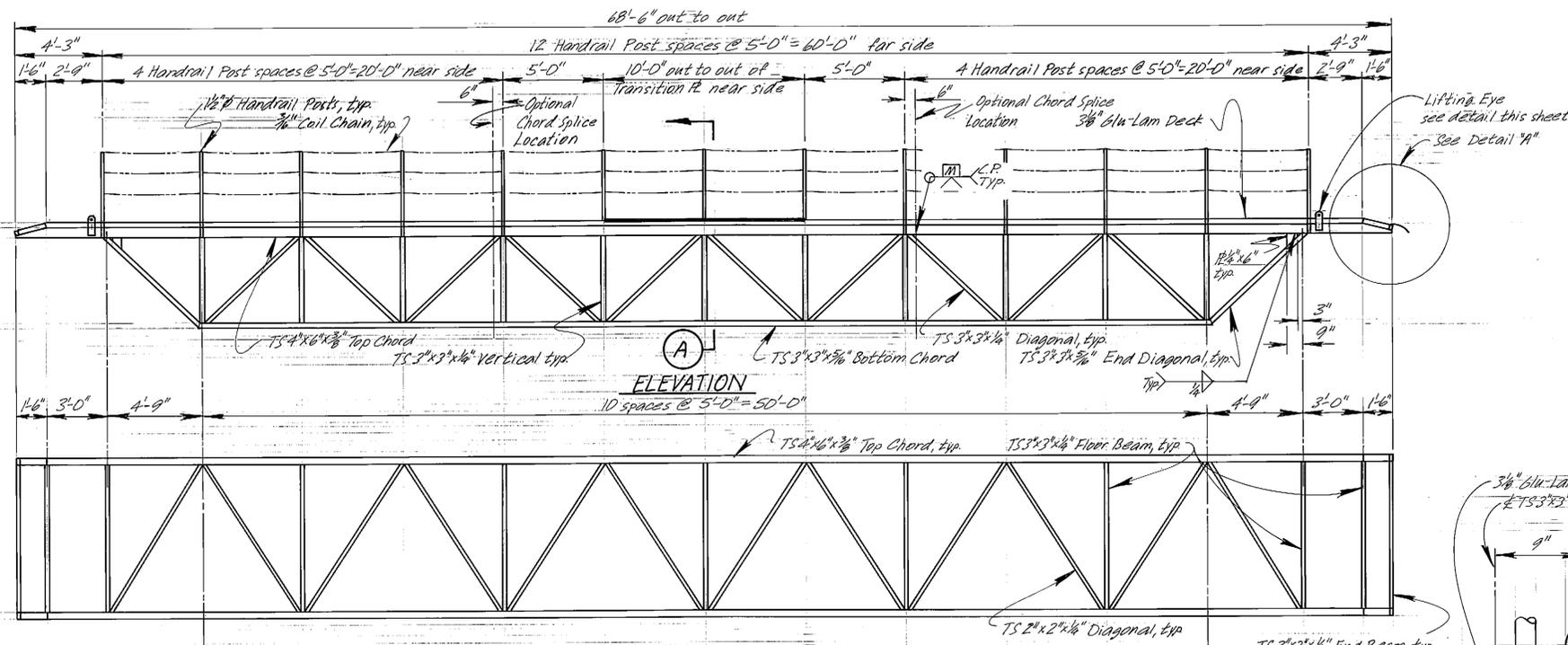
**SECTION B**



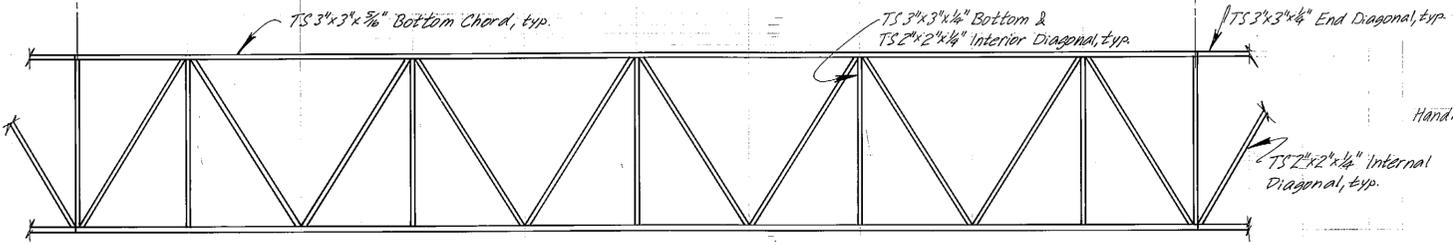
**AS-BUILT**  
Date: 6.86



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan		Alaska	
MAIN WHARF HAWSER RAIL			
DESIGNED	CHECKED	DRAWN <b>LVB</b>	DATE <b>2/85</b>
PROJECT NUMBER <b>X70010</b>	SHEET <b>54</b> OF <b>57</b>		



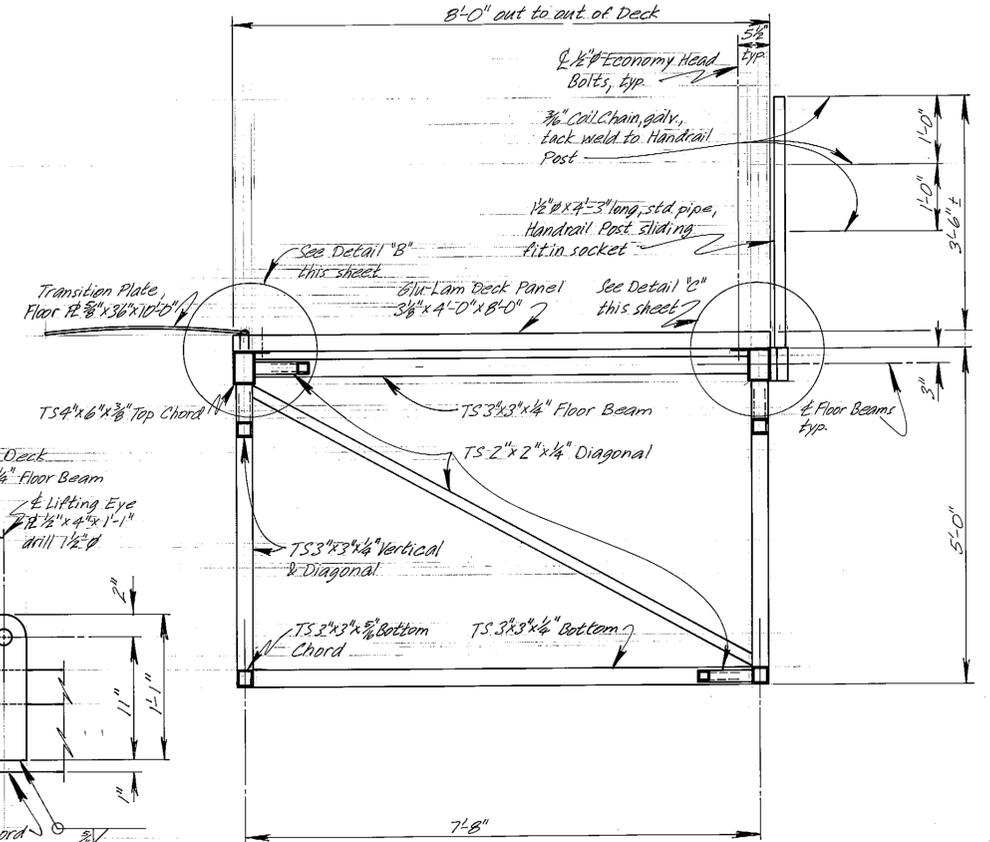
**ELEVATION**  
10 spaces @ 5'-0" = 50'-0"



**TOP CHORD PLAN**



**BOTTOM CHORD PLAN**



**SECTION A**

Engraved laminate sign, red foreground, white 80pt letters. Provide 3, adhesive bonded to 17ga stainless sheet same size as sign. Signs to be screwed to deck at 1/4" of transition plate 4" from edge of deck.

**LOAD LIMITS PERSONNEL AND MATERIAL GANGWAYS**

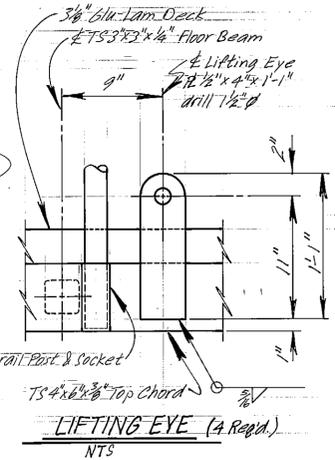
Maximum axle load = 10,000 lbs., minimum axle spacing = 5 ft.  
Maximum single tire load on 5 ft. track axle = 5,000 lbs.

Maximum Gross Vehicle Weight = 20,000 lbs.

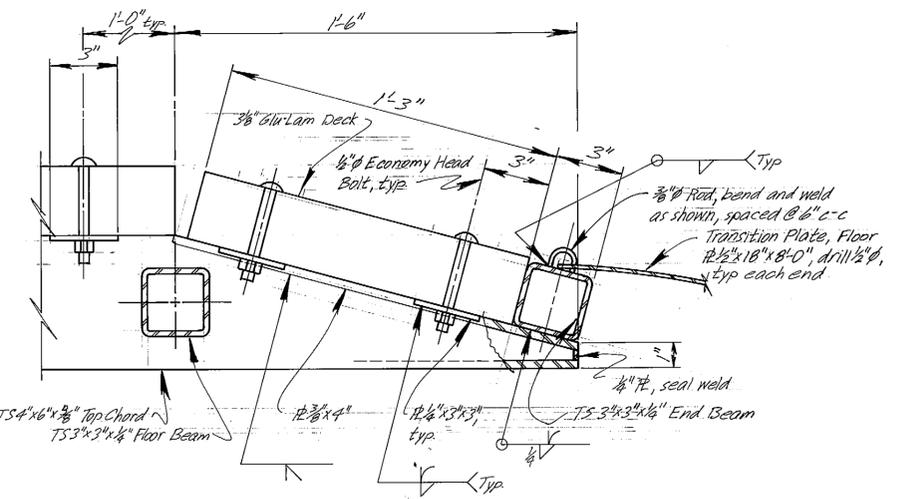
Loads or positions of loads not within the above parameters will require approval, prior to use of bridge, by Alaska Marine Highway System at (907) 465-2740.

**LOAD LIMIT SIGN**

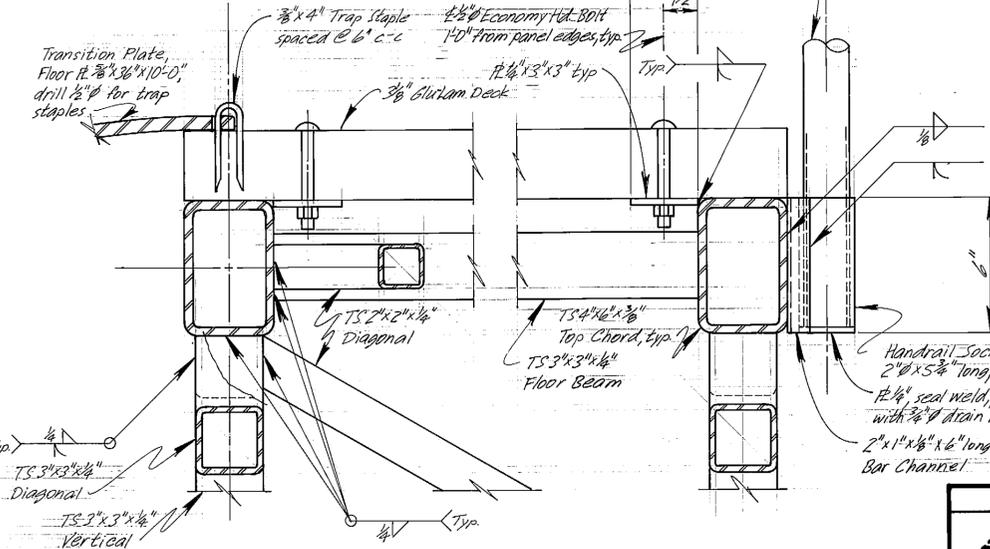
- Notes:
1. Provide with 2 1/2" positive camber at mid span for dead load. Camber to be smooth parabolic curve over entire length of structure.
  2. Stack pile Work Float Intertie on dunnage on the uplands, per Engineer's instructions.
  3. Galvanize after fabrication or spray metallize to 6 mil thickness, see Section 302.
  4. Work Float Intertie shall be incidental to Work Floats, Item 302(3).
  5. Blu-Lam Panels, treat per Section 306-2.02. All panels shall be Doug Fir Comb-2.
  6. Approx. steel wt. = 10,800 lbs.



**LIFTING EYE (4 Req'd)**  
NTS



**DETAIL "A"**  
NTS

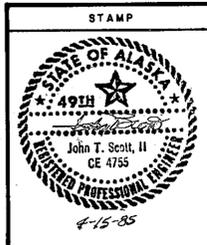


**DETAIL "B"**  
NTS

**DETAIL "C"**  
NTS

**AS-BUILT**

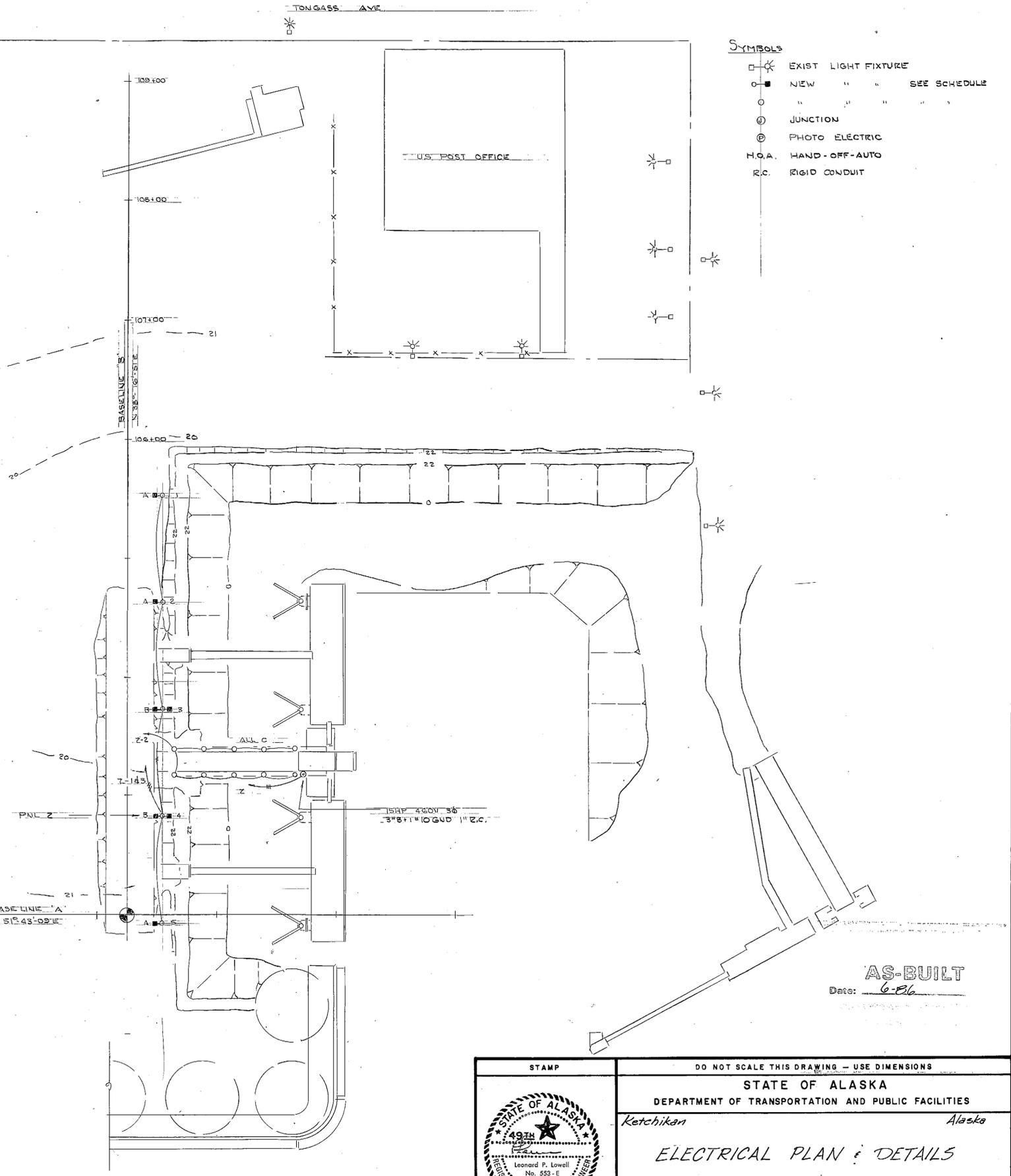
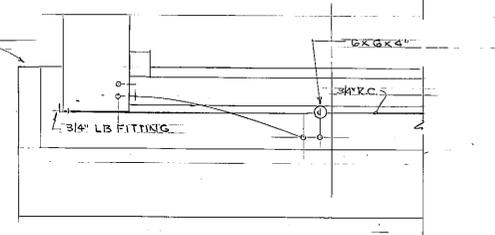
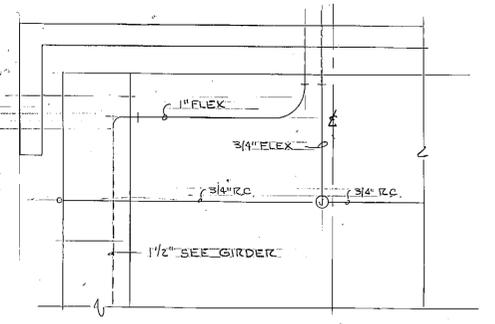
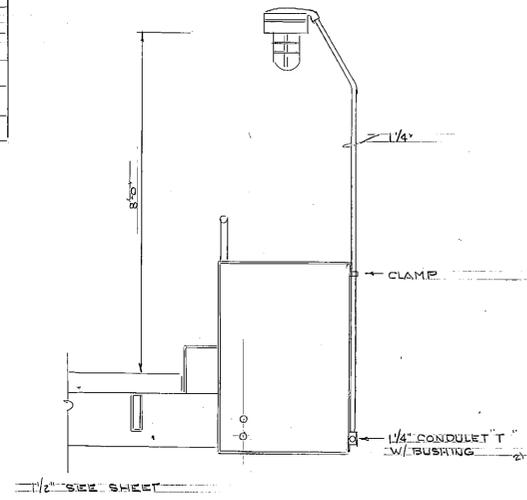
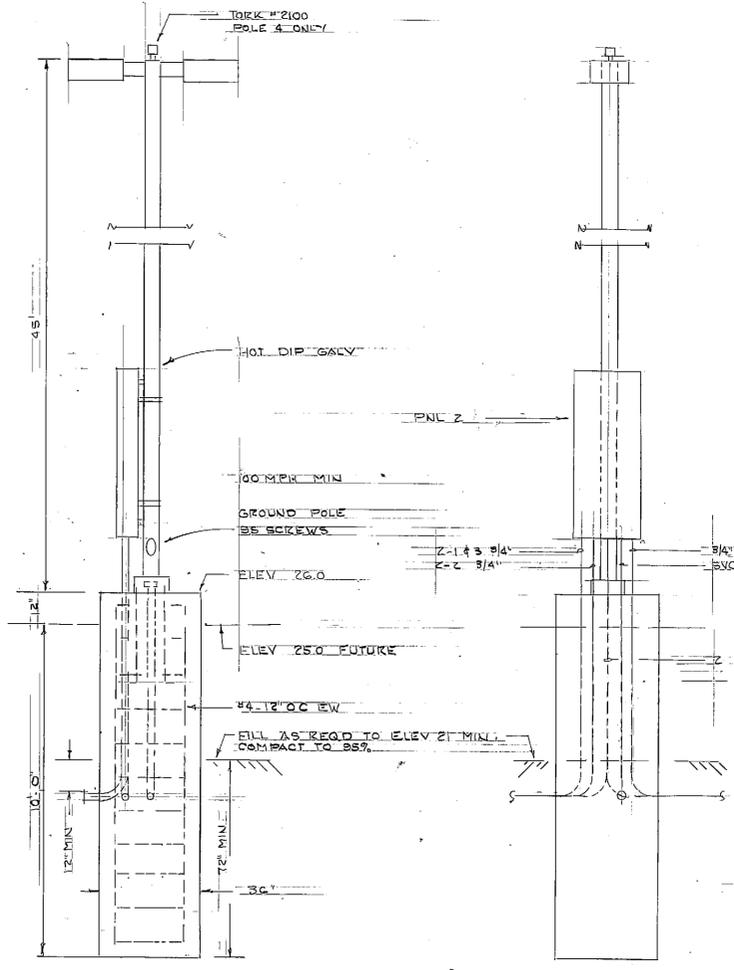
Date: 6-86



DO NOT SCALE THIS DRAWING - USE DIMENSIONS			
STATE OF ALASKA			
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
Ketchikan			Alaska
WORK FLOAT INTERTIE			
DESIGNED <u>JS</u>	CHECKED <u>BHS</u>	DRAWN <u>LJB</u>	DATE <u>4/85</u>
PROJECT NUMBER <u>X70010</u>	SHEET <u>55</u>		OF <u>57</u>

FIXTURE SCHEDULE				
TYPE	MFG.	W	H	REMARKS
A	MERPHOLSEN	TR866-D-98-211VC-45 SUCBOS	400 HPS	SEE DETAIL
B	"	TR866-2D-98-211VC-45 SUCBOS	2-400 HPS	"
C	F&S	M243-S4-G (211)	100 HPS	"

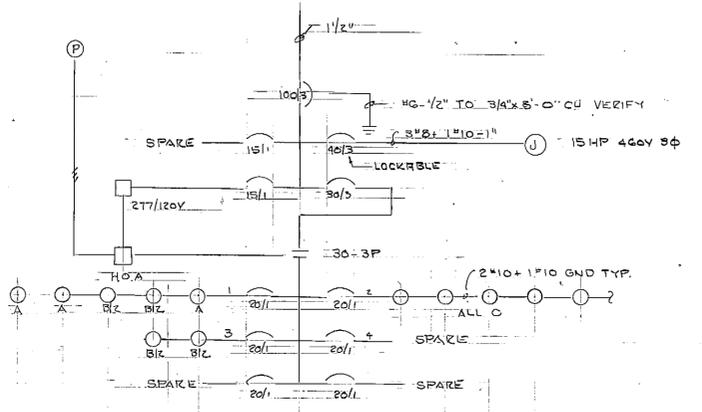
- SYMBOLS**
- ⊗ EXIST LIGHT FIXTURE
  - NEW " " SEE SCHEDULE
  - " " " " " " " "
  - ⊙ JUNCTION
  - ⊕ PHOTO ELECTRIC
  - H.O.A. HAND-OFF-AUTO
  - R.C. RIGID CONDUIT



FIXTURE TYPE A+B  
3/8" x 1'-0" ELEVATION 3/8" x 1'-0"

PARTIAL BRIDGE PLAN  
1/4" x 1'-0"

ELEVATION  
1/4" x 1'-0"



ONE-LINE DIAGRAM  
NO SCALE

**AS-BUILT**  
Date: 6-86

STAMP		DO NOT SCALE THIS DRAWING - USE DIMENSIONS	
		STATE OF ALASKA	
		DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES	
		Ketchikan	Alaska
<b>ELECTRICAL PLAN - DETAILS</b>			
DESIGNED	LP	CHECKED	DATE MARCH 85
PROJECT NUMBER	X70010	SHEET	56 OF 57

NOTES:

1. For subsurface information bidders are referred to the following:
  - a. Review of Soil Conditions Report Ketchikan Vessel Maintenance Facility by Converse Consultants dated 1984,
  - b. Geotechnical Report for Ketchikan Vessel Maintenance Facility by R&M Consultants dated 1982.
2. These Reports will be available for bidder viewing at Alaska Marine Highway System, 1591 Glacier Avenue, Juneau, and at the office of the Project Engineer located at the KVMP site in Ketchikan. Reports will be available during normal business hours.

AS-BUILT  
Date: 6-86

STAMP	DO NOT SCALE THIS DRAWING -- USE DIMENSIONS			
	STATE OF ALASKA			
	DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES			
	Ketchikan		Alaska	
<b>LOG OF TEST HOLES</b>				
DESIGNED _____	CHECKED _____	DRAWN _____	DATE _____	
PROJECT NUMBER X 70010		SHEET 57	OF 57	