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**Jerilyn Bailey**  
Solicitation/Contract  
Section Supervisor

(850) 487-3427  
(850) 921-2500 FAX

*Managing fish and wildlife resources for their long-term well-being and the benefit of people.*

620 South Meridian Street  
Tallahassee, Florida  
32399-1600  
Voice: (850) 488-4676

Hearing/speech-impaired:  
(800) 955-8771 (T)  
(800) 955-8770 (V)

MyFWC.com

DATE: December 8, 2011  
ADDENDUM NO.: 1  
BID NO.: FWC 11/12-33  
BID TITLE: Repair of the Guardian Patrol Vessel  
ADD Vendor Questions & FWC's Answers

If the COMMISSION finds it necessary to supplement, modify or interpret any portion of the specifications or documents during the ITB period an addendum shall be issued. An Addendum Acknowledgment Form shall be signed by an authorized vendor representative, dated, and returned to the COMMISSION prior to the opening date and time specified in the Calendar of Events.

Jerilyn Bailey  
Procurement Manager

**ADDENDUM ACKNOWLEDGMENT FORM**

VENDOR NAME: \_\_\_\_\_

VENDOR FEID#: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE: \_\_\_\_\_

PHONE #: \_\_\_\_\_

FAX #: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_

TITLE: \_\_\_\_\_

## Vendor Questions and FWC Answers

1. Question: Has it been decided which engines will be installed in the vessel? This affects the exhaust quotation.  
*Answer: The engine bid has not been awarded. We will require the yard to include pricing for the Cummins exhaust as it is the more complex system.*
  
2. Question: Is there a specific format for hourly rates for welding, electrical, mechanical, etc?  
*Answer: Yes, see attached.*
  
3. Question: Are any of the drawings available for tasks 12, 13, and 23?  
*Answer: Yes, see installation drawings attached. Hydrofoil installation drawings will be provided with delivery of the hydrofoils*
  
4. Question: Is there a specification or part number for the perforated aluminum headliner panels?  
*Answer: No. The "Otech" shipyard is no longer in business and the panels can only be matched visually. If an exact match can't be located, the FWC Contract Manager may approve a suitable alternative.*
  
5. Question: Do you know the manufacturer of these aluminum panels?  
*Answer: No. The "Otech" shipyard is no longer in business and the panels can only be matched visually. If an exact match can't be located, the FWC Contract Manager may approve a suitable alternative.*

FORMAT FOR HOURLY RATES

**DOCKING AND LAY DAYS BASED ON VESSEL LENGTH  
PER FOOT/ PER DAY**

HAUL  
LAY DAY  
DOCKAGE

**PLATE AND SHAPES PER POUND**

ALUMINUM 5083 / 5086  
STEEL  
STAINLESS STEEL 304 / 316

**WELDING SERVICES HOURLY**

ALUMINUM  
STEEL

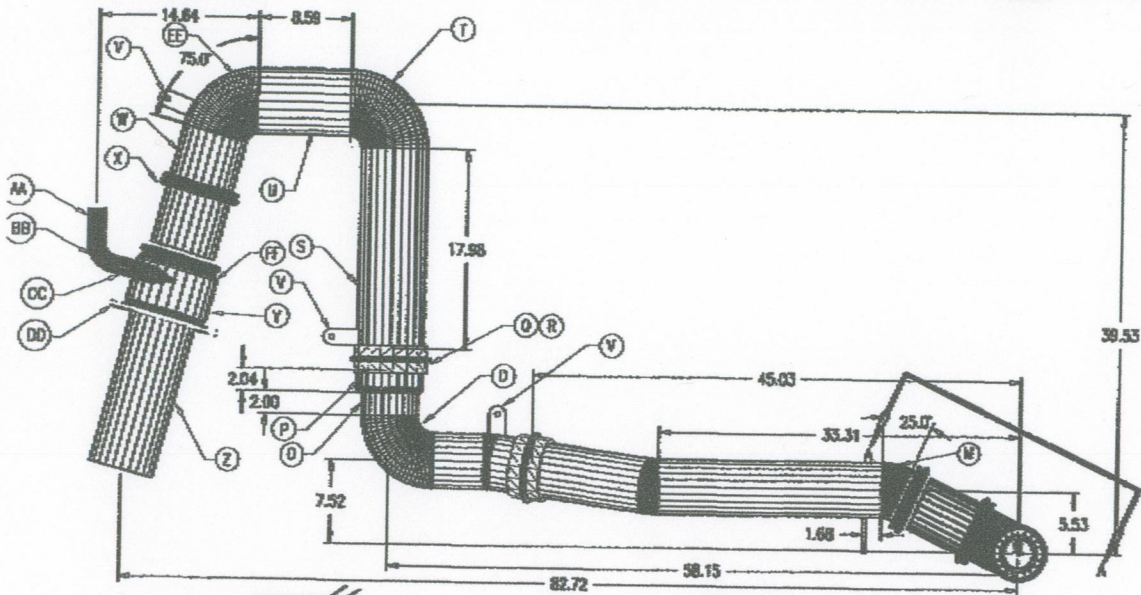
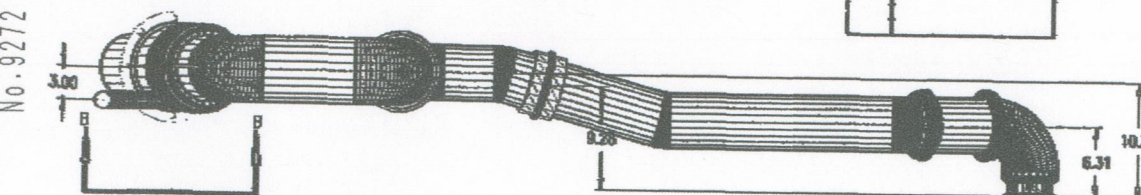
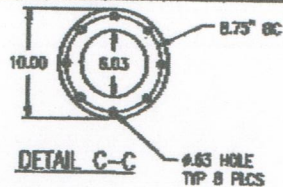
**LABOR CRAFTS HOURLY**

PAINTER  
PAINTER HELPER  
MACHINIST  
MACHINIST HELPER  
RIGGER  
EQUIPMENT OPERATOR  
OILER  
PLUMBER/PIPEFITTER  
PLUMBER/PIPEFITTER HELPER  
ELECTRICIAN  
ELECTRICIAN HELPER  
LABORER  
DIESEL/GAS ENGINE MECHANIC  
ELECTRONICS TECHNICIAN  
ELECTRONICS TECHNICIAN HELPER  
CARPENTER  
CARPENTER HELPER  
SHEET METAL WORKER  
SHEET METAL HELPER

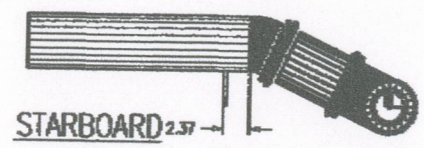
**MATERIALS, COMPONENTS AND SYSTEMS BASED ON  
PERCENTAGE DISCOUNT OFF LIST PRICE**

MATERIALS  
COMPONENTS  
SYSTEMS

THIS DRAWING IS THE PROPERTY OF DANIELI MARINE ENGINEERING S.p.A. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF DANIELI MARINE ENGINEERING S.p.A.



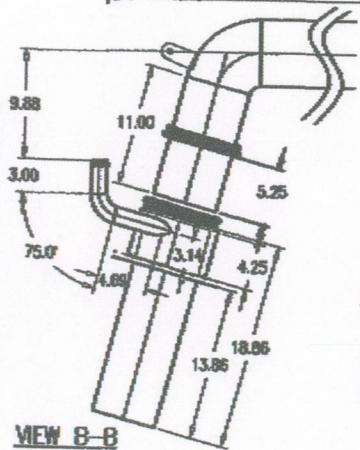
PORT



NOTES

1. PORT SHOWN, STARBOARD IDENTICAL EXCEPT AS NOTED
2. STAMP "PORT/STBD, ON FLANGE
3. INSULATION SPEC: 1" INNER, .50" OUTER GREY EXTERIOR

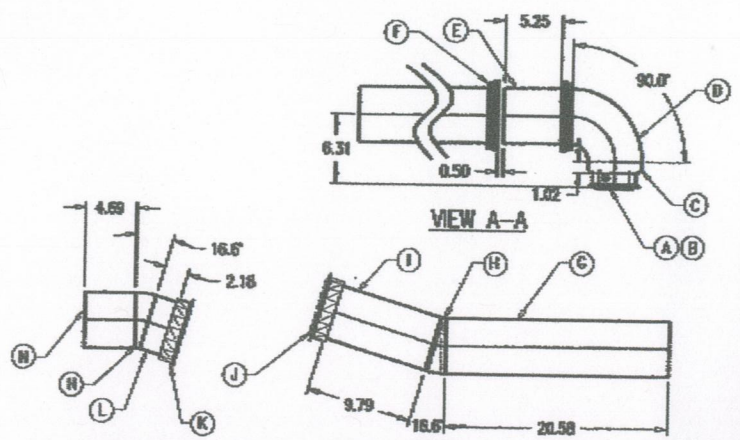
VIEW B-B



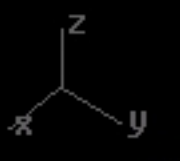
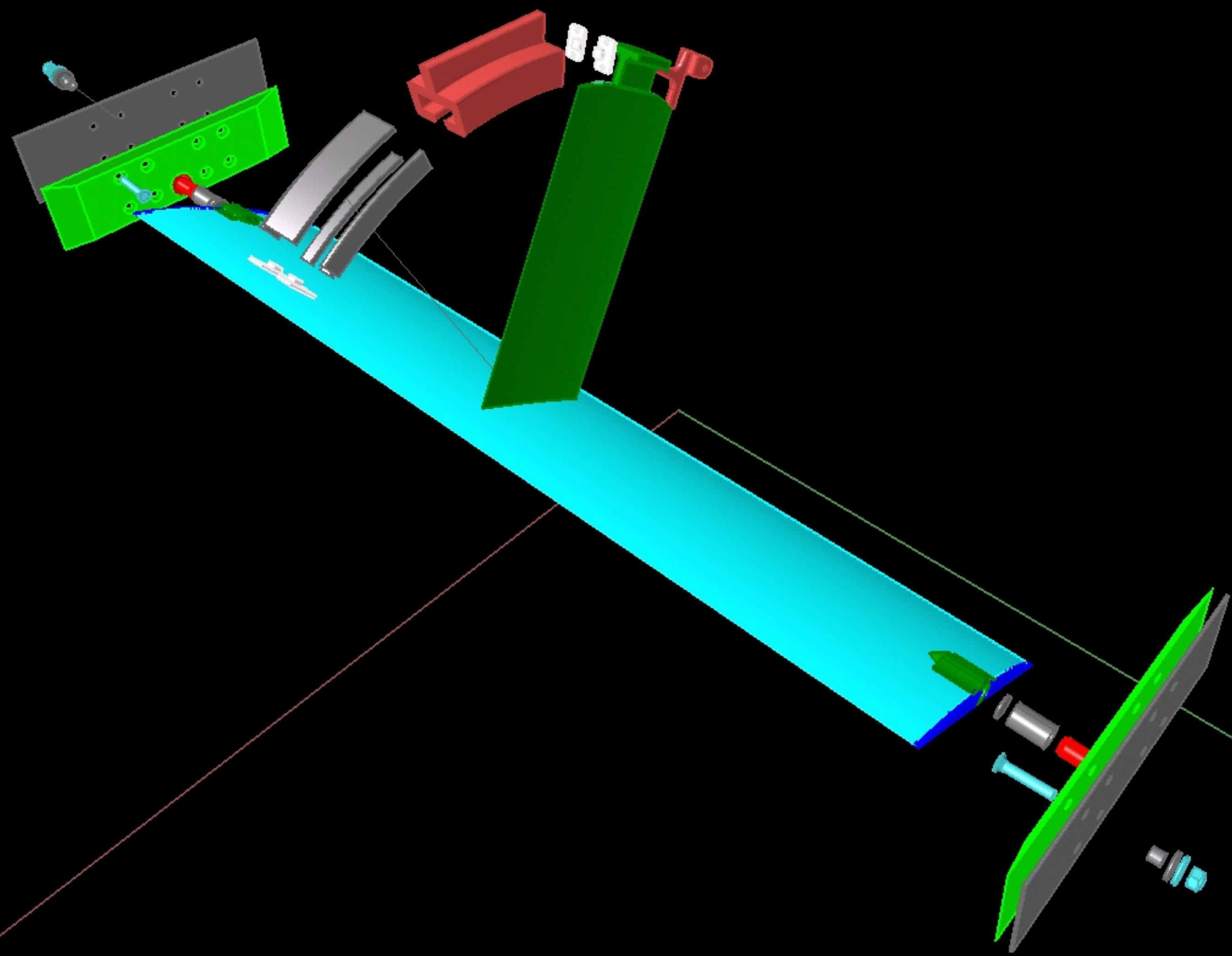
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01	1					

CUTTING LIST

ITEM	QTY	UNIT	FINISH	REQD FOR ASSY	TOTAL	PART NO.	DESCRIPTION	GUAGE	REMARKS
A	1	NAIVE				898-012900	FLANGE ADAPTOR		
B	1	316L	NAIVE				PIPE PLUS .25" NPT		
C	1	316L	NAIVE				TUBE, #5" x 1.38" LENGTH	12	SW. O/E TO FLANGE
D	2	316L	NAIVE				ELBOW, #5" x 4RAD x 90°	14	
E	1	316L	NAIVE				TUBE, #5" x 6.5" LENGTH	14	BLOW OUT TUBE
F	2	316L	NAIVE			895-113600	BELLOW ADAPTOR 5D	14	
G	1	316L	NAIVE				TUBE, #5" x 21.25" LENGTH	14	
H	2	316L	NAIVE				ELBOW, #5" x 4RAD x 16.6"	14	
I	1	316L	NAIVE				TUBE, #5" x 10.25" LENGTH	14	
J	1	NAIVE				898-042701	FLANGE MARMON ADAPTOR 5D		MALE
K	1	NAIVE				898-042702	FLANGE MARMON ADAPTOR 5D		FEMALE
L	1	316L	NAIVE				TUBE, #5" x 2.75" LENGTH	14	
M	1	316L	NAIVE				ELBOW, #5" x 4RAD x 25°	14	
N	1	316L	NAIVE				TUBE, #5" x 5.13" LENGTH	14	
O	1	316L	NAIVE				TUBE, #5" x 2.5" LENGTH	14	
P	1	316L	NAIVE				TUBE, #6" x 2.5" LENGTH	12	SW. O/E TO 5"
Q	1	NAIVE				898-042801	FLANGE MARMON ADAPTOR 6D		MALE
R	1	NAIVE				898-042802	FLANGE MARMON ADAPTOR 6D		FEMALE
S	1	316L	NAIVE				TUBE, #6" x 18.5" LENGTH	14	
T	1	316L	NAIVE				ELBOW, #6" x 4RAD x 90°	14	
U	1	316L	NAIVE				TUBE, #6" x 9.13" LENGTH	14	
V	4	316L	NAIVE				PADEYE W/ DOUBLER	14	
W	1	316L	NAIVE				TUBE, #6" x 11.25" LENGTH	14	BLOW OUT TUBE
X	2	NAIVE				895-113700	BELLOWS ADAPTOR 6D		
Y	1	25-0	NAIVE				TUBE, #7" x 4.38" LENGTH	14	SW. O/E TO 6"
Z	1	25-0	NAIVE				TUBE, #6" x 19.0" LENGTH	14	SEE TEMPLATE FOR HOLES
AA	1	25-0	NAIVE				TUBE, #1.5" x 3.0" LENGTH	14	HB
BB	1	25-0	NAIVE				ELBOW, # 1.63" x 2RAD x 75°	14	
CC	1	25-0	NAIVE				TUBE, #1.5" x 4.63" LENGTH	14	CUT O/E @ 40°
DD	1	NAIVE					FLANGE ADAPTOR	.5	SEE DETAIL C-C
EE	1	316L	NAIVE				ELBOW, #6" x 4RAD x 75°	14	
FF	1	25-0	NAIVE				RING ID= 6.03" x OD= 6.9"	25	



<p>1/REV'D</p> <p>NO. FOR SCALE</p> <p>DATE</p> <p>BY</p> <p>APP'D</p> <p>100</p>	<p>SEE CUT LIST</p> <p>PURGE/POSHOME</p> <p>DATE</p> <p>8-27-08</p>	<p><b>DANIELI MARINE ENGINEERING, INC.</b></p> <p>RISER ASSY</p> <p>OCEAN TECH</p> <p>YANMAR BLYA-SIP 440 BRP</p> <p>C</p> <p>C03-0834</p> <p>1.5"-1"</p>
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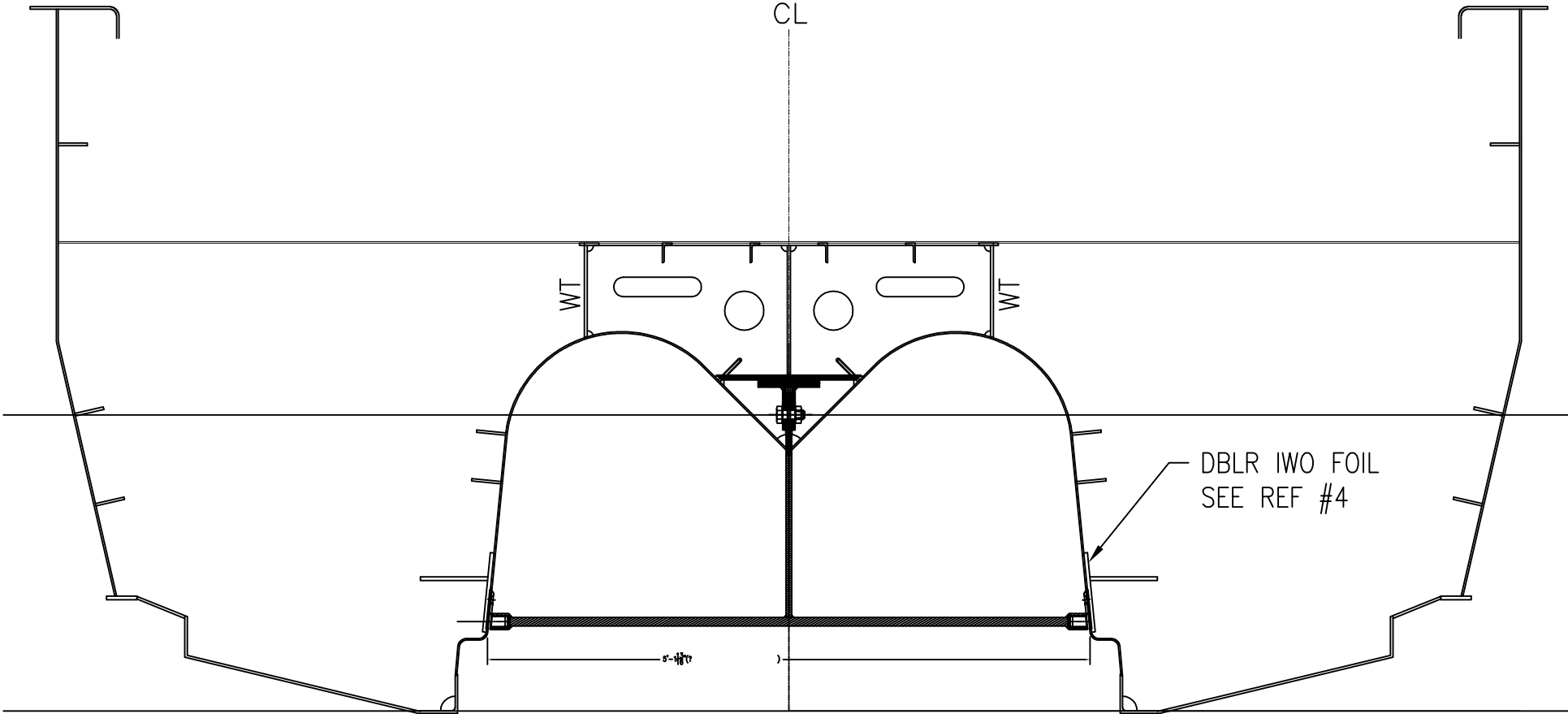
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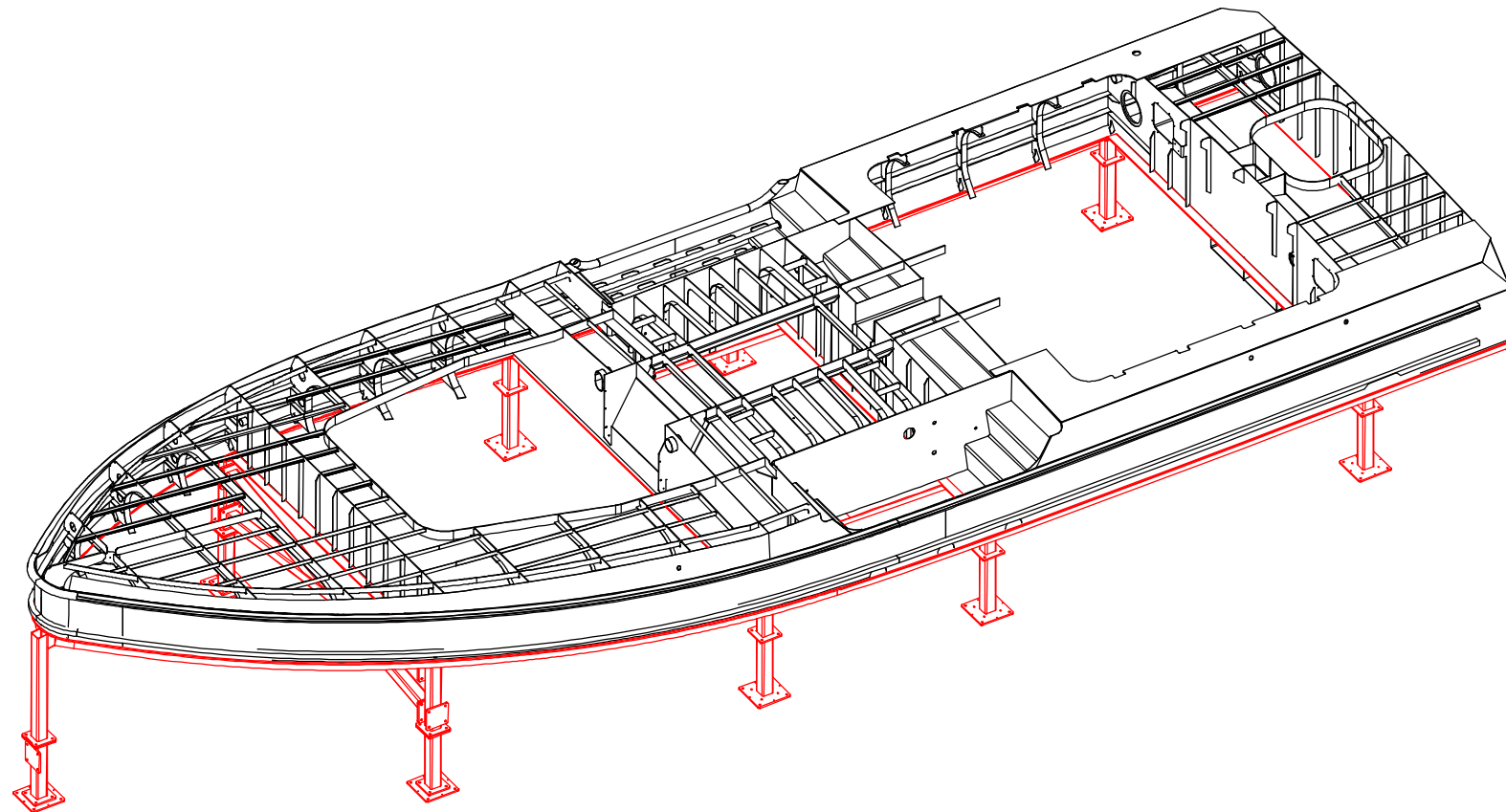
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DBLR IWO FOIL  
SEE REF #4

5-1/2"



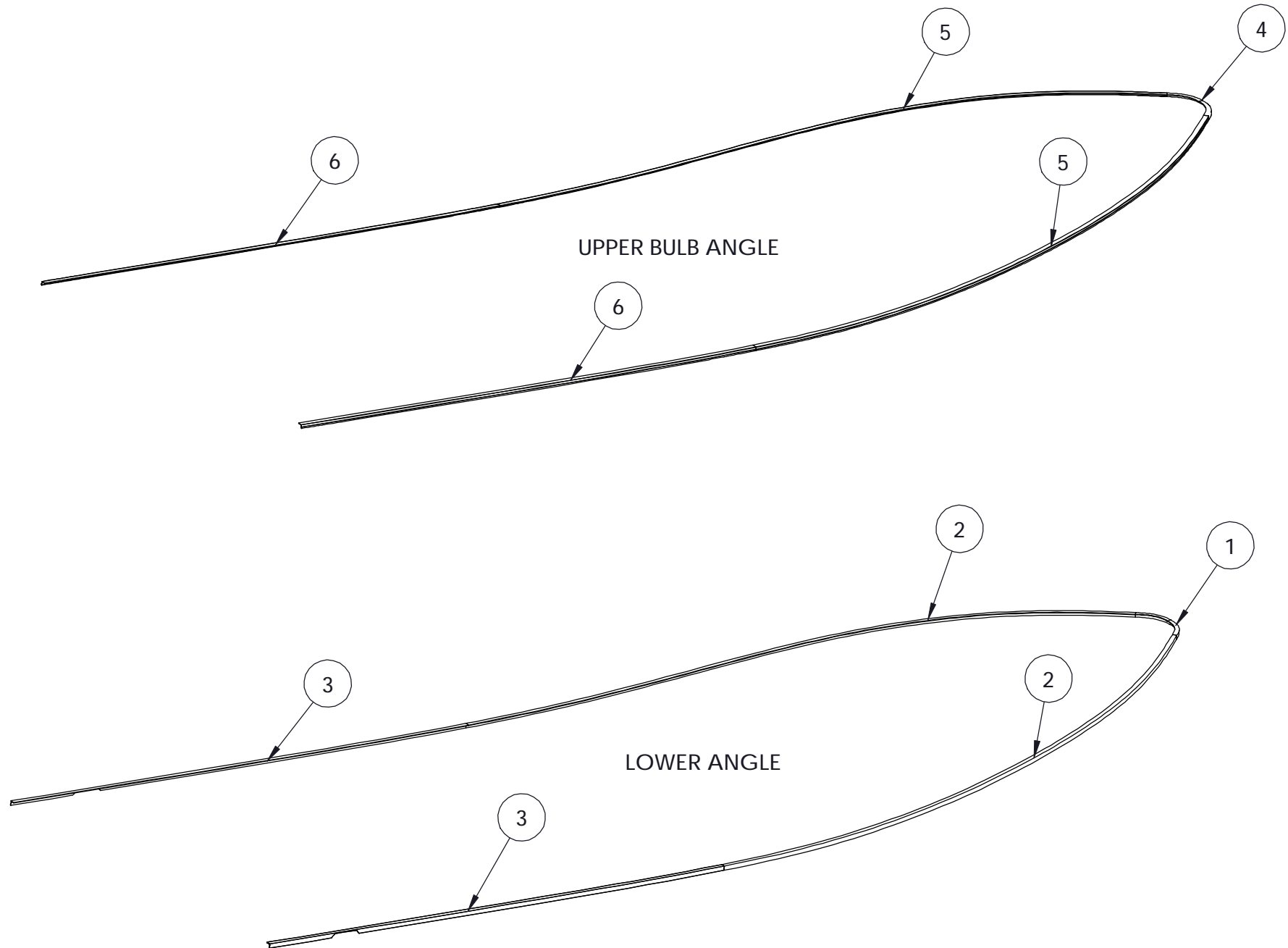
WP 236



## Hull Guard Fendering Attachments Deck Fab

<b>Kvichak</b> Marine Industries, Inc. <small>469 NW BOWDOIN PL. SEATTLE, WA 98107 TEL. (206) 545-8485 FAX (206) 545-3504</small>	<b>Hull Guard Fendering Attachments</b>	
	WP 236	REV C
<small>PAGES</small> 1 of 10	<small>DATE</small> 07/07/09	
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PARTS LIST		ID CODE LEGEND			
			P = PURCHASED PART	B = BIN STOCK	
			M = MACHINED PART	SUB = SUB-ASSY	
ITEM NO.	PART/SUB ASSY NO.	QTY.	DESCRIPTION	KMI PART NO.	ID CODE
1	114-001-0006	1	ANGLE BOW SECTION	205283	N/A
2	114-001-0002	2	ANGLE, 5086, .250 X 1.750 X 1.750	205283	N/A
3	114-001-0008	2	ANGLE, 5086, .250 X 1.750 X 1.750	205283	N/A
4	114-001-0005	1	BULB ANGLE BOW SECTION	205272	N/A
5	114-001-0001	2	BULB ANGLE, 5086, .250 x 2.500 x 1.500	205272	N/A
6	114-001-0007	2	BULB ANGLE, 5086, .250 x 2.500 x 1.500	205272	N/A



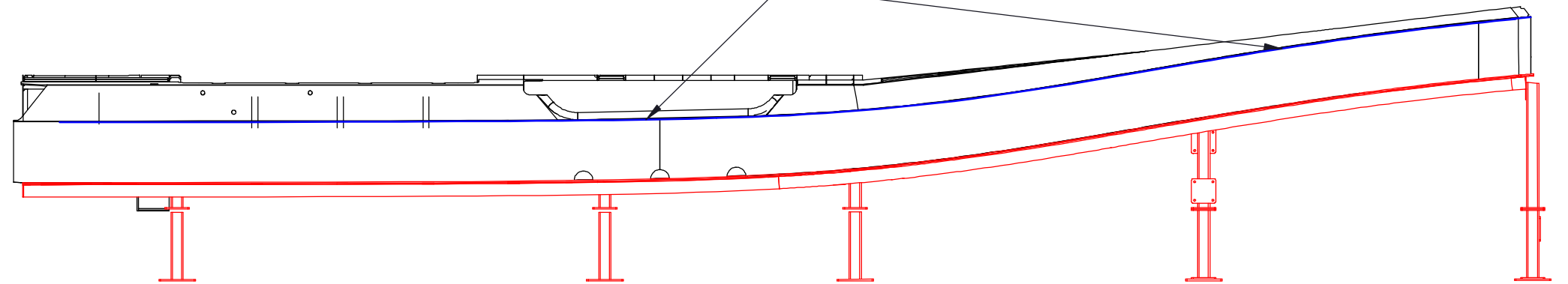
<b>Kvichak</b> Marine Industries, Inc. <small>469 NW BOWDOIN PL. SEATTLE, WA. 98107          TEL. (206) 545-8485 FAX (206) 545-3504</small>	<b>Hull Guard Fendering Attachments</b>	
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Workstation:Deck Fab

Assembly/Install Instructions:

MARK THE LOCATION FOR THE UPPER FENDER ANGLE



FENDER DIMENSIONS ARE LOCATED ON PAGES 4, 5, AND 6

- Inspection & Test:
- Fabrication / Insp.
  - Super. sign-off.
  - Verify configuration & all parts in place.
  - Verify fendering attachment dimensions.
  - Inspection sign-off.

**Kvichak**  
Marine Industries, Inc.

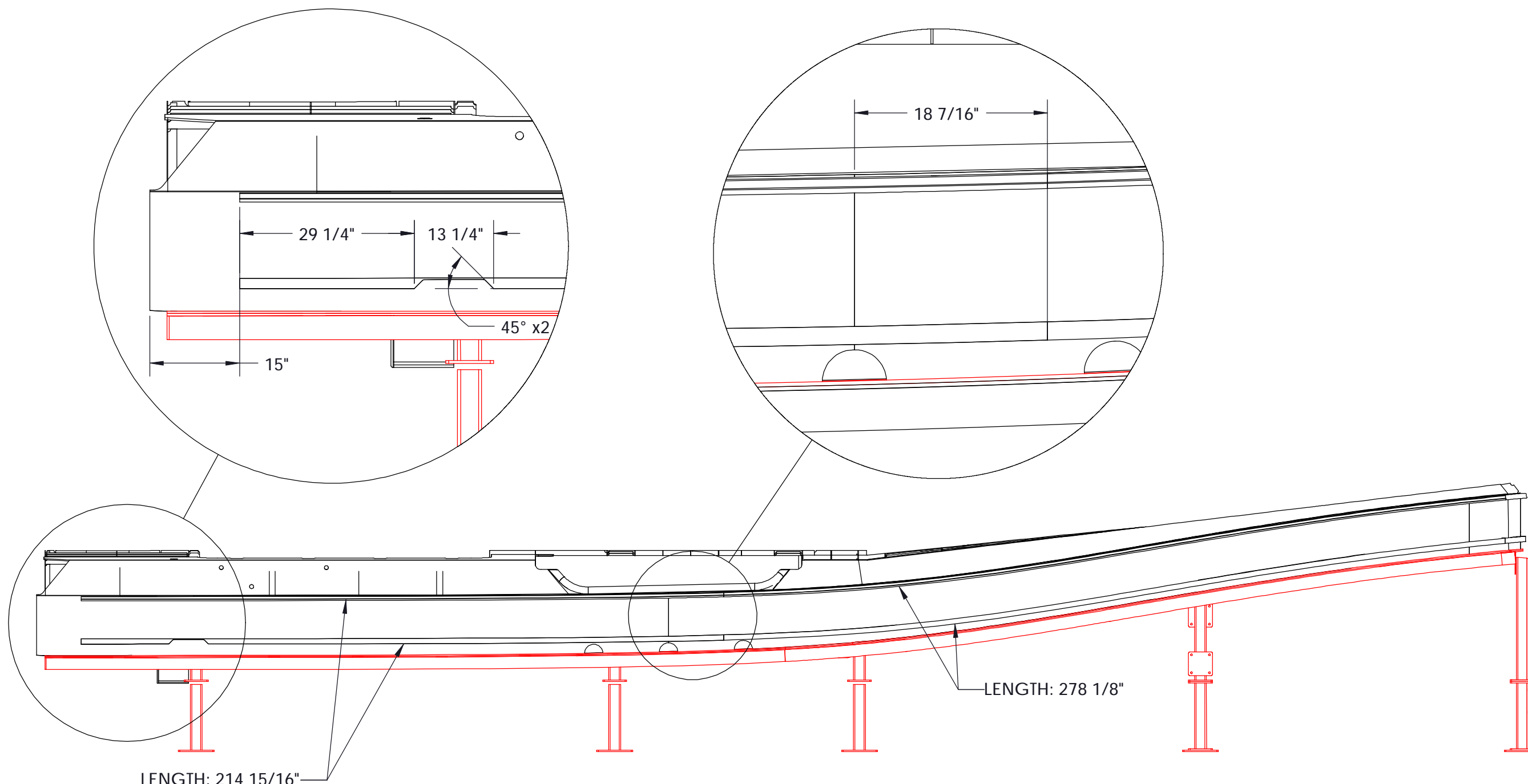
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**Hull Guard Fendering Attachments**

WP 236 REV C

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LENGTH: 214 15/16"

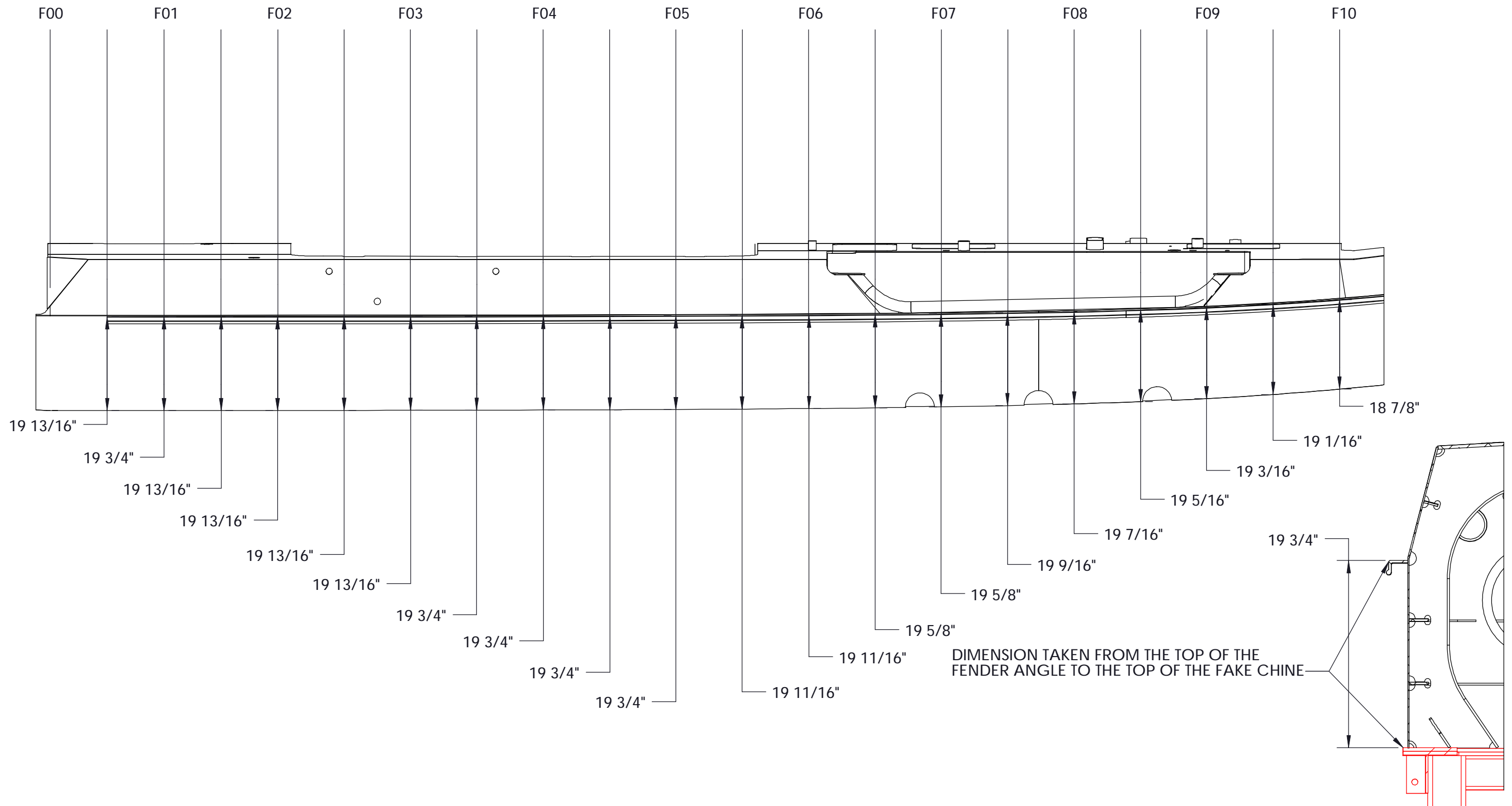
LENGTH: 278 1/8"

LOCATING DIMENSIONS SHOWN ON THE FOLLOWING PAGES

**Inspection & Test:** Fabrication / Insp.  
 - Super. sign-off.  
 - Verify configuration & all parts in place.  
 - Verify fendering attachment dimensions.  
 - Inspection sign-off.

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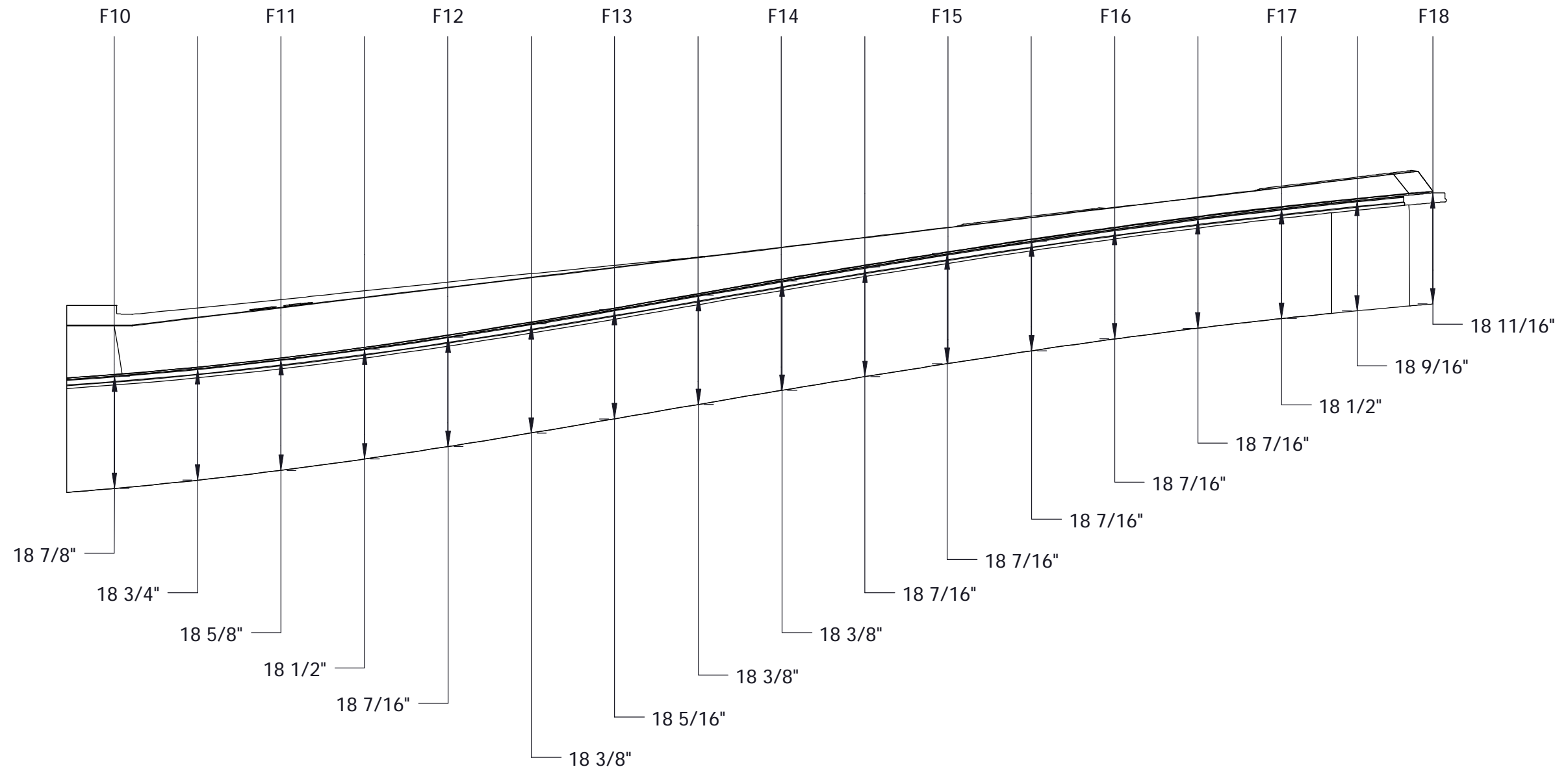
DIMENSIONS ARE TO THE TOP OF THE UPPER FENDER ANGLE



**Inspection & Test:** Fabrication / Insp.  
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DIMENSIONS ARE TO THE TOP OF THE UPPER FENDER ANGLE



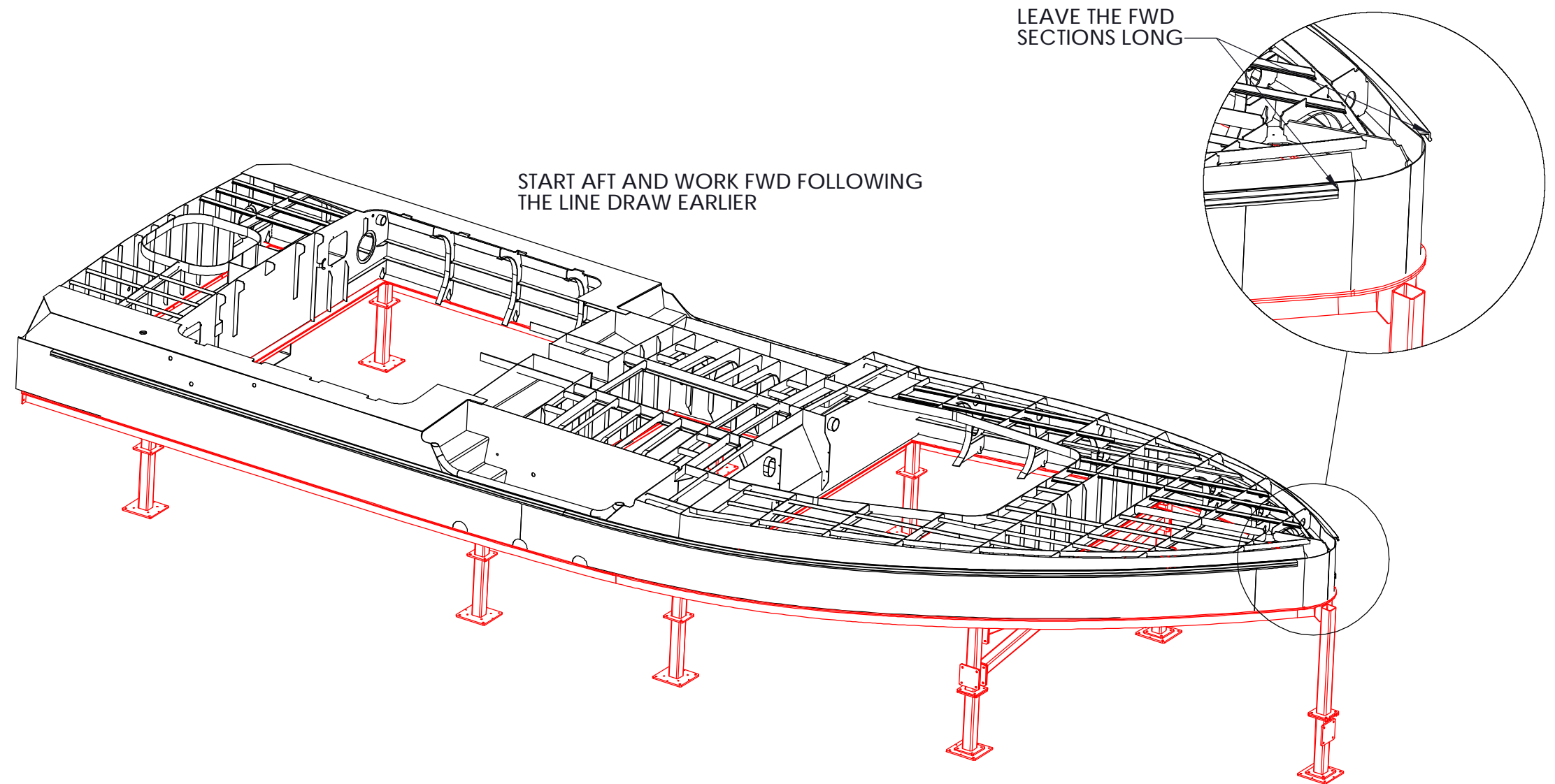
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	<b>Hull Guard Fendering Attachments</b>	
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## Workstation: Deck Fab

### Assembly/Install Instructions:

1. Start aft tacking on the angles below the line drawn. Put all tacks on the top side. Make sure you keep the angle 90° to the side shell.



**Inspection & Test:** Fabrication / Insp.  
- Super. sign-off.  
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- Inspection sign-off.

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**Hull Guard Fendering Attachments**

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REV C

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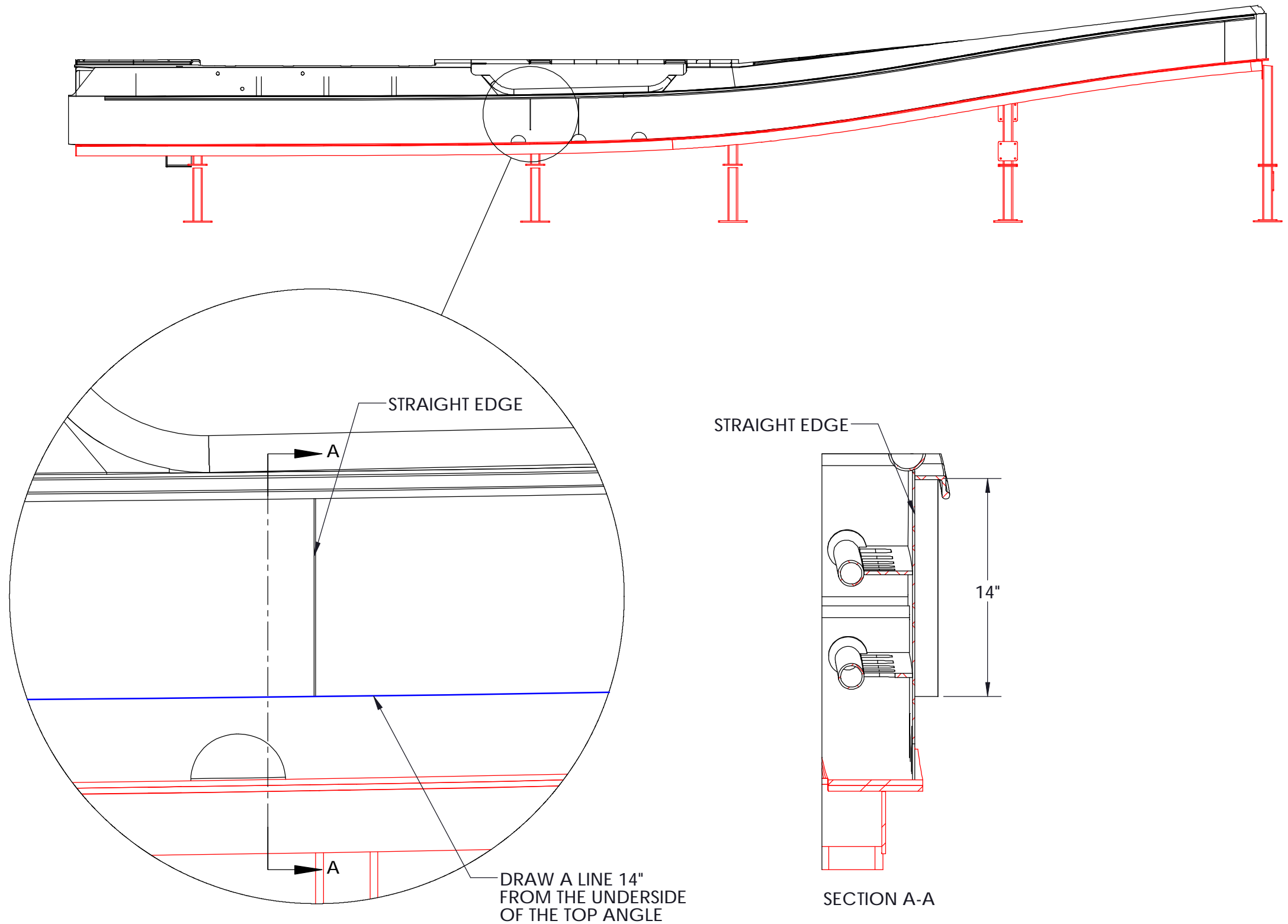
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# Workstation: Deck Fab

## Assembly/Install Instructions:

1. After the top angle is tacked, use a spacer that measures 14" long to mark a line all the way down the length of the boat. This line is for the lower angle.



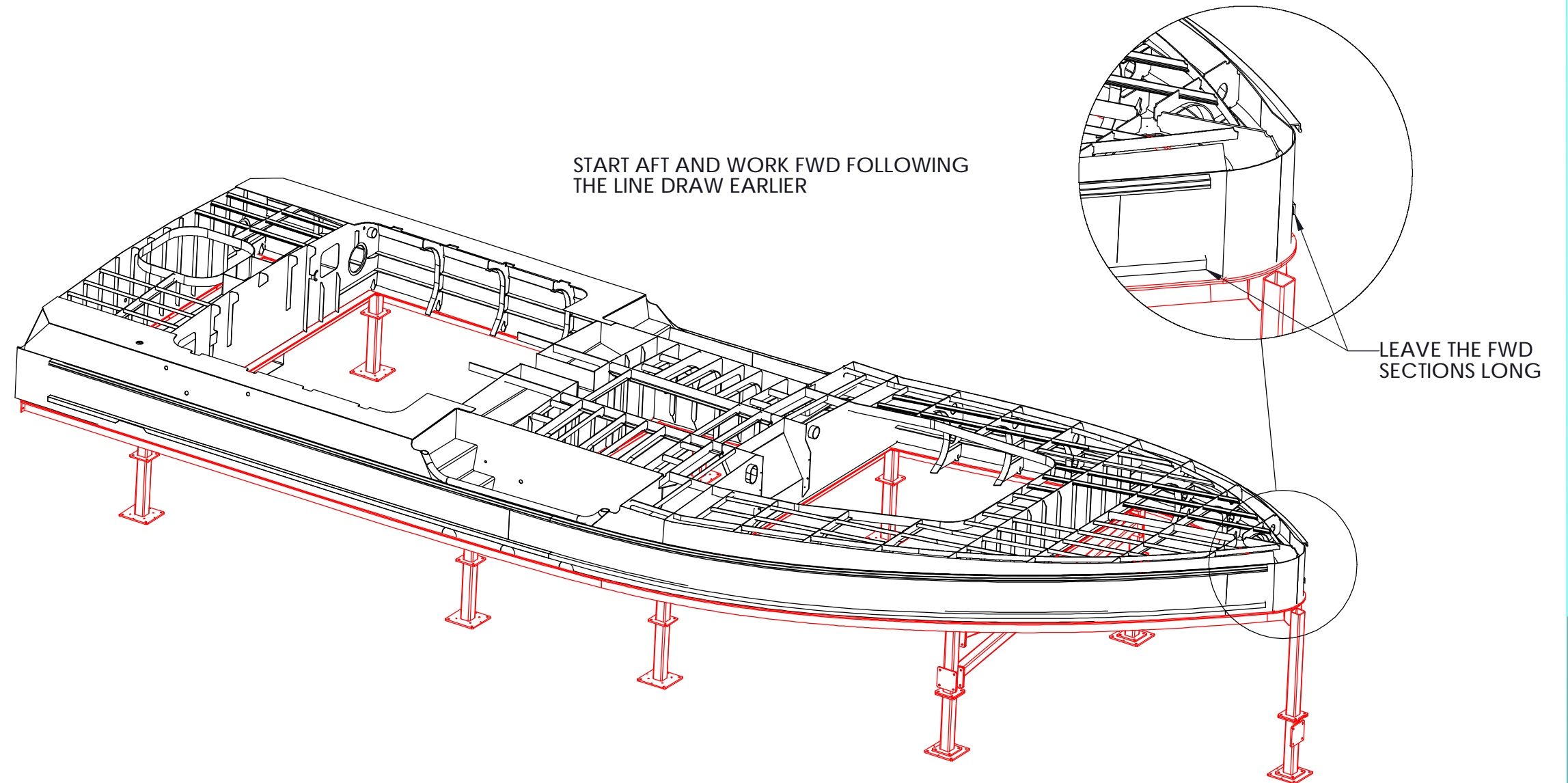
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- Super. sign-off.
  - Verify configuration & all parts in place.
  - Verify fendering attachment dimensions.
  - Inspection sign-off.

	<b>Hull Guard Fendering Attachments</b>	
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## Workstation:Deck Fab

### Assembly/Install Instructions:

1. Install the lower angle the same as the top.



**Inspection & Test:** Fabrication / Insp.  
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**Hull Guard Fendering Attachments**

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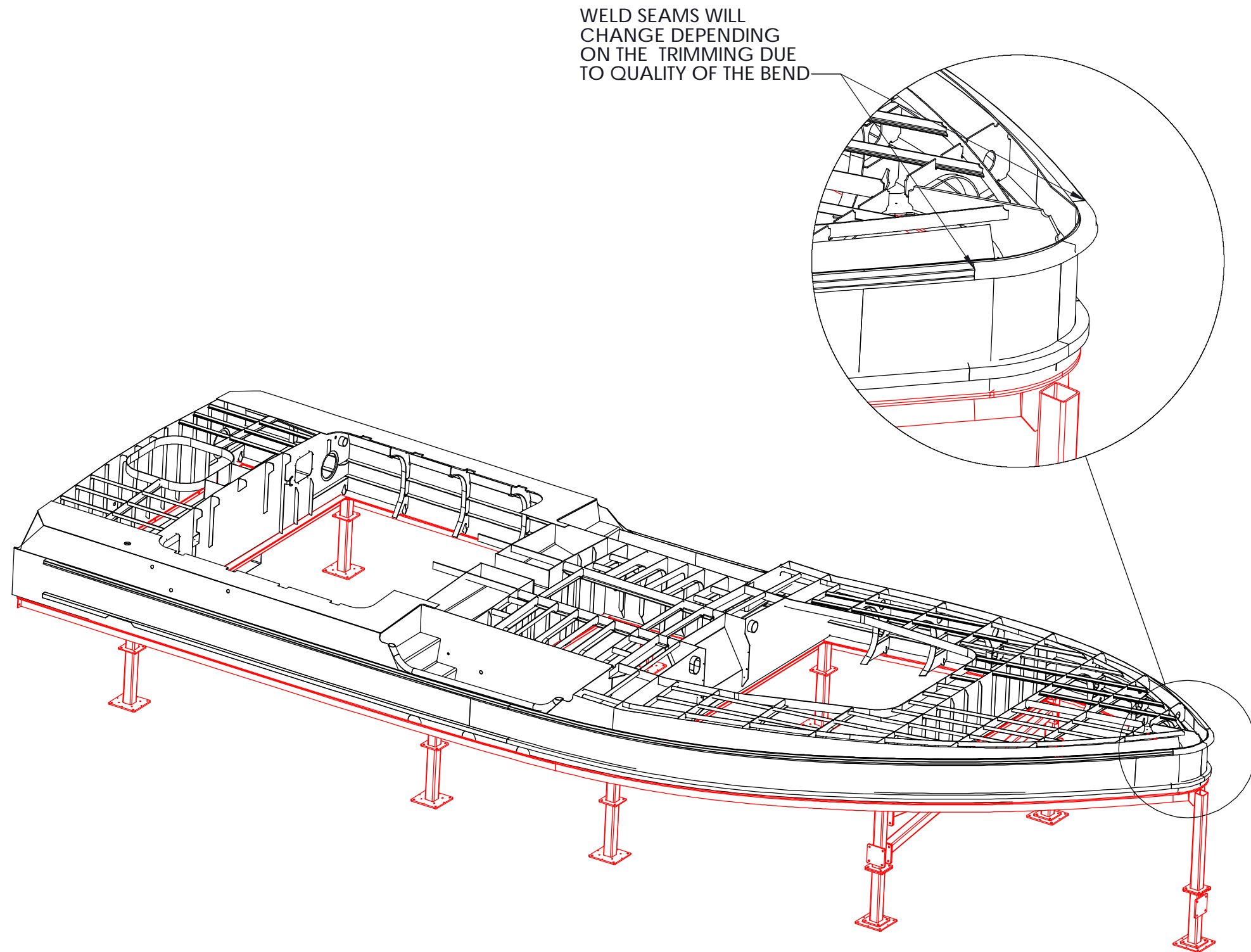
PAGES: 9 of 10 DATE: 07/07/09

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## Workstation:Deck Fab

### Assembly/Install Instructions:

1. Install the bow angle sections. Fit the angle around the bow section so it is snug to the side shell. Trimming will be required for fit up. Once done tack on the top side only.



- Inspection & Test:** Fabrication / Insp.
- Super. sign-off.
  - Verify configuration & all parts in place.
  - Verify fendering attachment dimensions.
  - Inspection sign-off.

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**Hull Guard Fendering Attachments**

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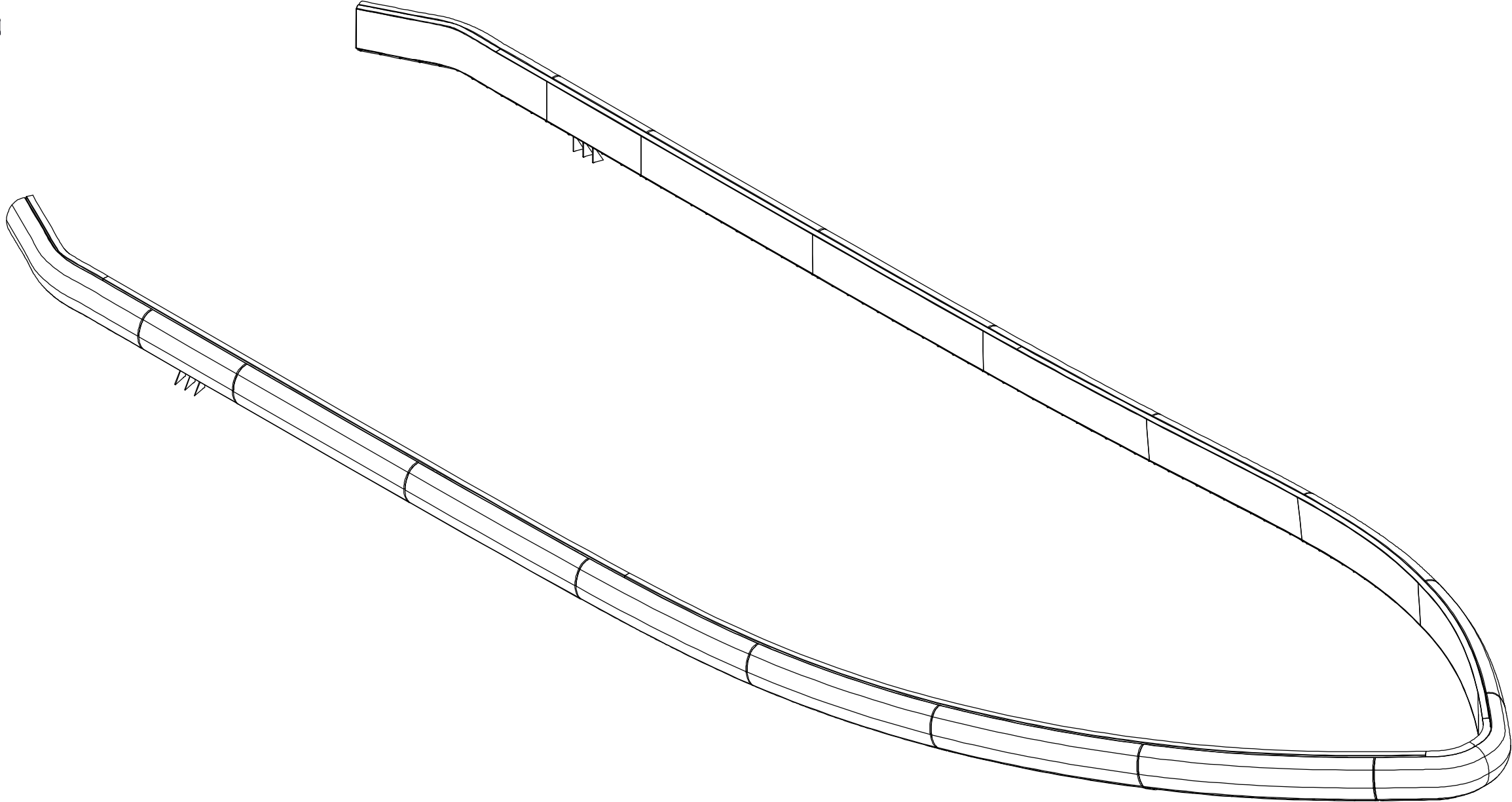
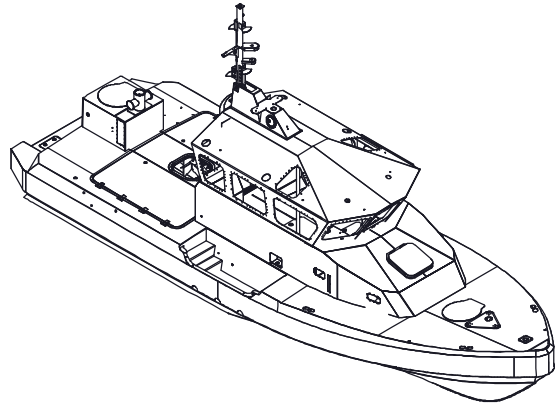
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# WP 410

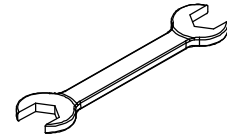


Install Hull Guard / Fendering  
Final Assy #1

<b>Kvichak</b> Marine Industries, Inc. <small>469 NW BOWDOIN PL. SEATTLE, WA 98107 TEL. (206) 545-8485 FAX (206) 545-3504</small>	Install Hull Guard Fendering	
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## TOOLS LIST

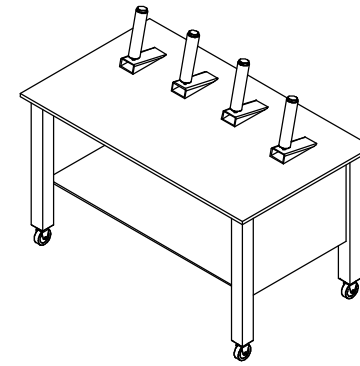
ITEM NO	DESCRIPTION
1	9/16" Wrench (X2)
2	Anti-Seize
3	Fender Installation Table
4	3/8" Drill Bit
5	Drill
6	Finger Clamp
7	1/2" Drill Bit
8	3/8" Air Ratchet
9	3/4" Wrench
10	3/4" Socket
11	Hot Knife with Table
12	9/16" Socket
13	1/2" Flat Washers, Zinc Plated
14	1/2" x 1-1/4 Bolt, Zinc Plated
15	1/2" Nut, Zinc Plated



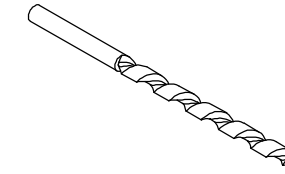
TOOL 1  
(X2)



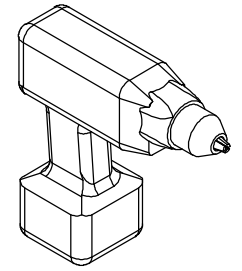
TOOL 2



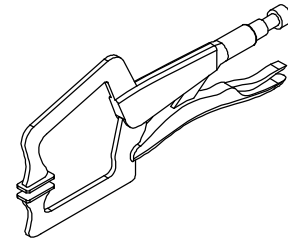
TOOL 3



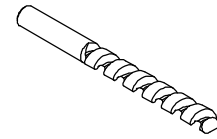
TOOL 4



TOOL 5



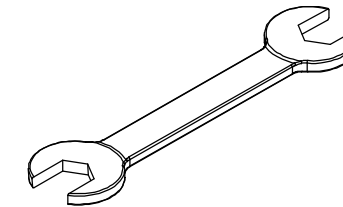
TOOL 6



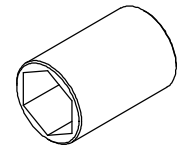
TOOL 7



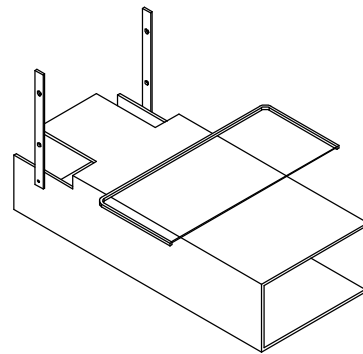
TOOL 8



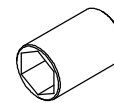
TOOL 9  
(X2)



TOOL 10



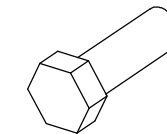
TOOL 11



TOOL 12



TOOL 13



TOOL 14

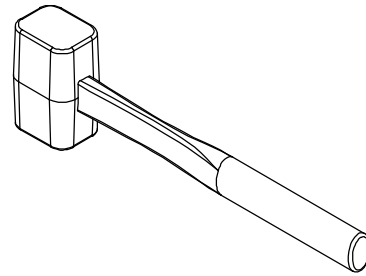


TOOL 15

	Install Hull Guard Fendering	
	WP 410	REV C
469 NW BOWDOIN PL. SEATTLE, WA 98107 TEL. (206) 545-8485 FAX (206) 545-3504	PAGES <b>2 of 13</b>	DATE 8/29/09
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# TOOLS LIST

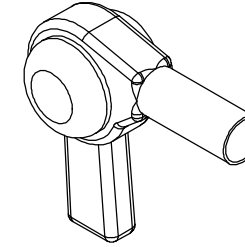
ITEM NO	DESCRIPTION
16	Large Hammer
17	3" Ratchet Straps (X3)
18	Heat Gun
19	Heel Bars (X2)
20	Roller Router
21	Compression Plates
22	Fender Removal Tool
23	Super Lube
24	Tape Measure
25	Utility Knife



TOOL 16



TOOL 17  
(X3)



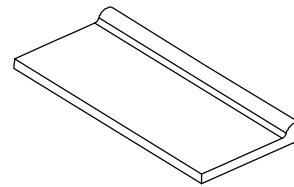
TOOL 18



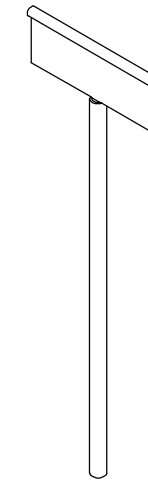
TOOL 19  
(X2)



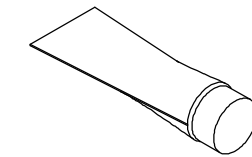
TOOL 20



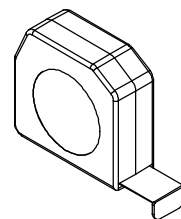
TOOL 21



TOOL 22



TOOL 23



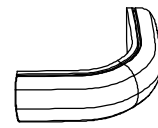
TOOL 24



TOOL 25

	Install Hull Guard Fendering	
	WP 410	REV C
<small>469 NW BOWDOIN PL. SEATTLE, WA 98107 TEL. (206) 545-8485 FAX (206) 545-3504</small>	<small>PAGES</small> 3 of 13	<small>DATE</small> 8/29/09
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PARTS LIST		ID CODE LEGEND		
		I = INCLUDED M = MACHINED PART	B = BIN STOCK SUB = SUB-ASSEMBLY	
ITEM NO.	PART/ASSY	QTY.	DESCRIPTION	ID CODE
1	205063	1	BOW FENDER SEGMENT	NA
2	207580	1	FENDER SEGMENT, PORT 1	NA
3	207581	1	FENDER SEGMENT, STBD 1	NA
4	207582	1	FENDER SEGMENT, PORT 2	NA
5	207583	1	FENDER SEGMENT, STBD 2	NA
6	207584	1	FENDER SEGMENT, PORT 3	NA
7	207585	1	FENDER SEGMENT, STBD 3	NA
8	207586	1	FENDER SEGMENT, PORT 4	NA
9	207587	1	FENDER SEGMENT, STBD 4	NA
10	205064	1	FENDER SEGMENT, PORT 5	NA
11	205065	1	PORT AFT CORNER FENDER SEGMENT	NA
12	207579	1	STBD AFT CORNER FENDER SEGMENT	NA



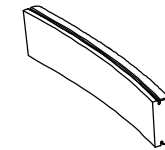
ITEM 1



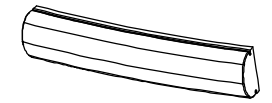
ITEM 2



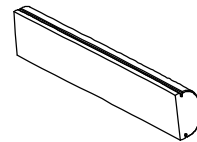
ITEM 3



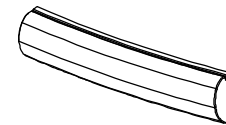
ITEM 4



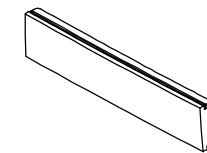
ITEM 5



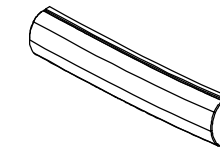
ITEM 6



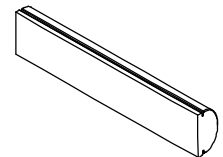
ITEM 7



ITEM 8



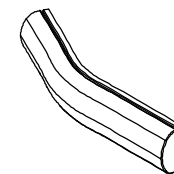
ITEM 9



ITEM 10



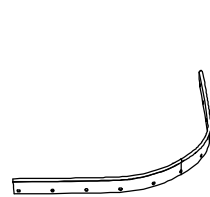
ITEM 11



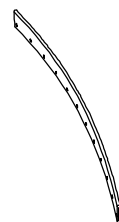
ITEM 12

	Install Hull Guard Fendering	
	WP 410	REV C
<small>469 NW BOWDOIN PL. SEATTLE, WA 98107 TEL. (206) 545-8485 FAX (206) 545-3504</small>	<small>PAGES</small> 4 of 13	<small>DATE</small> 8/29/09
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PARTS LIST		ID CODE LEGEND		
ITEM NO.	PART/ASSY	QTY.	DESCRIPTION	ID CODE
			I = INCLUDED M = MACHINED PART	B = BIN STOCK SUB = SUB-ASSEMBLY
13	114-001-0003A	1	BOW, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
14	114-001-0003B	1	SECTION #1 PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
15	114-001-0003C	1	SECTION #1 STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
16	114-001-0003D	1	SECTION #2 PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
17	114-001-0003E	1	SECTION #2 STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
18	114-001-0003F	1	SECTION #3 PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
19	114-001-0003G	1	SECTION #3 STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
20	114-001-0003H	1	SECTION #4 PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
21	114-001-0003J	1	SECTION #4 STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
22	114-001-0003K	1	SECTION #5 PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
23	114-001-0003L	1	SECTION #5 STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
24	114-001-0003M	1	SECTION #6 PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
25	114-001-0003N	1	SECTION #6 STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
26	114-001-0003P	1	MAKE-UP SECTION PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
27	114-001-0003Q	1	MAKE-UP SECTION STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
28	114-001-0003R	1	AFT SECTION PORT, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA
29	114-001-0003S	1	AFT SECTION STBD, CUSTOM RBM LOWER FENDER MOUNTING BULB EXTRUSION	NA



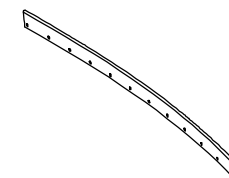
ITEM 13



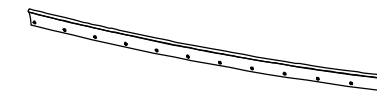
ITEM 14



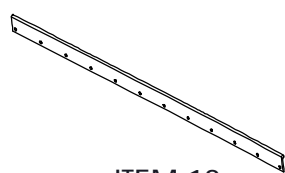
ITEM 15



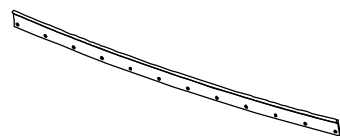
ITEM 16



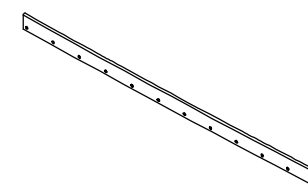
ITEM 17



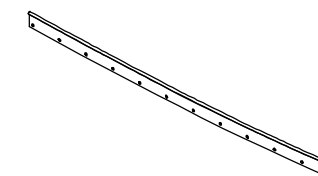
ITEM 18



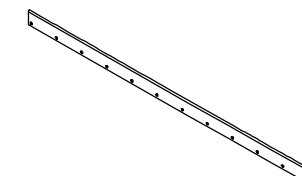
ITEM 19



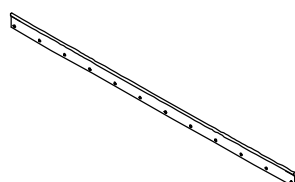
ITEM 20



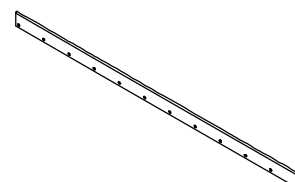
ITEM 21



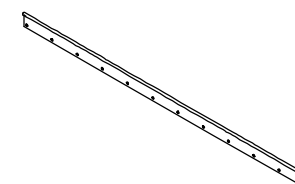
ITEM 22



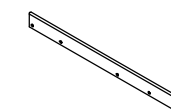
ITEM 23



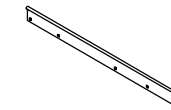
ITEM 24



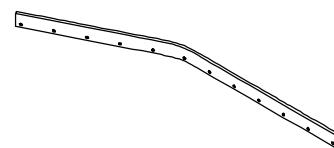
ITEM 25



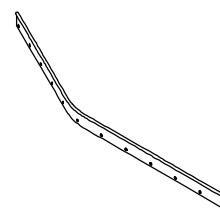
ITEM 26



ITEM 27



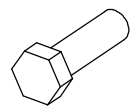
ITEM 28



ITEM 29

	Install Hull Guard Fendering	
	WP 410	REV C
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PARTS LIST		ID CODE LEGEND		
		I = INCLUDED M = MACHINED PART	B = BIN STOCK SUB = SUB-ASSEMBLY	
ITEM NO.	PART/ASSY	QTY.	DESCRIPTION	ID CODE
30	117697	173	SCREW HEX CAP, 316, .375-16 x 1.250	B
31	117397	189	NUT NYLOCK, 316, .375-16	B
32	117396	378	WASHER FLAT, 316, .375	B
33	204911	362	WASHER SHOULDER, NYLON, .375ID x .500OD x .188L x .063 THICK, WASUSA 12SWS2556	B
34	410-001	8	FENDR STOP	SUB
35	118202	16	SCREW HEX CAP, 316, 375-16 x 1.500	B
36	211555	16	WASHER, SHOULDER, NYLON, .386 ID x .484 OD x .375 LENGTH x .875 FLANGE OD x .062 FLANGE THICKNESS, WASHERSUSA.COM 12SWS3515	B
37	205064	1	FENDER SEGMENT, STDB 5	NA
38	205064	1	FENDER SEGMENT, PORT 6	NA
39	205064	1	FENDER SEGMENT, STDB 6	NA
40	205064	1	FENDER SEGMENT, PORT 7	NA
41	205064	1	FENDER SEGMENT, STDB 7	NA



ITEM 30



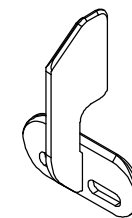
ITEM 31



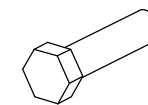
ITEM 32



ITEM 33



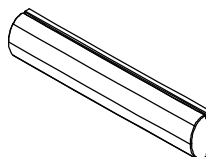
ITEM 34



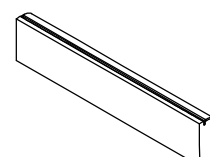
ITEM 35



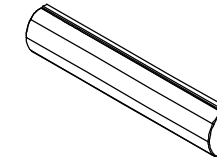
ITEM 36



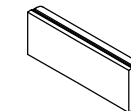
ITEM 37



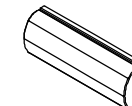
ITEM 38



ITEM 39



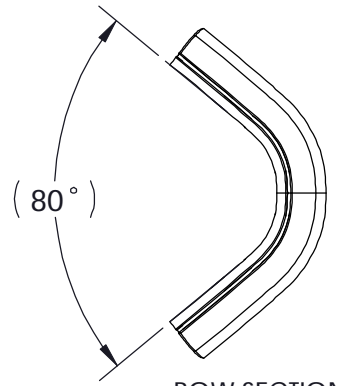
ITEM 40



ITEM 41

	Install Hull Guard Fendering	
	WP 410	REV C
<small>469 NW BOWDOIN PL. SEATTLE, WA 98107 TEL. (206) 545-8485 FAX (206) 545-3504</small>	PAGES <b>6 of 13</b>	DATE <b>8/29/09</b>
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# FENDERS



BOW SECTION  
(ITEM 1)



SECTION #1 PORT  
(ITEM 2)



SECTION #1 STBD  
(ITEM 3)



SECTION #2 PORT  
(ITEM 4)



SECTION #2 STBD  
(ITEM 5)



SECTION #3 PORT  
(ITEM 6)



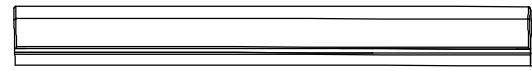
SECTION #3 STBD  
(ITEM 7)



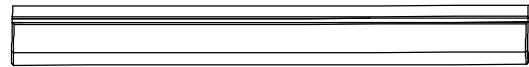
SECTION #4 PORT  
(ITEM 8)



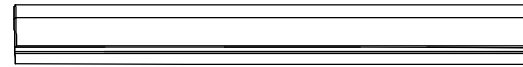
SECTION #4 STBD  
(ITEM 9)



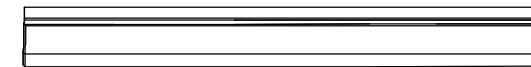
SECTION #5 PORT  
(ITEM 10)



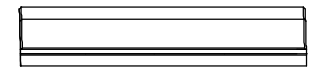
SECTION #5 STBD  
(ITEM 37)



SECTION #6 PORT  
(ITEM 38)

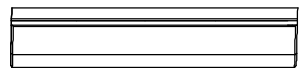


SECTION #6 STBD  
(ITEM 39)



MAKE-UP SECTION #7 PORT  
(ITEM 40)

THIS DIMENSION NEEDS TO BE  
VERIFIED DURING INSTALL.  
MAY NEED TO BE TRIMMED TO FIT.

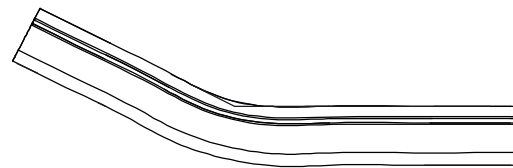


MAKE-UP SECTION #7 STBD  
(ITEM 41)

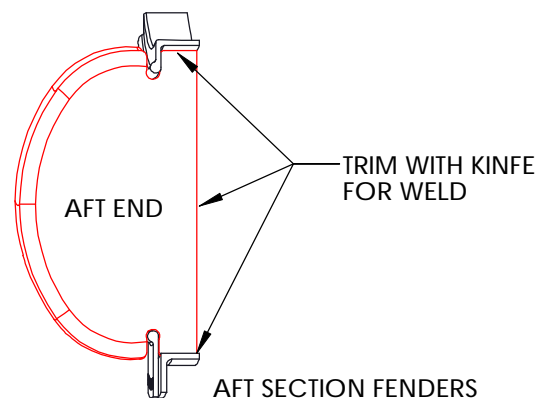
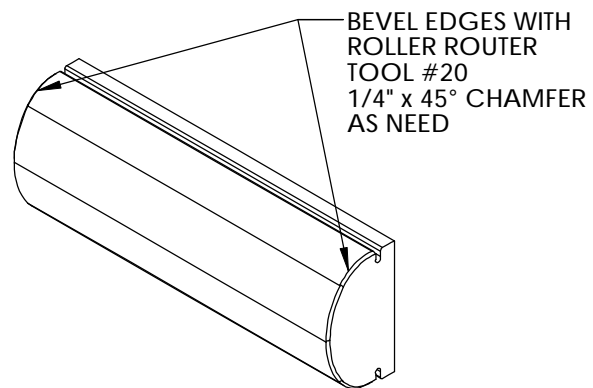
THIS DIMENSION NEEDS TO BE  
VERIFIED DURING INSTALL.  
MAY NEED TO BE TRIMMED TO FIT.



AFT SECTION PORT  
(ITEM 11)



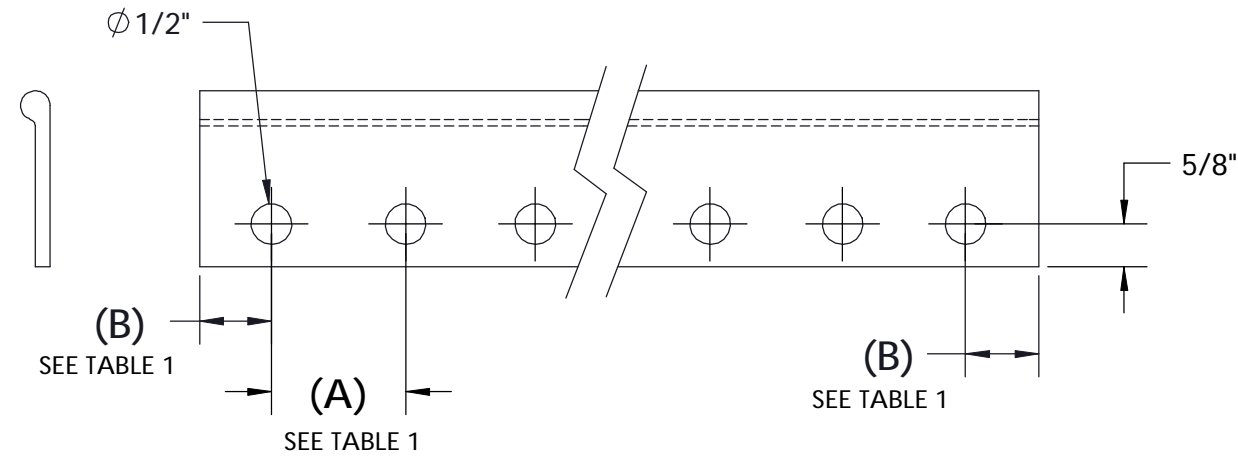
AFT SECTION STBD  
(ITEM 12)



AFT SECTION FENDERS  
(ITEM #'S 11 AND 12) ONLY

<p>469 NW BOWDOIN PL. SEATTLE, WA 98107 TEL. (206) 545-8485 FAX (206) 545-3504</p>	Install Hull Guard Fendering	
	WP 410	REV C
PAGES 7 of 13	DATE 8/29/09	
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# FLAT BAR



FENDER SECTION	FLAT FLAT-BAR LENGTHS	# BOLTS	(A) CALCULATED SPACING	(B) FWD END	(B) AFT END
BOW (ITEM 13)	57 3/16	11	5 9/16	3/4	3/4
SECTION #1 PORT (ITEM 14)	68 13/16	12	6 1/8	3/4	3/4
SECTION #1 STBD. (ITEM 15)	68 13/16	12	6 1/8	3/4	3/4
SECTION #2 PORT (ITEM 16)	69	12	6 1/8	3/4	3/4
SECTION #2 STBD. (ITEM 17)	69	12	6 1/8	3/4	3/4
SECTION #3 PORT (ITEM 18)	69 7/8	12	6 1/4	3/4	3/4
SECTION #3 STBD. (ITEM 19)	69 7/8	12	6 1/4	3/4	3/4
SECTION #4 PORT (ITEM 20)	69 1/8	12	6 1/8	3/4	3/4
SECTION #4 STBD. (ITEM 21)	69 1/8	12	6 1/8	3/4	3/4
SECTION #5 PORT (ITEM 22)	69 7/8	12	6 1/4	3/4	3/4
SECTION #5 STBD. (ITEM 23)	69 7/8	12	6 1/4	3/4	3/4
SECTION #6 PORT (ITEM 24)	70	12	6 1/4	3/4	3/4
SECTION #6 STBD. (ITEM 25)	70	12	6 1/4	3/4	3/4
MAKE-UP SECTION PORT (ITEM 26)	39 1/16	5	SPACING VARIES	3/4	3/4
MAKE-UP SECTION STBD (ITEM 27)	39 1/16	5	SPACING VARIES	3/4	3/4
AFT SECTION PORT (ITEM 28)	67 3/4	12	6	3/4	1
AFT SECTION STBD (ITEM 29)	67 3/4	12	6	3/4	1

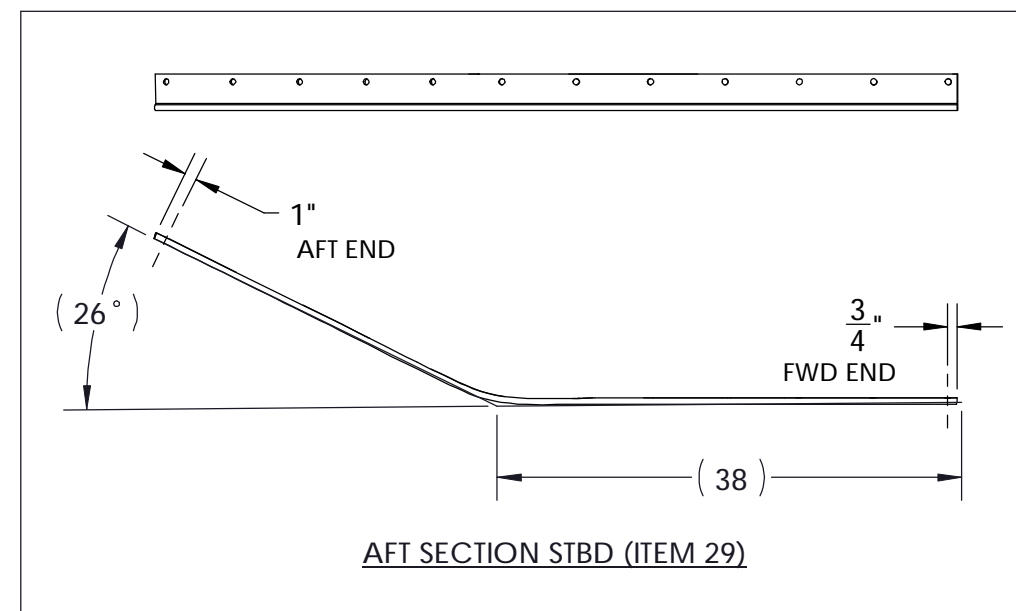
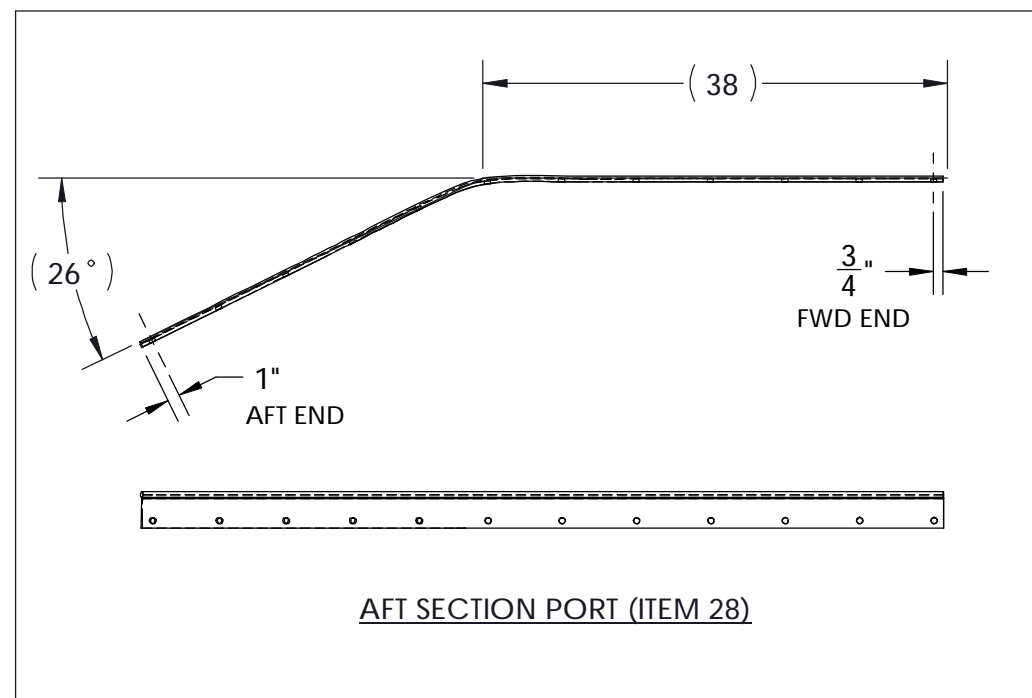
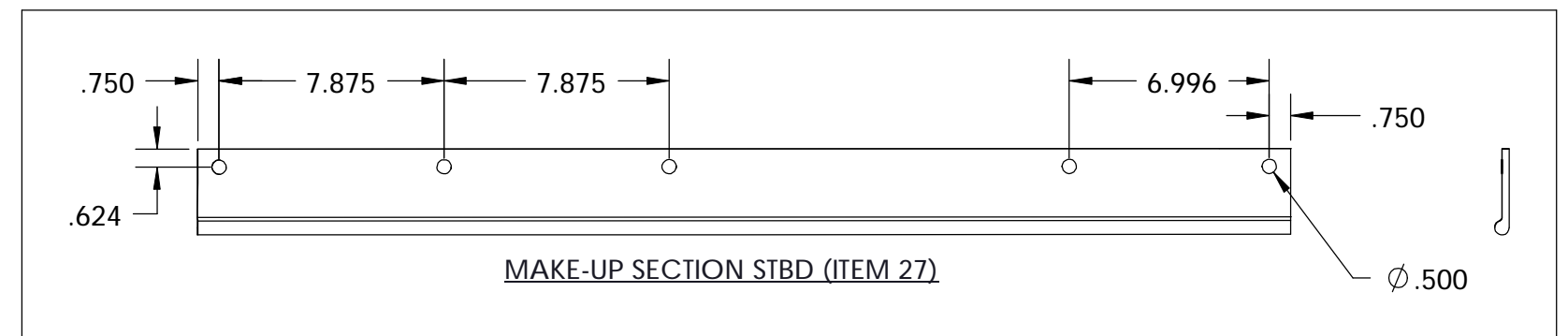
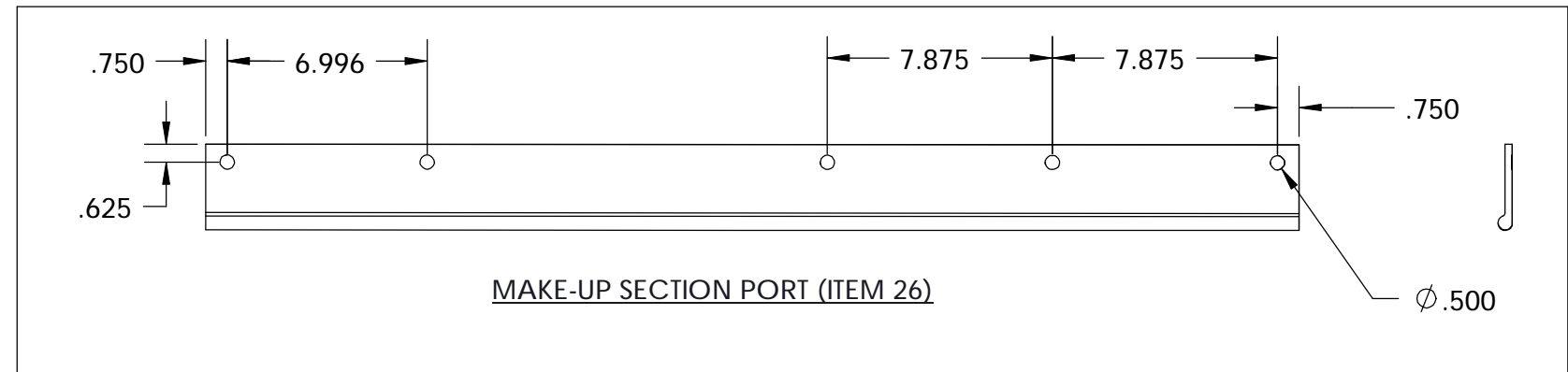
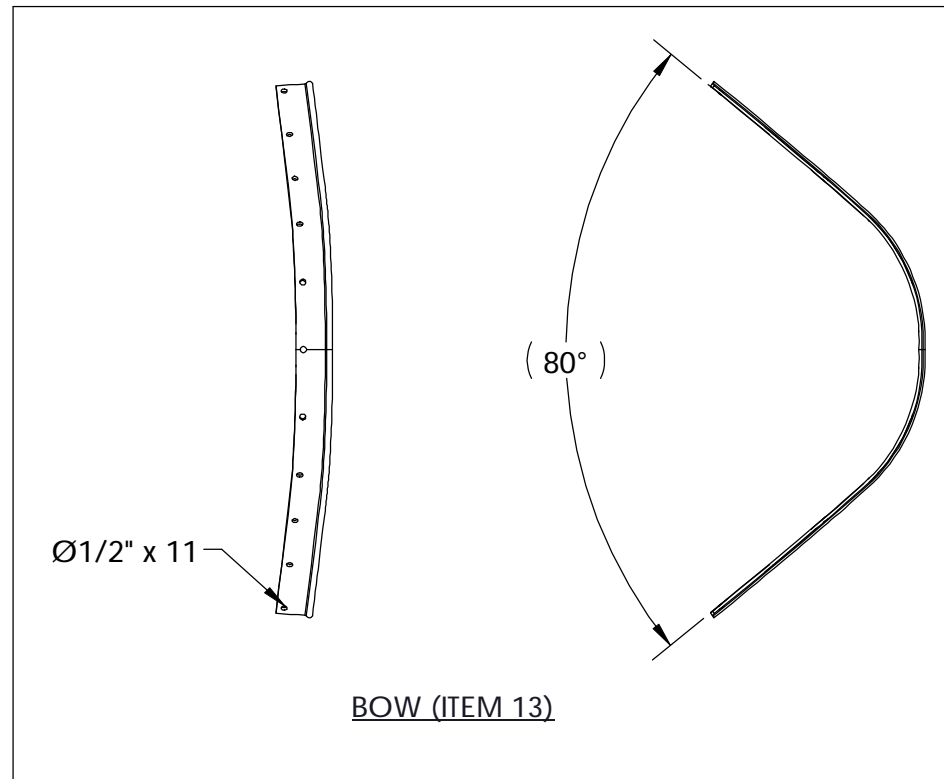
**TABLE 1**

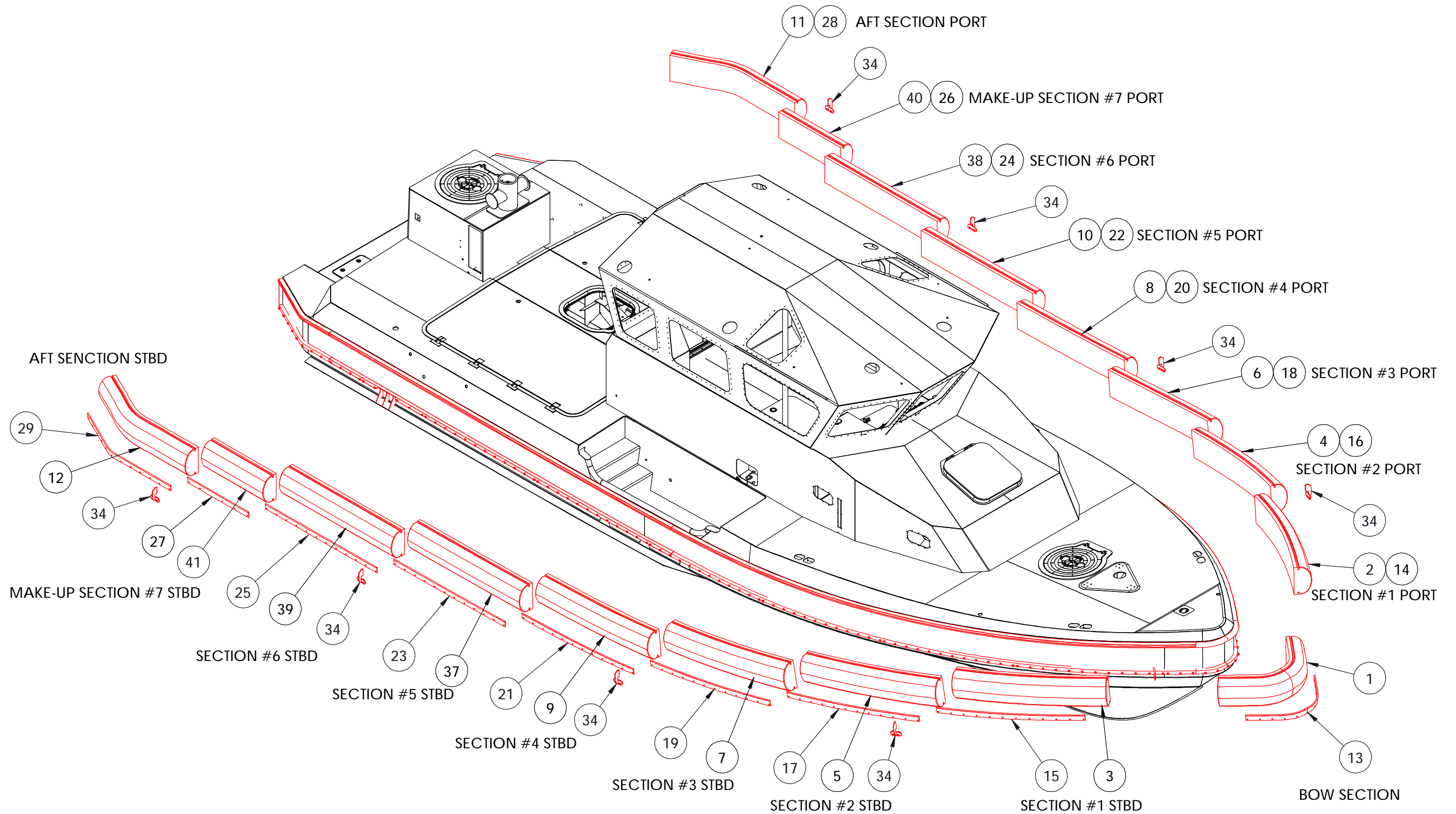
**IMPORTANT:** END HOLES SHALL BE 3/4" FROM EACH END EXCEPT FOR THE AFT BOLT THAT IS 1" FROM THE END  
FLAT BAR SHALL BE CENTERED ON EACH INSTALLED FENDER SECTION.

IDEALLY THE SPACING SHOULD BE 3/4" BETWEEN FLAT BAR BUT IT IS MORE IMPORTANT TO CENTER THEM ON EACH DENDER SECTION.



# FLAT BAR





<b>Kvichak</b> Marine Industries, Inc. <small>469 NW BOWDOIN PL. SEATTLE, WA 98107          TEL. (206) 545-8485 FAX (206) 545-3504</small>	Install Hull Guard Fendering	
	WP 410	REV C
PAGES	DATE	
10 of 13	8/29/09	
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# Workstation: Final Assy 1

## Assembly/Install Instructions:

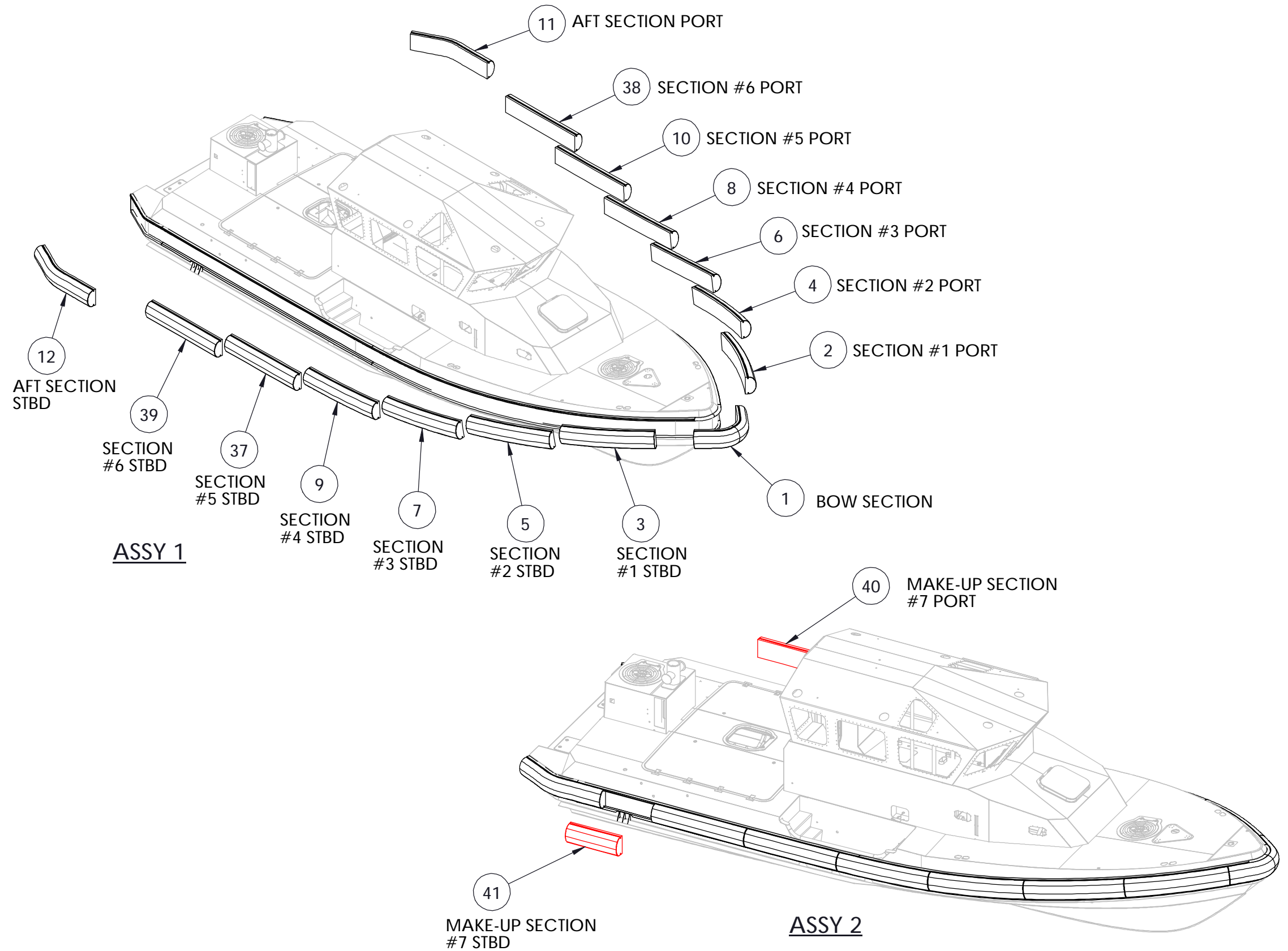
### Step 1: Installation of fenders

- 1) Install the aft fenders (Item #'s 11 and 12) as shown in Assy 1.
- 2) Install the additional fenders (Item #'s 1 to 10) as shown in Assy 1.

### Installation of make-up sections

Measure between section #6 and aft section (Item # 11) add an extra 1/2" to this measurement then use this as your cut length. Do this for both port and stbd.

- 3) Install make-up section #7 fenders (Item #'s 40 port and 41 stbd ) as shown in Assy 2.



## Inspection & Test:

- Super. sign-off.
- Verify configuration & all parts in place.
- Inspection sign-off.

<b>Kvichak</b> Marine Industries, Inc. <small>469 NW BOWDOIN PL. SEATTLE, WA. 98107                  TEL. (206) 545-8485 FAX (206) 545-3504</small>	Install Hull Guard Fendering	
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PAGES 11 of 13	DATE 8/29/09	
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# Workstation: Final Assy 1

## Assembly/Install Instructions:

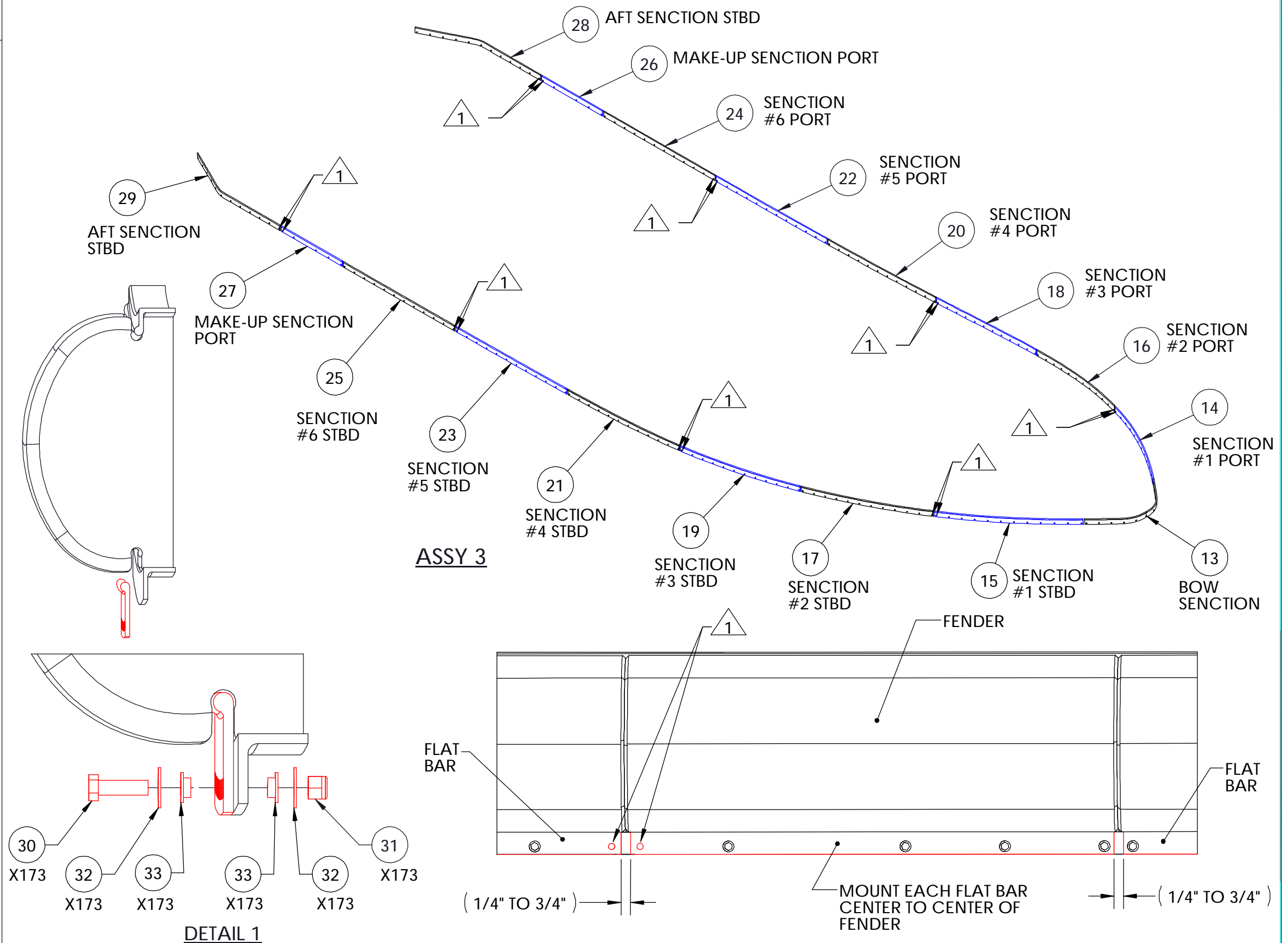
### Step 2: Installation of fender mounting flat bar

1) Install the fender mounting flat bar (Item #'s 13 to 29) using the proper fasteners (Item #'s 30, 31 and 32) and isolation (Item # 33) as shown in Assy 3/Detail 1. Drill holes into the angle bar to match the lower guide rail using a 3/8" drill (Tool # 4) and drill (Tool # 5). Tighten the fasteners using 9/16" wrenches (Tool # 1) and air ratchet (Tool # 8) and 9/16" socket (Tool # 12) until securely tightened. Do not over tighten or it will break isolation washers (Item # 33).

**Note:** Mount each flat bar center to center of fender.

**Note:** Item #'s 14 to 25 are pre-cut and pre-drill. Item #'s 26 and 27 are cut to fit and install to drill. Item #'s 13, 28 and 29 are install to drill.

⚠ Will not install fasteners in here, Is for fender stop installation.



## Inspection & Test:

- Super. sign-off.
- Verify configuration & all parts in place.
- Inspection sign-off.

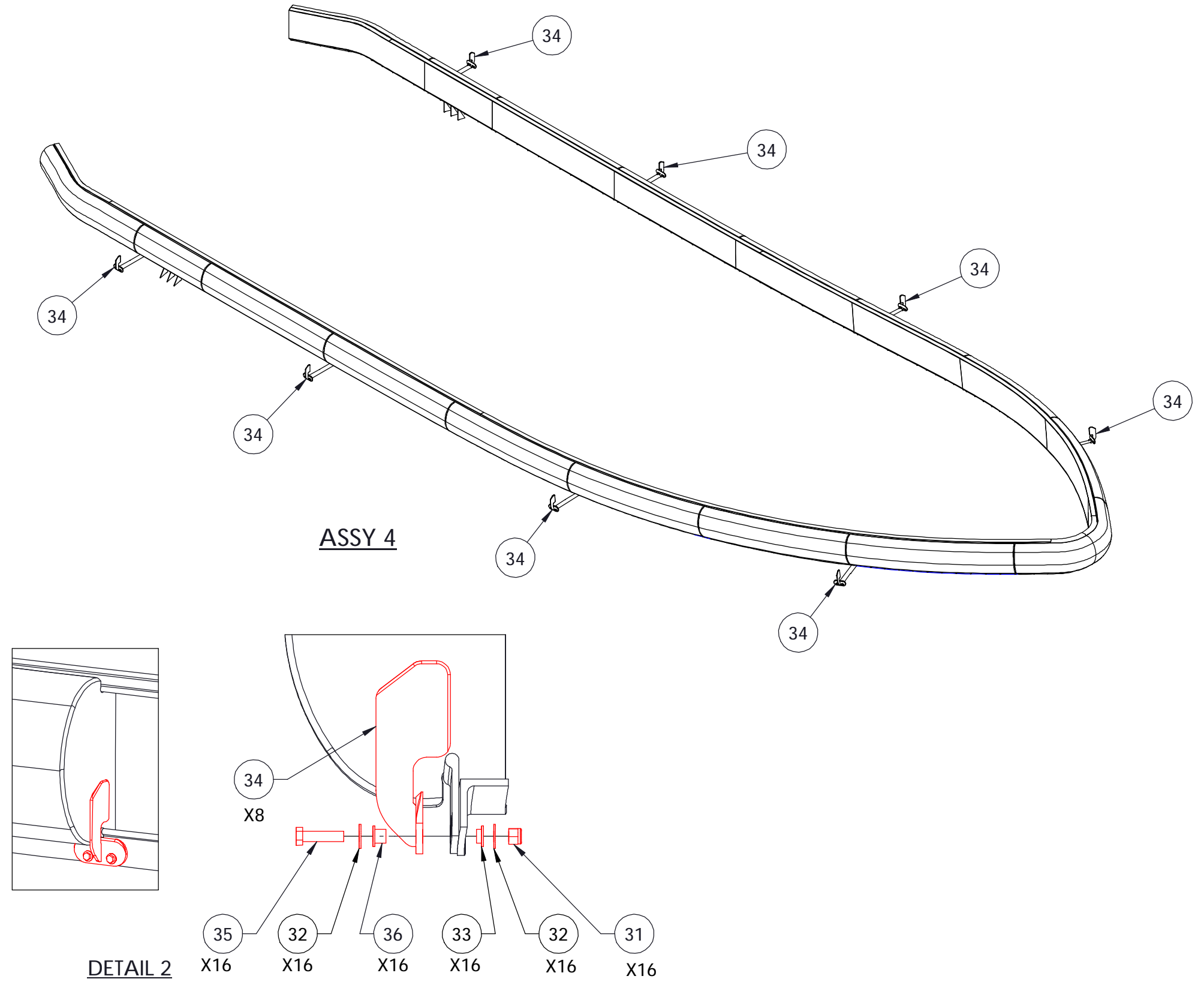
<b>Kvichak</b> Marine Industries, Inc. <small>469 NW BOWDOIN PL. SEATTLE, WA. 98107                  TEL. (206) 545-8485 FAX (206) 545-3504</small>	Install Hull Guard Fendering	
	WP 410	REV C
PAGES 12 of 13	DATE 8/29/09	
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# Workstation: Final Assy 1

## Assembly/Install Instructions:

### Step 3: Installation of fender stop

1) Install the fenders stop (Item # 34) as shown in Assy 4/Detail 2. Using the proper fasteners (Item #'s 31, 32 and 35) and isolation (Item #'s 33 and 36) as shown in Detail 2. Tighten the fasteners using 9/16" wrenches (Tool # 1) and air ratchet (Tool # 8) and 9/16" socket (Tool # 12) until securely tightened. Do not over tighten or it will break isolation washers (Item #'s 33 and 36).



## Inspection & Test:

- Super. sign-off.
- Verify configuration & all parts in place.
- Inspection sign-off.

	Install Hull Guard Fendering	
	WP 410	REV C
<small>469 NW BOWDOIN PL. SEATTLE, WA. 98107 TEL. (206) 545-8485 FAX (206) 545-3504</small>	<small>PAGES</small> 13 of 13	<small>DATE</small> 8/29/09
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GENERAL NOTES

- MOLD LINES ARE TO BE AS FOLLOWS (FOR ADDITIONAL INFO SEE REF #1):
    - BULKHEADS OR FRAMES ARE TO BE MOLDED ON THE FWD SIDE.
    - LONGITUDINAL MEMBERS OUTBOARD OF THE CRAFT CENTERLINE ARE TO BE MOLDED ON THE OUTBOARD SIDE.
    - LONGITUDINAL MEMBERS ON CENTERLINE ARE TO BE CENTERED.
    - DECK AND FLATS ARE TO BE MOLDED ON THE UNDERSIDE.
    - THE SHELL PLATING IS TO MOLDED ON THE INSIDE.
  - ALL COPES ARE 5/8"R OR 1 1/2"R UNLESS NOTED OTHERWISE.
- GENERAL NOTES CONTINUED ON SHEET 4

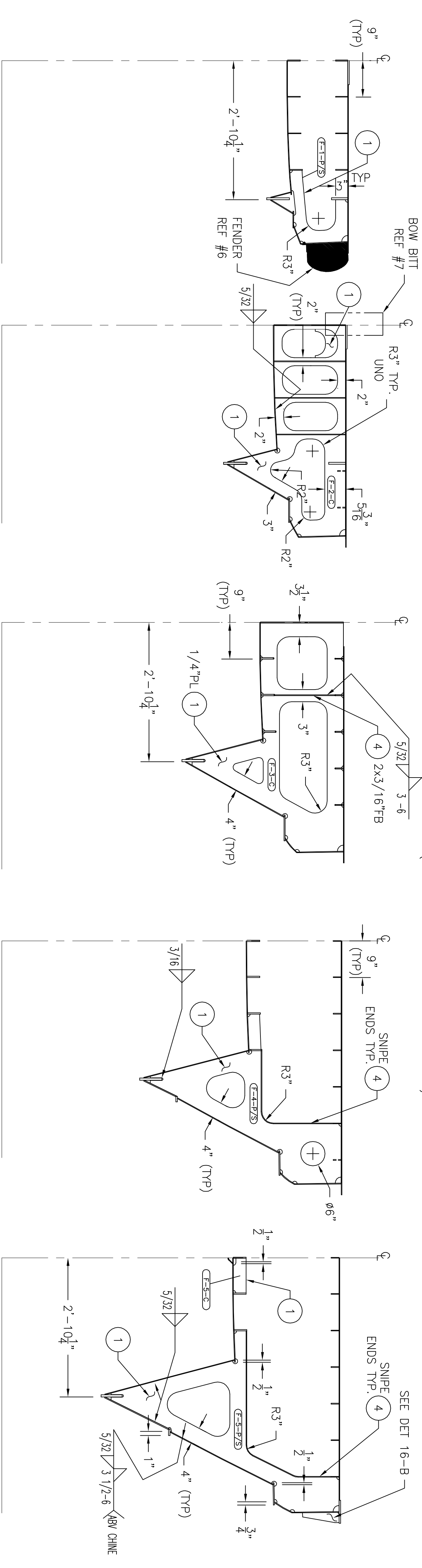
MATERIALS LIST

REV	PIECE NO	QTY	UNIT	MFR #/NSN	DESCRIPTION	MATERIAL
0	1	AR	SF		PLATE, 1/4"	5083-H116, ASTM B209
0	2	AR	SF		PLATE, 3/16"	5083-H116, ASTM B209
0	3	AR	SF		ANGLE, 1 1/2x1 1/2x3/16"	5086-H111, ASTM B221
0	4	AR	LF		FLAT BAR, 2x3/16"	5086-H111, ASTM B221
0	5	AR	LF		FLAT BAR, 3x3/8"	5086-H111, ASTM B221
0	6	AR	LF		FLAT BAR, 4x3/16"	5086-H111, ASTM B221
0	7	AR	LF		FLAT BAR, 4x1/4"	5086-H111, ASTM B221
0	8	AR	EA		STUD, 3/8-16UNC x 1 1/4"	316 CRES
0	9	AR	EA		HEX NUT, 3/8-16UNC SELF-LOCKING	316 CRES
0	10	AR	EA		WASHER, FLAT 3/8"	316 CRES
0	11	AR	2		GASKET	NEOPRENE
0	12	AR	EA		RIVET, 1/4" DIA., 45° MIN. GRIP, STRUCTURAL	5056-ALUMINUM
0	13	AR	LF		SELF-PLUG, CHEMICAL MONOBOLT BAYW-86-OR-EQ	5086-H32, ASTM B221
0	14	AR	EA		PIPE, 2 1/2" SCH 40	ALUM
0	15	AR	EA		COUPLING, 3/4" NPT	CRES
0	16	AR	SF		PLUG, 3/4"	5083-H116, ASTM B209

(MATERIALS LIST CONTINUED ON SHEET 4)

REVISIONS

REV	ZONE	ITEM	DESCRIPTION	DATE	APP'D
1	Sht. 2	1	Added 3x5/16 FB frame 9-11	9/12/11	BIS



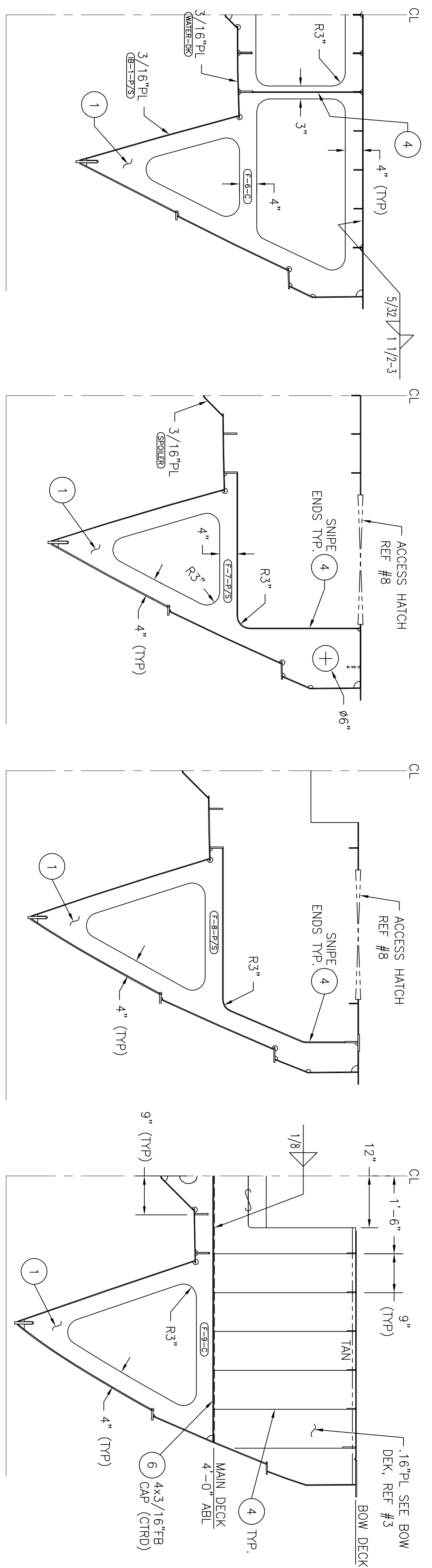
FRAME 1  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

FRAME 2  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

FRAME 3  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

FRAME 4  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

FRAME 5  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



FRAME 6  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

FRAME 7  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

FRAME 8  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

FRAME 9  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND

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NO	TITLE	DRAWING NO
10	DOOR SCHEDULE	S-19
9	PROPELSION ARRANGEMENT	M-1
8	SCHEDULE OF OPENINGS	S-18
7	MOORING & TOWING ARRGT & DETAILS	S-23
6	FENDER ARRGT & DETAILS	S-11
5	DECKHOUSE SCANTLINGS	S-2
4	HULL SCANTLINGS, LONG SECTIONS	S-1
3	HULL SCANTLINGS, PLANS	A-1
2	GENERAL ARRANGEMENT	A-1
1	MOLDED LINE CONVENTION	C-2

REFERENCE PLANS

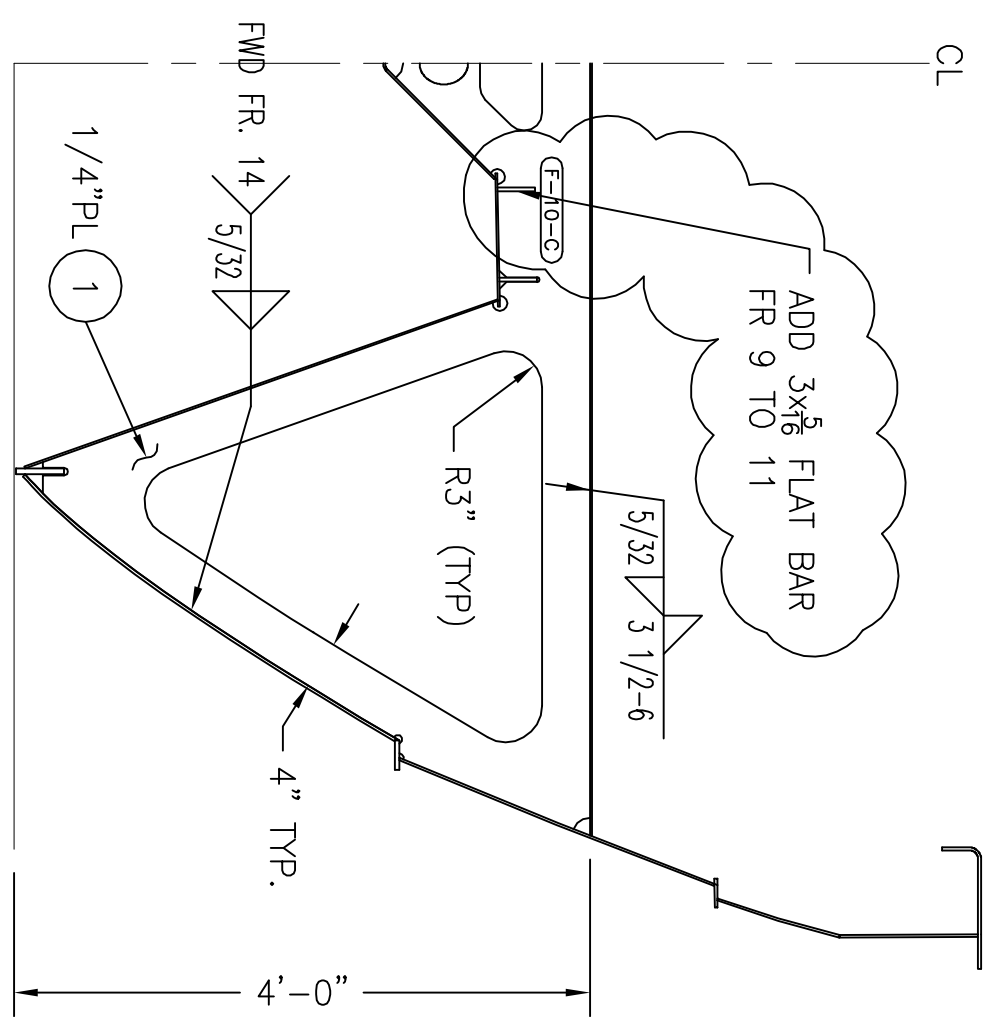
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**F. F. W. C. C. 45' PATROL BOAT**  
HULL SCANTLINGS  
TRANSVERSE SECTIONS

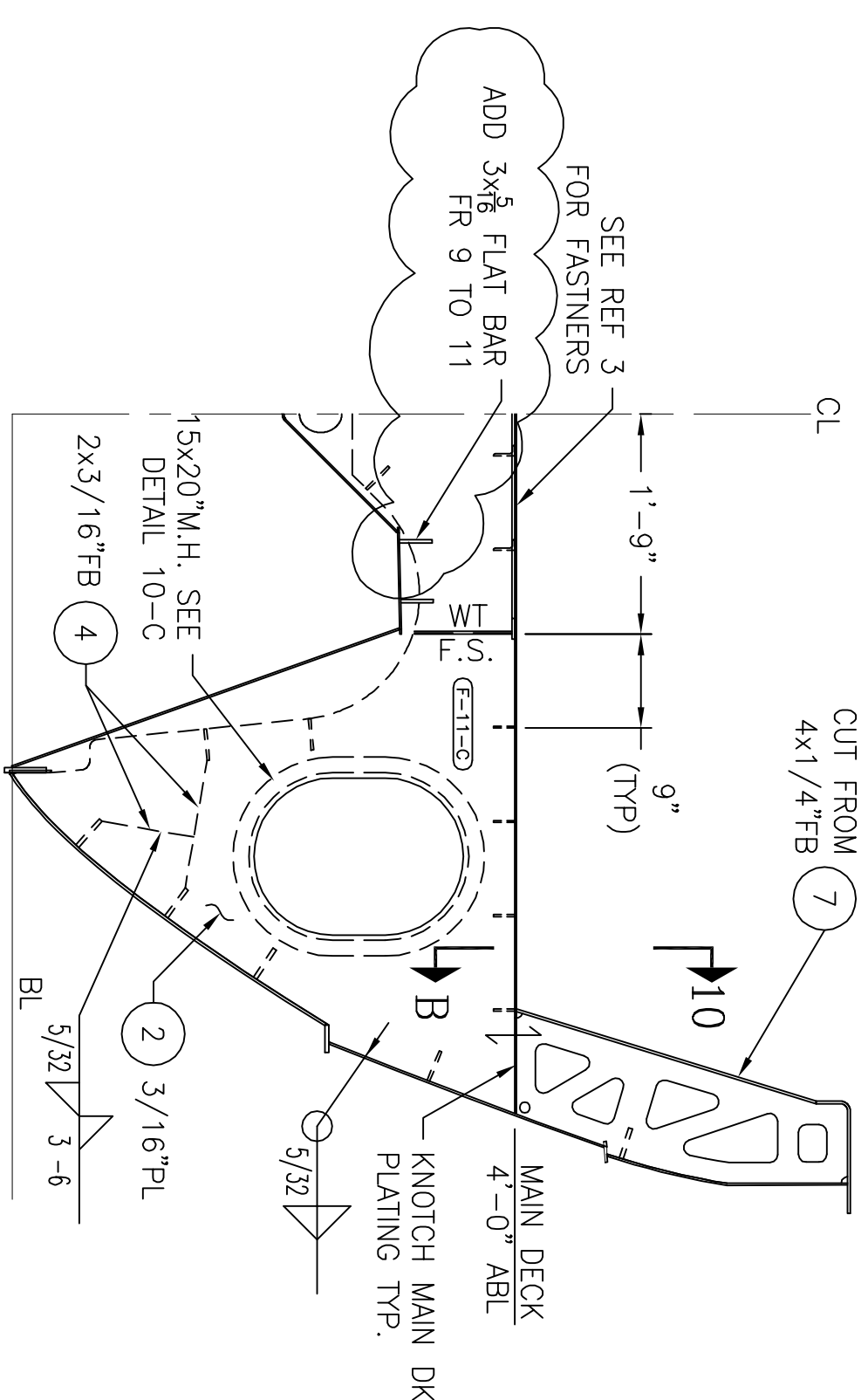
**FAST CRAFT SOLUTIONS INC.**  
11724 North River View Circle  
(228) 392-4688 • Fax (228) 396-8922

DATE: 3/4/05  
SIZE: JOB NO.  
D  
SCALE: 3/4"=1'-0"  
CHK: JBS  
REV: 1

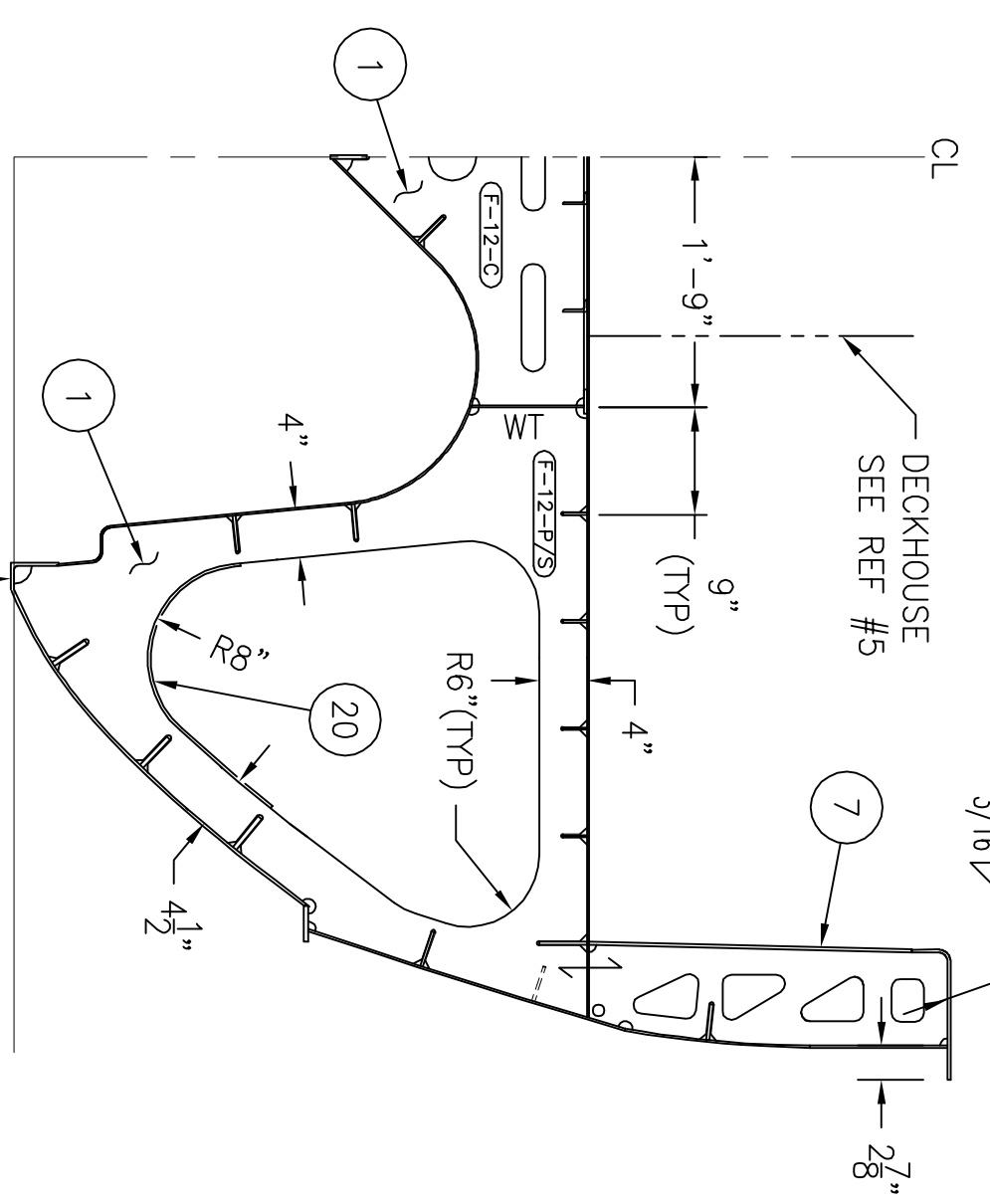
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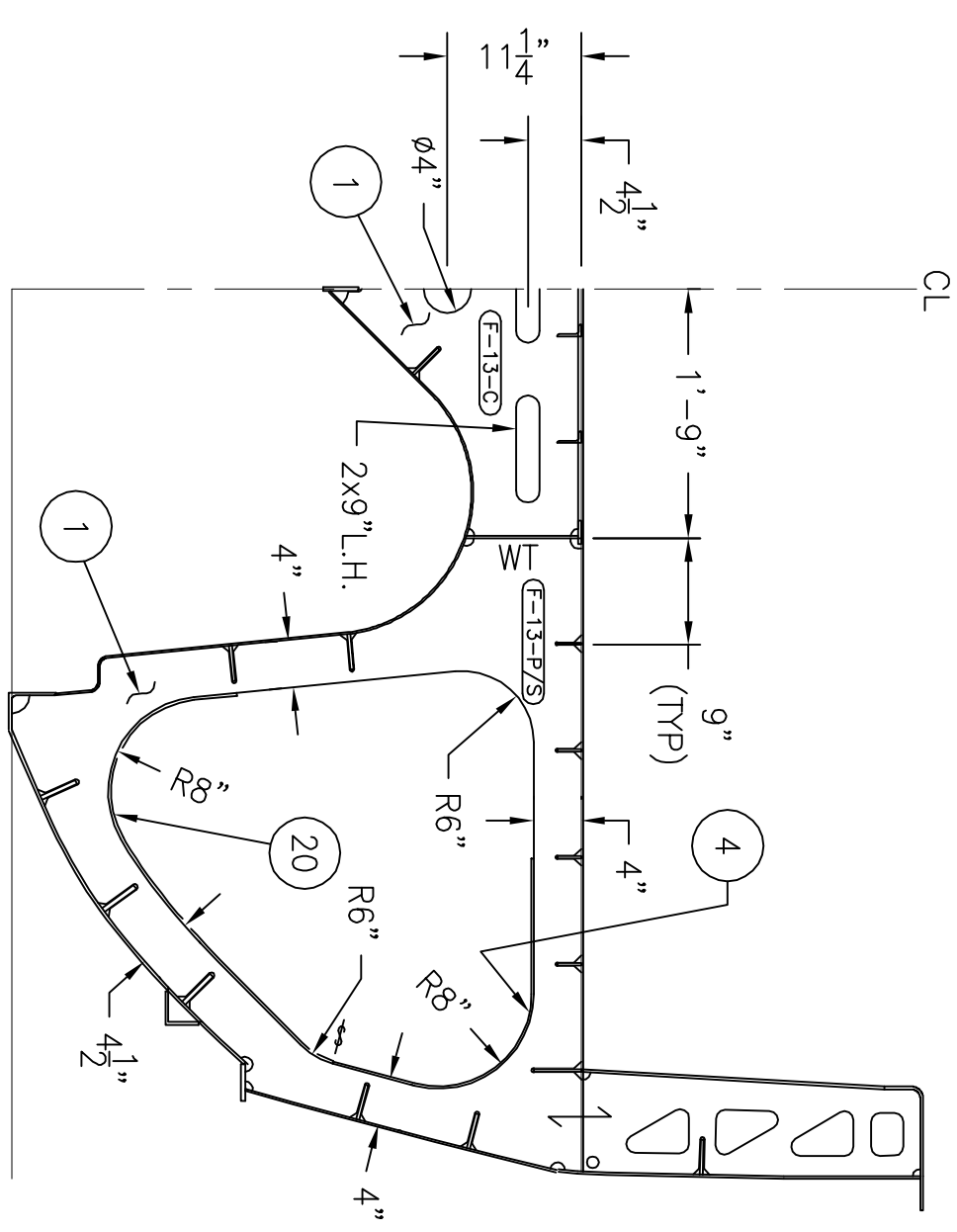
**FRAME 10**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



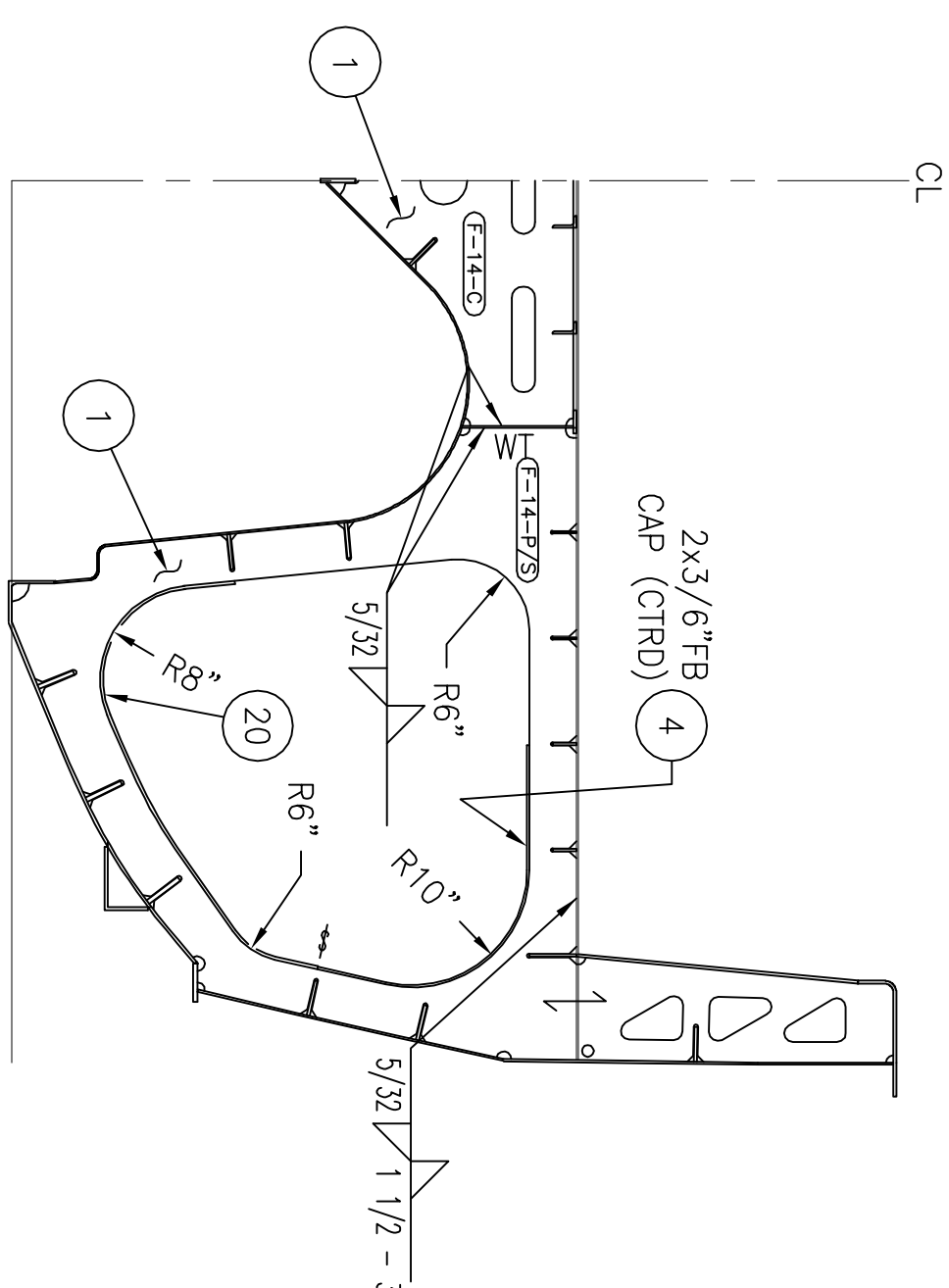
**FRAME 11**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND  
WT BHD



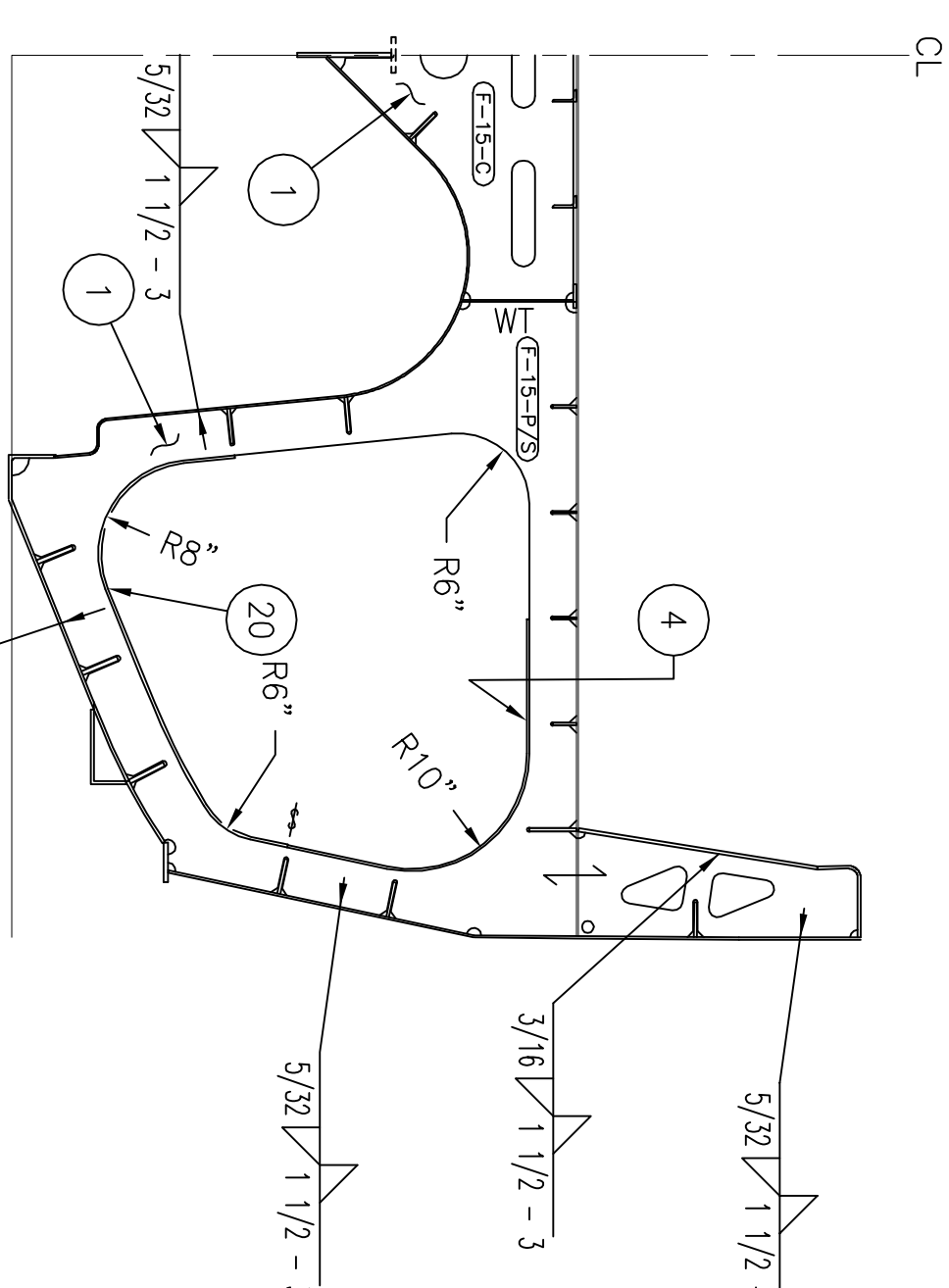
**FRAME 12**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



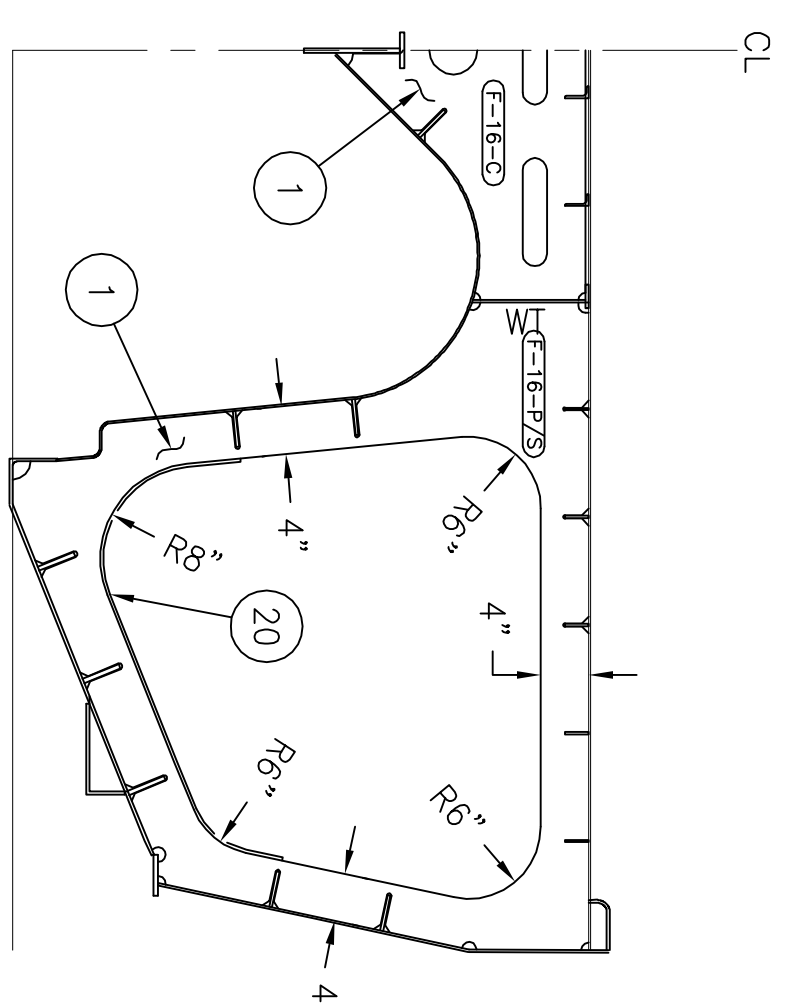
**FRAME 13**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



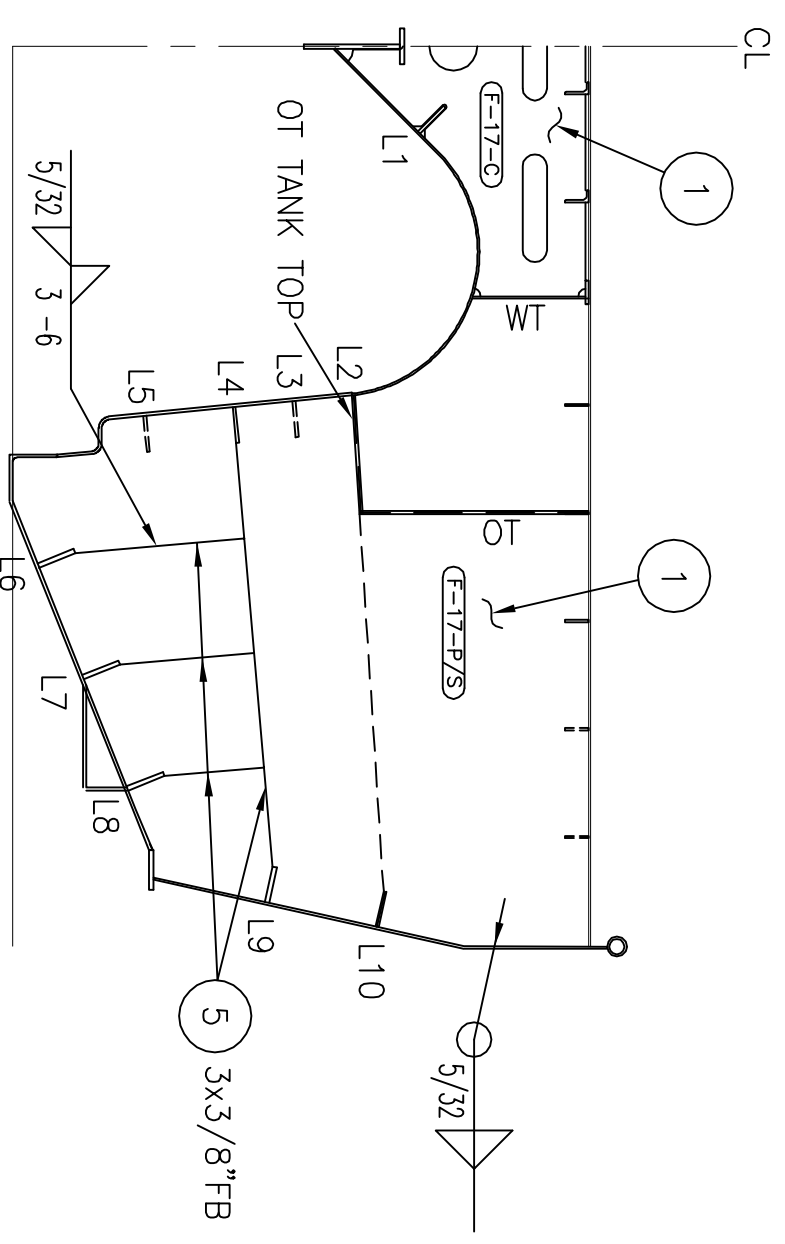
**FRAME 14**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



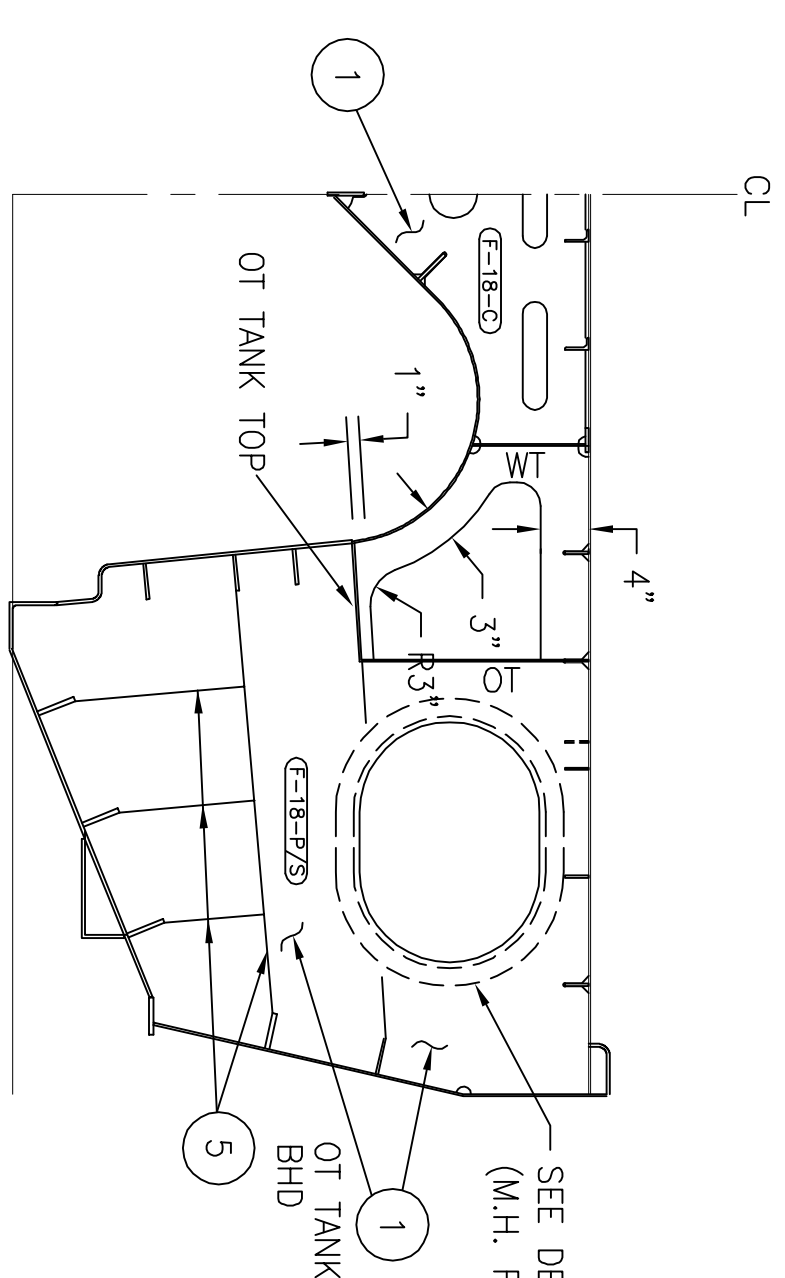
**FRAME 15**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



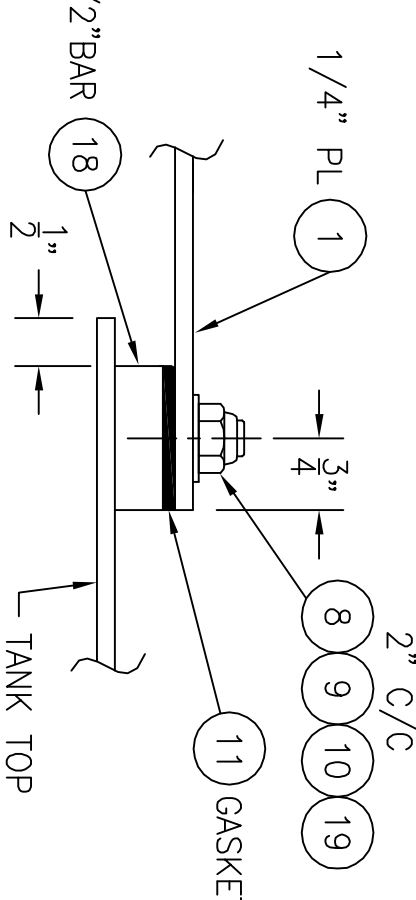
**FRAME 16**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



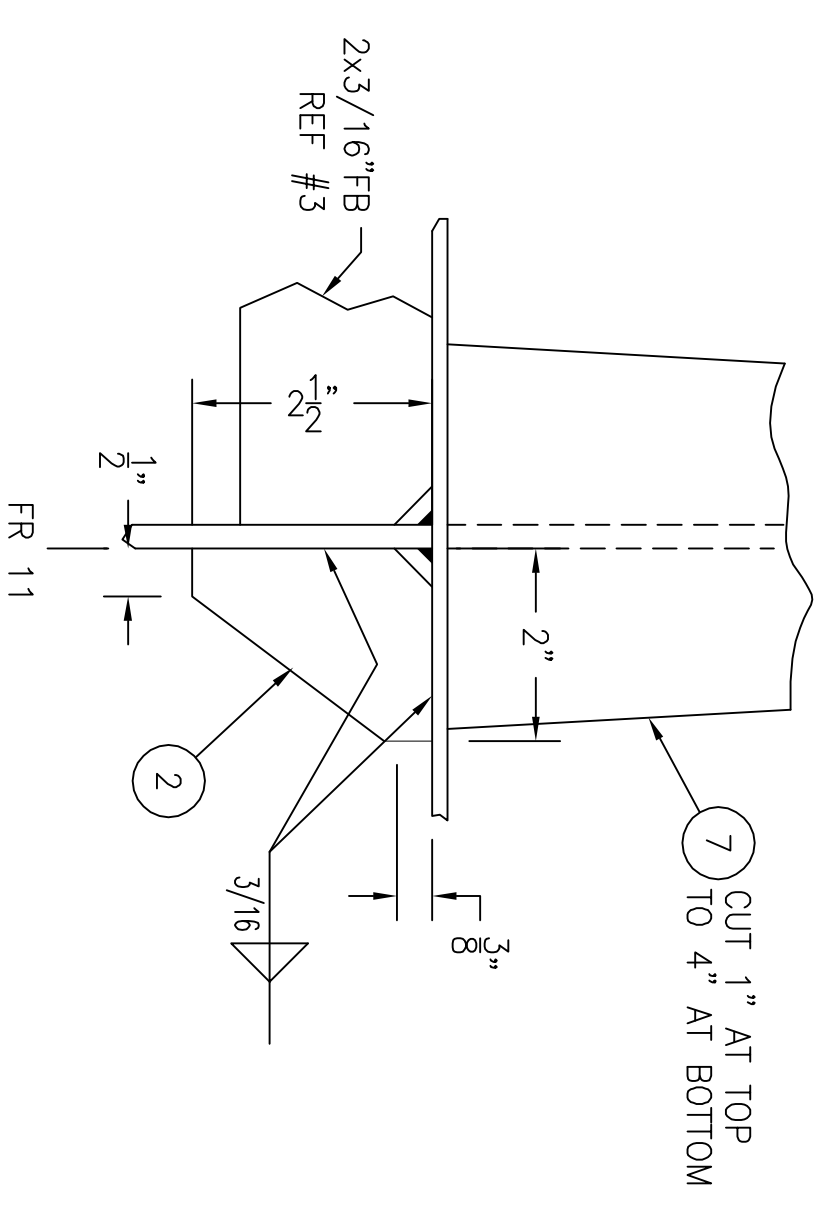
**FRAME 17**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



**FRAME 18**  
PORT SIDE SHOWN LKG AFT  
STBD SIDE SIM OPP HAND



**DETAIL 10-C**  
MANHOLE BOLTED COVER  
SCALE: 6"=1'-0"  
SHT 2, ZONE 14-D



**SECTION 10-B**  
PORT SIDE-LKG OUTBD  
SCALE: 6"=1'-0"  
SHT 2, ZONE 13-D

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HULL SCANTLING,  
TRANSVERSE SECTIONS

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DRAWN	JBS	DATE	3/4/05
SIZE	D	SCALE	3/4"=1'-0"
REV	1	COPYRIGHT	© 2005 WKMNG FCS
		SHEET	2 OF 4

