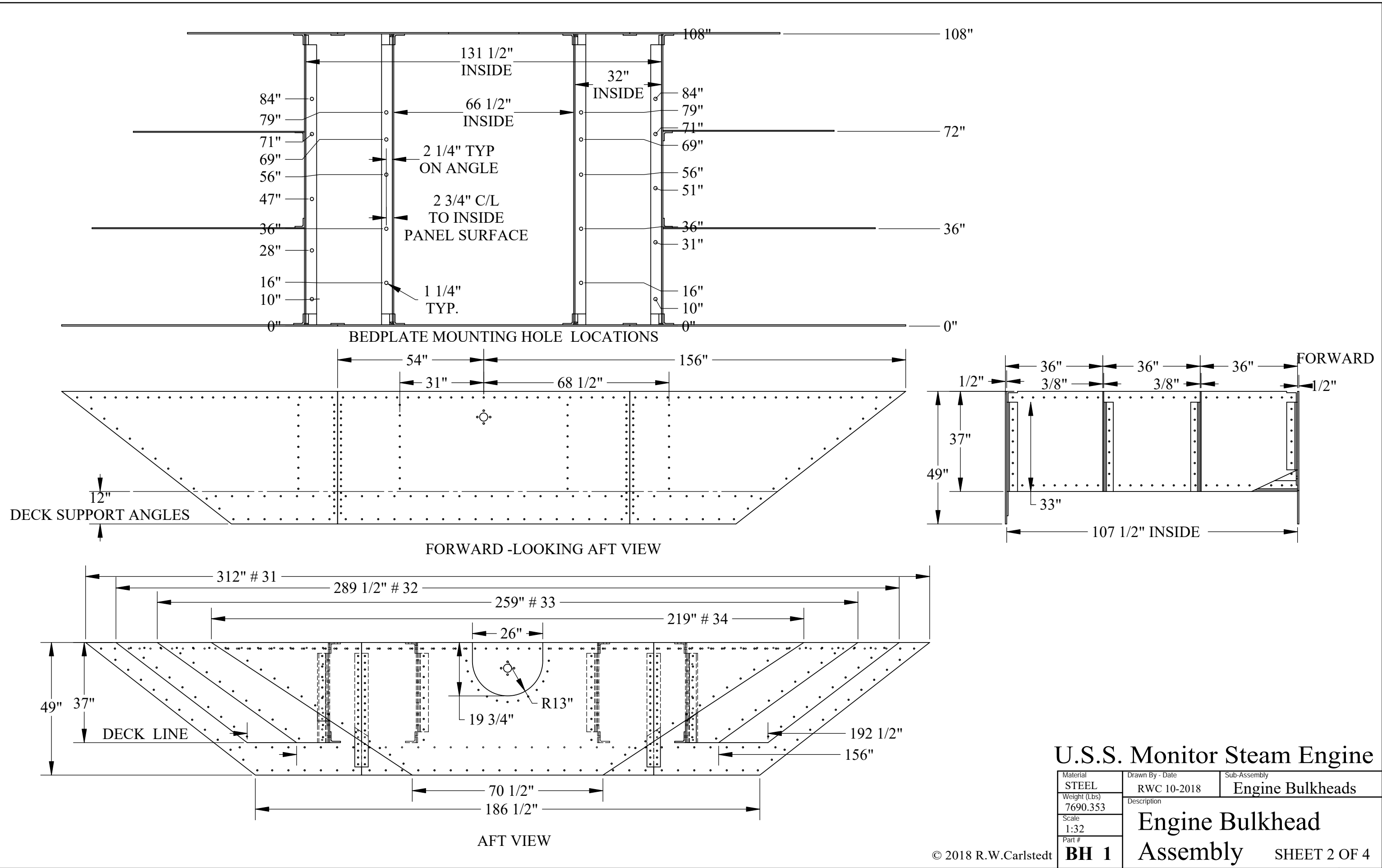


BULKHEAD ASSEMBLY OF THE U.S.S. MONITOR.  
BULKHEADS WERE NUMBER 31 TO 34 .  
THESE BULKHEADS FORMED A TABLE TO SUPPORT  
THE ENGINE'S BEDPLATE AND WERE 100 % RIVETED IN  
CONSTRUCTION- THIS VIEW IS A DECK LEVEL VIEW .  
THE COMPLETE BULKHEADS -31 & 34- MAY BE VIEWED IN  
THE FOLLOWING SHEETS AND DETAILED DRAWINGS

**U.S.S. Monitor Steam Engine**

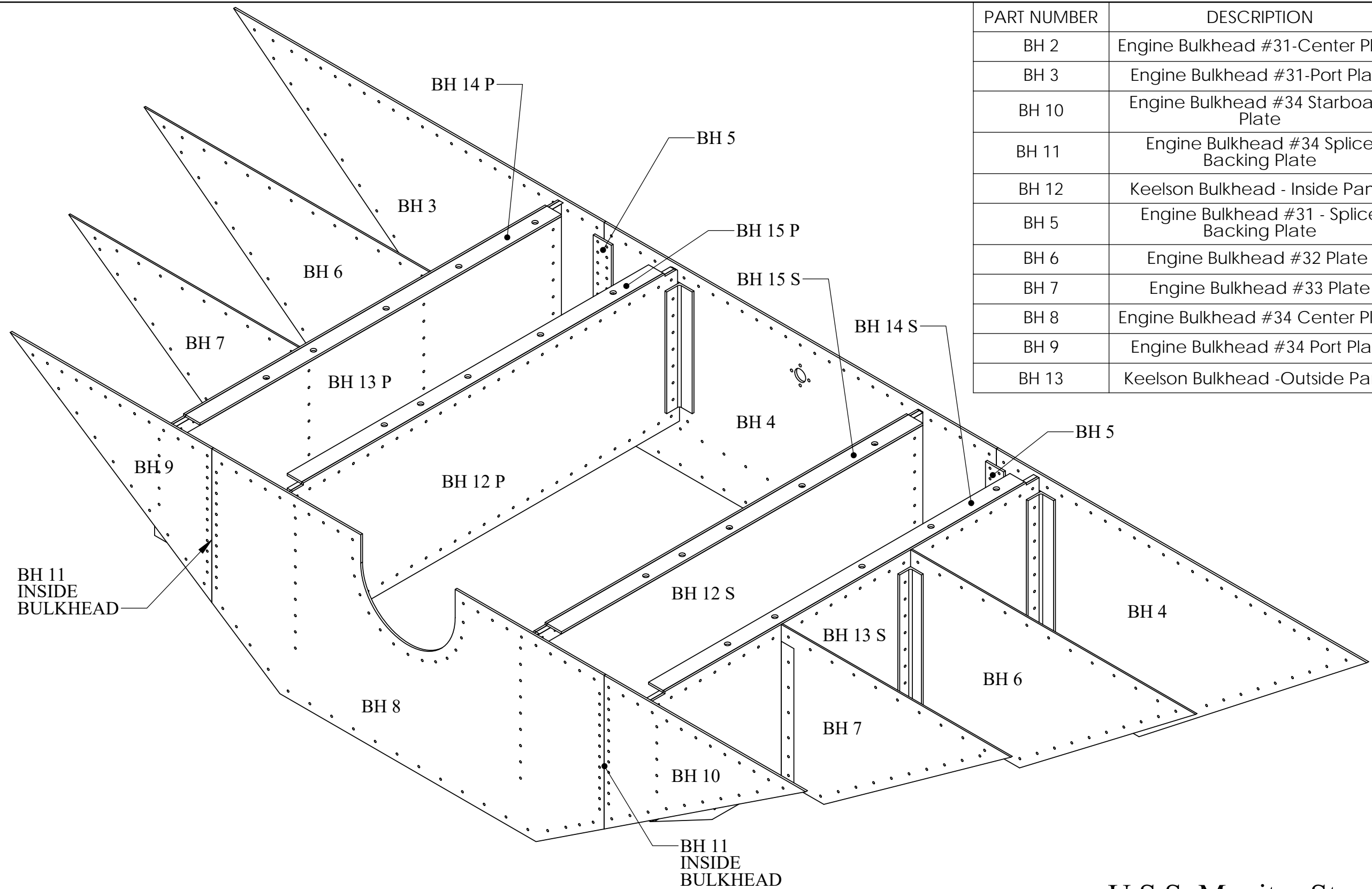
Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 7690.353	Description <b>Engine Bulkhead Assembly</b>	
Scale 1:20		
Part # <b>BH 1</b>		



U.S.S. Monitor Steam Engine

Material STEEL	Drawn By - Date RWC 10-2018	Sub-Assembly Engine Bulkheads
Weight (Lbs) 7690.353	Description <b>Engine Bulkhead Assembly</b>	
Scale 1:32		
Part # <b>BH 1</b>		

SHEET 2 OF 4

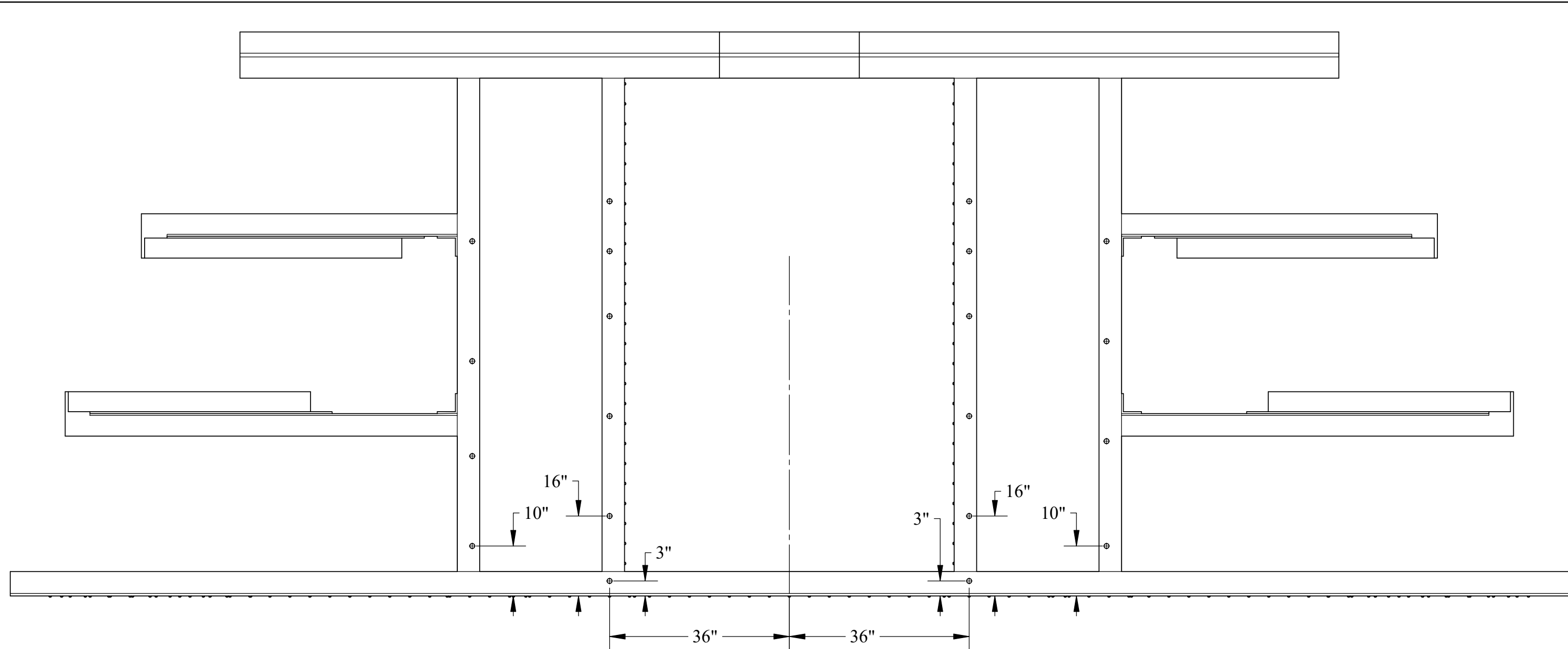


PART NUMBER	DESCRIPTION	QTY.
BH 2	Engine Bulkhead #31-Center Plate	1
BH 3	Engine Bulkhead #31-Port Plate	2
BH 10	Engine Bulkhead #34 Starboard Plate	1
BH 11	Engine Bulkhead #34 Splice Backing Plate	2
BH 12	Keelson Bulkhead - Inside Panel	2
BH 5	Engine Bulkhead #31 - Splice Backing Plate	2
BH 6	Engine Bulkhead #32 Plate	2
BH 7	Engine Bulkhead #33 Plate	2
BH 8	Engine Bulkhead #34 Center Plate	1
BH 9	Engine Bulkhead #34 Port Plate	1
BH 13	Keelson Bulkhead -Outside Panel	2

ASSEMBLED BULKHEADS AND KEELSONS AS VIEWED FROM AFT LOCATION-  
BULKHEAD STIFFINERS AND ANGLE IRON CROSS MEMBERS NOT SHOWN FOR VISUAL PRESENTATION

U.S.S. Monitor Steam Engine

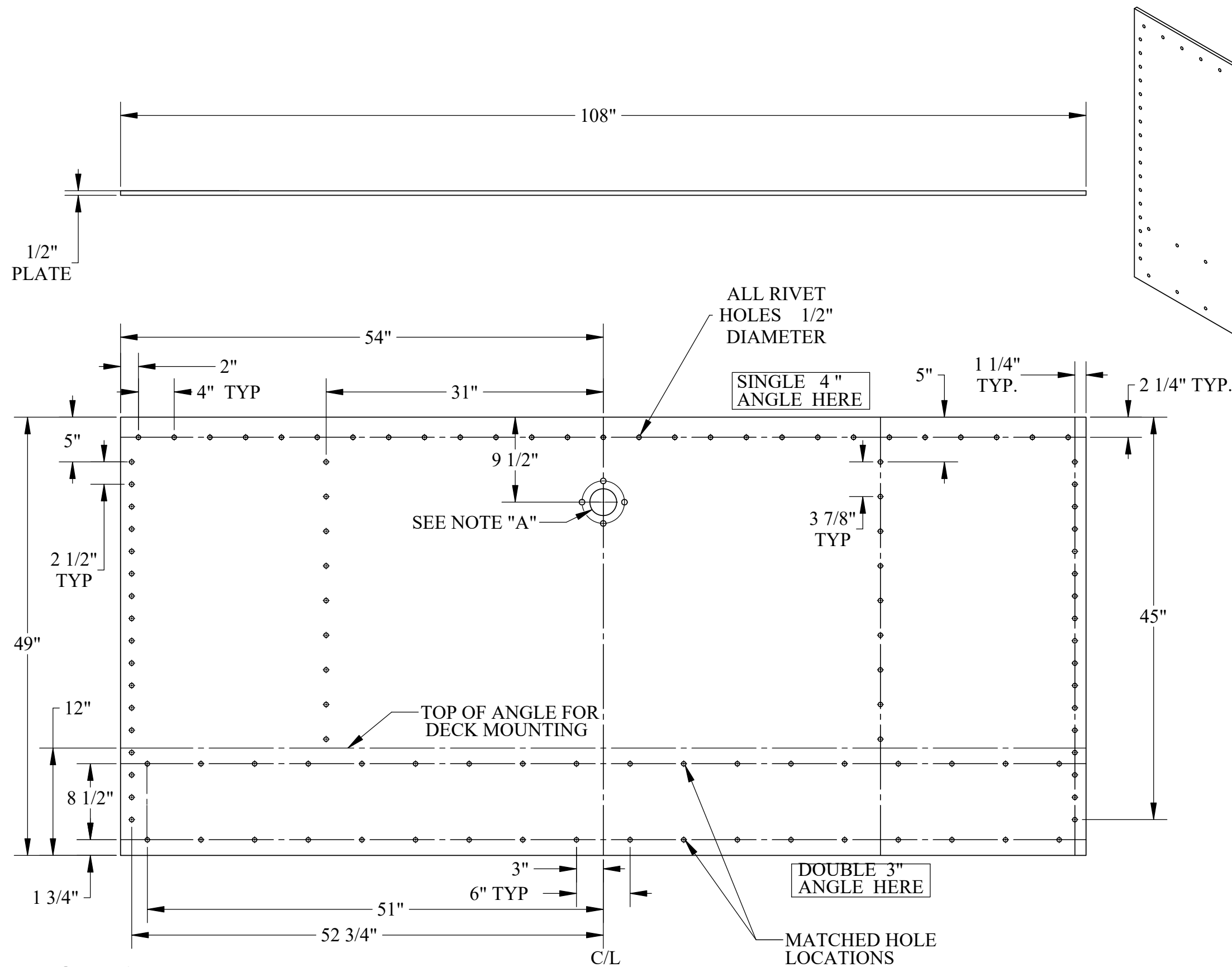
Material STEEL	Drawn By - Date RWC 10-2018	Sub-Assembly Engine Bulkheads
Weight (Lbs) 7690.353	Description <b>Engine Bulkhead Assembly</b>	
Scale 1:48		
Part # <b>BH 1</b>		



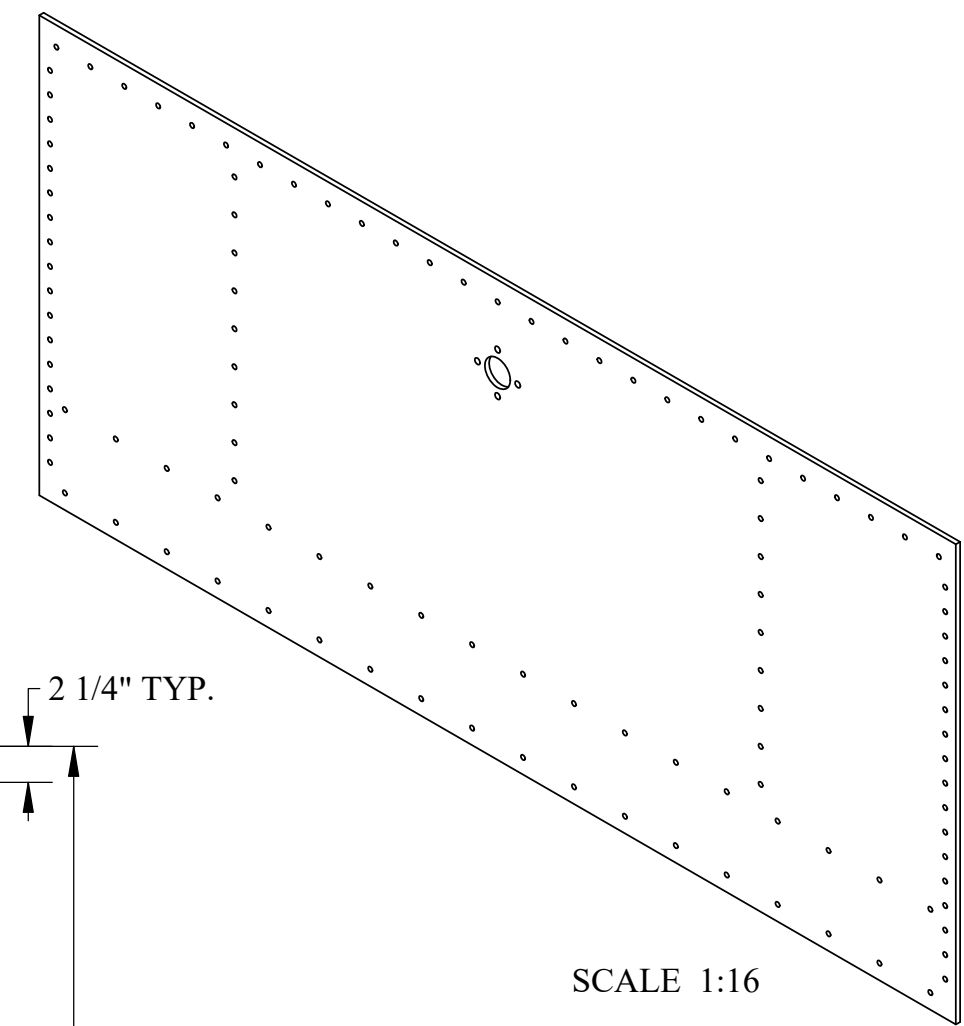
TOP VIEW WITH NOTATION ON  
HOLES NOT DEFINED IN EARILER  
VIEWS - HOLES LOCATED IN # 31  
BULKHEAD STIFFINER ARE 1 1/4" DIAM

U.S.S. Monitor Steam Engine

Material STEEL	Drawn By - Date RWC 10-2018	Sub-Assembly Engine Bulkheads
Weight (Lbs) 7690.353	Engine Bulkhead Assembly	
Scale 1:20		
Part # BH 1		

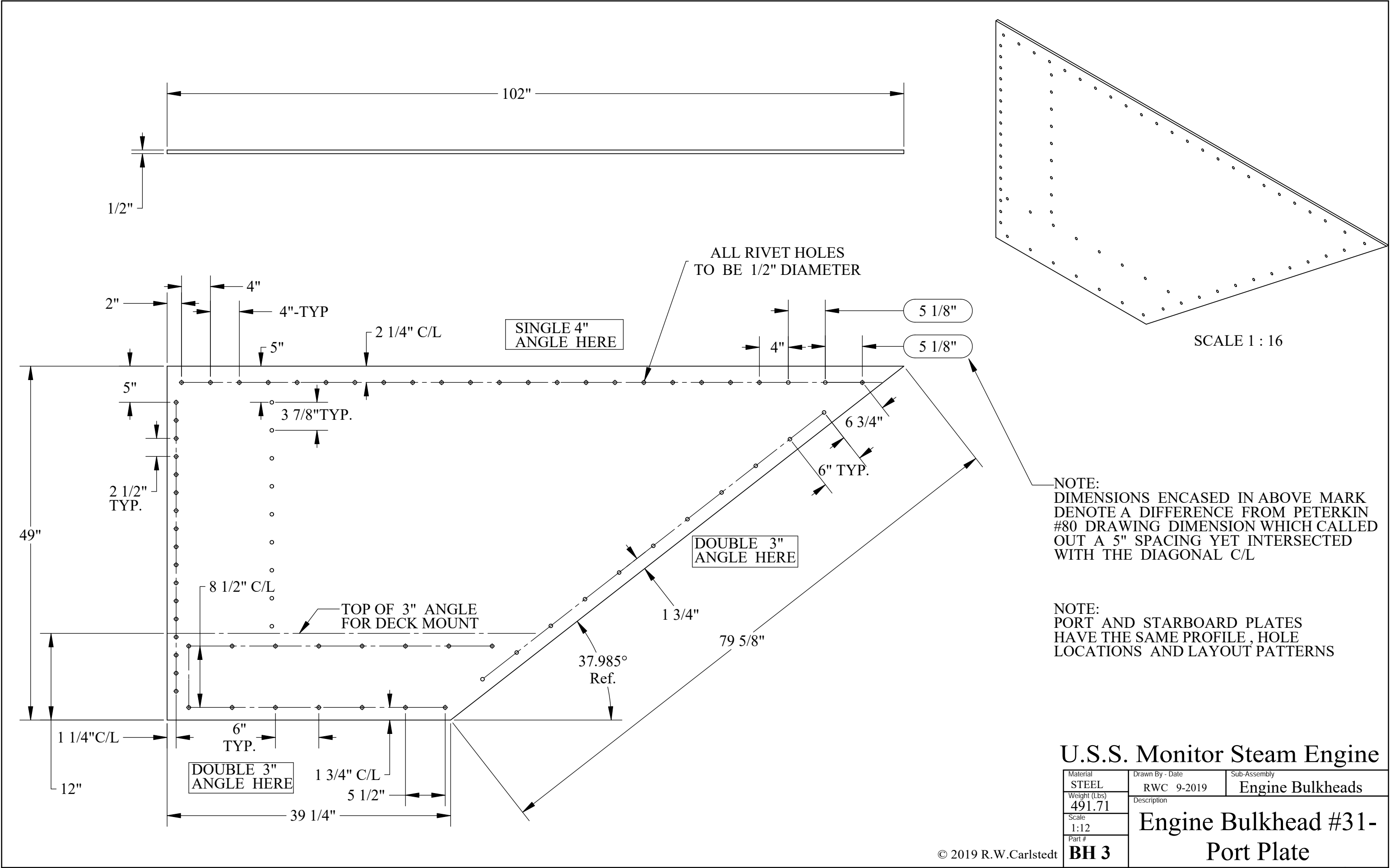


**NOTE : A**  
PROBABLE LOCATION OF THE REVERSING WHEEL SHAFT BUSHING ( RW 6 )  
3 " BORE AS SHOWN WITH FOUR 5/8" HOLES ON A 4 3/4" B/C



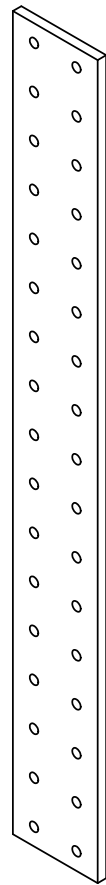
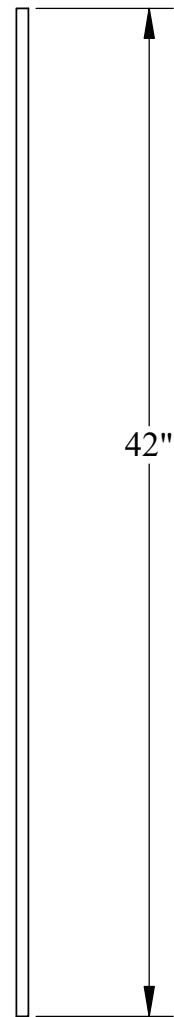
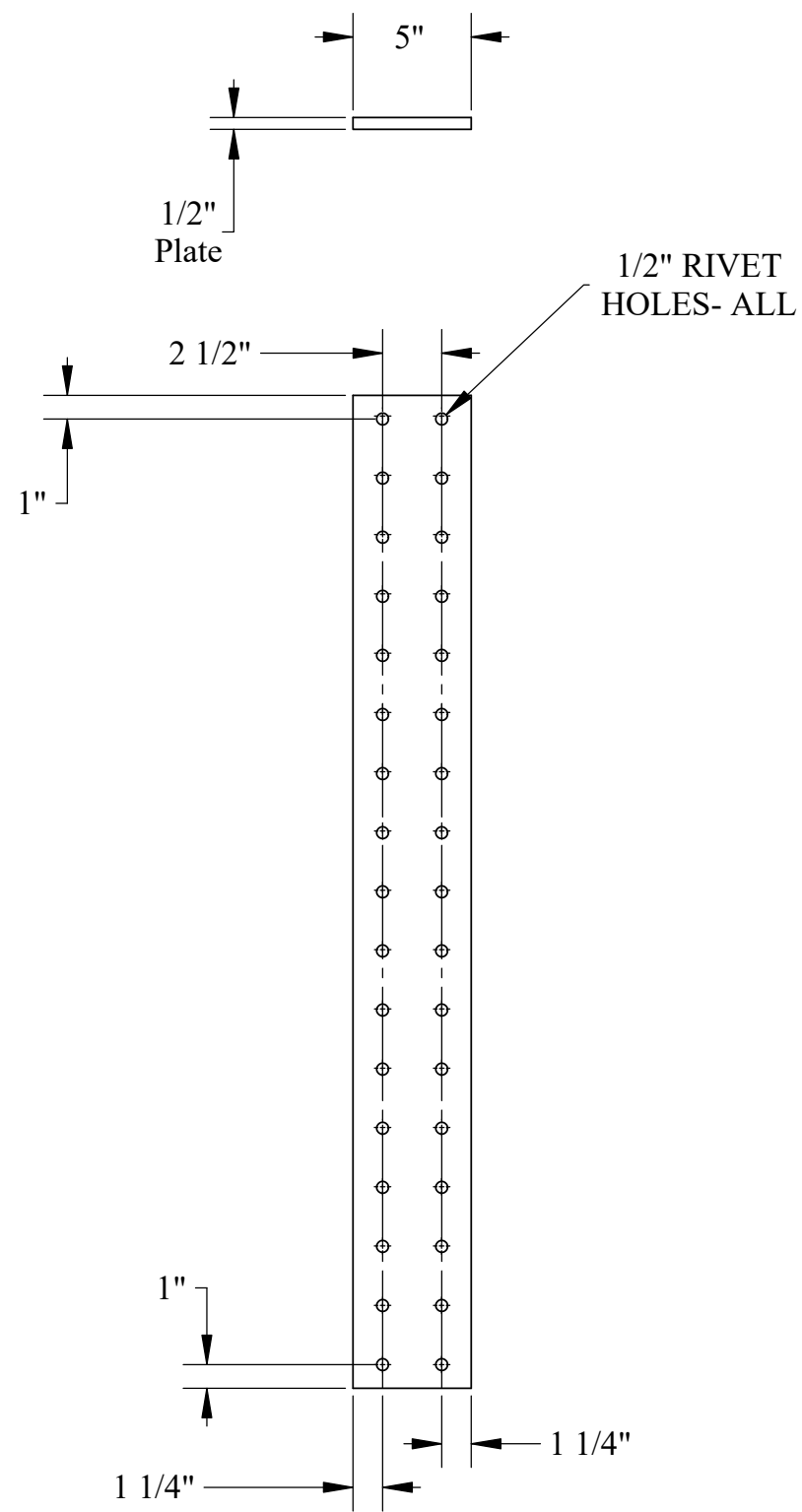
**NOTE:**  
ALL HOLES ARE SYMETRICAL  
IN LAYOUT

U.S.S. Monitor Steam Engine		
Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 750.78	Description Engine Bulkhead #31- Center Plate	
Scale 1:12		
Part # BH 2		



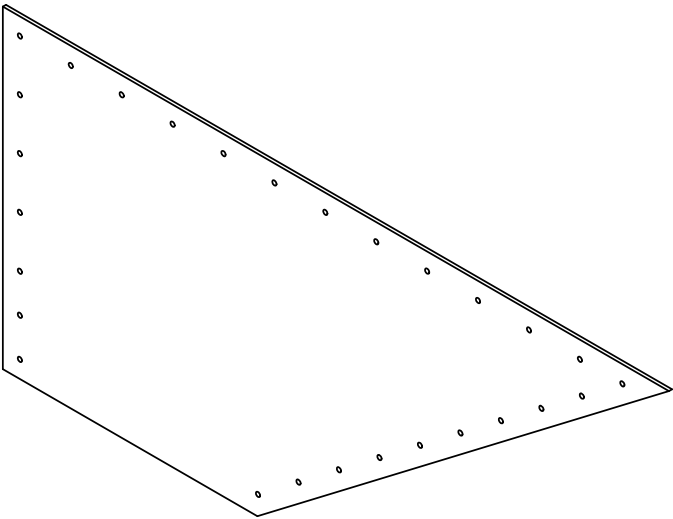
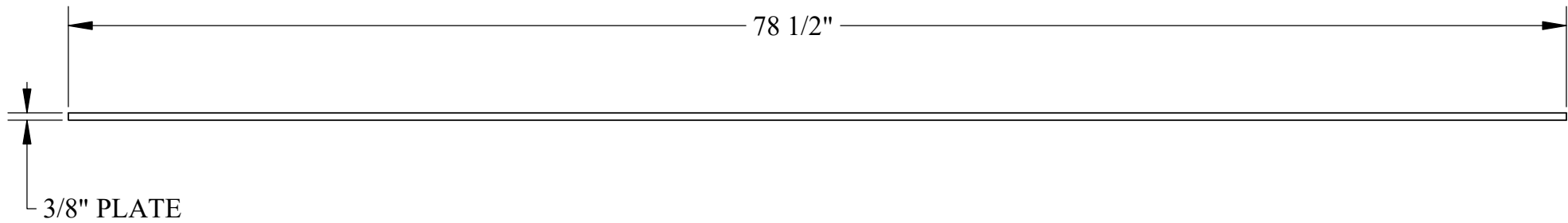
U.S.S. Monitor Steam Engine

Material	STEEL	Drawn By - Date	RWC 9-2019	Sub-Assembly	Engine Bulkheads
Weight (Lbs)	491.71	Description			
Scale	1:12				
Part #	BH 3				
		Engine Bulkhead #31- Port Plate			

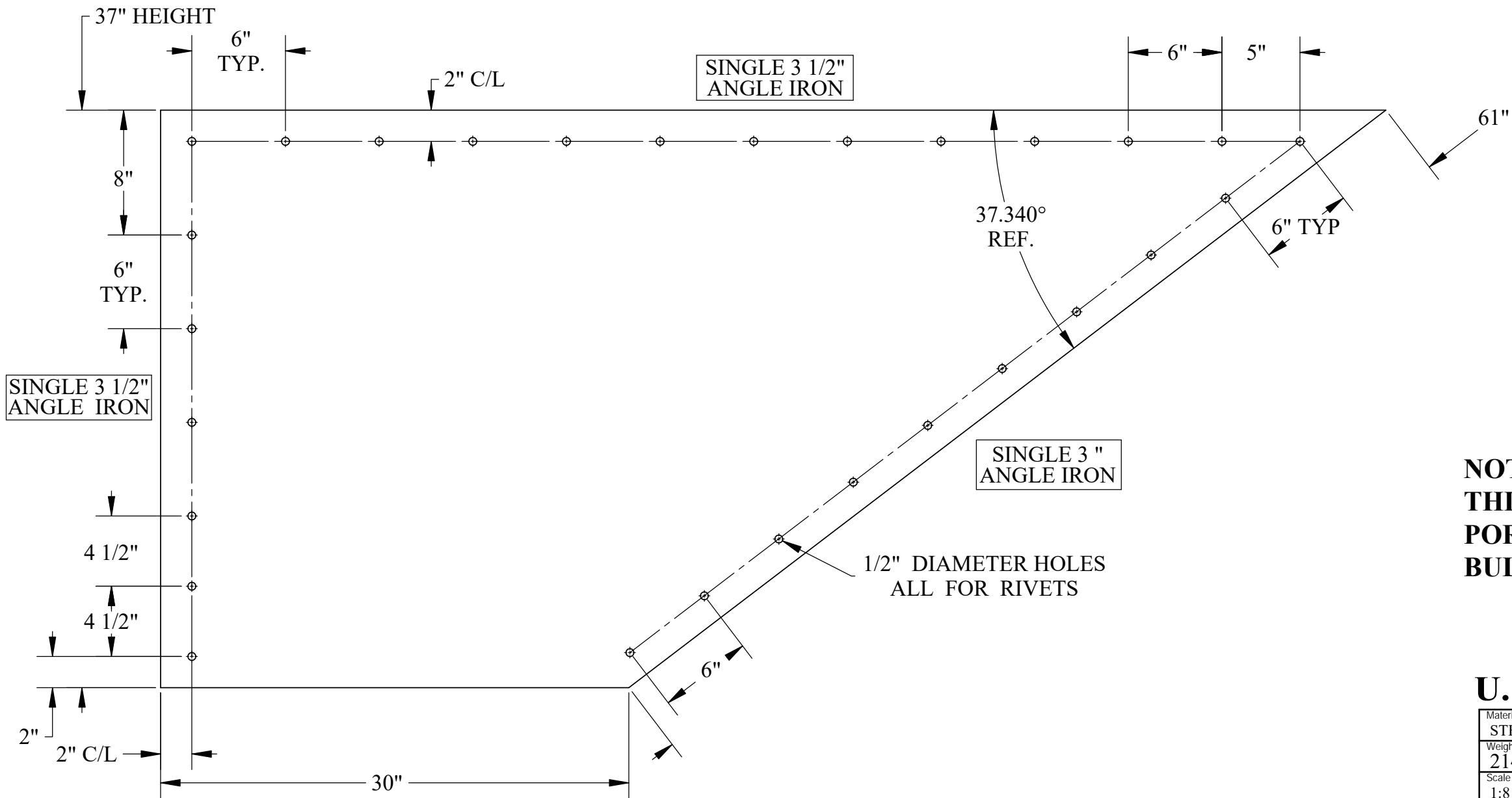


U.S.S. Monitor Steam Engine

Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 29.01	Description Engine Bulkhead #31 - Splice Backing Plate	
Scale 1:8		
Part # BH 5		



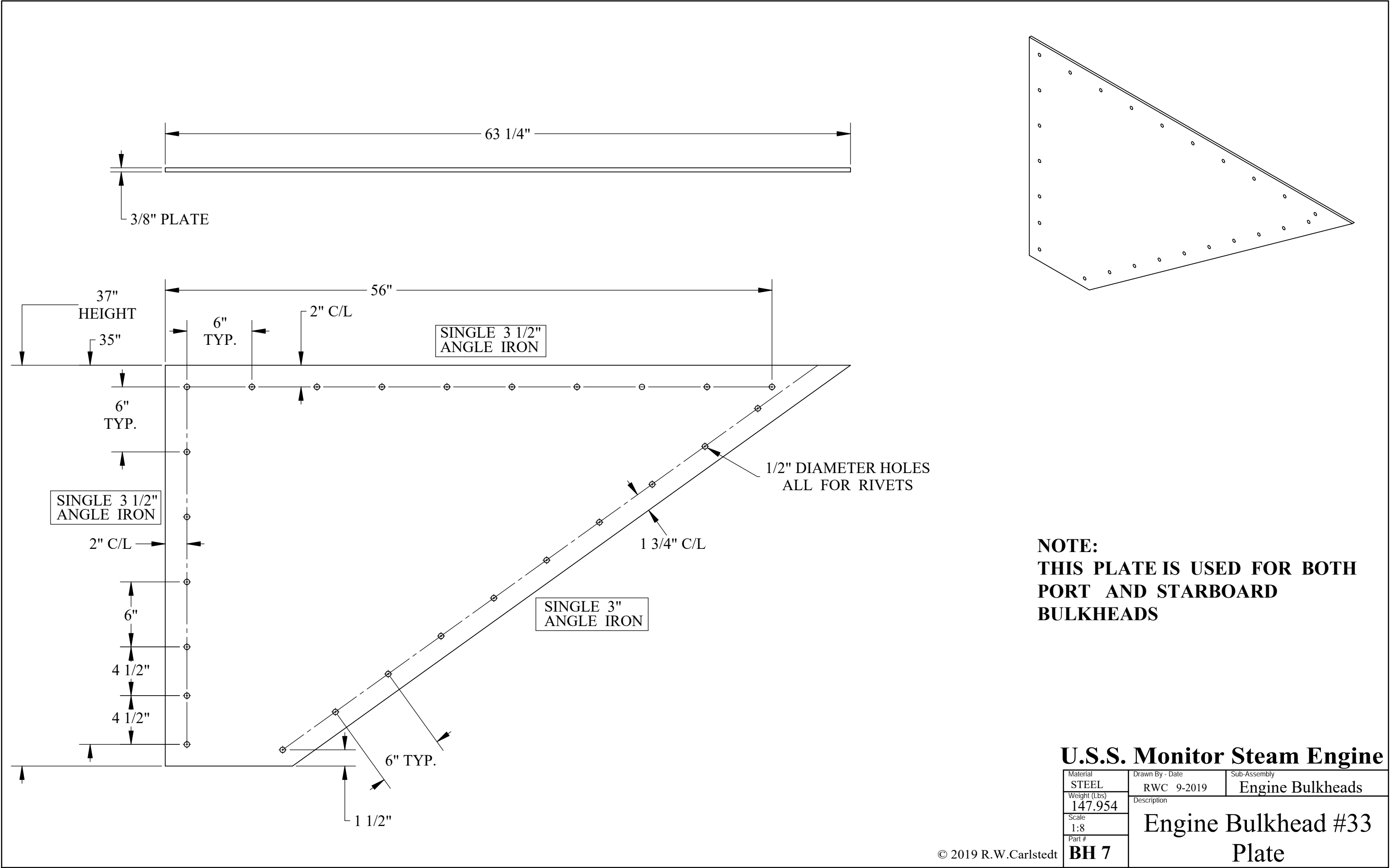
SCALE 1:16

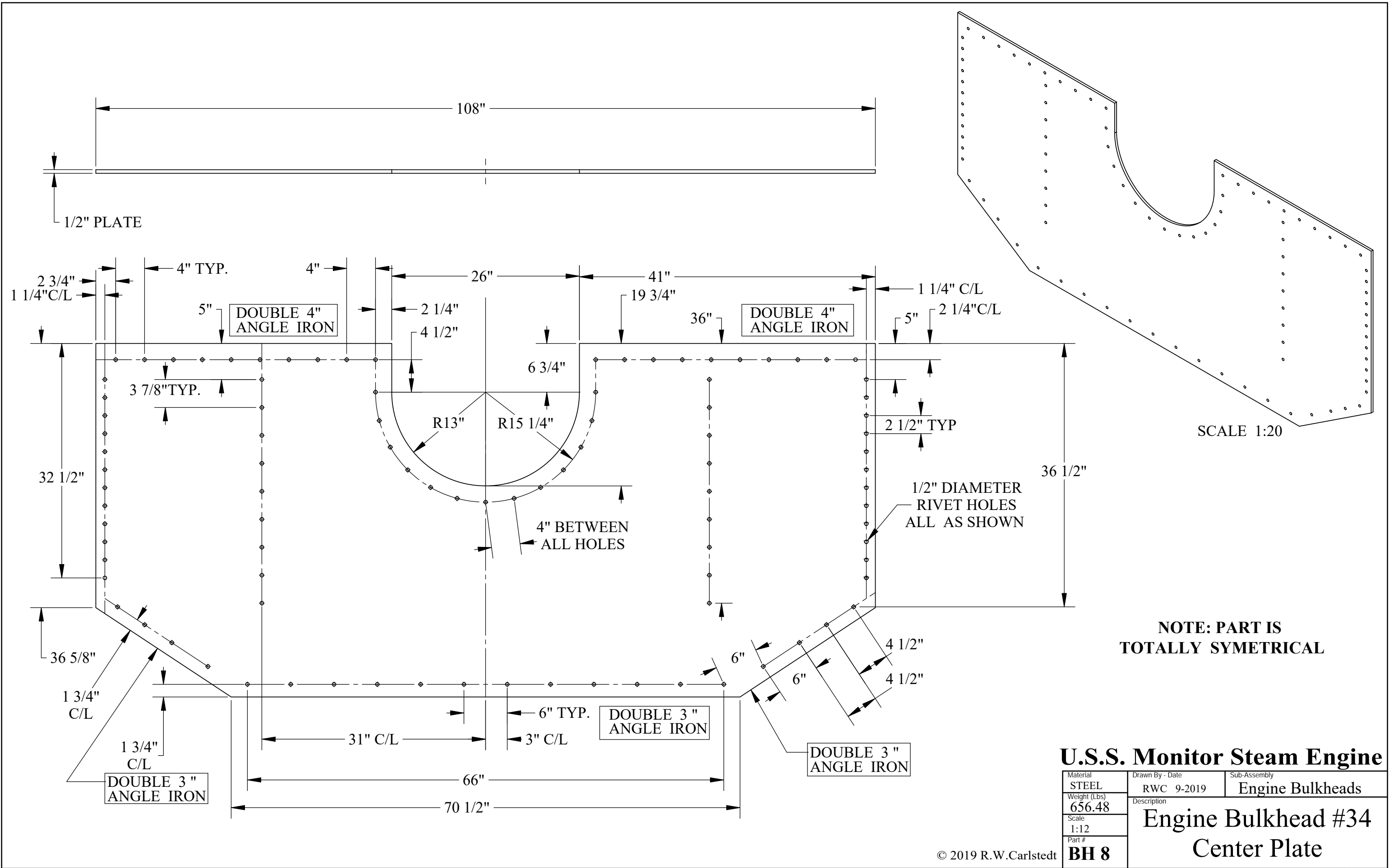


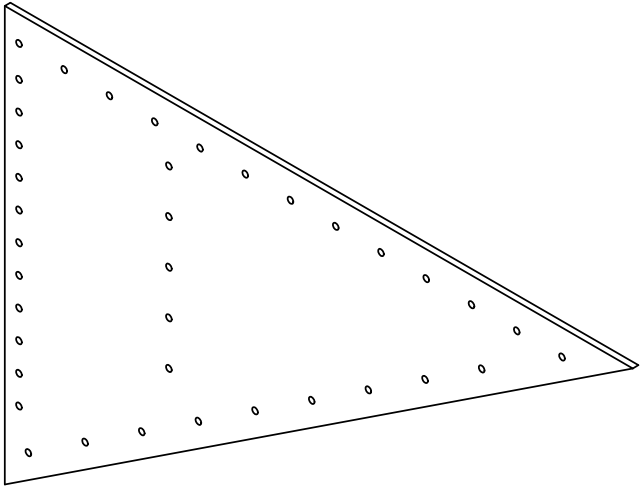
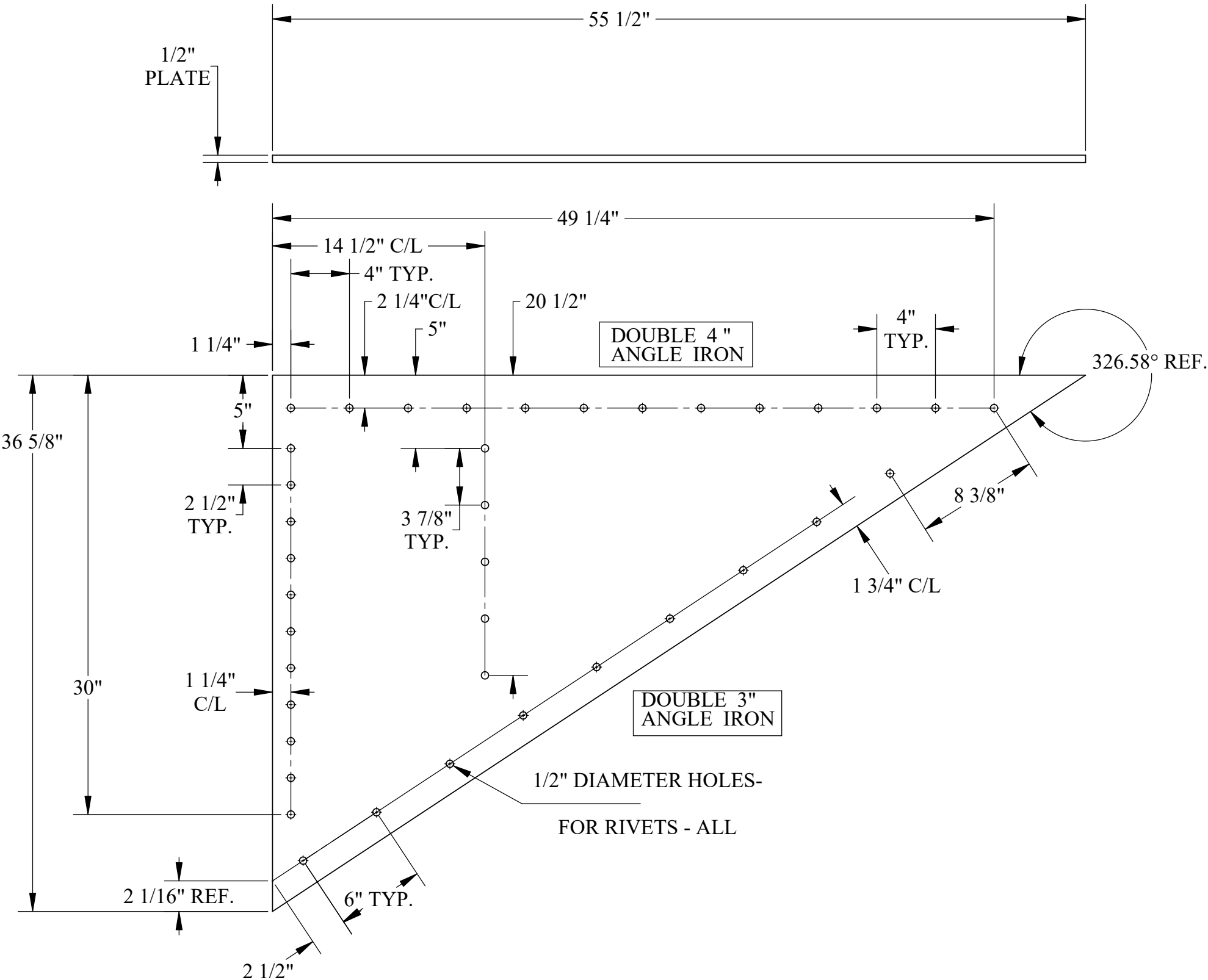
**NOTE:**  
**THIS PLATE IS USED FOR BOTH**  
**PORT AND STARBOARD**  
**BULKHEADS**

**U.S.S. Monitor Steam Engine**

Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 214.242	Engine Bulkhead #32 Plate	
Scale 1:8		
Part # BH 6		



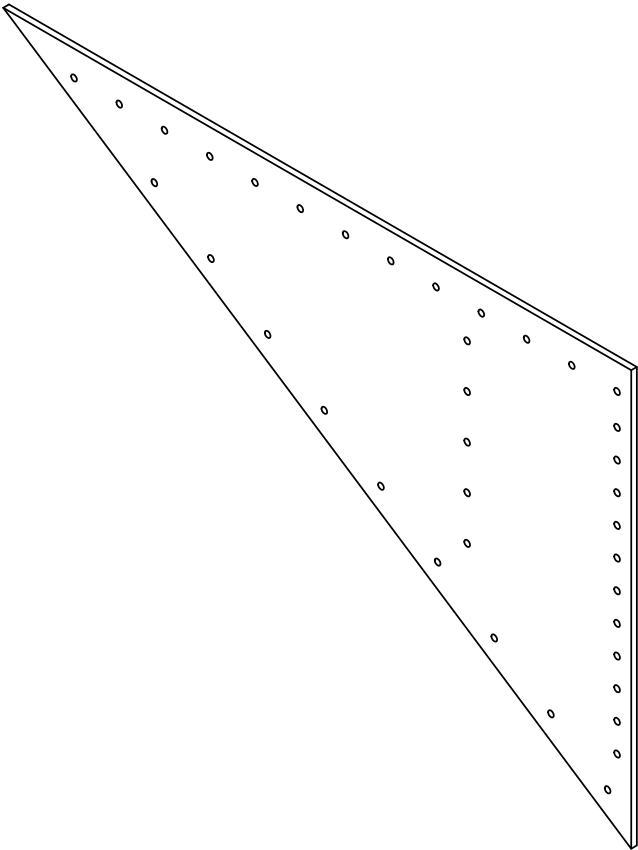
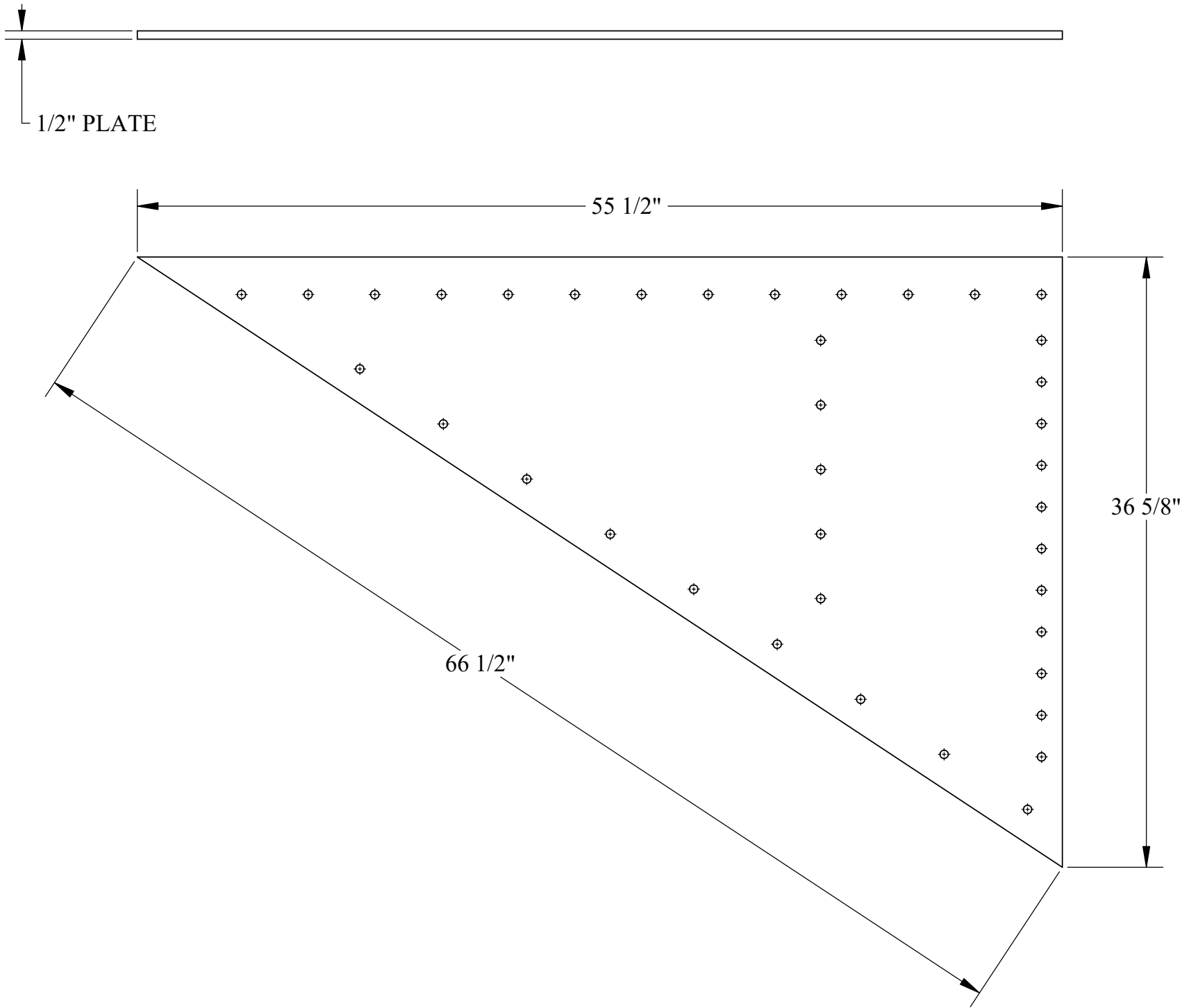




NOTE:  
BOTH PORT AND STARBOARD  
BULKHEAD PLATES ARE IDENTICAL  
BUT REVERSED IN LAYOUT ON  
ASSEMBLY - BH 18 & BH 20

**U.S.S. Monitor Steam Engine**

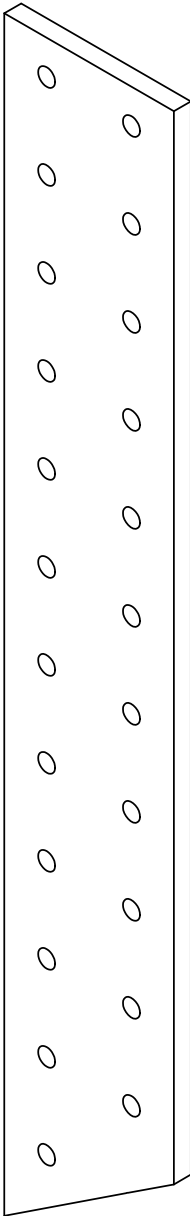
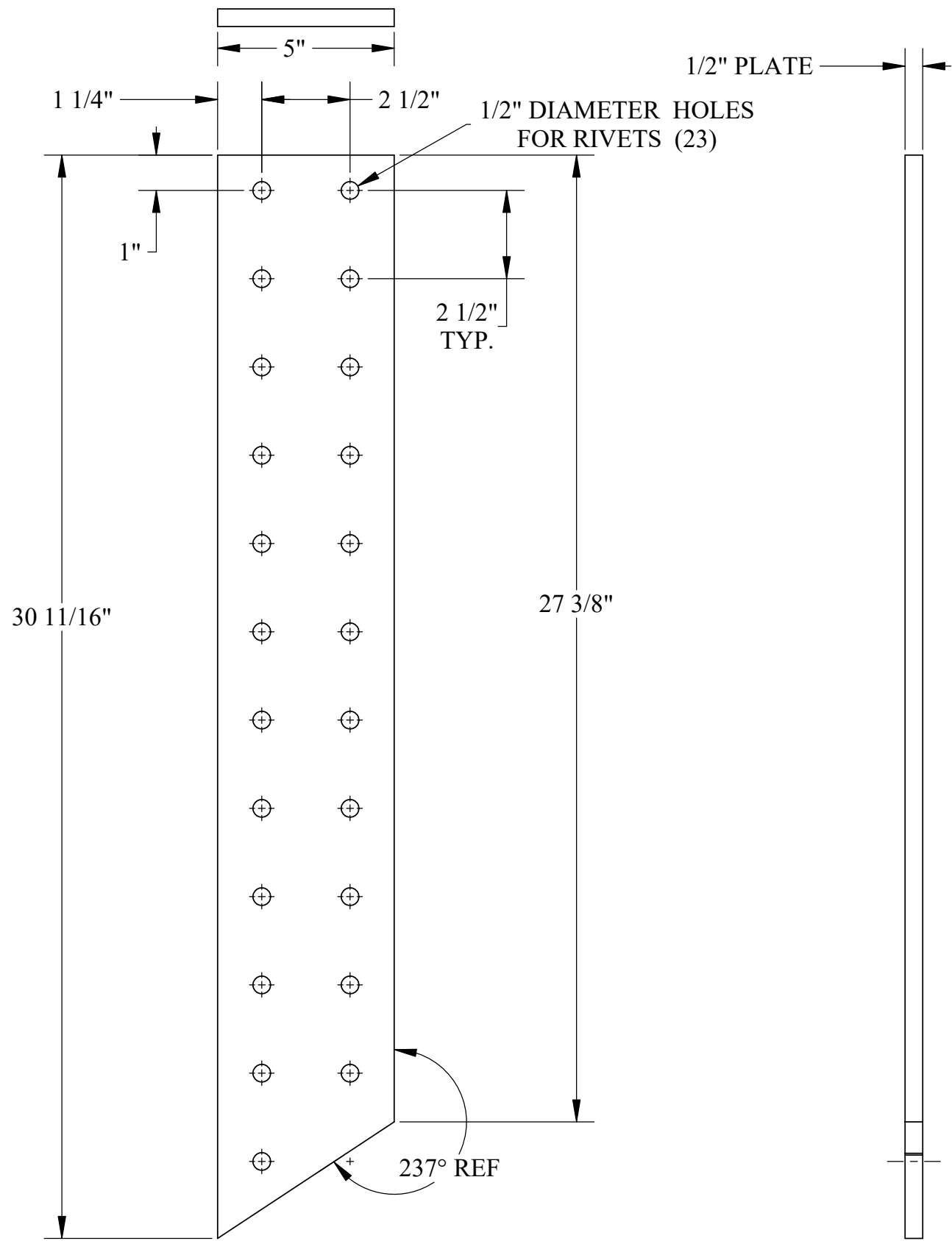
Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 143.970	Description <b>Engine Bulkhead #34 Port Plate</b>	
Scale 1:8		
Part # <b>BH 9</b>		



NOTE:  
BOTH PORT AND STARBOARD  
BULKHEAD PLATES ARE IDENTICAL  
BUT REVERSED IN LAYOUT ON  
ASSEMBLY - BH 9 & BH 10  
SEE:  
BH 9 FOR ALL RIVET HOLE LOCATIONS

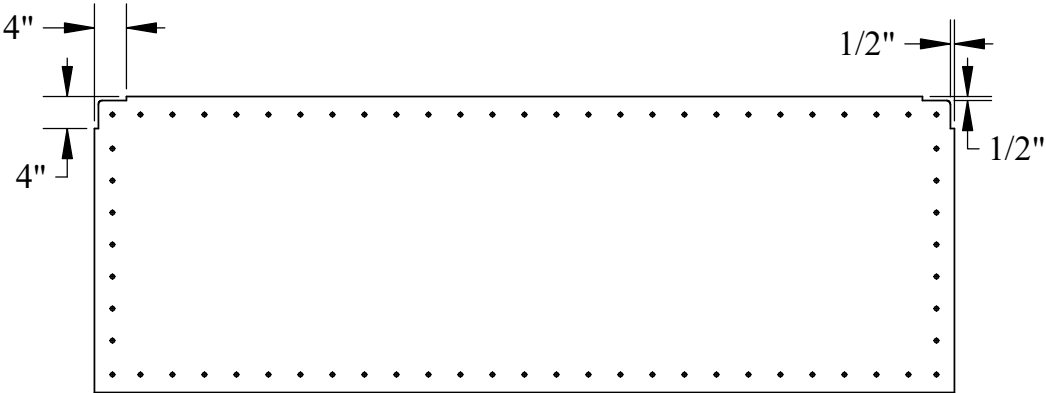
U.S.S. Monitor Steam Engine

Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 143.970	Engine Bulkhead #34 Starboard Plate	
Scale 1:8		
Part # BH 10		



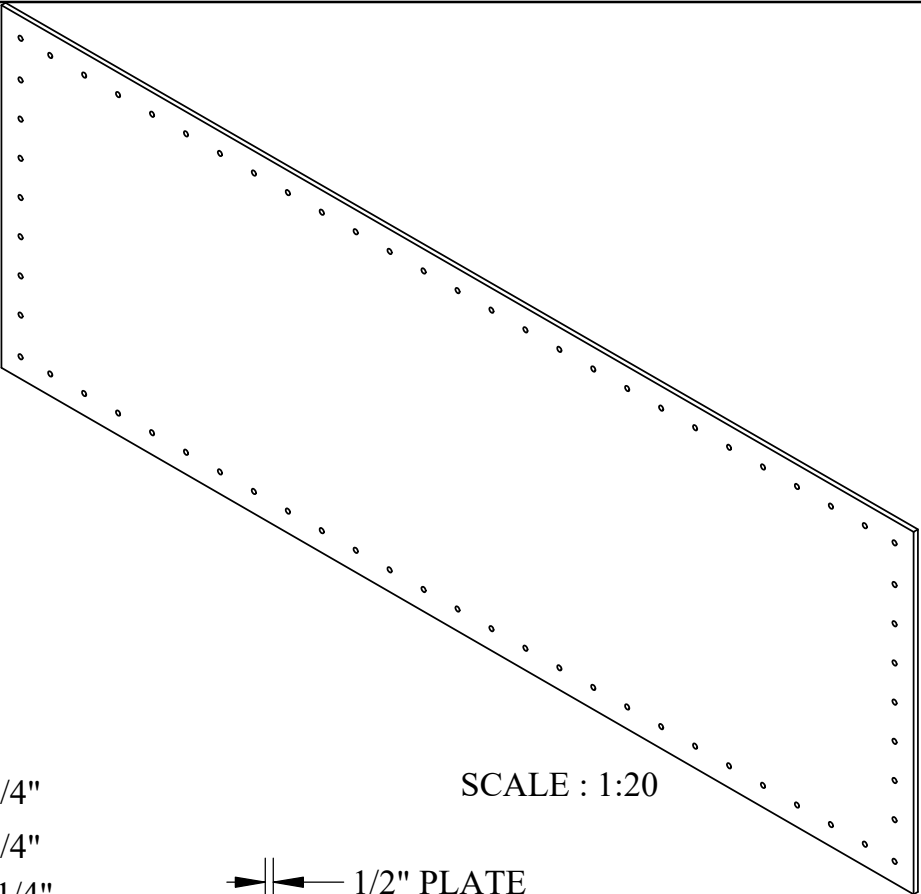
**U.S.S. Monitor Steam Engine**

Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 20.07	Engine Bulkhead #34 Splice Backing Plate	
Scale 1:4		
Part # BH 11		

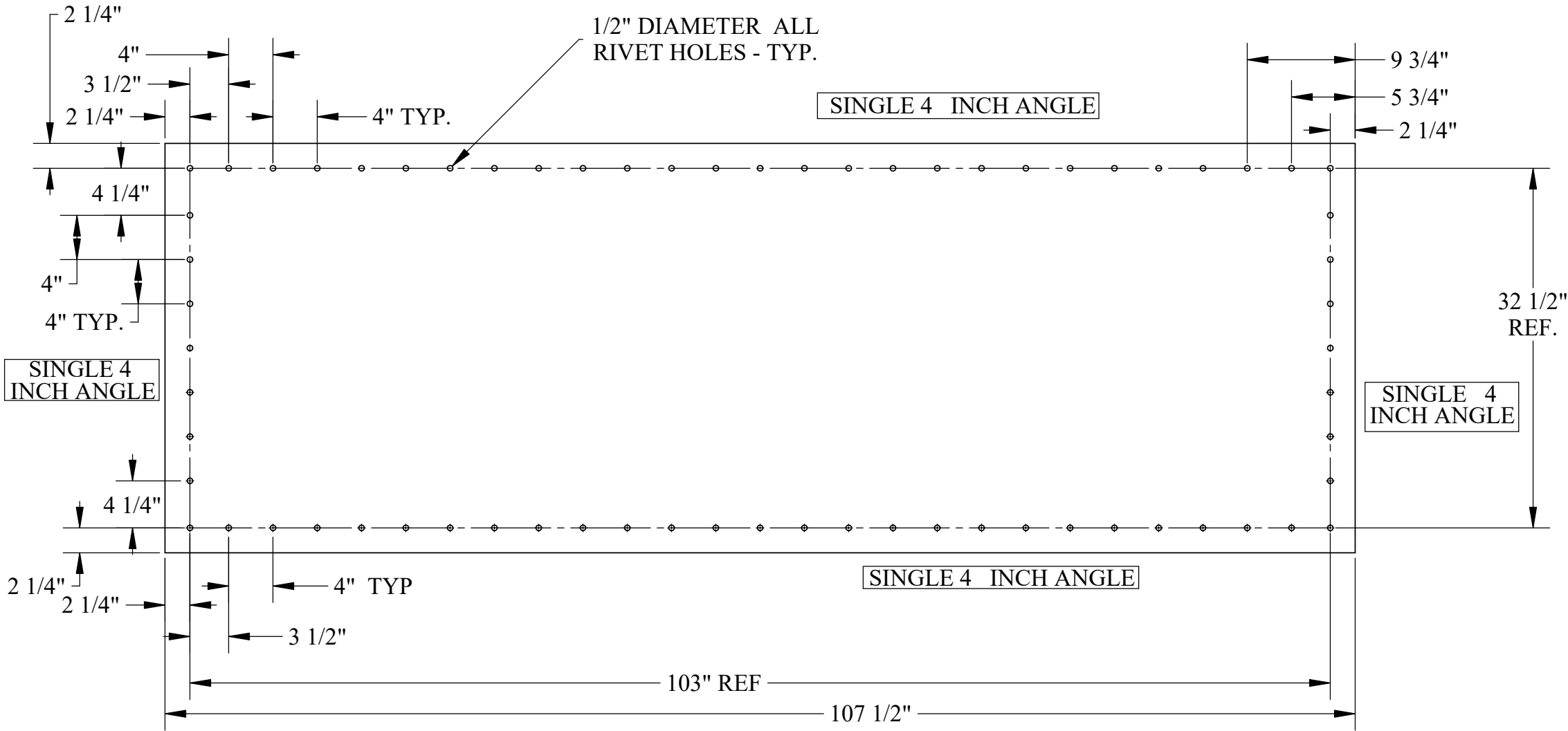


ALTERNATIVE PROJECTION ABOVE- SCALE 1:24

NOTE :  
ALTHOUGH NOT SHOWN IN ANY  
SURVIVING DRAWINGS BUT  
REQUIRED FOR ASSEMBLY -ARE  
NOTCHES IN THE TOP CORNERS  
OF THE PANELS TO CLEAR THE  
TOP ANGLE IRON OF THE BULKHEADS  
AND DISPLAYED HERE AS AN  
ALTERNATIVE VIEW



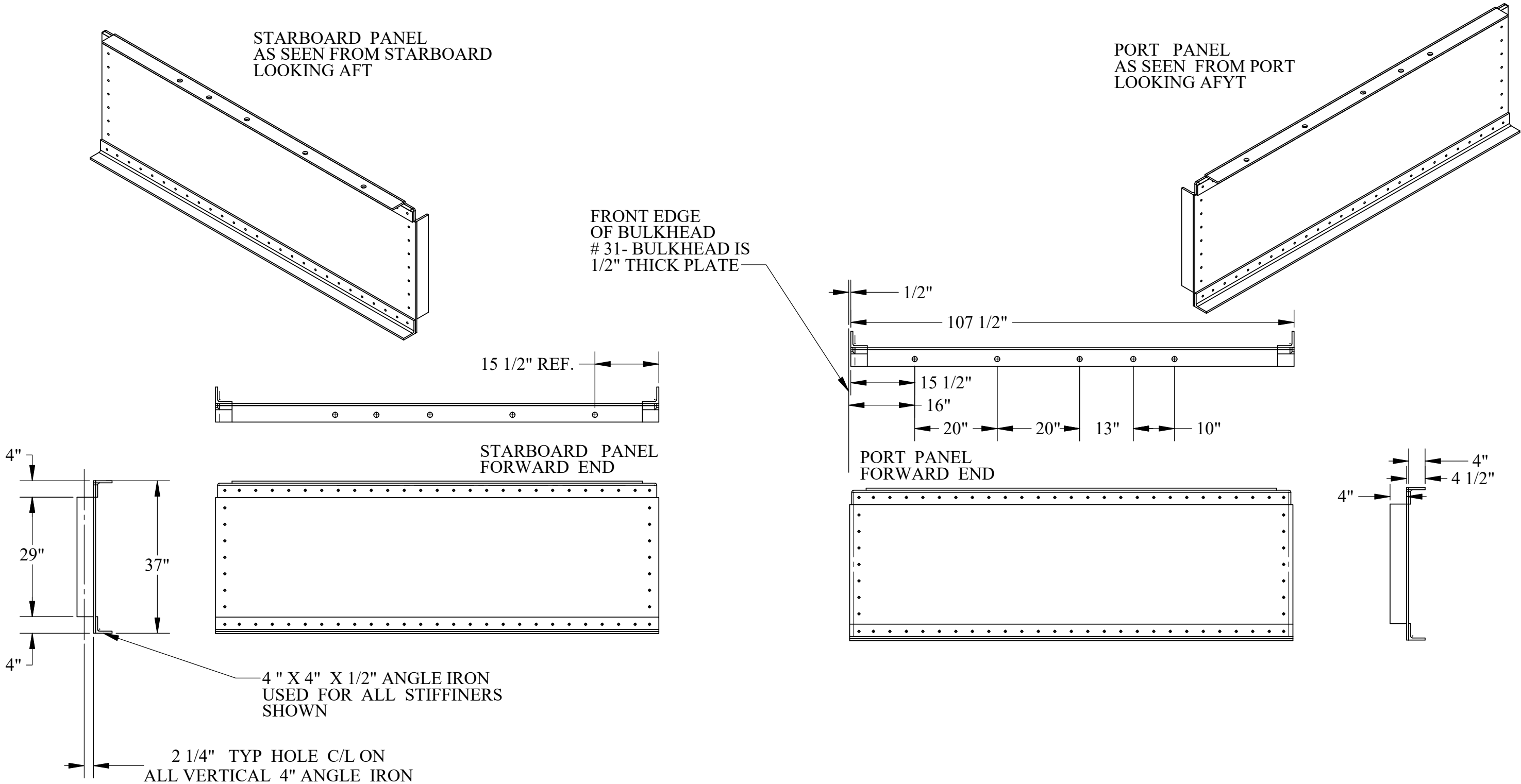
SCALE : 1:20



NOTE : ALL HOLE LOCATIONS  
ARE SYMETRICAL - TOP & BOTTOM  
OR FORWARD & AFT

U.S.S. Monitor Steam Engine

Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 565.69	Description <b>Keelson Bulkhead- Inside Panel -P &amp; S</b>	
Scale 1:12		
Part # <b>BH 12</b>		

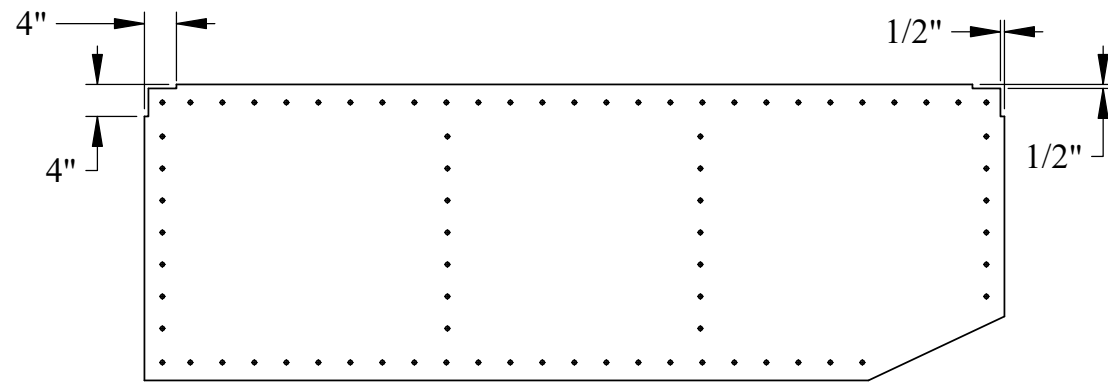


HOLE PATTERNS ARE ENTIRELY SYMETRICAL ON THESE PANELS  
ONLY THE TOP STIFFINER ANGLES DEFINE ORIENTED POSITION  
AND HOLE PATTERN ON THOSE TWO ANGLES ARE MIRRORED

U.S.S. Monitor Steam Engine

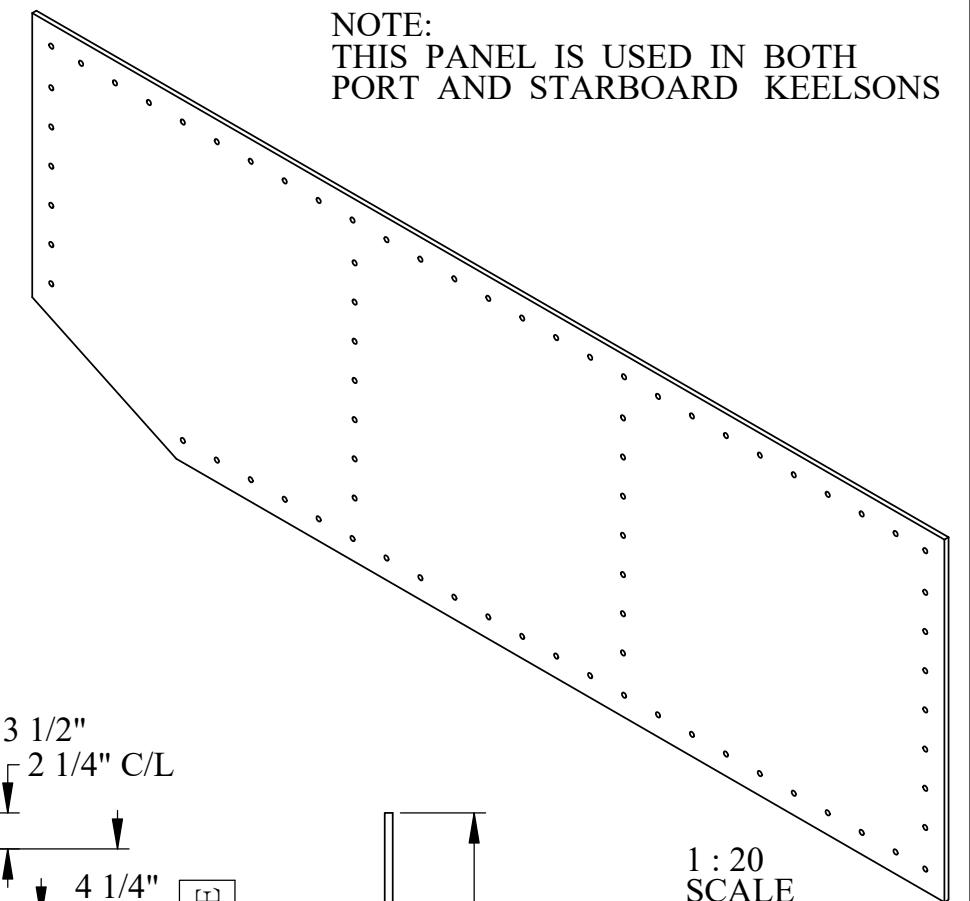
Material STEEL	Drawn By - Date RWC 10-2018	Sub-Assembly Engine Bulkheads
Weight (Lbs) 853.09	Description <b>Keelson Bulkhead- Inside Panel -P &amp; S</b>	
Scale 1:24		
Part # <b>BH 12</b>		

SHEET 2 OF 2

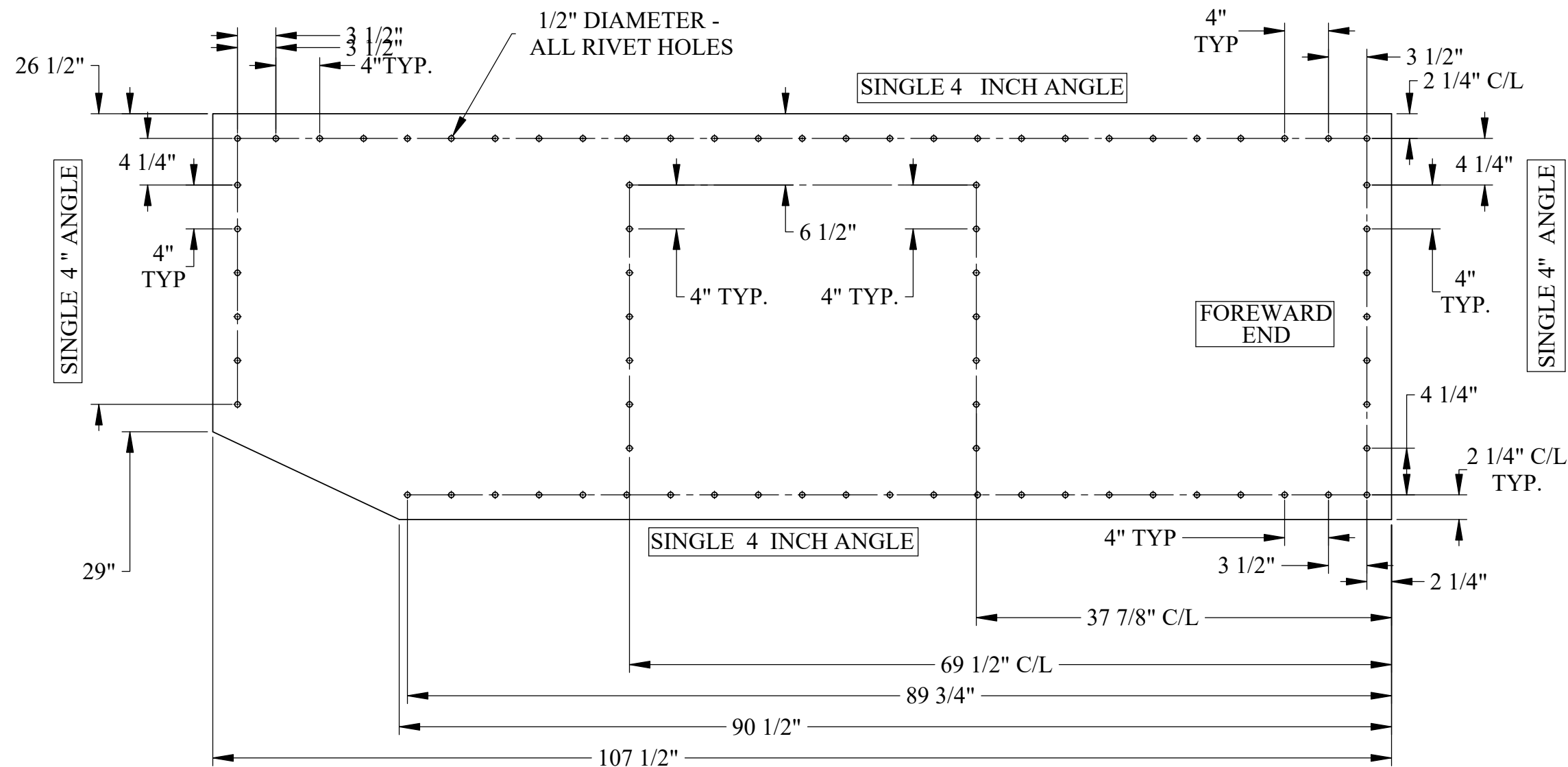


NOTE :  
ALTHOUGH NOT SHOWN IN ANY  
SURVIVING DRAWINGS BUT  
REQUIRED FOR ASSEMBLY -ARE  
NOTCHES IN THE TOP CORNERS  
OF THE PANELS TO CLEAR THE  
TOP ANGLE IRON OF THE BULKHEADS  
AND DISPLAYED HERE AS AN  
ALTERNATIVE VIEW

ALTERNATIVE VIEW OF PROBABLE PANEL - SCALE 1: 24



1 : 20  
SCALE



SINGLE 4" ANGLE

SINGLE 4 INCH ANGLE

FOREWARD  
END

SINGLE 4" ANGLE

SINGLE 4 INCH ANGLE

\_\_\_\_\_ 90 1/2"

- 89 3/4"

- 69 1/2" C/L

— 37 7/8" C/L

4" TYPE

3 1/2" -

2 1/4"

2 1/4" C/L  
TYP.

4 1/4"

4"  
TYP.

4 1/4"

└ 2 1/4" C/L

3 1/2"

4"  
TYP

1/2" DIAMETER -  
ALL RIVET HOLES

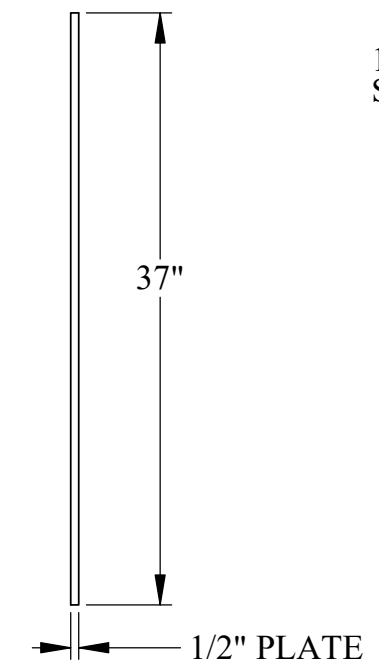
3 1/2"  
4" TYP.

5 1/2  
4" TYP.

4 1/4"

4" TYP

29"

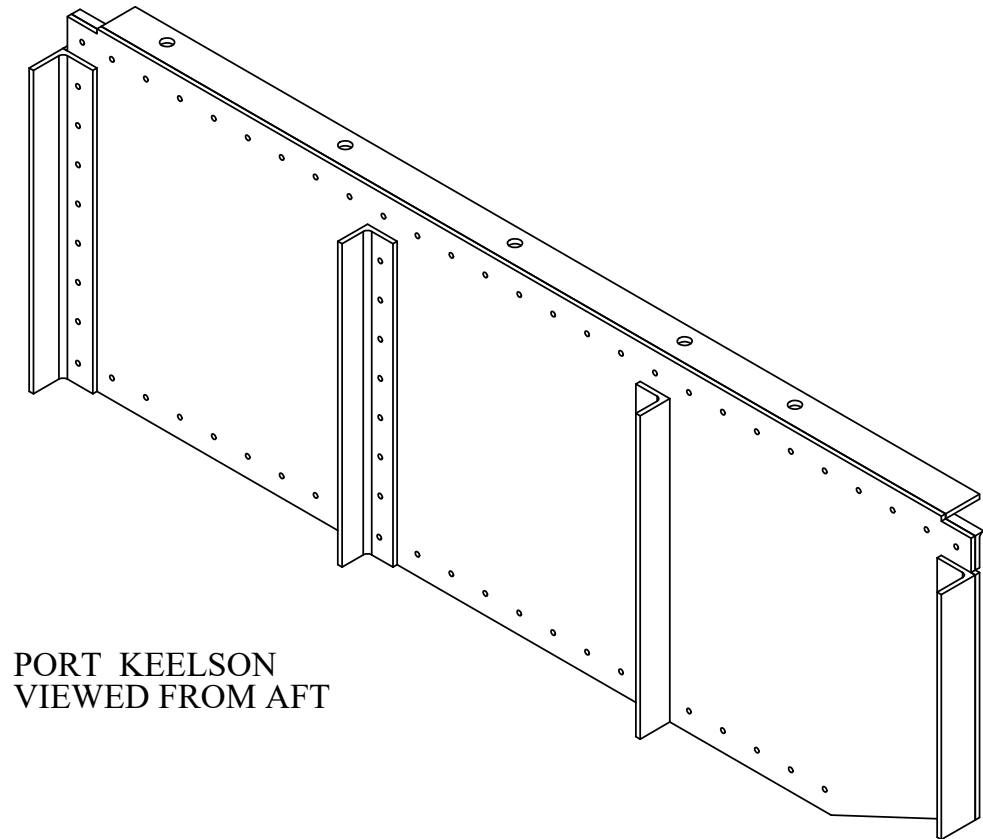


— 1/2" PLATE

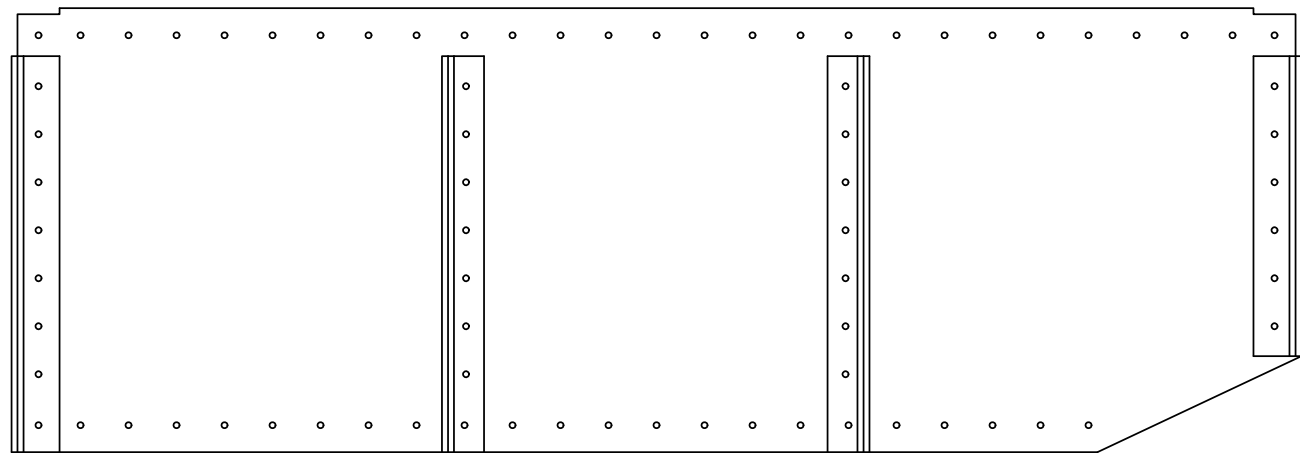
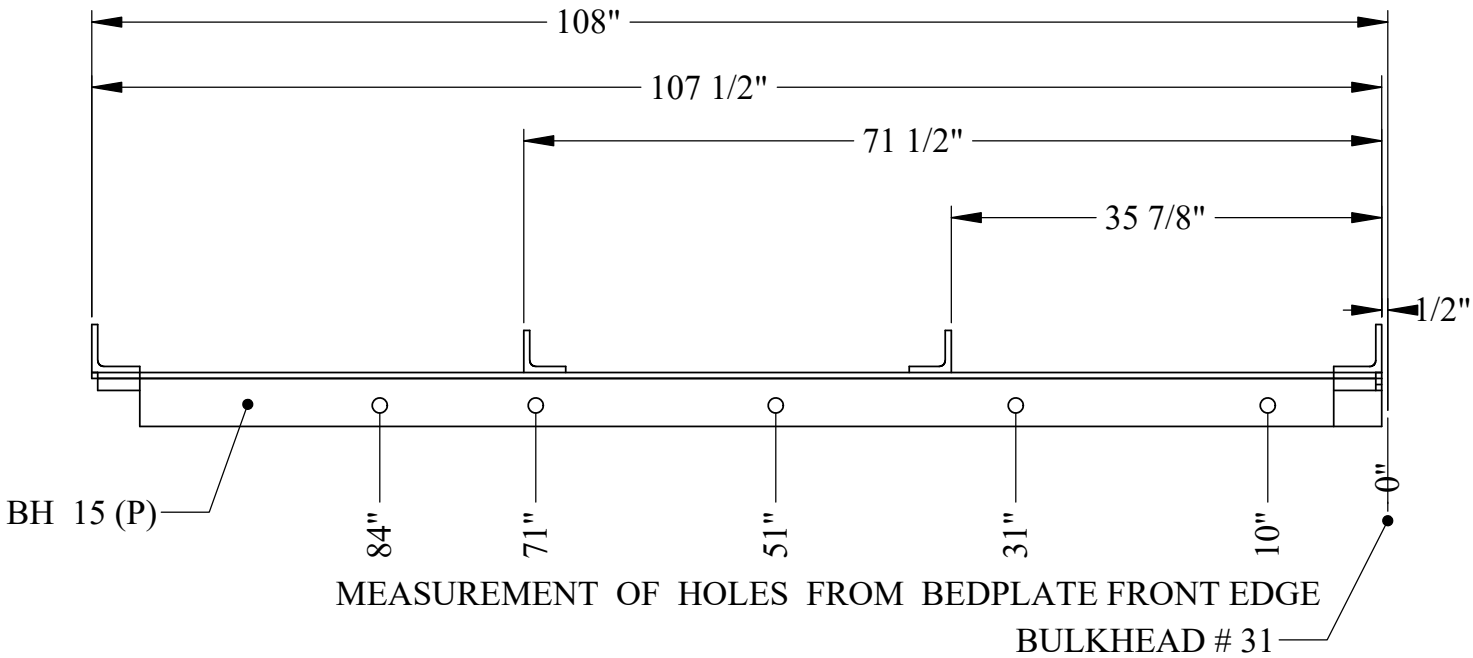
## U.S.S. Monitor Steam Engine

Material <b>STEEL</b>	Drawn By - Date <b>RWC 9-2019</b>	Sub-Assembly <b>Engine Bulkheads</b>
Weight (Lbs) <b>555.74</b>	Description <h1>Keelson Bulkhead - Outside Panel P &amp; S</h1>	
Scale <b>1:12</b>		
Part # <b>BH 13</b>		

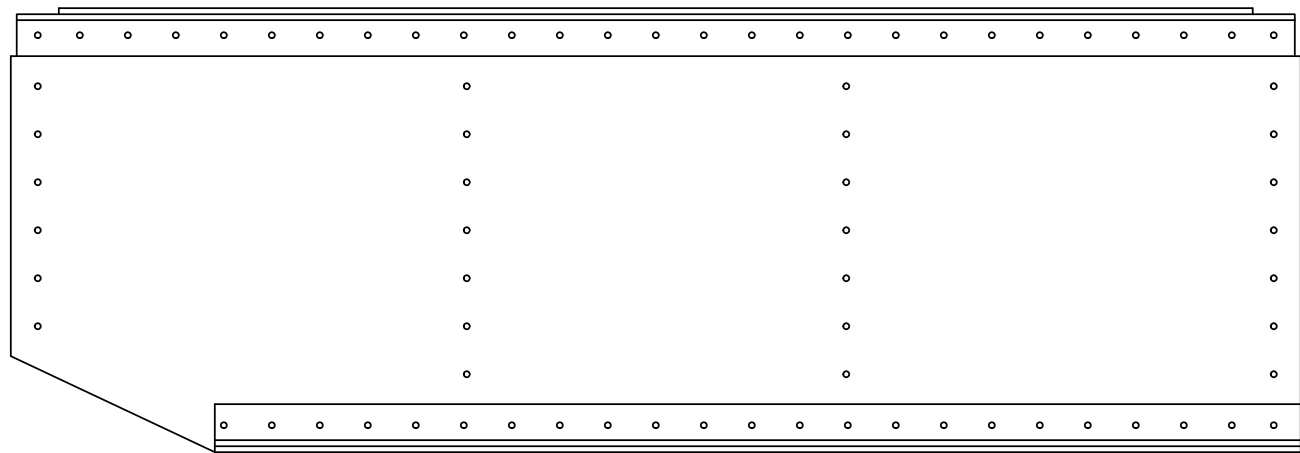
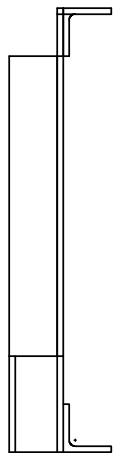
SHEET 1 OF 3



PORT KEELSON  
VIEWED FROM AFT



PORT ( OUTSIDE ) VIEW

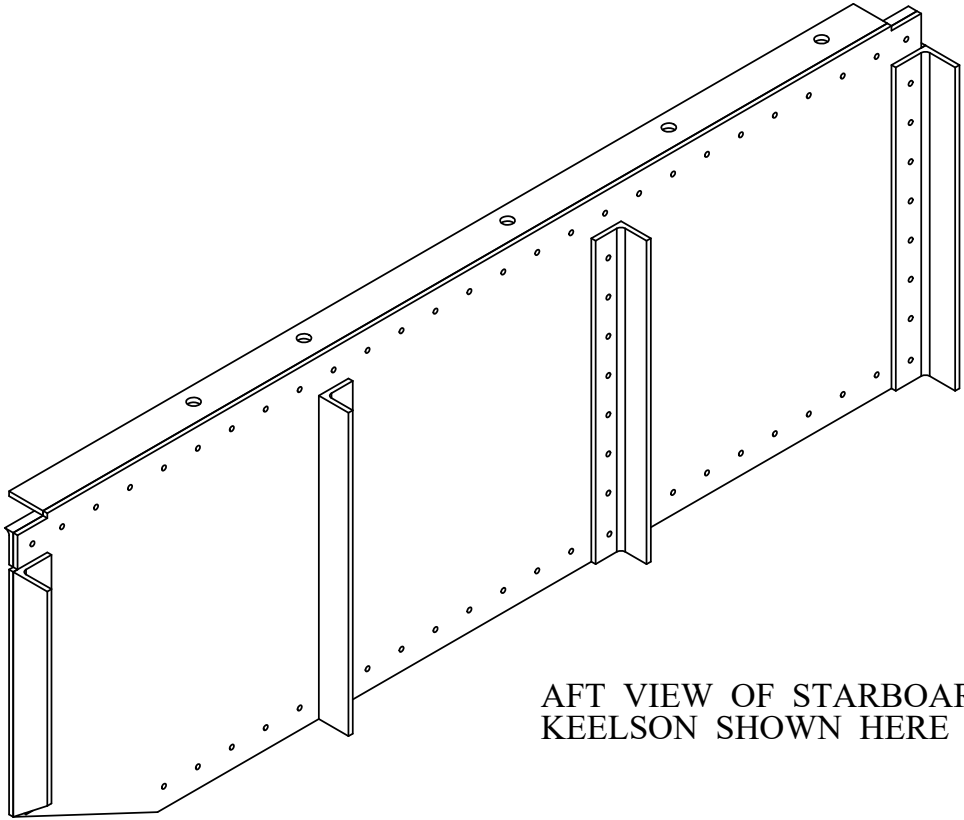


INSIDE VIEW

**NOTE : PORT KEELSON LAYOUT SHOWN HERE**  
ONLY HOLES USED TO MOUNT THE BEDPLATE ARE DISPLAYED

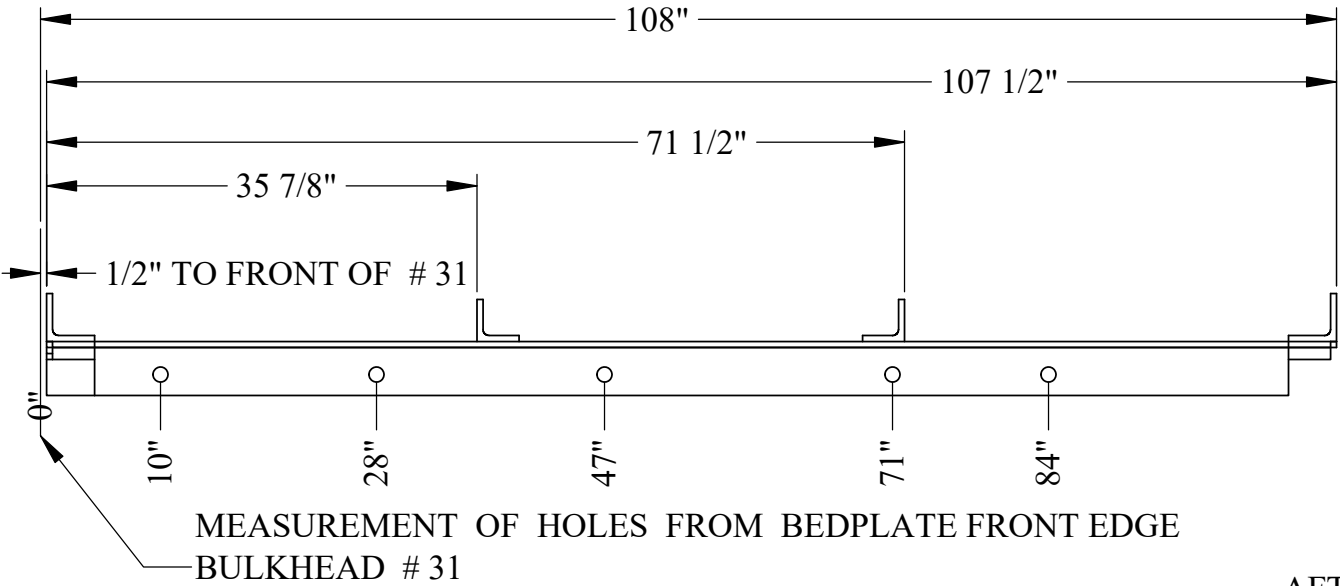
U.S.S. Monitor Steam Engine

Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 886.61	Description <b>Keelson Bulkhead - Outside Panel</b>	
Scale 1:24		
Part # <b>BH 13</b>		

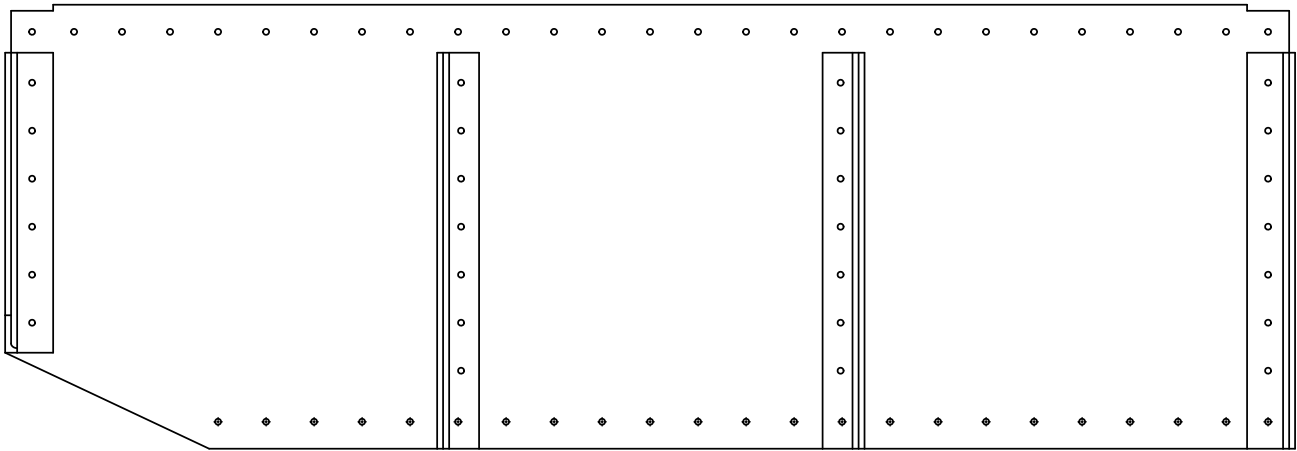


AFT VIEW OF STARBOARD  
KEELSON SHOWN HERE

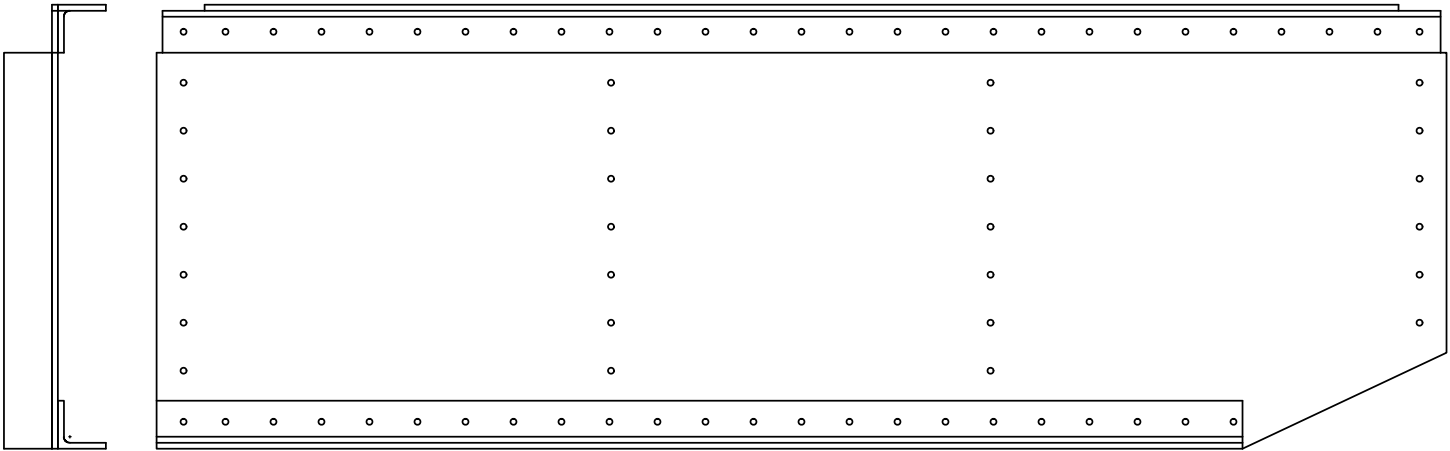
AFT



AFT



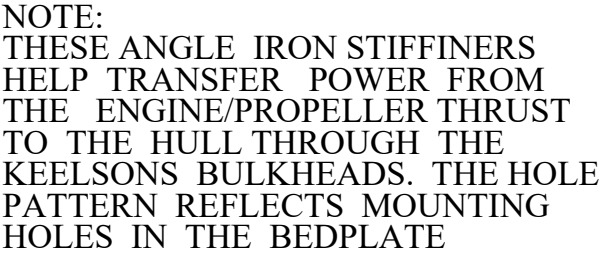
AFT



**NOTE : STARBOARD KEELSON SHOWN HERE**  
ONLY HOLES USED TO MOUNT THE BEDPLATE ARE DISPLAYED

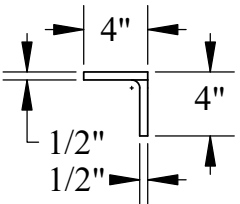
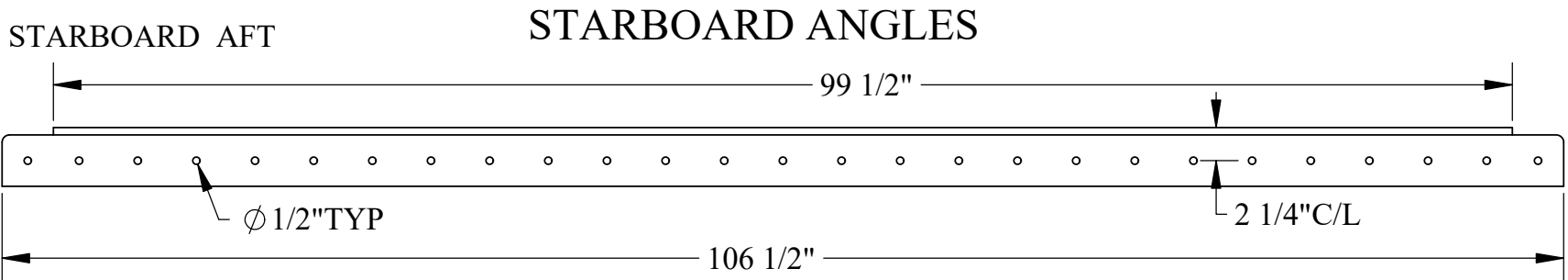
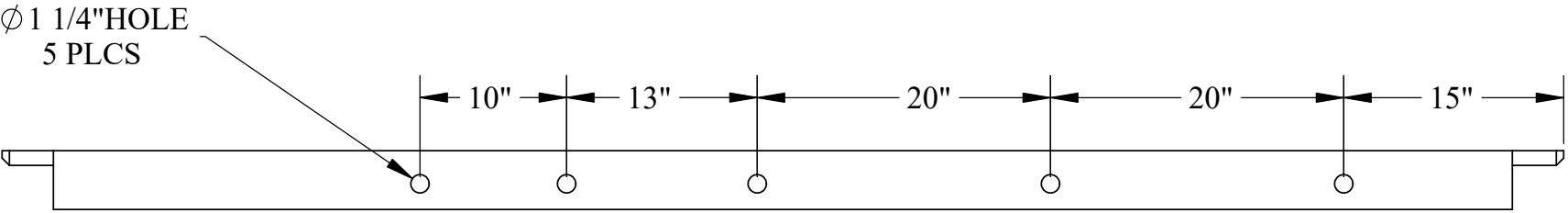
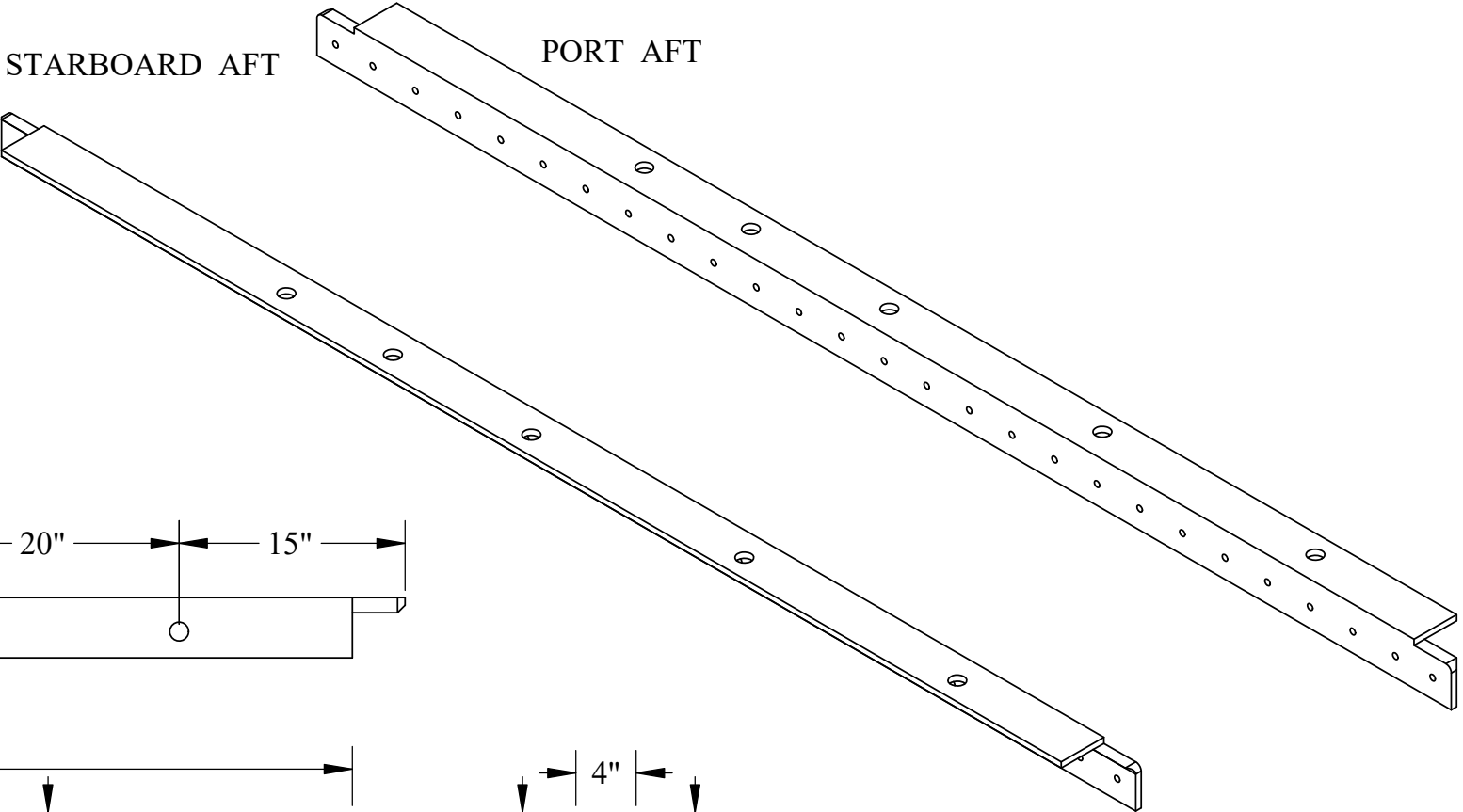
U.S.S. Monitor Steam Engine

Material STEEL	Drawn By - Date RWC 10-2018	Sub-Assembly Engine Bulkheads
Weight (Lbs) 885.70	Description <b>Keelson Bulkhead - Outside Panel</b>	
Scale 1:24		
Part # <b>BH 13</b>		



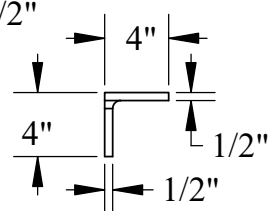
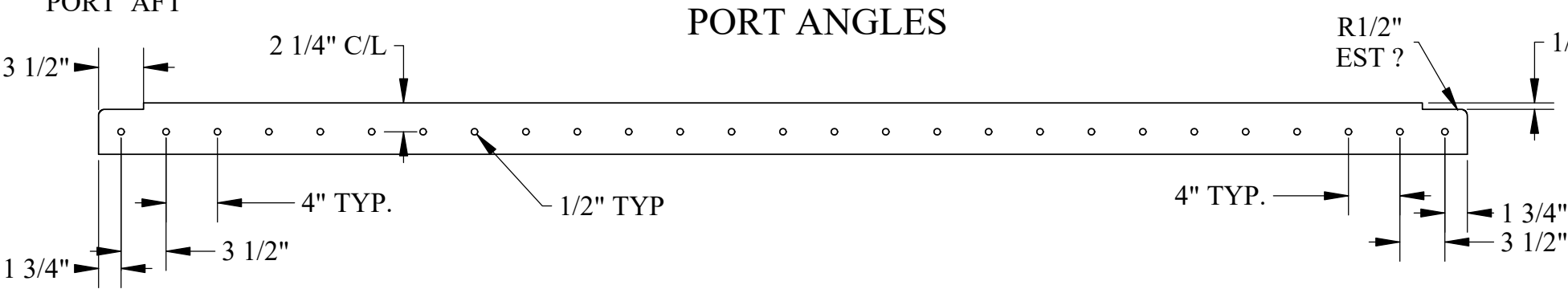
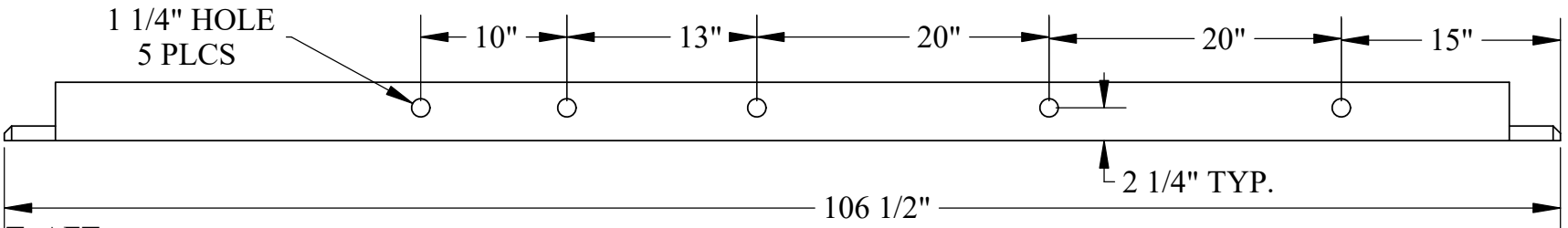
# U.S.S. Monitor Steam Engine

Material <b>STEEL</b>	Drawn By - Date RWC 9-2019	Sub-Assembly <b>Engine Bulkheads</b>
Weight (Lbs) <b>109.9 each</b>	Description	
Scale 1 : 12	<b>Keelson Bulkhead-O.P. Top Stiffeners P &amp; S</b>	
Part # <b>BH 14</b>		



NOTE:  
THESE ANGLE IRON STIFFENERS  
HELP TRANSFER POWER FROM  
THE ENGINE/PROPELLER THRUST  
TO THE HULL THROUGH THE  
KEELSON BULKHEADS. THE HOLE  
PATTERNS REFLECT THE MOUNTING  
HOLES IN THE BEDPLATE.

**ONLY THE INSIDE PANEL ( IP ) ANGLES  
HAVE THE SAME HOLE PATTERN , BUT  
MIRRORED !**



**U.S.S. Monitor Steam Engine**

Material STEEL	Drawn By - Date RWC 9-2019	Sub-Assembly Engine Bulkheads
Weight (Lbs) 109.9 each	Description <b>Keelson Bulkhead- I.P. Top Stiffeners P &amp; S</b>	
Scale 1:12		
Part # <b>BH 15</b>		