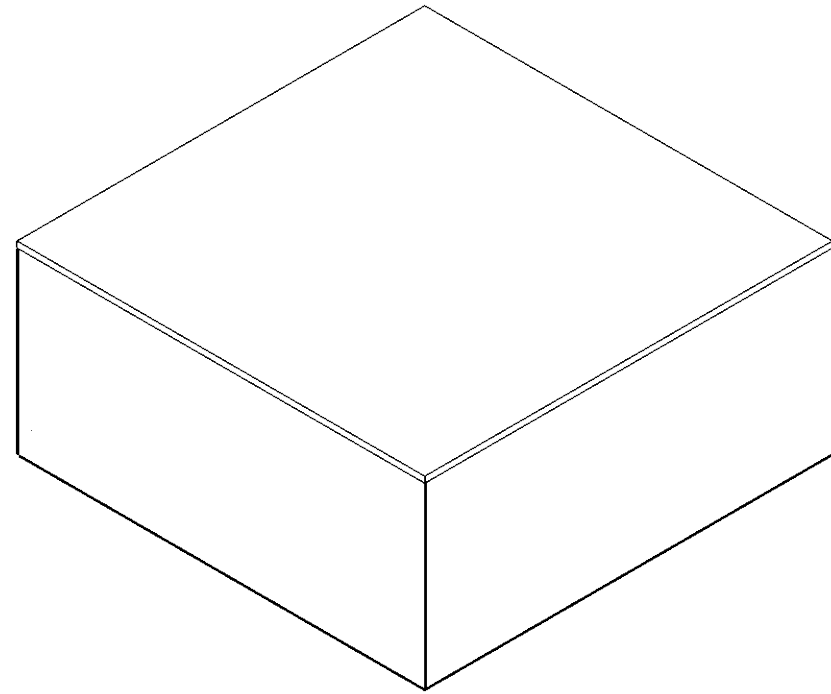


2



1

ITEM NO.	PART NUMBER	QTY.
1	TE-19102-01	4
2	TE-19102-02	5
3	TE-19102-03	8
4	TE-19102-04	1
5	TE-19102-05	3
6	TE-19102-06	4



Material	QTY
23/32" (3/4") A/C or CDX Plywood	0.5 sheet
1/8" Hardboard	0.75 sheet
2"x 4"x 8'	8
1.25" wood screws	~40
2.5" wood screws	~60

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 			
		DIMENSIONS ARE IN INCHES	DRAWN						
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$	Q.A.			TITLE: <h1>2"x 4" Hab Ivl 3</h1>			
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:						
		INTERPRET GEOMETRIC TOLERANCING PER:							
		MATERIAL				SIZE	DWG. NO.	REV	
NEXT ASSY	USED ON	FINISH				A	TE-19102		
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:16		WEIGHT:	SHEET 1 OF 5

2

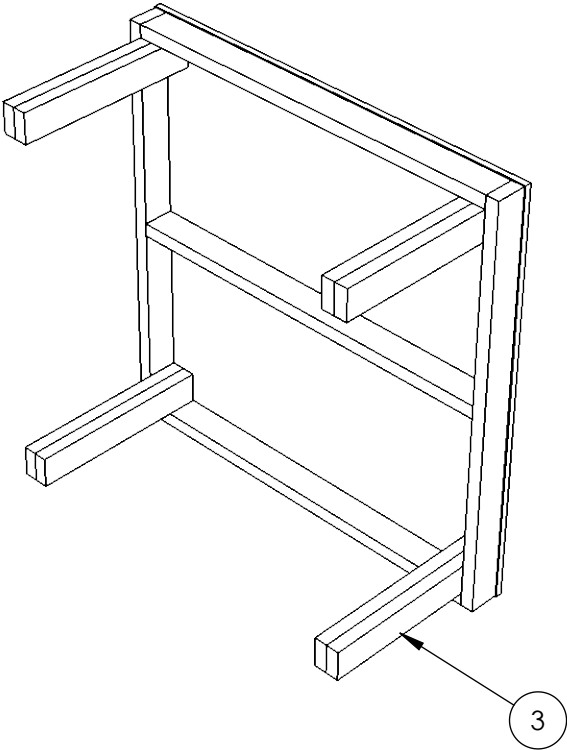
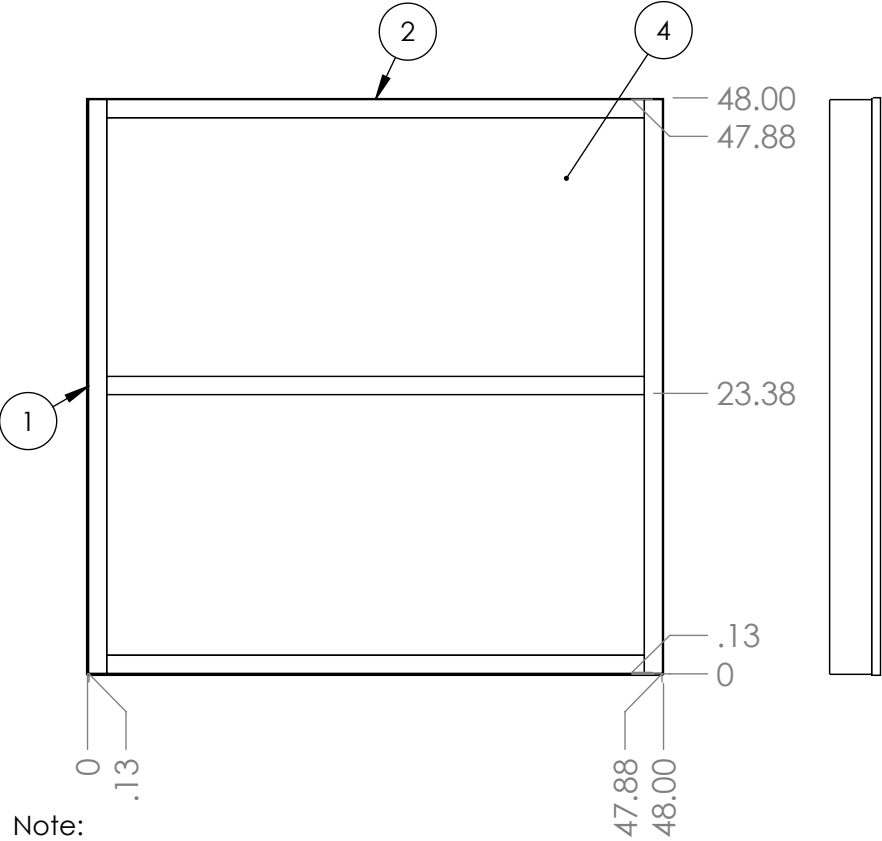
1

2

1

Step 1:

Step 2:





Note:
Attach 1 and 2 with 2.5" screws
Attach 1, 2, and 4 with 1.25" screws
Pre drill if needed

Note:
Assemble Item 3 QTY 2 together with 2.5" screws
Attach with 2.5" screws to rest of assembly

A

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		DIMENSIONS ARE IN INCHES		DRAWN		
		TOLERANCES:		CHECKED		
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		THREE PLACE DECIMAL ±.001		COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				SCALE: 1:16 WEIGHT: SHEET 2 OF 5
NEXT ASSY		USED ON				
APPLICATION		DO NOT SCALE DRAWING				

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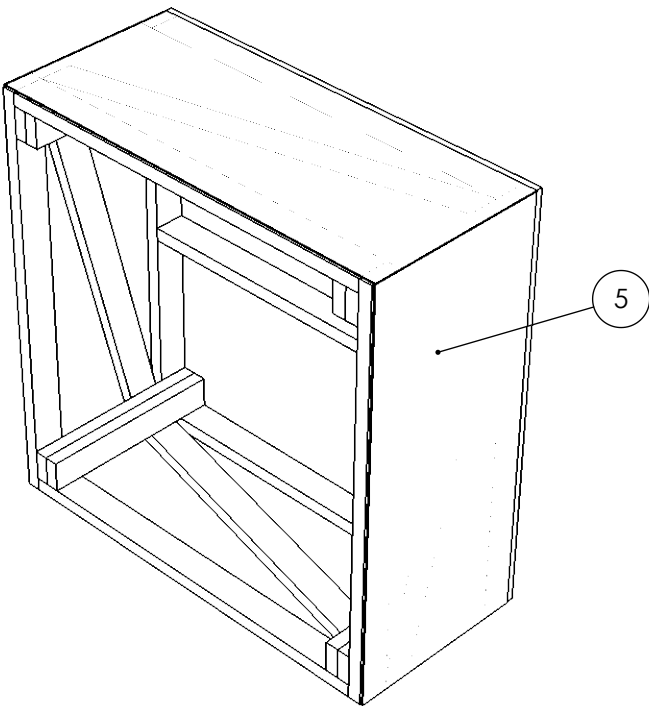
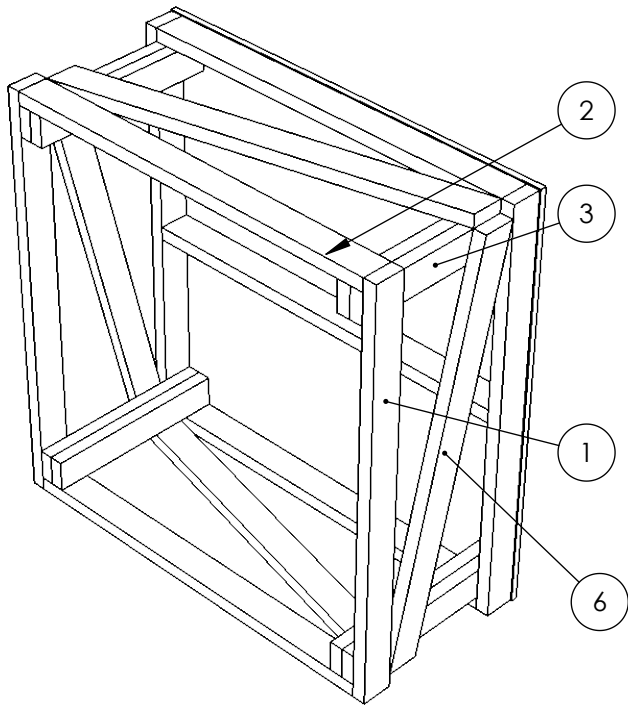
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2

1

Step 3:

Step 4



Note:

Assemble Item 2 and 1 to the bottom of 3 with 2.5" screws

Assemble Item 6 to assembly using 2.5" screws as shown

Add item 5 sides with 1.25" screws

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL ±1/16	ENG APPR.		
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.		
		TWO PLACE DECIMAL ±.01	Q.A.		
		THREE PLACE DECIMAL ±.001	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
2"x 4" Hab Ivl 3

SIZE	DWG. NO.	REV
A	TE-19102	
SCALE: 1:16		WEIGHT:
		SHEET 3 OF 5

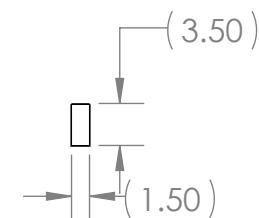
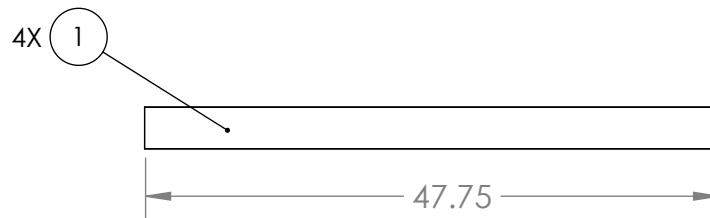
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1

2

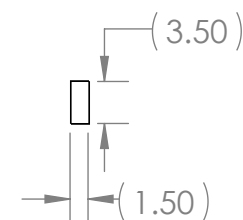
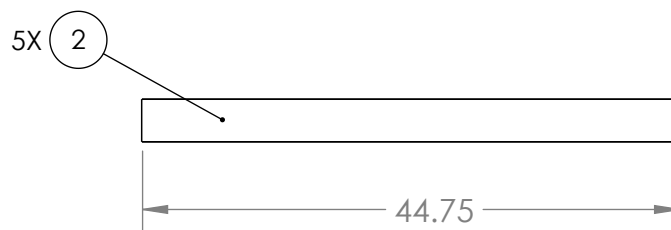
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TE-19102-01



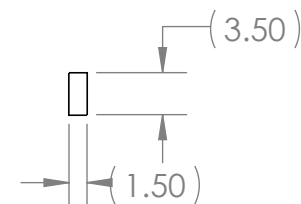
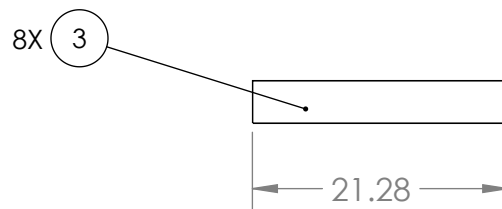
Note:
2 x 4 Pine Lumber

TE-19102-02



Note:
2 x 4 Pine Lumber

TE-19102-03



Note:
2 x 4 Pine Lumber

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		TOLERANCES:
		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC
		TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



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TITLE:

2"x 4" Hab lvl 3

SIZE

A

DWG. NO.

TE-19102

REV

SCALE: 1:16 WEIGHT:

SHEET 4 OF 5

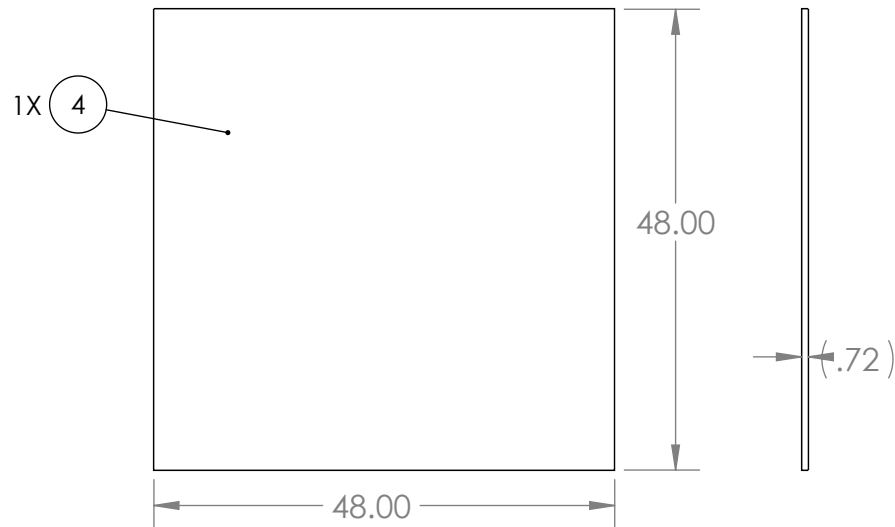
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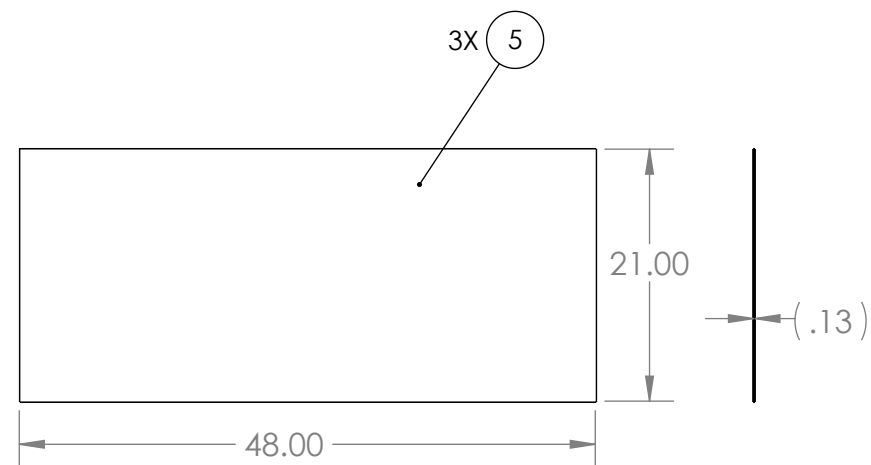
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1

TE-19102-04



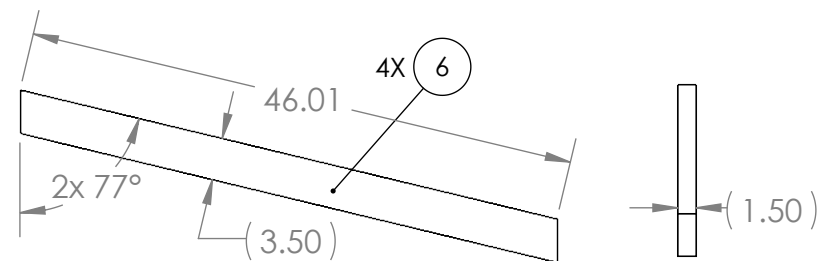
TE-19102-05



Note:
1/8" Hardboard

Note:
A/C or CDX 23/32" Plywood

TE-19102-06



Note:
2"x 4" Lumber Pine

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		TOLERANCES:	CHECKED	
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.	
		TWO PLACE DECIMAL $\pm .01$	Q.A.	
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:		
		MATERIAL		
NEXT ASSY	USED ON	FINISH		
APPLICATION		DO NOT SCALE DRAWING		



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Modeling Solutions Partner

TITLE:

2"x 4" Hab lvl 3

SIZE

A

DWG. NO.

TE-19102

REV

SCALE: 1:16 WEIGHT:

SHEET 5 OF 5

2

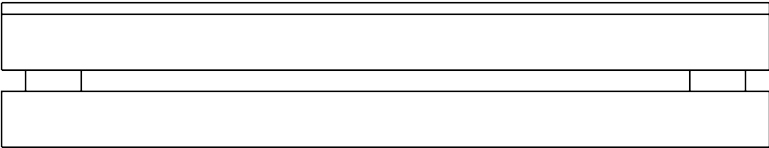
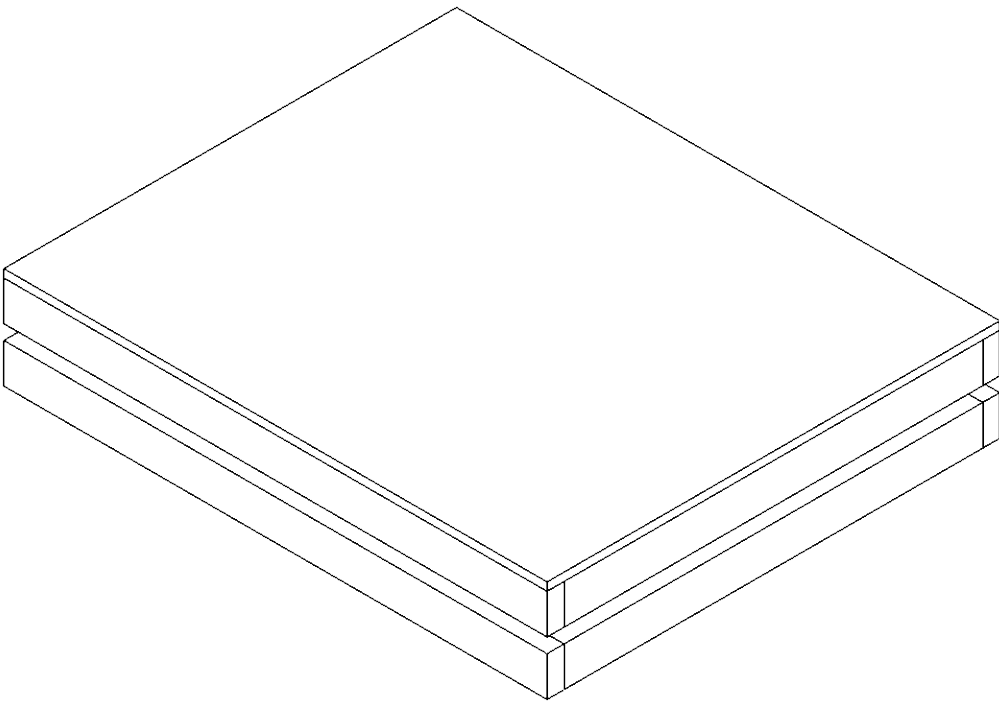
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2

1

ITEM NO.	PART NUMBER	QTY.
1	TE-19103-01	1
2	TE-19103-02	8
3	te-19103-03	4
4	TE-19103-04	5

Material	QTY
23/32" (3/4") A/C or CDX Plywood	0.5 sheet
2"x 4"x 8'	5
1.25" wood screws	~20
2.5" wood screws	~48



Note:
To build the entire Hab, build QTY 2 of the TE-19103

A

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		TOLERANCES:
		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:
2"X4" HAB v1 2

SIZE	DWG. NO.	REV
A	TE-19103	

SCALE: 1:12 WEIGHT: SHEET 1 OF 5

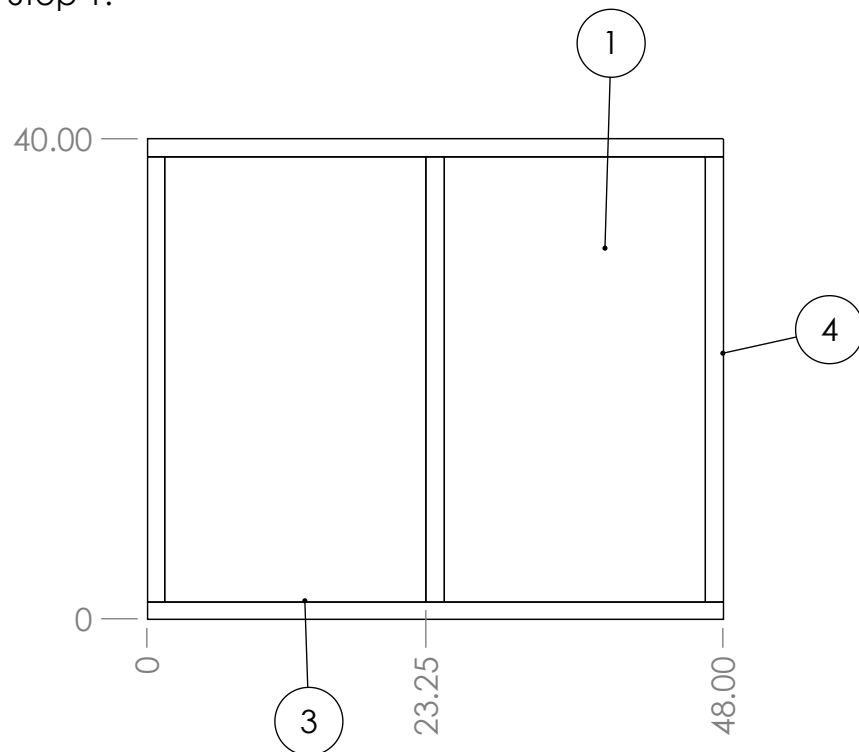
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1

2

1

Step 1:



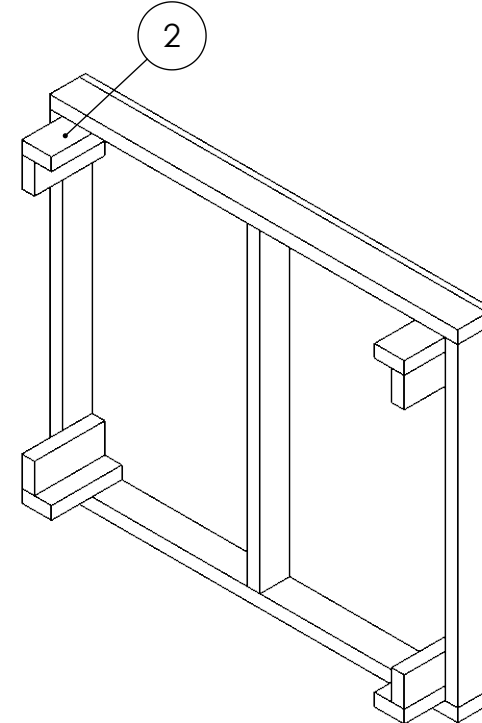
Note:

Attach item (3) and (4) with 2.5" screws

Attach item (1) to assembly with 1.25" screws

Pre drill if needed

Step 2:



Note:

Attach item (2) to assembly with 2.5" screws, as shown

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		DIMENSIONS ARE IN INCHES
		TOLERANCES:
		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
		FINISH
NEXT ASSY	USED ON	
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:

2"X4" HAB v1 2

SIZE	DWG. NO.	REV
A	TE-19103	
SCALE: 1:12 WEIGHT:		SHEET 2 OF 5

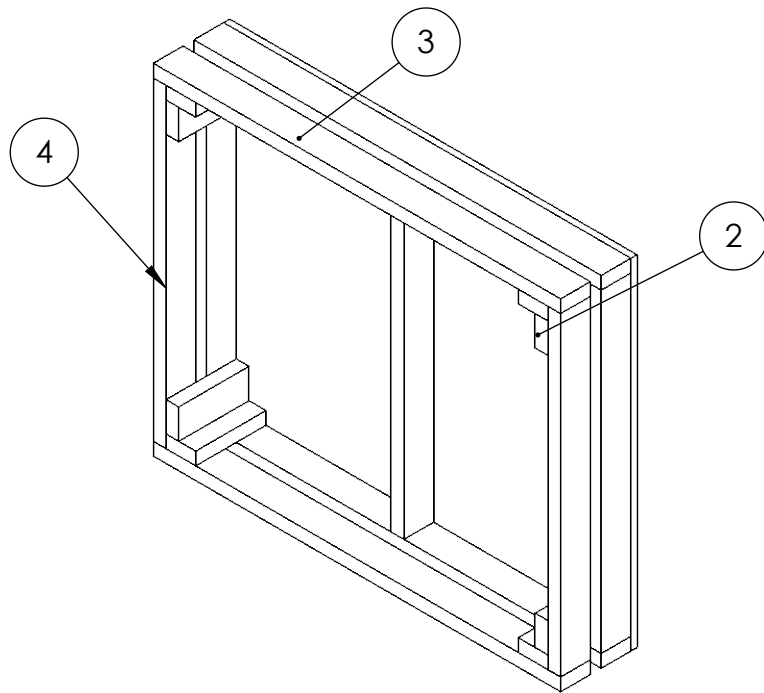
2

1

2

1

Step 3:



Note:

Attach item 4 and 3 to the lower part of item 2 with pre drilled 2.5" screw

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		FRACTIONAL $\pm 1/16$
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		TWO PLACE DECIMAL $\pm .01$
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		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



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TITLE:

2"X4" HAB v1 2

SIZE	DWG. NO.	REV
A	TE-19103	
SCALE: 1:12 WEIGHT:		SHEET 3 OF 5

2

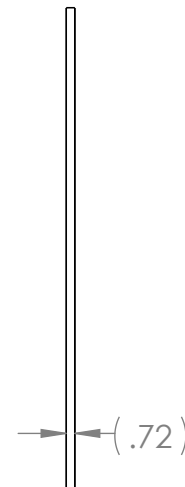
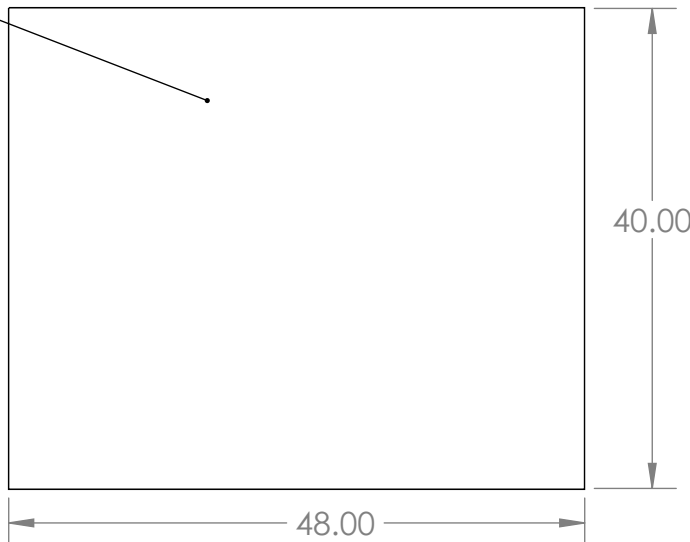
1

2

1

TE-19103-01

1X (1)



Notes:
A/C or CDX plywood 23/32"

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NEXT ASSY

USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



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TITLE:

2"X4" HAB IV 2

SIZE

A

DWG. NO.

TE-19103

REV

SCALE: 1:12 WEIGHT:

SHEET 4 OF 5

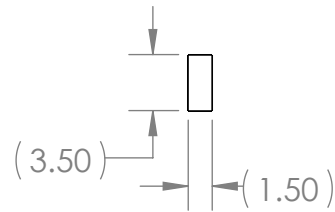
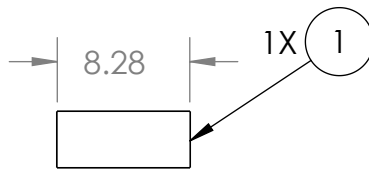
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1

2

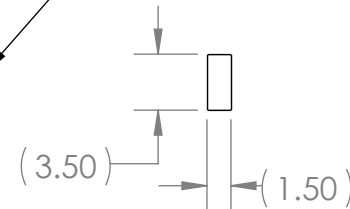
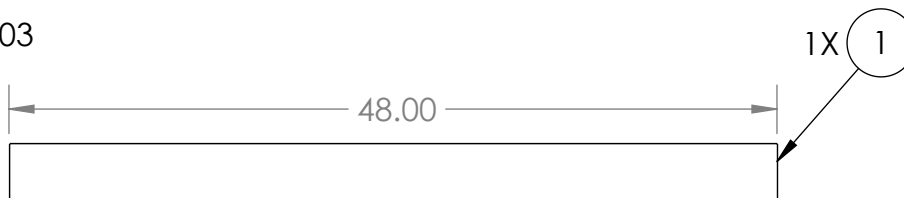
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TE-19103-02



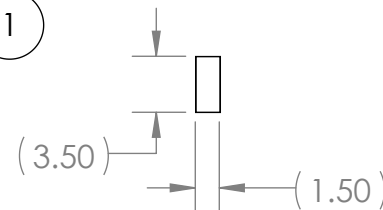
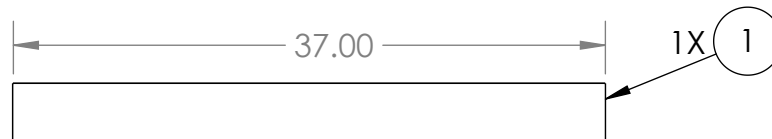
Notes:
2"x 4" Pine

TE-19103-03



Notes:
2"x 4" Pine

TE-19103-04



Notes:
2"x 4" Pine

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		TOLERANCES:
		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
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		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



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COMPETITION**

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Modeling Solutions Partner

TITLE:

2"X4" HAB v1 2

SIZE

A

DWG. NO.

TE-19103

REV

SCALE: 1:12 WEIGHT:

SHEET 5 OF 5

2

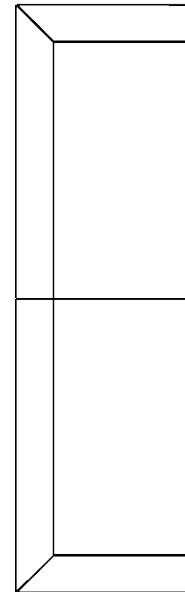
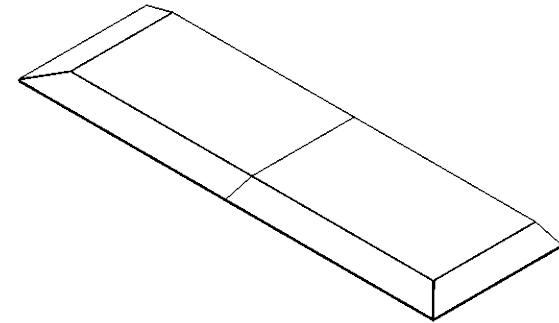
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2

1

ITEM NO.	PART NUMBER	QTY.
1	TE-19104-01	2
2	TE-19104-02	2
3	TE-19104-03	2
4	TE-19104-04	4
5	TE-19104-05	2
6	TE-19104-06	8
7	TE-19104-07	2

Material	QTY
23/32" (3/4") A/C or CDX Plywood	2 sheets
2"x 4"x 8' Lumber Pine	8
1.25 wood screws	~70
2.5 wood screws	~50





B

B

A

A

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		DIMENSIONS ARE IN INCHES		DRAWN			TITLE: <h1>Full Hab Ivl 1</h1>
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		THREE PLACE DECIMAL $\pm .001$		COMMENTS:			
INTERPRET GEOMETRIC TOLERANCING PER:							
MATERIAL						SCALE: 1:48 WEIGHT: SHEET 1 OF 5	
NEXT ASSY	USED ON	FINISH					
APPLICATION		DO NOT SCALE DRAWING					

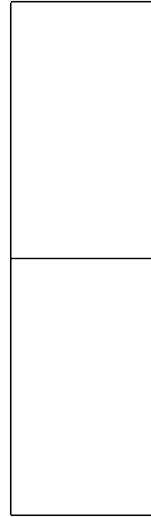
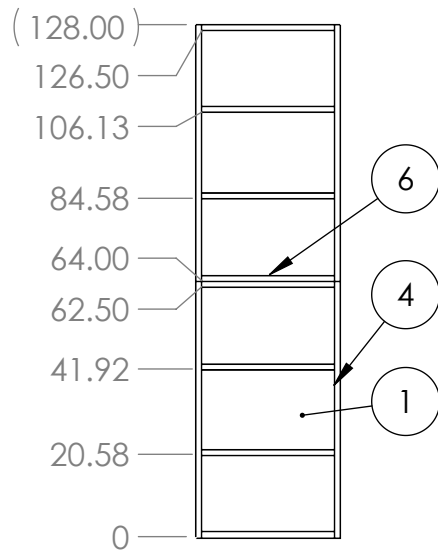
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Step 1

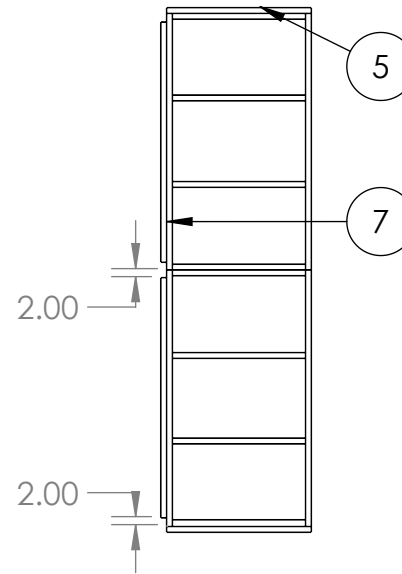


Assembly notes:

Assemble (6) and (4) to make frame
pre drill and use 2.5" screws

Attach (1) to the frame; pre-drill and use 1.25" screws

Step 2





Assembly notes:

Attach (5) and (7) to assembly as shown
Pre-drill and use 2.5" screws

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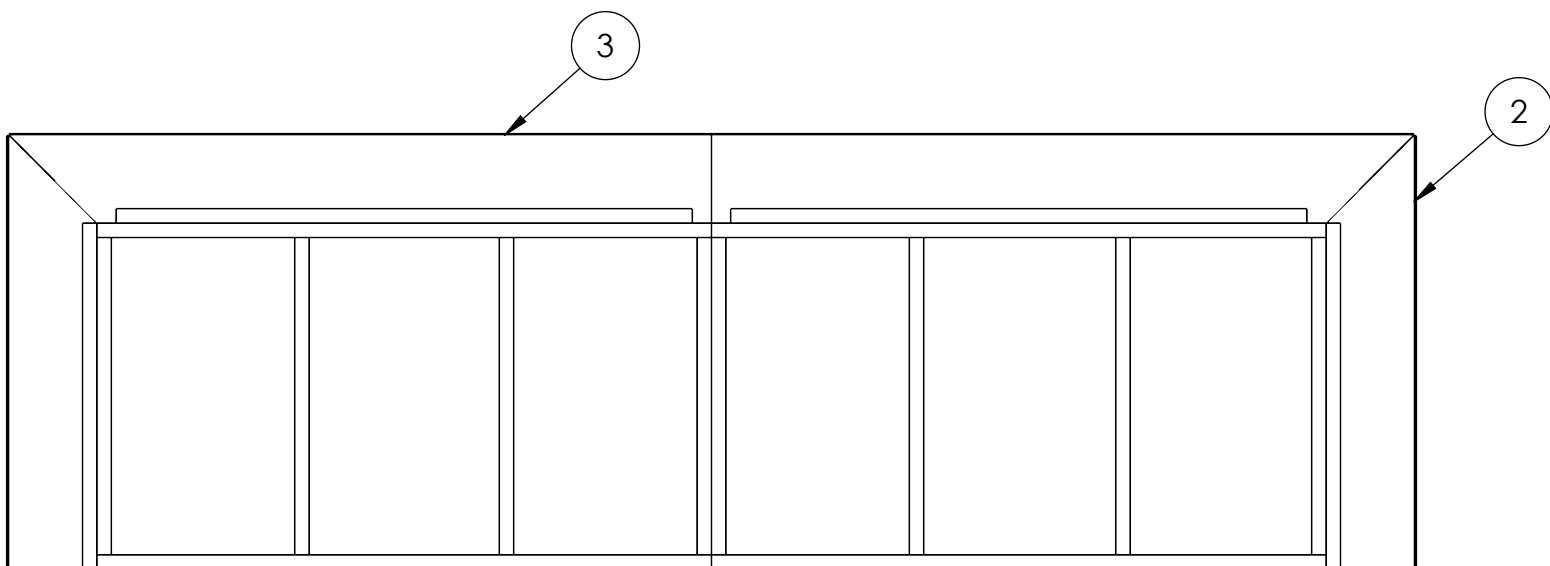
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		TOLERANCES:
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

 		
TITLE: Full Hab lvl 1		
SIZE A	DWG. NO. TE-19104	REV
SCALE: 1:48		WEIGHT:
SHEET 2 OF 5		

2

1





Assembly notes:

Attach 3 and 2 to assembly as shown
Pre-drill and use 1.25" screws

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

TITLE:
Full Hab lvl 1

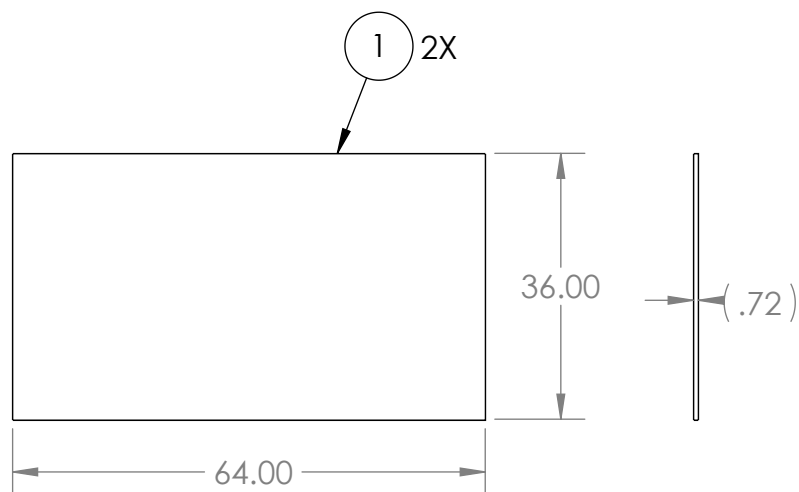
SIZE A	DWG. NO. TE-19104	REV
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SCALE: 1:48	WEIGHT:	SHEET 3 OF 5
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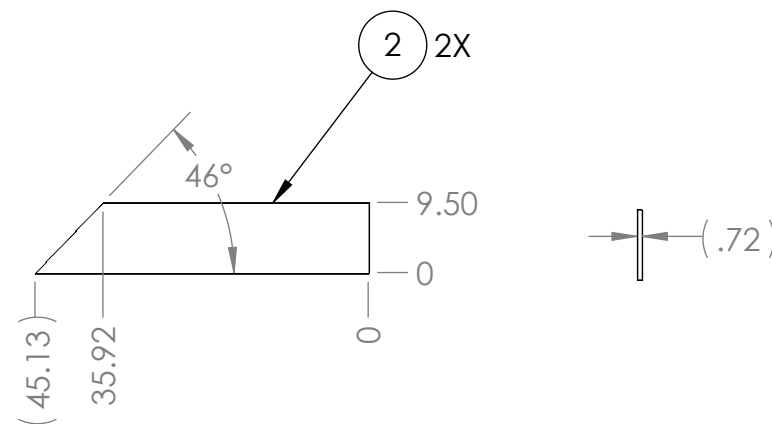
2

1

TE-19104-01



TE-19104-02





Note:
23/32"(3/4") A/C or CDX Plywood

Note:
23/32"(3/4") A/C or CDX Plywood

A

A

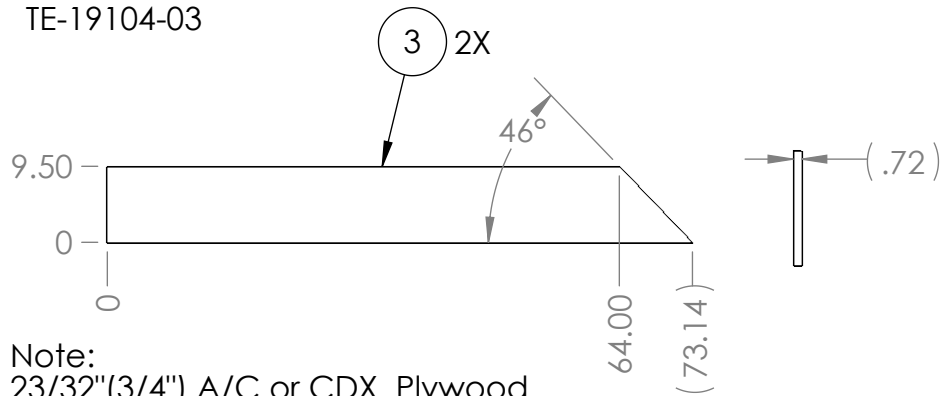
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . Any REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 
			DIMENSIONS ARE IN INCHES	DRAWN			
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			ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.			TITLE: <h1>Full Hab Ivl 1</h1>
			TWO PLACE DECIMAL $\pm .01$	Q.A.			
			THREE PLACE DECIMAL $\pm .001$	COMMENTS:			
			INTERPRET GEOMETRIC TOLERANCING PER:				SIZE DWG. NO. REV
			MATERIAL				A TE-19104
	NEXT ASSY	USED ON	FINISH				SCALE: 1:48 WEIGHT: SHEET 4 OF 5
	APPLICATION		DO NOT SCALE DRAWING				

2

1

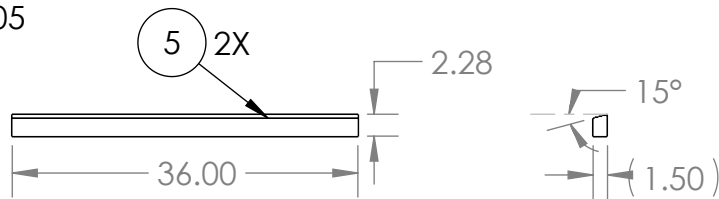
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TE-19104-03



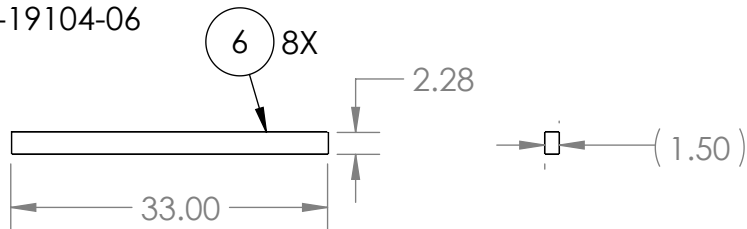
Note:
23/32"(3/4") A/C or CDX Plywood

TE-19104-05



Note:
2"x 4" Pine lumber

TE-19104-06



Note:
2"x 4" Pine lumber

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NEXT ASSY

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APPLICATION

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TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
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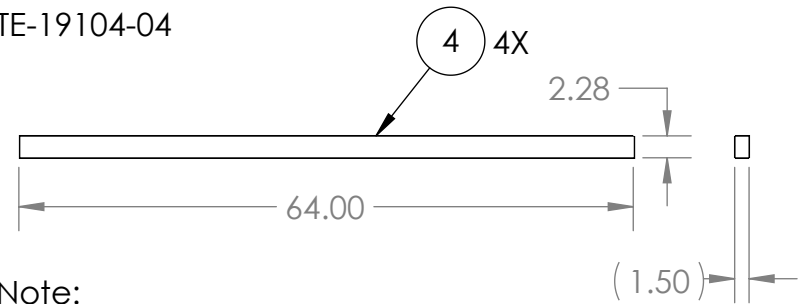
INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

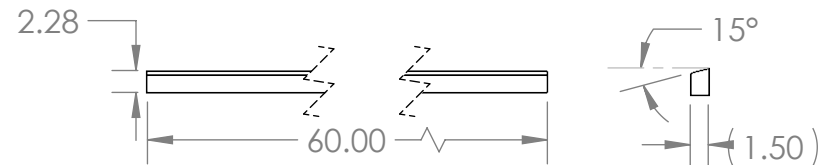
DO NOT SCALE DRAWING

TE-19104-04



Note:
2"x 4" Pine lumber

TE-19104-07



Note:
2"x 4" Pine lumber



**FIRST
ROBOTICS
COMPETITION**

SOLIDWORKS
Modeling Solutions Partner

TITLE:

Full Hab lvl 1

SIZE

A

DWG. NO.

TE-19104

REV

SCALE: 1:48 WEIGHT:

SHEET 5 OF 5

B

A

2

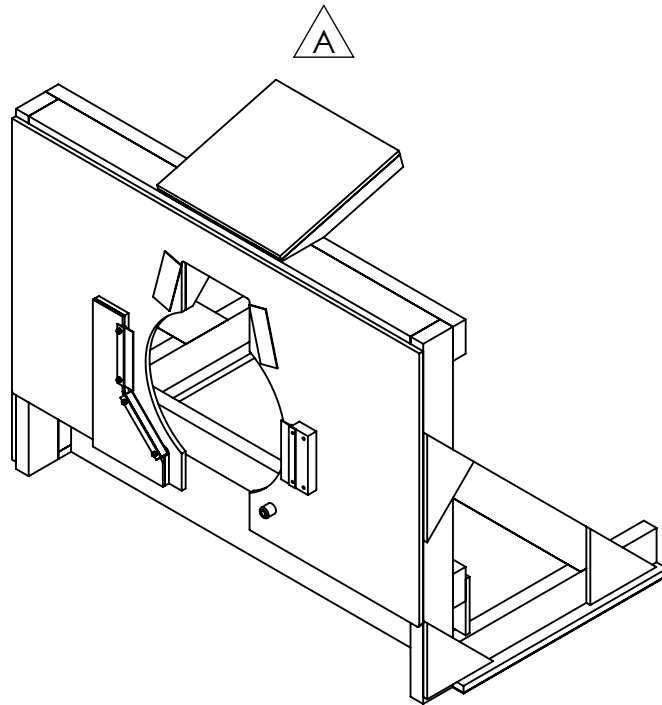
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B2, 2-B2, 13-B1, 15-B2	A	Moved materials table to sheet 2. Updated dimensions of TE-19108-16 to more closely match field elements. Added sheet with modification instructions to make initial Rev perform as Rev A intends.	1/30/2019	

This diagram shows the front panel assembly in an exploded view. The main front panel is a large rectangular piece. A top panel is shown being aligned with the top edge of the front panel. A central latch mechanism, consisting of a curved metal piece and a rectangular plate, is shown being aligned with the center of the front panel. A bottom panel is shown being aligned with the bottom edge of the front panel. A small circular hole is visible on the front panel, likely for a screw or pin.

A

B



B

Material	QTY
Flat head 10-24 X0.625"	4
15/32"(1/2") A/C or CDX Plywood	1 sheet
1/4" Hardboard	1 (2'x4') sheet
2"x 4"x 8'	5.5
Frost King C35PH	1
McMaster 9540K953	1
Button Head 1/4"-20 x 1.25	1
Nylock 1/4"-20	1
Nylock 10-24	4
Frost King door sweep	1
2" Hook Fastener	48"
2" Vison Tape	11"
1.25" wood screws	~90
2.5" wood screws	~40

A

A

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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:

Loading Station

SIZE	DWG. NO.	REV
A	TE-19108	A
SCALE: 1:16	WEIGHT:	SHEET 2 OF 15

2

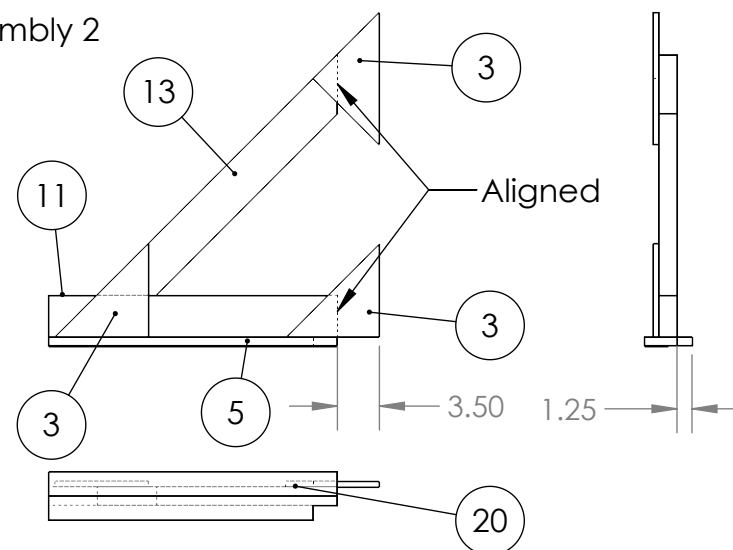
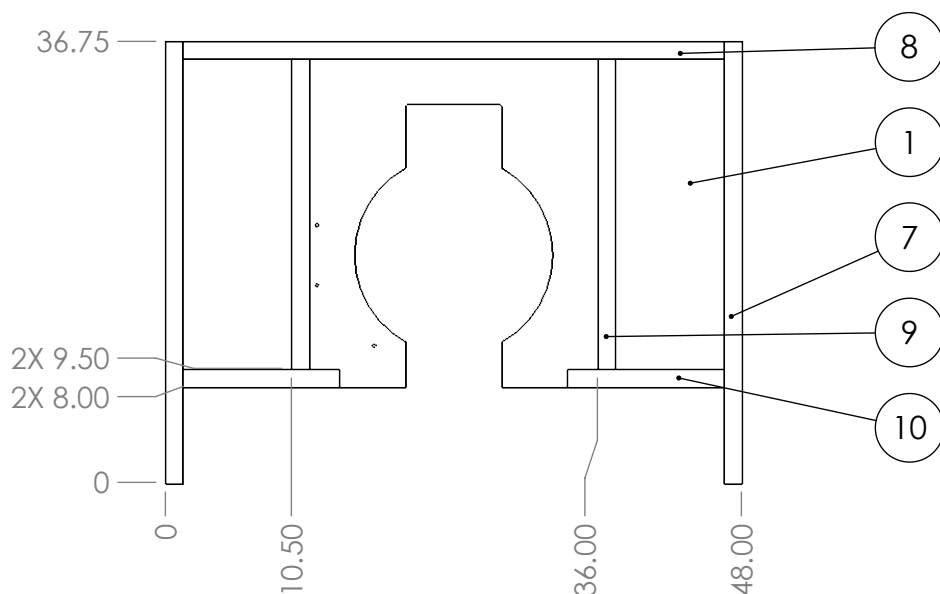
1

2

1

Subassembly 1

Subassembly 2



Note:

- Attach 9 10 7 8 together to make a frame. Use 2.5" screws to attach.
- Attach 1 to the frame flush to 7 and 10. Use 1.25" screws.
- Pre-drill as necessary

Note:

- Attach 13 to 11 with 2.5" screws. Reinforce with 3.
- Attach two more 3 as shown using 1.25" screws.
- Attach 20 as shown with 1.25" screws. Apply 20 to bottom.

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		TOLERANCES:
		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
		FINISH
NEXT ASSY	USED ON	
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:

Loading Station

SIZE	DWG. NO.	REV
A	TE-19108	A
SCALE: 1:16	WEIGHT:	SHEET 3 OF 15

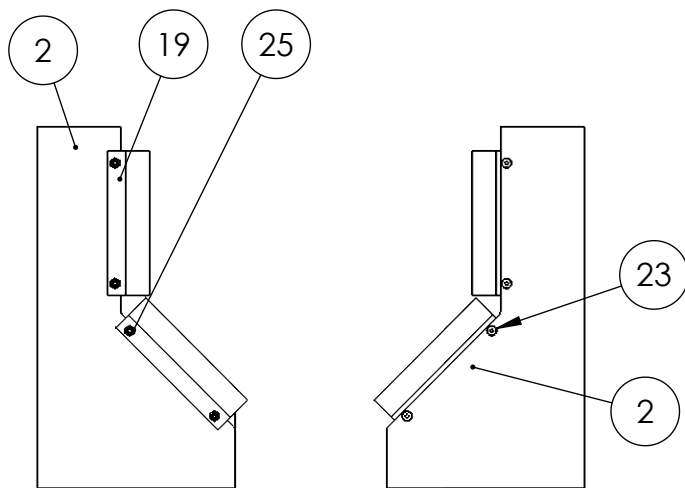
2

1

2

1

B



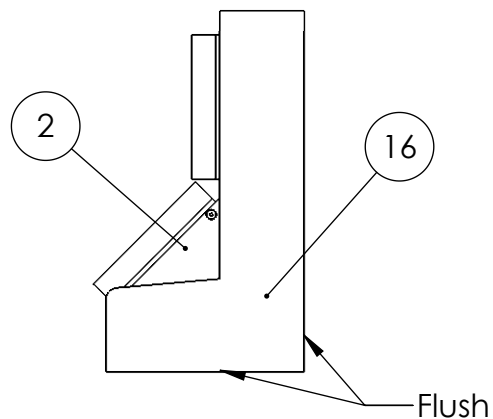
Front

Back

Note:

Attach (19) to (2) with (23) and (25).

Subassembly 3:



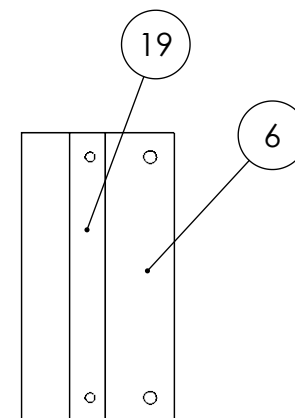
Flush

Note:

- Attach (16) to the back of (2) flush on indicated edges.

- Use 1.25" screws, but do not screw in all the way.

Subassembly 4:



Note:

Attach (19) to (6) with 1.25" screws

B

A

A

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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



FIRST
ROBOTICS
COMPETITION

3D SOLIDWORKS
Modeling Solutions Partner

TITLE:

Loading Station

SIZE

A

DWG. NO.

TE-19108

REV

A

SCALE: 1:16 WEIGHT:

SHEET 4 OF 15

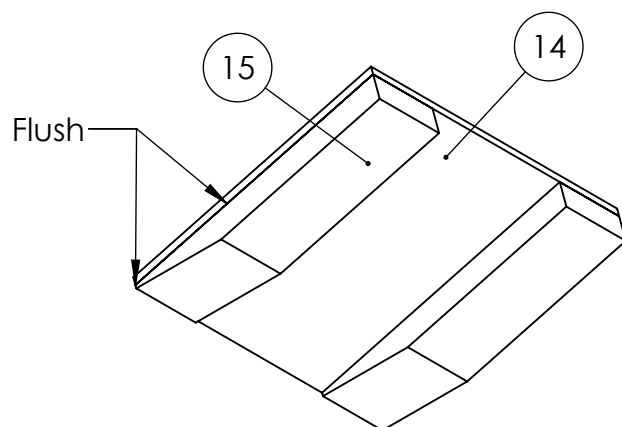
2

1

2

1

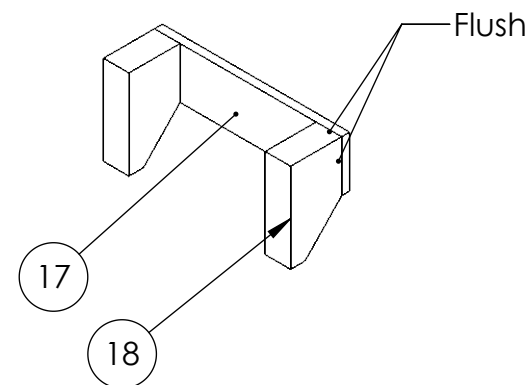
Subassembly 5:



Note:

- Attach 14 to 15 with 1.25" screws.
- Keep flush at indicated edges.

Subassembly 6:



Note:

- Attach 17 to 18 with 1.25" screws
- Keep flush at indicated edges.

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NEXT ASSY

USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



FIRST
ROBOTICS
COMPETITION

SOLIDWORKS
Modeling Solutions Partner

TITLE:

Loading Station

SIZE

A

DWG. NO.

TE-19108

REV

A

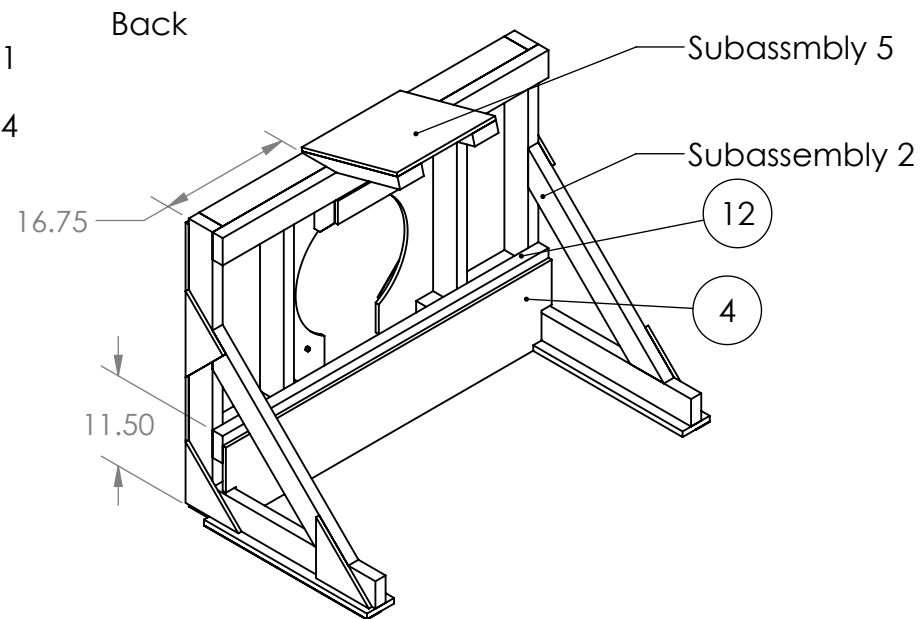
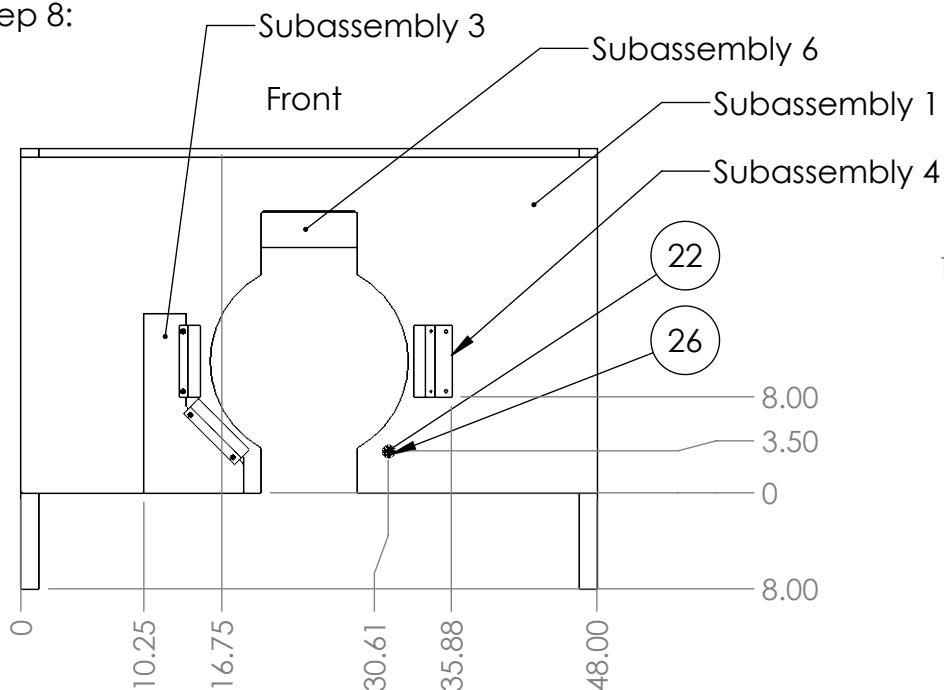
SCALE: 1:16 WEIGHT:

SHEET 5 OF 15

2

1

Step 8:



Note:

- Attach Subassembly 3 to Subassembly 1 using 1.25" screws.
- Attach Subassembly 4 to Subassembly 6 using 1.25" screws.
- Attach Subassembly 6 using 2.5" screws. Keep sides and top flush to opening.

Notes:

- Attach Subassembly 2 to the sides of Subassembly 1.
- Attach Subassembly 5 as shown. Use 2.5" screws to attach.
- Attach (12) using 2.5" screws.
- Attach (4) to (12) using 1.25" screws

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		TWO PLACE DECIMAL $\pm .01$		Q.A.	
		THREE PLACE DECIMAL $\pm .001$		COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



FIRST
ROBOTICS
COMPETITION



TITLE:

Loading Station

SIZE

A

DWG. NO.

TE-19108

REV

A

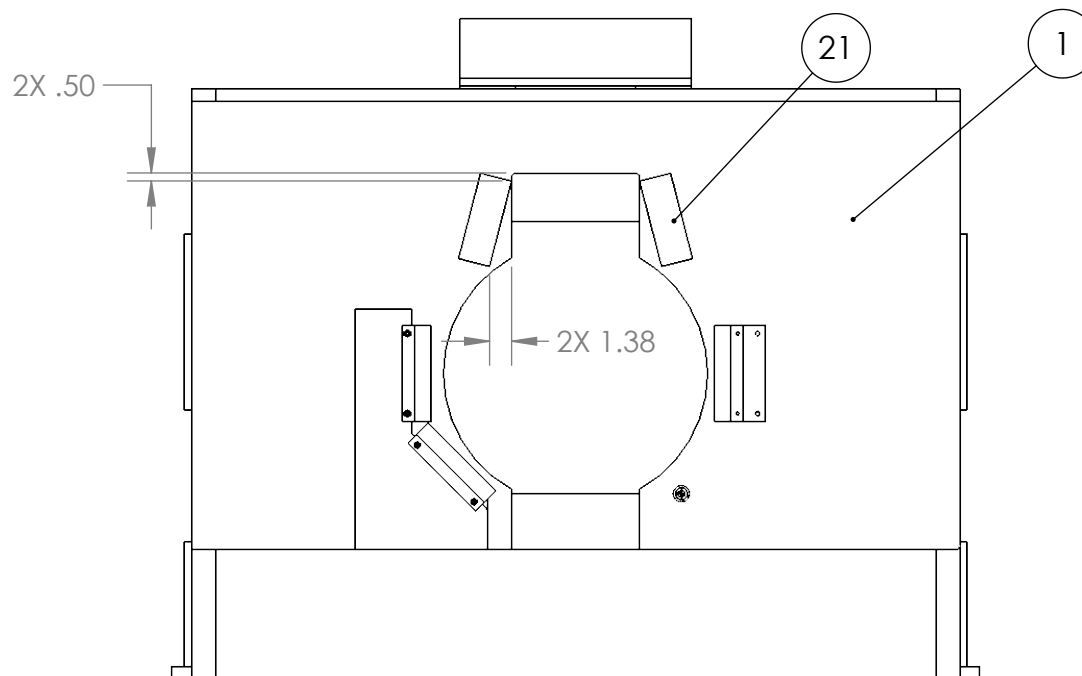
SCALE: 1:16 WEIGHT:

SHEET 6 OF 15

2

1

Step 10:



Note:

Attach (21) to (1) as shown.

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		TWO PLACE DECIMAL $\pm .01$
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NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
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ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



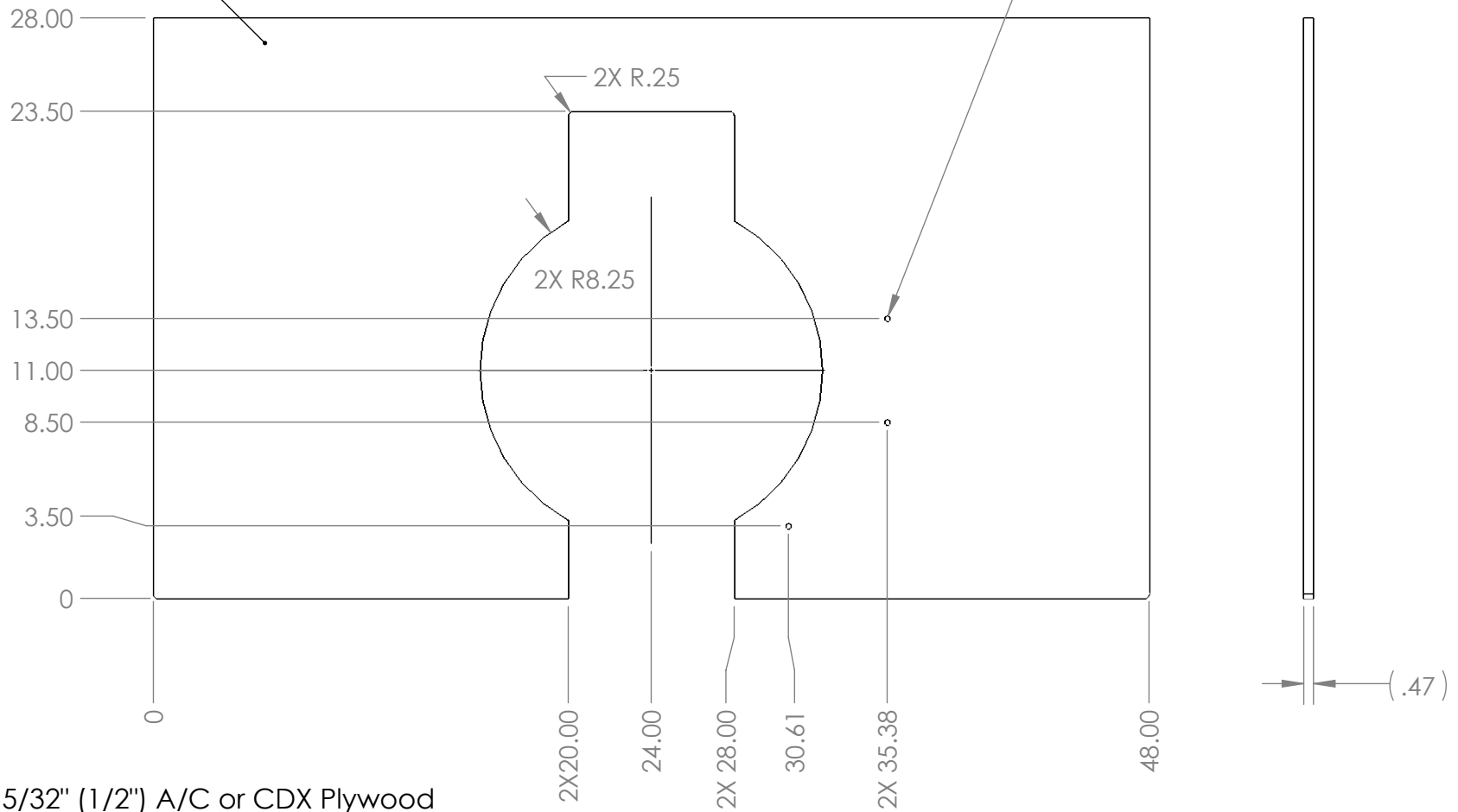
TITLE:
Loading Station

SIZE	DWG. NO.	REV
A	TE-19108	A
SCALE: 1:16		WEIGHT:
		SHEET 7 OF 15

2

1

TE-19108-01



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		MATERIAL
NEXT ASSY	USED ON	FINISH
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COMMENTS:		

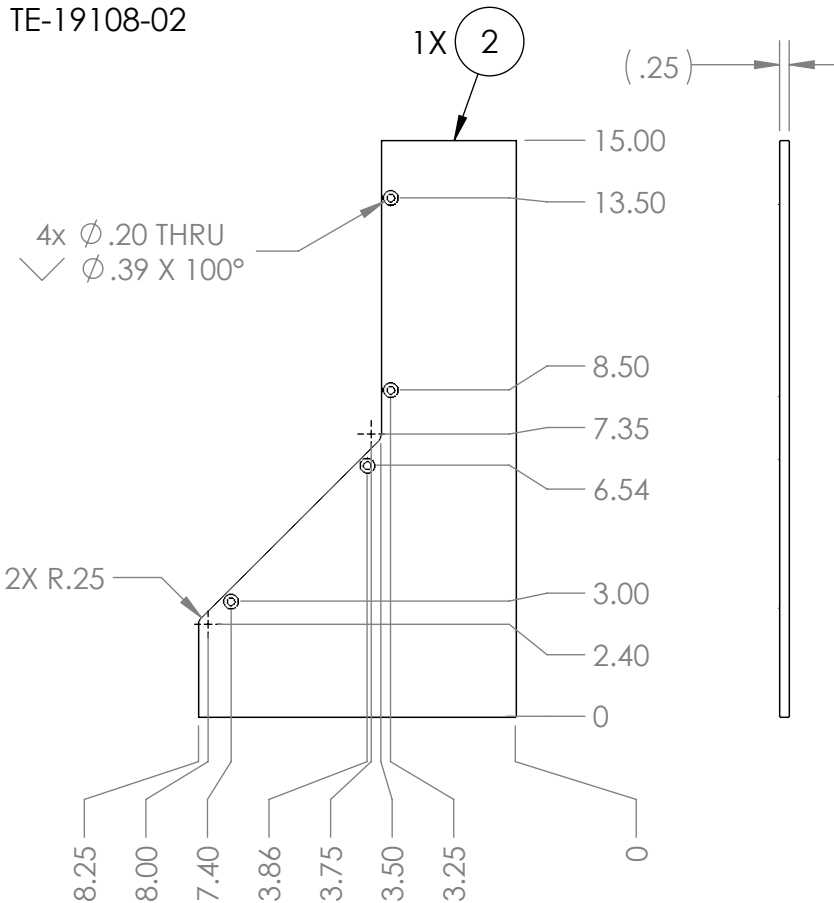


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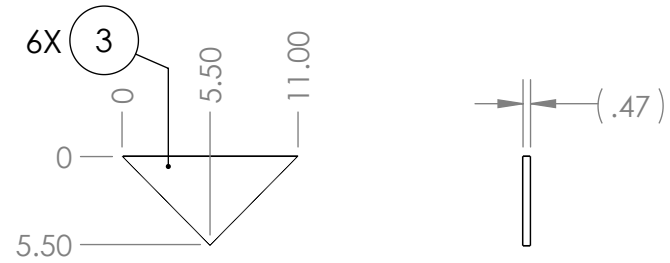
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SCALE: 1:16		WEIGHT:
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TE-19108-02



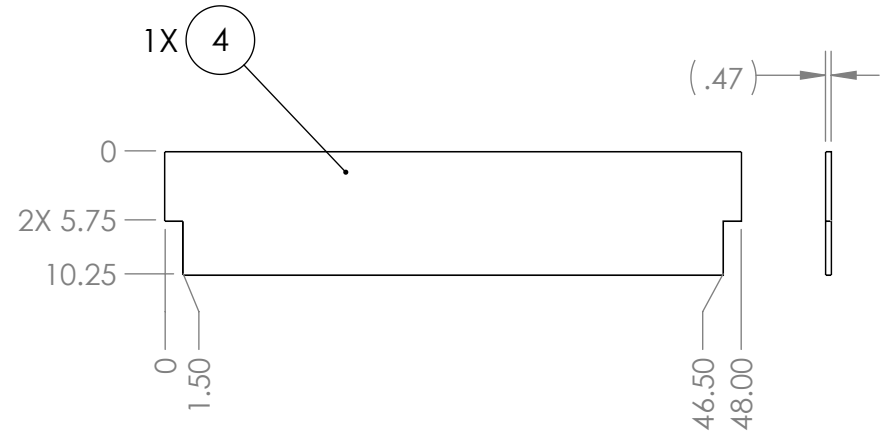
Note:
Material 1/4" Hardboard

TE-19108-03



Note:
Material 15/32" (1/2") A/C or CDX Plywood

TE-19108-04



Note:
Material 15/32" (1/2") A/C or CDX Plywood

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		FRACTIONAL ±1/16
		ANGULAR: MACH ±1° BEND ±1°
		TWO PLACE DECIMAL ±.01
		THREE PLACE DECIMAL ±.001
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
		FINISH
NEXT ASSY	USED ON	
APPLICATION		DO NOT SCALE DRAWING

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DRAWN		
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ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:

Loading Station

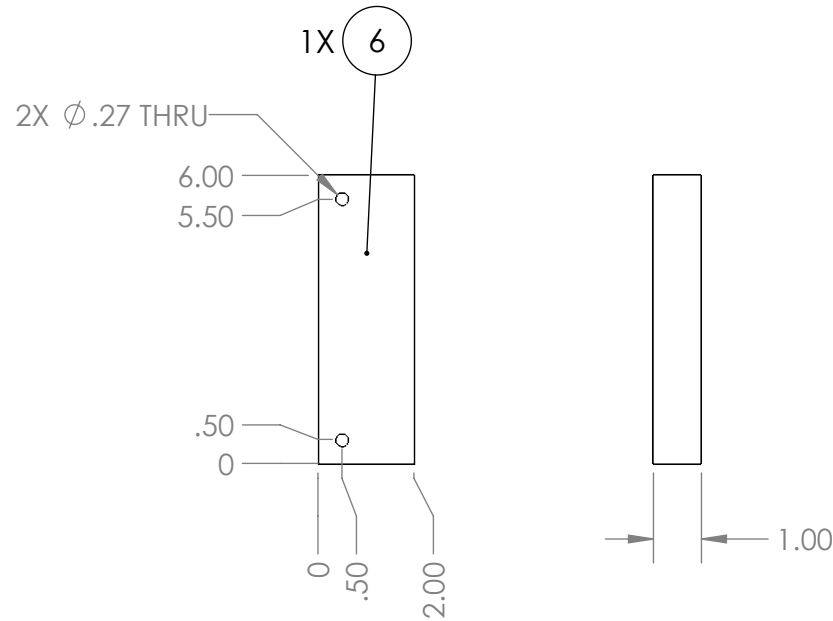
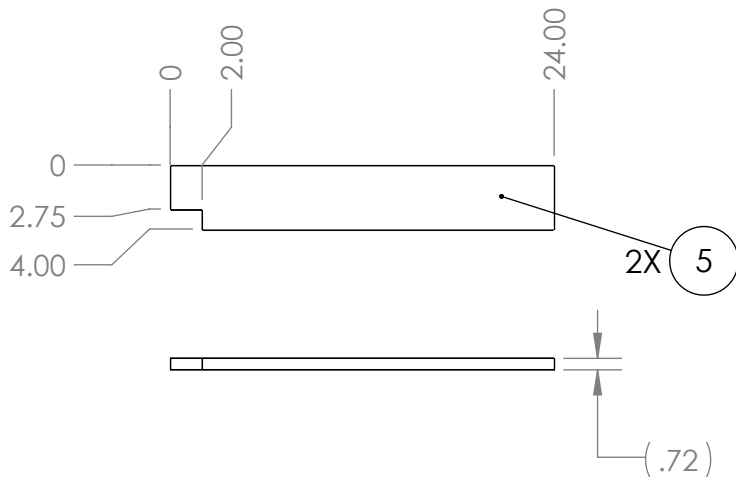
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A	TE-19108	A
SCALE: 1:16		WEIGHT:
		SHEET 9 OF 15

2

1

TE-19108-05

TE-19108-06



Note:
Material 23/32" (3/4") A/C or CDX Plywood

Notes:
Material 2"x 4" Lumber Pine

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		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
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ENG APPR.		
MFG APPR.		
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COMMENTS:		



TITLE:
Loading Station

SIZE	DWG. NO.	REV
A	TE-19108	A

SCALE: 1:16 WEIGHT: SHEET 10 OF 15

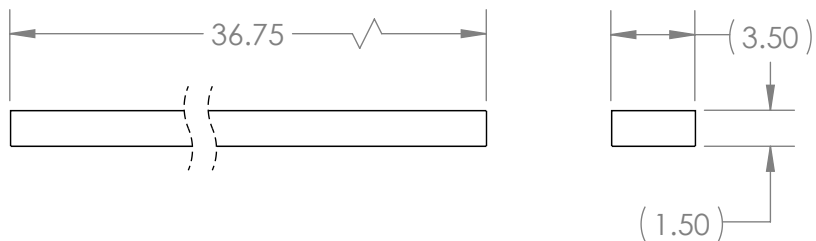
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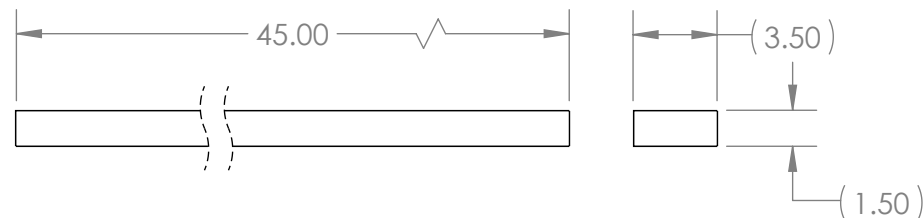
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TE-19108-07



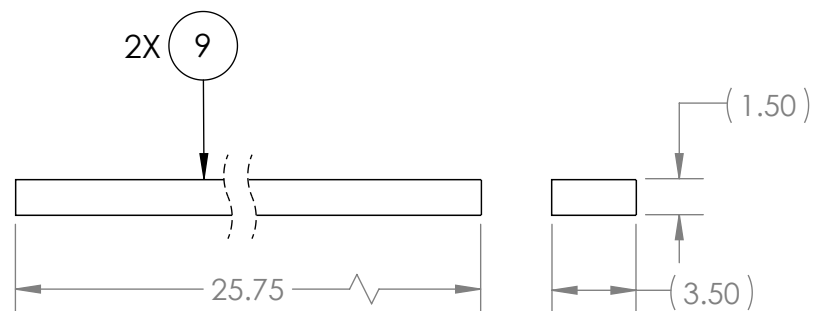
Notes:
Material 2"x 4" Lumber Pine

TE-19108-08



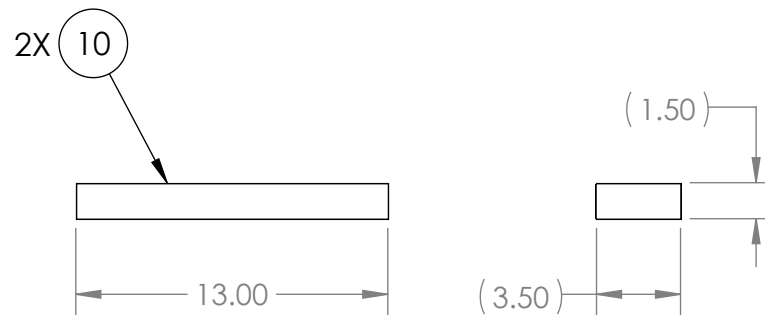
Notes:
Material 2"x 4" Lumber Pine

TE-19108-09



Notes:
Material 2"x 4" Lumber Pine

TE-19108-10



Notes:
Material 2"x 4" Lumber Pine

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TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



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TITLE:

Loading Station

SIZE

A

DWG. NO.

TE-19108

REV

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SCALE: 1:16 WEIGHT:

SHEET 11 OF 15

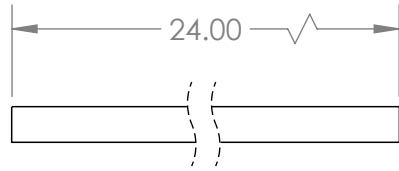
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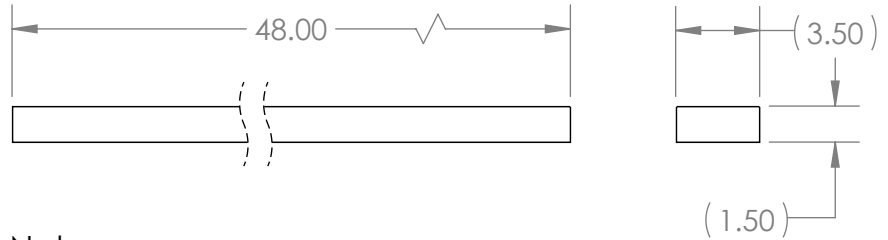
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TE-19108-11



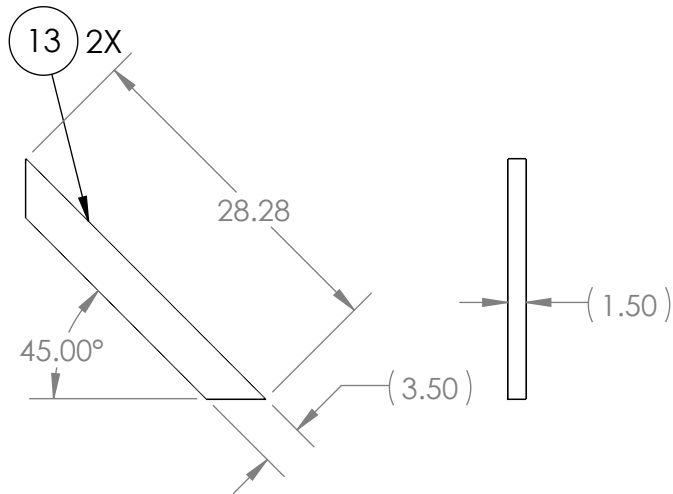
Notes:
Material 2"x 4" Lumber Pine

TE-19108-12



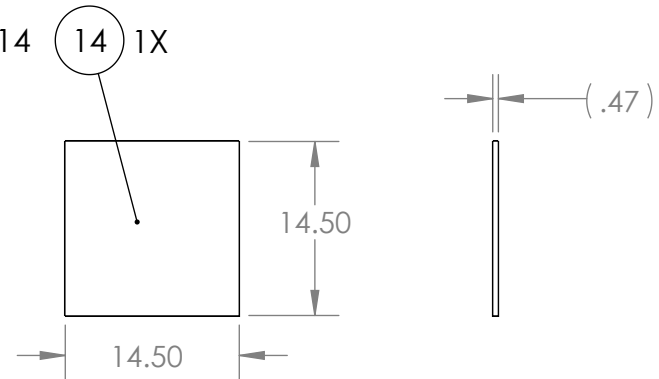
Notes:
Material 2"x 4" Lumber Pine

TE-19108-13



Notes:
Material 2"x 4" Lumber Pine

TE-19108-14



Note:
Material 15/32" (1/2") A/C or CDX Plywood

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NEXT ASSY

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TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



FIRST
ROBOTICS
COMPETITION



TITLE:

Loading Station

SIZE

A

DWG. NO.

TE-19108

REV

A

SCALE: 1:16 WEIGHT:

SHEET 12 OF 15

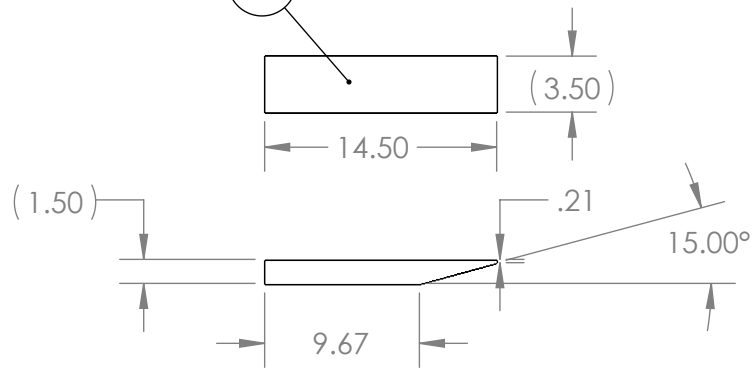
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1

B

TE-19108-15

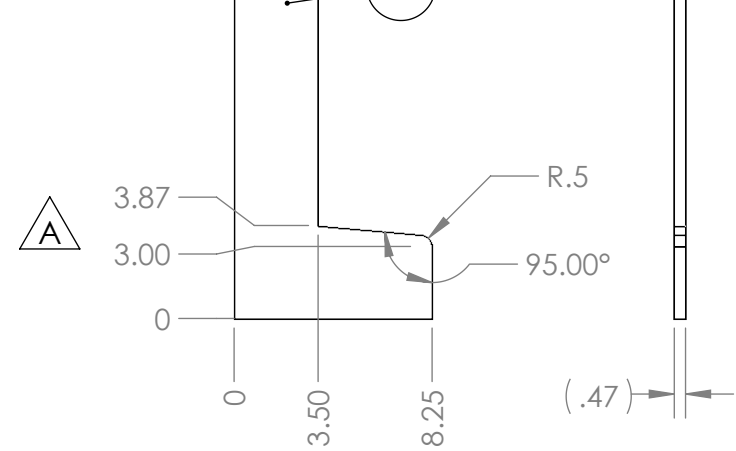
2X (15)



Note:
Material 2"x4" Pine Lumber

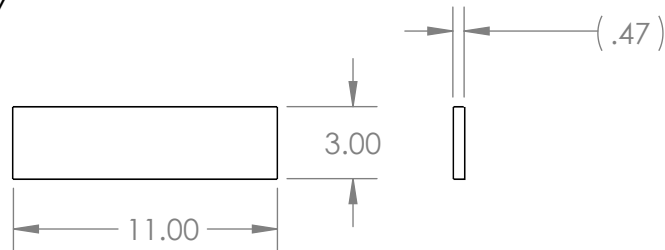
TE-19108-16

15.00 1X (16)



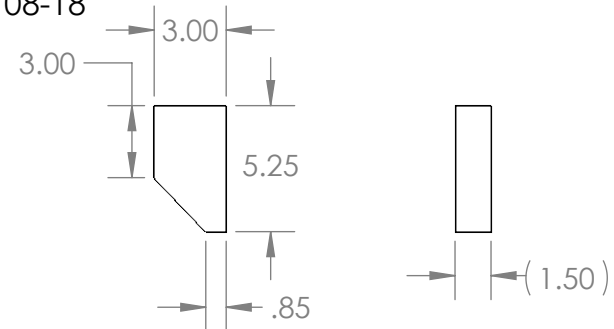
Note:
Material 15/32"(1/2") A/C or CDX Plywood

TE-19108-17



Note:
Material 15/32"(1/2") A/C or CDX Plywood

TE-19108-18



Note:
Material 2"x4" Pine Lumber

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NEXT ASSY

USED ON

APPLICATION

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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

NAME

DATE



FIRST
ROBOTICS
COMPETITION

SOLIDWORKS
Modeling Solutions Partner

TITLE:

Loading Station

SIZE

A

DWG. NO.

TE-19108

REV

A

SCALE: 1:16 WEIGHT:

SHEET 13 OF 15

B

A

2

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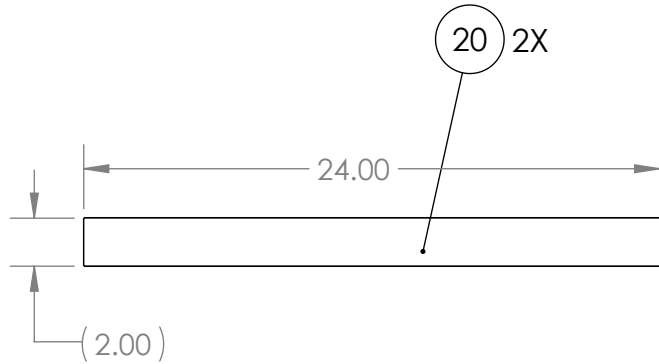
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TE-19108-20

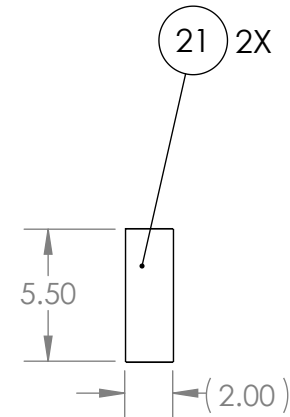
TE-19108-21

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B

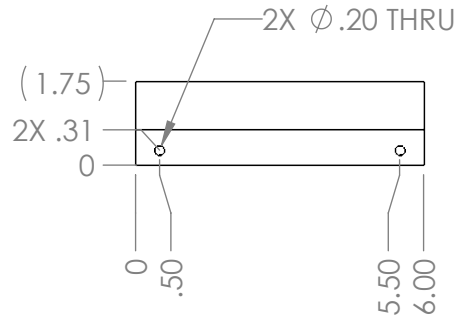


2" Hook Fastener



2" Vision Tape

TE-19108-19



Note:
Material Frost King C35PH

A

A

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		TOLERANCES:	CHECKED		
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
Loading Station

SIZE DWG. NO. REV
A **TE-19108** **A**

SCALE: 1:16 WEIGHT: SHEET 14 OF 15

2

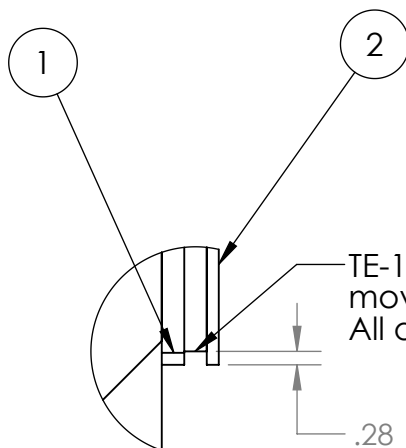
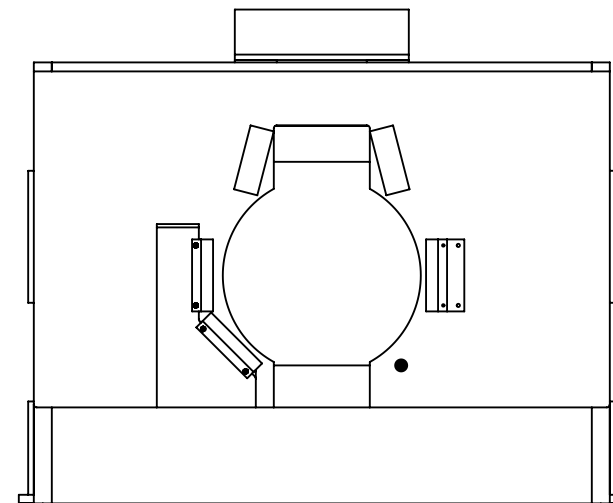
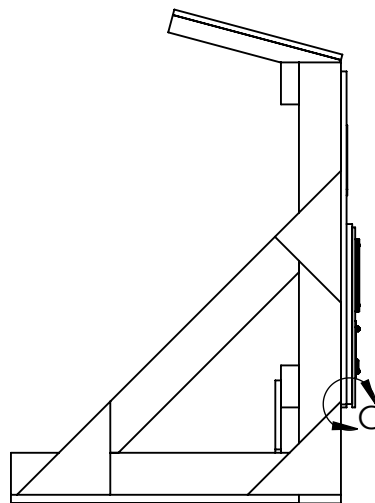
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This page shows the change needed to revise an initial Rev TE-19108 to function as Rev A intends without having to remake TE-19108-16.



TE-19108-16 initial release version needs to be moved up 0.28" (~9/32") relative to the mating parts. All other alignment stays the same.

DETAIL C
SCALE 1 : 4

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		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



**FIRST
ROBOTICS
COMPETITION**

SOLIDWORKS
Modeling Solutions Partner

TITLE:

Loading Station

SIZE	DWG. NO.	REV
A	TE-19108	A

SCALE: 1:16 WEIGHT: SHEET 15 OF 15

2

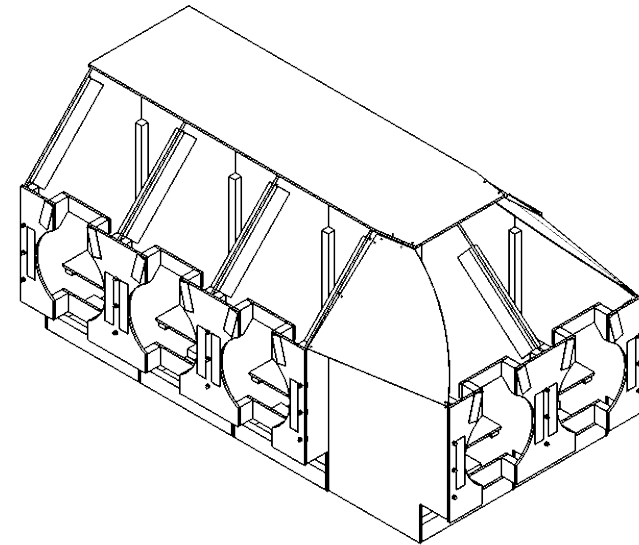
1

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B

ITEM NO.	PART NUMBER	QTY.
1	TE-19112-01	1
2	TE-19112-02	4
3	TE-19112-03	1
4	TE-19112-04	6
5	TE-19112-05	8
6	TE-19112-06	2
7	TE-19112-07	5
8	TE-19112-08	32
9	TE-19112-09	34
10	TE-19112-10	2
11	TE-19112-11	14
12	TE-19112-12	16
13	TE-19112-13	8
14	TE-19112-14	16
15	TE-19112-15	16
16	TE-19112-16	8
17	Tee nut .375_16	33
18	hex nut_.375_16	33
19	hex_.375_16_.625	33
20	TE-19112-19	16
21	TE-19112-20	16
22	TE-19112-21	8



B

Material	QTY
15/32"(1/2" A/C or CDX Plywood	6 sheets
23/32"(3/4" A/C or CDX Plywood	.5 sheet
2"x 4"x 8'	4.5
2"x 2"x 8'	5
1/8" Hardboard	0.5 sheet
2" Vison Tape	88"
2" Hook Fastener	334"
1.25" screws	~200
2.5" screws	~100

A

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		INTERPRET GEOMETRIC TOLERANCING PER:		CHECKED	
		MATERIAL		ENG APPR.	
		FINISH		MFG APPR.	
				Q.A.	
				COMMENTS:	
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



**FIRST
ROBOTICS
COMPETITION**



TITLE:

Full Cargo Ship

SIZE	DWG. NO.	REV
A	TE-19112	
SCALE: 1:32	WEIGHT:	SHEET 1 OF 17

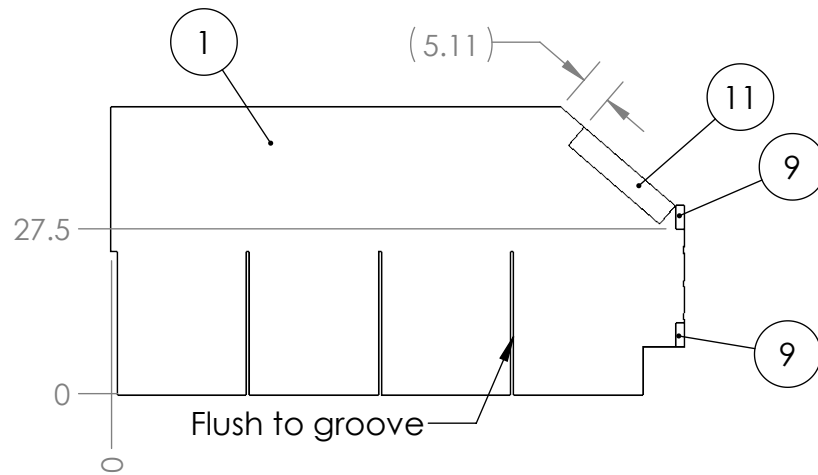
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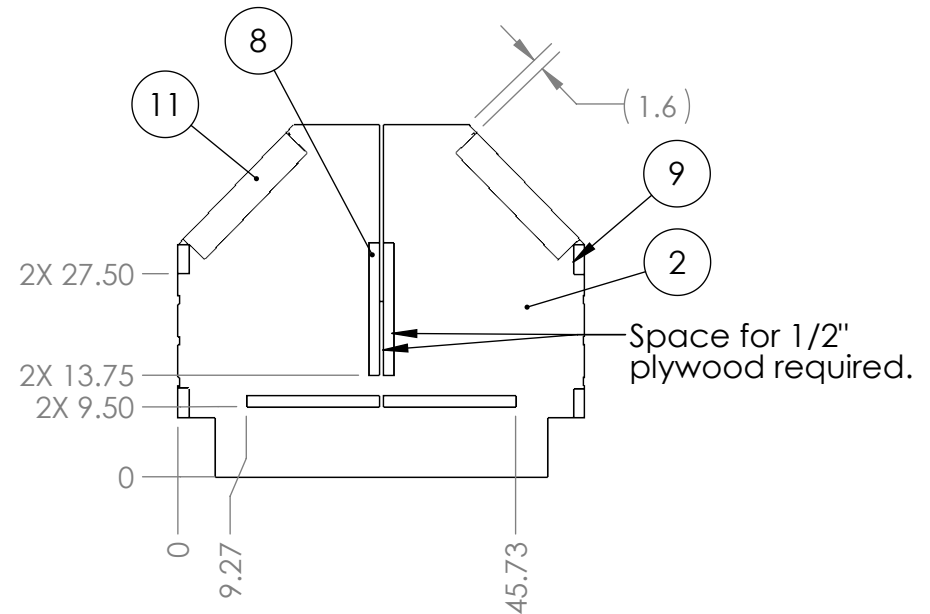
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Subassembly 1:



Notes:

- Attach Items (9), and (11) to Item (1) as shown.
- Repeat on opposite side.
- Pre-drill and use 1.25 and 2.5" screws as necessary.

Subassembly 2:
QTY 1

Notes:

- Attach Items (8), (9) and (11) to Item (2) as shown.
- Pre-drill and use 1.25" screws as necessary.

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NEXT ASSY

USED ON

APPLICATION

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TOLERANCES:
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ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



TITLE:

Full Cargo Ship

SIZE

DWG. NO.

REV

A

TE-19112

SCALE: 1:32 WEIGHT:

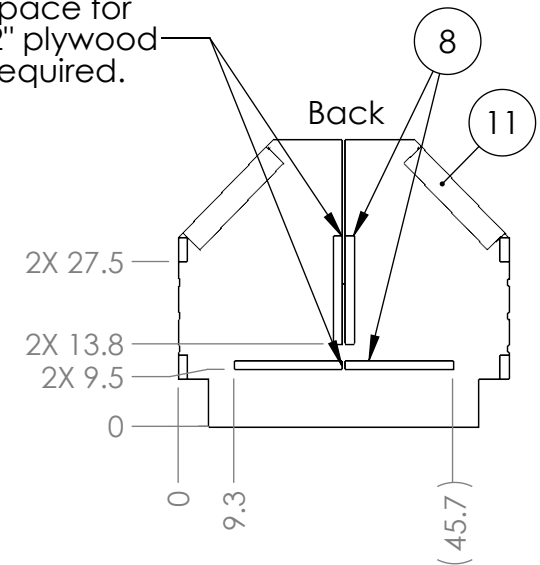
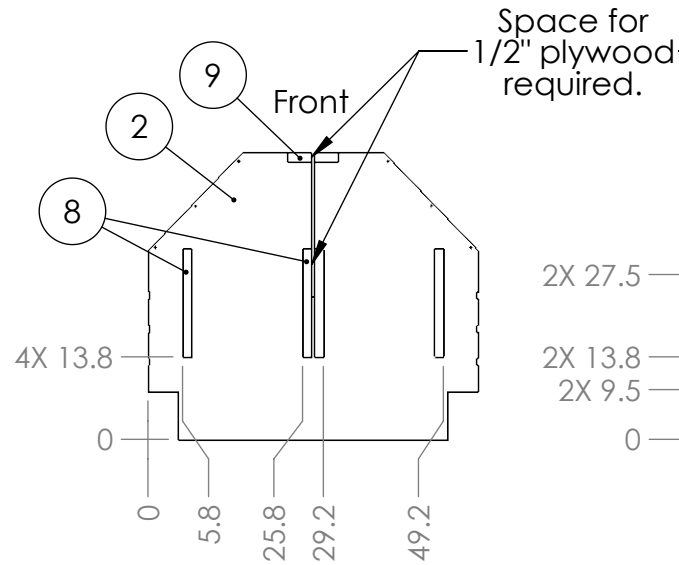
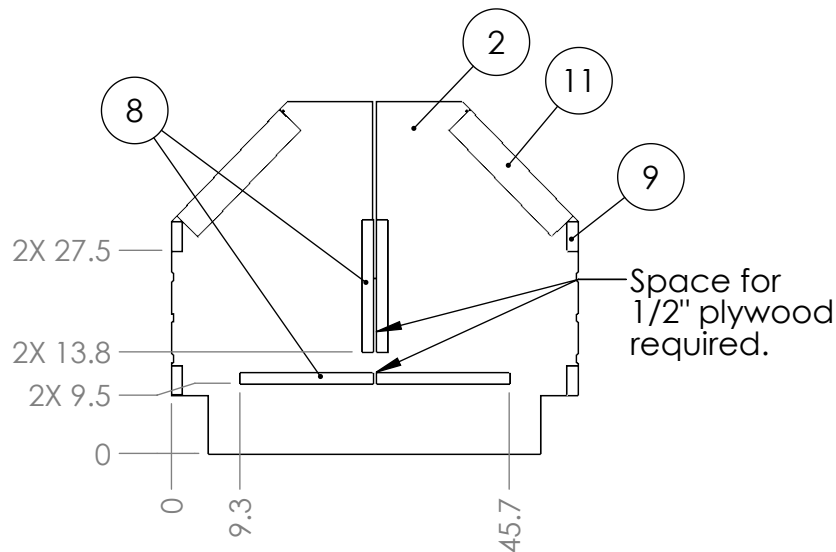
SHEET 2 OF 17

2

1

Subassembly 3: QTY(2)

Subassembly 4: QTY(1)



Notes:

- Repeat on both sides
- Attach 9 x4 flush to surfaces of 2 as shown.
- Attach 11 x4 flush to surfaces of 2 as shown.
- Attach 8 x4 to 2 vertical flush to cutout
- Pre-drill and attach with 1.25" and 2.5" screws

Notes:

- Attach 9 to 2 flush to top and cutout.
- Attach 8 to 2 as shown. Middle items to be flush with cutout.
- Attach 11 flush to angled surfaces of 2.
- Pre-drill and attach with 1.25" and 2.5" screws

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		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

NAME	DATE
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ENG APPR.	
MFG APPR.	
Q.A.	
COMMENTS:	

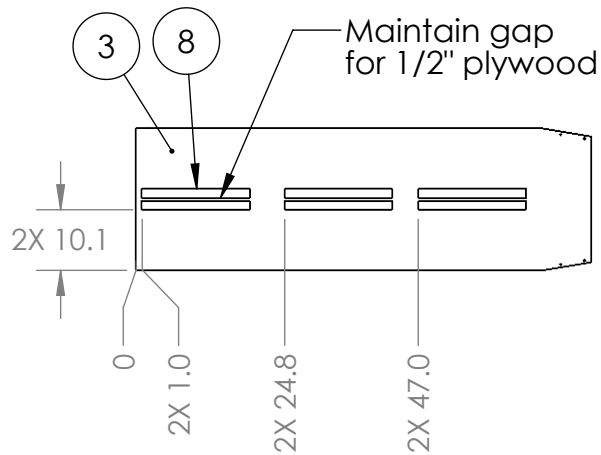


TITLE:

Full Cargo Ship

SIZE	DWG. NO.	REV
A	TE-19112	
SCALE: 1:32		WEIGHT:
		SHEET 3 OF 17

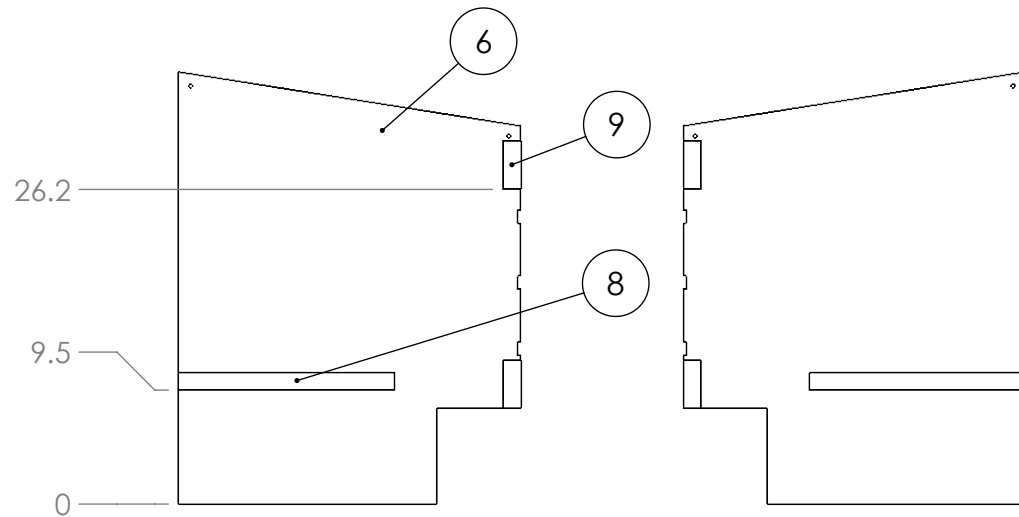
Subassembly 5:



Notes:

- Attach (8) x6 to (3) as shown using 1.25" screws.
- Pre-drill as necessary.

Subassembly 6:



Mirrored Version

Notes:

- Attach (9) flush to surfaces of (6) as shown using 1.25" screws.
- Attach (8) to (6) as shown using 1.25" screws.
- Pre-drill as necessary.
- Repeat process to create a mirrored version of subassembly.

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TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME

DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



TITLE:

Full Cargo Ship

SIZE

DWG. NO.

REV

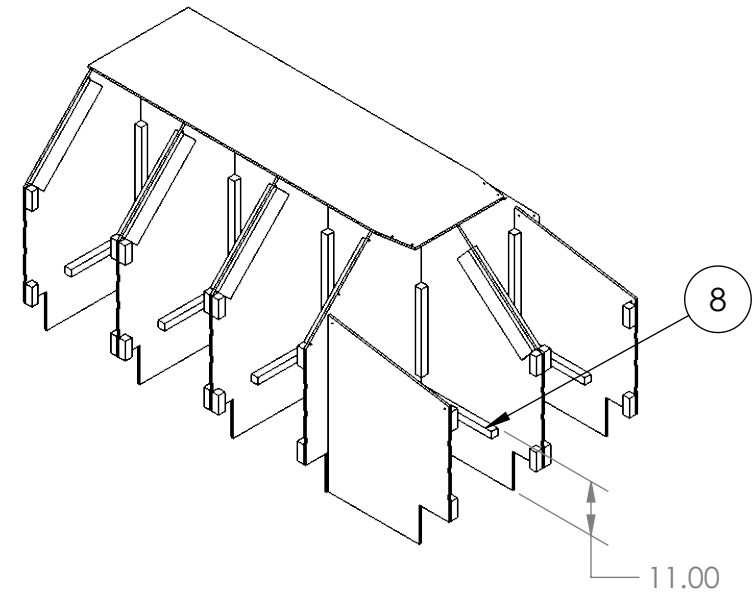
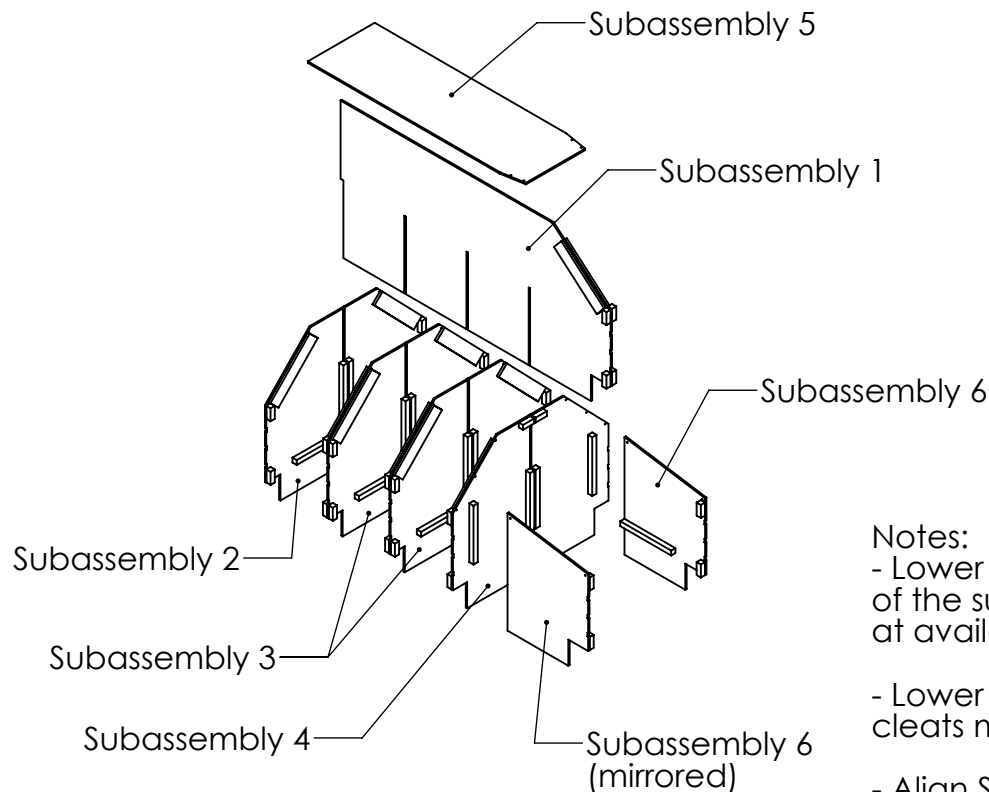
A

TE-19112

SCALE: 1:32 WEIGHT:

SHEET 4 OF 17

Subassembly 9:



Notes:

- Lower Subassembly 1 onto Subassemblies 2, 3 and 4. Cutouts of the subassemblies should intersect. Secure with 2.5" screws at available cleats.
- Lower Subassembly 5 so that Subassembly 1 sits inside the cleats mounted on the bottom. Secure with 2.5" screws.
- Align Subassembly 6 (and mirrored) with the cleats on Subassembly 4. Secure with 1.25" screws.
- Attach Item 8 as shown on both sides of suSubassembly 1. Secure with 2.5" screws.

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TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



TITLE:

Full Cargo Ship

SIZE

DWG. NO.

REV

A

TE-19112

SCALE: 1:32 WEIGHT:

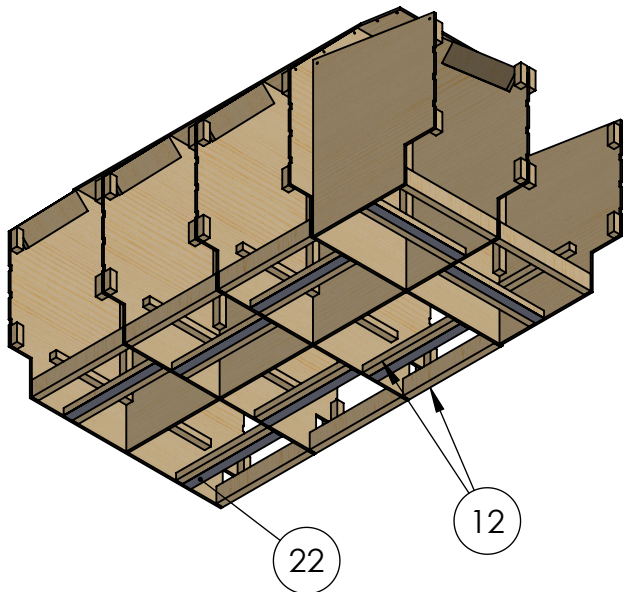
SHEET 5 OF 17

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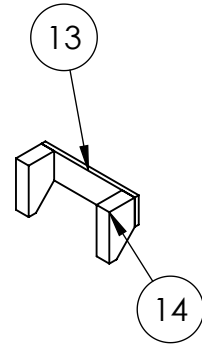
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Note:

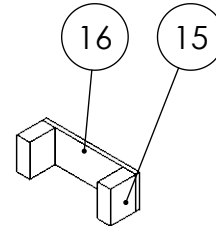
- Attach (12) 16X as shown using 1.25" screws. Stagger inner 2x4's for easy attachment. Outer 2x4's will require pre-drilling at an angle to attach. All 2x4's should be flush with the bottom of frames.
- Add (22) to the bottom of the inner 2x4's.



Subassembly 10:
QTY 8

Note:

- Attach (14) to (13) using 1.25" screws. Top surfaces should be flush.
- Pre-drill as necessary



Subassembly 11:
QTY 8

Note:



- Attach (15) to (16) using 1.25" screws. Top surfaces should be flush.
- Pre-drill as necessary.

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		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.		
		TWO PLACE DECIMAL ±.01	Q.A.		
		THREE PLACE DECIMAL ±.001	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
Full Cargo Ship

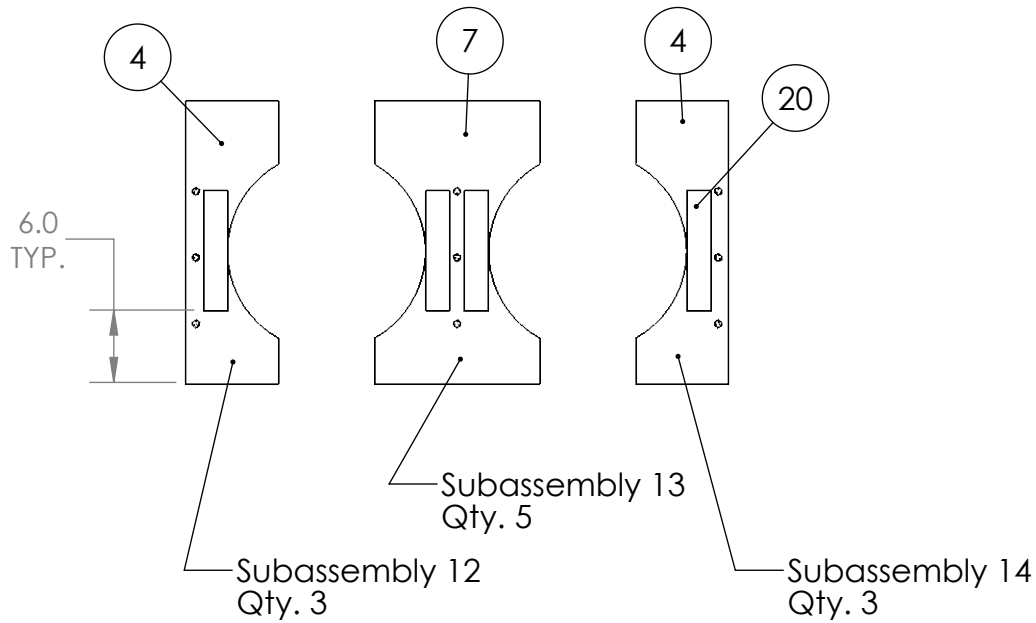
SIZE	DWG. NO.	REV
A	TE-19112	

SCALE: 1:32 WEIGHT: SHEET 6 OF 17

2

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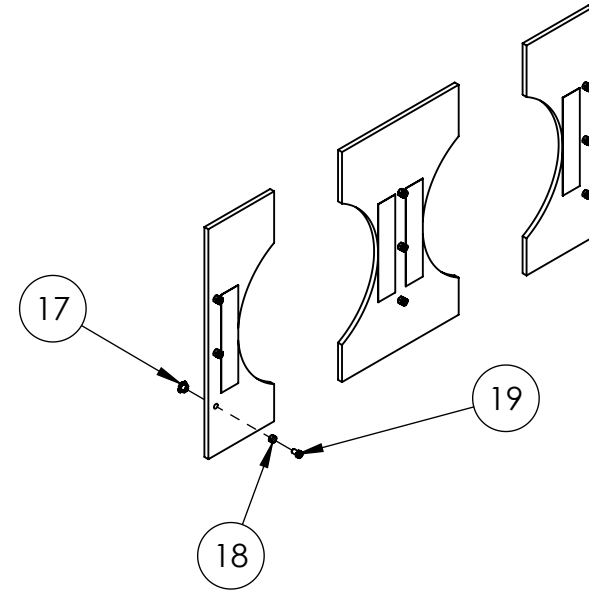


Note:

-Apply (20) to (4) and (7) as shown.

(20) should be tangent to the curve.

-Create the quantities listed.



Note:

-Press in (17) into each hole in subassembly 12, 13 and 14. Flange should be on the non-hook side of plywood. Use hammer if necessary.

-Thread (18) (19) into (17)

A

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		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
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ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:

Full Cargo Ship

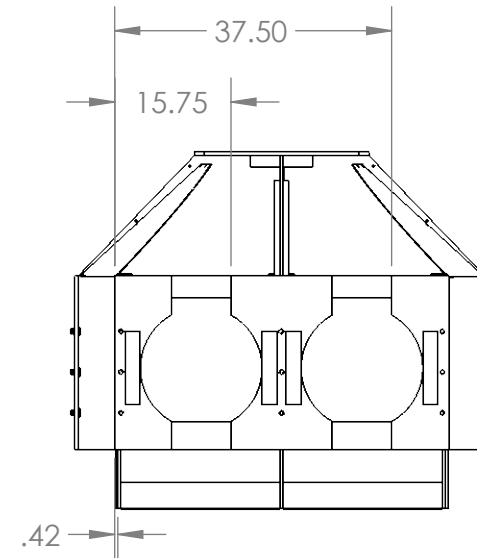
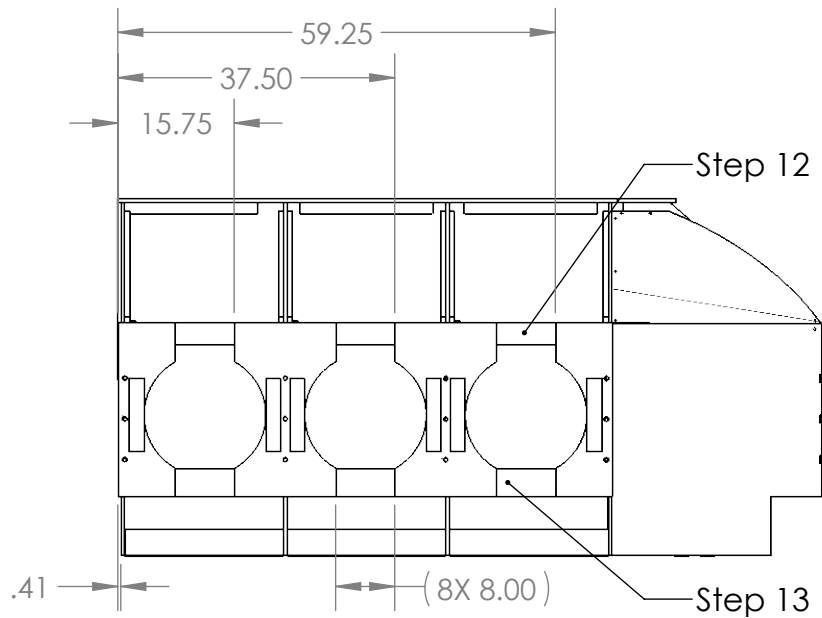
SIZE	DWG. NO.	REV
A	TE-19112	
SCALE: 1:32		WEIGHT:
		SHEET 7 OF 17

B

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Note:

- Attach Subassemblies 12, 13 and 14 as shown using 1.25" screws.
- Attach Subassemblies 10 and 11 as shown using 1.25" screws.
- Pre-drill as necessary.

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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
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		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
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ENG APPR.		
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COMMENTS:		

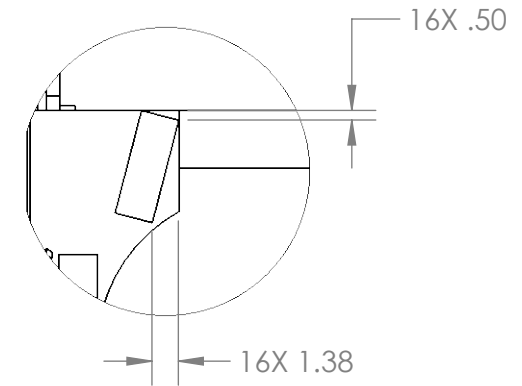
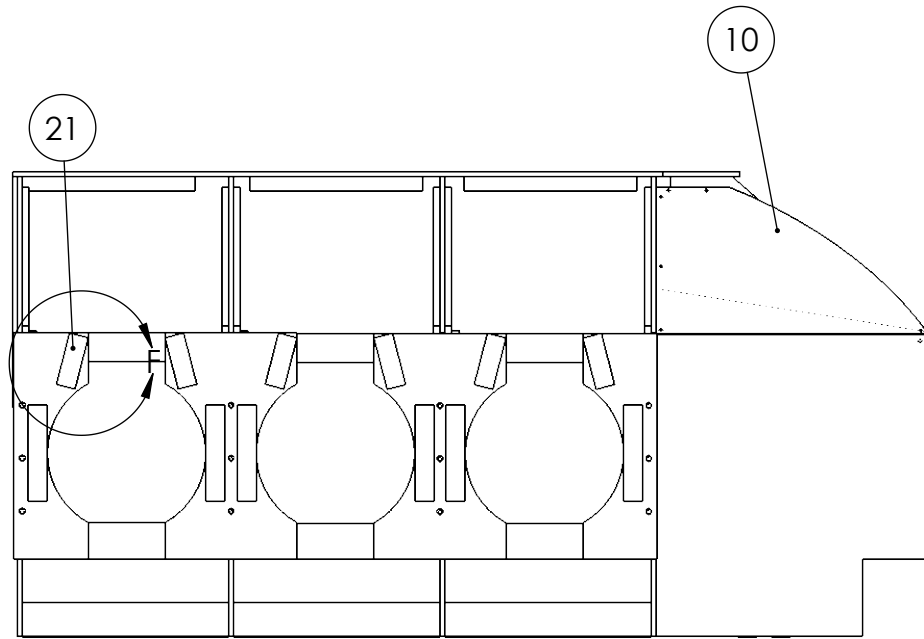


TITLE:

Full Cargo Ship

SIZE	DWG. NO.	REV
A	TE-19112	
SCALE: 1:32		WEIGHT:
		SHEET 8 OF 17

B



DETAIL F
SCALE 1 : 10

Notes:

- Apply (21) as shown.
- Attach (10) with cable ties. Quantity 2.

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		TWO PLACE DECIMAL $\pm .01$
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		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
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ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:

Full Cargo Ship

SIZE	DWG. NO.	REV
A	TE-19112	
SCALE: 1:32		WEIGHT:
		SHEET 9 OF 17

B

A

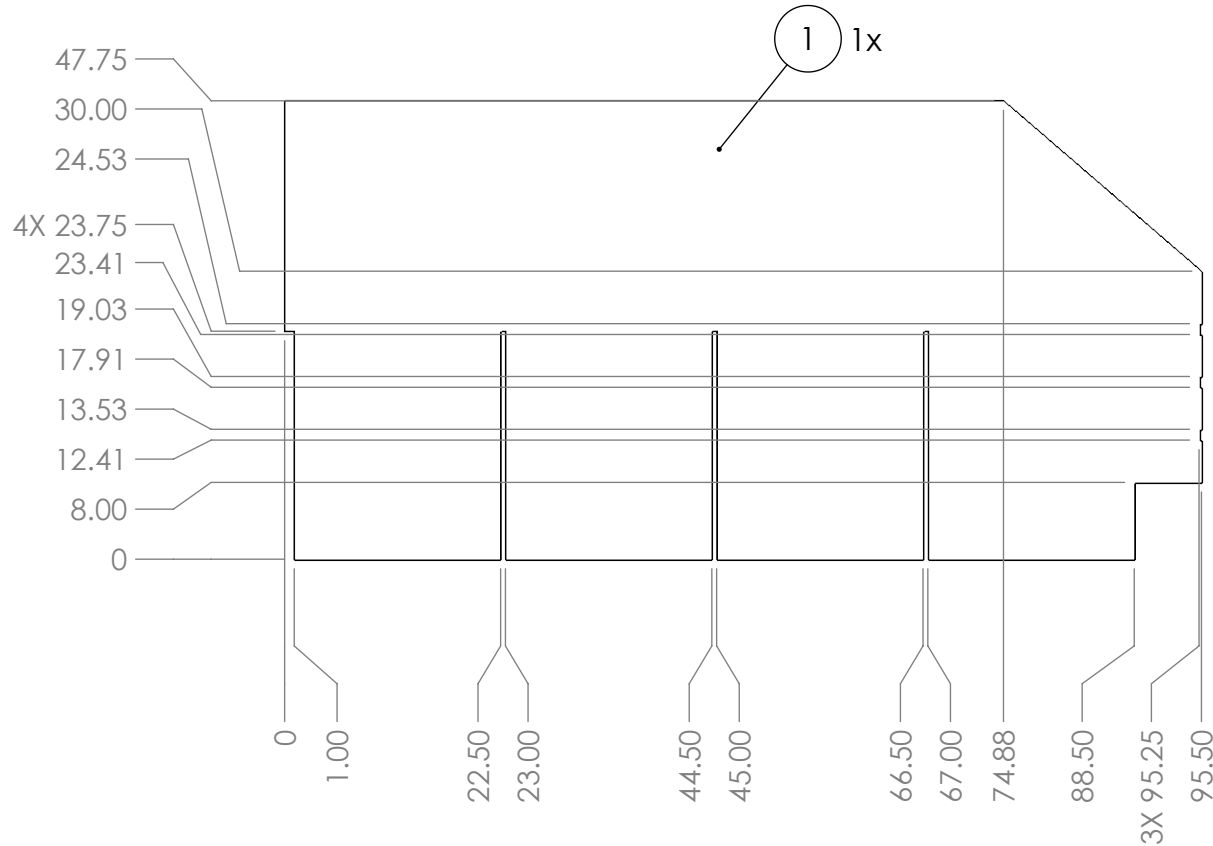
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TE-19112-01



Note:
Material 15/32" (1/2") A/C or CDX Plywood

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		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
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ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



FIRST
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TITLE:

Full Cargo Ship

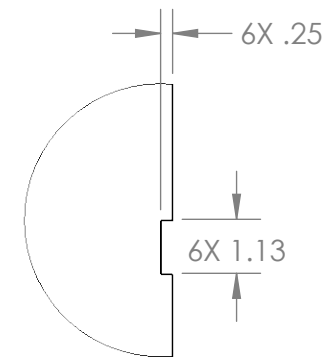
SIZE	DWG. NO.	REV
A	TE-19112	

SCALE: 1:32 WEIGHT: SHEET 10 OF 17

2

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→ ← (.47)

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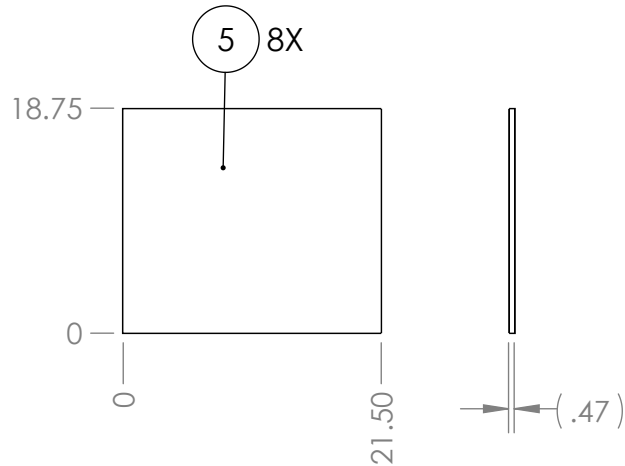


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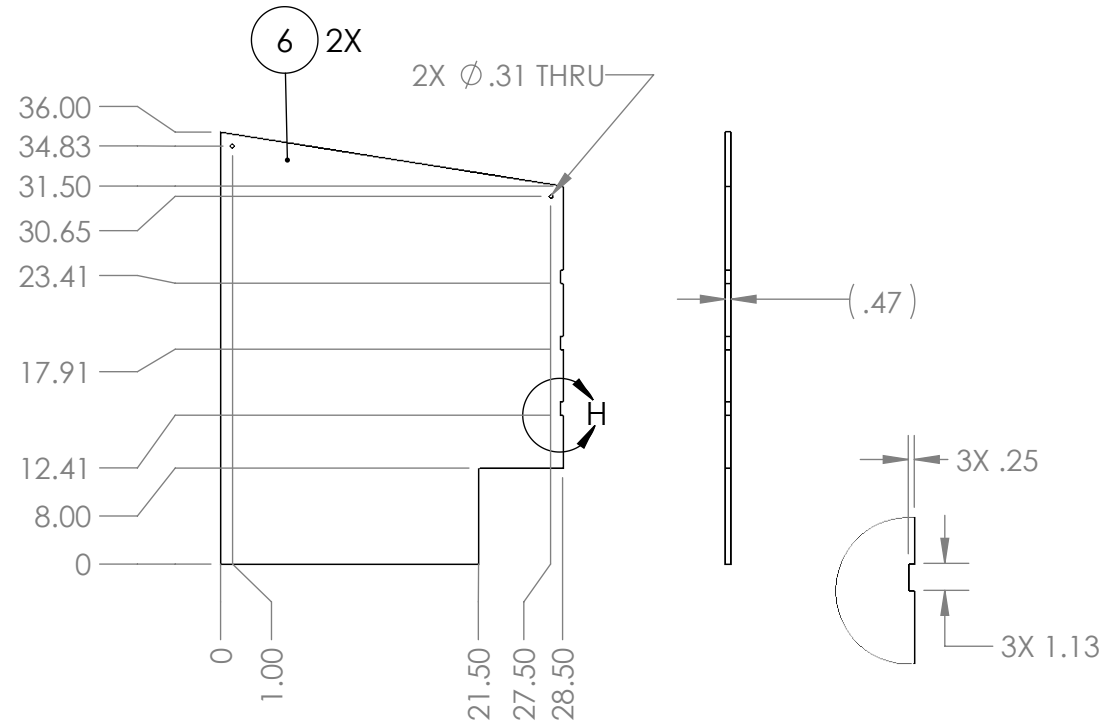
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TE-19112-05



Note:
Material 15/32" (1/2") A/C or CDX Plywood

TE-19112-06



Note:
Material 15/32" (1/2") A/C or CDX Plywood

DETAIL H
SCALE 1 : 8

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		THREE PLACE DECIMAL $\pm .001$	COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:		
		MATERIAL		
		FINISH		
NEXT ASSY	USED ON			
APPLICATION		DO NOT SCALE DRAWING		



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TITLE:

Full Cargo Ship

SIZE

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DWG. NO.

TE-19112

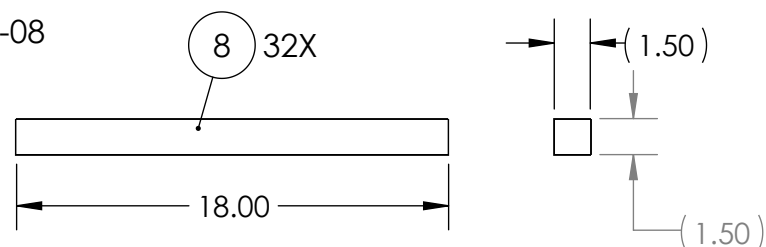
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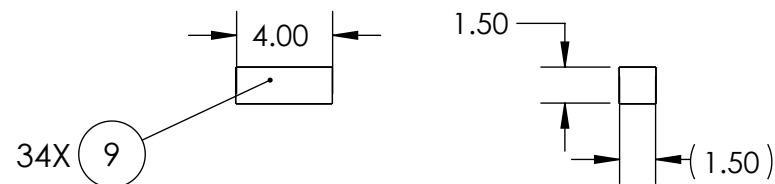
SHEET 13 OF 17

1

TE-19112-08



TE-19112-09



Note:
Material 2"x 2" Lumber Pine

Note:
Material 15/32" (1/2") A/C or CDX Plywood

Note:
Material 2"x 2" Lumber Pine

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
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NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



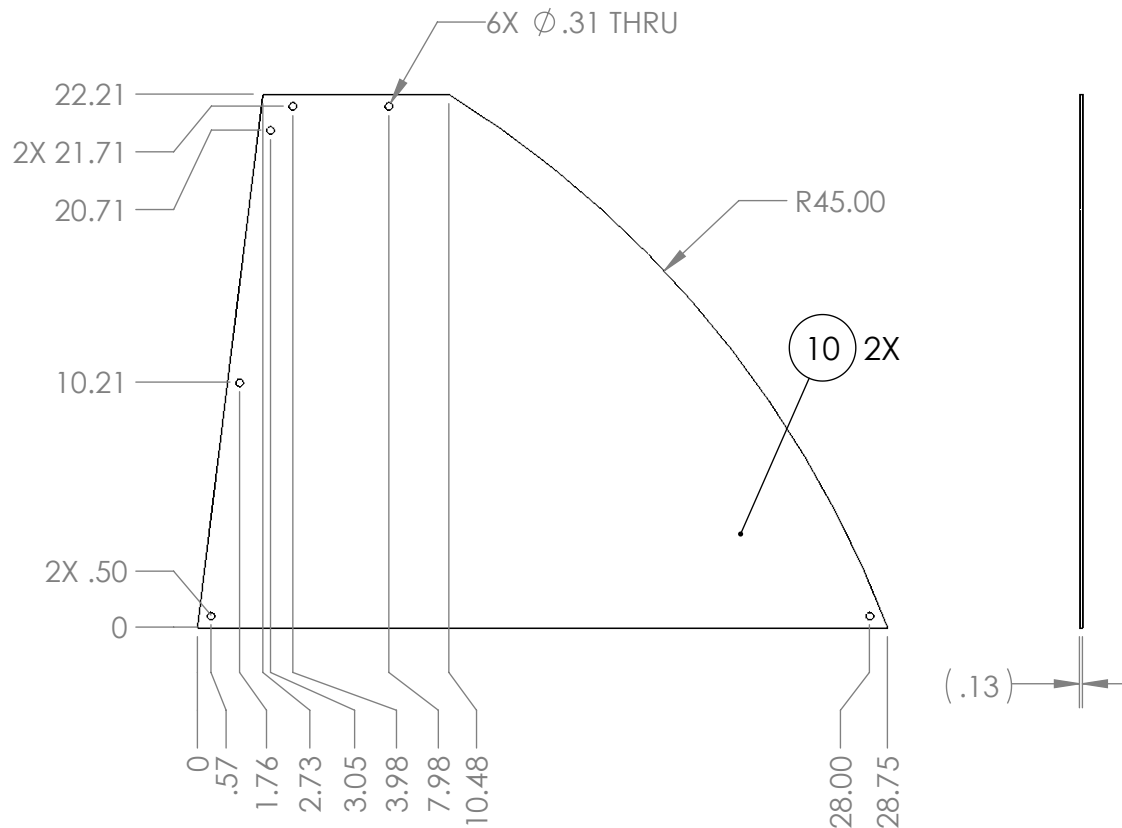

TITLE:
Full Cargo Ship

SIZE A	DWG. NO. TE-19112	REV
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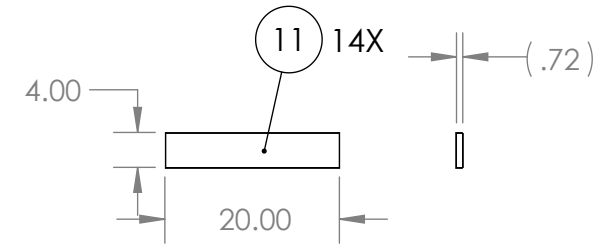
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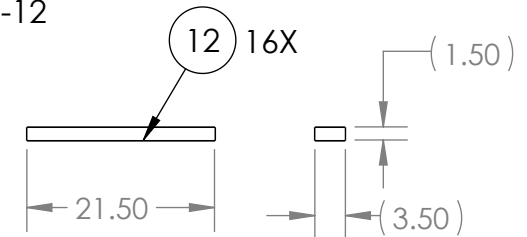
TE-19112-10



TE-19112-11



TE-19112-12



Note:
Material 1/8" Hardboard

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		MATERIAL			
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SIZE

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DWG. NO.

TE-19112

REV

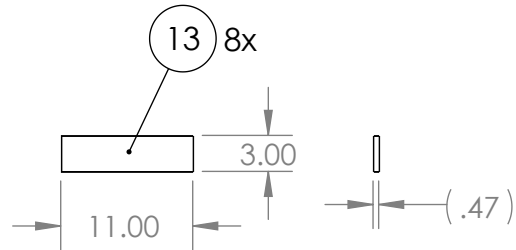
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WEIGHT:

SHEET 15 OF 17

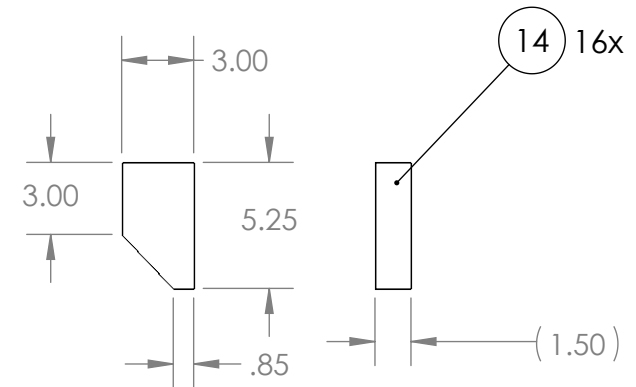
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TE-19112-13



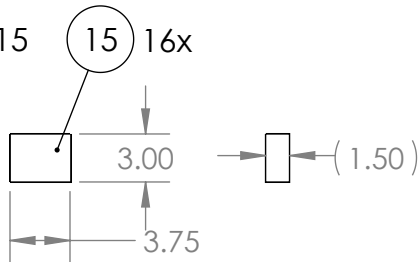
Note:
15/32" (1/2") A/C or CDX Plywood

TE-19112-14



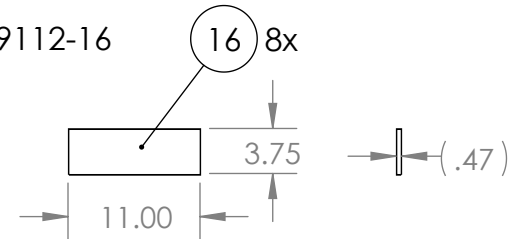
Note:
2"x 4" Pine lumber

TE-19112-15



Note:
2"x 4" Pine lumber

TE-19112-16



Note:
15/32" (1/2") A/C or CDX Plywood

B

A

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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
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MFG APPR.		
Q.A.		
COMMENTS:		



TITLE:

Full Cargo Ship

SIZE	DWG. NO.	REV
A	TE-19112	

SCALE: 1:32 WEIGHT:

SHEET 16 OF 17

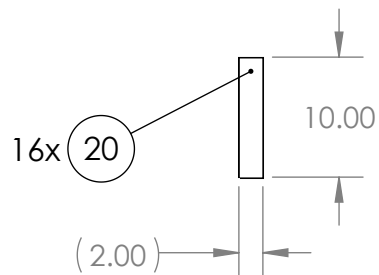
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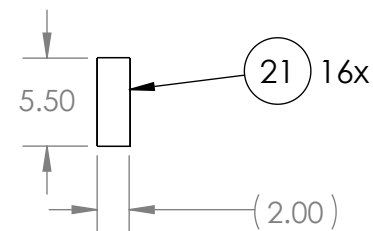
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TE-19112-19



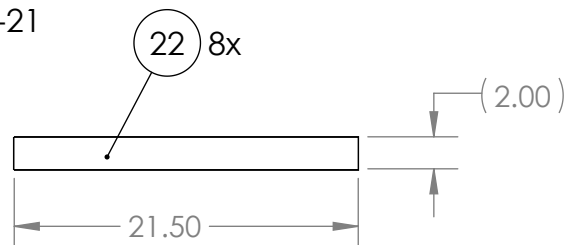
2" Hook Fastener

TE-19112-20



2" Vison Tape

TE-19112-21



2" Hook Fastener

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TOLERANCES:
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ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME

DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:


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TITLE:

Full Cargo Ship

SIZE

DWG. NO.

REV

A**TE-19112**

SCALE: 1:32 WEIGHT:

SHEET 17 OF 17

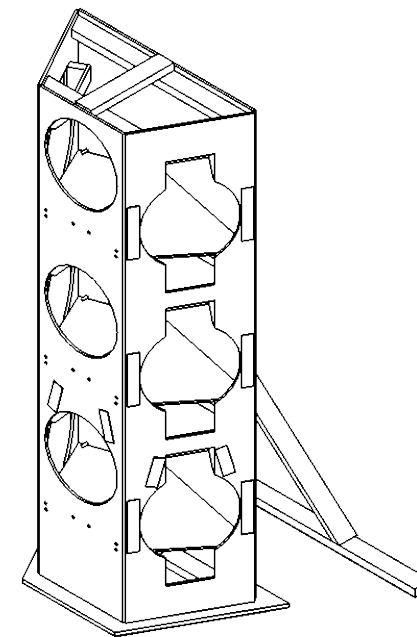
2

1



2

1

ITEM NO.	PART NUMBER	QTY.
1	TE-19113-01	1
2	TE-19113-02	2
3	TE-19113-03	1
4	TE-19113-04	6
5	TE-19113-05	2
6	TE-19113-06	1
7	TE-19113-07	4
8	TE-19113-08	4
9	TE-19113-09	4
10	TE-19113-10	1
11	TE-19113-11	6
12	TE-19113-12	12
13	TE-19113-13	12
14	TE-19113-15	6
15	TE-19113-16	1
16	TE-19113-17	3
17	flat_phil_.25_20_1.75	36



Material	QTY
23/32" (4/3") A/C or CDX Plywood	0.25 sheets
15/32" (1/2") A/C or CDX Plywood	3 sheets
2"x4"x8'	4
Flat Head 1/4"-20 x1.75	18
2" Hook Fastener	267"
2" Vison Tape	33"
1.25" screws	~60
2.5" screws	~100

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			DIMENSIONS ARE IN INCHES	DRAWN				TITLE: <h1>Full Rocket</h1>
			TOLERANCES:	CHECKED				
			FRACTIONAL ±1/16	ENG APPR.				
			ANGULAR: MACH ±1° BEND ±1°	MFG APPR.				
		TWO PLACE DECIMAL ±.01	Q.A.					
		THREE PLACE DECIMAL ±.001	COMMENTS:					
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
	NEXT ASSY	USED ON						
	APPLICATION		DO NOT SCALE DRAWING					

SIZE	DWG. NO.	REV
A	TE-19113	
SCALE: 1:32		WEIGHT:
		SHEET 1 OF 11

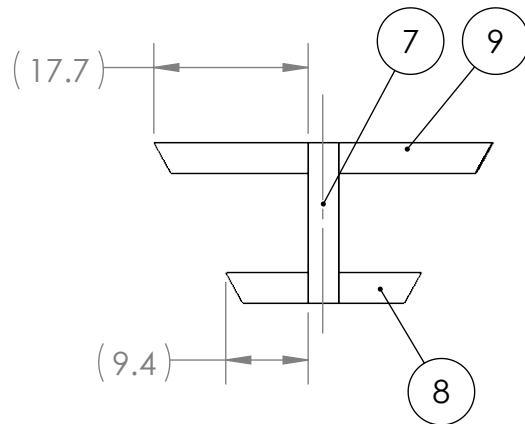
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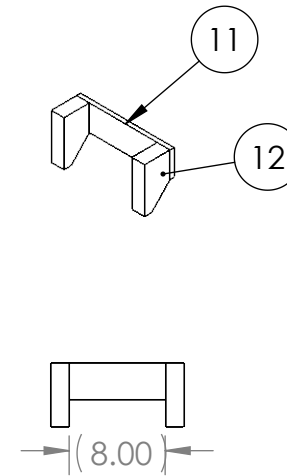
Subassembly 1: QTY 4



Notes:

- Attach (7) to (8) and (9).
- (7) is centered on top of (8) and (9).
- Pre-drill and attach items with 2.5" screws.

Subassembly 2: QTY 6



Note:

- Attach (11) to (12) 2X.
- (12) should be flush to top edge and side faces of (11).
- Pre drill and attach using 1.25" screws

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		INTERPRET GEOMETRIC TOLERANCING PER:			
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NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



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TITLE:

Full Rocket

SIZE	DWG. NO.	REV
A	TE-19113	
SCALE: 1:32		WEIGHT:
		SHEET 2 OF 11

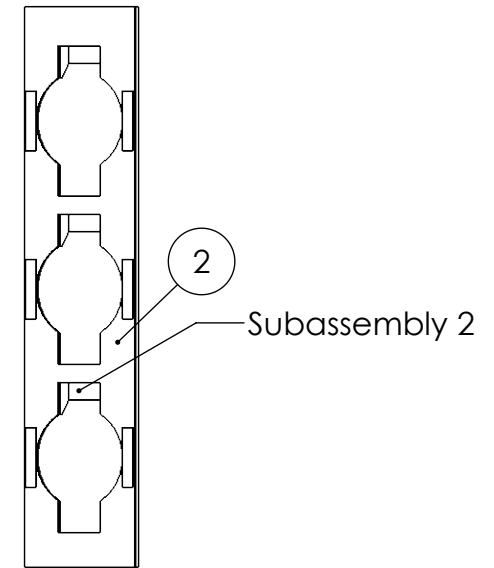
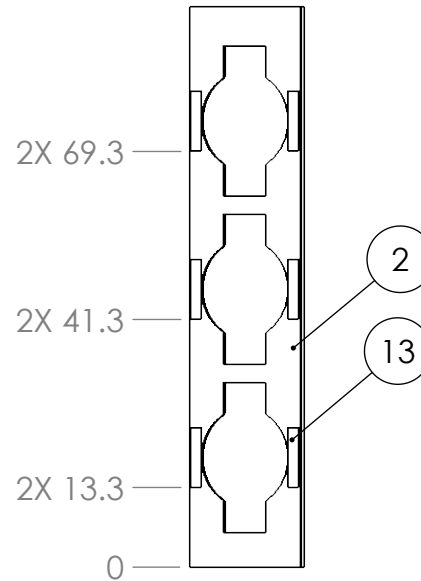
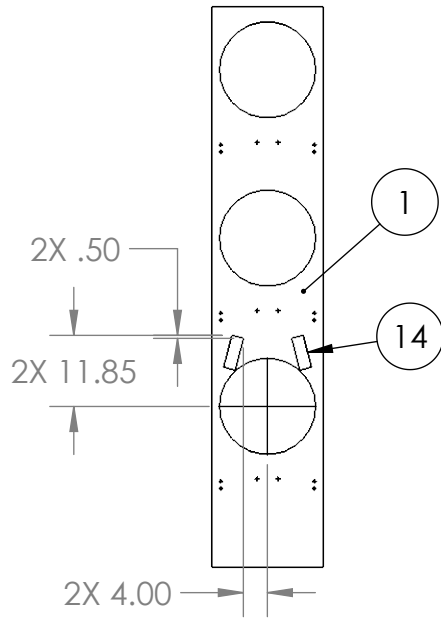
2

1

2

1

Subassembly 3:

Subassembly 4:
Qty. 2

Note:

Attach (14)x2 to (1).

Note:

- Attach (13) x6 to (2). (13) should be tangent to opening.
- Attach Subassembly 2 (qty.3) to (2). It should be flush to the top opening edges.
- Use 1.25" or 2.5" screws to attach items.

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ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
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MATERIAL

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MFG APPR.

Q.A.

COMMENTS:



TITLE:

Full Rocket

SIZE

DWG. NO.

REV

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TE-19113

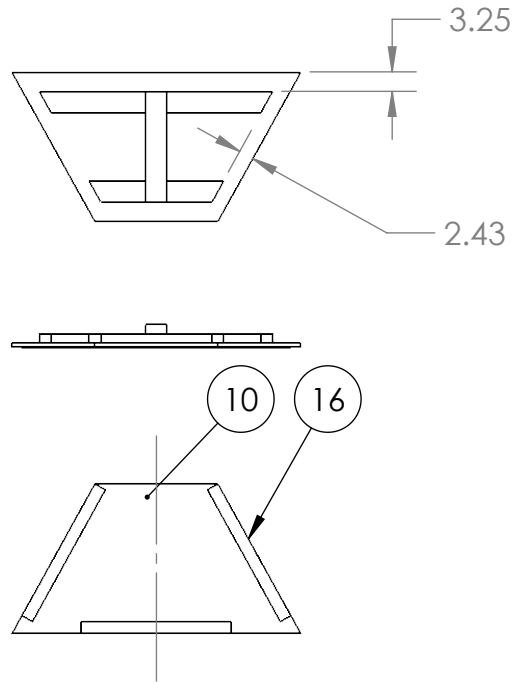
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SHEET 3 OF 11

2

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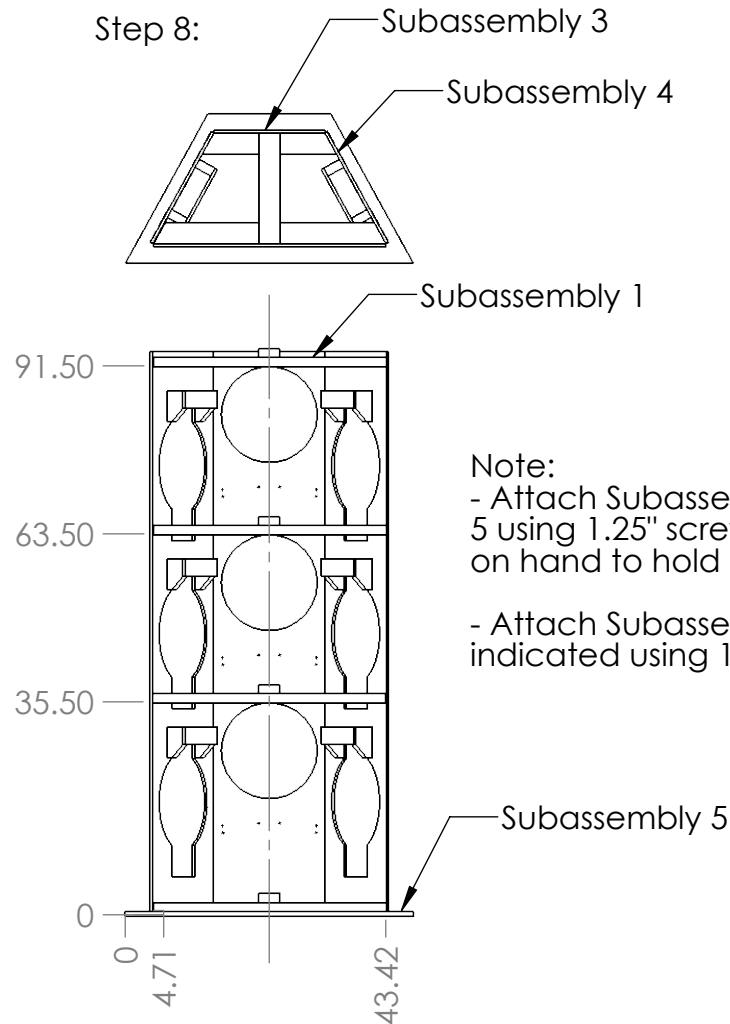
Subassembly 5:



Note:

- Attach 16 to 10 as shown.
- Attach Subassembly 1 using 1.25" screws.

Step 8:



Note:

- Attach Subassembly 3 and 4 to Subassembly 5 using 1.25" screws. Have additional people on hand to hold components in place.
- Attach Subassembly 1 at the locations indicated using 1.25" screws.

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		INTERPRET GEOMETRIC TOLERANCING PER:		
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NEXT ASSY	USED ON	FINISH		
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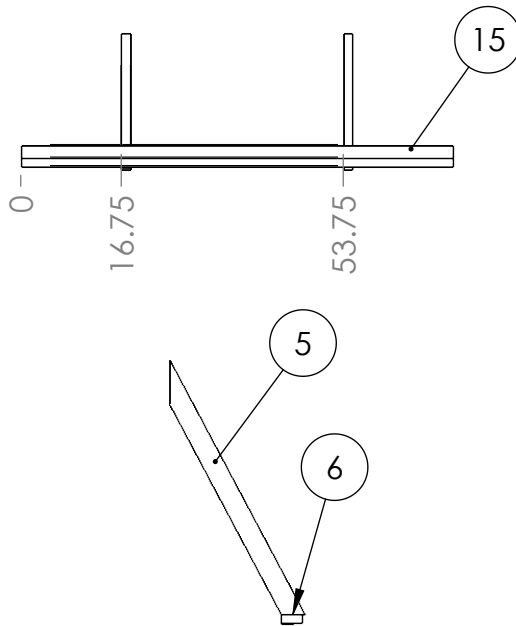
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Full Rocket

SIZE	DWG. NO.	REV
A	TE-19113	
SCALE: 1:32		WEIGHT:
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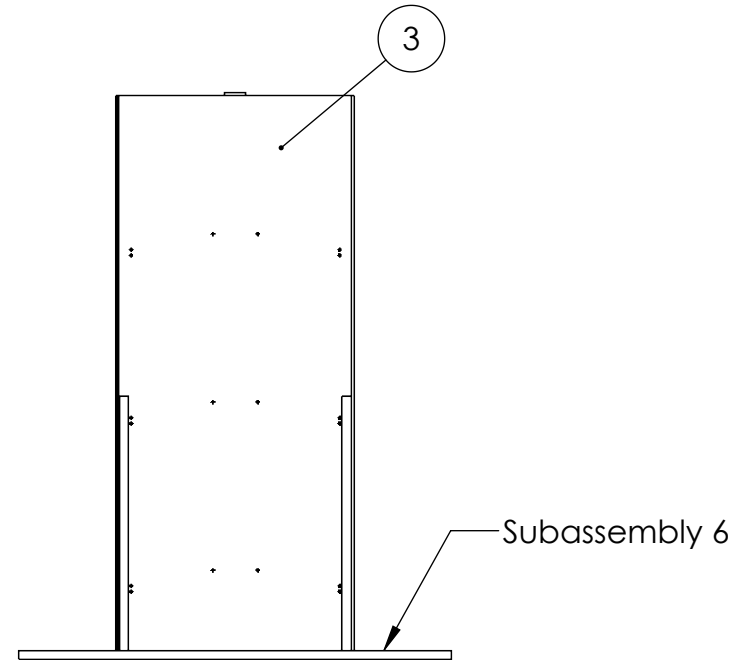
Subassembly 6:

Step 10:



Notes:

- Attach (5) to (6) at the two locations indicated. Pre-drill and use 2.5" screws.
- Attach (15) to (6)



Note:

- Attach (3) to Step 8 pre drill 2.5" screws
 - Attach Step 9 to (3) pre drill and 2.5" screw
- Step 9 sits flush to floor

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NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
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COMMENTS:		



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TITLE:

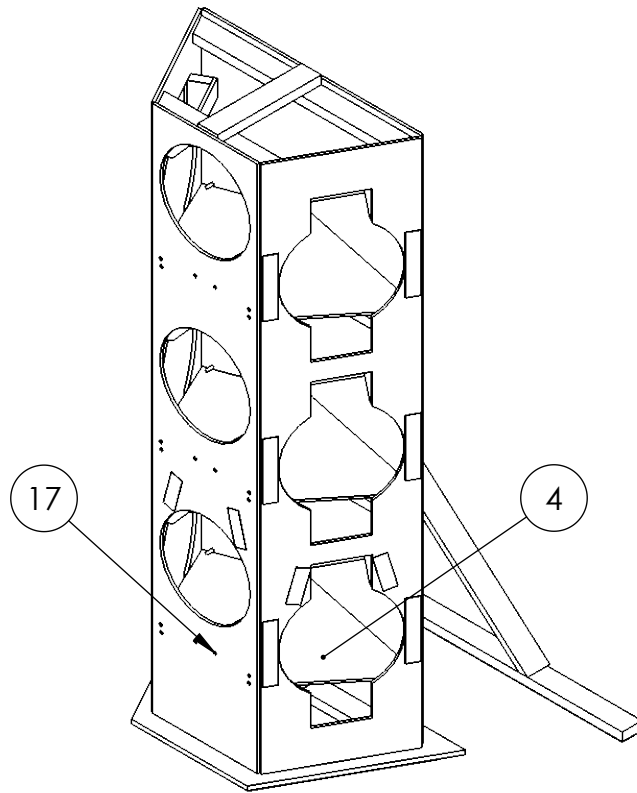
Full Rocket

SIZE	DWG. NO.	REV
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		SHEET 5 OF 11

2

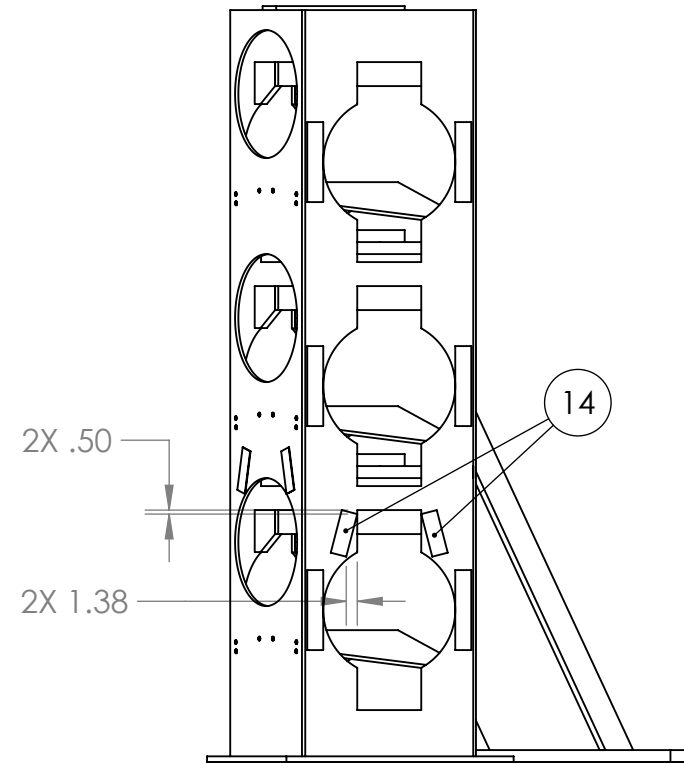
1

B



Note:

- Insert (17) x36 into all countersunk holes
- Lay (4) onto (17). One of the (17) will be on top of (4)



Note:

- Attach (14) 2X as shown. Repeat on other side.

A

A

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APPLICATION		DO NOT SCALE DRAWING

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MFG APPR.		
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TITLE:

Full Rocket

SIZE	DWG. NO.	REV
A	TE-19113	
SCALE: 1:32 WEIGHT:		SHEET 6 OF 11

2

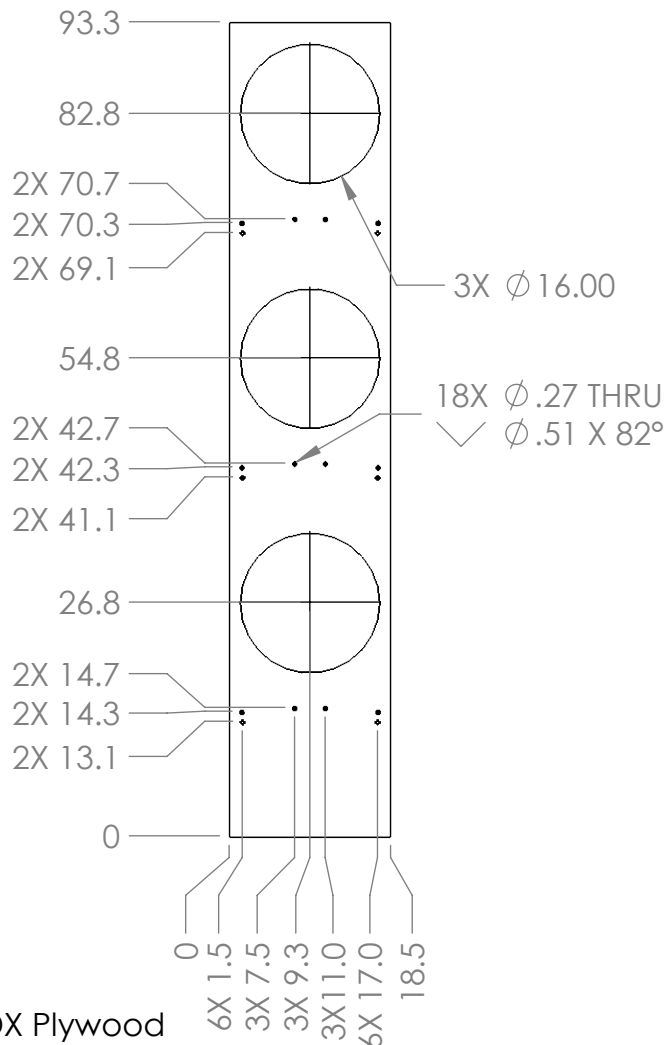
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TE-19113-01

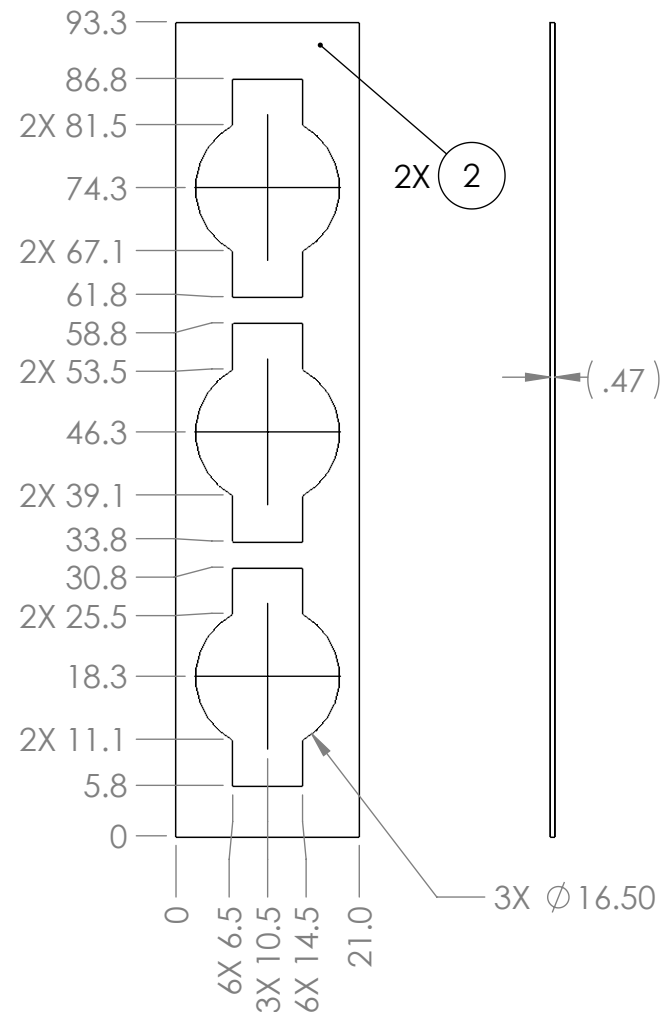
1X (1)

(.47)



Note:
15/32" A/C or CDX Plywood

TE-19113-02



Note:
15/32" A/C or CDX Plywood

B

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A

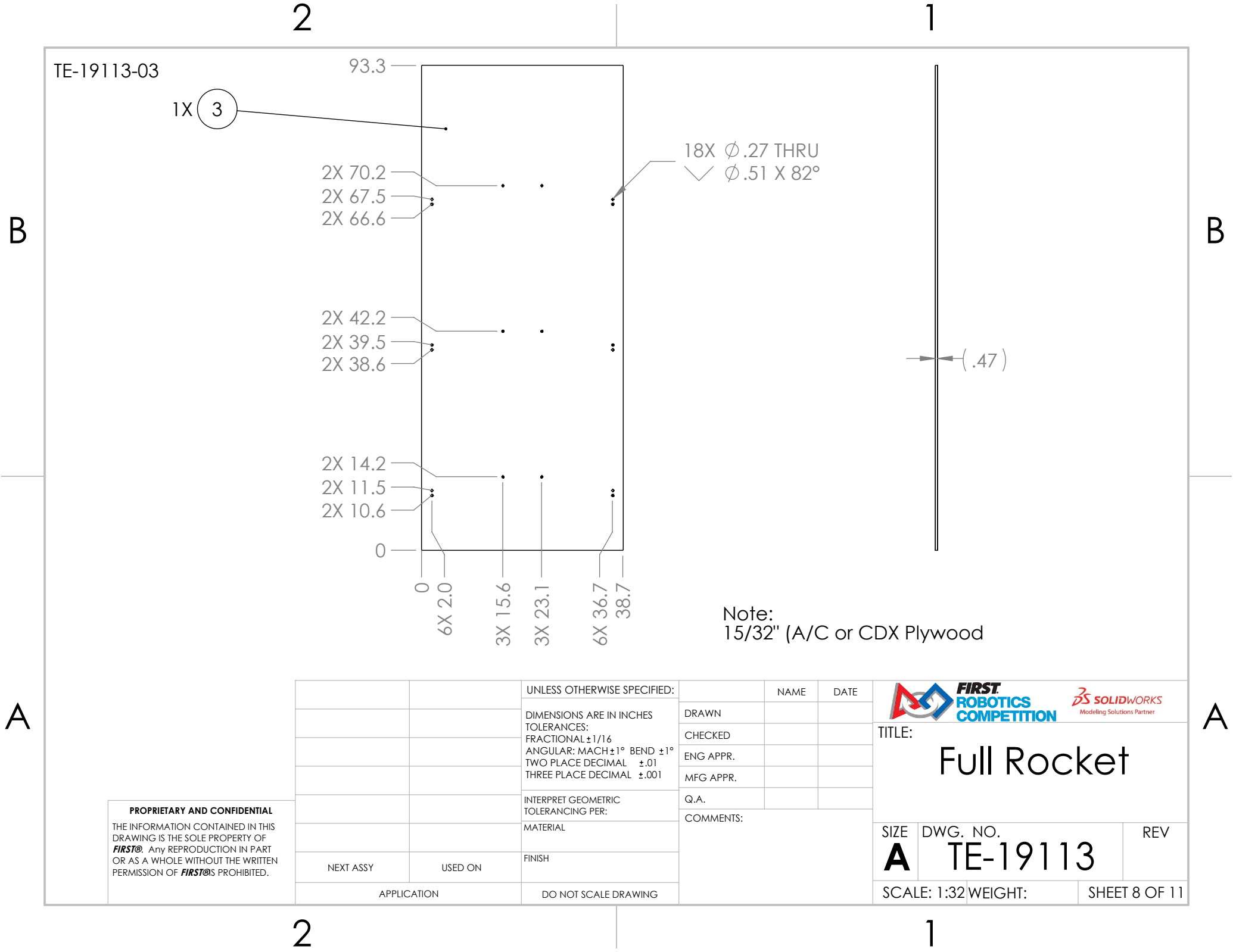
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		THREE PLACE DECIMAL ±.001
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APPLICATION		DO NOT SCALE DRAWING

DRAWN	NAME	DATE
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MFG APPR.		
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COMMENTS:		



TITLE: Full Rocket		
SIZE A	DWG. NO. TE-19113	REV
SCALE: 1:32 WEIGHT:		SHEET 7 OF 11





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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
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		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
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ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		

 		
TITLE:		
Full Rocket		
SIZE	DWG. NO.	REV
A	TE-19113	
SCALE: 1:32		WEIGHT:
		SHEET 8 OF 11

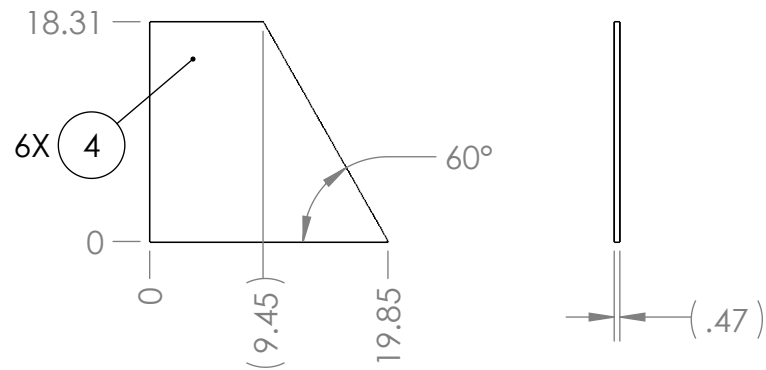
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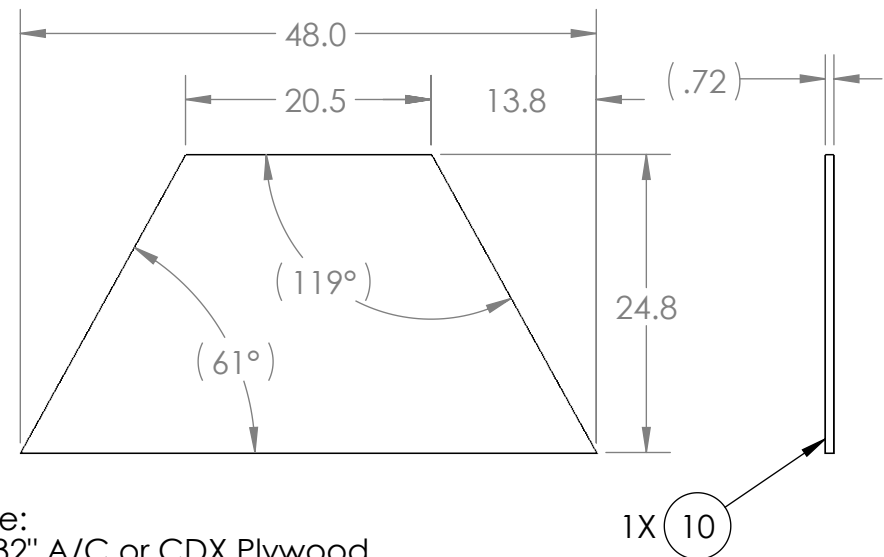
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TE-19113-04



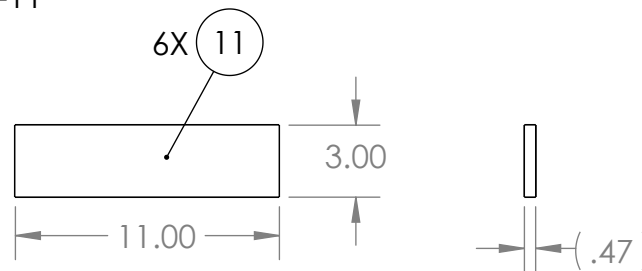
Note:
15/32" A/C or CDX Plywood

TE-19113-10



Note:
23/32" A/C or CDX Plywood

TE-19113-11



Note:
15/32" A/C or CDX Plywood

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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN	
		TOLERANCES:	CHECKED	
		FRACTIONAL $\pm 1/16$	ENG APPR.	
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.	
		TWO PLACE DECIMAL $\pm .01$	Q.A.	
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:		
		MATERIAL		
NEXT ASSY	USED ON	FINISH		
APPLICATION		DO NOT SCALE DRAWING		



FIRST
ROBOTICS
COMPETITION

SOLIDWORKS
Modeling Solutions Partner

TITLE:

Full Rocket

SIZE

A

DWG. NO.

TE-19113

REV

SCALE: 1:32 WEIGHT:

SHEET 9 OF 11

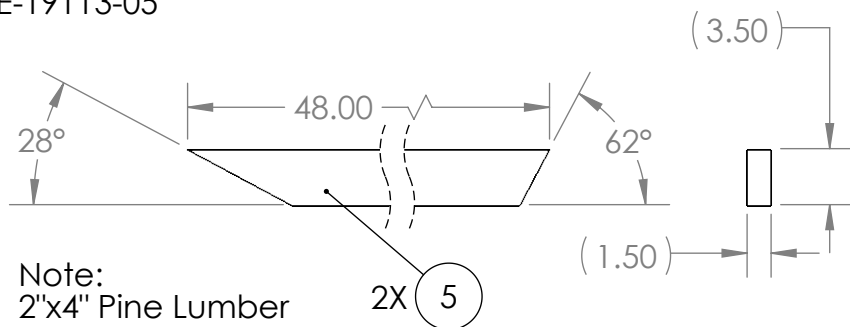
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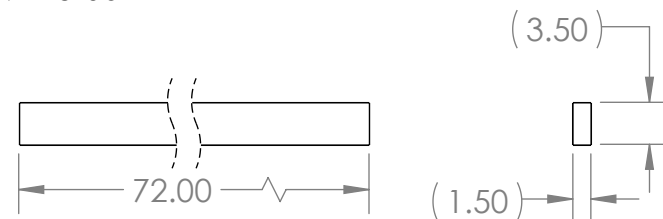
TE-19113-05



Note:
2"x4" Pine Lumber

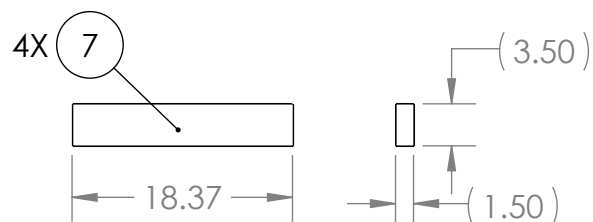
2X (5)

TE-19113-06



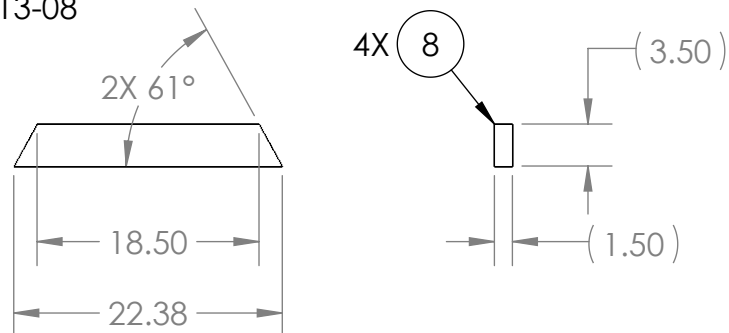
Note:
2"x4" Pine Lumber

TE-19113-07

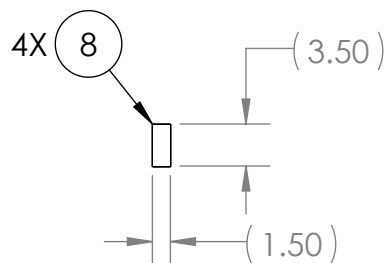


Note:
2"x4" Pine Lumber

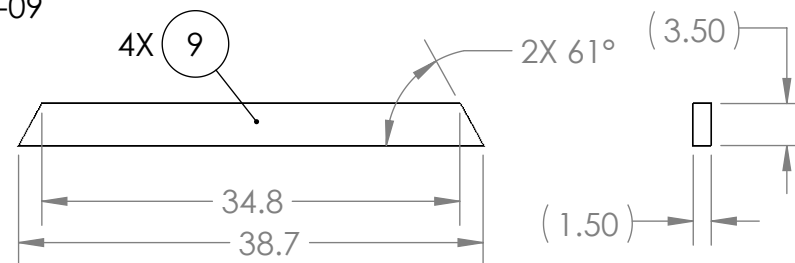
TE-19113-08



Note:
2"x4" Pine Lumber



TE-19113-09



Note:
2"x4" Pine Lumber

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NEXT ASSY

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APPLICATION

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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



FIRST
ROBOTICS
COMPETITION

3D SOLIDWORKS
Modeling Solutions Partner

TITLE:

Full Rocket

SIZE

DWG. NO.

REV

A**TE-19113**

SCALE: 1:32 WEIGHT:

SHEET 10 OF 11

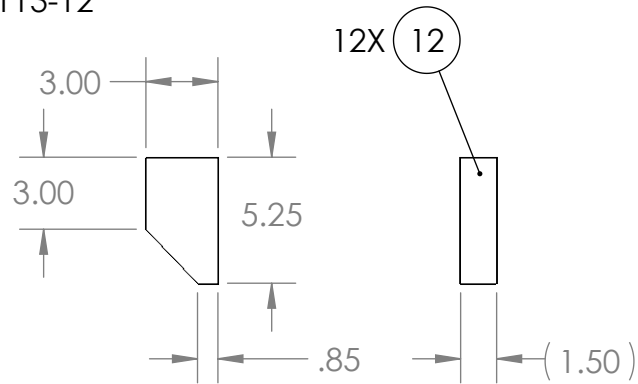
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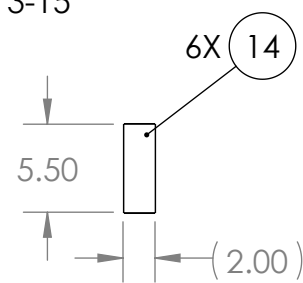
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TE-19113-12



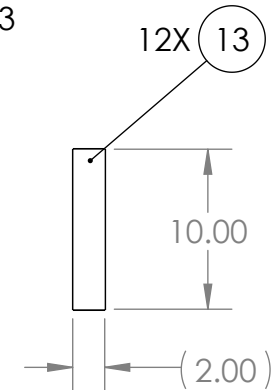
Note:
2"x 4" Pine lumber

TE-19113-15



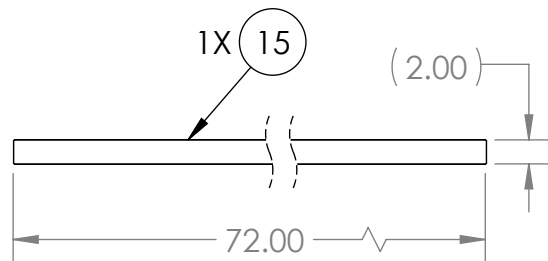
2" Vison Tape

TE-19113-13



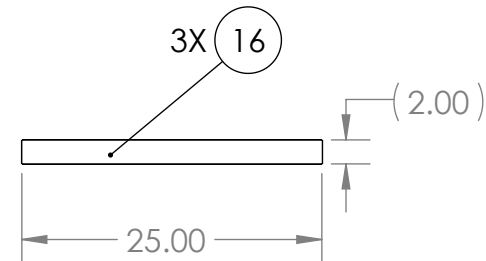
2" Hook Fastener

TE-19113-16



2" Hook Fastener

TE-19113-17



2" Hook Fastener

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TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

NAME

DATE



TITLE:

Full Rocket

SIZE

A

DWG. NO.

TE-19113

REV

SCALE: 1:32 WEIGHT:

SHEET 11 OF 11

2

1