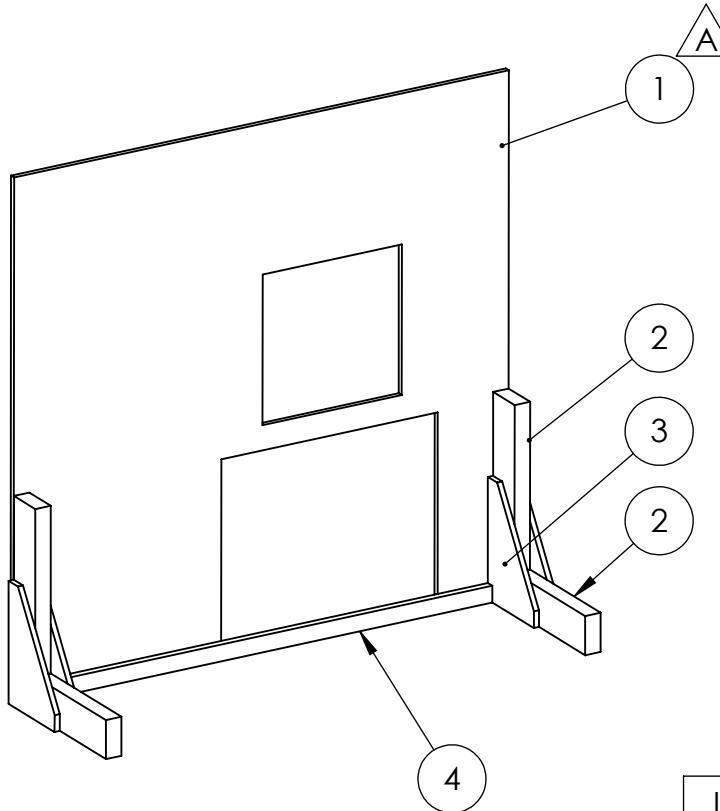


2

1



B

B

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B2, 2-B1	A	Flipped orientation of TE-18001-01 so that the EXCHANGE opening is on the correct side.	1/23/2018	DAF

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18001-01		1
2	TE-18001-02		4
3	TE-18001-03		4
4	TE-18001-04		1

		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			

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TITLE:

Exchange

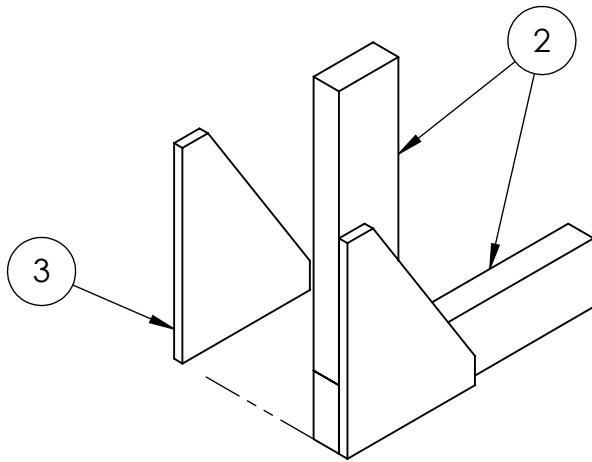
SIZE DWG. NO. REV
A **TE-18001** **A**
 SCALE: 1:16 WEIGHT: SHEET 1 OF 2

2

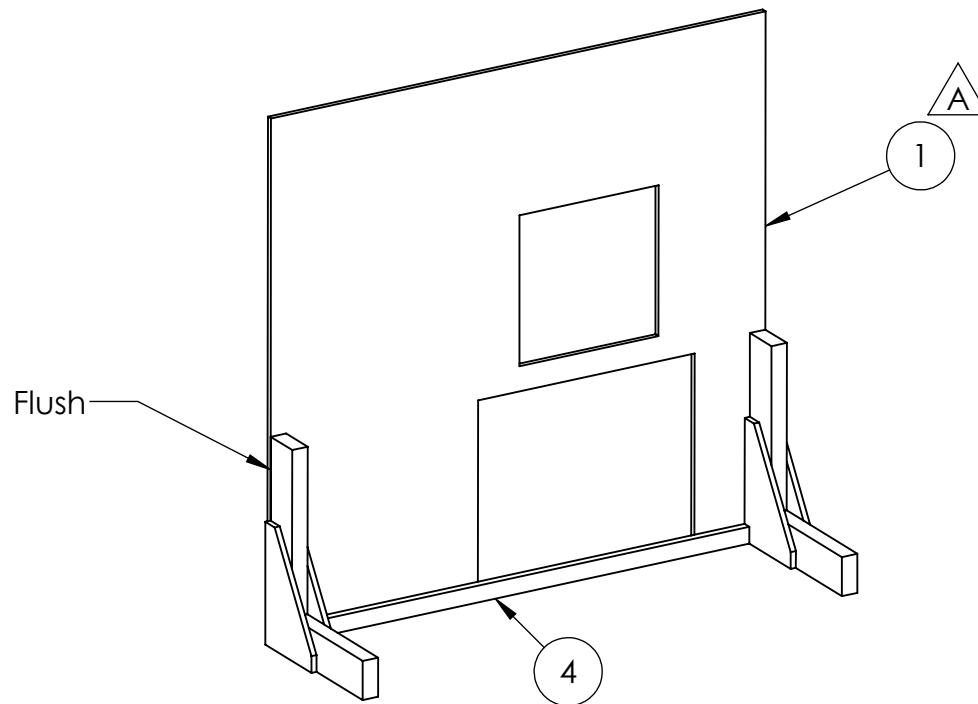
1

2

1



Attach Item 2 (Qty. 2) and Item 3 (Qty. 2) as shown with wood screws. Build two total.



Using wood screws, attach the two leg assemblies to Item 1, so that the 2x4 is flush with the edge of the plywood. Place Item 4 between the two leg assemblies and secure with screws.

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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			

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TITLE:

Exchange

SIZE	DWG. NO.	REV
A	TE-18001	A
SCALE: 1:16	WEIGHT:	SHEET 2 OF 2

2

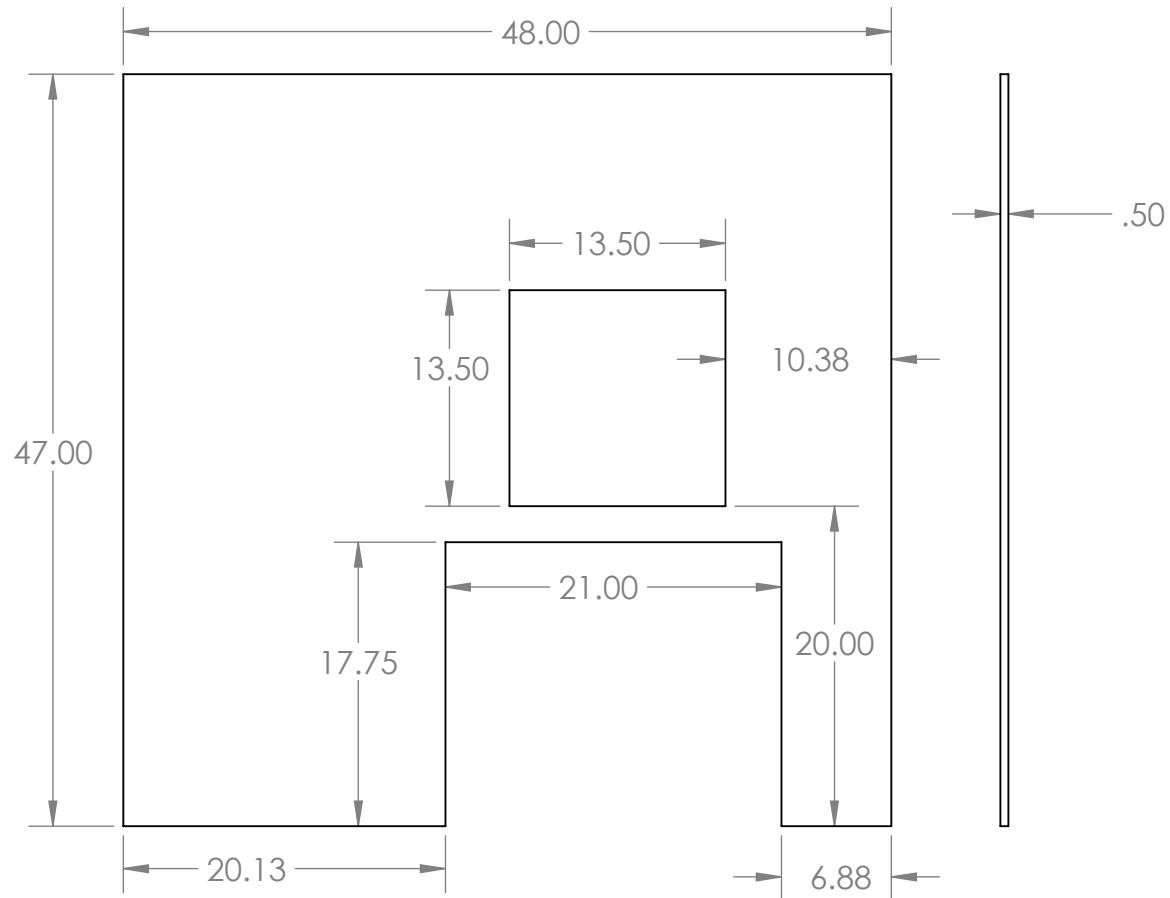
1

2

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B

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Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 1

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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				



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TITLE:

SIZE DWG. NO. REV
A TE-18001-01

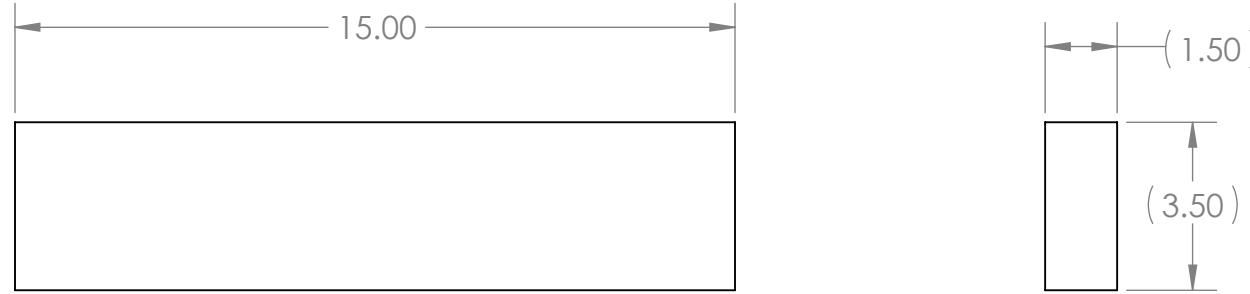
SCALE: 1:12 WEIGHT: SHEET 1 OF 1

2

1

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Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY Needed: 4

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		UNLESS OTHERWISE SPECIFIED:			NAME	DATE
		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 $\pm .001$		DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	MATERIAL	CHECKED		
				ENG APPR.		
				MFG APPR.		
				Q.A.		
		COMMENTS:				
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NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				



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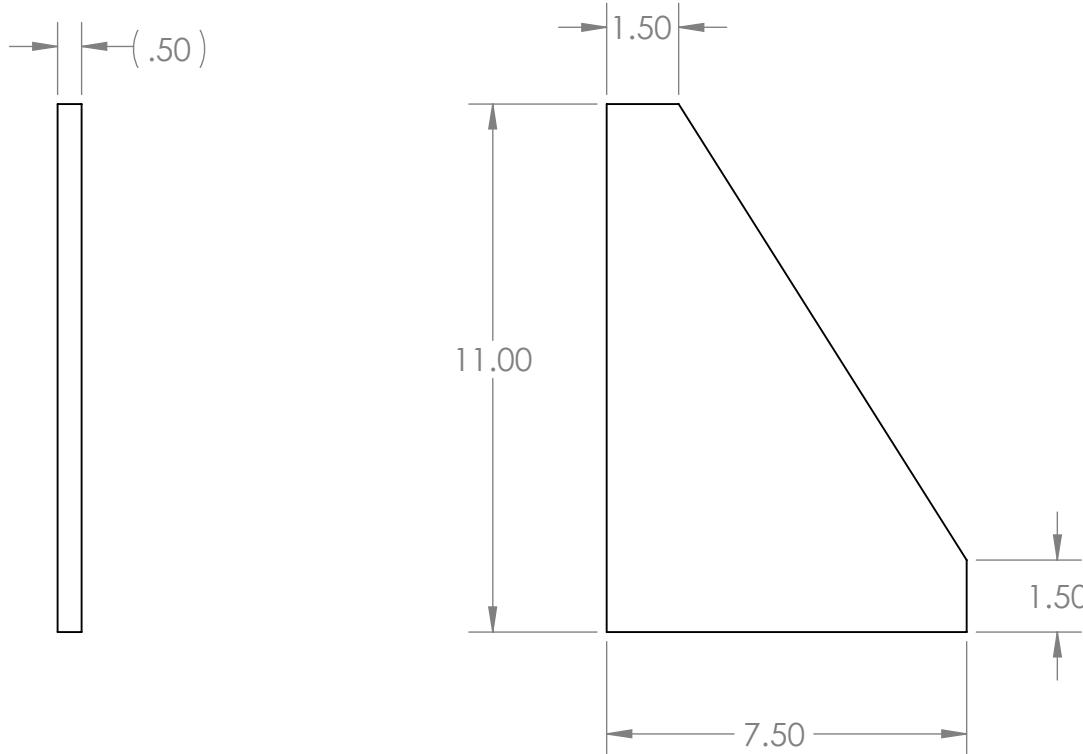
TITLE:

SIZE DWG. NO. REV
A TE-18001-02

SCALE: 1:4 WEIGHT: SHEET 1 OF 1

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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 $\pm .001$		DRAWN	NAME	DATE
		INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL		CHECKED		
NEXT ASSY	USED ON	FINISH		ENG APPR.		
	APPLICATION	DO NOT SCALE DRAWING		MFG APPR.		



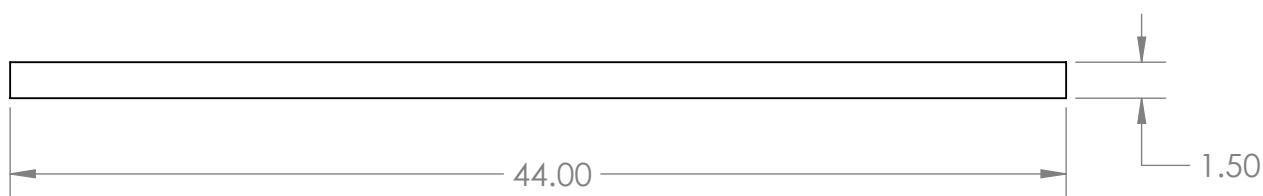
TITLE:

SIZE DWG. NO. REV
A TE-18001-03

SCALE: 1:4 WEIGHT: SHEET 1 OF 1

B

B



NOTES:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 1

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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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
		.75 Ply	MFG APPR.		
NEXT ASSY	USED ON	FINISH	Q.A.		
APPLICATION		DO NOT SCALE DRAWING	COMMENTS:		



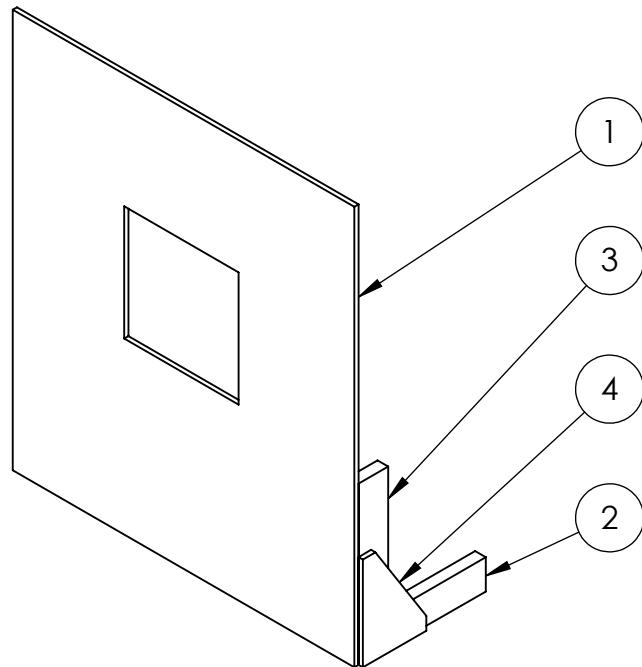
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TITLE:

SIZE DWG. NO. REV
A TE-18001-04
SCALE: 1:8 WEIGHT: SHEET 1 OF 1

2

1



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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18002-1		1
2	TE-18002-2		2
3	TE-18002-3		2
4	TE-18002-4		4

		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			

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COMPETITION

 **SOLIDWORKS**
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TITLE:

Portal

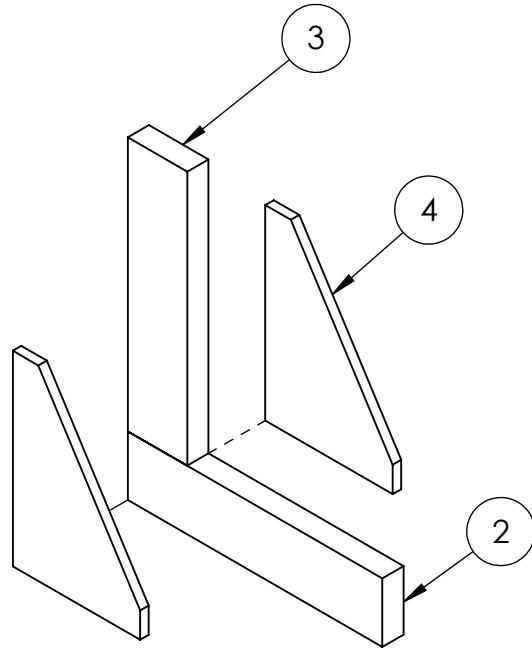
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A	TE-18002	
SCALE: 1:16	WEIGHT:	SHEET 1 OF 2

2

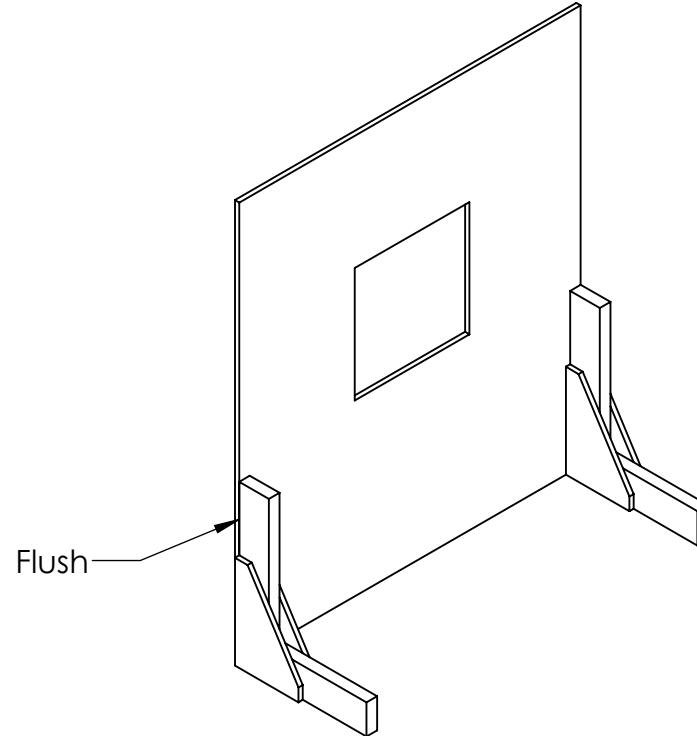
1

2

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Create leg assemblies by attaching Item 4 (qty. 2) to Items 2 and 3 with wood screws as necessary. Qty. 2.



Attach two leg assemblies to Item 1 as shown using wood screws.

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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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:

SIZE	DWG. NO.	REV
A	TE-18002	
SCALE: 1:16		WEIGHT:
SHEET 2 OF 2		

2

1

B

B

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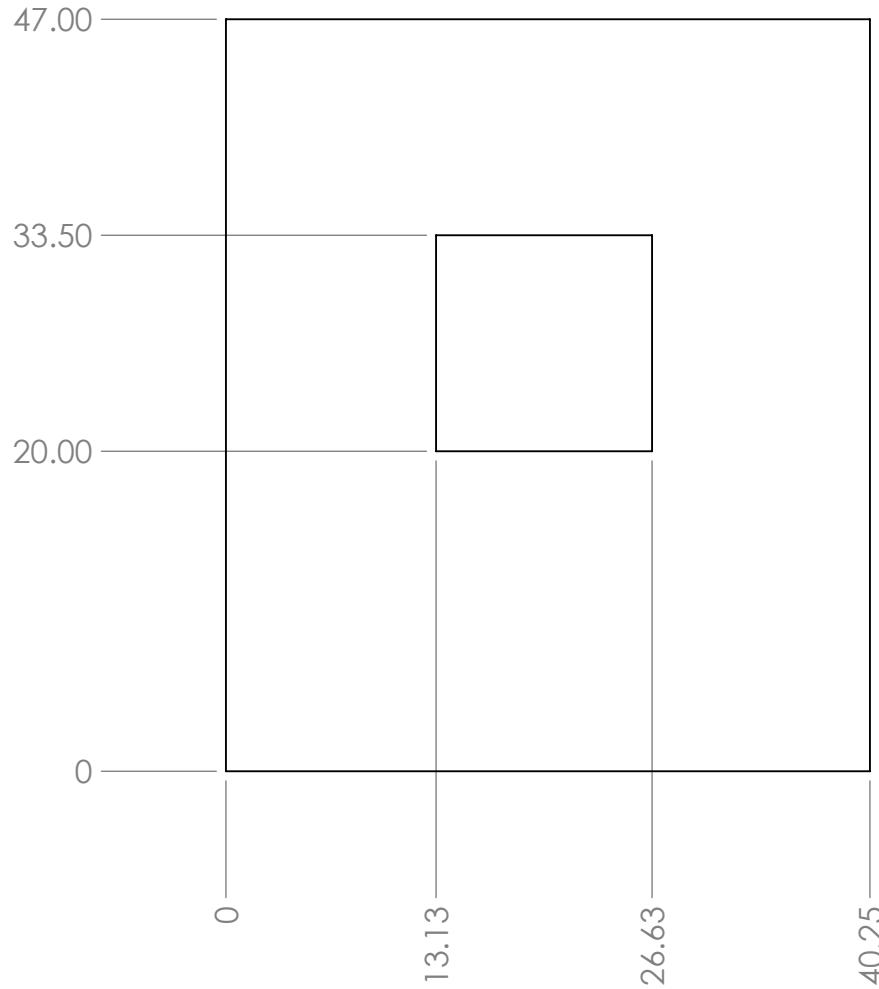
A

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Notes:
 1. Material: 1/2" AC Plywood
 2. QTY. Needed: 1

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		UNLESS OTHERWISE SPECIFIED:		COMMENTS:
		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		
NEXT ASSY	USED ON	FINISH		
APPLICATION		DO NOT SCALE DRAWING		

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

SIZE	DWG. NO.	REV
A	TE-18002-1	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1

2

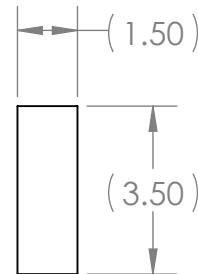
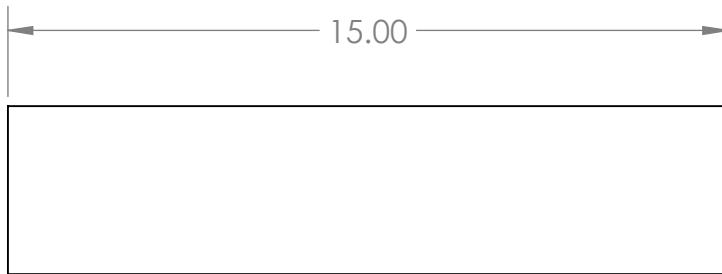
1

2

1

B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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



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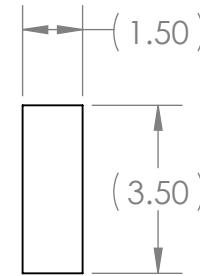
TITLE:

SIZE	DWG. NO.	REV
A	TE-18002-2	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

B



B

Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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

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TITLE:

SIZE	DWG. NO.	REV
A	TE-18002-3	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

(.50)

11.00

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1.50
7.50

Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

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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				



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TITLE:

SIZE DWG. NO. REV
A TE-18002-4

SCALE: 1:4 WEIGHT: SHEET 1 OF 1

2

1

B

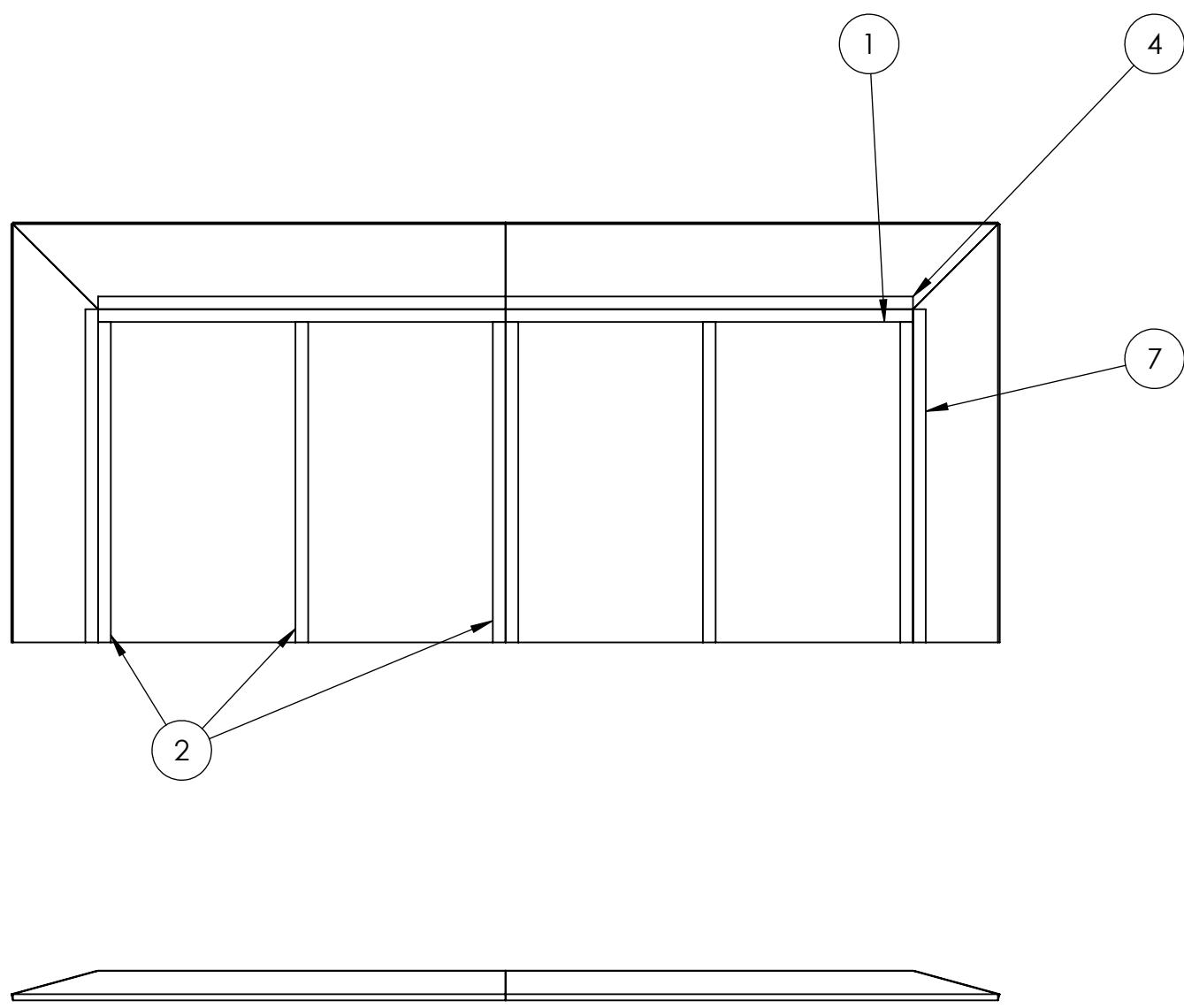
B

4

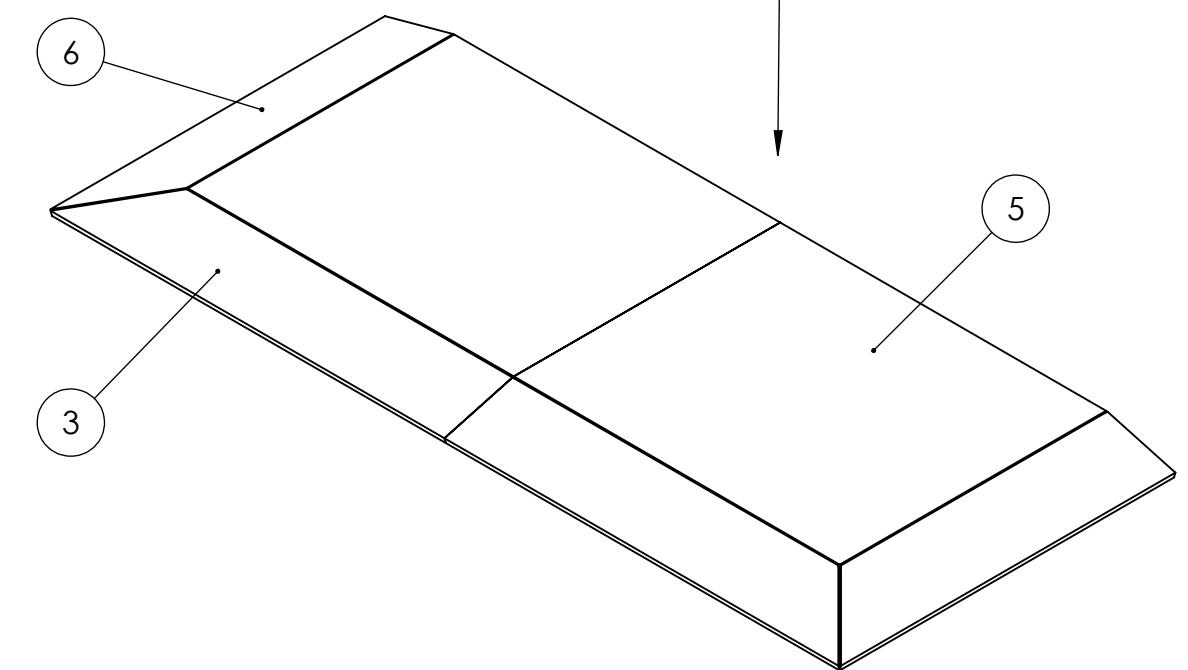
3

2

1



Note: The width of this platform varies from the field version to reduce cost. The top face of this platform is 96" wide, while the field version is 104".



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18003-1		2
2	TE-18003-2		6
3	TE-18003-3		2
4	TE-18003-4		2
5	TE-18003-5		2
6	TE-18003-6		2
7	TE-18003-7		2

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		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
	APPLICATION	DO NOT SCALE DRAWING			
SIZE	DWG. NO.		REV		
B	TE-18003				
SCALE: 1:20	WEIGHT:		SHEET 1 OF 3		

4

3

2

1

B

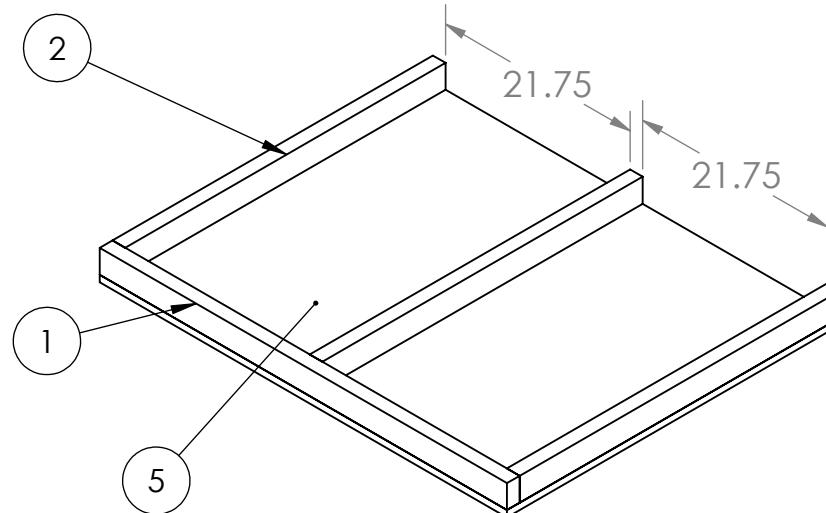
A

4

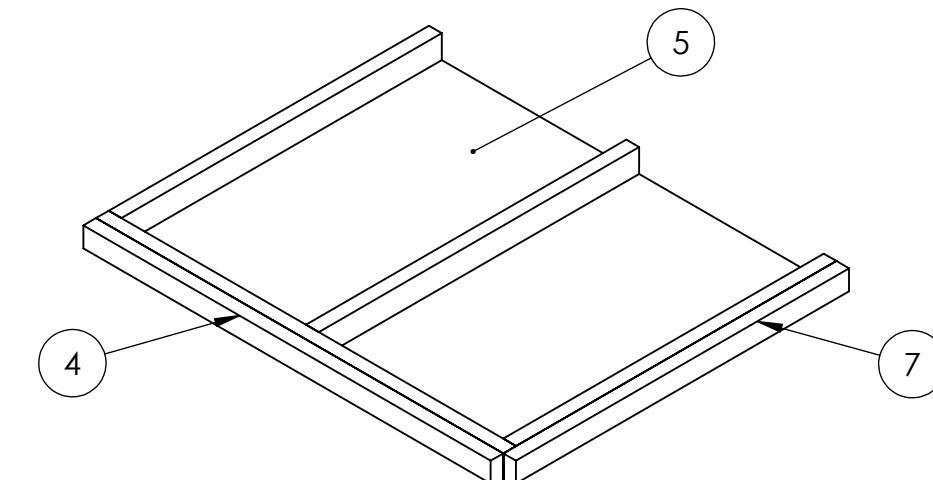
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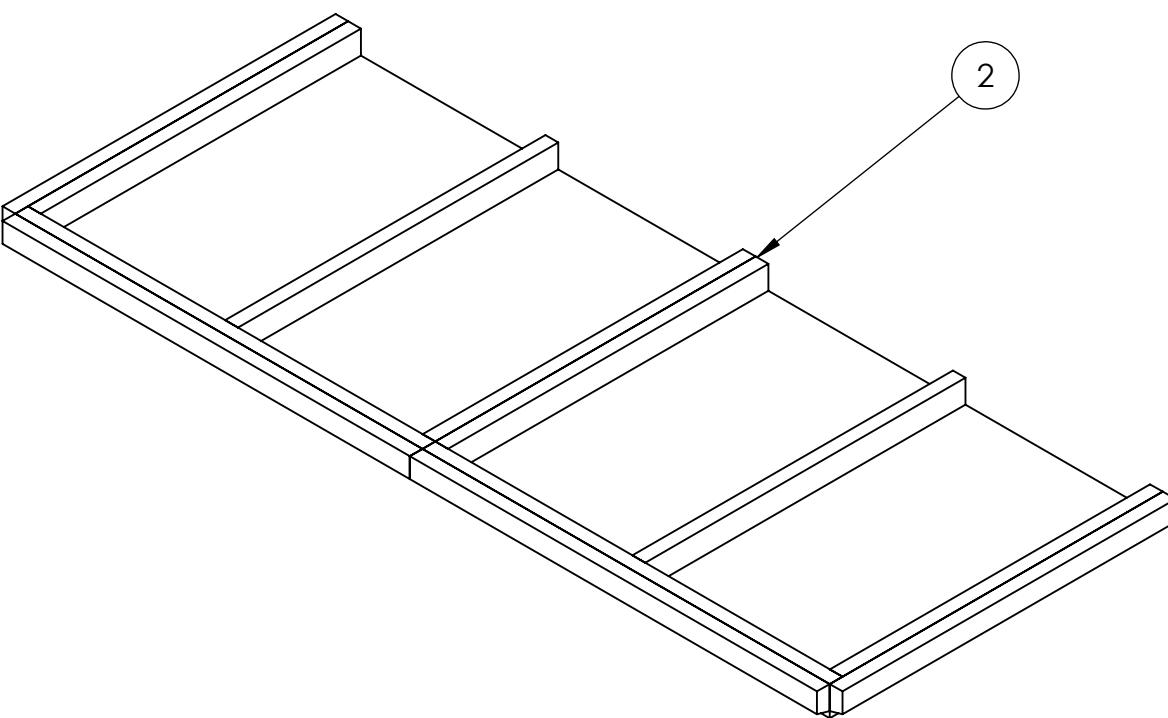
1



Step 1: Attach Item 1 and Item 2 (qty: 2) to Item 5 using wood screws. Build 2 identical assemblies.



Step 2: Attach Item 4 and Item 7 to Item 5 using wood screws. Repeat for the second assembly.



Step 3: Use wood screws to attach the identical assemblies together, with Item 2 (qty: 2) in the middle.

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		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				
SCALE: 1:16		WEIGHT:		SHEET 2 OF 3	
SIZE B		DWG. NO. TE-18003	REV		

 **FIRST
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COMPETITION**  **SOLIDWORKS**
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Platform

4

3

2

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4

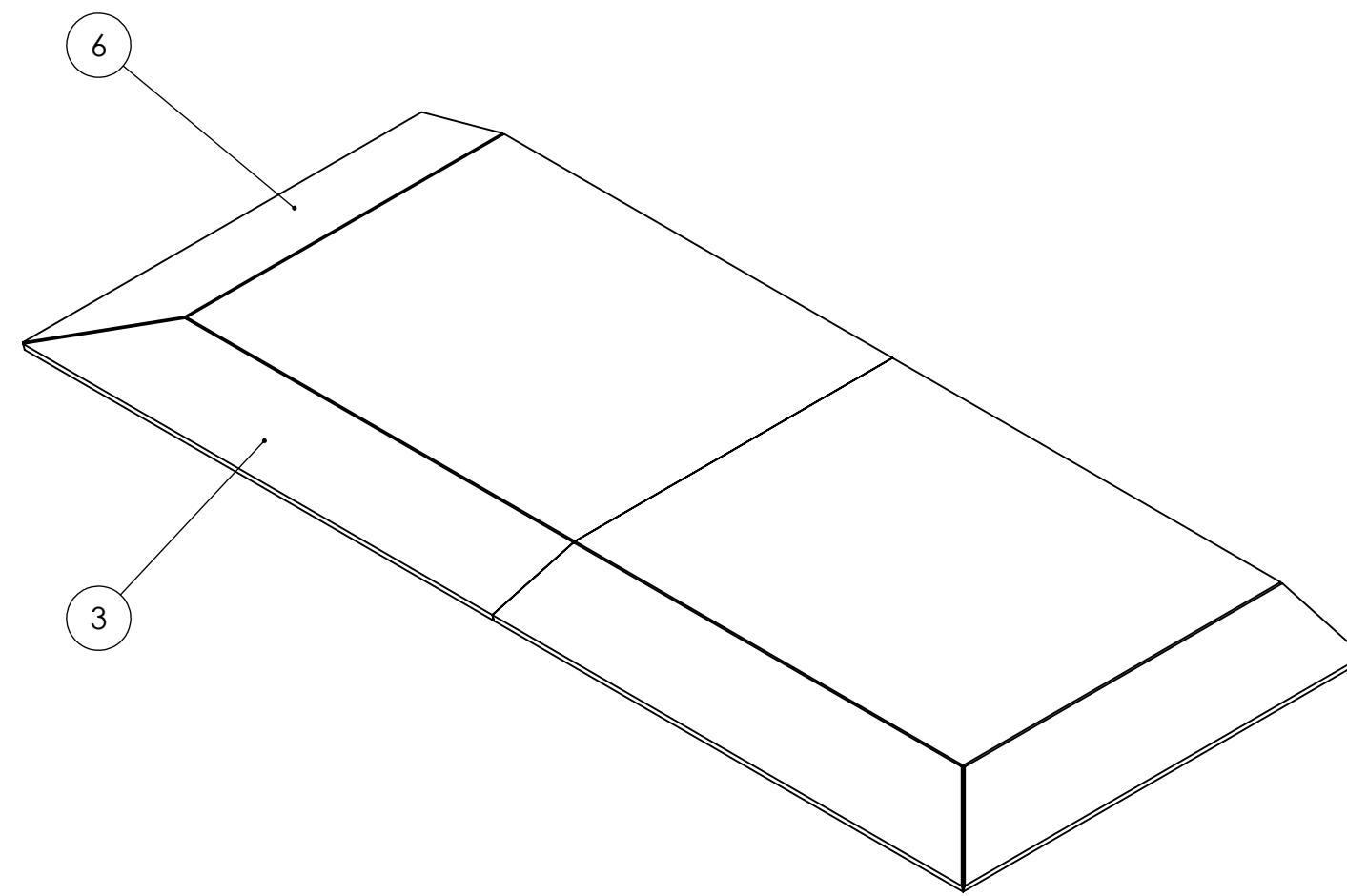
3

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Step 4: Use wood screws to fasten Item 3 (qty: 2) to Item 4 (qty: 2), and Item 6 (qty: 2) to Item 7 (qty: 2).

A

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		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				
B	DWG. NO. TE-18003		REV		
SCALE: 1:16	WEIGHT:		SHEET 3 OF 3		

4

3

2

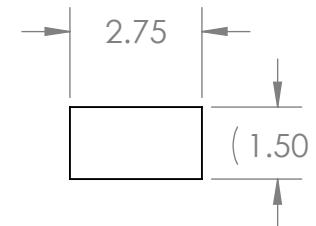
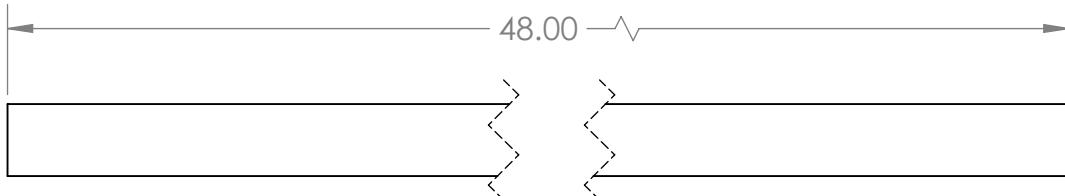
1

2

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B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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

COMMENTS:	

SIZE	DWG. NO.	REV
A	TE-18003-1	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1



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TITLE:

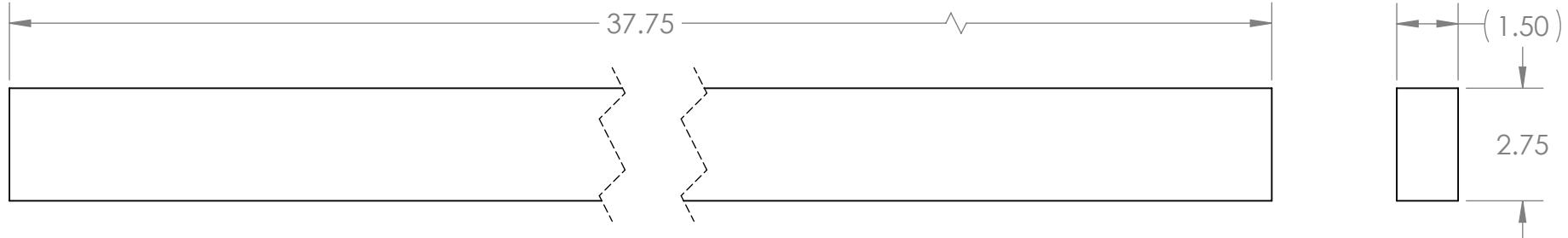
A

2

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Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 6

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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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:		



TITLE:

SIZE DWG. NO. REV
A TE-18003-2
SCALE: 1:4 WEIGHT: SHEET 1 OF 1

2

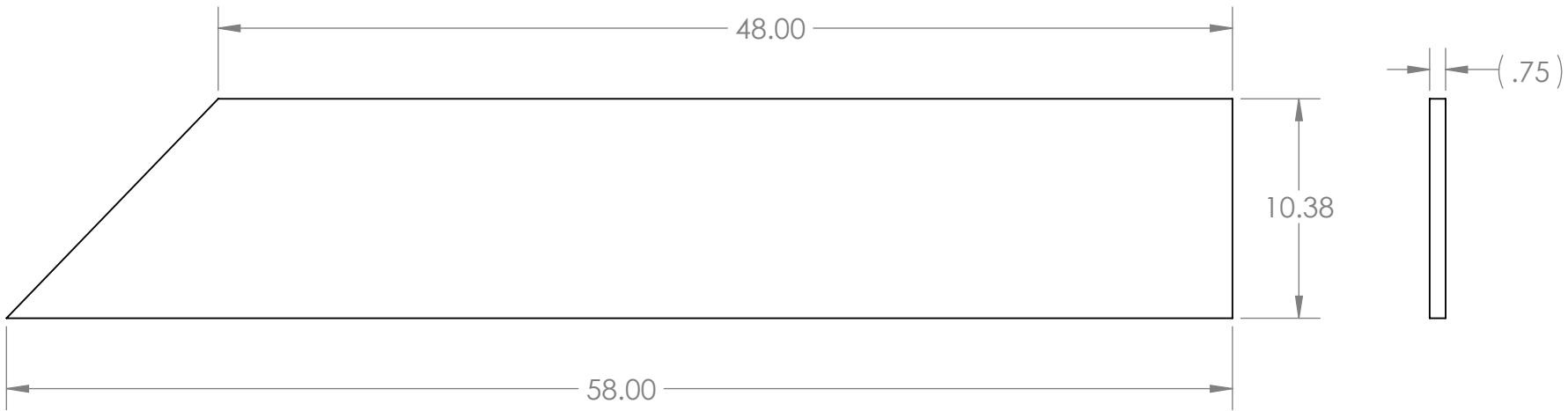
1

2

1

B

B



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

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

TITLE:	
FIRST[®] ROBOTICS COMPETITION	
DS SOLIDWORKS Modeling Solutions Partner	

COMMENTS:

SIZE	DWG. NO.	REV
A	TE-18003-3	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

2

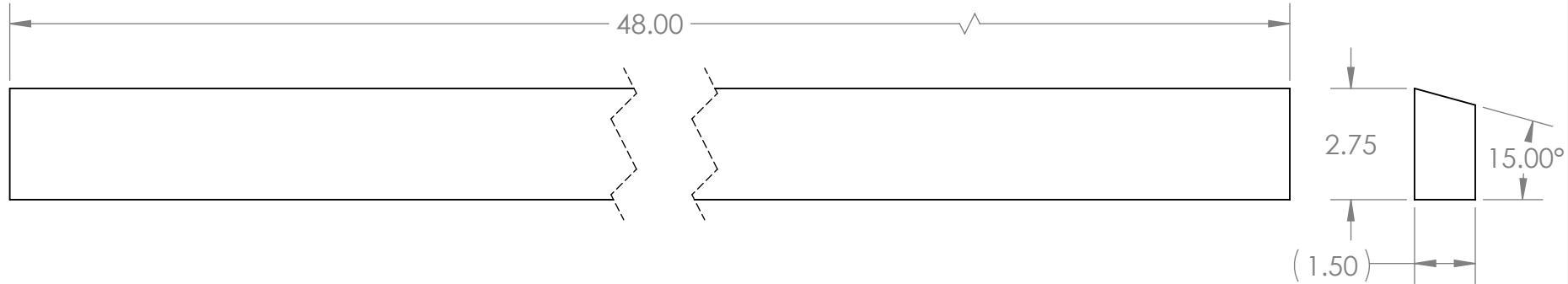
1

2

1

B

B

**Notes:**

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:	



SOLIDWORKS
Modeling Solutions Partner

TITLE:

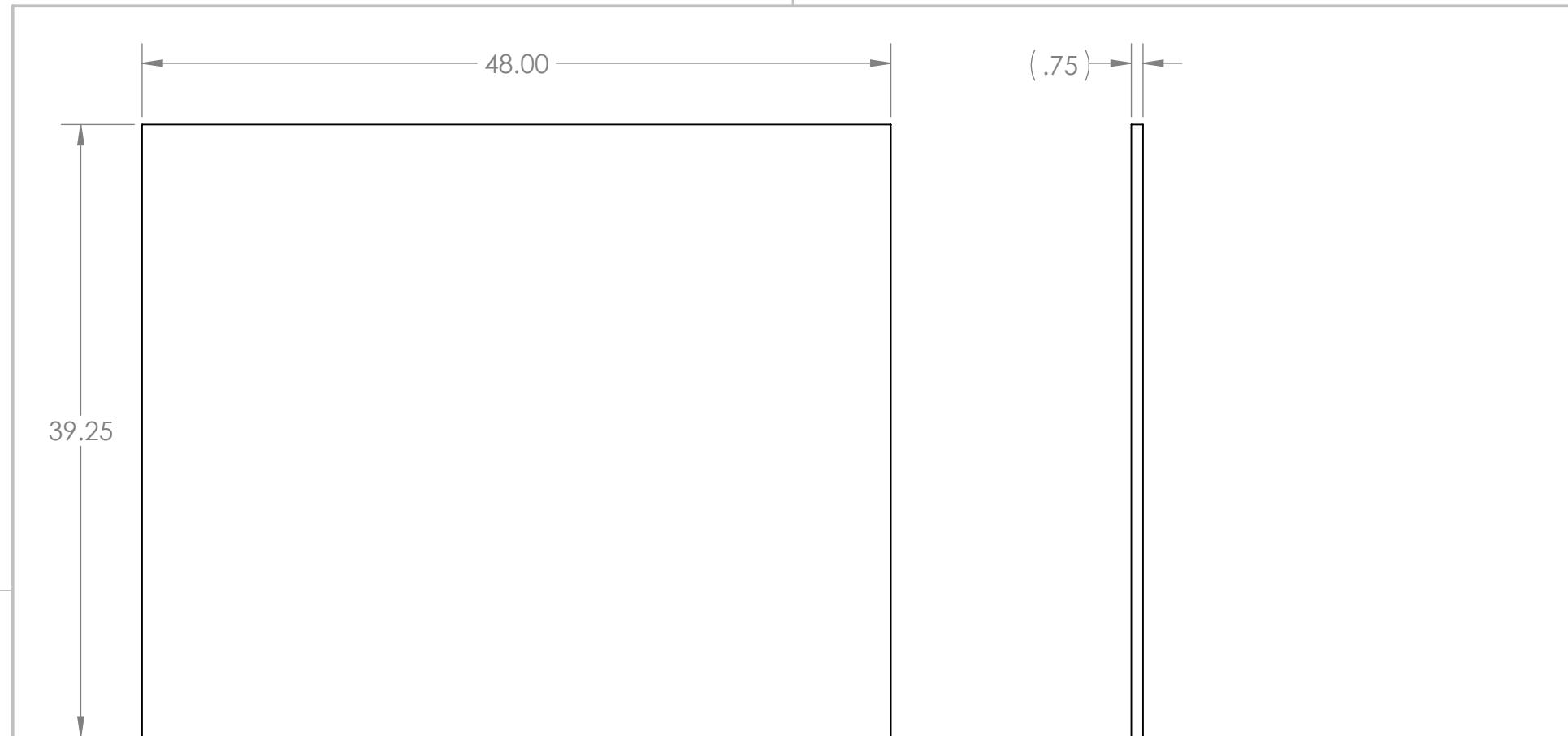
SIZE	DWG. NO.	REV
A	TE-18003-4	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

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1



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

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



SOLIDWORKS
Modeling Solutions Partner

TITLE:

SIZE	DWG. NO.	REV
A	TE-18003-5	
SCALE: 1:10	WEIGHT:	SHEET 1 OF 1

2

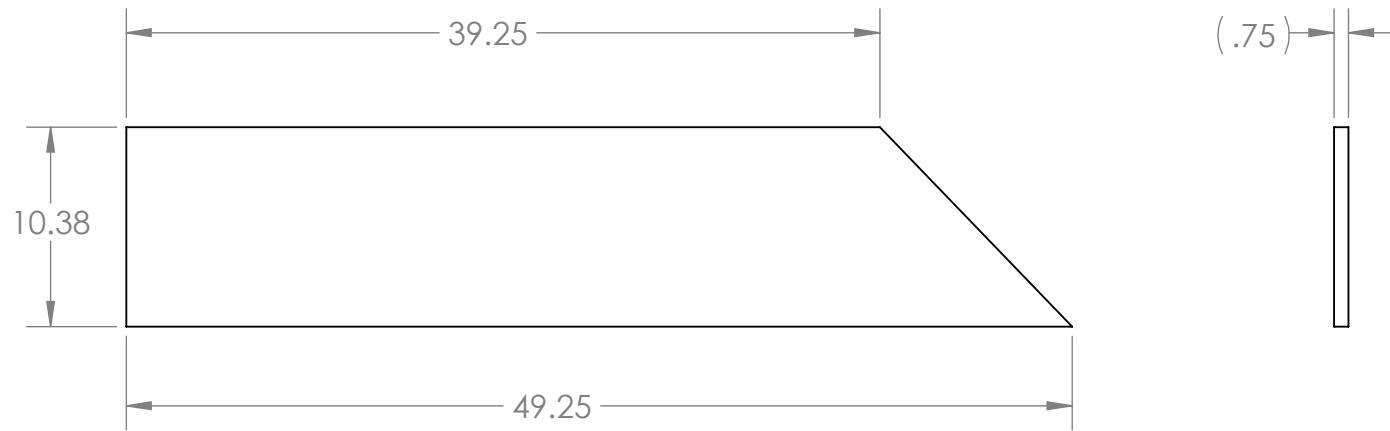
1

B

A

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Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

A

A

		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				

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TITLE:

SIZE DWG. NO. REV
A TE-18003-6

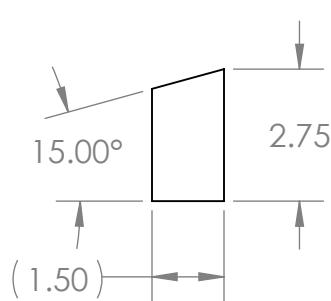
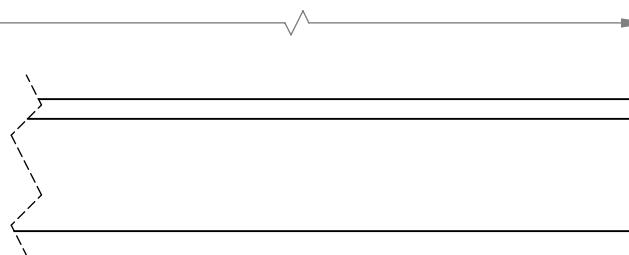
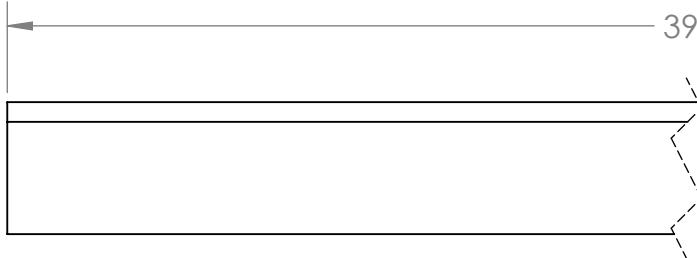
SCALE: 1:10 WEIGHT: SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:		

SIZE	DWG. NO.	REV
A	TE-18003-7	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

 **FIRST[®]
ROBOTICS
COMPETITION**

 **SOLIDWORKS**
Modeling Solutions Partner

TITLE:

A

4

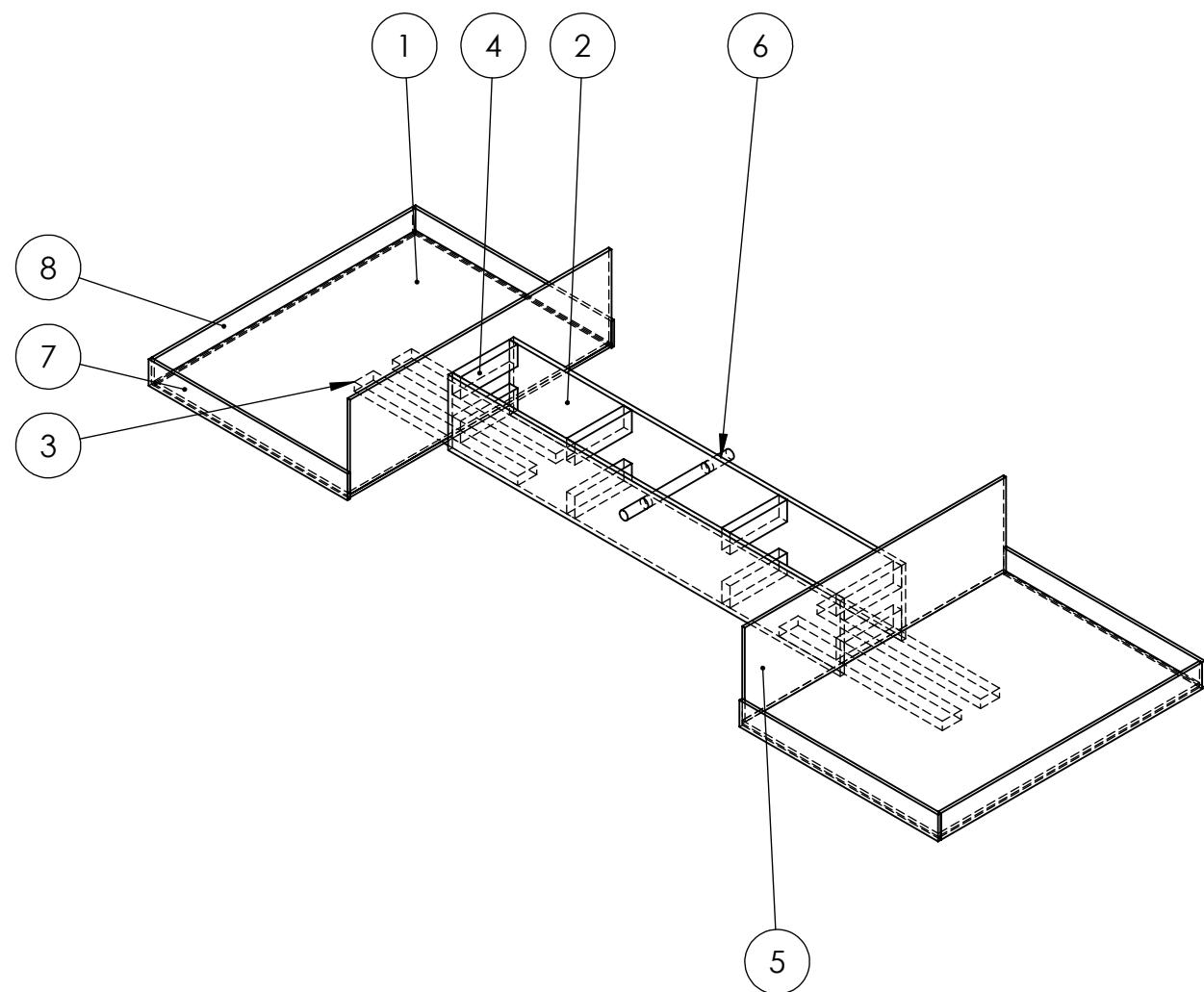
3

2

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18004-01		2
2	TE-18004-02		2
3	TE-18004-03		4
4	TE-18004-04		8
5	TE-18004-05		2
6	TE-18004-06		1
7	TE-18004-07		4
8	TE-18004-08		2



Switch Arm

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION  SOLIDWORKS <small>Modeling Solutions Partner</small>
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm\frac{1}{16}$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			
			CHECKED			
			ENG APPR.			
			MFG APPR.			
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			
		MATERIAL	COMMENTS:			
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:24	WEIGHT:	SHEET 1 OF 3	

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4

3

2

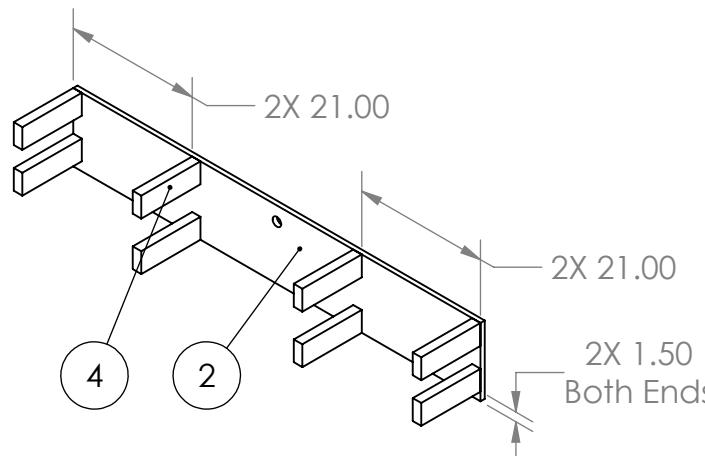
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4

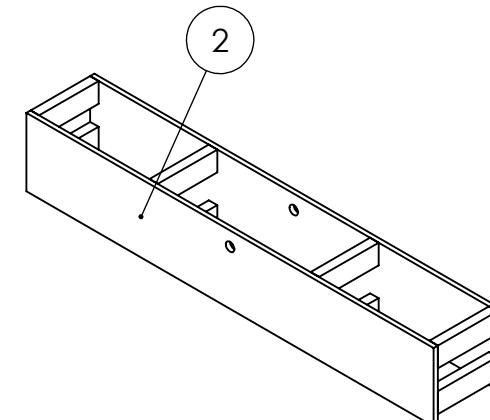
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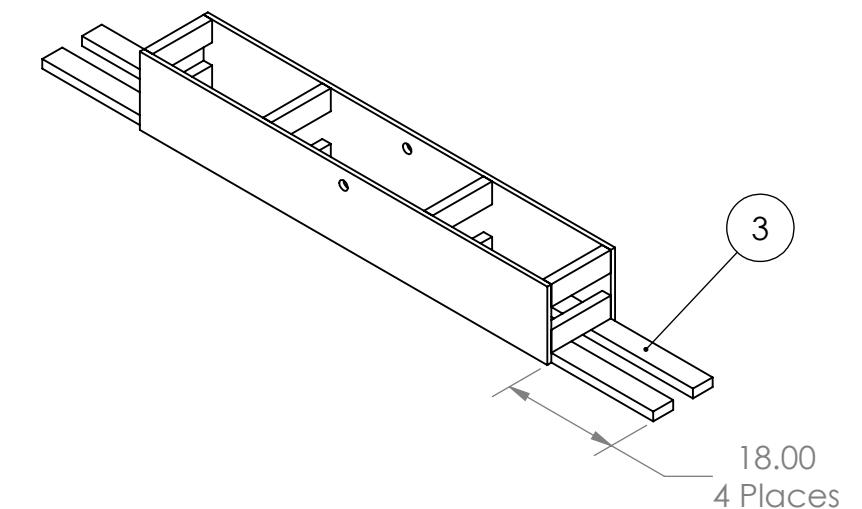
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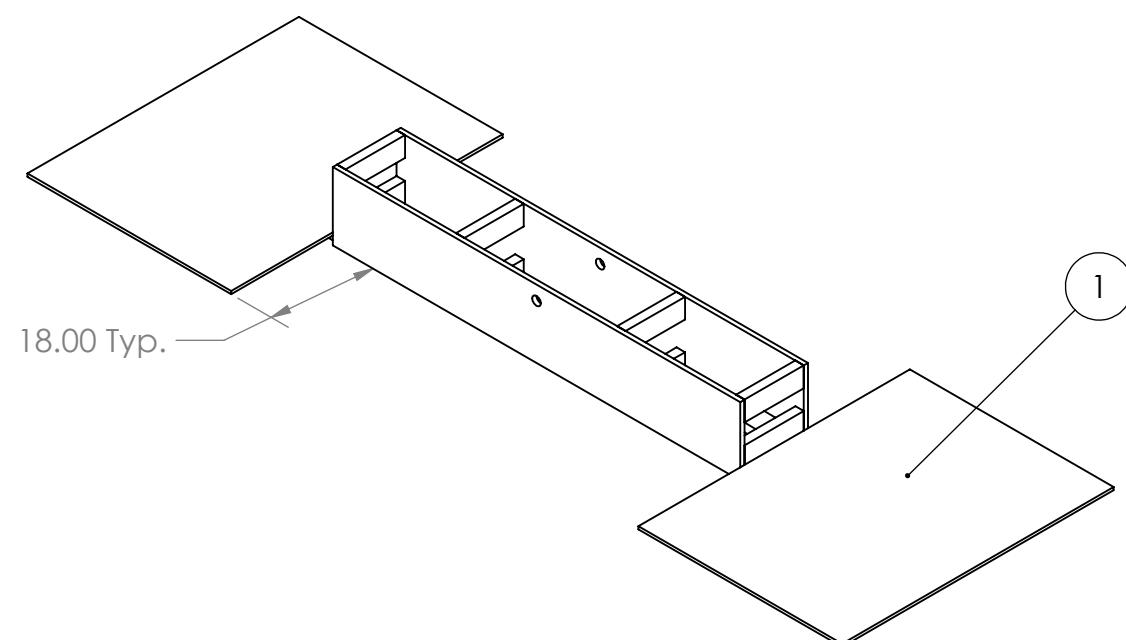
Step 1: Attach Item 4 (qty. 8) to Item 2 as shown with wood screws.



Step 2: Attach Item 2 to assembly as shown with wood screws.



Step 3: Attach Item 3 (qty. 4) to assembly as shown with wood screws.



Step 4: Attach Item 1 (qty. 2) to assembly as shown with wood screws.

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		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001		NAME	DATE
		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				
SIZE	DWG. NO.			REV	
B	TE-18004				
SCALE: 1:24	WEIGHT:			SHEET 2 OF 3	

 **FIRST
ROBOTICS
COMPETITION**  **SOLIDWORKS**
Modeling Solutions Partner

Switch Arm

4

3

2

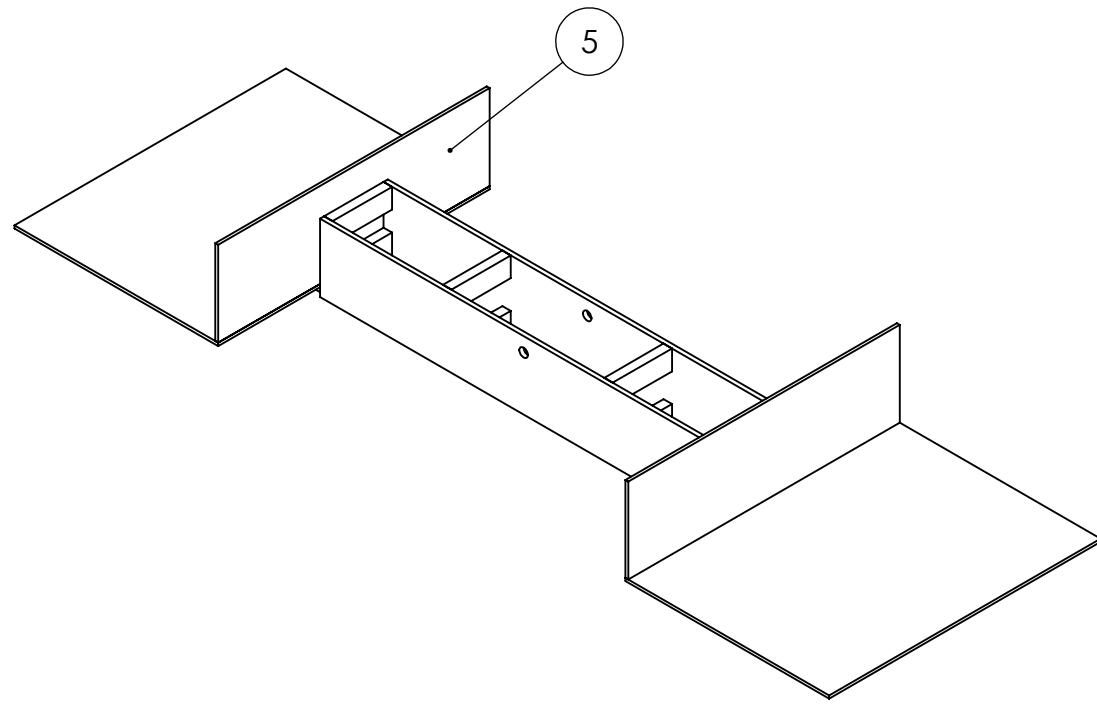
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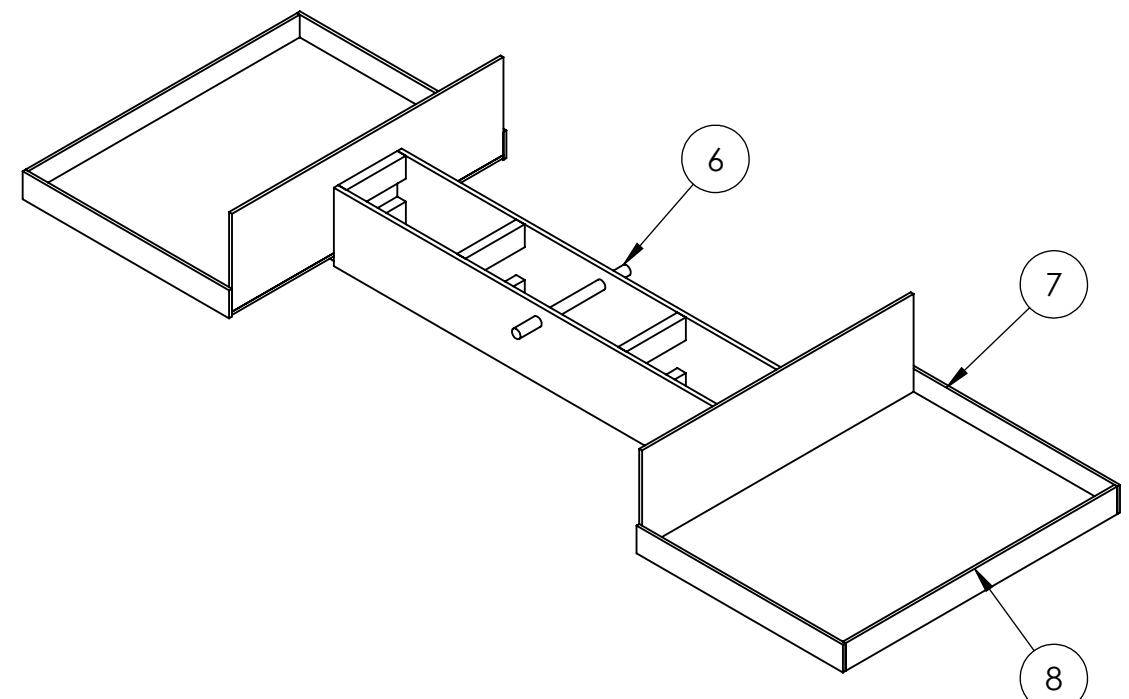
3

2

1



Step 5: Attach Item 5 (qty. 2) to assembly as shown with wood screws.



Step 6: Attach Item 7 (qty. 4) and Item 8 (qty. 2) to Item 2 as shown with wood screws or staples. When using screws, pre-drill to avoid splitting.

Place Item 6 as shown, but do not attach.

B

B

A

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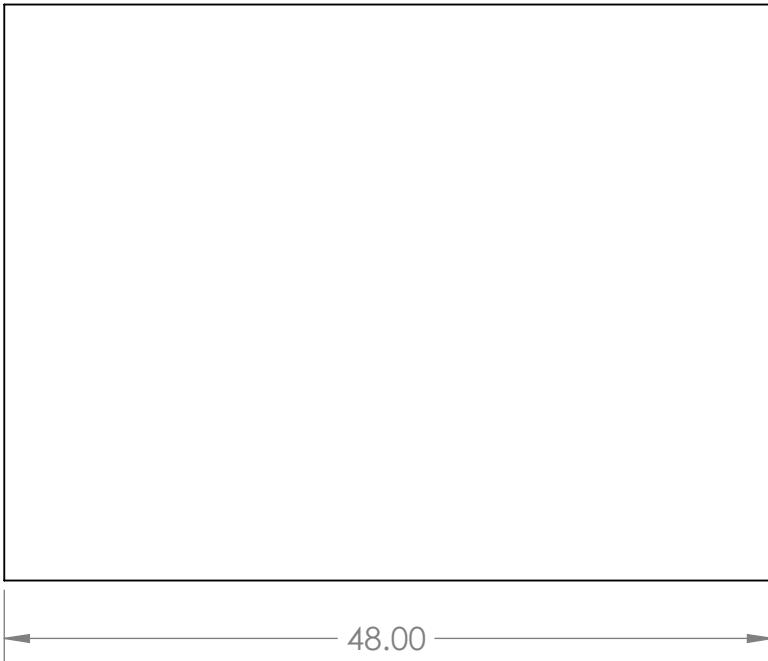
		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$		NAME	DATE
		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				
SIZE	DWG. NO.			REV	
B	TE-18004				
SCALE: 1:24	WEIGHT:			SHEET 3 OF 3	

4

3

2

1



NOTES:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

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

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SIZE	DWG. NO.	REV
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SCALE: 1:12	WEIGHT:	SHEET 1 OF 1

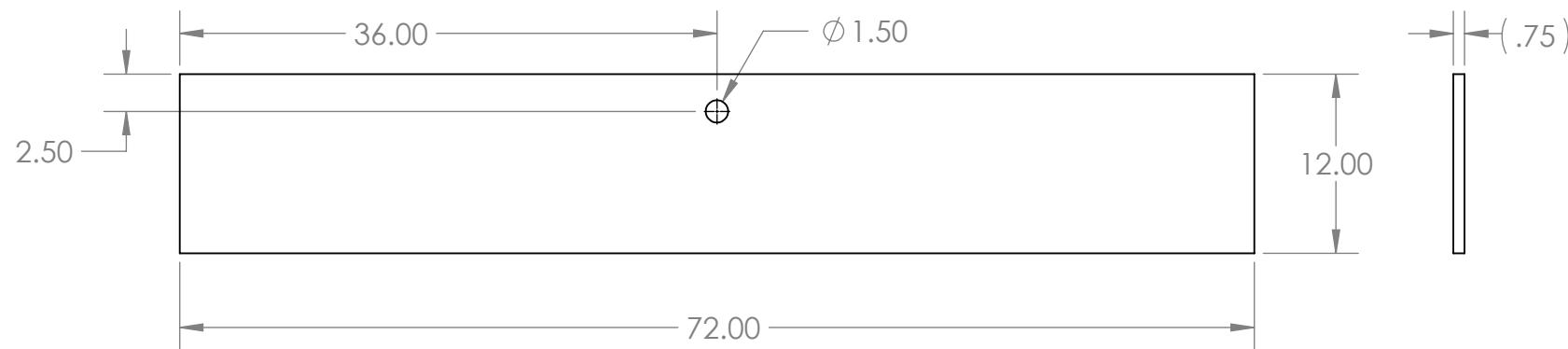


SOLIDWORKS
Modeling Solutions Partner

TITLE:

B

B



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

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		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		
		.75 Ply		
NEXT ASSY	USED ON	FINISH		
APPLICATION		DO NOT SCALE DRAWING		

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

COMMENTS:

SIZE	DWG. NO.	REV
A	TE-18004-02	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1

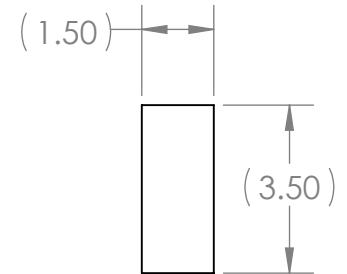
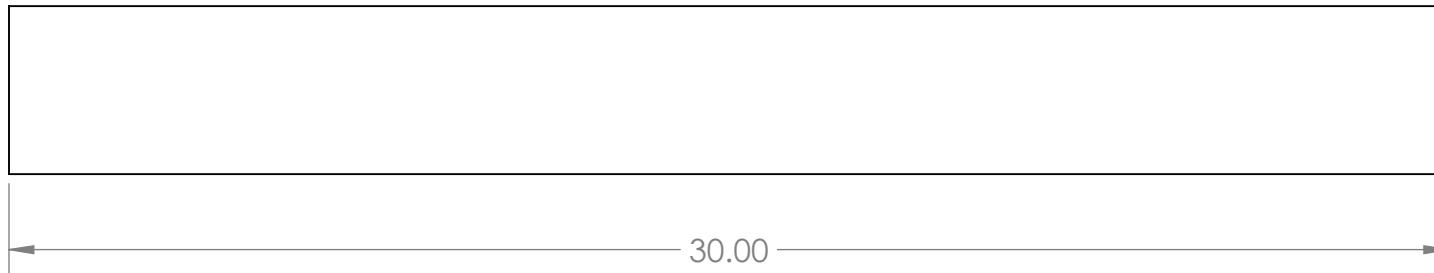


SOLIDWORKS
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A

B

B

**Notes:**

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 4

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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 $\pm .001$			
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		2x4			
NEXT ASSY	USED ON	FINISH			
	APPLICATION	DO NOT SCALE DRAWING			

TITLE: **FIRST
ROBOTICS
COMPETITION**

SOLIDWORKS
Modeling Solutions Partner

SIZE DWG. NO. REV

A TE-18004-03

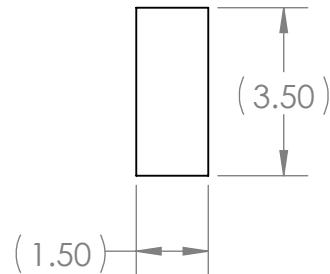
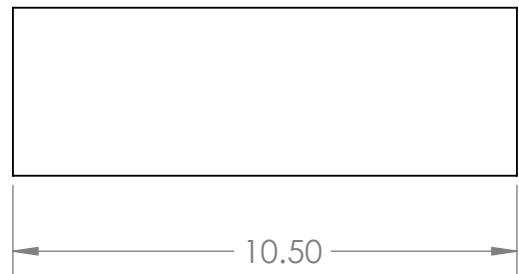
SCALE: 1:4 WEIGHT: SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 8

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		UNLESS OTHERWISE SPECIFIED:				
		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	2x4			
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				

SIZE	DWG. NO.	REV
A	TE-18004-04	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1



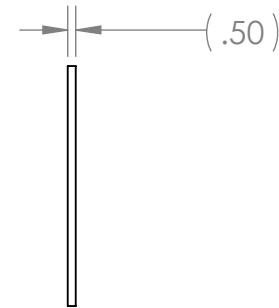
SOLIDWORKS
Modeling Solutions Partner

TITLE:

A

B

B

**Notes:**

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

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		UNLESS OTHERWISE SPECIFIED:		
		DIMENSIONS ARE IN INCHES		
		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		
		1/2" Ply		
NEXT ASSY	USED ON	FINISH		
APPLICATION		DO NOT SCALE DRAWING		

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

COMMENTS:

SIZE	DWG. NO.	REV
A	TE-18004-05	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1



SOLIDWORKS
Modeling Solutions Partner

TITLE:

2

1

B

B



(ϕ 1.5)

Notes:

1. Material: 1.5" Diameter Wood Dowel (Any Wood)
2. QTY. Needed: 1

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

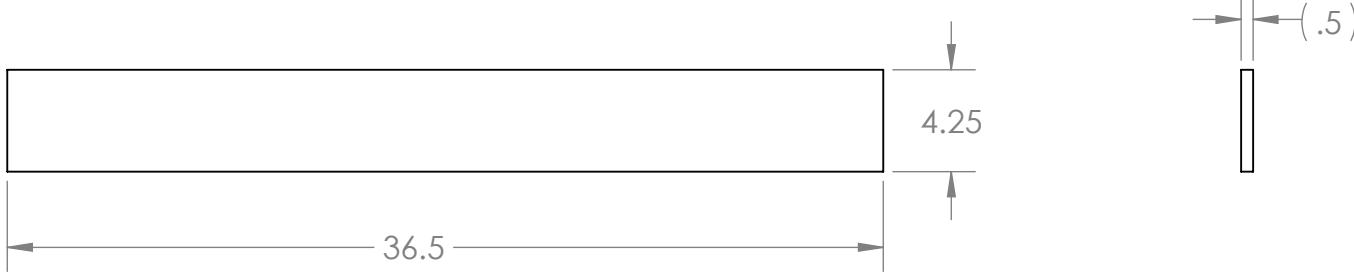
 **FIRST
ROBOTICS
COMPETITION** 
Modeling Solutions Partner

TITLE:

SIZE	DWG. NO.	REV
A	TE-18004-06	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1



Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

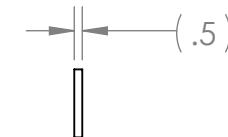
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		UNLESS OTHERWISE SPECIFIED:				NAME	DATE
		DIMENSIONS ARE IN INCHES			DRAWN		
		TOLERANCES:			CHECKED		
		FRACTIONAL $\pm 1/16$			ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$			MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$			Q.A.		
		THREE PLACE DECIMAL $\pm .001$			COMMENTS:		
		INTERPRET GEOMETRIC					
		TOLERANCING PER:					
		MATERIAL					
		1/2" Ply					
NEXT ASSY	USED ON	FINISH					
APPLICATION		DO NOT SCALE DRAWING					

SIZE	DWG. NO.	REV
A	TE-18004-07	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

B

B

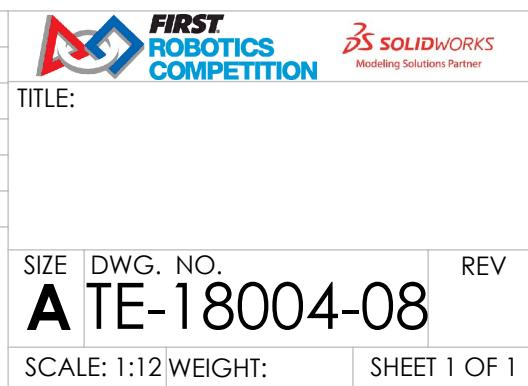
**Notes:**

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

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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 $\pm .001$			
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		1/2 Ply			
NEXT ASSY	USED ON	FINISH			
	APPLICATION	DO NOT SCALE DRAWING			

SIZE	DWG. NO.	REV
A	TE-18004-08	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1



4

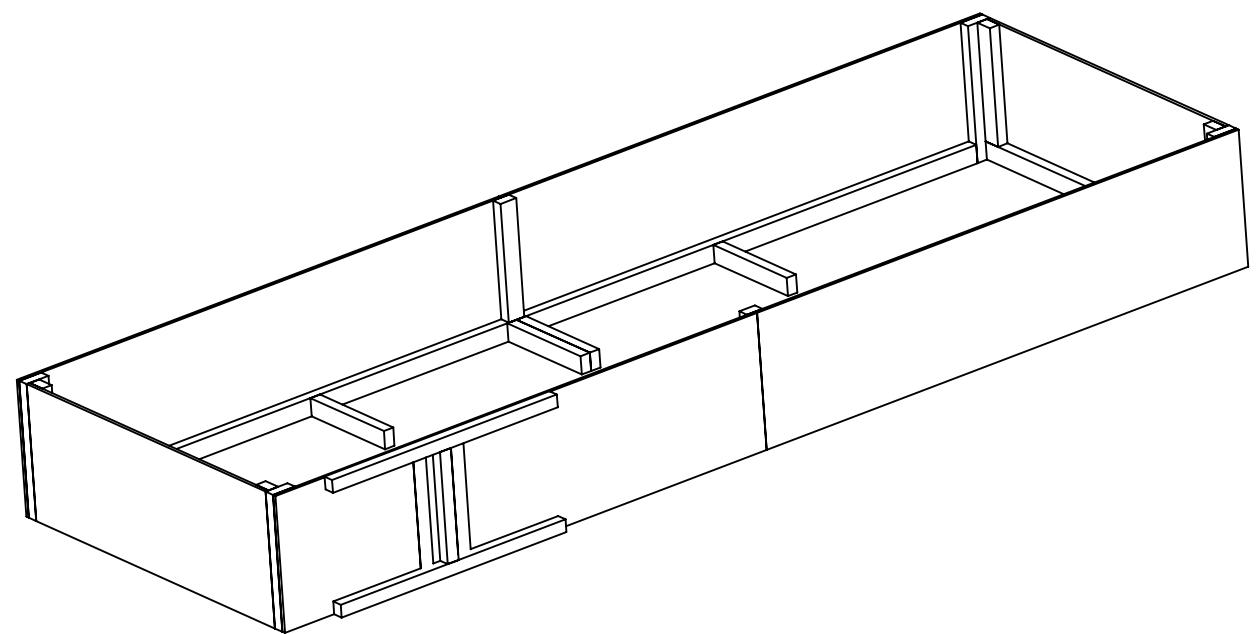
3

2

1

B

B



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18005-1		4
2	TE-18005-2		2
3	TE-18005-3		4
4	TE-18005-4		8
5	TE-18005-5		4
6	TE-18005-6		2
7	TE-18005-7		2
8	TE-18005-8		1
9	TE-18005-9		2
10	TE-18005-10		6

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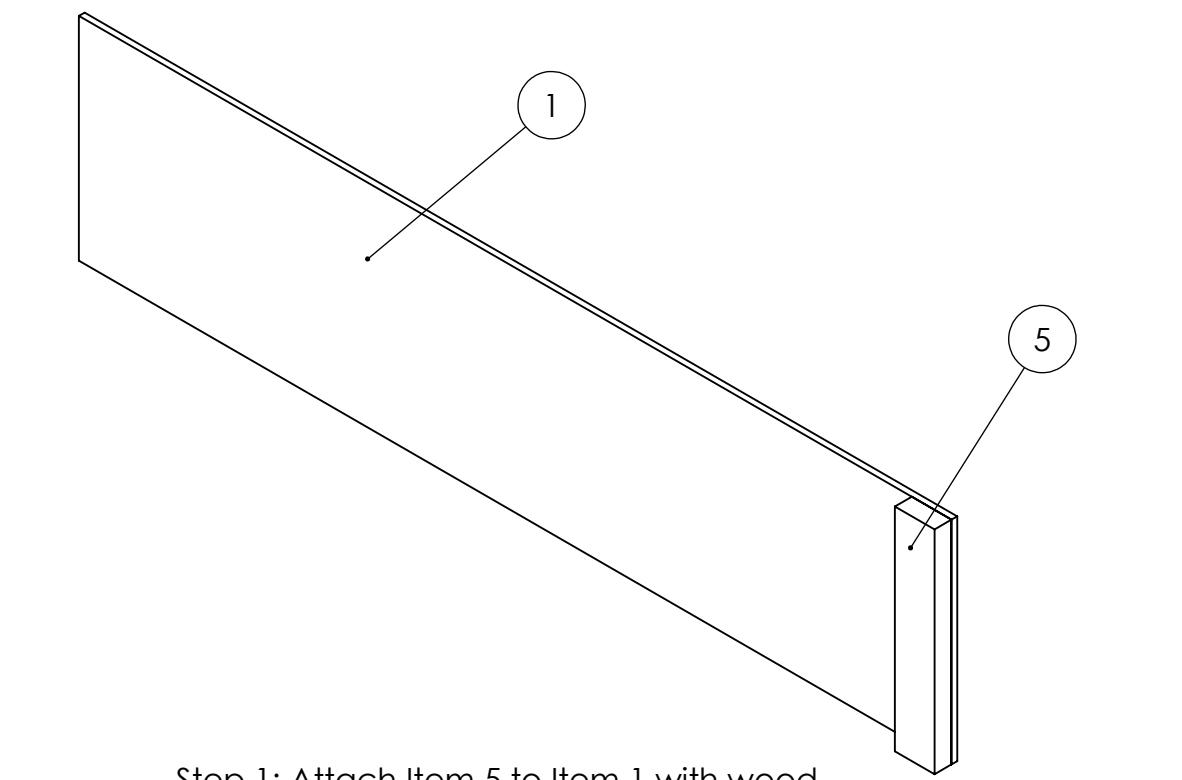
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION  SOLIDWORKS <small>Modeling Solutions Partner</small>
		DIMENSIONS ARE IN INCHES	DRAWN			
		TOLERANCES: FRACTIONAL $\pm 1/16$	CHECKED			
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	ENG APPR.			
		TWO PLACE DECIMAL $\pm .01$	MFG APPR.			
		THREE PLACE DECIMAL $\pm .001$	Q.A.			
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			
		MATERIAL				
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				
SIZE DWG. NO. B TE-18005 REV						
SCALE: 1:24 WEIGHT: SHEET 1 OF 3						

4

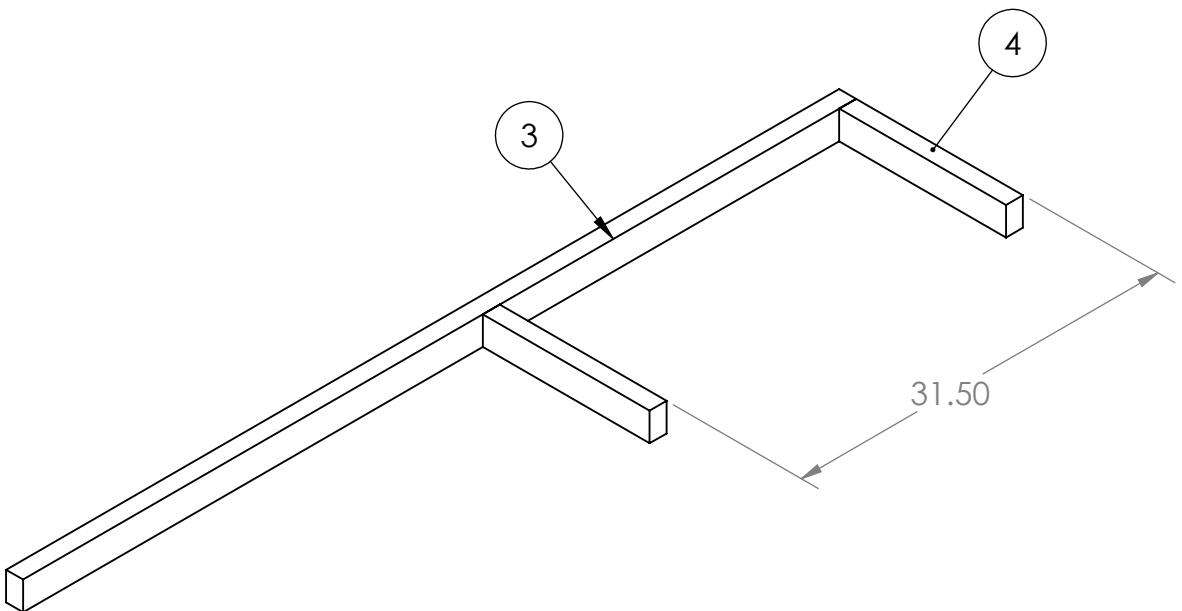
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2

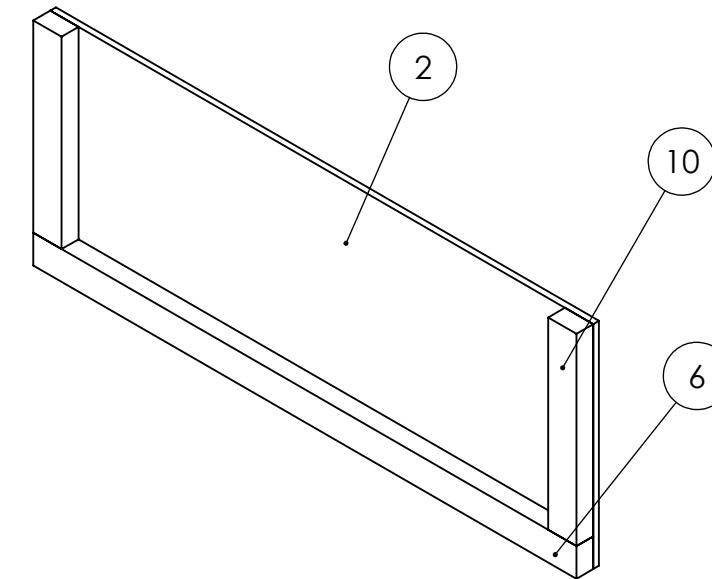
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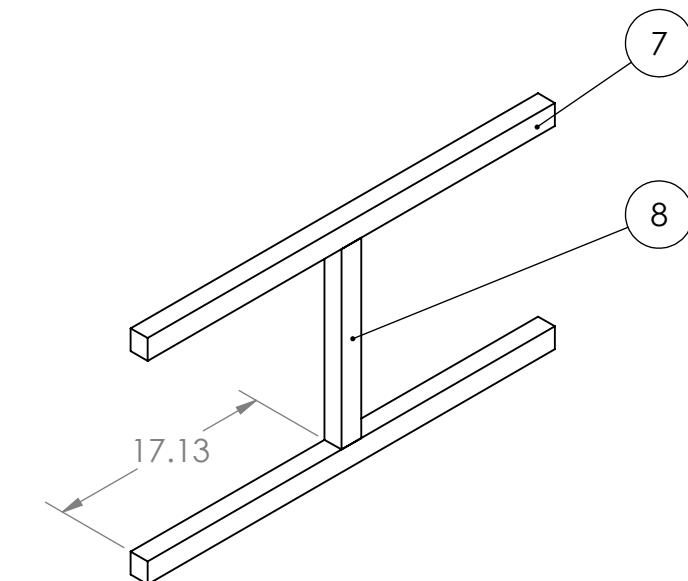
Step 1: Attach Item 5 to Item 1 with wood screws. Build 4.



Step 3: Attach Item 4 (qty. 2) to Item 3 with wood screws. Build 4.



Step 2: Attach Item 10 (qty. 2) and Item 6 to Item 2 with wood screws. Build 2.



Step 4 (optional): Attach Item 7 (qty. 2) to Item 8 with wood screws. Only build if team is using vision targets.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES			
		TOLERANCES:			
		FRACTIONAL: $\pm\frac{1}{16}$			
		ANGULAR: MACH $\pm 1^\circ$			
		BEND $\pm 1^\circ$			
		TWO PLACE DECIMAL $\pm .01$			
		THREE PLACE DECIMAL $\pm .001$			
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		Q.A.			
		COMMENTS:			
	NEXT ASSY	USED ON	FINISH		
	APPLICATION		DO NOT SCALE DRAWING		
SIZE	DWG. NO.			REV	
B	TE-18005				
SCALE: 1:24	WEIGHT:				

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 FIRST
ROBOTICS
COMPETITION

 SOLIDWORKS
Modeling Solutions Partner

Fence

1

4

3

2

B

B

A

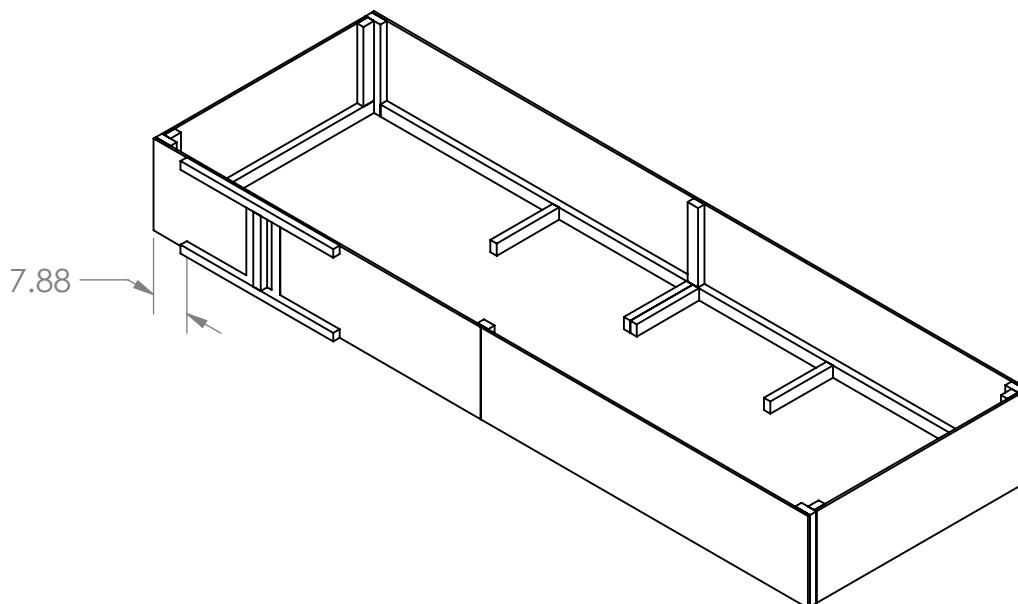
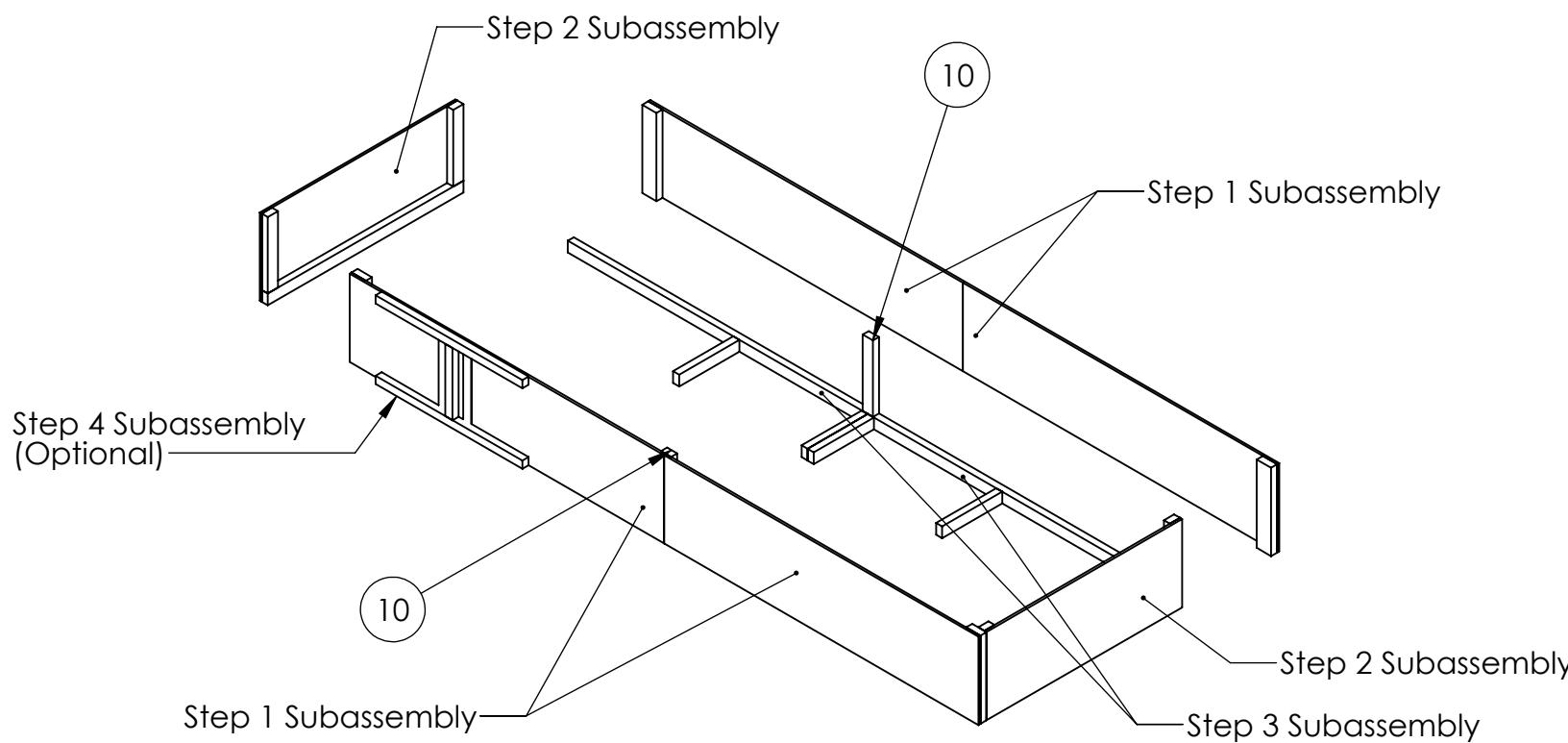
A

4

3

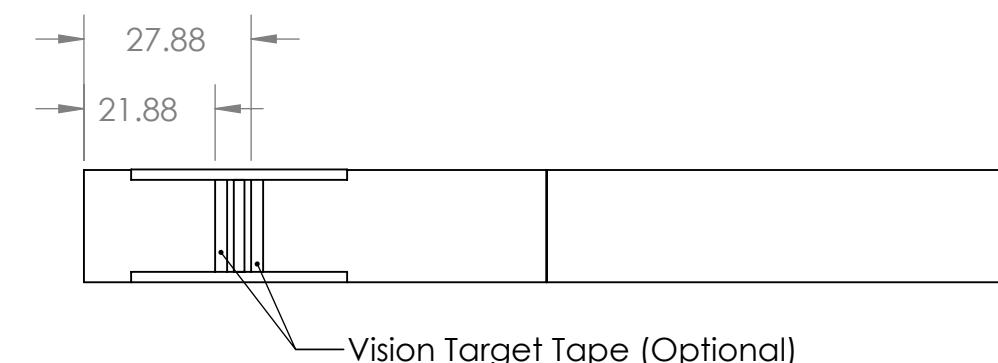
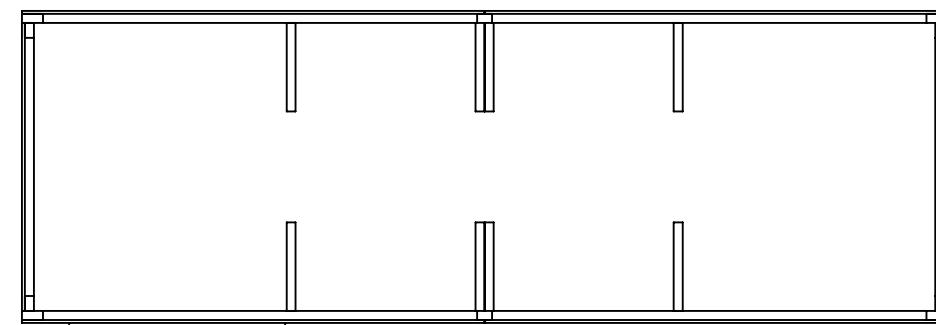
2

1



Step 5: Attach all subassemblies as shown using wood screw. Predrill to avoid splitting.

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Step 6 (Optional): Attach vision tape as shown.

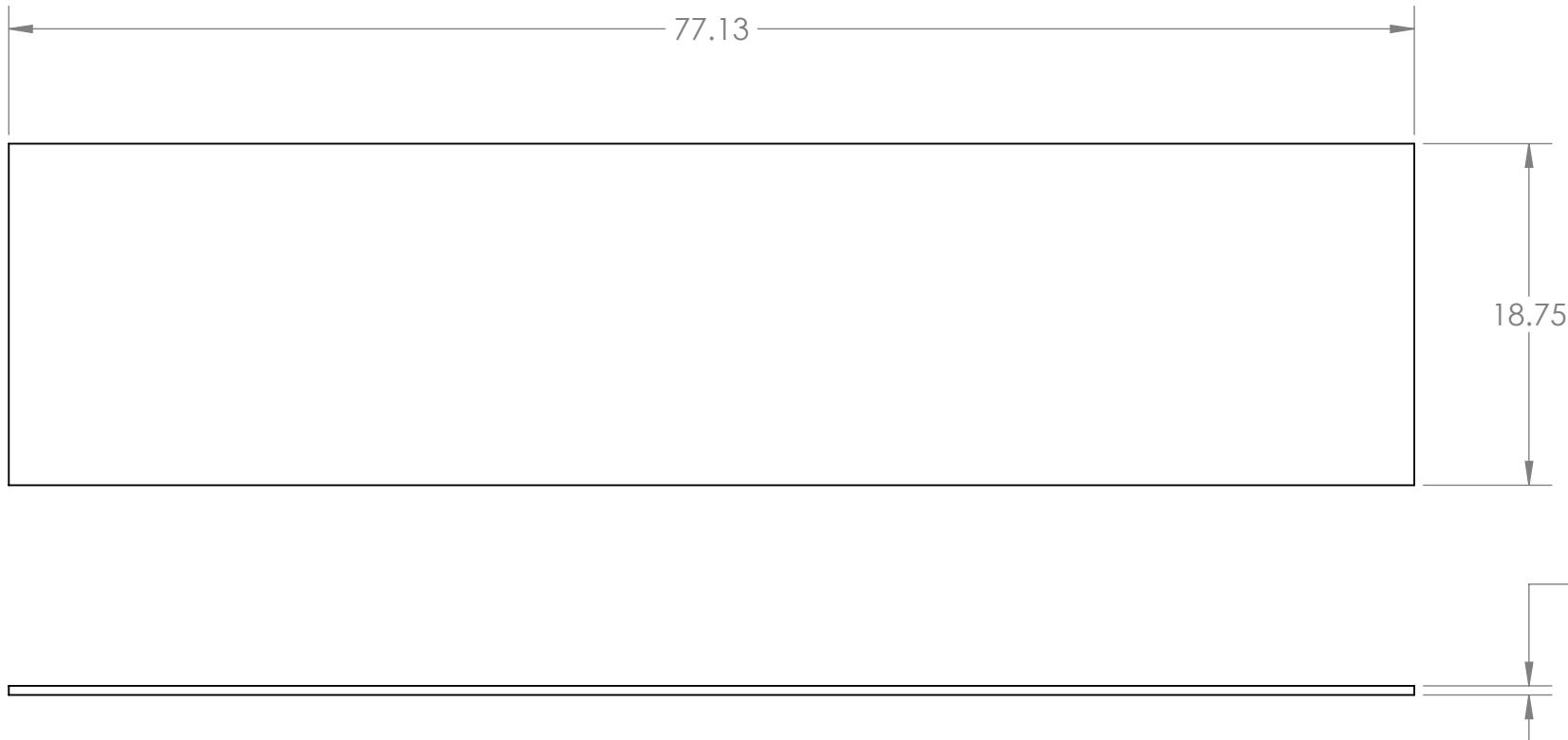
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		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
	NEXT ASSY	USED ON	FINISH		
		APPLICATION	DO NOT SCALE DRAWING		
SIZE	DWG. NO.			REV	
B	TE-18005				
SCALE: 1:32	WEIGHT:			SHEET 3 OF 3	

4

3

2

1

**Notes:**

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

A	TE-18005-1	SIZE	DWG. NO.	REV
		SCALE: 1:10	WEIGHT:	SHEET 1 OF 1

2

1

B

B

48.00

18.75

(.50)

Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

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



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 Modeling Solutions Partner

TITLE:

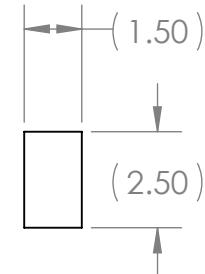
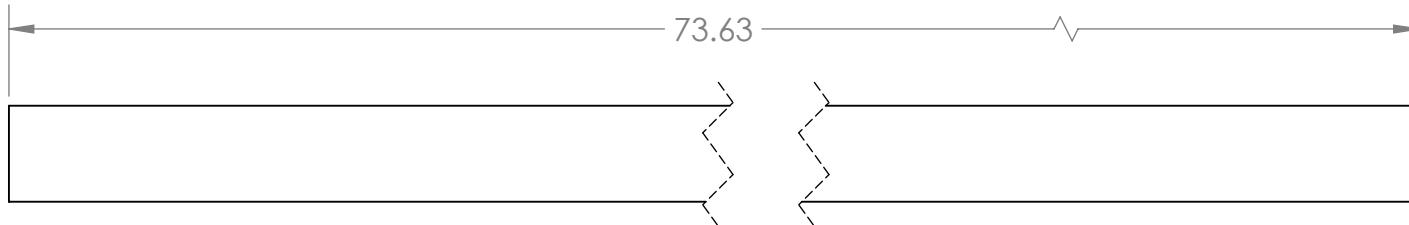
SIZE	DWG. NO.	REV
A	TE-18005-2	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 2" x 3" Pine Lumber
2. QTY. Needed: 4

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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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:	

SIZE	DWG. NO.	REV
A	TE-18005-3	
SCALE: 1:5	WEIGHT:	SHEET 1 OF 1



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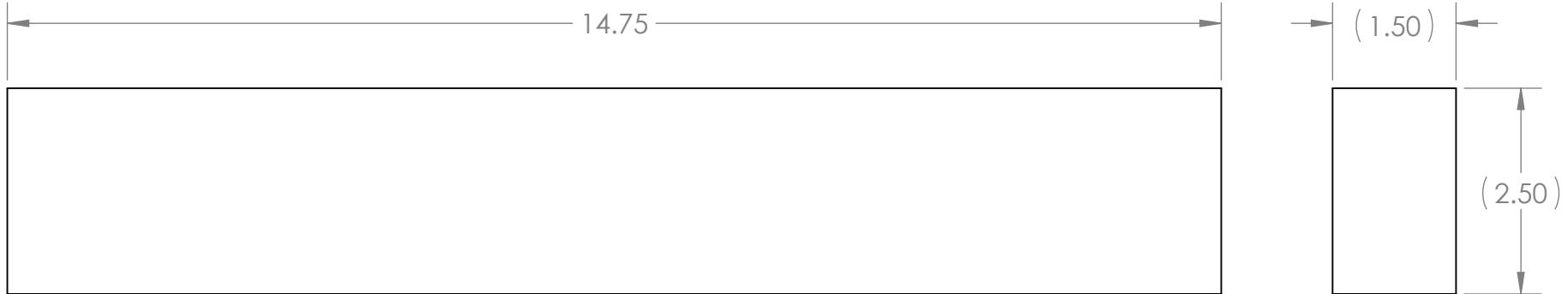
A

2

1

B

B



Notes:

1. Material: 2" x 3" Pine Lumber
2. QTY. Needed: 8

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
			MFG APPR.		
			Q.A.		
		COMMENTS:			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



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TITLE:

SIZE	DWG. NO.	REV
A	TE-18005-4	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

2

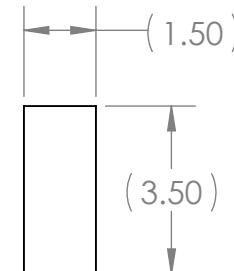
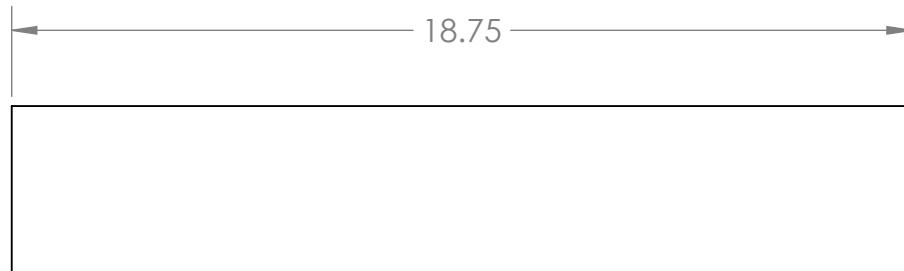
1

2

1

B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 4

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

SIZE	DWG. NO.	REV
A	TE-18005-5	
SCALE: 1:4		WEIGHT:
SHEET 1 OF 1		

2

1

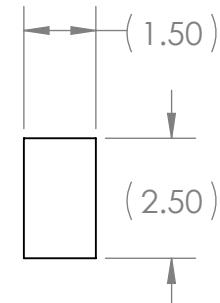
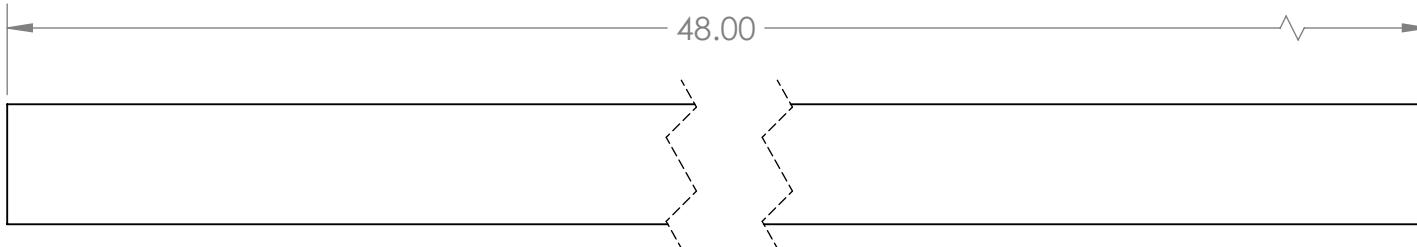
1

2

1

B

B



Notes:

1. Material: 2" x 3" Pine Lumber
2. QTY. Needed: 2

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

TITLE: **FIRST[®] ROBOTICS COMPETITION**

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Modeling Solutions Partner

COMMENTS:

SIZE	DWG. NO.	REV
A	TE-18005-6	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

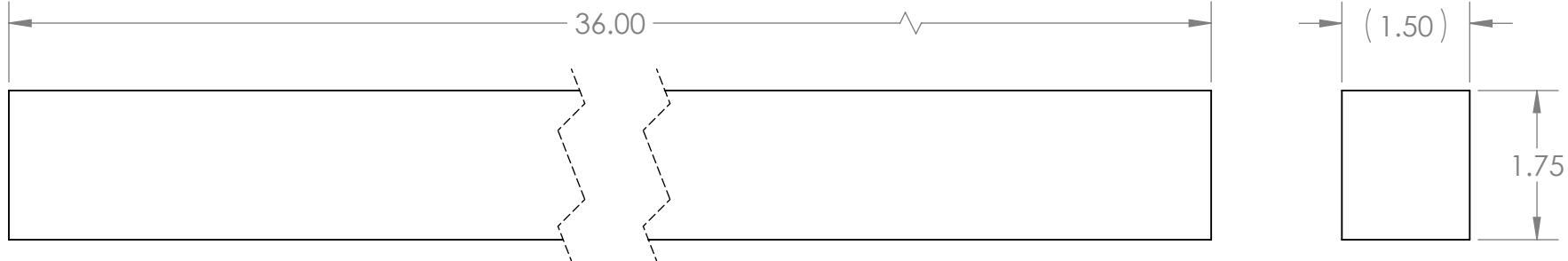
1

2

1

B

B

**Notes:**

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2
3. This part is only necessary for use with an optional vision target component of the assembly. If retroreflective tape is not going to be applied, this part is not necessary.
4. The 1.75" material height may be undersized to allow for cutting blade thickness.

A

A

		UNLESS OTHERWISE SPECIFIED:		DRAWN	NAME	DATE	TITLE:  FIRST ROBOTICS COMPETITION				
		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		CHECKED	ENG APPR.	MFG APPR.					
NEXT ASSY	USED ON	FINISH									
APPLICATION		DO NOT SCALE DRAWING		COMMENTS:							
SIZE	DWG. NO.										
A	TE-18005-7										
SCALE: 1:2		WEIGHT:		SHEET 1 OF 1							

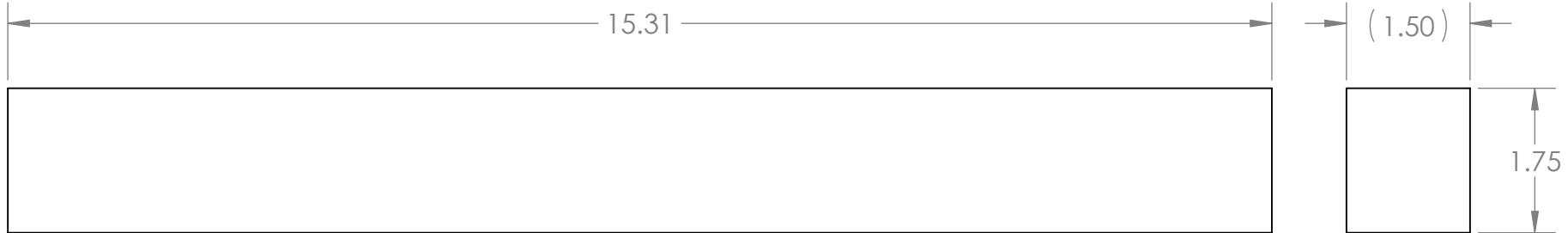
2

1

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B

B

**Notes:**

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 1
3. This part is only necessary for use with an optional vision target component of the assembly. If retroreflective tape is not going to be applied, this part is not necessary.
4. The 1.75" material height may be undersized to allow for cutting blade thickness.

A

A

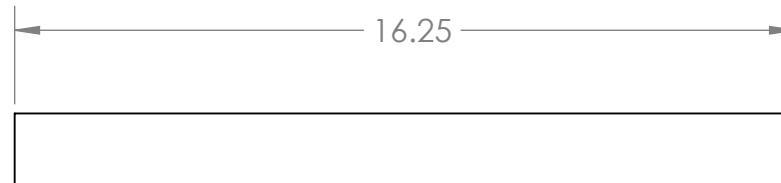
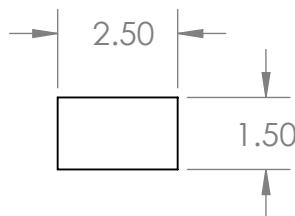
		UNLESS OTHERWISE SPECIFIED:		DRAWN	NAME	DATE	 FIRST ROBOTICS COMPETITION  SOLIDWORKS <small>Modeling Solutions Partner</small>	TITLE:					
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$											
		INTERPRET GEOMETRIC TOLERANCING PER:		CHECKED	ENG APPR.	MFG APPR.							
		MATERIAL											
NEXT ASSY	USED ON	FINISH		Q.A.	COMMENTS:								
APPLICATION		DO NOT SCALE DRAWING											
PROPRIETARY AND CONFIDENTIAL				SIZE	DWG. NO.		A	TE-18005-8					
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				SCALE: 1:2		WEIGHT:	SHEET 1 OF 1						



Notes:

1. Material: 2" Retroreflective tape
2. QTY. Needed: 2
3. This part is only necessary for use with an optional vision target component of the assembly.

		UNLESS OTHERWISE SPECIFIED:			NAME	DATE	 FIRST ROBOTICS COMPETITION <small>SOLIDWORKS Modeling Solutions Partner</small>	TITLE: COMMENTS:		
		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 $\pm .001$								
		INTERPRET GEOMETRIC TOLERANCING PER:								
		MATERIAL								
		NEXT ASSY								
		USED ON								
		FINISH								
		APPLICATION		DO NOT SCALE DRAWING						
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Notes:

1. Material: 2" x 3" Pine Lumber (1.5" x 2.5" actual)
2. Qty. needed: 6

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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				



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TITLE:

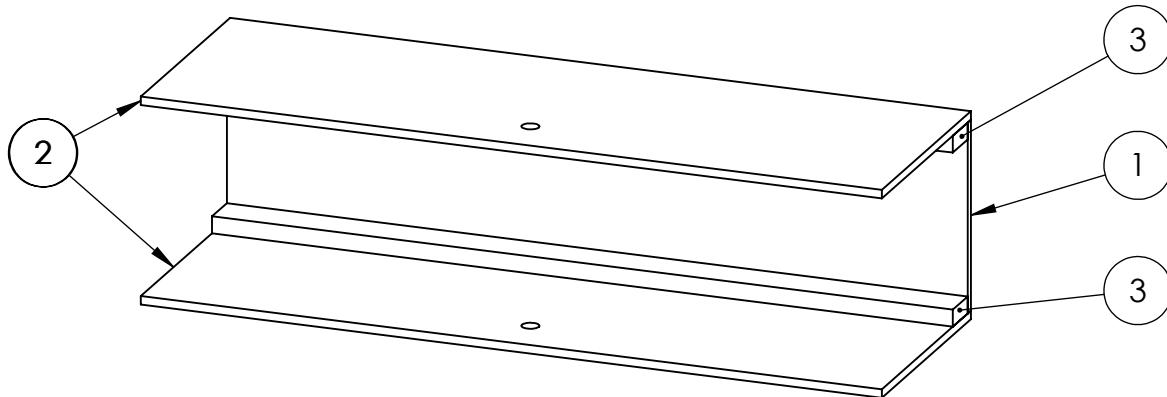
SIZE	DWG. NO.	REV
A	TE-18005-10	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

B

B



Align parts as shown and secure with wood screws or staples.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18006-01		1
2	TE-18006-02		2
3	TE-18006-03		2

		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			



TITLE:

Switch Frame

SIZE	DWG. NO.	REV
A	TE-18006	
SCALE: 1:16	WEIGHT:	SHEET 1 OF 1

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2

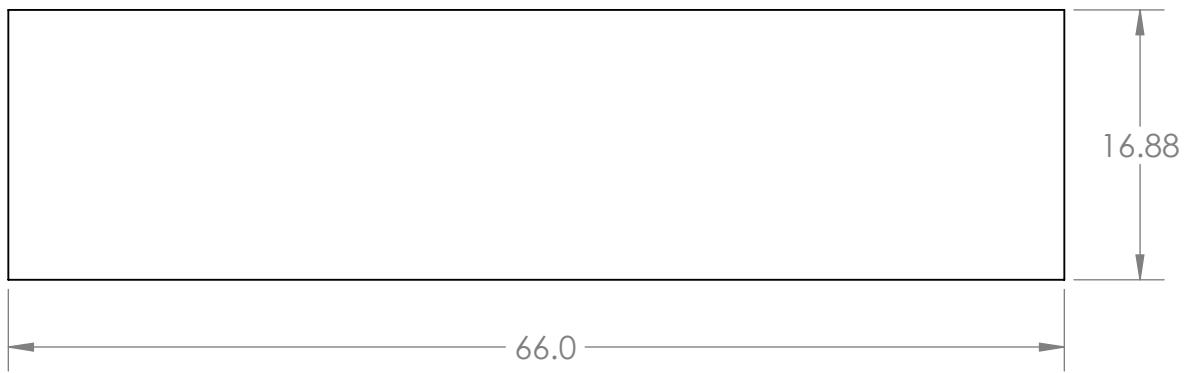
1

2

1

B

B



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 1

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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					
		.75 Ply					
NEXT ASSY	USED ON	FINISH					
APPLICATION		DO NOT SCALE DRAWING					



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TITLE:

SIZE DWG. NO. REV
A TE-18006-01

SCALE: 1:12 WEIGHT: SHEET 1 OF 1

2

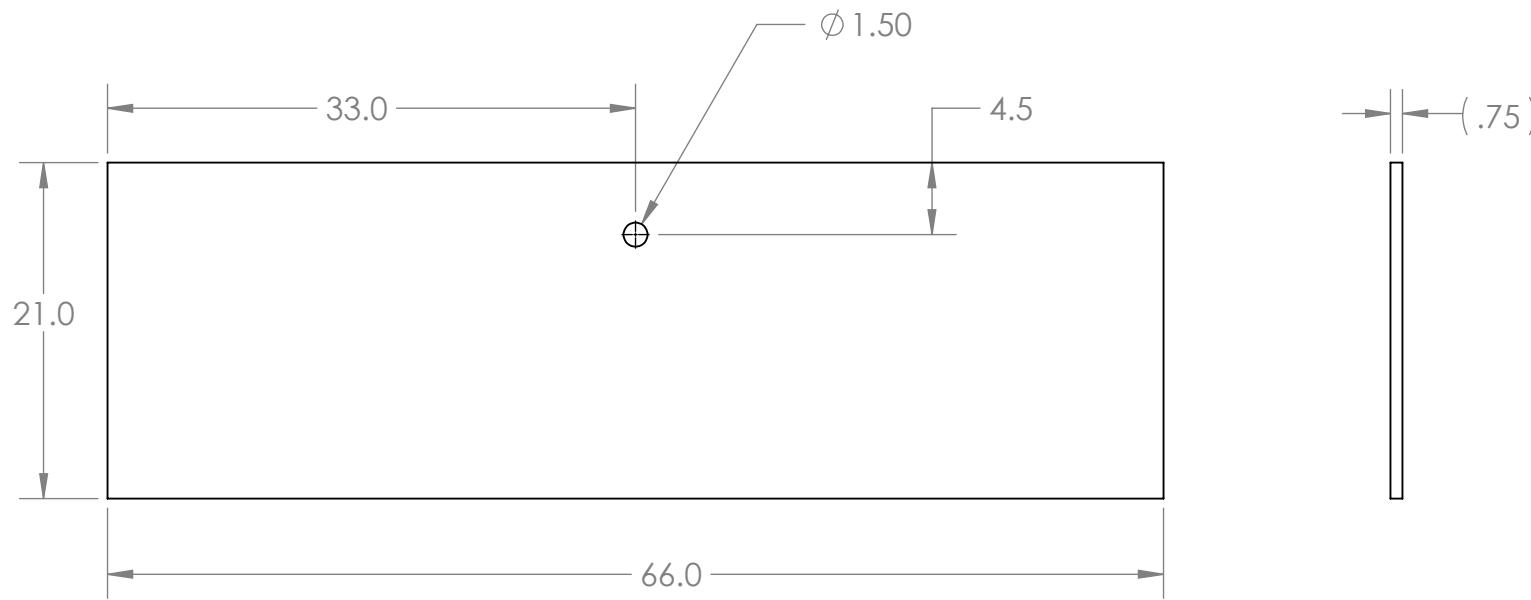
1

2

1

B

B



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

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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				
		.75 Ply				
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				



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TITLE:

SIZE DWG. NO. REV
A TE-18006-02

SCALE: 1:12 WEIGHT: SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 2" x 4" Lumber
2. QTY. Needed: 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL 2x4	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:		

SIZE	DWG. NO.	REV
A	TE-18006-03	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1



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A

4

3

2

1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A2, 3-B3	A	Updated to include updates to TE-18007-3, TE-18007-4, TE-18007-10, TE-18007-11. BOM sorted.	1/12/2018	

A detailed technical line drawing of a wooden frame structure, likely a section of a roof or floor joist system. The structure is built from vertical studs and horizontal beams. A prominent feature is a diagonal brace running from the bottom left towards the top right. A horizontal beam at the top is supported by a vertical post. On the right side, there is a triangular support or rafter system. Various joints are shown with lines indicating the direction of the wood grain and the placement of hardware like screws and bolts.

A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18007-1		2
2	TE-18007-2		1
3	TE-18007-3		6
4	TE-18007-4		2
5	TE-18007-5		2
6	TE-18007-6		6
7	TE-18007-7		4
8	TE-18007-8		2
9	TE-18007-9		4
10	TE-18007-10		2
11	TE-18007-11		2



LE:

Scale Frame

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION	 SOLIDWORKS <small>Modeling Solutions Partner</small>	
		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						
						SIZE	DWG. NO.	REV
						B	TE-18007	A
						SCALE: 1:20	WEIGHT:	SHEET 1 OF 3

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4

3

2

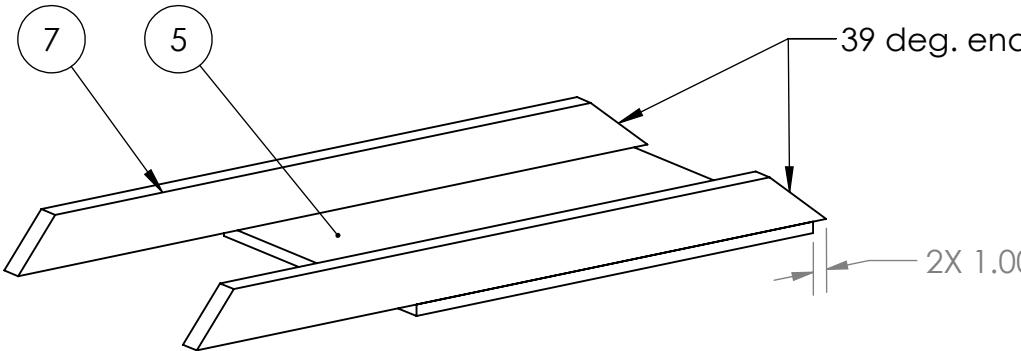
1

4

3

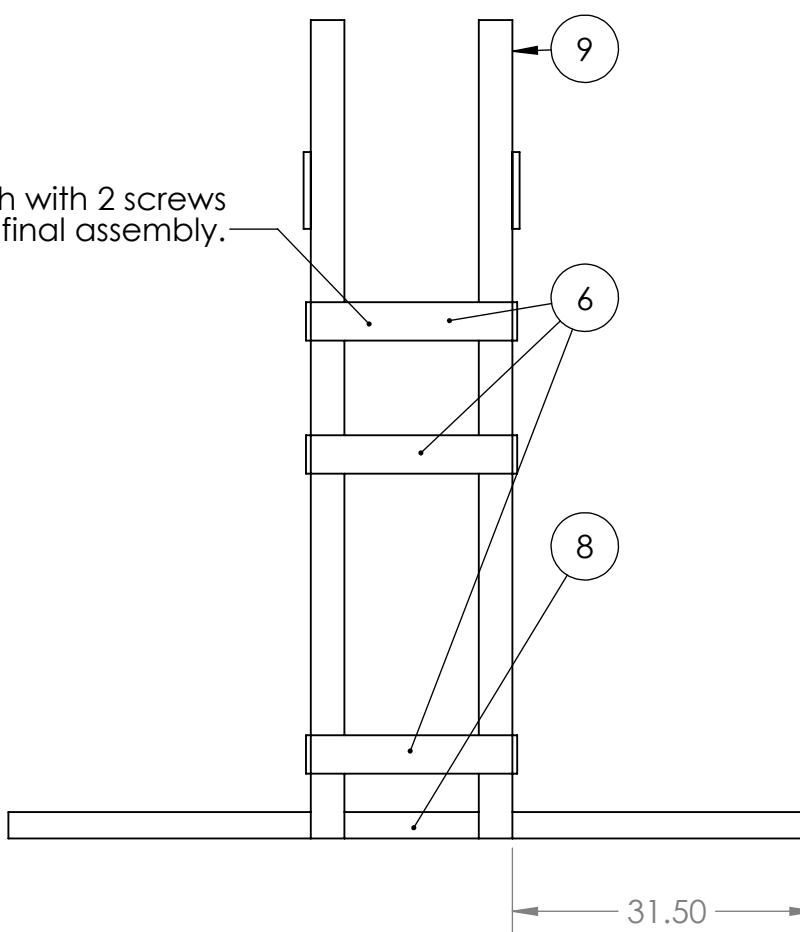
2

1

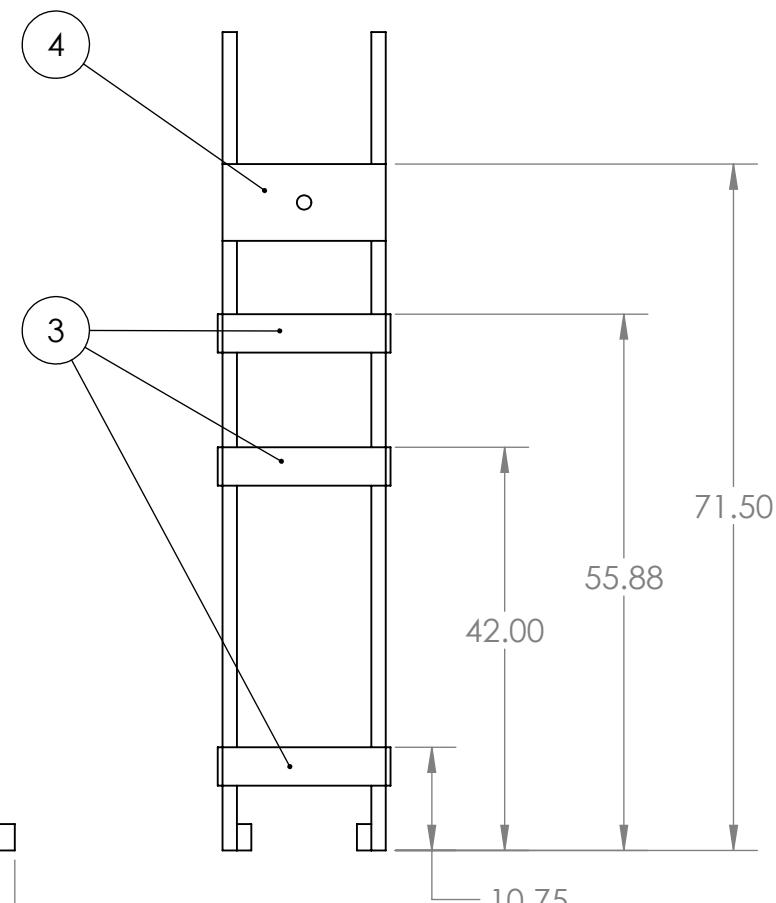


Step 1: Attach as shown with wood screws. Build qty. 2.

Only attach with 2 screws until final assembly.



Step 2: Attach as shown with wood screws. Use wooden dowel to help align item 4 (qty. 2).



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		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 $\pm .001$		NAME	DATE
		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
	NEXT ASSY	USED ON	FINISH		
		APPLICATION	DO NOT SCALE DRAWING		
SIZE	DWG. NO.			REV	
B	TE-18007			A	
SCALE: 1:32	WEIGHT:			SHEET 2 OF 3	

4

3

2

1

4

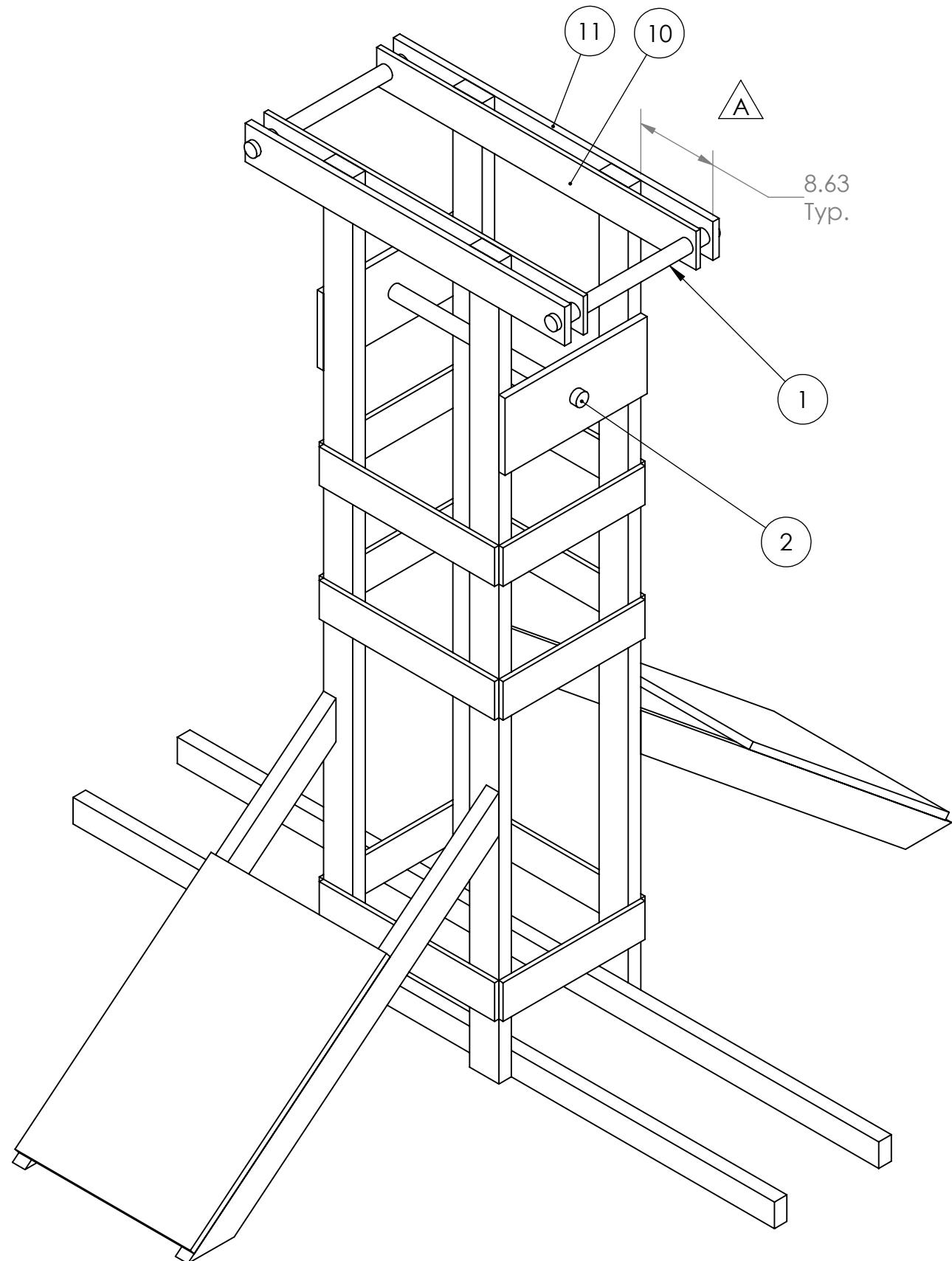
3

2

1

B

B



Step 3: Attach two assemblies from Step 1 to the main assembly. When attaching items 1, 10 and 11, ensure that dowel is level and the top surface is 84" from the ground. Use wood screws to keep dowel from rotating.

Do not fasten Item 2.

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		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 $\pm .001$		NAME	DATE
		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
		INTERPRET GEOMETRIC TOLERANCING PER:			
		NEXT ASSY	USED ON	FINISH	
		APPLICATION		DO NOT SCALE DRAWING	
SIZE	DWG. NO.			REV	
B	TE-18007			A	
SCALE: 1:32	WEIGHT:			SHEET 3 OF 3	

4

3

2

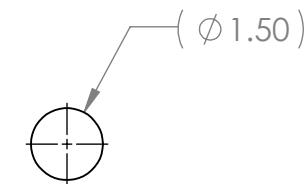
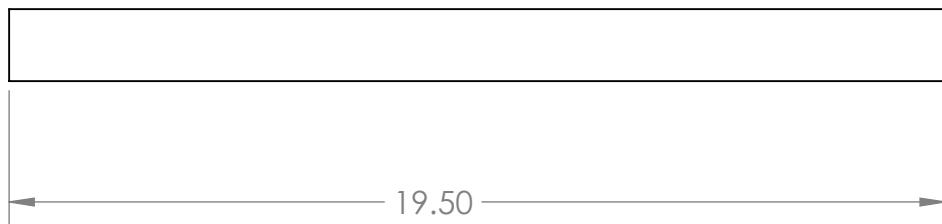
1

2

1

B

B



Notes:

1. Material: 1.5" dowel rod
2. QTY. Needed: 2

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		UNLESS OTHERWISE SPECIFIED:			NAME	DATE
		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 $\pm .001$		DRAWN		
				CHECKED		
				ENG APPR.		
				MFG APPR.		
				Q.A.		
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			
		MATERIAL				
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				



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Modeling Solutions Partner

TITLE:

SIZE	DWG. NO.	REV
A	TE-18007-1	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 1.5" dowel rod
2. QTY. Needed: 1

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



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TITLE:

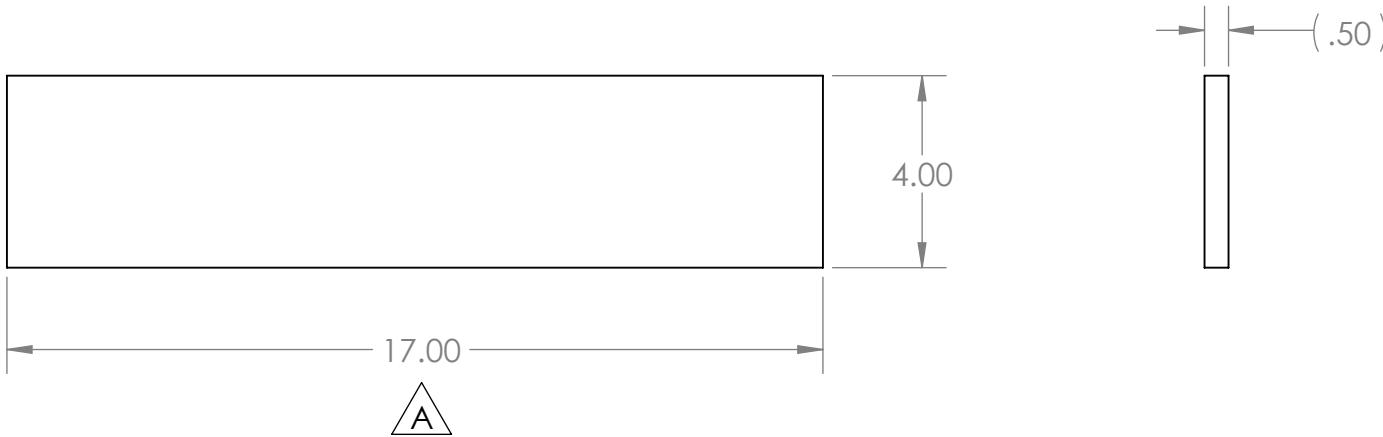
SIZE	DWG. NO.	REV
A	TE-18007-2	
SCALE: 1:3	WEIGHT:	SHEET 1 OF 1

REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
A2	A	Modified overall length of part.	1/12/2018	CPO

B

B



Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 6

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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			



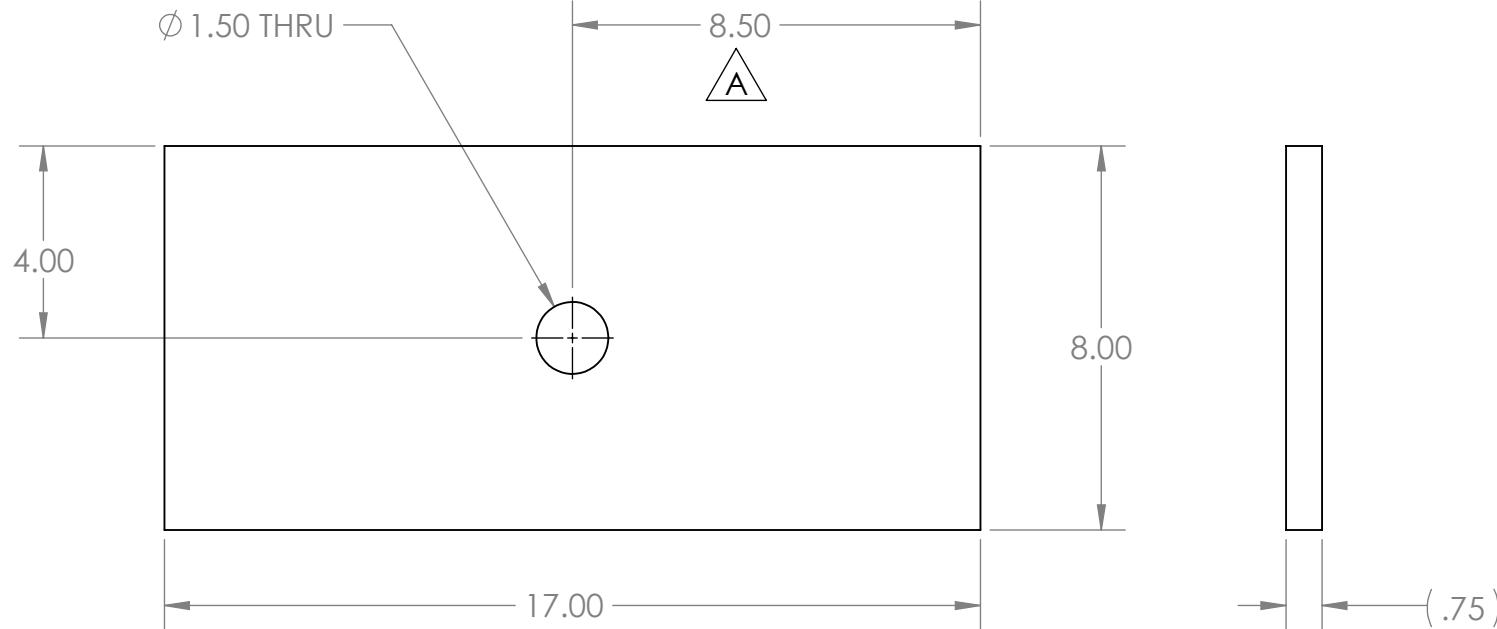
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TITLE:

SIZE	DWG. NO.	REV
A	TE-18007-3	A
SCALE: 1:4		WEIGHT:
SHEET 1 OF 1		

REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
A2, B2	A	Modified overall width of part	1/12/2018	CPO



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

		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			

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TITLE:

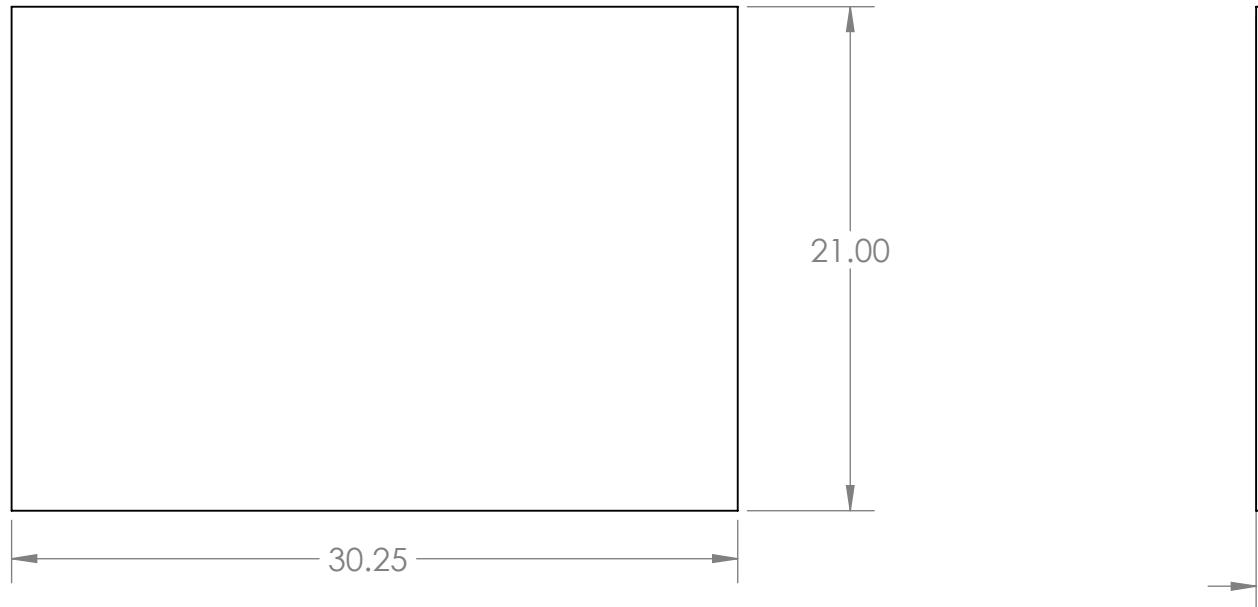
SIZE DWG. NO. REV
A TE-18007-4 **A**
 SCALE: 1:4 WEIGHT: SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

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



TITLE:

SIZE	DWG. NO.	REV
A	TE-18007-5	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

2

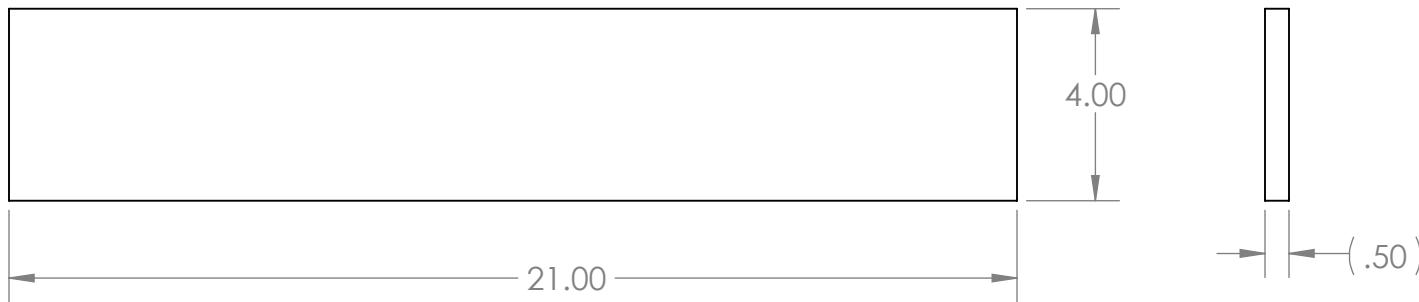
1

A

A

B

B

**Notes:**

1. Material: 1/2" AC Plywood
2. QTY. Needed: 6

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		UNLESS OTHERWISE SPECIFIED:				
		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				

SIZE	DWG. NO.	REV
A	TE-18007-6	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

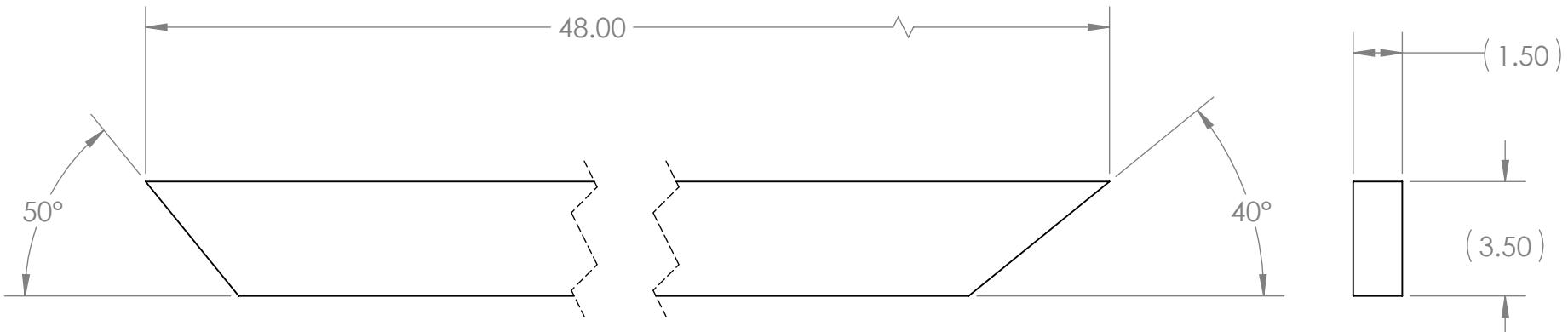


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TITLE:

A

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 4

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

SIZE	DWG. NO.	REV
A	TE-18007-7	
SCALE: 1:5	WEIGHT:	SHEET 1 OF 1



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TITLE:

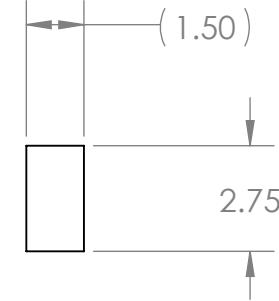
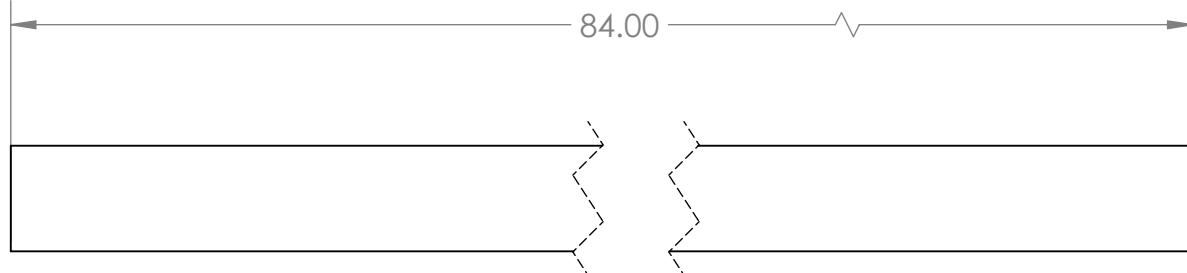
B

A

2

1

B



B

Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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		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 $\pm .001$		DRAWN	NAME	DATE
		INTERPRET GEOMETRIC TOLERANCING PER:		CHECKED		
		MATERIAL		ENG APPR.		
				MFG APPR.		
				Q.A.		
		COMMENTS:				
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				

2

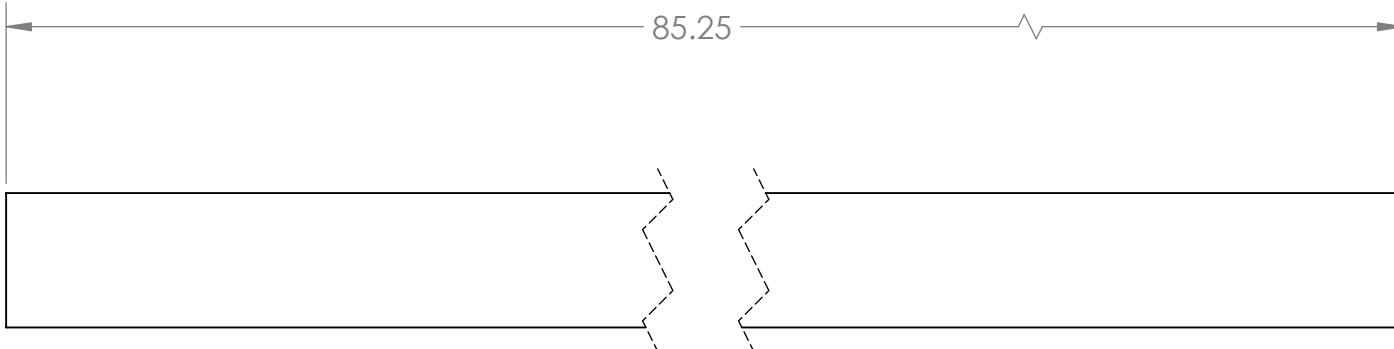
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SIZE	DWG. NO.	REV
A	TE-18007-8	
SCALE: 1:5	WEIGHT:	SHEET 1 OF 1

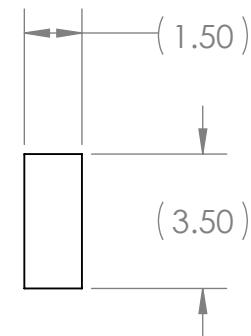
FIRST[®] ROBOTICS COMPETITION **SOLIDWORKS**
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TITLE:

B



B



Notes:

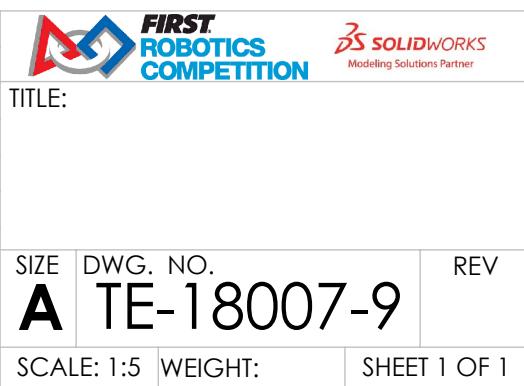
1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:		

SIZE	DWG. NO.	REV
A	TE-18007-9	
SCALE: 1:5		WEIGHT:
SHEET 1 OF 1		

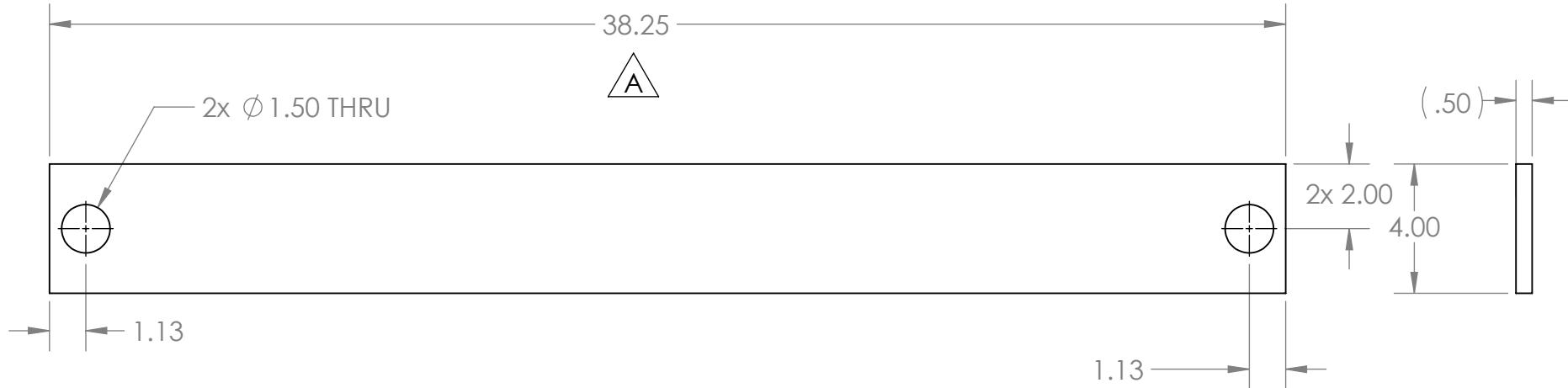


TITLE:

SHEET 1 OF 1

REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
B2	A	Modified overall length of part	1/12/2018	CPO



Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

		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			
SIZE		DWG. NO.	REV		
A		TE-18007-10	A		
SCALE: 1:5		WEIGHT:	SHEET 1 OF 1		

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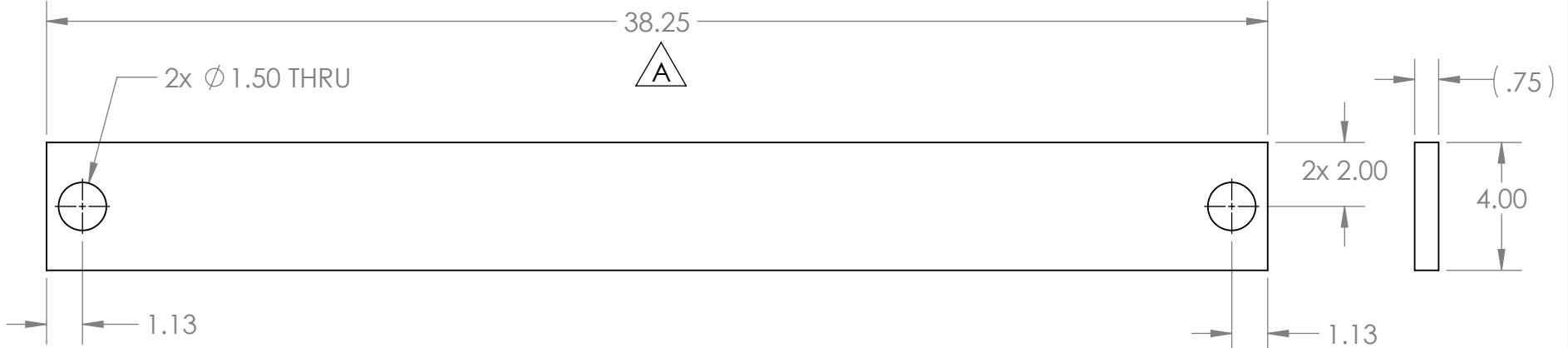
FIRST ROBOTICS COMPETITION

SOLIDWORKS
Modeling Solutions Partner

TITLE:

REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
B2	A	Modified overall length of part	1/12/2018	CPO



Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

		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			
			SIZE	DWG. NO.	REV
			A	TE-18007-11	A
			SCALE: 1:5	WEIGHT:	SHEET 1 OF 1

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TITLE:

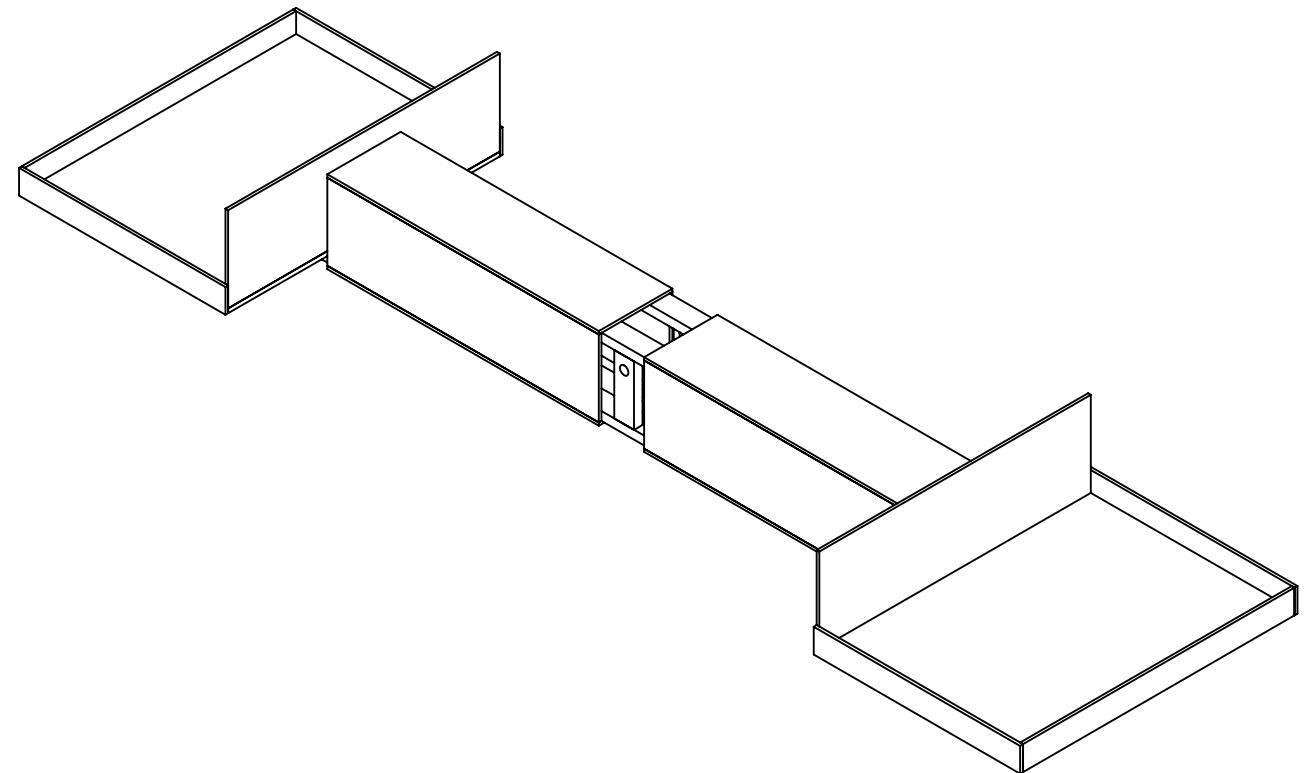
4

3

2

1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A2	A	BOM table sorted by PART NUMBER. Notes changed throughout to match new ITEM NO.	1/12/2018	CPO



A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18008-01		4
2	TE-18008-02		4
3	TE-18008-03		2
4	TE-18008-04		2
5	TE-18008-05		2
6	TE-18008-06		4
7	TE-18008-07		2
8	TE-18008-08		2
9	TE-18008-09		4
10	TE-18008-10		2
11	TE-18008-11		2



Scale Arm

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION	TITLE: <h1>Scale Arm</h1>
		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		SCALE: 1:32	WEIGHT:	SHEET 1 OF 3	

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4

3

2

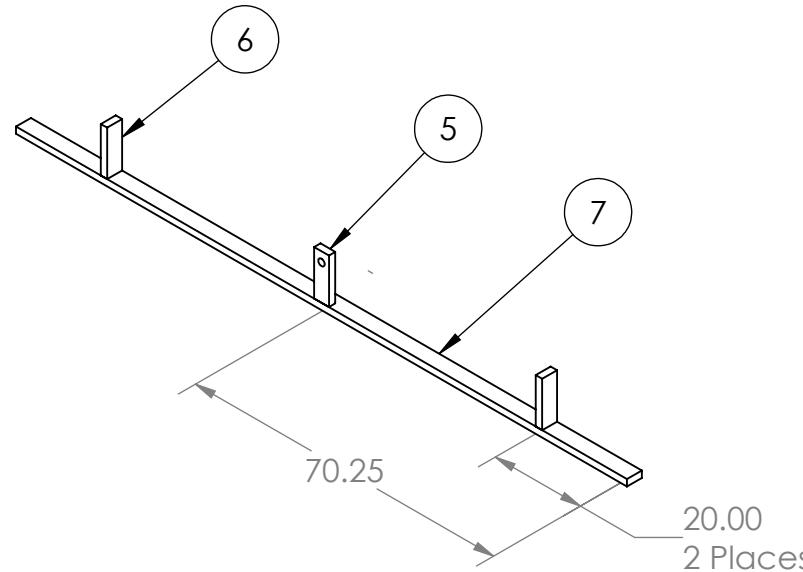
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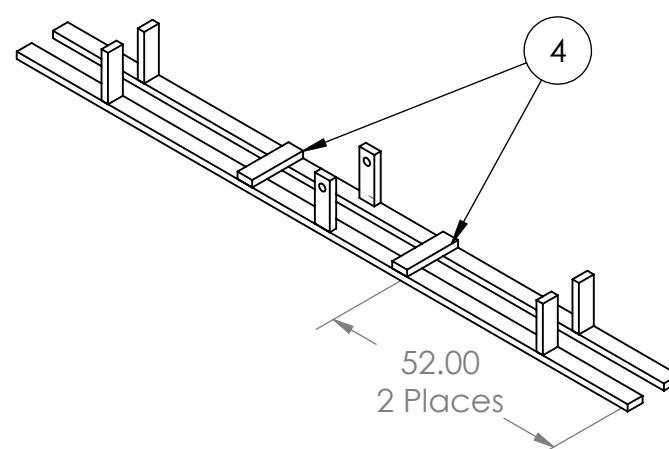
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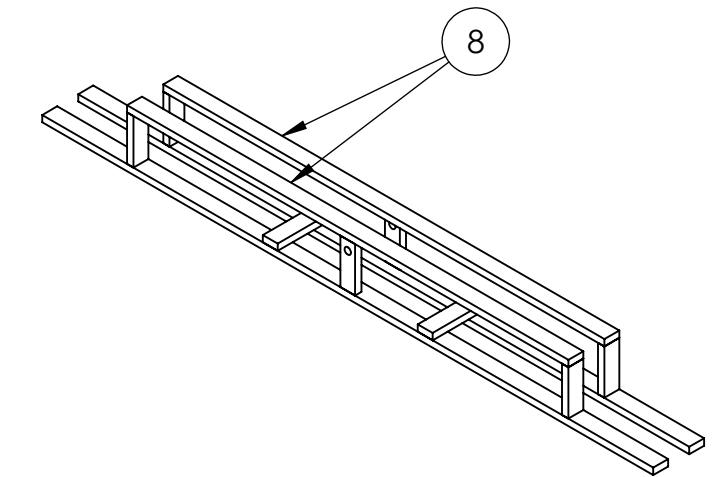
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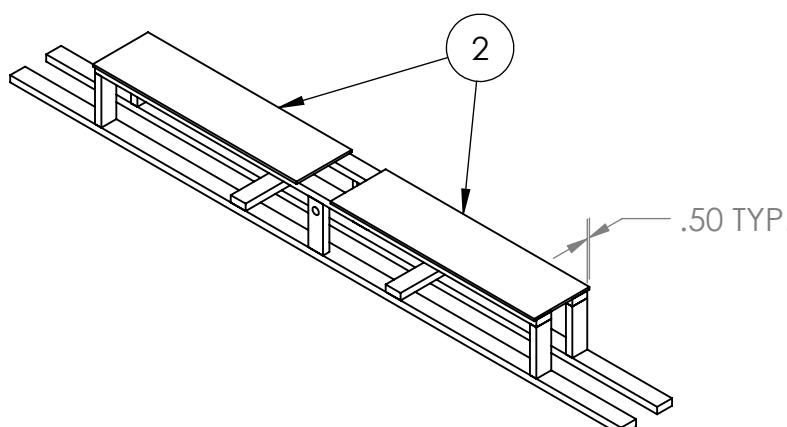
Step 1: Attach Item 6 (qty. 2) and Item 5 to Item 7 as shown using wood screws. Build 2 identical assemblies.



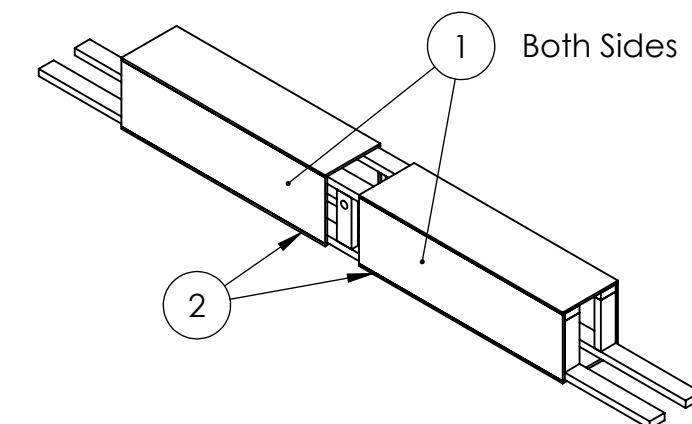
Step 2: Attach Item 4 (qty. 2) to the two assemblies from Step 1 using wood screws.



Step 3: Attach Item 8 (qty. 2) as shown using wood screws.



Step 4: Attach Item 2 (qty. 2) as shown using wood screws. There should be a 1/2" overhang on each side.



Step 5: Attach Item 1 (qty. 4) and as shown using wood screws. Flip assembly over and attach Item 2 (qty. 2).

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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	

FIRST ROBOTICS COMPETITION **SOLIDWORKS**
Modeling Solutions Partner

Title: Scale Arm

Size: DWG. NO. **B** **TE-18008** **Rev:** **A**

Scale: 1:32 **Weight:**

Sheet: 2 of 3

4

3

2

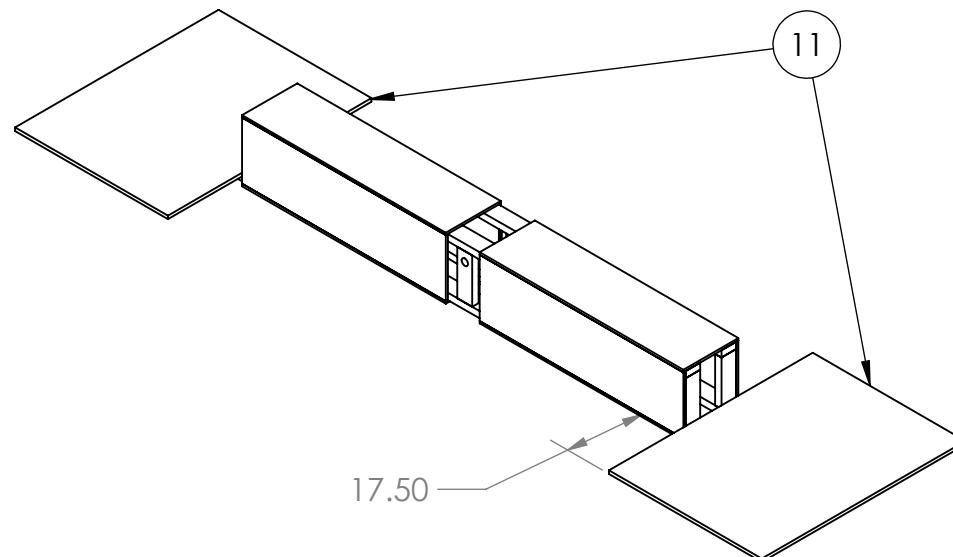
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4

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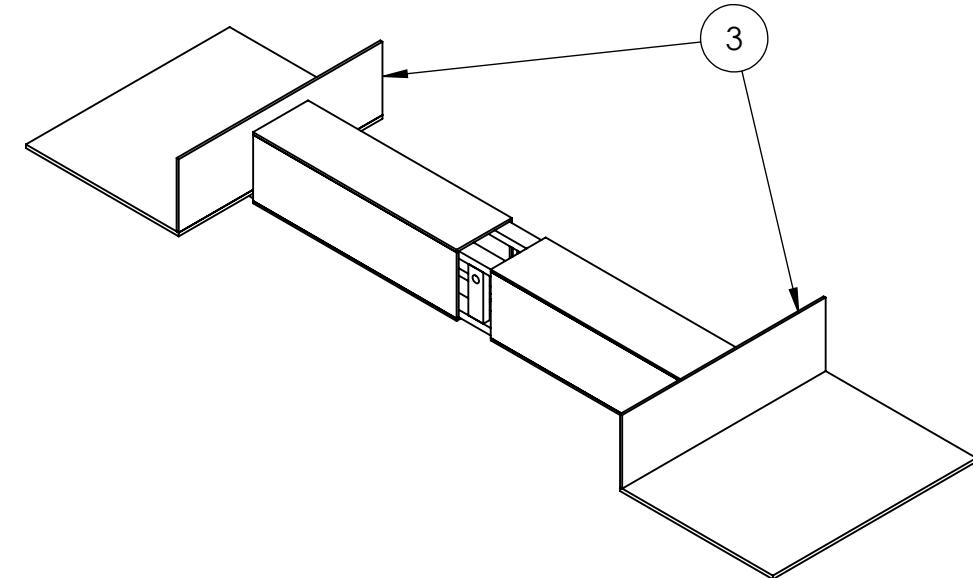
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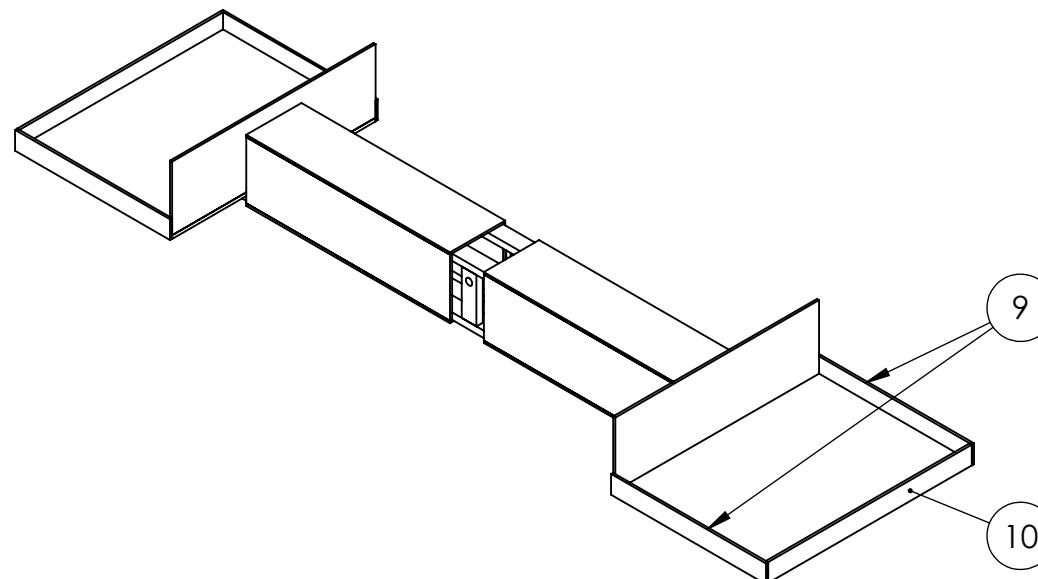
DO NOT PROCEED TO THIS STEP UNTIL YOU
HAVE ASSEMBLED TO THE SCALE FRAME
(See Drawing TE-18014)

Step 6: Attach Item 11 (qty. 2) as shown
using wood screws.



DO NOT PROCEED TO THIS STEP UNTIL YOU
HAVE ASSEMBLED TO THE SCALE FRAME

Step 7: Attach Item 3 (qty. 2) as shown
using wood screws.



DO NOT PROCEED TO THIS STEP UNTIL YOU
HAVE ASSEMBLED TO THE SCALE FRAME

Step 8: Attach Item 9 (qty. 4) and Item 10
(qty. 2) and as shown using wood screws or
staples. Pre-drill holes to avoid splitting.

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
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			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

FIRST ROBOTICS COMPETITION **SOLIDWORKS**
Modeling Solutions Partner

Title: Scale Arm

Size: DWG. NO. **B** **TE-18008** **Rev:** **A**

Scale: 1:32 **Weight:** **Sheet 3 of 3**

4

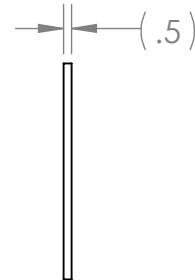
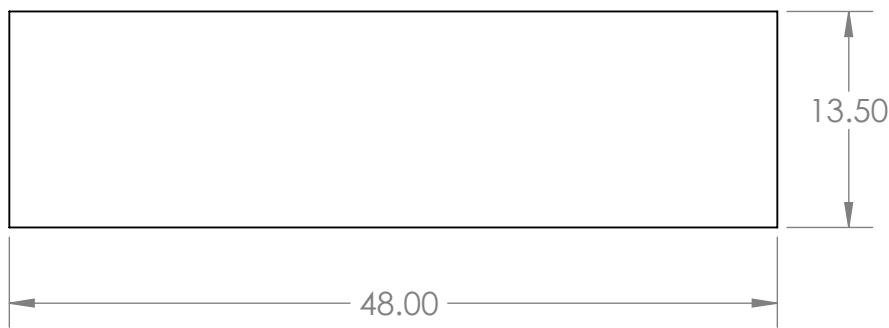
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2

1

B

B

**Notes:**

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

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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 $\pm .001$			
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		1/2" Ply			
NEXT ASSY	USED ON	FINISH			
	APPLICATION	DO NOT SCALE DRAWING			

COMMENTS:	

SIZE	DWG. NO.	REV
A	TE-18008-01	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1



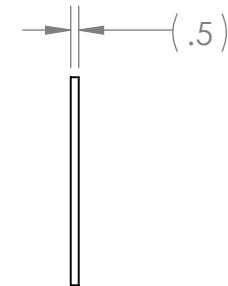
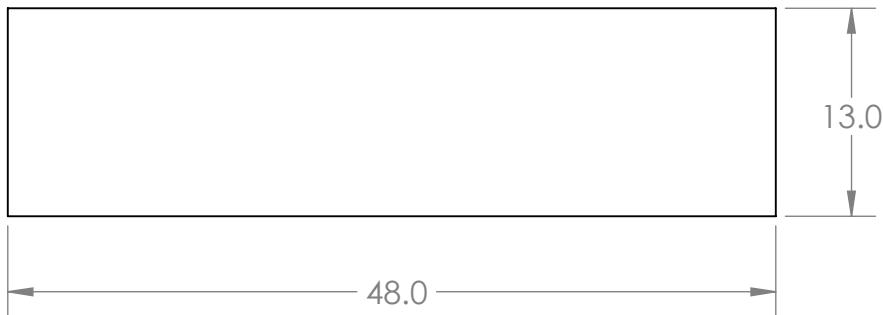
TITLE:

2

1

B

B



Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:



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TITLE:

SIZE DWG. NO. REV
A TE-18008-02

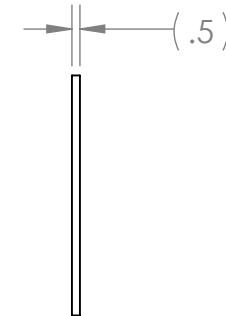
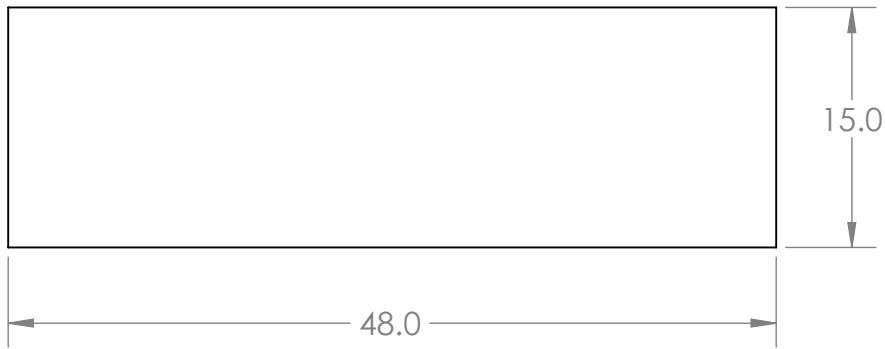
SCALE: 1:12 WEIGHT: SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

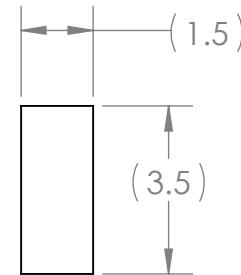
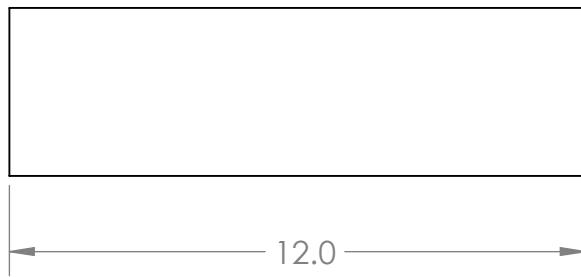
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		DIMENSIONS ARE IN INCHES			DRAWN		
		TOLERANCES:			CHECKED		
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$			MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$			Q.A.		
		THREE PLACE DECIMAL $\pm .001$			COMMENTS:		
		INTERPRET GEOMETRIC					
		TOLERANCING PER:					
		MATERIAL					
		1/2" Ply					
NEXT ASSY	USED ON	FINISH					
APPLICATION		DO NOT SCALE DRAWING					

SIZE	DWG. NO.	REV
A	TE-18008-03	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1

B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
		2x4	MFG APPR.		
NEXT ASSY	USED ON	FINISH	Q.A.		
APPLICATION		DO NOT SCALE DRAWING	COMMENTS:		



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TITLE:

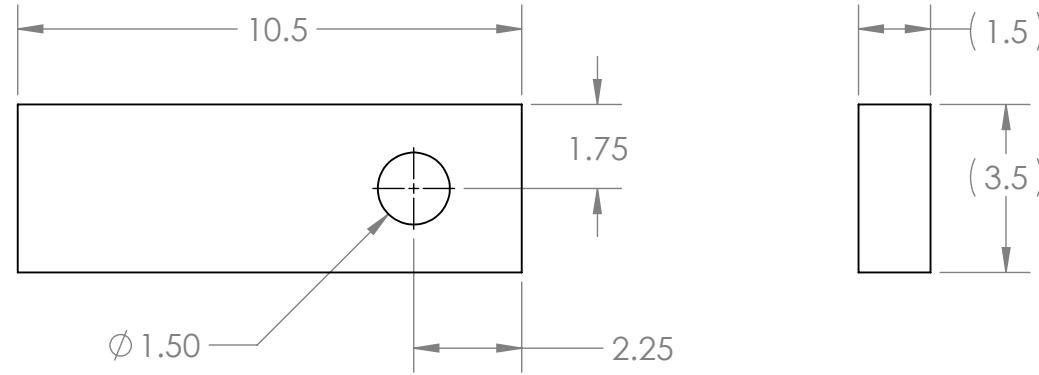
SIZE DWG. NO. REV
A TE-18008-04
SCALE: 1:4 WEIGHT: SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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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 $\pm .001$			
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		2x4			
NEXT ASSY	USED ON	FINISH			
	APPLICATION	DO NOT SCALE DRAWING			

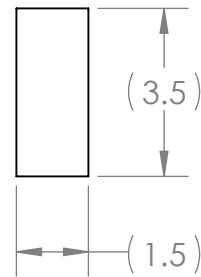
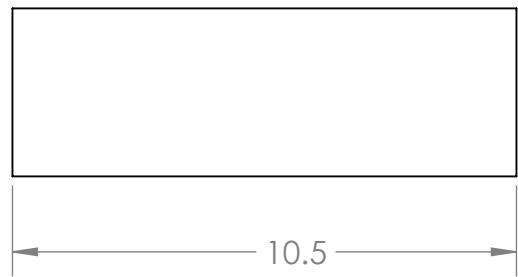
SIZE	DWG. NO.	REV
A	TE-18008-05	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

B

B

**Notes:**

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 4

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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 $\pm .001$			
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		2x4			
NEXT ASSY	USED ON	FINISH			
	APPLICATION	DO NOT SCALE DRAWING			

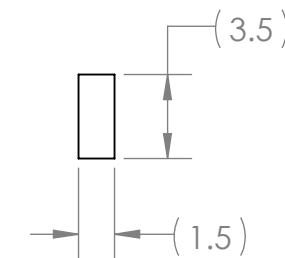
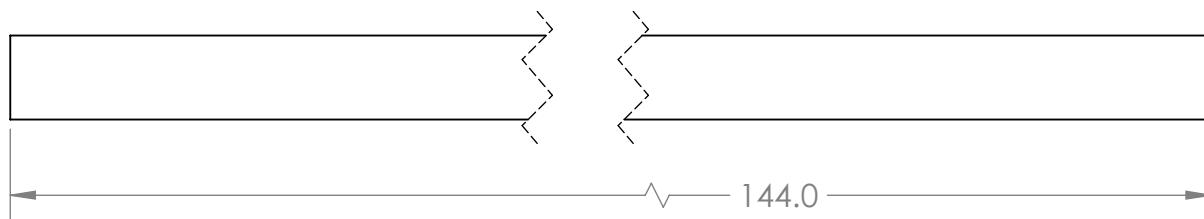
SIZE	DWG. NO.	REV
A	TE-18008-06	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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		UNLESS OTHERWISE SPECIFIED:				
		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	2x4x12			
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				



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TITLE:

SIZE DWG. NO. REV
A TE-18008-07

SCALE: 1:8 WEIGHT: SHEET 1 OF 1

2

1

2

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B



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
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		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL 2x4x12	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:	

SIZE	DWG. NO.	REV
A	TE-18008-08	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

2

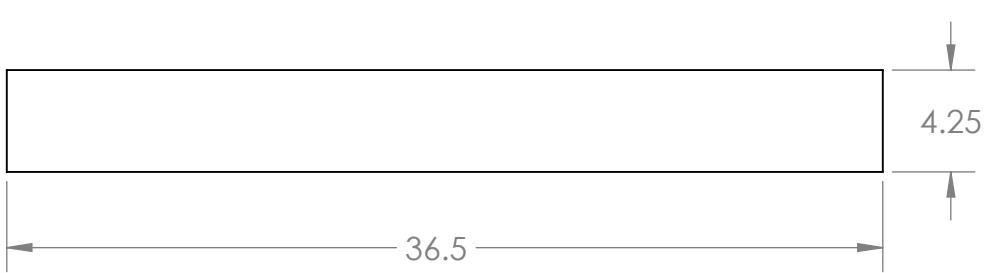
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SOLIDWORKS
Modeling Solutions Partner

TITLE:

A

**Notes:**

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
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		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL 1/2" Ply	ENG APPR.		
		NEXT ASSY	MFG APPR.		
		USED ON	Q.A.		
		FINISH	COMMENTS:		
		APPLICATION			
		DO NOT SCALE DRAWING			

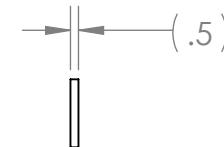
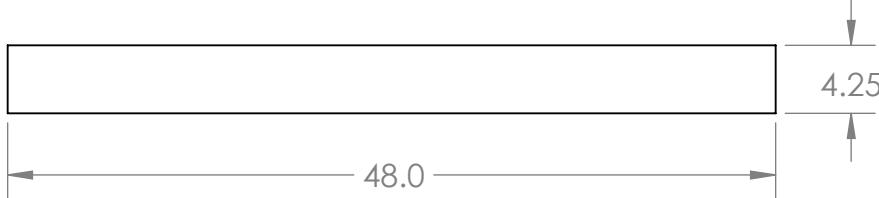
SIZE	DWG. NO.	REV
A	TE-18008-09	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

2

1

B

B



Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

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		DIMENSIONS ARE IN INCHES	DRAWN		
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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 $\pm .001$			
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		1/2 Ply			
NEXT ASSY	USED ON	FINISH			
	APPLICATION	DO NOT SCALE DRAWING			

SIZE	DWG. NO.	REV
A	TE-18008-10	
SCALE: 1:12	WEIGHT:	SHEET 1 OF 1

2

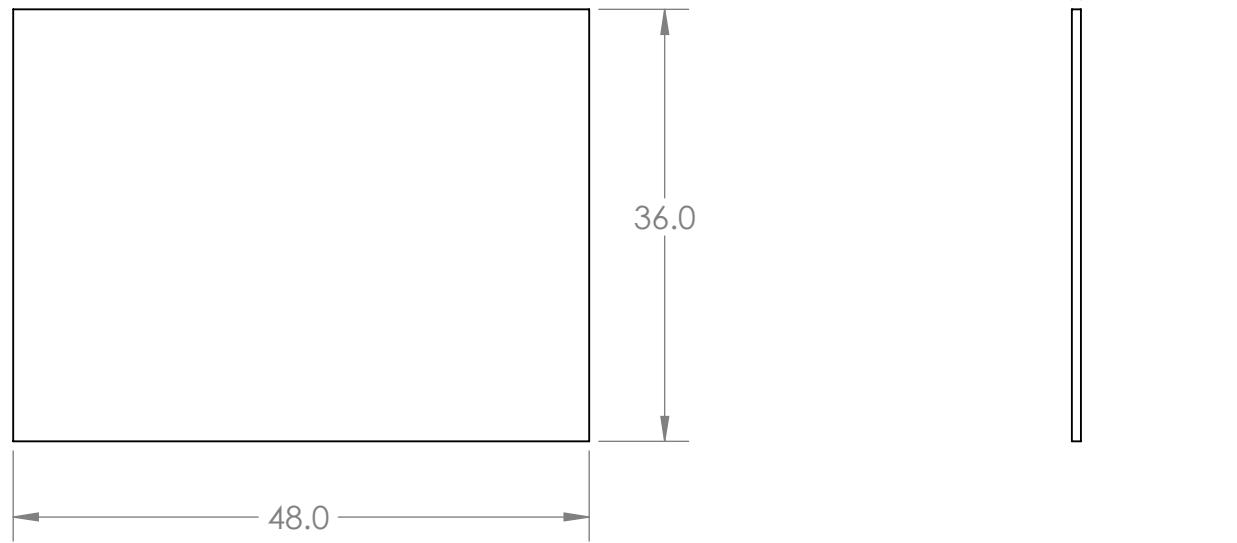
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2

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Notes:

1. Material: 3/4" AC Plywood
2. QTY. Needed: 2

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		UNLESS OTHERWISE SPECIFIED:				
		DIMENSIONS ARE IN INCHES		DRAWN		
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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	3/4" Ply			
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				

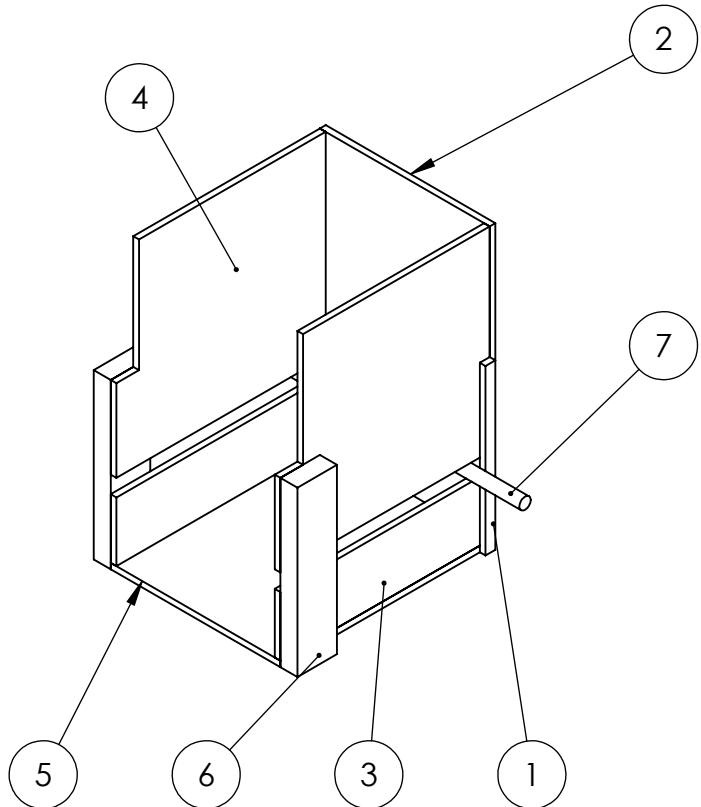
SIZE	DWG. NO.	REV
A	TE-18008-11	
SCALE: 1:16	WEIGHT:	SHEET 1 OF 1

2

1

2

1



NOTE: Two of these assemblies will be required to build all elements.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18009-1		2
2	TE-18009-2		1
3	TE-18009-3		2
4	TE-18009-4		2
5	TE-18009-5		1
6	TE-18009-6		2
7	TE-18009-7		1

		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		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 $\pm .001$	DRAWN	
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED	
		MATERIAL	ENG APPR.	
NEXT ASSY	USED ON	FINISH	MFG APPR.	
APPLICATION		DO NOT SCALE DRAWING	Q.A.	
COMMENTS:				
SIZE	DWG. NO.		REV	
A	TE-18009			
SCALE: 1:12 WEIGHT: SHEET 1 OF 3				

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 **FIRST
ROBOTICS
COMPETITION**  **SOLIDWORKS**
Modeling Solutions Partner

TITLE:
Chute Assembly

2

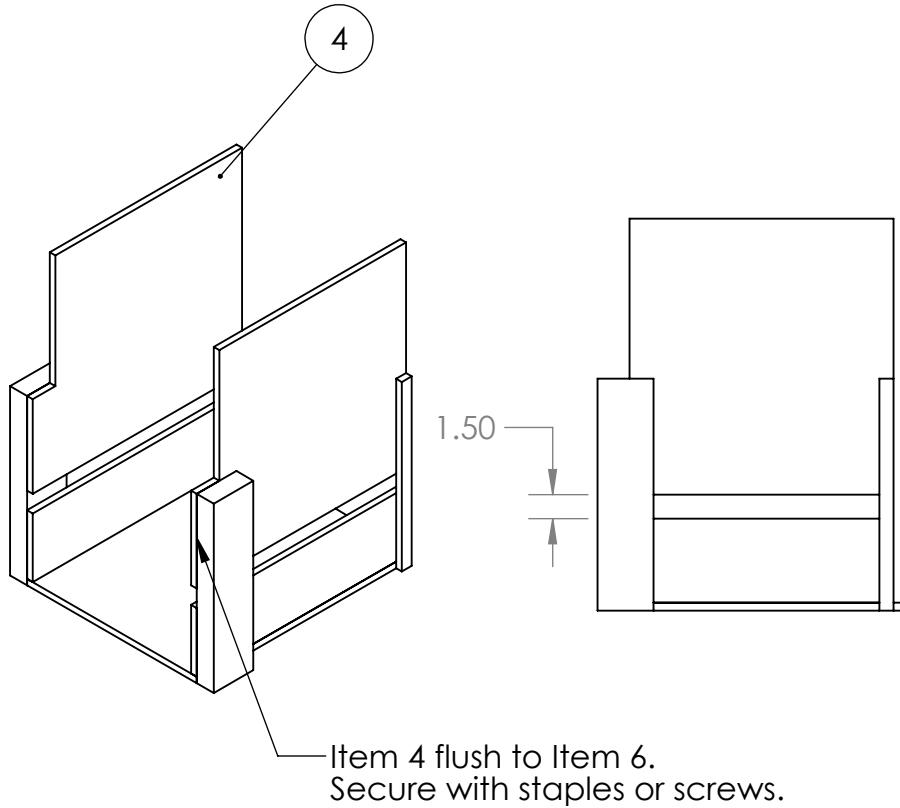
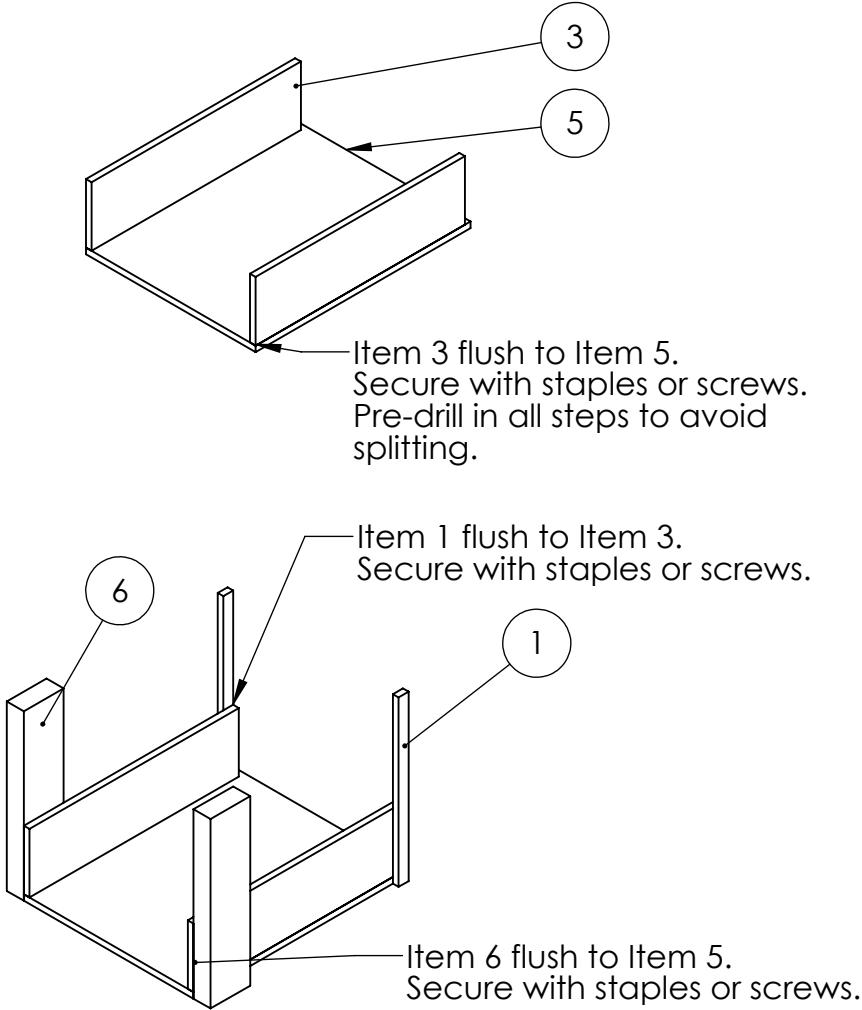
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2

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B



A

A

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		UNLESS OTHERWISE SPECIFIED:		DRAWN	NAME	DATE			
		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		ENG APPR.					
NEXT ASSY		FINISH		MFG APPR.					
APPLICATION		DO NOT SCALE DRAWING		Q.A.					

COMMENTS:

FIRST[®] ROBOTICS COMPETITION **SOLIDWORKS**
Modeling Solutions Partner

TITLE: Chute Assembly

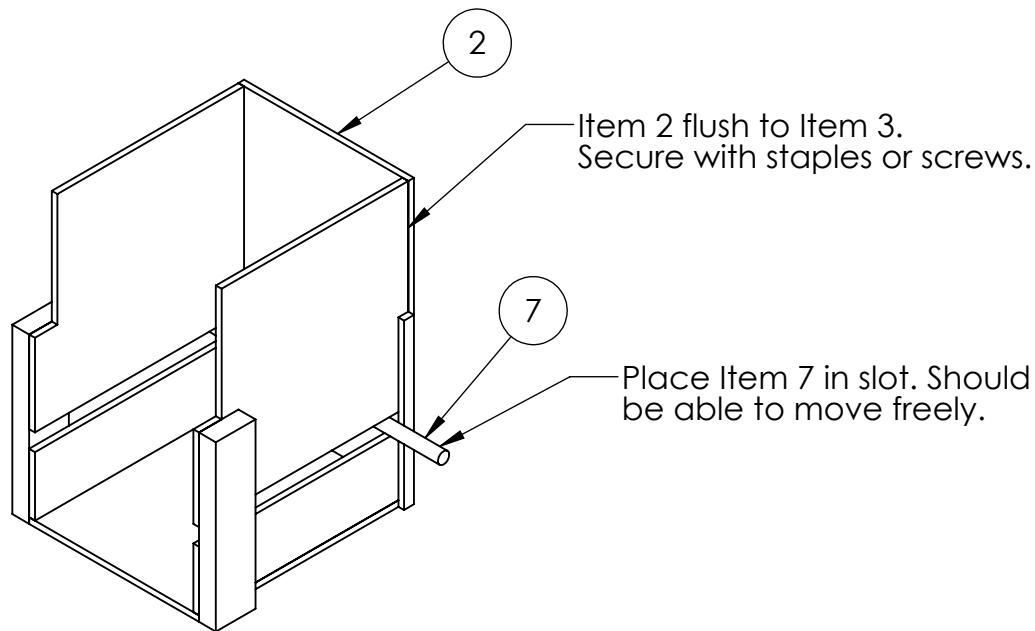
SIZE	DWG. NO.	REV
A	TE-18009	
SCALE: 1:12		WEIGHT:
SHEET 2 OF 3		

2

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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			

2

1

 **FIRST**
ROBOTICS
COMPETITION

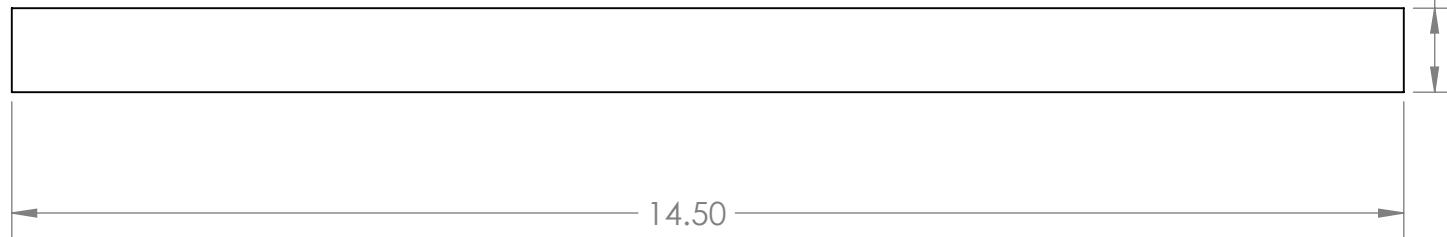
 **SOLIDWORKS**
Modeling Solutions Partner

TITLE: Chute Assembly

SIZE	DWG. NO.	REV
A	TE-18009	
SCALE: 1:12	WEIGHT:	SHEET 3 OF 3

B

B



Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

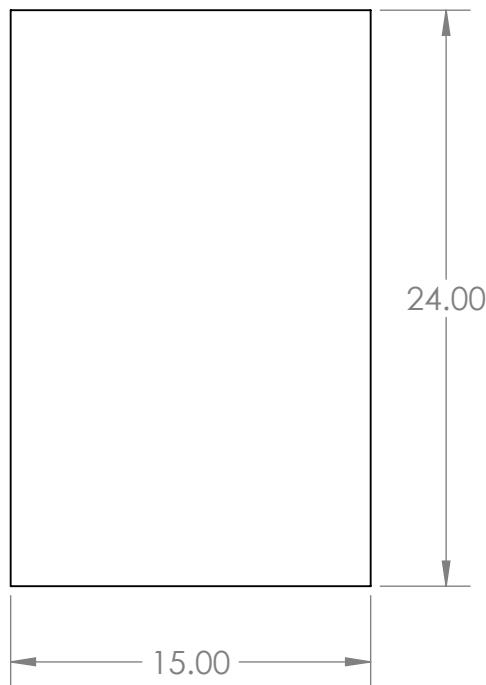
TITLE: **FIRST ROBOTICS COMPETITION**
 **SOLIDWORKS**
 Modeling Solutions Partner

COMMENTS:

SIZE	DWG. NO.	REV
A	TE-18009-1	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

B

B

**Notes:**

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

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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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:



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TITLE:

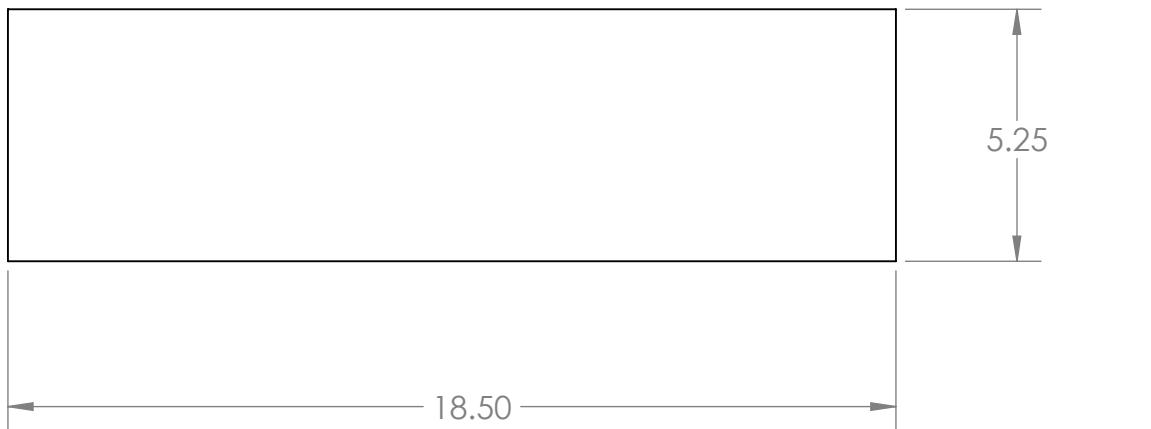
SIZE	DWG. NO.	REV
A	TE-18009-2	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

2

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Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:



SOLIDWORKS
Modeling Solutions Partner

TITLE:

SIZE	DWG. NO.	REV
A	TE-18009-3	
SCALE: 1:4		WEIGHT:
SHEET 1 OF 1		

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17.25

18.50

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(.50)

16.50

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		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 $\pm .001$	DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL .5 Ply	ENG APPR.		
NEXT ASSY	USED ON	FINISH	MFG APPR.		
APPLICATION		DO NOT SCALE DRAWING	Q.A.		

COMMENTS:

- Notes:
 1. Material: 1/2" AC Plywood
 2. QTY. Needed: 4



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TITLE:

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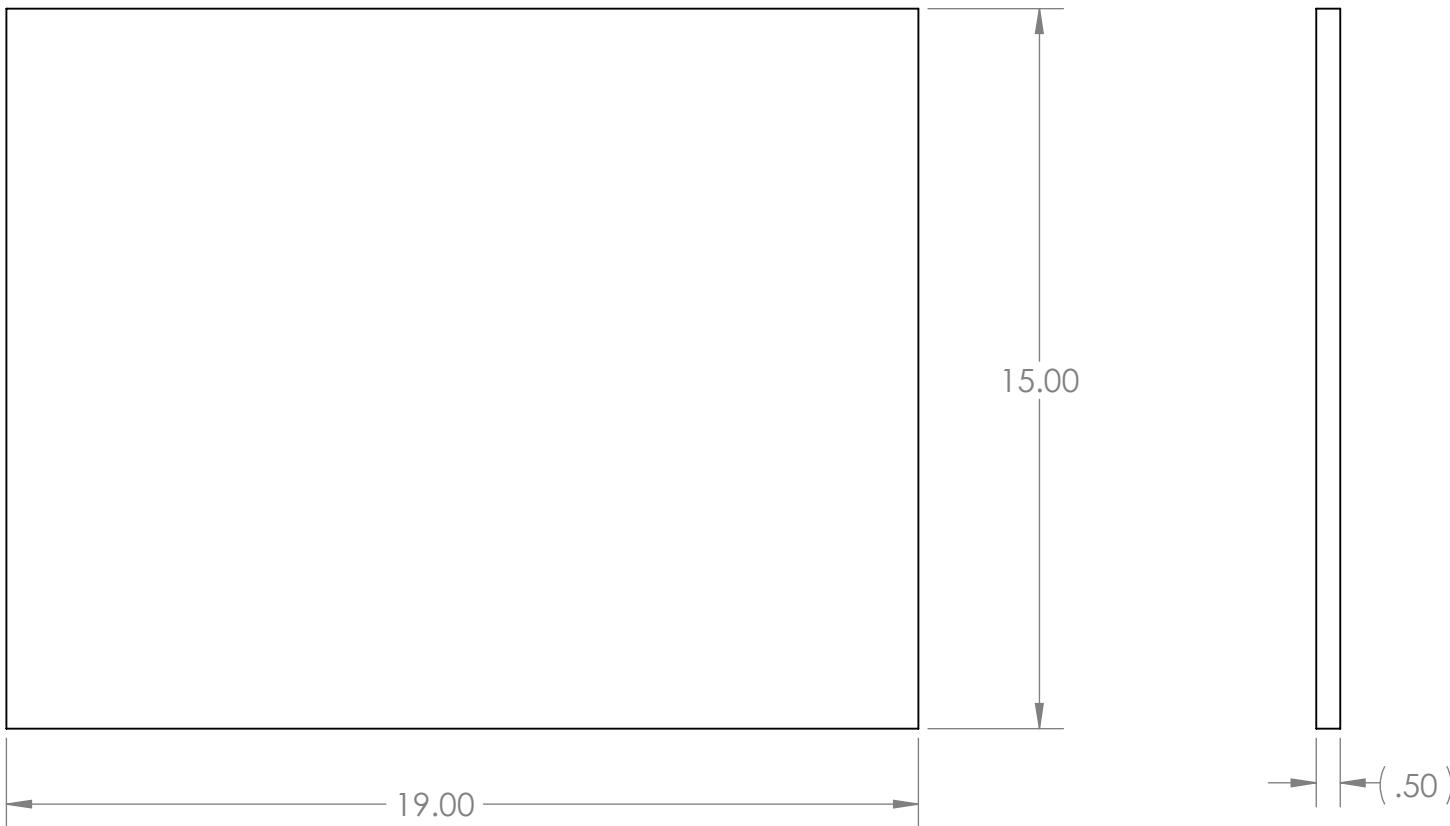
2

1

SIZE	DWG. NO.	REV
A	TE-18009-4	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

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Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 2

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

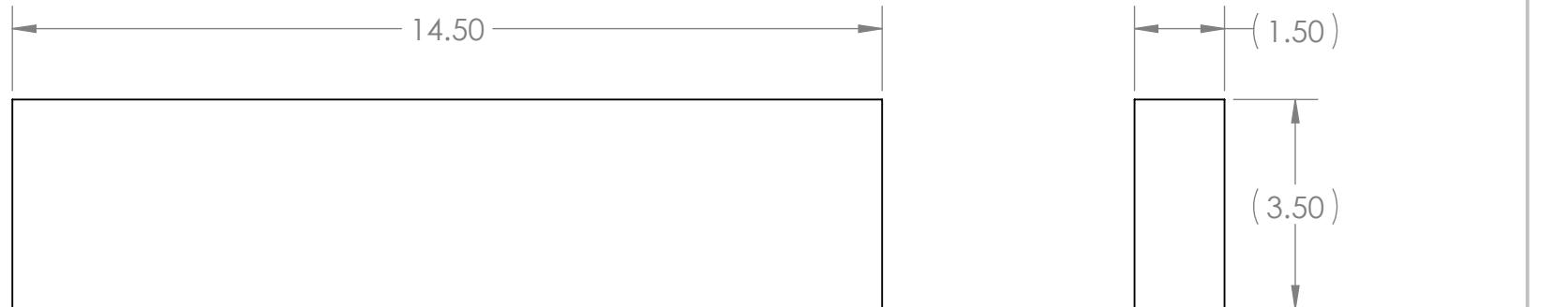


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TITLE:

SIZE	DWG. NO.	REV
A	TE-18009-5	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

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Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 4

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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			
			SIZE DWG. NO.		REV
			A TE-18009-6		
			SCALE: 1:3 WEIGHT:		SHEET 1 OF 1

A

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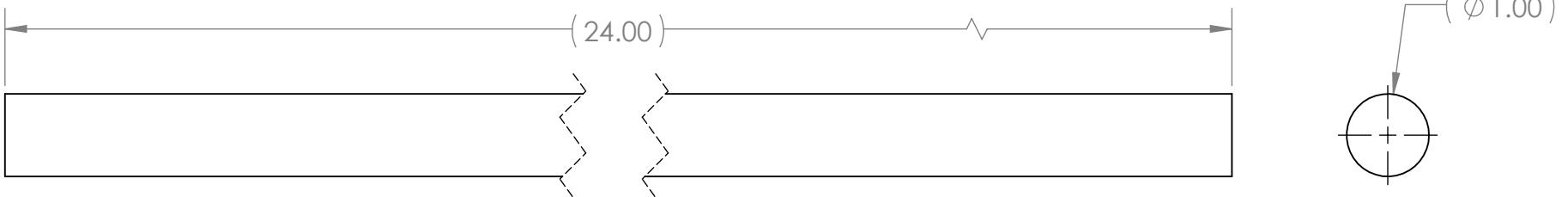
TITLE:

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Notes:

1. Material: 1" Dowel Rod
2. QTY. Needed: 2

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		DIMENSIONS ARE IN INCHES		DRAWN		
		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				

DRAWN NAME DATE

CHECKED

ENG APPR.

MFG APPR.

Q.A.



TITLE:

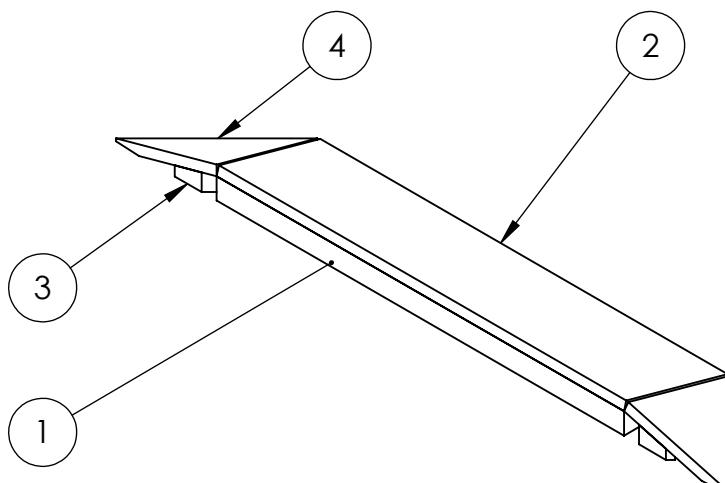
SIZE	DWG. NO.	REV
A	TE-18009-7	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18010-02		1
2	TE-18010-03		1
3	TE-18010-04		2
4	TE-18010-05		2

		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			

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TITLE:

Ramp, Exchange

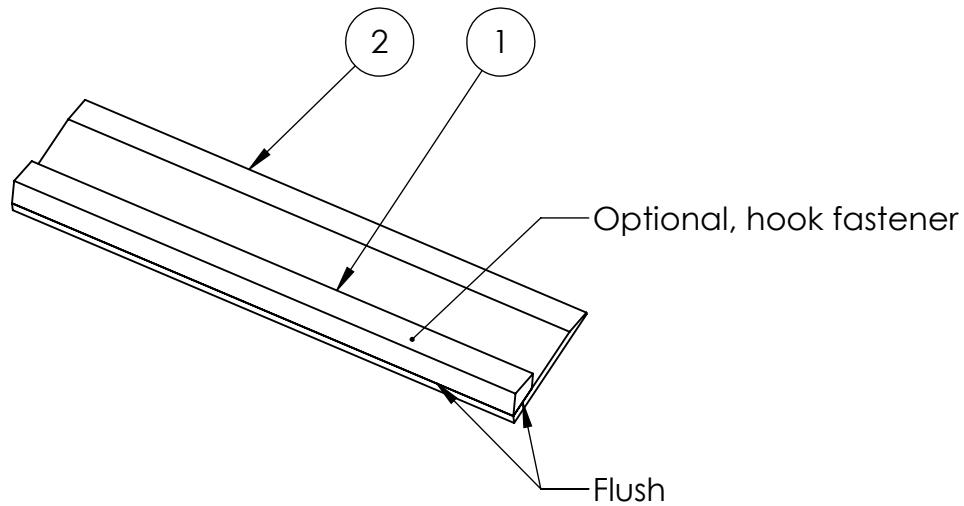
SIZE	DWG. NO.	REV
A	TE-18010	
SCALE: 1:8	WEIGHT:	SHEET 1 OF 3

2

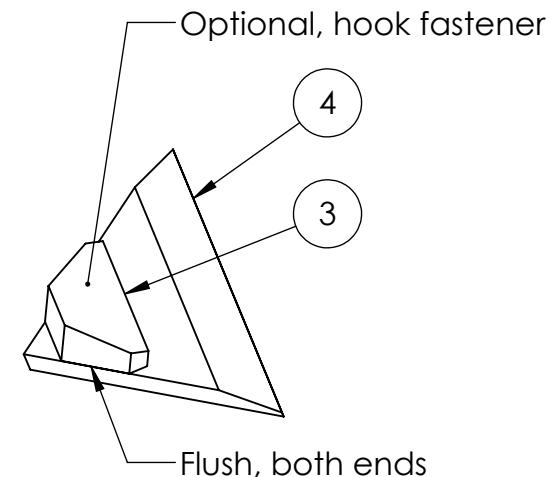
1

2

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Align Item 1 and Item 2 as shown.
Fasten with wood screws.



Align Item 3 and Item 4 as shown.
Fasten with wood screws. Build a
qty. of two.

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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		CHECKED		
		NEXT ASSY		ENG APPR.		
		USED ON		MFG APPR.		
		FINISH		Q.A.		
		APPLICATION		COMMENTS:		
		DO NOT SCALE DRAWING				

FIRST ROBOTICS COMPETITION		SOLIDWORKS Modeling Solutions Partner
TITLE: Ramp, Exchange		
SIZE	DWG. NO.	REV
A	TE-18010	
SCALE: 1:8		WEIGHT:
SHEET 2 OF 3		

2

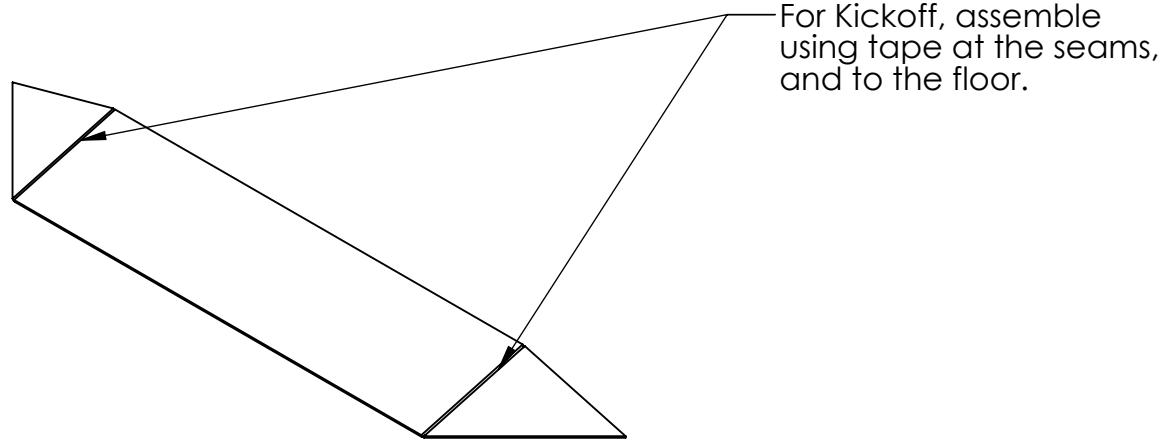
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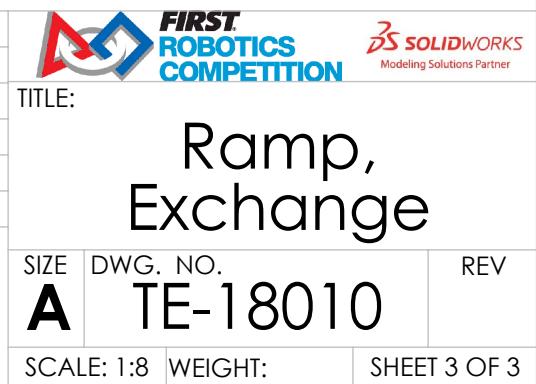
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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL \pm ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm THREE PLACE DECIMAL \pm	DRAWN		
			CHECKED		
			ENG APPR.		
			MFG APPR.		
			Q.A.		
		INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL	COMMENTS:		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

TITLE: **Ramp, Exchange**

SIZE	DWG. NO.	REV
A	TE-18010	
SCALE: 1:8	WEIGHT:	SHEET 3 OF 3

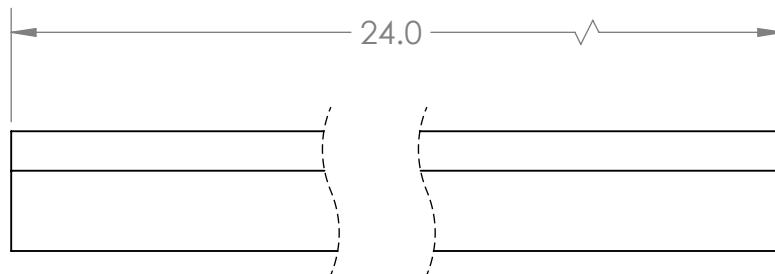
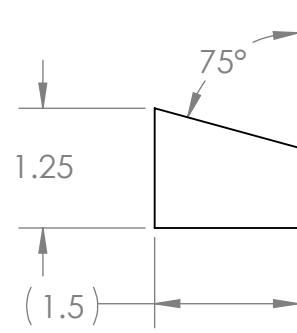


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Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 1

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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				



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Modeling Solutions Partner

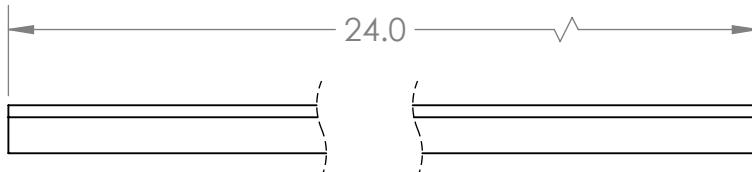
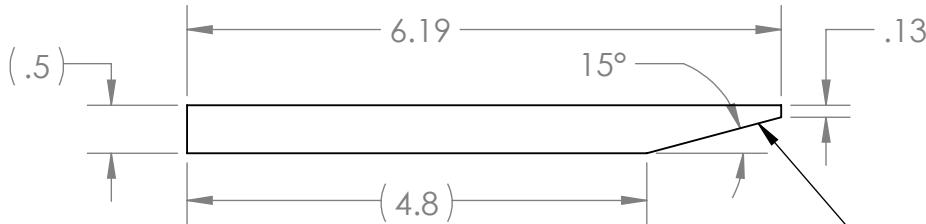
TITLE:

SIZE DWG. NO. REV
A TE-18010-02

SCALE: 1:2 WEIGHT: SHEET 1 OF 1

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Please exercise caution when cutting chamfer. If you feel the cut is too dangerous, cut a simplified 4.75" x 24" piece of plywood. Both versions will be able to represent the assembly, but the chamfered will be closer to the real design.

Notes:

1. Material: 1/2" AC Plywood
2. QTY. Needed: 1

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		UNLESS OTHERWISE SPECIFIED:			NAME	DATE
		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 $\pm .001$		DRAWN		
		INTERPRET GEOMETRIC TOLERANCING PER:	MATERIAL	CHECKED		
				ENG APPR.		
				MFG APPR.		
				Q.A.		
		COMMENTS:				
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				



SOLIDWORKS
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TITLE:

SIZE DWG. NO. REV
A TE-18010-03

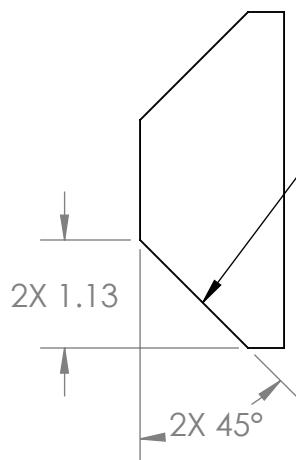
SCALE: 1:2 WEIGHT: SHEET 1 OF 1

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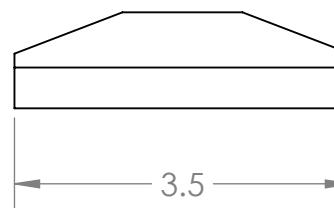
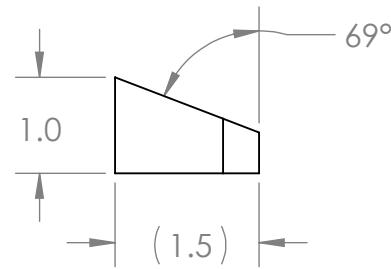
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Please use caution when making chamfers. If you are unable to make this part, it may be omitted. It's a nice-to-have, not mandatory.



Notes:

1. Material: 2" x 4" Pine Lumber
2. QTY. Needed: 2

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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				



SOLIDWORKS
Modeling Solutions Partner

TITLE:

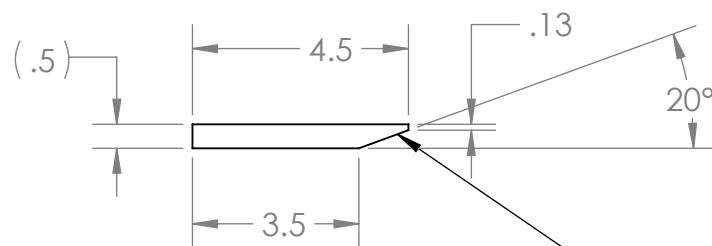
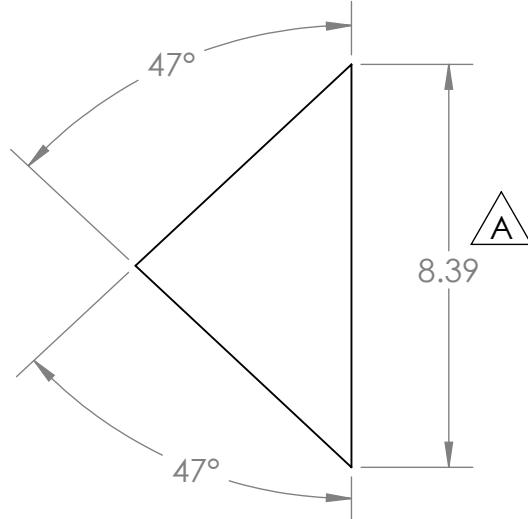
SIZE	DWG. NO.	REV
A	TE-18010-04	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

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Notes:

1. Material; 1/2" AC Plywood
2. QTY. Needed: 2

Please exercise caution when cutting chamfer. Please note, if you feel you are unable to make this part, it can be omitted.

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B2	A	Added missing dimension (8.39)	1/5/2018	DAF

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

SIZE	DWG. NO.	REV
A	TE-18010-05	A
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

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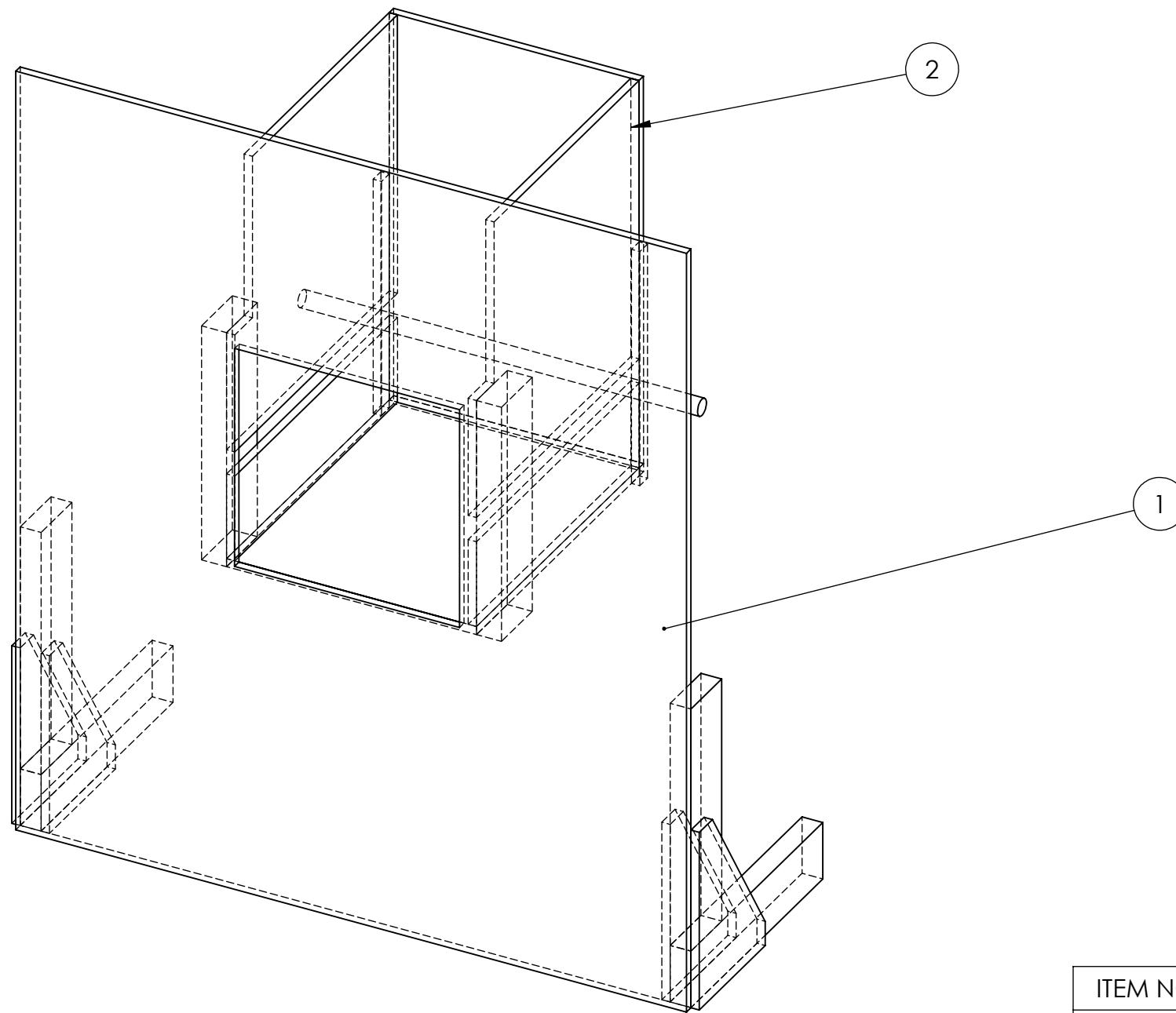
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18002	Portal	1
2	TE-18009	Chute Assembly	1

		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: **Portal Full Assembly**

SIZE	DWG. NO.	REV
B	TE-18011	

SCALE: 1:8 WEIGHT: SHEET 1 OF 2

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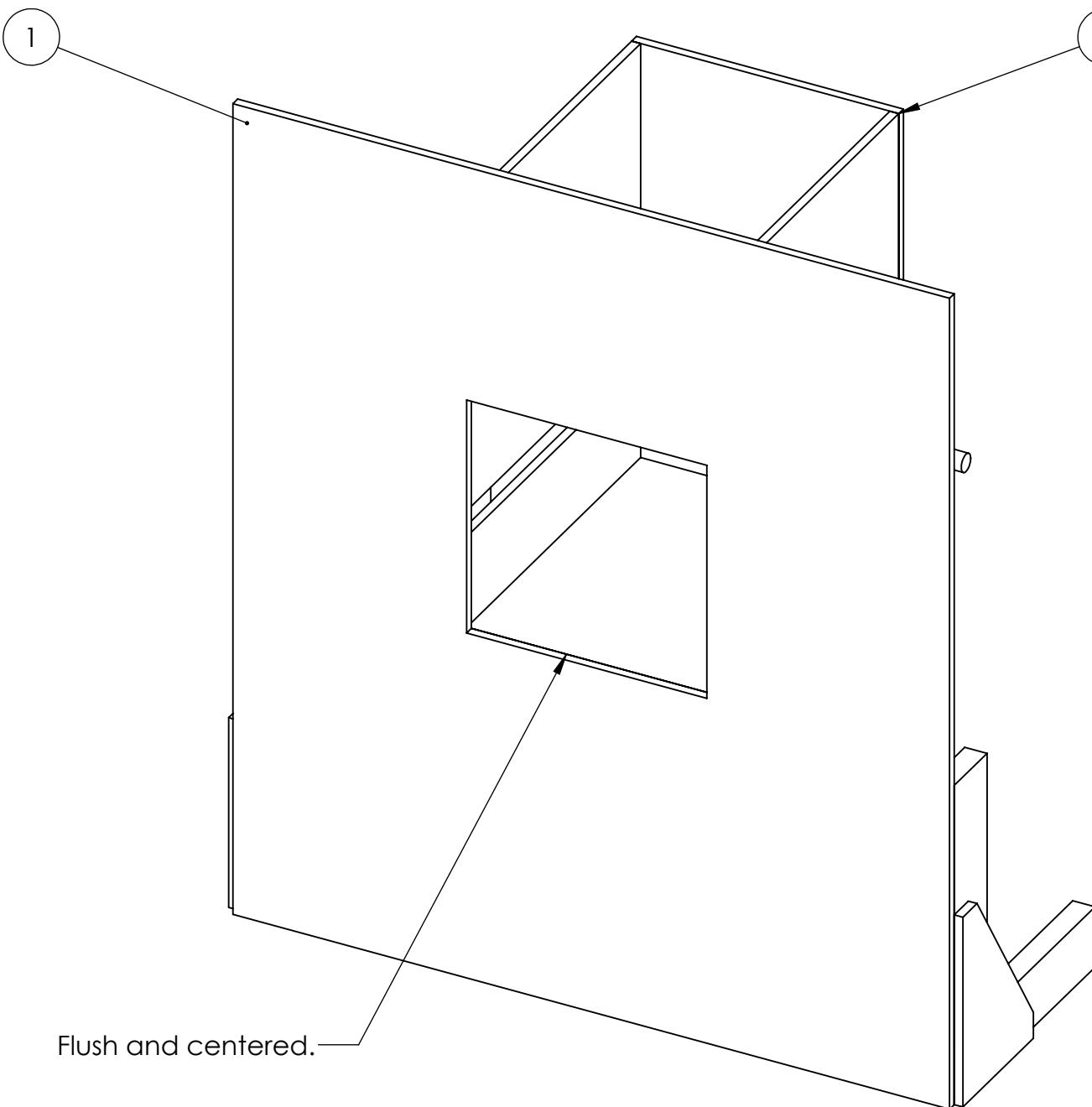
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		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$		NAME	DATE
		DRAWN			
		CHECKED			
		ENG APPR.			
		MFG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

FIRST ROBOTICS COMPETITION **SOLIDWORKS**
Modeling Solutions Partner

Portal Full Assembly

B **TE-18011**

SIZE DWG. NO. REV
SCALE: 1:8 WEIGHT: SHEET 2 OF 2

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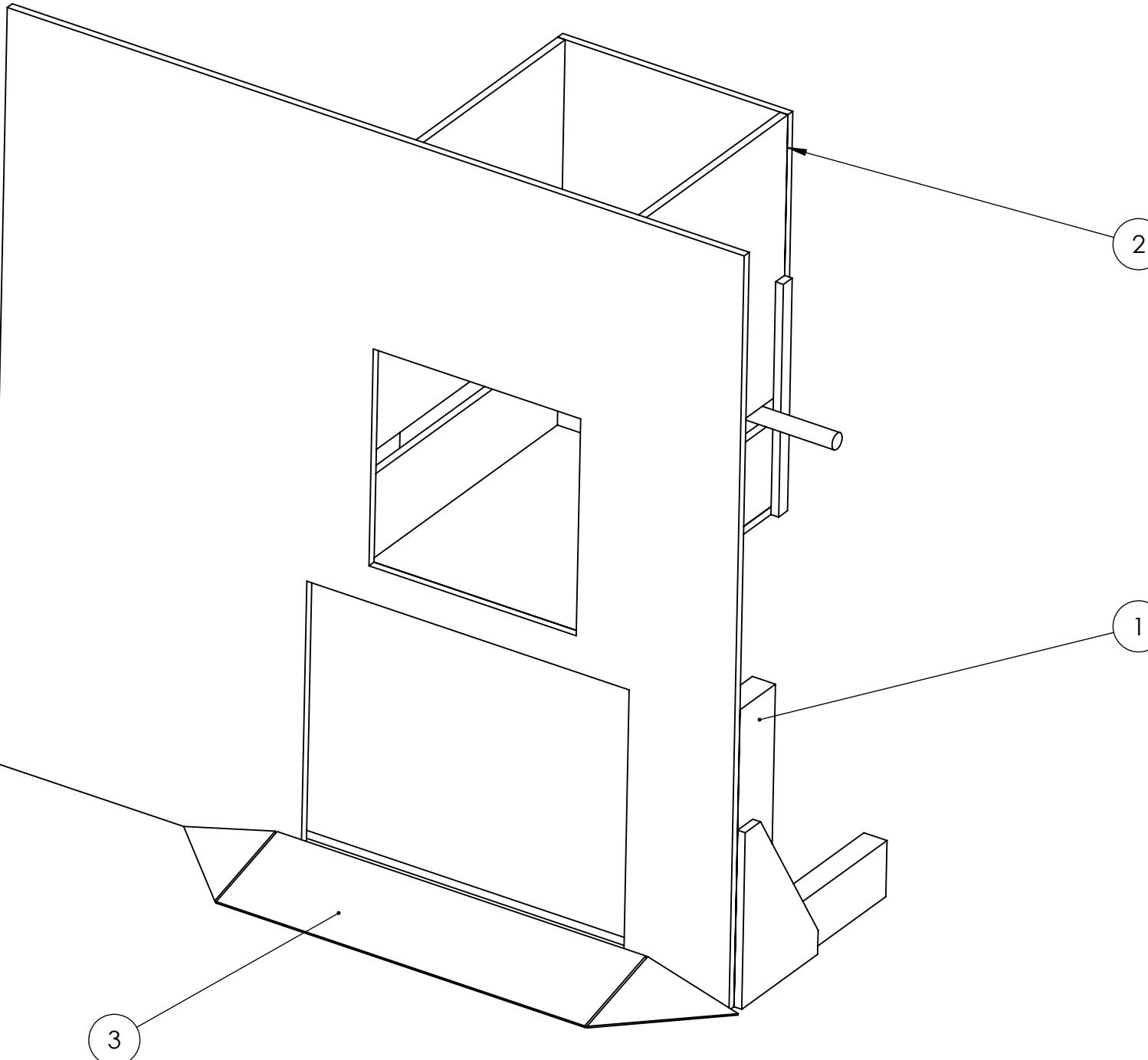
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18001	Exchange	1
2	TE-18009	Chute Assembly	1
3	TE-18010	Ramp, Exchange	1

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		FRACTIONAL $\pm 1/16$	ENG APPR.		
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		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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EXCHANGE FULL ASSEMBLY

SIZE DWG. NO. REV
B TE-18012

SCALE: 1:8 WEIGHT: SHEET 1 OF 2

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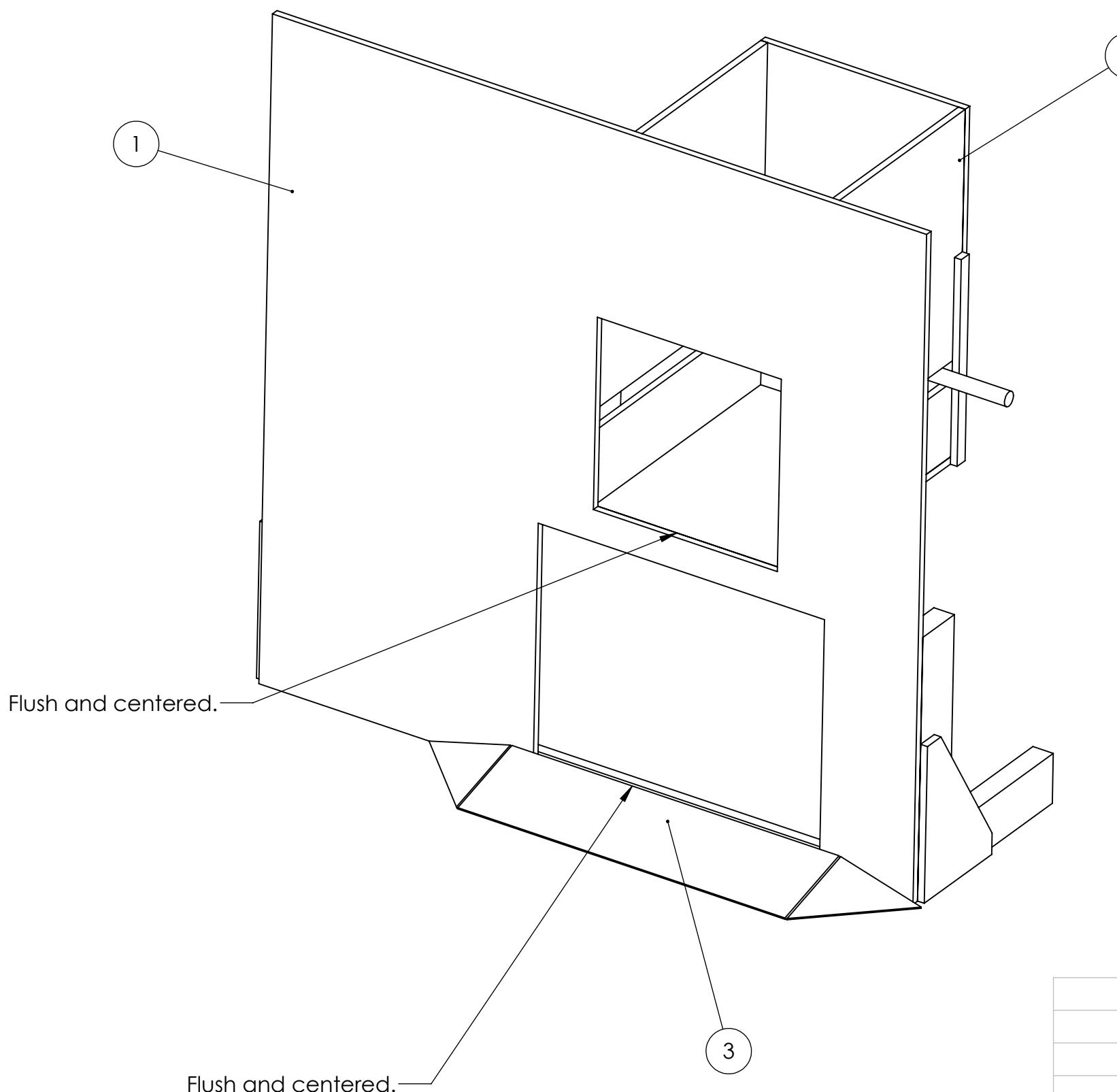
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Step 1: Align Item 2 so it is flush and centered with the top opening. Fasten using wood screws.

Step 2: Align Item 3 so it is flush and centered with the bottom opening. Affix to floor using tape or hook and loop.

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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		

FIRST ROBOTICS COMPETITION **SOLIDWORKS**
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Exchange Full Assembly

B **TE-18012**

SIZE DWG. NO. REV
SCALE: 1:8 WEIGHT: SHEET 2 OF 2

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This technical drawing shows an exploded view of a rectangular metal frame assembly. The main structure consists of four vertical side panels and a horizontal bottom panel. A central horizontal beam connects the top of the side panels. On the top surface, there are two rectangular cutouts, each containing a small vertical post. Three callout circles point to specific parts: circle 1 points to the bottom panel; circle 2 points to one of the vertical side panels; and circle 3 points to the top horizontal beam.

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18006	Switch Frame	1
2	TE-18004	Switch Arm	1
3	TE-18005	Fence	1



 SOLIDWORKS
Modeling Solutions Partner

TITLE:

Switch Full Assembly

SIZE	DWG. NO.	REV
B	TE 18013	

SCALE: 1:16 WEIGHT: SHEET 1 OF 2

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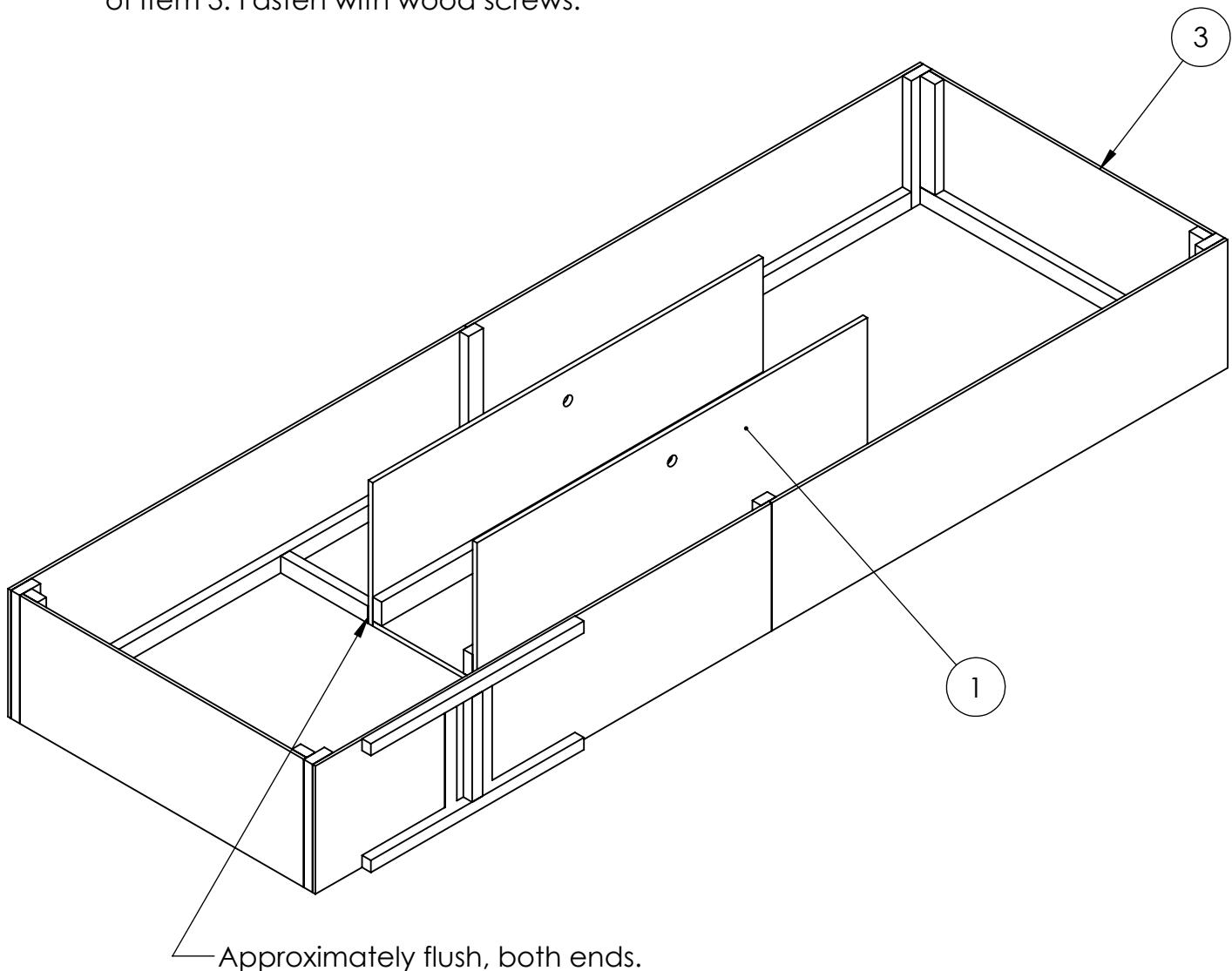
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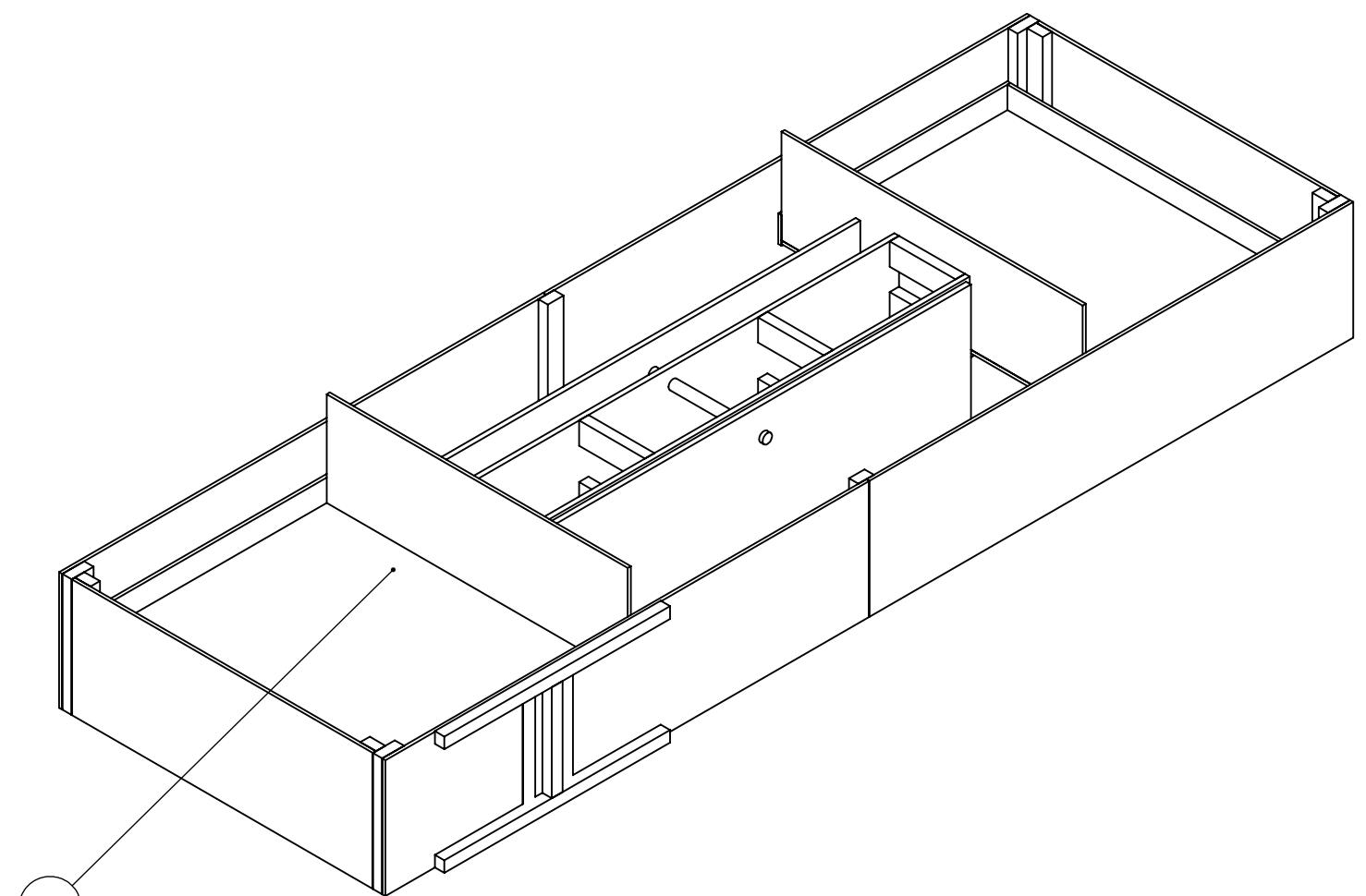
1

Step 1: Insert Item 1 into the middle of Item 3. Fasten with wood screws.



— Approximately flush, both ends.

Step 2: Attach Item 2 to Item 1 using the shaft (TE-18004-06) from Item 1. Shaft will have to be removed prior to installation.



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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 $\pm .001$	DRAWN				
			CHECKED				
			ENG APPR.				
			MFG APPR.				
			Q.A.				
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:				
		MATERIAL					
NEXT ASSY	USED ON	FINISH					
APPLICATION		DO NOT SCALE DRAWING					
			SCALE: 1:20	WEIGHT:	SHEET 2 OF 2		
			REV				

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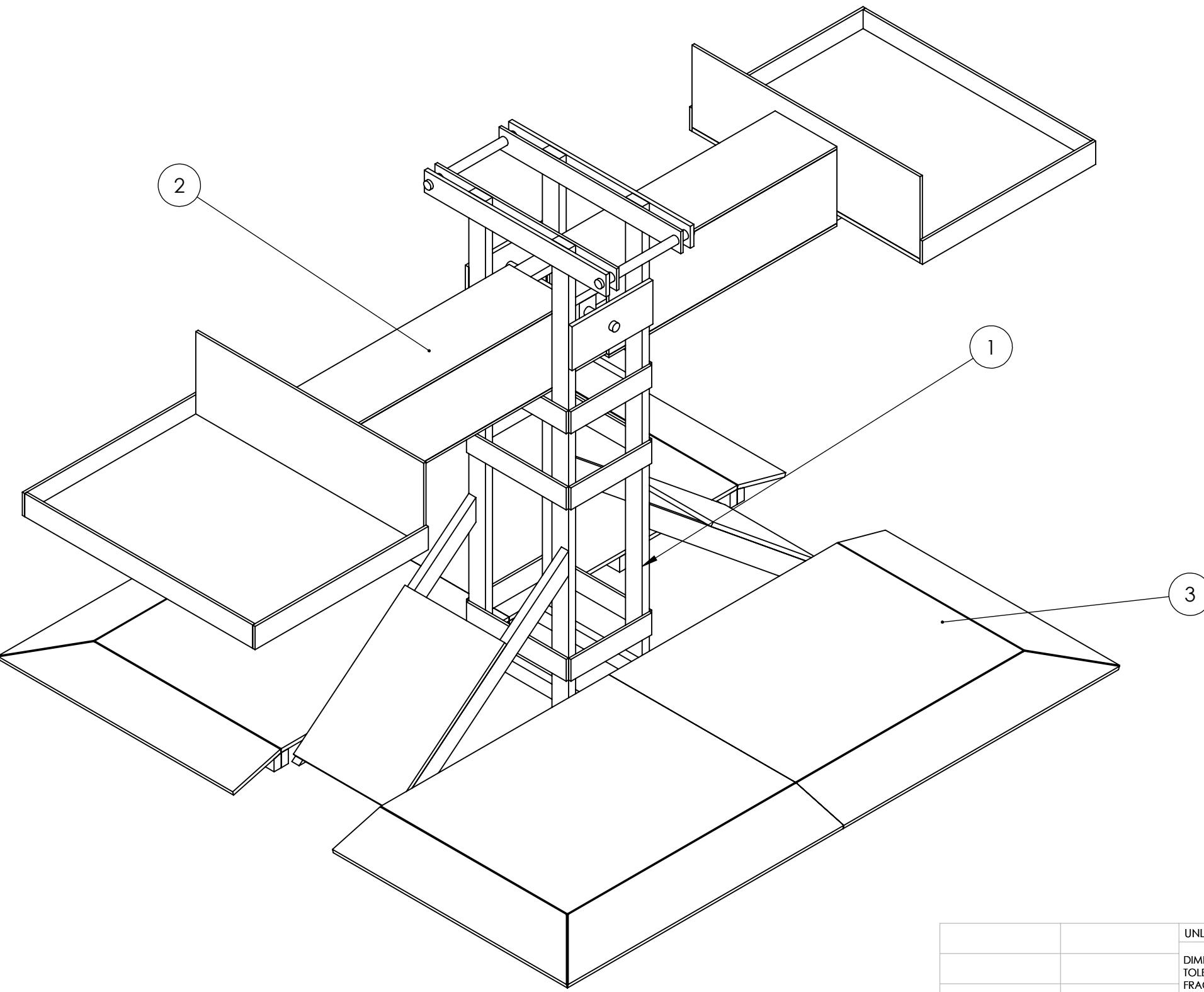
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-18007	Scale Frame	1
2	TE-18008	Scale Arm	1
3	TE-18003	Platform	2

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		DIMENSIONS ARE IN INCHES	DRAWN		
		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	

FIRST ROBOTICS COMPETITION **SOLIDWORKS**
Modeling Solutions Partner

Scale

B **TE-18014**

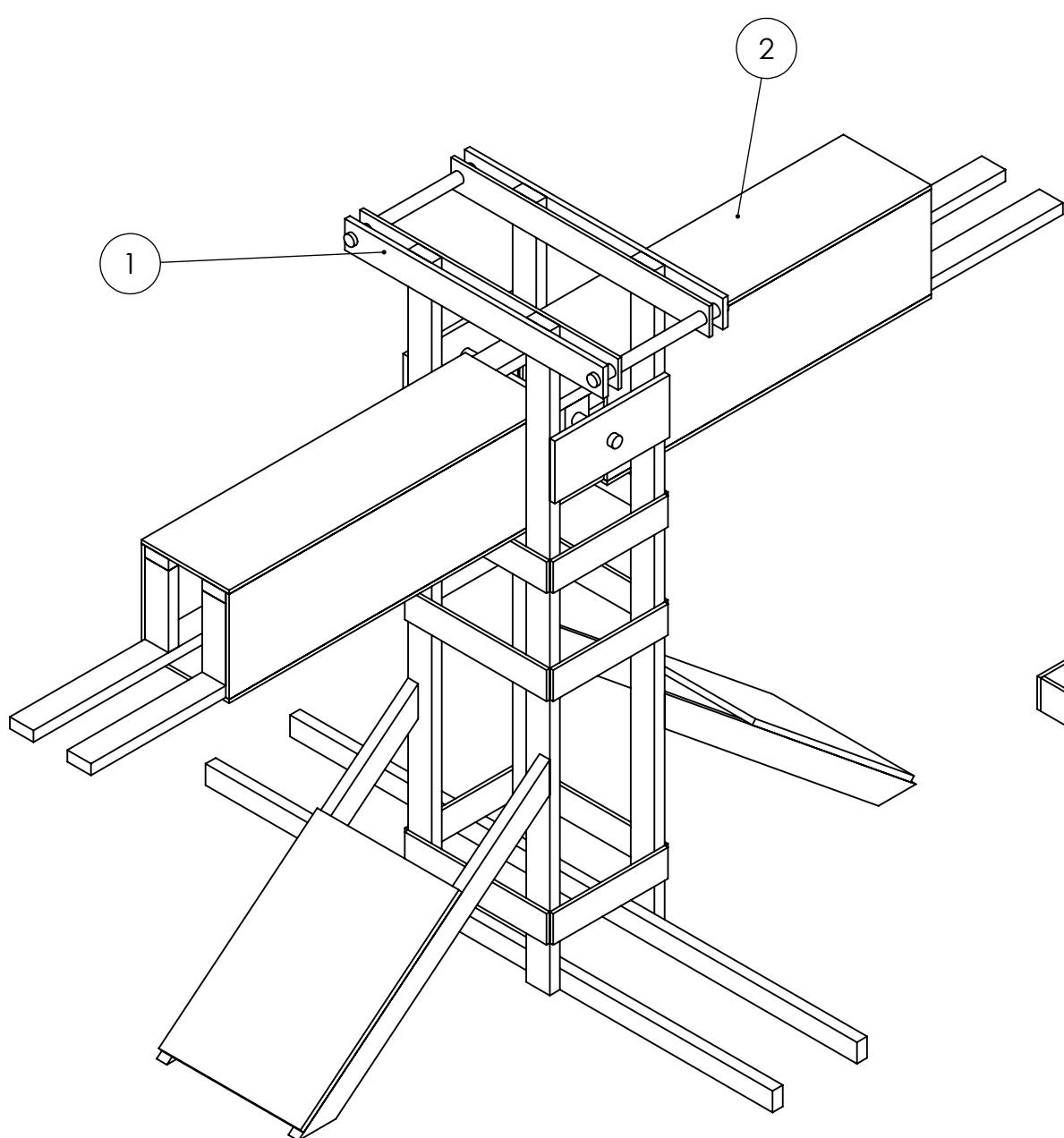
SIZE DWG. NO. REV
SCALE: 1:18 WEIGHT: SHEET 1 OF 3

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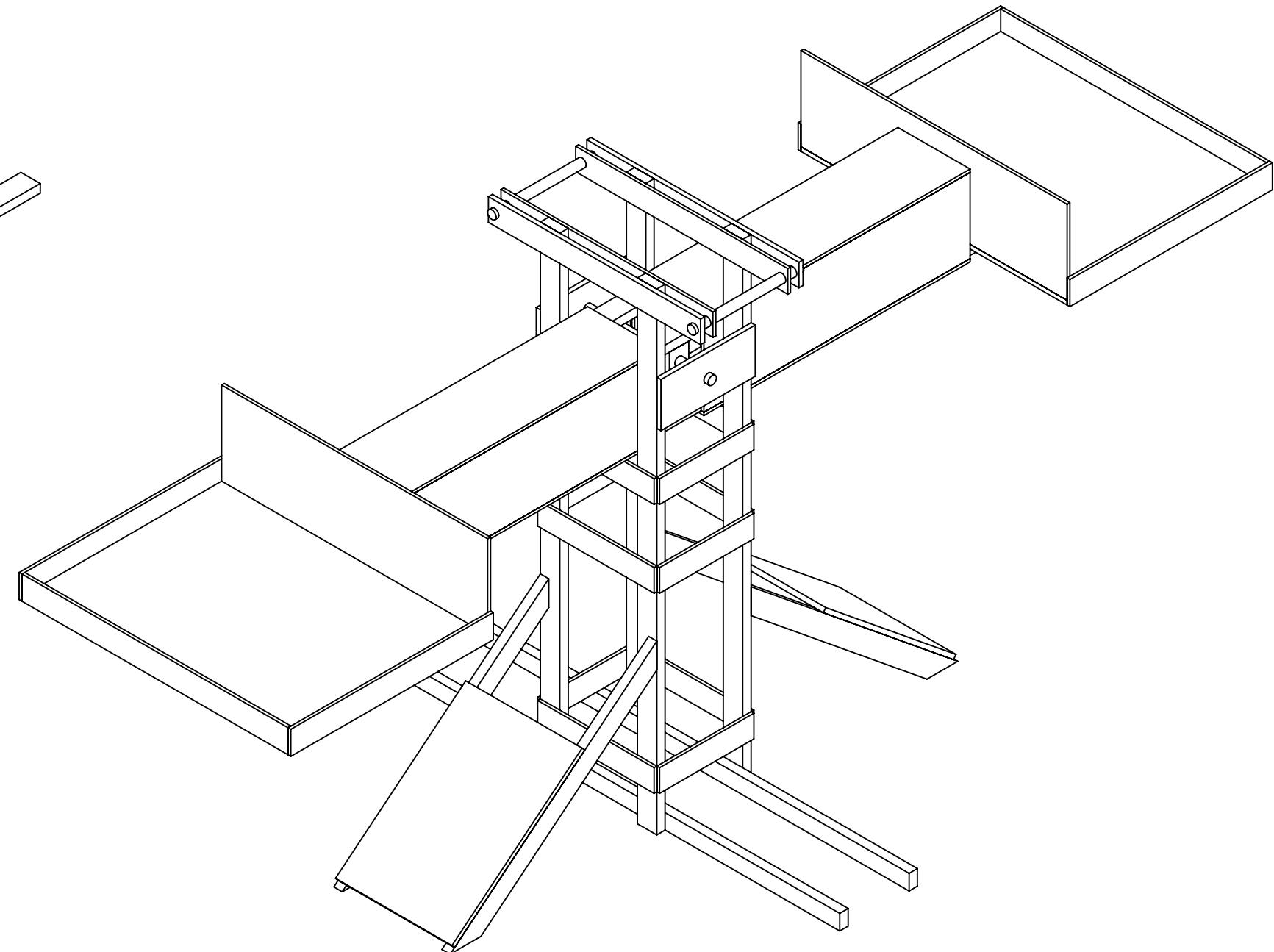
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Step 1: Assemble Item 2 to Item 1 using the Scale Shaft (TE-18007-2).
Shaft will have to be removed prior to installation.



Step 2: Complete Item 2 by attaching the Baskets (see TE-18008).

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION	TITLE: Scale	
		DIMENSIONS ARE IN INCHES	DRAWN					
		TOLERANCES:	CHECKED					
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		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:					
		INTERPRET GEOMETRIC TOLERANCING PER:				SIZE DWG. NO. B TE-18014	REV	
		MATERIAL						
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:18	WEIGHT:	SHEET 2 OF 3

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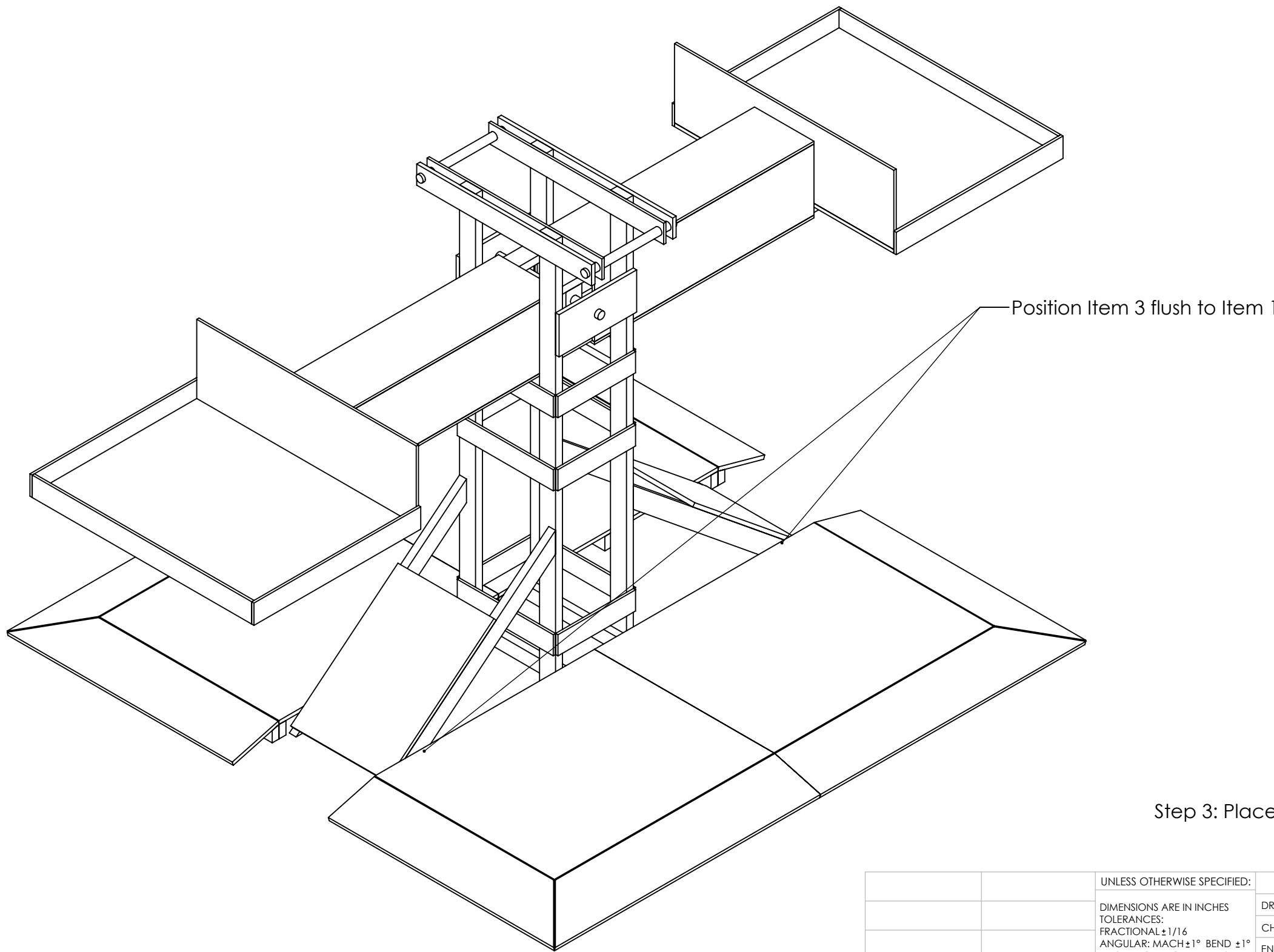
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		MFG APPR.			
		Q.A.			
		COMMENTS:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION	DO NOT SCALE DRAWING				
B	TE-18014				
SCALE: 1:18	WEIGHT:				
		SHEET 3 OF 3			

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