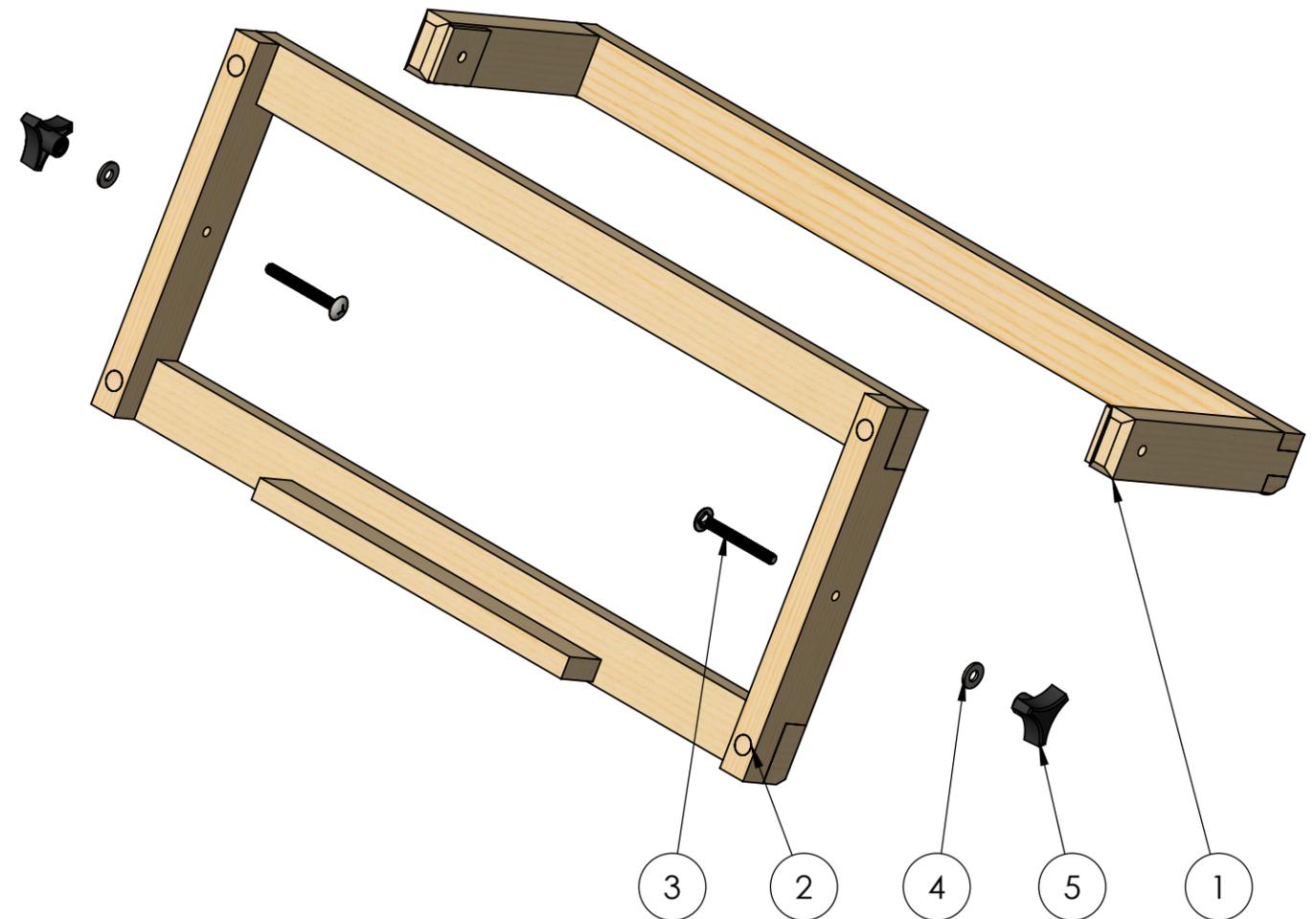
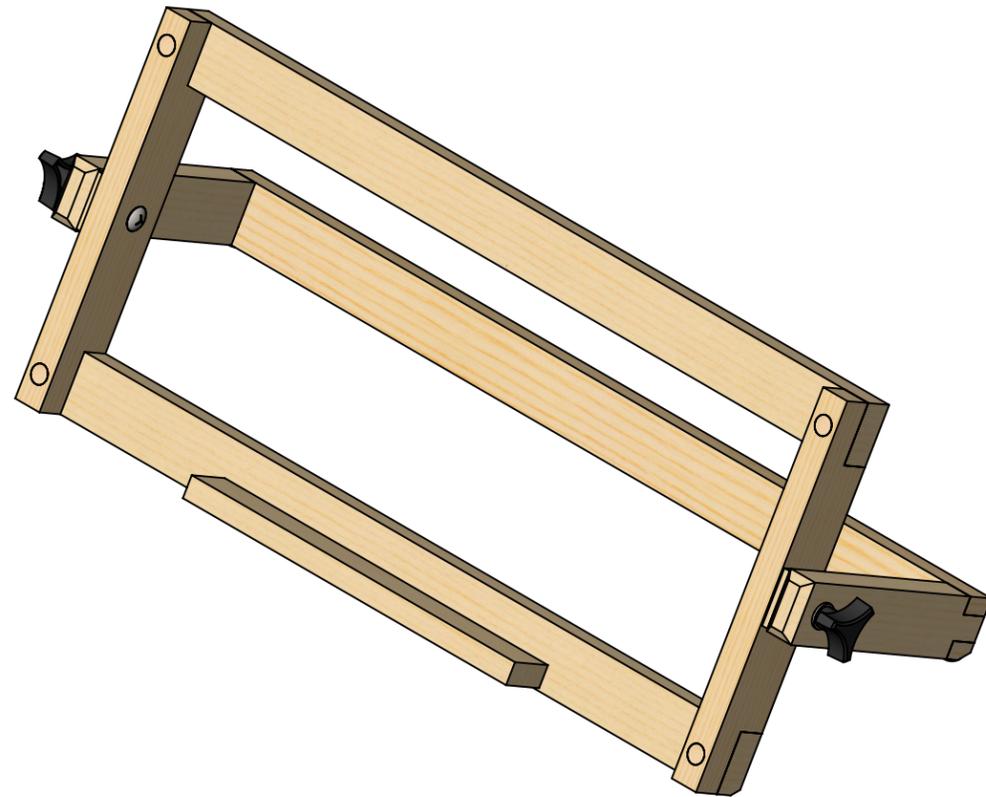


NOTES:
 1. COMPLETE ASSEMBLY BY ADDING CARRIAGE BOLT, WASHERS AND THREE PRONG KNOBS.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	10011M	GRAFT STAND BASE	1
2	10012M	GRAFT STAND FRAME	1
3	90185A105	M6 Steel Square-Neck Carriage Bolt	2
4	Preferred Narrow FW M6	M6 WASHER	2
5	cl-440-tpkM	3 PRONG KNOB - M6	2

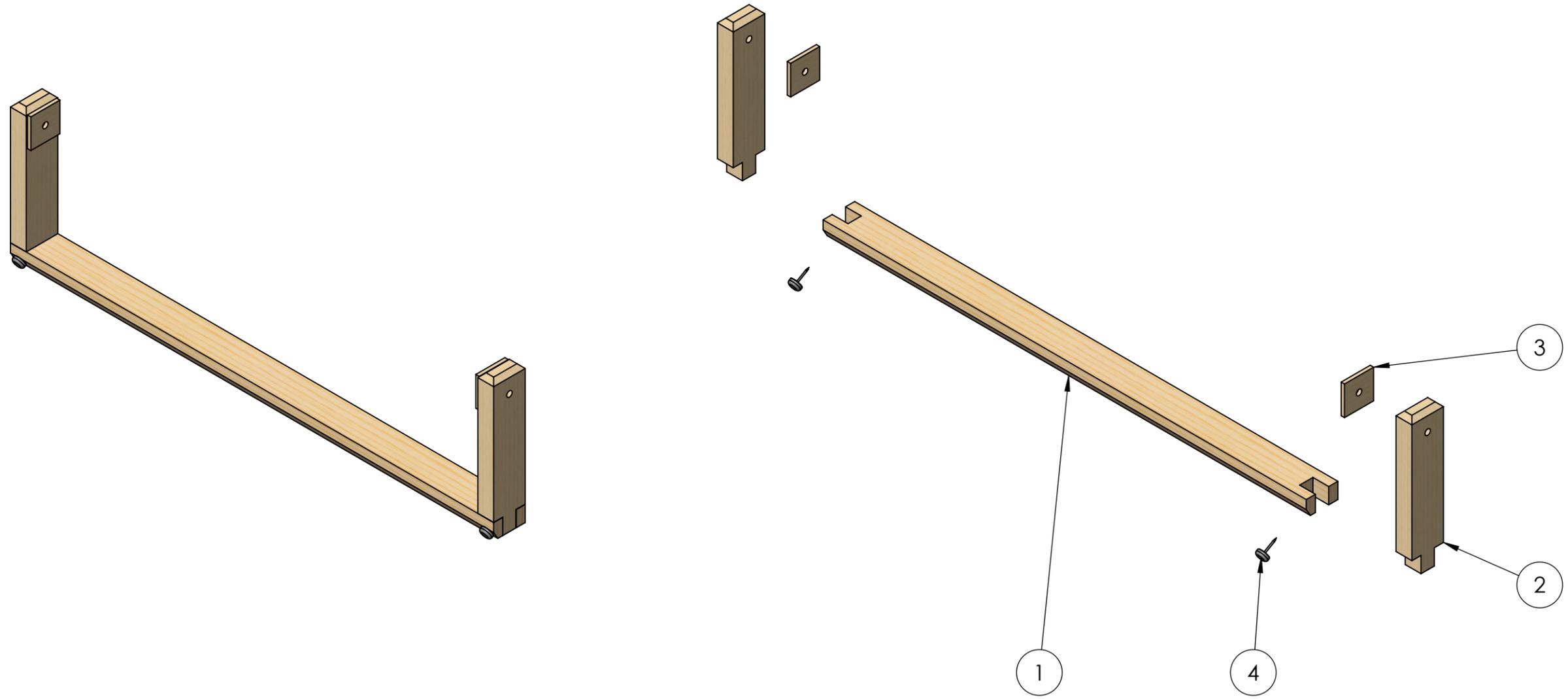


10010M	01	GRAFT STAND
PART NUMBER	REV	DESCRIPTION

<p>UNLESS OTHERWISE SPECIFIED</p> <p>DO NOT SCALE DRAWING</p> <p>INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018</p> <p>DIMENSIONS ARE IN MILLIMETERS</p>		<p>SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY</p> <p>PROPRIETARY</p> <p>NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.</p>		 <p>HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH</p>	
<p>CUSTOMER BEE KEEPERS</p> <p>PROJECT HIVE PRODUCTS</p>		<p>DATE 3/4/2024</p> <p>DATE 3/4/2024</p> <p>DATE 3/4/2024</p>		<p>TITLE</p> <p>GRAFT STAND</p>	
<p>THIRD ANGLE PROJECTION</p> 		<p>DRAWN BY F. FULKERSON</p> <p>CHECKED BY P.G. KELLY</p> <p>APPROVED P.G. KELLY</p>		<p>SCALE</p> <p>B</p> <p>1:4</p>	
		<p>WEIGHT</p> <p>664.856 g</p>		<p>REVISION</p> <p>10010M -</p> <p>SHEET 1 OF 11</p>	

- NOTES:
 1. GLUE ALL PARTS SQUARE.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.
 4. ADD FEET TO ANGLED FACE.

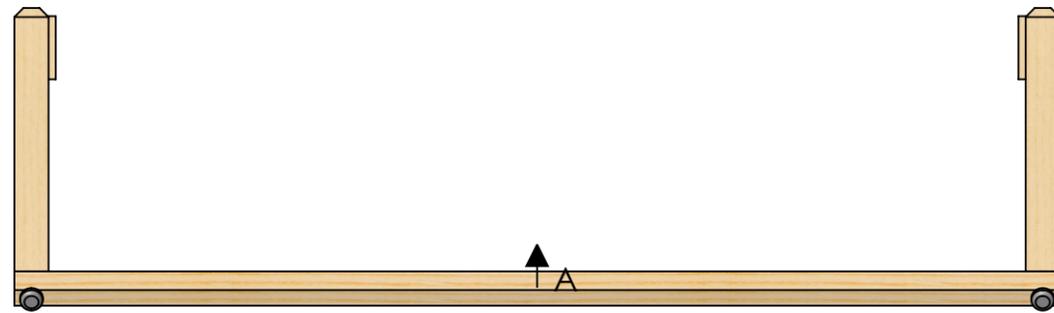
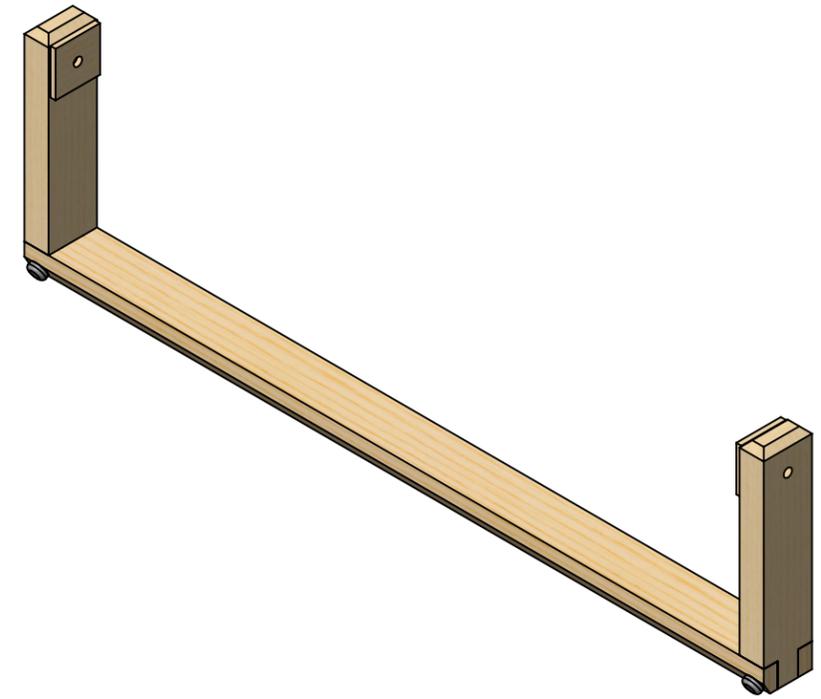
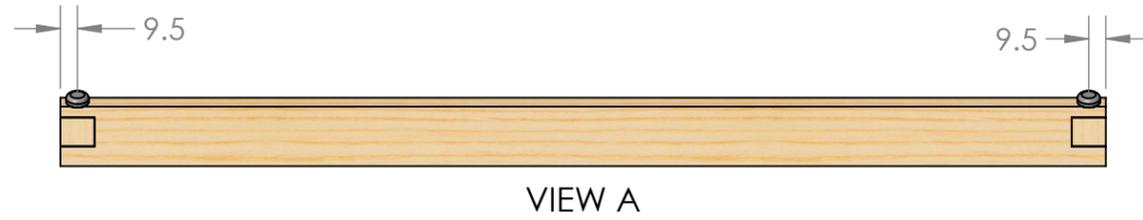
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1032M	BASE BOTTOM BOARD	1
2	1033M	BASE SIDE	2
3	1038M	SHIM	2
4	2513T18	Hammer-on Feet	2



10011M	01	GRAFT STAND BASE
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018 DIMENSIONS ARE IN MILLIMETERS		SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.		 HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH	
THIRD ANGLE PROJECTION 		CUSTOMER BEE KEEPERS PROJECT HIVE PRODUCTS		GRAFT STAND BASE	
DRAWN BY F. FULKERSON CHECKED BY P.G. KELLY APPROVED P.G. KELLY		DATE 3/4/2024 DATE 3/4/2024 DATE 3/4/2024		TITLE 10010M - SCALE 1:4 WEIGHT 213.500 g	
				SHEET 2 OF 11	

- NOTES:
 1. GLUE ALL PARTS SQUARE.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.
 4. ADD FEET TO ANGLED FACE.

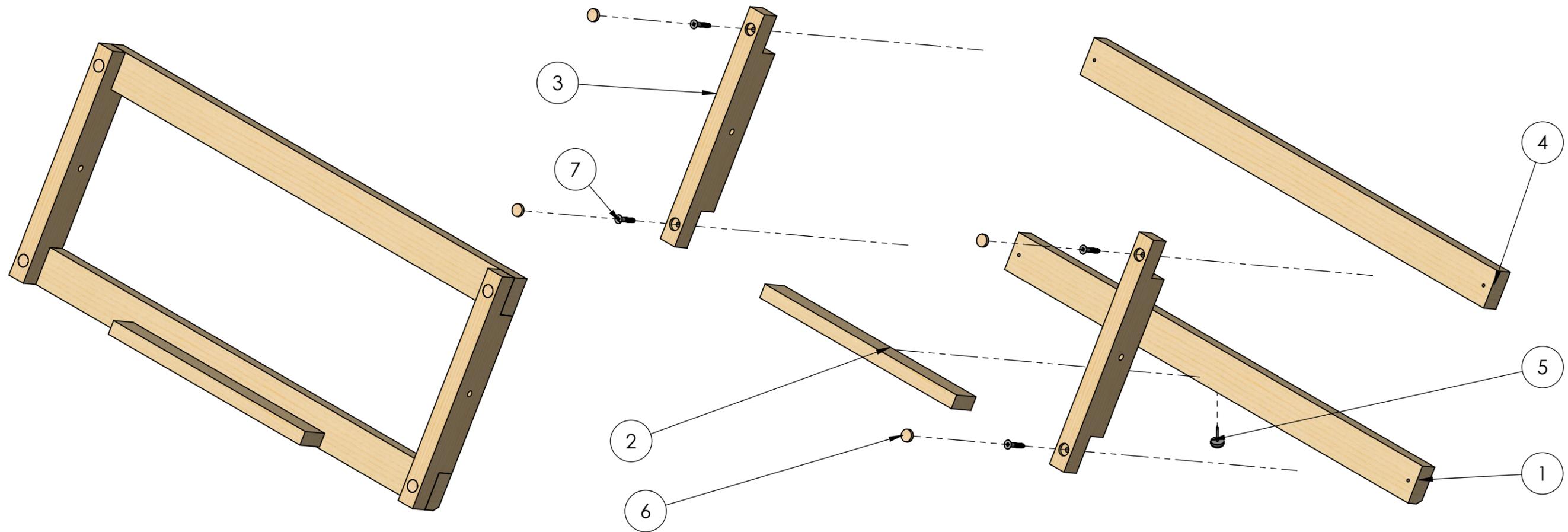


10011M	01	GRAFT STAND BASE
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018 DIMENSIONS ARE IN MILLIMETERS	SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY	 HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH
	PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.	
THIRD ANGLE PROJECTION 	CUSTOMER: BEE KEEPERS PROJECT: HIVE PRODUCTS DRAWN BY: F. FULKERSON CHECKED BY: P.G. KELLY APPROVED: P.G. KELLY	DATE: 3/4/2024 DATE: 3/4/2024 DATE: 3/4/2024
TITLE: GRAFT STAND BASE		SIZE: B SCALE: 1:4 WEIGHT: 213.500 g
PART NUMBER: 10011M		SHEET 3 OF 11

- NOTES:
 1. GLUE ALL PARTS SQUARE.
 2. PREDRILL ALL HOLES.
 3. ADD #8 X 25MM WOOD SCREW.
 4. ADD 12MM DOWEL PLUGS.
 5. SAND DOWELS FLUSH.
 6. REMOVE ALL SHARP EDGES.
 7. FINISH: VARNISH.
 8. ADD FOOT TO CENTER OF ANGLED FACE.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	1035M	FRAME BOTTOM	1
2	1036M	GRAFT FRAME SUPPORT	1
3	1037M	FRAME SIDE	2
4	1034M	FRAME TOP	1
5	2513T18	Hammer-on Feet	1
6	1039M	12M DOWEL PLUG	4
7	90610A718	Square-Drive Flat Head Screws for Wood	4



10012M	01	GRAFT STAND FRAME
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED
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 PER ASME Y14.5-2018
 DIMENSIONS ARE IN MILLIMETERS

THIRD ANGLE PROJECTION



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PROPRIETARY

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 ANY FORM, WITHOUT WRITTEN PERMISSION.

CUSTOMER
 BEE KEEPERS
 PROJECT
 HIVE PRODUCTS

DRAWN BY
 F. FULKERSON
 CHECKED BY
 P.G. KELLY
 APPROVED
 P.G. KELLY

DATE
 3/4/2024
 DATE
 3/4/2024
 DATE
 3/4/2024



HONEY BEE RESEARCH CENTRE
 THE UNIVERSITY OF GUELPH

TITLE

GRAFT STAND FRAME

SIZE
B

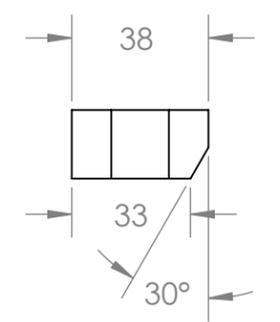
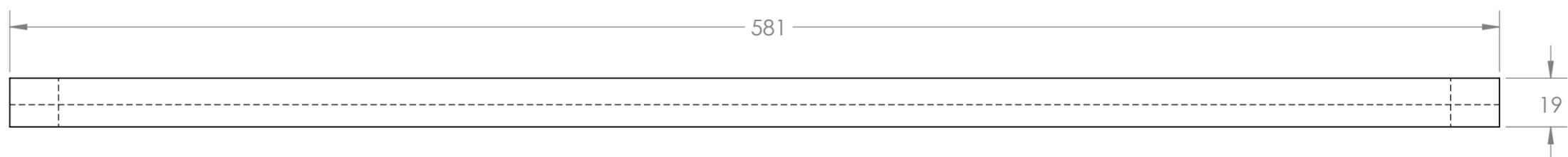
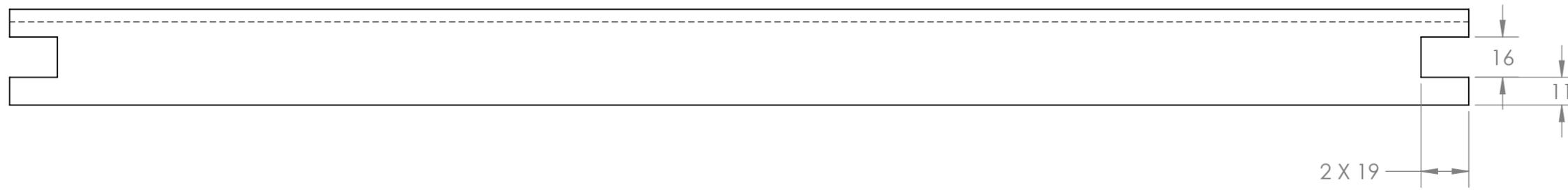
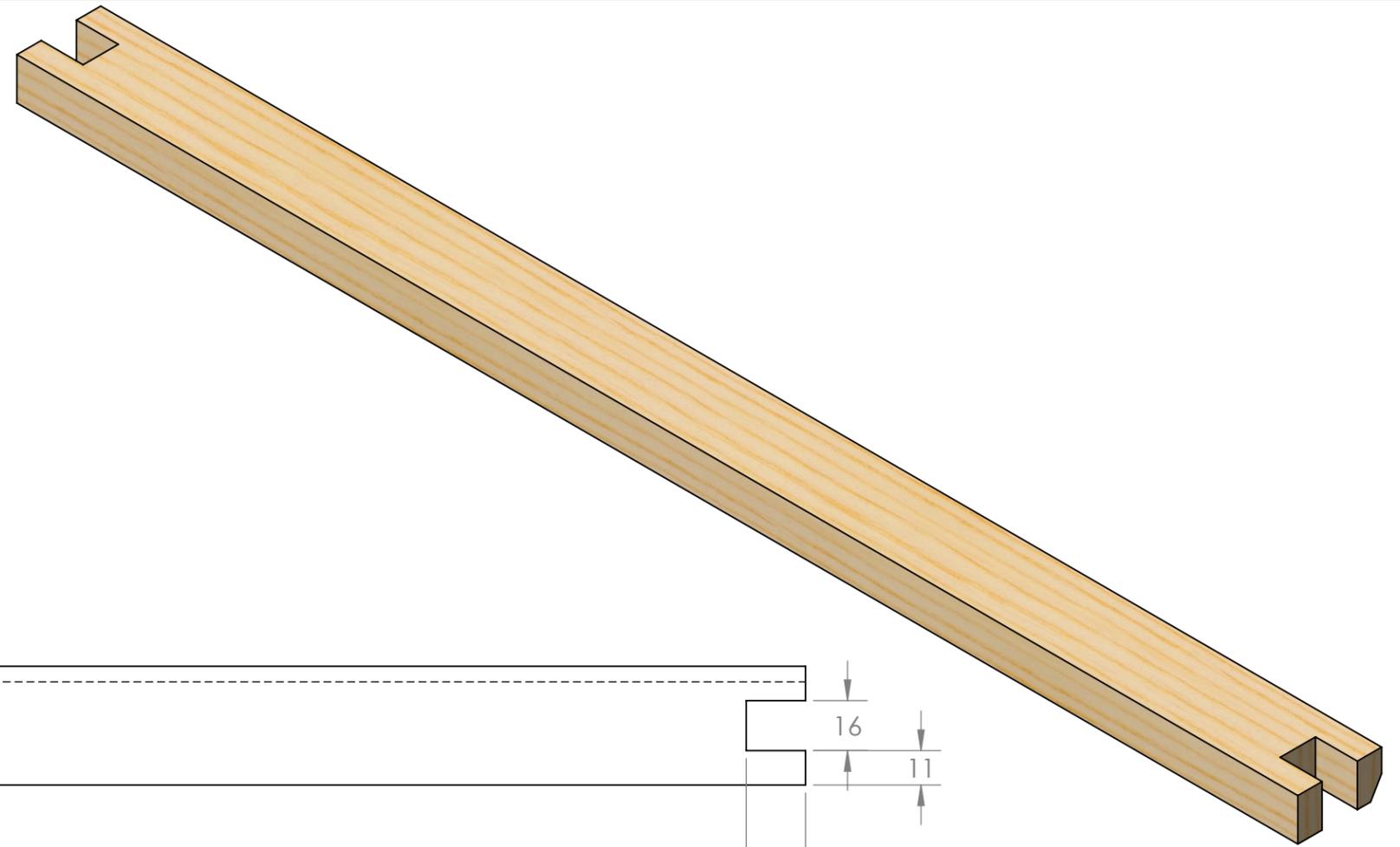
SCALE
 1:4

WEIGHT
 396.033 g

10010M -

SHEET 4 OF 11

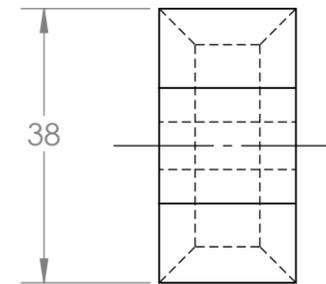
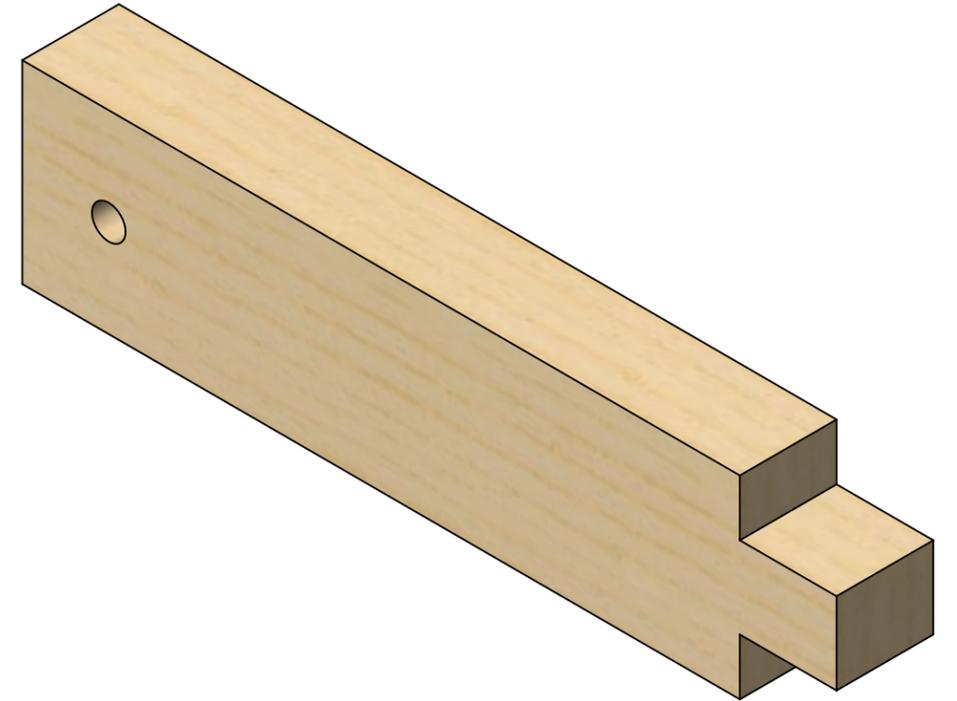
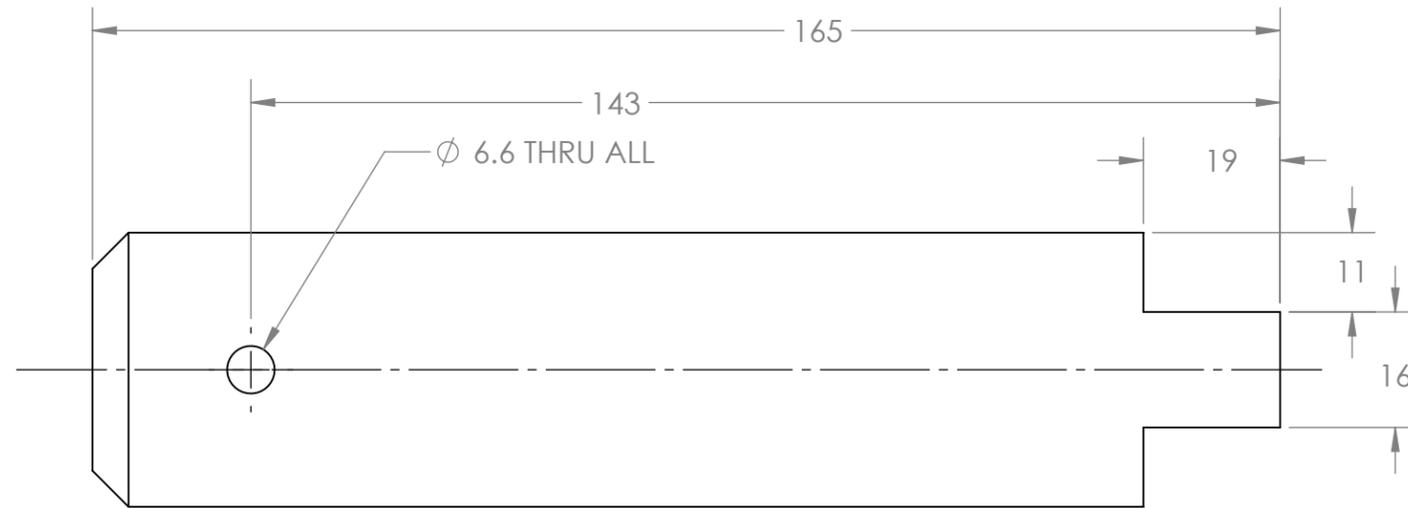
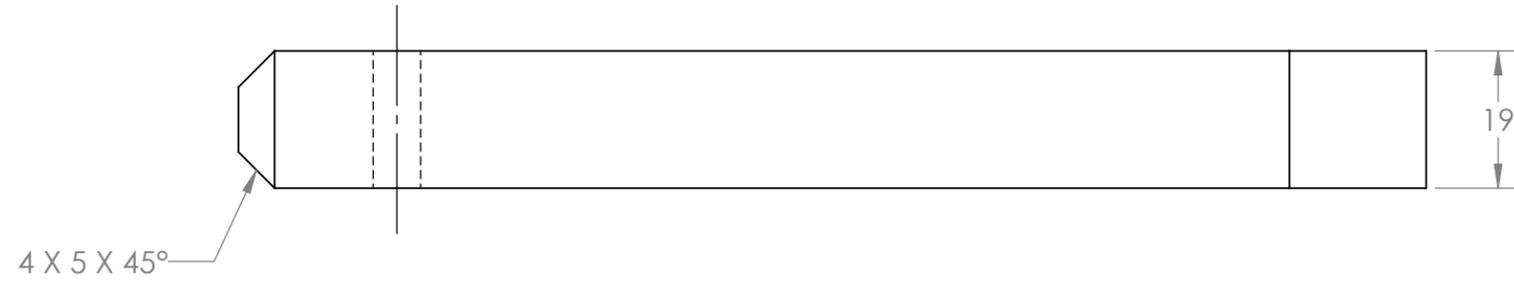
- NOTES:
 1. MATERIAL: Pine.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.



1032M	01	BASE BOTTOM BOARD
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018 DIMENSIONS ARE IN MILLIMETERS	SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY	 HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH	BASE BOTTOM BOARD	
	PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.		CUSTOMER BEE KEEPERS	TITLE 10010M
THIRD ANGLE PROJECTION 	DRAWN BY F. FULKERSON	DATE 3/4/2024	SIZE B	DRAWING NO.
	CHECKED BY P.G. KELLY	DATE 3/4/2024	SCALE 1:2	WEIGHT 134.419 g
	APPROVED P.G. KELLY	DATE 3/4/2024	SHEET 5 OF 11	

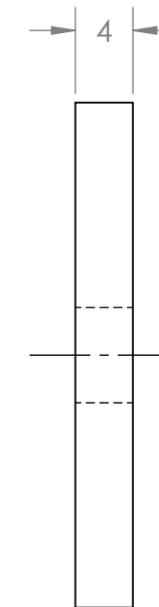
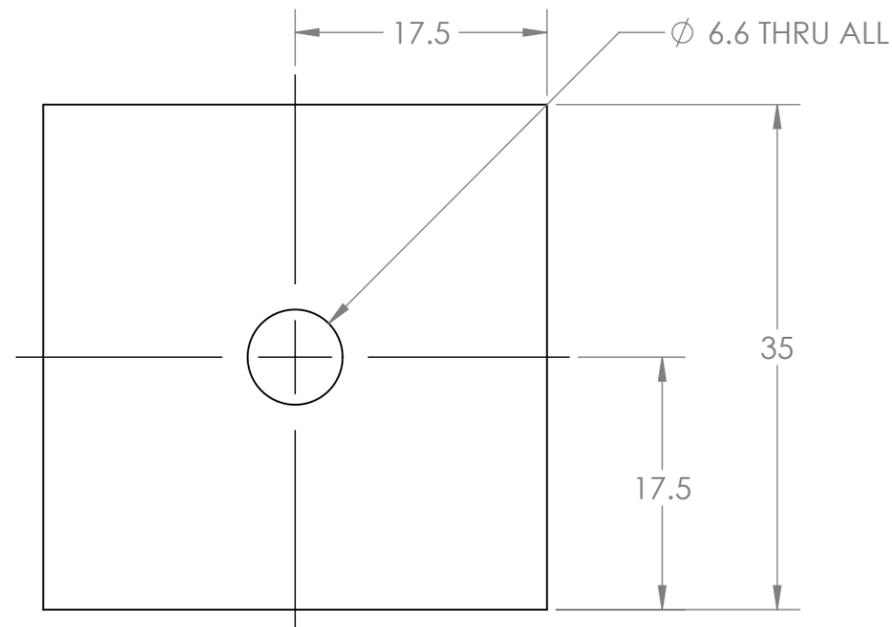
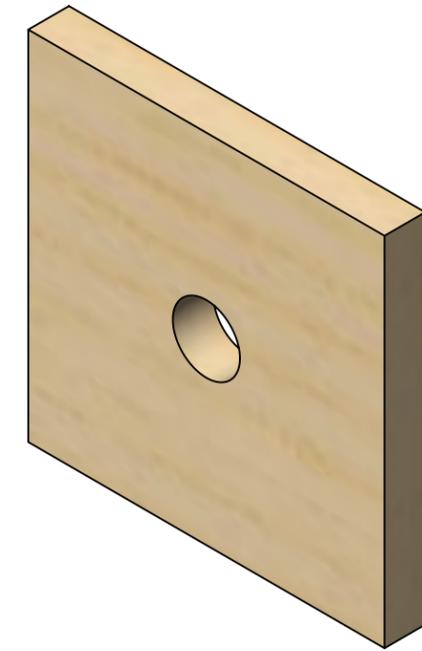
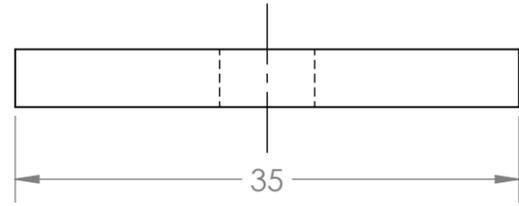
- NOTES:
 1. MATERIAL: Pine.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.



1033M	01	BASE SIDE
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018 DIMENSIONS ARE IN MILLIMETERS	SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY	 HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH	TITLE <h1>BASE SIDE</h1>
	PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.		
THIRD ANGLE PROJECTION 	DRAWN BY F. FULKERSON CHECKED BY P.G. KELLY APPROVED P.G. KELLY	DATE 3/4/2024 DATE 3/4/2024 DATE 3/4/2024	SIZE B SCALE 1:1 DRAWING NO. 10010M WEIGHT 37.155 g
			REVISION 10010M - SHEET 6 OF 11

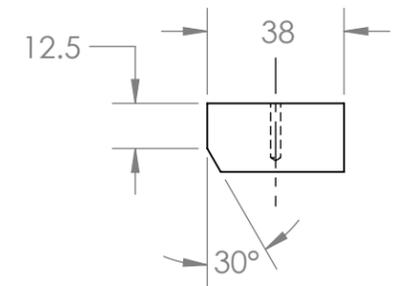
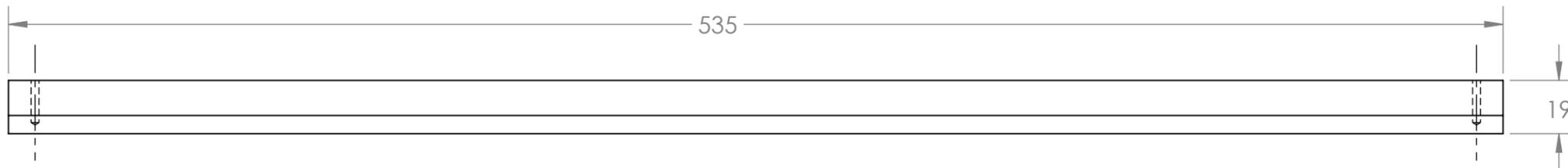
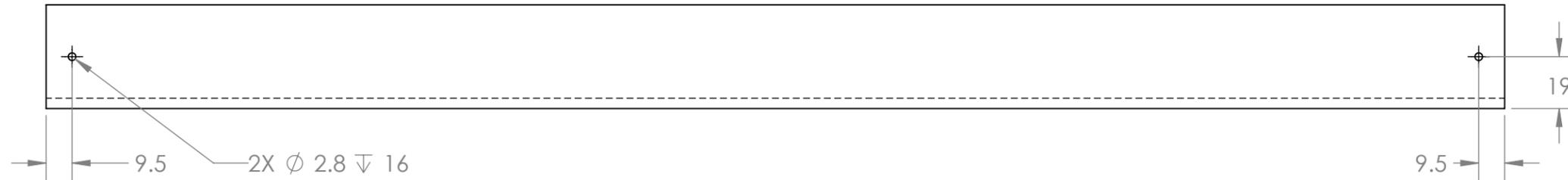
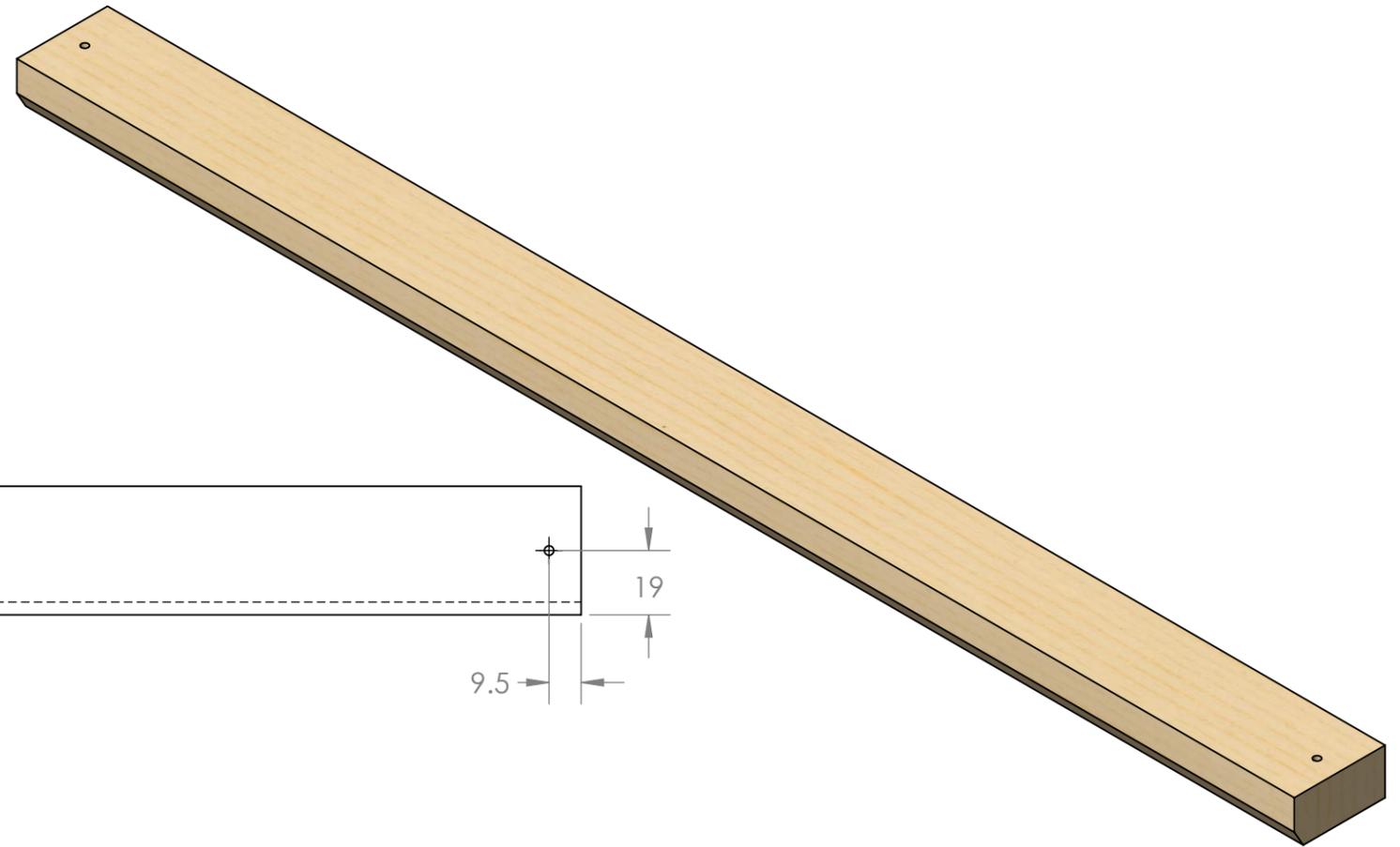
- NOTES:
 1. MATERIAL: Pine.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.



1038M	01	SHIM
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018 DIMENSIONS ARE IN MILLIMETERS	SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY	 HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH	TITLE <h1>SHIM</h1>		
	PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.		CUSTOMER BEE KEEPERS	SIZE B	DRAWING NO. 10010M
THIRD ANGLE PROJECTION 	DRAWN BY F. FULKERSON	DATE 3/4/2024	SCALE 2:1	WEIGHT 1.619 g	SHEET 7 OF 11
	CHECKED BY P.G. KELLY	DATE 3/4/2024			
	APPROVED P.G. KELLY	DATE 3/4/2024			

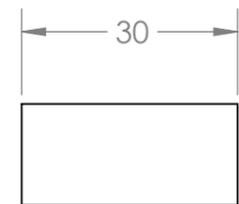
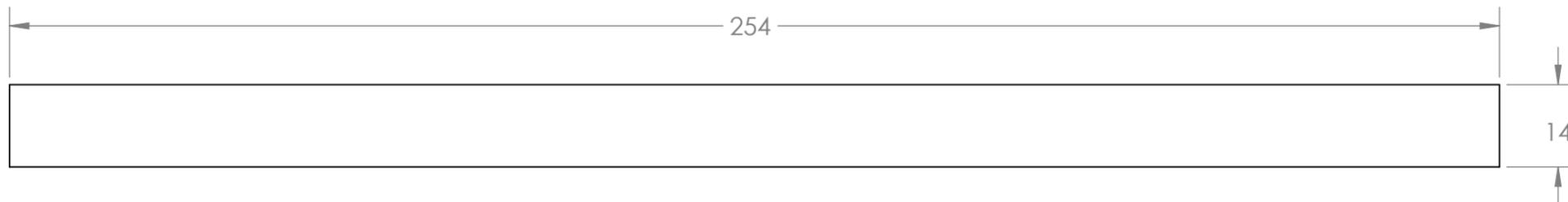
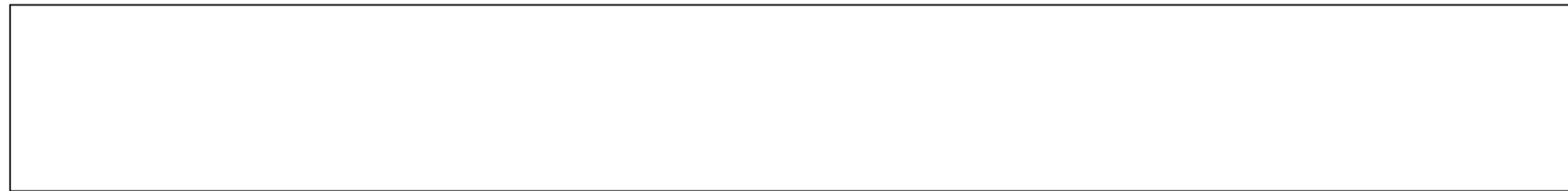
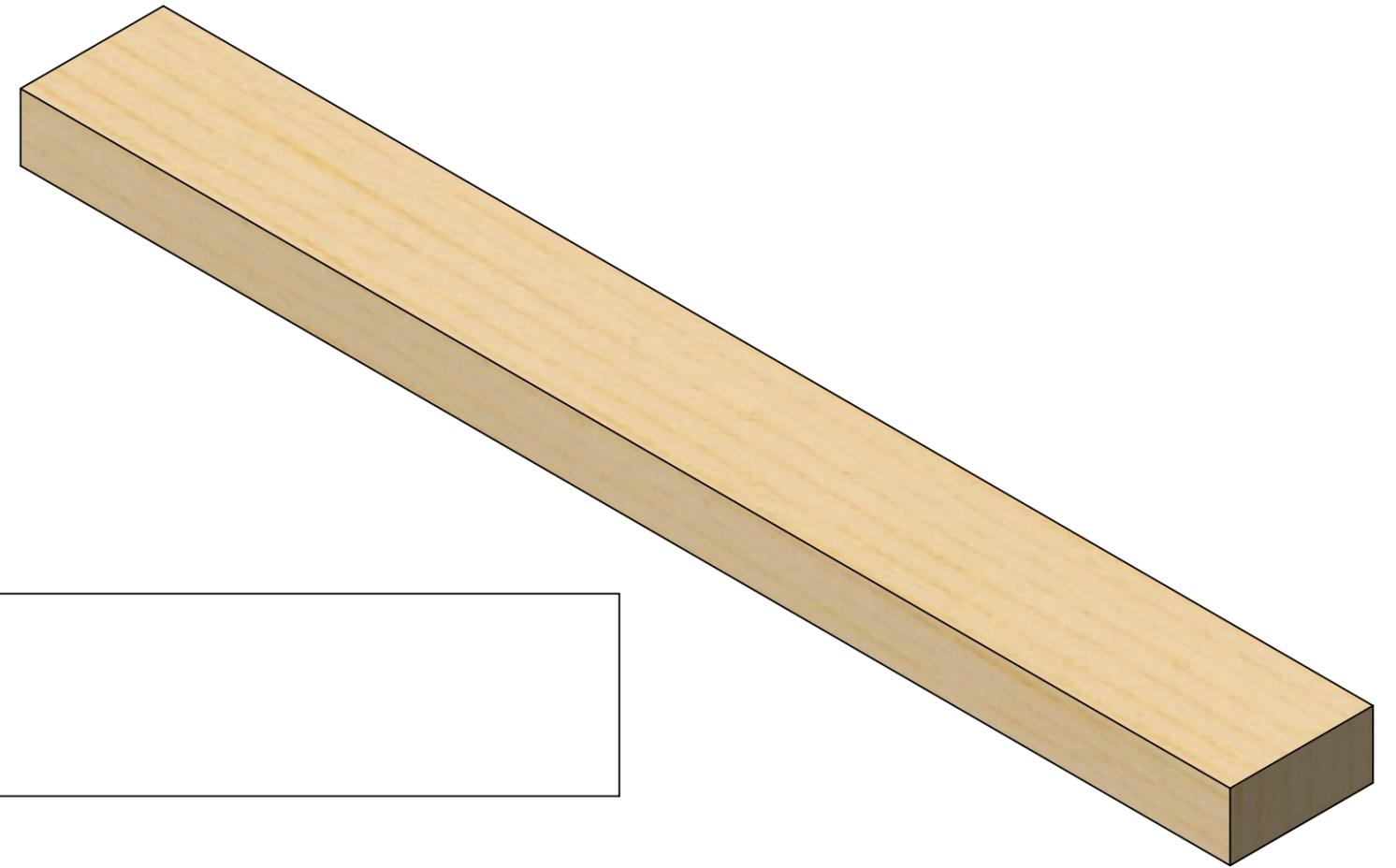
- NOTES:
 1. MATERIAL: Pine.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.



1035M	01	FRAME BOTTOM
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018 DIMENSIONS ARE IN MILLIMETERS	SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY	 HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH	TITLE <h1>FRAME BOTTOM</h1>
	PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.		
THIRD ANGLE PROJECTION 	DRAWN BY F. FULKERSON CHECKED BY P.G. KELLY APPROVED P.G. KELLY	DATE 3/4/2024 DATE 3/4/2024 DATE 3/4/2024	SIZE B DRAWING NO. 10010M - SCALE 1:2 WEIGHT 129.049 g
			REVISION 10010M - SHEET 8 OF 11

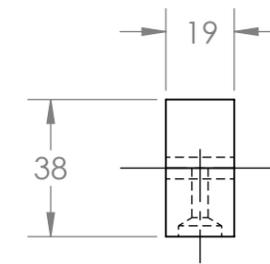
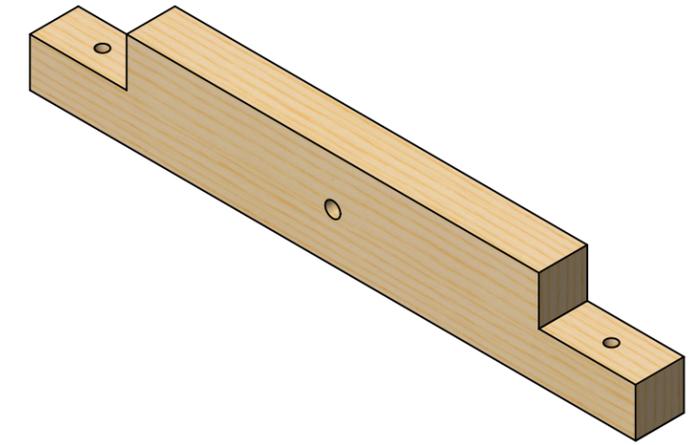
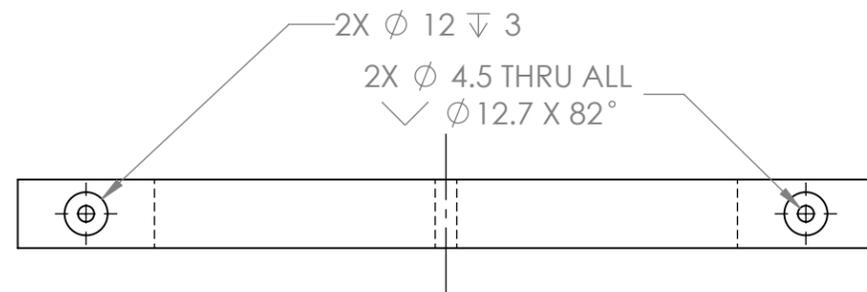
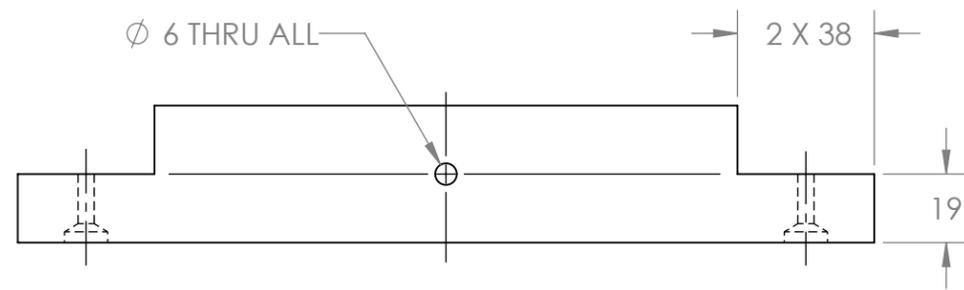
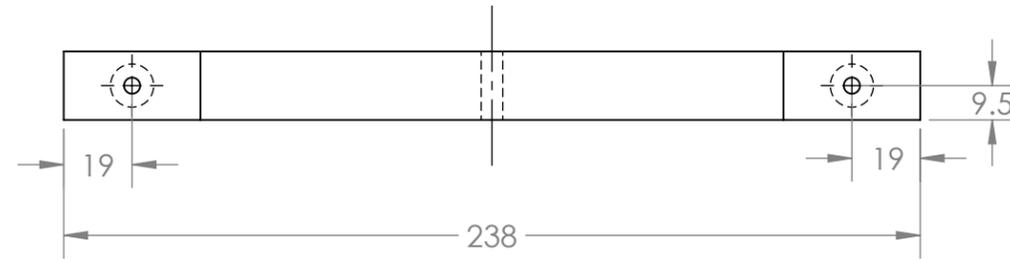
- NOTES:
 1. MATERIAL: Pine.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.



1036M	01	GRAFT FRAME SUPPORT
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5-2018 DIMENSIONS ARE IN MILLIMETERS	SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY	 HONEY BEE RESEARCH CENTRE THE UNIVERSITY OF GUELPH	TITLE GRAFT FRAME SUPPORT		
	PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT WRITTEN PERMISSION.		CUSTOMER BEE KEEPERS	SIZE B	DRAWING NO. 10010M
THIRD ANGLE PROJECTION 	DRAWN BY F. FULKERSON	DATE 3/4/2024	SCALE 1:1	WEIGHT 36.271 g	SHEET 9 OF 11
	CHECKED BY P.G. KELLY	DATE 3/4/2024			
	APPROVED P.G. KELLY	DATE 3/4/2024			

- NOTES:
 1. MATERIAL: Pine.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.



1037M	01	FRAME SIDE
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED
 DO NOT SCALE DRAWING
 INTERPRET DIMENSIONS AND TOLERANCES
 PER ASME Y14.5-2018
 DIMENSIONS ARE IN MILLIMETERS

THIRD ANGLE PROJECTION



SolidWorks MAINTAINED DATA
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CUSTOMER
 BEE KEEPERS
 PROJECT
 HIVE PRODUCTS

DRAWN BY F. FULKERSON	DATE 3/4/2024
CHECKED BY P.G. KELLY	DATE 3/4/2024
APPROVED P.G. KELLY	DATE 3/4/2024

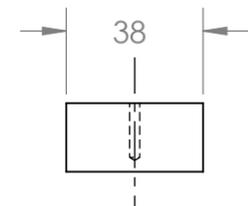
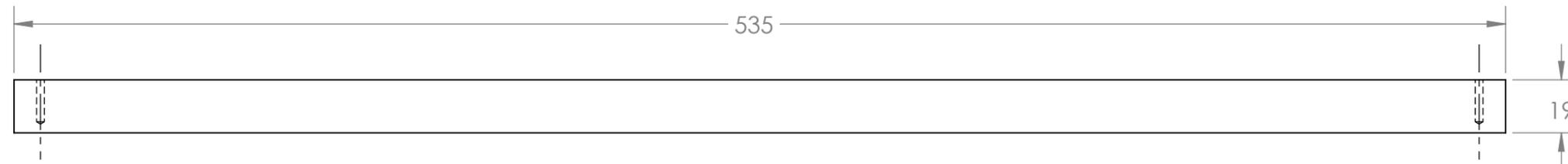
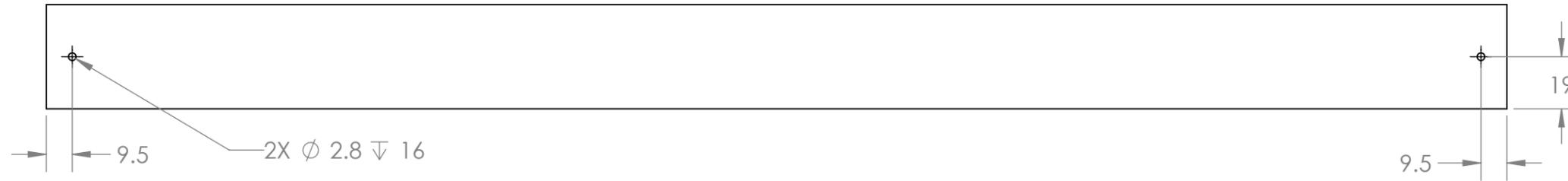
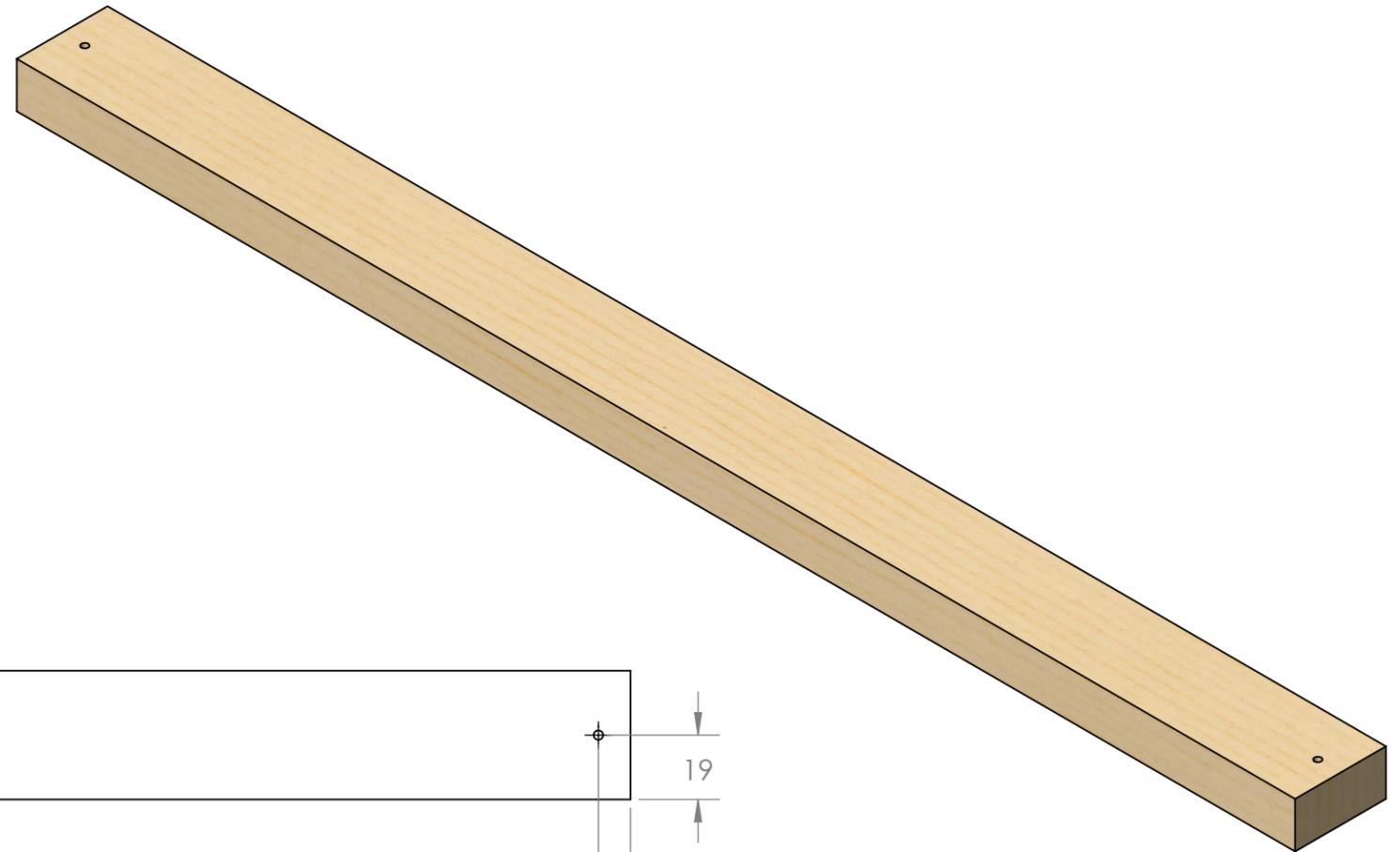


HONEY BEE RESEARCH CENTRE
 THE UNIVERSITY OF GUELPH

TITLE
FRAME SIDE

SIZE B	DRAWING NO.	REVISION
SCALE 1:2	WEIGHT 48.446 g	10010M - SHEET 10 OF 11

- NOTES:
 1. MATERIAL: Pine.
 2. FINISH: VARNISH.
 3. REMOVE ALL SHARP EDGES.



1034M		FRAME TOP
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED
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 PER ASME Y14.5-2018
 DIMENSIONS ARE IN MILLIMETERS

THIRD ANGLE PROJECTION



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CUSTOMER
 BEE KEEPERS
 PROJECT
 HIVE PRODUCTS

DRAWN BY F. FULKERSON	DATE 3/4/2024
CHECKED BY P.G. KELLY	DATE 3/4/2024
APPROVED P.G. KELLY	DATE 3/4/2024



HONEY BEE RESEARCH CENTRE
 THE UNIVERSITY OF GUELPH

FRAME TOP

TITLE	SIZE	DRAWING NO	REVISION
	B		10010M -
SCALE	1:2	WEIGHT	131.268 g
		SHEET 11 OF 11	