

4

3

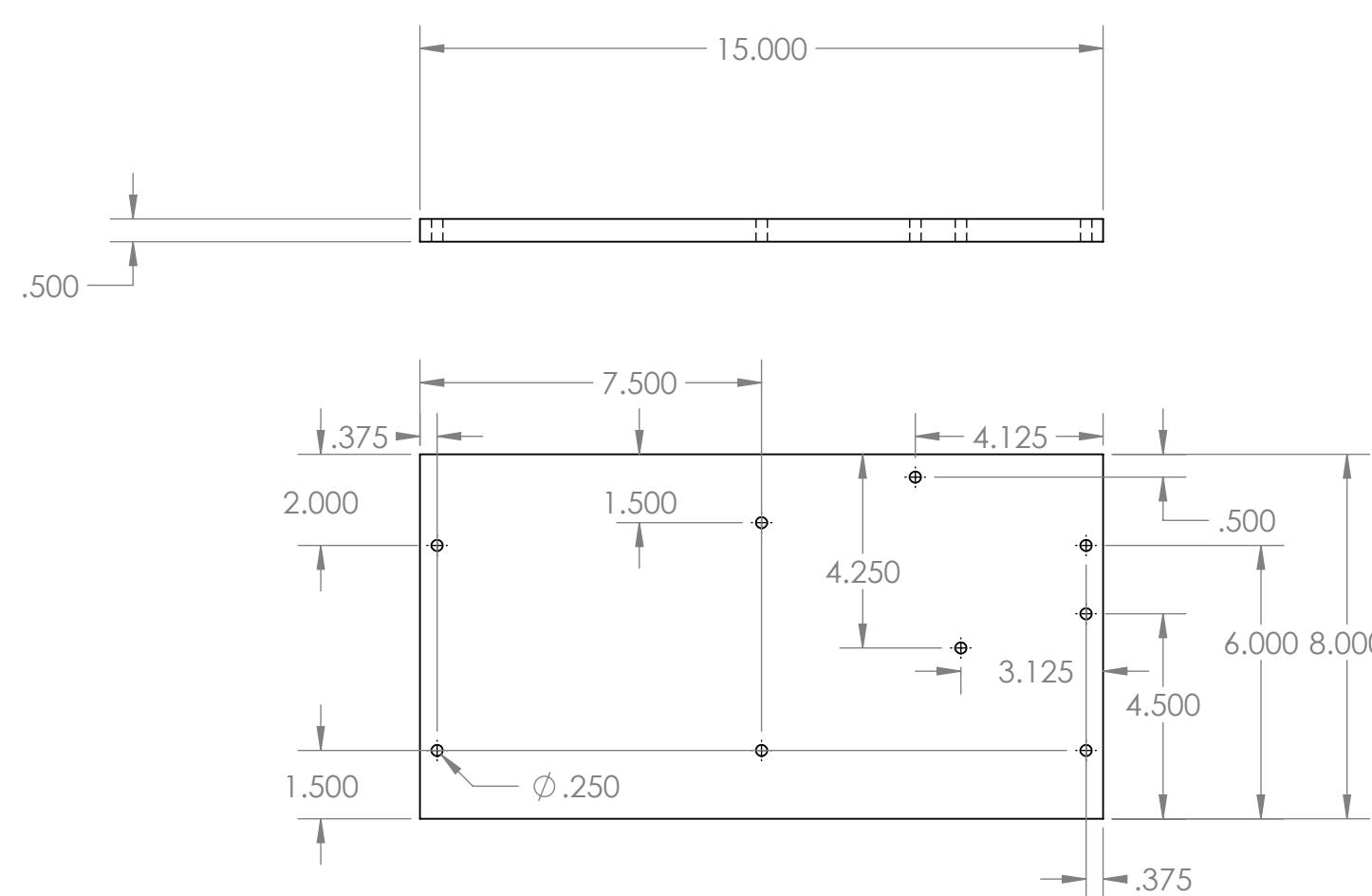
2

1

## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS OBS Plywood

1. Cut 8"x11" sheet of plywood with table saw
2. Use 1/4" drill to create all 9 holes



B

B

A

A

DRAWN BY  
Jacob Martin DATE  
4/29/2025

APPROVALS:

AU EMAIL SIGNATURE

Aeh0178 AH  
Jmm0290 JM  
cmw0178 CW  
jtm0156 JM  
hrd0015 hd  
bod0002 bd

STOCK VENDOR INFO:	Auburn Makerspace - PINEPLY
UNLESS OTHERWISE SPECIFIED:	Solidworks Crashouts
DIMENSIONS ARE IN INCHES	MATERIAL: OSB Plywood
ANGLES ARE IN DEGREES	TITLE/DESC: Baseplate of Chassis
3rd Angle Projection	FILE NAME: P001_Baseplate
<b>TOLERANCES:</b>	DWG. #: 001 REV #: 1
ANGULAR $\pm 1^\circ$	SCALE: 1:4
FRACTIONAL $\pm 1/8''$	SIZE <b>B</b>
ONE PLACE DECIMAL $\pm 0.1''$	SHEET 1 OF 1
TWO PLACE DECIMAL $\pm 0.05''$	
THREE PLACE DECIMAL $\pm 0.005''$	

4

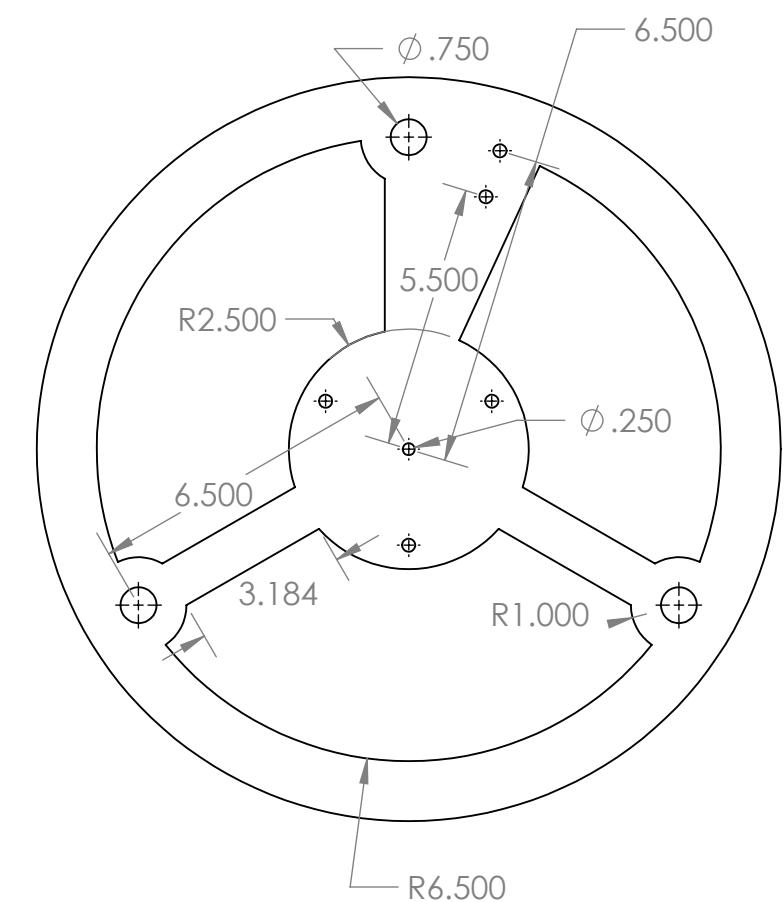
3

2

1

B

B



A

A

DRAWN BY Alec Hudson	DATE 4/29/2025
-------------------------	-------------------

APPROVALS:	
cmw0178	CMW
aeh0178	AEH
jtm0156	JTM
hrd0015	HRD
jmm0290	JMM
bod0002	BOD

TOLERANCES:	
ANGULAR	± 1°
FRACTIONAL	± 1/8"
ONE PLACE DECIMAL	± 0.1"
TWO PLACE DECIMAL	± 0.05"
THREE PLACE DECIMAL	± 0.005"

STOCK VENDOR INFO:	MAKERSPACE - PINEPLY
UNLESS OTHERWISE SPECIFIED:	Solidworks Crashouts
DIMENSIONS ARE IN INCHES	MATERIAL: OSB Plywood
ANGLES ARE IN DEGREES	TITLE/DESC: Wheel Right
3rd Angle Projection	FILE NAME: P003_Wheel_Right
	DWG. #: 003 REV #: 1
	SCALE: 1:4 SIZE B SHEET 1 OF 1

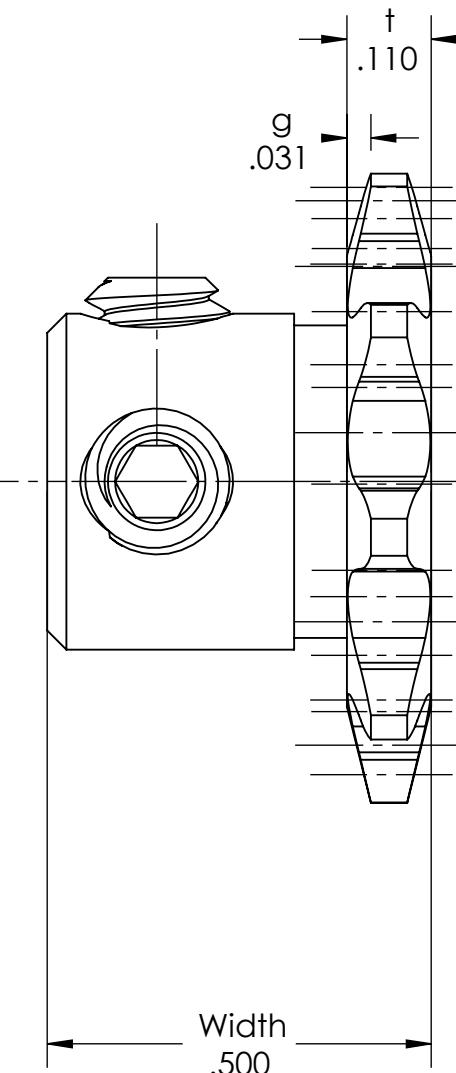
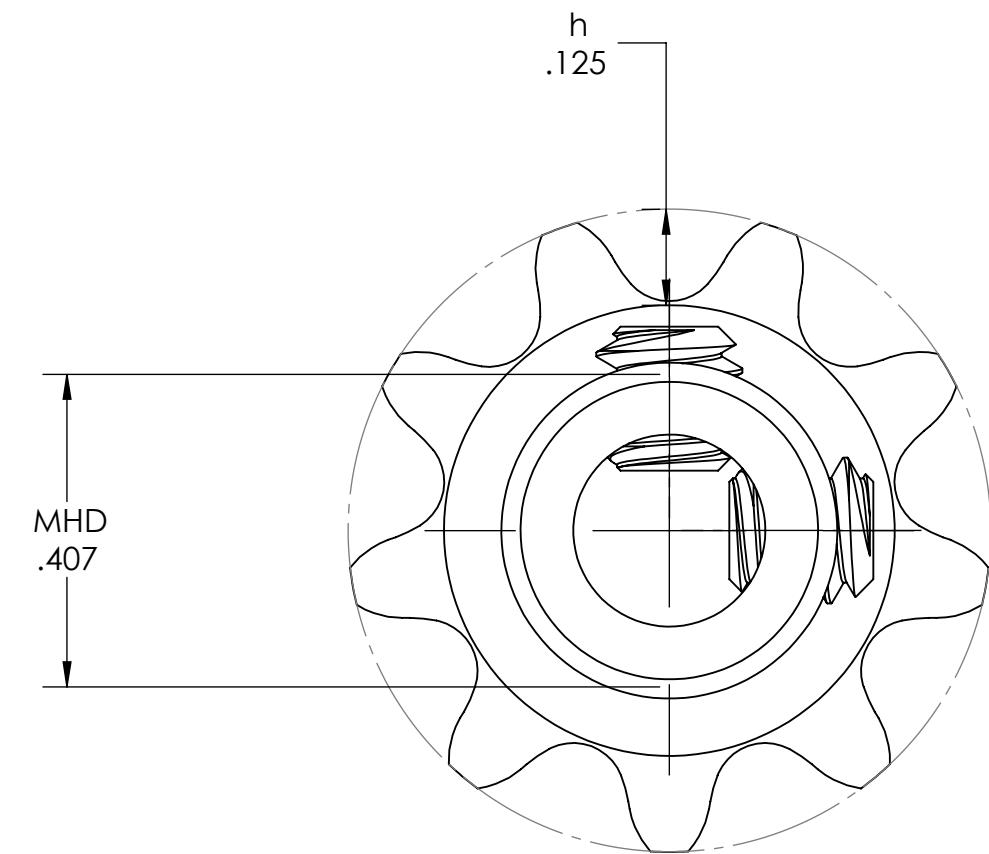
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B



A

B

## SAMPLE FABRICATION/ASSEMBLY PROCESS

## STOCK DESC/DIMS

1.) Provided by Makerspace

DRAWN BY	Alec Hudson	DATE	4/29/2025
<b>APPROVALS:</b>			
aeh0178	AEH		
cmw0178	CMW		
jtm0156	JTM		
hrd0015	HRD		
jmm0290	JMM		
bod0002	BOD		
<b>STOCK VENDOR INFO:</b> Makerspace			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection			
<b>TOLERANCES:</b>			
ANGULAR	± 1°	FRACTIONAL	± 1/8"
ONE PLACE DECIMAL	± 0.1"	TWO PLACE DECIMAL	± 0.05"
THREE PLACE DECIMAL	± 0.005"		
<b>Solidworks Crashouts</b>		MATERIAL:	Steel
TITLE/DESC:		P007_Small_Drive_Sprocket	
FILE NAME:		P007	REV #: 1
DWG. #:		SCALE: 4:1	SIZE <b>B</b>
SCALE: 4:1		SHEET 1 OF 1	

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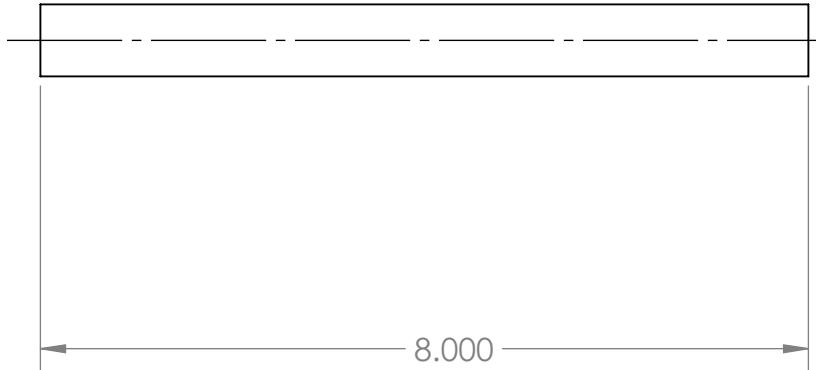
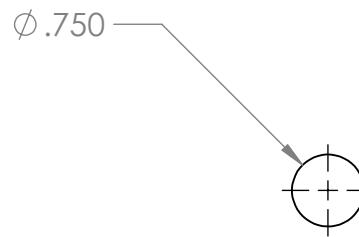
## SAMPLE FABRICATION/ASSEMBLY PROCESS

## STOCK DESC/DIMS

1. Buy 3/4" dowel
2. Cut to 8.0" length using saw or similar tool

B

B



A

A

DRAWN BY Brandon Dixon	DATE 4/29/2025
---------------------------	-------------------

## APPROVALS:

bod0002 BOD

jtm0156 JTM

hrd0015 HRD

aeh0178 AEH

cmw0178 CMW

jmm0290 JMM

STOCK VENDOR INFO: Makerspace Solidworks Crashouts

UNLESS OTHERWISE SPECIFIED: MATERIAL: Pine

DIMENSIONS ARE IN INCHES TITLE/DESC: Wheel Dowel

ANGLES ARE IN DEGREES FILE NAME: Wheel\_Dowel\_V1.prt

3rd Angle Projection DWG. #: 008 REV #: 1

TOLERANCES: SCALE: 1:2

ANGULAR  $\pm 1^\circ$ FRACTIONAL  $\pm 1/8"$ ONE PLACE DECIMAL  $\pm 0.1"$ TWO PLACE DECIMAL  $\pm 0.05"$ THREE PLACE DECIMAL  $\pm 0.005"$ 

SIZE B

SHEET 1 OF 1

4

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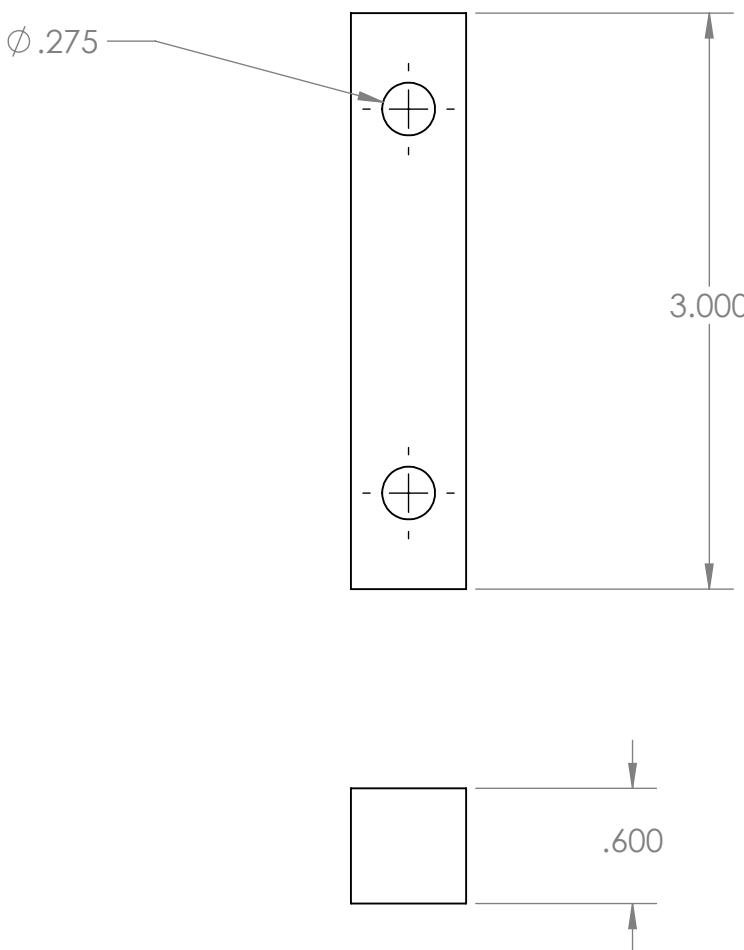
2

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## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS PLA

1. splice model
2. 3d print using 30% infill



B

B

A

A

DRAWN BY  
Brandon Dixon DATE  
4/29/2025

## APPROVALS:

bod0002 BOD

cmw0178 CMW

jtm0156 JTM

hrd0015 HRD

aeh0178 AEH

jmm0290 JMM

STOCK VENDOR INFO: ME3D Lab Solidworks Crashouts

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection

MATERIAL: PLA

TITLE/DESC: Aluminum Tube Adapter

FILE NAME: P010\_Alum\_Tube\_Adapter

DWG. #: 010 REV #:

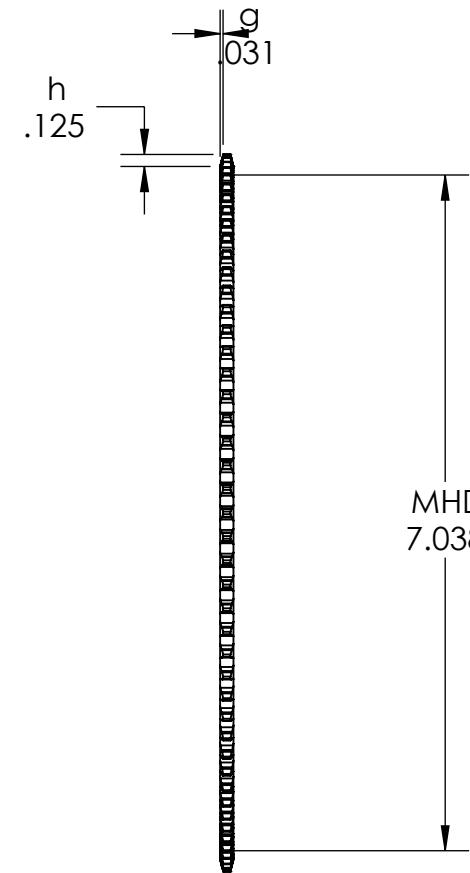
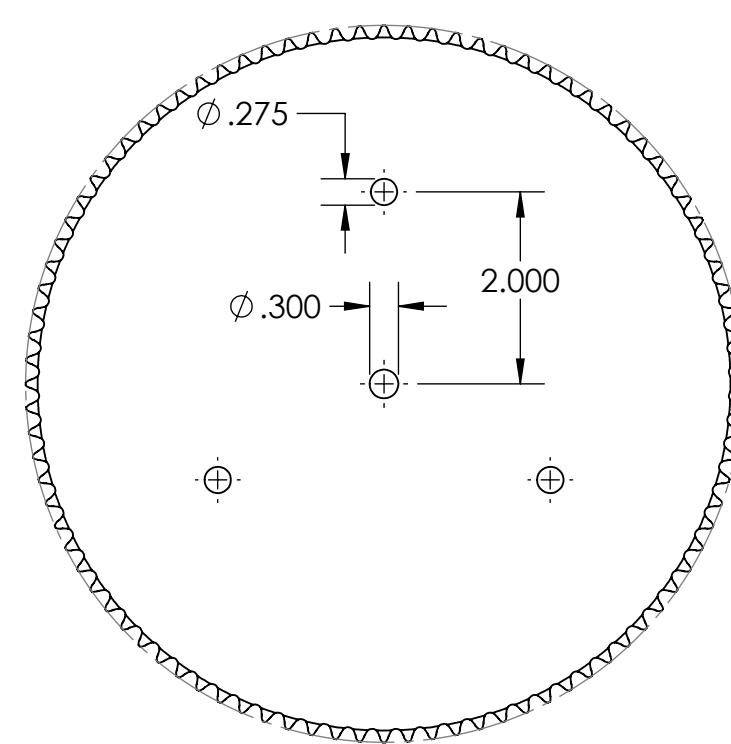
SCALE: 1:2 SIZE B SHEET 1 OF 1

4

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## SAMPLE FABRICATION/ASSEMBLY PROCESS

## STOCK DESC/DIMS

- download file to a thumb drive
- put thumb drive into a 3D printer
- enter in specifications for that 3D printer
- print the part and make sure the first few layers go on well

DRAWN BY	DATE
Alec Hudson	02/26/25

## APPROVALS:

aeh0178 AEH

cmw0178 CMW

jtm0156 JTM

hrd0015 HRD

jmm0002 JMM

bod0002 BOD

STOCK VENDOR INFO: ME3D Lab

UNLESS OTHERWISE SPECIFIED: Solidworks Crashouts

DIMENSIONS ARE IN INCHES

ANGLES ARE IN DEGREES

3rd Angle Projection

## TOLERANCES:

ANGULAR  $\pm 1^\circ$ FRACTIONAL  $\pm 1/8"$ ONE PLACE DECIMAL  $\pm 0.1"$ TWO PLACE DECIMAL  $\pm 0.05"$ THREE PLACE DECIMAL  $\pm 0.005"$ 

FILE NAME: P011\_Driven\_Gear

DWG. #: 011 REV #: 001

SCALE: 1:2 SIZE B SHEET 1 OF 1

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## SAMPLE FABRICATION/ASSEMBLY PROCESS

## STOCK DESC/DIMS

1. Cut tubing to length
2. Drill 1/4" hole at specified distance with drill or drill press



B

B

A

A

DRAWN BY Holt Degenkolb	DATE 3/5/2025	STOCK VENDOR INFO: Makerspace 63AST34062
APPROVALS:		
AU EMAIL cmw0178 jlm0156 hrd0015 aeh0178 jmm0290 bod0002	SINGNATURE cmw jlm hrd aeh jmm bod	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection
TOLERANCES:		
ANGULAR	$\pm 1^\circ$	
FRACTIONAL	$\pm 1/8"$	
ONE PLACE DECIMAL	$\pm 0.1"$	
TWO PLACE DECIMAL	$\pm 0.05"$	
THREE PLACE DECIMAL	$\pm 0.005"$	
DWG. #: 014	REV #:	SCALE: 1:2
		SIZE B
		SHEET 1 OF 1

4

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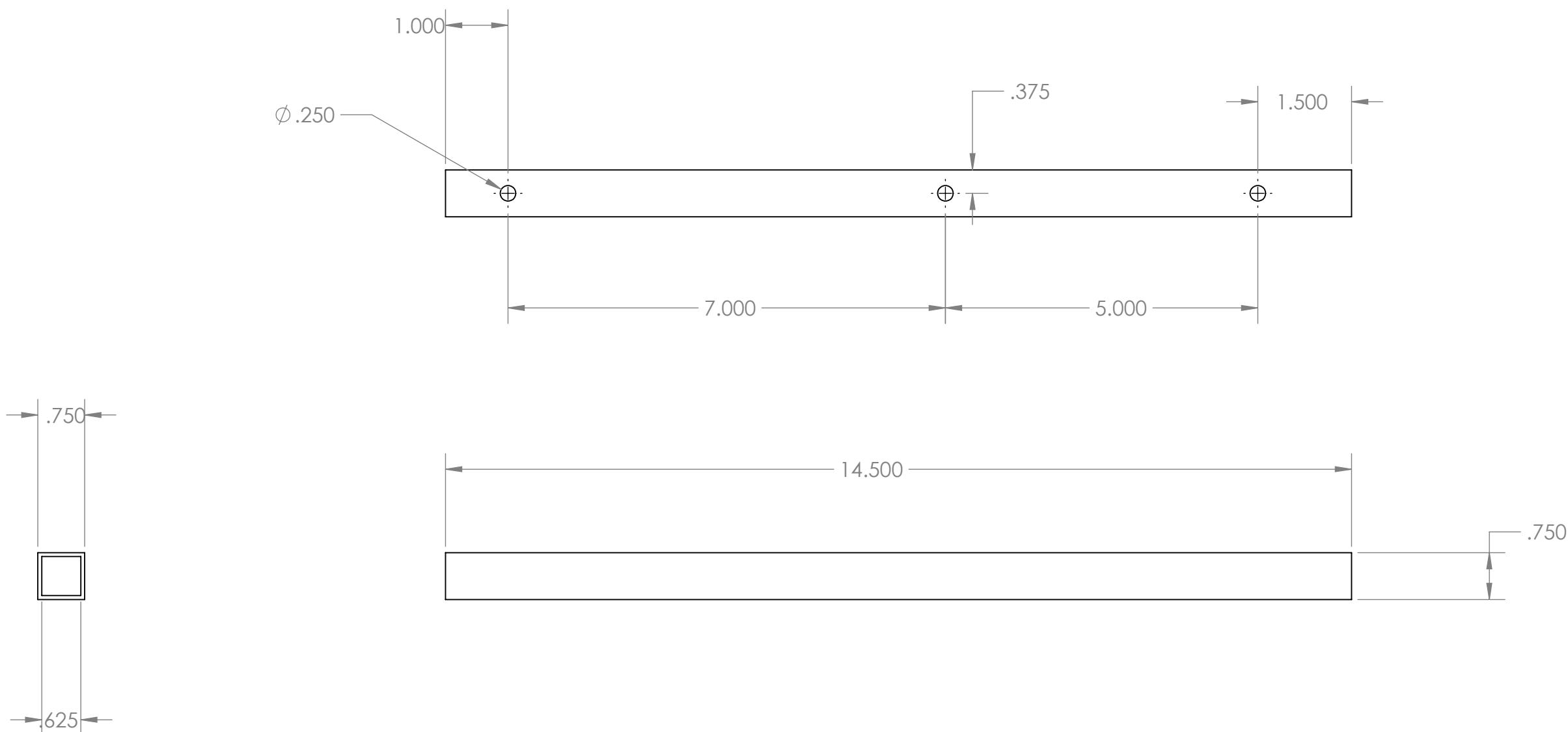
2

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## SAMPLE FABRICATION/ASSEMBLY PROCESS

## STOCK DESC/DIMS

1. Cut tubing to length
2. Drill 1/4" holes to length



DRAWN BY Holt Degenkolb	DATE 3/5/2025
APPROVALS:	
AU EMAIL cmw0178	SINGNATURE CMW
jtm0156	JTM
hrd0015	HRD
aeh0178	AEH
jmm0290	JMM
bod0002	BOD

## STOCK VENDOR INFO:

Makerspace 63AST34062

Solidworks Crashouts

MATERIAL: 6061 T6 Aluminum

TITLE/DESC: P015 Tail Rod Base

FILE NAME: P015\_Tail\_Rod\_Base

DWG. #: 015 REV #:

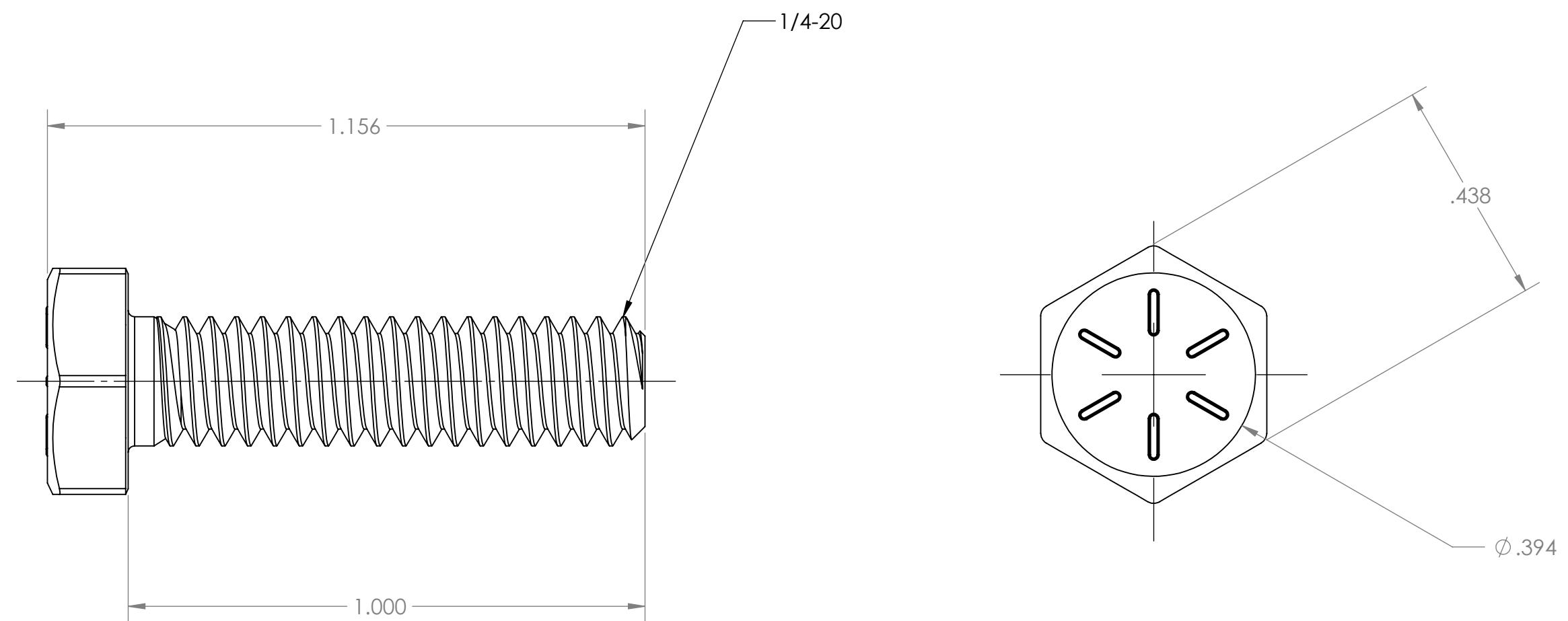
SCALE: 1:2 SIZE B SHEET 1 OF 1

4

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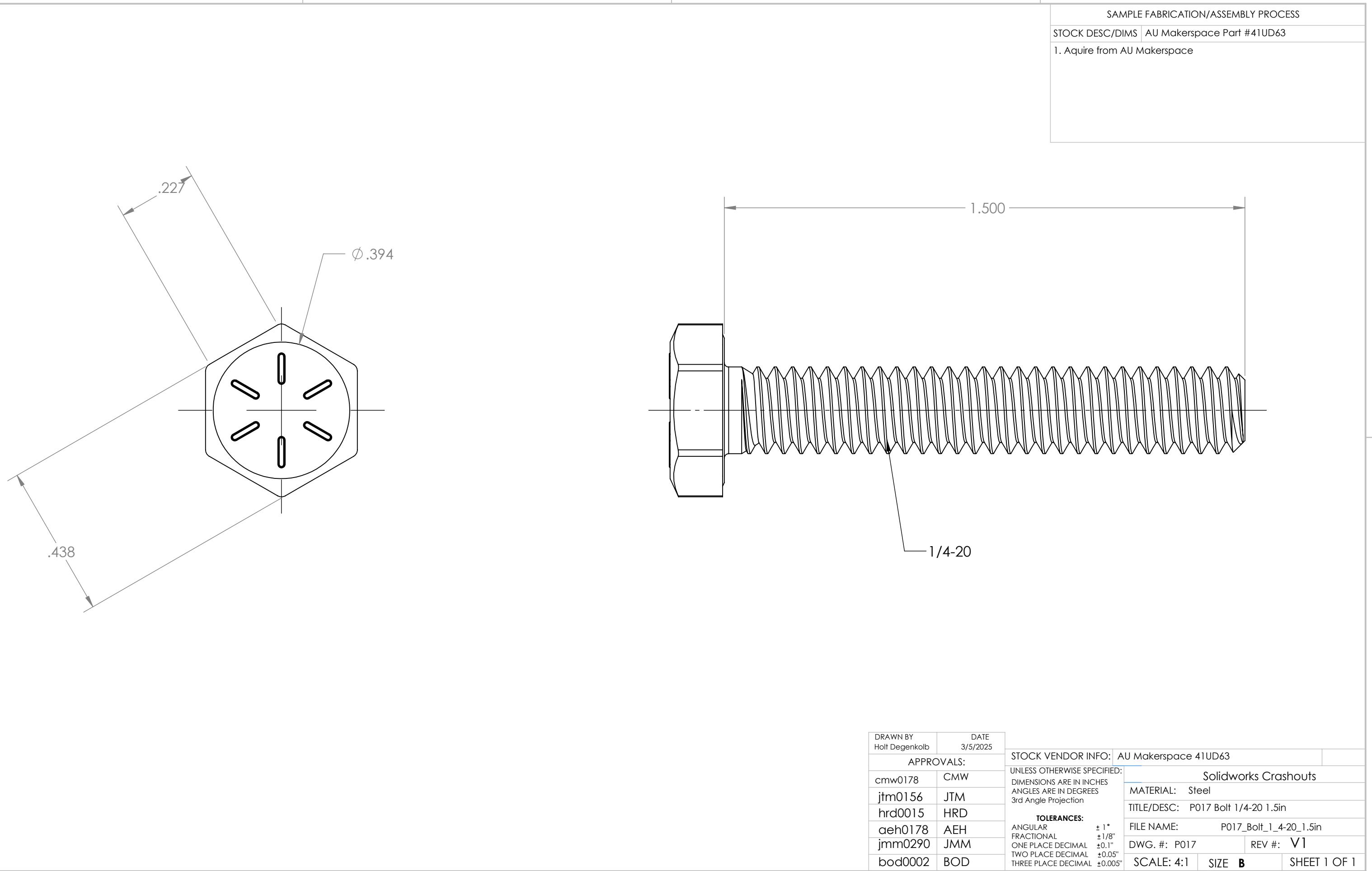
DRAWN BY Holt Degenkolb	DATE 3/5/2025	STOCK VENDOR INFO: AU Makerspace 2CA54
APPROVALS:		
jmm0290	JMM	Solidworks Crashouts
cmw0178	CMW	MATERIAL: Steel
bod0002	BOD	TITLE/DESC: P016 Bolt 1/4-20
jtm0156	JTM	FILE NAME: P016_Bolt_1_4-20
hrd0015	HRD	DWG. #: P016
aeh0178	AEH	REV #: V1
TOLERANCES:		
ANGULAR	$\pm 1^\circ$	SCALE: 4:1
FRACTIONAL	$\pm 1/8"$	SIZE B
ONE PLACE DECIMAL	$\pm 0.1"$	SHEET 1 OF 1
TWO PLACE DECIMAL	$\pm 0.05"$	
THREE PLACE DECIMAL	$\pm 0.005"$	

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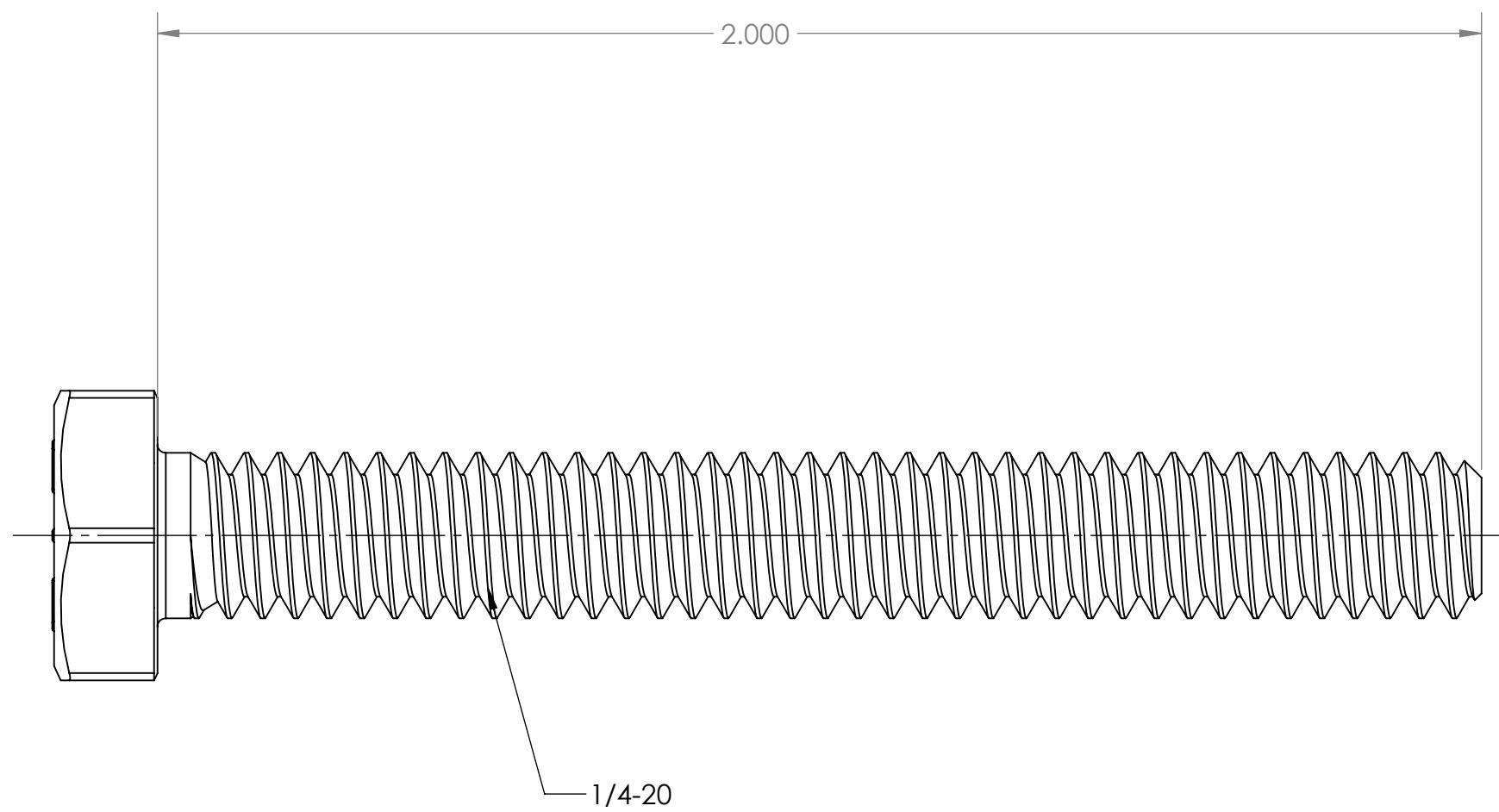


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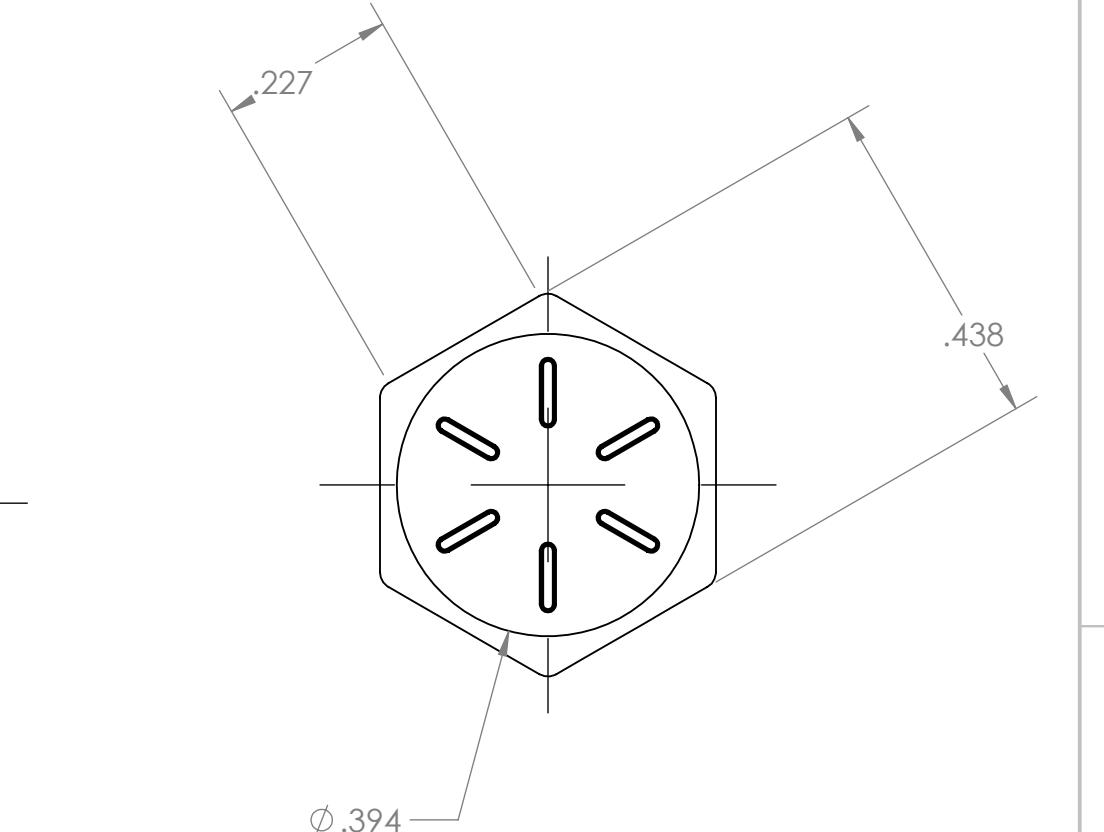
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SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	
1. Acquire from AU Makerspace	



DRAWN BY Holt Degenkolb	DATE 3/5/2025	STOCK VENDOR INFO: Makerspace 41UD65
APPROVALS:		
AU EMAIL jtm0156	SINGNATURE JTM	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection
bod0002	BOD	MATERIAL: Steel
cmw0178	CMW	TITLE/DESC: P018 Bolt 1/4-20 2in
hrd0015	HRD	FILE NAME: P018_1_4-20_2in
aeh0178	AEH	DWG. #: 018
jmm0290	JMM	REV #:
TOLERANCES:		
ANGULAR	$\pm 1^\circ$	SCALE: 4:1
FRACTIONAL	$\pm 1/8''$	SIZE B
ONE PLACE DECIMAL	$\pm 0.1''$	SHEET 1 OF 1
TWO PLACE DECIMAL	$\pm 0.05''$	
THREE PLACE DECIMAL	$\pm 0.005''$	

4

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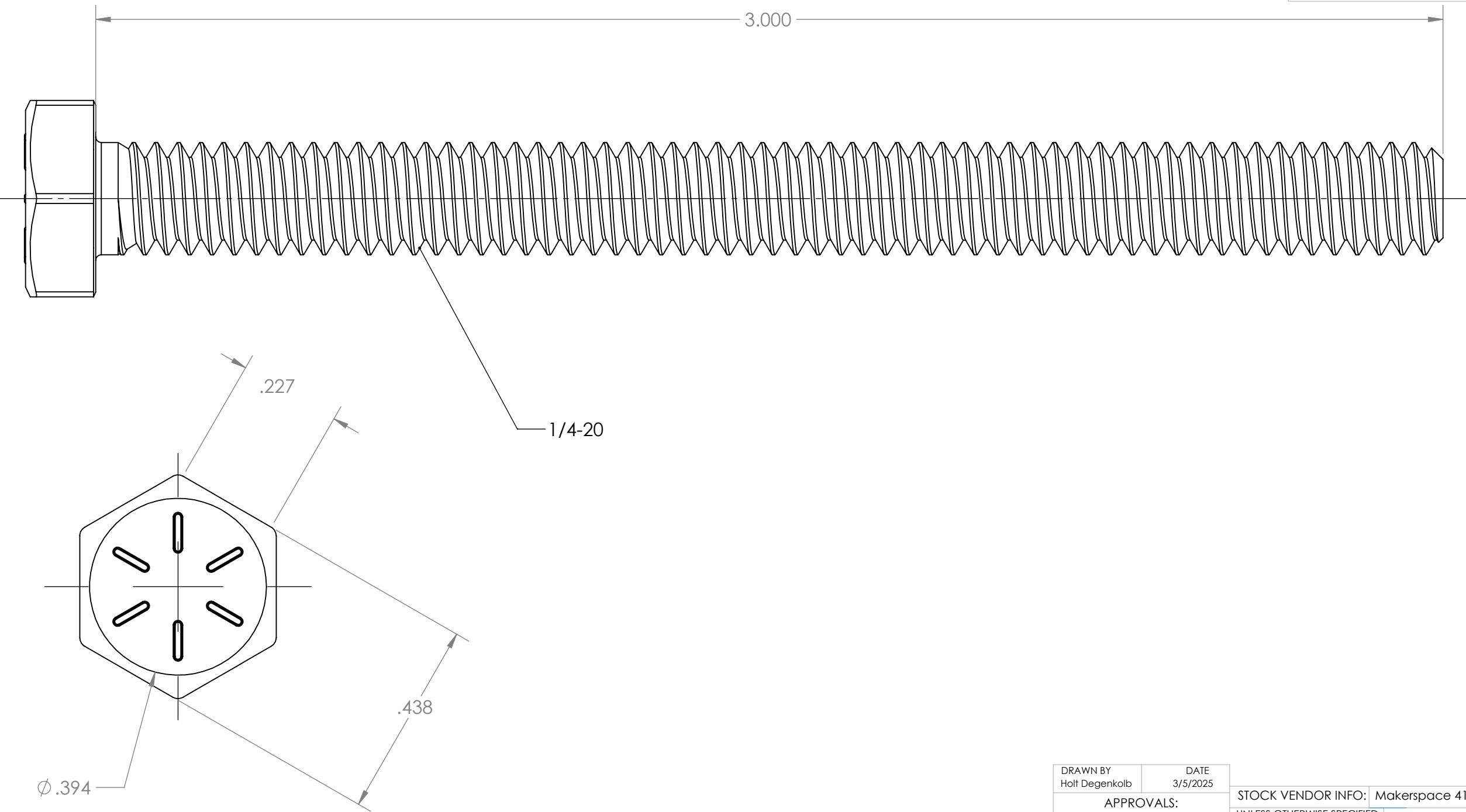
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## SAMPLE FABRICATION/ASSEMBLY PROCESS

## STOCK DESC/DIMS

- Acquire from AU Makerspace



DRAWN BY Holt Degenkolb	DATE 3/5/2025
APPROVALS:	
AU EMAIL jtm0156	SINGNATURE JTM
bod0002	BOD
cmw0178	CMW
hrd0015	HRD
aeh0178	AEH
jmm0290	JMM
STOCK VENDOR INFO: Makerspace 41UD69	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
TOLERANCES:	
ANGULAR	± 1°
FRACTIONAL	± 1/8"
ONE PLACE DECIMAL	± 0.1"
TWO PLACE DECIMAL	± 0.05"
THREE PLACE DECIMAL	± 0.005"
Solidworks Crashouts	
MATERIAL: Steel	
TITLE/DESC: P019 Bolt 1/4-20 3in	
FILE NAME: P019_1_4-20_3in	
DWG. #: 019	REV #:
SCALE: 4:1	SIZE B
SHEET 1 OF 1	

4

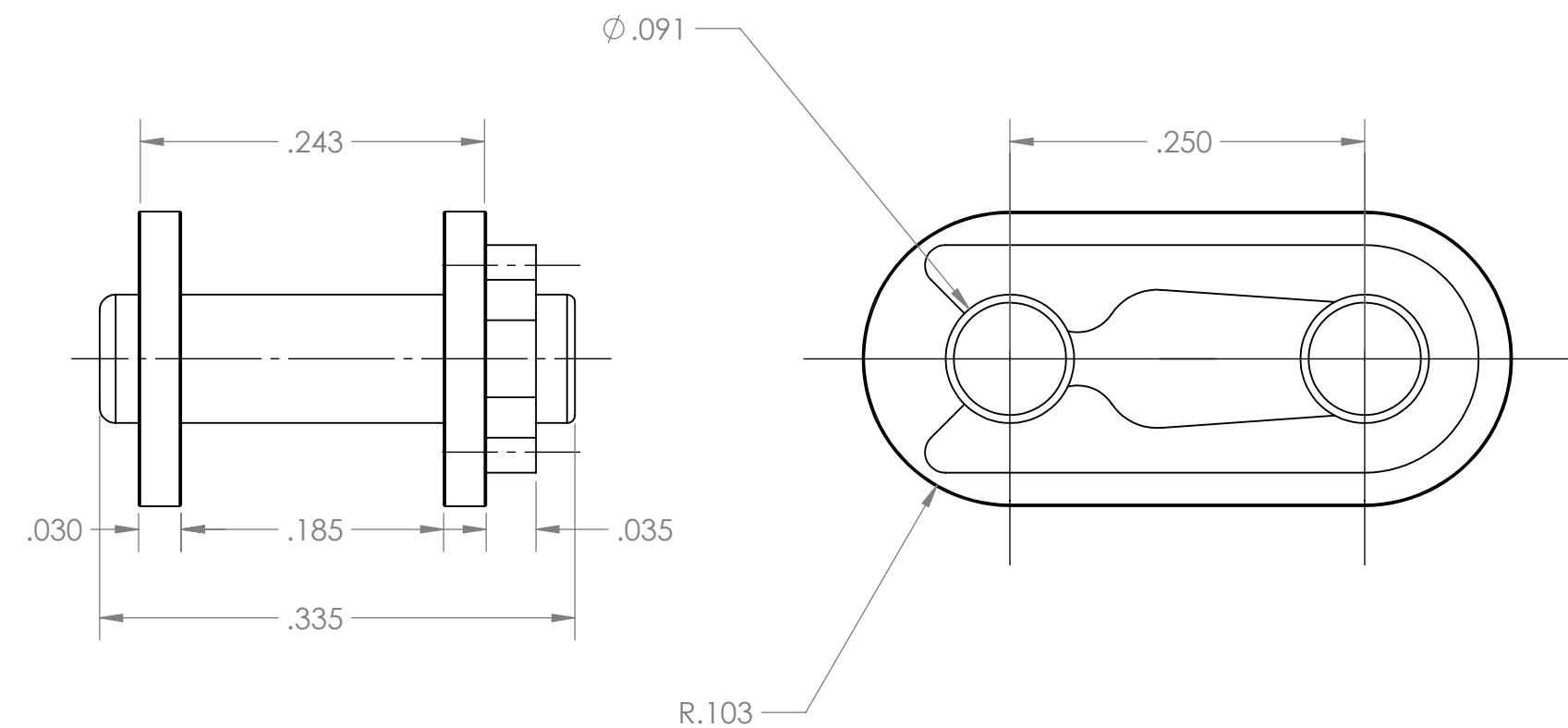
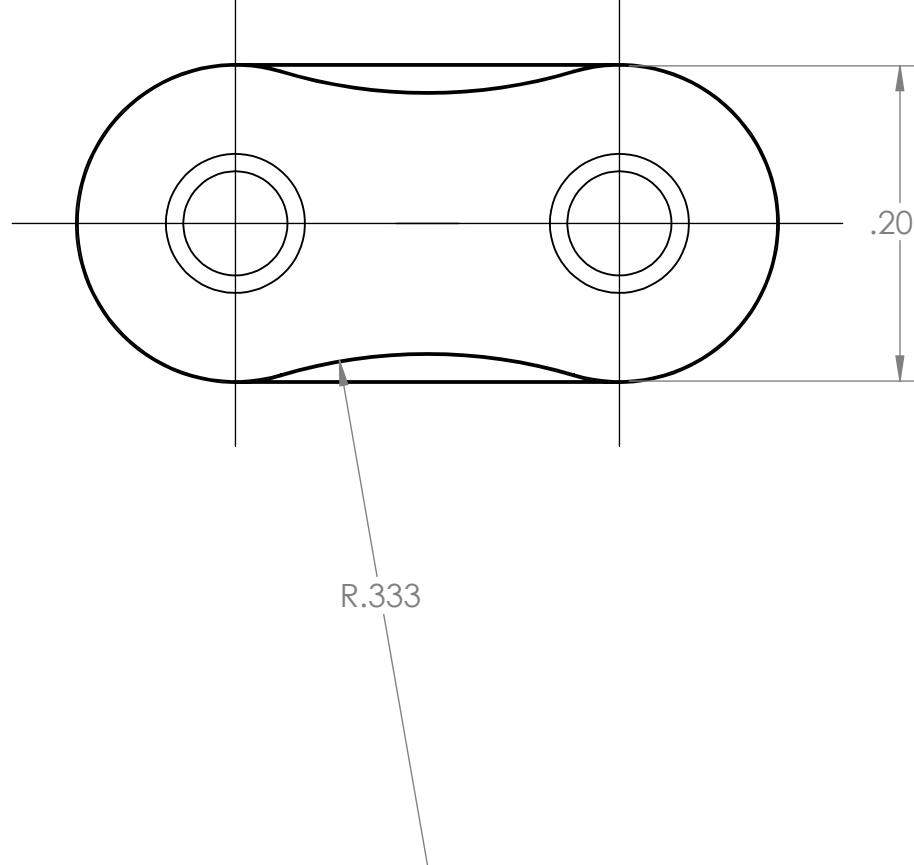
3

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B

B



## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS #25 Roller Chain

1. From Granger

DRAWN BY Brandon Dixon	DATE 4/29/2025	STOCK VENDOR INFO: Grainger 42ML14
APPROVALS:		
jtm0156	JTM	Solidworks Crashouts
bod0002	BOD	MATERIAL: Steel
cmw0178	CMW	TITLE/DESC: Roller Chain Connecting Link
hrd0015	HRD	FILE NAME:P020_#25_Roller_Chain_Connecting_Link
aeh0178	AEH	DWG. #: P020
jmm0290	JMM	REV #: 1
TOLERANCES:		
ANGULAR	± 1°	SCALE: 8:1
FRACTIONAL	± 1/8"	SIZE B
ONE PLACE DECIMAL	± 0.1"	SHEET 1 OF 1
TWO PLACE DECIMAL	± 0.05"	
THREE PLACE DECIMAL	± 0.005"	

4

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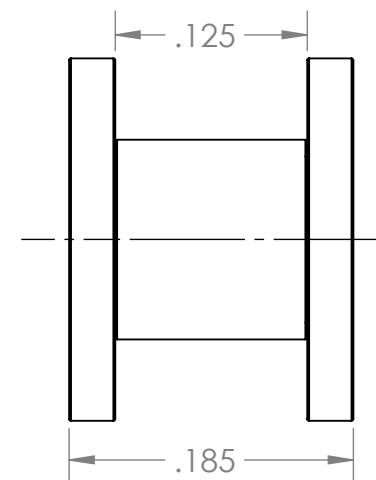
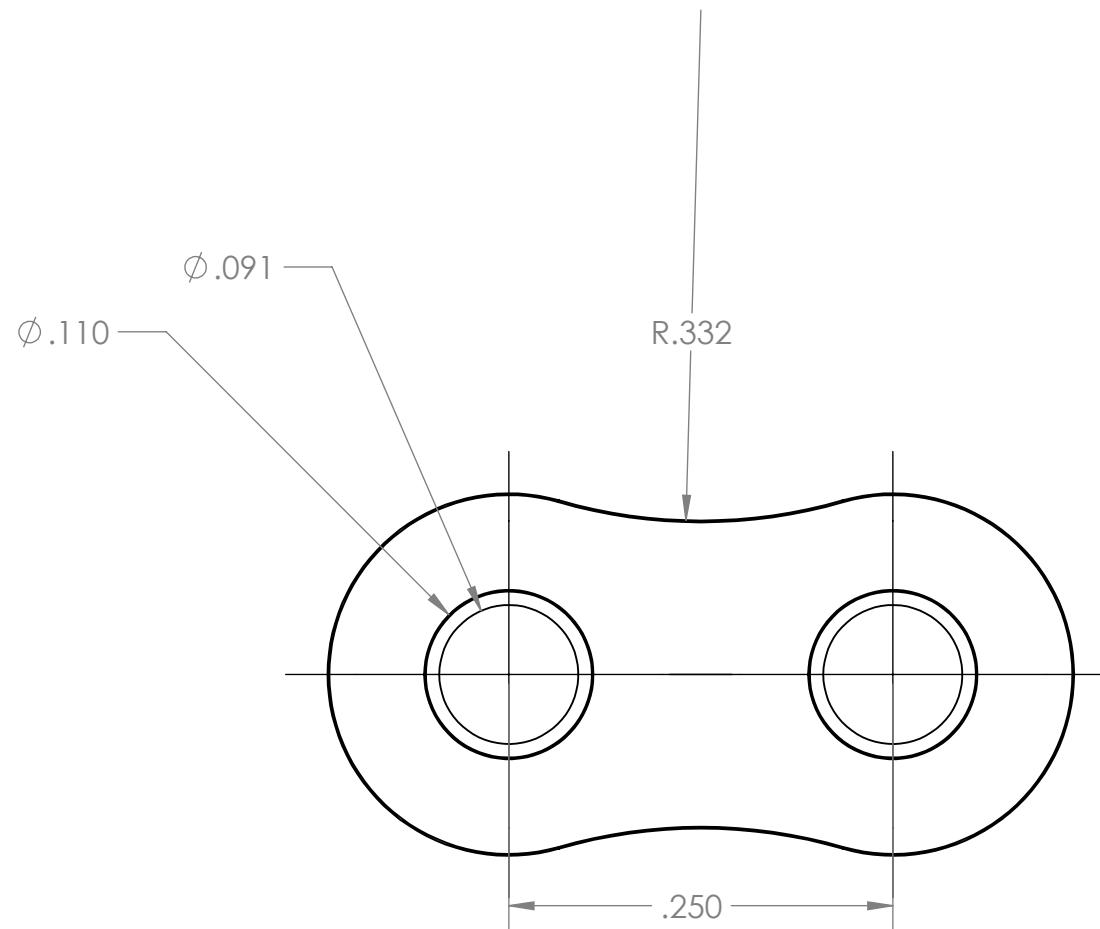
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS			
STOCK DESC/DIMS			#25 Steel Roller Chain Adding Link
1. From Grainger			

B

B



A

A

DRAWN BY Brandon Dixon	DATE 4/29/2025
APPROVALS:	
bod0002	BOD
cmw0178	CMW
hrd0015	HRD
aeh0178	AEH
jmm0290	JMM
jtm0156	JTM
STOCK VENDOR INFO: 6261K106	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
MATERIAL: Steel	
TITLE/DESC: #25 Roller Chain Adding Chain	
FILE NAME: P021_#25_Roller_Chain_Adding_Link	
DWG. #: P021	REV #: 1
SCALE: 8:1	SIZE B
SHEET 1 OF 1	

4

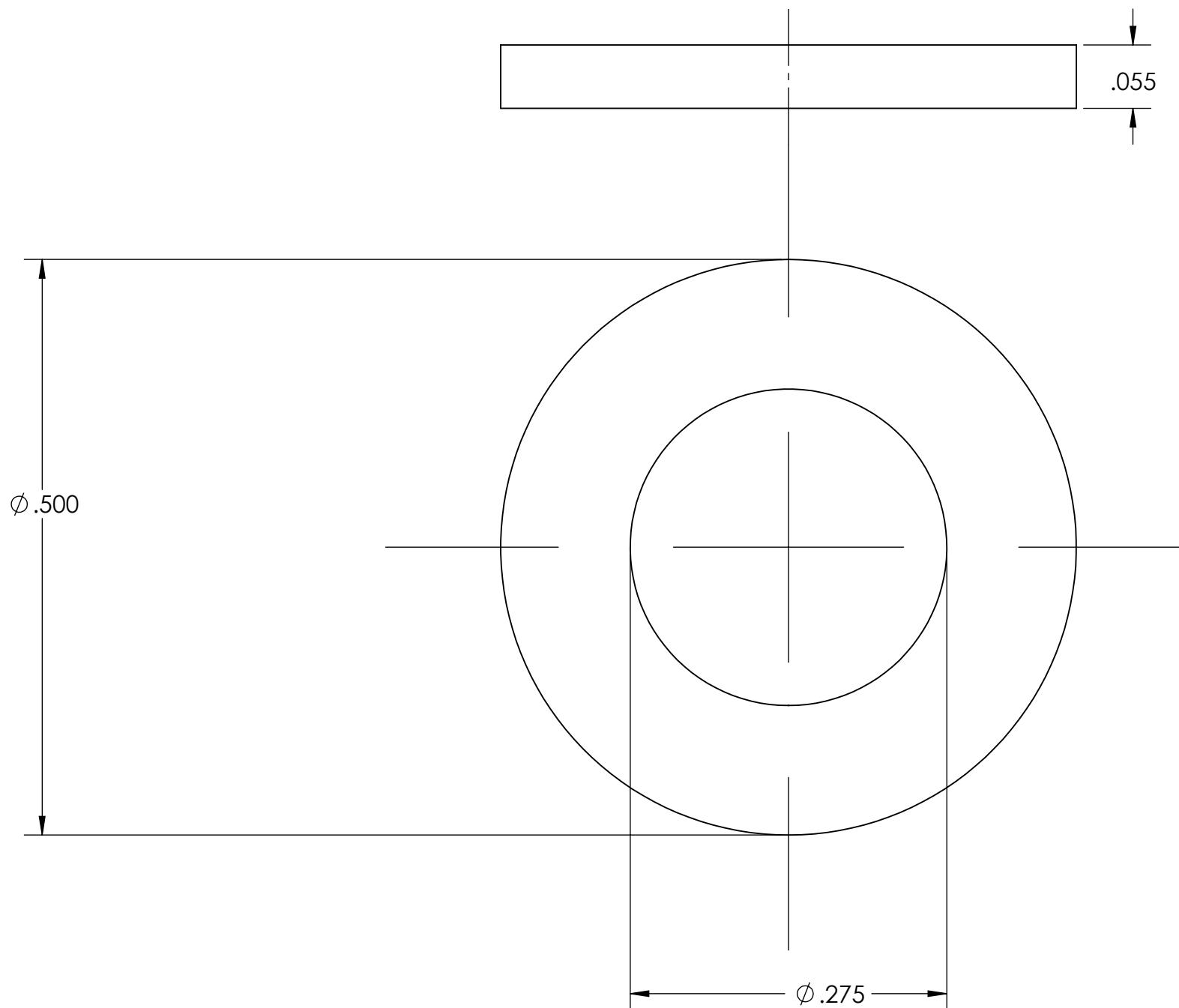
3

2

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B

B



A

A

DRAWN BY Alec Hudson	DATE 4/29/2025
APPROVALS:	
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd	
STOCK VENDOR INFO:	Auburn Makerspace 19NR63
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	SolidWorks Crashouts
TOLERANCES:	
ANGULAR	$\pm 1^\circ$
FRACTIONAL	$\pm 1/8''$
ONE PLACE DECIMAL	$\pm 0.1''$
TWO PLACE DECIMAL	$\pm 0.05''$
THREE PLACE DECIMAL	$\pm 0.005''$
DWG. #: 022	REV #: 1
SCALE: 8:1	SIZE B
SHEET 1 OF 1	

4

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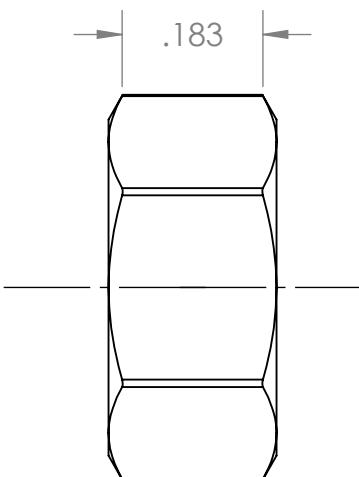
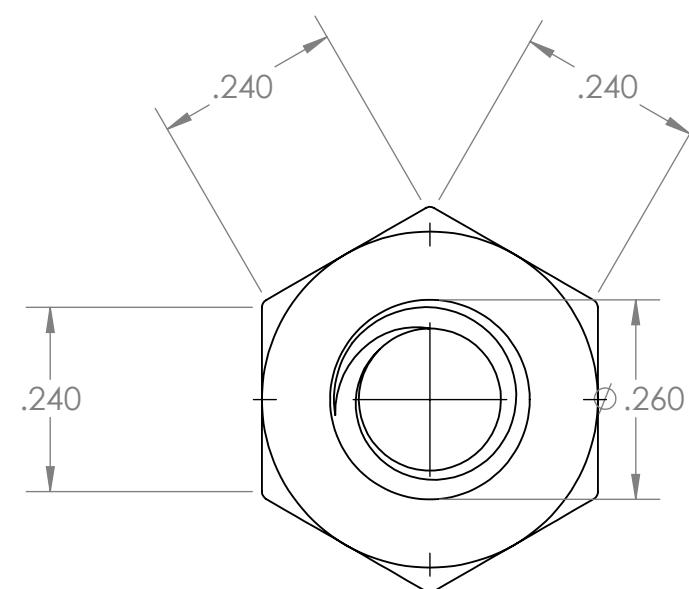
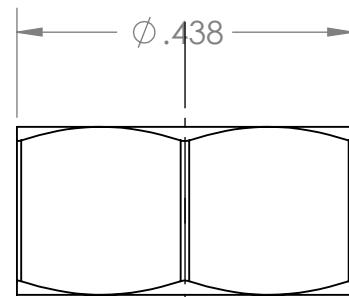
2

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## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS 1-4" 20 Nut

1. Auburn Makerspace Part # 4FCA9



B

B

A

A

DRAWN BY  
Marshall Wellborn  
DATE  
3/5/2025

## APPROVALS:

jtm0156 JTM

cmw0178 CMW

hrd0015 HRD

aeh0178 AEH

jmm0290 JMM

bod0002 BOD

STOCK VENDOR INFO: Auburn Makerspace 4FCA9

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
ANGLES ARE IN DEGREES  
3rd Angle Projection

MATERIAL: Steel

TITLE/DESC: 1/4"-20 Nut

FILE NAME: P023\_Nut\_1\_4-20

DWG. #: 023 REV #: V1

SCALE: 4:1 SIZE B SHEET 1 OF 1

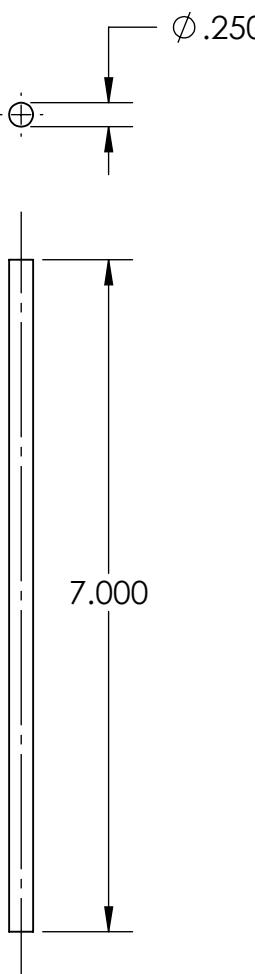
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Manufacturing Instructions:  
1) Purchase from distributor (Lowe's)  
2) Cut to length using vertical or horizontal bandsaw



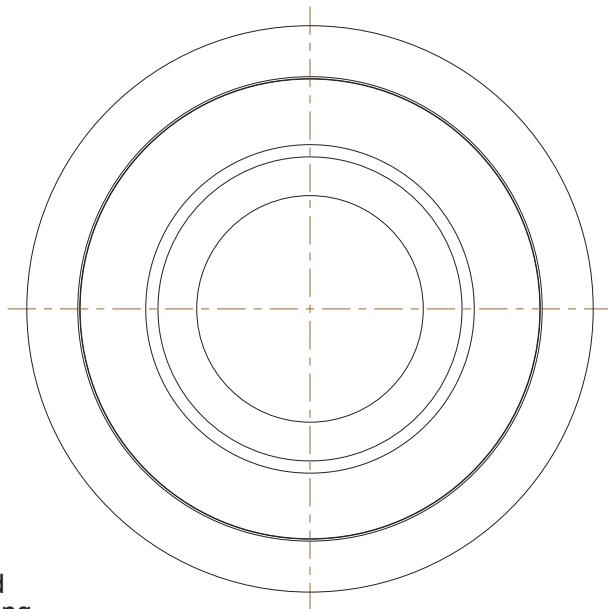
B

B

A

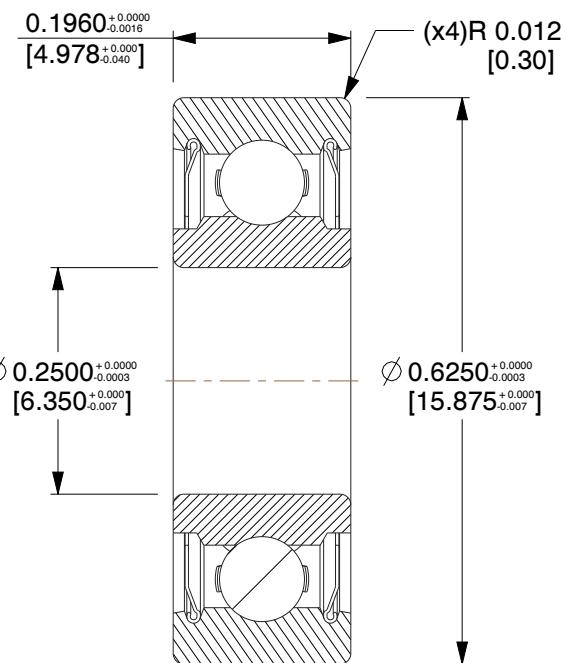
A

DRAWN BY Alec Hudson	DATE 4/30/2025	STOCK VENDOR INFO: Lowe's Item #69857
APPROVALS:		
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	Solidworks Crashouts
	TOLERANCES: ANGULAR $\pm 1^\circ$ FRACTIONAL $\pm 1/8''$ ONE PLACE DECIMAL $\pm 0.1''$ TWO PLACE DECIMAL $\pm 0.05''$ THREE PLACE DECIMAL $\pm 0.005''$	MATERIAL: 4031 Steel
		TITLE/DESC: Axle
		FILE NAME: P024_Drill_Axle
		DWG. #: 024 REV #: 1
		SCALE: 1:2 SIZE B SHEET 1 OF 1



#### NOTES:

1. MAX. RPM: 54000
2. TYPE: Double Shielded
3. ITEM: Radial Ball Bearing
4. SHIELD MATERIAL: Steel
5. BEARING MATERIAL: Steel
6. CAGE MATERIAL: Pressed Steel
7. LUBRICATION: Polyrex EM Grease
8. TEMP. RANGE: -40°F to 350°F
9. STATIC LOAD CAPACITY: 139Lb.
10. DYNAMIC LOAD CAPACITY: 335Lb.



<b>GRAINGER</b> 100 Grainger Parkway, Lake Forest, Illinois 60045-5201 1-(800) GRAINGER, 1-(800) 472-4643, (847) 535-1000 <a href="http://www.grainger.com">www.grainger.com</a>	

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SCALE      4.72

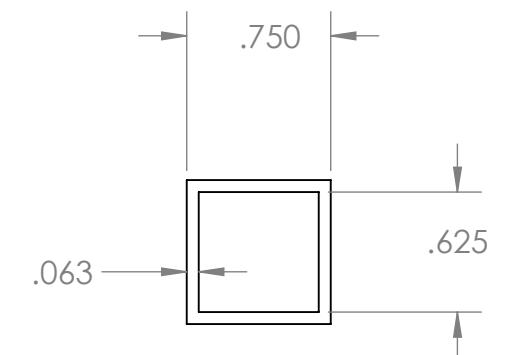
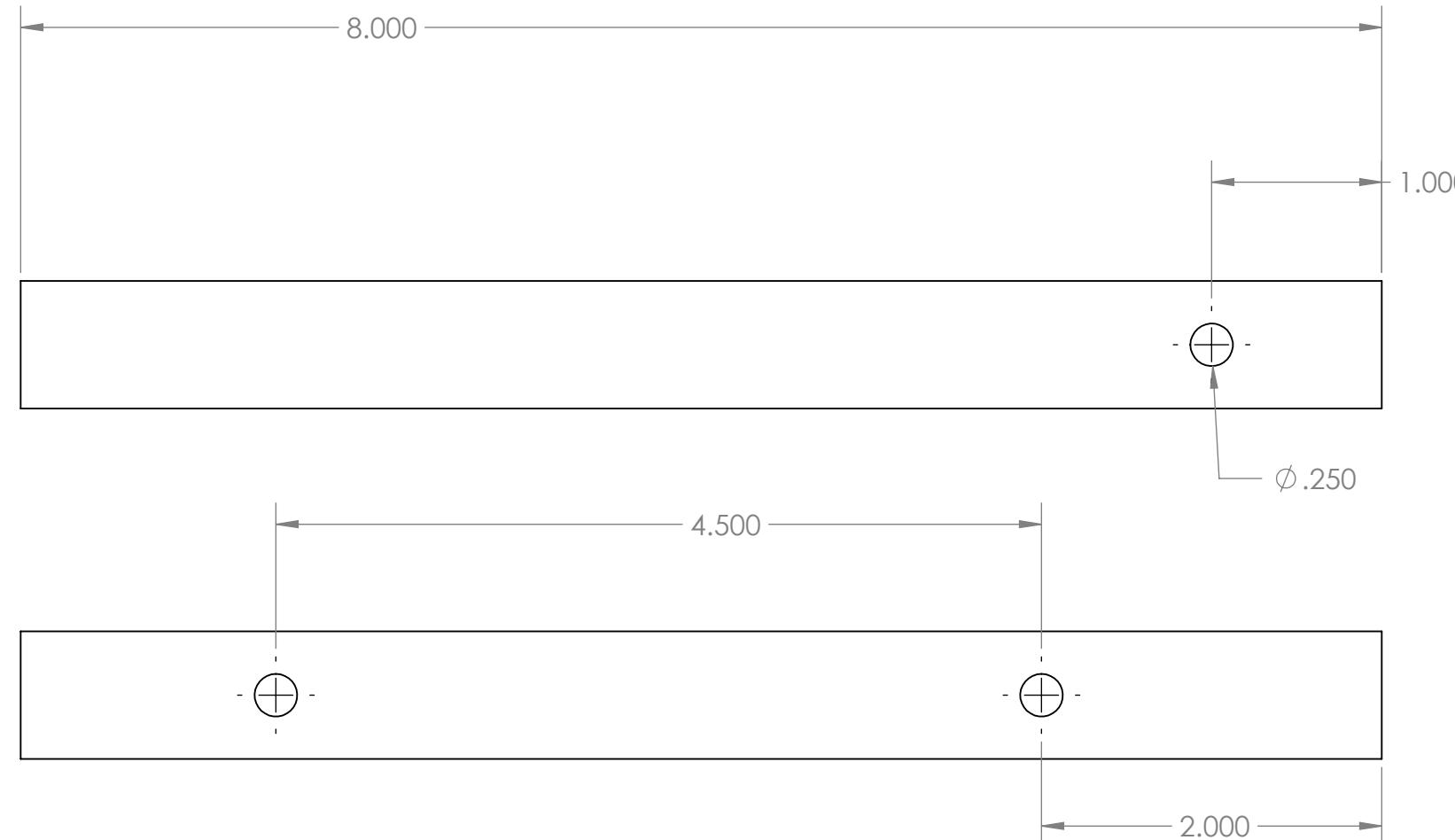
COMPONENT	Radial Ball Bearing	UNIT
35JC63		INCH
Min Ball Bearing, PS, 0.25In Bore Dia		SHEET
		1 of 1

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1



## SAMPLE FABRICATION/ASSEMBLY PROCESS

## STOCK DESC/DIMS

1. Obtain stock Aluminum from Makerspace
2. Cut to dimension length
3. Drill holes to dimensions with drill or drill press

B

B

A

A

DRAWN BY  
Holt DegenkolbDATE  
04/25/25

## APPROVALS:

Aeh0178 AH  
Jmm0290 JM  
cmw0178 CW  
jtm0156 JM  
hrd0015 hd  
bod0002 bd

STOCK VENDOR INFO: Makerspace

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	Solidworks Crashouts
MATERIAL: 6061 T6 Aluminum	
TITLE/DESC: P027 Fork Base Left	
FILE NAME: P027_Fork_Base_Left	
DWG. #: P027	REV #: 1
SCALE: 1:1	SIZE B
	SHEET 1 OF 1

4

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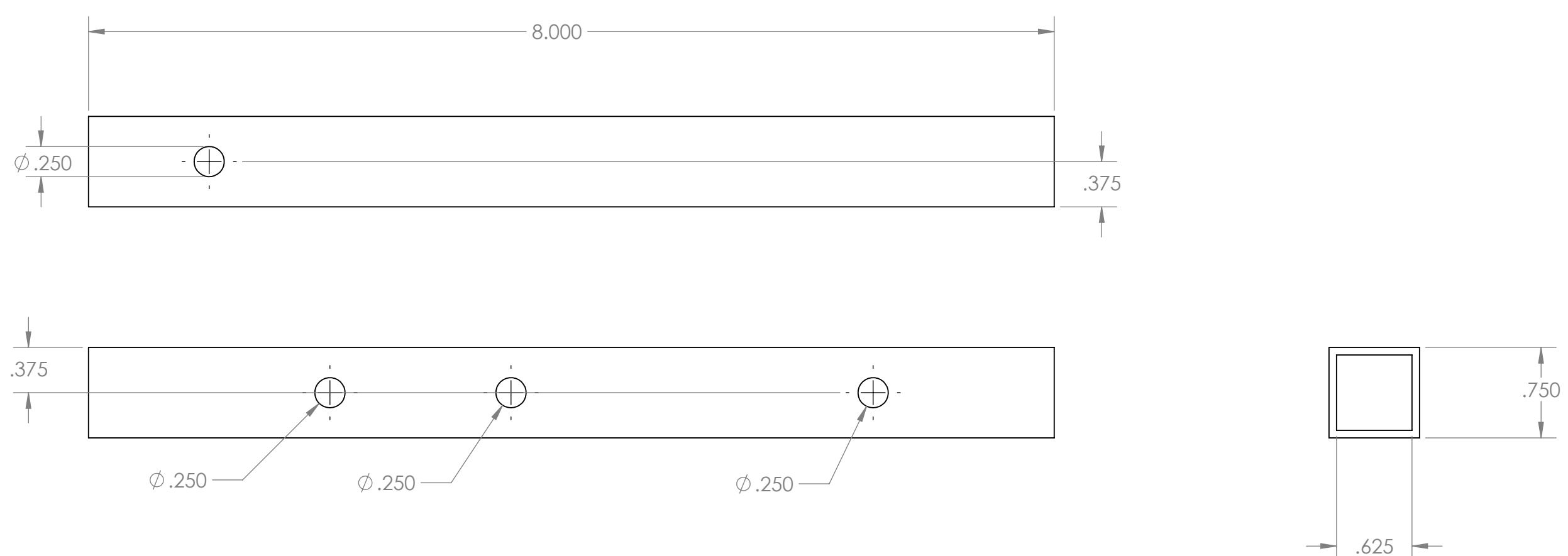
2

1

## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS Aluminum Tubing

1. Cut tubing to 8"
2. Use drill to create holes



DRAWN BY Jacob Martin	DATE 4/29/2025
--------------------------	-------------------

## APPROVALS:

AU EMAIL	SINGNATURE
----------	------------

Aeh0178 AH  
Jmm0290 JM  
cmw0178 CW  
jtm0156 JM  
hrd0015 hd  
bod0002 bd

STOCK VENDOR INFO: Auburn Makerspace 63AST34062

Solidworks Crashouts

MATERIAL: 6061 T6 Aluminum

TITLE/DESC: Right Baseplate Fork

FILE NAME: P028\_Fork\_Base\_Right

DWG. #: 028 REV #: 1

SCALE: 1:1 SIZE B SHEET 1 OF 1

4

3

2

1

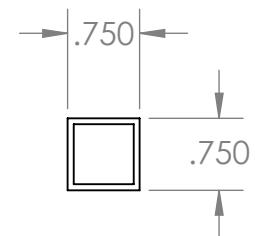
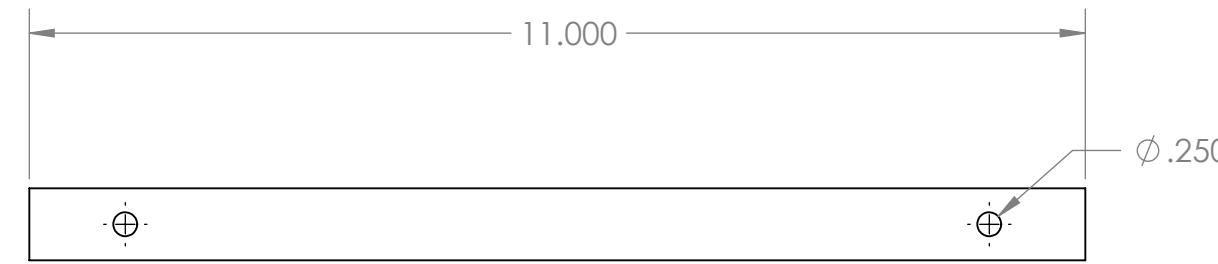
## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS .75 x .75 6061 Aluminum

1. Obtain stock tubing
2. Cut tubing to length
3. Drill holes through ends

B

B



A

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DRAWN BY Brandon Dixon	DATE 4/25/25
---------------------------	-----------------

## APPROVALS:

jtm0156	JTM
bod0002	BOD
jmm0290	JMM
aeh0178	AEH
hrd0015	HRD
cmw0178	CMW

STOCK VENDOR INFO: Makerspace 63AST34062

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
ANGLES ARE IN DEGREES  
3rd Angle Projection

TOLERANCES:	
ANGULAR	± 1°
FRACTIONAL	± 1/8"
ONE PLACE DECIMAL	± 0.1"
TWO PLACE DECIMAL	± 0.05"
THREE PLACE DECIMAL	± 0.005"

Solidworks Crashouts

MATERIAL: Aluminum

TITLE/DESC: Fork Left Drawing

FILE NAME: P029\_Fork\_Left

DWG. #: P029 REV #: 1

SCALE: 1:1 SIZE B SHEET 1 OF 1

4

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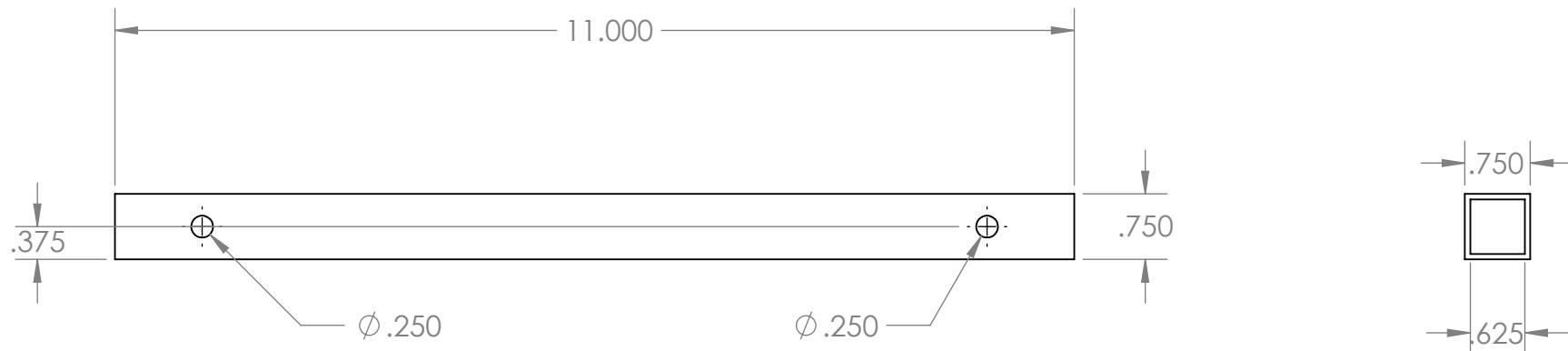
## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS 3/4"x3/4" Aluminum Tubing

1. Cut tubing to 11"
2. Use drill to create holes

B

B



A

A

DRAWN BY Jacob Martin	DATE 4/29/2025
--------------------------	-------------------

APPROVALS:

AU EMAIL      SINGNATURE

Aeh0178 AH

Jmm0290 JM

cmw0178 CW

jtm0156 JM

hrd0015 hd

bod0002 bd

STOCK VENDOR INFO: Auburn Makerspace 63AST34062

Solidworks Crashouts

MATERIAL: 6061 T6 Aluminum

TITLE/DESC: Right Base Fork

FILE NAME: P030\_Fork\_Right

DWG. #: 030      REV #: 1

SCALE: 1:2      SIZE B

SHEET 1 OF 1

4

3

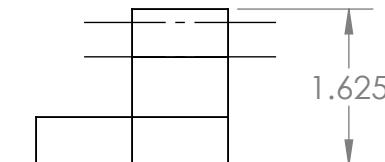
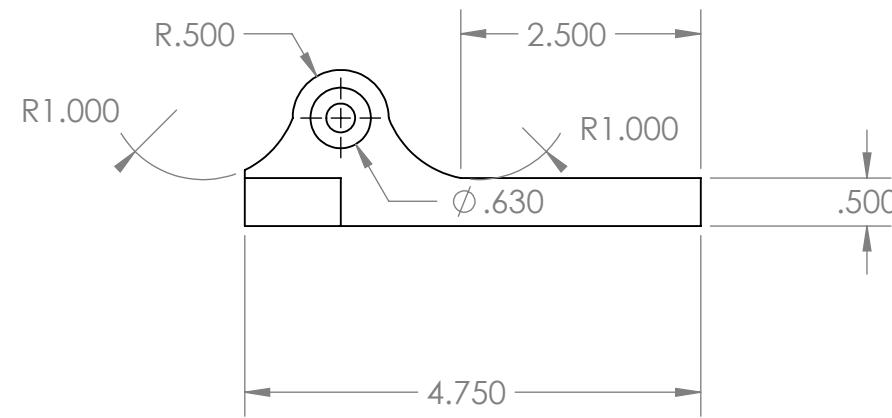
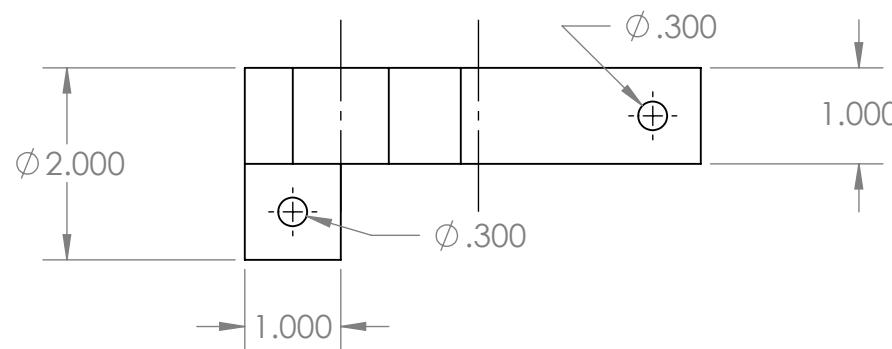
2

1

Manufacturing Instructions  
1) Printed by ME3D Lab

B

B



A

A

DRAWN BY	DATE
Joe Ragan	4/29/2025
APPROVALS:	
AU EMAIL	SINGNATURE
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd	
STOCK VENDOR INFO: ME3D Lab	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
TOLERANCES:	
ANGULAR	$\pm 1^\circ$
FRACTIONAL	$\pm 1/8"$
ONE PLACE DECIMAL	$\pm 0.1"$
TWO PLACE DECIMAL	$\pm 0.05"$
THREE PLACE DECIMAL	$\pm 0.005"$
Solidworks Crashouts	
MATERIAL: PLA	
TITLE/DESC: Inner Axle Bracket	
FILE NAME: P031_Inner_Axle_Bracket	
DWG. #: 031	REV #: 1
SCALE: 1:2	SIZE B
SHEET 1 OF 1	

4

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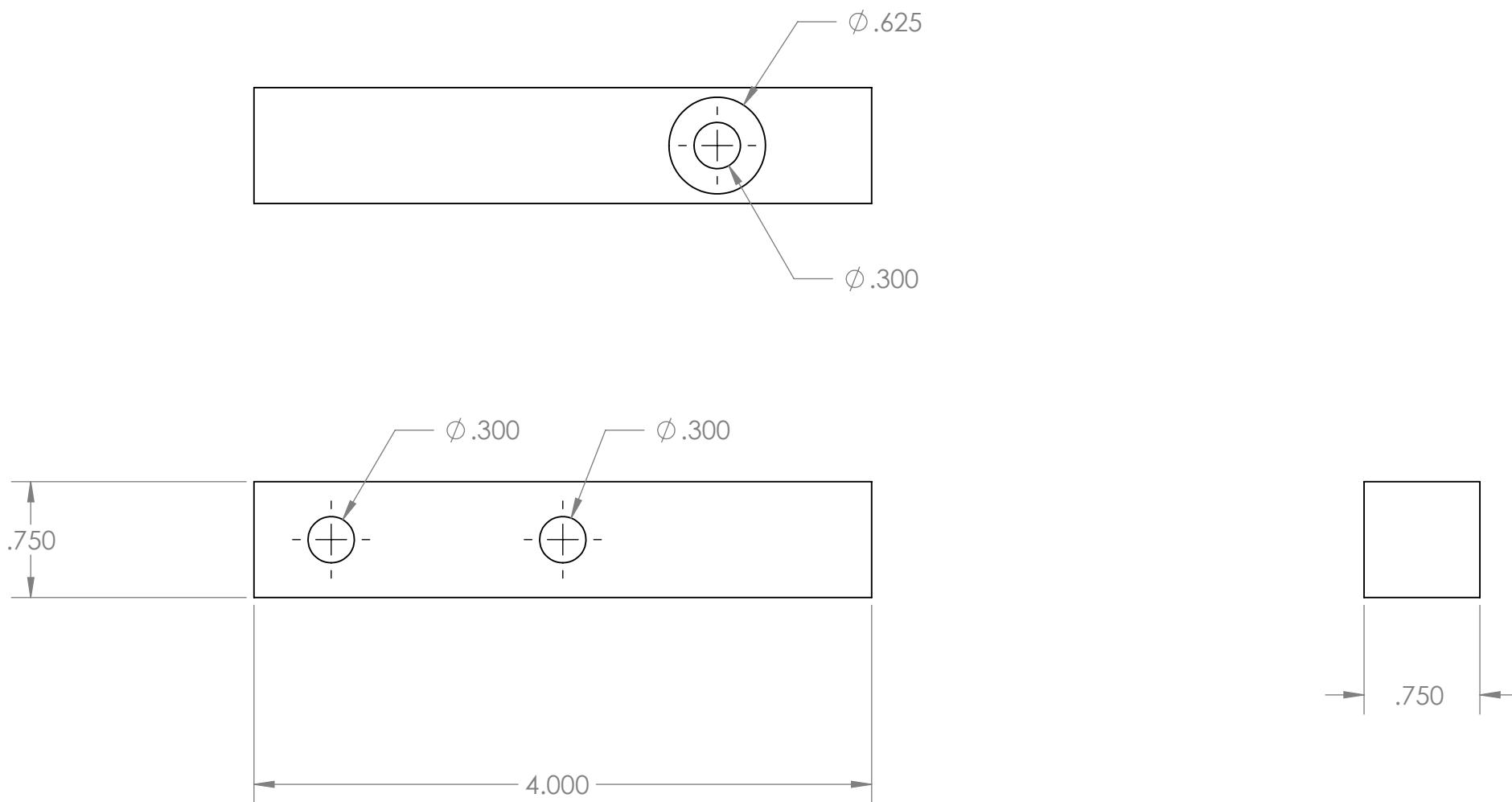
2

1

Manufacturing Instructions:  
1) Printed by ME3D Lab

B

B



A

A

DRAWN BY Jacob Martin	DATE 4/29/2025
APPROVALS:	
AU EMAIL	SINGNATURE
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd	
STOCK VENDOR INFO: ME3D Lab	Solidworks Crashouts
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	MATERIAL: PLA
TOLERANCES:	TITLE/DESC: Outer Axle Bracket
ANGULAR $\pm 1^\circ$ FRACTIONAL $\pm 1/8"$ ONE PLACE DECIMAL $\pm 0.1"$ TWO PLACE DECIMAL $\pm 0.05"$ THREE PLACE DECIMAL $\pm 0.005"$	FILE NAME: P032_Outer_Axle_Bracket
DWG. #: 032	REV #: 1
SCALE: 1:1	SIZE B
	SHEET 1 OF 1

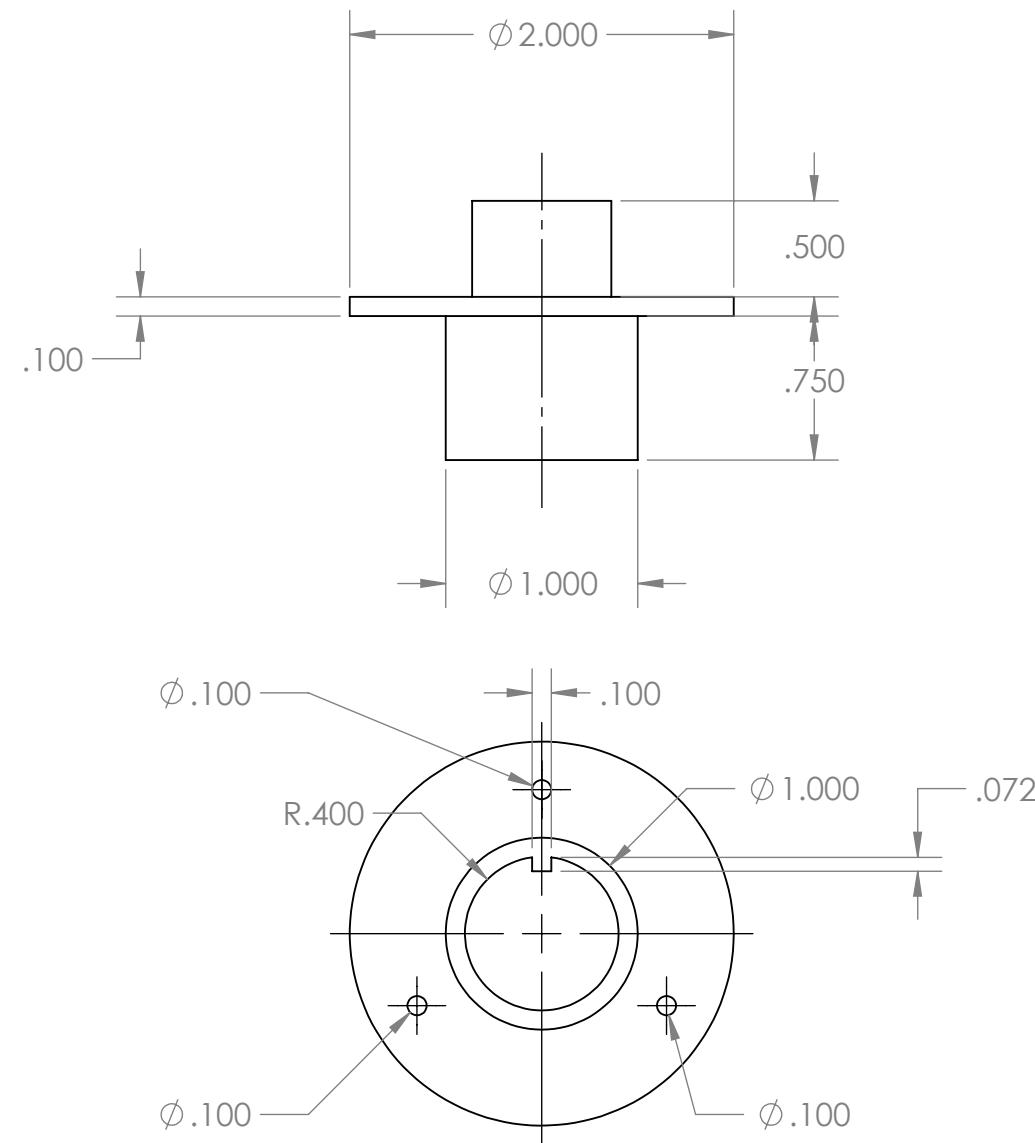
4

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1

Manufacturing Instructions:  
1) Printed through ME3D Lab



B

B

A

A

DRAWN BY Jacob Martin	DATE 4/30/2025
APPROVALS:	
AU EMAIL	SINGNATURE
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd	
STOCK VENDOR INFO: ME3D Lab	Solidworks Crashouts
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	MATERIAL: PLA
TOLERANCES:	TITLE/DESC: Wheel Adapter
ANGULAR $\pm 1^\circ$ FRACTIONAL $\pm 1/8"$ ONE PLACE DECIMAL $\pm 0.1"$ TWO PLACE DECIMAL $\pm 0.05"$ THREE PLACE DECIMAL $\pm 0.005"$	FILE NAME: P033_Wheel_Adapter_V2
DWG. #: 033	REV #: 1
SCALE: 1:1	SIZE B
SHEET 1 OF 1	

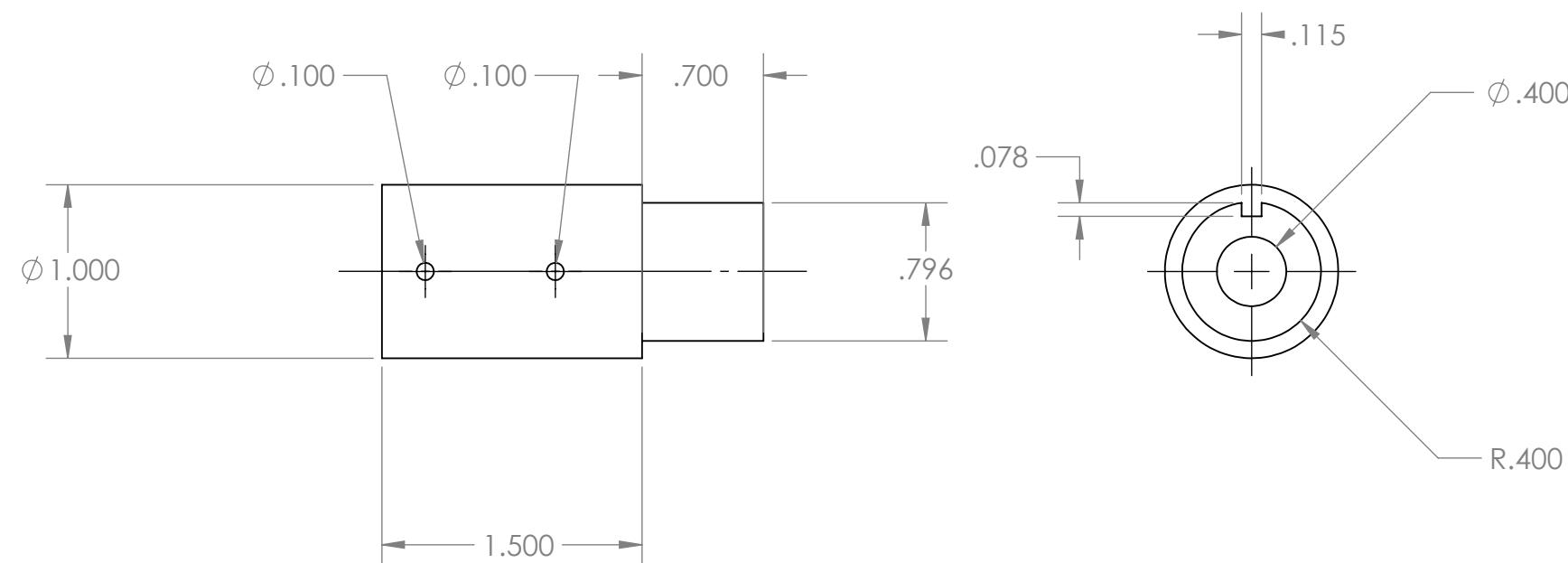
4

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1

Manufacturing Instructions:  
1) Printed through ME3D Lab



DRAWN BY Jacob Martin	DATE 4/30/2025
APPROVALS:	
AU EMAIL	SINGNATURE
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd	
STOCK VENDOR INFO: ME3D Lab	Solidworks Crashouts
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	MATERIAL: PLA
TOLERANCES:	TITLE/DESC: Dowel Adapter
ANGULAR $\pm 1^\circ$ FRACTIONAL $\pm 1/8"$ ONE PLACE DECIMAL $\pm 0.1"$ TWO PLACE DECIMAL $\pm 0.05"$ THREE PLACE DECIMAL $\pm 0.005"$	FILE NAME: P034_Dowel_Adapter_V2
	DWG. #: 034 REV #: 1
	SCALE: 1:1 SIZE B SHEET 1 OF 1

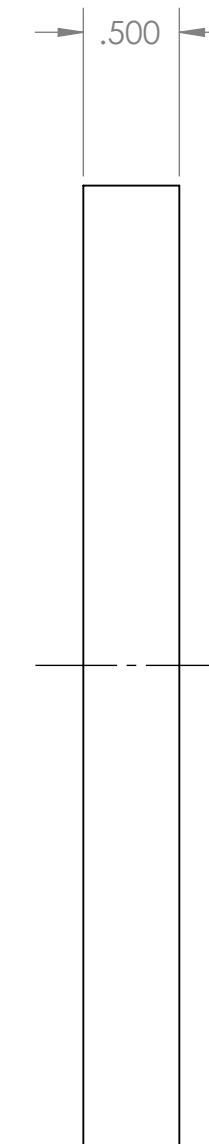
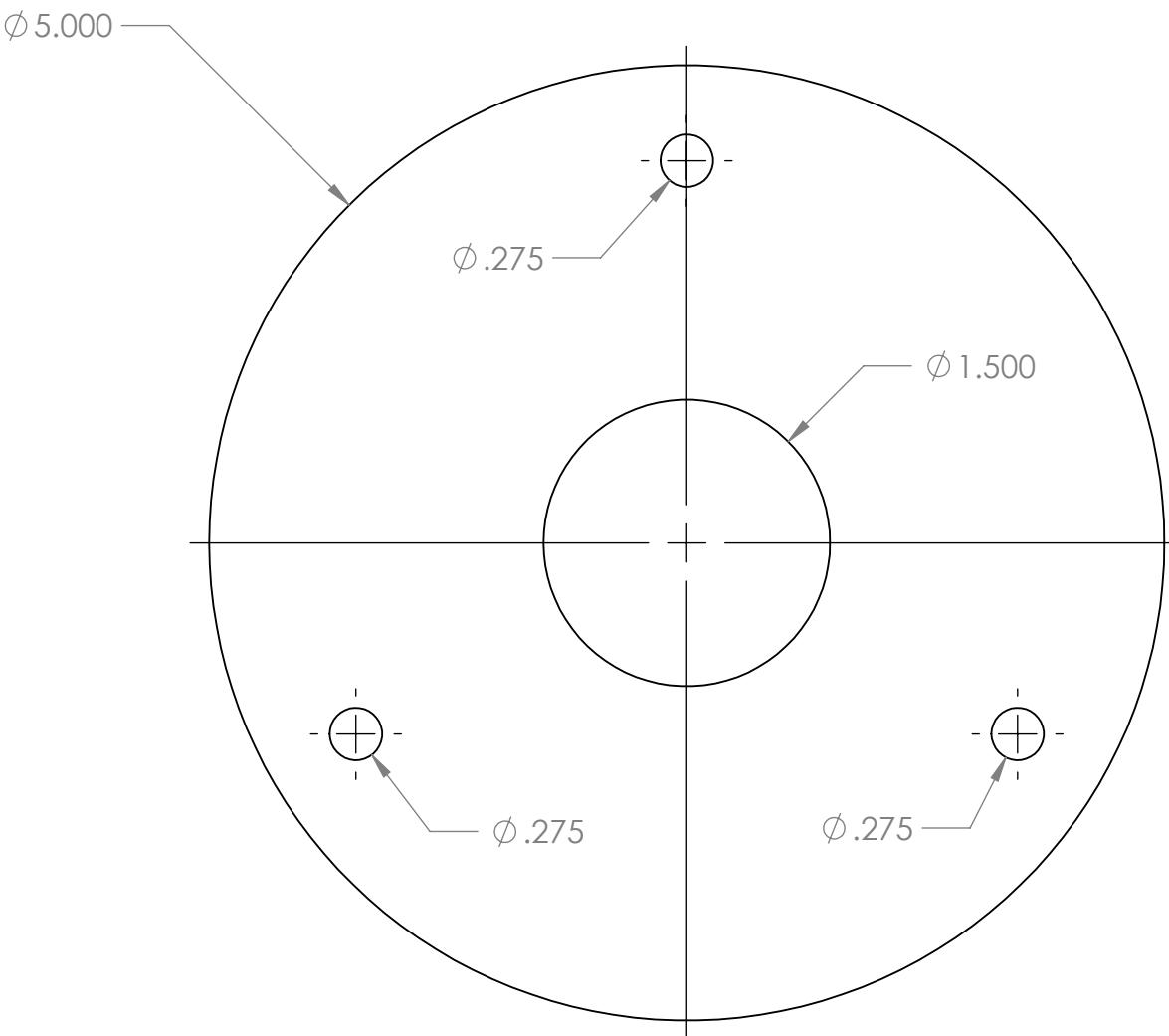
4

3

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1

Manufacturing Instructions:  
 1) Cut plywood (obtained through Makerspace) to 5"x5" using table saw  
 2) Round off corners with scroll saw  
 3) Drill holes using hand drill or similar tool



B

B

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A

DRAWN BY	Jacob Martin	DATE	4/30/2025
APPROVALS:			
AU EMAIL	SINGNATURE		
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd		STOCK VENDOR INFO: Makerspace - PINEPLY UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ± 0.1" TWO PLACE DECIMAL ± 0.05" THREE PLACE DECIMAL ± 0.005"	
		Solidworks Crashouts MATERIAL: Plywood TITLE/DESC: Gear Spacer FILE NAME: P035_Gear_Spacer DWG. #: 035 REV #: 1 SCALE: 1:1 SIZE B SHEET 1 OF 1	

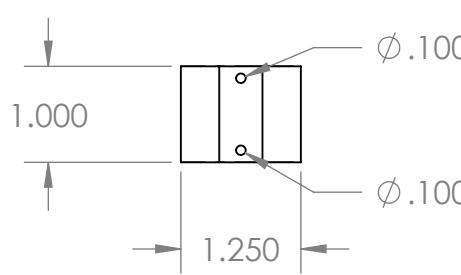
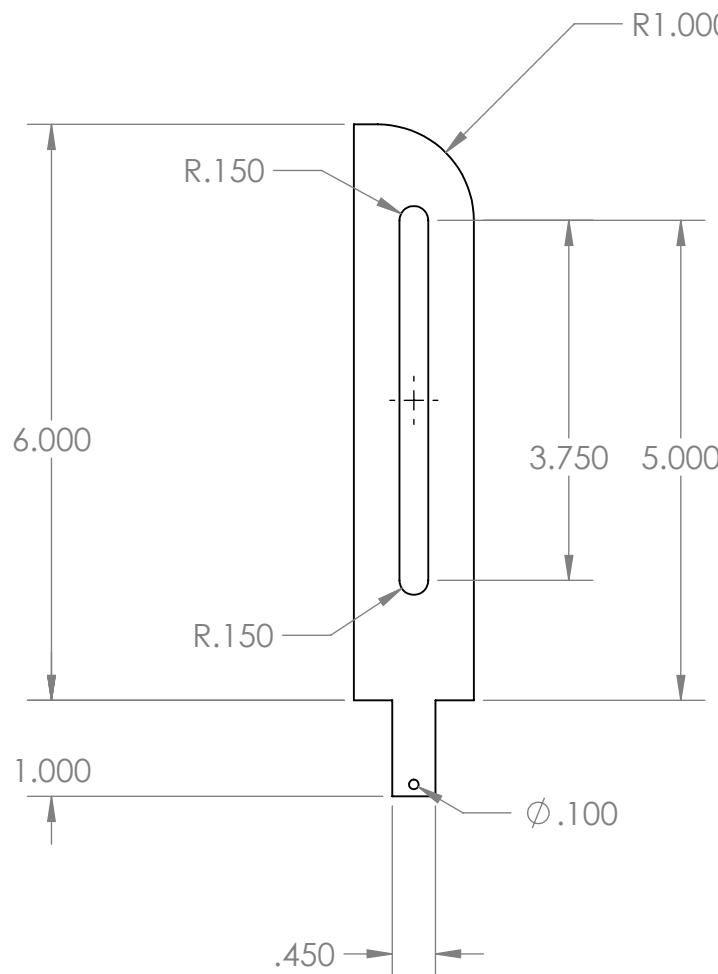
4

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1

Manufacturing Instructions:  
1) Printed through ME3D Lab



DRAWN BY Jacob Martin	DATE 4/25/2025
APPROVALS:	
AU EMAIL	SINGNATURE
Aeh0178 AH Jmm0290 JM cmw0178 CW jtm0156 JM hrd0015 hd bod0002 bd	
STOCK VENDOR INFO: ME3D Lab	Solidworks Crashouts
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	MATERIAL: PLA
TOLERANCES:	TITLE/DESC: Foot
ANGULAR $\pm 1^\circ$ FRACTIONAL $\pm 1/8"$ ONE PLACE DECIMAL $\pm 0.1"$ TWO PLACE DECIMAL $\pm 0.05"$ THREE PLACE DECIMAL $\pm 0.005"$	FILE NAME: P036_Foot
DWG. #: 036	REV #: 1
SCALE: 1:2	SIZE B
SHEET 1 OF 1	

4

3

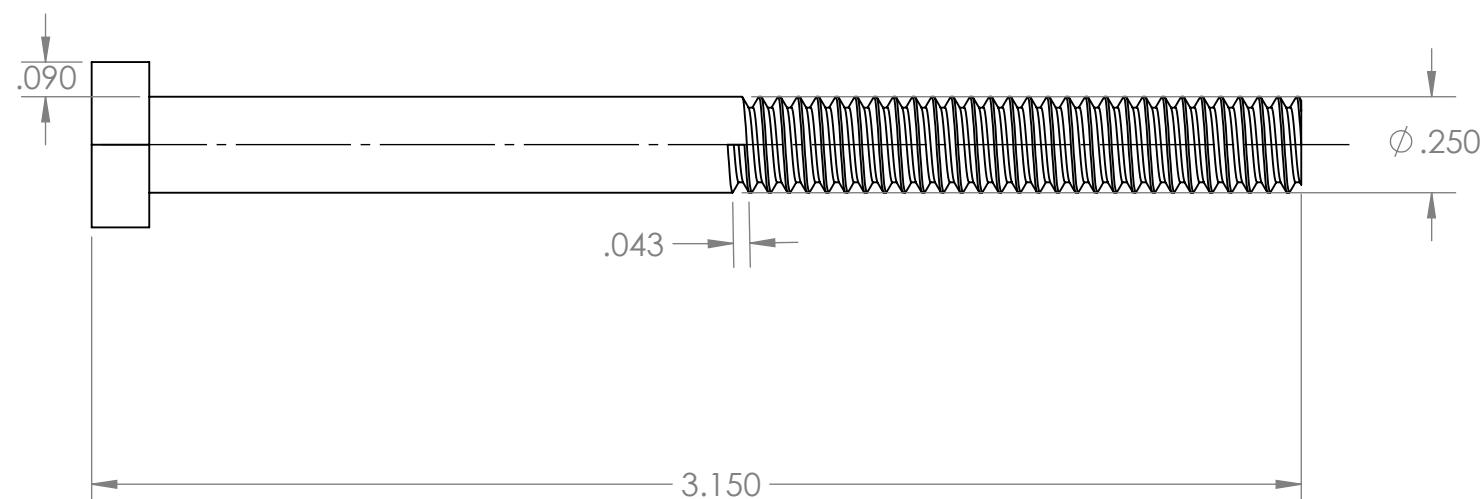
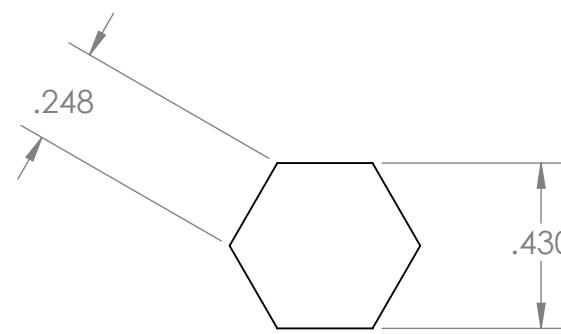
2

1

Manufacturing Instructions:  
1) Obtained through Makerspace

B

B



A

A

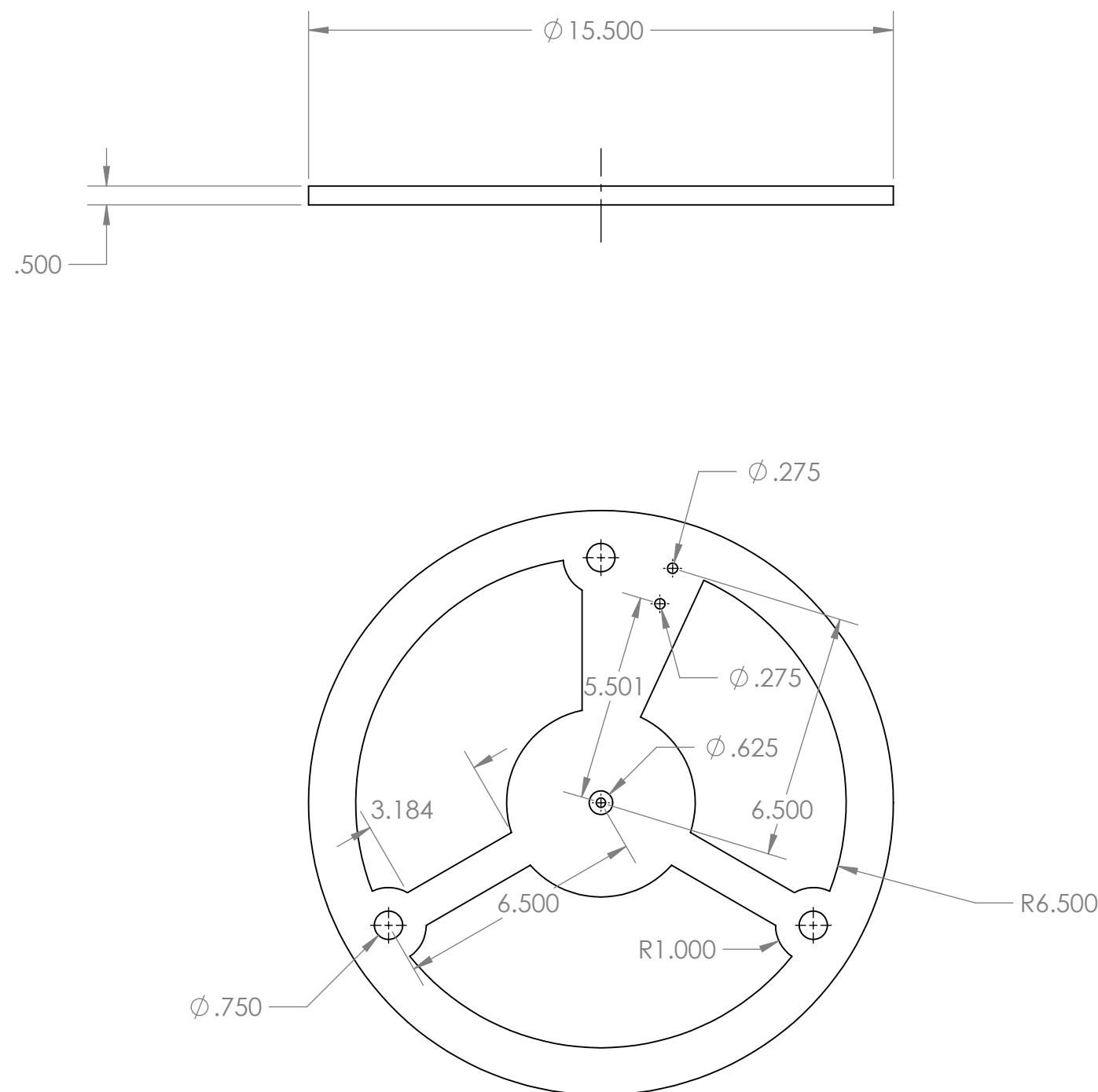
DRAWN BY Jacob Martin	DATE 4/30/2025	STOCK VENDOR INFO: Auburn Makerspace - 41UD69
<b>APPROVALS:</b>		
AU EMAIL	SINGNATURE	Solidworks Crashouts
Aeh0178 AH		MATERIAL: AISI 4130 Steel
Jmm0290 JM		TITLE/DESC: Half Threaded 1/4-20 Bolt
cmw0178 CW		FILE NAME: P037_Bolt_1_4-20_Half_Threaded
jtm0156 JM		DWG. #: 037 REV #: 1
hrd0015 hd		SCALE: 2:1 SIZE <b>B</b> SHEET 1 OF 1
bod0002 bd		
<b>TOLERANCES:</b>		
ANGULAR	$\pm 1^\circ$	
FRACTIONAL	$\pm 1/8''$	
ONE PLACE DECIMAL	$\pm 0.1''$	
TWO PLACE DECIMAL	$\pm 0.05''$	
THREE PLACE DECIMAL	$\pm 0.005''$	

4

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1



## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS OSB

- Get a stock piece of OSB plywood
- waterjet the wood to get precise dimensions

2

1

DRAWN BY Jacob Martin	DATE 4/26/2025
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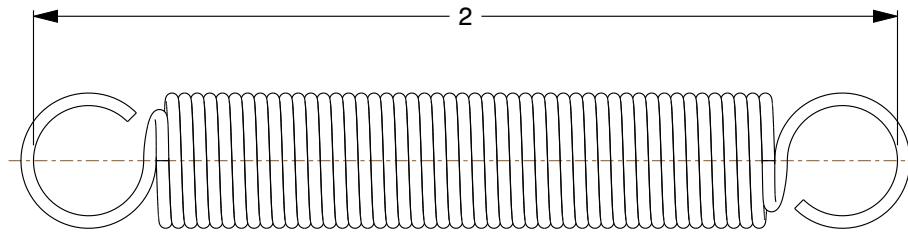
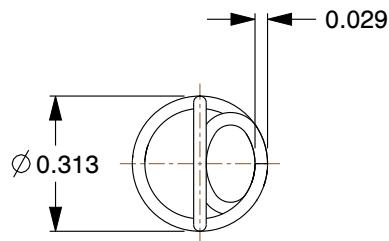
APPROVALS:

AU EMAIL SINGNATURE

Aeh0178 AH  
Jmm0290 JM  
cmw0178 CW  
jtm0156 JM  
hrd0015 hd  
bod0002 bd

**TOLERANCES:**  
 ANGULAR  $\pm 1^\circ$   
 FRACTIONAL  $\pm 1/8"$   
 ONE PLACE DECIMAL  $\pm 0.1"$   
 TWO PLACE DECIMAL  $\pm 0.05"$   
 THREE PLACE DECIMAL  $\pm 0.005"$

STOCK VENDOR INFO: Auburn Makerspace - PINEPLY	Solidworks Crashouts
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	MATERIAL: OSB Plywood
	TITLE/DESC: Left Wheel
	FILE NAME: P038_Wheel_Left
	DWG. #: 038 REV #: 1
	SCALE: 1:4 SIZE B SHEET 1 OF 1



**GRAINGER**  
/ / / /

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[www.grainger.com](http://www.grainger.com)

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SCALE      2.25

COMPONENT	Extension Spring	UNIT
1NAA1	INCH	
SHEET	Extension Spring: Utility, High Carbon Steel, 2 in Overall Lg, Zinc Plated, 12 PK	1 of 1

4

3

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1

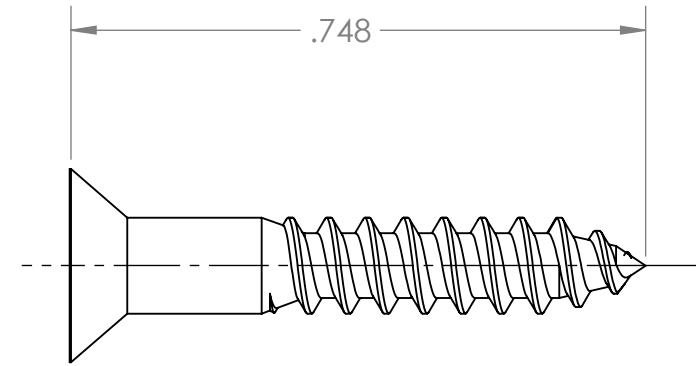
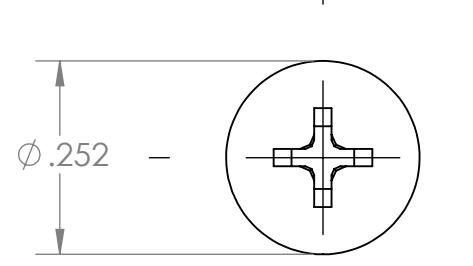
## SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS Wood Screw

1. Order from Makerspace

B

B



A

A

DRAWN BY  
Marshall Wellborn  
DATE  
4/29/2025

## APPROVALS:

cmw0178 CMW

jtm0156 JTM

hrd0015 HRD

aeh0178 AEH

jmm0290 JMM

bod0002 BOD

STOCK VENDOR INFO: AU Makerspace 31JJ06

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
ANGLES ARE IN DEGREES  
3rd Angle Projection

Solidworks Crashouts

MATERIAL: Steel

TITLE/DESC: Wood Screw

FILE NAME: P040\_Wood\_Screw

DWG. #: 040 REV #: V1

SCALE: 4:1 SIZE B SHEET 1 OF 1