

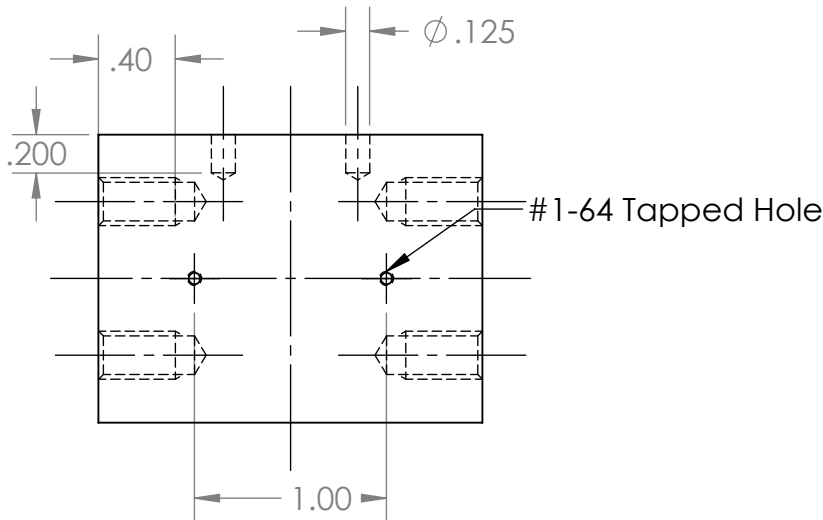
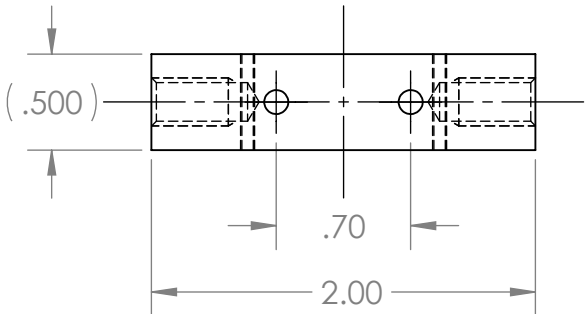
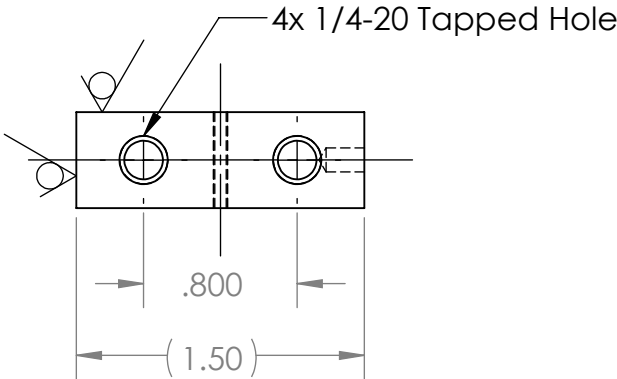
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	6063 Aluminium Bar 1/2" x 1" x 4'
1. cut aluminum bar to 4" length with band saw 2. mill sides to legth of 3.5" 3. mark and centerpuch holes 4. drill hole for 1/4-20 thread with #7 drill 5. drill holes for 1-64 thread with #53 drill 6. cut 1/4-20 thread 7. cut 1-64 thread	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 89755k11	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: 6063-T5	
		TITLE/DESC: Connection Front Suspension	
		FILE NAME: Connection Front Suspension	
		DWG. #: P-002	REV #: A
		SCALE: 1:1	SHEET 1 OF 1
		SIZE B	

3

2

1

4

3

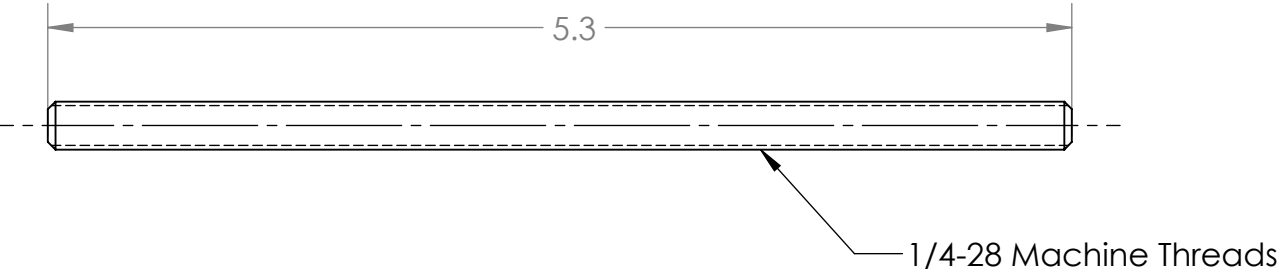
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Threaded Rod 1/4-20 x 3'
1.	cut threaded rod to lenhgth of 7.28"
2.	chamfer edges with belt grinder

B

B



A

A

DRAWN BY Felix Lasch	DATE 11/18/2019	STOCK VENDOR INFO: McMaster-Carr 3313N11	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SINGNATURE	MATERIAL: AISI 1020	
		TITLE/DESC: Threaded Axle Front Left	
		FILE NAME: Threaded Axle Front Left	
		DWG. #: P-003	REV #: A
		SCALE: 1:2	SHEET 1 OF 1
		SIZE B	

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"

4

3

2

1

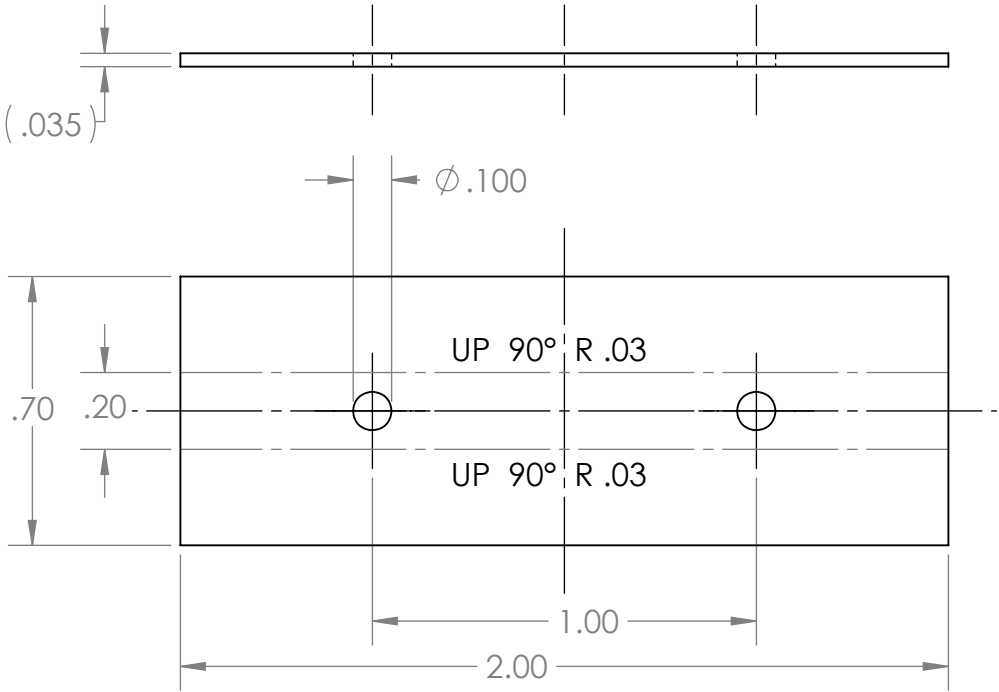
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	1075 Spring Steel Sheet 8"x12"x0.035"
1. cut sheet metal to desired length 2. burring all sides with belt grinder 3. mark and centerpunch holes 4. drill 0.1" holes 5. bend sheet metal at given points	



DRAWN BY Felix Lasch	DATE 12/5/2019	STOCK VENDOR INFO: McMaster-Carr 9071K73	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI 1020	
		TITLE/DESC: Slide Wing Nut	
		FILE NAME: Slide Wing Nut 1	
		DWG. #: P-004	REV #: A
		SCALE: 2:1	SIZE B SHEET 1 OF 2

3

2

1

4

3

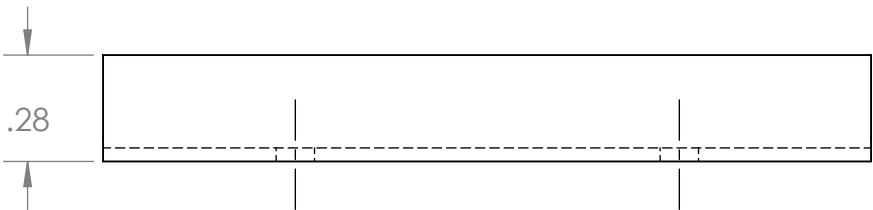
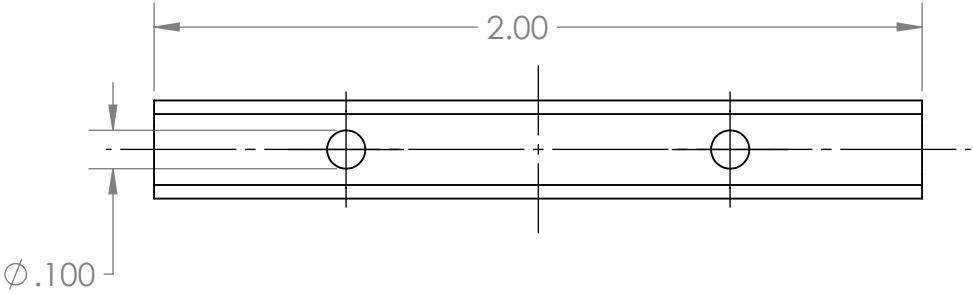
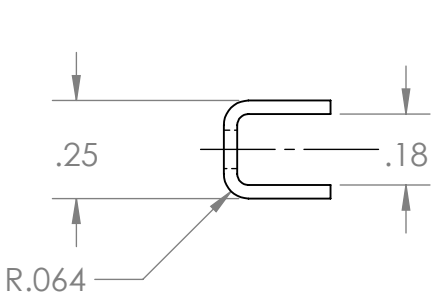
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS1075 Spring Steel Sheet 8"x12"x0.035"

1. cut sheet metal to desired length
2. burring all sides with belt grinder
3. mark and centerpunch holes
4. drill 0.1" holes
5. bend sheet metal at given points



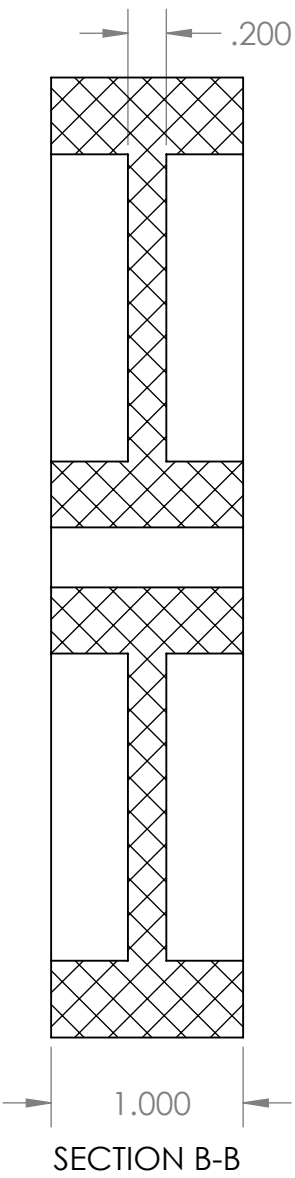
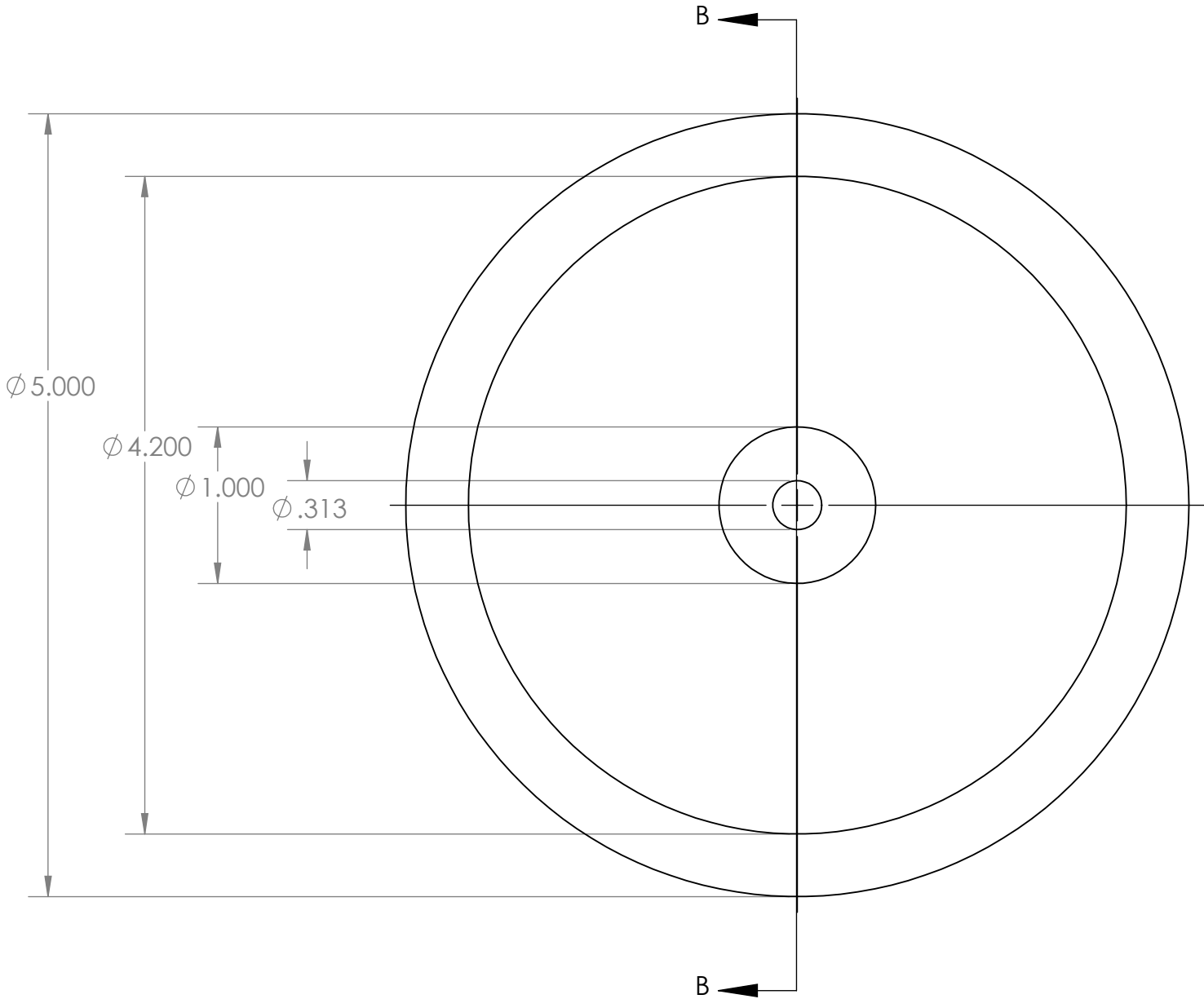
DRAWN BY Felix Lasch	DATE 12/5/2019	STOCK VENDOR INFO: McMaster-Carr 9071K73	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI 1020	
		TITLE/DESC: Slide Wing Nut	
		FILE NAME: Slide Wing Nut 2	
		DWG. #:	REV #:
		SCALE: 2:1	SIZE B SHEET 2 OF 2

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Polzpropylene Wheel 4"" Diameterx 1-1/4" wide
Manufacturer purchased item	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 2781T585	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: PP Copolymer	
		TITLE/DESC: Wheel	
		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:	Wheel
		DWG. #: P-005	REV #: A
		SCALE: 1:1	SIZE B SHEET 1 OF 1

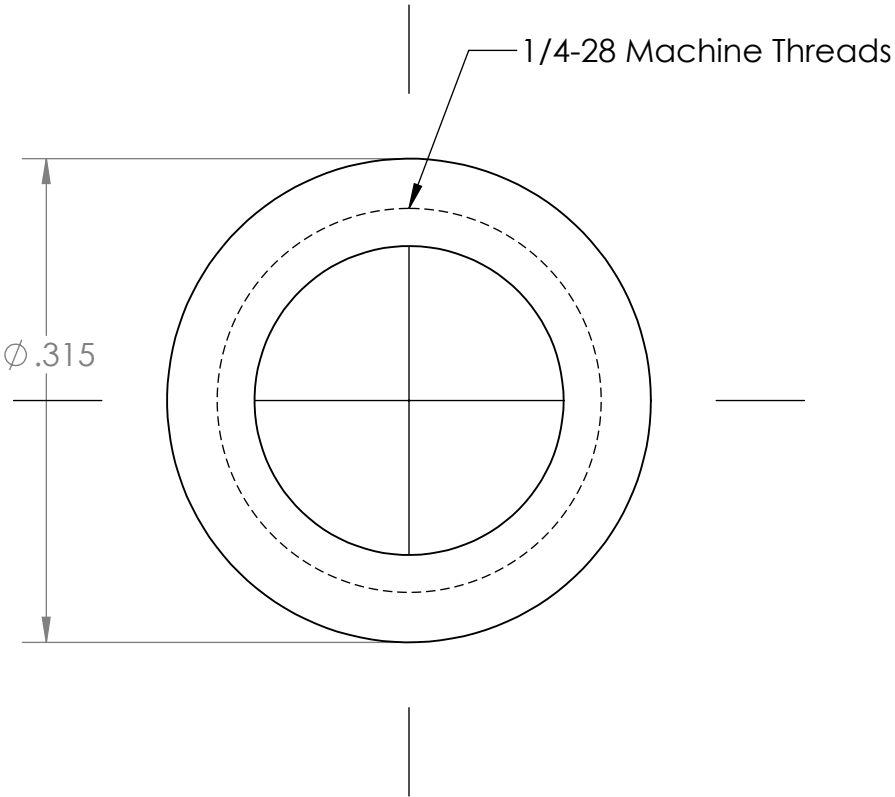
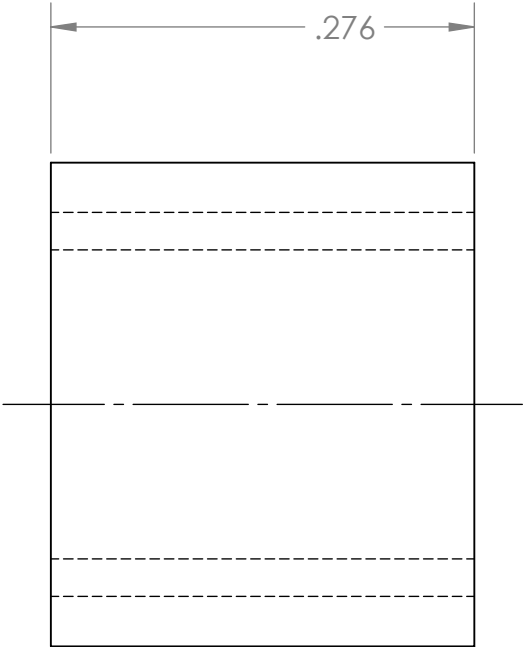
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Muffle Bearing
1.	print muffle with 3D-printer
2.	recut 1/4-28 thread with tap cutter



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO:	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SIGNATURE	MATERIAL: ABS	
		TITLE/DESC: Muffle Bearing	
		FILE NAME: Muffle Bearing	
		DWG. #:	REV #: A
		SCALE: 8:1	SHEET 1 OF 1
		SIZE B	

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"

3

2

1

4

B

B

A

A

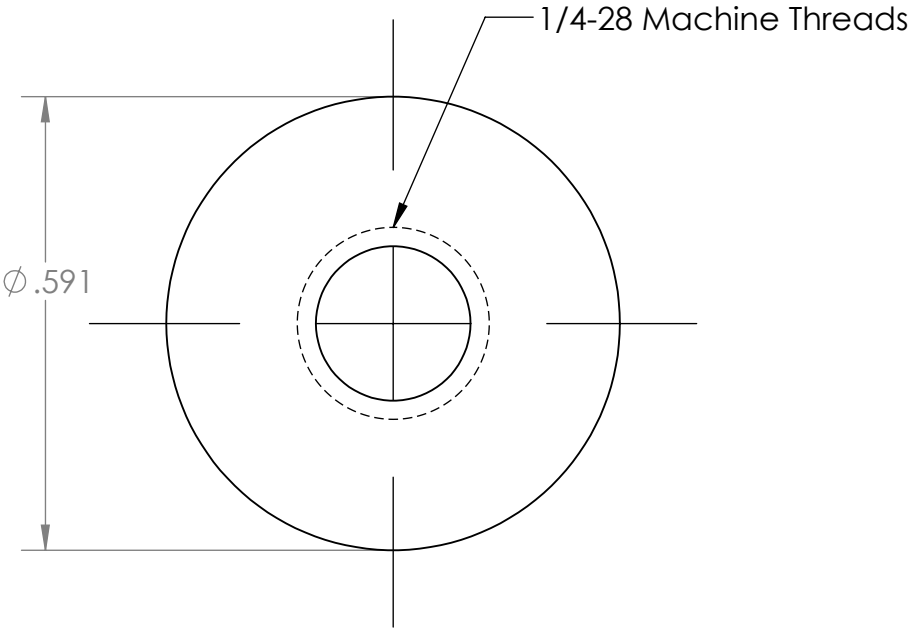
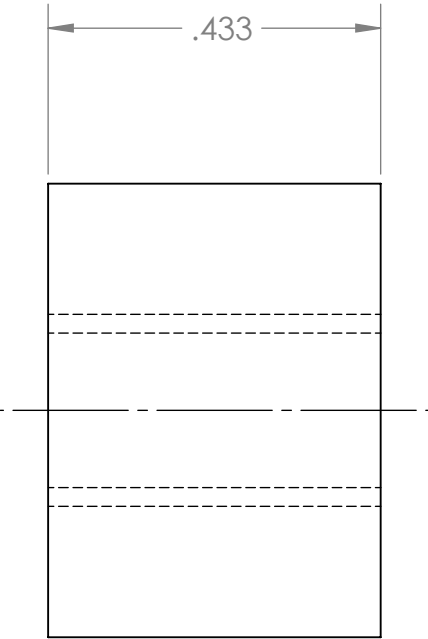
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Muffle One-Way-Bearing
1.	print muffle with 3D-printer
2.	recut 1/4-28 thread with tap cutter



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO:	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SINGNATURE	MATERIAL: ABS	
		TITLE/DESC: Muffle One-Way-Bearing	
		FILE NAME: Muffle One-Way-Bearing	
		DWG. #: P-007	REV #: A
		SCALE: 4:1	SHEET 1 OF 1
		SIZE B	

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"

3

2

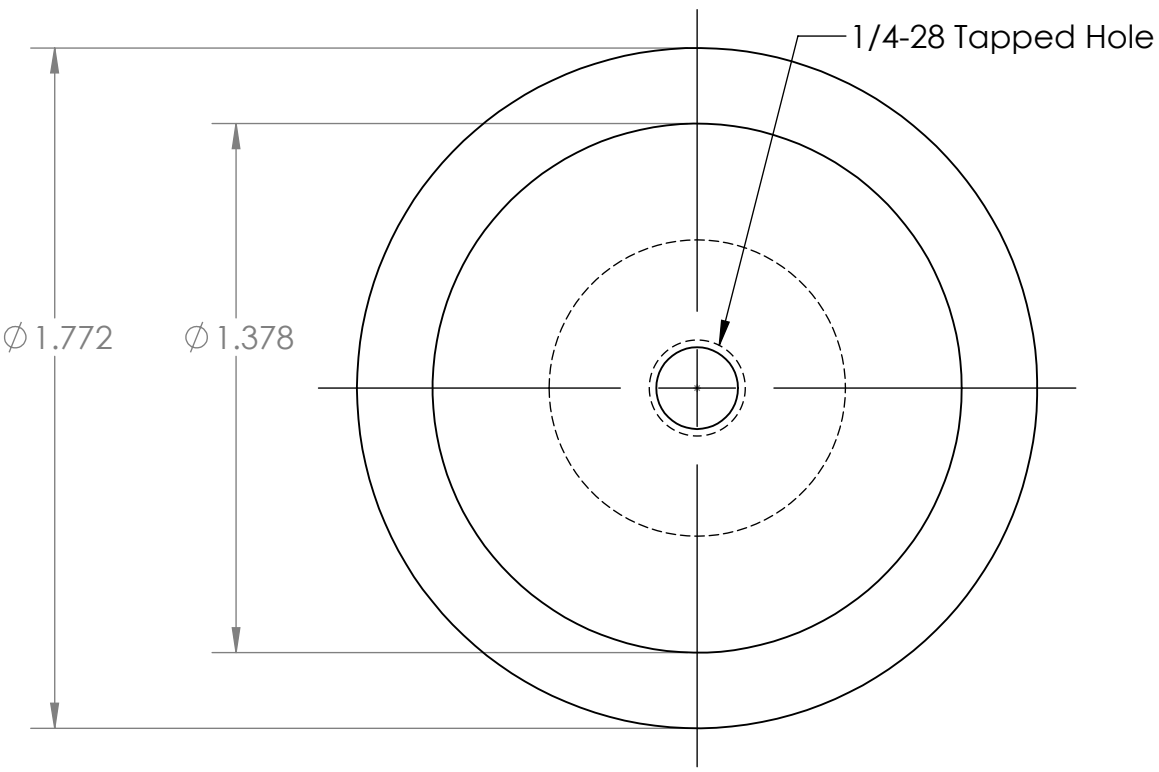
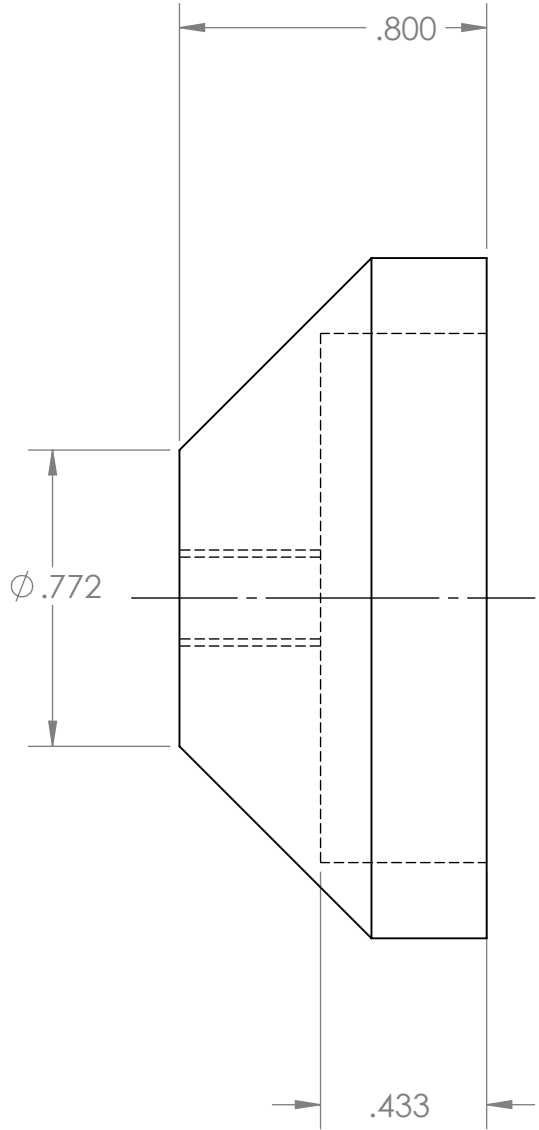
1

B

B

A

A



SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Adapter One-Way-Bearing
1. print adapter with 3D-Printer	
2. recut 1/4-28 thread with tap cutter	

DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO:	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SIGNATURE	MATERIAL: ABS	
		TITLE/DESC: Adapter One-Way-Bearing	
		FILE NAME: P8 Adapter One-Way-Bearing	
		DWG. #: P-008	REV #: A
		SCALE: 2:1	SHEET 1 OF 1
		SIZE B	

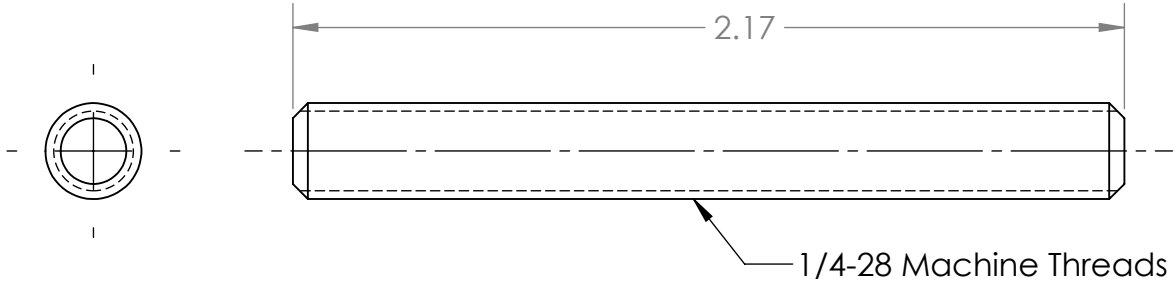
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Threaded Rod 1/4-20 x 3'
1.	cut rod to desired length
2.	chamfer ends with belt grinder



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: MMC2525	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SIGNATURE	Careless Broncos	
		MATERIAL: AISI 1020	
		TITLE/DESC: Threaded Axle Front Right	
		TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ± 0.1" TWO PLACE DECIMAL ± 0.05" THREE PLACE DECIMAL ± 0.005"	
		FILE NAME:	Threaded Axle Front Right
		DWG. #:	P-009
		REV #:	A
		SCALE: 2:1	SIZE B
		SHEET 1 OF 1	

3

2

1

4

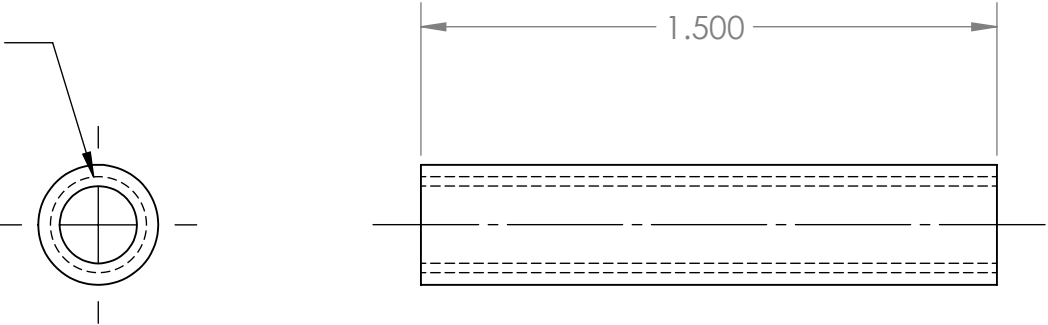
3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Muffle Wheel Left
1. print muffle with 3D-Printer	
2. recut 1/4-28 thread with tap cutter	

1/4-28 Machine Threads



DRAWN BY Felix Lasch	DATE 11/17/2019	STOCK VENDOR INFO:	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SINGNATURE	MATERIAL: ABS	
		TITLE/DESC: Muffle Wheel Left	
		FILE NAME: Muffle Wheel Left	
		DWG. #:	REV #: A
		SCALE: 2:1	SHEET 1 OF 1
		SIZE B	

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"

4

3

2

1

B

B

A

A

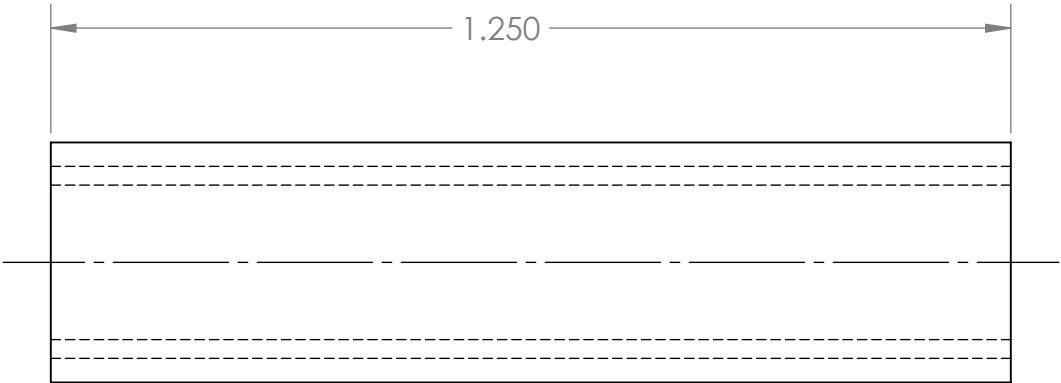
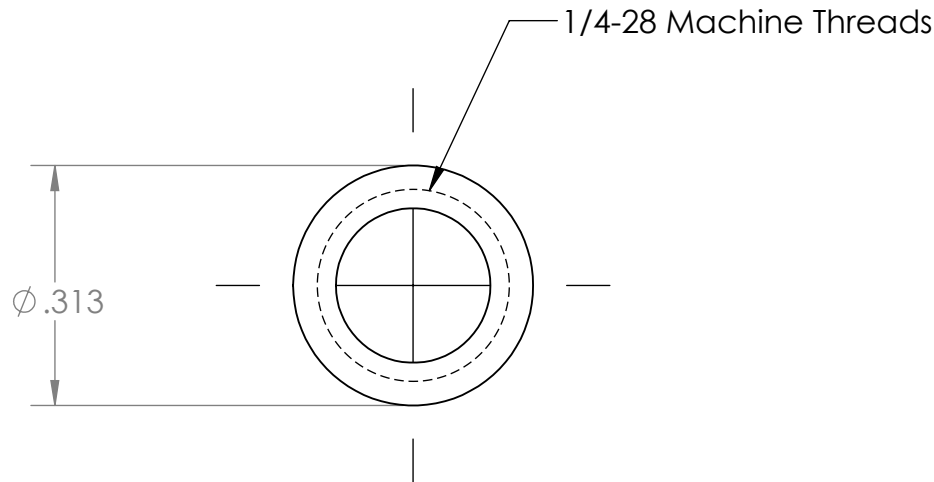
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Muffle Wheel Right
1. print muffle	
2. recut 1/4-28 thread with tap cutter	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO:	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SINGNATURE	MATERIAL: ABS	
		TITLE/DESC: Muffle Wheel Right	
		FILE NAME: Muffle Wheel Right	
		DWG. #: P-011	REV #: A
		SCALE: 2:1	SIZE B SHEET 1 OF 1
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"

4

3

2

1

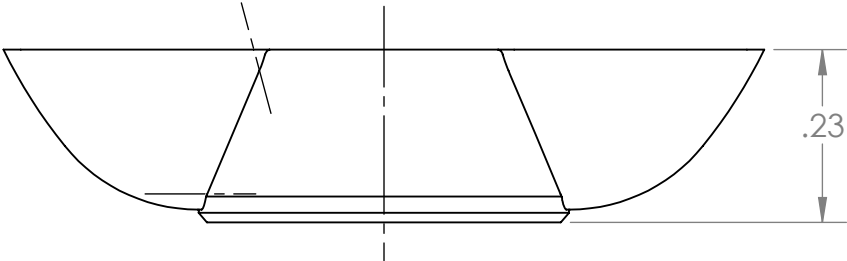
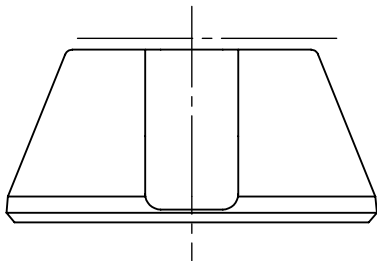
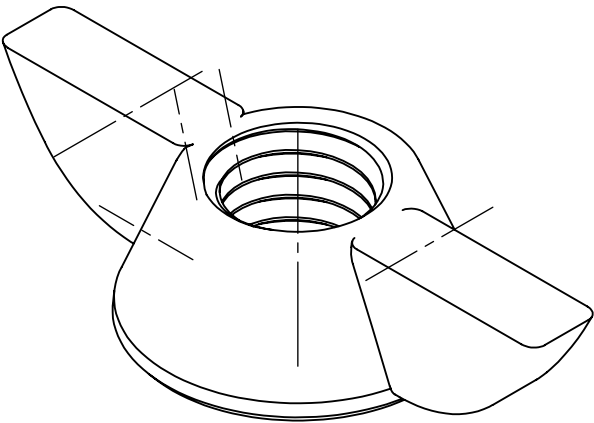
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Wingnut 1/4-28 tread size
1. Cut wing nut at 0.23in with metal saw	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 92771A529	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: Brass	
		TITLE/DESC: Wingnut	
		FILE NAME: Wingnut	
		DWG. #: P-012	REV #: A
		SCALE: 4:1	SHEET 1 OF 1
		SIZE B	

3

2

1

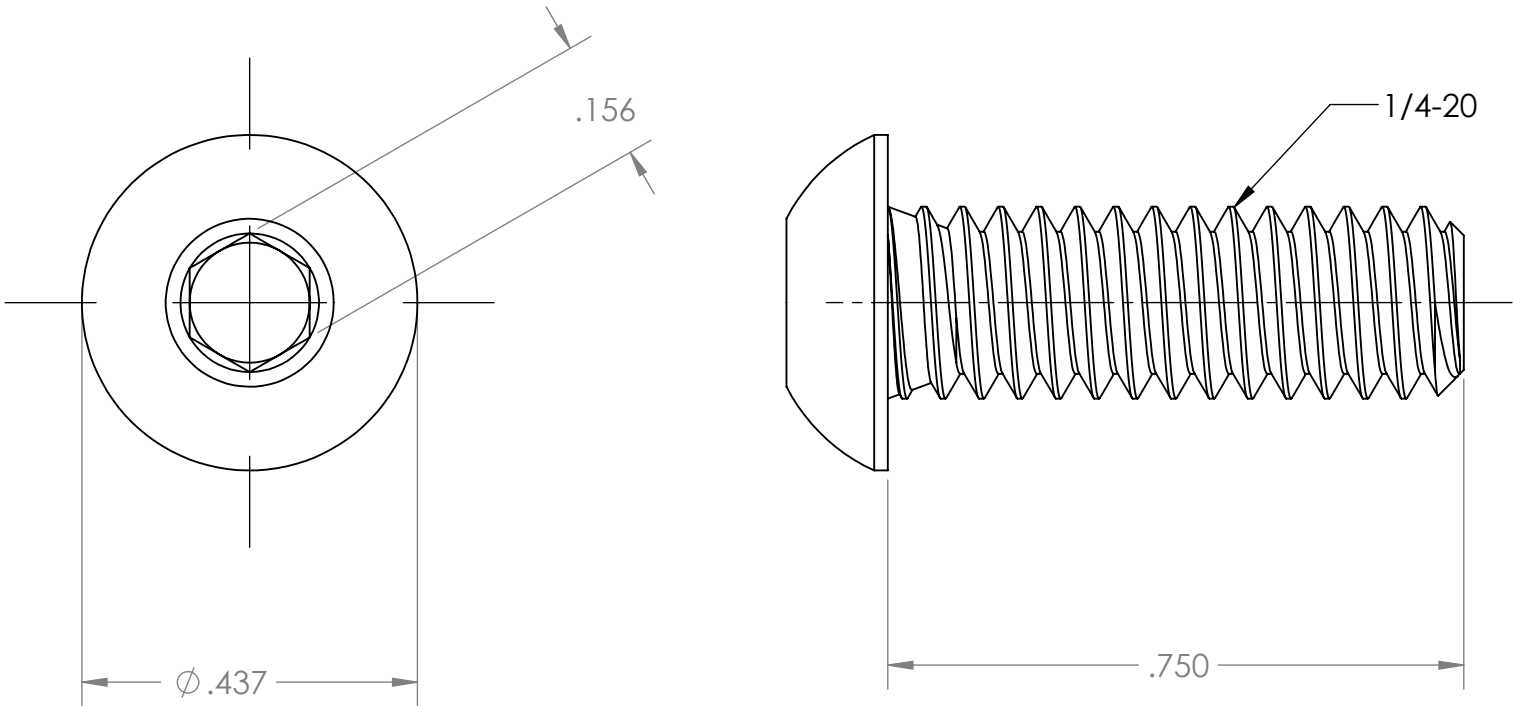
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Button Head Hex Drive Screw 1/4-20
Manufacturer purchased item	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 92949A540	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Carless Broncos	
		MATERIAL: AISI Type 316L stainless steel	
		TITLE/DESC: Button Head Hex Drive Screw	
		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: Button Head Hex Screw 1-4-20	
		DWG. #: P-013	REV #:
		SCALE: 4:1	SIZE B SHEET 1 OF 1

3

2

1

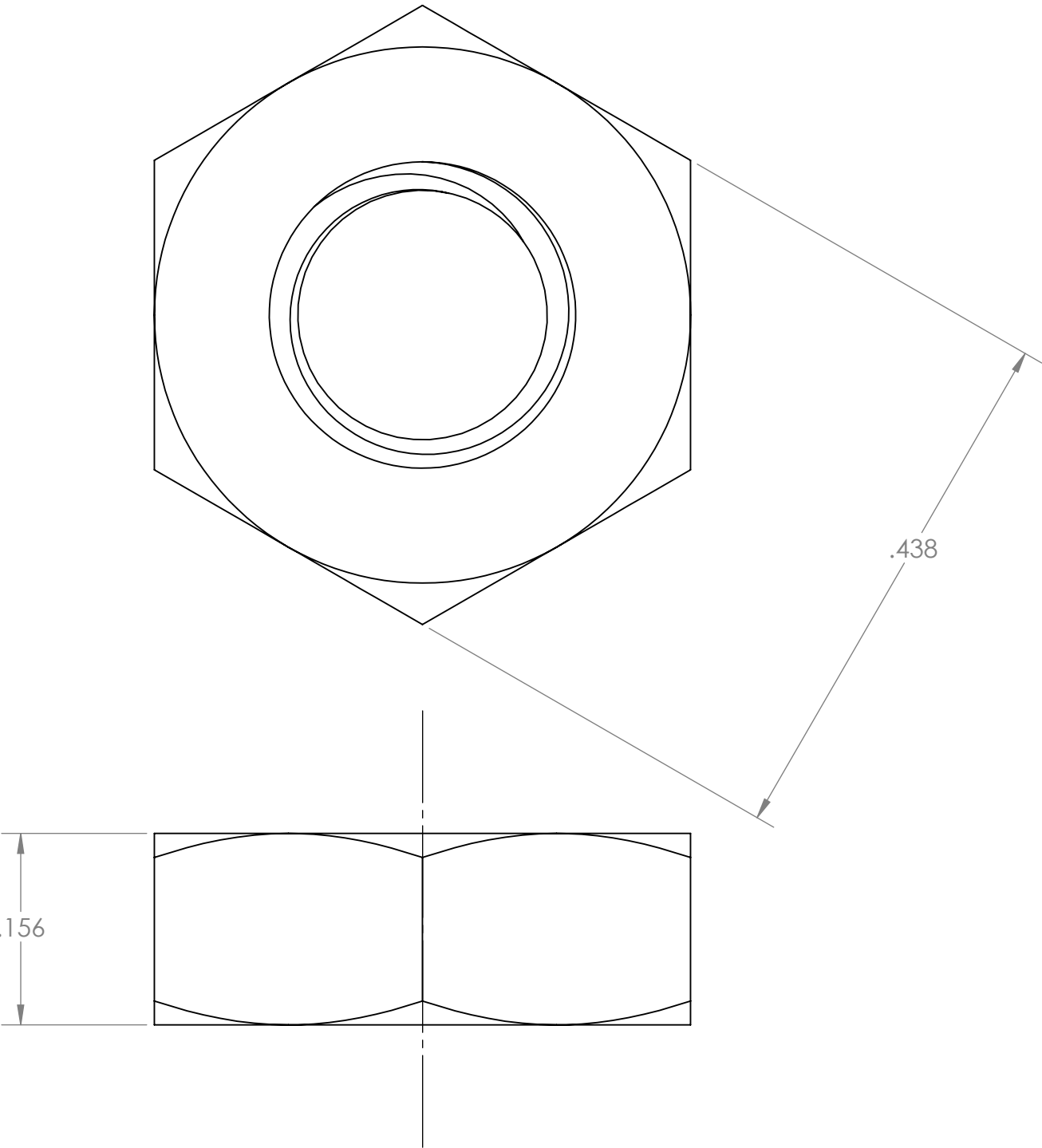
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Stainless Steel Thin Hex Nut 1/4-28
manufacturer purchased item	



DRAWN BY Felix Lasch	DATE 12/5/2019	STOCK VENDOR INFO: McMaster-Carr91847A429	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI Type 316L stainless steel	
		TITLE/DESC: Stainless Steel Thin Hex Nut 1/4-28	
		TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ± 0.1" TWO PLACE DECIMAL ± 0.05" THREE PLACE DECIMAL ± 0.005"	
		FILE NAME: Stainless Steel Thin Hex Nut 1-4-28	
		DWG. #: P-014	REV #:
		SCALE: 8:1	SIZE B
		SHEET 1 OF 1	

3

2

1

4

3

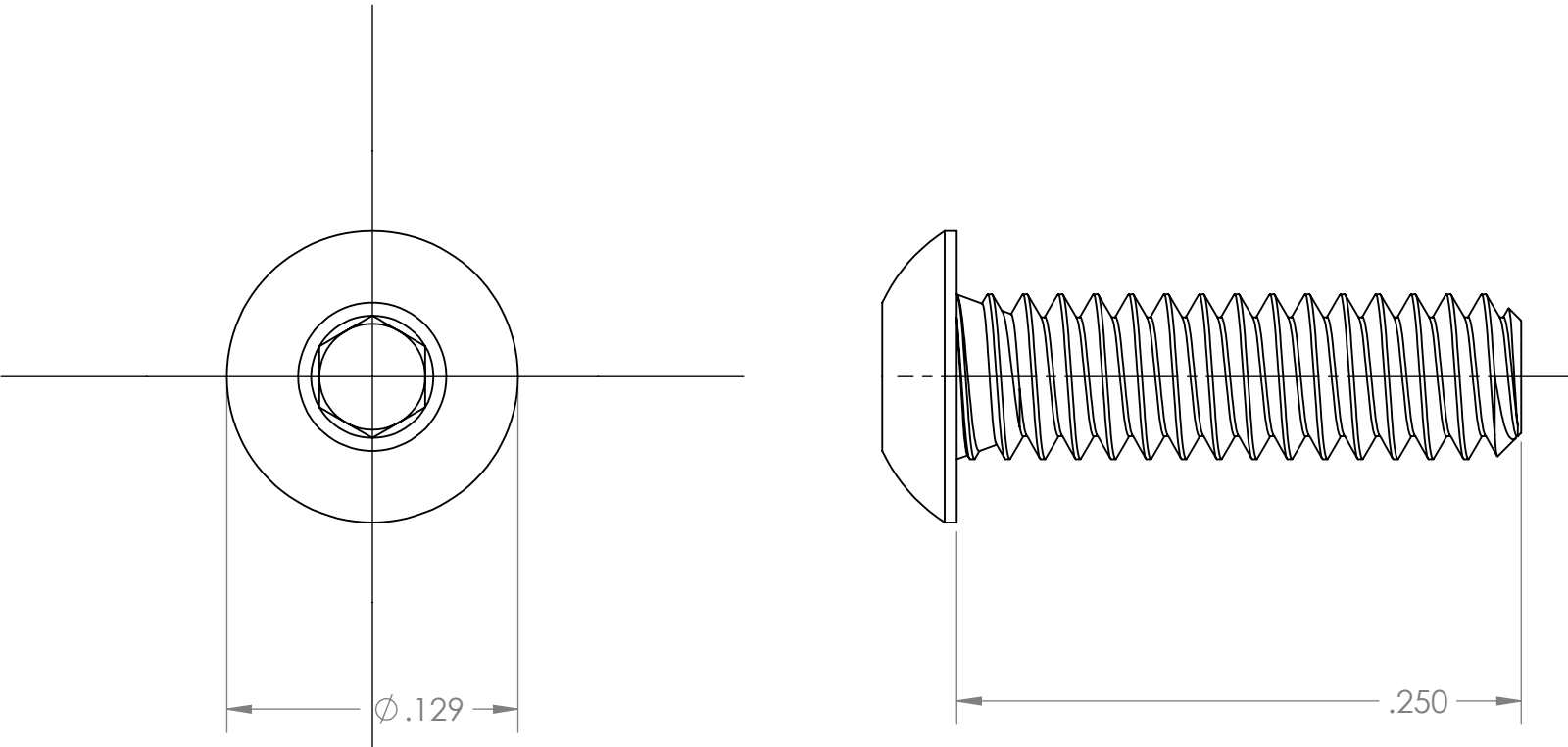
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS Button Head Hex Screw 1-64

manufacrurer purchased item



DRAWN BY Felix Lasch	DATE 12/5/2019	STOCK VENDOR INFO: McMaster-Carr 92949A316		
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection		
AU EMAIL	SINGNATURE	Careless Broncos		
		MATERIAL: AISI Type 316L stainless steel		
		TITLE/DESC: Button Head Hex Drive Screw 1-64		
		FILE NAME: Button Head Hex Drive Screw 1-64		
		DWG. #:	P-015	REV #:
		SCALE: 12:1	SIZE B	SHEET 1 OF 1

3

2

1

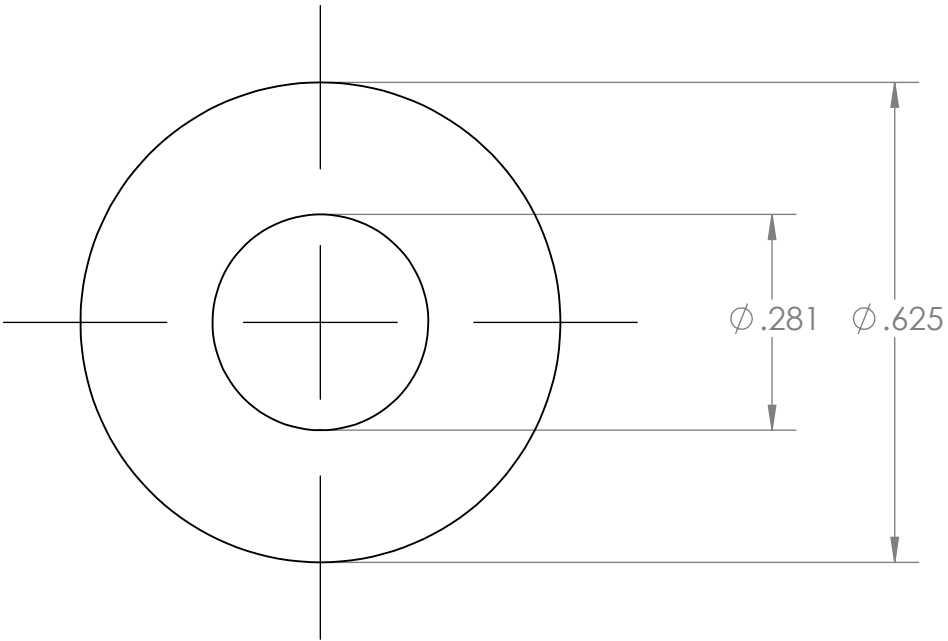
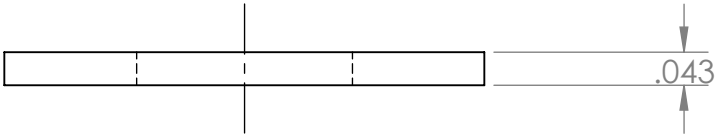
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Stainless Steel Washer 1/4
Manufacturer purchased item	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 90107A029	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI Type 316L stainless steel	
		TITLE/DESC: Stainless Steel Washer 1/4	
		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:	316 Stainless Steel Washer
		DWG. #:	P-016
		REV #:	
		SCALE: 4:1	SIZE B
		SHEET 1 OF 1	

3

2

1

4

B

B

A

A

4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS 608 Ball Bearing

Manufacturer purchased item

.276

Ø.315

Ø.839

DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 5972K91		
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection		
AU EMAIL	SINGNATURE	Careless Broncos		
		MATERIAL: AISI 1020		
		TITLE/DESC: 608 Ball Bearing		
		FILE NAME: 608 Ball Bearing		
		DWG. #:	P-017	REV #:
		SCALE: 4:1	SIZE B	SHEET 1 OF 1

3

2

1

4

3

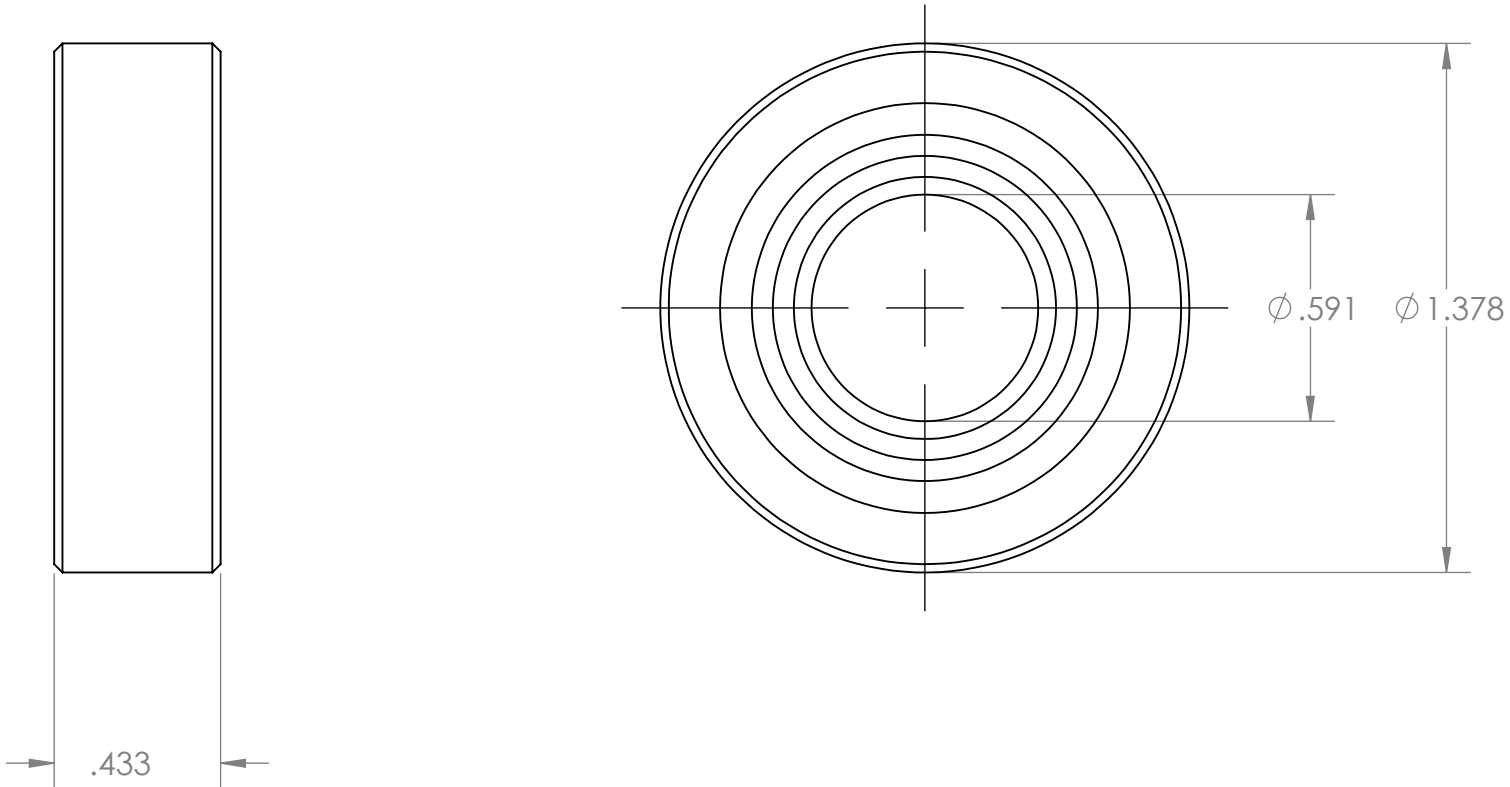
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	One-Way-Bearing
Manufacturer purchased item	

B

B



A

A

DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI 1020	
		TITLE/DESC: One-Way-Bearing	
		FILE NAME: One-Way-Bearing	
		DWG. #: P-018	REV #:
		SCALE: 2:1	SIZE B
		SHEET 1 OF 1	

4

3

2

1

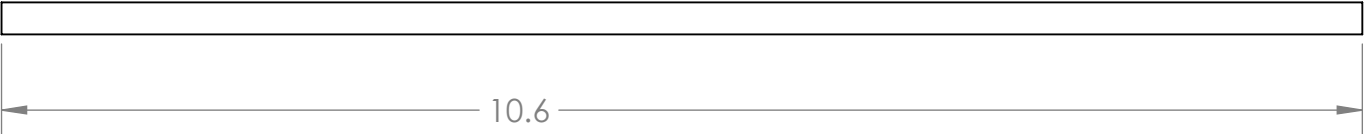
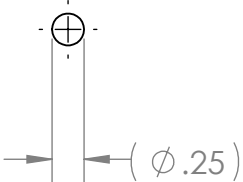
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Wooden Rod
1. Cut Rod to length	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: Home Depot #203360194	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: Oak	
		TITLE/DESC: Wooden Rod	
		FILE NAME: Wooden Rod	
		DWG. #: P-019	REV #: A
		SCALE: 1:2	SIZE B SHEET 1 OF 1

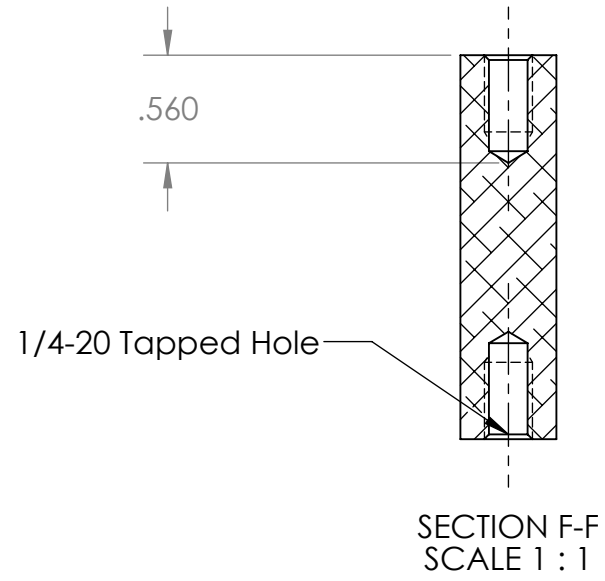
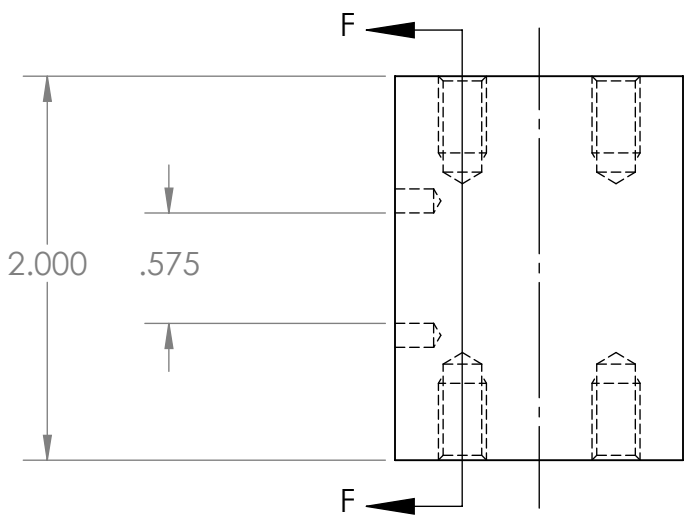
3

2

1

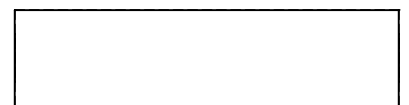
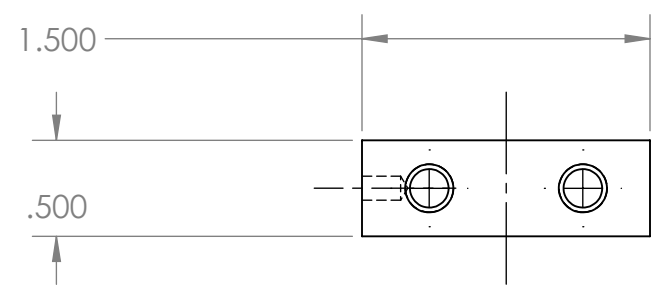
B

B



A

A



SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	6063 Aluminium Bar 1/2" x 1" x 4'
<div><div>1.</div>cut aluminum bar to 2" length with band saw</div> <div><div>2.</div>mill sides to legth of 1.5"</div> <div><div>3.</div>mark and centerpunch holes</div> <div><div>4.</div>drill hole for 1/4-20 thread with #7 drill</div> <div><div>5.</div>drill 1/8" holes</div> <div><div>6.</div>cut 1/4-20 thread</div>	

DRAWN BY Aditya Patwardhan		DATE 12/5/2019	
APPROVALS:		STOCK VENDOR INFO: McMaster Carr 89755k11	
AU EMAIL	SINGNATURE	UNLESS OTHERWISE SPECIFIED: CARELESS BRONCOS	
		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"	
		MATERIAL: 6063-T5	
		TITLE/DESC: Connection Rear Suspension	
		FILE NAME: Connection Rear Suspension	
		DWG. #: P-020	REV #: B
		SCALE: 1:1	SHEET 1 OF 1

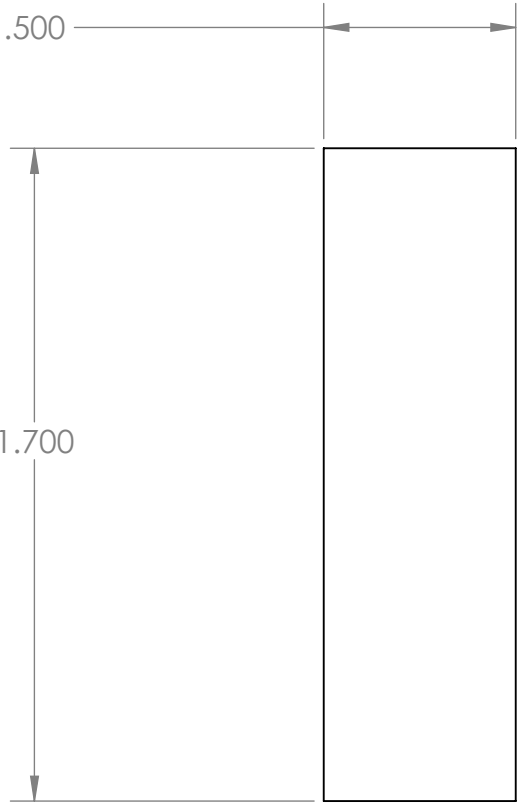
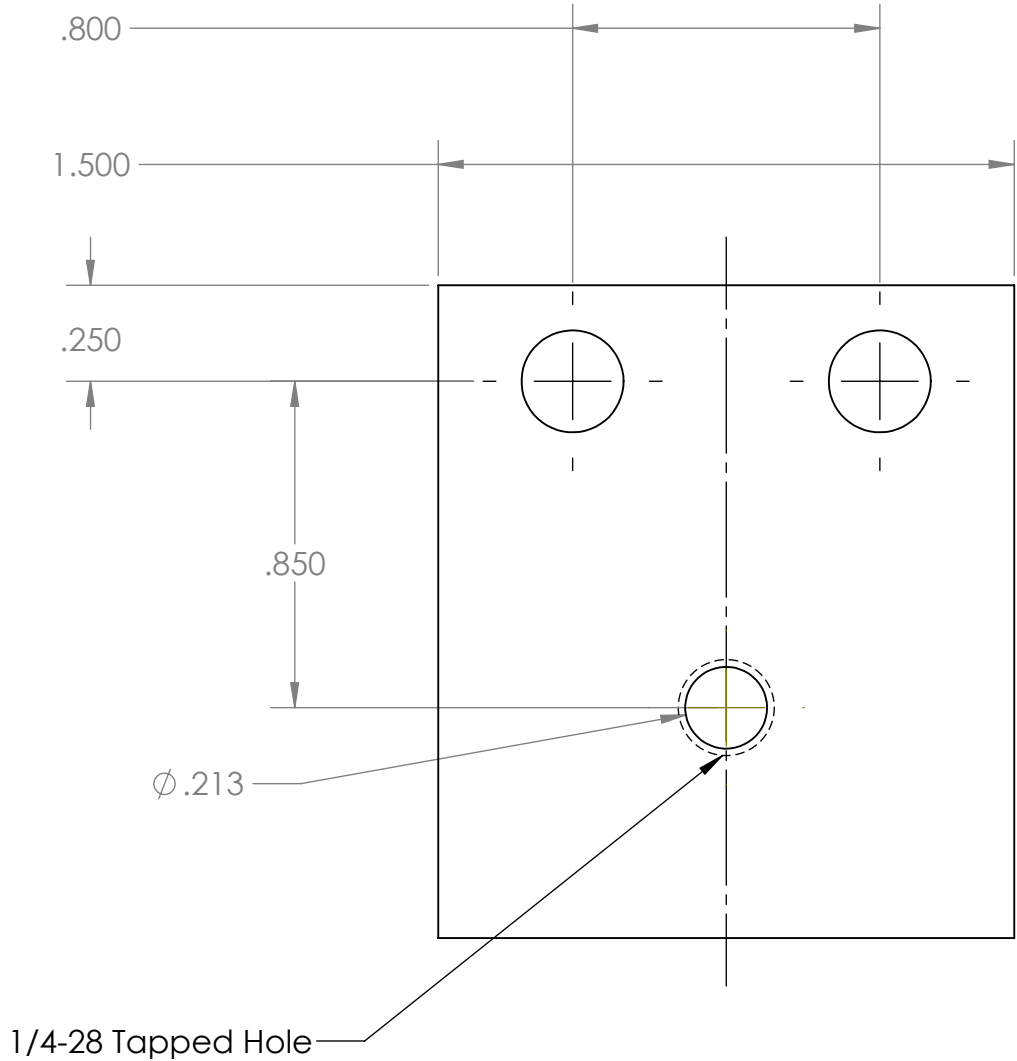
B

A

B

A

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Architectural 6063 Aluminum Bar 1/2" Thick, 2" Wide
1. Mill the 2" wide bar to 1.70" wide. 2. Drill and thread the 1/4-20 holes at given location. 3. Drill the two 17/64 holes at given location.	



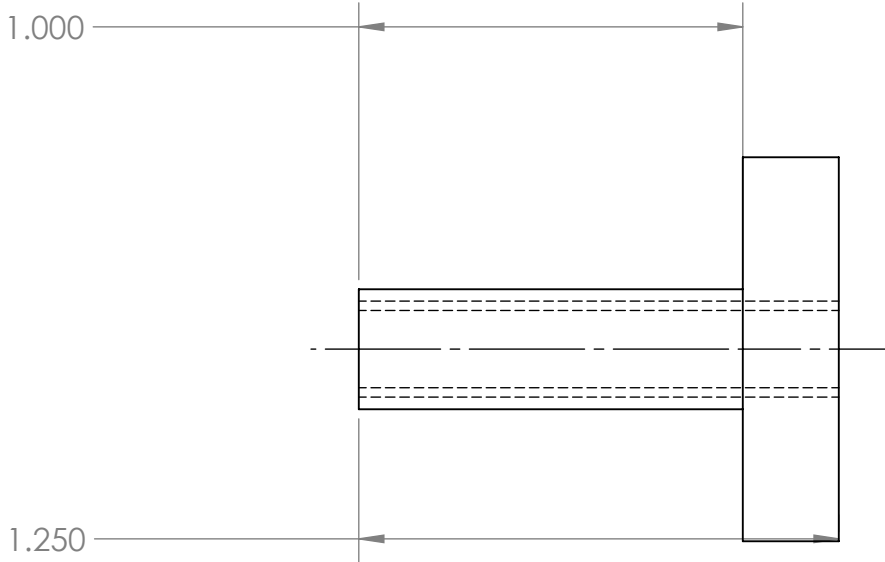
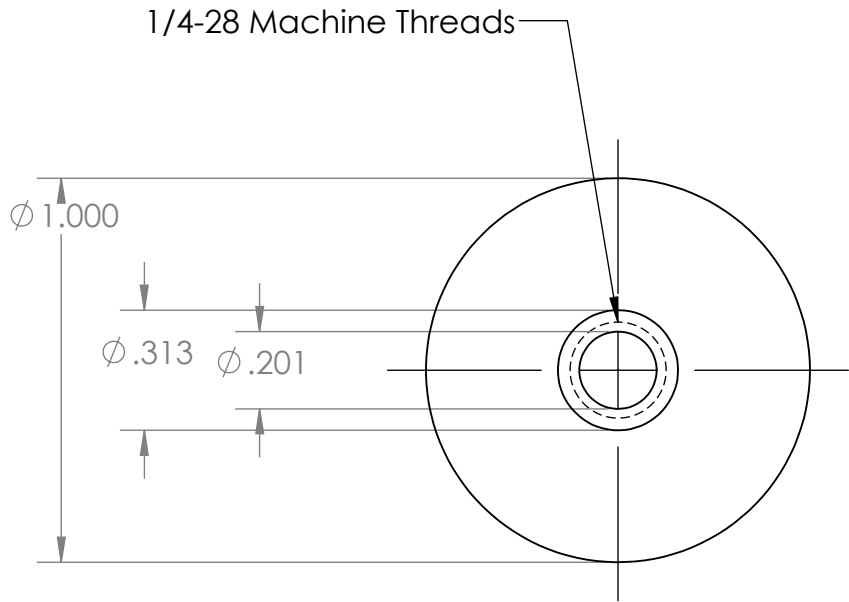
DRAWN BY Aditya Patwardhan	DATE 12/5/2019	STOCK VENDOR INFO: McMaster Carr 89755K14	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SIGNATURE	Careless Broncos	
		MATERIAL: 6063-T5	
		TITLE/DESC: Rear Suspension	
		FILE NAME: suspension rear	
		DWG. #: P-021	REV #: B
		SCALE: 2:1	SHEET 1 OF 1
		SIZE B	

B

A

B

A



SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Low-Carbon Steel Rod 1" Diameter
1.	Off the 1' steel rod, cut two parts 1.5" each for both muffles
2.	Lathe one end down to given dimensions.
3.	Drill and tap 1/4-20" holes in the center of both rods.

DRAWN BY Aditya Patwardhan		DATE 12/5/2019	
APPROVALS:			
AU EMAIL		SINGNATURE	

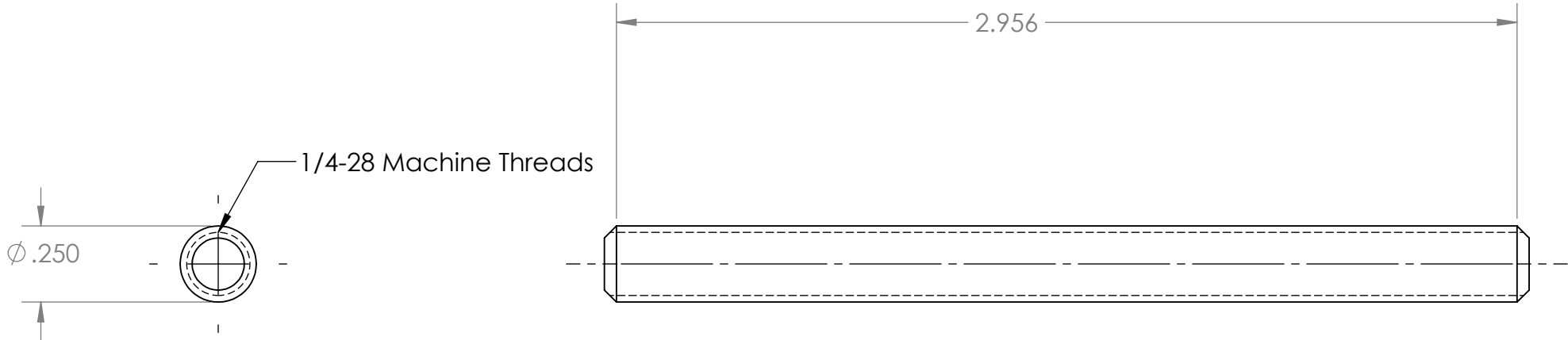
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Threaded Rod 1/4-20 x 3'
1. Cut threaded rod to a length of 3.366	
2. Chamfer the edges with a belt grinder	



DRAWN BY Aditya Patwardhan		DATE 12/5/2019		STOCK VENDOR INFO: McMaster-Carr 3313N11	
APPROVALS:				UNLESS OTHERWISE SPECIFIED:	
AU EMAIL		SINGNATURE		Careless Broncos	
				MATERIAL: AISI 1020	
				TITLE/DESC: Threaded Axle	
				FILE NAME: threaded axle rear right	
				DWG. #:	P-023
				REV #:	B
				SCALE: 2:1	SIZE B
				SHEET 1 OF 1	

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

3

2

1

4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS

STOCK DESC/DIMS Threaded Rod 1/4-20 x 3'

1. Cut threaded rod to a length of 2.677
2. Chamfer the edges with a belt grinder

1/4-28 Machine Threads

Ø .250

2.407

DRAWN BY Aditya Patwardhan	DATE 12/5/2019	STOCK VENDOR INFO: McMaster-Carr 3313N11		
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection		
AU EMAIL	SINGNATURE	Careless Broncos		
		MATERIAL: AISI 1020		
		TITLE/DESC: Threaded Axle		
		FILE NAME: threaded axle rear left		
		DWG. #:	P-024	REV #: B
		SCALE: 2:1	SIZE B	SHEET 1 OF 1

3

2

1

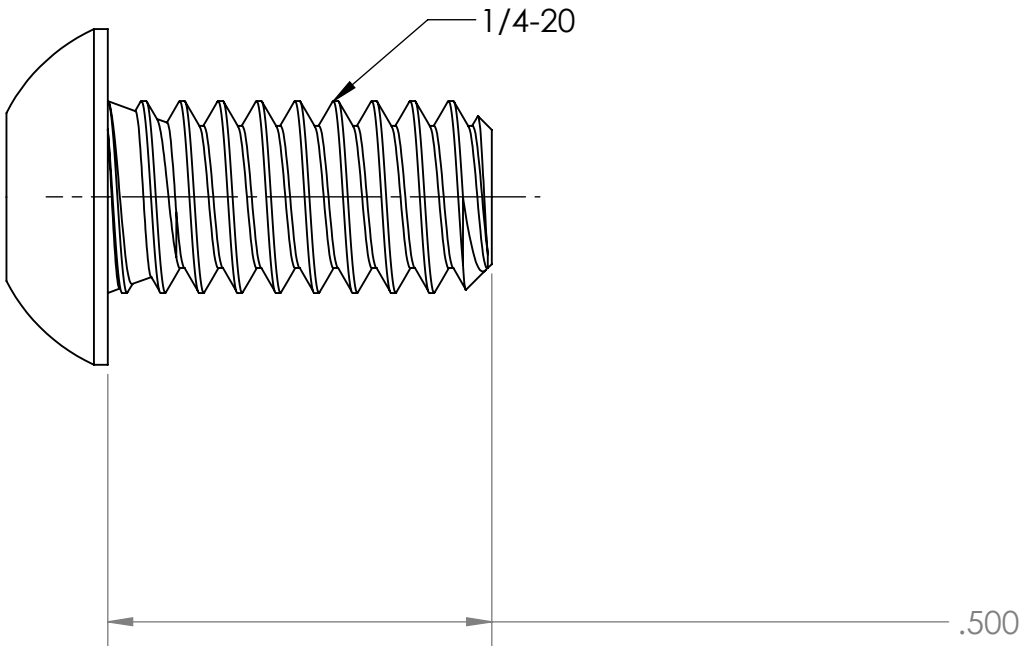
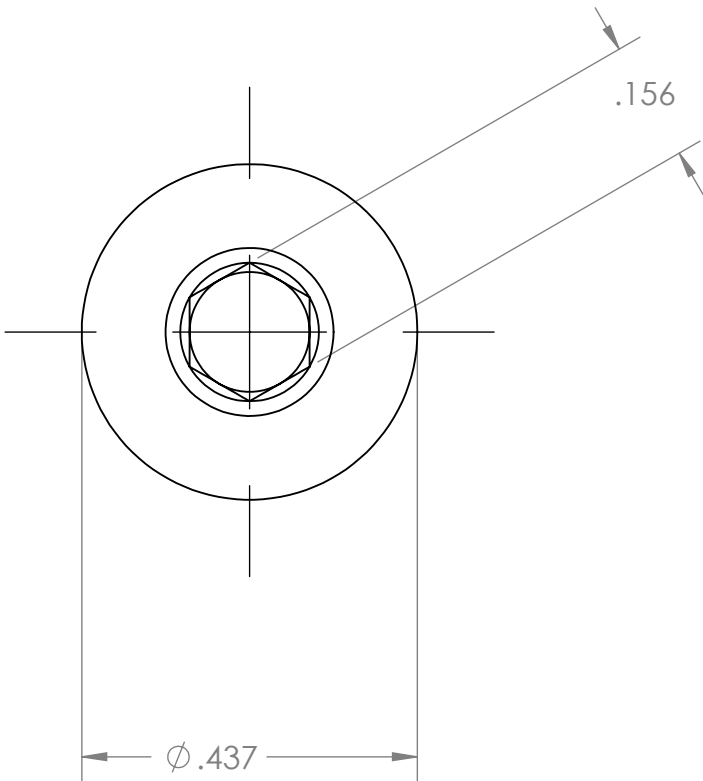
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Button Head Hex Drive Screw 1/4, 1/2
Manufacturer purchased item	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI Type 316L stainless steel	
		TITLE/DESC: Button Head Hex Drive Screw 1/4, 1/2	
		FILE NAME: Button Head Hex Drive Screw	
		DWG. #: P-025	REV #:
		SCALE: 4:1	SIZE B
		SHEET 1 OF 1	

3

2

1

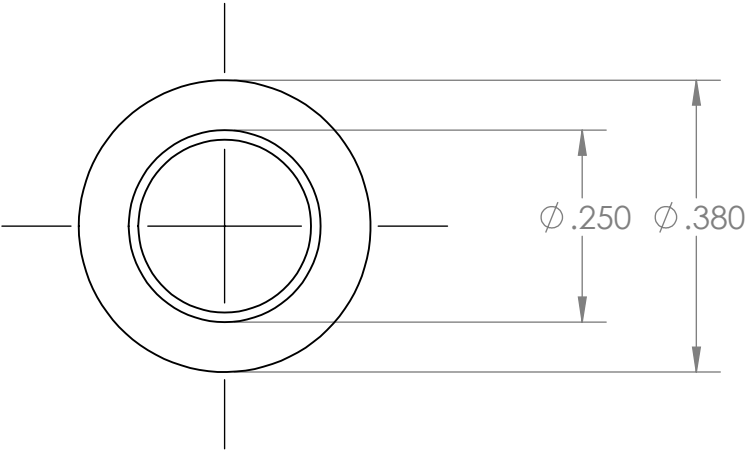
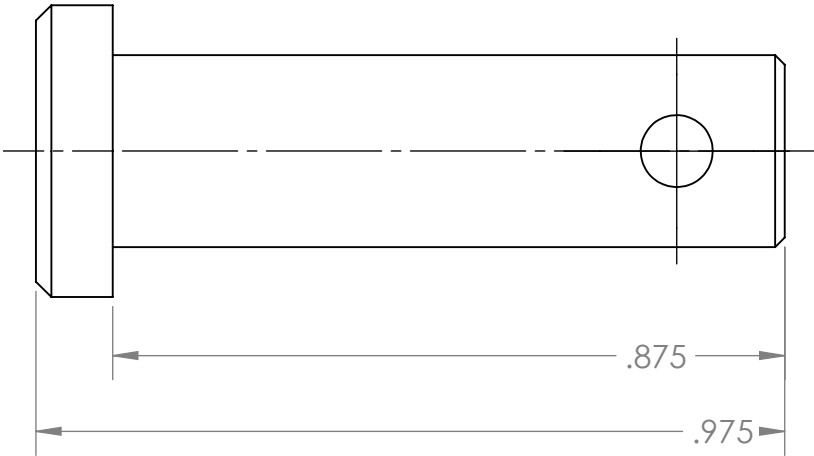
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Clevis Pin
Manufacturer purchased item	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 98306A158	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI 1020	
		TITLE/DESC: Clevis Pin	
		TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ± 0.1" TWO PLACE DECIMAL ± 0.05" THREE PLACE DECIMAL ± 0.005"	
		FILE NAME:	Clevis Pin
		DWG. #:	P-026
		REV #:	
		SCALE: 4:1	SIZE B
		SHEET 1 OF 1	

3

2

1

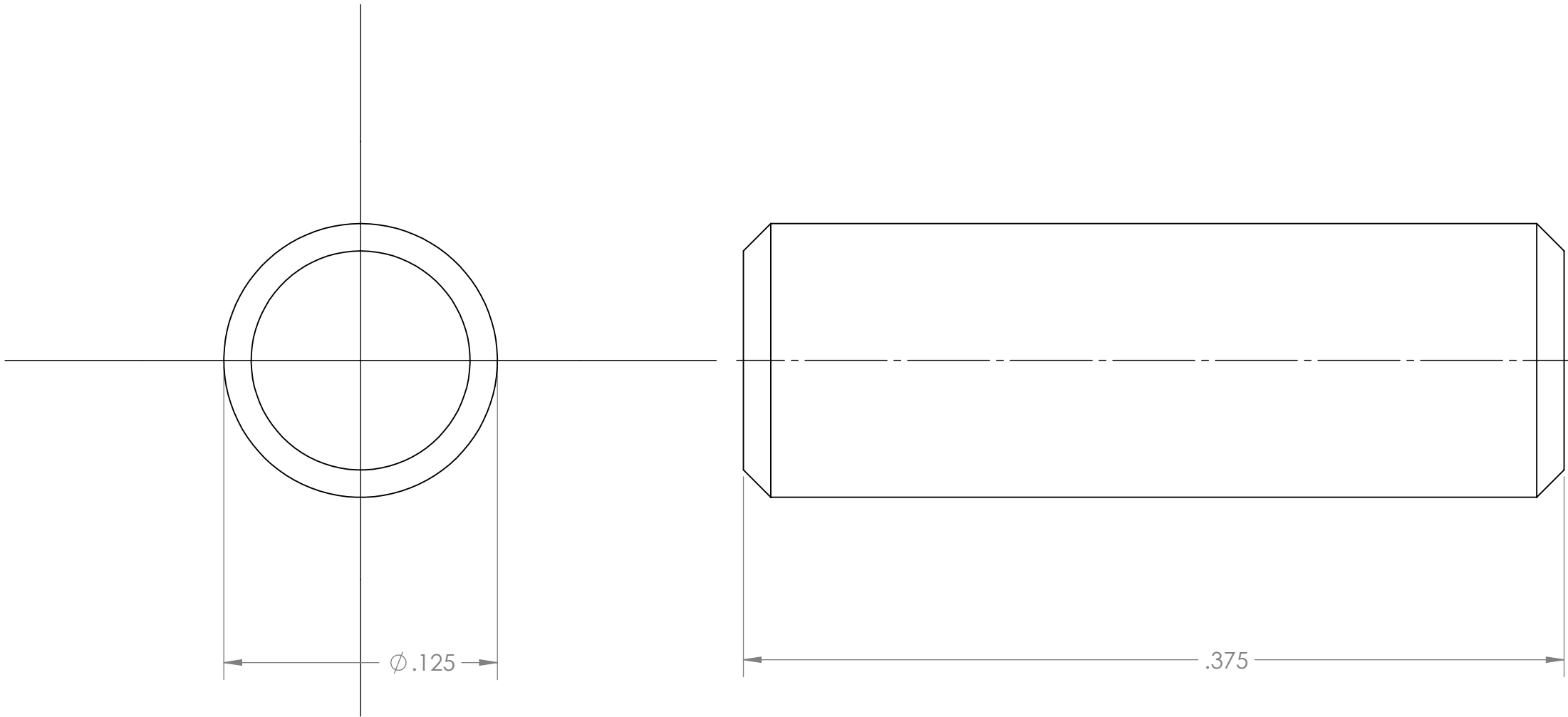
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Dowel Pin



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI 1020	
		TITLE/DESC: Dowel Pin	
		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:	Dowel Pin
		DWG. #:	P-027
		REV #:	
		SCALE: 16:1	SIZE B
		SHEET 1 OF 1	

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	12 in. x 24 in. Leathergrain Aluminum Sheet in Silver
1.	Cut a strip of material from the sheet of proper dimensions with a band saw
2.	Drill the holes using a power drill
3.	Sand the edges using silicon carbide sandpaper
4.	Bend the strip, by using the procedure of heat bending, according to the given tollerances



DRAWN BY Giampietro Nigro	DATE 12/5/2019	STOCK VENDOR INFO: Home Depot Model # 56030	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SIGNATURE	MATERIAL: Leathergrain Aluminum Sheet in Silver	
		TITLE/DESC: Split frame 1 Front	
		FILE NAME: Frame1_Unfolded Front	
		DWG. #:	P-028
		REV #:	D
		SCALE: 2:1	SIZE B
		SHEET 1 OF 2	

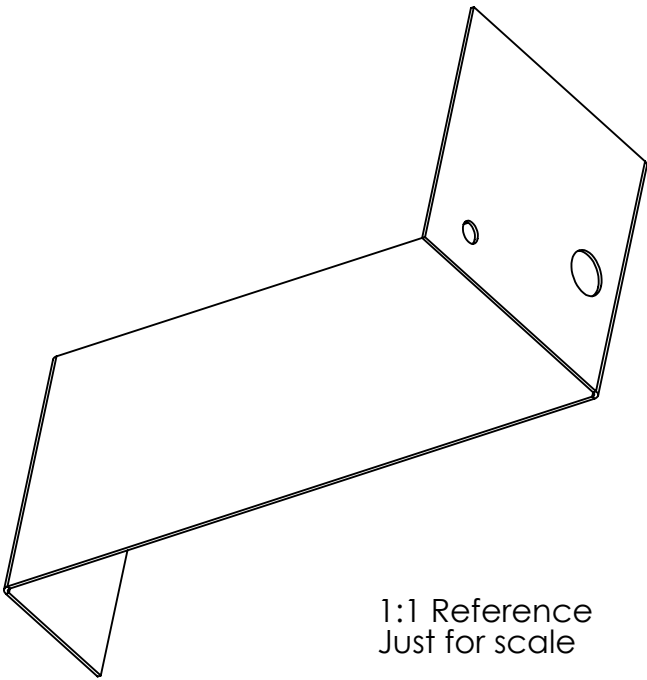
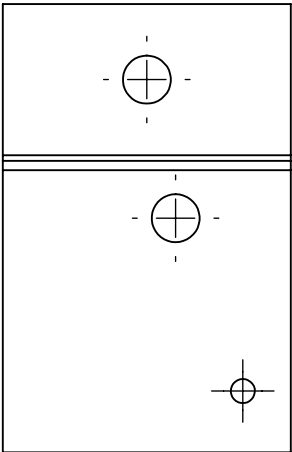
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	12 in. x 24 in. Leathergrain Aluminum Sheet in Silver
1.	Cut a strip of material from the sheet of proper dimensions with a band saw
2.	Drill the holes using a power drill
3.	Sand the edges using silicon carbide sandpaper
4.	Bend the strip, by using the procedure of heat bending, according to the given tollerances



DRAWN BY Giampietro Nigro	DATE 12/5/2019	STOCK VENDOR INFO: Home Depot Model # 56030	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: Leathergrain Aluminum Sheet in Silver	
		TITLE/DESC: Split frame 1 Front	
		FILE NAME:	Frame1 Front
		DWG. #:	P-028
		REV #:	D
		SCALE: 1:1	SIZE B
		SHEET 2 OF 2	

3

2

1

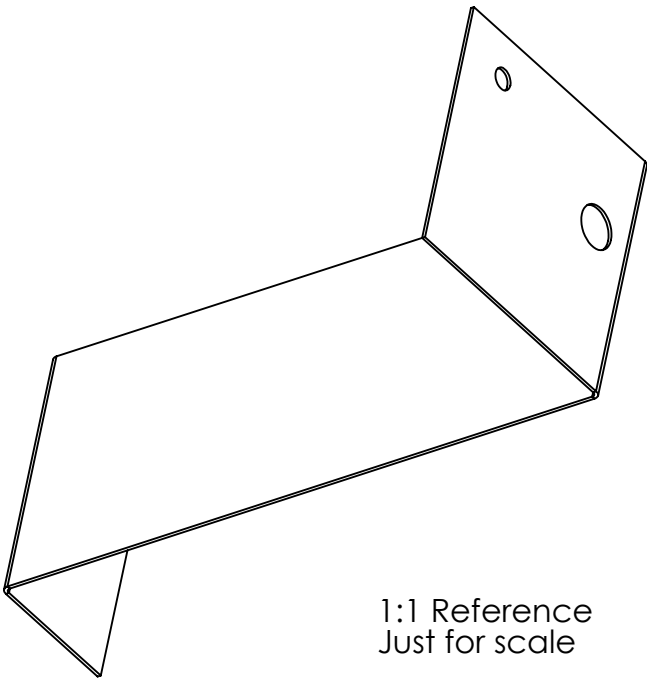
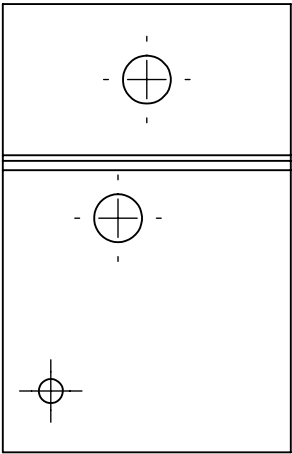
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	12 in. x 24 in. Leathergrain Aluminum Sheet in Silver
1.	Cut a strip of material from the sheet of proper dimensions with a band saw
2.	Drill the holes using a power drill
3.	Sand the edges using silicon carbide sandpaper
4.	Bend the strip, by using the procedure of heat bending, according to the given tollerances



DRAWN BY Giampietro Nigro	DATE 12/5/2019	STOCK VENDOR INFO: Home Depot Model # 56030	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: Leathergrain Aluminum Sheet in Silver	
		TITLE/DESC: Split frame 1 Rear	
		FILE NAME: Frame1 Rear	
		DWG. #: P-029	REV #: D
		SCALE: 1:1	SHEET 2 OF 2
		SIZE B	

4

3

2

1

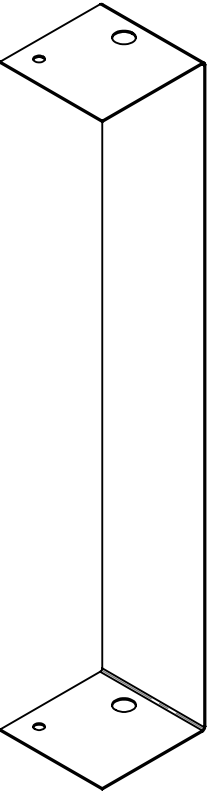
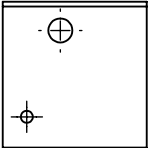
4

3

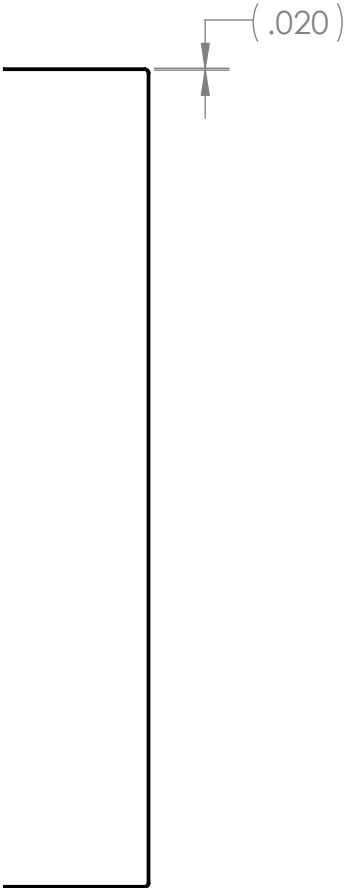
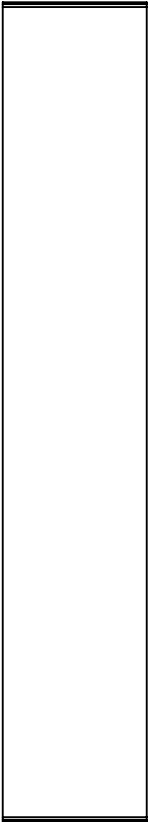
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	12 in. x 24 in. Leathergrain Aluminum Sheet in Silver
1.	Cut a strip of material from the sheet of proper dimensions with a band saw
2.	Drill the holes using a power drill
3.	Sand the edges using silicon carbide sandpaper
4.	Bend the strip, by using the procedure of heat bending, according to the given tollerances



1:2 Refence
Just for scale



DRAWN BY Giampietro Nigro	DATE 12/5/2019	STOCK VENDOR INFO: Home Depot Model # 56030	
APPROVALS:		CARELESS BRONCOS	
AU EMAIL	SINGNATURE	MATERIAL: Leathergrain Aluminum Sheet in Silver	
		TITLE/DESC: Split frame 2	
		FILE NAME: Frame2	
		DWG. #:	REV #:A
		SCALE: 1:2	SHEET 2 OF 2
		SIZE B	
		TOLERANCES:	
		ANGULAR	± 1°
		FRACTIONAL	± 1/8"
		ONE PLACE DECIMAL	± 0.1"
		TWO PLACE DECIMAL	± 0.05"
		THREE PLACE DECIMAL	± 0.005"

B

B

A

A

4

3

2

1

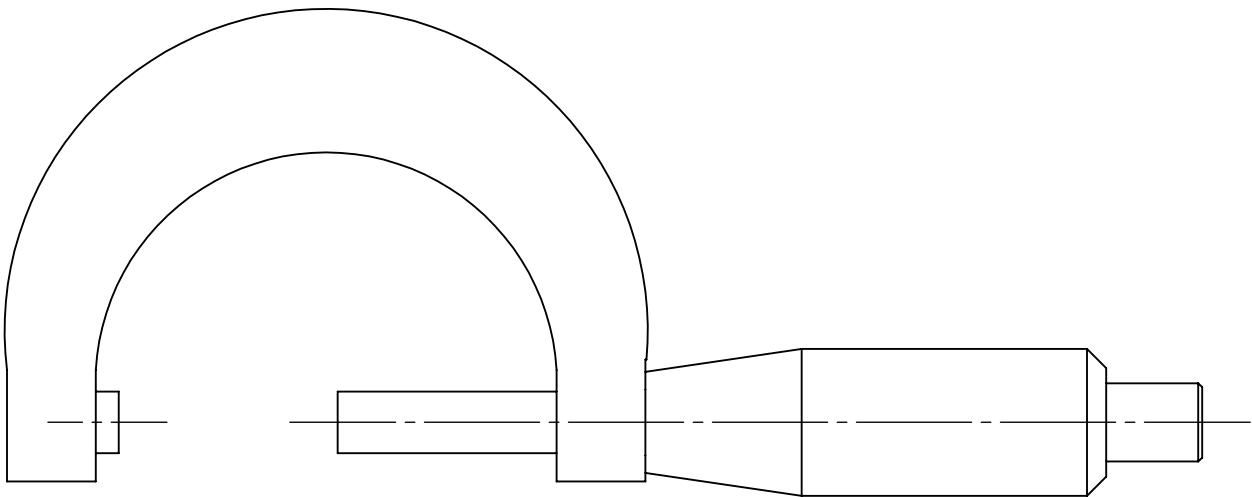
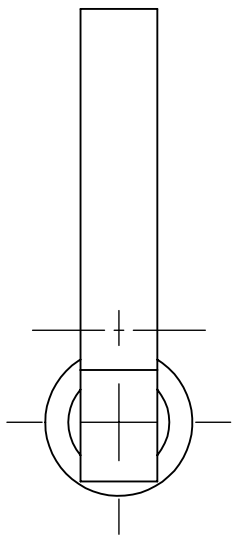
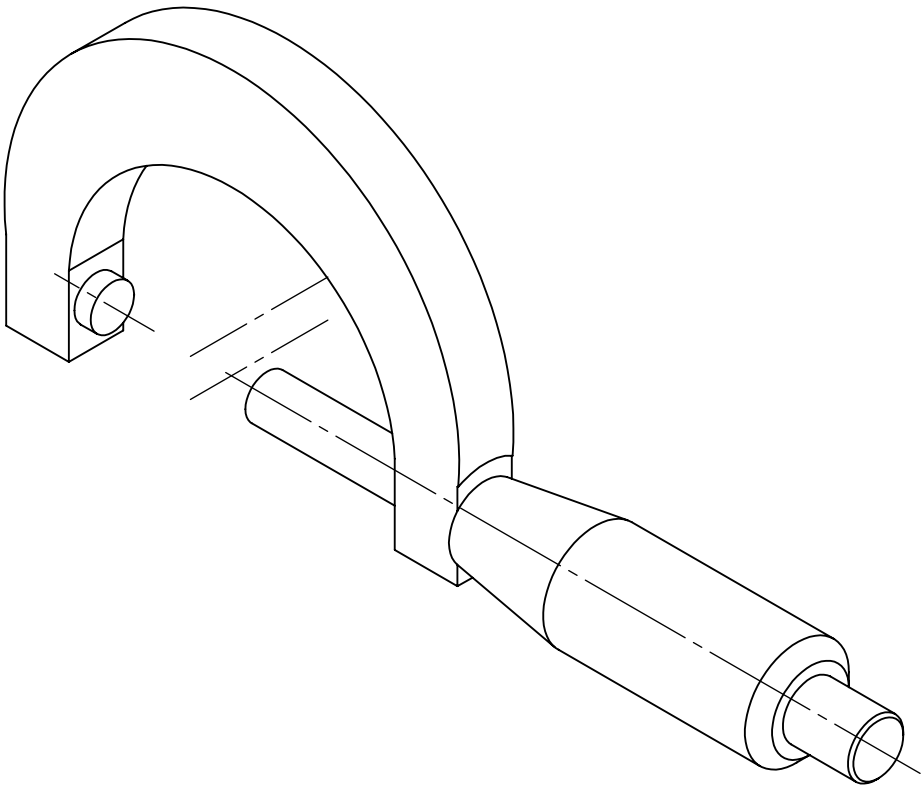
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	micrometer
Purchaed manufactured item	



DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 85205A61	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	GROUP NAME	
		MATERIAL: AISI 1020	
		TITLE/DESC: micrometer	
		FILE NAME:	micrometer
		DWG. #:	P-031
		REV #:	
		SCALE: 2:1	SIZE B
		SHEET 1 OF 1	

4

3

2

1

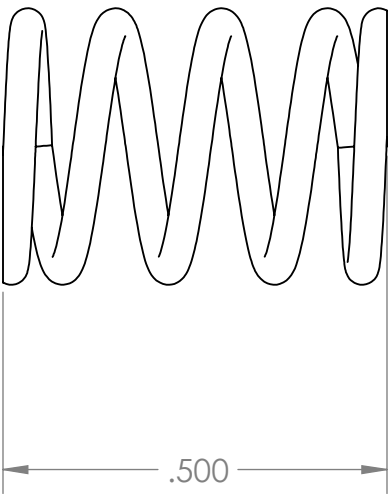
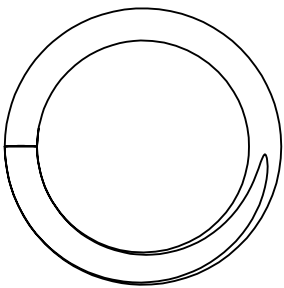
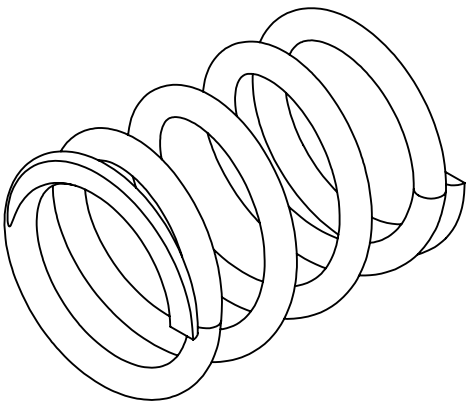
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Compression Spring
Purchased manufacturer Item	



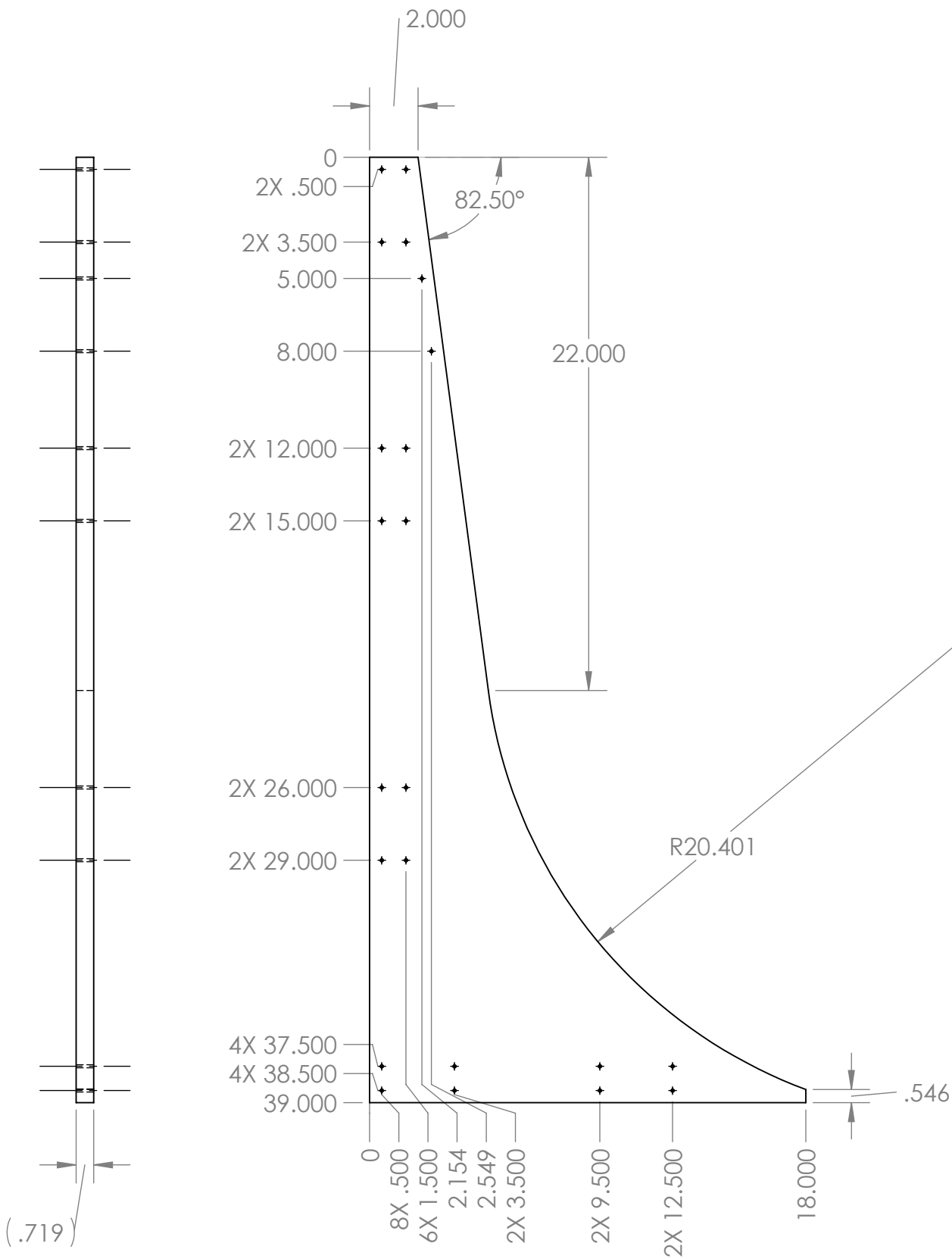
DRAWN BY Felix Lasch	DATE 11/21/2019	STOCK VENDOR INFO: McMaster-Carr 2022N161	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	Careless Broncos	
		MATERIAL: AISI 1020	
		TITLE/DESC: Compression Spring	
		TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ± 0.1" TWO PLACE DECIMAL ± 0.05" THREE PLACE DECIMAL ± 0.005"	
		FILE NAME:	Compression Spring
		DWG. #:	P-032
		REV #:	
		SCALE: 4:1	SIZE B
		SHEET 1 OF 1	

3

2

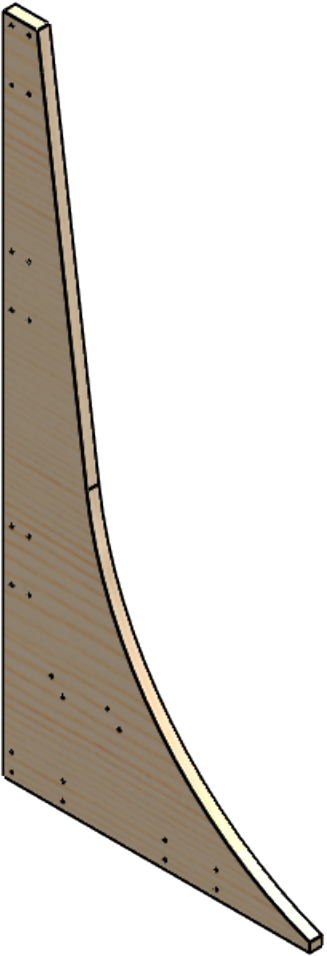
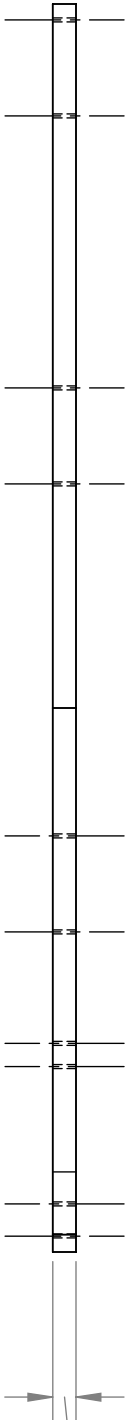
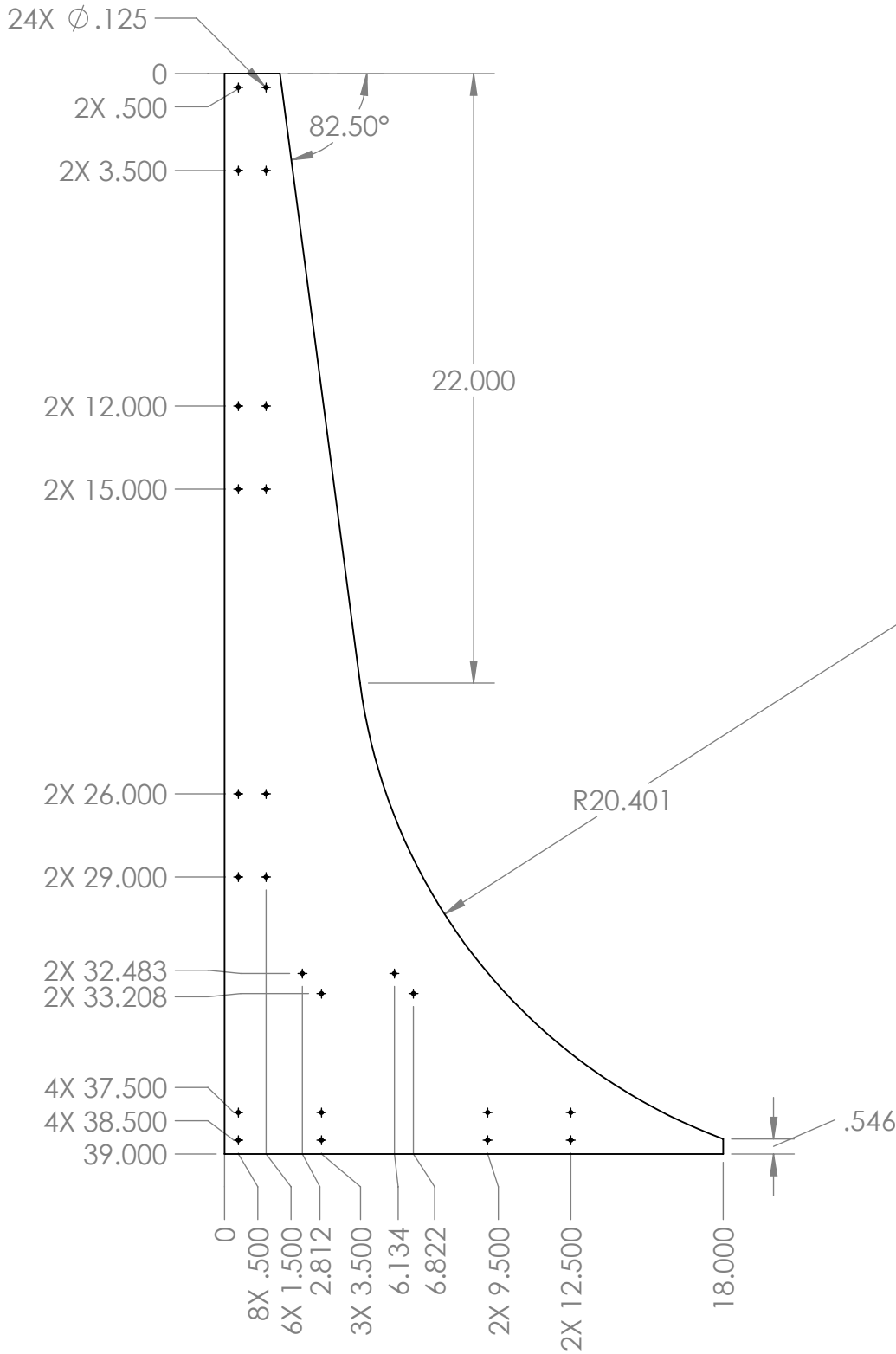
1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	BC SANDED PINE PLYWOOD 23/32 in. x 4 ft. x 8ft.
1.	USE CIRCULAR SAW TO CUT OUT A RECTANGLE WITH CORRECT LENGTH AND HEIGHT SPECIFIED. WIDTH WILL COME FROM THE PURCHASED PRODUCT.
2.	USE BAND SAW TO CUT OUT BASIC CURVE SHAPE OF PART.
3.	SAND EDGES TO MATCH DIMENSIONING WITHIN GIVEN TOLERANCES
4.	USE DRILL WITH 1/8 IN. BIT SIZE TO CREATE HOLES WITHIN GIVEN TOLERANCES



DRAWN BY ANDREW WEIR	DATE 11/21/2019	STOCK VENDOR INFO: Home Depot Model# 201428	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SIGNATURE	GROUP NAME	
		MATERIAL: Pine	
		TITLE/DESC: Ramp Right Side	
		FILE NAME: Left Ramp Side	
		DWG. #: P-033	REV #: A
		SCALE: 1:6	SIZE B
		SHEET 1 OF 1	

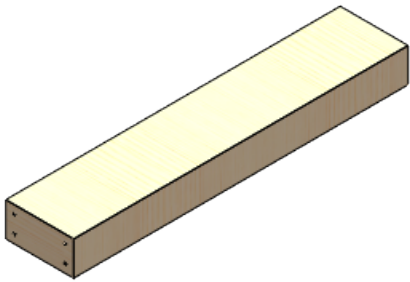
SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	BC SANDED PINE PLYWOOD 23/32 in. x 4 ft. x 8ft.
1.	USE CIRCULAR SAW TO CUT OUT A RECTANGLE WITH CORRECT LENGTH AND HEIGHT SPECIFIED. WIDTH WILL COME FROM THE PURCHASED PRODUCT.
2.	USE BAND SAW TO CUT OUT BASIC CURVE SHAPE OF PART.
3.	SAND EDGES TO MATCH DIMENSIONING WITHIN GIVEN TOLERANCES
4.	USE DRILL WITH 1/8 IN. BIT SIZE TO CREATE HOLES WITHIN GIVEN TOLERANCES



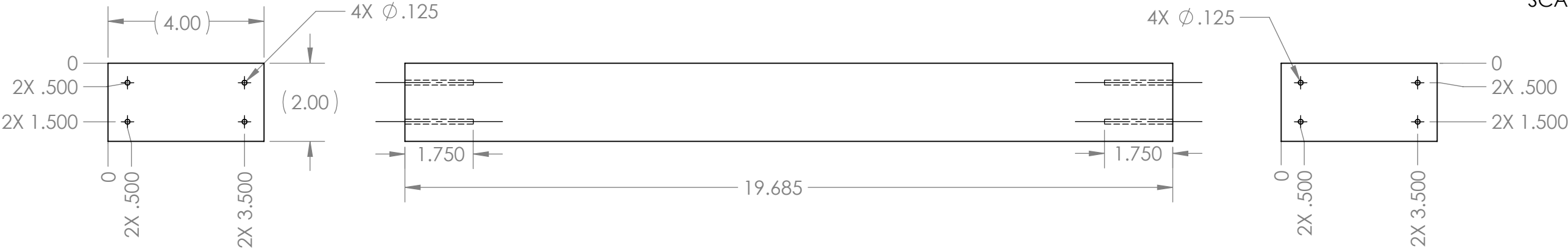
ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:8

DRAWN BY Andrew Weir	DATE 11/22/2019	STOCK VENDOR INFO: Home Depot Model# 201428	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	TEAM CARELESS BRONCOS	
		MATERIAL: Pine	
		TITLE/DESC: Ramp Right Side	
		FILE NAME: Ramp Right Side	
		DWG. #: P-034	REV #: D
		SCALE: 1:6	SIZE B
		SHEET 1 OF 1	

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	2 IN. X 4 IN. X 16 FT. SPRUCE PINE FIR LUMBER
1.	USE A CIRCULAR SAW TO CUT THE A BLOCK WITH LENGTH APPROXIMATELY EQUAL TO DIMENSIONS GIVEN. DIMENSIONS FOR WIDTH AND HEIGHT ARE EQUAL TO PURCHASED DIMENSIONS.
2.	USE A DRILL WITH 1/8 IN. TO DRILL THE SMALL HOLES ON BOTH SIDES OF THE BLOCK. THE LOCATION OF THE HOLES SHOULD FALL WITHIN TOLERANCES GIVEN. THE DEPTH OF THE HOLES ONLY HAVE TO FALL WITHIN 1 IN. OF TOLERANCE.
3.	SAND THE SIDES OF THE BLOCK UNTIL ALL TOLERANCES FALL WITHIN GIVEN TOLERANCES.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:8



DRAWN BY ANDREW WEIR	DATE 11/21/2019	STOCK VENDOR INFO: HOME DEPOT MODEL # 0133166	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SIGNATURE	CARELESS BRONCOS	
		MATERIAL: Pine	
		TITLE/DESC: RAMP CONNECTING SUPPORT	
		FILE NAME: base support	
		DWG. #: P-035	REV #: A
		SCALE: 1:3	SIZE B
		SHEET 1 OF 1	

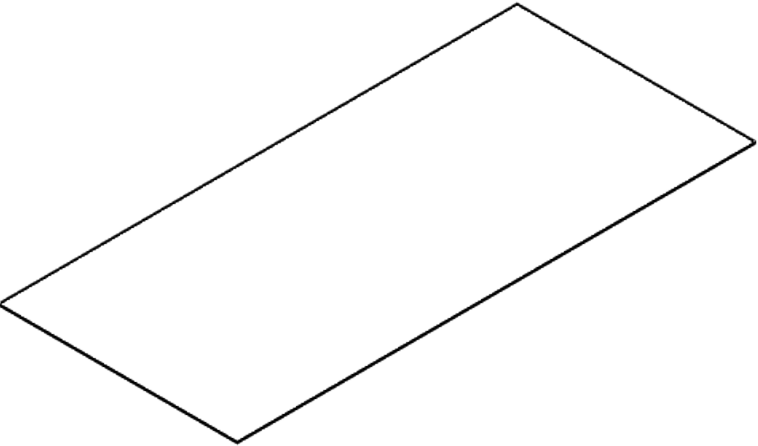
4

3

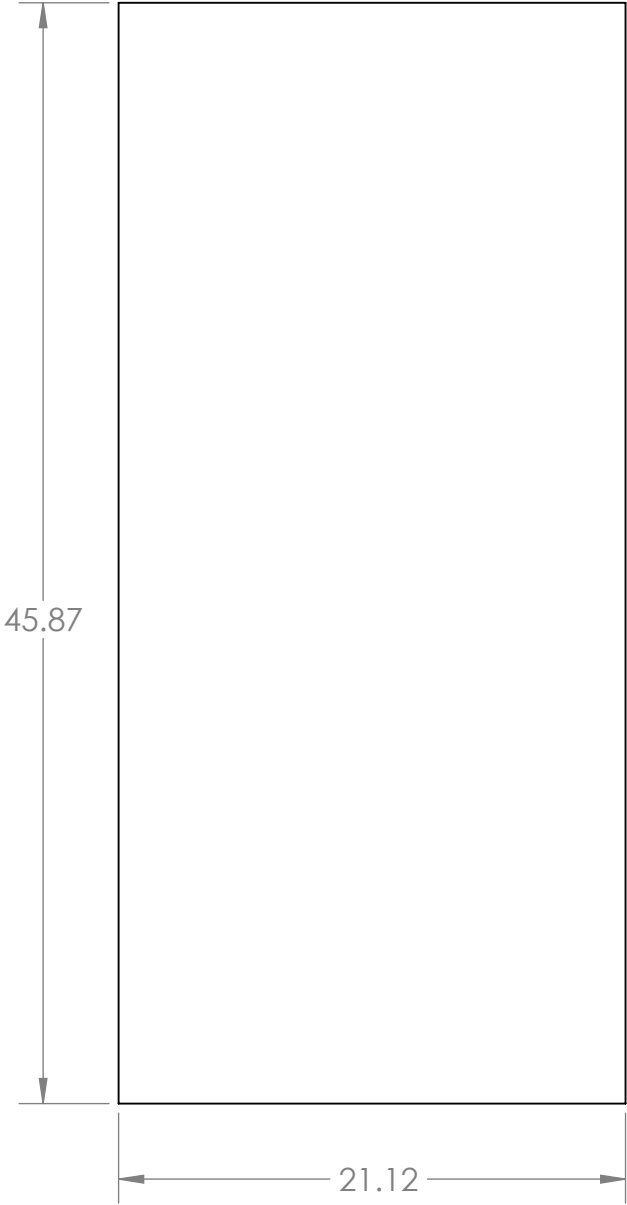
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	24 IN. W x 3 FT. L Galvanized Steel Sheet Metal
1.	USE A PAIR OF TIN SNIPS TO CUT THE SHEET METAL WITH APPROXIMATE LENGTH AND HEIGHT GIVEN.
2.	USE SAND PAPER TO SAND THE EDGES OF THE SHEET OF METAL UNTIL ALL DIMENSIONS ARE WITHIN TOLERANCE.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:12



(.013)

DRAWN BY ANDREW WEIR	DATE 11/21/2019	STOCK VENDOR INFO: LOWE'S MODEL # GVL0108	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	CARELESS BRONCOS	
		MATERIAL: Galvanized Steel	
		TITLE/DESC: Ramp Top	
		FILE NAME: ramp top	
		DWG. #: P-036	REV #: A
		SCALE: 1:8	SIZE B SHEET 1 OF 2
		TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ±0.1" TWO PLACE DECIMAL ±0.13" THREE PLACE DECIMAL ±0.125"	

4

3

2

1

B

B

A

A

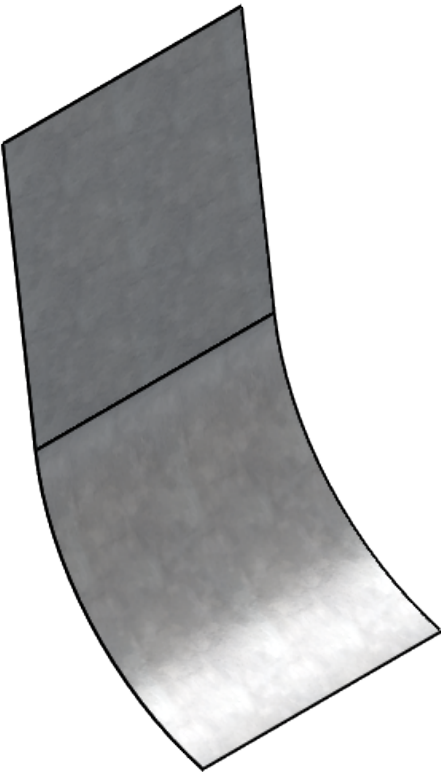
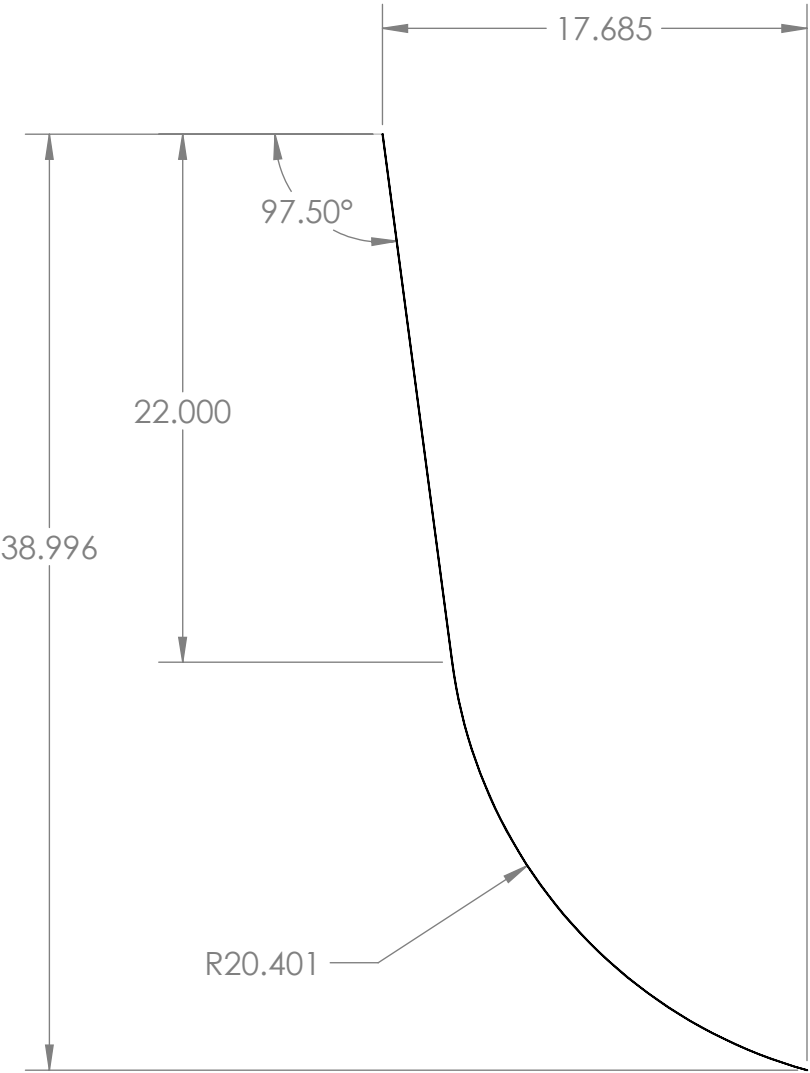
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	24 IN. W x 3 FT. L Galvanized Steel Sheet Metal
1.	USE HANDS TO BEND SHEET METAL UNTIL IT IS IN APPROXIMATE POSITION SHOWN.
2.	LINE THE SHEET METAL UP TO THE TOP OF THE RAMP, THEN USE PHYSICAL FORCE TO BEND THE METAL UNTIL IT IS FLUSH WITH THE TOP SURFACE OF THE RAMP.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:12

DRAWN BY ANDREW WEIR	DATE 11/21/2019	STOCK VENDOR INFO: LOWE'S MODEL # GVL0108	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	CARELESS BRNCOS	
		MATERIAL: Galvanized Steel	
		TITLE/DESC: Ramp Top	
		FILE NAME: ramp top	
		DWG. #: P-036	REV #: A
		SCALE: 1:8	SIZE B
		SHEET 2 OF 2	

4

3

2

1

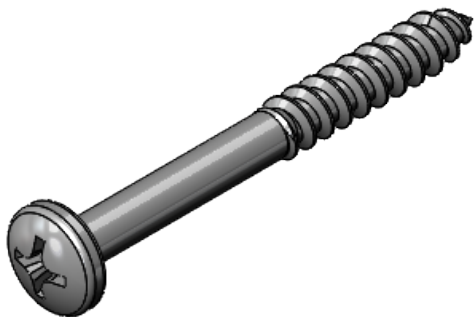
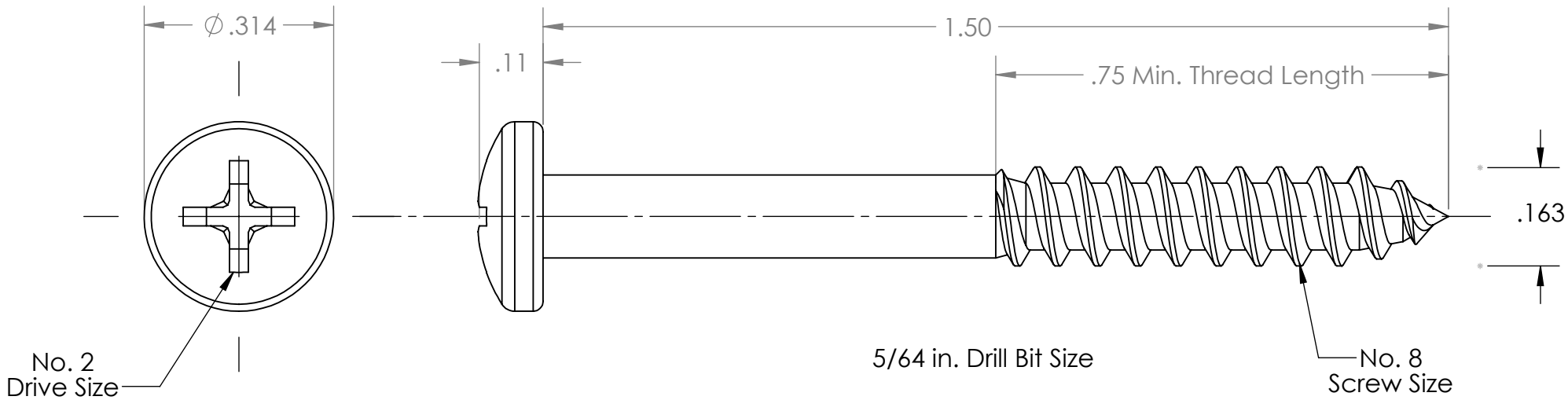
4

3

2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	Screw Rounded Head,No. 8 Size,1-1/2" Long
1. PURCHASE FROM MANUFACTURER	



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 2:1

DRAWN BY Andrew Weir	DATE 11/21/2019	STOCK VENDOR INFO: MCMaster-CARR ITEM NO. 93360A255		
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection		
AU EMAIL	SIGNATURE	CARELESS BRONCOS		
		MATERIAL: Stainless Steel		
		TITLE/DESC: Wood Screw No. 8 Size, 1-1/2" Long		
		FILE NAME: Smaller Wood Screw		
		DWG. #: P-037	REV #: A	
		SCALE: 4:1	SIZE B	SHEET 1 OF 1

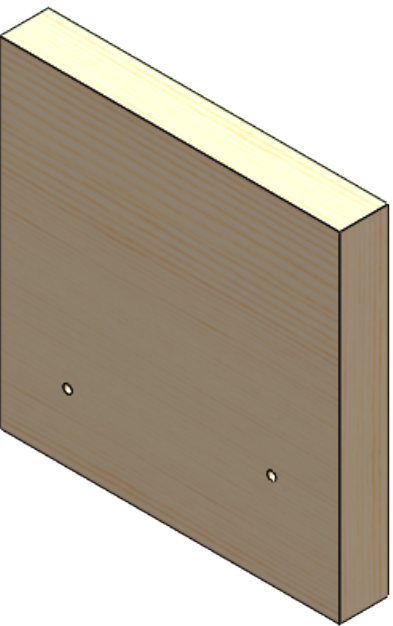
4

3

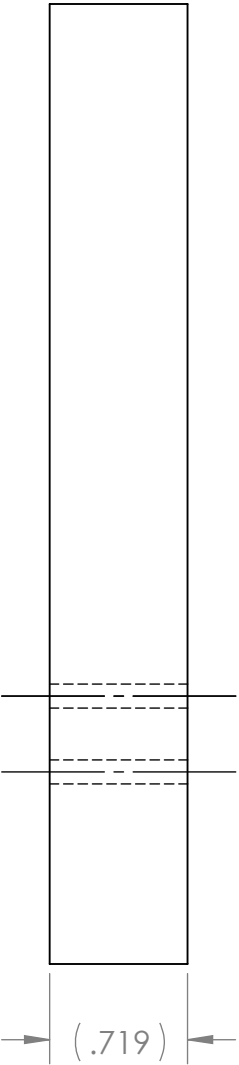
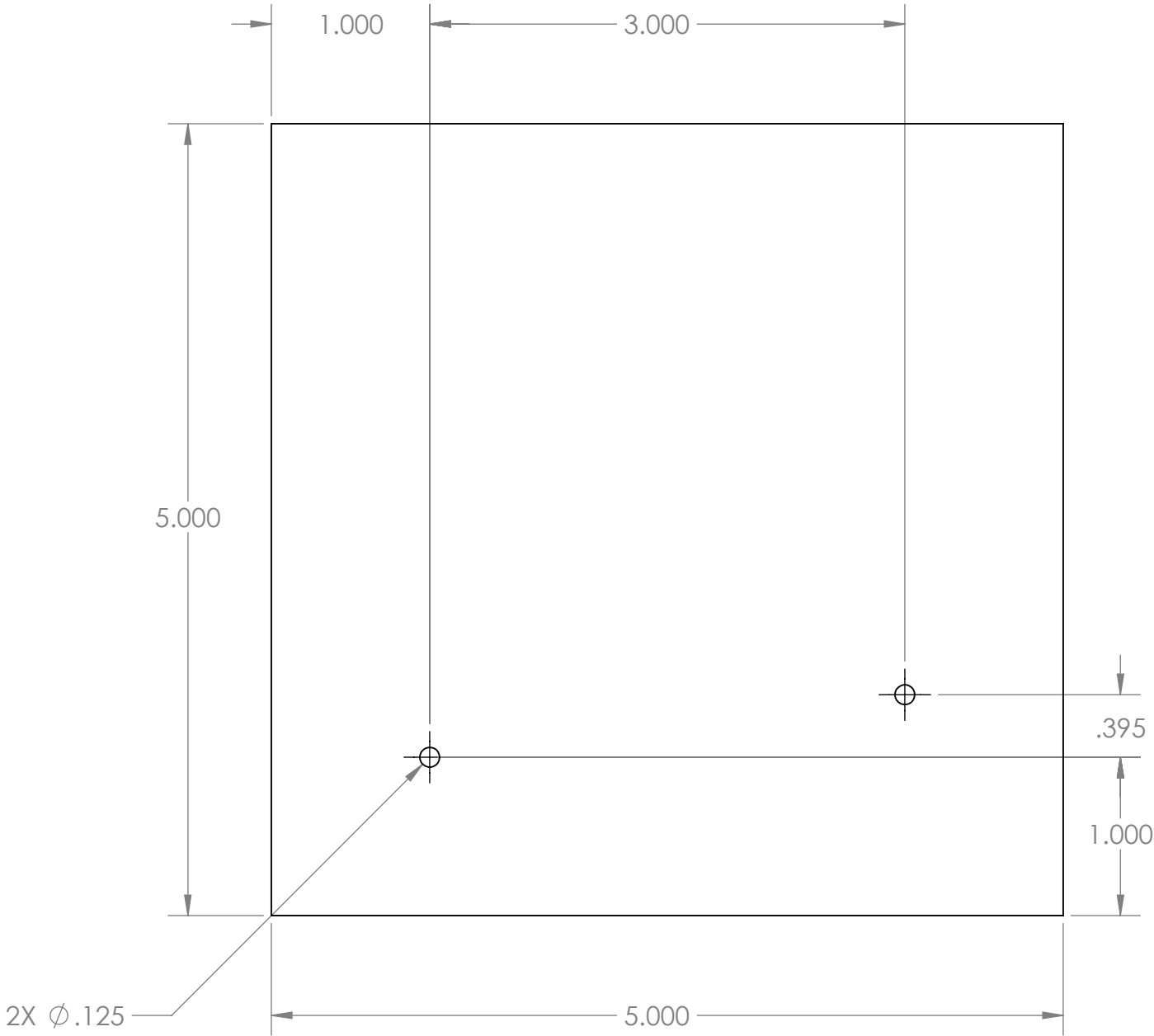
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	BC SANDED PINE PLYWOOD 23/32 IN. X 4 FT. X 8 FT.
1.	USE CIRCULAR SAW TO CUT A BLOCK WITH APPROXIMATE HEIGHT AND WEIGHT SHOWN. WIDTH OF BLOCK WILL COME FROM PURCHASED PRODUCT.
2.	USE A DRILL WITH 1/8 IN. BIT SIZE TO DRILL HOLES IN APPROPRIATE LOCATIONS. LOCATIONS SHOULD FALL WITHIN TOLERANCES.
3.	USE SAND PAPER TO SAND EDGES OF BLOCK UNTIL ALL DIMENSIONS ARE WITHIN TOLERANCE.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:2



DRAWN BY ANDREW WEIR	DATE 11/21/2019	STOCK VENDOR INFO: HOME DEPOT # 201428	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	CARELESS BRONCOS	
		MATERIAL: Pine	
		TITLE/DESC: Position Marker	
		FILE NAME: Position Marker	
		DWG. #: P-038	REV #: A
		SCALE: 1:1	SIZE B SHEET 1 OF 1
		TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ± 0.1" TWO PLACE DECIMAL ± 0.13" THREE PLACE DECIMAL ± 0.125"	

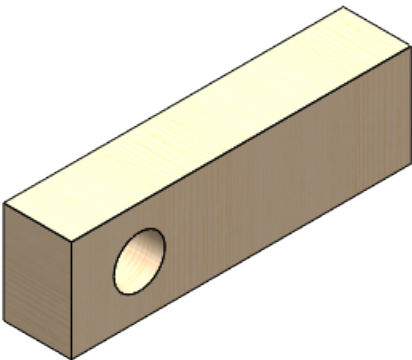
4

3

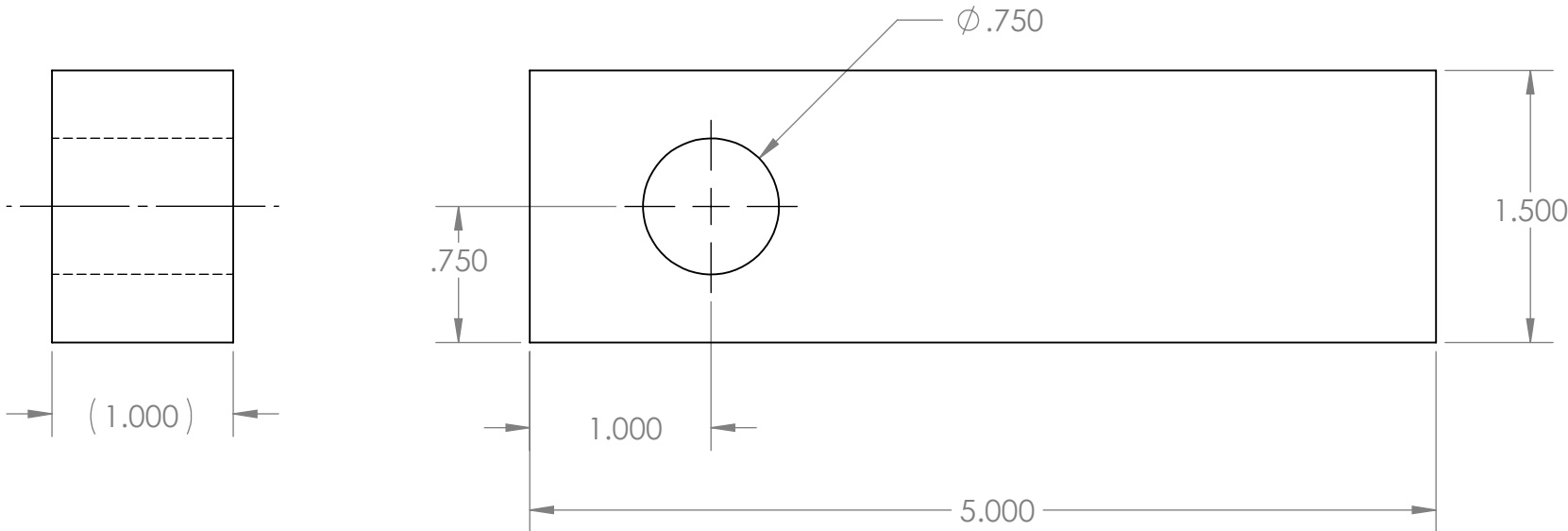
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	SELECT PINE BOARD 1in. X 6in. X 6ft.
1.	USE A CIRCULAR SAW TO CUT A BLOCK WITH LENGTH AND HEIGHT APPROXIMATELY EQUAL TO DIMENSIONS GIVEN. THE WIDTH SHOULD CORRESPOND TO PURCHASED MATERIAL.
2.	USE A DRILL WITH A BIT SIZE OF .75 IN TO CUT OUT A HOLE IN APPROXIMATE LOCATION GIVEN. THE LOCATION OF THE HOLE SHOULD FIT WITHIN TOLERANCES.
3.	USE SAND PAPER TO SAND THE EDGES OF THE BLOCK AND HOLE UNTIL IT FITS WITHING GIVEN TOLERANCES.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:2



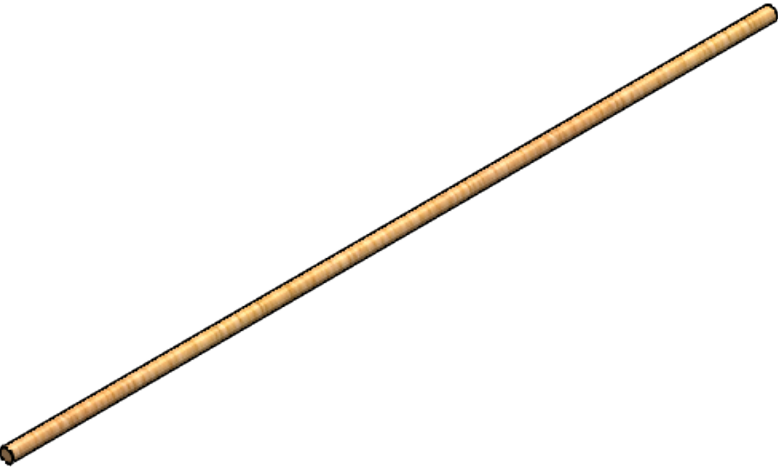
DRAWN BY Andrew Weir	DATE 11/21/2019	STOCK VENDOR INFO: HOME DEPOT MODEL #928787	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	CARELESS BRONCOS	
		MATERIAL: Pine	
		TITLE/DESC: RELEASE LEVER	
		FILE NAME: Release Lever	
		DWG. #: P-039	REV #: A
		SCALE: 1:1	SHEET 1 OF 1
		SIZE B	

3

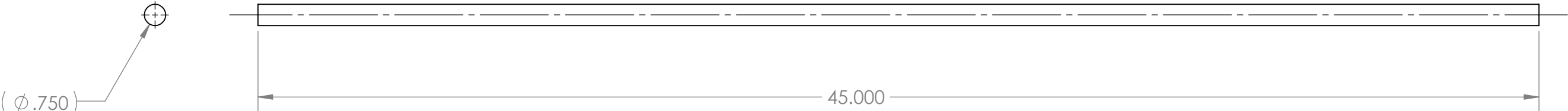
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	3/4 IN. X 36 IN. OAK ROUND DOWEL
1.	USE A CIRCULAR SAW TO CUT A DOWEL WITH APPROXIMATE LOCATION SPECIFIED. THE DIAMETER OF THE DOWEL SHOULD CORRESPOND TO THAT OF PURCHASED MATERIAL.
2.	USE SAND PAPER TO SAND THE BASE OF THE DOWEL UNTIL IT IS WITHIN GIVEN TOLERANCES.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:8



DRAWN BY Joe Ragan	DATE 11/21/2019	STOCK VENDOR INFO: HOME DEPOT MODEL #HDDO3436	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	CARELESS BRONCOS	
		MATERIAL: Oak	
		TITLE/DESC: RELEASE DOWEL	
		TOLERANCES: ANGULAR ± 1° FRACTIONAL ± 1/8" ONE PLACE DECIMAL ±0.1" TWO PLACE DECIMAL ±0.13" THREE PLACE DECIMAL ±0.125"	
		FILE NAME:	Release Dowel
		DWG. #:	P-040
		REV #:	A
		SCALE: 1:4	SIZE B
		SHEET 1 OF 1	

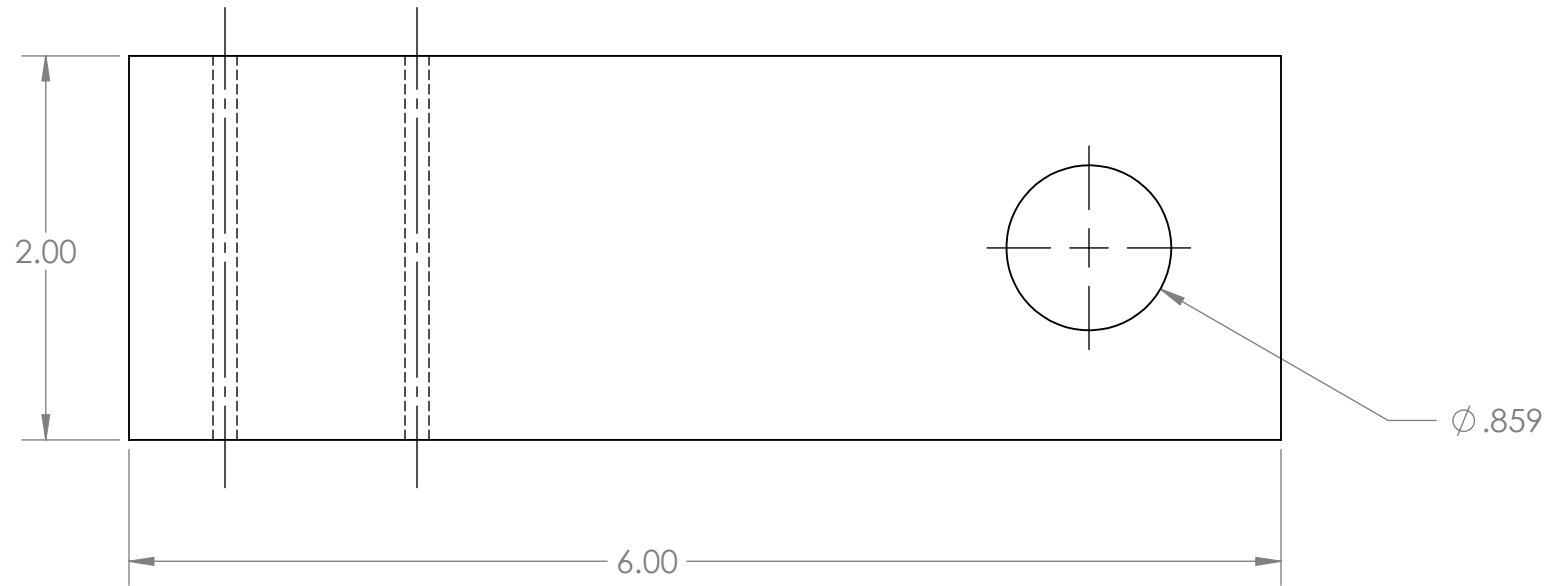
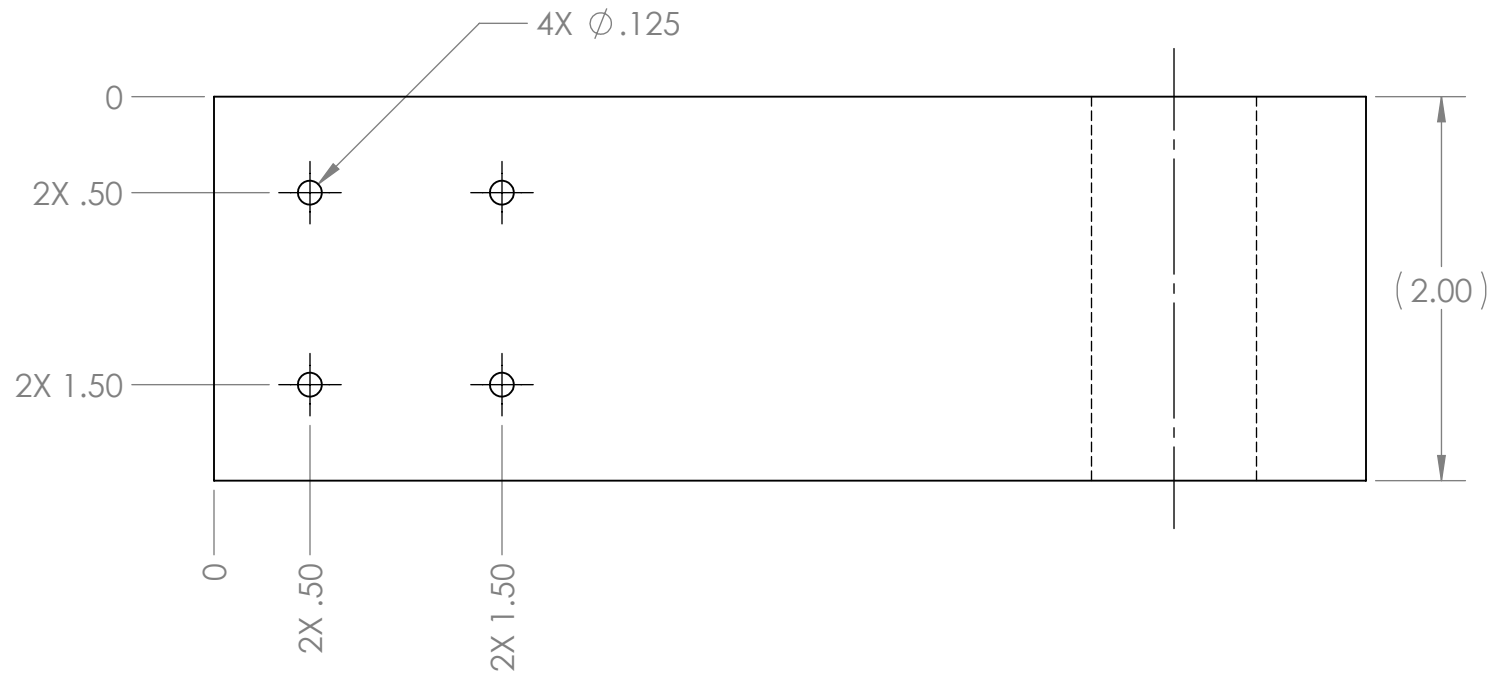
4321

B

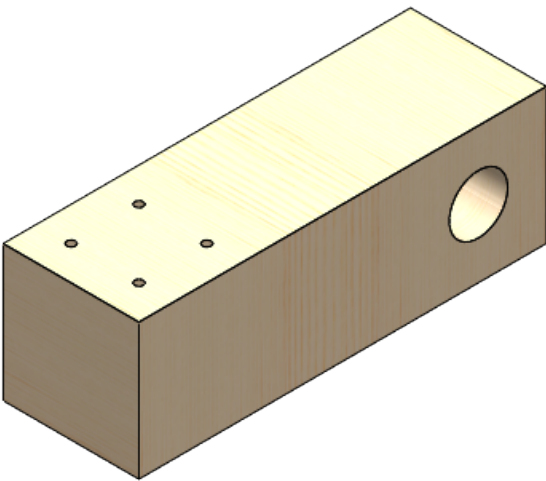
A

B

A



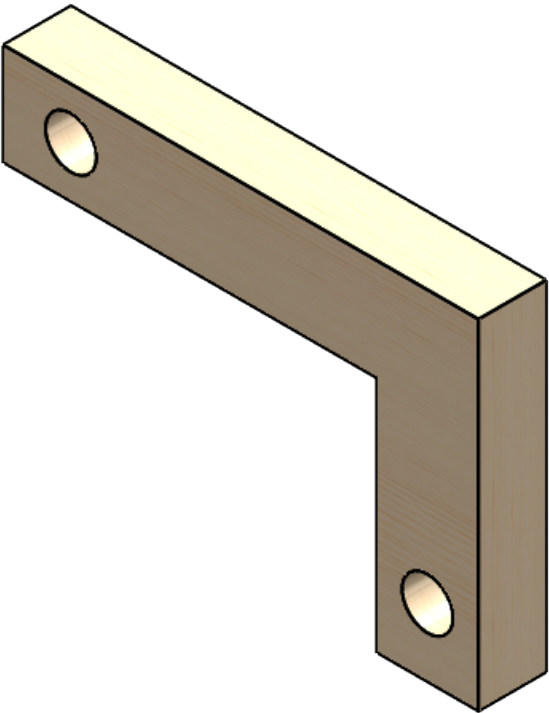
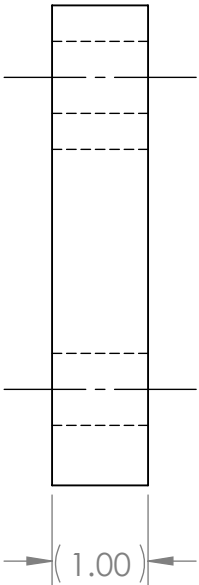
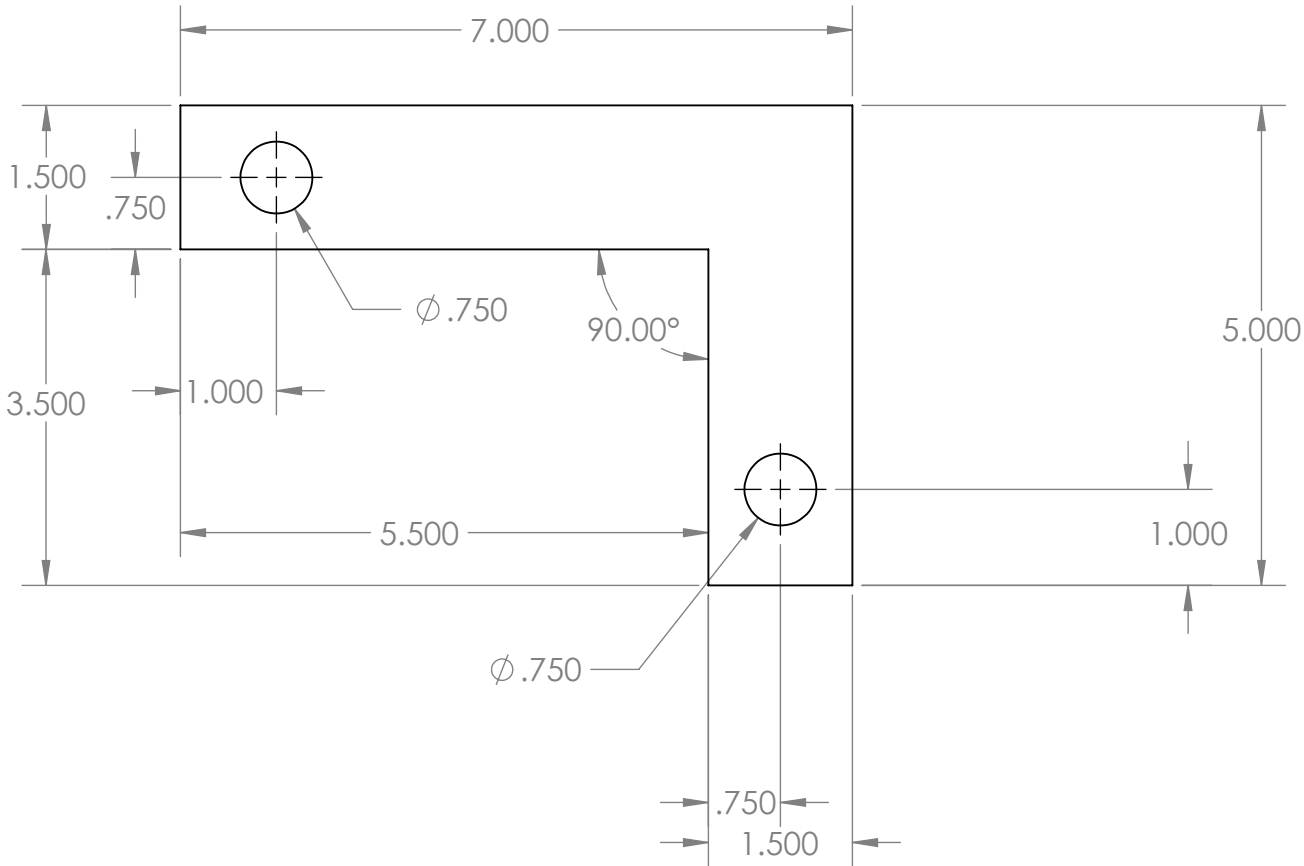
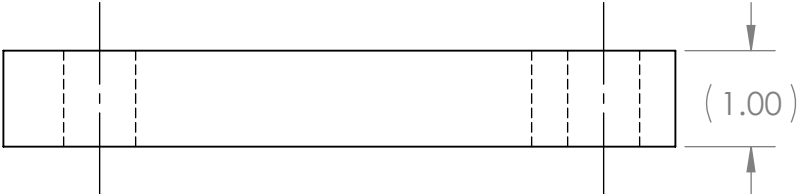
SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	2 IN. X 4 IN. X 16 FT. SPRUCE PINE FIR LUMBER
1.	USE A CIRCULAR SAW TO CUT A WOOD BLOCK WITH HEIGHT AND LENGTH APPROXIMATELY EQUAL TO DIMENSIONS GIVEN.
2.	USE A DRILL WITH A 1/8 IN. DRILL BIT TO DRILL THE SMALL PILOT HOLES. THE LOATION OF THE HOLES SHOULD FALL WITHIN TOLERANCES.
3.	USE A DRILL WITH A 55/64 IN. DRILL BIT TO DRILL THE LARGER HOLE. THE LOCATION OF HOLE SHOULD CORRESPOND TO THE GIVEN DIMENSIONS WITHIN TOLERANCE.
4.	SAND THE SIDES OF THE BLOCK UNTIL ALL DIMENSIONS ARE WITHIN TOLERANCE.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:2

DRAWN BY ANDREW WEIR	DATE 11/21/2019	STOCK VENDOR INFO: HOME DEPOT MODEL # 0133166	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	CARELESS BRONCOS	
		MATERIAL: Pine	
		TITLE/DESC: RELEASE CONNECTING SUPPORT	
		FILE NAME: Release support	
		DWG. #: P-041	REV #: A
		SCALE: 1:1	SIZE B
		SHEET 1 OF 1	

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	SELECT PINE BOARD 1in. X 6in. X 6ft.
1.	USE A CIRCULAR SAW TO CUT OUT A BOARD WITH LENGTH AND HEIGHT APPROXIMATELY EQUAL TO DIMENSIONS GIVEN.
2.	USE A BAND SAW TO CUT OUT THE INNER RECTANGLE TO CREATE THE HOOK SHAPE. THE CUT SHOULD BE DONE TO APPROXIMATE DIMENSIONS GIVEN.
3.	USE A DRILL WITH APPROPRIATE BIT SIZE TO CREATE HOLES IN THE LOCATIONS GIVEN. BIT SIZE OF .75 IN SHOULD CORRESPOND TO APPROXIMATE DIMENSION GIVEN. LOCATION OF HOLE SHOULD FALL WITHING GIVEN TOLERANCES.
4.	USE SAND PAPER TO SAND THE EDGES OF THE CREATED PART UNTIL EACH DIMENSION IS WITHIN TOLERANCE.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:2

DRAWN BY ANDREW WEIR	DATE 11/21/2019	STOCK VENDOR INFO: HOME DEPOT MODEL #928787		
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection		
AU EMAIL	SINGNATURE	CARELESS BRONCOS		
		MATERIAL: Pine		
		TITLE/DESC: RELEASE HOOK		
		FILE NAME: RELEASE HOOK		
		DWG. #: P-042	REV #: C	
		SCALE: 1:2	SIZE B	SHEET 1 OF 1

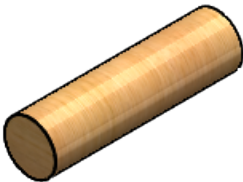
4

3

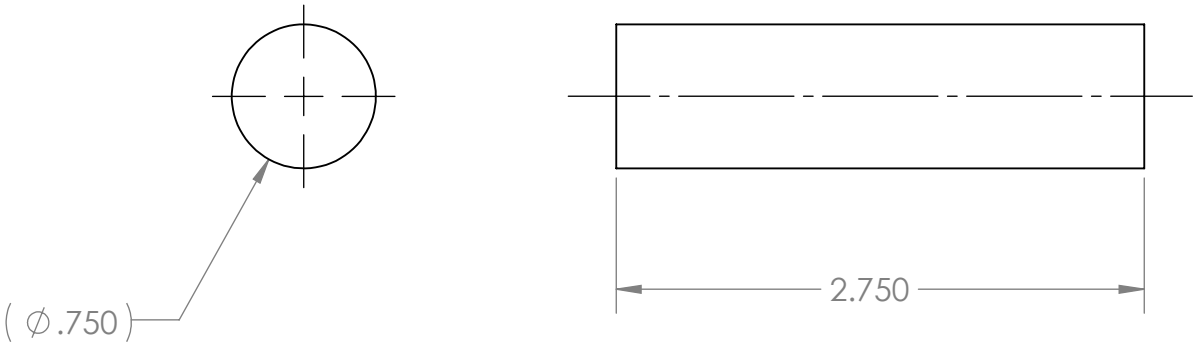
2

1

SAMPLE FABRICATION/ASSEMBLY PROCESS	
STOCK DESC/DIMS	3/4 IN. X 36 IN. OAK ROUND DOWEL
1.	USE A CIRCULA SAW TO CUT A DOWEL WITH APPROXIMATE LENGTH SHOWN. THE DIAMETER OF THE DOWEL SHOULD CORRESPOND TO THAT OF THE PURCHASED MATERIAL.
2.	USE SAND PAPER TO SAND THE BASE OF THE DOWEL UNTIL THE LENGTH IS WITHIN THE GIVEN TOLERANCE.



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 1:2



DRAWN BY ANDREW WEIR	DATE 11/22/2019	STOCK VENDOR INFO: HOME DEPOT MODEL # HDDO3436	
APPROVALS:		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ARE IN DEGREES 3rd Angle Projection	
AU EMAIL	SINGNATURE	CARELESS BRONCOS	
		MATERIAL: Oak	
		TITLE/DESC: HOOK DOWEL	
		FILE NAME:	Hook Dowel
		DWG. #: P-043	REV #: A
		SCALE: 1:1	SIZE B SHEET 1 OF 1
TOLERANCES:			
ANGULAR		± 1°	
FRACTIONAL		± 1/8"	
ONE PLACE DECIMAL		± 0.1"	
TWO PLACE DECIMAL		± 0.13"	
THREE PLACE DECIMAL		± 0.125"	

4

3

2

1

B

B

A

A