



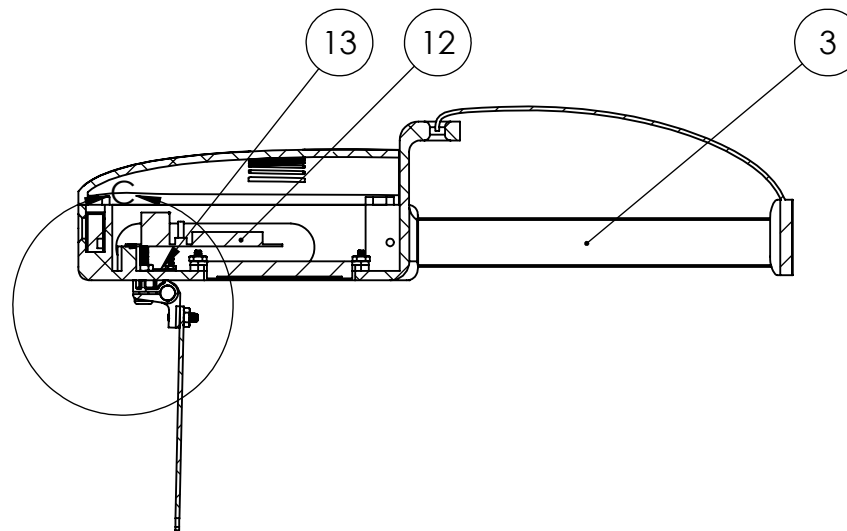
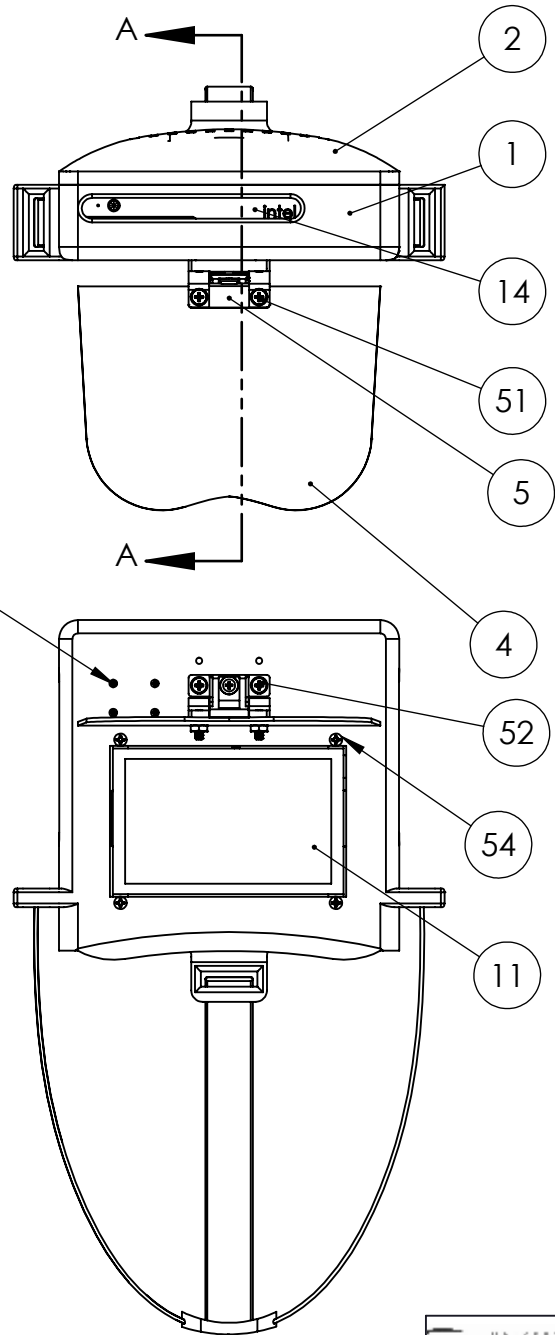
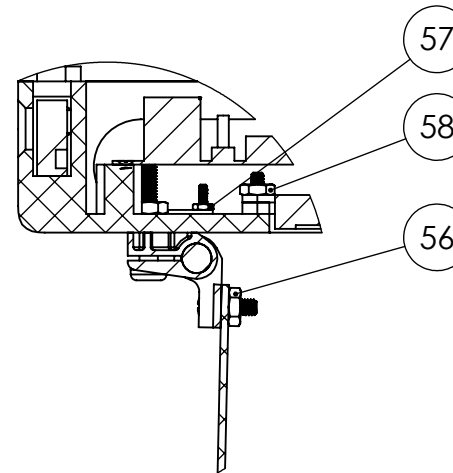


ISOMETRIC VIEW
SCALE: NONE
FOR REFERENCE ONLY

 UNIVERSITY Concordia UNIVERSITY	MATERIAL VARIES		UNLESS OTHERWISE SPECIFIED 	SURFACE  ROUGHNESS TOLERANCES $X \pm .1$ $.X \pm .05$ $.XX \pm .005$ $.XXX \pm .002$ ANGLE $\pm .5^\circ$	TITLE ASSEMBLY			
	FINISH							
PROPRIETARY INFORMATION. NOT TO BE RELEASED WITHOUT WRITTEN AUTHORIZATION FROM CONCORDIA UNIVERSITY	DESIGNER A. SHAWWA	ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED		A SIZE	DATE 3/19/2018	USED ON MECH 490		
	DRAFTER M. A. YADAO	APPROVED R. PATEL			SCALE 1:4	SHEET 1/12	DWG NO. 11809301	REV NO. 05



SECTION A-A
SCALE 1 : 4



DETAIL C
SCALE 1 : 2



MATERIAL VARIES		SURFACE ROUGHNESS ✓ TOLERANCES X ± .1 .X ± .05 .XX ± .005 .XXX ± .002 ANGLE ± .5°	TITLE ASSEMBLY - SECTIONS			
FINISH			A SIZE			
DESIGNER A. SHAWWA	ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED		DATE 3/19/2018	USED ON	MECH 490	
DRAFTER M. A. YADAO	APPROVED R. PATEL	SCALE 1:4	SHEET 2/12	DWG NO. 11809302	REV NO. 05	

5

4

3

2

1

ITEM NO.	DESCRIPTION	PART NUMBER	MNF/OEM/SPL	QTY.
1	HEADSET	11809001	EXTERNAL - 3D HUBS	1
2	TOP COVER	11809002	EXTERNAL - 3D HUBS	1
3	HEAD STRAP	11809005	STUDENT - AMIR SHAWWA	1
4	HEADS-UP DISPLAY	11809006	STUDENT - KOSTAS ZOITAKIS	1
5	ADJUSTABLE-FRICTION HINGE	1791A440	MCMaster	1
11	SCREEN	11809011	AMAZON	1
12	ODROID XU4	0007A	AMERIDROID.COM	1
13	ADAFRUIT BNO055 MOTION SENSOR	ADA2472	ADAFRUIT	1
14	INTEL REALSENSE CAMERA R200	MM#939143	INTEL REALSENSE	1
51	PAN HEAD PHILLIPS [#8-32 x 1/2" LG]	90272A194	MCMaster	2
52	PAN HEAD PHILLIPS [#8-32 x 7/8" LG]	90272A198	MCMaster	2
53	FLAT HEAD PHILLIPS [#2-56 x 1/2" LG]	90273A070	MCMaster	4
54	FLAT HEAD PHILLIPS [#6-32 x 5/8" LG]	90273A150	MCMaster	4
55	FLAT HEAD PHILLIPS [#4-48 x 3/8" LG]	91771A742	MCMaster	2
56	HEX NUT [#8-32]	90480A009	MCMaster	4
57	HEX NUT [#2-56]	90480A003	MCMaster	4
58	HEX NUT [#6-32]	90480A007	MCMaster	4



PROPRIETARY INFORMATION NOT TO BE RELEASED WITHOUT WRITTEN AUTHORIZATION FROM CONCORDIA UNIVERSITY

MATERIAL
FINISH

DESIGNER **A. SHAWWA**

DRAFTER **M. A. YADAO**

ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED

APPROVED **R. PATEL**

UNLESS OTHERWISE SPECIFIED	SURFACE ROUGHNESS	✓
	TOLERANCES	X ± .1
		.X ± .05
		.XX ± .005
	.XXX ± .002	
	ANGLE ± 5°	



SCALE **1:8**

TITLE BOM			
A SIZE	DATE 3/19/2018	USED ON	MECH 490

SHEET **3/12** DWG NO. **11809303** REV NO. **05**

5

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4

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F

F

E

E

D

D

C

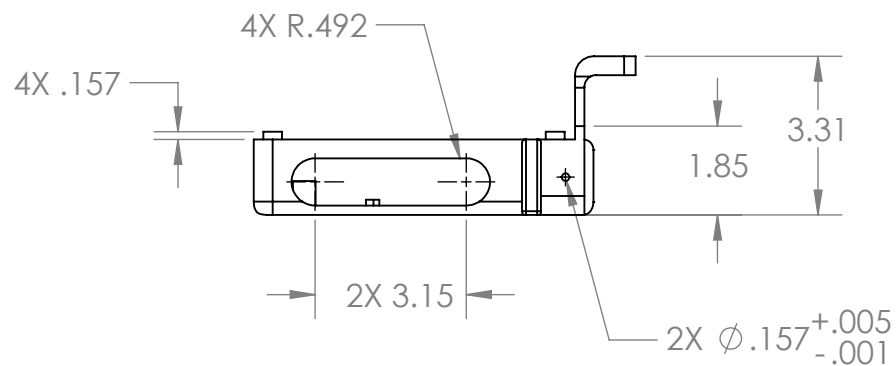
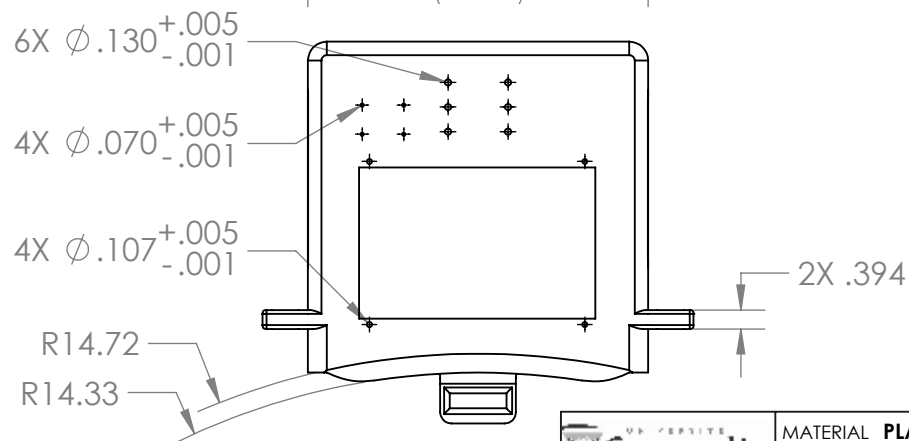
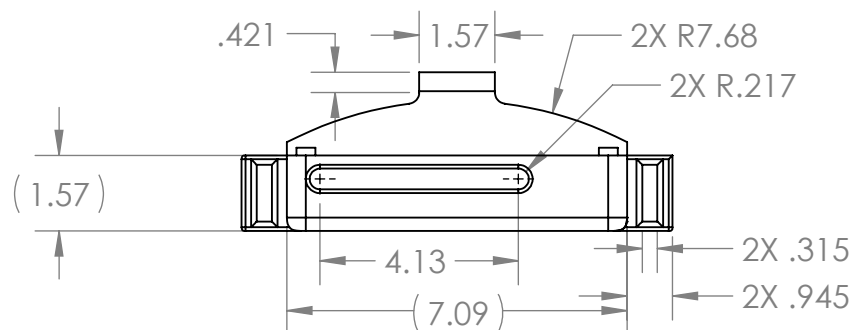
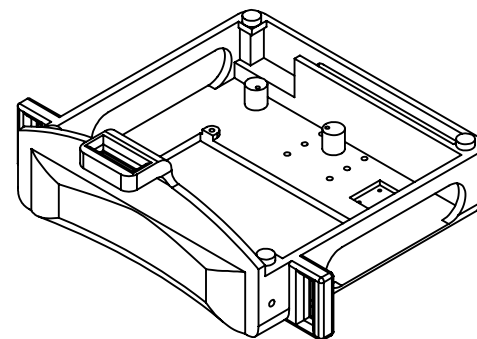
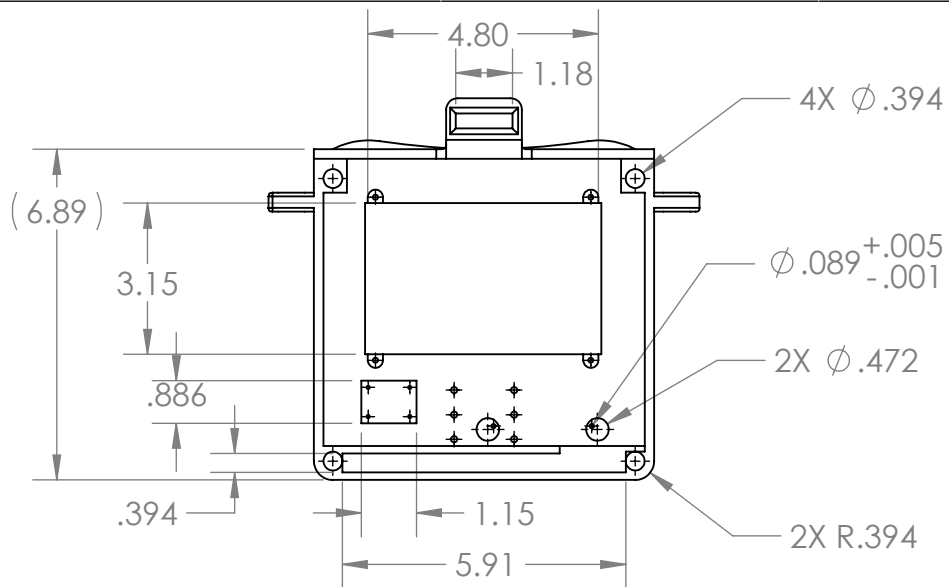
C

B

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A

A



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MATERIAL **PLA**

FINISH **CLEAN**

DESIGNER **A. SHAWWA**

DRAFTER **M. A. YADAO**

ALL DIMENSIONS IN **INCHES**
UNLESS OTHERWISE SPECIFIED

APPROVED **R. PATEL**

SURFACE
ROUGHNESS
TOLERANCES X $\pm .1$
.X $\pm .05$
.XX $\pm .005$
.XXX $\pm .002$
ANGLE $\pm .5^\circ$

TITLE **HEADSET**

SIZE **A**

DATE **3/19/2018**

USED ON

MECH 490

SCALE **1:4**

SHEET **4/12**

DWG NO. **11809001**

REV NO. **05**

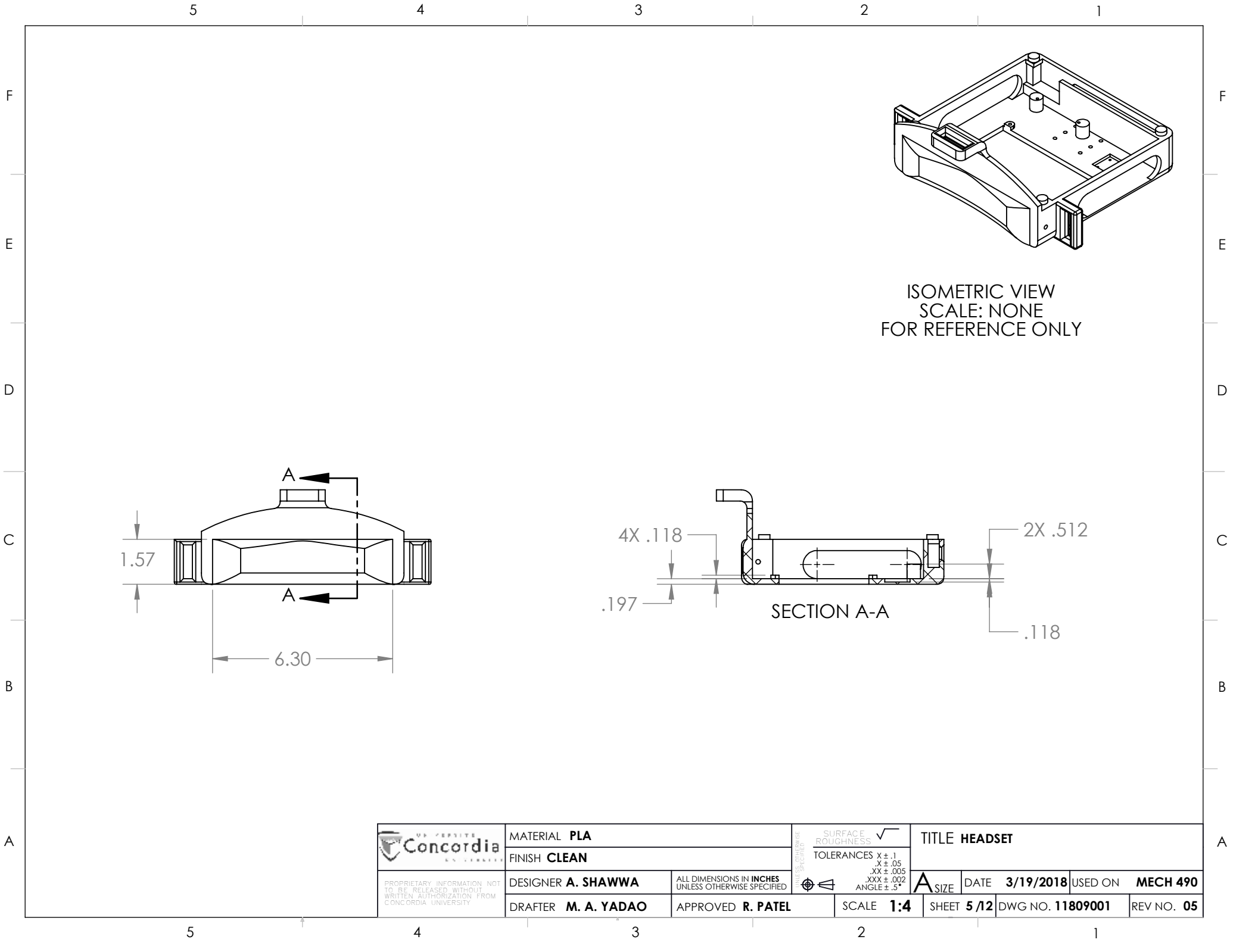
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1



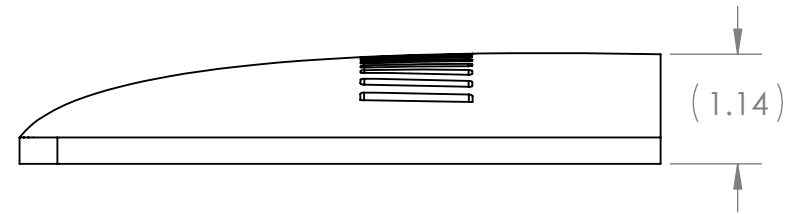
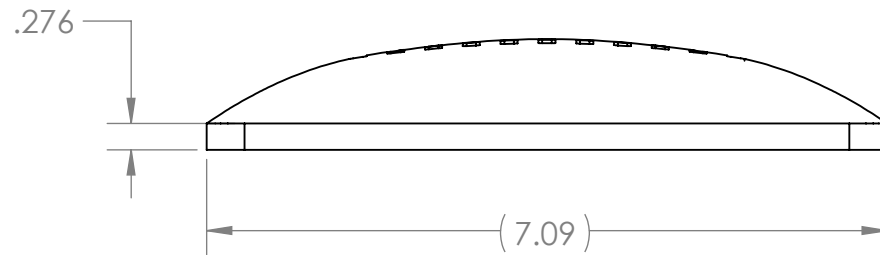
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4

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2

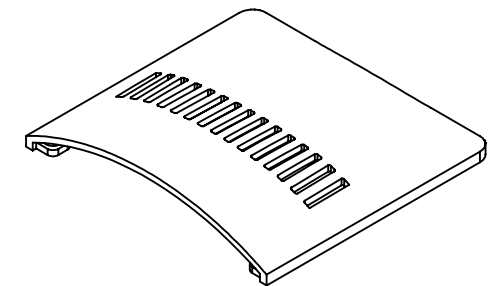
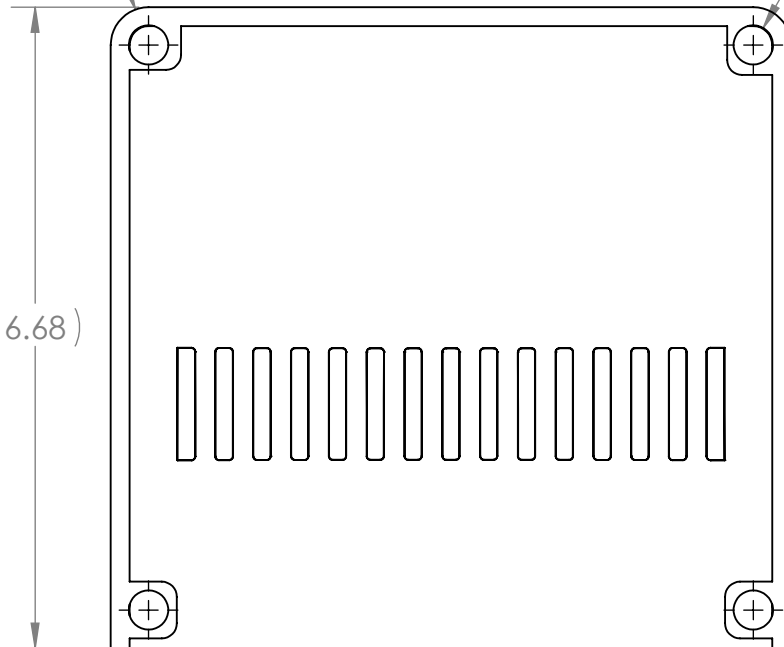
1



2X R.394

4X $\phi .409^{+.006}_{-.001}$

(6.68)



ISOMETRIC VIEW
SCALE: NONE
FOR REFERENCE ONLY



PROPRIETARY INFORMATION NOT
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WRITTEN AUTHORIZATION FROM
CONCORDIA UNIVERSITY

MATERIAL **PLA**FINISH **CLEAN**DESIGNER **A. SHAWWA**DRAFTER **M. A. YADAO**ALL DIMENSIONS IN **INCHES**
UNLESS OTHERWISE SPECIFIEDAPPROVED **R. PATEL**UNLESS OTHERWISE
SPECIFIED

SURFACE
ROUGHNESS $\sqrt{\text{ }}$
TOLERANCES X $\pm .1$
.X $\pm .05$
.XX $\pm .005$
.XXX $\pm .002$
ANGLE $\pm .5^\circ$

TITLE **TOP COVER**

A SIZE

DATE

3/19/2018

USED ON

MECH 490

SHEET

6/12

DWG NO. 11809002

REV NO. 05

5

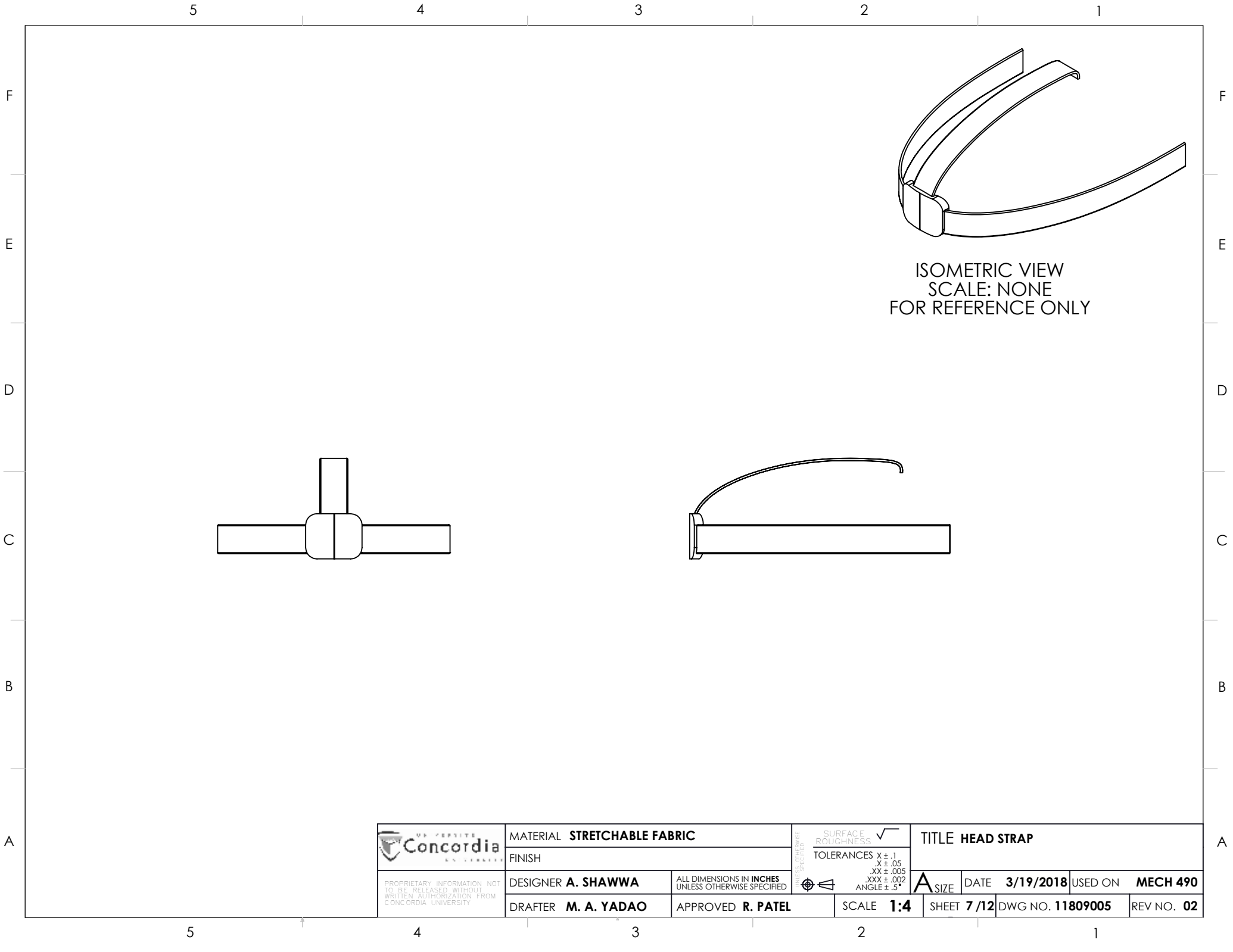
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3

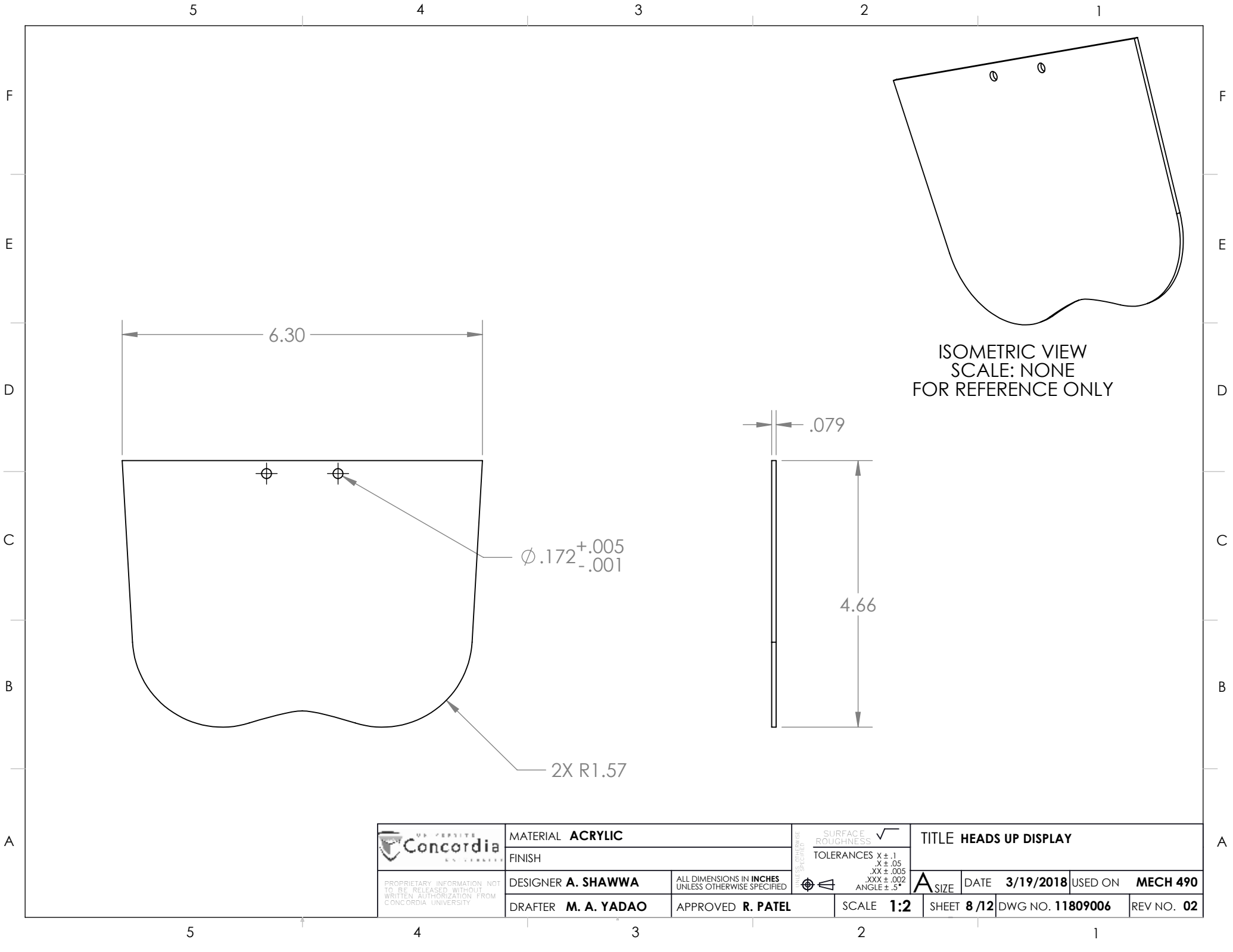
2

1




A

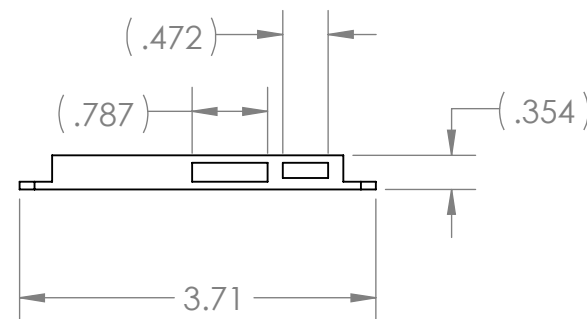
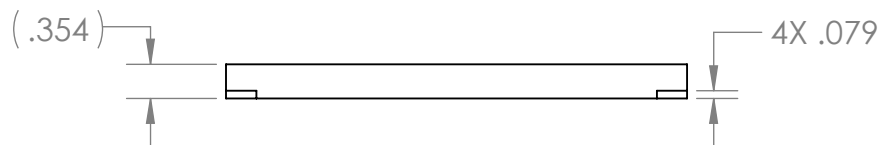
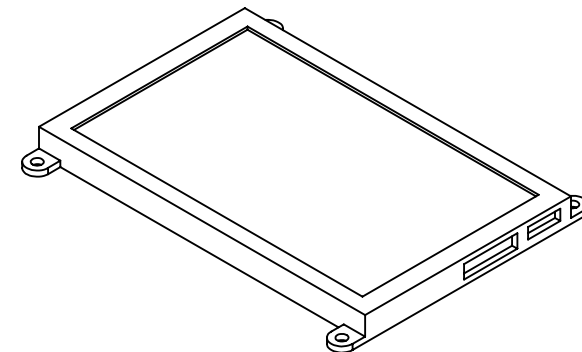
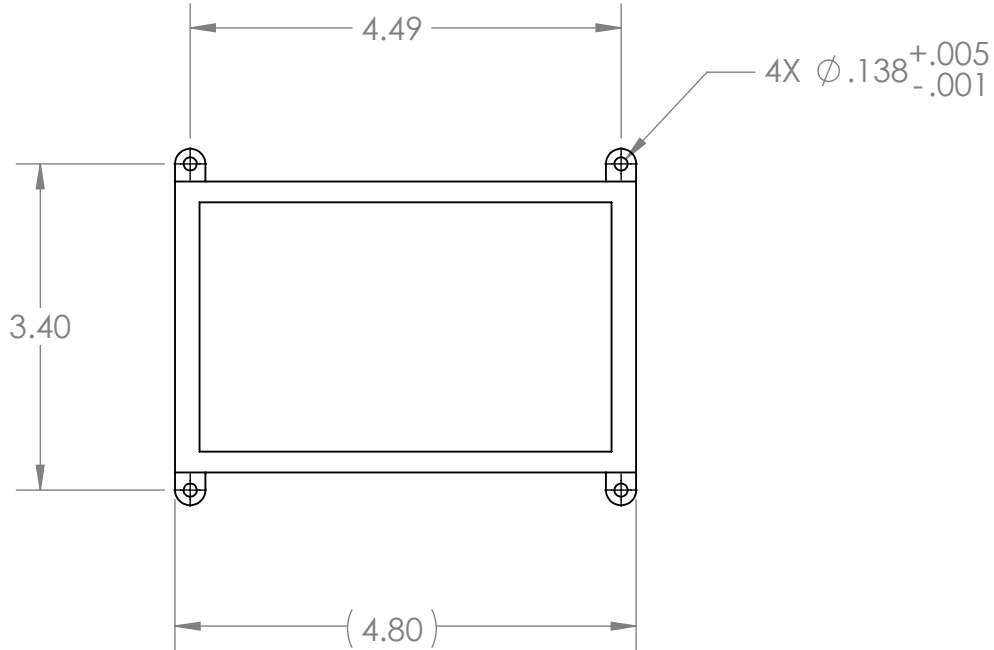


 UNIVERSITY Concordia UNIVERSITY	MATERIAL STRETCHABLE FABRIC		<div>UNLESS OTHERWISE SPECIFIED</div> <div><div><div><div><div></div><div></div></div></div><div><div></div><div></div></div></div><div>SURFACE ROUGHNESS $\sqrt{}$</div><div>TOLERANCES $X \pm .1$ $.X \pm .05$ $.XX \pm .005$ $.XXX \pm .002$ ANGLE $\pm .5^\circ$</div></div>	TITLE HEAD STRAP			
	FINISH			A SIZE	DATE 3/19/2018	USED ON	MECH 490
PROPRIETARY INFORMATION NOT TO BE RELEASED WITHOUT WRITTEN AUTHORIZATION FROM CONCORDIA UNIVERSITY	DESIGNER A. SHAWWA	ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED		SCALE 1:4	SHEET 7/12	DWG NO. 11809005	REV NO. 02
	DRAFTER M. A. YADAO	APPROVED R. PATEL					



ISOMETRIC VIEW
SCALE: NONE
FOR REFERENCE ONLY

 UNIVERSITY OF Concordia UNIVERSITY	MATERIAL ACRYLIC		SURFACE  ROUGHNESS TOLERANCES X ± .1 .XX ± .005 .XXX ± .002 ANGLE ± .5°	TITLE HEADS UP DISPLAY				
	FINISH							
PROPRIETARY INFORMATION NOT TO BE RELEASED WITHOUT WRITTEN AUTHORIZATION FROM CONCORDIA UNIVERSITY	DESIGNER A. SHAWWA	ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED		A SIZE	DATE	3/19/2018	USED ON	MECH 490
	DRAFTER M. A. YADAO	APPROVED R. PATEL			SCALE 1:2	SHEET 8/12	DWG NO. 11809006	REV NO. 02



<p>UNIVERSITY Concordia UNIVERSITY</p> <p>PROPRIETARY INFORMATION. NOT TO BE RELEASED WITHOUT WRITTEN AUTHORIZATION FROM CONCORDIA UNIVERSITY.</p>	MATERIAL ABS		SURFACE ROUGHNESS TOLERANCES $X \pm .1$ $.X \pm .05$ $.XX \pm .005$ $.XXX \pm .002$ ANGLE $\pm .5^\circ$	TITLE SCREEN		
	FINISH CLEAN			A SIZE		
	DESIGNER A. SHAWWA	ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED		DATE 3/19/2018	USED ON MECH 490	
	DRAFTER M. A. YADAO	APPROVED R. PATEL		SCALE 1:2	SHEET 9/12	DWG NO. 11809011
					REV NO. 04	

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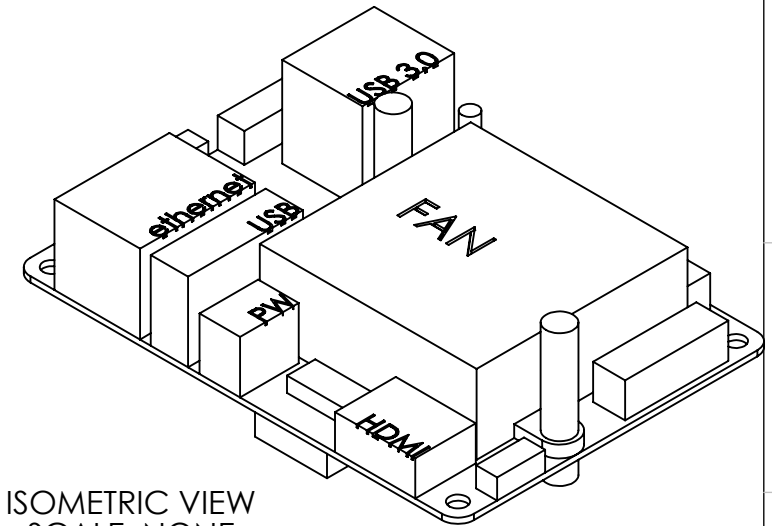
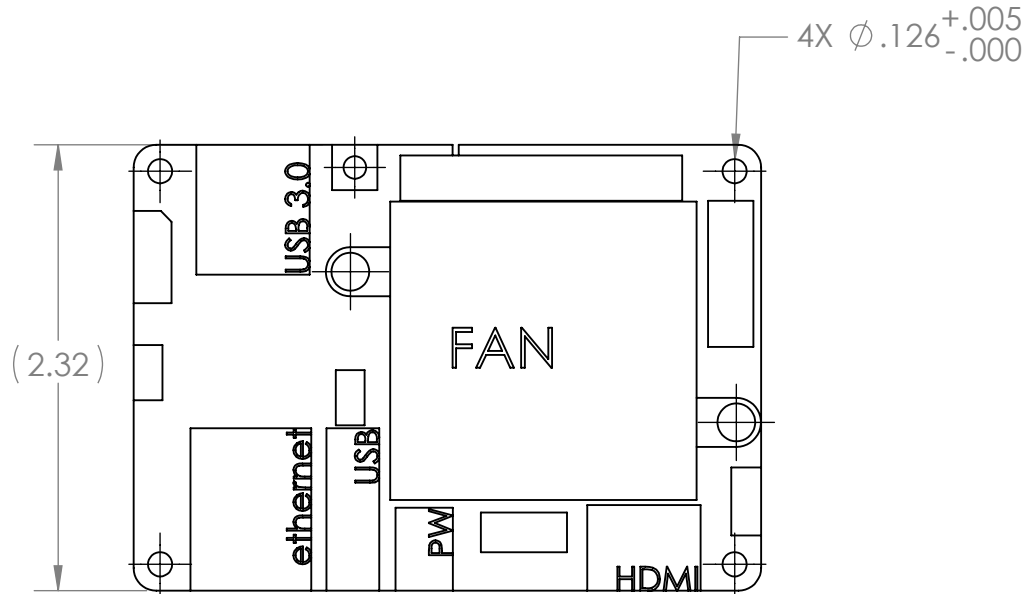
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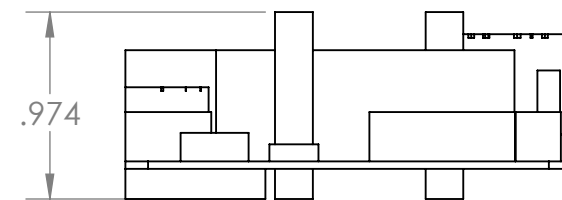
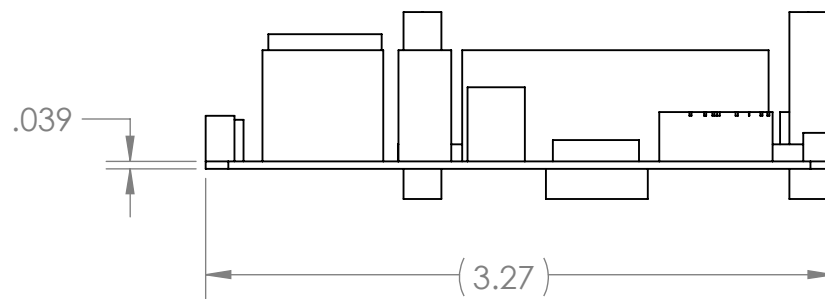
C

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A



ISOMETRIC VIEW
SCALE: NONE
FOR REFERENCE ONLY



PROPRIETARY INFORMATION NOT
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MATERIAL **VARIES**

FINISH **VARIES**

DESIGNER **ONLINE**

DRAFTER **ONLINE**

ALL DIMENSIONS IN **INCHES**
UNLESS OTHERWISE SPECIFIED

APPROVED **ONLINE**

SURFACE
ROUGHNESS
TOLERANCES $X \pm .1$
 $.XX \pm .05$
 $.XXX \pm .005$
 $.XXX \pm .002$
ANGLE $\pm .5^\circ$



TITLE **ODROID XU4**

SIZE **A**

DATE **3/19/2018**

USED ON **MECH 490**

SHEET **10/12** DWG NO. **0007A** REV NO. **04**

5

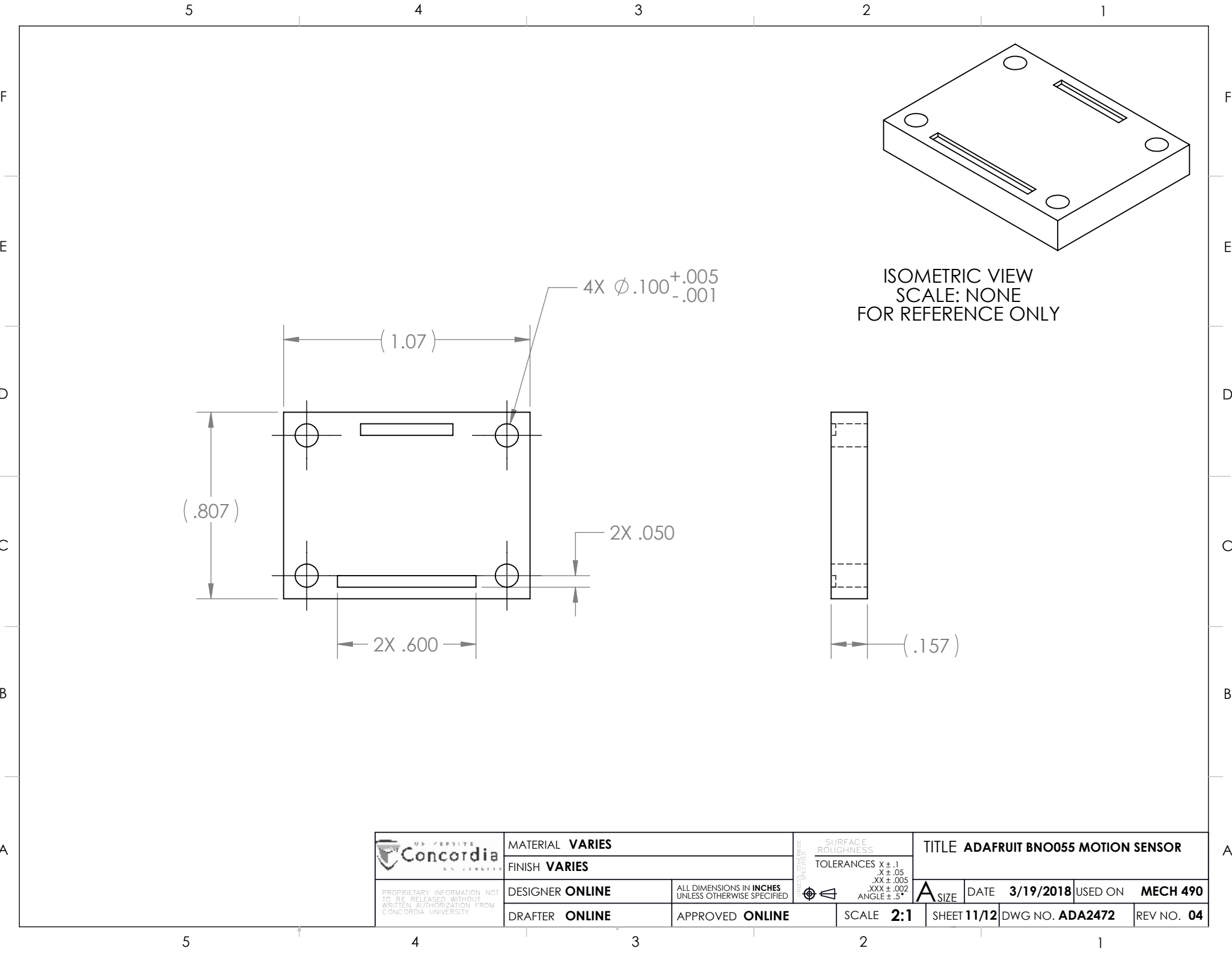
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A







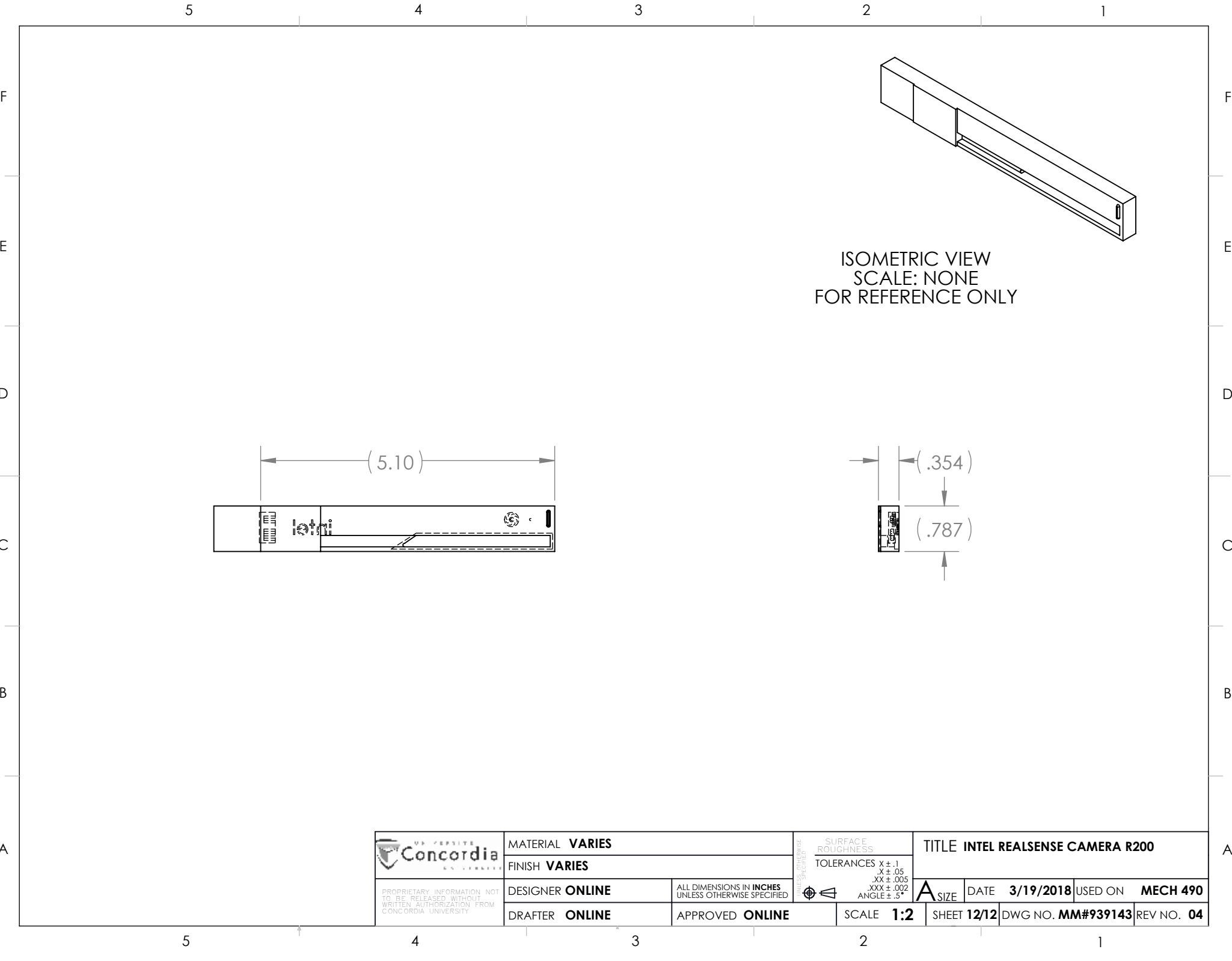
UNIVERSITY

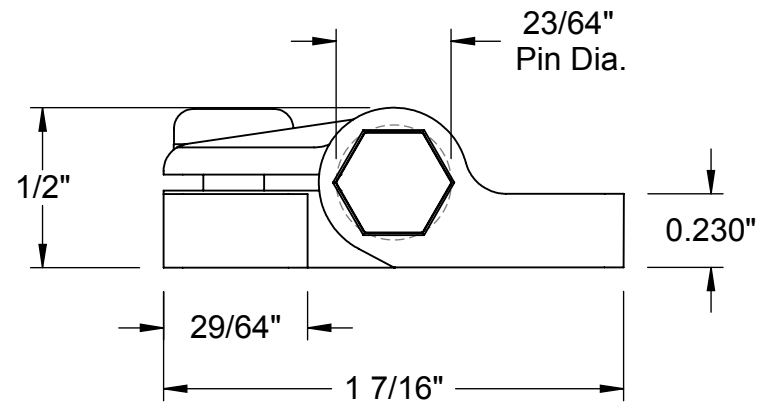
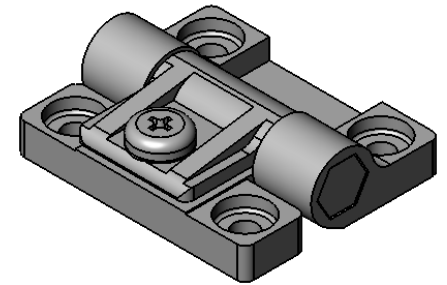
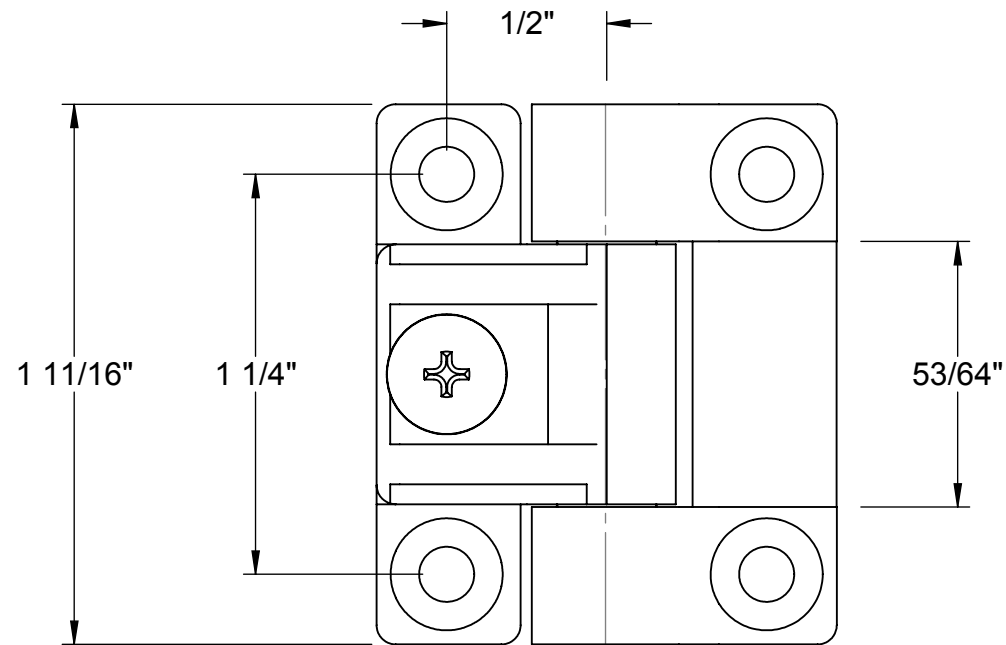
Concordia

UNIVERSITY

PROPRIETARY INFORMATION. NOT TO BE RELEASED WITHOUT WRITTEN AUTHORIZATION FROM CONCORDIA UNIVERSITY

MATERIAL VARIES		 SURFACE ROUGHNESS TOLERANCES X ± .1 .X ± .05 .XX ± .005 .XXX ± .002 ANGLE ± .5°	TITLE ADAFRUIT BNO055 MOTION SENSOR				
FINISH VARIES							
DESIGNER ONLINE	ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED			DATE	3/19/2018	USED ON	MECH 490
DRAFTER ONLINE	APPROVED ONLINE			SCALE 2:1	SHEET 11/12	DWG NO. ADA2472	REV NO. 04





Hinge uses #8 screws.

McMASTER-CARR CAD

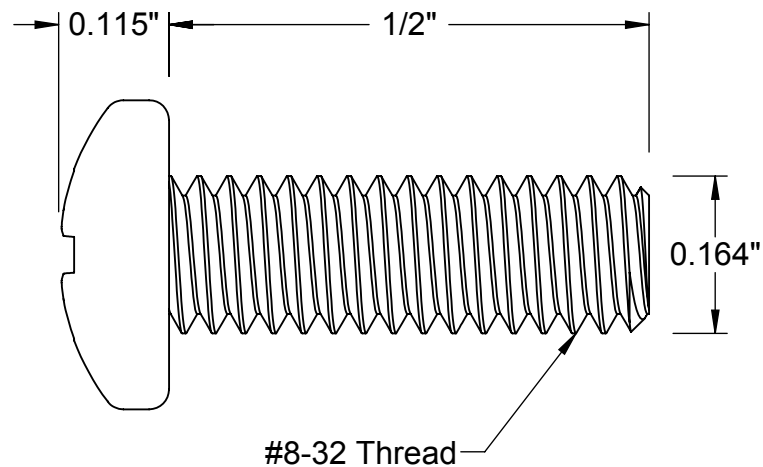
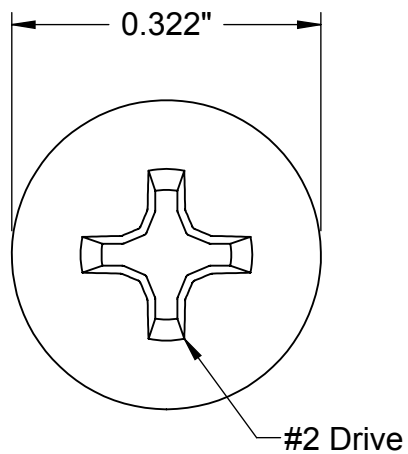
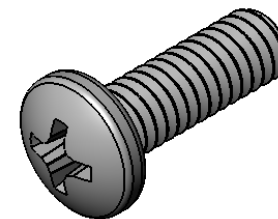
<http://www.mcmaster.com>
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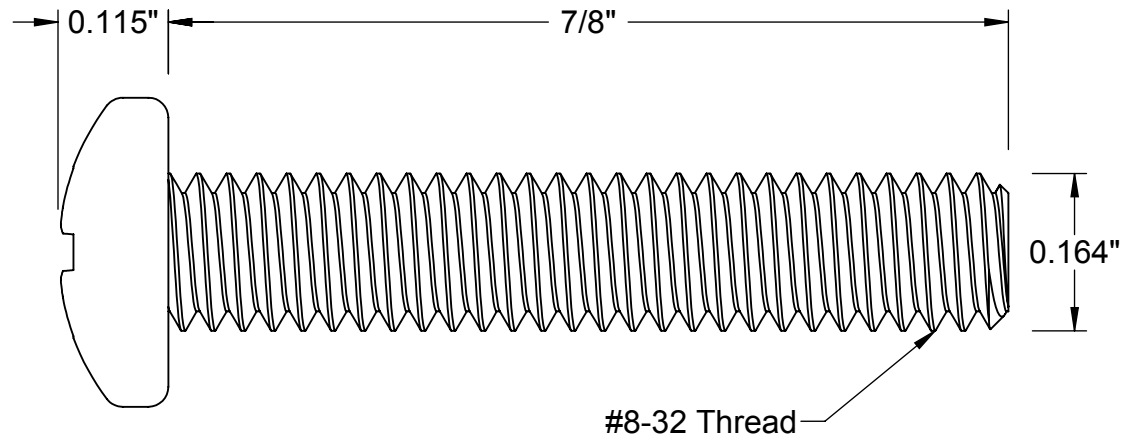
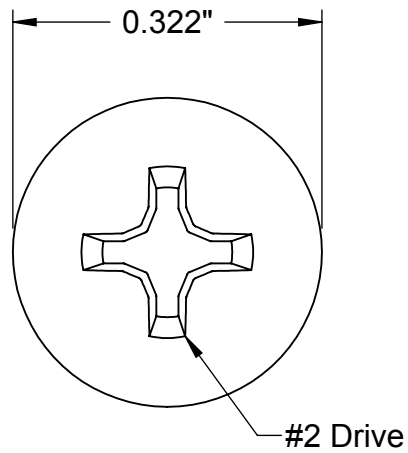
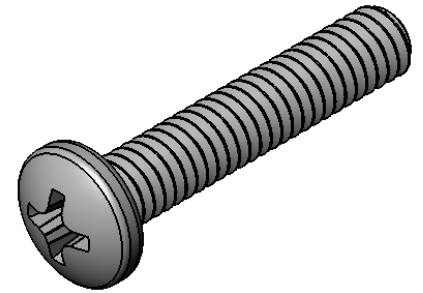
PART
NUMBER

1791A44

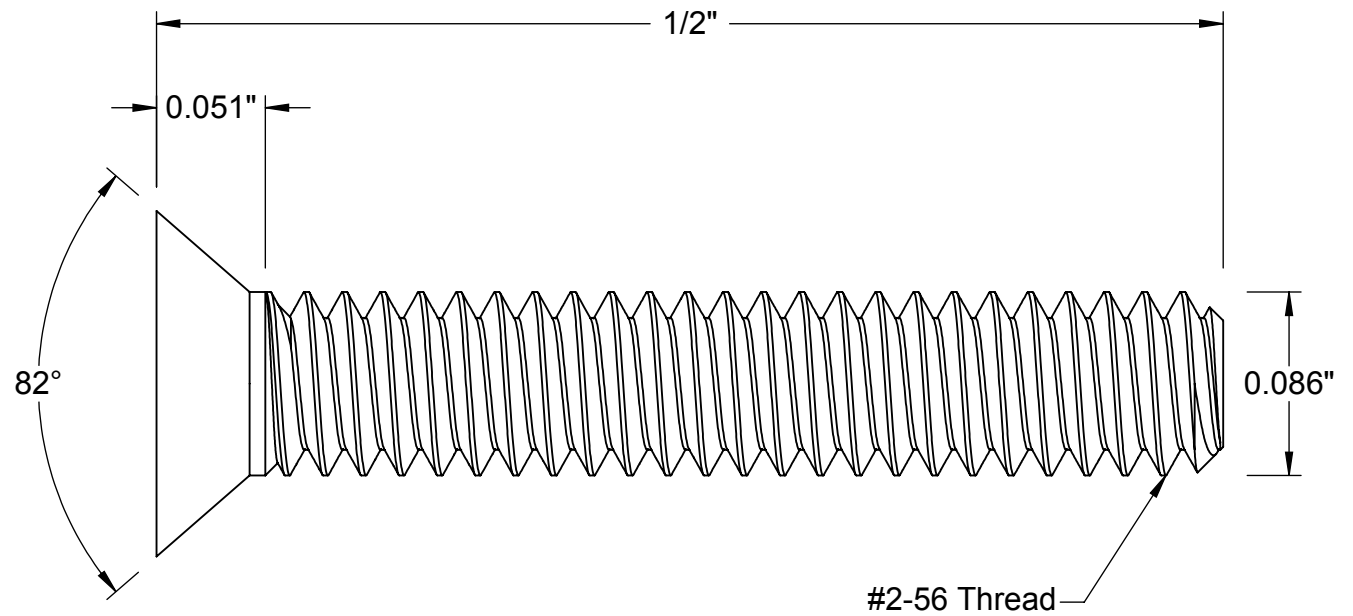
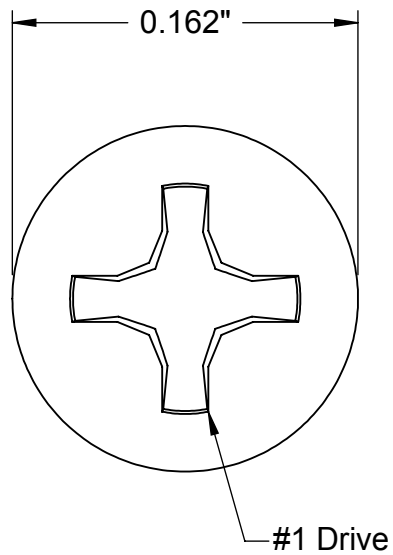
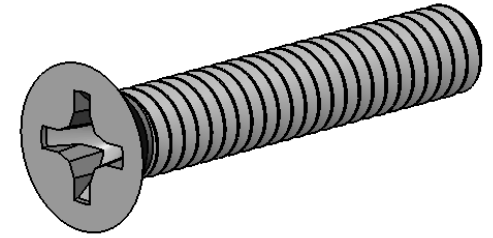
Adjustable-Friction
Hinge



McMASTER-CARR <small>CAD</small> http://www.mcmaster.com © 2012 McMaster-Carr Supply Company Information in this drawing is provided for reference only.	PART NUMBER	90272A194
	Pan Head Phillips Machine Screw	



McMASTER-CARR <small>CAD</small> http://www.mcmaster.com © 2012 McMaster-Carr Supply Company <small>Information in this drawing is provided for reference only.</small>	PART NUMBER 90272A198
	Pan Head Phillips Machine Screw



McMASTER-CARR CAD

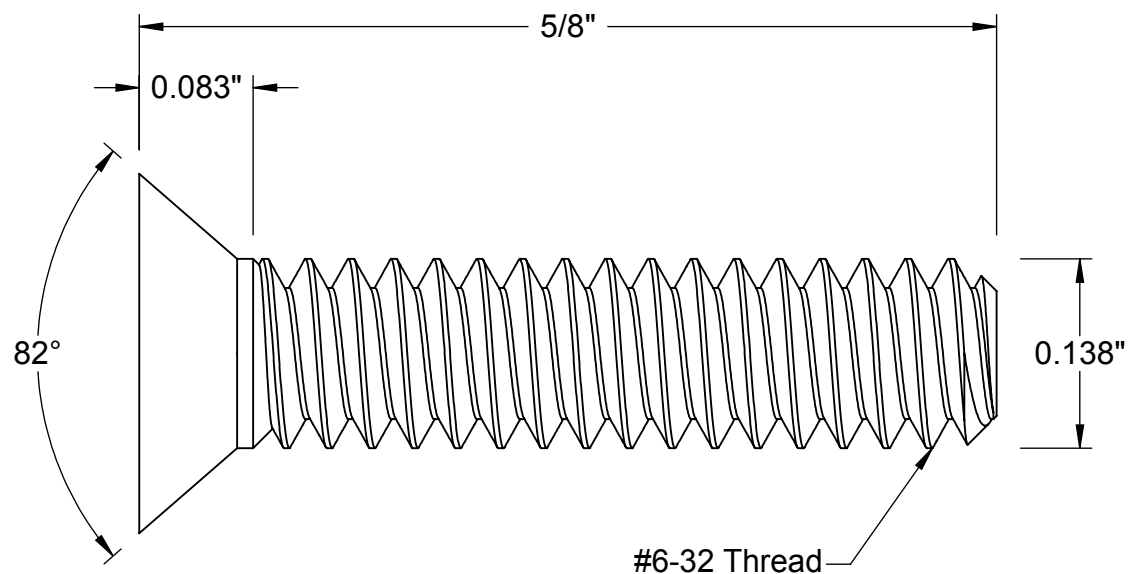
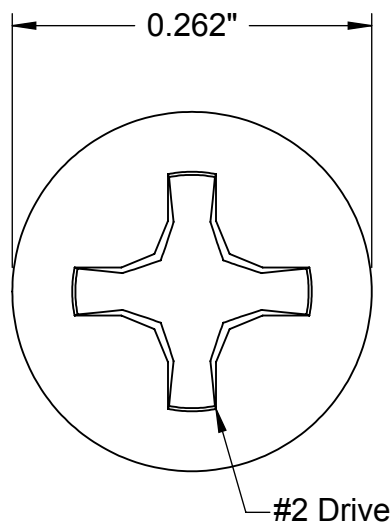
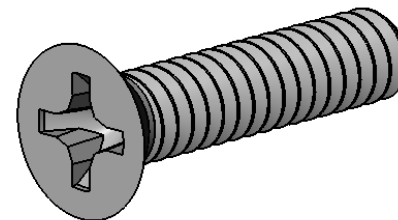
<http://www.mcmaster.com>
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Information in this drawing is provided for reference only.

PART
NUMBER

90273A070

Flat Head Phillips
Machine Screw



McMASTER-CARR CAD

<http://www.mcmaster.com>

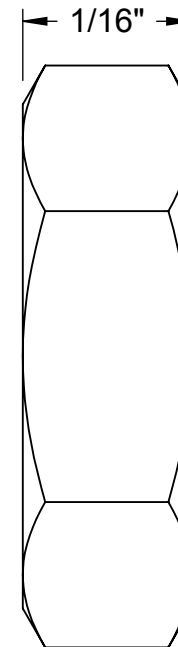
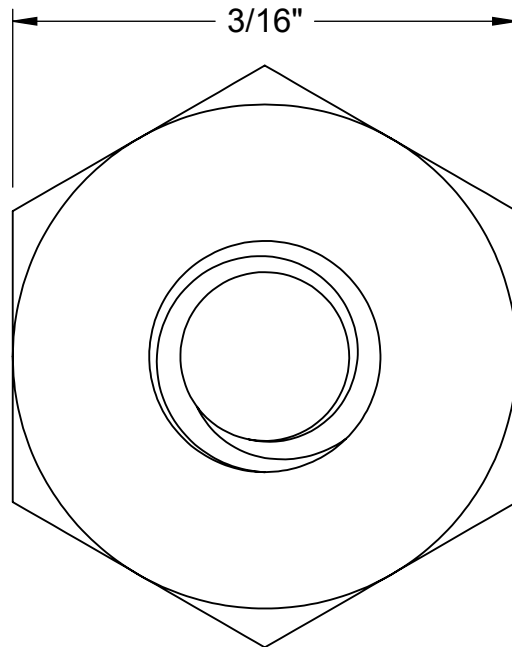
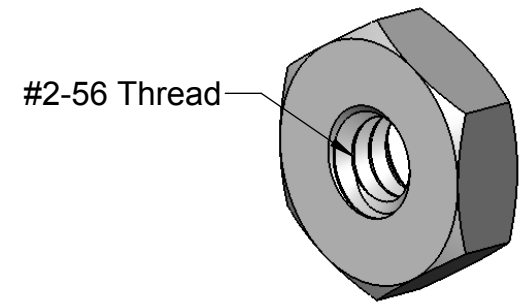
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PART
NUMBER

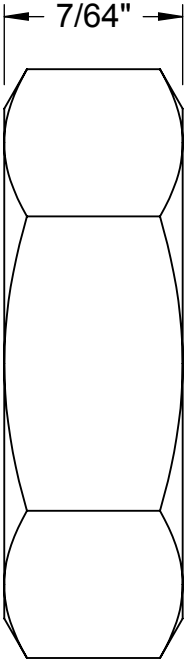
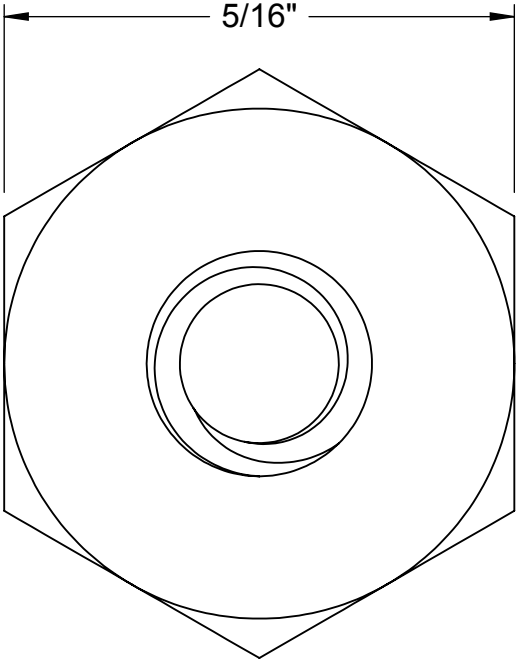
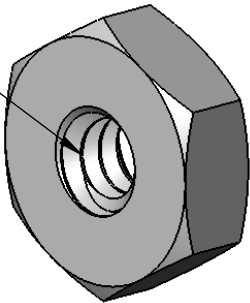
90273A150

Flat Head Phillips
Machine Screw



McMASTER-CARR <small>CAD</small> http://www.mcmaster.com © 2015 McMaster-Carr Supply Company Information in this drawing is provided for reference only.	PART NUMBER 90480A003
	Hex Nut

#6-32 Thread



McMASTER-CARR CAD

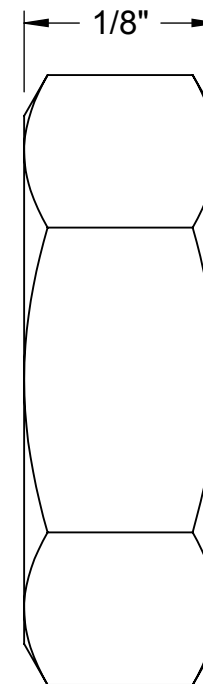
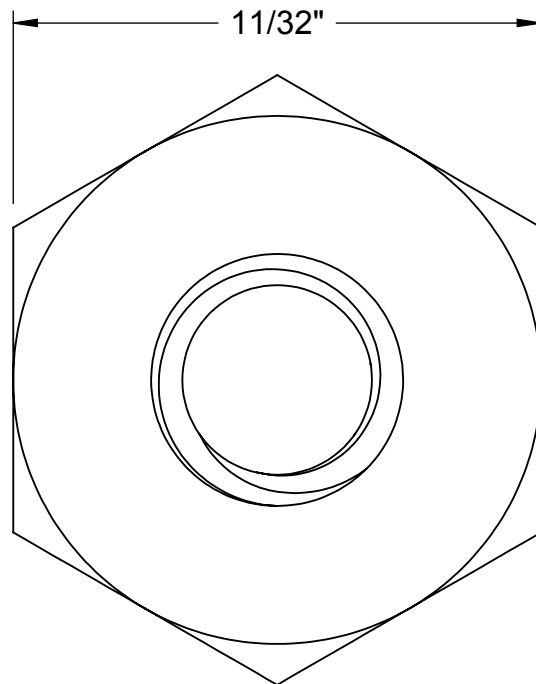
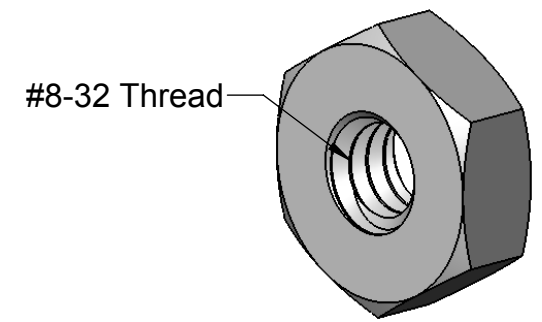
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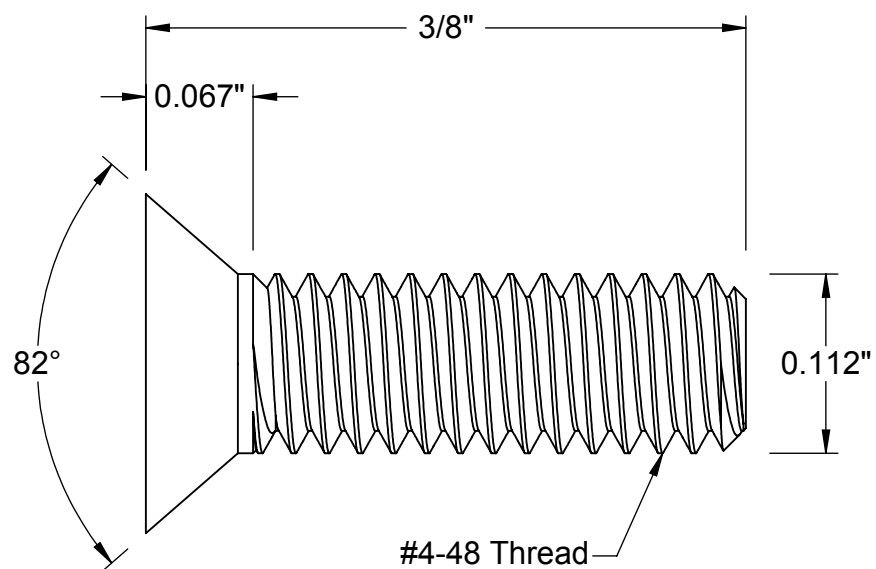
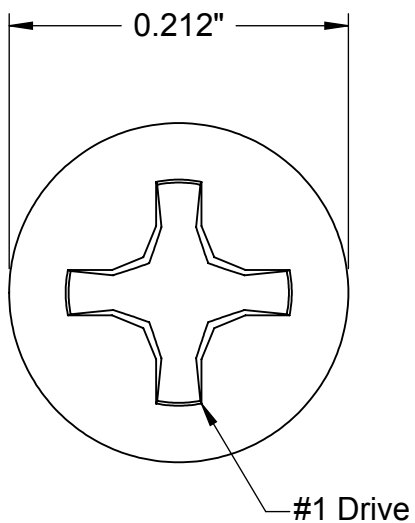
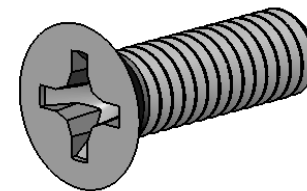
PART
NUMBER

90480A007

Hex
Nut



McMASTER-CARR <small>CAD</small> http://www.mcmaster.com © 2015 McMaster-Carr Supply Company Information in this drawing is provided for reference only.	PART NUMBER	90480A009
		Hex
		Nut



McMASTER-CARR CAD

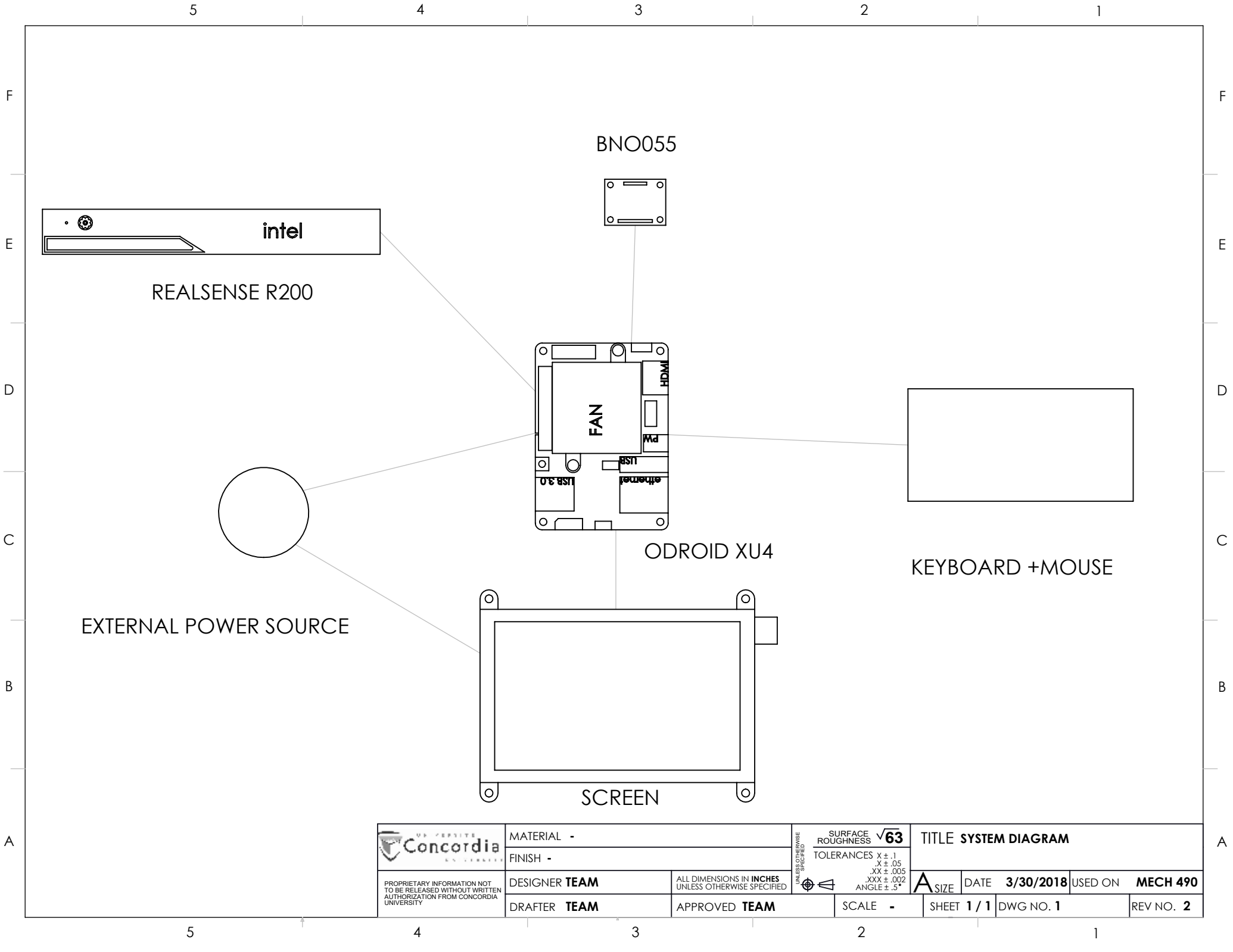
<http://www.mcmaster.com>
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Information in this drawing is provided for reference only.

PART
NUMBER

91771A742

Flat Head Phillips
Machine Screw




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Concordia
UNIVERSITY

PROPRIETARY INFORMATION NOT
TO BE RELEASED WITHOUT WRITTEN
AUTHORIZATION FROM CONCORDIA
UNIVERSITY

MATERIAL -	
FINISH -	
DESIGNER TEAM	ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED
DRAFTER TEAM	APPROVED TEAM

UNLESS OTHERWISE SPECIFIED



SURFACE
ROUGHNESS $\sqrt{63}$

TOLERANCES X $\pm .1$
.X $\pm .05$
.XX $\pm .005$
.XXX $\pm .002$
ANGLE $\pm .5^\circ$

TITLE SYSTEM DIAGRAM			
A SIZE	DATE 3/30/2018	USED ON	MECH 490
SHEET 1 / 1	DWG NO. 1	REV NO. 2	