

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ENG-300-00	ENGINE BLOCK	1
2	ENG-400-00	GEARBOX	1
3	ENG-100-00	ENGINE INTERNALS	1
4	6383K490	0.75" BEARING	1
5	91590A128	0.75" BEARING	2
6	ENG-700-00	VALVE ASSEMBLY	12
7	ENG-500-00	LEFT VALVE CAM	1
8	ENG-600-00	RIGHT VALVE CAM	1
9	ENG-800-00	SHIFTER	1
10	ENG-000-02	SHIFTER PILLOW BLOCK	1
11	ENG-000-01	SHIFTER CAM	1
12	8124823A14	1/4"-20 SCREW WITH WASHERS	1
13	92147A029	MCMaster CARR PART 92147A029	1
14			1
15			2
16	6383K234	6383K234 McMaster Part 6383K234 McMaster Part 6383K234	1
17	98633A230	MCMaster CARR PART 98633A230 5/8 RETAINING RING	4
18	ENG-200-00	ENG-200-00	1
19	6529K240	MCMaster CARR PART 6529K240	1
20	ENG-000-03	DRIVESHAFT COVERING	1
21	90692A748	90692A748	1
22	ENG-900-00	ENG-900-00	2
23			1

UNLESS OTHERWISE SPECIFIED:

QTY: 1 MATERIAL: SEE COMPONENTS

DIMENSIONS ARE IN INCHES.

ENGINEER	landrade	12/14/2015
DRAWN	C.Kissel	12/14/2015
CHECKED		12/14/2015

ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994

TOLERANCES UNLESS OTHERWISE SPECIFIED:

X.X	±0.03
X.XX	±0.01
X.XXX	±0.005

±0.5° 125°

REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

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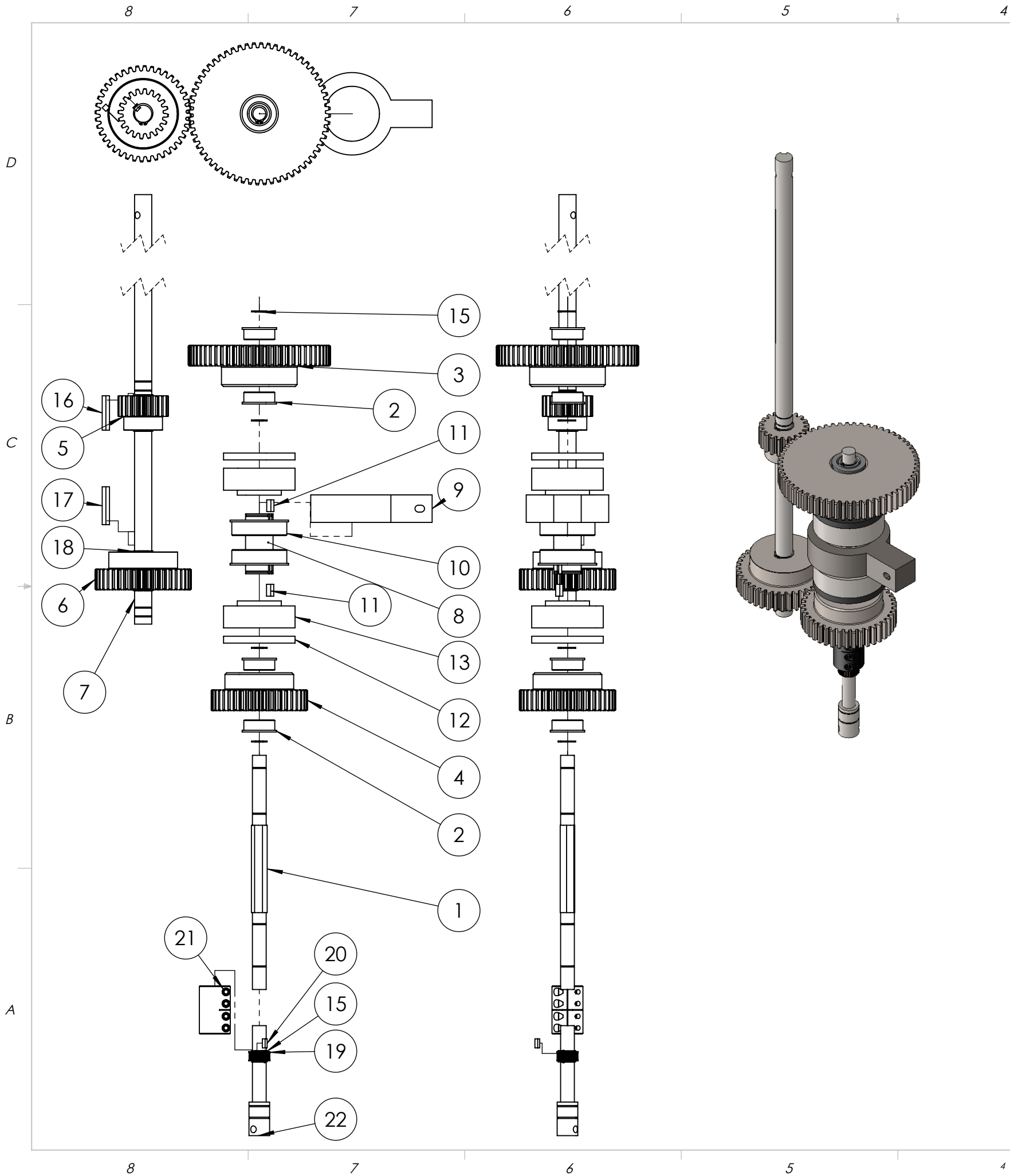
**Olin College of Engineering**

TITLE

**FULL ASSEMBLY**

SIZE	PART NO.	REV
<b>B</b>	<b>ENG-000-00</b>	<b>U</b>

SCALE 2:1 DO NOT SCALE PRINT SHEET 1 OF 1



ITEM NO.	Number	DESCRIPTION	QTY.
1	ENG-400-02	GEARBOX OUTPUT SHAFT	1
2	6383K234	McMaster Part 6383K234	4
3	6325K4	McMaster Part 6325K4	1
4	6325K2	McMaster Part 6325K2	1
5	6867K59	McMaster Part 6867K59	1
6	6867K65	McMaster Part 6867K65	1
7	ENG-400-01	GEARBOX INPUT SHAFT	1
8	ENG-400-03	SHIFTER SLIDE	1
9	ENG-400-04	SHIFTER LINK	1
10	6383KS57	MCMaster CARR PART 6383KS57	2
11	98535A130	3/16 KEY 0.43"	2
12	ENG-400-06	SHIFTER FRICTION PAD	2
13	ENG-400-05	FRICTION SHOE	2
14	91590A133	MCMaster CARR PART 91590A133 1" RETAINING RING	2
15	97633A200	97633A200	6
16	98535A140	3/16 KEY 0.43"	1
17	98535A140	3/16 KEY 0.43"	1
18	98633A230	MCMaster CARR PART 98633A230 5/8 RETAINING RING	4
19	ENG-400-07	CAM SHAFT TIMING PULLEY	1
20		.125 KEY	1
21	61005K122	MCMaster PART 61005K122 SHAFT COUPLER	1
22	ENG-400-02	GEARBOX OUTPUT SHAFT	1

ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994

TOLERANCES UNLESS OTHERWISE SPECIFIED:  
X.X ±0.03  
X.XX ±0.01  
X.XXX ±0.005

±0.5° 125°

REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

UNLESS OTHERWISE SPECIFIED:

QTY: 1 MATERIAL: SEE COMPONENTS

DIMENSIONS ARE IN INCHES.

ENGINEER	ckissel	12/14/2015
DRAWN	C.Kissel	12/14/2015
CHECKED	jsapers	12/14/2015

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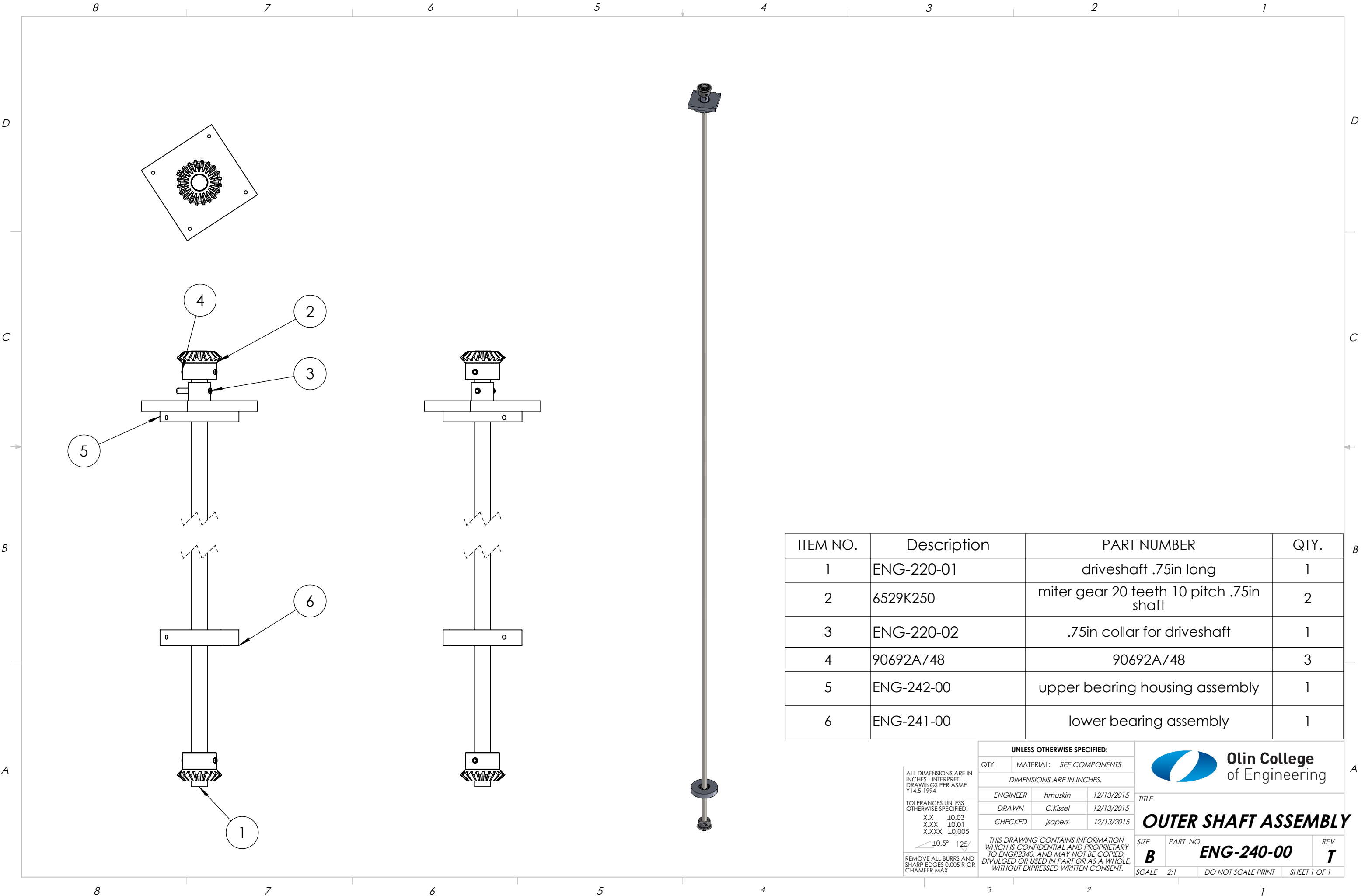
Olin College of Engineering

TITLE

**GEARBOX**

SIZE	PART NO.	REV
<b>B</b>	<b>ENG-400-00</b>	<b>G</b>

SCALE 2:1 DO NOT SCALE PRINT SHEET 1 OF 1



ITEM NO.	Description	PART NUMBER	QTY.
1	ENG-220-01	driveshaft .75in long	1
2	6529K250	miter gear 20 teeth 10 pitch .75in shaft	2
3	ENG-220-02	.75in collar for driveshaft	1
4	90692A748	90692A748	3
5	ENG-242-00	upper bearing housing assembly	1
6	ENG-241-00	lower bearing assembly	1

ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994

TOLERANCES UNLESS OTHERWISE SPECIFIED:  
X.X ±0.03  
X.XX ±0.01  
X.XXX ±0.005

±0.5° 125

REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

UNLESS OTHERWISE SPECIFIED:

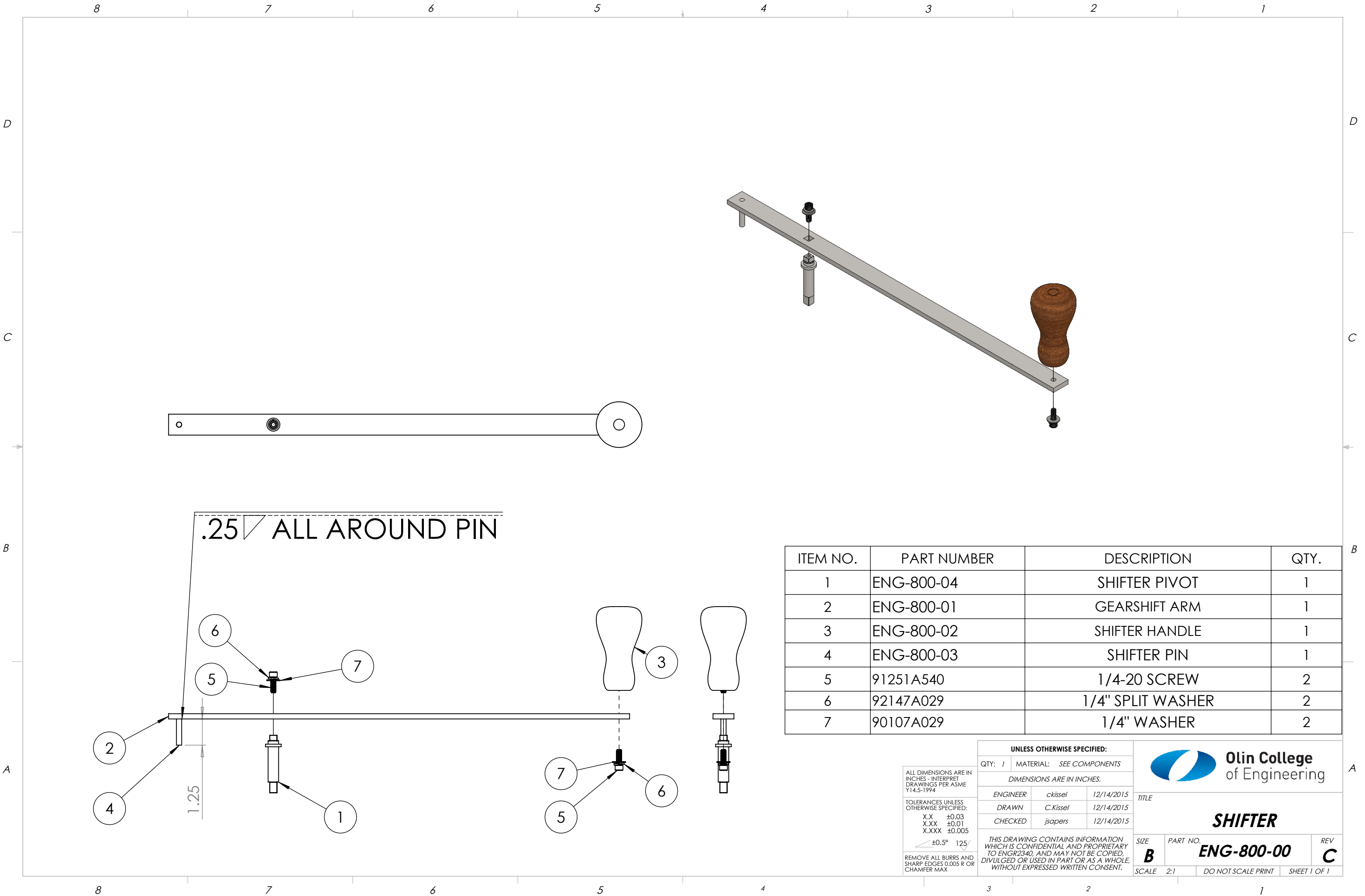
QTY:	MATERIAL: SEE COMPONENTS	
DIMENSIONS ARE IN INCHES.		
ENGINEER	hmskin	12/13/2015
DRAWN	C.Kissel	12/13/2015
CHECKED	jsapers	12/13/2015

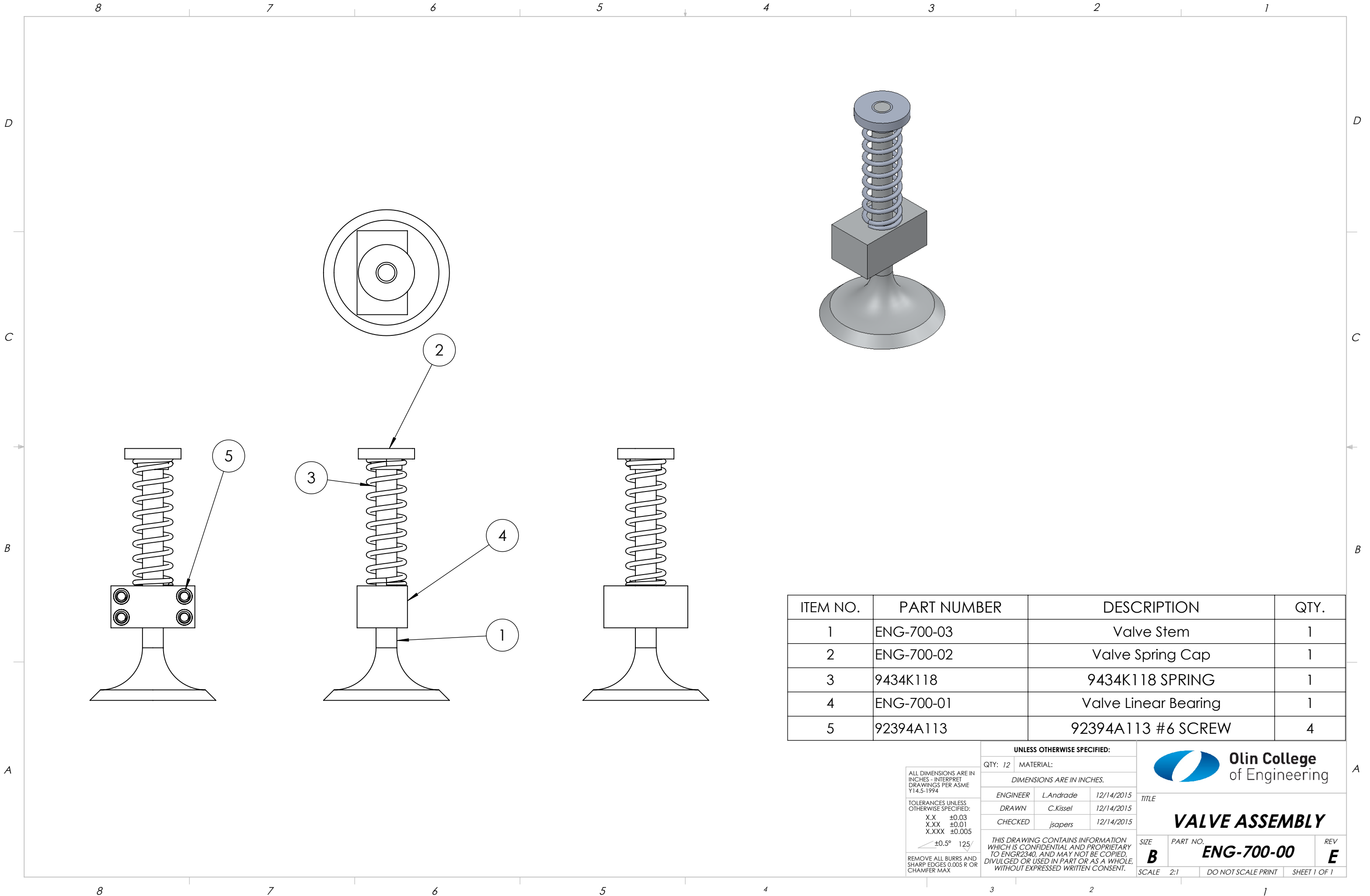
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TITLE

**OUTER SHAFT ASSEMBLY**

SIZE	PART NO.	REV
<b>B</b>	<b>ENG-240-00</b>	<b>T</b>
SCALE 2:1	DO NOT SCALE PRINT	SHEET 1 OF 1





ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ENG-700-03	Valve Stem	1
2	ENG-700-02	Valve Spring Cap	1
3	9434K118	9434K118 SPRING	1
4	ENG-700-01	Valve Linear Bearing	1
5	92394A113	92394A113 #6 SCREW	4

ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994

TOLERANCES UNLESS OTHERWISE SPECIFIED:  
X.X ±0.03  
X.XX ±0.01  
X.XXX ±0.005  
±0.5° 125°  
REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

UNLESS OTHERWISE SPECIFIED:

QTY:	12	MATERIAL:
DIMENSIONS ARE IN INCHES.		
ENGINEER	L.Andrade	12/14/2015
DRAWN	C.Kissel	12/14/2015
CHECKED	jsapers	12/14/2015

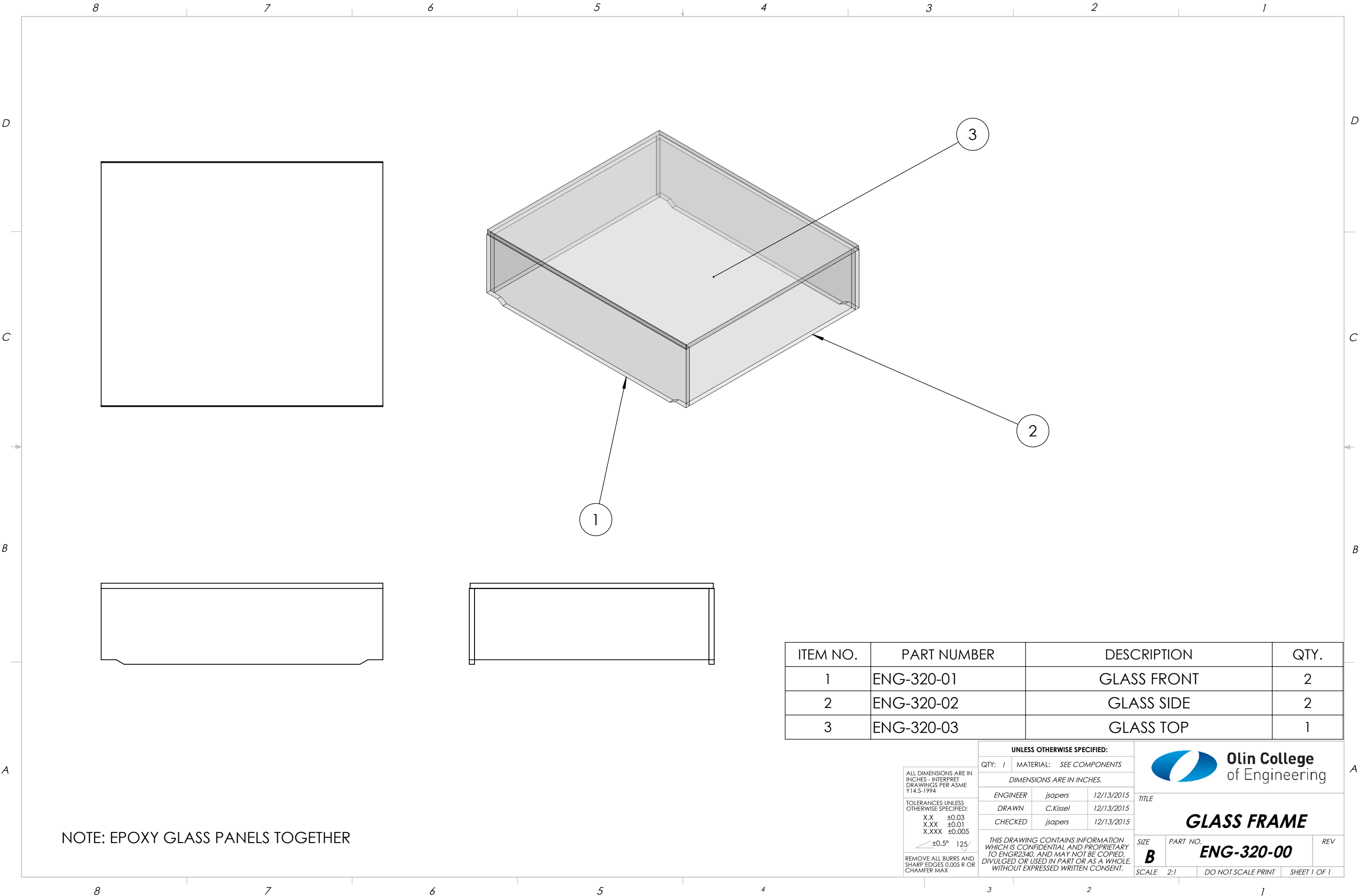
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TITLE

**VALVE ASSEMBLY**

SIZE	PART NO.	REV
<b>B</b>	<b>ENG-700-00</b>	<b>E</b>

SCALE 2:1 DO NOT SCALE PRINT SHEET 1 OF 1



NOTE: EPOXY GLASS PANELS TOGETHER

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	ENG-320-01	GLASS FRONT	2
2	ENG-320-02	GLASS SIDE	2
3	ENG-320-03	GLASS TOP	1

ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994

TOLERANCES UNLESS OTHERWISE SPECIFIED:  
X.X ±0.03  
X.XX ±0.01  
X.XXX ±0.005  
±0.5° 125°  
REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

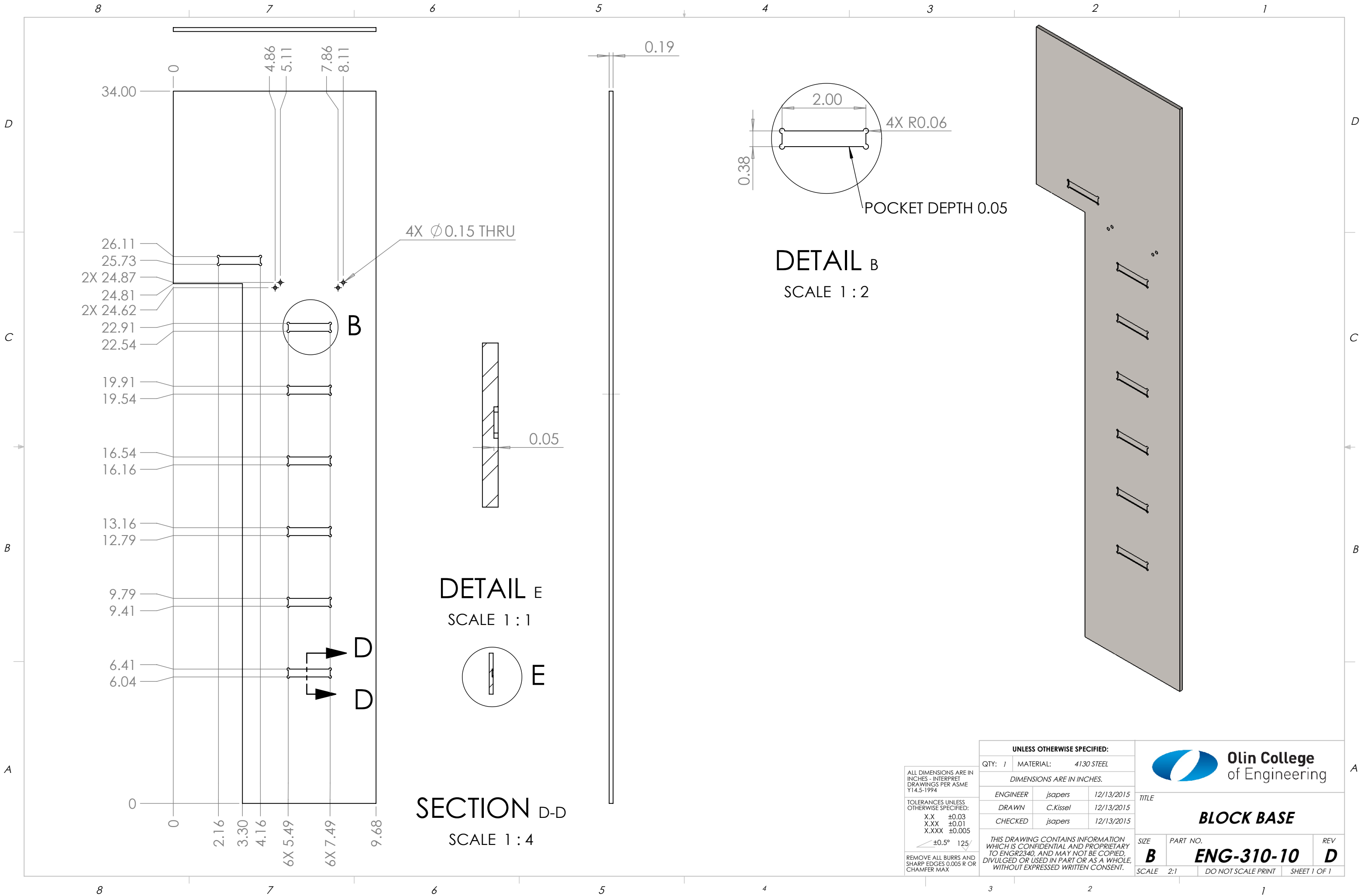
UNLESS OTHERWISE SPECIFIED:  
QTY: 1 MATERIAL: SEE COMPONENTS  
DIMENSIONS ARE IN INCHES.  
ENGINEER jsapers 12/13/2015  
DRAWN C.Kissel 12/13/2015  
CHECKED jsapers 12/13/2015

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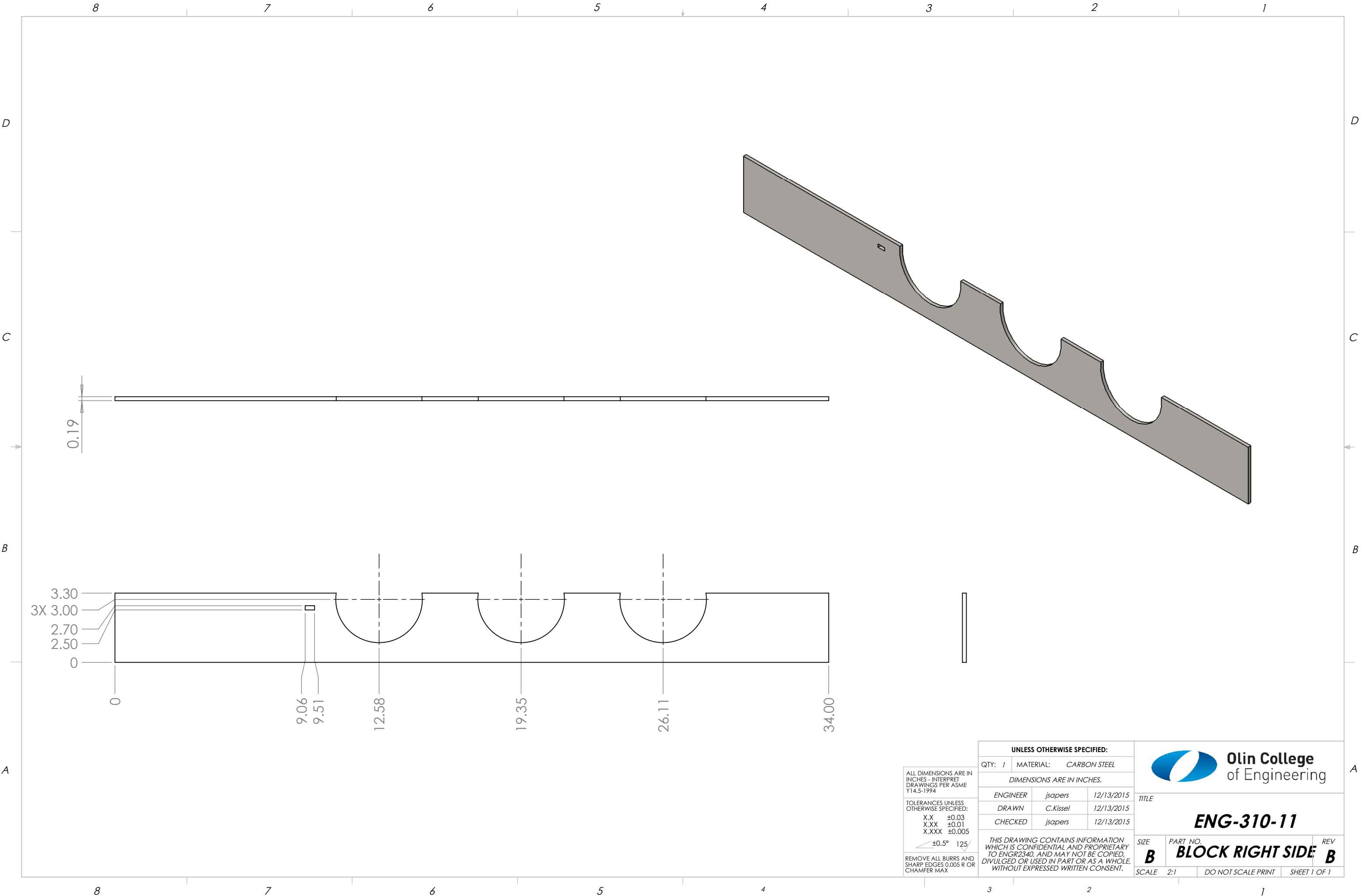
TITLE  
**GLASS FRAME**

SIZE **B** PART NO. **ENG-320-00** REV  
SCALE 2:1 DO NOT SCALE PRINT SHEET 1 OF 1









ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994


TOLERANCES UNLESS OTHERWISE SPECIFIED:

X.X	±0.03
X.XX	±0.01
X.XXX	±0.005

±0.5° 125/

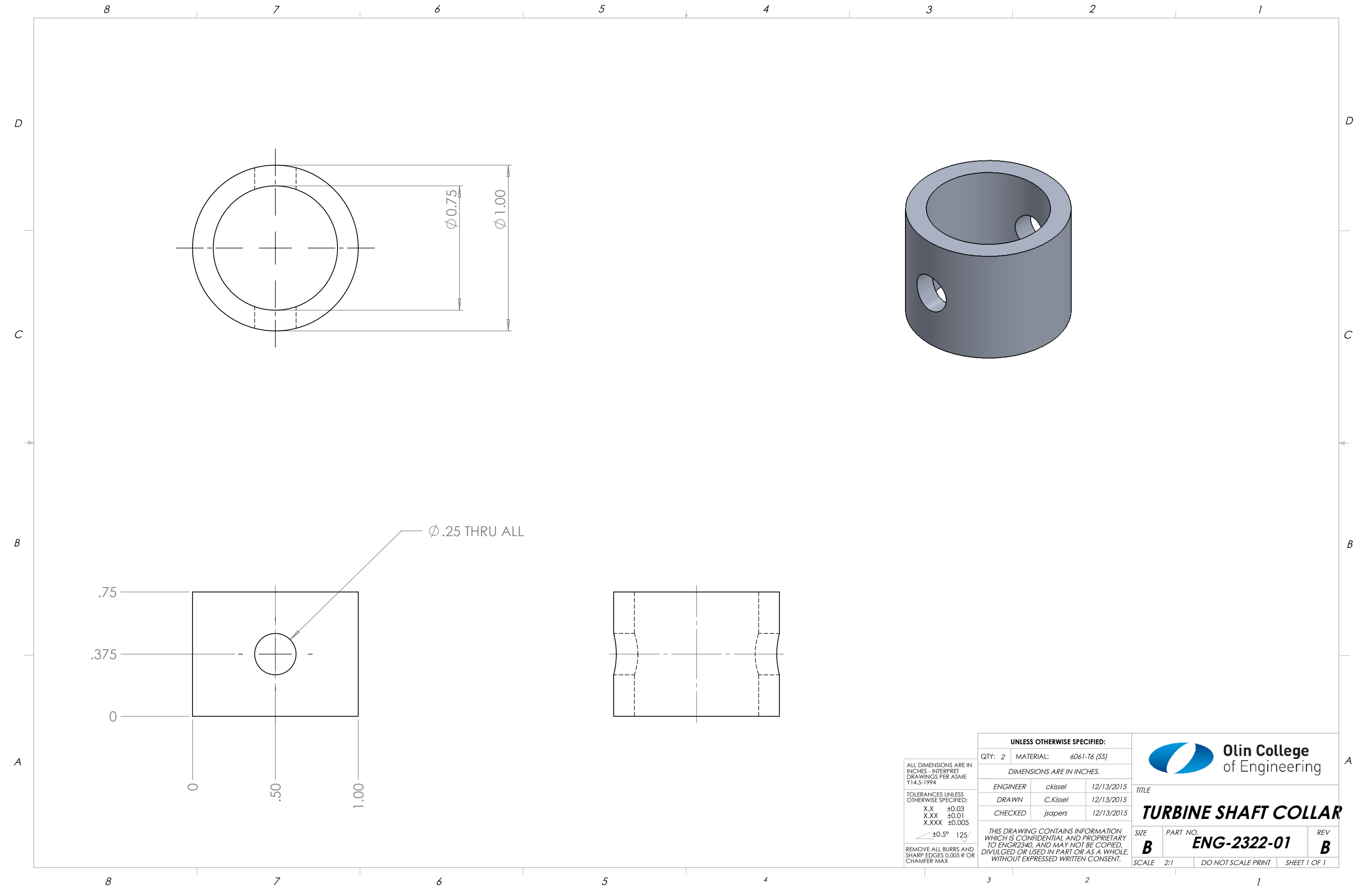
REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

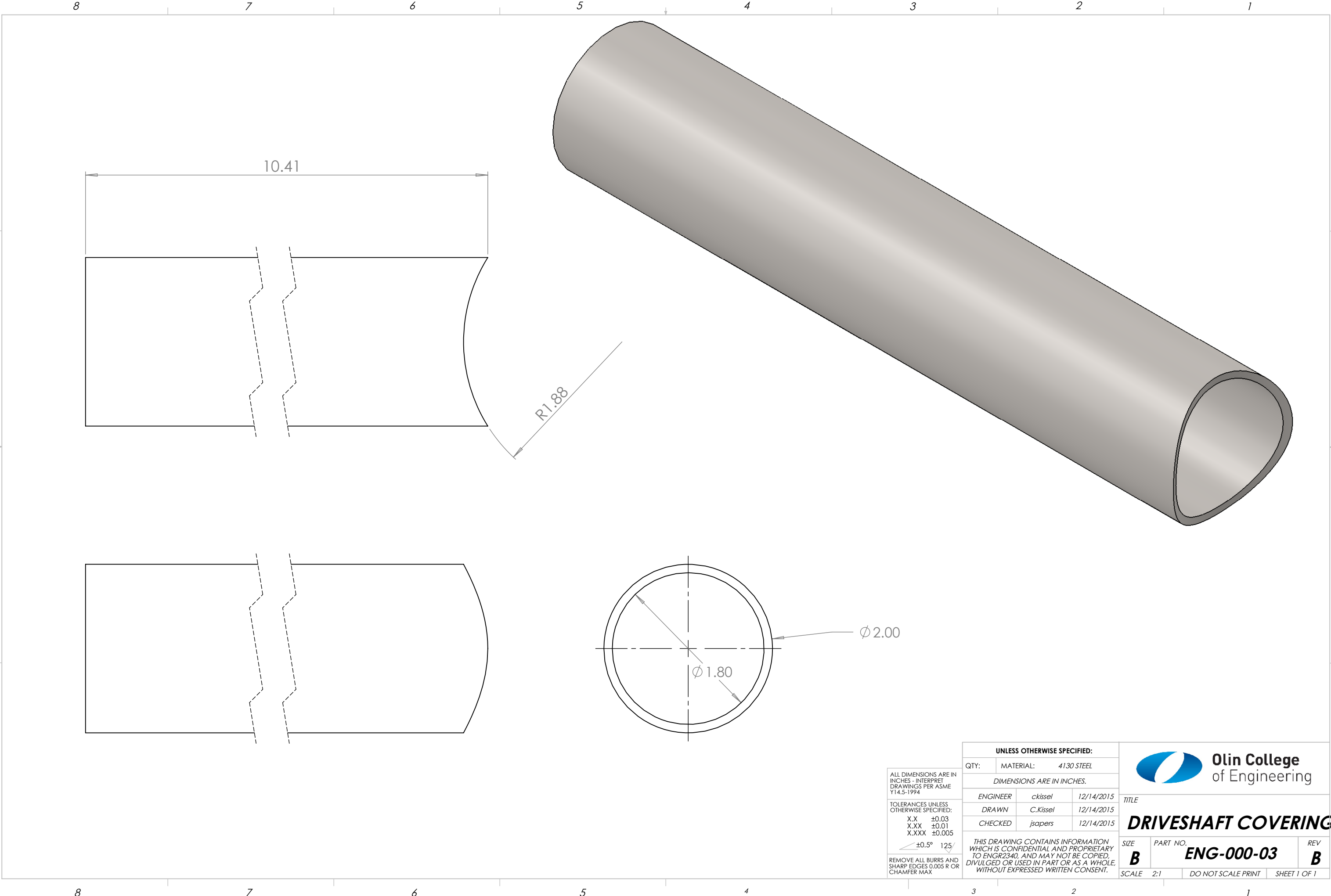
UNLESS OTHERWISE SPECIFIED:		
QTY: 1	MATERIAL: CARBON STEEL	
DIMENSIONS ARE IN INCHES.		
ENGINEER	jsapers	12/13/2015
DRAWN	C.Kissel	12/13/2015
CHECKED	jsapers	12/13/2015
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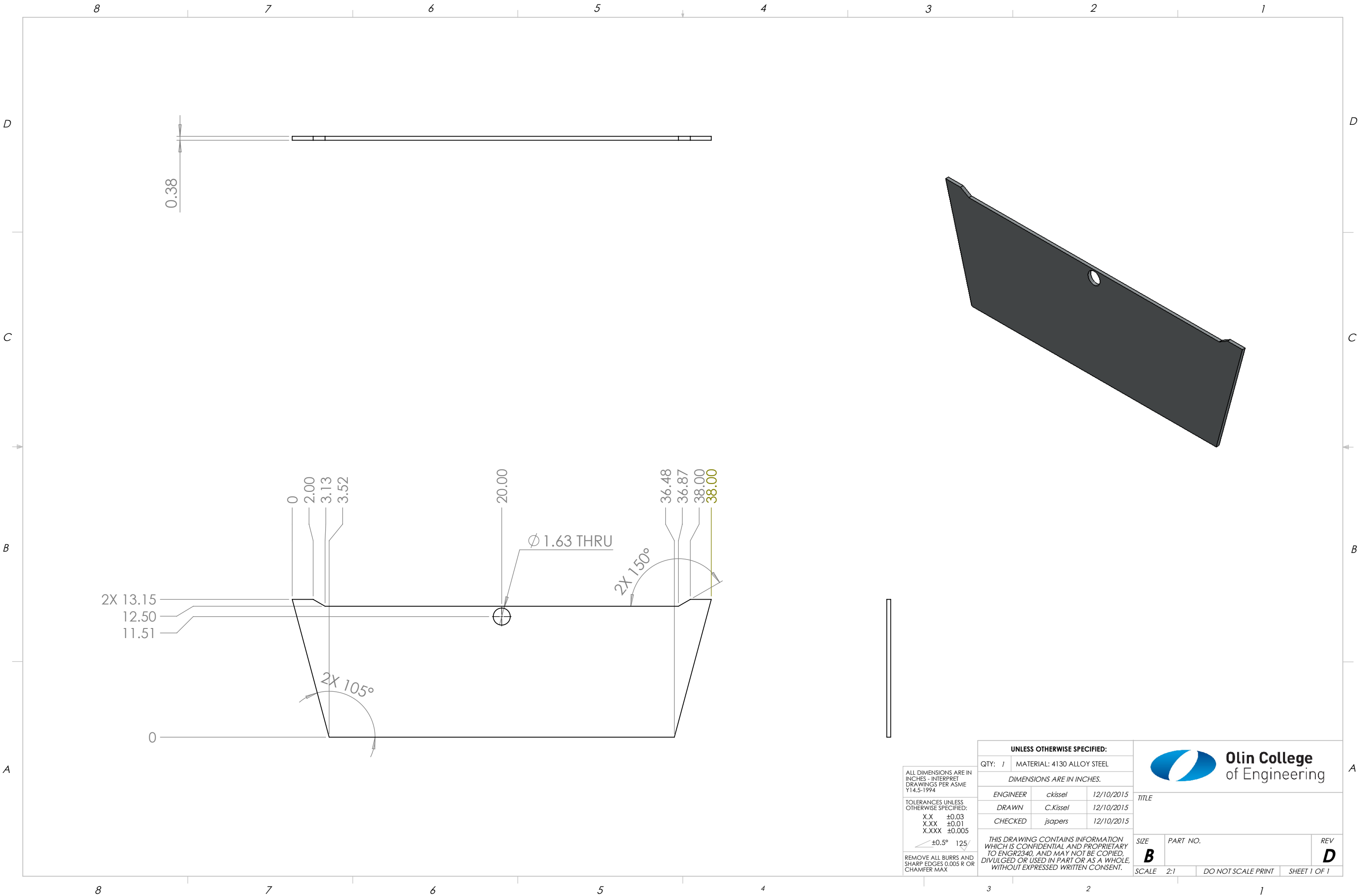


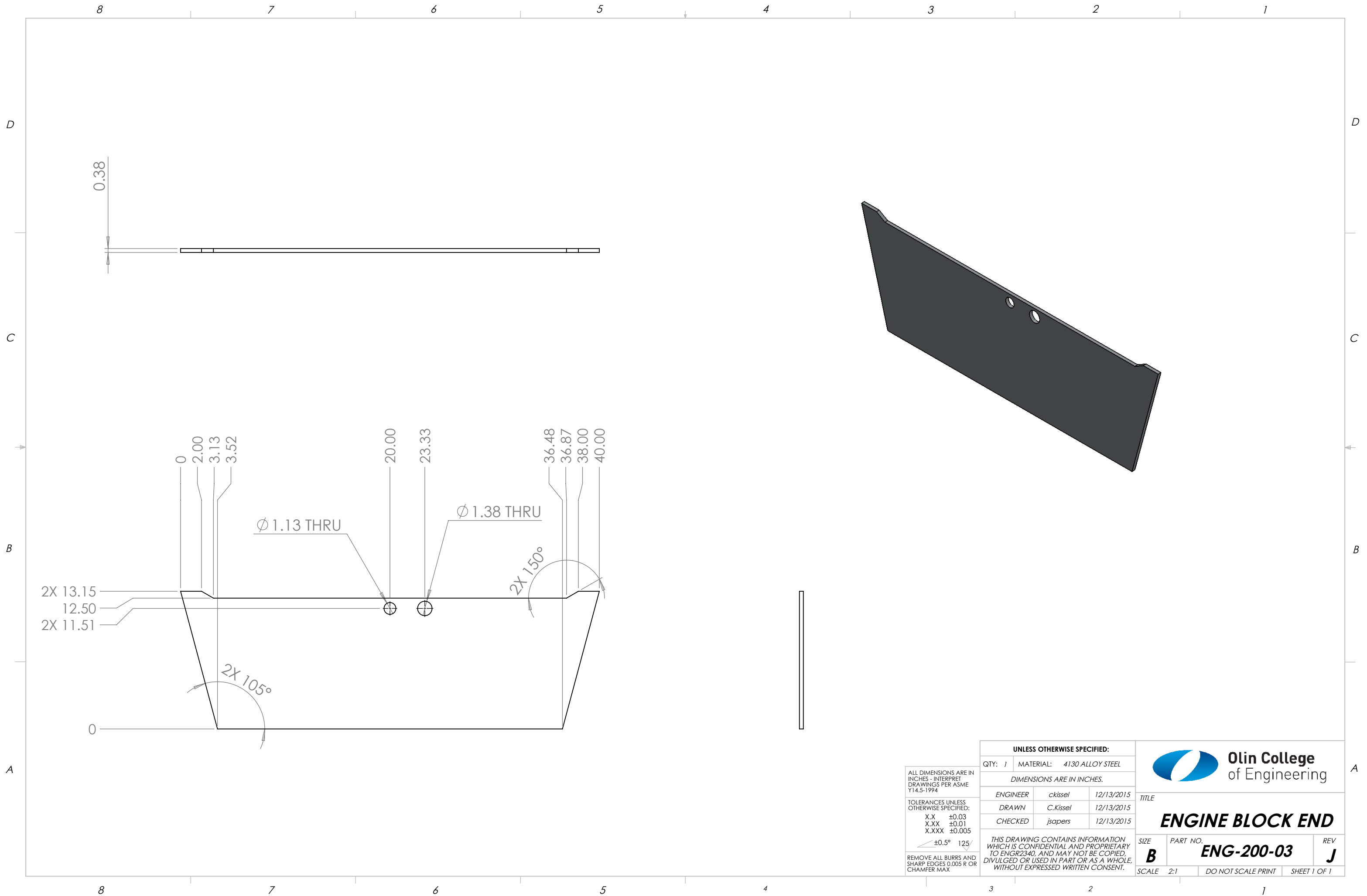
Olin College  
of Engineering

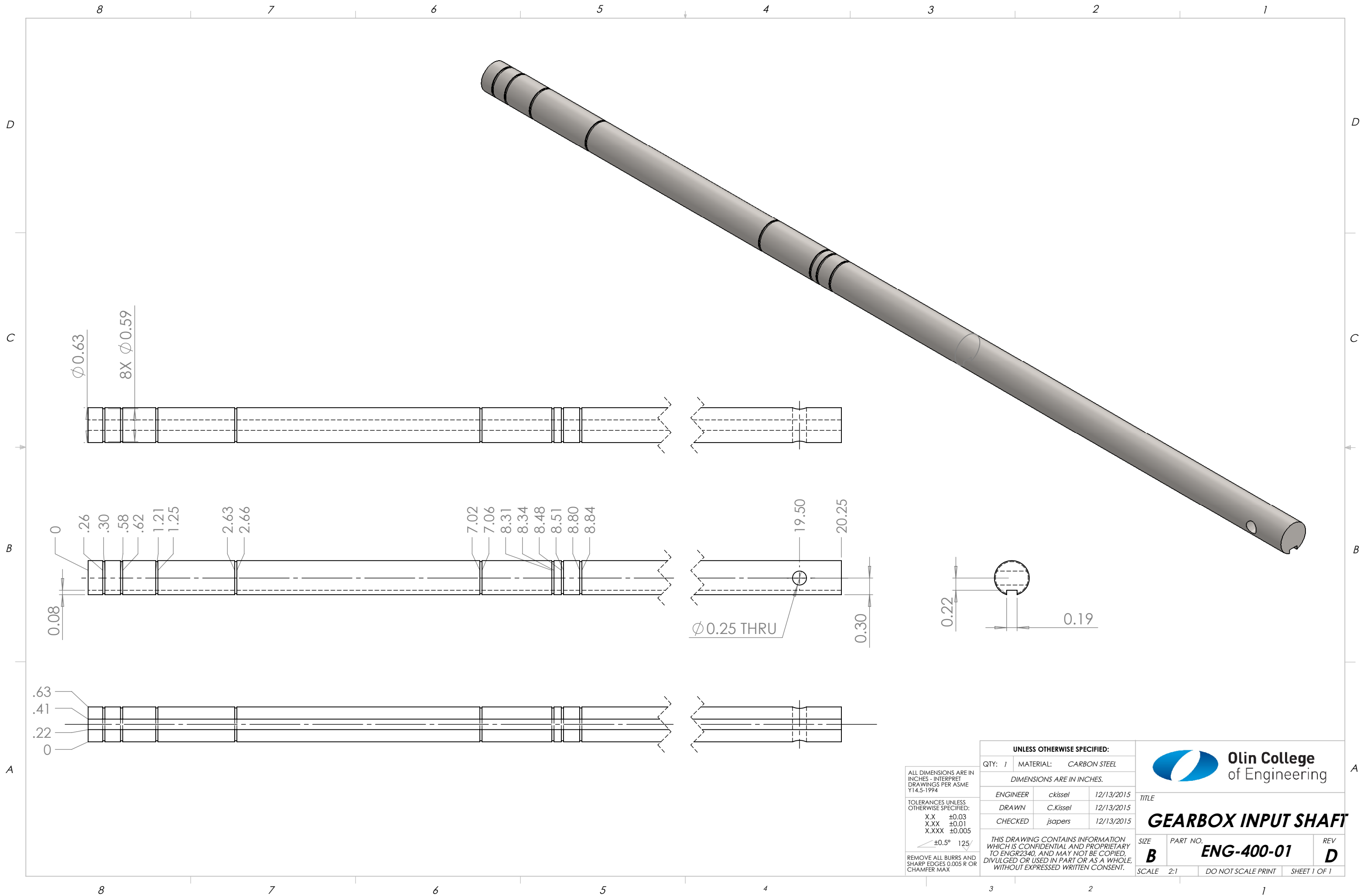
TITLE		
ENG-310-11		
SIZE	PART NO.	REV
B	BLOCK RIGHT SIDE	B
SCALE	2:1	DO NOT SCALE PRINT
		SHEET 1 OF 1

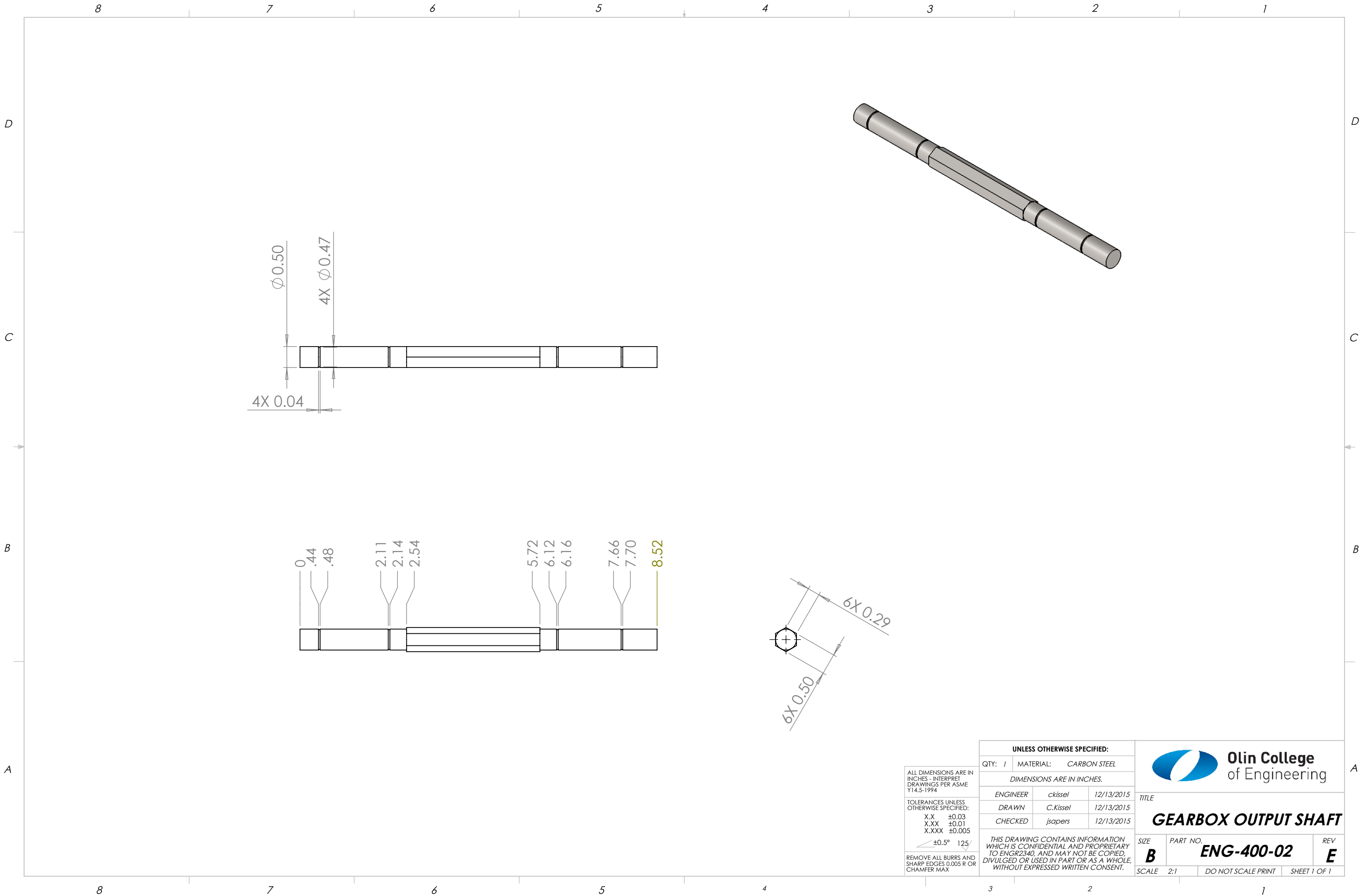


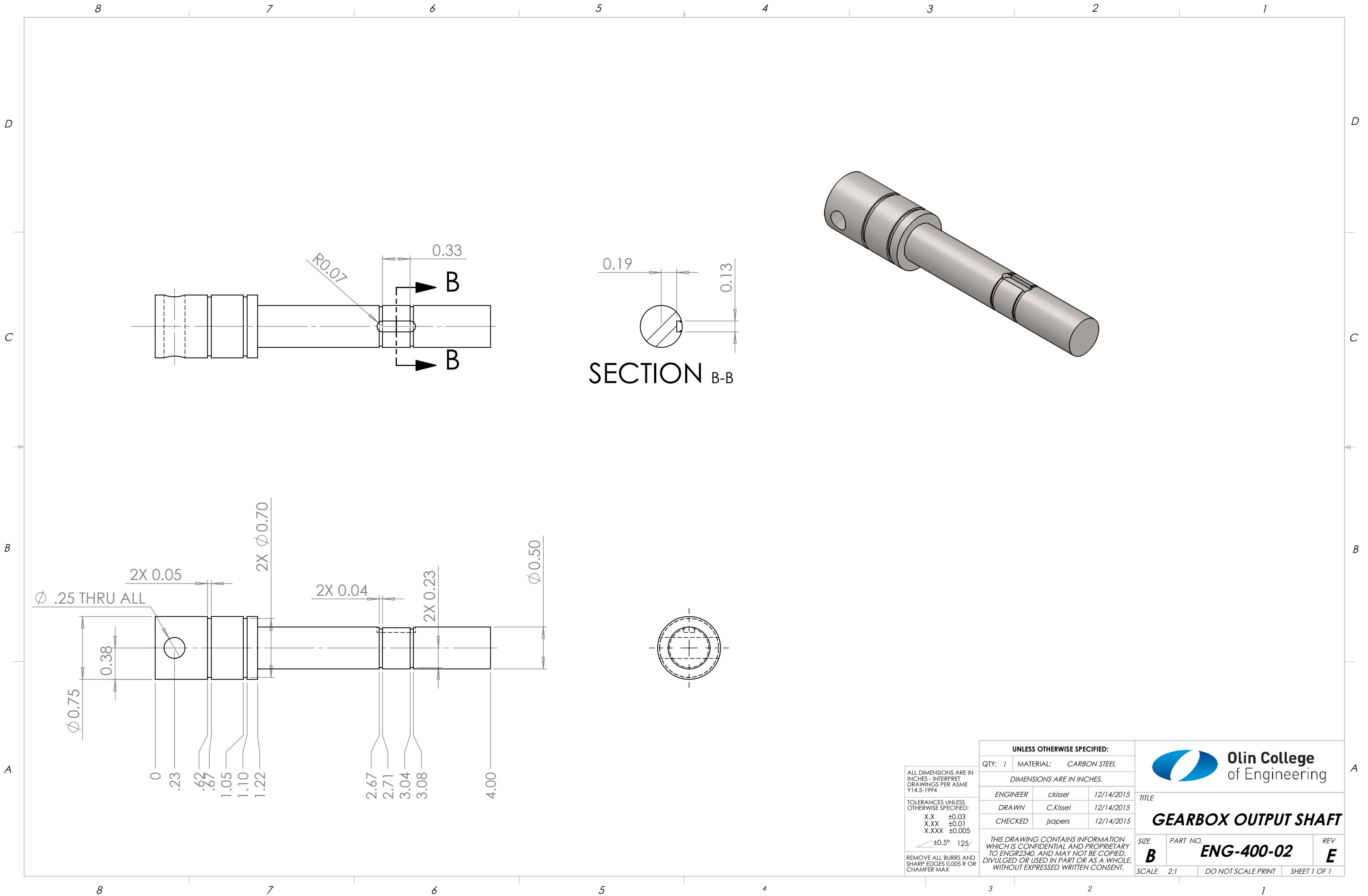




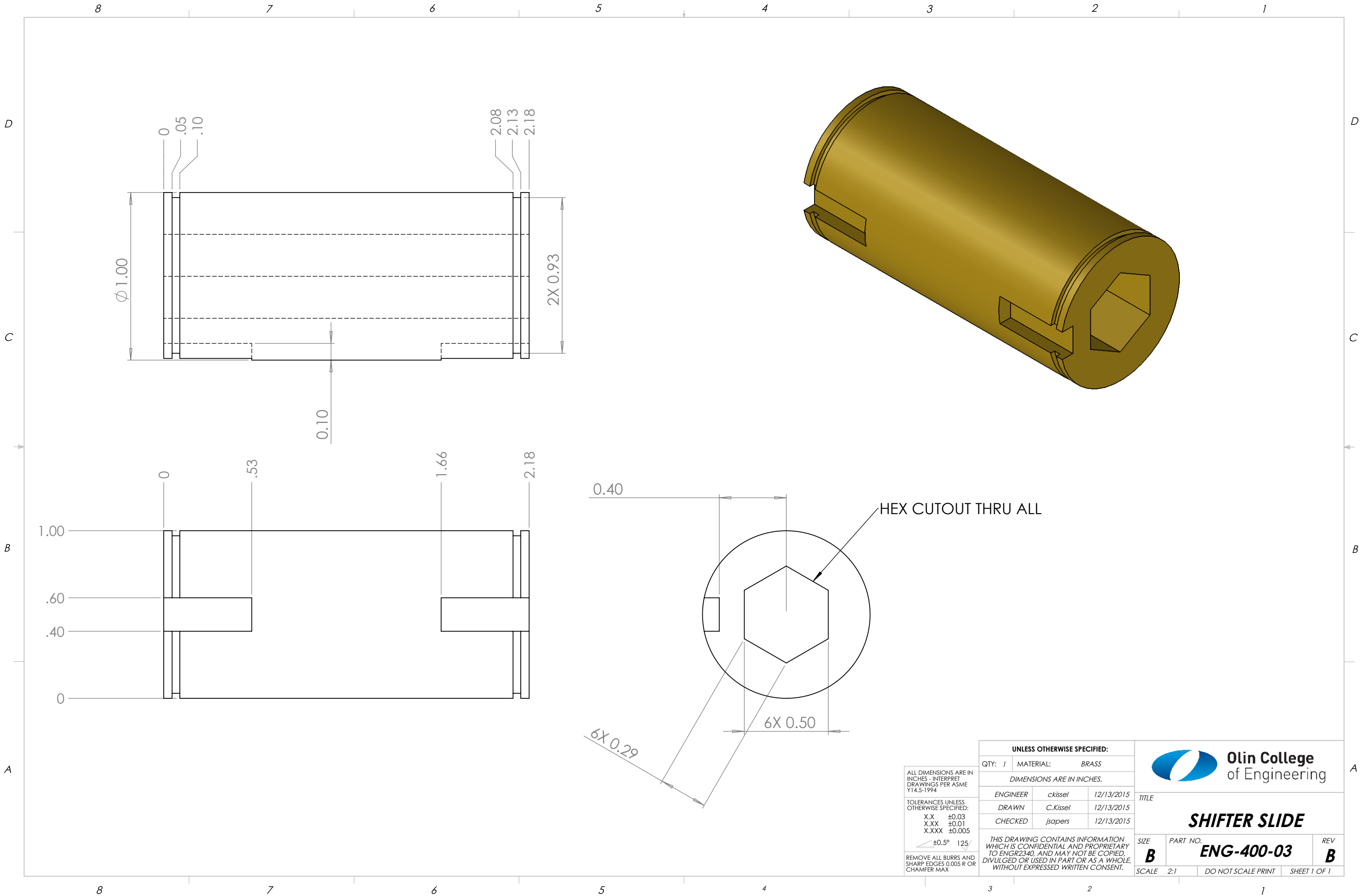


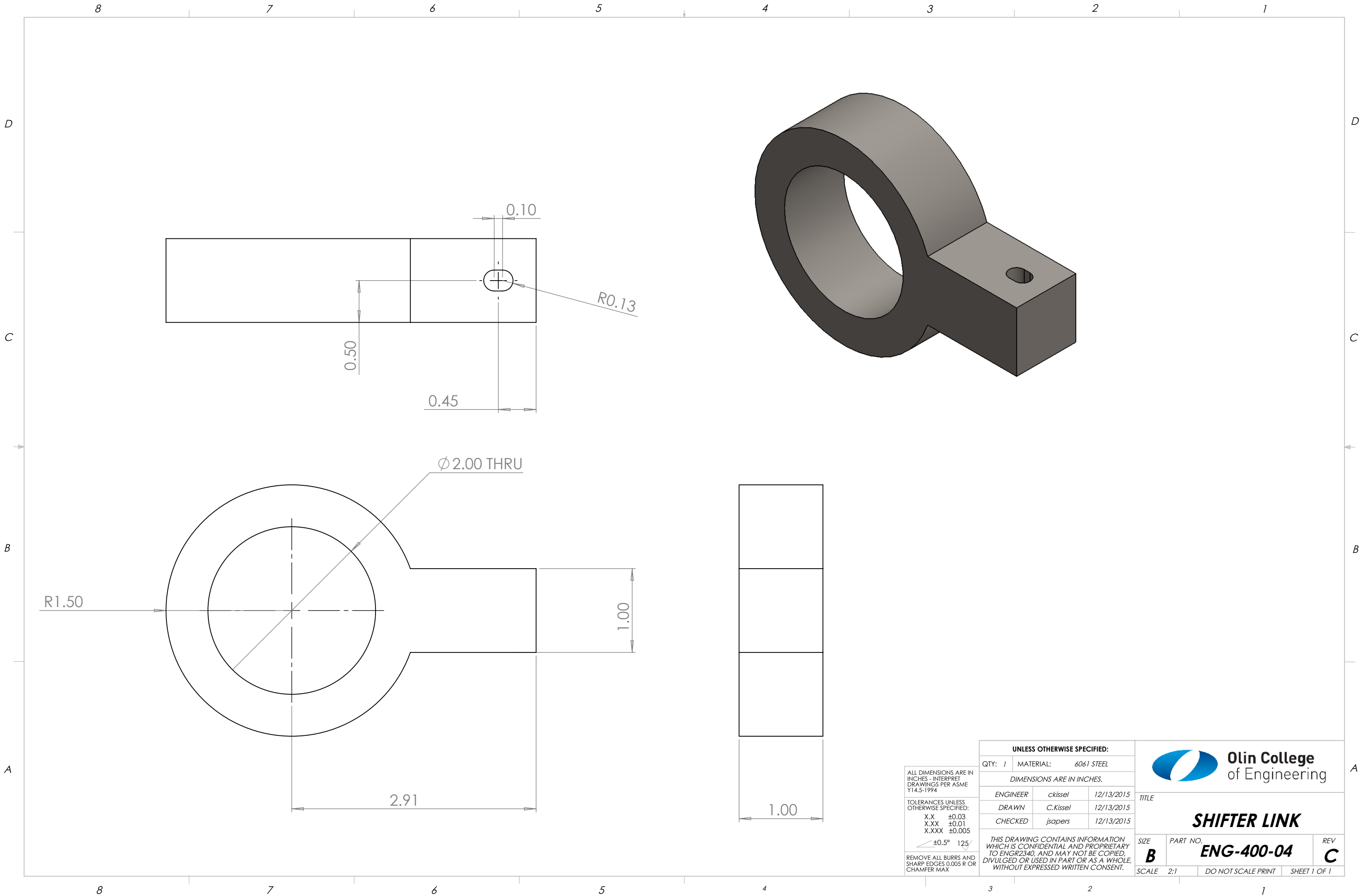


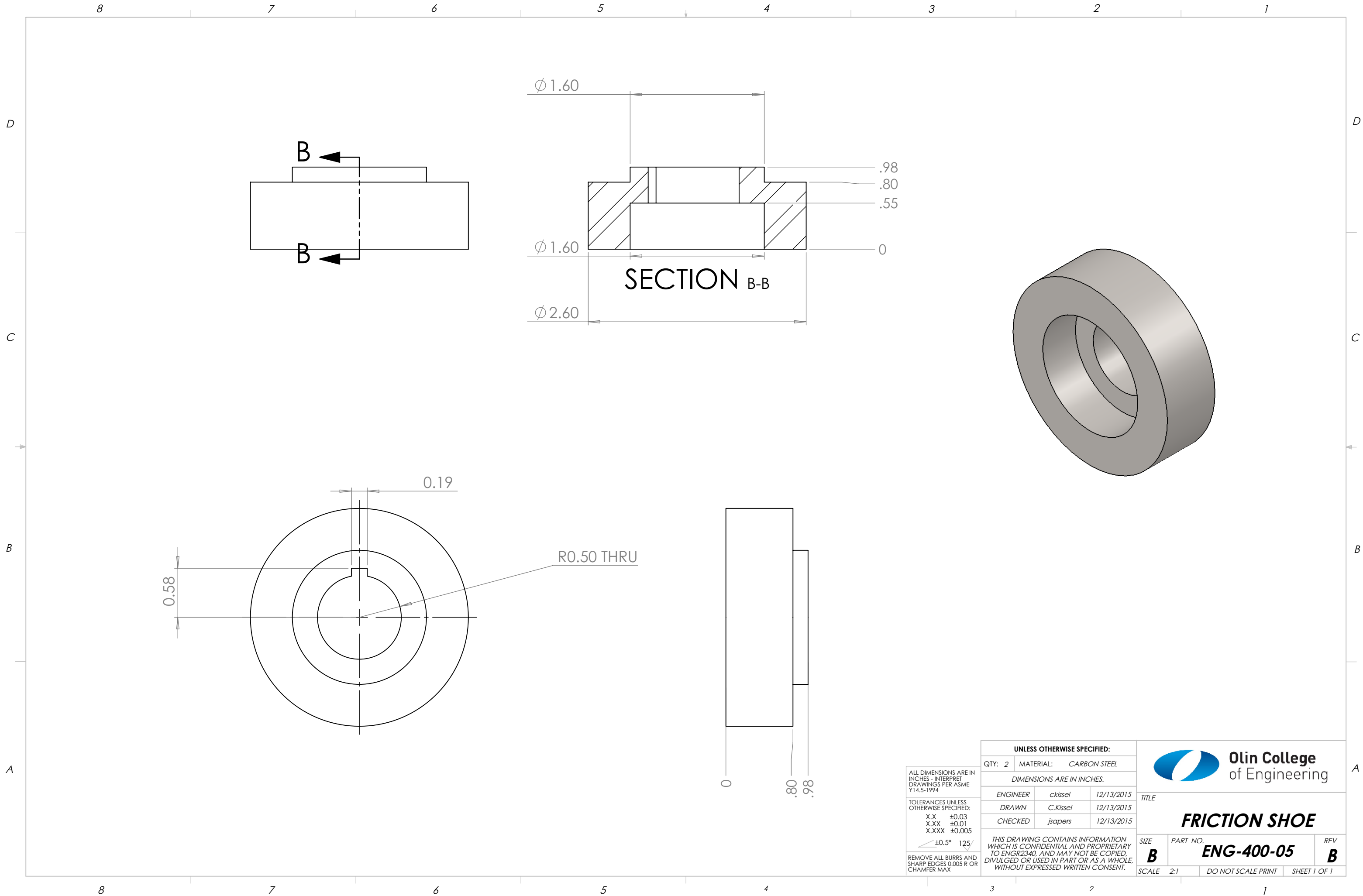


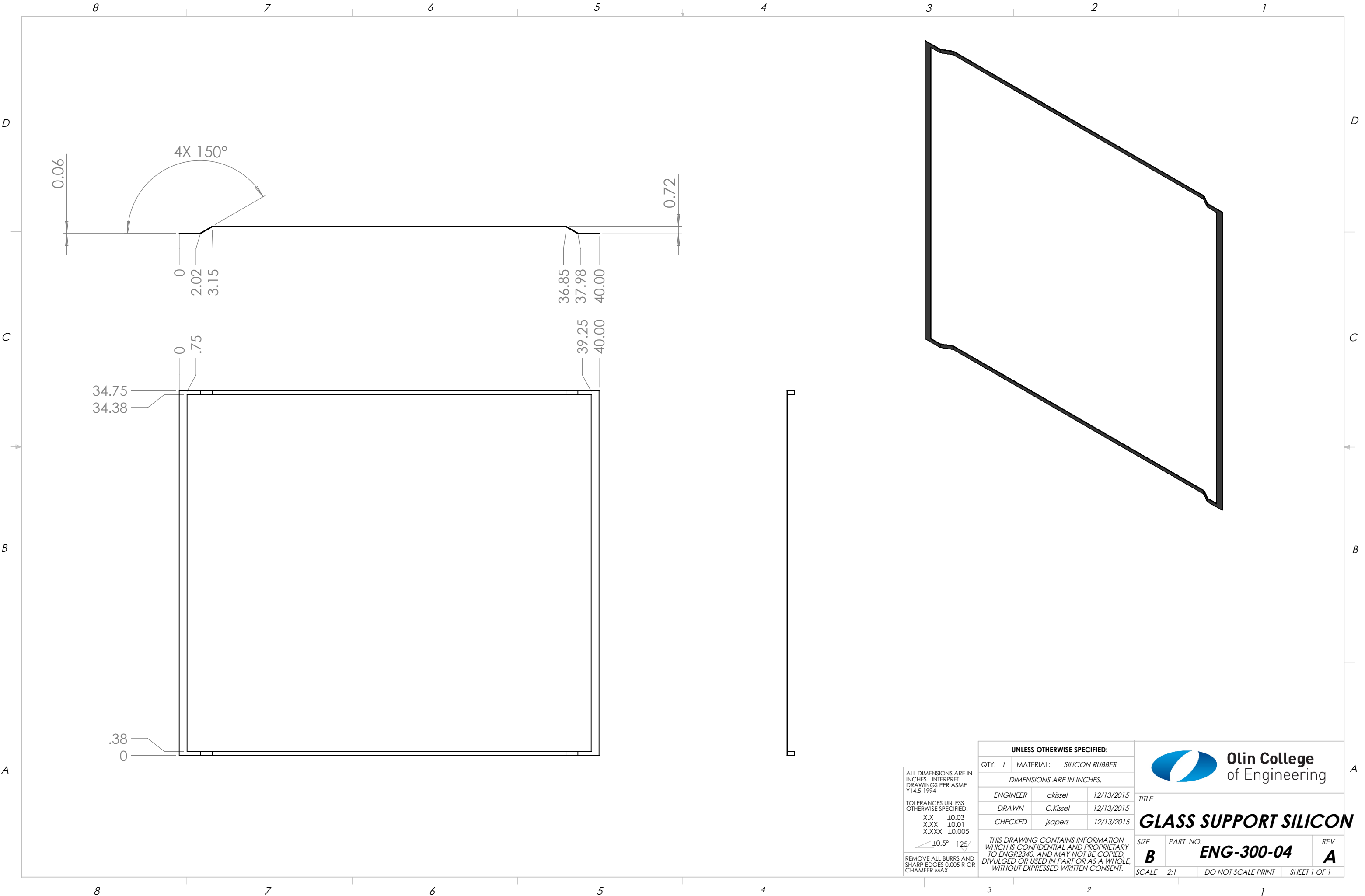





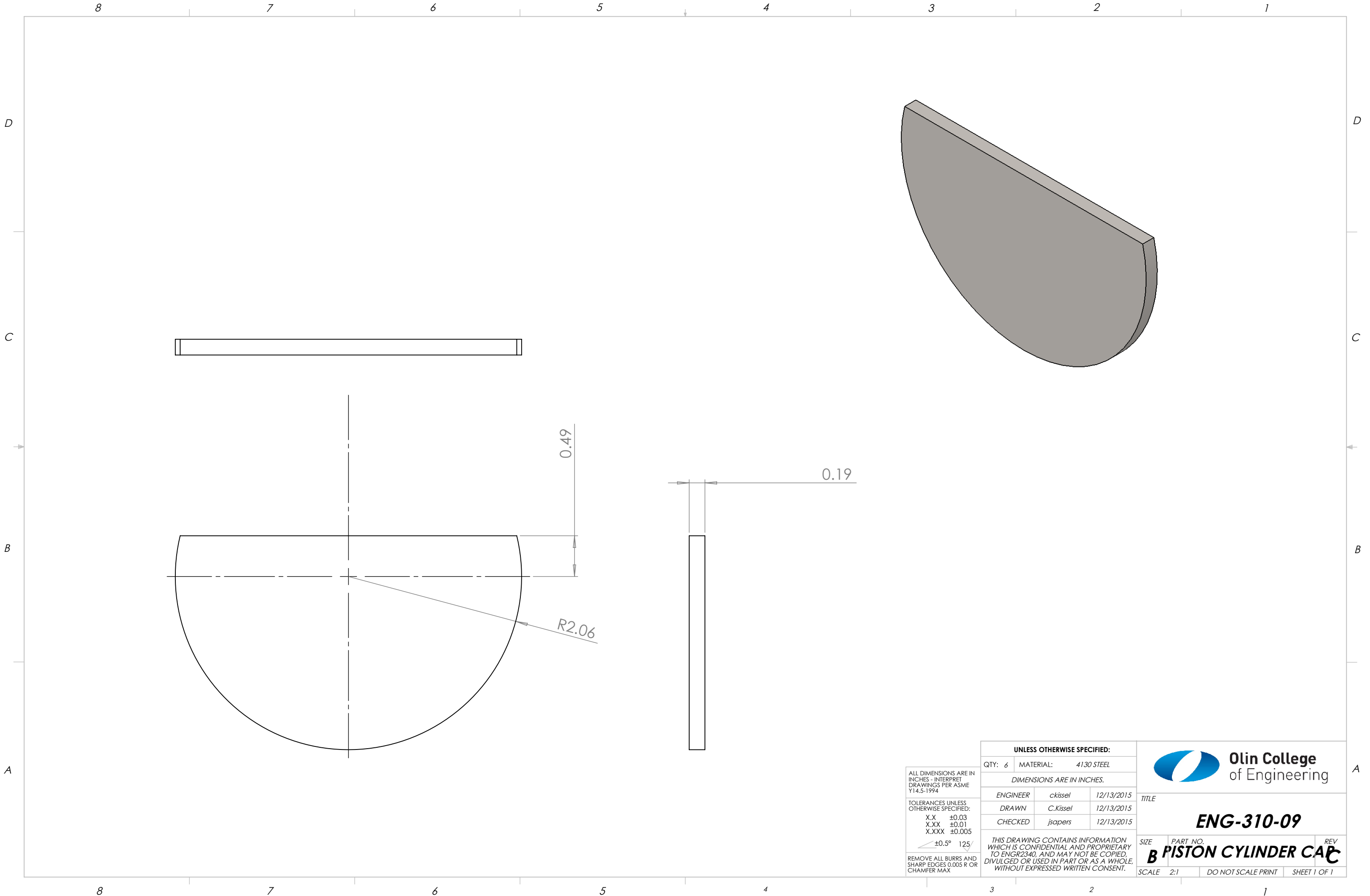





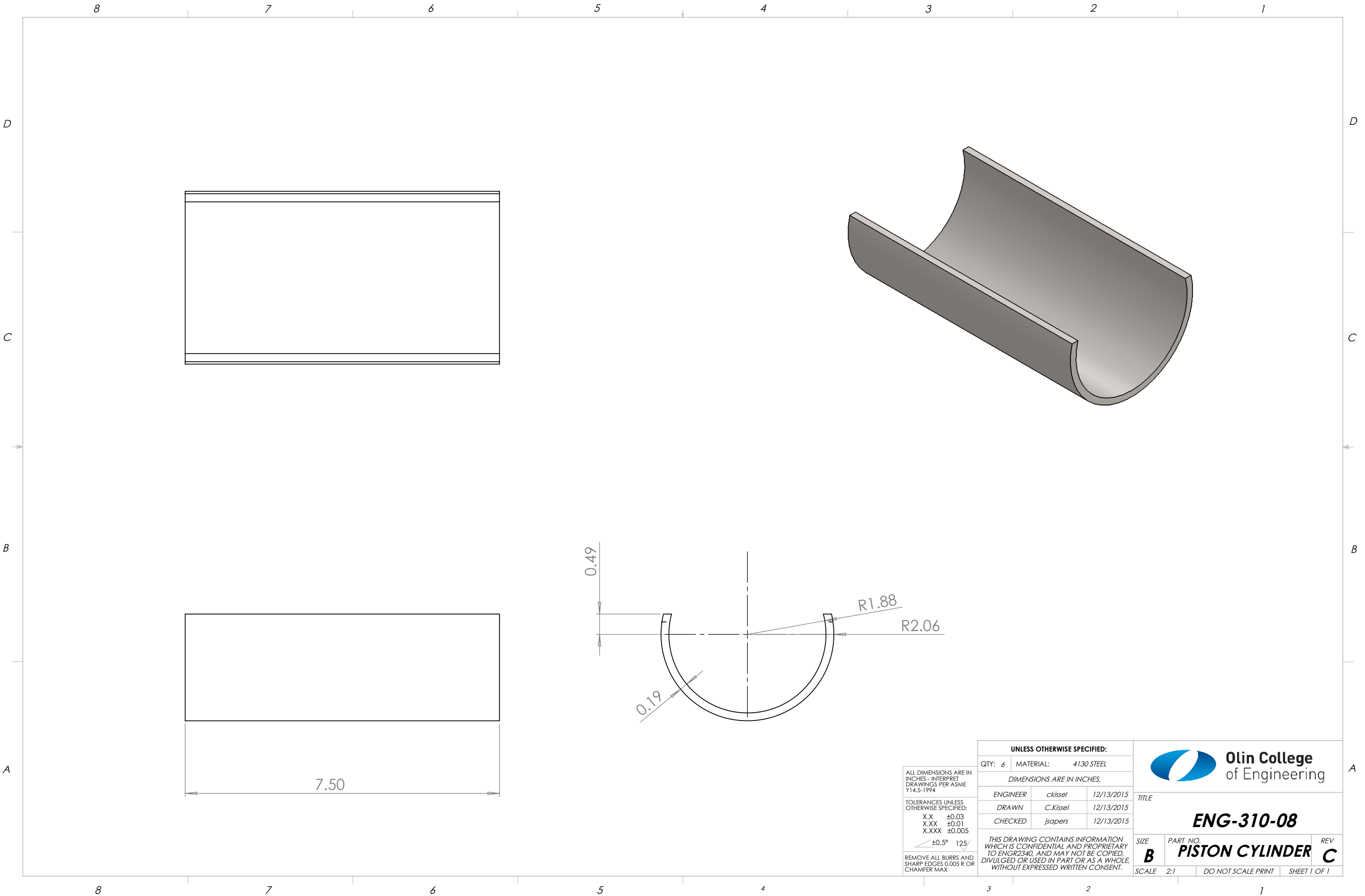


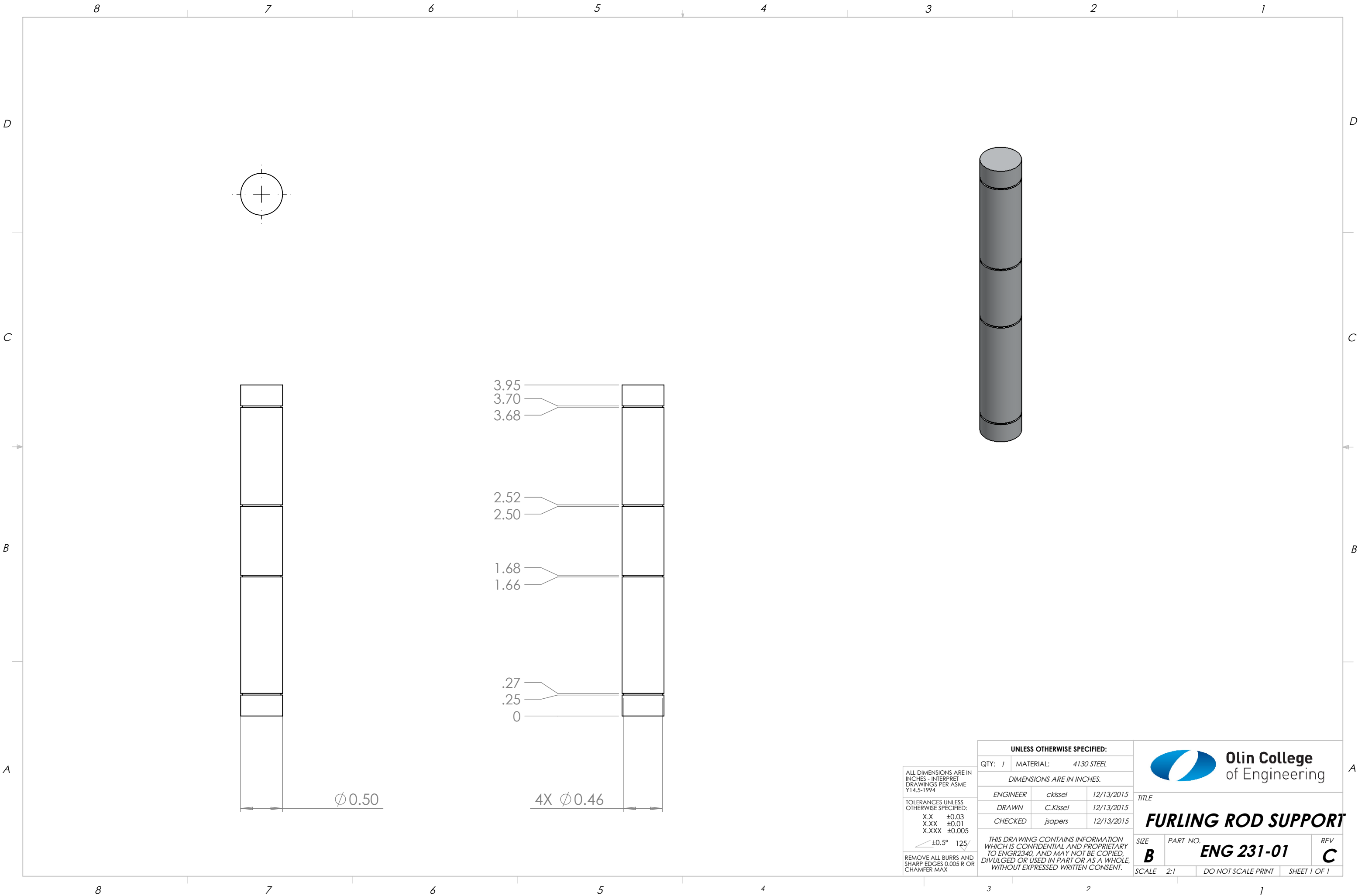


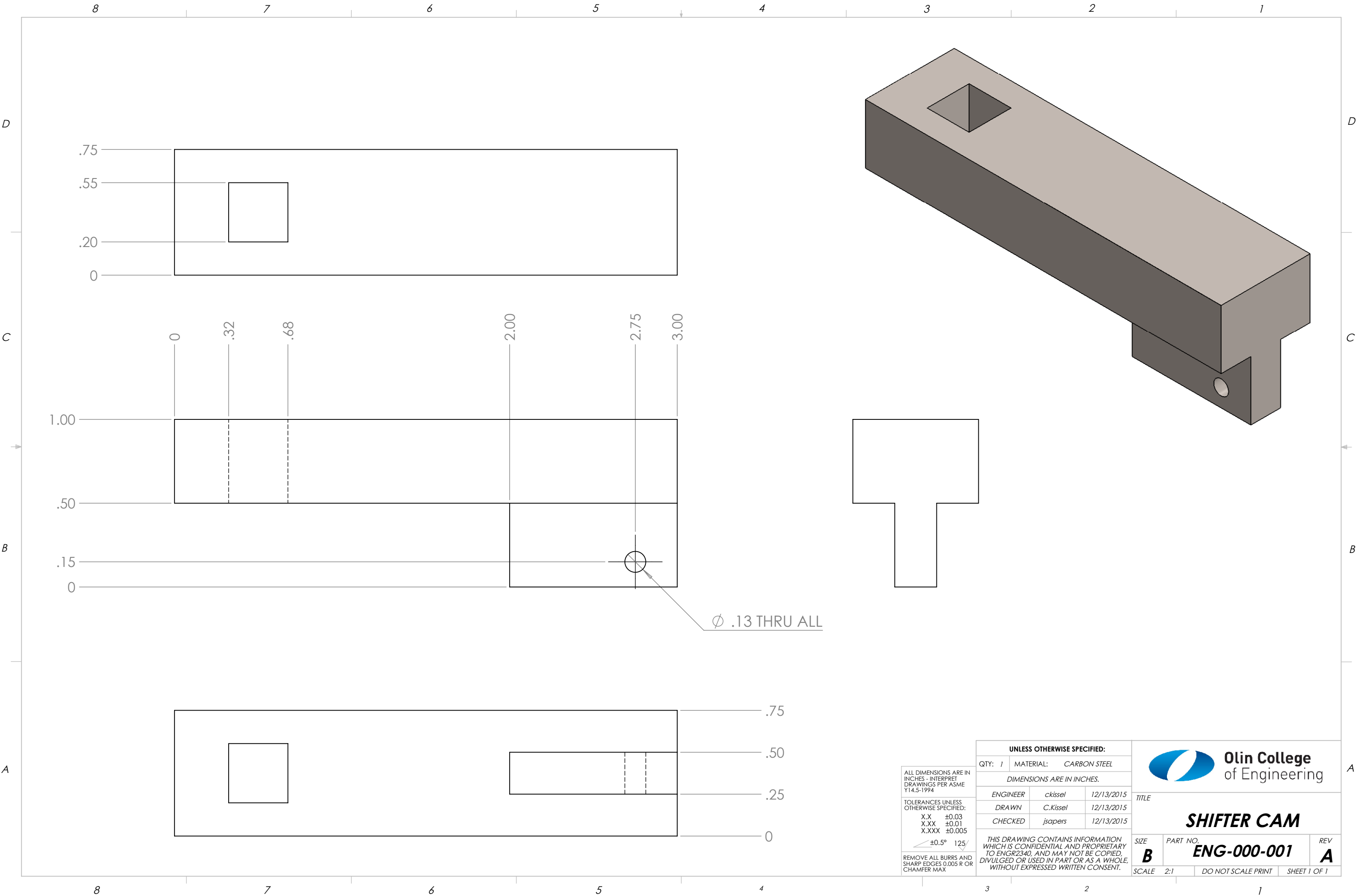
<div>ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994</div> <div>TOLERANCES UNLESS OTHERWISE SPECIFIED: X.X ±0.03 X.XX ±0.01 X.XXX ±0.005 <div>±0.5° 125/</div></div> <div>REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX</div>	UNLESS OTHERWISE SPECIFIED:			<div> <b>Olin College</b> of Engineering</div> <div>TITLE</div> <div><b>GLASS SUPPORT SILICON</b></div>		
	QTY: 1	MATERIAL: SILICON RUBBER				
	DIMENSIONS ARE IN INCHES.					
	ENGINEER	ckissel	12/13/2015			
	DRAWN	C.Kissel	12/13/2015			
<div>THIS DRAWING CONTAINS INFORMATION WHICH IS CONFIDENTIAL AND PROPRIETARY TO ENGR2340, AND MAY NOT BE COPIED, DIVULGED OR USED IN PART OR AS A WHOLE, WITHOUT EXPRESSED WRITTEN CONSENT.</div>	CHECKED	jsapers	12/13/2015	SIZE	PART NO.	REV
				<b>B</b>	<b>ENG-300-04</b>	<b>A</b>
				SCALE	2:1	DO NOT SCALE PRINT
				SHEET 1 OF 1		



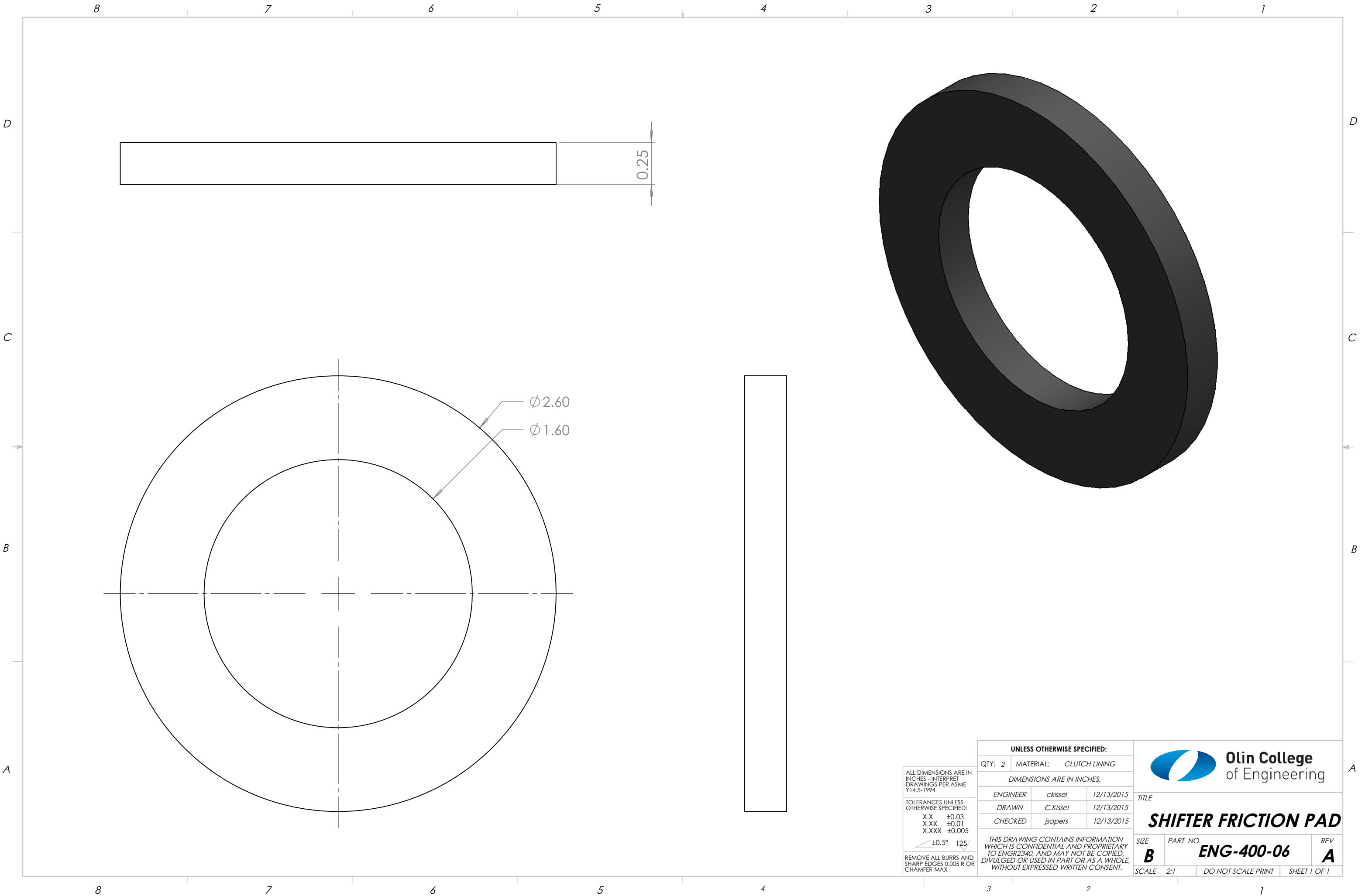
<small>ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994</small>  <small>TOLERANCES UNLESS OTHERWISE SPECIFIED:</small> X.X ±0.03 X.XX ±0.01 X.XXX ±0.005  ±0.5° 125°  <small>REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX</small>	<b>UNLESS OTHERWISE SPECIFIED:</b>			 <b>Olin College of Engineering</b>  <b>ENG-310-09</b>  <small>SIZE PART NO. REV</small> <b>B PISTON CYLINDER CAP C</b>	
	QTY: 6	MATERIAL: 4130 STEEL			TITLE
	DIMENSIONS ARE IN INCHES.				
	ENGINEER	ckissel	12/13/2015		
	DRAWN	C.Kissel	12/13/2015		
	CHECKED	jsapers	12/13/2015		
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SCALE	2:1	DO NOT SCALE PRINT		SHEET 1 OF 1	

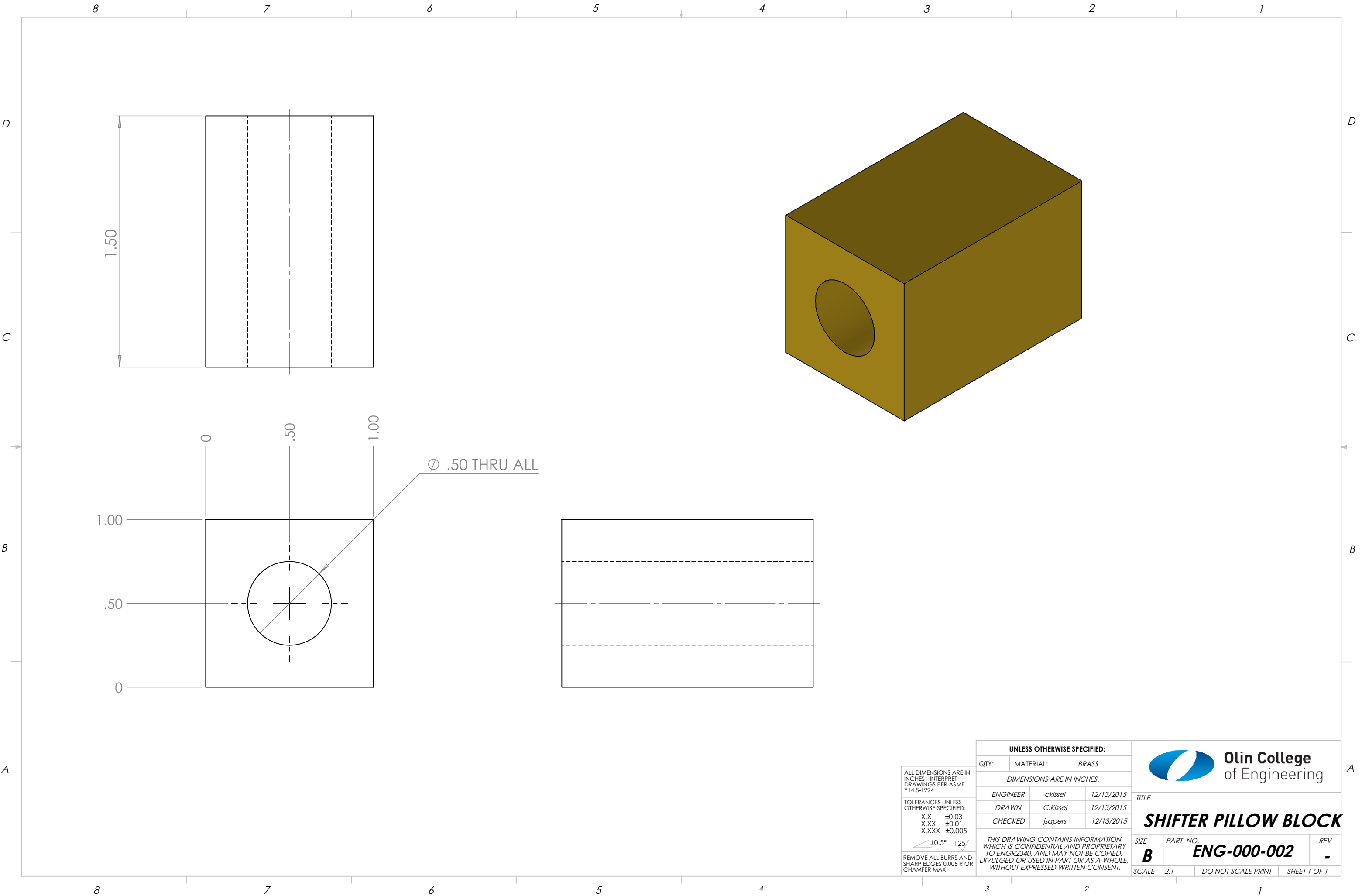


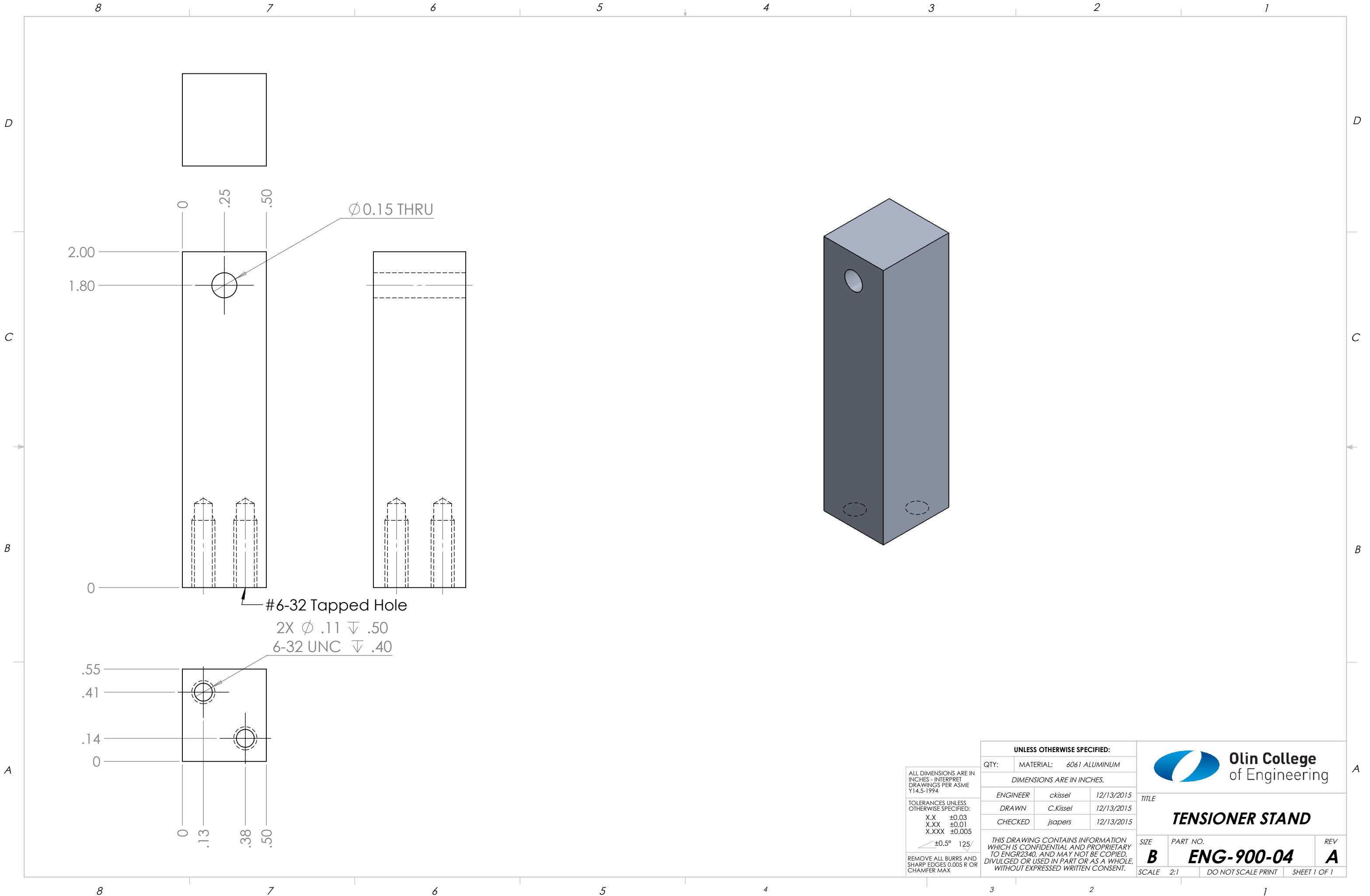












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TOLERANCES UNLESS OTHERWISE SPECIFIED:

X.X	±0.03
X.XX	±0.01
X.XXX	±0.005

±0.5° 125/

REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

UNLESS OTHERWISE SPECIFIED:		
QTY:	MATERIAL: 6061 ALUMINUM	
DIMENSIONS ARE IN INCHES.		
ENGINEER	ckissel	12/13/2015
DRAWN	C.Kissel	12/13/2015
CHECKED	jsapers	12/13/2015

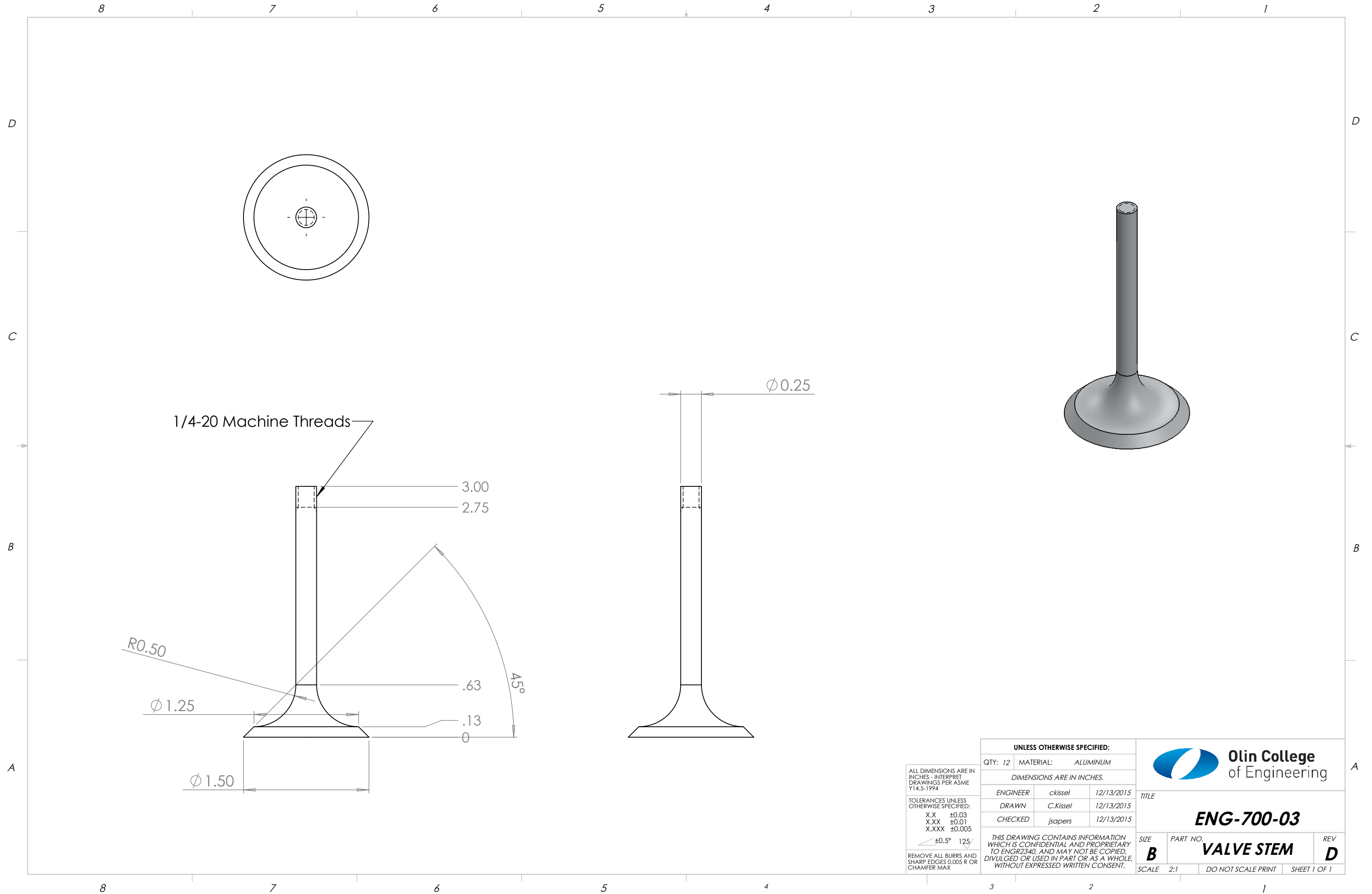
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TITLE

**TENSIONER STAND**

SIZE	PART NO.	REV
<b>B</b>	<b>ENG-900-04</b>	<b>A</b>
SCALE	2:1	DO NOT SCALE PRINT
SHEET 1 OF 1		



ALL DIMENSIONS ARE IN INCHES - INTERPRET DRAWINGS PER ASME Y14.5-1994


TOLERANCES UNLESS OTHERWISE SPECIFIED:

X.X	±0.03
X.XX	±0.01
X.XXX	±0.005

±0.5° 125/

REMOVE ALL BURRS AND SHARP EDGES 0.005 R OR CHAMFER MAX

UNLESS OTHERWISE SPECIFIED:		
QTY: 12	MATERIAL:	ALUMINUM
DIMENSIONS ARE IN INCHES.		
ENGINEER	ckissel	12/13/2015
DRAWN	C.Kissel	12/13/2015
CHECKED	jsapers	12/13/2015
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TITLE		
ENG-700-03		
SIZE	PART NO.	REV
B	VALVE STEM	D
SCALE	2:1	DO NOT SCALE PRINT
		SHEET 1 OF 1