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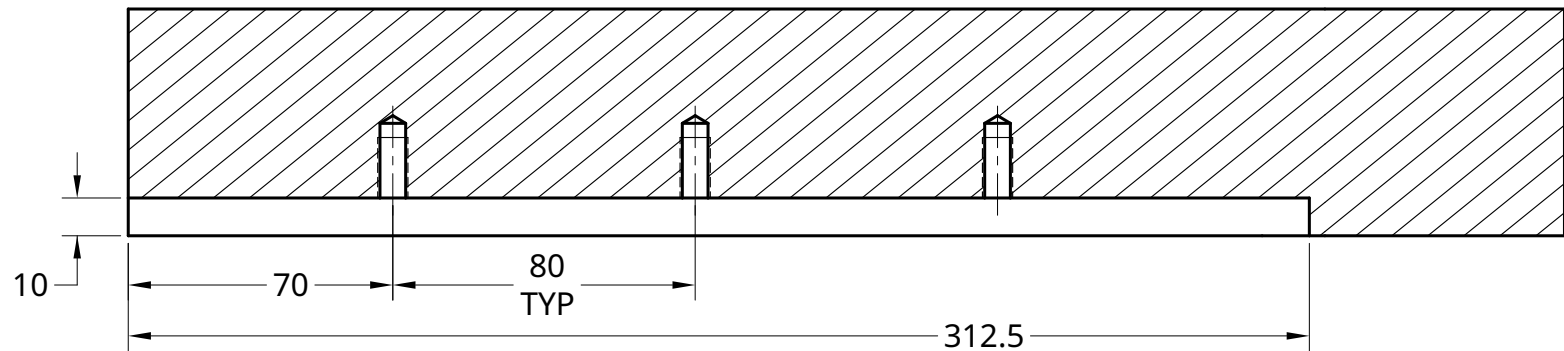
C

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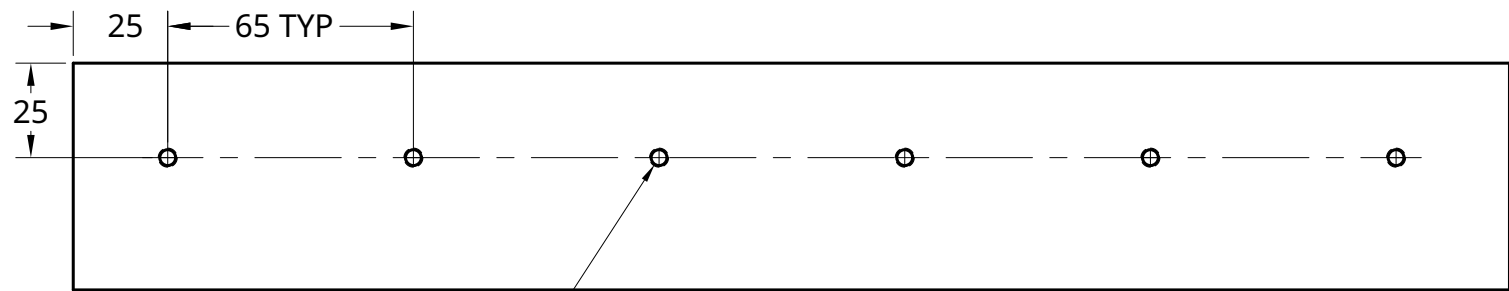
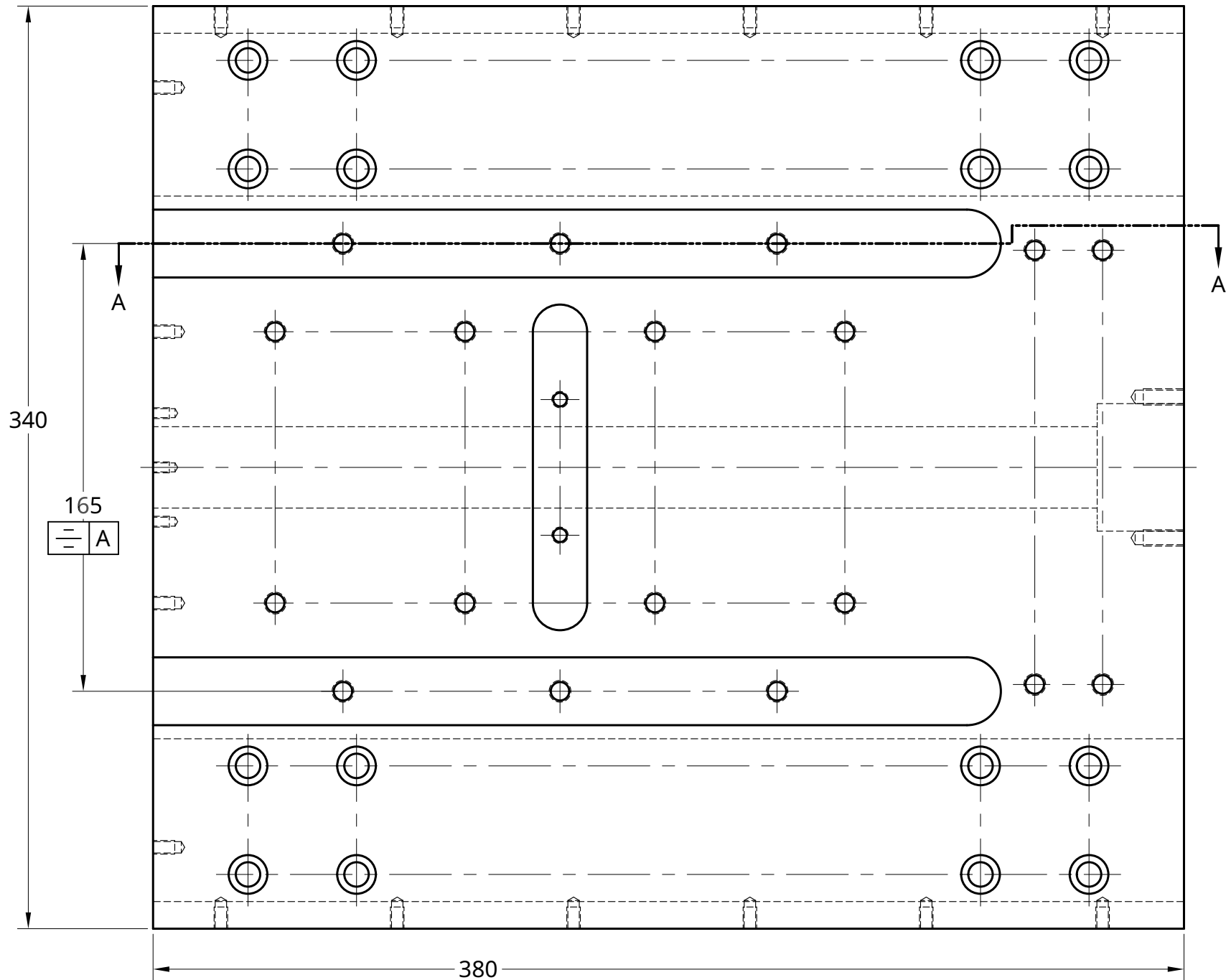
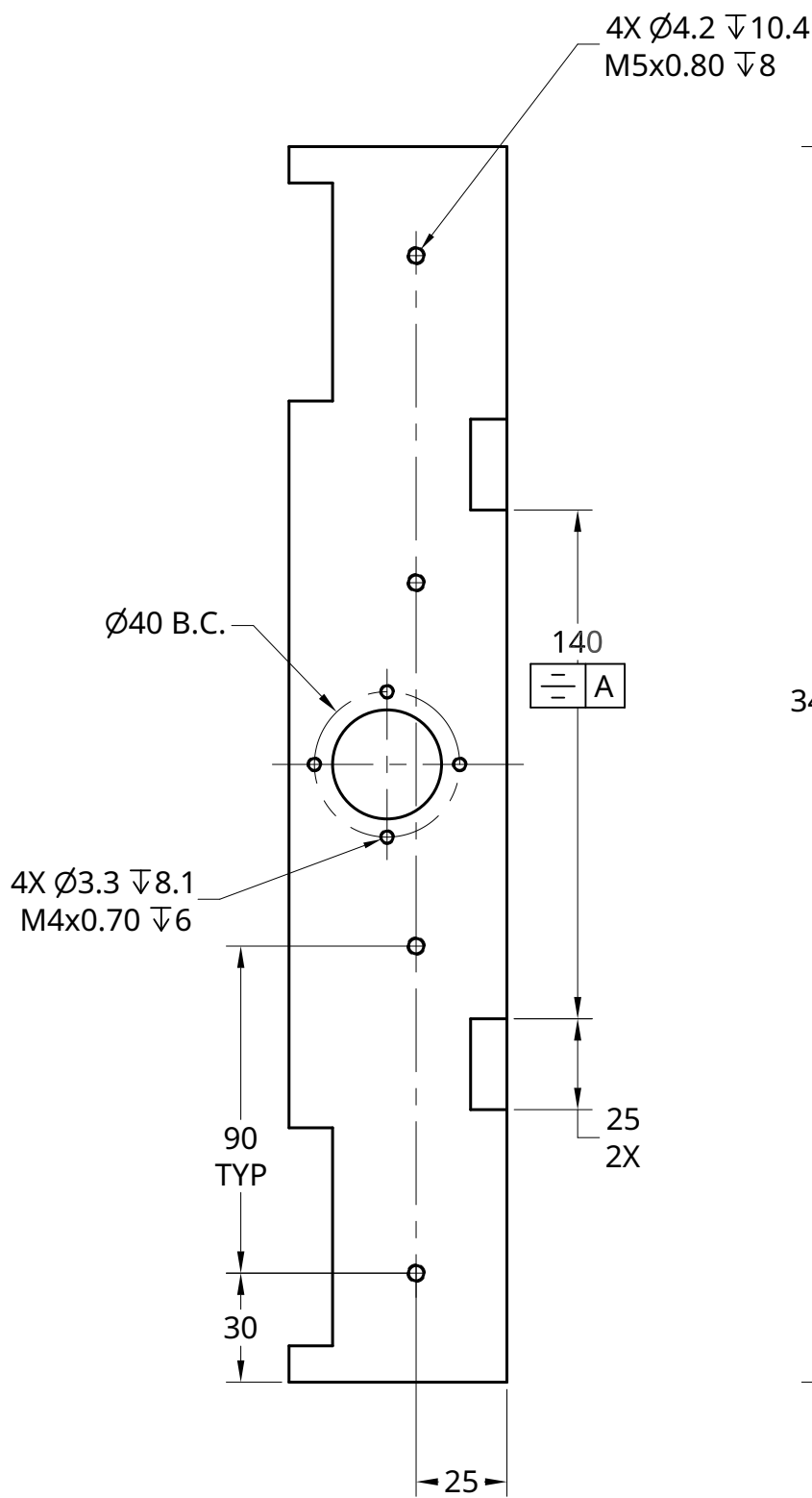
B

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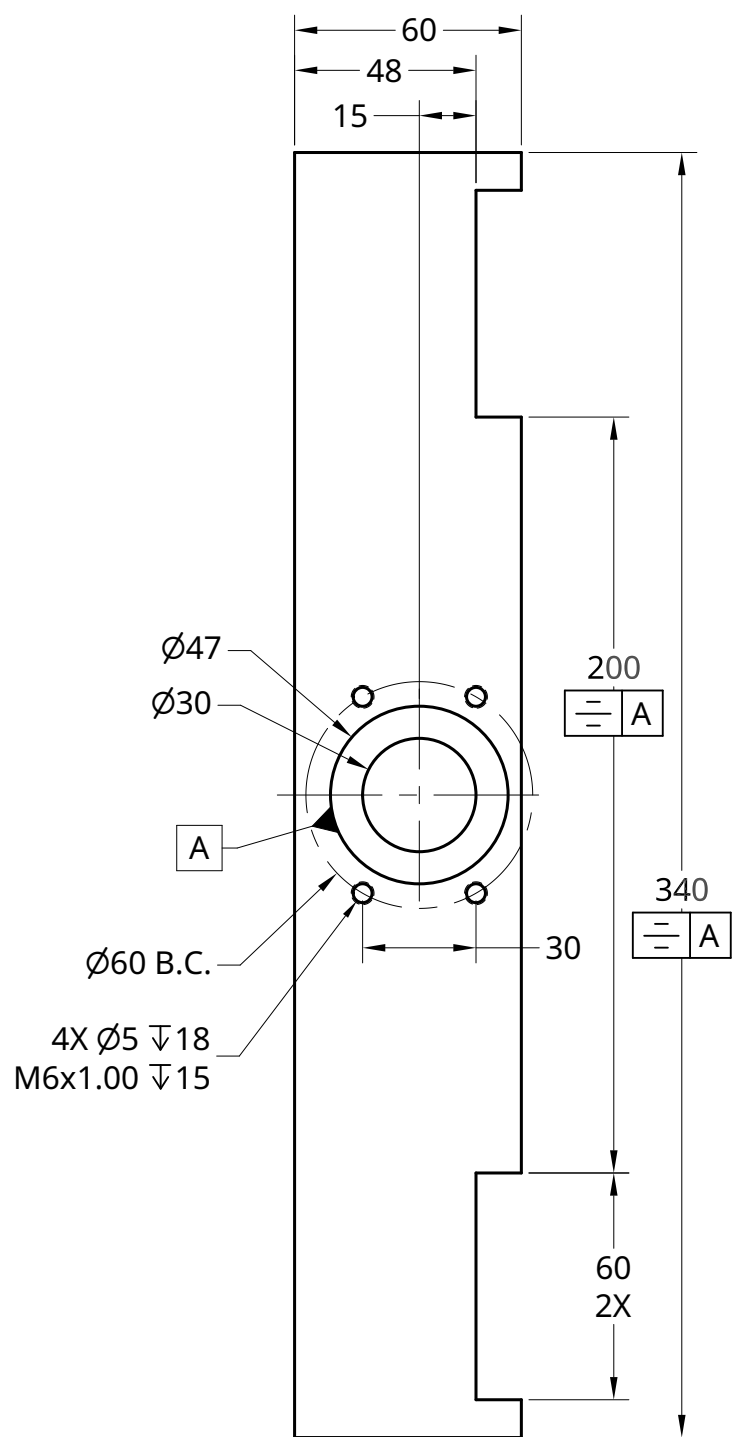
A



SECTION A - A
2 PLACES



12X Ø4.2 ±10.4
M5x0.80 ±8
6X THIS SIDE,
6X OTHER SIDE



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.01 .XXX = ±.001 XXXX = ±.0001 SURFACE FINISH:				NAME BRIAN BRADY		DATE 10/16/2019		FERRIS STATE UNIVERSITY			
DO NOT SCALE DRAWING				DRAWN		CHECKED		TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SLIDE PLATE			
BREAK ALL SHARP EDGES AND REMOVE BURRS				APPROVED				SIZE C			
THIRD ANGLE PROJECTION 				MATERIAL STEEL 8620		VOLUME 6655558 mm³		DWG NO. BR-549-B-001		REV.	
				SCALE 1:2		WEIGHT 52.246 kg		SHEET 1 of 16			

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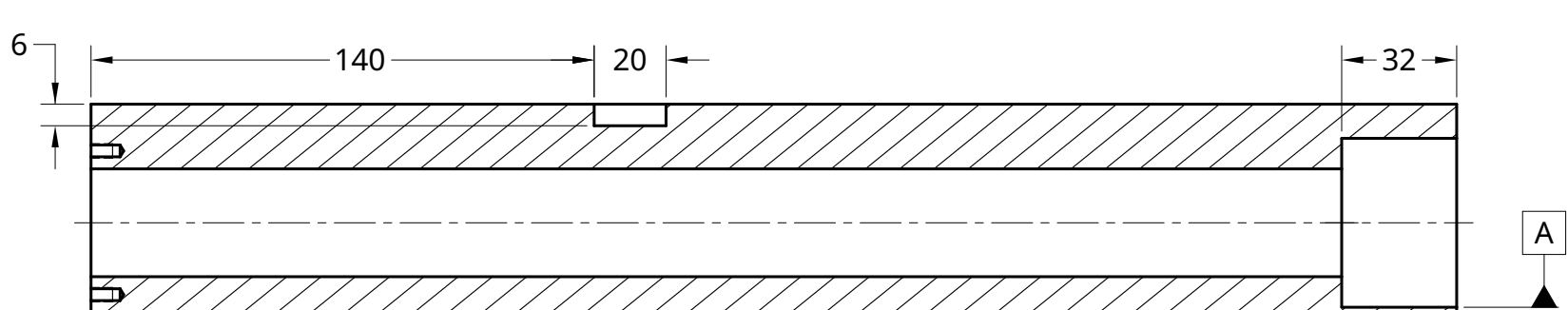
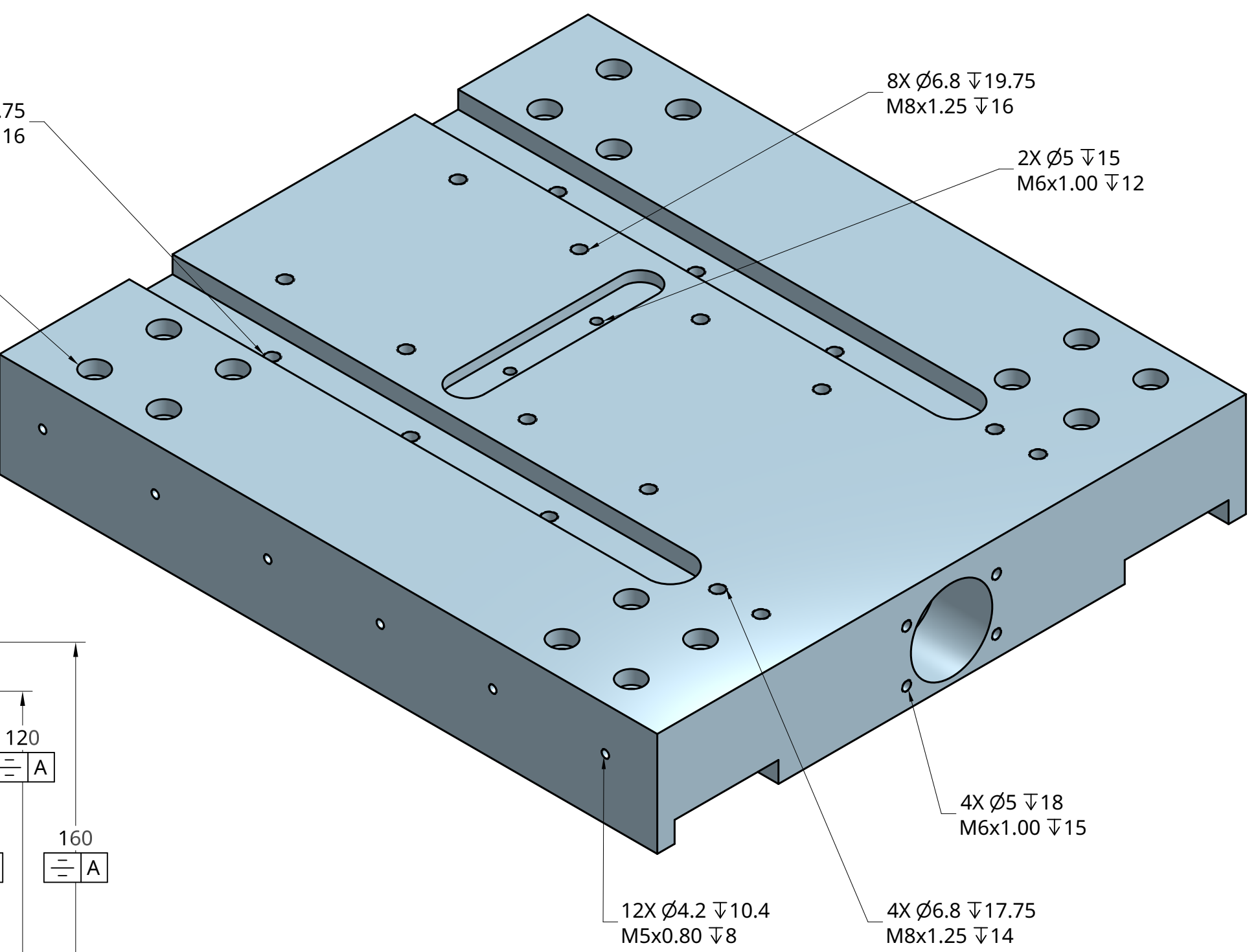
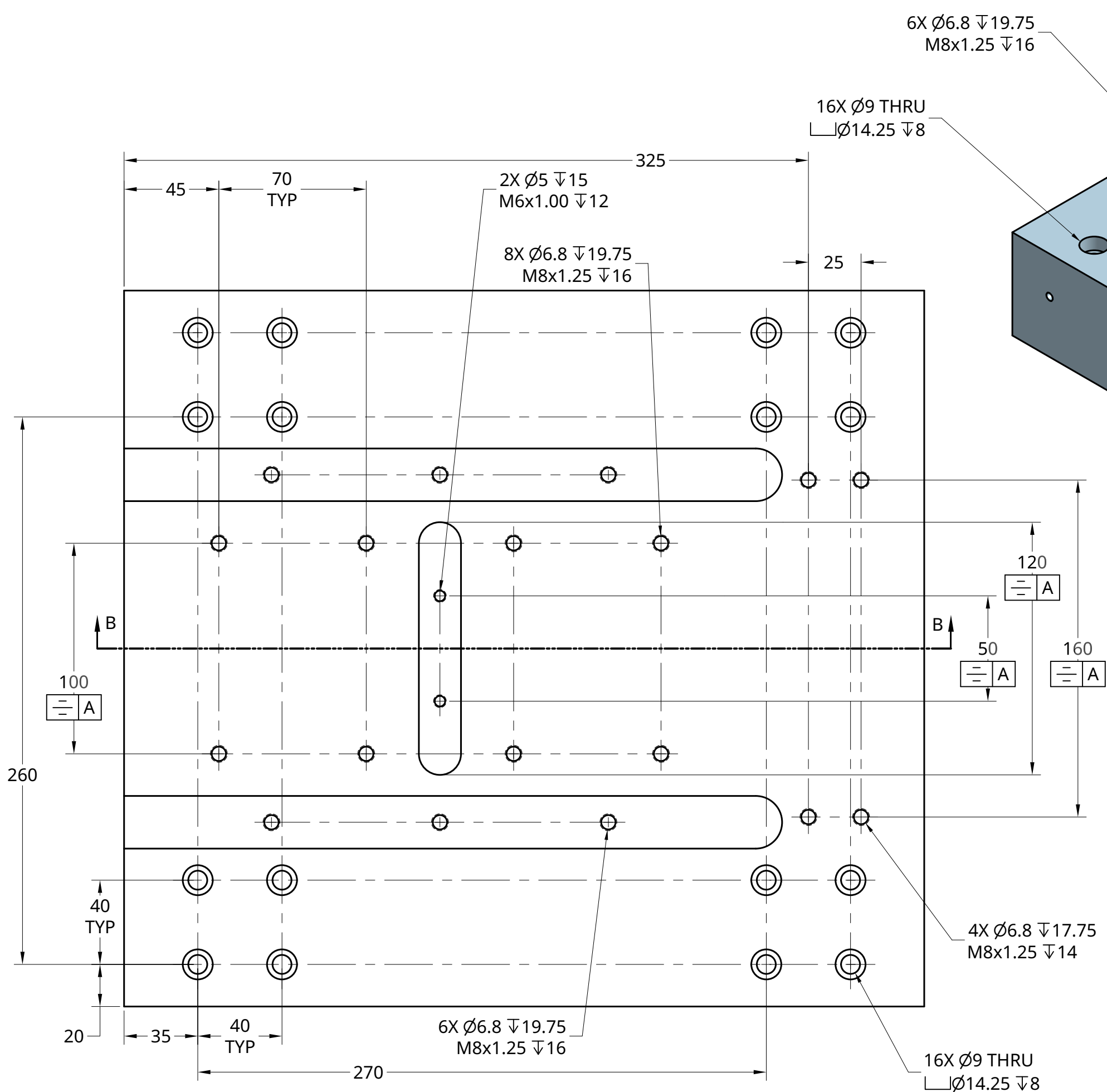
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SECTION B - B

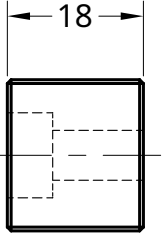
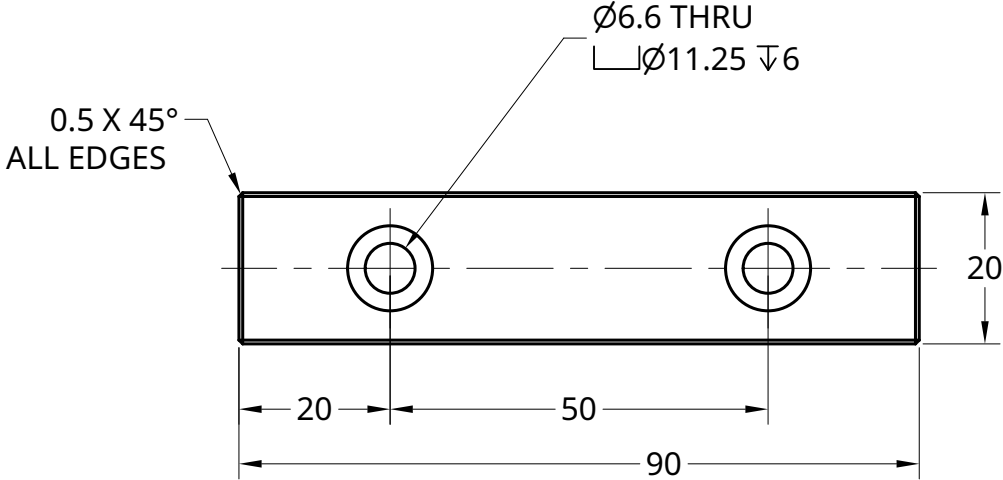
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.01 .XXX = ±.001 XXXX = ±.0001 SURFACE FINISH $\sqrt{\text{ }}$	NAME		DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019			
	CHECKED			TITLE		
	APPROVED					
DO NOT SCALE DRAWING				DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SLIDE PLATE		
BREAK ALL SHARP EDGES AND REMOVE BURRS						
THIRD ANGLE PROJECTION	MATERIAL	VOLUME		SIZE	DWG NO.	REV.
	STEEL 8620	665558 mm ³		C	BR-549-B-001	
	SCALE	1:2	WEIGHT	52.246 kg	SHEET	2 of 16

B

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- ANGULAR = ± ° FRACTIONAL = ± SURFACE FINISH		NAME		DATE		Ferris State University DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS 20 X 18 X 90 KEY					
		DRAWN		BRIAN BRADY						10/16/2019	
		CHECKED									
		APPROVED									
DO NOT SCALE DRAWING						SIZE		DWG NO.		REV.	
BREAK ALL SHARP EDGES AND REMOVE BURRS						A		BR-549-B-002			
THIRD ANGLE PROJECTION 		MATERIAL		VOLUME		SCALE		WEIGHT		SHEET	
		STEEL 4130		30323 mm³		1:1		0.238 kg		3 of 16	

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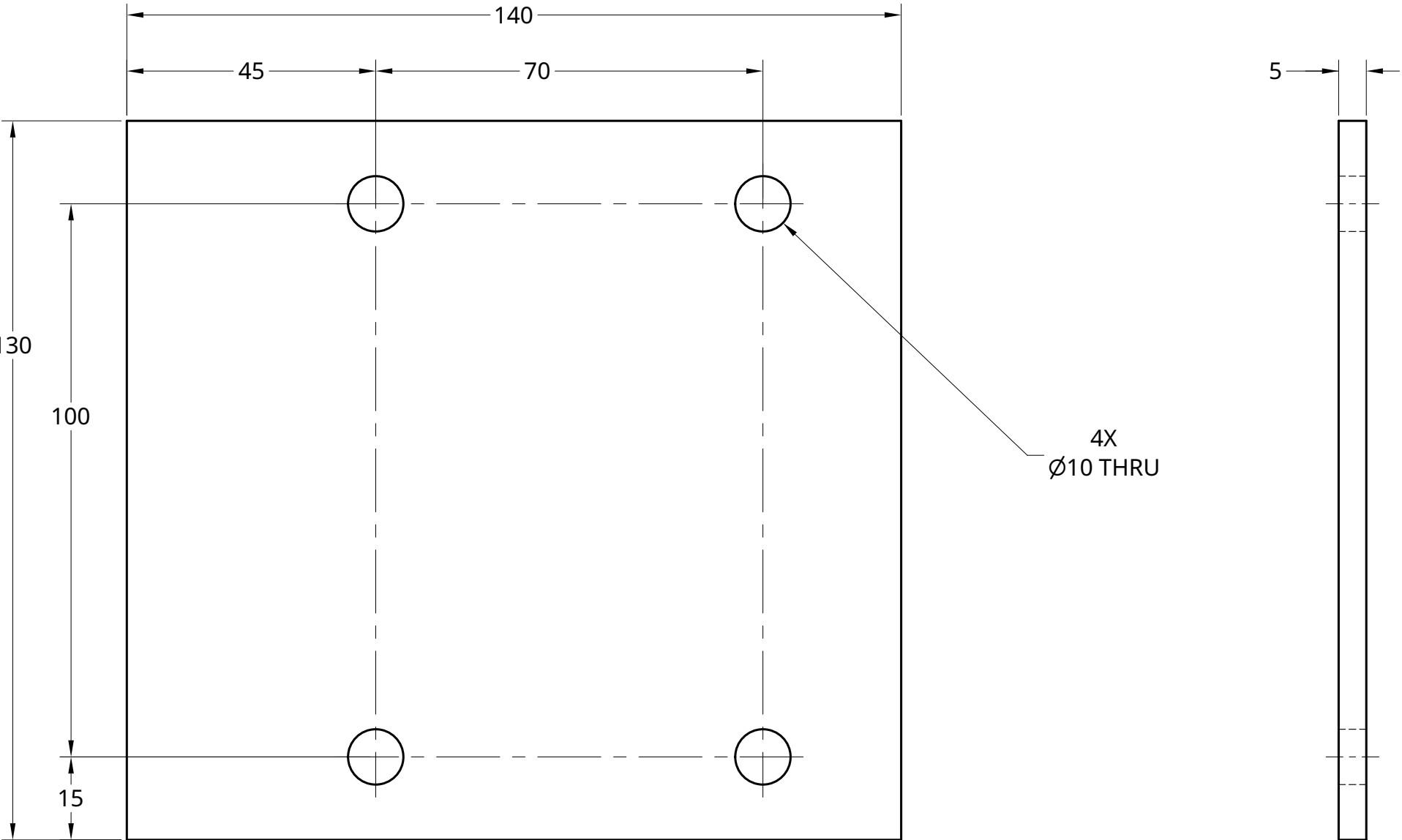
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 		NAME	DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019	TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS HOUSING FITTING SPACER		
	CHECKED					
	APPROVED					
				SIZE B	DWG NO. BR-549-B-003	REV.
	MATERIAL STEEL 1020	VOLUME 89429 mm³		SCALE 1:1	WEIGHT 0.704 kg	SHEET 4 of 16

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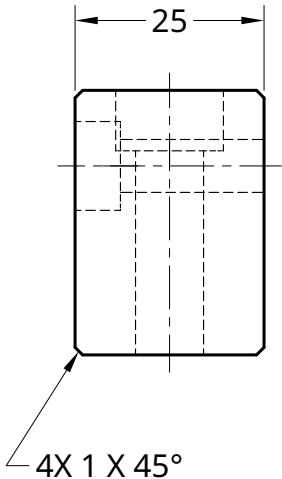
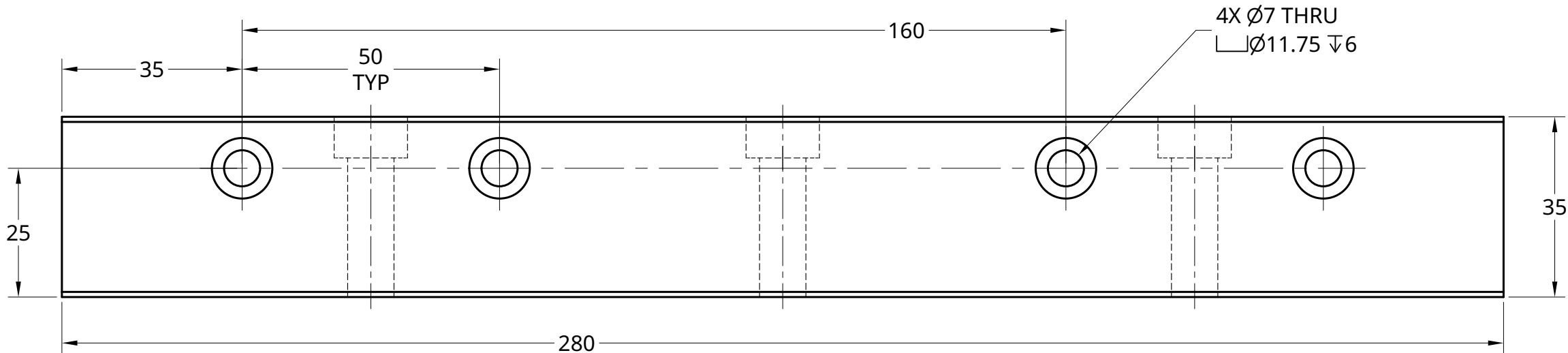
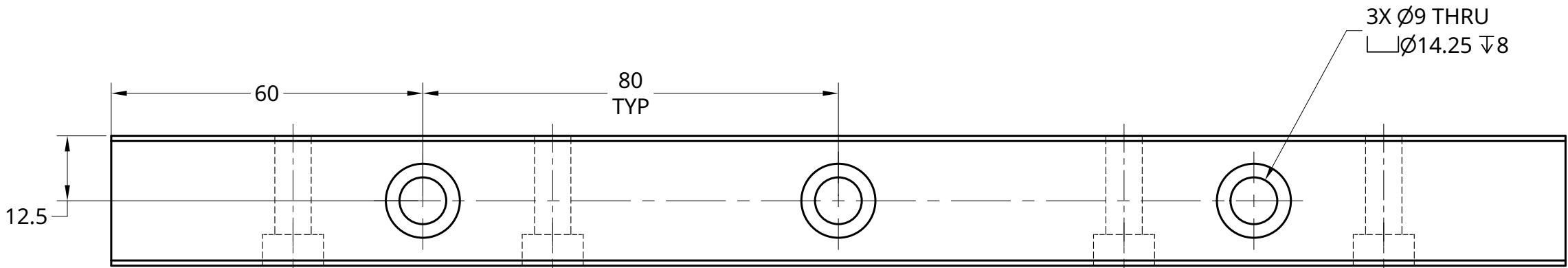
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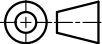
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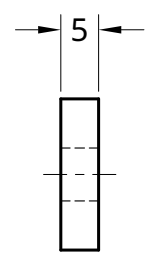
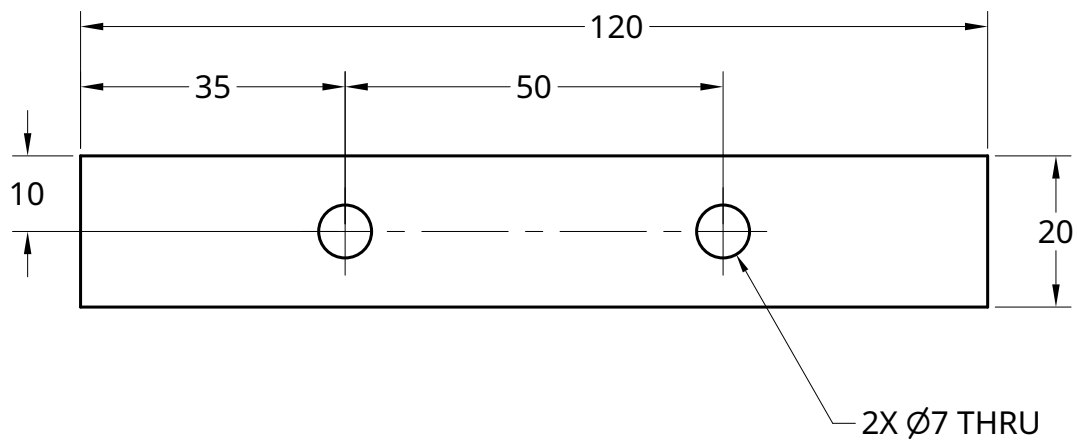
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 	NAME		DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019			
	CHECKED					
	APPROVED					
				TITLE		
				DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS PUSH-PULL BLOCK		
MATERIAL		VOLUME		SIZE	DWG NO.	REV.
STEEL 1020		229932 mm³		B	BR-549-B-004	
SCALE	1:1	WEIGHT	1.810 kg	SHEET	5 of 16	

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 				Ferris State University		
				NAME	DATE	TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS PUSH-PULL FITTING SPACER
				DRAWN BRIAN BRADY	10/16/2019	
				CHECKED		
				APPROVED		SIZE A
				MATERIAL STEEL 1020	VOLUME 11615 mm³	DWG NO. BR-549-B-005
				SCALE 1:1	WEIGHT 0.091 kg	REV. SHEET 6 of 16

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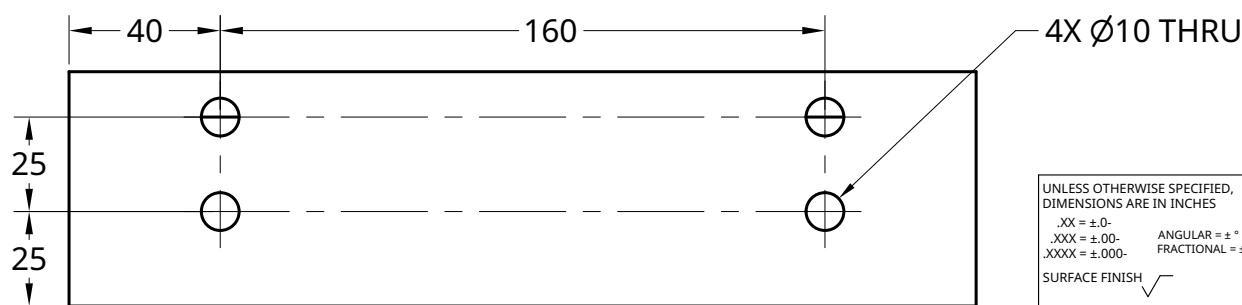
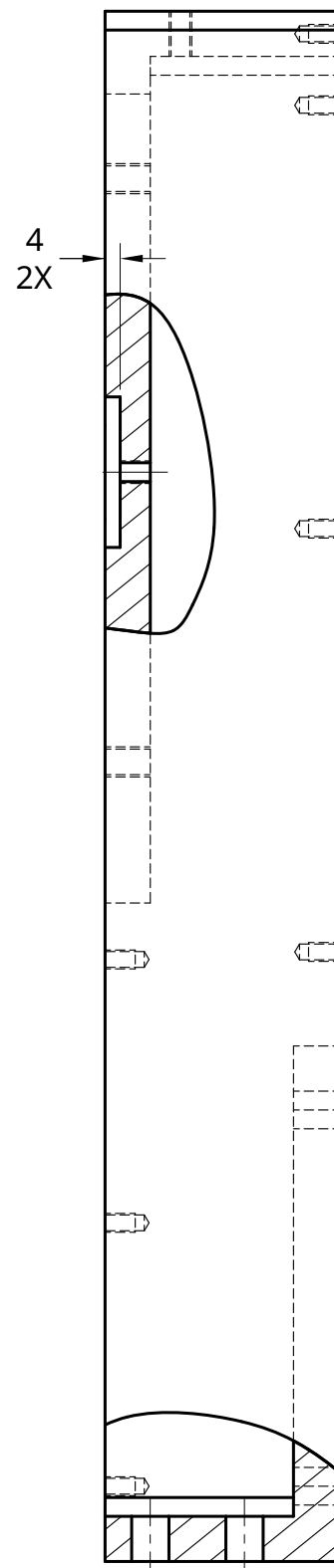
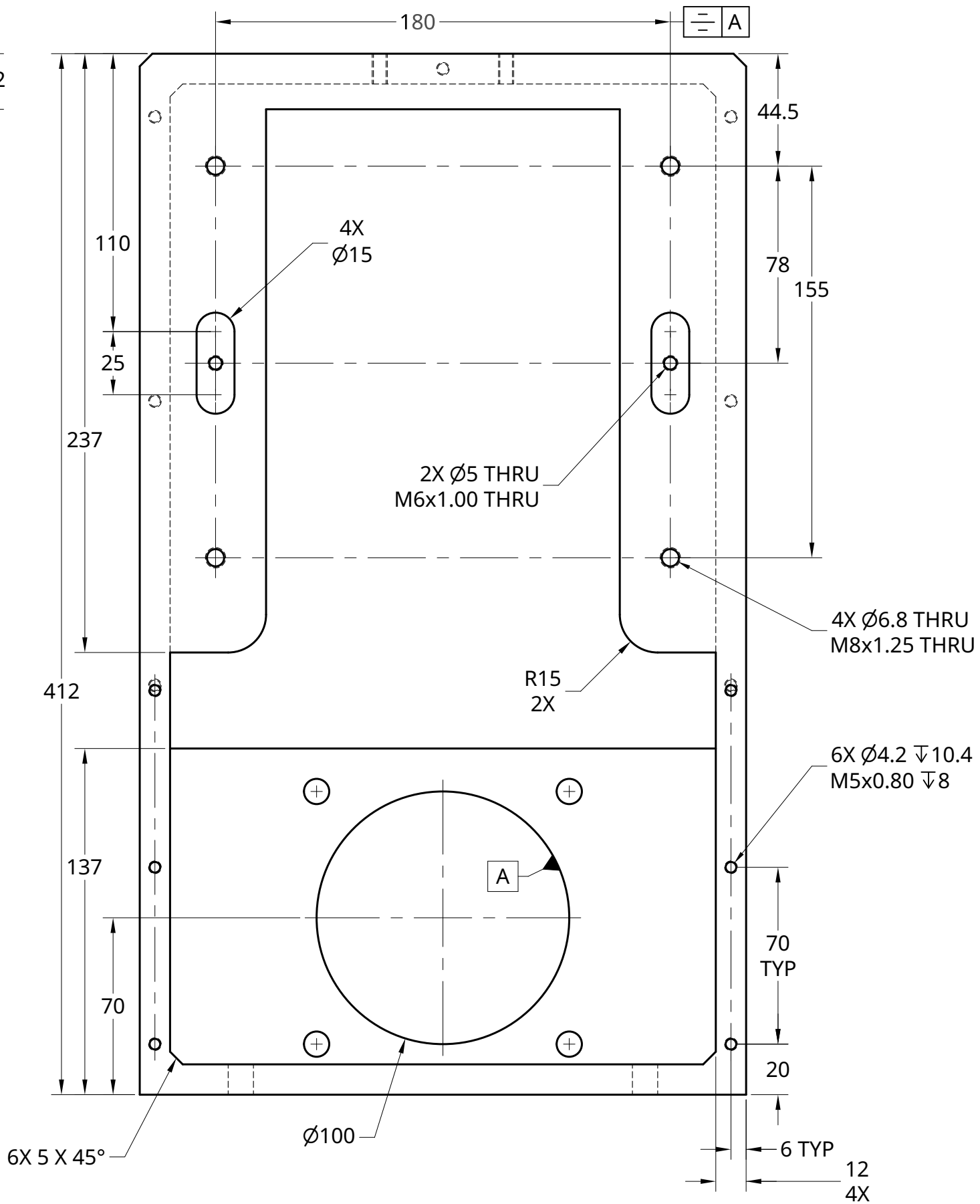
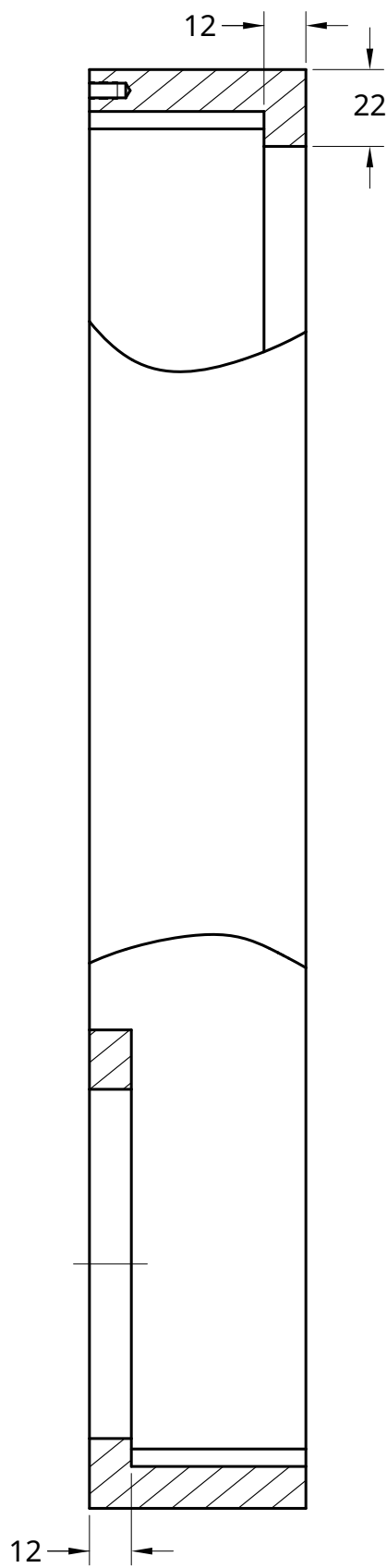
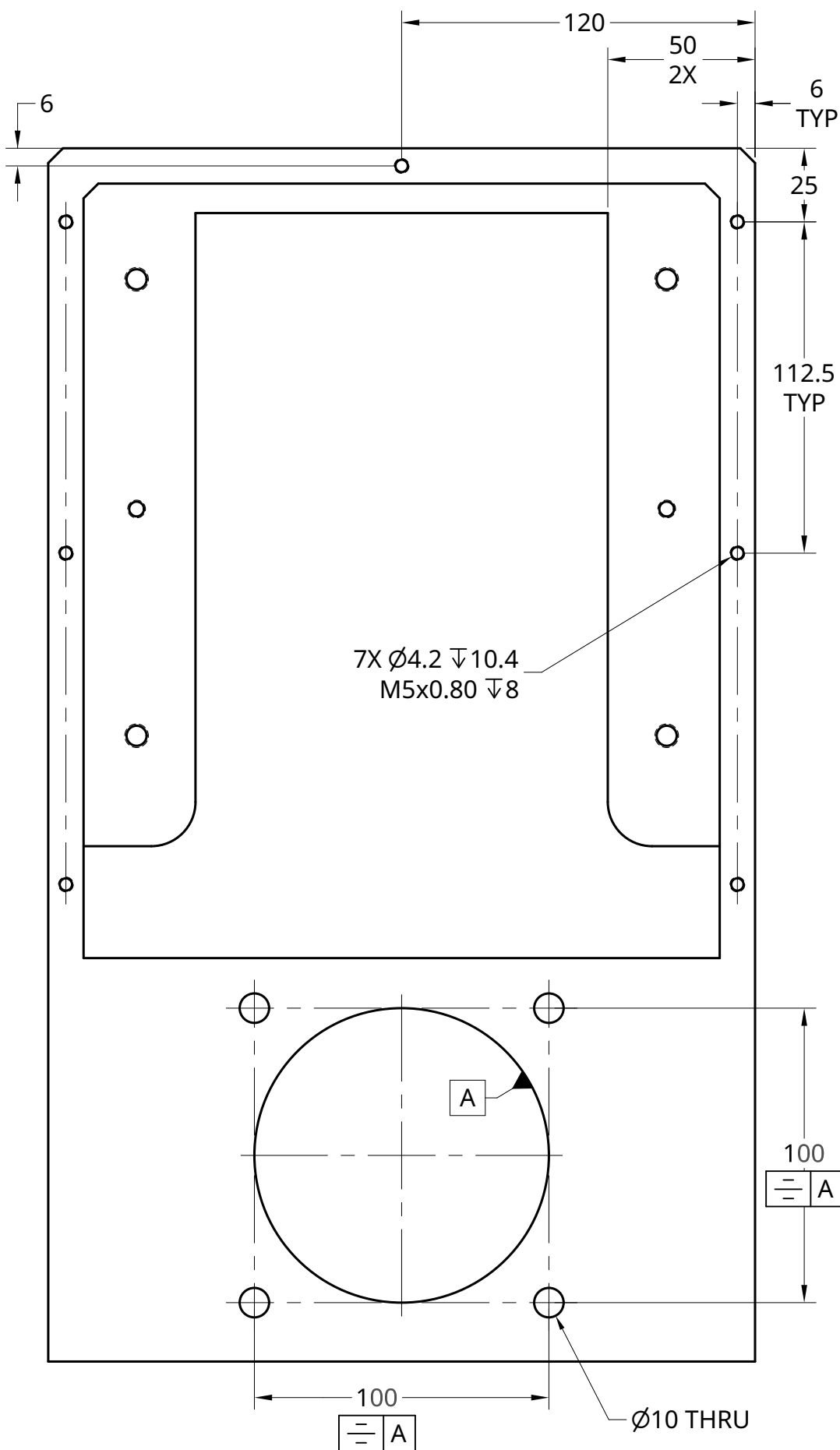
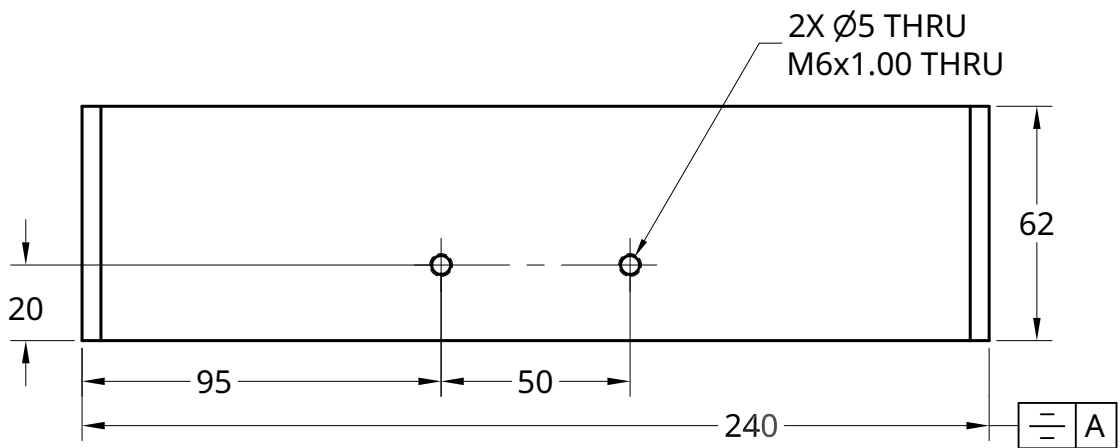
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.01- .XXX = ±.001- SURFACE FINISH		DRAWN	NAME	DATE	Ferris State University DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SPINDLE MOTOR MOUNTING FRAME	
		CHECKED	BRIAN BRADY	10/16/2019		
		APPROVED				
DO NOT SCALE DRAWING					SIZE C	DWG NO. BR-549-B-006
BREAK ALL SHARP EDGES AND REMOVE BURRS						
THIRD ANGLE PROJECTION						
		MATERIAL STEEL 1020	VOLUME 1369576 mm³		SCALE 1:2	WEIGHT 10.784 kg
					SHEET 7 of 16	REV.

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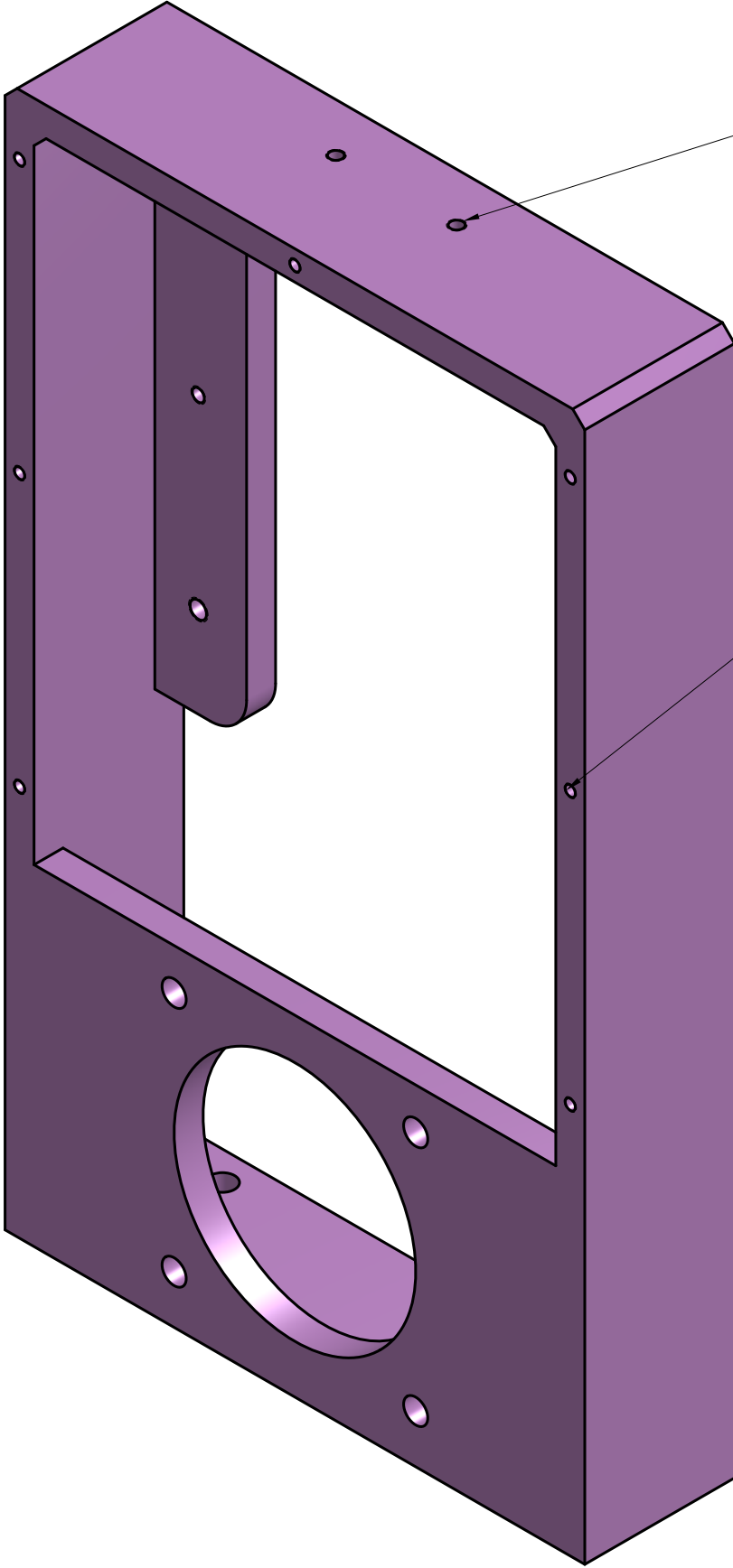
C

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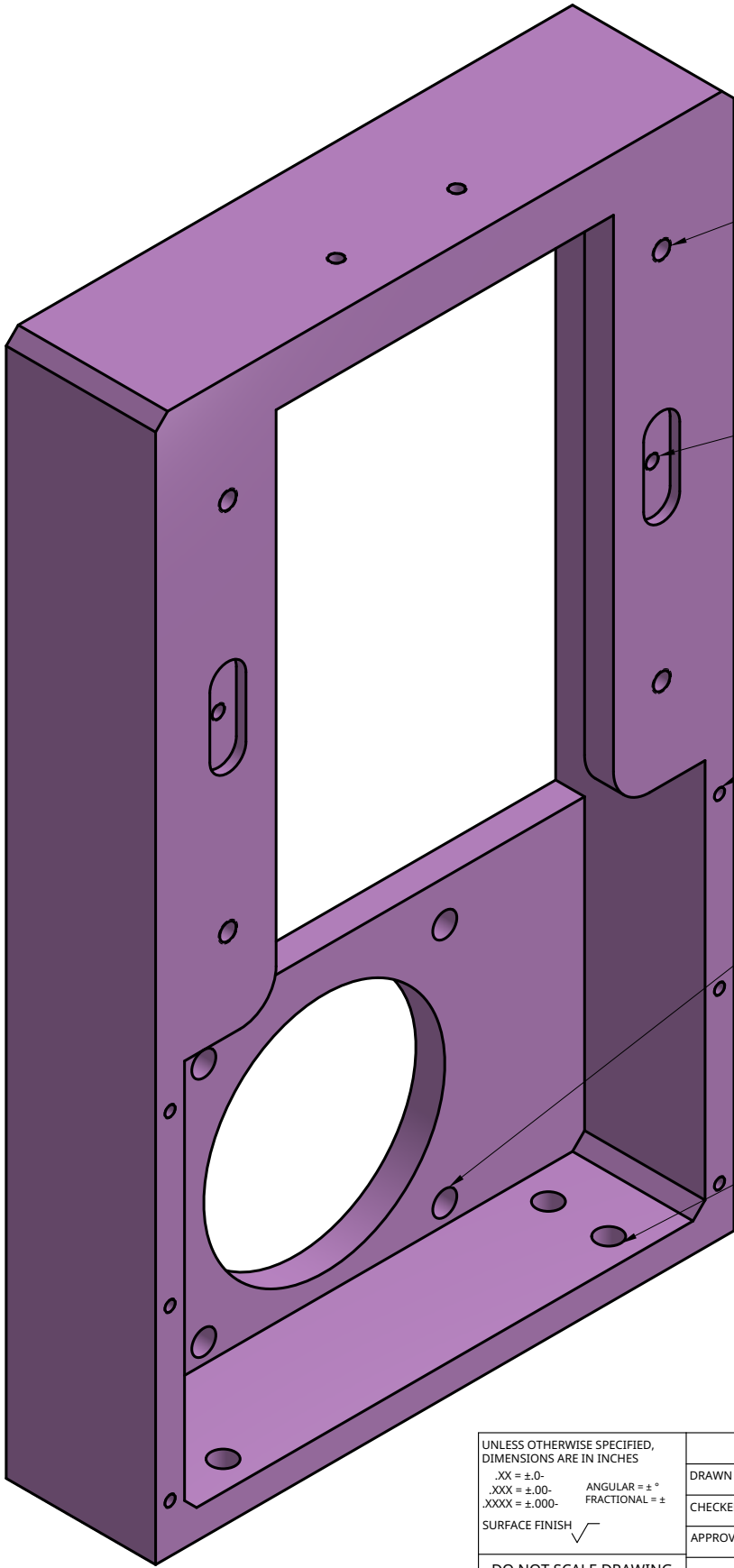
A

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2X Ø5 THRU
M6x1.00 THRU

7X Ø4.2 ∇ 10.4
M5x0.80 ∇ 8





4X Ø6.8 THRU
M8x1.25 THRU

2X Ø5 THRU
M6x1.00 THRU

6X Ø4.2 ∇ 10.4
M5x0.80 ∇ 8

4X Ø10 THRU

4X Ø10 THRU

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH  DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 		NAME		DATE		Ferris State University					
		DRAWN		BRIAN BRADY						10/16/2019	
		CHECKED									
		APPROVED									
						TITLE					
						DRILL UNIT					
						SLIDE PLATE ASSEMBLY DETAILS					
						SPINDLE MOTOR MOUNTING FRAME					
		SIZE		DWG NO.		BR-549-B-006		REV.			
		B									
		SCALE		1:2		WEIGHT		10.784 kg			
		SHEET		8 of 16							

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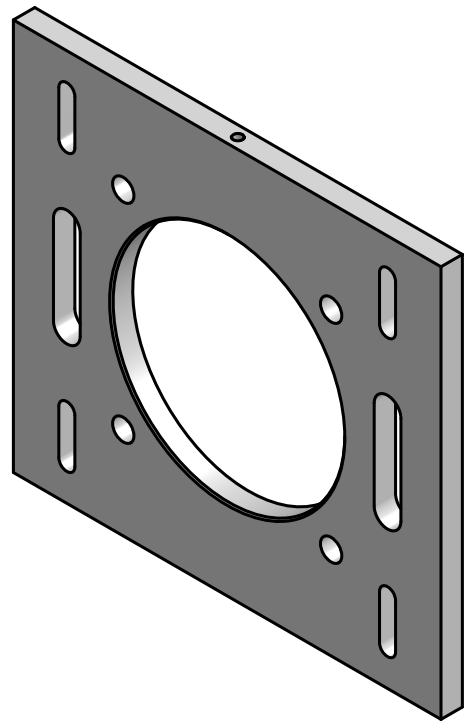
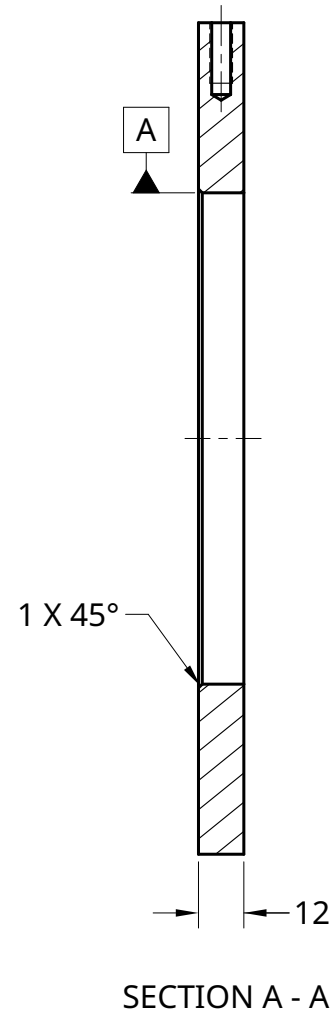
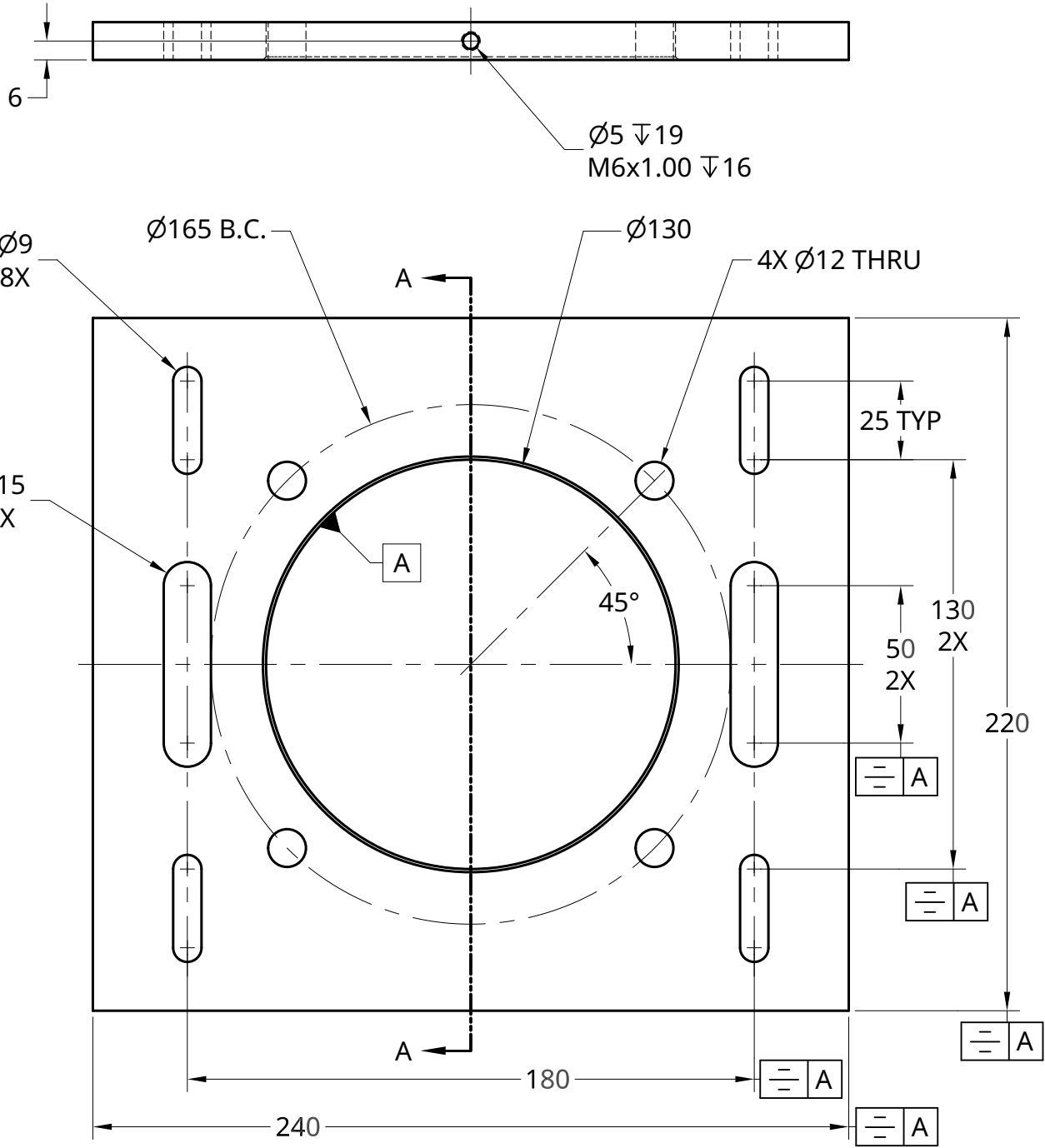
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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION	NAME		DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019	TITLE		
	CHECKED			DRILL UNIT		
	APPROVED			SLIDE PLATE ASSEMBLY DETAILS		
				MOTOR MOUNTING PLATE		
MATERIAL		VOLUME		SIZE	DWG NO.	REV.
STEEL 8620		432210 mm ³		B	BR-549-B-007	
SCALE		WEIGHT		SHEET		
1:2		3.393 kg		9 of 16		

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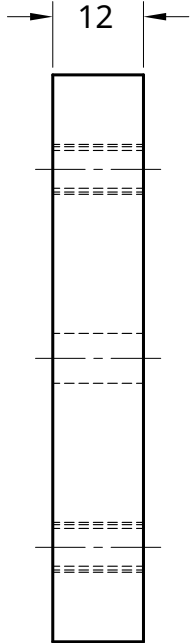
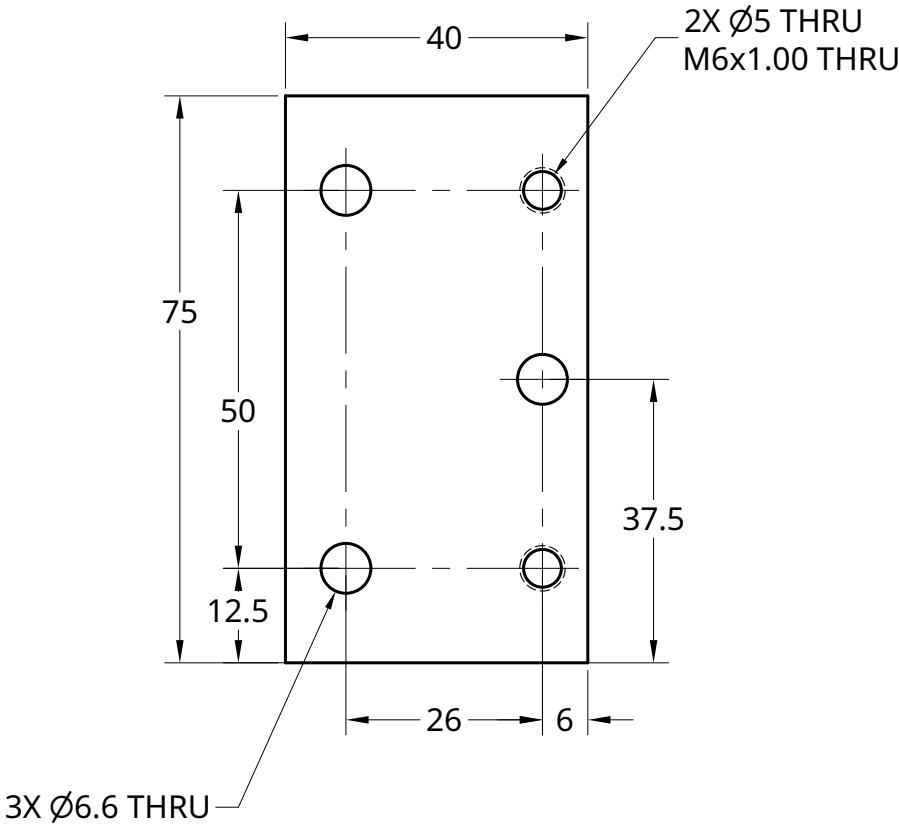
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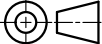
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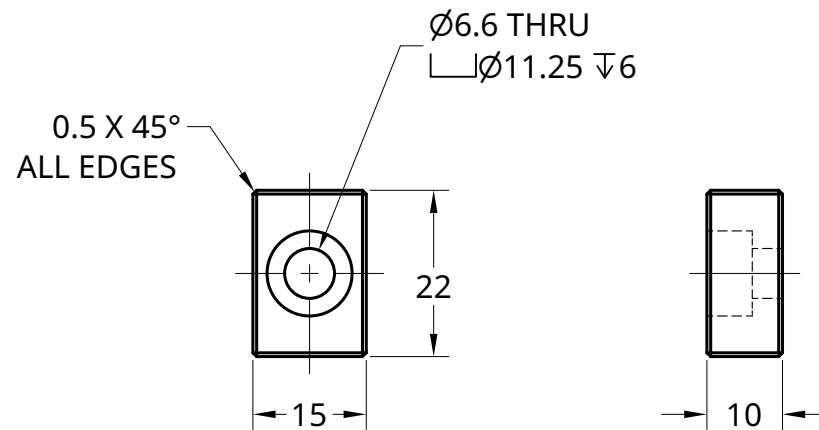
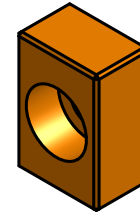
A



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION 		NAME	DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019	TITLE		
	CHECKED			DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS MOTOR ADJUSTER BLOCK		
	APPROVED					
				SIZE	DWG NO.	REV.
	MATERIAL	STEEL 1020		VOLUME	34297 mm³	
	SCALE	1:1		WEIGHT	0.270 kg	
				SHEET	10 of 16	


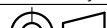
2

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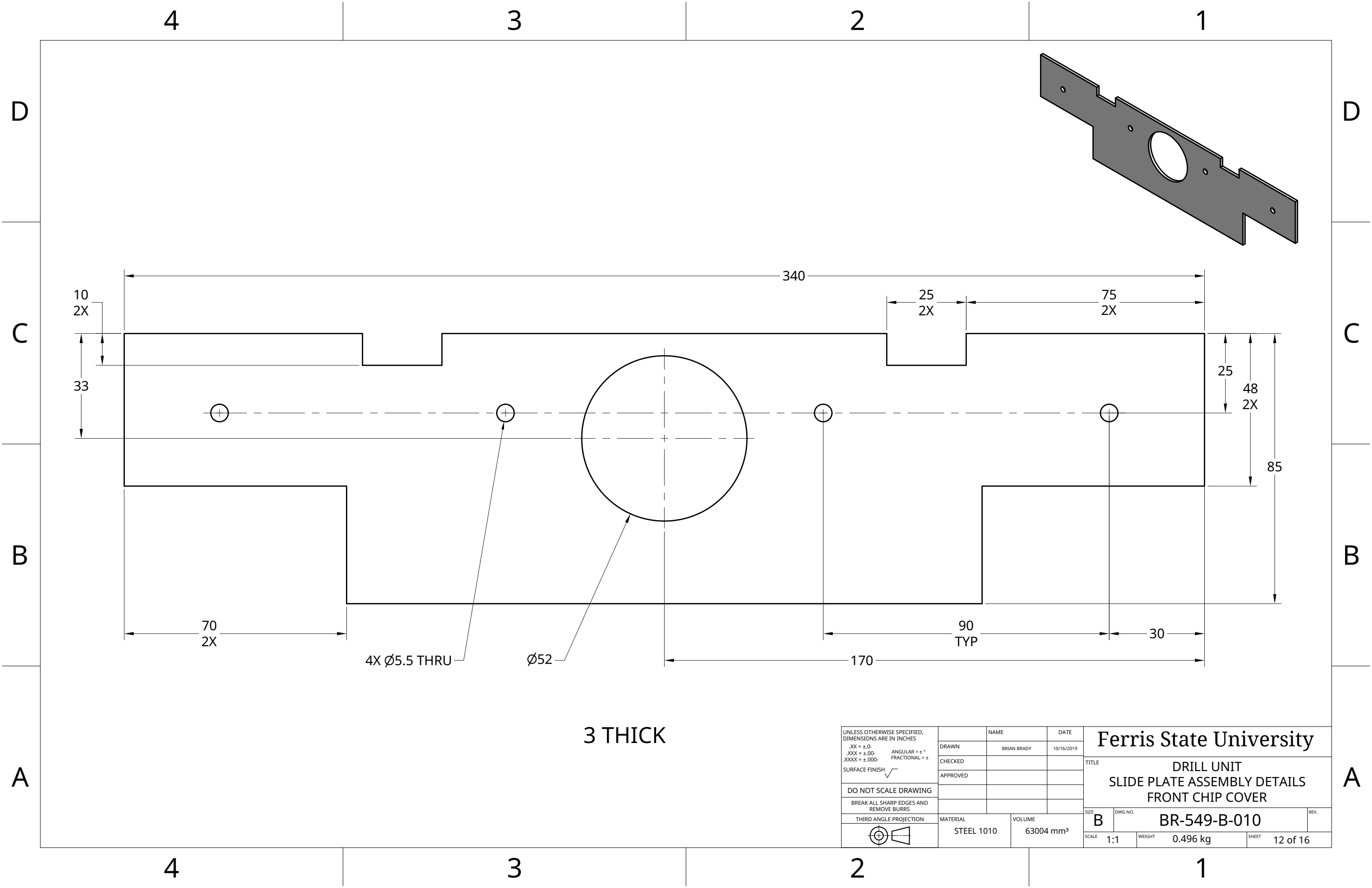
B

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- ANGULAR = ± ° FRACTIONAL = ± SURFACE FINISH 	NAME		DATE		<div>Ferris State University</div> <div>DRILL UNIT</div> <div>SLIDE PLATE ASSEMBLY DETAILS</div> <div>MEDIUM SLIDE KEY</div>					
	DRAWN		BRIAN BRADY						10/16/2019	
	CHECKED									
	APPROVED									
DO NOT SCALE DRAWING										
BREAK ALL SHARP EDGES AND REMOVE BURRS										
THIRD ANGLE PROJECTION	MATERIAL		VOLUME		SIZE	DWG NO.	REV.			
	STEEL 4130		2544 mm ³		A	BR-549-B-009				
					SCALE	1:1	WEIGHT	0.020 kg		
					SHEET	11 of 16				

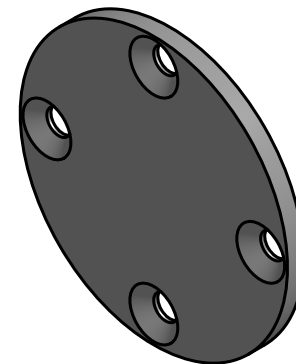
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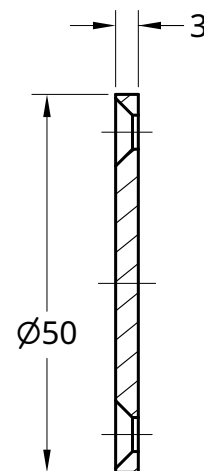
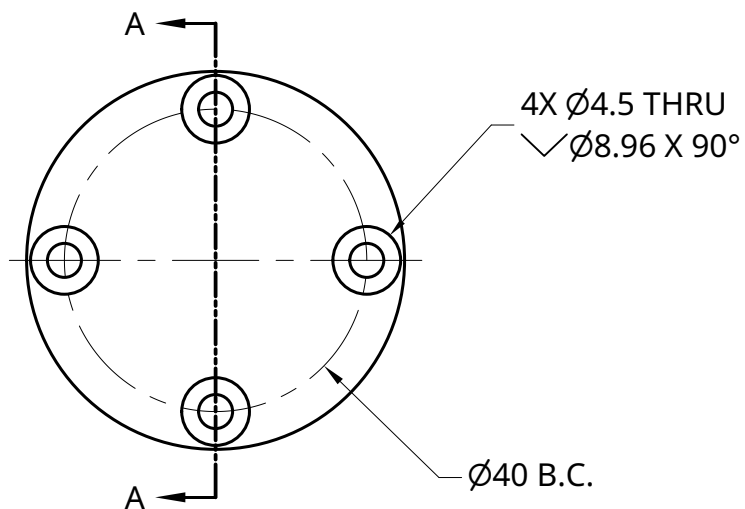
2

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SECTION A - A

UNLESS OTHERWISE SPECIFIED,
DIMENSIONS ARE IN INCHES

.XX = ±.0-
.XXX = ±.00-
.XXXX = ±.000-

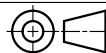
ANGULAR = ± °
FRACTIONAL = ±

SURFACE FINISH

DO NOT SCALE DRAWING

BREAK ALL SHARP EDGES AND
REMOVE BURRS

THIRD ANGLE PROJECTION



NAME

DATE

DRAWN

BRIAN BRADY

10/16/2019

CHECKED

APPROVED

Ferris State University

TITLE

DRILL UNIT
SLIDE PLATE ASSEMBLY DETAILS
BALL SCREW HOLE COVER

SIZE

A

DWG NO.

BR-549-B-011

REV.

SCALE

1:1

WEIGHT

0.043 kg

SHEET

13 of 16

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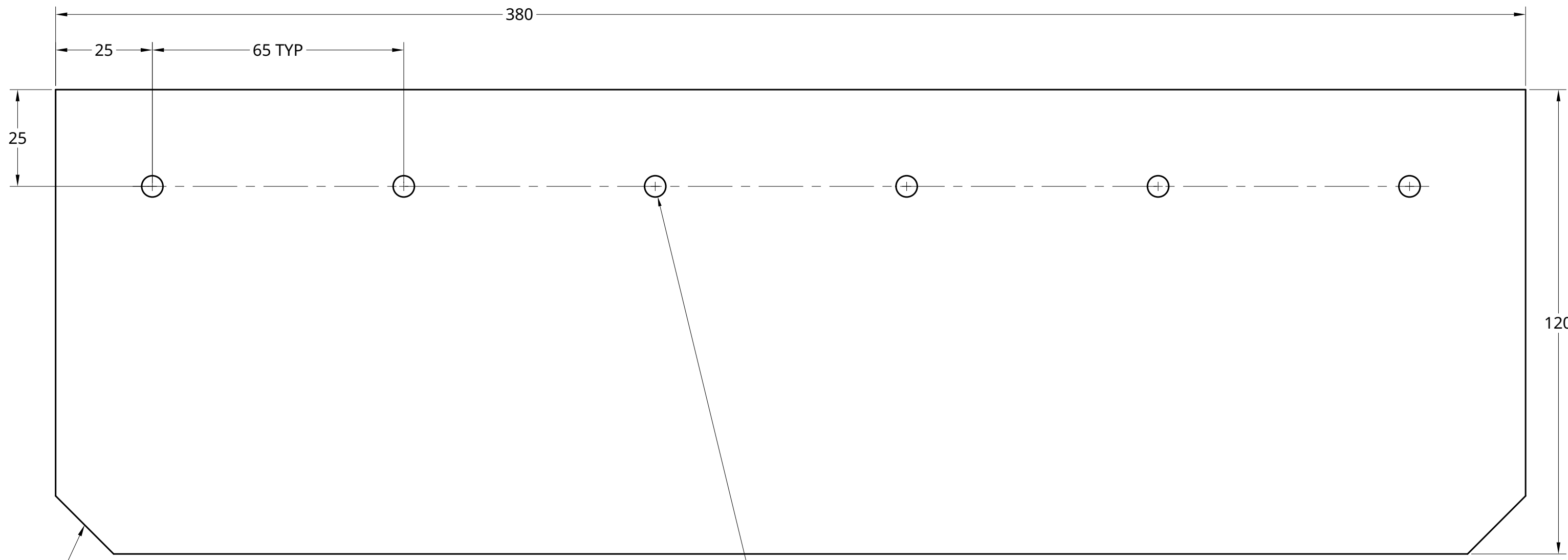
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
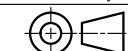
B

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2X 15 X 45°

6X Ø5.5 THRU

<div>UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES</div> <div>.XXX = ±.01- .XXXX = ±.001- .XXXXX = ±.0001-</div> <div>SURFACE FINISH </div> <div>DO NOT SCALE DRAWING</div> <div>BREAK ALL SHARP EDGES AND REMOVE BURRS</div> <div>THIRD ANGLE PROJECTION</div> <div></div>		NAME		DATE		<div>Ferris State University</div> <div>DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS SIDE CHIP COVER</div>							
		DRAWN		BRIAN BRADY								10/16/2019	
		CHECKED											
		APPROVED											
						TITLE							

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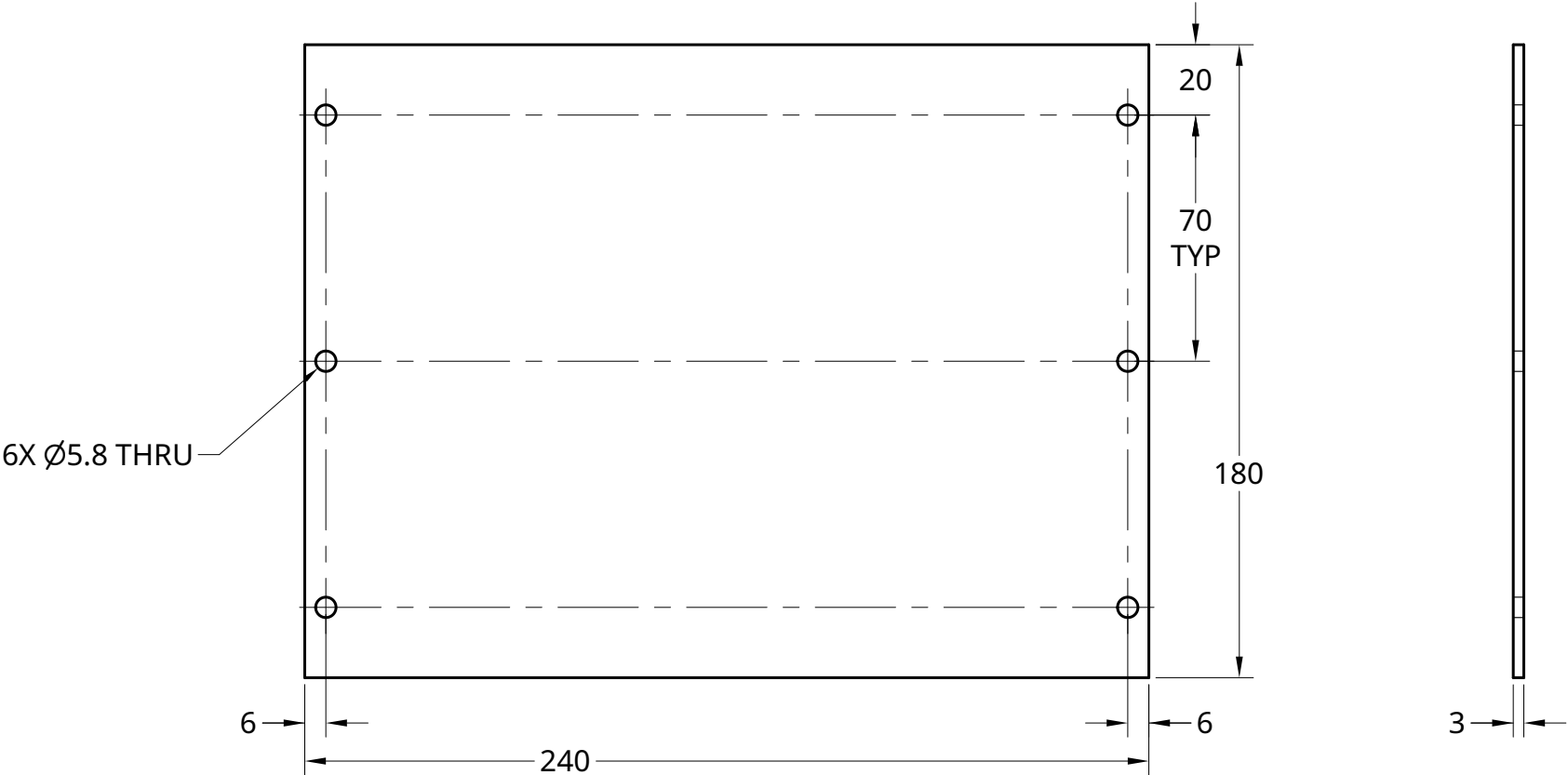
C



B

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH 		NAME	DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019			
	CHECKED			TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS LOWER COVER PLATE - MOTOR		
	APPROVED					
DO NOT SCALE DRAWING				SIZE B		
BREAK ALL SHARP EDGES AND REMOVE BURRS						
THIRD ANGLE PROJECTION 	MATERIAL POLYCARBONATE	VOLUME 129124 mm³		SCALE 1:2	DWG NO. BR-549-B-013	REV.
				WEIGHT 0.154 kg	SHEET 15 of 16	

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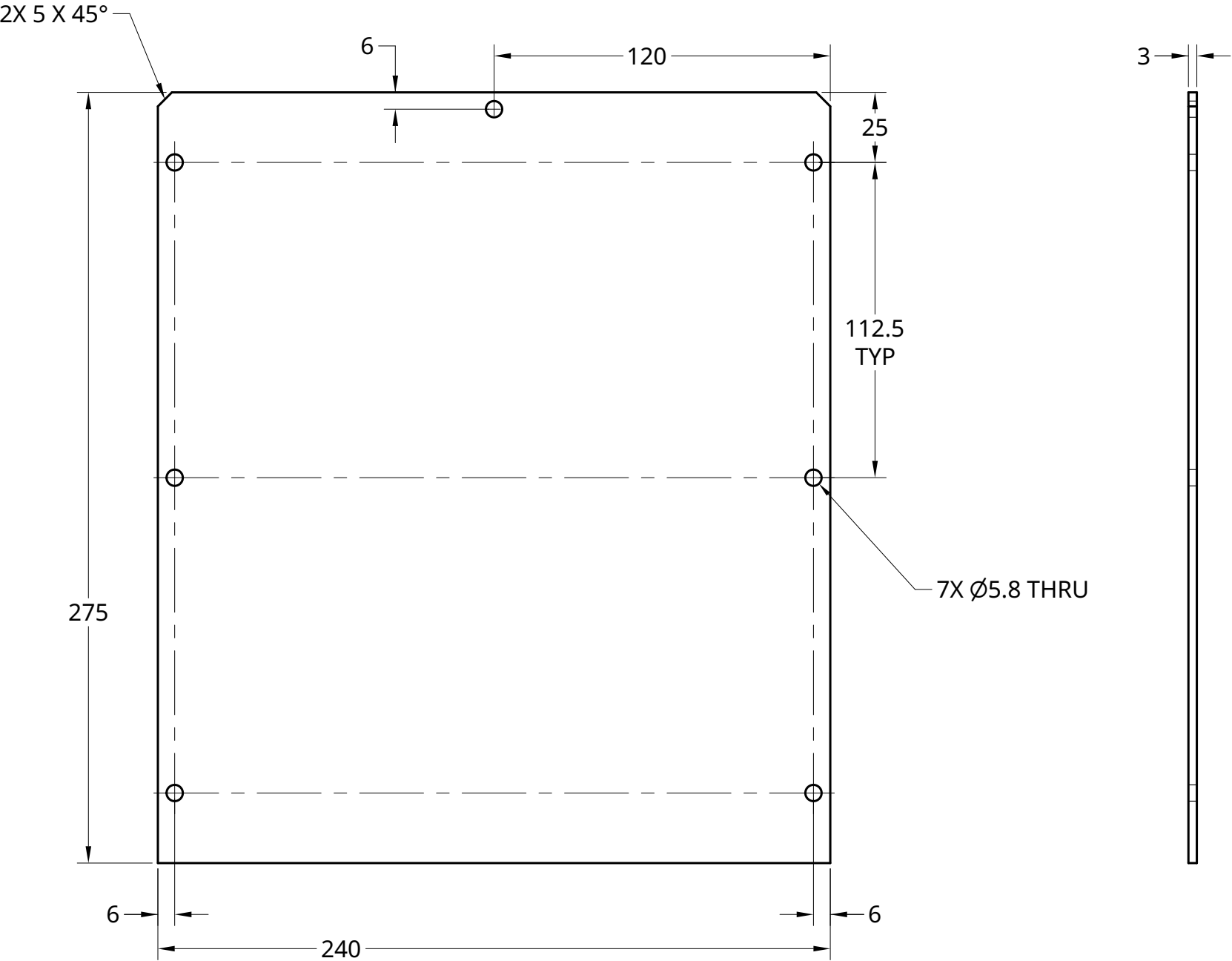
C

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES .XX = ±.0- .XXX = ±.00- .XXXX = ±.000- SURFACE FINISH ✓ DO NOT SCALE DRAWING BREAK ALL SHARP EDGES AND REMOVE BURRS THIRD ANGLE PROJECTION ⊕		NAME	DATE	Ferris State University		
	DRAWN	BRIAN BRADY	10/16/2019	TITLE DRILL UNIT SLIDE PLATE ASSEMBLY DETAILS UPPER COVER PLATE - MOTOR		
	CHECKED					
	APPROVED					
				SIZE B	DWG NO. BR-549-B-014	REV.
	MATERIAL POLYCARBONATE	VOLUME 197370 mm³		SCALE 1:2	WEIGHT 0.235 kg	SHEET 16 of 16