

CACTUS - 1 EXPLODED VIEW

METAL COMPONENTS ONLY
SOME PRESS NUT LOCATIONS SHOWN
SCREWS, NUTS, AND BOLTS ARE NOT SHOWN

CACTUS 1 ASSEMBLY

NOTE: METAL COMPONENTS ONLY
SIZE: 14.398 x 4.449 x 4.075"

NOTES:

- 1) ASSEMBLY IS NOT REQUIRED FOR DELIVERY
- 2) REMOVE ALL BURRS AND ROUND ALL CORNERS AT LEAST 0.005" FOR ALL PARTS
- 3) PRESS NUTS WILL BE MOUNTED IN HOLES WITH DIAMETER .177", THESE LOCATIONS WILL BE NOTED THROUGHT THE DRAWING

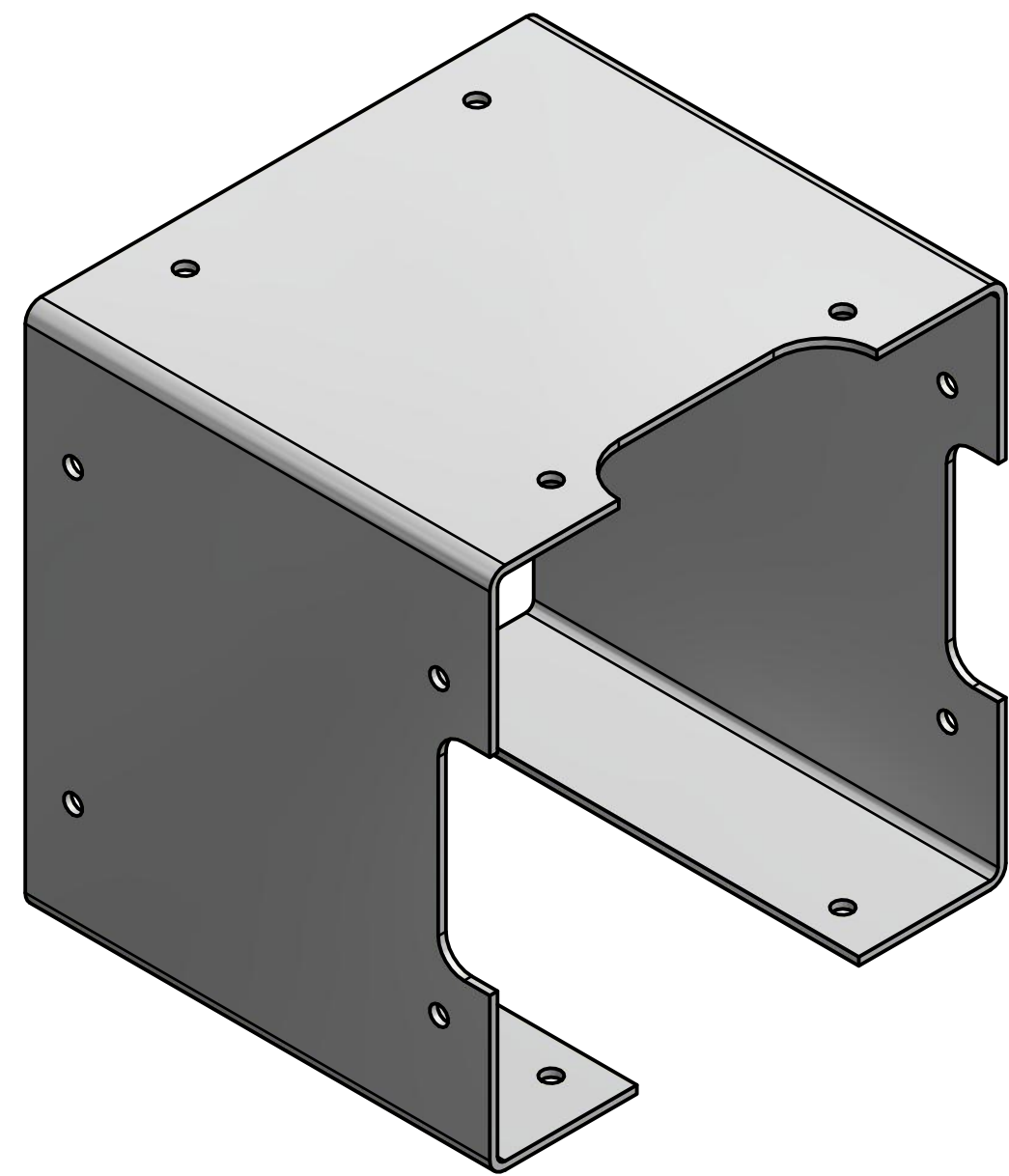
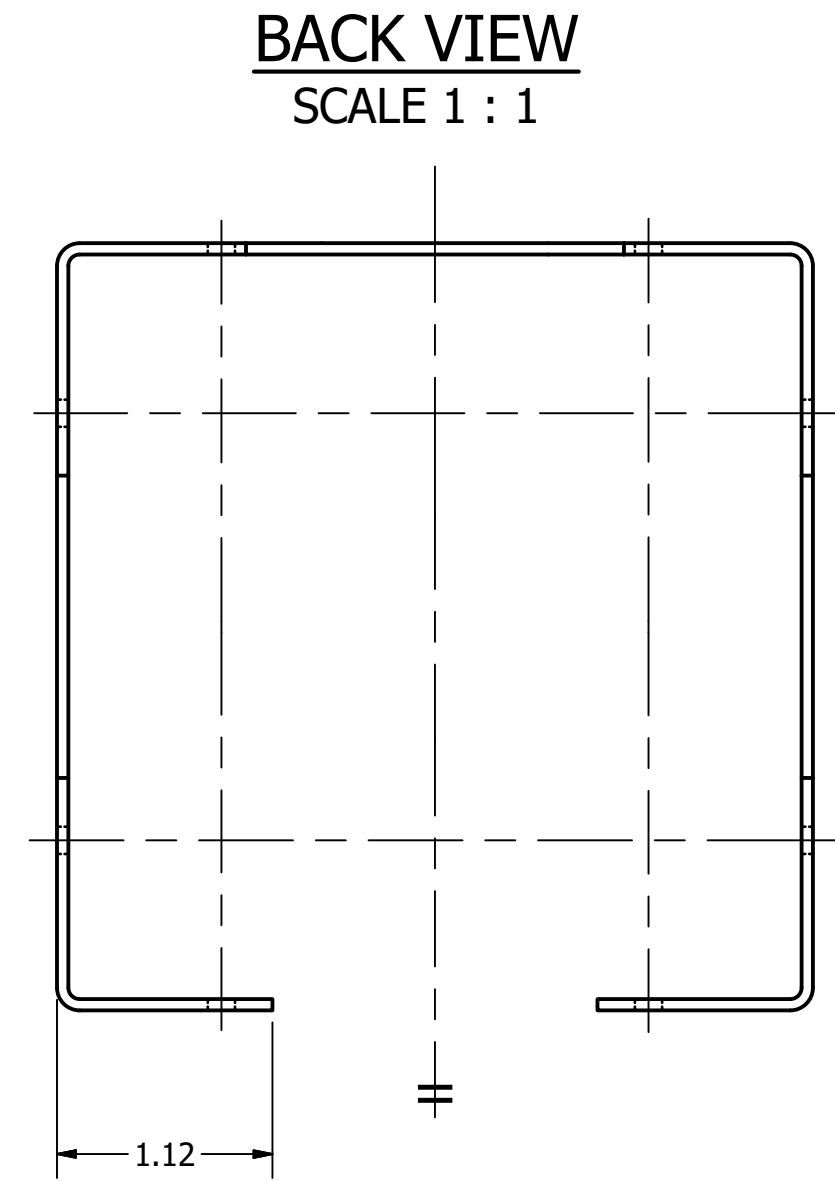
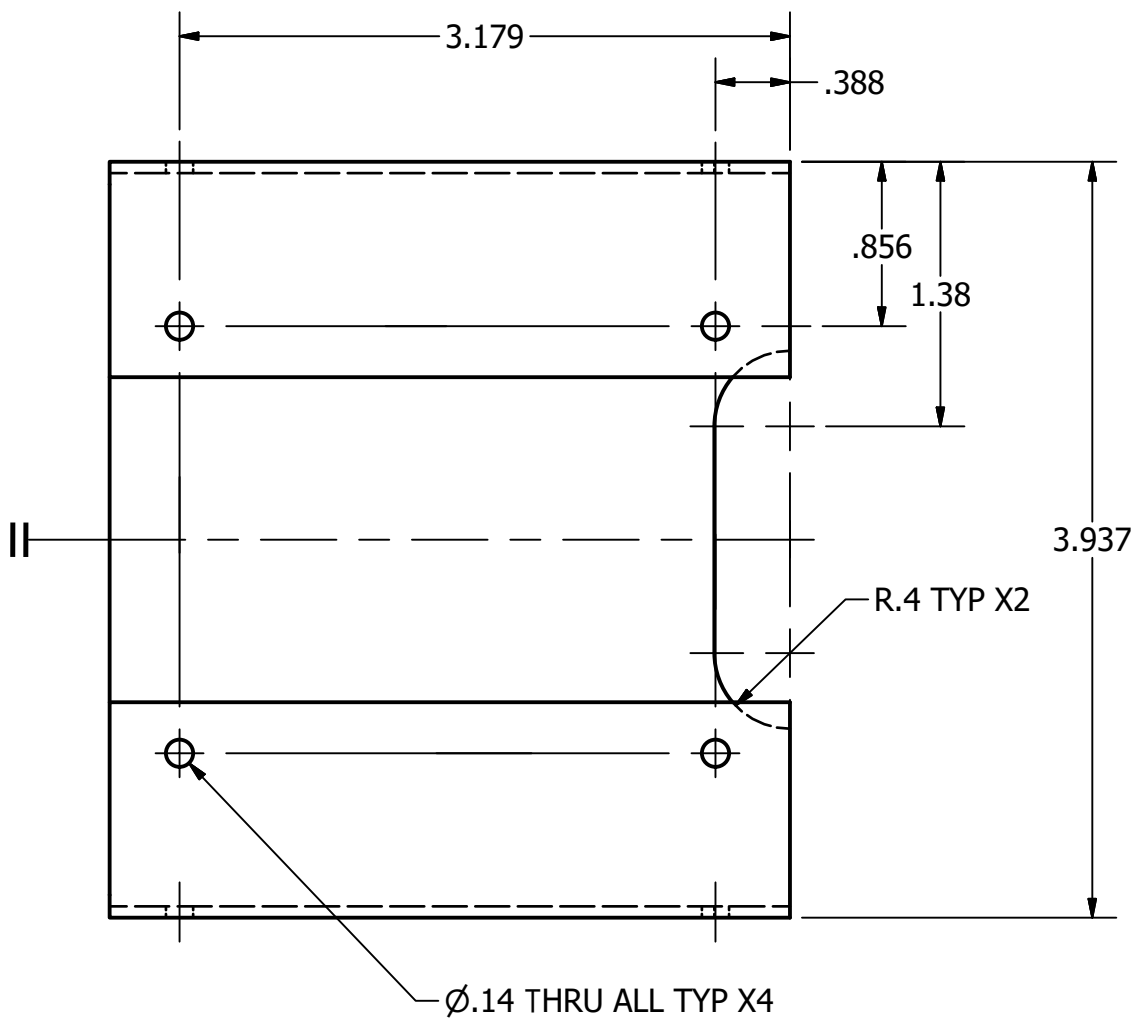
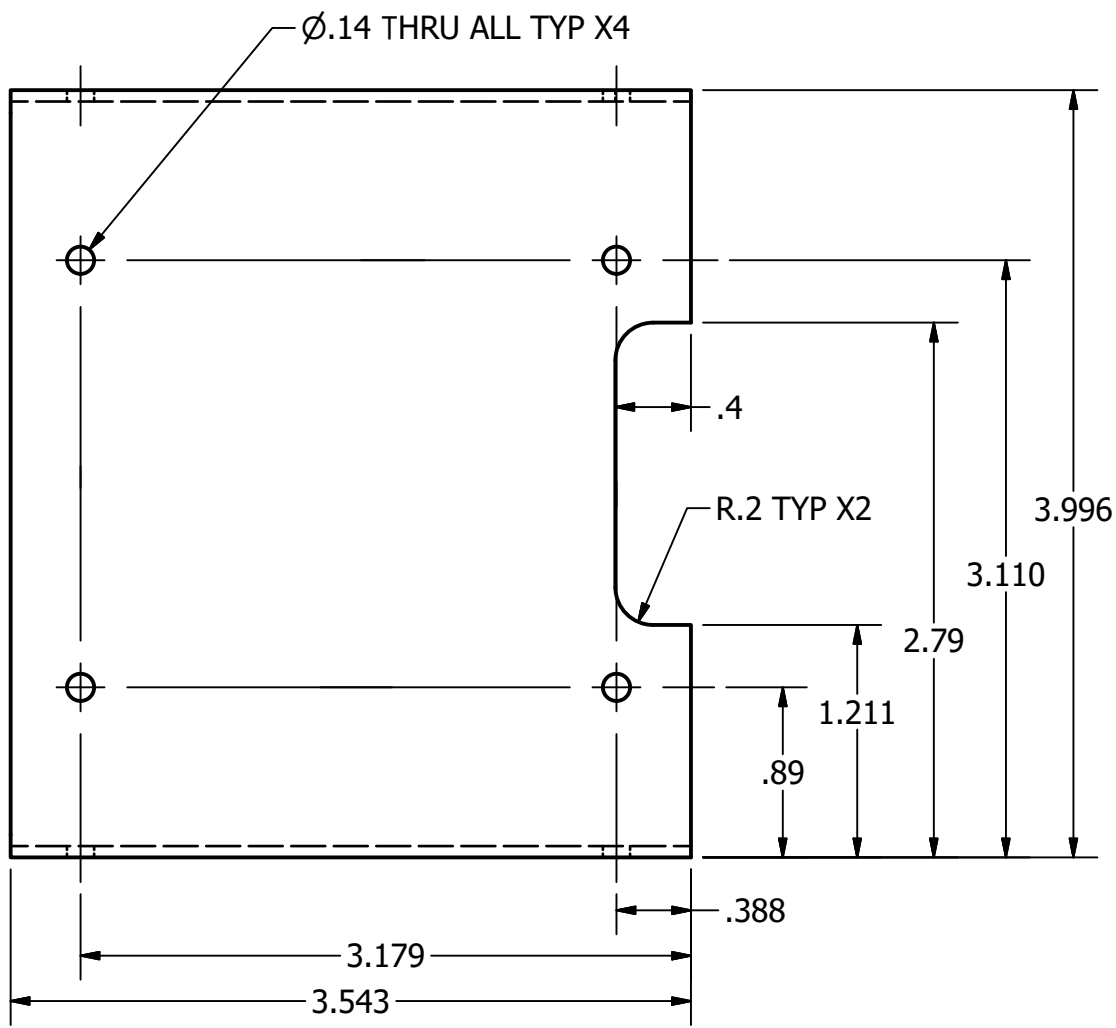
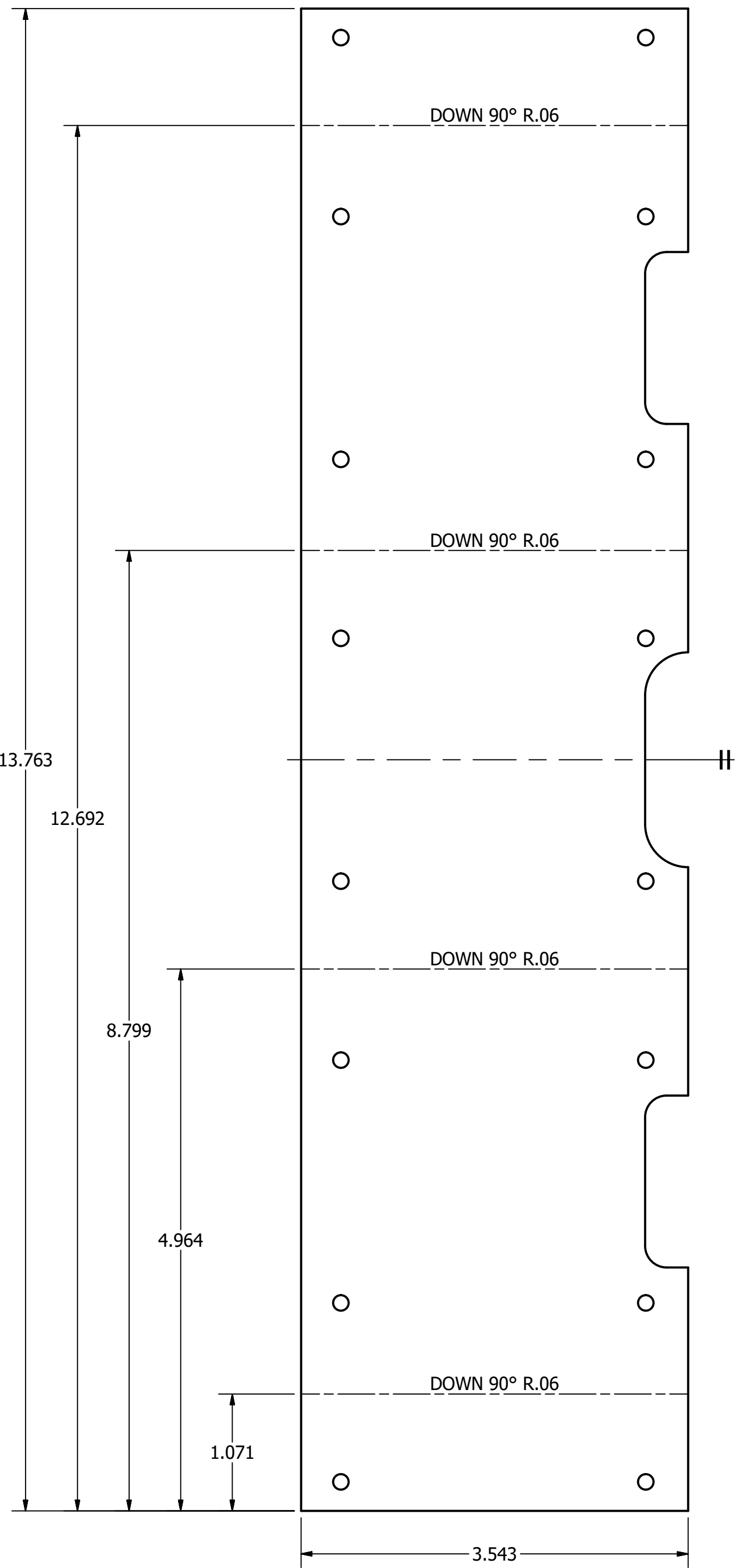
GENERAL TOLERANCE:

0.0 ± 0.030"

0.00 ± 0.020"

0.000 ± 0.010"

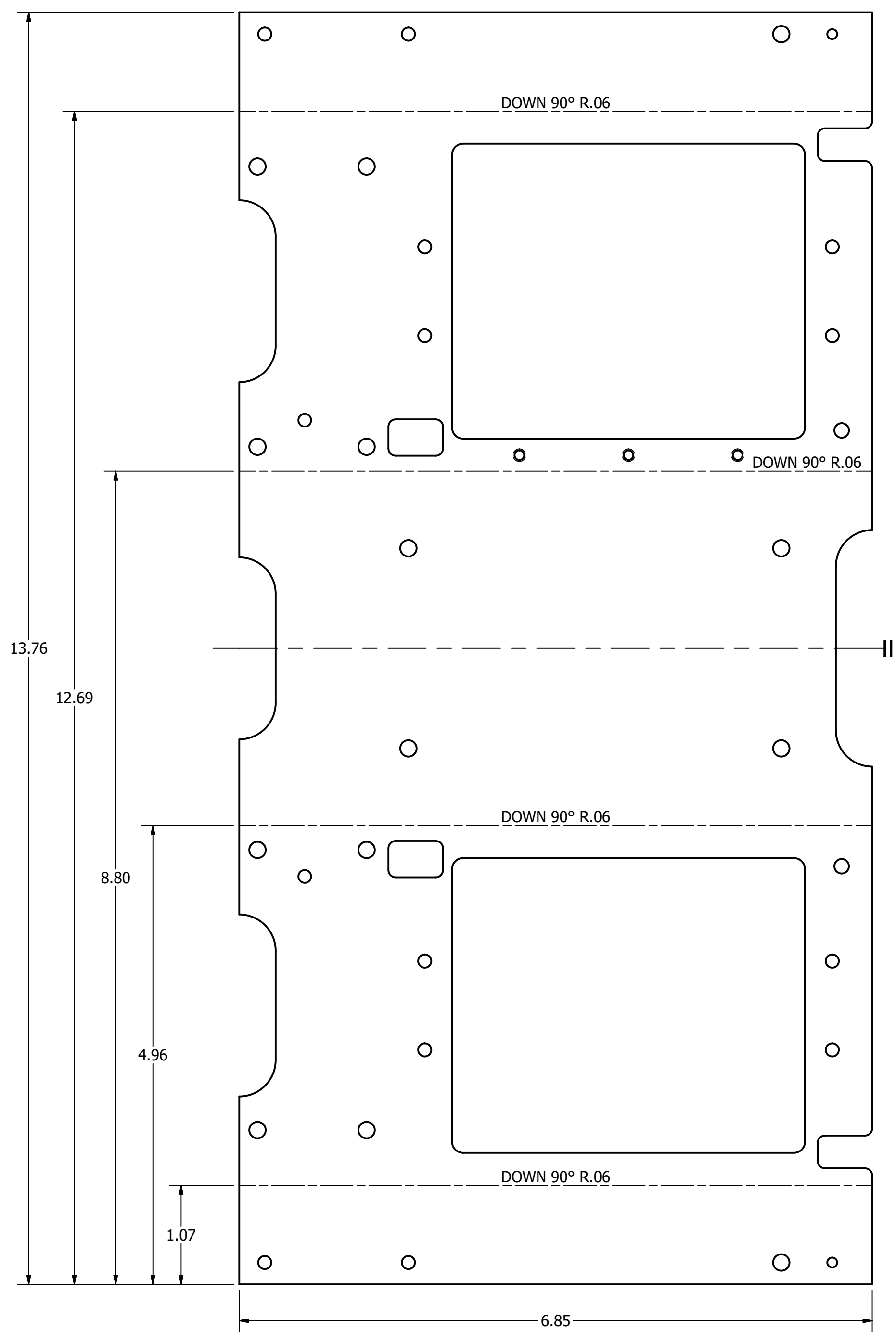
DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE 1 / 2	SHEET 1 OF 16	



PART 1 - BUS FRAME
MATERIAL: ALUMINUM 6061
SIZE: 3.996 x 3.937 x 3.543"
SCALE 1 : 1

GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

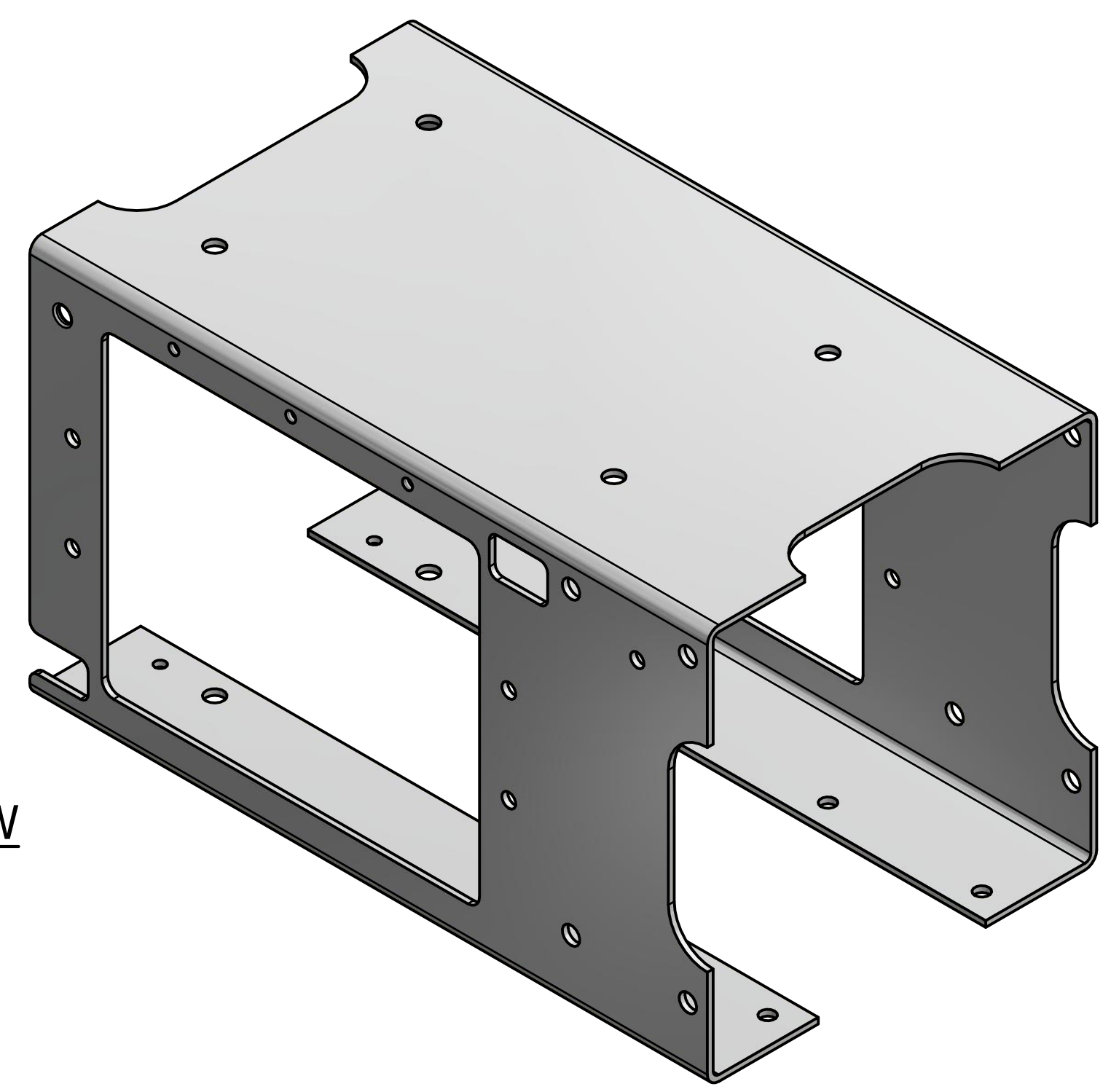
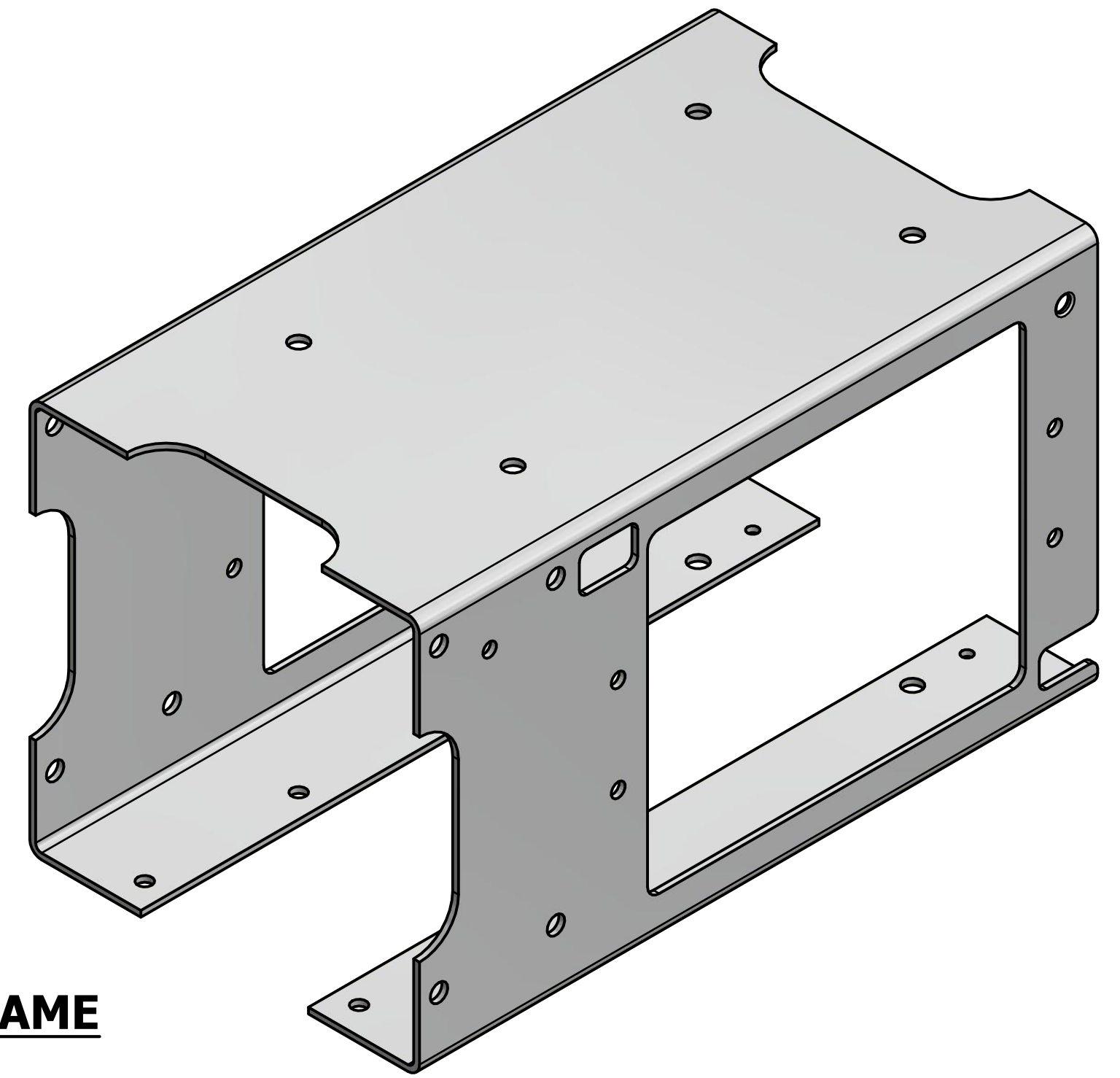
DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
SCALE FULL		SHEET 2 OF 16		



FLAT PATTERN
FLAT SIZE: 13.763 x 6.850"
THICKNESS: .06"
SCALE 1 : 1

NOTE:
1) THE 'PART 3 - TRAPSAT FRAME' WORKING VIEWS ARE LOCATED ON SHEET 4
2) PART IS SYMMETRICAL EXCEPT FOR THE ONLY THREE THREADED HOLES

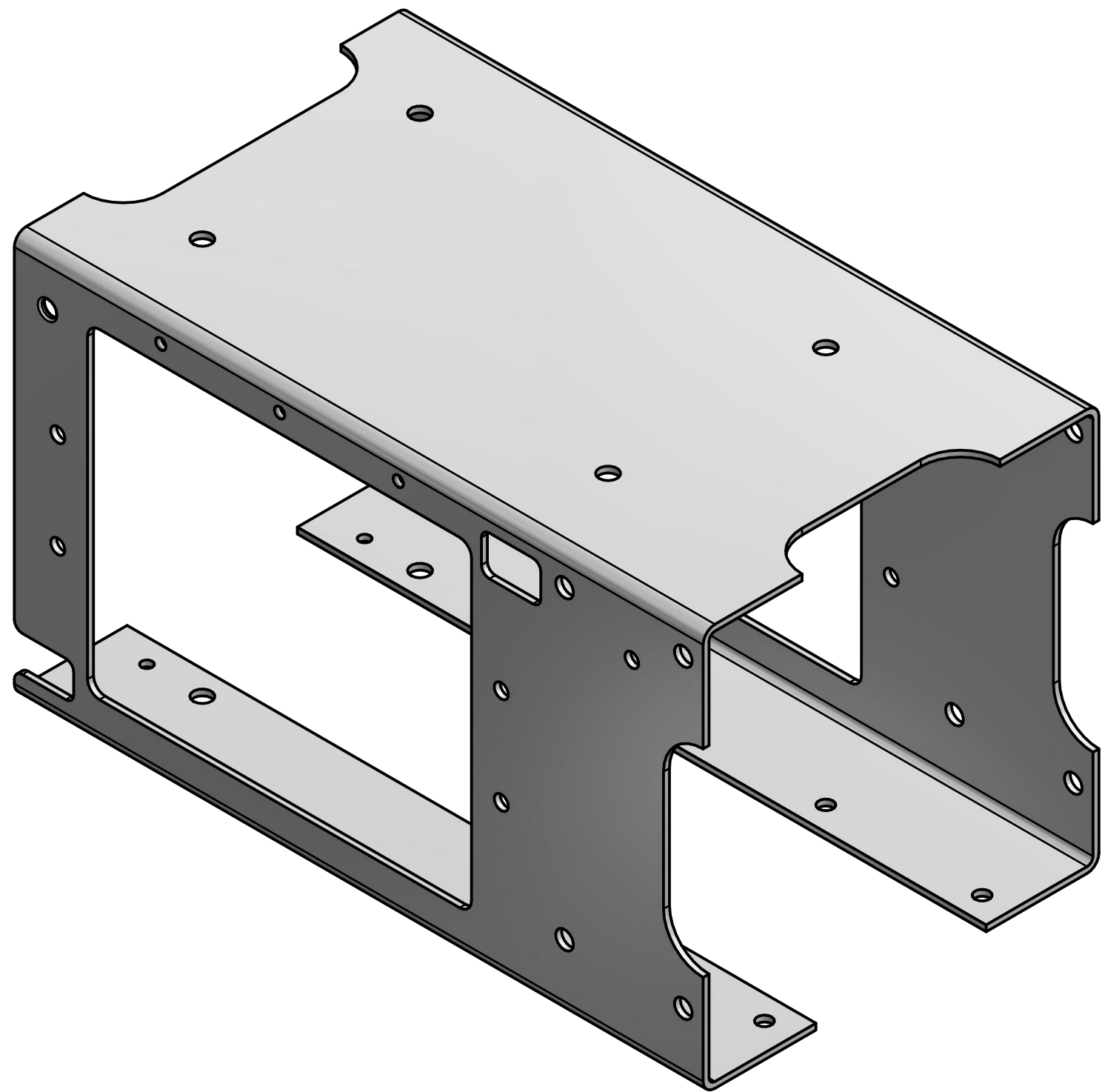
PART 2 - TRAPSAT FRAME
FLAT PATTERN ONLY
MATERIAL: ALUMINUM 6061
SIZE: 6.850 x 3.996 x 3.937"
SCALE 1 : 1



ALTERNATE VIEW
SCALE 1 : 1

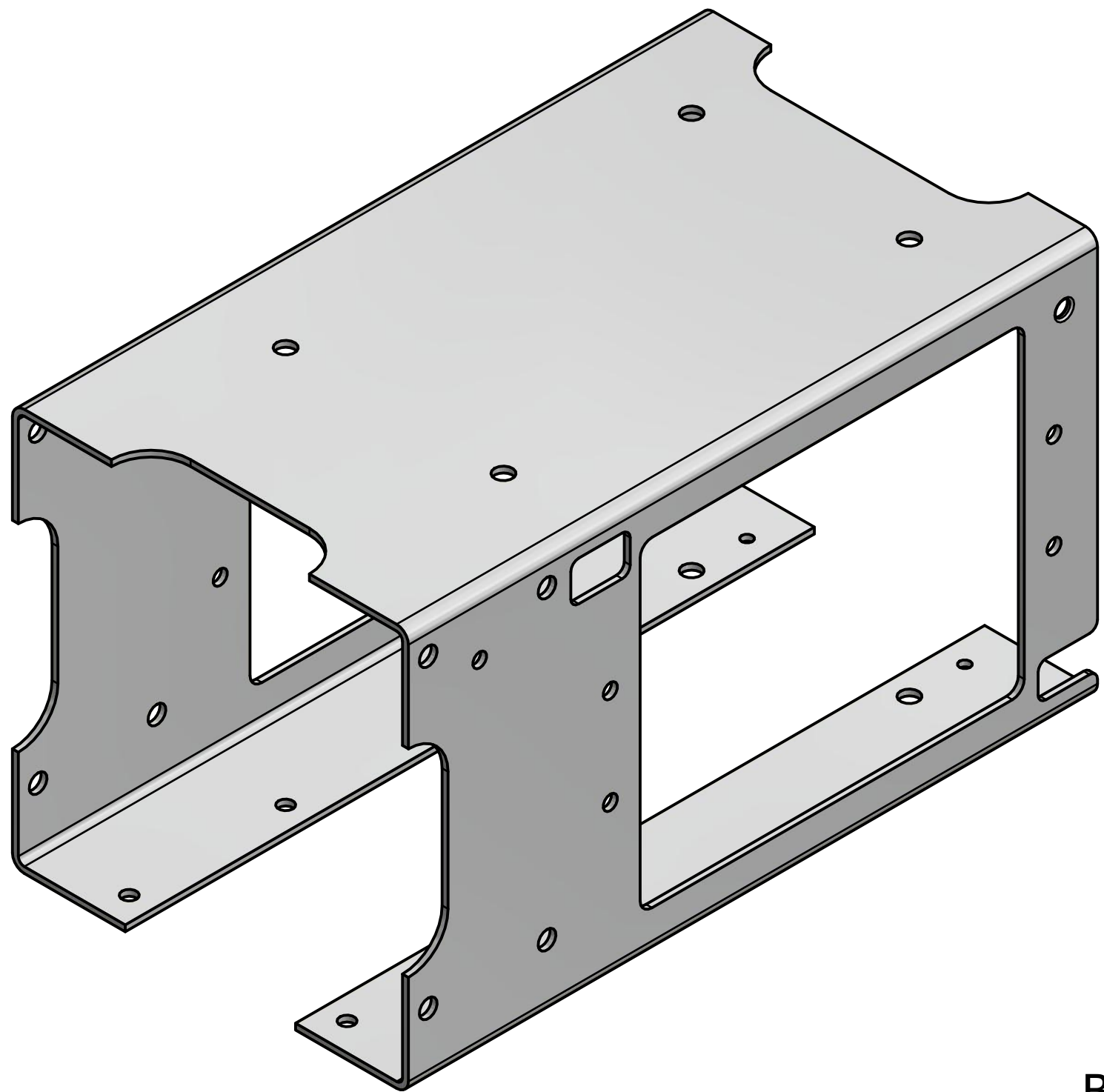
GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE FULL	SHEET 3 OF 16	



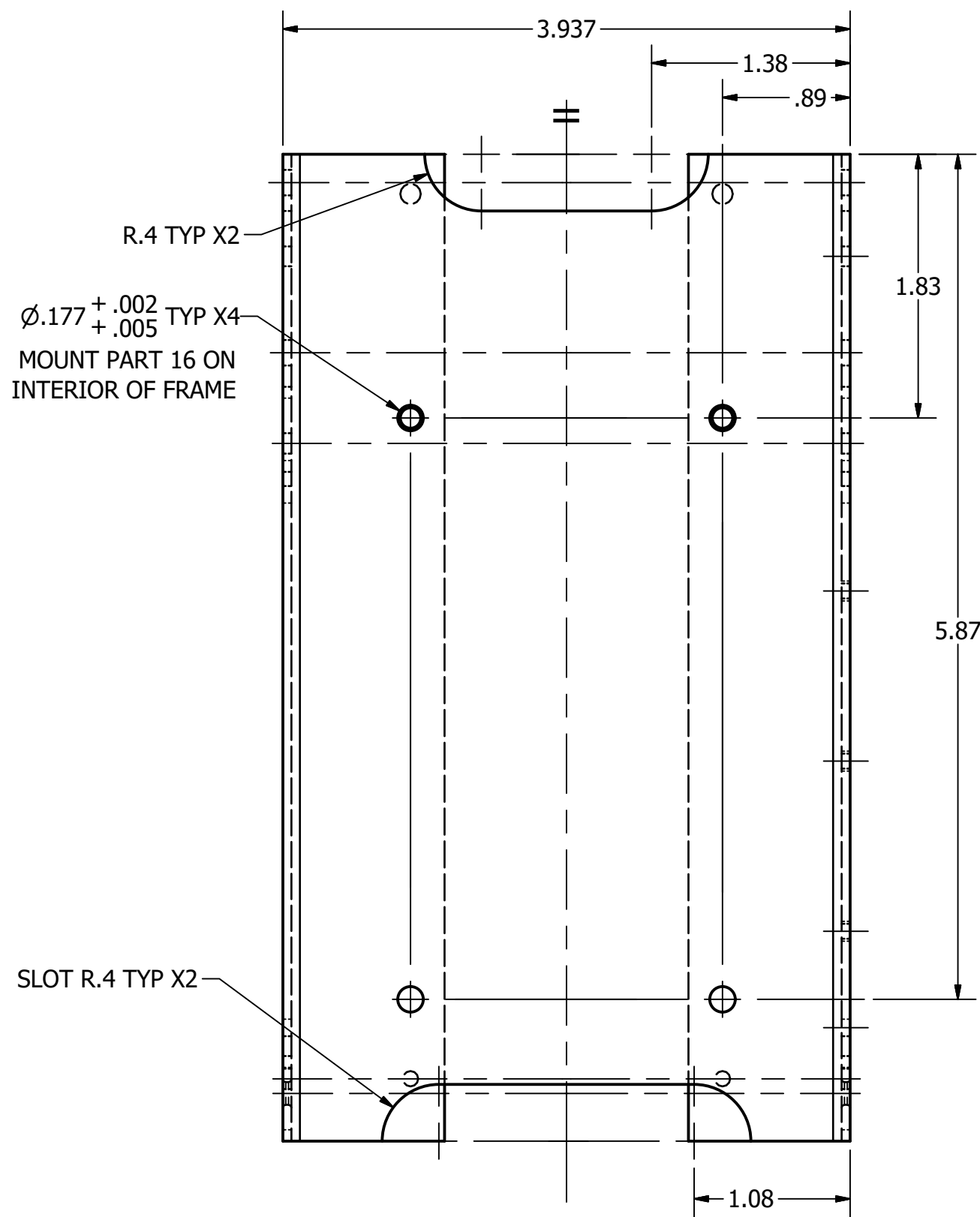
NOTE:

- 1) THE 'PART 3 - TRAPSAT FRAME' FLAT PATTERN IS LOCATED ON SHEET 3
2) PART IS SYMMETRICAL EXCEPT FOR THE ONLY THREE THREADED HOLES

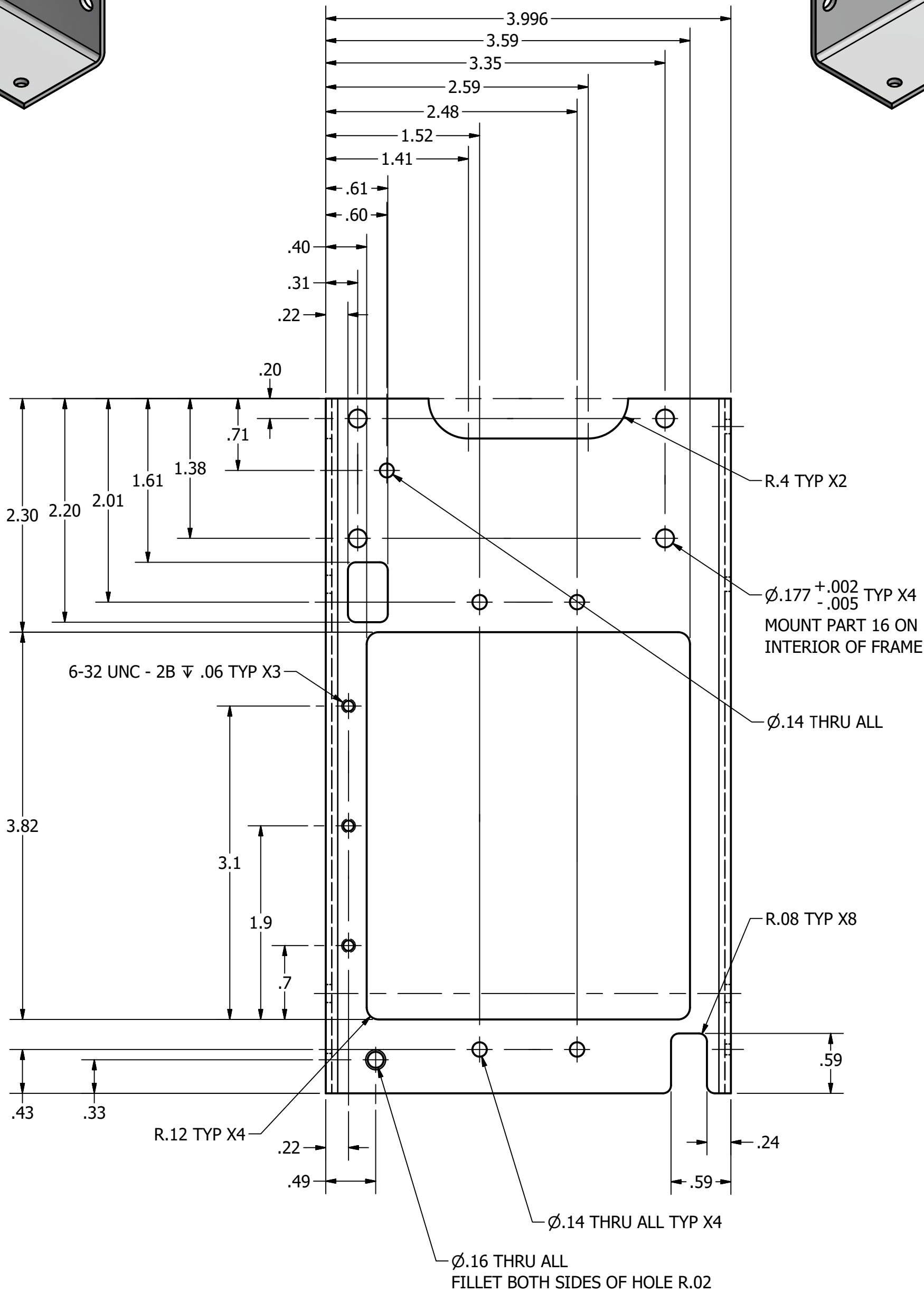


PART 2 - TRAPSAT FRAME

BENT MODEL ONLY
MATERIAL: ALUMINUM 6061
SIZE: 6.850 x 3.996 x 3.937"
SCALE 1 : 1



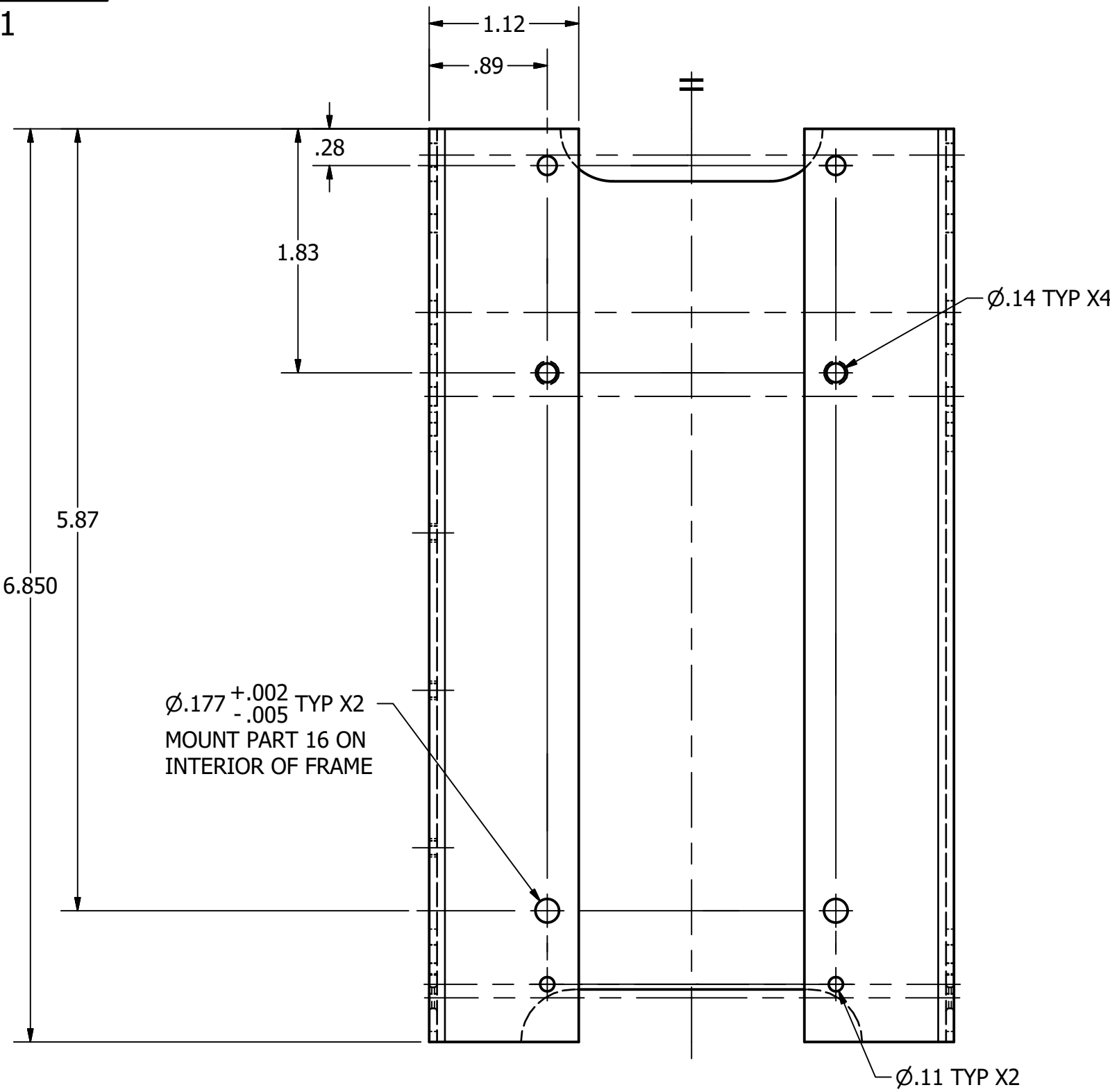
TOP VIEW
SCALE 1 : 1



RIGHT SIDE VIEW
SCALE 1 : 1

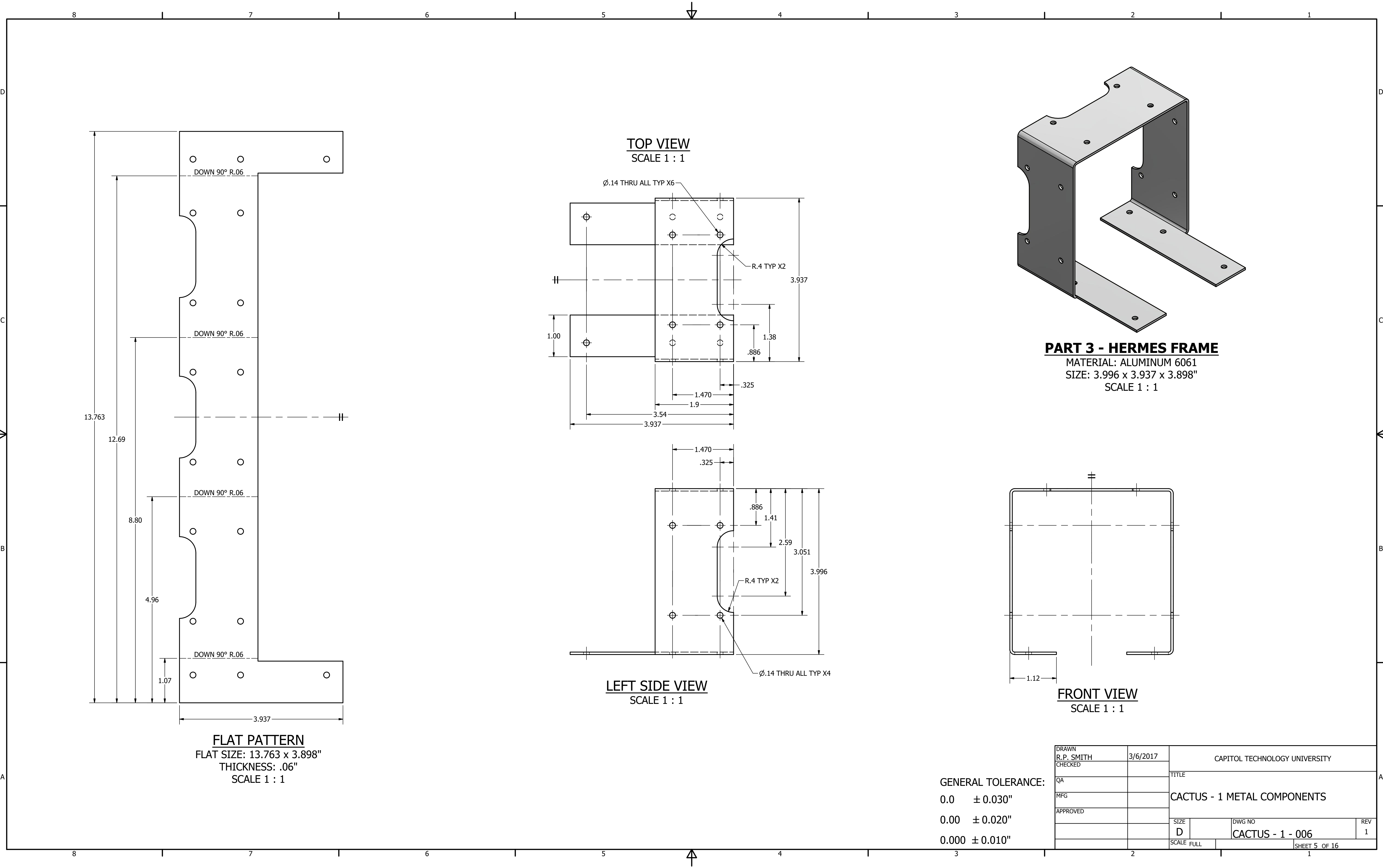
ALTERNATE VIEW
SCALE 1 : 1

BOTTOM VIEW
SCALE 1 : 1

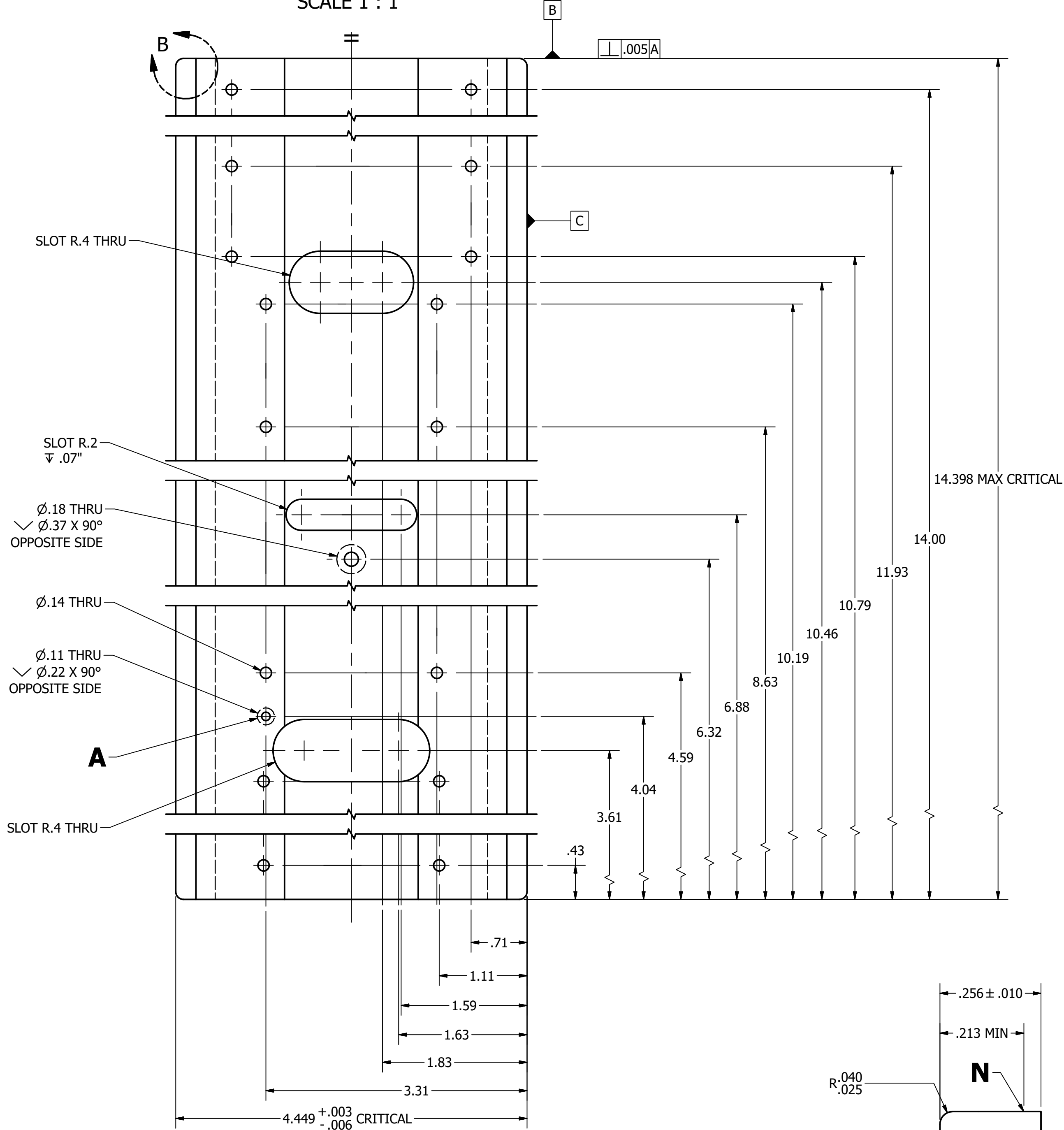


GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
SCALE FULL		SHEET 4 OF 16		



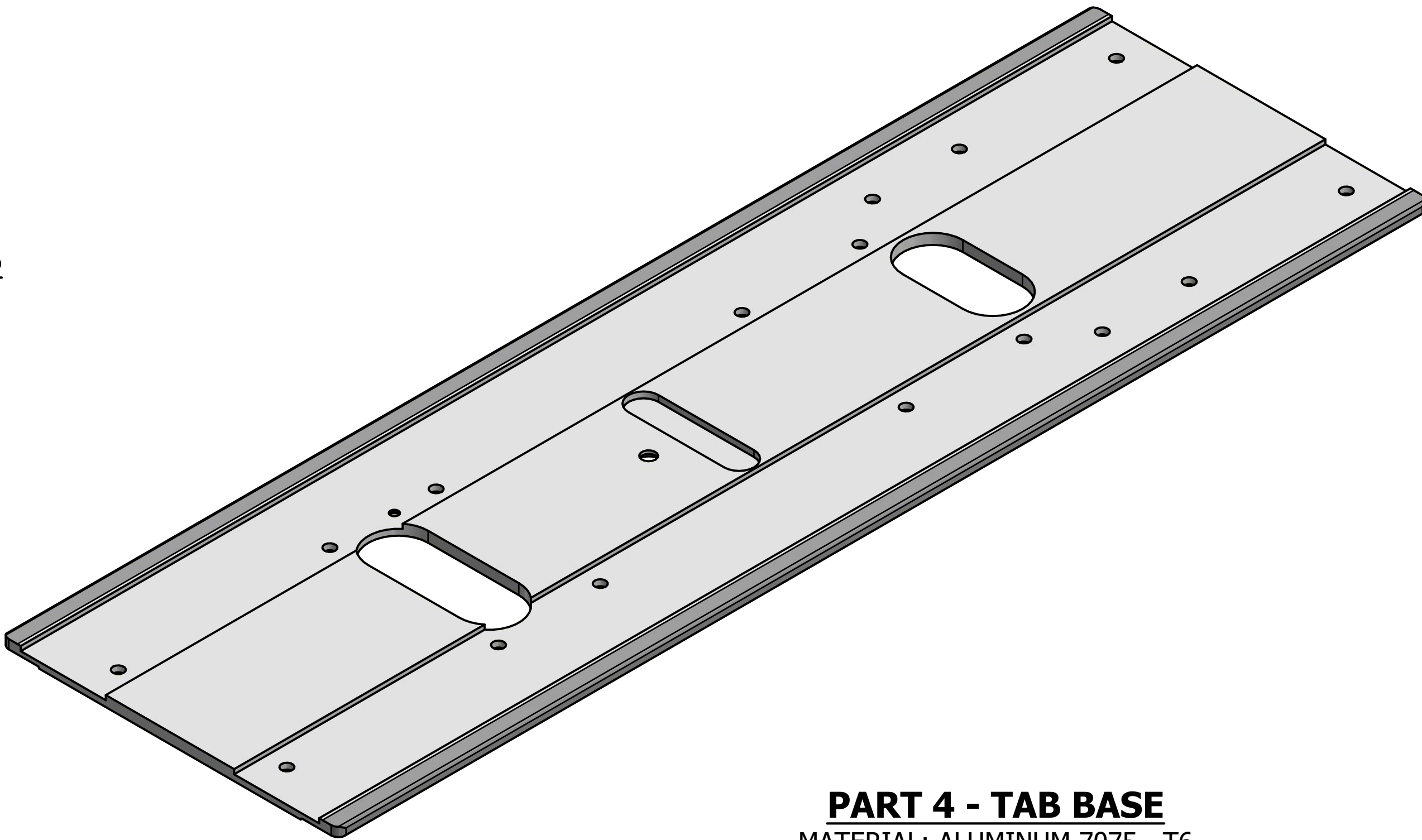
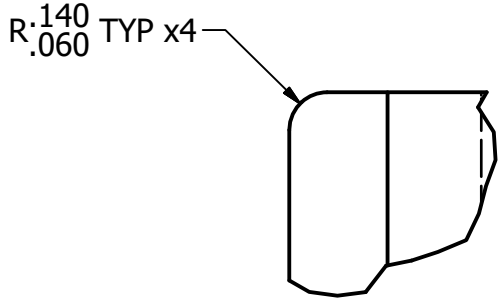
TOP VIEW
SCALE 1 : 1



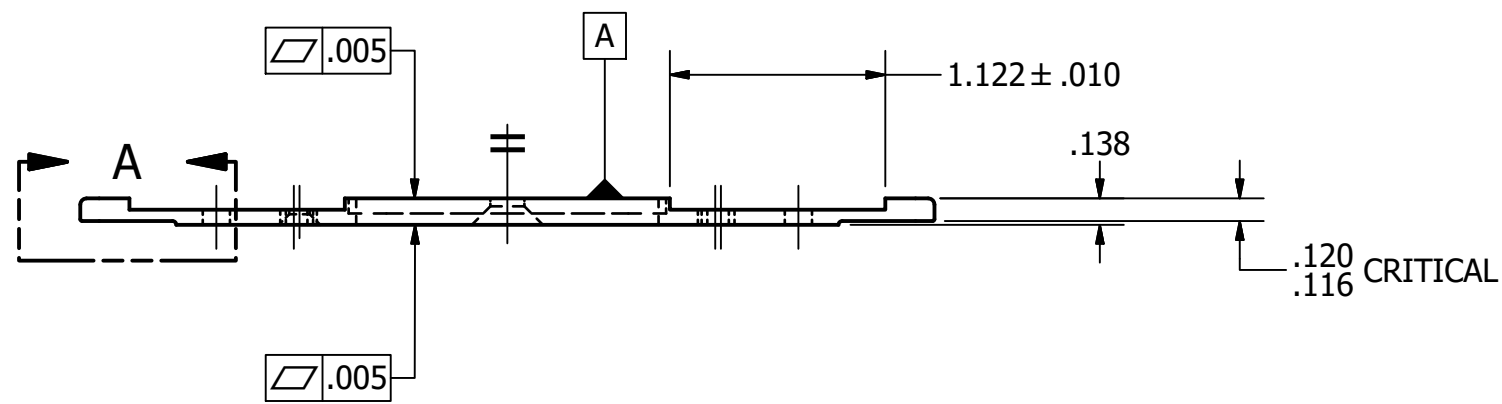
NOTES:

1. DATUM AND AND FEATURE CONTROLS ARE IN INCHES
2. GENERAL TOLERANCES APPLY TO ALL DIMENSIONS UNLESS ANOTHER FORM OF TOLERANCE IS NOTED
3. ALL EDGES ARE FILLETED AT LEAST .005" UNLESS NOTED OTHERWISE
4. UNLESS OTHERWISE NOTED, THE PROFILE TOLERANCES SHALL BE AS FOLLOWS (WHERE A, B, AND C ARE THE PRIMARY, SECONDARY, AND TERTIARY DATUMS RESPECTIVELY): $\sqrt{.010|A|B|C}$
5. TRUE POSITION TOLERANCE: UNLESS OTHERWISE NOTED, THE TRUE POSITION TOLERACE FOR FEATURES SHALL BE AS FOLLOWS: $\sqrt{.010|A|B|C}$
6. SURFACE ROUGHNESS: UNLESS OTHERWISE SPECIFIED, MAX SURFACE ROUGHNESS SHALL BE: $\sqrt{32}$
7. SURFACE TREATMENT: HARD ANODIZE PER MIL-A-8625, TYPE II, CLASS 1
 - a. SURFACE TREATMENT IS CONTINUOUS FROM **N** TO **M**.
 - b. ALLOWABLE THICKNESS .001" MIN TO .002" MAX. MACHINIST SHALL COORDINATE WITH PLATER AS ACTUAL THICKNESS MAY NEED TO BE MORE PRECISE SINCE ALL DIMENSIONS APPLY AFTER SURFACE TREATMENT.
 - c. DO NOT USE TABS FOR ELECTRICAL CONTACT.
8. CLEANLINESS: PART SHALL BE DELIVERED VISIBLY CLEAN, TO THE NORMAL UNAIDED EYE, OF ALL PARTICULATE MATTER AND NON-PARTICULATE FILM MATTER.
9. SYMMETRY: PART IS SYMMETRICAL, EXCLUDING FEATURES MARKED WITH AN 'A'

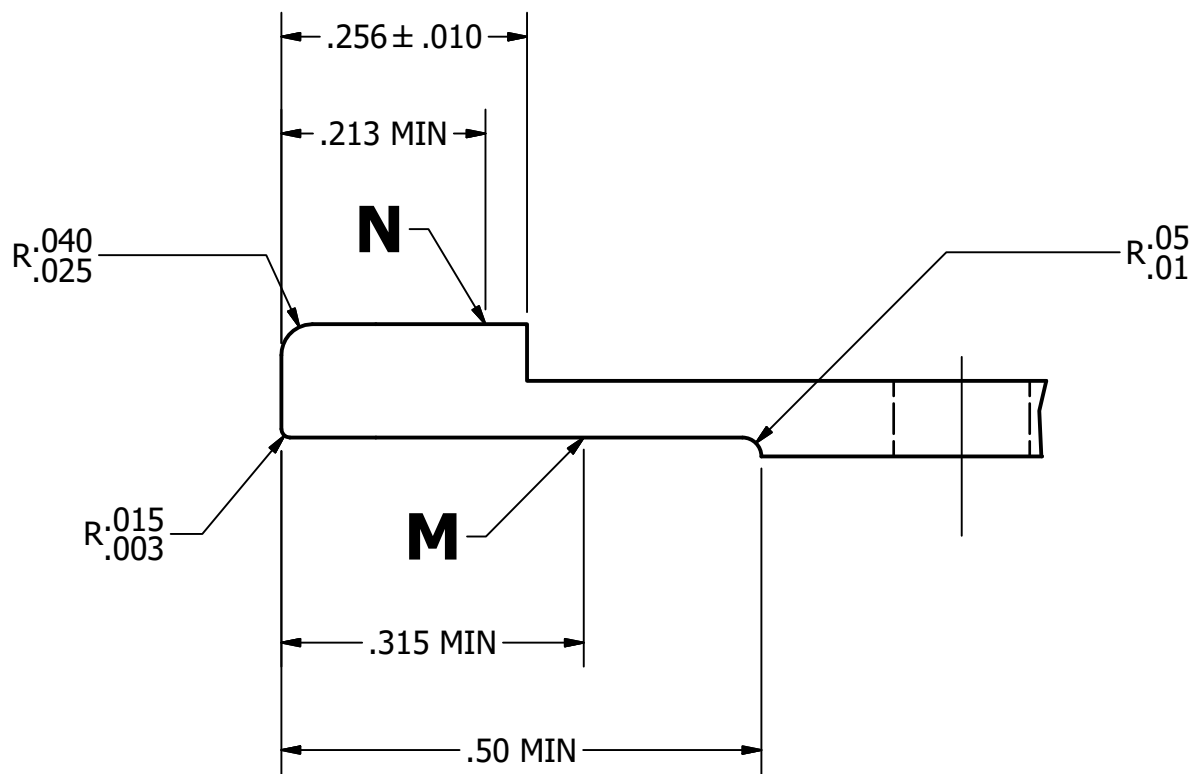
DETAIL B
SCALE 2 : 1



PART 4 - TAB BASE
MATERIAL: ALUMINUM 7075 - T6
SIZE: 14.409 x 4.449 x 0.138"
SCALE 1 : 1



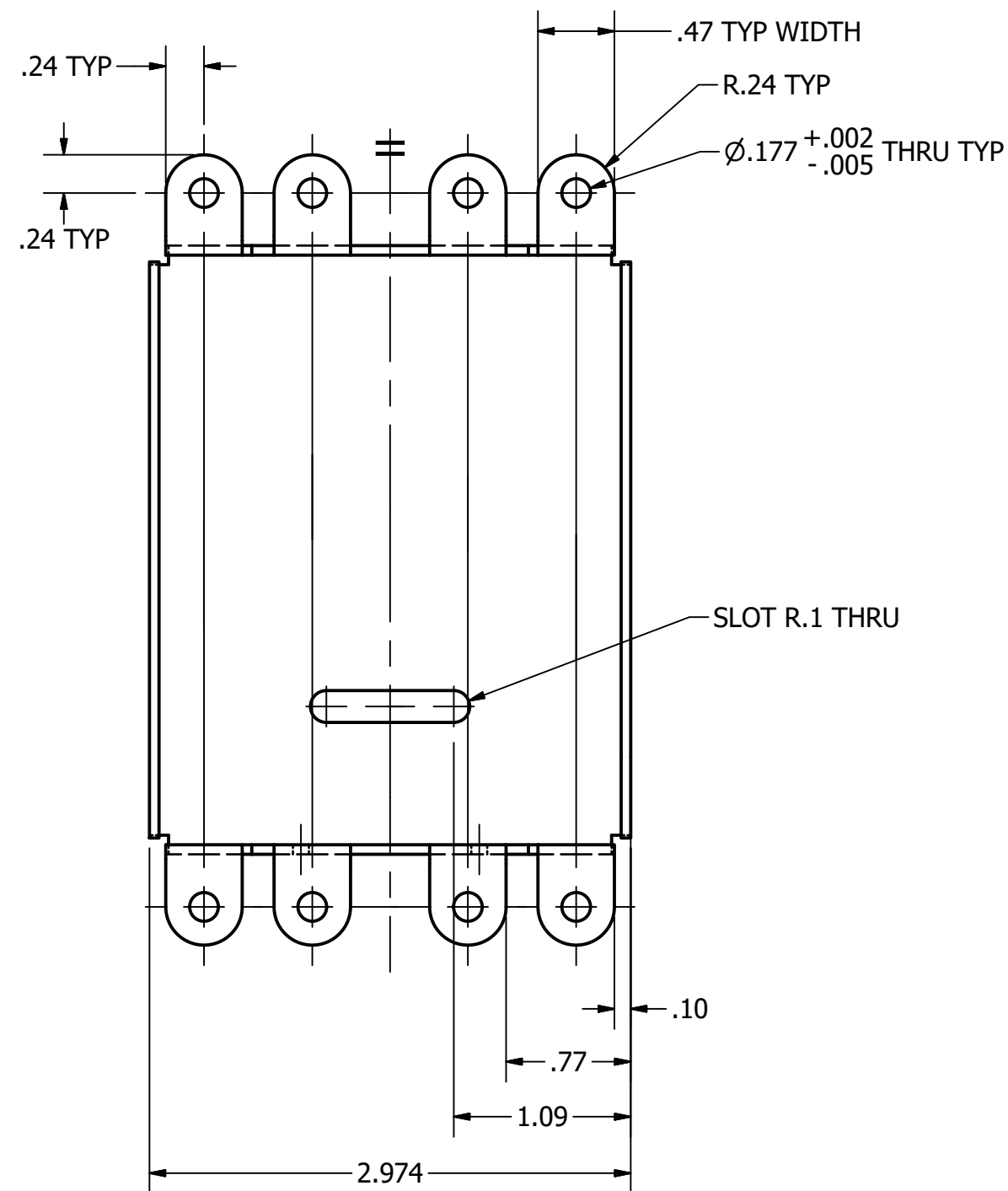
FRONT VIEW
SCALE 1 : 1



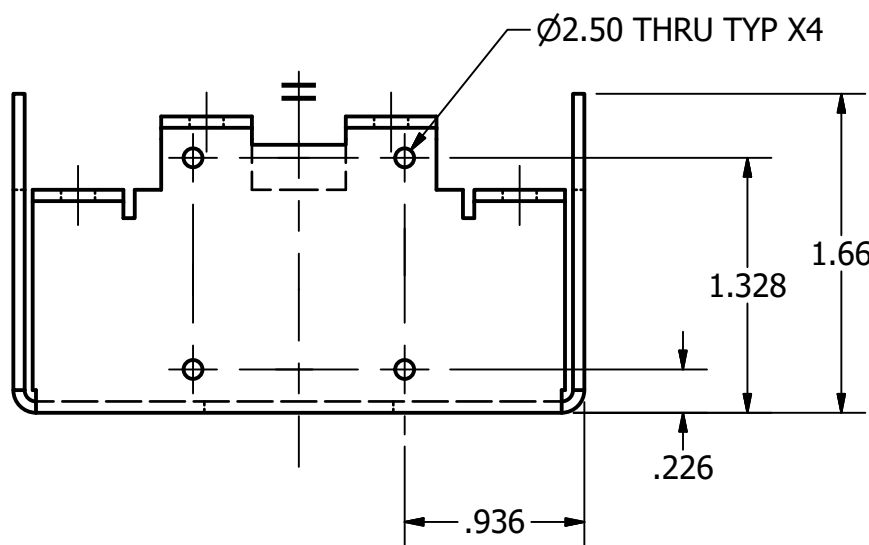
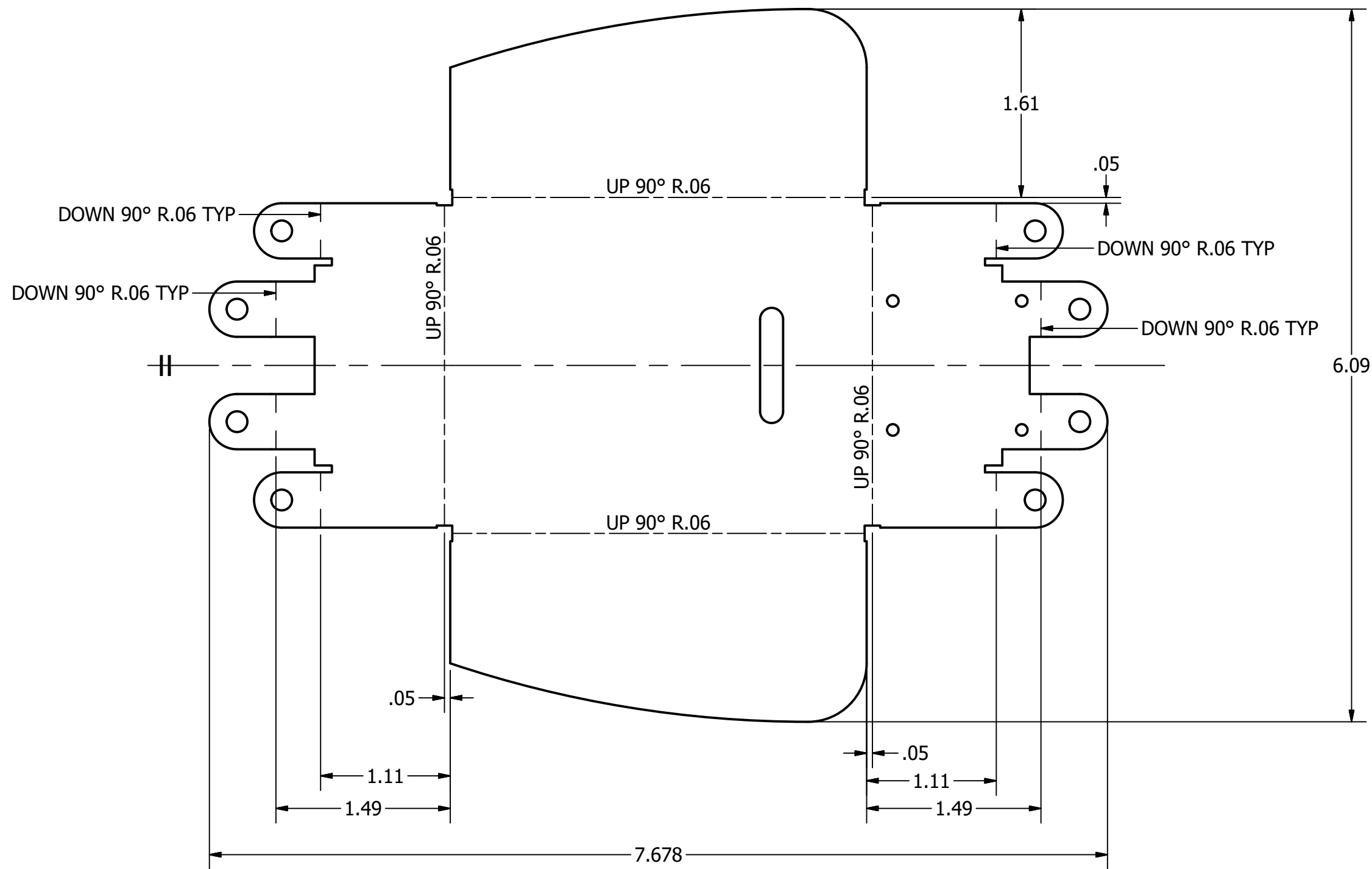
DETAIL A
ALL DIMENSIONS IN THIS VIEW ARE CRITICAL TO SPEC
SCALE 5 : 1

GENERAL TOLERANCE:
0.0 ± 0.030 "
0.00 ± 0.020 "
0.000 ± 0.010 "

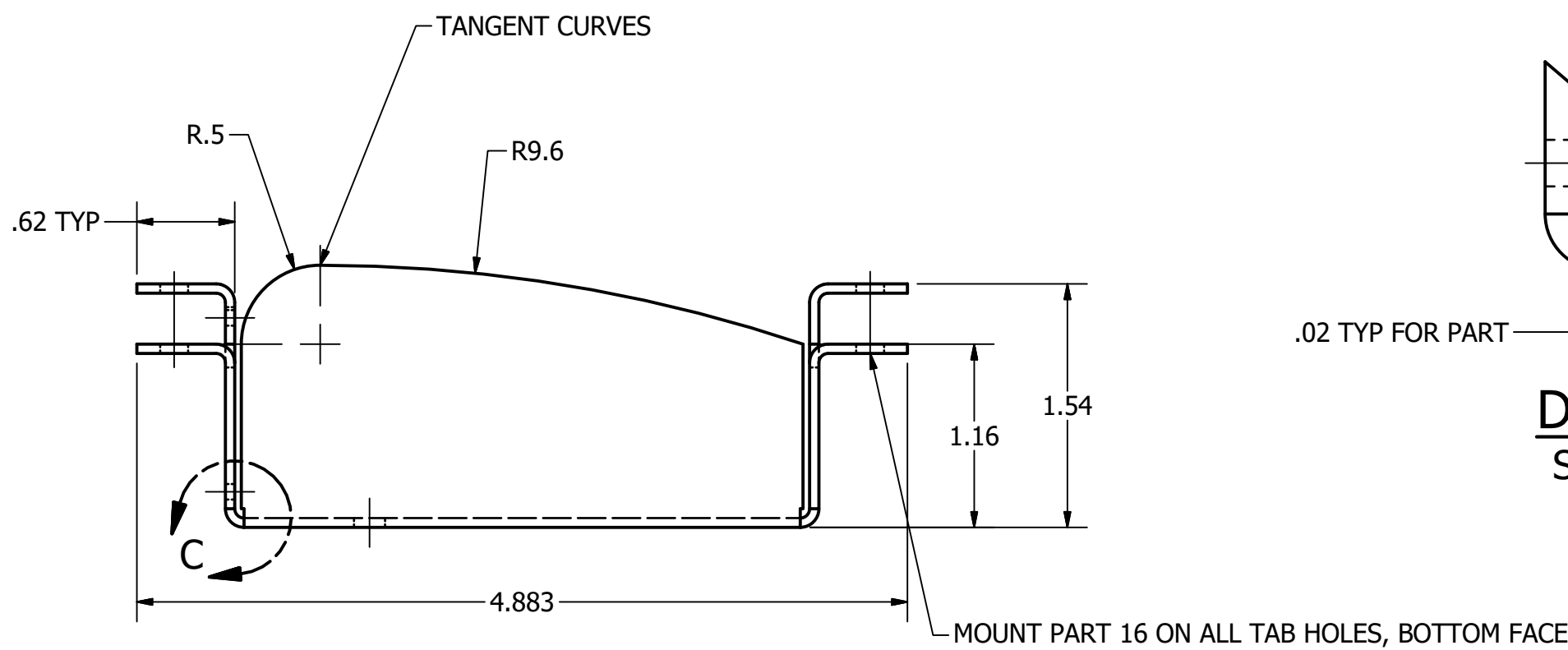
DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE	NOTED	SHEET 6 OF 16



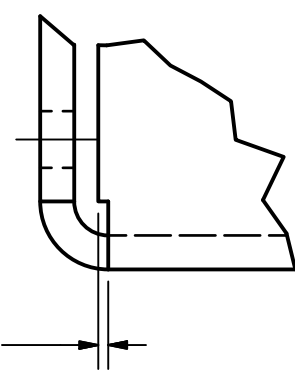
TOP VIEW
SCALE 1 : 1



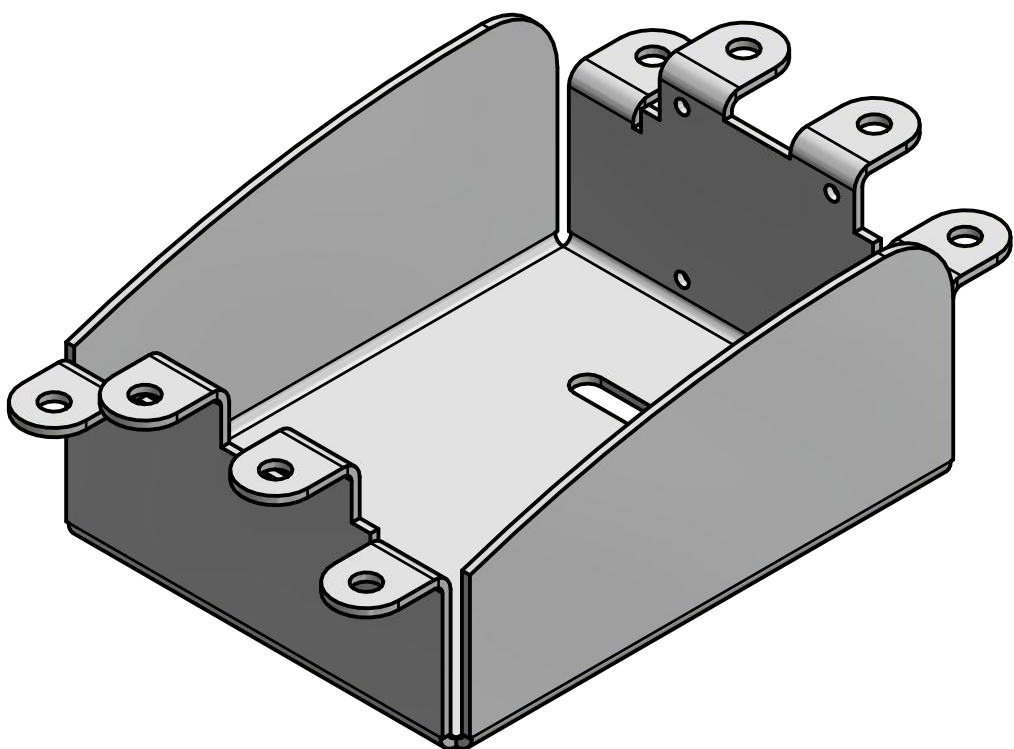
FRONT VIEW
SCALE 1 : 1



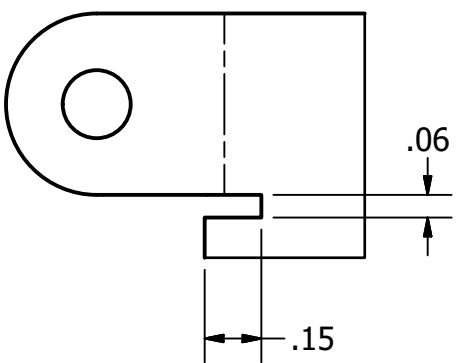
RIGHT SIDE VIEW
SCALE 1 : 1



DETAIL C
SCALE 3 : 1



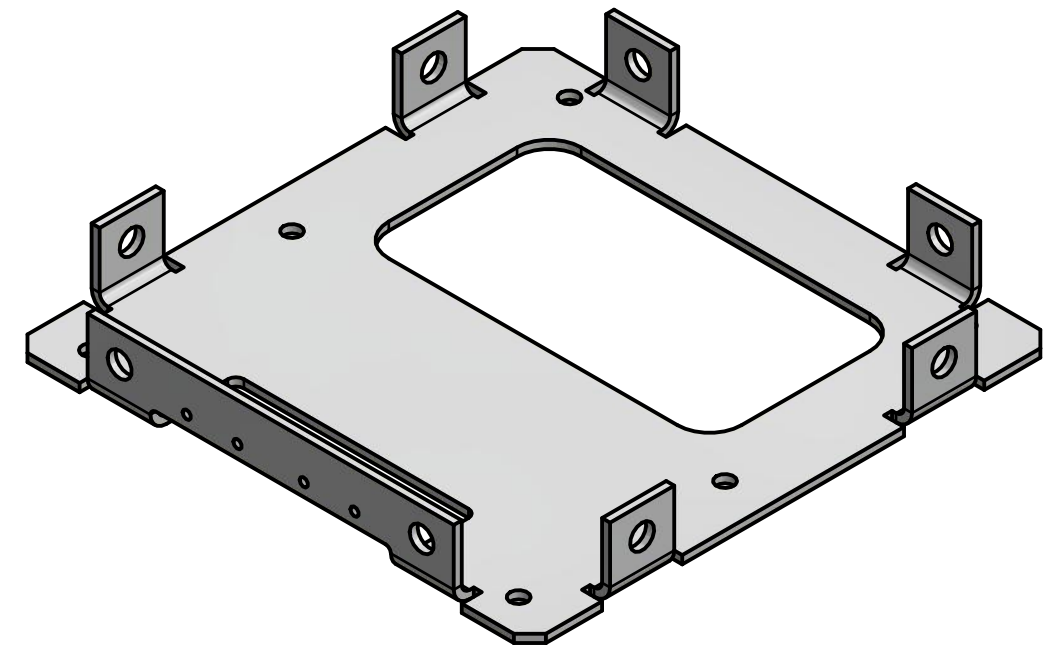
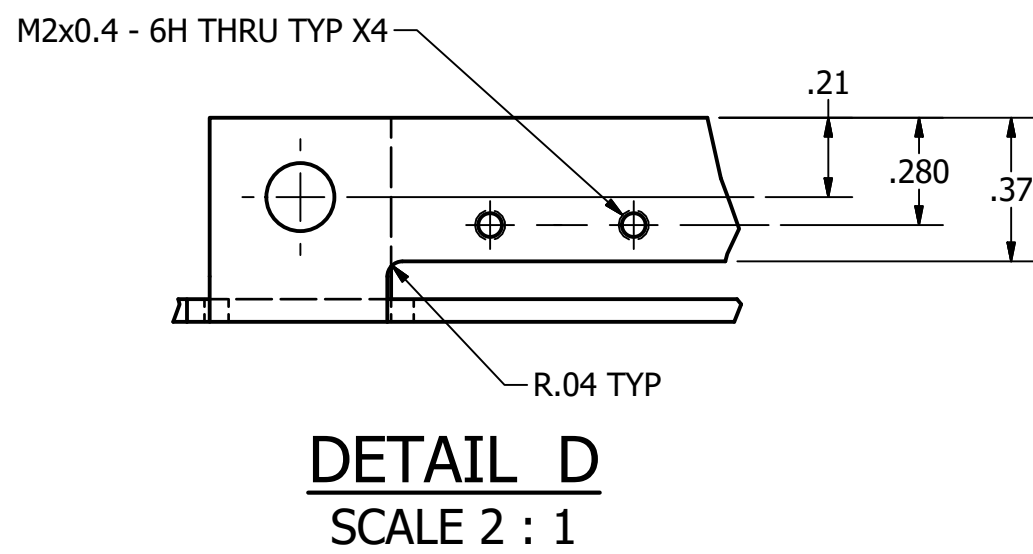
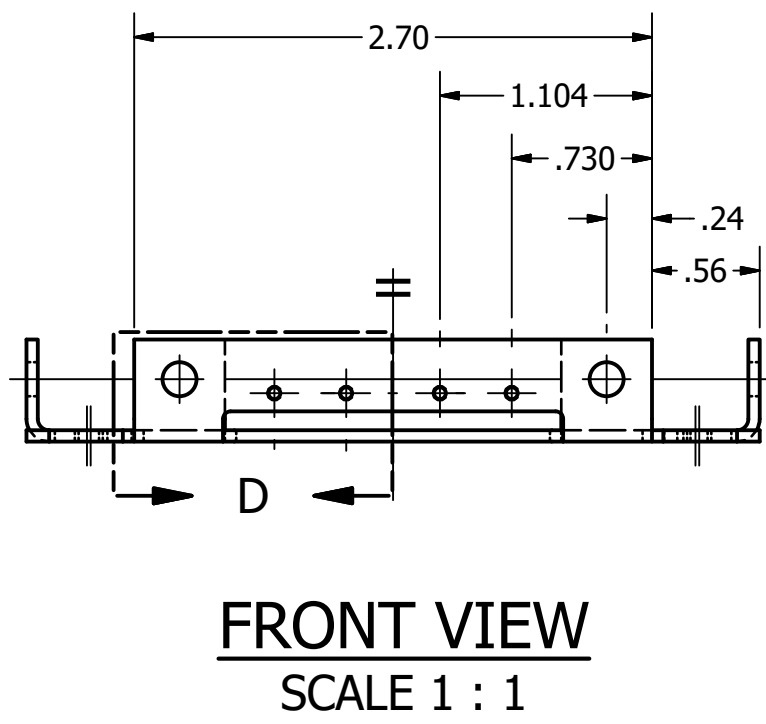
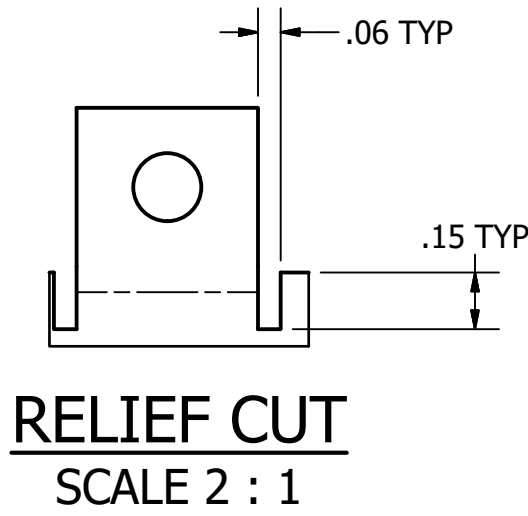
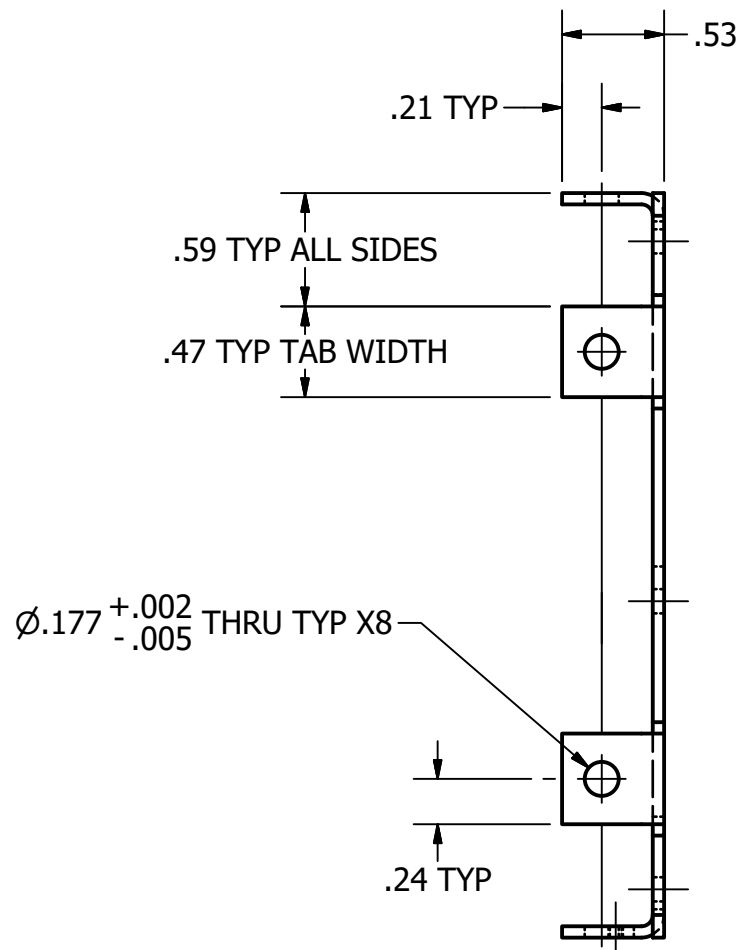
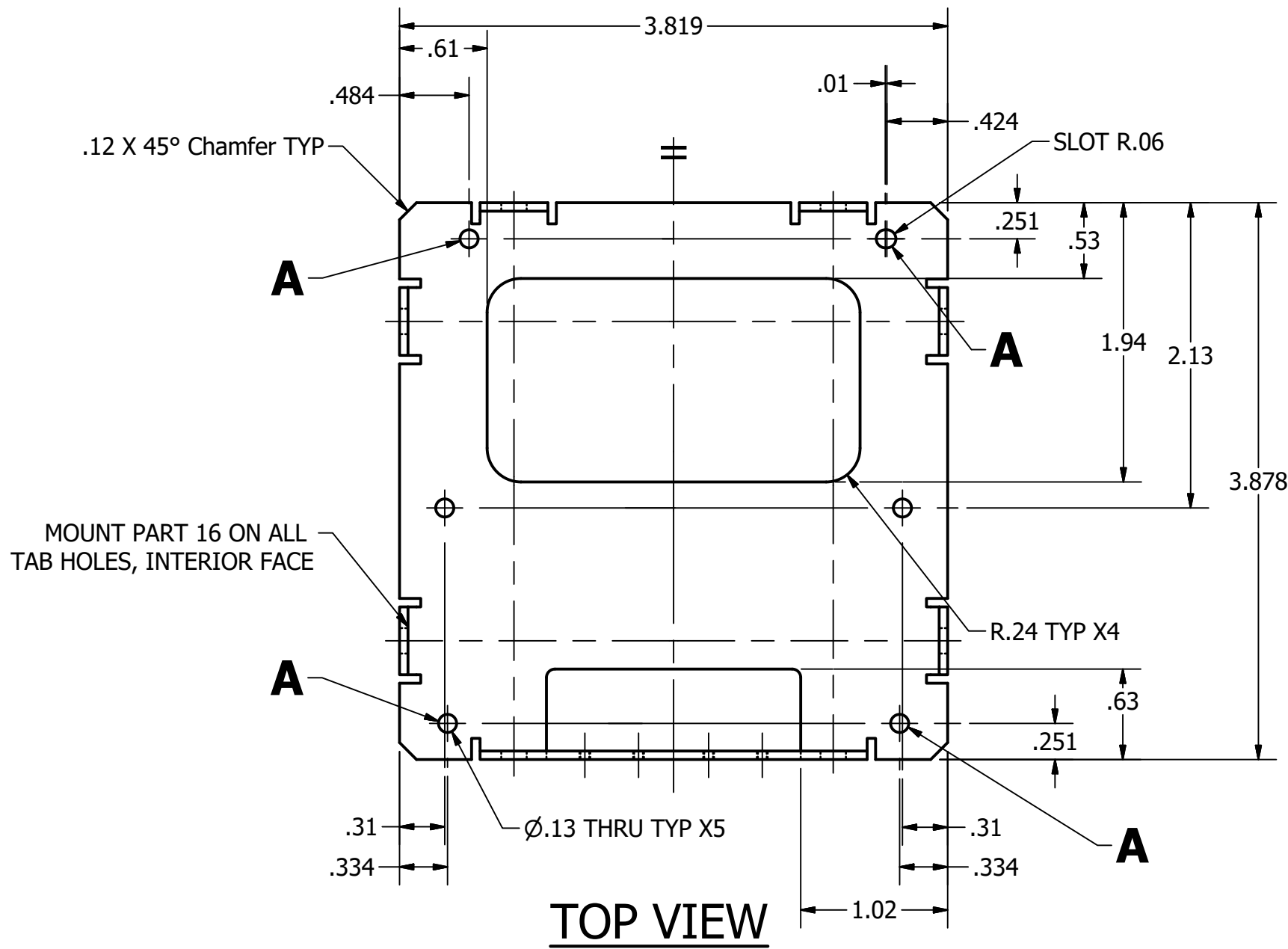
PART 5 - AEROGEL CAPTURE BAY
MATERIAL: ALUMINUM 6061
SIZE: 4.883 x 2.974 x 1.66"
SCALE 1 : 1



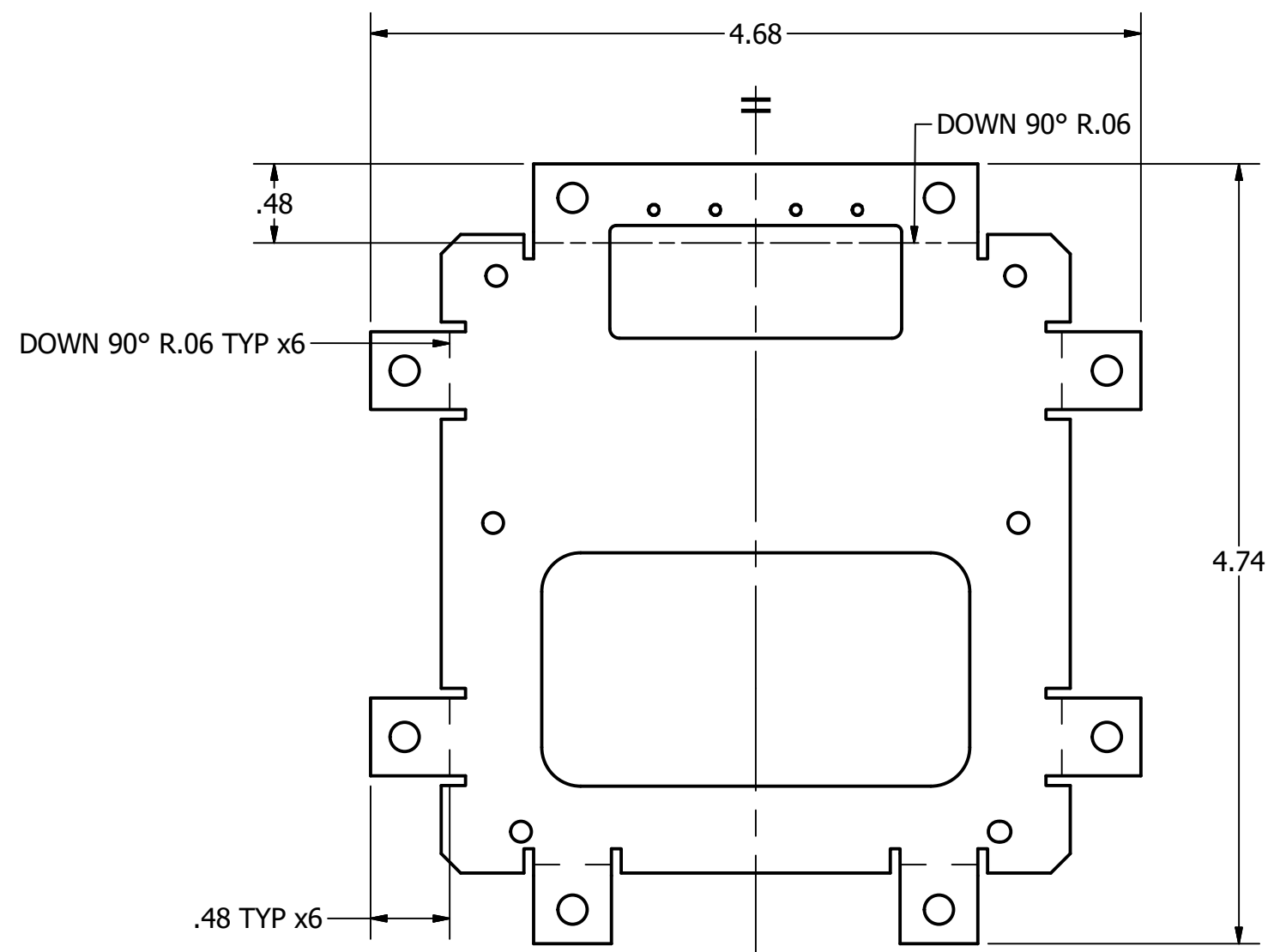
RELIEF CUT
SCALE 2 : 1

GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE NOTED	SHEET 7 OF 16	



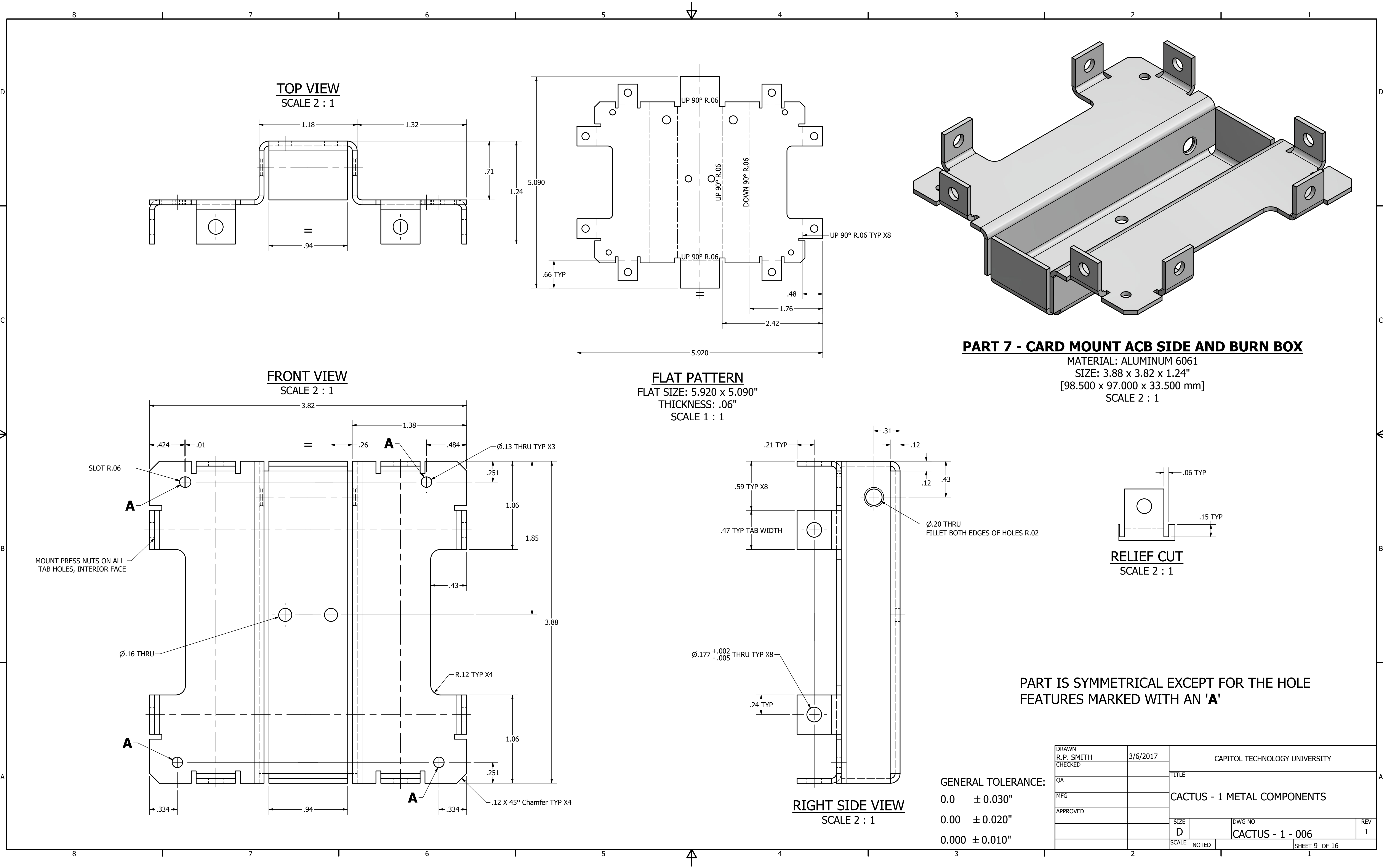
PART 6 - CARD MOUNT COMMS SIDE
MATERIAL: ALUMINUM 6061
SIZE: 3.878 x 3.819 x 0.53"
SCALE 1 : 1

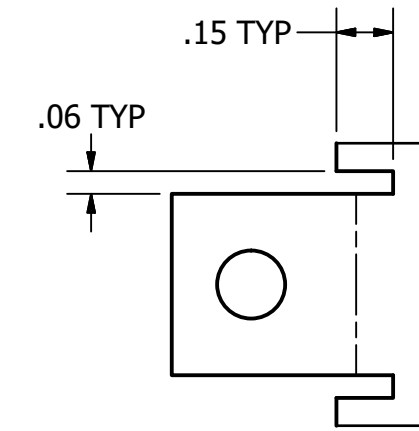


PART IS SYMMETRICAL EXCEPT FOR THE HOLE
FEATURES MARKED WITH AN 'A'

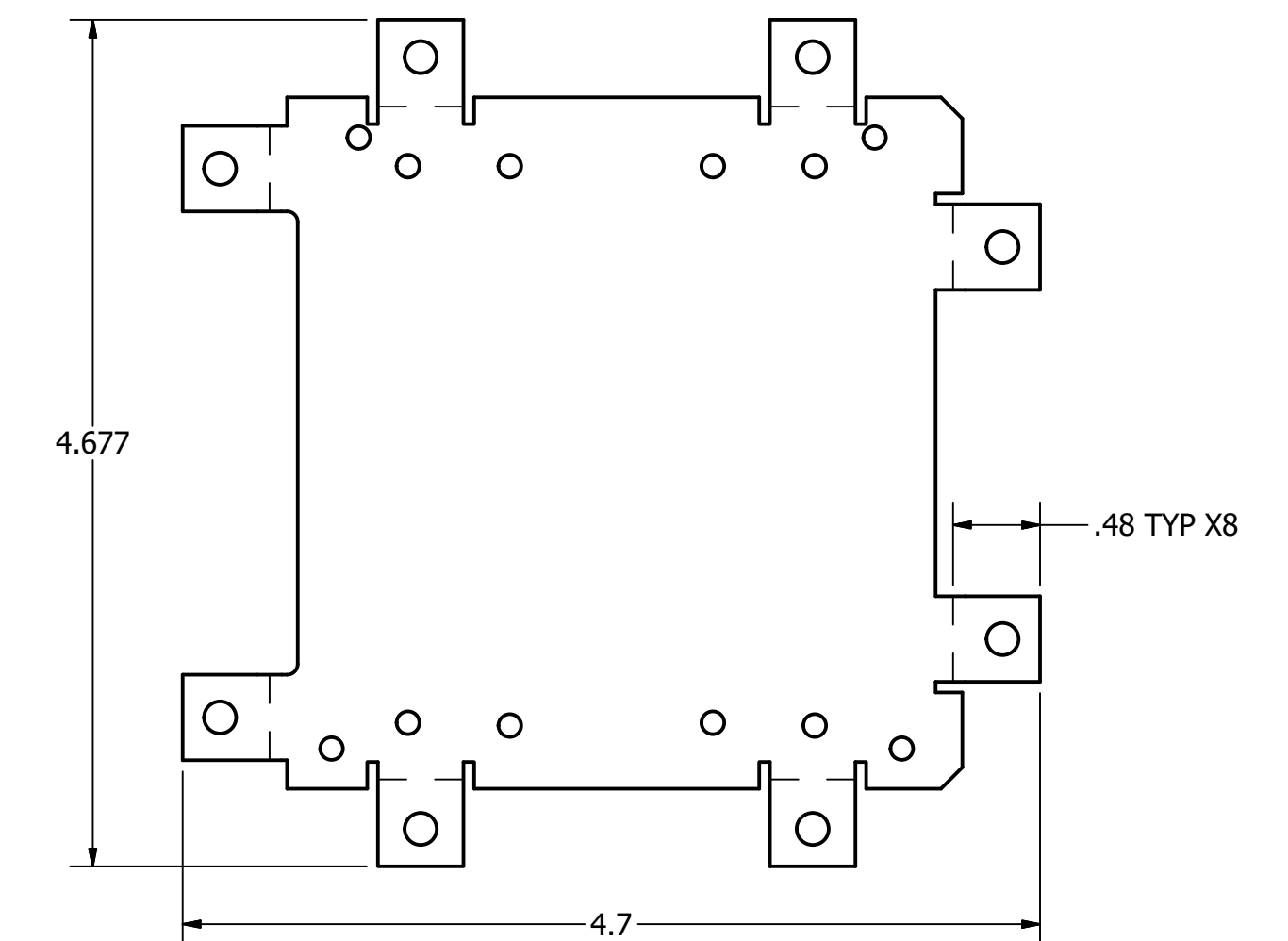
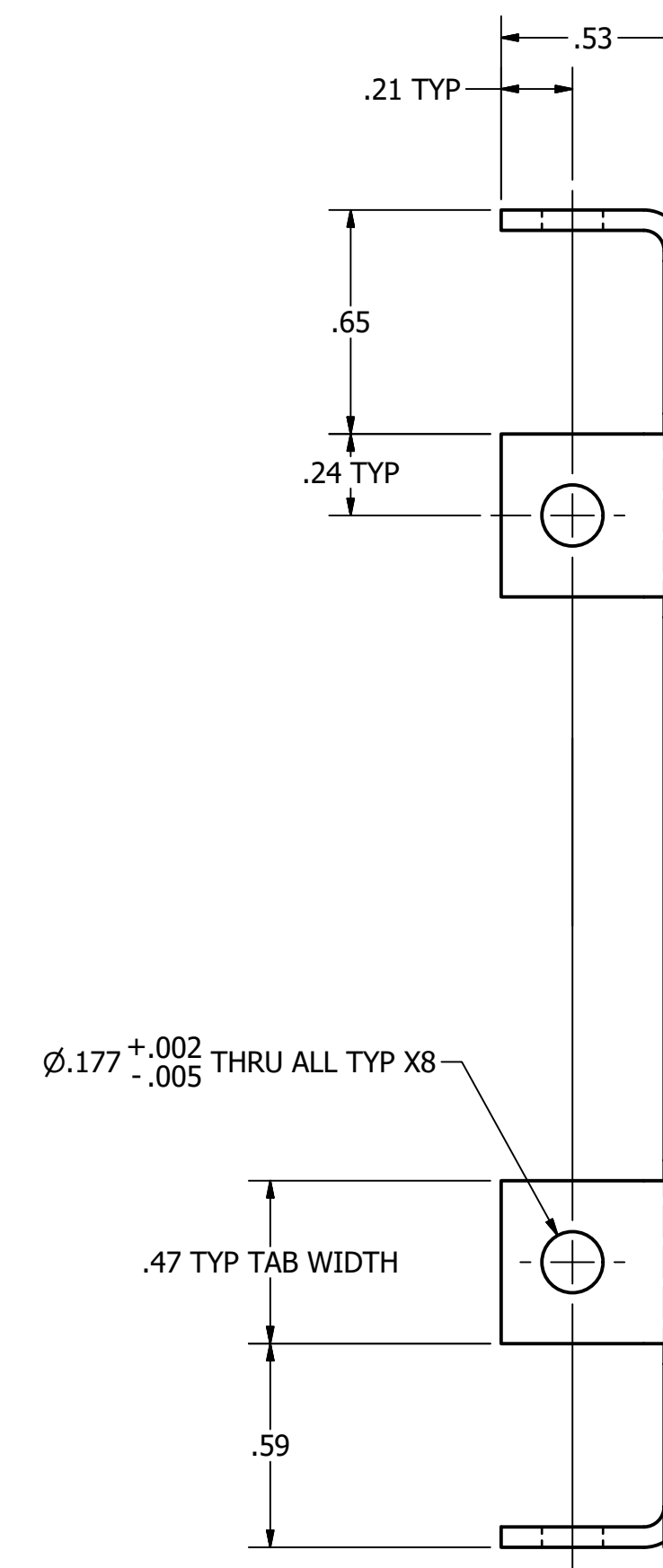
GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE	NOTED	SHEET 8 OF 16





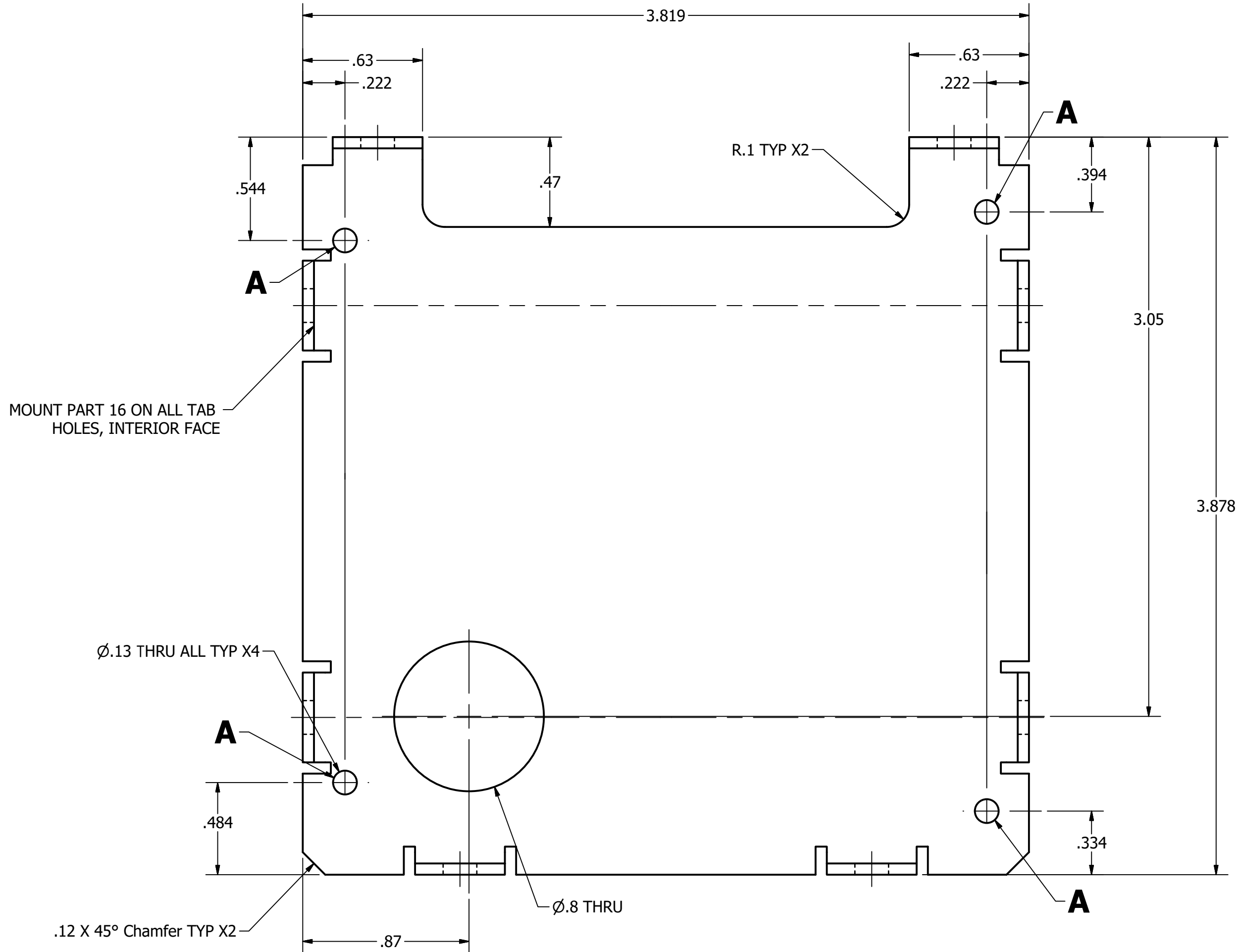
MATERIAL: ALUMINUM 6061
SIZE: 3.878 x 3.819 x 0.53"
SCALE 1 : 1



GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

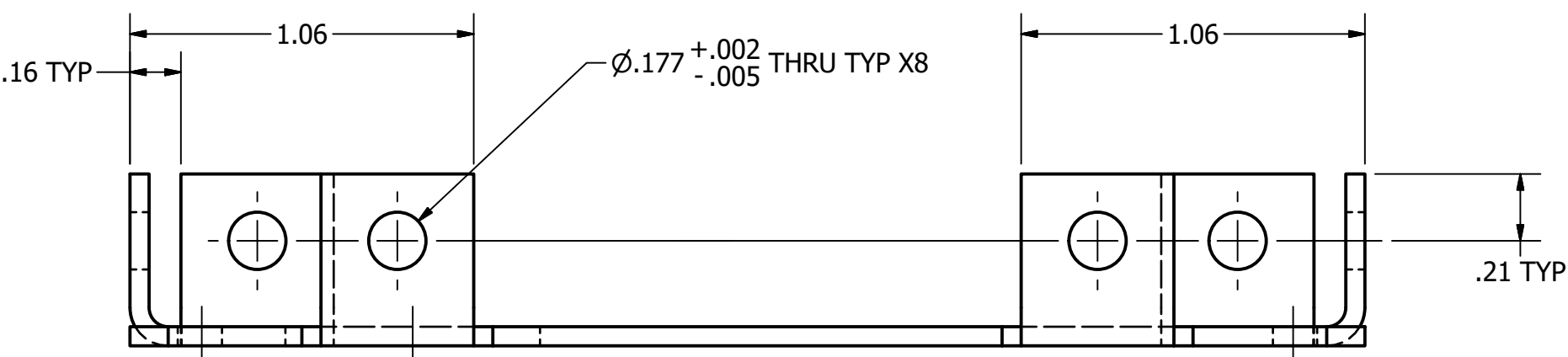
DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE	NOTED	SHEET 10 OF 16

8 7 6 5 4 3 2 1

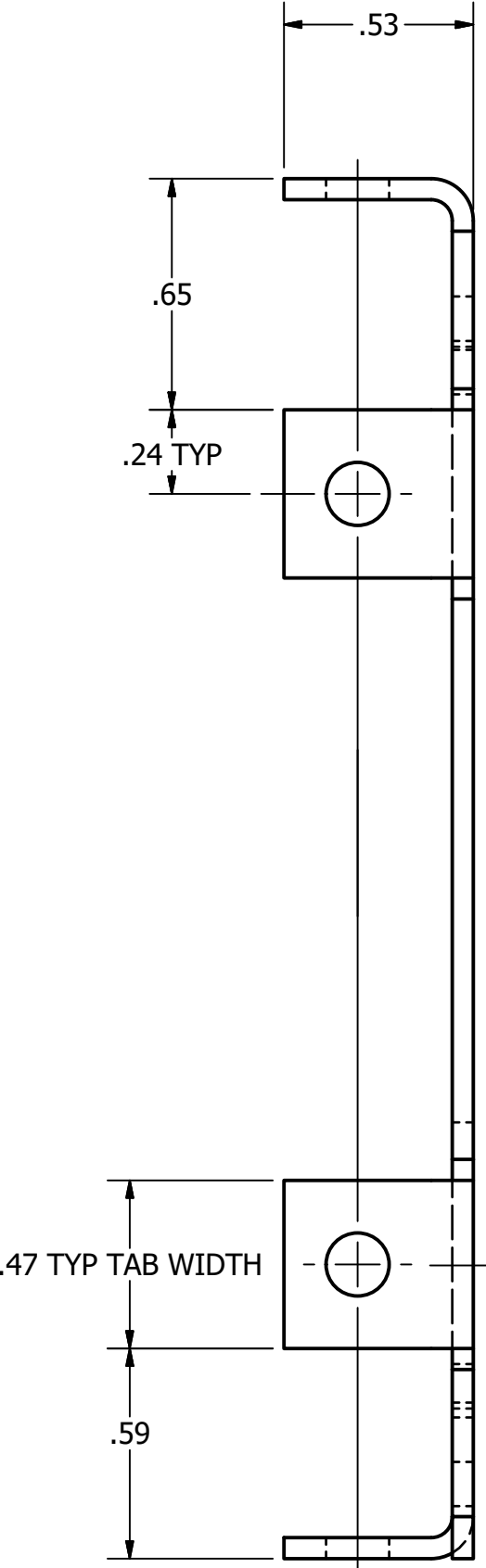


MOUNT PART 16 ON ALL TAB HOLES, INTERIOR FACE

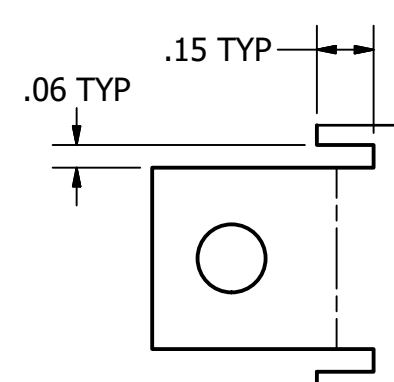
TOP VIEW
SCALE 2 : 1



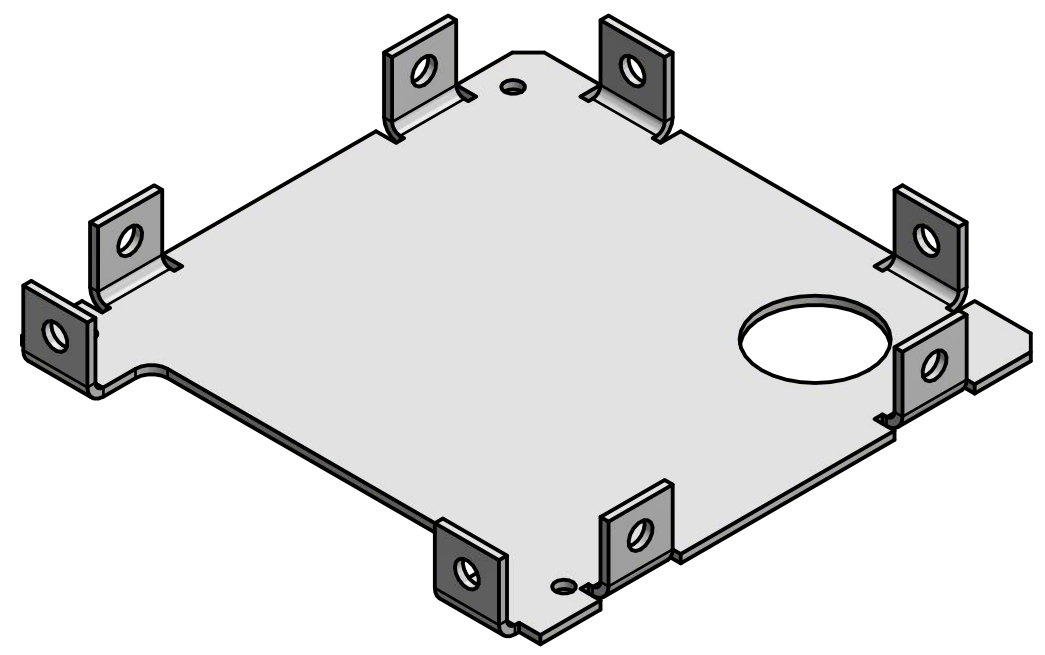
FRONT VIEW
SCALE 2 : 1



RIGHT SIDE VIEW
SCALE 2 : 1

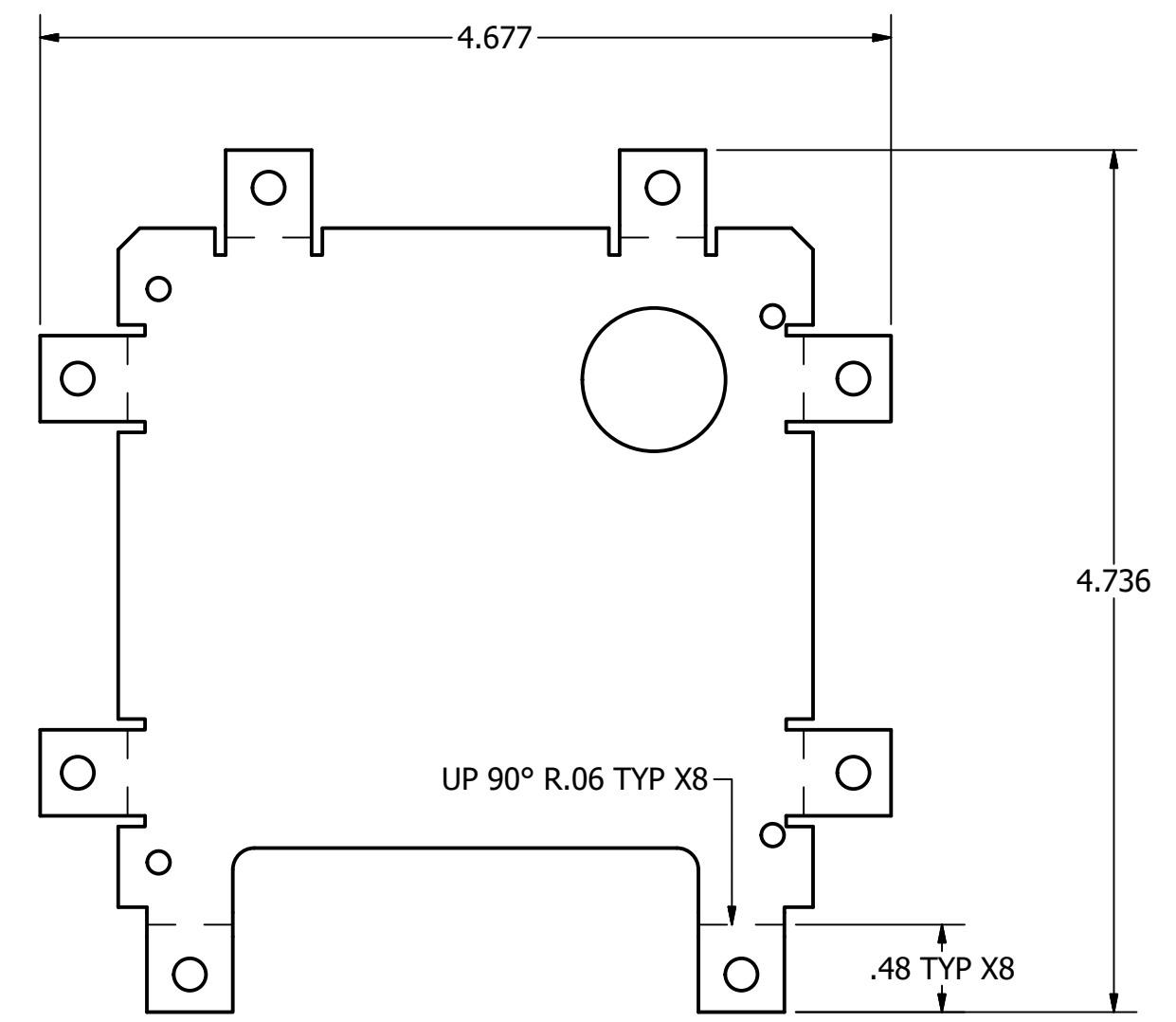


RELIEF CUT
SCALE 2 : 1



PART 9 - HERMES EXTERNAL MOUNT

MATERIAL: ALUMINUM 6061
SIZE: 3.878 x 3.819 x 0.53"
SCALE 1 : 1



FLAT PATTERN
FLAT SIZE: 4.736 x 4.677"
THICKNESS: .06"
SCALE 1 : 1

GENERAL TOLERANCE:

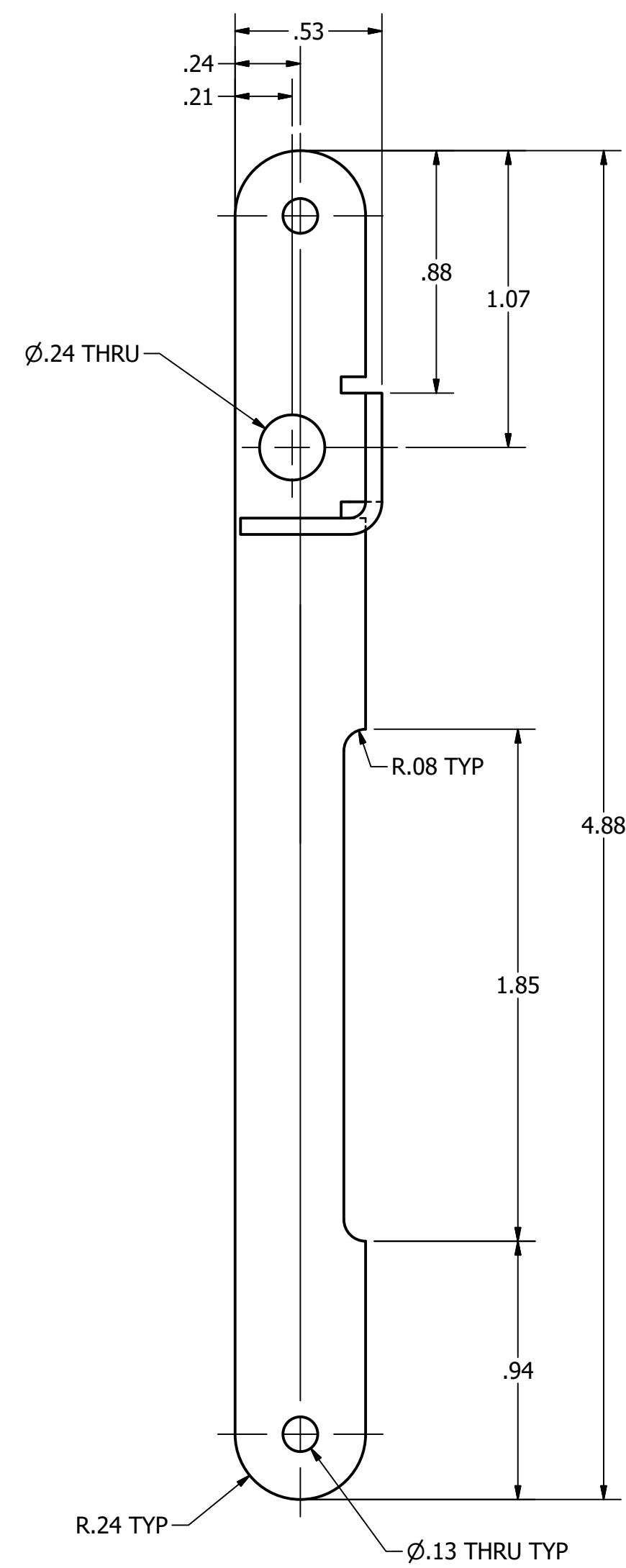
0.0 ± 0.030"

0.00 ± 0.020"

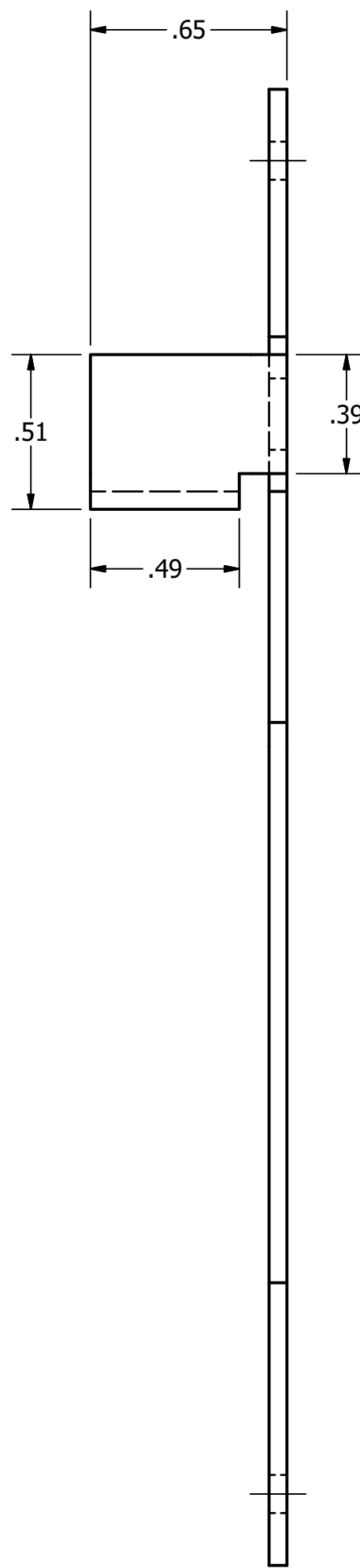
0.000 ± 0.010"

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
SCALE NOTED		SHEET 11 OF 16		

8 7 6 5 4 3 2 1

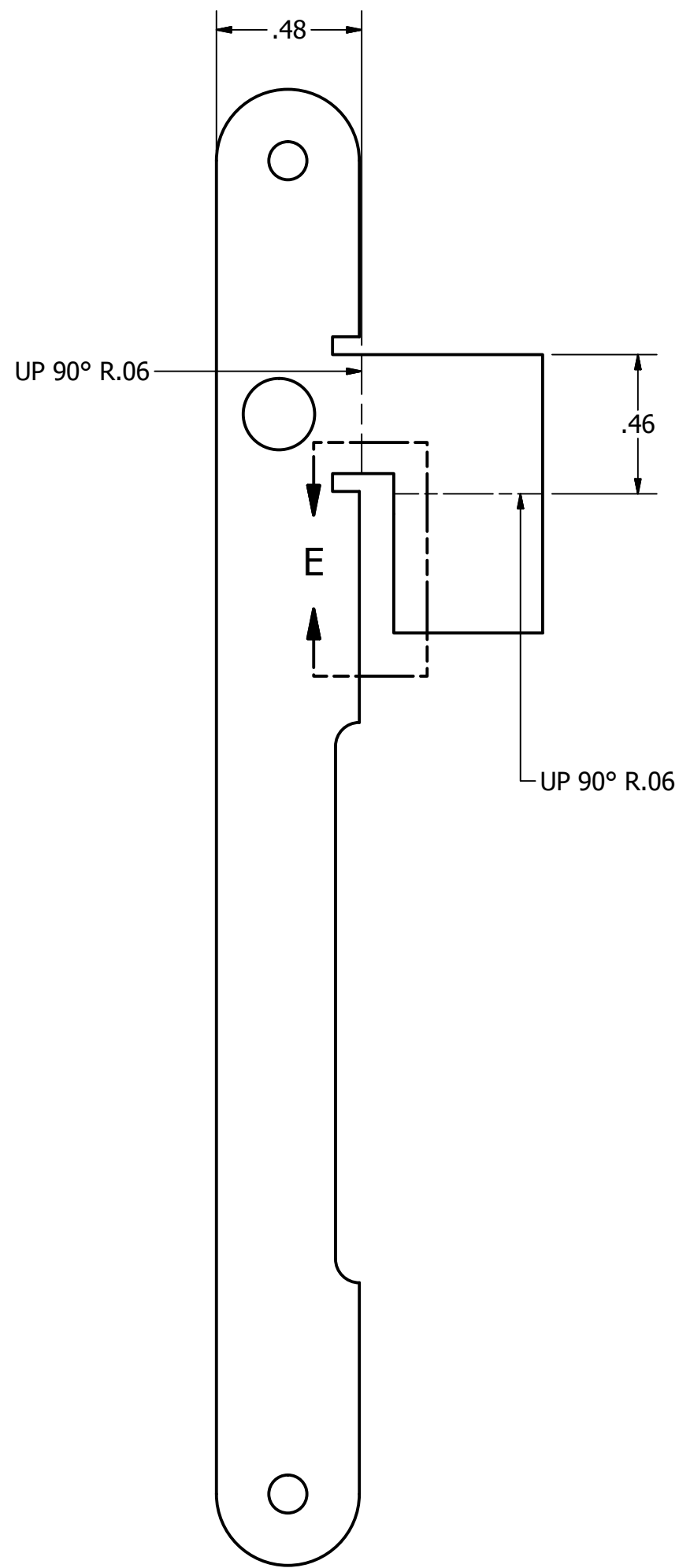


FRONT VIEW
SCALE 2 : 1



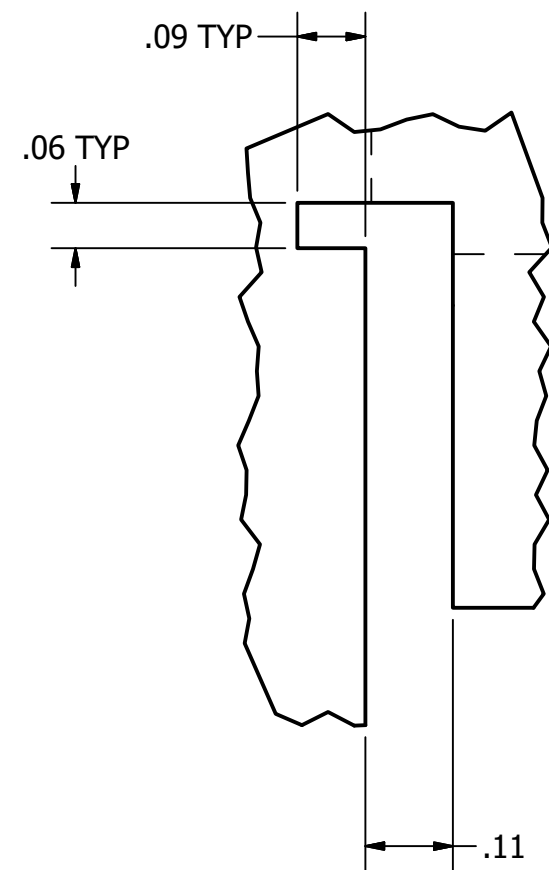
RIGHT SIDE VIEW

SCALE 2 : 1

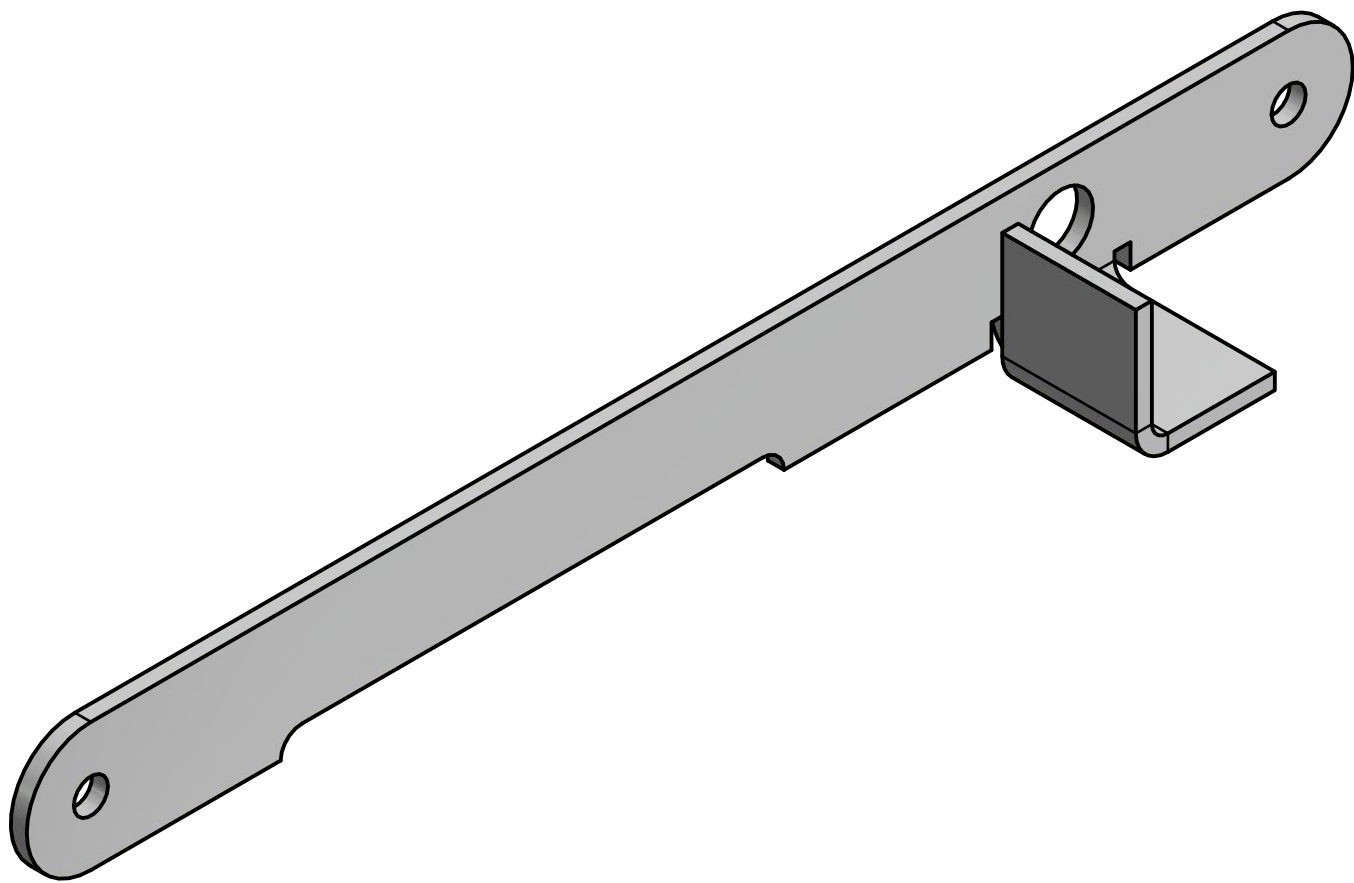


FLAT PATTERN

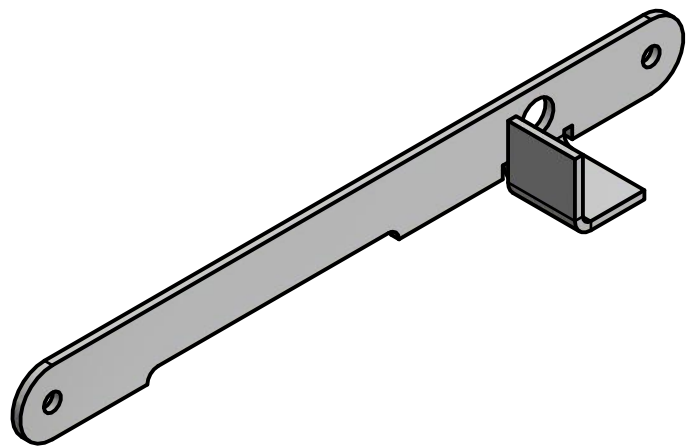
SCALE 2 : 1



DETAIL E
SCALE 4 : 1



PART 10 - RASC LOCK LEFT
MATERIAL: ALUMINUM 6061
SIZE: 4.88 x 0.65 x 0.53"
SCALE 2 : 1

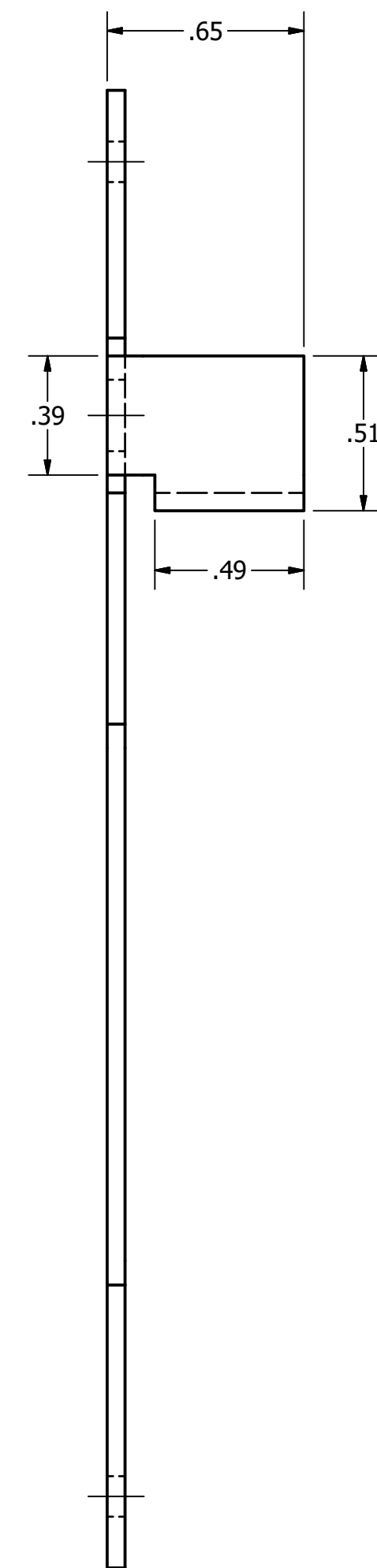


ACTUAL SIZE
SCALE 1 : 1

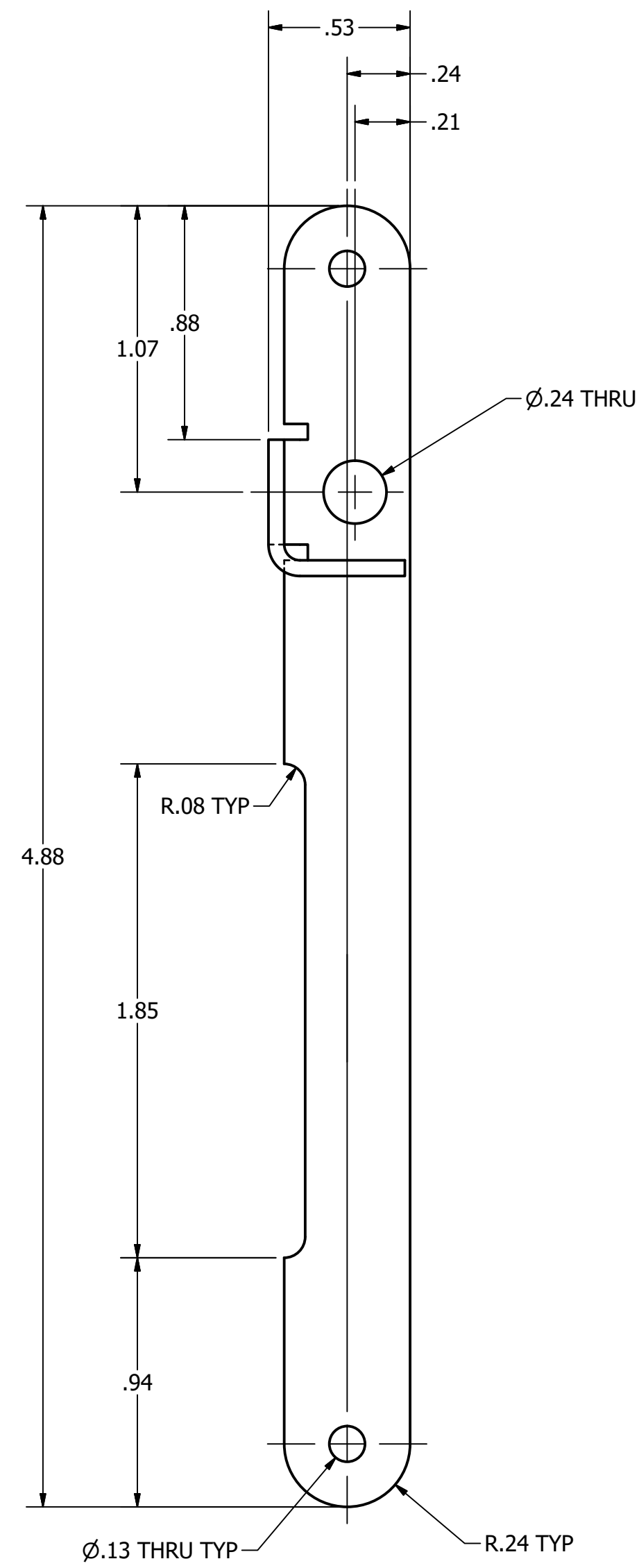
GENERAL TOLERANCE:

0.0	± 0.030"
0.00	± 0.020"
0.000	± 0.010"

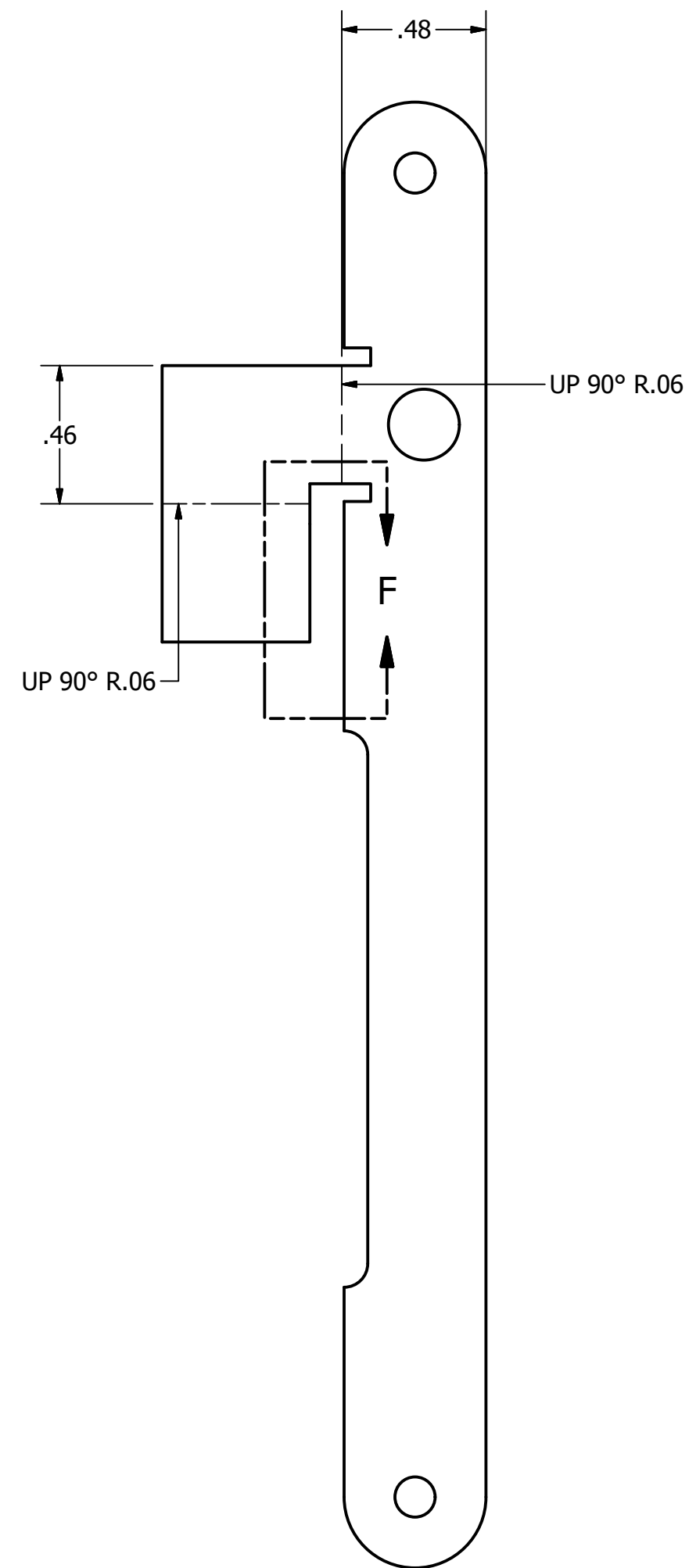
DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY			
CHECKED		TITLE			
QA		CACTUS - 1 METAL COMPONENTS			
MFG					
APPROVED					
		SIZE D		DWG NO CACTUS - 1 - 006	REV 1
		SCALE	NOTED		SHEET 12 OF 16



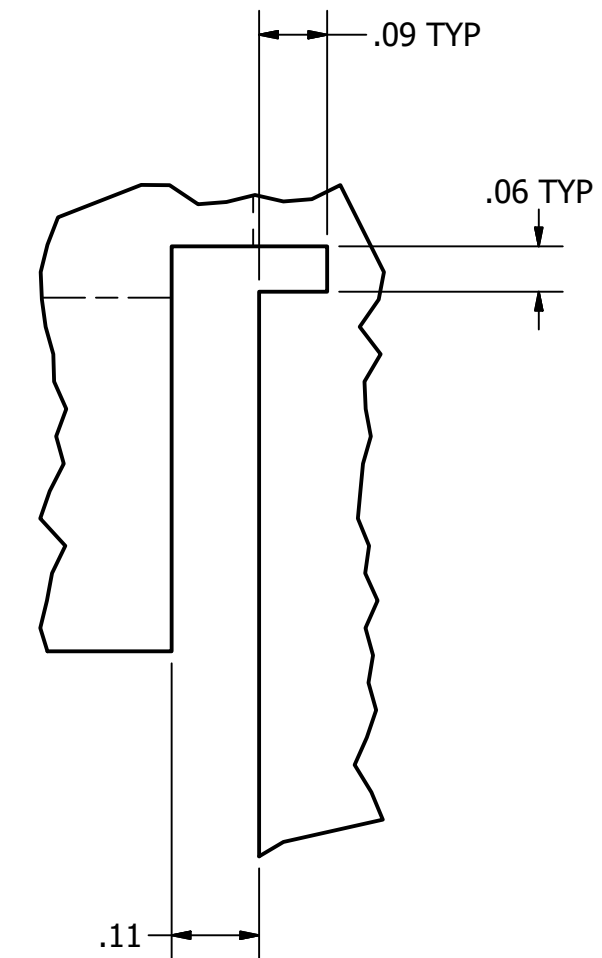
LEFT SIDE VIEW
SCALE 2 : 1



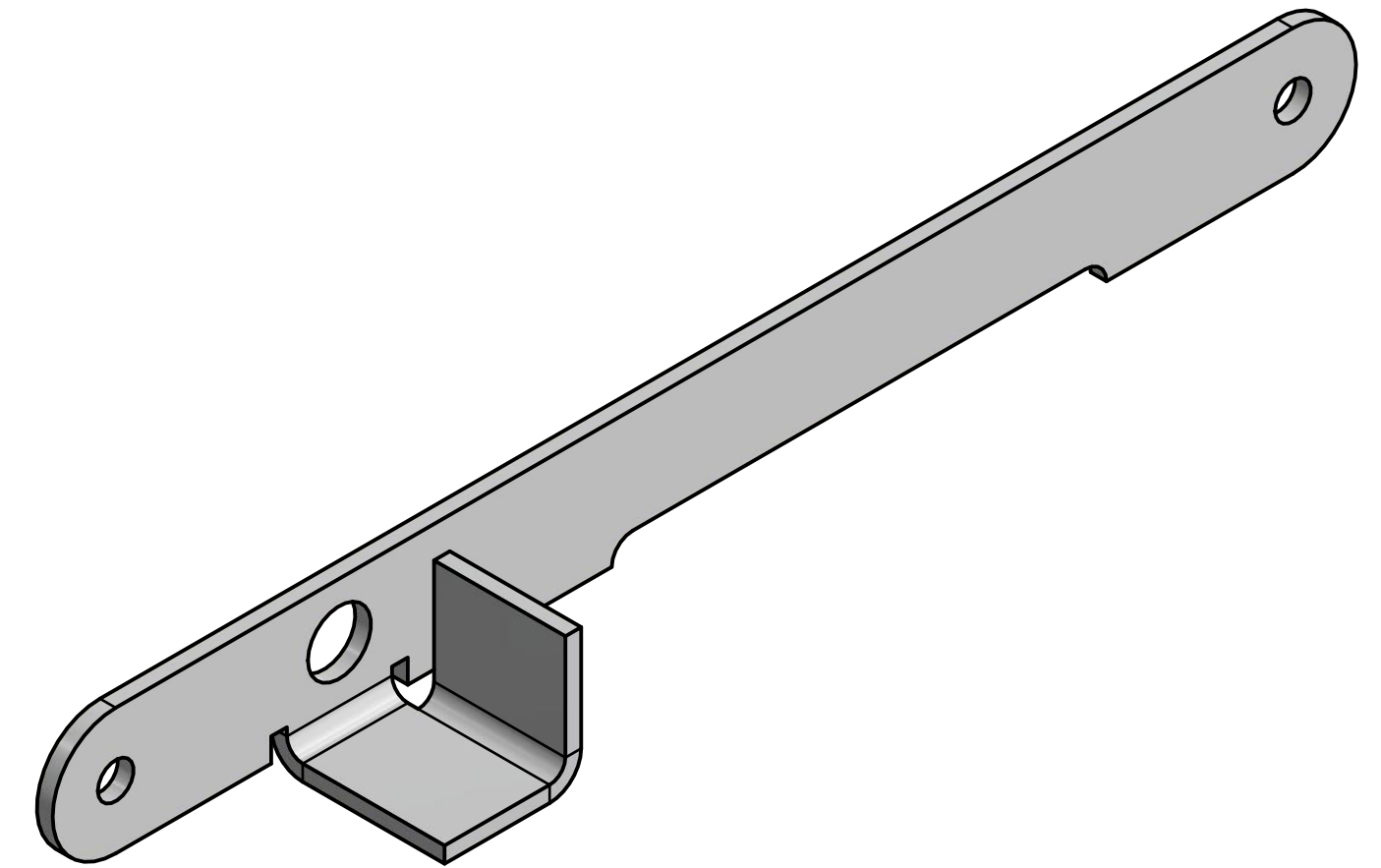
FRONT VIEW
SCALE 2 : 1



FLAT PATTERN
SCALE 2 : 1

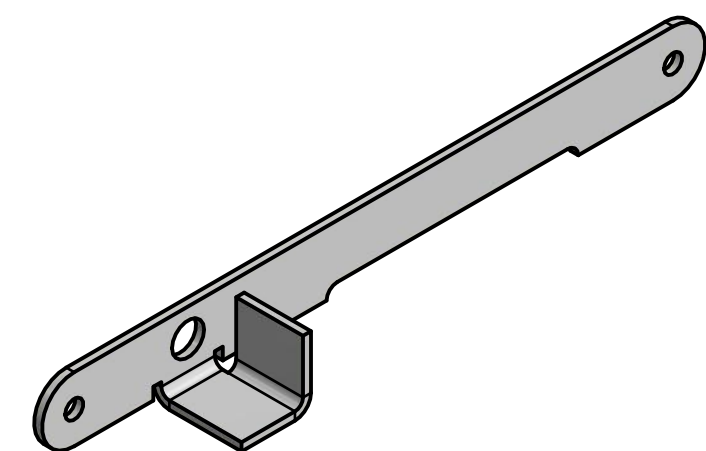


DETAIL F
SCALE 4 : 1



PART 11 - RASC LOCK RIGHT

MATERIAL: ALUMINUM 6061
SIZE: 4.88 x 0.65 x 0.53"
SCALE 2 : 1



ACTUAL SIZE
SCALE 1 : 1

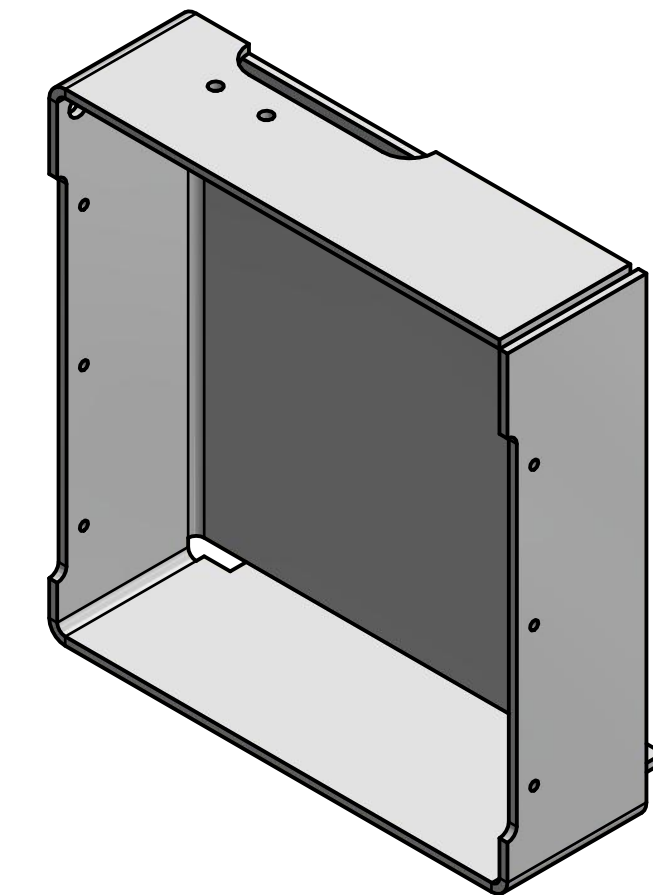
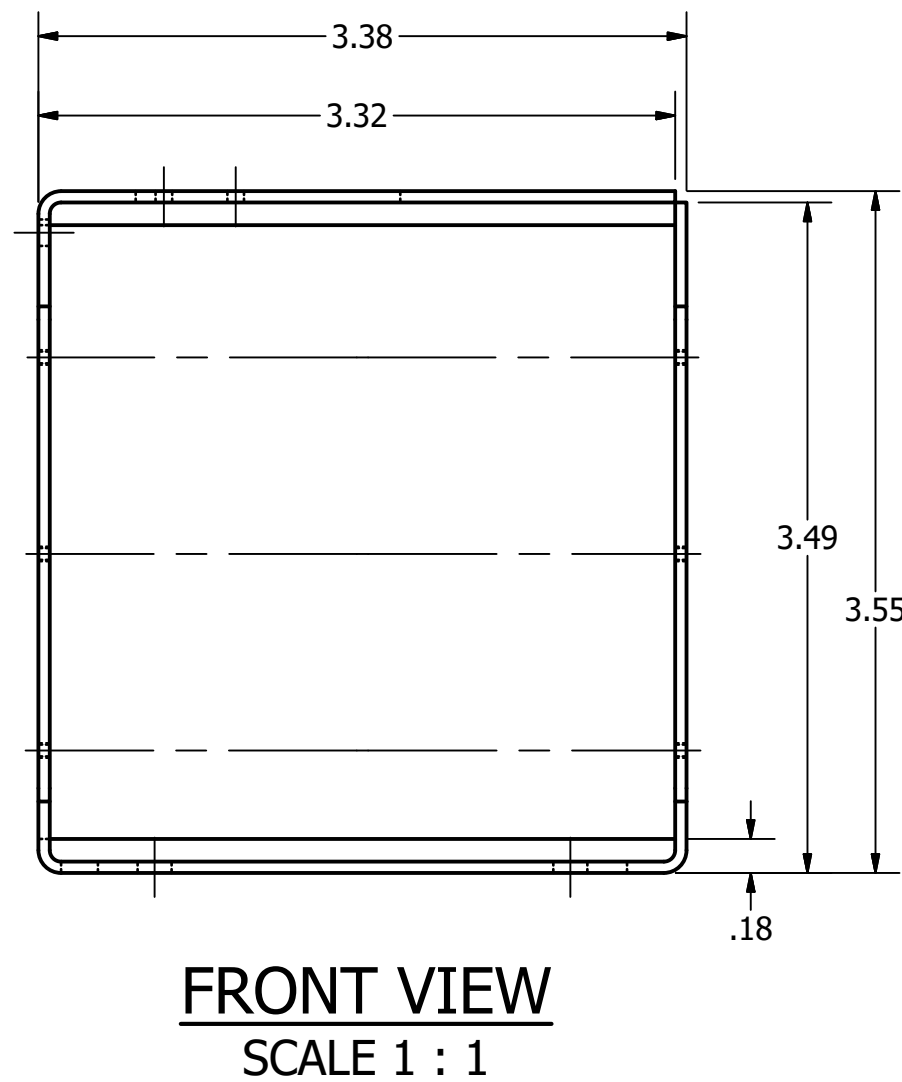
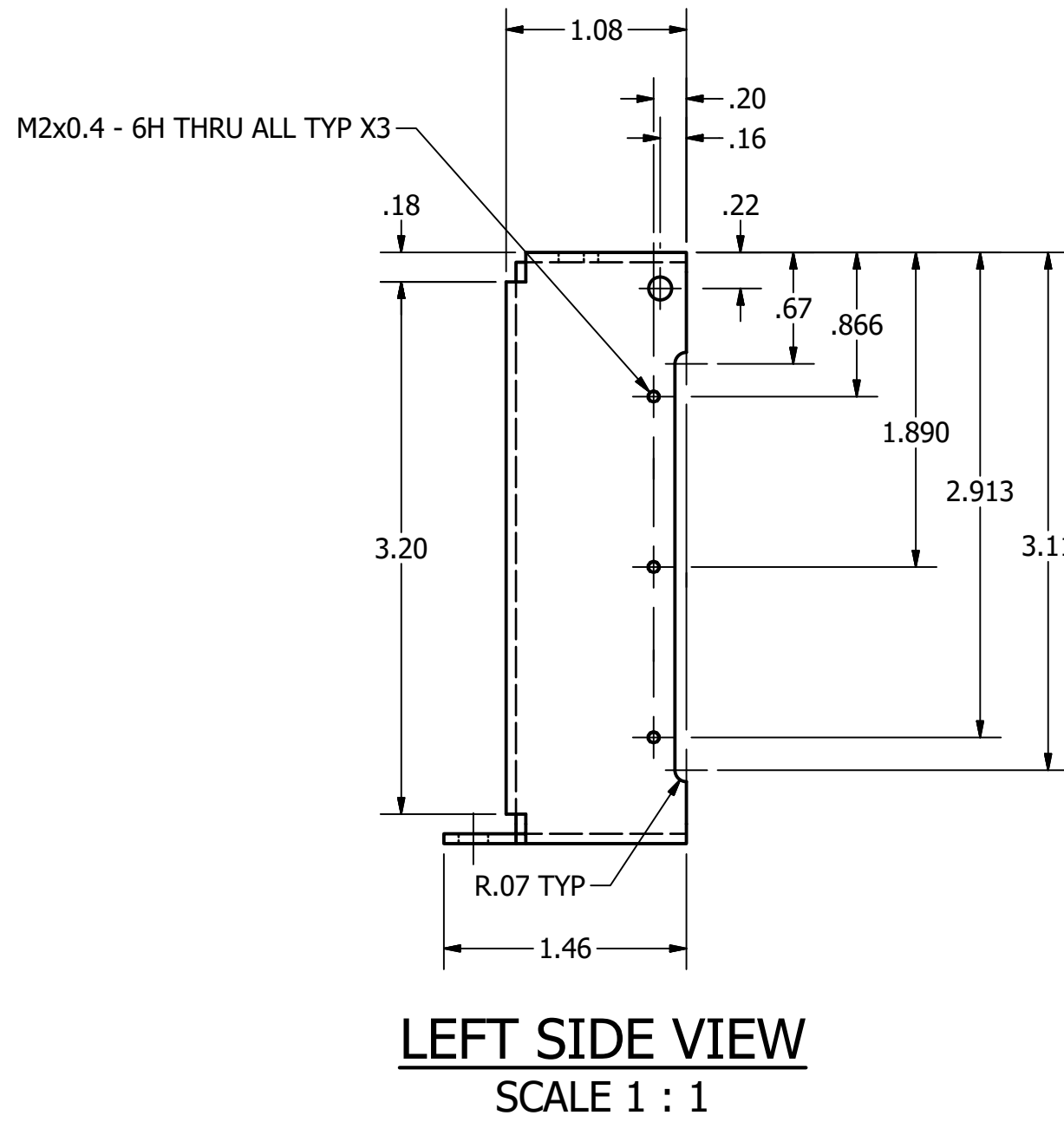
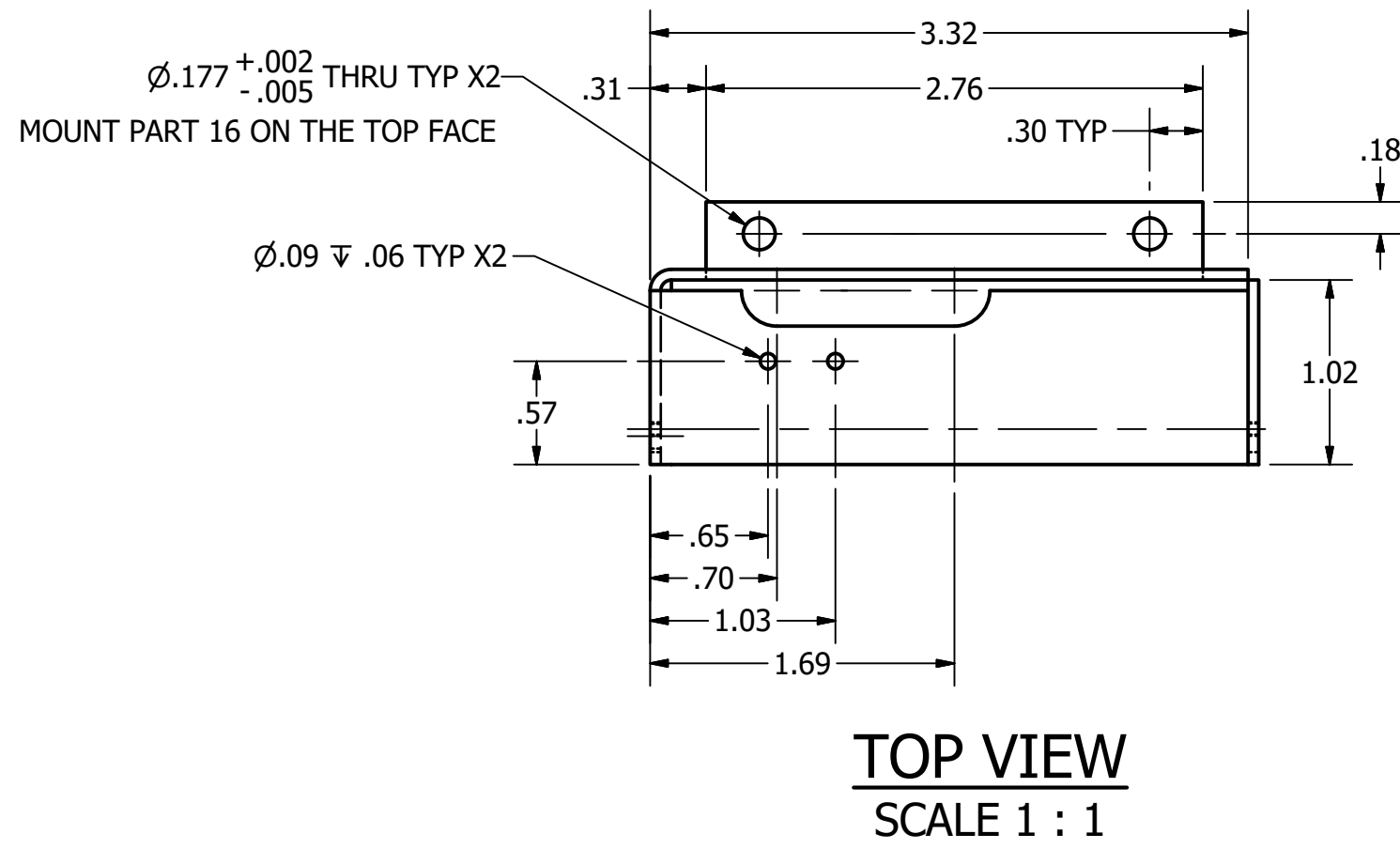
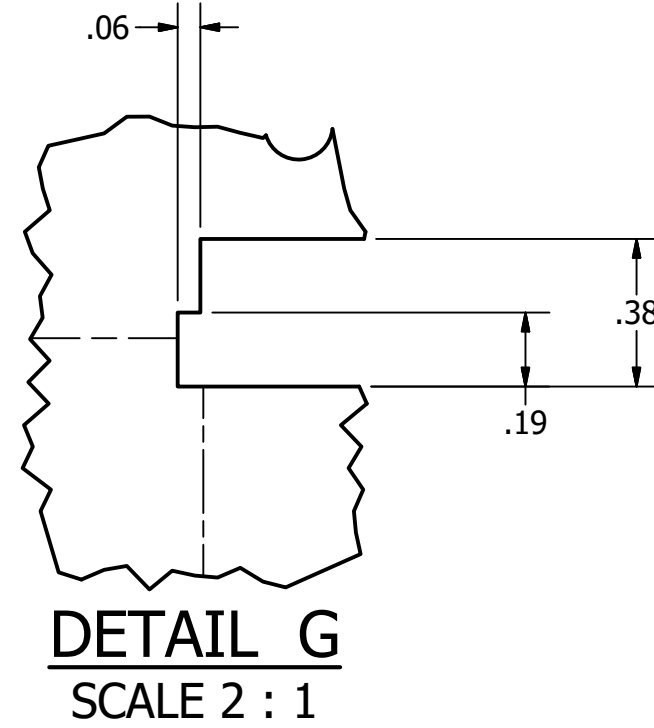
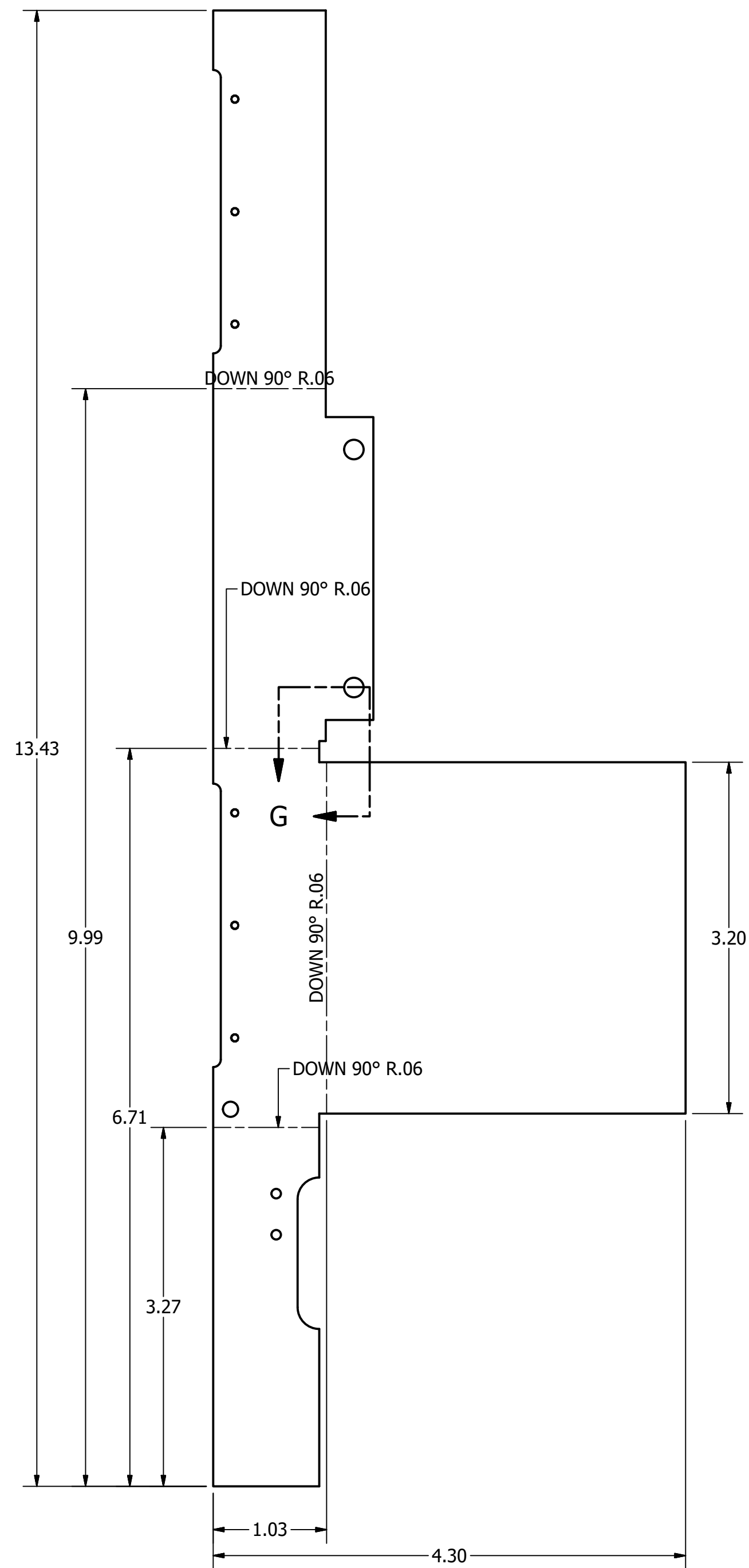
GENERAL TOLERANCE:

0.0 ± 0.030"

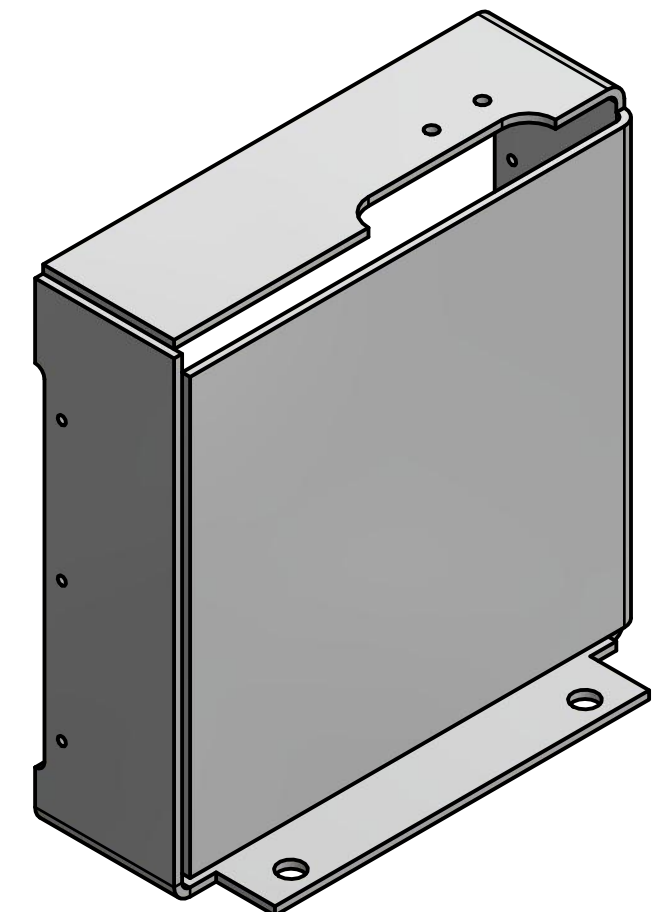
0.00 ± 0.020"

 $0.000 \pm 0.010''$

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE	NOTED	SHEET 13 OF 16



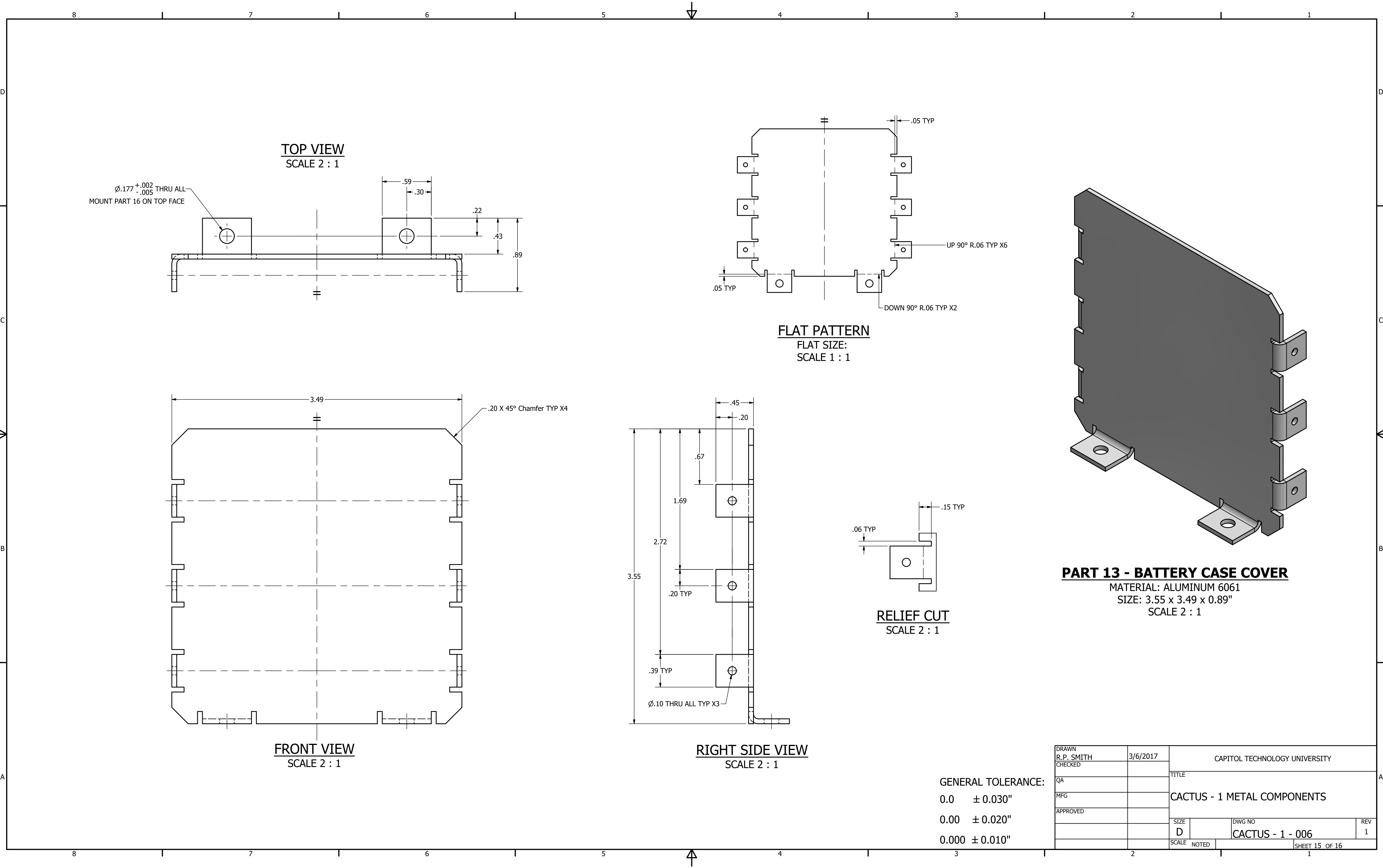
PART 12 - BATTERY CASE
MATERIAL: ALUMINUM 6061
SIZE: 3.55 x 3.38 x 1.46"
SCALE 1 : 1



ALTERNATE VIEW
SCALE 1 : 1

GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE	NOTED	SHEET 14 OF 16



TOP VIEW
SCALE 2 : 1

FLAT PATTERN
FLAT SIZE:
SCALE 1 : 1

FRONT VIEW
SCALE 2 : 1

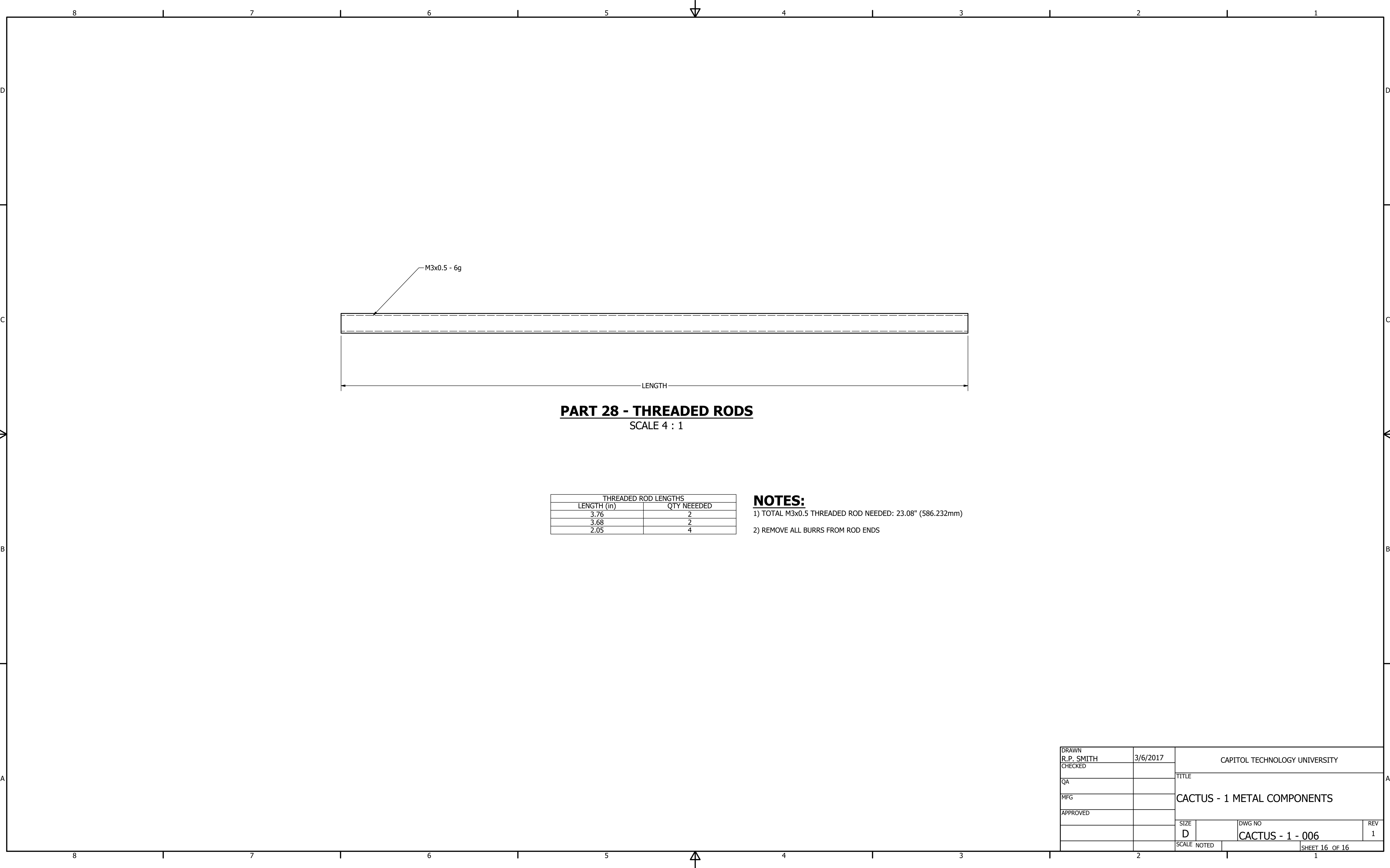
RIGHT SIDE VIEW
SCALE 2 : 1

PART 13 - BATTERY CASE COVER

MATERIAL: ALUMINUM 6061
SIZE: 3.55 x 3.49 x 0.89"
SCALE 2 : 1

GENERAL TOLERANCE:
0.0 ± 0.030"
0.00 ± 0.020"
0.000 ± 0.010"

DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE	NOTED	SHEET 15 OF 16



DRAWN R.P. SMITH	3/6/2017	CAPITOL TECHNOLOGY UNIVERSITY		
CHECKED		TITLE		
QA		CACTUS - 1 METAL COMPONENTS		
MFG				
APPROVED				
		SIZE D	DWG NO CACTUS - 1 - 006	REV 1
		SCALE NOTED	SHEET 16 OF 16	