

PARTS LIST

FIND NO.	QTY	CAGE CODE	PART NUMBER	DESCRIPTION	NOTES
1	1	SQ985	ARROW-T517-01	CHASSIS, BOTTOM	
2	1	SQ985	ARROW-T517-02	CHASSIS, BACK PANEL	
3	1	SQ985	ARROW-T517-03	CHASSIS, FRONT PANEL	
4	1	SQ984	ARROW-T517-04	CHASSIS, RIGHT PANEL	
5	1	SQ984	ARROW-T517-05	CHASSIS, LEFT PANEL	
6	1	SQ984	ARROW-T517-06	CHASSIS, LID	
7	1	SQ984	ARROW-T517-07	TURNTABLE, MOUNT PLATE	
8	1	SQ984	ARROW-T517-08	TURNTABLE, BRACKET	
9	2	SQ984	ARROW-T517-09	TOWER, SIDE	
10	1	SQ984	ARROW-T517-10	TOWER, BODY	
11	1	SQ984	ARROW-T517-11	CONNECTOR PLATE	
12	1	SQ984	ARROW-T517-12	PLATE BRACKET 1	
13	1	SQ984	ARROW-T517-13	PLATE BRACKET 2	
14	1	SQ984	ARROW-T517-14	ACTUATOR RACK BRACKET	
15	1	SQ984	ARROW-T517-15	ACTUATOR WALL BRACKET	
16	18	SQ984	ARROW-T517-16	GENERAL BRACKET	
17	2	SQ984	ARROW-T517-17	BEARING BRACKET, SMALL	
18	1	SQ984	ARROW-T517-18	BEARING BRACKET, LARGE	
19	1	SQ984	ARROW-T517-19	LSMS CONNECTOR PLATE	

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

PART NAME:
 ARROW ASSEMBLY
 DRAWN BY:
 CHRISTINA MORROW
 MODELED BY:
 JAYSON DICKINSON
 SIZE:
 A
 SCALE:
 1:1
 PROJECT NAME:
 LUNAR LANDING PAYLOAD CRANE
 DATE:
 2021-03-11
 MATERIAL:
 N/A
 SHEET NUMBER:
 1 OF 3
 PART NUMBER:
 ARROW-517

A

B

C

D

5

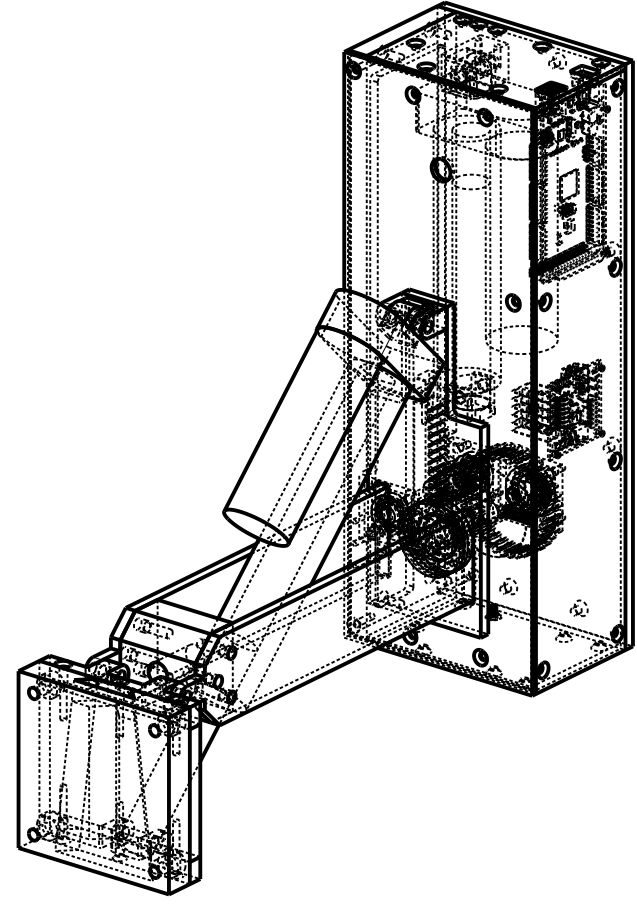
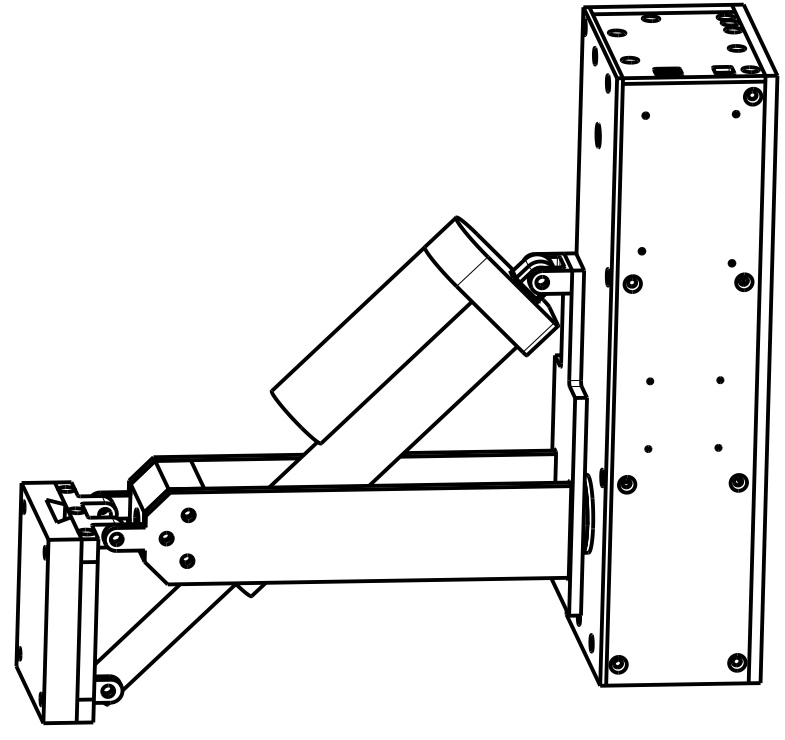
4

3

2

1

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW



REFERENCE VIEWS

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: X.X± .0.1 X.XX± .0.01 X.XXX± .0.003 ANGLES± 0.5°		PART NAME: ARROW ASSEMBLY		PROJECT NAME: LUNAR LANDING PAYLOAD CRANE	
DRAWN BY: CHRISTINA MORROW		SIZE: A		DATE: 2021-03-11	
MODELED BY: JAYSON DICKINSON		SCALE: 1:4		MATERIAL: N/A	
				SHEET NUMBER: 2 OF 3	
				PART NUMBER: ARROW-T517	

5

4

3

2

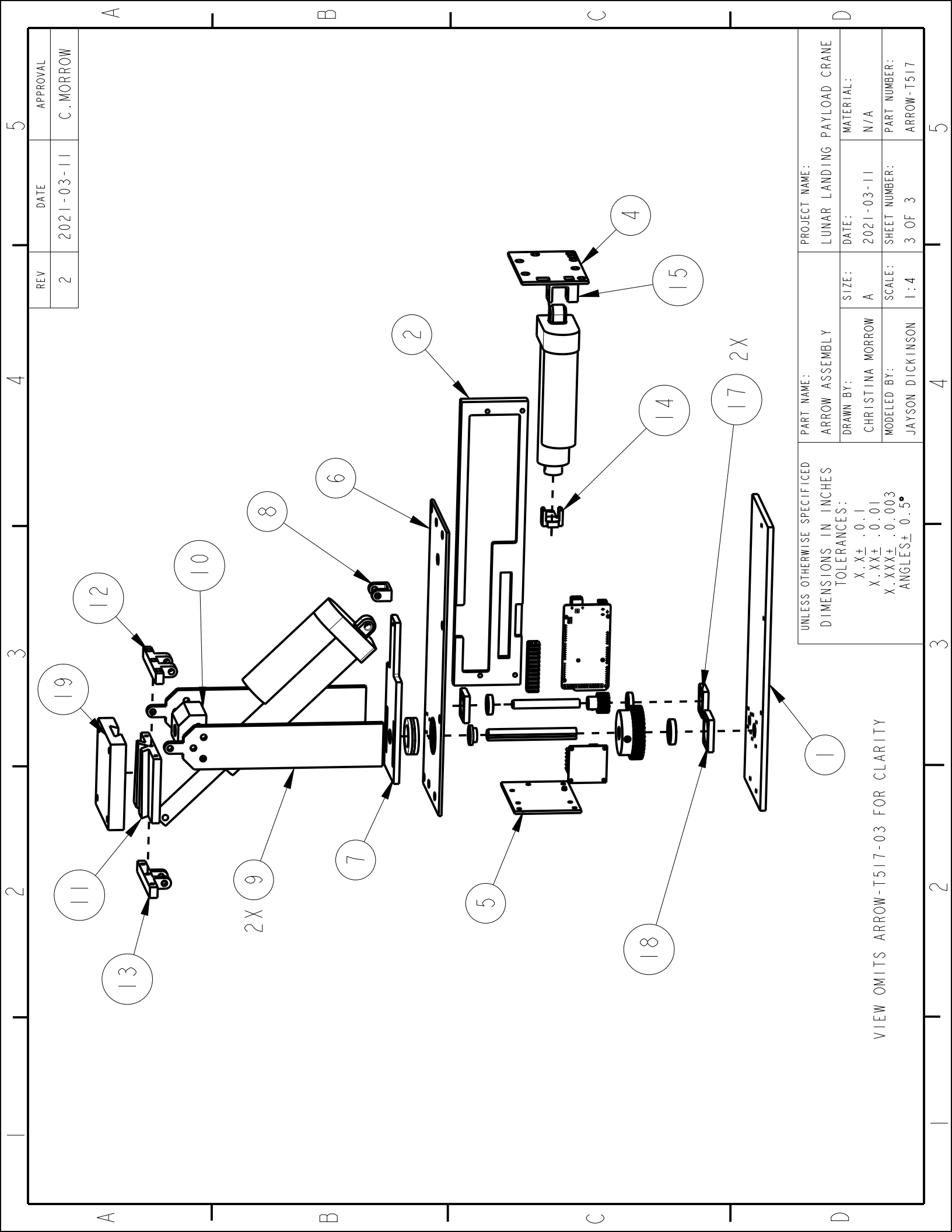
1

A

B

C

D



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

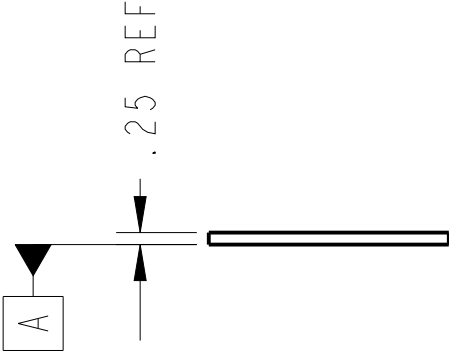
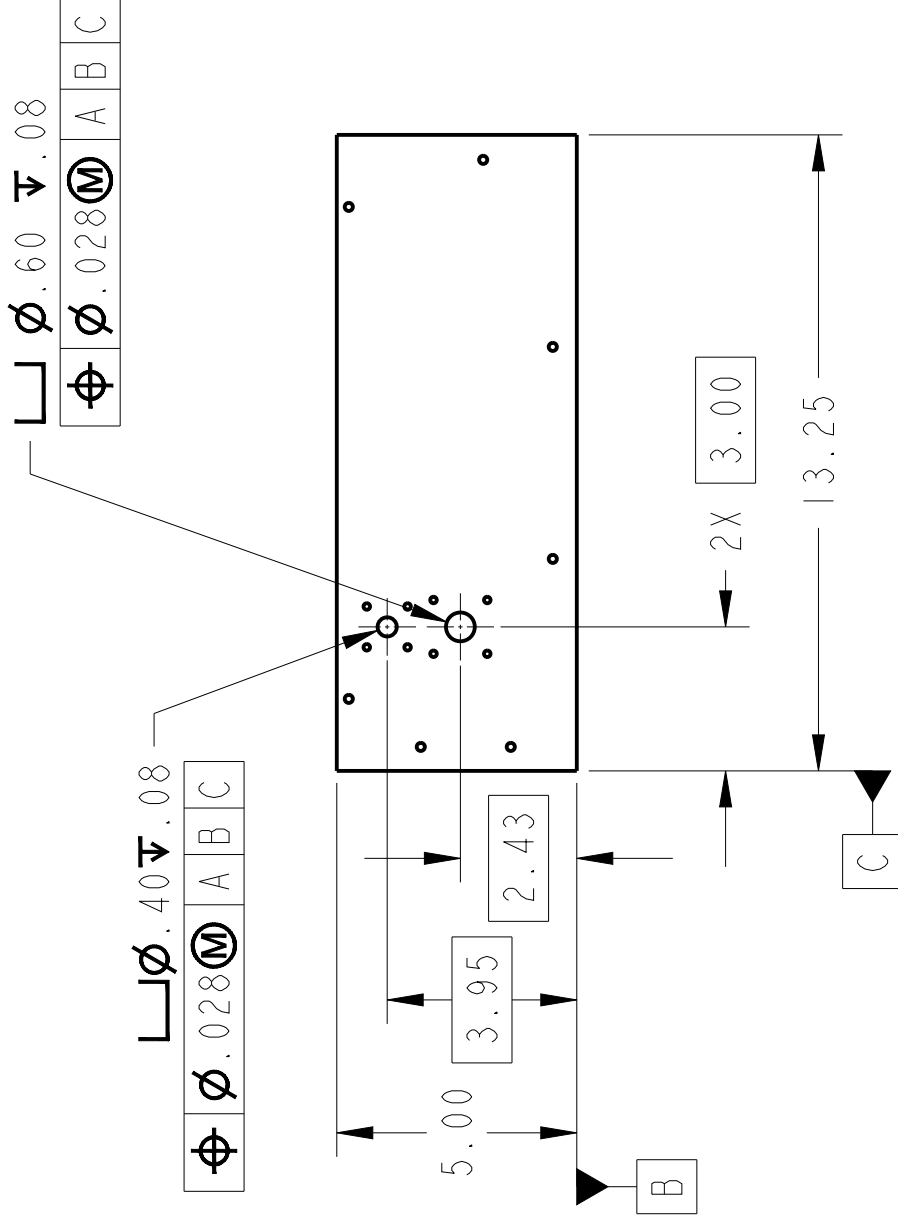
PART NAME:		PROJECT NAME:	
ARROW ASSEMBLY		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-11	N/A
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	1:4	3 OF 3	ARROW-T517

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

VIEW OMITTS ARROW-T517-03 FOR CLARITY

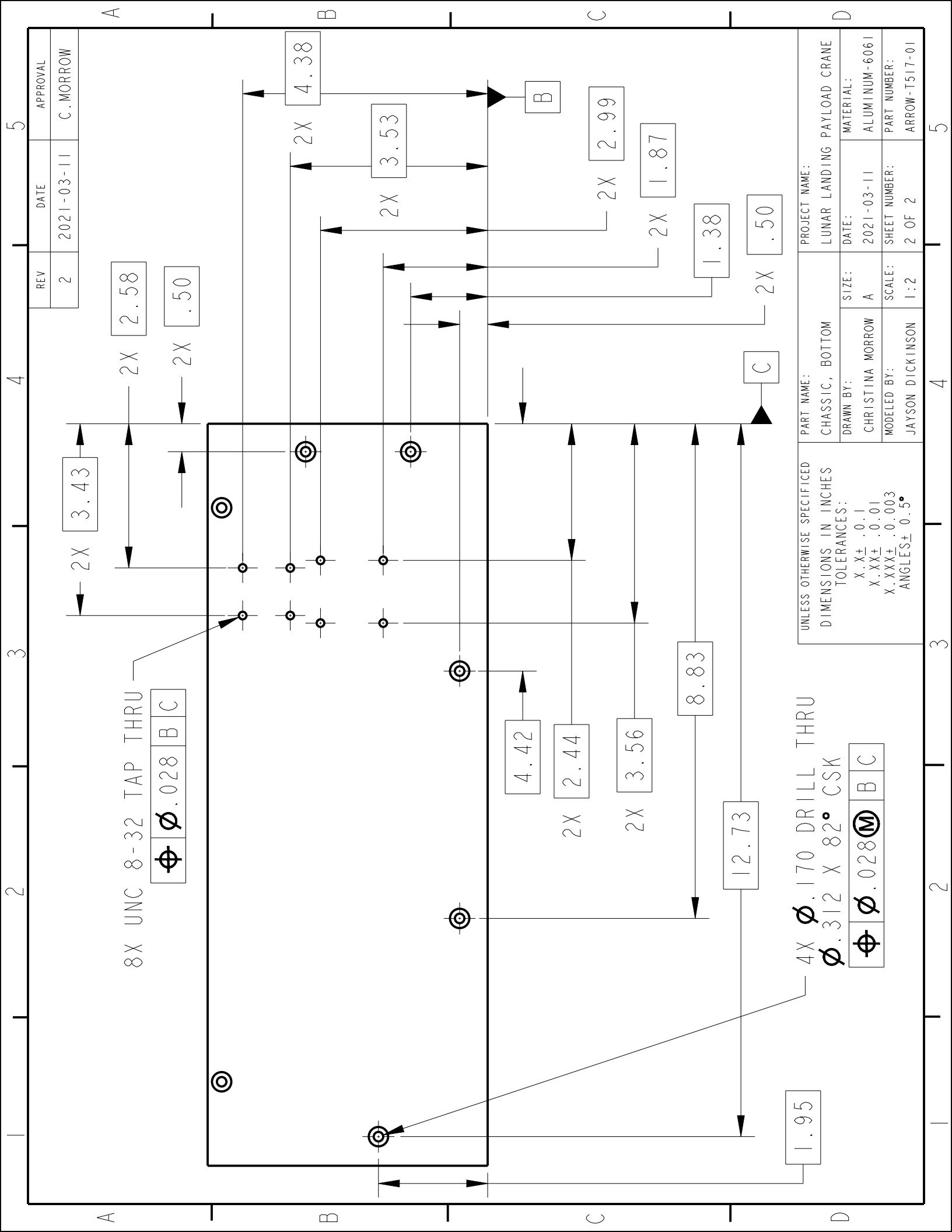
NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: X.X± .0.1 X.XX± .0.01 X.XXX± .0.003 ANGLES± 0.5°		PART NAME: CHASSIS, BOTTOM		PROJECT NAME: LUNAR LANDING PAYLOAD CRANE	
DRAWN BY: CHRISTINA MORROW		SIZE: A	DATE: 2021-03-11		MATERIAL: ALUMINIUM-6061
MODELED BY: JAYSON DICKINSON		SCALE: 1:2	SHEET NUMBER: 1 OF 2		PART NUMBER: ARROW-T517-01



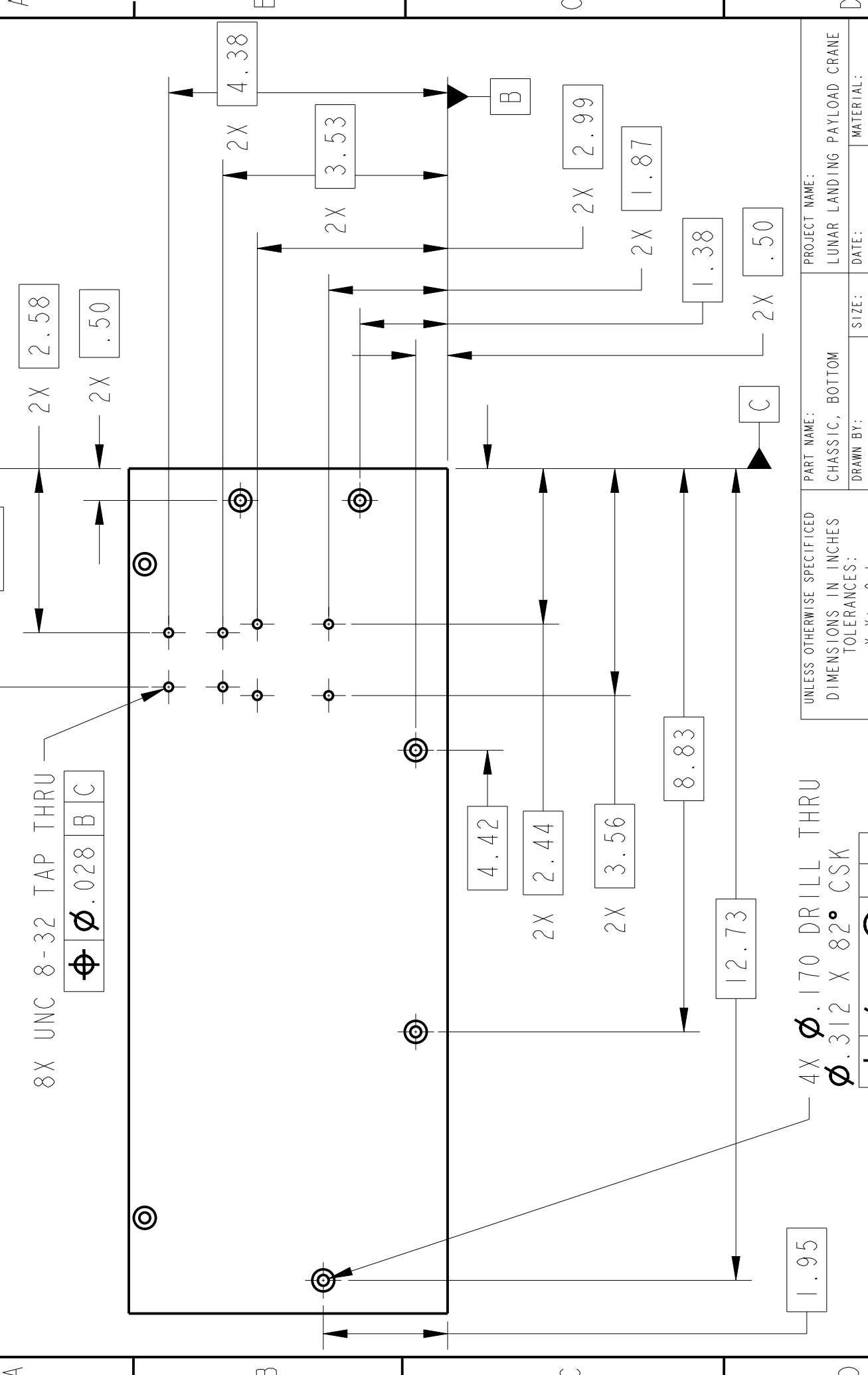
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

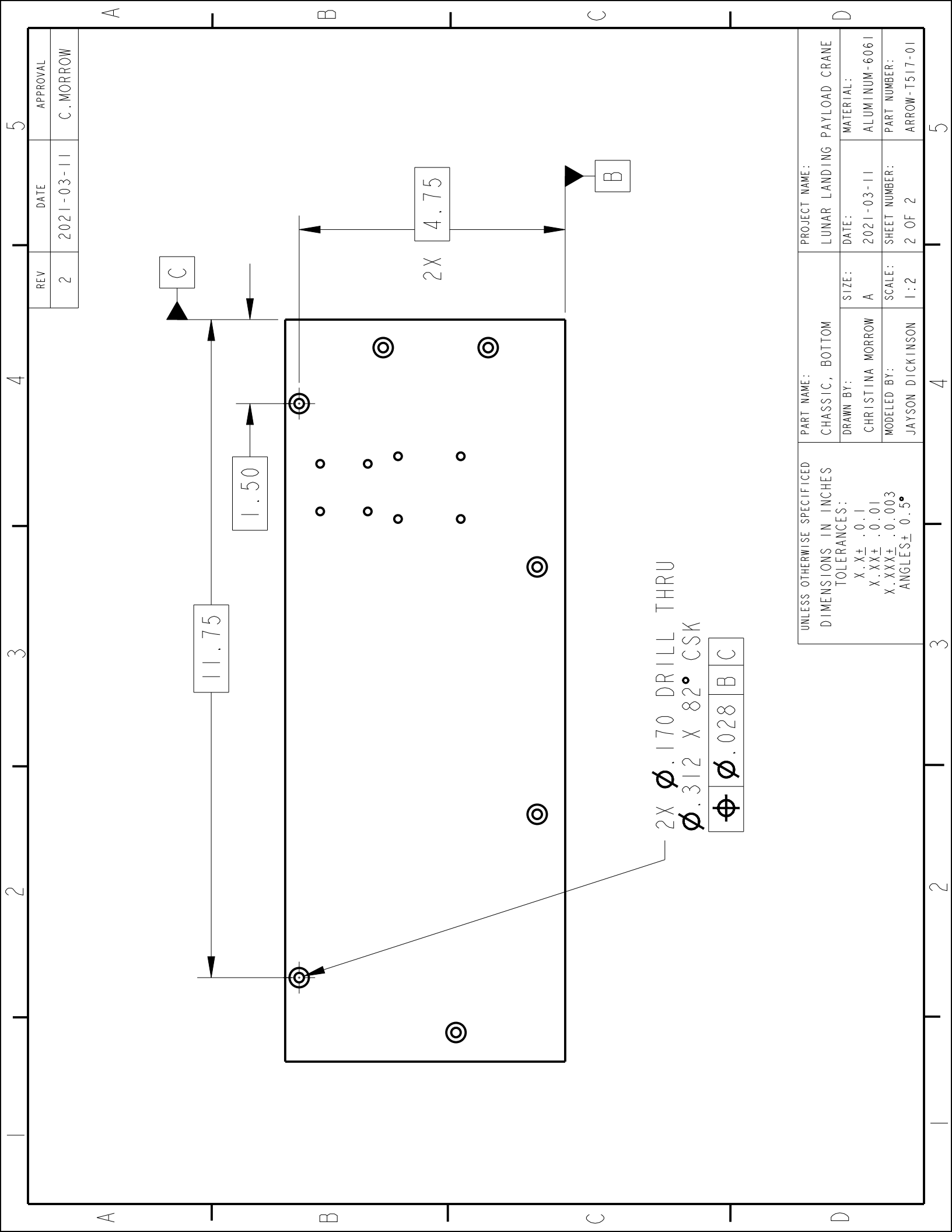
8X UNC 8-32 TAP THRU
 ϕ .028 B C

4X ϕ .170 DRILL THRU
 ϕ .312 X 82° CSK
 ϕ .028 M B C

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

PART NAME:		PROJECT NAME:	
CHASSIS, BOTTOM		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-11	ALUMINUM-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	1:2	2 OF 2	ARROW-T517-01





REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

2X ϕ .170 DRILL THRU
 ϕ .312 X 82° CSK
 ϕ .028 B C

UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		CHASSIS, BOTTOM		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:	SIZE:	DATE:	MATERIAL:
X.X± .0.1		CHRISTINA MORROW	A	2021-03-11	ALUMINIUM-6061
X.XX± .0.01		MODELED BY:			
X.XXX± .0.003		JAYSON DICKINSON			
ANGLES± 0.5°					
			SCALE:	SHEET NUMBER:	PART NUMBER:
			1:2	2 OF 2	ARROW-T517-01

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.
2. ALL INTERNAL CORNERS ARE NOT CRITICAL.

2X UNC 8-32 TAP ∇ .50

\varnothing .028 B A C

.50 REF

2X .25

.20

.35

12.90

.37

1.57

3.76

2.26

.63

1.97

2.70

2.47

2.65

.25

2.26

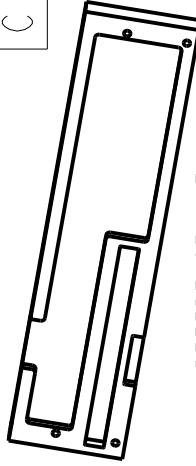
3.76

6.38

6.63

12.63

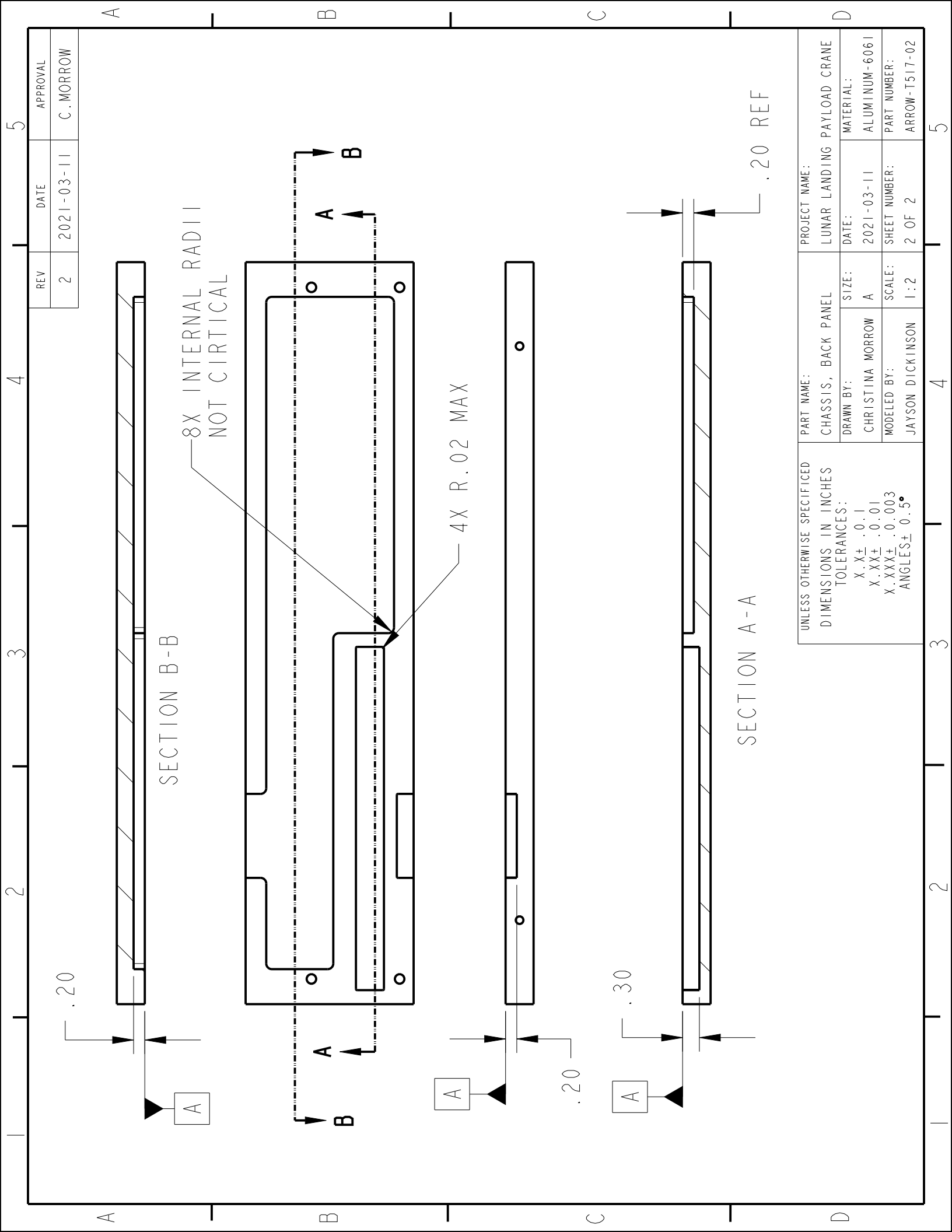
13.25



REFERENCE VIEW

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW
3	2021-03-21	C. MORROW

UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		CHASSIS, BACK PANEL		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:		DATE:	
X.X± .0.1		CHRISTINA MORROW		2021-03-21	
X.XX± .0.01		MODELED BY:		SHEET NUMBER:	
X.XXX± .0.003		JAYSON DICKINSON		1 OF 2	
ANGLES± 0.5°				PART NUMBER:	
				ARROW-T517-02	
				MATERIAL:	
				ALUMINUM-6061	



SECTION B-B

8X INTERNAL RADII
NOT CIRTICAL

4X R.02 MAX

SECTION A-A

.20 REF

.20

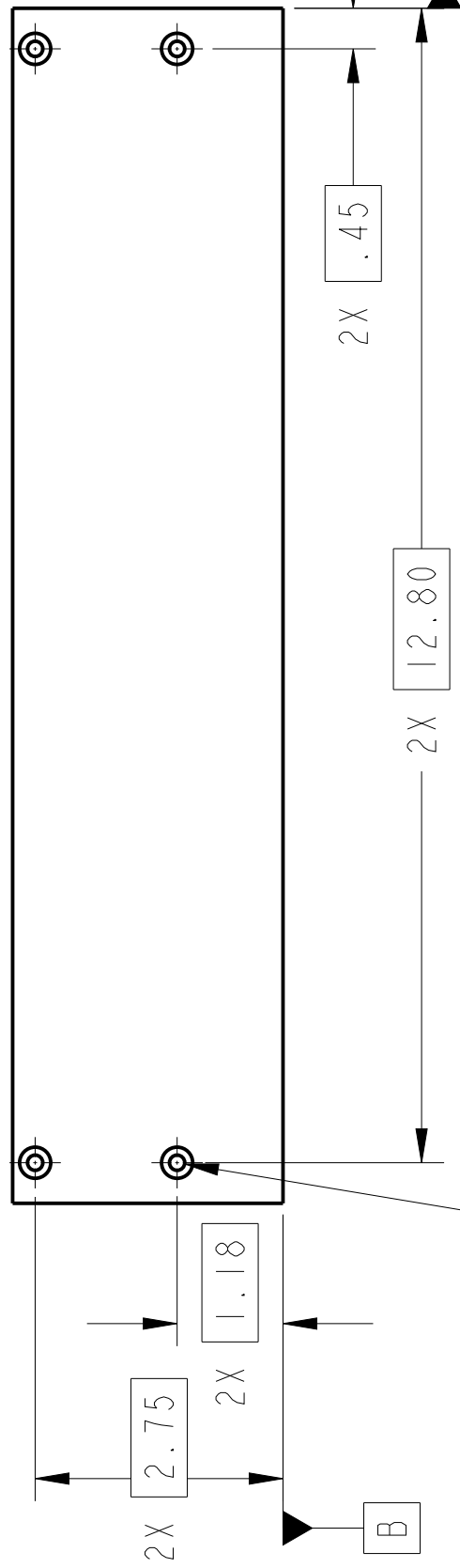
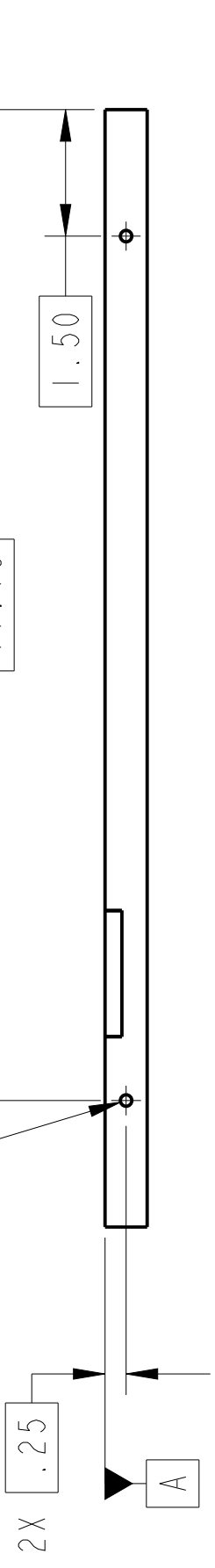
.20

.30

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PART NAME:	
X.X±	.0.1	CHASSIS, BACK PANEL	LUNAR LANDING PAYLOAD CRANE
X.XX±	.0.01	DRAWN BY: CHRISTINA MORROW	DATE: 2021-03-11
X.XXX±	.0.003	MODELED BY: JAYSON DICKINSON	MATERIAL: ALUMINIUM-6061
ANGLES±	0.5°	SCALE: 1:2	SHEET NUMBER: 2 OF 2
			PART NUMBER: ARROW-T517-02

2X UNC 8-32 TAP ∇ .25
 \varnothing .028 A C



4X \varnothing .170 DRILL THRU
 \varnothing .312 X 82° CSK

\varnothing .028 M B C

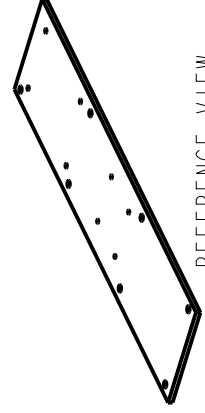
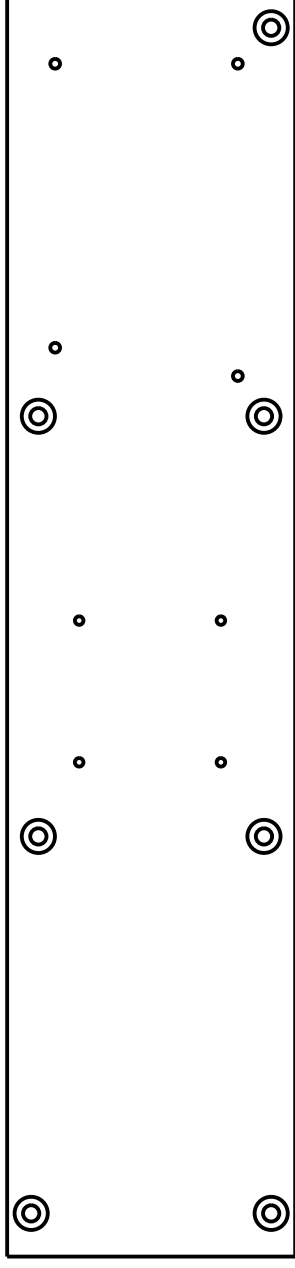
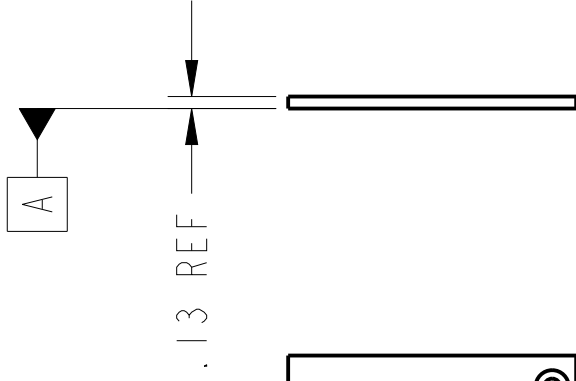
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

PART NAME:		PROJECT NAME:	
CHASSIS, BACK PANEL		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-11	ALUMINIUM-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	1:1	1 OF 1	ARROW-T517-02

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

NOTES:

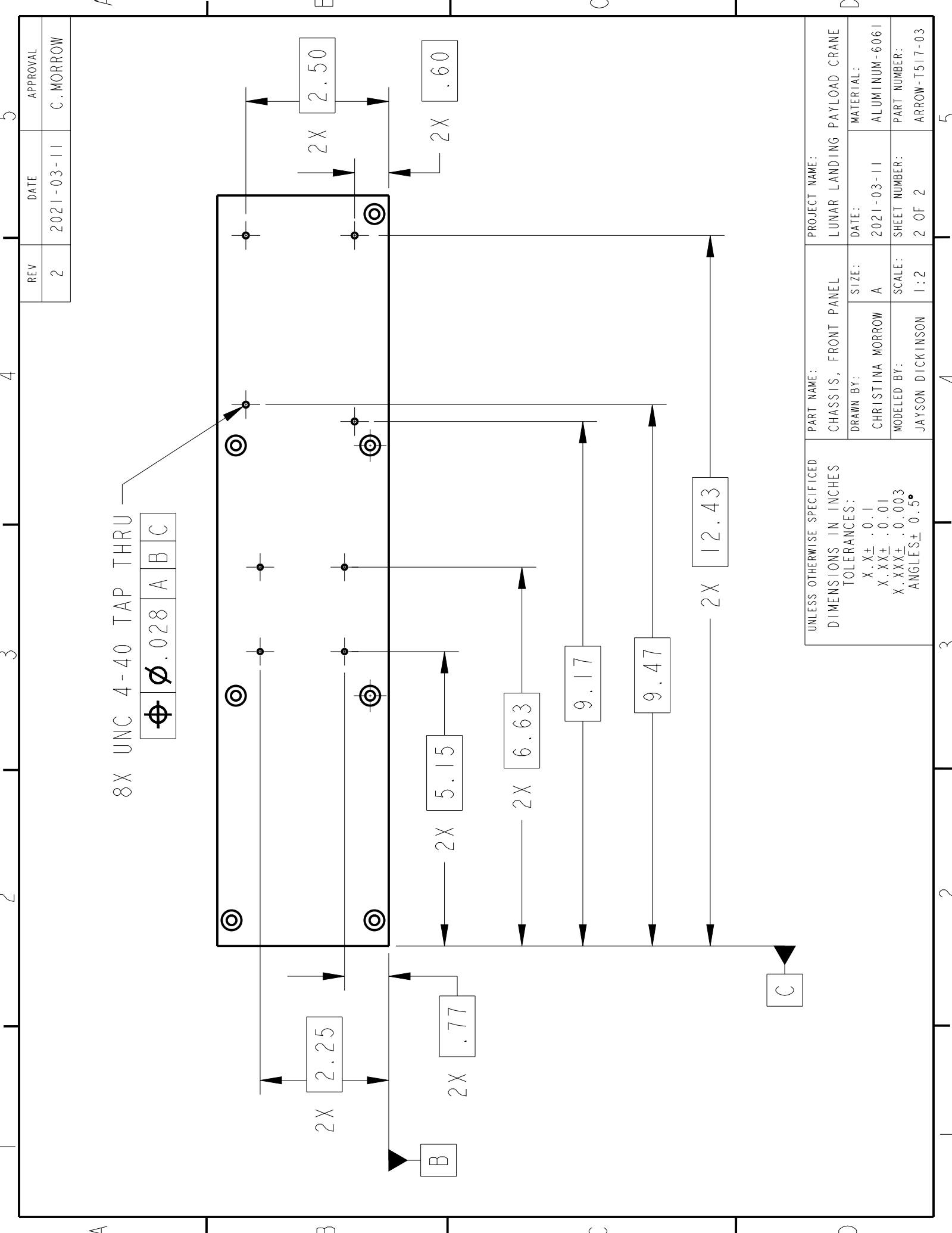
1. REMOVE ALL BURS AND SHARP EDGES.



REFERENCE VIEW

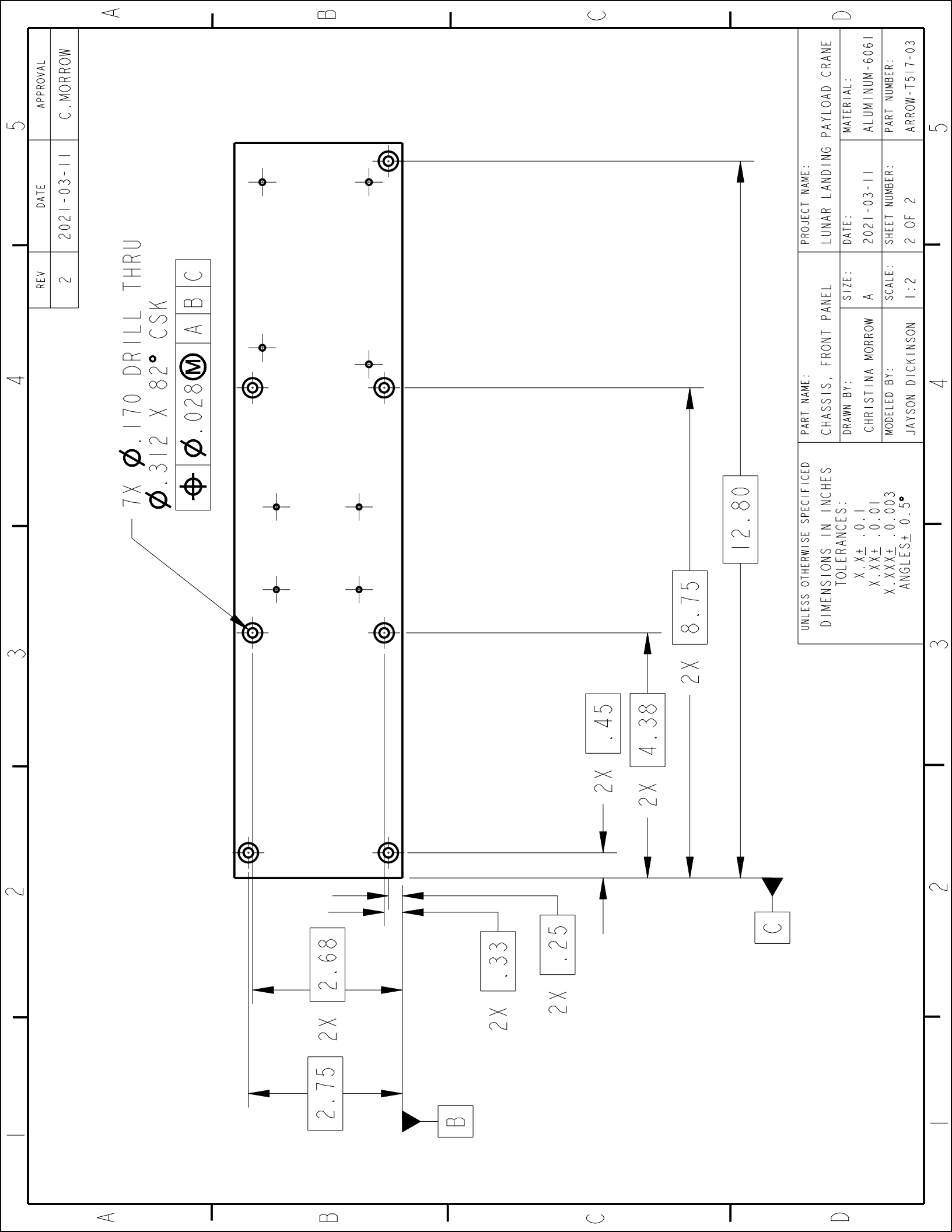
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PART NAME:		PROJECT NAME:	
X.X±	.0.1	CHASSIS, FRONT PANEL		LUNAR LANDING PAYLOAD CRANE	
X.XX±	.0.01	DRAWN BY:	SIZE:	DATE:	MATERIAL:
X.XXX±	.0.003	CHRISTINA MORROW	A	2021-03-11	ALUMINUM-6061
ANGLES± 0.5°		MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
		JAYSON DICKINSON	1:2	1 OF 2	ARROW-T517-03



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

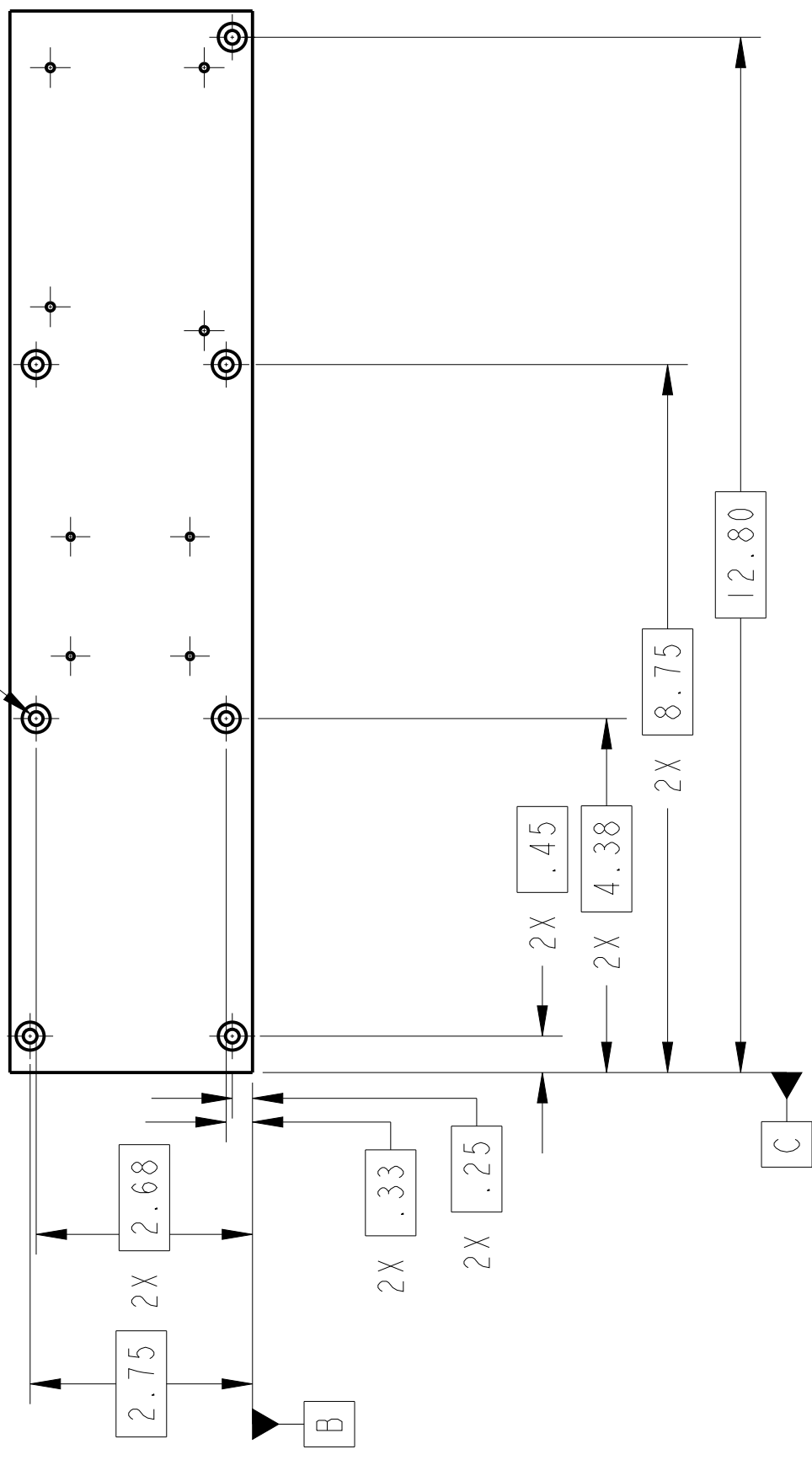
UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		CHASSIS, FRONT PANEL		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:		DATE:	
X.X± .0.1		CHRISTINA MORROW		2021-03-11	
X.XX± .0.01		MODELED BY:		SHEET NUMBER:	
X.XXX± .0.003		JAYSON DICKINSON		2 OF 2	
ANGLES± 0.5°				PART NUMBER:	
				ARROW-T517-03	
				MATERIAL:	
				ALUMINIUM-6061	



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

7X Ø.170 DRILL THRU
 Ø.312 X 82° CSK

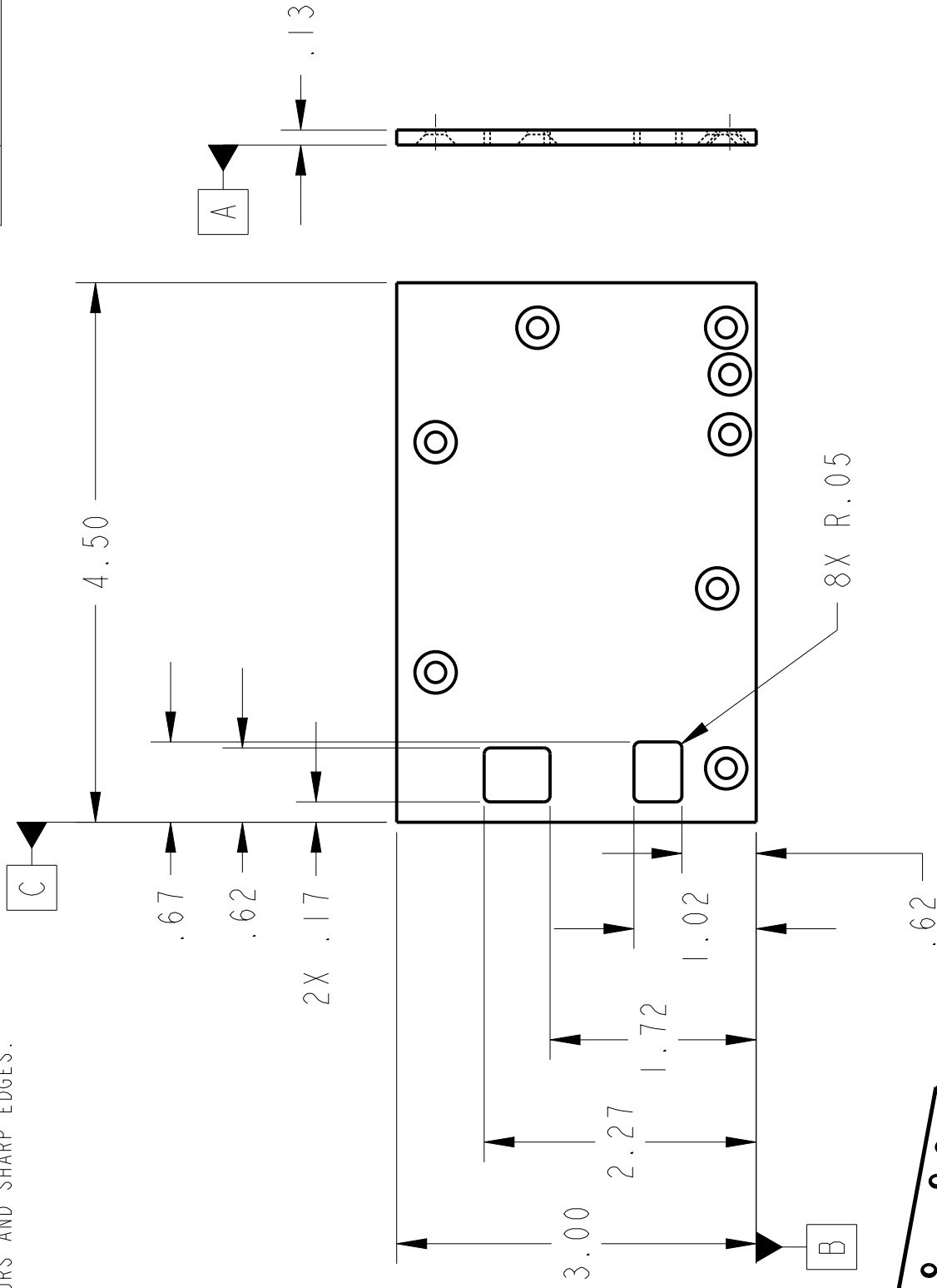
⊕	⊕	⊕
Ø.028	Ø.028	Ø.028
M		
A	B	C



UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: X.X± .0.1 X.XX± .0.01 X.XXX± .0.003 ANGLES± 0.5°		PART NAME: CHASSIS, FRONT PANEL		PROJECT NAME: LUNAR LANDING PAYLOAD CRANE	
DRAWN BY: CHRISTINA MORROW		SIZE: A		DATE: 2021-03-11	
MODELED BY: JAYSON DICKINSON		SCALE: 1:2		MATERIAL: ALUMINUM-6061	
				PART NUMBER: ARROW-T517-03	

NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.

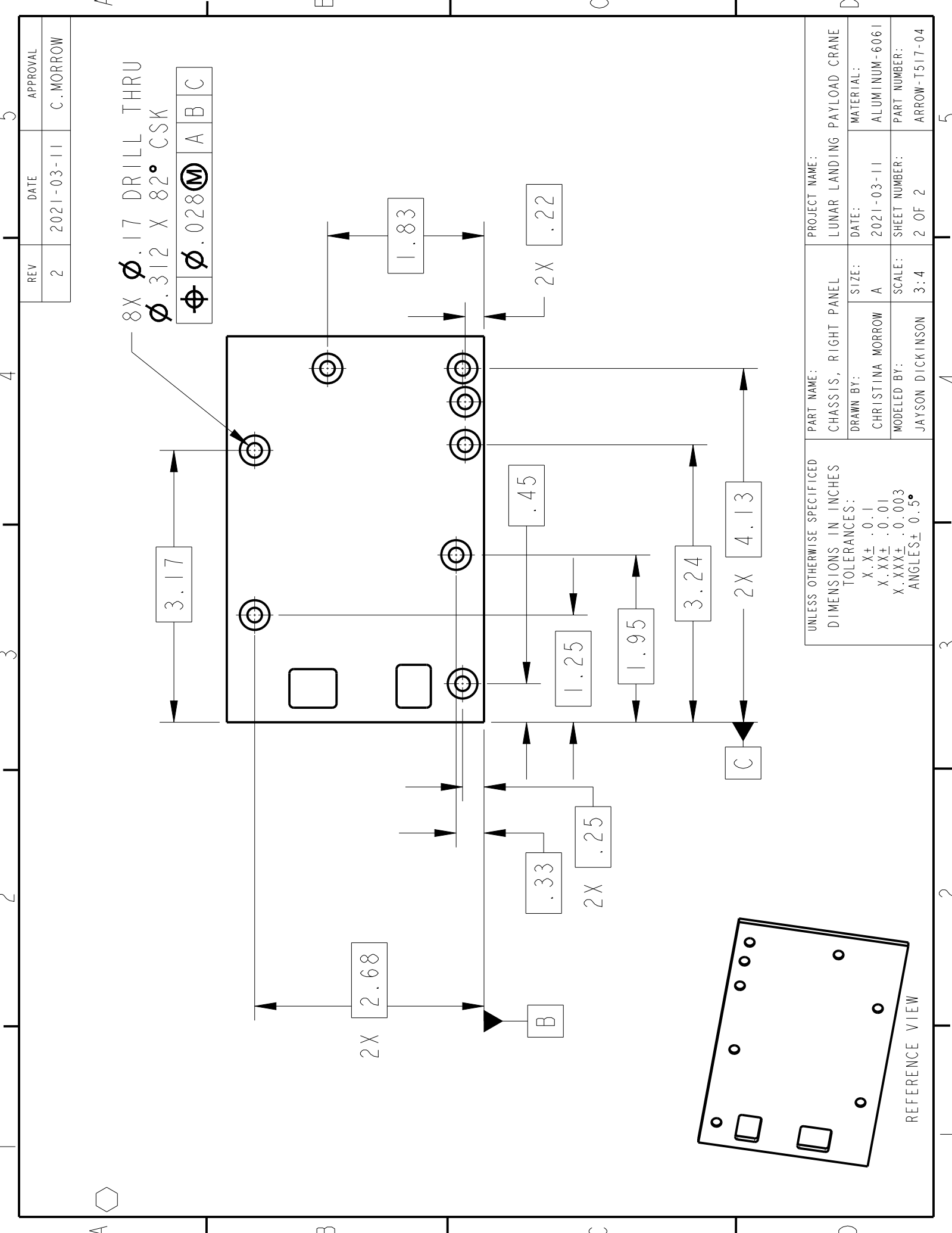


REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

PART NAME:		PROJECT NAME:	
CHASSIS, RIGHT PANEL		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-11	ALUMINUM-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	3:4	1 OF 2	ARROW-T517-04

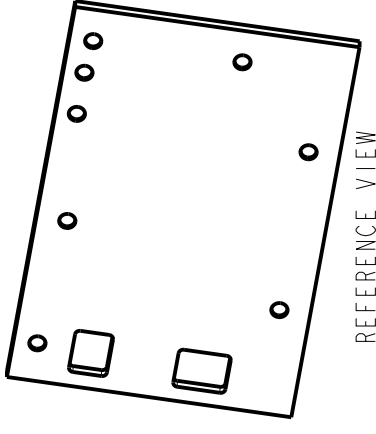
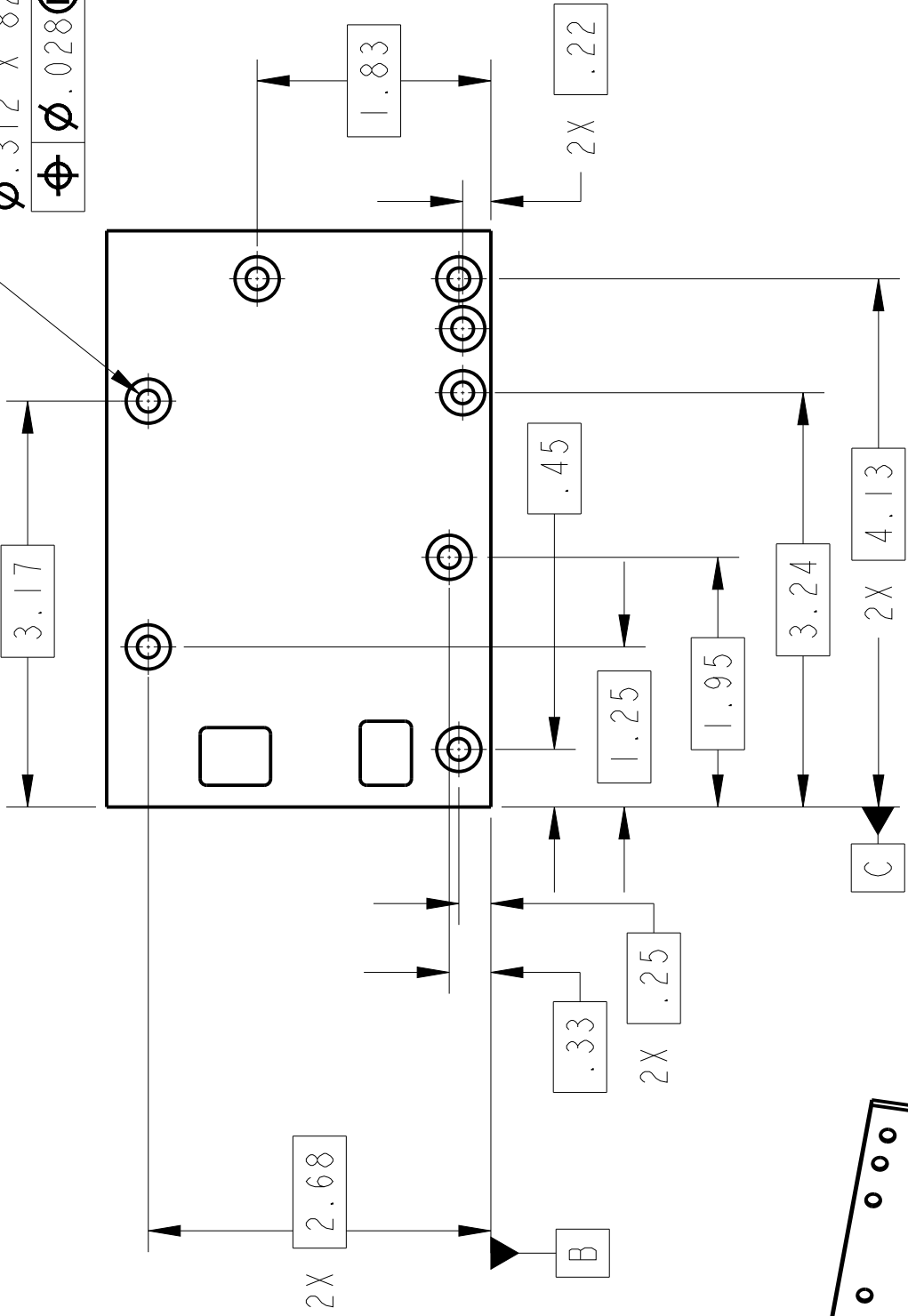
UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

REFERENCE VIEW



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

8X Ø.17 DRILL THRU
 Ø.312 X 82° CSK
 Ø.028 (M) A B C



UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		CHASSIS, RIGHT PANEL		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:		DATE:	
X.X± .0.1	X.XX± .0.01	CHRISTINA MORROW		2021-03-11	
X.XXX± .0.003	ANGLES± 0.5°	MODELED BY:		SHEET NUMBER:	
		JAYSON DICKINSON		3:4	
				2 OF 2	
				MATERIAL:	
				ALUMINIUM-6061	
				PART NUMBER:	
				ARROW-T517-04	

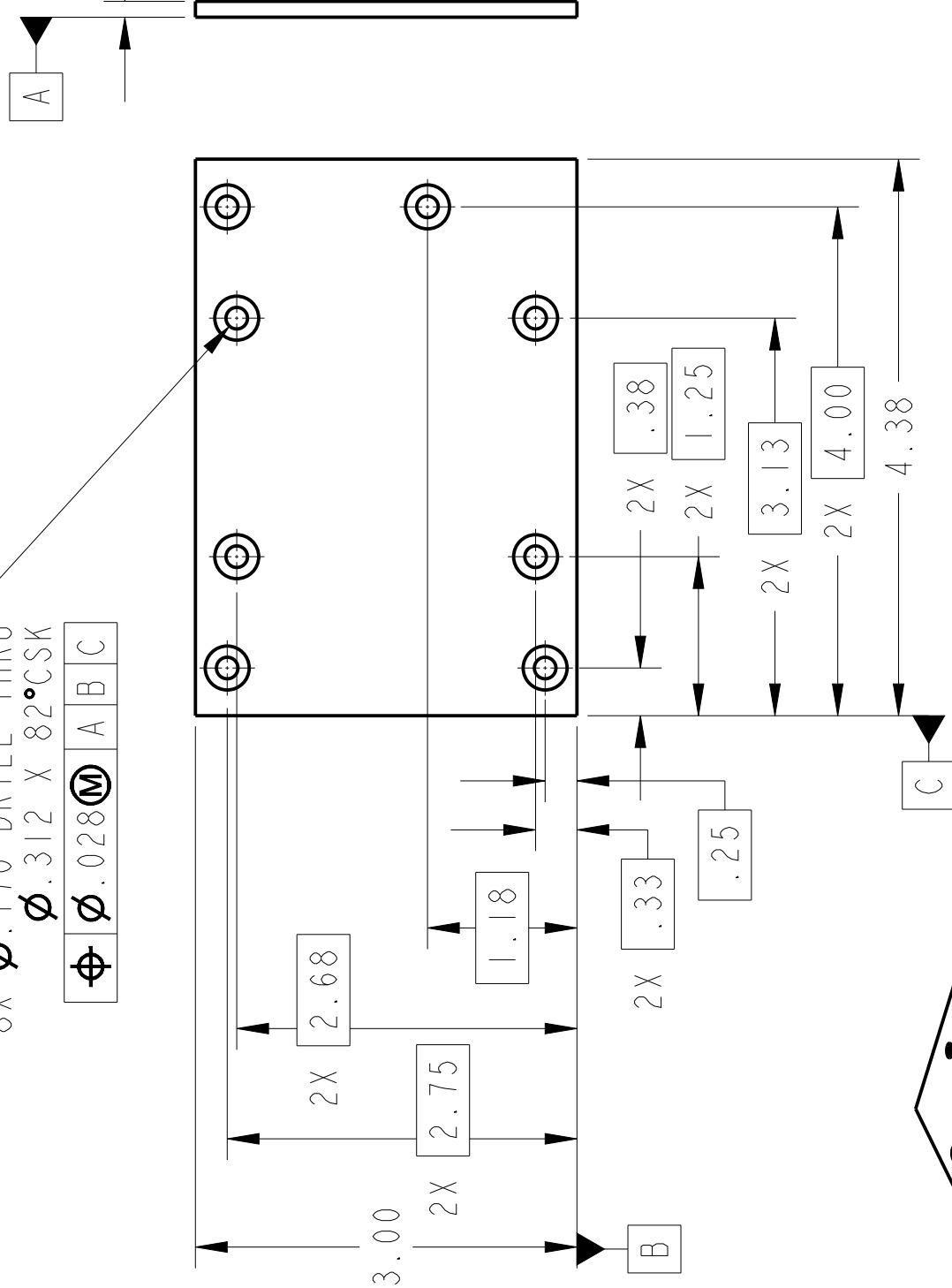
NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.

8X ϕ .170 DRILL THRU

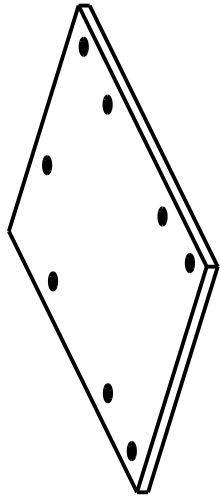
ϕ .312 X 82°CSK

ϕ .028 (M) A B C



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

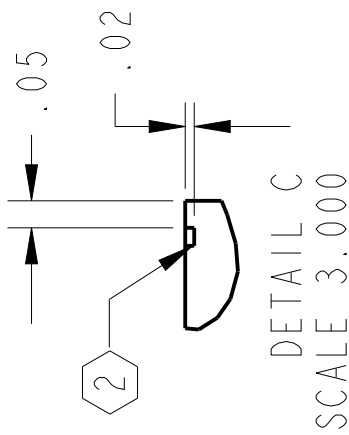
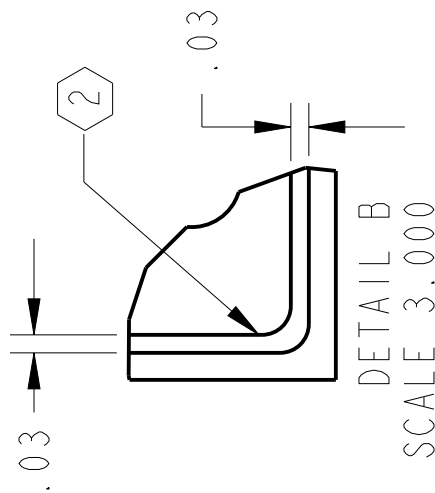
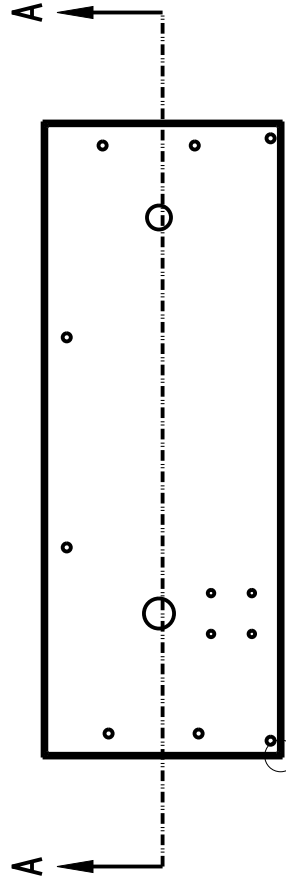
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PART NAME:	
X.X± .0.1	X.XX± .0.01	CHASSIS, LEFT PANEL	LUNAR LANDING PAYLOAD CRANE
X.XXX± .0.003	ANGLES± 0.5°	DRAWN BY: CHRISTINA MORROW	DATE: 2021-03-11
		MODELED BY: JAYSON DICKINSON	MATERIAL: ALUMINUM-6061
			SHEET NUMBER: 1 OF 1
			PART NUMBER: ARROW-T517-05



REFERENCE VIEW

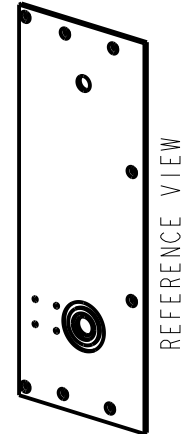
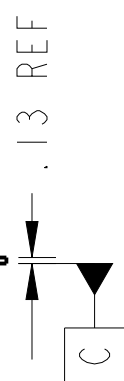
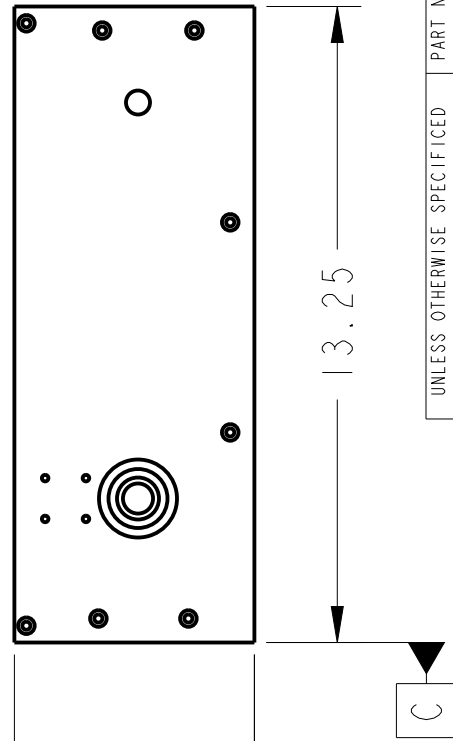
NOTES:

- 1. REMOVE ALL BURS AND SHARP EDGES.
- ② GASKET GROOVE INTERNAL RADII WILL HAVE R.05 MAX ALL THE WAY AROUND.



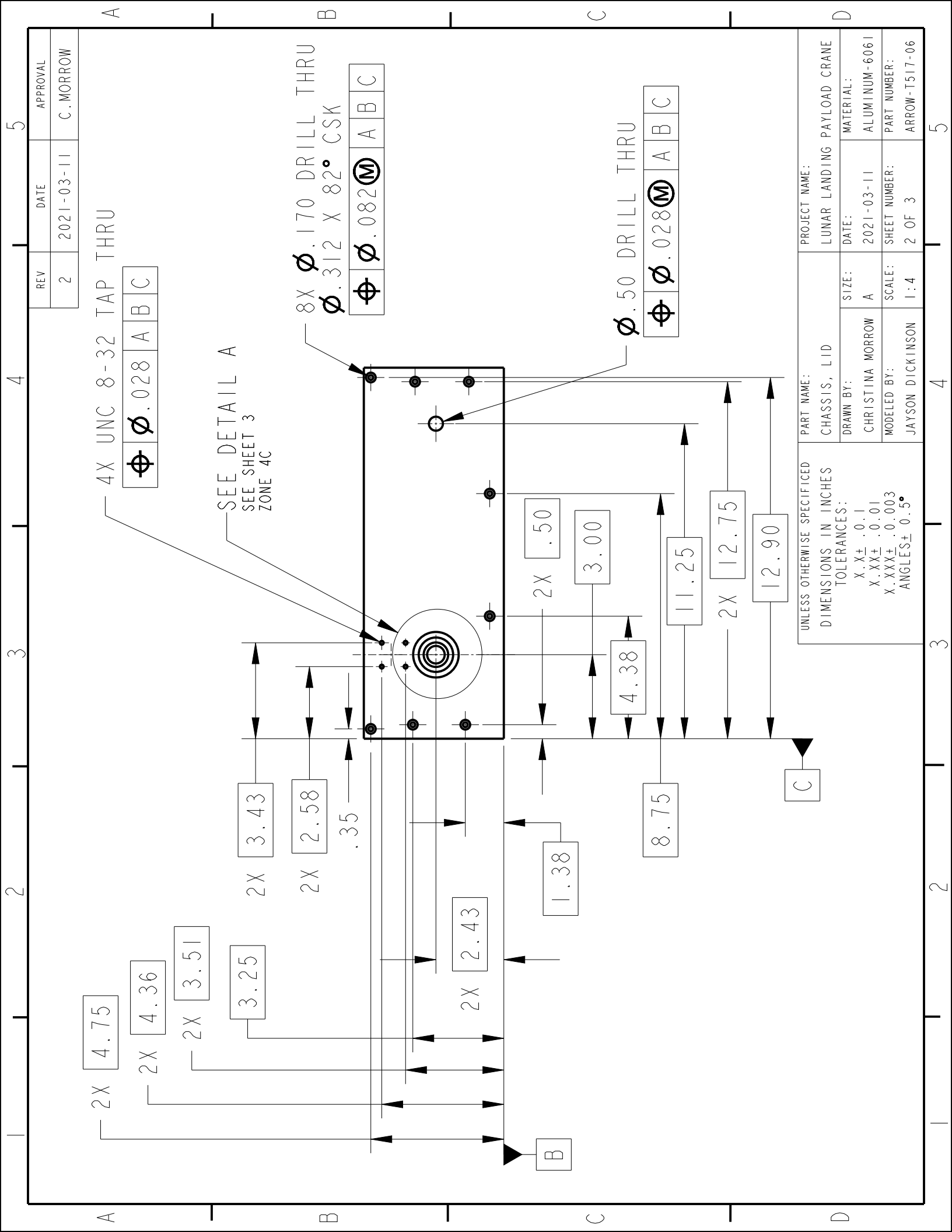
SEE DETAIL D
SEE SHEET 3
ZONE C2

SECTION A-A
SEE DETAIL C



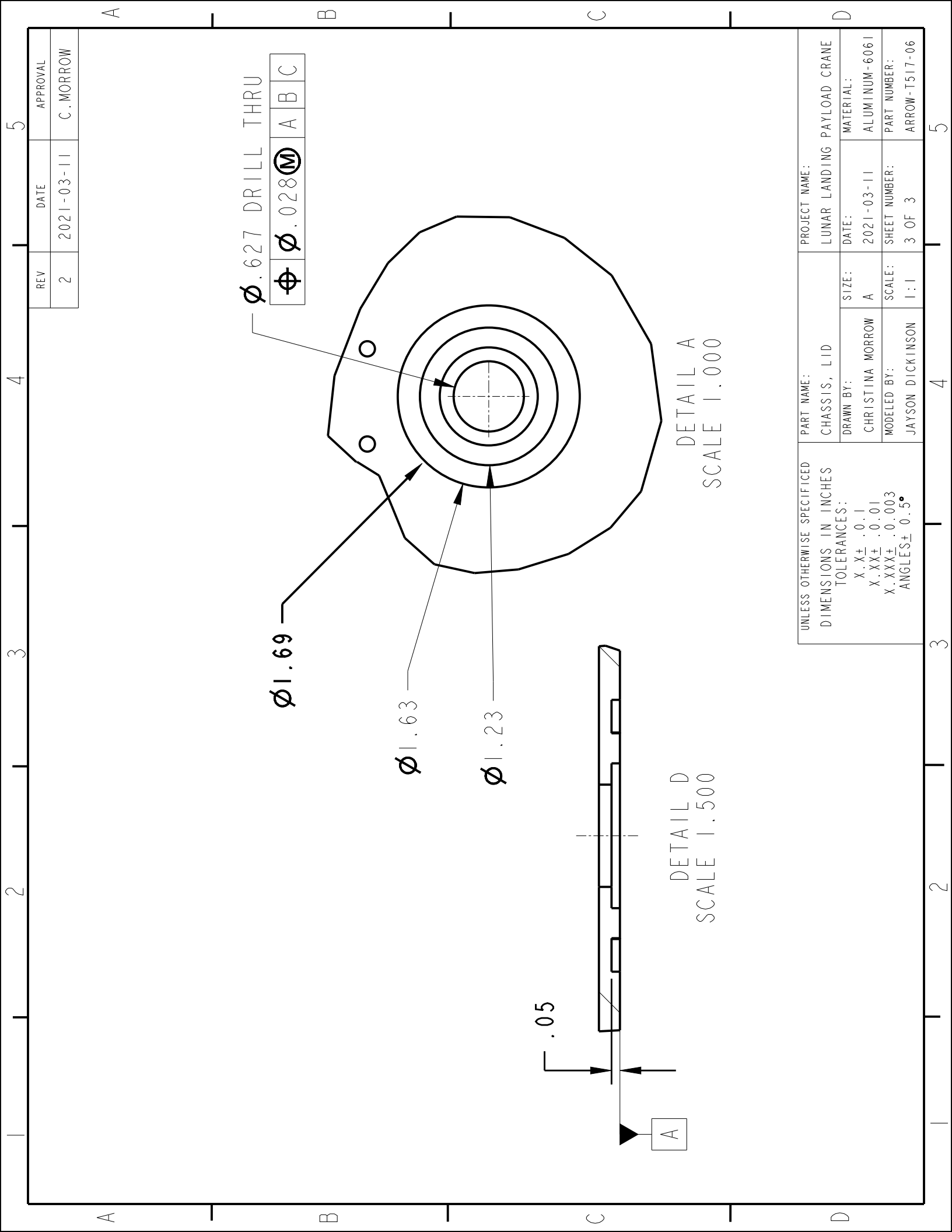
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PART NAME:		PROJECT NAME:	
X.X±	.0.1	CHASSIS, LID	LUNAR LANDING PAYLOAD CRANE		
X.XX±	.0.01	DRAWN BY:	DATE:		
X.XXX±	.0.003	CHRISTINA MORROW	2021-03-11		
ANGLES±	0.5°	MODELED BY:	SCALE:	MATERIAL:	
		JAYSON DICKINSON	1:4	ALUMINUM-6061	
				PART NUMBER:	
				ARROW-T517-06	



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PROJECT NAME:	
X.X± .0.1	X.XX± .0.01	CHASSIS, LID	LUNAR LANDING PAYLOAD CRANE
X.XXX± .0.003	ANGLES± 0.5°	DRAWN BY:	DATE:
		CHRISTINA MORROW	2021-03-11
		MODELED BY:	MATERIAL:
		JAYSON DICKINSON	ALUMINIUM-6061
			SHEET NUMBER:
			2 OF 3
			PART NUMBER:
			ARROW-T517-06



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

ϕ .627 DRILL THRU
 ϕ .028 (M) A B C

ϕ 1.69

ϕ 1.63

ϕ 1.23

.05

DETAIL A
SCALE 1.000

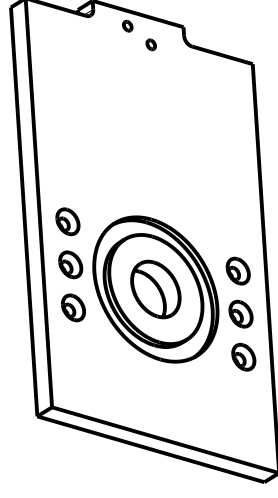
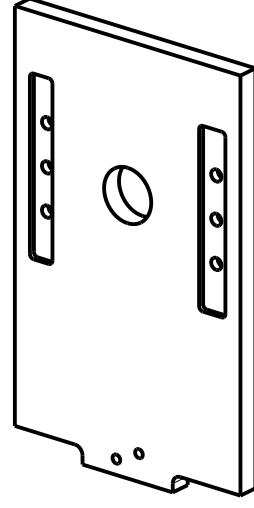
DETAIL D
SCALE 1.500

UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		CHASSIS, LID		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:		DATE:	
X.X± .0.1		CHRISTINA MORROW		2021-03-11	
X.XX± .0.01		MODELED BY:		SCALE:	
X.XXX± .0.003		JAYSON DICKINSON		1:1	
ANGLES± 0.5°				SHEET NUMBER:	
				3 OF 3	
				PART NUMBER:	
				ARROW-T517-06	
				MATERIAL:	
				ALUMINIUM-6061	

NOTES:

1. REMOVE ALL BURRS AND SHARP EDGES.

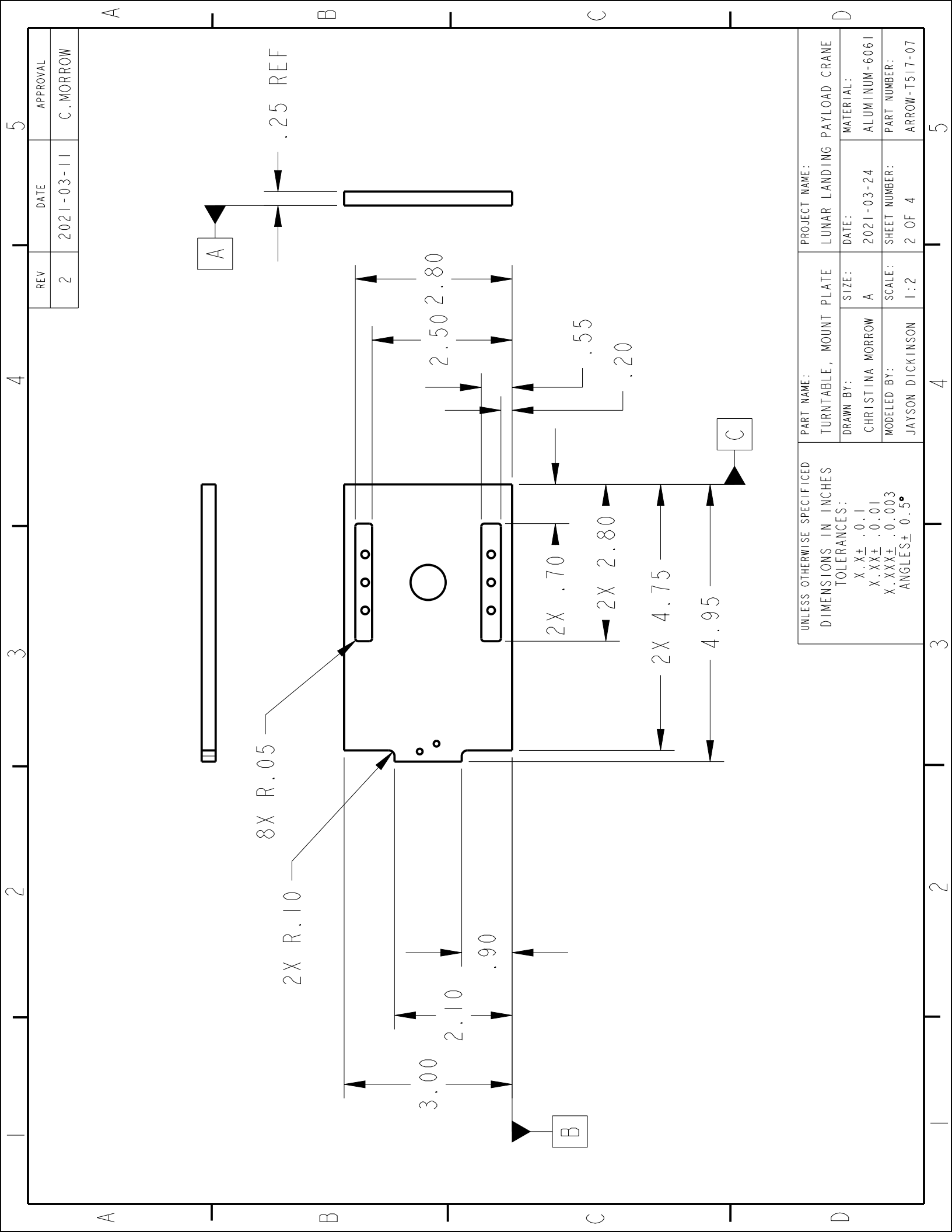
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW
3	2021-03-24	C. MORROW



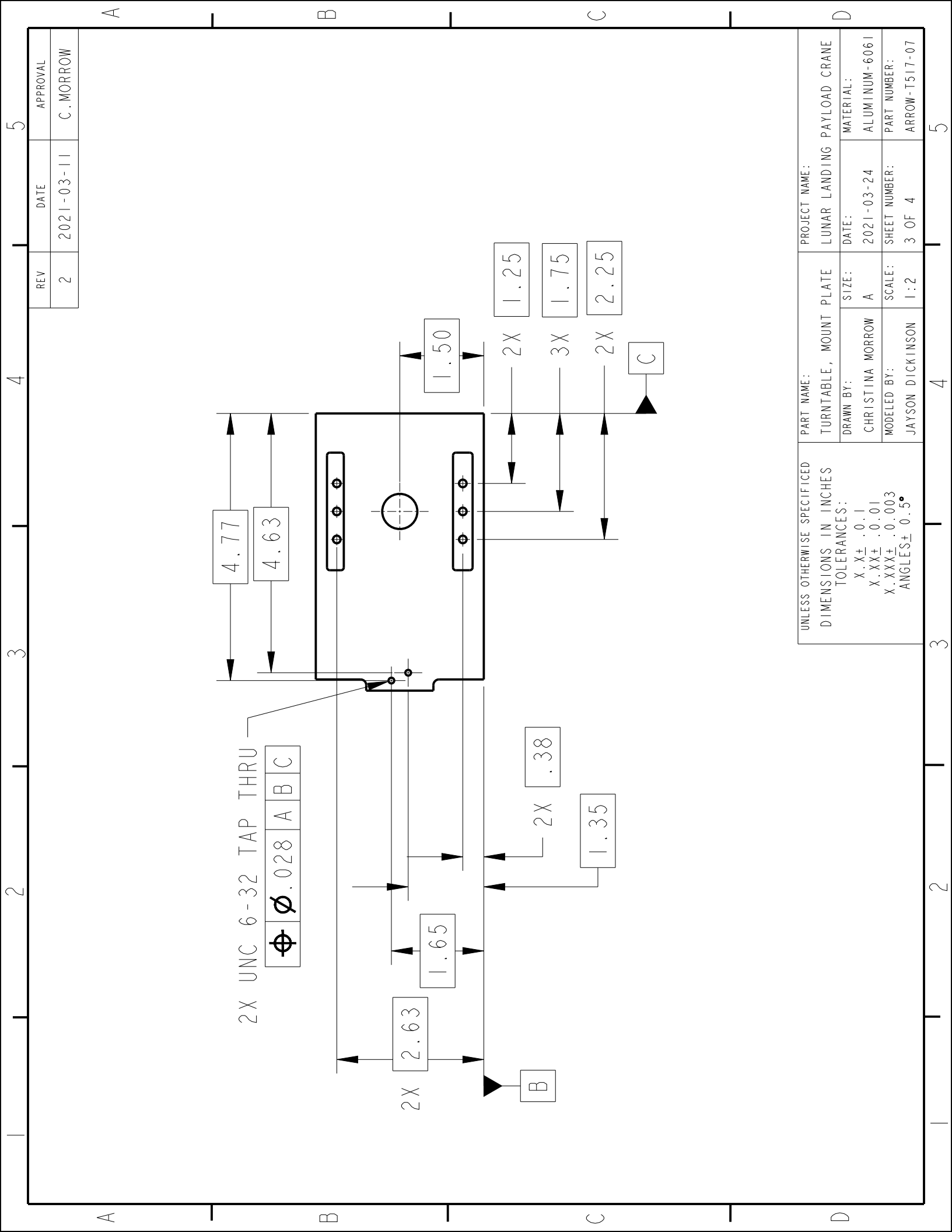
REFERENCE VIEWS

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

PART NAME:		PROJECT NAME:	
TURNTABLE, MOUNT PLATE		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-24	ALUMINIUM-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	1:2	1 OF 4	ARROW-T517-07



UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		TURNTABLE, MOUNT PLATE		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:	SIZE:	DATE:	MATERIAL:
X.X± .0.1		CHRISTINA MORROW	A	2021-03-24	ALUMINUM-6061
X.XX± .0.01		MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
X.XXX± .0.003		JAYSON DICKINSON	1:2	2 OF 4	ARROW-T517-07
ANGLES± 0.5°					

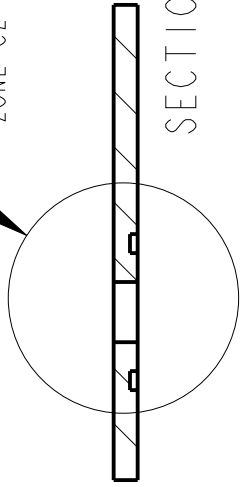


2X UNC 6-32 TAP THRU
 $\phi .028$ A B C

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

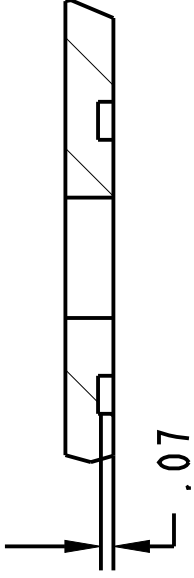
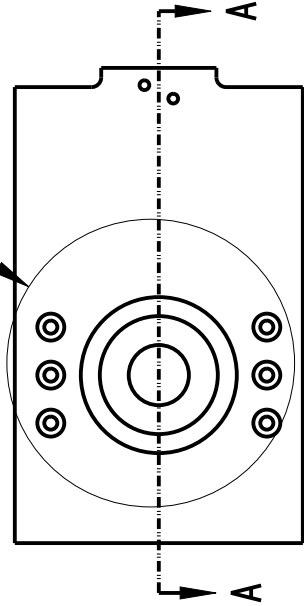
UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		TURNTABLE, MOUNT PLATE		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:		DATE:	
X.X± .0.1		CHRISTINA MORROW		2021-03-24	
X.XX± .0.01		MODELED BY:		SHEET NUMBER:	
X.XXX± .0.003		JAYSON DICKINSON		3 OF 4	
ANGLES± 0.5°				SCALE: 1:2	
				MATERIAL: ALUMINUM-6061	
				PART NUMBER: ARROW-T517-07	

SEE DETAIL C
SEE SHEET 4
ZONE C2



SECTION A-A

SEE DETAIL A
SEE SHEET 4
ZONE C4



DETAIL C
SCALE 1.000

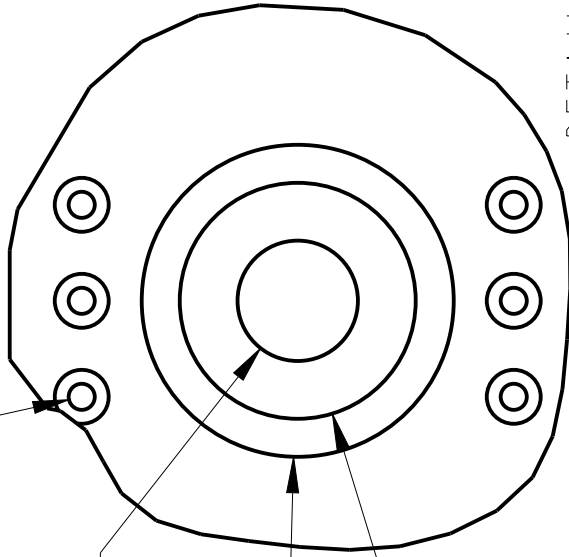
6X $\phi .144$ DRILL THRU
 $\phi .281$ X 82° CSK

$\phi .028$ M B C

$\phi .63$ DRILL THRU

$\phi 1.63$

$\phi 1.23$



DETAIL A
SCALE 1.000

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES:
X.X ± 0.1
X.XX ± 0.01
X.XXX ± 0.003
ANGLES ± 0.5°

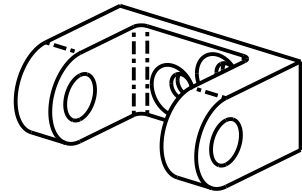
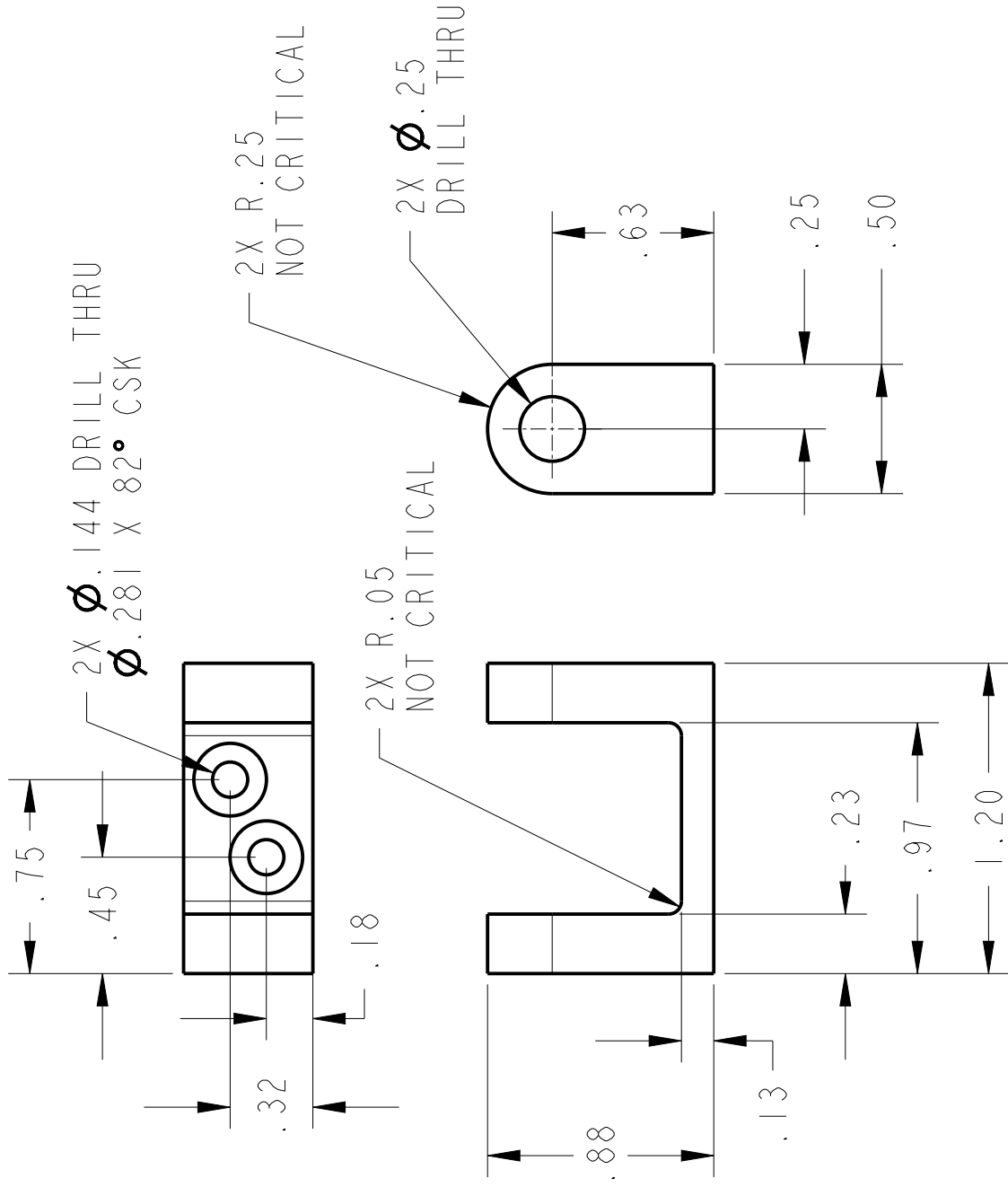
PART NAME:
TURNABLE, MOUNT PLATE
DRAWN BY:
CHRISTINA MORROW
MODELED BY:
JAYSON DICKINSON

PROJECT NAME:
LUNAR LANDING PAYLOAD CRANE
DATE:
2021-03-24
SHEET NUMBER:
4 OF 4

MATERIAL:
ALUMINUM-6061
PART NUMBER:
ARROW-T517-07

NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.
2. RADII ARE NOT CRITICAL.



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		TURNTABLE, BRACKET		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:	SIZE:	DATE:	MATERIAL:
X.X± .0.1		CHRISTINA MORROW	A	2021-03-11	ALUMINUM-6061
X.XX± .0.01		MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
X.XXX± .0.003		JAYSON DICKINSON	3:2	1 OF 1	ARROW-T517-08
ANGLES± 0.5°					

NOTES:

- 1. REMOVE ALL BURS AND SHARP EDGES.
- 2. RADII ARE NOT CRITICAL.

2.00
1.50
1.25

.75
.50

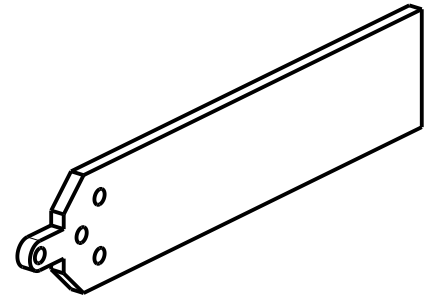
2X 45.0°^{+0.5°}
-0.0°

.25 REF

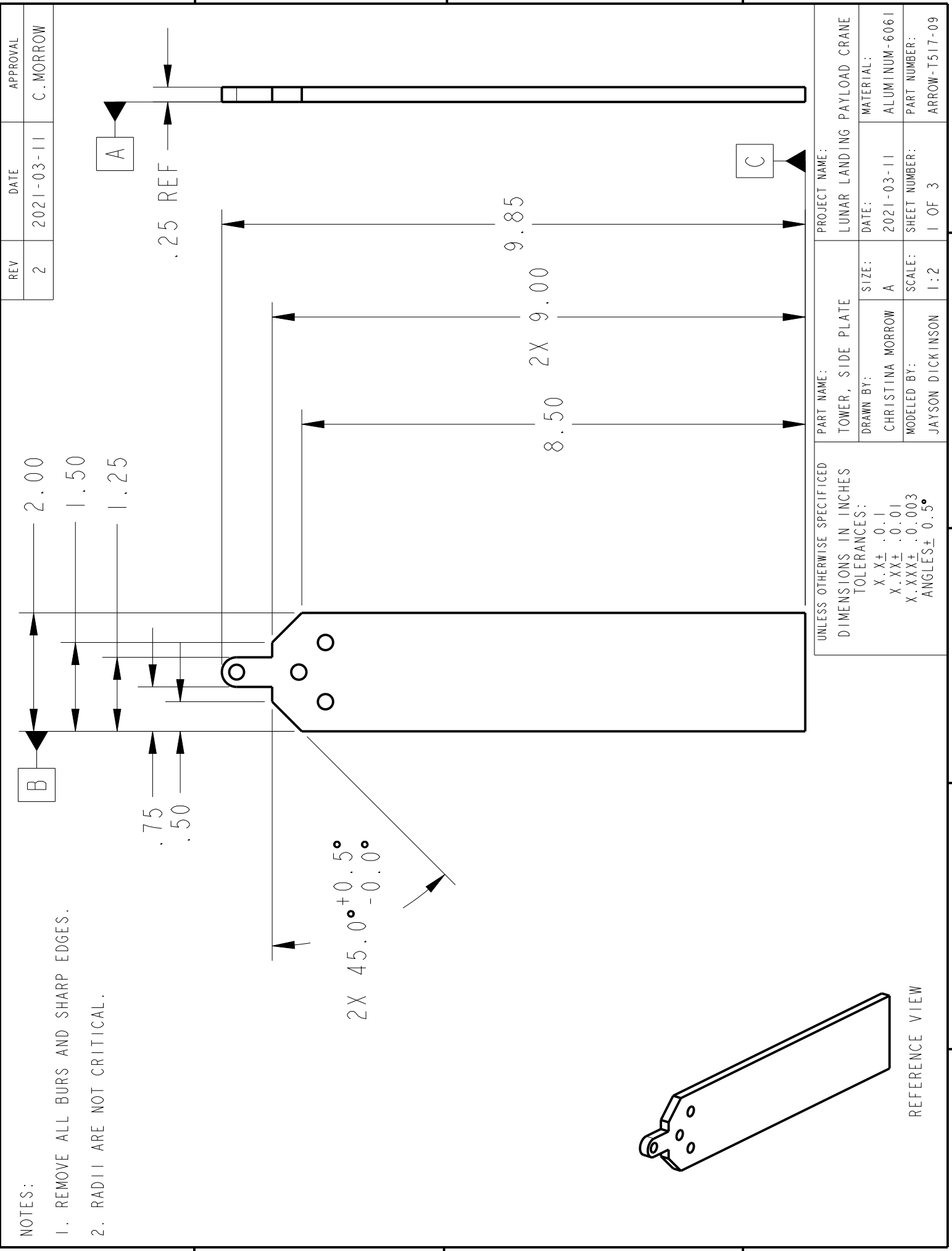
9.85

2X 9.00

8.50



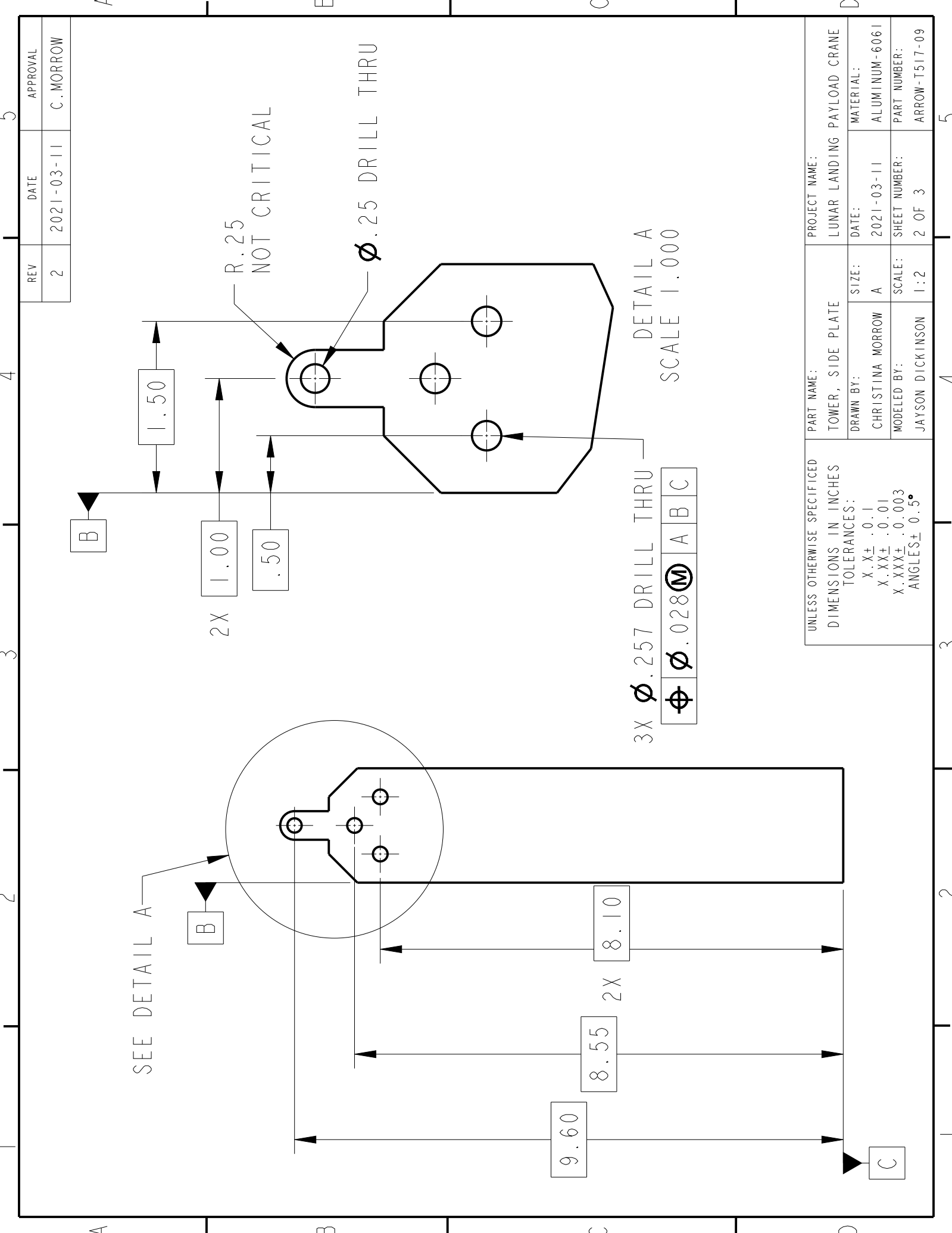
REFERENCE VIEW



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED		PROJECT NAME:	
DIMENSIONS IN INCHES		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DATE:	MATERIAL:
X.X± .0.1		2021-03-11	ALUMINUM-6061
X.XX± .0.01		SHEET NUMBER:	PART NUMBER:
X.XXX± .0.003		1 OF 3	ARROW-T517-09
ANGLES± 0.5°			

PART NAME:	
TOWER, SIDE PLATE	
DRAWN BY:	SIZE:
CHRISTINA MORROW	A
MODELED BY:	SCALE:
JAYSON DICKINSON	1:2



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		TOWER, SIDE PLATE		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:	SIZE:	DATE:	MATERIAL:
X.X± .0.1		CHRISTINA MORROW	A	2021-03-11	ALUMINUM-6061
X.XX± .0.01		MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
X.XXX± .0.003		JAYSON DICKINSON	1:2	2 OF 3	ARROW-T517-09
ANGLES± 0.5°					

DETAIL A
SCALE 1.000

3X $\phi .257$ DRILL THRU
 $\phi .028$ (M) A B C

SEE DETAIL A

R.25
NOT CRITICAL

$\phi .25$ DRILL THRU

9.60

8.55

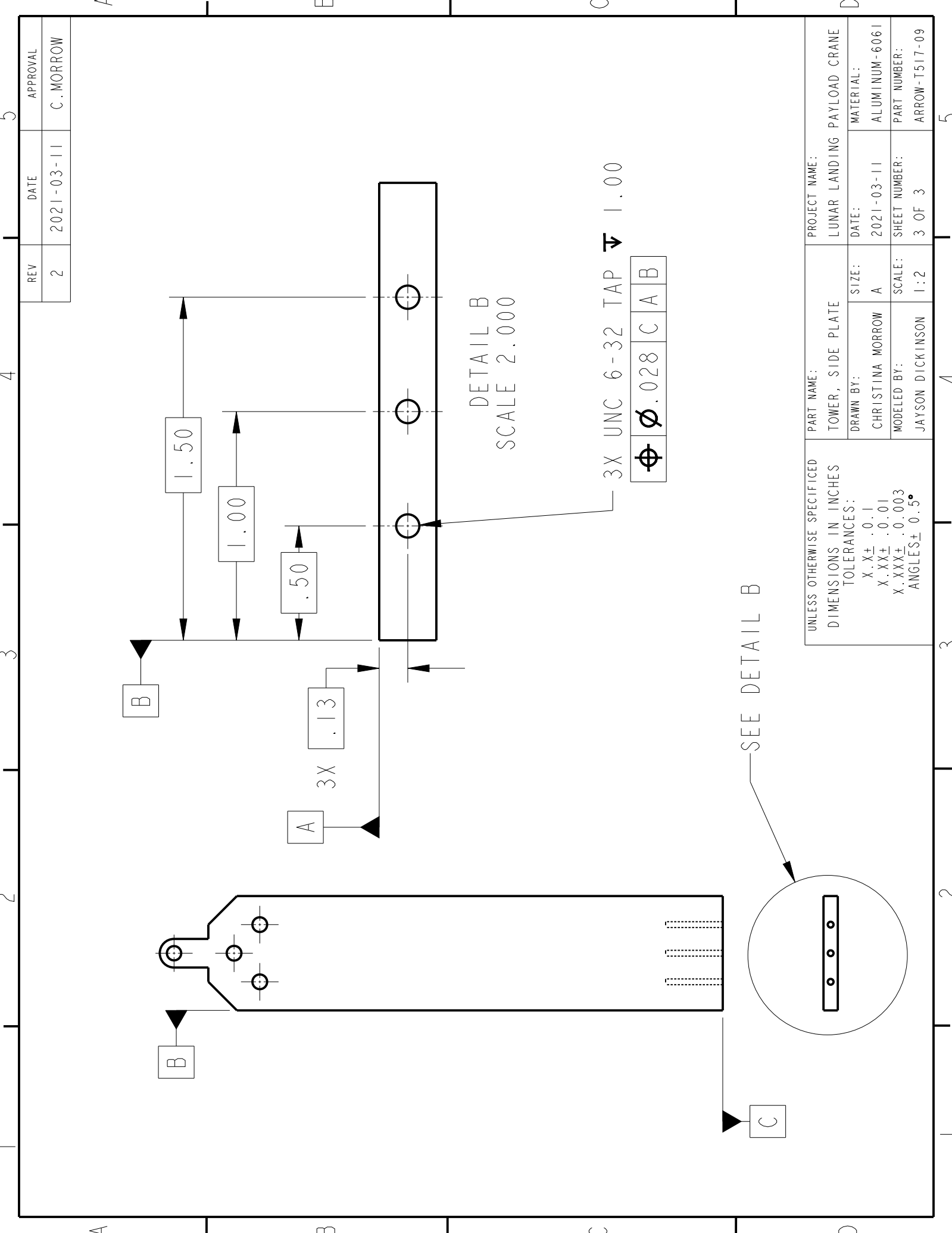
2X

8.10

1.50

2X 1.00

.50



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

DETAIL B
SCALE 2.000

3X UNC 6-32 TAP ∇ 1.00

\varnothing .028 C A B

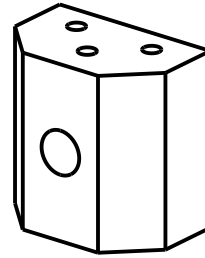
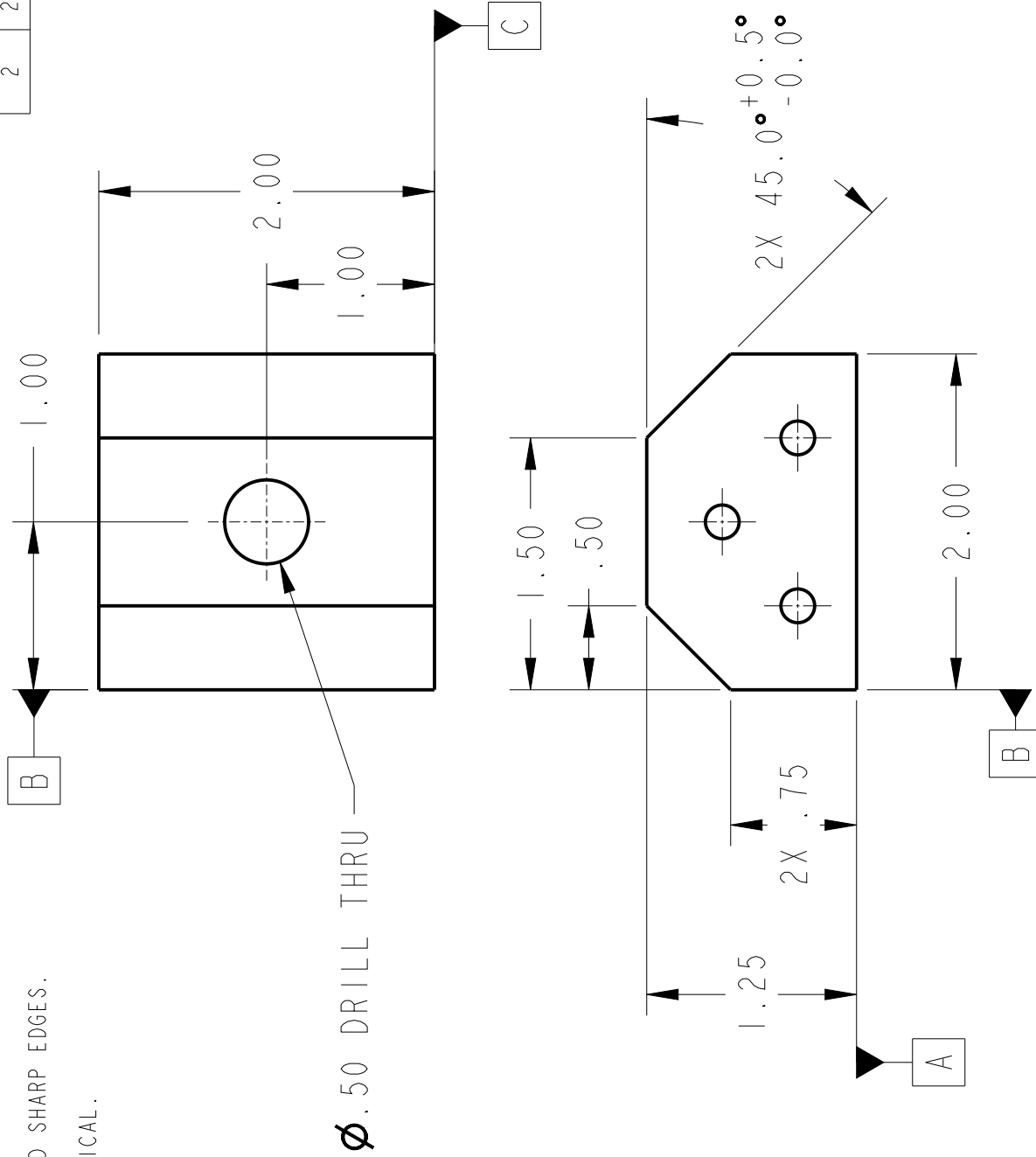
SEE DETAIL B

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PROJECT NAME: LUNAR LANDING PAYLOAD CRANE	
X.X± .0.1	X.XX± .0.01	DATE:	2021-03-11
X.XXX± .0.003	ANGLES± 0.5°	MATERIAL:	ALUMINUM-6061
		SCALE:	1:2
		SHEET NUMBER:	3 OF 3
		PART NUMBER:	ARROW-T517-09

PART NAME: TOWER, SIDE PLATE		PROJECT NAME: LUNAR LANDING PAYLOAD CRANE	
DRAWN BY: CHRISTINA MORROW	SIZE: A	DATE:	2021-03-11
MODELED BY: JAYSON DICKINSON	SCALE: 1:2	MATERIAL:	ALUMINUM-6061
		SHEET NUMBER:	3 OF 3
		PART NUMBER:	ARROW-T517-09

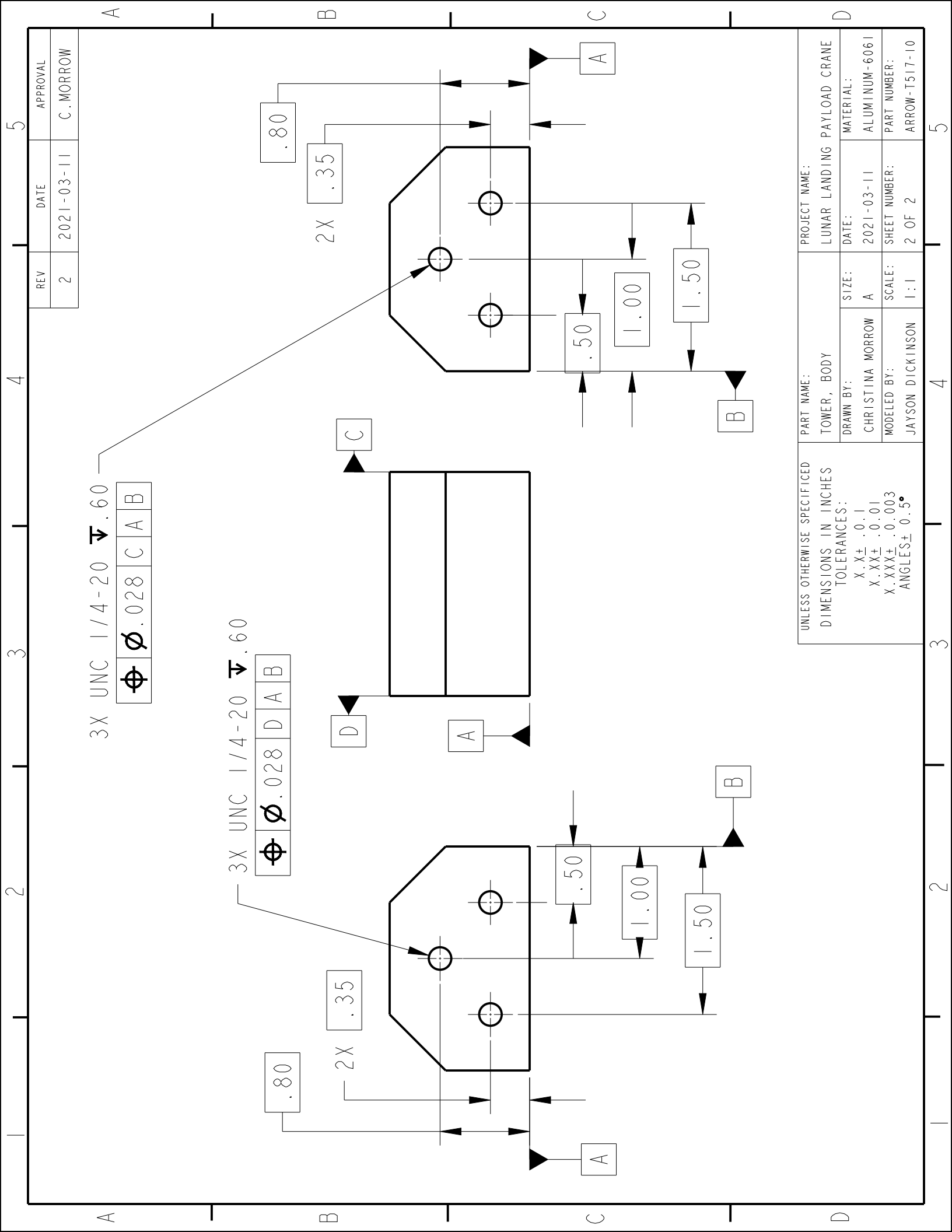
NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.
2. CHAMFER ANGLE CRITICAL.



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		TOWER, BODY		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:		DATE:	
X.X± .0.1	X.XX± .0.01	CHRISTINA MORROW		2021-03-11	
X.XXX± .0.003	ANGLES± 0.5°	MODELED BY:		SHEET NUMBER:	
		JAYSON DICKINSON		1 OF 2	
				MATERIAL:	
				ALUMINUM-6061	
				PART NUMBER:	
				ARROW-T517-10	



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

3X UNC 1/4-20 ∇ .60
 ϕ .028 C A B

3X UNC 1/4-20 ∇ .60
 ϕ .028 D A B

.80

2X .35

.50

1.00

1.50

.50

1.00

1.50

2X .35

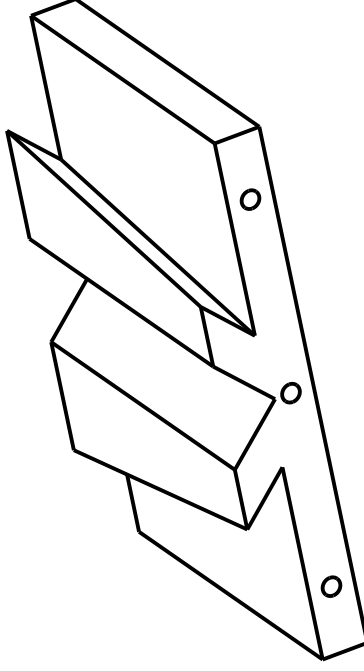
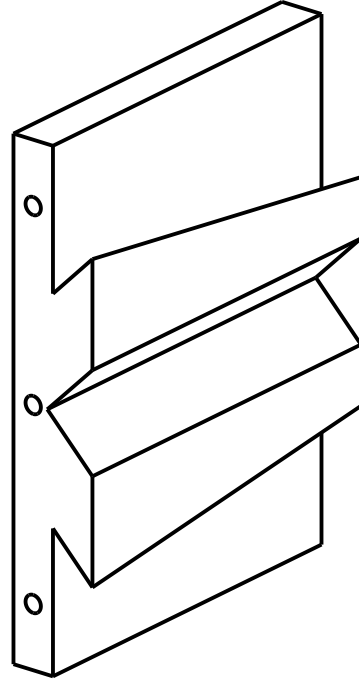
.80

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PROJECT NAME:	
X.X± .0.1	X.XX± .0.01	LUNAR LANDING PAYLOAD CRANE	
X.XXX± .0.003	ANGLES± 0.5°	DRAWN BY:	DATE:
		CHRISTINA MORROW	2021-03-11
		MODELED BY:	SHEET NUMBER:
		JAYSON DICKINSON	2 OF 2
			MATERIAL:
			ALUMINUM-6061
			PART NUMBER:
			ARROW-T517-10

NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.

2 IF 44.8° IS NOT ACHIEVABLE, PLEASE USE STANDARD DOVE TAIL CUTTER SUCH THAT ARROW-T517-11 MATES WITH ARROW-T517-19.

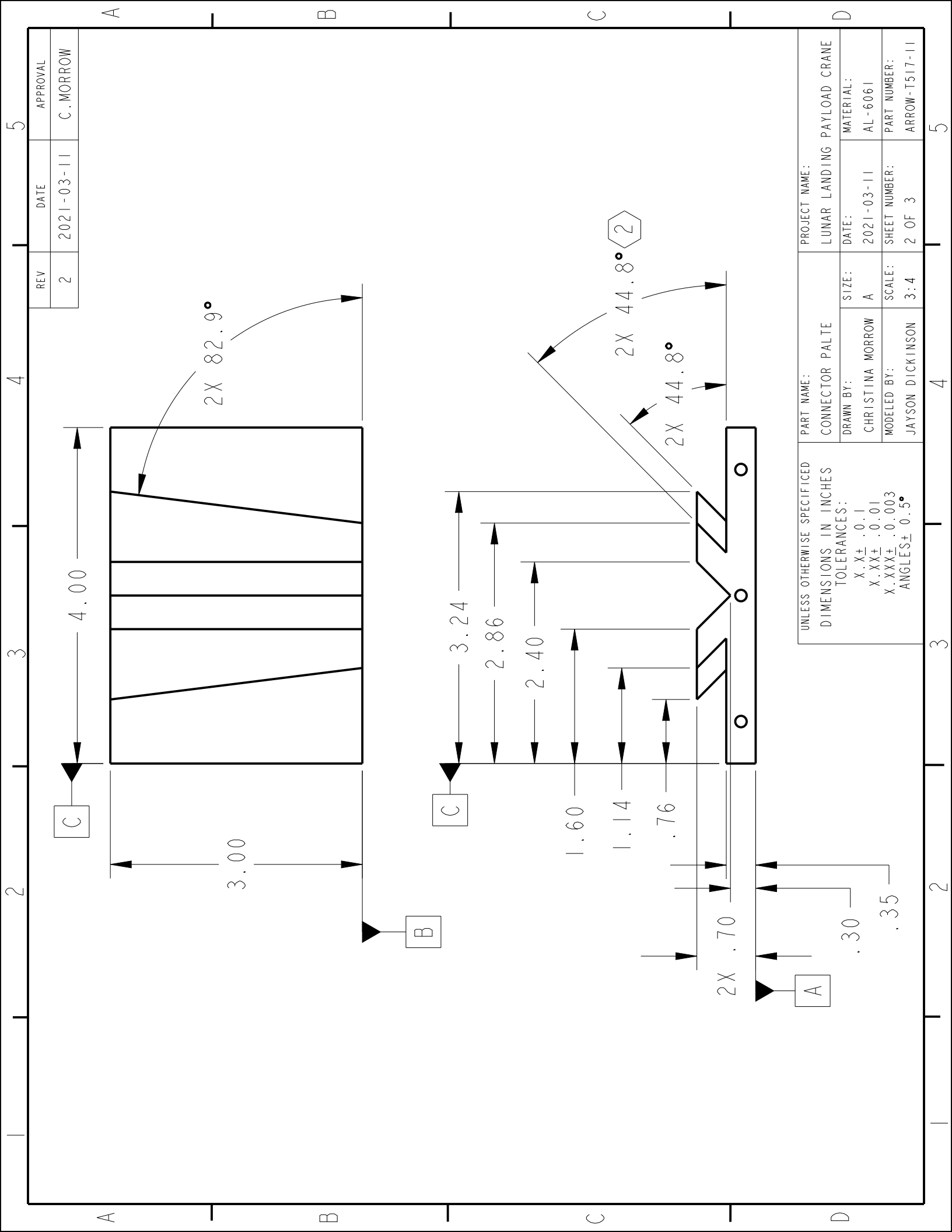


REFERENCE VIEWS

UNLESS OTHERWISE SPECIFIED	
DIMENSIONS IN INCHES	
TOLERANCES:	
X.X±	.0.1
X.XX±	.0.01
X.XXX±	.0.003
ANGLES± 0.5°	

PART NAME:		PROJECT NAME:	
CONNECTOR PALTE		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-11	AL-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	3:4	1 OF 3	ARROW-T517-11

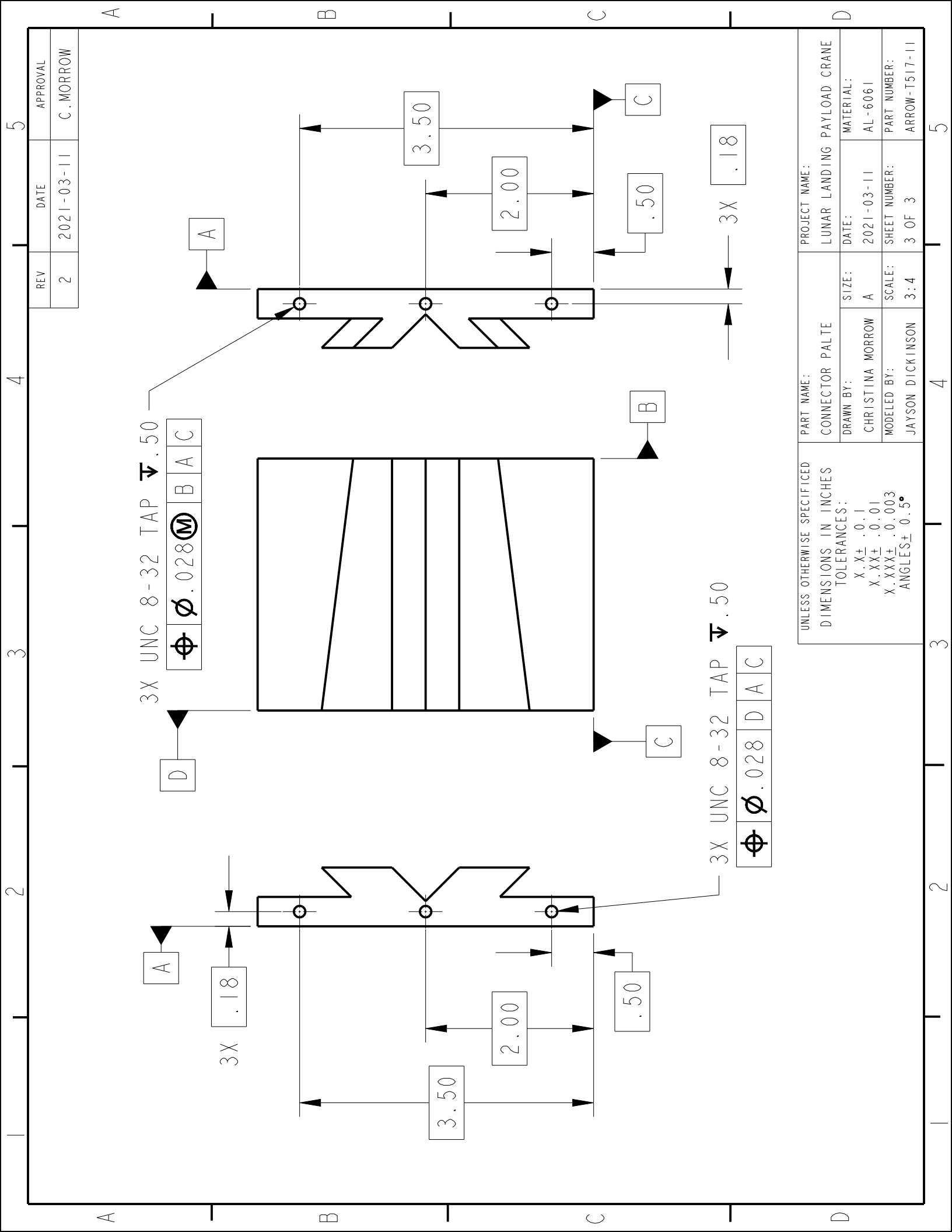
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED		PROJECT NAME:	
DIMENSIONS IN INCHES		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DATE:	MATERIAL:
X.X± .0.1		2021-03-11	AL-6061
X.XX± .0.01		SHEET NUMBER:	PART NUMBER:
X.XXX± .0.003		2 OF 3	ARROW-T517-11
ANGLES± 0.5°			

PART NAME:		CONNECTOR PALTE	
DRAWN BY:		CHRISTINA MORROW	
MODELED BY:		JAYSON DICKINSON	
SIZE:		A	
SCALE:		3:4	



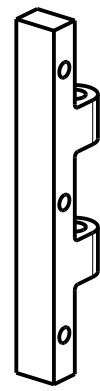
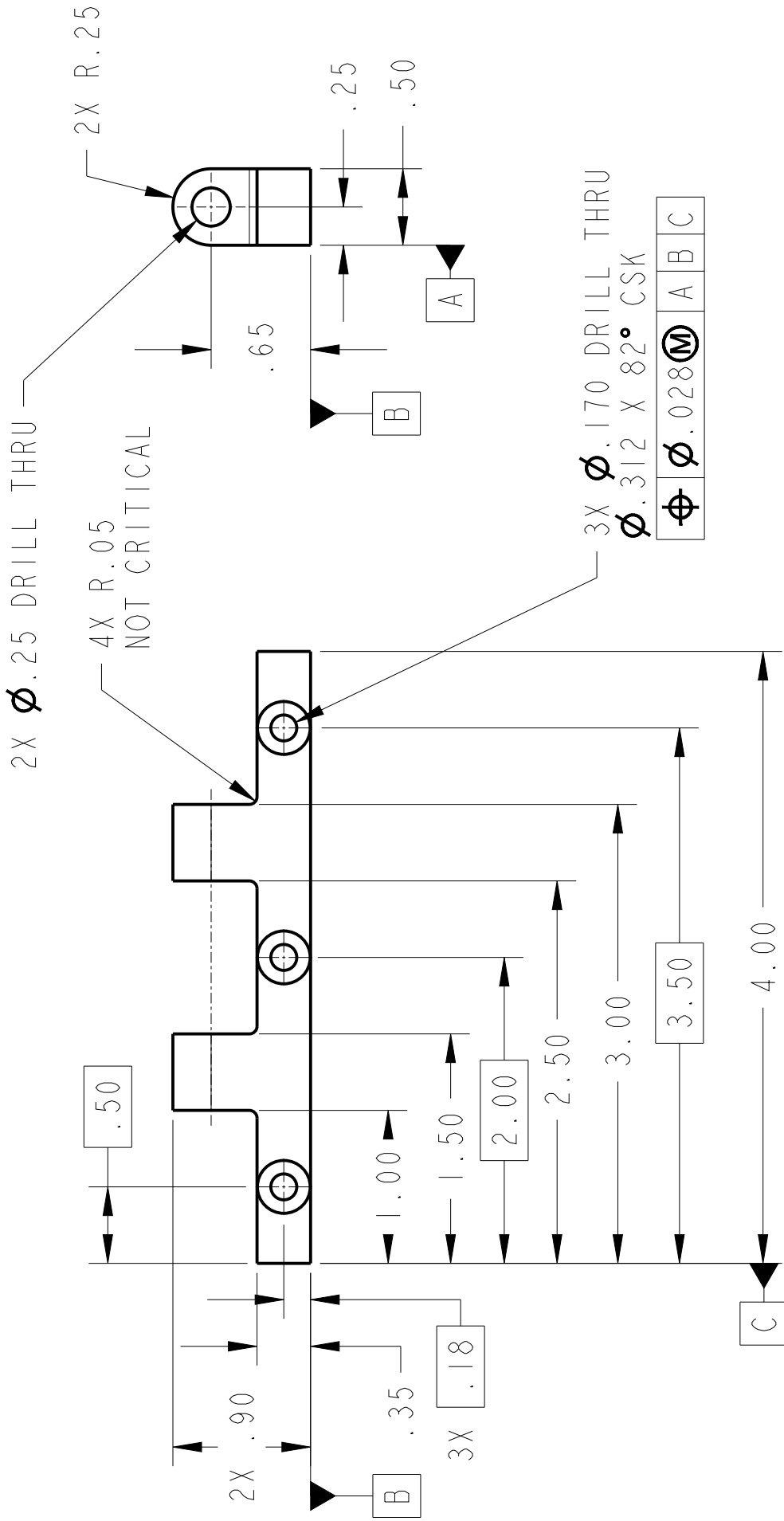
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

PART NAME:		PROJECT NAME:	
CONNECTOR PALTE		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-11	AL-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	3:4	3 OF 3	ARROW-T517-11

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.
2. RADII ARE NOT CRITICAL UNLESS OTHERWISE SPECIFIED.



REFERENCE VIEW

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW
3	2021-03-24	C. MORROW

PART NAME:		PROJECT NAME:	
PLATE BRACKET I		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-24	AL-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	1:1	1 OF 1	ARROW-T517-12

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES:
X.X± .0.1
X.XX± .0.01
X.XXX± .0.003
ANGLES± 0.5°

NOTES:

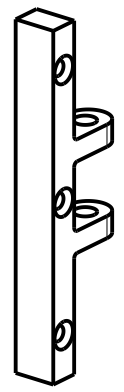
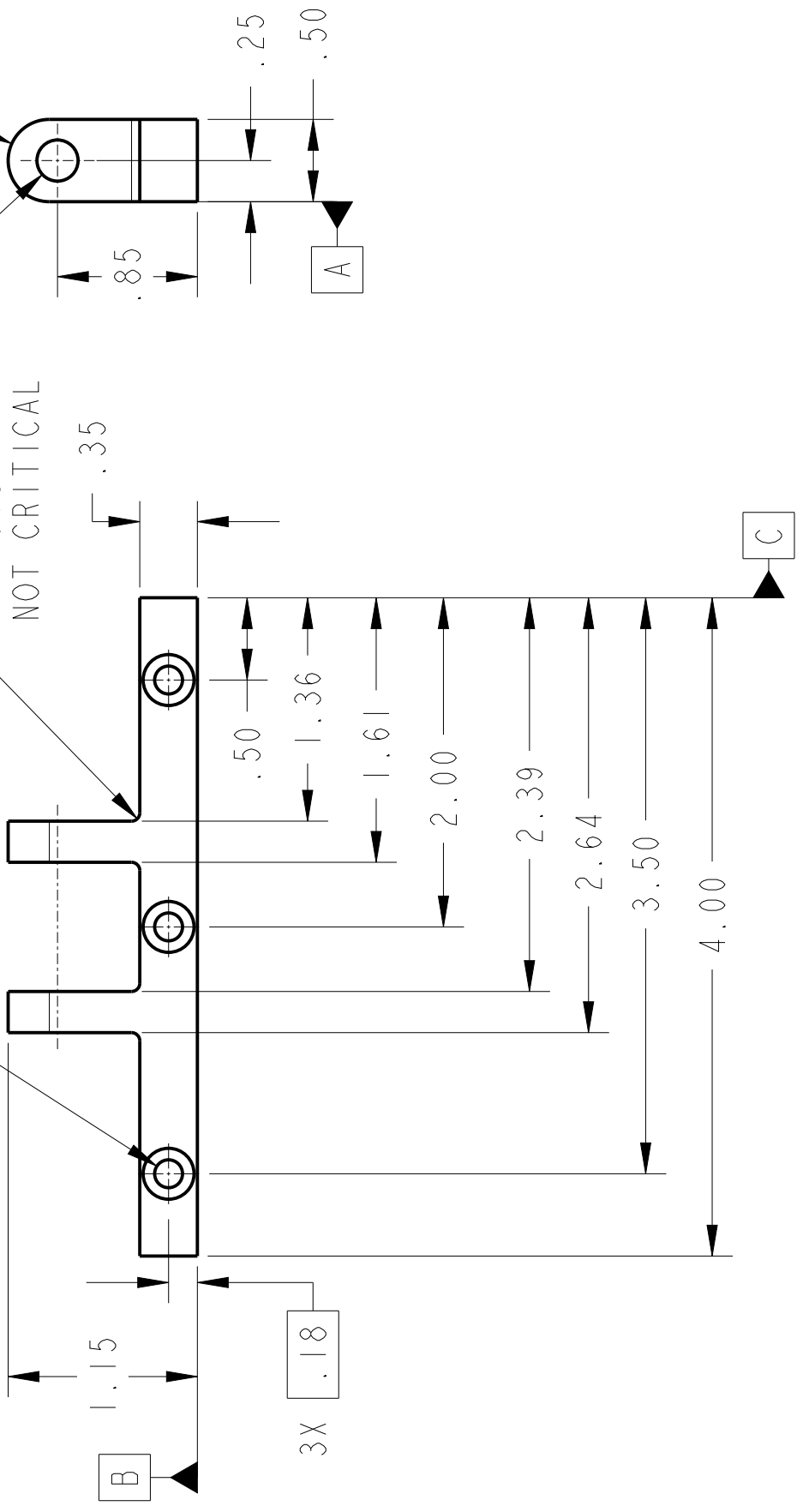
1. REMOVE ALL BURS AND SHARP EDGES.
2. RADII ARE NOT CRITICAL UNLESS OTHERWISE SPECIFIED.

2X ϕ .25 DRILL THRU

3X ϕ .170 DRILL THRU
 ϕ .312 X 82° CSK

4X R.05
 NOT CRITICAL

2X R.25



REFERENCE VIEW

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°

PART NAME: PLATE BRACKET 2		PROJECT NAME: LUNAR LANDING PAYLOAD CRANE	
DRAWN BY: CHRISTINA MORROW	SIZE: A	DATE: 2021-03-11	MATERIAL: AL-6061
MODELED BY: JAYSON DICKINSON	SCALE: 1:1	SHEET NUMBER: 1 OF 1	PART NUMBER: ARRPW-T517-13

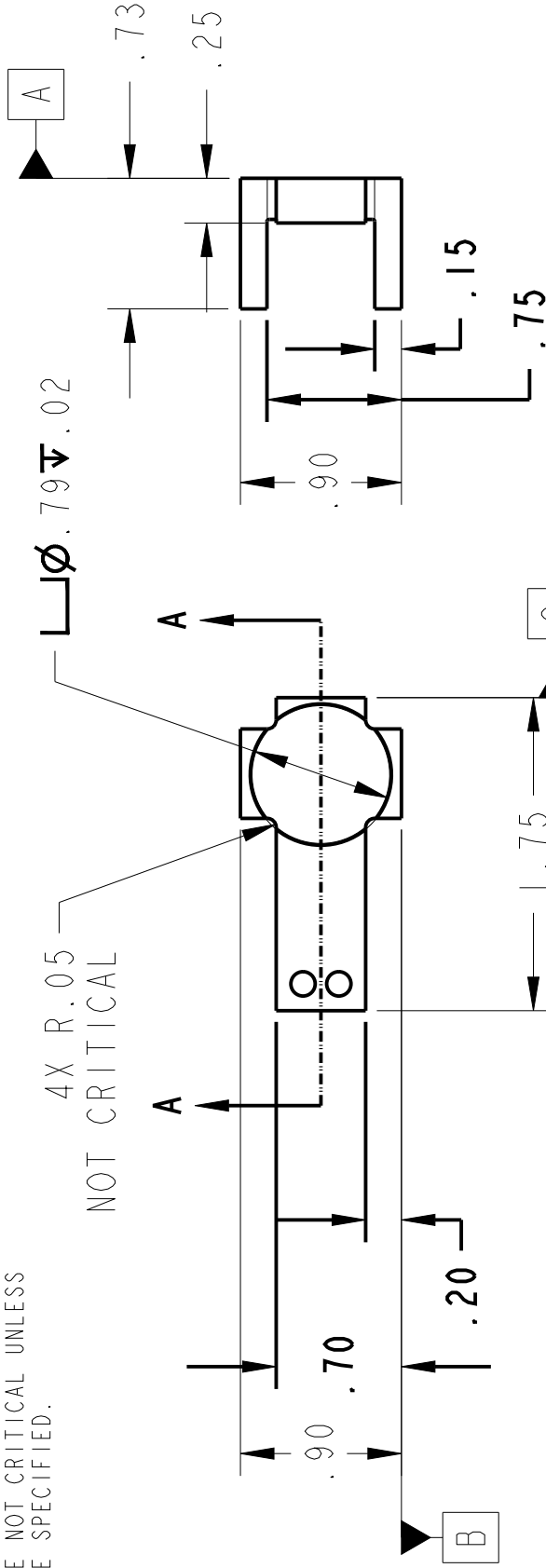
REV 2	DATE 2021-03-11	APPROVAL C. MORROW
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NOTES:

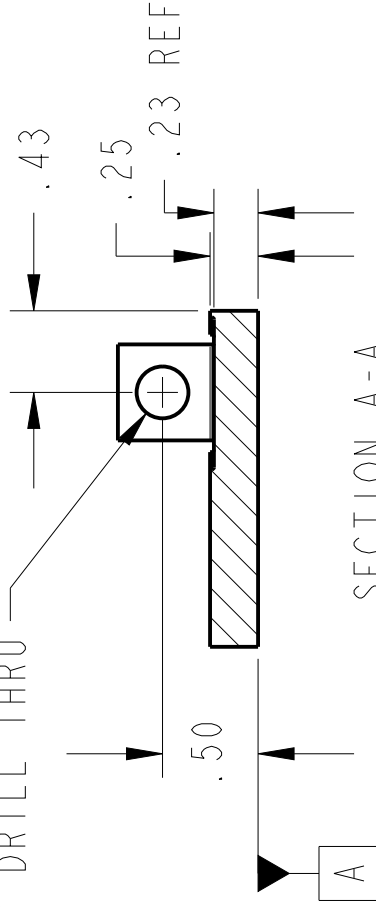
1. REMOVE ALL BURS AND SHARP EDGES.
2. RADII ARE NOT CRITICAL UNLESS OTHERWISE SPECIFIED.

4X R.05
NOT CRITICAL

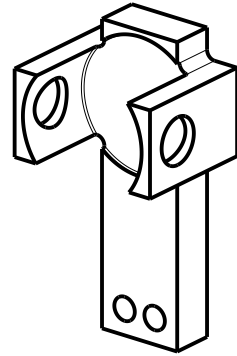
$\perp \varnothing .79 \nabla .02$



2X $\varnothing .27$ DRILL THRU



SECTION A-A



REFERENCE VIEW

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES:

- X.X± .0.1
- X.XX± .0.01
- X.XXX± .0.003
- ANGLES± 0.5°

PART NAME:
ACTUATOR RACK BRACKET

DRAWN BY:
CHRISTINA MORROW

MODELED BY:
JAYSON DICKINSON

SIZE:
A

SCALE:
1:1

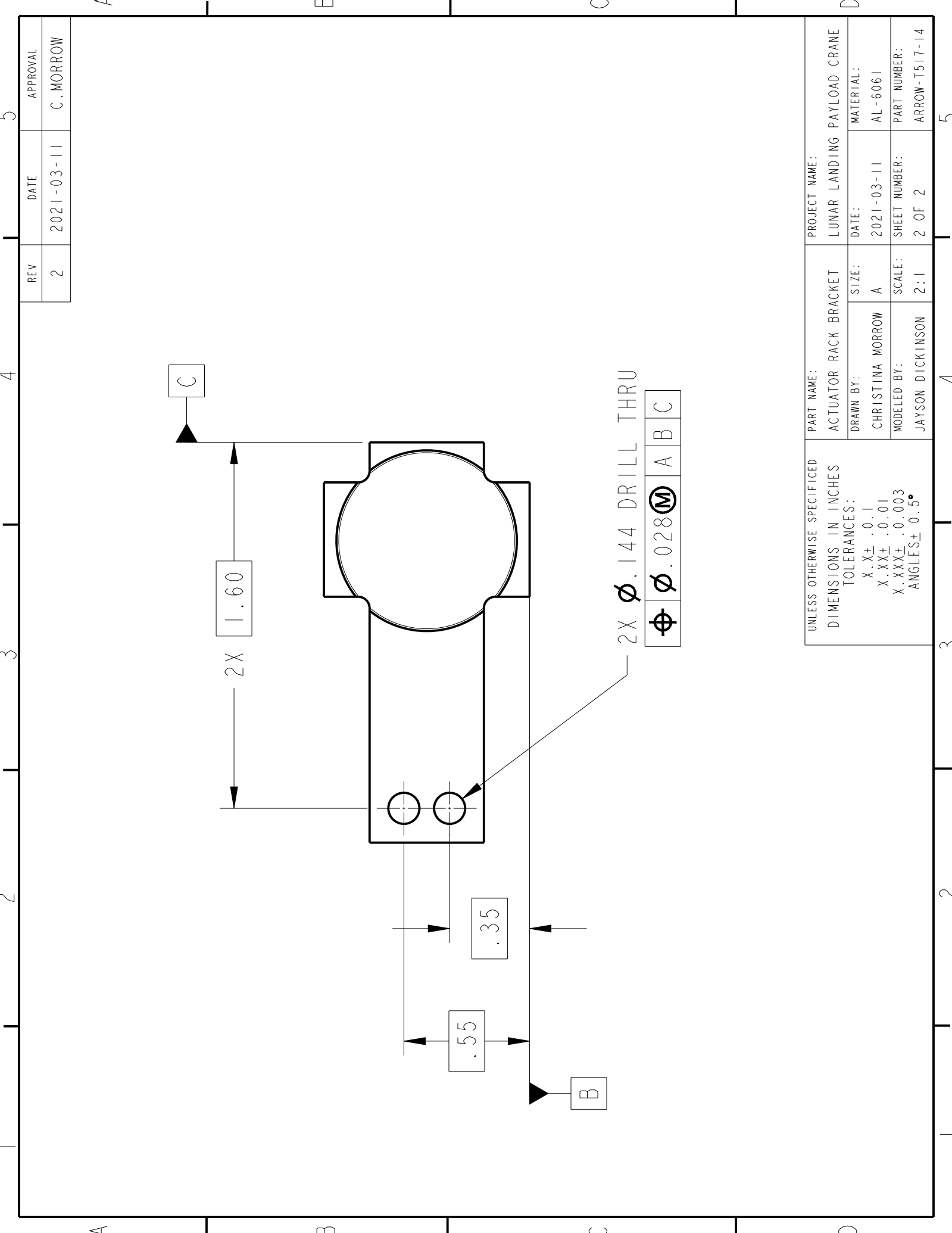
PROJECT NAME:
LUNAR LANDING PAYLOAD CRANE

DATE:
2021-03-11

SHEET NUMBER:
1 OF 2

MATERIAL:
AL-6061

PART NUMBER:
ARROW-T517-14



UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PROJECT NAME:	
X.X± .0.1	X.XX± .0.01	LUNAR LANDING PAYLOAD CRANE	
X.XXX± .0.003	ANGLES± 0.5°	ACTUATOR RACK BRACKET	MATERIAL:
		DRAWN BY: CHRISTINA MORROW	AL-6061
		MODELED BY: JAYSON DICKINSON	PART NUMBER: ARROW-T517-14
		SCALE: 2:1	SHEET NUMBER: 2 OF 2
		DATE: 2021-03-11	

A B C D

A B C D

1 2 3 4 5

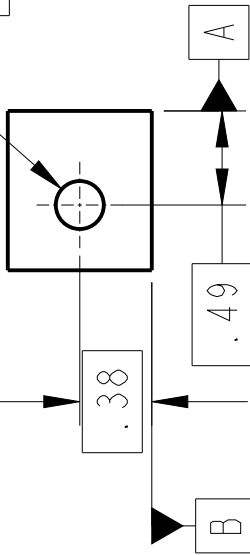
1 2 3 4 5

NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.
2. INTERNAL RADII ARE NOT CRITICAL UNLESS OTHERWISE SPECIFIED.

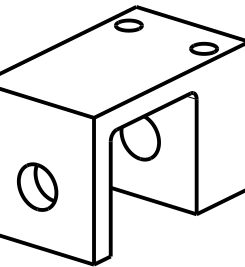
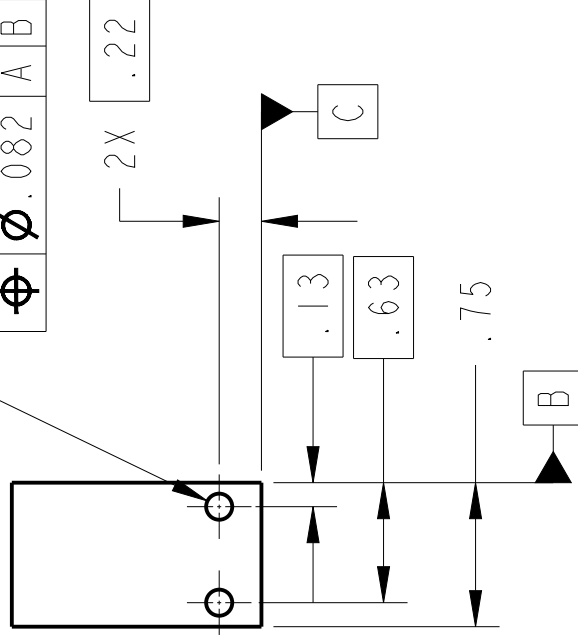
Ø.25 DRILL THRU

Ø.028 M D A B



2X R.05
NOT CRITICAL

2X UNC 8-32 TAP ∇ .50
Ø.082 A B C



REFERENCE VIEW

UNLESS OTHERWISE SPECIFIED

DIMENSIONS IN INCHES

TOLERANCES:

X.X± .0.1

X.XX± .0.01

X.XXX± .0.003

ANGLES± 0.5°

PART NAME:

ACTUATOR WALL BRACKET

DRAWN BY:

CHRISTINA MORROW

MODELED BY:

JAYSON DICKINSON

PROJECT NAME:

LUNAR LANDING PAYLOAD CRANE

DATE:

2021-03-11

SHEET NUMBER:

1 OF 1

MATERIAL:

AL-6061

PART NUMBER:

ARROW-T517-15

REV

2

DATE

2021-03-11

APPROVAL

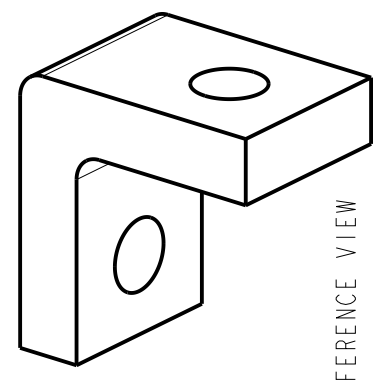
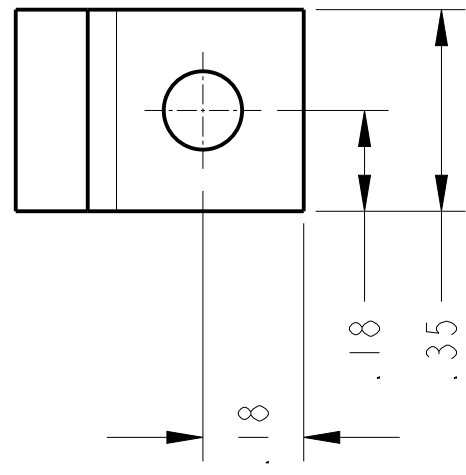
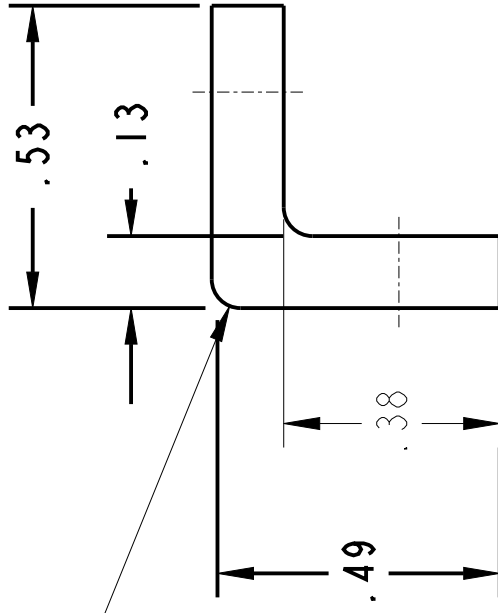
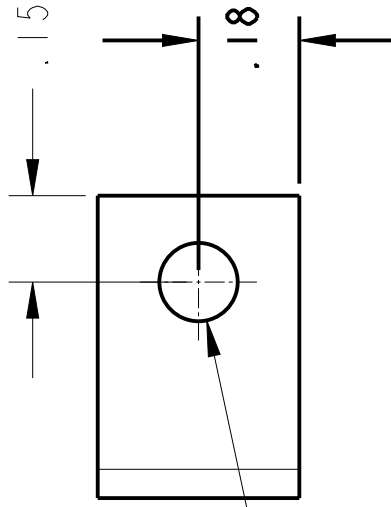
C. MORROW

NOTES:

1. REMOVE ALL BURS AND SHARP EDGES.
2. RADII ARE NOT CRITICAL.

2X UNC 8-32 TAP THRU

2X R.05
NOT CRITICAL



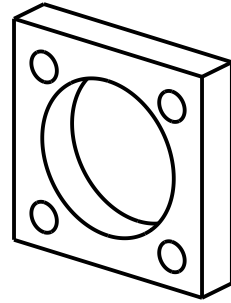
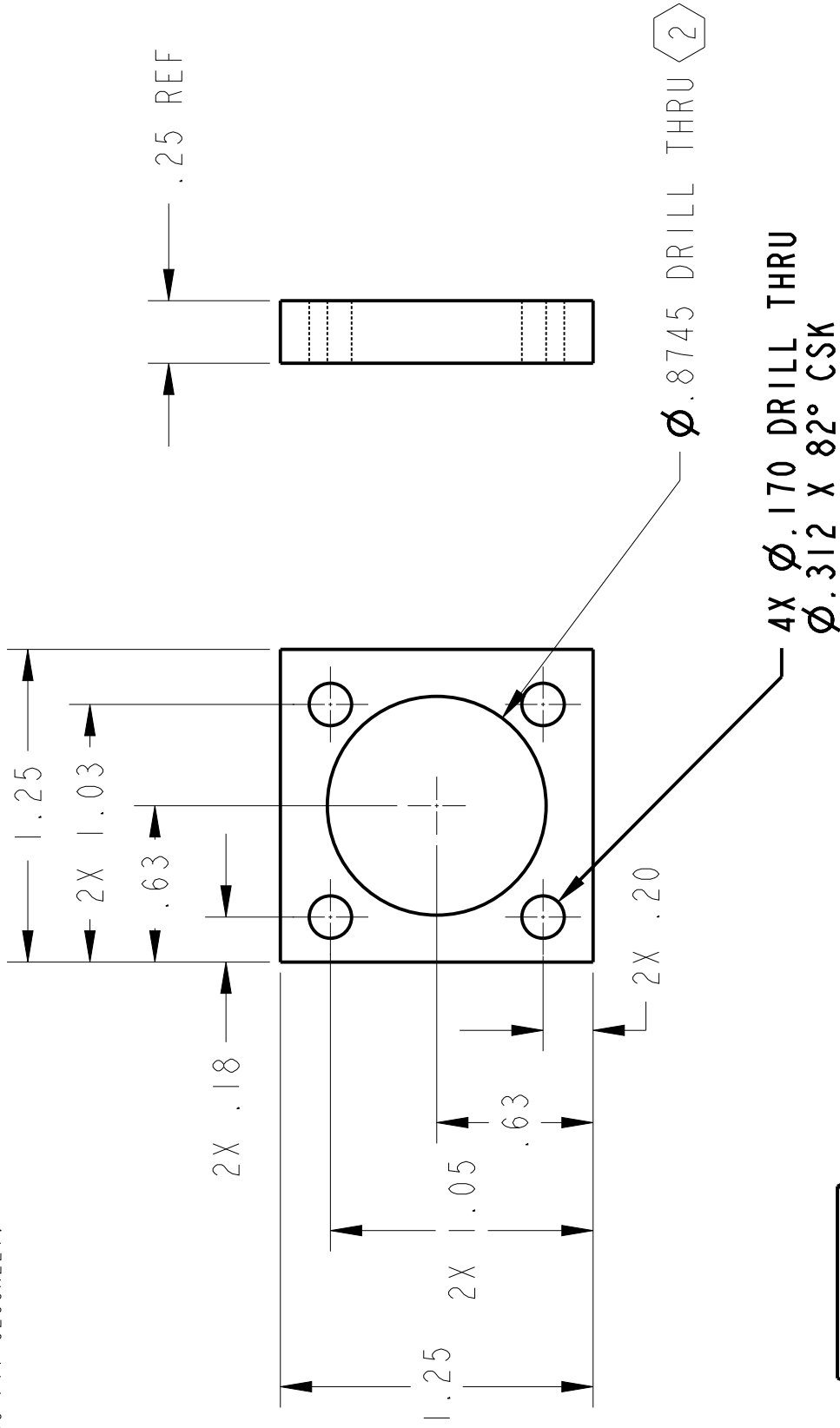
REFERENCE VIEW

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

UNLESS OTHERWISE SPECIFIED		PART NAME:		PROJECT NAME:	
DIMENSIONS IN INCHES		GENERAL BRACKET		LUNAR LANDING PAYLOAD CRANE	
TOLERANCES:		DRAWN BY:	SIZE:	DATE:	MATERIAL:
X.X± .0.1		CHRISTINA MORROW	A	2021-03-11	ALUMINUM-6061
X.XX± .0.01		MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
X.XXX± .0.003		JAYSON DICKINSON	3:1	1 OF 1	ARROW-T517-16
ANGLES± 0.5°					

NOTES:

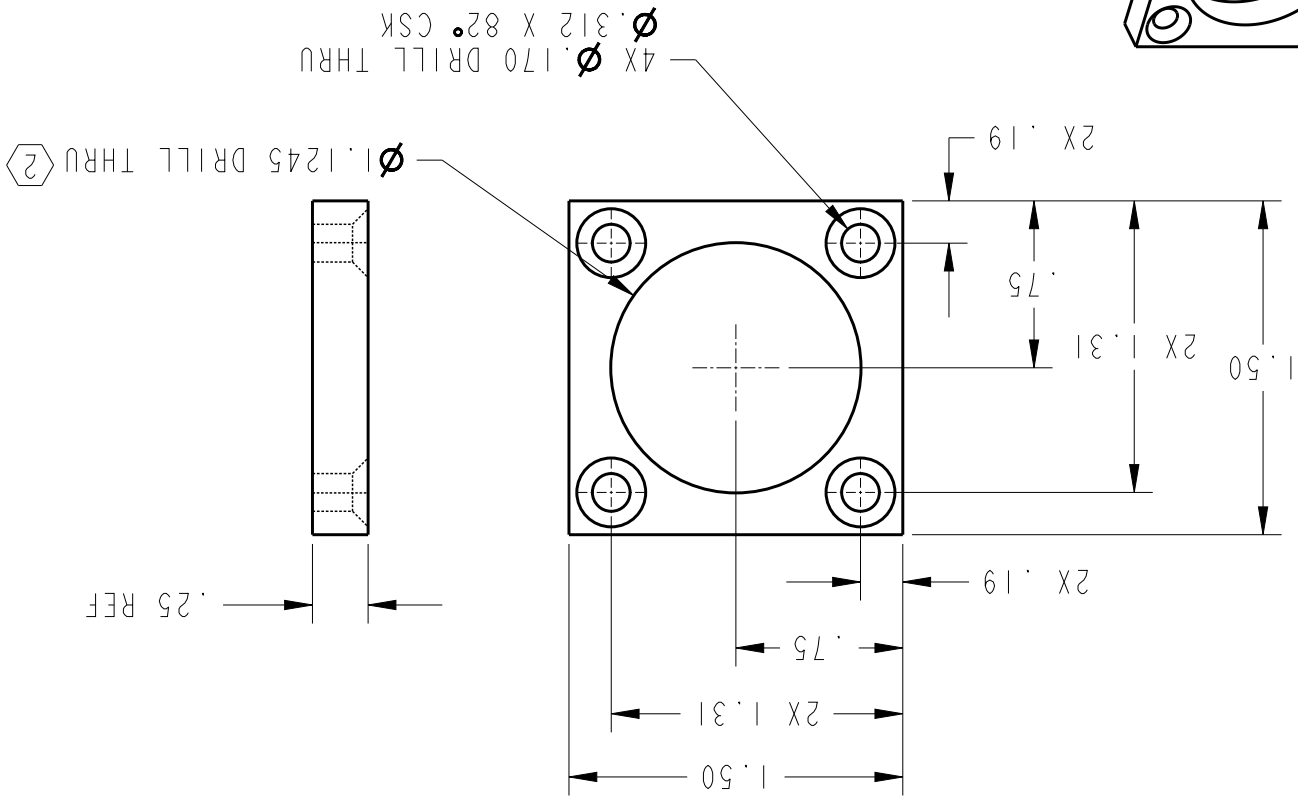
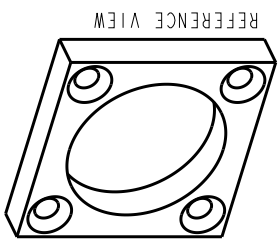
- REMOVE ALL BURS AND SHARP EDGES.
- DIAMETER SHOULD BE SUCH THAT A 0.875 INCH DIAMETER BALL BEARING WILL PRESS FIT SECURELY.



REV	DATE	APPROVAL
2	2021-03-11	C. MORROW
3	2021-03-18	C. MORROW

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PART NAME:	
X.X±	0.1	BEARING BRACKET, SMALL	
X.XX±	0.01	DRAWN BY:	CHRISTINA MORROW
X.XXX±	0.003	MODELED BY:	JAYSON DICKINSON
ANGLES± 0.5°		SCALE:	3:2
		PROJECT NAME:	
		LUNAR LANDING PAYLOAD CRANE	
		DATE:	2021-03-18
		MATERIAL:	ALUMINUM-6061
		SHEET NUMBER:	1 OF 1
		PART NUMBER:	ARROW-T517-17

UNLESS OTHERWISE SPECIFIED		PART NAME: BEARING BRACKET, LARGE		PROJECT NAME: LUNAR LANDING PAYLOAD CRANE	
DIMENSIONS IN INCHES		DRAWN BY: CHRISTINA MORROW		DATE: 2021-03-11	
TOLERANCES:		SCALE: 3:2		SHEET NUMBER: 1 OF 1	
X.XX± .01		MODELED BY: JAYSON DICKINSON		PART NUMBER: ARROW-T517-18	
X.XX± .01		DATE: 2021-03-11		MATERIAL: ALUMINUM-6061	
X.XX± .01		SIZE: A		PART NUMBER: ARROW-T517-18	
ANGLE± 0.5°		SCALE: 3:2		SHEET NUMBER: 1 OF 1	



4X Ø .312 X 82° CSK
Ø .170 DRILL THRU

Ø 1.1245 DRILL THRU (2)

.25 REF

NOTES:
1. REMOVE ALL BURS AND SHARP EDGES.
2. DIAMETER SHOULD BE SUCH THAT A 1.125 INCH DIAMETER BALL BEARING WILL PRESS FIT SECURELY.

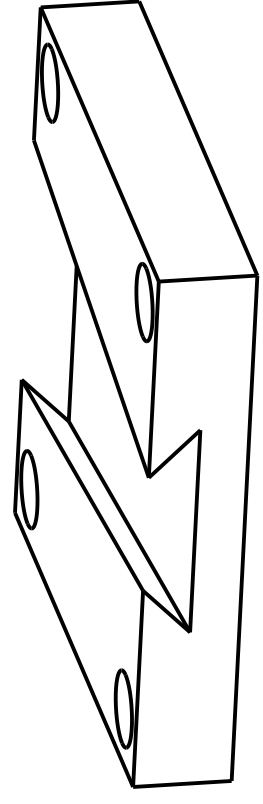
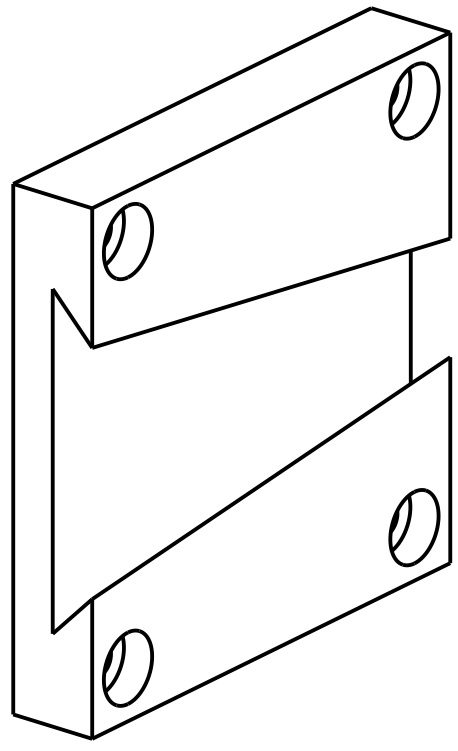
REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

A B C D

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

1 2 3 4 5

NOTES:
 1. REMOVE ALL BURS AND SHARP EDGES.
 2 IF 44.8° IS NOT ACHIEVABLE, PLEASE USE STANDARD DOVE TAIL CUTTER SUCH THAT ARROW-T517-19 MATES WITH ARROW-T517-11.

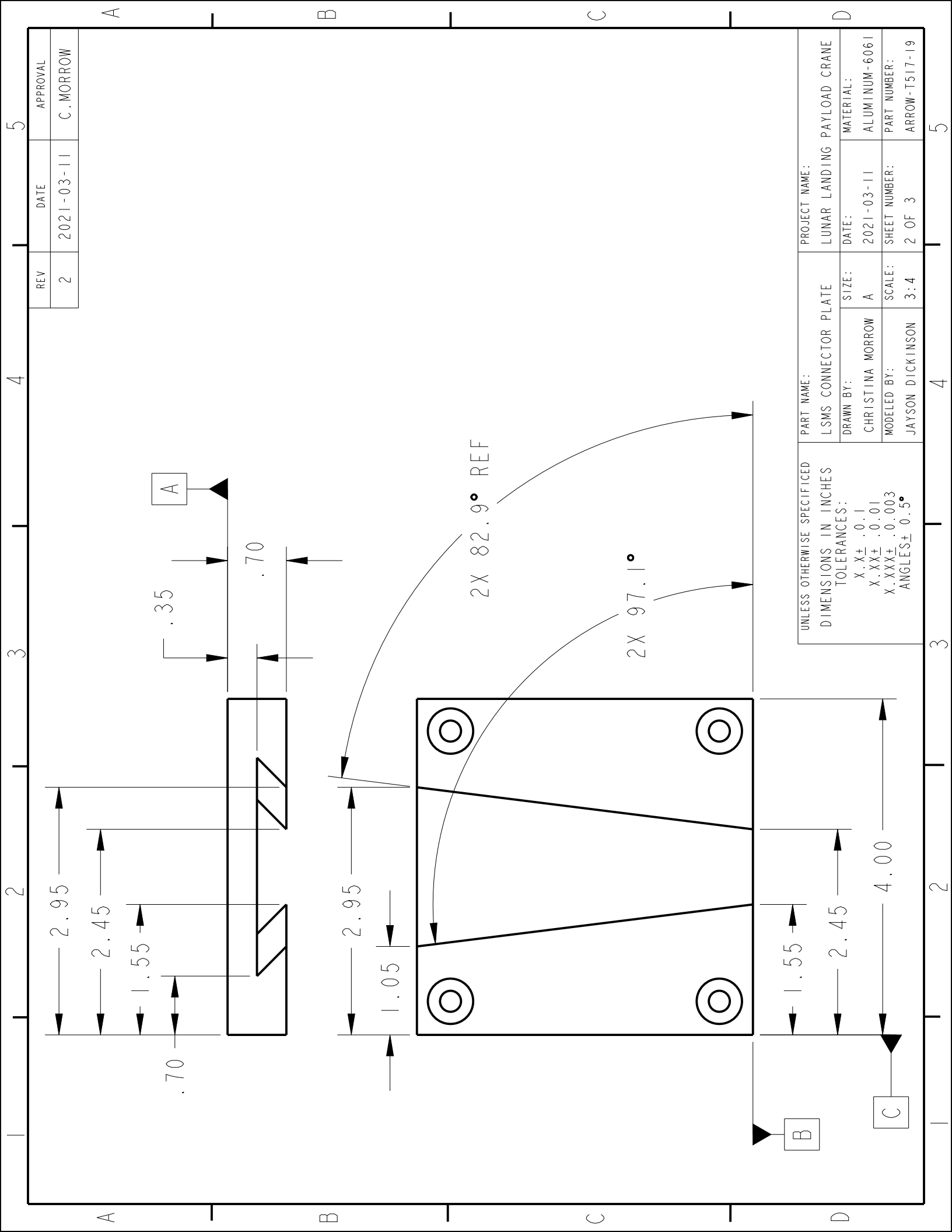


REFERENCE VEIWS

A B C D

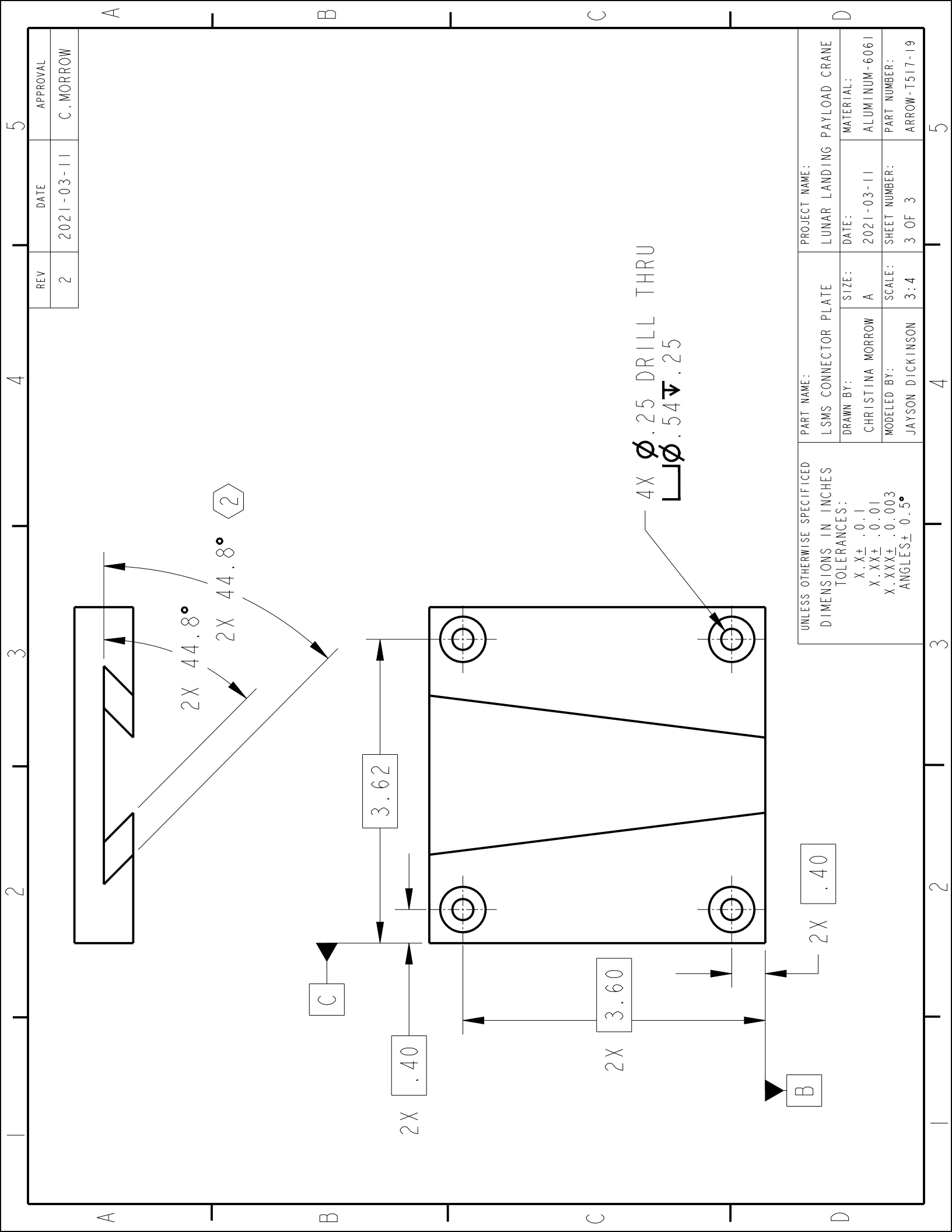
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES: X.X± .0.1 X.XX± .0.01 X.XXX± .0.003 ANGLES± 0.5°	PART NAME:		PROJECT NAME:	
	LSMS CONNECTOR PLATE		LUNAR LANDING PAYLOAD CRANE	
	DRAWN BY:	SIZE:	DATE:	MATERIAL:
	CHRISTINA MORROW	A	2021-03-11	ALUMINIUM-6061
MODELED BY:		SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON		3:4	1 OF 3	ARROW-T517-19

1 2 3 4 5

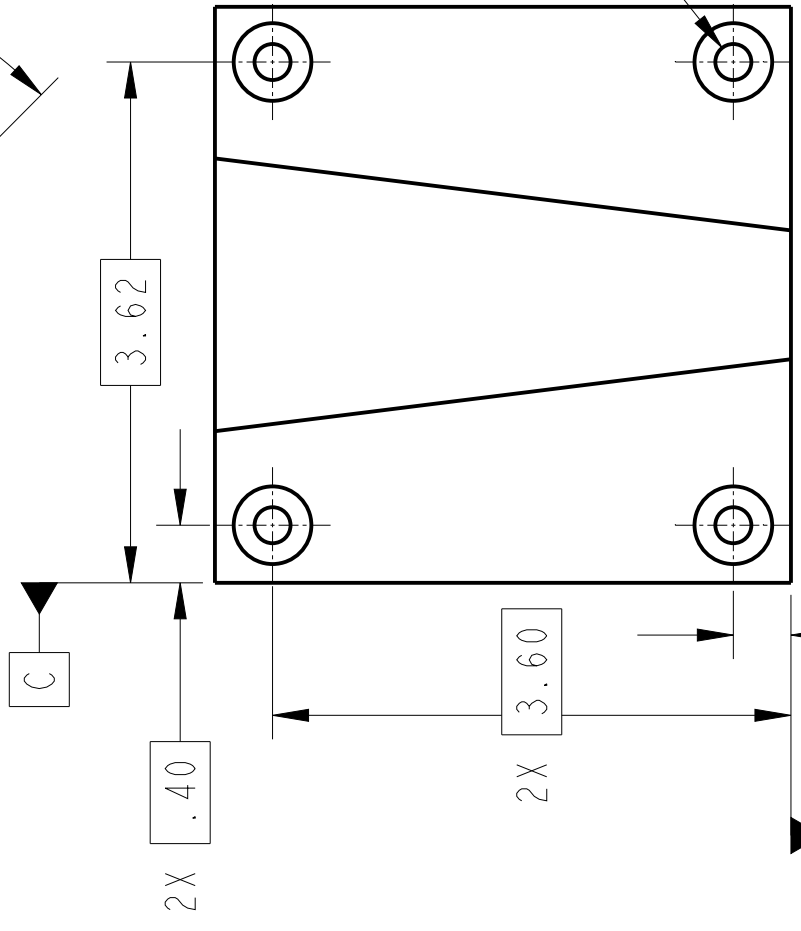
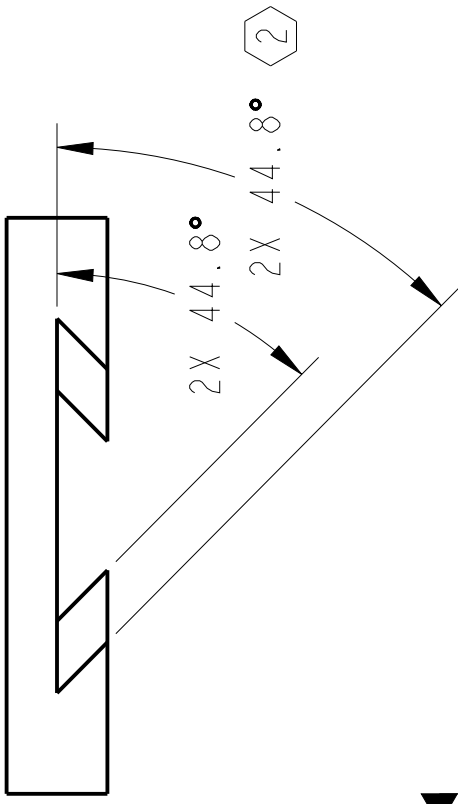


REV	DATE	APPROVAL
2	2021-03-11	C. MORROW

PART NAME:		PROJECT NAME:	
LSMS CONNECTOR PLATE		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-11	ALUMINUM-6061
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	3:4	2 OF 3	ARROW-T517-19

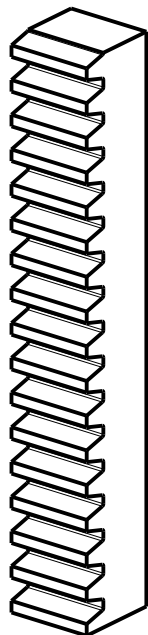
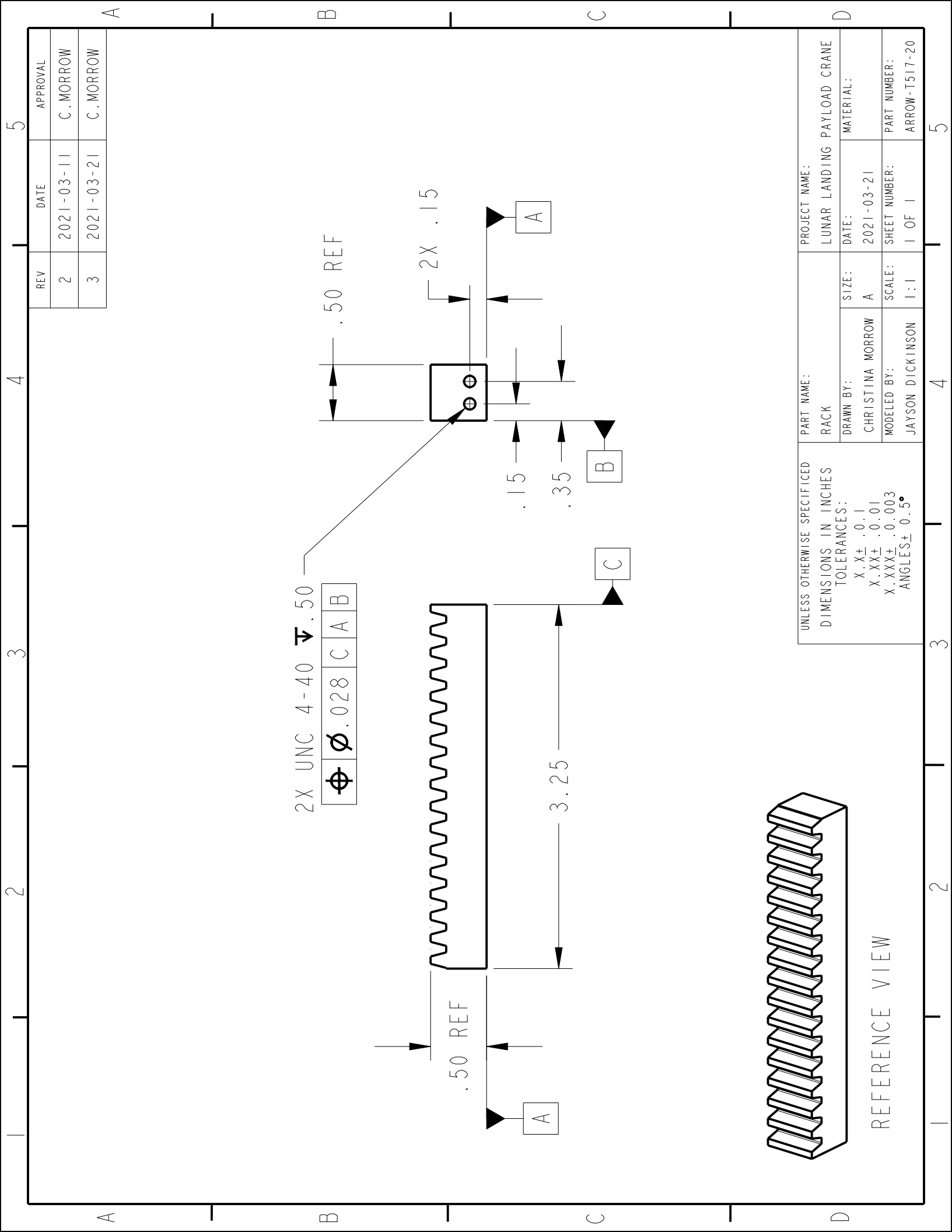


REV	DATE	APPROVAL
2	2021-03-11	C. MORROW



4X $\varnothing .25$ DRILL THRU
 $\sqsupset \varnothing .54 \nabla .25$

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES:		PART NAME:		PROJECT NAME:	
X.X±	.0.1	LSMS CONNECTOR PLATE	LUNAR LANDING PAYLOAD CRANE	DATE:	2021-03-11
X.XX±	.0.01	DRAWN BY: CHRISTINA MORROW	SIZE: A	MATERIAL:	ALUMINIUM-6061
X.XXX±	.0.003	MODELED BY: JAYSON DICKINSON	SCALE: 3:4	SHEET NUMBER:	3 OF 3
ANGLES±	0.5°			PART NUMBER:	ARROW-T517-19



REFERENCE VIEW

REV	DATE	APPROVAL
2	2021-03-11	C. MORROW
3	2021-03-21	C. MORROW

PART NAME:		PROJECT NAME:	
RACK		LUNAR LANDING PAYLOAD CRANE	
DRAWN BY:	SIZE:	DATE:	MATERIAL:
CHRISTINA MORROW	A	2021-03-21	
MODELED BY:	SCALE:	SHEET NUMBER:	PART NUMBER:
JAYSON DICKINSON	1:1	1 OF 1	ARROW-T517-20

UNLESS OTHERWISE SPECIFIED
 DIMENSIONS IN INCHES
 TOLERANCES:
 X.X± .0.1
 X.XX± .0.01
 X.XXX± .0.003
 ANGLES± 0.5°