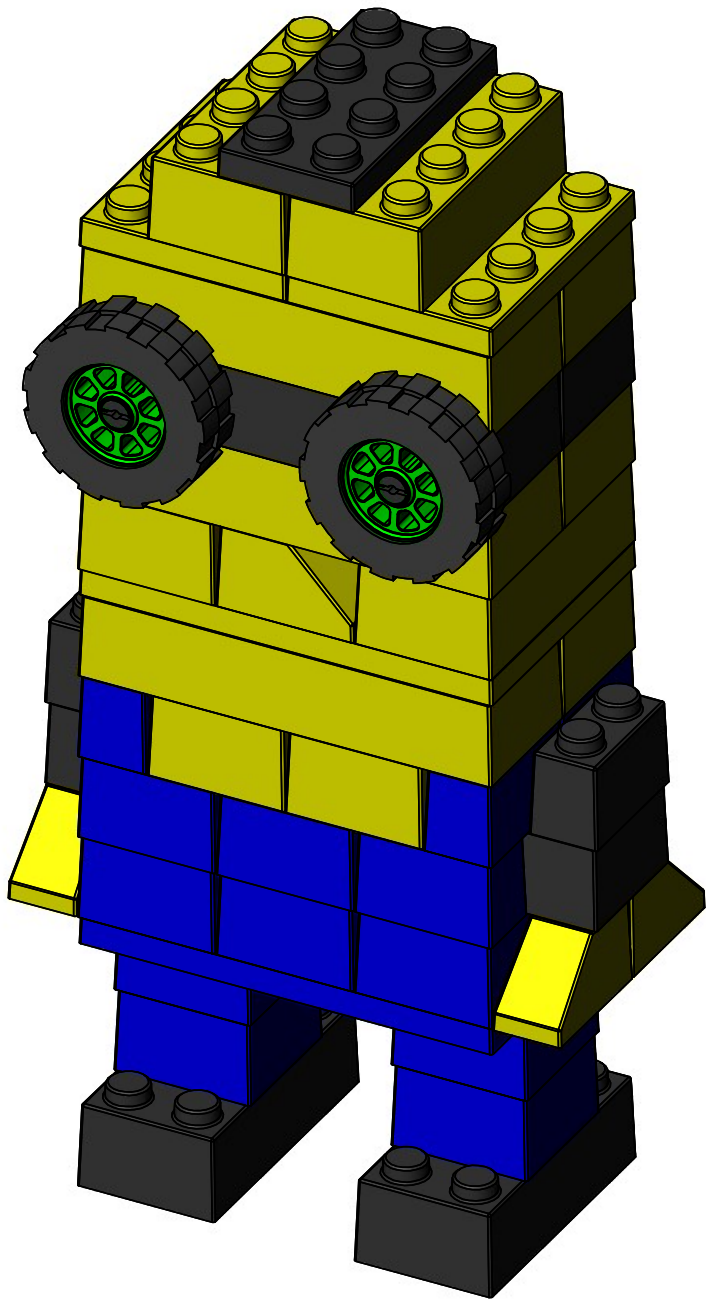
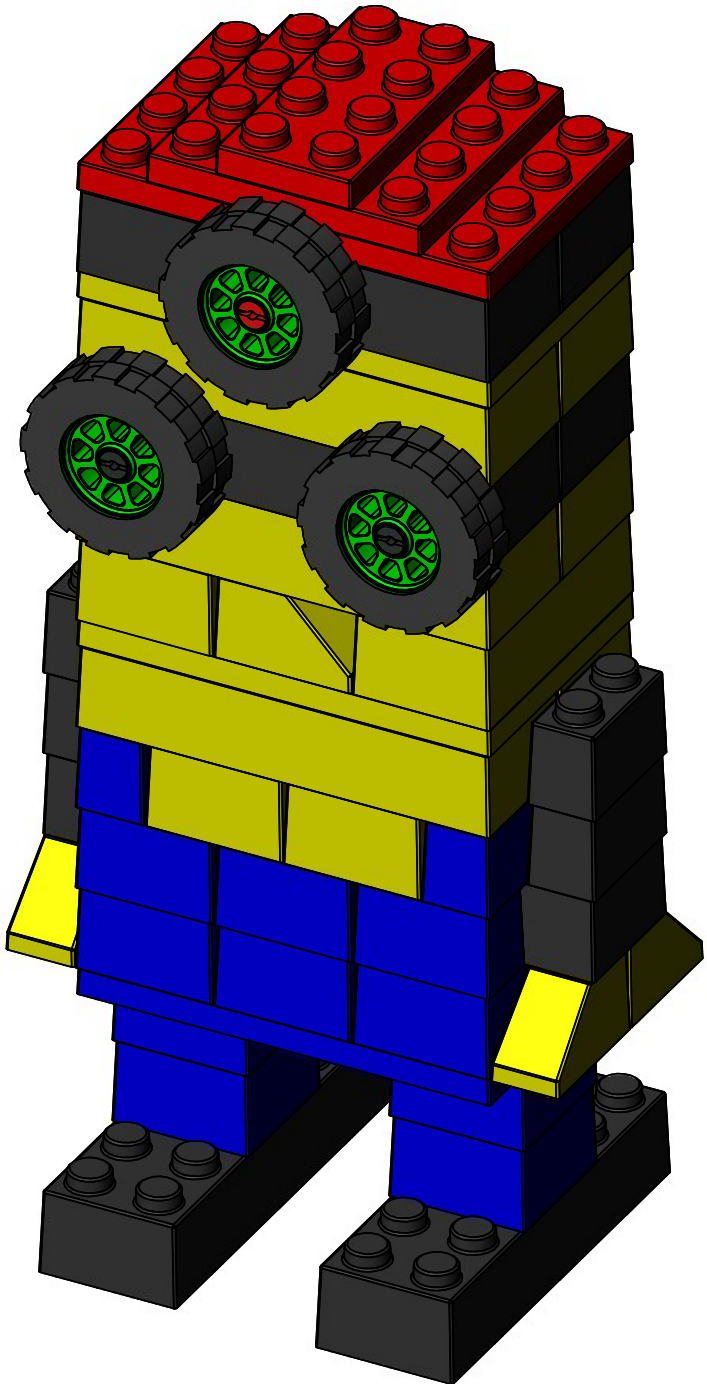


MINION CONFIGURATIONS



2 EYE LEGO MINION



3 EYE LEGO MINION

FINAL ASSEMBLY	A	2 EYE LEGO MINION
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y 14.5M-1994

DIMENSIONS ARE IN MILLIMETRES

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC ± 0.5

1 PL DEC ± 0.3

2 PL DEC ± 0.13

3 PL DEC ± 0.073

ANGLES ± 1°

SURFACE ROUGHNESS 0.8 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA

CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT THE WRITTEN PERMISSION OF Conestoga College.

CUSTOMER XYZ Company

PROJECT FINAL PROJECT

DRAWN BY Vijay Prajwal

CHECKED BY Prof. Flukerson

APPROVED Prof. Flukerson

DATE 2020-04-27

DATE 2020-04-30

DATE 2020-04-30

CONESTOGA

Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

FINAL ASSEMBLY

DRAWING NO

B

SCALE 2:1

WEIGHT 83.226 g

REVISION

Drawing_Sheet A

SHEET 1 OF 12

4

3

2

1

D

C

B

A

7

1

6

4

10

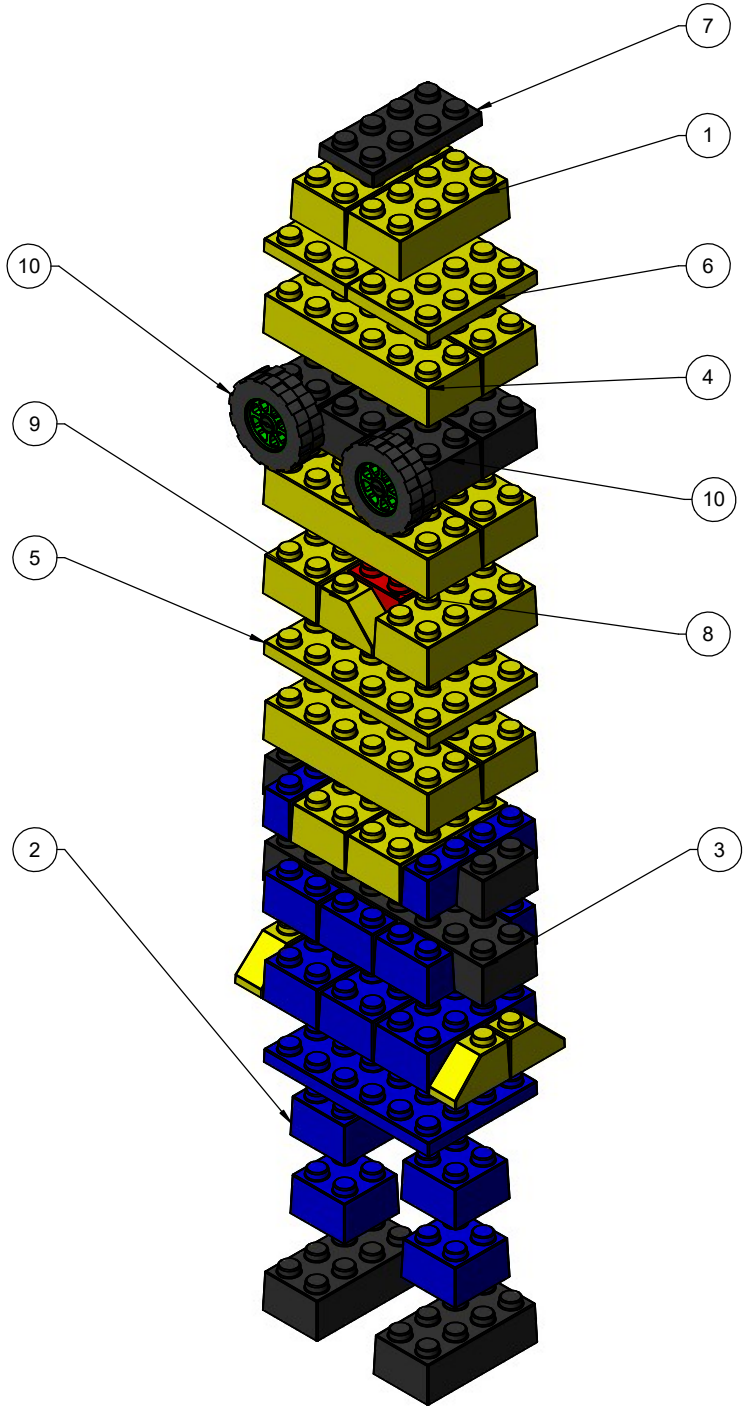
9

5

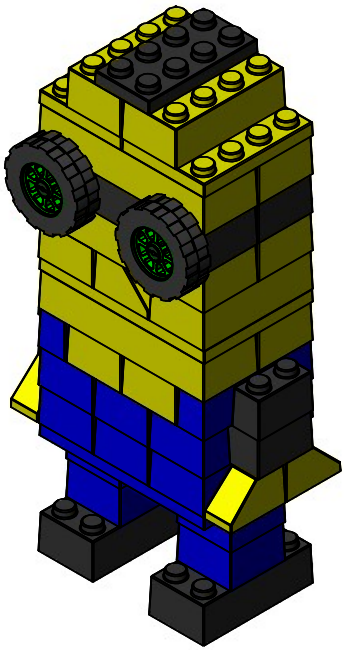
8

2

3



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	BLOCK	2 X 4 BLOCK	24
2	BLOCK	2 X 2 BLOCK	14
3	BLOCK	2 X 8 BLOCK	2
4	BLOCK	2 X 6 BLOCK	12
5	SHORT BLOCK	4 X 6 SHORTBLOCK	8
6	SHORT BLOCK	4 X 3 SHORTBLOCK	8
7	SHORT BLOCK	4 X 2 SHORTBLOCK	4
8	ANGLE PART	1 X 2 BLOCK	13
9	ANGLE PART	ANGLED BLOCK	5
10	BLOCK WITH WHEEL	BLOCK WITH WHEEL	2



FINAL ASSEMBLY

A

2 EYE LEGO MINION

PART NUMBER

REV

DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y 14.5M-1994

DIMENSIONS ARE IN MILLIMETRES

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC ± 0.5

1 PL DEC ± 0.3


2 PL DEC ± 0.13

3 PL DEC ± 0.073

ANGLES ± 1°

SURFACE ROUGHNESS 0.8 µm

THIRD ANGLE PROJECTION



SolidWorks MAINTAINED DATA

CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT THE WRITTEN PERMISSION OF Conestoga College.

CUSTOMER

XYZ Company

PROJECT

FINAL PROJECT

DRAWN BY

Vijay Prajwal

DATE

2020-04-27

CHECKED BY

Prof. Flukerson

DATE

2020-04-30

APPROVED

Prof. Flukerson

DATE

2020-04-30

C

CONESTOGA

Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

2 EYE LEGO MINION

SIZE

B

DRAWING NO

SCALE

1:1

WEIGHT

83.226 g

REVISION



SHEET 2 OF 12

Drawing_Sheet -

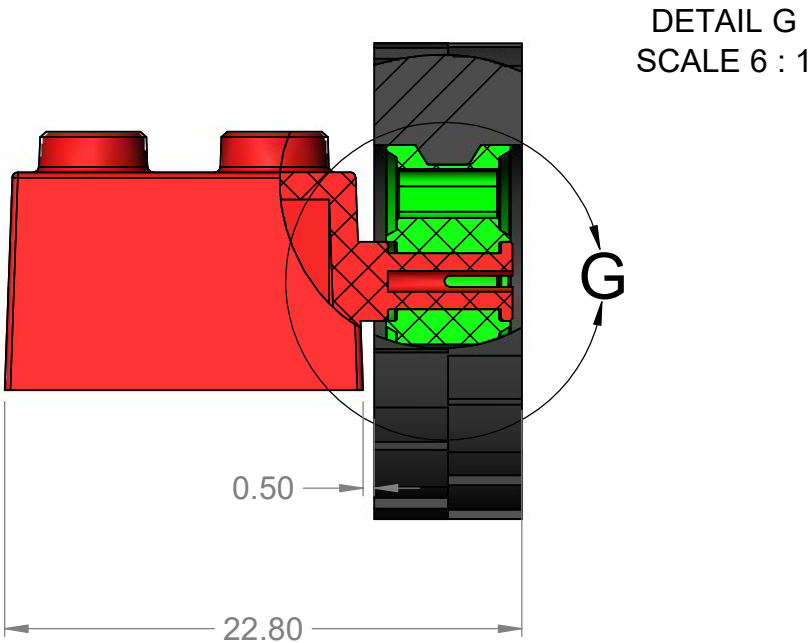
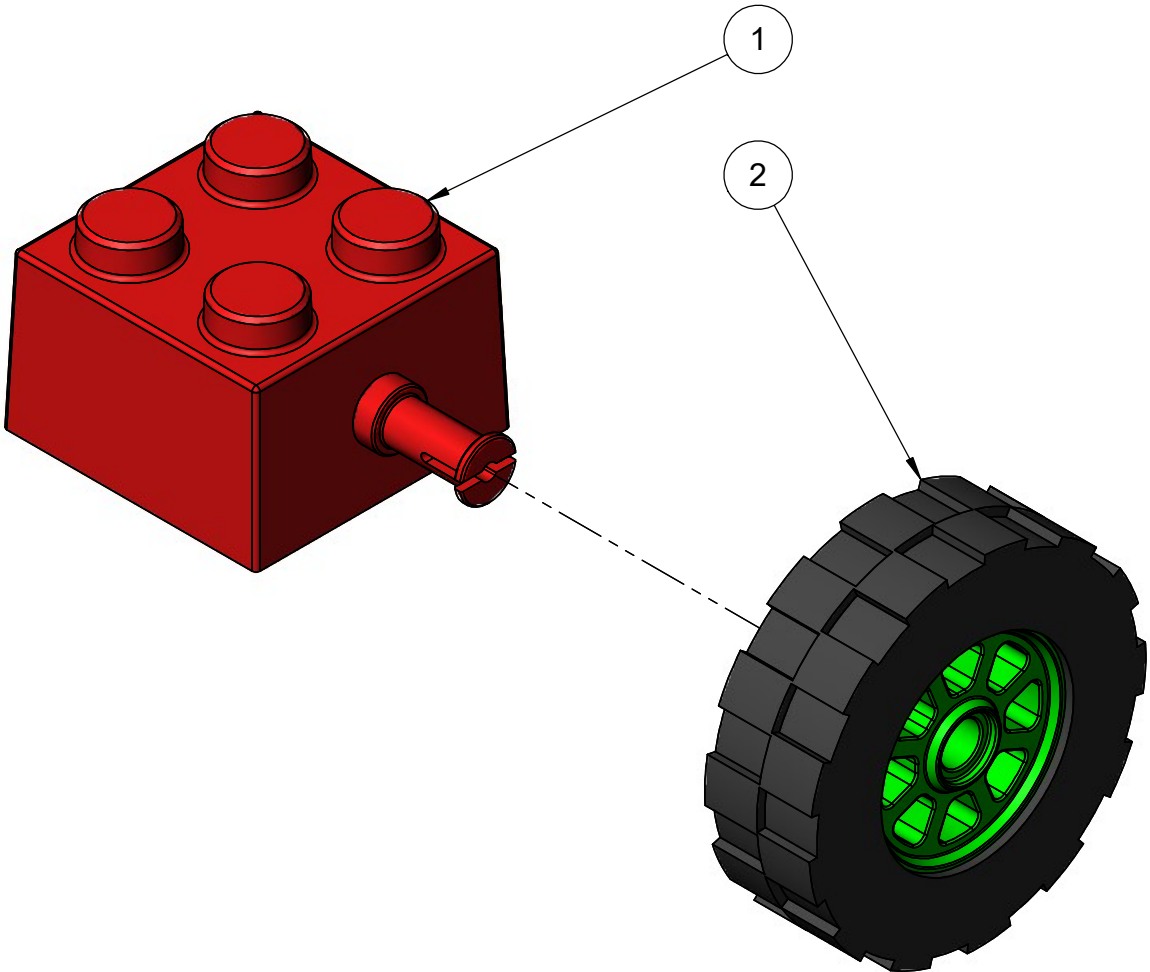
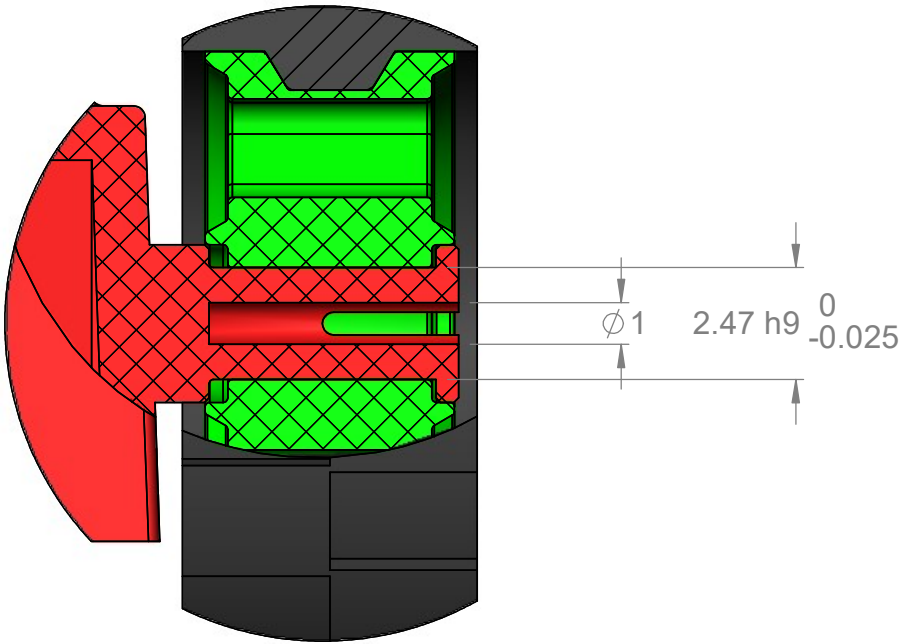
SOLIDWORKS Educational Product. For Instructional Use Only.

1



UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING		SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY		 CONESTOGA Connect Life and Learning		299 Doon Valley Drive, Kitchener, ON, N2G 4M4	
INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994		PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT THE WRITTEN PERMISSION OF Conestoga College.		TITLE		3 EYE LEGO MINION	
DIMENSIONS ARE IN MILLIMETRES TOLERANCES APPLY AS SHOWN BELOW		CUSTOMER XYZ Company		PROJECT FINAL PROJECT		SIZE	
0 PL DEC ± 0.5 1 PL DEC ± 0.3 2 PL DEC ± 0.13 3 PL DEC ± 0.013 ANGLES ± 1° SURFACE ROUGHNESS 0.8 µm		DRAWN BY Vijay Prajwal CHECKED BY Prof. Flukerson APPROVED Prof. Flukerson		DATE 2020-04-27 DATE 2020-04-30 DATE 2020-04-30		DRAWING NO B SCALE 1:1	
THIRD ANGLE PROJECTION 				WEIGHT 95.500 g		SHEET 3 OF 12	

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	BLOCK FOR WHEEL	BLOCKS	1
2	HUB & WHEEL	HUB & WHEEL	1



BLOCK WITH WHEEL	BLOCK WITH WHEEL
PART NUMBER	REV DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994

DIMENSIONS ARE IN MILLIMETERS

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.5
1 PL DEC	± 0.3
2 PL DEC	± 0.13
3 PL DEC	± 0.013
ANGLES	$\pm .1^\circ$
SURFACE ROUGHNESS	$0.8 \mu\text{m}$

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA
CHANGES SHALL BE INCORPORATED
ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED,
STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN
ANY FORM, WITHOUT THE WRITTEN PERMISSION OF
Conestoga College

CUSTOMER
XYZ Company

PROJECT
FINAL PROJECT

DRAWN BY Vijay prajwal	DATE 2020-04-27
CHECKED BY Prof. Flukerson	DATE 2020-04-30
APPROVED Prof. Flukerson	DATE 2020-04-30

CONESTOGA
Connect Life and Learning

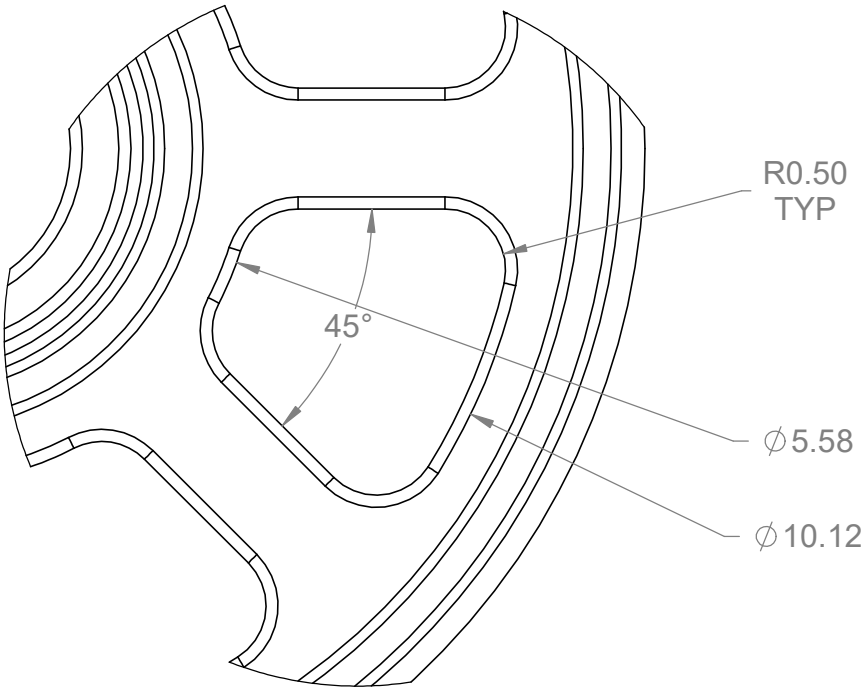
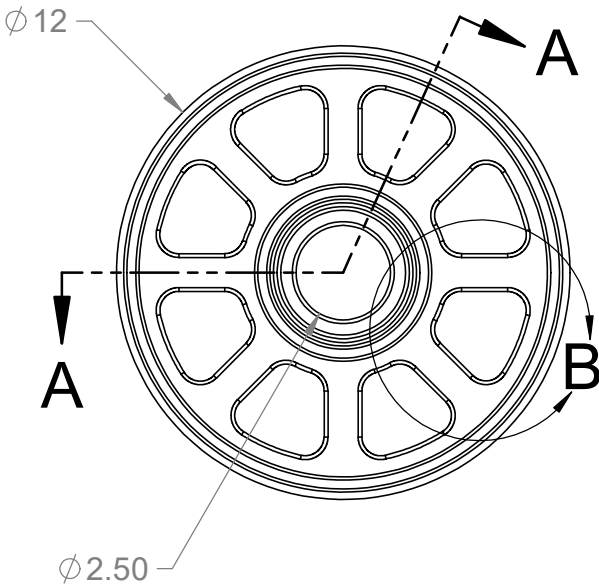
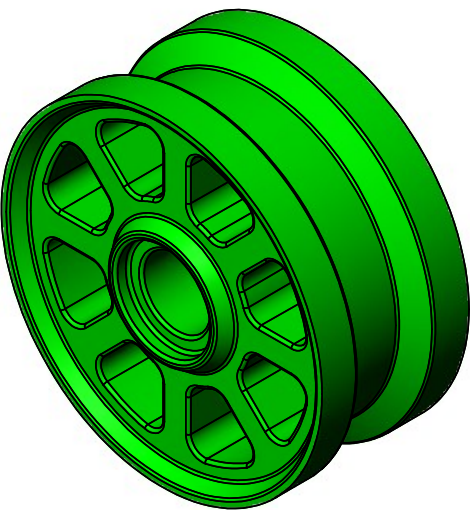
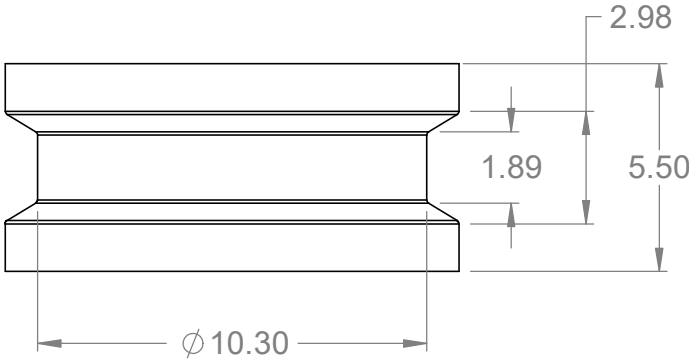
299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE
BLOCK WITH WHEEL

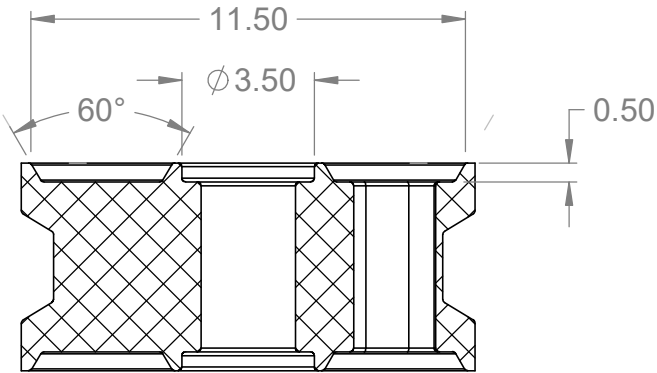
SIZE B	DRAWING NO.	REVISION
SCALE 3:1	WEIGHT 3.174 g	SHEET 4 OF 12

Drawing_Sheet

- NOTES:
- 1. MATERIAL: ABS
 - 2. REMOVE ALL SHARP EDGES



DETAIL B
SCALE 16 : 1



SECTION A-A

0001	A	HUB
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994

DIMENSIONS ARE IN MILLIMETERS

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.5
1 PL DEC	± 0.25
2 PL DEC	± 0.13
3 PL DEC	± 0.05
ANGLES	± .1°
SURFACE ROUGHNESS	1.6 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA
CHANGES SHALL BE INCORPORATED
ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED,
STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN
ANY FORM, WITHOUT THE WRITTEN PERMISSION OF
Conestoga College

CUSTOMER
XYZ Company

PROJECT
FINAL PROJECT

DRAWN BY Vijay Prajwal	DATE 2020-04-25
CHECKED BY Prof. Flukerson	DATE 2020-04-30
APPROVED Prof. Flukerson	DATE 2020-04-30

CONESTOGA
Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

HUB

SIZE

B

DRAWING NO

Drawing_Sheet A

SCALE

5:1

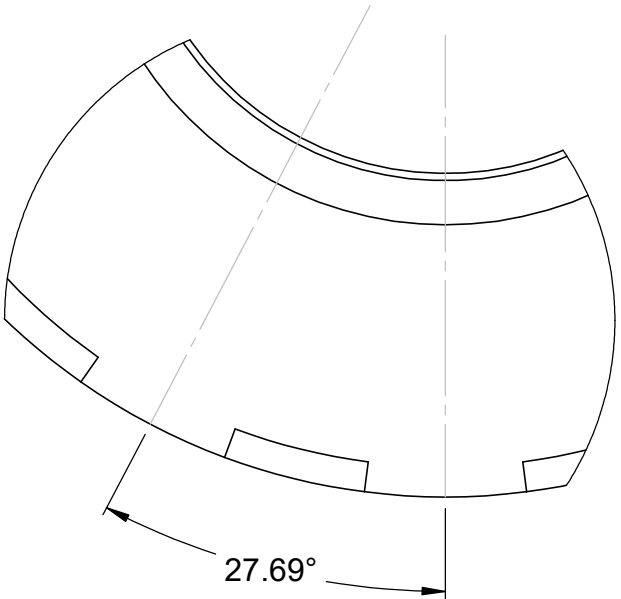
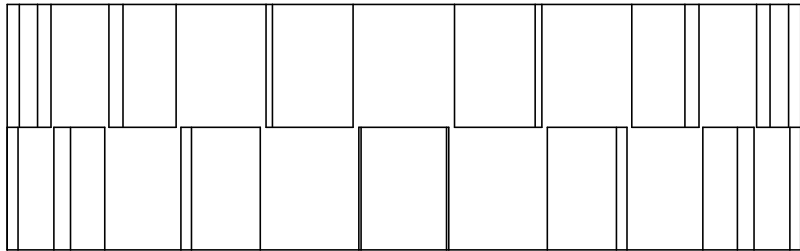
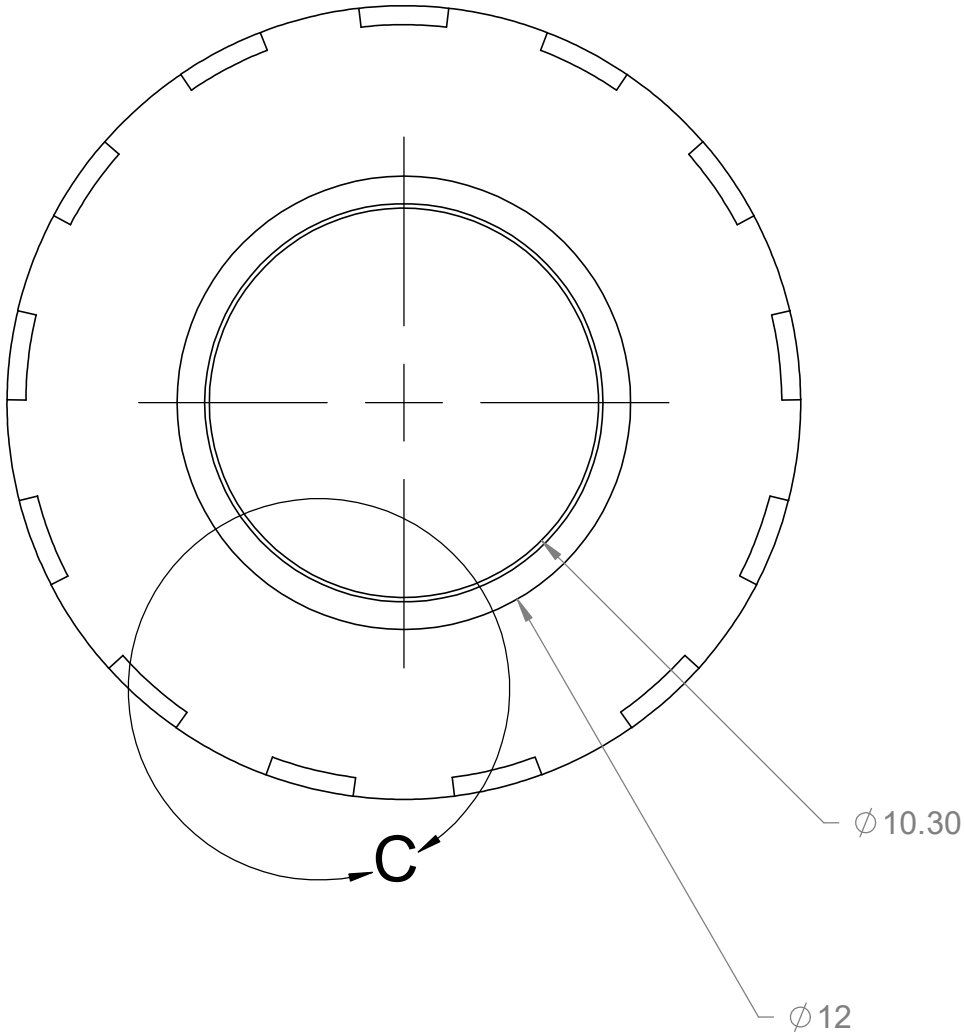
WEIGHT

0.289 g

REVISION

SHEET 5 OF 12

NOTES:
1. MATERIAL : BUTYL
2. REMOVE ALL SHARP EDGES



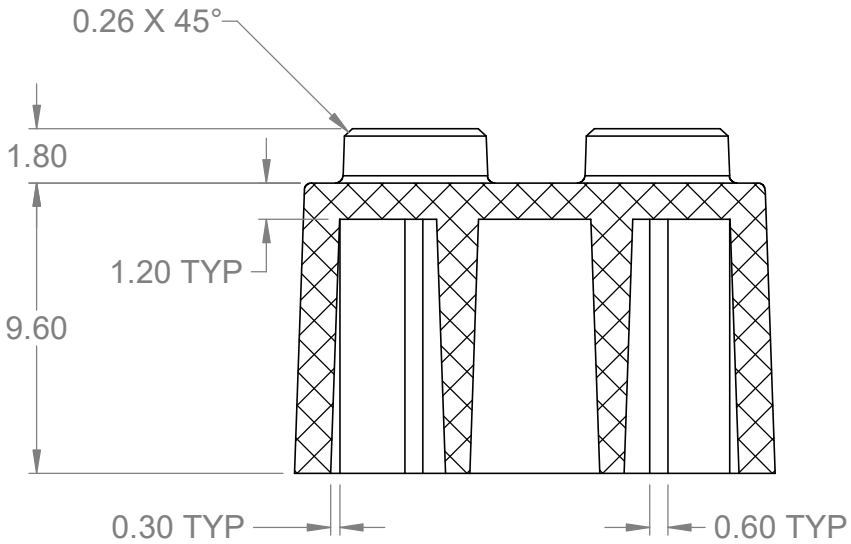
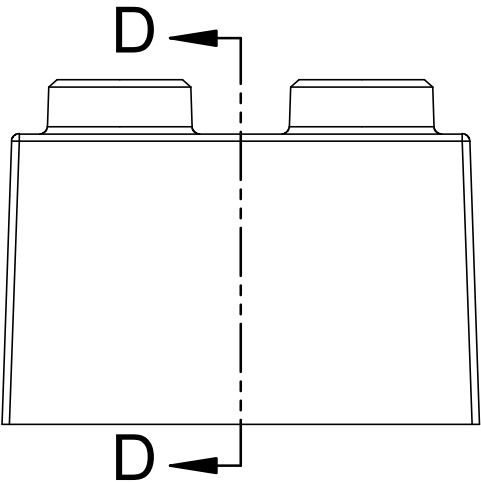
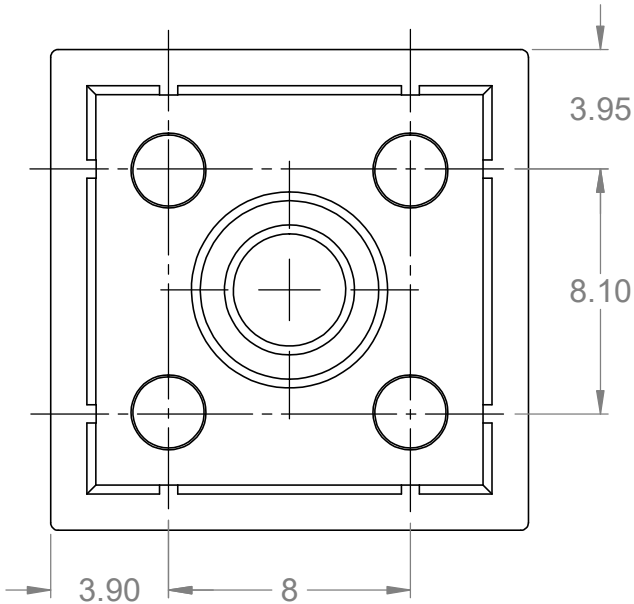
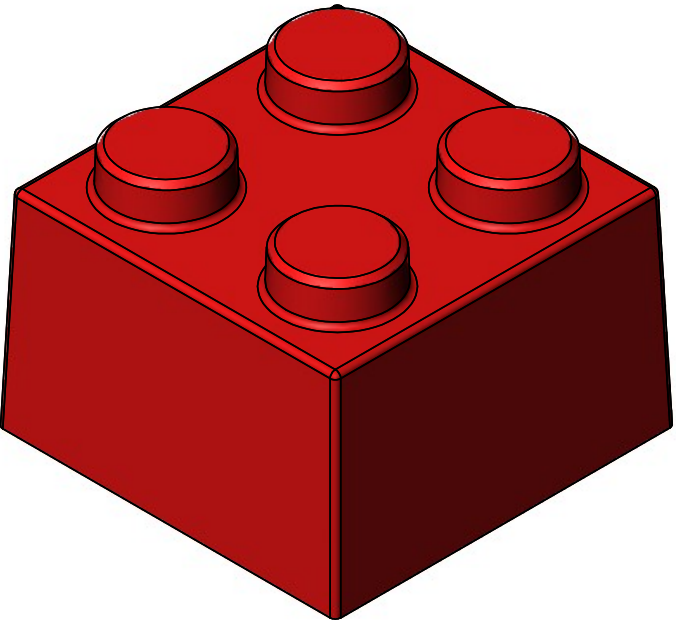
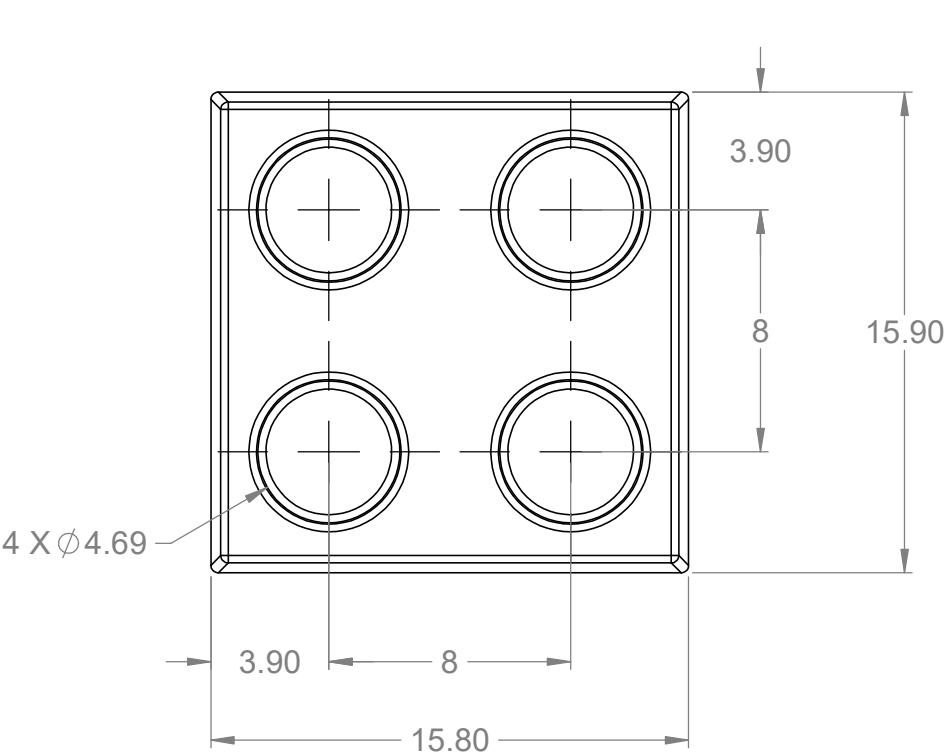
DETAIL C
SCALE 8 : 1



0002	A	WHEEL
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED DO NOT SCALE DRAWING INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994 DIMENSIONS ARE IN MILLIMETERS TOLERANCES APPLY AS SHOWN BELOW 0 PL DEC ± 0.5 1 PL DEC ± 0.3 2 PL DEC ± 0.13 3 PL DEC ± 0.013 ANGLES ± .1° SURFACE ROUGHNESS 0.8 µm		SolidWorks MAINTAINED DATA CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY		CONESTOGA Connect Life and Learning 299 Doon Valley Drive, Kitchener, ON, N2G 4M4	
		PROPRIETARY NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT THE WRITTEN PERMISSION OF Conestoga College		TITLE WHEEL	
THIRD ANGLE PROJECTION 		CUSTOMER XYZ Company	DATE 2020-04-25	SIZE B	REVISION
DRAWN BY Vijay Prajwal		PROJECT FINAL PROJECT	DATE 2020-04-30	DRAWING NO.	Drawing_Sheet A
CHECKED BY Prof. Flukerson		APPROVED Prof. Flukerson	DATE 2020-04-30	SCALE 5:1	
				WEIGHT 1.725 g	SHEET 6 OF 12

- NOTES:
- 1. MATERIAL : ABS
 - 2. REMOVE ALL SHARP EDGES
 - 3. ALL DRAFT ANGLES ARE 2 DEGREE
 - 4. ALL FILLETS AND ROUNDS ARE 0.25MM



SECTION D-D

BLOCK	A	2 X 2 BLOCK
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994

DIMENSIONS ARE IN MILLIMETERS

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.5
1 PL DEC	± 0.3
2 PL DEC	± 0.13
3 PL DEC	± 0.013
ANGLES	± .1°
SURFACE ROUGHNESS	0.8 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA
CHANGES SHALL BE INCORPORATED
ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED,
STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN
ANY FORM, WITHOUT THE WRITTEN PERMISSION OF
Conestoga College

CUSTOMER
XYZ Company

PROJECT
FINAL PROJECT

DRAWN BY Vijay Prajwal	DATE 2020-04-25
CHECKED BY Prof. Flukerson	DATE 2020-04-30
APPROVED Prof. Flukerson	DATE 2020-04-30

C CONESTOGA
Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

2 X 2 BLOCK

SIZE	DRAWING NO	REVISION
B		Drawing_Sheet A
SCALE	4:1	WEIGHT 1.124 g

SHEET 7 OF 12

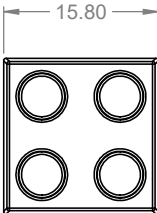
D

C

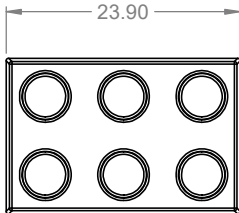
B

A

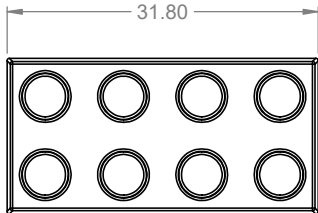
BLOCK CONFIGURATIONS



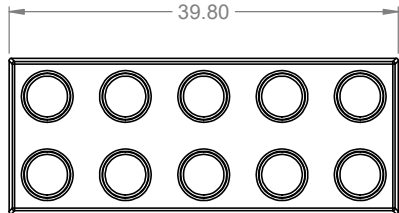
2 x 2



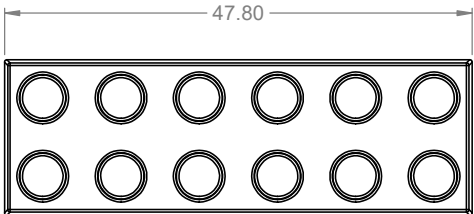
2 x 3



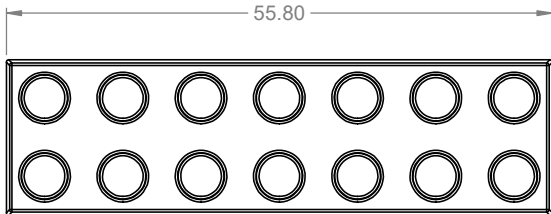
2 x 4



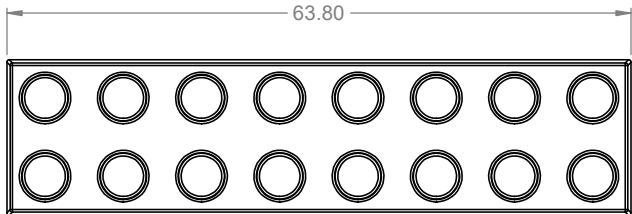
2 x 5



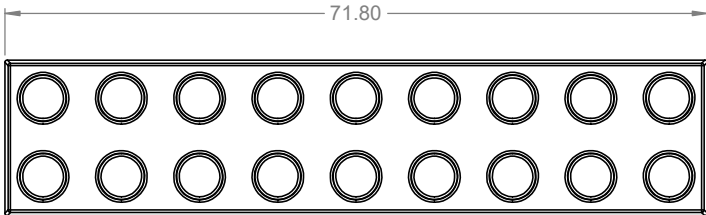
2 x 6



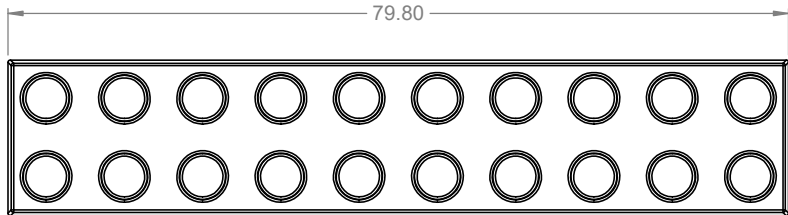
2 x 7



2 x 8



2 x 9



2 x 10

BLOCK	A	2 X 2 BLOCK
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y 14.5M-1994

DIMENSIONS ARE IN MILLIMETRES

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.5
1 PL DEC	± 0.3
2 PL DEC	± 0.13
3 PL DEC	± 0.073
ANGLES	± .1°
SURFACE ROUGHNESS	0.8 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA
CHANGES SHALL BE INCORPORATED
ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED,
STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN
ANY FORM, WITHOUT THE WRITTEN PERMISSION OF
Conestoga College.

CUSTOMER	XYZ Company		
PROJECT	FINAL PROJECT		
DRAWN BY	Vijay Prajwal	DATE	2020-04-25
CHECKED BY	Prof. Flukerson	DATE	2020-04-30
APPROVED	Prof. Flukerson	DATE	2020-04-30

CONESTOGA
Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

2 X 2 BLOCK

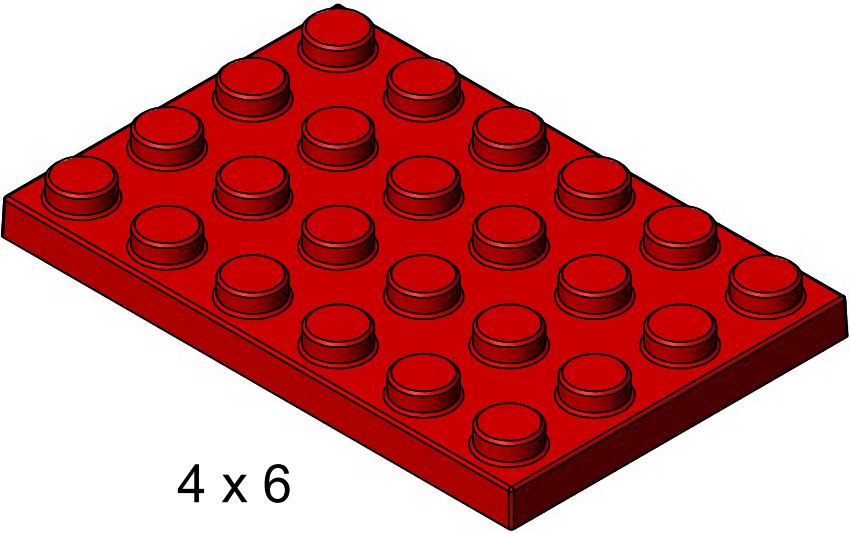
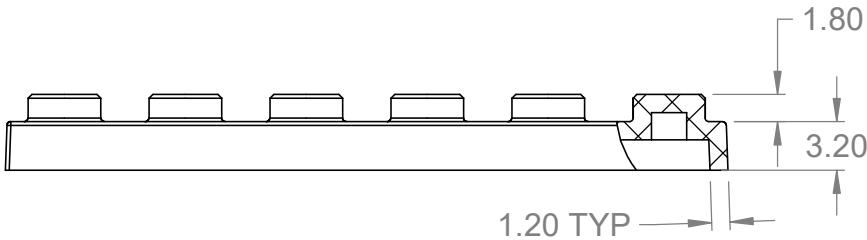
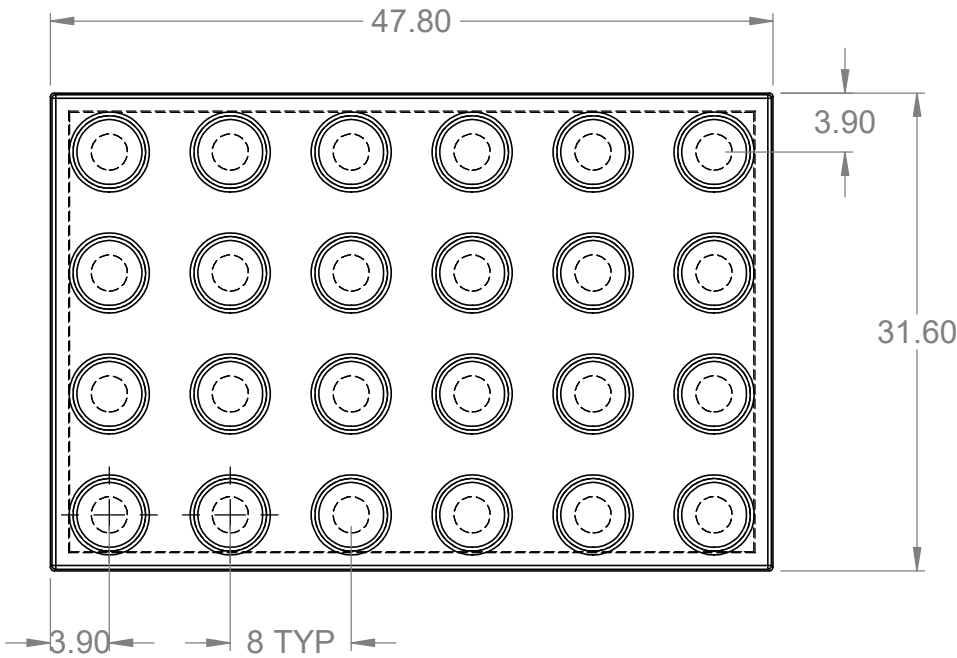
SIZE	DRAWING NO	REVISION		
B	Drawing_Sheet A			
SCALE	2:1	WEIGHT	1.124 g	SHEET 8 OF 12

C

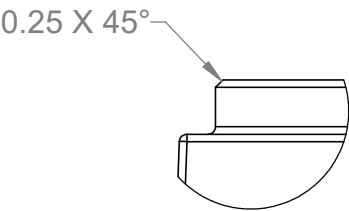
B

A

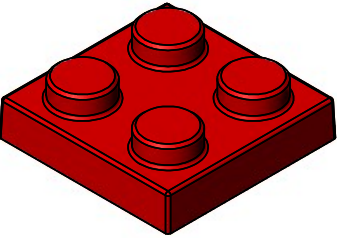
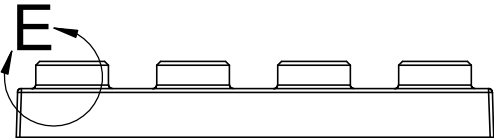
- NOTES:
- 1. MATERIAL : ABS
 - 2. REMOVE ALL SHARP EDGES
 - 3. ALL DRAFT ANGLES ARE 2 DEGREE
 - 4. ALL FILLETS AND ROUNDS ARE 0.25MM



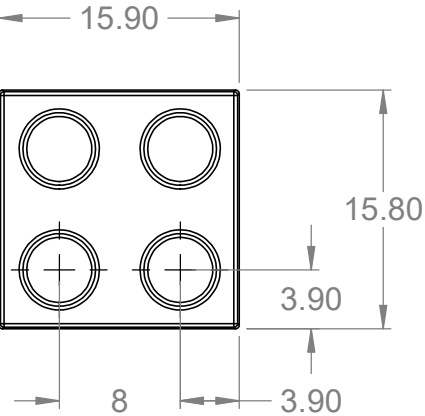
4 x 6



DETAIL E
SCALE 4 : 1



2 x 2



SHORT BLOCK	A	4 X 6 SHORTBLOCK
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994

DIMENSIONS ARE IN MILLIMETERS

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.5
1 PL DEC	± 0.3
2 PL DEC	± 0.13
3 PL DEC	± 0.013
ANGLES	± .1°
SURFACE ROUGHNESS	0.8 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA
CHANGES SHALL BE INCORPORATED
ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED,
STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN
ANY FORM, WITHOUT THE WRITTEN PERMISSION OF
Conestoga College

CUSTOMER	XYZ Company		
PROJECT	FINAL PROJECT		
DRAWN BY	Vijay Prajwal	DATE	2020-04-27
CHECKED BY	Prof. Flukerson	DATE	2020-04-30
APPROVED	Prof. Flukerson	DATE	2020-04-30

CONESTOGA
Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

4 X 6 SHORTBLOCK

SIZE	DRAWING NO	REVISION		
B		A		
SCALE	2:1	WEIGHT	2.798 g	SHEET 9 OF 12

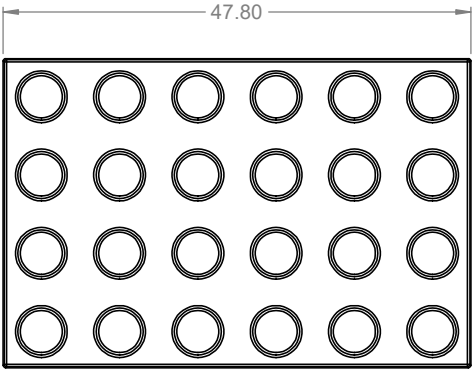
D

C

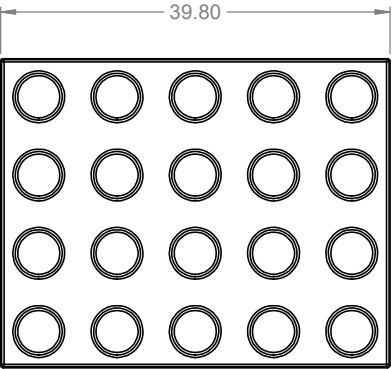
B

A

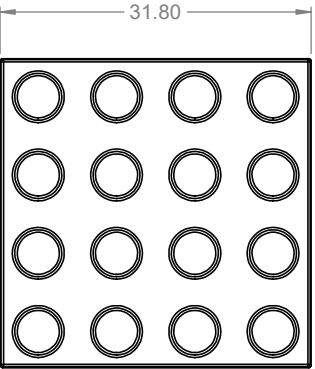
SHORTBLOCK CONFIGURATIONS



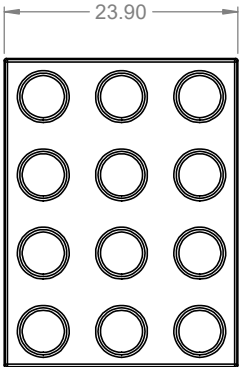
4 x 6



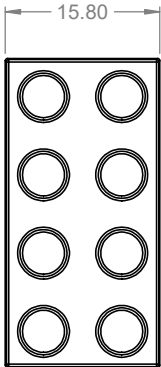
4 x 5



4 x 4



4 x 3



4 x 2

SHORT BLOCK	A	4 X 6 SHORTBLOCK
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y 14.5M-1994

DIMENSIONS ARE IN MILLIMETRES

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.5
1 PL DEC	± 0.3
2 PL DEC	± 0.13
3 PL DEC	± 0.073
ANGLES	± 1°
SURFACE ROUGHNESS	0.8 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA
CHANGES SHALL BE INCORPORATED
ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED,
STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN
ANY FORM, WITHOUT THE WRITTEN PERMISSION OF
Conestoga College.

CUSTOMER	XYZ Company		
PROJECT	FINAL PROJECT		
DRAWN BY	Vijay Prajwal	DATE	2020-04-27
CHECKED BY	Prof. Flukerson	DATE	2020-04-30
APPROVED	Prof. Flukerson	DATE	2020-04-30

CONESTOGA
Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

4 X 6 SHORTBLOCK

SIZE	DRAWING NO	REVISION		
B				
SCALE	2:1	WEIGHT	2.798 g	SHEET 10 OF 12

C

B

A

D

C

B

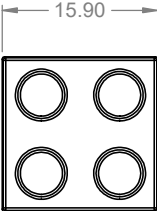
A

4

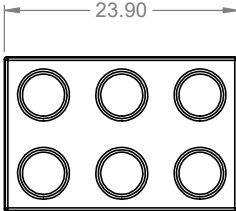
SHORTBLOCK CONFIGURATIONS

4

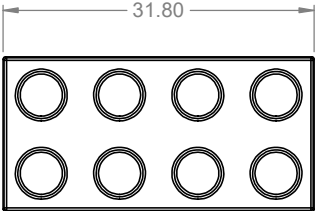
3



2 x 2

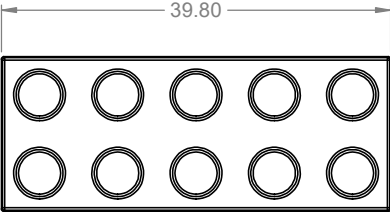


2 x 3

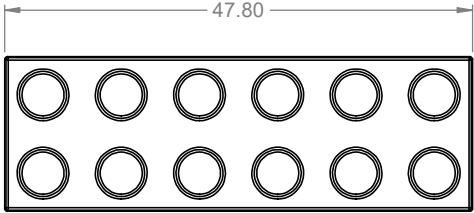


2 x 4

2



2 x 5



2 x 6

3

2

1

1

SHORT BLOCK	A	2 X 2 SHORTBLOCK
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y 14.5M-1994

DIMENSIONS ARE IN MILLIMETRES

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC ± 0.5

1 PL DEC ± 0.3

2 PL DEC ± 0.13

3 PL DEC ± 0.073

ANGLES ± 1°

SURFACE ROUGHNESS 0.8 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA

CHANGES SHALL BE INCORPORATED ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN ANY FORM, WITHOUT THE WRITTEN PERMISSION OF Conestoga College.

CUSTOMER

XYZ Company

PROJECT

FINAL PROJECT

DRAWN BY

Vijay Prajwal

CHECKED BY

Prof. Flukerson

APPROVED

Prof. Flukerson

DATE

2020-04-27

DATE

2020-04-30

DATE

2020-04-30

CONESTOGA

Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

2 X 2 SHORTBLOCK

SIZE

B

DRAWING NO

SCALE

2:1

WEIGHT

0.541 g

REVISION

Drawing_Sheet -

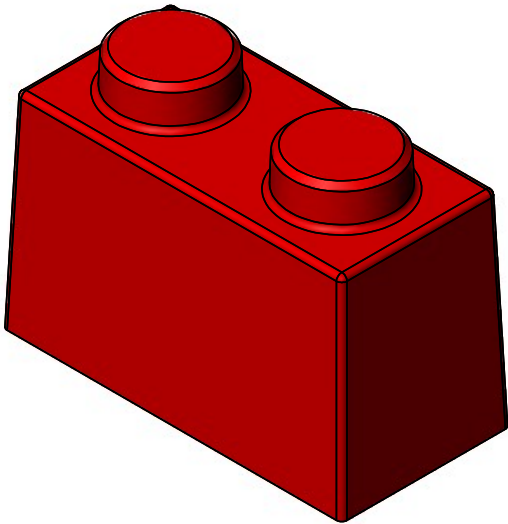
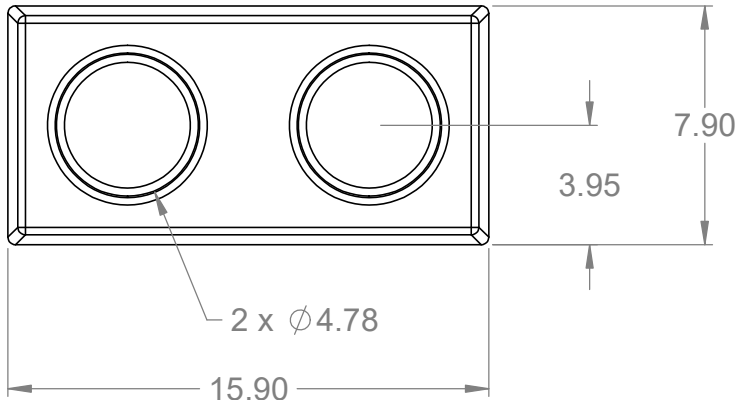
SHEET 11 OF 12

C

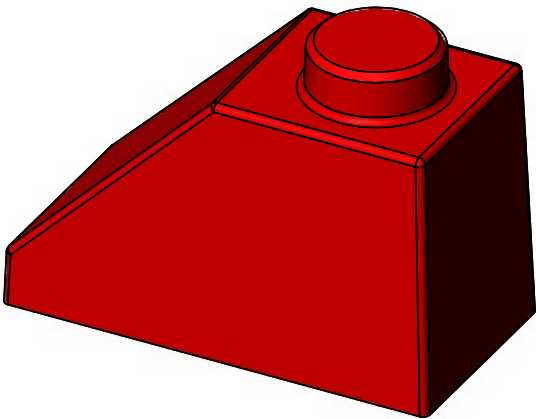
B

A

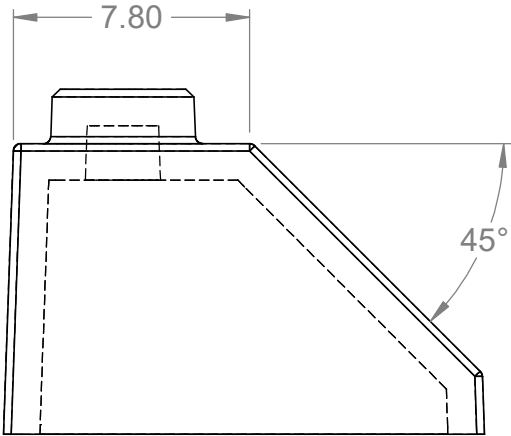
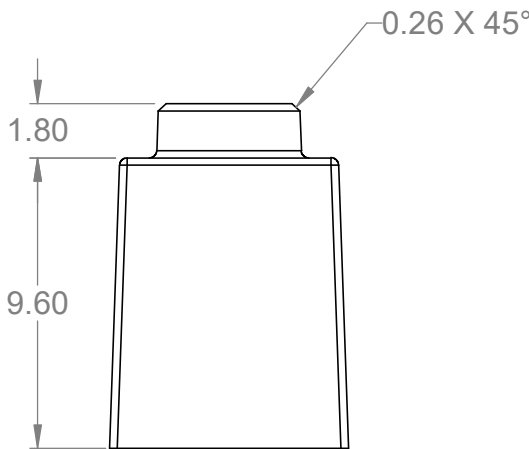
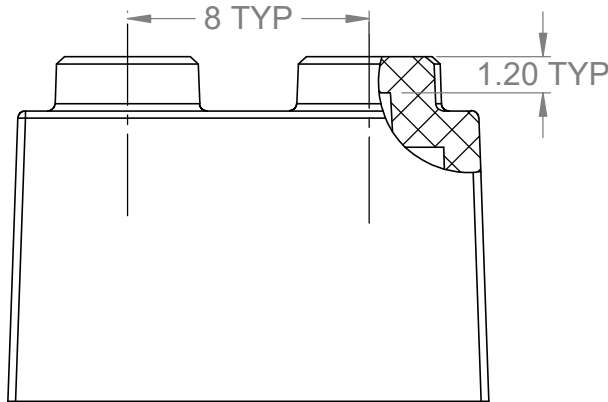
- NOTES:
- 1. MATERIAL : ABS
 - 2. REMOVE ALL SHARP EDGES
 - 3. ALL FILLETS AND ROUNDS ARE 0.25MM



1 x 2 BLOCK CONFIGURATION



1 x 2 ANGLE CONFIGURATION



1 x 2 ANGLE

ANGLE PART	A	ANGLED BLOCK
PART NUMBER	REV	DESCRIPTION

UNLESS OTHERWISE SPECIFIED

DO NOT SCALE DRAWING

INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994

DIMENSIONS ARE IN MILLIMETERS

TOLERANCES APPLY AS SHOWN BELOW

0 PL DEC	± 0.5
1 PL DEC	± 0.3
2 PL DEC	± 0.13
3 PL DEC	± 0.013
ANGLES	± .1°
SURFACE ROUGHNESS	0.8 µm

THIRD ANGLE PROJECTION

SolidWorks MAINTAINED DATA
CHANGES SHALL BE INCORPORATED
ELECTRONICALLY BY THE DESIGN ACTIVITY

PROPRIETARY

NO PART OF THIS DOCUMENT MAY BE REPRODUCED,
STORED IN A RETRIEVAL SYSTEM, OR TRANSMITTED IN
ANY FORM, WITHOUT THE WRITTEN PERMISSION OF
Conestoga College

CUSTOMER	XYZ Company		
PROJECT	FINAL PROJECT		
DRAWN BY	Vijay Prajwal	DATE	2020-04-25
CHECKED BY	Prof. Flukerson	DATE	2020-04-30
APPROVED	Prof. Flukerson	DATE	2020-04-30

CONESTOGA
Connect Life and Learning

299 Doon Valley Drive, Kitchener, ON, N2G 4M4

TITLE

ANGLED BLOCK

SIZE	DRAWING NO	REVISION
B		Drawing_Sheet A
SCALE	4:1	WEIGHT 0.496 g
SHEET 12 OF 12		