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CENDEK RAILINGS LTD.
TEST REPORT

SCOPE OF WORK
REPORT OF 6 FT. CENTURY 5 MM FASCIA GLASS RAILING SYSTEM TESTED IN ACCORDANCE WITH SELECTED SECTIONS OF ASTM E2353-16, *STANDARD TEST METHODS FOR PERFORMANCE OF GLAZING IN PERMANENT RAILING SYSTEMS, GUARDS, AND BALUSTRADES*

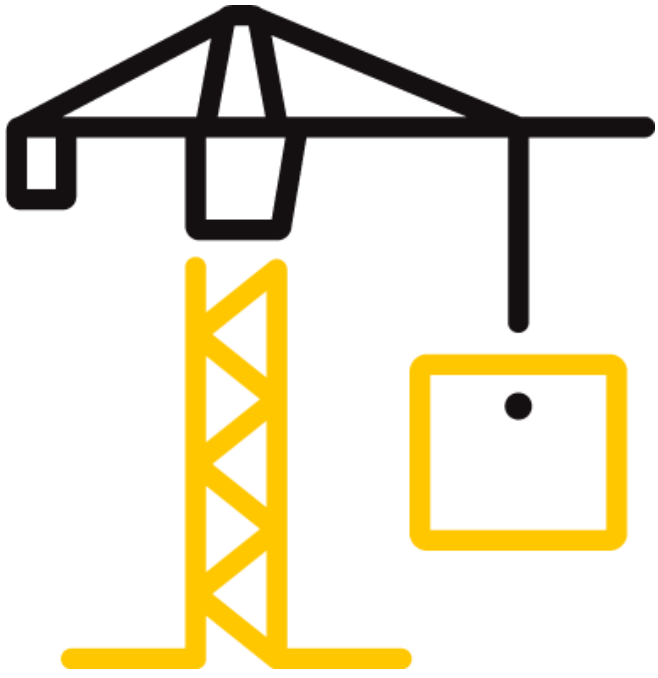
REPORT NUMBER
104892560COQ-001

TEST DATE
11/25/21

ISSUE DATE
11/29/21

PAGES
29

DOCUMENT CONTROL NUMBER
GFT-OP-10c (09/29/20)



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TEST REPORT FOR CENDEK RAILINGS LTD.
Report No.: 104892560COQ-001
Date: 11/29/21

REPORT ISSUED TO

CENDEK RAILINGS LTD.
9685 Agur St.
Summerland, BC, V0H 1Z2
Canada

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Cendek Railings Ltd., 9685 Agur St., Summerland, BC, V0H 1Z2, Canada, to perform testing on the 6 ft. Century 5 mm Fascia Glass Railing System in accordance with selected sections of ASTM E2353-16, *Standard Test Methods for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades*. The scope of the testing as requested by Cendek Railings Ltd., was to assess the ability of the guard system to resist the load requirements of Section 4.1.5.14 and 9.8.8.2 of the 2015 NBC, 2012 OBC, and 2018 BCBC. Results obtained are tested values. Testing was conducted at the Intertek test facility in Coquitlam, BC, Canada on November 25, 2021.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule also called “Shared Risk approach,” of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

COMPLETED BY:	Chris Chang, P.Eng.	**REVIEWED BY:**	Baldeep Sandhu
TITLE:	Sr. Tech – Building & Construction	**TITLE:**	Manager – Building & Construction
SIGNATURE:	 EGBC Permit No: 1000953	**SIGNATURE:**	
DATE:	11/29/21	**DATE:**	11/29/21

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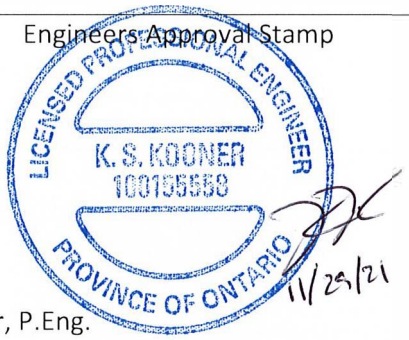
Engineer's Disclaimer:

- Intertek Engineers do not assume professional responsibility of Engineer of Record.
- Compliance to Building Codes must be approved by the Engineer of Record or Authority Having Jurisdiction.
- Intertek Engineer's seal and signature is limited to the review of applicable code required loads, review of test setup, and witnessing of laboratory testing.
- Additional disclaimers are shown in Notes of Section 7 and Section 8

Engineers Approval Stamp



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EGBC Permit No.: 1000953
Director, Building & Construction
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EGBC Permit No.: 1000953
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TEST REPORT FOR CENDEK RAILINGS LTD.
Report No.: 104892560COQ-001
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SECTION 2
SUMMARY OF TEST RESULTS

SYSTEM DESCRIPTION	TEST	PASS/FAIL
6 ft. Century 5 mm Fascia Glass Railing System	In-fill Load	Pass
	Vertical Uniform Load Test	Pass
	Outward – Horizontal Uniform Load Test	Pass
	Outward – Horizontal – Mid-Span Concentrated Load	Pass
	Outward – Horizontal – Adjacent to Post Concentrated Load	Pass
	Outward – Horizontal – Top of Post Concentrated Load	Pass
	Inward – Horizontal Uniform Load Test	Pass
	Inward – Horizontal – Mid-Span Concentrated Load	Pass
	Inward – Horizontal – Adjacent to Post Concentrated Load	Pass
	Inward – Horizontal – Top of Post Concentrated Load	Pass
	Size of Opening	Pass

Refer to Appendix B for photos of testing.

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SECTION 3
TEST LOADS

The guard specimen was evaluated in accordance with the selected sections of the following:

> **ASTM E2353-16**, *Standard Test Methods for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades,* Section 12.1.1 *Static Load Testing*

The required test loads were based on the Specified Loads per the following Building Code articles with the Safety Factors applied as indicated in this report:

2015 National Building Code of Canada (NBC)

- Section 4.1.5.14 *Loads on Guards and Handrails*
- Section 9.8.8.2 *Loads on Guards*

2012 Ontario Building Code (OBC)

- Section 4.1.5.14 *Loads on Guards and Handrails*
- Section 9.8.8.2 *Loads on Guards*

2018 British Columbia Building Code (BCBC)

- Section 4.1.5.14 *Loads on Guards and Handrails*
- Section 9.8.8.2 *Loads on Guards*

Per the client's request, the *Shot Bag Impact Test* per Section 12.2 and the *Pendulum Impact Test* per Section 12.3 were not conducted per ASTM E2353.

SECTION 4
MATERIAL SOURCE

The client submitted the railing system to the Evaluation Center on November 23, 2021 (Coquitlam ID# VAN2111240824-001). The sample was received in good condition and was suitable for testing unless noted otherwise. The sample was not independently selected for testing.

SECTION 5
EQUIPMENT

Calibration of test equipment was performed by Intertek B&C in accordance with ISO 17025 requirements.

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TEST REPORT FOR CENDEK RAILINGS LTD.
Report No.: 104892560COQ-001
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ASSET #	DESCRIPTION	MODEL	CAL DUE DATE
D8375	Loadstar 2.5k lb S-Type Load Cell	RAS1-2HKS-S	10/10/22
D8281	Graphtec MIDI Logger	GL240	03/12/22
P60554	T&D Temperature and Humidity Indicator	TR-72Ui	09/26/22
P60444	Extech Stopwatch	365515	03/05/22
P60494	Stanley Tape Measure	FatMax	09/30/22
52650	Mitutoyo 8 in. Digital Caliper	CD-8	06/08/22
D7810	Micro Mule	Intertek-York	04/29/22
D7820	Tyco Electronics Linear Transducer	PT1MA-20-UP-420E-M6	03/15/22

SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Kevin Penner	Intertek B&C
Chris Chang	Intertek B&C
Kal Kooner	Intertek B&C
Dan Lungu	Intertek B&C

The above observer(s) witnessed part of the test program.

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SECTION 7
TESTING PROCEDURE

The evaluation was conducted in accordance with Section 12.1.1 *Static Load Testing* of ASTM E2353-16, *Standard Test Methods for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades,* with reference to ASTM E935-13e1, *Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings.* The test specimen was loaded at a rate to achieve the specified loads between 10 seconds and 5 minutes. The specified test loads were held for one minute before the load was released. For each test, deflection measurements were taken at the point of load application. Testing was conducted with reference to the specified load requirements of the following:

2015 NBC / 2012 OBC / 2018 BCBC: SECTION 4.1.5.14 LOADS ON GUARDS AND HANDRAILS

1) The minimum specified horizontal load applied inward or outward at the minimum required height of every guard shall be 0.75 kN/m or a concentrated load of 1.0 kN applied at any point.

2) The minimum specified horizontal load applied inward at the minimum required height of every required guard shall be half that specified in Sentence (1).

3) Individual elements within the *guard*, including solid panels and pickets, shall be designed for a concentrated load of 0.5 kN applied over an area of 100 mm x 100 mm located at any point in the element or elements so as to produce the most critical effect.

4) The size of the opening between any two adjacent vertical elements within a *guard* shall not exceed 100 mm when each of these elements is subjected to a specified *live load* of 0.1 kN applied in opposite directions in the in-plane direction of the *guard* so as to produce the most critical effect.

5) The minimum specified load applied vertically at the top of every required *guard* shall be 1.5 kN/m.

6) None of the loads specified above need be considered to act simultaneously.

2015 NBC / 2012 OBC / 2018 BCBC: SECTION 9.8.8.2 LOADS ON GUARDS

1) The minimum specified horizontal load applied inward or outward at the top of every required guard shall be 0.5 kN/m or a concentrated load of 1.0 kN applied at any point

2) Individual elements within the *guard*, including solid panels and pickets, shall be designed for a concentrated load of 0.5 kN applied over an area of 300 mm x 300 mm located at any point in

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the element or elements so as to engage 3 balusters when possible.

3) The minimum specified load applied vertically at the top of every required *guard* shall be 1.5 kN/m.

4) None of the loads specified above need be considered to act simultaneously.

Note 1: A safety factor of 1.67-2.5 was applied to the above loads, based on an assumed failure mode and tested material. The safety factor was calculated by dividing the live load factor of 1.5 by the material resistance factors below, as defined in the CAN/CSA S157, *Strength Design in Aluminum* standard.

- ø=0.90 resistance factor for bending failure mode, resulting safety factor = 1.67
- ø=0.75 resistance factor for ductile failure mode, resulting safety factor = 2.0
- ø=0.67 resistance factor for brittle failure mode, resulting safety factor = 2.24
- ø=0.60 resistance factor for glass, wood fastener connections, resulting safety factor = 2.5

Note 2: The following sections of ASTM E2353 were not conducted in this evaluation:

- Section 9.3 *Sampling;* the test sample was a single span wall mounted system with no posts
- Section 12.2 *Shot Bag Impact Test*
- Section 12.3 *Pendulum Impact Test.*

IN-FILL LOAD TEST

A test load was applied using a 100 mm x 100 mm square block on the center of the railing system normal to the in-fill. After release of the load, the systems were evaluated for failure, any evidence of disengagements of any component and visible cracks in any component.

UNIFORM LOAD TEST

Uniform test loads were applied vertically to the top of the guardrail system and horizontally to the top of the guardrail system. Horizontal uniform loads were applied in both the inward and outward directions. The test loads were applied using quarter point loads. After release of the load, the systems were evaluated for failure, any evidence of disengagements of any component and visible cracks in any component.

CONCENTRATED LOAD TEST

Concentrated test loads were applied horizontally at the midspan of the top of the guard, at the top rail adjacent to the post connection to verify the connection capacity, and at the top of post. Concentrated

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loads were applied in both the inward and outward directions.

After completion of the above load tests, the concentrated load at the top of post was loaded until failure. The maximum load was recorded and reported in the test data sheets of Appendix A.

SIZE OF OPENING

The opening between adjacent vertical elements was subjected to a specified live load of 0.1 kN applied in opposite directions and measured.

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SECTION 8
TEST SPECIMEN DESCRIPTION

The sample was identified as the following:

TABLE 1. RAILING CONFIGURATION

PART NAME	PART NUMBER	QTY	PART DIMENSIONS				REPORTED MATERIAL
			LENGTH	WIDTH	HEIGHT	NOMINAL THICKNESS	
6 FT. CENTURY 5 MM FASCIA GLASS RAILING SYSTEM							
Top Rail	0041PA	1	71.5 in.	2.37 in.	1.87 in.	0.07 in.	6063-T5 Aluminum
End Post	0086A	2	-	2.50 in.	2.50 in.	0.07 in.	6063-T5 Aluminum
Baseplate			-	4.00 in.	4.00 in.	0.25 in.	6063-T5 Aluminum
Bottom Rail	0057PB	1	71.5 in.	1.32 in.	1.31 in.	0.07 in.	6063-T5 Aluminum
Support Leg	0076PG	1	-	1.25 in.	7.00 in.	0.19 in.	6063-T5 Aluminum
Fascia Bracket	0217A	2	4.75 in.	4.25 in.	7.00 in.	-	6063-T5 Aluminum
Fascia Baseplate			-	4.00 in.	4.00 in.	0.375 in.	6063-T5 Aluminum
Infill	2082P	1	-	66 in.	37.31 in.	0.20 in.	Tempered Glass

Note 3: The railing had one (1) support leg positioned under the bottom rail at mid-span and was fixed to the steel test frame. For detailed drawings of the test samples and components, refer to Appendix C.

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SECTION 9
TEST RESULTS

A full set of test results is included in Appendix A.

SECTION 10
CONCLUSION

Intertek Testing Services NA Ltd. (Intertek) has conducted testing for Cendek Railings Ltd. on the 6 ft. Century 5 mm Fascia Glass Railing System per selected sections of ASTM E2353-16, *Standard Test Methods for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades*. The scope of the testing as requested by Cendek Railings Ltd., was to assess the ability of the guard system to resist the loads as prescribed in the following building code articles:

2015 National Building Code of Canada (NBC)
- Section 4.1.5.14 *Loads on Guards and Handrails*
- Section 9.8.8.2 *Loads on Guards*

2012 Ontario Building Code (OBC)
- Section 4.1.5.14 *Loads on Guards and Handrails*
- Section 9.8.8.2 *Loads on Guards*

2018 British Columbia Building Code (BCBC)
- Section 4.1.5.14 *Loads on Guards and Handrails*
- Section 9.8.8.2 *Loads on Guards*

The Cendek Railings Ltd. 6 ft. Century 5 mm Fascia Glass Railing System identified and evaluated in this report has met the load requirements using the safety factors as defined in Section 7, Note 1 of this report. Overall compliance with the Building Codes must be evaluated and approved by the Engineer of Record and Authority Having Jurisdiction.

The conclusions of this test may not be used as part of the requirements for Intertek product certification. Authority to Mark must be issued for a product to become certified.

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SECTION 11

APPENDIX A – TEST DATA (3 PAGES)

Company	Cendek Railings Ltd.	Technician(s)	Chris Chang / Kevin Penner
Project No.	G104892560	Reviewer	Baldeep Sandhu
Models	Century 6 ft. Fascia - 5 mm Glass Railing	Start/End Date	November 25, 2021
Product Name	Same as above	Sample ID	VAN2111240824-001
Standard	**2015 NBC/2012 OBC/2018 BCBC, Section 4.1.5.14 and 9.8.8.2**		

Test Data Package

Table of Contents

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Test:	**Loads on Guards - Outward**	Project:	G104892560
Date:	24-Nov-21	Eng/Tech:	Kevin Penner
Client:	Cendek Railings Ltd.		Chris Chang
Product:	**Century 6 ft. Fascia - 5 mm Glass Railing**	Reviewer:	Baldeep Sandhu
Post Spacing:	6.21 ft 1.89 m	Location:	Coquitlam, BC, Canada
Height of Guard:	42 in 1070 mm		
Opening in Guard:	1.50 in 38 mm		

Method: ASTM E2353-16, *Standard Test Methods for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades*
2015 National Building Code of Canada, 4.1.5.14 *Loads on Guards and Handrails* / 9.8.8.2 *Loads on Guards*
2012 Ontario Building Code, 4.1.5.14 *Loads on Guards* / 9.8.8.2 *Loads on Guards*
2018 British Columbia Building Code, 4.1.5.14 *Loads on Guards and Handrails* / 9.8.8.2 *Loads on Guards*

Safety Factor: 1.67 (based on a resistance factor Ø = 0.9 for aluminum)
2.24 (based on a resistance factor Ø = 0.67 for connection)
2.50 (based on a resistance factor Ø = 0.6 for glass)

Equipment: Loadstar 2500 lbf Load Cell (Intertek ID# D8375, cal due October 10, 2022)
Graphtec GL240 Midi Logger (Intertek ID# D8281, cal due March 12, 2022)
T&D TR-72Ui Temperature and Humidity Logger (Intertek ID# P60554, cal due September 26, 2022)
Stopwatch (Intertek ID# P60444, cal due March 5, 2022)
Stanley Tape Measure (Intertek ID# P60494, cal due September 30, 2022)
Mitutoyo Digital Caliper (Intertek ID# 52650, cal due June 8, 2022)
Micro Mule Measurement System (Intertek ID# D7810, cal due April 29, 2022)
Tyco Electronics Linear Transducer (Intertek ID# D7820, cal due March 15, 2022)

Time/Temp/RH: 1:50PM / 22.5°C / 50.0%

Direction	Test	Design Load (Inward/ Outward) (lbf)	Factored Load	Calculated Moment (lbf-ft)	Equivalent Quarter-Point Load (lbf)	Required Proof Load (lbf)	Deflections (in.)	Pass/Fail
Outward	Individual Elements (over 4 in. x 4 in.)	112	281	-	-	281	2.906	**Pass**
	Vertical Uniform Load (per ft)	103	171	825	532	1063	0.530	**Pass**
	Horizontal Uniform Load (per ft)	51	86	413	266	532	3.984	**Pass**
	Midspan Horizontal Concentrated Load	225	375	-	-	375	2.820	**Pass**
	Adjacent to Post Concentrated Load	225	503	-	-	503	6.378	**Pass**
	Top of Post Concentrated Load	225	375	-	-	375	4.167	**Pass**
	Top of Post Concentrated Load	Maximum load of 621.5 lb; baseplate screws on tension side pulled out of bottom posts						
In-Plane	Size of Opening	22.5	-	-	-	22.5	1.550	**Pass**

Direction	Test	Design Load (Inward/ Outward) (kN)	Factored Load	Calculated Moment (kNm)	Equivalent Quarter-Point Load (kN)	Required Proof Load (kN)	Deflections (mm)	Pass/Fail
Outward	Individual Elements (over 100 mm in. x 100 mm)	0.5	1.25	-	-	1.25	73.8	**Pass**
	Vertical Uniform Load (per m)	1.5	2.50	1.12	2.37	4.73	13.5	**Pass**
	Horizontal Uniform Load (per m)	0.75	1.25	0.56	1.18	2.37	101.2	**Pass**
	Midspan Horizontal Concentrated Load	1	1.67	-	-	1.67	71.6	**Pass**
	Adjacent to Post Concentrated Load	1	2.24	-	-	2.24	162.0	**Pass**
	Top of Post Concentrated Load	1	1.67	-	-	1.67	105.8	**Pass**
	Top of Post Concentrated Load	Maximum load of 2.76 kN; baseplate screws on tension side pulled out of bottom posts						
In-Plane	Size of Opening	0.1	-	-	-	0.1	39.4	**Pass**

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Test:	**Loads on Guards - Inward**			Project:	G104892560
Date:	24-Nov-21			Eng/Tech:	Kevin Penner
Client:	Cendek Railings Ltd.				Chris Chang
Product:	**Century 6 ft. Fascia - 5 mm Glass Railing**			Reviewer:	Baldeep Sandhu
Post Spacing:	6.21 ft	1.89 m		Location:	Coquitlam, BC, Canada
Height of Guard:	42 in	1070 mm			
Opening in Guard:	1.50 in	38 mm			

Method: ASTM E2353-16, *Standard Test Methods for Performance of Glazing in Permanent Railing Systems, Guards, and Balustrades*
2015 National Building Code of Canada, 4.1.5.14 *Loads on Guards and Handrails* / 9.8.8.2 *Loads on Guards*
2012 Ontario Building Code, 4.1.5.14 *Loads on Guards* / 9.8.8.2 *Loads on Guards*
2018 British Columbia Building Code, 4.1.5.14 *Loads on Guards and Handrails* / 9.8.8.2 *Loads on Guards*

Safety Factor: 1.67 (based on a resistance factor Ø = 0.9 for aluminum)
2.24 (based on a resistance factor Ø = 0.67 for connection)
2.50 (based on a resistance factor Ø = 0.6 for glass)

Equipment: Loadstar 2500 lbf Load Cell (Intertek ID# D8375, cal due October 10, 2022)
Graphtec GL240 Midi Logger (Intertek ID# D8281, cal due March 12, 2022)
T&D TR-72Ui Temperature and Humidity Logger (Intertek ID# P60554, cal due September 26, 2022)
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Mitutoyo Digital Caliper (Intertek ID# 52650, cal due June 8, 2022)
Micro Mule Measurement System (Intertek ID# D7810, cal due April 29, 2022)
Tyco Electronics Linear Transducer (Intertek ID# D7820, cal due March 15, 2022)

Time/Temp/RH: 1:50PM / 22.5°C / 50.0%

Direction	Test	Design Load (Inward/ Outward) (lbf)	Factored Load	Calculated Moment (lbf-ft)	Equivalent Quarter-Point Load (lbf)	Required Proof Load (lbf)	Deflections (in.)	Pass/Fail
Inward	Horizontal Uniform Load (per ft)	51	86	413	266	532	4.693	**Pass**
	Midspan Horizontal Concentrated Load	225	375	-	-	375	2.940	**Pass**
	Adjacent to Post Concentrated Load	225	503	-	-	503	5.883	**Pass**
	Top of Post Concentrated Load	225	375	-	-	375	3.812	**Pass**

Direction	Test	Design Load (Inward/ Outward) (kN)	Factored Load	Calculated Moment (kNm)	Equivalent Quarter-Point Load (kN)	Required Proof Load (kN)	Deflections (mm)	Pass/Fail
Inward	Horizontal Uniform Load (per m)	0.75	1.25	0.56	1.18	2.37	119.2	**Pass**
	Midspan Horizontal Concentrated Load	1	1.67	-	-	1.67	74.7	**Pass**
	Adjacent to Post Concentrated Load	1	2.24	-	-	2.24	149.4	**Pass**
	Top of Post Concentrated Load	1	1.67	-	-	1.67	96.8	**Pass**

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APPENDIX B – PHOTOS (3 PAGES)

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Report No.: 104892560COQ-001
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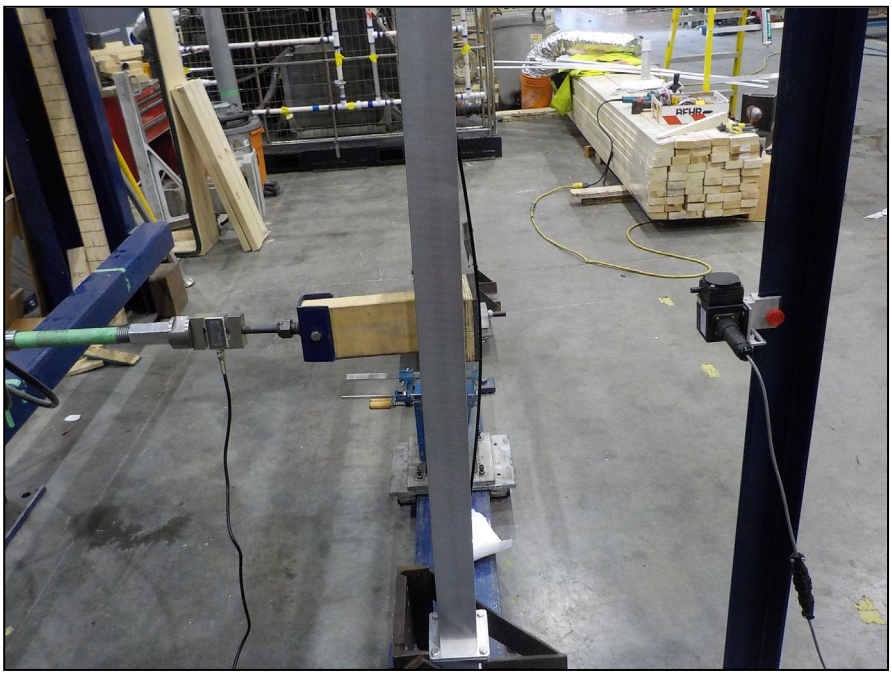

Figure 1 – In-fill Load Test

Figure 2 – Horizontal Uniform Load (Outward)

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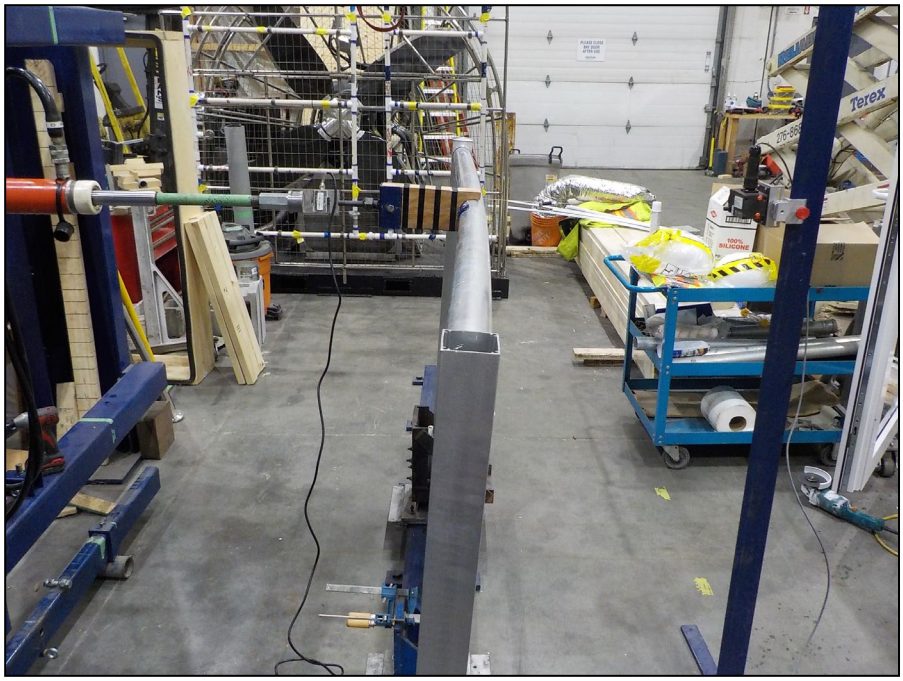

Figure 3 – Mid-span Top Rail Concentrated Load (Outward)

Figure 4 – Adjacent to Post Connection Concentrated Load (Outward)

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Figure 5 – Horizontal Uniform Load (Inward)

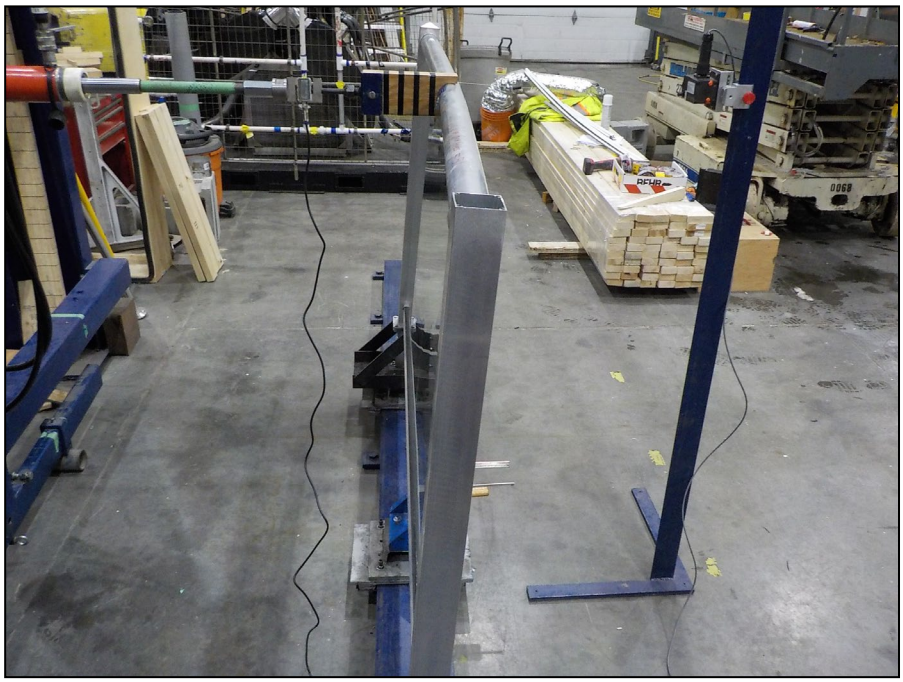

Figure 6 – Mid-span Top Rail Concentrated Load (Inward)

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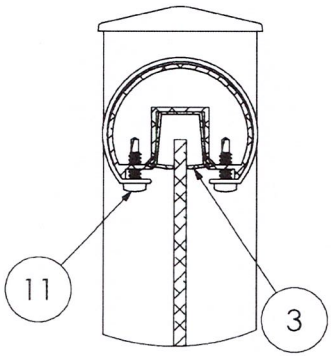
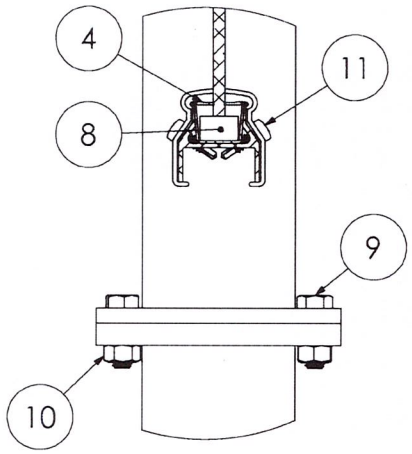
APPENDIX C – DRAWINGS (8 PAGES)

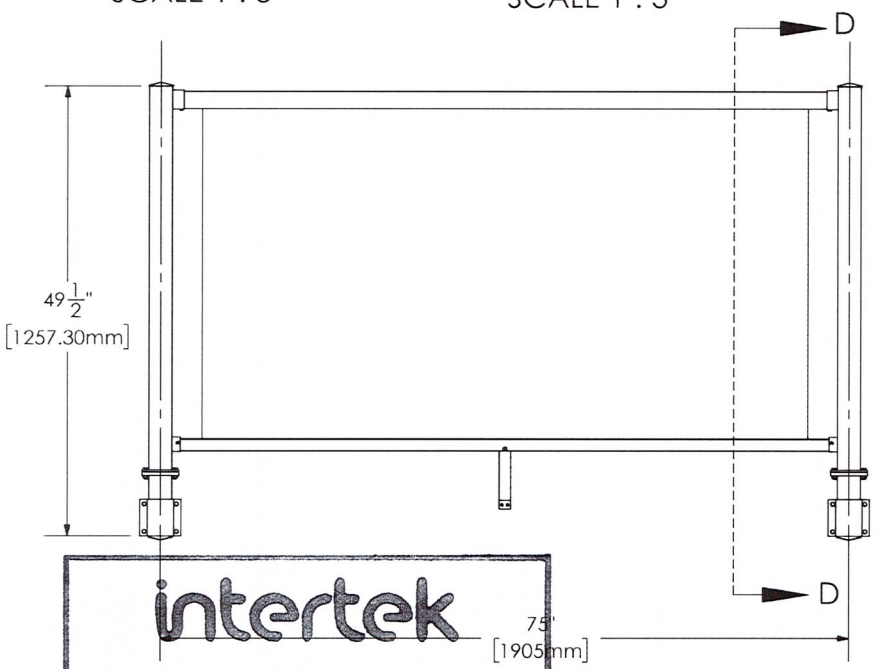


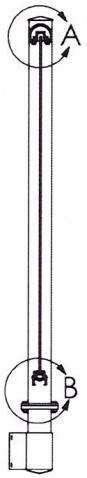
DETAIL A
SCALE 1 : 3



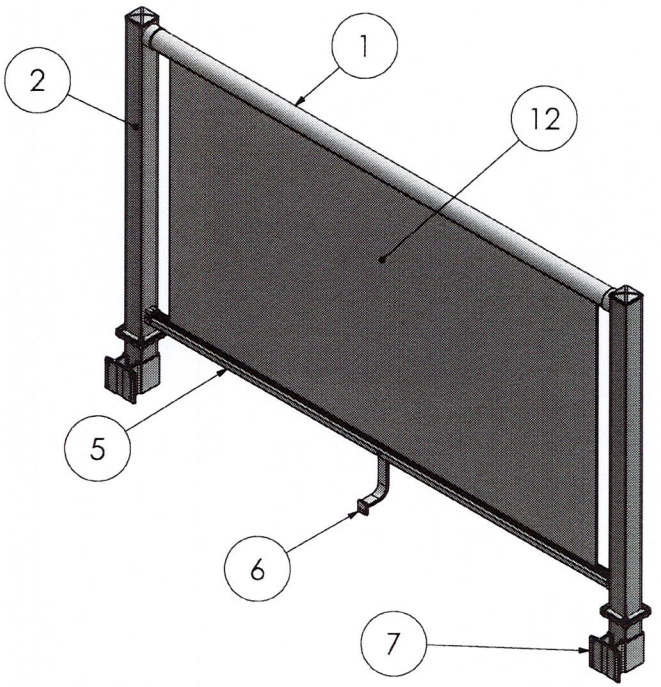
DETAIL B
SCALE 1 : 3

ITEM NO.	Eng No.	Material	DESCRIPTION	QTY.
1	0041PA	6063-T5	Component Top Rail Round 6'	1
2	0086A	6063-T5	2-1/2" End Post for 42" High Railing Round Profile	2
3	0297P	PVC Rigid	Top Rail Glass Insert Tall 6'	1
4	0296P	PVC Rigid	Bottom Rail Glass insert 6'	1
5	0057PB	6063-T5	Glass Bottom Rail 6'	1
6	0076PG	6063-T5	2" Offset Fascia Support Leg for 2-1/2" Post	1
7	0217A	6063-T5	2 1/2" Line/End/Stair Fascia Bracket (w/baseplate)	2
8	0328PA	Rubber	5 mil Glass Setting Block (for Glass Bottom Rail) 1-1/2"	2
9	2077P	AISI 304	5/16-18x1" Hex Bolt Stainless	8
10	2557P	AISI 304	5/16 Nylon Lock Nut Stainless	8
11	0096PA	ASTM A36 Steel	Screw #10x3/4" P/H Soc Tek Zinc	12
12	2082P	Glass	CTG66- 66" x 37 5/16" Clear Tempered Glass 5mm	1





SECTION D-D
SCALE 1 : 20



intertek

Test sample complies with these details.
Deviations are noted.

Report #: 104892560COQ-001

Date: 11/29/21 Tech: C. C.

CenDek Railings Ltd.

PROPRIETARY AND CONFIDENTIAL

DRAWN BY	Admin
CREATED	10/30/2017
MATERIAL	
DIE NO.	

ALL DIMENSION IN INCHES/mm

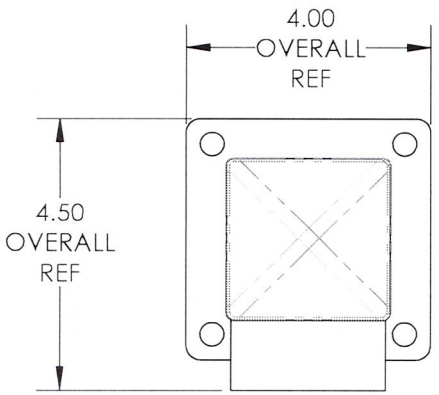
DESCRIPTION
Century 5mm Fascia Glass

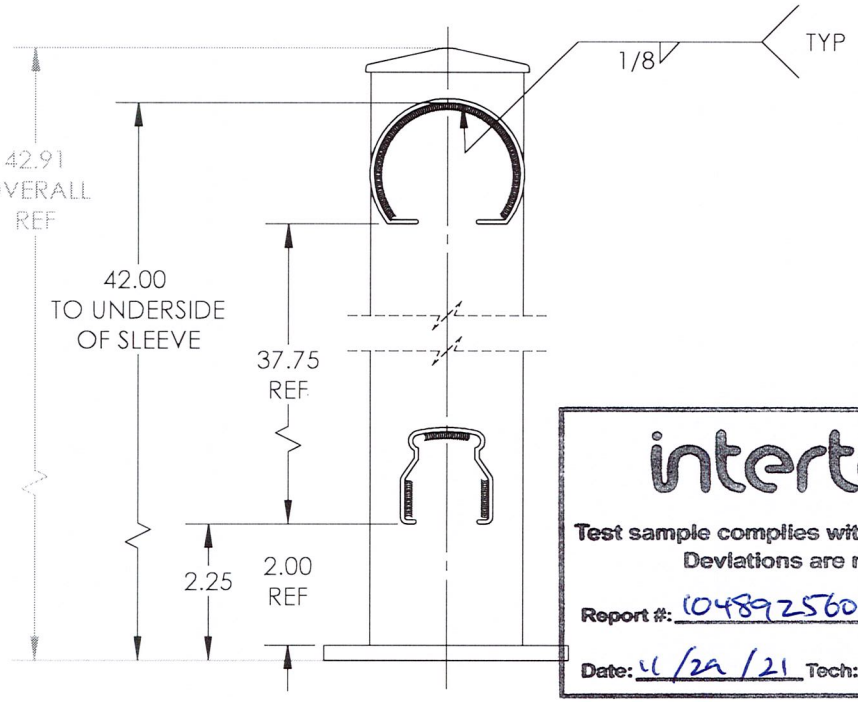
Part No.	Eng No. 2118A	
Weight 64.12 lbs	SHEET 1 OF 1	Rev

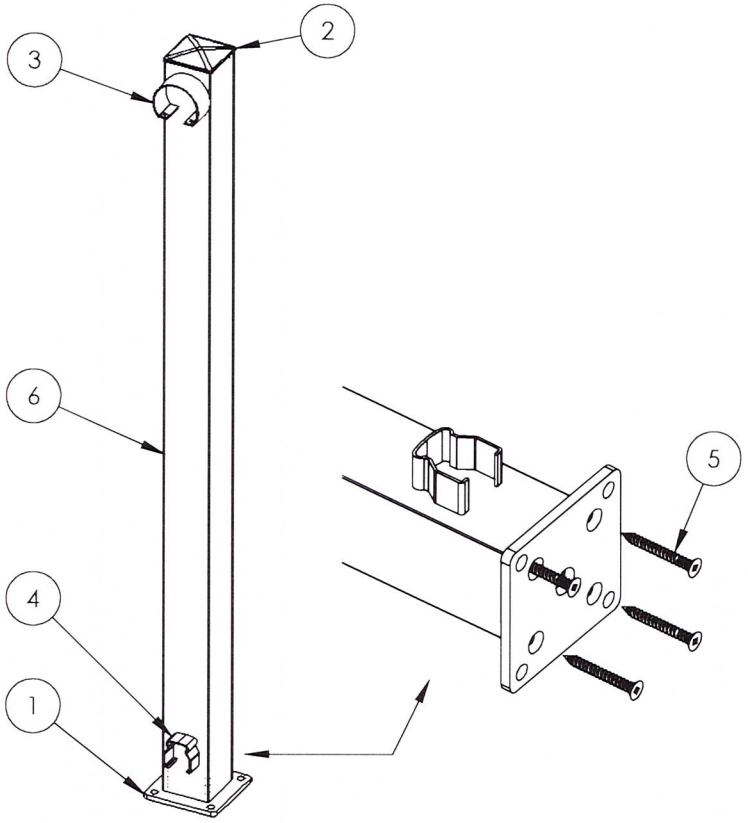
REVISIONS

REV.	DESCRIPTION	DATE	INTIALS

ITEM NO.	Eng No.	Part No.	DESCRIPTION	QTY.
1			4" X 4" Baseplate for 2-1/2" Post	1
2			Pyramid Cap 2.50 Post	1
3		1604-SLE-20025	Top Rail Sleeve Round cut WB, Post Sleeve	1
4		1600-SLE-10011	Bottom Rail Sleeve Welded Cut WB	1
5			Screw #14x2" Flat Head Robertson Zinc (Baseplate)	4
6			2-1/2" Post Material 42-1/4"	1







intertek

Test sample complies with these details.
Deviations are noted.

Report #: 104892560COQ-001

Date: 11/29/21 Tech: C.C.

CenDek Railings Ltd.

PROPRIETARY AND CONFIDENTIAL

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DRAWN BY	cchislett	11/10/2021
CHECKED		
MATERIAL	6063-T5	
DIE NO.		

ALL DIMENSION IN INCHES/mm

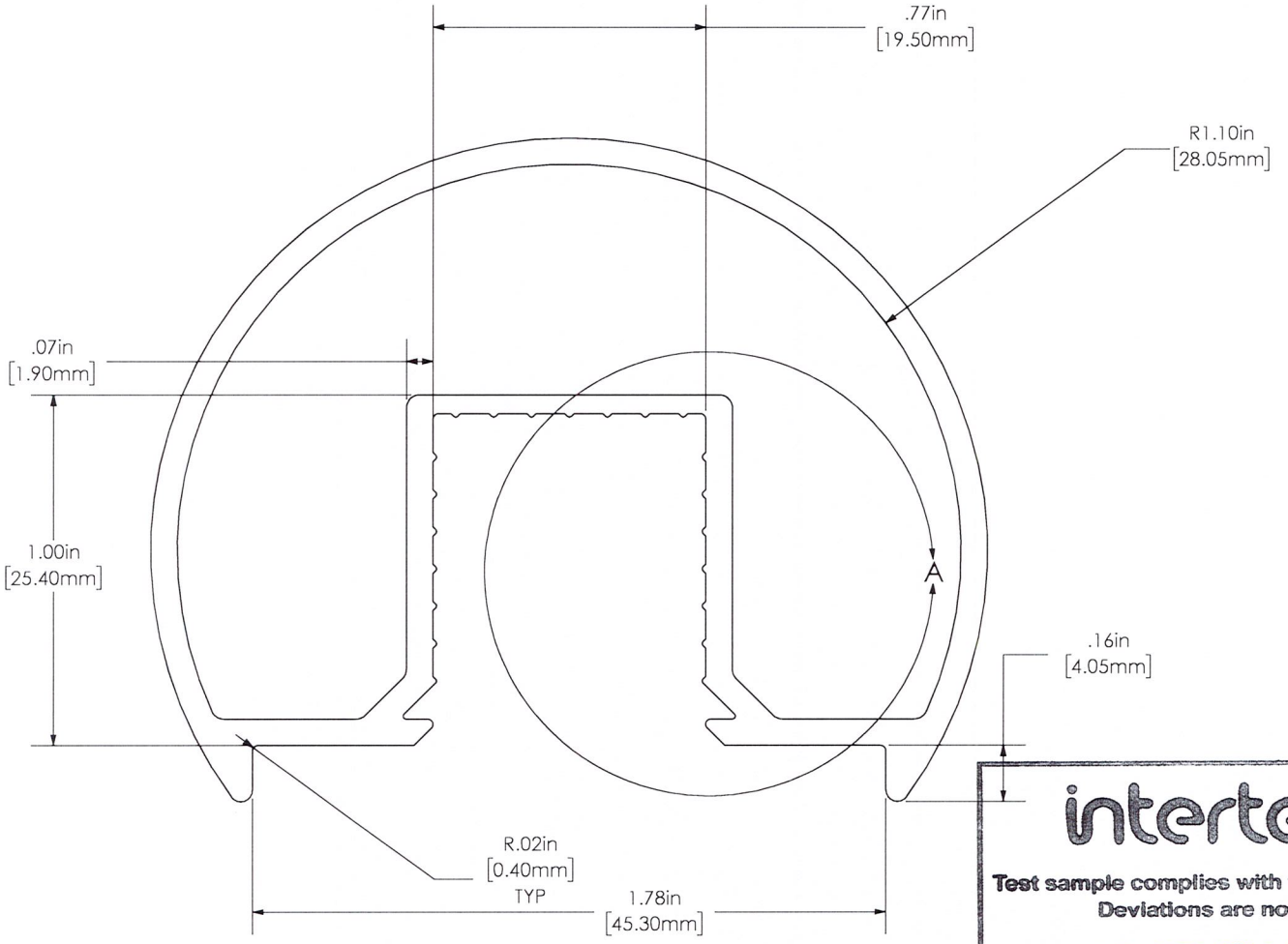
DESCRIPTION

2-1/2" End Post for 42" High Railing
Round Profile

Part No. 5104-POS-27042	Eng No. 0086A	
Weight 4.03 lbs	SHEET 1 OF 1	Rev 2

REVISIONS

REV.	DESCRIPTION	DATE	INTIALS
1	WELD TABLE	11/15/18	CC



EXTRUSION TOLERANCE	
<1	±0.10
<1-2	±0.12
<2-3	±0.14
<3-4	±0.16
<4-6	±0.18
<6-12	±0.20
<12-19	±0.23
<19-25	±0.25
<25-38	±0.30
<38-50	±0.36
<50-100	±0.61
<100-150	±0.86
<150-200	±1.12
<200-250	±1.38

intertek

Test sample complies with these details. Deviations are noted.

Report #: 104892560COQ-001

Date: 11/29/21 Tech: C.C.

CUT LENGTH TOLERANCE		MACHINING TOLERANCE	
Dimension (mm)	Tolerance	Dimension (mm)	Tolerance
≤100	±0.5	≤10	±0.2
>100<500	±0.8	>10<20	±0.3
>500<1000	±1.0	>20<30	±0.4
>1000<1500	±1.5	>30<40	±0.5
>1500<3000	±1.8	>40<60	±0.6
>3000<6000	±2.0	>60<100	±0.8
Above 6000	±2.5	Above 100	±1.0

REVISIONS

REV.	DESCRIPTION	DATE	INITIALS

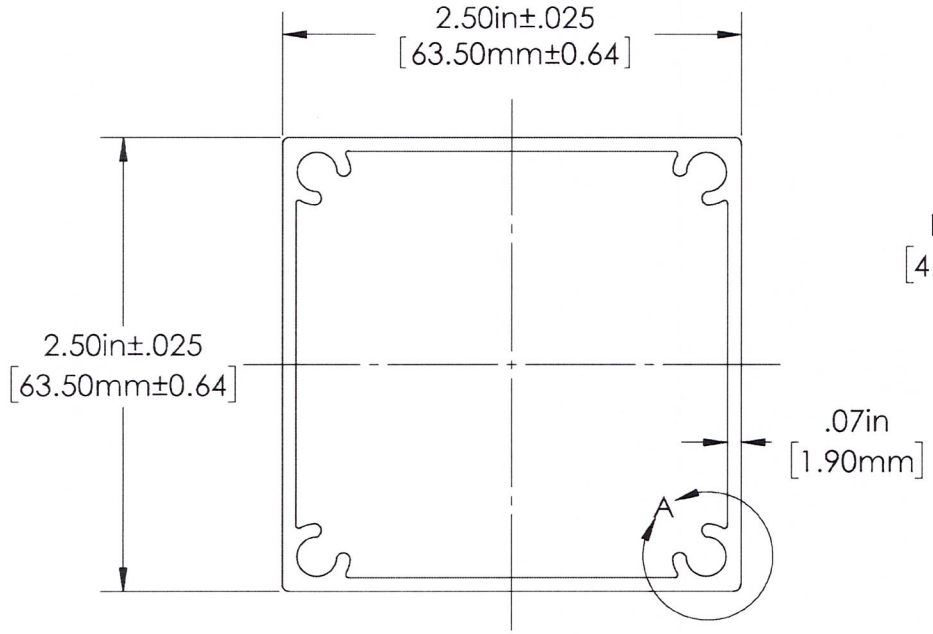
CenDek Railings Ltd.

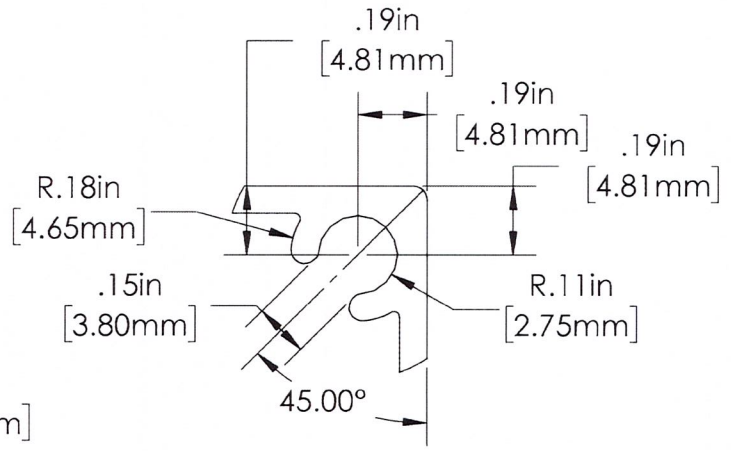
DRAWN BY	Admin
CREATED	2/27/2018
MATERIAL	6063-T5
DIE NO.	DYG12073190
ALL DIMENSION IN INCHES/mm	

DESCRIPTION

Century Top Rail Die

Part No.		Eng No. 0041P	
Weight 0.77 lbs		SHEET 1 OF 1	Rev -





DETAIL A
TYPICAL 4 LOCATIONS

intertek

Test sample complies with these details.
Deviations are noted.

Report #: 104PR2560COQ-001

Date: 11/29/21 Tech: C.C.

CenDek Railings Ltd.

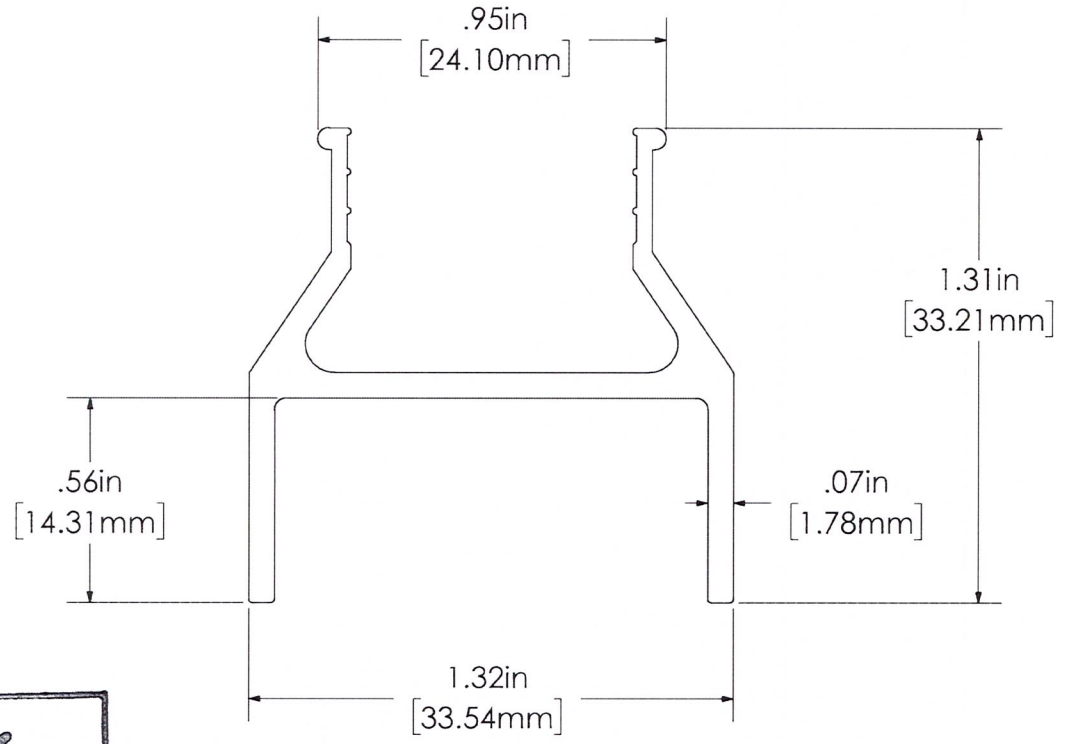
DRAWN BY	Admin
CREATED	8/21/2017
MATERIAL	6063-T5
DIE NO.	DYG12076190
ALL DIMENSION IN INCHES/mm	

DESCRIPTION
2-1/2" Post Material 42-1/4"

Part No. 1500-POS-23414		Eng No. 0071P	
Weight	lbs	SHEET 1 OF 1	Rev 2

REVISIONS

REV.	DESCRIPTION	DATE	INITIALS



intertek

Test sample complies with these details.
Deviations are noted.

Report #: 104892560COQ-001

Date: 11/29/21 Tech: C.C.

CenDek Railings Ltd.

DRAWN BY	Admin
CREATED	8/13/2019
MATERIAL	
DIE NO.	

ALL DIMENSION IN INCHES/mm

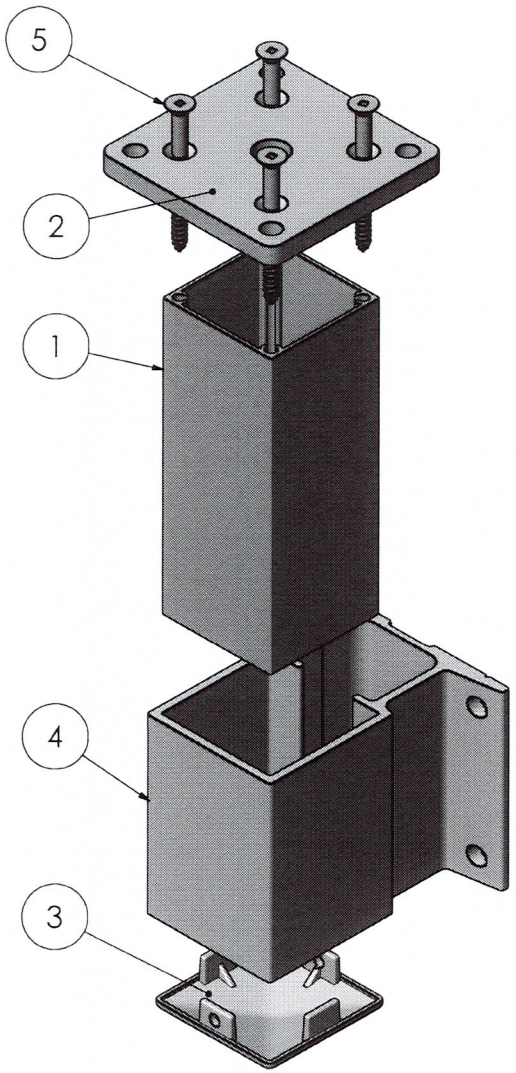
DESCRIPTION
5/8" Picket Bottom Rail

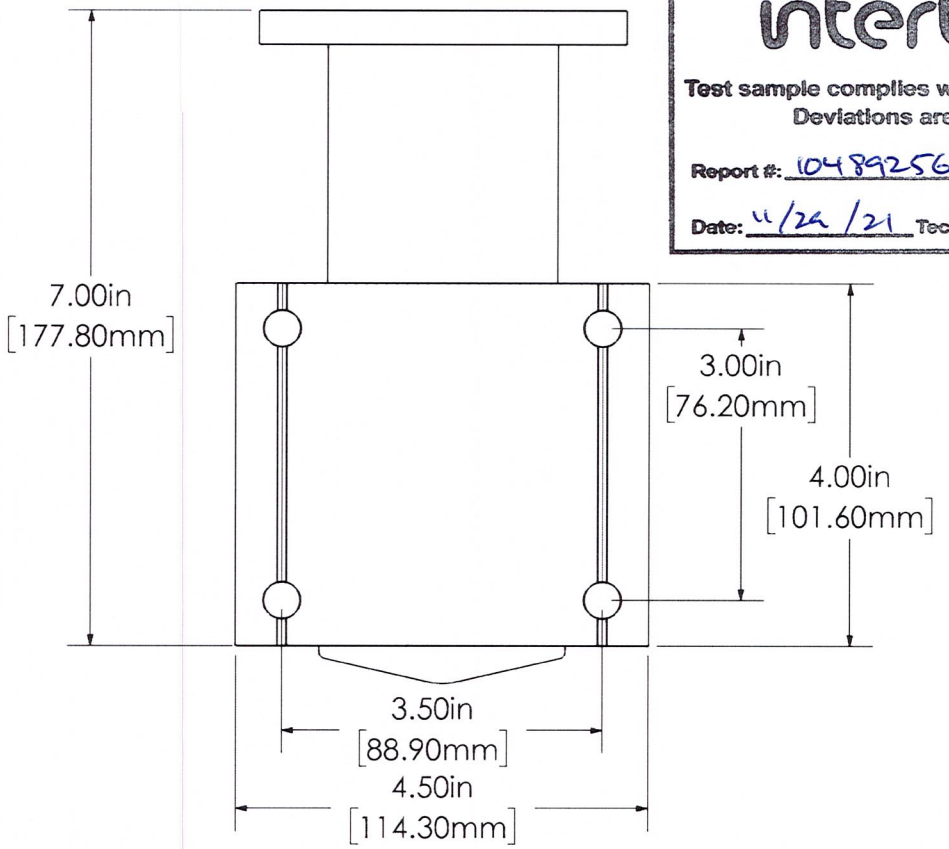
Part No.		Eng No. 0684AH	
Weight	lbs	SHEET 1 OF 1	Rev -

REVISIONS

REV.	DESCRIPTION	DATE	INTIALS

ITEM NO.	Eng No.	Part No.	DESCRIPTION	QTY.
1	0071PC	1500-POS-23414	2-1/2" Post Material 6-3/8" (Fascia Brackets)	1
2	0054PG	4700-BAS-70438	4" X 4" X 3/8" Baseplate for 2-1/2" Post	1
3	0078P	2000-CAP-20002	2-1/2" Pyramid Post Cap (Inner)	1
4	0172P	1700-FAS-04004	2-1/2" Line/End/Stair Fascia Bracket Material 4"	1
5	0797P	NA	#14x3in Robertson Screw	4





intertek

Test sample complies with these details.
Deviations are noted.

Report #: 104892560COQ-001

Date: 11/24/21 Tech: C.C.

CenDek Railings Ltd.

DRAWN BY	Admin
CREATED	3/26/2018
MATERIAL	6063-T5
DIE NO.	

ALL DIMENSION IN INCHES/mm

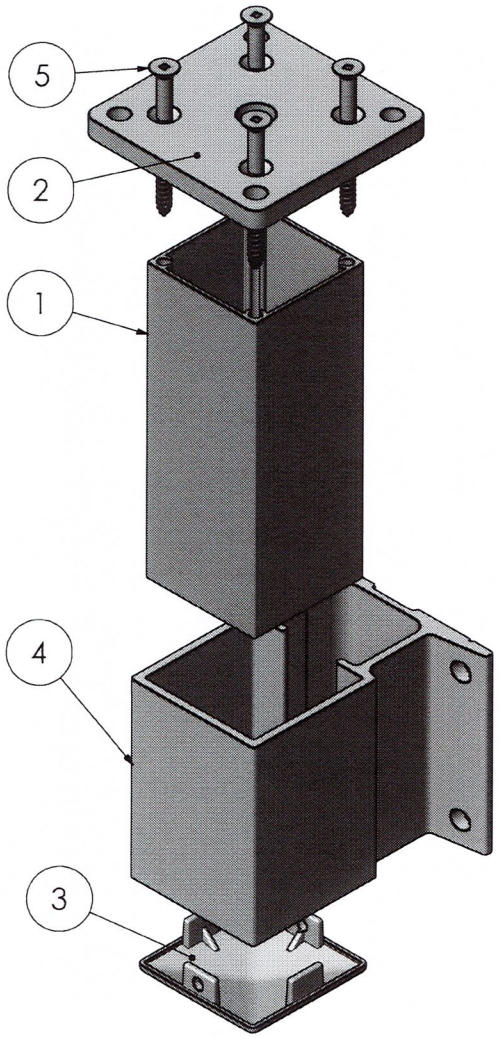
DESCRIPTION
2 1/2" Line/End/Stair Fascia Bracket (w/baseplate)

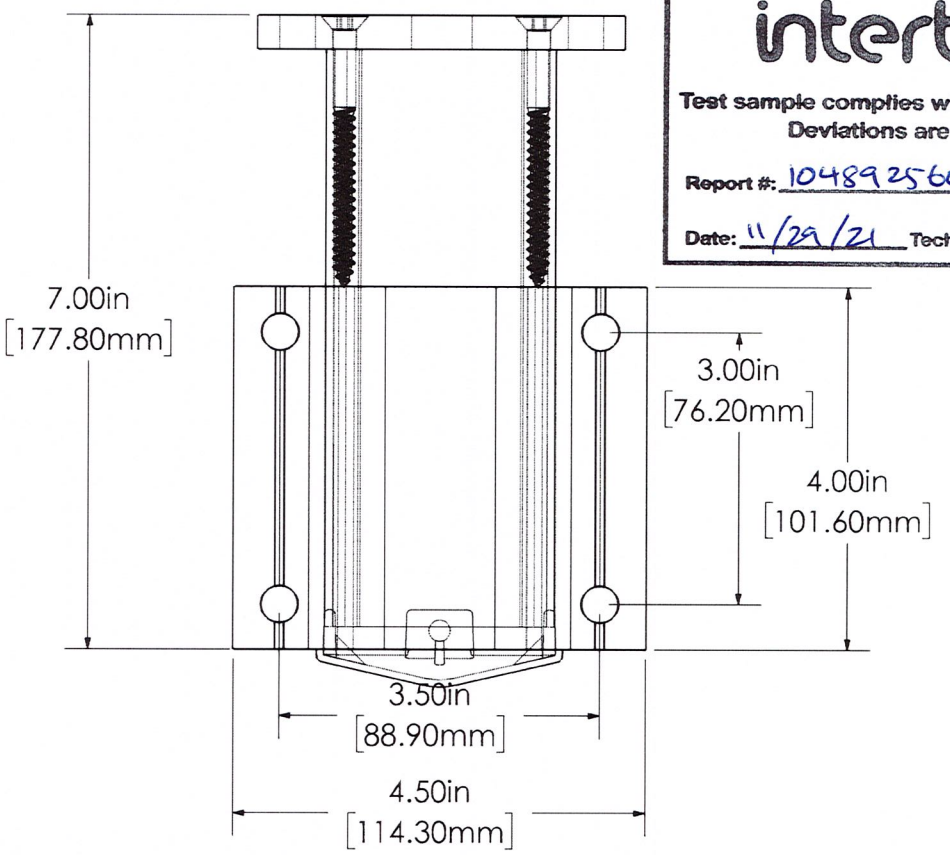
Part No. 4500-FAS-52100 | Eng No. 0217A
Weight 2.36 lbs | SHEET 4 OF 4 | Rev 1

REVISIONS

REV.	DESCRIPTION	DATE	INTIALS
1	Post Mat was 6.5 - Now 6.375in	02/16/2021	

ITEM NO.	Eng No.	Part No.	DESCRIPTION	QTY.
1	0071PC	1500-POS-23414	2-1/2" Post Material 6-3/8" (Fascia Brackets)	1
2	0054PG	4700-BAS-70438	4" X 4" X 3/8" Baseplate for 2-1/2" Post	1
3	0078P	2000-CAP-20002	2-1/2" Pyramid Post Cap (Inner)	1
4	0172P	1700-FAS-04004	2-1/2" Line/End/Stair Fascia Bracket Material 4"	1
5	0797P	NA	#14x3in Robertson Screw	4





intertek

Test sample complies with these details.
Deviations are noted.

Report #: 104892560COQ-001

Date: 11/29/21 Tech: C.C.

CenDek Railings Ltd.

DRAWN BY	Admin
CREATED	3/26/2018
MATERIAL	6063-T5
DIE NO.	

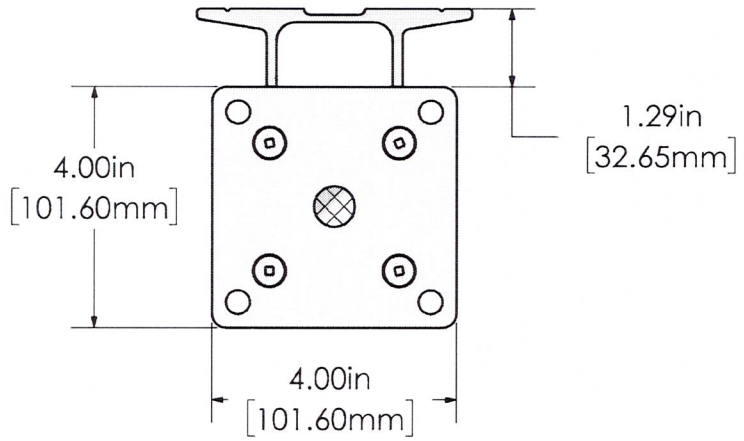
ALL DIMENSION IN INCHES/mm

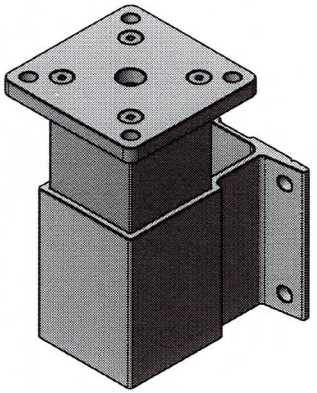
DESCRIPTION
2 1/2" Line/End/Stair Fascia Bracket (w/baseplate)

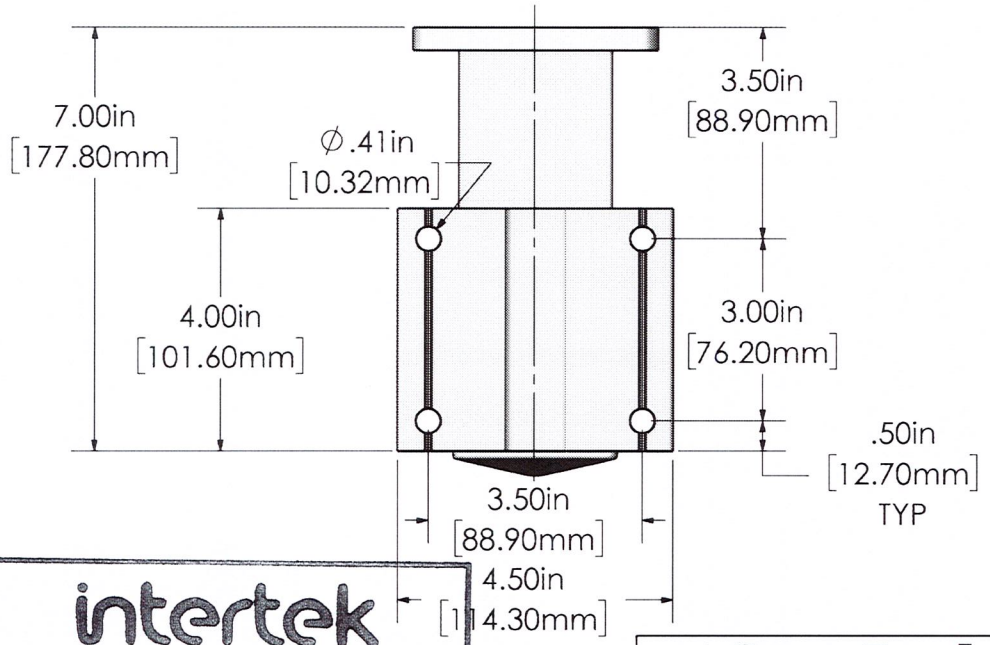
Part No. 4500-FAS-52100 | Eng No. 0217A
Weight 2.36 lbs | SHEET 1 OF 3 | Rev 1

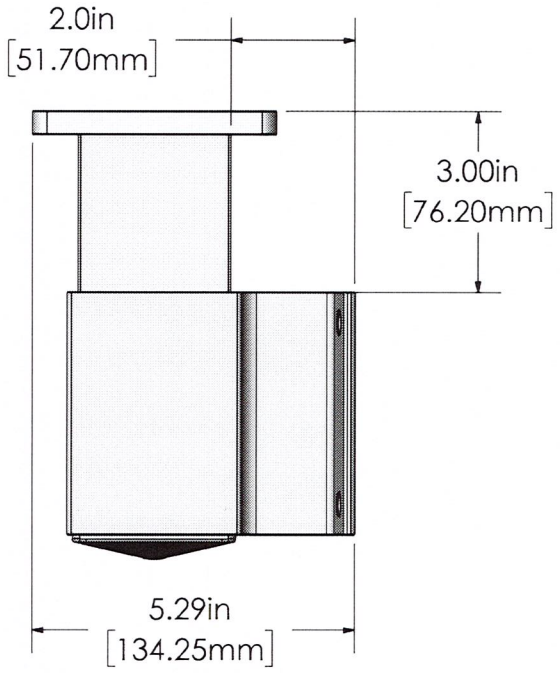
REVISIONS

REV.	DESCRIPTION	DATE	INTIALS
1	Post Mat was 6.5 - Now 6.375in	02/16/2021	









intertek

Test sample complies with these details. Deviations are noted.

Report #: 104892560COQ-001

Date: 4/29/21 Tech: C.C.

CenDek Railings Ltd.

DRAWN BY	Admin
CREATED	3/26/2018
MATERIAL	6063-T5
DIE NO.	

ALL DIMENSION IN INCHES/mm

DESCRIPTION
2 1/2" Line/End/Stair Fascia Bracket (w/baseplate)

Part No. 4500-FAS-52100	Eng No. 0217A	
Weight 2.36 lbs	SHEET 2 OF 4	Rev 1

1500 Brigantine Drive
Coquitlam, BC, V3K 7C1

Telephone: 604-520-3321
Facsimile: 604-524-9186
www.intertek.com

SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	11/29/21	N/A	Original Report Issue