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BARRETTE OUTDOOR LIVING, INC.

TEST REPORT

SCOPE OF WORK
STRUCTURAL PEFORMANCE TESTING ON THE 8 FT BY 42 IN *METAL WORKS EXCALIBUR - LATITUDES* STEEL GUARDRAIL SYSTEM

REPORT NUMBER
M1154.01-119-19 R0

TEST DATE
04/29/21

ISSUE DATE
05/18/21

RECORD RETENTION END DATE
04/29/25

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26

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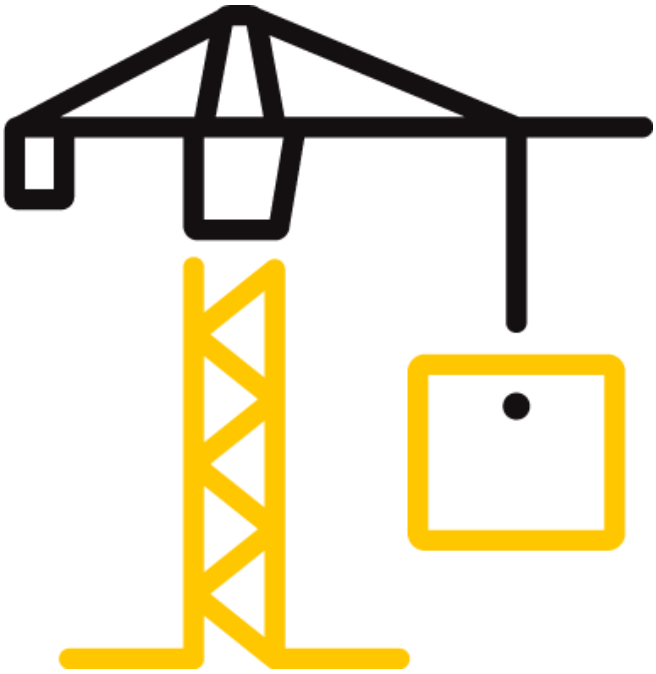

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Report No.: M1154.01-119-19 R0
Date: 05/18/21

REPORT ISSUED TO

BARRETTE OUTDOOR LIVING, INC.
545 Tilton Road
Egg Harbor City, NJ 08215

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Barrette Outdoor Living, Inc. to perform structural performance testing in accordance with the 2018 IRC and IBC on their 8 ft (96 in) wide by 42 (in) high *Metal Works Excalibur - Latitudes* steel guardrail system. All tests performed were to evaluate structural performance of the guardrail assembly to carry and transfer imposed loads to the supporting structure. The test specimens evaluated included the infill, rails, rail brackets, and support posts (IRC loading only). Anchorage of support posts to the supporting structure is not included in the scope of this testing and would need to be evaluated separately.

Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at Intertek test facility in York, Pennsylvania. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

The specimens met the 2018 IBC and IRC design load performance requirements.

For INTERTEK B&C:

COMPLETED BY:	Adam J. Schrum	**REVIEWED BY:**	V. Thomas Mickley, Jr., P.E.
TITLE:	Project Manager	**TITLE:**	Senior Staff Engineer
SIGNATURE:	Digitally Signed by: Adam J. Schrum	**SIGNATURE:**	Digitally Signed by: Virgal Thomas Mickley, Jr.
DATE:	05/18/21	**DATE:**	05/18/21

AJS:vtm/aas

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SECTION 3
TEST METHODS

The specimens were evaluated in accordance with the following:

2018, *International Building Code®*, International Code Council

2018, *International Residential Code®*, International Code Council

Structural tests were performed according to Chapter 17 (Structural Tests and Special Inspections) of IBC 2018.

SECTION 4
MATERIAL SOURCE/INSTALLATION

Test samples were provided by the client. Representative samples of the test specimens will be retained by Intertek B&C for a minimum of four years from the test completion date.

The 8 ft (96 in) wide by 42 in high guardrail assembly was installed and tested as a single railing section by directly securing the posts into a rigid steel test fixture, which rigidly restrained the posts from deflecting (for IBC testing), or with the post mounts attached at the base to steel C-channels to represent simulated concrete condition (for IRC testing). Transducers mounted to an independent reference frame were located to record movement of reference points on the guardrail system components (ends and mid-point) to determine net component deflections. See photographs in Section 11 for individual test setups.

SECTION 5
EQUIPMENT

The guardrail was tested in a self-contained structural frame designed to accommodate anchorage of the guardrail assembly and application of the required test loads. The specimens were loaded using an electric winch mounted to a rigid steel test frame. High strength steel cables, nylon straps, and load distribution beams were used to impose test loads on the specimens. Applied load was measured using an electronic load cell located in-line with the loading system. Electronic linear motion transducers were used to measure deflections.

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SECTION 6
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
George Sarkees	Barrette Outdoor Living, Inc.
Joe Ciszek	Barrette Outdoor Living, Inc.
Adam J. Schrum	Intertek B&C

SECTION 7
TEST PROCEDURE

Each test specimen was inspected prior to testing to verify size and general condition of the materials, assembly, and installation. No potentially compromising defects were observed prior to testing.

An initial load, not exceeding 50% of design load, was applied and transducers were zeroed. Load was then applied at a steady uniform rate until reaching 2.0 times design load in no less than 10 seconds. After reaching 2.0 times design load, the load was released. After allowing a minimum period of one minute for stabilization, load was reapplied to the initial load level used at the start of the loading procedure, and deflections were recorded and used to analyze recovery. Load was then increased at a steady uniform rate until reaching 2.5 times design load or until failure occurred. The testing time was continually recorded from the application of initial test load until the ultimate test load was reached.

Deflection and permanent set were component deflections relative to their end-points; they were not overall system displacements. All loads and displacement measurements were horizontal, unless noted otherwise.

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SECTION 8
TEST SPECIMEN DESCRIPTION

Barrette Outdoor Living, Inc. provided the fully-assembled test specimens with the following details:

PRODUCT	*Metal Works Excalibur - Latitudes*
TYPE	Steel guardrail system
GUARDRAIL LENGTH	96 in (inside of post to inside of post)
GUARDRAIL HEIGHT	- 42 in (top of top rail to bottom of base plate) - 40 in (top of top rail to bottom of bottom rail)
TOP AND BOTTOM RAIL	1 in square steel tube with a 0.11 in thick wall
PICKETS (IN-FILL)	- Four vertical 1 in square steel tubes with 0.07 in wall, one at each end and at 1/3 points - Nine horizontal 1/2 in diameter steel tubes with 0.09 in wall equally spaced between the top and bottom rail
RAIL BRACKETS	1-1/4 in high by 1-5/16 in wide by 1 in long steel collar brackets (welded or mechanically fastened to post mount)
POST	2 in square by 0.08 in wall hollow steel post welded to a 3-13/16 in square by 1/4 in thick steel base plate with a 1/8 in fillet weld all around; the base plate included four 7/16 in diameter holes and one 1 in square hole

Fastening Schedule

CONNECTION	FASTENER
Bracket to Post (IRC only)	1/16 in fillet weld on three sides
Bracket to Post (IBC and IRC)	Two, #10-16 by 5/8" (0.130 in minor diameter) flat head, torx drive, self-drilling, stainless steel screws
Top/Bottom Rail to Bracket	Two, #10-16 by 5/8" (0.130 in minor diameter) flat head, torx drive, self-drilling, stainless steel screws
Vertical Picket (First and Last) to Top/Bottom Rail	One, M5-1.75 by 19mm (0.122 in minor diameter) hex-washer head, self-drilling, steel screw
Vertical Picket (Located at Third Points) to Top/Bottom Rail	Butt welded on two sides and fillet welded on two sides
Horizonal Picket to First and Last Vertical Picket	Compression fit into plastic grommet; No mechanical connection
Horizonal Picket to 1/3 Point Vertical Pickets	Fillet welded all around

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Date: 05/18/21

SECTION 9
TEST RESULTS

Key to Test Results Tables:

Load Level: Target test load

Test Load: Actual applied load at the designated load level (target).

Elapsed Time (E.T.): The amount of time into the test with zero established at the beginning of the loading procedure.

Test Series No. 1
8 ft (96 in) by 42 in *Metal Works Excalibur - Latitudes* Steel Guardrail with Posts Restrained in Stanchions
IBC - All Use Groups

Test No. 1 - 04/29/21
Design Load: 50 lb / 1 Square ft at Center of In-fill (on 3 Pickets)

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)			
			END	MID	END	NET
Initial Load	25	00:00	--	0.00	--	--
2.0x Design Load	103	00:10	--	0.49	--	--
Initial Load	25	01:29	--	0.00	--	--
100% Recovery from 2.0 x Design Load						
2.5x Design Load	129	01:36	Achieved Load without Failure			

Test No. 2 - 04/29/21
Design Load: 50 lb / 1 Square ft at Bottom of In-fill (on 3 Pickets)

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)			
			END	MID	END	NET
Initial Load	25	00:00	--	0.00	--	--
2.0x Design Load	107	00:10	--	0.61	--	--
Initial Load	25	01:21	--	0.00	--	--
100% Recovery from 2.0 x Design Load						
2.5x Design Load	135	01:30	Achieved Load without Failure			

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Test No. 3 - 04/29/21
Design Load: 50 lb/ft x (96 in ÷ 12 in/ft) = 400 lb Horizontal Uniform Load On Top Rail [2]

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	RAIL DISPLACEMENT (in)			
			END	MID	END	NET [1]
Initial Load	80	00:00	0.00	0.00	0.00	0.00
2.0x Design Load	805	01:01	0.14	4.99	0.09	4.88
Initial Load	80	02:41	0.02	0.89	0.00	0.88
82% Recovery from 2.0 x Design Load						
2.5x Design Load	1001	03:21	Achieved Load without Failure			

[1] Net displacement was mid-rail displacement relative to the rail at the support posts.

[2] Uniform load was simulated with quarter point loading.

Test No. 4 - 04/29/21
Design Load: 50 lb/ft x (96 in ÷ 12 in/ft) = 400 lb Vertical Uniform Load On Top Rail [1]

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	RAIL DISPLACEMENT (in)			
			END	MID	END	NET
Initial Load	80	00:00	--	0.00	--	--
2.0x Design Load	806	00:49	--	1.19	--	--
Initial Load	80	02:16	--	0.12	--	--
90% Recovery from 2.0 x Design Load						
2.5x Design Load	1003	02:45	Achieved Load without Failure			

[1] Uniform load was simulated with quarter point loading.

Test No. 5 - 04/29/21
Design Load: 200 lb Horizontal Concentrated Load at Midspan of Top Rail

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	RAIL DISPLACEMENT (in)			
			END	MID	END	NET [1]
Initial Load	50	00:00	0.00	0.00	0.00	0.00
2.0x Design Load	406	00:30	0.05	3.23	0.03	3.19
Initial Load	50	01:56	0.00	0.09	0.00	0.09
97% Recovery from 2.0 x Design Load						
2.5x Design Load	503	02:26	Achieved Load without Failure			

[1] Net displacement was mid-rail displacement relative to the rail at the support posts.

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Test No. 6 - 04/29/21
Design Load: 200 lb Horizontal Concentrated Load at Ends of Top Rail (Brackets)

LOAD LEVEL [1]	TEST LOAD (lb)	E.T. (min:sec)	RAIL DISPLACEMENT (in)	
			RAIL END #1	RAIL END #2
Initial Load	80	00:00	0.00	0.00
(2.0x Design Load) x 2	808	00:24	0.25	0.22
Initial Load	80	01:49	0.01	0.01
95% Recovery (Rail End #1) and 95% Recovery (Rail End #2) from 2.0 x Design Load				
(2.5x Design Load) x 2	1010	02:14	Achieved Load without Failure	

[1] *A spreader beam was used to impose loads on* both *ends of the railing system; therefore, loads were doubled.*

Test Series No. 2
8 ft (96 in) by 42 in *Metal Works Excalibur - Latitudes* Steel Guardrail with Posts Installed in Simulated Concrete Condition
IRC - One- and Two-Family Dwellings

Test No. 1 - 04/29/21
Design Load: 50 lb / 1 Square ft at Center of In-fill (on 3 Pickets)

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)			
			END	MID	END	NET
Initial Load	25	00:00	--	0.00	--	--
2.0x Design Load	104	00:10	--	0.50	--	--
Initial Load	25	01:27	--	0.00	--	--
100% Recovery from 2.0 x Design Load						
2.5x Design Load	125	01:51	Achieved Load without Failure			

Test No. 2 - 04/29/21
Design Load: 50 lb / 1 Square ft at Bottom of In-fill (on 3 Pickets)

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	DISPLACEMENT (in)			
			END	MID	END	NET
Initial Load	25	00:00	--	0.00	--	--
2.0x Design Load	100	00:10	--	0.49	--	--
Initial Load	25	01:18	--	0.00	--	--
100% Recovery from 2.0 x Design Load						
2.5x Design Load	127	01:33	Achieved Load without Failure			

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Test No. 3 - 04/29/21
Design Load: 200 lb Horizontal Concentrated Load at Midspan of Top Rail

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	RAIL DISPLACEMENT (in)			
			END	MID	END	NET [1]
Initial Load	50	00:00	0.00	0.00	0.00	0.00
2.0x Design Load	407	00:46	0.89	4.30	0.84	3.44
Initial Load	50	02:12	0.02	0.45	0.03	0.43
88% Recovery from 2.0 x Design Load						
2.5x Design Load	503	03:02	Achieved Load without Failure			

[1] *Net displacement was mid-rail displacement relative to the rail at the support posts.*

Test No. 4 - 04/29/21
Design Load: 200 lb Horizontal Concentrated Load at Ends of Top Rail (Brackets)

LOAD LEVEL [1]	TEST LOAD (lb)	E.T. (min:sec)	RAIL DISPLACEMENT (in)	
			RAIL END #1	RAIL END #2
Initial Load	80	00:00	0.00	0.00
(2.0x Design Load) x 2	803	00:52	2.11	2.30
Initial Load	80	02:18	0.15	0.24
93% Recovery (Rail End #1) and 90% Recovery (Rail End #2) from 2.0 x Design Load				
(2.5x Design Load) x 2	1005	03:01	Achieved Load without Failure	

[1] *A spreader beam was used to impose loads on* both *ends of the railing system; therefore, loads were doubled.*

Test No. 5 - 04/29/21
Design Load: 200 lb Concentrated Load at Top of Stand-Alone [1] Post (42 in high)

LOAD LEVEL	TEST LOAD (lb)	E.T. (min:sec)	POST DISPLACEMENT (in)
Initial Load	40	00:00	0.00
2.0x Design Load	409	00:25	1.84
Initial Load	40	01:46	0.02
99% Recovery from 2.0 x Design Load			
2.5x Design Load	503	02:25	Achieved Load without Failure

[1] *Post was conservatively tested without a railing attached.*

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SECTION 10
CONCLUSION

Using performance criteria of withstanding an ultimate load of 2.5 times design load, the test results substantiate compliance with the design load requirements for the building codes and guardrail details shown in the following table:

METAL WORKS EXCALIBUR - LATITUDES	**GUARDRAIL TYPE**	**SUPPORT POST**	**BRACKET TO POST CONNECTION**	**CODE OCCUPANCY CLASSIFICATION**
8 ft (96 in) by 42 in	Level / In-Line Application	-- [1]	Mechanically Connected	IBC - All Use Groups
		2 in Square Steel Post Mount Attached to Simulated Concrete	Mechanically Connected or Welded	IRC - One- and Two-Family Dwellings

[1] *Support posts are not included in the scope of the IBC evaluation documented in this report and would need to be evaluated separately.*

Anchorage of support posts to the supporting structure is not included in the scope of this testing and would need to be evaluated separately.

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SECTION 11
PHOTOGRAPHS

Photo No. 1
In-Fill Load Test at Center of Three Pickets

Photo No. 2
In-Fill Load Test at Bottom of Three Pickets

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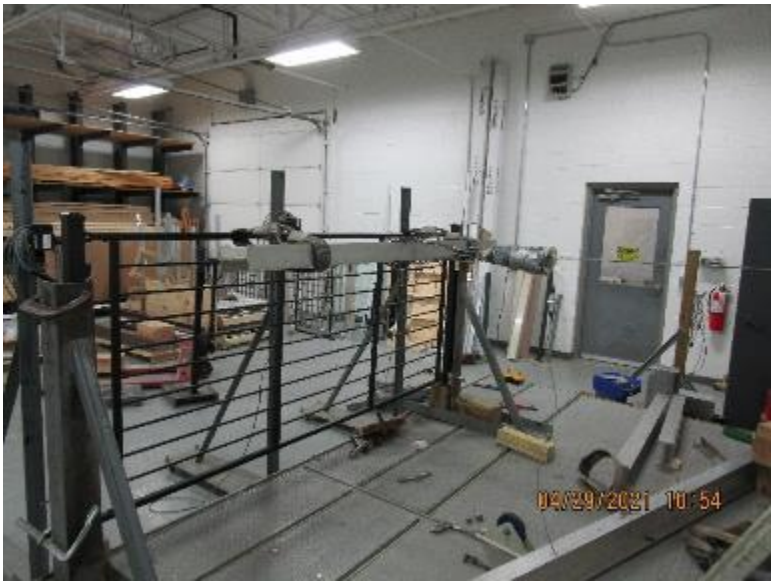

Photo No. 3
Horizontal Uniform Load on Top Rail (IBC Loading Only)

Photo No. 4
Vertical Uniform Load on Top Rail (IBC Loading Only)

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Photo No. 5
Concentrated Load Test at Midspan of Top Rail

Photo No. 6
Concentrated Load Test at Ends of Top Rail (Brackets)

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Report No.: M1154.01-119-19 R0
Date: 05/18/21

Photo No. 7
Concentrated Load Test at Top of Stand-Alone Post (42 in high)

Photo No. 8
Bracket Connection to Post and Rail

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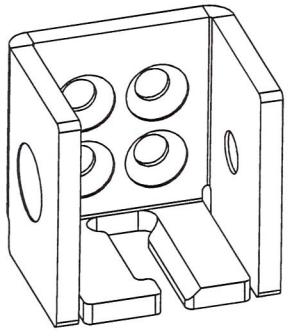
SECTION 12
DRAWINGS

The "As-Built" drawings for the 8 ft (96 in) wide by 42 (in) high *Metal Works Excalibur - Latitudes* steel guardrail system which follow have been reviewed by Intertek B&C and are representative of the project reported herein. Project construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

NOTES:
1. MATERIAL: Q235 STEEL
2. USE WITH EPN-4258 BRACKET COVER
3. AAMA 2604 POWDER COAT PART BLACK OR BRONZE
4. SEE CAD FILE FOR ALL DIMENSIONS



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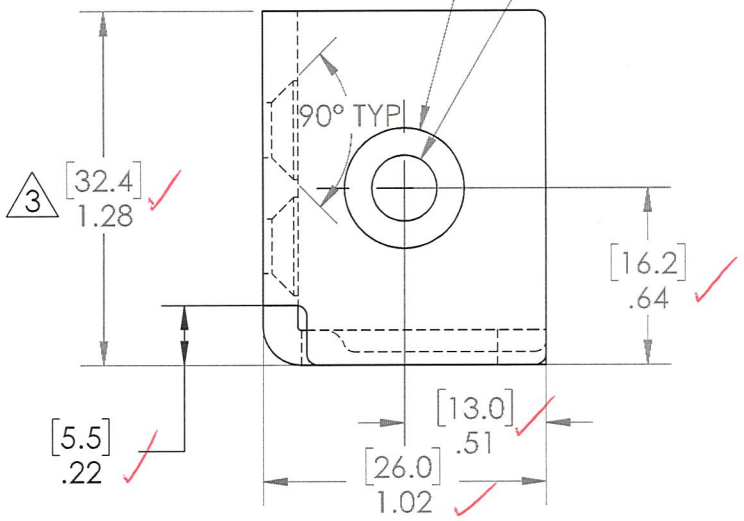
Test sample complies with these details.
Deviations are noted.
Report # 5° M1154-01-119-19
Date 5/11/21 Tech AJS

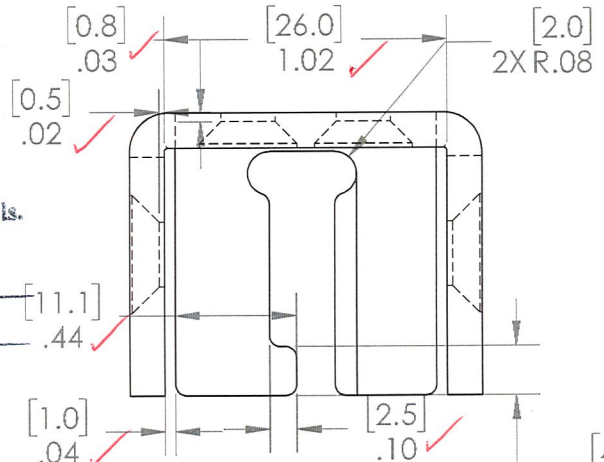
[2.0] .08

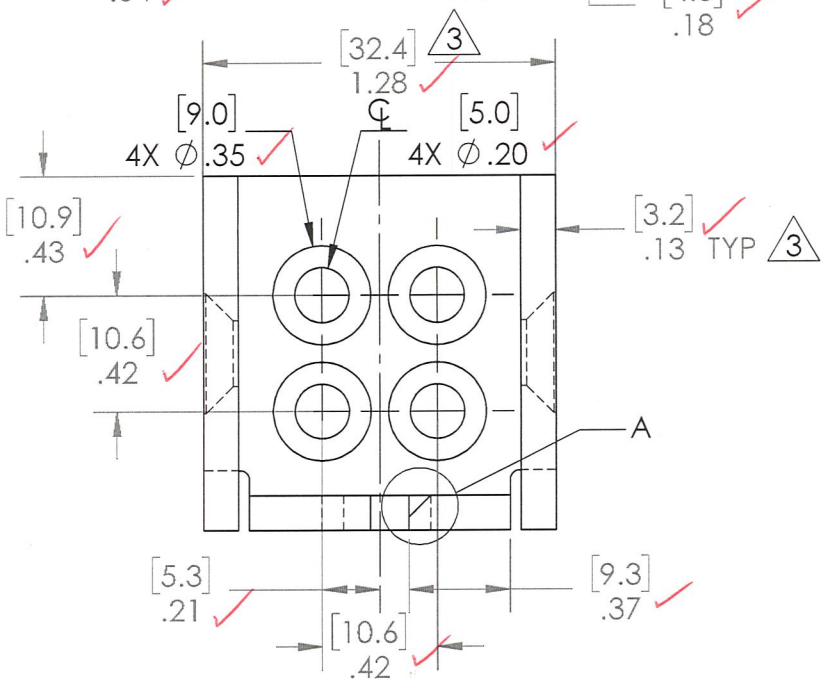
DETAIL A
SCALE 3 : 1

[11.0] Ø.43
[6.0] Ø.24

SCALE 1 : 1







REV	BY	DATE	PCR	DESCRIPTION
3	CH	10/30/2020	N/A	ADDED MISSING DIMS, ADD Q235 TO MATERIAL SPEC.
2	CH	8/3/2020	N/A	ADDED MISSING DIM (26mm)
1	CH	6/9/2020	N/A	ADDED 2mm RADIUS CUT ON BOTTOM AT END OF CHAMFER.
0	CH	6/3/2020	N/A	ADD RADIUS AT END OF CHAMFER. RELEASE FOR PRODUCTION.

THE INFORMATION CONTAINED IN THIS DRAWING IS PROTECTED BY COPYRIGHT AND PATENT LAWS OF THE UNITED STATES AND OTHER COUNTRIES. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT WRITTEN PERMISSION IS PROHIBITED.

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

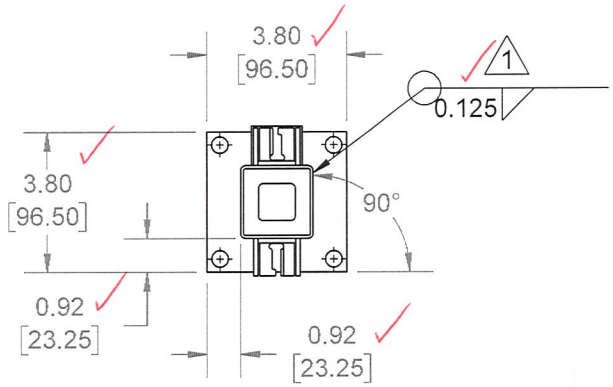
Barrette

BARRETTE
Outdoor Living
740 N. Main St., Bulls Gap, TN 37711

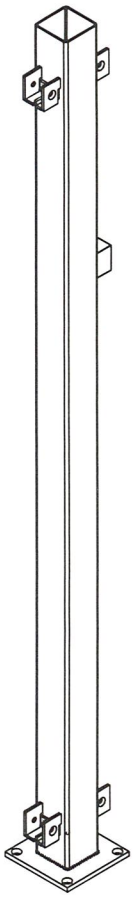
DRAWN:	DATE:	APPROVED:
C HERITAGE	05/27/2020	PS

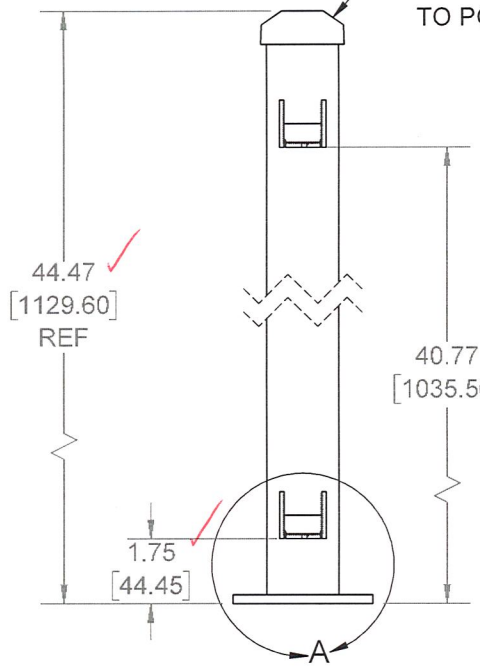
DESCRIPTION:
METAL WORKS EXCALIBUR LOOSE LEVEL BRACKET

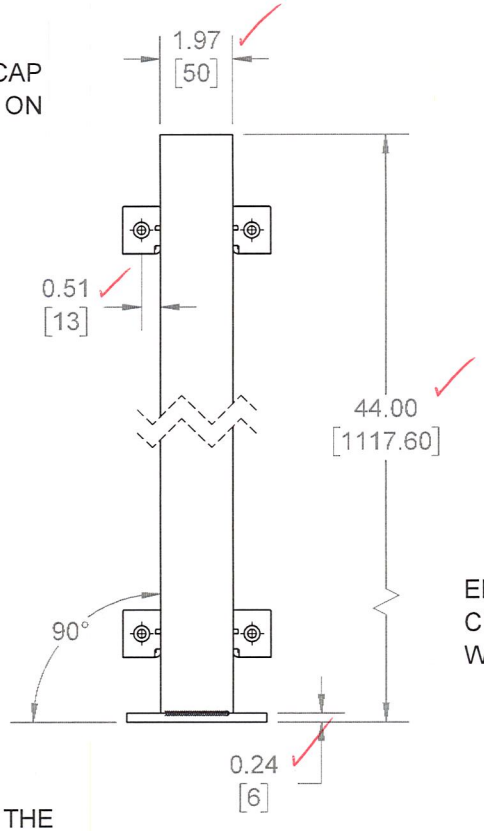
SHEET 1 OF 1	REVISION	PART NUMBER
SCALE 3:2	3	EPN-4257
WEIGHT:		



NOTES:
1. MATERIAL: GALVANIZED STEEL Q235.
2. FINISH: POWDER COAT BLACK (AAMA 2604-13).
3. EPN-3010 MUST BE CENTERED AND WELDED TO EPN-4109.
4. EPN-4259 MUST BE CENTERED AND WELDED TO EPN-3010.







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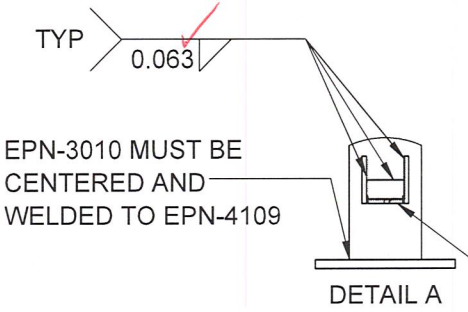
Test sample complies with these details.
Deviations are noted.

Report # M1154-01-119-19

Date 5/11/21 Tech AJS



BRACKET DIMENSION FROM BOTTOM OF THE PLATE TO THE BOTTOM OF THE BRACKET

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REV	BY	DATE	PCR	DESCRIPTION
2	CMJ	11/3/2020	201105CJH-A	CHANGED EPN-4110 TO EPN-4259 CHANGED EPN-4111 TO EPN-4258
1	CMJ	9/29/2020	N/A	UPDATE SPEC. WELD ON POST PLATE

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

Barrette

BARRETTE
Outdoor Living
740 N. Main St., Bulls Gap, TN 37711

DRAWN:	DATE:	APPROVED:
PSackett	12/04/2014	CH

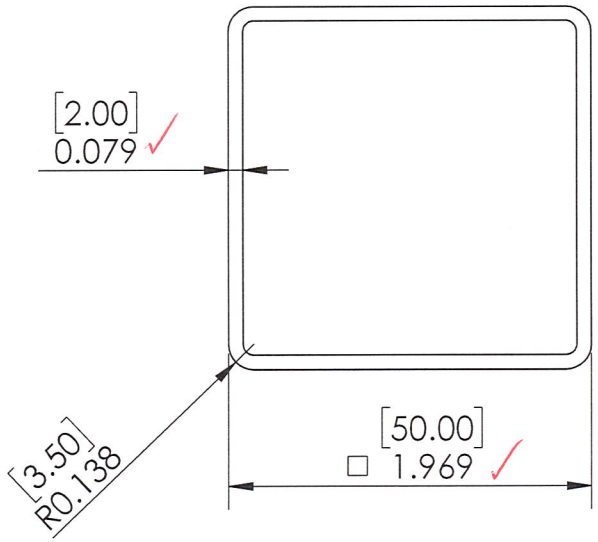
DESCRIPTION:

44" Mid Post Assembly for 42" Rail

SHEET 2 OF 2	REVISION	PART NUMBER
SCALE 1:10	2	73018349
WEIGHT: 8.746070		

NOTES:

1. MATERIAL: GALVANIZED STEEL Q235
2. LENGTH TOLERANCE:
   - <96" = 1/16"
   - >96" = 1/8"



intertek

Test sample complies with these details.
Deviations are noted.

Report # M1154.01-119-19

Date 5/11/21 Tech AJS

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REV	BY	DATE	PCR	DESCRIPTION
0	WED	10/5/2020	N/A	RELEASED

Barrette

BARRETTE
Outdoor Living

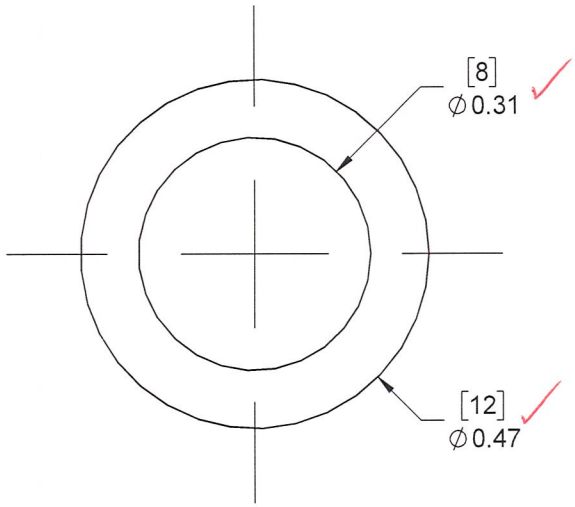
DRAWN:	DATE:	APPROVED:
W DIXON	10/05/2020	

DESCRIPTION: METALWORKS EXCALBUR 2" POST

SHEET 1 OF 1	REVISION	PART NUMBER
SCALE 1:1	0	EPN-3010
WEIGHT: 1.001574		

NOTES:

1. MATERIAL: GALVANIZED TUBE STEEL Q235.
2. STEEL TUBING TO BE POWDER COATED IN MATTE BLACK OR MATTE BRONZE.
3. DIMENSIONS SHOWN DO NOT INCLUDE POWDER COAT.
4. POWDER COAT THICKNESS RANGE BETWEEN .003-.006 INCHES ON EACH SURFACE.
5. POWDER COAT PROCESS WILL BE THE SAME AS METALWORKS EXCALIBUR PARTS.
6. SEE ASSEMBLY DRAWINGS FOR PART LENGTH.



intertek

Test sample complies with these details.
Deviations are noted.

Report # M1154.01-119-19

Date 5/11/21 Tech AJS

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REV	BY	DATE	PCR	DESCRIPTION
0	CH	7/7/2020	N/A	RELEASE FOR PRODUCTION
A	SRM	2/10/2020	N/A	PRELIMINARY DRAWING

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

Barrette

BARRETTE
Outdoor Living

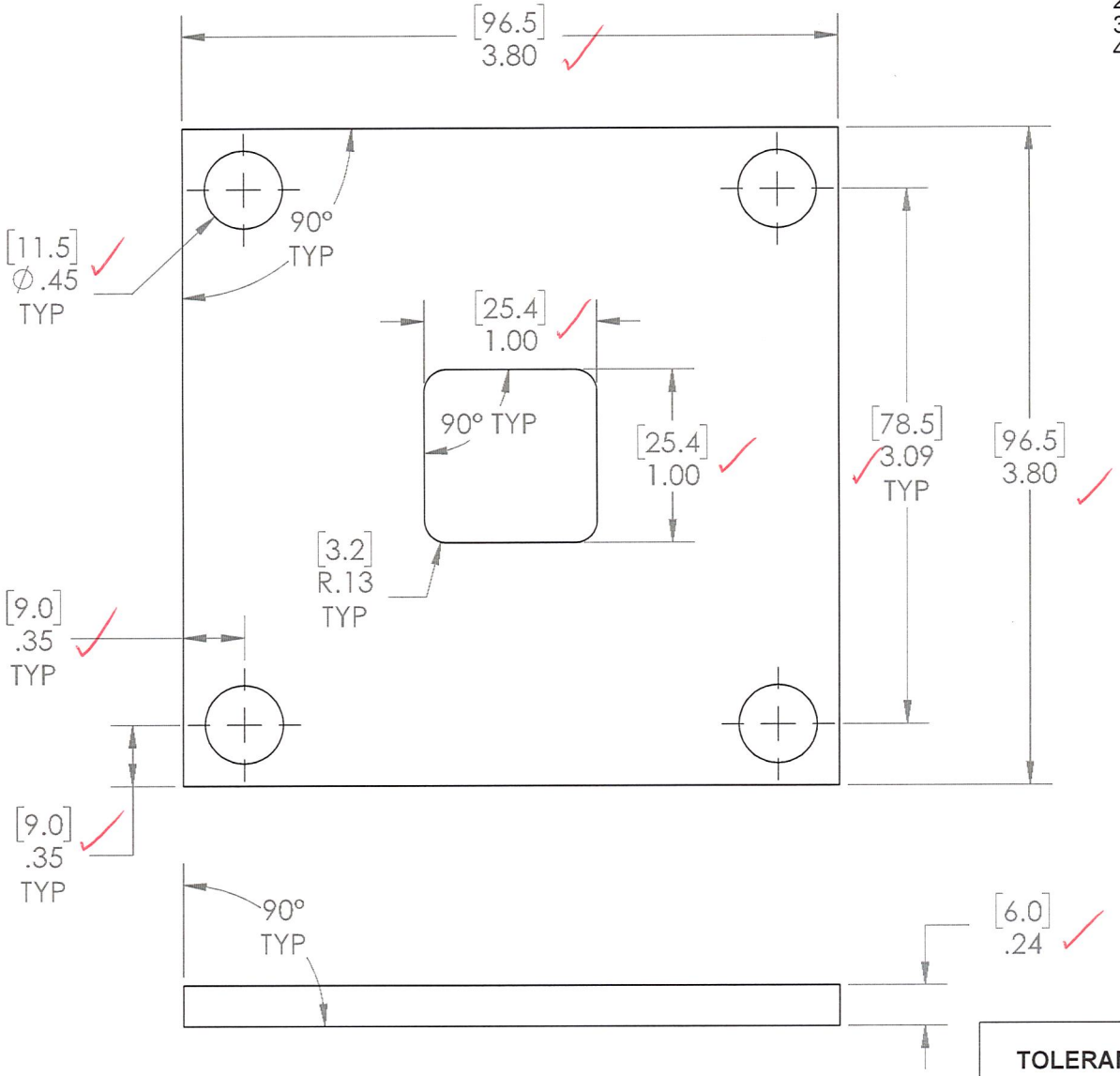
DRAWN:	DATE:	APPROVED:
S. MARIN	02/03/2020	MW

DESCRIPTION:

SR 12MM ROUND HOR

SHEET 1 OF 1	REVISION	PART NUMBER
SCALE 2:1	0	EPN-3061
WEIGHT: 0.33		

NOTES:
1. GALVANIZED STEEL FLANGE, TYPE Q345.
2. PLATE WELDED TO TUBE OF POST ON ALL SIDES.
3. USED FOR BASE OF ALL 2" POST ASSEMBLIES.
4. POWDER COAT PART BLACK OR BRONZE (AFTER WELDING).

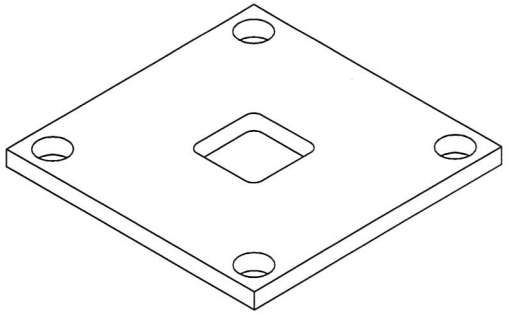


intertek

Test sample complies with these details.
Deviations are noted.

Report # M1154.01-119-19

Date 5/11/21 Tech AJS



SCALE 1 : 2

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

BARRETTE
Outdoor Living
740 N. Main St., Bulls Gap, TN 37711

DRAWN:	DATE:	APPROVED:
PSackett	12/11/2014	PS

DESCRIPTION: POST FLANGE

SHEET 1 OF 1
SCALE 1:1
WEIGHT: 0.859927

REVISION: 1

PART NUMBER: EPN-4109

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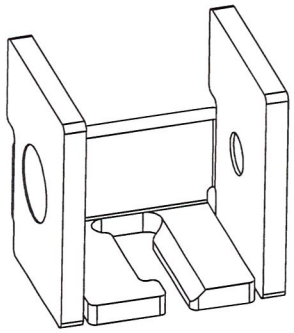
REV	BY	DATE	PCR	DESCRIPTION
1	CH	3/25/2021	210325CJH-B	SPECIFIED MATERIAL TO BE Q345 STEEL. ADDED TOL TABLE. ADDED TYP AND REMOVED EXTRA DIMS.

NOTES:
1. MATERIAL: Q235 STEEL
2. USE WITH EPN-4258 BRACKET COVER
3. AAMA 2604 POWDER COAT PART BLACK OR BRONZE
4. SEE CAD FILE FOR ALL DIMENSIONS

intertek

Test sample complies with these details.
Deviations are noted.
Report # M1154.01-119-19
Date 5/11/21 Tech AJS



[2.0] .08

45°

DETAIL A
SCALE 3 : 1

SCALE 1 : 1

[26.0] 1.02

[0.5] .02

[2.0] 2X R.08

[3.5] .14

[11.1] .44

[1.0] .04

[2.5] .10

[4.5] .18

[11.0] Ø.43

[6.0] Ø.24

[26.0] 1.02 △0

[3.5] .14

[32.4] 1.28 △1

[3.0] .12

[16.2] .64

[5.5] .22

[13.0] .51

[3.5] R.14

[32.4] 1.28 △1 ℄

[3.2] .13 TYP △1

[16.2] .64

A

[9.3] .37

REV	BY	DATE	PCR	DESCRIPTION
1	CH	10/30/2020	N/A	ADD MISSING DIMS. ADD Q235 TO STEEL SPEC.
0	CH	8/3/2020	N/A	ADDED MISSING DIM (26.0mm), RELEASE FOR PRODUCTION.
A	CH	6/15/2020	N/A	INITIAL RELEASE

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

Barrette

BARRETTE
Outdoor Living
740 N. Main St., Bulls Gap, TN 37711

DRAWN:	DATE:	APPROVED:
C HERITAGE	06/15/2020	SG

DESCRIPTION:
METAL WORKS EXCALIBUR WELDED LEVEL BRACKET

SHEET 1 OF 1	REVISION	PART NUMBER
SCALE 3:2	1	EPN-4259
WEIGHT:		

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NOTES:
PART TO BE MODELED FROM 3D CAD MODEL.
SEE INDIVIDUAL PARTS DRAWINGS FOR SPECIFIC MATERIALS.
NO LEAD IS ALLOWED IN BARRETTE PRODUCTS OR MATERIALS.
NO BURRS OR SHARP EDGES ALLOWED.

MATERIAL:
410 STAINLESS STEEL

SURFACE TREATMENT:
NONE

SURFACE FINISH:
DACROMET 320PB = BLACK OR DACROMET 500B = SILVER, GREATER THAN 36 GM/M².
COLOR AS NOTED ON SHEET.

DACROMET 500 B = SILVER

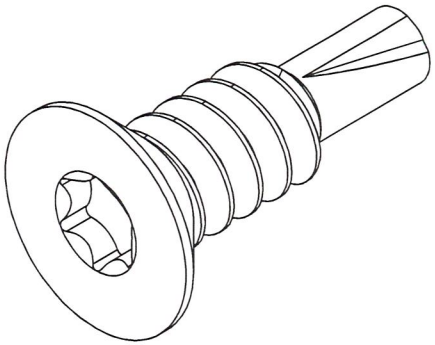
(TO WITHSTAND 1000 HOURS SALT SPRAY TEST)

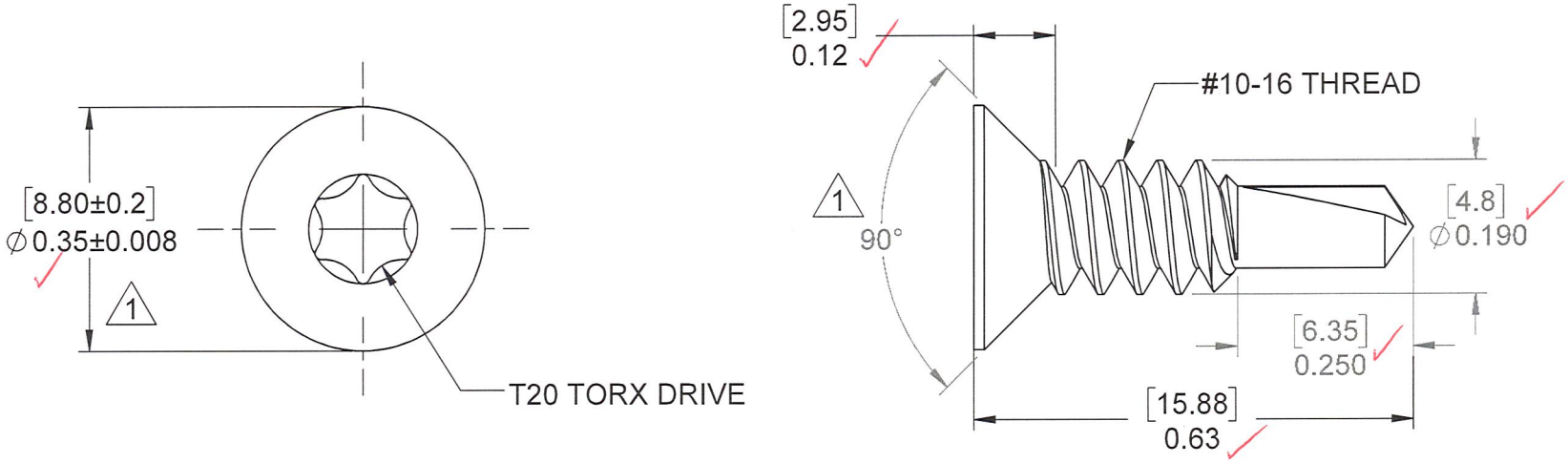
intertek

Test sample complies with these details.
Deviations are noted.

Report # M1154.01-119-19

Date 5/11/21 Tech AJS





3D MODEL FILENAME EPN-6159

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REV	BY	DATE	PCR	DESCRIPTION
1	CH	12/15/2020	N/A	90 DEG. WAS 82 DEG. HEAD DIA. WAS .362 AND ADDED TOL.
0	CH	11/3/20	N/A	INITIAL RELEASE

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

Barrette **BARRETTE** Outdoor Living

DRAWN:	DATE:	APPROVED:
C HERITAGE	11/3/2020	MW

DESCRIPTION: 10-16 X 5/8" T20 FH SDS 410SS DACROMET

SHEET 1 OF 1
SCALE 4:1
WEIGHT: 0.00

REVISION: 1

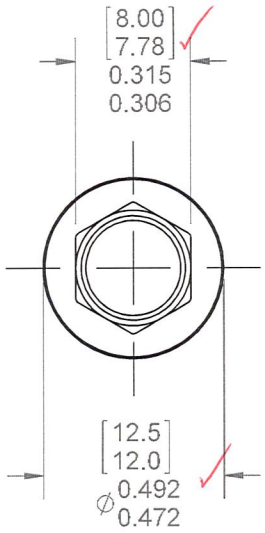
PART NUMBER: **EPN-6337**

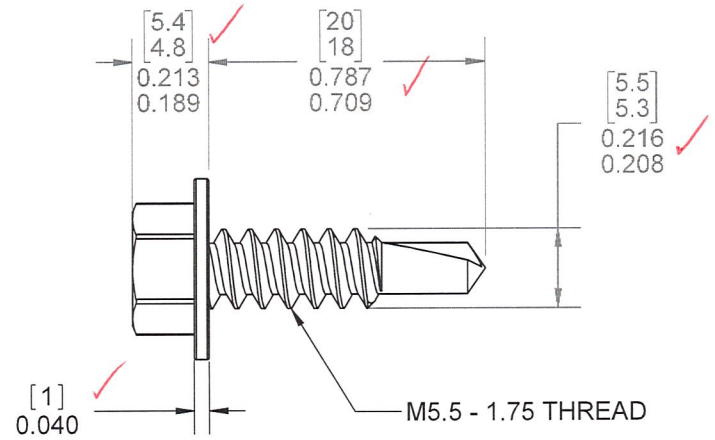
NOTES:
PART TO BE MODELED FROM 3D CAD MODEL.
SEE INDIVIDUAL PARTS DRAWINGS FOR SPECIFIC MATERIALS.
NO LEAD IS ALLOWED IN BARRETTE PRODUCTS OR MATERIALS.
NO BURRS OR SHARP EDGES ALLOWED.

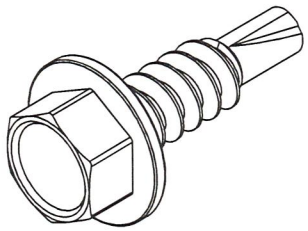
MATERIAL:
STAINLESS STEEL TYPE 410

SURFACE TREATMENT:
POWDER COAT (HEAD ONLY)
- SAME AS POWDER USED ON PANEL

ALT SURFACE TREATMENT:
DACROMET 320PB = BLACK OR DACROMET 500B = SILVER, GREATER THAN 36GM/M².
- SALT SPRAY TEST PER ASTM B117 (PASS 1000 HOURS)







intertek

Test sample complies with these details.
Deviations are noted.

Report # M1154.01-119-19

Date 5/11/21 Tech AJS

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REV	BY	DATE	PCR	DESCRIPTION
0	CH	3/23/2021	N/A	RELEASED FOR PRODUCTION

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

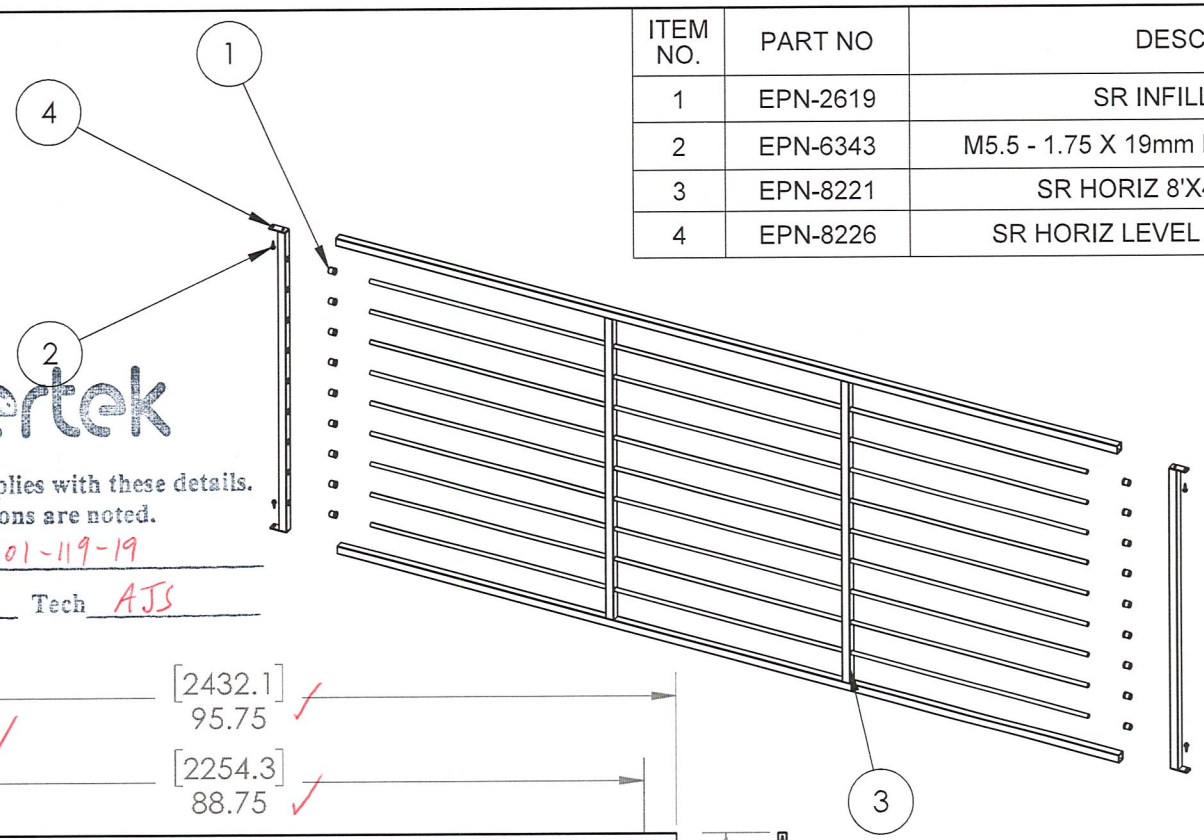
Barrette OUTDOOR LIVING®

DRAWN:	DATE:	APPROVED:
C HERITAGE	03/23/2021	

DESCRIPTION: M5.5 - 1.75 X 19mm HEX HEAD SDS 410 SS

SHEET 1 OF 1	REVISION	PART NUMBER
SCALE 2:1	0	EPN-6343
WEIGHT:		

ITEM NO.	PART NO	DESCRIPTION	QTY
1	EPN-2619	SR INFILL GROMMET	18
2	EPN-6343	M5.5 - 1.75 X 19mm HEX HEAD SDS 410 SS	4
3	EPN-8221	SR HORIZ 8'X42" LEVEL INFILL	1
4	EPN-8226	SR HORIZ LEVEL END BALUSTER, 42"	2



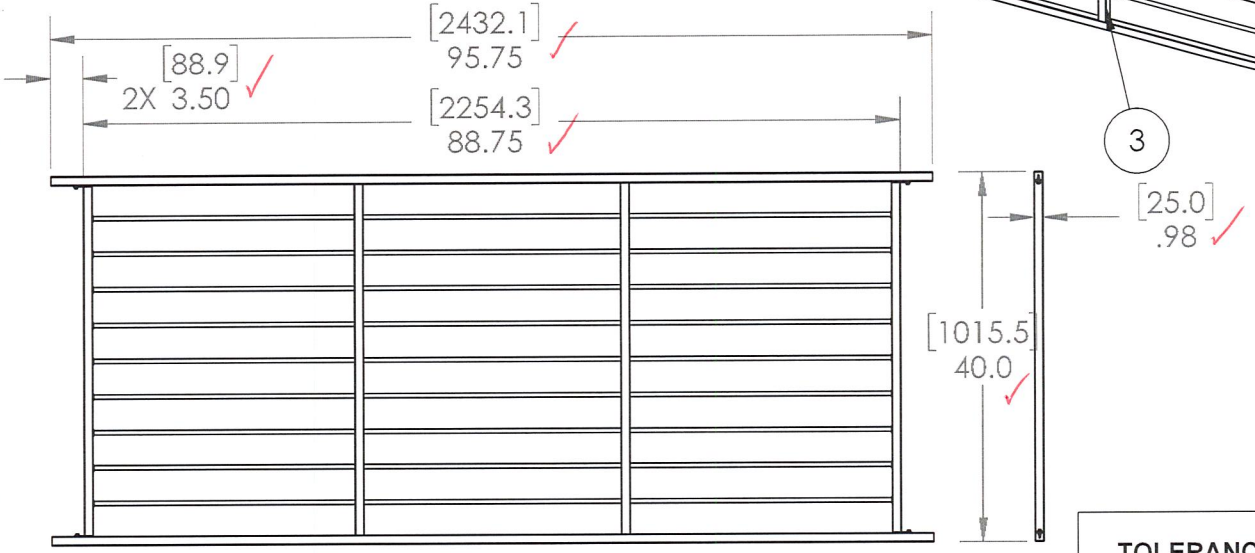
SCALE 1 : 20

intertek

Test sample complies with these details.
Deviations are noted.

Report # M1154.01-119-19

Date 5/11/21 Tech AJS



NOTES:
1) USE SAME POWDER COAT PROCESS AS METAL WORKS EXCALIBUR.
2) COLOR MUST MATCH BOL SAMPLE.

REV	BY	DATE	PCR	DESCRIPTION
2	CH	3/29/2021	210325CJH-A	CHANGED TO BIGGER SCREW; EPN-6343 WAS EPN-6329.
1	CH	1/4/2021	N/A	UPDATED DESCRIPTION
0	CH	8/21/2020	N/A	RELEASED FOR PRODUCTION

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TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

Barrette

BARRETTE
Outdoor Living

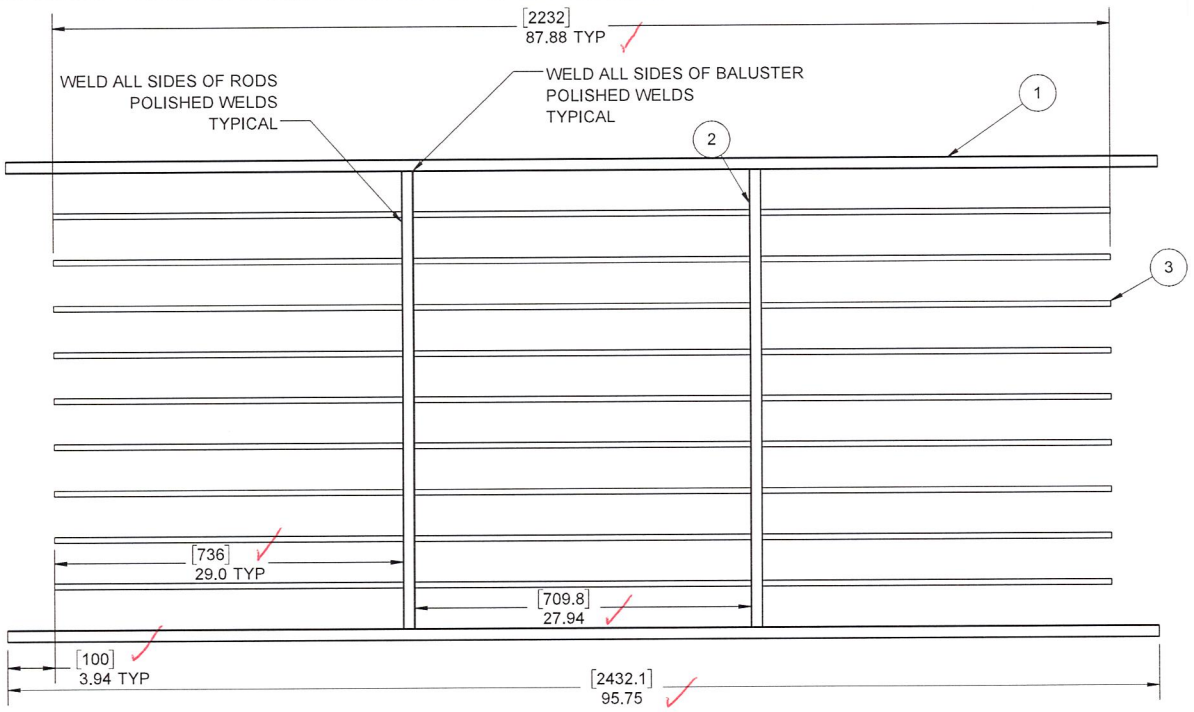
DRAWN: C HERITAGE | DATE: 08/21/2020 | APPROVED: PS

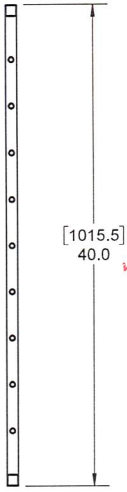
DESCRIPTION: SR HORIZ 8'X42" LEVEL PANEL

SHEET 1 OF 1
SCALE 1:15
WEIGHT: 47.353

REVISION: 1

PART NUMBER: **EPN-8220**





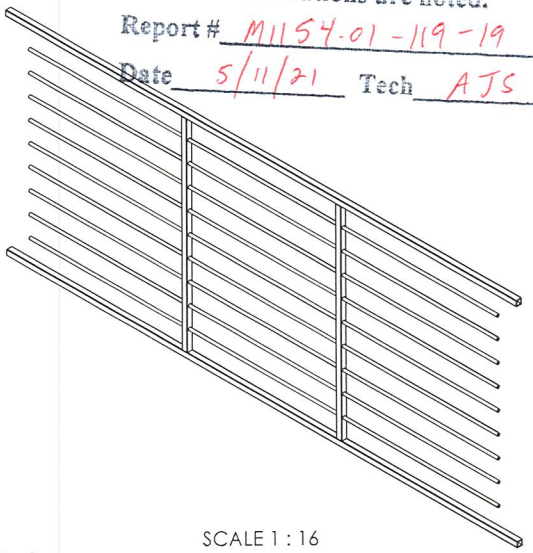
ITEM NO.	PART NO	DESCRIPTION	QTY
1	EPN-3067	8' LEVEL RAIL, 25MM SQ, 2.5MM WALL, Q345 ALLOY	2
2	EPN-3060	SR 25mm Sq 15 GAUGE BALUSTER MID LEVEL 38"	2
3	EPN-3061	SR 12MM ROUND, 8FT	9

intertek

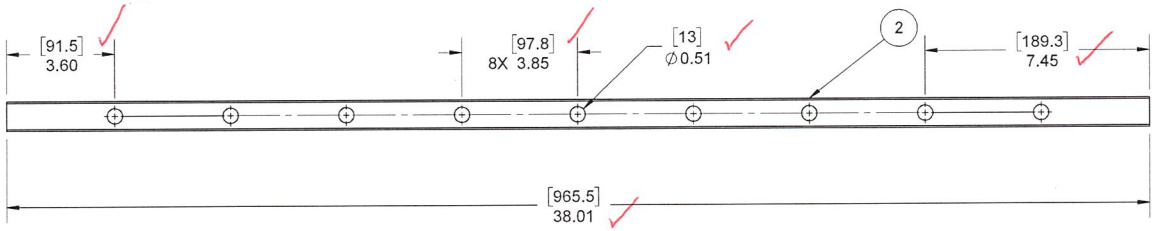
Test sample complies with these details.
Deviations are noted.

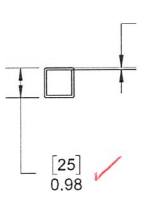
Report # M1154.01-119-19

Date 5/11/21 Tech AJS



SCALE 1 : 16





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REV	BY	DATE	PCR	DESCRIPTION
1	GS	9/17/2020	N/A	REPLACED EPN-3008 WITH EPN-3067
0	CH	8/21/2020	N/A	RELEASED FOR PRODUCTION

TOLERANCES	
FRACTION	±1/16
XX	±0.01
XXX	±0.005
ANGLE	±1.0°
FINISH	125 RMS
UNLESS OTHERWISE SPECIFIED	

Barrette Outdoor Living

DRAWN: C HERITAGE | DATE: 08/21/2020 | APPROVED: CH

DESCRIPTION: SR HORIZ 42"X96" LEVEL INFILL

SHEET 1 OF 1 | SCALE 1:10 | WEIGHT: 46.11 | REVISION: 1 | PART NUMBER: EPN-8221

130 Derry Court
York, Pennsylvania 17406

Telephone: 717-764-7700
Facsimile: 717-764-4129
www.intertek.com/building

TEST REPORT FOR BARRETTE OUTDOOR LIVING, INC.
Report No.: M1154.01-119-19 R0
Date: 05/18/21

SECTION 13
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	05/18/21	N/A	Original Report Issue