



Building Product Evaluation Report 0101

Bella Premier Guardrail Systems Oldcastle

Initial Acceptance: October 7, 2017

Expiration: November 10, 2027

Revision: October 27, 2025

Version: 2.0

TYPE OF ACCEPTANCE

Product Material – Wood and Plastics

CSI Specification Division: 06 50 00 (Structural Plastic) and 06 63 00 (Plastic Railing)

MANUFACTURER IDENTIFICATION:

Oldcastle
400 Perimeter Center Terrace FL 10
Atlanta, GA 30360
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EVALUTATION REPORT SUBJECT:

Guardrail Systems for Exterior Applications
Installation on construction complying with the International Residential Code® (IRC) or with the International Building Code® (IBC), including IBC exceptions in Section 1015.3 of the IBC.

DESCRIPTION OF BUILDING COMPONENTS:

Oldcastle guardrail system is identified with the name **Bella Premier**. This guardrail System is for use in areas as referenced in the Applicable Codes, and provides a protective barrier for walking areas, balconies, porches, stairs and ramps. This guardrail system is manufactured by an extrusion process and produced in white and other colors.

1. **Guardrail – Bella Premier**

- (a) The **Bella Premier** guardrail system consists of a top rail, bottom rail, balusters, and an aluminum reinforcing insert. The bottom and baluster components (except for the round baluster) are manufactured by the co-extruded process with PVC material. The top rail is manufactured by the co-extruded process with ComposiCore™ material.
- (b) The **Bella Premier** guardrail system has a top rail that has a contoured profile (ComposiCore) shape, is hollow in the center, has rounded edges, is pre-routed for balusters, and has a PVC cap stock on the top rail. The top rail has a “dog bone” 6005-T5 aluminum insert that must be used with the 8 foot and 10-foot guardrail systems. The top rail is connected to the supports utilizing a PVC bracket. See Table 1 in this Report for drawings and dimensions.
- (c) The **Bella Premier** guardrail system has a bottom rail that is rectangular in shape, is hollow in the center, has rounded edges, and is pre-routed for balusters. The bottom rail connects to the supports utilizing a molded PVC bracket. See Table 1 in this Report for drawings and dimensions.



- (d) The **Bella Premier** guardrail system has three baluster designs. Two balusters (Yorktown and Square) are square in shape, have rounded edges, and are hollow in the center. The third baluster (aluminum 6005-T5) is circular in shape and is hollow in the center. See Tables 1 in this Report for baluster drawings and dimensions.
- (e) The **Bella Premier** guardrail system connections for the top and bottom rail to the supports are brackets. The brackets are secured to the posts with steel screws (stainless, corrosion plated or galvanized) suitable for use in preservative-treated wood. See Tables 1 and 3 in this Report for drawing of the bracket and number of fasteners required.
- (f) See Table 2 in this Report for the **Bella Premier** guardrail system height and length. The guardrail system that is 6 feet in length requires intermediate support between the supports under the bottom rail, and the guardrail systems that are 8 feet and 10 feet in length require two supports that are located under the bottom rail and are evenly spaced between the supports. See manufacturer's installation instructions BOM 34107347 dated 4-27-15.

2. Stairs –*Bella Premier*

- (a) The *Bella Premier* guardrail system can be used as stair guards. See Tables 1, 2, and 3 in this Report for the maximum length between posts, bottom rail supports, top and bottom rail connection brackets, and fasteners required.
- (b) When guardrails are used with stairs, the guardrail must be installed in accordance with the manufacturer's installation instructions and information located in Tables 1, 2, and 3 in this Report. When the manufacturer's installation instructions differ from this Report, this Report governs. Additionally, to comply with the IBC or IRC graspability requirements, a separate handrail complying with IBC Section 1014.3 or IRC Section R311.7.8.3 must be provided. Specific details regarding the construction, installation, and attachment to the stair guardrail and/or posts have not been evaluated and are outside the scope of this Report. Specific details when required must be furnished to the authority having jurisdiction.

APPLICABLE CODES:

- 2015, 2018, and 2021 International Building Code (IBC)
- 2015, 2018, and 2021 International Residential Code (IRC)

APPLICABLE CHARACTERISTICS REVIEWED:

1. Structural Performance:

- (a) Oldcastle **Bella Premier** guardrail system has been reviewed for maximum span as indicated in Table 2. Table 2 in this Report also indicates the limitations of use evaluated for each design.

2. Durability - Temperature:

- (a) Oldcastle **Bella Premier** guardrail system has been reviewed and evaluated for a temperature range of -20 degrees F (-29 degrees C) to 125 degrees F (52 degrees C).

3. Flame Spread Index:

- (a) Oldcastle **Bella Premier** guardrail system flame spread ratings were between 0-25 for CompositCore™ and PVC material when tested in accordance with ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*.

4. Decay Resistance:

- (a) The material used in the Oldcastle **Bella Premier** guardrail system in this Report does not contain any wood and has been deemed comparable to naturally resistant wood or to preservative-treated wood for resistance to fungal decay.

5. Termite Resistance:

- (a) The material used in the Oldcastle **Bella Premier** guardrail system in this Report does not contain any wood and has been deemed equivalent to naturally resistant wood or to preservative-treated wood for resistance to termite attack.

6. UV Testing:

- (a) The UV testing was conducted, and an appropriate adjustment factor was applied in accordance with ASTM D7032, *Standard Specification for Establishing Performance Ratings for Wood-Plastic Composite Deck Boards and Guardrail Systems (Guards or Handrails)*.

7. Fastening:

- (a) Oldcastle **Bella Premier** guardrail system top and bottom rails are fastened to posts with brackets using steel (stainless, corrosion plated or galvanized) screws. See Table 3 in this Report and the manufacturer's installation instructions.



- (b) Oldcastle guardrail system connection for the stairs are as follows: The **Bella Premier** guardrail system is connected with molded single piece sockets that allow the rail to pivot to the required angle or to be cut as required. See Table 1 of this Report for drawings of the brackets.
- (c) The fasteners and brackets are supplied by the manufacturer and must be used in the installation of the Oldcastle guardrail system. Use of other brackets and fasteners is not covered under this Report.

8. Posts:

- (a) Wood posts or other wood support framing members are not covered under this Report and fall outside of this Report. Wood posts and other wood must meet the load requirement in the building code and the wood members must have a minimum specific gravity of 0.50 (Southern Pine or better) and minimum thickness to allow full penetration of bracket mounting screws. Other wood posts or wood members not meeting these requirements are not covered under this Report.

APPLICABLE USES:

The Oldcastle guardrail system evaluated in this Report is for installations on construction complying with IRC or IBC including Exceptions indicated in section 1015.3. See Table 2 for guardrail system limitations.

LIMITATIONS OF ACCEPTANCE:

The Oldcastle **Bella Premier** guardrail system described in this Report comply with those codes listed in the Applicable Codes section above and are subject to the following conditions:

1. Oldcastle **Bella Premier** guardrail system is limited to exterior construction complying with the IRC and the IBC. The guardrail system provides a protective barrier for walking areas, balconies, porches, and ramps. See Table 2 for additional restrictions and limitations.
2. Installation of the guardrail system must comply with this Report; the applicable manufacturer's published installation instructions identified as BOM 34107347 for **Bella Premier** dated 4-27-15; and the applicable code. When the guardrail installation instructions differ from this Report, this Report governs.
3. The fasteners described in this Report have been evaluated for the installation of the Oldcastle **Premier** guardrail attached to wood posts. Structural wood posts and framing support members for posts must be designed to satisfy load requirements (live and dead) indicated in the building code. Material necessary for anchorage of the guardrail system(s) and compatibility of the fasteners to the treated supporting construction has not been evaluated.
4. The Oldcastle **Bella Premier** guardrail system described in the report must be fastened to the supporting construction (wood posts) as indicated in the manufacturer's installation manual and as outlined in this Report. When guardrail fastening instructions differ from this Report, this Report governs.
5. The top rail component for the Oldcastle **Bella Premier** guardrail system does not meet the graspability requirements when used as a handrail for stairs. See Description of Building Components 3(b) in this Report for additional requirements.
6. When required, the guardrail system, including a stair handrail (see Description of Building Components 3(b)), must be designed by a design professional and submitted to the authority having jurisdiction for final acceptance.
7. Oldcastle **Bella Premier** guardrail has not been evaluated as a member of a fire-resistance-rated assembly.
8. Oldcastle has a Third-Party inspection program provided by PFS Corporation.
9. The structural design for code compliance of supporting members for the guardrail has not been evaluated and is not part of this Report.

DOCUMENTATION SUBMITTED:

Submitted data was provided in accordance with PFS TECO Certification and Inspection Policy: Deck Boards and Guardrails (Quality control manual, Specifications, Manufacturer's installation instructions, Test data and Description information) and the products have been evaluated in accordance with ICC-ES AC174, *Acceptance Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails)*.



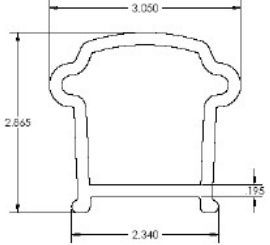

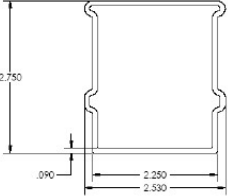
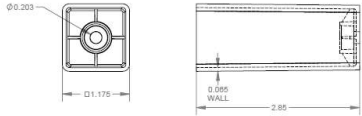
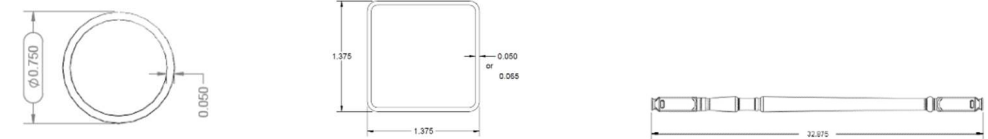
PRODUCT IDENTIFICATION:

The Oldcastle guardrail assembly system must be identified with a label on each component or the packaging. The required information is as follows: Oldcastle, product identification (***Bella Premier***), compliance to ASTM D7032 including the maximum guardrail span, the PFS TECO Building Product Evaluation Report number (BPER 0101), and the PFS Certification Mark (see image below). Guardrails that are 36 inches high require a label indicating the following: "Guardrail installation in residential (1 & 2 Family) units only." Guardrails without this information are not covered under this Report.

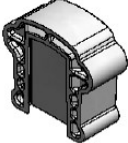

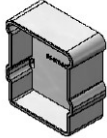



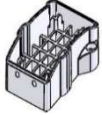




Table 1: Schematics of Bella Premier Guardrail System Components

Description	Bella Premier
Top Rail	
Top Rail Insert	 <p style="text-align: center;">Dog Bone</p>
Bottom Rail	
Bottom Rail Insert	None
Bottom Rail Support Block	
Baluster	 <p style="display: flex; justify-content: space-around;"> $\frac{3}{4}$" Aluminum 1-3/8" Square PVC Yorktown </p>



<i>Description</i>	<i>Bella Premier</i>		
Bracket - Level	 Top Bracket	 Bracket Base	 Bottom Bracket
Bracket - Stair	 Top Rail Upper Socket		 Top Rail Lower Socket
	 Bottom Rail Upper Socket		 Bottom Rail Lower Socket



**Table 2: Maximum Span Table for Bella Premier, Guardrail Assembly
(For IRC Residential and IBC One- and Two-Family Residential Dwellings – (TYPE V-B))**

Railing Type	Railing Assembly for Compliance with IBC Maximum Rail Height 42 inches					Railing Assembly for Compliance with IRC Maximum Rail Height 36 inches				
	Top Rail Insert	Bottom Rail Insert	Baluster Type	Baluster Length	Maximum Span (in)	Top Rail Insert	Bottom Rail Insert	Baluster Type	Baluster Length	Maximum Span (in)
Bella Premier Guardrail System Assembly										
Level	None	None	1-3/8" Square Baluster 0.065" Thick	38-7/8"	67	None	None	1-3/8" Square 0.055" Thick, 3/4" Al Tube, 1-3/8" Yorktown	32-7/8"	67
Level	Dog Bone	None			91	Dog Bone	None			115
Stair	Dog Bone	None			90	Dog Bone	None			90

For SI conversion: 1 in = 25.4 mm, 1 psi = 6.895 kPa, 1 lbf = 0.0044 kN
 Refer to Table 3 for fastening schedule
 Maximum span is clear length between posts measured parallel to top/bottom rail



Table 3: Fastening Schedule for Bella Premier Guardrail Assembly

Location	Connection	Fasteners
Bella Premier Guardrail Assembly		
Level – Top Rail Bracket Base	Base to Post	Four #10 x 2" Pan #2 Square Drive SDS 410 SS screw ¹
	Rail Bracket to Base	Slip fit – No mechanical connection
Level – Top Rail (Rail Bracket)	Rail Bracket to Post	Two #10 x 2" Pan #2 Square Drive SDS 410 SS screw
	Rail Bracket to Rail	Two #10 x 2" Pan #2 Square Drive SDS 410 SS screw
Level - Bottom Rail, Bracket Base	Base to Post	Four #10 x 1-1/4" Pan #2 Square Drive, 302 SS screw ¹
	Rail Bracket to Base	Slip fit – No mechanical connection
Level - Bottom Rail Rail Bracket	Rail Bracket to Post	Slip fit – No mechanical connection
	Rail Bracket to Rail	Slip fit – No mechanical connection on 8' or less One #10 x 1" Pan #2 Square Drive SDS 410 SS screw ¹ for 10' rail
Stair – Top Rail Upper Socket	Socket to Post	Two #10 x 2" Pan #2 Square Drive SDS 410 SS screw ²
	Rail to Socket	Three #10 x 1" Pan #2 Square Drive SDS 410 SS screw ²
Stair – Top Rail Lower Socket	Socket to Post	Two #10 x 2" Pan #2 Square Drive SDS 410 SS screw ²
	Rail to Socket	Three #10 x 1" Pan #2 Square Drive SDS 410 SS screw ²
Stair – Bottom Rail Upper Socket	Socket to Post	Two #10 x 2" Pan #2 Square Drive SDS 410 SS screw ²
	Rail to Socket	Two #10 x 1" Pan #2 Square Drive SDS 410 SS screw ²
Stair – Bottom Rail Lower Socket	Socket to Post	Two #10 x 2" Pan #2 Square Drive SDS 410 SS screw ²
	Rail to Socket	Two #10 x 1" Pan #2 Square Drive SDS 410 SS screw ²
Support Block ³ to Bottom Rail Bella Premier		One #10 x 3/4" Pan #2 Square Drive Tapping 302 SS screw

¹ Pre drill with 5/32 drill bit

² Pre drill with 1/8" drill bit

³ Use one Support Block for 6-ft span and two Support Blocks for longer span

⁴ See Applicable Characteristics Reviewed – 8 for additional post information