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DIVISION: 06— WOOD AND PLASTICS
Section: 06610—Plastics Railings and Guards

REPORT HOLDER:

CORRECT BUILDING PRODUCTS, LLC
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EVALUATION SUBJECT:

CORRECTDECK RAPID RAIL

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2003 *International Building Code*® (IBC)
- 2003 *International Residential Code*® (IRC)

Properties evaluated:

- Structural
- Durability
- Surface-burning characteristics

2.0 USES

CorrectDeck Rapid Rail is limited to exterior use as a guard system for balconies, porches, and decks for one- and two-family dwellings of Type V-B (IBC) construction and structures constructed in accordance with the IRC.

3.0 DESCRIPTION

3.1 General:

CorrectDeck Rapid Rail is a manufactured composite material that consists of approximately 60 percent wood fibers and 40 percent polypropylene. The wood thermoplastic composite material is manufactured by an extrusion molding process to produce comparable lumber-sized boards that are available in four colors: Coastal Grey, Cedar, Acadia, and Mahogany. The railing is assembled in sections 96 inches (2438 mm) long, measured from post centerlines, and 42 inches (1067 mm) high. See Figures 1 and 2 for details.

3.2 Guardrail System:

The components of the CorrectDeck Rapid Rail system consist of nominally 4-inch-by-4-inch [actually 3¹/₂ inches by 3¹/₂ inches (89 mm by 89 mm)] posts, 55 inches (1397 mm) long and with a center hollow cavity; nominally 2-inch-by-2-inch [actually 1³/₈ inches by 1⁵/₈ inches (35 mm by 41 mm)] solid balusters, 36¹/₄ inches (921 mm) long; and a top and

bottom profiled rail with actual dimensions of 3¹/₂ inches by 2³/₄ inches by 92¹/₂ inches long (89 mm by 70 mm by 2350 mm) and with a center hollow cavity.

3.2.1 Durability: When subjected to weathering, insect attack, and other decaying elements, material used to manufacture the CorrectDeck Rapid Rail is equivalent in durability to preservative-treated or naturally durable lumber, when used in locations described in Section 2.0 of this report. The CorrectDeck Rapid Rail is permitted to be exposed to a temperature range of -20°F (-29°C) to 125°F (52°C).

3.2.2 Surface-Burning Characteristics: When tested in accordance with ASTM E 84, CorrectDeck Rapid Rail has a flame-spread index of no greater than 200.

4.0 DESIGN AND INSTALLATION

4.1 General:

Installation of the CorrectDeck Rapid Rail system shall comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions shall be available at the jobsite at all times during installation. When the manufacturer's published installation instructions differ from this report, this report shall govern.

4.2 Design:

The CorrectDeck Rapid Rail system is designed to resist the loads specified in Chapter 16 of the IBC and Table R301.5 of the IRC when installed at a maximum center-of-post to center-of-post spacing as prescribed in Table 1 of this report. When a guardrail is supported on one or both ends by the supporting construction, the maximum distance shall be measured from center-of-post to center-of-post, center-of-post to edge-of-structure or edge-of-structure to edge-of-structure.

Construction supporting the CorrectDeck Rapid Rail system, including but not limited to the beams, joists, stringers, and associated connections, shall be designed and constructed in accordance with the applicable code.

4.3 Installation:

4.3.1 Post Mount:

4.3.1.1 Inside Box Rim Joist Mounting: The post of the CorrectDeck Rapid Rail system is attached to the supporting construction by two 1/2-inch (13 mm) carriage bolts with 5/8-inch washers on both sides. Each post is to be installed between a joist and joist block (see Figure 1).

4.3.1.2 Outside Rim Joist Mounting: The post of the CorrectDeck Rapid Rail system is attached to the outside of the supporting construction using two 1/2-inch (13 mm) carriage bolts with 5/8-inch (16 mm) washers on both sides (see Figure 1).

4.3.2 Rail: The top and bottom rails are attached to each post with a steel L-bracket. Each bracket is connected to the post with two No. 8 by 1-inch-long (25 mm) screws. Each rail is also attached to each bracket using two No. 8 by 1-inch-long (25 mm) screws. A squash block is required for all spans (see Figure 1).

4.3.3 Baluster: The balusters are installed in mortise in the top and bottom rails. No fasteners are needed to secure the balusters when the top and bottom rails are level. For installations on stairs and ramps, where the top and bottom rails are installed on an incline, the rails are not mortised and the balusters are installed by predrilling and toe-screwing each baluster to the rails with a No. 8 by 1-inch screw at the top and bottom of each baluster. (The rails on stairs and ramps have not been evaluated as handrails.) (See Figure 1.)

5.0 CONDITIONS OF USE

The CorrectDeck Rapid Rail railing described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The use of this product shall be limited to exterior use as a guardrail system for balconies and porches for one- and two-family dwellings of Type V-B (IBC) construction and structures constructed in accordance with the IRC.
- 5.2** Installation shall comply with this report, the manufacturer's published installation instructions and the applicable code. Only those fasteners and fastener configurations described in this report have been evaluated for the installation of the CorrectDeck Rapid Rail. When the manufacturer's published installation instructions differ from this report, this report shall govern.
- 5.3** The compatibility of the fasteners, metal mount components and other metal hardware with the supporting construction, including chemically treated wood, is outside the scope of this report.

5.4 The CorrectDeck Rapid Rail system shall be directly fastened to supporting construction. Where required by the code official, engineering calculations and construction documents consistent with this report shall be submitted for approval. The calculations shall verify that the supporting construction complies with the applicable building code requirements and is adequate to resist the loads imparted upon it from the products and systems discussed in this report. The documents shall contain details of the attachment to the supporting structure consistent with the requirements of this report. The documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

5.5 The top rail component of CorrectDeck Rapid Rail railing shall not be permitted to be used as a handrail for stairways or ramps.

5.6 The CorrectDeck Rapid Rail is produced by Correct Building Products, LLC, in Biddeford, Maine, under a quality control program with inspections by RADCO (AA-650).

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Criteria for Deck Board Span Ratings and Guardrail Systems (Guards and Handrails) (AC174), dated April 2002 (editorially revised July 1, 2004; corrected December 2004).

7.0 IDENTIFICATION

Each railing kit described in this report is identified by a stamp, on each individual piece or on the packaging, bearing the Correct Building Products, LLC, name and address; the CorrectDeck Rapid Rail railing products name; the name of the inspection agency (RADCO); the evaluation report number (ESR-1341); and the phrase "For Use in One- and Two-Family Dwellings Only."

TABLE 1—MAXIMUM GUARDRAIL SYSTEM SPANS^{2,3}

PRODUCT NAME/COMPONENT	APPLICABLE BUILDING CODE ⁴		MAXIMUM SPAN ¹
	IBC	IRC	
CorrectDeck Rapid Rail	Yes	Yes	8 ft. - 0 in.

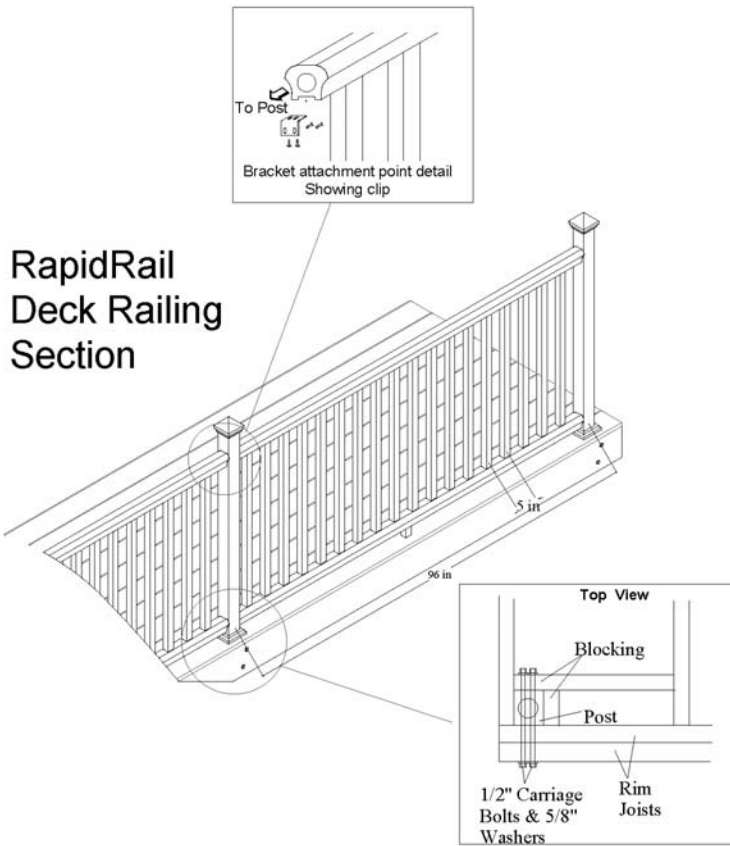
For **SI**: 1 inch = 25.4 mm; 1 ft = 305 mm.

¹Maximum span is measured center-to-center of the posts or from edge-of-building to center-of-post or edge-of-building to edge-of building where the rail is supported directly by the building.

²Maximum allowable span is adjusted for durability. No further increases are permitted.

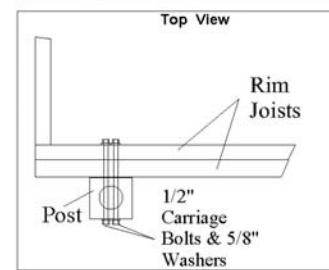
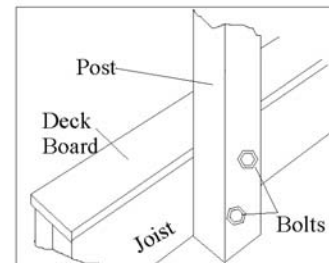
³The ability of the supporting construction to resist the reactionary loads shall be confirmed by the code official.

⁴Indicates compliance with the respective building codes.



Inside Box Rim Joist Mounting Method

Bill of Materials	
Stainless Steel Brackets	
#8 x 1 Stainless Screws	
For single joists: 1/2" x 8 Stainless Carriage Bolts	
For double joists: 1/2" x 10" Stainless Carriage Bolts	
1/2" Stainless Nuts	
5/8" Stainless Washers	



Outside Rim Joist Mounting Method

FIGURE 1