



Transform® Railing Guide Specification

This section is based on the products of RDI Railing, an Oldcastle® APG brand, Atlanta, GA 30346; (877) 265-2220; www.rdirail.com.

Transform®, made from RDI Railing's resin-based, state-of-the-art Compositore® core, contains no wood! Transform has the elements you want in a wood railing – the weight, look, and feel of wood, and nothing you don't. Transform will not absorb water, so it won't rot, and it resists weathering, discoloration, and sagging. Transform's 100% acrylic exterior surface provides long lasting color and a light textured, low-maintenance and durable finish.

Oldcastle® APG, a CRH Company, is North America's leading provider of innovative outdoor living solutions that enable customers to Live Well Outside. The manufacturer's portfolio of premier building products inspires endless possibilities while providing enduring outdoor spaces where people can connect, reflect and recharge.

SECTION 066300 - PLASTIC RAILINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Plastic resin-based-core railings.

1.2 REFERENCES

Specifier: If retaining this optional article, edit list below to correspond to those references retained in edited specification section.

- A. References, General: Versions of the following standards current as of the date of issue of the project or required by applicable code apply to the Work of this Section.
- B. ASTM International (ASTM):
 1. ASTM A123/A123M - Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 2. ASTM A307 - Carbon Steel Bolts, Studs, and Threaded Rods 60,000 psi Tensile Strength.
 3. ASTM A492 - Stainless Steel Rope Wire.
 4. ASTM A500/A500M - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
 5. ASTM B221M - Aluminum-Alloy Extruded Bar, Rod, Wire, Profiles, and Tube (Metric).

1.3 SUBMITTALS

- A. Product Data: Manufacturer's technical literature for each product specified.
1. Include preparation instructions and recommendations.
 2. Include storage and handling requirements and recommendations.
 3. Include manufacturer's installation instructions.

Specifier: This product is available with load calculation documentation that is individually stamped by a Professional Engineer per state. Contact RDI Railing Customer Service at (877) 265-2220 for documents that pertain to your region. Delete paragraph below if requirement for Delegated Design Submittal is retained.

4. Include load calculation documentation stamped by a Professional Engineer licensed in the jurisdiction in which Project is located.

B. Shop Drawings:

1. Include plans, elevations, sections, and details.
2. Include points of attachment and their corresponding static and dynamic loads imposed on deck and post foundations.

Specifier: Retain "Delegated Design Submittal" Paragraph and related paragraphs under "Quality Assurance" and "Performance Requirements" articles when required due to railing size or other exceptional Project requirements.

- C. Delegated Design Submittal: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

Specifier: Retain both "Samples for Initial Selection" and "Samples for Verification" paragraphs below for two-stage Samples.

- D. Samples for Initial Selection: For each finish product and finish specified, sets of color chips representing manufacturer's full range of available colors.
- E. Samples for Verification: For each material and for each color, in manufacturer's standard size.

1.4 QUALITY ASSURANCE

A. Qualification Data:

1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum five years documented experience.
2. Installer Qualifications: Railing manufacturer, or experienced Installer with a record of successful installations of similar type and size to that specified.

Specifier: Retain paragraph below for delegated design requirement.

- B. Professional Engineer Qualifications: Documented experience with providing delegated-design engineering services of the kind required by this Section, including documentation that engineer is licensed in the jurisdiction in which Project is located.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Transport, handle, store and protect railing components so they are in undamaged condition when installed.
- B. Store railing components in manufacturer's unopened packaging.
- C. Store railing components off the ground in a dry, protected, covered and secure area.

1.6 WARRANTY

- A. Special Warranty: On manufacturer's standard form in which manufacturer agrees to repair or replace components which fail in materials or workmanship within specified warranty period.

Specifier: RDI offers a limited lifetime warranty for this product for single-family residential installations and a 20-year warranty for other building types.

- 1. Warranty Period: [Lifetime] [20 years from date of Substantial Completion].

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Requirements: Engineer railings to withstand live and dead loads according to authorities having jurisdiction and information indicated within limits and under conditions indicated, without material failure or permanent deformation of structural members.

Specifier: Retain paragraph below if retaining requirement for delegated design by Contractor. Custom engineering is available via authorized Transform railing dealers.

- B. Delegated Design: Design railing to withstand design and operational loads.

2.2 MANUFACTURER

- A. Basis of Design: [Transform®](#) with Compositore® resin-based core manufactured by RDI Railing; Atlanta, Georgia 30346; (877) 265-2220; www.rdirail.com.

Specifier: Retain one of the following two subparagraphs.

- 1. Substitutions: Not permitted.
- 2. Substitutions: Submit request for substitution according to Instructions to Bidders and Division 01 General Requirements.

2.3 RAILING SYSTEM

- A. Use manufacturer's standard components.
- B. System Description:
 - 1. Height: [36 inches] [42 inches].
 - 2. Length: [72 inches] [96 inches] [As indicated on the Drawings].
 - 3. Color: [Satin White] [Satin Black].

- C. Rails: Resin-based core with no wood or organic fibers and acrylic exterior surfaces. Contoured shaped.
 - 1. Top Rail: Contour shaped.
 - a. Basis of Design Style: [Emerge] [Presence] [Aspire] [Graspable].

Specifier: Bottom rail below is optional if using cable infill; delete if not required. If bottom rail is specified with cable infill systems, one less set of cables and fittings are provided.

- 2. Bottom Rail: 2.50-inches-wide by 2.21-inches-high.

D. Infill:

Specifier: Delete infill not used. If more than one type of infill, indicate locations on Drawings.

- 1. Square Balusters: 1.13-inch square, 0.08-inch-thick extruded PVC.
 - 2. Round Balusters: 3/4-inch round, 6063-T5, black powder-coated aluminum.
 - 3. Cables: 1x19 stainless steel cables, 1/8-inch diameter. Provide intermediate steel vertical supports color-matched to cable at locations as needed to meet performance requirements.
- E. Posts: Vertical structural posts, 2-inch-square galvanized steel tube with 3-1/4- by 3-1/4 by 3/8-inch-thick galvanized steel plate welded to post. Structural post to be stabilized inside 5-inch-square PVC post sleeve.
 - 1. Post Caps: Acrylic.
 - a. Basis of Design Style: [Pinnacle] [Zenith].
- F. Fasteners:
 - 1. Stainless steel fasteners to be concealed upon installation.
 - 2. Attachment to Wood Decking: 3/8-inch diameter A307 bolts for through bolt attachment.
 - 3. Attachment to Concrete: Comply with manufacturer's instructions.
- G. Accessories: Include brackets, trim rings, hardware, and all accessories required for a complete installation.

2.4 MATERIALS

- A. Plastic Material: Manufacturer's proprietary, weather-resistant, resin-based composite material with no wood or organic fibers.
- B. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with not less than strength and durability properties of alloy and temper designated.
 - 1. Extruded Bar and Tube: ASTM B221 (ASTM B221M), alloy 6063-T5/T52
 - 2. Plate and Sheet: ASTM B209 (ASTM B209M), alloy 6061-T6.
- C. Polyvinyl Chloride Components: Rigid PVC homopolymer compound modified for cold weather impact retention with high levels of Titanium Dioxide pigment for long-term ultraviolet light resistance.

- D. Steel Components: ASTM A500/A500M, Grade A cold-rolled steel tubing with G-60 zinc coating on both inside and outside surfaces in accordance with ASTM A123/A123 hot-dipped electroplating process.
- E. Cables and Cable Fittings: ASTM A492, Type 316 stainless steel cable, factory swaged. Provide stainless steel fittings and connectors capable of sustaining load required to meet performance requirements.

Specifier: Delete subparagraph below if no stairs.

- 1. Stair Applications: Provide manufacturer's standard "hinged" fittings to allow cables to follow contour of stair.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Examine railing system substrate with Installer present. Inspect for erection tolerances and other conditions that would adversely affect installation of railing system.
 - 1. Inspect substrate that will support railing system to determine if support components are installed as indicated on approved shop drawings and are within tolerances acceptable to railing system manufacturer.
- B. Proceed with railing installation once out-of-tolerance work and other deficient conditions are corrected.

3.2 RAILING INSTALLATION

- A. General: Install railing system in accordance with approved shop drawings and manufacturer's written instructions.
- B. Support Installation: Install blocking and other supports at locations, spacings, and with fasteners recommended by manufacturer.
- C. During installation, carefully handle and store PVC components to avoid contact with abrasive surfaces. Install components in sequence as recommended by manufacturer.

3.3 CLEANING AND PROTECTION

- A. Clean finished surfaces as recommended by railing system manufacturer.
- B. Replace damaged or discolored components that cannot be restored by field repair.

END OF SECTION