SECTION 06455

SIMULATED WOOD TRIM

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\*\* NOTE TO SPECIFIER \*\* Royal Building Products - Siding & Trim Board; Cellular PVC Trim Board and Sheet Board Products.
This section is based on the products of Royal Building Products - Siding & Trim Board, which is located at:
91 Royal Group Crescent
Woodbridge, ON, Canada L4H 1X9
Toll Free Tel: 800-387-2789
Tel: 905-850-9700
Fax: 905-850-9184
Email: [request info (RBPCustomerCare@royalbuildingproducts.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Royal+Building+Products+-+Siding+%26+Trim+Board&coid=46961&rep=&fax=905-850-9184&message=RE:%20Spec%20Question%20(06455rbp):%20%20&mf=)
Web: <https://www.royalbuildingproducts.com>
 [ [Click Here](https://www.arcat.com/arcatcos/cos46/arc46961.html) ] for additional information.
From traditional vinyl and insulated siding, to shake and shingles, to trim, moulding, decking and exteriors accessories and accents, Royal designs products that deliver on the most critical professional and homeowner demands: stylish, sustainable products that boost curb appeal and are easy-to-maintain. Royal's 'Build Bold' mission is a commitment to bringing a new and distinct energy and attitude to the way the company works, the way it makes products and the way the company brings those products to market.
[Note to manufacturer: Use this section to tell some more about the uses and advantages of your products.]

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. PVC Trimboard.
		2. PVC Sheetboard.
		3. PVC Moulding.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06100 - Rough Carpentry: Framing and sheathing
		2. Section 07260 - Below Grade Vapor Retarders
		3. Section 07900 - Joint Protection.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. ASTM D 570 - Water Absorption of Plastics.
		2. ASTM D 635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position. ASTM E 84 - Surface Burning Characteristics of Building Materials.
		3. ASTM D 648 - Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
		4. ASTM D 696 - Coefficient of Linear Thermal Expansion of Plastics Between minus degrees C and plus 30 degrees C with a Vitreous Silica Dilatometer.
		5. ASTM D 790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
		6. ASTM D 792 - Density and Specific Gravity of Plastics by Displacement.
		7. ASTM D 1761 - Mechanical Fasteners in Wood.
		8. ASTM D 3679 - Standard Specification for Rigid Poly Vinyl Chloride (PVC) Siding.
		9. ASTM D 4226 - Standard Test Methods for Impact Resistance of Rigid Poly(Vinyl Chloride) (PVC) Building Products.
		10. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
	1. SUBMITTALS
		1. Submit under provisions of Section 01300 Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete the following paragraphs if LEED is not applicable.

* + 1. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
			1. List of proposed materials with recycled content. Indicate post-consumer recycled content and pre-consumer recycled content for each product having recycled content.
			2. Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
		3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
		4. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking and maintenance.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Manufacturer with a minimum of 5 years producing PVC trim products.
		2. Installer Qualifications: Installer with a minimum of 3 years experience with the installation of PVC trim products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
			3. Refinish mock-up area as required to produce acceptable work.
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
		2. Store products on a flat and level surface on a full shipping pallet. Handle materials to prevent damage to product edges and corners.
		3. Store materials under a protective covering to prevent jobsite dirt and residue from collecting on the boards.
	2. SEQUENCING
		1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
	4. WARRANTY
		1. Provide manufacturer's 25 year warranty against defects in manufacturing that causes the products to rot, corrode, delaminate, or excessively swell from moisture.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Royal Building Products - Siding & Trim Board, which is located at: 91 Royal Group Crescent; Woodbridge, ON, Canada L4H 1X9; Toll Free Tel: 800-387-2789; Tel: 905-850-9700; Fax: 905-850-9184; Email: [request info (RBPCustomerCare@royalbuildingproducts.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Royal+Building+Products+-+Siding+%26+Trim+Board&coid=46961&rep=&fax=905-850-9184&message=RE:%20Spec%20Question%20(06455rbp):%20%20&mf=); Web: <https://www.royalbuildingproducts.com>
		2. Acceptable Manufacturer; Trimboard & Sheet Board; 328 Industrial Drive, Bristol, TN 37620 USA. Toll Free: 800-368-3117. Phone: 276-783-8161. Fax: 276-782-3292. Web Site:www.royalbuildingproducts.com. Email: RBPCustomerCare@royalbuildingproducts.com.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01600 Product Requirements.
	1. MATERIALS
		1. Cellular PVC material with a small-cell microstructure.
			1. Physical:
				1. Density: 0.55 g/cm3 when tested in accordance with ASTM D 792.
				2. Water Absorption: Less than 0.15 percent when tested in accordance with ASTM D 570
			2. Mechanical:
				1. Tensile Strength: 2090 psi when tested in accordance with ASTM D 638
				2. Tensile Modulus: > 144,000 when tested in accordance with ASTM D 638
				3. Flexural Strength: 5790 psi when tested in accordance with ASTM D 790.
				4. Flexural Modulus: 211,000 psi when tested in accordance with ASTM D 790.
				5. Nail Hold: >=400 lbf when tested in accordance with ASTM D 1761.
				6. Screw Hold: >=680 lbf when tested in accordance with ASTM D 1761.
				7. Staple Hold: >=180 lbf when tested in accordance with ASTM D 1761.
				8. Gardner Impact: >=120 in-lbs. when tested in accordance with ASTM D 4226.
				9. Shore D Hardness: >=60 when tested in accordance with ASTM D 696
			3. Thermal:
				1. Coefficient of Linear Expansion: 3.2 x 10-5 in/in/degrees F when tested in accordance with ASTM D 696.
				2. Burning Rate: Failed to Ignite when tested in accordance with ASTM D 635.
				3. Flame Spread Index: 10 when tested in accordance with ASTM E 84.
				4. Heat Deflection Temp (66 psi): 155 degrees F when tested in accordance with ASTM D 648.
			4. Manufacturing Tolerances
				1. Variation in component length: Minus 0.00 / plus 1.00.
				2. Variation in component width: plus or minus 1/32 inch.
				3. Variation in component thickness: plus or minus 1/32 inch.
				4. Variation in component edge cut: plus or minus 2 degrees.
				5. Variation in Density plus or minus 0.02 grams per cubic centimeter
			5. Workmanship, Finish, and Appearance:
				1. Free Foam Cellular PVC that is homogeneous and free of voids, holes, cracks, foreign inclusions and/or other defects. Square edges and top and bottom surfaces shall be flat with no unacceptable convex or concave deviation.
				2. Uniform surface free from cupping, warping, and twisting.

\*\* NOTE TO SPECIFIER \*\* Edit the following paragraphs as required to suit project requirements. Delete the paragraphs that are not applicable.

* 1. SIMULATED WOOD TRIM
		1. PVC Trimboard: Royal Trimboard S4S, designed with a natural appearance to compliment fiber cement and natural cedar.
			1. Size: 5/8 inch thick Trimboard.
				1. Width.

4 inches nominal (3-1/2 Inches actual).

6 inches nominal (5-1/2 Inches actual).

8 Inches nominal (7-1/4 Inches actual).

10 Inches nominal (9-1/4 Inches actual).

12 Inches nominal (11-1/4 Inches actual).

* + - * 1. Length:

18 feet.

Custom lengths.

* + - 1. Size: 1 inch nominal (3/4 inch actual) thick Trimboard.
				1. Width.

2 inches nominal (1-1/2 Inches actual).

3 inches nominal (2-1/2 Inches actual).

4 Inches nominal (3-1/2 Inches actual).

5 Inches nominal (4-1/2 Inches actual).

6 Inches nominal (5-1/2 Inches actual).

8 Inches nominal (7-1/4 Inches actual).

10 Inches nominal (9-1/4 Inches actual).

12 Inches nominal (11-1/4 Inches actual).

* + - * 1. Length:

18 feet.

Custom lengths.

* + - 1. Size: 5/4 inch nominal (1 inch actual) thick Trimboard.
				1. Width.

3 inches nominal (2-1/2 Inches actual).

4 Inches nominal (3-1/2 Inches actual).

5 Inches nominal (4-1/2 Inches actual).

6 Inches nominal (5-1/2 Inches actual).

8 Inches nominal (7-1/4 Inches actual).

10 Inches nominal (9-1/4 Inches actual).

12 Inches nominal (11-1/4 Inches actual).

* + - * 1. Length:

18 feet.

20 feet.

Custom lengths.

* + - 1. Finish:
				1. Smooth/Smooth finish.
				2. Reversible with Smooth/Timber Ridge finish.
		1. Sheet Board: Royal Sheet board for use as sheet materials or to create columns and gingerbread millwork.
			1. Size:
				1. Actual Width/Length:

4 foot by 8 foot.

4 foot by 10 foot.

4 foot by 12 foot.

4 foot by 18 foot.

4 foot by 20 foot

* + - * 1. Actual Thickness:

3/8 inch.

1/2 inch.

5/8 inch.

3/4 inch.

1 inch.

* + - 1. Finish:
				1. Smooth/Smooth finish.
		1. Royal Mouldings: Moulding materials for use as interior or exterior decorative moulding.

\*\* NOTE TO SPECIFIER \*\* See manufacturer's product guide for full product offering.

* + - 1. General Shapes:
				1. Door Frame & Transom Sill
				2. Brickmold & J-Channel
				3. Sill & Nose
				4. Drip Caps, Back Bands, & Panel Mould
				5. Rail & Baluster Cladding
				6. Casing & Base
				7. Crown & Chair Rail
				8. Quarter Round, Cove and Lattice
				9. Stops & Shoes
				10. Column Wraps & Other Fabricated/Milled Parts
	1. ACCESSORIES
		1. Fasteners: Stainless steel fasteners designed for wood trim and siding
		2. Adhesives: Finishing System: Adhere simulated wood trim to itself with PVC cement or cellular PVC adhesives to prevent joint separation. Acceptable adhesives are:
			1. PVC Trim Welder.
			2. IPS Weld-On 705 (white).
			3. Zevo PVC Trim adhesive.
		3. Nail Hole Filler: Cortex plug system by Fasten Master.
		4. Sealants: Urethane, polyurethane, polymer blends or acrylic based sealants that do not contain silicone as specified in Section 07 91 16 - Joint Gaskets.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions and as follows.
			1. Cutting:
				1. Cut using standard woodworking saws. Conventional carbide-tipped blades designed for cutting wood are preferred. Avoid using fine-tooth metal-cutting blades.
				2. Rough-cut edges are typically caused by excessive friction, poor board support, or worn or improper tooling.
			2. Drilling:
				1. Drill using standard woodworking drill bits. Do not use drill bits made for rigid PVC.
				2. Avoid frictional heat build-up.
				3. Remove shavings periodically from a drill hole as necessary.
			3. Milling and Moulding:
				1. Milled or mould using standard milling or moulding machines found in millwork shops.
				2. Rake angle 20 to 30 degrees. 25 degrees is recommended.
				3. Cutting speed to be optimized with the number of knives and feed rate.
			4. Routing:
				1. Route with virtually any piece of equipment used to rout wood.
		2. Expansion and Contraction: Allow for expansion and contraction with changes in temperature. Proper fastening along the entire length is required to minimize expansion and contraction/
			1. Allow 3/16 inch space per 18-foot run of trim for expansion and contraction.
			2. Bond joints between pieces of simulated wood trim to eliminate separation.
			3. Allow expansion and contraction space at the ends of long runs.
		3. Mechanical Fastening:
			1. Use 12 gauge stainless steel fasteners designed for wood trim and siding. Fastener should have sufficient flexural and tensile strength to resist bending.
			2. Use fasteners with thin shanks, blunt points, and full round heads that are long enough to penetrate the substrate a minimum of 1-1/2 inches.
			3. Do not use staples, small brads and wire nails. Avoid using fine threaded wood screws and ring-shank fasteners.
			4. Use standard nail guns with a pressure setting between 70 psi and 100 psi. The recommended pressure depends on the type of gun, type of nail, ambient temperature, and the substrate. Care should be taken not to overdrive the nail into the material.
			5. Pre-drilling is not typically required unless large fasteners are used or the product is installed during temperatures below 40 degrees F.
			6. Use two fasteners for every framing member for trimboard applications. Sheet and trimboards 8 inches and wider require additional fasteners.
			7. Install fasteners no more than 2 inches from the end of each board.
			8. Avoid fastening trim over hollow or uneven areas. Fasten onto flat, solid substrates.
			9. Sheet and Beadboard 3/8 inch and 1/2 inch thick is not designed to be ripped and used for trim applications. These products must be glued and mechanically fastened to the substrate.
		4. Adhesives: Finishing System:
			1. All bonded surfaces must be smooth, clean, and in complete contact with each other for best results.
			2. Adhere simulated wood trim to itself with PVC cement or cellular PVC adhesives to prevent joint separation.
			3. Scarf cut joints are recommended where applicable.
			4. Bonded joints should be secured with fasteners and fastened with two rows on each side of the joint.
			5. When bonding simulated wood trim to other substrates, consult the adhesive manufacturer to determine suitability.
		5. Cleaning:
			1. Be sure surface to be painted is clean, dry, and free of dirt, loose or peeling paint, mildew, chalk, grease and any other surface contaminants before paint application.
			2. Finish nail holes with nail hole filler or a UV resistant acrylic caulk.
			3. Use 100 percent acrylic latex or 100 percent acrylic latex with urethane additive paint with a light reflective value (LRV) equal to or greater than 55 units.
			4. Follow the paint manufacturer's application recommendations.
		6. Painting: Paint as specified in Section 09900 - Painting and Coating
			1. Be sure surface to be painted is clean, dry, and free of dirt, loose or peeling paint, mildew, chalk, grease and any other surface contaminants before paint application.
			2. Finish nail holes with nail hole filler or a UV resistant acrylic caulk.
			3. Use 100 percent acrylic latex or 100 percent acrylic latex with urethane additive paint with a light reflective value (LRV) equal to or greater than 55 units.
			4. Follow the paint manufacturer's application recommendations.
	4. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION