



## SECTION 06455

### SIMULATED WOOD TRIM

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#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Simulated Wood Trimboards.
- B. Simulated Wood One Piece Cornerboards.
- C. Simulated Wood Soffits.
- D. Simulated Wood Fascia and Rake Boards.
- E. Simulated Wood Battens.
- F. Simulated Wood Cellular PVC Skirting.

- G. Simulated Wood Window Trim.
- H. Simulated Wood Door Trim.
- I. Simulated Wood Door Pilasters.
- J. Simulated Wood Frieze Boards.
- K. Simulated Wood Architectural Millwork.

## 1.2 RELATED SECTIONS

- A. Section 06110 - Wood Framing.
- B. Section 06200 - Finish Carpentry: Woodwork.
- C. Section 06300 - Exterior Finish Carpentry.
- D. Section 06400 - Interior Finish Carpentry.
- E. Section 06450 - Standing and Running Trim.
- F. Section 07910 - Joint Sealants.
- G. Section 09250 - Gypsum Board.
- H. Section 09900 - Paints and Coatings.

### 1.3 REFERENCES

- A. ASTM D 792 – Density and Specific Gravity of Plastics by Displacement.
- B. ASTM D 570 – Water Absorption of Plastics.
- C. ASTM D 638 – Tensile Property of Plastics.
- D. ASTM D 790 – Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- E. ASTM D 792 - Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.
- F. ASTM D 1761- Mechanical Fasteners in Wood.
- G. ASTM D 5420 – Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by means of a Striker Impacted by Falling Weight.
- H. ASTM D 256 – Determining the Pendulum Impact Resistance of Plastics.
- I. ASTM D 696 – Coefficient of Linear Thermal Expansion of Plastics Between -30 deg C and 30 deg C with a Vitreous Silica Dilatometer.
- J. ASTM D 635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
- K. ASTM E 84 – Surface Burning Characteristics of Building Materials

- L. ASTM D 648 – Deflection Temperature of Plastics Under Flexural Load in Edgewise Position.
- M. ASTM 3679 – Standard Specification for Rigid Poly Vinyl Chloride (PVC) Siding.

#### 1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - Preparation instructions and recommendations.
  - Storage and handling requirements and recommendations.
  - Installation methods, including nailing patterns.
- C. Verification Samples: For each finish profile specified, two samples, minimum size 6 inches (150 mm) long, representing actual product and patterns finish.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A minimum of 10 years in the manufacture of PVC products.
- B. Installer Qualifications: A minimum of 3 years in the installation of PVC products.
- C. Mock-Up: Provide a mock-up for evaluation of profiles and installation techniques and workmanship.
  - Finish areas designated by Architect.

Include mock-up for each profile combination indicated on the Drawings

Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.

Refinish mock-up area as required to produce acceptable work.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.

#### 1.7 PROJECT CONDITIONS

- A. 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.

#### 1.8 WARRANTY

- A. Warranted to the original Owner under normal and proper use to be free of manufacturing defects for a period of 25 years.

#### 1.9 COORDINATION

- A. Coordinate Work with other operations and installation of trim to avoid damage to installed materials.

### PART 2 PRODUCTS

## 2.1 MANUFACTURERS

- A. Acceptable Manufacturer: CertainTeed Corp., CertainTeed Restoration Millwork, which is located at: 750 E. Swedesford Rd. ; Valley Forge, PA 19482; Toll Free Tel: 800-233-8990 ; Fax: 610-341-7940 ; Email: request info; Web: <http://www.certainteed.com/products/trim>.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

## 2.2 MATERIAL

- A. General: CertainTeed Restoration Millwork is a Freefoam Cellular PVC that is homogenous and free of voids, holes, cracks, and foreign inclusions and other defects. Edges must be square and top and bottom surfaces shall be flat with no convex or concave deviation.
- B. Physical Properties: Free foam cellular PVC material with a small-cell microstructure of 0.60 grams/cm<sup>3</sup> in accordance with ASTM D 792 with the following physical and performance properties:
  - Mechanical:
    - a. Tensile Strength: 1261 psi when tested in accordance with ASTM D 638.
    - b. Tensile Modulus: 79,463 psi when tested in accordance with ASTM D 638.
    - c. Flexural Strength: 4082 psi when tested in accordance with ASTM D 790.
    - d. Nail Hold: 66 (finish nail) lbf/in of penetration when tested in accordance with ASTM D 1761.

- e. Screw Hold: 593 lbf/in of penetration when tested in accordance with ASTM D 1761.
- f. Gardner Impact: 16 in-lbs when tested in accordance with ASTM D 4226.
- g. Charpy Impact (23 deg C): 0.1526 ft-lbs/in when tested in accordance with ASTM D 256.

Thermal:

- h. Coefficient of Linear Expansion:  $3.2 \times 10^{-5}$  in/in/deg F when tested in accordance with ASTM D 696.
- i. Burning Rate: No burn when flame removed when tested in accordance with ASTM D 635.
- j. Flame Spread Index: 20 when tested in accordance with ASTM E 84.

Manufacturing Tolerances:

- k. Variation in component length: minus 0.00 plus 1.00 inch.
- l. Variation in component width: plus or minus 1/16 inch.
- m. Variation in component edge cut: plus or minus 2 degrees.
- n. Variation in Density: minus 0 percent to plus 10 percent.

C. Workmanship, Finish, and Appearance:

Products are provided with a natural white color and a smooth finish on both sides.

Products do not require paint for protection but may be painted to achieve a custom color.

## 2.3 SIMULATED WOOD TRIM

A. General:

Provide simulated wood trim to the following profiles and to the configurations indicated on the Drawings.

Provide simulated wood trim to the following profiles and to the configurations defined on the Schedule at the end of the section.

B. Trim Boards Type A:

Nominal Thickness: 5/8 inch (16 mm).

Nominal Width:

- a. 4 inches (102 mm).
- b. 6 inches (152 mm).
- c. 8 inches (203 mm).
- d. 10 inches (254 mm).
- e. 12 inches (305 mm).

Nominal Length: 18 feet (5.48 m).

Finish:

- f. Smooth Natural White.
- g. Woodgrain Natural White.

C. Trim Boards Type B:

Nominal Thickness: 1 inch (25.5 mm) Thick.

Nominal Width:

- a. 4 inches (102 mm).
- b. 6 inches (152 mm).
- c. 8 inches (203 mm).
- d. 10 inches (254 mm).
- e. 12 inches (305 mm).

Nominal Length: 12 feet (3.65 m).

Finish:

- f. Smooth Natural White.
- g. Woodgrain Natural White.

D. Trim Boards Type C:



Nominal Thickness: 1 inch (25.5 mm).

Nominal Width:

- a. 4 inches (102 mm).
- b. 6 inches (152 mm).
- c. 8 inches (203 mm).
- d. 10 inches (254 mm).
- e. 12 inches (305 mm).
- f. 16 inches (406 mm).

Nominal Length: 18 feet (5.48 m).

Finish:

- g. Smooth Natural White.
- h. Woodgrain Natural White.

E. Trim Boards Type D:

Nominal Thickness: 5/4 inches (32 mm).

Nominal Width:

- a. 4 inches (102 mm).
- b. 6 inches (152 mm).
- c. 8 inches (203 mm).

Nominal Length: 12 feet (3.65 m).

Finish:

- d. Smooth Natural White.
- e. Woodgrain Natural White.

F. Trim Boards Type E:

Nominal Thickness: 5/4 inches (32 mm).

Nominal Width:

- a. 4 inches (102 mm).

- b. 6 inches (152 mm).
- c. 8 inches (203 mm).
- d. 10 inches (254 mm).
- e. 12 inches (305 mm).
- f. 16 inches (406 mm).

Nominal Length: 18 feet (5.48 m).

Finish:

- g. Smooth Natural White.
- h. Woodgrain Natural White.

G. Trim Boards Type F:

Nominal Thickness: 5/4 inches (32 mm).

Nominal Width:

- a. 4 inches (102 mm).
- b. 6 inches (152 mm).
- c. 8 inches (203 mm).
- d. 10 inches (254 mm).
- e. 12 inches (305 mm).

Nominal Length: 20 feet (6.10 m).

Finish:

- f. Smooth Natural White.
- g. Woodgrain Natural White.

H. Trim Boards Type G: With built-in J-Pocket for siding.

Nominal Thickness: 5/4 inches (32 mm).

Nominal Width:

- a. 4 inches (102 mm).
- b. 6 inches (152 mm).

Nominal Length: 18 feet (5.48 m).

Finish:

- c. Smooth Natural White.
- d. Woodgrain Natural White.

I. Trim Boards Type G: With built-in J-Pocket for siding.

Nominal Thickness: 1-1/2 inches (38 mm).

Nominal Width: 4 inches (102 mm).

Nominal Length: 18 feet (5.48 m).

Finish: Woodgrain Natural White.

J. CustomCraft 1-1/2" Thick for custom fabrication.

Nominal Thickness: 1-1/2 inches (38 mm).

Nominal Width: 10 inches (254 mm).

Nominal Length: 18 feet (5.48 m).

Finish: Smooth Natural White.

K. Sheets 3/8 inch (9.5 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height:

- a. 8 feet (2.44 m).
- b. 10 feet (3.05 m).
- c. 18 feet (5.49 m).

Finish:

- d. Smooth Natural White.

L. Sheets 3/8 inch (9.5 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height:8 feet (2.44 m).

Finish: Woodgrain Natural White.

M. Sheets 1/2 inch (12.5 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height:

a. 8 feet (2.44 m).

b. 10 feet (3.05 m).

c. 18 feet (5.49 m).

Finish:

d. Smooth Natural White.

N. Sheets 1/2 inch (12.5 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height: 8 feet (2.44 m).

Finish: Woodgrain Natural White.

O. Sheets 5/8 inch (16 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height:

a. 8 feet (2.44 m).

b. 10 feet (3.05 m).

c. 18 feet (5.49 m).

Finish:

d. Smooth Natural White.

P. Sheets 3/4 inch (19 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height:

- a. 8 feet (2.44 m).
- b. 10 feet (3.05 m).
- c. 12 feet (4.27 m).
- d. 18 feet (5.49 m).

Finish:

- e. Smooth Natural White.

Q. Sheets 3/4 inch (19 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height: 8 feet (2.44 m).

Finish: Woodgrain Natural White.

R. Sheets 1 inch (25.5 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height:

- a. 8 feet (2.44 m).
- b. 10 feet (3.05 m).
- c. 12 feet (4.27 m).
- d. 18 feet (5.49 m).
- e. 20 feet (6.1 m).

Finish:

- f. Smooth Natural White.

S. Sheets CustomCraft 1-1/2 inch (38.2 mm) Nominal Thickness:

Nominal Width: 10 feet (3.05 m).

Nominal Width: 4 feet (1.22 m).

Nominal Height: 8 feet (2.44 m).

Finish: Smooth Natural White.

T. Beadboard 1/2 inch (12.5 mm) Nominal Thickness:

Nominal Width: 5-1/2 inches (140 mm).

Nominal Height:

a. 18 feet (5.49 m).

Configuration:

b. Reversible Beaded.

c. Channel Repeat.

Finish: Smooth Natural White.

U. Beadboard 2TL 1/2 inch (12.5 mm) Nominal Thickness:

Nominal Width: 6 inches (153 mm).

Nominal Height:

a. 18 feet (5.49 m).

Configuration:

b. Reversible Beaded.

c. Channel Repeat.

Finish: Smooth Natural White.

V. Beadboard 3TL 1/2 inch (12.5 mm) Nominal Thickness:

Nominal Width: 8 1/2 inches (216 mm).

Nominal Height:

a. 18 feet (5.49 m).

Configuration:

b. Reversible Beaded.

c. Channel Repeat.

Finish: Smooth Natural White.

W. WP4/Nickel Gap 3/4 inch (19 mm) Nominal Thickness:

Nominal Width: 6 inches (153 mm).

Nominal Height:

a. 18 feet (5.49 m).

Configuration:

b. V groove channel repeat.

c. Gap channel repeat.

Finish: Smooth Natural White.

X. Beadboard Panel 1/2 inch (12.5 mm) Nominal Thickness:

Nominal Width: 4 feet (1.22 m).

Nominal Height:

a. 8 feet (2.44 m).

Configuration: Reversible Beaded.

Finish: Smooth Natural White.

Y. One-Piece Corner Trim:

Nominal Thickness: 5/4 inches (32 mm).

Nominal Size:

a. 4 inches (102 mm) by 4 inches (102 mm) by 10 feet (3.05 m) long.

b. 4 inches (102 mm) by 4 inches (102 mm) by 20 feet (6.10 m) long.

c. 6 inches (152 mm) by 6 inches (152 mm) by 10 feet (3.05 m) long.

d. 6 inches (152 mm) by 6 inches (152 mm) by 20 feet (6.10 m) long.

Finish:

e. Smooth Natural White.

f. Woodgrain Natural White.

Z. One-Piece Corner Trim with built-in J-Pocket for vinyl siding.

Nominal Thickness: 5/4 inches (32 mm).

Nominal Size:

- a. 4 inches (102 mm) by 4 inches (102 mm) by 10 feet (3.05 m) long.
- b. 4 inches (102 mm) by 4 inches (102 mm) by 20 feet (6.10 m) long.
- c. 6 inches (152 mm) by 6 inches (152 mm) by 10 feet (3.05 m) long.
- d. 6 inches (152 mm) by 6 inches (152 mm) by 20 feet (6.10 m) long.

Finish:

- e. Smooth Natural White.
- f. Woodgrain Natural White.

AA. One-Piece Corner Trim with built-in J-Pocket for vinyl siding.

Nominal Thickness: 1-1/4 inches (32 mm).

Nominal Size: 5 inches (127 mm) by 5 inches (127 mm) by 20 feet (6.10 m) long.

Finish: Woodgrain Natural White.

BB. Column Wrap 8 inch x 8 inch.

Nominal Thickness: ½ inch (12.5 mm)

Nominal Size: 8 inches (203 mm) by 8 inches (203 mm) by 9 feet (2.44 m) long.

Finish: Smooth Natural White.

CC. Column Wrap 10 inch x 10 inch.

Nominal Thickness: ½ inch (12.5 mm)

Nominal Size: 10 inches (254 mm) by 10 inches (254 mm) by 9 feet (2.44 m) long.

Finish: Smooth Natural White.



DD. Inside Corner Post:

Nominal Size: 1-1/4 inches (32 mm) by 1-1/4 inches (32 mm) by 10 feet (3.05 m) long.

Finish: Smooth Natural White.

EE. Brickmould:

Nominal Size:

a. 1-1/8 inches (29 mm) by 2 inches (51 mm) by 7 feet (2.13 m) long.

b. 1-1/8 inches (29 mm) by 2 inches (51 mm) by 10 feet (3.05 m) long.

c. 1-1/8 inches (29 mm) by 2 inches (51 mm) by 17 feet (5.18 m) long.

Finish:

d. Smooth Natural White.

FF. J-Channel Brickmould:

Nominal Size:

a. 1-1/4 inches (31.9 mm) by 2 inches (51mm) by 17 feet (5.18 m) long

Finish:

b. Smooth Natural White.

GG. Drip Cap:

Nominal Size:

a. 11/16 inch (17.5 mm) by 1-5/8 inches (41 mm) by 16 feet (4.88 m) long.

Finish:

b. Smooth Natural White.

HH. Crown Molding: Number 49 Crown.

Nominal Size:

a. 11/16 inch (17.5 mm) by 3-5/8" by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

II. Crown Molding: Number 47 Crown.

Nominal Size:

- a. 11/16 inch (17.5 mm) by 4-5/8 inch (117.5 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

JJ. Bed Mould: Bed Mould.

Nominal Size:

- a. 9/16 inch (14 mm) by 1-5/8 inch (41.3 mm) by 5/8 inch (16 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

KK. Quarter Round: Number 105 Quarter Round.

Nominal Size:

- a. 3/4 inch (19 mm) by 3/4 inch (19 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

LL. Quarter Round: Number 107 Quarter Round.

Nominal Size:

- a. 5/8 inch (16 mm) by 5/8 inch (16 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

MM. Base Cap: Number Base Cap.

Nominal Size:

- a. 11/16 inch (17.5 mm) by 1-1/8 inches (29 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

NN. Shingle Mould: Shingle Mould.

Nominal Size:

- a. 11/16 inch (17.5 mm) by 1-5/8 inch (41 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

OO. Back Band:

Nominal Size:

- a. 1 inch (25.5 mm) by 4-1/2 inches (114.75 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

PP. Adjustable Back Band:

Nominal Size:

- a. 1-11/32 inch (34.3 mm) by 1-13/32 inches (35.8 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

QQ. Sill:

Nominal Size:

- a. 1-1/4 inches (31.85 mm) by 5 inches (127.5 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

RR. Sill Nose:

Nominal Size:

- a. 1-5/16 inches (33 mm) by 1-3/8 inches (35 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

SS. Rake:

Nominal Size:

- a. 1 inch (25.5 mm) by 2 inches (51 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

TT. RB3 Casing:

Nominal Size:

- a. 1-7/64 inches (25.6 mm) by 3-7/16 inches (36.6 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

UU. Lattice:

Nominal Size:

- a. 1/4 inch (6.37 mm) by 1-1/2 inches (38.2 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

VV. Rams Crown:

Nominal Size:

- a. 1-3/16 inches (30.3 mm) by 2 inches (51 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

WW. 356 Casing:

Nominal Size:

- a. 11-16 inches (17.5 mm) by 2-1/4 inches (57.3 mm) by 16 feet (4.88 m) long.

Finish:

- b. Smooth Natural White.

## 2.4 ACCESSORIES

### A. Fasteners:

Use fasteners designed for wood trim and siding (thinner shank, blunt point, full round head).

Use a highly durable fastener such as stainless steel or hot dipped galvanized steel.

Staples, small brads and wire nails must not be used as fastening members.

Fasteners should be long enough to penetrate a solid wood substrate a minimum of 1-1/2 inch (38 mm).

The use of standard nail guns is acceptable.

Use two fasteners per every framing member for trimboard applications.

Use additional fasteners for trimboards 12 inches (305 mm) or wider, as well as sheets.

Install fasteners no more than 2 inches (51 mm) from the end of the board.

Fasten trim into a flat, solid substrate. Fastening trim into hollow or uneven areas must be avoided.

Pre-drilling is typically not required unless a large fastener is used or product is being installed in low temperatures.

B. Adhesives:

Glue all trim joints (scarf or miter) with a cellular PVC cement/adhesive such as TrimTight or Extreme PVC TrimWelder.

Glue joints should be secured with a fastener and/or fastened on each side of the joint to allow adequate bonding time.

Surfaces to be glued should be smooth, clean and in complete contact with each other.

Various adhesives may be used. Consult adhesive manufacturer to determine suitability.

C. Sealants:

Use urethane, polyurethane or acrylic based sealants without silicone as specified in Section 07910.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Prior to installation, verify governing dimensions of and condition of substrate.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Examine, clean, and repair as necessary any substrate conditions that would be detrimental to proper installation.
- C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
  - Comply with all terms necessary to maintain warranty coverage.
  - Use trim details indicated on Drawings.
  - Touch up all field cut edges before installing.
- B. Cutting:
  - Use carbide tipped blades designed to cut wood. Do not use fine-tooth metal-cutting blades or plywood blades.
  - Avoid rough edges from cutting caused by: excessive friction, poor board support, worn saw blades or badly aligned tools.
- C. Drilling:
  - Drill with standard woodworking drill bits.
  - Do not use bits made for rigid PVC.
  - Avoid frictional heat build-up and remove shavings from the drill hole frequently.

D. Milling:

Mill using standard milling machines used to mill lumber.

Relief angle 20 to 30 degrees.

Cutting speed to be optimized with the number of knives and feed rate.

E. Routing:

Use sharp carbide tipped router bits.

F. Edge Finishing:

Use machine edging, sanding, grinding, or filling to finish edges.

G. Nail Location:

Refer to fastening schedule and diagrams in the most current version of the manufacturer's installation manual for recommended fastener spacing.

Install fasteners no more than 3/4 inches (19 mm) from the end of each board.

H. Thermal Expansion and Contraction:

Expansion and contraction will occur with changes in temperature.

When properly fastened, allow 1/4 inch (6 mm) per 18 foot (5.49 m) for expansion and contraction.

Joints between pieces should be glued to eliminate joint separation. When gaps are glued on a long run, allow for expansion and contraction at the end of the runs.

I. Finishing.

Correct dents and gouges before applying final coating.

Prepare surfaces and paint materials as recommended by the molding manufacturer. Paint as specified in Section 09900.



If moldings get dirty during installation, clean with a soft bristle brush and a bucket of soapy water. For stubborn stains, mold or mildew, use a cleaner suitable for PVC products.

#### 3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

#### 3.5 SCHEDULES

- A. :

END OF SECTION