

SECTION 074600

VINYL SIDING



PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Vinyl siding.
- B. Vinyl soffits.
- C. Accessories and trim.

1.2 RELATED SECTIONS

- A. Section 06100 - Framing and Sheathing.
- B. Section 07260 - Vapor Retarders.
- C. Section 07900 - Joint Sealers.

1.3 REFERENCES

- A. ASTM D 635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
- B. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
- C. ASTM D 648 - Test Method for Deflection Temperature of Plastics Under Flexural Load.
- D. ASTM D 696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 Degrees C and 30 Degrees C.
- E. ASTM D 790 -- Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- F. ASTM D 1435 - Standard Practice Method for Outdoor Weathering of Plastics.
- G. ASTM D 1929 - Standard Test Method for Ignition Properties of Plastics.
- H. ASTM D 2843 - Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics.
- I. ASTM D 3679 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Siding.

- J. ASTM D 4101 - Standard Specification for Propylene Plastic Injection and Extrusion Materials.
- K. ASTM D 4216 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Related Plastic Building Product Compounds.
- L. ASTM D 4226 - Standard Test Method for Impact Resistance of PVC Building Products.
- M. ASTM D 4477 - Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Soffit.
- N. ASTM D 5206 - Standard Windload Resistance Test.
- O. ASTM E 84 - Standard test Method for Surface Burning Characteristics of Building Materials.
- P. ASTM E 119 - Standard Test Methods for Fire Tests of Building Construction and Materials.

1.4 PERFORMANCE REQUIREMENTS

- A. PVC Fire Resistance: Provide vinyl siding products that meet or exceed the following ratings:
 - 1. Flame spread index 20, fuel contribution 0, smoke development rating 360, per ASTM E 84.
 - 2. Self-ignition temperature: 824 degrees F (440 degrees C) per ASTM D 1929.
 - 3. Fire endurance classification of 1 hour, per ASTM E 119 as wall assembly.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. 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.
- C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- D. Verification Samples: For each finish product specified, two samples, minimum size 12 inches (300 mm) long, representing actual product, color, and patterns.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Provide installer with not less than three years of experience with products specified or has passed the Vinyl Siding Institute's (VSI) Certified Installer Program.
- B. Mock-Up: Provide a mock-up for evaluation of installation techniques and workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship and color are approved by Architect.
 - 3. Reinstall mock-up area as required to produce acceptable work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.

1.8 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.

1.9 WARRANTY

- A. Provide manufacturer's standard lifetime limited warranty on siding products, transferable to new owners.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Mitten Inc., P.O. Box 2005, 70 Curtis Ave. N., Paris, Ontario, Canada N3L 3T2. Tel: (800) 265-0774. Fax: (519) 442-3214; Email: inquiries@mittenvinyl.com; Web: www.mittenvinyl.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIALS

- A. Polyvinyl Chloride: Provide siding and soffit materials made of PVC compound with cell classification of 13344-B, as defined by ASTM D 4216, that meets or exceeds the following properties:
 1. Impact strength: 2.20 ft-lbs per inch at test temperature of 73 degrees F. (22.7 degrees C.), and 1.30 ft-lbs per inch at test temperature of 32 degrees F (0 degrees C), per ASTM D 4226.
 2. Tensile strength: 7,344 psi (50,637 kPa).
 3. Flexural modulus of elasticity in tension: 455,750 psi (3,142,396 kPa).
 4. Deflection temperature under load of 264 psi (1820 kPa): 168 degrees F (76 degrees C).
 5. Coefficient of expansion: .000034 in/in/degree F.
 6. Chemical resistance: Excellent.
- B. Vinyl Components: Provide products made of extruded polyvinyl chloride as specified in this section and manufactured to comply with requirements of ASTM D 3679.
 1. Provide elongated nailing slots on nailing flanges to allow for movement.
 2. Factory-notch ends of horizontal panels to form overlapping joints.
 3. Provide products that meet weathering requirements of ASTM D 3679.

2.3 VINYL SIDING

1.1 VINYL SIDING AND TRIM

- A. Vinyl Siding Type ____: InsulPlank Foamed Backed Siding.
1. Product Description: Double 6 profile, 12 inches exposure; nominal 0.046 inch material thickness (Vinyl); 12 feet 6 inch piece length.
 2. Nailing Hem: Enhanced 1-1/4 inch wide nail hem with 1-1/8 inch elongated nail slots on 1-3/4" centers.
 3. Finish: Cedar wood-grain texture.
 4. Color: As selected from manufacturer's full range of available colors.
 5. Color: _____.
- B. Vinyl Siding Type ____: SentryPlus Foam Back Siding.
1. Product Description: Double 4.5 profile, 9 inches exposure; nominal 0.044 inch material thickness; 12 feet 1 inch piece length.
 2. Nailing Hem: Rolled over, single row nail hem with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 3. Finish: Cedar wood-grain texture.
 4. Color: As selected from manufacturer's full range of available colors.
 5. Color: _____.
- C. Vinyl Siding Type ____: Sentry act Siding.
1. Product Description: Double 4 profile, 8 inches exposure; nominal 0.044 inch material thickness; nominal 12 feet 6 inch piece length.
 2. Product Description: Double 4.5 profile, 9 inches exposure; nominal 0.044 inch material thickness; nominal 12 feet 1 inch piece length.
 3. Nailing Hem: Rolled over, single row nail rail, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 4. Finish: Cedar wood-grain texture.
 5. Color: As selected from manufacturer's full range of available colors.
 6. Color: _____.
- D. Vinyl Siding Type ____: Sentry Siding.
1. Product Description: Double 4 profile, 8 inches exposure; nominal 0.044 inch material thickness; nominal 12 feet 6 inch piece length.
 2. Product Description: Double 4.5 profile, 9 inches exposure; nominal 0.044 inch material thickness; nominal 12 feet 1 inch piece length.
 3. Nailing Hem: Rolled over, single row nail rail, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 4. Finish: Cedar wood-grain texture.
 5. Color: As selected from manufacturer's full range of available colors.
 6. Color: _____.
- E. Vinyl Siding Type ____: Board & Batten Siding
1. Product Description: Single 5-1/2" Board with 1-1/2" Batten profile, 7 inches exposure; nominal 0.045 inch material thickness; nominal 10 feet piece length.
 2. Nailing Hem: Single-row, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 3. Finish: Cedar wood-grain texture.
 4. Color: As selected from manufacturer's full range of available colors.

5. Color: _____.
- F. Vinyl Siding Type ____: Southern Beaded Siding.
1. Product Description: 6-1/2 Beaded profile (semi-bead), 6-1/2 inches exposure; nominal 0.045 inch material thickness; nominal 12 feet 4 inches piece length.
 2. Nailing Hem: Single-row, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 3. Finish: Light wood-grain texture.
 4. Color: As selected from manufacturer's full range of available colors.
 5. Color: _____.
- G. Vinyl Siding Type ____: Triple Three Siding.
1. Product Description: Triple 3-1/3 profile, 10 inches exposure; nominal 0.040 inch material thickness; nominal 12 feet piece length.
 2. Nailing Hem: Single-row, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 3. Finish: Light wood-grain texture.
 4. Color: As selected from manufacturer's full range of available colors.
 5. Color: _____.
- H. Vinyl Siding Type ____: Cambridge Siding.
1. Product Description: Double 4.5 profile, 9 inches exposure; nominal 0.042 inch material thickness; nominal 12 feet 1 inch piece length.
 2. Product Description: Double 5 profile, 10 inches exposure; nominal 0.042 inch material thickness; nominal 12 feet piece length.
 3. Nailing Hem: Rolled over, Single-row, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 4. Finish: Embossed wood-grain texture.
 5. Color: As selected from manufacturer's full range of available colors.
 6. Color: _____.
 - 7.
- I. Vinyl Siding Type ____: Oregon Pride Siding.
1. Product Description: Double 4 profile, 8 inches exposure; nominal 0.040 inch material thickness; nominal 12 feet 6 inch piece length.
 2. Product Description: Double 4-1/2 profile, 9 inches exposure; nominal 0.040 inch material thickness; nominal 12 feet 1 inch piece length.
 3. Product Description: Double 5 profile, 10 inches exposure; nominal 0.040 inch material thickness; nominal 12 feet piece length.
 4. Nailing Hem: Rolled over, Single-row, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 5. Finish: Rough-sawn Wood-grain texture.
 6. Color: As selected from manufacturer's full range of available colors.
 7. Color: _____.
- J. Vinyl Trim:
1. Foam Back Siding Corner Post with Foam Insert: 4.888 inches by 4.888 inches post, 1-1/4 inch wide siding recess; _____ color.
 2. Universal Outside Corner Post: 3 inches by 3 inches post, 3/4 inch wide siding recess; _____ color.

3. Foam Back Siding Inside Corner Post: 1-1/2 inches by 1-1/2 inches covered projection, 1-1/4 inch wide siding recess; _____ color.
4. Universal Siding Inside Corner Post: 1-1/2 inches by 1-1/2 inches covered projection, 3/4 inch wide siding recess; _____ color.
5. Foam Back Siding J-Trim: Channel, 2-1/4 inches nailing leg, 1-3/4 inch forward leg, 1-1/4 inch channel width; _____ color.
6. J-Trim: Channel, 1-3/4 inches nailing leg, 1 inch forward leg, 3/4 inch channel width; _____ color.
7. Foam Back Siding Undersill Trim: 2-1/2 inches nailing leg, 1 3/4 inch forward leg; _____ color.
8. Undersill Trim: 1-1/2 inches nailing leg, 3/4 inch forward leg; _____ color.
9. Wide Window Casing: 3-1/2 inches nailing leg, 3 inch forward leg with 1 inch return; white color.
10. Foam Back Siding Wide Window & Door Trim: 1-3/4 inches nailing leg, 3-1/2 inch forward leg with 1-1/4 inch return; _____ color.
11. Wide Window & Door Trim: 1-5/8 inches nailing leg, 3-1/2 inch forward leg with 3/4 inch return; White, Ivory, Sandalwood, Satin Gray & Brownstone color.
12. H Trim: 1-1/2 inches nailing leg, 1-3/4 inch forward leg with 3/4 inch return; _____ color.
13. StacLok Starter Strip: Double-row nailing hem with elongated nailing holes 3/4 inches long 16 inches on center; 1/2 inch base projection; _____ color.
14. Sentry Plus Starter Strip: Double-row nailing hem with elongated nailing holes 1-1/4 inches long 16 inches on center; 1/4 inch base projection; white color.
15. Starter Strip: Double-row nailing hem with elongated nailing holes 3/4 inches long 18 inches on center, 1/4 inch base projection; natural color.

1.2 VINYL SOFFIT AND TRIM

- A. Vinyl Soffit Type ____: Select Soffit.
 1. Product Description: Double 5 V-groove profile, 10 inches exposure, 5/8 inch depth; nominal 0.040 inch material thickness; nominal 12 feet piece length.
 2. Product Description: Triple 4 U-groove profile, 12 inches exposure, 5/8 inch depth; nominal 0.040 inch material thickness; nominal 12 feet piece length.
 3. Nailing Hem: Single-row, with elongated nailing holes 1-1/4 inches long at 16 inches on center.
 4. Finish: Low-gloss brushed texture.
 5. Color: As selected from manufacturer's full range of available colors.
 6. Color: _____.
 7. Supply Double 5 ventilating type soffit material having 1/8 inch diameter holes openings for 4.2 square inches free air space per square foot of soffit area.
 8. Supply Triple 4 ventilating type soffit material having 1/8 inch diameter holes openings for 5.89 square inches free air space per square foot of soffit area.
 9. Supply non-ventilating type soffit material.
 10. Supply both ventilating type and non-ventilating type soffit materials to achieve indicated patterns.

- B. Vinyl Soffit Type ____: Beaded Soffit.
 1. Product Description: Triple 2 Bead profile, 6 inches exposure, 3/8 inch depth; nominal 0.040 inch material thickness; nominal 12 feet 6 inch piece length.
 2. Nailing Hem: Single-row, with elongated nailing holes 1-1/4 inches long at 1-5/8 inches on center.
 3. Finish: Low-gloss matte texture.

4. Color: White
5. Supply ventilating type soffit material having concealed lanced openings for 1.2 square inches free air space per lineal foot of soffit area.
6. Supply non-ventilating type soffit material.
7. Supply both ventilating type and non-ventilating type soffit materials to achieve indicated patterns.

C. Vinyl Trim:

1. Soffit J-Trim: Channel, 1-1/2 inches nailing leg, 3/4 inch forward leg, 1/2 inch channel width; _____ color.
2. F-Channel: 7/8 inches nailing leg, 7/8 inch forward leg, 3/4 inch channel width; _____ color.

2.4 VINYL CARPENTRY ACCESSORIES

A. Standard Accessories:

1. Corner post: Standard width, 10 feet (3.05 m) and 12 feet (3.66 m) lengths.
2. J-Channel: Standard width, 12 feet (3.66 m) length.
3. Undersill trim.
4. 2-3/4 inch (70 mm) Starter Strip.
5. Color: _____.

B. 1-1/4 Inch Pocket Accessories:

1. Cornerpost: Wide width, 12 feet; (3.66 m) length.
2. J-Channel: Wide width, 12 feet (3.66 m) length.
3. Inside Cornerpost; Standard width, 12 feet (3.66 m) length.
4. 3-1/2 inch (89 mm) Lineal by 12 feet (3.66 m) length.
5. Starter Strip: 3 inches (76 mm) by 12 feet (3.66 m) length.
6. Color: _____.

C. Optional Accessories:

1. 5-1/2 inches Corner Post with Foam Insulation, 20 feet (6.096 m) length.
2. 3 inch (75 mm) Window and Door Casing.
3. 3 inch (75 mm) Steel Starter Strip.
4. 3-1/2 inch (89 mm) Lineal: 3-1/2 inches by 12 feet (89 mm by 3.66 m) length.
5. Color: _____.

2.5 FASTENERS

- A. Provide galvanized or other corrosion-resistant nails as recommended by manufacturer of siding products.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.

- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Examine, clean, and repair as necessary any substrate conditions which would be detrimental to proper installation.
- B. Do not begin installation until unacceptable conditions have been corrected.

3.3 INSTALLATION

- D. Install products in accordance with the latest printed instructions of the manufacturer. Installer should have current VSI Certified Installer Credentials or 3 years experience.
- E. Install products with all components true and plumb.
- F. Nail horizontal panels by placing nail in center of slot. Nail vertical panels by placing first nail at top of top slot and remaining nails in center of slots. Drive nails straight, leaving 1/16 inch (1.6 mm) space between nail head and flange of panel.
- G. Allow space between both ends of siding panels and trim for thermal movement. Overlap horizontal panel ends one-half the width of factory pre-cut notches.
- H. Stagger lap joints in horizontal siding in uniform pattern as successive courses of siding are installed.
- I. Install J-channel and flashing to accommodate successive courses of vertical siding. Install wood shims at building corners to bring cut edges of vertical siding out to correct plane.

3.4 PROTECTION

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

3.5 CLEANING

- A. At completion of work, remove debris caused by siding installation from project site.

END OF SECTION