SECTION 07 4634

CELLULAR PVC SIDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Cellular PVC siding and related trim.

**(Note to Writer: Edit the following Article to match project requirements)**

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Siding substrate.

**(Note to Writer: Edit this article to match project requirement)**

B. Section 07 2623 - Below Grade Gas Retarders.

C. Section 07 9000 - Joint Protection

1.03 REFERENCE STANDARDS

A. ASTM C1363- Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus

B. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position; 2018.

C. ASTM D696 - Test Method for Coefficient of Linear Expansion of Plastics.

D. ASTM D1435 - Practice for Outdoor Weathering of Plastics.

E. ASTM D2244 - Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates.

F. ASTM D3679 - Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Siding; 2017.

G. ASTM D4226 - Test Methods for Impact Resistance of Rigid Poly Vinyl Chloride (PVC) Building Products.

H. ASTM D5206 - Standard Test Method for Windload Resistance of Rigid Plastic Siding; 2013.

I. ASTM G147 - Practice for Conditioning and handling of Nonmetallic Materials for Natural and Artificial Weathering Tests.

1.04 SUBMITTALS

A. Submit under provisions of Section 01 3000

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. Samples: Provide samples in colors specified, not less than 12 inches in length.

D. Color Charts: Where colors are not specified, provide samples of manufacturer's entire color line for selection.

1.05 QUALITY ASSURANCE

A. Installer Qualifications: Not less than three years of experience with products specified.

1.06 DELIVERY, STORAGE, AND HANDLING

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

B. Siding shall be kept on a flat and level surface, and should be kept free of dust, dirt and debris. Keep siding covered until ready to install. If siding does get dirty, it should be cleaned after installation.

C. Do not store boards in areas where ambient temp exceeds 120° F

D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

E. Carry siding on it’s side to minimize deflection and damage.

1.07 WARRANTY

(Note to Writer: Paragraph A. applies to single-family home, townhome, or multifamily dwelling (up to 3 units) that are not owned by corporate entities (e.g. corporations, LLCs), governmental agencies, partnerships, trusts, religious organizations, schools, condominiums or pursuant to cooperative housing arrangements.)

A. Residential Purchasers:

1. Manufacturer's Product Warranty: Provide manufacturer’s limited lifetime warranty.

a. Warranty Period: 50 Years

b. Warranty shall include defects in manufacturing that cause products to:

1) Rot.

2) Corrode.

3) Delaminate.

4) Splinter or split.

5) Structural damage from termites or fungus.

6) Excessively swell from moisture.

c. Manufacturer’s Finish Warranty:

1) Siding shall not fade from light or weathering more than 5 Delta E units in the first 5 years and not more than 10 Delta E units during the entire warranty period. Fading between years 6 and year 25 shall not exceed the manufacturer’s maximum color change table.

2) Total Warranty Period: 25 years.

d. Contractor’s Workmanship Warranty: Provide 5 year warranty on the workmanship of the installation if a certified Wolf PRO siding contractor used.

**(Note to Writer: Use Paragraph B. for all projects except those that meet the manufacturer’s requirements Residential Purchaser.)**

B. Non-Residential Purchasers:

1. Manufacturer's Product Warranty: Provide manufacturer’s limited lifetime warranty.

a. Warranty Period: 20 Years

b. Warranty shall include defects in manufacturing that cause products to:

1) Rot.

2) Corrode.

3) Delaminate.

4) Splinter or split.

5) Structural damage from termites or fungus.

6) Excessively swell from moisture.

2. Contractor’s Workmanship Warranty: Provide 1 year warranty on the workmanship of the installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

(Note to Writer: Select [Silhouette] in paragraph siding with 7 inch profile or [Vignette] for siding with double 4 inch profile.)

A. Basis of Design: Products specified herein and shown on the Drawings are based on Wolf **Portrait™ [Silhouette] [Vignette]** Siding as manufactured by Inteplast Group Corporation for Wolf Home Products.

B. Substitutions: [Refer Section 01 6000 - Product Requirements]

1. Royal Celect Siding by Royal Building Products.

2. Everlast Composite Siding by Chelsea Manufacturing.

2.02 SIDING MATERIALS

(Note to Writer: Keep Paragraph A if Silhouette siding is being used).

A. Silhouette Siding Performance Requirements:

1. Profile: Silhouette Single 7 inch exposure, 8-1/4 inch total face dimension.

2. Siding: Comply with ASTM D3679.

3. Wind Resistance: Capable of withstanding the following design negative pressure, when tested in accordance with ASTM D5206:

a. Wolf Silhouette Siding: 95 psf

4. Coefficient of Linear Expansion: ASTM D696; Exceeds requirements.

5. Weathering: ASTM D1435 and G147; Passes; Uniform of color; no peeling, chipping, cracking, flaking and pitting.

6. Uniformity of Color: ASTM D2244; Passed.

7. Horizontal Flammability, when tested in accordance with ASTM D635:

a. Extent of Burn: 0 mm.

b. Average Time of Burn: Less than 1 seconds.

8. Impact Resistance: (ASTM D4226):

a. Wolf Silhouette Siding: 169 in·lbf

9. Thermal Resistance Value: ASTM C1363; 0.37 hr. sq.ft. F/btu

10. Color: As selected by Architect from manufacturer’s full range of available colors.

a. Morning Mist.

b. Oyster White.

c. Graphite.

d. Riverstone.

e. Sandstone

f. Hemlock

g. Chestnut.

h. Vintage Taupe

(Note to Writer: Keep Paragraph B if Vignette siding is being used).

B. Vignette Siding Performance Requirements:

1. Profile: Vignette Double 4 inch exposure, 9-1/4 inch total face dimension.

2. Siding: Comply with ASTM D3679.

3. Wind Resistance: Capable of withstanding The following design negative pressure, when tested in accordance with ASTM D5206:

a. Wolf Vignette Siding:185 psf

4. Coefficient of Linear Expansion: ASTM D696; Exceeds requirements.

5. Weathering: ASTM D1435 and G147; Passes; Uniform of color; no peeling, chipping, cracking, flaking and pitting.

6. Uniformity of Color: ASTM D2244; Passed.

7. Horizontal Flammability, when tested in accordance with ASTM D635:

a. Extent of Burn: 0 mm.

b. Average Time of Burn: Less than 1 seconds.

8. Impact Resistance: (ASTM D4226):

a. Wolf Vignette Siding: 71 in·lbf

9. Thermal Resistance Value: ASTM C1363; 0.36 hr. sq.ft. F/btu

10. Color: As selected by Architect from manufacturer’s full range of available colors.

a. Morning Mist.

b. Oyster White.

c. Graphite.

d. Riverstone.

e. Sandstone

f. Hemlock

g. Chestnut.

h. Vintage Taupe

C. Nailing Flange:

1. Nailing Flange: Single layer, with pre-slotted nail holes.

2. Finish: Smooth.

2.03 ACCESSORY MATERIALS

A. Drainage House Wrap: A non-woven vapor permeable water resistant barrier.

1. Basis of Design: BLOCK-IT House Wrap from Kimberly - Clark and supplied by Wolf.

2. Drainage Efficiency: 95%, ASTM E2273

3. Water Vapor Transmission Rate: 15 perms, ASTM E96.

4. Surface Burning Characteristics:

a. Flame Spread Index: 25 or less.

b. Smoke Developed: 450 or less.

c. UV Exposure Rating: 180 days.

d. System shall be complete with seam tape, flashing tape and preformed corners.

e. Flashing Tape: BLOCK-IT Flashing Tape.

f. Seam Tape: BLOCK-IT Seam Tape.

5. When Wolf Portrait Siding is used in conjunction with Kimberly-Clark BLOCK-IT Housewrap, the consumer receives a lifetime warranty against structural damage caused by performance failure of the Kimberly – Clark BLOCK-IT

B. Starter Strips: Wolf Portrait Siding starter strips.

C. Trim and Accessories: Provide coordinating accessories made of same material as required for complete and proper installation whether or not specifically shown on the drawings.

**(Note to Writer: Select trim color.)**

1. Color: Match adjacent siding.

2. Provide 5/4 cellular PVC Trim.

3. Corners and Trim: Provide types as indicated on the Drawings.

D. Seam Plates (Infinity Seam Plates) and Adhesive:

1. Seam Plates: Provide Infinity Seam Plates designed and sized to match siding profile.

2. Adhesive: Use adhesives approved by the siding manufacturer.

E. Fasteners: Provide stainless steel or hot-dipped galvanized nails 6 penny nails.

1. Siding Fasteners:

a. Provide stainless steel or hot-dipped galvanized nails 6 penny nails.

b. Nails: Long enough to penetrate through the substrate a minimum of 3/4 inch.

c. Do not use brads, staples, wire nails or fine-threaded wood screws.

2. Trim Fasteners: Cortex hidden fastening system for trim.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrate conditions before beginning installation; verify dimensions and acceptability of substrate.

B. Substrate surfaces shall be as smooth as possible.

C. Do not proceed with installation until unacceptable conditions have been corrected.

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

3.02 PREPARATION

**(Note to Writer: Delete Paragraph A. for new construction.)**

A. Residing Projects: Remove all existing siding or install furring strips over existing siding to create flat surface for siding attachment.

B. Install drainage house wrap over sheathing and flashing in accordance with manufacturer's recommendations.

1. Lap drainage house wrap in direction of flow.

2. Follow manufacturer’s instructions and details for flashing around windows, doors and wrap penetrations.

3. Provide flashing tape to create sill pans, penetration seals and corner flashings.

**(Note to Writer: Delete Paragraph below if using single layer pocketed trim.)**

C. Two Layer Trim: Install first layer (5/8 inch thick pack-out trim) using stainless steel screw fasteners.

3.03 SIDING INSTALLATION

A. Install the manufacturer’s siding starter strip straight and level line, nailing every 8-12 inches fastening to wall studs as often as possible.

B. Install siding, and trim in accordance with manufacturer's printed installation instructions.

C. Provide a minimum of ½ inch clearance between siding and any surface that may collect water.

D. Cutting: Cut siding face down, using an 8 teeth per inch carbide tipped finish blade.

E. Hanging Siding:

1. Place first course of siding by interlocking integral tongue and groove of panel on to the starter strip.

2. Apply moderate hand pressure to seat the panel on the starter strip flange.

3. Install subsequent courses in a similar manner.

F. Seam Plate Installation:

1. Install seam plate using siding manufacturer’s approved adhesive.

2. Apply four (4) ¼ inch beads of adhesive vertically on seam plate, no closer than 1 inch to the butt end of the panel. Also apply one (1) ¼ inch bead of adhesive horizontally on seam plate in the lowest slot.

3. Gently pull back on the butt end of the installed panel, moving the panel just far enough to slide the plate with the adhesive on it behind the installed panel.

4. Install the next panel, tightly butting the edges. With firm hand pressure, push on both butt ends to ensure an adequate spread of the adhesive.

5. Place nails on either side of the plate in the nail slots as close to the outer edge of the plate as possible. Be sure not to drive nails through the plate.

6. Do not attempt to install plates when the temperature is below 25° F or when a temperature drop of greater than 40° is expected.

G. Fastening - General:

1. Nail siding 16 inches on center maximum. Nails shall penetrate the substrate a minimum of ¾ inches.

2. When fastening a panel, place fastener in the center of the fastener slot.

3. Drive in nail straight and level, leaving 1/16” gap between the head of the nail and the surface of the siding and center nail in the slot.

4. Do not overdrive nails, as this may pin the panel and interfere with natural expansion and contraction.

3.04 TRIM INSTALLATION

**(Note to Writer select Paragraph A. or Paragraph B. depending on trim installation method.)**

A. Two Layer Trim:

1. Install 5/8 inch pack-out trim at outside corners and other terminations of siding with screw fasteners prior to installing starter strip and siding.

2. After siding has been installed install top layer of trim with stainless steel screw fasteners.

B. Single Layer (Pocketed) Trim:

1. Thermal Expansion: Allow the following gaps between the end of the siding and the trim to accommodate panel movement.

2. Follow trim manufacturers trim spacing chart for pocketing and spacing recommendations.

C. Trim: Seal fastener holes in the exposed layer of trim with color matched sealant.

3.05 CLEANING AND PROTECTION

A. Clean dirt from surface of installed products, using mild soap and water.

B. Protect installed products until completion of project.

C. Touch-up, repair or replace damaged products before date of Substantial Completion.

END OF SECTION