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SECTION 07410

COMPOSITE BUILDING PANELS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes

1. Preformed, pre-finished fiber cement panels to be used in a rain-screen wall cladding installation system.
2. Installation Accessories.
3. Contractor to provide an add-alternate price to Owner for removing and residing the cement board panel system on the existing building with new panels. Contractor to provide allowance for repairs to substrate, waterproofing, and furring strip portions of existing system.

B. Related Sections

1. Section 05100 - Structural Steel
2. Section 06100 - Rough Carpentry.
3. Section 07100 - Dampproofing and waterproofing
2. Section 07920 - Joint Sealants
3. Section 07620 - Sheet Metal Flashing and Trim

1.02 SUBMITTALS

A. Submit the following in accordance with Section 01010:

1. Product Data: Manufacturer's product literature for the panel specified and for all accessories to be used in assembly. Submit copy of manufacturers recommended installation instructions for each of the conditions planned for installation.
2. Shop Drawings: Indicate thickness and dimension of parts, fastening and anchoring methods, and detail and location of joints and gaskets; including joints necessary to accommodate thermal movement.
3. Samples: 2 samples of each product to be used, 6 inch by 6 inch minimum.
4. Affidavit certifying that the material meets the requirements specified.

1.03 QUALITY ASSURANCE

A. Installer Qualifications: Acceptable to panel manufacturer.

B. Pre-Task Envelope Meeting: Conduct pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions, and manufacturer's warranty requirements.

1. Before Composite Building Panel system installation, a meeting will be held on site to review work to be accomplished.
2. Attendees: [Notify Attendees at least seven days prior to meeting.]
 - a. Architect / Engineer of Record
 - b. Construction Manager/General Contractor. - Project Manager and Superintendent
 - c. Composite Building Panel manufacturer's representative.
 - d. Installer Owner & on-site Foreman must attend and must be English literate
 - e. Independent Testing Agency.

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f. Other Subcontractors: subs concerned with siding and trim & adjacent construction installation. [i.e. window, brick, waterproofing, flashing, sheet metal, curtain wall, roofing, site work, etc].

3. Verify required submittals have been reviewed; verify acceptance of sample and mock-up.

4. Record minutes of meeting; distribute to attendees within 7 days of meeting & beginning work.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to the project site in manufacturer's original crating, properly labeled for identification and installation purposes. Store materials in accordance with panel manufacturer's recommendations. Handle materials carefully to avoid damage to panels and finishes.

1.05 WARRANTY

A. The Contractor shall warrant the materials to be free of faults and defects for a period of one year commencing on the date of Substantial Completion. The warranty shall be in writing and shall be signed by the manufacturer.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Cement Board Fabricators, P.O.Box 35247, Louisville, KY 40232 800-366-5376 www.cbf11.com.

B. An alternate product may be submitted, provided color and texture of above specified product can be replicated.

1. A reviewed product is "Petrarch Exterior Architectural Wall Panels" as manufactured by CEP Panels Inc., Naperville, Illinois. Panel would require custom color in smooth finish. Installation of panels would be directly to plywood substrate without the use of furring, and utilize manufacturers 'T' shaped gaskets at joints.

2. Other manufacturers seeking approval of their products must comply with requirements of this section and Section 01010.

2.02 PANEL TYPE

A. Non-asbestos, pre-finished, fiber cement panels manufactured from Portland cement, silicate, and selected fillers, reinforced with cellulose fibers that are fully compressed and cured in a high pressure steam autoclave.

B. Owner has a supply of panels set aside by the manufacturer for re-cladding the existing building equal to the square footage of panels on the existing building. Contractor is responsible for providing balance of panels required for a complete installation.

2.03 MATERIALS AND FABRICATION

A. Fiber Cement Panel: "Cembonit"

1. Thickness: 1/4 inches (6 mm).

2. Panel sizes: 4' x 8' from manufacturer. Installation requires 4' x 4' panel sizes.

3. Color: Flint #21

4. Compressive Strength: 14,000 psi

5. Weight: 0.35 lbs. / sq. ft. / mm of thickness.

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- B. Tolerances
 - 1. Panel lines, breaks, and angles shall be sharp and true, and surfaces shall be free from warp or buckle.

2.04 ACCESSORIES

- A. Pressure treated furring strips, premium grade, in 2-1/2" and 3-1/2" width. Refer to Section 6100 for additional information
- B. EPT Rubber strips as provided by the manufacturer. Strips are in two widths: 3", 1-3/16".
- C. Fasteners: As recommended by the panel manufacturer. Stainless steel oval head fasteners with stainless steel shoulder washers.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine the areas and conditions under which materials are to be installed and notify the Contractor in writing of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.
- B. Verify plywood substrate is completely covered by waterproofing system. Inspect all joints, edges of windows and penetrations, imbedded flashings, etc. Surfaces to receive panels shall be even, smooth, sound, clean, dry, and free from defects. Waterproofing system must have built in U.V. protection as panel system will have open joints.

3.02 PREPARATION

- A. Provide layout of panel system over entire wall area prior to installation of furring strips in order to allow for adjustment of layout to minimize small pieces of panel. Review changes to layout alignment where new construction and existing panel layouts are to align prior to securing furring.

3.03 INSTALLATION

- A. Always install panels in dry weather, as required by manufacturer. Panel is designed for face fastening with exposed fasteners and open joints.
- B. Install 5/4" pressure treated furring strips, with galvanized flat head screws, along center lines of panel layout, ensuring that panels will not cross breaks in the furring members.
 - 1. Verify that proper bearing and screw placement is possible for all panels. Follow manufacturers recommendations on fastener layout. Fasteners holding furring strips in place must be flush with strip or slightly recessed so as not to interfere with panel placement.
 - 2. Provide gaps in furring to allow for proper drainage of cavity. Do not abut furring directly to perimeter of windows.
 - 3. Install flashings as required to shed water to exterior of panel system. Provide pressure treated blocking under flashings as required to provide proper bearing.
- C. Cut panels to field conditions with methods approved by panel manufacturer. Smooth all cut edges.
- D. Install rubber strips per manufacturers recommendations. Wide strips are to be used at panel joints in order to support both adjacent panels. Ensure rubber strip is centered on panel joint. Narrow rubber strips are to be used at mid panel support locations only.
- E. Predrill and anchor panels securely in place, in accordance with final approved shop drawings. Fasteners are to use shoulder washers and are to be tightened in a spiral pattern starting from the

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center of the panel. Do not overtighten screws as panels may crack or break. Replace any damaged panels.

- F. Erect panels plumb, level, and true. Maintain even open joints around perimeter of all panels. Comply with panel manufacturer's instructions for proper spacing around obstructions (windows, vents, outlets, etc.) to allow for thermal movement of each panel.
- G. Maximum deviation from vertical-horizontal alignment of installed panels shall be 1/4 inch in 20 feet.

3.04 ADJUSTING AND CLEANING

- A. Repair panels with minor damage per manufacturers requirements.
- B. Remove panels damaged beyond repair and replace with new panels to match adjacent undamaged panels.
- C. Clean exposed panel surfaces promptly after installation in accordance with recommendations of panel manufacturer.

END OF SECTION