RODD HANSEN, ARCHITECT, L.L.C.
ARCHITECTURE AND PLANNING

Date: 4-30-2014

To: All Prime Bidders

RE: Eugene School District 4j
Spencer Butte Middle School – Energy Efficiency Upgrades
C.I.P. No. 420.578.032

ADDENDUM #1:

YOU ARE HEREBY DIRECTED TO PERFORM THE FOLLOWING WORK AND INCLUDE THE FOLLOWING WORK IN YOUR BID.

Item #1: The Bid Date / **Time** has been postponed until May 8, 2014, **3:00pm PST**.

Item #2: See the attached Section 07 55 00 Built-Up Roofing.

Item #3: See the attached Section 08 45 23 Plastic Wall Panels.

Item #4: See the attached Section 07 45 70 Cementitious Panels

END OF ADDENDUM #1

Roofing Systems At HVAC Units

Listed below are two (2) roof assemblies that can be applied at the new curb units. One system is with hot asphalt bitumen and the other roof system is Heat-welded (Torch) applied assembly.

Hot Asphalt Bitumen

Contractor to adhere and install 1" inch rigid insulation board below curb wood nailer to roof flange. Fill void at existing membrane around curb with similar insulation material to be plus / or minus 1/4" inch from existing BUR installed at plane of roof.
Place and adhere new cant strip around the curb to transition the roofing

Clean existing built-up roofing of all sediment and debris around curb. Prime existing cap sheet with asphalt primer around outside of curb a minimum 28" inches for a full width sheet application. Allow asphalt primer to dry prior to any roofing application.

Install two (2) layers of modified base sheet mechanically correct around curb to top of new cant strip. Feather each layer 6" inches beyond each other onto existing primed roof and above cant strip.

Install full width sheet of white mineral surface S.B.S. cap sheet over the base plies to the top of the curb wood nailer.

Fasten white granulated SBS sheet to curb wood nailer 6" inches on center.

Mastic, tape and granule roofing outside edges of finished roofing. ***Note-** Do not apply any mastic adhesive until after HVAC unit is in place and connected so other trades do not disturb the finish product of the mastic adhesive, tape and granules.

Heat Welded Atatic Polypropylene (APP)

Contractor to adhere and install 1" inch rigid insulation board below curb wood nailer to roof flange. Fill void at existing membrane around curb with similar insulation material to be plus / or minus 1/4" inch from existing BUR installed at plane of roof.
Place and adhere new cant strip around the curb to transition the roofing

Clean existing built-up roofing of all sediment and debris around curb. Prime existing cap sheet with asphalt primer around outside of curb a minimum 28" inches for a full width sheet application. Allow asphalt primer to dry prior to any roofing application.

Heat-weld (Torch) one layer of black smooth Atatic Polypropylene (A.P.P.) modified bitumen to 3" beyond the top of cant strip and a minimum of 20" onto existing primed roof. ***Note-** Contractor to use all safety precautions while using torch heating the APP materials and roof. A fully functional fire extinguisher must be present at all times.

Heat- weld (Torch) one full width sheet layer of white granulated A.P.P. modified bitumen to top of wood nailer and extend over the existing layer of black smooth A.P.P.

Fasten white granulated sheet to curb wood nailer 6” inches on center.

Mastic, tape and granule roofing outside edges of finished roofing. ***Note-** Do not apply any mastic adhesive until after HVAC unit is placed and connected so other trades do not disturb mastic adhesive, tape and granules.

END OF SECTION 07 55 00

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes the insulated translucent sandwich panel system and accessories, factory unitized, as shown and specified. Work includes providing and installing:

1. Flat factory prefabricated structural insulated translucent sandwich panels
2. Aluminum installation system
3. Aluminum sill flashing
4. Thermal break windows
5. Screens

1.2 SUBMITTALS

NOTE: Due to the schedule of this project the engineering and submittal drawings are in process with the manufacturer and will be delivered to the architect direct.

A. Submit manufacturer's product data. Include construction details, material descriptions, profiles and finishes of components.

B. Submit shop drawings. Include elevations and details.

C. Submit manufacturer's color charts showing the full range of colors available for factory-finished aluminum.

1. When requested, submit samples for each exposed finish required, in same thickness and material indicated for the work and in size indicated below. If finishes involve normal color variations, include sample sets consisting of two or more units showing the full range of variations expected.

a. Sandwich panels: 14" x 28" units
b. Factory finished aluminum: 5" long sections

D. Submit Installer Certificate, signed by installer, certifying compliance with project qualification requirements.

E. Submit product reports from a qualified independent testing agency indicating each type and class of panel system complies with the project performance requirements, based on comprehensive testing of current products. Previously completed reports will be acceptable if for current manufacturer and indicative of products used on this project.

1. Reports required are:

a. International Building Code Evaluation Report
b. Flame Spread and Smoke Developed (UL 723) – Submit UL Card
c. Burn Extent (ASTM D 635)
d. Color Difference (ASTM D 2244)
e. Impact Strength (UL 972)
f. Bond Tensile Strength (ASTM C 297 after aging by ASTM D 1037)
g. Bond Shear Strength (ASTM D 1002)
h. Beam Bending Strength (ASTM E 72)
i. Insulation U-Factor (NFRC 100)

j. NFRC System U-Factor Certification (NFRC 700)
k. Solar Heat Gain Coefficient (NFRC or Calculations)
l. Condensation Resistance Factor (AAMA 1503)
m. Air Leakage (ASTM E 283)
n. Structural Performance (ASTM E 330)
o. Water Penetration (ASTM E 331)
p. 1200°F Fire Resistance (SWRI)
q. Performance for Windows (AAMA/WDMA/CSA-101/I.S.2/A440-05)
r. Daylight Autonomy

1.3 QUALITY ASSURANCE

A. Manufacturer's Qualifications

1. Material and products shall be manufactured by a company continuously and regularly employed in the manufacture of specified materials for a period of at least ten consecutive years and which can show evidence of those materials being satisfactorily used on at least six projects of similar size, scope and location. At least three of the projects shall have been in successful use for ten years or longer.
2. Panel system must be listed by an ANSI accredited Evaluation Service, which requires quality control inspections and fire, structural and water infiltration testing of sandwich panel systems by an accredited agency.
3. Quality control inspections shall be conducted at least once each year and shall include manufacturing facilities, sandwich panel components and production sandwich panels for conformance with AC177 “Translucent Fiberglass Reinforced Plastic (FRP) Faced Panel Wall, Roof and Skylight Systems” as issued by the ICC-ES.

B. Installer’s Qualifications: Installation shall be by an experienced installer, which has been in the business of installing specified panel systems for at least two consecutive years and can show evidence of satisfactory completion of projects of similar size, scope and type.

1.4 PERFORMANCE REQUIREMENTS

A. The manufacturer shall be responsible for the configuration and fabrication of the complete unitized panel system.

1. When requested, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
2. Standard panel system shall have less than 0.01 cfm/ft^2 air leakage by ASTM E 283 at 6.24 PSF (50 mph) and no water penetration by ASTM E 331 at 15 PSF; and structural testing by ASTM E 330.
3. Structural Loads; Provide system capable of handling the project specific loads:

1.5 DELIVERY STORAGE AND HANDLING

A. Deliver panel system, components and materials in manufacturer's standard protective packaging.

B. Store panels on the long edge; several inches above the ground, blocked and under cover in accordance with manufacturer's storage and handling instructions.

1.6 WARRANTY

A. Submit manufacturer's and installer's written warranty agreeing to repair or replace panel system work, which fails in materials or workmanship within five years of the date of delivery. Failure of materials or workmanship shall

include leakage, excessive deflection, and deterioration of finish on metal in excess of normal weathering and defects in accessories, insulated translucent sandwich panels and other components of the work.

Warranty: 10 year Limited Warranty covering separation of faces from grid core, and/or abnormal color change of the exterior face and 20 year Limited Warranty against reinforcing fiber bloom.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Kalwall Corporation, - Local Contact: DeaMor Associates, Inc. 1-800-284-6799. Contact: Mark Atteridge

2.2 PANEL COMPONENTS

A. Face Sheets

1. Translucent faces: Manufactured from glass fiber reinforced thermoset resins, formulated specifically for architectural use.

   a. Thermoplastic (e.g. polycarbonate, acrylic) faces are not acceptable.
   b. Face sheets shall not deform, deflect or drip when subjected to fire or flame.

2. Interior face sheets:

   a. Flame spread: Underwriters Laboratories (UL) listed, which requires periodic unannounced retesting, with flame spread rating no greater than 50 and smoke developed no greater than 250 when tested in accordance with UL 723.
   b. Burn extent by ASTM D 635 shall be no greater than 1”.

3. Exterior face sheets:

   a. Color stability: Full thickness of the exterior face sheet shall not change color more than 3 CIE Units DELTA E by ASTM D 2244 after 5 years outdoor South Florida weathering at 5° facing south, determined by the average of at least three white samples with and without a protective film or coating to ensure long-term color stability. Color stability shall be unaffected by abrasion or scratching.
   b. Strength: Exterior face sheet shall be uniform in strength, impenetrable by hand held pencil and repel an impact minimum of 70 ft. lbs. without fracture or tear when impacted by a 3-1/4” diameter, 5 lb. free-falling ball per UL 972.

4. Appearance:

   a. Exterior face sheets: Smooth 0.070 thick and Crystal in color.
   b. Interior face sheets: Smooth 0.045 thick and Crystal in color.
   c. Face sheets shall not vary more than ± 10% in thickness and be uniform in color.

B. Grid Core

1. Thermally Broken I-beam grid core shall be of 6063-T6 or 6005-T5 alloy and temper with provisions for mechanical interlocking of muntin-mullion and perimeter. Width of I-beam shall be no less than 7/16”.
2. I-beam Thermal break: Minimum 1”, thermoset fiberglass composite.

C. Laminate Adhesive

1. Heat and pressure resin type adhesive engineered for structural sandwich panel use, with minimum 25-years field use. Adhesive shall pass testing requirements specified by the International Code Council “Acceptance Criteria for Sandwich Panel Adhesives”.
2. Minimum tensile strength of 750 PSI when the panel assembly is tested by ASTM C 297 after two exposures to six cycles each of the aging conditions prescribed by ASTM D 1037.
3. Minimum shear strength of the panel adhesive by ASTM D 1002 after exposure to four separate conditions:

   a. 50% Relative Humidity at 68° F: 540 PSI
   b. 182° F: 100 PSI
   c. Accelerated Aging by ASTM D 1037 at room temperature: 800 PSI
   d. Accelerated Aging by ASTM D 1037 at 182° F: 250 PSI

2.3 PANEL CONSTRUCTION

A. Provide sandwich panels of flat fiberglass reinforced translucent face sheets laminated to a grid core of mechanically interlocking I-beams. The adhesive bonding line shall be straight, cover the entire width of the I-beam and have a neat, sharp edge.

1. Thickness: 2-3/4”
2. Light transmission: 15%
3. Solar heat gain coefficient 0.18.
4. Panel U-factor by NFRC certified laboratory: 2-3/4” thermally broken grid
5. Complete insulated panel system only shall have NFRC certified U-factor of 0.16.
6. Grid pattern: Nominal size 12” by 24”; pattern Shoji.

B. Standard panels shall deflect no more than 1.9” at 30 PSF in 10’ 0” span without a supporting frame by ASTM E 72.

C. Standard panels shall withstand 1200° F fire for minimum one hour without collapse or exterior flaming.

D. Thermally broken panels: Minimum Condensation Resistance Factor of 80 by AAMA 1503 measured on the bond line.

2.4 BATTENS AND PERIMETER CLOSURE SYSTEM

A. Closure system: Thermally Broken extruded aluminum 6063-T6 and 6063-T5 alloy and temper clamp-tite screw type closure system.

B. Sealing tape: Manufacturer's standard, pre-applied to closure system at the factory under controlled conditions.

C. Fasteners: 300 series stainless steel screws for aluminum closures, excluding final fasteners to the building.

D. Finish: Mill Aluminum

2.5 WINDOWS (OPTIONAL)

A. Windows shall be designed specifically for inclusion in the translucent panel unit wall system and factory unitized to panels.

1. Units shall be of the following type(s):

a. Project-in top
b. Fixed lite

B. Performance: Windows shall pass or exceed requirements of AAMA/WDMA/CSA-101/I.S.2/A440-05.

1. **HC-2000 projected windows: PI-AW50, PO-HC55**; shall pass requirements at 75 psf uniform structural load with air infiltration <.01 CFM/FT^2 at 6.24 psf and no water penetration at 10 psf (PI) and 8 psf (PO)
2. **HC-2000 fixed widows: F-AW80**; shall pass requirements at 120 psf uniform structural load with air infiltration <.01 CFM/FT^2 at 6.24 psf and no water penetration at 12 psf.

C. Construction: All window frame members shall be of heavy gauge 6063-T5 extruded aluminum with a thermal break. Frame sections shall be coped and joined by stainless steel screws at each corner. All joints exposed to the weather shall be sealed with an elastic compound. All openings shall be double weather stripped using T-slot bulb gaskets to insure minimum air infiltration.

1. Operating sash shall be hollow extruded design, mitered and joined with heavy reinforcing corners.
2. Both operable and fixed lites shall be inside glazed with an expanded EPDM closed cell sponge gasket to exterior, with aluminum glazing bead and a driven EPDM wedge gasket to the interior for rapid removal and replacement.

D. Hardware:

1. Hinges on operating windows shall be four bar stainless steel with adjustable friction blocks.
2. Locking hardware shall be of cam lever design and shall be made of cast white bronze.

E. Glazing:

1. Heavy commercial (HC2000) windows (Optional E-Series windows) shall be glazed with 1” double (triple) insulated glass.

a. (Optional) 1” translucent panels with _____ U-factor and faces to match 2-3/4” translucent panels.

2. Glazing Specification: _____

F. Finish is to be coordinated with closure system.

G. Insect Screens shall be supplied.

1. Constructed of hollow box extruded frame
2. Mitered with reinforcing corners mechanically joined
3. Screen cloth shall be of 18-16 aluminum mesh and held in place by spline

PART 3 - EXECUTION

3.1 EXAMINATION

A. Installer shall examine substrates, supporting structure and installation conditions.

B. Do not proceed with panel installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Metal Protection:

1. Where aluminum will contact dissimilar metals, protect against galvanic action by painting contact surfaces with primer or by applying sealant or tape recommended by manufacturer for this purpose.
2. Where aluminum will contact concrete, masonry or pressure treated wood, protect against corrosion by painting contact surfaces with bituminous paint or method recommended by manufacturer.

3.3 INSTALLATION

A. Install the panel system in accordance with the manufacturer's installation recommendations and approved shop drawings.

1. Anchor component parts securely in place by permanent mechanical attachment system.
2. Accommodate thermal and mechanical movements.
3. Set perimeter framing in a full bed of sealant compound, or with joint fillers or gaskets to provide weather-tight construction.

B. Install joint sealants at perimeter joints and within the panel system in accordance with manufacturer's installation instructions.

3.4 CLEANING

A. Clean the panel system inside and outside, immediately after installation.

B. Refer to manufacturer's written recommendations.

END OF SECTION 08 45 23

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Cementitious express/reveal jointed panel with accessories.

1.2 RELATED SECTIONS

A. Section 06 10 00 - Rough Carpentry: Wood framing and bracing.

B. Section 06 10 00 - Rough Carpentry: Sheathing.

C. Section 07 21 00 - Insulation: Exterior wall insulation.

1.3 REFERENCES

A. ASTM International (ASTM):
1. ASTM B136 - Standard Method for Measurement of Stain Resistance of Anodic Coatings on Aluminum.
2. ASTM B244 - Standard Test Method for Measurement of Thickness of Anodic Coatings on Aluminum and of Other Nonconductive Coatings on Nonmagnetic Basis Metals with Eddy-Current Instruments.
3. ASTM C834 - Standard Specification for Latex Sealants.
4. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
5. ASTM C1186 - Standard Specification for Flat Non-Asbestos Fiber-Cement Sheets.
6. ASTM D1117 - Standard Guide for Evaluating Nonwoven Fabrics.
7. ASTM D1730 - Standard Practices for Preparation of Aluminum and Aluminum-Alloy Surfaces for Painting.
8. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
9. ASTM E96 - Test Methods for Water Vapor Transmission of Materials.
10. ASTM E119 - Standard Test Methods for Fire Tests of Building Construction and Materials.
11. ASTM E136 - Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 degrees C.
12. ASTM E330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure.

B. AATCC127 - Water Resistance: Hydrostatic Pressure Test.

C. TAPPI - T460 - Air Resistance of Paper (Gurley Method).

1.4 SUBMITTALS

A. Submit under provisions of Section 01 30 00.

B. Product Data: Manufacturer's data sheets on each product to be used, including:
1. Installation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Manufacturer's best practice guide.
4. Technical data sheet.

5. Standard CAD drawings

C. Shop Drawings: Provide detailed drawings of atypical non-standard applications of cladding junctions and penetrations which are outside the scope of the standard details and specifications provided by the manufacturer.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 4 by 6 inches (100 by 150 mm), representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

A. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques
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.

1.6 DELIVERY, STORAGE, AND HANDLING

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

B. Store siding flat on a smooth level surface. Protect edges and corners from chipping. Store sheets under cover and keep dry prior to installing.

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

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. Manufacturer's Warranty: 30-year limited product warranty against manufacturing defects.
1. Application Warranty: Application limited warranty for 2 years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. James Hardie Building Products, Inc., Certainteed, or approved.

B. Requests for approval of equal substitutions will be considered in accordance with provisions of Section 01 60 00.

2.2 CLADDING

A. Code Compliance Requirement for Siding Materials:
1. Fiber-cement siding, complies with ÅSTM C 1186 Type A Grade II.

2. Fiber-cement siding, complies with ASTM E 136 as a noncombustible material.
3. Fiber-cement siding, complies with ASTM E 84 Flame Spread Index = 0, Smoke Developed Index = 5.
4. Fiber-cement siding, complies with ÅSTM E 119 1 hour and 2 hour fire resistive assemblies listed with Warnock Hersey.
5. Fiber-cement siding, tested to ASTM E330 for Transverse Loads.
6. Intertek Warnock Hersey Product Listing.
7. Manufacturer's Technical Data Sheet.

2.3 WEATHER BARRIER

A. Weather Barrier: HardieWrap and HardieWrap Flashing and Seam Tapes, or approved.
Code Compliance Requirement for Weather Barrier:
1. Thickness, 11 mil sheet.
2. Breathability in accordance with ÅSTM E96.
3. Tear strength in accordance with ASTM D1117.
4. Water resistance in accordance with AATCC127.
5. Air Penetration in accordance with TAPPI - T460.
6. HardieWrap Weather Barrier ICC-ES Evaluation Report ESR-2258

2.4 FURRING (STRAPPING)

A. Rainscreen Cavity: Install Hardie Reveal Panels, or approved, on a drained and vented rainscreen cavity, with a minimum 3/8 inch (9.5mm) air cavity. Selection of cavity vent materials shall be incorporated into the design to prevent insect and pest entry.

2.5 ACCESSORIES

A. Trims: Trims confirm to a 6063 alloy in T-5 temper with a minimum thickness of 0.050 inch. All reveal trims are 12 feet in length.
1. Horizontal trim.
2. Vertical trim.
3. Outside corner trim.
4. Inside corner trim.
5. J channel trim.
6. Drip cap trim.

B. Finishes of Trims:
1. Chem Film for field painting of Reveal Trims; Chem Film Coating shall conform to ASTM N D1730
2. Clear anodized metal finish aesthetic; clear anodizing shall conform to ASTM B244 and ASTM B136.
3. Color coated finish as supplied in accordance with manufacturers requirements

2.6 FASTENERS

A. Fasteners: For attaching Hardie Reveal Panel to a rain screen provide the following:
1. Wood Framing: 10-12 1-1/2 inch long x 0.47 inch HD low profile Torx (T20W) (TW-S-D12-4.8x38).
2. Steel Framing: 10-12 1-1/2 inch long x 0.47 inch HD low profile Torx (T20W) (TW-S-D12-4.8x38).
3. Fasteners shall be of high quality stainless steel to ensure resistance to corrosion. For field painting, fasteners should be treated to accept paint adhesion.
a. Alternatives must be approved by the architect. e.g. decorative screws, nails,

bugle head screws, etc.

2.7 FINISHES

A. Factory Primer: Provide factory applied universal primer.
   1. Primer: Factory applied sealer/primer by James Hardie. Apply flat sheen finishes to panels.
   2. Topcoat: Refer to Section 09 90 00 and Exterior Finish Schedule.

B. Factory Finish for Trim:
   1. Trim for Factory-Applied Coating and Field-Applied Finish: Chem Film.
   2. Trim for Factory-Applied Finish and No Field-Applied Finish: Clear anodized.

PART 3 EXECUTION

3.1 EXAMINATION

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

B. If framing 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. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Ensure that drainage plane in intact and all penetrations are sealed.

3.3 INSTALLATION

A. Wood Framing: Nominal 2 inch by 4 inch (51 m by 102 mm) wood framing selected for minimal shrinkage and complying with local building codes, including the use of water-resistive barriers or vapor barriers where required. Minimum 1-1/2 inches (38 mm) face and straight, true, of uniform dimensions and properly aligned.
   1. Install water-resistive barriers and claddings to dry surfaces.
   2. Repair any punctures or tears in the water-resistive barrier prior to the installation of the siding.
   3. Protect siding from other trades.

B. Metal Framing: Minimum 20 gauge 3-5/8 inch (92 mm) C-Stud 16 inches maximum metal framing complying with local building codes, including the use of water-resistive barriers and/or vapor barriers where required. Minimum 1-1/2 inches (38 mm) face and straight, true, of uniform dimensions and properly aligned.
   1. Install water-resistive barriers and claddings to dry surfaces.
   2. Repair any punctures or tears in the water-resistive barrier prior to the installation of the siding.
   3. Protect siding from other trades.

C. Furring: Install furring on a minimum 3/8 inch rainscreen cavity, or in accordance with local building code for rainscreen requirements.

D. Panel Installation: Install materials in strict accordance with manufacturer's installation

instructions.

1. Place fasteners no closer than 3/4 inch (9.5 mm) from panel edges and 2 inches (51 mm) from panel corners.
2. Use fasteners as specified in the James Hardie Tech Data sheet and in the Hardie Reveal Panel Installation Instruction.
3. Install panel using 1/2 inch (13 mm) spacers at horizontal joints. Leave bottom edge of panel above all horizontal trims exposed, no caulking shall be placed at this overlap of Horizontal Reveal Trim. Factory primed edge shall always be used.
4. Install a kickout flashing to deflect water away from the siding at the roof intersection.
5. Install a self-adhering membrane on the wall before the subfascia and trim boards are nailed in place, and then install the kickout.
6. Allow minimum vertical clearance between the bottom edge of siding and any other material in strict accordance with the manufacturer's installation instructions and as determined by James Hardie Zone.
7. Maintain clearance between siding and adjacent finished grade.
8. Specific framing and fastener requirements - refer to the applicable building code compliance reports.

3.4 FINISHING

A. Finish factory primed siding with a minimum of one coat of high quality 100 percent acrylic exterior flat grade paint with flat finish within 180 days of installation. Follow paint manufacturer's written product recommendation and written application instructions.

B. Field cut edges shall be coated during the installation process using an exterior grade primer/sealer that is compatible with the type of paint to used on project.

3.5 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 07 45 70