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ADDENDUM

ADDENDUM NO. [3] Date: February 17, 2023

RE: NORTHWOOD TECHNICAL COLLEGE- ASHLAND
 ROOFING & METAL PANELS REPLACEMENT
 2100 BEASER AVENUE
 ASHLAND, WISCONSIN 54806
 HSR PROJECT NO. 22004

FROM: HSR Associates, Inc
 100 Milwaukee Street
 La Crosse, WI 54603
 (608) 784-1830

To: Prospective Bidders

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated January 2023. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of [1] page, and [1] section.

CHANGES TO SPECIFICATIONS:

1. Section 08 63 00 Metal-Framed Skylights
 - a. See the revised section included in this addendum. Disregard the previous version.
 - b. Revised 1.04 Submittals. See text to see the revised requirements.
 - c. Revised 2.03 Materials to require insulating glass in lieu of insulating plastic glazing.
 - d. Revised 2.06 Finishes to require color anodized finish in lieu of natural anodized at the exterior and to allow for the interior color to be selected by the A/E during the submittal process.

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**SECTION 08 63 00
METAL-FRAMED SKYLIGHTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Aluminum skylight framing system.
- B. Skylight glazing.
- C. Fasteners, anchors, reinforcement, and flashings.

1.02 RELATED REQUIREMENTS

- A. Section 06 18 00 - Glued-Laminated Construction: Structural support.
- B. Section 07 92 00 - Joint Sealants: Sealing joints between skylight frames and adjacent construction.

1.03 REFERENCE STANDARDS

- A. AAMA 501.2 - Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls, and Sloped Glazing Systems 2015.
- B. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum 2014 (2015 Errata).
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel 2014.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products 2015.
- E. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate 2021.
- F. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes 2014.
- G. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes (Metric) 2013.
- H. ASTM C794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants 2015a.
- I. ASTM D4479/D4479M - Standard Specification for Asphalt Roof Coatings - Asbestos-Free 2007 (Reapproved 2012).
- J. ASTM E283/E283M - Standard Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal) 2010 (Reapproved 2019).
- K. ASTM E330/E330M - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference 2014.
- L. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference 2000 (Reapproved 2016).
- M. ICC (IBC) - International Building Code 2015.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Review Submittals - Preparatory
 - 1. Product Data: Provide manufacturer's specifications, standard details, and installation requirements.
 - 2. Shop Drawings: Indicate framed opening requirements and tolerances, spacing of members, anticipated deflection under load, affected related work, expansion and contraction joint locations and details, and sizes and locations for field welding.
 - a. Show field measurements on shop drawings.
 - 3. Design Data: Provide framing member structural and physical characteristics and engineering calculations. Identify dimensional limitations.

- C. Review Submittals - Samples
 - 1. Samples: Set of color chips for selection of color, finish.
 - 2. Samples: One sample, not less than 12 by 12 inches in size illustrating appearance of prefinished aluminum and specified glazing system, including glazed edge and corner.
- D. Information Submittals - Preparatory
 - 1. Manufacturer's Certificate: Certify that the products supplied meet or exceed the specified requirements.
- E. Closeout Submittals
 - 1. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Designer Qualifications: Design skylight system under direct supervision of a professional engineer experienced in design of system type specified and licensed in the state in which the project is located.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with not fewer than three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Provide wrapping to protect prefinished aluminum surfaces. Do not use adhesive papers or spray coatings that bond when exposed to sunlight or weather.

1.07 FIELD CONDITIONS

- A. Do not install sealants when ambient temperature is less than 40 degrees F. Maintain this minimum temperature during and 48 hours after installation.

1.08 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work, including leaks, discoloration, failure of seal at insulated glazing units, and excessive thermal or structural movement, within a 2 year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Metal-Framed Skylights Manufacturers:
 - 1. Acurlite Glass Skylights: www.acurlite.com
 - 2. Kingspan Light + Air; Formerly Bristolite Daylighting Systems, Inc: www.bristolite.com
 - 3. Velux America, Inc: www.veluxusa.com
 - 4. Wasco Skylights - Part of the VELUX Group: www.wascoskylights.com
 - 5. Wisconsin Solar Design: www.wisconsinsolardesign.com
 - 6. Substitutions: See Section 01 60 00 - Product Requirements.

2.02 METAL-FRAMED SKYLIGHTS

- A. Metal Framed Skylights: Factory-fabricated, and glazed.
 - 1. Frame: Extruded aluminum structural members with integral condensation collection and guttering system thermally separated from exterior pressure bar.
 - 2. Glazing System: Pressure glazing bar system.
 - 3. Glazing: Insulating glass.
 - 4. Aluminum Finish: Class II color anodized.
 - 5. Fabricate to prevent vibration harmonics, thermal movement transmitted to other building elements, and loosening, weakening, or fracturing of attachments or components of system.

2.03 PERFORMANCE REQUIREMENTS

- A. Provide metal-framed skylights that comply with the following:
 - 1. Structural Design: Design and size components to withstand dead loads and specified live loads without damage or permanent set.
 - 2. Wind Loads: Test in accordance with ASTM E330/E330M, using loads 1.5 times the specified design pressures and 10 second duration of maximum load.
 - 3. Design Pressure (DP): In accordance with applicable codes.
 - 4. Snow Load: 40 psf.
 - 5. Concentrated Load: Design to withstand 250 pounds concentrated load at any location on framing members without permanent set.
 - 6. Glazing Support Member Deflection Under Wind Load: 1/180 of span, maximum.
 - 7. Structural Glazing Adhesive: Design system to limit stress on structural glazing adhesive to 20 percent of tested tensile adhesion and maximum compression or elongation to 25 percent of neutral dimension.
 - 8. Thermal Movement: Design system to accommodate thermal expansion and contraction over ambient temperature range of 100 degrees F, dynamic loading and release of loads, and deflection of structural support framing without damage to skylight system components or loss of weathertightness.
 - 9. Energy Code Compliance: Comply with ICC (IBC), International Energy Code as required for metal-framed skylights.
 - 10. Air Leakage: 0.30 cfm/sq ft maximum leakage when tested at 1.57 psf pressure difference in accordance with ASTM E283/E283M.
 - 11. Water Penetration: None, when measured in accordance with ASTM E331 at a test pressure difference of 2.86 pounds per square foot.

2.04 MATERIALS

- A. Aluminum Extrusions: Alloy and temper 6063-T5, 6063-T6, or 6061-T6 members complying with ASTM B221 (ASTM B221M), with minimum thickness 1/8 inch for structural members and 1/16 inch for non-structural members.
- B. Formed Aluminum: Sheet material of alloy 5052, 5005, or 6061-T651 members complying with ASTM B209/B209M, with minimum thickness 1/8 inch for structural members and 1/16 inch for non-structural members.
- C. Internal Reinforcement: ASTM A36/A36M Steel shapes as required for strength and mullion size limitations, hot-dip galvanized after fabrication in accordance with ASTM A123/A123M.
- D. Insulating Glass: Sealed insulated units, outer pane of tinted transparent, laminated glass; inner pane of clear transparent, laminated glass; space of sealed air, metal edge frame.
- E. Glazing Accessories: As recommended by manufacturer of skylight system.
- F. Weatherseal Sealant: Silicone, with adhesion in compliance with ASTM C794; compatible with glazing accessories.
- G. Touch-Up Primer for Galvanized Steel Surfaces: Zinc rich type.
- H. Protective Back Coating: Asphaltic mastic, ASTM D4479/D4479M Type I.
- I. Fasteners: Stainless steel.
- J. Flashing: Matching finish of skylight frame system components; secure using concealed fastening method, and seal with weather-tight sealant.
 - 1. Refer to Section 07 62 00 for flashing material requirements.

2.05 FABRICATION

- A. Rigidly fit and secure joints and corners with screw and spline; fabricate rigid joints with connections that are flush, hairline, and weatherproof.
- B. Fabricate components to allow for expansion and contraction with minimum clearance and shim spacing around perimeter of assembly.

- C. Drain to exterior any water entering exterior joints, condensation occurring in glazing channels, or migrating moisture occurring within system.
- D. Prepare components to receive concealed anchorage devices, and ensure that fasteners will be concealed upon completion of installation.

2.06 FINISHES

- A. Class II Color Anodized Finish: AAMA 611 AA-M12C22A32 Integrally colored anodic coating not less than 0.4 mils thick; both interior and exterior surfaces.
- B. Color: Exterior color to be dark bronze. Interior color to be selected by the A/E from the manufacturer's standard range; including color anodized and clear anodized.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that structural curb is ready to receive skylight system. Coordinate installation of roofing and other adjacent work to ensure weathertight construction.

3.02 PREPARATION

- A. Apply single coat of protective coating to concealed aluminum and steel surfaces in contact with dissimilar materials.

3.03 INSTALLATION

- A. Install metal-framed skylights in accordance with manufacturer's instructions.
- B. Set skylight structure plumb, level, and true to line, without warp or rack of frames or glazing panels. Anchor securely in place in accordance with approved shop drawings.
- C. Maintain assembly dimensional tolerances, aligning with adjacent work.
- D. Install base flashings in accordance with Section 07 62 00.
- E. Pack fibrous insulation or expanding spray foam in shim spaces at perimeter of assembly to ensure continuity of thermal barrier.
- F. Touch up damaged finishes so repair is imperceptible from 6 feet distance, and remove and replace components that cannot be acceptably touched up.

3.04 FIELD QUALITY CONTROL

- A. Provide services of metal-framed skylight manufacturer's field representative to observe for proper installation of system and submit report.
- B. See Section 01 40 00 - Quality Requirements for general testing and inspection requirements.
- C. Water-Spray Test: Provide water spray quality test of installed metal-framed skylight components in accordance with AAMA 501.2 during construction process and before installation of interior finishes.
 - 1. Perform a minimum of two tests in each designated area as directed by Architect.
- D. Repair or replace metal-framed skylight components that have failed designated field testing, and retest to verify performance complies with specified requirements.

3.05 CLEANING

- A. Remove protective material from prefinished aluminum surfaces.
- B. Wash down exposed surfaces; wipe surfaces clean.
- C. Remove excess sealant by methods recommended by skylight manufacturer.

END OF SECTION