

ARKANSAS STATE HIGHWAY & TRANSPORTATION DEPARTMENT  
EQUIPMENT AND PROCUREMENT OFFICE  
LITTLE ROCK, ARKANSAS

February 17, 2017

NOTICE TO BIDDERS  
ADDENDUM

Bid No. M-17-029P

District 3 Headquarters Administration Office HVAC Replacement

OPENING DATE: February 22, 2017

**Bid Invitation Should have Read:**

1. A NEBB Certified Test and Balance Company will be used to perform Test and Balance on air distribution system and equipment.
2. Any cutting and patching of roof shall be performed by Reynolds Construction to retain factory Duralast Warranty.

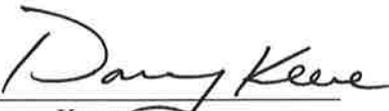
Contact: Reynolds Construction  
Cell: 1-870-329-1592

3. Installation Contractor shall be certified to install selected Manufacturers equipment.

**Bid Specifications Should have Included:**

Section 23 07 00 (HVAC Insulation) and Section 23 21 13 (Hydronic Piping) attached.

ALL OTHER SPECIFICATIONS SHALL REMAIN THE SAME.

  
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Danny Keene  
Division Head  
Equipment and Procurement

**District 3 Headquarters Administration  
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**SECTION 23 07 00 - HVAC INSULATION**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals:
  - 1. Product Data: For each type of product indicated.
  - 2. For adhesives and sealants, documentation including printed statement of VOC content.
- B. Quality Assurance: Labeled with maximum flame-spread index of 25 and maximum smoke-developed index of 50 according to ASTM E 84.

**PART 2 - PRODUCTS**

**2.1 PERFORMANCE REQUIREMENTS**

- A. Surface-Burning Characteristics:
  - 1. Indoor Insulation and Related Materials: To be factory-labeled designating maximum flame-spread index of 25 or less and smoke-developed index of 50 or less according to ASTM E 84.
  - 2. Outdoor Insulation and Related Materials: To be factory labeled designating maximum flame-spread index of 75 or less and smoke-developed index of 150 or less according to ASTM E 84.

**2.2 INSULATION MATERIALS**

- A. Foam insulation materials shall not use CFC or HCFC blowing agents in the manufacturing process.
- B. Flexible Elastomeric: Closed-cell, sponge- or expanded-rubber materials. Comply with ASTM C 534, Type I for tubular materials and Type II for sheet materials.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Aeroflex USA, Inc.
    - b. Armacell LLC.
- C. Mineral-Fiber Blanket Insulation: Comply with ASTM C 553, Type II and ASTM C 1290, Type I.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. CertainTeed Corporation.

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- b. Johns Manville; a Berkshire Hathaway company.
  - c. Knauf Insulation.
  - d. Manson Insulation Inc.
- D. Flexible Elastomeric and Polyolefin Adhesive: Comply with MIL-A-24179A, Type II, Class I.
- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Aeroflex USA, Inc.
    - b. Armacell LLC.
    - c. Foster Brand; H. B. Fuller Construction Products.
  - 2. For indoor applications, adhesive shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- E. Vapor-Barrier Mastic: Water based; suitable for indoor and outdoor use on below ambient services.
- 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
    - a. Foster Brand; H. B. Fuller Construction Products.
  - 2. Water-Vapor Permeance: ASTM E 96/E 96M, Procedure B, 0.013 perm at 43-mil dry film thickness.
  - 3. Solids Content: ASTM D 1644, 58 percent by volume and 70 percent by weight.
- F. Factory-Applied Jackets: When factory-applied jackets are indicated, comply with the following:
- 1. FSK Jacket: Aluminum-foil, fiberglass-reinforced scrim with kraft-paper backing; complying with ASTM C 1136, Type II.
- G. FSK Tape: Foil-face, vapor-retarder tape matching factory-applied jacket with acrylic adhesive; complying with ASTM C 1136.
- 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Avery Dennison Corporation, Specialty Tapes Division.
    - b. Compac Corporation.
    - c. Ideal Tape Co., Inc., an American Biltrite Company.

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**PART 3 - EXECUTION**

**3.1 INSULATION INSTALLATION**

- A. Comply with requirements of the Midwest Insulation Contractors Association's "National Commercial & Industrial Insulation Standards" for insulation installation on pipes and equipment.
- B. Insulation Installation at Interior Wall and Partition Penetrations (That Are Not Fire Rated): Install insulation continuously through walls and partitions.
- C. Insulation Installation at Fire-Rated Wall, Partition, and Floor Penetrations: Install insulation continuously through penetrations. Seal penetrations. Comply with requirements in Section 07 84 13 "Penetration Firestopping."
- D. Flexible Elastomeric Insulation Installation:
  - 1. Seal longitudinal seams and end joints with adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.
  - 2. Insulation Installation on Pipe Fittings and Elbows: Install mitered sections of pipe insulation. Secure insulation materials and seal seams with adhesive to eliminate openings in insulation that allow passage of air to surface being insulated.
- E. Mineral-Fiber Insulation Installation:
  - 1. Insulation Installation on Straight Pipes and Tubes: Where vapor barriers are indicated, seal longitudinal seams, end joints, and protrusions with vapor-barrier mastic and joint sealant.
  - 2. For insulation with factory-applied jackets on above ambient surfaces, secure laps with outward clinched staples at 6 inches o.c.
  - 3. For insulation with factory-applied jackets on below ambient surfaces, do not staple longitudinal tabs but secure tabs with additional adhesive as recommended by insulation material manufacturer and seal with vapor-barrier mastic and flashing sealant.
  - 4. Blanket and Board Insulation Installation on Ducts and Plenums: Secure with adhesive and insulation pins.
  - 5. For ducts and plenums with surface temperatures below ambient, install a continuous, unbroken vapor barrier.
- F. Plenums and Ducts Requiring Insulation:
  - 1. Concealed and exposed supply and outdoor air.
  - 2. Concealed and exposed return air located in nonconditioned space.
  - 3. Concealed and exposed exhaust between isolation damper and penetration of building exterior.
- G. Piping Not Insulated: Unless otherwise indicated, do not install insulation on the following:
  - 1. Drainage piping located above ceilings.

**END OF SECTION 23 07 00**

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**SECTION 23 21 13 - HYDRONIC PIPING**

**PART 1 - GENERAL**

**1.1 SECTION REQUIREMENTS**

- A. Submittals:
1. Product Data: For each type of product indicated.
  2. For solvent cements and adhesive primers, documentation including printed statement of VOC content.

**PART 2 - PRODUCTS**

**2.1 PERFORMANCE REQUIREMENTS**

- A. Hydronic piping components and installation shall be capable of withstanding the following minimum working pressure and temperature:
1. Condensate-Drain Piping: 150 deg F.

**2.2 PIPES, TUBES, AND FITTINGS**

- A. PVC Pipe: ASTM D 1785, Schedule 40, plain ends with ASTM F 438, socket-type solvent welding fittings.
1. PVC solvent cement shall have a VOC content of 510 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  2. Adhesive primer shall have a VOC content of 550 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

- A. Install piping at a uniform slope downward in the direction of flow.
- B. Install adequate pipe hangers and support to prevent sagging.
- C. Make reductions in pipe sizes using eccentric reducer fitting installed with level side up.

**END OF SECTION 23 21 13**