

**THE SCHOOL DISTRICT OF PHILADLPHIA
SCHOOL REFORM COMMISSION
Office of Capital Programs
440 North Broad Street, 3rd Floor – Suite 371
Philadelphia, PA 19130**

TELEPHONE: (215) 400-4730

Addendum No. 1

**Subject: Avery Harrington Elementary School
Roof Replacement
SDP Contract No. B-064C of 2016/17**

**Location: Avery Harrington Elementary School
5300 Baltimore Avenue
Philadelphia, Pennsylvania 19143**

This Addendum, dated November 08, 2017 shall modify and become part of the Contract Documents for the work of this project. Any items not mentioned herein, or affected by, shall be performed strictly in accordance with the original documents.

1. Bids

- A. Bids are due by 2:00 p.m., Tuesday, November 14, 2017.
- B. All bidder questions concerning the bid documents shall be directed to Scott Dolan (WJE) via email at sdolan@wje.com or fax (609-799-7088) by 2 p.m., Tuesday, November 7, 2017. Copy Anthony Bier (SDP) at abier@philasd.org.
- C. Any final addenda will be issued to bidders by 2 p.m., Thursday, November 9, 2017.
- D. Copy of pre-bid meeting attendee sign-in sheet attached.

2. Post-Bid De-Scope Conference

- A. A Post-Bid, De-Scope meeting is scheduled for the following day, Wednesday, November 15, 2017 at 9:00 a.m. at the Office of Capital Programs, conference room 3126, 3rd floor, 440 North Broad Street. The apparent Low-Bidder is required to attend, a principal of the bidder or representative authorized to make binding commitments must attend the meeting.

The following items, including drawings, sketches, specifications and/or revisions are to be included in the contract:

3. Construction Completion

- A. All work of the contract shall be 100% completed by October 31, 2018.

4. Drawings

- A. Sheet R-1, key note 7: this note only applies to the two windowsills closest to both Roof Areas H and J, and not the windowsills on the upper floors above.
- B. Sheet R-2, revise noted scale for 1, 2, 3, and 4 R-2 from the noted 3/32" = 1'-0" to 3/8" = 1'-0".

Addendum No. 1 (cont'd)

- C. Sheet R-4, Detail 5/R-4: typical crack repair. This detail for use at any cracks in the masonry wall areas to be repointed where shown on elevations 1, 2, 3, and 4/R-2.
- D. Sheet R-4, Detail 8/R-4: new sheet metal flashing shall be 24 gauge stainless steel.

5. Specifications

- A. Add attached Specification 07 22 00 - Roof Insulation to the specifications.
- B. Specification Section 07 24 00 - Modified Bituminous Membrane Waterproofing Vapor Barrier: omit Section 2.2.B.
- C. Specification Section 07 53 10 - Modified Bitumen Membrane: Section 2.2.A.3. Flashing (2-ply) shall be revised to Parafor 30TG over Paradiene 20TG.
- D. Specification Section 07 24 00 - Modified Bituminous Membrane Waterproofing Vapor Barrier: add the following:
 - 2.2A.4 Soprema: Sopralene Flam 180
 - 2.5A.4 Soprema: Sopralene Flam Stick
- E. Specification Section 07 53 10 - Modified Bituminous Membrane: add the following:
 - 2.2.A.4 Manufacturer: Soprema
 - Bottom Plies (2): Sopralene Flam 180
 - Top Ply: Sopralene Flam 180 FR GR
 - Flashing (2-ply): Sopralene Flam 180 GR over Sopralene Flam 180 and Alsan Liquid Flashing over Sopralene Flam 180
 - 2.4A.4 Soprema: Alsan RS
 - 2.5A.4 Soprema: Flam Stick
 - 2.11A.4 Soprema: Soprawalk
- F. Specification Section 07 62 50 - Flashing and Sheet Metal - Masonry: replace existing Section 2.1A with the following:
 - A. Sheet Metal Flashing:
 - 1. 24 Gauge Stainless Steel, Type 302/304:
 - a. Custom fabricated through-wall flashing and counter flashing as indicated - overlap joints 4 in. min, solder all joints at interior and exterior corners and splice adjacent sections of through wall flashing with flexible wall flashing membrane and sealant per detail drawings.
 - b. Custom fabricated flashing pan at window heads - solder all end dams watertight.
 - c. Formed hemmed edges along all exposed flashings.

6. Other

- A. The attic area(s) that may currently contain asbestos containing materials, will be abated and asbestos free prior to start of roof replacement work. These spaces are currently not accessible.

-END OF ADDENDUM NO. 1-

SECTION 07 22 00 - ROOF INSULATION

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

- A. Installation of roof insulation and cover board over prepared substrates where noted on drawings.

1.2 REFERENCES

- A. American Society for Testing and Materials
 - 1. C1289 Type II, Class 1 or 2, Grade 2 (20 psi minimum compressive strength) Standard Specification for Faced Rigid Cellular Polystyrene Thermal Insulation Board.

1.3 SUBMITTALS

- A. Product Data: Submit the following most recent information for all Products specified:
 - 1. Manufacturer's product data and material specifications.
 - 2. Manufacturer's installation instructions.
 - 3. Material Safety Data Sheet (MSDS).
- B. Shop Drawings: Submit drawings of the following:
 - 1. Insulation Manufacturer's layout plans for all of the following specified in the contract documents (where tapered insulation included in the design):
 - a. Tapered insulation systems
 - b. Tapered saddles
 - c. Tapered crickets
 - 2. Insulation attachment recommended by FM Global (FM) to meet the Regulatory Requirements of the contract. Provide detailed drawings shown dimensioned adhesive patterns for submitted insulation board(s) at roof corner, roof edges, and the field of the roof (unless already shown on project drawings).
 - a. Include a roof plan showing all roof areas with dimensioned locations of each corner, edge, and field adhesive pattern.
- C. Samples: Submit product samples as follows:
 - 1. 8 x 8 inch piece of insulation specified.
- D. Fastener pull-out tests:
 - 1. When requested by Architect/Engineer, Contractor shall arrange for fastener pull-out tests into each type of roof deck substrate and provide test results of various fasteners tested to Architect for review at no cost to Owner or Architect/Engineer.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: Insulation attachment to meet the wind uplift requirements of FM Global (FM) Class 1-90 for the field of the roof, unless more stringent requirements are noted on the drawings. Minimum perimeter zone requirement of FM Class 1-120 and 1-150 for corner zones.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store materials under provisions of manufacturer.
- B. Label on insulation packages shall include material name, thermal conductance, production date and/or product code.
- C. When stored outdoors, store insulation on pallets at least 4 inches above ground or roof level and cover with tarpaulins or other suitable covering. Factory installed wrap shall not be acceptable.
- D. Roof insulation that has been wet prior to or during installation, shall not be used in new roof system and shall be removed from the site.
- E. Asbestos Free Products: Only materials certified to be 100% asbestos-free shall be delivered to site and installed on this project, including temporary cut-offs and tie-ins.
- F. Insulation adhesive shall only be applied when ambient temperatures a minimum of 40°F and rising.

PART 2 - PRODUCTS

2.1 INSULATIONS AND COVER BOARDS

- A. Roof insulation (refer to Roof Assembly Details)
 - 1. Polyisocyanurate board roof insulation; 4 by 4 foot board size for all installations requiring attachment into adhesive; thicknesses as noted on the drawings. 4 by 4 foot boards shall be factory cut to size. Do not field cut 4 by 8 foot boards to comply with size requirements. For installations requiring mechanical attachment, 4x8 foot boards may be used. Refer to drawings for required thickness.
 - 2. Tapered insulation: isocyanurate for new saddles and crickets, or sumps tapered as shown on drawings.
 - 3. Insulation and cover boards shall be approved for use by roof membrane manufacturer and shall be included in roof system warranty.
- B. Approved roof insulation board manufacturers and products:
 - 1. Johns Manville: Enrgy 3 CGF, Grade 2
 - 2. Siplast: Paratherm CG, Grade 2
 - 3. Firestone: ISO 95+ GL Insulation
 - 4. Soprema: Sopra-ISO+
- C. Roof Cover Board
 - 1. G-P Gypsum, Dens Deck Prime Roof Board (factory primed surface) 1/2 inch thick.
 - 2. USG Securock, 1/2 inch thick
- D. Cant and Tapered Strips
 - 1. Perlite for use at the base of walls and curbs and where required to provide flush transitions and as noted on drawings

2.2 ADHESIVES FOR ROOF INSULATION AND COVER BOARD (Except where mechanical attachment may be noted)

- A. Adhesive as recommended by insulation and cover board manufacturer and in compliance with VOC Limitations established by the Pennsylvania Department of Environmental Protection.

PART 3 - EXECUTION

3.1 GENERAL

- A. Neatly cut insulation boards to fit around all penetrations through the roof deck and to fit neatly around and over wood blocking, cant and any existing conduit routed over the top of the roof deck. At locations where less than a full-sized sheet of insulation is required, use the largest size practical to fill in the area. Contractor shall not install numerous small sections of the insulation at these locations.
- B. All gaps between insulation boards and between insulation boards and walls, curbs, blocking and equipment 1/4 inch wide or greater shall be filled in with additional insulation material.
- C. At elevation changes between top of adjacent insulation boards and between top of insulation boards and top of wood blocking 1/4 inch or greater, install tapered edge strip to provide flush transition. Trim tapered edge strip as necessary to provide flush transition.
- D. Protect all insulation from weather (moisture) and standing water at all times. Install no more insulation than can be completely covered with the roofing membrane on the same day or prior to the arrival of inclement weather.
- E. Install temporary water cut-offs at the edges of insulation at the end of each work day.

3.2 INSULATION – ADHESIVE ATTACHMENT

- A. Install two layers of isocyanurate insulation over the vapor barrier on concrete roof deck areas as shown on the drawings. Install insulation boards in adhesive per drawings. Closely butt insulation boards. Fill in all gaps between insulation boards, 1/4 inch or wider, with additional insulation. At elevation changes between top of adjacent insulation boards and between top of insulation boards and top of wood blocking 1/4 inch or greater, install tapered edge strip to provide flush transition. Trim tapered edge strip as necessary to provide flush transition. Stagger the board joints within and between the layers by the maximum dimensions possible.
- B. Install cover board over the insulation board in cold adhesive per the drawings and the manufacturer's recommendations. Stagger board joints within and between layers by maximum dimensions possible.

3.3 TAPERED EDGE STRIP

- A. Install tapered edge strips below the cover board at vertical walls, curbs and perimeter edges as may be necessary and as shown on the project details. In addition, at elevation changes between top of adjacent insulation boards and between top of insulation boards and top of wood blocking 1/4 inch or greater, install tapered edge strip to provide flush transition. Trim tapered edge strip as necessary to provide flush transition. Install tapered edge strips into place over the top layer of insulation (below cover board) using cold adhesive.

END OF SECTION 07 22 00

SIGN-IN SHEET

- School Name: HARRINGTON
- Scope of Work: ROOF REPL. T.
- Conference Date: NOV. 1, 2017 @ 10:00 AM

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