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Addendum # 1

File # 20-99433

Project: #1875 – Public Works & Utilities Building Roof Replacement

This addendum serves to notify all bidders of the following changes to the solicitation documents:

- 1) Specification Section 075323 “Ethylene Propylene Diene Monomer (EPDM) Roofing,” has been revised. The previous version is replaced with the attached section dated June 18th, 2020. Revision includes additions to the list of approved manufacturers.

Please acknowledge receipt of this Addendum by initialing and dating Addendum #1 below the bid form on the invitation for bids.

Posted 6/22/20.

DOCUMENT 00 91 13

ADDENDUM No. 1

1.01 PROJECT INFORMATION

- A. Project Name: Public Works & Utilities Building Roof Replacement.
- B. Owner: City of Duluth, Minnesota.
- C. Architect: Benjamin Olson, AIA.
- D. Architect Project Number: 17790.000.
- E. Date of Addendum: June 18, 2020.

1.02 NOTICE TO BIDDERS

- A. This Addendum is issued to all plan holders pursuant to the Instructions to Bidders. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.
- C. The date for receipt of bids has not changed.

1.03 ATTACHMENTS

- A. This Addendum includes the following attachments:
 - 1. Specification Section 075323 "Ethylene Propylene Diene Monomer (EPDM) Roofing," Revised.

1.04 REVISIONS TO DIVISIONS 02 - 49 SPECIFICATION SECTIONS

- A. Section 075323 "Ethylene Propylene Diene Monomer (EPDM) Roofing," Revised.
 - 1. Replace previously issued section with revised section dated June 18, 2020.

1.05 CLARIFICATIONS

- A. All Bidders questions shall be directed to the Architect's Project Manager:
 - 1. Joshua Elder.
(218) 491-7396.
joshua.elder@tkda.com.

END OF SECTION

SECTION 07 53 23

ETHYLENE PROPYLENE DIENE MONOMER (EPDM) ROOFING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Loosely laid ethylene propylene diene monomer (EPDM) roofing system.
2. Ballast.
3. Light weight roof pavers.

B. Related Requirements:

1. Section 072713 "Modified Bituminous Sheet Air Barriers."

1.03 INSTALLATION MEETINGS

- A. Preliminary Conference: Conduct conference at Project site at least one week before roofing installation begins.

1. Coordinate conference with requirements in Section 072713 "Modified Bituminous Sheet Air Barriers."

1.04 ACTION SUBMITTALS

- A. Product Data: For each type of product.

- B. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:

1. Base flashings and membrane terminations.
2. Flashing details at penetrations.

- C. Samples: For the following products:

1. Roof membrane and flashings of color required.
2. Roof paver in each color and texture required.

1.05 INFORMATIONAL SUBMITTALS

- A. Manufacturer Certificates:

1. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.

- B. Product Test Reports: For components of roof membrane, for tests performed by a qualified testing agency, indicating compliance with specified requirements.

- C. Research reports.
- D. Field quality control reports.
- E. Sample warranties.

1.06 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

1.08 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 30 years from Date of Substantial Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested according to ASTM G 152, ASTM G 154, or ASTM G 155.
- B. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D 3746, ASTM D 4272, or the Resistance to Foot Traffic Test in FM Approvals 4470.
- C. Exterior Fire Test Exposure: ASTM E 108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

2.02 MANUFACTURERS

- A. Basis of Design Product: Where Specifications name a product, or refer to a product indicated on Drawings, and include a list of manufacturers, provide the specified or indicated product or a comparable product by one of the other named manufacturers.
- B. Limited List of Manufacturers:
 1. Carlisle SynTec Systems, (800) 479-6832, www.carlislestentec.com.
 2. Firestone Building Products, (855) 479-5589, www.firestonebpco.com.
 3. Mule-Hide Products, (800) 786-1492, www.mulehide.com.
 4. Versico Roofing Systems, (800) 992-7663, www.versico.com.

2.03 ETHYLENE PROPYLENE DIENE MONOMER (EPDM) ROOFING

- A. EPDM Sheet: ASTM D 4637, Type I, non-reinforced, EPDM sheet with factory applied seam tape.

1. Product: Subject to compliance with requirements, provide the following:
 - a. Sure-Seal EPDM by Carlisle SynTec.
2. Thickness: 90 mil thick, nominal.
3. Exposed Face Color: Black.

2.04 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
 1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: 90 mil thick EPDM, partially cured or cured, according to application.
- C. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- D. Bonding Adhesive: Manufacturer's standard, water based.
- E. Seaming Material: Factory applied seam tape, width as recommended by manufacturer.
- F. Lap Sealant: Manufacturer's standard, single component sealant, colored to match membrane roofing.
- G. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.
- H. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- I. Fasteners: Factory coated steel fasteners and metal or plastic plates complying with corrosion resistance provisions in FM Approvals 4470, designed for fastening components to substrate, and acceptable to roofing system manufacturer.
- J. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, molded pipe boot flashings, preformed inside and outside corner sheet flashings, reinforced EPDM securement strips, T joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.

2.05 BALLAST

- A. Aggregate Ballast: Smooth, washed, riverbed gravel or other acceptable smooth faced stone that withstands weather exposure without significant deterioration and does not contribute to membrane degradation, of the following size:
 1. Size: ASTM D 448, Size 4, ranging in size from 3/4 to 1-1/2 inches.
- B. Lightweight Roof Pavers: Interlocking, lightweight concrete units; grooved back, with four way drainage capability; beveled, doweled, or otherwise profiled; and as follows:
 1. Size: 24 by 24 inches.
 2. Weight: 10 lb/sq. ft., minimum
 3. Compressive Strength: 2500 psi, minimum.
 4. Colors and Textures: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
 - 1. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer when tested according to ASTM F 2170.
 - a. Test Frequency: One test probe per each 1000 sq. ft., or portion thereof, of roof deck, with not less than three test probes.
 - b. Submit test reports within 24 hours of performing tests.
 - 2. Verify that joints in precast concrete roof decks have been grouted flush with top of concrete.

3.02 ROOFING INSTALLATION, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.03 LOOSELY LAID AND BALLASTED MEMBRANE ROOFING INSTALLATION

- A. Loosely lay roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.
- B. Unroll roof membrane and allow to relax before installing.
- C. Comply with requirements in SPRI RP-4 for System 3.
- D. Start installation of roofing in presence of roofing system manufacturer's technical personnel.
- E. Accurately align roof membrane, without stretching, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- F. Mechanically fasten roof membrane at corners, perimeters, and transitions according to requirements in SPRI RP-4.
- G. Apply roof membrane with side laps shingled with slope of deck where possible.
- H. Factory Applied Seam Tape Installation: Clean and prime surface to receive tape.
 - 1. Firmly roll side and end laps of overlapping roof membrane to ensure a watertight seam installation.
 - 2. Apply lap sealant and seal exposed edges of roofing terminations.
- I. Leave seams uncovered until inspected by roofing system manufacturer.
- J. Spread sealant or mastic bed over deck drain flange at roof drains, and securely seal roof membrane in place with clamping ring.
- K. Aggregate Ballast: Apply uniformly over roof membrane at the rate required by roofing system manufacturer, but not less than the following, spreading with care to minimize possibility of damage to roofing system. Lay ballast as roof membrane is installed, leaving roof membrane

ballasted at end of workday.

1. Ballast Weight: Size 4 aggregate, 10 lb/sq. ft.

3.04 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.05 ROOF PAVER INSTALLATION

- A. Light Weight Roof Pavers: Install roof pavers according to manufacturer's written instructions.
 1. Install roof pavers at the following locations:
 - a. As indicated on Drawings.
 2. Provide 3 inches of space between adjacent roof pavers.

3.06 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing system, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

END OF SECTION