

February 9, 2016

ADDENDUM NO. 9
to the
Iowa Department of Transportation
For: Proposal 15702
For: Ames DOT Warehouse Dock Expansion
Letting Date: February 17, 2016

Notice To Bidders:

This Addendum is issued to incorporate the following additions, deletions, corrections, and/or clarifications to the terms or specifications and shall hereby be considered a part of the final contract documents. This Addendum shall supersede, modify and/or change all statements to the contrary in the bid proposal and shall take precedence over previous terms or specifications.

CHANGES: The following changes have been made to these specifications.

Section 03 4100, Paragraph 2.16.C: Replace the paragraph with the following:

Exterior surface of new precast insulated wall panels shall be medium sand blast finish.

Section 04 2000: Replace Section 04 2000 with Revised Section 04 2000 (Revised 2-08-2016).

Fire rating of hollow core concrete block used for infill of existing windows to meet 3 hour fire rating requirements

Section 07 5300: Replace Section 07 5300 with Revised Section 07 5300 (Revised 2-08-2016).

Change from fully adhered membrane roof system to mechanically fastened roof system. Roof insulation to be installed at R-38 average value.

Section 29 9000: Delete Section 09 9000.

On site painting will not be required for this project.

The following changes have been made to the following plans

Sheet A-3: Replace sheet A-3 with Sheet A-3R dated 02 FEB 2016.

The new precast concrete wall finish has been changed to a medium sand blast finish in lieu of the ribbed finish.

All Bidders must sign and return this Addendum for the bid opportunity referenced above. Failure to do so may subject the Bidder to disqualification. If a bid response has already been submitted, this Addendum shall be signed and emailed or faxed to the Purchasing Section prior to the scheduled Letting Date.

Company Name (*please print*)

Date

Signature

Sincerely,

Jody McNaughton, Purchasing Agent III
Phone No. 515-239-1298 Fax No. 515-239-1538
Jody.McNaughton@dot.iowa.gov

SECTION 04 2000
UNIT MASONRY (REVISED 2-8-2016)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete Block.
- B. Mortar.
- C. Accessories.

1.02 REFERENCE STANDARDS

- A. ACI 530/530.1/ERTA - Building Code Requirements and Specification for Masonry Structures and Related Commentaries; American Concrete Institute International; 2011.
- B. ASTM C91/C91M - Standard Specification for Masonry Cement; 2012.
- C. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2011.
- D. ASTM C387/C387M - Standard Specification for Packaged, Dry, Combined Materials for Concrete and High Strength Mortar; 2011b.
- E. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for masonry units and mortar.

1.04 QUALITY ASSURANCE

- A. Comply with provisions of ACI 530/530.1/ERTA, except where exceeded by requirements of the contract documents.
- B. Fire Rated Assemblies: Conform to applicable code for 3 hour fire rating requirements for fire rated masonry construction.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 x 8 inches and nominal depth of 12 inches.
 - 2. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block.

2.02 MORTAR MATERIALS

- A. Masonry Cement: ASTM C91/C91M, Type N.
- B. Water: Clean and potable.
- C. Packaged Dry Material for Mortar for Unit Masonry: Premixed masonry cement and mason's sand; complying with ASTM C387/C387M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.
 - 1. Type: Type N.
 - 2. Color: Standard gray.
 - 3. Products:
 - a. Amerimix, an Oldcastle brand; AMX 500: www.amerimix.com.
 - b. The QUIKRETE Companies; QUIKRETE® Mason Mix: www.quikrete.com.
 - c. Substitutions: See Section 01 6000 - Product Requirements.

2.03 ACCESSORIES

- A. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.

3.02 PREPARATION

3.03 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
 - 1. Bond: Running.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.

3.04 PLACING AND BONDING

- A. Lay hollow masonry units with face shell bedding on head and bed joints.
- B. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- C. Remove excess mortar and mortar smears as work progresses.
- D. Remove excess mortar with water repellent admixture promptly. Do not use acids, sandblasting or high pressure cleaning methods.
- E. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- F. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

3.05 CUTTING AND FITTING

- A. Cut and fit for existing window, door, and exhaust vent infill. Coordinate with other sections of work to provide correct size, shape, and location.

3.06 CLEANING

- A. Clean soiled surfaces with cleaning solution.

3.07 SCHEDULES

- A. Infill window openings and one 2'x2' vent opening of existing west brick-block wall with 12" thick, 3 hour rated, hollow core concrete block, Plain finish.

END OF SECTION

SECTION 07 5300
ELASTOMERIC MEMBRANE ROOFING (REVISED 2-8-2016)

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Elastomeric roofing membrane, mechanically fastened conventional application.
- B. Insulation, flat and tapered.
- C. Vapor retarder.
- D. Flashings.
- E. Roofing cant strips and stack boots.

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Wood nailers and curbs.
- B. Section 07 0150.19 - Preparation for Re-Roofing.
- C. Section 07 6200 - Sheet Metal Flashing and Trim: Counterflashings, reglets.

1.03 REFERENCE STANDARDS

- A. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2014.
- B. ASTM D4637/D4637M - Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane; 2013.
- C. ASTM E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces; 2011.
- D. FM DS 1-28 - Wind Design; Factory Mutual Research Corporation; 2007.
- E. NRCA ML104 - The NRCA Roofing and Waterproofing Manual; National Roofing Contractors Association; Fifth Edition, with interim updates.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with installation of associated counterflashings installed under other sections.
- B. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all affected installers; review preparation and installation procedures and coordination and scheduling necessary for related work.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, vapor retarder, surfacing, and fasteners.
- C. Shop Drawings: Indicate joint or termination detail conditions and conditions of interface with other materials.
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Manufacturer's Installation Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.
- F. Manufacturer's Field Reports: Indicate procedures followed, ambient temperatures, humidity, wind velocity during application, and supplementary instructions given.

1.06 QUALITY ASSURANCE

- A. Perform work in accordance with NRCA Roofing and Waterproofing Manual and manufacturer's instructions.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

- C. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience, and approved by manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products in manufacturer's original containers, dry, undamaged, with seals and labels intact.
- B. Store products in weather protected environment, clear of ground and moisture.
- C. Protect foam insulation from direct exposure to sunlight.

1.08 FIELD CONDITIONS

- A. Do not apply roofing membrane during unsuitable weather.
- B. Do not apply roofing membrane when ambient temperature is below 40 degrees F or above 100 degrees F.
- C. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

1.09 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a 5 year period after Date of Substantial Completion.
- C. Provide five year manufacturer's material and labor warranty to cover failure to prevent penetration of water.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. EPDM Membrane Materials:
 - 1. Carlisle Roofing Systems, Inc; Sure-White EPDM: www.carlisle-syntec.com.
 - 2. Firestone Building Products, LLC: RubberGard White EPDM: www.firestonebpc.com.
 - 3. GenFlex Roofing Systems, LLC: Flex White EPDM: www.genflex.com.
 - 4. Versico, a division of Carlisle Construction Materials Inc; VersiFleece EPDM: www.versico.com.
 - 5. Mule-Hide Products Co.; White on Black EPDM: www.mulehide.com.
 - 6. Substitutions: See Section 01 6000 - Product Requirements.
- B. Insulation:
 - 1. Blue Ridge Fiberboard: www.blueridgefiberboard.com.
 - 2. Dow Chemical Co: www.dow.com.
 - 3. GAF: www.gaf.com.
 - 4. Hunter Panels, LLC: www.hpanels.com.
 - 5. Owens Corning Corp: www.owenscorning.com.
 - 6. ROXUL, Inc: www.roxul.com.
 - 7. Versico, a division of Carlisle Construction Materials Inc; SecurShield Insulation: www.versico.com.
 - 8. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ROOFING

- A. Elastomeric Membrane Roofing: One ply membrane, mechanically fastened, over insulation.
- B. Roofing Assembly Requirements:
 - 1. Solar Reflectance Index (SRI): Minimum of 64 based on three-year aged value; if three-year aged data is not available, minimum of 82 initial value.
 - a. Calculate SRI in accordance with ASTM E1980.
 - b. Field applied coating may not be used to achieve specified SRI.
 - 2. Insulation Thermal Value (R), minimum: R 38.

- C. Acceptable Insulation Types - Constant Thickness Application: Any of the types specified.
- D. Acceptable Insulation Types - Tapered Application: Any of the types specified.
 - 1. Tapered polyisocyanurate board.

2.03 ROOFING MEMBRANE AND ASSOCIATED MATERIALS

- A. Membrane: Ethylene-propylene-diene-terpolymer (EPDM); non-reinforced; complying with minimum properties of ASTM D4637.
 - 1. Thickness: 0.060 inch.
 - 2. Sheet Width: 76 inch, minimum; factory-fabricate into largest sheets possible.
 - 3. Color: White.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Membrane Fasteners: As recommended by and approved by membrane manufacturer.
- D. Flexible Flashing Material: Same material as membrane; conforming to the following:
 - 1. Tensile Strength: 1,200 psi.
 - 2. Elasticity: 50 percent with full recovery without set.
 - 3. Color: White.

2.04 INSULATION

- A. Polyisocyanurate Board Insulation: Rigid cellular foam, complying with ASTM C1289, Type I, aluminum foil both faces; Class 1, non-reinforced foam core and with the following characteristics:
 - 1. Compressive Strength: 16 psi
 - 2. Board Size: 48 by 96 inch.
 - 3. Board Thickness: 1.5 to 2.5 inch is acceptable.
 - 4. Thermal Resistance: R-value of 38 average insulation.
 - 5. Board Edges: Square.
 - 6. Manufacturers:
 - a. Dow Chemical Co: www.dow.com.
 - b. GAF; EnergyGuard PolyIso Insulation: www.gaf.com.
 - c. Hunter Panels, LLC; H-Shield: www.hpanels.com.
 - d. Versico, a division of Carlisle Construction Materials Inc; SecurShield Insulation: www.versico.com.
 - 7. Substitutions: See Section 01 6000 - Product Requirements.

2.05 ACCESSORIES

- A. Roofing Expansion Joint Flashing: Sheet butyl.
- B. Stack Boots: Prefabricated flexible boot and collar for pipe stacks through membrane; same material as membrane.
- C. Cant Strips: Wood; pressure preservative treated.
- D. Insulation Joint Tape: Glass fiber reinforced type as recommended by insulation manufacturer, compatible with roofing materials; 6 inches wide; self adhering.
- E. Insulation Fasteners: Appropriate for purpose intended.
 - 1. Length as required for thickness of insulation material and penetration of deck substrate, with metal washers.
- F. Membrane Adhesive: As recommended by membrane manufacturer.
- G. Surface Conditioner for Adhesives: Compatible with membrane and adhesives.
- H. Thinners and Cleaners: As recommended by adhesive manufacturer, compatible with membrane.
- I. Insulation Adhesive: As recommended by insulation manufacturer.
- J. Strip Reglet Devices: Galvanized steel, maximum possible lengths per location, with attachment flanges.

- K. Sealants: As recommended by membrane manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.
- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

3.02 CONCRETE DECK PREPARATION

- A. Verify adjacent precast concrete roof members do not vary more than 1/4 inch in height. Verify grout keys are filled flush.
- B. Fill surface honeycomb and variations with latex filler.
- C. Confirm dry deck by moisture meter with 12 percent moisture maximum.

3.03 INSULATION - UNDER MEMBRANE

- A. Attachment of Insulation:
 - 1. Mechanically fasten first layer of insulation to deck in accordance with roofing manufacturer's instructions and Factory Mutual requirements.
 - 2. Embed second layer of insulation into full bed of adhesive in accordance with roofing and insulation manufacturers' instructions.
- B. Attachment of Insulation:
 - 1. Fully adhere each subsequent layer of insulation to deck in accordance with roofing manufacturer's instructions and Factory Mutual requirements.
- C. Lay subsequent layers of insulation with joints staggered minimum 6 inch from joints of preceding layer.
- D. Place tapered insulation to the required slope pattern in accordance with manufacturer's instructions.
- E. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- F. Tape joints of insulation in accordance with roofing and insulation manufacturers' instructions.
- G. Do not apply more insulation than can be covered with membrane in same day.

3.04 MEMBRANE APPLICATION

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Overlap edges and ends and seal seams by contact adhesive, minimum 3 inches. Seal permanently waterproof. Apply uniform bead of sealant to joint edge.
- D. Mechanical Attachment: Apply membrane and mechanical attachment devices in accordance with manufacturer's instructions.
- E. At intersections with vertical surfaces:
 - 1. Extend membrane over cant strips and up a minimum of 4 inches onto vertical surfaces.
 - 2. Fully adhere flexible flashing over membrane and up to nailing strips.
- F. Around roof penetrations, seal flanges and flashings with flexible flashing.
- G. Install roofing expansion joints where indicated. Make joints watertight.
- H. Coordinate installation of roof drains and scuttles and related flashings.

3.05 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for general requirements for field quality control and inspection.
- B. Require site attendance of roofing and insulation material manufacturers daily during installation of the Work.

3.06 CLEANING

- A. Remove bituminous markings from finished surfaces.
- B. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions.
- C. Repair or replace defaced or damaged finishes caused by work of this section.

3.07 PROTECTION

- A. Protect installed roofing and flashings from construction operations.
- B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

END OF SECTION