

**ADDENDUM NO. 4**

**TO: PLANS AND SPECIFICATIONS FOR**

**Replace Roofs & Fascia  
Albany Regional Office, Main Building, Gentry County, MO  
M1806-01**

**BID DATE CHANGED TO: 1:30 P.M. (CST), Thursday, April 18, 2019**

**NOTE: MissouriBUYS ELECTRONIC BIDDING IS REQUIRED ON THIS PROJECT!**

Bidders are hereby informed that the construction plans and specifications are modified as follows:

**1. SPECIFICATIONS:**

- a. SECTION 074120 – FLAT, STRUCTURAL, STANDING-SEAM METAL ROOF PANELS  
Replace existing 4 page Section 074120 in its entirety and use the attached revised 8 page Section 074120 – Flat, Structural, Standing-Seam Metal Roof Panels.
- b. SECTION 075400 – THERMOPLASTIC MEMBRANE ROOFING
  - 1) Delete Paragraph 2.2-B in its entirety and replace with the following:

2.2-B Membrane Color: As selected by Architect top surface with SRI (solar reflectance index) not less than 86, tested in accordance with ASTM E 1980.
  - 2) Delete Paragraph 2.3-A.1 B in its entirety and replace with the following:

2.3-A.1 Adhesive: A two-component insulating urethane adhesive used to attach insulation and fleeceback membrane, per manufacturer’s recommendations.
- c. SECTION 076200 – SHEET METAL FLASHING AND TRIM
  - 1) Revise the third sentence in Paragraph 2.4-A as follows:

2.4-A: Delete “within 30 years” and replace with “within 20 years”.
  - 2) Delete Paragraph 3.1-B in its entirety and replace with the following:

3.1-B 24-Gauge Metallic-Coated Steel Sheet: Restricted flatness steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
  - 3) Add new Paragraphs 3.1-C and 3.1-D as follows:

3.1-C Coping: All metal edging shall be tested and meet ANSI/SPRI ES-1 standards and comply with the International Building Code.

3.1-D Coping: A snap-on coping edge system consisting of a 24 gauge retainer bar (face side only), corrosion resistant fasteners and a 24 gauge or 0.040 aluminum Kynar finished coping cover. The coping cover is secured by clipping on the retainer bar and fastened on the backside with corrosion resistant fasteners (with rubber washer). Available for wall thicknesses up to 30”. Metal coping cap color shall be as designated by the Owner’s Representative.

## 2. PLANS:

### a. DRAWING G-002 CLARIFICATION:

In bottom box titled "DESCRIPTION OF EXISTING ROOF CONDITIONS"; revise 2<sup>ND</sup> note to read:

MAIN BUILDING FLAT ROOFS: 60 MIL EPDM MEMBRANE, OVER 1/2" FIBERBOARD, OVER TAPERED EPS INSULATION, OVER SLOPING CONCRETE DECK.

### b. DRAWING A-102 CLARIFICATIONS:

- 1) In the "ROOF PLAN KEYED NOTES", delete Note 5 in its entirety and replace with the following:

(N) PRE-FINISHED 24 GA. METAL GUTTER AND 26 GA. PRE-FINISHED DOWNSPOUTS PER SPEC SECTION 074120, 2.5-B.

- 2) In the upper-right Downspout Detail #2, delete the top leader note in its entirety and replace with the following:

(N) 4"X4" 26 GA. PRE-FIN. MTL. DOWNSPOUTS @ NEW GUTTERS.

- 3) Clarification of two Roof Plan "VERIFY" leader note callouts referencing the building's existing (E) perimeter underground (U.G.) concrete pipe (C.P.) storm drainage system:

CONTRACTOR SHALL VERIFY LOCATION, DEPTH, DIAMETER, AND FLOW CAPACITY OF EXISTING DRAINAGE C.P. (TYP) U.G. LINES IN LOCATIONS WHERE NEW (N) STORM DRAINAGE LINES ARE TO CONNECT WITH EXISTING (Also refer to PLAN NOTE 5 and ROOF PLAN's U.G. drainage callout notes).

### c. DRAWINGS A-103 & A-104 CLARIFICATION:

Remove "PHOTO KEYED NOTE 13" in its entirety and replace with the following:

(E) DOWNSPOUTS TO BE REMOVED AND REPLACED WITH (N) 26 GA. PRE-FIN. MTL. DOWNSPOUTS.

### d. DRAWING A-201 CLARIFICATION:

Remove "ELEVATION KEYED NOTE 8" in its entirety and replace with the following:

(N) PRE-FINISHED 6" 24 GA. MTL. BOX GUTTER AND 4"X4" 26 GA. PRE-FIN. DOWNSPOUT PER SPECIFICATION SECTION 074120, 2.5-B.

### e. DRAWING A-501 CLARIFICATIONS:

- 1) Add NOTE 9 to the "DETAIL NOTES" box, as follows:

9. ANCHOR NEW ZEE-PURLINS THRU CONCRETE/METAL ROOF DECK AND TO BAR JOISTS USING SELF DRILLING SCREWS PER MANUFACTURER'S RECOMMENDATIONS.

Per 1966 Construction Dwgs Sht #S1 & Sht #S2/Detail B + Bar Joint Web Ref Info:

- West/Entry 16'-2" W Roof Bar Joists 12H5's 5X top chord: 't' = 0.188" & 'W' = 4".
- Central 62'-10" W Roof Bar Joists 18H8's 8T top chord: 't' = 0.250" & 'W' = 4 7/8".
- East 20'-3" W Roof Bar Joists 16H4's 4T top chord: 't' = 0.156" & 'W' = 3 1/2".
- East 68'-4" W Roof Bar Joists 12H3's 3T top chord: 't' = 0.125" & 'W' = 3 7/16".
- Existing sloped roof metal deck measured 0.051" & 0.054" thick (17 - 18 gauge steel).

- 2) In DETAIL 3, remove the “(N) 4” POLYISO INSUL...” leader note in its entirety and replace with the following:

(N) 4” POLYISO INSULATION OVER HEATED SPACE.

- 3) In DETAIL 5, remove the “(N) PRE-FIN. ALUM. GUTTER” leader note in its entirety and replace with the following:

(N) 6” 24 GA. PRE-FIN. MTL. BOX GUTTER W/ANCHOR STRAPS @ 4’-0” O.C.

- 4) In DETAIL 5, DELETE the leader note “(N) ZEE PURLINS @ 48” O.C.” in its entirety.

- 5) In DETAIL 6, remove the “(N) PRE-FIN. ALUM. GUTTER” leader note in its entirety and replace with the following:

(N) 6” 24 GA. PRE-FIN. MTL. BOX GUTTER W/ANCHOR STRAPS @ 4’-0” O.C.

- 6) In DETAIL 6, remove the “(N) 4” POLYISO INSUL...” leader note in its entirety and replace with the following:

(N) 4” POLYISO INSULATION OVER HEATED SPACE.

- 7) In DETAIL 7, remove the “(N) 4” POLYISO INSUL...” leader note in its entirety and replace with the following:

(N) 4” POLYISO INSULATION

### **3. GENERAL NOTES:**

- a. AVAILABILITY OF EXISTING “AS-BUILT” BUILDING DRAWING FILES:

- 1) Copies of the Albany Regional Clinic’s AE-PE Stamped 1966 Original 26-Sheet Construction Plans have been copied and posted to American Document Solutions’ website at <http://planroom.adsmo.net> . Contractors wishing to download the 62.96MB pdf file should contact ADS Columbia, MO, phone: 573-446-7768 or email: [orders@adsmo.net](mailto:orders@adsmo.net) and ask for instructions/assistance. Please limit requests to one person per Contractor.
- 2) Disclaimer: reference building drawings are being provided for informational use only. Contractors are responsible for attending the pre-bid meeting and performing their own site and/or building investigations to inform themselves of current conditions and scope-of-work involved with this project, and should not solely rely on provided reference drawing files when bidding, planning, or performing work on this project.

- b. When the bidder has completed the upload of the bid in MissouriBUYS, be sure to go to “Bid Response” on the blue bar and select the orange “Submit” button just below the blue bar to the right. This is necessary in order to complete the bid submission.

### **4. ATTACHMENTS:**

- 1) SECTION 074120 – Flat, Structural, Standing-Seam Metal Roof Panels.

**End of Addendum No. 4  
April 5, 2019**

**Replace Roofs & Fascia – Albany Regional Office - Main Building**

SECTION 074120 - FLAT, STRUCTURAL, STANDING-SEAM METAL ROOF PANELS

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Flat, Standing-seam roof panels.

**1.3 DEFINITIONS**

- A. Roofing Terminology: Refer to ASTM D 1079 for definitions of terms related to roofing work not otherwise defined in this Section.

**1.4 PERFORMANCE REQUIREMENTS**

- A. General: Provide manufactured roof panel assemblies complying with performance requirements indicated and capable of withstanding structural movement, thermally induced movement, and exposure to weather without failure or infiltration of water into the building interior.
- B. Water Penetration: Provide manufactured roof panel assemblies with no water penetration as defined in the test method when tested according to ASTM E 1646 at a minimum differential pressure of 20 percent of inward acting, wind-load design pressure of not less than 6.24 lb/sq. ft. (300 Pa) and not more than 12.0 lb/sq. ft. (575 Pa).
- C. Wind-Uplift Resistance: Provide roof panel assemblies that meet requirements of UL 580 for Class 90 wind-uplift resistance.
- D. Structural Performance: Provide manufactured roof panel assemblies capable of safely supporting design loads indicated under in-service conditions with vertical deflection no greater than the following, based on testing manufacturer's standard units according to ASTM E 1592 by a qualified independent testing and inspecting agency.
  - 1. Maximum Deflection: 1/180 of the span.
- E. Loading Requirements: Provide all panels, supports, trims, and accessories to meet the following: 2018 International Building Code

**1.5 SUBMITTALS**

- A. Product Data: Include manufacturer's product specifications, standard details, certified product test results, and general recommendations, as applicable to materials and finishes for each component and for total panel assemblies.

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- B. Shop Drawings: Show layouts of panels on roof, details of edge conditions, joints, panel profiles, supports, anchorages, trim, flashings, underlayment, closures, snow guards, and special details. Distinguish between factory- and field-assembled work.
- C. For installed products indicated to comply with certain design loadings, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- D. Samples for Initial Selection: Manufacturer's color charts or chips showing the full range of colors, textures, and patterns available for roof panels with factory-applied finishes.
- E. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- F. Product Test Reports: Indicate compliance of manufactured roof panel assemblies and materials with performance and other requirements based on comprehensive testing of current products.

**1.6 QUALITY ASSURANCE**

- A. Installer Qualifications: Engage an experienced installer who has completed metal roof panel projects similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in the State of Missouri and who is experienced in providing engineering services of the kind indicated.
- C. Fire-Test-Response Characteristics: Where fire-resistance-rated roof panel assemblies are indicated, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

**1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver panels and other components so they will not be damaged or deformed. Package panels for protection against damage during transportation or handling.
- B. Handling: Exercise care in unloading, storing, and erecting roof panels to prevent bending, warping, twisting, and surface damage.
- C. Stack materials on platforms or pallets, covered with tarpaulins or other suitable weathertight and ventilated covering. Store panels to ensure dryness. Do not store panels in contact with their materials that might cause staining, denting, or other surface damage. Slope panels to drain.

**1.8 PROJECT CONDITIONS**

- A. Field Measurements: Verify location of structural members and openings in substrates by field measurements before fabrication and indicate measurements on Shop

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Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

**1.9 WARRANTY**

- A. General Warranty: Special warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.
- B. Special Finish Warranty: Submit a written warranty, signed by manufacturer, covering failure of the factory-applied exterior finish on metal roof panels within the specified warranty period and agreeing to repair finish or replace roof panels that show evidence of finish deterioration. Deterioration of finish includes, but is not limited to, color fade, chalking, cracking, peeling, and loss of film integrity.

- 1. Finish Warranty Period: 20 years from date of Substantial Completion.

- C. Special Weathertight System Warranty: Submit a written warranty, signed by roofing system manufacturer agreeing to promptly repair leaks in the complete system including roof membrane and flashings, penetrations, curbs, accessories, etc., resulting from defects in materials or workmanship for the warranty period listed below. The manufacturer's liability shall not exceed the original installed cost of the roofing system. Indicate by letter that "All roofing components contained in the system proposed are approved and compatible with the warranty requirements of the roof system as specified, and that the warranty specified will be issued at completion of the project if system is installed as designed.

- 1. Warranty Period: 20 years from date of Substantial Completion.

The State of Missouri is prohibited by law from entering into binding arbitration. No warranty shall be submitted with any arbitration clause.

- D. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering roofing, insulation, fasteners, flashings, penetrations, curbs, accessories, etc, if any, for the following warranty period:

- 1. Warranty Period: 5 years from date of Substantial Completion.

**PART 2 - PRODUCTS**

**2.1 MANUFACTURERS**

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering metal roof systems that are considered acceptable and may be incorporated into the Work include, but are not limited to, the following:

- 1. American Buildings Roofing and Architectural Products. - Loc-Seam panel
  - 2. Butler Manufacturing Co. - VSR Roof System
  - 3. Metal Building Components, Inc. - SuperLok System
  - 4. Steelox Roofing Systems, Inc - LRK (Steelox Panel)
  - 5. Centria - System SDP-200
  - 6. Metal Sales Manufacturing Corporation – Magna-Loc Metal Roof Panel
  - 7. Berridge Manufacturing – Double Lock Zee-Lock

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- B. Substitutions: Any proposed substitution to the list above must be approved a minimum of 10 days in advance of bid date by submitting the "SUBSTITUTION REQUEST" form enclosed with bidding documents.

The product specifications listed in SECTIONS 2.2, and 2.3 are performance specifications indicating the minimum level of quality required to be considered as an "Acceptable Substitution."

**2.2 PANEL FINISH**

- A. **22 gauge** Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755. Color to be selected from manufacturer's full range of colors.
- B. Pre-Painting to be Fluoropolymer 2-Coat Coating System: Manufacturer's standard 2-coat, thermocured system composed of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight with a total minimum dry film thickness of 0.9 mil (0.023 mm) and 30 percent reflective gloss when tested according to ASTM D 523.
  - 1. Durability: Provide coating field tested under normal range of weather conditions for a minimum of 20 years without significant peel, blister, flake, chip, crack, or check in finish; without chalking in excess of a chalk rating of 8 according to ASTM D 4214; and without fading in excess of 5 Hunter units.

**2.3 PANEL CONSTRUCTION**

- A. Flat, Standing-Seam Roof Panels: Panels shall be 16 inch wide, factory-formed, standing-seam roof panel assembly designed for concealed mechanical attachment of panels to roof purlins or deck. Panels shall be field seamed by machine creating a vertical lock seam. Panel seam must contain factory applied sealant. Panel seam must be a minimum of 2 inches above flat of panel.
- B. Panel clips must be designed to allow for a minimum of one inch thermal expansion in each direction from nominal centered clip, two inches total expansion and contraction.

**2.4 ROOF ACCESSORIES**

- A. General: Provide materials and accessories required for a complete roof assembly and as recommended by manufacturer, unless otherwise indicated.
- B. Accessories: Unless otherwise specified, provide components required for a complete roof panel assembly including trim, copings, fascia, mullions, sills, corner units, ridge closures, clips, seam covers, battens, flashings, gutters, sealants, gaskets, fillers, closure strips, and similar items. Match materials and finishes of panels.
- C. Closure Strips: Closed-cell, self-extinguishing, expanded, cellular, rubber or cross-linked, polyolefin-foam flexible closure strips. Cut or premold to match configuration of panels. Provide closure strips where indicated or necessary to ensure weathertight construction.
- D. Snow Guards: Prefabricated, noncorrosive units designed to use with roof panels and complete with attachment to seam mechanism.



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**2.5 FABRICATION**

- A. General: Fabricate and finish panels and accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

**PART 3 - EXECUTION**

**3.1 EXAMINATION**

- A. Examine substrates and conditions, with Installer present, for compliance with requirements indicated or conditions affecting performance of metal panel roofing.

Panel Supports and Anchorage: Examine roof framing to verify that purlins, angles, channels, and other secondary structural panel support members and anchorage have been installed according to written instructions of panel manufacturer.

Do not proceed with roof panel installation until unsatisfactory conditions have been corrected.

**3.2 PREPARATION**

- A. Coordinate metal panel roofing with rain drainage work; flashing; trim; and construction of decks, parapets, walls, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.
- B. Promptly remove protective film, if any, from exposed surfaces of metal panels and accessories. Strip with care to avoid damage to finish.
- C. Secondary Structural Supports: Install purlins, bracing, and other secondary structural panel support members and anchorage according to the **AISI Cold-Formed Steel Design Guides and Manuals**.

**3.3 PANEL INSTALLATION**

- A. General: Comply with panel manufacturer's written instructions and recommendations for installation, as applicable to project conditions and supporting substrates. Anchor panels and other components of the Work securely in place, with provisions for thermal and structural movement.

Field cutting exterior panels by torch is not permitted.

**Install panels over a minimum 1/2:12 slope.**

Accessories: Install components required for a complete roof panel assembly including trim, copings, fascia, ridge closures, clips, seam covers, battens, flashings, gutters, sealants, gaskets, fillers, closure strips, and similar items.

- B. Separate dissimilar metals by painting each metal surface in area of contact with a bituminous coating, by applying rubberized-asphalt underlayment to each metal surface, or by other permanent separation as recommended by manufacturers of dissimilar metals.



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- C. Install weatherseal under ridge cap. Flash and seal panels at eave and rake with rubber, neoprene, or other closures to exclude weather.

Seal panel end laps with double beads of tape or sealant, full width of panel.

- D. Standing-Seam Roof Panel Assembly: Fasten panels to supports with concealed clip according to panel manufacturer's written instructions. Install clips at each support with self-drilling/self-tapping fasteners.

- E. Seaming: Complete seaming of panel joints by operating portable power-driven equipment of type recommended by panel manufacturer to provide a weathertight joint. Installation Tolerances: Shim and align panel units within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines as indicated and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

**3.4 CLEANING AND PROTECTING**

- A. Damaged Units: Replace panels and other components of the Work that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.
- B. Cleaning: Remove temporary protective coverings and strippable films, if any, as soon as each panel is installed. On completion of panel installation, clean finished surfaces as recommended by panel manufacturer and maintain in a clean condition during construction.

**3.5 ROOFING INSTALLER'S WARRANTY – TO BE PROVIDED BY CONTRACTOR**

- A. WHEREAS <NAME> of <ADDRESS>, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:

- 1. Owner:
- 2. Address:
- 3. Building Name/Type:
- 4. Address:
- 5. Area of Work:
- 6. Acceptance Date:
- 7. Warranty Period:
- 8. Expiration Date:

- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

- D. This Warranty is made subject to the following terms and conditions:

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1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
  - a. Lightning.
  - b. Peak gust wind speed exceeding 72 mph.
  - c. Fire.
  - d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition.
  - e. Faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions or penetrations of the work.
  - f. Vapor condensation on bottom of roofing.
  - g. Roofing by others; including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof has been paid by Owner or by another responsible party so designated.
3. The Roofing Installer is responsible for damage to work covered by this Warranty.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void, unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation.
5. The Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
6. This Warranty is recognized to be the installation warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents and to coordinate the Manufacturer's warranty, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

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E. IN WITNESS THEREOF, this instrument has been duly executed this<DAY>day of <MONTH>, 20<YEAR>.

1. Authorized Signature:
2. Name:
3. Title:

**END OF SECTION 074120**