

**ADDENDUM NUMBER TWO
FOR
Horry Georgetown Technical College Georgetown Campus
Building 100 Exterior Renovations
Georgetown, South Carolina
State Project Number: H59-056-CB
LAI Project Number: 19701**

PREPARED BY:
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TO: ALL BIDDERS OF RECORD

This Addendum modifies the Contract Documents only in the manner and to the extent stated herein and shown on any accompanying drawings and will become a part of the Contract Documents. Except as specified or otherwise indicated by this Addendum, all work shall be in accordance with the basic requirements of the Contract Documents.

BIDDERS SHALL ACKNOWLEDGE RECEIPT OF ADDENDUM WHEN SUBMITTING BID. FAILURE TO DO SO MAY CONSTITUTE AN INFORMALITY IN THE BID.

This Addendum consists of two (2) page(s) and the following enclosures:

I. ENCLOSURES:

1. Section 070150.71 Rehabilitation of Metal Roofing

II. GENERAL INFORMATION / CLARIFICATIONS: None.

III. QUESTIONS & ANSWERS:

1. **Question:** What value should we use to obtain builder's risk insurance quotes?
Answer: Refer to A101 Exhibit A, Section A3.3 Property Insurance for requirements.

IV. CHANGES TO SPECIFICATIONS / PROJECT MANUAL:

1. INSERT Specification Section 070150.71 Rehabilitation of Metal Roofing

V. CHANGES TO DRAWINGS: None.

VI. SUBSTITUTION REQUESTS: Subject to strict compliance with drawings and specifications, the following products are clearly marked "Approved" or "Not Approved":

1. **Section 099114 Exterior Painting** – Section 3.5 E, Subject to compliance with the specifications, GAF Kymax Coating System (XR-2000 Primer, Roof Mate

Base Coat, Kymax Finish Coating) is accepted as an approved equal.

2. **Section 265600 LED Exterior Lighting** – Peachtree Lighting 4BLRD-VR 4” Recessed Vandal Resistant LED Recessed Downlight is not approved as it will not work with the existing joist depth above the soffit.

END OF ADDENDUM TWO

SECTION 070150.71 - REHABILITATION OF METAL ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Roof coating preparation including restoration of metal roof panel joints, fasteners, and flashing, and cleaning preparation for coating.
 - 2. Application of coating on metal roofing.

1.2 MATERIALS OWNERSHIP

- A. Demolished materials shall become Contractor's property and shall be removed from Project site.

1.3 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.
- B. Existing Roofing System: Metal roofing, and components and accessories between deck and metal roofing.
- C. Roofing Coating Preparation: Existing roofing that is to remain and be prepared to accept restorative coating application.
- D. Patching: Removal of a portion of existing metal roofing system from deck or removal of selected components and accessories from existing metal roofing system and replacement with similar materials.
- E. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and reinstalled.
- F. Existing to Remain: Existing items of construction that are not indicated to be removed.
- G. Manufacturer/Roofing Manufacturer: Manufacturer of roofing restoration products, unless otherwise indicated.

1.4 ROOFING CONFERENCES

- A. Roofing Rehabilitation Preinstallation Conference: Conduct conference at Project site to review methods and procedures related to roofing system.

1. Meet with Owner, Architect, roofing coating materials manufacturer's representative; roofing coating Installer including project manager and foreman; and installers whose work interfaces with or affects rehabilitation including installers of roof accessories and roof-mounted equipment requiring removal and replacement as part of the Work.
2. Review methods and procedures related to coating preparation, including metal roofing coating system manufacturer's written instructions.
3. Review temporary protection requirements for existing roofing system that is to remain uncoated, during and after installation.
4. Review roof drainage during each stage of coating and review roof drain plugging and plug removal procedures.
5. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
6. Review base flashings, special roofing details, drainage, penetrations, equipment curbs, and condition of other construction that will affect coating.
7. Review HVAC shutdown and sealing of air intakes.
8. Review shutdown of fire-suppression, -protection, and -alarm and -detection systems.
9. Review governing regulations and requirements for insurance and certificates if applicable.
10. Review existing conditions that may require notification of Owner before proceeding.

1.5 ACTION SUBMITTALS

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

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section, including product names and numbers and manufacturers' names, with statement indicating that products to be provided meet the requirements of the Contract Documents.
- C. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 1. Indicate that proposed system components are compatible.

- D. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing rehabilitation system.
- E. Warranties: Unexecuted sample copies of special warranties.
- F. Photographs or Video Recordings: Show existing conditions of adjoining construction and site improvements, including exterior and interior finish surfaces, which might be misconstrued as having been damaged by coating operations. Submit before Work begins.
- G. Inspection Reports: Reports of Roofing Inspector. Include weather conditions, description of work performed, tests performed, defective work observed, and corrective actions required and carried out.
 - 1. Submit report within 72 hours after inspection.

1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: To include in maintenance manuals.
- B. Warranties: Executed copies of approved warranty forms.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and the following:
 - 1. Qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.
- B. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
- C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:
 - 1. An authorized full-time technical employee of the manufacturer.
 - 2. An independent party certified as a Registered Roof Observer by the Roof Consultants Institute, retained by the Contractor or the Manufacturer and approved by the Manufacturer.

1.9 PROJECT / FIELD CONDITIONS

- A. Weather Limitations: Proceed with rehabilitation work only when existing and forecasted weather conditions permit Work to proceed without water entering into existing roofing system or building.
 - 1. Store all materials prior to application at temperatures recommended by manufacturer.
 - 2. Apply coatings within range of ambient and substrate temperatures recommended by manufacturer.
 - 3. Do not apply roofing in snow, rain, fog, or mist.
- B. Protect building to be rehabilitated, adjacent buildings, walkways, site improvements, exterior plantings, and landscaping from damage or soiling from rehabilitation operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.
- D. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
- E. Owner will occupy all or portions of building immediately below re-coating area. Conduct re-coating so Owner's operations will not be disrupted. Provide Owner with not less than 72 hours' notice of activities that may affect Owner's operations.

1.10 WARRANTY

- A. Manufacturer's Warranty: In which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
 - 1. Form of Warranty: Manufacturer's standard warranty form.
 - 2. Scope of Warranty: Work of this Section.
 - 3. Warranty Period: 12 years from date of completion.
 - 4. Inspections by Manufacturer: To occur every five years following completion.
- B. Installer Warranty: Installer's warranty signed by Installer, as follows.
 - 1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.
 - 2. Scope of Warranty: Work of this Section.
 - 3. Warranty Period: 2 years from date of completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design Manufacturer: Subject to compliance, provide product indicated below or approved equal:
 - 1. Tremco, Inc., Beachwood, OH, (800) 562-2728, www.tremcoroofing.com that are named in other Part 2 articles.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Provide coated metal roofing system that remains weathertight; does not permit the passage of water; and resists specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Exterior Fire-Test Exposure: Roofing system exterior fire-test exposure performance following application of rehabilitation coating shall be not be less than that of the pre-rehabilitated roof performance when tested in accordance with ASTM E 108, based upon manufacturer's tests of identical applications.

2.3 MATERIALS, GENERAL

- A. General: Restoration materials recommended by roof coating manufacturer for intended use and compatible with components of existing metal roofing system.

2.4 METAL COATING MATERIALS

- A. Metal Restoration Coating:
 - 1. Acrylic Urethane Paint: Single-component water-based direct-to-metal, low-odor and low-VOC.
 - a. Basis of design product: Tremco, Solargard Acrythane.
 - b. Salt Spray Resistance, ASTM B117
 - c. Accelerated Weathering, ASTM D4587
 - d. Impact Resistance, ASTM D2794
 - e. Minimum thickness: 6 mils (0.015 mm) wet per coat 2 coats required.
 - f. Color: as indicated on drawings.

2. Acrylic Roof Coating, Highly-Reflective Elastomeric: ASTM D6083, applied as base coat plus finish coat over prepared and primed roof surfaces.
 - a. Basis of design product: Tremco, Solargard 6083 Base.
 - b. Tensile Strength at 73 deg. F (23 deg. C), minimum, ASTM D2370
 - c. Elongation at 73 deg. F (23 deg. C), minimum, ASTM D2370: 200 percent.
 - d. Flexibility at -15 deg F (-26 deg C), ASTM D522
 - e. Color, Top Coat: White.
 - f. Minimum Thickness over Metal: 16 mils (0.40 mm) wet each coat for base.

B. Metal Primer:

1. Acrylic primer formulated for use with acrylic coatings on PVDF-coated metal.
 - a. Basis of design product: Tremco, SOLARGARD Fluoro-Prime.
 - b. Application: 6 to 8 wet mils; (0.15 to 0.20 mm) wet.

2.5 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with existing roofing system and roofing coating system.

B. Seam Reinforcing Fabric:

1. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded mildew-resistant polyester fabric intended for reinforcement of compatible fluid-applied membranes and flashings and as a protection layer under pavers or stone aggregates.
 - a. Basis of design product: Tremco, Permafab.

C. Seam Sealer: Waterproof seam and fastener patching material.

1. Seam Sealer: Aliphatic polyurethane sealer, single-component, moisture curing, high solids, low-VOC, formulated for compatibility and use with specified roofing substrates.
 - a. Basis of design product: Tremco, SOLARGARD Seam Sealer.

- D. Joint Sealant: Elastomeric joint sealant compatible with applied coating, with movement capability appropriate for application.

1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.
 - a. Basis of design product: Tremco, TremSEAL Pro.
 - b. Color: Closest match to substrate from manufacturer's full range.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FM 4470; designed for fastening metal roofing components to substrate; tested by fastener manufacturer for required pullout strength; and acceptable to roofing system manufacturer.
- F. Metal Flashing Sheet: Provide metal flashing sheet matching type, thickness, finish, and profile of existing metal flashing and trim.

PART 3 - EXECUTION

3.1 EXISTING WARRANTIES

- A. Notify warrantor of extent of work. Do not proceed with work that will diminish Owner's protection under existing warranties unless directed by Owner.

3.2 EXAMINATION

- A. Examine existing roofing substrates, with Installer present, for compliance with requirements and for other conditions affecting application and performance of roof coatings
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
 2. Verify compatibility with and suitability of substrates.
 3. Verify that substrates are visibly dry and free of moisture.
 4. Verify that metal roofing is free of rust affecting structural integrity of roofing, or other indications of impending metal roof system failure.
 5. Application of coatings indicates acceptance of surfaces and conditions.

3.3 PREPARATION

- A. Protect existing roofing system that is indicated not to be coated, and adjacent portions of building and building equipment.
 1. Comply with warranty requirements of existing roofing manufacturer.
 2. Maintain temporary protection and leave in place until roofing rehabilitation has been completed.

- B. Shut down air intake equipment in the vicinity of the Work in coordination with the Owner. Cover air intake louvers before proceeding with rehabilitation work that could affect indoor air quality or activate smoke detectors in the ductwork.
 - 1. Verify that rooftop utilities and service piping affected by the Work have been shut off before commencing Work.
- C. Maintain roof drains in functioning condition to ensure roof drainage at end of each workday. Prevent debris from entering or blocking roof drains and conductors.
 - 1. Do not permit water to enter into or under existing metal roofing system components that are to remain.

3.4 ROOFING COATING PREPARATION

A. Metal Roofing Surface Preparation:

- 1. Remove ridges, buckles, failed or loose roofing fasteners, and other substrate irregularities from existing metal roofing that would inhibit application of uniform, weathertight coating.
- 2. Repair metal roofing at locations where irregularities have been removed.
- 3. Provide replacement fasteners where required.
- 4. Provide additional fasteners where required to meet performance requirements.
- 5. Clean substrate of contaminants such as dirt, debris, oil, and grease that can affect adhesion of coating by power washing at minimum 2000 psi. Remove existing coatings if any. Allow to dry thoroughly.
- 6. Verify that existing substrate is dry before proceeding with application of coating.
- 7. Perform adhesion testing before proceeding with application of coating.

3.5 FLASHING REPAIR

- A. Repair existing base flashings around parapets, curbs, walls, and penetrations.
- B. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish.
- C. Repair flashings, copings, and other roof-related sheet metal and trim elements. Reseal joints, replace loose or missing fasteners, and replace components where required to leave in a watertight condition.

3.6 ROOF COATING APPLICATION

- A. Primer: Spot prime cleaned rusted or bare areas with metal primer at manufacturer's recommended application rate and allow to dry.
- B. Metal Roofing Seam Reinforcement Plies: Coat horizontal and vertical seams with detail course of seam sealer according to manufacturer's written instructions. Embed seam reinforcement fabric in seam sealer.
- C. Coating: Apply number of coats and thickness of coats indicated in Part 2 product listing and as required in manufacturer's written instructions.
- D. Joint Sealant: Apply joint sealant at exposed movement joints, terminations, and where required for complete weathertight application.

3.7 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove coating that does not comply with requirements, repair substrates, and reapply coating.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 070150.71