

PROJECT MANUAL
FOR
FOLEY CIVIC CENTER
“ROOF & SHEET METAL RESTORATION”
LABOR & INCIDENTAL MATERIALS CONTRACT

CITY OF FOLEY, ALABAMA
407 EAST LAUREL AVE
FOLEY, ALABAMA 36535

NOVEMBER 18, 2020

PROJECT MANUAL
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SECTION 00300 - BID FORM

PROJECT ID: "Foley Civic Center Roof and Sheet Metal Restoration"

Bid Date: _____

BID TO CITY OF FOLEY, ALABAMA
407 EAST LAUREL AVE
FOLEY, ALABAMA 36535

BID FROM: _____

1. The undersigned BIDDER agrees to perform Work as specified in the Bidding Documents for the Bid Price, and within the specified time period.
2. BIDDER acknowledges that:
 - a. Bid will remain subject to acceptance for 60 days after the day of Bid opening;
 - b. BIDDER will sign and submit Agreement within 15 days of OWNER'S NTP;
 - c. BIDDER has received Addenda, receipt of which is hereby acknowledged;

Date	Number
_____	_____

3. BASE BID \$ _____
Perform Roof and Masonry restoration.

4. UNIT PRICING

- a. Replace deteriorated wood nailer with pressure treated, to match existing dimension. Per Board Foot, in addition to base bid quantities, credit unused portion. \$ _____
- b. Remove & replace wet insulation & roofing, per Square Foot, in addition to base bid quantities, credit unused portion. \$ _____
- c. Remove and replace deteriorated deck, 22g Type B steel, per Square Foot, in addition to base bid quantities, credit unused portion. \$ _____

- d. Remove and replace deteriorated plywood, 5/8" ext. grade, per Square Foot, in addition to base bid quantities, credit unused portion. \$ _____
- e. Remove and replace unbonded vertical membrane flashing, per Linear Foot, in addition to base bid quantities, credit unused portion. \$ _____
- f. Clear roof drain with cutter tool per hour, in addition to base bid quantities, credit unused portion. \$ _____

5. SUBMITTED BY: _____, on _____, 2020.

6. COMPANY NAME: _____

SECTION 00800 - SUPPLEMENTARY CONDITIONS

1.0 CONTRACT TIME AND LIQUIDATED DAMAGES

- A. Contract Time: 60 Work Days, from Notice to Proceed to Project Completion.
- B. Liquidated Damages: Shall be \$150.00 per day and subject to the following;
 - 1. Contract Work Day defined as:
 - a. 40F and rising,
 - b. **50% or less, chance-of-precipitation, weather reporting stations:**
Foley Airport, Weather Underground
 - c. Monday to Saturday.
 - 2. Substantial Completion shall occur on the Date of Manufacturer's Punch List.
 - 3. Project shall be complete after receipt of Manufacturer's Warranty.

SECTION 01024 – QUANTITY ALLOWANCES

1.0 BASE BID QUANTITIES

- | | | |
|----|---|-------------------------------------|
| A. | Replace deteriorated wood nailer with pressure treated, to match existing dimension. | Include 40 LF in Base Bid |
| B. | Remove & replace wet insulation & roofing, 3.0" polyiso, 1/2" cover Board, 2 ply mod bit. | Include 500 SF in Base Bid. |
| C. | Remove and replace deteriorated steel deck w/ new 22 gauge Type B. | Include 30 SF in Base Bid. |
| D. | Remove and replace deteriorated plywood, 5/8" ext. grade, per Square Foot. | Include 30 SF in Base Bid. |
| E. | Remove and replace membrane flashing. | Include 40 LF in Base Bid. |
| F. | Clear roof drain with cutter tool per hour. | Include 4 hours in Base Bid. |

SECTION 01360 – MANUFACTURER WARRANTY CERTIFICATION

Description: IBC Code and Watertightness-Warranty DESIGN compliance document from Roof Restoration System Manufacturer, copy provided to Owner and Contractor post-award.

1. Project: _____
2. Manufacturer: _____
3. Contractor _____
4. Definitions:
 - a. “Substrate”: Any surface the new roof, wall and skylight restoration system is applied to, including existing roof membranes, deck, perimeter nailers, sheet metal and masonry walls.
 - b. “Restoration System”: The complete repair system including Coatings, Sheet Metal, Prefabricated Metal Panels, Fabrics, Membranes, Adhesives, Mastics, Sealants, Primers, Attachments (fasteners), and Insulations.
5. SUBSTRATE: We have reviewed existing Substrates and have provided Contractor with the preparation and attachment information necessary for Restoration System application to SUBSTRATE in accordance with IBC Code, and Warranty requirements.
6. RESTORATION SYSTEM DESIGN: We have provided Contractor with DESIGN for Restoration System compliance with IBC Code and Warranty requirements.
7. WORKMANSHIP: We will support Contractor throughout installation with weekly site visits during installation, with reports noting agreement/disagreement with Contractor’s workmanship per IBC Code and warranty requirements.

Sincerely,

Manufacturer Representative PRINT NAME

Date

Manufacturer Representative SIGNATURE

SECTION 07540 – FLUID APPLIED ROOF RESTORATION

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. Provide moisture scan, then demolition and replacement of wet roof materials. Provide preparation, priming and installation of new liquid applied restoration system for field and flashings.

1.3 SYSTEM DESCRIPTION

- A. It is the intent of this specification to install a long-term liquid-applied roof system that meets or exceeds all current NRCA guidelines as stated in the most recent edition of the NRCA Roofing and Waterproofing Manual.

1.4 SUBMITTALS

- A. Manufacturer's signed Shop Drawings containing;
 - 1. Site Pressures for Field (ASCE-7) and Perimeter Metal (ANSI-SPRI ES-1).
 - 2. Scope of Work for IBC and Warranty Compliance.
 - 3. CAD drawn details (Field, Flashings, Metal Edge, and Curbs, dimensioned), showing fastener types and spacing, and interfacing for coatings, reinforcements, mastics and sealants.
 - 4. Roof Plan scaled, with construction notes as needed.
 - 5. Design Summary
 - a. IBC-2015
 - b. ASCE 7-10
 - (1) Safety Factor: 1.65
 - (2) Test Method: ASTM E-1592.
 - c. SMACNA 5th Edition or later.
- B. Submit Section 01360 Manufacturer Site Certification demonstrating compliance with specified warranty requirements and non-compliance shall be grounds for rejection of Bid.
- C. Submit certification that the roof system furnished is Tested and Approved by Factory Mutual as a Class 1A roof system, or Listed by Underwriters Laboratories or Warnock Hersey for external fire tests of ASTM E - 108 Class A.
- D. Submit Product Data Sheets for each type of product specified.

- E. Show evidence that the Installer specializes in liquid applied membrane roof restorations with a minimum 5 years experience and who is certified by roofing system manufacturer.
- F. Provide a sample of each product.
- G. Unexecuted Manufacturer's warranty.
- H. Certified copy of ISO 9001 compliance.

1.5 QUALIFICATIONS

- A. Installer: Company specializing in roof restoration with a minimum five [5] years experience and certified by roofing system manufacturer as qualified to install manufacturer's roofing materials.
- B. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work and at any time roofing work is in progress. Maintain proper supervision of workmen. Maintain a copy of the specifications in the possession of the Supervisor/Foremen and on the roof at all times.
- C. Immediately correct roof leakage during construction. If the Contractor does not respond within twenty four (24) hours, the Owner has the right to hire a qualified contractor and backcharge the original contractor.
- D. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

1.6 PRE-INSTALLATION CONFERENCE

- A. Pre-Roofing Conference: Convene a pre-roofing conference approximately two (2) weeks before scheduled commencement of restoration system application and associated work.
- B. Require attendance of installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing which must precede or follow roofing work (including mechanical work if any), Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of the Work, including (where applicable) Owner's insurers, testing agencies and governing authorities. If equipment of substantial size is to be placed on the roof, the Mechanical Contractor must also attend this meeting.
- C. Objectives of conference shall include:
 - 1. Review foreseeable methods and procedures related to roofing work.

2. Tour representative areas of roofing substrates (decks) inspect and discuss condition of substrate, roof drains, curbs, penetrations and other preparatory work performed by others.
3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
4. Review roofing system requirements (drawings, specifications and other contract documents).
5. Review required submittals both completed and yet to be completed.
6. Review and finalize construction schedule related to roofing work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
7. Review required inspection, testing, certifying and material usage accounting procedures.
8. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing (if not mandatory requirement).
9. Record discussion of conference including decisions and agreements (or disagreements) reached and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.
10. Review notification procedures for weather or non-working days.
11. Establish acceptable methods of protecting the finished roof if any trades must travel across or work on or above any areas of the finished roof.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.
- B. Do not leave unused materials on the roof overnight or when roofing work is not in progress unless protected from weather and other moisture sources.
- C. It is the responsibility of the contractor to secure all material and equipment on the job site. If any material or equipment is stored on the roof, the contractor must make sure that the integrity of the deck is not compromised at any time. Damage to the deck caused by the contractor will be the sole responsibility of the contractor and will be repaired or replaced at his expense.
 1. Handle and store roofing materials and place equipment in a manner to avoid significant or permanent damage to deck or structural supporting members.
- D. Refer to Division 1 Sections "Summary of Work" and "Special Conditions," for additional information and requirements.

1.8 MANUFACTURER'S INSPECTIONS

- A. Require attendance of roofing materials manufacturers' representatives at site during installation of the liquid membrane system. Perform field inspection and testing as required.

1. Keep the Owner informed as to the progress and quality of the work as observed.
 2. Provide job site inspections a minimum of two days a week.
 3. Report to the Owner in writing any failure or refusal of the Contractor to correct unacceptable practices called to the Contractor's attention.
 4. Confirm after completion that manufacturer has observed no applications procedures in conflict with the specifications other than those that may have been previously reported and corrected.
- B. Correct defects or irregularities discovered during field inspection.
- C. Keep wet film gauges on-hand at all times during the application process to ensure proper coverage.

1.9 PROJECT CONDITIONS

- A. Weather Condition Limitations: Do not apply roofing system during inclement weather or when a 50% chance of precipitation or greater is expected.
- B. Proceed with roofing work only when existing and forecasted weather conditions will permit unit of work to be installed in accordance with manufacturer's recommendations and warranty requirements.
- C. Materials shall be stored at room temperature until immediately prior to application. Discontinue the application if the material cannot be stored at a temperature, which permits even distribution during application.
- D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day.
- E. When applying materials with spray equipment, take precautions to prevent over spray and/or solvents from damaging or defacing surrounding walls, building surfaces, vehicles or other property. Care should be taken to do the following:
1. Close air intakes into the building.
 2. Have a dry chemical fire extinguisher available at the jobsite.
 3. Post and enforce "No Smoking" signs.
- F. Avoid inhaling spray mist; take precautions to ensure adequate ventilation.
- G. Protect completed roof sections from foot traffic for a period of at least 48 hours (at 75F and 50% relative humidity) or until fully cured.
- H. Take precautions to ensure that materials do not freeze.
- I. Minimum temperature for application is 40F and rising.

1.10 SEQUENCING AND SCHEDULING

- A. Sequence installation of restoration system with related units of work specified in other sections to ensure that roof assemblies including roof accessories, flashing, trim and

joint sealers are protected against damage from effects of weather, corrosion and adjacent construction activity.

- B. Fully complete all roofing field assembly work each day. Phased construction will not be accepted.

1.11 WARRANTIES AND GUARANTEES

- A. Upon completion of installation, and acceptance by Owner, the manufacturer shall supply to the Owner their 10 (5+5) year watertightness warranty.
1. Manufacturer annual site visits during warranty period, with maintenance recommendations, no charge.
 2. Manufacturer (not contractor or consultant) leak response.
 3. No "Blanket Voiding" for storm events.
 4. No "Blanket Voiding" for lack of Owner maintenance or log.
 5. No more than one required inspection and renewal period.
 6. No exclusion for improper roof design or construction.
 7. No exclusion for manufacturer's own site inspections.
 8. A single manufacturer/warrantor shall be utilized for all Membrane, Metal and Masonry Restorations and Replacements. Warranties from multiple Manufacturers are not acceptable.
 9. Standard manufacturer's warranty shall be amended to require that the Laws of the State of Alabama shall govern all such warranties and guarantees.
- B. Contractor will submit a five year warranty using Alabama Building Commission form as specified.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. When a particular trade name or performance standard is specified it shall be indicative of a standard required.
- B. Provide products as manufactured by Garland, Ecology or Hyload.
- C. Approved manufacturer must comply in all respects as to the quality and technical performance of the products specified.

2.2 LIQUID RESTORATION SYSTEM

- A. High build multi-purpose solvent-based liquid waterproofing membrane designed to maintain, restore and upgrade the performance of existing smooth-surface bituminous membranes. Note that acrylic or water-based products are not allowed.

1.	Density @ 77F	ASTM D1475	10 lbs/gal
2.	Viscosity @ 77F	Brookfield #5	15,000/25,000 cP
3.	Elongation	ASTM D412	275%
4.	Coverage Rate	Wet Film Thickness	Dry Film Thickness
	4.0 gal / poly / 3.5 gal	123 mils (64/11/56)	100 mils

- B. Polyester: Continuous reinforcement to repair cracks, seams and joints, used in conjunction with coating.
- | | | | |
|----|------------------|-------------|-------------|
| 1. | Elongation | ASTM D 1682 | 44% |
| 2. | Tearing Strength | ASTM D 1682 | 17 lbs |
| 3. | Tensile | | 75 lbs. |
| 4. | Weight | | 3 oz/sq. yd |
- C. Asphaltic primer: Where required by Manufacturer.
- | | | | |
|----|---------------------------------|-------------|-----------|
| 1. | Viscosity Zahn Cup | ASTM D-4212 | 18-21 sec |
| 2. | Distillation | ASTM D-402 | |
| | a. Volume @ 380 F | | 55% |
| | b. Penetration of Residue mm/10 | | 10-30 |
| 3. | Wet Film Thickness | | 8-16 mils |
- D. Moisture-curing, single-component, modified silane adhesive sealant.
- | | | | |
|----|----------------------|----------------------|---------|
| 1. | Tensile Strength | ASTM D-412 | 225 psi |
| 2. | Elongation, Ultimate | ASTM D-412 | 500% |
| 3. | Weep & Sag | ASTM C920, max 3/16" | Passes |
| 4. | Hardness, Shore A | ASTM C-920, 15-50 | 30 |
- E. Reflective Asphalt Mastic: Aluminized asphalt mastic for all exposed surfaces, meeting the following requirements ["roof cement" coated with granules or aluminum is not allowed].
- | | | | |
|----|---------------------------|-------------------|-------------|
| 1. | Reflectivity | | 60% |
| 2. | Density | ASTM D-1475 | 8.3 lb./gal |
| 3. | Viscosity @ 77F | Mobilometer 1500g | 9-11 sec |
| 4. | Pre/Post Recycled Content | | 5.0% |
- F. Base Sheet/Base Flashing Base Ply:
- | | | | |
|----|--|-----------------------------|-----------------------|
| 1. | <u>Properties:</u> Finished Membrane, ASTM D-5147 at 2 in/min. @ $73.4 \pm 3.6^\circ$ F. | | |
| | a. | Tensile Strength | MD and XD 100 lbf/in. |
| | b. | Tear Strength | MD and XD 100 lbf/in. |
| | c. | Low Temperature Flexibility | Passes -20 °F |
- G. Modified Membrane Field/Modified Membrane Flashing Top Ply:
- | | | | |
|----|--|-----------------------------|-----------------------|
| 1. | <u>Properties:</u> Finished Membrane, ASTM D-5147 at 2 in/min. @ $73.4 \pm 3.6^\circ$ F. | | |
| | a. | Tensile Strength | MD and XD 310 lbf/in. |
| | b. | Tear Strength | MD and XD 500 lbf/in. |
| | c. | Low Temperature Flexibility | Passes -30 °F |
- H. Cold Process Adhesive: Per manufacturer's requirements.
- I. Surfacing; white ceramic granules.

- J. Self Adhering Membrane Underlayment: per manufacturer's requirements.

2.3 SHEET METAL

- A. Coping: New metal coping where directed on plans.
- B. Metal Type; G-90 Kynar Steel, 24 ga minimum.
- C. Continuous cleat; G90 galvanized steel, 22 ga. minimum.
- D. ANSI-SPRI ES-1 compliant.

2.4 DRAIN BOWL

- A. Matching existing dimension, Josan or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate surfaces to receive liquid-applied membrane and associated work and conditions under which roofing will be installed. Do not proceed with roofing until unsatisfactory conditions have been corrected in a manner acceptable to Installer.
- B. Review ASTM C-1153 moisture scan report with Owner and Manufacturer onsite.

3.2 GENERAL INSTALLATION REQUIREMENTS

- A. Cooperate with manufacturer, inspection and test agencies engaged or required to perform services in connection with installing the roof system.
- B. Protect other work from spillage of roofing materials and prevent materials from entering or clogging drains and conductors. Replace or restore other work damaged by installation of the modified bituminous roofing system.
- C. Properly prepare and apply manufactured components and products, in strict accordance with each manufacturer's current written instructions and recommendations.
- D. Apply roofing materials as specified herein unless recommended otherwise by manufacturer's current written instructions and recommendations. Keep roofing materials dry during application. Do not permit phased construction.

3.3 PROTECTION

- A. Protect Parking Lots, Sidewalks and Perimeter Mansards from drippage and staining.
- B. Contractor is to take photographs of all existing staining and drippage to Parking Lots, Sidewalks and Perimeter Mansards and provide to Owner prior to beginning the Work. All stains not shown by prior photograph will be removed at Contractor's expense.
- C. Cover HVAC intakes with two layers of carbon filter wrap in all areas where paint and coating fumes may enter the interior.

3.4 SCOPE OF WORK

- A. Perform roof restoration for Section "A".
- B. Replace wet insulation areas where noted on Plans.
- C. Complete additional Work as described on Plans.

3.5 LEAD PLUMBING BOOTS

- A. Install new 4lb lead boot inserts, c-clamped to existing pipe.

3.6 BLISTER REPAIRS

- A. Manufacturer is to mark all defect locations with orange paint prior to beginning with coating application.
- B. Cut out unbonded membrane areas.
- C. Apply approved asphalt primer.
- D. Apply one-ply cold-applied modified bitumen membrane.

3.7 VERTICAL MEMBRANE FLASHING

- A. Replace unbonded membrane flashing where required for warranty.
- B. Vertical Laps; Prime substrate, apply aluminized asphalt mastic reinforced with fiberglass mesh.
- C. Horizontal Laps; Provide asphalt mastic transition from field to horizontal base of flashing for smooth transition of field polyester.
- D. Apply two coats aluminum coating at one (1) gallon per square per coat.

3.8 REPLACE WET INSULATION

- A. Remove and replace wet insulation to steel deck.
- B. Install new matching thickness insulation and cover board.
- C. Install new two ply modified bitumen roof.
- D. Include removal and replacement of drain stripping and lead flashing where included within designated "wet roof areas".
- E. Include adjacent vertical membrane flashing where within or adjacent to designated "wet roof areas".

3.9 FLUID-APPLIED MEMBRANE APPLICATION

- A. Remove all unattached equipment to allow cleaning and coating system application underneath.
- B. Clean the entire roof and cladding by removing all dirt, algae, paint, oil, talc, rust or foreign substance. Scrub heavily soiled areas with a brush. Allow roof to dry before continuing.

- C. Install new Membrane Flashings where required by Manufacturer for Warranty.
- D. Replace wet insulation and membrane where required by Manufacturer for Warranty.
- E. Apply primer throughout roof.
- F. Apply Base Coat throughout Field and Flashing at three and one-half (4.0) gallons per square.
- G. Apply continuous polyester reinforcement throughout roof system.
- H. Apply Top Coat throughout Field and Flashing at three and one-half (3.5) gallons per square.
- I. Surfacing;
 - 1. Broadcast ceramic granules into wet coating at sixty (60) pounds per square. Sweep all loose granules on roof and in gutters and grounds, and discard.
 - 2. Paint vertical membrane flashings with two coats manufacturer's aluminum coating at one-half (1/2) gallon per square, per coat.

3.10 NEW METAL COPING & MEMBRANE FLASHING

- A. Replace coping where indicated on Plans.
- B. Replace membrane flashing where coping is to be replaced.
- C. Remove existing coping underlayment, sheet metal counterflashing, membrane flashing and cant strips to deck.
- D. Install new cant strips, primer, membrane flashing mechanically fastened, self adhering membrane and metal coping per manufacturer's shop drawings.

3.11 DRAIN REPAIRS

- A. Remove and replace existing clogged drain bowl with new.
- B. Clear drain plumbing using cutter tool, minimum four (4) hours.

3.12 FINAL INSPECTION

- A. At completion of roofing installation and associated work Contractor shall schedule meeting with Owner and roofing system manufacturer's representative.
- B. All parties shall tour roof work areas and provide punch list to Contractor of areas (if any) needing repair or replacement.
- C. Contractor shall repair or replace deteriorated or defective work found at time of above inspection as required to produce an installation which is free of damage, and in compliance with specification and warranty requirements.

- D. Contractor shall notify the Owner and Manufacturer's Representative upon completion of corrections and schedule a final inspection.
- E. Following the final inspection, Manufacturer shall provide written notice of acceptance of the installation for warranty.

3.13 OWNER PURCHASED MATERIALS

- A. Owner shall provide materials and quantities listed below, Contractor shall be responsible for receiving all quantities at jobsite, hoisting to rooftop, and subsequent storage.
- B. Contractor shall be responsible for purchase of any additional materials and quantities required to complete Specification and issue of manufacturer's warranty. Under no circumstances shall owner be responsible for ordering additional materials beyond those originally provided.
- C. All unused Owner-purchased materials shall remain the possession of Owner.
- D. All materials shall be kept covered from weather and set atop pallet at all times.
- E. Contractor shall be responsible for initiating and coordinating receipt of the shipment of Owner Provided Materials, including unloading and staging.

F. Owner Provided Materials

Garland "Versiply Mineral"	75 sf roll	<u>12 rolls</u>
Garland "Flexbase 80"	100 sf roll	<u>7 rolls</u>
Garland "Garla-Prime"	5gal pail	<u>10 pails</u>
Garland "Revitalizer"	5gal pail	<u>79 pails</u>
Garland "GRIP Polyester"	10 sq roll	<u>6 rolls</u>
Garland Standard Roofing Granules	60# bag	<u>68 bags</u>

END OF ROOF AND MASONRY RESTORATION