

**DURHAM TECHNICAL COMMUNITY COLLEGE
COLLINS BUILDING**

1637 E Lawson St., Durham, NC

**RENOVATION OF EXISTING
SINGLE-PLY and BUR ROOFS
PROJECT NO. 94-25-1005**

Department/Agency	Durham Technical Community College
Project Name	Collins Roof Replacement
Scope	See Below
Contact	Kenisha Wright
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Mandatory Pre-Bid Meeting	Thursday, February 27, 2025 @11am Collins Building #2 Room 164 1637 E Lawson St, Durham, NC 27703
Question Due	Tuesday, March 4, 2025 @ 12pm
Source of Funds	Durham County
Publish Date	Wednesday, February 19, 2025
Closing Date	Monday, March 10, 2025 @ 11am
Submit Bids To:	Kenisha Wright, Procurement Specialist Durham Technical Community College 1634 Cooper St Building #7 Room 113 Durham, NC 27703
<p style="text-align: center;"><u>BID SUBMITTAL CRITERIA</u></p> <ul style="list-style-type: none"> • Submit completed Form of Proposal and Schedule of Cost • Signed Addendums (if applicable) • Signed Hub Supplemental Vendor Information • Sealed proposals will be received by Durham Technical Community College in Conference Room 113, Building 7, 1634 Cooper St, Durham NC 27703, up to 11:00 a.m. on Monday, March 10, 2025. <p>Durham Technical Community College encourages participation by MWBE firms and supports efforts to ensure and promote opportunities for minority businesses.</p>	

SCOPE OF WORK

SECTION 01100 – GENERAL CONDITIONS

1. Work shall proceed in a continuous and orderly manner. Phased construction is unacceptable.
2. The Contractor shall strive to minimize disruption of the building operations and occupancy during remedial roofing activities and shall identify any proposed disruptions, including utilities or mechanical systems, prior to bidding and shall list them on the bid form.
3. The Owner will occupy the premises during the entire period of construction, to conduct his normal business operations. The Contractor must cooperate with the Owner to minimize conflict, and facilitate the Owner's operations. The Contractor shall limit use of the premises for construction operations to allow for Owner Occupancy and Safety.
4. The Contractor shall provide sufficient qualified workmen and a supervisor, who shall be present at all times during the execution of the work, and who shall be familiar with the type of construction involved, and the materials and techniques specified. The Owner shall make no allowance for lack of skill of the workmen.
5. The Contractor shall provide his own temporary facilities and controls required for the performance of the project. Such items include, but are not limited to, utilities such as heat, water, electricity and telephone; sanitary facilities; Contractor's facilities and enclosures; such as tarpaulins, barricades and canopies.
6. All equipment furnished by the Contractor shall comply with all pertinent safety requirements.
7. All temporary facilities are subject to the Owner's approval. No signs or advertising of any kind shall be allowed on the project site unless approved in writing by the Owner.
8. Bidders shall be required to provide a Bid Bond equal to 5% of the total Base Bid, which is to be included in their proposal package. The successful Contractor shall provide a 100% Performance and Payment Bond prior to mobilization. The cost for this bond shall be included in his Base Bid.
9. The Contractor shall provide equipment for access to the roof. Other than emergencies, Contractor presence inside the building will not be allowed except as necessary during roof removal and clean-up.
10. The Contractor shall provide for debris removal services and containers. Placement and servicing of containers shall be coordinated with the Owner. Dust, dirt and debris created by the project shall be properly contained and controlled by the Contractor. Residue and debris from all operations shall not be allowed to accumulate on the project site. Debris shall be removed and disposed of regularly in accordance with all Federal, State and Local regulations.

12. The Contractor shall be responsible for proper storage of equipment, materials and devices by himself and/or his subcontractors and suppliers. The Contractor shall not store materials inside the building. All storage areas are subject to approval by the Owner.
13. The Contractor's vehicles shall park in areas as directed by the Owner. The Contractor shall be responsible for coordination of traffic by his subcontractors, suppliers, etc., so as not to disrupt on-going operations of the Owner.

SECTION 02220 – DEMOLITION (BASE BID)

1. Areas 1, 4, 5, 6, 7 & 8 - Remove existing thermoplastic membrane, insulation, recovery board and BUR membrane to the level of the existing metal or concrete deck. Remove existing debris and protrusions, as required to provide a smooth, solid substrate for installation of new roofing materials.
2. Area 9 – Power broom existing gravel surface and dispose of aggregate off-site. Remove existing debris and protrusions, as required to provide a smooth, solid substrate for installation of new roofing materials.
3. Contractor shall provide interior protection below their work in areas designated by the Owner. Interior protection shall be installed by a firm specializing in this work, such as TuffWrap, and not be performed by the contractor's own personnel. Contractor shall include the cost of below-deck dust protection in his Base Bid and show this as a line item in the Schedule of Cost.
4. At the location of FCG's test cuts the composition of the existing roofs are as follows:
 - Area 1 - Concrete roof deck, $\frac{3}{4}$ " Perlite insulation, BUR plies and granular-surfaced cap sheet. Total Thickness- 1 $\frac{1}{2}$ ".
 - Area 4 - Metal roof deck, 1" tapered polyisocyanurate insulation, BUR plies and granular-surfaced cap sheet. Total Thickness- 3"-5".
 - Areas 5 & 8 - Metal roof deck, 2" extruded polystyrene insulation, $\frac{1}{2}$ " wood fiberboard and adhered EPDM membrane. Total Thickness- 3".
 - Areas 5 & 8 - Metal roof deck, 2" extruded polystyrene insulation, $\frac{1}{2}$ " wood fiberboard and adhered EPDM membrane. Total Thickness- 3".
 - Areas 6 & 7 - Metal roof deck, composite Iso/Perlite insulation, BUR plies and granular-surfaced cap sheet, 1" Iso, $\frac{5}{8}$ " gypsum, fleece-backed TPO membrane. Total Thickness- 4 $\frac{1}{2}$ ".
 - Area 9 - Metal roof deck, gypsum board, Iso insulation, BUR plies and gravel surface. Total Thickness- 3".

The Owner will test the existing BUR membranes for asbestos. Results of this testing will be provided to Awarded Bidder.

5. Remove existing insulation and roof membranes to the deck. Repair/replace metal deck as required (see Section 05310). Include 1000 sq. ft. of metal deck replacement in the Base Bid:
 - a. Provide a Unit Cost for quantities greater or lesser than the amount specified in the Base Bid.
6. Remove existing membrane flashings on curbs and pipes as required by the Membrane Manufacturer.
7. Remove existing edge metal and fascia.
8. Remove existing metal counterflashing and rain hoods.
9. Remove and dispose of abandoned and out of service equipment, as identified and directed by the Owner. Resulting openings in the deck shall be patched with matching metal deck panels.
10. Disconnection of any mechanical or electrical equipment for the purposes of this demolition must be carefully coordinated with the Owner. Disconnection and reconnection is the responsibility of the Contractor.
11. Inspection - verify that the roof and all components have been properly removed and disposed of and that the substrate is acceptable for the installation of new materials.
12. Roof removal and material installation shall proceed only when no precipitation is imminent. Install only as much insulation and roof membrane as can be completed by the end of the day. The building must be maintained weatherproof at all times. The Contractor is responsible for making construction under this contract rainproof. If he is prevented from so doing by any limitations of the Scope of Work or the existing site conditions, the Owner shall immediately be given written notification of such limitations before construction proceeds in the area where the problem exists. The Contractor may then only proceed upon written approval of the Owner.
13. The Contractor shall plan and execute all work in a manner that provides safe access and egress to the building for the Owner and his personnel, and shall provide all necessary barricades, warnings, signs, monitors, etc. for the Owner's protection during the course of the work.

SECTION 02220- DEMOLITION/PREPARATION ALTERNATE – Areas 2 & 3

1. Proceed with rehabilitation work only when existing and forecasted weather conditions permit work to proceed without water entering into the existing roofing system or building.
2. Store all materials as required by the manufacturer.
3. Apply coatings within range of ambient and substrate temperatures recommended by the manufacturer.
4. Protect building, adjacent buildings, walkways, site improvements, exterior plantings and landscaping from damage or soiling from rehabilitation operations.

5. Maintain access to existing walkways, corridors and other adjacent occupied or used facilities.
6. 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.
7. Where required, Replace or reattach deteriorated and displaced existing sheet metal, including; coping and counterflashing, edge metal and fascia.
8. Repair all delaminated membrane seams and dis-bonded patches. Cut and repair bridging membrane flashings.
9. Inspection - verify that the roof and all components have been cleaned, prepared or properly removed and disposed of and that the substrate is acceptable for the installation of new materials.
10. Disconnection of any mechanical or electrical equipment for the purposes of this demolition must be carefully coordinated with the Owner. Disconnection and reconnection is the responsibility of the Contractor.
11. Roof repair and material installation shall proceed only when no precipitation is imminent. Install only as much material as can be completed by the end of the day. The building must be maintained weatherproof at all times.
12. The Contractor shall plan and execute all work in a manner that provides safe access and egress to the building for the Owner and his personnel, and shall provide all necessary barricades, warnings, signs, monitors, etc. for the Owner's protection during the course of the work. Erection of these shall be strictly coordinated with the Owner.

SECTION 05310 – STEEL DECK

1. Remove damaged and deteriorated metal panels, and replace as necessary. (1000 sq. ft. in Base Bid, any additional at Unit cost). Replacement of the metal deck will be at the direction and discretion of the Owner's Representative who will have the responsibility of verifying the amount of deck replaced for unit cost purposes.
2. Material installation shall proceed only when no precipitation is imminent. Contractor shall exercise due caution during this phase of the work, taking all steps necessary to minimize roof traffic and unnecessary crew movement in the area where roof panel replacement is being performed. Contractor shall take any and all precautions necessary to prevent dust and debris from entering the building during this phase of the work. Contractor shall immediately follow all instructions in this regard given by the Owner or the Owner's Representative.
3. Contractor shall provide sufficient qualified workman and supervisor, who shall be present at all times during execution of this portion of the work, and who shall be familiar with the type of construction involved, and the materials and techniques specified.

4. Provide metal decking with G-90 hot-dipped galvanized zinc coating. Panels shall conform to ASTM A 611, Grade C with a minimum yield strength of 33 ksi. Profile shall match the existing conditions.
5. Metal deck panels shall be installed in minimum 3-foot wide panels. Panel length to be determined by field conditions, but in no instance shall the metal panel length be less than the bar joist spacing (or curb support framing) plus one foot, to allow a minimum 6" overlap with the existing metal panels
6. Side laps and end laps of the metal deck shall be fastened to adjacent metal deck panels and bar joists at 12" on center. Fastening shall occur in the bottom rib of the deck wherever possible.
7. Fasteners shall be #12 x 7/8" stainless steel, hex-head Tek 4, self-drilling screws by Buildex, or approved equal.
8. Metal deck shall be cut as required at roof penetrations. Cuts shall be straight and no gaps over 1/2" will be allowed. No piecing or patching of the metal deck will be allowed without the approval of the Owner's Representative.
9. Verify that the metal deck is sound, dry and secure, so as to adequately support new roofing components. Verify that the deck surface meets the requirements of the insulation and membrane manufacturer(s).

SECTION 06100 – ROUGH CARPENTRY

1. Treated Wood: Shall be No. 2 or better Southern Yellow Pine, kiln-dried after treatment to a moisture content of not more than 19 percent. It shall be sound, thoroughly seasoned, dressed to nominal finish dimension, and free of warpage, cupping, and bowing. All nailers and other blocking associated with the roofing installation shall be pressure treated with 0.15 pcf retention of micronized copper azole (MCA), or approved equal, and shall conform to AWWA Standard U1 ground contact. Asphalt or Creosote preservatives shall not be used. The presence of AWWA quality mark LP-22 on each piece is required. Where full penetration of MCA is not evident, field cuts shall be coated in accordance with AWWA standard M-4. Dimensions are to be determined by job conditions, and the membrane manufacturer's specifications. Site cut ends shall be treated with one coat of preservative treatment.
2. Plywood: CDX exterior-type, treated (C-C EXT-APA). Dimensions are to be determined by job conditions, and the membrane manufacturer's specifications.
3. Masonry Anchors: Shall be 1/4 inch x 1 inch expanding anchor type, equal to Rawl, Zamac Fastener No. 2870, having stainless steel nail.
4. Nails shall be 16 penny, cement coated for untreated wood, and hot dipped, galvanized nails for exterior treated wood.
5. Verify that existing construction is sound, dry, and secure, so as to adequately support new roofing components.

6. Treated 2X wood nailers shall be installed at appropriate locations. Replace deteriorated wood nailers with new treated wood, as directed by the Owners Representative and in accordance with good roofing practice.
7. All nailers shall be of sufficient thickness to be flush with the existing conditions, and securely anchored with the appropriate fasteners to resist a force of 90 lbs./linear foot in any direction.
8. Install new nailers with 1/8" vent gap between each length.
9. New wood nailers, blocking, etc., shall be chamfered, beveled, shaved, planed, or shimmed as necessary to provide smooth transition to adjacent materials.

SECTION 07220 – ROOF AND DECK INSULATION

1. Installation of the insulation system must be approved by the membrane Manufacturer, and have been tested for the specified wind uplift pressure, using the Manufacturer's specified attachment method.
2. Material installation shall proceed only when weather conditions are in compliance with the Manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to rejection, removal, and replacement at the Contractors expense.
3. Insulation boards shall be a homogeneous board of closed-cell polyisocyanurate with factory laminated fiberglass facer. Insulation shall conform to Federal spec. HH. 1529b and ASTM C-728-72. Insulation shall be factory with square edges, and be approved by the Manufacturer and Designer for use with the specified system. Thickness and density must be such that two layers shall result in an R-30 insulation value.
4. Recovery board insulation (Area 9) shall be a homogeneous board of closed-cell polyisocyanurate with factory laminated fiberglass facer. Insulation shall conform to Federal spec. HH. 1529b and ASTM C-728-72. Insulation shall be factory with square edges, and be approved by the Manufacturer and Designer for use with the specified system. Minimum thickness – 1"
5. Tapered insulation boards shall be a homogeneous board of closed-cell polyisocyanurate with factory laminated fiberglass facer. Insulation shall conform to Federal spec. HH. 1529b and ASTM C-728-72. Insulation shall be factory with square edges, and be approved by the Manufacturer and Designer for use with the specified system. Insulation shall be 1" per foot tapered with a minimum thickness of 1/2".
5. The deck and membrane surfaces shall be smooth, clean, dry, and free of debris and all foreign matter. All roof/deck surfaces shall be inspected prior to the installation of new roof insulation, and the application of new materials will constitute approval of the surface by the Roofing Contractor.
6. The Contractor shall adhere to the insulation and membrane manufacturer's specifications and installation instructions.

7. Insulation board shall be mechanically-attached using approved fasteners at the required rate, with board joints staggered the maximum distance possible between rows and layers.
8. Construct crickets using above specified insulation with a slope of 1" per foot between drains and on the up-slope side of curbed units larger than 4' to ensure positive drainage.
9. Adjacent insulation boards shall be tightly butted, with gaps greater than 1/4 inch filled by cutting out enough material to allow placement of a minimum 3-inch wide piece of similar insulation.
10. Install no more insulation than can be installed with the membrane in the same day. Contractor shall strictly conform to this requirement.

SECTION 07540 – THERMOPLASTIC MEMBRANE ROOFING (BASE BID)

1. Material installation shall proceed only when weather conditions are in compliance with the Manufacturer's recommendations for installation and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to rejection, removal and replacement at the Contractor's expense.
2. The Contractor and his personnel shall be currently approved by the Manufacturer of the approved products as qualified to install the materials of this section. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work in this section.
3. The roofing membrane shall be nominal 0.050 inch thick KEE (ASTM D 6754-02) membrane, reinforced with knitted polyester fabric, manufactured by Seaman Corporation (Wooster, OH), FiberTite® XT.
4. Base flashing shall be the same as the field material. Size shall be as required by job conditions.
5. Other Materials: flashing, sheet goods, caulking, mechanical fasteners and termination bars shall be as supplied and approved by FiberTite and delivered in the Manufacturers labeled containers.
6. Membrane roof system shall meet the following requirements:

Wind uplift rating:	FM I-90
Interior exposure:	UL Fire Classified
Exterior exposure:	UL Class A

7. Verify that the roof deck surface is clean, smooth, properly fastened, free of depressions, waves, or projections. Verify that the roof deck surface meets requirements of the approved membrane and vent system Manufacturers. Application of materials shall constitute acceptance of the surface by the Contractor. The Contractor shall strictly adhere to the Manufacturer's specifications for installation.

8. Place only as much membrane as can be totally installed as a completed section in the same day. All aspects of the system including flashing at all penetrations, walls, etc., shall be completed during each day's work.
 9. The orientation of both end laps and side laps shall be such that the direction of water flow is over the laps. The direction of the overlap shall be changed as the direction of the water flow changes.
 10. Install a mechanically-attached FiberTite membrane system using fasteners and plates supplied or approved by the Manufacturer, at the rates recommended to meet the wind uplift requirements.
 11. Flashing - Flashing at the roof perimeter and at all penetrations including pipes, curbs, walls, and vents shall be installed as shown on the drawings or the membrane Manufacturer's standard details. Flashing shall be fabricated from the roofing membrane using the largest pieces practical, and shall be terminated a minimum of eight (8) inches above roof level (unless Manufacturer's required minimum height is greater). Flashing shall be fully adhered to vertical surfaces and fastened eight (8) inches on center along the top edge. Flashing to roof membrane laps shall be minimum of four (4) inches wide on the roof surface. All flashing shall be sealed to both the penetration and the roof membrane. Flashing shall be installed as roof membrane installation progresses.
 12. Upon completion of the roofing system, equipment and excess material shall be removed from the site.
 13. Where equipment pads or wood sleepers are to be installed over the roofing membrane, an additional layer of the roofing membrane shall be loose-laid between the roofing membrane and the pad or sleeper. Due caution shall be exercised to prevent roofing membrane from being damaged.
 14. Upon completion of the work, and prior to the final payment, the Contractor shall submit the following items to the Owner:
 - A. Manufacturer's 20-year Warranty.
 - B. Contractor's 5-year warranty to Owner.
- i. The Contractor shall guarantee that the work covered under this contract shall remain free from any water penetration and/or physical defects caused by defective workmanship or materials for a period of five (5) years from the date of final acceptance by the Owner
 - ii. Emergency repairs of defects and leaks shall be performed within 24 hours of receiving notice from the Owner. As soon as weather permits, permanent repairs and restoration of affected areas shall be accomplished in a manner conforming to the original contract requirements. This work shall be done without additional cost to the Owner, except if it is determined that such leaks and defects were caused by abuse, lightning, hurricane, tornado, hail storm, or other unusual phenomena.

The Contractor's warranty shall also state that the Owner has the right, at any time during the two-year Contractor's warranty period, to make emergency repairs to protect the contents of the building, or the building itself, from damage due to leaking. The cost of emergency repairs made during the first two years of the warranty period shall be borne by the Contractor, unless it is determined that such leaks and defects were caused by abuse, lightning, hurricane, tornado, hailstorm, or other unusual phenomena, and action by the Owner shall not invalidate the warranty. The Contractor's warranty shall neither replace nor negate any agreement furnished by the Manufacturer.

Final payment will be made to the Contractor only after three (3) copies of the Manufacturer's and Contractor's warranty have been submitted. All such documents shall show the project name, location and the Owner's name. Starting dates of all warranties shall be the date of Owner and Designer acceptance.

SECTION 07560 – FLUID APPLIED ROOFING (ALTERNATE – Areas 2 & 3)

PART 1 - PRODUCTS

1. MANUFACTURER, Basis of Design: The roof system specified in this Section is based upon products of Tremco, Inc., Beachwood, OH, (800) 562-2728, www.tremcoroofing.com that are named in other Part 2 articles. Provide specified products.

2. PERFORMANCE REQUIREMENTS

- General Performance: Rehabilitated roofing shall withstand exposure to weather without failure or leaks due to defective manufacture or installation.
- Accelerated Weathering: Roofing system shall withstand 5000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
- 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.
- Exterior Fire-Test Exposure: Roofing system exterior fire-test exposure performance following application of rehabilitation coating shall not be less than that of the pre-rehabilitated roof performance when tested in accordance with ASTM E108, based upon manufacturer's tests of identical applications.

3. MATERIALS, GENERAL

- General: Rehabilitation materials recommended by roofing system manufacturer for intended use and compatible with components of existing membrane roofing system.

- Infill Materials: Where required to replace test cores and to patch existing roofing, use infill materials matching existing membrane roofing system materials, unless otherwise indicated.
- Temporary Roof Drainage: Design and selection of materials for temporary roof drainage are responsibilities of the Contractor.

4. FLUID-APPLIED ROOFING MEMBRANE COATING

- Polyurethane Elastomeric Fluid-Applied System: Two-coat fluid-applied roofing membrane formulated for application over prepared existing roofing substrate.
- Polyurethane Roof Coating System Base Coat: Single-part moisture-curing, for use with a compatible top coat.
 - Basis of design product: Tremco, AlphaGuard MTS Base Coat.
 - Combustion Characteristics, UL790: Maintains combustion characteristics of existing roof system.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 42 g/L.
 - Accelerated Weathering, 5000 hours, ASTM G154: Pass.
 - Hardness, Shore A, minimum, ASTM D2240: 85.
 - Solids, by volume, ASTM D2697, minimum: 87 percent.
 - Minimum Thickness, Base Coat on Smooth Surface: 48 mils (1.22 mm) wet.
- Polyurethane roof coating system top coat, low odor low VOC single-part, for application over compatible base coat.
 - Basis of design product: Tremco, AlphaGuard MTS Top Coat.
 - Combustion Characteristics, UL790: Maintains combustion characteristics of existing roof system.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 44 g/L.
 - Solar Reflectance Index (SRI), ASTM E1980: For white, not less than 108.
 - Accelerated Weathering, 5000 hours, ASTM G154: Pass.
 - Hardness, Shore A, minimum, ASTM D2240: 85.
 - Solids, by volume, ASTM D2697: 87.

- Minimum Thickness: 32 mils (0.81 mm) wet over cured base coat.
- Minimum Thickness, Slip-Resistant Coat: 20 mils (0.50 mm) wet.
- Color: White.
- Primer for Asphaltic and Single-Ply Membranes: Water-based, polymer-modified quick-dry low odor primer.
 - Basis of design product: Tremco, AlphaGuard WB Primer.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 1 g/L.
 - Solids, by weight: 70 percent.
- Primer for Masonry Surfaces: Two-part high-solids epoxy-penetrating low-odor primer for masonry and concrete surfaces.
 - Basis of design product: Tremco, AlphaGuard C-Prime.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 0 g/L.
 - Solids, by weight: 100 percent.
- Primer for Non-Porous Surfaces: Single-part, water based primer to promote adhesion of urethanes to metals, PVC and other non-porous surfaces.
 - Basis of design product: Tremco, AlphaGuard M-Prime.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 22 g/L.
 - Nonvolatile Content, minimum, ASTM D2369: 5 percent.
 - Density at 77 deg F (25 deg C): 8.3 lb/gal (1kg/L).
- Primer for Intercoat and Substrate Adhesion: Single-part, quick-drying primer to promote adhesion of urethane products to previous urethane coats and to other approved surfaces.
 - Basis of design product: Tremco, Geogard Primer.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 100 g/L
 - Coverage Rate, 400 sq. ft/ gal. (10 m²/ L): 4 mils (0.10 mm) wet.

- Fluid-Applied Roofing Reinforcing Fabric: Medium-fine fiber, rapid wetting chopped strand mat intended for reinforcement of compatible fluid-applied membranes and flashings.
- Basis of design product: Tremco, AlphaGuard Glass Mat.
- Binder: Highly soluble powdered polyester.

5. AUXILIARY ROOFING REHABILITATION MATERIALS

- General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with existing roofing system and roofing coating system.
- Seam Sealer: Aromatic polyurethane sealer, single-component, high solids, moisture curing, formulated for compatibility and use with a variety of roofing and flashing substrates.
 - Basis of design product: Tremco, GEOGUARD Seam Sealer.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 189 g/L.
 - Tensile Strength, ASTM D412: 270 psi (1860 kPa).
 - Tear Strength, ASTM D412: 35 pli (6.13 kNm).
 - Elongation, ASTM D412: 220 percent.
 - Color: Gray.
- Joint Sealant: Elastomeric joint sealant compatible with applied coating, with movement capability appropriate for application.
 - 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.
 - Basis of design product: Tremco, TremSEAL Pro.
 - Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.
 - Hardness, Shore A, ASTM C661: 40.
 - Adhesion to Concrete, ASTM C794: 35 pli.
 - Tensile Strength, ASTM D412: 350 psi (2410 kPa).
 - Color: Closest match to substrate.

- Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

6. WALKWAYS

- Slip Resistant Product for Fluid-Applied Walkways:
- Aggregate, Slip Resistant Silica Sand: Silica sand, broadcast into fluid-applied roof coating products for use as aggregate fill for slip-resistant, abrasion-resistant coating applications.
 - Basis of design product: Aggregate, Slip Resistant Silica Sand.
 - Size: 20 - 40 mesh.
 - Application Rate: Minimum 20 lb/100 sq ft (1 k/m²).

PART 2 - EXECUTION

1. EXAMINATION

- Examine existing roofing substrates, with Installer present, for compliance with requirements and for other conditions affecting application and performance of roof coatings
- For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance.
- Verify compatibility with and suitability of substrates.
- Verify that substrates are visibly dry and free of moisture.
- Verify that roofing membrane surfaces have adequately aged to enable proper bond with base coat.
- Verify that roofing membrane is free of blisters, splits, open laps, indications of shrinkage, and puncture damage or other indications of impending roof system failure.
- Commencing application of coatings indicates acceptance of surfaces and conditions.

2. PREPARATION

- Protect existing roofing system that is indicated not to be rehabilitated, and adjacent portions of building and building equipment.
- Mask surfaces to be protected. Seal joints subject to infiltration by coating materials.
- Limit traffic and material storage to areas of existing roofing membrane that have been protected.

- Maintain temporary protection and leave in place until replacement roofing has been completed.
- Shut down air intake equipment in the vicinity of the Work in coordination with the Owner. Cover air intake louvers before proceeding with coating work that could affect indoor air quality or activate smoke detectors in the ductwork.
- Verify that rooftop utilities and service piping affected by the Work have been shut off before commencing Work.
- 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. Use roof-drain plugs specifically designed for this purpose. Remove roof-drain plugs at end of each workday, when no work is taking place, or when rain is forecast.
- Do not permit water to enter into or under existing membrane roofing system components that are to remain.

3. ROOFING COATING PREPARATION

- Removal of Wet Insulation: Remove portions of roofing membrane with underlying wet insulation. Remove wet insulation, fill in tear-off areas to match existing insulation and membrane, and prepare patched membrane for application of roof coating as specified below.
- Repair of Ponding Areas: Repair areas indicated as ponding areas or areas of inadequate drainage by removing roof membrane, adding additional insulation as required to provide minimum slopes to drain required by roofing rehabilitation coating manufacturer, and replace membrane with material matching existing. Submit photographic report indicating compliance.
- Membrane Surface Preparation:
 - Remove walkway pads and pavers from roofing membrane. Discard damaged pavers.
 - Remove blisters, ridges, buckles, roofing membrane fastener buttons projecting above the membrane, and other substrate irregularities from existing roofing membrane that would inhibit application of uniform, waterproof coating.
 - Broom clean existing substrate.
 - Substrate Cleaning: Clean substrate of contaminants such as dirt, debris, oil, and grease that can affect adhesion of coating by power washing at maximum 2,000 psi (13,800 kPa). Dispose of waste water in accordance with requirements of authorities having jurisdiction.

- Verify that existing substrate is dry before proceeding with application of coating. Spot check substrates with an electrical capacitance moisture-detection meter.
- Verify adhesion of new products.
- Existing Flashing and Detail Preparation: Repair flashings, gravel stops, 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.
 - 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.
- Roof Drains: Remove drain strainer and clamping ring. Grind metal surfaces down to clean, bare, metal.
- Surface Priming: Prime surfaces to receive fluid-applied coating using coating manufacturer's recommended product for surface material. Apply at application rate recommended by manufacturer.
 - Ensure primer does not puddle and substrate has complete coverage.
 - Allow to cure completely prior to application of coating.

4. FLUID-APPLIED FLASHING APPLICATION

- Fluid-Applied Flashing and Detail Base Coat Application: Complete base coat and fabric reinforcement at parapets, curbs, penetrations, and drains prior to application of field of fluid-applied membrane. Apply base coat in accordance with manufacturer's written instructions.
 - Apply base coat on prepared and primed surfaces and spread coating evenly. Extend coating minimum of 8 inches (200 mm) up vertical surfaces and 4 inches (100 mm) onto horizontal surfaces.
 - Back roll to achieve minimum coating thickness indicated on product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 - Reinforcing Fabric: Embed fabric reinforcement into wet base coat. Lap adjacent flashing pieces of fabric minimum 3 inches (75 mm) along edges and 6 inches (150 mm) at end laps. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.
 - Roof Drains: Install base coat onto surrounding membrane surface and metal drain bowl flange. Install target piece of fabric

reinforcement immediately into wet base coat and roll to fully embed and saturate fabric. Reinstall clamping ring and strainer following application of top coat. Replace broken/missing drain ring clamping bolts.

5. FLUID-APPLIED MEMBRANE APPLICATION

- Fluid-Applied Membrane Base Coat: Apply base coat to field of membrane in accordance with manufacturer's written instructions.
 - Apply base coat on prepared and primed surfaces and spread coating evenly.
 - Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 - Fabric Reinforcement: Embed fabric reinforcement into wet base coat. Lap adjacent pieces of fabric minimum 3 inches (75 mm) along edges and 6 inches (150 mm) at end laps. Roll surface of fabric reinforcing to completely embed and saturate fabric. Leave finished base coat with fabric free of pin holes, voids, or openings.
- Fluid-Applied Membrane Top Coat: Apply top coat to field of membrane and flashings uniformly in a complete, continuous installation.
 - Allow base coat to cure prior to application of top coat.
 - Following curing of base coat and prior to application of top coat, sand raised or exposed edges of fabric reinforcement.
 - Prime base coat prior to application of top coat if top coat is not applied within 72 hours of the base coat application, using manufacturer's recommended primer.
 - Apply top coat extending coating up vertical surfaces and out onto horizontal surfaces. Install top coat over field base coat and spread coating evenly.
 - Back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 - Avoid foot traffic on new fluid-applied membrane for a minimum of 24 hours.

6. WALKWAY INSTALLATION

- Install walkways following application of coating. Locate as indicated, or as directed by Owner.
- Slip-Resistant Walkway Topcoat: Apply walkway second topcoat following application and curing of top coat. Locate as indicated on Drawings.
 - Mask walkway location with tape.
 - Prime first top coat prior to application of walkway top coat if walkway top coat is not applied within 72 hours of the first top coat application, using manufacturer's recommended primer.
 - Apply walkway topcoat and back roll to achieve minimum coating thickness indicated on Part 2 product listing, unless greater thickness is recommended by manufacturer; verify thickness of base coat as work progresses.
 - Broadcast Slip-Resistant Top Coat Aggregate in wet top coat at rate indicated in Part 2 product listing or as otherwise recommended by coating manufacturer. Back roll aggregate and top coat creating even dispersal of aggregate. Remove masking immediately.

7. FIELD QUALITY CONTROL

- Roof Inspection: Contractor shall engage roofing system manufacturer's technical personnel to inspect roofing installation, and submit report. Notify Owner's Consultant 48 hours in advance of dates and times of inspections. Inspect work as follows:
 - Upon completion of preparation of first component of work, prior to application of re-coating materials.
 - Following application of re-coating to flashings and application of base coat to field of roof.
 - Upon completion of re-coating but prior to re-installation of other roofing components.
- Repair fluid-applied membrane where test inspections indicate that they do not comply with specified requirements.
- Arrange for additional inspections, at Contractor's expense, to verify compliance of replaced or additional work with specified requirements.

8. PROTECTING AND CLEANING

- Protect roofing system from damage and wear during remainder of construction period.

- Correct deficiencies in or remove coating that does not comply with requirements, repair substrates, and reapply coating.
- Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

9. WARRANTY

- **Manufacturer's Warranty:** Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.
 - **Form of Warranty:** Manufacturer's standard warranty form.
 - **Scope of Warranty:** Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.
 - **Warranty Period:** 25 years from date of completion.
- **Manufacturer Inspection Services:** By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.
 - Inspections to occur in following years: 2, 5, 10, 15 following completion.
- **Installer Warranty:** Installer's warranty signed by Installer, as follows.
 - **Form of Warranty:** Form acceptable to Roofing Manufacturer and Owner.
 - **Scope of Warranty:** Work of this Section
 - **Warranty Period:** 5 years from date of completion.

SECTION 07600 - FLASHING AND SHEET METAL

1. All work under this section shall be in accordance with the Sheet Metal and Air Conditioning Contractor's National Association (SMACNA) Architectural Sheet Metal Manual (Current Edition).
2. Except where the Membrane Manufacturer's coated metal is required, sheet metal material shall be as follows:
 - Counterflashings: .032 Mill Finish aluminum.

- Exposed edge metal, gutters, conductor heads and downspouts: .032 Kynar aluminum from Manufacturer's standard colors, conforming to existing size and location.
3. Copings, counter-flashings and edge metal shall have a continuous 20 ga. cleat. All materials are to be approved by the roof Membrane Manufacturer and Owner.
 4. Edge metal shall be formed with a face dimension to match the total of the existing edge metal and fascia.
 5. Caulking shall be Dow-Corning 795, neutral-cure silicone sealant, Sonneborn NP-1 or approved equal.
 6. Sheet metal fabrication and installation, as follows:
 - Form sections square, true, and accurate to size, free from distortion, sharp edges, and other defects detrimental to appearance or performance.
 - Form sections in ten (10) foot lengths, or shorter as required by construction.
 - Verify the installation of all flashing, blocking, etc. prior to installation of sheet metal. Verify that all surfaces are clean and free of debris.
 - Install coping, scuppers, downspouts, expansion joint covers, etc., as necessary, in conformance with the membrane Manufacturer's specifications and details provided.
 - All dissimilar metals shall be separated by one (1) ply of uncured EPDM set in bonding adhesive.
 - Secure flashings using specified type of fasteners.
 - Apply two continuous beads of sealant at the junction of metal/non-metal interfaces and at all metal/metal overlaps.

SECTION 09990 – PAINT RESTORATION

1. Material installation shall proceed only when weather conditions are favorable and no precipitation is imminent. Materials installed during adverse weather conditions shall be subject to rejection, including removal and replacement at the Contractors expense.
2. Deliver materials to the project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label.
3. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F.
4. Maintain storage containers in a clean condition, free of foreign materials and residue. Maintain environmental conditions (temperature, humidity and ventilation) within

limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

5. Apply waterborne paints only when temperature of surfaces to be painted and surrounding air are between 50 and 90°F unless otherwise stated in the manufacturer's instructions. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95°F. Do not apply paint in snow, rain, fog or mist; or when relative humidity exceeds 85%; or at temperatures less than 5°F above the dew point; or to damp or wet surfaces.
6. Acceptable Manufacturer: Rust-Oleum Corporation, which is located at 11 E Hawthorn Parkway, Vernon Hills, IL 60061; 847-367-7700; Web: www.rustoleum.com
7. Substitutions: As approved in writing by the Designer. Requests for substitutions shall be considered in accordance with provisions of Section 01610 of these Specifications.
8. Products shall comply with USGBC, LEED version 2.2, EQ Credit 4.2 Low Emitting Materials, Paints and Coatings criteria for limits on Volatile Organic Compounds (VOC).
9. Material compatibility: Provide block fillers, primers and finish=coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
10. VOC Classification: Provide materials, including primers, undercoats and finish-coat materials that meet local air quality management district regulations.
11. Color: Match existing or Owner to choose from standard colors.
12. Application Rate: Coating thickness for primer, intermediate, barrier and finish coats shall be measured as Dry Film Thickness (DFT) and comply with manufacturer's published recommendations.
13. Primer: Rust-Oleum® Stops Rust® Clean Metal Primer
14. Finish: Rust-Oleum® Stops Rust® Protective Enamel
15. Do not begin application until substrates have been properly prepared.
16. Remove hardware and hardware accessories, plates, machined surfaces, lightning protection and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting. After completing painting operations, reinstall items removed using workers skilled in the trades involved.
17. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease

before cleaning. Schedule cleaning and painting so dust and other contaminants from the cleaning process and adjacent work will not fall on wet, newly painted surfaces.

18. Surface preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified. Provide barrier coats over incompatible primers or remove and reprime. Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC recommendations.
19. Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied. Apply coatings by brush, roller, spray or other applicators according to the manufacturer's written instructions. The number of coats and film thickness required is the same regardless of application method.
20. After completing painting, clean all paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.
21. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by the Designer.

FORM OF PROPOSAL

The undersigned, as bidder, hereby declares that the only person or persons interested in this proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this proposal or in the contract to be entered into; that this proposal is made without connection with any other person, company or parties making a bid or proposal; and that it is in all respects fair and in good faith without collusion or fraud. The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the specifications for the work and the contract documents relative thereto, and has read all special provisions furnished prior to the opening of bids; that he has satisfied himself relative to the work to be performed.

The Bidder proposes and agrees, if this proposal is accepted, to contract with Durham Technical Community College, the Owner, in the form of a contract specified, to furnish all necessary material, equipment, machinery, tools apparatus, means of transportation, and labor necessary to complete the construction of Reroofing, in full and in complete accordance with the specifications, and contract documents, to the full and entire satisfaction of The Owner, with a definite understanding that no money will be allowed for extra work except as set forth in the General Conditions and Contract Documents, for the sum of:

BASE BID

Install FiberTite membrane over existing roof and decks as specified

_____Dollars

\$ _____

ALTERNATE BID (Areas 2 & 3)

Install Fluid-Applied roof system over existing membrane roofs as specified

_____Dollars

\$ _____

UNIT PRICES

1. Replace deteriorated wood nailers \$ _____ per board ft.
2. Replace existing wet insulation (1000 s.f. in Base Bid)
\$ _____ per square ft.

3. Repair rusted metal deck \$ _____ per square ft.

4. Replace deteriorated metal deck (1000 s.f. in Base Bid)
\$ _____ per square ft.

Unit prices quoted and accepted for the Base Bid shall apply throughout the life of the Base Bid contract, except as otherwise specifically noted. Unit prices shall be applied, as appropriate, to compute the total value of changes in the scope of work, all in accordance with the Contract Documents.

The Bidder further proposes and agrees hereby to commence work under his contract on a date to be specified in a written order by the Owner, and shall fully complete all work there under within _____ Consecutive Calendar Days from and including said date.

Respectfully submitted this _____ day of _____, 2024.

Name of firm or corporation making bid

Witness By: _____

_____ Title: _____
(Proprietorship or partnership) (Owner, Partner or Corp. Pres. Or Vice Pres. only)

Address: _____

License No: _____

ATTEST:

By: _____
Title: _____
(Corp. Sec. or Assistant. Sec. only)

(Corporate Seal)

Addendum received and used in computing bid(if applicable)

Addendum No. 1 _____

Addendum No. 2 _____

SCHEDULE OF COST

Section 01100 - General Requirements

License, Permits, & Fees \$ _____

Administration \$ _____

Temporary Facilities \$ _____

Roof Drain Tests \$ _____

Section 02220 – Demolition

Demolition \$ _____

Interior Protection \$ _____

Section 05310 – Steel Deck

Metal Deck \$ _____

Section 06100 – Rough Carpentry

Wood \$ _____

Section 07220 – Roof and Deck Insulation

Insulation \$ _____

Section 07540 – Thermoplastic Membrane

Membrane \$ _____

Section 07600 – Flashing and Sheet Metal

Sheet Metal \$ _____

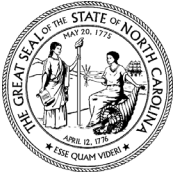
Section 09990 – Paint Restoration

Paint \$ _____

SUBTOTAL \$ _____

Performance and Payment Bond \$ _____

TOTAL \$ _____



ATTACHMENT D: HUB Supplemental Vendor Information

Solicitation #: _____

Vendor Name: _____

Historically Underutilized Businesses (HUBs) consist of minority, women, and disabled business firms that are at least fifty-one percent owned and operated by an individual(s) from one of these categories. Also included in this category are disabled business enterprises and non-profit work centers for the blind and severely disabled.

Pursuant to G.S. 143B-1361(a), 143-48 and 143-128.4, the State invites and encourages participation in this procurement process by businesses owned by minorities, women, the disable, disabled business enterprises, and non-profit work centers for the blind and severely disabled. This includes utilizing individual(s) from these categories as subcontractors to perform the functions required in this Solicitation.

The Vendor shall respond to questions below, as applicable.

PART I: HUB CERTIFICATION

Is Vendor a NC-certified HUB entity? ☐ **Yes** ☐ **No**

If **yes**, provide Vendor #: _____

If **no**, does Vendor qualify for certification as HUB? ☐ **Yes** ☐ **No**

Vendors that check "yes" will be referred to the HUB Office for assistance in acquiring certification.

PART II: PROCUREMENT OF GOODS - SUPPLIERS

For *Goods* procurements, are you using Tier 2 suppliers? ☐ **Yes** ☐ **No**

If **yes**, then provide the following information:

Company Name	Company Address	Website Address	Contact Name	Contact Email	Contact Phone	NC HUB certified?	Percent of total bid price

PART III: PROCUREMENT OF SERVICES - SUBCONTRACTORS

For *Services* procurements, are you using Subcontractors to perform any of the services being procured under this solicitation? ☐ **Yes** ☐ **No**

If **yes**, then provide the following information:

Company Name	Company Address	Website Address	Contact Name	Contact Email	Contact Phone	NC HUB certified?	Percent of total bid price

Need more information?

Questions concerning the completion of this form should be presented during the Q&A period through the process defined in the Solicitation document.

Questions concerning NC HUB certification, contact the [North Carolina Office of Historically Underutilized Businesses](#) at 984-236-0130 or huboffice.doa@doa.nc.gov