



DALTON PUBLIC SCHOOLS

PURCHASING DEPARTMENT

REQUEST FOR BID

FOR

ROOF WORK NORTHSTAR AT MORRIS ST

2018-2019 DALTON PUBLIC SCHOOLS

Northstar at Morris St Roof Replacement Project

BID NUMBER (#0017 Northstar at Morris St Roof Replacement)

ISSUED September 20, 2018

Pre-Bid Meeting – October 9th, 2018 10:00 a.m.

Bid opening October 24th 2018 11:00 a.m.

412 S Hamilton St, Dalton, Ga 30720

Invitation to Bid

To: All Bidders

The Dalton Public School System invites you to bid to replace the media center roof on the Southside of Northstar at Morris St, 307 Fredrick St., Dalton, GA 30720. Bid prices quoted shall remain effective until **January 7th, 2018**. *The prices in this bid supersede any other quote given to Dalton Public Schools to date on the same items.*

Responses to this Invitation to Bid shall be submitted in a sealed envelope marked “**(#0017 Northstar at Morris Roof Replacement.**” Bids may be mailed or delivered to the Dalton Public School System, Maintenance and Operations Dept., 412 S. Hamilton St, P.O. Box 1408, Dalton, Georgia 30722-1408 or hand delivered to the Purchasing Department prior to bid opening time.

Bids will be opened at the Dalton City Schools Maintenance and Operations Office, First Floor Conference Room, 412 S. Hamilton St., Dalton, Ga. 30721 on **October 24th, 2018 @ 11 AM.**

Bidders are required to use the enclosed specifications’ forms. They are instructed to read carefully all items, conditions and specifications in this letter and the attached pages before completing their bid.

The Dalton Public School System reserves the right to accept or reject any and all bids, and to waive any irregularity in bids received to award the entire bid to one vendor or to make awards by groups or line items, whichever is in the best interest of the Dalton Public School System.

Any questions concerning this bid may be forwarded to:
rusty.lount@dalton.k12.ga.us

Your interest and participation are solicited and appreciated.

Sincerely,

Rusty Lount
Director of Operations
Dalton Public Schools

General Terms and Conditions

1. Bids should be mailed in ample time to assure delivery prior to the bid opening date and time.

Mailing Address:

Dalton Public School System
412 S Hamilton St.
P.O. Box 1408
Dalton, Georgia 30722-1408

2. Bids may be hand delivered to the Maintenance and Operations Department, Dalton Public School System prior to bid opening time.

3. Bids must be on the specifications forms provided within this Invitation to Bid, sealed within an envelope marked as shown in the cover letter.

No awards of any kind are made at the time of the bid opening. A copy of the bid tabulations and/or the awards will be available upon request for any vendor who submitted a bid. This information may be obtained after the bid has been awarded.

4. Bids must be submitted based on the installation of the new Southside roof section of Northstar at Morris St.

5. All Vendors must meet trucks to receive shipment. Dalton Public Schools personnel will not meet carrier to receive delivery.

6. Bid submitted must include any and all freight and handling cost. The Dalton Public School System will pay no additional charges.

7. The bidder's and manufacturer's representative's responsibilities to the Dalton Public School include, but are not limited to, handling any problems with products supplied and any necessary instruction on use and upkeep.

8. When an article of particular make or trade name is specified, it is meant to establish a quality standard and is not intended to eliminate competing articles of equal quality. Bidders are at liberty to quote on substitutions provided complete specifications are included with the bid. Vendor is also required to describe all exceptions to our specifications and include a color photo. We need the URL for the manufacturer website for the product listed. If no substitutions are indicated, it will be assumed the quotations are based on our specifications.

9. Samples may be requested for comparison purposes. Samples, when required, must be furnished free of expense to Dalton Public Schools, and must be tagged with the bidder's name and bid item number. If samples are not used or destroyed in testing, the bidder must claim them within thirty (30) days from date of bid or they will become the property of the school system. If there is a sample of the item within 30 miles that can be viewed please let us know.
10. Time of delivery is a part of this consideration and must be stated in definite terms and must be adhered to completely. Delivery must be complete on or before the specified date. Items will not need to be received on site before **October 24th 2018.**
11. No partial payment will be made. The total amount of each purchase order will be paid only after the complete order has been received in good condition. The final inspection and approval must be made by an authorized representative of the Dalton Public School System.
12. The bidder, by submitting their bid, certifies that to the best of their knowledge, neither they nor any of their suppliers discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin.
13. Dalton Public Schools has the right to award the entire bid to one vendor or to separate the bid and order by line item. Dalton Public School System reserves the right to reject any or all bids. We will do whatever is in the best interest of the school system.
14. Vendor is responsible for the removal from the location any and all waste materials or other debris from the preparation, delivery, assembly and installation of items received and all cost associated with the disposal of the debris.

BIDDERS DECLARATION

The bidder understands, agrees and warrants:

That the bidder has carefully read and fully understands the full scope of the specifications. That the bidder has the capability to successfully undertake and complete the responsibilities and obligations in said specifications.

That the installer must have million dollar general liability policy, proof of workers compensation on all workers, and proof of vehicle insurance that covers all vehicles on school property and proof of all insurances must be included in the bid.

That this bid may be withdrawn by requesting such withdrawal in writing at any time prior to **October 24th, 2018** but may not be withdrawn after such date and time.

A. That the Dalton Public School System reserves the right to reject any or all bids and to accept that bid which will, in its opinion, best serve the public interest. The Dalton Public School System reserves the right to waive any technicalities and formalities in the bidding. Dalton Public Schools reserves the right to select the owner-preferred manufacturer for any and all products as listed in the bid documentation.

That by submission of this bid the bidder acknowledges that the Dalton Public School System has the right to make any inquiry or investigation they deem appropriate to substantiate or supplement information supplied by the bidder.

If a partnership, a general partner must sign.

If a corporation, the authorized corporate officer(s) must sign and the corporate seal must be affixed to this bid.

BIDDER:

Name

Title

Name

Title

AFFIX CORPORATE SEAL (If Applicable)

CERTIFICATE OF NON-DISCRIMINATION

In connection with the performance of work under this contract, the bidder agrees as follows:

The bidder agrees not to discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, ancestry or disability. The vendor shall take affirmative action to insure that employees are treated without regard to their race, creed, color, sex, national origin, ancestry or disability. Such action shall include, but not be limited to the following: employment, upgrading, demotion, transfer, recruiting or recruitment, advertising, lay-off or termination, rates of pay or other compensation and selection for training, including apprenticeship.

In the event of the bidders' non-compliance with this non-discrimination clause, the contract may be canceled or terminated by the Dalton Public School System. The bidders may be declared, by the school system, ineligible for further contracts with the Dalton Public School System until satisfactory proof of intent to comply shall be made by the vendor.

The bidder agrees to include this non-discrimination clause in any sub-contracts connected with the performance of this agreement.

BIDDER

SIGNATURE

TITLE

NON-COLLUSION AFFIDAVIT

The following affidavit is to accompany the bid:

STATE OF

COUNTY OF

Owner, Partner or Officer of Firm

Company Name, Address, City and State

Being of lawful age, being first duly sworn, on oath says that he/she is the agent authorized by the bidder to submit the attached bid. Affidavit further states as bidder, that they have not been a party to any collusion among bidders in restraint of competition by agreement to bid at a fixed price or to refrain from bidding; or with any office of the Dalton Public School System, or any of their employees as to quantity, quality or price in the prospective contract; or any discussion between bidders and any official of the Dalton Public School System, or any of their employees concerning exchange of money or other things of value for special consideration in submitting a sealed bid for:

FIRM NAME _____

SIGNATURE _____

TITLE _____

Subscribed and sworn to before me this _____ day of _____ 20_____.

NOTARY PUBLIC

STATE OF GEORGIA PROMPT PAY ACT AFFIDAVIT

THIS AFFIDAVIT IS TO ACCOMPANY THE BID

GEORGIA PROMPT PAY ACT: The Georgia Prompt Pay Act was enacted by the General Assembly in 1994 and took effect January 1, 1995. This act requires owners to pay contractors within 15 days of receipt of a pay request by the owner or the owner's representative. If payment is not made the owner shall pay the contractor 1% per month interest on the delayed payment. Additionally, the contractor must pay subcontractors within 10 days of receipt of payment from the owner.

This Act is Code Section 13-11-1 (Georgia Laws of 1994, p. 1398 par. 4)

Firm Name _____

Signature _____

Title _____

Subscribed and Sworn to before me this _____ day of _____, 20_____

Notary Public

CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with Dalton Public Schools has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with Dalton Public Schools, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to Dalton Public Schools at the time the subcontractor(s) is retained to perform such service.

EEV / Basic Pilot Program* User Identification Number

BY: Authorized Officer or Agent
(Contractor Name)

Date

Title of Authorized Officer or Agent of Contractor

Printed name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 20____

Notary Public
My Commission Expires:

* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the “EEV / Basic Pilot Program” operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA)

DALTON PUBLIC SCHOOLS

Operations Department

Northstar at Morris St Southside Media Center Roof Replacement bid

Specifications

- Color photo and complete description to accompany each item bid other than example.
- URL for manufacturer website for product listed that is different from example.
- Location where sample can be viewed within 30 miles of Dalton, GA or sample provided to Dalton at vendor cost (and returned at vendor cost) if sample is not in use within 30 miles of Dalton,
- Units shipped to be installed at Northstar at Morris St (NS) based on school code listed in () no earlier than **October 24th, 2018 and must be installed by January 7th, 2018.**
- Price to be effective until **January 7th, 2018.**
- Price quoted **supersedes** any other quote given to DPS to date on same items,

Northstar at Morris St Southside media center Roof Replacement needed:

THERMOPLASTIC PVC MEMBRANE ROOFING

PART 1 - GENERAL CONDITIONS

1.01 DESCRIPTION

Scope - To install a complete mechanically fastened PVC (Polyvinyl Chloride) roofing system including membrane, flashings and other components.

A. Northstar – Southside media center roof replacement

1. The existing roof systems will be removed down to the deck prior to the new roof replacement. The selected contractor will replace areas with new decking and install a new PVC roof system in a timely matter after roof removal is complete.
2. Cover over drains with new decking and filler.
3. Install gypsum board rigid insulation underlayment over roof decking as required to meet fire code requirements.
4. Install tapered polyisocyanurate sloping to the outside edge using mechanical fasteners.
5. Install **80mil** minimum Mechanically Fastened PVC Membrane over polyisocyanurate.
6. Flash all curbs, pipes and projections per manufacture specification.
7. Flash walls with PVC **80mil** membrane per specification.
8. Install new gutters and downspouts around media center and canopy roof
9. Install Tread around HV/AC Units.
10. Supply owner with Manufacturer's 20 year system warranty.
11. Supply owner with 2 yr. installation warranty.
12. Follow all OSHA safety standards.

13. Clean up and take away all debris. Debris left on site during construction must be maintained in a waste removal container.
14. Provide all required permits, fees, licenses.
15. The roofing contractor is responsible to provide portable sanitary facilities for all personnel & to provide adequate power as required to run any power equipment.
16. Provide owner with Preventative Maintenance plan for area being reroofed.

B. Related Work

The work includes but is not limited to the installation of:

1. Substrate Preparation
2. Vapor Barrier
3. Fire rate barrier (Gypsum board)
4. Wood Blocking
5. Insulation
6. Separation Layers
7. Roof Membrane
8. Fasteners
9. Adhesive for Flashings
10. Roof Membrane Flashings
11. Walkways
12. Metal Flashings
13. Sealants

C. Upon successful completion of work the following warranties may be obtained:

1. 20 year Manufacturer's Warranty
2. 2 year Roofing Installer Warranty

1.02 QUALITY ASSURANCE

A. Manufacturer: Company with min. 5 years successful experience in manufacture of roofing systems of type specified, with record of installed projects min. of 5 years successfully in place.

1. Obtain primary flexible sheet roofing from single manufacturer.
2. Provide secondary materials recommended by manufacturer of primary materials.

B. Installer: Firm shall have a min. 5 years successful experience in installation of roofing systems similar to those required for Project and acceptable to or licensed by manufacturer of primary roofing materials.

1. Applicator shall perform work associated with flexible sheet roofing, including (but not limited to) vapor retarders, insulation, flashing and counter flashing, expansion joints, and flexible sheet joint sealers.
2. Applicator personnel trained and authorized by the manufacturers in those procedures shall only complete all work pertaining to the installation of the roof membrane and flashings.

- C. Certificate of Compliance: Submit, as part of Shop Drawings, certification from manufacturer of product or materials furnished herein, stating that product(s) and / or material (s) being furnished comply with technical provisions contained herein.
 - 1. Any and all deviations from technical provisions of specifications shall be specifically noted.
- D. Certification by Manufacturer: Submit certifications by the manufacturers of the roofing and insulation that materials supplied comply with requirements of the identified ASTM standards.
- E. Producer's Statement of Applicability: Submit from manufacturer or other producer, a written-certified statement that producer reviewed proposed application of product on Project.
 - 1. Statement shall state that producer agrees with or does not object to Owner's specification and Contractor's selection of product for use in Work.
 - 2. Statement also state that proposed application of product on project is suitable and proper.
- F. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification necessary in connection with fire and extended coverage insurance on roofing and associated work.
- G. Upon completion of the installation the roofing contractor will submit to the manufacturers a certification that all work has been done in strict accordance with the contract specifications and the manufacturer's requirements, an inspection shall be made by the manufacturer's technical department to review the installed roof system.
- H. There shall be no deviation made from the Project Specification or the approved shop drawings without prior written approval by the Owner.

1.03 SUBMITTALS

At the time of bidding, the Installer shall submit to the Owner (or Representative) the following:

- A. Product Data: Submit specifications, installation instructions and general recommendations from manufacturers of flexible sheet roofing system materials, for types of roofing required.
- B. Samples of each primary component to be used in the roof system and the manufacturer's current literature for each component.
- C. Written approval by the insulation manufacturer (as applicable) for use and performance of the product in the proposed system.
- D. Sample copy of Manufacturer's warranty.
- E. Sample copy of Installer's warranty.
- F. Dimensioned shop drawings which shall include:

1. Outline of roof with roof size and elevations shown.
 2. Details of flashing methods for penetrations.
 3. Indicate layout of Gypsum board fire barrier.
 4. Indicate layout of tapered insulation materials.
- G. Certifications by manufacturers of roofing and insulating materials that all materials supplied comply with all requirements of the identified ASTM and other industry standards or practices.
- H. Certification from the Installer that the system specified meets all identified code and insurance requirements as required in the specifications.
- I. Safety Data Sheets (SDS)

1.04 CODE REQUIREMENTS

- A. The applicator shall submit evidence that the roof system is approved or listed by the following test organizations. These requirements are minimum standards and no roofing work shall commence without written documentation of the system's compliance, as required in the "Submittals" section of this specification.
- B. UL Listing: Provide labeled materials tested and listed by UL in "Building Materials Directory" for application indicated, with "Class A" rated materials/system for roof slopes shown:
1. Fire Performance Characteristics: Provide insulation materials identical to those whose fire performance characteristics, as listed for each material or assembly of which insulation is part, determined by testing, per methods indicated below, by UL or other testing and inspecting agency acceptable to authorities having jurisdiction:
 - a. Surface Burning Characteristics: ASTM E 84.
 - b. Fire Resistance Ratings: ASTM E 119.
 - c. Combustion Characteristics: ASTM E 136.
- C. FM Listing: Provide roofing system and component materials which have been evaluated by Factory Mutual System for fire spread, wind-uplift and hail damage and are listed in 'Factory Mutual Approval Guide' for Class I Construction.
1. Provide roof covering materials bearing FM approval marking on bundle, package or container, indicating that the material has been subjected to FM's examination and follow-up service.
 2. Installation, including anchorage, to meet requirements of FM-I-90 wind load classification with FM 129S perimeter installation. Provide test data verifying compliance.
- D. Building Code Compliance: Roofing system, including edge securement, to comply with applicable sections of current International Building Code and Standard Building Code of Georgia.
1. Edge metal installation shall comply with provisions of Section 1504.5 "Edge Securement for low-sloped Roofs" of the Standard Building Code of Georgia.

2. Low-slope membrane roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with Chapter 16, except that the basic wind shall be determined from Figure 1609.
3. Design, fabrication, installation and testing of edge metal shall meet ANSI/SPRI ES-1 standards.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All products delivered to the job site shall be in the original unopened containers or wrappings bearing all seals and approvals.
- B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.
- C. Membrane rolls shall be stored lying down on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.
- D. As a general rule all adhesives shall be stored at temperatures between 40°F (4°C) and 80°F (27°C). Refer to adhesive manufacturer's instructions contained on adhesive canister for specific storage instructions
- E. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.
- F. All materials which are determined to be damaged by the Owner's Representative or Manufacturer are to be removed from the job site and replaced at no cost to the Owner.

1.06 JOB CONDITIONS

- A. Prior to application of roofing system, the roofing contractor shall perform a detailed inspection of the substrate onto which the roofing system will be placed and other job conditions which affect the work performed under this Section.
 1. Immediately notify the contractor of any discrepancies noted.
 2. Commencement of roofing activities shall be construed as acceptance of deck as being suitable for installation of roofing system and, upon the conclusion of the work, issuance of the specified warranties.
- B. Manufacturer's materials may be installed under certain adverse weather conditions but only after consultation with Manufacturer, as installation time and system integrity may be affected.
- C. Only as much of the new roofing as can be made watertight each day, including all flashing and detail work, shall be installed. All seams shall be heat welded before leaving the job site that day.
- D. All work shall be scheduled and executed without exposing the interior building areas to the

effects of inclement weather. The existing building and its contents shall be protected against all risks.

- E. All surfaces to receive new insulation, membrane or flashings shall be dry. Should surface moisture occur, the Installer shall provide the necessary equipment to dry the surface prior to application.
- F. All new and temporary construction, including equipment and accessories, shall be secured in such a manner as to preclude wind blow-off and subsequent roof or equipment damage.
- G. Uninterrupted waterstops shall be installed at the end of each day's work and shall be completely removed before proceeding with the next day's work. Waterstops shall not emit dangerous or unsafe fumes and shall not remain in contact with the finished roof as the installation progresses. Contaminated membrane shall be replaced at no cost to the Owner.
- H. The Installer is cautioned that certain manufacturer's membranes are incompatible with asphalt, coal tar, heavy oils, roofing cements, creosote and some preservative materials. Such materials shall not remain in contact with manufacturer's membranes. The Installer shall consult Manufacturer regarding compatibility, precautions and recommendations.
- I. Arrange work sequence to avoid use of newly constructed roofing as a walking surface or for equipment movement and storage. Where such access is absolutely required, the Installer shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial protection layer consisting of plywood over felt or plywood over insulation board shall be provided for all new and existing roof areas that receive rooftop traffic during construction.
- J. Prior to and during application, all dirt, debris and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air or similar methods.
- K. The Installer shall follow all safety regulations as required by OSHA and any other applicable authority having jurisdiction. This is an active School Campus therefore the installer/contractor shall maintain the construction area in a safe and orderly manner to protect the students, staff and general public from any and all potential hazards. The Installer shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas.
- L. All roofing, insulation, flashings and metal work removed during construction shall be immediately taken off site to a legal dumping area authorized to receive such materials. Hazardous materials, such as materials containing asbestos, are to be removed and disposed of in strict accordance with applicable City, State and Federal requirements.
- M. All new roofing waste material (i.e., scrap roof membrane, empty cans of adhesive) shall be immediately removed from the site by the Installer and properly transported to a legal dumping area authorized to receive such material.
- N. The Installer shall take precautions that storage and application of materials and equipment does not overload the roof deck or building structure.

- O. Installation of a Manufacturer's membrane over coal tar pitch or a resaturated roof requires special consideration to protect the Manufacturer's membrane from volatile fumes and materials. Consult Manufacturer for precautions prior to bid.
- P. Flammable adhesives and deck primers shall not be stored and not be used in the vicinity of open flames, sparks and excessive heat.
- Q. All rooftop contamination that is anticipated or that is occurring shall be reported to Manufacturer to determine the corrective steps to be taken.
- R. The Installer shall verify that all roof drain lines are functioning correctly (not clogged or blocked) before starting work. Installer shall report any such blockages in writing (letter copy to Manufacturer) to the Owner's Representative for corrective action prior to the installation of the Manufacturer's roof system.
- S. Installer shall immediately stop work if any unusual or concealed condition is discovered and shall immediately notify Owner of such condition in writing for correction at the Owner's expense (letter copy to Manufacturer).
- T. Site cleanup, including both interior and exterior building areas that have been affected by construction, shall be completed to the Owner's satisfaction.
- U. All landscaped areas damaged by construction activities shall be repaired at no cost to the Owner.
- V. The Installer shall conduct fastener pullout tests in accordance with the latest version of the SPRI/ANSI Fastener Pullout Standard to verify condition of the deck/substrate and to confirm expected pullout values.
- W. The Manufacturer membrane shall not be installed under the following conditions without consulting Manufacturer's Technical Dept. for precautionary steps:
 - 1. The roof assembly permits interior air to pressurize the membrane underside.
 - 2. Any exterior wall has 10 percent or more of the surface area comprised of opening doors or windows.
 - 3. The wall/deck intersection permits air entry into the wall flashing area.
- X. Precautions shall be taken when using adhesives at or near rooftop vents or air intakes. Adhesive odors could enter the building. Coordinate the operation of vents and air intakes in such a manner as to avoid the intake of adhesive odor while ventilating the building. Keep lids on unused cans at all times.
- Y. Protective wear shall be worn when using solvents or adhesives or as required by job conditions.
- Z. Manufacturer membranes are slippery when wet or covered with snow, frost, or ice. Working on surfaces under these conditions is hazardous. Appropriate safety measures must be

implemented prior to working on such surfaces. Always follow OSHA and other relevant fall protection standards when working on roofs.

1.07 [BIDDING REQUIREMENTS](#)

A. Pre-Bid Meeting:

A pre-bid meeting shall be held on October 9th, 2018 10:00a.m. at 412 S Hamilton St, Dalton, Ga 30720 with the Owner's Representative and involved trades to discuss all aspects of the project. The Installer's field representative or roofing foreman for the work shall be in attendance. Procedures to avoid rooftop damage by other trades shall be determined.

B. Site Visit:

Bidders shall visit the site and carefully examine the areas in question as to conditions that may affect proper execution of the work. All dimensions and quantities shall be determined or verified by the Installer. No claims for extra costs will be allowed because of lack of full knowledge of the existing conditions unless agreed to in advance with the Owner or Owner's Representative.

1.08 [WARRANTIES](#)

A. Manufacturer Membrane Warranty

Upon successful completion of the work to Manufacturer's satisfaction and receipt of final payment, the Manufacturer Membrane Warranty shall be issued.

B. Manufacturer System Warranty (only products purchased from Manufacturer are covered under System Warranty)

Upon successful completion of the work to Manufacturer's satisfaction and receipt of final payment, the Manufacturer System Warranty shall be issued.

C. Installer/Roofing Contractor Warranty

Installer shall furnish Owner with a separate workmanship warranty. Warranty will contain a 2 year guarantee of watertightness. In the event any work related to roofing, flashing, or metal is found to be within the Installer warranty term, defective or otherwise not in accordance with Contract Documents, the Installer shall repair that defect at no cost to the Owner. Installer's warranty obligation shall run directly to Owner, and a copy shall be sent to Manufacturer.

D. Owner Responsibility

Owner shall notify both Manufacturer and the Installer of any leaks as they occur during the time period when warranties are in effect.

1.09 [WARRANTY DURATIONS](#)

A. Manufacturer's warranty shall be in effect for a 20 year duration.

- B. Installer's/Roofing Contractor's Warranty shall be in effect for a 2 year duration.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Components of the roof system are to be products of Manufacturer as specified in this document.
- B. Components to be used that are other than those supplied or manufactured by Manufacturer may be submitted for review and acceptance by Manufacturer. Manufacturer's acceptance of any other product is only for a determination of compatibility with Manufacturer products and not for inclusion in the Manufacturer warranty.
- C. Compatibility: Provide products recommended by manufacturers as fully compatible with indicated substrates, or provide separation materials required to eliminate contact between incompatible materials.
- D. Special consideration should be given to construction related moisture. An example is the significant amount of moisture generated when concrete floor slabs are poured after the roof has been installed. Manufacturer is not responsible for damage to the insulation when exposed to construction related moisture.

2.02 ROOFING MEMBRANES

- A. General: Provide one of the listed roof membranes.
- B. Membrane shall have a minimum ten (10) year track record with the same formulation.
- C. Private label, sub-manufactured products not acceptable.
- D. Products to be energy star compliant:
 - 1. Reflectivity: .65 Initial, .50 aged, ASTM E903.
 - 2. Emissivity: .9 minimum ASTM E408.

2.03 POLYVINYL CHLORIDE MEMBRANE

- A. Polyvinyl Chloride (PVC) Membrane - **80 Mils, Minimum.**
- B. Membrane shall conform to ASTM D4434-96 (or latest revision), "Standard for Polyvinyl Chloride Sheet Roofing". Classification: Type II, Grade I.
- C. Mechanically Fastened PVC Membrane, virgin polyvinyl chloride (PVC) with plasticizers and modifiers, formed into uniform flexible sheets, complying with ASTM D 4434, type to suit Project.
 - 1. Thickness: 80 mils, minimum.

2. Membrane Reinforcing: Manufacturer's fiberglass fiber scrim.
 3. Exposed Face Color: White.
- D. Manufacturers: subject to compliance with requirements, provide products of one of the following:
1. Sarnafil, Inc. (owner-preferred manufacturer)
 2. Duro-last, Inc.
 3. Fibertite, Inc.
- E. Membrane should have minimum 10 year track record with same formulation.
- F. Roofing manufacturer shall have technical field representative on project for periodic inspections.
- G. No sub-manufactured (private label) products allowed
- H. Installers should be approved by manufacturer PRIOR to bid

2.04 FLASHING MATERIALS

- A. Wall/Curb Flashing (Flashing, Fasciae, Coping, Concealed Gutters): Flashings to be PVC coated metal flashings only, except where indicated.
1. Flashing to be PVC-coated, heat-weldable sheet metal shop fabricated to meet field conditions for this project.
 2. Coated metal shall be 24 gauge, G90 galvanized metal sheet with a 20 mil unsupported membrane laminated on one side.
 3. Coated metal to be used at all walls, curbs and perimeters. Roof to wall at building expansion joints to be flexible membrane flashing compatible with flexible sheet roofing membrane.
 4. Color to be dark bronze or black, unless otherwise noted.
- B. Miscellaneous Flashing
1. Flashing - A heavy-duty, extruded aluminum flashing termination used at walls and large curbs. Use prefabricated flashing mitered inside and outside corners where walls intersect. Consult Manufacturer's Product Data Sheet for additional information.
 2. Stack/Pipe Boot Universal - A 60 mil (1.5 mm) thick prefabricated stack/pipe boot injection molded. Consult Manufacturer's Product Data Sheet for additional information.
 3. Corners – Inside - A 60 mil (1.5 mm) thick prefabricated inside corner injection molded. Consult Manufacturers Product Data Sheet for additional information.
 4. Corners – Outside - A 60 mil (1.5 mm) thick prefabricated outside corner injection molded. Consult Manufacturers Product Data Sheet for additional information.
 5. Open Post Flashing - A 60 mil (1.5 mm) thick prefabricated flashing using weld technology convenient to flash obstructed rooftop conduits and pipes. Open post flashings

are fabricated with an open seam and are available in different sizes. Consult Manufacturer's Product Data Sheet for sizes and additional information.

6. Sealant - Use Manufacturer's recommend sealant for wall, curb drain terminations, pipe penetrations, and under certain metals. It can also be used as a pitch pocket sealant. Consult Manufacturer's Product Data Sheet for additional information.
7. Filler - Use Manufacturer's recommended pourable two component urethane sealant used as a pitch pocket filler for roofing applications. Consult Manufacturer's Product Data Sheet for additional information.
8. Adhesive - Use manufacturer's recommended solvent-based reactivating adhesive to attach membrane to flashing substrate. Consult Manufacturer's Product Data Sheets for additional information.

2.05 WALKWAY PROTECTIONS

- A. A polyester reinforced weldable membrane with surface embossment used as a protection layer from rooftop traffic.
 1. Traffic pad to be type recommended, approved and furnished by the manufacturer.
 2. Provide walkway protection around each roof top HVAC unit and elsewhere where indicated.

2.06 AUXILIARY MATERIALS FOR FLEXIBLE SHEET ROOFING SYSTEM

- A. Rigid Insulation Underlayment: Provide one of the following for gypsum board underlayment where indicated or where required to meet fire code requirements or other requirements of these specifications:
 1. Gypsum Board Base: ASTM C 36, Type X, thickness indicated.
 - a. Thickness: Minimum of 5/8", unless other noted.
 2. Cement-Coated Portland Cement Panels: High density portland cement surface coating on both faces, lightweight concrete core composed of portland cement and expanded ceramic aggregate; 1/4" thick x 48" x 72" long; 1150 lbs/1000sf.
 - a. "Dens-Deck"; Georgia Pacific Corp.
 - b. "Wonder-Board"; Modulars Inc.
 - c. "Durock Tile Backer Board"; Durabond Div., USG Industries, Inc.
- B. Sheet Seaming System: Manufacturer's standard materials for sealing lapped joints, including edge sealer to cover exposed spliced edges recommended by manufacturer of flexible sheet roofing system.
- C. Cant Strips, Tapered Edge Strips and Flashing Accessories: Types recommended by manufacturer of flexible sheet roofing material, provided at locations indicated and locations recommended by mfr., including adhesive tapes, flashing cements, and sealants.
- D. Slip Sheet: Type recommended by manufacturer of flexible sheet roofing material for protection of membrane from incompatible substrates.

1. Mechanical Fasteners: Metal plates, caps, battens, accessory components, fastening devices, and adhesives to suit substrate and as recommended by flexible sheet roofing membrane manufacturer.
 2. Fastener pattern to meet requirements of FM I-90 wind load classification and FM 129S perimeter installation.
 3. Thru-bolt type fastening acceptable only in areas where ceiling occurs and not exposed to view.
 4. Other screw type mechanical fastening systems such as NTB, Gyptec (Buildex) fasteners acceptable only if Roofing Installer and Manufacturer perform withdrawal tests on existing roof and Roofing Manufacturer submits letter of certification indicating withdrawal tests performed and roofing system complies with above referenced wind loading and ANSI standard.
- E. Fasteners and roofing nails for flashing: Galvanized metal or corrosion resistant material with min. head diameter of 3/8" with min. fastener penetration into wood nailer of 3/4".

2.07 INSULATING MATERIALS

- A. General: Provide insulating materials to comply with requirements indicated for materials and compliance with referenced standards; in sizes to fit applications indicated, selected from manufacturer's standard thicknesses, widths and lengths.
1. Flexible Roofing System Manufacturer provide insulation under his label or label approved for the system and include insulation as part of his total system warranty.
- B. Roof Slope: Unless noted or detailed otherwise the roof slop is obtained through the use of tapered rigid insulation.
1. Minimum finished roof to be no less than 1/4" per foot; slope calculations shall include allowances for deflection of roof deck.
 2. Provide crickets to drain around roof mounted equipment.
- C. Thickness and "R" Value:
1. Minimum thickness of insulation at roof drains and/or eaves to be 3" thick, unless noted otherwise.
 2. Regardless of type of insulation selected the overall thickness of the insulation shall be as required to obtain an average "R" value for each individual roof section of no less than "**R**" = **20** for insulation alone. Calculations shall not include roofing, decking, ceilings, air films or other materials.
 3. Modify and adjust conditions as necessary to accommodate thickness of insulation selected, without added cost to contract.
- D. Insulation Type: Contractor shall select one of the following types of insulation for use through-out project.
- E. Extruded Polystyrene Board Insulation: Rigid, cellular thermal insulation with closed cells and integral high density skin, formed by expansion of polystyrene base resin in extrusion process to comply with ASTM C 578 for Type indicated; 5-year aged r-values of 5.4 and 5 at 40°F and 75°F (4.4°C and 23.9°C), respectively, and as follows:

1. Type VI, 1.8 lb./cu. ft. min density, unless otherwise indicated. Surface Burning Characteristics: Max. flame spread and smoke developed values of 5 and 165, respectively.
 2. Provide tapered boards where indicated for sloping to drain; fabricate with taper of 1/4" per ft. in the 24" dimension.
- F. Polyisocyanurate Board Roof Insulation: Rigid, cellular thermal insulation with polyisocyanurate closed-cell foam core and manufacturer's standard facing laminated to both sides; complying with FS HH-I-1972/2, Class 1, aged R-values as designated at mean temperatures indicated, after conditioning based on consensus standard ASTM C1303 ; and as follows:
1. Surface Burning Characteristics: Max. flame spread of 25.
 2. Thermal Resistivity: 12.1 at 75°F (23.9°C) for 2" thick insulation board.

2.08 AUXILIARY INSULATION MATERIALS

- A. Adhesive for Bonding Insulation: Type recommended by insulation manufacturer and complying with fire resistance requirements.
- B. Mastic Sealer: Type recommended by insulation manufacturer for bonding edge joints and filling voids.
- C. Mechanical Anchors: Corrosion-resistant type as recommended by insulation manufacturer for deck type, and complying with fire and insurance uplift rating requirements.
1. Provide system tested and approved for FM I-90 wind uplift rating.
 2. Provide system tested and approved for FM 129S perimeter uplift.

2.09 MISCELLANEOUS ACCESSORIES

- A. Aluminum Tape - A 2 inch minimum wide pressure-sensitive aluminum tape used as a separation layer between small areas of asphalt contamination and the membrane and as a bond-breaker under the coverstrip at clad joints.
- B. Multi-Purpose Tape - A high performance sealant tape used with metal flashings as a preventive measure against air and wind blown moisture entry.

2.10 SEALANTS AND PITCH POCKET FILLERS

- A. Use manufacturer's recommend sealants and pitch pocket fillers and apply in accordance Manufacturer's specifications.
- B. Depending on substrates, the following sealants are options for temporary overnight tie-ins:
1. Type III hot asphalt conforming to ASTM D312 (latest version).
 2. Multiple layers of roofing cement and felt.
 3. Spray-applied, water-resistant urethane foam.
 4. Mechanical attachment with rigid bars and compressed sealant.

2.11 MISCELLANEOUS FASTENERS AND ANCHORS

- A. All fasteners, anchors, nails, straps, bars, etc. shall be post-galvanized steel, aluminum or stainless steel. Mixing metal types and methods of contact shall be assembled in such a manner as to avoid galvanic corrosion. Fasteners for attachment of metal to masonry shall be expansion type fasteners with stainless steel pins. All concrete fasteners and anchors shall have a minimum embedment of 1-1/4 inch (32 mm) and shall be approved for such use by the fastener manufacturer. All miscellaneous wood fasteners and anchors used for flashings shall have a minimum embedment of 1 inch (25 mm) and shall be approved for such use by the fastener manufacturer.

2.12 RELATED MATERIALS

- A. Wood Nailer - Treated wood nailers shall be installed at the perimeter of the entire roof and around such other roof projections and penetrations as specified on Project Drawings. Thickness of nailers must match the insulation thickness to achieve a smooth transition. Wood nailers shall be treated for fire and rot resistance (wolmanized or osmose treated) and be #2 quality or better lumber. Creosote or asphalt-treated wood is not acceptable. Wood nailers shall conform to Factory Mutual Loss Prevention Data Sheet 1-49. All wood shall have a maximum moisture content of 19 percent by weight on a dry-weight basis.
- B. Bidder to provide sufficient roof build up to provide a smooth transition between roofing surface and nailer where nailer occurs. Roof build up will be sufficient to eliminate ponding water at roof edges.

Note: Wood nailers or wood blocking for snow protection system shall be installed prior to the installation of the roof membrane whenever possible.

PART 3 - EXECUTION

3.01 PRE-ROOFING CONFERENCE:

- A. Prior to installation of roofing and associated work, meet at project site, or other mutually agreed location, with Installer, roofing manufacturer, installers of related work, and other entities concerned with roofing performance, including (where applicable) Owner's insurer, test agencies, governing authorities, and Owner.
 1. Record discussions and agreements and furnish copy to each participant.
 2. Provide min. 72 hrs. advance notice to participants prior to convening pre-roofing conference.

3.02 SUBSTRATE CONDITION:

- A. Applicator shall be responsible for acceptance or provision of proper substrate to receive new roofing materials.
- B. Applicator shall verify that the work done under related sections meets the following conditions:

1. Roof drains, roof curbs, nailers, equipment supports, vents and other roof penetrations are properly secured and prepared to receive new roofing materials.
2. All surfaces are smooth and free of dirt, debris and incompatible materials.
3. All roof surfaces shall be free of water, ice and snow.

3.03 PREPARATION OF SUBSTRATE

- A. General: Comply with manufacturer's instructions for preparation of substrate to receive flexible sheet roofing system.
- B. Clean substrate of dust, debris, and other substances detrimental to flexible sheet roofing system work; remove sharp projections.
- C. Install cant strips, flashings, and accessory items as shown, and as recommended by manufacturer even though not shown.
- D. Prevent compounds from entering and clogging drains and conductors, and from spilling or migrating onto surfaces of other work.

3.04 SURFACE PREPARATION

- A. During course of roofing process, protect existing roofs from elements as necessary to ensure that existing roof deck and building interiors not damaged or wetted in any way by elements.
- B. Contractor, at his expense, replace existing construction and/or equipment, furniture, etc., damaged as result of Contractor's failure to comply with this.
- C. Cover flashing which retain portions of old roof with .006" dead soft aluminum foil, taped into place with an aluminum capable of withstanding at least 200°F continuous service, such as 3M Co. #425B, wherever existing flashing not being covered with metal flashing.

3.05 INSTALLATION

- A. General: Comply with manufacturer's instructions, except where more stringent requirements indicated.

3.06 NAILERS

- A. Install treated wood nailers at perimeter of entire roof and around all roof projections and penetrations.
 1. Roofing Installer supply and install wood nailers as required for the requested roof install and any additional wood nailers as needed in order to install roofing complete, secure and watertight.
- B. Wood Nailer - Treated wood nailers shall be installed at the perimeter of the entire roof and around such other roof projections and penetrations as specified on Project Drawings.

Thickness of nailers must match the insulation thickness to achieve a smooth transition. Wood nailers shall be treated for fire and rot resistance (wolmanized or osmose treated) and be #2 quality or better lumber. Creosote or asphalt-treated wood is not acceptable. Wood nailers shall conform to Factory Mutual Loss Prevention Data Sheet 1-49. All wood shall have a maximum moisture content of 19 percent by weight on a dry-weight basis.

- C. Bidder to provide sufficient roof build up to provide a smooth transition between roofing surface and nailer where nailer occurs. Roof build up will be sufficient to eliminate ponding water at roof edges.

Note: Wood nailers or wood blocking for snow protection system shall be installed prior to the installation of the roof membrane whenever possible.

3.07 INSTALLATION OF INSULATION UNDERLAYMENT

- A. Install underlayment directly over metal decking in accordance with roofing manufacturers written instructions and as follows:
 - 1. Screw attach to metal deck.
 - 2. Stagger adjacent butt joint.
 - 3. Tightly abut joints.
- B. Install underlayment in accordance with manufacturer's recommendations in order to obtain an Underwriters Class "A" service rating.

3.08 INSULATION INSTALLATION

- A. General: Extend insulation fill thickness as single layer, in two layers, or in multiple layers over entire surface insulated, as indicated on drawings, cutting and fitting tightly around obstructions.
 - 1. Provide full support for all edges of insulation.
 - 2. Align insulation to provide a continuous, uniform surface slope, free of irregularities.
- B. Form cant strips, crickets, saddles, and tapered areas with additional material as shown and as required for proper drainage of membrane.
 - 1. Stagger all joints in one direction for each course; for multiple layers, stagger joints in both directions between courses with no gaps to form complete thermal envelope.
 - 2. Install insulation in a manner necessary to obtain a minimum finished slope of 1/4" per for along any slope of roof.
- C. Do not install more insulation each day than can be covered with membrane before end of day and before start of inclement weather.

- D. Secure roof insulation to substrate with mechanical anchors of type and spacing indicated; but in no case provide less than one anchor per 4 square feet of surface area, or less anchorage than required by FM "Loss Prevention Data Sheet 1-28".

3.09 SLIP SHEET

- A. Install where recommended by Roofing Manufacturer.
- B. Lay loosely over insulation.
- C. Lap joint 2" min. on mineral sheets; 6" min. on paper sheets.
- D. Follow slip sheet installation immediately by installation of roof membrane and sufficient ballast to prevent displacement of slip sheet.

3.10 MEMBRANE INSTALLATION

- A. System Applications:
 - 1. System #1: Mechanically Attached: Mechanically attached system to be used where fasteners concealed from view.
 - a. Areas of use include building additions where underside of roof concealed through use of suspended ceilings or soffits.
 - 2. System #2: Fully adhered system to be used where partially attached system cannot be used due to fasteners being exposed.
 - a. Areas of use include covered walkways without soffits.
- B. General:
 - 1. Start installation only in presence of manufacturer's technical representative.
 - 2. Comply with manufacturer's instructions, except where more stringent requirements indicated.
- C. The surface of the insulation or substrate shall be inspected prior to installation of the roof membrane. The substrate shall be clean, dry, free from debris and smooth with no surface roughness or contamination.
- D. Install membrane by unrolling over prepared substrate, lapping adjoining sheets as recommended by manufacturer, and bonding and sealing seams.
 - 1. Roll out membrane without stretching and allow to relax min. of 15 minute if temperature above 60°F, 30 minutes if below 60°F.
 - 2. Inspect and remove damaged, folded or wrinkled membrane.
 - 3. Membrane shall lay flat and be free from "fish mouths", wrinkles, folds or other conditions detrimental to obtaining a water tight application.
- E. Mechanically Attached: Install membrane by unrolling over prepared substrate, lapping adjoining sheets as recommended by manufacturer, and heat welding seams.
 - 1. Install mechanical fasteners at spacing recommended by manufacturer or to achieve a Factory Mutual I-90 Wind-uplift rating, whichever is more stringent.
 - 2. Install all flashings as shown or as recommended by the manufacturer.

- F. Install mechanical fasteners at spacing recommended by manufacturer, covering with adhesive-applied membrane so no fasteners are exposed.
- G. Install adhesives of type and using methods recommended by manufacturer.
- H. Install flashings and counter flashings as shown or recommended by manufacturer.
- I. Follow manufacturer's instructions for non-penetrating mechanically fastened systems.

3.11 ROOF TOP HVAC EQUIPMENT

- A. At roof top mechanical equipment (Roof top Units, RTUs; Energy Recovery Units, ERUs and similar equipment) roof deck, roof deck insulation and roofing system to extend under roof top equipment. Omit decking, insulation and roofing only where ducts penetrate roof system.
 - 1. Roof decking to extend under entire area of roof top unit except where duct penetrate roof system. At duct penetrations provide perimeter angles for support of roof decking.
 - 2. Roof insulation to extend under entire surface of roof top unit except where ducts penetrate roof system. Roof insulation to be of thickness and slope to match areas outside of roof curb. Minimum 'R' value of roof deck insulation shall be no less than 'R-20'.
 - 3. Roofing system to be installed under the entire area of the roof top Hvac units other than where ducts penetrate roofing system. Provide perimeter edge and curb flashing to match other areas.

3.12 HOT-AIR WELDING OF SEAM OVERLAPS

- A. General:
 - 1. All seams shall be hot-air welded. Seam overlaps should be 3 inches wide when automatic machine welding and 4 inches wide when hand welding, except for certain details.
 - 2. All membrane to be welded shall be clean and dry.
- B. Seams: Provide with two independent seals formed by solvent welding and subsequent sealing.
 - 1. At mechanically fastened system, overlap membrane min. of 5" over itself or metal flashing to allow for installation of metal fasteners and a full 2" solvent weld at edge.
 - 2. Check for continuity and integrity and seal with manufacturer's sealant.
 - 3. Weld and seal all seams the same day.
- C. Hand-Welding: Hand-welded seams shall be completed in two stages. Hot-air welding equipment shall be allowed to warm up for at least one minute prior to welding.
 - 1. The back edge of the seam shall be welded with a narrow but continuous weld to prevent loss of hot air during the final welding.
 - 2. The nozzle shall be inserted into the seam at a 45-degree angle to the edge of the membrane. Once the proper welding temperature has been reached and the membrane begins to "flow," the hand roller is positioned perpendicular to the nozzle

and pressed lightly. For straight seams, the 1-1/2 inch wide nozzle is recommended for use. For corners and compound connections, the 3/4 inch wide nozzle shall be used.

- D. Quality Control of Welded Seams: The Applicator shall check all welded seams for continuity using a rounded screwdriver. Visible evidence that welding is proceeding correctly is smoke during the welding operation, shiny membrane surfaces, and an uninterrupted flow of dark grey material from the underside of the top membrane.
1. No adhesive shall be applied in seam areas that are to be welded. All panels of membrane shall be applied in the same manner, overlapping the edges of the panels as required by welding techniques.

3.13 METAL FLASHINGS

- A. Install at all intersections of roof with sloped or vertical surfaces, roof interruptions and penetrations in accordance with roofing manufacturer's currently published drawings herein specified and consistent with Owner's details and job conditions, or other drawings approved by Roofing Manufacturer.
- B. Metal details, fabrication practices and installation methods shall conform to the applicable requirements of the following:
1. Factory Mutual Loss Prevention Data Sheet 1-49 (latest issue).
 2. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - latest issue.
- C. Complete all metal work in conjunction with roofing and flashings so that a watertight condition exists daily.
- D. Metal shall be installed to provide:
1. Adequate resistance to bending to allow for normal thermal expansion and contraction.
 2. Metal joints shall be watertight.
- E. Metal flashings shall be securely fastened into solid wood blocking. Fasteners shall penetrate the wood nailer a minimum of 1 inch.
- F. Flashing shall extend a minimum of 8 inches above roofing level unless otherwise accepted in writing by the Owner and manufacturer.
- G. Counter flashings shall overlap base flashings at least 4 inches.
- H. Securely fasten flashing and terminations to plane of roof deck with suitable fasteners to provide min. of 150 lbs./l.f. for expected life of roof.
- I. Install fasteners so to be subjected only to shear forces unless suitable expansion type fasteners used in approved manner.
1. Install fasteners 8" o.c. unless otherwise specified.

- J. Make joints between longitudinal segments of Roofing Manufacturer's metal in accordance with standard details and manufacturer's instructions; weld joint strips in place prior to roofing installation.
- K. Provide scuppers in PVC-coated gravel stop at a maximum of 20'-0" on center; coordinate location with windows, doors and HVAC units to ensure scuppers do not occur over these items.

3.14 METAL BASE FLASHINGS/EDGE METAL

- A. Flashings shall be installed concurrently with the roof membrane as the job progresses. No temporary flashings shall be allowed without the prior written approval of the Owner.
- B. Extend base flashing and/or vertical wall flashing up vertical surfaces 8" and onto horizontal roof surface min. 3" unless otherwise shown.
 - 1. Flashing to be metal clad only; use of membrane flashing not acceptable.
- C. Install metal base flashing, where indicated, by nailing to wood nailers; provide 2" min. overlap and solvent weld in the horizontal plane.
 - 1. Flashing to be membrane coated metal only; use of membrane flashing not acceptable.
- D. Metal flashings shall be formed and installed per the Detail Drawings.
 - 1. Metal flashings shall be fastened into solid wood nailers with two rows of post galvanized flat head annular ring nails, 4 inches on center staggered. Fasteners shall penetrate the nailer a minimum of 1 inch.
 - 2. Metal shall be installed to provide adequate resistance to bending and allow for normal thermal expansion and contraction.
- E. Adjacent sheets of coated metal shall be spaced 1/4 inch apart. The joint shall be covered with 2 inch) wide aluminum tape. A 6 inch minimum wide strip of flashing membrane shall be hot-air welded over the joint.

3.15 WALKWAY INSTALLATION

- A. Roofing membrane to receive walkway shall be clean and dry. Place chalk lines on deck sheet to indicate location of Walkway. Clean the deck membrane in areas to be welded. Walkway shall be unrolled and positioned within the chalk lines. Hot-air weld the entire perimeter of the Walkway to the deck sheet. Check all welds with a rounded screwdriver. Re-weld any inconsistencies.
- B. Walkway Protection: Install walkway at locations shown, indicated herein and where required for access to roof-mounted equipment.
 - 1. Pavers required from edge of roof or from roof scuttle to and completely around major roof mounted equipment, included but not limited to, kitchen hood, roof top HVAC units, fresh air units and similar equipment.

3.16 CLEANING

- A. After completion of all roofing installation, remove all tools, excess materials and debris from roof surfaces.
- B. Clean roof surface and flashing thoroughly so that no soil or stains are evident.
- C. Inspect roof surfaces prior to Owner's final inspection to assure that no debris remains on roof from this or other trades; have removed as necessary.

3.17 TEMPORARY CUT-OFF

- A. All flashings shall be installed concurrently with the roof membrane in order to maintain a watertight condition as the work progresses. All temporary waterstops shall be constructed to provide a 100 percent watertight seal. The stagger of the insulation joints shall be made even by installing partial panels of insulation. The new membrane shall be carried into the waterstop. Waterstop shall be sealed to the deck or substrate so that water will not be allowed to travel under the new or existing roofing. The edge of the membrane shall be sealed in a continuous heavy application of sealant. When work resumes, the contaminated membrane shall be cut out. All sealant, contaminated membrane, insulation fillers, etc. shall be removed from the work area and properly disposed of off-site. None of these materials shall be used in the new work.
- B. If inclement weather occurs while a temporary waterstop is in place, the Installer shall provide the labor necessary to monitor the situation to maintain a watertight condition.
- C. If any water is allowed to enter under the newly-completed roofing, the affected area shall be removed and replaced at the Installer's expense.

3.18 COMPLETION

- B. Prior to demobilization from the site, the Owner, general contractor and the applicator shall review the work. All defects noted and non-compliances with the Specifications or the recommendations of the manufacturer shall be itemized in a punch list. These items must be corrected immediately by the applicator to the satisfaction of the Owner.

3.19 BASE BID and BID ALTERNATES

- A. The based bid shall be any manufacturer's roof product listed in 2.03, Section D
- B. The alternate bid shall be the owner preferred manufacturer roof product, Sarnafil, Inc., as listed in section 2.03 section D. Dalton Public Schools reserves the right to select the owner-preferred manufacturer for roofing products.

BID FORM

Name of Company Bidding _____

Contract Person: _____

Contact Phone # _____

Please record your pricing below, include a **per square foot** price as part of your submittal:

Northstar at Morris St Southside
Media Center Roof Replacement

1. Bid Amount _____

Price per sq. ft. _____

2. Alternate Bid Amount _____

Price per sq. ft. _____

All items will be ordered by purchase order.

Location: Northstar building at Morris Street Southside media center roof section
Replacement area is color coded: purple

