

SECTION 075216 – SBS MODIFIED BITUMINOUOUS MEMBRANE ROOFING

STRUCTURAL GUIDELINES

1.1 Introduction

- a. The requirements and guidelines outlined herein are intended to provide an outline of best practices to enhance the performance of the exterior building enclosure systems and to reduce future maintenance when possible.
- b. The Architects and Engineers for all construction projects are responsible for identifying and preparing the full documentation necessary for all permits and reviews by governmental authorities having jurisdiction over the projects at University of Delaware.
- c. The information outlined herein are preferences or specific requirements of the University of Delaware under this Section.

1.2 Codes and Standards

- a. FM Global – All roofing projects shall be submitted to FM Global Plan Review concurrent with the design development phase submission. The design professional shall incorporate FM review comments within the project documents prior to bid
- b. National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual
- c. Sheet Metal and Air Conditioning Contractors' National Association (SMACNA)
- d. American Air Barrier Association (AABA)
- e. Sealant Waterproofing and Restoration Institute (SWRI)
- f. Occupational Safety and Health Administration (OSHA)
- g. American National Standards Institute/American Society of Safety Engineers (ANSI/ASSE) Z359.2-2007 – Fall Protection

1.3 Environmental Testing

- a. The University may perform environmental testing of existing materials to be impacted by the work for hazardous materials (i.e. lead, asbestos, mold, etc.) during the design phases, including but not limited to, the following:
  - i. Roofing materials
  - ii. Flashing materials
  - iii. Paints
  - iv. Sealants

1.4 Quality Assurance Guidelines

- a. Manufacturer's Inspections
  - i. The University prefers to have the manufacturer's field technical representative perform interim inspections during the execution of the work.
- b. Pre-Installation Conferences
  - i. Conduct Pre-Installation Conferences where works involve multiple trades before starting substantial work.
- c. Mock-ups and Samples
  - i. On large projects the university requires full size exterior wall mock-ups to demonstrate expected performance and quality of embedded components and aesthetics of visible cladding and fenestration components.
  - ii. Construct mock-ups and obtain samples for review before starting substantial work.

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PART 1 - GENERAL

1.1 SUMMARY

- A. The Architects and Engineers for all construction projects are responsible for identifying and preparing the full documentation necessary for all permits and reviews by governmental authorities having jurisdiction over the projects at University of Delaware.
- B. The information outlined herein are preferences or specific requirements of the University of Delaware under this Section.
- C. The University recommends a dew-point analysis be performed to determine if the air barrier system should be vapor permeable or vapor impermeable.

1.2 PRE-INSTALLATION MEETINGS

- A. The university requires Pre-installation Conferences for all Building Enclosure components
- B. All related trades should be present at Pre-installation Conference

1.3 DESIGN REQUIREMENTS

- A. Request direction from the university with respect to hot or cold applied.
- B. All roof replacement projects will require a fall hazard survey conducted by the design team and Environmental Health & Safety. The design professional must consult OSHA Regulation 1926 and UD Design Standards CSI Section 07720 Fall Arrest Anchorages prior to the meeting. If anchors are to be used for window washing, refer to ANSI I14 and OSHA 1910.66.
- C. The University requires the installation of permanent anchors for the attachment of personal fall arrest equipment/fall arrest systems per OSHA 1926.502 paragraphs (d) (8) and (d) (15) on roofs with pitches over 1 in 12 or on flat roofs with parapets of less than 38". Installation sequence should allow use of the anchors during and after roof replacement.
- D. A post construction infra-red survey (recorded on film) is required prior to final acceptance of the roof. Any wet areas found must be removed and replaced.
- E. On roof replacement projects or additions to existing buildings care and attention must be given to the height of the existing perimeter conditions to insure new roof system can be installed with appropriate R-value insulation. It may be necessary to include modifying the existing vertical wall cladding to insure continuity between the new roof system and the weather resistive barriers at existing rising vertical walls.

1.4 PERFORMANCE REQUIREMENTS

- A. Roof systems and detailing must be approved by Factory Mutual. The Architect needs to allow for this process during the Design Phases. The final roof system should bear a Roof Nav number.

- B. Embedded Items/Penetrations: All embedded Items and penetrations including but not limited to those associated with electrical, plumbing, and security devices should be in place prior to the application of the air barrier. Failure to do so may require deconstruction of cladding to achieve a proper sealed termination at the plane of the air barrier.

1.5 WARRANTY

- A. The University requires a minimum 20 year NDL warranty.
- B. The University requires a minimum 5 year Installer warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers: Garland, Siplast, Soprema

2.2 AUXILIARY ROOFING MATERIALS

- A. The University prefers the use of liquid flashing at all penetrations in lieu of field wrapping of the membrane. Pitch pocket type components and not acceptable.

2.3 WALKWAY PADS

- A. The Architect needs to review with the University specific layout of proposed walkway pads during the construction documentation phase.

PART 3 - EXECUTION

- 3.1 The Architect should include aggregate surfacing of all seam bleed outs.

END OF SECTION