

SECTION 072700 – MEMBRANE AIR BARRIERS

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 prefers not to use water repellants as the primary weather resistive barrier for exterior cladding components

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 QUALITY ASSURANCE

- A. Installer Qualifications: University prefers that the installer is ABAA certified.

PART 2 - PRODUCTS

2.1 FLUID APPLIED MEMBRANE AIR BARRIERS

- A. Acceptable Manufacturers: Carlisle Barriseal or Barritech, Grace Perm-A-Barrier, Henry Air-Bloc

2.2 SHEET MEMBRANE AIR BARRIERS

- A. Acceptable Manufacturers: Carlisle CCW-705, Grace Perm-A-Barrier, Henry Blueskin

2.3 ACCESSORY MATERIALS

- A. The integrity of air barrier system relies on continuity. The Architect to design and detail the transition of the air barrier system to all fenestrations within the building enclosure. Compatibility of transition membranes, fenestrations, and visible perimeter joint sealants should be verified within the design and documentation phases.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: When sheet membrane air barriers are utilized all surfaces are to be primed. All different components within a selected system are to be primed.

- 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.

3.2 FIELD QUALITY CONTROL

- A. Air Barrier Association of America Installer Audits: The University prefers to have a project where air barriers are utilized to be ABAA certified. As such this requires ABAA audits and testing. This should be included within this Section.

END OF SECTION