SECTION 07500D - MEMBRANE ROOFING

A. GENERAL REQUIREMENTS

1. Roofs shall be designed to provide a 1/4” per foot slope as required by the Ohio Basic Building Code. Dead level roofs are prohibited. Slope shall be accomplished by sloping the roof deck whenever possible. If the deck cannot be sloped, tapered insulation will be required throughout the roof. Additional tapered insulation should be used at strategic locations to create saddles, crickets, and additional taper around equipment, perimeter areas, curbs, valleys, and other potential problem areas. Scupper openings should be provided through parapets as a means of overflow protection.

2. Provide roofing membrane manufacturer approved walkway pads around rooftop equipment and in areas subject to traffic. Provide roof protection provisions for window washing equipment.

3. On re-roofing projects, drainage should be assessed and, if necessary, provisions should be added to improve drainage.

4. Associates shall produce a detailed set of drawings and specifications for the roof assembly. Drawings shall show all roof drains, gutters, scuppers, rooftop equipment, penthouses, walkway pads, expansion joints, area separators, drainage patterns, tapered insulation, and other items which affect the roof assembly. Drawings shall include details of curbs and supports, flashings, drains, gutters, scuppers, expansion joints, area dividers, and other membrane terminations, along with details of unique situations.

5. Details shall be consistent with the industry standards established by the National Roofing Contractors Association (NRCA), Single Ply Roofing Institute (SPRI) and the roof system manufacturer. Rooftop piping, conduits, and equipment shall be mounted on supports specifically manufactured for roofing. Wood blocking is not an acceptable means of support.

6. Preconstruction Conference: Specify preconstruction meeting prior to commencement of roofing work as a quality assurance measure (refer to Section 07500).

B. ROOF SYSTEM SELECTION

1. It is a goal of the University to have very good quality, long lasting, low maintenance roof systems on campus. Because the University typically owns, occupies, and maintains its buildings over a long period of time, the roof selection should be based on long term, life cycle costs.

2. The roof system selected shall be determined on a project by project basis. Although there is no single roof system requirement, the University requires that the following criteria be considered in selecting a roof system.
3. Built-Up Roofing Systems: Built-up roofing (BUR) systems are preferred and should be utilized on all projects unless there is a project specific reason not to use them. BUR systems should be 4 ply coal tar or asphalt. Coal tar (type 1) is preferred to asphalt. On projects where the fumes from the hot tar are of concern, asphalt BUR should be specified. If the asphalt fumes are still more than the project can tolerate, other systems should be considered. On projects where staging a hot kettle would be a problem, or on small roofs where BUR is not feasible, a modified bitumen system should be considered.

4. Modified Bitumen Roofing Systems: Modified bitumen roof systems should be considered when built-up roof systems are not appropriate. Modified bitumen systems are composed basically of factory fabricated reinforced rolls of asphalt that have either SBS (rubber) or APP (plastic) polymer modifier’s. SBS systems typically can be hot mopped torch applied, or cold adhered. APP systems are traditionally torch applied. Torch applied systems should be used over buildings with concrete decks, or where mopping is not appropriate (high rise, small areas, etc.). Extra precautions need to be taken to ensure protection from fire hazard, especially at blocking locations. If fire hazard concerns cannot be resolved, cold adhered systems should be considered.

5. Single Ply Membrane Systems: Single ply membrane systems should not be specified without specific approval of the University Architect. Only in the event that project conditions make a built-up or modified system inappropriate should single ply systems be considered. The type of single ply membrane being considered should be based on project conditions. Reinforced and thicker (60 mil) membranes are preferred. Reinforced thermoplastic membranes (EP, TPO, PVC, CPA) are preferred over vulcanized elastomer membranes (EPDM) or non-vulcanized membranes (CSPE, CPE).

6. Sprayed-on Roofing Systems: Sprayed-on roofing systems are prohibited.


C. Refer to section 07500 that follows this document for specification statements that should be incorporated into specifications prepared by Associates.

END