

## SECTION 07 50 00 - MEMBRANE ROOFING

### PART 1 - GENERAL

#### 1.1 SYSTEM REQUIREMENTS

- A. Design Requirements:
  - 1. Provide fully-adhered membrane roofing for all new construction.
  - 2. PVC or KEE membrane preferred; TPO acceptable if project budget does not permit PVC or KEE.
  - 3. For renovation work, consider matching existing roofing system or separate new construction from existing in order to preserve the warranty on the existing roof.
  - 4. Provide walkway treads from roof access points continuous to and around all roof mounted equipment.
  - 5. Design scuppers, downspouts and overflow drains so that they do not discharge down the face of the building or across a sidewalk.
  - 6. Provide splash blocks to control and direct downspout and overflow drain discharge at grade.
  - 7. Locate overflow drain wall hydrants so that they do not discharge across pedestrian travel paths.
  - 8. Provide positive slope to drain on all roofs.
- B. Performance Requirements:
  - 1. Roofing System Design: Uplift pressures calculated according to ASCE/SEI 7.
  - 2. FM Approvals Listing: Class 1A-90 minimum.
  - 3. Exterior Fire-Test Exposure: Class A.
  - 4. Solar Reflectance Index: Not less than 78 when calculated according to ASTM E 1980.

#### 1.2 WARRANTY

- A. Special Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.
  - 1. Special warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, substrate board, roofing accessories, roof pavers, and other components of membrane roofing system.
  - 2. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, signed by Installer, covering the Work of this Section, including all components of membrane roofing system such as membrane roofing, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:
  - 1. Warranty Period: 5 years from date of Substantial Completion.

#### 1.3 DELIVERY, STORAGE, AND HANDLING

- A. Protect and cover membrane and board insulation with tarpaulins.
- B. Store adhesives at temperatures between 50 deg-F and 80 deg-F.

### PART 2 - PRODUCTS

#### 2.1 ROOFING MEMBRANE

- A. PVC membrane roofing:

1. PVC Sheet: ASTM D 4434, Type II, Grade I, glass fiber reinforced.
    - a. Products: Provide the following:
      - 1) Sarnafil Inc.; Sarnafil G410.
    - b. Thickness: 60 mils.
    - c. Exposed Face Color: Light color with SRI not less than 78.
  - B. KEE membrane roofing:
    1. KEE Sheet: ASTM D 4434, ASTM D 6754, fabric reinforced.
      - a. Products: Provide the following:
        - 1) Seaman Corporation.; Fibertite-SM.
      - b. Thickness: 60 mils.
      - c. Exposed Face Color: Light color with SRI not less than 78.
  - C. TPO membrane roofing:
    1. Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, internally fabric or scrim reinforced, uniform, flexible TPO sheet.
      - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following :
        - 1) Carlisle SynTec Incorporated.
        - 2) Firestone Building Products Company.
        - 3) Johns Manville.
      - b. Thickness: 60 mils.
      - c. Exposed Face Color: Light color with SRI not less than 78.
- 2.2 ROOF INSULATION
- A. Substrate Board: Glass-mat, water-resistant gypsum board.
  - B. Vapor Retarder: If required, self-adhering, rubberized asphalt.
  - C. Roof Insulation: Polyisocyanurate board.
  - D. Cover Board: Primed, glass-mat, water-resistant gypsum substrate.
- 2.3 WALKWAYS
- A. Flexible Walkways: Roofing manufacturer's recommended, factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway rolls.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION

- A. Seams: Provide thermally welded membrane patch at all membrane joints with three or more edges.

#### 3.2 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

**END OF SECTION 07 50 00**