

MODIFIED BITUMOUS MEMBRANE ROOFING

GENERAL INFORMATION

- 1.1 Existing roofing systems on the Morningside campus include flat roofs, metal roofs, slate and tile roofs, paver roof systems, and green roofs.
- 1.2 For metal roofs, green roofs, paver roof systems, and slate and tile roofs, consult Columbia University Facilities Exteriors and Historic Preservation group.

DESIGN REQUIREMENTS

- 2.1 Approved vendors:
 - a. Modified Bitumous Membrane Roofing - Siplast
 - b. Reinforced liquid membrane flashing - Siplast Parapro PMMA Liquid Flashing, Kemper Products Odorless 2K PUR Polyurethane
- 2.2 Columbia's standard flat roof system is a 2-ply SBS (styrene-butadiene-styrene)-Modified Bitumen with white granulated surface. It shall be cold-applied for wood decks, and torch-applied for concrete decks.
- 2.3 The system shall include rigid insulation, vapor barrier on deck, flashing (liquid applied flashing at all penetrations, and surface applied termination bar at masonry wall or curb to be covered with regletted metal cap flashing), and other products as required.
- 2.4 Specify that all submittals and drawings shall be issued to CUF Exteriors and HP for in-house review. Obtain and incorporate their comments before returning submittals to the contractor.
- 2.5 Specify that the contractor list all materials proposed for use.
- 2.6 Specify that the contractor shall provide samples of each product.
- 2.7 Specify that the contractor shall submit material safety data sheets (MSDS) for all materials to be used.
- 2.8 Specify that the contractor shall provide a detailed work schedule for owner approval prior to starting work.
- 2.9 Specify that the roofing contractor's foreman of the crew performing the work shall have at least 5 years of experience.

- 2.10 Specify that the contractor shall give a minimum 10 work days notice to the owner and manufacturer prior to commencing any site work.
- 2.11 Specify that the roof shall be left water-tight at the end of each work day, and that all work areas are to be left clean at the end of each work day. All materials, equipment and debris are to be secured at the end of each work day.
- 2.12 Specify that debris removal in an occupied building shall be accomplished on the exterior via a hoist, and that removal is not permitted through the building.
- 2.13 Specify that the contractor shall prevent access by the public to work area, materials, and equipment.
- 2.14 Specify that ACM and other hazardous material removal will be performed under a separate contract, however, the roofing contractor shall be required to coordinate their work with hazardous materials removal contractor.
- 2.15 Specify that decks shall be frost-free and dry, clean, free of oil, grease and other foreign materials that would inhibit application of the membrane or insulation

CONSTRUCTION REQUIREMENTS

- 3.1 All roofing work shall be performed in accordance with the requirements of the roofing manufacturer, by an installer acceptable to manufacturer.
- 3.2 All roofing work will be documented by the roofing contractor, as required by warranty requirements. Warranty shall be roofing manufacturer's standard 20-year extended NDL providing that the membrane and associated flashing will remain watertight under ordinary wear and tear by the elements.
- 3.3 All roofing work shall be performed by a single firm with a minimum of three (3) years experience in the installation of the specified type of roofing.
- 3.4 The roofing installer shall be licensed by the manufacturer, and shall present evidence of qualification in writing.
- 3.5 Upon completion of the installation the contractor shall arrange for an inspection by the manufacturer to determine if corrective work is required before the warranty is issued.
- 3.6 The Roofing Contractor shall agree for a period of 2 years after the execution date, to inspect and make immediate temporary repairs required to stop leaks or correct other defects in the roofing

and associated work within 24 hours of notice received from the Owner by telephone, telegram or letter; and further agrees to make permanent repairs to restore or replace the work to the quality standards originally specified, within reasonable time and as weather conditions permit; and further agrees to make such temporary and permanent repairs without reference to or consideration of the cause or nature of the leaks or defect in the roofing and associated work.

- 3.7 The Roofing Contractor shall also agree that for a period of 2 years after the execution date, to make an annual maintenance inspection of the roofing and associated work; and to submit a written report of such inspection to the Owner, stating the nature and circumstances (if known) of damage, deterioration, unusual wear or weatherizing effects observed, and recommending maintenance work required to restore the work and prevent further deterioration. Inspection shall be made in the Spring after the likelihood of freezing weather has passed. The cost of the 2 annual inspections and reports shall be included in the original contract price for the roofing and associated work, and will not be paid for separately by the Owner.

END OF SECTION