C-03 – EXTERIOR WALLS & BUILDING ENVELOPE

Windows

Acceptable window frames are painted or clad wood frames, or metal frames as project archetypes and aesthetics may require. Frame colors should be compatible with the building exterior and approved by the Project Manager and University Architect. Operable windows are encouraged. Windows on residence halls and other buildings may require security screens to discourage unauthorized entry.

Exterior Painting

The University must approve all exterior building colors. Design Teams shall coordinate the review of materials samples and mock-up panels a& assemblies with the University Architect.

Exterior fixtures and equipment, such as lampposts, bicycle racks, railings, bollards, posts, barriers, drinking fountains, street signs, and trash receptacles should be painted in accordance with the University's current standard color scheme.

Selection of Brick or Cast Panel for Exterior Walls

Designers shall present sample panels from Masonry and Brick Manufacturers to the University Architect for their selection from which sample panel patterns are to be erected or shown on the job site, after consultation with the Facilities Planning Department. The Construction Management Department will notify the architect's representative where to locate these panels.

The Chancellor's Buildings and Grounds Committee will review these panels and make the selection. At the time the brick panels are viewed by the committee, the contractor shall also have available samples of all significant exterior materials, including but not limited to pre-cast stone or limestone, window and door frames, glass and metal panels. The Construction Management Office will notify the designer of the final selection. In the case of cast stone panels, small samples may be submitted for selection purposes.

Completed panels must cure for at least three weeks before they are reviewed by the Chancellor's Buildings and Grounds Committee. In addition, three weeks are required to schedule this review. Therefore, the panels must be completed by the contractor a minimum of six weeks before the brick selection is needed.

Masonry

1. **Masonry Removals, Repair, and Reuse**
   In renovation projects, and for additions to existing brick buildings, carefully remove bricks in order to re-use the same units whenever possible. When replacement with new brick is necessary, the brick must match the existing masonry units. Masonry pavers, especially with renovation projects should be reused whenever possible to match existing adjacent pavers.

   Perform masonry joint repairs for historic buildings in accordance with the best standards of the trade and with careful attention to specify proper mortar mix and color range.

For all historic structures, mortar joint profiles and mortar colors are critical and must be specifically approved by the University. Do not use Portland cement in making such repairs since the resulting strength of the mortar may exceed the strength of the brick.

Unit Masonry

1. **Sample Panels**
   The Contractor shall prepare sample panels of all proposed exterior materials. The Designer shall recommend samples for the University's approval. Present all exterior samples for approval at the same time. Mark the approved panels and maintain until completion of the building for comparison with actual construction.

2. **Walls for Animal Quarters**
   a. All walls for animal care facilities shall have a medium dusting of boric acid powder put into the walls for pest control purposes immediately prior to sealing of walls.
   b. Completely seal all openings for piping, conduit, etc., on both sides of block wall.
   c. Seal all wall mounted fixtures such as cabinets, towel dispensers, etc., by caulking to prevent pest harborage.
   d. New Exterior, Load Bearing, Below Grade or Retaining Walls
   e. For exterior walls, load bearing walls, below grade walls or retaining walls, fully grout all cells.

Masonry Cleaning

Exercise caution to keep the masonry and adjacent surfaces clean during the erection of masonry. Clean wall surfaces as the work progresses, and to the extent practical, clean masonry on the same day in which it is laid. Rub excess mortar off the wall face when the mortar is sufficiently dry so that it will not smear and form a scum on the face of the masonry.

Clean brick or stone masonry with water and brushes with nonmetal bristles. Diluted detergents may be used if the water is containerized and pumped to the sanitary sewer. Repeated washings are preferred to fewer washings that are too abrasive or chemically laden. Acid content in washing solutions is forbidden. The Designer and Contractor are to make every effort to prevent infiltration of cleaning water into the storm sewer system during masonry cleaning. This is especially the case when very old masonry units or mortar joints are involved.

1. **Sandblasting of masonry is absolutely prohibited**
   The Designer shall make every effort to specify "low salt" mortar and to assure that the best workmanship standard of the trade is used to prevent efflorescence. It is the responsibility of the Contractor to remove efflorescence and to correct the work as necessary to avoid further efflorescence.

   The use of water-repellent masonry coatings is generally discouraged because of the on-going maintenance. This is particularly a problem with the high moisture content of walls in historic structures.