

## DIVISION 4 – MASONRY

### 04 00 00 MASONRY

#### 04 20 00 – UNIT MASONRY

##### A. General

1. Horizontal expansion joints should be installed in a masonry veneer wall at each steel support angle. Joints should be filled with compressible material at the lower leg of each angle shelf and caulked to match mortar. Vertical expansion joints shall be specified, every 20' or as appropriate for design and approved by UNI.
2. Specify limits and conditions for laying or erecting in both hot and cold weather. Require submittals outlining procedures to be followed at various temperatures for approval.
3. Specify that cleaning of masonry shall take place periodically as installation progresses, no less than once per day. Chemical cleaning of masonry shall follow International Masonry Industry, Concrete Masonry Association, and Brick Industry Association guidelines. Provide for appropriate cleaning and pointing after masonry installation has been completed.
4. Provide adequate anchorage, reinforcing, ties and bonding appropriate for each type of masonry material.
5. Control joints shall be caulked to prevent moisture infiltration.
6. At exterior masonry cavity walls, provide through-wall flashing with weeps approximately eight inches above finish grade, roof lines, and openings. Prefer weeps formed with cotton rope or other approved weeping method or provide honeycomb plastic cell cavity vents at head joints. Install mortar netting in cavity walls to prevent clogging weeps.
7. Use only portland cement/lime mortars for exterior conditions. Prefer type N.
8. **Test mortar on historic buildings to determine mortar type for masonry repairs or tuckpointing.**
9. Mortar should be specified without color additive unless prior agreement has been reached with the Owner's Representative
10. All joints should be specified to be completely filled with mortar. All joints in exterior wall face should be tooled to obtain concave joint. Tool all joints to seal mortar.
11. Parapet walls should project a minimum of 42 inches above the roof surface. Provide secondary roof drains/scuppers through exterior parapet wall.
12. Clearly specify and indicate on drawings all reinforced masonry walls.

13. Brick ledges or indentation in brick walls are not recommended due to standing water in these areas.
14. Design and construction of all concrete masonry shall be in accordance with ACI 531.
15. Masonry units shall be from a single source for the duration of each project, with acceptable uniform blend.
16. Provide end dam flashing vertical up wall where dissimilar materials meet. Do not rely on caulking alone as an end dam.
17. Provide flashing at the top of brick walls directly under the metal or stone copings.

#### B. Brick

1. Specify brick by size and cash allowance.
2. Provide for construction of a sample panel, with back-up material, not less than 4' high and 6' wide, to be erected for approval of brick and mortar by the Architect and the Owner's Representative. Sample panel is to remain in place for the duration of the project.
3. Brick for monumental architecture such as bridges and pedestrian entrances/gateways to be Glen-Gery Brick, Classic Series, Terra Cotta.

#### C. Concrete Masonry Units (CMU)

1. Specify load bearing CMU's, ASTM C90.
2. Lightweight aggregate CMU's may be used only for special conditions approved in advance by the Owner's Representative.
3. Provide for solid units and brick sizes when needed by conditions. Use bullnose units for all outside corners where exposed in interior finished work.
4. The use of standard weight concrete block for interior walls, partitions and exterior backup is recommended where aesthetic values are not of prime importance.
5. Specify performance tolerances for exposed/finished CMU's.

#### ~~D. Clay Tile~~

- ~~1. Glazed structural clay tile is an acceptable material for restroom areas and laboratories.~~
- ~~2. Special detailing is needed at corners where chipping of tile can occur. Use of bullnose tile is required in those areas.~~

## ~~E. Glass Block~~

- ~~1. Check with the Owner's Representative before specifying this material.~~

## **04 40 00 – STONE ASSEMBLIES**

### A. Limestone

1. Indiana Limestone is the preferred exterior stone facing material for buildings in the central area of the campus (limestone in combination with red brick). An alternate material such as Edwards Cast Stone using recycled materials is allowed with Owner's approval.
2. Provide samples for approval by the Owner's Representative.
3. Stone shall generally match the color and texture of the Indiana Limestone that is used in existing buildings on campus. Seerley Hall may be used as a reference for limestone if not attaching to another campus building.
4. Non-staining mortar shall be specified.
5. Stone sills shall be specified with lugs, adequate wash, and drip to minimize staining of surface below. Flashing with end dams shall be used. Verify the use of waterproofing back sides of panels. If air pocket with waterproofing is built within the limestone wall system, add vents at both top and bottom for venting purposes.
6. Follow recommendations of the Indiana Limestone Institute.
7. Precast concrete may be an acceptable alternative to limestone with approval of the Owner's Representative.
8. Consider properties of limestone, cast stone or other stone materials at building entrance where excess salt or other ice melt products will be used or areas where damaged can occur from lawn or snow removal equipment.

### B. Granite

1. Granite should be considered in the design of base courses and for exterior steps and thresholds.

### C. Cleaning of Stone

1. Confer with owner on preferred cleaning methods. Protect adjacent surfaces and plant material.