

Building Code Requirements and Specification for Masonry Structures

Containing

Building Code Requirements for Masonry Structures
(TMS 402-11/ACI 530-11/ASCE 5-11)

Specification for Masonry Structures
(TMS 602-11/ACI 530.1-11/ASCE 6-11)

and Companion Commentaries

Developed by the Masonry Standards Joint Committee (MSJC) of



Advancing the knowledge of masonry



SPECIFICATION

3.3 — Masonry erection

3.3 A. Bond pattern — Unless otherwise required, lay masonry in running bond.

3.3 B. Placing mortar and units

1. **Bed and head joints** — Unless otherwise required, construct $\frac{3}{8}$ -in. (9.5-mm) thick bed and head joints, except at foundation or with glass unit masonry. Construct bed joint of the starting course of foundation with a thickness not less than $\frac{1}{4}$ in. (6.4 mm) and not more than $\frac{3}{4}$ in. (19.1 mm). Provide glass unit masonry bed and head joint thicknesses in accordance with Article 3.3 B.6.c. Construct joints that also conform to the following:
 - a. Fill holes not specified in exposed and below grade masonry with mortar.
 - b. Unless otherwise required, tool joint with a round jointer when the mortar is thumbprint hard.
 - c. Remove masonry protrusions extending $\frac{1}{2}$ in. (12.7 mm) or more into cells or cavities to be grouted.
2. **Collar joints** — Unless otherwise required, solidly fill collar joints less than $\frac{3}{4}$ in. (19.1 mm) wide with mortar as the project progresses.
3. **Hollow units** — Place hollow units so:
 - a. Face shells of bed joints are fully mortared.
 - b. Webs are fully mortared in:
 - 1) all courses of piers, columns and pilasters;
 - 2) when necessary to confine grout or insulation.
 - c. Head joints are mortared, a minimum distance from each face equal to the face shell thickness of the unit.
 - d. Vertical cells to be grouted are aligned and unobstructed openings for grout are provided in accordance with the Project Drawings.
4. **Solid units** — Unless otherwise required, solidly fill bed and head joints with mortar and:
 - a. Do not fill head joints by slushing with mortar.
 - b. Construct head joints by shoving mortar tight against the adjoining unit.
 - c. Do not deeply furrow bed joints.

COMMENTARY

3.3 — Masonry erection

3.3 B. Placing mortar and units — Article 3.3 B applies to masonry construction in which the units support their own weight. Face shell mortar bedding of hollow units is standard, except in locations detailed in Article 3.3 B.3.b. Figure SC-7 shows the typical placement of mortar for hollow-unit masonry walls. In partially grouted walls, however, cross webs next to cells that are to be grouted are usually mortared. If full mortar beds throughout are required for structural capacity, for example, the specifier must so stipulate in the Project Specifications or Project Drawings.

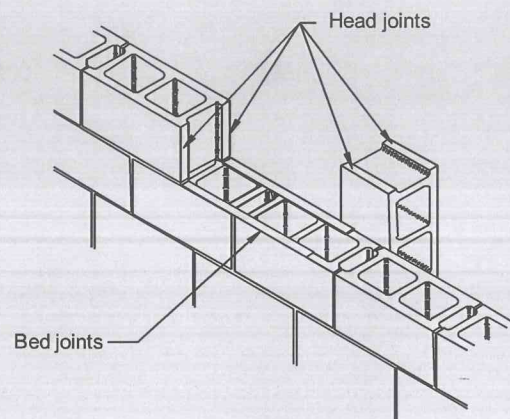


Figure SC-7 — Mortar placement of hollow units in walls