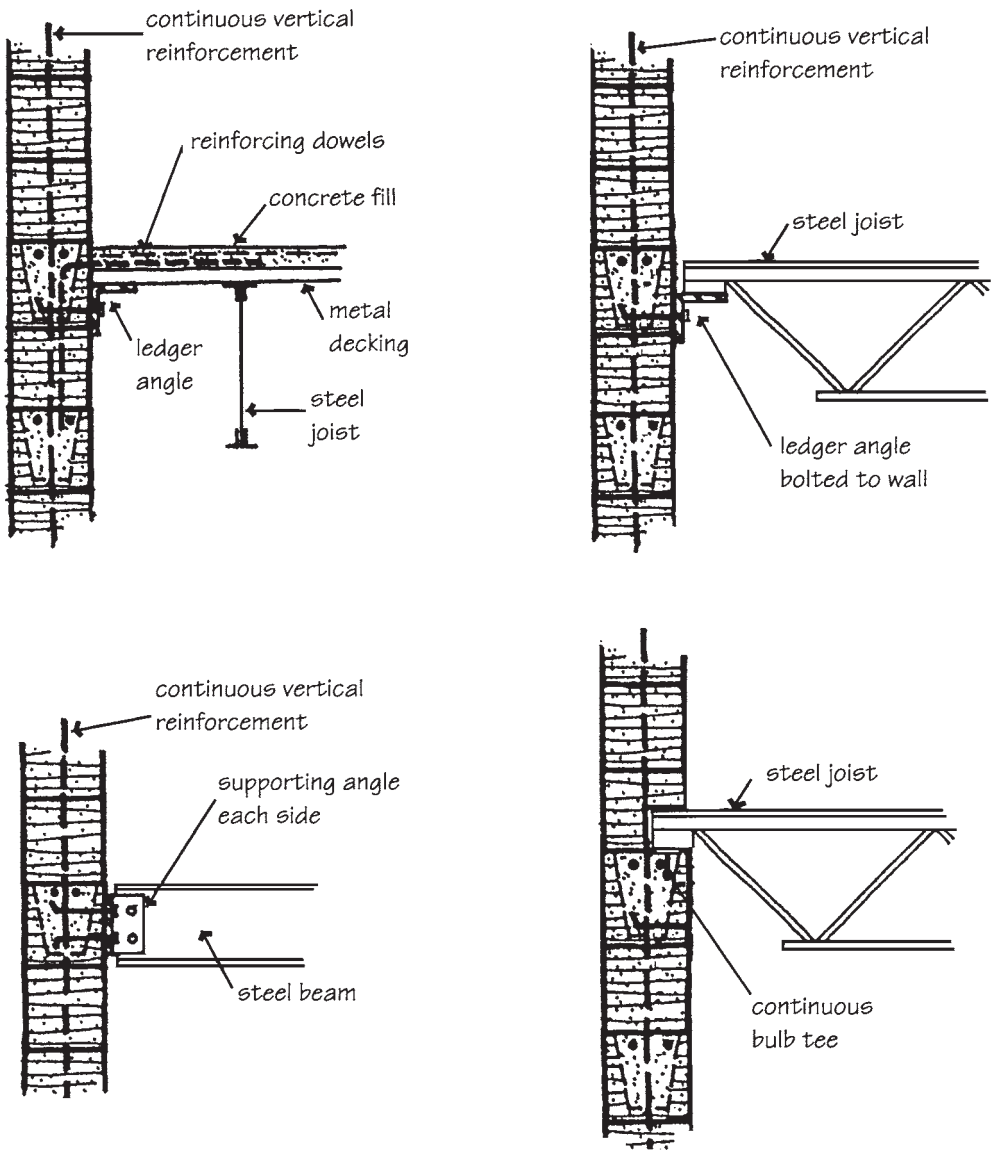
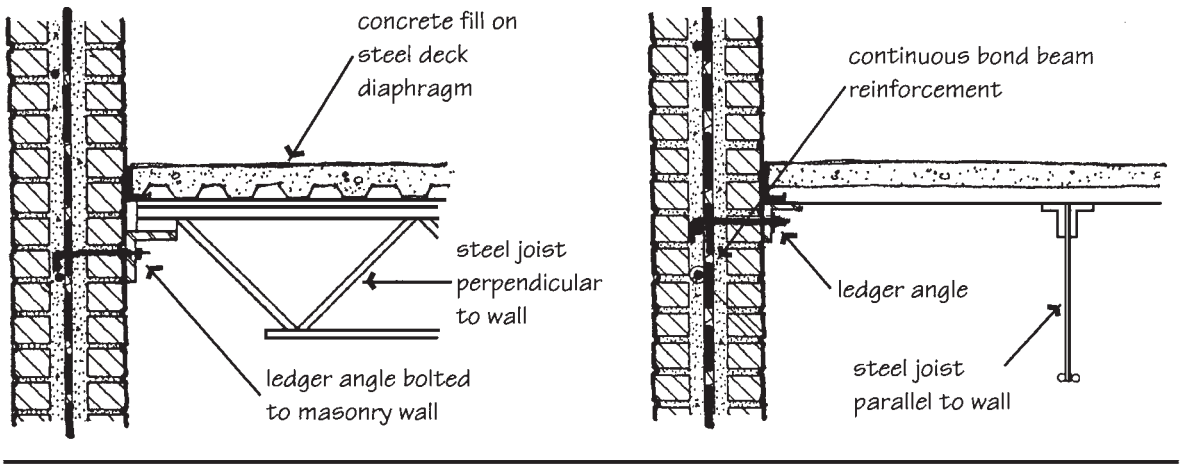


Figure 12-17 Examples of single-wythe masonry wall connections to steel beams and open web steel joists.

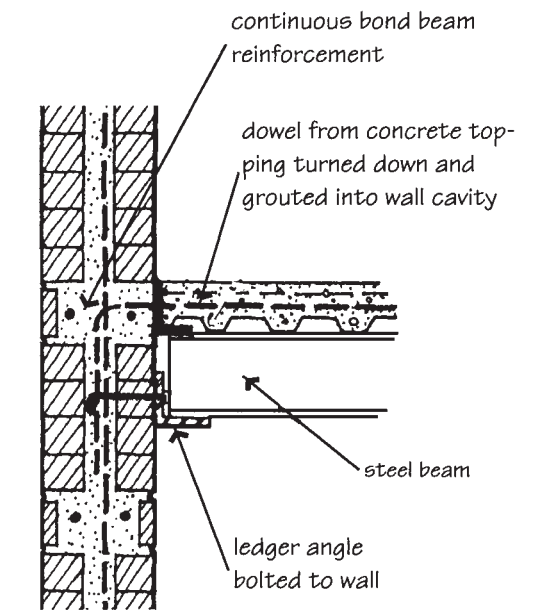
tar and grout bind the masonry units and steel together so that they act as a single element in resisting applied forces. Reinforcement may be added to resist isolated stresses wherever design analysis indicates that excessive flexural tension is developed. The reinforcing steel is then designed to resist all of the tensile stresses and the flexural strength of the masonry is neglected entirely.

12.1.9 Empirical and Analytical Design

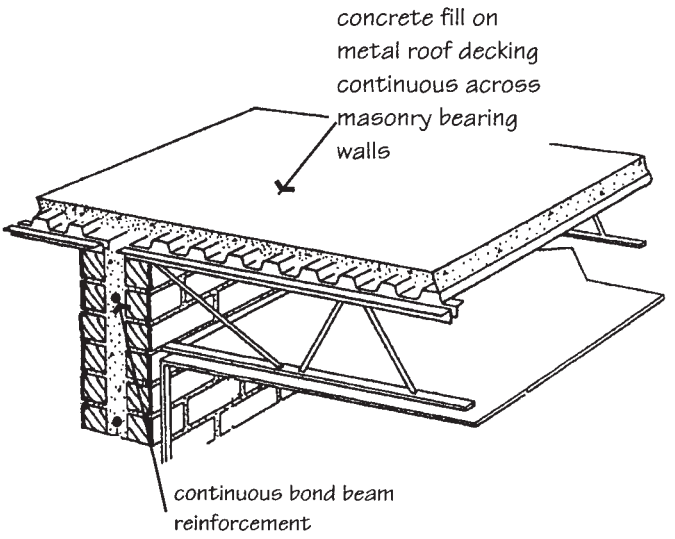
The analytical design of loadbearing masonry buildings by the allowable stress method, the strength design method, or prestressed masonry design is based on a general analysis of the structure to determine the magnitude, line



STEEL JOIST SUPPORTED ON LEDGER ANGLE



STEEL BEAM SUPPORTED
ON LEDGER ANGLE



STEEL JOISTS SUPPORTED ON BEARING
PADS PLACED DIRECTLY ON WALL

Figure 12-18 Connecting double-wythe masonry walls to steel beams and joists. (*Adapted from Amrhein,* Reinforced Masonry Engineering Handbook, *5th ed., Masonry Institute of America, Los Angeles, 1992.*)