CODE

16.3.3.6 At the base of a precast column, pedestal, or wall, anchor bolts and anchors for mechanical connections shall be designed in accordance with Chapter 17. Forces developed during erection shall be considered.

16.3.3.7 At the base of a precast column, pedestal, or wall, mechanical connectors shall be designed to reach their design strength before anchorage failure or failure of surrounding concrete.

16.3.4 *Minimum reinforcement for connections between cast-in-place members and foundation*

16.3.4.1 For connections between a cast-in-place column or pedestal and foundation, A_s crossing the interface shall be at least $\mathbf{0.005}A_g$, where A_g is the gross area of the supported member.

16.3.4.2 For connections between a cast-in-place wall and foundation, area of vertical reinforcement crossing the interface shall satisfy 11.6.1.

16.3.5 *Details for connections between cast-in-place members and foundation*

16.3.5.1 At the base of a cast-in-place column, pedestal, or wall, reinforcement required to satisfy 16.3.3 and 16.3.4 shall be provided either by extending longitudinal bars into supporting foundation or by dowels.

16.3.5.2 Where continuity is required, splices and mechanical connectors for the longitudinal reinforcement or dowels shall satisfy 10.7.5 and, if applicable, 18.13.2.2.

16.3.5.3 If a pinned or rocker connection is used at the base of a cast-in-place column or pedestal, the connection to foundation shall satisfy 16.3.3.

16.3.5.4 At footings, compression lap splices of No. 43 and No. 57 bars that are in compression for all factored load combinations shall be permitted in accordance with 25.5.5.3.

16.3.6 *Details for connections between precast members and foundation*

COMMENTARY

the joint satisfies 16.3.4.1 for cast-in-place construction or 16.3.6.1 for precast construction. In precast construction, resistance to lateral forces may be provided by mechanical or welded connections.

R16.3.3.6 Chapter 17 covers anchor design, including seismic design requirements. In precast concrete construction, erection considerations may control base connection design and need to be considered.

R16.3.4 *Minimum reinforcement for connections between cast-in-place members and foundation*

The Code requires a minimum amount of reinforcement between all supported and supporting members to ensure ductile behavior. This reinforcement is required to provide a degree of structural integrity during the construction stage and during the life of the structure.

R16.3.4.1 The minimum area of reinforcement at the base of a column may be provided by extending the longitudinal bars and anchoring them into the footing or by providing properly anchored dowels.

R16.3.5 *Details for connections between cast-in-place members and foundation*

R16.3.5.4 Satisfying 16.3.3.1 might require that each No. 43 or 57 bar be spliced in compression to more than one No. 36 or smaller dowel bar.