

CODE

COMMENTARY

8.2.2 The effects of concentrated loads, slab openings, and slab voids shall be considered in design.

8.2.3 Slabs prestressed with an average effective compressive stress less than 0.9 MPa shall be designed as nonprestressed slabs.

8.2.4 A drop panel in a nonprestressed slab, where used to reduce the minimum required thickness in accordance with 8.3.1.1 or the quantity of deformed negative moment reinforcement at a support in accordance with 8.5.2.2, shall satisfy (a) and (b):

- (a) The drop panel shall project below the slab at least one-fourth of the adjacent slab thickness.
- (b) The drop panel shall extend in each direction from the centerline of support a distance not less than one-sixth the span length measured from center-to-center of supports in that direction.

8.2.5 A shear cap, where used to increase the critical section for shear at a slab-column joint, shall project below the slab soffit and extend horizontally from the face of the column a distance at least equal to the thickness of the projection below the slab soffit.

8.2.6 Materials

8.2.6.1 Design properties for concrete shall be selected to be in accordance with **Chapter 19**.

8.2.6.2 Design properties for steel reinforcement shall be selected to be in accordance with **Chapter 20**.

8.2.6.3 Materials, design, and detailing requirements for embedments in concrete shall be in accordance with **20.6**.

8.2.7 Connections to other members

8.2.7.1 Beam-column and slab-column joints shall satisfy **Chapter 15**.

8.3—Design limits

8.3.1 Minimum slab thickness

R8.2.2 Refer to R7.2.1.

R8.2.4 and R8.2.5 Drop panel dimensions specified in 8.2.4 are necessary when reducing the amount of negative moment reinforcement following 8.5.2.2 or to satisfy minimum slab thicknesses permitted in 8.3.1.1. If the dimensions are less than specified in 8.2.4, the projection may be used as a shear cap to increase the shear strength of the slab. For slabs with changes in thickness, it is necessary to check the shear strength at several sections (Refer to 22.6.4.1(b)).

R8.2.7 Connections to other members

Safety of a slab system requires consideration of the transmission of load from the slab to the columns by flexure, torsion, and shear.

R8.3—Design limits

R8.3.1 Minimum slab thickness

The minimum slab thicknesses in 8.3.1.1 and 8.3.1.2 are independent of loading and concrete modulus of elasticity, both of which have significant effects on deflections. These minimum thicknesses are not applicable to slabs with unusually heavy superimposed sustained loads or for concrete with modulus of elasticity significantly lower than that of ordinary normalweight concrete. Deflections should be calculated for such situations.