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model satisfying Chapter 23 (Adebar et al. 1990) provided the shear force limits of 23.4.4 are also satisfied.

Figure R13.2.6.5 illustrates the application of the shear force limits of 23.4.4 and the provisions of 13.2.7.2 for one-way shear design of a spread footing using the strut-and-tie method. Soil pressure within ***d*** from the face of the column or wall does not contribute to shear across the critical crack (Uzel et al. 2011), but the soil pressure within ***d*** contributes to the bending moment at the face of the column or wall.

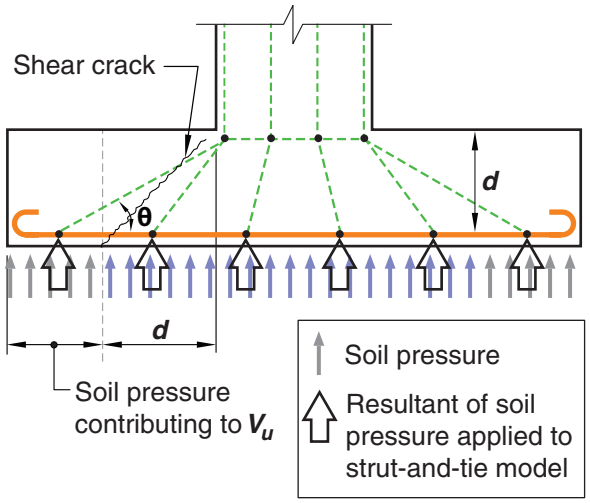

Fig. R13.2.6.5*—One-way shear design of a spread footing using the strut-and-tie method.*

13.2.6.6 External moment on any section of a strip footing, isolated footing, or pile cap shall be calculated by passing a vertical plane through the member and calculating the moment of the forces acting over the entire area of member on one side of that vertical plane.

13.2.7 *Critical sections for shallow foundations and pile caps*

R13.2.7 *Critical sections for shallow foundations and pile caps*

13.2.7.1 M_u at the supported member shall be permitted to be calculated at the critical section defined in accordance with Table 13.2.7.1.

Table 13.2.7.1—Location of critical section for M_u

Supported member	Location of critical section
Column or pedestal	Face of column or pedestal
Column with steel base plate	Halfway between face of column and edge of steel base plate
Concrete wall	Face of wall
Masonry wall	Halfway between center and face of masonry wall

13.2.7.2 The location of critical section for factored shear in accordance with 7.4.3 and 8.4.3 for one-way shear or 8.4.4.1 for two-way shear shall be measured from the location of the critical section for M_u in 13.2.7.1.

R13.2.7.2 The shear strength of a footing is determined for the more severe condition of 8.5.3.1.1 and 8.5.3.1.2. The critical section for shear is measured from the face of the supported member (column, pedestal, or wall), except for masonry walls and members supported on steel base plates.