CODE

least 30 percent; steel element meeting the requirements of ASTM A307 shall be considered ductile; except as modified by for earthquake effects, deformed reinforcing bars meeting the requirements of ASTM A615, A706, or A955 shall be considered as ductile steel elements.

stirrup—reinforcement used to resist shear and torsion forces in a member; typically deformed bars, deformed wires, or welded wire reinforcement either single leg or bent into L, U, or rectangular shapes and located perpendicular to, or at an angle to, longitudinal reinforcement. See also **tie**.

strength, design—nominal strength multiplied by a strength reduction factor ϕ.

strength, nominal—strength of a member or cross section calculated in accordance with provisions and assumptions of the strength design method of this Code before application of any strength reduction factors.

strength, required—strength of a member or cross section required to resist factored loads or related internal moments and forces in such combinations as stipulated in this Code.

stretch length—length of anchor, extending beyond concrete in which it is anchored, subject to full tensile load applied to anchor, and for which cross-sectional area is minimum and constant.

structural concrete—concrete used for structural purposes, including plain and reinforced concrete.

structural diaphragm—member, such as a floor or roof slab, that transmits forces acting in the plane of the member to vertical elements of the lateral-force-resisting system. A structural diaphragm may include chords and collectors as part of the diaphragm.

structural integrity—ability of a structure through strength, redundancy, ductility, and detailing of reinforcement to redistribute stresses and maintain overall stability if localized damage or significant overstress occurs.

structural system—interconnected members designed to meet performance requirements.

structural truss—assemblage of reinforced concrete members subjected primarily to axial forces.

structural wall—wall proportioned to resist combinations of moments, shears, and axial forces in the plane of the wall; a shear wall is a structural wall.

structural wall, ductile coupled—a seismic-force-resisting-system complying with 18.10.9.

structural wall, ordinary reinforced concrete—a wall complying with Chapter 11.

COMMENTARY

appropriate ASTM standard for steel. Due to concerns over fracture in cut threads, it should be verified that threaded deformed reinforcing bars satisfy the strength requirements of 25.5.7.1.

stirrup—The term "stirrup" is usually applied to transverse reinforcement in beams or slabs and the term "ties" or "hoops" to transverse reinforcement in compression members.

strength, nominal—Nominal or specified values of material strengths and dimensions are used in the calculation of nominal strength. The subscript n is used to denote the nominal strengths; for example, nominal axial load strength P_n, nominal moment strength M_n, and nominal shear strength V_n. For additional discussion on the concepts and nomenclature for strength design, refer to the Commentary of Chapter 22.

strength, required—The subscript u is used only to denote the required strengths; for example, required axial load strength P_u, required moment strength M_u, and required shear strength V_u, calculated from the applied factored loads and forces. The basic requirement for strength design may be expressed as follows: design strength $\geq$ required strength; for example, $\phi P_n \geq P_u$; $\phi M_n \geq M_u$; $\phi V_n \geq V_u$. For additional discussion on the concepts and nomenclature for strength design, refer to the Commentary of Chapter 22.

stretch length—Length of an anchor over which inelastic elongations are designed to occur under earthquake loadings. Examples illustrating stretch length are shown in Fig. R17.10.5.3.