structures shall be designed and detailed in accordance with the requirements of AISI S213.

14.1.4.3 Prescriptive Cold-Formed Steel Light-Frame Construction

Cold-formed steel light-frame construction for one- and two-family dwellings is permitted to be designed and constructed in accordance with the requirements of AISI S230 subject to the limitations therein.

14.1.5 Steel Deck Diaphragms

Steel deck diaphragms shall be made from materials conforming to the requirements of AISI S100 or ASCE 8. Nominal strengths shall be determined in accordance with approved analytical procedures or with test procedures prepared by a registered design professional experienced in testing of cold-formed steel assemblies and approved by the authority having jurisdiction. The required strength of diaphragms, including bracing members that form part of the diaphragm, shall be determined in accordance with Section 12.10.1. The steel deck installation for the building, including fasteners, shall comply with the test assembly arrangement. Quality standards established for the nominal strength test shall be the minimum standards required for the steel deck installation, including fasteners.

14.1.6 Steel Cables

The design strength of steel cables shall be determined by the requirements of ASCE 19 except as modified by this chapter. ASCE 19, Section 3.1.2(d), shall be modified by substituting $1.5(T_4)$ where T_4 is the net tension in cable due to dead load, prestress, live load, and seismic load. A load factor of 1.1 shall be applied to the prestress force to be added to the load combination of Section 3.1.2 of ASCE 19.

14.1.7 Additional Detailing Requirements for Steel Piles in Seismic Design Categories D through F

In addition to the foundation requirements set forth in Sections 12.1.5 and 12.13, design and detailing of H-piles shall conform to the requirements of AISC 341, and the connection between the pile cap and steel piles or unfilled steel pipe piles in structures assigned to Seismic Design Category D, E, or F shall be designed for a tensile force not less than 10 percent of the pile compression capacity.

EXCEPTION: Connection tensile capacity need not exceed the strength required to resist seismic load effects including overstrength factor of Section 12.4.3.2 or Section 12.14.2.2.2. Connections need not be provided where the foundation or supported structure does not rely on the tensile capacity of the piles for stability under the design seismic forces.

14.2 CONCRETE

Structures, including foundations, constructed of concrete to resist seismic loads shall be designed and detailed in accordance with this standard including the reference documents and additional requirements provided in this section.

14.2.1 Reference Documents

The quality and testing of concrete materials and the design and construction of structural concrete members that resist seismic forces shall conform to the requirements of ACI 318, except as modified in Section 14.2.2.

14.2.2 Modifications to ACI 318

The text of ACI 318 shall be modified as indicated in Sections 14.2.2.1 through 14.2.2.9. Italics are used for text within Sections 14.2.2.1 through 14.2.2.9 to indicate requirements that differ from ACI 318.

14.2.2.1 Definitions

Add the following definitions to Section 2.2.

DETAILED PLAIN CONCRETE STRUCTURAL WALL: *A wall complying with the requirements of Chapter 22.*

ORDINARY PRECAST STRUCTURAL WALL: *A precast wall complying with the requirements of Chapters 1 through 18.*

WALL PIER: *A wall segment with a horizontal length-to-thickness ratio of at least 2.5, but not exceeding 6, whose clear height is at least two times its horizontal length.*

14.2.2.2 ACI 318, Section 7.10

Modify Section 7.10 by revising Section 7.10.5.6 to read as follows:

7.10.5.6 Where anchor bolts are placed in the top of columns or pedestals, the bolts shall be enclosed by lateral reinforcement that also surrounds at least four vertical bars of the column or pedestal. The lateral reinforcement shall be distributed within 5 in. of the top of the column or pedestal, and shall consist of at least two No. 4 or three No. 3 bars. *In structures assigned to Seismic Design Categories C, D, E, or F, the ties shall have a hook on each free end that complies with 7.1.4.*