or hooked around the reinforcing steel or otherwise terminated so as to effectively transfer forces to the reinforcing steel.

12.14.7.6 Bearing Walls and Shear Walls

Exterior and interior bearing walls and shear walls and their anchorage shall be designed for a force equal to 40 percent of the short period design spectral response acceleration S_{DS} times the weight of wall, W_c, normal to the surface, with a minimum force of 10 percent of the weight of the wall. Interconnection of wall elements and connections to supporting framing systems shall have sufficient ductility, rotational capacity, or sufficient strength to resist shrinkage, thermal changes, and differential foundation settlement where combined with seismic forces.

12.14.7.7 Anchorage of Nonstructural Systems

Where required by Chapter 13, all portions or components of the structure shall be anchored for the seismic force, F_p, prescribed therein.

12.14.8 Simplified Lateral Force Analysis Procedure

An equivalent lateral force analysis shall consist of the application of equivalent static lateral forces to a linear mathematical model of the structure. The lateral forces applied in each direction shall sum to a total seismic base shear given by Section 12.14.8.1 and shall be distributed vertically in accordance with Section 12.14.8.2. For purposes of analysis, the structure shall be considered fixed at the base.

12.14.8.1 Seismic Base Shear

The seismic base shear, V, in a given direction shall be determined in accordance with Eq. 12.14-11:

$$V = \frac{FS_{DS}}{R} W \qquad (12.14\text{-}11)$$

where

$$S_{DS} = \frac{2}{3} F_a S_s$$

where F_a is permitted to be taken as 1.0 for rock sites, 1.4 for soil sites, or determined in accordance with Section 11.4.3. For the purpose of this section, sites are permitted to be considered to be rock if there is no more than 10 ft (3 m) of soil between the rock surface and the bottom of spread footing or mat foundation. In calculating S_{DS}, S_s shall be in accordance with Section 11.4.1, but need not be taken larger than 1.5.

F = 1.0 for buildings that are one story above grade plane
F = 1.1 for buildings that are two stories above grade plane
F = 1.2 for buildings that are three stories above grade plane
R = the response modification factor from Table 12.14-1
W = effective seismic weight of the structure that includes the dead load, as defined in Section 3.1, above grade plane and other loads above grade plane as listed in the following text:

1. In areas used for storage, a minimum of 25 percent of the floor live load shall be included.

   EXCEPTIONS:

   a. Where the inclusion of storage loads adds no more than 5% to the effective seismic weight at that level, it need not be included in the effective seismic weight.
   b. Floor live load in public garages and open parking structures need not be included.

2. Where provision for partitions is required by Section 4.2.2 in the floor load design, the actual partition weight, or a minimum weight of 10 psf (0.48 kN/m^2) of floor area, whichever is greater.
3. Total operating weight of permanent equipment.
4. Where the flat roof snow load, P_f, exceeds 30 psf (1.44 kN/m^2), 20 percent of the uniform design snow load, regardless of actual roof slope.
5. Weight of landscaping and other materials at roof gardens and similar areas.

12.14.8.2 Vertical Distribution

The forces at each level shall be calculated using the following equation:

$$F_x = \frac{w_x}{W} V \qquad (12.14\text{-}12)$$

where w_x = the portion of the effective seismic weight of the structure, W, at level x.

12.14.8.3 Horizontal Shear Distribution

The seismic design story shear in any story, V_x (kip or kN), shall be determined from the following equation:

$$V_x = \sum_{i=x}^{n} F_i \qquad (12.14\text{-}13)$$