

- $D_{1M}$  = fundamental mode maximum displacement at the center of rigidity of the roof level of the structure in the direction under consideration, Section 18.5.3.5
- $D_{mD}$  = design displacement at the center of rigidity of the roof level of the structure due to the  $m^{\text{th}}$  mode of vibration in the direction under consideration, Section 18.4.3.2
- $D_{mM}$  = maximum displacement at the center of rigidity of the roof level of the structure due to the  $m^{\text{th}}$  mode of vibration in the direction under consideration, Section 18.4.3.5
- $D_{RD}$  = residual mode design displacement at the center of rigidity of the roof level of the structure in the direction under consideration, Section 18.5.3.2
- $D_{RM}$  = residual mode maximum displacement at the center of rigidity of the roof level of the structure in the direction under consideration, Section 18.5.3.5
- $D_Y$  = displacement at the center of rigidity of the roof level of the structure at the effective yield point of the seismic force-resisting system, Section 18.6.3
- $f_i$  = lateral force at Level  $i$  of the structure distributed approximately in accordance with Section 12.8.3, Section 18.5.2.3
- $F_{i1}$  = inertial force at Level  $i$  (or mass point  $i$ ) in the fundamental mode of vibration of the structure in the direction of interest, Section 18.5.2.9
- $F_{im}$  = inertial force at Level  $i$  (or mass point  $i$ ) in the  $m^{\text{th}}$  mode of vibration of the structure in the direction of interest, Section 18.4.2.7
- $F_{iR}$  = inertial force at Level  $i$  (or mass point  $i$ ) in the residual mode of vibration of the structure in the direction of interest, Section 18.5.2.9
- $h_r$  = height of the structure above the base to the roof level, Section 18.5.2.3
- $q_H$  = hysteresis loop adjustment factor as determined in Section 18.6.2.2.1
- $Q_{DSD}$  = force in an element of the damping system required to resist design seismic forces of displacement-dependent damping devices, Section 18.7.2.5
- $Q_{mDSV}$  = forces in an element of the damping system required to resist design seismic forces of velocity-dependent damping devices due to the  $m^{\text{th}}$  mode of vibration of the structure in the direction of interest, Section 18.7.2.5
- $Q_{mSFRS}$  = force in an element of the damping system equal to the design seismic force of the  $m^{\text{th}}$  mode of vibration of the structure in the direction of interest, Section 18.7.2.5
- $T_1$  = the fundamental period of the structure in the direction under consideration
- $T_{1D}$  = effective period, in seconds, of the fundamental mode of vibration of the structure at the design displacement in the direction under consideration, as prescribed by Section 18.4.2.5 or 18.5.2.5
- $T_{1M}$  = effective period, in seconds, of the fundamental mode of vibration of the structure at the maximum displacement in the direction under consideration, as prescribed by Section 18.4.2.5 or 18.5.2.5
- $T_R$  = period, in seconds, of the residual mode of vibration of the structure in the direction under consideration, Section 18.5.2.7
- $V_m$  = design value of the seismic base shear of the  $m^{\text{th}}$  mode of vibration of the structure in the direction of interest, Section 18.4.2.2
- $V_{\min}$  = minimum allowable value of base shear permitted for design of the seismic force-resisting system of the structure in the direction of interest, Section 18.2.2.1
- $V_R$  = design value of the seismic base shear of the residual mode of vibration of the structure in a given direction, as determined in Section 18.5.2.6
- $\bar{W}_1$  = effective fundamental mode seismic weight determined in accordance with Eq. 18.4-2b for  $m = 1$
- $\bar{W}_R$  = effective residual mode seismic weight determined in accordance with Eq. 18.5-13
- $\alpha$  = velocity exponent relating damping device force to damping device velocity
- $\beta_{mD}$  = total effective damping of the  $m^{\text{th}}$  mode of vibration of the structure in the direction of interest at the design displacement, Section 18.6.2
- $\beta_{mM}$  = total effective damping of the  $m^{\text{th}}$  mode of vibration of the structure in the direction of interest at the maximum displacement, Section 18.6.2
- $\beta_{HD}$  = component of effective damping of the structure in the direction of interest due to post-yield hysteretic behavior of the seismic force-resisting system and elements of the damping system at effective ductility demand  $\mu_D$ , Section 18.6.2.2
- $\beta_{HM}$  = component of effective damping of the structure in the direction of interest due to post-yield hysteretic behavior of the seismic