

Load Combinations from AISC (Based on ASCE-7 2010)

$$1.4D \quad (1)$$

$$1.2D + 1.6L + 0.5(L_r \text{ or } S \text{ or } R) \quad (2)$$

$$1.2D + 1.6(L_r \text{ or } S \text{ or } R) + (1.0^aL \text{ or } 0.5W) \quad (3)$$

$$1.2D + 1.0W + 1.0^aL + 0.5(L_r \text{ or } S \text{ or } R) \quad (4)$$

$$1.2D \pm 1.0E + 1.0^aL + 0.2S \quad (5)$$

$$0.9D \pm 1.0W \quad (6)$$

$$0.9D \pm 1.0E \quad (7)$$

Note a) Factor should be reduced to 0.5 if $L \leq 100\text{psf}$ except for locations of public assembly.