

Formal LRFD equation $\sim$ design strength

$$\sum_i \gamma_i Q_i \leq \phi R_n$$

load
effects

where: Q_i = a load effect (axial force, moment, etc.) caused by a particular element of load, i , (wind, dead, live)

γ_i = load factor for element i , typically ≥ 1.0 , but not always

ϕ = resistance factor

R_n = nominal resistance (strength) of component (tension member, beam, column)