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NOTATIONS

- A** = Area
A_c = gross area of concrete section
A_s = area of tension reinforcement
A'_s = area of compression reinforcement
b = width of rectangular section
d = depth from extreme compression fibre to centroid of tension reinforcement
D = Dead load
e = eccentricity
e_a = additional eccentricity
e_c = eccentricity due to creep
e_s = eccentricity of sustained load
E_c = modulus of elasticity of concrete
E_s = modulus of elasticity of steel
f'_c = 28 day compression strength of a 6 by 12 in. (15 by 30 cm) concrete test cylinder
h = overall depth of a concrete section
H = lateral load
I = moment of inertia
I_g = moment of inertia of gross (uncracked) concrete section ignoring the reinforcement
I_s = moment of inertia of reinforcement
k = effective length factor
K = curvature = $(\epsilon_1 - \epsilon_2)/h$
l = length of a column
L = live load
m_j = mean of j
M = moment
M_a = additional moment
M_o = moment capacity of cross section
M_{ox} = uniaxial moment capacity of column cross section about x axis
M₁ = smaller of the two column end moments, positive if column is bent in single curvature
M₂ = larger of the two column end moments, always positive

- p_t = total reinforcement ratio = $(A_s + A'_s)/A_c$
 p = tension reinforcement ratio = A_s/A_c
 p' = compression reinforcement ratio = A'_s/A_c
 P = axial load
 P_{cr} = critical load
 P_E = Euler buckling load
 P_o = capacity of column cross-section under pure axial load
 P_ϕ = constant sustained load
 r = radius of gyration of section
 R = Resistance
 S = Shear force
 t = time
 T = Temperature
 v_j = coefficient of variation of j
 x, y = Axes in cross-section
 z = Axis along member
 γ = Safety factor
 Δ = lateral deflection of a column or storey
 ϵ = strain
 ϵ_c = concrete strain
 ϵ_{cu} = failure strain of concrete
 ϵ_k = creep strain of concrete
 ϵ_{sh} = shrinkage strain in concrete
 ϵ_s = steel strain in tension reinforcement
 ϵ'_s = steel strain in compression reinforcement
 ϵ_y = yield strain of reinforcement
 ϵ_1, ϵ_2 = extreme strains in cross-section
 ϕ = creep coefficient
 λ = load factor
 ρ = resistance reduction factor
 σ = stress
 σ_y = yield strength of steel
 σ_j = standard deviation of j

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