CODE

$V_{ua,g}$ = total factored shear force applied to anchor group, N

$V_{ua,i}$ = factored shear force applied to most highly stressed anchor in a group of anchors, N

V_{uh} = factored shear force along contact surface in composite concrete flexural member, N

V_{us} = factored horizontal shear in a story, N

$V_{u,x}$ = factored shear force at section in the x-direction, N

$V_{u,y}$ = factored shear force at section in the y-direction, N

$V_{n,x}$ = shear strength in the x-direction

$V_{n,y}$ = shear strength in the y-direction

w_c = density, unit weight, of normalweight concrete or equilibrium density of lightweight concrete, kg/m^3

w_t = effective tie width in a strut-and-tie model, mm

w_u = factored load per unit length of beam or one-way slab, N/mm

w/cm = water-cementitious materials ratio

W = effect of wind load

y_t = distance from centroidal axis of gross section, neglecting reinforcement, to tension face, mm

α = angle defining the orientation of reinforcement

α_c = coefficient defining the relative contribution of concrete strength to nominal wall shear strength

α_f = ratio of flexural stiffness of beam section to flexural stiffness of a width of slab bounded laterally by centerlines of adjacent panels, if any, on each side of the beam

α_{fm} = average value of α_f for all beams on edges of a panel

α_s = constant used to calculate V_c in slabs and footings

α_1 = minimum angle between unidirectional distributed reinforcement and a strut

β = ratio of long to short dimensions: clear spans for two-way slabs, sides of column, concentrated load or reaction area; or sides of a footing

β_b = ratio of area of reinforcement cut off to total area of tension reinforcement at section

β_c = confinement modification factor for struts and nodes in a strut-and-tie model

β_{dns} = ratio used to account for reduction of stiffness of columns due to sustained axial loads

β_{ds} = the ratio of maximum factored sustained shear within a story to the maximum factored shear in that story associated with the same load combination

β_n = factor used to account for the effect of the anchorage of ties on the effective compressive strength of a nodal zone

β_s = factor used to account for the effect of cracking and confining reinforcement on the effective compressive strength of the concrete in a strut

COMMENTARY

w_s = width of a strut perpendicular to the axis of the strut, mm

w_t = effective height of concrete concentric with a tie, used to dimension nodal zone, mm

$w_{t,max}$ = maximum effective height of concrete concentric with a tie, mm

W_a = service-level wind load, N

α_f = $E_{cb}I_b/E_{cs}I_s$