



FIGURE 5.4-1 Normally Incident Breaking Wave Pressures against a Vertical Wall (Space behind Vertical Wall is Dry).

nonvertical. The horizontal component of breaking wave force shall be given by

$$F_{nv} = F_t \sin^2 \alpha \quad (5.4-8)$$

where

F_{nv} = horizontal component of breaking wave force in lb/ft (kN/m)

F_t = net breaking wave force acting on a vertical surface in lb/ft (kN/m)

α = vertical angle between nonvertical surface and the horizontal

5.4.4.4 Breaking Wave Loads from Obliquely Incident Waves

Breaking wave forces given by Eqs. 5.4-6 and 5.4-7 shall be modified in instances where waves are obliquely incident. Breaking wave forces from non-normally incident waves shall be given by

$$F_{oi} = F_t \sin^2 \alpha \quad (5.4-9)$$

where

F_{oi} = horizontal component of obliquely incident breaking wave force in lb/ft (kN/m)

F_t = net breaking wave force (normally incident waves) acting on a vertical surface in lb/ft (kN/m)

α = horizontal angle between the direction of wave approach and the vertical surface

5.4.5 Impact Loads

Impact loads are those that result from debris, ice, and any object transported by floodwaters striking against buildings and structures, or parts thereof. Impact loads shall be determined using a rational approach as concentrated loads acting horizontally at the most critical location at or below the DFE.