FIGURE C30.1-1 Distribution of Net Components and Cladding Pressure Acting on a Building Surface (Building Envelope) Comprised of Three Components (Layers)

Furthermore, the air space between the cladding and the next adjacent building envelope surface behind the cladding (e.g., the exterior sheathing) should be as small as practicable and compartmentalized to avoid communication or venting between different pressure zones of a building's surfaces.

The design wind pressures derived from Chapter 30 represent the pressure differential between the exterior and interior surfaces of the exterior envelope (wall or roof system). Because of partial air-pressure equalization provided by air-permeable claddings, the components and cladding pressures derived from Chapter 30 can overestimate the load on air-permeable cladding elements. The designer may elect either to use the loads derived from Chapter 30 or to use loads derived by an approved alternative method. If the designer desires to determine the pressure differential across a specific cladding element in combination with other elements comprising a specific building envelope assembly, appropriate full-scale pressure measurements should be made on the applicable building envelope assembly, or reference should be made to recognized literature (Cheung and Melbourne 1986, Haig 1990, Baskaran 1992, Southern Building Code Congress International 1994, Peterka et al. 1997, ASTM 2006, 2007, and Kala et al. 2008) for documentation pertaining to wind loads. Such alternative methods may vary according to a given cladding product or class of cladding products or assemblies because each has unique features that affect pressure equalization.

C30.3.1 Velocity Pressure Exposure Coefficient
See commentary, Section C27.3.1.

C30.3.2 Velocity Pressure
See commentary, Section C27.3.2.
Figures 30.4-1, 30.4-2A, 30.4-2B, and 30.4-2C. The pressure coefficient values provided in these figures are to be used for buildings with a mean roof height of 60 ft (18 m) or less. The values were