SUPPLEMENTARY DESIGN CONSIDERATIONS

The version of ASCE Standard in force at the time this manual was created (ASCE 7-05) did not specifically address the design considerations presented in this section. The engineer shall exercise judgment in deciding when these procedures should be used. Various versions of earlier codes and other snow design guides have presented methods for evaluating these conditions, and these methods are illustrated in this section. These methods have also been utilized in the Design Examples in Part III where applicable.

Intersecting Drifts

A design procedure for estimating loads from snow drifts created by wind action that intersect at a reentrant corner is presented in the 1997 UBC, Section 1644.6. When one snow drift intersects another at an angle as depicted in Figure 9, the maximum unit pressure of the drift shall be taken as the greater of the two individual drifts, but not the sum of the two. The total load on the area of intersection is increased, however, simply because of the assumed geometry of the intersecting drifts.[23] This is the same procedure used in the *Snow Load Analysis for Washington, Second Edition*.[5]
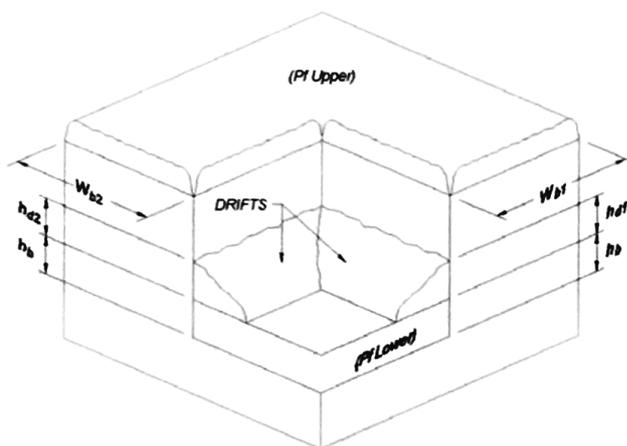

Figure 9. Intersecting Drifts

$$h_{d1} = 0.43 \cdot \sqrt[3]{W_{b1}} \cdot \sqrt[4]{P_g + 10} - 1.5$$

$$h_{d2} = 0.43 \cdot \sqrt[3]{W_{b2}} \cdot \sqrt[4]{P_g + 10} - 1.5$$