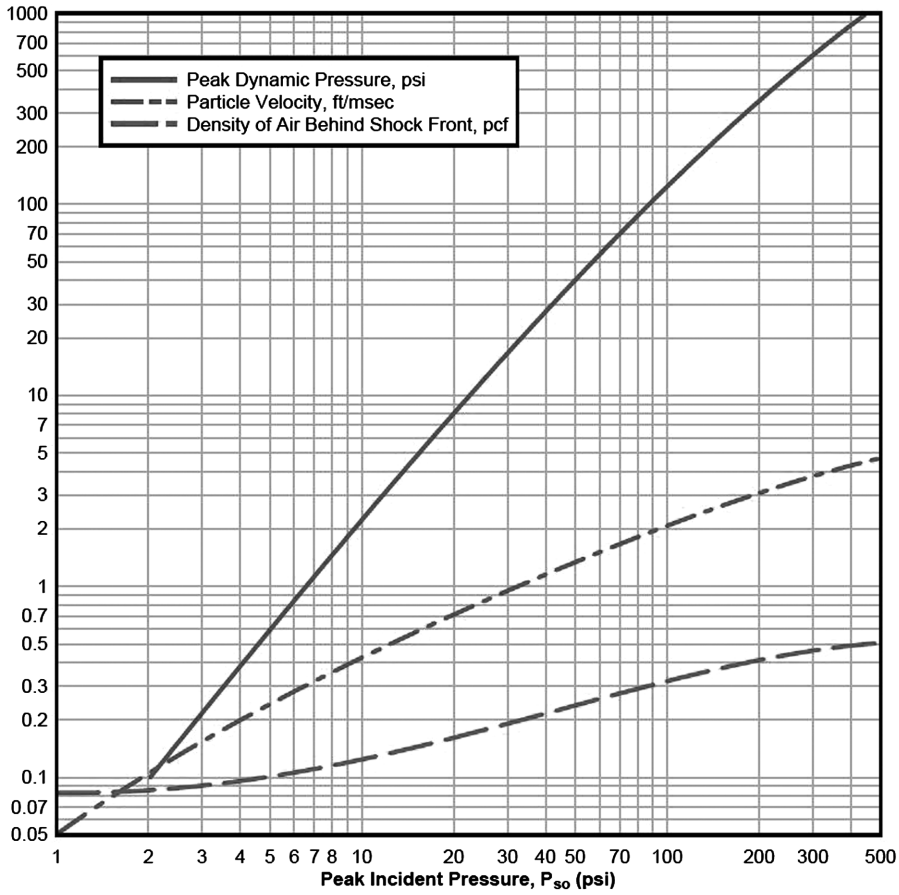

Figure 7.1 Peak Incident Pressure versus Peak Dynamic Pressure, Density of Air Behind the Shock Front, and Particle Velocity (UFC 3-340-02)

from Figure 7.1. Alternatively, in the low overpressure range, and at sea level atmospheric pressure, the following equation from Newmark can be used.

$$q_o = 0.022\ (P_{so})^2 \tag{7.1}$$

The pressure exerted on a structural element is the dynamic wind pressure multiplied by a drag coefficient. The drag coefficient, C_d, is a function of the shape and orientation of the obstructing element. Newmark lists approximate values of C_d for open-frame structural elements as 2 for structural shapes, 1.25 for box shapes, and 0.8 for cylinders. Values of C_d for enclosed rectangular buildings are provided in the following sections.