

### **19.75.083 Avalanche considerations.**

A. Development of structures for human occupancy is not permitted within an avalanche special study area, or in other areas where avalanche hazards may exist, unless a detailed avalanche hazard analysis is performed, as described in Section 19.75.060, by a qualified avalanche expert.

B. If the avalanche analysis indicates that the site may be impacted by avalanches, the report shall delineate the following areas:

1. A “red zone” of high avalanche potential [return period of twenty-five years or less, and/or impact pressures over six hundred pounds per square foot (psf)] within which critical facilities or structures for human occupancy are not permitted;

2. A “blue zone” (return period between twenty-five and three hundred years, and impact pressures less than six hundred psf) within which critical facilities or structures for human occupancy shall only be permitted when at least one of the following requirements has been met:

a. The structure is designed to incorporate direct protection measures that address the estimated impact forces (flowing snow/debris and powder blast loading). The estimated impact forces shall be calculated by the avalanche expert. The structure shall be designed by, and the plans stamped by, a qualified structural engineer licensed in the State of Utah; or

b. Appropriate engineering controls (i.e. deflection structures, snow retention nets, dams, etc.) are designed and installed to mitigate the avalanche hazard. Design or performance criteria for engineered mitigation measures (including estimated impact forces, flow heights, location and dimensions of the mitigation structures) and all supporting modeling or other analyses, calculations, and assumptions, shall be calculated by the avalanche expert and included in the report. Final design plans and specifications for engineered mitigation must be signed and stamped by a qualified professional geotechnical or structural engineer, as appropriate, licensed in the State of Utah. (Ord. 1500 (part), 2002)