

One of the interesting features of the White path is that its primary starting zone consists of a medium-sized, steeply sloped bowl bordered at its base by a narrow sloping bench. Most of the small avalanches originating in this bowl stop on this bench. Moderate sized avalanches easily overtop this bench and continue their descent down a very steep cliff-like, V-shaped gully to the slopes below. The base of the gully narrows into the neck of an hourglass-shaped gully before opening onto a moderately steep, grass-covered, alluvial fan bordered by mature timber. At the base of this fan and along its fringes are the residential structures of White Subdivision. Moderate to large avalanches, which occur relatively frequently, are easily able to fill most or all of the alluvial fan with snow debris 6'-12' (2-4 m) deep. Mature trees are often snapped off and carried downslope by the moving debris and evidence of extensive vegetative damage is present along the fringes of the forest. Compared with the design magnitude avalanches this path is capable of producing, all of these observed events are small. Major avalanches with far greater dynamic energy would be easily capable of crossing Glacier Highway and destroying any unprotected wood frame structures in their path.

Little is known about the avalanche history of the smaller paths affecting the subdivision (Bartlett No. 1, No. 2 and No. 3) because development is relatively recent and no records have been routinely maintained by the City and Borough of Juneau. As the area is further developed, however, the record will undoubtedly grow. (For a more detailed summary of events in White Subdivision, see Appendix A-3)

## **5. SNOW AVALANCHE HAZARD CLASSIFICATIONS**

In an attempt to delineate degrees of avalanche exposure in a manner useful for land use planning, three categories of hazard are delineated in the avalanche hazard maps (see Maps E-1, E-2, and H in Appendix B). These include: High Severity Areas, Special Engineering Areas, and Unaffected Areas (described below in Sections 5.1, 5.2, and 5.3 respectively).

### **5.1 Definition of High Severity Avalanche Areas**

By definition *High Severity Avalanche Areas* are exposed to the greatest potential risk. These areas, referred to as the **Red Zone**, are subject to avalanches with:

- a) return periods of < 30 years, or
- b) impact pressures > 600 lbs/ft.<sup>2</sup> (assuming a flat, normal, rigid surface)

Consequences: People living in or traveling through High Severity Avalanche Areas should expect to be infrequently impacted by major avalanche events capable of severely damaging or destroying standard wood frame structures and injuring or killing people. This includes the following range of exposure (without mitigation): structures could be totally destroyed or severely damaged, roofs could be blown off or caved in, walls could be pushed in or sucked out, houses could be pushed from their foundations, vehicles could be severely damaged, mature trees broken off, and windows and doors ripped off, sucked out, or pushed in, with considerable broken glass and debris carried by hurricane force winds.