produce the horizontal check survey for this example. If the project control survey is conducted at a standard of accuracy equal to or better than second-order, class II, the check survey can tie to the project control network in accordance with FGCC standards.

For the vertical check survey, the distance (d) is also taken as a diagonal ground distance across the map to account for the fact that elevation accuracy pertains to all mapped features. The propagated standard deviation in elevation (S) is required by this standard to be equal or less than $1/20^{th}$ of the contour interval (CI) of two feet:

S = (1/20) CI = 1.10 feet

Returning to Table 2.2 of the FGCC document, relating distance between bench marks (d in km), the standard deviation in elevation (S in mm), and the elevation difference accuracy (b);

where;

S = 0.10 feet = 30.5 mm

D = 6000 feet = 1.181 km

then;

b = **S**/√**d** = **28.1 mm**/√**km**

It is clear that a third-order survey for elevation differences is more than adequate for purposes of conducting the check survey for this map example. Other methods for conducting the check survey for elevation are acceptable provided they have demonstrated accuracy capability equal to that required by this map standard. Such departures, however, must be agreed upon by the contracting parties prior to conducting the survey.

A5. Check Point Location

Due to the diversity of requirements anticipated for any special purpose or engineering map, it is not realistic to include statements that specify the spatial distribution of check points designed to assess the spatial accuracy of the map. For instance, it may be preferred to distribute the check points more densely in the vicinity of important structures or drainage features and more sparsely in areas that are of little or no interest.

For a map sheet, however, of conventional rectangular dimensions, intended to portray a uniform spatial accuracy over the entire map sheet. It may be reasonable to specify the distribution. For instance, given the minimum of twenty check points, it could be specified that at least 20% of the points be located in each quadrant of the map sheet and these points be spaced at intervals equal to at least 10% of the map sheet diagonal.