# SECTION 2

# MAP ACCURACY STANDARDS

When using the National Map of Accuracy Standard, a map either meets the standard or it does not; no specific levels of compliance are specified. This model standard for map accuracy defines the positional accuracy of a hardcopy or digital map product much more fully by incorporating classes of maps. The Class One (1) map designation is used to set the standard and is not easily attained. For map Classes Two (2) and beyond, the average positional error allowed is a multiple of the allowable Class One (1) error and the map class designation number. This use of numerical levels for map accuracy provides several advantages.

- the use of map accuracy class designations will assist map users in determing how appropriate the data is for their particular purposes by giving them more precise positional information; and

- the use of numerical levels of map accuracy provides the capability to request and have map producers deliver higher class maps, thus improving the level of mapping services provided with the Commonwealth.

This model standard defines spatial accuracy as it pertains to maps of all scales greater than or equal to 1:100,000 prepared for special purposes or engineering applications. Emphasis is on the final spatial accuracies that can be derived from the map in terms most generally understood by the users. It should be noted that the accuracy statement pertains to the map at the date of its creation.

The vertical part of the proposed accuracy standard is important in that it allows for the specification of vertical accuracies for maps without contour lines. Digital elevation models and digital terrain models are frequently being used and no mechanism exists for reporting their level of accuracy.

A major feature of this model standard is that it indicates accuracy on the surface of the earth. Thus, digital spatial data of known accuracy can be related to the appropriate map scale for graphic presentation at a recognized standard.

This model standard addresses horizontal and vertical accuracy and defines the test requirements needed to meet various map accuracy classes.