61G17-6.003 General Survey, Map, and Report Content.

(1) Survey and Map Accuracy

(a) REGULATIONAL OBJECTIVE: The public must be able to rely on the accuracy of measurements and maps produced by a surveyor and mapper. In meeting this objective, surveyors and mappers must achieve the following minimum standards of accuracy, completeness, and quality:

(b) The accuracy of the survey measurements shall be premised upon the type of survey and the expected use of the survey and map. All measurements must be in accordance with the United States standard, using either feet or meters. Records of these measurements shall be maintained for each survey by either the individual surveyor and mapper or the surveying and mapping business entity. Measurement and computation records must be dated and must contain sufficient data to substantiate the survey map and insure that the accuracy portion of these standards has been met.

(c) Vertical Control: Field-measured control for elevation information shown upon survey maps shall be based on a level loop. Closure in feet must be accurate to a standard of plus or minus .05 ft. times the square root of the distance in miles. All surveys and maps with elevation data shall indicate the datum and a description of the benchmark(s) upon which the survey is based. Minor elevation data may be obtained on an assumed datum provided the base elevation of the datum is obviously different than the established datum.

(d) Vertical Feature Accuracy:

1. If contour lines are shown, then sufficient data must be obtained in order to insure that 90% of ground point elevations taken from contours are within ½ of the contour interval, and the remainder are not in error more than the contour interval.

2. For surveys performed by photogrammetric methods, vertical positional accuracy of map elevation features such as spot elevations, contours, or other forms of terrain models must be stated. The stated accuracy is a plus or minus tolerance that encompasses 90% of elevation differences between survey-measured values and ground truth. All such survey maps or reports with elevation data shall have a statement to the effect: "Elevations of well-identified features contained in this survey and map have been measured to an estimated vertical positional accuracy of: ---- (ft) (m)." If different accuracy levels exist for different features, then applicable features and accuracies shall be identified with similar statements.

(e) Horizontal Control: All surveys and maps expressing or displaying features in coordinate position shall indicate the coordinate datum and a description of the control points upon which the survey is based. Minor coordinate data may be obtained on an assumed datum provided the numerical basis of the datum is obviously different than an established datum. The accuracy of field-measured control measurements shall be statistically verified by measurement and calculation of a closed geometric figure. All control measurements shall be made with a transit and steel tape, or devices with equivalent or higher degrees of accuracy. The relative distance accuracy must be better than the following:

Commercial/High Risk	Linear:	1 foot in 10,000 feet;
Suburban:	Linear:	1 foot in 7,500 feet;
Rural:	Linear:	1 foot in 5,000 feet.

(f) Horizontal Feature Accuracy (for surveys by photogrammetric methods only): A survey and map's horizontal positional accuracy must be stated. The stated accuracy is a plus or minus tolerance that encompasses 90% of coordinate differences between survey-measured values and ground truth. All survey maps or reports shall have a statement to the effect: "Well-identified features in this survey and map have been measured to an estimated horizontal positional accuracy of ---- (ft) (m)." If different accuracy levels exist for different features, then applicable features and accuracies shall be identified with similar statements.

(g) Map Plotting Accuracy: The horizontal position of physical features surveyed by field methods must be plotted to within 1/20 of an inch at the map scale.

(h) Intended Display Scale: At the maximum intended display scale, a survey and map's positional accuracy value occupies 1/20" on the display. All maps or reports of surveys produced by photogrammetric methods and delivered with digital coordinate files must contain a statement to the effect of: "This map is intended to be displayed at a scale of 1/-- or smaller".

(2) Other Provisions that Apply to All Surveys and Maps

(a) REGULATIONAL OBJECTIVE: In order to avoid misuse of a survey and map, the surveyor and mapper must adequately communicate the survey results to the public through a map or report with an attached map. Any survey map or report must identify the responsible surveyor and mapper and contain standard content. In meeting this objective, surveyors and mappers must meet the following minimum standards of accuracy, completeness, and quality:

(b) Each survey map and report shall state the type of survey it depicts consistent with the types of surveys defined in Rule 61G17-6.002(8)(a) -- (l). The purpose of a survey, as set out in 61G17-6.002(8)(a) -- (l), dictates the type of survey to be performed and depicted, and a licensee may not avoid the minimum standards required by rule of a particular survey type merely by changing the name of the survey type to conform with what standards or lack of them the licensee chooses to follow.

(c) All survey maps and reports must bear the name, certificate of authorization number, and street and mailing address of the business entity issuing the map and report, along with the name and license number of the surveyor and mapper in responsible charge. The name, license number, and street and mailing address of a surveyor and mapper practicing independent of any business entity must be shown on each survey map and report.

(d) All survey maps must reflect a SURVEY DATE, which is the date of the field survey or the date of image acquisition for photogrammetric surveys. If the graphics of a map are revised, but the SURVEY DATE stays the same, the map must list dates for all revisions.

(e) The survey map and report and the copies of the survey map and report, except those with electronic signature and electronic seal, must contain a statement indicating that the survey map and report or the copies thereof are "not valid without the signature and the original raised seal of a Florida licensed surveyor and mapper." Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.

(f) All computed data or plotted features shown on survey maps must be supported by accurate survey measurements unless clearly stated otherwise. Bearings, distances, coordinates, and elevations shown on a survey map shall be substantiated by survey measurements unless clearly stated otherwise.

(g) A reference to all bearings shown on a survey map or report must be clearly stated, i.e., whether to "True North"; "Grid North as established by the NOS"; "Assumed North based on a bearing for a well defined line, such as the center line of a road or right of way, etc."; "a Deed Call for a particular line"; or "the bearing of a particular line shown upon a plat." References to Magnetic North should be avoided except in the cases where a comparison is necessitated by a Deed Call. In all cases, the bearings used shall be referenced to some well-established and monumented line.

(h) A designated "north arrow" and either a stated scale or graphic scale of the map shall be prominently shown upon the survey map.

(i) Abbreviations generally used by the public or in proper names that do not relate to matters of survey are excluded from the legend requirement.

1. Acceptable abbreviations on the face of survey maps are:

N = North
S = South
E = East
W = West

or any combination such as NE, SW, etc.

o = Degrees
' = Minutes when used in a bearing
" = Seconds when used in a bearing
' = Feet when used in a distance
" = Inches when used in a distance
AC = Acres
+/- = More or less (or Plus or Minus)
metric notation

2. Any other abbreviations relating to survey matters must be clearly shown within a legend or notes appearing on the face of the map or report.

(j) When special conditions exist that effectively prevent the survey from meeting these minimum standards, the special conditions and any necessary deviation from the standards shall be noted upon the map or report.

(k) Report Option

1. Text items shall be displayed either through notes on the map itself or in a text report delivered with the map. If the report is produced as a text document and a map is attached, only the report shall be signed and sealed. If the map is delivered in digital form only, then a report is required. An attached map must clearly reference the report by title, date and subject; and the report must likewise clearly refer to the map by title, date, and subject. Statements must be made on the map and in the report that neither is full and complete without the other.

2. Report items are text statements as required by other parts of this chapter, such as: abbreviation legends, accuracy statements, feature lists, datums used, and things done or not done as part of the survey and mapping process. In addition, the map or report shall contain other items necessary for an adequate communication of survey methods and results as judged by the surveyor and mapper such as: data sources, measurement methods, history and lineage of data, and limitations pertaining to the information presented.

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