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## **INTRODUCTION**

In preparing these standards, the Alaska Society of Professional Land Surveyors noted that several national professional surveying and engineering associations had prepared or were in the process of preparing minimum standards for land surveying. These included the National Society of Professional Surveyors, the National Council of Examiners for Engineering and Surveying, the American Land Title Association and American Congress on Surveying and Mapping, and the American Society of Civil Engineers. Several of these organizations have realized the need to consolidate these variations into one national standard and will be working toward that goal in the next year or two.

In light of this activity, we did not believe that it would be beneficial for ASPLS to develop its own standards which would likely result in only a slight variation from the currently available national standards.

Therefore, at the ASPLS Board meeting of August 14, 1993, a motion was passed accepting the National Council of Examiners for Engineering and Surveying - Model Minimum Standards for the Practice of Land Surveying as the minimum criteria for professional land surveying practice within the state of Alaska.

In addition to the NCEES standards, the 1992 ALTA/ACSM Land Title Survey standards and the FGCC standards for Geodetic Control Surveys and GPS positioning are provided for informational purposes and are to be used where appropriate. A recent (November 1993) ACSM/NSPS publication titled Manual on Construction Layout was not included due to copyright restrictions. The ACSM/NSPS manual provides recommendations for procedures and standards for construction surveys and can be obtained from ACSM/NSPS.

The ASCE draft standards are provided primarily to give the surveyor a look at an approach to surveying standards which incorporates the concept of "positional tolerance" as a maximum allowable error in the position of a point or new monument to be set.

We hope that all professional land surveyors within Alaska will rely upon these standards for their work, and that the Board of Architects, Engineers and Land Surveyors will use them as guidelines for enforcing professional practices. By following these standards, we trust that individual surveyors will grow in their level of professional performance and that, as a result, the entire profession will mature.

**STANDARDS AND SPECIFICATIONS  
JUSTIFIED AND DEFINED**

*(Editor's note: This page was copied verbatim from the 1986 manual as its message is still considered to be valid and relevant.)*

At the present time, a period in history when innumerable boundary and control surveys are being performed to chart our relatively new state, there appears to be a vast inconsistency in the survey standards that are used. Investigation has revealed the wide disparity of practices from surveyor to surveyor, even on the same type of job. Having no established standards, Alaskan surveyors have used whatever standards are dictated by time pressures, by economics, and by their own ethical consciousness. In the field, for example, some surveyors use national specifications for obtaining horizontal and vertical angles while others rely upon a single angle measurement. Some use standardized tapes; others ignore the need for standardizing. Some surveyors make corrections for systematic errors; others do not. Monumentation, the most important, enduring result of surveying, varies from the use of self-identifying monuments to the use of a simple nail. In the office, procedures are no less varied. In performing computations, for example, some surveyors analyze and mathematically adjust measurements while others use unadjusted data. The former procedure will allow for mathematical proration of corners on future retracement surveys; the latter will not. Survey plats vary, also. Some plats give all the necessary information to allow the retracement surveyor to follow the original surveyor's footsteps. Other plats are open to interpretation because of the omission of detail.

If we will now arrive at and enforce common standards, future surveyors attempting to perform retracement surveys will not be forced to resolve conflicting evidence between description, plat, and physical and record monuments. By agreeing to use the same standards, Alaskan surveyors can establish a professional level of uniformity. Thus, instead of chaos, we can leave to our successors a heritage of high quality surveying where each parcel of land is uniquely described.

Standards may be defined as the minimum accuracies by which a survey is to be performed. Specifications, on the other hand, are the specific criteria necessary to meet the standards set forth for the survey. These specifications will, in turn, establish the field methods and the type of equipment to be used. All specifications must be followed explicitly in order to meet an established standard.

Specifications are stringent to compensate for the various kinds of errors which are bound to occur in the field. By achieving these specifications, the minimum standards of accuracy will then be met. These standards have been established for the current status of technological development. Changes in technology may, of course, provide opportunities for revising the standards.

**TYPES OF SURVEYS**

The surveys that an Alaskan land surveyor performs can be divided into four distinct types.

- Type I            Government and government contract surveys.
- Type II           Surveys performed under the regulations of platting authorities.
- Type III          Boundary and control surveys not governed by platting authorities.
- Type IV          Miscellaneous surveys (i.e. - mortgage inspections; as-builts; topographical surveys.)

Type I - Government contract surveys should follow the standards and specifications established by the Federal, State or local government for the particular project.

Type II - The surveys performed under Municipality, Borough, or City platting authorities should meet the platting criteria and procedures established by the local governing board. The control, boundary and monumentation of these surveys should meet the minimum Alaska Society of Professional Land Surveyors' adopted standards and specifications (NCEES) as set forth in this chapter.

Type III - Boundary surveys not governed by platting authorities should meet the minimum Alaska Society of Professional Land Surveyors' adopted standards and specifications (NCEES) as set forth in this chapter.

Type IV - Miscellaneous surveys, such as mortgage inspections, as-builts, topographical, construction, hydrographic, geodetic control or GPS surveys are governed neither by local government standards, by platting authority regulations, nor by the Alaska Society of Professional Land Surveyors' adopted NCEES standards. A standard for many of these surveys, may be adopted from appropriate "published" guidelines such as ALTA/ACSM Land Title Surveys, the ACSM/NSPS Manual on Construction Layout, FGCC Standards for Geodetic Control Networks, FGCC Standards for GPS Positioning or a standard established by an agreement or contract with the client. Any plat or sketch created in conjunction with a Type IV survey which conforms with a "published" standard should contain a note specifying the standard upon which it is based.