Land Surv. by R211-99, 5-10-2000)

STANDARDS OF PRACTICE FOR PROFESSIONAL LAND SURVEYORS

General Provisions

NAC 625.651 "Positional certainty" defined. (NRS 625.140, 625.250) As used in NAC 625.651 to 625.795, inclusive, "positional certainty" means a measurement of the relative accuracy of positions with respect to the location of a controlling monument.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.655 Applicability of statutes and regulations. (NRS 625.140, 625.250) When engaging in the practice of land surveying in this State, a professional land surveyor shall apply all applicable statutes and regulations in addition to the minimum standards of practice for professional land surveyors established in NAC 625.651 to 625.795, inclusive.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92; A by Bd. of Professional Eng'rs & Land Surv., 11-14-97)

NAC 625.660 Responsibility for compliance with standards of practice. (NRS 625.140, 625.250) Responsibility for adherence to the minimum standards of practice for engaging in the practice of land surveying rests with the professional land surveyor in responsible charge of the work. Failure on the part of any Nevada professional land surveyor to comply with these minimum standards may be considered by the Board as evidence of gross negligence, professional incompetence or misconduct in the practice of land surveying.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92; A by Bd. of Professional Eng'rs & Land Surv., 11-14-97)

NAC 625.662 Units of measurement. (NRS 625.140, 625.250)

1. Lineal measurements on a survey may be expressed in feet or meters. Measurements of area may be expressed in acres, square feet, hectares or square meters. If any measurement is reported in metric units, the professional land surveyor shall include on the survey the information necessary to convert the measurement to its nonmetric equivalent.

2. As used in this section, the words "foot" and "meter" have the meanings ascribed to them in NRS 327.030.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.664 Positional certainty: Minimum confidence level. (NRS 625.140, 625.250) For the purposes of NAC 625.651 to 625.795, inclusive, the positional certainty of a point or monument or of the horizontal or vertical component of a survey must be based upon a confidence level of not less than 95 percent.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.666 Positional certainty: Horizontal and vertical components of certain land surveys. (NRS 625.140, 625.250)

1. The requirements for positional certainty for the horizontal component of land boundary, topographic, control and geodetic surveys are as follows:

Type of Survey	Positional Certainty	
	Meters	U.S. Survey Feet
Land Boundary Surveys		
High Urban.....	±0.02 m	±0.05 ft
Low Urban.....	±0.04 m	±0.15 ft
High Rural.....	±0.1 m	±0.3 ft
Low Rural.....	±0.15 m	±0.5 ft
Control and Geodetic Surveys		

Precise Measurement Studies.....	±0.001 m to ±0.01 m	±0.002 ft to ±0.03 ft
State Network.....	±0.02 m	±0.05 ft
County Network.....	±0.04 m	±0.15 ft
Local Network.....	±0.06 m	±0.2 ft
Photogrammetric Control.....	±0.06 m to ±1 m	±0.2 ft to ±3 ft
Topographic Surveys		
Engineering Design Surveys.....	±0.01 m to ±0.1 m	±0.03 ft to ±0.3 ft
Planning Study Surveys.....	±0.02 m to ±0.05 m	±0.05 ft to ±0.15 ft
Utilities Mapping.....	±0.15 m	±0.5 ft
Feature Mapping.....	±0.3 m	±1 ft
Resource Mapping.....	±0.5 m to ±100 m	±1.5 ft to ±330 ft

2. The requirements for positional certainty for the vertical component of land boundary, control, geodetic and topographic surveys are as follows:

Type of Survey	Positional Certainty	
	Meters	U.S. Survey Feet
Land Boundary Surveys.....	±0.05 m	±0.15 ft
Control and Geodetic Surveys Other Than Photogrammetric Control Surveys.....	±0.005 m to ±0.03 m	±0.02 ft to ±0.1 ft
Photogrammetric Control Surveys.....	±0.03 m to ±0.5 m	±0.1 ft to ±1.5 ft
Topographic Surveys.....	National Map Accuracy Standards	

3. For the purposes of this section, the National Map Accuracy Standards, as they existed on November 14, 1997, are hereby adopted by reference. A copy of the National Map Accuracy Standards may be obtained from the United States Geological Survey, Department of the Interior, 12201 Sunrise Valley Drive, Reston, Virginia 20192, at no cost.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.668 Positional certainty: Horizontal and vertical positions of monuments. (NRS 625.140**,** 625.250**)** When conducting a land boundary, topographic, control or geodetic survey, a professional land surveyor shall ensure that the horizontal and vertical positions of the monuments established by the surveyor comply with the requirements for positional certainty set forth in NAC 625.666.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

Land Boundary Surveys

NAC 625.670 Required research, identifications, measurements and computations. (NRS 625.140**,** 625.250**)** In conducting a land boundary survey, a professional land surveyor shall:

1. Search pertinent documents, including, but not limited to, maps, deeds, title reports, title opinions and the records of the U.S. Public Land Survey System.
2. Thoroughly examine the information and data acquired.
3. Diligently search for and identify monuments and other physical evidence which could affect the location of the boundaries of the property being surveyed.
4. Conduct field measurements necessary to relate adequately the position of all apparent evidence pertinent to the boundaries of the property being surveyed.
5. Make computations to verify the correctness of field data acquired and confirm that results of

measurements are within acceptable limits of tolerance. Computations must be made to determine the relative positions of all found evidence.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92; A by Bd. of Professional Eng'rs & Land Surv., 11-14-97)

NAC 625.680 Disagreements concerning measurements or positions of monumented corners. (NRS 625.140**,** 625.250**)** If a professional land surveyor has a material disagreement with the measurements or monumented corner positions of another land surveyor, the professional land surveyor shall contact the other land surveyor and attempt to resolve the disagreement.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92)

NAC 625.690 Location of corners, boundaries and monuments. (NRS 625.140**,** 625.250**)**

1. The professional land surveyor shall make a final analysis and reach a conclusion as to the most probable location of corner positions and boundary lines.

2. A professional land surveyor shall set monuments pursuant to the provisions of NRS 625.380 and all applicable local ordinances.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92; A by Bd. of Professional Eng'rs & Land Surv., 11-14-97)

NAC 625.700 Report to client of discrepancies concerning boundary lines. (NRS 625.140**,** 625.250**)** The professional land surveyor shall:

1. Advise his or her client of discrepancies which raise doubts concerning the boundary lines of the property being surveyed; and

2. Provide a written report to the client concerning the discrepancies.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92)

NAC 625.710 Identification and description of monuments. (NRS 625.140**,** 625.250**)**

1. All monuments, whether set or found, must be thoroughly described and specifically identified as set or found, whenever shown on maps or referred to in documents prepared by a professional land surveyor. Descriptions of monuments must be sufficient in detail to facilitate readily future recovery and to enable positive identification, including map references.

2. If the Nevada Coordinate System, as defined in chapter 327 of NRS, is used to describe a monument:

(a) The control used as the coordinate basis must be shown on any maps on which the monument is shown or documents in which reference is made to the monument; and

(b) The source of the control data used must be described.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92; A by Bd. of Professional Eng'rs & Land Surv., 11-14-97)

NAC 625.720 Drawing of survey; certification. (NRS 625.140**,** 625.250**,** 625.350**)**

1. A professional land surveyor shall prepare a scaled drawing of the survey for presentation to the client. The drawing must comply with the provisions of NRS 625.340, 625.350 and 625.565.

2. In cases where a certification is required by statute or local ordinance, the professional land surveyor shall certify only those matters personally known to be true. The certificate must be in the following form:

SURVEYOR'S CERTIFICATE

I, ……. (name of professional land surveyor), a Professional Land Surveyor registered in the State of Nevada, certify that:

1. This plat represents the results of a survey conducted under my supervision at the instance of ……. (owner, trustee, etc.).

2. The land surveyed lies within ……. (section, township, range, meridian, county and city, if incorporated), and the survey was completed on ……. (date).

3. This plat complies with applicable statutes of this State and any local ordinances in effect on the date that the survey was completed, and the survey was conducted in accordance with chapter 625 of the Nevada Administrative Code.

4. The monuments depicted on the plat are of the character shown, occupy the positions indicated and are of sufficient durability.

5. (Any other information that the professional land surveyor personally knows to be true concerning the land surveyed.)

(Validated seal of the professional land surveyor);

(Name and license number of the professional land surveyor printed below the seal).

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92; A by Bd. of Professional Eng'rs & Land Surv., 11-14-97)

NAC 625.740 Classifications of surveys; use of classifications and requirements for positional certainty. (NRS 625.140**,** 625.250**)**

1. Boundary surveys have been divided into the following four classifications:

(a) High Urban. Surveys of land lying within or adjoining a city or town, including surveys of commercial and industrial properties, condominiums, townhouses, apartments and other multiunit developments, regardless of geographic location.

(b) Low Urban. Surveys of land lying outside high urban areas and used almost exclusively for single family residential use or residential subdivisions.

(c) High Rural. Surveys of land such as farms and other undeveloped land lying outside the low urban areas which may have potential for future development.

(d) Low Rural. Surveys of land normally lying in remote areas with difficult or barren terrain and which usually have limited potential for development.

2. A professional land surveyor shall use the classifications described in subsection 1 and the requirements for positional certainty for those classifications prescribed in NAC 625.666 to establish the locations of monuments in a boundary survey.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A by Bd. of Professional Eng'rs & Land Surv., 11-14-97)

Construction Surveys

NAC 625.760 Contract drawings and specifications; special instructions. (NRS 625.140**,** 625.250**)** Before beginning a construction survey, a professional land surveyor shall obtain from the owner's representative a complete set of the contract drawings and specifications approved by the appropriate federal, state and local agencies and any special instructions for the proposed fixed works.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.765 Establishment of final location of points. (NRS 625.140**,** 625.250**)** When conducting a construction survey, a professional land surveyor shall establish the final location of points within positional certainties which ensure that the proposed fixed works may be properly constructed.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.770 Verification of location of certain points; notification of insufficient dimensions or details. (NRS 625.140**,** 625.250**)**

1. A professional land surveyor who is conducting a construction survey shall ensure that:

(a) The location of the control that delineates the horizontal location of the proposed fixed works; and

(b) The locations of the benchmark for the project and the vertical location of the proposed fixed works, ➥ are identical to the locations of those points as shown on the engineering plans for the project.

2. If the professional land surveyor discovers any material differences between the location of the control on the construction survey and the location of the control on the engineering plans for the project, he or she shall notify the owner's representative of those differences.

3. If the dimensions or details of the engineering plans are not sufficient to establish the location of the proposed fixed works, the professional land surveyor shall notify the owner's representative and the engineer or architect of record and request that the necessary additional information be provided.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.775 Positional certainties for marking locations of proposed fixed works. (NRS 625.140**,** 625.250**)** A professional land surveyor who conducts a construction survey shall place the stakes or other materials used to mark the location of the proposed fixed works within the following positional certainties:

Proposed Fixed Works	Horizontal Positional Certainty	Vertical Positional Certainty

	Meters	Feet	Meters	Feet
Rough Grades.....	±0.03 m	±1 ft	±0.06 m	±0.2 ft
Subgrades.....	±0.15 m	±0.5 ft	±0.015 m	±0.05 ft
Finish Grades.....	±0.15 m	±0.5 ft	±0.015 m	±0.05 ft
Buildings.....	±0.015 m	±0.05 ft	±0.01 m	±0.03 ft
Sewer Facilities.....	±0.1 m	±0.3 ft	±0.015 m	±0.05 ft
Waterlines.....	±0.1 m	±0.3 ft	±0.03 m	±0.1 ft
Water Facilities Other Than Waterlines.....	±0.03 m	±0.1 ft	±0.015 m	±0.05 ft
Street Lights and Devices for the Control of Traffic.....	±0.06 m	±0.2 ft	±0.03 m	±0.1 ft
Curbs and Gutters.....	±0.03 m	±0.1 ft	±0.015 m	±0.05 ft

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.780 Sketches, cut sheets and field notes. (NRS 625.140**,** 625.250**)** A professional land surveyor who conducts a construction survey shall provide the owner's representative sketches, cut sheets or other field notes to describe the survey conducted.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

NAC 625.785 Verification surveys: Exchange of information. (NRS 625.140**,** 625.250**)** If a professional land surveyor other than the surveyor responsible for the initial location of the proposed fixed works conducts a verification survey, the professional land surveyor shall share with the surveyor responsible for the initial location of the proposed fixed works notes and other data related to the verification survey. Each surveyor shall provide to the other surveyor the results of the survey conducted by him or her and cooperate to resolve any discrepancies between the two surveys.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)

Miscellaneous Provisions

NAC 625.790 Preparation of legal description of property. (NRS 625.140**,** 625.250**)** If a professional land surveyor is called upon to prepare a legal description of real property, the professional land surveyor shall include:

1. A sufficient caption, body and, where applicable, qualifying clauses;
2. A clear statement of the relationship between the real property being described and the survey control or the basis of the unique location;
3. A clear statement explaining the basis of bearings or language which otherwise makes definite the method of direction and orientation for the lines of the property being described and the survey control related thereto;
4. Full and complete citations to maps, plats, documents and other matters of record, facts of pertinence, which are intended to be incorporated into and made a part of the legal description by reference thereto;
5. When called out, complete and detailed descriptions of physical monuments, both natural and artificial;
6. When appropriate, incorporated either directly or by citation, sufficient data to enable a check of mathematical closure for the property being described; and
7. His or her name, the number of his or her Nevada license and his or her validated seal.

(Added to NAC by Bd. of Reg'd Professional Eng'rs & Land Surv., eff. 7-18-88; A 7-10-92)

NAC 625.795 Duties regarding geographic information systems. (NRS 625.140**,** 625.250**)**

1. When contributing information to a geographic information system, a professional land surveyor must include for use as metadata a statement describing the positional certainty of each type of information contributed to the system by the professional land surveyor.
2. When advising the developers of a geographic information system, a professional land surveyor must make recommendations concerning the appropriate methods for:
   (a) Conducting a survey for the development of the system; and
   (b) Compiling data for the contribution of additional information to the system after it is developed.
3. A professional land surveyor shall comply with the provisions of NAC 625.651 to 625.795, inclusive,

when conducting surveys to collect information that will be included in a geographic information system.

4. As used in this section:

(a) "Geographic information system" means a collection of computer hardware, software and data that is used for the collection, management, manipulation, analysis and display of information that includes a positional component.

(b) "Metadata" means data that describes information used to describe an object.

(Added to NAC by Bd. of Professional Eng'rs & Land Surv., eff. 11-14-97)