

have been completed in the 24-month period immediately preceding the date of expiration of the dental hygienist license.

(d) An extension of time to complete a continuing education requirement may be granted by the board if it finds that good cause has been shown. (Authorized by K.S.A. 2010 Supp. 65-1431 and K.S.A. 74-1406; implementing K.S.A. 2010 Supp. 65-1431; effective May 1, 1978; amended May 1, 1986; amended March 27, 1989; amended Dec. 27, 1996; amended Feb. 20, 2004; amended Jan. 6, 2012.)

B. Lane Hemsley
Executive Director

Doc. No. 040096

State of Kansas

Board of Technical Professions

Permanent Administrative Regulations

Article 7.—APPLICATIONS

66-7-1. Applications. (a) In addition to the appropriate, completed application form and fee, each applicant shall also submit the following:

(1) An official transcript to verify any educational credit; and

(2) verification of any practical experience for which credit is claimed on reference forms approved by the board and forwarded directly to the board office by the individual providing the reference.

(b) Each applicant for a license by reciprocity shall also submit the following:

(1) Verification of any exams previously taken; and

(2) verification of a current active license. (Authorized by K.S.A. 2010 Supp. 74-7013; implementing K.S.A. 2010 Supp. 74-7018; effective May 1, 1984; amended May 4, 1992; amended Jan. 6, 2012.)

Article 9.—EDUCATION

66-9-7. Educational standard acceptable to the board for reciprocity applicants. For purposes of K.S.A. 74-7024 and amendments thereto, the following shall apply:

(a) Each applicant for a license to practice engineering, surveying, landscape architecture, or geology by reciprocity shall be deemed to have met the educational standard acceptable to the board if the applicant's educational qualifications when the original license was issued would have met the Kansas requirements in effect on that date.

(b) Each applicant for a license to practice architecture by reciprocity shall provide proof of certification by the national council of architectural registration boards (NCARB). The requirements for this certification shall be those specified in chapters one, two, and three of the "handbook for interns and architects," published by the national council of architectural registration boards and

revised July 2011. These three chapters are hereby adopted by reference. (Authorized by K.S.A. 2010 Supp. 74-7013; implementing K.S.A. 74-7024; effective Feb. 4, 2005; amended Jan. 6, 2012.)

Article 10.—EXPERIENCE

66-10-1. Architectural experience of a character satisfactory to the board. Each applicant shall complete the intern development program (IDP) as specified in the "intern development program guidelines," including the appendices and excluding the section titled "the next steps," dated July 2011, published by the national council of architectural registration boards (NCARB), and hereby adopted by reference. Each applicant shall provide a completed record of architectural experience prepared by the NCARB. (Authorized by K.S.A. 2010 Supp. 74-7013 and K.S.A. 74-7019; implementing K.S.A. 74-7019; effective May 1, 1984; amended May 4, 1992; amended Feb. 22, 1993; amended Feb. 14, 1994; amended Feb. 13, 1995; amended March 1, 1996; amended Feb. 6, 1998; amended Feb. 9, 2001; amended Nov. 1, 2002; amended Feb. 3, 2006; amended March 28, 2008; amended Nov. 6, 2009; amended June 18, 2010; amended Jan. 6, 2012.)

66-10-3. Architectural experience required of a reciprocity applicant. Each applicant for a license to practice architecture by reciprocity shall provide proof of certification by the national council of architectural registration boards (NCARB), for approval by the board. The requirements for this certification shall be those specified in the portions of the "handbook for interns and architects" adopted by reference in K.A.R. 66-9-7. (Authorized by K.S.A. 2010 Supp. 74-7013; implementing K.S.A. 74-7019; effective May 1, 1984; amended May 1, 1985; amended May 4, 1992; amended Feb. 22, 1993; amended Feb. 14, 1994; amended Feb. 13, 1995; amended Jan. 6, 2012.)

Article 12.—MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYING

66-12-1. Minimum standards for the practice of land surveying. The board hereby adopts by reference the following:

(a) The "minimum standard detail requirements for ALTA/ACSM land title surveys (effective February 23, 2011)"; and

(b) the "Kansas minimum standards for boundary surveys and mortgagee title inspections standards of practice" adopted by the Kansas society of land surveyors and last amended December 2009, except that the preface and scope sections shall be deleted. (Authorized by K.S.A. 2010 Supp. 74-7013; implementing K.S.A. 74-7037; effective May 4, 1992; amended Feb. 14, 1994; amended Feb. 13, 1995; amended March 1, 1996; amended Feb. 4, 2000; amended Jan. 23, 2009; amended June 18, 2010; amended Jan. 6, 2012.)

Jean Boline
Executive Director

Doc. No. 040094

Kansas Minimum Standards For Boundary Surveys

And

Mortgage Title Inspections Standards of Practice

Last amended December, 2009

DEFINITIONS

BOUNDARY SURVEY. A 'boundary survey' as used in this section means any land survey performed for the purpose of describing, monument, locating the boundary lines of, or platting one or more parcels of land.

PLAT. 'Plat' or 'Certificate of Survey' as used herein means any graphic representation of the survey as defined in KSA 74-7001 et seq..

'Plat of Subdivision' means any survey requiring a subdivision of land into lots and blocks requiring ratification.

SURVEYOR. 'Surveyor' as used in this section means a Licensed Land Surveyor, or any person authorized by statute KSA 74-7001 et seq..

DIRECT SUPERVISION: Direct supervision defines the relationship between the Land Surveyor and those persons who are performing the work controlled by the Land Surveyor. Direct supervision means the Land Surveyor has control over those decisions that are the basis for the findings, conclusions, analyses, rationale, details and judgments that are embodied in the development and preparation of land surveying projects, plats, reports, and related activities. Direct supervision requires providing personal direction, oversight, inspection, and supervision of the work being certified.

RESPONSIBLE CHARGE: Responsible Charge may be delegated to an individual by the Land

Surveyor for the purpose of initial supervision of surveying projects. The final decisions on all surveying projects shall be made by the Land Surveyor having direct supervision as defined previously.

Boundary Descriptions (AKA: LEGAL DESCRIPTIONS)

Descriptions defining land boundaries written for conveyance or other purposes shall be complete, providing definite and unequivocal identification of lines and boundaries thereof. The description shall contain dimensions sufficient to enable the description to be plotted and retraced and shall describe the land surveyed by either government lot, aliquot parts, quarter section, section, township, range and county; or by metes and bounds commencing with a corner marked and established in the U.S. Public Land Survey System; or if such land is located in a recorded subdivision or recorded addition thereto, then by the number or other description of that lot, block or subdivision thereof. If the parcel is described by metes and bounds it may be referenced to known lot or block corners in recorded subdivisions or additions.

RESEARCH & INVESTIGATION

Every boundary survey should be made in accordance with the existing or proposed record title boundaries as nearly as is practicable. The surveyor shall, insofar as practical, acquire the necessary data, which may include but are not limited to deeds, maps, abstracts of title, section corner ties, subdivision plats, road records, County Surveyor's records, section lines, and other boundary line locations in the vicinity. The surveyor shall analyze the data and make a careful determination of the record title boundaries of the property to be surveyed.

CONDUCT OF SURVEY

The surveyor shall, or under his or her direct supervision, conduct his or her survey consisting of, but not limited to, the following items:

- 1. Search thoroughly for necessary controlling monuments and other physical evidence.**
- 2. If considered necessary, investigate possible parol evidence supporting positions of obliterated control monuments and take necessary oaths.**
- 3. Cooperate with appropriate public officials.**
- 4. Take necessary measurements to analyze and evaluate evidence.**
- 5. Make sufficient check measurements and computations to satisfactorily verify the initial fieldwork.**
- 6. Where relevant, locate lines of possession.**
- 7. Evaluate the evidence, and apply the proper theory of location in accordance with statutes and/or precedents in determining the position of all corners to be established or re-established.**
- 8. In the event of the discovery of a material difference with the work of another surveyor, an attempt shall be made to contact the other surveyor and discuss the difference.**
- 9. Monuments set as required herein shall comply with statute, administrative regulations and contractual agreement with the client.**
- 10. All pertinent information, measurements, and observations made in the field during the course of the survey shall be recorded and kept in a manner that is intelligible to another surveyor.**

**PLAT OR CERTIFICATE OF SURVEY
And/or PLAT OF SUBDIVISION**

The client shall be furnished a plat of survey showing the following information as defined by Items 1 through 13:

- 1. The name, address, and phone number of the surveyor, company, or corporation responsible for the survey.**
- 2. The boundary description (as defined in K.S.A. 74-7003) of the parcel surveyed.**
- 3. North arrow, scale, (graphic scale if deemed appropriate), and angles, bearings or azimuths. When bearings or azimuths are shown, the basis shall be indicated.**
- 4. All pertinent measured dimensions. On other dimensions, sufficient notations shall be used to identify their source; such as, but not limited to the following examples:
Record measurement (R)
Calculated from record value (CR)
Calculated from measurements (CM)**
- 5. All pertinent monuments found or set with a notation indicating which were found and which were set, and identified as to size and type. Found monuments shall be accompanied by a reference to their origin, or noted "Origin Unknown." The relationship of monuments to the surveyed lines and corners shall be indicated.**
- 6. All found or set monuments and evidence of possession beyond the surveyed premises on which establishment of the corners of the surveyed premises are dependent.**
- 7. Where possession affects the survey, the character or type of observed evidence of possession and the location of such evidence in relation to the surveyed boundary lines shall be noted.**
- 8. Delineation must be such that gaps, gores and overlaps are clearly shown and dimensioned. When a gap, gore or overlap is determined and shown by dimension or note, adjoining parcels identified by the title description or record reference, shall be shown.**

9. Easement lines, where known. All easements, evidenced by a record document which have been provided to the surveyor, shall be shown, both those burdening and those benefiting the property surveyed. Indicate the source document and/or recording data of record documents. Observable evidence of unrecorded easements and/or servitudes of all kinds on or across the surveyed property and adjoining properties if they appear to affect the surveyed property shall be shown.

10. Sufficient data to clearly indicate the theory of location applied in finalizing the locations of the corners, any data at variance with this theory of location, and sufficient data to allow the facile retracement of all pertinent lines and points shown on the plat.

11. Any data which is excluded from the survey by agreement with the client, such as easements, setbacks, or other encumbrances shall be noted on the survey as "not shown by agreement with client."

12. Certification stating the following: the date the survey was completed in the field, and that the survey was made by the surveyor or under his or her direct supervision. Such certificate shall be accompanied by an original signature and seal. All copies of the survey delivered to the client shall be signed and dated by the surveyor in blue ink. The signature and date shall be placed across the surveyor's seal in blue ink OR, if filed electronically, shall otherwise adhere to the electronic certification standards approved by the Kansas State Board of Technical Professions Rules and Regulations as described in K.A.R. 66-6-1.

13. Where Kansas State Plane Coordinates (as defined by KSA 58 20a06) are shown on a Survey they will be shown in meters or US Survey feet, with the conversion factor of 39.37 inches per meter plainly shown on the plat.

MONUMENTATION

Unless specifically excluded by agreement with the client, the surveyor shall establish, or confirm the prior establishment of, permanent monuments at each and every corner on the boundaries of the parcel or tract of land being surveyed. In such cases where the placement of a required monument at its proper location is impractical, it shall be permissible to set

a reference monument close by the point, and if such reference monument is set, its location shall be properly shown on the plat of survey. When conditions warrant setting a reference monument on an offset, the location shall be selected so the reference monument lies on a line of the survey or on the prolongation of such line. Reference monuments shall not be offset in fractional feet or less than two feet from the true corner unless a physical obstruction affects their location. Even half meter offsets may be utilized for surveys requiring metric measurements.

Set monuments, when possible, shall be constructed of material capable of being detected by commonly used magnetic locators. Where practical, said monuments shall be firm and substantially free from movement. These monuments shall have affixed thereto a cap or other device bearing the registration number of the surveyor in direct supervision or the corporate registration number of the corporation registered to practice land surveying in the State of Kansas (i.e. CLS 000) or the name of the governmental agency legibly stamped or imprinted thereon. Unless extenuating circumstances dictate, the minimum size monument shall be an iron pipe not less than ½" O.D. or a solid steel rod not less than ½" in diameter, and minimum length shall be 24 inches.

PERPETUATION

- 1. Ties to government corners must be filed for record as provided by KSA 1987 Supp. 58-2011 and shall indicate whether the tie measurements are horizontal or slope.***
- 2. All existing government corners accepted by the surveyor which do not meet the minimum monumentation standards shall, when existing conditions permit, be remonumented to standards. Original government stones shall have a metal monument or magnet placed in close proximity to the stone to facilitate the relocation.***
- 3. After a boundary survey which results in the re-establishment of lost government land***

monuments or replacement of obliterated monuments, sufficient documentation of the theory applied in finalizing the locations of corners, any data at variance with this theory, and sufficient data to allow the facile retracement of all pertinent lines and points shall be provided to the appropriate County Agency charged with the preservation of this information.

4. Surveys involving the platting, replatting, lot splitting or subdividing of land into lots or tracts, and any surveys creating a new description or revised description, shall be filed for record in the office of the Register of Deeds of the appropriate County or any other County office designated for archival purposes as directed by the Board of County Commissioners.

5. It is the duty of every surveyor to insure permanent preservation of his or her records, field notes, and plats.

TECHNICAL MINIMUMS

The degree and accuracy necessary for a particular survey should be based upon the intended use of the land without regard for its present use, provided the surveyor has knowledge of the intended use. If the surveyor has no such knowledge, the degree of precision may be based on the knowledge of local regulations, requirements and conditions and the present use of the land.

The relative precision shall meet or exceed the following:

The true horizontal distance between any two points whose positions are stated relative to each other, whether directly or indirectly by calculation, shall not differ from the reported distance by more than 1 part in 10,000 plus 0.10 feet.

MINIMUM STANDARDS FOR MORTGAGEE TITLE INSPECTIONS (MTIs)

A licensed land surveyor in the State of Kansas shall not provide to any party a mortgagee title inspection unless in possession of a work order signed by the borrower indicating that they have been advised of the different types of services available and the scope of each of these services. (See the attached recommended work order.) This work order may be changed to fit the surveyor's or the client's particular needs, except that the three services shown may only be expanded to include more services and the signature statement must remain unchanged.

FIELD PROCEDURES

Professional notes shall be taken on all MTIs and kept as part of the surveyor's permanent record.

A diligent search for existing control and/or boundary evidence shall be made by field crews. The highest order of existing control and/or boundary evidence available shall be used to perform the MTI. The surveyor must obtain sufficient evidence relating to the property boundary to demonstrate general knowledge of the given area.

DRAFTING

A sketch or diagram of the parcel shall be used in support of the certificate, and the following minimum standards will be used:

a) Property lines with the boundary dimensions from the deed description or plat shall be shown.

b) Major improvements (permanent structures) shall be shown with dimensions and descriptions (e.g., residences, garages, outbuildings with foundations, in-ground pools).

c) Major improvement locations shall be shown with dimensions to the nearest property lines with a minimum of three dimensions shown for normal lots, and shall be sufficient to locate the structure (offsets shall be shown perpendicular to straight property lines and radially to curved property lines). The level of certainty of these dimensions, based on the evidence found in the field and not as a standard note shall be

shown in parenthesis after each dimension or by means of a general note. Example: 12.5' ($\pm 0.5'$), or Front offsets: $\pm 0.3'$, Side offsets: $\pm 0.4'$).

d) Means of access and platted setback lines shall be shown graphically and labeled.

e) Platted and apparent easements shall be shown and labeled. State the source of record easement information, if other than platted (e.g., miscellaneous book and page of recording. If the information was obtained from a title company, state which title company and the commitment number).

f) The posted address shall be shown, if not posted, so state.

g) A north arrow shall be shown.

h) Encroachments shall be noted and shown in an obvious manner. When the level of certainty of dimensions to possible encroachments are not precise enough for a positive determination, a boundary survey shall be recommended.

i) The following caption shall appear prominently on the sketch:

**MORTGAGEE TITLE INSPECTION
(this does not constitute a boundary survey)**

j) If the certification and the sketch are on more than one sheet of paper it shall be so indicated (e.g., Page 1 of 2, Page 2 of 2).

CERTIFICATION

A mortgagee title inspection shall only refer to performing an inspection of the property and shall not indicate the performance of a survey in any part of the certification.

The certification shall contain the name, address, and the telephone number of the surveyor responsible for the inspection, in addition to the following:

1) A statement that the inspection was either conducted by the land surveyor or that the inspection was made under his or her direct supervision. The date the inspection was made and the legal description of the property inspected.

2) A statement that the accompanying sketch is a true representation of the conditions that were found at the time of the inspection and that the inspection was prepared for mortgagee title insurance only, and that the document does not constitute a boundary survey and is subject to any inaccuracies that a subsequent boundary survey may disclose. It shall state the fact that no property corners were set, and that the information shown on the sketch should not be used to establish any fence, structure or other improvements. It shall be stated that the linear or angular values shown on the sketch, if any, are based on record or deed information and have not been verified unless noted. Include notification that the land surveyor is not extending a warranty to the present or future owners or occupants.

3) a) All copies of the MTI delivered to the client shall be signed and dated by the surveyor in blue ink. The signature and date shall be placed across the surveyor's seal.

b) The surveyor shall make a reasonable effort to discourage the unauthorized copying and reuse of all MTI's.

RECORDS

The surveyor shall perform adequate research, maintain sufficient recorded documentation, and provide the field crews with information necessary to determine the property dimensions in the field.

WORK ORDER

Borrower: Date:

Lender: Ordered By:

Common Address:

Legal description:

Title Commitment being prepared by:

**Is Flood Zone Verification required? Yes _____
No _____**

Does the property have: Locked Gates: _____ Security System: _____ Animals to be locked-up: _____

Deliver ____ copies to:

Anticipated closing date: _____ Need by date:

**Is estimate of fee required prior to service? Yes _____
No _____**

A Mortgagee Title Inspection can only be provided if this work order is signed by the purchaser or mortgagor of the property to be inspected, pursuant to Article 66-12-1 of the Rules and Regulations of the Kansas State Board of Technical Professions.

Please read carefully and indicate the type of service you wish to order.

_____ Mortgagee Title Inspection: The sole purpose of this inspection is to obtain mortgagee title insurance. This is the minimum service that your lender requires for closing your loan. It is a location of improvements and cursory check for violations or encroachments onto or from the subject property based on existing but not confirmed evidence. This does not constitute a boundary survey and is subject to any inaccuracies that a subsequent boundary survey may disclose. No property corners will be set and it should not be used or relied upon for the establishment of any fence, structure or other improvement. No warranty of any kind is extended therein to the present or future owner or occupant.

_____ Boundary Survey and Improvement Location: A boundary survey of the subject property will be made and the property corners will be located

and verified or reset. The improvements on the property will be located and a check for violations or encroachments onto or from the subject property will be made. This survey can be used by the property owner for the construction of a fence, structure or other improvement.

_____ ALTA (American Land Title Association) Survey: This is the most comprehensive type of survey and improvement location. It covers all the aspects of the boundary survey and improvement location and identification of any additional evidence of possession or use which could be adverse to the interests of the purchaser. This type of survey is normally only performed on commercial property because of the expense involved.

I (We), the undersigned borrower(s), have read, understand and have indicated the type of service to be performed.

Signature

(Signature)

Date

(Date)

Notice: The survey company reserves the right to terminate work on a Mortgagee Title Inspection, if it determines that meaningful results cannot be expected from this type of service. The suitability of any particular property as the subject for a Mortgagee Title Inspection may not be determinable until after work is in progress. The survey company assumes no liability for delays resulting from weather or other factors beyond their reasonable control.

**MINIMUM STANDARD DETAIL REQUIREMENTS FOR
ALTA/ACSM LAND TITLE SURVEYS**
(Effective February 23, 2011)

1. **Purpose** - Members of the American Land Title Association (ALTA) have specific needs, unique to title insurance matters, when asked to insure title to land without exception as to the many matters which might be discoverable from survey and inspection, and which are not evidenced by the public records.

For a survey of real property, and the plat, map or record of such survey, to be acceptable to a title insurance company for the purpose of insuring title to said real property free and clear of survey matters (except those matters disclosed by the survey and indicated on the plat or map), certain specific and pertinent information must be presented for the distinct and clear understanding between the insured, the client (if different from the insured), the title insurance company (insurer), the lender, and the surveyor professionally responsible for the survey.

In order to meet such needs, clients, insurers, insureds, and lenders are entitled to rely on surveyors to conduct surveys and prepare associated plats or maps that are of a professional quality and appropriately uniform, complete and accurate. To that end, and in the interests of the general public, the surveying profession, title insurers and abstracters, the ALTA and the National Society of Professional Surveyors, Inc. (NSPS) jointly promulgate the within details and criteria setting forth a minimum standard of performance for ALTA/ACSM Land Title Surveys. A complete 2011 ALTA/ACSM Land Title Survey includes the on-site fieldwork required under Section 5 herein, the preparation of a plat or map showing the results of the fieldwork and its relationship to record documents as required under Section 6 herein, any information in Table A herein that may have been negotiated with the client, and the certification outlined in Section 7 herein.

2. **Request for Survey** - The client shall request the survey or arrange for the survey to be requested, and shall provide a written authorization to proceed from the person or entity responsible for paying for the survey. Unless specifically authorized in writing by the insurer, the insurer shall not be responsible for any costs associated with the preparation of the survey. The request shall specify that an "ALTA/ACSM LAND TITLE SURVEY" is required and which of the optional items listed in Table A herein, if any, are to be incorporated. Certain properties, including, but not limited to, marinas, campgrounds, trailer parks and leased areas, may present issues outside those normally encountered on an ALTA/ACSM Land Title Survey. The scope of work related to such properties should be discussed with the client, lender and insurer, and agreed upon in writing prior to requesting the survey. The client may need to secure permission for the surveyor to enter upon the property to be surveyed, adjoining properties, or offsite easements.

3. **Surveying Standards and Standards of Care**

A. **Effective Date** - The 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys are effective February 23, 2011. As of that date, all previous versions of the Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys are superseded by these standards.



- B. Other Requirements and Standards of Practice** - Some Federal agencies, many states and some local jurisdictions have adopted statutes, administrative rules and/or ordinances that set out standards regulating the practice of surveying within their jurisdictions. In addition to the standards set forth herein, surveyors shall also conduct their surveys in accordance with all applicable jurisdictional requirements and standards of practice. Where conflicts between the standards set forth herein and any such jurisdictional requirements and standards of practice occur, the more stringent shall apply.
- C. The Normal Standard of Care** - Surveyors should recognize that there may be unwritten local, state, and/or regional standards of care defined by the practice of the 'prudent surveyor' in those locales.
- D. Boundary Resolution** - The boundary lines and corners of any property being surveyed as part of an ALTA/ACSM Land Title Survey shall be established and/or retraced in accordance with appropriate boundary law principles governed by the set of facts and evidence found in the course of performing the research and survey.
- E. Measurement Standards** - The following measurement standards address Relative Positional Precision for the monuments or witnesses marking the corners of the surveyed property.
- i. "Relative Positional Precision" means the length of the semi-major axis, expressed in feet or meters, of the error ellipse representing the uncertainty due to random errors in measurements in the location of the monument, or witness, marking any corner of the surveyed property relative to the monument, or witness, marking any other corner of the surveyed property at the 95 percent confidence level (two standard deviations). Relative Positional Precision is estimated by the results of a correctly weighted least squares adjustment of the survey.
 - ii. Any boundary lines and corners established or retraced may have uncertainties in location resulting from (1) the availability, condition, history and integrity of reference or controlling monuments, (2) ambiguities in the record descriptions or plats of the surveyed property or its adjoiners, (3) occupation or possession lines as they may differ from the written title lines, and (4) Relative Positional Precision. Of these four sources of uncertainty, only Relative Positional Precision is controllable, although due to the inherent errors in any measurement, it cannot be eliminated. The magnitude of the first three uncertainties can be projected based on evidence; Relative Positional Precision is estimated using statistical means (see Section 3.E.i. above and Section 3.E.v. below).
 - iii. The first three of these sources of uncertainty must be weighed as part of the evidence in the determination of where, in the surveyor's opinion, the boundary lines and corners of the surveyed property should be located (see Section 3.D. above). Relative Positional Precision is a measure of how precisely the surveyor is able to monument and report those positions; it is not a substitute for the application of proper boundary law principles. A boundary corner or line may have a small Relative Positional Precision because the survey measurements were precise, yet still be in the wrong position (i.e. inaccurate) if it was established or retraced using faulty or improper application of boundary law principles.
 - iv. For any measurement technology or procedure used on an ALTA/ACSM Land Title Survey, the surveyor shall (1) use appropriately trained personnel, (2) compensate for systematic errors, including those associated with instrument calibration, and (3) use appropriate error propagation and measurement design theory (selecting the proper instruments, geometric layouts, and field and computational procedures) to control random errors such that the maximum allowable Relative Positional Precision outlined in Section 3.E.v. below is not exceeded.



- v. The maximum allowable Relative Positional Precision for an ALTA/ACSM Land Title Survey is 2 cm (0.07 feet) plus 50 parts per million (based on the direct distance between the two corners being tested). It is recognized that in certain circumstances, the size or configuration of the surveyed property, or the relief, vegetation or improvements on the surveyed property will result in survey measurements for which the maximum allowable Relative Positional Precision may be exceeded. If the maximum allowable Relative Positional Precision is exceeded, the surveyor shall note the reason as explained in Section 6.B.ix below.
4. **Records Research** - It is recognized that for the performance of an ALTA/ACSM Land Title Survey, the surveyor will be provided with appropriate data which can be relied upon in the preparation of the survey. The request for an ALTA/ACSM Land Title Survey shall set forth the current record description of the property to be surveyed or, in the case of an original survey, the current record description of the parent parcel that contains the property to be surveyed. Complete copies of the most recent title commitment, the current record description of the property to be surveyed (or, in the case of an original survey, the parent parcel), the current record descriptions of adjoining, any record easements benefiting the property, the record easements or servitudes and covenants burdening the property (all hereinafter referred to collectively as "Record Documents"), documents of record referred to in the Record Documents, documents necessary to ascertain, if possible, the junior/senior relationship pursuant to Section 6.B.vii. below, and any other documents containing desired appropriate information affecting the property being surveyed, and to which the ALTA/ACSM Land Title Survey shall make reference, shall be provided to the surveyor for use in conducting the survey. Reference is made to Section 3.B. above.
5. **Field Work** - The Survey shall be performed on the ground (except as otherwise negotiated pursuant to Table A, Item 15 below, if selected by the client), and the field work shall include the following:
- A. **Monuments**
- i. The location and description of any monuments or lines that control the boundaries of the surveyed property.
 - ii. The location, size and type of any monuments found (or set, if Table A, Item 1 is requested by the client, or if otherwise required – see Section 3.B. above) on the boundary of the surveyed property.
- B. **Rights of Way and Access**
- i. The distance from the appropriate corner or corners of the surveyed property to the nearest right of way line, if the surveyed property does not abut a right of way.
 - ii. The name of any street, highway or other public or private way abutting the surveyed property, and the width and location of the travelled way relative to the nearest boundary line of the surveyed property.
 - iii. Visible evidence of physical access (such as, but not limited to, curb cuts and driveways) to any abutting streets, highways or other public ways.
 - iv. The location and character of vehicular, pedestrian or other forms of access by other than the apparent occupants of the surveyed property to or across the surveyed property, including, but not limited to driveways, alleys, private roads, sidewalks and footpaths observed in the process of conducting the survey.
 - v. Without expressing a legal opinion as to ownership or nature, the location and extent of any potentially encroaching driveways, alleys, and other ways of access from adjoining properties onto the surveyed property observed in the process of conducting the survey.



- vi. Where documentation of the width or location of any abutting street, road or highway right of way was not disclosed in Record Documents provided to the surveyor or was not otherwise available from the controlling jurisdiction (see Section 6.C.iv. below), the evidence and location of parcel corners recovered which might indicate the width or location of such right of way lines.
 - vii. Evidence of access to and from waters adjoining the surveyed property, such as paths, boat slips, launches, piers and docks observed in the process of conducting the survey.
- C. Lines of Possession, and Improvements along the Boundaries**
- i. The character and location of evidence of possession or occupation along the perimeter of the surveyed property, both by the occupants of the surveyed property and by adjoining, observed in the process of conducting the survey.
 - ii. The character and location of all walls, buildings, fences, and other improvements within five feet of each side of the boundary lines, observed in the process of conducting the survey.
 - iii. Without expressing a legal opinion as to the ownership or nature of the potential encroachment, the evidence, location and extent of potentially encroaching structural appurtenances and projections observed in the process of conducting the survey, such as fire escapes, bay windows, windows and doors that open out, flue pipes, stoops, eaves, cornices, areaways, steps, trim, etc., by or onto adjoining property, or onto rights of way, easements or setback lines disclosed in Record Documents provided to the surveyor.
- D. Buildings**
- Based on the normal standard of care, the location of all buildings on the surveyed property shown perpendicular to the nearest perimeter boundary line(s) and expressed to the appropriate degree of precision.
- E. Easements and Servitudes**
- i. Evidence of any easements or servitudes burdening the surveyed property, disclosed in the Record Documents provided to the surveyor and observed in the process of conducting the survey.
 - ii. Evidence of easements or servitudes not disclosed in the Record Documents provided to the surveyor, but observed in the process of conducting the survey, such as those created by roads; rights of way; water courses; ditches; drains; telephone, fiber optic lines, or electric lines; water, sewer, oil or gas pipelines on or across the surveyed property and on adjoining properties if they appear to affect the surveyed property.
 - iii. Surface indications of underground easements or servitudes on or across the surveyed property observed in the process of conducting the survey.
 - iv. Evidence of use of the surveyed property by other than the apparent occupants observed in the process of conducting the survey.
- F. Cemeteries**
- As accurately as the evidence permits, the location of cemeteries, gravesites, and burial grounds (i) disclosed in the Record Documents provided to the surveyor, or (ii) observed in the process of conducting the survey.
- G. Water Features**
- i. The location of springs, together with the location of ponds, lakes, streams, and rivers bordering on or running through the surveyed property, observed during the process of conducting the survey. See Table A, Item 19 for wetlands locations.



- ii. The location of any water boundary on the surveyed property. The attribute(s) of the water feature located (e.g. top of bank, edge of water, high water mark, etc.) should be congruent with the boundary as described in the record description or, in the case of an original survey, in the new description. (See Section 6.B.vi. below).
6. **Plat or Map** - A plat or map of an ALTA/ACSM Land Title Survey shall show the following information. Where dimensioning is appropriate, dimensions shall be in accordance with the appropriate standard of care.
- A. The evidence and locations gathered during the field work as outlined in Section 5 above.
 - B. **Boundary, Descriptions, Dimensions and Closures**
 - i. The current record description of the surveyed property, and any new description of the surveyed property that was prepared in conjunction with the survey, including a statement explaining why the new description was prepared. Preparation of a new description should be avoided unless deemed necessary or appropriate by the surveyor and insurer. Preparation of a new description should also generally be avoided when the record description is a lot or block in a platted, recorded subdivision.
 - ii. The location and description of any monuments, lines or other evidence that control the boundaries of the surveyed property or that were otherwise relied upon in establishing or retracing the boundaries of the surveyed property, and the relationship of that evidence to the surveyed boundary. In some cases, this will require notes on the plat or map.
 - iii. All distances and directions identified in the record description of the surveyed property (and in the new description, if one was prepared). Where a measured or calculated dimension differs from the record by an amount deemed significant by the surveyor, such dimension shall be shown in addition to, and differentiated from, the corresponding record dimension.
 - iv. The directional, distance and curve data necessary to compute a mathematical closure of the surveyed boundary. A note if the record description does not mathematically close. The basis of bearings and, when it differs from the record basis, the difference.
 - v. The remainder of any recorded lot or existing parcel, when the surveyed property is composed of only a portion of such lot or parcel, shall be graphically depicted. Such remainder does not need to be included as part of the actual survey, except to the extent necessary to locate the lines and corners of the surveyed property, and it need not be fully dimensioned or drawn at the same scale as the surveyed property.
 - vi. When the surveyed property includes a water boundary, a note on the face of the plat or map noting the date the boundary was measured, which attribute(s) of the water feature was/were located, and the caveat that the boundary is subject to change due to natural causes and that it may or may not represent the actual location of the limit of title. When the surveyor is aware of natural or artificial realignments or changes in such boundaries, the extent of those changes and facts shall be shown or explained.
 - vii. The relationship of the boundaries of the surveyed property (i.e. contiguity, gaps, or overlaps) with its adjoiners, where ascertainable from Record Documents and/or from field evidence gathered during the process of conducting the survey of the property being surveyed. If the surveyed property is composed of multiple parcels, the extent of any gaps or overlaps between those parcels shall be identified. Where gaps or overlaps are identified, the surveyor shall, prior to preparation of the final plat or map, disclose this to the insurer and client for determination of a course of action concerning junior/senior rights.



- viii. When, in the opinion of the surveyor, the results of the survey differ significantly from the record, or if a fundamental decision related to the boundary resolution is not clearly reflected on the plat or map, the surveyor shall explain this information with notes on the face of the plat or map.
 - ix. A note on the face of the plat or map explaining the site conditions that resulted in a Relative Positional Precision that exceeds the maximum allowed under Section 3.E.v. of these standards.
 - x. A note on the face of the plat or map identifying the title commitment/policy number, effective date and name of the insurer for any title work provided to the surveyor.
- C. Easements, Servitudes, Rights of Way, Access and Record Documents**
- i. The width and recording information of all plottable rights of way, easements and servitudes burdening and benefitting the property surveyed, as evidenced by Record Documents which have been provided to the surveyor.
 - ii. A note regarding any right of way, easement or servitude evidenced by a Record Document which has been provided to the surveyor (a) the location of which cannot be determined from the record document, or (b) of which there was no observed evidence at the time of the survey, or (c) that is a blanket easement, or (d) that is not on, or does not touch, the surveyed property, or (e) that limits access to an otherwise abutting right of way, or (f) in cases where the surveyed property is composed of multiple parcels, which of such parcels the various rights of way, easements, and servitudes cross.
 - iii. A note if no physical access to a public way was observed in the process of conducting the survey.
 - iv. The width of abutting rights of way and the source of such information (a) where available from the controlling jurisdiction or (b) where disclosed in Record Documents provided to the surveyor.
 - v. The identifying titles of all recorded plats, filed maps, right of way maps, or similar documents which the survey represents, wholly or in part, with their recording or filing data.
 - vi. For non-platted adjoining land, names and recording data identifying adjoining owners according to current public records. For platted adjoining land, the recording data of the subdivision plat.
 - vii. Platted setback or building restriction lines which appear on recorded subdivision plats or which were disclosed in Record Documents provided to the surveyor.
- D. Presentation**
- i. The plat or map shall be drawn on a sheet of not less than 8 ½ by 11 inches in size at a legible, standard engineering scale, with that scale clearly indicated in words or numbers and with a graphic scale. When recordation or filing of a plat or map is required by law, such plat or map shall be produced in recordable form. The boundary of the surveyed property drawn in a manner that distinguishes it from other lines on the plat or map. A north arrow (with north to the top of the drawing when practicable), a legend of symbols and abbreviations, and a vicinity map showing the property in reference to nearby highway(s) or major street intersection(s).
 - ii. Supplementary or detail diagrams when necessary.
 - iii. If there are no visible buildings on the surveyed property, a note stating "*No buildings existing on the surveyed property*" shall appear on the face on the survey.



- iv. The surveyor's project number (if any), and the name, registration or license number, signature, seal, street address, telephone number, and email address of the surveyor who performed the survey. The date(s) of any revisions made by said surveyor.
 - v. Sheet numbers where the plat or map is composed of more than one sheet.
 - vi. The caption "ALTA/ACSM Land Title Survey."
7. **Certification** - The plat or map of an ALTA/ACSM Land Title Survey shall bear only the following certification, unaltered, except as may be required pursuant to Section 3.B. above:

To (name of insured, if known), (name of lender, if known), (name of insurer, if known), (names of others as negotiated with the client):

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items _____ of Table A thereof. The field work was completed on _____.

Date of Plat or Map: _____ (Surveyor's signature, printed name and seal with Registration/License Number)

8. **Deliverables** - The surveyor shall furnish copies of the plat or map of survey to the insurer and client, and as otherwise negotiated with the client. Hard copies shall be on durable and dimensionally stable material of a quality standard acceptable to the insurer. Digital copies of the plat or map may be provided in addition to, or in lieu of, hard copies in accordance with the terms of the contract. When required by law or requested by the client, the plat or map shall be produced in recordable form and recorded or filed in the appropriate office or with the appropriate agency.



TABLE A

OPTIONAL SURVEY RESPONSIBILITIES AND SPECIFICATIONS

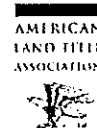
NOTE: The items of Table A must be negotiated between the surveyor and client. It may be necessary for the surveyor to qualify or expand upon the description of these items (e.g., in reference to Item 6(b), there may be a need for an interpretation of a restriction). The surveyor cannot make a certification on the basis of an interpretation or opinion of another party. Notwithstanding Table A Items 5 and 11(b), if an engineering design survey is desired as part of an ALTA/ACSM Land Title Survey, such services should be negotiated under Table A, item 22.

If checked, the following optional items are to be included in the ALTA/ACSM LAND TITLE SURVEY, except as otherwise qualified (see note above):

1. *Monuments placed (or a reference monument or witness to the corner) at all major corners of the boundary of the property, unless already marked or referenced by existing monuments or witnesses.*
2. *Address(es) if disclosed in Record Documents, or observed while conducting the survey.*
3. *Flood zone classification (with proper annotation based on federal Flood Insurance Rate Maps or the state or local equivalent) depicted by scaled map location and graphic plotting only.*
4. *Gross land area (and other areas if specified by the client).*
5. *Vertical relief with the source of information (e.g. ground survey or aerial map), contour interval, datum, and originating benchmark identified.*
6. *(a) Current zoning classification, as provided by the insurer.*
 (b) Current zoning classification and building setback requirements, height and floor space area restrictions as set forth in that classification, as provided by the insurer. If none, so state.
7. *(a) Exterior dimensions of all buildings at ground level.*
 (b) Square footage of:
 (1) exterior footprint of all buildings at ground level.
 (2) other areas as specified by the client.
 (c) Measured height of all buildings above grade at a location specified by the client. If no location is specified, the point of measurement shall be identified.



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8. _____ *Substantial features observed in the process of conducting the survey (in addition to the improvements and features required under Section 5 above) such as parking lots, billboards, signs, swimming pools, landscaped areas, etc.*
9. _____ *Striping, number and type (e.g. handicapped, motorcycle, regular, etc.) of parking spaces in parking areas, lots and structures.*
10. _____ *(a) Determination of the relationship and location of certain division or party walls designated by the client with respect to adjoining properties (client to obtain necessary permissions).*
- _____ *(b) Determination of whether certain walls designated by the client are plumb (client to obtain necessary permissions).*
11. _____ *Location of utilities (representative examples of which are listed below) existing on or serving the surveyed property as determined by:*
- _____ *(a) Observed evidence.*
- _____ *(b) Observed evidence together with evidence from plans obtained from utility companies or provided by client, and markings by utility companies and other appropriate sources (with reference as to the source of information).*
- *Railroad tracks, spurs and sidings;*
 - *Manholes, catch basins, valve vaults and other surface indications of subterranean uses;*
 - *Wires and cables (including their function, if readily identifiable) crossing the surveyed property, and all poles on or within ten feet of the surveyed property. Without expressing a legal opinion as to the ownership or nature of the potential encroachment, the dimensions of all encroaching utility pole crossmembers or overhangs; and*
 - *utility company installations on the surveyed property.*
- Note - With regard to Table A, item 11(b), source information from plans and markings will be combined with observed evidence of utilities to develop a view of those underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary.*
12. _____ *Governmental Agency survey-related requirements as specified by the client, such as for HUD surveys, and surveys for leases on Bureau of Land Management managed lands.*
13. _____ *Names of adjoining owners of platted lands according to current public records.*
14. _____ *Distance to the nearest intersecting street as specified by the client.*
15. _____ *Rectified orthophotography, photogrammetric mapping, airborne/mobile laser scanning and other similar products, tools or technologies as the basis for the showing the location of certain features (excluding boundaries) where ground measurements are not otherwise*



necessary to locate those features to an appropriate and acceptable accuracy relative to a nearby boundary. The surveyor shall (a) discuss the ramifications of such methodologies (e.g. the potential precision and completeness of the data gathered thereby) with the insurer, lender and client prior to the performance of the survey and, (b) place a note on the face of the survey explaining the source, date, precision and other relevant qualifications of any such data.

16. _____ *Observed evidence of current earth moving work, building construction or building additions.*
17. _____ *Proposed changes in street right of way lines, if information is available from the controlling jurisdiction. Observed evidence of recent street or sidewalk construction or repairs.*
18. _____ *Observed evidence of site use as a solid waste dump, sump or sanitary landfill.*
19. _____ *Location of wetland areas as delineated by appropriate authorities.*
20. _____ *(a) Locate improvements within any offsite easements or servitudes benefitting the surveyed property that are disclosed in the Record Documents provided to the surveyor and that are observed in the process of conducting the survey (client to obtain necessary permissions).*
- _____ *(b) Monuments placed (or a reference monument or witness to the corner) at all major corners of any offsite easements or servitudes benefitting the surveyed property and disclosed in Record Documents provided to the surveyor (client to obtain necessary permissions).*
21. _____ *Professional Liability Insurance policy obtained by the surveyor in the minimum amount of \$_____ to be in effect throughout the contract term. Certificate of Insurance to be furnished upon request.*
22. _____ _____

*Adopted by the Board of Governors, American Land Title Association, on October 13, 2010.
American Land Title Association, 1828 L St., N.W., Suite 705, Washington, D.C. 20036.*

*Adopted by the Board of Directors, National Society of Professional Surveyors, on November 15, 2010.
National Society of Professional Surveyors, Inc., a member organization of the American Congress on Surveying and Mapping, 6 Montgomery Village Avenue, Suite 403, Gaithersburg, MD 20879*

