

GIS/LIS in Ohio and the NCEES Model Law

*Establishing an Informed Basis for
Discussion of The Professional Surveyor's
Role in Ohio Cadastral Information
Management*

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Abstract

Recently debate within the Geographic/Land Information Systems (GIS/LIS) community has included discussions regarding the implications of the National Council of Examiners for Engineering and Surveying (NCEES) model legislation for the regulation of the practice of engineering and land surveying. The land surveys portion of recent revisions included, within the definition of the practice of surveying, operations which are inherently required to include real property data in any GIS. The NCEES model law historically has been influential in the adoption of individual state licensing laws and rules of practice. However, additional laws control the operation of governmental agencies in Ohio. This paper examines how interpretation these laws may affect the cadastral layer(s) of GIS systems in Ohio. Hopefully this will provide a basis for informed discussion. Such discussion should include members of the Ohio GIS community, Professional Engineers, Professional Surveyors, and public agencies planning or operating GIS systems. The intent is to assist in the continued expansion and improvement of GIS applications in Ohio.

Introduction

The land surveys portion of both the 1997 and August 1999 revisions to the NCEES model legislation included, within the definition of the practice of surveying, operations which are inherently required to include real property data in any GIS. The NCEES model law historically has been influential in the adoption of individual state laws and rules of practice. Both the NCEES definition of surveying and current Ohio Law definitions of Professional Engineering and Surveying have been included in Appendix A for reference. Reaction from working members of the GIS community has included statements indicating they view this as nothing less than a belated grab for power in an emerging industry.

In 1998 the Urban and Regional Information Systems Association (URISA) responded by establishing an online forum, “. . . intended to facilitate efforts to achieve consensus [sic] regarding the wisdom and content of legislation that requires registration, certification, or other quality control of professionals involved with the design, development, and use of GIS for public projects.”¹

In October of 2000 a report “GIS/LIS Addendum to the Report of the Task Force on the NCEES Model Law for Surveying”² was released. This report summarized

. . . the deliberations and recommendations of representatives from seven organizations whose constituencies maintain a vital interest in the modification and promulgation of the Model Law for Surveying by the National Council of Examiners for Engineering and Surveying (NCEES). The seven organizations include:

- American Congress on Surveying and Mapping (ACSM)
- American Society of Civil Engineers - Geomatics Division (ASCE)
- American Society for Photogrammetry and Remote Sensing (ASPRS)
- Management Association for Private Photogrammetric Surveyors (MAPPS)
- National Society of Professional Surveyors (NSPS)
- National States Geographic Information Council (NSGIC)

Urban and Regional Information System Association (URISA)

The report included, as part of the statement of philosophy, “GIS-based databases and maps that are intended to be used as the authoritative document for the location of parcels, fixed works, survey monuments, elevation measurements, etc., must be accomplished under the responsible charge of a Professional Surveyor or Land Surveyor.”

My objective is to snapshot the current status and direction nationally and provide information to develop a position consistent with existing Ohio law and rules. Hopefully this will provide a basis for discussion between members of the Ohio GIS community, Professional Engineers, Professional Surveyors, and public agencies planning or operating such systems. The intent is to assist in the continued expansion of GIS applications in Ohio.

Focus of Discussion

Much of the national discussion has focused on the broadest interpretation of the wording in the NCEES Model Law. The primary subject matter has been representation of property boundaries (the cadastral data) and the proper resolution of apparently conflicting information in the legal source documents. The Federal Geographic Data Committee, Cadastral Subcommittee, Technical Advisory Group issued a draft set of standards in September 1994. This draft included three parts Cadastral Spatial Data Content, Collection Standard, and Metadata Profile. Of these the Cadastral Data Content Standard for the National Spatial Data Infrastructure been adopted and makes reference to the Content Standard for Digital Geospatial Metadata.

The Collection Standard was intended to provide a national standard procedure “To determine where multiple measurements, multiple monuments, or conflicting descriptions may have created apparent or real conflict in the spatial extent of rights in land. . . .³ To select information from a Content Data System and evaluate it such that no gaps or overlaps exist between land rights.”⁴ The Collection Standard was abandoned based on comments of reviewers of the draft as being “. . . overwhelming and would not serve the ultimate goal of the committee which was then and continues to be to build cooperation and coordination with local, state and tribal governments.”⁵ The proposed standard procedures would, in most cases, have predicted the most logical resolution of such gaps and overlaps. The basis of the proposed collection standard was a measurement based system for managing cadastral information. This type of system provides a basis for all evidence to be evaluated for decision making. If real gaps and overlaps exist, theoretical resolutions may be misleading. The lack of visual clues to legal problems could be viewed as deceptive. GIS/LIS is being widely accepted as a tool for decision making. If relied on such predictive resolutions may produce inappropriate decisions. Neither GIS/LIS managers nor surveyors are legally empowered to resolve boundary conflicts. The actual resolution of such conditions is the responsibility of the courts. This is emphasized, in a text on the legal aspects of surveying, by Brown et al. in two passages. The first deals with the authority of surveyors.

Unlike other countries, surveyors in the United States do not have the

authority to locate legal boundaries that are binding on all the involved parties. Their responsibilities lie in the area of interpreting legal descriptions and then placing these descriptions on the ground by conducting surveys to recover evidence of prior work or surveys. In addition to locating these title boundaries, surveyors may be called on to (1) locate the limits of possession, (2) locate the limits of the claim of ownership, either under color of title or not under color of title, (3) locate improvements on property, and (4) locate and describe rights and interests in land.⁶

The second deals with the role of the courts. “The courts are present to apply the various laws, both statute and common, to the facts presented. If there is a question as to the facts, then it is in the province of the jury to decide what facts to believe and apply.”⁷

The national debate has been wide ranging and dealt with much more than the cadastral layer. Comments from some individuals have been combative. It is to be hoped the discussion in Ohio can be more focused in order to continue and expand on the existing exchange of information and cooperation between the Ohio Geographically Referenced Information Program (OGRIP), the Professional Land Surveyors of Ohio (PLSO), the County Auditors’ Association of Ohio (CAAO) and the County Engineers Association of Ohio (CEAO).

Therefore this document will focus on the existing Ohio Law (Ohio Revised Code) and Rules (Ohio Administrative Code) that may pertain to discussions regarding GIS responsibilities of Professional Engineers, Professional Land Surveyors, and various elected county officials. Information collected by OGRIP indicates that much of the effort to develop new GIS applications in Ohio is centered at the county government level. These efforts reflect implementing new technology to comply with existing responsibilities mandated by the laws of Ohio. Logically responsibilities so mandated do not shift to other individuals simply because new tools hold the promise of higher efficiency.

Defined Responsibilities

This is not intended to be a comprehensive summary of either GIS/LIS applications or the responsibilities of the offices or professions mentioned. In Ohio cadastral information has been a primary concern of most county GIS/LIS systems and many Professional Surveyors. Information regarding real property ownership, interests, and transfer is collected by several county offices. Additionally it is becoming common for city, county and township zoning and planning agencies to provide land use data for inclusion. Any of these offices may then be involved in the maintenance of GIS/LIS data. The responsibilities of each are defined by the laws of Ohio. In the interest of clear communications excerpts from the specific sections of Ohio Revised Code (ORC) and Ohio Administrative Code (OAC) referenced are quoted in Appendix A. This inclusion is also intended to provide a point in time contextual reference. The ORC and OAC are subject to constant change. You are encouraged to refer to the current versions of the Ohio Revised Code and Ohio Administrative Code as well as Appendix A.

County Auditor

The county auditor is required by [section 319.20](#) to transfer real property ownership on tax listings and determines tax value of property transferred. The auditor determines the tax sums to be levied upon each tract and on public utility property, [section 319.30](#). The auditor also establishes, in conjunction with the county engineer, the real property transfer standards for the county and reviews property descriptions for compliance with these standards, [section 319.203](#).

When a tract is split or a new description for an existing tract is presented, if the adopted real property transfer standards include the provisions of [section 315.251](#), the county auditor relies on the county engineer's opinion of compliance with [OAC 4733-37](#) in determining sufficiency for transfer. The Auditor also must, in compliance with [section 5301.25](#) “. . . require that the name of the person who made the survey appear in the deed.” The real property tax listings and documents for property appraisals, maintained by the county auditor, include the county tax maps.

County Engineer

The county engineer must be registered as both a Professional Engineer and Professional Surveyor in Ohio to hold the office, [section 325.02](#). Perform all the duties, authorized or declared by law, of either profession, [section 315.08](#) for “. . . any board within and for the county.” In dealing with specific instances affecting real estate, under [section 315.23](#) the county engineer has the same powers as a judge in taking and certifying statements that may be used as evidence.

If so directed by the county commissioners [section 315.24](#) empowers the county engineer to acquire and maintain certified copies of the original surveys within the county. This section also declares certified copies of these records to be admissible in evidence as if they were the original records. The original surveys in Ohio began in 1786 and all current real property titles are based on these original surveys. The original records of these surveys are historic documents not readily accessible to the public. [Section 315.25](#) requires that the engineer to maintain records of all county surveys as well as, if directed by the county commissioners, surveys made by other surveyors.

If the adopted county real property transfer standards include the provisions of [section 315.251](#) the county engineer is also required to provide an opinion, to the county auditor, on the compliance of submitted survey plats and descriptions with [OAC 4733-37](#). Additionally [section 315.251](#) requires a copy of approved survey plats be “. . . filed in the county engineer's survey file for public inspection.” It should be noted that OAC 4733-37 is the minimum standard for boundary surveys established by the board of registration for professional engineers and surveyors. The actions of any county engineer, including adoption of a less stringent local boundary requirement, are subject to review by the state board of registration responsible for granting the county engineer's professional licenses.

Unless otherwise ordered by the board of county commissioners the county engineer is required by [section 315.27](#) to maintain complete indexes of all records of the county engineer. The county engineer is also required by [section 325.15](#) to be the county tax map draftsman.

County Recorder

The county recorder is required, by [section 317.08](#), to maintain the equivalent of six separate sets of records. Five of these record sets commonly deal with real property rights. [Section 317.081](#) requires the recorder to maintain copies of all county and township zoning resolutions in both text and map formats. The county recorder must also notify the boards of county commissioners and township trustees annually of the duty to file zoning changes and amendments.

The county recorder must also maintain, as required by [section 317.201](#), a “Notice Index” of claims to rights in real property “. . . recording in conformity with sections 5301.51, 5301.52, and 5301.56 of the Revised Code.” The claims addressed by the recording of such documents may be in conflict with the deed records or be reassertions of such rights in title as previously severed mineral rights. [Section 5301.252](#) requires the recording of affidavits stating facts relating to the matters “. . . that may affect the title to real estate in this state . . .” and specifically includes “In an affidavit of a registered surveyor, facts reconciling conflicts and ambiguities in descriptions of land in recorded instruments.”

County, City or Township Zoning Board

The Ohio Revised Code authorizes the establishment of land use planning or zoning boards for counties in [section 303.04](#), for townships in [section 519.04](#) and for cities (municipal corporations) in [section 713.06](#). Most actions of such planning or zoning boards are based on individual real property parcels. The records, of real property ownership and interests, maintained by the county auditor, county engineer and county recorder provide the basic frame of reference for many zoning action requests.

These records are used in conjunction with additional documentation prepared by surveyors, engineers, architects and other consulting professions. Decisions made by these boards have both immediate and lasting effects on the values of real property and the right to use property for specific purposes. The decisions of these boards are frequently appealed. Appeals may be carried through local procedures and into the court system. Once in the court system the sufficiency of any document, for the purpose of decision making, is open to examination.

Professional Surveyors

Definition of the practice of surveying is included in Ohio Revised Code [section 4733.01](#) and amplified in Ohio Administrative Code section [4733-37-01](#) the wording of these definitions is inclusive rather than exclusionary. Allowing the application of the knowledge and skills required for registration as a professional surveyor to be applied in situations that the legislators and rule makers could not predict.

Surveyors are gatherers, documenters and describers of many types of information, including real property data. When real property is involved the data must be gathered and documented in compliance with minimum standards, OAC [section 4733-37](#), established by the board of registration. Included are requirements for research, measurement, monumentation, description and plats. The standard for research requires reference to other documents if the current deeds are in conflict. The standard for plats, section 4733-37-05, includes the requirement for “A general notation describing the evidence of occupation that may be found along every boundary line and/or occupation

line.” These standards require documentation of existing conditions. The plat and description resulting must include existing overlaps and gaps that cannot be resolved without legal action. Occupation of property that does not agree with the legal titles must also be documented. Local standards may be established that are more restrictive.

Should local standards require boundary surveys to reference control monuments based on the Ohio Co-ordinate System, ORC [Chapter 157](#) establishes minimum standards. These minimums apply to both the control monuments and the boundaries referenced to them. The minimums within [section 157.07](#) establish a boundary corner tolerance in relationship to the control monuments and accuracy of the control monuments. Local standards, not in conflict, may be more restrictive. [Section 157.04](#) declares plane co-ordinates are acceptable “. . . in the absence of original physical monuments or other acceptable controlling evidence . . .” for the reestablishment of boundary corners. Co-ordinates established and recorded in a deed in compliance with these statutes have legal status that enhances the usability of GIS/LIS records. Surveyor licensing exams prepared by Ohio and NCEES have, to my knowledge, included the proper application of these requirements for over twenty years. Seminars including these procedures have been presented with some regularity by PLSO in convention seminars and annually in license review courses for many years.

Historic Methods of Compliance

Tax maps in most Ohio counties have been manually drafted from deeds for many years. The scale, and consequently the accuracy of the manually drafted tax maps varied widely. Scales as small as one inch equal to six hundred sixty feet were common for rural areas. Tax maps of villages and town lots have been drawn at one inch equal to two hundred feet. When these scales are employed, a minor drafting error is equivalent to many feet. This has been common knowledge among those working with real property documents. Consequently tax maps are regarded as an approximation of limited usefulness. Additionally old descriptions, often dating from the early 1800s and approaching 200 years old, are accepted for current real property transfers. Many old descriptions are excellent and will continue to be used. Others are of poor quality conflicting not only with adjoining descriptions but within themselves. Surveying license requirements did not exist when these surveys and descriptions were prepared. Licensing of surveyors and engineers in Ohio began about seventy years ago.

The Ohio Revised Code has long charged the county auditor with requiring presentation of survey documents for new parcels or new descriptions of existing parcels. However, until 1981 the name of the individual making the survey was not required in the deed. Consequently anyone could, and with some frequency did, prepare descriptions for inclusion in deeds. These descriptions may have been prepared without benefit of survey measurements. Such descriptions may appear mathematically correct and pass the cursory checks, for mathematic closure, that have been commonly applied. These checks do not readily detect conflicts with adjoining parcels or improper location of new division lines in relation to existing structures. The previously mentioned standards, governing description and mapping, for boundary surveys were adopted in 1980. The combined effect is the existence of many conflicts between record title documents.

The advent of Geographic and Land Information Systems required the conversion from manually drafted tax maps to digital media. Numerous methods have been used to accomplish this conversion. Scanning or digitizing of existing maps has been common and these are efficient methods of maintaining the existing level of service during a conversion process that may last many years. These are valid methods to speed implementation of a GIS project. The resulting property boundary information retains the inaccuracies of the manually produced graphics and may include additional human errors inherent in the conversion process. As the digital images are compared and checked conflicts are normally eliminated to produce the clean appearance of a carefully drafted tax map. Removal of these conflicts without reference to the chain of title in addition to the current deeds of all parcels involved may produce further distortion of reality.

Apparent and Real Accuracy of GIS Data

Figure 1 is an example of a gap in property ownership. This gap resulted from an estate settlement, dividing a revolutionary war land grant, prior to the civil war. The tract shaded yellow was not conveyed to any of the heirs at that time. Subsequent transfers and surveys honored the lines created by the court. This 0.43 acre tract⁸ did not appear in tax maps, property records or the county GIS cadastral layer. Nor was there any indication of a disagreement of the adjoining descriptions or gap indicated in any of the then current public records.

The cadastral layer of this GIS was initially established through a combination of manual drafting from existing title documents and digitizing. Subsequent updates have been made as new surveys tied to county monuments are submitted. The county engineer publishes a listing of county monuments with Ohio plane co-ordinates. Existence of the tract was discovered through field surveys to acquire property for construction of a public project. The other shaded areas represent commercial buildings in a light industrial area of a major city. This gap was resolved because the property was required for public use. Had this been the survey of an adjoining tract, and shown the gap, the resolution of the problem is less certain.



Figure 1 An example of a gap in property ownership not detected during the original compilation of the GIS cadastral layer.

Given that during conversion errors may be carried through from previously existing documents. Once normal operation and maintenance begin, land information systems are not manually drafted maps. Competent use of these systems can accurately document the true conditions. How can land information systems be used as true multipurpose tools if they do not document areas needing attention in the most basic type of land ownership information? How can they be relied on for land use decisions if existing, documented

ownership conflicts and gaps are not shown?

Ohio laws require the tax map be based on survey documents. Conflicts in record documents may be detected during the creation and maintenance of a GIS/LIS cadastral layer. Conflicts in record documents are required to be shown on survey plats submitted to the county engineer for review. The county engineer, required to be the tax map draftsman, is a licensed surveyor. The cadastral layer may reasonably be considered a composite plat of survey. Is the county engineer exempt from compliance with state minimum standards while preparing such a composite plat? If indeed the county engineer must show documented conflicts how should this be done?

Solutions Available Through GIS

The development of survey control densification programs is becoming more common as counties in Ohio increase their GIS/LIS efforts. A draft proposal for a state wide densification program has been presented to the Ohio Geographically Referenced Information Program (OGRIP) Council. I would suggest that Professional Land Surveyors of Ohio (PLSO) and the County Engineers Association of Ohio (CEAO) review the draft proposal, offer comments and support the effort. The availability of this control is basic to the development of accurate the cadastral information required to address any other concerns.

The minimum standards for boundary surveys were developed over twenty years ago. These standards do not address the documentation required to establish Ohio plane co-ordinates for property boundary corners. OGRIP working in conjunction with, the County Auditors' Association of Ohio (CAAO), CEAO and PLSO could develop a model Ohio plane co-ordinate survey documentation standard for boundary surveys as a part of the ongoing OGRIP GIS guide book effort. This model should be compatible with the existing minimum standards for boundary surveys.

Such a document would be useful to counties working to adopt local standards for a truly co-ordinate based cadastral layer. In addition to the requirements for documentation of plane co-ordinate corners in [section 157.04](#) consideration should be given to requiring additional data. First, whether the survey was made by conventional or Global Positioning System methods. Second, a statement of the raw accuracy of the survey and the mathematic method employed to distribute random error.

The previously mentioned FGDC cadastral collection standard may suggest a model to satisfy many of the property boundary requirements. Within the described process there is a point when all the record data conflicts are defined and evaluated. Preserving this information as well as the probable solution is of value. Multiple layers containing cadastral information could be created. The primary cadastral layer would appear much the same as in most current GIS applications. This layer would show lines not in dispute and the probable solution if a conflict is detected. An additional layer could show the extent of apparent conflicts. The information could be used as documentation of the need for new surveys or investigation of chain of title to determine junior/senior rights. The apparent conflict layer may also be linked to the county recorder "Notice Index" if that index is maintained as a data base. Such a link needs only to show that a record has

been filed which may affect the parcel.

Additional efforts by Ohio Geographically Referenced Information Program working in conjunction with the County Engineers Association of Ohio, the County Auditors' Association of Ohio and the Professional Land Surveyors of Ohio can build the consensus needed to smooth the transition from tax maps to truly multipurpose systems for geographic and land information.

In closing I believe Ohio has in place the legal basis for a County Auditor's GIS cadastral layer to be considered authoritative. Consensus needs to be reached regarding methods to document and resolve boundary conflicts. Cadastral layers maintained by registered professional surveyors, using existing survey and co-ordinate documentation standards discussed will, over a period of many years result in improved usability for Ohio public GIS systems.

Appendix A, Proposed or Existing Laws and Rules

August 1999 NCEES Model Law definition of the Practice of Surveying⁹

Practice of Surveying or Land Surveying - The term "Practice of Surveying or Land Surveying," within the intent of this Act shall mean providing professional services such as consultation, investigation, testimony evaluation, expert technical testimony, planning, mapping, assembling, and interpreting reliable scientific measurements and information relative to the location, size, shape, or physical features of the earth, improvements on the earth, the space above the earth, or any part of the earth, and utilization and development of these facts and interpretation into an orderly survey map, plan, report, description, or project. The practice of surveying or land surveying includes, but is not limited to, any one or more of the following:

- (a) Determining the configuration or contour of the earth's surface or the position of fixed objects thereon by measuring lines and angles and applying the principles of mathematics or photogrammetry.
- (b) Performing geodetic surveying which includes surveying for determination of the size and shape of the earth utilizing angular and linear measurements through spatially oriented spherical geometry.
- (c) Determining, by the use of principles of surveying, the position for any survey control (non-boundary) monument or reference point; or setting, resetting, or replacing any such monument or reference point.
- (d) Creating, preparing, or modifying electronic or computerized data, including land information systems, and geographic information systems, relative to the performance of the activities in the above described items (a) through (c).
- (e) Locating, relocating, establishing, reestablishing, laying out, or retracing any property line or boundary of any tract of land or any road, right of way, easement, alignment, or elevation of any of the fixed works embraced within the practice of engineering.
- (f) Making any survey for the subdivision of any tract of land.
- (g) Determining, by the use of principles of land surveying, the position for any survey monument or reference point; or setting, resetting, or replacing any such monument or reference point.
- (h) Creating, preparing, or modifying electronic or computerized data, including land information systems, and geographic information systems, relative to the performance of the activities in the above described items (e) through (g).

Any person shall be construed to practice or offer to practice surveying or land surveying, within the meaning and intent of this Act, who engages in surveying or land surveying or who by verbal claim, sign, advertisement, letterhead, card, or in any other way represents themselves to be a professional surveyor or land surveyor or, through the use of some other title implies that they are able to perform, or who does perform any surveying or land surveying service or work or any other service designated by the practitioner which is recognized as surveying or land surveying.

The Ohio Revised Code Definitions¹⁰

Chapter 4733: Professional Engineers And Professional Surveyors

Section 4733.01, General Assembly: 119. Bill Number: Sub. House Bill 482, Effective Date: 7-1-93

As used in this chapter:

(A) "Professional engineer" means a person registered as a professional engineer under this chapter. . . .

(D) "The practice of engineering" includes any professional service, such as consultation, investigation, evaluation, planning, design, or inspection of construction or operation, for the purpose of assuring compliance with drawings or specifications in connection with any public or privately owned public utilities, structures, buildings, machines, equipment, processes, works, or projects in the proper rendering of which the qualifications of section 4733.11 of the Revised Code are required to protect the public welfare or to safeguard life, health, or property.

(E) "Professional surveyor" means a person who engages in the practice of that branch of engineering commonly known as surveying and who is registered as a professional surveyor under this chapter.

(F) "Practice of surveying" means that branch of engineering which includes any professional service which requires the application of special knowledge of the principles of mathematics, the related physical and applied sciences, and the relevant requirements of law for the adequate performance of the art of surveying, including, but not limited to, measuring the area of any portion of the earth's surface, the lengths and directions of the bounding lines, and the contour of the surface, for their correct determination and description and for conveyancing for recording, or for the establishment or re-establishment of land boundaries and the platting of lands and subdivisions; and like measurements and operations involved in the surveying of mines, commonly known as "mine surveying."

Ohio Administrative Code Definition

4733-31-01 Land surveying defined¹¹.

Text of Rule

(A) Land Surveying shall mean any Professional Service performed for the purpose of determining land areas, the monumenting of property boundaries, the platting and layout of lands and sub-divisions thereof, including the topography, the alignment and the preliminary grades of streets, the preparation of: maps, record plats, field note records and property descriptions representing such surveys.

(B) The adequate performance of such work involves the application of special knowledge of the principles of mathematics, the related physical and applied sciences and the relevant requirements of law for adequate evidence to the act of measuring, and locating lines, angles, elevations, natural and man-made features in the air, on the surface of the earth, within underground workings, and on the beds of bodies of water. Chapter 4733-33 Examination for Land Surveyors

HISTORY: (former ES-23); Eff 10-15-70, Rule promulgated under: RC 119., Rule authorized by: RC 4733.

Responsibilities, Ohio Revised Code

County Auditor

Section 319.20, General Assembly: 121, Bill Number: Amended Sub. S.B. 158, Effective Date: 05/08/96

After complying with sections 319.202, 315.251, and 319.203 of the Revised Code, and on application and presentation of title, with the affidavits required by law, or the proper order of a court, bearing the last known address of the grantee, or of any one of the grantees named in the title, and a reference to the volume and page of the recording of the next preceding recorded instrument by or through which the grantor claims title, the county auditor shall transfer any land or town lot or part thereof, minerals therein, or mineral rights thereto, charged with taxes on the tax list, from the name in which it stands into the name of the owner, when rendered necessary by a conveyance, partition, devise, descent, or otherwise. If by reason of the conveyance or otherwise, a part only of a tract or lot, minerals therein, or mineral rights thereto, as charged in the tax list, is to be transferred, the auditor shall determine the tax value of the part of a tract or lot of real estate, minerals therein, or mineral rights thereto, so transferred, and the value of the remaining part compared with the value of the whole. . . .

Section 319.203, General Assembly: 121, Bill Number: Amended Sub. S.B. 287, Effective Date: 03/13/97

Subject to division (B) of section 315.251 of the Revised Code, the county auditor and the county engineer of each county, by written agreement, shall adopt standards governing conveyances of real property in the county. These standards may include the requirements specified in section 315.251 of the Revised Code. The county auditor and county engineer may modify those standards from time to time as they consider necessary or desirable. The standards shall be adopted or modified only after the county

auditor and county engineer have held two public hearings, not less than ten days apart, concerning adoption or modification of the standards. The standards shall be available for public inspection during normal business hours at the offices of the county auditor and county engineer.

Before the county auditor transfers any conveyance of real property presented to the auditor under section 319.20 or 315.251 of the Revised Code, the county auditor shall review the conveyance to determine whether it complies with the standards adopted under this section. The county auditor shall not transfer any conveyance that does not comply with those standards. . . .

Section 319.30, General Assembly: 120. Bill Number: Sub. House Bill 404, Effective Date: 5-25-94

(A) After receiving from officers and authorities empowered to determine the rates or amounts of taxes to be levied for the various purposes authorized by law, statements of the rates and sums to be levied for the current year, the county auditor shall proceed to determine the sums to be levied upon each tract and lot of real property, adding, except as provided under section 319.48 of the Revised Code for tracts and lots on the real property tax suspension list, the taxes of any previous year that have been omitted or that are delinquent, including the penalties and interest thereon, and upon the amount of public utility property listed on the general tax list and duplicate in the county, in the name of each public utility, which shall be assessed equally on all property subject to such taxes, and entered in one or more columns, in such manner and form as the tax commissioner prescribes. . . .

Section 5301.25, General Assembly: 122. Bill Number: Amended Sub. House Bill 371, Effective Date: 02/25/98

(A) All deeds, land contracts referred to in division (B)(2) of section 317.08 of the Revised Code, and instruments of writing properly executed for the conveyance or encumbrance of lands, tenements, or hereditaments, other than as provided in division

(C) of this section and section 5301.23 of the Revised Code, shall be recorded in the office of the county recorder of the county in which the premises are situated, and until so recorded or filed for record, they are fraudulent, so far as relates to a subsequent bona fide purchaser having, at the time of purchase, no knowledge of the existence of such former deed or land contract or instrument.

(B) Whenever a survey is made of lands which are being conveyed, the county auditor shall require that the name of the person who made the survey appear in the deed. Such name shall either be printed, typewritten, stamped, or signed in a legible manner. An instrument is in compliance with this section if it contains a statement in the following form:

"A survey of this property was made by " (Name)

This division does not apply to any court decree, order, judgment, or writ, nor to any

instrument executed or acknowledged outside of this state, or executed within this state prior to September 20, 1965. . . .

County Engineer

Section 315.02, General Assembly: 114. Bill Number: Amended Sub. S.B. 114, Effective Date: 10/27/81

No person holding the office of clerk of the court of common pleas, sheriff, county treasurer, or county recorder is eligible to hold the office of county engineer. No person is eligible in any county as a candidate for such office or shall be elected or appointed thereto unless he is a registered professional engineer and a registered surveyor, licensed to practice in this state.

Section 315.08, General Assembly: 119. Bill Number: Amended Sub. House Bill 201, Effective Date: 06/30/91

The county engineer shall perform for the county all duties authorized or declared by law to be done by a registered professional engineer or registered surveyor, except those duties described in Chapters 343., 6103., and 6117. of the Revised Code. He shall prepare all plans, specifications, details, estimates of cost, and submit forms of contracts for the construction, maintenance, and repair of all bridges, culverts, roads, drains, ditches, roads on county fairgrounds, and other public improvements, except buildings, constructed under the authority of any board within and for the county. . . .

Section 315.23, General Assembly: 107. Bill Number: House Bill 2, Effective Date: 2-14-67

The county engineer shall have the same power as judges of county courts to take and certify the acknowledgments of deeds, mortgages, powers of attorney, and other instruments affecting real estate, to administer oaths, and to take and certify affidavits and depositions.

Section 315.24, General Assembly: 100. Bill Number: House Bill 1, Effective Date: 10/01/53

When so directed by the board of county commissioners, the county engineer shall procure from any office in this state where it may be procured, a certified plat, together with the field notes of the corners and bearing trees to each section, quarter section, lot, or original survey in his county, and cause it to be preserved in a book provided by him for that purpose, which book shall be deposited in the office of the engineer for the use of the landholders in such county. A certified copy from such book by the engineer shall be received as prima-facie evidence in all cases in which the original would be received.

The expenses incurred by reason of this section shall be paid from the county treasury on the warrant of the county auditor.

Section 315.25, General Assembly: 100. Bill Number: House Bill 1, Effective Date: 10/01/53

The county engineer shall make and keep, in a book provided for that purpose, an accurate record of all surveys made by him or his deputies for the purpose of locating any land or road lines, or fixing any corner or monument by which it may be determined, whether official or otherwise. Such surveys shall include corners, distances, azimuths, angles, calculations, plats, and a description of the monuments set up, with such references thereto as will aid in finding the names of the parties for whom the surveys are made, and the date of making such surveys. Such book shall be kept as a public record by the engineer at his office, and it shall be at all proper times open to inspection and examination by all persons interested therein. Any other surveys made in the county by competent surveyors, certified by such surveyor to be correct and deemed worthy of preservation, may, by order of the board of county commissioners, be recorded by the engineer.

Section 315.251, General Assembly: 121. Bill Number: Amended Sub. S.B. 287, Effective Date: 3/13/97, Bill Number: Amended Sub. S.B. 262. Effective Date: 3/18/97

*(A) If a deed conveying title to real property is presented to the county auditor for transfer, and the deed contains a legal description for land that is a cut-up or split of the grantor's one or more existing parcels of land as shown in the county auditor's records, or if the legal description of the land conveyed in the deed is different from the legal description shown in the prior deed to the grantor, a boundary survey plat in conformity with the new description shall be submitted with the deed. The survey plat and description shall satisfy the minimum standards for boundary surveys promulgated by the board of registration for professional engineers and surveyors pursuant to Chapter 4733. of the Revised Code. If, in the opinion of the county engineer, the survey plat and description satisfy those standards, the county auditor shall accept the deed for transfer and a copy of the survey plat shall be filed in the county engineer's survey file for public inspection. This section applies only if the requirements of this section are included in the standards governing conveyances of real property in the county adopted under section 319.203 [319.20.3] of the Revised Code.

(B) Beginning on the effective date of this amendment, in the counties where the county engineer elects to engage in the private practice of engineering or surveying under division (B) of section 325.14 of the Revised Code the county auditor of that county shall designate another engineer who is registered under Chapter 4733. of the Revised Code and who is employed in the same county engineer's office to perform the duty of the county engineer under division (A) of this section or to exercise or perform any authority or duty of the county engineer under section 319.203 [319.20.3] of the Revised Code if the county engineer reasonably believes that the performance of that duty or exercise of that authority by the county engineer would constitute a violation of Chapter 102. of the Revised Code or any other similar civil or criminal statute. . . .

Section 315.251 and 319.203 of the Revised Code are amended by this act [Am. Sub. S.B. 262] and also by Am. Sub. S.B. 287 of the 121st General Assembly. Comparison of these amendments in pursuance of section 1.52 of the Revised Code discloses that they

are not irreconcilable so that they are required by that section to be harmonized to give effect to each amendment.

HISTORY ¹² : 146 v S 158 (Eff 5-8-96); 146 v S 287 (Eff 3-13-97); 146 v S 262. Eff 3-18-97. * The division (A) in SB 287 (146 v --) is deleted by SB 262 (146 v --). The division (A) presented here is the material enacted by SB 262 (146 v --).

Section 315.27, General Assembly: 100. Bill Number: House Bill 1, Effective Date: 10/01/53

Unless otherwise ordered by the board of county commissioners, the county engineer shall make and keep up, in a manner convenient for reference, complete indexes to all the records in his office, alphabetically arranged by townships. Such indexes shall contain in their several columns the number or name of the original survey, section, tract, or lot in which such survey is located, the date of the execution thereof, the name of the surveyor making it, and the name of the party for whom the survey was made. The board may at any time during the progress of the work provided for in this section discontinue such work.

Section 325.15, General Assembly: 121, Bill Number: Amended. Sub. House Bill 408, Effective Date: 05/08/96

(A) Each county engineer shall be classified, for salary purposes, according to the population of the county.

Except as provided in division (B) of this section, all such county engineers shall receive annual compensation in accordance with the following schedule:

CLASSIFICATION AND COMPENSATION SCHEDULE . . .

Such salary may be paid monthly out of the general county fund or out of the county's share of the fund derived from the receipts from motor vehicle licenses, as distributed by section 4501.04 of the Revised Code and the county's share of the fund derived from the motor vehicle fuel tax, as distributed by section 5735.27 of the Revised Code as the board of county commissioners directs, upon the warrant of the county auditor and shall be in lieu of all fees, costs, per diem or other allowances, and all other perquisites, of whatever kind, which any engineer collects and receives. The engineer shall be the county tax map draftperson, but shall receive no additional compensation for performing the duties of such position. . . .

County Recorder

Section 317.08, General Assembly: 122. Bill Number: Amended Sub. S.B. 223, Effective Date: 04/05/99

Except as provided in division (F) of this section, the county recorder shall keep six separate sets of records as follows:

(A) A record of deeds, in which shall be recorded all deeds and other instruments of writing for the absolute and unconditional sale or conveyance of lands, tenements, and hereditaments . . .

(B) A record of mortgages, in which shall be recorded all of the following:

(1) All mortgages . . .

(2) All executory installment contracts for the sale of land . . .

(3) All options to purchase real estate . . .

(4) Any tax certificate sold under section 5721.33 of the Revised Code . . .

(C) A record of powers of attorney, including all memoranda of trust, as described in division (A) of section 5301.255 of the Revised Code, that do not describe specific real property;

(D) A record of plats, in which shall be recorded all plats and maps of town lots, of the subdivision of town lots, and of other divisions or surveys of lands, any center line survey of a highway located within the county, the plat of which shall be furnished by the director of transportation or county engineer, and all drawings as provided for in Chapter 5311. of the Revised Code;

(E) A record of leases . . .

(F) A record of declarations executed pursuant to section 2133.02 of the Revised Code and durable powers of attorney for health care . . .

Section 317.081, General Assembly: 119. Bill Number: Amended Sub. S.B. 20, Effective Date: 01/01/92

The county recorder shall keep county and township zoning resolutions, including text and maps, and amendments to them, in his office and make all these documents available for public inspection during normal business hours. By the fifteenth day of January each year, the county recorder shall notify the board of county commissioners and the board of township trustees of each township within the county of that board's duty under section 303.11, 303.12, 519.11, or 519.12 of the Revised Code to file zoning resolutions and amendments in the office of the county recorder. The fee provided in section 317.32 of the Revised Code shall be charged for each resolution and amendment filed in the office of the county recorder.

Section 317.201, General Assembly: 117. Bill Number: Sub. S.B. 223, Effective Date: 3-22-89

The county recorder shall maintain a book to be known as the "Notice Index." Separate

pages of the book shall be headed by the original survey sections or surveys, or parts of a section or survey, squares, subdivisions, or the permanent parcel numbers provided for under section 319.28 of the Revised Code, or lots. In this book, there shall be entered the notices for preservation of claims presented for recording in conformity with sections 5301.51, 5301.52, and 5301.56 of the Revised Code. In designated columns, there shall be entered on the left-hand page:

- (A) The name of each claimant;
- (B) Next to the right, the name of each owner of title;
- (C) The deed book number and page where the instrument containing the claim has been recorded;
- (D) The type of claim asserted.

On the opposite page on the corresponding line, a pertinent description of the property affected as appears in such notice shall be entered.

Section 5301.252, General Assembly: 121. Bill Number: Amended Sub. S.B. 262, Effective Date: 03/18/97

(A) An affidavit stating facts relating to the matters set forth under division (B) of this section that may affect the title to real estate in this state, made by any person having knowledge of the facts or competent to testify concerning them in open court, may be recorded in the office of the county recorder in the county in which the real estate is situated. When so recorded, such affidavit, or a certified copy, shall be evidence of the facts stated, insofar as such facts affect title to real estate.

(B) The affidavits provided for under this section may relate to the following matters:

(1) Age, sex, birth, death, capacity, relationship, family history, heirship, names, identity of parties, marriage, residence, or service in the armed forces;

(2) Possession;

(3) The happening of any condition or event that may create or terminate an estate or interest;

(4) The existence and location of monuments and physical boundaries, such as fences, streams, roads, and rights of way;

(5) In an affidavit of a registered surveyor, facts reconciling conflicts and ambiguities in descriptions of land in recorded instruments.

(C) The county recorder for the county where such affidavit is offered for record shall receive and cause the affidavit to be recorded as deeds are recorded, and collect the same fees for recording such affidavit as for recording deeds.

(D) Every affidavit provided for under this section shall include a description of the land, title to which may be affected by facts stated in such affidavit, and a reference to an instrument of record containing such description, and shall state the name of the person appearing by the record to be the owner of such land at the time of the recording of the affidavit. The recorder shall index the affidavit in the name of such record owner.

County, Township or City Planning and Zoning

Section 303.04, General Assembly: 122. Bill Number: Amended Sub. House Bill 388, Effective Date: 07/22/98

The board of county commissioners of any county proceeding under sections 303.01 to 303.25 of the Revised Code, shall create and establish a county rural zoning commission.
...

Section 519.04, General Assembly: 122. Bill Number: Amended Sub. House Bill 388, Effective Date: 07/22/98

The board of township trustees of any township proceeding under sections 519.01 to 519.99 of the Revised Code, shall create and establish a township zoning commission. . . .

Section 713.06, General Assembly: 100. Bill Number: House Bill 1, Effective Date: 10-1-53

The planning commission of any municipal corporation may frame and adopt a plan for dividing the municipal corporation or any portion thereof into zones or districts, representing the recommendations of the commission, in the interest of the public health, safety, convenience, comfort, prosperity, or general welfare . . .

Ohio Co-ordinate System

Section 157.01, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10-1-85

The systems of plane rectangular co-ordinates which have been established by the United States department of commerce for defining and stating the positions or locations of points on the surface of the earth within the state shall be known as the Ohio co-ordinate system of 1927 and the Ohio co-ordinate system of 1983. This chapter applies only to the Ohio co-ordinate system of 1927 and the Ohio co-ordinate system of 1983 and to the use of these systems. . . .

Section 157.02, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10-1-85

As established for use in the north zone, the Ohio co-ordinate system of 1927 or the Ohio co-ordinate system of 1983 shall be named, and in any land description in which it is used

it shall be designated, the Ohio co-ordinate system of 1927, north zone, or the Ohio co-ordinate system of 1983, north zone.

As established for use in the south zone, the Ohio co-ordinate system of 1927 or the Ohio co-ordinate system of 1983 shall be named, and in any land description in which it is used it shall be designated, the Ohio co-ordinate system of 1927, south zone, or the Ohio co-ordinate system of 1983, south zone.

Section 157.03, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10-1-85

The plane co-ordinates of a point on the earth's surface, to be used in expressing the position or location of such point in the appropriate zone of the systems specified in section 157.01 of the Revised Code, shall consist of two distances, expressed in United States survey feet and decimals of a United States survey foot when using the Ohio co-ordinate system of 1927, and expressed in metres and decimals of a metre when using the Ohio co-ordinate system of 1983. One of these distances, known as the "x co-ordinate," shall give the position in an east and west direction; the other, known as the "y co-ordinate," shall give the position in a north and south direction. These co-ordinates shall be made to depend upon and conform to plane rectangular co-ordinate values for the monumented points of the North American horizontal geodetic control network as published by the United States department of commerce and whose plane co-ordinates have been computed on the systems defined in this chapter. Any such station may be used for establishing a survey connection to either Ohio co-ordinate system.

Section 157.04, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10-1-85

Plane co-ordinates, used to reference and describe land boundary corners and made a part of the recorded description of such corners, shall be considered adequate evidence of the location of such corners in the absence of original physical monuments or other acceptable controlling evidence of original corner locations. In all instances where reference has been made to such co-ordinates in land surveys, the scale, sea level, and grid factors must also be stated for the survey lines used in computing ground distances and areas.

Nothing in this chapter shall be construed to require a purchaser or mortgagee of real property to rely wholly on a land description, any part of which depends exclusively upon either Ohio co-ordinate system.

Section 157.05, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10/1/85

When any tract of land extends from one zone into the other the co-ordinate zones established by section 157.01 of the Revised Code, the positions of all points on its boundaries may be referenced to either of the two zones.

Section 157.06, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective

Date: 10-1-53

(A) As defined by the United States department of commerce:

(1) The "Ohio co-ordinate system of 1927, north zone" is a Lambert conformal conic projection of the Clarke spheroid of 1866, having standard parallels at north latitudes of $40^{\circ} 26'$ and $41^{\circ} 42'$ along which parallels the scale shall be exact; the origin of co-ordinates is at the intersection of the meridian $82^{\circ} 30'$ west of Greenwich and the parallel $39^{\circ} 40'$ north latitude. This origin is given the co-ordinates: $x = 2,000,000$ feet and $y = 0$ feet.

(2) The "Ohio co-ordinate system of 1927, south zone" is a Lambert conformal conic projection of the Clarke spheroid of 1866, having standard parallels at north latitudes $38^{\circ} 44'$ and $40^{\circ} 02'$ along which parallels the scale shall be exact. The origin of co-ordinates is at the intersection of the meridian $82^{\circ} 30'$ west of Greenwich and the parallel $38^{\circ} 00'$ north latitude. This origin is given the co-ordinates: $x = 2,000,000$ feet and $y = 0$ feet.

(B) As defined by the United States department of commerce:

(1) The "Ohio co-ordinate system of 1983, north zone" is a Lambert conformal conic projection of the North American datum of 1983, having standard parallels at north latitudes $40^{\circ} 26'$ and $41^{\circ} 42'$ along which parallels the scale shall be exact. The origin of co-ordinates is at the intersection of the meridian $82^{\circ} 30'$ west of Greenwich and the parallel $39^{\circ} 40'$ north latitude. This origin is given the co-ordinates: $x = 600,000$ metres and $y = 0$ metres.

(2) The "Ohio co-ordinate system of 1983, south zone" is a Lambert conformal conic projection of the North American datum of 1983, having standard parallels at north latitudes $38^{\circ} 44'$ and $40^{\circ} 02'$, along which parallels the scale shall be exact. The origin of co-ordinates is at the intersection of the meridian $82^{\circ} 30'$ west of Greenwich and the parallel $38^{\circ} 00'$ north latitude. This origin is given the co-ordinates: $x = 600,000$ metres and $y = 0$ metres.

Section 157.07, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10-1-85

Co-ordinates based on either Ohio co-ordinate system and used to describe and locate positions of land boundary corners shall be surveyed and determined within a maximum positional error of plus or minus 0.05 metres, except that it may be less than 0.05 metres if local land survey standards of practice for positional errors so dictate, with respect to the nearest horizontal control station established in conformity with the standards of accuracy and specifications for first and second-order geodetic surveying as prepared and published by the federal geodetic control committee of the United States department of commerce.

Section 157.08, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10-1-85

Extension of co-ordinate control by qualified surveyors for local co-ordinate control densification shall be executed in conformity with standards of accuracy and specifications for first or second-order geodetic surveys as prepared and published by the federal geodetic control committee of the United States department of commerce pursuant to section 157.07 of the Revised Code. Control monumentation for analysis of land boundaries, construction control, engineering design and planning, and photogrammetric survey control for such purposes shall be executed in conformity with the standards of accuracy and specifications for first, second, or third-order geodetic surveys as prepared and published by the federal geodetic control committee in force on the date of such survey.

Section 157.09, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10/1/85

Distances, bearings, and areas computed indirectly from co-ordinates shall be considered acceptable measurement evidence for land and other surveys if such co-ordinates have been determined in accordance with sections 157.04, 157.07, and 157.08 of the Revised Code.

Section 157.10, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10/1/85

Use of the terms "Ohio co-ordinate system of 1927, north zone," or "Ohio co-ordinate system of 1927, south zone," on any map, report of survey or other document shall be limited to co-ordinates based on the "Ohio co-ordinate system of 1927" as defined in this chapter.

Section 157.11, General Assembly: 116. Bill Number: Sub. House Bill 134, Effective Date: 10/1/85

In accordance with sections 157.01 to 157.10 of the Revised Code, the Ohio co-ordinate system of 1927 shall not be used after 1999 and the Ohio co-ordinate system of 1983 shall be used after that date. Nothing in sections 157.01 to 157.10 of the Revised Code shall be construed to require that land descriptions using the Ohio co-ordinate system of 1927 and recorded before January 1, 2000, be conformed to the Ohio co-ordinate system of 1983.

Minimum Standards for Boundary Surveys, Ohio Administrative Code

4733-37-01 Preamble.

Text of Rule

These rules are intended to be the basis for all surveys relating to the establishment or retracement of property boundaries in the state of Ohio. Abridgements of one or more provisions herein shall be clearly indicated on plats and/or legal descriptions and reports.

Where local or other prescribed regulations exist which are more restrictive than these rules, the survey shall conform to all local and state regulatory standards. When a client desires only a portion of his property surveyed, and this portion can be clearly isolated from the remainder of the property without affecting the interests of adjoining owners, these rules shall apply to the survey of only the desired portion.

HISTORY: Eff 5-1-80, Rule promulgated under: RC 119. Rule amplifies: RC 4733.20

4733-37-02 Research and investigation.

Text of Rule

(A) When the deed description of the subject property and the deed descriptions of adjoining properties do not resolve the unique locations of the corners and lines of the property being surveyed, the surveyor shall consult other sources of information in order to assemble the best possible set of written evidence of every corner and line of the property being surveyed. These sources include, but are not limited to: records of previous surveys, deed descriptions of adjacent properties, records of adjacent highways, railroads and public utility lines; also include subdivision plats, tax maps, topographic maps, aerial photographs, and other sources as may be appropriate.

(B) After all necessary written documents have been analyzed, the survey shall be based on a field investigation of the property. The surveyor shall make a thorough search for physical monuments, analyze evidence of occupation and confer with the owner(s) of the property being surveyed. In addition, the surveyor shall, when necessary, confer with the owner(s) of the adjoining property and take statements.

HISTORY: Eff 5-1-80, Rule promulgated under: RC 119. Rule amplifies: RC 4733.20

4733-37-03 Monumentation.

Text of Rule

(A) When necessary in accordance with the accepted surveying practice and legal requirements the surveyor shall set boundary monuments so that, upon completion of the survey, each corner of the property and each referenced control station will be physically monumented.

(B) When it is impossible or impracticable to set a boundary monument on a corner, the surveyor shall set a reference monument, similar in character to the boundary monument and preferably along one of the property lines which intersect at that corner. When such a reference monument is used, it shall be clearly identified as a reference monument on the plat of the property and in any new deed description which may be written for the property. . . .

HISTORY: Eff 5-1-80, Rule promulgated under: RC 119. Rule amplifies: RC 4733.20

4733-37-04 Measurement specifications.

Text of Rule

All measurements shall be made in accord with the following specifications:

(A) The surveyor shall keep his equipment in such repair and adjustment as to conform to the requirements stipulated by the director of agriculture in sections 1327.46 to 1327.99 of the Revised Code. The specifications, tolerances, and regulations published in the "National Bureau of Standards Handbook 44" shall be the specifications, tolerances and regulations for commercial weighing and measuring devices of the state.

(B) Every measurement of distance shall be made either directly or indirectly in such a manner that the linear error in the distance between any two points (not necessarily adjacent points) shall not exceed the reported distance divided by five thousand (allowable linear error = reported distance divided by five thousand) and every angular measurement shall be made in such a manner that the allowable (directional) error, in radians, shall not exceed the allowable linear error divided by the reported distance (allowable (directional) error = allowable linear error divided by reported distance). When the reported distance is less than one hundred feet, the linear error shall not exceed 0.02 feet. The reported distance is the distance established by the survey.

(C) In all new deed descriptions and plats of survey, the lengths and directions of the lines shall be specified so that the mathematical error in closure of the property boundary does not exceed 0.02 feet in latitudes and 0.02 feet in departure.

HISTORY: Eff 5-1-80, Rule promulgated under: RC 119. Rule amplifies: RC 4733.20

4733-37-05 Plat of survey.

Text of Rule

(A) The surveyor shall prepare a scale drawing of every survey in which he retraces previously established property lines or establishes new boundaries.

(B) A copy of this drawing shall be given to the client. When required, another copy shall be filed with the proper agency.

(C) The surveyor shall include the following details:

(1) A title such that the general location of the survey can be identified.

(2) A north arrow with a clear statement as to the basis of the reference direction used.

(3) The control station(s) or line cited in the deed description and the relationship of the property to this control.

(4) A notation at each corner of the property stating that the boundary monument specified in the deed description was found, or that a boundary monument was set. In addition, there shall be a statement describing the material, size, position and condition of

every monument found and/or set.

(5) A general notation describing the evidence of occupation that may be found along every boundary line and/or occupation line.

(6) The length and direction of each line as specified in the deed description of the property or as determined in the actual survey if this differs from what is stated in the deed description by more than the tolerance specified in paragraph (B) of rule 4733-37-04 of the Administrative Code.

(7) A citation of pertinent documents and sources of data used as a basis for carrying out the work.

(8) The written and graphical scale of the drawing.

(9) The date of the survey.

(10) The surveyor's printed name and Ohio registration number, signature and seal (in a form which may clearly reproduce on any copies which may be made of the original drawing).

HISTORY: Eff 5-1-80, Rule promulgated under: RC 119. Rule amplifies: RC 4733.20

4733-37-06 Descriptions.

Text of Rule

(A) When a surveyor is called upon to prepare a new description, either to replace an existing description which is inadequate or to create a new piece of property, said description shall include the following items:

(1) Sufficient caption so that the property can be adequately identified.

(2) A relationship between the property in question and clearly defined control station(s).

(3) The basis of the bearings.

(4) A citation to the public record of the appropriate prior deed(s).

(5) The surveyor's name, Ohio registration number and date of writing and/or survey.

(B) A metes and bounds description shall include, in addition to paragraph (A) of this rule:

(1) A description of the boundary monument used as the initial point of the description.

(2) A series of calls for successive lines bounding the parcel, each of which specifies:

(a) The intent in regards to adjoiners or other existing features.

- (b) The direction of the line relative to the direction of the basis of bearing.
 - (c) The length of the line.
 - (d) A description of the boundary monument (or reference monument) and whether found or set to identify the end of the particular line.
 - (e) Sufficient mathematical data shall be given for each curved line so that the curve can be reproduced without ambiguity.
 - (f) The reported boundary data shall meet the closure requirements of paragraph (C) of rule 4733-37-04 of the Administrative Code.
- (3) The area of the parcel.
- (C) Descriptions other than the metes and bounds form shall include sufficient and adequate legal and technical wording so that the property can be definitely located and defined.
- (D) A statement shall appear indicating that either: the description was made in accordance with a recent survey and the date thereof, or the description was made based on a previous survey, of a certain date, and date of description, or the description was not based on a survey.
- (E) When the surveyor knows a new description is to be used for a fee transfer, the surveyor shall base the description on a current or updated survey of the property.

HISTORY: Eff 5-1-80, Rule promulgated under: RC 119. Rule amplifies: RC 4733.20

4733-37-07 Subdivision plats.

Text of Rule

When a subdivision is created from a piece of property, or several adjoining pieces, the surveyor shall prepare a scale drawing showing all of the details specified in rule 4733-37-05 of the Administrative Code. In addition, the drawing will show all of the details of each new lot, street, easement, etc., including the length and direction of each new line. Sufficient mathematical data shall be given for each curved line so that the curve can be reproduced without ambiguity. Chapter 4733-38 Standards For Mortgage Location Surveys

HISTORY: Eff 5-1-80, Rule promulgated under: RC 119. Rule amplifies: RC 4733.20

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