



Enforcement of Minimum Survey Standards

Presented By:

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John Greenhalge, Executive Director, State Board of Registration



Enforcement of Minimum Survey Standards

In the Ohio Revised Code, Section 315.251:

“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 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.”



Enforcement of Minimum Survey Standards

*“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 the transfer and a copy of the survey plat shall be filed in the county engineer’s survey file for public inspection.”*

O.R.C. 315.251

A logo in the top left corner featuring a surveying instrument, possibly a theodolite or level, with a circular seal around it containing the words "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

- ✓ First and foremost, this is a discussion of what is contained in the “*Minimum Standards for Boundary Surveys*”, we are not discussing the additional requirements placed upon the surveying community by County Conveyance Standards.



Enforcement of Minimum Survey Standards

- ✓ We will begin by looking at Ohio
Administrative Code Chapter 4733-37
 - Did you know, the most recent version was effective 11/01/2003. This should supersede all previous versions.

A logo in the top-left corner of the slide, partially overlapping the dark blue background. It features a circular emblem with a red border containing the words "COURT" at the top and "YEAR" at the bottom. The center of the emblem is white with a red design. The logo is set against a grey, textured background that resembles a surveying instrument or a map.

Enforcement of Minimum Survey Standards

O.A.C. 4733-37 is comprised of 7 sections:

- (01) Preamble
- (02) Research and Investigations
- (03) Monumentation
- (04) Measurement Specifications
- (05) Plat of Survey
- (06) Descriptions
- (07) Subdivision Plats

A logo on the left side of the slide, partially obscured by a blue horizontal bar. It features a surveying instrument, possibly a theodolite or level, with a circular seal around it. The seal contains the text 'COURT' at the top and 'YEAR' at the bottom, with a central emblem. The background of the logo is a textured, light-colored surface.

Enforcement of Minimum Survey Standards

▼ O.A.C. 4733-37-01 “Preamble”

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. When the case arises where one or more provisions herein must be abridged due to local condition, the abridgement 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, ...

A logo featuring a surveying instrument, possibly a theodolite or level, with a circular seal containing the text "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-01 “Preamble”

...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.



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-01 “Preamble”

- This is pretty much straight forward, not much interpretation is needed. It does allow for the “County Conveyance Standards” to abridge these standards. One thing to keep in mind, these are the “minimum” that is required, so County Conveyance Standards cannot “loosen” or ask less than the Minimum Standards.



Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-02 “Research & Investigation”
 - A. *The surveyor shall consult deeds and other documents, including those for adjacent parcels, in order to assemble the best possible set of written evidence of every corner and line of the property being surveyed.*

The emblem of the Surveyor General of the State of Ohio, featuring a red circle with a white 'S' and 'G' and the words 'SURVEYOR GENERAL' and 'STATE OF OHIO' around it.

Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-02 “Research & Investigation”
 - 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, and analyze evidence of monumentation and occupation. In addition, the surveyor shall, when necessary, confer with the owner(s) of the adjoining property and the owner(s) of the property being surveyed.*

A logo in the top left corner featuring a surveying instrument, possibly a theodolite or level, with a red circular seal containing the text 'COUNTY YEAR'.

Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-02 “Research & Investigation”
 - This could be one of the categories with a perspective based on the county you are working in with the various degrees of how readily available information is to the surveyor.
 - Recorded deeds, other documents, are they readily available, or are they subject to the infamous court house fires, misplaced, even discarded.
 - Does the Engineer’s Office have Private Survey Plats on file, road records, R/W plans, etc.

A logo featuring a surveying instrument, possibly a theodolite or level, with a circular seal containing the text "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-02 “Research & Investigation”
 - How thorough is thorough?
 - Is there a difference in simple platted lots versus meandering lines through a woods? VMS versus sectionalized lands?
 - How many times is the owner home of the adjoining property when the survey crew is there to confer with?
 - Do we follow up with adjoiners on nights and weekends?

The emblem of the Surveyor General of the State of Ohio, featuring a shield with a plumb line and a level, surrounded by the text "SURVEYOR GENERAL OF THE STATE OF OHIO".

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-03 “Monumentation”

- A. *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.*

A small icon of a surveying instrument, possibly a theodolite or level, with a red circular seal that says "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-03 “Monumentation”

- 3. 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.*

The emblem of the Ohio Surveyors' Association, featuring a surveying instrument (a theodolite) and the text "OHIO SURVEYORS' ASSOCIATION" around a central figure.

Enforcement of Minimum Survey Standards

O.A.C. 4733-37-03 “Monumentation”

Every boundary monument and/or reference monument set by the surveyor shall, when practicable:

- 1. Be composed of a durable material.*
- 2. Have a minimum length of thirty inches.*
- 3. Have a minimum cross-section area of material of 0.21 square inches.*
- 4. Be identified with a durable marker bearing the surveyor's Ohio registration number and/or name or company name.*
- 5. Be detectable with conventional instruments for finding ferrous or magnetic.*

A logo for a surveying instrument, possibly a theodolite or level, with a circular emblem containing the text 'COUNTY' and 'YEAR'.

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-03 “Monumentation”

D. When a case arises, due to physical obstructions such as pavements, large rocks, large roots, utility cables, etc., so that neither a boundary monument nor a reference monument can be conveniently or practicably set in accordance with paragraph (C) of this rule, then alternative monumentation, which is essentially as durable and identifiable (e.g., chiseled “X” in concrete, drill hole, etc.) shall be established for the particular situation.



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-03 “Monumentation”

- Again, this should be a straight forward section, regardless of the County/area you are working in.
- All corners shall be monumented (with a provision of being impractical).
 - This should not be confused with saving money, time, ...
 - Reference monument requirements could be subject to County Conveyance Standards.
- All Control Stations shall be monumented, i.e. POC’s



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-03 “Monumentation”

- The 2003 Standards closed the loophole and eliminates the use of a 1/2” iron pin.
 - Prior version called for cross-section area of 0.2 square inches and changed it to 0.21 square inches.
 - Using the formula to compute area of a circle, $A = \pi R^2$
 - Remember, a 1/2” pin, 1/2” is the diameter, it’s radius is 0.25”!

$$A = \pi R^2$$

$$A = 0.196349541$$



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-03 “Monumentation”

- Provides for alternative monumentation to be used, e.g., chiseled “X” in concrete, drill hole, p.k./Mag Nails, etc.
- Discretion and control over the use can be dictated by the authority reviewing these legal descriptions.
 - Examples: Drill hole in blacktop of county road, railroad spike set in gravel road, etc...



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-04 “Measurement Specifications”

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

- A. *The surveyor shall keep all equipment used in the performance of surveying in proper repair and adjustment.*

A logo in the top left corner featuring a surveying instrument, possibly a theodolite or level, with a red circular seal containing the text 'COUNTY' and 'YEAR'.

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-04 “Measurement Specifications”

- B. *Every determination 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 ten thousand (allowable linear error = reported distance divided by ten 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 two hundred feet, the linear error shall not exceed 0.02 feet. The reported distance is the distance established by the survey.*

A logo in the top left corner featuring a surveying instrument, possibly a theodolite or level, with a circular seal around it containing the text 'COUNTY' and 'YEAR'.

Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-04 “Measurement Specifications”
 - C. *In all new 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 departures.*
 - D. *Surveys performed using metric measurements shall utilize the metric equivalents based upon the U.S. survey foot conversion factor.*



Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-04 “Measurement Specifications”
 - Again, a fairly straight forward section that leaves little interpretation to the County/area you are working in.
 - All equipment must be in the proper repair/adjustment.
 - Keep detailed logs of calibration on file.
 - In 2003, there was a change from the reported distance from 100’ to 200’.
 - No more than 0.02’ of error in closure in latitudes and departures.
 - Should not be confused with 1:10,000 closure requirements most counties have in place.

Allows for metric measurements ~ YEAH!?!?

The emblem of the Surveyor General of the State of Tennessee, featuring a surveying instrument and the text "SURVEYOR GENERAL STATE OF TENNESSEE".

Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-05 “Plat of Survey”
 - A. *The surveyor shall prepare a scale drawing of every individual survey, or drawings comprising all of the surveys when they are contiguous, in which the surveyor 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 appropriate public agencies.*

The emblem of a surveyor, featuring a red circle with a white 'S' and 'Y' inside, surrounded by the words 'SURVEYOR' and '1800'.

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

C. The surveyor shall include the following details:

- 1. A title such that the general location of the survey can be identified. The title shall include, but not be limited to: state, county, civil township or municipality, and original land subdivision description.*
- 2. A north arrow with a clear statement as to the basis of the reference direction used.*



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

- 3. The control station(s) or line cited in the description and the relationship of the property to this control must be referenced to an established monumented point of beginning such as, but not limited to: centerline intersection of streets or highways record, section or quarter section corners, Virginia military survey corners or lines, or platted lot corners. The type of monuments set or found at the control stations shall be noted.*

A logo in the top left corner featuring a surveying instrument, possibly a theodolite or level, with a red circular seal containing the text "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

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, or a legend of the symbols used to identify monumentation. In addition, there shall be a statement describing the material and size of every monument found or set.*
5. *A general notation describing the evidence of occupation that may be found along every boundary line or occupation line.*

A logo in the top left corner featuring a surveying instrument, possibly a theodolite or level, with a red circular seal containing the text 'COUNTY' and 'YEAR'.

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

6. *The length and direction of each line as specified in the 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. The length and direction shall be stated as follows:*

A logo in the top-left corner of the slide, featuring a surveying instrument (likely a theodolite or similar) with a red circular seal. The seal contains the text 'COUNTY' at the top and 'YEAR' at the bottom, with a central emblem. The instrument is shown in a perspective view, with a blue and white background.

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

- a) *Bearings expressed in degrees, minutes and seconds and distances expressed in feet and decimal parts thereof on each course. If a metric equivalent distance is stated, it shall be stated to the third decimal place.*
- b) *All curved lines shall indicate the radius, central angle, curve length, chord bearing and chord distance.*

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Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

- c) *Each course shall show other common lines such as centerline of roads, rivers, streams, section lines, quarter section lines, half section lines or other pertinent common lines of record.*



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

7. *A citation of pertinent documents and sources of data used as a basis for carrying out the work. The citation shall include, but not be limited to: current deeds as of the date of the survey, prior deeds or other documents of record, and available deeds of record for adjoining parcels along each boundary line of the survey. If the adjoining parcel is a recorded subdivision, only the subdivision name, recording information and lot numbers need to be shown.*
8. *The written and graphical scale of the drawing.*

A surveyor's seal is partially visible on the left side of the slide. It features a circular emblem with a central figure, surrounded by the text "COUNTY" at the top and "YEAR" at the bottom. The seal is set against a background of a surveying instrument, possibly a theodolite or similar device.

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

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).*

11. *The area contained within the perimeter of the surveyed parcel.*

A logo in the top left corner featuring a surveying instrument, possibly a theodolite or level, with a circular seal around it containing the text "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-05 “Plat of Survey”

12. All references to roads or railroads contiguous to the surveyed parcel shall use current names or names of record and applicable right of way widths, if available.

13. All references to rivers or streams shall use current names of record, if available.

The image shows a surveyor's emblem in the top left corner. It features a circular seal with a red border containing the words 'COUNTY' and 'YEAR'. Inside the seal is a white square with a red 'S' and a blue '1'. The emblem is set against a blue background with a white triangle.

Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-05 “Plat of Survey”
 - Conveyance Standards may require much, much more.
 - Every boundary survey requires a plat of survey, whether a deed is being executed and be given to the client and filed with any appropriate public agency when necessary.
 - Must be referenced to a monumented point of beginning.

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Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-05 “Plat of Survey”
 - Contain a notation at each corner of the property stating whether monumentation was found, set and the condition.
 - A general notation describing the evidence of occupation that may exist along each boundary line.
 - Any difference in a length or direction of a line should be noted.
 - All curved lines shall include the radius, central angle, curve length, chord bearing and distance.

A circular seal of a surveyor, partially visible on the left side of the slide. It features a central emblem with a scale and a plumb line, surrounded by the text "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

- ✓ O.A.C. 4733-37-05 “Plat of Survey”
 - Needs to show common lines such as centerlines, section, quarter section and/or half section lines or other pertinent common lines of record.
 - A citation of pertinent documents and sources of data used.
 - Scale needs to be shown
 - Date of survey.
 - Surveyor’s printed name, registration number, signature and seal (in a form which may be clearly reproduced on any copies).****



Enforcement of Minimum Survey Standards



PEs, PSs MUST SIGN, SEAL AND DATE ALL WORK PRODUCTS

By Mark T. Jones, PS, Executive Director
State Board of Registration for Professional Engineers
and Surveyors

For many years, Professional Engineers (PE) and Professional Surveyors (PS) only signed and sealed plans and plats. Due to the passage of HB 337 in 2002, Ohio Revised Code (ORC) Section 4733.14 now requires that "Plans, specifications, plats, reports, and all other engineering work products shall be stamped with the seal...and be signed and dated by the registrant". Therefore, all opinions, reports, plans, plats, property descriptions, etc. must be signed, sealed and dated by the PE or PS who was in direct supervisory control of the preparation of the work product.



Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-06 “Descriptions”

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.*

The emblem of the Ohio Surveyors' Association, featuring a surveying instrument (a theodolite) and the text "COUNTY SURVEYOR".

Enforcement of Minimum Survey Standards

✓ O.A.C. 4733-37-06 “Descriptions”

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.*
- . *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.*



Enforcement of Minimum Survey Standards

O.A.C. 4733-37-06 “Descriptions”

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.*

A logo in the top-left corner of the slide, featuring a surveying instrument (likely a theodolite or level) with a red circular seal containing the text "COUNTY" and "YEAR".

Enforcement of Minimum Survey Standards

O.A.C. 4733-37-06 “Descriptions”

- e. All curved lines shall indicate the radius, central angle, curve length, chord bearing, chord length and direction of the curve.*
 - 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.*

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Enforcement of Minimum Survey Standards

O.A.C. 4733-37-06 “Descriptions”

Descriptions other than metes and bounds descriptions may be a reference to a recorded survey plat or a parcel on a recorded survey plat and shall include sufficient and adequate legal and technical wording so that the property can be definitely located and defined.

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.

The emblem of the Surveyor General of the State of Ohio, featuring a red circle with a white 'S' and 'G' and the words 'SURVEYOR GENERAL' and 'STATE OF OHIO' around it, set against a blue and white background.

Enforcement of Minimum Survey Standards

O.A.C. 4733-37-06 “Descriptions”

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.



Enforcement of Minimum Survey Standards

O.A.C. 4733-37-06 “Descriptions”

- Conveyance Standards may require much, much more.
- O.R.C. 315.251 states the following:

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.

- Requires the surveyor’s name, Ohio registration number and date of writing and/or survey. ****



Enforcement of Minimum Survey Standards



PEs, PSs MUST SIGN, SEAL AND DATE ALL WORK PRODUCTS

By Mark T. Jones, PS, Executive Director
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For many years, Professional Engineers (PE) and Professional Surveyors (PS) only signed and sealed plans and plats. Due to the passage of HB 337 in 2002, Ohio Revised Code (ORC) Section 4733.14 now requires that "Plans, specifications, plats, reports, and all other engineering work products shall be stamped with the seal...and be signed and dated by the registrant". Therefore, all opinions, reports, plans, plats, property descriptions, etc. must be signed, sealed and dated by the PE or PS who was in direct supervisory control of the preparation of the work product.

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Enforcement of Minimum Survey Standards

O.A.C. 4733-37-06 “Descriptions”

- The metes and bounds description shall include:
 - A description of boundary monument used as initial point.
 - Series of calls for successive lines bounding parcel like intent in regards to adjoiners or other features.
 - Description of boundary monument and whether found or set.
 - Curved lines must indicate radius, central angle, curve length, chord bearing and distance, and direction.
- Descriptions other than metes and bounds may be used.
- Statement indicating that it was based on a previous survey or recent survey and the date thereof.

A logo in the top-left corner of the slide, partially obscured by the dark blue background. It features a circular emblem with a red border containing the words "COUNTY" at the top and "YEAR" at the bottom. The center of the emblem is white with a red design. The logo is set against a light-colored, textured background that looks like a surveying instrument or a map.

Enforcement of Minimum Survey Standards

O.A.C. 4733-37-06 “Descriptions”

- A description cannot be written for the fee transfer of land from records only, it must be based on a current or updated survey of the property!



Enforcement of Minimum Survey Standards

O.A.C. 4733-37-07 “Subdivision Plats”

When a subdivision is created from a piece of property, or several adjoining pieces, the following rules shall apply:

Rule [4733-37-02](#) (Research and Investigation) of the Administrative Code shall apply to the original tract(s) of land prior to being subdivided.

Rule [4733-37-03](#) (Monumentation) of the Administrative Code shall apply to the outside perimeter of the original tract(s) of land and to the outside perimeter of the newly created subdivisions. All newly created lots, blocks, rights of way, angle points, points of curvature and points of tangency



Enforcement of Minimum Survey Standards

O.A.C. 4733-37-07 “Subdivision Plats”

shall be monumented according to local regulations. Street rights of way may be monumented with monuments on the centerline instead of right of way monuments. Centerline or right of way monuments shall be set at all intersections, angle points, points of curvature and points of tangency.

All newly created subdivisions shall comply with rules [4733-37-04](#) (Measurement Specifications) and [4733-37-05](#) (Plat of Survey) of the Administrative Code.

All easements within a newly created subdivision shall be accurately dimensioned so that each easement line can be reproduced without ambiguity.



Enforcement of Minimum Survey Standards

O.A.C. 4733-37-07 “Subdivision Plats”

- Has some provisions for monumentation that newly created lots, blocks, rights of way, angle points, points of curvature and points of tangency shall be monumented according to *local regulations*, but they may monument the centerline or the R/W line.
- All easements must be dimensioned so they can be reproduced.

**Administrative Code
Chapter 4733-37**

**STANDARDS FOR BOUNDARY
S IN THE STATE OF OHIO**

EFFECTIVE 11/01/2003

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AMBLE

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SEARCH AND INVESTIGATION

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UMENTATION

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(5) Be detectable with conventional
instruments for finding ferrous or magnetic objects.

(D) When a case arises, due to physical obstructions
such as pavements, large rocks, large roots, utility
cables, etc., so that neither a boundary monument nor
a reference monument can be conveniently or
practicably set in accordance with Paragraph (C) of this
rule, then alternative monumentation, which is
essentially as durable and identifiable (e.g., chiseled "X"
in concrete, drill hole, etc.) shall be established for the
particular situation.

4733-37-04 MEASUREMENT SPECIFICATIONS

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

(A) The surveyor shall keep all equipment used in
the performance of surveying in proper repair and
adjustment.

(B) Every determination 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 ten thousand (allowable
linear error = reported distance divided by ten thousand)
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divided by the reported distance (allowable (directional)
error = allowable linear error divided by reported
distance). When the reported distance is less than two
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 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.

(D) Surveys performed using metric measurements
shall utilize the metric equivalents based upon the U.S.
Survey Foot conversion factor.

4733-37-05 PLAT OF SURVEY

(A) The surveyor shall prepare a scale drawing of
every individual survey or drawings comprising all of the
surveys when they are contiguous, in which the
surveyor 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 appropriate public agencies.

(C) The surveyor shall include the following details:

(1) A title such that the general location of the
survey can be identified. The title shall include, but
not be limited to: state, county, civil township or
municipality, and original land subdivision
description.

(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
description and the relationship of the property to this
control must be referenced to an established
monumented point of beginning such as, but not
limited to: centerline intersection of streets or
highways, record, section or quarter section corners,
virginia military survey corners or lines, or platted lot
corners. The type of monuments set or found at the
control stations shall be noted.

(4) A notation at each corner of the property
stating that the boundary monument specified in the

description was found, or that a boundary monument
was set, or a legend of the symbols used to identify
monumentation. In addition, there shall be a
statement describing the material and size of every
monument found or set.

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

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

(a) Bearings expressed in degrees,
minutes and seconds and distances expressed in
feet and decimal parts thereof on each
course. If a metric equivalent distance is stated,
it shall be stated to the third decimal place.

(b) All curved lines shall indicate the
radius, central angle, curve length, chord
bearing and chord distance.

(c) Each course shall show other common
lines such as centerline of roads, rivers,
streams, section lines, quarter section lines, half
section lines or other pertinent common lines of
record.

(7) A citation of pertinent documents and
sources of data used as a basis for carrying out the
work. The citation shall include, but not be limited to:
current deeds as of the date of the survey, prior
deeds or other documents of record, and available
deed of record for adjoining parcels along each
boundary line of the survey. If the adjoining parcel is
a recorded subdivision, only the subdivision name,
recording information and lot numbers need to be
shown.

(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).

(11) The area contained within the perimeter of
the surveyed parcel.

(12) All references to roads or railroads
contiguous to the surveyed parcel shall use current
names or names of record and applicable right of
way widths, if available.

(13) All reference to rivers or streams shall use
current names of record, if available.

4733-37-06 DESCRIPTIONS

(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) All curved lines shall indicate the
radius, central angle, curve length, chord
bearing, chord length and direction of the curve.

(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 metes and bounds
descriptions may be reference to a recorded survey plat
or a parcel on a recorded survey plat and 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.

4733-37-07 SUBDIVISION PLATS

When a subdivision is created from a piece of
property, or several adjoining pieces, the following rules
shall apply:

(A) Rule 4733-37-02 of the Administrative Code
shall apply to the original tract(s) of land prior to being
subdivided.

(B) Rule 14733-37-03 of the Administrative Code
shall apply to the outside perimeter of the original
tract(s) of land and to the outside perimeter of the newly
created subdivisions. All newly created lots, blocks,
rights or way, angle points, points of curvature and
points of tangency shall be monumented according to
local regulations. Street rights of way may be
monumented with monuments on the centerline instead
of right of way monuments. Centerline or right of way
monuments shall be set at all intersections, angle
points, points of curvature and points of tangency.

(C) All newly created subdivisions shall comply with
rules 4733-37-04 and 4733-37-05 of the Administrative
Code.

(D) All easements within a newly created subdivision
shall be accurately dimensioned so that each easement
line can be reproduced without ambiguity.

SAMPLE PLAT OF SURVEY

COUNTY, OHIO

TOWNSHIP, CITY

SUBDIVISION & LOT N^o.

SECTION, TOWN, RANGE OR MILITARY SURVEY N^o.

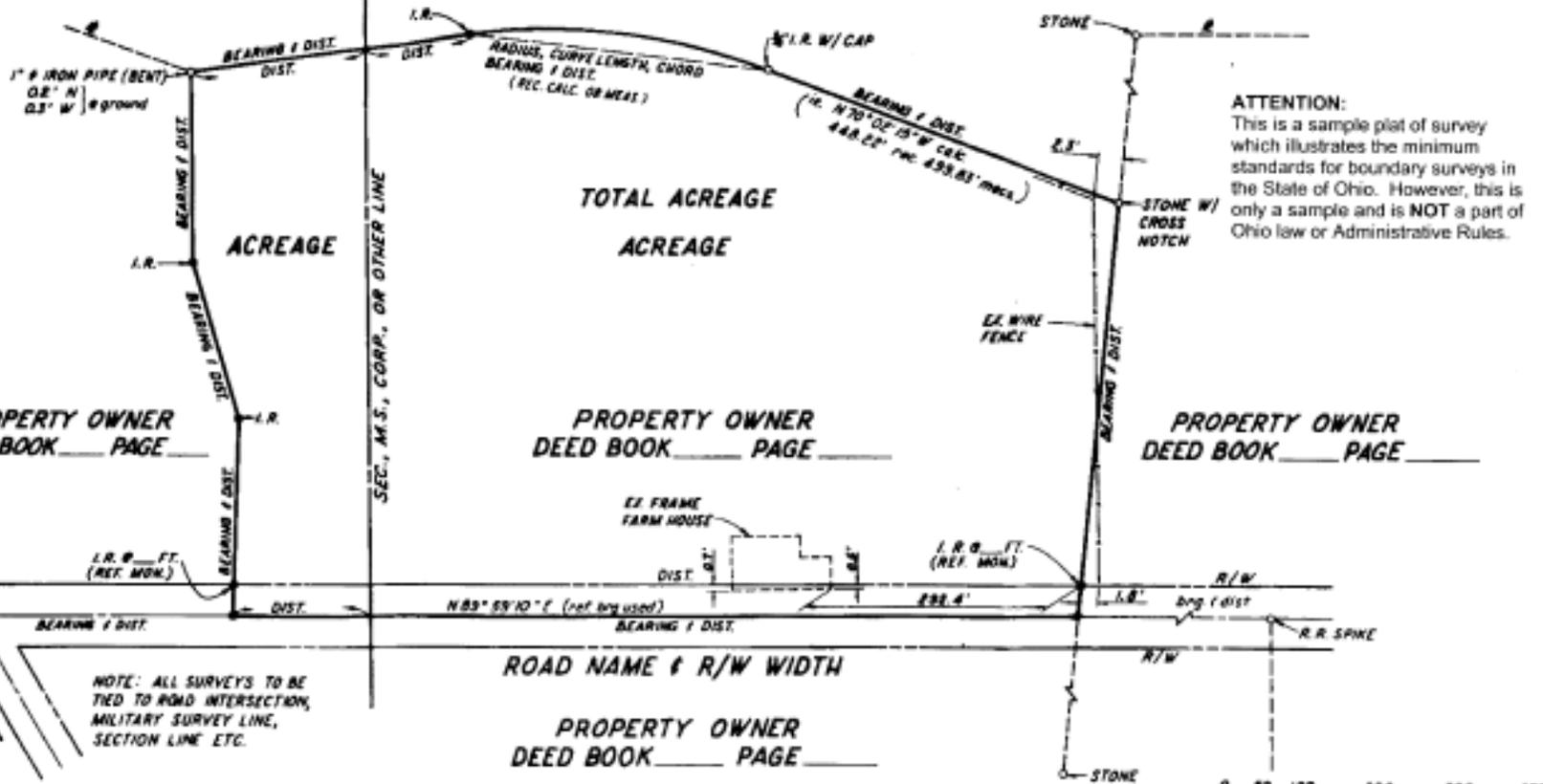
SAMPLE PROVIDED BY PLSO

CLEAR STATEMENT AS TO THE BASIS OF THE REFERENCE DIRECTION USED.

DEED REFERENCE BOOK _____ PAGE _____

PERTINENT DOCUMENTS AND SOURCES OF DATA USED:

PROPERTY OWNER
DEED BOOK _____ PAGE _____



ATTENTION:
This is a sample plat of survey which illustrates the minimum standards for boundary surveys in the State of Ohio. However, this is only a sample and is NOT a part of Ohio law or Administrative Rules.

NOTE: ALL SURVEYS TO BE TIED TO ROAD INTERSECTION, MILITARY SURVEY LINE, SECTION LINE ETC.

END
UMENT FOUND
UMENT SET

CLIENT
INFORMATION

SURVEY CO. INFORMATION

Enforcement of Minimum Survey Standards

QUESTIONS?????

Dean C. Ringle, P.E., P.S. Franklin County Engineer

373 S. High St., 19th Flr. Columbus, Ohio 43215-6308
Lat. 39°57'14"N Long. 083°00'02"W



Tony Rettke, P.S.
Tax Map Administrator

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