

67th Annual Meeting

of the

Missouri Society of
Professional Surveyors

OCTOBER 3-5, 2024

OSAGE BEACH, MISSOURI



Missouri Surveying Standards

J. Michael (Mike) Flowers, PLS
Retired, Missouri State Land Surveyor



Rules of Department of Commerce and Insurance

Division 2030—Missouri Board for Architects, Professional Engineers, Professional Land Surveyors, and Professional Landscape Architects Chapter 17—United States Public Land Survey Corners

Title	Page
20 CSR 2030-17.010 Definitions	3
20 CSR 2030-17.020 Authorization for Removal or Alteration of Corners	3
20 CSR 2030-17.030 Reestablished or Restored Corners (Rescinded June 30, 2017)	3
20 CSR 2030-17.040 Procedure for Filing Documents	3
20 CSR 2030-17.050 Monumentation	4
20 CSR 2030-17.060 Monument Marking (Rescinded June 30, 2017)	4
20 CSR 2030-17.070 Missouri Coordinate System of 1983	4
20 CSR 3200-17.080 Approved Documents	4



**Title 20—DEPARTMENT OF
COMMERCE AND INSURANCE**
Division 2030—Missouri Board for
Architects, Professional Engineers,
Professional Land Surveyors, and
Professional Landscape Architects
Chapter 17—United States Public Land
Survey Corners

20 CSR 2030-17.010 Definitions

PURPOSE: This rule defines the various technical and legal terms used in Chapter 17.

(1) Alteration of a corner, changing the physical monumentation of a corner or adding witness accessories.

(2) Corners of the United States Public Land Survey, those points that determine the boundaries of the various subdivisions represented on the official plat such as the township corner, the section corner, the quarter-section corner, blank quarter section corners, fractional section corner, center of section, grant corner, lot corner, and meander corner.

(3) Date of the field work, the date on which the monument was physically altered or removed and referenced.

(4) Existent corner, a corner whose position can be identified by verifying the evidence of the original monument or its accessories, or by some physical evidence described in the field notes, or located by an acceptable supplemental survey record or some physical evidence thereof, or by testimony. The physical evidence of a corner may have been entirely obliterated but the corner will be considered existent if its position can be recovered through the testimony of one (1) or more witnesses who have a dependable knowledge of the original location. A legally reestablished corner shall have the same status as an existent corner.

(5) Lost corner, a corner whose position cannot be determined, beyond reasonable doubt, either from traces of the original marks or from acceptable evidence or testimony that bears upon the original position.

(6) Monument, the physical object which marks the corner point determined by the surveying process. The accessories, such as bearing trees, bearing objects, reference monuments, mounds of stone, and other similar objects that aid in identifying the corner position, are also considered a part of a corner monument.

(7) Reestablishment of a corner, the monumentation of a lost corner whose position has been determined by proportionate measurement.

(8) Reference monument, a monument set in such a manner and location that the position of the actual corner can be located from it by direction and distance or by two (2) distances when two (2) reference monuments are set.

(9) Removal of a corner, the complete elimination of an existing corner monument.

(10) Restoration of a corner, the alteration of an existent corner.

AUTHORITY: sections 327.041 and 327.272, RSMo 2016. * This rule originally filed as 4 CSR 30-17.010. Original rule filed May 3, 1994, effective Dec. 30, 1994. Amended: Filed Dec. 1, 2005, effective June 30, 2006. Moved to 20 CSR 2030-17.010, effective Aug. 28, 2006. Non-substantive change filed Oct. 21, 2015, published Dec. 31, 2015. Amended: Filed Nov. 18, 2016, effective June 30, 2017.

*Original authority: 327.041, RSMo 1969, amended 1981, 1986, 1989, 1993, 1995, 1999, 2001, 2010, 2014 and 327.272, RSMo 1969, amended 1981, 1999, 2010, 2014, 2016.

**20 CSR 2030-17.020 Authorization for
Removal or Alteration of Corners**

PURPOSE: This rule identifies who is authorized to alter or remove a corner of the United States Public Land Survey and how to obtain permission from the Department of Agriculture.

Only a professional land surveyor is authorized to remove, alter, restore, or reestablish a corner of the United States Public Land Survey. Any professional land surveyor who removes, alters, restores, or reestablishes a corner of the United States Public Land Survey shall report his actions by filing an approved document with the Missouri Department of Agriculture, Land Survey Program within ninety (90) days from the date of the field work. The permission required by section 60.550, RSMo, is granted upon filing the approved document with the Missouri Department of Agriculture Land Survey Program.

AUTHORITY: sections 327.041 and 327.272, RSMo 2016. * This rule originally filed as 4 CSR 30-17.020. Original rule filed May 3, 1994, effective Dec. 30, 1994. Moved to 20 CSR 2030-17.020, effective Aug. 28, 2006. Non-substantive change filed Oct. 21, 2015,

published Dec. 31, 2015. Amended: Filed Nov. 18, 2016, effective June 30, 2017.

*Original authority: 327.041, RSMo 1969, amended 1981, 1986, 1989, 1993, 1995, 1999, 2001, 2010, 2014 and 327.272, RSMo 1969, amended 1981, 1999, 2010, 2014, 2016.

**20 CSR 2030-17.030 Reestablished or Re-
stored Corners**
(Rescinded June 30, 2017)

AUTHORITY: section 327.041, RSMo Supp. 1993. This rule originally filed as 4 CSR 30-17.030. Original rule filed May 3, 1994, effective Dec. 30, 1994. Moved to 20 CSR 2030-17.030, effective Aug. 28, 2006. Non-substantive change filed Oct. 21, 2015, published Dec. 31, 2015. Rescinded: Filed Nov. 18, 2016, effective June 30, 2017.

**20 CSR 2030-17.040 Procedure for Filing
Documents**

PURPOSE: This rule describes the procedure for filing certified land corner documents with the Department of Agriculture.

(1) Approved documents shall be filed with the Department of Agriculture, Weights, Measures and Consumer Protection Division, Land Survey Program, PO Box 937, Rolla, MO 65402-0937. Documents filed with the county recorder must first be filed with the Department of Agriculture.

(2) Certified Land Corner Document and Resident Witness Affidavit forms may be obtained in a reasonable number from the Department of Agriculture, Weights, Measures and Consumer Protection Division, Land Survey Program, PO Box 937, Rolla, MO 65402.

(3) There is no fee for filing these documents.

(4) Filing of corner documentation with the Department of Agriculture does not create an implied warranty by either the professional land surveyor or the Department of Agriculture as to conclusive evidence of the corner location.

AUTHORITY: sections 327.041 and 327.272, RSMo 2016. * This rule originally filed as 4 CSR 30-17.040. Original rule filed May 3, 1994, effective Dec. 30, 1994. Moved to 20 CSR 2030-17.040, effective Aug. 28, 2006. Non-substantive change filed Oct. 21, 2015, published Dec. 31, 2015. Amended: Filed Nov. 18, 2016, effective June 30, 2017.



**Original authority: 327.041, RSMo 1969, amended 1981, 1986, 1989, 1993, 1995, 1999, 2001, 2010, 2014 and 327.272, RSMo 1969, amended 1981, 1999, 2010, 2014, 2016.*

20 CSR 2030-17.050 Monumentation

PURPOSE: This rule prescribes the type of monument to be installed to preserve the position of the United States Public Land Survey Corner.

(1) All corner monuments, witness monuments, and reference monuments shall be permanent monuments of a type providing a degree of permanency consistent with that of the adjacent terrain and physical features. Monuments shall meet the requirements for a permanent monument in accordance with the Missouri Standards for Property Boundary Surveys.

(2) In such cases where the placement of a required corner monument at its proper location is impractical, it shall be permissible to set a reference or witness monument or mark near that point, and if such reference monument or mark is set, its location shall be properly shown on the certified land corner document.

(3) All monuments shall be marked and designated in accordance with the Bureau of Land Management (BLM) system of marking monuments that furnishes ready identification of the position of the monument which bears the mark. Letters and numerals should be carefully stamped with three-sixteenths inch (3/16") or one-eighth inch (1/8") steel dies and should always be made to read from the south. Lines and crosses should be made with a sharp cold chisel. The precise position shall be marked by a point, cross, or appropriate symbol on the monument.

(4) Where possible, four (4) reference ties (distance and direction) to durable objects will be made to provide the means for restoring the position of the marked corner if the monument is disturbed. Durable objects include, but are not restricted to: house corners, marks on concrete structures or pavement, marks on ledge or bedrock, trees, additional permanent monuments, fence posts, utility poles, and crosses on curbs. All durable objects and reference ties shall be fully described on the document.

(5) In some special cases where an existing monument is found and it is deemed appropriate to preserve the monument in its original location, a reference or witness monu-

ment may be installed nearby.

(6) At locations where a stone, iron pin, pipe, or other monument is to be replaced by a permanent monument, the existing monument will be removed and buried or placed alongside the permanent monument in such a manner that it will not be confused with the permanent monument.

AUTHORITY: sections 327.041 and 327.272, RSMo 2016. This rule originally filed as 4 CSR 30-17.050. Original rule filed May 3, 1994, effective Dec. 30, 1994. Moved to 20 CSR 2030-17.050, effective Aug. 28, 2006. Amended: Filed June 14, 2007, effective Dec. 30, 2007. Non-substantive change filed Oct. 21, 2015, published Dec. 31, 2015. Amended: Filed Nov. 18, 2016, effective June 30, 2017.*

**Original authority: 327.041, RSMo 1969, amended 1981, 1986, 1989, 1993, 1995, 1999, 2001, 2010, 2014 and 327.272, RSMo 1969, amended 1981, 1999, 2010, 2014, 2016.*

20 CSR 2030-17.060 Monument Marking (Rescinded June 30, 2017)

AUTHORITY: section 327.041, RSMo Supp. 1993. This rule originally filed as 4 CSR 30-17.060. Original rule filed May 3, 1994, effective Dec. 30, 1994. Moved to 20 CSR 2030-17.060, effective Aug. 28, 2006. Non-substantive change filed Oct. 21, 2015, published Dec. 31, 2015. Rescinded: Filed Nov. 18, 2016, effective June 30, 2017.

20 CSR 2030-17.070 Missouri Coordinate System of 1983

PURPOSE: This rule prescribes the requirements for referencing corners of the United States Public Land Survey to the Missouri Coordinate System of 1983.

(1) When the corner that is removed, altered, restored, or reestablished is required to be referenced to the Missouri Coordinate System of 1983, the corner coordinates shall be shown on the Certified Land Corner Document form.

(2) Coordinates referenced to the Missouri Coordinate System of 1983 and shown on Certified Land Corner Document forms shall comply with the following requirements:

(A) The position of the corner shall be based upon a geodetic control station having a horizontal accuracy of second order (as defined in 20 CSR 2030-18.020) or higher order;

(B) The survey connecting the corner to the geodetic control station shall meet the

accuracy standards set forth in the Missouri Standards for Property Boundary Surveys; and

(C) The following information shall be included on the Certified Land Corner Document form:

1. The geodetic control station(s) that were used to determine the position of the corner;

2. The coordinates of the geodetic control station(s) used and the appropriate Zone designation;

3. The appropriate adjustment date or realization designation on the North American Datum of 1983 along with the epoch date, when applicable;

4. A brief statement of the method used to obtain the position; and

5. The grid factor used.

(3) Coordinates referenced to the Missouri Coordinate System of 1983 may be used to reference corners in lieu of monuments.

AUTHORITY: sections 327.041 and 327.272, RSMo 2016. This rule originally filed as 4 CSR 30-17.070. Original rule filed May 3, 1994, effective Dec. 30, 1994. Moved to 20 CSR 2030-17.070, effective Aug. 28, 2006. Amended: Filed June 14, 2007, effective Dec. 30, 2007. Non-substantive change filed Oct. 21, 2015, published Dec. 31, 2015. Amended: Filed Nov. 18, 2016, effective June 30, 2017.*

**Original authority: 327.041, RSMo 1969, amended 1981, 1986, 1989, 1993, 1995, 1999, 2001, 2010, 2014 and 327.272, RSMo 1969, amended 1981, 1999, 2010, 2014, 2016.*

20 CSR 2030-17.080 Approved Documents

PURPOSE: This rule prescribes the form of the document to be filed with the Department of Agriculture.

(1) An approved document may be either one (1) of the following:

(A) Certified Land Corner Document form; or

(B) Special form approved by the Missouri Department of Agriculture.

(2) Preparation of Certified Land Corner Document Forms. All information (except drawings) will be typed or completed in black ink. Lettering or typing shall not be less than eight-hundredths inch (0.08") in height. Drawings may be made in black pencil so long as all drawings will make sharp and clear copies.

(A) The following information shall be included on all corner forms:



1. The description of the original monument, witness ties, and any subsequent restorations, including the date of the survey, the document reference (book and page and/or microfilm location), and the professional land surveyor of record. Original survey notes need not be given in urban or built-up areas;

2. Signature and seal of the professional land surveyor;

3. Date of the survey field work;

4. Basis of bearing system used;

5. Description of the monument, monument marking, and witness/reference ties;

6. Comprehensive sketch of the corner location sufficient to find the monument; and

7. Coordinates referenced to the Missouri Coordinate System of 1983, if known.

(B) The following additional information is required for forms showing the restoration or alteration of existing corner monuments:

1. Description of the evidence found indicating the corner is existent;

2. Resident witness affidavits when the corner is restored from testimony; and

3. Distances and directions used to retrace prior evidence.

(C) The following additional information will be required for reestablished corners:

1. Statement of the method used to reestablish the corner; and

2. Distances and bearings used in the reestablishment procedure.

AUTHORITY: sections 327.041 and 327.272, RSMo 2016. This rule originally filed as 4 CSR 30-17.080. Original rule filed May 3, 1994, effective Dec. 30, 1994. Moved to 20 CSR 2030-17.080, effective Aug. 28, 2006. Non-substantive change filed Oct. 21, 2015, published Dec. 31, 2015. Amended: Filed Nov. 18, 2016, effective June 30, 2017.*

**Original authority: 327.041, RSMo 1969, amended 1981, 1986, 1989, 1993, 1995, 1999, 2001, 2010, 2014 and 327.272, RSMo 1969, amended 1981, 1999, 2010, 2014, 2016.*

REVISED

**CHECK LIST FOR CORNER DOCUMENTS
(Filed with the MDA Land Survey Program)**

NAME OF SURVEYOR: _____ **DATE OF FORM:** _____

REVIEWED BY: _____ **DATE:** _____

CORNER LOCATION: TOWNSHIP: _____ **RANGE:** _____ **INDEX NO.** _____

ALL CORNER DOCUMENTS SHALL SHOW THE FOLLOWING	<u>YES</u>	<u>NO</u>	<u>NA</u>
1) Block showing restoration or reestablishment correctly checked	_____	_____	_____
2) Lettering or typing not less than 0.08" in height	_____	_____	_____
3) Lettering or typing in black ink	_____	_____	_____
4) Drawings clear and sharp	_____	_____	_____
5) Description of original monument	_____	_____	_____
6) Description of any subsequent surveys	_____	_____	_____
7) Surveyor's seal with date and signature on front and back sheet	_____	_____	_____
8) Date of survey field work	_____	_____	_____
9) Basis of bearing system used	_____	_____	_____
10) Description of existing or reestablished monument and accessories	_____	_____	_____
11) Sketch of corner location (reference ties)	_____	_____	_____
12) Sketch is in accordance with MO CSR 10 30-3.080	_____	_____	_____
	<u>YES</u>	<u>NO</u>	<u>NA</u>

FOR RESTORATION OR ALTERATION OF EXISTING MONUMENT

- 13) Description of evidence found and used in restoration _____
- 14) Resident witness affidavits _____
- 15) Distance and direction used in restoration _____

FOR REESTABLISHED MONUMENTS

- 16) Statement of method used to reestablish corner, statutory method was used (front of corner document) _____
- 17) Distance and directions used in reestablishment (to be noted on sketch) _____

WHEN COORDINATES ARE SHOWN

- 18) Coordinates of 1st and 2nd Order Control Station used including SPC zone and date of adjustment _____
- 19) Coordinates of corner in meters and SPC zone _____
- 20) Grid factor used _____
- 21) Relative positional tolerance of coordinates obtained for corner monument _____

7/9/2024

CORNER REGISTRATION USPLSS in MISSOURI

J. Michael Flowers PLS




1

7/9/2024

2 PRESENTATION OUTLINE

- Review research procedures of the State Land Survey Repository
- Review statutes and rules governing the restoration and reestablishment of the USPLSS corners in Missouri
- Complete a certified land corner document while addressing frequently asked questions
- Corner Remonumentation Programs of the Land Survey Program (LSP-MDA)



2

3 STATUTES

- Title VI: County, Township and Political Subdivision Government
- Chapter 60: County Surveyors and Land Surveys
 - 60.301- 60.355 Revised Statutes of Missouri (RSMo)

3

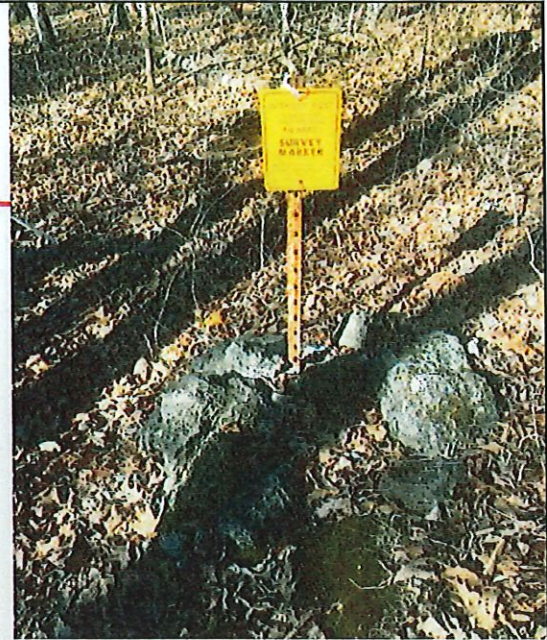
4 REGULATIONS

- 20 CSR 2030-17.010....20 CSR-2030-17.080
- Department of Commerce and Insurance
- Division 2030 – Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Landscape Architects
- Chapter 17 – United States Public Land Survey Corners

4

5 RESEARCH

- J-17 Corner Commence
11, 14 & 15 Township 25
Range 1 East, Washington
County, MO



5

6 GETTING TO THE LAND SURVEY INDEX

7/9/2024

- Missouri Department of Agriculture Website agriculture.mo.gov
- Under **Weights and Measures** tab scroll down to Land Survey
- Under Online Services right side click on Land Survey Index

6

7 LAND SURVEY INDEX

MISSOURI AGRICULTURE
Land Survey Index

Home | Corner Master Index | County Index | GLO Plats and Notes | Subdivisions | Shopping Cart | Help |

LSI Search

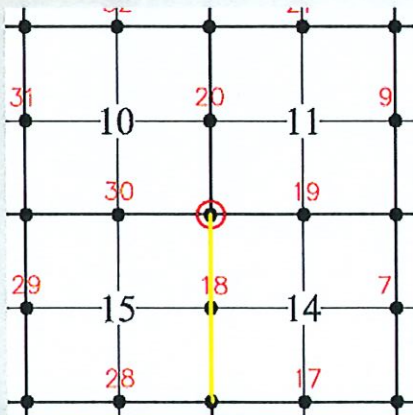
To search the Land Survey Index:
 1. Enter at least one search criteria.
 2. Click the search button.
 A GLO Reader is provided to view reports and plats.

Sort By: **Legal** | Surveyor: | Document Name: |
 Township: | Range: | Direction: |
 Section: | US Survey: | County: |
 Begin Date: | End Date: |

Land Survey Program | P.O. Box 937 | Rolla, MO 65402-0937 | (636) 368-2300 | E-mail: landsurv@mda.mo.gov

7

8 CORNER INDEX GRID



7/9/2024

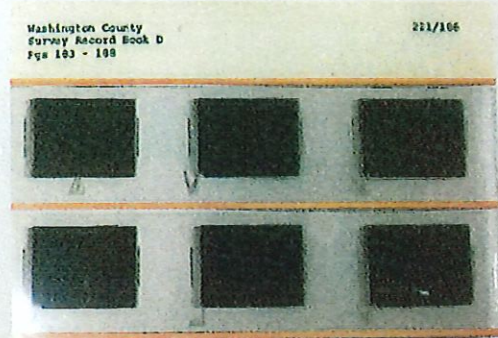
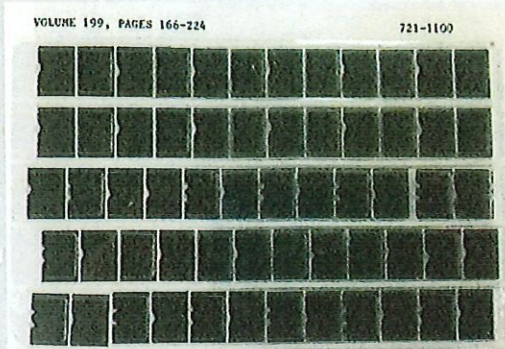
	1	3	5	7	9	11	13	15	17	19	21	23	25
A													
C	6	60	5	41	4	33	3	32	2	1			
E	20	38	36	40		32		28		10			
G	7	57	8	42	9	35	10	20	11	9	12		
J	56	59		47	30		16	19		8			
L	18	54	17	40	16	29	15	16	14	7	13		
N	53	52		39	28		14	17		6			61
P	19	58	20	38	21	27	22	15	23	5	24		
R	50	49		37	26		15	16		4			
T	30	48	29	36	28	25	27	14	26	3	25		
V	47	46		35	24		14	15		2			
X	31	45	32	41	33	33	34	12	35	1	36		
Z													

62

8

9 MICROFICHE

7/9/2024



9

10 RESEARCH (GLO)

Trp	Key	Dir	Sec	Fract	Sec Line	U.S. Surv	Surveyor	Doc Date	Root Ref	Subdivision	Loc (M)	Document Name	Record ID
37	01	E	00	000	0	0	RECTOR	03-04-1816	197		721	7211084A	604244
37	01	E	00	000	0	0	BROWN	04-15-1817	199		721	7211097B	673452
37	01	E	00	000	1	0	BROWN	01-01-1817	1998/191		721	7211100C	771229
37	01	E	00	000	2	0	BROWN	01-01-1817	1998/192		721	7211100C	771228
37	01	E	00	000	3	0	BROWN	01-01-1817	1998/193		721	7211100C	771227
37	01	E	00	000	4	0	BROWN	01-01-1817	1998/194		721	7211100C	771226
37	01	E	00	000	5	0	BROWN	01-01-1817	1998/195		721	7211100C	771225
37	01	E	00	000	6	0	BROWN	01-01-1817	1998/196		721	7211100C	771224
37	01	E	00	000	7	0	BROWN	01-01-1817	1998/197		721	7211100C	771223
37	01	E	00	000	8	0	BROWN	01-01-1817	1998/198		721	7211100C	771222
37	01	E	00	000	9	0	BROWN	01-01-1817	1998/199		721	7211100C	771221
37	01	E	00	000	10	0	BROWN	01-01-1817	1998/200		721	7211100C	771220
37	01	E	00	000	11	0	BROWN	01-01-1817	1998/201		721	7211100D	771219
37	01	E	00	000	12	0	BROWN	01-01-1817	1998/202		721	7211100D	771218
37	01	E	00	000	13	0	BROWN	01-01-1817	1998/203		721	7211100D	771217
37	01	E	00	000	14	0	BROWN	01-01-1817	1998/204		721	7211100D	771216
37	01	E	00	000	15	0	BROWN	01-01-1817	1998/205		721	7211100D	771215
37	01	E	00	000	16	0	BROWN	01-01-1817	1998/206		721	7211100D	771214
37	01	E	00	000	17	0	BROWN	01-01-1817	1998/207		721	7211100D	771213
37	01	E	00	000	18	0	BROWN	01-01-1817	1998/208		721	7211100D	771212
37	01	E	00	000	19	0	BROWN	01-01-1817	1998/209		721	7211100D	771211
37	01	E	00	000	20	0	BROWN	01-01-1817	1998/210		721	7211100D	771210
37	01	E	00	000	21	0	BROWN	01-01-1817	1998/211		721	7211100D	771209
37	01	E	00	000	22	0	BROWN	01-01-1817	1998/212		721	7211100D	771208
37	01	E	00	000	23	0	BROWN	01-01-1817	1998/213		721	7211100E	771207

10

7/9/2024

RESEARCH (GLO)

Twp	Rng	Dir	Sec	Fract	Sec	U.S. Survey	Surveyor	Doc Date	Root Ref	Subdivision	Loc	Document	Record ID
37	01	E	00	000	10	0	BROWN	01-01-1817	199B/200		721	7211100C	7712
37	01	E	00	000	11	0	BROWN	01-01-1817	199B/201		721	7211100D	7712
37	01	E	00	000	12	0	BROWN	01-01-1817	199B/202		721	7211100D	7712
37	01	E	00	000	13	0	BROWN	01-01-1817	199B/203		721	7211100D	7712
37	01	E	00	000	14	0	BROWN	01-01-1817	199B/204		721	7211100D	7712
37	01	E	00	000	15	0	BROWN	01-01-1817	199B/205		721	7211100D	7712
37	01	E	00	000	16	0	BROWN	01-01-1817	199B/206		721	7211100D	7712
37	01	E	00	000	17	0	BROWN	01-01-1817	199B/207		721	7211100D	7712
37	01	E	00	000	18	0	BROWN	01-01-1817	199B/208		721	7211100D	7712
37	01	E	00	000	19	0	BROWN	01-01-1817	199B/209		721	7211100D	7712
37	01	E	00	000	20	0	BROWN	01-01-1817	199B/210		721	7211100D	7712
37	01	E	00	000	21	0	BROWN	01-01-1817	199B/211		721	7211100D	7712
37	01	E	00	000	22	0	BROWN	01-01-1817	199B/212		721	7211100D	7712
37	01	E	00	000	23	0	BROWN	01-01-1817	199B/213		721	7211100E	7712

11

1818 GLO NOTES

7/9/2024

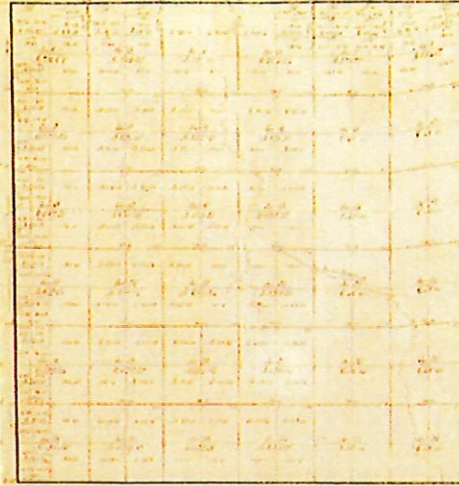
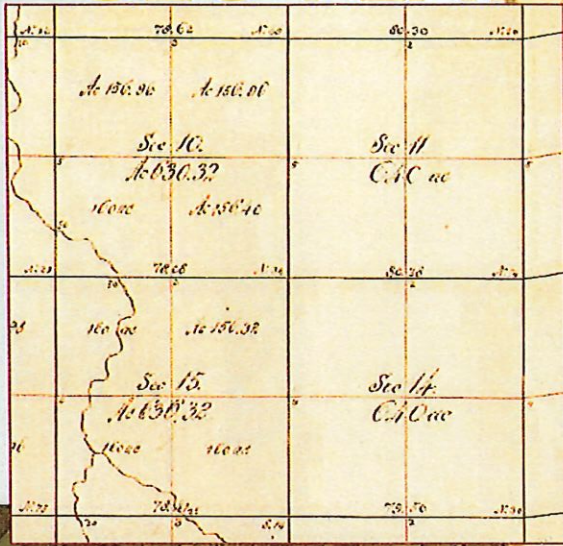
215
 North between Sections 14 & 15
 1817 or 1818
 21 25 26 oak 12 in dia
 21 25 26 oak 12 in dia
 21 25 26 oak 12 in dia
 21 25 26 oak 12 in dia
 21 25 26 oak 12 in dia

66 33 a Pine 10 in dia
 8000 set a post corner of Section
 10, 11, 14 & 15 from with a Pine
 13 in dia No 77 48 SW 34 like
 4 a Pine 13 in dia No 8
 6 10 3 like
 Pine Ridge
 77 Aug 5th 1818

Deputy Surveyor
 Lionel Brown

12

13 GLO PLAT



13

14 RESEARCH - ~~SUBSEQUENT~~ HYRCANUS HAWKINS

7/9/2024

37	01	E	13	000	0	0	HUTCHIN	07-26-1928	SRBG/052		221	2210254A	656421
37	01	E	13	002	0	0	1019	11-29-1978	018219		750	7503185A	657450
37	01	E	13	002	0	0	1019	11-29-1978	018219		750	7503185A	657451
37	01	E	14	000	0	0	HAWKINS	01-01-1900	SRBD/186		221	2210186B	653599
37	01	E	14	000	0	0	HAWKINS	03-24-1903	SRBD/224		221	2210192B	653617
37	01	E	14	000	0	0	HAWKINS	02-26-1908	SRBE/051		221	2210198B	655785
37	01	E	14	000	0	0	SETTLE	00-06-1924	CRBC/426		221	2210268A	656456
37	01	E	14	000	0	0	HAWKINS	03-24-1903	SRBD/224		221	2210192B	653617
37	01	E	14	000	0	0	HAWKINS	02-26-1908	SRBE/051		221	2210198B	655785
37	01	E	14	000	0	0	SETTLE	09-06-1924	SRBG/136		221	2210268A	656456
37	01	E	14	000	0	0	IRIN	01-17-1926	RANDE IE		651	6515805G	1222475
37	01	E	14	000	0	0	SETTLE	01-17-1926	SRBG/150		221	2210270B	656450
37	01	E	15	400	0	0	IRIN	01-01-1900	RANDE IE		651	6515809A	1222514
37	01	E	15	440	0	0	SHULAR	01-01-1900	SRBN/191		221	2210017A	658236
37	01	E	15	310	0	0	OTHARA	01-01-1900	SRBN/191		221	2210017A	658237

14

CO. SURVEYOR H HAWKINS, SRBD P. 186

15

7/9/2024

Survey No 103 for Ben Hill to the N.W. 1/4 Sec. 11, T. 14 N., R. 10 W., S. 34 E., 103
 commenced at what was said to be 1/4 sec. cor bet^{ns} secs 10 & 15. Hence
 Cont. 2. 40. 12 chs full north of N.W. cor. sec. 11, 80th one orig^l tree stg, a pine N. 48 W. 34th 55th stump of other S. 34 E., 103
 a pile of rocks on the mid end of a small bluff of rock, a Pin O. 55.64 to 21st. Hence
 Cont. 2. 32nd 70th 40 chs no signs of 1/4 sec. cor. at 80 chs no signs of sec. cor. Hence from S. H. N. W. S. H. Sec 14-37-16

commenced at what was said to be 1/4 sec. cor bet^{ns} secs 10 & 15. Hence

4. 40. 12 chs full north of N.W. cor. sec. 11, 80th one orig^l tree stg, a pine N. 48 W. 34th 55th stump of other S. 34 E., 103
 a pile of rocks on the mid end of a small bluff of rock, a Pin O. 55.64 to 21st. Hence

32nd 70th 40 chs no signs of 1/4 sec. cor. at 80 chs no signs of sec. cor. Hence from S. H. N. W. S. H. Sec 14-37-16
 Hook Given

15

16

RESEARCH - CORNER MASTER

7/9/2024

MISSOURI AGRICULTURE
 Corner Master Index

Home | Shopping Cart | Help |

Corner Search

To search Corner Master

1. Enter at least one search criteria
2. Click the search button.

Adobe Reader is required to view corner documents

Document Number: Surveyor: Sort By:

Township: Range: Direction:

US Survey: Begin Date: End Date:

File Marker:

16

7/9/2024

17 RESEARCH - CORNER

MISSOURI LAND SURVEY
P.O. BOX 230 KANSAS CITY, MISSOURI 64101
Phone 314 841 1100

DESCRIPTION OF CORNER EVIDENCE FOUND OR A CONCISE STATEMENT OF THE METHOD USED TO REESTABLISH THE CORNER:

DESCRIPTION OF MONUMENT AND ACCESSORIES ESTABLISHED TO PERPETUATE THE LOCATION OF THIS CORNER:
(Provide a sketch of the corner on the back of this form)

MONUMENT: 2 1/2" aluminum cap in 6" dia. concrete cylinder stamped to identify corner.
WITNESS ACCESSORIES: new trees scribed with "WT" at breast height and notched below "WT"; notch at base marked with aluminum nail. 4"x4" alum. WT plate nailed above "WT"; metal post with sign N-70°W, 1.5'.

NEW TREES MARKED:
1. 12" Scarlet Oak N-0°E, 10.6'
2. 9" Pine N-72°E, 12.7'
3. 10" Post Oak S-10°E, 7.5'
4. 3" Post Oak S-38°W, 12.5'

Description of corner evidence found OR a concise statement of the method used to reestablish the corner:

Old stone pile at west end of rock bluff; remains of pine stump N-44°W, 23.5'; stump hole S-35°E, 66'; 12" Oak with old hack marks S-65°E, 13'. Survey #103, page 186 (Hawkins); a pile of rocks on west end of small bluff; 5" Pin Oak S-64°E, 21 lks.

Description of monument and accessories I established to perpetuate the location of this corner:
(Provide a sketch of the corner on the back of this form)

Monument: 2 1/2" aluminum cap in 6" dia. concrete cylinder stamped to identify corner.
Witness accessories: new trees scribed with "WT" at breast height and notched below "WT"; notch at base marked with aluminum nail. 4"x4" alum. WT plate nailed above "WT"; metal post with sign N-70°W, 1.5'.
New trees marked:
1. 12" Scarlet Oak N-0°E, 10.6'
2. 9" Pine N-72°E, 12.7'
3. 10" Post Oak S-10°E, 7.5'
4. 3" Post Oak S-38°W, 12.5'

17

7/9/2024

18 RESEARCH - CORNER MASTER

MISSOURI LAND SURVEY
P.O. BOX 230 KANSAS CITY, MISSOURI 64101
Phone 314 841 1100

DESCRIPTION OF CORNER EVIDENCE FOUND OR A CONCISE STATEMENT OF THE METHOD USED TO REESTABLISH THIS CORNER:

DESCRIPTION OF MONUMENT AND ACCESSORIES ESTABLISHED TO PERPETUATE THE LOCATION OF THIS CORNER:
(Provide a sketch of the corner on the back of this form)

Grouted a new Aluminum cap stamped to identify corner into solid ledge rock and placed mass of concrete around the disk.
Existing Witness Trees Marked in 1986;
12" scarlet oak N 0d E 10.60 feet.
9" pine N 72d E 12.70 feet
10" elm (dead) S 10d E 7.50 feet previously recorded as a post oak.
5" chinkapin S 38d W 21.50 feet previously recorded as a post oak 12.5 ft.
11" chinkapin S 64d E 13.90 feet. Tree by Hawkins in 1900 steel post and sign N 70d W 1.50 feet.

Description of corner evidence found or a concise statement of the method used to reestablish this corner:

Found the Aluminum cap and concrete cylinder lying loose in a rock pile at the west end of a small rock bluff. The 1986 and 1900 witness trees still standing.

Description of monument and accessories I established to perpetuate the location of this corner:
(Provide a sketch of the corner on the back of this form)

Grouted a new Aluminum cap stamped to identify corner into solid ledge rock and placed mass of concrete around the disk.

Existing Witness Trees Marked in 1986;
12" scarlet oak N 0d E 10.60 feet.
9" pine N 72d E 12.70 feet
10" elm (dead) S 10d E 7.50 feet previously recorded as a post oak.
5" chinkapin S 38d W 21.50 feet previously recorded as a post oak 12.5 ft.
11" chinkapin S 64d E 13.90 feet. Tree by Hawkins in 1900 steel post and sign N 70d W 1.50 feet.

18

RESEARCH - CORNER MASTER

7/9/2024

19

MISSOURI DEPARTMENT OF REVENUE
GENERAL INQUIRY AND RECORDS DIVISION
COURT AND LAND RECORDS SECTION

SEARCHED INDEXED SERIALIZED FILED
MAY 15 2003
MAY 15 2003
MAY 15 2003

DESCRIPTION OF CORNER EVIDENCE FOUND OR A CONCISE STATEMENT OF THE METHOD USED TO REESTABLISH THIS CORNER.

May 20, 2003 I visited the corner at the request of adjacent property owner, Clinton Edward Hawkins, that thought the corner in error and should be approximately 150 feet North of the monumented position: I found no evidence of any corner marker, witness tree evidence or possession lines in the area shown to me by Mr. Hawkins.

From the monumented position of the corner the tree taken in 1900 by Co. Sur. H. Hawkins bears S64°E 21 links. It is now a 11 inch. In 1900 Surveyor Hawkins recorded the tree as a 5 inch Pin Oak. The tree is a chinkapin now 11 inch. Pin oaks trees are not native to this area and numerous survey records throughout Southeast Missouri during this time period refers to the chinkapin oak as only a Pin Oak.

Near the location of the stump hole of the original pine tree N48°W 34 links from the Aluminum cap I found lying on the ground a piece of pine wood that was the original blaze in the witness trees with scribing that verifies the tree stood in Section 10, Township 37 North, Range 1 East. This concludes that the Aluminum Cap perpetuates the position of the original government corner established by Deputy Surveyor Lionel Brown, May 5, 1818.

The elm tree noted as dead in October of 2000 is alive this date with green leaves.

19

20 CORNER REGISTRATION IN MISSOURI

7/9/2024

USF5001168 Sheet 1 of 2

Survey 487-64-18-187 May, 1818
U.S. Department of Agriculture
FOREST SERVICE

CHECK NATIONAL FOREST
CORNERS OF THE PUBLIC SURVEY

T. 37 N. R. 1 E. S. 10 SW. 1/4 Sec. 10
Corner corners to Section of
11, 12, 13, 14, 15

Corner monument of a Pin Oak
Bare tree being

Identical to those ground
Pulsed ground line, shown as marked on page here of map
CORNER POSITION DIAGONAL POSITION

N W E SW NE
NW SW SE NE

Mon 1 rd Is located

File the location
If no trace of corner trees or monuments are found in 5 or 10 year
renewal period

By: J. L. Williams
Director
For use
Date
Do not believe due to lack of previous Last Office Correct
East, why?

8/0/03
Williams
Register
Class

USF5001168 Sheet 2 of 2

T. 37 N. R. 1 E. S. 10 SW. 1/4 Sec. 10
Corner corners to Section of
11, 12, 13, 14, 15

Diagram showing the location of the corner to be registered in the section of the survey.

Metal Location Pin is on a
Iron 9 inches diameter, on the
side of
From which this Corner is set
170 yards distant
Give any further facts which will aid in locating this
Corner again.

20

MISSOURI REVISED STATUTES

7/9/2024

- 21 60.321. For the purpose of perpetuating the corners of the United States public land survey, every surveyor who reestablishes a lost corner or restores an existent corner shall monument the corner and file an instrument showing reestablishment or restoration with the MDA, in accordance with the specifications and procedures adopted by MDA. Any surveyor who willfully and knowingly fails to perpetuate corners in accordance with this section is guilty of misconduct in the practice of land surveying.

21

22

DEFINITIONS

7/9/2024

- **Corners of the USPLSS:** Those points that determine the boundaries of the various subdivisions represented on the official plat such as the township, section, quarter-section, fractional section, center of section, grant, lot, and meander corners

22

23

DEFINITIONS

- **Alteration of a corner:** Changing the physical monumentation of a corner or adding witness accessories
- **Date of field work:** Date when monument was physically altered or removed and referenced

23

24

DEFINITIONS

- **Existent corner:** One whose position can be identified by verifying the evidence of original monument or accessories, or physical evidence described in the field notes, or located by acceptable supplemental survey record or physical evidence thereof, or testimony

24

25

DEFINITIONS

Existent corner (cont)

Physical evidence of a corner may have been entirely obliterated but the corner will be considered existent if its position can be recovered through the testimony of 1 or more witnesses having dependable knowledge of original location. Legally reestablished corner shall have same status as an existent corner.

25

26

DEFINITIONS

- **Lost corner:** Corner whose position cannot be determined, beyond reasonable doubt, either from traces of the original marks or from acceptable evidence or testimony that bears upon the original position
- **Reestablishment of a corner:** The monumentation of a lost corner whose position has been determined by proportionate measurement

26

27 DEFINITIONS

- **Monument:** The physical object which marks corner point determined by surveying process. The accessories, such as bearing trees and objects, reference monuments, stone mounds, and similar objects that aid in identifying the corner position, are also considered part of a corner monument.

27

28 DEFINITIONS

- **Reference monument:** A monument set in such a manner and location that the position of the actual corner can be located from it by direction and distance or by 2 distances when 2 reference monuments are set

28

29 DEFINITIONS

- **Removal of a corner:**The complete elimination of an existing corner monument
- **Restoration of a corner:**Alteration of an existent corner

29

30 CHAPTER 60, RSMO

60.305. In the resurvey of USPLSS lands, the surveyor shall observe the following rules:

- (1) Boundaries of USPLSS in Missouri are unchangeable

30

31 CHAPTER 60, RSMO /2

(2) The original township, section, quarter-section and other corners established by the original government survey must stand as the true corners which they were intended to represent, regardless of the location indicated by the field notes and plat

31

32 CHAPTER 60, RSMO /3

(3) These corners must be restored at the identical spot where the original corner was located by the government survey, when this can be determined

(4) When this cannot be done, the corner is said to be lost and it must be reestablished in accordance with the provisions of this chapter

32

33 60.311 RSMO

- The restoration and utilization of existent corners of the USPLSS is a prime objective of every survey. Every means shall be undertaken to determine the position of the original corner before deciding that the corner is lost.

33

34 AUTHORIZATION FOR REMOVAL/ALTERATION OFCORNERS

- Only a PLS is authorized to remove, alter, restore or reestablish a corner of the United States Public Land Survey
- Any PLS who removes, alters, restores or reestablishes a corner of the USPLSS shall report his actions by filing approved document with the MDA, LSP within 90 days from the date of field work
- Permission required (60.550, RSMo) is granted upon filing the approved document with the MDA/LSP

34

7/9/2024

35 MONUMENTATION

- Monuments shall meet the requirements for permanent monument (Missouri Standards for Property Boundary Surveys)
- Where corner monumentation is impractical, reference or witness monuments are permissible, and shall be properly shown on documentation
- Monuments shall be marked in accordance with the Bureau of Land Management (BLM) system of marking monuments

35

7/9/2024

36 MONUMENTATION /2

- Four reference ties to durable objects where possible
- When replacing an existing monument, bury original monument face down alongside, to alleviate confusion
- In special cases where an existing monument is deemed appropriate to preserve, a reference or witness monument may be installed nearby

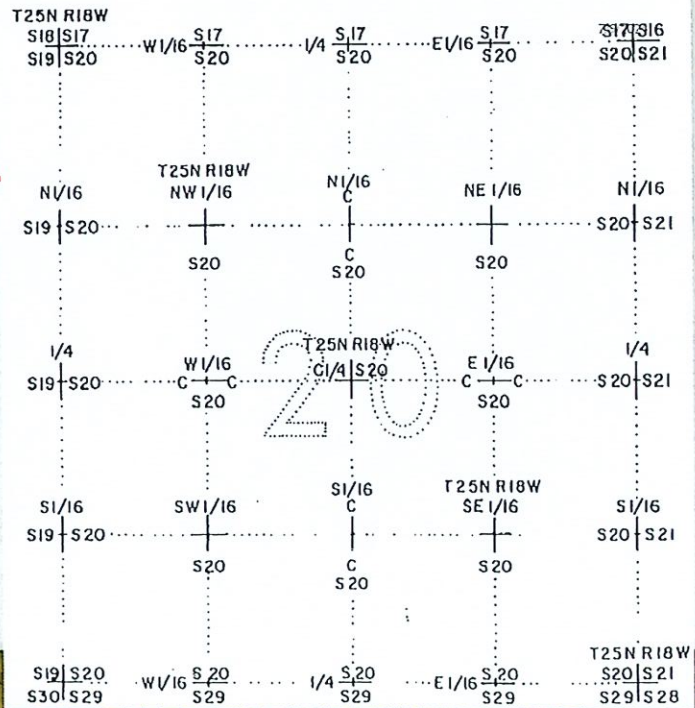
36

37 REFERENCE MONUMENTS

- Reference and witness monuments should be last thing considered
- When set, many people believe surveyor changed things
- Setting a reference monument a few feet away would create confusion

37

EXAMPLE OF MARKING IN SECTION 20

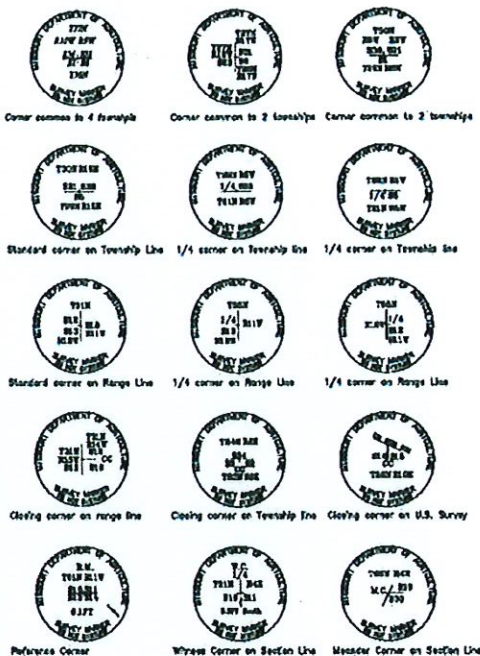


38

SPECIAL SURVEY MONUMENT MARKINGS

39

EXAMPLES OF SPECIAL SURVEY MONUMENT MARKINGS



39

WHEN STATE PLANE COORDINATES ARE REQUIRED

40

7/9/2024

- Only coordinates based on Missouri Coordinate System of 1983 (Metric) must be used
- Based on first or second order horizontal control station
- Survey connecting to the control station shall meet the accuracy standards for Property Boundary Surveys

40

WHEN STATE PLANE COORDINATES ARE REQUIRED

7/9/2024

41

12

- Note control station(s), coordinates, zone, and date of adjustment or epoch date for those stations
- State **relative positional tolerance** of coordinates and grid factor used
- State Plane Coordinates may be used to reference corners

41

CERTIFIED LAND CORNER DOCUMENT

42

In two formats
 Adobe (.PDF)
 CAD (.DWG)

MICHIGAN DEPARTMENT OF AGRICULTURE
 DIVISION OF SURVEYS, SURVEYING AND SURVEYING REGULATION
 LAND SURVEYING
 GREAT PLAINS LAND SURVEYING COMMUNITY

P.A. No. 180/2024
 FILING, RECORDING, AND INDEXING

STATE OF MICHIGAN
 COUNTY OF _____

SECTION 1: SURVEY INFORMATION
 1.1. Survey Name: _____
 1.2. Survey Date: _____
 1.3. Surveyor Name: _____
 1.4. Surveyor License No.: _____
 1.5. Description of Land: _____
 1.6. Purpose of Survey: _____
 1.7. Date of Survey: _____

SECTION 2: SURVEY DATA

Station No.	Station Name	Coordinates (Easting, Northing)	Zone	Epoch
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____
5	_____	_____	_____	_____
6	_____	_____	_____	_____
7	_____	_____	_____	_____
8	_____	_____	_____	_____
9	_____	_____	_____	_____
10	_____	_____	_____	_____

SECTION 3: SIGNATURE AND CERTIFICATION

Surveyor Signature: _____
 Date: _____

SECTION 4: NOTES

SECTION 5: CONTACT INFORMATION

Surveyor Name: _____
 Phone: _____
 Email: _____

SECTION 6: FILING AND RECORDING

File No.: _____
 Record No.: _____
 Index No.: _____

SECTION 7: CHECKSUMS

Checksum 1: _____
 Checksum 2: _____

42

43 MISSOURI DEPARTMENT OF AGRICULTURE

7/9/2024



43

44 WEIGHTS AND MEASURES LAND SURVEY

7/9/2024

Land Survey Program

Who We Are and What We Do

The mission of the Land Survey Program is to develop and provide information required for the accurate and economical location of property boundaries in Missouri. The program is responsible for Cadastral and Geodetic Surveys, as well as moving survey documents available to landowners and the public. The corners of the United States Public Land Survey System (PLSS) are the basis for the location of all property in Missouri. Property measurements, they are a dependable, consistent, accurate source of information for settling property boundary disputes and other boundary related questions.

Cadastral Section

The Cadastral Section is responsible for vectoring existing and established corners of the United States Public Land Survey System. Hundreds of corners are restored, thousands perpetuated and disseminated through measure projects, contacting and participation in the filing of Certified Land Corner Documents.

County Survey Co-op

The Land Survey Program enters into contracts with county governments to reconstruct corners of the Original Government Survey. These contracts are contractual agreements between the Department and county governments.

Online Services

- Land Survey Index (LSI)
- Corner Marker Index (CMI)
- EDM Baseline Calibrations
- Geographic Reference System

Private Survey Co-op

Statutes and Rules

- 2 CSR 90-00 Missouri Standards for Property Boundary Surveys
- 2 CSR 90-01 United States Public Land Survey Corners
- 2 CSR 90-02 First and Second Order Horizontal and Vertical Control
- 2 CSR 90-03 Standards for Surveyor's Real Property Report
- 2 CSR 90-04 Mapping Survey Standards
- 2 CSR 90-05 Cadastral Mapping Survey Standards
- 20 CSR 3003 Division of Professional Registration
- Relevant Statutes Related to Land Survey

Maps, Forms, Publications &

44

45 LAND SURVEY PROGRAM

7/9/2024

Maps, Forms, Publications & Additional Resources

- Maps
- Forms
- Publications
- Sites of Interest

45

46 FORMS

7/9/2024

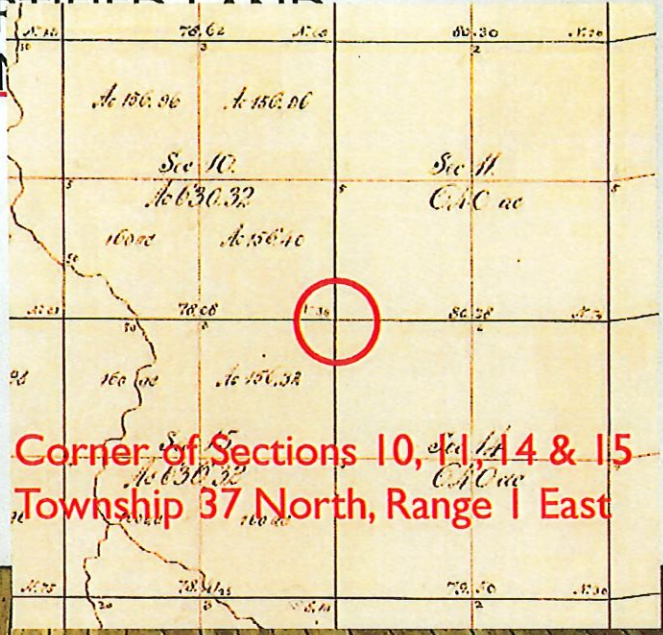
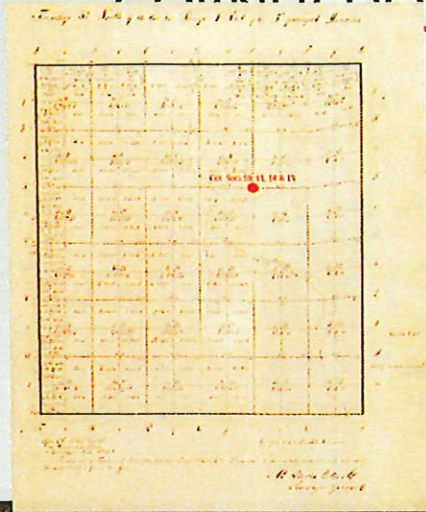
Forms

- [Surveyor Contract Qualification Questionnaire](#)
- [Certified Land Corner Document](#)
 - [PDF](#)
 - [DWG](#)
- [EDM Calibration Report EDM Baseline \(Horizontal\)](#)
 - [Cedar City](#)
 - [Dexter](#)
 - [Jasper County](#)
 - [Kirksville](#)
 - [Lake City](#)
 - [Pomona](#)
 - [River Valley](#)
 - [Springfield](#)
 - [Squaw Creek](#)
 - [Taylor](#)
 - [Vichy Reversed](#)
- [Observation Log](#)
- [Horizontal and Vertical Control Recovery Form](#)
- [Checklist for Corner Documents](#)
- [Check List for Plat Review \(PDF\)](#)

46

47 COMPLETING A CERTIFIED LAND CORNER DOCUMENT

7/9/2024

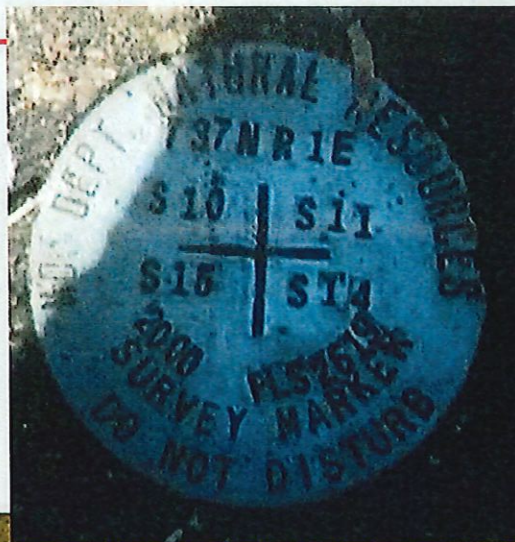


Corner of Sections 10, 11, 14 & 15
Township 37 North, Range 1 East

47

48 CAP BY PLS 2619

7/9/2024



48

VIDEO CLIP OF CORNER

7/9/2024

49



49

7/9/2024



50

1900 HAWKINS TREE & 51 1939 FOREST SERVICE

7/9/2024



51

ORIGINAL AND SUBSEQUENT SURVEY DESCRIPTIONS 52 REFERENCING THIS CORNER POSITION

7/9/2024



MISSOURI DEPARTMENT OF AGRICULTURE
DIVISION OF WEIGHTS, MEASURES AND CONSUMER PROTECTION
LAND SURVEY PROGRAM
CERTIFIED LAND CORNER DOCUMENT

P.O. Box 937
Rolla, Missouri 65402-0937
(573) 368-2300

- CORNER RESTORATION (Accepted or perpetuated corner)
- CORNER ESTABLISHMENT (Any PLSS corner created, but not monumented in the original survey; Blank 1/4, Center 1/4, etc.)
- CORNER REESTABLISHMENT (Lost corner)

Description of original and subsequent surveys referencing this corner position:
(References shall include date of survey, surveyor of record, location of survey (book and page), monument, accessories and other information relevant to the location of this corner.)

May 1818: Original Government Survey, Volume 199 at Page 208, Lionel Brown, Deputy Surveyor.
North Between Secs 14 & 15 T37N R1E @ 80.00 chains Set a post corner of Sections 10, 11, 14 & 15
From which: 13° Pine N.48°W., 34 links
13° Pine S.35°E., 103 links

Dec. 1900: Survey Record Book D at Page 186, Hyrcanus Hawkins, County Surveyor.
One original tree standing, a pine N.48°W., 34 links & Stump of other S.34°E., 103 links. A pile of rocks on the West end of a small bluff of rock. A Pin Oak 5° S.64°E., 21 links.

May 1939: USFS 001168, USFS 018844, USFS 018777 (Yellow Sheets), W. Graham, Enrollee.
Corner consists of Rocks in place 12 inches above ground, metal location Poster on a 6" Elm from which the corner bears North 1/10 chains distant.
18° Pine N.45°W., 35 links

Continued on Page 2

52

DESCRIPTION

53

Continued from page 1

7/9/2024

Feb. 1986: Missouri Land Survey Document 600-37039, John A. Hrinsin, PLS 1410. Old stone pile at West end of rock bluff, remains of pine stump N.44°W., 23.5 feet, stump hole S.35°E., 66 feet, 12 inch Oak with old hack marks S.65°E., 13 feet. Set a 2 1/2 inch aluminum cap stamped to identify the corner in a 6 inch diameter concrete cylinder. Marked new trees; 12" Scarlet Oak N.0°E., 10.6 feet, 9" Pine N.72°E., 12.7 feet, 10" Post Oak S.10°E., 7.5 feet, 3" Post Oak S.38°W., 12.5 feet.

Oct. 2000: Certified Land Corner Document 600-65902, William K. Berthold, PLS 2619. Found the Aluminum Cap and concrete cylinder lying loose in a rock pile at the West end of a small rock bluff. The 1986 and 1900 witness trees still standing. Grouted a new aluminum cap stamped to identify the corner into solid ledge rock and placed a mass of concrete around the disk. Existing trees marked in 1986; 12" Scarlet Oak N.0°E., 10.6 feet, 9" Pine N.72°E., 12.7 feet, 10" Elm (dead) S.10°E., 7.5 feet (previously recorded as a Post Oak), 5" Chinkapin S.38°W., 21.5 feet, (previously recorded as a Post Oak 12.5 feet), 11" Chinkapin S.64°E., 13.9 feet (tree by Hawkins in 1900), steel post and sign N.70°W., 1.5 feet.

May 2003: Certified Land Corner Document 600-71972, Orvis D. Lashley, PLS 1538.
I visited the corner at the request of adjacent property owner, Clinton Edward Hawkins, that thought the corner in error and should be approximately 150 North of the monument position. I found no evidence of any corner marker, witness tree evidence or possession lines in the area shown to me by Mr. Hawkins. From the monumented position of the corner the tree taken in 1900 by Co. Sur. H. Hawkins bears S.64°E., 21 links. It is now a 11 inch. In 1900 Surveyor Hawkins recorded the tree as a 5 inch Pin Oak. The tree is a Chinkapin now 11 inches. Pin Oak trees are not native to this area and numerous survey records throughout Southeast Missouri during this time period refers to the Chinkapin Oak as only a Pin Oak. Near the location of the stump hole of the original Pine tree N.48°W., 34 links from the Aluminum cap I found lying on the ground a piece of pine wood that was the original blaze in the witness tree with scribing that verifies the tree stood in Section 10, Township 37 North, Range 1 East. This concludes that the Aluminum Cap perpetuates the position of the original government corner established by Deputy Surveyor Lionel Brown, May 5, 1818.
The Elm tree noted as dead in October of 2000 is alive this date with green leaves.

53

DESCRIPTION OF CORNER
EVIDENCE FOUND

7/9/2024

54

Description of corner evidence found or a concise statement of the method used to establish or reestablish this corner:

February 2017: Found Aluminum cap grouted into ledge rock on the West end of a rock bluff
Stump hole N.48°W., 22.4 feet (GLO) Stump hole S.35°E., 68.0 feet (GLO)
13" Chinkapin Oak S.64°E., 13.9 feet (1900 H. Hawkins noted as a Pin Oak)
16" Scarlet Oak N.0°E., 10.6 feet (1986 Hrinsin)
11" Pine N.61°E., 12.7 feet (1986 noted N.72°E.)
13" Elm S.10°E., 7.5 feet (1986 noted as a Post Oak & 2000 as dead elm)(1939 USFS)
6" Chinkapin S.38°W., 21.5 feet (1986 noted as a Post Oak 12.5 feet)
steel post and sign N.70°W., 1.5 feet

54

55 DESCRIPTION OF MONUMENT AND ACCESSORIES PERPETUATING CORNER

7/9/2024

Description of monument and accessories established to perpetuate the location of this corner:
(Provide a sketch of the corner on the back of this form.)

Accepted the grouted in cap by William K. Berthold, LS #2619
 16" Scarlet Oak N.0°E., 10.6 feet (1986 Hrinsin)
 7" Chinkapin Oak N.0°E., 20.6 feet (new)
 11" Pine N.61°E., 12.7 feet (1986 Hrinsin)
 13" Elm S.10°E., 7.5 feet (1939 USFS) (1986 Hrinsin)
 6" Chinkapin S.38°W., 21.5 feet (1986 Hrinsin)
 13" Chinkapin S.64°E., 13.9 feet (1900 Hawkins)
 steel post and sign N.70°W., 1.5 feet
 Set steel post and sign South 6.0 feet (new)

55

56 CORNER DESCRIPTION

7/9/2024

CORNER DESCRIPTION			
CORNER OF SECTION(S)	TOWNSHIP	RANGE	COUNTY
Corner Common to Sections 10, 11, 14 & 15	T 37 N	R 1 E	Washington

56

CORNER COORDINATE MISSOURI COORDINATE SYSTEM (1983 METRIC)

7/9/2024

CORNER COORDINATE MISSOURI COORDINATE SYSTEM (1983 METRIC)					
NORTH	EAST	RELATIVE POSITIONAL TOLERANCE	ZONE	PROJECT GRID FACTOR	
233,340.041	214,423.422	6 cm	East	0.9999083	
CONTROL STATION(S) DESCRIPTION MISSOURI COORDINATE SYSTEM (1983 METRIC)					
NAME / PID#	COORDINATE ORIGIN (AGENCY)	NORTH	EAST	DATE OF ADJUSTMENT OR EPOCH DATE	ZONE
MODOT Real-Time Network (RTN) Utilizing a Virtual Reference Station (VRS) as Control	NGS	N/A	N/A	NAD 83 (2011) EPOCH 2010.00	East

57

OPUS ONLINE POSITIONING USER SERVICE

7/9/2024

- <http://www.ngs.noaa.gov/opus>

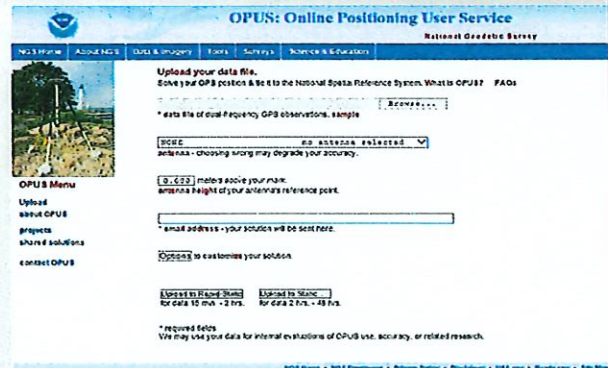
Upload data file

Select antenna type

List antenna height (meters)

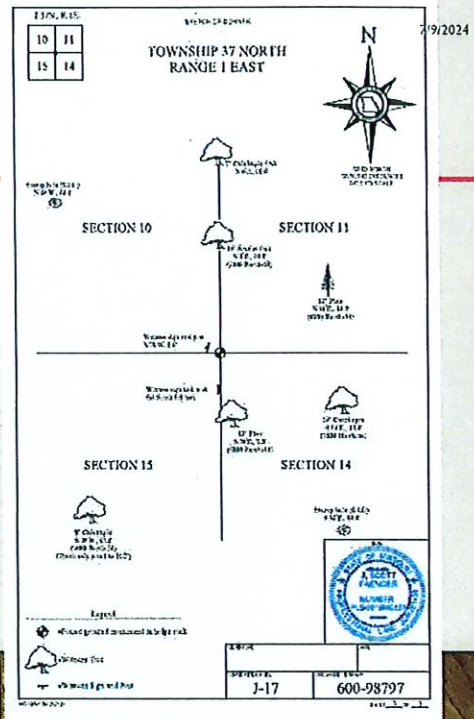
Note your email address

Upload to "Rapid Static" or "Static"



58

SKETCH OF 6 CORNER



61

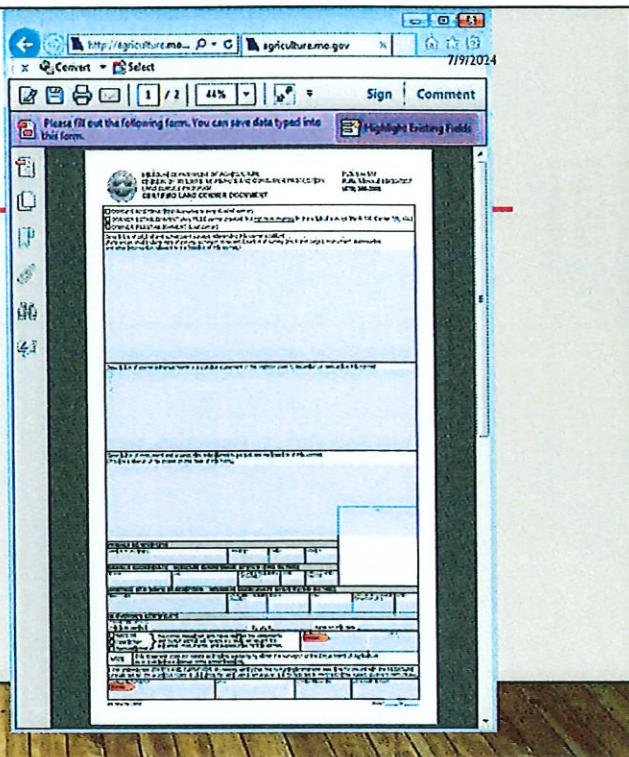
62 PDF VERSION

- The Certified Land Corner Document form in PDF format, is a "Fill-In" form
- The document is pre-set with text boxes ready to accept your corner information
- The document has pre-established digital signature and date boxes
- Can be used as a printable form to be filled out by hand and/or typewriter

62

PDF VERSION

63

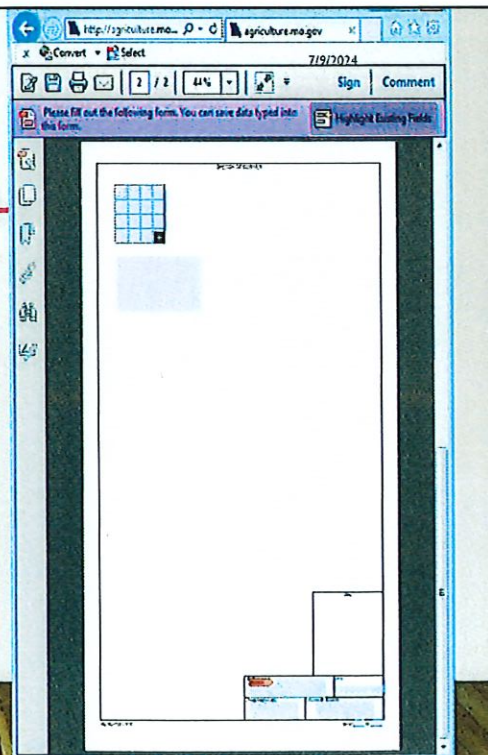


63

USING A CUSTOM STAMP

64

- Copy image from original source, i.e. CAD drawing, Word document or another PDF, into separate PDF file
- Create Custom Stamp using this file
- Use this method to insert your sketch, north arrow, Surveyor's Seal, etc.



64

7/9/2024

65 COMMON MISTAKES

- Incomplete GLO and subsequent records
- Found evidence space left blank
- Corner description unclear
- No surveyor's seal and signature
- No courses shown on reestablishment documents

65

7/9/2024

66 COMMON MISTAKES /2

- Date of Adjustment.
- Incorrect corner index number
- No bearing reference
- Pencil sketches too light for scanning
- Old form

66

67 CHECKLIST

Land Survey

- Certified Land Corner Document PDF | DWG
- EDM Calibration Report EDM Baseline (Horizontal)
 - Cedar City
 - Dexter
 - Jasper County
 - Kirksville
 - Lake City
 - Perryville
 - Pomona
 - River Valley
 - Springfield
 - Squaw Creek
 - Taylor
 - Vichy Reversed
- Observation Log
- Horizontal and Vertical Control Recovery Form
- Surveyor Contract Qualification Questionnaire
- Plat Review Checklist
- Checklist for Corner Documents

CHECKLIST FOR CORNER DOCUMENTS (Filed with the MDA Land Survey Program)

NAME OF SURVEYOR: _____ DATE OF FORM: _____
 REVIEWED BY: _____ DATE: _____
 CORNER LOCATION: TOWNSHIP: _____ RANGE: _____ INDEX NO. _____

ALL CORNER DOCUMENTS SHALL SHOW THE FOLLOWING:	YES	NO	NA
1) Check box for restoration, establishment or reestablishment	___	___	___
2) Lettering or typing not less than 0.03" in height	___	___	___
3) Lettering or typing in black ink	___	___	___
4) Drawings clear and sharp	___	___	___
5) Description of original monument and accessories	___	___	___
6) Description of any subsequent surveys	___	___	___
7) Surveyor's seal with date and signature on front and back sheet	___	___	___
8) Date of survey field work	___	___	___
9) Basis of bearing system used	___	___	___
10) Description of existing or reestablished monument and accessories	___	___	___
11) Comprehensive sketch of corner location (reference ties)	___	___	___
12) Sketch is in accordance with MO CSR 290-01.000	___	___	___
13) State coordinates, if known	___	___	___

68

RESTORATION OR ALTERATION OF EXISTING MONUMENT: YES NO NA

- 13) Description of evidence found and used in restoration _____
- 14) Resident witness affidavits _____
- 15) Distance and direction used in restoration _____

FOR REESTABLISHED MONUMENTS:

- 16) Statement of method used to reestablish corner. _____
- 17) Distances and directions used in the reestablishment procedure. _____

WHEN COORDINATES ARE SHOWN:

- 18) Coordinates of corner in meters _____
- 19) Relative positional tolerance of coordinates obtained for corner monument _____
- 20) Zone of corner coordinates _____
- 21) Project grid factor used _____
- 22) Coordinates of 1st and 2nd Order Control Station used _____
- 23) Control station coordinate origin (agency) _____
- 24) Coordinates of control station(s) _____
- 25) Date of adjustment or epoch date, of control station(s) _____
- 26) Zone of control station(s) _____
- 27) Brief statement of the method used to obtain the position _____

69 PROCEDURES FOR FILING DOCUMENTS

- Approved documents shall be filed with the MDA/LSP
- Documents filed with recorder must first be filed with the MDA
- There is no fee for filing these documents

69

70 CORNER MASTER INDEX

The screenshot shows the 'MISSOURI AGRICULTURE Corner Master Index' website. At the top, there is a navigation bar with 'Home | Public Menu | Log Off'. Below this is a 'Corner Search' section with the instruction '*Please enter search criteria.*'. The search form includes several input fields and dropdown menus:

- Search Type:
- Document Number:
- Township:
- US Survey:
- Corner Type:
- Monument Type:
- Surveyor Number:
- Range:
- Begin Date:
- Corner Index Let:
- Contract Type:
- Sort By:
- Direction:
- End Date:
- Corner Index No:
- 3/4" Marker:

 At the bottom of the form are three buttons: 'Search', 'Print', and 'Close'.

70

CORNER INDEX GRID

71

Township _____ Range _____ County _____ 7/9/2024

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
B																										
C		6	60	5	44	A	33	3	22	2	11	1														
D																										
E		-59		-58		-43		-32		-21		-10														
F																										
G		7	57	8	42	9	31	10	20	11	0	12														
H																										
J		-56		-55		-41		-30		-19		-8														
K																										
L		18	54	17	40	16	29	15	18	14	7	13														
M																										
N		-53		-52		-39		-28		-17		-6	-5													
O																										
P		19	51	20	38	21	27	22	16	23	5	24														
Q																										
R		-50		-49		-37		-26		-15		-4														
S																										
T		30	48	29	36	28	25	27	14	26	3	25														
U																										
V		-47		-46		-35		-24		-13		-2														
W																										
X		31	45	32	34	33	23	34	12	35	1	36														
Y																										
Z																										

71

72 COUNTY CO-OP PROGRAM

7/9/2024

- A means for restoration of land corners through cost share program between county government and MDA. It allocates funds each year for program and sends out letters to all County Commissioners to solicit participation via contract.

72

73 COUNTY CO-OP PROGRAM /2

- Qualifying corners must meet one of the following
- Original evidence
- Chain of evidence
- Properly reestablished corner
- Established corner – relationship to adjacent corners

73

74 PRIVATE SURVEYOR CO-OP PROGRAM

- Land Survey Program (LSP) contracts with private surveyors to remonument corners of the original Government Survey
- LSP furnishes monumentation supplies
- Private surveyor installs monumentation and files a Certified Land Corner Document
- LSP will pay agreed-upon cost of remonumentation

74

LAND SURVEY PROGRAM



- Department of Agriculture
- Weights, measures and consumer protection
- agriculture.mo.gov/weights/landsurvey
- Land Survey Program
1251A Gale Drive
PO Box 937
Rolla, MO 65402-0937
Phone: 1873 368-2300
Fax: 1873 368-2379
email: landsurvey@mda.mo.gov