

Ottawa County Remonumentation Program Summary

Developed
Winter 2020

Introduction

Remonumentation is the process of re-tracing, re-establishing, and maintaining the accuracy of land survey corners. Land survey corners, or “monuments” form the basis of the Public Land Survey System (PLSS) which is the reference for determining ownership of public and private property. Verifying the accuracy of all 2,186 land survey corners in Ottawa County is crucial in maintaining accurate property descriptions.

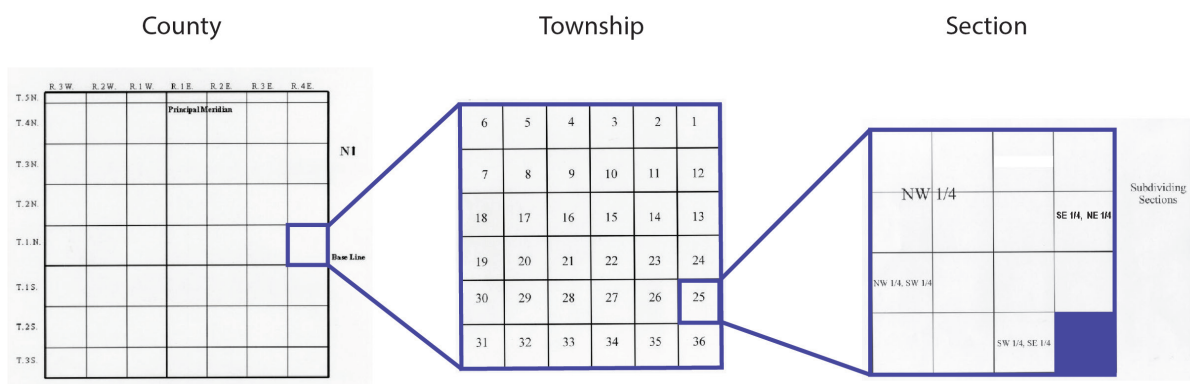
While seemingly a straightforward and monotonous task, surveying and remonumentation efforts are steeped in history and tradition. First established by teams of rugged frontiersmen in the early 1800s, these early survey corners delineated by rocks, sticks, and etchings in trees established the boundaries on which properties are separated, roadways are placed, and local governments are formed. Act 345 (State Survey and Remonumentation Act of 1990) represented the first effort to validate these corners in over 175 years and record them using modern GPS technology.


History and Importance of the Public Land Survey System (PLSS)

The surveying of land has been a human endeavor for thousands of years, from the Roman Empire establishing a land taxation system to British colonies instituting a “metes and bounds” system of property descriptions¹. Both George Washington and Thomas Jefferson were land surveyors by practice, with Washington’s experience in the Allegheny Mountains playing a key role in the French and Indian War². Following the American Revolution, the United States obtained control of the Northwest Territory from the British. Vast and largely uncharted, it was decided that a surveying system would be instituted to determine property ownership in the newest part of the fledgling nation.

Thomas Jefferson first proposed the Public Land Survey System (PLSS) as a means of organizing the vast interior of North America into rectangular geographic areas³. Territories would be divided into six-mile square blocks, called “survey townships”, each with 36 one-mile square “sections”. These sections would then be subdivided into four quarters (NE, NW, SE, SW), which are further subdivided into additional quarters. Varying from the “metes and bounds” surveying method dating back to Medieval England, the PLSS’s mathematically uniform and predictable system for establishing property relies on base lines and meridians⁴, in which all survey townships are referenced as being either north, south, east, or west of these lines.

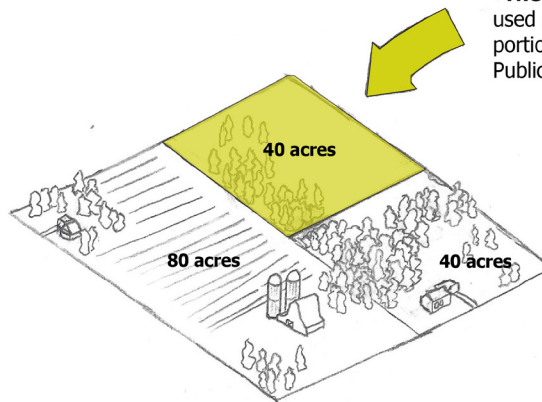
How to Read Property Descriptions Derived from PLSS



The property description for the  parcel would read as follows:
SE 1/4 of the SE 1/4 of Section 25, Town 1 North, Range 4 East

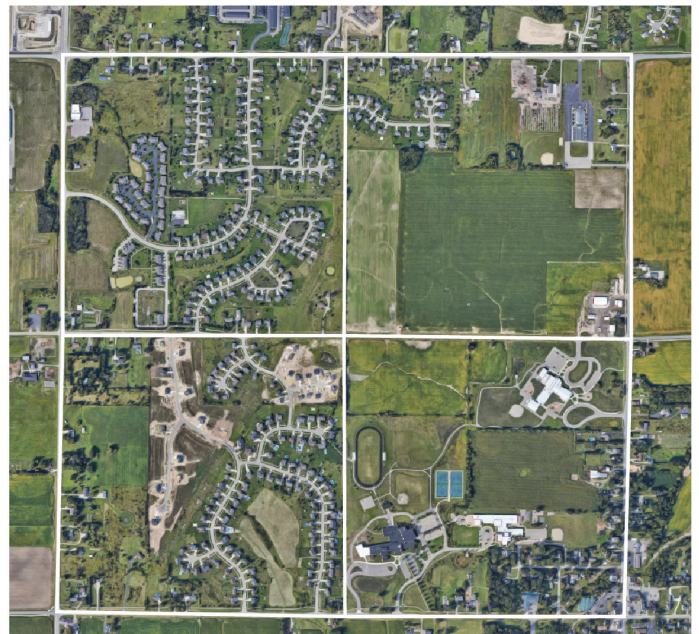
With the passage of the Land Ordinance of 1785, the PLSS was first implemented along the western banks of the Ohio River Valley⁵. In stark contrast to surveying methods today, surveying in the Northwest Territory was an arduous and dangerous process. Surveyors in teams of two proceeded into the uncharted forests of the upper Midwest, often using nothing but a compass and a measuring chain. Surveying parties encountered swamps, perilous cliffs, attacks from wild animals, and raids from native Americans. Although a challenging profession, these frontiersmen were among the first to take notes of the landscapes they traversed. In recent decades, information from their journals have been invaluable in identifying North America’s vegetation prior to European settlement⁶.

Following his belief in a well-educated agrarian society, Jefferson seized the opportunity to buy 827,000 square miles from France in 1803. With the stroke of a pen, the Louisiana Purchase doubled the size of the United States and required surveying the new territory using the PLSS. Using a standard issue 66-foot measuring chain (“one chain”), it would take surveyors 80 “chains” to measure one mile (5,280 feet). With 640 acres in each section, land was easily subdivided proportionally. Revolutionary War veterans were often granted 100-160 acres for their service⁷, and remaining plots were auctioned to settlers at low prices.



“The Back Forty” - Expression commonly used as a reference to a remote or unused portion of one’s property, derived from the Public Land Surveying System (PLSS)

In Michigan, we have a rich and intricate relationship with the PLSS. Legacies of the system abound, from Meridian Road denoting the state’s meridian line, Base Line Road (Eight Mile Road in Detroit), and the evenly spaced grid of roadways here in Ottawa County. Grand Rapids founder Lucius Lyon even served as the nation’s final Surveyor General of the Northwest Territory in 1845⁸. Our county, townships, sections, quarter sections, and subsequent parcels are all geographic units derived from the PLSS.



2 Above: Examples of sections and quarter-sections in Ottawa County. Aerials accessed from Google Maps.

Maintaining the Public Land Survey System (PLSS)

As the first PLSS monuments were laid in the 1800s, revisiting them and ensuring their accuracy is the goal of the Ottawa County Remonumentation Program. This is accomplished on an annual basis, with the county requesting and receiving grant funds from the state for these purposes.

With all 2,186 survey corners in the county revisited and recorded using GPS technology, the county is currently in the maintenance phase, where select corners are revisited to ensure they remain accurate and in good condition.



Above: Late 1800s monument stones used to delineate corners, found on Section 28/Section 29 boundary in Trowbridge Township in Allegan County in 2015.

Timeline of the Ottawa County Remonumentation Program

1992: Ottawa County Remonumentation Plan is adopted – Following the creation of Act 345 of 1990, Ottawa County first established a 20-year plan to remonument all corners within the county.

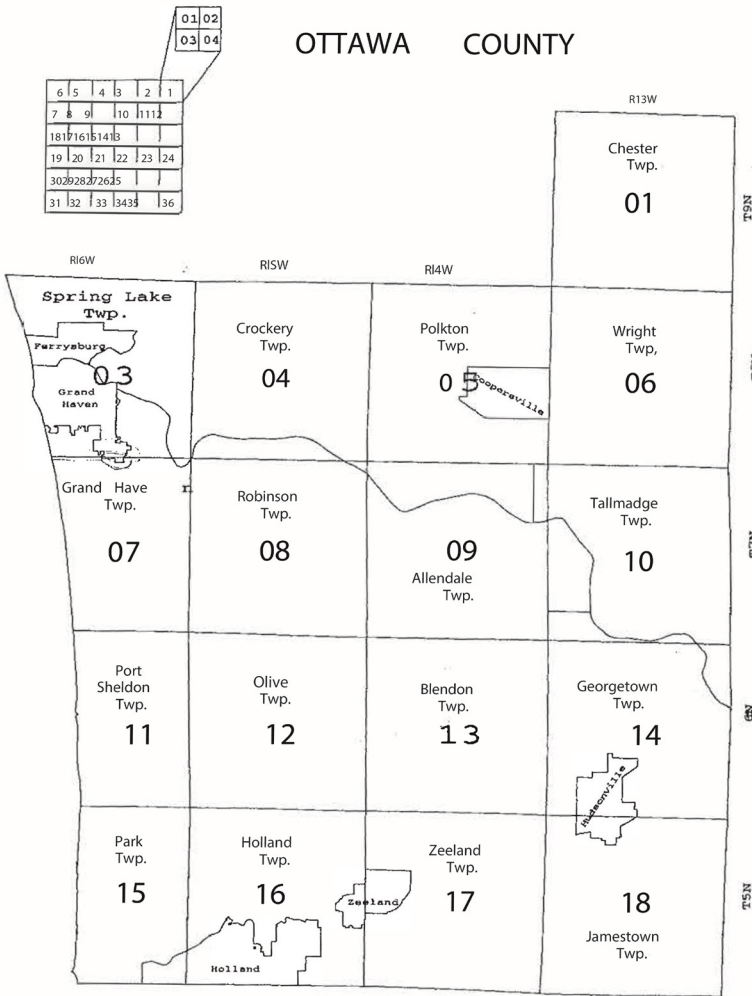
2012: Ottawa County request for expedited reimbursement – Due to Ottawa County expending money to expedite the completion of remonumentation services, the State of Michigan must reimburse the county per Sec. 8(4) of Act 345 of 1990. Beginning in 2015, each annual reimbursement is \$174,906 and will pay back \$1,049,436 over 10 years, with the final payment coming in 2025.

2013: County completed remonumentation phase of program – With all 2,186 land survey corners remonumented and verified, the county submitted their remonumentation completion notice to the Michigan Department of Licensing and Regulatory Affairs (LARA), signaling the end of the remonumentation phase.

2015: Ottawa County enters maintenance phase of program – With the remonumentation phase complete, Ottawa County embarked on perpetual maintenance of these corners.

2020: Ottawa County Remonumentation Plan is amended – Nearly 30 years after Act 345 was established, the Michigan Department of Licensing and Regulatory Affairs (LARA) required counties to revise their county plans to illustrate their status in remonumentation efforts. Since Ottawa County had already completed remonumentation and had entered maintenance in 2015, this plan simply provided an update on the maintenance plan while adopting LARA regulations for peer review group meetings.

OTTAWA COUNTY



Town and Range of Ottawa County Survey Townships

Survey Township	Town	Range
Spring Lake Township	T8N	R16W
Grand Haven Township	T7N	R16W
Port Sheldon Township	T6N	R16W
Park Township	T5N	R16W
Crockery Township	T8N	R15W
Robinson Township	T7N	R15W
Olive Township	T6N	R15W
Holland Township	T5N	R15W
Polkton Township	T8N	R14W
Allendale Township	T7N	R14W
Blendon Township	T6N	R14W
Zeeland Township	T5N	R14W
Chester Township	T9N	R13W
Wright Township	T8N	R13W
Tallmadge Township	T7N	R13W
Georgetown Township	T6N	R13W
Jamestown Township	T5N	R13W

Citations

- 1.) Brady, M. E. (2018). *The Forgotten History of Metes and Bounds*. New York University Law.
- 2.) *Ten Facts About George Washington and the French and Indian War* (2020). George Washington's Mount Vernon. Retrieved from <https://www.mountvernon.org/george-washington/french-indian-war/ten-facts-about-george-washington-and-the-french-indian-war/>
- 3.) United States Department of the Interior. (2012, May 29). *The Public Land Survey System (PLSS)*. National Atlas. Retrieved from https://web.archive.org/web/20120607063232/http://www.nationalatlas.gov/articles/boundaries/a_plss.html
- 4.) *Metes and Bounds vs. Public Lands* (n.d.). Virtual Museum of Surveying. Retrieved from http://www.surveyhistory.org/metes_&_bounds_vs_public_land.htm
- 5.) Ohio History Connection. (2020). *Seven Ranges*. Ohio History Central. Retrieved from https://ohiohistorycentral.org/w/Seven_Ranges
- 6.) Galatowitsch, S. M. (1990) *Using the Original Land Survey Notes to Reconstruct Presettlement Landscapes in the American West*. Great Basin Naturalist: Vol. 50 : No. 2, Article 10. Available at: <https://scholarsarchive.byu.edu/gbn/vol50/iss2/10>
- 7.) *What is Bounty Land?* (2015, October 22). Fold3 HQ. Retrieved from <https://blog.fold3.com/what-is-bounty-land/>
- 8.) White, A. (1983). *A History of the Rectangular Survey System*. United States Department of the Interior.