

WISCONSIN COUNTY



SURVEYORS HANDBOOK

Dear County Surveyor or County Official,

Often a newly appointed or elected county surveyor will ask, "Just exactly what is my job and what are my duties?" The same question comes from county employees and elected supervisors.

With that in mind, the Wisconsin County Surveyors' Association (WCSA) made it a goal to produce a reference manual that would answer the many questions so often asked about the office of the county surveyor in Wisconsin.

After a great deal of work by some of our members, the manual is now complete and is being distributed to all the counties in the State. The manual is complimentary. The WCSA only asks that the manual remain county property and be housed at the official office of each county surveyor. For those few counties that do not have a county surveyor, it is hoped that the manual will be kept with an appropriate county official such as the county land information officer.

The manual is constructed so that items can be added to it. The WCSA hopes that the manual will be a handy guide for each county in the years to come.

Please accept it with our compliments. If you have any questions or comments, feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "William C. Jung". The signature is written in a cursive, flowing style.

William C. Jung
La Crosse County Surveyor
President, WCSA

**This handbook is intended to assist current County Surveyors,
new County Surveyors, County Boards looking at
creating or maintaining a County Surveyor position,
and anyone interested in the County Surveyor position and his/her
duties.**

Current through January, 2004

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Special Thanks to:
The County Surveyor's Handbook Committee
and all those from the
Wisconsin County Surveyors Association
that have contributed toward this handbook.

Front cover:
Abraham Lincoln Print done by Lloyd Ostendorf, 1967
Donated by William Rhode

Vision Statement County Surveyor

The County Surveyor shall always remember that their principal responsibility to the public has changed little since 1848, that is to monument and maintain the public land survey system of section and quarter corners. The law requires this of the County Surveyor. The County Surveyor should constantly envision the day when this system is again intact as it was over 150 years ago. Once intact, the County Surveyor should guard this system like a “loyal watchdog” so to speak, for the section and quarter section corners are the basis of all land ownership as we know it. The County Surveyor must always protect this network of public corners.

The County Surveyor must always envision the day when the record again are complete. When complete, the records should be constantly maintained and inspected. The County Surveyor should never again allow these records to be lost or destroyed as they were in the past. The law also requires this. The County Surveyor must never forget how many citizens are dependant on these records for research.

The County Surveyor must always strive to be a leader by constantly studying, reading and updating their education. The County Surveyor should always be available to give advice, is do asked, to the land surveyors who practice in their county. If the answer to a question is not known, the County Surveyor should know where to find the answer. By doing so, they can command the respect that this office was shown generations ago.

The County Surveyor should be available to the public at all times, not only in the field, but also in the classroom. When the public asks, the County Surveyor should respond. The County Surveyor should be willing to go to any school or appear before any public or civic group. By making public education another goal, the County Surveyor furthers the goal of maintaining the public land survey system. It also helps to prevent the public from making costly mistakes. The County Surveyor must always serve the public.

Our forefathers came to America for many reasons, one of which was the right, as free people, to own land. The County Surveyor must always remember that as they execute their job, they help maintain this right of ownership. This right is a sacred dream to all Americans. The County Surveyor should always put this right and the laws that allow them to protect it, above all else. “The law is the law.” The County Surveyor remains solid in their office only if they never veer from this latter point. By remembering this, the public is always put first.

Foreword

Most people generally have the occasion to employ a land surveyor only once or twice in a lifetime. Since such employment is so infrequent, the average person is not aware of the logical steps to be followed in selecting a land surveyor. The following is a brief description of what general land surveying entails.

A land survey is performed for the purpose of describing, monumenting and mapping the boundaries and corners of a parcel of land. It may include the design and layout of new lots, streets, the physical features of the land parcel, the location of buildings, and other improvements upon the land. A land survey locates, on the ground, the land that your deed describes.

A land surveyor may make maps for architects, landscape experts, and other land planners to be utilized for the design of houses, commercial, or housing development. The surveyor may also do layouts for engineering projects. Hence, land surveying requires knowledge in applied math and science, basic planning, surveying, engineering, and legal principles.

Therefore, the land surveyor is the best qualified person to write a land description, or to advise someone on any defects or discrepancies in a description.

A BIT OF HISTORY

After the American Revolution, each of the colonies granted the newly formed federal government all of the lands outside their present boundaries. All of this vast territory became part of the "public domain". The first enactment, in regard to the surveying of public lands, was an ordinance passed by the congress of the Confederation on May 20, 1785, prescribing the mode for the survey of the "Western Territory", which provided that said territory should be divided into townships of 6 miles square. Subsequent revisions and additions were passed to provide for the subdivision of the public lands into quarter quarters. In the survey of Wisconsin, the southern boundary of parallel of 42° 30' north latitude was taken as a base line and other parallels, called township lines, were run east and west across the state at intervals of 6 miles.

Another set of lines, called range lines, were run north and south, also at intervals of 6 miles, beginning with a meridian known as the "Fourth Principle Meridian" which extends across the state from a point on Lake Superior near the mouth of the Montreal River. These township boundaries were surveyed from a period beginning in 1832 and extending through 1861. The interior of the townships were divided between the years of 1832 and 1873.

A point of interest in Wisconsin, is that in a number of counties, surveyors must retrace title lines as they were intended in the French claims, military preserves and Indian lands, which predate the rectangular system of surveying mentioned above. All land sold by the United States Government were sold according to the government survey thereof, as staked and marked on the ground. The confounding of the theoretical section of 640 acres with the section as actually staked out on the ground is one of the largest sources of errors in the description of lands in deed of conveyance. Law, through the years, has held that the boundaries of the public lands established by the duly appointed surveyors, when approved by the Surveyor General and accepted by the commissioners of the General Land Office, are unchangeable, and further, the original township section and quarter sections corners established by the surveyors must stand as the true corners which they were intended to represent, whether in place or shown by the field notes.

When the surveying started, Wisconsin was still part of the Michigan Territory, a vast wilderness covered with dense forest with very few white men as inhabitants. The surveyor had nothing but a simple compass to guide him, which being an excellent instrument to distinguish north from south or east from west, is not an instrument any surveyor would like to rely upon when accuracy was required. The chains used in measurement were of various lengths and were continually changing in length from wearing or opening of links.

By the law of July 31, 1830, each county in the Territory of Michigan was to be a surveying district with a surveyor appointed and commissioned by the Governor. With the organization of Wisconsin Territory, the surveyor's office was continued by authority of the congressional act which provided that all laws in force in the Territory of Michigan, if not incompatible with the provisions of the act, were to be extended over

Wisconsin Territory, subject to modification or repeal of the Wisconsin Territory legislative assembly. The statutes of 1839 made the office of the District Surveyor elective for a two-year term. With the granting of statehood to Wisconsin in 1848, a provision in the Constitution was made for all laws to remain in force until their expiration or modification and repeal by the legislature. Thus the office of District Surveyor remained and since 1849, has been designated as County Surveyor, a constitutional office.

What has happened to the public land survey since the original government survey?

When Wisconsin became a state, the survey records were turned over to the state government. State law gave the County Surveyor the responsibility of the preservation of the government survey and all the records of the survey. It was generally expected that the townships would preserve the corners already marked by having them monumented with more durable material by the County Surveyor. In many counties, this was sadly neglected. Because of this neglect of the perpetuation of the government surveys, the County Surveyor now faces a difficult task in the preservation of the original land system corners. When the location of any government corner is lost, and before any legal survey can be made in the area controlled by that corner, it must be re-established, as nearly as possible, in its original position, according to rules prescribed by the U. S. Department of the Interior. In many cases, this proves to be very time-consuming and expensive.

Man has been erecting monuments to mark land ownership for thousands of years. In Biblical times, persons were stoned to death for the removal or disturbance of any landmark. Today, Wisconsin Statutes provide that a fine of up to \$1,000 or imprisonment in the county jail for not more than one year may be ruled against any person who disturbs, destroys, or covers up any landmark of record. Land valuation, together with population is progressing at an ever increasing rate; is therefore, most important, that land marks be preserved in a manner consistent with such a trend.

This is the origin and a brief background of the public land survey. The United States, as original owner, caused all lands to be surveyed. The plan of subdivision, based on the rectangular system, was simple. The original surveys were conducted under the

direction of public law, monuments were placed on the land, and written documents were placed on public record in what became our counties over a century ago.

As technology changes and Geographic Information Systems (GIS) advance, the need for a County Surveyor becomes necessary to interpret difficult legal boundary issues, solve survey related problems and to guide the proper use of GIS. This Handbook is intended to serve as a guide and reference book for the new County Surveyor, existing County Surveyor, and County Boards who may need assistance in setting up a County Surveyor Program.

Reasons for a County Surveyor Position in Your County

Maintenance of the physical monuments marking the Public Land Survey System positions does not go away. There is constant activity that threatens Public Land Survey Corners – placement of underground cables and other utility work, road maintenance and construction, residential, commercial and industrial development are some examples of “corner danger”.

Land ownership and the laws related thereto are complex. Most land owners do not have a basic understanding of land issues and so they often need advice. Many attorneys are not well versed in land law. The County Surveyor answers a good share of the hard questions.

When County Departments or other governmental bodies such as Town Boards, Cities, etc., have complex land issues to deal with, they have a dependable source of consistent information and guidance.

When survey records are properly maintained, it saves time and multiplies efficiency for all surveyors. This, again, saves constituents money. Remember, people that need surveys done are taxpayers, too.

In developing a GIS, A County Surveyor can assist in minimizing the misuse of data by working with the staff and the land owners that “know just enough to be dangerous.” Awareness of the limitations of mixing and matching digital data of varying accuracies is essential to guard your county’s liability. For example, a “cartoon type” parcel map is overlaid on an orthophoto and a barn appears to be over the boundary line. When in reality, the barn is well within the boundaries, the appearance of an encroachment can cause un-necessary grief for both land owners.

The trend in Wisconsin, for counties, has been to expand the County Surveyor position because of the growing land information needs. As the population grows and urban sprawl becomes more of a problem, more people are going to subdivide their land. Whether surveying is done to create new parcels or just to locate a line from existing parcels, the County Surveyor is there make certain that land laws pertaining to surveying are being completely followed.

If contracting is a desired way of handling the statutory requirements of County Surveyor, a County Surveyor is needed to manage these contracts. Most people do not understand the complexities that are involved in the County Surveyor's duties. Only someone who is familiar with these duties and has a good working relationship with the private sector can accurately depict the costs and benefits for this type of work. Planning for a specific county's needs, efficiency, and good judgment for work practices are necessary to maximize value while minimizing cost and liability.

Highly precise coordinates, whether gathered by traditional survey methods or GPS, are NO GOOD if they are on the wrong monument. Whether it is in record keeping or actual field work, a County Surveyor's guidance is needed to make sure that the information received is both precise and accurate.

The Public Land Survey System is the foundation of land ownership and the County Surveyor organizes this system. Original descriptions have been based on this system since the early 1830's. If the system fails than everything that is based on this system fails too. Could we imagine a state or county without planning, zoning, mapping or GIS?

Statutory Duties of the County Surveyor

Taken from Wisconsin State Statutes

59.45 County Surveyor; duties, deputies, fees.

(1) Surveyor; Duties. (a) The county surveyor shall do all of the following:

1. Execute, personally or by a deputy, all surveys that are required by the county or by a court. Surveys for individual or corporations may be executed at the county surveyor's discretion.
2. Make, personally or by a deputy, a record, in books or on drawings and plats that are kept for that purpose, of all corners that are set and the manner of fixing the corners and of all bearings and the distances of all courses run, of each survey made personally, by deputies, or by other land surveyors and arrange or index the record so it is an easy to use reference and file and preserve in the office the original field notes and calculation thereof. Within 60 days after completing any survey, the county surveyor shall make a true and correct copy of the foregoing record, in record books or in reproducible papers to be furnished by the county and kept in files in the office if the county surveyor to be provided by the county. In a county with a population of 500,000 or more where there is no county surveyor, a copy of the record shall also be filed in the office of the regional planning commission which acts in the capacity of the county surveyor for the county.
3. Furnish a copy of any record, plat or paper in the office to any person on demand and upon payment to the county of the required fees.
4. Administer to every survey assistant engages in any survey, before commencing their duties, an oath or affirmation to faithfully and impartially discharge the duties of survey assistant, and the deputies are empowered to administer the same.
5. Perform all other duties that are required by law.

(b) Surveys for individuals or corporations may be performed by any land surveyor who is employed by the parties requiring the services, provided

that within 60 days after completing any survey the land surveyor files a true and correct copy of the survey in the office of the county surveyor. In counties with a population of 500,000 or more the copy shall be filed in the office of the register of deeds and in the office of the regional planning commission which acts in the capacity of county surveyor for the county.

(2) Surveyor; Deputies. The county surveyor may appoint and remove deputies at will on filing a certificate thereof with the clerk.

(3) Surveyor; Fees. In addition to the regular fees of land surveyors that are received from the parties employing the county surveyor, the county surveyor may receive a salary from the county.

59.46 Penalty for nonfeasance. Any county surveyor, any city, village or town engineer, or any land surveyor who fails or refuses to perform any duty required of that person by law shall forfeit not less than \$25 nor more than \$50 for each such failure or refusal.

59.74 Perpetuation of section corners, landmarks.

(1) Relocation and perpetuation of section corners and division line.

(a) If a majority of all the resident landowners in any section of land within this desire to establish, relocate or perpetuate any section or other corner of any section, or in the same section a division line of the section, they may make a formal application in writing to a circuit judge for the county in which the land is situated. The circuit judge shall file the application in his or her court and shall within a reasonable time give at least 10 days notice in writing to the owners of all adjoining lands, if those owners reside in the county where the land is situated and if not, by publication of a class 3 notice, under ch. 985, stating the day and hour when the circuit judge will consider and pass upon such application. The circuit judge shall hear all interested parties and approve or reject the application at that time. If the application is approved, the clerk shall notify the county surveyor who shall within a reasonable time proceed to make the required survey and location. If a corner is to be perpetuated, the surveyor shall deposit in

the proper place a stone or other equally durable material of the dimensions and in the manner and with the markings provided under s. 60.84 (3) (c), and shall also erect witness monuments as provided under sub. (2). The surveyor shall be paid the cost of the perpetuation from the general fund of the county.

(b) All expense and cost of the publication of the notice and of the survey and perpetuation shall be apportioned by the clerk among the several parcels of land in the section upon the basis of the area surveyed, shall be included by the clerk in the next tax roll and shall be collected in the same manner as other taxes are collected.

(2) Perpetuation of landmarks.

- (a) 1. No landmark, monument, corner post of the government survey or survey made by the county surveyor or survey of public record may be destroyed, removed, or covered by any material that will make the landmark, monument, or corner post inaccessible for use, without first having erected witness or reference monuments as provided in subd. 2. For the purpose of identifying the location of the landmark and making a certified copy of the field notes of the survey setting forth all the particulars of the location of the landmark with relation to the reference or witness monuments so that its location can be determined after its destruction or removal. The certified copy of the field notes shall be filed as provided under par. (b) 2.
2. Witness monuments shall be made of durable material, including cement, natural stone, iron or other equally durable material, except wood. If iron pipes are used, they shall be made of 2 inch or more galvanized iron pipe not less than 30 inches in length having an iron or brass cap fastened to the top and marked with a cross cut on the top of the cap where the point of measurement is taken. If witness monuments are made of cement, stone or similar material, they shall be not less than 30 inches in length nor less than

5 inches in diameter along the shortest diagonal marked on the top with a cross where the point of measurement taken.

- (b) 1. Whenever it becomes necessary to destroy, remove or cover up in such a way that will make it inaccessible for use, any landmark, monument of survey, or corner post within the meaning of this subsection, the person including employees of governmental agencies who intend to commit such act shall serve written notice at least 30 days prior to the act upon the county surveyor of the county within which the landmark is located. Notice shall also be served upon the municipality's engineer if the landmark is located within the corporate limits of a municipality. The notice shall include a description of the landmark, monument of survey or corner post and the reason for removing or covering it. In this paragraph, removal of the landmark includes the removal of railroad track by the owner of the track. In a county having a population of less than 500,000 where there is no county surveyor, notice shall be served upon the executive director of regional planning commission which acts in the capacity of county surveyor for the county. Notwithstanding par. (c), upon receipt of the notice the clerk shall appoint a registered land surveyor to perform the duties of a county surveyor under subd. 2.
2. The county surveyor or executive director of the regional planning commission, upon receipt of notice under subd. 1., shall within a period of not to exceed 30 working days, either personally or by a deputy, or by the municipality's engineer make an inspection of the landmark, and, if he or she considers it necessary because of the public interest to erect witness monuments to the landmark, he or she shall erect 4 or more witness monuments or, within a municipality, may make 2 or more offset marks at places near the landmark where they will not be disturbed. The county surveyor shall make a survey and field notes giving a description of the landmark and the witness monuments or offset marks, stating the material

and size of the witness monuments and locating the offset marks, the horizontal distances and courses in terms of the references set forth in s. 59.45 (1) (a) 2. that the witness monuments bear from the landmark and, also of each witness monument to all of the other witness monuments. The county surveyor may also make noted as to such other object, natural or artificial, that will enable anyone to locate the position of the landmark. The county surveyor upon completing the survey shall make a certified copy of the field notes of the survey and record it as provided under s.59.45 (1). The municipality's engineer upon completing the survey shall record the notes in his or her office, open to the inspection of the public, and shall file a true and correct copy with the county surveyor. In a county with a population of 500,000 or more, the certified copy of the field notes of the survey shall be filed in the office of the regional planning commission which acts in the capacity of county surveyor for the county.

- (c) In those counties where there are no county surveyors a petition can be made to the board by any resident of this state requesting the board appoint a land surveyor to act in the capacity of the county surveyor. The board, upon receipt of this petition, shall appoint a land surveyor to act in the capacity of the county surveyor. In counties with a population of 500,000 or more, the board may appoint a governmental agency to act in the capacity of the county surveyor.
- (d) The cost of the work of perpetuating the evidence of any landmark under the scope of this subsection shall be borne by the county or counties proportionally, in which said landmark is located.
- (e) 1. Except as provided in subd. 2., any person who removed, destroys or makes inaccessible any landmark, monument of survey, corner post or government survey, survey made by the county surveyor or survey of public record without first complying with this subsection shall be fined no to exceed \$1,000 or imprisonment in a county jail for not more than one year.

2. Any person who removes railroad track as provided in par. (b) 1. without first complying with par. (b) 1. shall be subject to forfeiture not to exceed \$1,000.
- (f) Any person who destroys, removes or covers any landmark or corner post rendering them inaccessible for use, without first complying with pars. (a) 1. and (b) 1. shall be liable in damages to the county in which the landmark is located, for the amount of any additional expense incurred by the county because of such destruction, removal or covering.
 - (g) Every land surveyor and every officer of the department of natural resources and the district shall enforce this subsection.
 - (h) Any registered land surveyor employed by the department of transportation or by a county highway department, may, incident to employment as such, assume and perform the duties and act in the capacity of the county surveyor under this subsection with respect to preservation and perpetuation of landmarks, witness monuments and corner posts upon and along state trunk, county trunk, and town highways. Upon completing a survey and perpetuating landmarks and witness monuments under par. (b) 2., a land surveyor employed by the state shall file the field notes and record in the district office or main office of the department of transportation, and a land surveyor employed by a county shall file the filed notes and records in the office of the county highway commissioner, open to inspection by the public, and in either case a true and correct copy of the filed notes and records shall be filed with the county surveyor. In a county with a population of 500,000 or more where there is no county surveyor, a copy of the field notes and records shall also be filed in the office of the regional planning commission which acts in the capacity of the county surveyor of the county.
 - (i) The records of the corners of the public land survey may be established and perpetuated in the following manner: commencing on January 1, 1970, and in each calendar year thereafter, the county surveyor or a deputy may check and establish and reference at least 5% of all corners originally established in the

county by government surveyors, so that within 20 years or less all the original corners will be established or reestablished and thereafter perpetuated.

- (j) The county surveyor may employ other land surveyors to assist in this work and may accept reference checks for these corners from any land surveyor.
- (k) The cost of perpetuating these corners shall be paid out of the county road and bridge fund or other county fund under s. 83.11.

59.75 Certificates and records as evidence. The certificate and also the official record of the county surveyor when produced by the legal custodian thereof, or any of the county surveyor's deputies, when duly signed by the county surveyor in his or her official capacity, shall be admitted as evidence in any court within the state, but the same may be explained or rebutted by other evidence. If any county surveyor or any of his or her deputies are interested in any tract of land a survey of which becomes necessary, such survey may be executed by any land surveyor appointed by the board.

This is an unofficial text from Wisconsin Statutes database. See printed Statutes and Wisconsin Acts for official text under s.35.18(2) stats.

Other statutes that may pertain directly or indirectly to a county surveyor are Chapter 17-referring to vacancies, resignations, and removals of office, Chapter 59.20-the eligibility, terms, locations and hours of county offices and officers, Chapter 59.53 (18)-membership of the immigration board, Chapter 60.84, requirements of monuments at section and quarter corners, and Chapter 84.095-transportation plat projects.

Also remember that a county surveyor has to abide by any Wisconsin Statute that pertains to land and its functions.

Job Description and Helpful Ideas

When a new county surveyor position is created or a new person is hired and isn't familiar with the office, that person shall follow these simple guidelines to get more acquainted with the details of the job:

1. Take a tour of your counties offices. Pay special attention to the Register of Deeds, Property Listers, County Clerks, Parks and Forestry, Highway Department, Zoning and Planning. They will probably need information from you from time to time and you will definitely need information from them. Introduce yourself to department heads along with town, city, village or other municipal officers. A county surveyor is an asset to the other departments and also other levels of government. This is an often overlooked value as this assistance does not show up in your revenues. Examples of value to other departments include but are not limited to the performance of surveys for the county facilities and advise on complicated legal issues regarding land ownership to other departments and also other municipalities within the county. The county surveyor is often invited to sit on various county board committees as an advisor in land and mapping issues. This role as an advisor also applies to the public. John Q. Taxpayer is often a visitor to the county surveyor's office seeking advice that he is unable to find elsewhere.

The county surveyor should also have a good working relationship with the county board. He or she needs to inform and educate the county board. If the board is to finance the county surveyor program and everything it entails, they must have an appreciation of the value of the work and the complexities involved. Good communication with the board will help them support your program.

2. Create a list of surveyors that are presently working, those that have retired, and the heirs to those that have past away. Contact everyone and gather as much information as possible from them. Not only is this a way to create a basis for your file, but it also helps you to get to know your fellow surveyors. The position of the county surveyor is comparable to an orchestra conductor. You have an influence on the surveys performed by the private sector, and they also should have some influence on you. They can support your survey program, and possibly participate and enhance your

efforts. Again, communication and good working relationships should be strived for. A method to obtain input from the surveyors in your county is to have occasional meetings with them. By scheduling meetings or attending WSLC Chapter meetings, you can get useful suggestions, and the meetings promote the exchange of information.

3. Many towns or other municipalities have records on PLSS corners and road right-of-ways. You can obtain files from them also. Even if they don't have the physical sheets, the road supervisor, in all likelihood, has personally seen some of these corners. Some municipalities were very diligent on maintaining their corner locations, and they are a very good source to obtain information.
4. Take the information from these surveyors and from the municipalities and create a filing system. Keep it simple. You may want to visit nearby counties for ideas that you could incorporate. You will need different types of filing cabinets to hold:

- U.S. Public Land Survey Monument Location Records (Tie Sheets)

- Certified Survey Maps

- Plats of survey

- Subdivision plats

- Section summary sheets

- Railroad maps

- Road maps – State, county and town roads

- Original field notes (if you don't have, contact the Board of Commissioners of public land, see Appendix A)

- Field notes from other surveyors

- G.P.S. records

- Benchmark records – N.G.S., U.S.G.S. and other

- County forest projects and other miscellaneous surveys

- Digital Ortho Photos

- Other records from towns and other municipalities

A good example of a filing system is in Appendix B.

5. After going through the information, make a corner inventory of what you have and what you need. Include a spreadsheet listing the corners that are in, who tied them out, what method was used for locating, what was found, set, or re-set, and when. A

good way to do this is with a pinboard. It will help you to visualize the status of the remonumentation process.

6. Set up priority areas where the PLSS corners are most in need. This can be done with the aid of planning and zoning. The most populated or the most active places are usually first. Make a step-by-step process to follow. Ask yourself what areas are needed first and when can you do them.
7. Now you need to figure out how these are going to get done. There are a few ways that this can be handled.
 - a) The county surveyor can visit these corners and tie them out personally.
 - b) The county can contract one or more private companies to do the work. It should then be the county surveyor's job to manage these contracts.
 - c) Establish a bounty system. Set a specific price for setting, re-tying, and getting county coordinates on each corner. That way, a private surveyor can do the corner work while he/she is out in the area. (see Appendix D)
 - d) Have a combination of each.

These choices may vary from county to county due to budget, need and time. A county that has a lot of time may want to remonument on a need-to-need basis. Whereas a county that has a high population and not enough time, may have the money to contract out to a survey firm to have it done in a more timely manner.

8. Now the county surveyor, deputy, or other surveyors can visit the corners starting with the priority areas, collect coordinates, and reference out. Also a U.S. Public Land Survey Monument Location Record (tie sheet) can be drawn up and filed.
9. After the monumentation is completed, parcel mapping can be done more accurately. The coordinates can be used to link every corner in the county together. This way if a corner ever is removed, there is another piece of evidence to re-set the corner.

In an effort to lessen the demise of the PLSS monuments located within town road rights of way, routine communication with town officials is encouraged. This can be accomplished a number of ways, such as:

1. Requesting to speak at Town Association Meetings
2. Send out informative letters (and reminder post cards) every spring that quote chapter 59 of Wisconsin State Statutes. See samples in Appendix F.

3. Contact town officials personally

A good working relationship with town chairs or the road supervisor can save tax dollars. It is cheaper to preserve than to re-establish a lost monument.

Having a presence with the county highway department and the WIDOT district headquarters is also advised. You are particularly encouraged to attend the Annual Utility Conference sponsored by your WIDOT district. It is an opportunity to, not only get to know DOT personnel, but to meet folks from the utility industries as well.

The office work for remonumentation can get very extensive. Here are some places to find information that may show corner location:

Original field notes

Any surveys that may be tied out to that corner

Road records – including state, county and town roads

Old railroad plats and deeds

Parcel deeds

Cemetery, church, and school deeds

Parol evidence from local residences

The field work can also be very extensive. If you have been to the approximate location of the corner and it isn't blatantly obvious, there are some steps to follow in your search.

Traverse between section corners

Locate any property fences

Locate centerline and right-of-way of roads

Locate physical evidence including surveyor monuments, trees, rivers and other

Obtaining parol evidence from residents

All of these pieces of evidence should be considered when searching for or re-establishing a corner. Once you have thoroughly gone through each piece, you need to come up with the most logical location for a search area. It may be that you have more than one search area. Then you can go back to the location and do a more extensive search within that area.

If the corner falls within an existing road you may need to perform a dig. All corners should be dug for in the field, even if it appears that there is a large fill or

excavation. Again, some municipalities were very diligent in maintaining their corners. Search areas should be determined prior to the actual digging. Once the locations have been established you should contact both Digger's Hotline and the municipality's road supervisor. Find out what the county and municipality's policies are before you dig. Sometimes the municipality will pay for the dig, sometimes it may come out of the county surveyor's budget, and sometimes it may be a combination. They can refuse to pay but they cannot refuse to let you dig.

While digging, make sure that you take your time. Remember, now you are an archeologist and you are trying to recover historical artifacts. Also, make sure that you and the machine operator fully understand one another. A small misunderstanding could be the difference from a recovery or destruction.

If the search is unsuccessful, you may be able to set the monument when the machine operator is back-filling. Other times you will have to come back to set the monument and reference monuments (ties). Make sure when you set these points, that you follow the requirements outlined in ch. 59.74 of the Wisconsin Statutes. Also, some counties or municipalities have their own corner monument that they have standardized throughout.

Whether the PLSS corner has been found or set, a U.S. Public Land Survey Monument Location Record (tie sheet) has to be created. There are standard forms or the county surveyor may want to design his own that will be uniform throughout the county. It does not matter as long as it meets the required criteria. See Appendix E. An index should be created for the tie sheets. Make sure that it is simple. Many people, not just surveyors, will need these sheets, so keep in mind that the index system will need to be easily understandable and can be found effortlessly. Also, you may be creating a system that will last through the next few generations of county surveyor, so make sure that your "footsteps can undoubtedly be followed.

In many counties, the county surveyor will also be required to other duties related to surveying, such as:

- Staking road right-of-way for municipalities

- Locating public land boundaries for Parks and Forestry

- Assisting other county departments in completing any required land surveys

Locating floodplain for Zoning and Planning

Maintaining other monument records (i.e. U.S.G.S., N.G.S., G.P.S., other benchmarks and geodetic markers with coordinates and elevations)

Reviewing of Plats and Certified Survey Maps (see Appendix G)

Gathering coordinate information for G.I.S. mapping

Providing survey information to private surveyors and interested citizens

Performing any other related work as needed by the county and state, as stated in chapter 59 of statutes and county requirements

The equipment, field or office, needed to complete these duties depends on budget, personal preference, terrain, and whether you have a full or part-time assistant. You want to make sure that you take the time to look at everything out there. Whether it is computer software or G.P.S. equipment, bells and whistles may not mean that it will be the most efficient for you. Do some research on the equipment. Try things out first to find out if it is “user-friendly”, and see what kind of training people can offer. A system you can't use can only be blamed on ignorance.

The surveying field has changed so much in the last 20 years, and it will continue to change in the next 20 years. Between computers, space exploration and digital integration, we can now do things at the speed of light. It is important to keep in mind that even though the technology changes everyday, the basic duties of the county surveyor have stayed the same. G.P.S, palm pilots, laptops, and robotics make the county surveyor's job faster and more efficient, but there still is, and always will be, a corner that gets obliterated because of carelessness, no matter how good the equipment gets.

Part-time County Surveyors

Being a part-time County Surveyor can be a very difficult position to be in. Whether you are elected or appointed, it seems that every county has their own way of handling the position and they are all different. The following pages are some frequently asked questions that may help you understand the difficulties with a part-time position. I have also sighted some examples of both elected and appointed County Surveyors and how difficult situations are handled in that county. These situations cover things like hours required, office locations, wages and compensation, contract letting, and conflicts of interest. Keep in mind that the records need to be in a location where the public can easily locate them.

As for someone who is stepping into this position for the first time, these questions stated on the next pages should always be addressed before you accept any position. Both you and the County should have a full and complete understanding of your duties and requirements as County Surveyor and as a private surveyor too. These items should be put in writing as part a contract that is agreed upon between you and the County.

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties: *None Assigned*

How often are you required to be available to serve the public?

Varies, sometimes twice a month, other times not for three months

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Independent

Do you have a supervisor? who?

No

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Private office

How are you compensated for your office work? (i.e. hourly, salary)

I am asked for a proposal on each project

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

No, since I am not compensated, a log has never been requested

How is your budget put together? (i.e. put together by you, another county employee or a combination)

So far, as a yearly roll-over with no input

Field Duties:

How often are you required to perform field work?

Quite varied

How are you compensated for your time? (ie hourly, salary)

By the project

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

The County has no equipment

If you do use your own equipment/vehicle, how are you compensated for the use?

All costs are written into the project

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties:

How often are you required to be available to serve the public?

Four (4) hours a week, plus any phone calls

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Housed with mapping and GIS

Do you have a supervisor? who?

No, steering committee only

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Courthouse, in Mapping Department

How are you compensated for your office work? (i.e. hourly, salary)

Base salary, and additional time is charged a "Professional Fee" at a set rate.

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

How is your budget put together? (i.e. put together by you, another county employee or a combination)

By me, in conjunction with Mapping and Land Records

Field Duties:

How often are you required to perform field work?

Very infrequent, some corner maintenance and control

How are you compensated for your time? (ie hourly, salary) *"Professional Fee" at set rate*

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

Some equipment is provided and shared by Mapping/ I use my personal vehicle

If you do use your own equipment/vehicle, how are you compensated for the use?

Cannot submit invoicing from my business for any item, be it staff or equipment, but I do get reimbursed for use of my personal vehicle through an expense system all County employees use.

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties:

How often are you required to be available to serve the public?

One day per week, 8 hours a day

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Office is with the Land Information Office

Do you have a supervisor? who?

I am Department Head

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Main Courthouse

How are you compensated for your office work? (i.e. hourly, salary)

Contracted service through the place I work, where I am paid hourly

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

Company I work for has hourly rates

How is your budget put together? (i.e. put together by you, another county employee or a combination)

I put together my own budget

Field Duties:

How often are you required to perform field work?

Occasionally

How are you compensated for your time? (ie hourly, salary)

Hourly

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

I use my own equipment

If you do use your own equipment/vehicle, how are you compensated for the use?

Through the company at hourly rates. We have one major project each year-an inspection of the townships we remonument.

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties:

How often are you required to be available to serve the public?

2 hours a week at courthouse/ and 38 hours a week at my private office

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Under Zoning Department

Do you have a supervisor? who?

The County Zoning Administrator

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Courthouse and private office, off county property

How are you compensated for your office work? (i.e. hourly, salary)

Hourly

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

Monthly statements show hours spent on County projects

How is your budget put together? (i.e. put together by you, another county employee or a combination)

By Zoning Administrator

Field Duties:

How often are you required to perform field work?

5 hours a week

How are you compensated for your time? (ie hourly, salary)

Hourly

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

I use my own equipment and vehicle

If you do use your own equipment/vehicle, how are you compensated for the use?

Part of contract with County-figured into hourly rate

Part-time County Surveyors

Being a part-time County Surveyor can be a very difficult position to be in. Whether you are elected or appointed, it seems that every county has their own way of handling the position and they are all different. The following pages are some frequently asked questions that may help you understand the difficulties with a part-time position. I have also sighted some examples of both elected and appointed County Surveyors and how difficult situations are handled in that county. These situations cover things like hours required, office locations, wages and compensation, contract letting, and conflicts of interest. Keep in mind that the records need to be in a location where the public can easily locate them.

As for someone who is stepping into this position for the first time, these questions stated on the next pages should always be addressed before you accept any position. Both you and the County should have a full and complete understanding of your duties and requirements as County Surveyor and as a private surveyor too. These items should be put in writing as part a contract that is agreed upon between you and the County.

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties: *None Assigned*

How often are you required to be available to serve the public?

Varies, sometimes twice a month, other times not for three months

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Independent

Do you have a supervisor? who?

No

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Private office

How are you compensated for your office work? (i.e. hourly, salary)

I am asked for a proposal on each project

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

No, since I am not compensated, a log has never been requested

How is your budget put together? (i.e. put together by you, another county employee or a combination)

So far, as a yearly roll-over with no input

Field Duties:

How often are you required to perform field work?

Quite varied

How are you compensated for your time? (ie hourly, salary)

By the project

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

The County has no equipment

If you do use your own equipment/vehicle, how are you compensated for the use?

All costs are written into the project

Who assists you in the field? (i.e. another county employee, private assistant)

My own private assistant

How is your assistant(s) compensated?

Hourly

When you contract work to a private company, is there a specific cost that the project has to be before it will be contracted? What? *No*

How involved are you on the setting up the contract specs, selecting bids, and reviewing the work being produced by the contracts?

They are imposed upon me

Is your private company allowed to submit a bid on the work being contracted? If so, is your involvement with the letting of the contracts different than above? How?

Yes, I do not let any contracts. I try to educate and advise others as to the need to "GET IT SURVEYED"

Do you compensate private surveyors to set or retie PLSS corners?

Yes

Are they required to submit a written request to be compensated?

Yes

Is your private company allowed to submit those requests as well? How is this handled?

Yes, Administration is handled by full-time County employees in the Zoning and Land Records Offices.

Is there anything else that is important for a new part-time County Surveyor to know that we haven't covered?

Every Department is competing for funding fro the same pocket. Do not expect cooperation to increase your portion. The other departments are not mad at you, it's just business and politics as usual.

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties:

How often are you required to be available to serve the public?

Four (4) hours a week, plus any phone calls

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Housed with mapping and GIS

Do you have a supervisor? who?

No, steering committee only

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Courthouse, in Mapping Department

How are you compensated for your office work? (i.e. hourly, salary)

Base salary, and additional time is charged a "Professional Fee" at a set rate.

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

How is your budget put together? (i.e. put together by you, another county employee or a combination)

By me, in conjunction with Mapping and Land Records

Field Duties:

How often are you required to perform field work?

Very infrequent, some corner maintenance and control

How are you compensated for your time? (ie hourly, salary) *"Professional Fee" at set rate*

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

Some equipment is provided and shared by Mapping/ I use my personal vehicle

If you do use your own equipment/vehicle, how are you compensated for the use?

Cannot submit invoicing from my business for any item, be it staff or equipment, but I do get reimbursed for use of my personal vehicle through an expense system all County employees use.

Who assists you in the field? (i.e. another county employee, private assistant)

A staff member from the Mapping Department

How is your assistant(s) compensated?

Through the County by their regular wages

When you contract work to a private company, is there a specific cost that the project has to be before it will be contracted? What? *Most are the result of an RFP Process (Request for Proposals)*

How involved are you on the setting up the contract specs, selecting bids, and reviewing the work being produced by the contracts?

I am the one responsible for this!

Is your private company allowed to submit a bid on the work being contracted? If so, is your involvement with the letting of the contracts different than above? How?

No, Conflict of interest

Do you compensate private surveyors to set or retie PLSS corners?

Set at \$350 a corner, no compensation for maintenance

Are they required to submit a written request to be compensated?

Yes

Is your private company allowed to submit those requests as well? How is this handled?

Yes, if I perpetuate a corner, I can receive the bounty for it

Is there anything else that is important for a new part-time County Surveyor to know that we haven't covered?

I work hand-in-hand with the County's Corporation Counsel. Whenever I have a question regarding a conflict of interest, I run it past them. I do not have a written job description, so Chapter 59 of statutes is my main governing document of my duties.

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties:

How often are you required to be available to serve the public?

One day per week, 8 hours a day

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Office is with the Land Information Office

Do you have a supervisor? who?

I am Department Head

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Main Courthouse

How are you compensated for your office work? (i.e. hourly, salary)

Contracted service through the place I work, where I am paid hourly

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

Company I work for has hourly rates

How is your budget put together? (i.e. put together by you, another county employee or a combination)

I put together my own budget

Field Duties:

How often are you required to perform field work?

Occasionally

How are you compensated for your time? (ie hourly, salary)

Hourly

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

I use my own equipment

If you do use your own equipment/vehicle, how are you compensated for the use?

Through the company at hourly rates. We have one major project each year-an inspection of the townships we remonument.

Who assists you in the field? (i.e. another county employee, private assistant)

Our own field crews

How is your assistant(s) compensated?

hourly

When you contract work to a private company, is there a specific cost that the project has to be before it will be contracted? What? *Yes, remonumentation project*

How involved are you on the setting up the contract specs, selecting bids, and reviewing the work being produced by the contracts?

I'm the guy! I do all of the above

Is your private company allowed to submit a bid on the work being contracted? If so, is your involvement with the letting of the contracts different than above? How?

We don't bid on major remonumentation projects. When smaller projects come up, we give estimates and do the job.

Do you compensate private surveyors to set or retie PLSS corners?

No

Are they required to submit a written request to be compensated?

N/A

Is your private company allowed to submit those requests as well? How is this handled?

N/A

Is there anything else that is important for a new part-time County Surveyor to know that we haven't covered?

Conflict of interest issues- really need to be careful when to wear the "County Surveyor Hat" and when to wear the "Private Surveyor Hat". Don't give the appearance of promoting your own business while in office.

PART-TIME COUNTY SURVEYORS

These are questions designed to get information on how County Surveyors working part-time handle the duties outlined by Chapter 59 of the Wisconsin State Statutes. A part-time County Surveyor should have a full understanding of these questions and answers before taking the position.

Elected

Appointed

Office Duties:

How often are you required to be available to serve the public?

2 hours a week at courthouse/ and 38 hours a week at my private office

Are you an independent office, or are you part of another office? (i.e. Land Information Office, Zoning Office)

Under Zoning Department

Do you have a supervisor? who?

The County Zoning Administrator

Where is your office located? (i.e. Courthouse, Other County Building, Private Office)

Courthouse and private office, off county property

How are you compensated for your office work? (i.e. hourly, salary)

Hourly

Are you required to keep a log of the time you spend doing county work outside of county time? How? (i.e. surveyor contacts you at your private business to take care county business)

Monthly statements show hours spent on County projects

How is your budget put together? (i.e. put together by you, another county employee or a combination)

By Zoning Administrator

Field Duties:

How often are you required to perform field work?

5 hours a week

How are you compensated for your time? (ie hourly, salary)

Hourly

Do you use your own equipment/vehicle or is the equipment/vehicle provided for you?

I use my own equipment and vehicle

If you do use your own equipment/vehicle, how are you compensated for the use?

Part of contract with County-figured into hourly rate

Who assists you in the field? (i.e. another county employee, private assistant)

Our own field crews

How is your assistant(s) compensated?

hourly

When you contract work to a private company, is there a specific cost that the project has to be before it will be contracted? What? *No*

How involved are you on the setting up the contract specs, selecting bids, and reviewing the work being produced by the contracts?

Review RFP's (Request for Proposals) and inspection of work

Is your private company allowed to submit a bid on the work being contracted? If so, is your involvement with the letting of the contracts different than above? How?

We cannot bid on work that I was involved in the RFP or supervision

Do you compensate private surveyors to set or retie PLSS corners?

Yes

Are they required to submit a written request to be compensated?

Yes

Is your private company allowed to submit those requests as well? How is this handled?

Yes, the Zoning Administrator okays the requests

Is there anything else that is important for a new part-time County Surveyor to know that we haven't covered?

Record keeping is the main function of my position as County Surveyor

APPENDIX A

Contact Information

- **National Geodetic Survey**
Information Services
NOAA, N/NGS12
Phone: (301) 713-3242
info_center@ngs.noaa.gov
- **State Cartographer's Office**
160 Science Hall
550 N. Park Place
Madison, WI 53706-1491
Phone: (608) 262-3065
sco@facstaff.wisc.edu
- **United States, The**
 - **Army Corps of Engineers**
St. Paul District
190 Fifth Street East
St. Paul, MN 55101-1638
Phone: (651) 290-5376
 - **Bureau of Land Management**
Office of Public Affairs
1849 C Street
Room 406-LS
Washington, D.C. 20240
Phone: (202) 452-5125
 - **Fish and Wildlife Service**
1 Federal Drive
BHW Federal Building
Fort Snelling, MN 55111
Phone: (612) 713-5360
 - **Forest Service**
P.O. Box 96090
Washington, D.C. 20090
- **Geological Survey**
8505 Research Way
Middleton, WI 53562
Phone: (608) 821-3801
- **FEMA, Region V**
536 S. Clark St
Chicago, IL 60605
(312) 408-5500
- **Wisconsin, State of**
 - **Department of Administration**
101 East Wilson Street
Madison, WI 53702
 - **Board of Commissioners of Public Lands**
P.O. Box 8943
Madison, WI 53708-8943
Phone: (608) 266-1370
info@bcpl.state.wi.us
 - **Department of Natural Resources**
101 S. Webster St.
Madison, WI 53703
Phone: (608) 266-2621
 - **Department of Transportation**
Check your local District.
 - **Department of Workforce Development**
201 E. Washington Ave.
GEF-1 Room A400
P.O. Box 7946
Madison, WI 53707-7946

APPENDIX B

County Surveyor Records Guide

Contributed from Marathon County

What We Have

How To Obtain Information

Photos

Marathon County

COUNTY SURVEYOR RECORDS GUIDE

THIS BOOK HAS BEEN PREPARED TO SERVE AS A GUIDE TO FINDING SURVEY RECORDS WITHIN THIS OFFICE. IT WILL SHOW YOU WHAT WE HAVE, HOW IT IS INDEXED, HOW TO GET COPIES, AND ALSO WHERE TO GET INFORMATION THAT WE DON'T HAVE.

WHAT WE HAVE

- Original government survey notes and plats
- Old County survey notes
- State highway maps
- Guide to County highway maps
- Land corner Restoration forms (Tie Sheets)
- Copies of Certified Survey Maps, Plats of Survey, and other information
- Reduced copies of Subdivision/Plats
- G.P.S. Points throughout the County
- Digital Ortho Photos for all of Marathon County (TIFF Format)
- Railroad Maps
- County Forest Projects and other miscellaneous surveys
- Benchmark records

HOW TO OBTAIN INFORMATION

Original government survey notes and plats Original notes are in large green books above file cabinet. Original plats are on CD ROM. Ask the County Surveyor for more information.

Old County Survey notes Notes are in the green binders next to the tie sheets and in a black binder next to Original field notes.

State Highway maps Maps are in the wide file cabinet with an index. If you can't find something, ask or contact the Wisconsin Dept. of Transportation, District 4, 1681 Second Avenue South, Wisconsin Rapids, WI 54495-4722, (715) 421-8300.

Guide to County Highway maps Index and some maps are in the wide file cabinet. If you can't find something, ask or contact the Marathon County Highway Dept., 1430 West St., Wausau WI, 54403, (715) 842-2205.

Land Corner restoration forms Tie sheets are located above the wide file cabinet in green binders. Each binder represents one Township and Range. They are all indexed on the front page of every binder.

Copies of C.S.M.'s, Plats of Survey, and other information Can be found in the tall file cabinet. They are all separated by Section, Township and Range. Section Summaries are in the front of some folders. The index for Section Summaries is on top of the tall file cabinet. Some files are on a numbered system and are also indexed on the maps in the wide cabinet, i.e. City of Wausau or Weston Index.

Reduced copies of Subdivision/Plats Some can be found in the folders in the tall file cabinet. Others can be found in Zoning files or in Register of Deeds in the Courthouse. If you can't find something, ask someone.

G.P.S. points throughout the County Can be found in the green binders above the wide cabinet on the bottom shelf. They are indexed by point in alphabetical order.

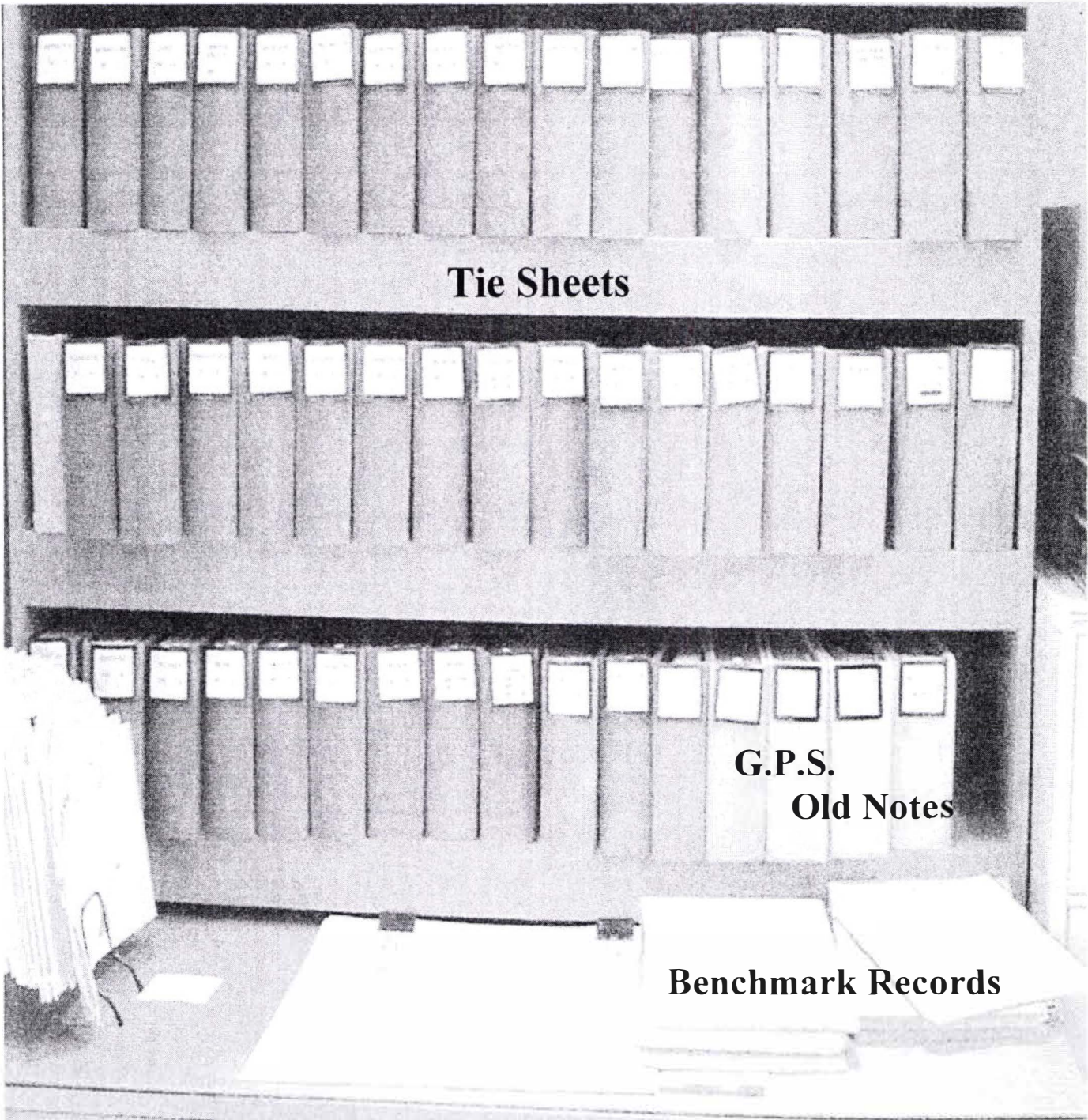
Digital Ortho Photos Can be brought up on GIS or the photos are available to view in the Planning Office upstairs.

Railroad maps They are on the left side below the drafting table in the cabinet. They are indexed on the inside face of the cover. If you have any questions, feel free to ask someone.

County Forest Projects and other miscellaneous projects They are on the right side below the drafting table. They are indexed on the inside face of the cover. If you have any questions, feel free to ask someone.

Benchmark Records Files are in green binders on top of wide cabinet or in the wide cabinet. They are separated by Township and Range.

IF YOU CAN'T FIND SOMETHING, PLEASE ASK. IF WE CAN'T FIND IT FOR YOU, WE WILL PUT YOU IN TOUCH WITH SOMEONE WHO CAN!



Tie Sheets

**G.P.S.
Old Notes**

Benchmark Records

City of Wausau Index

Weston Index

Road Right-of-ways

Original Notes/Plats/Spencer Index

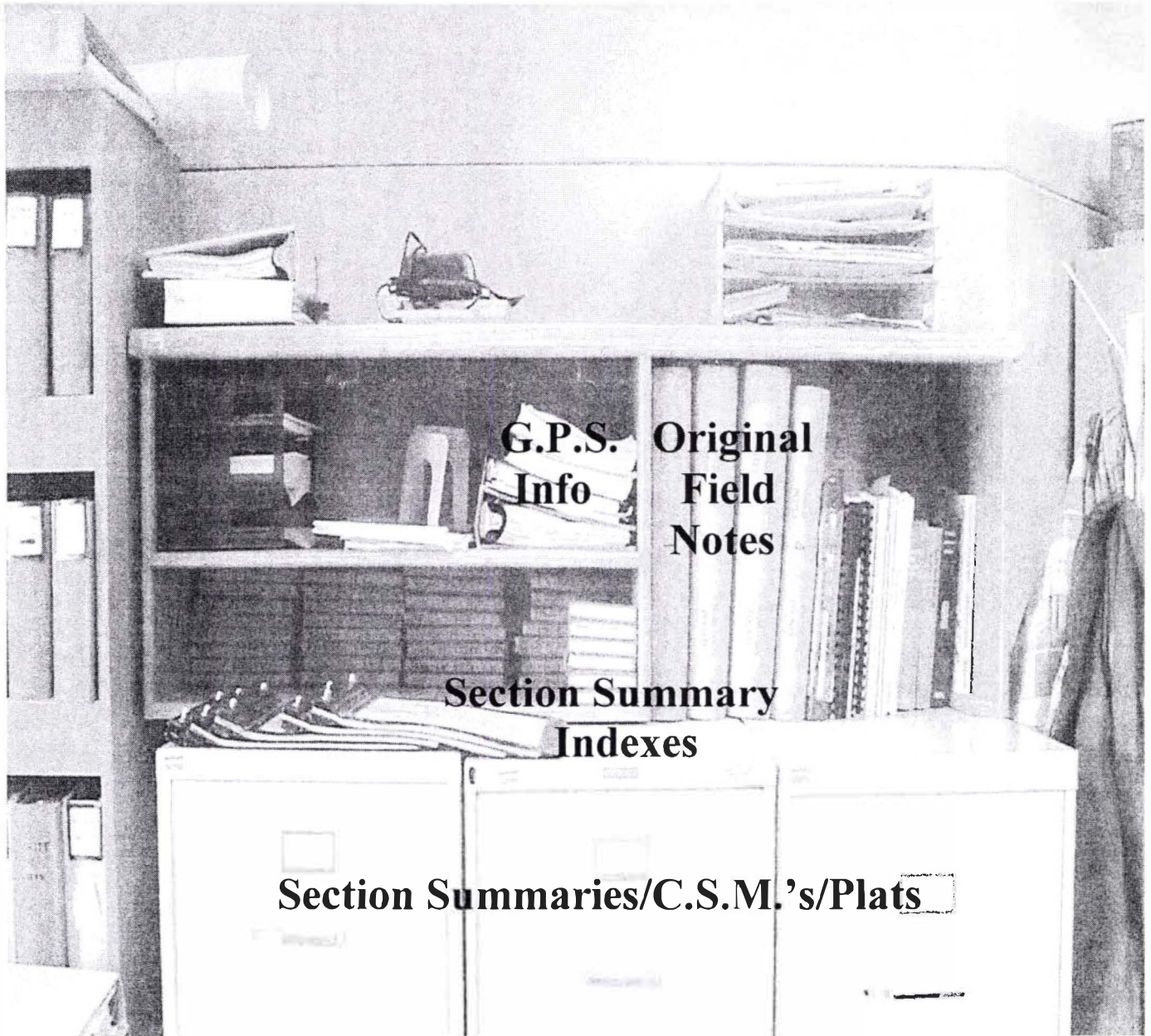
Benchmarks

State

Highway

Projects

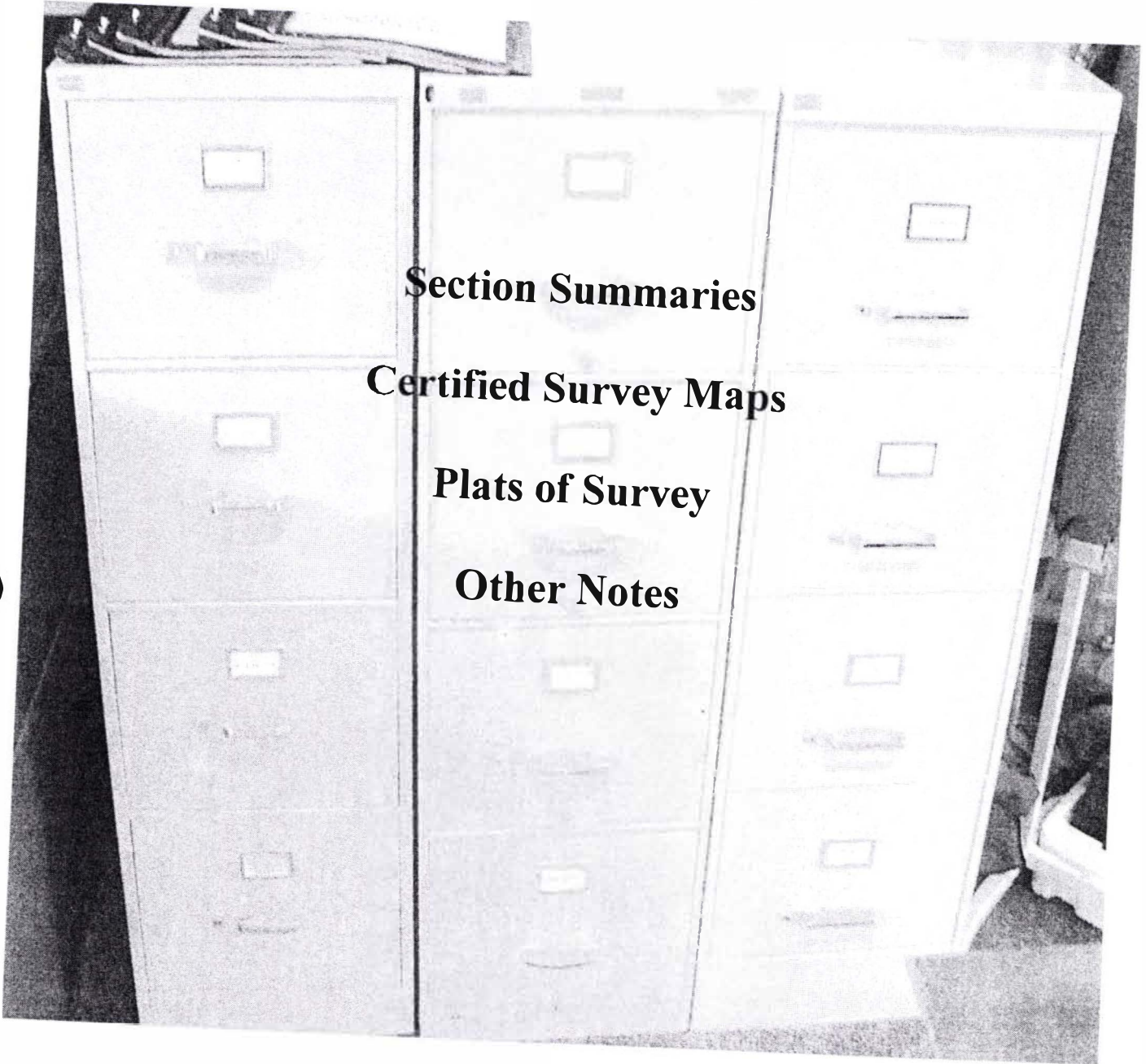
County Highway Projects



G.P.S. Info **Original Field Notes**

Section Summary Indexes

Section Summaries/C.S.M.'s/Plats



Section Summaries

Certified Survey Maps

Plats of Survey

Other Notes

APPENDIX C

Index Systems

Marathon County Township Indexing System

Oneida County Indexing System

SAMPLE

T30N, R7E

01	0301	02	0302	03	0303	04	0304	05	0305	06	0306	07	0307	08	0308	09	0309	010	0310	011	0311	012	0312	013
0313	0314	0315	0316	0317	0318	0319	0320	0321	0322	0323	0324	0325	0326	0327	0328	0329	0330	0331	0332	0333	0334	0335	0336	0337
014	0338	015	0339	016	0340	017	0341	018	0342	019	0343	020	0344	021	0345	022	0346	023	0347	024	0348	025	0349	026
0350	0351	0352	0353	0354	0355	0356	0357	0358	0359	0360	0361	0362	0363	0364	0365	0366	0367	0368	0369	0370	0371	0372	0373	0374
027	0375	028	0376	029	0377	030	0378	031	0379	032	0380	033	0381	034	0382	035	0383	036	0384	037	0385	038	0386	039
0387	0388	0389	0390	0391	0392	0393	0394	0395	0396	0397	0398	0399	0400	0401	0402	0403	0404	0405	0406	0407	0408	0409	0410	0411
040	0412	041	0413	042	0414	043	0415	044	0416	045	0417	046	0418	047	0419	048	0420	049	0421	050	0422	051	0423	052
0424	0425	0426	0427	0428	0429	0430	0431	0432	0433	0434	0435	0436	0437	0438	0439	0440	0441	0442	0443	0444	0445	0446	0447	0448
053	0449	054	0450	055	0451	056	0452	057	0453	058	0454	059	0455	060	0456	061	0457	062	0458	063	0459	064	0460	065
0461	0462	0463	0464	0465	0466	0467	0468	0469	0470	0471	0472	0473	0474	0475	0476	0477	0478	0479	0480	0481	0482	0483	0484	0485
066	0486	067	0487	068	0488	069	0489	070	0490	071	0491	072	0492	073	0493	074	0494	075	0495	076	0496	077	0497	078
0498	0499	0500	0501	0502	0503	0504	0505	0506	0507	0508	0509	0510	0511	0512	0513	0514	0515	0516	0517	0518	0519	0520	0521	0522
079	0523	080	0524	081	0525	082	0526	083	0527	084	0528	085	0529	086	0530	087	0531	088	0532	089	0533	090	0534	091
0535	0536	0537	0538	0539	0540	0541	0542	0543	0544	0545	0546	0547	0548	0549	0550	0551	0552	0553	0554	0555	0556	0557	0558	0559
092	0560	093	0561	094	0562	095	0563	096	0564	097	0565	098	0566	099	0567	100	0568	101	0569	102	0570	103	0571	104
0572	0573	0574	0575	0576	0577	0578	0579	0580	0581	0582	0583	0584	0585	0586	0587	0588	0589	0590	0591	0592	0593	0594	0595	0596
0105	0597	0106	0598	0107	0599	0108	0600	0109	0601	0110	0602	0111	0603	0112	0604	0113	0605	0114	0606	0115	0607	0116	0608	0117
0609	0610	0611	0612	0613	0614	0615	0616	0617	0618	0619	0620	0621	0622	0623	0624	0625	0626	0627	0628	0629	0630	0631	0632	0633
0118	0634	0119	0635	0120	0636	0121	0637	0122	0638	0123	0639	0124	0640	0125	0641	0126	0642	0127	0643	0128	0644	0129	0645	0130
0646	0647	0648	0649	0650	0651	0652	0653	0654	0655	0656	0657	0658	0659	0660	0661	0662	0663	0664	0665	0666	0667	0668	0669	0670
0131	0671	0132	0672	0133	0673	0134	0674	0135	0675	0136	0676	0137	0677	0138	0678	0139	0679	0140	0680	0141	0681	0142	0682	0143
0683	0684	0685	0686	0687	0688	0689	0690	0691	0692	0693	0694	0695	0696	0697	0698	0699	0700	0701	0702	0703	0704	0705	0706	0707
0144	0708	0145	0709	0146	0710	0147	0711	0148	0712	0149	0713	0150	0714	0151	0715	0152	0716	0153	0717	0154	0718	0155	0719	0156
0720	0721	0722	0723	0724	0725	0726	0727	0728	0729	0730	0731	0732	0733	0734	0735	0736	0737	0738	0739	0740	0741	0742	0743	0744
0157	0745	0158	0746	0159	0747	0160	0748	0161	0749	0162	0750	0163	0751	0164	0752	0165	0753	0166	0754	0167	0755	0168	0756	0169

**PROPOSED IDENTIFICATION SCHEME FOR
PUBLIC LAND SURVEY CORNERS AND CONTROL POINTS**

The unique identification of public land survey corners and control points in general, has become an issue with the proliferation of land/geographic information systems. Unique identifiers are needed in automated systems for easy retrieval and consistency. This document represents the concept of an identification scheme generated as a result of reviewing existing identification systems for public land survey corners. This concept could very likely extend beyond the public land survey corners to other control points, and with minor modification, work in any public land survey system State. The scheme is very easy to understand and a user can mentally visualize where a location is just by looking at the meaningful identifier.

In order to use this proposed scheme, a section is gridded similar to a regular section and 16 quarter-quarter sections. Each major horizontal row (or line) and each vertical column (or line) is assigned a number incremented by 10 and each corner then receives a row and column number, See Figure 1. The corner becomes unique by prefixing the row and column number by its principal meridian indicator, either east or west of the 4th principal meridian, and the township, range, and section. Locations between the major rows and columns can also be identified with this scheme which allows for 100 possible locations within a quarter-quarter section to be uniquely identified.

There are only 16 different primary combinations which identify the major and minor public land survey corners within a section. These 16 identifiers are the same for any regular section. In addition, while using the identification system, it is very easy to mentally visualize where a location is within a section, ie row 20 column 20 is always the center of section, row 20 column 00 is always the E 1/4. This proposed system also has the flexibility to apply to many irregular situations, such as meander corners, closing corners and fractional sections. Listed below are some rules to follow for implementation.

- 1) Rows are numbered south to north 00 - 30; south line of the section 00, south 1/16 line 10, east-west 1/4 line 20, and north 1/16 line 30; the north line of the section is the south line of the above section so it would start again with 00. Columns are numbered east to west 00 - 30; east line of section 00, east 1/16 line 10, north-south 1/4 line 20, west 1/16 line 30; the west line of the section is the same as the east line of the section to the west so it would start again with 00. The intersection of these lines yield the unique ID. For instance, the SE corner of a section is always the origin of the system being 00,00; (S1/4 is 00,20; C1/4 is 20,20; CS1/16 is 10,20 (first row up - second column in). Refer to Figure 2 which show the unique number for all corners in a

regular section.

- 2) The row and column number is prefixed by the principal meridian indicator, either east (4), or west (2), of the 4th principal meridian, then by the township, range and section number which is immediately north and west of the corner or point being defined. The principal meridian indicator (4 for east and 2 for west) is the same designation the department of revenue uses in their parcel identification number. See Figure 3 & 4.
- 3) In cases such as a closing corner on a standard parallel (correction line), the row associated with the north line of the township would be assigned 40, and the township, range and section which the closing corner controls would be its prefix. Any combination containing a 40 series number or greater indicates an irregular situation. See Figure 5. Where closing corners were set on range lines (southeast Wisconsin), the west line of the township would be assigned 40 and again prefixed by the section, township and range which the closing corner controls.
- 4) In cases where excess or deficiencies in sections were put into the north and west part of the township, the rows and/or columns could continue up to 90 to accommodate this condition. This happens in Marathon, Price and other counties where the sections adjacent to and east of the 4th principal meridian measure approximately 2 1/2 miles wide. See Figure 6.
- 5) Meander corners would be assigned identifications based on an approximation of the row and column number where it lies in the section since they do not fall in predicted locations. See Figure 3, ID 43609160037.
- 6) Other control points, both vertical and horizontal, could be included in this scheme by assigning identifications of an approximate row/column number. This would allow for some locational intelligence in the control points name.

This scheme is flexible, functional and easy to understand for the non-surveyor. An alternative implementation procedure that may be worth considering, is to assign a measurement to the row and column. Instead of the 10, 20, 30 etc., one may want to use 3 digits to describe the rows and columns in terms of the number of chains a location is in respect to the southeast corner of a section, ie 020,020 would be 20 chains up 20 chains over. The prefixing and other rules would remain the same. However, few people, other than surveyors think in terms of chains.

Any questions, suggestions or comments concerning this proposed scheme can be directed to Michael J. Romportl, P.O. Box 400, Rhinelander, WI 54501-0400.

Examples:

43609220000 translated is:

PMI	Township	Range	Section	Row	Column
4	36	09	22	00	00

This single identifier describes the corner common to Sections 22,23,26,27, Township 36 North, Range 9 East.

Figure 3, Standard Sections:

PMI	TW	RG	SC	ROW	COL	S	T	R
-ID 4 36 09 22 00 00	is the SE 22-36-09, SW 23-36-09, NW 26-36-09, NE 27-36-09 (Remember, you always assign the section, township and range which is immediately north and west of the point being identified in regular situations.							
-ID 4 36 09 21 20 00	is the E1/4 21-36-09, W1/4 22-36-09							
-ID 43609211030	is the C1/16SW 21-36-09							
-ID 43609150010	is the E1/16 on south line of 15-36-09, or E1/16 on north line section 22,							
-ID 43609160037	is a meander corner on the south line of 16-36-09, 37 units west of the southeast corner of 16							
-ID 43609161000	is the S1/16 on east line 16-36-09							
-ID 43609162020	is the C1/4 16-36-09							
-ID 43609152433	is a point in the SW1/4-NW1/4 of 15-36-09, 24 units north and 33 units west of the southeast corner of 15							
-ID 43609080000	is the SE 08-36-09, SW 09-36-09, NW 16-36-09, NE 17-36-09. Note how the section immediately north and west of the point was used as the section identifier.							

Figure 4, Regular Townships:

-ID 43708360000 is the SE 36-37-08, SW 31-37-09, NW 06-36-09, NE 01-36-08. Remember, you always assign the section, township and range which is immediately north and west of the point being identified in regular situations.

-ID 43608132000 is the E1/4 13-36-08, W1/4 18-36-09

-ID 43609100000 is the SE 10-36-09, SW 11-36-09, NW 14-36-09, NE 15-36-09

-ID 43609173838 is a point in the NW1/4-NW1/4 of 17-36-09, 38 units north and 38 units west of the southeast corner of 17.

Figure 5, Township with Standard parallel (correction line):

-ID 44109360000 is the SE 36-41-09, SW 31-41-10. It is a standard corner, controlling only the section to the north, therefore it assumes the section, township and range which is immediately north and west of the corner.

-ID 44008014000 is the NE 01-40-08, NW 06-40-09, 40 series indicates its an irregular situation. It is a closing corner controlling only the sections to the south, therefore it assumes

the section, township and range which is immediately south and west of the corner.

-ID 44109350020 is the S1/4 35-41-09

-ID 44008024020 is the N1/4 02-40-09

Figure 6, Excess or deficient sections:

-ID 44001350000 is the SE 35-40-01, SW 36-40-01, NW 01-39-01, NE 02-39-01

-ID 43901180050 is the SW corner of a government lot in section 18-39-01, 50 units (or 1 1/4 miles) west of the southeast corner of section 18.

-ID 23901252000 is the E1/4 25-39-01(W), W1/4 30-39-01(E)

-ID 23901120000 is the SE 12-39-01(W), SW 07-39-01(E)

A simple data base to support this system may look something like this.

1	NUMBER	5	5	I	-	NUMBER ASSIGNED CONSECUTIVELY TO POINT AND CONTROLLED BY USER
6	EASTING	8	12	F	3	COORDINATE
14	NORTHING	8	12	F	3	COORDINATE
22	PMI	1	1	C	-	INDICATOR FOR LOCATION EAST OR WEST OF PRINCIPAL MERIDIAN, 4=EAST, 2=WEST
23	TW	2	2	C	-	PUBLIC LAND SURVEY TOWNSHIP NUMBER
25	RG	2	2	C	-	PUBLIC LAND SURVEY RANGE NUMBER
27	SC	2	2	C	-	PUBLIC LAND SURVEY SECTION NUMBER
29	ROW	2	2	C	-	IDENTIFICATION OF THE ROW IN WHICH CONTROL POINT IS LOCATED (NORTHING)
31	COL	2	2	C	-	IDENTIFICATION OF THE COLUMN IN WHICH THE CONTROL POINT IS LOCATED (WESTING)
33	TYPE	1	1	C	-	TYPE OF CONTROL POINT, P=PUBLIC LAND SURVEY CORNER, G=GPS, H=HORIZONTAL CONTROL STATION, T=TRAVERSE STATION, V=VERTICAL CONTROL STATION, A=ANALYTICAL TRIANGULATION PUG POINT
34	MONUMENT	2	2	C	-	DESCRIPTION OF MONUMENT, BC=BRASS CORNER, IP=IRON PIPE, CO=CONCRETE, PK=PARALLEL NAIL, ETC
36	HACCURACY	2	2	C	-	HORIZONTAL POSITIONAL ACCURACY OF POINT
38	HDATUM	2	2	C	-	TWO CHARACTER CODE WHICH WOULD REFER TO A TABLE DESCRIBING THE HORIZONTAL DATUM AND COORDINATE SYSTEM
40	ELEV	8	12	F	3	ELEVATION OF POINT
48	VACCURACY	2	2	C	-	VERTICAL POSITIONAL ACCURACY OF POINT
50	VDATUM	2	2	C	-	TWO CHARACTER CODE WHICH WOULD REFER TO A TABLE DESCRIBING THE VERTICAL DATUM
52	OTHCOORVAL	1	1	C	-	OTHER COORDINATE VALUE Y=YES, N=NO
53	DATE	6	6	D	-	DAY, MONTH & YEAR POINT ENTERED OR LAST EDITED BY USER

22

ID

11

11

REDEFINED ITEM

C

- UNIQUE NUMBER FOR CONTROL POINT

The item 'NUMBER' is a consecutive number in the data base and the next available number would be assigned the record. If a point is deleted from the data base it could not be used again. In order to describe the points location, the following general attributes would be carried. More detailed data could be obtained from the actual source document which may be stored as an image in the future.

The item 'PMI' is an indicator used by state agencies to indicate the location of a section in respect to the 4th principal meridian in Wisconsin, 4 east, 2 west.

The items 'TW, RG, SC' is simply the township, range and section number in which the point is located.

The ROW and COL is the row and column schema described previously.

The item 'TYPE' is a one character description of the type of control point.

The items 'HACCURACY' ('VACCURACY') is a statement of the horizontal (vertical) positional accuracy of the point.

The item 'MONUMENT' is a physical description of the monument.

The item 'HDATUM' ('VDATUM') would be a two character field which relates to a table describing the datum and coordinate system of the point.

The item 'OTHCOORVAL' is a yes-no flag to indicate if there are other known coordinate values on this point and could relate to another table describing the other values.

The item 'DATE' is the date the point was determined or last edited.

The redefined item 'ID' is a concatenation of fields 22-33 which provide for a uniquely defined ID for points.

Obviously other attributes could be added to the file such as various values determined for the point over time and other related information. The manual index number could be carried as a reference to the existing system.

FIGURE 1
STANDARD SECTION

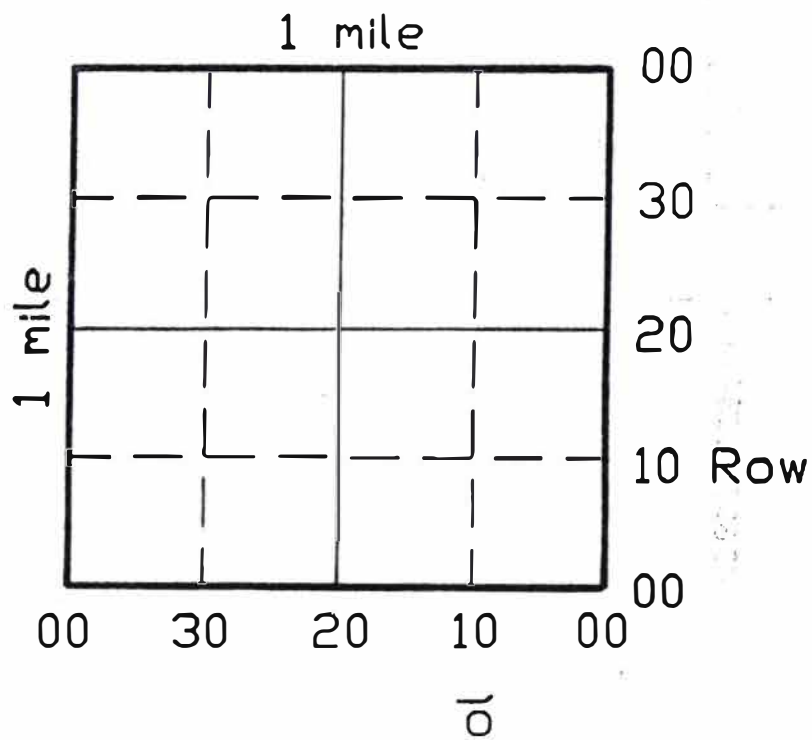


FIGURE 2
STANDARD SECTION
CORNER ID'S

3030	3020	3010	3000
2030	2020	2010	2000
1030	1020	1010	1000
0030	0020	0010	0000

FIGURE 3

STANDARD SECTIONS

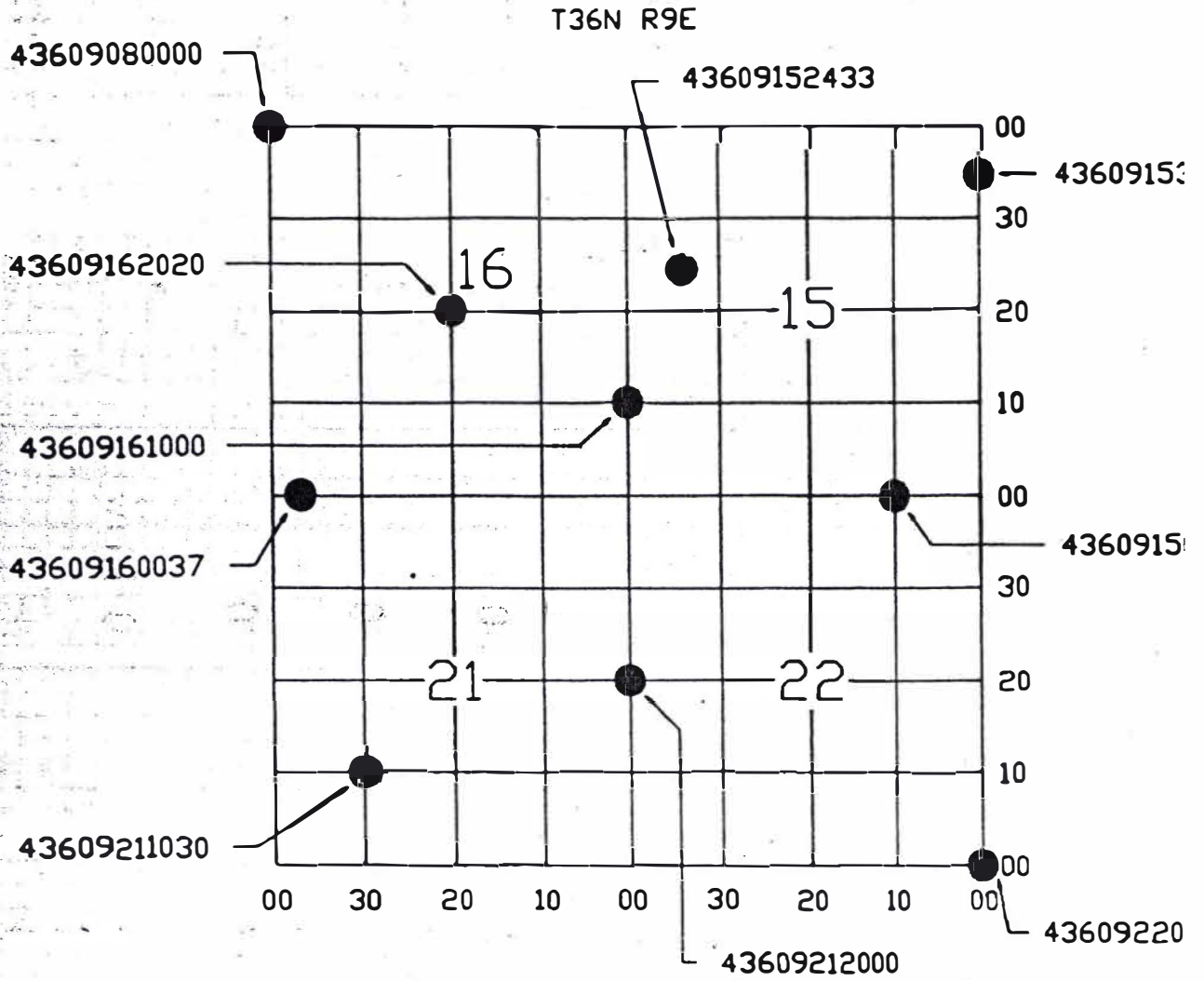
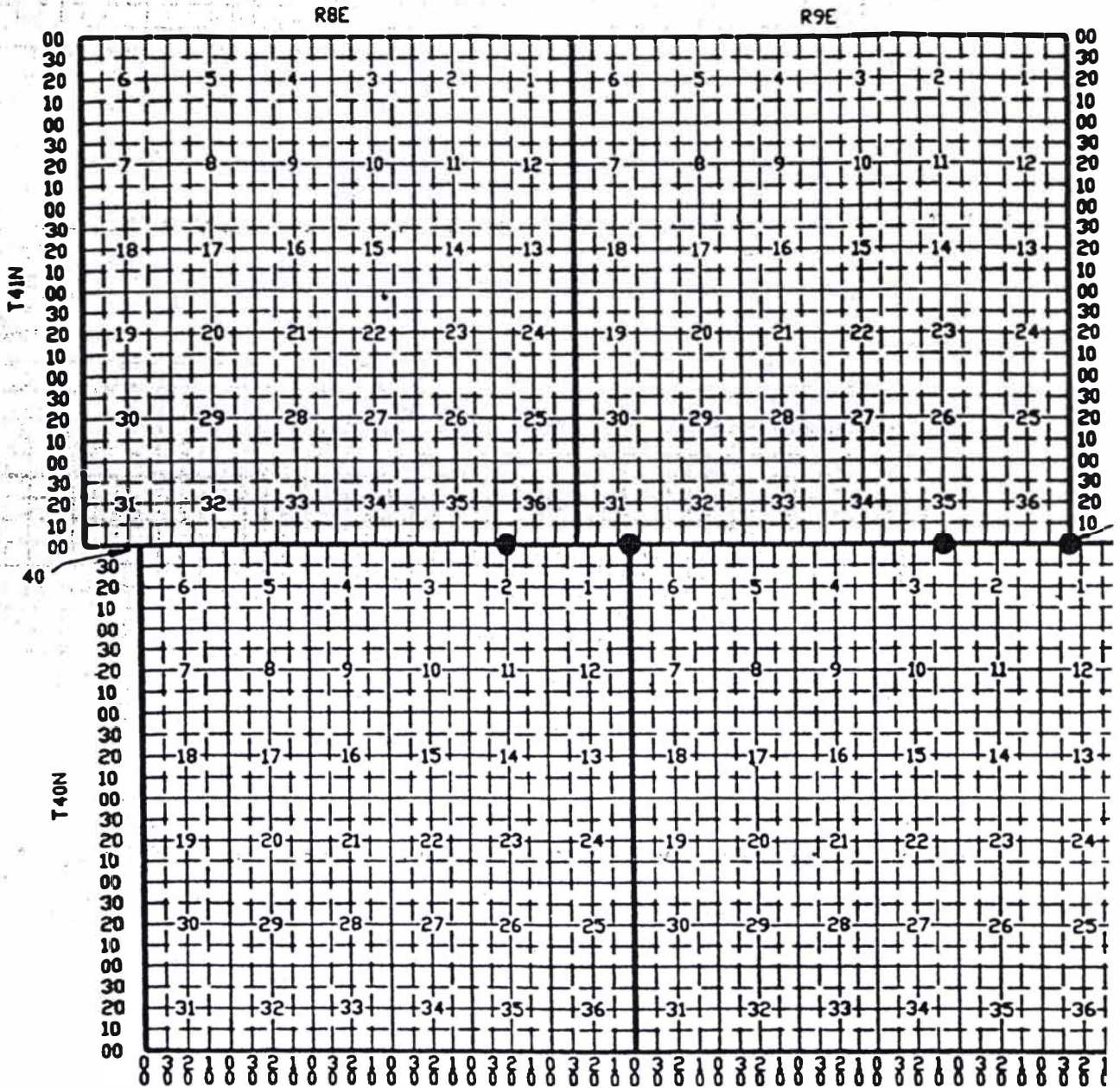


FIGURE 5

TOWNSHIPS WITH STANDARD PARALLELS (CORRECTION LINES)



APPENDIX D

Remonumentation

Contributed by Marathon County

Remonumentation Request

Reminder to Surveyors

Waiver

Remonumentation Request of US Public Land Survey Corners

-
- I hereby request reimbursement for the above corners
 - I hereby request the county surveyor to set the above corners.

Surveyor's Name

Date

Company Name

-
- I hereby authorize the above corners.
 - I will set the above requested corner.
 - I hereby authorize only these corners: _____

Request # _____

Chester J. Nowaczyk, Marathon County Surveyor

Date

Pursuant to Marathon County Board Resolution number 58-74 adopted 1974, authorization is hereby requested to remonument the following U.S. Public Land Survey corners. All corners established or re-established must comply with A-E-5, and proper insurance requirements must be complied with. If remonumentation is not completed **one year** from date approved this request becomes invalid. This request must be approved before payment will be processed. 3/96

SAMPLE



COUNTY OF MARATHON

Zoning Department
210 River Drive
Wausau, Wisconsin 54403-5449

(715) 261-6020 or 6021
Fax: (715) 261-4116

TO: Surveyors / Engineering Firms
FROM: Chet Nowaczyk, County Surveyor
DATE: January 2001
RE: Remonumentation work in Marathon County

SAMPLE

REMINDER

Surveyors doing remonumentation work for Marathon County are required to file the following with the County before any remonumentation requests can be honored.

1. Worker Compensation policy, and
2. General liability policy, and
3. Auto liability policy,

OR Sign the enclosed form

If these are not on file, we cannot pay for the work. The County must have current coverage information. It would be more convenient if this information would be submitted every time you renewed the policies.

ALSO: Please add the following to your utility contracts if they do not already contain the language:

“REPLACEMENT OF PROPERTY CORNERS. The contractor shall be held responsible for the cost of the replacement of any and all property corners, monuments, iron pipes, stakes or marked stone disturbed during the construction. All surveying monument replacements shall be completed by a Registered Land Surveyor.”

Enclosure: Harmless.ltr

f:\survey\ins engineer mem

Marathon County Surveyor
Chet Nowaczyk
210 River Drive
Wausau, WI 54403-5449

SAMPLE

Mr. Nowaczyk:

I am a licensed surveyor in the State of Wisconsin that maintains a private business. For that purpose, my Federal Identification Number is _____. As a small business owner or sole proprietor, I have elected to waive workers compensation covering under Wisconsin Statute 102.075.

I hold Marathon County, its employees, officers, agents and assignees harmless for any and all loss that may arise during the course of any business pursuits conducted on or for Marathon County, to include requests for reimbursement for remonumenting corners pursuant to Marathon County Board Resolution number 58-74, adopted 1974.

This waiver is effective for one year from the date of signature.

Sincerely,

Signature _____

_____ Date

Print Name: _____

Surveyor - RLS _____

APPENDIX E

Tie Sheets

Blank One-Sided Tie Sheet (Marathon County)

Blank Two-Sided Tie Sheet (Clark County)

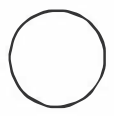
One-sided Tie Sheet (Burnett County)

Two-sided Tie Sheet (Washburn County)

Section Summary (Marathon County)

**MARATHON COUNTY U.S. PUBLIC LAND
SURVEY MONUMENT LOCATION RECORD**

SECTION _____
TOWNSHIP _____
RANGE _____

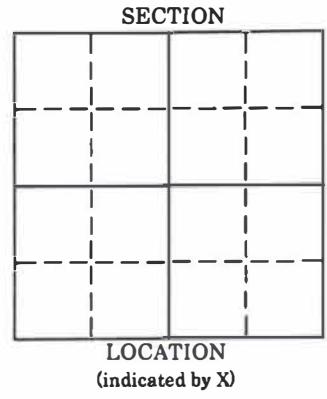


LANDMARK BENCHMARK: _____
CORNER LOCATION AND MONUMENT: _____
COUNTY COORDINATE: N _____, E _____
DATE OF SURVEY: _____ TEMPERATURE: _____ °
SURVEY PARTY/COMPANY: _____
FIELD BOOK NO. _____ PAGE NO. _____

CITY, VILLAGE, TOWN

BASIS FOR MONUMENT LOCATION:
(DESCRIBE METHOD OF SURVEY AND CORNER AUTHENTICATION)

- FOUND
- SET
- RE-SET
- RE-TIED



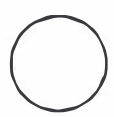
CERTIFIED CORRECT

DATE: _____

SEAL

TIE SKETCH: SHOW MINIMUM OF FOUR (4) HORIZONTAL TIE DISTANCES TO FIXED WITNESS MONUMENTS. DESCRIBE ALL MONUMENTS FOUND OR SET. CORRECT ALL DISTANCES SHOWN STANDARD TEMPERATURE OF 68° F.

SAMPLE



U.S. PUBLIC LAND SURVEY MONUMENT RECORD

Instructions: This record shall show the location of the corner and shall include all of the following nine elements (a through i).

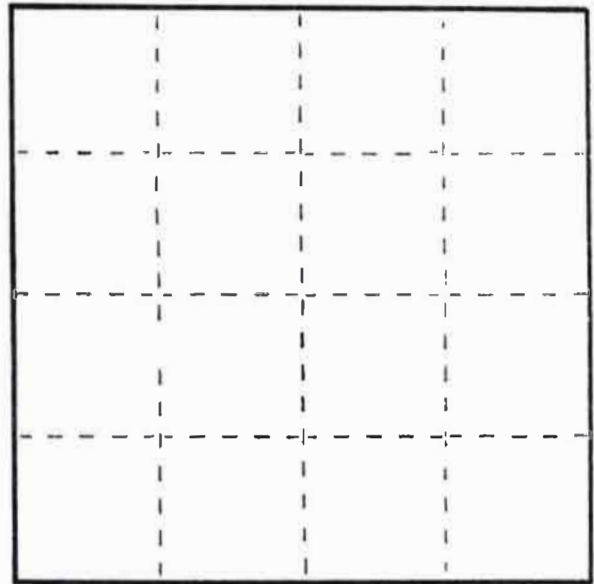
- (a) Identify the corner by reference to the U.S. public land survey system.

○ = Corner monument restored.

_____ Corner

Sec. _____, T _____ N, R _____

Type of Monument:



SAMPLE

CLARK COUNTY

- (b) Describe any record evidence, monument evidence, occupational evidence, testimonial evidence or any other material evidence you considered, and whether the monument was found or placed.

- (c) In the plan view drawing below, provide reference ties to at least 4 witness monuments, or, if the location is within a municipality, to at least 2 witness monuments. (Witness monuments shall be made of concrete, natural stone, iron or other equally durable material.)
Describe witness monuments:

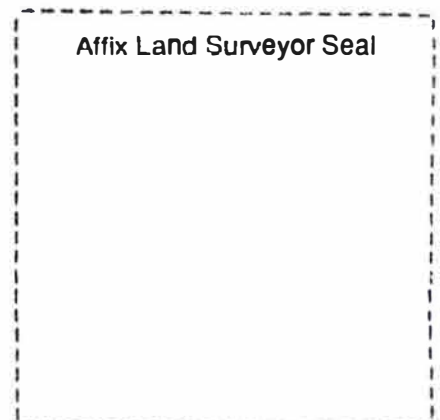
- (d) Show a plan view drawing depicting the relevant monuments and reference ties which is sufficient in detail to enable accurate relocation of the corner monument if the corner monument is disturbed. Indicate north.

(e) Describe any material discrepancy between the location of the corner as restored or reestablished and the location of that corner as previously restored or reestablished by distance and direction. Show the discrepancy on the plan view drawing under (d), above. Show the distances between the corner as previously restored or reestablished and (1) the corner as restored or reestablished, and (2) to at least 2 of the witness monuments shown on the drawing in (d), above.

(f) Was the corner restored through acceptance of (1) an obliterated evidence location, or, (2) a found perpetuated location?

(g&h) Was the corner reestablished through lost corner proportionate methods? If so, show the method, including the directions and distances to other public land survey corners used as evidence or used for proportioning in determining the corner location?

(i) I, _____
(type or print name) certify that the corner location shown on this record was determined by me or under my direction and control and that this U.S. Public Land Survey Monument Record is correct and complete to the best of my knowledge and belief.



Signature

Date

SEC

TWN

RNG

CORNER MAINTENANCE RECORD

On September 26, 1996 a survey mark nail was set 8.5 ft. West of centerline of Lakewood Drive and 1.5 ft. North of pointed panel used in aerial photography. A Harrison monument was found laying down beneath the surface of the present road. All witnesses had been destroyed. The position for the corner was determined using notes from previous survey work done in sections 20 and 21 entered into the Zone 8 Burnett County Adjustment. GPS observations of existing section corners were made to strengthen the network prior to staking this corner.

I, Douglas R. Crane, hereby certify that the information presented on this Corner Maintenance Record sheet is correct to the best of my knowledge.

Douglas R. Crane

Douglas R. Crane

September 17, 1996

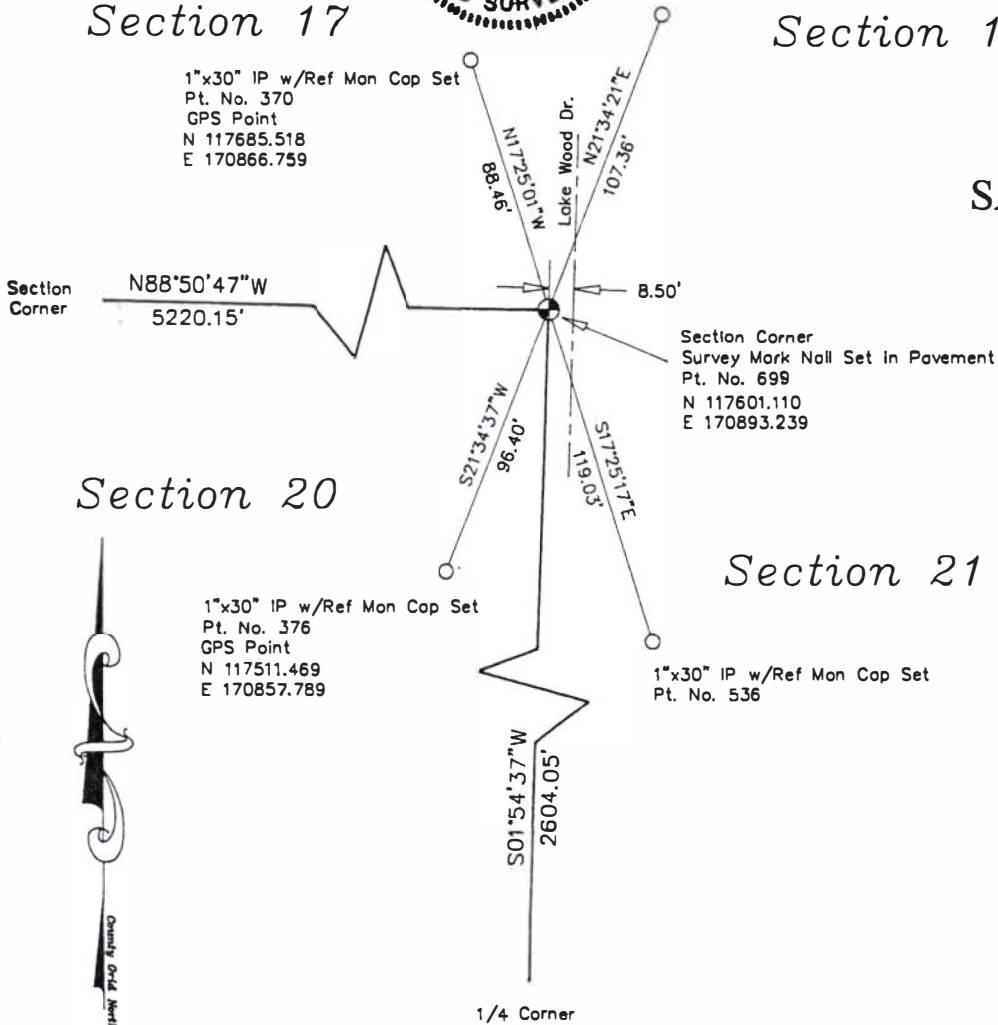


1"x30" IP w/Ref Mon Cop Set
Pt. No. 535

Section 17

Section 16

SAMPLE



SEE APPENDUM

Section 16 T37 N, R18 W

I.D. E-7

Township TRADE LAKE

SURVEYING SERVICES, INC.
 1075 1/2 STREET, P.O. BOX 337
 SPONGIA, WISCONSIN 54801
 715 - 635-2245
 CONSULTING ENGINEER AND
 LAND SURVEYOR

SAMPLE

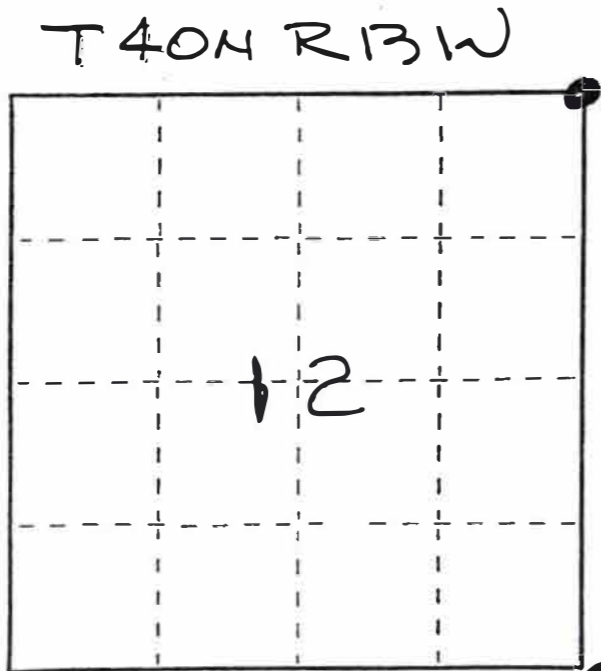
A.C. Miller Form 985 STAGE N° 26272

County of WASHBURN } ss.

I, RODNEY W. RIPLEY, do hereby
 certify that on the 10th day
 of December, 1992, I found
 evidence of the North East
 corner of Section 12
 Township 40, North, Range
13 W, Fourth Principal Meridian,
 as described hereon; and that from this evidence
 I established a new monument and accessories
 as described hereon to perpetuate the original
 location of this corner.

Resident witnesses:

G. C. Ripley
 (Crew)
J. D. Ripley



○ = Corner monument restored.

History of original corner establishment:

Original Gov. Corner Set by U.S. Deputy. Edgar Sears, Aug. 1855

U.S.B.T's:

Yellow Pine	20"	S 32° E	215 lks. =	141.90'	}
Yellow Pine	18"	S 84° W	47 =	31.02'	
Yellow Pine	22"	N 40° W	142 =	93.72'	

Description of corner evidence found:

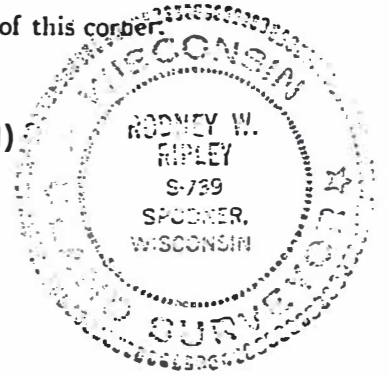
Nothing Found - Did not recover Wolf's 1902 1/2" Iron Pipe or his Bearing Trees.
 Assumed corner as partially lost, so reestablished its position based on modified
 distances. NOTE: Government Distance East to South East corner of Sec 6 is
 84.90 Ch. (5603.4') Andrews Shows 5519 Feet. A pure pro-ration - 5549.53'.
 1993 Final 5530.08'. The record distance of 5428 feet for the East Line of
 Section 12 was not accepted as correct. This would have placed the corner
 100 feet North.

Description of monument and accessories I established to perpetuate the original location of this corner.

Set 5/8" x 24" Rebar w/ 2" Stamped Alum Cap with the

Following Ties:

N 29° E 8.50'	5/8" x 24" Rebar (1.1' from 5" Norway (blazed))
N 75° E 14.00'	4" Norway (Blazed)
E 3.08'	County Surveyor Sign on Steel Fence Post
S 5° E 26.20'	5" Norway (Blazed)
S 83° E 38.85'	6" Norway (Blazed)
N 58° W 34.35'	7" Norway (Blazed)
N 43° W 91.30'	18" Norway (Blazed)



Dated at Spooner, Wis., this 12th day of January, 1993.

Signature Rodney W. Ripley Title County Surveyor Registration No. 739
 (County Surveyor, Registered Land Surveyor, or other duly authorized official)

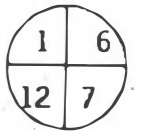
Office of Register of Deeds, County of Spooner, I hereby certify that the within
 instrument was filed in this office for record on the _____ day of _____, 19____
 at _____ o'clock _____ M.

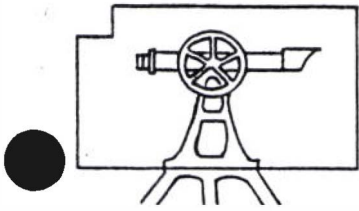
(Register of Deeds)

By _____

NOT APPLICABLE
 AS REG. 1-10

Index N 4013 4014



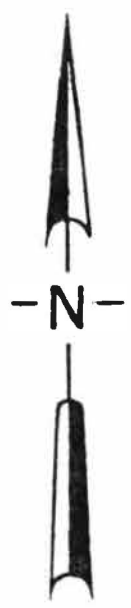
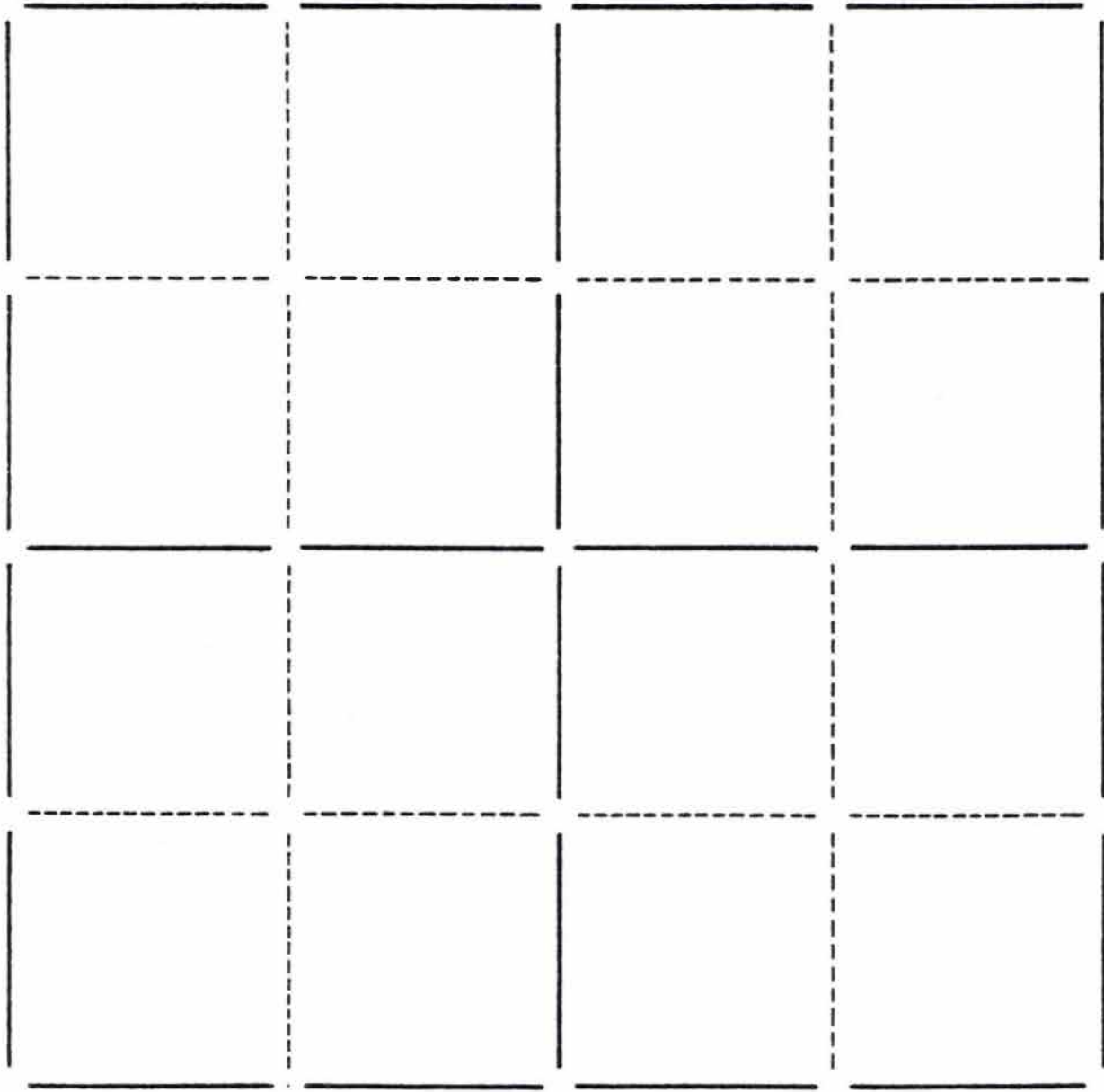


marathon county surveyor

SECTION SUMMARY







Section	Township	Range
Town		

SAMPLE



LEGEND

SEAL

-  - Harrison Cast Iron Monument
-  - Stone or Concrete Monument
-  - 2" Iron Pipe
-  - 1" Iron Pipe
-  - Iron Bar
-  - Other

CERTIFIED CORRECT:

Registered Land Surveyor

DATE: _____

APPENDIX F

Letters to Municipalities

Town Letter (Burnett County)

Reminder Post Card (Burnett County)

Town Letter (Marathon County)

Municipality Letter (Marathon County)

Notify the County Surveyor



LAND INFORMATION

Burnett County Government Center / 7410 Co. Rd. K #120 / Siren, WI 54872
(715) 349-2599 Fax: (715) 349-2102

February 20, 2001

SAMPLE

To: Town Chair

From: Kathleen E. Swingle, Burnett County Surveyor/Land Information Supervisor

Re: Town Road Work

This is my yearly letter reminding you to notify me prior to any road work (including brushing.) Many of you have already contacted me this year and I would like to Thank all of you for your cooperation.

The expense of section and property corner restoration or replacement is high, therefore, it is essential to preserve whatever monuments and witnesses we can to keep these costs as low as possible. You play a very important part in controlling such expenses by reporting your road construction activities.

When you have pending construction, if you could give me a call at 349-2599 and let me know what roads you are working on and the nature of that work, I will arrange to have a surveyor mark monuments and put in offset ties if necessary.

I am enclosing a copy of the Wisconsin State Statutes with portions highlighted that refer to this notification process. A few years ago, I asked our District Attorney for an interpretation of "who pays for what?" The answer is the county is responsible for costs of perpetuation of section and property monuments of record that fall within the road right of way. The township is responsible for costs of perpetuation or replacement of property monuments that may be located on the road right of way line. If the county is not notified by the township in advance of road work, the township becomes responsible for replacement costs.

Often property corners are placed on the right of way line. These corners should be marked prior to construction so they do not get disturbed. A relatively small expense, at that time, may save considerable costs later and it is a courtesy the property owners deserve.


Again, I can not emphasize enough, the importance of locating monuments and evidence prior to road construction and brushing. Please feel free to call me if you have any questions or if I can be of help to you. My number is 349-2599, Government Center office hours are 8:30 to 4:30, Monday through Friday. If you get my voice mail, it usually means I am in another office at that time so leave a message and I will call you back. **Thank you** once more and I'm looking forward to working with you the rest of 2001.

SAMPLE

REMINDER

Every year we send a note reminding townships of their obligation to notify the County Surveyor of impending road work. Statutorily, we should be notified 30 days in advance of construction activity. However, if you forget or have unanticipated improvements in a short timeframe...call us anyway. If you are a new Town Chair and have questions please feel free to contact us. Thank you for your cooperation.

Call the Burnett County Surveyor prior to road work at 349-2599.


Thank you
for letting us know!

Your notification can save thousands of dollars by allowing us to locate Public Land Survey Corners before they are destroyed during Construction.

Burnett County Surveyor
7410 Co. Rd. K #120
Siren, WI 54872

Phone: 715-349-2599
Fax: 715-349-2102
Email: kswingie@sirentel.net

Example Reminder Post Card

SAMPLE

TO: Town Clerks
FROM: Chester J. Nowaczyk, County Surveyor
RE: Preserving Section Corners and Quarter Section Corners
DATE: Spring 2000

INFORM YOUR TOWN BOARD AND/OR ROAD SUPERVISORS.

Your cooperation in the past has been appreciated. We are still losing too many corners and reference ties due to road work.

- Indicate on the enclosed map **ANY** road work being done in your Town, from the smallest **ditching, sand or gravel lifts, and brushing, to major road rebuilding.**
- **Respond** even if no work is being done.
- We need to be notified at least **eight (8) working days before any project is started**, by telephone (715 261-6025) or mail (210 River Drive, Wausau 54403-5449).
- If you are going to obtain more **right of way it should be surveyed and a map recorded** in our office.
- Contact us immediately if you notice a utility moving poles.

☞ When doing any utilities work, your contract should contain the following language:

***“REPLACEMENT OF PROPERTY CORNERS.** The contractor shall be held responsible for the cost of the replacement of any and all property corners, monuments, iron pipes, stakes or marked stone disturbed during the construction. All surveying monument replacements shall be completed by a Registered Land Surveyor.”*

SHARE THIS INFORMATION WITH YOUR TOWN BOARD AND/OR ROAD SUPERVISORS.

Marathon County Zoning Department 210 River Drive Wausau, WI 54403-5449
Surveyor: (715) 261-6025 Zoning: (715) 261-6020 or 6021 Fax: (715) 261-4116

SAMPLE

TO: Municipalities
FROM: Chester J. Nowaczyk, County Surveyor
RE: Preserving Section Corners and Quarter Section Corners
DATE: Spring 2000

INFORM YOUR MUNICIPAL BOARD AND/OR ROAD SUPERVISORS.

Your cooperation in the past has been appreciated, but we are still losing too many corners and reference ties due to road work.

- Respond with **ANY** road work being done in your municipality - from the smallest **ditching, sand or gravel lifts, and brushing, to major road rebuilding** - even if no work is being done.
- We need to be notified at least **eight (8) working days before any project is started**, by telephone (715 261-6025) or mail (210 River Drive, Wausau 54403-5449).
- If you are going to obtain more **right of way** it **should be surveyed and a map recorded** in our office.
- Contact us immediately if you notice a utility moving poles.

☞ When doing **any** utilities work, your contract should contain the following language:

"REPLACEMENT OF PROPERTY CORNERS. *The contractor shall be held responsible for the cost of the replacement of any and all property corners, monuments, iron pipes, stakes or marked stone disturbed during the construction. All surveying monument replacements shall be completed by a Registered Land Surveyor."*

SHARE THIS INFORMATION WITH YOUR MUNICIPAL BOARD AND/OR ROAD SUPERVISORS.

Marathon County Zoning Department 210 River Drive Wausau, WI 54403-5449
Surveyor: (715) 261-6025 Zoning: (715) 261-6020 or 6021 Fax: (715) 261-4116

- *Please...
Notify the
County
Surveyor*

...if you are clearing rights of way or doing construction which may destroy important markers.

- County Surveyor's

Phone number: _____

APPENDIX G

Review Checklists

Certified Survey Map Review Sheet (Green Lake County)

Certified Survey Map Checklist (Marathon County)

Certified Survey Map Checklist (unknown)

Final County Plat Check Sheet (Marathon County)

Local Plat Check Sheet (unknown)

Green Lake County



Alan K. Shute
County Surveyor
492 Hill St, PO Box 3188
Green Lake, WI 54941
Phone : (920) 294-4030
Fax : (920) 294-4104

Land Use Planning & Zoning Department

SAMPLE

CERTIFIED SURVEY MAP REVIEW SHEET

INTAKE DATA BY _____ DATE _____
Surveyor _____ Date Received _____
Address _____ Fee(s) Received _____
Phone (____) _____ Receipt # _____
Section _____ T _____ N R _____ E Town of _____

ZONING DATA BY _____ DATE _____
Parent Tax Parcel # _____ County Zoning Apply _____
Min Required Lot Size _____ (acres)(sq. ft.) Zoning _____
Min Required Lot Width _____ Flood Plain _____
Proposed Lot Size _____ (acres)(sq. ft.) Shoreland _____
Lot Size Violation _____ (conforming) Wetland _____
Remnant Parcel Size _____ Selback Violation _____
Subdivision Status _____
Extraterritorial Review Area _____ Berlin ETZA _____ (send copy of CSM)
Other Comments: _____

GREEN LAKE COUNTY REGULATIONS

SURVEYING DATA BY _____ DATE _____

GLC 3.4 CSM for parcels 15 acres or less in size; 14 working days to review CSM; Scale of not more than 400 feet to one inch; 6 copies with letter of transmittal

- (1) Name and address of those dividing the land
- (2) Date of survey
- (4) Location, widths and names of existing and proposed roads, easements, railroad r/w, utility easements in or adjacent to the proposed CSM
- (5) Location of : existing property lines
 - Building setbacks from proposed property lines
 - Drainage ditches
 - Drives
 - Buildings
 - Streams and water courses

Lakes
Marshes

Other significant features within the CSM

- (6) Building and visual setback lines per Green Lake County Zoning Ordinance
 - (7) Lands reserved for public acquisition
 - (8) Floodplain and Shoreland boundaries and a contour line at an elevation which is 2 feet above the regional flood as established by the DNR
 - (10) Utility easements where requested
 - (11) Approximate location of existing and proposed on-site sewage disposal system
 - (12) Access restrictions where applicable
 - (13) Municipality certificate for acceptance of dedication
 - (14) Owner's certificate for dedication
 - (15) Certificate for committee approval
- GLC 5.6(2) Frontage on a public road, 66 ft minimum
GLC 4.3 Statement of compliance with this ordinance

CHAPTER 236 WISCONSIN STATUTES

General

236.34(1) Not more than 4 parcels (inc. private roads, outlots) per map; May change lot boundaries within a recorded subdivision if change does; not result in a subdivision violation per State and County regulations; Cannot be used in changing exterior boundary of recorded subdivision.

236.34(1)(a) Performed by RLS, error may not exceed 1/3000

Monumentation 236.34(1)(b)

236.15(1)(c) Monument lot corners with pipes or rods

236.15(1)(d) Monument meander corners with pipes or rods a minimum of 20' back from the normal high water mark

Map 236.34(1)(c)

236.20(2)(a) Show exterior boundaries of land surveyed and divided

236.20(2)(b) Show all existing and set monuments (in legend material, diameter, weight per foot)

236.20(2)(c) Bearing and distance of lines surveyed and mapped. Previous shown as "recorded as"

236.20(2)(e) All lots and outlots consecutively numbered

236.20(2)(f) Exact width of easements, streets and alleys

236.20(2)(g) Meander lines and relationship of ends of meander line to ordinary HWM

236.20(2)(i) North arrow referenced to magnetic, assumed or true datum and related to a line of a ¼ section in the section in which the CSM is located

236.20(2)(j) Area in sq. ft. of lots and outlots (gross and net)

236.20(2)(k) Minimum curve data (radius, central angle, chord bearing, chord length, arc length)

236.20(2)(L) Waiver of strict compliance

236.20(3)(b) Tie by bearing and distance to a boundary line of the ¼ section, in the section in which the CSM is located, with monumentation at ends of boundary line described and bearing and distance between them shown.

236.34(1)(c) Sheets numbered consecutively in relation to the total number of sheets

236.34(1)(c) Original seal signature and date on all pages per A-E2.02(4)

236.34(1)(c) Title and general description by Gov't Lot or ¼ - ¼ Section, Section, Town, Range, County, State

Certificales

236.34(1)(d)1. By whose direction surveyor made survey of land described on this map.

236.34(1)(d)2. Clear and concise legal description by metes and bounds commencing at a corner of the PLSS or may be tied to a corner (lot, block, subdivision) in a subdivision if said subdivision is tied to a PLSS corner.

236.34(1)(d)3. Statement of correctness

236.34(1)(d)4. Statement of full compliance with state statutes and local ordinances

236.34(1)(e) Dedication(s) of streets and public area with owner certificate per 236.21(2)(a)

Recording

236.34(2) When recording CSM's to be consecutively numbered

Conveyance

236.34(3) When conveying use lot number and CSM number for all purposes

CERTIFIED SURVEY MAP CHECKLIST

Registered Land Surveyor - Name _____

Telephone Number _____

Registered Land Surveyor - Address _____

SAMPLE

I have reviewed the Certified Survey Map for (owner/buyer) _____

at (legal description) _____

- 1. Title: "CERTIFIED SURVEY MAP NO. _____" on all pages of survey.
- 2. General location: $\frac{1}{4}$ $\frac{1}{4}$, Section, Government Lot, etc.
- 3. Basis for bearings statement stating the line being referenced, how it is referenced (true, assumed, etc.), and what bearing.
- 4. North arrow.
- 5. Ties to two US Public Land System corner by bearing and distance.
- 6. Identify all monuments. State material, length, weight per lineal foot, diameter(I.D. or O.D.) and found or set.
- 7. Show water elevation on date of survey or ordinary high-water mark of any water body, establish a benchmark and show what datum was used. (#7 may be waived.)
- 8. Identify all adjoining lands. State whether it is on a C.S.M., Subdivision, or unplatted. Also state who owns, owner, others, divider.
- 9. Show "recorded as" bearings and distances if different.
- 10. Show meander line bearing and distance along with bearing and distance from meander line to waters edge.
- 11. Identify all easements. If previously recorded, show Vol. and Page. If not recorded, must have easement validation note. Must show width.
- 12. Identify US Public Land System lines (section forty, etc).
- 13. Mathematical closure of 1/3,000 or better for exterior and individual lots and outlots.
- 14. Lot number.
- 15. Legend.
- 16. Show adjacent streets, names, and street right angle widths. (County Road..., State Highway...)
- 17. Curve information, on curve or in a table, i.e.: radius, chord length, chord bearing, central angle, arc length, and tangent bearing or direction both in description and on face of map.
- 18. Surveyor's certificate always, owner's certificate when R/W is to be dedicated, and mortgagee's certificate if applicable.
- 19. Graphic scale, not to exceed 500 feet to an inch.
- 20. Original map with stamp and seal of land surveyor in contrasting colors, along with copies.
- 21. Comply with Chapter 236.34 of the Wisconsin State Statutes along with A-E7 of the Wisconsin Administrative Code.

CSM will not be approved until the following/attached information is submitted or explained. Date _____

Comments: _____

CSM approved on _____, but have comments and suggestions for future submittals.

CSM approved on _____

CERTIFIED SURVEY MAP CHECK SHEET

SAMPLE

Subdivision: Section _____ Town _____ Range _____ Location _____
Surveyor: _____ Date of Survey: _____
Land Owner _____

____ Are there 4 parcels or less (including Outlots, public dedications and public ROW do not count as parcels)? 236.34 (1)

____ Has there been an adjacent CSM recorded with 4 parcels of 1 ½ acres each or less within a period of 5 years? 236.2 (12)

____ Are all of the lots and outlots consecutively numbered?

____ Is the area in square feet of each lot and outlot shown?

____ Is the map on 8 ½ " x 14" durable white paper?

____ Is there a 1 ½ " wide binding margin on the left or upper end and a ½ " margin on all other sides?

____ Are the sheets consecutively numbered and containing a notation giving the total number of sheets, showing the relationship of one sheet to the other sheets?

____ Is "CERTIFIED SURVEY MAP" printed on the map in prominent letters?

____ Is the location of the land denoted by government lot, recorded private claim, quarter-quarter section, section, township, range, and county noted?

____ Does the map indicate the name of the person dividing or selling the land?

____ Are all the exterior boundaries of the land surveyed and divided shown?

____ Check legend: size (outside diameter, length, weight per lineal foot) and material of monuments set (at least 1 ½ " x 1 " diameter or solid square or round iron bars less in diameter, minimum weight 1.13/ft), are all monuments on the map accounted for on the legend? (236.15 (1))

____ Are the exact length and bearing of the exterior boundaries, the boundary lines of all blocks, public ground, streets and alleys shown?

____ Are there any easements that need to be shown?

____ Are all of the exact widths of all easements, streets and alleys shown? (If known.)

___ Are there the necessary Recorded As" bearing and lengths shown?

___ Are there any lake or stream shore meander lines that need to be shown according to 236.15 (1) (d)?

___ Is there a north point properly located thereon referenced to a magnetic, true or other identifiable direction related to the boundary line of quarter section, private claim or federal reservation in which map lies? 236.34 (2)

___ Where there is a circular curve, are the Main chord bearing and length, radius of circle, central angle and both tangent bearings shown? Circular curve of less than 30 feet radius must be tangent to street lines and show at a minimum the radius and tangent length. (236.20 (2) (k).

___ Are adjoiners shown and underscored with dashes or dots? Lot lines too? (dash or dotted.)

___ Is there a graphic scale on all sheets that show layout features? (Not to exceed 500' to an inch) 236.34 (1) (c)

___ Math check each lot and add all parts to be sure totals are correct.

SAMPLE

___ Is access to a public road shown?

___ Have U.S. PLS Monument Record documents been filed for section corners? (A/E 7.08)

___ Is there a tie by bearing and distance to a boundary line of ¼ section, recorded private claim or federal reservation in which map lies. 236.20 (3) (b)

___ Check description with the map.

___ If there is to be dedication of streets or other public areas, have you included the owners certificates and mortgagees certificates? 236.34 (1) (c)

___ Have you included the "Certificate of the Surveyor" who did the survey according to 236.34 (1) (d)?

___ Does this CSM cross the exterior boundary of a recorded plat?

___ Are additional parcels being created?

___ Are owners certificates from all parties of interest included?

___ Has the CSM been approved by all approving authorities like a plat?

___ Is it monumented the same as a plat with bigger monuments at corners?

___ Is each sheet signed, sealed and dated?

___ Is the information on the map placed to allow for ease of reading the information?

____ Strict compliance with requirements of this section may be waived by the Plat Review for CSM's.

____ Does Trans 233 apply?

____ Reconciles with Real Property Listing.

____ Parcel Identification Number is _____

____ Treasurer Check for Taxes owed _____

SIGNATURE OF REVIEWER: _____

DATE: _____

SAMPLE

FINAL

CHECK SHEET FOR LAND SUBDIVISION PLATS--CHAPTER 236, WISCONSIN STATUTES
This form is NOT the statute. It is a convenient guide to the statute.

SAMPLE

15 SURVEYING REQUIREMENTS

(1) MONUMENTS (Placed flush with the ground where practicable)

- _____ (a) External boundaries of subdivision shall be monumented by: stone or concrete, 30" long by 4" square or 5" in diameter with $\frac{1}{4}$ " diameter rod imbedded; or iron pipes or rods, 30" long by 2" in diameter, or solid square or round iron bars less in diameter, min. wt. 3.65#/lin. ft. At all corners, ends of curves, point where curve changes radius, all angle points, and all angle points along the meander line (not less than 20' back from the ordinary high water mark or stream bank).
- _____ (b) Internal boundaries, shall be monumented as in par. (a); at all block corners, each end of curves; at points in curve where radius changes; at all angle points.
- _____ (c) Lot, outlot, park and public dedication corners, iron rods or pipes 24" long by 1" diameter, or solid square or round iron bars less in diameter, min. wt. 1.13#/lin. ft.
- _____ (d) Lot, outlot, park and public dedication lines extending to lakes or streams shall be monumented as in par. (c); at intersection of line & meander line, not less than 20' from ordinary high water mark of stream bank.
- _____ (f) Any durable metal, stone or concrete monuments may be used in par. (c) and (d). Must have magnet embedded near top or bottom and be uniform through plat.
- _____ (g) DATCP may make other reasonable monumentation requirements to accommodate unusual circumstances.
- _____ (h) Primary approving authority may temporarily waive placing of monuments under par. (b), (c) and (d); surety bond required.

(2) ACCURACY OF SURVEY

Plat may be rejected if ratio of error in latitude and departure closure of any part of the survey exceeds 1'/3000'. Survey by Wisconsin Registered Land Surveyor.

16 LAYOUT REQUIREMENTS

- _____ (1) MINIMUM LOT WIDTH AND AREA. In counties of 40,000 or more, lots shall be 50' wide and 6,000 sq. ft. in area; in counties of less than 40,000, lots shall be 60' wide and 7,200 sq. ft. in area; lot width and area may be reduced by subdivision control ordinance, with public sewers.
- _____ (2) MINIMUM STREET WIDTH. Of the width specified on Master Plan or Official Map, at least as great as existing streets if no Official Map or Master Plan, not less than 60' wide unless permitted by local ordinance. Town road widths shall comply with minimum standards prescribed by s. 86.26. Frontage and service roads not less than 49.5' in width.
- _____ (3) LAKE OR STREAM SHORE PLATS. Provide public access 60' in width, connected to existing public roads, to navigable waters at not more than 1/2 mile intervals along shore, except where such access already exists or where greater intervals and wider access is agreed upon by the DNR & DATCP. Public access may not be vacated except by circuit court action and DNR approval (see s. 80.41).
- _____ (4) LAKE OR STREAM SHORE PLATS. If the subdivider has any interest in lands between meander line and water's edge or other unplattable lands between the subdivision and the water's edge, they must be included in plat.

236.20 FINAL PLAT

(1) GENERAL REQUIREMENTS

- _____ (1) (a) - $1\frac{1}{2}$ " binding margin on left side and 1" margins on other sides.
- Graphic scale not over 100' to 1" on each sheet showing layout features.
- Sheets numbered as sheet ___ of ___ sheets, if more than one sheet.
- Subdivision and county name on each sheet.
- _____ (1) (b) - For s. 236.12 (6) processing: Original and recording document is muslin-backed white paper 22" wide x 30" long, prepared with nonfading black image. (Sheet size ___ x ___).
- _____ (1) (c) - For s. 236.12 (2) processing: Original is any size and any material capable of clearly legible reproduction. Sheet size is ___ x ___. Recording document is photographic reproduction specified in s. 236.25 (2) (a).

SAMPLE

FINAL PLAT (continued)

(2) MAP AND ENGINEERING INFORMATION

- (a) All exterior boundaries.
- (b) All monuments, corners and other points established in the field; indicate material used, except that lot, outlot and meander corners need not be shown. A description of the monuments, including for metal monuments the kind of metal, the diameter, length and weight per lineal foot.
- (c) Exact length and bearing of all exterior blocks, public grounds, streets, alleys, and lot lines (except where parallel). Easements by center line distance and bearing & widths, or by widths when parallel to other survey lines. Previously recorded bearings and lengths shown "Recorded as _____".
- (d) Blocks, if designated, consecutively numbered or lettered in alphabetical order.
- (e) Lots and outlots in each block consecutively numbered.
- (f) Exact width of all easements, streets, alleys.
- (g) Lengths and bearings of all meander lines, with distances between intersections of meander lines and lot lines and ordinary high water mark.
- (h) Center line of all streets.
- (i) North point properly located; referenced to a magnetic, true or other identifiable direction and related to boundary line of quarter section, private claim or federal reservation in which subdivision lies.
- (j) Lot or outlot area in square feet.
- (k) CURVES: Main chords drawn as dotted or dashed lines and both tangent bearings shown. Arc length, chord bearing & length, radius, & central angle shown for main curve & each segment. Street on circular curve of less than 30' radius, tangent to street lines--show radius of curve and tangent distances.
- (l) Strict compliance with requirements of this section may be waived by DATCP for plats and CSMS.

(3) SUBDIVISION NAME IN PROMINENT LETTERS, NOT A DUPLICATE WITHIN COUNTY OR MUNICIPALITY

- (a) Immediately under name show gov't. lot, recorded private claim, $\frac{1}{4}$ - $\frac{1}{4}$ section, section, township, range & county.
- (b) Tie by lengths and bearings to boundary line of 1/4 section, P.C., Federal Reservation in which subdivision lies; and description of monuments at ends of the line; & bearing & distance between those monuments.
- (c) Small drawing showing section or a government subdivision of section in which subdivision lies, oriented same as main drawing. DATCP may grant variance if relationship of subdivision to existing streets shown.
- (d) Names of adjoining streets, state highways, subdivisions in proper location, underscored by dotted/dashed lines.
- (e) Abutting street and state highway lines in dotted or dashed lines and in proper location, with widths.

ROADS AND PUBLIC SPACES

- (a) Name of each road and street in plat.
- (b) Lands dedicated to public marked "Dedicated to the Public" (except roads and streets).
- (c) Mark clearly all roads not dedicated to the public "Private Road", "Private Street", or "Private Way".
- (d) Each lot must have access to a public street, unless otherwise provided by local ordinance.

(5) SITE CONDITIONS AND TOPOGRAPHY

- (a) All existing buildings.
- (b) All watercourses, drainage ditches, other pertinent features.
- (c) Water elevations of adjoining lakes or streams at date of survey, approximate high and low water elevations, referred to permanently established datum plane.

236.21 CERTIFICATES TO ACCOMPANY PLAT

(1) SURVEYOR'S CERTIFICATE OF COMPLIANCE WITH STATUTE:

- (a) By whose direction survey, subdivision and plat made.
- (b) A clear, concise description, by government lot, recorded private claim, $\frac{1}{4}$ - $\frac{1}{4}$ section, section, township, range and county. Metes and bounds description required. Commencing with a corner of the 1/4 section (not center of section), recorded P.C., or Federal Reservation in which the subdivision lies.
- (c) Statement that plat is a correct representation of all the exterior boundaries of the land surveyed and the subdivision of it.
- (d) Statement that surveyor has fully complied with the provisions of Chapter 236.

SURVEYOR'S CERTIFICATE

Signed _____
Date _____

Reg. No. _____
Seal _____

(2) OWNER' CERTIFICATE

- (a) Certificate in following form: "As owner, I hereby certify that I caused the land described on this plat to be surveyed, divided, mapped and dedicated as represented on the plat. I also certify that this plat is required by s. 236.10 or s. 236.12 to be submitted to the following for approval or objection: (list governing bodies required to approve or allowed to object to plat)."

LOCAL PLAT CHECK SHEET

SAMPLE

Subdivision Name: _____

Section _____ Town _____ Range _____ Location _____

Surveyor: _____ Date of Survey: _____

___ Is the location of the land denoted by government lot, recorded private claim, quarter-quarter section, section, township, range, and county noted?

___ Are all of the lots and outlots consecutively numbered?

___ Is the area in square feet of each lot and outlot shown?

___ Are the sheets consecutively numbered and containing a notation giving the total number of sheets, showing the relationship of one sheet to the other sheets?

___ Does the map indicate the name of the person dividing or selling the land?

___ Are all the exterior boundaries of the land surveyed and divided shown?

___ Check legend: size (diameter, length, weight per lineal foot) and material of monuments set (at least 18" x 1 OD" diameter IP or solid square or round iron bars less in diameter, minimum weight 1.13/ft), are all monuments on the map accounted for on the legend? (236.15) (1)

___ Are the external boundaries monumented by 2" OD x 18" iron pipes or equivalent with a minimum weight of 3.65#/foot at all corners, ends of curves and angle points (including the meander line)?

___ Are the exact length and bearing of the exterior boundaries, the boundary lines of all blocks, public ground, streets and alleys shown?

___ Are there any easements that need to be shown?

___ Are all of the exact widths of all easements, streets and alleys shown? (If known.)

___ Are roads clearly marked as Private or Public if so dedicated?

___ Are existing buildings shown?

___ Are water elevations shown and referenced to a permanent established datum?

___ Are there the necessary Recorded As" bearing and lengths shown?

___ Are there any lake or stream shore meander lines that need to be shown according to 236.15 (1) (d)?

___ Is there a north point properly located thereon referenced to a magnetic, true or other identifiable direction related to the boundary line of quarter section, private claim or federal reservation in which map lies? 236.34 (2)

___ Where there is a circular curve, are the Main chord bearing and length, radius of circle, central angle and both tangent bearings shown? Circular curve of less than 30 feet radius must be tangent to street lines and show at a minimum the radius and tangent length. (236.20 (2) (k).

SAMPLE

___ Are adjoiners shown?

___ Is there a graphic scale on each page? (Not to exceed 500' to an inch) 236.34 (1) (c)

___ Math check each lot and add all parts to be sure totals are correct.

___ Is access to a public road shown?

___ Have U.S. PLS Monument Record documents been filed for section corners? (A/E 7.08)

___ Is there a tie by bearing and distance to a boundary line of ¼ section, recorded private claim or federal reservation in which map lies. 236.20 (3) (b)

___ Check description with the map.

___ If there is to be dedication of streets or other public areas, have you included the owners certificates and mortgagees certificates? 236.34 (1) (e)

___ Have you included the "Certificate of the Surveyor" who did the survey according to 236.34 (1) (d)?

___ Is each sheet signed, scaled and dated?

___ Is the information on the map placed to allow for ease of reading the information?

___ Does Trans 233 apply?

___ Reconciles with Real Property Listing.

___ Parcel Identification Number is _____.

___ Treasurer Check for Taxes owed _____.

SIGNATURE OF REVIEWER: _____

DATE: _____

BIBLIOGRAPHY

- Brown, C. W., Robillard, W.G., and
Wilson, D.A. *Evidence and Procedures for
Boundary Location*, 3rd ed. New York,
NY. John Wiley & Sons, Inc. 1994
- Brown, C. W., Robillard, W.G., and
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Wiley & Sons, Inc. 1995
- Brown, W.S. *The System of Government
Surveys*, Green Lake County, WI.
Northwest Publishing Company, 1901
- Ellis, E.W.H. *Historical Sketch of the
Subdivision of Public Lands*, Chicago, Ill.
Higgins, Harney & Company
Publishers, 1875
- Hulburt, Ray W. *The Public Land Survey and
the County Surveyor*, Jackson County, WI.
Written sometime between 1953 and
1980

Other references that are helpful to have are:

- Attorney General's Opinions, compiled by the Wisconsin Society of Land Surveyors
Elementary Surveying, 10th ed., Wolf, Paul R. and Brinker, Russell C.
- Manual for Resurvey of Public Land Survey Corners and Sectionalized Subdivision Boundaries within the
State of Wisconsin*, A, Onsrud, Harlan J.
- Wisconsin Laws Relating to the Practice of Land Surveying*, compiled by the Wisconsin Society of
Land Surveyors
- Wisconsin Platting Manual*, compiled by The Plat Review Unit, Wisconsin Department of
Agriculture, Trade & Consumer Protection

Wisconsin County Coordinate System versus Wisconsin Coordinate Reference System

Glen R. Schaefer, PE, LS
Surveying and Mapping Section
Wisconsin Department of Transportation

May 11, 2006

Wisconsin County Coordinate System

59 zones covering 72 counties

Conic or cylindrical projection

Each uses a "raised" ellipsoid

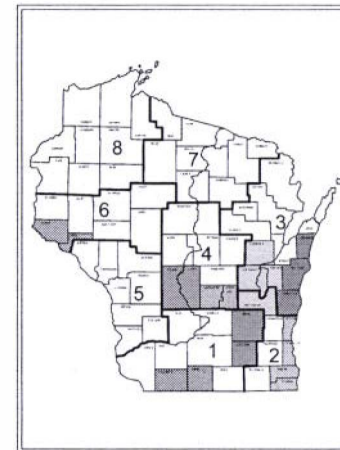
Maximum ratio:

(grid to ground)

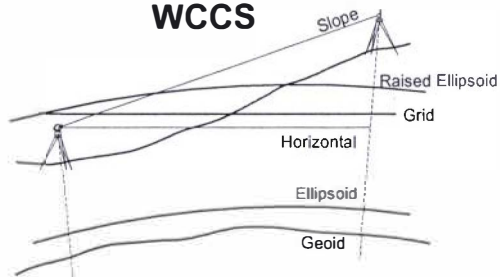
1/30,000 rural

1/50,000 urban

For more information visit the
Wisconsin State Cartographer's
Office web page at
<http://www.sco.wisc.edu>



WCCS



- A raised ellipsoid is defined at some height above the rigorously defined GRS 80 ellipsoid.
- A conic or cylindrical projection is selected and fit to the raised ellipsoid using maximum distortion (ellipsoid to grid) as a fit criteria.
- A grid coordinate system is defined by locating the origin and defining the direction of north

Moving Spatial Data Between Systems

Available Software Includes:

WISCON 1.7b and 2.2

Transform geodetic positions between NAD 27, NAD 83 (1986), and NAD 83 (1991)

Convert positions within NAD 27, NAD 83 (1986), NAD 83 (1991), and NAD 83 (1997)

Terminology

WISCON Version 1.7b uses "HPGN (WI)" to identify the NAD 83 (1991).

WISCON Version 2.2 uses "WIHPGN: Wisconsin HARN" to identify NAD 83 (1991).

Caution: in Version 2.2, "NAD 83: North American Datum of 1983" means NAD 83 (1986)!

WISCRS

Wisconsin Coordinate Reference System

59 zones covering 72 counties

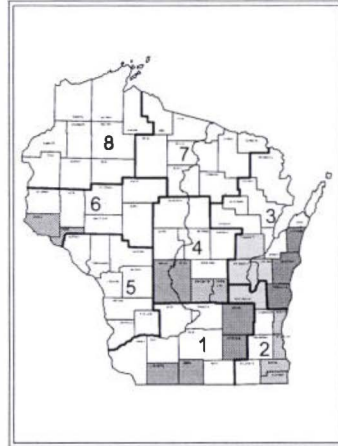
Conic or cylindrical projection

Each uses the GRS 80 ellipsoid

Maximum ratio:
(grid to ground)

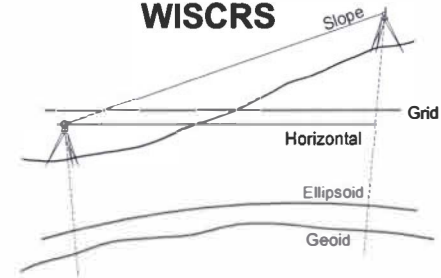
1/30,000 rural
1/50,000 urban

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5

WISCRS



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6

WCCS

$$4.000 / 3.000 = 1.3333$$

$$1.3333 \times 6.000 = 7.9998$$

$$7.9998 = 8.000$$

7

WCCS

$$4.000 / 3.000 = 1.3333$$

$$1.3333 \times 6.000 = 7.9998$$

$$7.9998 = 8.000$$

WISCRS

$$4.000 \times 6.000 = 24.0000$$

$$24.0000 / 3.000 = 8.000$$

8

WISCRS

Wisconsin Coordinate Reference System

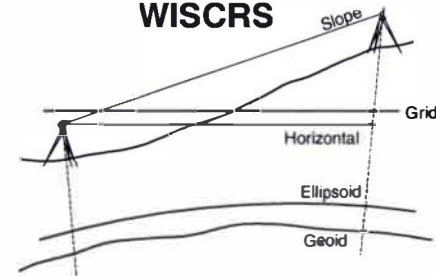
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6

WCCS $4.000 / 3.000 = 1.3333$
 $1.3333 \times 6.000 = 7.9998$
 $7.9998 = 8.000$

7

WCCS $4.000 / 3.000 = 1.3333$
 $1.3333 \times 6.000 = 7.9998$
 $7.9998 = 8.000$

WISCRS $4.000 \times 6.000 = 24.0000$
 $24.0000 / 3.000 = 8.000$

8

Wisconsin County Coordinate System versus Wisconsin Coordinate Reference System

Glen R. Schaefer, PE, LS
Surveying and Mapping Section
Wisconsin Department of Transportation

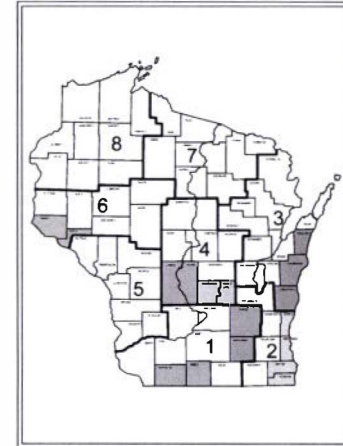
May 11, 2006

1

Wisconsin County Coordinate System

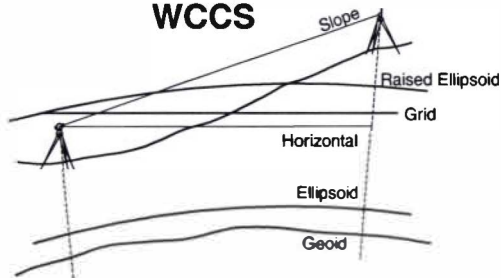
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2

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3

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4

WISCONSIN COUNTY SURVEYORS ASSOCIATION, INC.

Minutes of the Wisconsin County Surveyors Association meeting, February 24, 2006 at Neillsville, Wisconsin.

Board members present: John Ellingson - Jackson County, Bill Jung - LaCrosse County, Tony Dallman - Lincoln County, Bryan Meyer - Juneau County, Steve Geiger - Polk County, Chet Nowaczyk - Marathon County, Wade Pettit - Clark County, Jim Herbert - Outagamie County.

Others present: Glen Schaefer - Wisconsin Department of Transportation, Kathy Swingle - Burnette County

President John Ellingson called the meeting to order at 10:04 a. m.

Additions to the agenda: Assessor's Plat Question; Wetlands disclosure; Architect/Landscape bill; electronic filing; cost of on-line information; County employee parking; survey situation in Clark County; National Association of County Surveyors.

Minutes from the November 4, 2005 meeting at Thorp, Wisconsin. One correction - The checkbook balance in the treasurer's report should be corrected to show \$1,156.30 - not the \$11,156.30 shown in the January Newsletter. Motion by Herbert, second by Jung to approve, Motion carried.

Secretary's Report: Bryan Meyer submitted a written report. He passed out copies of the 2006-2007 County Surveyor Directory. Meyer asked those in attendance to review the directory and submit any suggested changes as soon as possible. He plans to print up to 90 more directories within the next week and distribute those to the membership, associates members and sustaining members. There will be no labor charges associated with the creation of the new directory. Only charges for ink, paper, binding, mailing materials and postage will be submitted to WCSA. Meyer also submitted a proposal for secretarial/publication services for 2006. The proposal reflects the same duties as in 2005. Compensation calls for \$2400.00. This represents a \$200 increase over last year. In assessing the amount of work involved in the position of secretary, Meyer believes it would be in the best interest of WCSA to get the compensation amount back up at or near the \$2500 figure that was paid to the secretarial service was in 2003. Should Meyer decide to step down, this should be an encouragement for someone else to step forward and take over the position. Pending board approval of the proposal, Meyer submitted an invoice for \$600.00 for secretarial duties and an invoice for \$8.56 for over and above costs. Motion by Geiger, second by Hebert to approve the secretaries report; motion carried. The secretarial/publications services proposal will be taken up under new business.

Treasurer's Report: Steve Geiger submitted a written report showing a checking balance of \$1485.41; a savings balance of \$2480.01; and a 7 month CD balance of \$1500.00 (CD Matures 7/27/06 - interest rate 4.02/annual yield 4.10). The report also showed expenditures since January annual meeting at \$336.60. Kathy Swingle expressed her thanks to the Board for the memorial given to the WSLs Foundation in memory of her late husband. Motion by Hebert, second by Meyer to approve the treasurer's report; motion carried.

Correspondence: Dodge County submitted suggested changes to AE7 of the Administrative Code via e-mail to President Ellingson. Copies were made and distributed to those in attendance. A lengthy and spirited discussion followed regarding the requirements of AE7 and these suggestions. Each member of the board was encouraged to respond to Dodge County. A thank you card was sent by Kathy Swingle to President John Ellingson in appreciation of the gift given to the WSLs foundation in memory of her husband. Chet Nowaczyk handed out a list of people signed up to serve on the County Surveyor Committee. The page also laid out the responsibilities of the committee for 2006. Glen Schaefer reported on the status of the Dane County Surveyor position. A candidate was selected but that individual did not accept. A second candidate has been offered the position, but to date, has not accepted.

DOT Liaison Committee: Glen Schaefer reported he has been asked by the Public Service Corporation based in Green Bay to speak at a training session for their designers. These are the designers that decide where various utilities will be located in DOT right of way. Glen handed out a printout of the power point presentation showing the various types of survey monuments and witness posts which the designers may deal with in the course of their work. Glen also handed out a draft copy of a policy 96.20 of the DOT Maintenance Manual which pertains to Utility Accommodation/Location Requirements. This is essentially an agreement that DOT has with utilities as to where they can place utilities in the DOT right of way. If utilities do not follow this procedure, DOT will not provide them with a permit. This draft gives a minimum clearance that all types of utility should stay from three types of survey monuments (R/W/Property boundary - Government Corners - Geodetic control). survey monuments. Glen asked those in attendance to review the criteria and get back to him with any comments or questions. A suggestion was made that when this policy gets finalized and approved, it would be good if county highway commissioners had a copy. The board expressed it's appreciation for Glen's work in helping to protect survey monuments. Glen also shared some comments regarding virtual reference stations.

Coordinate System Task Force Committee: Glen reviewed the rationale behind the new coordinate system. Glen said that within most counties, the difference in the way this is being calculated is resulting in differences in coordinates of 2 to 3 mm. The criteria calls for less than 5 mm. Glen also discussed the differences between the new system and WISCON. Identifying the new system has been resolved by giving it a new name – WISCRS – an acronym that can be pronounced “whiskers”. The letters actually stand for WISconsin Coordinate Reference System. The County name would then follow for each respective county.

John Ellingson offered additional comments and stated that WLSL is planning a continuing education session on WISCRS featuring Al Vonderohe in October. Discussion followed on individuals who were somewhat uncomfortable with the new coordinate system.

OLD BUSINESS:

Current Status of County Surveyors Offices: Dane County (See comments in Correspondence) Douglas County has advertised for a new county surveyor with a deadline for applications being March 13. Discussion on the use of retained fees to pay salaries followed.

County Surveyor Directory: Meyer thanked Wade Pettit, Chet Nowaczyk and Tony Dallman for submitting pictures for the cover of the new directory.

Monroe County Way Point Description: Meyer reported that Monroe County Surveyor Gary Sime is attempting to make contact with the individuals responsible for the description. Discussion followed.

Meeting Dates and Times: The following dates and times were established: May 19 – Mosinee; August 4 – Waupaca; November 3 – Menominee. Start time for all meetings is 10:00 a. m. (NOTE: The Mosinee meeting was later changed to May 18 in Wausau due to a scheduling conflict).

NEW BUSINESS:

Assessor's Plat Question: Wade Pettit handed out information, including several maps, which showed a survey problem in Clark County – Section 24, T24N, R3W. Wade explained the data and the conflict. He asked those in attendance for advice on the best resolution. Many thoughts were shared and a solution was agreed upon. Wade thanked the group for their input.

Landscape Architects Bill: Chet brought this item up stating that landscape architects are attempting to introduce legislation to include some things that involve some elements of engineering and surveying. John stated that the engineers are on the offensive on this matter. Chet feels that we need to stay on top of this issue. The Board agreed. Motion by Hebert, 2nd by Jung to work in tandem with WLSL in opposing this proposed legislation. Motion carried.

Wetland Delineation: Chet stated that a bill has been introduced requiring realtors to disclose if the lands that they are trying to sell contain wetlands. Realtors are opposed to this legislation. Chet felt the board should be aware of this matter. Discussion on wetland maps and delineations followed.

Electronic Filing: Chet also brought up an issue where subdivision plats are being submitted for recording without an *original* seal and signature. Chet contacted Plat Review. Discussion followed.

County Employee Parking: Chet asked the board for input on employee parking in other Counties. This issue seems to be an issue in larger cities.

On-line information: Chet asked for input on serving survey information online. Items such as what is served and how much is being charged. Discussion followed.

Secretarial Services: Motion by Herbert, Second by Jung to approve the Secretarial/Publication services contract in the amount of \$2400.00. Motion carried.

Meeting adjourned by President John Ellingson at 12:51 p. m.