

FDM 9-5-1 Preservation of Survey Monuments

August 15, 2019

1.1 General

It is the policy and practice of WisDOT to take all reasonable measures to perpetuate, preserve and replace survey monuments. Therefore, all reasonable efforts will be taken to assure that no survey monuments will be destroyed, disturbed, removed or buried to the degree that they are no longer usable without first following the instructions listed below.

United States Public Land Survey System (USPLSS) corners, Boundary Monuments and Geodetic Survey Control Stations are the most significant types of monuments found within road rights of way. USPLSS corners and boundary monuments are used to help identify land ownership boundaries while geodetic survey control station monuments mark a location where a precise elevation and/or latitude and longitude have been determined. They are two completely separate entities. If USPLSS or boundary monuments are disturbed or destroyed, they can be replaced in substantially the same location using local references. Geodetic stations, if disturbed or destroyed, must be replaced and resurveyed in their entirety due to their precision.

Refer to <u>CMM 7-85</u> for additional information.

1.2 Definitions

Accessory: A nearby physical object to which corners or monuments are referenced for perpetuation or recovery. Distances and/or directions are measured from the corner or monument to the accessory. Examples may include trees, poles, roads, fences or any other easily discernible object. Accessories should be selected based on location and permanence and can be natural or man-made.

Boundary Line: A line of demarcation between adjoining lands. Boundary lines may delineate areas of different political jurisdiction and/or different land parcels. Land parcel boundaries are more commonly referred to as 'property lines' and may have the same ownership on both sides of the line.

Boundary Monument: Physical object(s) placed on or near a boundary line to preserve and delineate a line where two land areas meet. Boundary Monuments may delineate lines of political and/or land parcel boundaries. Also see Boundary Line.

Corner: A point on the Earth where two or more land boundary lines meet denoting the end or a change of direction in the line. This is not the same as Monument, which is a physical object used to represent the location of a corner. The terms Monument, Mark, Landmark, Corner, Point and Station are not synonymous, but are often used interchangeably.

Geodetic Survey Control Station: A survey monument with either a precise latitude and longitude used for horizontal control, or a precise elevation used for vertical control, or both that has been determined by the most rigorous of surveying methods to meet the specifications set forth by the National Geodetic Survey (NGS). A typical Geodetic Survey Control Station established by WisDOT's Height Modernization Program is a 3.5" bronze disk set in a 16" diameter concrete post, with the survey monument's position of record published as part of NGS' National Spatial Reference System (NSRS).

Landmark: See monument.

Lost USPLSS Corner or Monument: From the 2009 BLM Manual of Surveying Instructions, a lost corner or monument is one whose original position cannot be determined by substantial evidence, either from traces of the original marks or from acceptable evidence or reliable testimony that bears upon the original position. The location of a lost corner can be restored only by proportioning to one or more existing interdependent corners.

Monument: A physical object that indicates the location of a corner or a point determined by survey. Monuments may include (but are not limited to) a brass disk in concrete, iron rods or pipes with or without plastic caps, chiseled X's, PK nails etc. More than one monument may define a location. The terms Monument, Mark, Landmark, Corner, Point and Station are not synonymous, but are often used interchangeably.

Obliterated USPLSS Corner or Monument: From the 2009 BLM Manual of Surveying Instructions, an obliterated corner is an existent corner where there are no remaining traces of the monument or its accessories but whose position may be recovered by substantial evidence from the reliable testimony of competent witnesses, or by acceptable record evidence.

Parcel (Land): A continuous area or acreage of land which is described with its own unique land description such as metes and bounds, etc. Adjoining land parcels can have the same or different owners.

Perpetuate: The establishment of monuments, accessories and other relevant evidence that sustains the location of a corner in the event of its destruction. Corners can be perpetuated, geodetic survey control stations cannot. Perpetuations of corners should be recorded with the appropriate jurisdiction to preserve the chain of evidence from the present day back to the original monument. Geodetic survey control stations have measurements to other monuments and/or accessories to help locate the station but are not used to perpetuate it.

Property Corner: The same as a land parcel corner. A property corner may or may not have a monument designating its location.

Replace/Reset/Restore: The reestablishment of a survey monument that has been destroyed or disturbed in the same location as the original monument. The original location is typically determined via perpetuation of the original monument prior to destruction. Land Parcel monuments and Section Corners can be reset, but Geodetic Survey Control Stations cannot. The terms Replace, Reset and Restore are often used interchangeably.

United States Public Land Survey System (USPLSS): System of surveys that began in 1784 by the US Federal Government that provides direction and instruction for the orderly survey and subdivision of federally owned lands into grids prior to settlement. The grids from largest to smallest are: Townships (also called Congressional Townships to distinguish from Political Townships), Sections, Quarter Sections, Quarter-Quarter Sections (40 acres) and so on. Generally, the original USPLSS surveys monumented township and section exteriors. Further subdivisions and Monumentation was carried out by local surveyors. In Wisconsin, the USPLSS surveys began in December 1831 with substantial completion in 1866. Further information can be found in FDM 9-20-5 or most introductory survey textbooks.

Wisconsin Height Modernization Program (HMP): The Wisconsin Department of Transportation's Division of Transportation Systems Development, Bureau of Technical Services, Geodetic Surveys Unit (GSU) is responsible for the development and maintenance of the statewide vertical, horizontal, and gravitational geodetic control network in support of the Wisconsin Spatial Reference System (WSRS).

In 1998 the Wisconsin Department of Transportation's Geodetic Surveys Unit, in conjunction with the National Geodetic Survey (NGS), began work on a Height Modernization Program in Wisconsin. The goal was to construct a dense statewide network of permanent Geodetic Survey Control stations with highly accurate, reliable heights using global positioning satellite technology with traditional leveling, gravity, and modern remote sensing methods.

Upon completion of initial Height Modernization Program efforts, the Geodetic Surveys Unit serves as chief custodian of the statewide Geodetic Survey Control Network, which includes the core functions of replacement and reestablishment of Geodetic Survey Control Stations that are disturbed and/or destroyed.

See <u>CMM 7-85-2</u> for additional information.

1.3 Types of Monuments Typically Found along WisDOT Projects

There are four categories of monuments typically found along WisDOT projects.

- Geodetic Survey Control Station Monuments cannot be perpetuated. If disturbed due to nearby activity it must be replaced. Contact the Geodetic Surveys Unit by phone 866-568-2852 or email <u>geodetic@dot.wi.gov</u> if a project may endanger a geodetic survey control station. See FDM 9-5-1.4 for more details.
- 2. United States Public Land Survey System (USPLSS) Monument shall be perpetuated prior to construction. See FDM 9-5-1.5 for more details.
- 3. Land Parcel or Boundary Monument shall be perpetuated prior to construction. See FDM 9-5-1.5 for more details.
- 4. Any other types of monuments contact the appropriate WisDOT region survey coordinator for guidance prior to disturbing.

1.4 Geodetic Survey Control Station Replacement Procedure

When a Wisconsin Height Modernization Program geodetic survey control station will be disturbed or destroyed during construction, it must be replaced and reestablished as specified in the "Geodetic Survey Control Station Replacement Procedure". The "Geodetic Survey Control Station Replacement Procedure" was created to describe the roles, responsibilities, and funding necessary to ensure the replacement and reestablishment of a HMP geodetic survey control station is performed to the same specification and survey accuracy of the station it

is replacing.

The Geodetic Survey Control Station Replacement Procedure can be found here:

https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/tools/wiscors/geodetic-control-replacement-procedure.pdf

1.5 Procedure to Perpetuate USPLSS and/or Land Parcel Boundary Monuments

- 1. Each region will notify all counties, villages and cities of upcoming construction projects within their county/municipal boundaries that may endanger or disturb any survey monument. This notification will be sent out at least 60 days before the start of construction. This notification will include the location and limits of the project as well as the anticipated start of construction. This notification will serve as the 30-day written notice as required by Wis. Stat. s. 59.74(2)(b)1, that a survey monument may be destroyed.
- 2. A thorough search of the records will be made to determine if monuments of public record exist on the proposed project. County surveyors and city/village engineers will be asked to research their records and provide WisDOT with any information they have concerning survey monuments within the project limits.

WisDOT will make a thorough search of the records in the region office.

- 3. WisDOT will make a determination of which monuments may be endangered and notify the county, village or city of these monuments.
- 4. At least 30 days before construction, the county surveyor and city/village engineer will be asked to inform the region of the monuments that will be preserved by the county surveyor and city/village engineer under statute s. 59.74(2)(b)1.
- 5. The WisDOT region survey unit will determine if there are recorded monuments in addition to those perpetuated by the county or municipality that are deemed necessary to preserve in the public interest. These additional recorded monuments shall be perpetuated per the instructions of the region survey coordinator.
- 6. WisDOT will make a field survey of the affected monuments and witness monuments and provide a copy to the county. This will be done for informational purposes only. A note will state explicitly that this monument is not being certified as an actual corner, only that a certain type of monument was found and is perpetuated by a monument or reference monuments. This will be done at WisDOT cost.
- 7. Upon completion of construction, WisDOT will, if requested, reset an appropriate type of monument in the original location. WisDOT will file with the county/municipality the type of monument set. This will be done for informational purposes only. The notes will state that this monument is not being certified as an actual monument, only that certain evidence of a monument was found and that due to construction, it was necessary to remove and reset a monument at the location. This service will be provided by WisDOT at its expense. Resetting of monuments shall be done under the responsible charge of a Professional Land Surveyor (PLS) per Wisconsin Statute 443.01(6s)(c). A Monument Perpetuation Document is required for this procedure (See FDM 9-5-3).
- 8. If WisDOT has determined that a lost or obliterated United States Public Land Survey System (USPLSS) monument must be restored, the first point of contact will be the county surveyor (or designated representative if there is no county surveyor) where the monument in question is located. Per State Statute 59.74(2)(d), the cost of perpetuating the evidence of any [USPLSS] monument shall be borne by the county or counties where the monument is located.
- 9a. In the areas that are acquired as new fee acquisition, WisDOT shall notify the owner that it will facilitate, upon request, the actual and reasonable cost to have new property monuments set on the new right-of-way line in those instances where there is an existing property survey by a Professional Land Surveyor (PLS) and evidence of monumentation is found or identified prior to construction for the property in question. By facilitate, the region has the option to pay the property owner to hire a PLS or hire a PLS directly to set monuments on the new right-of-way line. Property owner notification to WisDOT for setting of property monuments on the new right-of-way via the above procedure shall occur prior to the closing of the construction project. The region Technical Services Chief or designee in consultation with the Project Development, Real Estate, Survey, Plat and other relevant region unit(s) shall determine if WisDOT will pay for new property monuments in areas new right-of-way acquisition area that does not meet the above qualifications.
- 9b. In the areas where rights and or other interests (e.g. Temporary Limited Easement (TLE), Permanent Limited Easement (PLE), Highway Easement (HE), etc.) are being acquired by WisDOT, WisDOT will

replace any property monuments that are damaged or destroyed as a result of construction activities provided that there is an existing property survey by a Professional Land Surveyor (PLS) and evidence of monumentation is found or identified prior to construction for the property in question. Property owner notification to WisDOT for replacement property monuments shall occur prior to the closing of the construction project. The region Technical Services Chief or designee in consultation with the Project Development, Real Estate, Survey, Plat and other relevant region unit(s) shall determine if WisDOT will pay for monument replacement of a property in area(s) where rights or other interests are acquired but does not meet the property survey or monumentation qualifications mentioned above. A Monument Perpetuation Document is required for this procedure (See FDM 9-5-3).

10. In areas where there are no Real Estate acquisitions, the construction contractor will be responsible for having a Professional Land Surveyor (PLS) replace any property monument that is damaged or destroyed during construction. Per the requirements in areas of new right-of-way acquisition, the property owner must be able to provide an existing property survey by a Professional Land Surveyor (PLS) and evidence of monumentation prior to construction. The property owner shall notify WisDOT or WisDOT's representative of any missing property monuments prior to the closing of the construction project. A Monument Perpetuation Document is required for this procedure (See FDM 9-5-3).

FDM 9-5-3 Monument Perpetuation Document

August 15, 2019

A Wisconsin Department of Transportation Monument Perpetuation Document (MPD) is a document that verifies monuments found prior to a transportation improvement construction project, but subsequently disturbed by construction activities, were replaced in the same location. It will also state the type of monument that was reset, providing future users evidence as to why a monument type representing a location may have changed. Typically, monuments referenced for this procedure will include disturbed monuments that are within Temporary Limited Easement (TLE) areas, within Permanent Limited Easement (PLE) areas or accidentally disturbed by construction activities. Per FDM 9-5-1.5 7,9b and 10, the monument to be replaced must be found and identified prior to construction for it to be replaced.

A Monument Perpetuation Document is **NOT** to be used for monuments that are disturbed because of new fee acquisition by WisDOT. See FDM 9-5-1.5 9a for procedures to have new property monuments set on a new right-of-way line.

A Monument Perpetuation Document states that the replaced monuments are to be used as evidence of existing monumentation prior to construction **without opinion as to their validity as a property corner**. An MPD may not be a true representation of existing property lines, should not be used as a substitute for an accurate field survey, does not depict a property survey and does not comply with Wisconsin Administrative Rule AE-7.

Resetting of monuments and creation of a Monumentation Document shall be done under the responsible charge of a Professional Land Surveyor (PLS) per Wisconsin Statute 443.01(6s)(c).

3.1 Monument Perpetuation Document Procedure

When construction is completed, the project construction oversight firm will then hire a surveyor or survey firm to replace disturbed monuments and create the Monument Perpetuation Document.

Contact the WisDOT Region Survey Coordinator to determine if the Region would like to review the MPD prior to general distribution.

The preparer will send the approved MPD to the WisDOT Region Survey Coordinator for distribution and filing within WisDOT and the appropriate County Surveyor (or the designated representative) for distribution within the county.

Please see the following link for current county surveyor (or designee) name, phone number and email address. <u>https://www.sco.wisc.edu/county-surveyors/</u>

3.2 Monument Perpetuation Document Examples

The following Monument Perpetuation Documents are shown as possible examples of how a MPD can be formatted. It is not required that the final MPD resemble any of the examples, they are provided as guide. Final determination as to whether a submitted MPD is acceptable shall be made by the Region Survey Coordinator.

3.2.1 Edit an Existing Transportation Project Plat

If a WisDOT transportation improvement project requires the acquisition of permanent land interests, then it is required that a Transportation Project Plat (TPP) be completed for the project per FDM 12-10.

An efficient and cost-effective way to create a Monument Perpetuation Document is to edit an existing Transportation Project Plat (TPP) with the following edits, note that the numbered items below correspond to the numbered items on <u>Attachment 3.1</u>.

- 1. Replace the Relocation Order with WISCONSIN DEPARTMENT OF TRANSPORTATION MONUMENT PERPETUATION DOCUMENT
- 2. Remove the recording information block in the upper right-hand corner of the TPP.
- 3. Insert the following statement in the recording information block *This document may not be a true representation of existing property lines and should not be used as a substitute for an accurate field survey.*
- 4. Insert the following statement in the recording information block *This Monument Perpetuation Document* does not depict a property survey and does not comply with Wisconsin Administrative Rule AE-7.
- 5. Clear the entire signature block of the text, signatures and surveyor stamp.
- 6. Insert the following statement in the old signature block: *I*, *<Name of Surveyor>*, *Professional Land Surveyor, certify that I have perpetuated the monuments shown on this document based on information provided to me by the Wisconsin Department of Transportation. The replaced monuments are to be used as evidence of existing monumentation prior to construction without opinion as to their validity as a property corner.*
- 7. Surveyor signs and stamps the document.
- 8. Callout boxes and arrows pointing to the monument location and listing the following required information for monuments replaced via this example:

Found: type of monument found prior to construction Set: type of monument set after construction

Coordinates of the monument in X and Y (not Northing and Easting) in the same coordinate system as the project. Coordinate precision for all perpetuated monuments shall be at least 0.01 feet (two decimals) with a maximum precision of 0.001 feet (three decimals). Every monument coordinate on a document shall have the same precision (number of digits after the decimal).

A table may be used in lieu of call-out boxes and arrows (see item 9).

- 9. A table can be placed on the appropriate TPP page in lieu of callouts and arrows. The table must be given a distinctive table name and every monument must be given a distinctive name or ID number.
- 10. Any other information that would be pertinent to this project.
- 11. It is recommended, but not required, to use red font for call-outs or tables for the MPD to better distinguish information added after the filing of the TPP.

3.2.2 Table Options

For projects that have very few disturbed monuments, a Monument Perpetuation Document may be submitted as a standalone table or a table with appropriate maps, county GIS screen captures or TLE Exhibit (FDM 12-20) screen captures with perpetuated monuments identified with unique point labels.

Requirements for Table Option (note that the lettered items below correspond to the lettered items on <u>Attachments 3.2</u> and <u>3.3</u>.

- A. Point labels on additional maps submitted as part of the Monument Perpetuation Document can be used in the Location column in lieu of a complete description. The Quarter-Quarter Section (or equivalent), Section Town, Range and Municipality must be listed in a column. It is advisable, but not required, to give additional brief information regarding the monument location in the Location column.
- B. Horizontal datum with adjustment year and coordinate system of the document. They shall be identical as the datum and coordinate system of the project.
- C. Surveyors certificate which includes the following text: *I*, *<Name of Surveyor>*, *Professional Land Surveyor, certify that I have perpetuated the monuments shown on this document based on information provided to me by the Wisconsin Department of Transportation. The replaced monuments are to be used as evidence of existing monumentation prior to construction without opinion as to their validity as a property corner.*

- D. The following two statements:
 - 1) The information on this document may not be a true representation of existing property corners and should not be used as a substitute for an accurate field survey.
 - 2) The information on this document does not depict a property survey and does not comply with Wisconsin Administrative Rule AE-7.

E. WisDOT project information- This must include the WisDOT Project ID and may include any additional relevant project information (i.e. TLE Exhibit number, structure number etc.).

- F. Table Columns shall show the following required information for monuments replaced via this example:
 - 1) Found: type of monument found prior to construction
 - 2) Set: type of monument set after construction
 - 3) Coordinates of the monument in X and Y (not Northing and Easting) in the same coordinate system as the original Transportation Project Plat. Coordinate precision for all perpetuated monuments shall be at least 0.01 feet (two decimals) with a maximum precision of 0.001 feet (three decimals). Every monument coordinate on a document shall have the same precision (number of digits after the decimal).

G. The PLS will sign and stamp the document page that has the Surveyors Certificate described in item C above.

H. PAGE X of Y shall be on the bottom of all pages submitted as part of the table option:

Table Option with Maps The table, certificate and note items (items A through G above) will appear on the first page(s) of the Monument Perpetuation Document followed by the maps on later pages (<u>Attachment 3.2</u>). It is recommended that every map be labeled with its Section, Township, Range and Town or Municipality to help determine the map location. Every monument listed in the table must have a table column listing the monument the Quarter-Quarter Section (or equivalent), Section, Township, Range, Township or Municipality name.

Table Option without Maps- If a Monument Perpetuation Document table is created without additional maps, it is important that the location descriptions must be detailed enough so that there is no doubt about what monument is being discussed (<u>Attachment 3.3</u>). In addition to detailed location description, every monument listed in the table must state the Quarter-Quarter Section (or equivalent), Section, Township, Range, Township or Municipality name.

3.3 Notes about Coordinates on Monument Perpetuation Documents

The inclusion of coordinates for a Monument Perpetuation Document is intended to help guide users to locate the monument in question. The coordinates are not intended and should never be used to subsequently reset a monument once it has been reset after the construction project that created the MPD.

It is not a requirement that all perpetuated monuments have coordinates listed. Monuments can be reset in the same location from reference ties or other evidence without obtaining coordinates. It should be noted in the coordinate column or call out box that 'no coordinates obtained' or 'NA' so that future users do not think that the lack of coordinates is an oversight. Briefly state why coordinates for a monument are not listed in the table. A typical example is 'Reset From Ties'.

LIST OF ATTACHMENTS

- Attachment 3.1
 Edited Transportation Project Plat Example
- Attachment 3.2 Table Option with Maps Example
- Attachment 3.3 Table Option without Maps Example

FDM 9-5-5 Right-of-Way Monumentation

December 21, 2010

Right-of-way monuments shall be set for all transportation projects requiring right-of-way acquisition.

Refer to <u>Attachment 5.1</u> for the department's policy on right-of-way monumentation, to <u>FDM 9-25-6</u> for right-ofway monumentation, implementation methods and requirements, and to FDM 9-5-10 for the department's policy on standard geodetic references.

Requests for information about this procedure should be directed to the Right-of-Way Plat Coordinator/Land Surveyor at 608-243-3397 or the Chief Surveying & Mapping Engineer at 608-246-7941.

LIST OF ATTACHMENTS

Attachment 5.1 Right-of-Way Monumentation Policy

FDM 9-5-10 Standard Geodetic References

March 28, 2014

The Department policy on geodetic datums and coordinates specifies having a single standard reference for horizontal measurements, a single standard reference for vertical measurements, and a single standard for large-scale mapping. This policy became effective January 1, 1997 and is applicable to all new work begun after that date. The standard geodetic references as revised in January 2014 are as follows:

Horizontal Datum (HMP ¹ area)	North American Datum of 1983 adjustment of 2011 NAD 83 (2011)
Horizontal Datum (non-HMP area)	North American Datum of 1983 adjustment of 1991 NAD 83 (1991)
Vertical Datum (HMP area)	North American Vertical Datum of 1988 adjustment of 2012 NAVD 88 (2012)
Vertical Datum (non-HMP area)	North American Vertical Datum of 1988 adjustment of 1991 NAVD 88 (1991)
Rectangular Coordinate System	Wisconsin County Coordinate System (WCCS) or
(except in Jackson County)	Wisconsin Coordinate Reference Systems (WISCRS)
Rectangular Coordinate System in	WISCRS, which is the same as the Jackson County Official
Jackson County	Coordinate System (JCOCS)

The standard reference shall be used for all data collection, maintenance, integration, analysis, reporting activities, and large-scale conformal mapping. This includes all survey work, photogrammetric mapping, and project development activities for which the department provides funding. Using a standard reference will eliminate the additional effort, costs, and errors associated with using various references.

To reduce the confusion over the references used for a project, WisDOT staff are encouraged to complete Form <u>DT1773</u>, Geodetic References Documentation, for every project and file the completed form with the project. If a non-standard geodetic reference is used, the region survey coordinator should fill out Form <u>DT1773</u> to document the circumstances regarding the decision to use a non-standard datum. There is no requirement to complete either of the above. The form is available online from the Authorized Forms list. The references normally should be selected at the time the scoping meeting Survey Worksheet is completed, but no later than shortly after the scoping meeting and in accordance with Minimum Data Requirements (see <u>FDM 9-43-1</u>).

The region survey coordinators are responsible for overseeing the region's survey projects; therefore, their choice of which datum and coordinate system to use should be followed. Generally, they are the ones that are most knowledgeable regarding what old projects, control, etc, exist in the area of a project and are best suited to decide the benefits/detriments of which datum and coordinate system should be used for any new project. If the region survey coordinators have questions or concerns, they should contact the Central Office Geodetic Surveys Unit for assistance.

Be sure to check three boxes on Form DT1773:

- One box for the standard horizontal reference.
- One box for the standard vertical reference.
- One box for the standard coordinate reference.

Below are some factors to consider when deciding on a project datum and coordinate system:

- The type of project: See <u>FDM 3-5-2</u> for definitions and examples of project types. Also, see <u>FDM 9-43-1</u> for survey activities associated with each of these types of projects.
- Alternative references available in the project area.
- Whether right-of-way acquisition will, or will not, be required for the project.
- References used for nearby projects.
- Any extenuating circumstances.
- Approximate effort (cost and/or crew time) to provide the requested reference and approximate effort to provide another reference for the project.

¹ Height Modernization Program. Contact the Chief, Surveying and Mapping Section for information on where the HMP has been completed.

- The delay caused to the project if one reference is used over another.

Whether a standard reference or a nonstandard reference is used for a project, the coordinate values and datum of existing control used as starting point(s) to establish engineering (project) control shall be shown in the metadata of all project documents listing engineering control. This will assist future users of the project data in learning the origin of the engineering control.

For more information, see the procedures and their subject matter listed as follows:

FDM 9-20-15	Horizontal Datums
<u>FDM 9-20-20</u>	Vertical Datums
<u>FDM 9-20-25</u>	Coordinate Systems
FDM 9-20-26	Wisconsin State Plane Coordinate System
FDM 9-20-27	Wisconsin County Coordinate System
FDM 9-20-28	Wisconsin Coordinate Reference Systems
FDM 9-43-1	Minimum Data Requirements

FDM 9-5-15 Requests for Photogrammetric Products and Services

November 15, 2023

It is the policy of WisDOT that all requests for products and services produced through photogrammetric methods (aerial imagery) and related sensor technologies (LiDAR scanning) shall be coordinated through the Photogrammetry Unit.

15.1 Procedure

Each region has a point of contact for requests, typically the Survey Unit Coordinator. Requests from other bureaus and any questions should be emailed to <u>dotaerialmapping@dot.wi.gov</u>.

When a consultant under contract with WisDOT needs products from the Photogrammetry Unit, the bureau or region responsible for the contract shall coordinate with the Photogrammetry Unit. Consultants should not make requests directly to the Photogrammetry Unit.

The Photogrammetry Unit shall be informed early in negotiations with design consultants when there is a possibility that photogrammetric methods will be needed. When workload exceeds in-house resources, the Photogrammetry Unit will prepare, negotiate and administer photogrammetric consultant contracts under the Photogrammetry Services Master Contract. The Photogrammetry Unit will provide deliverables to the requestor for transmittal to the consultant. All costs will be charged to the project ID.

In some cases, the Photogrammetry Unit may determine the work can be performed through the prime design contract or by subcontract. The Photogrammetry Unit will assist the requestor with estimates, standards and specifications and will provide review of the deliverables.

The Photogrammetry Unit shall receive all photogrammetric deliverables for records retention.

15.2 Resources

A list of products and services are specified in FDM 9-45.