DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF ECONOMIC DEVELOPMENT
MILWAUKEE COUNTY LAND INFORMATION OFFICE
2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: FILE FILE FILE
Milwaukee County Automated Mapping and Land Information System
2711 W. Wells St.
City Campus - Rm 426
Milwaukee, WI. 53208

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: March 6, 2014

SUBJECT: MCAMLIS 95th Steering Committee Meeting Materials

Enclosed please find a set of materials that the steering committee will take up at its scheduled March 18th Meeting.

I. Meeting Agenda

II. Special Order of Business – Nominating Committee recommendations

III. Meeting Minutes of the 94th Steering Committee meeting held December 3rd, 2013

IV. Reports

A. **Maintain Core Foundational Elements**

1. Report materials related to the status of the 2013 Orthophotography/Oblique Imagery Program
2. Report materials related to the status of the Planimetric Map Replacement Program

B. **Promote the Integration of Parcel Based Land Information**

1. Report materials related to the status of MCAMLIS street address and Cadastral map maintenance operations.

C. **Educational Outreach**

1. Report materials related to the status of work performed on behalf of MCAMLIS in support of local community GIS efforts

D. **Countywide Initiatives**

1. Report materials regarding 2013 Surveyor activity status.
2. Report materials related to the status of work performed regarding Countywide Program Initiatives

E. **Fiscal**

1. Report materials related to the MCAMLIS Program 2013 End of Year and Current Year Fiscal status

2. Register of Deeds YTD Document Counts

IV. Old Business

A. Report materials regarding status of the State of Wisconsin efforts to develop a Statewide Parcel Map as part of Act 20 initiatives related to the Wisconsin Land Information Program (WLIP);

V. New Business

A. Report materials regarding status of the 2015 Regional Orthophotography Project

VII. Correspondence

A. NA

* * * * *

MILWAUKEE COUNTY AUTOMATED MAPPING AND LAND INFORMATION SYSTEM

Ninety-Fifth Steering Committee Meeting

AGENDA

Date: March 18[18], 2014
Time: 9:00 a.m.
Place: Milwaukee Metropolitan Sewerage District
MMSD Hdqtrs, Room 401
260 W Seeboth St.
Milwaukee, WI. 53204

I. Roll Call

II. Special Order of Business

Election of 2014 MCAMLIS Steering Committee Officers

III. Meeting Minutes

Consideration of the minutes of the 94th Steering Committee meeting held December 3rd, 2013

IV. Reports

A. **Maintain Core Foundational Elements**

1. Report by MCAMLIS staff on the status of the 2013 Orthophotography/Oblique Imagery Program.
2. Report by MCAMLIS staff on the status of the 2010 Planimetric Update Program

B. **Promote the Integration of Parcel Based Land Information**

1. Report by Milwaukee County Register of Deeds staff on MCAMLIS street address and cadastral map maintenance operations; and
2. Report by City of Milwaukee staff on MCAMLIS street address and cadastral map maintenance operations.

C. **Educational Outreach**

1. Report by MCAMLIS Staff on the status of work performance on behalf of MCAMLIS in support of local community GIS efforts.

D. **Countywide Initiatives**

1. Report by The Milwaukee County Surveyor regarding 2013 Surveyor activity status.
2. Report by MCAMLIS Staff regarding Countywide Initiatives and program activity status.

E. **Financial**

Report by Milwaukee County DAS staff on MCAMLIS Fiscal status

V. Old Business

A. Report by MCAMLIS Staff regarding status of the State of Wisconsin efforts to develop a Statewide Parcel Map as part of Act 20 initiatives related to the Wisconsin Land Information Program (WLIP);

VI. New Business

A. Report by MCAMLIS Staff regarding status of the 2015 Regional Orthophotography Project

VII. Correspondence

VIII. Date, time, and place of next meeting

IX. Adjournment

DEPARTMENT OF ADMINISTRATIVE SERVICES

Milwaukee County

January 28, 2014

Milwaukee County Automated Mapping and Land Information System (MCAMLIS) Steering Committee
c/o
Mr. William C. Shaw
GIS Supervisor / MCAMLIS Project Manager
Milwaukee County Department of administrative Services
City Campus -- Room 426
2711 W. Wells Street
Milwaukee, WI 53208

Subject: **Nominating Sub-Committee Report**

Dear Mr. Shaw:

Pursuant to the direction of Mr. Donald Nehmer, Chairman of the MCAMLIS Steering Committee and his selection of a Nominating Sub-committee consisting of Greg High and John Bennett, please be advised that via telephone and e-mail communications the sub-committee has selected the following nominations for officers for the 2014 MCAMLIS Steering Committee:

Chairperson: Mr. Donald Nehmer
Vice-Chairperson: Ms. Nancy Olson

Both candidates have agreed to serve as officers for the calendar year of 2014. It is recommended that the Chair appoint Milwaukee County staff as Secretary.

Respectfully submitted,

Greg High & John Bennett

GGH:

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MILWAUKEE COUNTY-CITY CAMPUS • 2711 WEST WELLS STREET • MILWAUKEE, WI 53208

PHONE NUMBER: Architecture & Engineering 278-4861 FAX NUMBER: Architecture & Engineering 223-1366

MINUTES OF THE 94th MEETING
MILWAUKEE COUNTY AUTOMATED MAPPING AND LAND INFORMATION SYSTEM STEERING COMMITTEE

Date:	December 3rd 2013
Time:	9:00 a.m.
Place:	Milwaukee Metropolitan Sewerage District MMSD Hdqtrs, Room 401 260 W Seeboth St. Milwaukee, WI. 53204

Members Present

Kurt W. Bauer	Milwaukee County Surveyor
Donald R. Nehmer, Chair	Capital Program Business Manager, Milwaukee Metropolitan Sewerage District
Gary Drent	Support Services Manager, representing Milwaukee County Department of Administrative Services Facilities Management
Dana Kahle	GIS Supervisor, representing Timothy Marquardt, Manager - EDAM Support, We Energies
Dan Laurila	Fiscal Analyst, Milwaukee County DAS, representing Don Tyler, Director of Milwaukee County Department of Administrative Services
Pamela Booth	GIS Developer - Project Leader, City of Milwaukee, ITMD representing Nancy A. Olson, Vice Chair, Chief Information Officer, City of Milwaukee
John La Fave	LIO, Milwaukee County Register of Deeds
Todd Niedermeyer	GIS manager City of Franklin representing the Intergovernmental Coordinating Council of Milwaukee County

Members Absent

Guest and Staff Present

William C. Shaw	MCAMLIS Project Manager, Milwaukee County DAS/ECD-MCAMLIS
Brad Blumer	GIS Specialist, Milwaukee County DAS/ECD-MCAMLIS
Kevin Bruhn	GIS Specialist, Milwaukee County DAS/ECD-MCAMLIS
Katheen Bach	GIS Analyst, Milwaukee County Register of Deeds
Tammy Bronson	GIS Analyst, City of Milwaukee, ITMD
Marcia Cornnell	Civil Engineer - Senior, City of Milwaukee, DPW
Hardy Miehsner	Consultant, Spatial Data Sysytems
Tom Ries	Consultant, GEODECISIONS

I. ROLL CALL

Chairman Nehmer, called the Ninety-Forth meeting of the Milwaukee County Automated Mapping and Land Information System (MCAMLIS) Steering Committee to order at 9:00a.m. Roll Call was taken by circulating an attendance signature sheet and a quorum was declared present.

II. MEETING MINUTES

CONSIDERATION OF THE MINUTES OF THE 93RD STEERING COMMITTEE MEETING HELD SEPTEMBER 24TH, 2013

Nehmer: stated that a copy of the minutes was provided with the meeting materials and asked if any corrections are required.

Motion: Bauer moved approval of the minutes

Second: Booth, motion carried unanimously

III. REPORTS

Secretaries Note: the agenda item III.E taken out of order.

E. REPORT BY MILWAUKEE COUNTY DAS STAFF ON MCAMLIS FISCAL STATUS

Nehmer: directed Mr. Shaw address the Year to Date Document report produced by the Register of Deeds Office and included in the meeting materials.

LaFave: identified the report and explained that the report contents summarize the monthly recordings and fees collected by the ROD. He noted that fee collections were lagging his annual prediction of 137,000 recordings and now expects to see a number that is closer to 134,000.

Laurila: directed the Committee to the fiscal report supplement provided to the Committee at the meeting along with the meeting materials. He stated that the fiscal report reflected current balances. He estimated a surplus of $62,000 would be available at the end of 2013 to be carried over to the Trust account and added to the $1.6 million Trust balance. He further stated that there were no substantial changes from the previous report.

Nehmer: inquired if this report reflected the current revenue projection received from Mr. LaFave's office.

Laurila: confirmed that the projections were included.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file.

IV. OLD BUSINESS

Secretaries Note: the agenda item IV.B taken out of order.

B. REPORT BY GEODECISONS REGARDING THE BUSINESS NEEDS ASSESSMENT (BNA) PROJECT AND MCAMLIS FIVE YEAR WORK PROGRAM IMPLEMENTATION PLAN.

Nehmer: directed the Committee to the report that was included in the meeting materials noting that the materials represent a significant effort on the part of BNA Subcommittee members. He then turned the floor over to Tom Ries – GEODECISIONS who guided the Committee through the report materials highlighting elements included in the final draft of the five year work program implementation plan.

Nehmer: thanked Mr. Ries at the conclusion of his presentation allowing if there were any questions from the Committee. He then described the work of the BNA Subcommittee leading up to the final draft plan noting that the BNA Subcommittee had met on November 4th and unanimously approved that both the Five Year Plan and the 2014 Work Program as included in the plan be recommended to the Steering Committee for approval at the December meeting.

V. NEW BUSINESS

Secretaries Note: the agenda items V. A, B, C, D taken out of order.

A. Consideration of the Business Needs Assessment Sub-Committee recommendation to the MCAMLIS Steering Committee regarding acceptance of the Five Year Work Program Implementation Plan;

Nehmer: noted that formal acceptance of the Five Year was now before the Steering Committee. He then asked Mr. Shaw if he had anything to add before he would ask for a motion to accept the plan.

Shaw: directed the members of the Committee to a staff report included with the materials that outlined the BNA Sub-Committee members and activities leading up to a recommendation to the Steering Committee to consider formal acceptance of the Five Year Plan.

Nehmer: requested a motion to accept the Work Plan

Motion: LaFave, moved approval of the BNA Subcommittee recommendation to accept the MCAMLIS FIVE-YEAR Work Plan. He further motioned that acceptance of the plan as a whole did not constitute approval of individual items contained in the plan - noting that elements of the plan would be required to have separate consideration for spending approval.

Second: Drent, motion carried unanimously

B. Consideration of Business Needs Assessment Sub-Committee recommendations to the MCAMLIS Steering Committee for inclusion in the MCAMLIS 2014 Work Program;

Nehmer: referring to the previous motion made by Mr. LaFave regarding the need for approval by the Committee of individual work elements contained in the plan – noted that this item addresses the specific projects contained in the plan that are to be undertaken as part of the MCAMLIS 2014 Work Program. He further stated that the BNA Subcommittee is recommending that the list of projects include those that have been identified by the MCAMLIS stakeholders as their highest priority. He then directed members of the Committee to the fiscal impact statement confirming that the proposed projects fit within the current operating budget authorization for 2014 and would not require supplemental withdrawal from the MCAMLIS Trust account to cover a shortfall in operating funds.

Shaw: directed members of the Committee to examine the second page of the Fiscal Note – noting the projection of revenues and planned expenditures compiled for the fiscal years 2014 – 2018. He then asked Mr. Laurila to further elaborate on these figures.

Laurila: confirmed that the projections shown on this report show a pattern of expected surpluses through the five year period – excepting that there is the potential for a need to withdraw funding to cover expenses in fiscal 2015 to allow for additional projects included in that year.

Shaw: noted that the budget projections included an accounting change that will take place in 2014 and beyond. This change involves the combination of the currently separate $2 and $6 fees into one fund within the MCAMLIS organization under the Department of Administrative Services. He further noted that this was a result of a change in Wisconsin State Statutes enacted in July of 2013 as part of the State Budget. He also stated that the projected expenditures include the availability of up to $40,000 annually upon approval by the Steering Committee to the Register of Deeds for purposes of improving access to land information in the ROD Office.

Motion: Bauer moved approval of the projects to be included in the MCAMLIS 2014 Work Program recommended by the BNA Subcommittee.

PROJECT VWR: VIEWER/PICTOMETRY IMPROVEMENT ROLLOUT	ESTIMATED COST
Improve the MCLIO Interactive Mapping Service	**$70,000**
Implement Initial MCAMLIS Data Extract Service	INCLUDED
PROJECT MBL: MOBILE-BASED CAPABILITIES IMPLEMENTATION	
Deploy Mobile Property Locator Application	**$50,000**

Develop MCAMLIS Feature Data Service for Parcels
INCLUDED

PROJECT COL: MCAMLIS/PARTNER COLLABORATION IMPROVEMENT

Invest in LBDT/Collaboration Education and Training
$25,000

Formalize Partner Input in MCAMLIS Business Planning
$20,000

PROJECT MOL: MCAMLIS ONLINE PRESENCE IMPROVEMENT

INITIAL MCAMLIS WEBSITE IMPROVEMENTS
$20,000

PROJECT DAT: MCAMLIS DATA IMPROVEMENT

MCAMLIS Non-Vector Data Improvements: Historical Aerials
$10,000

MCAMLIS Vector Data Improvements: Create/deploy Planimetric Polygons
$65,000

TOTAL $260,000

Second: Niedermeyer, motion carried unanimously

C. Consideration of a 2014 agreement for Milwaukee County Surveyor Services between MCAMLIS and SEWRPC;

Nehmer: stated that the agreement between MCAMLIS and SEWRPC is recommended for approval for support of 2014 Milwaukee County Surveyor Services.

Shaw: added that the fiscal note refers to this item and the next item on the agenda and the fiscal analysis supports the funding of the two agreements without impacting restricted balances.

Motion: Drent, moved approval of the 2014 Milwaukee County Surveyor Services Agreement. Total cost of $78,719

Second La Fave, motion carried unanimously

Bauer: stated for the record that he does not personally receive any of the proceeds of this agreement.

D. Consideration of a 2014 agreement for Map Maintenance Services between MCAMLIS and the City of Milwaukee

Motion: Bauer, moved approval of the 2014 Milwaukee County Surveyor Services Agreement. Total cost of $78,719

Second Booth, motion carried unanimously

Nehmer: stated for the minutes that Ms. Booth does not personally receive any of the proceeds of this agreement.

III. REPORTS (continued)

A. MAINTAIN CORE FOUNDATIONAL ELEMENTS

1. REPORT BY MCAMLIS STAFF ON THE STATUS OF THE 2012/2013 ORTHOPHOTOGRAPHY/OBLIQUE IMAGERY PROGRAM

Shaw: directed the Committee to the report included with the meeting materials and that the status of the project remains as reported at the Committee's previous meeting. He further noted that the orthophotography has been received and posted to the MCLIO website and that copies of the data have been delivered to 24 organizations via a cloud service provider purchased for this purpose.

Shaw: continued his report describing the process in place to make the data available without restriction to anyone who requests the data. He further stated that he plans to follow-up with various organizations that have as yet not requested a copy to determine if they were satisfied with not receiving a copy of the data or if they would need additional assistance.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file

2. REPORT BY MCAMLIS STAFF ON THE STATUS OF THE 2010 PLANIMETRIC UPDATE PROGRAM

Shaw: directed the Committee to the report included with the meeting materials. He stated that delivery is complete through 18 of 22 areas as included on the status exhibit included with the materials. The project is on track to be completed later this year with areas 19 and 22 to be delivered within a week. Mr. Shaw noted that in addition to the completion of updates to selected areas containing planimetric features and the delivery of polygonal features representing travelled right of way, bridges and buildings across the county that MCAMLIS Staff has negotiated the completion of a pilot area located in section 5 of the status map. Further noting that this area will be used to test the contractor's ability to complete the production of discrete polygons for additional features e.g., paved/unpaved driveways, paved/unpaved road shoulders, surface parking and sidewalks. Shaw further stated that once the pilot area has been completed that an estimate of the cost to perform this additional work will be provided by the vendor and that continuation of the full polygonalization of planimetric features was approved earlier as part of the 2014 MCAMLIS Work Program.

Booth: inquired when the data may become available to MCAMLIS Partners including the City of Milwaukee.

Shaw: replied that although the data will be available for viewing on the MCLIO website that actual distribution of the data will require review and formal acceptance before it would be released. He speculated that this may occur the earliest in late January.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file

B. PROMOTE THE INTEGRATION OF PARCEL BASED LAND INFORMATION

1. REPORT BY MILWAUKEE COUNTY REGISTER OF DEEDS STAFF ON MCAMLIS STREET ADDRESS AND CADASTRAL MAP MAINTENANCE OPERATIONS

Bach: directed the Committee to the report included with the meeting materials.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file.

2. REPORT BY CITY OF MILWAUKEE STAFF ON MCAMLIS STREET ADDRESS AND CADASTRAL MAP MAINTENANCE OPERATIONS

Bronson: directed the Committee to the report included with the meeting materials.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file.

C. EDUCATIONAL OUTREACH

1. REPORT BY MCAMLIS STAFF ON THE STATUS OF WORK PERFORMANCE ON BEHALF OF MCAMLIS IN SUPPORT OF LOCAL COMMUNITY GIS EFFORTS

Shaw: directed the Committee to the report included with the meeting materials, noting that staff had recently participated at the UWM GIS-Day event facilitated the 7th meeting of the Milwaukee Municipal GIS Users Group (MMGUG) and that the meeting was held on 9/10/13 at the Village of Shorewood. The next meeting is scheduled to be held at MMSD on 1/14/2014.

Shaw: continued with an explanation of a MCLIO website Dashboard Report Exhibit noting a prediction of nearly 6 million operations logged on the website through the end of the year – which maintains a trend of adding approximately 1 million operations each year dating back to 2009. He further reported continued maintenance of the website to include new materials and noted that there would be additional improvements in 2014 brought about due to the training and collaboration projects included in the MCAMLIS Work Program.

Shaw: reported that staff continues to work with the City of Cudahy regarding a request to support their asset management initiative using MCAMLIS on-line services in combination with Asset Management software produce by Cartegraph. He further

stated that staff was working toward the development of a Service Level Agreement (SLA) between MCAMLIS and Rukert & Meilke Engineering. The SLA would formalize responsibilities in providing assistance to local partner clients in use of MCAMLIS services via R&M supported website solutions. He added that R&M is currently working with Wauwatosa, Greenfield and Fox Point.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file.

D. COUNTYWIDE INITIATIVES

1. REPORT BY MCAMLIS STAFF REGARDING 2013 COUNTYWIDE INITIATIVES AND PROGRAM ACTIVITY STATUS

Shaw: directed the Committee to the report included with the meeting materials. Noting the deployment of the 3rd Quarter consolidated City of Milwaukee and County Cadastral Data and the growing importance of address information and related accomplishments e.g., Historical Aerial photo, street centerline, plat of survey and Community Basemap Projects among others.

Shaw: confirmed the completion of the 1928 photography located in the Town of Granville and areas of southern Milwaukee County.

Shaw: continued, relaying progress on non-project related efforts e.g., websites enhancements and migration to new technologies, most notably HTML5, Silverlight and promoting Pictometry Connect.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file.

IV. OLD BUSINESS

REPORT BY MCAMLIS STAFF REGARDING STATUS OF THE STATE OF WISCONSIN EFFORTS TO DEVELOP A STATEWIDE PARCEL MAP AS PART OF ACT 20 INITIATIVES RELATED TO THE WISCONSIN LAND INFORMATION PROGRAM (WLIP)

Shaw: directed the Committee to a letter included with the meeting materials that described the WLIP activities regarding implementation of the State of Wisconsin Statewide Parcel Map. He further noted materials contained in the 2023 WLIP Report which describes in detail the program accomplishments and funding.

Nehmer: stated for the minutes that the report was accepted by consensus and is to be placed on file.

V. NEW BUSINESS

Appointment of a Nomination Committee to recommend officers to be seated at the Steering Committee's next regular meeting.

Nehmer: noted that Committee members Greg High and John Bennett who he would normally appoint to the Nomination Committee were not present at the meeting and that he would attempt to contact them to determine their willingness to serve in that capacity.

Secretary's note: subsequent to the meeting Mr. High and Mr. Bennett were contacted by Mr. Nehmer and will report their recommendations at the next Steering Committee meeting.

VI. CORRESPONDENCE

NA

VII. DATE, TIME, AND PLACE OF NEXT MEETING

March 18th, 2014 @ 9:00am, MMSD (next regular meeting)

VIII. ADJOURNMENT

Motion: Bauer, moved to adjourn

Second: Nehmer, motion carried unanimously

Respectfully submitted,
William Shaw

DEPARTMENT OF ADMINISTRATIVE SERVICES

DIVISION OF ECONOMIC DEVELOPMENT

MILWAUKEE COUNTY LAND INFORMATION OFFICE

2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: March 6, 2014

SUBJECT: 2012-2013 Milwaukee County Orthophotography Project

BACKGROUND

At its meeting held September 13th, 2011, the MCAMLIS Steering Committee approved a staff recommendation to proceed with the acquisition of Pictometry International Inc. AccuPlus orthophotography. Beginning with the 2005 Regional Orthophotography Project, Milwaukee County has acquired spring digital orthophotography every two or three years e.g., 2005, 2007, 2010. The spring of 2013 is the next scheduled acquisition of orthophotography covering Milwaukee County.

PROJECT

This project completes the second flight of a three (3) flight six-year license agreement with Pictometry International Inc. The original contract entered into in spring of 2010 specified a six-year agreement for imagery to be acquired in years 2010, 2013 and 2015 assuming that funds are available and authorized for this purpose.

The project includes acquisition of Pictometry International AccuPlus 4-inch pixel, color, digital orthophotography and oblique image photography as a package costing a total of $134,495. The 2013 flight was flown mid-April.

ACTIVITIES THIS PERIOD: 12/13 – 3/14

- Accuracy exceptions were discovered when comparing survey points between the 2010 and 2013 flights. Pictometry agreed to redeliver the 2013 Orthophotography after re-calibrating their procedures.
- Re-delivery from Pictometry during the week of February24th (See Exhibit)
- Posting 2013 data to the MCLIO websites

NEXT

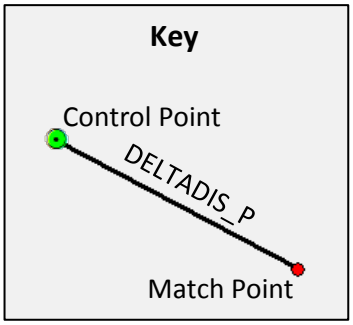
- Follow-up with Pictometry regarding missing compressed MrSid Township files
- Follow-up with communities to notify them of revised orthophotography and provide updated image data if requested

attach: 2013 Pictometry Comparative Accuracy Exhibit

* * * * *

2013 Ortho Accuracy Comparison Study

DESCRIPTION	2013 DELTADIS_P	2013 DELTADIS_P Re-Delivered
Bridge Point: Northerly most point of pavement joint on bridge, eastbound lanes of IH 794 where interstate turns from eastbound to southbound, above E. St. Paul Ave., Milwaukee	2.41	2.4
Bridge Point: Easterly most point of pavement joint on bridge of IH 794 exit ramp, overpass of E. Chicago St., overpass on west side of Meier Festival Park, Milwaukee	9.98	3
Bridge Point: Northeast corner of island at east bridge deck joint, overpass of W. Layton Ave. and W. Forest Home Ave., Greenfield	0.98	1.5
Bridge Point: South side of traffic island, at intersection with center pavement joint, bridge overpass of W. Wisconsin Ave. and USH 45, Wauwatosa	1.89	7.7
Bridge Point: Bridge joint at south edge of pavement at sidewalk on south side, west of bridge, eastbound lane of bridge, overpass of W. Watertown Plank Rd. over railroad tracks and Underwood Creek, Wauwatosa	0.61	0.61
Bridge Point: Northwest corner of bridge, most westerly point of expansion joint at pavement level, bridge for northbound exit ramp of USH 45 near Appleton Ave., Milwaukee	0.199	0.65
Bridge Point: Top of curb at north end of bridge parapet wall, east side of N. 107th St. overpass of W. Fond du Lac Ave., Milwaukee	0.77	1.5
Bridge Point: South end of barrier wall between southbound on-ramp and southbound IH 94 / 43 at pavement, on overpass above and south of Canal St., Milwaukee	11.29	2.4
Bridge Point: Easterly most point of pavement joint on bridge, north end of Hoan Bridge, Milwaukee	25.228	1.7



DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF ECONOMIC DEVELOPMENT
MILWAUKEE COUNTY LAND INFORMATION OFFICE
2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: March 7, 2014

SUBJECT: REPLACEMENT PLANIMETRIC MAPPING

BACKGROUND

At its meeting held on September 13th, 2011, the MCAMLIS Steering Committee approved a MCAMLIS Staff recommendation allowing staff to proceed with the development of a Planimetric Map Replacement Program. The Map Replacement program is regarded a priority in the MCAMLIS PROGRAM STRATEGIC ASSESSMENT FOR 2010-2013 and the project is scoped to meet requirements for updating the 2004 - 2009 Topographic/Planimetric Map Series and maintaining this series going forward.

PLANIMETRIC FEATURE UPDATES

The aggregate total of identified change in square miles is estimated to be approximately 7% by area from 2005 through 2010 - approximately 17 square miles.

PROJECT SPECIFICATIONS

MCAMLIS Staff prepared a set of detailed planimetric map maintenance specifications to address the planimetric mapping update process and presented these to the Steering Committee for approval. As approved by the Committee the update process will be overseen by a certified photogrammetrist and managed by MCAMLIS staff.

ACTIVITIES THIS PERIOD: 12/13 – 3/14

- Project continued production since the last update
- Areas 1 through 22 of 22 production areas have been accepted
- Accepted 18 sq. mi. pilot of area where all planimetric line features representing features e.g., sidewalks, driveways, surface parking have been polygonalized
- Notified MCAMLIS Partners of updated planimetric availability for delivery
- Prepared and delivered the updated planimetric data to MCAMLIS Partners as requested (total of 9 todate)

NEXT

- Continue full polygon pilot area product development e.g., community basemap, surface area analysis (see Basemap and Area Computation Example Exhibit)
- Accept/Reject GRW recommendation and estimate to complete the polygon generation procedure.
- Consider alternatives or accept the GRW completion estimate and prepare/execute a contract as part of the approved 2014 MCAMLIS Work Program – DAT:02.1 Create/Deploy Remaining Planimetric Polygons (see Planimetric Polygon Feature Exhibit attached)
- Locate and evaluate as-built source material related to WISDOT projects that were completed within the period of 2010 and the 2013 imagery for purposes of inserting these updates into the Planimetric Features. This effort would address known currency gaps that have occurred between the 2010 and 2015 Planimetric Map Replacement Projects. (see WISDOT Mitchell Interchange Exhibit)

Attach: Base Map and Area Computation Exhibit
Planimetric Polygon Feature Exhibit

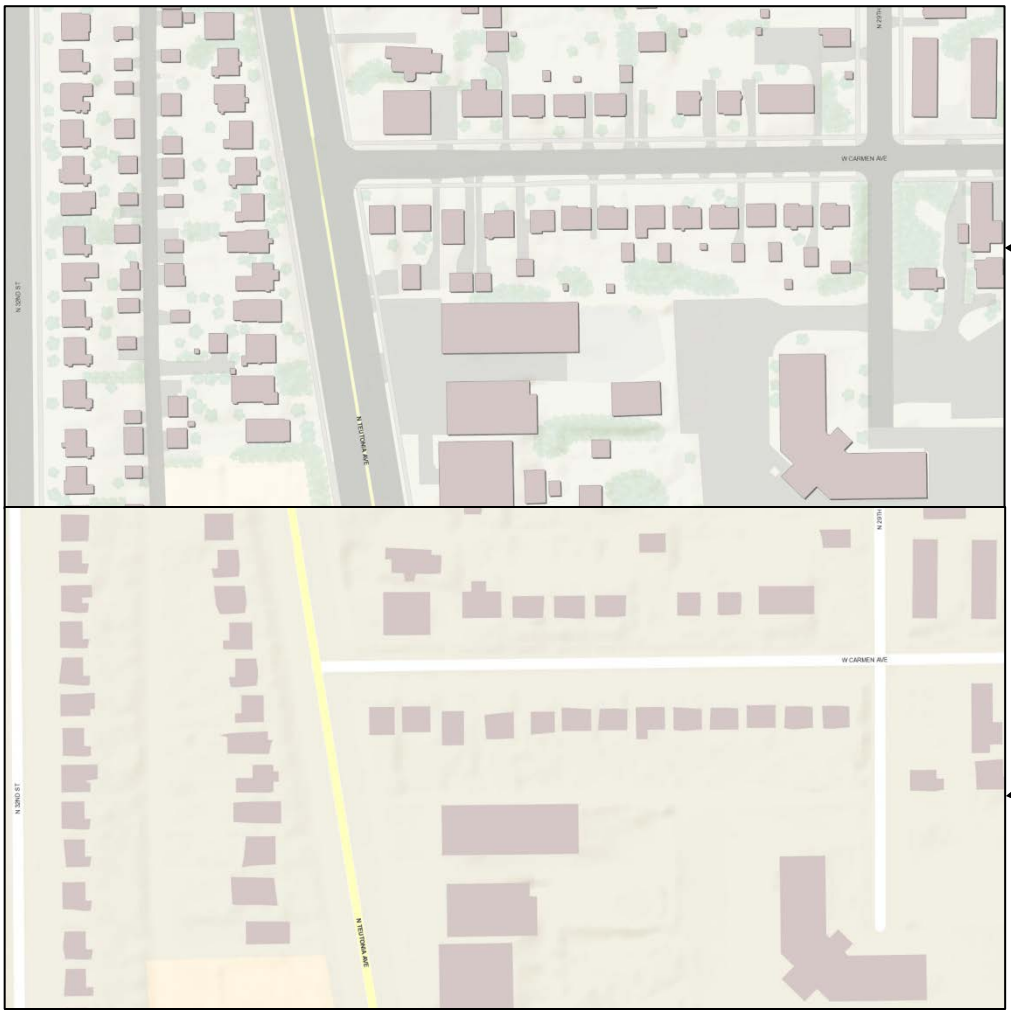
* * * * *

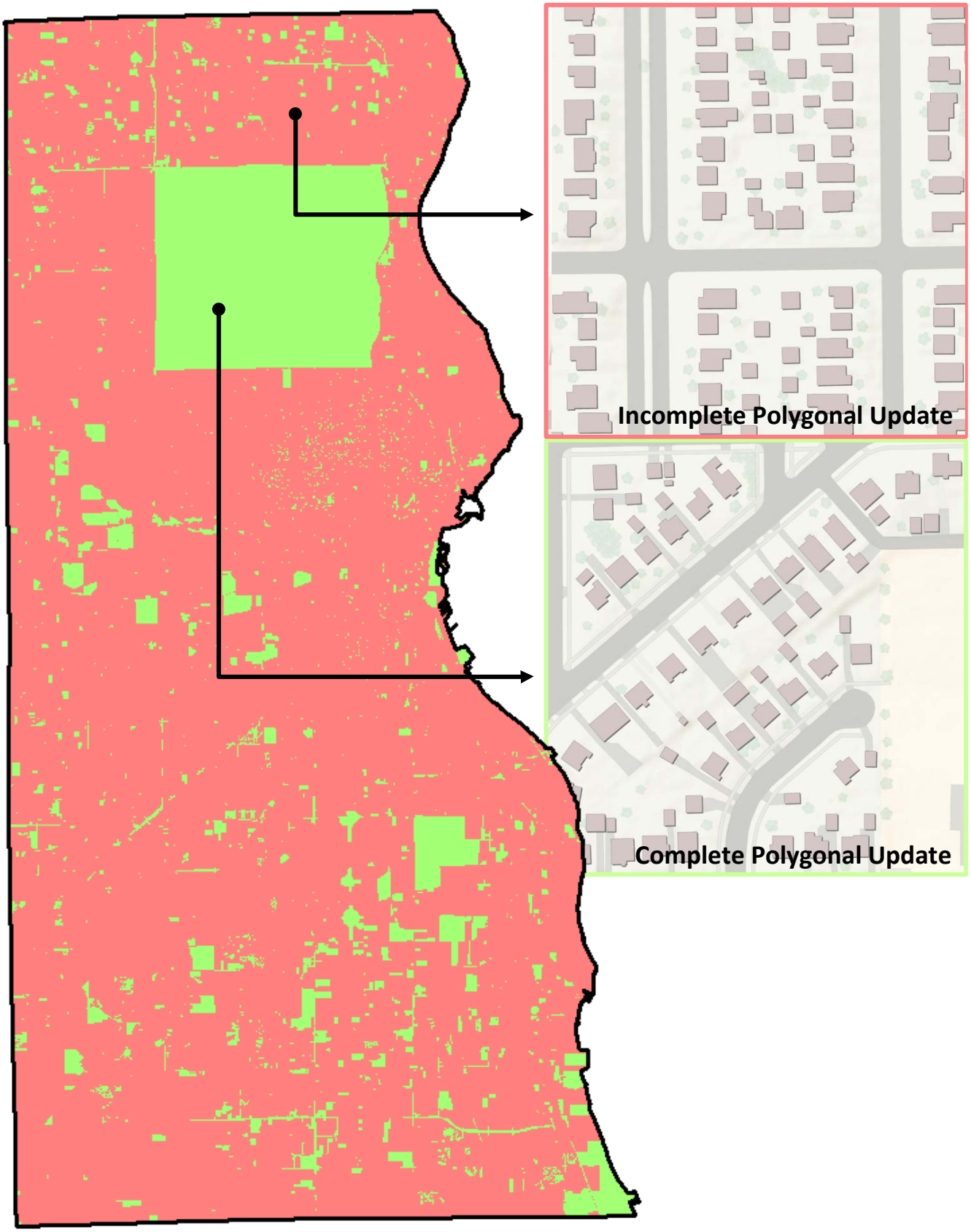
Pilot Area and County Estimated Polygonal Comparison

Pilot Area Totals (18.1 sq mi)	Square Miles	Percent
Structure:	2.64	14.5%
Paved Road:	2.61	14.4%
Paved Parking:	1.30	7.2%
Paved Driveway:	0.73	4.0%
Sidewalk:	0.43	2.4%
Bridge:	0.03	0.2%
Paved Shoulder:	0.00	0.0%
Unpaved Parking:	0.07	0.4%
Unpaved Driveway:	0.06	0.3%
Unpaved Shoulder:	0.00	0.0%
What's Left:	10.41	57.3%

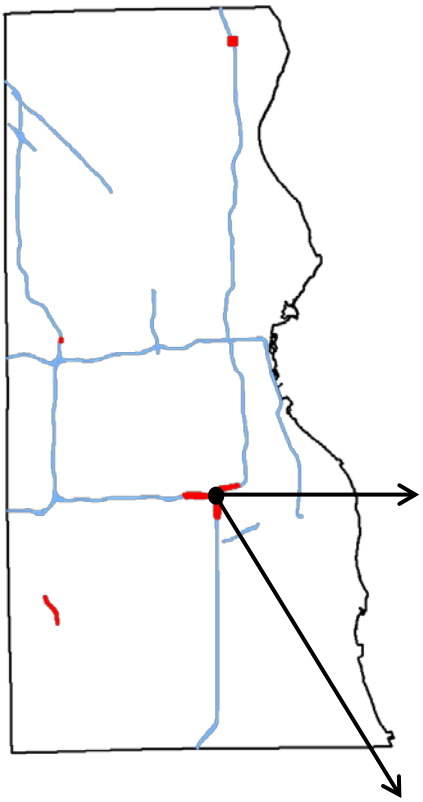
Entire County Totals		
Estimated from Pilot	Square Miles	Percent
Impermeable Surface:	93	38%
What's Left:	150	62%
Total County Area:	243	100%
Complete Features		
Buildings:	441714	Features
ROW Edge:	8849	Miles

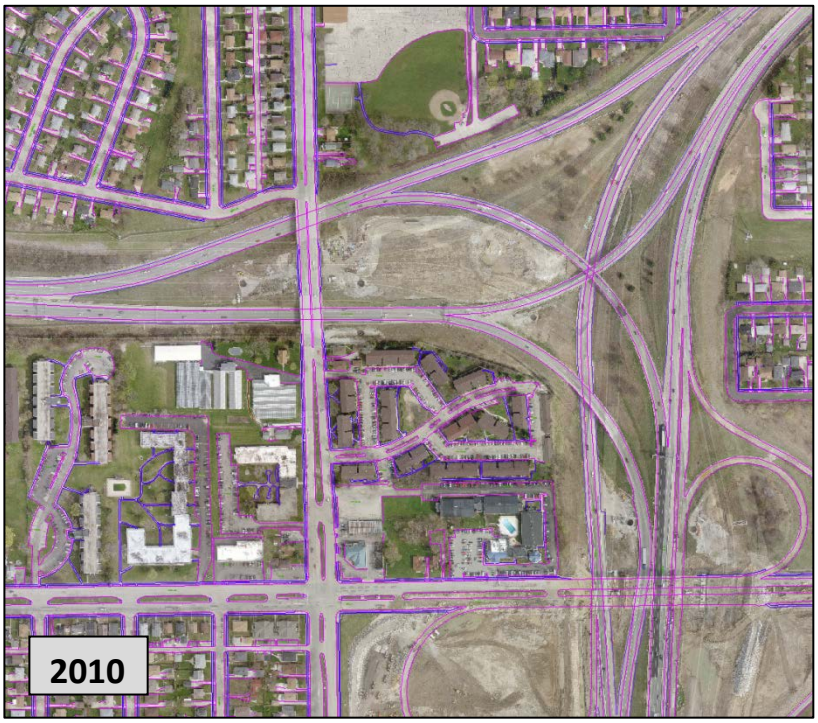
Derived Basemap Products

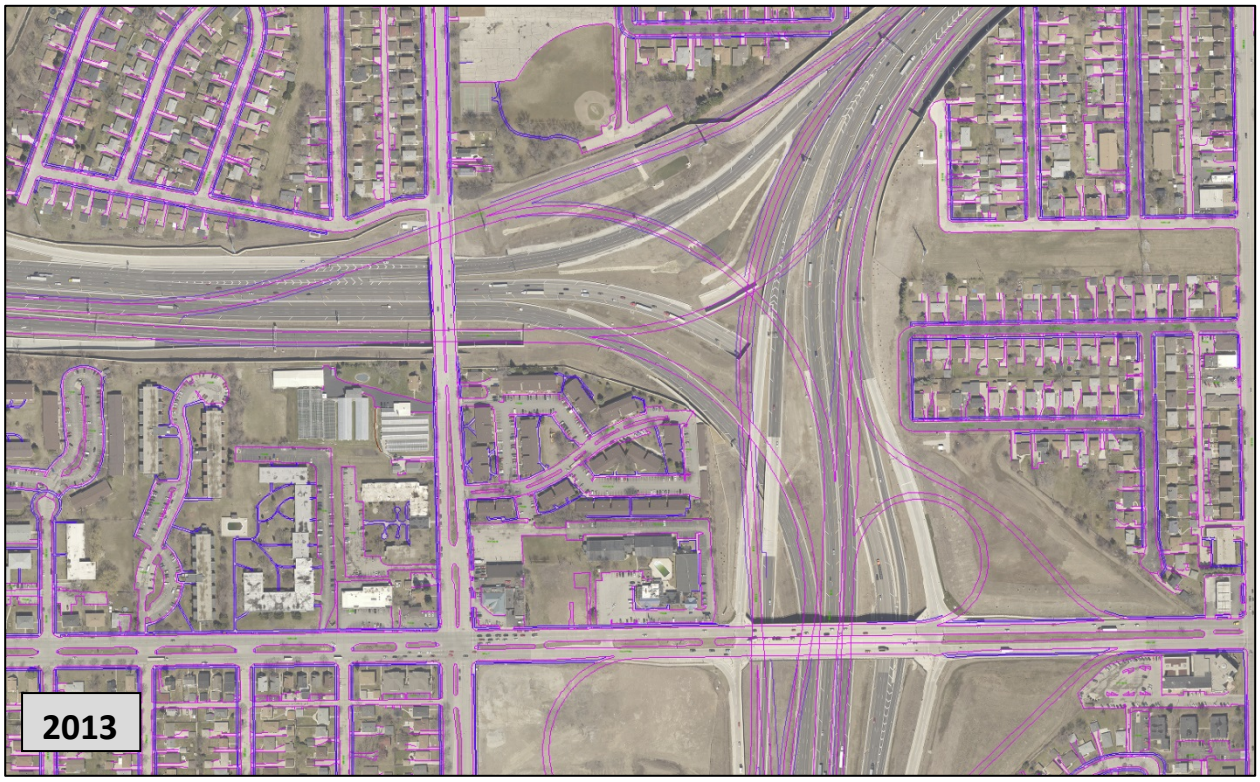



Incomplete Polygonal Update
Complete Polygonal Update

2010 vs 2013 WISDOT Corridor Updates

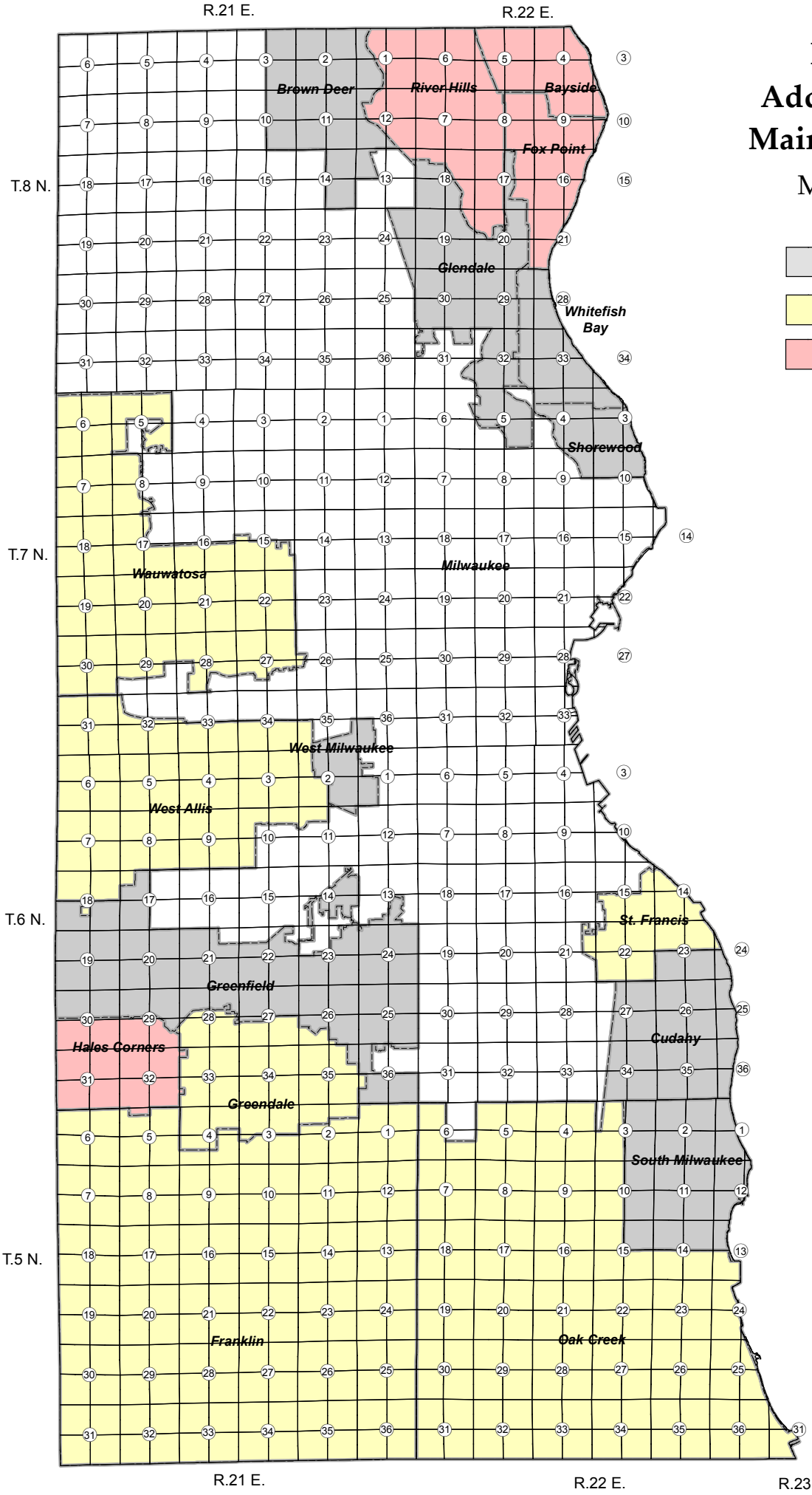






MCAMLIS Address Database Maintenance Status

March 2014 Status



January 1, 2014

March 1, 2014

January 1, 2013

N

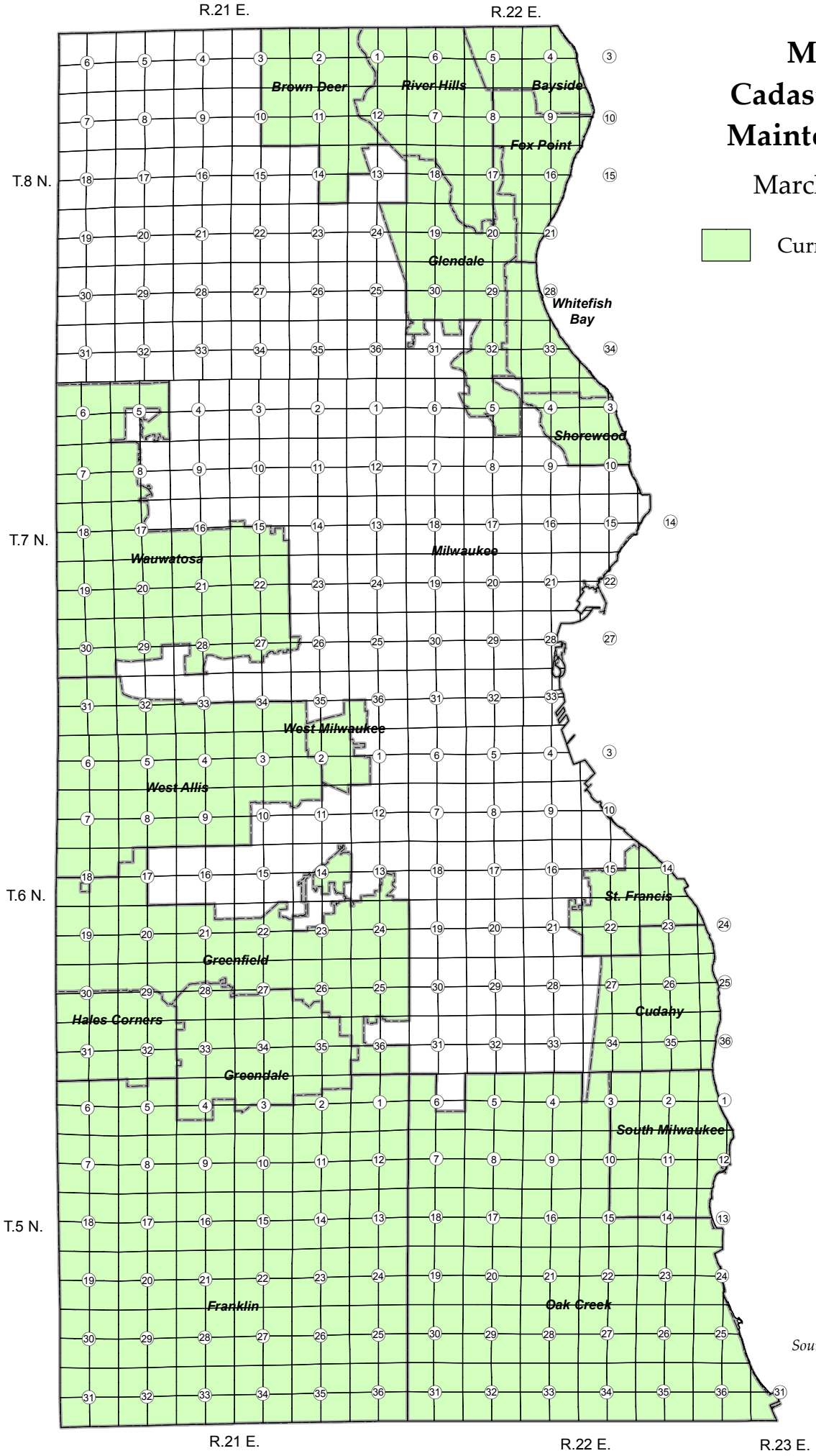
0 0.95 1.9 2.85 Miles

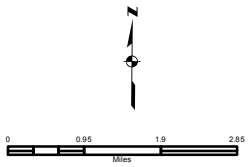
Source: MCAMLIS Project Manager

MCAMLIS
Cadastral Database Maintenance Status

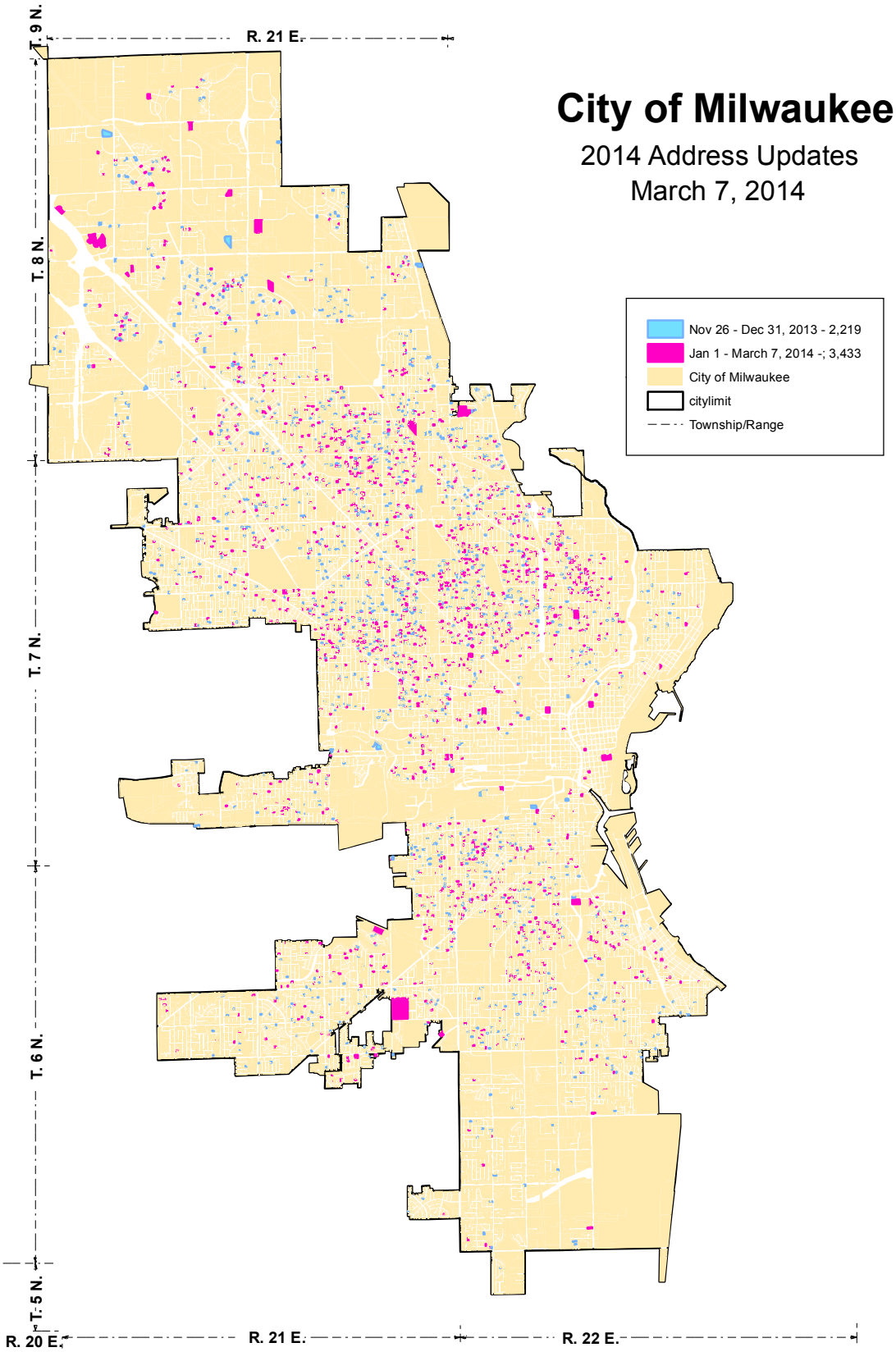
March 2014 Status

Current as of February 1, 2014



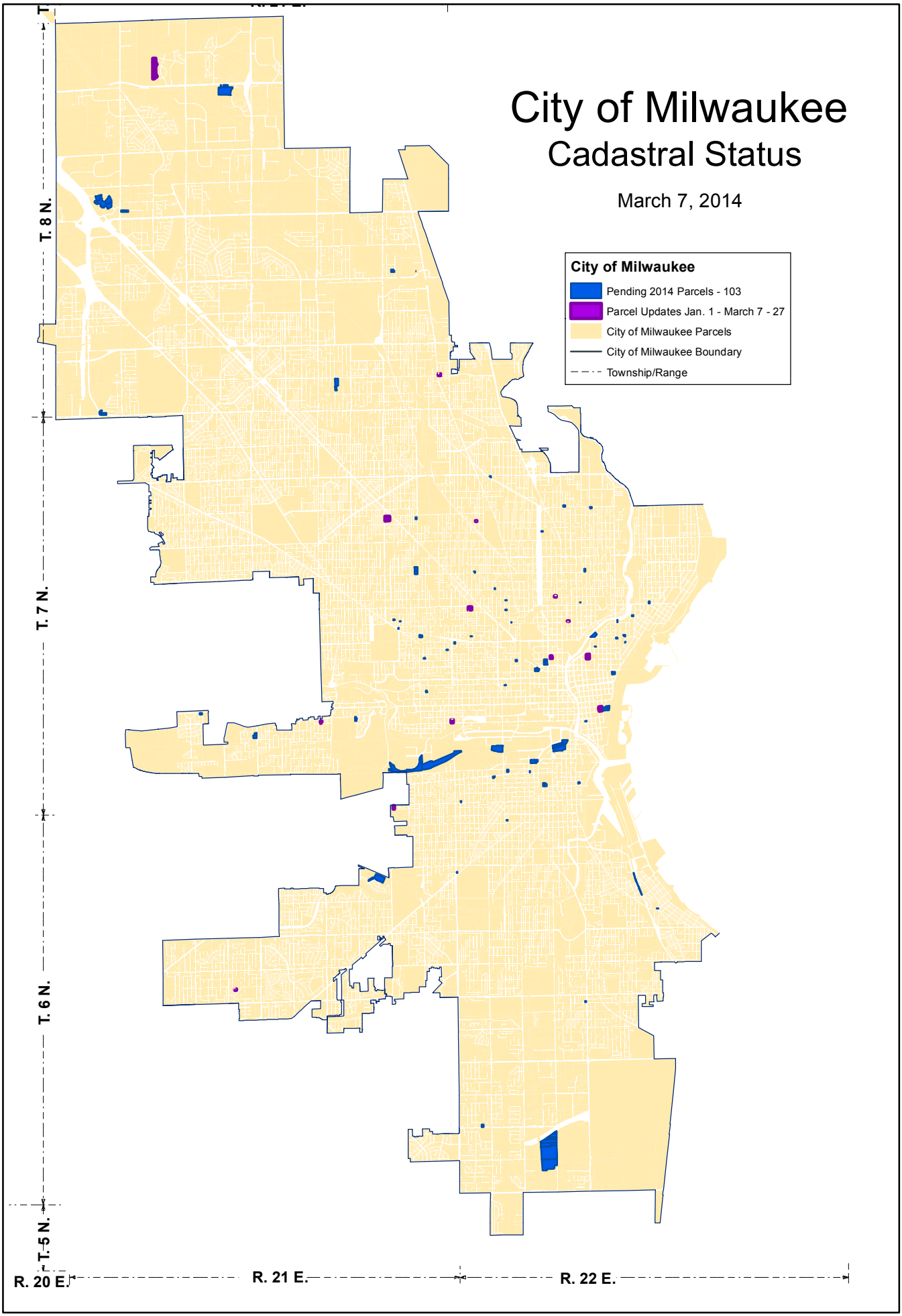


Source: MCAMLIS Project Manager


City of Milwaukee
2014 Address Updates
March 7, 2014
Nov 26 - Dec 31, 2013 - 2,219
Jan 1 - March 7, 2014 -; 3,433
City of Milwaukee
citylimit
Township/Range
R. 21 E.
T. 9 N.
T. 8 N.
T. 7 N.
T. 6 N.
T. 5 N.
R. 20 E.
R. 21 E.
R. 22 E.

City of Milwaukee
Cadastral Status

March 7, 2014



DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF ECONOMIC DEVELOPMENT
MILWAUKEE COUNTY LAND INFORMATION OFFICE
2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

MEMORANDUM

TO: MCAMLIS Steering Committee
FROM: William C. Shaw, MCAMLIS Project Manager
DATE: March 7, 2014

SUBJECT: Educational Outreach Activity Status

BACKGROUND

The MCAMLIS Program Goals and Objectives included in the 'Land Information Strategic Assessment for 2013 –2016 identified the need for MCAMLIS Staff to develop and promote MCAMLIS products and services to MCAMLIS Partners and especially to include contacts and assistance related to local municipalities. The following describes MCAMLIS Staff activities under this objective for the preceding period:

ACTIVITIES THIS PERIOD – 12/13- 3/14

1. Meetings and Presentations
   - MCLIO presentation at Wisconsin Land Information Association (WLIA) annual conference in Middleton on 2/13. The presentation topic discussed the Plainmetric Map Replacement Project and its use of multiple image and interpretation resources resulting in improved basemap and analysis opportunities. (see attached WLIA Presentation Example)
   - Organized and facilitated the eighth meeting of the Milwaukee Municipal GIS Users Group (MMGUG). Meeting was held on 1/14/2014 @ MMSD (see attached agenda)
   - Scheduled next MMGUG meeting to be held @ Cudahy City Hall scheduled for April 8th 2014
2. Maintained production MCLIO web services (see attached Dashboard);
3. Incorporated updated tutorial materials and announcements to users of the MCLIO Interactive Mapping Service website including:
   - Posting 4th Qtr 2013 foreclosure data
4. Maintained open channels of communication regarding web hosting data on the MCLIO website:
   - continued working with the City of Cudahy to assist their asset management system implementation utilizing Cartegraph Cloud services (see attached Cudahy Asset Management System Diagram)
   - continued discussions with Rukert & Mielke regarding Service Level Agreement (SLA)/Memorandum of Understanding (MOU) in support of municipal clients e.g., Wauwatosa, Greenfield and Fox Point
5. 2014 COL:01 – Collaboration Education and training
   - Outreach efforts to solicit contracted resources are in preliminary stages.

NEXT

1. Continue MCLIO website training, data distribution and product enhancements; and
2. Prepare for MMGUG Meeting – April 8th
3. Continue to work with member participants to further their GIS goals e.g., 2014 MCAMLIS Work Program Initiatives

Attach: 8th MMGUG Meeting Agenda
MCLIO Interactive Mapping Services Dashboard
Cudahy Asset Management System Diagram
WLIA Presentation Example

****

Mark Your Calendar for the Milwaukee County Land Information Office's

Milwaukee Municipal GIS Users Group Meeting
-MMGUG -

WHEN: **Tuesday, January 14, 2014**
10:30 am – 1:30 pm

WHERE: **MMSD Headquarters**
260 W. Seeboth St.
Milwaukee, WI 53204
***Visitor sign in required**

AGENDA

1. Registration/Welcome (5 Minutes)……..……..……..……..…Bill Shaw
2. MMGUG 7th Meeting September 10th Summary (5 Minutes)...……...……..…MCLIO Staff
3. MCAMLIS 2014 Work Plan (15 Minutes)…. …….……..……..Bill Shaw
4. Planimetric Map Replacement Project (30 Minutes)……....……...…...……Kevin Bruhn, MCLIO
5. Regional Green Infrastructure Analysis (30 Minutes)…….……Karen Sands, MMSD
6. Lunch (30 Minutes) ……..…..(Sub Sandwich & Beverage Selection - $5.00 at the door)
7. Local GIS Project Roundtable Experiences (45 – 60 Minutes) …….....All
7. Next Meeting – topics, date/time, location (remaining time)..……...All
8. Adjourn

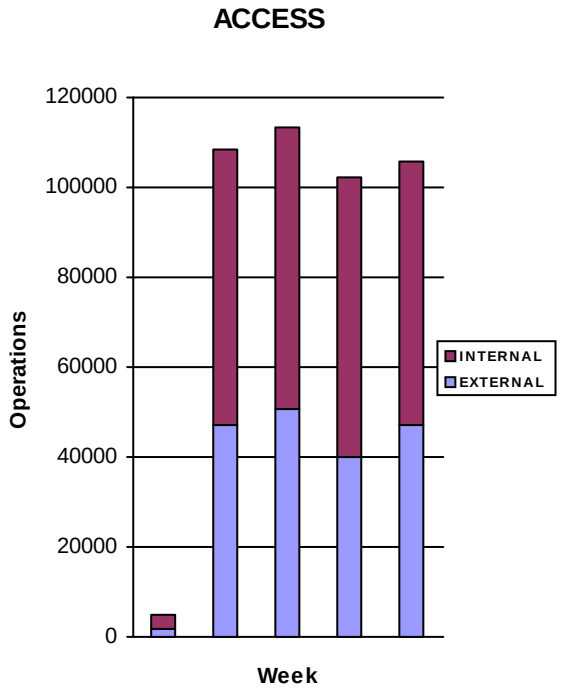
"The Milwaukee Municipal GIS Users Group serves to provide a venue for information sharing, professional communication, ongoing education, vendor presentations, and outreach to the GIS community located in Milwaukee and surrounding areas. The group is open to all users and persons having an interest in Geospatial Technologies (Geographic Information Systems, Land Information Systems, Remote Sensing and Land Survey) in the public and private sectors, as well as all levels of education or professional involvement."

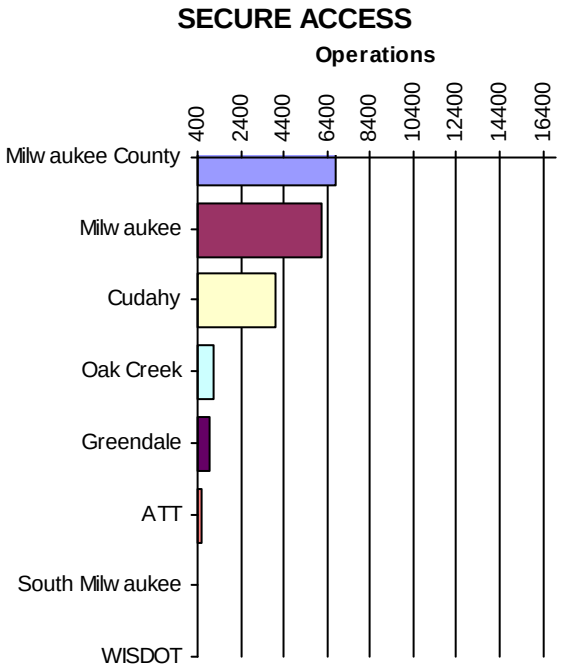
PLEASE PRE-REGISTER BY VISITING:

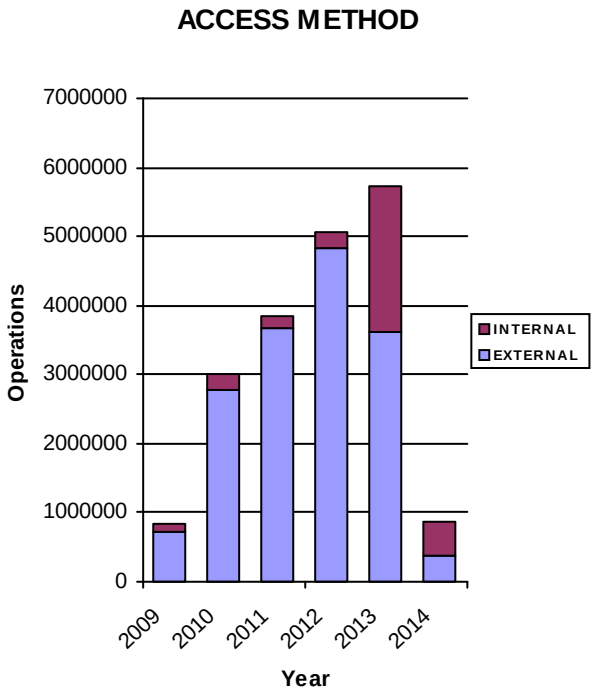
http://www.county.milwaukee.gov/LandInformationProgr23113/MMGUG_Registration.htm

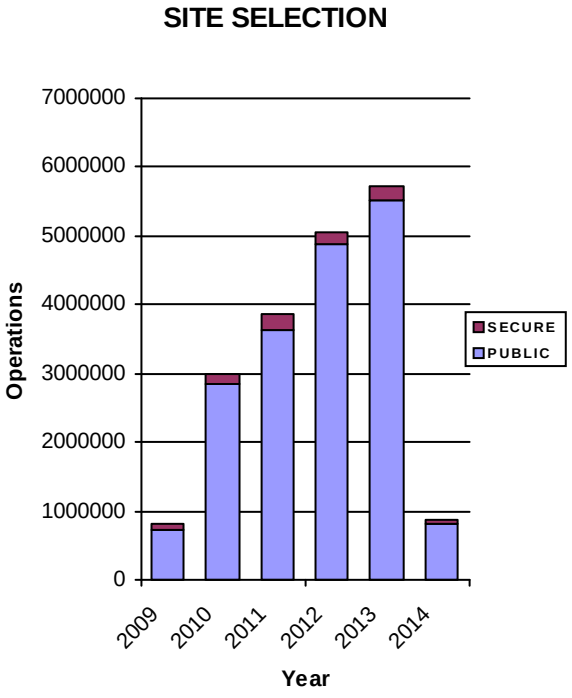
William Shaw, MCAMLIS Project Manager
Milwaukee County Land Information Office
Milwaukee Co. Economic Development
City Campus, Room 426
2711 W Wells St.
Milwaukee, WI. 53208
414.278.2176 phone
414.223.1982 fax
email: bill.shaw@milwcnty.com

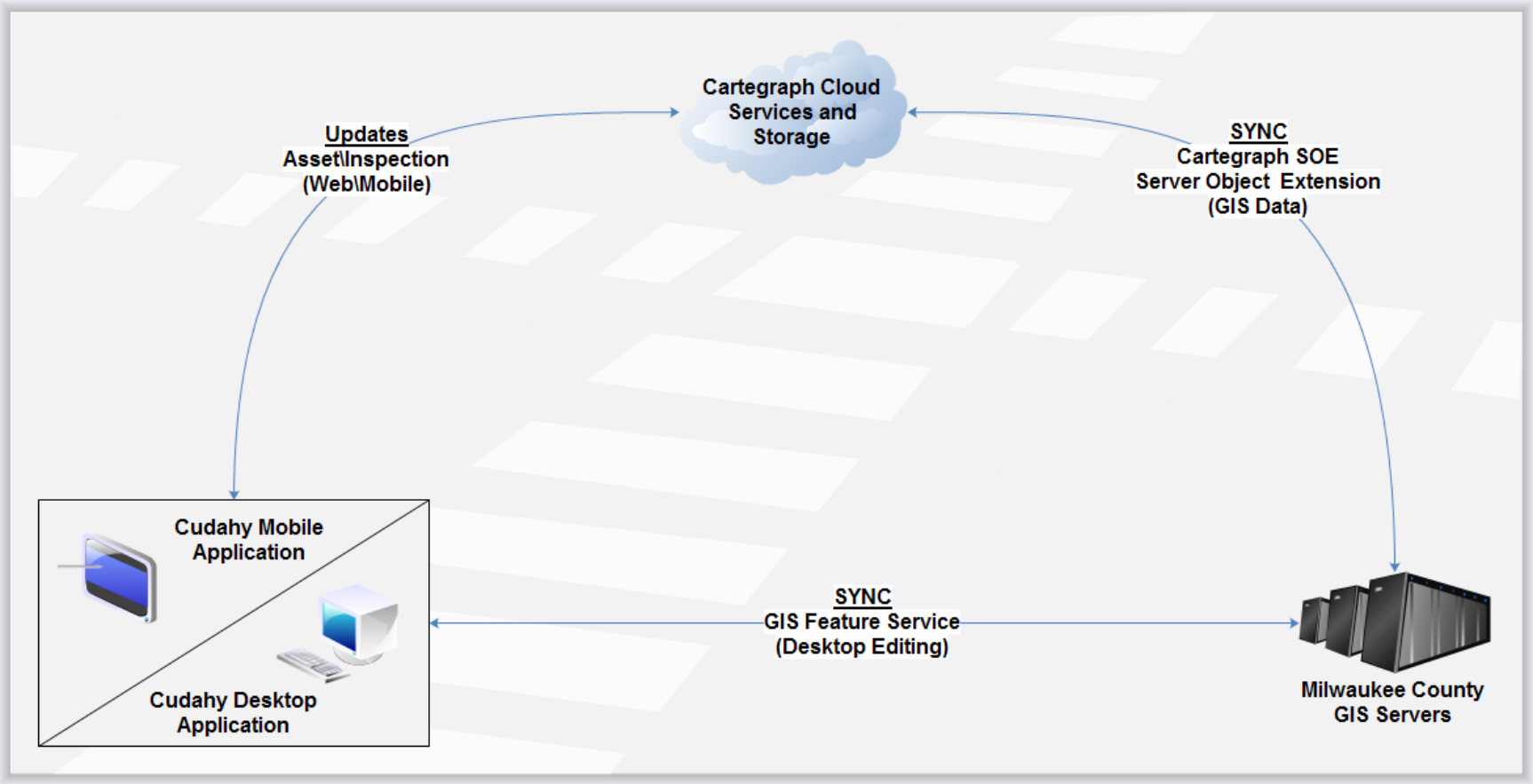
MCLIO Map Services Dashboard









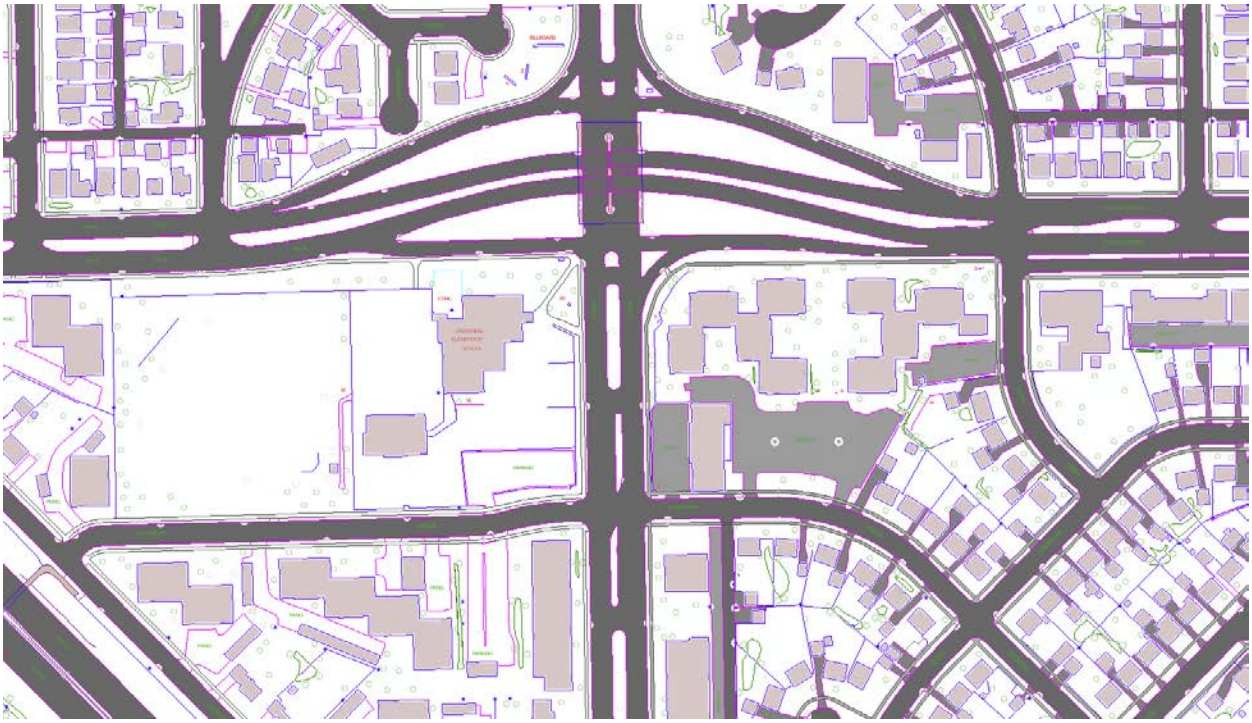

Cartegraph Cloud Services and Storage
Updates
Asset\Inspection
(Web\Mobile)
SYNC
Cartegraph SOE
Server Object Extension
(GIS Data)
Cudahy Mobile Application
Cudahy Desktop Application
SYNC
GIS Feature Service
(Desktop Editing)
Milwaukee County GIS Servers

2010 photo \ topo basemap

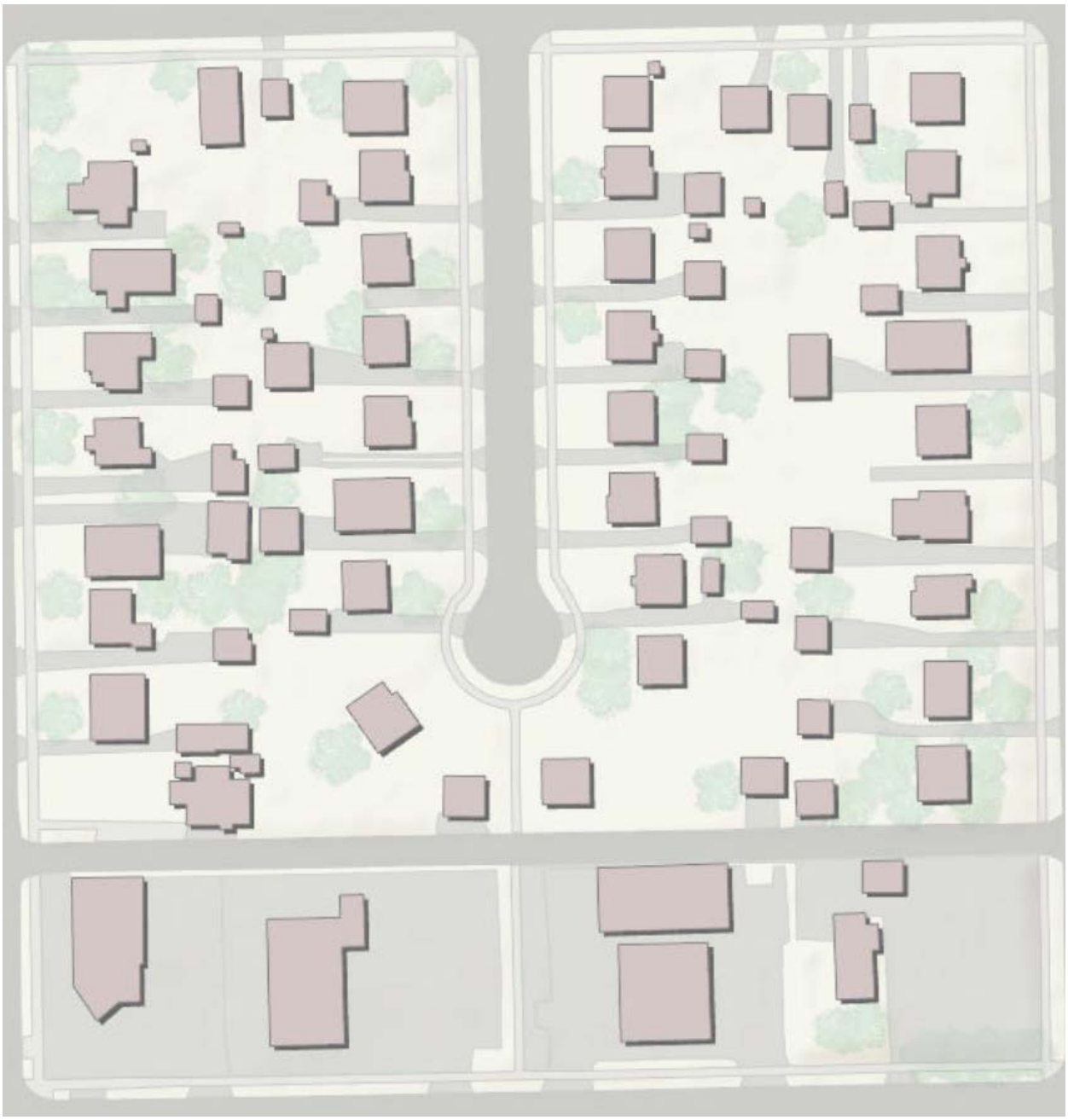
Updated Topo lines, points, and anno w\ 2010 Photo (75% transparency)

Power plant with all updated points, lines, polys, and Anno

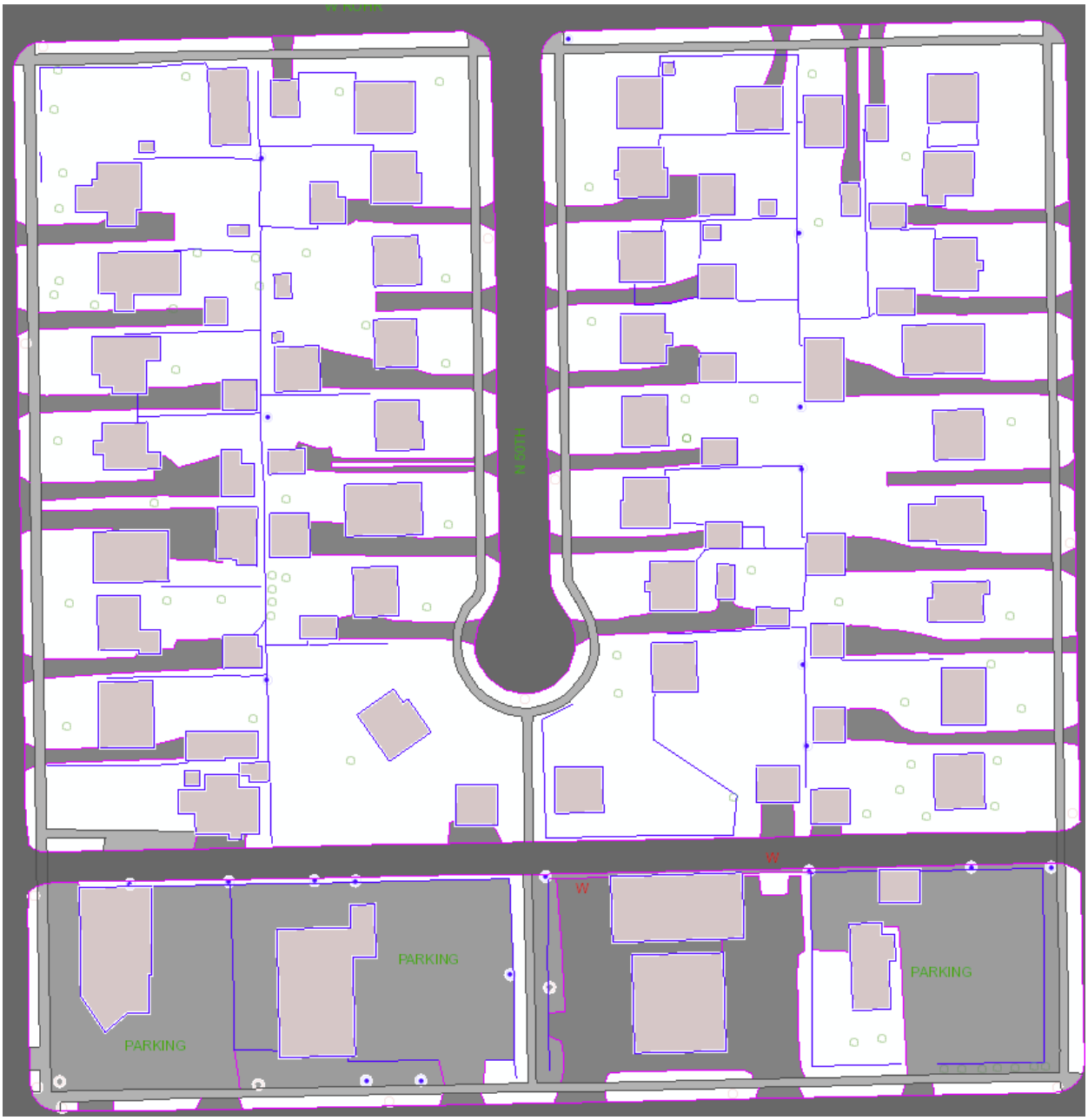
Edge of pilot area- 76th & Silver Spring DR - Rt side in pilot\Lft side out of pilot



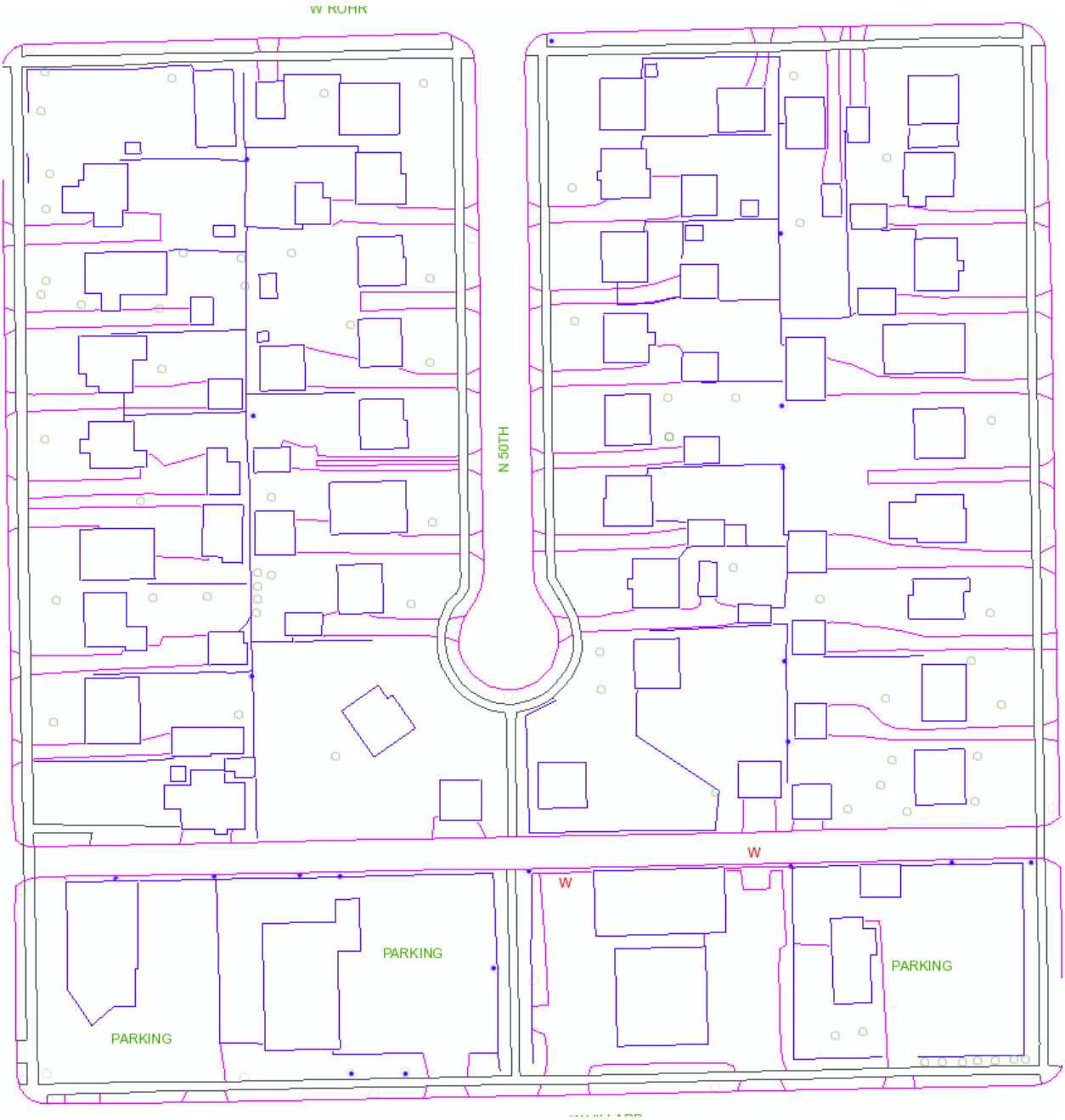
Edge of pilot area- 76th & Silver Spring DR - all points, lines, polys, and Anno



50st & Rohr st – basemap



50st & Rohr St – Points, Lines, Poyls, and Anno



50st & Rohr St – No Polys

DEPARTMENT OF ADMINISTRATIVE SERVICES
DIVISION OF ECONOMIC DEVELOPMENT
MILWAUKEE COUNTY LAND INFORMATION OFFICE
2711 West Wells Street, Rm 426, Milwaukee, WI 53208 (414) 278-2176

TO: MCAMLIS Steering Committee

FROM: William C. Shaw, MCAMLIS Project Manager

DATE: March 7, 2014

SUBJECT: COUNTYWIDE PROGRAM INITIATIVES

BACKGROUND

This Goal states that - Where appropriate, identify, initiate, and complete projects proposed by Milwaukee County or its constituent municipalities, agencies of the federal, state or regional government, public utilities and by private entities, including, importantly, interested citizens which would, by understanding of the MCAMLIS Steering Committee, prepare information and maps useful for meeting the needs of the County and its local units of government and contributing toward the implementation of the Wisconsin Land Information Program.

CURRENT PROJECT STATUS SUMMARIES

1. **Address Database Maintenance**

   Activities this Period – 12/13 – 3/14
   - Deployed 4th qtr consolidated Milwaukee County and City of Milwaukee Cadastral Data;
   - Maintained address point "situs" relationship to structure location; and .

   Next
   - Continuation of ongoing efforts incorporating updated multiple address source information

2. **Plat-of-Survey Maintenance**

   Plat of Survey Documents received from the Milwaukee County Surveyors Office are scanned and indexed to their respective parcel(s). The public is able to access these as they are posted to the MCLIO Interactive Mapping website. In total, there are 95,361 parcel references to 83,364 documents. In 2014 a total of 126 documents have been scanned and indexed into the Plat of Survey scanned document library.

3. **2014 DAT:01.1 Create Geo-rectified Historical Aerial Photo Library**

   1937 – The State Cartographers Office recently contributed a complete set of scanned files representing 199 images covering the entire county. MCAMLIS staff has started the process of geo-referencing this data for purposes of distributing and posting this via the MCLIO website. (attached 1937 Milwaukee County Aerial Photo Rectification Project Status Exhibit)

SEWRPC – The Southeast Regional Planning Commission has agreed to allow Milwaukee County to scan and geo-reference aerial images located in the Commissions image library. The source aerial photography is black and white, 9″ X 9″ format aerial negatives that reside in the archives of SEWRPC and are stored as individual negatives in plastic sleeves. It is anticipated that the project will include the following list of image years and number of negatives. SEWRPC will deliver the photographic negatives to SIDWELL in batches containing multiple years beginning with negatives from 1963. Subsequent batches are requested to be delivered and picked up at the convenience of SEWPRC.

Flight Year	**Number of Images**	**Negative Scale**	**Approx. Pixel Res. After Scanning**
1963	66	1″=2,000′	1.10′
1967	66	1″=1,660′	0.91′
1970	66	1″=1,667′	0.92′
1975	66	1″=1,667′	0.92′
1980	66	1″=1,667 ′	0.92′
1985	66	1″=1,667′	0.92′
1990	66	1″=1,660′	0.91′

Upon completion of the scanning by SIDWELL the scanned image data will be delivered to the county for MCAMLIS staff to continue the geo-rectification process. To date SIDWELL has completed scanning the 1963 and 1967 images.

Staff intends to pursue the process of geo-referencing the available photos and seeking further input from local communities to identify the availability of these and other photos needed to include in the historical aerial image library.

4. 2014 VWR.01 Improve the MCLIO Interactive Mapping Service

Work has started regarding upgrades and improvements to the MCLIO Viewer. A new architecture has been adopted and in being tested. Staff attended a recent Wisconsin Latitude Geographics User Group meeting held at ATC headquarters on 3/3. Progress has been made regarding recent upgrades to the current release version of the Latitude Release 4.0 that will soon replace an earlier version and be released for public review near the end of March beginning April.

5. 2014 MOL.01 Initial Website Improvements

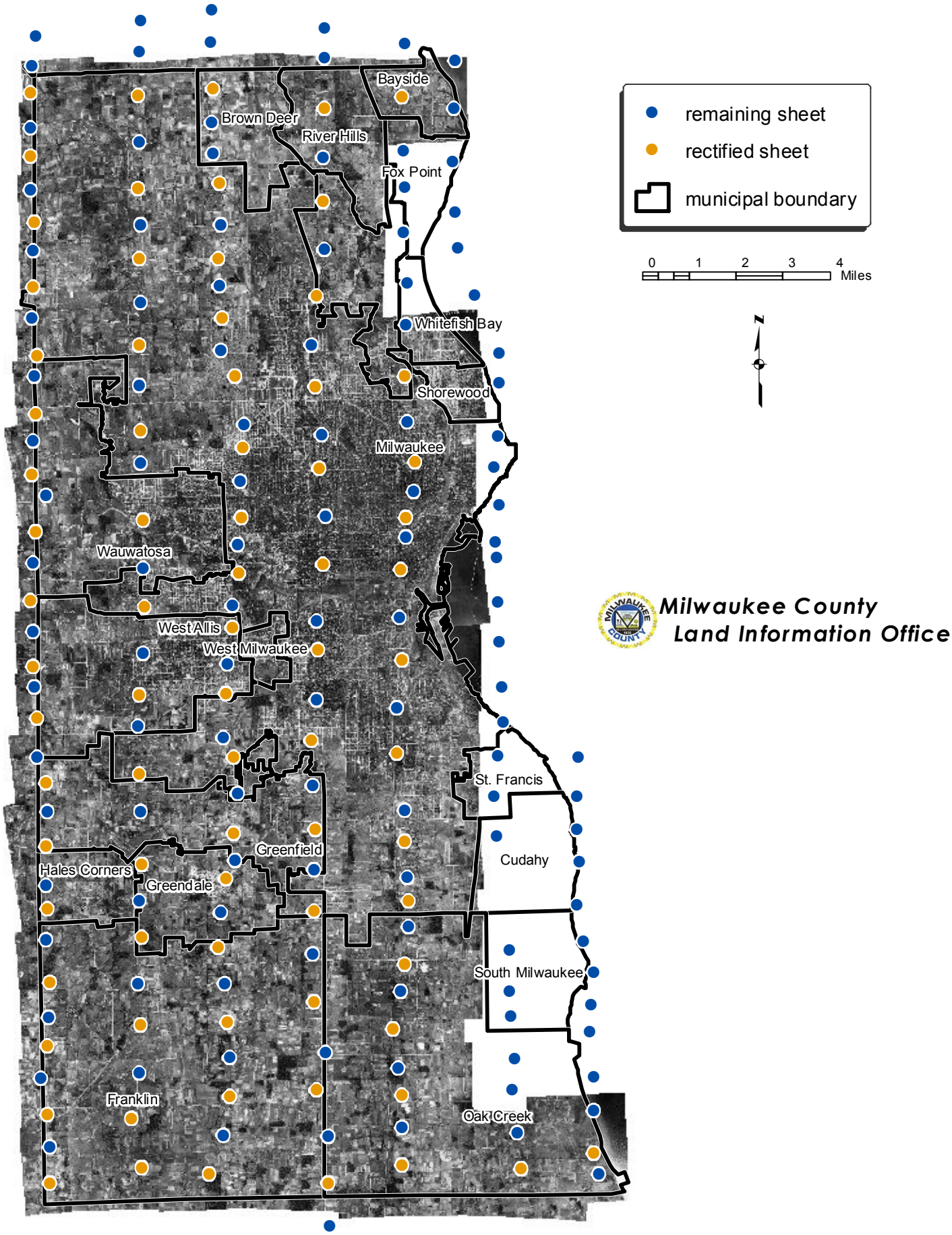
Work is underway regarding staffing this effort. Jim Lacy from the State Cartographers Office has agreed to assist development of this project on a part-time basis. His experience building and deploying similar website makeovers at the WLIA and SCO will be a huge asset to our project (see attached GIS Website Example Exhibit)

Attach: 1937 Historical Aerial Photo Geo-rectification Status Map

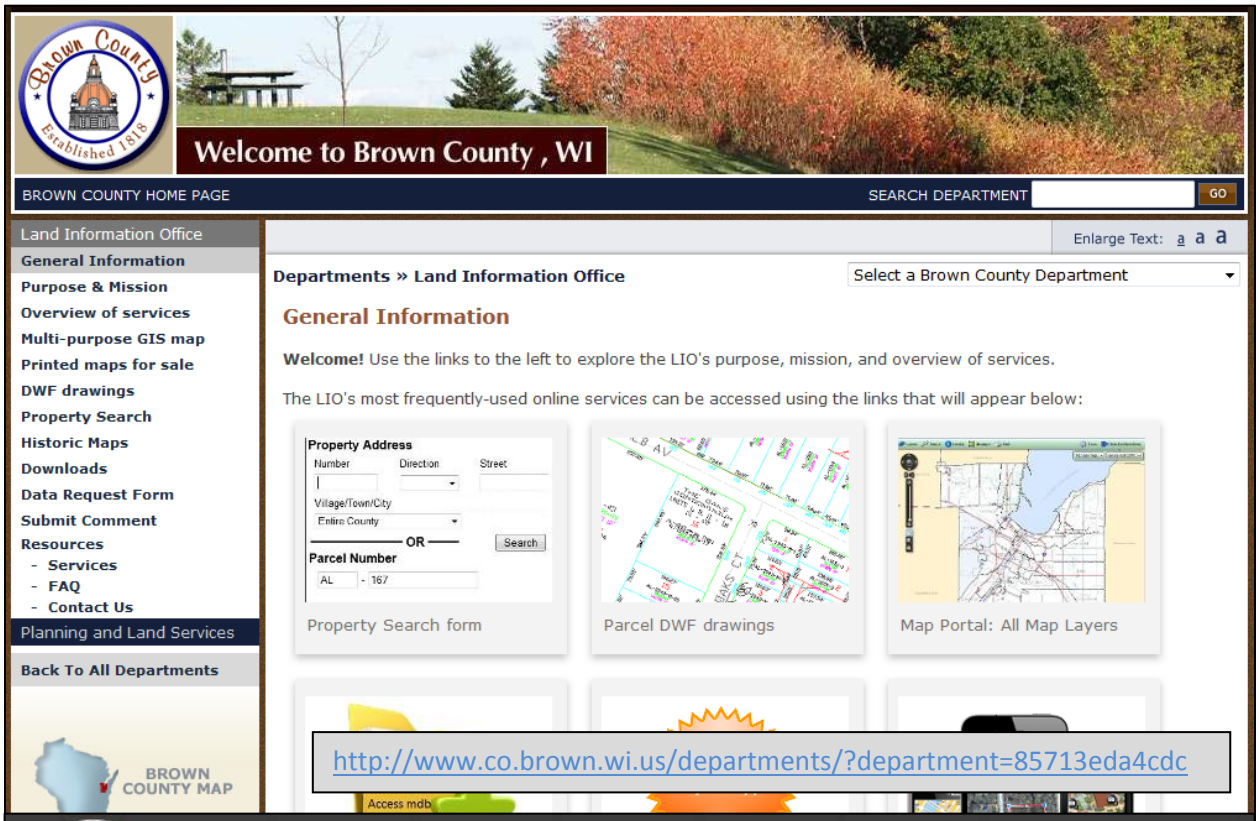
Example GIS Websites Exhibit

1937 Milwaukee County Aerial Photo Rectification Project Status

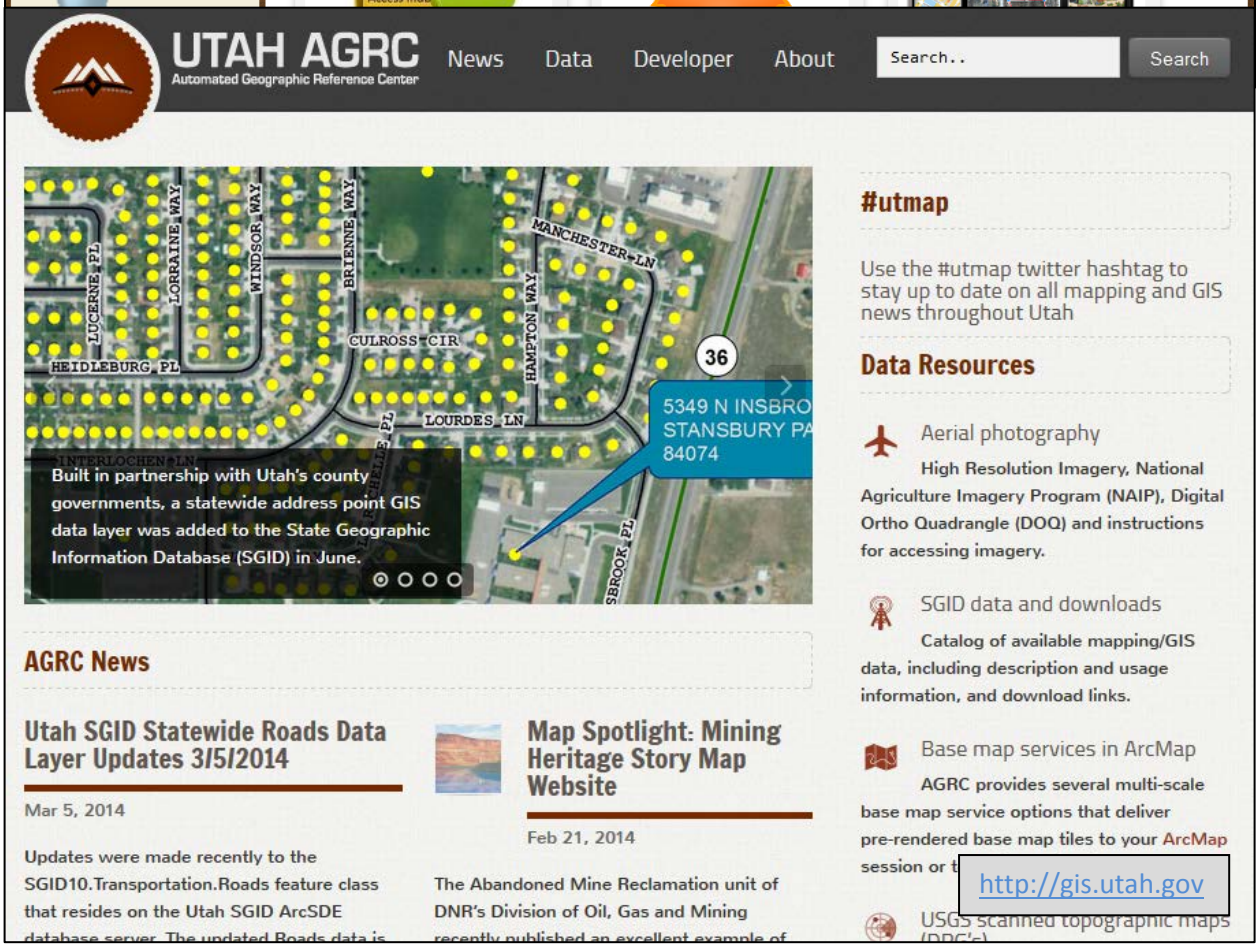
77 of 199 sheets rectified (38.7%) as of March 1, 2014



Example GIS Websites



http://www.co.brown.wi.us/departments/?department=85713eda4cdc



http://gis.utah.gov

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607• TELEPHONE (262) 547-6721
FAX (262) 547-1103

Serving the Counties of: KENOSHA
MILWAUKEE
OZAUKEE
RACINE
WALWORTH
WASHINGTON
WAUKESHA

MEMORANDUM

TO: MCAMLIS Steering Committee

FROM: Kurt W. Bauer, PE, RLS, AICP
Milwaukee County Surveyor

DATE: February 10, 2014

SUBJECT: MILWAUKEE COUNTY SURVEYOR ACTIVITIES—2013

This memorandum is intended to provide the MCAMLIS Steering Committee with a report on the work of the Milwaukee County Surveyor in the calendar year extending from January 1, 2013, through December 31, 2013. The office, and the duties and functions, of the County Surveyor are prescribed by Section 59.45 of the *Wisconsin Statutes.* In Milwaukee County the necessary work, pursuant to the direction of the County Board, is funded by document recording fees retained by the County pursuant to Section 59.43(2) of the *Wisconsin Statutes.* Since the MCAMLIS Steering Committee is charged by contract between Milwaukee County and the public and private utilities operating within the County with administering these retained recording fees, a report to the Committee on the activities of the County Surveyor is in order.

Within Milwaukee County, the U.S. Public Land Survey System has been combined with the State Plane Coordinate System and the National Geodetic Vertical Control System to provide the high order horizontal and vertical control survey network required for the preparation and maintenance of the MCAMLIS large-scale topographic and cadastral maps. Therefore, the work of the Milwaukee County Surveyor entails not only the maintenance of the U.S. Public Land Survey System as such, but also the maintenance of the MCAMLIS horizontal and vertical control survey network. Consequently, the work requires expertise in geodetic, as well as plane, surveying and in the legal aspects of property boundary determination.

Attachment 1 to this memorandum consists of a map of Milwaukee County on which are shown the location of all of the corners of the U.S. Public Land Survey System within Milwaukee County for which various types of perpetuation activities were undertaken in calendar year 2013. These activities involved the replacement of section, quarter section, center of section, and witness and meander corners which were reported as damaged, disturbed, destroyed, or proposed to be destroyed, by construction, or other activities or actions. The work involved the setting of new monuments; and, as necessary, the replacement of attendant witness marks and benchmarks, the verification or establishment of new State Plane Coordinate values for corner monuments, and elevations for benchmarks. New records of U.S. Public Land Survey control station records--dossier sheets--were prepared for each corner concerned. The work also involved the completion of 4.0 miles of high order differential level lines as required to maintain the vertical control network. The leveling work involved the reestablishment of 3 benchmarks, and the establishment of 2 new benchmarks. A record of vertical control station form was completed for each of the benchmarks concerned.

It should be noted that, in accordance with Milwaukee County policies relative to the participation and use of disadvantaged business enterprises in the provision of County services, a contract was entered into with the firm of Dakota Intertek Corporation of Milwaukee, Wisconsin--a minority owned firm--to provide assistance to the County Surveyor pertaining to the maintenance of the U. S. Public Land Survey System. More specifically, the contract provided for assistance in the remonumentation of broken or substandard concrete monuments marking the location of corners pertaining to the system. The contract specified 10 such monument locations where the contractor was instructed by the County Surveyor as to what type of work was to be performed and the specifications that were to be followed. After completion of such work, the County Surveyor performed an inspection of the monument installations, all of which were found to be in compliance with the specifications governing the work. Payment was made to the contractor in the amount of $16,687.61 on September 27, 2013. This amount constituted 21 percent of the total cost of the County Surveyor services, thus exceeding the goal established by Milwaukee County for the participation of a disadvantaged business enterprise in this regard.

A copy of one of the new dossier sheets for a U.S. Public Land Survey corner, is provided in Attachment 2 to this memorandum as an example of a completed record form. As indicated on Attachment 1, a total of 34 U.S. Public Land Survey corners were involved in the perpetuation activity for the calendar year. In some cases, the perpetuation activity resulted in the determination of revised elevations for both the corners and the attendant benchmarks. Control survey summary diagrams were updated as necessary to reflect these changes. A total of 25 diagrams required changes. A copy of one of the revised diagrams concerned is herewith provided as Attachment 3, also as an example of a completed sheet.[1]

Pursuant to State Statutes, Registered Land Surveyors must provide to the County Surveyor for filing copies of all plats of surveys other than land subdivision plats and certified survey maps prepared for surveys conducted within the County. Through December 31, 2013, the County Surveyor received, indexed, and filed 1,948 copies of new land surveys completed in 2013 within the County. In 2011, the Commission completed a project incorporating into the filing system historic plats of surveys acquired from a now defunct land surveying firm, totaling literally thousands of plats. The MCAMLIS staff also incorporated historic plats of survey files in Milwaukee County offices, again totaling thousands of plats, bringing the total number of records of land surveys completed within the County, which have been filed with the County Surveyor since the inception of this work in 1984, to 83,238. The filed records are indexed to permit retrieval by name of the surveyor concerned, the property owner concerned, the address of the property concerned, if shown on the plat, the date of the survey plat, the civil division, and the U.S. Public Land Survey Township and Range, and Section and one-quarter section within which the plat is located.

In 2012, the County Surveyor assisted MCAMLIS staff in the coordination of an annual program to update the Milwaukee County website in order to incorporate the 1,948 copies of new land surveys received during the year and those to be received in subsequent years. The MCAMLIS staff produced digital scans of the 1,948 hardcopies, and merged the new files with the existing files to create a total of 83,238 plats of survey that have been filed with the County Surveyor as of December 31, 2013. The purpose and intent of this project was to create a single digital database from the separate databases maintained by the office of the County Surveyor and MCAMLIS, and to allow the digital images of the

[1] Copies of all 34 dossier sheets and all 25 modified control summary diagrams have been provided with a copy of this memorandum to: 1) William C. Shaw, GIS Supervisor and MCAMLIS Project Manager; 2) Marcia G. Cornnell, Manager Central Drafting and Records, City of Milwaukee; 3) Gregory G. High, Director, Architectural, Engineering and Environmental Services, Milwaukee County; 4) Daniel R. Talarczyk, Survey Services Supervisor, Milwaukee Metropolitan Sewerage District; and 5) Mary Dziewiontkoski, Project Programming, City of Milwaukee.

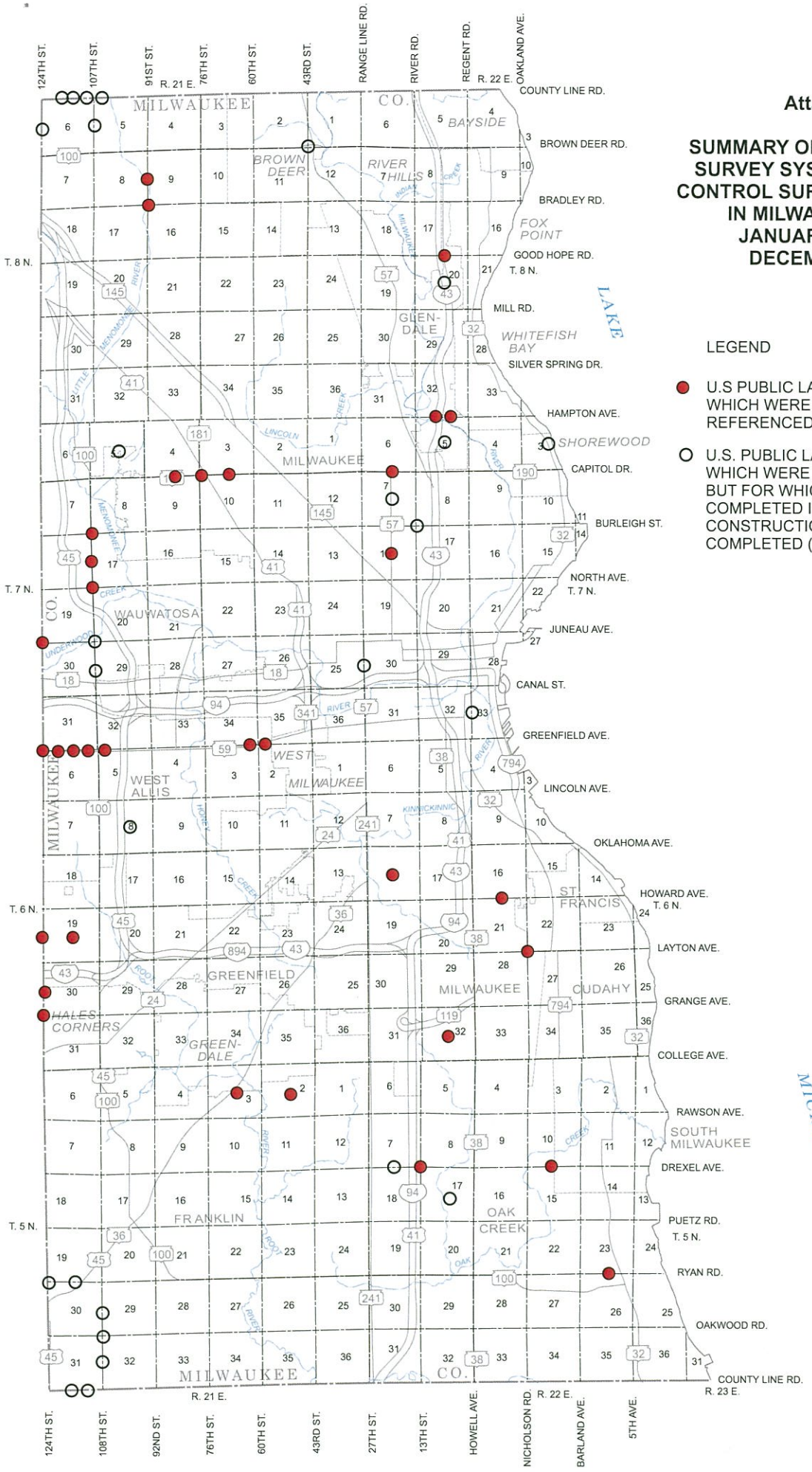
plats of survey to be accessed by the public through the MCAMLIS portion of the Milwaukee County website.

* * *

KWB/lgh
MKE CO. SURVEYOR ACTIVITIES 2013 (00216017).DOC

Attachments

cc: Donald P. Simon



Attachment 1

SUMMARY OF U.S. PUBLIC LAND SURVEY SYSTEM CORNER AND CONTROL SURVEY PERPETUATION IN MILWAUKEE COUNTY: JANUARY 1 THROUGH DECEMBER 31, 2013

LEGEND

- ● U.S PUBLIC LAND SURVEY CORNERS WHICH WERE REMONUMENTED AND/OR REFERENCED IN 2013 (34)
- ○ U.S. PUBLIC LAND SURVEY CORNERS WHICH WERE REMONUMENTED IN 2013 BUT FOR WHICH REFERENCING WILL BE COMPLETED IN 2014 DUE TO CONSTRUCTION PROJECTS NOT FULLY COMPLETED (29)

Source: SEWRPC.

RECORD OF U. S. PUBLIC LAND SURVEY CONTROL STATION

U. S. PUBLIC LAND SURVEY CORNER 6/6 7/7 T 7 N, R 22 E, MILWAUKEE COUNTY, WISCONSIN

HORIZONTAL CONTROL SURVEY BY: AERO-METRIC, INC. YEAR: 1991
VERTICAL CONTROL SURVEY BY: AERO-METRIC, INC./SEWRPC YEAR: 1991/2003/2012

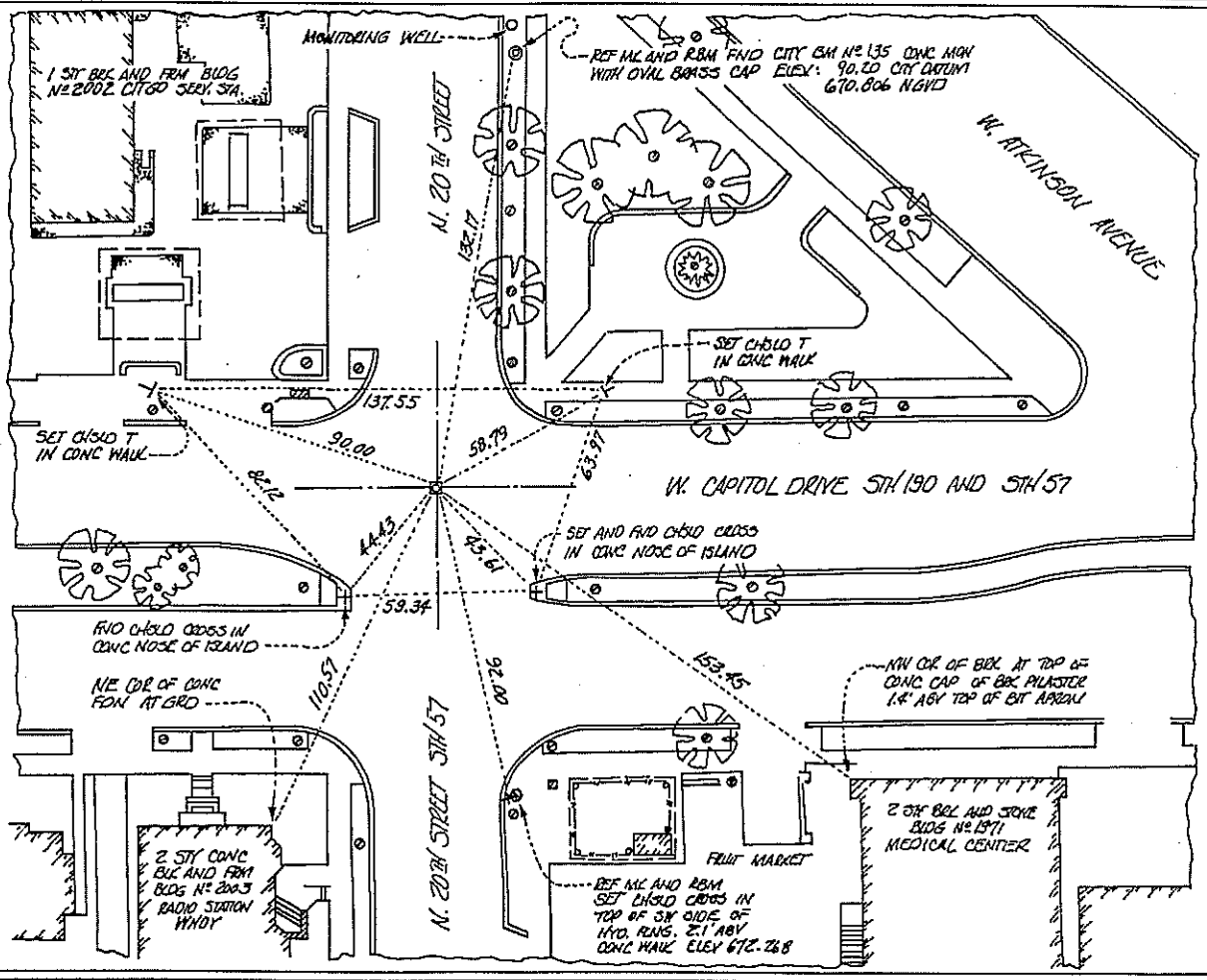
STATE PLANE COORDINATES OF: QUARTER SECTION CORNER
NORTH 403,959.03
EAST 2,551,035.81
ELEVATION OF STATION: 669.989

HORIZONTAL DATUM: WISCONSIN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE
NORTH AMERICAN DATUM OF 1927

VERTICAL DATUM: NATIONAL GEODETIC VERTICAL DATUM OF 1929 THETA ANGLE: +1-25-03

CONTROL ACCURACY:
HORIZONTAL: THIRD ORDER, CLASS I VERTICAL: SECOND ORDER, CLASS II

LOCATION SKETCH:



Bearing: S 00-14-31 W
To Trav. Sta. 52

SURVEYOR'S AFFIDAVIT:

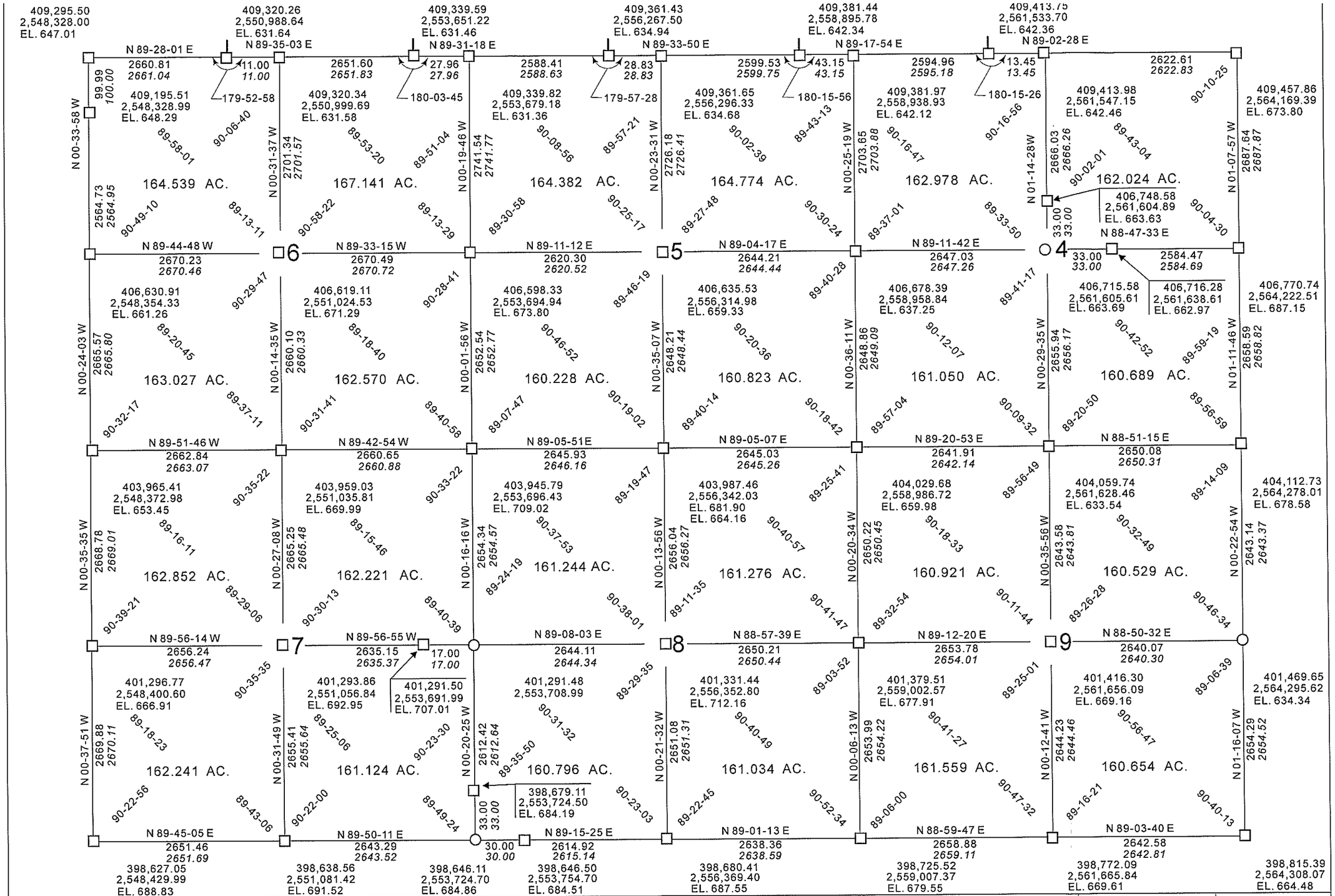
STATE OF WISCONSIN)
MILWAUKEE COUNTY) SS

As Milwaukee County Surveyor, I hereby certify that following sanitary sewer reconstruction and street intersection improvements, I set a concrete monument with SEWRPC brass cap to mark the location of this corner; replacing a concrete monument with SEWRPC brass cap found and referenced by me as Milwaukee County Surveyor on November 20, 2003; said concrete monument having been set to mark the location of this corner in November 2003 by Gregory J. Willms, City of Milwaukee Project Engineer, following street reconstruction; replacing a concrete monument with Wisconsin Division of Highways aluminum cap found and referenced by me as Milwaukee County Surveyor on May 31, 1991, said concrete monument with aluminum cap having been set to mark the location of this corner in September 1978 by Thomas A. Sprink, Wisconsin Department of Transportation Project Engineer, following street reconstruction; replacing a 1.5-inch-diameter brass rod with cross set in the then existing concrete pavement to mark the location of this corner in 1957 by Edward S. Adler, State Highway Commission of Wisconsin Project Engineer, following street reconstruction; using recorded distances to witness marks maintained by the Milwaukee County Highway Department to perpetuate the location of this corner; said recorded distances to witness marks dating back to 1924 having been measured to an old cut limestone monument then marking the location of this corner and subsequently destroyed during street reconstruction; said limestone monument having been found in July 1911 by a Milwaukee County Highway Department Project Engineer and accepted as marking the location of this corner; said limestone monument having been set to mark the location of this corner circa 1860 in the conduct of the remonumentation of the Town of Milwaukee; replacing in turn a wood post set to mark this corner in February 1835 by William A. Burt, Deputy United States Surveyor, in the conduct of the original United States Public Land Survey; that I have referenced the same as shown hereon; and that this record is correct and complete to the best of my knowledge and belief.

WISCONSIN K.W. BAUER S-157 MILWAUKEE, WI LAND SURVEYOR

DATE OF SURVEY: 8 August 2013 Kurt W. Bauer S - 157
REGISTERED LAND SURVEYOR

FORM PREPARED BY SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION



SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION
KENOSHA·MILWAUKEE·OZAUKEE·SHEBOYGAN·WASHINGTON·WALWORTH·RACINE

LEGEND

- U.S. PUBLIC LAND SURVEY CORNER, MARKED BY 6" x 6" x 36" CONC. MONUMENT WITH SEWRPC BRASS CAP.
- U.S. PUBLIC LAND SURVEY CORNER, MARKED BY 6" x 6" X 36" CONC. MONUMENT WITH BRASS CAP.
- U.S. PUBLIC LAND SURVEY CORNER, MARKED BY OTHER MONUMENTATION.
- N.G.S. HORIZONTAL CONTROL STATION.

+01° 25' 52" TH GN

HORIZONTAL DATUM IS BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM GRID, SOUTH ZONE (NAD-27), AND ALL BEARINGS ARE REFERRED TO GRID NORTH.

COMBINATION SCALE AND SEA LEVEL REDUCTION FACTOR: 0.99991464

DIMENSIONS SHOWN IN ITALICS INDICATE GROUND LEVEL DISTANCES.

VERTICAL DATUM IS BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1929. SUBTRACT 580.60 TO PLACE ELEVATIONS ON CITY OF MILWAUKEE DATUM.

CONTROL SURVEY SUMMARY DIAGRAM
FOR
SECTION SURVEYS
IN THE
CITIES OF GLENDALE AND MILWAUKEE; AND VILLAGES OF SHOREWOOD AND WHITEFISH BAY
MILWAUKEE COUNTY, WISCONSIN

DRAWN BY: D. L. RILEY	DATE: APR, 1986
CHECKED BY: L. H. KREBLIN	DATE: AUG, 1986
APPROVED BY: Kurt W. Bauer	DATE: AUG, 1986
REVISED: D. P. SIMON	DATE: MAR., 2012
REVISED: N. A. NEJEDLO	DATE: DEC., 2013

DOSSIER SHEETS CONTAINING ALL INFORMATION NECESSARY FOR RECOVERY AND USE OF CONTROL SURVEY STATIONS AVAILABLE FROM SEWRPC.

SECTIONS
6, 5, 4,
7, 8, 9
T. 7 N., R. 22 E.
MILWAUKEE COUNTY

2013 MCAMLIS FINAL

$2 & $6 Fees Combined

		YTD	YE Projected
REVENUES - 2013 YTD			
2013 Actual Revenue		$986,644	$986,644
2012 Encumbrances Carried Over		$580,082	$580,082
	TOTAL	**$1,566,726**	**$1,566,726**
OPERATING EXPENSES - 2013 YTD			
2013 Actual Expenditures		$1,137,209	$1,137,209
2013 Encumbrances		$315,014	$315,014
	TOTAL	**$1,452,223**	**$1,452,223**
2013 Est. Net Income (Loss)		**$114,503**	**$114,503**

Fund Balance:		YTD	YE Projected
2012 Year-End Fund Balance*		**$1,525,990**	**$1,525,990**
2013 Operating Revenues (Shown Above)	+	$1,566,726	$1,566,726
2013 Exp + Enc for $2 and $6 Fee Projects	-	$1,452,223	$1,452,223
2013 Est Fund Balance**	=	**$1,640,493**	**$1,640,493**
2013 Reserve Revenue @ 10%		$100,078	$100,078
2013 Est Fund Balance YTD - Unrestricted		$1,498,192	$1,498,192
2013 Est Fund Balance YTD - Restricted		$42,223	$42,223

*2012 YE Fund Balance represents the current amount in reserve as of 2012 YE close.

**2013 Est YTD Fund Balance represents the 2012 YE reserve netted against the actual 2013 expenditures and revenues. This figure will change throughout the year as additional 2013 expenditures and revenues are realized.

NOTE: 2013 expenditures, revenues, and resulting fund balance are year-to-date ONLY. The figures represented in this report are not intended to project a year-end balance for the MCAMLIS budget. The purpose of the report is to provide committee members a "financial snapshot" of MCAMLIS activities within a specific point in time.

2013 MCAMLIS YTD

$6 Fee

2013 Income Statement:		YTD	YE Projected
REVENUES - 2013 YTD			
2013 Actual Revenue		$738,844	$738,844
2012 Encumbrances Carried Over		$534,433	$534,433
TOTAL		**$1,273,277**	**$1,273,277**
OPERATING EXPENSES - 2013 YTD			
2013 Actual Expenditures		$904,176	$904,176
2013 Encumbrances		$292,069	$292,069
TOTAL		**$1,196,245**	**$1,196,245**
2013 Est. Net Income (Loss) YTD		**$77,032**	**$77,032**

Fund Balance:		YTD	YE Projected
2012 Year-End Fund Balance		**$1,118,790**	**$1,118,790**
2013 Actual Revenues (Shown Above)	+	$1,273,277	$1,273,277
2013 Exp + Enc for $6 Fee Projects	-	$1,196,245	$1,196,245
2013 Est YTD Fund Balance	=	**$1,195,822**	**$1,195,822**
2013 Reserve Revenue @ 10%		$75,500	$75,500
2013 Est Fund Balance YTD - Unrestricted		$1,114,532	$1,114,532
2013 Est Fund Balance YTD - Restricted		$5,790	$5,790

$2 FEE

2013 Income Statement:		YTD	YE Projected
REVENUES - 2013 YTD			
2013 Operating Cash Flow		$247,800	$247,800
2012 Encumbrances Carried Over		$45,649	$45,649
TOTAL		**$293,449**	**$293,449**
OPERATING EXPENSES - 2013 YTD			
2013 Actual Expenditures		$233,033	$233,033
2013 Encumbrances		$22,945	$22,945
TOTAL		**$255,978**	**$255,978**
2013 Est. Net Income (Loss) YTD		**$37,471**	**$37,471**

Fund Balance:		YTD	YE Projected
2012 Year-End Fund Balance		**$407,200**	**$407,200**
2013 Operating Revenues (Shown Above)	+	$293,449	$293,449
2013 Exp + Enc for $2 Fee Projects	-	$255,978	$255,978
2013 Est YTD Fund Balance	=	**$444,671**	**$444,671**
2013 Reserve Revenue @ 10%		$24,578	$24,578
2013 Est Fund Balance YTD - Unrestricted		$383,660	$383,660
2013 Est Fund Balance YTD - Restricted		$36,433	$36,433

2014 MCAMLIS YTD - as of 3/7/2014

Combined MCAMLIS Report

2013 Income Statement:		YTD	YE Projected
REVENUES - 2014 YTD			
2014 Actual Revenue		$108,164	$800,000
2013 Encumbrances Carried Over		$292,069	$292,069
TOTAL		**$400,233**	**$1,092,069**
OPERATING EXPENSES - 2014 YTD			
2014 Actual Expenditures		$102,520	$1,395,754
2014 Encumbrances		$22,945	$22,945
TOTAL		**$125,465**	**$1,418,699**
2013 Est. Net Income (Loss) YTD		**$274,768**	**($326,630)**

Fund Balance:		YTD	YE Projected
2013 Year-End Fund Balance		**$1,640,493**	**$1,118,790**
2014 Actual Revenues (Shown Above)	+	$400,233	$1,092,069
2013 Expenditures + Encumbrances	-	$125,465	$1,418,699
2014 Est YTD Fund Balance	**=**	**$1,915,261**	**$792,160**
2014 Reserve Revenue @ 10%		$75,500	$75,500
2014 Est Fund Balance YTD - Unrestricted		$1,556,773	$433,672
2014 Est Fund Balance YTD - Restricted		$282,988	$282,988

NOTE: 2014 expenditures, revenues, and resulting fund balance are year-to-date ONLY and the figures represented in this report are not intended to project a year-end balance for the MCAMLIS budget. The purpose of the report is to provide committee members a "financial snapshot" of MCAMLIS activities within a specific point in time.

Est. Documents to be Recorded: 100,000

2013 FINAL Combined Fiscal Report - MCAMLIS ($2) - as of 3-3-2014								
Year Authorized	**Project Description**	**Amount Authorized**	**Amount Paid 2002-2012**	**Amount Paid 2013**	**Amount Encumbered 2013**	**2013 Total Amount Paid (Encumbrances + Actual)**	Remaining Unpaid Balance	Complete
2002	Large Format Scanner	$13,090	$13,090	$0	$0	$ -	$ -	Yes
2003	Improvements to Computer System	$240,000	$240,000	$0	$0	$ -	$ -	Yes
2003	Electronic Recording	$45,000	$45,000	$0	$0	$ -	$ -	Yes
2003	External Hard Drive/Two SNAP Servers	$40,000	$40,000	$0	$0	$ -	$ -	Yes
2003/2005	Digital Images; Conversion of Microfiche	$400,000	$400,000	$0	$0	$ -	$ -	Yes
2005	Scanning A Card	$50,000	$50,000	$0	$0	$ -	$ -	Yes
2005	Improvements to Computer System II	$450,000	$450,000	$0	$0	$ -	$ -	Yes
2007	Improvements to Computer System III	$150,000	$150,000	$0	$0	$ -	$ -	Yes
2008	Improvements to Computer System IV	$150,000	$150,000	$0	$0	$ -	$ -	Yes
2009	Improvements to Computer System V	$120,000	$120,000	$0	$0	$ -	$ -	Yes
2009	Enterprise Address System*	$65,000	$65,000	$0	$0	$ -	$ -	Yes
2009	Improvements to Computer System VI +	$95,000	$94,961	$0	$0	$ -	$ 39	Yes
2012	Cadastral Address Maintenance-2012	$90,010	$67,507	$22,503	$0	$ 22,503	$ -	Yes
2012	Staff Projects $2 Fee	$73,234	$35,383	$3,676	$0	$ 3,676	$ 34,175	Yes
2013	Cadastral Address Maintenance-2013	$91,780	$0	$68,835	$22,945	$ 91,780	$ -	No
2013	ROD Improvements to Computer System	$40,000	$0	$40,000	$0	$ 40,000	$ -	Yes
Total		**$2,113,114**	**$ 1,920,941**	**$ 135,014**	**$ 22,945**	**$ 117,959**	**$ 34,214**	

Data from Register of Deeds as of 3/3/2014

NOTES

+ Project is substantially complete. $39 BAL to fall to Reserve's unrestricted balance.

2013 FINAL Combined Fiscal Report - MCAMLIS ($6) - as of 3-3-2014

Vendor Name	Description	Amount Authorized	Amount Paid - Prior Years	2013 Amount Encumbered	Amount Paid 2013 YTD	Total Amount Paid 2013 (Encumbrances + Actual)	Remaining Unpaid Balance
SEWRPC	MCAMLIS Floodland Mapping Phase 2	$ 436,000	$ 161,300	$ 274,700	$ -	$ 274,700	$ -
SEWRPC	County Surveyor	$ 78,719	$ -	$ -	$ 78,719	$ 78,719	$ -
PICTOMETRY INTL	Orthophotography Acquisition	$ 134,495	$ -	$ -	$ 134,495	$ 134,495	$ -
PLANIMETRIC	Planimetric Map Replacement	$ 125,000	$ -	$ 16,382	$ 108,618	$ 125,000	$ -
GeoDecisions	Business Needs Assessment	$ 149,845	$ -	$ -	$ 149,845	$ 149,845	$ -
	TOTAL	**$ 924,059**	**$ 161,300**	**$ 291,082**	**$ 471,677**	**$ 762,759**	**$ -**

2014 YTD Combined Fiscal Report - MCAMLIS ($8) - as of 3-3-2014

Vendor Name	Description	Amount Authorized	Amount Paid - Prior Years	2014 Amount Encumbered	Amount Paid 2014 YTD	Total Amount Paid 2014 (Encumbrances + Actual)	Remaining Unpaid Balance
SEWRPC	MCAMLIS Floodland Mapping Phase 2	$ 436,000	$ 161,300	$ 274,700	$ -	$ 274,700	$ -
SEWRPC	County Surveyor	$ 78,719	$ -	$ 78,719	$ -	$ 78,719	$ -
GRW	Planimetric Map Replacement	$ 190,000	$ 108,618	$ 5,861	$ 10,521	$ 16,382	$ 65,000
CITY OF MILWAUKEE	Cadastral Address Maintenance	$ 91,780	$ -	$ 91,780	$ -	$ 91,780	$ -
	VWR: Improve MCLIO Mapping Service	$ 70,000	$ -	$ -	$ -	$ -	$ 70,000
	MBL: Mobile Property Viewer	$ 50,000	$ -	$ -	$ -	$ -	$ 50,000
	COL: Collaborative Training & Business Planning	$ 45,000	$ -	$ -	$ -	$ -	$ 45,000
RADGOV	MOL: Website Improvements	$ 20,000	$ -	$ 3,000	$ -	$ 3,000	$ 17,000
SIDWELL INC	DAT: Historical Aerials	$ 10,000	$ -	$ 8,226	$ -	$ 8,226	$ 1,774
	TOTAL	**$ 991,499**	**$ 269,918**	**$ 462,286**	**$ 10,521**	**$ 472,807**	**$ 248,774**

John LaFave – Register of Deeds, LIO
Dan Laurila – DAS Fiscal 3/5/2014

2013 - Milwaukee County Documents Recorded Monthly Totals & Daily Average and Annual Total

The 2013 Budget estimated **137,000** documents would be recorded.
Fell short by 11,793 documents. = $94,344

Month	# of Recorded Documents	MORTGAGES	Percentage Mortgages	# of Days in Month	Daily Average
JAN	11,878	3,129	26.34	22	**539.9**
FEB	10,144	2,575	25.38	20	**507.2**
MAR	10,528	2,651	25.18	21	**501.3**
APRIL	11,116	2,726	24.52	22	**505.3**
MAY	11,034	2,798	25.36	22	**501.5**
JUNE	11,350	2,900	25.55	20	**567.5**
JULY	11,618	3,066	26.39	22	**528.1**
AUG	11,797	2,862	24.26	22	**536.2**
SEPT	9,859	2,268	23	20	**492.95**
OCT	9,938	2,088	21.01	23	**432.09**
NOV	8,149	1,754	21.5	20	**407.45**
DEC	7,794	1,746	22.4	21	**371.14**
Total	**125,207**	30,499	24.36	255	**491**

2014 - Milwaukee County Documents Recorded Monthly Totals & Daily Average and Annual Total

The 2014 Budget estimated **134,000** documents would be recorded.
Estimate falling short by 34,000 documents = $272,000

Month	# of Recorded Documents	MORTGAGES	Percentage Mortgages	# of Days in Month	Daily Average
JAN	7854	1659	21.12	22	**357**
FEB	6834	1326	19.40	20	**341.7**

1) What is an appropriate level of reserves in the trust fund for unanticipated expenditures or lower than expected revenues?

2) Which items in the Business Needs Assessment are high, medium, or low priorities? If revenues remain low and/or other projects arise - this should be helpful for planning purposes.

Milwaukee County Documents Recorded

Year	Total	Daily Average
2013	125,207	491
2012	131,502	517.724
2011	114,141	447.61
2010	123,084	488.43
2009	146,855	580.454
2008	143,389	564.524
2007	179,823	705.18
2006	205,706	806.7
2005	230,466	903.78
2004	212,273	832.4
2003	291,021	1,141
2002	226,057	887
2001	186,710	746
2000	151,693	597
1999	193,783	775
1998	191,481	766
1997	159,948	640
1996	141,827	567
1995	130,130	510.31
1994	156,659	614.35
1993	102,424	401.66
1992	**89,316**	**348.89**
1991	69,256	271.59
1990	65,519	256.93
1989	64,490	252.90
1988	68,570	267.85
1987	131,025	513.82
1986	127,347	499.4
1985	100,325	393.43
1984	95,602	373.44
1983	95,669	375.17
1982	67,522	264.79
1981	67,723	265.58
1980	75,647	295.49

Wisconsin Geospatial Information Strategy Summit

Lyman F. Anderson Agricultural and Conservation Center
Tuesday, January 14, 2014

January 27, 2014

We really appreciated everyone who made time in their busy schedules and braved the snow to attend the Summit. There was a diverse group of attendees from the private sector, non-profits, professional associations and various levels of government.

The day was full of valuable discussions about the current state of geospatial information in Wisconsin and how to make Wisconsin a leader once again. The *Deer Trustee Report* drew attention to the shortcomings of Wisconsin geospatial information, describing it as "woefully inadequate". The *Deer Trustee Report* had a tremendous impact on the 2013-15 State Budget (Act 20) and the Wisconsin Land Information Program (WLIP). Act 20 makes significant investments in the WLIP through a segregated appropriation with anticipated revenue of approximately $8.4 million by 2015. This funding will be used to increase county base budget grants to $100,000 and training and education grants to $1,000. Remaining funds would likely be targeted for investment at the local level through WLIP strategic initiative grants according to a March 1, 2013 DOA memo. A significant provision of Act 20 is the directive for DOA to create an implementation plan for a digital statewide parcel map and directs counties to coordinate their digital parcel mapping with the state.

There was general agreement on the need for a Wisconsin Geospatial Strategy. We are the first to admit that there was also confusion, especially in regards to how such a strategy would coexist with the DOA parcel plan. The "statewide parcel map" provision of Act 20 is significant in every sense of the word, but we must remember that it is only **one** of several critical geospatial data layers in Wisconsin. We need to develop a good answer for "Well now what?" once the parcel map is assembled. A comprehensive geospatial strategy would identify, prioritize and develop a consensus course of action for those data layers.

A comprehensive strategy should also address the broader geospatial issues including but not limited to data sharing, distribution, coordination and governance. WIGICC was essentially formed as a result of *Location Matters*; the most recent state geospatial strategic plan published 7 years ago. Would it be a good idea to revisit the topics of coordination and governance? Do we create another coordination body like WIGICC; do we reinvent WIGICC or scrap WIGICC for something else? We don't have the answers but collectively through a planning process we will come to an answer.

We will be meeting this week to discuss feedback from the summit and organize a core planning team. A core team will be organized much in the same way it was with *Location Matters*. This core team will be made up of a cross-section of individuals from the organizations invited to and attending the summit. This group will lead the planning effort with the support and resources of the WLIA, WIGICC and LION. Contact us to volunteer or nominate an individual for the core planning team. We hope that we may continue to rely on your valued contributions.

Sincerely,

Justin Conner, WLIA President-Elect
jconner@co.woood.wi.us

Jon Schwichtenberg, WIGICC Chair
jon.schwichtenberg@graef-usa.com

LION Discussion Topics

State-wide Parcel Project – Considerations for Implementation

Data Structure

- Grant funding to those counties that still need to complete parcel mapping
- List of attributes that need to be parcel of data
    - Attributes managed by the county (RPL, Treasurer)
    - Attributes managed by WI-DOR
    - Attributes managed by local assessors
    - Parcel numbering – How does this fit in?
    - Are WI-DOR Electronic Assessment Role Transfer standards the same as DOA standards? – Does parcel geometry fit in?

Data Transfer

- Keep it simple. Look to a toolset for Counties to publish data.
    - Establish an agreed upon, standard and attribution structure that allows for additional attribution in future updates.
    - Projection, File Format, Attributes etc.
- Looking for an easy method to post data to the state. Designed for future automated process
- Update Frequency?

Data Management

- Parcel Custodianship is at the local level
- Document contacts for each data source, metadata etc.
- Agency in charge of repository will work with custodians to identify errors.
- Custodians will have responsibility to alter data-and provide updates to repository

Data Agreement

- Develop State/County data agreement for the sharing of parcel data
- Agreement which honors county agreements

Data Access

- Centralized data repository that will provide state agencies with access to state-wide parcels.
- Contributors to the repository will also be able to download data they need from it.
- Build a repository with a plan for future growth.

After State-wide Parcels, what's next?

1) State-wide PLSS Remonumentation, integrated with Parcel data
2) State-wide Orthophoto's
3) Record Imaging for ROD & County Surveyors
    - Data Important for Emergency Management (and others)Street Centerlines, Addressing, Administrative Boundaries, Terrain Data, etc.

REQUEST FOR PROJECT AND COST PROPOSALS FOR THE

SOUTHEASTERN WISCONSIN 2015 ORTHOPHOTOGRAPHY PROJECT

I. GENERAL

The Southeastern Wisconsin Regional Planning Commission, in partnership with the Counties of Kenosha, Milwaukee, Ozaukee, Racine, Walworth, Washington, and Waukesha, is seeking project and cost proposals from selected qualified Vendors for an imagery and elevation mapping project in Southeastern Wisconsin. The 2015 Orthophotography Project will acquire digital orthophotography for the seven-county Southeastern Wisconsin Region. The project may also acquire oblique aerial photography, LiDAR data, and elevation mapping in the form of digital terrain model (DTM) files and contour and depression line files for all or portions of the Region. Metadata will be created for all datasets prepared for this project.

II. DIGITAL ORTHOPHOTOGRAPHY

A. General

Color digital orthophotography shall be prepared for an area of approximately 2,967 square miles in extent as shown on the map attached hereto as "Exhibit A". Three types of digital orthophoto products may be prepared for all or portions of this project area. Participating counties and municipalities may choose to prepare one or more of the following resolutions of orthophotography:

1. Color, 12-inch pixel resolution, one-inch-equals-200-feet scale digital orthophotography. This is the base product that may be prepared for all or a portion of the project area.

2. Color, 6-inch pixel resolution, one-inch-equals-100-feet scale digital orthophotography. This is the enhanced product that may be prepared for all or a portion of the project area.

3. Color, 3-inch pixel resolution, one-inch-equals-50-feet scale digital orthophotography. This is the high-resolution enhanced product that may be prepared for a portion of the project area.

Color digital orthophotography may be prepared at alternative resolutions in the range between 12-inch and 3-inch pixel resolution. Vendors may provide recommendations for preparing alternative resolutions (e.g. 9-inch or 4-inch resolution) at appropriate scales between one-inch-equals-200-feet scale and one-inch-equals-50-feet scale.

B. File Format

The three resolutions of orthophotography files will be prepared in uncompressed GeoTIFF file format (".tif" extension), with accompanying "world" (".tfw" extension) files for use in displaying and referencing the orthophoto files.

C. File Organization

The color orthophoto files shall be organized into "tiles" based on the Wisconsin State Plane Coordinate System, South Zone, North American Datum of 1927 (Wisconsin SPCS). The 12-inch and 6-inch pixel resolution orthophoto files that may be prepared for this project will each cover an area of 10,000 grid feet by 10,000 grid feet on the Wisconsin SPCS as shown on the map attached hereto as "Exhibit B". The 3-inch pixel resolution orthophoto files that may be prepared for this project will each cover an area of 5,000 grid feet by 5,000 grid feet on the Wisconsin SPCS. The 5,000-foot tiling scheme is a further subdivision of the 10,000-foot tiling scheme shown on "Exhibit B". There will be no image overlap between adjacent files. The origin of the grid or tiling scheme for the color orthophoto files shall be at an easting of 2,315,000 feet and a northing of 175,000 feet on the Wisconsin SPCS. A GIS file containing the grid boundaries of the tiling scheme can be provided to the Vendor if requested.

D. File Naming Convention

The 12-inch and 6-inch resolution digital orthophoto files shall follow the file naming convention of "im15_10K-12_*eeee_nnn*.tif" where the prefix "im15" indicates a 2015 image file; the notation "10K-12" indicates a 10,000 by 10,000 foot color 12-inch pixel resolution orthophoto; the notation "*eeee_nnn*" indicates the easting coordinate ("*eeee*"), in thousands of feet, and the northing coordinate ("*nnn*"), in thousands of feet, of the southwest corner of the image; and ".tif" is the extension for the GeoTIFF file format. For example, a file name of "im15_10K-12_2505_275.tif" indicates a 2015 orthophoto file in GeoTIFF format with 12-inch pixel resolution covering a 10,000 by 10,000 foot tile originating at an easting of 2,505,000 feet and a northing of 275,000 feet on the Wisconsin SPCS grid.

Similarly, the 3-inch resolution digital orthophoto files shall follow the file naming convention of "im15_5K-3_*eeee_nnn*.tif" where the prefix "im15" indicates a 2015 image file; the notation "5K-3" indicates a 5,000 by 5,000 foot color 3-inch pixel resolution orthophoto; the notation "*eeee_nnn*" indicates the easting coordinate ("*eeee*"), in thousands of feet, and the northing coordinate ("*nnn*"), in thousands of feet, of the southwest corner of the image; and ".tif" is the extension for the GeoTIFF file format.

The "world" file accompanying each GeoTIFF file shall be named similar to the GeoTIFF file but contain the ".tfw" file extension

E. Digital Orthophoto Elevation Model

The Commission maintains a digital orthophoto elevation model (OEM) that has been developed for past regional orthophotography projects and has been periodically updated during the course of those projects. The current status of the OEM is shown on the map attached hereto as "Exhibit C". The current version of the OEM was used and updated in the 2010 regional orthophotography project. The OEM is a set of MicroStation 3-D DGN format files, consisting of point features and breakline features with elevation values.

The Vendor may choose to utilize the OEM for the preparation of digital orthophotography described herein. The use of the OEM is optional—the Vendor may prefer to utilize an alternative georeferencing solution for preparation of orthophotography. If the Vendor chooses to use the OEM, they will revise the OEM files where necessary to reflect changes in terrain from previous imagery or to create a greater density of elevational features where needed to prepare the orthophotography. At the completion of the orthophoto preparation, the Vendor shall provide the revised 2015 orthophotography OEM, in the form of updated MicroStation 3-D DGN (V-8) format files or ESRI shapefiles or geodatabase format files, to the Commission for use in future orthophotography projects. The Vendor shall also provide an accompanying digital map file in ESRI shapefile format showing the areas where the previous OEM was revised to create the 2015 OEM. This file will identify the areas of change of the orthophoto elevation model between 2010 and 2015.

F. Accuracy Standards and Specifications

1. The horizontal datum shall be the North American Datum of 1927 (NAD27) referenced to the Wisconsin State Plane Coordinate System, South Zone, in U.S. survey feet.

2. The vertical datum shall be the National Geodetic Vertical Datum of 1929 (NGVD29) in U.S. survey feet, or the North American Vertical Datum of 1988 (NAVD88) in U.S. survey feet.

3. All 12-inch pixel resolution digital orthophotography files prepared for this project shall meet National Map Accuracy Standards (NMAS) for one-inch-equals-200-feet-scale (1" = 200' scale) mapping. All 6-inch pixel resolution digital orthophotography files prepared for this project shall meet NMAS for one-inch-equals-100-feet-scale (1" = 100' scale) mapping. All 3-inch pixel

resolution digital orthophotography files prepared for this project shall meet NMAS for one-inch-equals-50-feet-scale (1” = 50’ scale) mapping.

4. All orthophoto elevation model files prepared for 12-inch pixel resolution orthophotography areas shall meet NMAS for one-inch-equals-200-feet-scale (1” = 200’ scale) mapping. All orthophoto elevation model files prepared for 6-inch pixel resolution orthophotography areas shall meet NMAS for one-inch-equals-100-feet-scale (1” = 100’ scale) mapping. All orthophoto elevation model files prepared for 3-inch pixel resolution orthophotography areas shall meet NMAS for one-inch-equals-50-feet-scale (1” = 50’ scale) mapping.

5. Aerial photography for orthophoto preparation shall be collected in Spring 2015, in leaf-off conditions, with sun angle no less than 30 degrees; imagery must be obtained when the sky is free of clouds, cloud shadows, haze, and smoke; ground and water features shall be free of ice, snow, and flooding.

6. Delivered imagery shall be seamless, georeferenced, edge matched, and free of any pixel gaps. The final images shall be tonally balanced and uniform in appearance with no variation between adjacent flight lines or images. The images shall not contain noticeable building lean or distortion of structures.

III. OBLIQUE AERIAL PHOTOGRAPHY

The project may acquire oblique aerial photography for all or a portion of the seven-county Region. Where requested, color digital oblique imagery shall be prepared at a scale and resolution to complement the accompanying color orthophotography. The Vendor will provide the appropriate software for viewing the oblique photography in concert with the orthophotography. The viewing software should include an option for viewing the obliques and orthos on an individual workstation and on an Internet application such as a county land information website. The viewing software should include measurement and other image analysis tools.

IV. LIDAR DATA

The project may acquire LiDAR data for all or a portion of the seven-county Region. The LiDAR data will be delivered as LAS format files (“.las” file extension). The LiDAR data shall be fully classified to include bare-earth and all other types of classified points. The LiDAR may be collected at two different point spacings: 1) sufficient to support two-foot contour interval elevation mapping (approximately 1.0 meter or 3.28 feet spacing); or 2) sufficient to support one-foot contour interval mapping (approximately 0.7 meters or 2.30 feet spacing), as requested by the customer.

The horizontal and vertical datums to be used for the LiDAR data are NAD27 and NGVD29 or NAVD88 as previously described. The vertical Root Mean Square Error (RMSE) of the LiDAR data shall be 0.5 feet or better relative to NGVD29 or NAVD88. The LiDAR points shall be reported to the nearest hundredth of a foot.

V. ELEVATION DATA

A. General

The project may acquire accompanying elevation data for all or a portion of the seven-county Region. Digital elevation data may include digital terrain model (DTM) files, digital contour line and depression line files, and other products as offered by the Vendor.

B. Digital Terrain Model File Organization and Specifications

1. The DTM files that may be prepared as part of this project shall be capable of supporting the creation of two-foot interval contour lines meeting NMAS at a scale of 1:2400 (one inch equals 200 feet), or capable of supporting the creation of one-foot interval contour lines meeting NMAS at a scale of 1:1200 (one inch equals 100 feet), as requested by the customer.

2. The DTM files shall be prepared in such a manner that all break line and random point data included in the file are capable of generating a triangulated irregular network model through the use of appropriate computer software. The DTM files shall be organized in such a manner that all data features can be selectively retrieved, manipulated, and displayed, either singly or in combination with other data features.

3. The DTM files shall depict terrain features as break lines placed along water courses and shorelines and at major changes in the slope. Random points or mass points shall be used to supplement the break lines and water detail.

4. The DTM files shall be prepared in MicroStation Version 8 three-dimensional design file format (MicroStation V8 3-D DGN file) or a comparable ESRI geodatabase format. The files will be organized to cover quadrants of U.S. Public Land Survey System survey townships. Commission staff will provide information on the tiling scheme and naming convention for the files.

5. The horizontal and vertical datums to be used for the DTM files are NAD27 and NGVD29 or NAVD88 as previously described.

C. Digital Contour Line File Organization and Specifications

1. The contour line files that may be prepared as part of this project shall contain hypsometric features, consisting of contour lines, depression lines, and spot elevation locations. Alternatively, an enhanced version of the contour line files may additionally include annotation features consisting of contour and depression text and spot elevation text, as requested by the customer. All contour and depression line features and spot elevation point features shall contain the elevation of each feature encoded as an attribute value.

2. The contour line files shall contain either 1) two-foot interval contour lines meeting NMAS at a scale of 1:2400 (one inch equals 200 feet), or 2) one-foot interval contour lines meeting NMAS at a scale of 1:1200 (one inch equals 100 feet), as requested by the customer.

3. The digital elevation files shall be organized in such a manner that all data features can be selectively retrieved, manipulated, and displayed, either singly or in combination with other data features.

4. All contour and depression lines in the files will be continuous, connected line features. The contour and depression lines will not be broken or interrupted for text features, structures, or any other map features.

5. Depression line features in the contour line files need to be created in such a way as to facilitate the symbolization of these lines in other digital map file formats. All depression lines in the digital files shall be created in a “clockwise” direction in order to maintain the proper symbology of these features.

6. The contour line files shall be prepared in MicroStation Version 8 three-dimensional design file format (MicroStation V8 3-D DGN file) or a comparable ESRI geodatabase format. The files will be organized to cover entire U.S. Public Land Survey System survey townships. Commission staff will provide information on the tiling scheme and naming convention for the files.

7. The horizontal and vertical datums to be used for the contour line files are NAD27 and NGVD29 or NAVD88 as previously described.

VI. PROPOSAL REQUIREMENTS

A. General

The intent of this request for project and cost proposals is to evaluate Vendor qualifications and obtain cost estimates for the deliverable products described herein. Minimum product specifications have been provided for each deliverable, and it is expected that responses to this request will provide significant information about how the Vendor proposes to prepare each product. Vendors should explain how they propose to conduct this project and carry out the procedures necessary to deliver each of the described products. It is in the Vendor's best interest to provide as much information as possible.

B. Proposal Areas

Costs for the 12-inch resolution and 6-inch resolution orthophotography products should be provided for the seven-county area and extended out-of-region area as shown on "Exhibit A". This project area totals 2,967 square miles. Costs for 12-inch and 6-inch orthophotography products should also be provided for each of the seven counties and also for the out-of-region area. The cost for the 3-inch resolution orthophotography product should be provided for the area of Kenosha County only. The size of each county and the out-of-region area are as follows:

County	Area (mi^2)
Kenosha	278
Milwaukee	242
Ozaukee	234
Racine	340
Walworth	578
Washington	436
Waukesha	581
Out of Region Area	278
Total	2,967

C. Proposal Specifics

The project proposal and cost proposals should address the deliverable products of orthophotography, oblique photography, LiDAR data, DTM files, and contour line files. Metadata shall be provided for each type of deliverable product. The Vendor may provide information and costs for other image or elevation products that may be offered.

1. Digital Orthophotography

a. Provide cost proposal for 12-inch resolution orthophotography for entire 2,967 square mile project area and for each individual county and out-of-region area as listed above.

b. Provide cost proposal for 6-inch resolution orthophotography for entire 2,967 square mile project area and for each individual county and out-of-region area as listed above.

c. Provide cost proposal for 3-inch resolution orthophotography for Kenosha County area only.

d. Provide cost proposals for alternative resolutions (e.g. between 12-inch and 3-inch resolution) and appropriate scales of digital orthophotography for each individual county as listed above, if such alternatives are offered or recommended by your firm.

e. Provide information about digital camera to be used, including manufacturer, model, lens and focal length, flight altitude(s) and any other camera information important to this project.

f. Provide information about horizontal photo control, aero-triangulation, and other ground control procedures.

g. Provide information on flight altitude and other image collection information that may be important to this project.

h. Indicate if the Regional orthophoto elevation model that can be provided by the Commission will be used in the orthophoto process, and if the OEM will be updated and returned upon completion of project.

i. Alternatively, describe procedures for use of project-collected LiDAR for use in ground control and georeferencing.

j. Indicate whether triangulated nadir frames and/or camera models developed for this project are available as a deliverable product to interested participants.

k. Indicate possible cost savings for committing to a multiple-year orthophotography program. For example, describe approximate cost savings for a commitment to preparing 3-inch pixel resolution imagery for Kenosha County under these two scenarios: 1) image collection for three flights [e.g. flights in 2015, 2017, and 2020]; and 2) image collection for two flights [e.g. flights in 2015 and 2017 *or* 2018].

2. Digital Oblique Photography

a. Prepare cost proposals for the creation of oblique aerial imagery comparable to each resolution of orthophotography (e.g. 6-inch resolution oblique images to complement 6-inch resolution orthophoto images).

b. More specifically, provide cost proposals for each resolution of oblique photography for each county as listed above. Do not provide cost proposal for entire 2,967 square mile project area, and do not provide cost proposal for out-of-region area.

c. Provide information about procedures used to collect and prepare oblique imagery, including any technical or other information that may be important to this project.

d. Provide information about the software that will be used to view and analyze the oblique imagery. Include information about functionality such as distance measurement, area measurement, slope calculation, and other tools.

e. Describe and explain if the accompanying software is intended for workstation use, such as with ArcMap and other ESRI products. Indicate compatibility with ESRI products.

f. Describe and explain if the accompanying software is a web application suitable for inclusion on a municipal land information web site.

3. LiDAR Data

a. Prepare cost proposals for LiDAR data collected at a point spacing sufficient to support two-foot contour interval elevation mapping (approximately 1.0 meter or 3.28 feet point spacing),

and also collected at a point spacing sufficient to support one-foot contour interval mapping (approximately 0.7 meters or 2.30 feet point spacing).

b. More specifically, provide cost proposals for each point spacing of LiDAR data for each county as listed above. Do not provide cost proposal for entire 2,967 square mile project area, and do not provide cost proposal for out-of-region area.

c. Describe LiDAR collection and processing procedures.

d. Describe LiDAR data classification level, such as bare-earth classification only or fully classified data. Provide classification categories and codes.

4. Digital Terrain Model Files

a. Prepare cost proposals for the creation of DTM files capable of supporting the creation of two-foot interval contour lines meeting NMAS at a scale of 1:2400 (one inch equals 200 feet), and the preparation of DTM files capable of supporting the creation of one-foot interval contour lines meeting NMAS at a scale of 1:1200 (one inch equals 100 feet)

b. More specifically, provide cost proposals for the two different accuracies of DTM files for each county as listed above. Do not provide cost proposal for entire 2,967 square mile project area, and do not provide cost proposal for the out-of-region area.

c. Describe DTM collection and processing techniques, including mass point and breakline feature preparation.

5. Contour Line Files

a. Prepare cost proposals for digital contour and depression line files prepared to two different accuracies: 1) two-foot interval contour lines meeting NMAS at a scale of 1:2400 (one inch equals 200 feet, or 200-scale), or 2) one-foot interval contour lines meeting NMAS at a scale of 1:1200 (one inch equals 100 feet, or 100-scale). For each accuracy, also prepare cost proposals for contour line files without annotation features and contour line files with annotation features.

b. More specifically, provide cost proposals for the two different accuracies and two different feature sets of contour line files for each county as listed above. There will be four costs per county: 1) 200-scale without text; 2) 200-scale with text; 3) 100-scale without text; and 4) 100-scale with text. Do not provide cost proposal for entire 2,967 square mile project area, and do not provide cost proposal for the out-of-region area.

c. Describe contour and depression line collection and preparation procedures.

6. Other Products

a. The Vendor may provide information on additional imagery or elevation mapping products that may complement the 2015 Regional Orthophotography Project.

b. Describe additional products in detail and include any information that may be important to this project.

c. Provide cost proposals for the additional products for each county as listed above. Do not provide cost proposal for entire 2,967 square mile project area, and do not provide cost proposal for the out-of-region area.

D. Document Instructions

The cost proposals and product information provided by the Vendors will be used by the project participants to determine the scope of the regional project. The information will also help to determine Vendor selection for all or portions of the 2015 Regional Orthophotography Project. The Counties may choose a Vendor based on product suitability, timing of delivery, product cost, and other considerations. It is possible that both Vendors may be selected to complete portions of this project.

Please provide the project and cost proposals by **4:00 PM Friday, March 28, 2014**. The preferred format for the proposals is a document in PDF format delivered via email to jmcdougall@sewrpc.org. If you prefer to deliver hardcopy materials, please provide eight (8) copies of the materials to the address below.

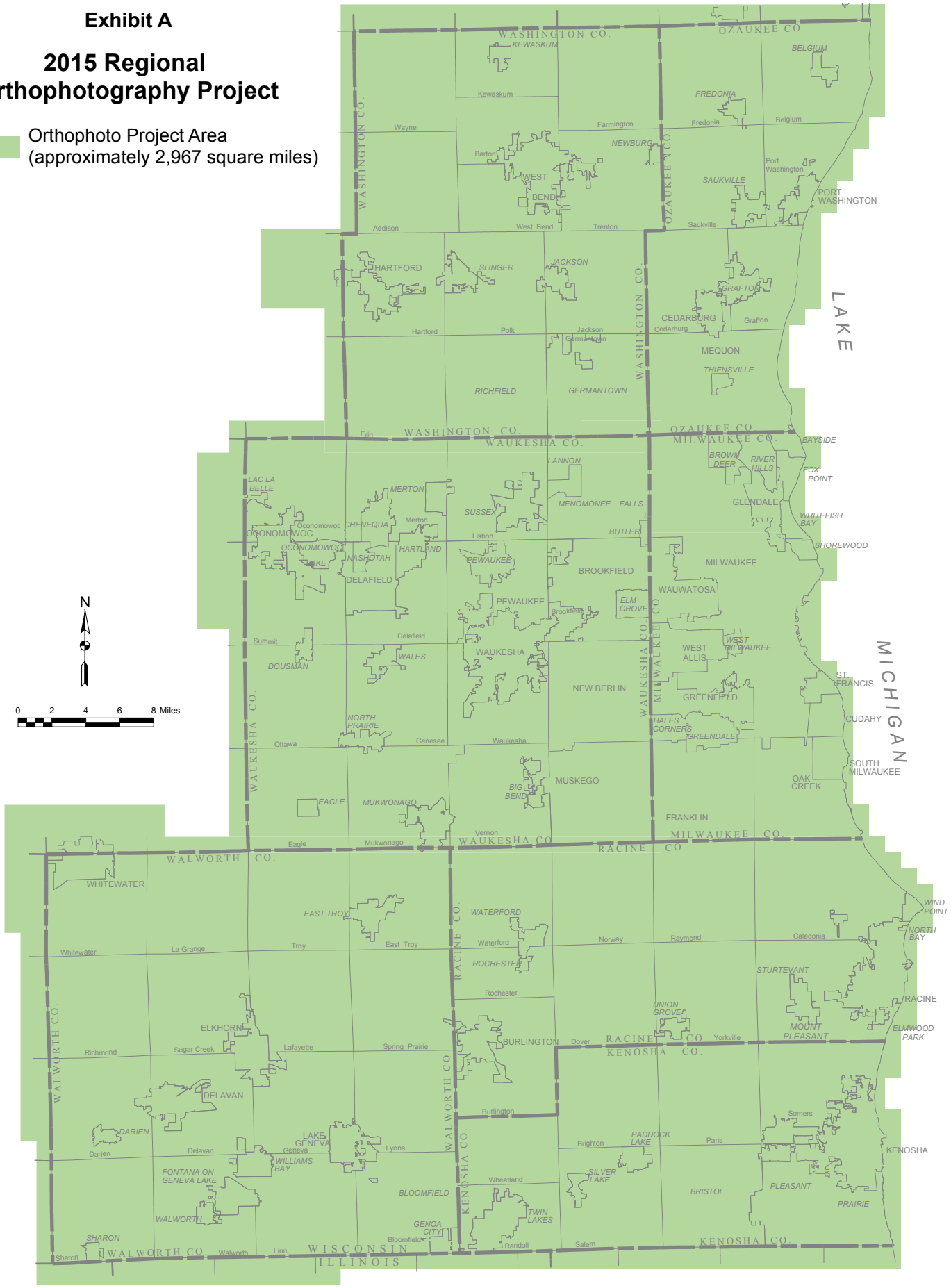
Any questions pertaining to the Request for Project and Cost Proposals for the 2015 Regional Orthophotography Project may be directed to:

John McDougall
GIS Manager
Southeastern Wisconsin Regional Planning Commission
P.O. Box 1607
W239 N1812 Rockwood Drive
Waukesha, WI 53187-1607
(262) 953-3217 *phone*
(262) 547-1103 *fax*
jmcdougall@sewrpc.org

Exhibit A

2015 Regional Orthophotography Project

Orthophoto Project Area
(approximately 2,967 square miles)



Map Document: (O:\Orthophoto_Statusmaps\2015OrthophotoStatusMaps\2015OrthoProjectArea_Exhibit_C.mxd)
2/26/2014 -- 11:46:55 AM

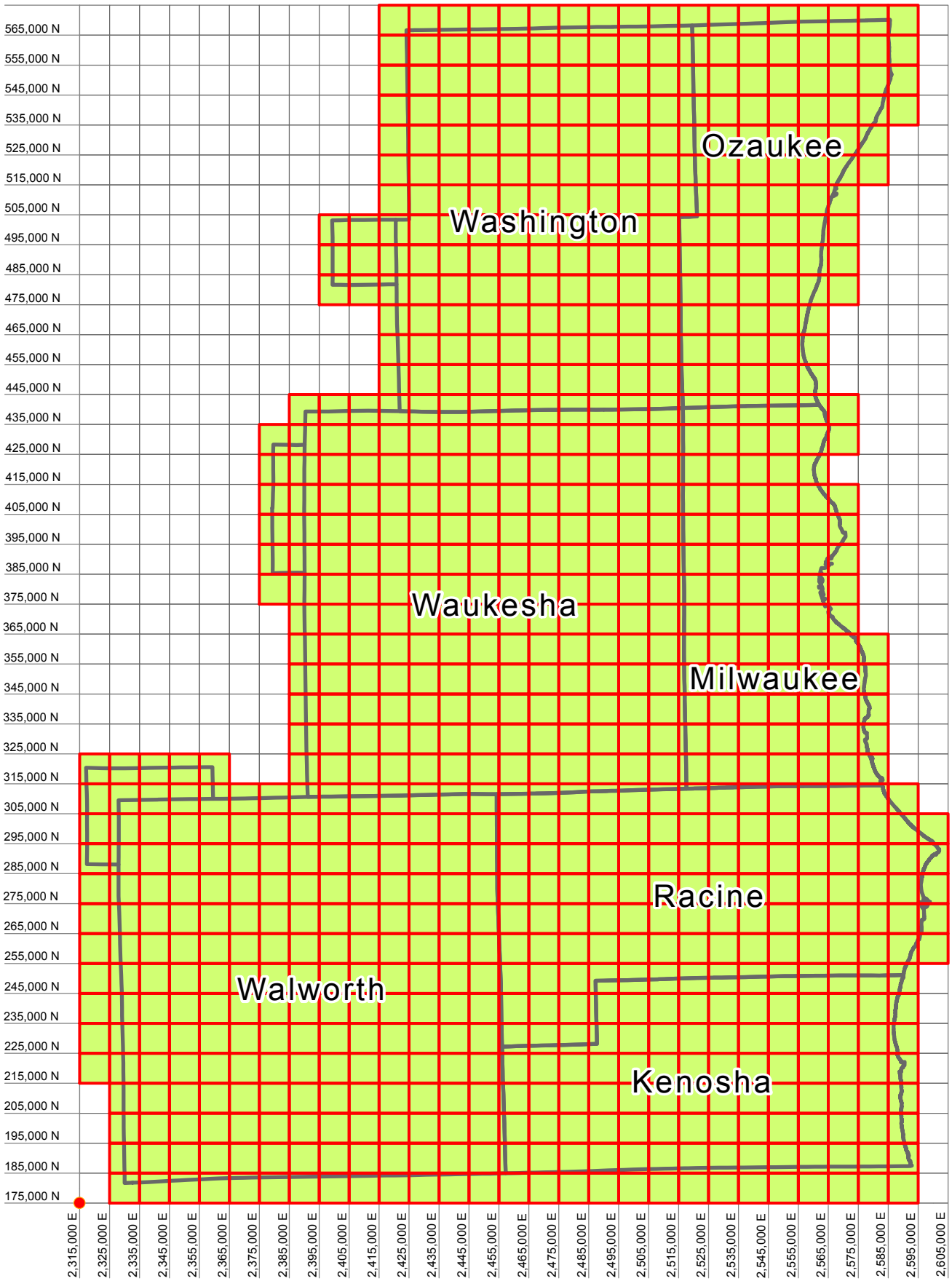


Exhibit B

2015 Regional Orthophotography Project

Orthophoto Project Area

10,000 x 10,000 foot tiles (876 10K Tiles)

Map Document: (O:\Orthophoto_Statusmaps\2015OrthophotoStatusMaps\2015OrthoProjectArea_Exhibit_B.mxd)
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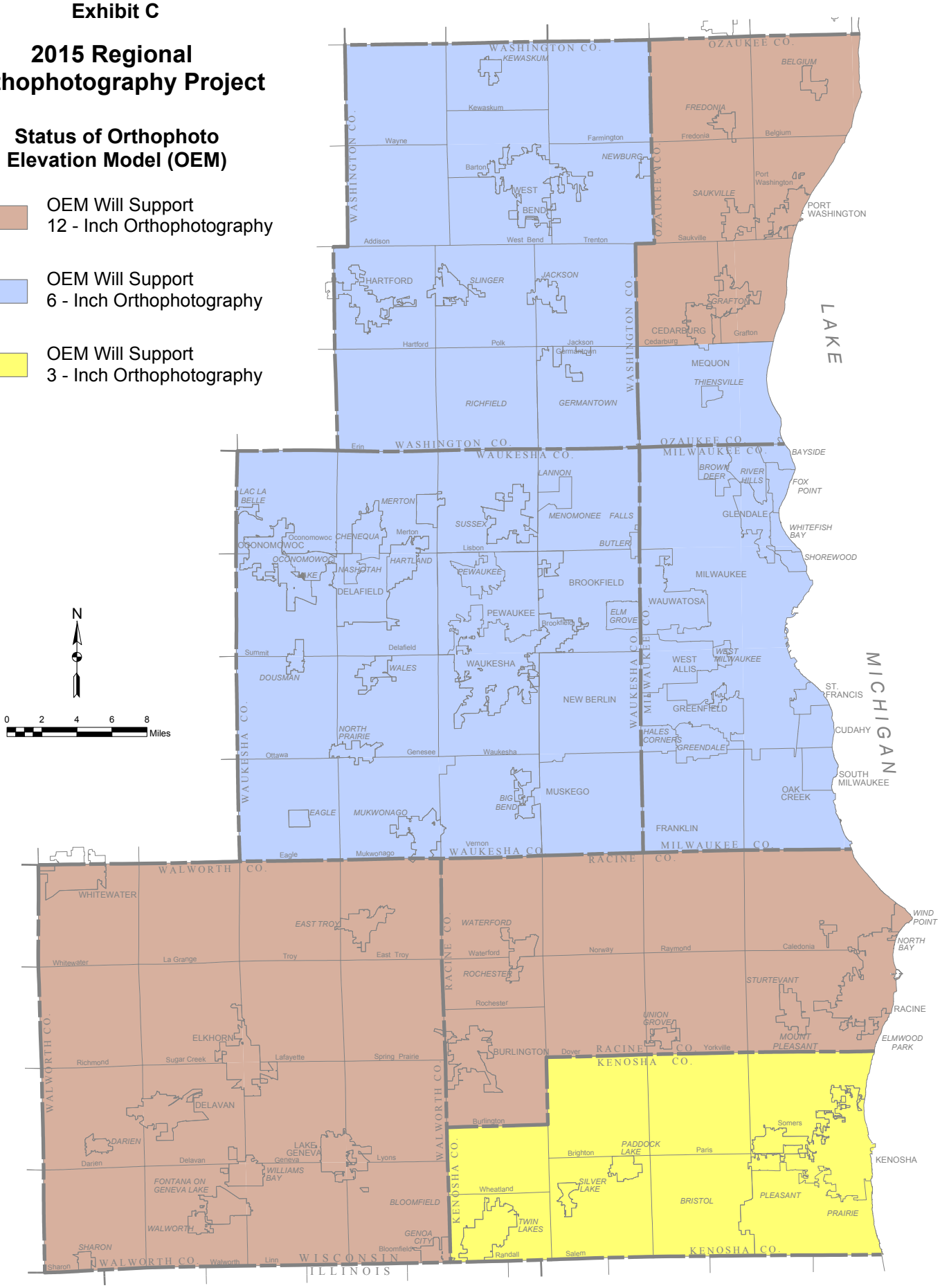
Exhibit C

2015 Regional Orthophotography Project

Status of Orthophoto Elevation Model (OEM)

- OEM Will Support 12 - Inch Orthophotography
- OEM Will Support 6 - Inch Orthophotography
- OEM Will Support 3 - Inch Orthophotography



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2/26/2014 -- 11:46:55 AM