CITY OF ONALASKA MEETING NOTICE

COMMITTEE/BOARD: **Board of Public Works**

DATE OF MEETING: April 1, 2014 (Tuesday)

PLACE OF MEETING: City Hall – 415 Main Street (Common Council Chambers)

TIME OF MEETING: 6:30 P.M.

PURPOSE OF MEETING

1. Call to Order and roll call.

2. Approval of minutes from the previous meeting.

3. Public Input: (limited to 3 minutes/individual)

Consideration and possible action on the following items:

4. **Approximately 6:30 PM Public Hearing(or immediately following public input) –** regarding proposed Alley Paving Project assessments between 3rd Avenue North and 4th Avenue North from Main Street to King Street.

5. **Resolution 16-2014** – Final Resolution regarding assessments for alley paving for Alley Paving Project between 3rd Avenue North and 4th Avenue North from Main Street to King Street

6. Review and consideration of professional engineering services for design of iron and manganese removal facility and renovations at Well #9

7. Review and consideration of costs associated with, funding of, notification of and issues related to choice of automated cart size for refuse and recycling collection

PLEASE TAKE FURTHER NOTICE that members of the Common Council of the City of Onalaska who do not serve on the Board may attend this meeting to gather information about a subject over which they have decision making responsibility.

Therefore, further notice is hereby given that the above meeting may constitute a meeting of the Common Council and is hereby noticed as such, even though it is not contemplated that the Common Council will take any formal action at this meeting.

Notices Mailed To:

* Mayor Joe Chilsen	*Jarrod Holter, City Engineer
Ald. Erik Sjolander	*Fred Buehler, Financial Services Director/Treasurer
Ald. Jim Olson	
* Ald. Jim Bialecki – Vice Chair	
*Ald Jack Pogreba - Chair	
Ald. Harvey Bertrand	
**Ald. Diane Oldani Wulf	
City Attorney Dept Heads	
La Crosse Tribune Charter Com.	
Onalaska Holmen Courier Life	
WIZM WKTY WLXR WKBH	
WLSU WKBT WXOW	Onalaska Public Library

*Board Members ** Alternate Member

Date Notices Mailed and Posted: 3-27-14

In compliance with the Americans with Disabilities Act of 1990, the City of Onalaska will provide reasonable accommodations to qualified individuals with a disability to ensure equal access to public meetings provided notification is given to the City Clerk within seventy-two (72) hours prior to the public meeting and that the requested accommodation does not create an undue hardship for the City.

8. Review and consideration of 2014 pavement maintenance
   A. Chip seal
   B. Installation of fiber patching material
   C. Polyfiber patching material purchase
   D. Asphalt pavement expansion joint installation
   E. Centerline painting

9. Review and consideration of quotes for storm sewer inlet installation on alley between Spruce Street and Troy Street from Park Avenue and 4th Avenue North

10. Review and consideration of bids received for 2014 Spring Tree Planting Project

11. Review and consideration of United States Highway 53 / 12th Avenue extended from SS – Gillette Street project by Wisconsin Department of Transportation

12. Review and consideration of Wisconsin Department of Natural Resources 2013 stormwater annual report

13. Review and consideration of bids received for 2014 Miscellaneous Concrete Project

14. Review and consideration of utility bill adjustments due to running of water to prevent frozen water laterals

15. Pay Estimates: Strand Associates, Short Elliot Hendrickson Inc., MSA Professional Services, Inc., Mathy Construction, Haas Sons, Winona Mechanical, A-1 Excavating, Wapasha Construction, State of Wisconsin Department of Transportation and any other contractor/developer.

Adjournment

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item:	#4
Project/Item Name:	Alley Paving Project
Location:	Alley between 3rd Ave. No. and 4th Ave. No. from Main St. to King St.
Requested Action:	Public hearing on proposed assessments
Staff Report/Description:	Preliminary resolution has been mailed to all abutting property owners regarding proposed assessments for repaving of alley. Public hearing will be held for all property owners to provide input.
Attachments:	Preliminary resolution, map and assessment sheets

RESOLUTION 11 - 2014

PRELIMINARY RESOLUTION REGARDING ASSESSMENTS FOR ALLEY PAVING ONALASKA, WISCONSIN

TO: THE HONORABLE MAYOR AND COUNCIL OF THE CITY OF ONALASKA, WISCONSIN

RESOLVED, by the Common Council of the City of Onalaska, Wisconsin

1) The Common Council hereby declares its intention to exercise its police power under Section 66.0703, Wisconsin Statutes; to levy special assessments upon property within the following described area for benefits conferred upon such property by the following improvements:

Reconstruction of alley to include asphalt paving.

2) The property to be assessed lies within the following described assessment district (the Benefited Property):

All property fronting upon both sides of the following alleys or portion of alleys:

ASPHALT ALLEY PAVING

- Between 3rd Avenue North and 4th Avenue North from Main Street to King Street

3) The Common Council determines that such improvements shall be made under police power and the amount assessed shall be based on the following:

Assessments for alley paving are determined by the actual cost of reconstruction, including paving, within the alley limits (from street line to street line). Any additional work such as alley aprons, sidewalks, landscaping, retaining walls, etc., shall be the sole obligation of the property owner(s) with seven and one-half percent (7 ½ %)as a reasonable charge for the services of the administrative staff of the City .

The cost of the project will be assessed on the basis that the owners of the Benefited Properties pay 2/3 the total cost with the City paying the remaining 1/3.

The formula to determine the per foot assessment for alley paving is as follows:

$$\frac{(.66) \times \text{Total Construction Costs}}{\text{Total Frontage}} = \$\ \text{Assessment/Foot}$$

The Common Council determines that the improvements constitute an exercise of the police power for the health, safety and general welfare of the city and its inhabitants.

4) Once the amount of the special assessment for the improvement has been determined as to each parcel of real estate, a statement of all assessments will be placed on file with the City Clerk. The City proposes to collect the special assessment in equal installments, equivalent to the length of time that the bond issue is issued for these said projects, as provided for by Section 66.0715 of the Wisconsin Statutes. Interest shall be charged on said installments at the rates determined by the Common Council, uniform with other City special assessments, one percent (1%) over what the City borrows the money for. All assessments will be collected in installments as provided above except assessments on property where the owner files with the City Clerk within thirty (30) days from date of this notice a written notice that the owner elects to pay the special assessment on the owner's property, describing the property, to the City Treasurer on or before the following November 1, unless the election is revoked. If after making the election, the property owner fails to make the payment to the City Treasurer, the City Clerk shall place the entire assessment on the following tax roll. The City Clerk shall publish a Class 1 notice under Ch. 985, Stats., pursuant to Section 66.0715., Stats.

5) The City Engineer is directed to prepare a report consisting of:

   a. Preliminary plans and specifications for said improvements
   b. An estimate of the entire cost of the proposed improvements.
   c. An estimate as to each parcel of property within the assessment district of the total assessments against each parcel affected.

   Upon completing such report, the City Engineer is directed to file a copy thereof in the City Clerk's Office for public inspection.

6) Upon receiving the report of the City Engineer, the Clerk is directed to give a Class 1 Notice of a Public Hearing before the Board of Public Works on such report as specified in Section 66.0703(7), Wisconsin Statutes, stating the nature of the proposed improvement, the general boundary lines of the proposed assessment district (including a small map thereof), the time and place at which the report may be inspected, and the time and place of the public hearing on the matters contained in the Preliminary Resolution and the report.

7) The hearing shall be held in the Council Chambers at Onalaska City Hall, 415 Main Street, Onalaska, Wisconsin, at a time set by the Clerk in accordance with Section 66.0703(7), Wisconsin Statutes.

8) The City Engineer is authorized to establish new street grades as needed in accordance with section 62.16(1)(b) of the Wisconsin Statutes. .

Dated this 11th day of March 2014.

CITY OF ONALASKA

BY: _____
Joe Chilsen, Mayor

_____
Caroline Burmaster, City Clerk

PASSED: 3/11/14
APPROVED: 3/11/14
PUBLISHED: 3/21/14

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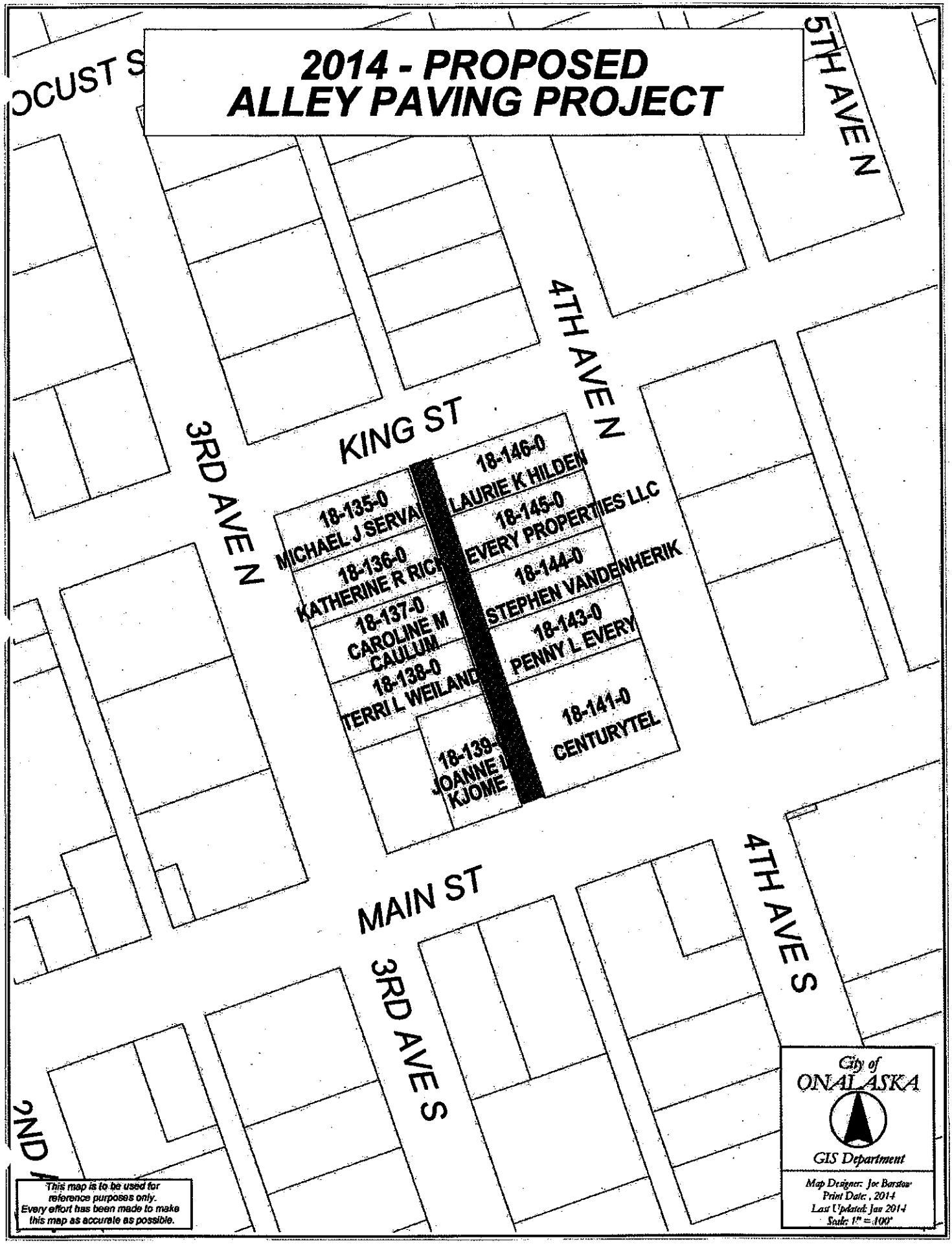
2014 - PROPOSED ALLEY PAVING PROJECT



Preliminary Assessments for 2014 Alley Paving Project

Assessments for alley paving between 3rd Ave. No. and 4th Ave. No. from MainStreet to King Street

Owner	Description	Number of Units	Unit Decription	Cost Per Unit	SUBTOTAL	TOTAL COST TO PROPERTY
Michael Servais 122 3rd Avenue North Tax Parcel #18-135-0 Mailing Address: 122 3rd Avenue North Onalaska, WI 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50
Katherine Rick 118 3rd Avnue North Tax Parcel #18-136-0 Mailing Address: 118 3rd Avenue North Onalaska, WI. 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50
Caroline Caulum 114 3rd Avenue North Tax Parcel #18-137-0 Mailing Address: 114 3rd Avenue North Onalaskas, WI. 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50
Terri Weiland 110 3rd Avenue North Tax Parcel #18-138-0 Mailing Address: 110 3rd Avenue North Onalaska, WI. 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50
Joanne Kjome 313 Main Streeet Tax Parcel #18-139-0 Mailing address: 619 Decker Street W Viroqua, WI. 54665	Alley paving	100	Lineal feet of frontage	$12.79	$1,279.00	
					TOTAL =	$1,279.00

Preliminary Assessments for 2014 Alley Paving Project

Assessments for alley paving between 3rd Ave. No. and 4th Ave. No. from MainStreet to King Street

Centurytel of Wisconsin LLC 319 Main Street Tax Parcel #18-141-0 Mailing Address: 206 5th Avnue South La Crosse, WI. 54601	Alley paving	100	Lineal feet of frontage	$12.79	$1,279.00	
					TOTAL =	$1,279.00
Penny Every 109 4th Avenue North Tax Parcel #18-143-0 Mailing Address:109 4th Avenue North Onalaska, WI. 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50
Stephen Vandenherik 113 4th Avenue North Tax Parcel #18-144-0 Mailing Address: 113 4th Avenue North Onalaska, WI. 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50
Every Properties LLC 117 4th Avenue North Tax Parcel #18-145-0 Mailing Address: 1105 Parkridge Drive Onalaska, WI. 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50
Laurie Hilden 121 4th Avenue North Tax Parcel #18-146-0 Mailing Address: 121 4th Avenue North Onalaska, WI. 54650	Alley paving	50	Lineal feet of frontage	$12.79	$639.50	
					TOTAL =	$639.50

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item:	#5
Project/Item Name:	Alley Paving Project
Location:	Alley between 3rd Ave. No. and 4th Ave. No. from Main St. to King St.
Requested Action:	Discussion on Resolution 16-2014
Staff Report/Description:	Based upon input provided during public hearing action should be taken on Resolution 16-2014 regarding assessments for repaving of alley.
Attachments:	Final Resolution 16 -2014

RESOLUTION 16 2014

FINAL RESOLUTION REGARDING ASSESSMENTS FOR ALLEY PAVING ONALASKA, WI FOR THE MARCOU ROAD PROJECT BETWEEN EAST MAIN STREET AND 500 FEET NORTH OF COUNTRY CLUB LANE.

WHEREAS, the Board of Public Works of the City of Onalaska, Wisconsin held a Public hearing at City Hall in the City of Onalaska at 6:30 PM on the 1st day of April, 2014 for the purpose of hearing all interested persons concerning the Preliminary Resolution and Report of the City Engineer on the proposed improvement listed below and preliminary assessments against benefitted properties and heard all persons who desired to speak at the hearing with respect to the following improvements (collectively, the "Public improvements"):

BITUMINOUS ALLEY PAVING

- Between 3rd Avenue North and 4th Avenue North from Main Street to King Street

AND WHEREAS, the Board of Public Works has heard all persons desiring audience at such hearing.

NOW, THEREFORE BE IT RESOLVED, by the Common Council of the City of Onalaska as follows:

1) That the Report of the City Engineer and the Board of Public Works pertaining to the construction of the Public Improvements (the "Project"), including plans, specifications and proposed assessments set forth therein, as modified, is hereby adopted and approved.

2) That the Board of Public Works is directed to advertise for bids and to supervise the construction of the Public Improvement in accordance with the report hereby adopted.

3) That payment for Public Improvements be made by assessing 2/3 of the cost of the Project to the property benefited as indicated in said report pursuant to the following formula:

$$\frac{(.66) \times \text{Total Project Costs}}{\text{Total Frontage}} = \$\ \text{Assessment/Foot}$$

4) That benefits and damages shown on the Report as modified represent an exercise of the police power, are true and correct, and have been determined on a reasonable basis and are hereby confirmed.

5) That the assessments for all projects included in said Report are hereby combined as a single assessment, but any interested property owner shall be entitled to object to each assessment separately or all assessments jointly for any purpose.

6) Assessments shall be due within 45 days of billing date. Assessments may be paid in cash or in equal installments, equivalent to the length of time of any bond issue that is issued for

this Project, together with interest at the rate determined by the Common Council, uniform with other City special assessments, normally one percent (1%) over what the City borrows the money for.

8) The City Clerk is directed to publish this Final Resolution as a Class 1 Notice under Chapter 985, in the Onalaska Community Life and to mail a copy of this Resolution and a statement of the final assessment against each benefitted property owner; together with a notice of the installment payment privilege, to every property owner whose name appears on the assessment roll, whose post office address in known or can be ascertained with reasonable diligence.

Dated this ___ day of April, 2014.

CITY OF ONALASKA

By: _____
Name: Joe Chilsen
Title: Mayor

By: _____
Name: Caroline Burmaster
Title: City Clerk

PASSED:
APPROVED:
PUBLISHED:

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item:	#6
Project/Item Name:	Well #9 reconstruction
Location:	906 11th Avenue South
Requested Action:	Discussion on professional engineering services for project
Staff Report/Description:	Well #9 has been identified in a variety of studies and reports documenting the well having iron and manganese exceeding the US EPA secondary maximum contaminant levels. This well was identified for reconstruction with the addition of iron and manganese filtration in the 2013 Water System Evaluation. The City has solicited for professional engineering services from three firms with scoring and proposed costs attached.
Attachments:	Scoring sheet with proposed costs of engineering services

CONSULTANT SELECTION SUMMARY

Project I.D.: _____

Project Description: WELL #9 RECONSTRUCTION

Consultant Firms

	Davy Eng.	SEH Inc.	Strand Assoc
Scored By:			
Jarrod Holter City Engineer	77	95	94
Kevin Schubert Asst. City Engineer	88	89	90
Fred Buehler Financial Srvs Director	74	84	86
Jim Prindle Water & San Sewer Manager	75	92	87
SCORE TOTALS:	314	360	357
PROPOSED FEE:	$173,000	$196,300	$169,600
TOTAL HOURS:	1,325	1,706	1,478

Criteria for Selection Process

- *Capabilities & experience of design team members*
- *Specific related experience in terms of type & scope of past projects*
- *Project completion, including services offered, scheduling & capacity to finish project within timelines*
- *Does the consultant demonstrate the ability to provide the full scope of services outlined in the RFP?*
- *Is the consultant proposing to be readily available & responsive to the City?*
- *Does the consultant employ a thorough approach to the project outlined?*

8.0 Well No. 9 Pilot Study

The City of Onalaska retained SEH to conduct an iron and manganese filtration pilot study of Well No. 9. The purpose of the pilot study is to assess the effectiveness of various treatment processes for the removal of dissolved iron and manganese from the raw water and recommend a suitable treatment process, system design and loading criteria.

8.1 Background

Most water quality related complaints in the Onalaska water system are related to the high manganese levels near municipal Well No. 9 that cause staining. The well has been a problem for the City since it was constructed in 1986. Iron bacteria were initially reported in the well within three years following construction. In December of 1990, shock chlorination and phosphate injection was performed in the well. In May 1991, the Department approved the use of AquaMag at the well to sequester the iron before pumping to the system. In April 1992, the Department granted a 6-month trial of anoxic blocking technique, using CO_2. The objective was to arrest iron bacteria growth in the well. The anoxic blocking technique was unsuccessful, so sequestering was chosen as the treatment method.

April 1997 the well yield had dropped to 75% of its original 125 gpm/foot. The City performed air-bursting and chemical treatment. This only restored 7% of the yield which stayed at only 79% of the original yield. This was repeated in March of 2000 and March of 2004. 2005 operating conditions included a static water level of 73 feet, with a specific capacity of 112.5 gpm/foot of drawdown. The yield was again measured by Municipal Well in 2007 and found to be down to about 59% of original yield. In November 2008, yield was 54 gpm/ft of drawdown.

In 2008 the City hired a licensed engineer to perform a microscopic analysis of the well water in an attempt to determine the degree at which microbial communities are affecting this well and to provide some guidance on mitigating these effects. The assessment revealed a robust bacteria community causing biofouling. Several different microbes were identified in the well's aquifer, casing, and bore hole that are common to water having high iron and manganese. According to the study, both iron reducing and iron oxidizing bacteria are present, and these bacteria create mucous that, over time, reduces well yield. The well rehabs of the past have allowed temporary reprieves; however, rehabilitation is not able to restore previous yield peaks.

In 2010 Water Well Solutions completed a successful rehabilitation of Well No. 9 resulting in a specific capacity of 147 gpm/ft of drawdown. In 2012, operating conditions include a static water level of 73 feet with a specific capacity of 123 gpm per foot of drawdown.

It is reported that a biological community of iron bacteria are producing ammonia. Iron reducing bacteria feed off the iron in the formation and give off ammonia in the anaerobic environment. It is thought that some biofouling in the well has also contributed to higher nitrates and lowering yield which negatively affects pumping efficiency and energy use. The City has minimized the use of municipal Well No. 9 so that iron, manganese, and nitrates are reduced in the system.

In the microbial study at municipal Well No. 9, the information on Table 8-1 is given for the predominant form of iron present in municipal Well No. 9 was obtained at various operating times.

Table 8-1 – Samples From a Microbiological Study

Minutes	Fe^{+2}	Fe^{+3}	Total Fe	$\%Fe^{+2}$	$\%Fe^{+3}$
0	0.016	1.304	1.32	1	99
1	0.017	0.659	0.676	3	97
2	0.041	0.204	0.245	17	83
4	0.065	0.199	0.264	25	75
6	0.117	0.147	0.264	44	56
12	0.142	0.166	0.308	46	54
24	0.176	0.144	0.32	55	45
60	0.288	0.071	0.359	80	20
125	0.358	0.05	0.408	88	12

The total iron at the beginning of pumping is greater than the secondary standard of 0.3 mg/l. The total iron levels drop below the standard just before the 2 minute point. Total iron then goes above the standard again at about 12 minutes and continues to raise the longer the well is operated. The iron changes its form (Fe^{+2} ferrous and Fe^{+3} ferric) as the well operates. Initially, the predominant form of iron is in its precipitated form, ferric iron, the non-dissolved rust that eventually settles out and causes staining. At about 18 minutes of operation, the iron is half ferric and half ferrous iron. At about an hour of operation, 20% of the iron is in the ferric or staining form. The remaining iron, being ferrous, is sequesterable. Before the two minute operating point, ferric iron is significantly above the secondary standard. In the ferric form, iron is non-sequesterable, and staining and complaints are likely. When the well is not in operation, iron that had been sequestered has the opportunity to oxidize to ferric iron in the service line. The next time the well is started, the ferric iron will be injected into the system.

In 2009, SEH offered the recommendation that the City install a VFD (variable frequency drive) at municipal Well No. 9 to prevent aquifer flushing or rinsing from startup surges. In addition, VFD's may allow longer run times since the flow rate can be reduced without affecting efficiency. Recent samples, however, have shown elevated levels of iron even when Well No. 9 was pumping at 1200 gpm rather than 2700 gpm.

8.2 Secondary Treatment Standard

High levels of dissolved iron and manganese are very common in groundwater supplies in Wisconsin and in the upper Midwest. These dissolved minerals in drinking water are typically not considered to be a health risk by regulatory authorities and are classified as nuisance contaminants. However, the U.S. Environmental Protection Agency (USEPA) has established secondary maximum contaminant levels (SMCL) for public drinking water supplies at 0.05 milligrams per liter (mg/L) for manganese and 0.30 mg/L for iron thresholds above which customer complaints due to color, taste or odor become more frequent.

Concentrations of iron and manganese above the SMCL have a negative aesthetic impact on the overall quality of drinking water. The adverse aesthetic impacts typically include staining of household plumbing fixtures, water discoloration, staining of laundry, plugging of water supply piping systems, and unpleasant taste and/or odors.

It is not mandatory that public water utilities remove or reduce dissolved iron and manganese from the potable water supply. In response to public concern and the utility's concern for water age, the City of Onalaska started to look into treatment options for Well No. 9. For

existing wells, the City committed to providing water at the consumer tap that does not exceed the USEPA secondary standard for iron or manganese.

Well No. 9 (2,700 gpm) Raw Water Quality

Iron levels = 0.45 mg/L (SMCL = 0.30 mg/L)
Manganese levels = 0.11 mg/L (SMCL = 0.050 mg/L)
pH readings = 7.2

Water from Well No. 9 exceeds both of the SMCL for iron and manganese and therefore does not meet the Utility's expectations of staying under USEPA standards.

8.3 Well No. 9 Existing Facilities

The City of Onalaska Well No. 9 is located at 860 11th Avenue. The well is capable of producing approximately 2,700 Gallons per minute. The water quality is above the secondary standard in iron with an average of 0.45 mg/l, which is above the secondary standard established by the EPA of 0.3 mg/l. Prolonged pumping could increase the iron concentrations. The manganese is much higher than the secondary standard of 0.05 mg/l with an average 0.11 mg/l. This value is near twice the secondary level of 0.05 mg/l. The elevated levels of iron and manganese have caused complaints from consumers in the surrounding area of brown water in the taps.

Well No. 9 operation has been limited due to water quality concerns. Well No. 9 is equipped with a Layne vertical turbine 4-stage pump powered by a 300 horsepower U.S. Motor. The pump is rated for 2,700 gpm at 348 feet TDH, and is set at 110 feet. Well No. 9 has provided the Utility with 19 percent of the water supply since 2000, averaging 144 MGY over the past 10 year period. The largest reported pumpage by Well No. 9 since 2000 was 235 MGY in 2002. It was expected that total pumping from this well will increase significantly with the addition of a filtration system due to 1) decreasing water age in the distribution system and 2) providing the system with water treated for iron and manganese.

8.4 Pilot Study Objectives

The objectives of the study were to evaluate treatment methods for the reduction of iron and manganese for Well No. 9 and select treatment methods for the design of a Water Treatment Plant for the City of Onalaska. USEPA National Secondary Drinking Water Standard recommendations for the concentration of iron and manganese in potable water supplies are 0.30 mg/l and 0.05 mg/l, respectively. Based on these criteria the objectives of this pilot study are as follows:

- Evaluate treatment processes that will maintain levels of dissolved manganese levels less than 50 µg/l (0.050 mg/l).
- Evaluate treatment processes that will reduce/maintain the levels of dissolved iron to a level less than 0.3 mg/l.
- Evaluate the effectiveness of different filtration media and filtration rates for the removal of dissolved iron and manganese.
- Determine the optimum treatment process to oxidize dissolved iron and manganese for effective removal of the precipitated minerals by filtration.
- Determine the treatment operating parameters for maintaining filter run duration of 12-24 hours.

- Determine required backwash requirements (flow rate and time) for each media evaluated.
- Establish the effective filter loading rate (gpm/ft^2) for each media evaluated.
- Recommend filtration system design criteria for Well No. 9.

8.5 Pilot Testing Process and Equipment

This section summarizes the treatment equipment and processes used to complete the pilot treatment testing for Well No. 9.

8.5.1 Water Chemistry for Iron and Manganese

The most common practice used for the treatment of dissolved iron and manganese from drinking water supplies is chemical oxidation followed by physical removal by filtration. In this water treatment approach dissolved iron (Fe) is oxidized from soluble Fe^{+2} to its less soluble Fe^{+3} state, and dissolved manganese (Mn) is oxidized from soluble Mn^{+2} to less soluble Mn^{+4}. The insoluble Fe^{+3} and Mn^{+4} oxides are precipitates that can be removed from the water through filtration.

The oxidation process and rates for iron and manganese are significantly different. Iron oxidizes rapidly and relatively easily. Simple aeration or chlorine is effectively used in many filtration systems for the removal of iron. Manganese requires a stronger oxidant and typically more time for the reaction to go to completion. The use of powerful oxidants such as potassium permanganate or ozone has been successful for removing manganese. Catalytic media is also used successfully to aide in the oxidation process for manganese. Effectively and efficiently removing iron and manganese from a water source requires the right combination of oxidant, time, and media.

8.5.2 Pilot Testing Process

The pilot study was conducted to establish the loading rates, chemical feed requirements, efficiency and reliability of each media for the treatment of Well No. Based on the historical data as collected by the City of Onalaska for dissolved iron and manganese, and on SEH's extensive prior water treatment experience, the most cost-effective treatment processes selected for pilot testing of this well water source included oxidation and filtration using catalytic media, performed without detention. Chlorine and potassium permanganate were evaluated as oxidants during this pilot study. To effectively oxidize the iron and manganese, several different catalytic media were evaluated.

Photo 1 SEH Pilot Trailer

8.5.1 Pilot Testing Equipment Description

Granular media pressure filtration equipment was utilized during the field testing phase of the pilot study. SEH's pilot trailer was parked immediately adjacent to the each well during the testing phase and operated around the clock. Photo 1 shows the SEH pilot trailer set up next to Well No. 9 during the pilot testing performed August 19 - August 23, 2013.

The SEH pilot trailer is equipped with the following equipment for testing oxidation-detention-filtration treatment processes on new and existing groundwater supplies for iron and manganese removal:

- Aerators
- Chemical feed pumps
- Chemical storage containers with mixers and motors
- Detention tank
- Booster pumps and process piping
- Four vertical pressure filters
- Pressure gauges and piping isolation valves
- Sampling taps
- Lab area with water quality testing equipment

Figure 8-1 illustrates the treatment flow schematic used during pilot testing. Figure 8-2 shows loadings and flows for each column during testing.

8.5.2 Filters

Four filters with a diameter of 8 inches by 72 inches tall were provided. The filter has a ¾-inch inlet, 1½-inch backwash waste outlets under drain system, air release system, and rate of flow meters, sample taps, and filter media. The filter columns provide a total area of 0.35 ft^2 of surface area per column. When the filters are operated at 6-gpm/ft^2, each column has an equivalent flow rate of 2.10 gpm applied. Pressure taps are located on the inlet and outlets of the filter to obtain filter head loss by comparing the two pressures with a Dwyer differential pressure manometer.

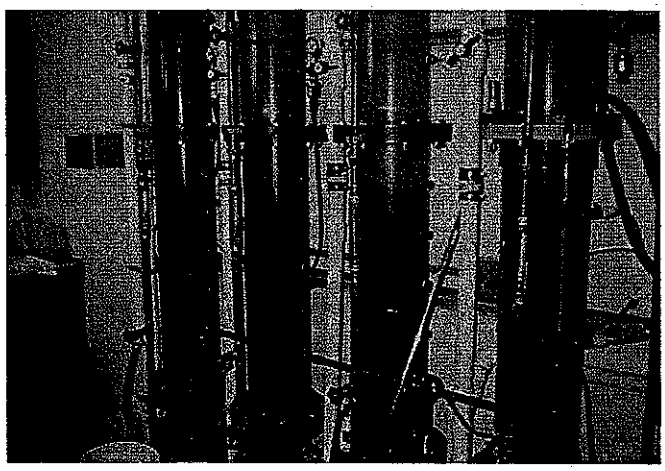
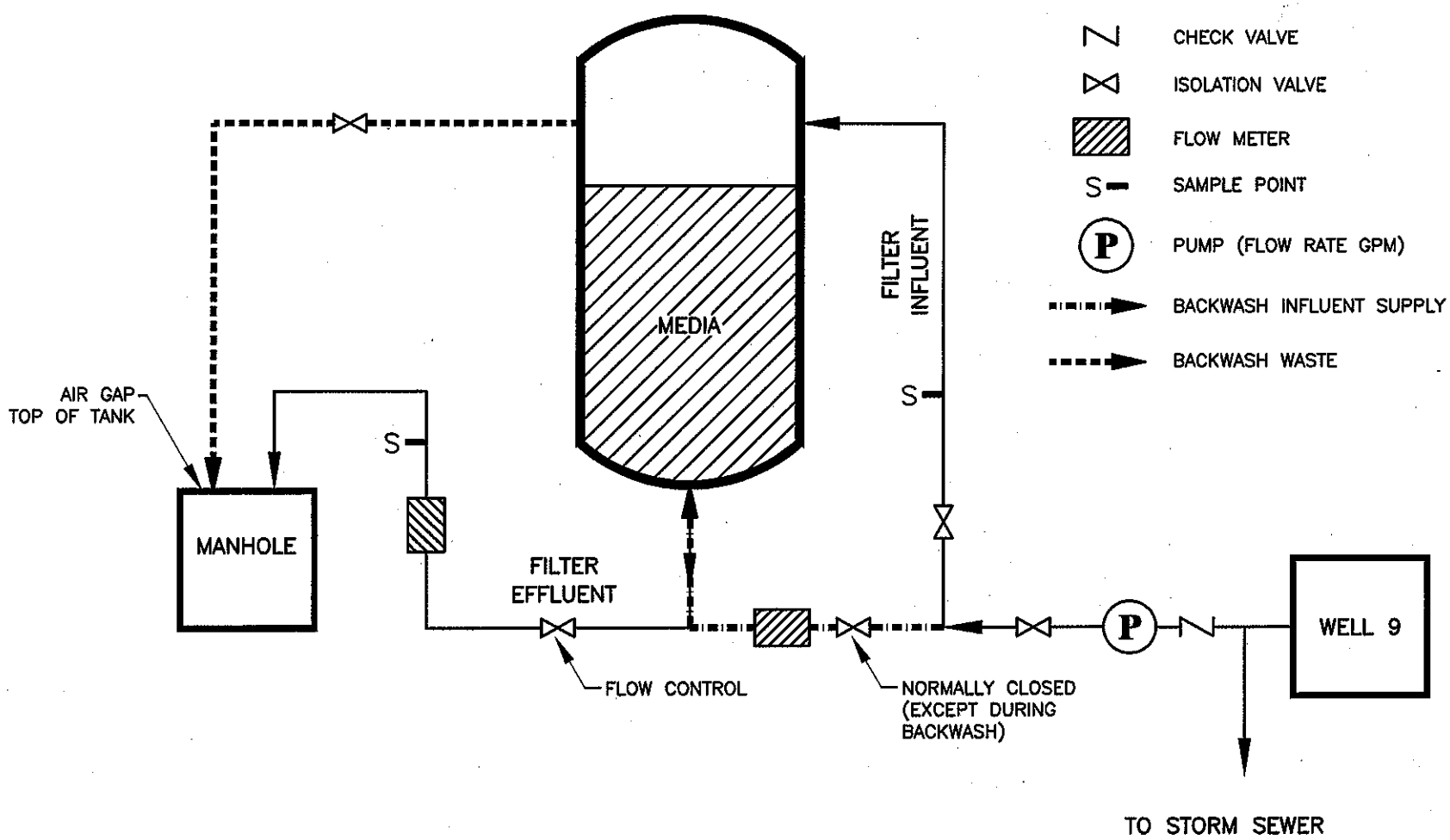


Photo 2 Pilot Trailer Pressure Filters

PILOT FILTER VESSEL FLOW TRAIN



SEH

PILOT FILTER VESSEL FLOW TRAIN
PILOT STUDY MUNICIPAL WELL NO. 9
ONALASKA, WISCONSIN

FILE NO.
ONALA 122004

FIGURE NO.
8-1

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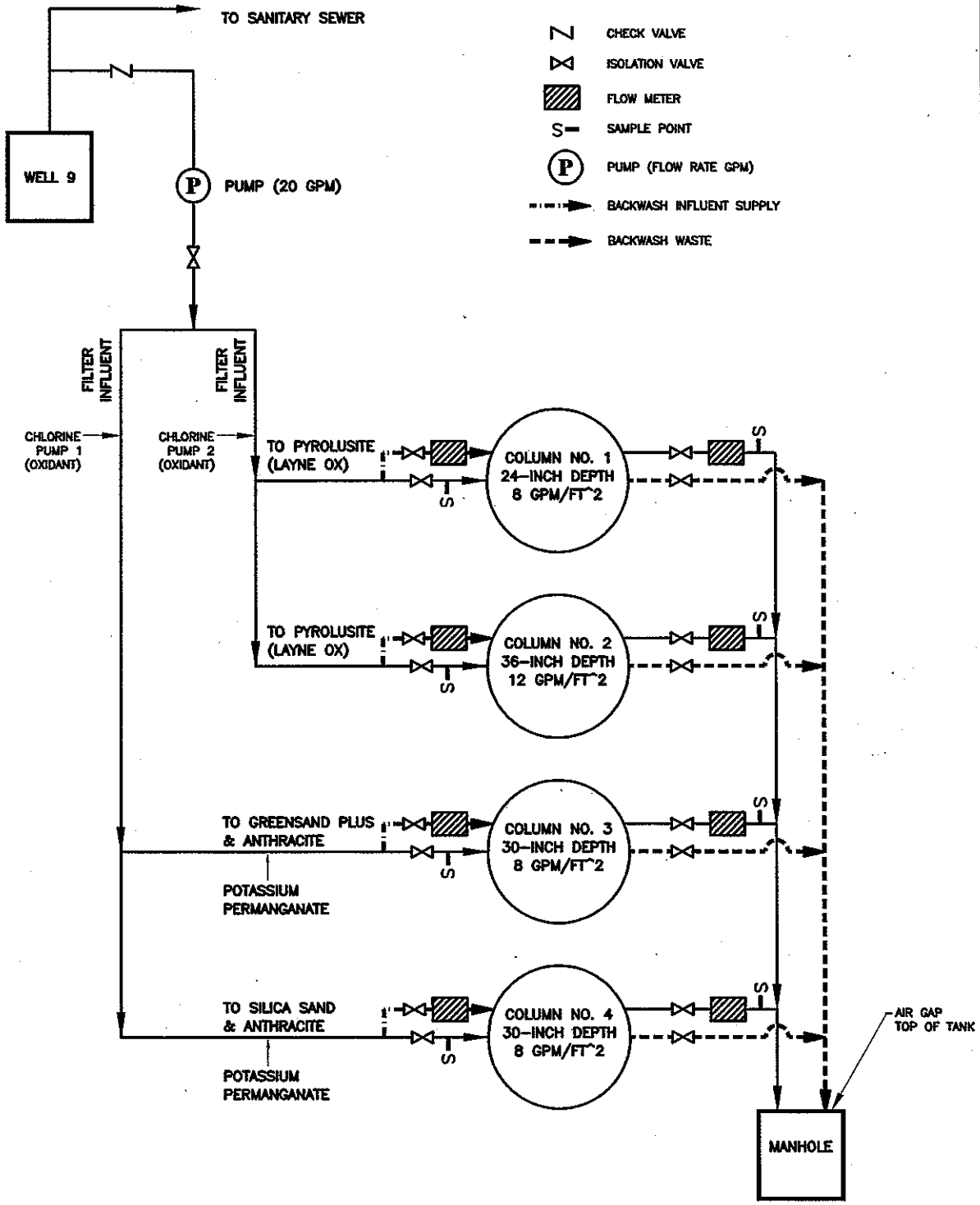
SAVED: 5-20-2013 12:19 PM
XREFs: C:\Users\rflege\Desktop\Onalaska Pre-Pilot Report\811xref; C:\Users\rflege\Desktop\Onalaska Pre-Pilot Report\811xref\plan
PLOTTED: 5-20-2013 4:55 PM
PLOT SCALE: 1:1

PILOT TRAILER FLOW TRAIN



SEH	PILOT TRAILER FLOW TRAIN PILOT STUDY MUNICIPAL WELL NO.9 ONALASKA, WISCONSIN	FILE NO. ONALA 122004 FIGURE NO. 8-2

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Photo 2 shows the pilot trailer pressure filters used during the Onalaska Water Utility pilot testing for Well No. 9.

The filtration rate through the columns during the pilot testing ranged from 6-gpm/ft^2 to 12-gpm/ft^2, equating to a water flow rate of 2.10 gpm and 4.20 gpm, respectively. Pressure gauges were located on the inlet and outlet piping of each filter column so the filter pressure head loss across each column could be observed and recorded during the test.

The filter columns were loaded with the media and operated at the filter rates indicated on Table 8-2. Section 8.5.5 discusses each of the media types.

Table 8-2 – Media Types and Loadings

Column Number	Media Type	Runs 1 & 2 Filter Rate (gpm/ft^2)	Runs 3 & 4 Filter Rate (gpm/ft^2)
1	18" Silica / 12" Anthracite	8	6
2	18" Greensand / 12" Anthracite	8	6
3	24" Pyrolusite	12	6
4	36" Pyrolusite	8	6

8.5.3 Pilot Study Testing Media

The media being tested for this pilot is based on previous experiences with iron and manganese removal and previous pilot study results. Below is a brief overview of each filtration media. A copy of manufacturers specification sheets are attached for further review in Appendix E.

Pyrolusite- Pyrolusite is a granular catalytic water filtration media used for the removal of hydrogen sulfide, iron and manganese. Pyrolusite is a naturally mined ore, and has been used in water treatment for more than 75 years. Typical bed depths range from 24 inches to 36 inches. LayneOx is the trade name for the pyrolusite being tested during this pilot test. This media had effective size of 0.3 – 0.5 mm and have a uniformity coefficient of less than 1.65. Two columns of pyrolusite were used during this pilot testing to evaluate filter efficiency and run times. Loading rates of 8 and 12 gpm/ft^2 were used on the first two runs and a loading rate of 6 gpm/ft^2 was used on the last two runs.

GreensandPlus with Anthracite- GreensandPlus™ is a silica based black colored catalytic filter media used for removing soluble iron, manganese, hydrogen sulfide, arsenic and radium from groundwater supplies. The manganese dioxide ore of GreensandPlus acts as a catalyst in the oxidation reduction reaction of iron and manganese. This media will have and effective size of 0.3 – 0.35 mm and have a uniformity coefficient of less than 1.6. Anthracite (effective size 0.8 mm) will be used in conjunction with GreensandPlus. One column of this dual media bed depth of 12-inches of anthracite and 18-inches of GreensandPlus, and will evaluate filter efficiency and run times, based on loading rates of 6 to 8 gpm/ft^2.

Silica Sand with Anthracite- Silica sand is one of the most common forms of sand found throughout the world. Silica is commonly used to treat groundwater supplies for various types of contaminants. The silica sand size used within this application will range from 0.3-0.4 mm. Anthracite (effective size 0.8 mm) will be used in conjunction with silica sand. One column of this dual media bed depth of 12-inches of anthracite and 18-inches of silica sand, and will evaluate filter efficiency and run times, based on loading rates at 8 gpm/ft^2.

8.5.4 Chemical Feed System

The chemical feed systems used in the pilot study were Blue and White Peristaltic metering pumps capable of feeding a maximum of 2.3 gallons per day. The pumps were setup to feed less than 2 gallons per day for this study. The post-treatment target free chlorine level was a minimum 0.3 mg/L). The solution was neat. The pumps transferred the pilot testing treatment chemicals from chemical storage tanks and into the raw water flow stream through plastic chemical feed tubing. The chemicals selected for the pilot study were:

- Chlorine as hypochlorite
- Potassium Permanganate

The hypochlorite was reduced from a level of 8.25 percent by mixing 5 gallons of distilled water to 1 gallon of hypochlorite. The potassium permanganate was mixed at 1 gram per liter of distilled water.

The pilot testing for this well simulated the projected pumping requirements following the addition of filtration. Data recorded during the pilot runs included flow rate, chemical feed rate, pH, free chlorine residual, iron, manganese, head loss, and time. All necessary precautions for intercepting a side stream of raw well water (20 gpm) was implemented including, disinfection, backflow preventers, and 1-foot air gaps for waste protection.

The chemicals used for the oxidation were chlorine fed in the filter raw water lines approximately 10 seconds before the filter. Detention time was provided on the water depth above the media. This time was approximately 5 minutes.

The chemical dosages were approximately the same with a slightly less use of chlorine on the columns using the flow rates of 6 gallons per square foot. This was likely because of the different reaction time on the filters.

8.5.4.1 Chlorine and Potassium Permanganate

In many groundwater treatment plants that remove iron and manganese, the oxidation process of the dissolved minerals is improved by using chlorine or chlorine combined with potassium permanganate ($KMnO_4$). The oxidation of dissolved iron with chlorine is very rapid, but oxidation of manganese with chlorine can be much slower.

Hach pH meter

8.5.5 Water Quality Testing Lab

The SEH pilot trailer included a fully-equipped water quality testing lab, and was staffed for the duration of the pilot testing by SEH's experienced pilot treatment specialist. The pilot trailer lab equipment and specialist were capable of performing all the required water quality field tests needed for this study.

8.5.6 Sampling and Analysis

Field testing of the influent water to the pilot trailer for iron and manganese were conducted using a Hach 890 Colorimeter. pH and temperature were conducted using a Hach HQ 40 pH meter. Chemical addition was measured using calibration columns on each chemical.

Hach colorimeter

The volume of each chemical in milliliters was measured per unit of time.

Water quality was tested hourly throughout the pilot testing. Field water quality sampling and testing of the raw water and filtered water was conducted during each filter run.

The chemical feed rates were monitored using calibration cylinders on each of the chemical feed systems to measure the amount of chemicals fed per hour for each treatment train. Field water quality tests were performed using a Hach digital colorimeter Model 890. Water pH levels were obtained using a Hach probe pH meter.

The City of Onalaska collected separate samples at the approximate half way points of each cycle and these samples were independently tested at a certified drinking water laboratory. Laboratory results can be found in Appendix F. Arsenic, iron, and manganese were taken from the effluent of GreensandPlus Filter (Column 2), and radium and radon were taken from the backwash of Column 2.

8.6 Pilot Study Test Results

This section summarizes the results from the pilot testing completed for City of Onalaska Well No. 9. All field results are tabulated in Appendix G.

8.6.1 Source Water Summary

Water supply for the pilot study at Well No. 9 was collected from hydrant, which was isolated from the distribution system and pumped to waste during the pilot study at a rate of approximately 1,350 GPM. Raw water has an average of 0.45 mg/l iron, 0.11 mg/l manganese and a pH average of 7.2.

The water from Well No. 9 varied somewhat on the iron content with a high 0.515 mg/l and a low of 0.339 mg/l, shown in Table 8-3. The Well produced levels of iron above the secondary standard during the total length of the pilot study. The manganese level in the Well during the study also was above the secondary level of 0.05 mg/l for the complete pilot study. The average level of 0.108 mg/l of manganese is double the secondary standard of 0.05 mg/l, the maximum level of 0.409 mg/l is almost 8 times the standard.

Table 8-3 – Well No. 9 Raw Water Quality

Iron			Manganese			pH		
Min	Max	Average	Min	Max	Average	Min	Max	Average
0.339	0.515	0.447	0.055	0.409	0.108	7.10	7.31	7.19

8.6.1.2 Iron

The dissolved iron concentration for Well No. 9 ranged from a low of 0.0.339 mg/L to a maximum of 0.515 mg/L with an average of 0.447 mg/L during the pilot testing. These results were found to be about 1.5 times higher than the City of Onalaska water quality goals.

Comparable lab results were also taken by City of Onalaska and lab results can be found in Appendix F.

8.6.1.3 Manganese

The dissolved manganese concentration for Well No. 9 ranged from a low of 0.055 mg/L to a maximum of 0.409 mg/L with an average of 0.108 mg/L during the pilot testing. These results were found to be two times higher than the USEPA water quality goals.

Comparable lab results were also taken by City of Onalaska and lab results can be found in Appendix F.

8.6.1.4 pH

The pH of Well No. 9 water was also monitored at several times during the pilot testing. pH is a measure of how acidic or basic a substance is. In the case of Well No. 9 the raw well water pH ranged from a low of 7.10 and 7.31, averaging 7.19. This raw water measurement is considered neutral to slightly basic.

8.6.1.5 Backwash Water

Backwash water is required during pilot runs. For Well No. 9 backwash water was utilized from the well water. Valves were installed to isolate the backwashing process during end of cycle pilot runs. The WDNR NR 811.853 requires that all backwash water from iron and manganese filters discharge to a sanitary sewer and that radionuclide content of the backwash water shall comply with NR 811.856. This section requires the water treatment plant backwash water to be in compliance with the radionuclide content and can be calculated in the form of the unity equation.

Backwash water will be recycled with only the sludge being discharged to the sewer. The sanitary sewer is too small to accept the backwash rate needed to clean the filter. A plate settler to limit the size of the backwash basin may be need in the flow pattern.

During the backwashing procedures for Column 2 (GreensandPlus Media 18-inch bed depth with 12-inch Anthracite bed), all backwash water was collected in a 150 gallon tank at 15 gpm/ft^2. A radionuclides sample was immediately taken after the complete backwash cycle to meet the requirements of the WDNR pilot study approval letter in June 2013. Laboratory test results for radium 226 and radium 228 in the backwash water can be found in Appendix F.

8.6.2 High Filter Rate Tests

In the first and second tests, chlorine alone was used as the oxidant in all columns followed by filtration with three different media types and two different filtration rates. Columns 1, 2 and 4 were loaded at 8 gpm/ft^2 and Column 3 was loaded at 12 gpm/ft^2.

Finished water quality results are shown in Table 8-4. At the high filter rates, iron and manganese both had considerable removal. However, breakthrough in both runs occurred after only 5 to 6 hours of run time, so the conditions of Run 1 and Run 2 did not meet treatment goals for Well No. 9.

Table 8-4 – Well No. 9 Finished Water Quality: Run 1 and Run 2

Column Number	Iron			Manganese			Filter Rate
	Min	Max	Average	Min	Max	Average	
1	0.001	0.010	0.002	0.009	0.090	0.048	8
2	0.001	0.023	0.008	0.008	0.198	0.089	8
3	0.001	0.029	0.011	0.011	0.139	0.050	12
4	0.001	0.019	0.008	0.001	0.123	0.037	8

8.6.3 Low Filter Rate Tests

In the third and fourth test, both chlorine and potassium permanganate were used as oxidants in all Columns followed by filtration with three different media types and one filtration rate. All Columns were loaded at 6 gpm/ft^2. Breakthrough in both runs occurred after 20 to 28 hours of run time, so the conditions of Run 3 and Run 4 met the treatment goals for Well No. 9.

Finished water quality results are shown in Table 8-5. At the low filter rate, iron and manganese both had good removal. Run time reached or exceeded 20 hours before breakthrough, so the conditions of the low rate tests were considered appropriate for application at Well No. 9.

Table 8-5 – Well No. 9 Finished Water Quality: Run 3 and Run 4

Column Number	Iron			Manganese			pH			Filter Rate
	Min	Max	Average	Min	Max	Average	Min	Max	Average	
1	0.001	0.051	0.012	0.001	0.061	0.023	7.02	7.23	7.13	6
2	0.001	0.051	0.010	0.001	0.094	0.025	7.13	7.19	7.14	6
3	0.001	0.047	0.010	0.001	0.067	0.024	7.05	7.21	7.15	6
4	0.001	0.063	0.010	0.001	0.079	0.014	7.08	7.18	7.14	6

8.7 Pilot Study Findings

Filtration on all columns met the EPA Secondary levels for both iron and manganese. Column number 2 was a greensand/anthracite media column. The average level of iron was 0.010 mg/l and manganese levels averaged 0.025 mg/l.

Chlorine addition was used on all treatment trains with results on the iron removal meeting the EPA Secondary levels for iron and manganese. Permanganate was used on the filters using the silica sand and greensand medias at a very low dose to maintain a charge of the media.

Table 8-6 is a summary of the individual treatment processes and performances.

Table 8-6 – Treatment Process Performance

Filtration Process	Oxidation Processes	Performance	Recommendation
GreensandPlus with Anthracite	Chlorine feed(continuous) Permanganate feed(charge	Good	First
36-inch Pyrolusite Media	Chlorine feed	Good	Second
Silica Sand with Anthracite	Chlorine feed(continuous) Permanganate feed(charge)	Good	Third
24-inch Pyrolusite Media	Chlorine feed	Good	Fourth

8.8 Water Treatment Recommendations

Based on the findings obtained from the Well No. 9 pilot testing performed, the following water treatment processes are recommended.

8.8.1 Oxidation

Dissolved manganese and iron should be effectively oxidized with the use of chlorine and potassium permanganate as the preferred oxidants for Well No. 9. It is recommended that the pre-filtration chlorination feed rate for Well No. 9 be designed at dosage of between

1.0 mg/L - 1.5 mg/L to allow for water quality changes within the raw water. The pilot study also found that GreensandPlus with Anthracite filter media was optimized with residual chlorine after the filters measuring 0.4 mg/L-0.8 mg/L for both wells.

8.8.2 Filter Media

The effectiveness of several common water filtration media was evaluated during the pilot testing for Well No. 9. Based on a review of the finished water quality results obtained, and an analysis of the associated chemical treatment needs, SEH recommends the use of the contents in Column 2: 18 inches of Greensand and 12 inches of anthracite. Although all media in the pilot study provided adequate removal, the use of Greensand allows the water utility to have a built in buffer if flows or water quality suddenly changes in any given day. The Greensand has the ability to absorb excess permanganate ions from the treatment train to store the permanganate in the media for times when more permanganate is required. This gives the operator some flexibility until adjustments can be made by the operator. The recommended filtration rate for Well No. 9 is 6 gpm/ft^2. The filter rate of 6 gpm/ft^2 provided the best removal of solids. However, the filter will normally operate at a lower rate.

8.8.3 Filtration Approach

Iron and Manganese removal was accomplished best with the use of 18 inches of Greensand and 12 inches of anthracite as described above. The filtration approach was reviewed and the following recommendation is as follows:

It is proposed to pump from Well No. 9 at a rate of 2,700 gpm and operated with a variable frequency drive (VFD). Gas chlorination should be injected before filtration at a dosage rage between 1.0 mg/L - 1.5 mg/L. Iron is found in this raw water at concentrations high enough that chlorine injection should allow for filtered water for chemical dosage. An inline mixer is also recommended to insure proper mixture prior to filtration. The recommended vertical filter vessels shall provide a minimum of 450 square feet of media area. This would require six each, 10-foot diameter filter vessels or nine each, 8-foot diameter filter vessels. However these vertical filters are typically installed in even numbers. So a typical installation would be six each, 10-foot diameter filter vessels with an average loading rate of 5.7 gpm/ft^2 or ten each, 8-foot diameter filter vessels with an average loading rate of 5.4 gpm/ ft^2. The expected filter run time would be around 24 hours and backwash would be required at 15 gpm/ ft^2. See Tables 8-7 and 8-8 for filter sizes, quantities, and backwash tank volumes.

Table 8-7 – Well No. 9 Vertical Filter Sizes and Backwash Volumes

Inside Diameter (ft)	Number of Tanks	Area of each Tank (ft^2)	Loading Rate (gpm/ft^2)	No. of Rows	Backwash Tank Size (Gallons)	Total Floor Area (ft^2)	Total Floor Area (ft x ft)
6	16	28.3	6.0	4	12,800	1,790	35' X 51'
8	10	50.3	5.4	2	22,700	1,610	52' X 31'
10	6	78.5	5.7	2	35,400	1,370	39' X 35'
12	4	113	6.0	2	50,900	1,250	32' X 39'

Note: See notes for horizontal tank calculations

Table 8-8 – Well No. 9 Horizontal Filter Sizes and Backwash Volumes

Inside Diameter (ft)	Number of tanks	Area of each Tank (ft^2)	Required Length (ft)	Number of Cells in Each Tank	Backwash Tank Size (Gallons)	Total Floor Area (ft^2)	Total Floor Area (ft x ft)
6	2	225	39	3	33,800	1,220	45' X 27'
6	3	150	26	3	22,500	1,310	32' X 41'
8	2	225	29	3	33,800	1,090	35' X 31'
8	3	150	20	3	22,500	1,220	26' X 47'
10	1	450	46	3	67,500	1,090	52' X 21'
10	2	225	24	3	33,800	1,050	30' X 35'
12	1	450	39	3	67,500	1,040	45' X 23'
12	2	225	20	3	33,800	1,010	26' X 39'

Notes:
Length adds 1 foot for roundness of tank ends, length is approximate
About 3 feet is needed between tank and wall for walkways
About 1.5 feet is needed between vertical tanks in the same row
Up to 9 feet is required between each pair of rows of vertical tanks or horizontal tank for piping and access
Backwash rate of 15 gpm/ft^2 is assumed for 15 minutes

8.8.4 Regulatory Approval

WDNR must approve all treatment processes for municipal drinking water facilities prior to construction of water treatment plants. Although the recommended treatment effectiveness and performance has been demonstrated during the pilot testing for this study, this does not guarantee that WDNR will approve the treatment process. Prior to design of a treatment facility, WDNR staff should be contacted to review the design parameters and recommendations in this pilot study report.

8.9 Capital and Operational Costs

For each filtration alternative, preliminary cost estimates were prepared based on one filter skid unit for comparison purposes. While many different filter configuration options are available, a combination of vertical pressure filters was used for the initial cost comparison. Table 8-9 provides order of magnitude cost estimates for the capital costs associated with pressure filtration. Table 8-10 provides a order of magnitude present worth costs if half of the project was done now and the other half in ten years. The costs for pressure filtration equipment include pressure filters, media, 15" of under bedding gravel, automatic control valves, air-waste valves, chemical feed system with sodium hypochlorite and, complete filter control system, and/off/auto backwash initiation, flow meters, NEMA 4 Panel, Solenoid Box and Airlines, Air Compressor.

The higher flow rate utilized results in smallest filter assembly footprint. This equates to lower capital and operational costs due to reduced media replacement cost, and smaller backwash facilities.

Table 8-9 – Cost Estimate of Pressure Filter System If All Tanks Were Constructed At Present Time

Two 10-foot diameter 3-cell Horizontal Pressure Filters: 6 gpm/ft^2

30'x30' filter assembly

Filtration Equipment & Installation		$950,000
	Subtotal	$950,000
	Engineering & Contingencies	$190,000
	Total	$1,140,000

Six 10-foot diameter Vertical Pressure Filters: 6 gpm/ft^2

40'x30' filter assembly

Filtration Equipment & Installation		$1,100,000
	Subtotal	$1,100,000
	Engineering & Contingencies	$220,000
	Total	$1,320,000

Table 8-10 – Cost Estimate of Pressure Filter System If Half Of Tanks Were Constructed At Present Time And Second Half Were Constructed In Ten Years

Two 10-foot diameter 3-cell Horizontal Pressure Filters:
6 gpm/ft^2
One installed now and one installed in ten years
30'x30' filter assembly

Filtration Equipment & Installation		$530,000
Future Filtration Equipment & Installation (Present Worth)	Inflation rate = 3 % Factor of 1.34 in ten years Future worth = $710,000	$530,000
	Subtotal	$1,060,000
	Engineering & Contingencies	210,000
	Total	$1,270,000

Six 10-foot diameter Vertical Pressure Filters: 6 gpm/ft^2
Three installed now and three installed in ten years
40'x30' filter assembly

Filtration Equipment & Installation		$600,000
Future Filtration Equipment & Installation	Inflation rate = 3 % Factor of 1.34 in ten years Future worth = $810,000	$600,000
	Subtotal	$1,200,000
	Engineering & Contingencies	$240,000
	Total	$1,440,000

8.10 Recommendations

The recommended filtration approach is continuous chlorine oxidation with pyrolusite filter media. This filter combination achieves the City's goals of:

1. Dissolved iron and manganese removal to below 0.1 mg/L and 0.02 mg/L respectively.
2. Run times of 20-30 hours or not exceeding a maximum differential pressure of 8 psi.

Below are the design recommendations for Well No. 9 to achieve the above goals:

Well No. 9	
Design Flow Rate (gpm)	2,700
Number of Filter Units (each)	2
Physical Filter Floor Area (ft)	30' x 35'
Diameter of Horizontal Filter Vessel (ft)	10
GreensandPlus Media Depth (inches)	18
Anthracite Media Depth (inches)	12
Effective Filter Flow Rate (gpm/ft^2)	6.0 gpm/ft^2
Capacity per Filter Cell(gpm)	450
Pre-Chlorine Dosage Rate (mg/L)	1.0 to 1.5
Anticipated Filter Run (hrs)	24
Backwash Flow Rate (gpm/ft^2)	15
Backwash Flow Rate per Filter Cell (gpm)	1,125
Rinse Water Flow Rate per Filter (gpm)	450
Residual Chlorine Post Filtration (mg/L)	0.3 – 0.5

The recommended filter would handle 2,700 gpm at a rate of 6 gpm/ft^2. Two options are described below:

The first recommended filter option (Option 1) would be two 10-foot diameter horizontal filters with three cells in each filter, dividing the flow over six total cells. Each cell would have an area of 75 ft^2. Each filter would be approximately 24 feet long with a total floor space of approximately 1,050 ft^2 and with dimensions of approximately 30 feet by 35 feet with walkways and piping. The filters would cost approximately $1.1 million. The filters could be installed one at a time, with one installed in the future. The cost of the first filter would be approximately $640,000, and the second filter would cost approximately $850,000 in ten years. Figure 8-3 shows the existing well house with the proposed addition in a plan view. The filters would be positioned in a north-south fashion to accommodate piping from the well. The existing chemical room and storage area would be removed, and new chemical and electrical rooms would be constructed west of the filters.

The second recommended filter option (Option 2) would be six 10-foot diameter vertical filters. Each filter would have an area of 78.5 ft^2. The total floor space would be approximately 1,370 ft^2 with dimensions of approximately 39 feet by 35 feet with walkways and piping. The filters would cost approximately $1.3 million. The filters could be installed three at a time, similar to the horizontal filter, with three installed in the future. The cost of the first three filters would be approximately $600,000, and the second three filters would cost approximately $810,000 in ten years. Figure 8-4 shows the existing well house with the proposed addition in a plan view. The filters would be positioned north of the existing well house. The existing storage area and chemical room would be re-used with the electrical equipment moved to the storage area. Two new chemical rooms would be constructed just west of the existing chemical room.

Table 9-1.2
Capital Improvement Plan

System Improvements - Facilities	Budget Estimate
Well No. 7 and No. 8 Safety Equipment	
Safety eyewash and showers	$10,000
Spill Containment	
Separate Chemical Rooms	
Subtotal	**$10,000**
Contingencies (20%)	$2,000
Engineering	$1,500
Total	**$13,500**
Gas chlorine system at OS Booster Station	
Gas chlorination equipment (each)	$35,000
Subtotal	**$35,000**
Contingencies (20%)	$7,000
Engineering (15 %)	$5,300
Total	**$47,300**
Total for Two Systems	**$94,600**
Greens Coulee Booster Station	
Pumping Equipment	$40,000
Electerical Equipment	$60,000
Subtotal	**$100,000**
Contingencies (20%)	$20,000
Engineering (15 %)	$15,000
Total	**$135,000**
Well No. 9 Treatment System	
Pressure Filter treatment system	$960,000
Demolition of existing well house facililties	$65,000
Reconstruction of well house 43' X 52' (brick and block with separate chemical rooms)	$550,000
Site Work (entrance, water main connection, restoration, etc.)	$50,000
Electrical, Mechanical, and Process Piping	$200,000
SCADA panel and programming	$25,000
Subtotal	**$1,850,000**
Contingencies (20%)	$370,000
Engineering (15 %)	$278,000
Total	**$2,498,000**

Note:
1. All costs are reported in 2013 dollars.

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #7

Project/Item Name:	Automated carts
Location:	Citywide
Requested Action:	Approval of automated cart change out
Staff Report/Description:	December 2013 the Common Council approved allowing all property owners a one-time change out of automated cart size at no cost. Staff is anticipating changing out approximately 2,400 of the 12,000 carts within the City. City staff is working with Harter's Quick Clean-Up(contracted solid waste hauler) and Rehrig Pacific(automated cart supplier) on specifics of automate cart change out.
Attachments:	Summary sheet of proposed automated carts to be changed out with associated costs.

Refuse & Recycling

Automated cart switch out

Cart switch out requests:		Inventory switch out:	
95 gallon refuse	1,050	95 gallon refuse	175
95 gallon recycling	975	95 gallon recycling	175
35 gallon refuse	200	35 gallon refuse	45
35 gallon recycling	190	35 gallon recycling	45
Subtotal	2,415	Subtotal	440

Total = 2,855

Preferred Option
City purchase

35 Gallon	$57/Each recycling	235 units	$13,395
	$50/Each refuse	245 units	$12,250
	One time logo set up		$325
95 Gallon	$57/Each recycling	1,150 units	$65,550
	$54/Each refuse	1,225 units	$66,150
Delivery & pick up of existing cart @ $15/Each (Rehrig Pacific to deliver new cart & pick up existing)		2,415 units	$36,225
Re-sale of existing carts @ $18/Each		2,855 units	-($51,390)
		Total	$142,505

Assumptions:

- Contractual costs with Harter's Quick Clean-Up are not affected for remainder of seven year contract
- Property owners requesting a cart change out after this date will be billed a $20 fee for each cart changed out. Directly billed by Harter's Quick Clean-Up to property owner
- Harter's Quick Clean-Up has agreed to no overhead costs due to migrating from two carts to six cart options.
- Harter's Quick Clean-Up will deliver choice of cart size to new City Service Dwelling Units as called out in contract

3/26/2014 2:13 PM

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #8

Project/Item Name:	Pavement Maintenance projects
Location:	Citywide
Requested Action:	Approval of 2014 pavement maintenance
Staff Report/Description:	The 2014 pavement maintenance program includes a variety of activities as outlined
Attachments:	Chip seal memo, map and table. Fiber patch installation memo. Polyfiber purchase memo. Centerline painting memo.

MEMORANDUM

PUBLIC WORKS DEPARTMENT

ONALASKA WISCONSIN
EST. 1851

TO: Board of Public Works

FROM: Jarrod Holter, City Engineer JH

DATE: March 25, 2014

CC:

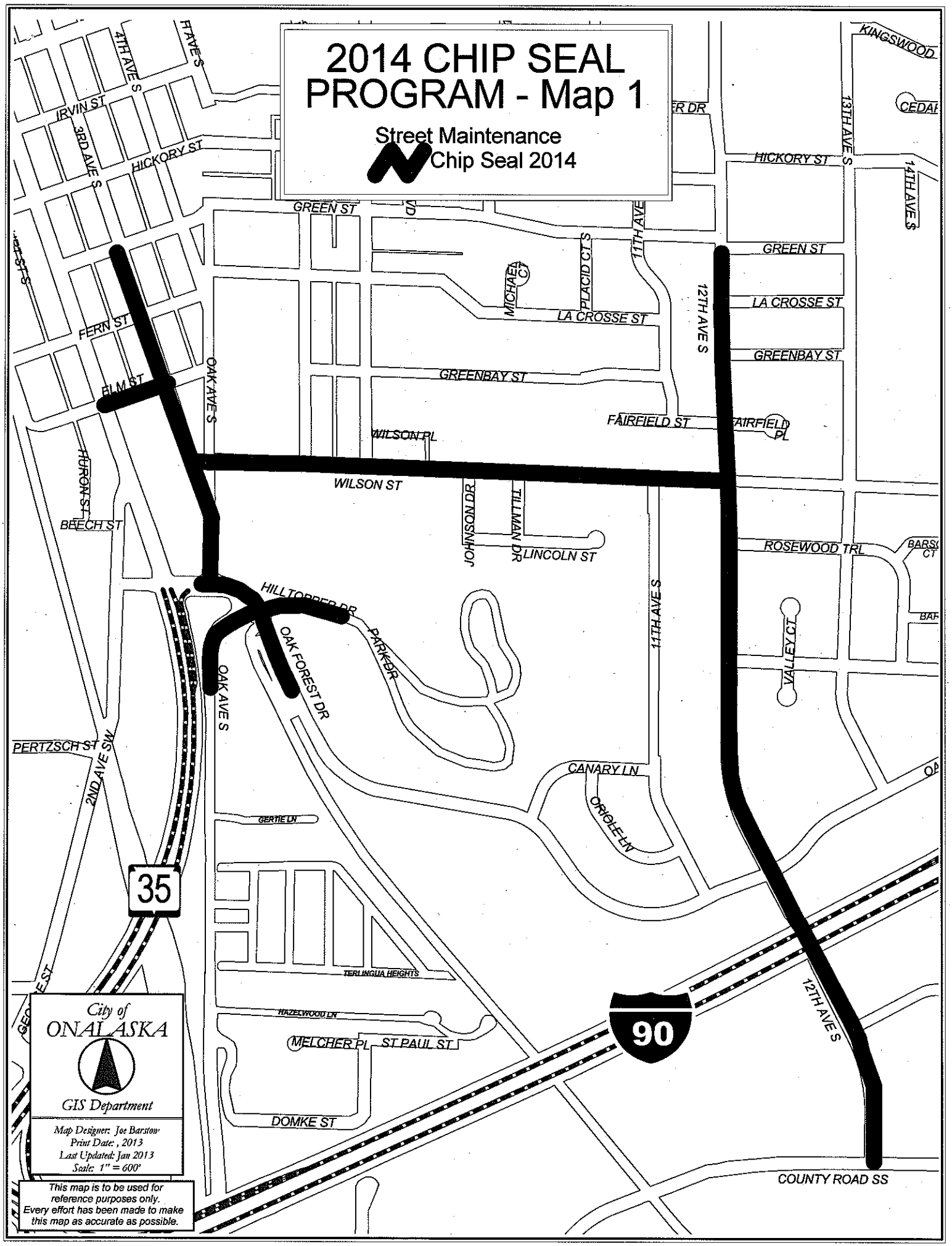
RE: 2014 Chip Sealing

Attached is a map of the proposed 2014 chip seal project. The City has worked with the La Crosse County Highway Department in the past to perform this project. La Crosse County has been very good to work with and has come in at or below the estimated price every year they have performed the project for the city. For 2014 City staff is using the price for 2013 of $1.59 per square yard for granite chip cover. Once La Crosse County receives bids for emulsion and aggregate a final estimated cost will be given to the City. If the costs exceed this estimate quantities will be adjusted.

We are using a smaller granite chip again this year of only ¼" diameter with a higher percentage of emulsion with the addition of a polymer additive. We are currently proposing 112,485 square yards at an approximate price of $178,851. The chip seal treatment is the most cost effective method for maintaining the city streets. The City has explored various options for street maintenance and has found that the chip seal is one of the most effective. Please contact me if you have any further questions.

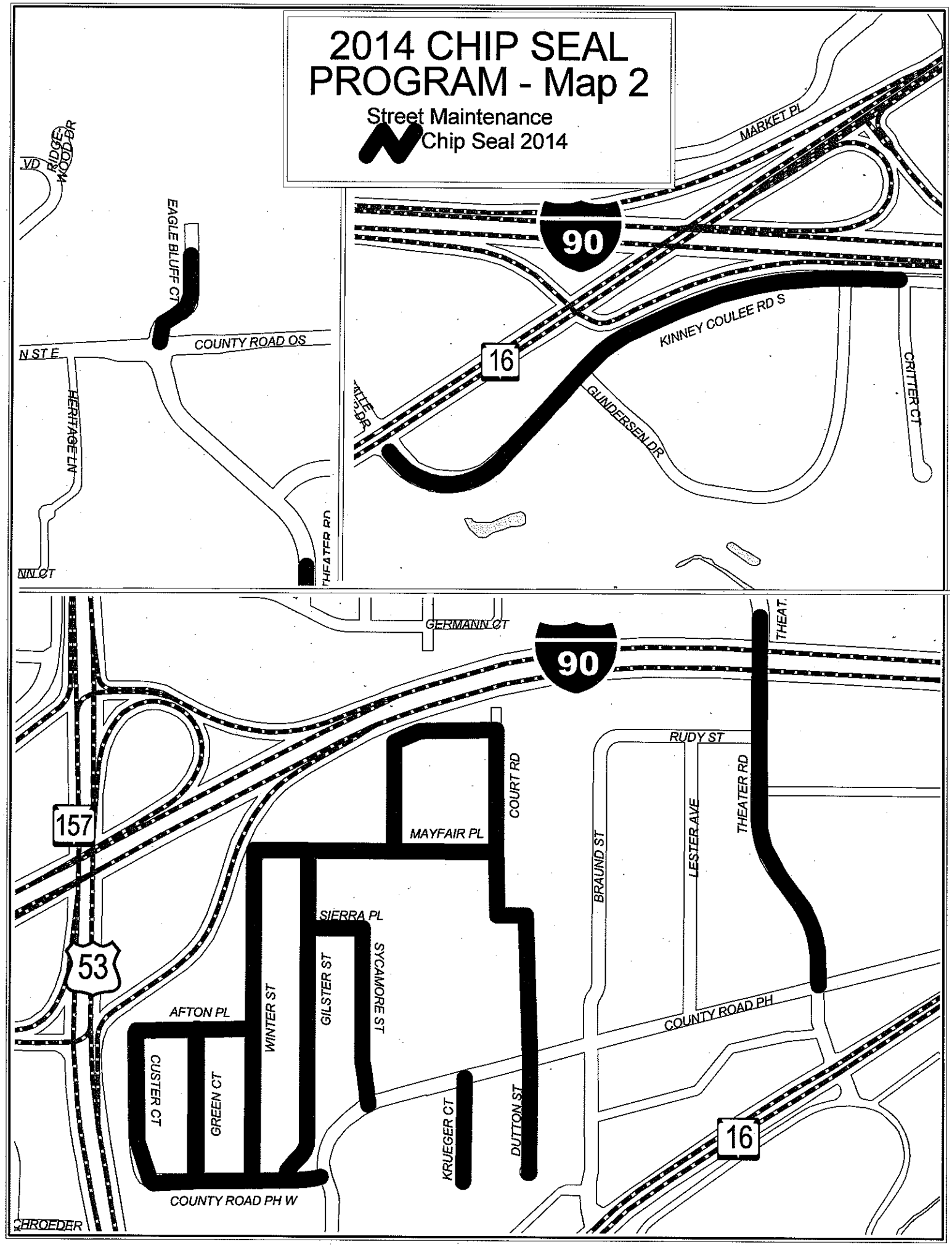
2014 CHIP SEAL PROGRAM - Map 1

Street Maintenance
Chip Seal 2014



2014 CHIP SEAL PROGRAM - Map 2

Street Maintenance
Chip Seal 2014



2014

STREET NAME	WISLR	FROM-	TO-	LENGTH	YEAR CONST	AVE WIDTH	CURB	SQFT	TOTAL SqFt	SqYd	Est. Cost/ Sq Yd [$1.52 - coal slag; 1.59 - granite]		
12th Ave S	7	Green Bay St	Wilson St	633	2006	39.0		24687	**1,012,362**	**112,485**	**$178,851**		
12th Ave S	6	Green St	La Crosse St	248	2006	36.0		8928					
12th Ave S	7	I-90	CORD SS	1291	2006	44.0		56804					
12th Ave S	7	La Crosse St	Green Bay St	289	2006	36.0		10404					
12th Ave S	7	Pinecrest Ln	I-90	1143	2006	44.0		50292					
12th Ave S	7	Rosewood Trail	Paving 1984	820	2006	46.0		37720					
12th Ave S	7	Wilson St	Rosewood Trail	326	2006	46.0		14996					
3rd Ave S	7	Green St	Oak Ave S	1131	1996	32.0		36192					
Afton Pl	7	Winter St	Custer Court	600	2003	26.0		15600					
CORD PH W	7	CORD PH	Gilster St	144	2003	22.0		3168					
CORD PH W	7	CORD PH	Custer Ct	727	2003	26.0		18902					
Court Rd	8	State Rd 16	Mayfair Pl	552	2006	24.0		13248					
Court Rd	8	State Rd 16	CORD PH	2319	2006	24.0		55656					
Custer Ct	7	Afton Pl	CORD PH	770	2003	26.0		20020					
Dutton St	8	Termini	CORD PH	603	2006	23.0		13869					
Eagle Bluff Ct	6	E Main St	Termini	507	1999	38.0		19266					
Elm St	7	2nd Ave S	3rd Ave S	341	1996	36.0		12276					
Gilster St	7	200' N of CORD PH W	Mayfair Pl	1462	2004	26.0		38012					
Gilster St	7	CORD PH W	200' N of CORD PH W	232	2003	26.0		6032					
Green Ct	7	Afton Pl	CORD PH	772	2003	26.0		20072					
Hilltopper Dr	8	Oak Forest Dr	Park Dr	335	2006	40.0		13400					
Kinney Coulee Rd S	7	250' W of Critter Ct	Critter Ct	251	1996	34.0		8534					
Kinney Coulee Rd S	7	650' E of StateRd 16	200' E	204	1996	49.5		10098					
Kinney Coulee Rd S	7	Kwik Trip Entrance	390' E	391	1996	55.0		21505					
Kinney Coulee Rd S	7	State Rd 16	Kwik Trip Entrance	217	1996	66.0		14322					
Kinney Coulee Rd S	7	W of Gundersen Dr	250' W of Critter Ct	1956	1996	46.0		89976					
Krueger Ct	8	Termini	CORD PH	527	2006	23.0		12121					
Mayfair Pl	7	Winter St	Court Rd	1238	2004	26.0		32188					
Oak Ave S	7	Oak Forest Dr	350' N	336	2006	39.0		13104					
Oak Ave S	8	Oak Forest Dr	530' S	534	2006	36.0		19224					
Oak Ave S	8	Wilson St	Oak Forest Dr	299	1996	32.0		9568					
Oak Forest Dr	8	Hilltopper Dr	440 ft Canary	440	2006	38.0		16720					
Oak Forest Dr	8	Hilltopper Dr	Concrete	353	2006	54.0		19062					
Sierra Pl	7	Gilster St	Sycamore St	277	2004	26.0		7202					
Sycamore St	7	Sierra Pl	CORD PH	896	2004	26.0		23296					
Theater Rd	5	Rudy St	CORD PH	1341	1995	52.0		69732					
Theater Rd	6	Rudy St	600' N	297	1998	56.0		16632					
Wilson St	6	11th Ave S	12th Ave S	363	1996	34.0		12342					
Wilson St	6	Oak Ave S	Tillman St	1692	1996	36.0		60912					
Wilson St	6	Tillman St	11th Ave S	667	1996	34.0		22678					
Winter St	7	CORD PH	Mayfair Pl	1677	2003	26.0		43602					

Holter, Jarrod

From: Ron Chamberlain <rchamberlain@lacrossecounty.org>
Sent: Tuesday, March 11, 2014 10:45 AM
To: Holter, Jarrod
Subject: RE: 2014 pavement maintenance

Jarrod,
We are going out for materials for the April PW&I. So I will not be able to provide anything accurate until after that.

Ronald Chamberlain, Highway Commissioner
La Crosse County Highway Department
301 Carlson Road
West Salem, WI 54669
Phone: 608-786-3813
Fax: 608-786-3816
Cell: 608-792-5260
rchamberlain@lacrossecounty.org

From: Holter, Jarrod [mailto:jholter@cityofonalaska.com]
Sent: Tuesday, March 11, 2014 10:17 AM
To: Ron Chamberlain
Subject: 2014 pavement maintenance

Ron,

Can you give me an estimate on what chip seal will cost this year? I will be taking forward to my April meeting cycle. Also a price for applying city supplied poly fiber and for County to provide crack filler material and put it down.

Thank you,

C. Jarrod Holter, P.E.
City Engineer

City of Onalaska
(608)781-9537
jholter@cityofonalaska.com

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MEMORANDUM

PUBLIC WORKS DEPARTMENT

ONALASKA WISCONSIN
EST. 1851

TO: Board of Public Works

FROM: Jarrod Holter, City Engineer JH

DATE: March 25, 2014

CC:

RE: 2014 fiber patching of city streets

Two quotes were received for the 2014 fiber patching City streets from Fahrner Asphalt Sealers, Inc. and La Crosse County Highway Department. 2014 prices remain consistent with 2013. The following prices were received:

- Fahrner Asphalt Sealers, Inc. Fiber patching $1.42 / lb
- La Crosse County Highway Department Fiber patching $1.65 / lb

With the two quotes received I would recommend awarding the quote to Fahrner Asphalt Sealers, Inc for the 2014 fiber patching at the above quoted prices per pound of material installed. It is anticipated that approximately 36,000 pounds of material will be installed at a cost of $51,120. This work will be funded from the 2014 Capital Improvements budget pavement maintenance item.

PROPOSAL / CONTRACT

Job. No. _____

Date: February 17, 2014

FAHRNER asphalt sealers llc

Pavement Maintenance Contractors

"An Equal Opportunity Employer"

Plover, WI 54467 • 2800 Mecca Drive
1.800.332.3360 • 715.341.2868 • Fax: 715.341.1054

Kaukauna, WI 54130 • 860 Eastline Road
1.800.261.1900 • 920.759.1008 • Fax: 920.759.1019

Eau Claire, WI 54702 • 6615 US Hwy 12
1.800.497.4907 • 715.874.6070 • Fax: 715.874.6717

316 Raemisch Road • Waunakee, WI 53597
Fax: 608.849.6470 • 608.849.6466 • 1.800.898.2102

3468 115th Street • Frederic, WI 54837
Fax: 715.653.2553 • 715.653.2535 • 1.800.497.4907

2224 Veterans Memorial Pkwy • Saginaw, MI 48601
Fax: 989.752.9205 • 989.752.9200

Contact Name:	JARROD HOLTER	**Cash Price**	T.B.D.
PURCHASER:	CITY OF ONALASKA	**TELEPHONE:**	(608) 781-9537
ADDRESS:	415 MAIN ST ONALASKA, WI 54650	**DESCRIPTION OF PROPERTY:**	
		Poly Fiber 415 MAIN ST ONALASKA WI 54650 JARROD HOLTER	

1. **FAHRNER Asphalt Sealers, L.L.C. (CONTRACTOR) and PURCHASER agree that, CONTRACTOR shall furnish the labor and materials to complete certain construction in accordance with the following specifications:**

City of Onalaska to provide poly fiber material.
Fahrner Asphalt Sealers L.L.C. will apply the product
for a price of $1.42/pound.

This proposal may be withdrawn if not accepted and received by CONTRACTOR within 90 days of the date above and/ or at any time before performance of the work hereunder upon CONTRACTOR'S determination that the PURCHASER is not creditworthy.

2. **If proposal is accepted please sign, retain one copy and forward a copy to our office.**
3. The undersigned ("PURCHASER") agrees to pay CONTRACTOR the total price of T.B.D. and/or the unit prices specified above for the labor and materials specified above which payment shall be due upon completion of each stage of work. PURCHASER acknowledges that the specifications, conditions and price quotes specified above are satisfactory and hereby accepted.

Acceptance of this Proposal includes acceptance of all the terms and conditions on back.

CONTRACTOR:
Fahrner Asphalt Sealers, LLC:

Fred Brown
(PRINT OR TYPE NAME)

By: _____
(CONTRACTOR REPRESENTATIVE)

Date: February 17, 2014

PURCHASER:
I have read and understand the terms and conditions on both sides of this contract.

_____
(PRINT OR TYPE NAME)

By: _____
(PURCHASER AUTHORIZED REPRESENTATIVE)

Date of acceptance: _____

Ronald Chamberlain, Highway Commissioner
Highway Department
County of La Crosse, Wisconsin
301 Carlson Road • West Salem, Wisconsin 54669-9332
(608) 786-3810 • Fax (608) 786-3816

Keith Back
Assistant Highway Commissioner
Joe Clements
Patrol Superintendent
Tim Hammes
Assistant Patrol Superintendent
Roger Ondeck
Shop Superintendent

~~March 12~~, 2013 USE SAME PRICING FOR 2014

Jarrod Holter
City of Onalaska
415 Main Street
Onalaska WI 54650

10 HOURS @ $495 = $4,950

Re: Crack Seal Estimate

ESTIMATED PRODUCTION IN ONE DAY (10 HRS)
= 3,000 lbs
= $4,950 / 3,000 lbs = $1.65/lb

Jarrod,

We are proposing an eight person crew with equipment using your material for a ten hour day to crack seal City of Onalaska streets for a cost of $495.00 per hour.

POLY FIBER

If routing and using our material is requested, we propose an eight person crew with equipment and an amount of crack seal material estimated at 1,500 pounds per day for a ten hour day at $570.00 per hour.

As always you will be invoiced for our actual costs so if our costs are lower than the estimates you will be invoiced the lower amount.

Thank you,

Ron Chamberlain
Highway Commissioner
La Crosse County Highway Department

CC: Joe C, File

MEMORANDUM

PUBLIC WORKS DEPARTMENT

TO: Board of Public Works

FROM: Jarrod Holter, City Engineer JH

DATE: March 25, 2014

CC:

RE: Purchase of fiber patching materials

One quote has been received for the purchase of fiber patching material, with another expected prior to the Board of Public Works meeting. The purchase of approximately 46,000 pounds of material (one semi-tractor load) is proposed. By purchasing directly the City has more control over the placement of the material and saves the tax costs. The following quotes were received:

- Sherwin Industries, Inc. $23,473($.510/lb)
- MidStates Equipment & Supply $23,230 ($.505/lb)

I would recommend MidStates Equipment for purchase of fiber patch material. This purchase will be funded from the 2014 Capital Improvements budget pavement maintenance item.

MIDSTATES
EQUIPMENT & SUPPLY

606 County Rd. #1
Mountain Lake, MN 56159
Tel. (507) 427-3807
Fax (507) 427-3709
Toll Free 1-800-929-3807

March 24, 2014

City of Onalaska
Attn: Jared Holter
415 Main Street
Onalaska, WI 54650

Dear Jared,

Thank you for giving us the opportunity to quote sealant for your asphalt maintenance needs. Listed below are the prices for the sealant you are interested in. The price listed includes freight to Onalaska, WI. **Keep in mind you will be responsible for sales tax in your own state.**

Right Point Poly Fiber EF

- 45,360 lbs. for **full** semi-load @ **$0.505/lb.** = **$22,906.80**

****Special Terms relating to the Hot Pour Sealant – Net 30 Days**. If the balances are not paid in full within 30 days, a 2% charge will be added to the invoice totals. Again this year we are being charged from our Material manufacturers a 2% fee if our invoices are not paid in full within 30 days, therefore we are passing it on to our customers as well. Please notify your Accounting Dept. so they are aware of the following terms.

TERMS: Owner agrees that all payments required under this Contract shall be due and payable within 30 days of date of invoice. Owner further agrees that Midstates Equipment & Supply may charge interest at the annual rate of eighteen percent (18%), unless a lesser percentage is required by law on any sum due under this Contract which is not paid within 30 days of invoice date. If payments are not made when due, interest, costs incidental to collection and attorney's fees (if any attorney is retained for collection) shall be added to the unpaid balance. Midstates Equipment & Supply reserves the right, without penalty from Owner, to stop service or shipment if the Owner does not make payments to Midstates Equipment & Supply when due.
This Proposal/Contract may be withdrawn by Midstates Equipment & Supply if not accepted within 30 days, or at anytime, subject to increases related to material prices as noted above.

Sherwin Industries, Inc. 2129 West Morgan Avenue Milwaukee, WI 53221 Phone: 414-281-6400 Fax: 414-281-0691	***Proposal***	**Date:** March 26, 2013

QUOTED TO:	**JOB DESIGNATION:**
Attn: Jarrod **City of Onalaska** **252 Mason Street** **Onalaska, WI 54650**	
Contact Name: Jarrod	**Project Start Date:**
Phone: 608-781-9537 or 608-780-2167	**Shipment Completion Date:**
Fax:	**Bid Date:**
Email: jholter@cityofonalaska.com	**Bid #: N/A**
Ship To:	**Duration of Quote: 30 Days**
Onalaska, WI	**F.O.B.: Ship point**
	Payment Terms: Net 30
	Quoted By: Randy S. Jackson

Description	**Quantity**	**Unit**	**Price**	**Extension Price**	**Terms**
34250: Polyfiber	45,000	LBS	$0.4755	$21,397.50	Net 30 days
Estimated Freight	1	TL	$1,6000.00	$1,600.00	Net 30 days

Estimated time of shipment: Quoted at time of order

→ .5103/lb

Comments:

1. Pricing and availability subject to change without notice
2. Pounds are approximate – actual pounds will depend on actual amount shipped.
3. All pricing plus freight.

Sherwin Industries, Inc.

Randy S. Jackson

Randy S. Jackson
Vice President

MEMORANDUM

PUBLIC WORKS DEPARTMENT

TO: Board of Public Works

FROM: Jarrod Holter, City Engineer JH

DATE: March 25, 2014

CC:

RE: Saw & seal expansion joints

Staff is requesting new paving within the City have joints sawed and sealed upon completion of the paving. Fahrner Asphalt Sealers is the only provider of this service. They have quoted a price of $2.15 per foot of saw & seal. Approximately 7,500 lineal feet will be performed at a cost of $16,125. Saw Seal will be funded out of the 2014 Capital Improvements fund for each respective street project. Please contact me if you have any further questions.

PROPOSAL / CONTRACT

Job. No. _____

Date: February 17, 2014

FAHRNER asphalt sealers llc

Pavement Maintenance Contractors

"An Equal Opportunity Employer"

Plover, WI 54467 • 2800 Mecca Drive
1.800.332.3360 • 715.341.2868 • Fax: 715.341.1054

Kaukauna, WI 54130 • 860 Eastline Road
1.800.261.1900 • 920.759.1008 • Fax: 920.759.1019

Eau Claire, WI 54702 • 6615 US Hwy 12
1.800.497.4907 • 715.874.6070 • Fax: 715.874.6717

316 Raemisch Road • Waunakee, WI 53597
Fax: 608.849.6470 • 608.849.6466 • 1.800.898.2102

3468 115th Street • Frederic, WI 54837
Fax: 715.653.2553 • 715.653.2535 • 1.800.497.4907

2224 Veterans Memorial Pkwy • Saginaw, MI 48601
Fax: 989.752.9205 • 989.752.9200

Contact Name:	JARROD HOLTER	**Cash Price**	T.B.D.
PURCHASER:	CITY OF ONALASKA	**TELEPHONE:**	(608) 781-9537
ADDRESS:	415 MAIN ST ONALASKA, WI 54650	**DESCRIPTION OF PROPERTY:**	Various Streets (Saw & Seal) 415 MAIN ST ONALASKA WI 54650 JARROD HOLTER Phone: (608) 781-9537

1. **FAHRNER Asphalt Sealers, L.L.C. (CONTRACTOR) and PURCHASER agree that, CONTRACTOR shall furnish the labor and materials to complete certain construction in accordance with the following specifications:**

Construct expansion joints as per Mn DOT specs.

Final cost based on total number of linear feet.

0-7,500' $2.65/L.F.
7,500'- plus $2.15/L.F.

NOTE: This is assuming that prevailing wages do not apply.

This proposal may be withdrawn if not accepted and received by CONTRACTOR within 90 days of the date above and/ or at any time before performance of the work hereunder upon CONTRACTOR'S determination that the PURCHASER is not creditworthy.

2. **If proposal is accepted please sign, retain one copy and forward a copy to our office.**
3. The undersigned ("PURCHASER") agrees to pay CONTRACTOR the total price of T.B.D. and/or the unit prices specified above for the labor and materials specified above which payment shall be due upon completion of each stage of work. PURCHASER acknowledges that the specifications, conditions and price quotes specified above are satisfactory and hereby accepted.

Acceptance of this Proposal includes acceptance of all the terms and conditions on back.

CONTRACTOR:
Fahrner Asphalt Sealers, LLC:

Fred Brown
(PRINT OR TYPE NAME)

By: _____
(CONTRACTOR REPRESENTATIVE)

Date: February 17, 2014

PURCHASER:
I have read and understand the terms and conditions on both sides of this contract.

_____
(PRINT OR TYPE NAME)

By: _____
(PURCHASER AUTHORIZED REPRESENTATIVE)

Date of acceptance: _____

MEMORANDUM

PUBLIC WORKS DEPARTMENT

TO: Board of Public Works

FROM: Jarrod Holter, City Engineer JH

DATE: March 25, 2014

CC:

RE: 2014 centerline painting

Two quotes were received for the 2014 centerline painting of City streets from Fahrner Asphalt Sealers, Inc. and Twin City Striping. The following prices were received:

- Fahrner Asphalt Sealers, Inc. striping $.0.069 / lf
- Twin City Striping striping $0.070 / lf

With the two quotes received I would recommend awarding the quote to Fahrner Asphalt Sealers for the 2014 striping work at the above quoted price per lineal foot painted. It is anticipated that approximately 180,000 lineal feet of painting, with 2nd mobilization charge, will be installed at a cost of $12,720. This work will be funded from Street Department contractual services account.

PROPOSAL / CONTRACT

Job. No. _____ **Date:** February 17, 2014

FAHRNER asphalt sealers llc

Pavement Maintenance Contractors

"An Equal Opportunity Employer"

Plover, WI 54467 • 2800 Mecca Drive
1.800.332.3360 • 715.341.2868 • Fax: 715.341.1054

Kaukauna, WI 54130 • 860 Eastline Road
1.800.261.1906 • 920.759.1008 • Fax: 920.759.1019

Eau Claire, WI 54702 • 6615 US Hwy 12
1.800.497.4907 • 715.874.6070 • Fax: 715.874.6717

316 Raemisch Road • Waunakee, WI 53597
Fax: 608.849.6470 • 608.849.6466 • 1.800.898.2102

3468 115th Street • Frederic, WI 54837
Fax: 715.653.2553 • 715.653.2535 • 1.800.497.4907

2224 Veterans Memorial Pkwy • Saginaw, MI 48601
Fax: 989.752.9205 • 989.752.9200

Contact Name:	JARROD HOLTER	**Cash Price**	T.B.D.
PURCHASER:	CITY OF ONALASKA	**TELEPHONE:**	(608) 781-9537
ADDRESS:	415 MAIN ST ONALASKA, WI 54650	**DESCRIPTION OF PROPERTY:**	Long Line Painting 415 MAIN ST ONALASKA WI 54650 JARROD HOLTER Phone: (608) 781-9537

1. FAHRNER Asphalt Sealers, L.L.C. (CONTRACTOR) and PURCHASER agree that, CONTRACTOR shall furnish the labor and materials to complete certain construction in accordance with the following specifications:

   Repaint approximately ~~225,000~~ 180,000 L.F. of centerline on city streets. ok 3-25-14

   Final cost will be based on total number of lineal feet painted at a rate of $0.069/L.F. per FREDE FAHRNER

   Note: Includes cones (where required), traffic control, and trailing vehicle (where required).

   NOTE: ADD $300 TRIP CHARGE FOR 2ND MOBILIZATION AFTER CHIPSEAL

This proposal may be withdrawn if not accepted and received by CONTRACTOR within 90 days of the date above and/or at any time before performance of the work hereunder upon CONTRACTOR'S determination that the PURCHASER is not creditworthy.

2. If proposal is accepted please sign, retain one copy and forward a copy to our office.
3. The undersigned ("PURCHASER") agrees to pay CONTRACTOR the total price of T.B.D. and/or the unit prices specified above for the labor and materials specified above which payment shall be due upon completion of each stage of work. PURCHASER acknowledges that the specifications, conditions and price quotes specified above are satisfactory and hereby accepted.

Acceptance of this Proposal includes acceptance of all the terms and conditions on back.

CONTRACTOR:
Fahrner Asphalt Sealers, LLC:

Fred Brown
(PRINT OR TYPE NAME)

By: _____
(CONTRACTOR REPRESENTATIVE)

Date: February 17, 2014

PURCHASER:
I have read and understand the terms and conditions on both sides of this contract.

_____
(PRINT OR TYPE NAME)

By: _____
(PURCHASER AUTHORIZED REPRESENTATIVE)

Date of acceptance: _____

QUOTATION

TWIN CITY STRIPING

1846 110th Street S.E.
Delano, MN. 55328
952-955-3303
Fax: 952-955-3302

SUBMITTED TO: ONALASKA WI	DATE: 3-17-14
STREET: 415 MAIN ST	LETTING:
CITY, STATE and ZIP CODE: ONALASKA WI 54650	JOB LOCATION: CITY STREETS
PHONE: 608-781-9537 FAX: 781-9506	JOB NUMBER:

WE ARE PLEASED TO QUOTE THE FOLLOWING PRICES

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT $ PRICE	$ AMOUNT
	STRIPING				
	YELLOW OR WHITE				
	LINES	200,000	L.F.	.07	
	ATTN				
	JARROD HOLTER P.E.				
				TOTAL AMOUNT	

SIGNATURE: Wayne A Jones

TITLE: OWNER

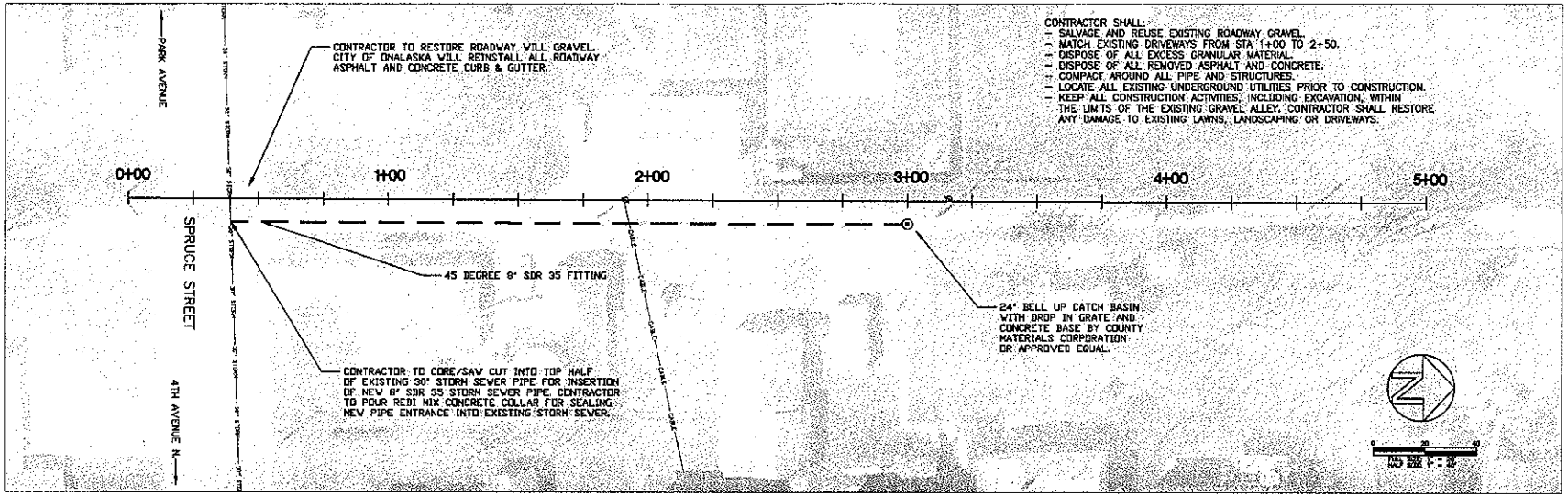
STAFF REVIEW SUMMARY

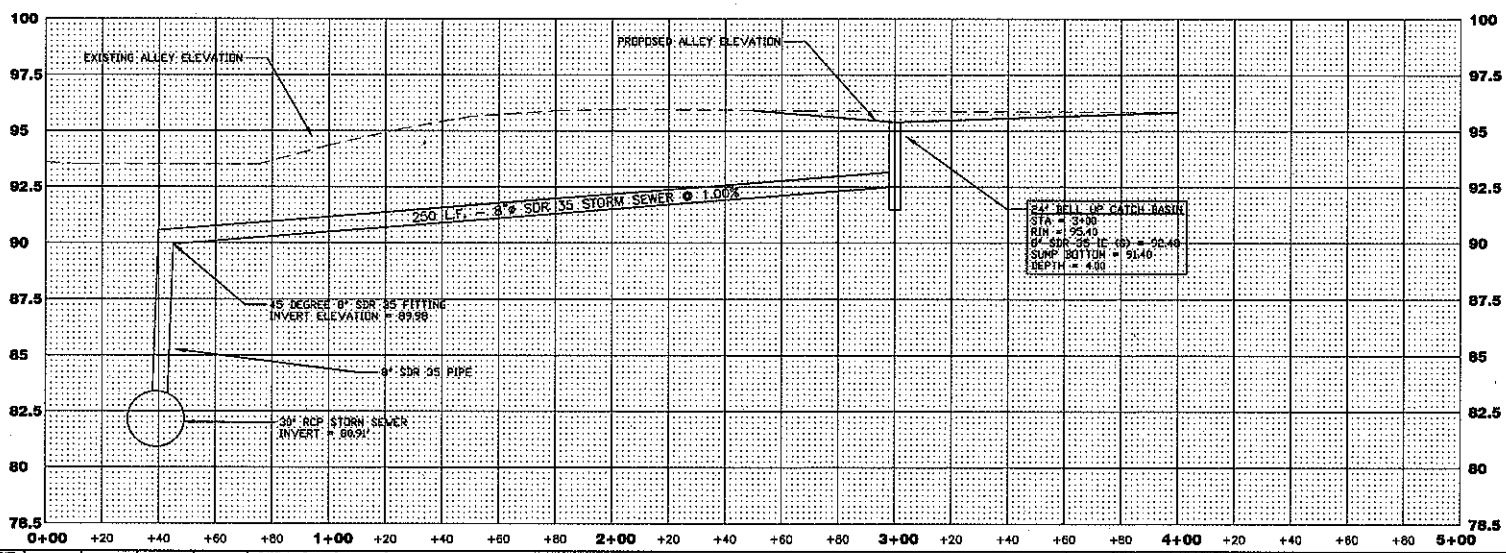
CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #9

Project/Item Name:	Storm sewer inlet install Spruce Street alley
Location:	Between Spruce St. and Troy St. from Park Ave. to 4th Ave. No.
Requested Action:	Approval of inlet installation
Staff Report/Description:	Quotes for this work will be received until March 28, 2014. Tabulation of quotes received will be handed out at the meeting. This area has experienced drainage problems for many years due to low spot with no natural drainage. Funding for this project was included within the 2014 Capital Improvements budget.
Attachments:	Plan sheet





REVISIONS	REV. DATE	DRAWN	DESIGN	CHECKED
		KJS	KJS	CJH
		3/21/14	3/21/14	3/21/14

CITY OF ONALASKA
ENGINEERING DEPARTMENT
415 MAIN STREET, ONALASKA, WISCONSIN, 54650
TELEPHONE: (608) 781-9537, FAX: (608) 781-9506

SPRUCE STREET ALLEY
BETWEEN PARK AVE & 4TH AVE N

PLAN & PROFILE (STA 0+00 - STA 5+00)

SHEET 1 / 1

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #10

Project/Item Name: 2014 Spring Tree Planting Project

Location: Various

Requested Action: Approval of bid

Staff Report/Description: This project includes boulevard tree replacement, cemetery planting and planting along East Main Street. Staff is recommending award of base bid only.

Attachments: Bid tabulation

CITY OF ONALASKA BID OPENING
For

2014 Spring Tree Planting Project

Due Date / Opening: Tuesday, March 25th, 2014 @ 11:00 AM

Company	Bidders Proof	Bid Bond	Base Bid Amount	Alt #1	Alt #2
WINONA NURSERY	X	X	$45,260.00	$4,500.00	$9,000.00
TREES TODAY	X	X	$48,258.00	$12,510.00	$31,320.00
KREIBICH LANDSCAPING	X	X	$39,235.00	$7,920.00	$14,940.00
RIVER CITY LAWNSCAPE	X		$52,162.50	$17,820.00	$38,640.00

RECOMMEND AWARD BID TO: _____

MW: vb/p/z-bidopenspringtreeplanting

BID TABULATION
CITY OF ONALASKA 2014 SPRING TREE PLANTING PROJECT

PART A - CITYWIDE BOULEVARD PLANTING

Botanical Name	Common Name	Unit	Total Units	KREIBICH LANDSCAPING Unit Cost	KREIBICH LANDSCAPING Total Cost	WINONA NURSERY Unit Cost	WINONA NURSERY Total Cost	TREES TODAY Unit Cost	TREES TODAY Total Cost	RIVER CITY Unit Cost	RIVER CITY Total Cost
Ulmus 'Regal'	Elm, Regal	each	1	$ 312.00	$ 312.00	$ 400.00	$ 400.00	$ 385.00	$ 385.00	$ 406.25	$ 406.25
Tilia tomentosa 'Sterling'	Linden, Sterling Silver	each	1	$ 280.00	$ 280.00	$ 400.00	$ 400.00	$ 370.00	$ 370.00	$ 487.50	$ 487.50
Gymnocladus dioicus	Coffeetree, Kentucky	each	2	$ 355.00	$ 710.00	$ 380.00	$ 760.00	$ 430.00	$ 860.00	$ 536.25	$ 1,072.50
Cercis	Redbud	each	3	$ 346.00	$ 1,038.00	$ 400.00	$ 1,200.00	$ 450.00	$ 1,350.00	$ 536.25	$ 1,608.75
Phellodendron amurense	Cork Tree, Amur (Male)	each	2	$ 280.00	$ 560.00	$ 400.00	$ 800.00	$ 500.00	$ 1,000.00	$ 471.25	$ 942.50
Quercus bicolor	Oak, Swamp White	each	2	$ 374.00	$ 748.00	$ 380.00	$ 760.00	$ 385.00	$ 770.00	$ 471.25	$ 942.50
Ginkgo biloba	Gingko	each	1	$ 421.00	$ 421.00	$ 460.00	$ 460.00	$ 710.00	$ 710.00	$ 633.75	$ 633.75
Gleditsia triacanthos var. inermis 'Skyline'	Honeylocust, Skyline	each	1	$ 280.00	$ 280.00	$ 340.00	$ 340.00	$ 370.00	$ 370.00	$ 406.25	$ 406.25
Malus 'Sutyzam'	Crabapple, Sugar Tyme	each	2	$ 314.00	$ 628.00	$ 340.00	$ 680.00	$ 315.00	$ 630.00	$ 325.00	$ 650.00
Quercus palustris	Oak, Pin	each	2	$ 328.00	$ 656.00	$ 380.00	$ 760.00	$ 435.00	$ 870.00	$ 438.75	$ 877.50
				PART A SUBTOTAL =	$ 5,633.00		$ 6,560.00		$ 7,315.00		$ 8,027.50

PART B - LOCUST STREET PLANTING (Between 2nd Avenue N & 5th Avenue N)

Botanical Name	Common Name	Unit	Total Units	KREIBICH LANDSCAPING Unit Cost	KREIBICH LANDSCAPING Total Cost	WINONA NURSERY Unit Cost	WINONA NURSERY Total Cost	TREES TODAY Unit Cost	TREES TODAY Total Cost	RIVER CITY Unit Cost	RIVER CITY Total Cost
Quercus palustris	Oak, Pin	each	1	$ 328.00	$ 328.00	$ 380.00	$ 380.00	$ 430.00	$ 430.00	$ 438.75	$ 438.75
Malus 'Sutyzam'	Crabapple, Sugar Tyme	each	1	$ 314.00	$ 314.00	$ 340.00	$ 340.00	$ 315.00	$ 315.00	$ 325.00	$ 325.00
Quercus bicolor	Oak, Swamp White	each	1	$ 374.00	$ 374.00	$ 380.00	$ 380.00	$ 385.00	$ 385.00	$ 471.25	$ 471.25
Ginkgo biloba	Gingko	each	1	$ 421.00	$ 421.00	$ 460.00	$ 460.00	$ 710.00	$ 710.00	$ 633.75	$ 633.75
				PART B SUBTOTAL =	$ 1,437.00		$ 1,560.00		$ 1,840.00		$ 1,868.75

PART C - CEMETERY PLANTING

Botanical Name	Common Name	Unit	Total Units	KREIBICH LANDSCAPING Unit Cost	KREIBICH LANDSCAPING Total Cost	WINONA NURSERY Unit Cost	WINONA NURSERY Total Cost	TREES TODAY Unit Cost	TREES TODAY Total Cost	RIVER CITY Unit Cost	RIVER CITY Total Cost
Tilia tomentosa 'Sterling'	Linden, Sterling Silver	each	5	$ 250.00	$ 1,250.00	$ 400.00	$ 2,000.00	$ 370.00	$ 1,850.00	$ 487.50	$ 2,437.50
Ulmus 'Regal'	Elm, Regal	each	2	$ 282.00	$ 564.00	$ 360.00	$ 720.00	$ 385.00	$ 770.00	$ 406.25	$ 812.50
Pinus strobus	Pine, White	each	2	$ 290.00	$ 580.00	$ 310.00	$ 620.00	$ 360.00	$ 720.00	$ 341.25	$ 682.50

BID TABULATION
CITY OF ONALASKA 2014 SPRING TREE PLANTING PROJECT

PART C - CEMETERY PLANTING

Botanical Name	Common Name	Unit	Total Units	KREIBICH LANDSCAPING Unit Cost	KREIBICH LANDSCAPING Total Cost	WINONA NURSERY Unit Cost	WINONA NURSERY Total Cost	TREES TODAY Unit Cost	TREES TODAY Total Cost	RIVER CITY Unit Cost	RIVER CITY Total Cost
Syringa reticulata subsp. pekinensis	Lilac, China Snow Tree	each	3	$ 282.00	$ 846.00	$ 400.00	$ 1,200.00	$ 386.00	$ 1,158.00	$ 455.00	$ 1,365.00
Picea abies	Spruce, Norway	each	6	$ 290.00	$ 1,740.00	$ 310.00	$ 1,860.00	$ 360.00	$ 2,160.00	$ 341.25	$ 2,047.50
Celtis occidentalis	Hackberry, Common	each	3	$ 325.00	$ 975.00	$ 380.00	$ 1,140.00	$ 370.00	$ 1,110.00	$ 406.25	$ 1,218.75
Quercus palustris	Oak, Pin	each	4	$ 298.00	$ 1,192.00	$ 380.00	$ 1,520.00	$ 430.00	$ 1,720.00	$ 438.75	$ 1,755.00
Malus 'JFS-KW5'	Crabapple, Royal Raindrops	each	3	$ 284.00	$ 852.00	$ 330.00	$ 990.00	$ 300.00	$ 900.00	$ 325.00	$ 975.00
Acer saccharum	Maple, Sugar	each	4	$ 298.00	$ 1,192.00	$ 380.00	$ 1,520.00	$ 390.00	$ 1,560.00	$ 438.75	$ 1,755.00
Gleditsia triacanthos var. inermis 'Skyline'	Honeylocust, Skyline	each	3	$ 250.00	$ 750.00	$ 340.00	$ 1,020.00	$ 370.00	$ 1,110.00	$ 406.25	$ 1,218.75
				PART C SUBTOTAL =	$ 9,941.00		$ 12,590.00		$ 13,058.00		$ 14,267.50

PART D - LANDFILL SCREENING PLANTING (County OS / East Main Street)

Botanical Name	Common Name	Unit	Total Units	KREIBICH LANDSCAPING Unit Cost	KREIBICH LANDSCAPING Total Cost	WINONA NURSERY Unit Cost	WINONA NURSERY Total Cost	TREES TODAY Unit Cost	TREES TODAY Total Cost	RIVER CITY Unit Cost	RIVER CITY Total Cost
Celtis occidentalis	Hackberry, Common	each	5	$ 355.00	$ 1,775.00	$ 380.00	$ 1,900.00	$ 370.00	$ 1,850.00	$ 406.25	$ 2,031.25
Aesculus x carnea 'Briotii'	Horsechestnut, Ruby Red	each	4	$ 328.00	$ 1,312.00	$ 400.00	$ 1,600.00	$ 470.00	$ 1,880.00	$ 568.75	$ 2,275.00
Acer rubrum	Maple, Columnar Red	each	4	$ 312.00	$ 1,248.00	$ 380.00	$ 1,520.00	$ 385.00	$ 1,540.00	$ 487.50	$ 1,950.00
Tilia americana 'Sentry'	Linden, Sentry	each	2	$ 280.00	$ 560.00	$ 340.00	$ 680.00	$ 370.00	$ 740.00	$ 406.25	$ 812.50
Ulmus 'Frontier'	Elm, Frontier	each	3	$ 312.00	$ 936.00	$ 380.00	$ 1,140.00	$ 390.00	$ 1,170.00	$ 455.00	$ 1,365.00
Amelanchier x grandiflora 'Princess Diana'	Serviceberry, Princess Diana	each	7	$ 374.00	$ 2,618.00	$ 380.00	$ 2,660.00	$ 390.00	$ 2,730.00	$ 422.50	$ 2,957.50
Crataegus crus galli	Hawthorn, Cockspur	each	7	$ 280.00	$ 1,960.00	$ 340.00	$ 2,380.00	$ 340.00	$ 2,380.00	$ 325.00	$ 2,275.00
Pyrus ussuriensis 'Mordok'	Pear, Prairie Gem	each	5	$ 314.00	$ 1,570.00	$ 400.00	$ 2,000.00	$ 390.00	$ 1,950.00	$ 438.75	$ 2,193.75
Carpinus caroliniana	Hornbeam, American	each	3	$ 382.00	$ 1,146.00	$ 490.00	$ 1,470.00	$ 430.00	$ 1,290.00	$ 633.75	$ 1,901.25
Syringa reticulate 'Ivory Silk'	Lilac, Ivory Silk Tree	each	3	$ 355.00	$ 1,065.00	$ 380.00	$ 1,140.00	$ 385.00	$ 1,155.00	$ 455.00	$ 1,365.00
Picea abies	Spruce, Norway	each	7	$ 320.00	$ 2,240.00	$ 310.00	$ 2,170.00	$ 360.00	$ 2,520.00	$ 341.25	$ 2,388.75
Picea glauca var. densata	Spruce, Black Hills	each	13	$ 298.00	$ 3,874.00	$ 310.00	$ 4,030.00	$ 360.00	$ 4,680.00	$ 341.25	$ 4,436.25
Picea pungens	Spruce, Colorado Green	each	6	$ 320.00	$ 1,920.00	$ 310.00	$ 1,860.00	$ 360.00	$ 2,160.00	$ 341.25	$ 2,047.50
				PART D SUBTOTAL =	$ 22,224.00		$ 24,550.00		$ 26,045.00		$ 27,998.75
				PARTS A-D PROJECT TOTAL =	$ 39,235.00		$ 45,260.00		$ 48,258.00		$ 52,162.50

BID TABULATION
CITY OF ONALASKA 2014 SPRING TREE PLANTING PROJECT

BID ALTERNATE 1: FOUR MONTHS OF TREE CARE & MAINTENANCE

ITEM DESCRIPTION	Unit	Total Units	KREIBICH LANDSCAPING		WINONA NURSERY		TREES TODAY		RIVER CITY	
			Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
Four (4) months of Tree Care & Maintenance Activities as noted in Part 3 Standards Specifications for trees in Parts A, B, and D. The plant establishment period will run from tree installation through October 15, 2014.	each	90	$ 88.00	$ 7,920.00	50	$ 4,500.00	$ 139.00	$ 12,510.00	$ 198.00	$ 17,820.00
		BID ALTERANTE #1 TOTAL =		$ 7,920.00		$ 4,500.00		$ 12,510.00		$ 17,820.00

BID ALTERNATE 2: SIXTEEN (16) MONTHS OF TREE CARE & MAINTENANCE

ITEM DESCRIPTION	Unit	Total Units	KREIBICH LANDSCAPING		WINONA NURSERY		TREES TODAY		RIVER CITY	
			Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost
Sixteen (16) months of Tree Care & Maintenance Activities as noted in Part 3 Standards Specifications for trees in Parts A, B, and D. The plant establishment period will run from tree installation through October 15, 2014 and May 15 – October 15, 2015.	each	90	$ 166.00	$ 14,940.00	100	$ 9,000.00	$ 348.00	$ 31,320.00	$ 429.00	$ 38,610.00
		BID ALTERANTE #2 TOTAL =		$ 14,940.00		$ 9,000.00		$ 31,320.00		$ 38,610.00

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #11

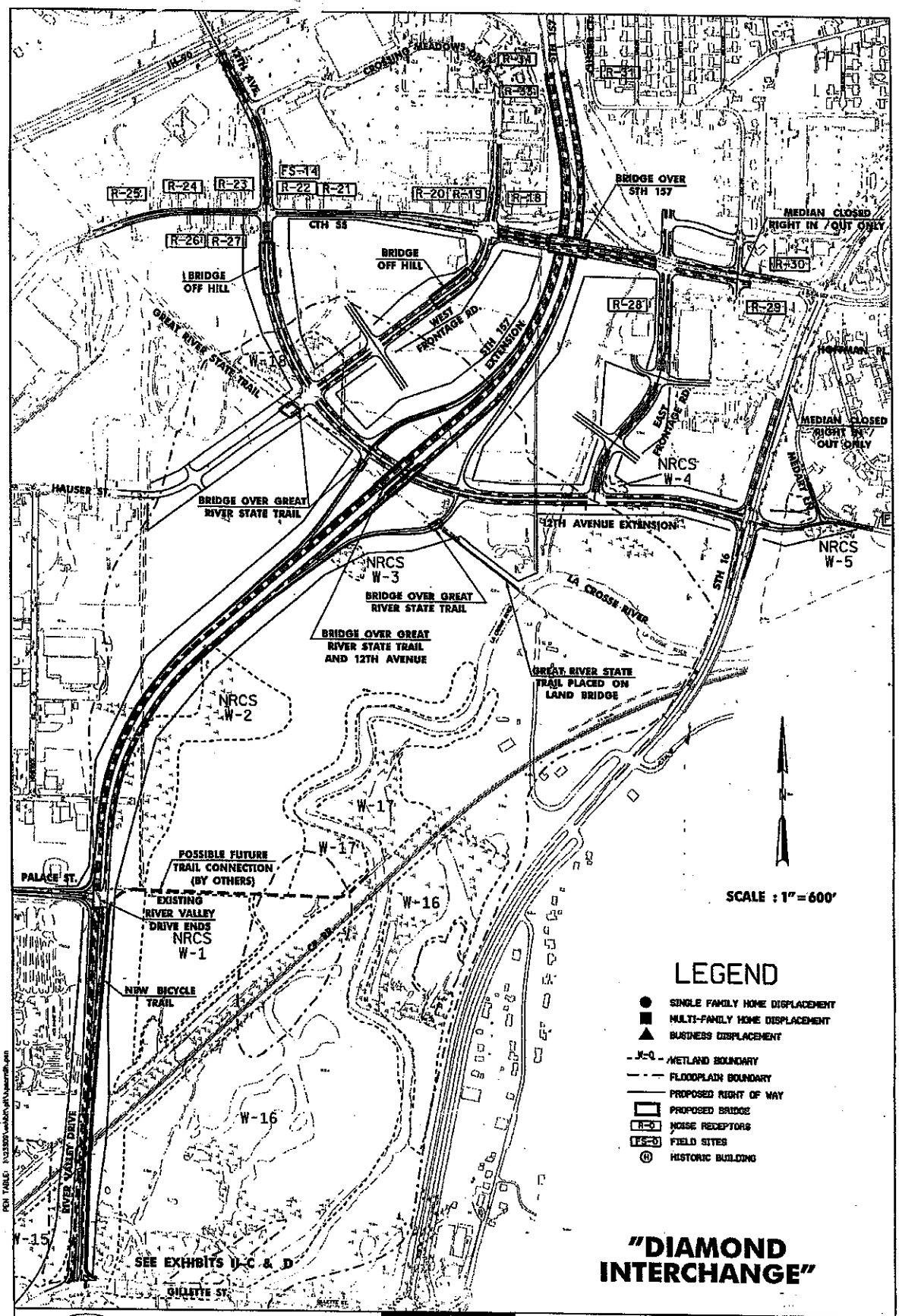
Project/Item Name: USH 53 / 12th Avenue extension

Location: 12th Avenue and SS

Requested Action: Discussion on proposed project

Staff Report/Description: The Wisconsin Department of Transportation has brought forward a transportation study looking at the extension of 12th Avenue south as a part of a larger project connecting STH 157 to CTH B. Discussion of impacts to City of Onalaska should be discussed.

Attachments: map



"DIAMOND INTERCHANGE"

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

HNTB

CH2M HILL & TEM, INC.

CITY OF LA CROSSE WISCONSIN

ALTERNATIVES 4A, 4B, 5B-1&5B-2

IH-90 TO GILLETTE ST.

EXHIBIT II-A

FILE NAME: P:\33509\23\ca\Ca4a2a.dgn
RCH TABLE: P:\33509\wkbk\rwh\layerrdh.pen
Time: 17-SEP-1997 15:18
Plotted by: BPlum

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #12

Project/Item Name:	MS4 stormwater permit
Location:	Various
Requested Action:	Approval of stormwater annual report
Staff Report/Description:	Each year an annual report must be approved by the Common Council and then submitted to the Wis. DNR. Current activities outlined in the annual report satisfy mandated stormwater regulations.
Attachments:	MS4 Annual Report

CITY OF ONALASKA

415 MAIN STREET
ONALASKA, WISCONSIN 54650-2953
www.cityofonalaska.com

Engineering/Public Works Dept.
PHONE: (608) 781-9537
FAX: (608) 781-9506

March 25, 2014

Roberta Walls
Storm Water Management Specialist
West Central Region – La Crosse Service Center
Wisconsin Department of Natural Resources
3550 Mormon Coulee Road
La Crosse, WI 54601

RE: 2013 Annual Report under MS4 General Permit No. WI-S050075-1

Dear Ms. Walls:

Enclosed is the Annual Report for Reporting Year 2013. This report references the City of Onalaska's Storm Water Quality Management Plan (December 2008). The Storm Water Quality Management Plan has been previously submitted to the DNR.

Please review the enclosed at your earliest convenience and if you have any questions please feel free to contact me at kschubert@cityofonalaska.com or 608-781-9537.

Sincerely,

Kevin Schubert, P.E.
Assistant City Engineer

State of Wisconsin
Department of Natural Resources
dnr.wi.gov

Annual Report under MS4 General Permit No. WI-S050075-1

Form 3400-195 (R 12/13)

Due by March 31, 2014

Notice: Pursuant to s. NR 216.07(8), Wis. Adm. Code, an owner or operator of a Municipal Separate Storm Sewer System (MS4) is required to submit an annual report to the Department of Natural Resources (DNR) by March 31 of each year to report on activities for the previous calendar year. This form is being provided by the DNR for the user's convenience. Personal information collected will be used for administrative purposes and may be provided to the extent required by Wisconsin's Open Records Law [ss. 19.31-19.39, Wis. Stats.].

This form is for reporting on activities undertaken in calendar year 2013.

Instructions: Complete each section of the form that follows. If additional space is needed to respond to a question, attach additional pages. Provide descriptions that explain the program actions taken to comply with the general permit. Complete and submit the annual report by March 31, 2014, to the appropriate address indicated on the last page of this form.

SECTION I. Municipal Information

Name of Municipality			Facility ID No. (FIN)
City of Onalaska			31067
Mailing Address	**City**	**State**	**ZIP Code**
415 Main Street	Onalaska	WI	54650
County(s) in which Municipality is located	**Municipality Type: (select one)**		
La Crosse	○ County ◉ City ○ Village ○ Town ○ Other (specify)		

SECTION II. Municipal Contact Information

Name of Municipal Contact Person		Title	
Kevin Schubert		Assistant City Engineer	
Mailing Address	**City**	**State**	**ZIP Code**
415 Main Street	Onalaska	WI	54650
Email	**Phone Number (include area code)**	**Fax Number (include area code)**	
kschubert@cityofonalaska.com	(608) 781-9537		

SECTION III. Certification

I hereby certify that I am an authorized representative of the municipality covered under MS4 General Permit No. WI-S050075-1 for which this annual report is being submitted and that the information contained in this document and all attachments were gathered and prepared under my direction or supervision. Based on my inquiry of the person or persons under my direction or supervision involved in the preparation of this document, to the best of my knowledge, the information is true, accurate, and complete. I further certify that the municipality's governing body or delegated representatives have reviewed or been apprised of the contents of this annual report. I understand that Wisconsin law provides severe penalties for submitting false information.

Authorized Representative Printed Name	Authorized Representative Title	
Kevin Schubert	Assistant City Engineer	
Signature of Authorized Representative	**Date**	
KS	3-25-14	
Email	**Phone Number (include area code)**	**Fax Number (include area code)**
kschubert@cityofonalaska.com	(608) 781-9537	(608) 781-9506

SECTION IV. General Information

a. Describe what efforts the municipality has undertaken to invite the municipal governing body, interest groups, and the general public to review and comment on the annual report.

See Attachment

b. Describe how elected and municipal officials and appropriate staff have been kept apprised of the municipal storm water discharge permit and its requirements.

See Attachment

c. Has the municipality prepared its own municipal-wide storm water management plan? ◉ Yes ○ No

If yes, title and date of storm water management plan:

City of Onalaska Storm Water Quality Management Plan and Appendixes (December 2008), City of Onalaska Erosion Control and Storm Water Management Requirements (December 2008)

SECTION IV. General Information (continued)

d. Has the municipality entered into a written agreement with another municipality or a contract with another entity to perform one or more of the conditions of the general permit as provided under Section 2.10 of the general permit? ◉ Yes ◯ No

If yes, describe these cooperative efforts:

See Attachment

e. Does the municipality have an internet website? ◉ Yes ◯ No

If yes, provide web address:
www.cityofonalaska.com

If the municipality has an internet website, is there current information about or links provided to the MS4 general permit and/or the municipality's storm water management program? ◉ Yes ◯ No

If yes, provide web address:
http://www.cityofonalaska.com - then Departments & Services, Storm Water Management & Erosion Control

SECTION V. Permit Conditions

a. Minimum Control Measures: For each of the permit conditions listed below, provide a description of the status of implementation of program elements, the status of meeting measurable goals, and compliance with permit schedule in section 3 of the MS4 general permit. Provide an evaluation of program compliance with the general permit, the appropriateness of identified best management practices, and progress towards achieving identified measurable goals. Be specific in describing the actions that have been taken during the reporting year to implement each permit condition and whether measurable goals have been met, including any data collected to document a measurable goal. Also, explain the reasons for any variations from the compliance schedule in the MS4 general permit.

- Public Education and Outreach

  See attachment

- Public Involvement and Participation

  See attachment

- Illicit Discharge Detection and Elimination

  See attachment

- Construction Site Pollutant Control

  See attachment

- Post-Construction Storm Water Management

  See attachment

- Pollution Prevention

  See attachment

b. Storm Water Quality Management: Has the municipality completed a pollutant-loading analysis to assess compliance with the 20% TSS reduction developed urban area performance standard? ◉ Yes ◯ No

If yes, provide the following: Model used WinSlamm Version 9.4.0 Reduction (%) 19.76

If no, include a description of any actions the municipality has undertaken during 2013 to help achieve the 20% standard.

Has the municipality completed an evaluation of all municipal owned or operated structural flood control facilities to determine the feasibility of retrofitting to increase TSS removal? ◉ Yes ◯ No

If yes, describe:
Refer to Onalaska Storm Water Quality Management Plan

SECTION V. Permit Conditions (continued)

c. Best Management Practices Maintenance: Does the municipality have a maintenance program for installed storm water best management practices? ◉ Yes ◯ No

If yes, describe the maintenance program and any maintenance activities that have occurred for best management practices in 2013. If available, attach any additional information on the maintenance program.

Refer to Onalaska Storm Water Quality Management Plan

d. Storm Sewer System Map: Describe any changes or updates to the storm sewer system map made in the reporting year. Provide an updated map if any changes occurred during the reporting year.

Added infrastructure on Marcou Road, Sand Lake Road, and Abbey Road.

SECTION VI. Fiscal Analysis

a. Provide a fiscal analysis that includes the annual expenditures for 2013, and the budget for 2013 and 2014. A table to document fiscal information is provided on page 5.

b. What financing/fiscal strategy has the municipality implemented to finance the requirements of the general permit?

☒ Storm water utility ☐ General fund ☐ Other _____

c. Are adequate revenues being generated to implement your storm water management program to meet the permit requirements? ◉ Yes ◯ No

Please provide a brief summary of your financing/fiscal strategy and any additional information that will assist the Department in understanding how storm water management funds are being generated to implement and administer your storm water management program.

See attachment and table

SECTION VII. Inspections and Enforcement Actions

Note: If an ordinance listed below has previously been submitted and has not been amended since that time, a copy does not need to be submitted again. If the ordinance was previously submitted, indicate such in the space provided.

a. As of the date of this annual report, has the municipality adopted a construction site pollutant control ordinance in accordance with subsection 2.4.1 of the general permit? ◉ Yes ◯ No If yes, attach copy or provide web link to ordinance:

http://www.cityofonalaska.com - then City Government, Code of Ordinances, Title 15 Building Codes

b. As of the date of this annual report, has the municipality adopted a post-construction storm water management ordinance in accordance with subsection 2.5.1 of the general permit? ◉ Yes ◯ No If yes, attach copy or provide web link to ordinance:

http://www.cityofonalaska.com - then City Government, Code of Ordinances, Title 6 Public Works

c. As of the date of this annual report, has the municipality adopted an illicit discharge detection and elimination ordinance in accordance with subsection 2.3.1 of the general permit? ◉ Yes ◯ No If yes, attach copy or provide web link to ordinance:

http://www.cityofonalaska.com - then City Government, Code of Ordinances, Title 6 Public Works

d. As of the date of this annual report, has the municipality adopted any other ordinances it has deemed necessary to implement a program under the general permit (e.g., pet waste ordinance, leaf management/yard waste ordinance, parking restrictions for street cleaning, etc.)? ◯ Yes ◉ No If yes, attach copy or provide web link to ordinance:

e. Provide a summary of available information on the number and nature of inspections and enforcement actions conducted during the reporting period to ensure compliance with the ordinances described in a. to d. above.

See attachment

SECTION VIII. Water Quality Concerns

a. Does any part of the MS4 discharge to an outstanding resource water (ORW) or exceptional resource water (ERW) listed under s. NR 102.10 or 102.11, Wis. Adm. Code? (A list of ORWs and ERWs may be found on the Department's Internet site at: http://dnr.wi.gov/topic/SurfaceWater/orwerw.html) ○ Yes ◉ No If yes, list:

b. Does any part of the MS4 discharge to an impaired waterbody listed in accordance with section 303(d)(1) of the federal Clean Water Act, 33 USC § 1313(d)(1)(C)? (A list of the most current Wisconsin impaired waterbodies may be found on the Department's Internet site at: http://dnr.wi.gov/water/impairedsearch.aspx?status=303d) ◉ Yes ○ No If yes, complete the following:

- Impaired waterbody to which the MS4 discharges:
  Black River, La Crosse River, and Mississippi River
- Description of actions municipality has taken to comply with section 1.5.2 of the MS4 general permit for discharges of pollutant(s) of concern to an impaired waterbody:
  Refer to City of Onalaska Storm Water Quality Management Plan (December 2008)

c. Identify any known water quality improvements in the receiving water to which the MS4 discharges during the reporting period.

d. Identify any known water quality degradation in the receiving water to which the MS4 discharges during the reporting period and what actions are being taken to improve the water quality in the receiving water.

SECTION IX. Proposed Program Changes

Describe any proposed changes to the storm water management program being contemplated by the municipality for 2014 and the schedule for implementing those changes. Proposed program changes must be consistent with the requirements of the general permit.

No proposed changes for 2014

31067 City of Onalaska
FIN / Municipality Name

Annual Report under MS4
General Permit No. WI-S050075-1
Form 3400-195 (R 12/13)

Fiscal Analysis Table. Complete the fiscal analysis table provided below.

Program Element	Annual Expenditure 2013	Budget 2013	Budget 2014	Source of Funds
Public Education and Outreach	1,193	3,693	2,946	Storm Water Utility
Public Involvement and Participation	1,208	1,221	1,233	Storm Water Utility
Illicit Discharge Detection and Elimination	1,779	1,797	1,774	Storm Water Utility
Construction Site Pollutant Control	16,206	16,370	16,714	Storm Water Utility
Post-Construction Storm Water Management	14,779	14,929	14,881	Storm Water Utility
Pollution Prevention	340,585	322,614	326,227	Storm Water Utility
Storm Water Quality Management (including pollutant-loading analysis)	0	0	0	
Storm Sewer System Map	4,988	5,038	3,950	Storm Water Utility
Other:	46,378	43,725	46,918	Storm Water Utility / Administrative

NORTHERN REGION COUNTIES		
Ashland	Langlade	DNR Service Center
Barron	Lincoln	Attn: Storm Water Program
Bayfield	Oneida	5301 Rib Mountain Rd.
Burnett	Polk	Wausau, WI 54401
Douglas	Price	Phone: (715) 359-4522
Florence	Rusk	
Forest	Sawyer	
Iron	Taylor	
	Vilas	
	Washburn	

WEST CENTRAL REGION COUNTIES		
Adams	Marathon	DNR Service Center
Buffalo	Monroe	Attn: Storm Water Program
Chippewa	Pepin	5301 Rib Mountain Rd.
Clark	Pierce	Wausau, WI 54401
Crawford	Portage	Phone: (715) 359-4522
Dunn	St. Croix	
Eau Claire	Trempealeau	
Jackson	Vernon	
Juneau	Wood	
La Crosse		

NORTHEAST REGION COUNTIES		
Brown	Marquette	DNR Northeast Region
Calumet	Menominee	Attn: Storm Water Program
Door	Oconto	2984 Shawano Ave.
Fond du Lac	Outagamie	Green Bay, WI 54313
Green Lake	Shawano	Phone: (920) 662-5100
Kewaunee	Waupaca	
Manitowoc	Waushara	
Marinette	Winnebago	

SOUTH CENTRAL REGION COUNTIES		
Columbia	Jefferson	DNR South Central Region
Dane	LaFayette	Attn: Storm Water Program
Dodge	Richland	3911 Fish Hatchery Rd.
Grant	Rock	Fitchburg, WI 53711
Green	Sauk	Phone: (608) 275-3266
Iowa		

SOUTHEAST REGION COUNTIES		
Kenosha	Sheboygan	DNR Service Center
Milwaukee	Walworth	Attn: Storm Water Program
Ozaukee	Washington	141 NW Barstow Street,
Racine	Waukesha	Room 180
		Waukesha, WI 53188
		(262) 574-2100

Appendix A
General Information

Section IV.a. The City of Onalaska will make this Annual Report available for review by the general public at the Engineering Department at City Hall. Copies of this Annual Report have been distributed to the Mayor and Alderpersons.

It shall be announced at the April 1st meeting of the Board of Public Works that this Annual Report will be available to the general public and a link will be placed on the City's website.

Section IV.b. Due to the significance of capital costs associated with storm water projects as well as yearly operating costs, elected and municipal officials are highly aware of City of Onalaska's general permit requirements.

Copies of the Storm water Management Plan were distributed to the Mayor and Alderpersons in 2008 and are currently available for viewing at the Engineering Department at City Hall. Directions on how to obtain a copy of the plan are also available on the City's website.

Section IV.d. The City of Onalaska Common Council passed Resolution 20-2007, authorizing the City of Onalaska to participate in a joint storm water grant application and joint public education effort with other participating municipalities in La Crosse County.

Representatives from the City of Onalaska Engineering Department attend group meetings at the La Crosse County/UW-Extension Building to coordinate group efforts. The group's 2013 efforts included the ongoing work to focus on the Public Education and Outreach & Public Involvement and Participation

- Newground made upgrades/updates to the website ***LaCrosseWaters.org*** dedicated to public education and outreach efforts in La Crosse County
- The website contains links to the City of Onalaska's website for home owners, contractors, and developers looking for permit information in the City of Onalaska
- efforts for 2013 continued to focus on getting storm water/permitting information to builders and developers

Appendix B
Permit Conditions

Section V.a. Public Education & Outreach

See attached Appendix A.

Also refer to Table 3.02-1 of the City of Onalaska *Storm Water Quality Management Plan (December 2008).*

- Activity 1 was completed December 2, 2008.
- Activity 2 will be completed April 8, 2014.
- Activity 3 was completed in 2008. Materials are currently available in City Hall Engineering and Inspection Departments.
- Activity 4 was ongoing in 2013
- Activity 5 was ongoing in 2013
- Activity 9 was ongoing in 2013
- Activity 10 was ongoing in 2013
- Activity 11 was ongoing in 2013

Public Involvement & Participation

See attached Appendix A.

Also refer to Table 3.02-2 of the City of Onalaska *Storm Water Quality Management Plan (December 2008).*

- All public meetings were given public notice in 2013 (Activity 1)
- Resident concerns can now be accessed via a Public Input Form as seen on the City of Onalaska Website. This was implemented in 2008 and is ongoing (Activity 2).
- Activity 3 will be completed April 8, 2014.
- Activity 4 is ongoing.

Illicit Discharge Detection and Elimination Plan

See Table 3.02-5 of the City of Onalaska *Storm Water Quality Management Plan (December 2008).*

- Activity 1 was completed in 2008.
- Activity 2 was completed in 2009. No illicit discharges were found. Prior discharges attributed to snowmelt.
- Activity 3 was completed in 2009.
- Activity 4 was ongoing in 2013.
- Activity 5 was ongoing in 2013.

Appendix B
Permit Conditions

Construction Site Pollution Control

See Table 3.02-6 of the City of Onalaska *Storm Water Quality Management Plan (December 2008).*

- Activity 1 was ongoing in 2013
- Activity 2 completed in 2008.
- Conducted 150 residential erosion control site inspections and issued numerous phone calls, letters and emails regarding enforcement of the permits issued.
- Commercial erosion control inspector conducted 392 erosion control inspections during 2013 that totaled 249 hours of inspection time. Duties included on-site inspections, plan review, field notes, letters, emails, phone calls, and public inquiries.

Post-Construction Storm Water Management

See Table 3.02-7 of the City of Onalaska *Storm Water Quality Management Plan (December 2008).*

- Activity 1 was ongoing in 2013
- Activity 2 was completed in 2008.
- Activity 3 was completed in 2013. 2 storm water management permits issued in 2013 along with 50 erosion control permits. Staff performed reviews for other sites, but these reviews were either still ongoing or the developments did not move forward.
- Activity 4 is ongoing for all permits issued. All permitted construction sites received routine inspections by City personnel on commercial properties in 2013. Inspections involved having contractor take corrective actions for storm water-related issues.

Pollution Prevention

See Table 3.02-8 of the City of Onalaska *Storm Water Quality Management Plan (December 2008).*

- Activity 1 was ongoing in 2013
- Activity 2 was ongoing in 2013. Over 240 tons of material collected during street sweeping operations in 2013.
- Activity 4 was ongoing in 2013
- Activity 5 was ongoing in 2013
- Activity 6 was ongoing in 2013. Over 400 gallons of waste oil was collected and recycled in 2013.
- Wellhead protection plan ongoing in 2013.

Section V.b.
Storm Water Quality Management

No new action was taken on this item in 2013. The City of Onalaska's current TSS removal is 19.76%. This is very close to the required 20% TSS removal requirement. In the opinion of the City's Engineering staff, the City's TSS removal is at the maximum extent practicable at this time and the City of Onalaska should be considered "in compliance" with this requirement. It is anticipated that this current TSS removal rate can be maintained until future capital projects can be completed. Future capital projects are outlined in the Storm Water *Quality Management Plan.*

The City of Onalaska's storm water quality efforts will be ongoing in the upcoming years in an effort to move closer to the 40% TSS removal rate.

Appendix C
Fiscal Analysis

See attached table for expenditures in 2013 and budgeted amounts in 2013-2014.

Financial Strategy Summary

The City of Onalaska currently as a storm water Utility in place and the Utility will be used to pay for storm water related costs throughout the City including maintenance, capital projects, equipment and personnel.

Appendix D

La Crosse Area Urban Storm Water Group

The City of Onalaska is a municipal member of the La Crosse Area Urban Storm Water Group. Onalaska contributes both staff time and financial resources to the Group each year. Below is a list of Public Education and Outreach efforts performed by the Group in 2013.

- Urban Stormwater Group continued meeting throughout 2013. As part of this activity, the work group created an updated public education contract for 2013-2014, continued our coordinated distribution of marketing materials within local municipal building permit folders , and planned major renovations to the La Crosse Waters website including:

  -Pictures/tutorial of La Crosse County rain gardens
  -Stormwater utility information (five of the member municipalities have adopted stormwater utilities)

- March, 2013 – Rain garden & rain barrel display at Washburn Neighborhood's "Spring Into Gardening" open house at La Crosse's Lincoln Middle School. Over 300 participants attended this open house – with rain garden materials, and website promotion. Rain barrel materials were provided to interested browsers. The event includes a painted rain barrel contest/ judging event, awarded to best painted rain barrel.

- April, 2013 – Attended La Crosse Area Earth Fair – promoting the La Crosse Waters Urban Stormwater Group and La Crosse Waters website: Handouts and brochures with multiple pages displaying helpful suggestions on how residents can learn more about stormwater, link to La Crosse County municipal ordinances related to stormwater and erosion control, link for sediment runoff violation reporting, as well as links to many publications illustrating stormwater best management practices. This website has been very successful, and IT statistical reports indicate an average of 30 hits per day.

- September 2013 – Provided rain garden and storm water program to Seminary Condo Association La Crosse, WI.

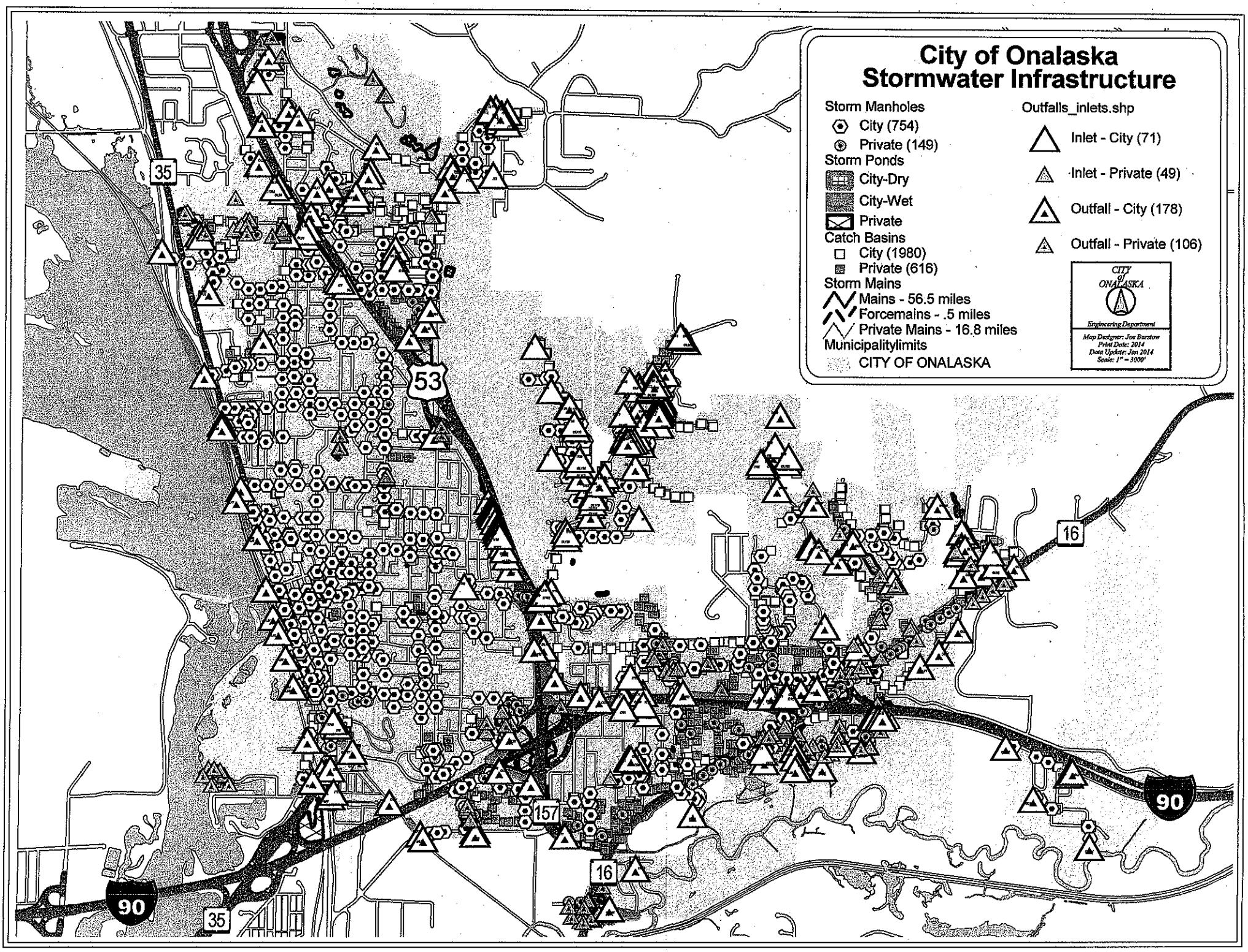
- May - November, 2013 - Urban Storm water Group coordinated clean-up of some of the municipally owned rain gardens. These included the rain gardens at the town of Campbell, town of Holland, Holmen School District Administrative center and the La Crosse Southside Neighborhood Center. This work was carried out by a private landscaping contractor and was performed in spring and late fall.

Appendix D

La Crosse Area Urban Storm Water Group

- Urban Municipal Stormwater group continues to meet, and has agreed to continue their cooperative agreement. During 2014 it is anticipated greater outreach effort towards non-profit, large parking lot property owners.

- Average visitor totals for January – December:
    - January : 42 /day
    - February: 43/day
    - March: 44/day
    - April: 49/day
    - May: 46/day
    - June: 44/day
    - July: 42/day
    - August: 35/day
    - September: 34/day
    - October: 30/day
    - November: 36/day
    - December: 24/day


City of Onalaska
Stormwater Infrastructure
Storm Manholes
City (754)
Private (149)
Storm Ponds
City-Dry
City-Wet
Private
Catch Basins
City (1980)
Private (616)
Storm Mains
Mains - 56.5 miles
Forcemains - .5 miles
Private Mains - 16.8 miles
Municipalitylimits
CITY OF ONALASKA
Outfalls_inlets.shp
Inlet - City (71)
Inlet - Private (49)
Outfall - City (178)
Outfall - Private (106)
CITY of ONALASKA
Engineering Department
Map Designer: Joe Barstow
Print Date: 2014
Data Update: Jan 2014
Scale: 1" = 3000'
35
53
16
157
90

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #13

Project/Item Name:	2104 Miscellaneous Concrete Project
Location:	Citywide
Requested Action:	Approval of bid
Staff Report/Description:	This project includes miscellaneous repairs throughout the city along with two zones of the City sidewalk repair program.
Attachments:	Bid tabulation

CITY OF ONALASKA BID OPENING
For

2014 Misc. Concrete Project

Due Date / Opening: Tuesday, March 25th, 2014 @ 11:00 AM

Company	***Bidders Proof***	***Bid Bond***	***Bid Amount***
JANZEN CONCRETE	X	X	$108,572.50
FOWLER & HAMMER	X	X	$125,829.50
STEIGER CONSTRUCTION	X	X	$96,777.50
PEMBER COMPANY	X	X	$94,333.50

RECOMMEND AWARD BID TO: _____

MW: vb/p/z-bidopenmiscconcreteproj

BOARD OF PUBLIC WORKS
MONTHLY ESTIMATES
April 1, 2014

Contractor	Original Contract Amount	Change Orders	Paid to Date	Due this Estimate
1. **SEH INC.** (01375) Railroad Quiet Zone Study Estimate #8	$ 14,200.00	$ -	$ 11,172.52	$ 1,361.30
2. **STRAND ASSOCIATES** (01321) Storm Lift Electrical Troubleshooting Estimate #4	$ -	$ -	$ 1,987.54	$ 322.14
3. **SEH INC.** Solid Waste Public Education and Outreach Estimate #5	$ 7,000.00	$ -	$ 6,300.00	$ 700.00
4. **STRAND ASSOCIATES** (01321) Theater Road Traffic Signal Construction/Engineering Estimate #2	$ 8,500.00	$ -	$ 3,694.42	$ 823.04
5. **MUNICIPAL WELL & PUMP** Well #7 & #8 Pump Repairs Construction Estimate #2	$ 41,519.00	$ -	$ 6,075.00	$ 22,921.00
6. **STRAND ASSOCIATES** (01321) Scada Upgrade Design Estimate #11	$ 30,000.00	$ -	$ 28,361.50	$ 1,030.04

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

April 1, 2014

Agenda Item: #14

Project/Item Name: Utility bill adjustments

Location: Citywide

Requested Action: Discussion on adjustments

Staff Report/Description: City staff sent out a Code Red message on February 7th alerting residents to be aware of cold conditions and effects on water services to homes. This message did not indicate any mandatory actions. City staff did inform properties specifically in areas of problems to run water. This was to prevent a second incident of freezing after one had occurred.

Attachments: Code Red information sent to residents

Jackson, Steve

From: Prindle, Jim
Sent: Friday, February 07, 2014 10:17 AM
To: Holter, Jarrod
Cc: Stoner, Shane; Jackson, Steve
Subject: Freeze ups

This is an informational announcement from the Onalaska Water Utility. Because of the extended cold weather and the frost depth that has developed, the City is recommending some steps you may want to take to help minimize the possibility of a freeze up in your water service or piping in your residence.

- Crack a faucet farthest from the place where your water enters the home. Entry point is where your water meter is located. A slow drip or narrow stream will keep water molecules moving, reducing the chance that pipes will freeze.
- Keep your thermostat set above 65 degrees when you leave your home or business for several days. Including over the weekend.
- Consider having family members, relatives or neighbors stop by to check on your home during extended time away.

If you have any questions, contact the Onalaska Water Utility at 608-781-9545.

Thank you

Jim Prindle
Water & Sanitary Sewer Manager
City of Onalaska
415 Main St.
Onalaska WI. 54650
Phone: 608-781-9545 ext. 404
jprindle@cityofonalaska.com

This is a followup message from the Onalaska Water Utility to reemphasize that we were only providing recommendations not requirements in whether or not you decide to run your faucet to help minimize the possibility of developing frozen services or pipes. Our goal is to raise awareness and communication especially in situations where you are away from home for extended periods of time and have reduced the heat settings for your furnace and also reduced the use of water turnover throughout the residence. If you do elect to drip your faucet, you can accomplish this from the cold water side of the faucet.

if you have additional questions you may call the Onalaska Water Utility at 608-781-9545

Thank you