



City of Appleton

100 North Appleton Street
Appleton, WI 54911-4799
www.appleton.org

Meeting Agenda - Final Utilities Committee

Tuesday, April 25, 2017

5:30 PM

Council Chambers, 6th Floor

1. Call meeting to order

2. Roll call of membership

3. Approval of minutes from previous meeting

[17-535](#)

Approval of the April 11, 2017 Utilities Committee Meeting minutes.

Attachments: [April 11, 2017 Utilities Committee Meeting Minutes.pdf](#)

4. **Public Hearings/Apearances**

5. **Action Items**

[17-537](#)

The Utilities Committee will go into closed session according to State Statute §19.85(1)(e) for the purpose of deliberating or negotiating the purchasing of public properties, the investment of public funds, or conducting other specified public business, whenever competitive or bargaining reasons require a closed session regarding discussion of negotiations for water meter purchases and replacements and reconvene into open session.

[17-556](#)

Confirm the following:

- Elect Vice-Chair
- Designate a "Contact Person" who can answer specific questions about agenda items

6. **Information Items**

[17-583](#)

Set Utilities Committee Meeting date and time.

[17-562](#)

Stormwater Program Update

Attachments: [April 25 2017 Util Com Update.pdf](#)

17-536

Change Order #3 to Caldwell Tank in the amount of \$2,428.15 for the Glendale Water Tower Project resulting in the construction contract being reduced from \$2,443,762 to \$2,441,333.85. This item will also be on the Finance Committee agenda.

Attachments: [Change Order 3 Glendale Project.pdf](#)

17-551

Change Orders #1 and #2 to August Winter & Sons Inc. contract as part of the Bar Screen #1 Channel Butterfly Valve Rebuild Project for structural steel repairs and welding totaling \$12,000 resulting in a decrease in contingency from \$13,750 to \$1,750. No change to overall contract amount.

Attachments: [Bar Screen #1 Valve Rebuild Change Order to AWS.pdf](#)

17-538

Monthly Reports for January, February, March 2017
- Wastewater Treatment Plant Synopsis and Receiving Station Revenue Report
- Water Treatment Facility Synopsis
- Water Distribution and Meter Team Monthly Report - March

Attachments: [2017 AWWTP Q1 Synopsis.pdf](#)
[2017 AWTF Q1 Synopsis.pdf](#)
[Water Meter Team Reports - March.pdf](#)

7. Adjournment

Notice is hereby given that a quorum of the Common Council may be present during this meeting, although no Council action will be taken.

Reasonable Accommodations for Persons with Disabilities will be made upon Request and if Feasible.

For questions on the agenda, contact Chris Shaw at 920-832-5945 or Paula Vandehey at 920-832-6474.



City of Appleton

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Meeting Minutes Utilities Committee

Tuesday, April 11, 2017

5:30 PM

Council Chambers, 6th Floor

1. Call meeting to order

Acting Chairperson Baranowski called the Utilities Committee meeting to order at 5:30 p.m.

2. Roll call of membership

Present: 3 - Baranowski, Meltzer and Reed

Excused: 2 - Dannecker and Jirschele

3. Approval of minutes from previous meeting

[17-433](#)

Approval of the March 21, 2017 Utilities Committee meeting minutes.

**Meltzer moved, seconded by Reed, that the Minutes be approved. Roll Call.
Motion carried by the following vote:**

Aye: 3 - Baranowski, Meltzer and Reed

Excused: 2 - Dannecker and Jirschele

4. Public Hearings/Appearances

5. Action Items

[17-435](#)

Award of 2017C Stormwater Consulting Services Contract for Spartan Drive Culverts and Stormwater Practices Sixty Percent (60%) Design and Permitting to Brown & Caldwell in an amount not to exceed \$202,767.

Meltzer moved, seconded by Reed, that the Report Action Item be recommended for approval. Roll Call. Motion carried by the following vote:

Aye: 3 - Baranowski, Meltzer and Reed

Excused: 2 - Dannecker and Jirschele

[17-436](#)

Preliminary Resolution 3-P-17 for Sanitary Laterals, Storm Laterals and Storm Sewer be adopted and refer the matter to the Finance Committee to determine the assessment rate.

Reed moved, seconded by Meltzer, that the Report Action Item be recommended for approval. Roll Call. Motion carried by the following vote:

Aye: 3 - Baranowski, Meltzer and Reed

Excused: 2 - Dannecker and Jirschele

[17-437](#)

Award Unit F-17, Sewer Cleaning & Televising to Northern Pipe, Inc. in an amount not to exceed \$247,500.

Meltzer moved, seconded by Reed, that the Report Action Item be recommended for approval. Roll Call. Motion carried by the following vote:

Aye: 3 - Baranowski, Meltzer and Reed

Excused: 2 - Dannecker and Jirschele

[17-443](#)

Award Engineering Services Contract for the North Reservoir Project to McMahon Associates, Inc. in the amount of \$34,871 with a 10% contingency of \$3,487 for a project total not to exceed \$38,358.

Reed moved, seconded by Meltzer, that the Report Action Item be recommended for approval. Roll Call. Motion carried by the following vote:

Aye: 3 - Baranowski, Meltzer and Reed

Excused: 2 - Dannecker and Jirschele

6. Information Items

[17-434](#)

Discussion of proposed changes to the City's Sanitary Lateral Replacement Policy.

Discussed.

[17-444](#)

WPDES Permit Reissuance for the Appleton Wastewater Treatment Plant.

Discussed.

7. Adjournment

Reed moved, seconded by Meltzer, that the Utilities Committee Meeting be adjourned at 6:13 p.m. Roll Call. Motion carried by the following vote:

Aye: 3 - Baranowski, Meltzer and Reed

Excused: 2 - Dannecker and Jirschele

STORMWATER Projects Update

Presented to
UTILITIES COMMITTEE

April 25, 2017



Appleton's Implementation Plan for City-wide Stormwater Management Plan

- 2015
 - Final design/permitting of Northland Pond (Done)
 - Work with Counties to clarify credit for TSS and TP
 - Calumet and Winnebago Done
 - Outagamie County In Progress
 - Evaluate potential Mud Creek project (DONE)
 - Relocate public storm sewer at WWTP to address Illicit Discharge (Done)



Appleton's Implementation Plan –Con't

- 2016
 - Solicit bids for Northland Pond (Done)
 - Work with WDOT to clarify credit for TSS and TP (waiting for DNR/DOT agreement)
- 2017
 - Construct Northland Pond (In Progress)
 - Evaluate possibility of adding private street sweeping contract to supplement City staff
 - Final Design and Purchase Land for Leona Street Pond (In Progress)



Appleton's Implementation Plan –Con't

- 2018
 - Construct Leona Street Pond
 - Possibly construct pond with WDOT 441 Project
- 2019
 - Budget for next City-wide plan update
 - Issue RFP for consultant selection
- 2020-2021
 - High Efficiency Street Sweeper Upgrade
 - Update the City-wide Stormwater Management Plan



NR 216 Permit

- Public Education and Outreach
 - Northeast Wisconsin Stormwater Consortium (NEWSC)
 - Example: Summer Camp
 - Example: Gathering and Discussion at Tempest Coffee
 - Plan update needed (Done)
- Public Involvement and Participation
 - Tied to Public Education and Outreach
 - Example: April 22, 2017 River Cleanup



NR 216 Permit

- Illicit Discharge Detection and Elimination
 - On-going field screening (In Progress for 2017)
 - Ordinance Update (Done)
- Construction Site Pollution Control
 - Ordinance and Program update (Done)



NR 216 Permit

- Post-Construction Stormwater Management
 - Ordinance and Program update (Done)
 - Plan reviews 15 in 2014, 21 in 2015, 28 in 2016
- Pollution Prevention
 - 2 requirements added to the new permit
 - Additional reporting required
 - Program to be updated (Done)
 - Updating site specific SWPPP's for MSB, PRFMD, Reid, Whittman, WTP and WWTP (Done)



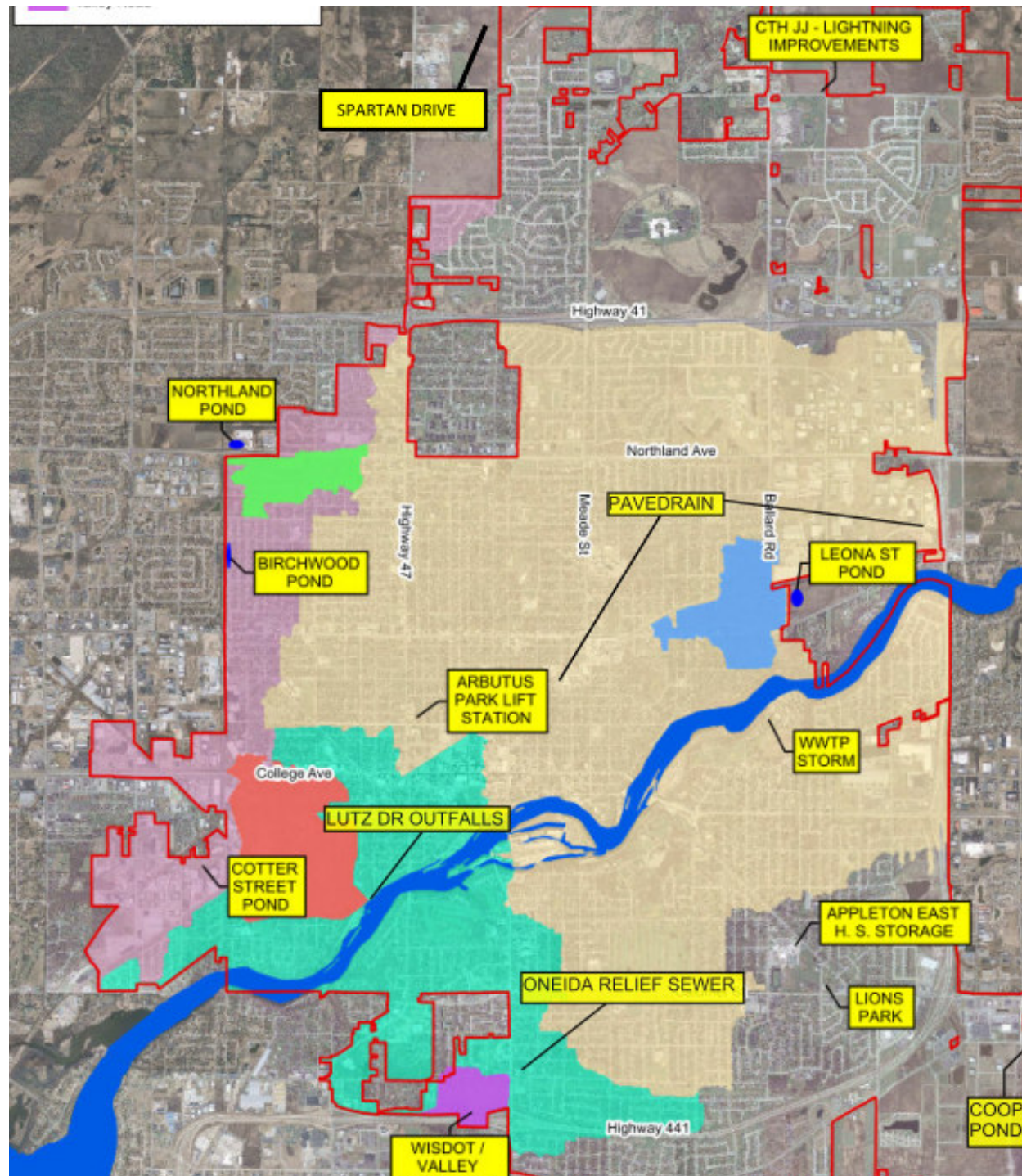
NR 216 Permit

- Stormwater Quality Management
 - City-wide SWMP updated fall 2014
 - Continuing to implement plan
 - Continuing to monitor technical changes
 - Continuing to monitor Lower Fox River TMDL implementation
- Storm Sewer System Map and Annual Report
 - 2016 maps and report submitted to WDNR on time



Stormwater Utility Database

- Maintenance of the Database is on-going
- Working to update Commercial billing areas with GIS data
- Commercial properties not requiring a site plan have not been updated since 1995



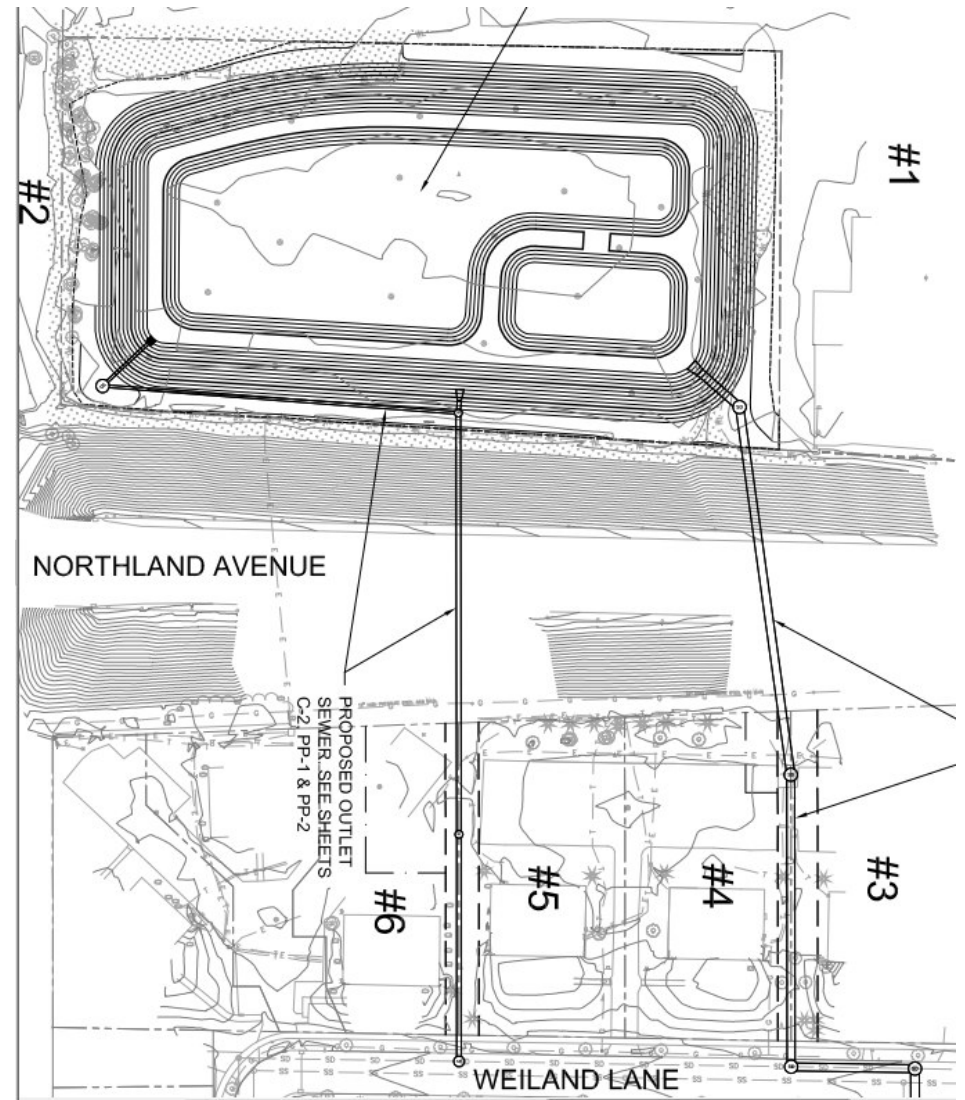
Capital Projects

- Northland Pond
- Cotter Street Pond
- Arbutus Park Lift Station
- WISDOT/Valley Road Pond
- Leona Street Pond
- PaveDrain Permeable Pavement
- Spartan Drive Corridor
- CTH JJ/Lightning Drive Pond
- Coop Pond/Eisenhower Drive
- Lutz Drive Outfalls
- Oneida Street Relief Sewer



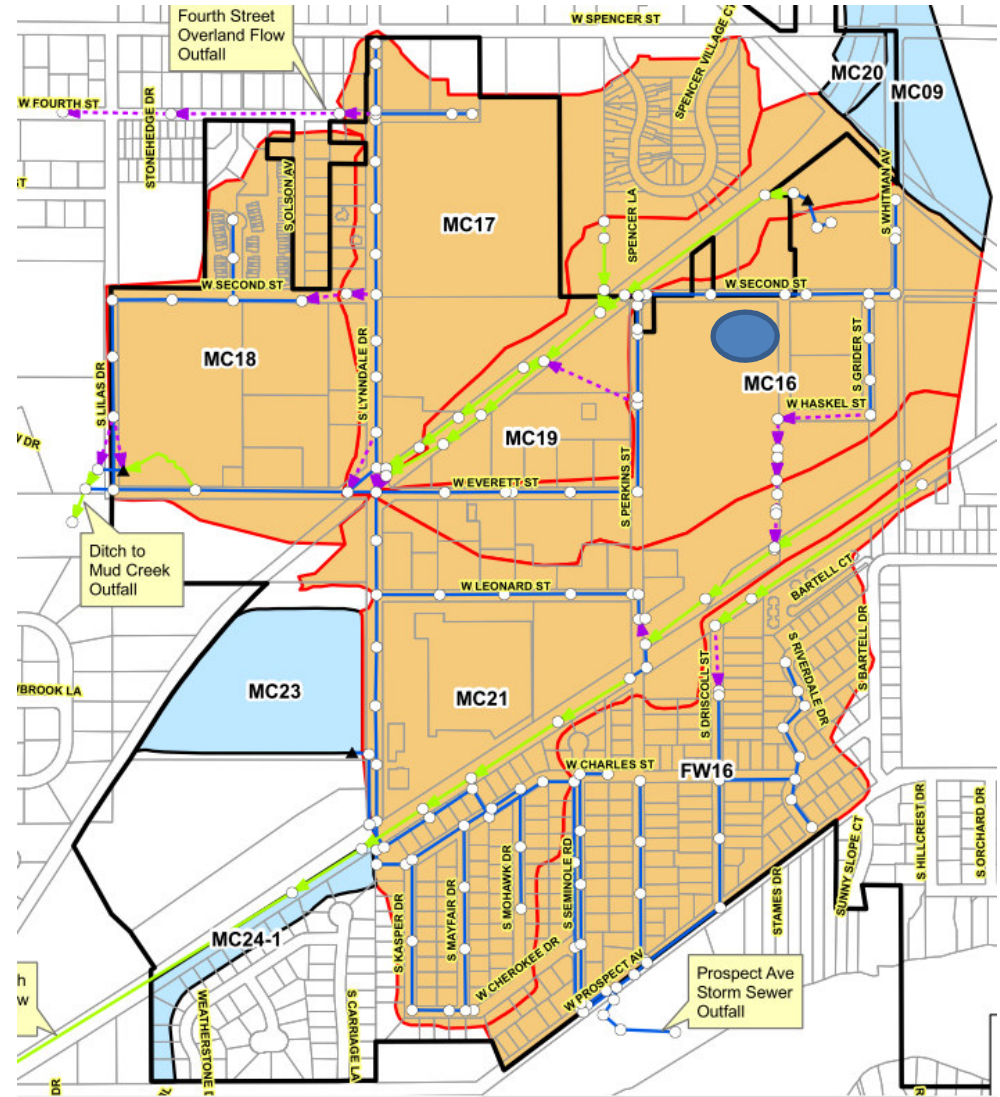
NORTHLAND POND

- Part of West Wisconsin Ave Study Selected Alternative to reduce flooding west of Mason Street
- Construction began March 20th, 2017
- Completion scheduled for November 1, 2017



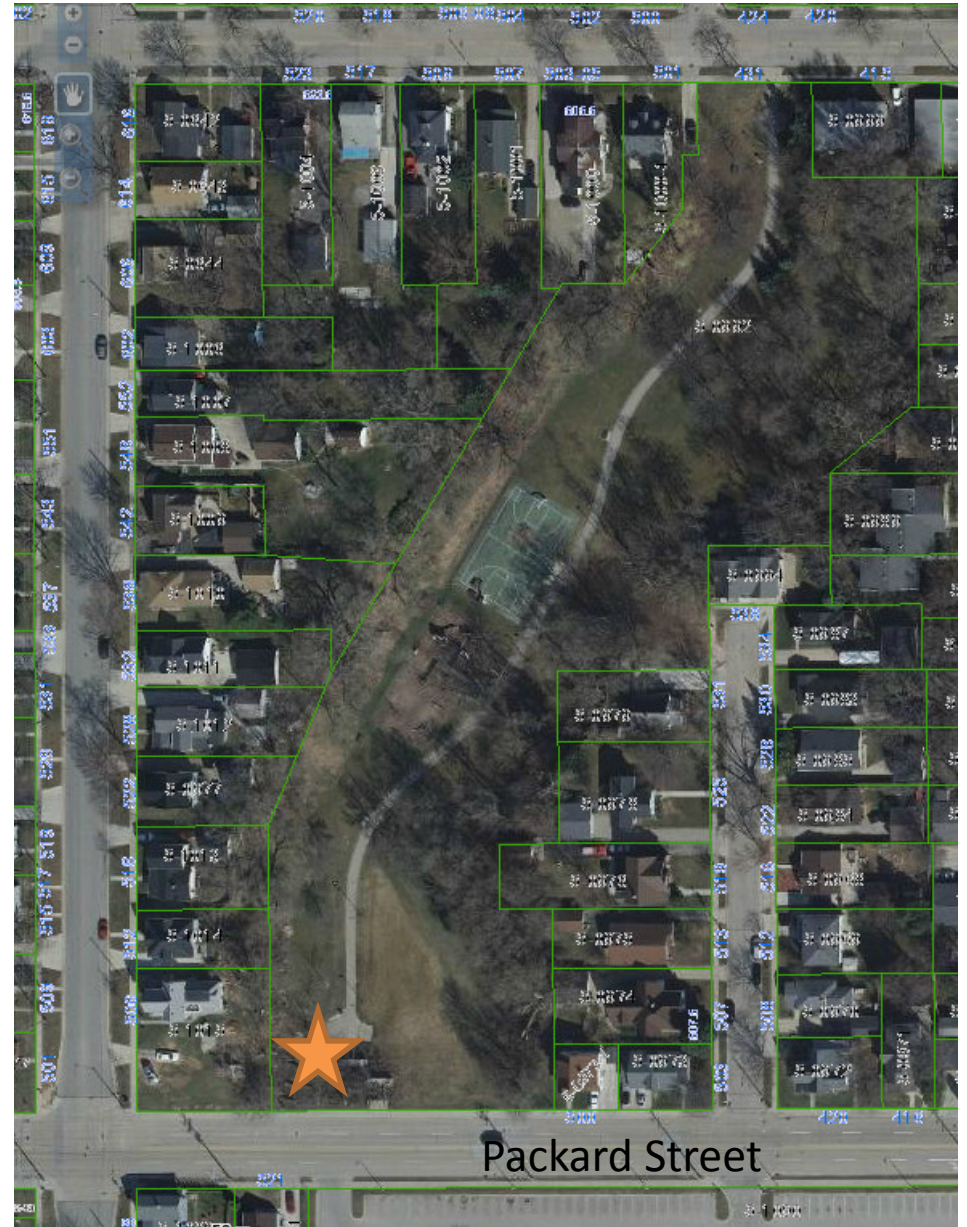
COTTER STREET

- Wet Pond Alternative approved fall 2016
- Construction documents 90% complete
- Land acquisition in progress
- Anticipate bidding June 2017 for late summer/fall construction



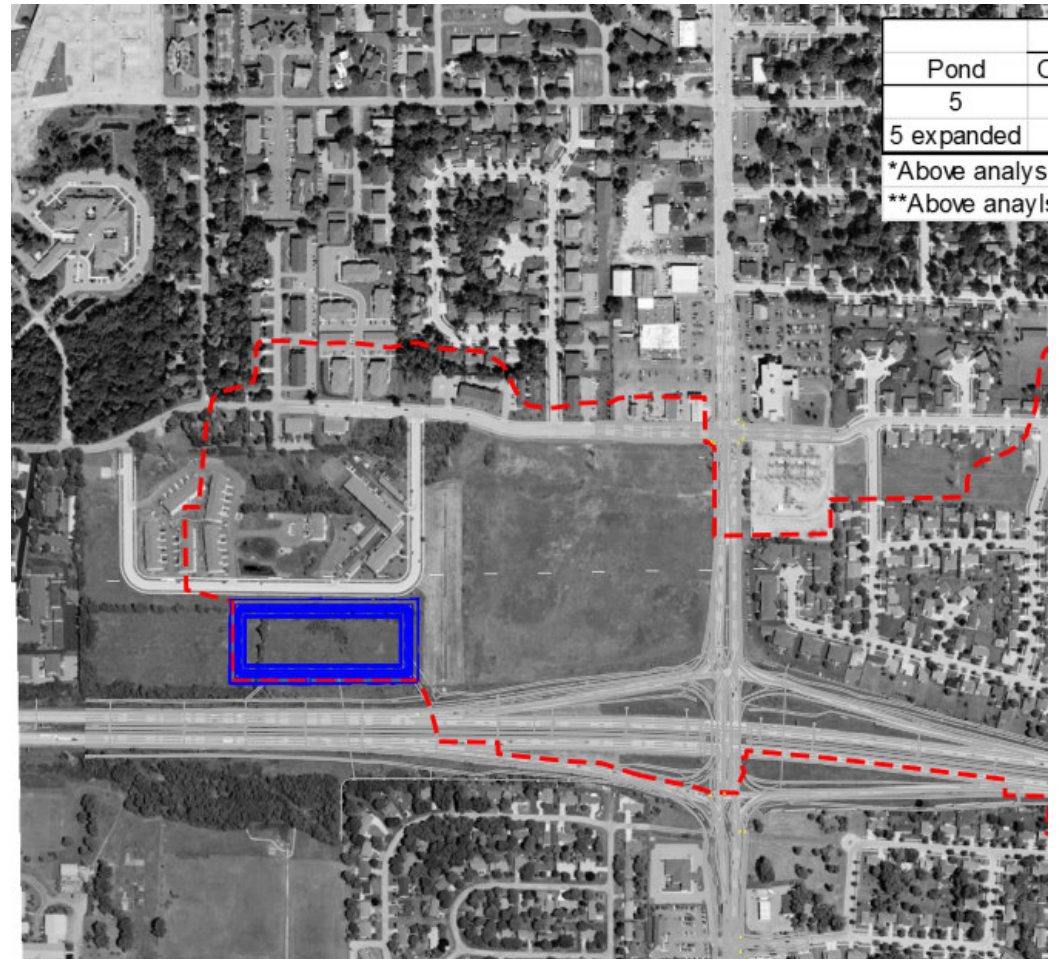
ARBUTUS PARK

- Stormwater Lift Station Maintained by Utilities
- Contract awarded December 2016
- Preconstruction Meeting January 2017
- Submittals under review and materials ordered
- Expect June construction



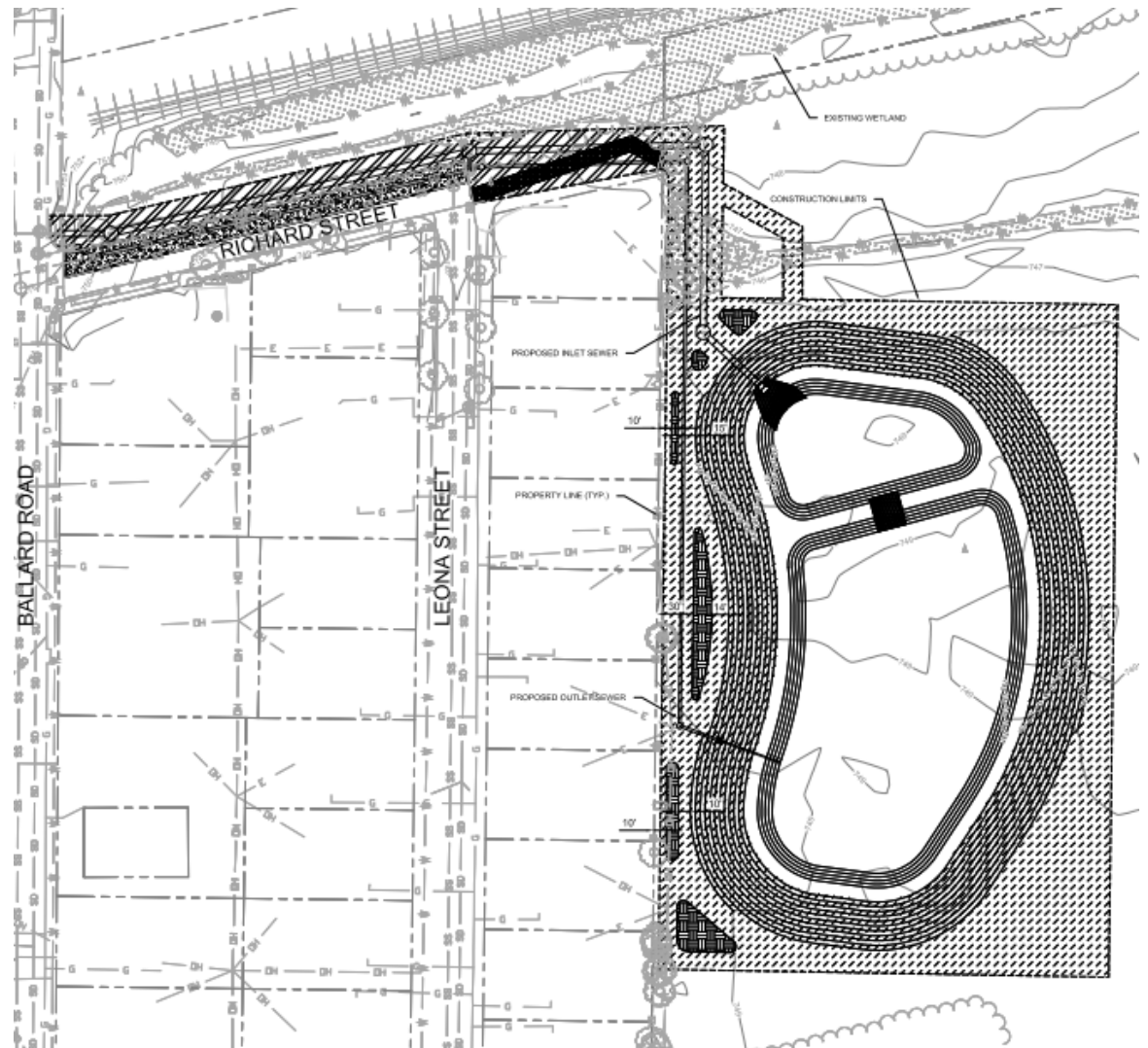
WisDOT/Valley Road Pond

- DOT- led project to expand pond
- Anticipated Cost Share w City
- Anticipated 2018-2019 Construction



Leona Street Pond

- Five alternatives evaluated
- Additional wetland delineation June 2017
- 60 % Design and Land Purchase in 2017
- Permitting in 2018
- Future Enhanced P Removal



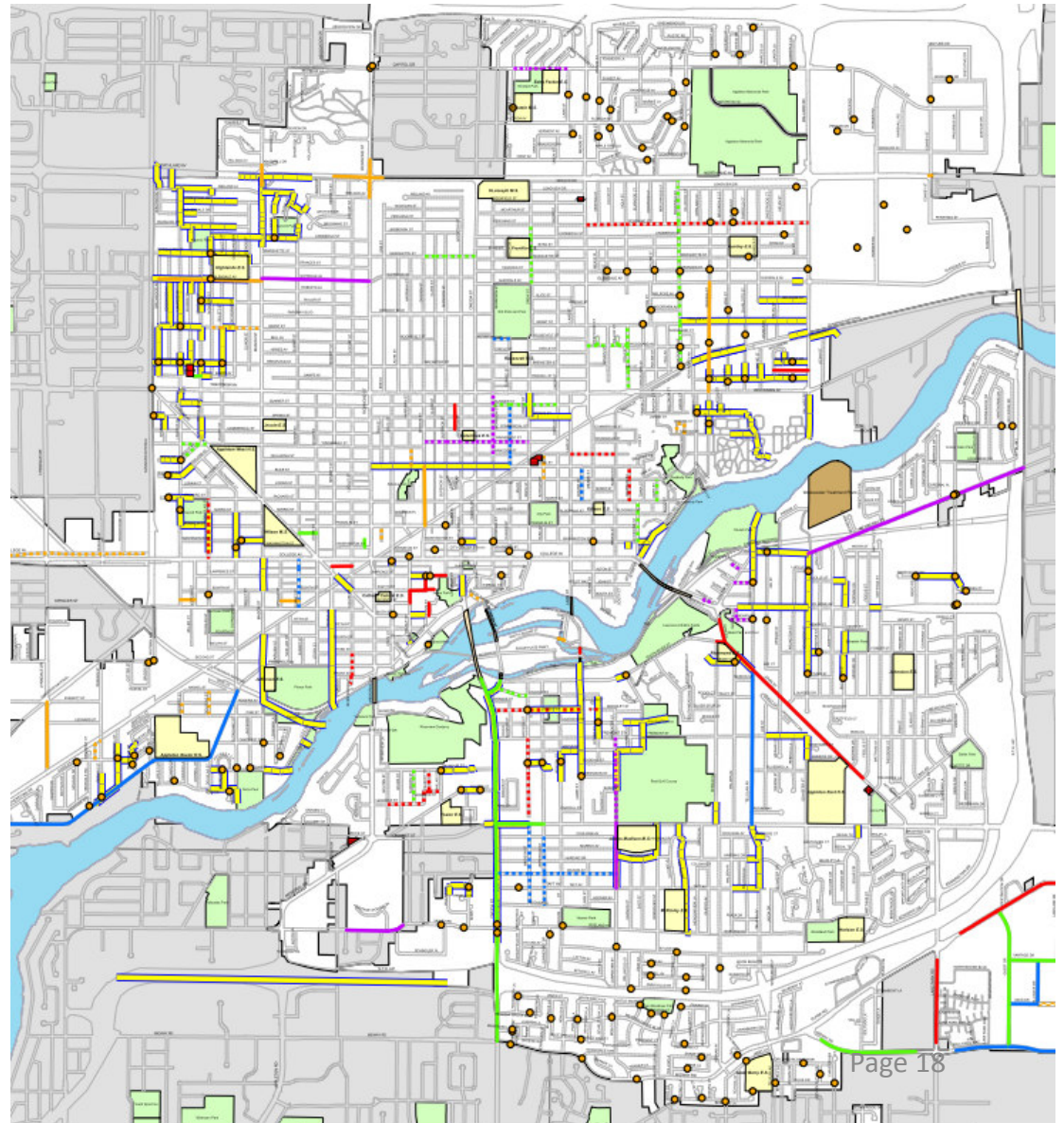
PaveDrain Permeable Pavement

- Pilot Projects at Fire Station #1 (2015) & Sandra St (2016)
- Flood Reduction and Water Quality
- Performance Monitoring is Ongoing



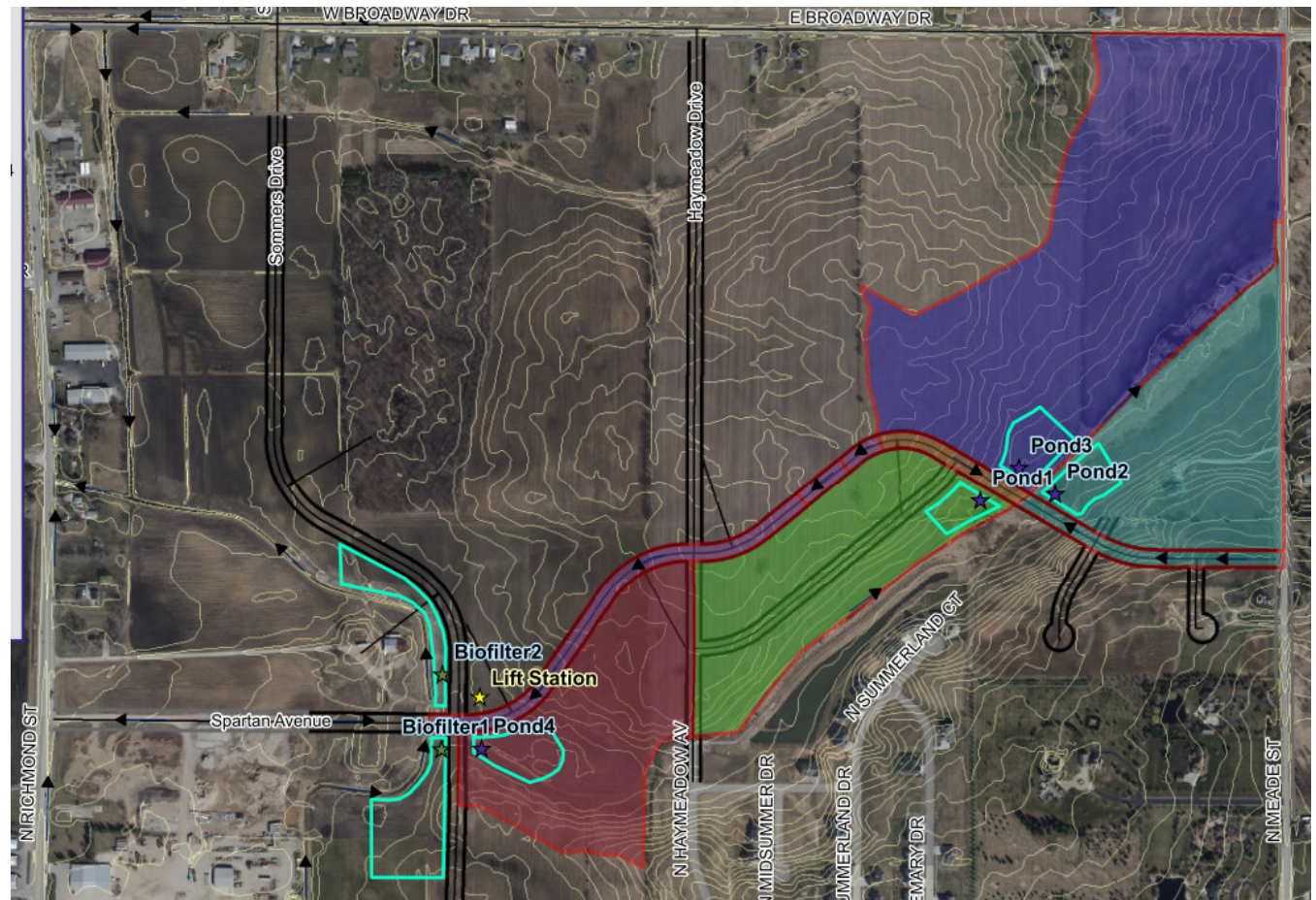
Storm Sewer Upgrades

- Pursuing drainage study recommendations
- Coordinating with paving schedule
- 2017: Oneida Street, Calumet Street, Weiland Lane, Linwood Ave, Lutz Drive



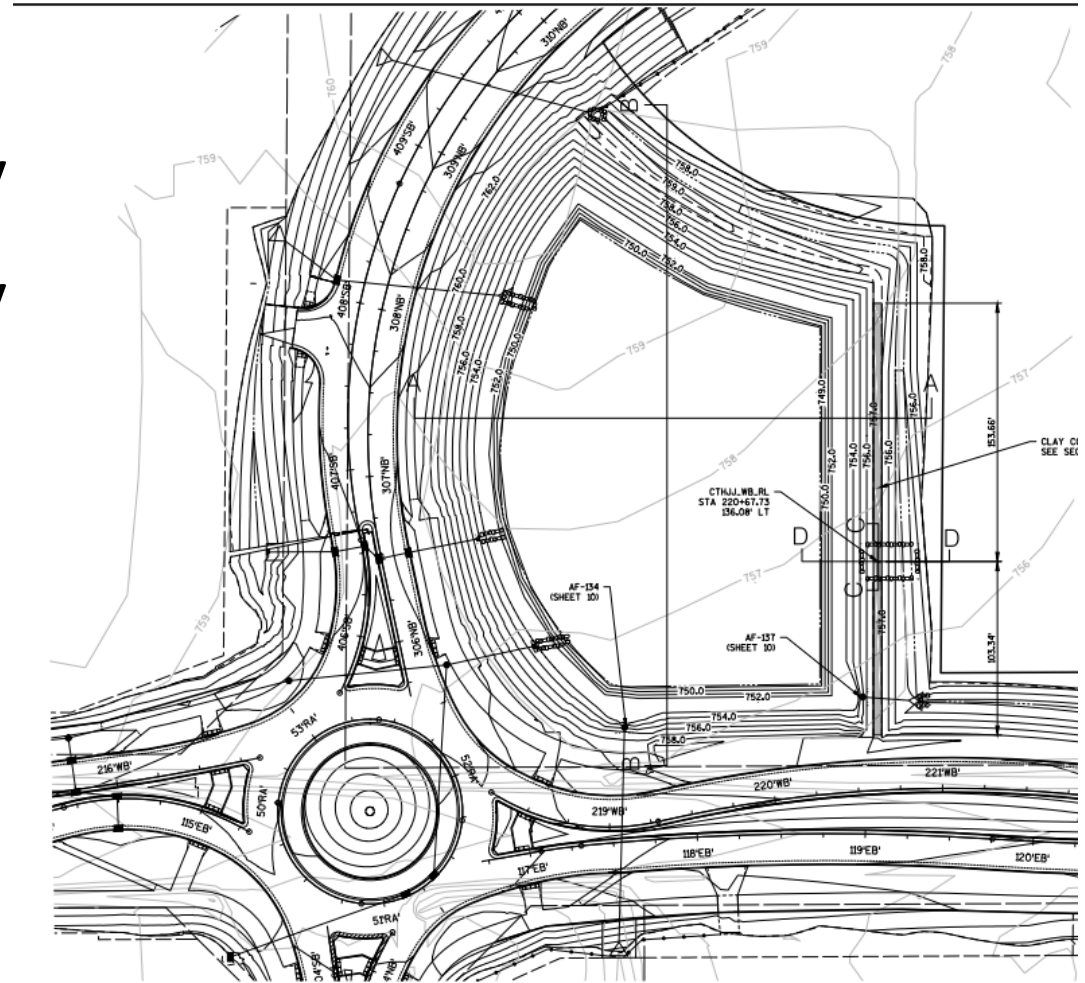
Spartan Drive

- Preliminary Engineering for stormwater complete
- 60% Design and permit submittal 2017
- Final design in 2018
- Construction in multiple phases beginning in 2018



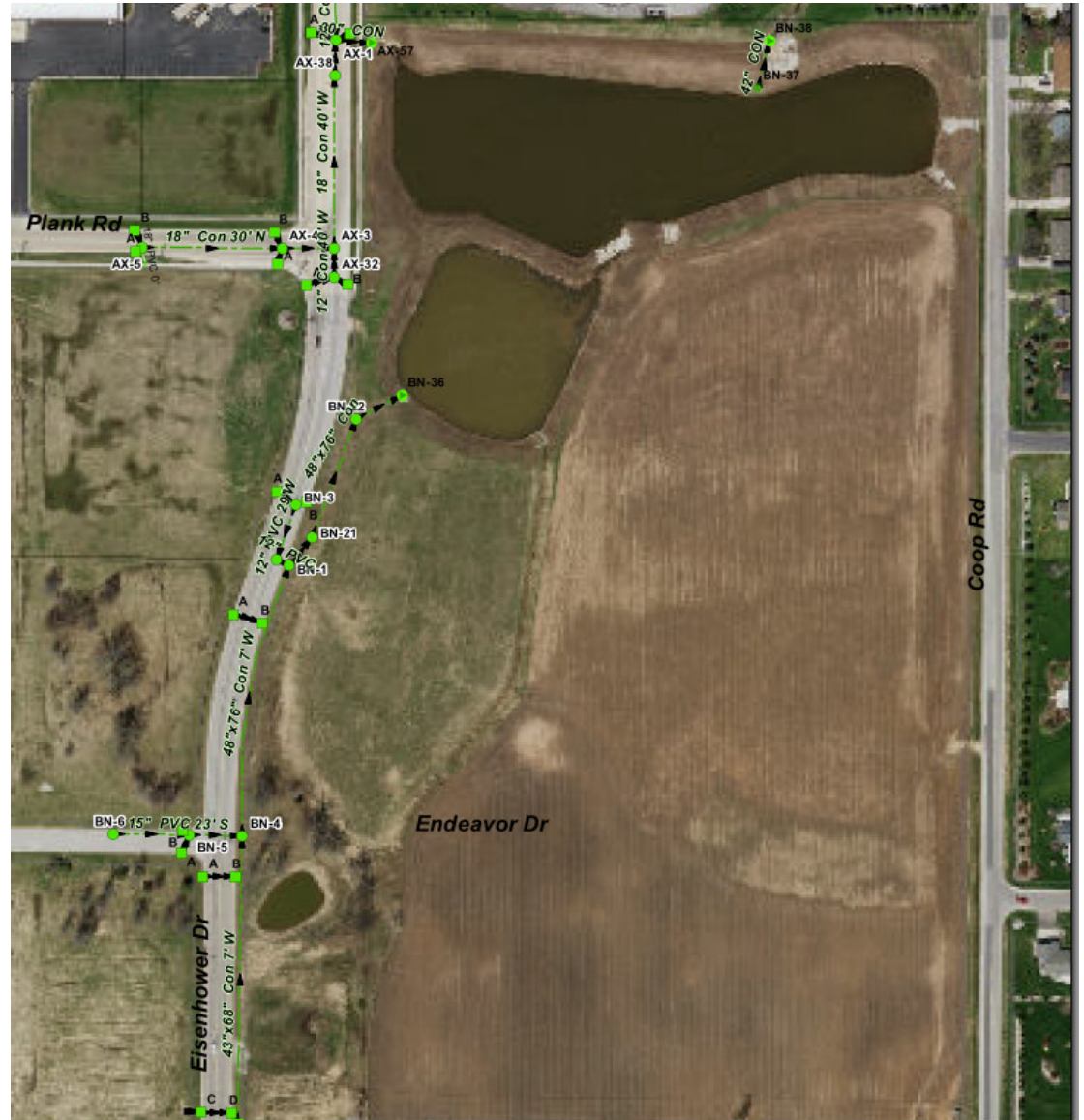
CTH JJ/Lightning Drive Pond

- Joint Project with Outagamie County
- Outagamie County will construct
- Permits received
- Anticipated start May 2017



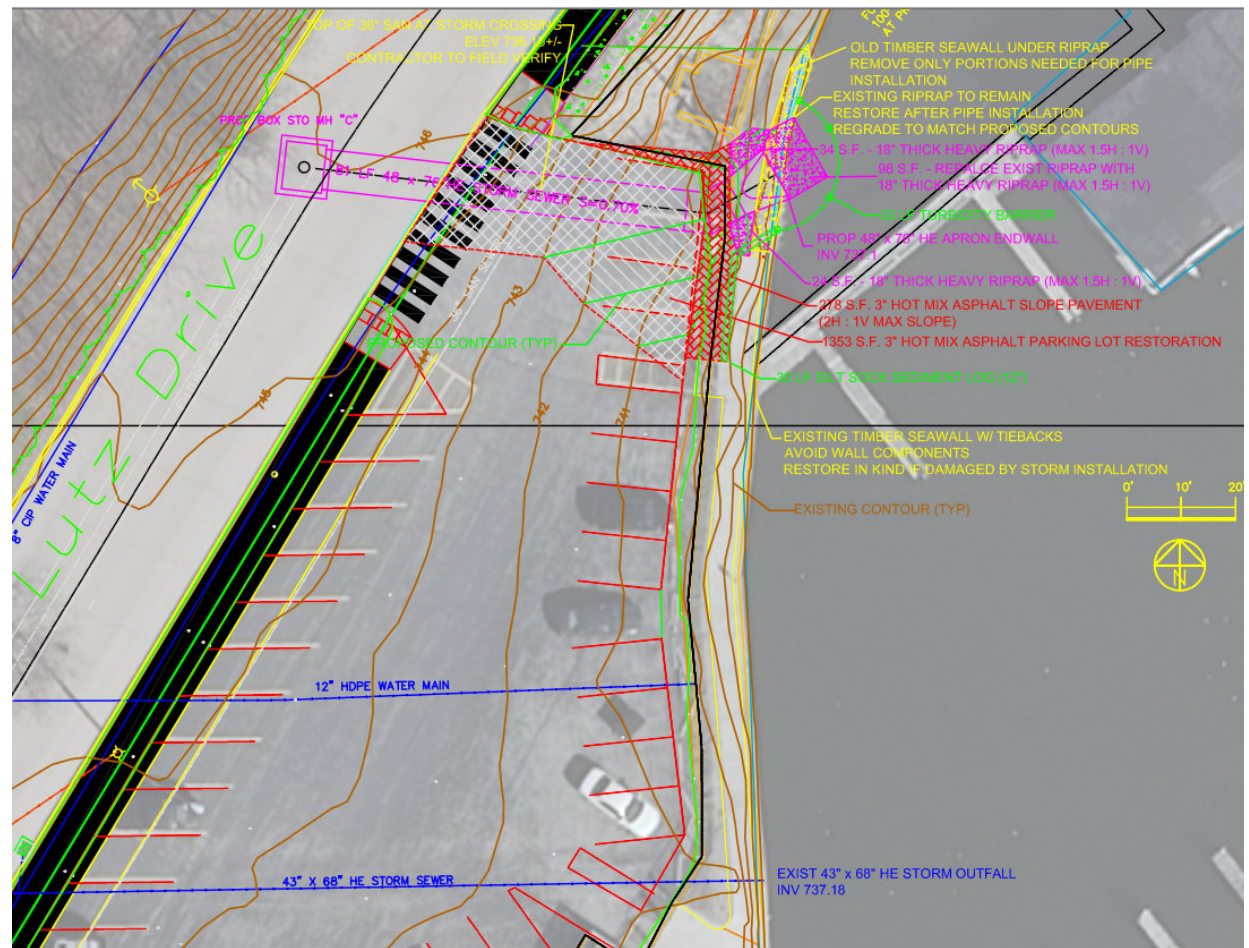
Coop Pond/Eisenhower Dr Sewer

- AECOM evaluated Pond quantity and quality control under current technical standards and modeling requirements
- Additional storm sewer and outlet modification in 2017



Lutz Drive Outfalls

- Part of Spencer/Locust Basin Study selected alternative to reduce flooding
- Locations:
 - Pierce Avenue
 - Yacht Club Parking Lot





"...meeting community needs...enhancing quality of life."

Water Treatment Facility
2281 Manitowoc Rd.
Menasha, WI 54952
920-997-4200 tel.
920-997-3240 fax

TO: Chairperson Kathy Plank and Members of the Finance Committee

CC: Chairperson Greg Dannecker and Members of the Utilities Committee

FROM: Utilities Director Chris Shaw

DATE: Friday, April 14, 2017

RE: *Change Order #3 to Caldwell Tank in the amount of (\$ 2,428.15) for the Glendale Water Tower Project resulting in the construction contract being reduced from \$2,443,762 to \$2,441,333.85*

BACKGROUND

The Glendale Water Tower project was borne as a result of a need for the City of Appleton to increase elevated water storage. The need came from the Oneida Street Tower reaching the end of its useful life. The project design is a result of computer modeling and engineering efforts that can be referenced in the Water Utility's Distribution Master Plan.

This project introduces a net of 500,000 gallons of water storage into the city's distribution system. Water storage is necessary for fire flow and to equalize production versus water demand differences. The Glendale Tank is a one million gallon tank.

CHANGE ORDER #3

The Glendale Water Tower construction project is effectively completed. Change Order #3 accounts for 3 deducts to the project. One of the deducts was for unused funding allowance for soils compaction testing. The other two deducts were for work that was not completed and is to be finished by utility personnel.

SUMMARY

The Glendale Tower Project is currently in use and nearing final completion. Currently, the contract price has been reduced from \$2,467,000 to \$2,441,333.85 as a result of deducts and engineering paid for by the contractor. If you have any questions, regarding this project please contact me at 997-4200.



“...meeting community needs...enhancing quality of life.”

Department of Utilities
Wastewater Treatment Plant
2006 E Newberry Street
Appleton, WI 54915-3128
920-832-5945 tel.
920-832-5949 fax

To: Chairman Greg Dannecker and Members of the Utilities Committee

From: Utilities Deputy Director, Chris Stempa

cc: Utilities Director Chris Shaw;
Kelli Rindt, Enterprise Fund Accounting Manager

Date: April 18, 2017

Re: **Informational Item: *Change Orders #1 and #2 to August Winter & Sons Inc. contract as part of the Bar Screen #1 Channel Butterfly Valve Rebuild Project for structural steel repairs and welding totaling \$12,000 resulting in a decrease in contingency from \$13,750 to \$1,750. No change to overall contract amount.***

Explanation:

On December 21, 2016 Common Council approved a contract for the Bar Screen #1 Channel Butterfly Valve Rebuild to August Winter and Sons, Inc. for \$111,250 with a contingency of \$13,750 and a project total not to exceed \$125,000. Prior to this contract, in 2015, two bar screens were installed in place of two that had surpassed their useful life. The equipment replacement also served to improve the hydraulic capacity and screening capabilities of the Appleton Wastewater Treatment Plant (AWWTP). It was discovered during the course of the 2015 bar screen project that the existing 1975 Pratt butterfly valves (four total) which control flow through Bar Screen #1 would require replacement of the damaged rectangular rubber seats and rehabilitation of failed carbon steel coatings.

August Winter & Sons (AWS) initiated rehabilitation work on Monday, March 20, 2016. The first two valves were removed later that week. AWS notified the AWWTP of greater than anticipated carbon steel deterioration caused by corrosion upon completion of off-site cleaning and blasting work. Although structurally sound, the valves required the addition of steel plating to areas where excessive pitting would not facilitate effective recoating. Re-welding of seams and joints would also be required where corrosion caused failure of the original welds.

Change orders #1 and #2 are described below. Each change order was authorized according to the guidelines outlined within the Appleton Procurement and Contract Management Policy.

Change Order #1 (\$6,000) – Butterfly Valves #1 and #2: This change order includes costs for the addition of formed carbon steel (3/16" carbon steel plates) to the upstream side of the butterfly valves including miscellaneous steel repairs and welding where excessive chloride induced corrosion occurred.

Change Order #2 (\$6,000) – Butterfly Valves #3 and #4: This change order includes costs for the addition of formed carbon steel (3/16" carbon steel plates) to the upstream side of the butterfly valves including miscellaneous steel repairs and welding where excessive chloride induced corrosion occurred.



Removal

Cleaned/Blasted

Repaired

Coated

If you have any questions regarding the project or change orders please contact Chris Stempa at 832-2353.

Appleton Wastewater Treatment Plant

Synopsis

January 2017 - March 2017

Wastewater Treatment Program

- The Appleton Wastewater Treatment Plant (AWWTP) final effluent met all Wisconsin Department of Natural Resources (WDNR) discharge monitoring reporting limits including carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS), pH, phosphorous, and ammonia. (See Table 1). The plant maintained good treatment and a healthy microbiological population with a sludge retention time of eight days. Dewatering processes functioned well and converted 13.09 Million Gallons (MG) of primary digested sludge to biosolids.

Table 1 – Wastewater Influent / Effluent Treatment Data

Characteristic	January 2017			February 2017			March 2017		
AWWTP Flows (MG)	Influent		Percent	Influent		Percent	Influent		Percent
Industrial Flow	50.2		11.9%	52.2		14.3%	59.9		10.7%
Domestic Flow	371.4		88.1%	313.0		85.7%	501.5		89.3%
Total Flow	421.6			365.2			561.4		
Pollutant Loadings (lbs)	Influent	Effluent	Removal	Influent	Effluent	Removal	Influent	Effluent	Removal
CBOD	1,025,163	13,242	98.7%	893,379	10,778	98.8%	1,056,123	13,089	98.8%
TSS	1,314,721	10,493	99.2%	1,342,906	6,148	99.5%	1,364,197	4,682	99.7%
Phosphorous	16,109	812	95.0%	15,294	492	96.8%	13,566	304	97.8%
Ammonia	65,919	8,066	87.8%	52,546	3,527	99.1%	58,490	7,434	87.3%

Work Completed:

- Staff continue to evaluate on-line phosphorus monitoring and chemical removal strategies as part of ongoing Phosphorous Treatment Optimization project. In March, the AWWTP moved forward with the purchase of an additional online analyzer to monitor phosphorus concentrations from biological treatment. The additional equipment recommended for purchase in combination with other planned changes to the existing low level final effluent phosphorus analyzer (e.g. Hach 5500sc) are designed to decrease the current chemical dose response time by nearly 60% providing better overall chemical treatment. Phosphorus removal efficiencies were maintained and improved through the period with minimal chemical feed.

Work in Progress:

- Bar Screen #1 Channel Butterfly Valve Rebuild Project:** Work started on this project in mid-March with the removal and rehabilitation of the inlet gates. Those gates were re-installed in early April and the discharge gates were removed. It is anticipated that the gates will be re-installed and the project completed before the end of April.

Appleton Wastewater Treatment Plant
Synopsis
January 2017 - March 2017

- **2017 Appleton Wastewater Plant Improvements Project:** RFP's were sent to four engineering firms, and all were represented at the pre-proposal meeting on April 5th. Proposals are due to be received by April 21st.
- **Chemical Storage Room Rehab/Improvements Project:** McMahon Engineers were selected for the project after review and evaluation of the submitted proposals. The engineers conducted a workshop for AWWTP staff in early April to present their design ideas and solicit input and suggestions.

Regulatory Summary

- Monthly Discharge Monitoring reports for January, February and March were filed electronically on time for regulatory compliance. The 2017 1st quarter short form was also submitted.
- The AWWTP operating permit was re-issued by the State of Wisconsin Department of Natural Resources with an effective date of April 1, 2017 and an expiration date of March 31, 2022. Staff are in the process of updating internal compliance monitoring and testing requirements including regulatory reporting schedules to align with those outlined in the re-issued permit. Noteworthy additions to the re-issued permit include the phosphorus Total Maximum Daily Load (TMDL) water quality based effluent limitation compliance schedule (ultimate compliance date set for January 1, 2023) and the addition of the biosolids compost outfall.

Laboratory Program

- Program objectives for regulatory and process sampling and analysis were met including results for the Discharge Monitoring Report (DMR) and Health Department pool testing program.
- Lab personnel completed the analysis of Double Blind Proficiency samples for laboratory recertification.
- Lab staff will be conducting compliance monitoring sampling and pretreatment monitoring sampling to comply with 2017 requirements. They will also aid operations staff in preparing for chlorine residual testing during the upcoming disinfection season.

**Appleton Wastewater Treatment Plant
Synopsis
January 2017 - March 2017**

EFFLUENT QUALITY SUMMARY

January 2016 – March 2017

<i>Effluent Parameter:</i>	<i>CBOD mg/L</i>	<i>TSS mg/L</i>	<i>Total Phosphorus mg/L</i>	<i>Ammonia- Nitrogen mg/L</i>	<i>Chlorine Residual mg/L</i>	<i>Fecal Coliform Colonies/ 100 ml</i>	<i>pH s.u.</i>
<i>WPDES LIMITS:</i>	<i>25 mg/L monthly avg.</i>	<i>30 mg/L monthly avg.</i>	<i>1 mg/L monthly avg.</i>	<i>10 mg/L monthly avg.</i>	<i>0.037 mg/L daily limit</i>	<i>400 col/100ml geom. mean</i>	<i>6.0 - 9.0 daily limit</i>

2016

January	2	2	0.16	0.24	NA	NA	7.1/7.4
February	3	4	0.20	0.95	NA	NA	6.9/7.2
March	3	2	0.12	0.86	NA	NA	7.2/7.4
April	2	1	0.10	0.32	NA	NA	7.4/7.6
May	4	2	0.27	0.66	<0.01	2	7.0/7.4
June	3	2	0.28	0.75	<0.01	10	7.0/7.4
July	4	3	0.23	0.74	<0.01	7	6.8/7.1
August	4	3	0.18	1.92	<0.01	3	6.8/7.1
September	4	2	0.28	1.51	<0.01	15	6.7/6.9
October	5	4	0.70	3.54	NA	NA	6.5/6.9
November	5	5	0.42	1.45	NA	NA	6.5/6.8
December	3	4	0.27	0.59	NA	NA	7.0/7.1

2017

January	4	3	0.23	2.28	NA	NA	7.1/7.3
February	4	2	0.17	1.14	NA	NA	7.1/7.3
March	3	1	0.06	1.58	NA	NA	7.1/7.3

YEAR 2017 RECEIVING STATION REVENUE

Hauler	January	February	March	April	May	June	July	August	September	October	November	December	Y-T-D Total
A & B Leist Trucking	\$ 118,361.74	\$128,962.99	\$ 159,597.37										\$ 406,922.10
Hickory Meadows	\$ 27,521.03	\$ 19,802.84	\$ 26,208.74										\$ 73,532.61
Jeff Waldvogel Trkg.	\$ 24,968.84	\$ 33,040.15	\$ 34,780.25										\$ 92,789.24
Waldvogel Trucking	\$ 1,883.47	\$ 2,670.05	\$ 3,031.98										\$ 7,585.50
2017 Total	\$ 172,735.08	\$184,476.03	\$ 223,618.34	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 580,829.45
2016 Total	\$172,642.52	\$174,844.28	\$214,615.28	\$194,073.19	\$147,993.22	\$166,671.53	\$177,531.77	\$179,398.93	\$213,707.36	\$178,214.32	\$184,882.22	\$ 156,865.52	\$ 2,161,440.14

Date: April 12, 2017

Copies: K. Rindt (via email)

C. Shaw (via email)

B. Kreski

Utilities Committee

Appleton Water Treatment Plant Operations Synopsis January, February, March 2017

Summary

The table below presents selected water production and quality performance metrics for the current and previous reporting periods. All compliance parameters met or exceeded regulatory requirements. During the quarter, average water production and electrical energy demand were consistent with winter water demand conditions.

WATER PLANT PARAMETERS	Previous (Q4 2016)			Current (Q1 2017)		
	October	November	December	January	February	March
Water Treated						
Finished (million gallons)	262.9	247.1	260.1	272.0	239.0	260.1
Finished (million gallons / day)	8.5	8.2	8.4	8.8	8.5	8.4
Electrical Energy (WTF)						
Consumption (Megawatt-hours)	451.2	427.9	452.5	467.1	418.3	463.4
MWH / million gallons produced	1.72	1.73	1.74	1.78	1.75	1.78
Turbidity						
Lake (NTU)	21.3	24.4	19.5	2.7	2.3	5.9
Finished (NTU)	0.02	0.03	0.02	0.02	0.02	0.02
Finished (<0.15 NTU standard)	100%	100%	100%	100%	100%	100%
Water System Microbial Quality						
Total Coliform Samples	81	81	82	81	81	81
Compliance with Standard	100%	100%	100%	100%	100%	100%
Disinfectant Contact Time						
Minimum CT Ratio Provided	3.1	3.2	1.8	0.87	1.52	1.4
Hardness						
Lake Total / Calcium (mg/L)	181/91	189/99	198/107	204/112	210/101	201/111
Finished Total / Calcium (mg/L)	86/19	91/21	98/30	105/38	106/38	99/35
Finished Water Quality						
Total Chlorine (mg/L)	2.06	2.10	2.16	1.95	2.18	2.13
pH (SU) Min/Max	8.3/8.9	8.5/8.7	8.6/8.9	8.6/8.8	8.5/8.8	8.6/8.9
Water Temperature (Degrees F)	57.7	47.5	34.3	34.0	36.1	34.9
Fluoride (mg/L)	0.72	0.72	0.73	0.73	0.74	0.65
Orthophosphate (mg/L)	0.67	0.62	0.64	0.62	0.62	0.63

Laboratory

- In support of plant operations, staff conducted analyses according to method protocols for pH, turbidity, alkalinity, hardness, free/total chlorine, ammonia, phosphorus, and fluoride.
- In support of distribution operations, staff performed required 81 monthly Coliform bacteria analyses along with heterotrophic plate count (HPC) testing.
- Staff collected and processed raw and finished water samples to comply with LT2 and DBPR2 sampling requirements. Support was provided to consecutive customers with shipping of DBPR2 samples.

Safety

- WTF Safety programs were maintained by completing scheduled safety inspections. There were no significant incidents to report.
- The Lock-Out/Tag-Out program has been modified to include recommended improvements from staff.
- Chemical unloading procedures are under review for potential improvements.

Operations

- #1 Softener was cleaned and is in stand-by.
- Database development was initiated for the implementation of the new plant data management and reporting system (Hach WIMS).

RUPIP

- All membrane equipment was idle during the quarter.
- Two UV Disinfection reactors were in continuous service during the quarter.
- Staab Construction repaired a series of concrete cracks in the #1 Membrane Wetwell under a warranty claim.
- Merrick Systems continued lime system dissolver replacements under a warranty claim.

Staffing & Training

- All Water Treatment Facility vacancies have been filled.
- All staff have completed mandatory department and City safety training for the year.

WATER SUMMARY FOR MARCH 2017

Work done by Construction Maintenance				
	<u>Mar 16</u>	<u>Mar 17</u>	<u>YTD 16</u>	<u>YTD 17</u>
Hydrants repaired	3	2	4	5
Hydrants replaced	0	0	2	0
Hydrant leaks	0	0	1	0
Valves replaced	0	1	0	1
Valves tested & inspected	559	260	721	702
Valves Rebuilt	0	2	0	2
Valve boxes repaired	12	16	18	19
Curb boxes repaired	8	9	14	22
Curb boxes replaced	3	0	9	0
Lead or galvanized replaced	0	0	0	0
New services 1"	0	0	0	0
New services >1"	1	0	1	0
Water main breaks	0	4	16	32
Joint leaks repaired	0	0	0	1
Water quality	0	1	0	2
Service leaks (City side)	0	1	1	1
Work done by Meter Service Team				
	<u>Mar 16</u>	<u>Mar 17</u>	<u>YTD 16</u>	<u>YTD 17</u>
New accounts set with 3/4" or 1"	12	5	20	18
New accounts set with larger meter	0	1	1	2
Meters tested	932	913	2332	2442
Meters failed	74	41	223	93
Meters stalled	0	0	0	0
Service calls	160	115	417	407
Final readings	268	305	702	739
Read meters - no reading	0	0	0	0
New meters installed	960	891	2396	2503
Exception meters inspected	0	0	0	0
Exception meters removed	0	0	0	0
Service leaks found	7	1	16	9
Cross connection inspections	879	872	2237	2425

**WATER MAIN BREAK/JOINT LEAK REPORT MARCH
2017**

LOCATION	Work Order	TYPE OF PIPE	SIZE	YEAR	BREAK	ESTIMATED DURATION	ESTIMATED WATER LOSS IN GALLONS	ESTIMATED DOLLAR VALUE OF WATER REVENUE LOSS**
Henry Street/ Frederick Street	223566	DIP	8"	1977	3" hole	4 hours	364,672	\$2,218.26
942 E. Windfield Place	223580	CIP	8"	1977	two 1/16" pinholes	75 days	145,200	\$883.24
1432 S. Memorial Drive	223654	CIP	8"	1928	1/64" x 3" split	79 days	859,678	\$5,229.32
231 W. Franklin Street	223842	CIP	6"	Unkown	1/128" x 12" split	14 days	265,636	\$1,615.83
								\$0.00
								\$0.00
								\$0.00
								\$0.00

**Water loss is calculated at the residential rate of \$4.55 per 100 cubic feet.

**WATER MAIN BREAK/JOINT LEAK DATA LOG MARCH
2017**

Leak Location	Arterial, Collector, Freeway, Local	Type of Street Concrete/Asphalt	Major Break Minor Break	Catch Basin Draining Yes/No	Date/Time	Comments
Henry Street/ Frederick Street	Local	Concrete	Major	Yes 25' away	3/16/2017 5:00 a.m. Thursday	Fixed during normal work hours.
942 E. Windfield Place	Local	Concrete	Minor	Yes 50' away	3/16/2017 9:00 a.m. Thursday	The road had heaved over the winter. Drilled on the heave after noticing water at the location and found multiple pin holes in the pipe. Fixed during normal work hours. Water loss calculated back to January 1st.
1432 S. Memorial Drive	Arterial	Terrace	Minor	Yes 10' away	3/20/2017 6:00 a.m. Monday	Fixed during normal work hours. Water was not coming to the surface and running into a storm drain. Water loss calculated back to January 1st.
231 W. Franklin Street	Collector	Concrete	Major	Yes 25' away	3/23/2017 6:00 a.m. Thursday	Fixed during normal work hours. Property owner reported sump pump running for approximately two weeks. Water was entering an old sewer lateral.