



# City of Appleton

100 North Appleton Street  
Appleton, WI 54911-4799  
[www.appleton.org](http://www.appleton.org)

## Meeting Agenda - Final Utilities Committee

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Tuesday, September 27, 2016

5:30 PM

Council Chambers, 6th Floor

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1. Call meeting to order

2. Roll call of membership

3. Approval of minutes from previous meeting

[16-1500](#) Approval of the September 13, 2016 Utilities Committee Meeting minutes.

**Attachments:** [September 13, 2016 Utilities Committee Meeting Minutes.pdf](#)

4. **Public Hearings/Appealances**

5. **Action Items**

[16-1501](#) Award Motor Control Center Electrical Maintenance Contract to Midwest Electrical Testing in the amount of \$17,725 with a 10% contingency of \$1,773 for a project total not to exceed \$19,498.

**Attachments:** [MCC Electrical Contract for AWWTP.pdf](#)

6. **Information Items**

[16-1502](#) Monthly Reports for August 2016:  
- Water Distribution and Meter Team Monthly Report - August

**Attachments:** [Meter Team Report August.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

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Tuesday, September 13, 2016

5:30 PM

Council Chambers, 6th Floor

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### 1. Call meeting to order

*Chairperson Dannecker called the Utilities Committee meeting to order at 5:30 p.m.*

**Present:** 4 - Dannecker, Meltzer, Reed and Jirschele

**Excused:** 1 - Baranowski

### 2. Roll call of membership

**Present:** 4 - Dannecker, Meltzer, Reed and Jirschele

**Excused:** 1 - Baranowski

### 3. Approval of minutes from previous meeting

[16-1387](#)

Approval of the August 23, 2016 Utilities Committee Meeting minutes.

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

**Aye:** 4 - Dannecker, Meltzer, Reed and Jirschele

**Absent:** 1 - Baranowski

### 4. Public Hearings/Apearances

### 5. Action Items

[16-1392](#)

Award Matthias Tower Construction Contract to Maguire Iron, Inc. in the amount of \$94,200 with a 10% contingency of \$9,420 and a total not to exceed \$103,620.

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

**Aye:** 4 - Dannecker, Meltzer, Reed and Jirschele

**Absent:** 1 - Baranowski

### 6. Information Items

7. Adjournment

**Meltzer moved, seconded by Reed, that the Utilities Committee meeting be adjourned at 5:42 p.m. Roll Call. Motion carried by the following vote:**

**Aye:** 4 - Dannecker, Meltzer, Reed and Jirschele

**Absent:** 1 - Baranowski



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

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

**TO:** Chairperson Greg Dannecker and Members of the Utilities Committee

**CC:** Chris Shaw, Utilities Director

**DATE:** September 20, 2016

**RE:** *Award Motor Control Center Electrical Maintenance Contract to Midwest Electrical Testing in the amount of \$17,725 with a 10% contingency of \$1,773 for a project total not to exceed \$19,498.*

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#### **BACKGROUND:**

The Appleton Wastewater Treatment Plant (AWWTP) staff solicited for quotations to perform electrical testing and maintenance services. The maintenance activities are to occur on the 480V and lower voltage equipment at the wastewater treatment plant. Service proposals included the ability to provide inspection, testing, servicing, and making minor repairs to the Motor Control Center (MCC) equipment. Quotes needed to abide by the National Electrical Testing Association (NETA) and the National Fire Protection Agency (NFPA) 70B requirements.

The quotations addressed electrical work on 25% of the MCC equipment per year. The term of the contract would be 4 years with the stipulation that the Appleton Common Council would have to approve appropriations for subsequent years. If budgets were approved over the next three years the electrical work and contract term would be completed in 2019.

#### **CONTRACTOR SCOPE OF WORK:**

- Prepare a working Method of Procedure (MOP). The MOP will reviewed by the operations and maintenance staff
- OSHA, electrical safety, lockout tagout requirements (i.e., CFR 40, 1910.147) are to be exercised during this project
- Infrared scans are to be completed on individual buckets of all motor control centers as listed. Infrared scans are to be completed on all transformers and power panels that are listed. Infrared scanning will be done annually.
- The thermographic scanning shall occur when the equipment is energized and is operating at its normal capacity.
- A thermographic scanning report shall be prepared and furnished to the owner.

- ✓ The report shall include all photos of any hot spots found with the temperature readings, including what MCC, bucket location, date and time.
- ✓ The contractor shall promptly report all sources of heating problems to the owner for corrective action.
- ✓ The contractor will use the City's MCC inventory as the structure of their report.

### 1.0 Motor Control Centers

- Perform point to point ground resistance tests on each motor control center from the fall of potential test point.
- Clean dust and debris from the interior and exterior of the MCC by means of vacuum and clean with non-corrosive cleaners with lint free towels.
- Inspect, clean, lube, and adjust all hinges and locking hardware on all doors, access panels, and blanks.
- Close any and all openings not being used by means of knockout plugs or made closures.
- Inspect and tighten all ground connections on the MCC ground bus.
- Neatly arrange wiring in common areas of MCC. Use plastic zip ties to keep wires away from hinges and latches so they will not be pinched.

### 2.0 MCC Buckets

- Clean dust and debris from the interior MCC buckets by means of vacuum and clean with non-corrosive cleaners and lint free towels.
- Inspect, adjust, and lube all linkage incorporated in the disconnecting and locking out of the bucket and overload resets.
- Inspect and tighten all line voltage and control voltage terminations also the starter overloads.
- Check voltage at breaker and at any control transformer.
- Record breaker or fuse size and type.
- Record overload size or settings.
- Perform insulation resistance test on all noted units (reference Section 6).
- Neatly arrange any loose wires inside bucket so they will not become pinched in the door or any moving part.

### 3.0 Transformers and Power Panels

- Clean dust and debris from interior and exterior of transformers and power panels (reference Section 8).
- Test ground system of the panel and transformer.
- Inspect and tighten all terminations inside the panels and transformers.
- Close any and all openings not being used in the panel back box and face plate.
- Test insulation resistance of the feeders to the transformer and panel.
- Verify voltage at main lugs / breaker.

#### 4.0 Drives and Soft Starts

- Using a HEPA filter equipped vacuum, clean dust and debris from interior and exterior drive cabinet (reference Section9).
- Inspect and tighten all connections within cabinet.
- Inspect, clean, lube, and adjust all hinges and locking hardware on doors and access panels.
- Close any and all openings not being used in the cabinet.

6.0 Motors to Check Insulation Resistance – Please refer to Table 1 Motor Inventory for Insulation Resistance Testing for the contractor required insulation testing.

Table 1 Motor Inventory for Insulation Resistance Testing		
Building	MCC	Equipment
Building B	MCC 14	Channel Aeration Blower #3
	MCC 6	Process Air Blower #1 Process Air Blower #2
Building F1	MCC 7A	Blower #3
	MCC 7B	Blower #1 Blower #2
Building F2	MCC 19	Channel Air Blower #2
	MCC 17	Channel Air Blower #1 SWG 4000 High Pressure Blower #1 High Pressure Blower #2 High Pressure Blower #3 High Pressure Blower #4

#### 7.0 Switch Gear – 4160 V

- Clean dust and debris from the interior and exterior by means of vacuum and clean with non-corrosive cleaners and lint free towels.
- Inspect and clean all contact points of the switch gear.
- Check Resistance of contact points of the switch gear.
- Inspect, clean, adjust, and lube all linkage incorporated within the switch gear.
- Inspect and tighten all wire connections.

8.0 Power Panels and Transformers – Please refer to Table 2 Inventory of Power Panels and Transformers for a contractor required list of power panels requiring maintenance.

Table 2 – Inventory of Power Panels and Transformers	
Building	Panel
Building B	PP-202
	PP-203
	JP-204
Building K	PP-603
	PP-605
	JP-604
South Pump Station Building FG Control Panel 4004	JP-424
	LP-419
	JP-421
North Pump Station Building FG Control Panel 4003	LP-418
	JP-423
Building V	PP-902
	LP-901
	JP-901

## 9.0 Drive Cabinets

Table 3 - Drive Cabinets		
Building	MCC	Equipment
Building F1	MCC 7A	Waste Sludge Pump #1
		Waste Sludge Pump #2
	MCC 7B	Blower #1
		Blower #2
		Waste Sludge Pump #3
		Blower #2 Power Recovery Unit
Building F2	SWG 4000	High Pressure Blower #2

## RFQ PROCESS:

A non-mandatory pre-quote meeting was held on September 1, at 9:30 a.m. at the wastewater plant. The meeting and tour was designed to give electrical contractors the opportunity ask questions and to view the facilities. Quotes were received at the Appleton Wastewater Treatment Plant on September 9, 2016. The table below identifies the companies and their quotes.

COMPANY	Four Year Quote	2016 Quote
Electrical Testing Solutions.	\$79,000	\$19,750
Midwest Electrical Testing	\$73,617	\$17,725
Steinmetz Corporation	DNP	NA

DNP – Did Not Propose

The quote received from Midwest Electrical Testing was the least cost quote. AWWTP staff have completed their review and recommends the project award to Midwest Electrical Testing.

Initial project estimates were projected at \$30,000/year. Available funds were identified in the 2016 operations and maintenance budget.

**RECOMMENDATION:**

It is recommended to approve the Motor Control Center Electrical Maintenance Contract to Midwest Electrical Testing in the amount of \$17,725 with a 10% contingency of \$1,773 for a project total not to exceed \$19,498. If you have any questions or require further information regarding this project please contact Chris Shaw at 832-2362.



## WATER SUMMARY FOR AUGUST 2016

<b>Work done by Construction Maintenance</b>				
	<u>Aug 15</u>	<u>Aug 16</u>	<u>YTD 15</u>	<u>YTD 16</u>
Hydrants repaired	1	1	42	15
Hydrants replaced	0	0	6	3
Hydrant leaks	0	0	1	1
Valves replaced	0	0	4	1
Valves tested & inspected	0	0	17	1356
Valves Rebuilt	0	8	9	14
Valve boxes repaired	7	10	126	43
Curb boxes repaired	61	10	361	118
Curb boxes replaced	41	0	132	20
Lead or galvanized replaced	0	1	0	18
New services 1"	0	0	0	0
New services >1"	0	0	3	1
Water main breaks	3	8	50	44
Joint leaks repaired	0	0	1	0
Water quality	1	1	3	2
Service leaks (City side)	0	0	0	1
<b>Work done by Meter Service Team</b>				
	<u>Aug 15</u>	<u>Aug 16</u>	<u>YTD 15</u>	<u>YTD 16</u>
New accounts set with 3/4" or 1"	14	18	78	113
New accounts set with larger meter	2	0	5	2
Meters tested	564	1010	4805	6436
Meters failed	23	18	103	367
Meters stalled	1	0	3	0
Service calls	163	125	977	862
Final readings	362	447	2638	2572
Read meters - no reading	0	0	0	5
New meters installed	569	950	5017	6677
Exception meters inspected	0	0	0	0
Exception meters removed	0	0	0	0
Service leaks found	1	1	3	25
Cross connection inspections	548	920	4673	6200

**WATER MAIN BREAK/JOINT LEAK DATA LOG AUGUST  
2016**

Leak Location	Arterial, Collector, Freeway, Local	Type of Street Concrete/Asphalt	Major Break Minor Break	Catch Basin Draining Yes/No	Date/Time	Comments
Telulah Avenue/ Marion Street	Arterial	Asphalt	Major	Yes 30' away	8/9/2016 4:30 p.m. Tuesday	Fixed right away due to property damage.
925 E. Capitol Driver	Collector	Concrete	Major	Yes 280' away	8/14/2016 5:30 a.m. Sunday	Fixed right away due to property damage.
1349 E. Bona Avenue	Local	Concrete	Major	Yes 20' away	8/16/2016 10:00 p.m. Tuesday	Fixed right away due to property damage.
Capitol Drive/ McDonald Street	Collector	Concrete	Major	Yes 65' away	8/24/2016 4:30 a.m. Wednesday	Throttled down and fixed during normal work hours.
1309 S. Theodore Street	Local	Concrete	Major	Yes 175' away	8/26/2016 1:00 p.m. Friday	Fixed right away due to property damage.
1215 S. Theodore Street	Local	Concrete	Major	Yes 110' away	8/27/2016 2:00 p.m. Saturday	A lot of water. Fixed right away due to water loss and potential property damage.

**WATER MAIN BREAK/JOINT LEAK DATA LOG AUGUST  
2016**

Leak Location	Arterial, Collector, Freeway, Local	Type of Street Concrete/Asphalt	Major Break Minor Break	Catch Basin Draining Yes/No	Date/Time	Comments
907 W. Oklahoma Street	Local	Asphalt	Major	Yes 120' away	8/28/2016 6:00 a.m. Sunday	Break was too large to throttle down. Fixed right away due to property damage and water loss.
1027 S. Buchanan Street	Local	Concrete	Major	Yes 60' away	8/30/2016 9:00 a.m. Tuesday	Found while investigating a service leak. Resident reported that he first saw water in street on Sunday. Fixed right away. Property owner's sump pump was running constantly.

**WATER MAIN BREAK/JOINT LEAK REPORT AUGUST  
2016**

LOCATION	Work Order	TYPE OF PIPE	SIZE	YEAR	BREAK	ESTIMATED DURATION	ESTIMATED WATER LOSS IN GALLONS	ESTIMATED DOLLAR VALUE OF WATER REVENUE LOSS**
Telulah Avenue/ Marion Street	214194	CIP	6"	1951	6" hole	4 hours	1,300,000	\$7,907.75
925 E. Capitol Drive	214319	DIP	12"	1977	3.5" hole	6 hours	780,878	\$4,749.99
1349 E. Bona Avenue	214397	DIP	8"	1978	3.25" hole	3 hours	287,000	\$1,745.79
Capitol Drive/ McDonald Street	214629	DIP	12"	1977	4" hole	4 hours	739,077	\$4,495.72
1309 S. Theodore Street	214773	DIP	8"	1975	3" hole	3 hours	250,670	\$1,524.80
1215 S. Theodore Street	214774	DIP	8"	1957	2" hole	5 hours	185,682	\$1,129.48
907 W. Oklahoma Street	214772	CIP	6"	1927	2" hole	4 hours	148,545	\$903.58
1027 S. Buchanan Street	214869	CIP	12"	1961	20"x1/16" split	2.5 days	791,651	\$4,815.52
								\$0.00

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