CITY OF ONALASKA MEETING NOTICE

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

DATE OF MEETING: July 2, 2019 (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. Review and consideration of chemical rehabilitation of well and gravel pack at Well #8
5. Review and consideration of Court Street lift station construction engineering services
6. Review and consideration 2019 Urban Forestry Program Change Order #1
7. Review and consideration of fiber optic cable install along East Main Street and Theater Road by Lemonweir Valley Telephone Company
8. Review and consideration of Sustainable La Crosse Commission Report including possible Strategic Plan Development
9. Review and consideration of State/Municipal agreement for State Trunk Highway 16 project
10. Review and consideration of La Crosse Wastewater Treatment Plant Strategic Plan
11. Pay Estimates: Strand Associates, Short Elliot Hendrickson Inc., Mathy Construction, Gerke Excavating, HSR Associates, Fowler and Hammer, A-1 Excavating, Hoffman and McNamara Nursery, Olympic Builders, La Crosse County Highway Department, State of Wisconsin Department of Transportation, Davy Engineering, MSA Professional services, and any other contractor/developer
12. Adjournment

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. Tom Smith	*Fred Buehler, Financial Services Director/Treasurer
Ald. Jim Olson	
Ald. Dan Stevens	
* Ald. Diane Wulf – Vice Chair	
**Ald. Boondi Iyer	
*Ald. Kim Smith - Chair	
City Attorney City Administrator	
La Crosse Tribune Dept Heads.	
Coulee Courier	
WKTY WLXR WLAX	Onalaska Omni Center
WKBT WXOW FOX	Onalaska Public Library

*Board Members ** Alternate Member

Date Notices Mailed and Posted: 6-26-19

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.

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

July 2, 2019

Agenda Item: #4

Project/Item Name:	Well #8 rehabilitation
Location:	1227 Oak Avenue North
Requested Action:	Approval of services
Staff Report/Description:	Water Quality Investigations, Mr. Andrew Jacque, performed a water quality assessment at Well #8 in March 2019. The recommendation from that assessment called for chemical rehabilitation of the well and gravel pack. Municipal Well has performed various work on City wells over the past twenty years and is the staff recommended service provider for well work. Staff feels this well should have rehabilitation work performed in 2019 with other wells in future years.
Attachments:	Quote, chemical treatment procedure and Well #8 water quality assessment

MUNICIPAL
WELL & PUMP
A Division of McHorse Well Services, Inc.

June 6, 2019

City of Onalaska
Attn: Jim Prindle
PO Box 339
Onalaska, WI 54650

RE: Well No. 8 Chemical Treatment

Dear Jim,

This letter is for the treatment work for Well No. 8, as detailed by Water Quality Investigations. The program is rather extensive, but we have been involved with other successful projects with Andy Jacque, on projects like this. Based on the project scope, it would appear the well will be out of service for approximately two weeks.

Please note that in our experience the supplemental treatments are usually used for these types of treatments.

Please review the following scopes and the associated costs for the project:

I: Mobilization/Demobilization

1. Load and mobilize chemical treatment equipment to job site.
2. Disassemble piping and set up treatment equipment.
3. Disassemble treatment equipment and return pump equipment to normal.
4. Install recycle line through well vent piping.
5. Demobilize chemical treatment equipment from job site and unload at shop.

Lump Sum Section I: $ 9,940

II: Acid Treatment

1. Provide chemicals per scope supplied in report.
2. Inject chemicals and surge well for 8-hours.
3. Let chemicals stand in well overnight.
4. Surge well for an additional 2 hours the following morning.
5. Pump off acid and neutralize.

Lump Sum Items 1-5: $ 6,740

6. Supplemental acid treatment per scope supplied:

Lump Sum: $ 2,110

Estimated Total Section II (Acid Treatment): $ 8,850

III: Chlorine-Based Treatment

1. Provide chemicals per scope supplied in report.
2. Inject chemicals and surge well for 8-hours.
3. Let chemicals stand in well overnight.
4. Surge well for an additional 2 hours the following morning.
5. Pump off chlorine and neutralize.

Lump Sum Items 1-5 (Chlorine-Based Treatment): $ 5,390

6. Supplemental chlorine-based treatment per scope supplied:

Lump Sum: $ 2,130

Estimated Total Section III (Chlorine-Based Treatment): $ 7,520

1212 Storbeck Drive, P.O. Box 311, Waupun, WI 53963
Office: 920-324-3400 – Toll-Free: 800-383-7412 – Fax: 920-324-3431 - IL: 847-541-8816
www.municipalwellandpump.com

IV: Pump to Waste & Sampling

1. Set up to run well to waste.
2. Run pump to waste for 8-hours.
3. Collect first sample after 8-hours.
4. Collect second sample from well the following morning.
5. Disassemble well testing equipment.
6. Deliver samples to lab.

.....**Lump Sum Section IV: $ 3,220**

Estimated Total Sections I - IV: $ 29,530

V: Additional Treatments (if needed)

1. Additional acid treatments- as needed:.....**Lump Sum Each: $ 5,810**
2. Additional chlorine-based treatments- as needed:.....**Lump Sum Each: $ 5,070**

We trust you will find this correspondence to your understanding. Should you have any questions or concerns regarding this proposal, or if there is any other way we can be of assistance to your community, please contact our offices at your earliest convenience. We appreciate this opportunity to provide you with this proposal, and look forward to the opportunity to provide the City of Onalaska expert service on this project.

Sincerely,
MUNICIPAL WELL & PUMP

Martin T. VanElls

Marty Van Ells
Project Manage

WQI Water Quality Investigations

Chemical rehabilitation of Onalaska Well 8 (WUWN BG173) with Owner's well pump in place.

General

Chemical treatment of the well will consist of an acid treatment step followed by a chlorine-based treatment step. Repeat of each treatment step may be necessary to achieve desired results. A datasheet is provided to track effectiveness of treatments.

Treatment: Treat five (5) well borehole volumes to target cleaning of the gravel pack region. Add chemical treatments to the well through the existing 6" vent in a single continuous action by either 1) flash mixing chemical and system water at the wellhead, 2) from an appropriate size batching tank or 3) by flash mixing a more concentrated batch from a batching tank with system water at the wellhead to deliver the chemical treatment to the well in a single operation. For Option 3, a 3,000-gallon chemical treatment could be delivered to a well using a 1,500-gallon batching tank by mixing a double strength chemical treatment in the batching tank and mixing it with 50% system water at the well head during injection into the well.

Mixing: During treatment period for each step, chemical mixture shall be surged between the well and a 3,000-gallon minimum batching tank continuously and tested at the interval described below. Use the existing 6-inch vent for reintroducing chemical treatment back into the well.

Purging of spent chemical: Purge well to the nearby grassed swale and neutralize as necessary.

General Well and Treatment Information

1. Pump Setting = 120 feet, 12" column pipe
2. Static Water Level = 78 feet
3. Cased depth = 119 feet, 16" diameter casing
4. Total depth = 169 feet, 50 feet of 16" screen
5. Borehole volume = 600 gallons
6. Treatment volume = 3,000 gallons

Initial Step – Mechanical Treatment

This step will not be performed – treatment will occur with Owner's pump in place

Acid Treatment Step (minimum 24 hours contact time)

1. Chemicals (all NSF 60 Approved):
    a. Inhibited 20-degree Baume HCl (31% strength) – 6,400 mg/L, pH of 0.7 su.
    b. Initial and re-dose treatment:
        i. 62 gallons of Inhibited HCl
        ii. 2,938 gallons of water from water system
    c. Supplemental treatment: 31 gallons of Inhibited HCl
2. Mix well for 8 hours and monitor pH of mixture in the well every 2 hours during normal working hours. At the end of the first day, let well sit overnight. The following morning, mix and monitor for an addition 2 hours to assess need for additional treatment.
    a. If pH increases above 3 su within the first 8 hours, supplement treatment (add supplemental chemical to the batch/surge tank during refilling of the tank from well) and continue to surge and monitor for the remainder of the day.
    b. If pH rises above 3 su a second time while mixing, or if the solution becomes excessively dirty, purge treatment, neutralize as necessary and start with a fresh batch of chemical (See dosage in Step 1). Purge a minimum of 20 borehole volumes before redosing.

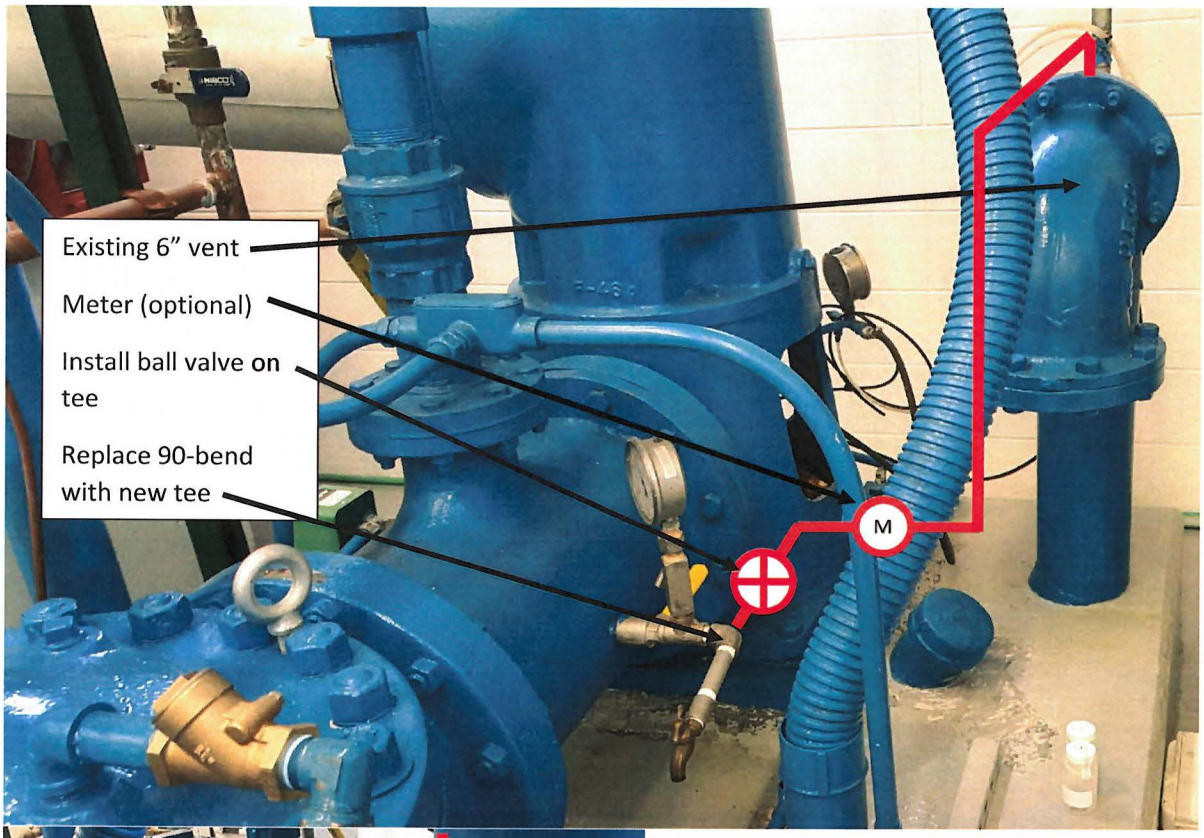
c. When pH stays below 3 su for 8 hours (after minimum contact time of 24 hours), purge treatment to waste and neutralize as necessary with caustic or soda ash if pH below 5.5 su (pH of rainwater).
d. Pump well to waste until pH rises above 5.5 su in preparation for following treatment.

Chlorine-Based Treatment Step: Chlorine, Glycolic and Clearitas (minimum 24 hours contact time)

1. Chemicals:
    a. Clearitas 110 (3x version of 101), Blue Earth Products, NSF 60 – 3,333 mg/L dose.
    b. 12.5% NSF 60 NaOCl – 3,000 mg/L dose.
    c. 70% NSF 60 glycolic acid – 4,000 mg/L dose.
    d. Initial and re-dose treatment:
        i. 10 gallons Clearitas 110
        ii. 24 gallons of 12.5% NaOCl
        iii. 17 gallons of 70% glycolic acid
        iv. 2,953 gallons of water – final mixture should have a pH of about 4 su.
        v. Add Clearitas and Hypochlorite to the tank during initial filling. Slowly add acid to the tank when it is about 75% full, which will minimize off-gas reactions yet still allowing for fluid assisted mixing.
    e. Supplement treatment (add supplemental chemical to the batch/surge tank during refilling of the tank from well, adding in the order described above):
        i. 5 gallons Clearitas 401
        ii. 12 gallons of 12.5% NaOCl
        iii. 8.5 gallons of 70% glycolic acid
2. Mix well for 8 hours, and monitor pH, odor and chlorine residual of the chemical mixture in the well every 2 hours. At the end of the first day, let well sit overnight. The following morning, mix and monitor for an addition 2 hours to assess need for additional treatment.
    a. For odor assessment, waft the sample (don't directly sniff) to determine if it has a fruity, sweet, musty, pungent, "swimming pool" or metallic odor.
    b. If free chlorine drops below 300 mg/L within the first 8 hours, supplement treatment and continue to mix and monitor for an additional 8 hours.
    c. If free chlorine drops below 300 mg/L a second time while surging, or if the solution becomes excessively dirty, purge the treatment from the well (neutralize as needed) and start with a fresh batch of chemical (see dosage in Step 1). Purge a minimum of 20 borehole volumes before redosing.
    d. When free chlorine stays above 300 mg/L for 8 hours (after minimum contact time of 24 hours), purge the treatment from the well and neutralize as needed. Purge a minimum of 20 borehole. Neutralize with caustic or soda ash if pH below 5.5 su, and with sodium thiosulfate if chlorine present.
    e. Pump the well to waste for a minimum of 8 hours following treatment. A minimum of 30 minutes after chlorine is no longer detectible, the first bacteria sample can be collected.
    f. Collect two safe samples a minimum of 8 hours apart before returning the well back to service.

Recycle Line Installation

Following chemical rehabilitation of the well, install a well water recycle line as generally shown below. Connect the 1/2" copper recycle line to a new tee and valve installed ahead of the sample tap (use the raw water tap located before the check valve). Install a flow meter on the recycle line to monitor flow rate and volume (optional). Transition to soft copper at the well head and insert the recycle line into the well through a compression fitting, terminating a minimum of five feet below the top of the pump base.



WQI Water Quality Investigations, LLC

Date:	March 19, 2019
Client:	City of Onalaska
Project Description:	Water Quality Assessment

Sample Sources:	Well 8
Sample Date:	March 5, 2019
Tests by WQI:	Microbial Occurrence, MBP/DP/EEM, Electrochemical Testing
Tests by Northern Lakes Service (NLS):	Nutrients and metals

Sample Name:	Area of System That Sample Represents:
Treated Stagnant	Well was offline for about 8 hours prior to sampling (stagnation period). Sample represents treated water that was stagnated in the distribution system piping at well discharge prior to sampling.
Column Pipe	Sample was collected after 20 seconds of pumping and presents stagnated water that was located in the column pipe prior to start of pumping.
Borehole	Sample was collected after 40 seconds of pumping and presents stagnated water that was located in the open borehole prior to start of pumping.
Gravel Pack	Sample was collected after 2 minutes of pumping and presents stagnated water that was located in the gravel pack prior to start of pumping.
Aquifer	Sample was collected after 60 minutes of pumping and presents water that was located in the nearby aquifer prior to start of pumping.
Treated Flowing	Well was online prior to sampling. Sample represents treated water that was flowed back to the sample point from distribution system piping at well discharge after well pump was turned off.

Background

The city of Onalaska has historically experienced elevated copper and nitrate in its drinking water. Previous testing data for Onalaska's water system suggest that the presence of naturally occurring biofilm in the water system is an underlying cause of copper corrosion and copper in water at the consumer tap. The purpose of this study is to determine if naturally occurring biofilm in Well 8 and/or aquifer is the underlying cause of biofilm in the drinking water system.

Sampling

Samples were analyzed to assess changes in water quality, and to determine if water quality changes were caused by microbial occurrence and/or the presence of biofilm in the system sampled.

Biofilm is a general term used to describe common soil and water microorganisms found growing on a wet surface. In its most basic form, biofilm consists of layers of harmless bacteria that have grown to form a colony. Biofilm typically attaches to a surface with a slime-like layer, and secretes components such as enzymes, proteins and polysaccharides in response to stressful conditions, or to protect itself from chlorine and anti-microbial treatments. Biofilm naturally grows inside of piping systems, hot water heaters, water softeners, groundwater wells, and more, with the amount of biofilm that can grow dependent upon the amount and type of nutrients present.

All wet surfaces found inside water related systems, from the raw water intake to the final point of usage, will have biofilm, including drinking water systems. Bacteria found in thin biofilms are typically harmless. Biofilms in water systems only become a problem when conditions allow them to grow so thick that the bacteria can change the quality of the water. A thick biofilm can corrode piping and plumbing fixtures, increasing the concentration

of metals in the water (such as lead and copper). Thick biofilms can also harbor pathogens, such as legionella, coliform bacteria and E. coli. See the Appendix for more information.

Results

Water quality results are summarized in **Table 1 and Table 2,** and shown in the attached **BIT** and **BAT** results summaries. When interpreting the data, it is important to understand that all water samples started out as **aquifer water** samples, which is the water that was introduced to the **well borehole or connected water main** at the end of the last **pumping cycle**. Minor changes in water quality can occur as water sits in a system, which are typically caused by changes in mineral solubility and/or temperature. Major and minor changes in water quality can be caused by the presence of biofilm in the system.

The following is a brief assessment of the results:

Microbial Occurrence (ME):

- Samples from a drinking water system with greater than 500 ME/mL have elevated microbial occurrence and are likely to be affected by microbial biofilms. In certain waters, low ME could indicate the presence of an excessively thick biofilm.
- Except for the column pipe sample, all samples had low microbial occurrence, which suggests the presence of excessive biofilm in the column pipe.

Excitation-Emission Matrix (EEM):

- EEMs provide information on the type of fluorescing organic carbons present in water (food for microbial growth and/or microbial created products) and/or exposure of water to biofilm.
- TP EEM levels greater than 100,000 FI indicate the presence of biofilm on surfaces that the sample was in contact with.
- In general, the greater the TP EEM, the greater the biofilm presence was in the system samples, with the proportion of each type of EEM indicating the underlying cause of biofilm.
- All samples had TP EEM greater than 100,000 FI.
- The Gravel Pack sample had the highest EEM signal, which is an indicator of excessive biofilm and/or biofilm sloughing in the gravel pack region of the well at the time of sampling.
- The Treated Stagnant and Treated Flowing samples had the lowest TP EEMs, which was caused by chlorination of the water. The Treated Stagnant TP EEM was 14% higher than the Treated Flowing TP EEM, which was caused by a 33% increase in MBP EEM. This is an indicator of active biofilm in the water main connecting the well to the water distribution system.
- The Aquifer and Gravel Pack samples had the highest DP EEM, which suggests the well is connected to an aquifer that in impacted by decaying organic matter and/or a starved biofilm.

Biofilm Corrosivity Index (BCI):

- A biofilm corrosivity index (BCI) can be calculated from EEM values. A BCI value greater than one indicates an increased potential for microbial induced corrosion to occur.
- The Treated Stagnant and Gravel Pack samples had elevated BCIs, which suggests the potential for microbial induced corrosion to occur in the vicinity of where the samples were obtained from.

Oxidation Reduction Potential (ORP):

- Oxidation Reduction Potential (ORP) is a relative measure of the concentration of dissolved energy-bearing nutrients in the water, and/or is an indicator of an adequate chlorine residual.
- Both treated water samples showed a high ORP measurement, with little drop in ORP for the Treated Stagnant sample relative to the Treated Flowing Sample, which suggests the presence of an effective

chlorine residual in the treated water and little chlorine demand in the water from the aquifer.

- The Gravel Pack sample had the highest ORP of all the untreated samples, which suggests that this location saw nutrient utilization over the period of non-use and likely contains excessive biofilm.

pH:

- pH of drinking water is highly dependent on geology and aquifer sediment chemistry, the type of disinfectant used, and the type of microbial activity present.
- Untreated samples from the well had a slightly higher pH compared to the treated water samples and the aquifer sample. This likely correlates with an ammonia oxidizing type biofilm in the well and gravel pack, which could be a source of nitrate in water pumped from the well.

Specific Conductance:

- Specific conductance is an estimate of the concentration of dissolved ions in the water.
- Untreated samples from the well had a slightly lower specific conductance compared to the treated water samples and the aquifer sample. This likely correlates with the presence of biofilm removing mineral and ions from the water (process called biofiltration).

FA TOC

- FA TOC is an estimate of the fulvic acid portion of total organic carbon content of the water based on the absorbance measurement of the water at a wavelength of 254 nm. This measurement can be used to assess the presence of biofilm and biofilm-produced fulvic acid type molecules.
- Untreated samples from the well had a slightly lower FA TOC compared to the treated water samples and the aquifer sample. This likely correlates with the presence of biofilm utilizing FA TOC as a nutrient source and water that is limited in the presence of available/useable organic carbon.

Filter Color:

- Color of filters used to process the samples is used to gauge the presence of biofilm and/or sloughed material in the water samples.
- All sample filters showed no color.

BIT Data Assessment:

- Data show a trend in nitrate related signal in the samples obtained from the well, with the Treated Stagnant sample showing the highest concentration of nitrate. The trend suggests the presence of an ammonia oxidizing type biofilm in the pipe between the well and the distribution system, which creates nitrate, and a nitrate consuming biofilm in the well and column pipe.
- Biofilm within the well appears to have a moderate iron limitation, which suggests the potential for biofilm to cause corrosion of the steel well casing and column pipe to meet needs for iron.

Chemical Analysis (Table 1):

- Water from the aquifer serving Well 8 meets all regulatory standards and has a low concentration of iron and manganese. The well produces water of good aesthetic quality.
- Except for an elevated nitrate concentration, water from Well 8 appears to be of good overall quality.
- Water quality changed little between the aquifer and gravel pack samples. The reduction in sodium and metals in the gravel pack region relative to the aquifer are indicators of the presence of excessive biofilm in the gravel pack.

Nutrient Analysis (Table 2):

- All living cells need organic carbon, nitrogen, and phosphorous to grow. The relative ratio of these nutrients, and the presence to micro nutrients, will select for certain types of biofilm and bacteria to

be present and/or flourish. Ammonia is the preferred form of nitrogen for microbial growth.

- Data show that water from the aquifer is nutrient limited with respect to organic carbon and phosphorous based on total nitrogen present (ammonia and nitrate). This assumes that bacteria present can utilize nitrate for their nitrogen needs through a process called assimilatory nitrate reduction. When considering only ammonia, water from the aquifer is nutrient limited with respect to carbon and ammonia. These data and data discussed above suggest that a mixed biofilm is present in the aquifer that is limited in organic carbon and ammonia.
- Data show that water from the gravel pack region of the well has the same limitations as water from the aquifer. The increase in ammonia and decrease in nitrate in the gravel pack relative to the aquifer suggests the presence of excessive biofilm in the well performing assimilatory nitrate reduction to satisfy nitrogen needs.
- Nutrient data and trends generally agree with BIT data described above and BAT data described below.

Biofilm Activity Test:

- The biofilm activity test (BAT) assesses the presence of microbial related byproducts in water, which are generally created by starved bacteria located in biofilm. Results are ranked against a database of sample results to calculate a severity index. Severity Index results for the BAT highlight the likely cause(s) of microbial induced corrosion, taste and odor issues, disinfection byproduct formation, and excess microbial occurrence in water samples, source water or a water related system.
- BAT data generally show metabolic activity associated with biofilm, not active bacteria in the water. The presence of this activity is not harmful and generally mirrors activity being performed at much higher levels by native bacteria in our digestive systems. We focus on this activity because it can cause corrosion of plumbing, wells and equipment, lead to formation of disinfection byproducts and/or interfere with water treatment.
- The BAT results generally show the following:
    1. Water from the aquifer shows excessive metabolism related activity associated with sulfur. For Well 8, this equates to water with a severe organic carbon limitation. This result matches the nutrient limitation data described above. The reduction in sulfur metabolism in the gravel pack sample equates to an environment with excessive biofilm, which becomes a source of organic carbon.
    2. Water from the aquifer shows excessive metabolism related activity associated with protein degradation. For Well 8, this equates to water with a severe organic carbon limitation and/or ammonia limitation. This result matches the nutrient limitation data described above.
    3. Metabolism associated with complex organic acids was highest in the treated stagnant sample and gradually declined with water from the well and then the aquifer. A similar trend was seen in the iron limitation data. These data together suggest the presence of biofilm in the downstream piping and in the well that is secreting acids in search of iron. These are corrosive conditions, which could be transferred to the distribution system and premise plumbing to cause corrosion of copper piping.
    4. General BAT nutrient assessment data match nutrient limitation data described above, and suggest that biofilm present is utilizing a combination of ammonia and nitrate as its nitrogen source.

Conclusions and Recommendations:

Data clearly show the presence of naturally occurring biofilm in the aquifer at Well 8, which likely promotes excessive biofilm growth in the well and down stream water distribution system. Biofilm appears to be the thickest in the gravel pack region of the well, which suggests that better biofilm control in the well could improve water quality in the water distribution system. The presence of biofilm in the well is not creating a direct health risk and is not regulated by drinking water standards, though it appears to be responsible for creating nitrate in the drinking water and corrosion of copper plumbing in premise plumbing systems.

Comparison of BAT and BIT test results for Well 8 with five recently tested Lead and Copper Rule sampling sites in Onalaska shows that biofilm present in this well and connected aquifer is a source/cause of biofilm in the sampled plumbing systems. The remainder of the wells in Onalaska should be assessed to determine if they have a similar influence on water quality in the distribution system. General data suggest that Well 7 and Well 10 will be of similar quality to Well 8, and that Well 9 will be different.

Well 8 should be chemically rehabilitated to reduce the presence of biofilm in the well and gravel pack region, and then operated and maintained differently to minimize the presence of biofilm. Overall recommendations will be provided once all wells have been assessed.

Table 1. Summary of Water Quality Data

Parameter	Gravel Pack	Aquifer	Change in Gravel Pack	Units	Limit of Detection
Barium, tot. as Ba	68	73	-6.8%	ug/L	1.2
Boron, tot. as B	23	24	-4.2%	ug/L	18
Calcium, tot. as Ca	87	89	-2.2%	mg/L	0.065
Chromium, tot. as Cr	0.84	0.94	-10.6%	ug/L	0.83
Copper, tot. as Cu	1.9	ND	increase	ug/L	1.6
Hardness, tot.	350	350	0.0%	mg/L	0.24*
Iron, tot. as Fe	ND	ND	none	mg/L	0.052
Lithium, tot. as Li	2.9	3.1	-6.5%	ug/L	0.24
Magnesium, tot. as Mg	32	32	0.0%	mg/L	0.02
Manganese, tot. as Mn	12	12	0.0%	ug/L	0.72
Ammonia as N (unfiltered)	0.046	0.038	21.1%	mg/L	0.025
NO2 + NO3 as N (unfiltered)	5.2	6.2	-16.1%	mg/L	0.15
Phosphorus, tot. as P	0.12	0.13	-7.7%	mg/L	0.022
Potassium, tot. as K	1.6	1.6	0.0%	mg/L	0.022
Silicon, tot. as Si	10,000	11,000	-9.1%	ug/L	55
Sodium, tot. as Na	19	24	-20.8%	mg/L	0.12
Strontium, tot. as Sr	91	96	-5.2%	ug/L	0.18
Total Organic Carbon (TOC)	0.47	0.46	2.2%	mg/L	0.39
Vanadium, tot. as V	2.3	2.4	-4.2%	ug/L	1.1
Zinc, tot. as Zn	3.7	ND	increase	ug/L	3.5

Table 2. Summary of Test Results for Nutrients and Biofilm Formation Potential

Sample Location	TOC mg/L	NH_3-N mg/L	NO_3-N mg/L	P mg/L	TOC limitation	N limitation	P limitation	TOC limitation	NH_3 - N limitation	P limitation
Gravel Pack	0.470	0.046	5.200	0.120	99%	0%	83%	93%	95%	0%
Aquifer	0.460	0.038	6.200	0.130	99%	0%	85%	94%	96%	0%

ND = non-detect. Limitation refers to the molecular percentage of a necessary nutrient that is missing in the water to support balanced growth of heterotrophic bacteria. From an analogy perspective, if the requirement for each nutrient were represented by a glass of liquid, nutrient limitation refers to the percentage of the glass that would unfilled by nutrients present in the water.

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

July 2, 2019

Agenda Item: #5

Project/Item Name:	Court Street Lift Station
Location:	300 South Court Street
Requested Action:	Approval of services
Staff Report/Description:	Staff is requesting the assistance of Strand Associates for construction related services for the Court Street Lift Station project. Services will include shop drawing review, site visits to review work, review project progress, etc. City staff will perform project administration and day to day oversight.
Attachments:	Task order 19-04

STRAND ASSOCIATES®

Strand Associates, Inc.®
910 West Wingra Drive
Madison, WI 53715
(P) 608-251-4843

Task Order No. 19-04
City of Onalaska, Wisconsin (OWNER)
and Strand Associates, Inc.® (ENGINEER)
Pursuant to the Agreement for Technical Services dated December 19, 2014

Project Information

Project Name: Court Street Lift Station

Services Description: Provide construction-related services for the Court Street Lift Station previously designed by ENGINEER.

Scope of Services

ENGINEER will provide the following services to OWNER:

1. Prepare three sets of Contract Documents for signature.

2. Prepare a list of project shop drawings to be provided by the contractor and/or supplier.

3. Receive and review electrical, civil, and process-related shop drawings, and correspond with contractor and/or supplier.

4. Prepare agenda and attend preconstruction meeting via teleconference.

5. Attend up to two site visits by electrical and civil staff (up to two staff members per visit, as required) for observation of construction progress. In furnishing observation services, ENGINEER's efforts will be directed toward determining for OWNER that the completed project will, in general, conform to the Contract Documents; but ENGINEER will not supervise, direct, or have control over the contractor's work and will not be responsible for the contractor's construction means, methods, techniques, sequences, procedures, or health and safety precaution programs, or for the contractor's failure to perform the construction work in accordance with the Contract Documents.

6. Assist OWNER with questions throughout construction.

7. Assist with up to three change order reviews.

8. Participate in up to three construction progress meetings via teleconference.

9. Attend pumping station startup and testing meeting.

10. Provide record drawings in portable document file format from information compiled from contractor's records. ENGINEER is providing drafting Services only for record drawings based on the records presented to ENGINEER by contractor and OWNER. ENGINEER will not be liable for the accuracy of the record drawing information provided by contractor and OWNER.

Compensation

OWNER shall compensate ENGINEER for Services under this Task Order on an hourly rate basis plus expenses an estimated fee of $24,300.

Schedule

Services will begin upon execution of this Task Order, which is anticipated on July 1, 2019. Services are scheduled for completion on May 31, 2020.

TASK ORDER AUTHORIZATION AND ACCEPTANCE:

ENGINEER:	OWNER:
STRAND ASSOCIATES, INC.®	CITY OF ONALASKA
Joseph M. Bunker Corporate Secretary — Date	Joe Chilsen Mayor — Date
	Caroline Burmaster City Clerk — Date

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

July 2, 2019

Agenda Item: #6

Project/Item Name:	2019 Urban Forestry Program
Location:	Citywide
Requested Action:	Approval of change order
Staff Report/Description:	Change order number one increases the 2019 Urban Forestry Program contract for installation of additional citizen request trees. Funds for the project fall within the budgeted amount in the 2018 and 2019 Capital Improvements Budget.
Attachments:	Change order #1

2019 Urban Forestry Program

CHANGE ORDER # 1

Contract Date: March 26, 2019

Owner:	City of Onalaska
Contractor:	Hoffman & McNamara Nursery and Landscape
Contract/Project:	2019 Urban Forestry Program

You are directed to make the following changes in the Contract Documents:

Description:

a) Additional Citizen Request Tree Planting
   a. Patriot Elm – 6 @ $332.00/EACH = $1,992.00
   b. American Linden – 4 @ $342.00/EACH = $1,368.00
   c. Swamp White Oak – 6 @ $352/EACH = $2,112.00
   Total = $5,472.00

Change Order Request

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price $ 61,980.00	Original Contract Times: Contract Substantial Comp: July 3, 2019
Net Increase from previous Change Orders: $ 0.00	Net change from previous Change Orders: Contract Substantial Comp: 0 days
Contract Price prior to this Change Order: $ 61,980.00	Contract Times prior to this Change Order: Contract Substantial Comp: July 3, 2019
Net Increase of this Change Order: $ 5,472.00	Net Increase this Change Order: Contract Substantial Comp:
Contract Price with all approved Change Orders: $ 67,452.00	Contract Times with all approved Change Orders: Contract Substantial Comp: July 3, 2019

APPROVED:
City of Onalaska

By: _____
(Authorized Signature)

Date:

ACCEPTED BY:
Hoffman & McNamara

By: _____
(Authorized Signature)

Date:

This Effective Date of this Change Order is the date when approved by all parties.

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

July 2, 2019

Agenda Item: #7

Project/Item Name:	Lemonwier Valley Telephone fiber optic cable installation
Location:	East Main Street and Theater Road
Requested Action:	Approval of fiber optic cable install
Staff Report/Description:	Lemonweir Valley Telephone Company has requested the installation of a fiber optic cable within City of Onalaska street right of way. Staff has reviewed the proposed routes and plans.
Attachments:	Plan route overview

MID-STATE CONSULTANTS

COPY

May 14, 2019

Jarrod Holter
City of Onalaska
415 Main St
Onalaska, WI 54650

RE: 2018 Proposed Telephone Equipment Construction
Lemonweir Valley Telephone Company
(WILT-49 Onalaska)

Mr. Holter;

I am sending you the routes the telephone company will be placing cable and associated equipment. Attached you will find a key map and construction sheets showing the area's in which they will be working in your city ROW. Work being done in state ROW will be permitted through them.

The approved permit can be mailed to: Darren Peper, Mid-State Consultants, 1222 N. Superior Rd., Tomah, WI 54660 or emailed to my address below. Please let me know if you have any questions.

The Contractor will be held accountable for any and all ditch, road, and contour restoration.

If you have any concerns or questions, you may contact me at (608)797-2609 or dpeper@mscon.com.

Sincerely,

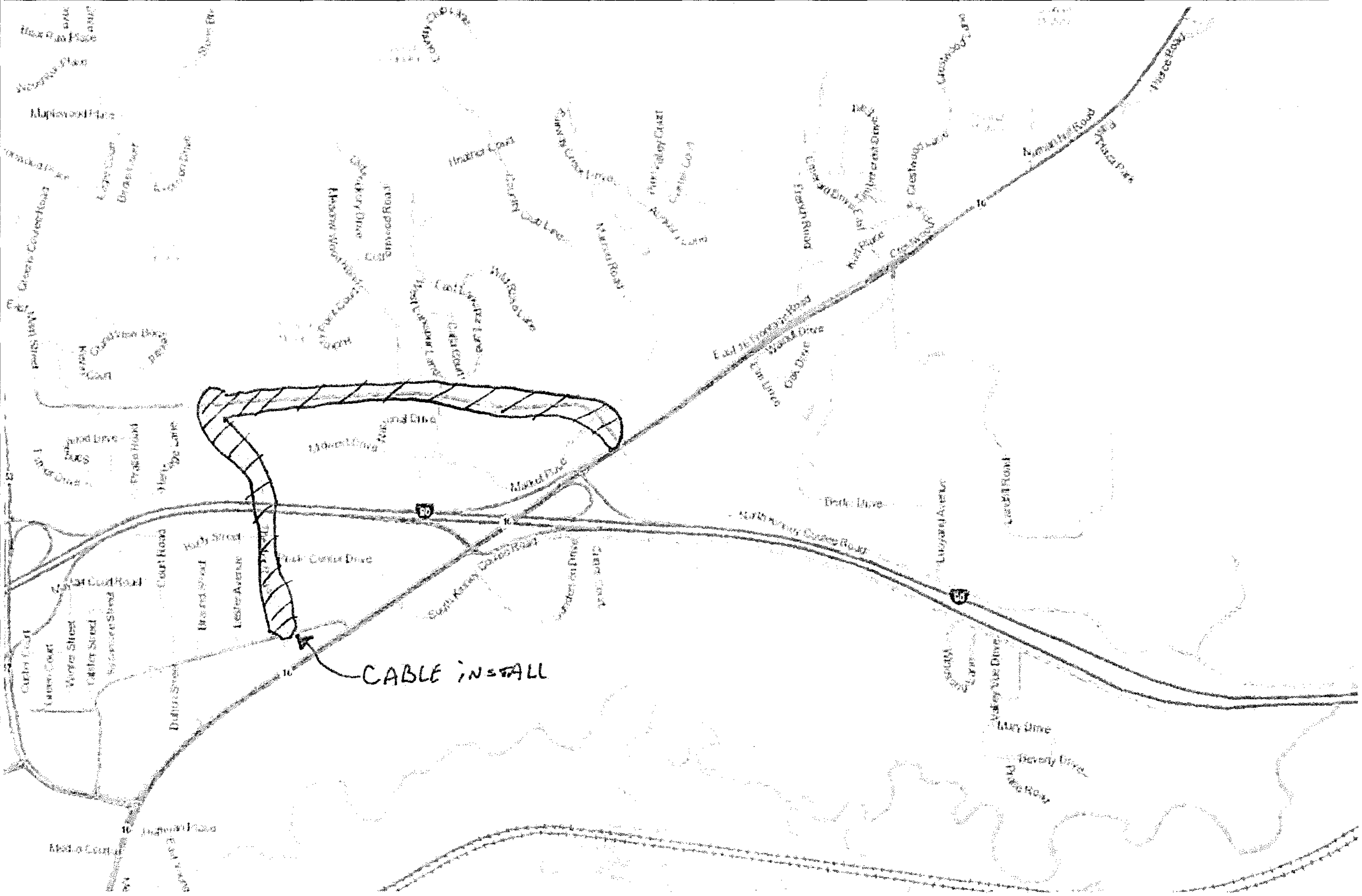
Darren Peper
Mid-State Consultants
Cc: File

PROVIDING COMMUNICATION
SYSTEMS ENGINEERING

CORPORATE OFFICE
1475 NORTH 200 WEST
POST OFFICE BOX 311
NEPHI, UT 84648
TEL: (435) 623-8601
FAX: (435) 623-8610

1222 NORTH SUPERIOR
POST OFFICE BOX 566
TOMAH, WI 54660
TEL: (608) 372-4127
FAX: (608) 372-4934

Surface Water Data Viewer Map



Legend

- Municipality
- State Boundaries
- County Boundaries
- Major Roads
  - Interstate Highway
  - State Highway
  - US Highway
- County and Local Roads
  - County HWY
  - Local Road
- Railroads
- Tribal Lands
- Rivers and Streams
- Intermittent Streams
- Lakes and Open water

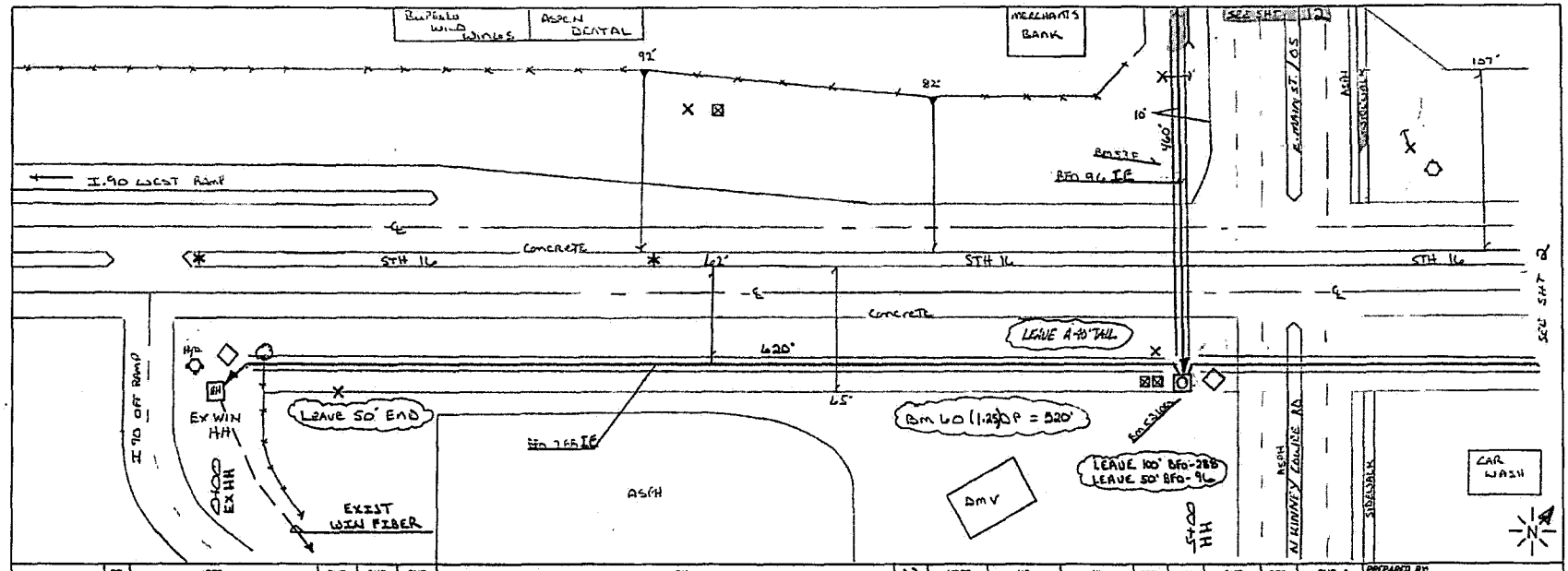
NOTE:
UPDATED PLAN SHEETS 6-25-19

0.5 0 0.25 0.5 Miles

1:15,840

NAD_1983_HARN_Wisconsin_TM

Notes



PED/POLE/ STATION NUMBER	BD	BFD				V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM 2 (5/8) (8)	BM SSF	BM 40 (1.25) DP	BM 60 (1.25) DR	BM 61 (2) DROP	BM 61 D	BM 62 SPLIT DUCT	BM 71 ROCK	BM 72 ASPH	BM 73 CONC	BM 83	BM 53F LDC	LJ HD -1	HBFD (S)	HBFD (M)	HD -1	HD -1P	W BHF	W HBFO	SESV .75	SEB 12 IE	ONT (2)	ONT (9)	SCB 12	SUB #
EX. HH									(1)	(1)												6					1	1						
												520																						
HH		620							1	1											1			1	96									
		620							1	1	1	520									1		6		1	96		1	1					

PREPARED BY: MID-STATE CONSULTANTS TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 1 OF

COUNTY: LA CROSSE

TWP: ONALASKA

TWN. 16N | RNG. 7W | SEC. 11

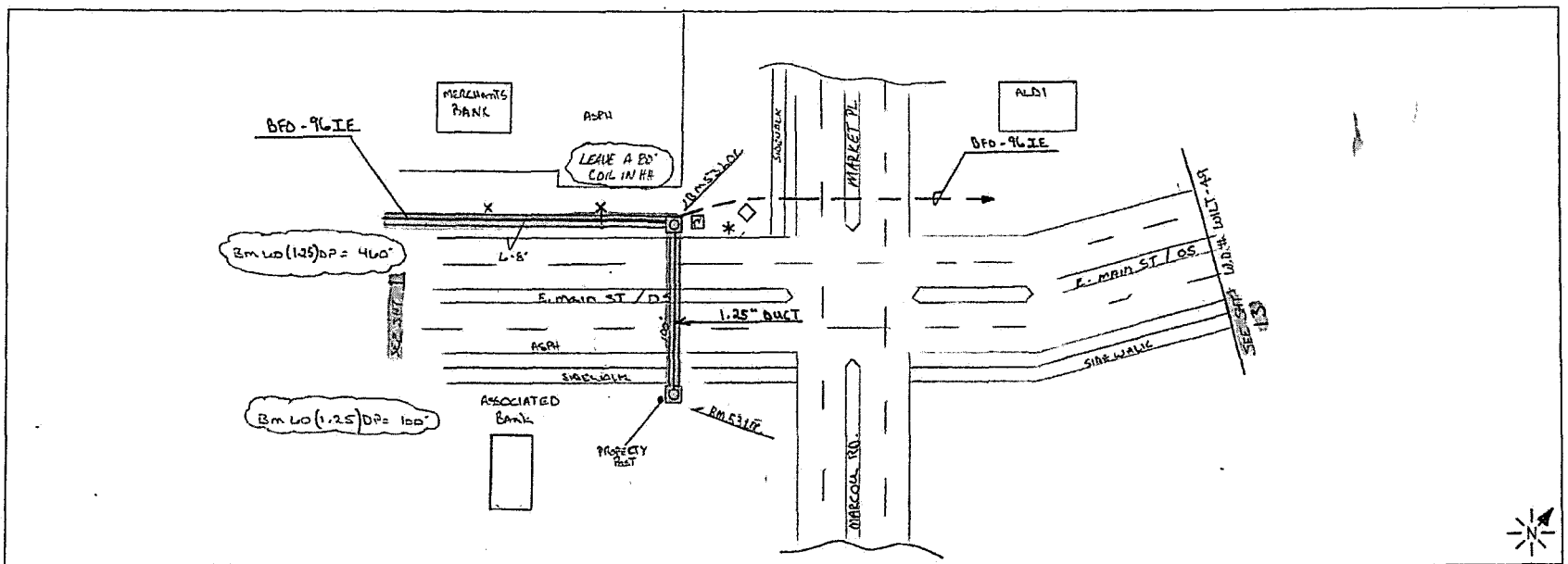
STAKED: RH 4/23

AS REC:

M-SC WO#: 01LT-49

CONST. SHT. OF

6-25-01
EH



PED/POLE/ STATION NUMBER	BD	BFD					V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM																	HBFD		HD		W		SEBV	SEB	DNT		SEB	SUB #
	4	96IE									2 (6/8) (6)	53F	60 (1.25) DP	60 (1.25) DR	61 (2) WMP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53F LOC					(S)	(W)	-1	-1P	BHF	HBFO	.75	12 IE	(2)	(9)	12	
													460																									
HH		542							1		1													1				1		—								
													100																									
HH		—							1		1													1				—										
		542							2		2		560											2				1										

PREPARED BY:
MADISON-STATE CONSULTANTS
TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 12 OF

COUNTY: LA CROSS

TWP: ONALASKA

TWN. 16 N | RNG. 7 W | SEC. 13

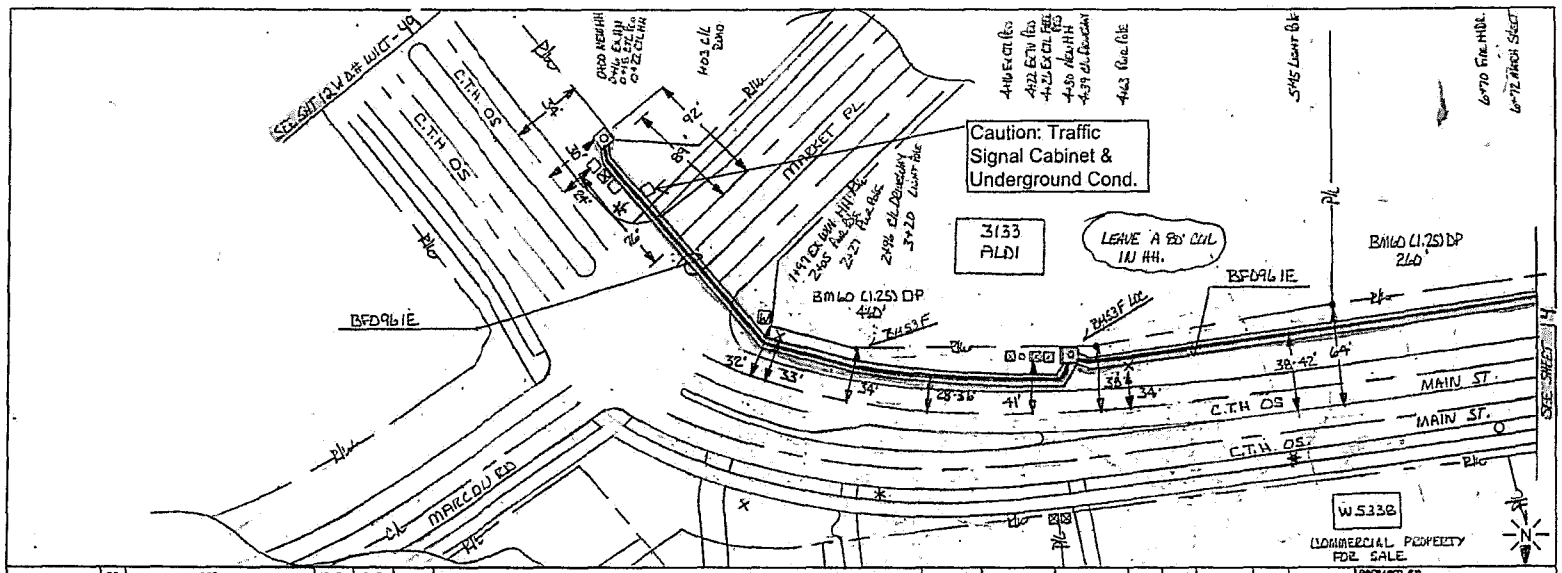
STAKED: RH 4/23

AS REC:

M-SC WO#: WICT-49

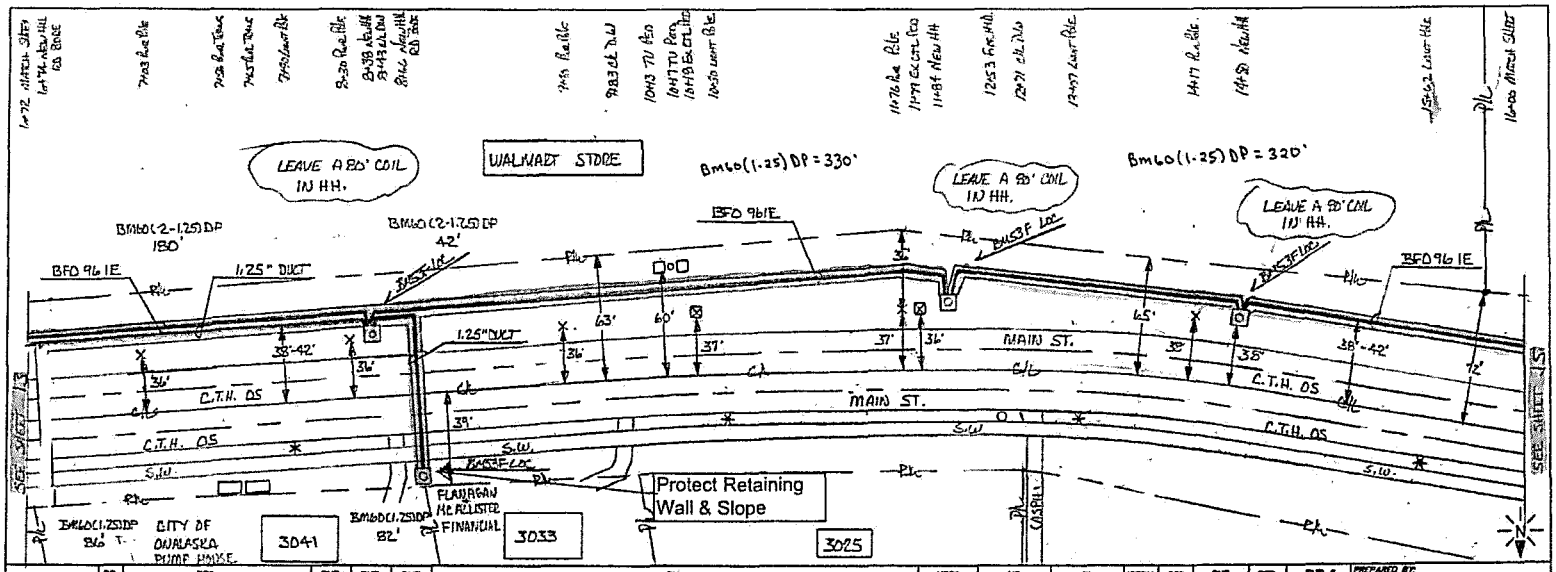
CONST. SHT. OF

6-25-19



PED/POLE/ STATION NUMBER	BD	BFD						BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM															HBFD		HD		W		SEBV	SEB	ONT		SEB	SUB #	PREPARED BY:
	4	96 IE					V (2)				3 (3/8) (6)	53F Loc.	60 (1.25) DP	60 (1.25) DR	61 (2) SHOP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F				(S)	(W)	-1	-1P	BHF	HBFD	.75	12 IE	(2)	(3)	12		CMLD-STATE CONSULTANTS TOMAH, WISCONSIN (608)372-4127
																																					CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI
HH									(1)		(1)	(1)														(1)												EXCHANGE: DNALASKA
HH		554							1		1	1	460									1				1		—										SERV. AREA:
													260																									ROUTE:
																																						SHEET 13 OF
																																						COUNTY: LA CROSSE
																																						TWP: CITY OF DNALASKA
																																						TWN. 16N RNG. 07W SEC. 11
																																						STAKED: M.S.N. 03/2019
																																						AS REC:
																																						CONTRACT: W-634
		554							1		1	1	720									1				1												M-SC WO#: WILT - 49
																																						CONST. SHT. OF

6-25-19
JH



PED/POLE/ STATION NUMBER	BO 4	BFO 96 IE				V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	2 (5/8) (6)	53F Loc.	60 (1.25) DP	60 (2-1.25) DP	61 (2) MDP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F		HBFO (S)	(U)	HO -1	-1P	W BHF	HBFO	SCBV .75	SCB 12 IE	ONT (2)	(6)	SCB 12	SUB #
HH		558						1		1	1		180										1		—									
HH		—						1		1	1	BL											—		—									
HH		—						1		1	1	82											—		—									
HH		488						1		1	1	330	42										1		—									
HH		434						1		1	1	320											1		—									
		1480						5		5	5	818	222										3											

PREPARED BY: CNLD-STATE CONSULTANTS TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 14 OF

COUNTY: LA CROSSE

TWP: CITY OF ONALASKA

TWN. 16N | RNG 07TH | SEC. 11

STAKED: N.G.N. 03/2019

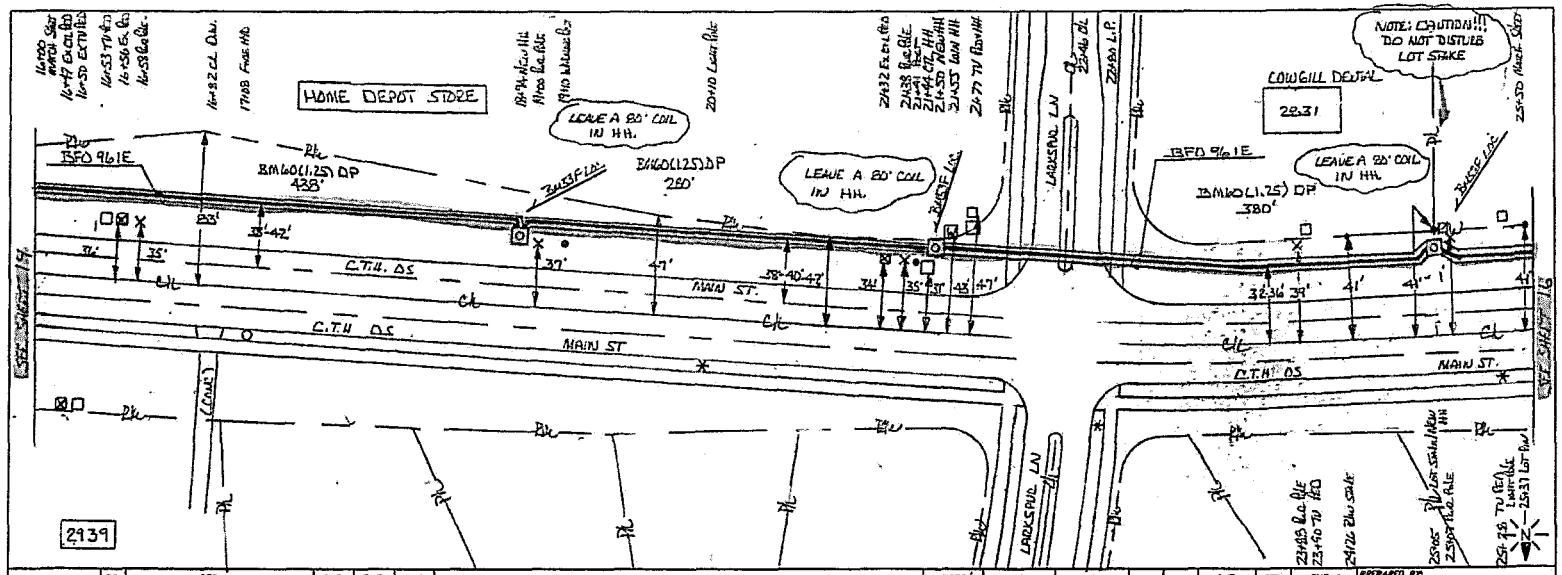
AS REC:

CONTRACT: WI-634

W-SC WO#: WILT-49

CONST. SHT. OF

6-25-19
JH

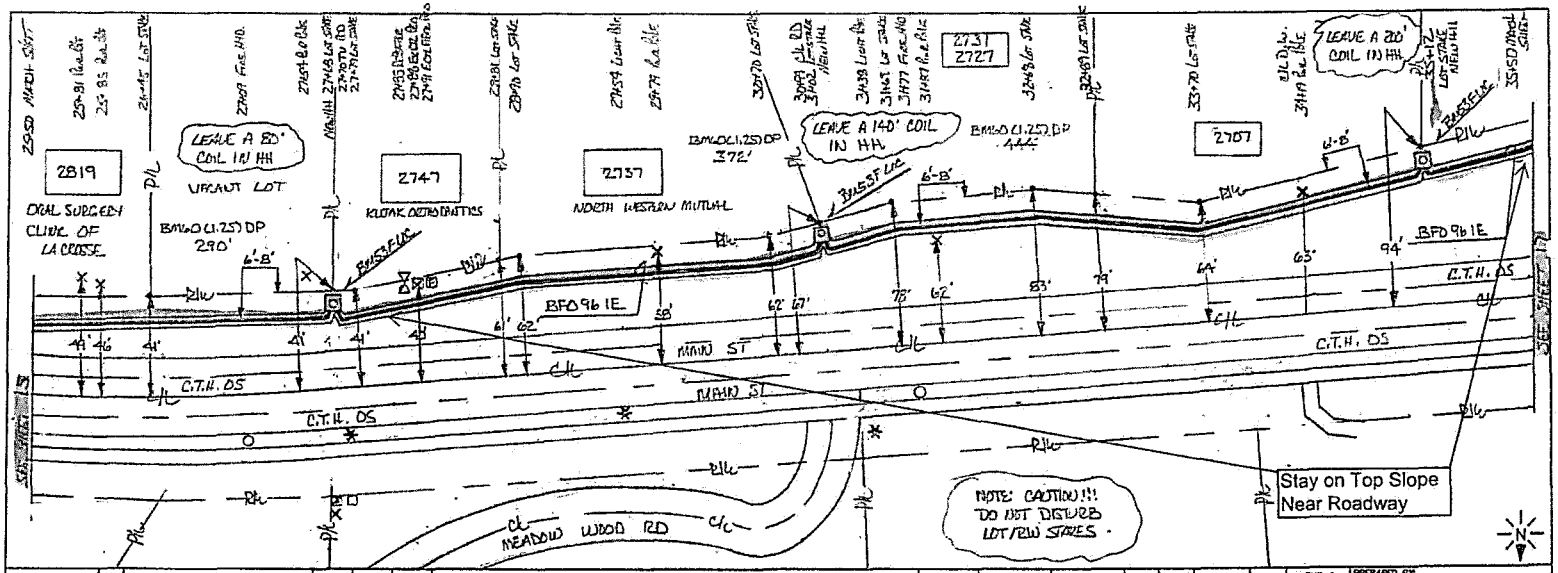


PED/POLE/ STATION NUMBER	BD	BFD					BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM														HBFD		HO		W		SEBV	SEB	ONT		SCB	SUB #
	4	96 IE				V (2)				2 (5/8) (8)	33' LOC.	60 (1.25) DP	60 (1.25) DR	61 (2) MDP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F			(S)	(W)	-1	-1P	BHF	HBFD	.75	12 IE	(2)	(9)	12	
HH		532						1		1	1	438												1		—				·					
HH		368						1		1	1	280												1		—									
HH		472						1		1	1	380												1		—									
		1372						3		3	3	1098												3											

PREPARED BY: CHILSTATE CONSULTANTS TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI
EXCHANGE: ONALASKA
SERV. AREA:
ROUTE:
SHEET 15 OF
COUNTY: LA CROSSE
TWP: CITY OF ONALASKA
TWN. 16N | RNG 5TW | SEC. 11
STAKED: M.G.M. 07/2019
AS REC:
CONTRACT: WI-634
M-SC WO#: WILT-49
CONST. SHT. OF

6-25-19
YL

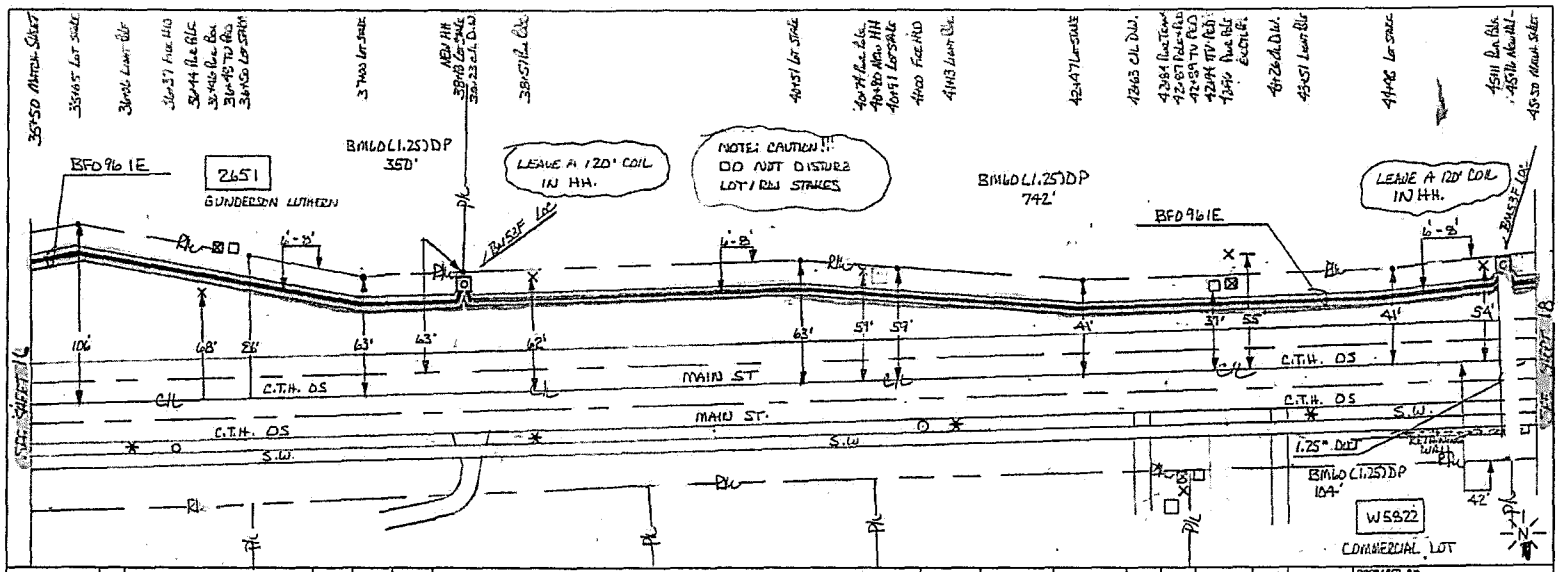


PED/POLE/ STATION NUMBER	BD	BFD				V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM 2 (5/8) (6)	53' Loc.	60 (1.25) DP	60 (1.25) DR	61 (2) SWP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F			HBFO (S)	HBFO (W)	HD -1	HD -1P	W BHF	W HBFO	SCBV .75	SCB 12 IE	ONT (2)	ONT (9)	SCB 12	SUB #
	4	96 IE																																
HH		37B						1		1	1	290												1		—								
HH		494						1		1	1	372												1		—								
HH		628						1		1	1	444												1		—								
		1500						3		3	3	1106												3										

PREPARED BY: CHILD-STATE CONSULTANTS TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI
EXCHANGE: DUALASKA
SERV. AREA:
ROUTE:
SHEET 16 OF
COUNTY: LA CROSSE
TWP: CITY OF DUALASKA
TWN./S/N | RNG./DIR | SEC. 10+11
STAKED: P.A.C.N. 03/2019
AS REC:
CONTRACT: WI-634
M-SC WO#: WICT-49
CONST. SHT. OF

6-25-19
JK



PED/POLE/ STATION NUMBER	BD	BFD				V (2)	BNF (SMALL)	BNF (MED)	BNF (LARGE)	BM														HBFO		HO		W		SEBV	SEB	ONT		SEB	SUB #
	4	96 1E								2 (5/8) (8)	53' Loc.	60 (1.25) DP	60 (1.25) DR	61 (2) BKD	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	43	53 F			(S)	(W)	-1	-1P	BNF	HBFO	.75	12 IE	(2)	(9)	12	
HH		520						1		1	1	350												1		—									
HH		884						1		1	1	742												1		—									
HH		—						1		1	1	104												—		—									
		1404						3		3	3	1196												2											

PREPARED BY:
MID-STATE CONSULTANTS
TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 17 OF

COUNTY: LACROSSE

TWP: MEDARY CITY OF ONALASKA

TWN/GN	RNG/ATW	SEC. ID

STAKED: M.C.M. 03/2019

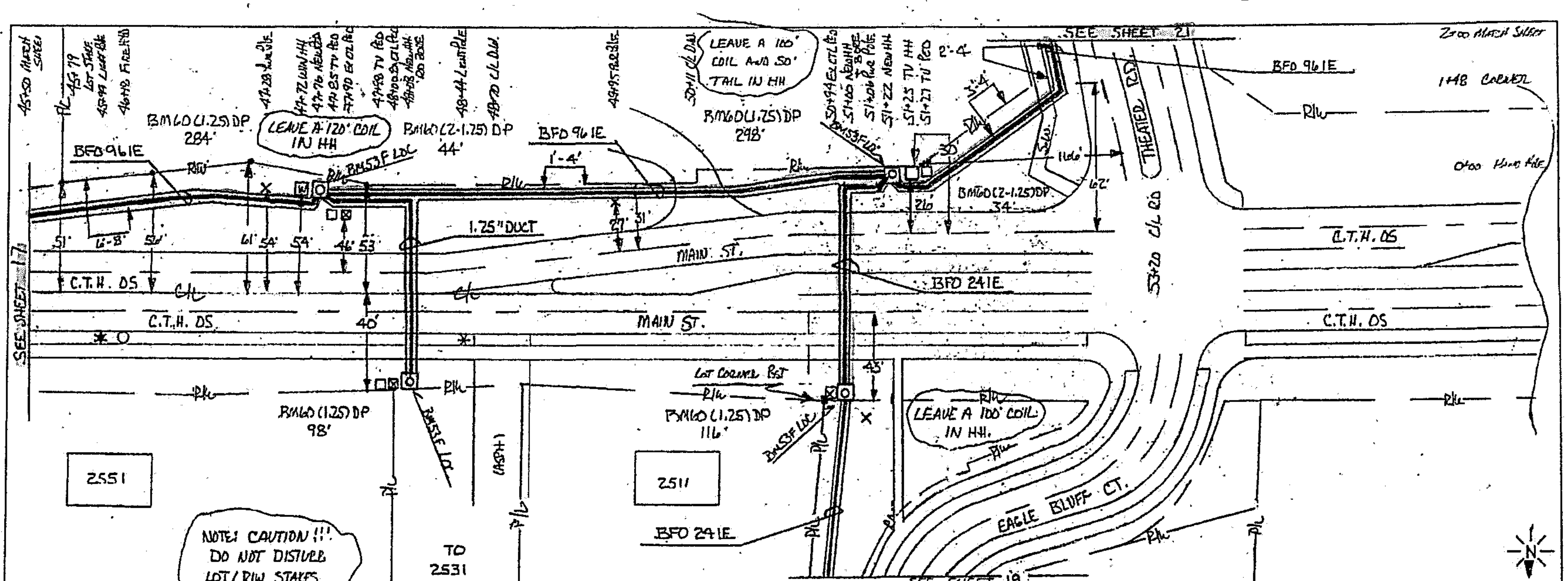
AS REC:

CONTRACT: WI-634

M-SC WO#: WILT-49

CONST. SHT. OF

6-25-19

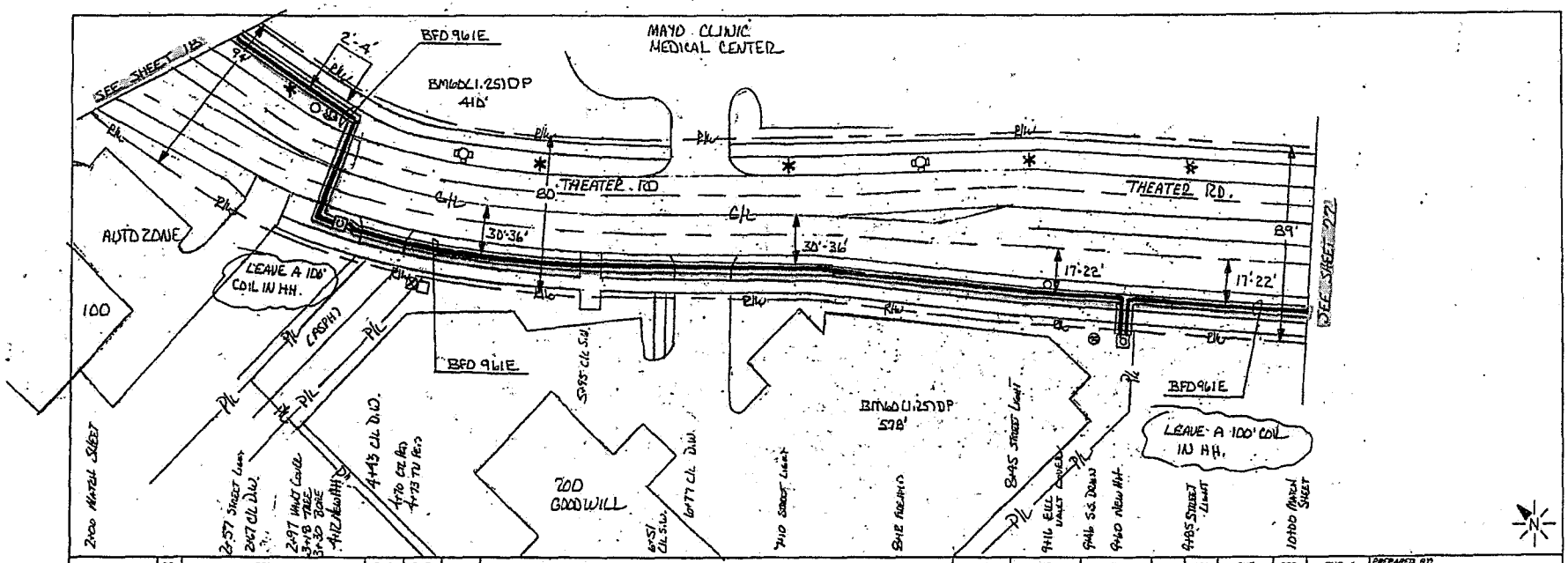


PED/POLE/ STATION NUMBER	BD 4	BFO 96 IE	BFO 24 IE			V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM 2 (5/8) (8)	83F LOC.	60 (1.25) DP	60 (2-1.25) DP	81 (2)	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F			HBFO (S)	HBFO (M)	HO -1	HO -1P	W BHF	W HBFO	SEBV .75	SEB 12 IE	ONT (2)	ONT (8)	SEB 12	SUB #
											L.O.																								
HH		412'						1		1	1	284												1		—									
HH		—						1		1	1	98	44											—		—									
HH		488						1		1	1	298	34											1		4									
HH			230					1		1	1	116												1		—									
		900	230					4		4	4	796	78											3		4									

PREPARED BY: MID-STATE CONSULTANTS
TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI
EXCHANGE: ONALASKA
SERV. AREA:
ROUTE:
SHEET 18 OF
COUNTY: LA CROSSE
TWP: CITY OF ONALASKA
TWN. 16N | RNG 07W | SEC. 10
STAKED: M.E.M. 031209
AS REC:
CONTRACT: WI-634
M-SC WO#: WILT-49
CONST. SHT. OF

6-25-19
gt

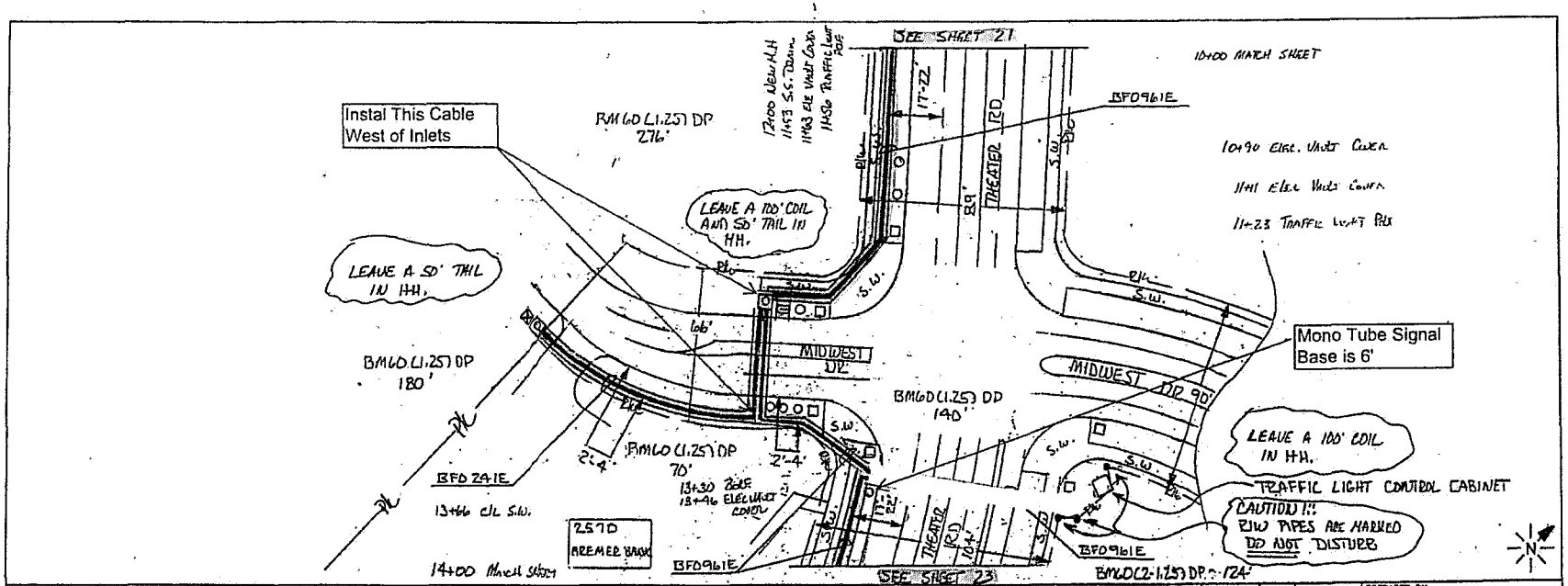


PED/POLE/ STATION NUMBER	BD	BFO					V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM														HBFD		HO		W		SEBV	SEB	ONT		SEB	SUB #
	4	90 IE									2 (5/8) (8)	53F LOC.	60 (1.25) DP	60 (1.25) DR	61 (2) DROP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F			(S)	(M)	-1	-1P	BHF	HBFO	.75	12 IE	(2)	(9)	12	
HH		510							1		1	1	410												1		—									
HH		678							1		1	1	578												1		—									
		1188							2		2	2	988												2		—									

PREPARED BY: TRI-STATE CONSULTANTS, TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS-WI
EXCHANGE: ON ALASKA
SERV. AREA:
ROUTE:
SHEET 21 OF
COUNTY: LACROSSE
TWP: CITY OF ONALASKA
TWN. 16N | RNG. 07W | SEC. 10
STAKED: M.G.N. 05/2019
AS REC:
CONTRACT: WI-634
M-SC WO#: LWCT-49
CONST. SHT. OF

6-25-19



PED/POLE/ STATION NUMBER	BD	BFD					BHF (SMALL)	BHF (MED)	BHF (LARGE)	BW													HBFD		HD		W		SERV	SER	ONT		SER	SUB #
	4	96 IE	24 IE			V (2)				2 (5/8) (8)	53F L.O.C.	80 (1.25) DP	80 (2-1.25) DP	81 (2) WDP	81 D	82 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F			(S)	(W)	-1-	-1P	BHF	HBFD	.75	12 IE	(2)	(6)	12	
HH		376						1		1	1	276							45					1		5									
HH			350					1		1	1	180	70						25					1		1									
HH		434						1		1	1	140	124						25					1											
		810	350					3		3	3	596	194						95					3		5									

PREPARED BY: WILD-STATE CONSULTANTS, TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 22 OF

COUNTY: LA CROSSE

TWP: CITY OF ONALASKA

TWN. N/S | RNG. E/W | SEC. 10

STAKED: M.G.N. 05/2019

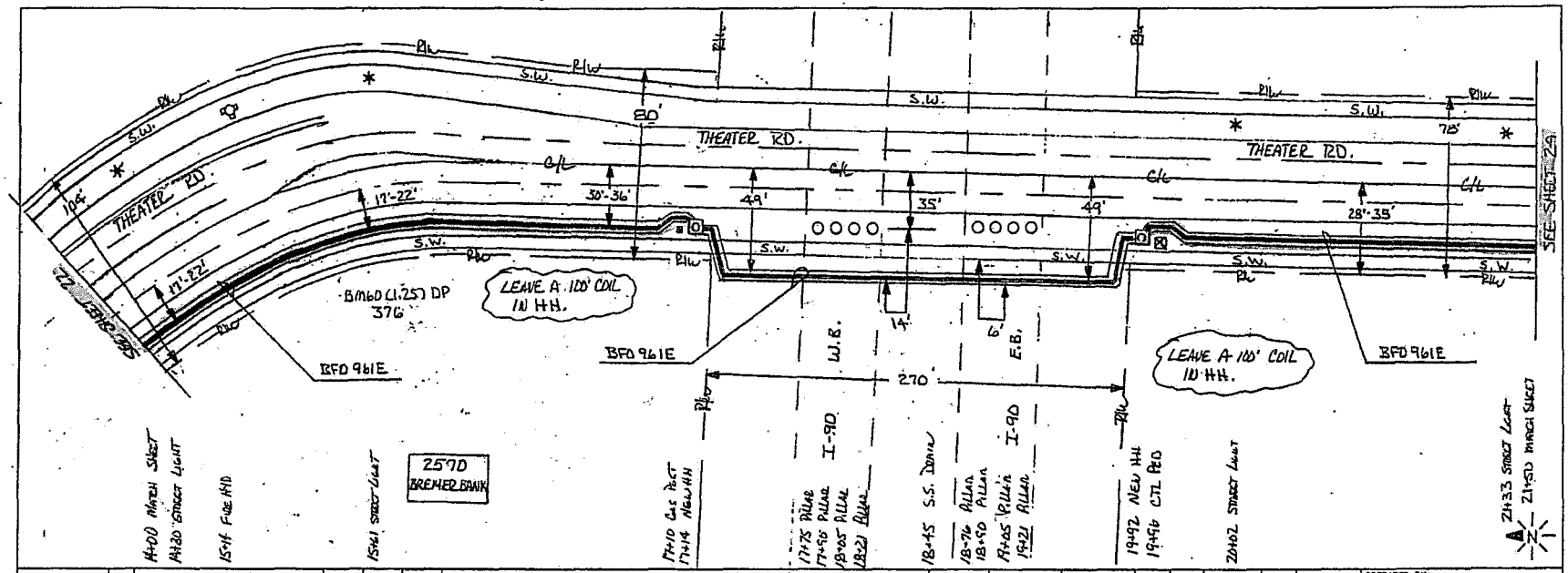
AS REC:

CONTRACT: WI-634

W-SC WO#: WILT-49

CONST. SHT. OF

6-25-19



PED/POLE/ STATION NUMBER	BD	BFO				V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM																HBFO		HO		W		SEBV	SEB	ONT		SEB	SUB #
	4	96 IE								2 (5/8) (S)	53F LOC.	60 (1.25) DP	60 (1.25) DR	61 (2) DROP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F					(S)	(M)	-1	-1P	BHF	HBFO	.75	12 IE	(2)	(9)	12	
HH		600						1		1	1	376														1		-									
HH		480						1		1	1	320														1		1									
		1020						2		2	2	696														2		—									

PREPARED BY: TRI-STATE CONSULTANTS, TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 23 OF

COUNTY: LA CROSSE

TWP: CITY OF ONALASKA

TWN. 16N | RNG. 07W | SEC. 10

STAKED: M.C.M. 05/2019

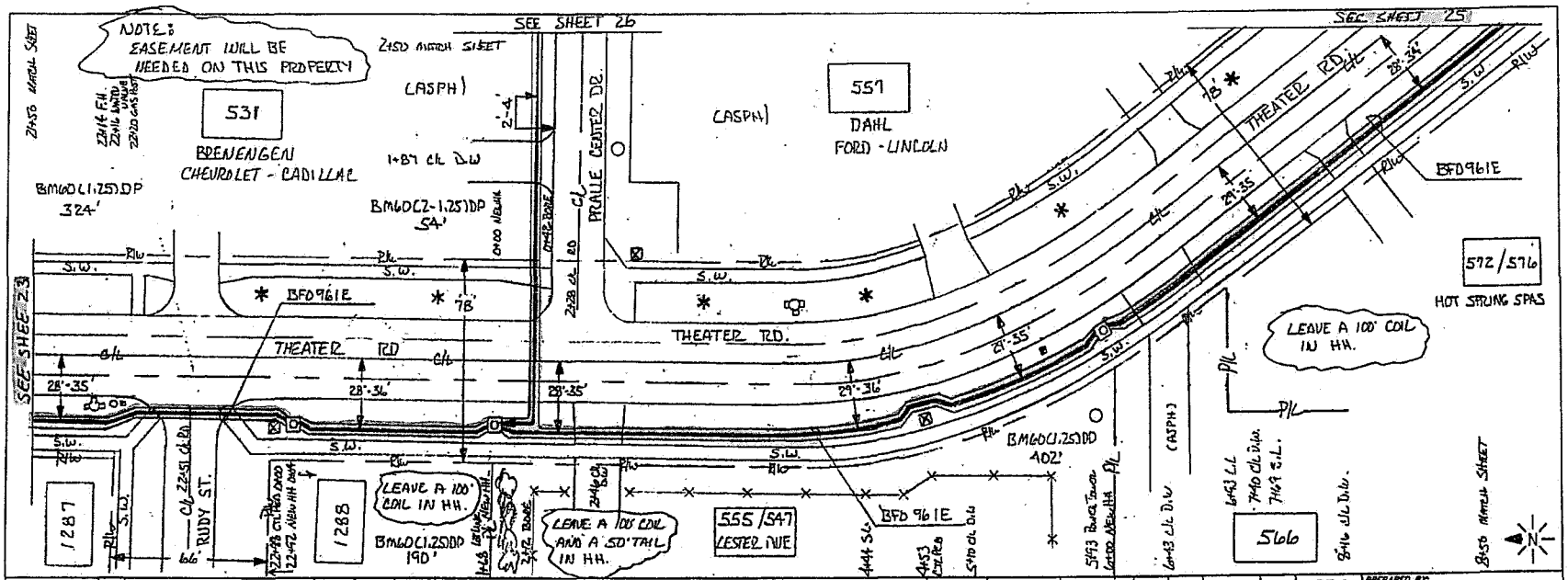
AS REC:

CONTRACT: WI-634

M-SC WO#: WILT-49

CONST. SHT. OF

6-25-19



PED/POLE/ STATION NUMBER	BD	BFD				V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM													HBFO		HD		W		SEBV	SEB	ONT		SEB	SUB #
	4	96 IE								2 (5/8) (B)	83F Loc.	60 (2-1.25) DP	60 (0.25) DP	61 (2) BRP	61 D....	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 T		(S)	(W)	-1	-1P	BHF	HBFO	.75	12 IE	(2)	(9)	12	
HH		424						1		1	1		324										1		—									
HH		290						1		1	1		190										1		6									
HH		556						1		1	1	54	402										1		—									
		1270						3		3	3	54	916										3	6										

PREPARED BY: CMLS-STATE CONSULTANTS TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 24 OF

COUNTY: LA CROSSE

TWP: CITY OF ONALASKA

TWN. 16N | RNG. 07W | SEC. 10

STAKED: M.G.M. 05/2019

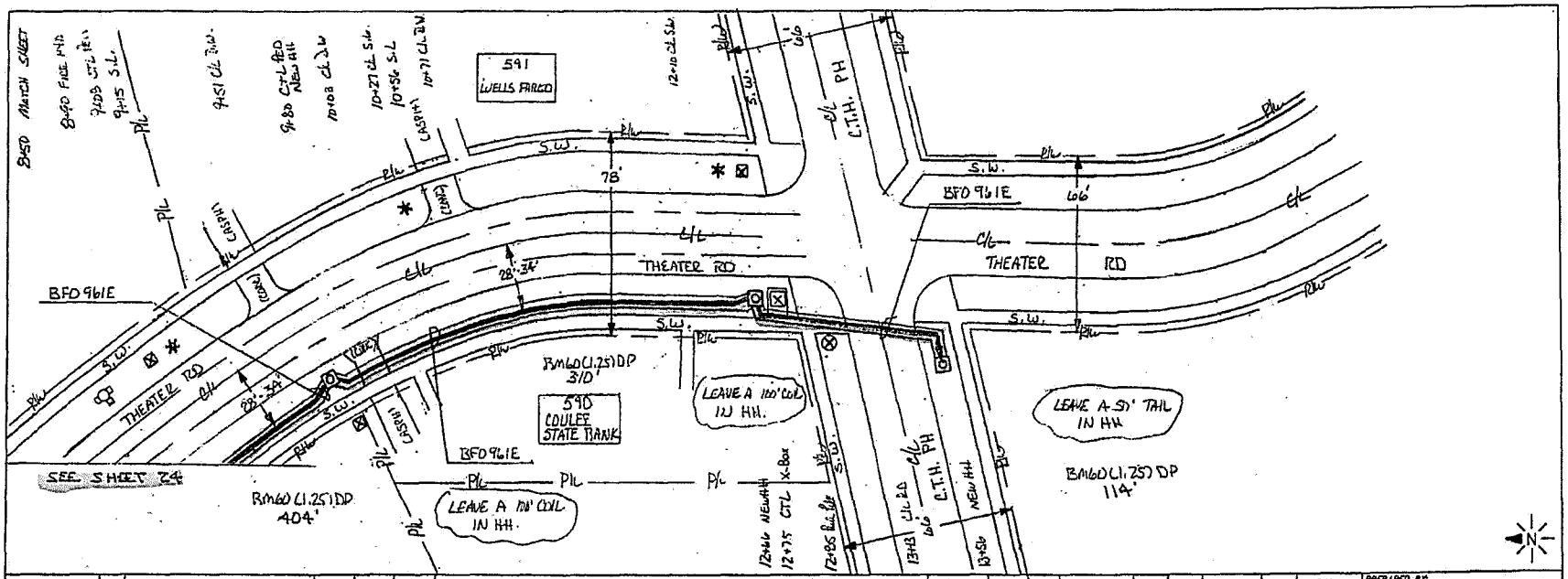
AS REC:

CONTRACT: WI-634

M-SC WO#: WILT-49

CONST. SHT. OF

6-25-19



PED/POLE/ STATION NUMBER	BD	BFD					V (2)	BHF (SMALL)	BHF (MED)	BHF (LARGE)	BM														HBFO		HD		W		SEBV	SEB	CNT		SEB	SUB #
	4	96 IE									3 (5/8) (3)	53F Loc.	60 (1.25) DP	60 (1.25) DR	61 (2) PROP	61 D	62 SPLIT DUCT	71 ROCK	72 ASPH	73 CONC	83	53 F			(S)	(M)	-1	-1P	BHF	HBFO	.75	12 IE	(2)	(9)	12	
HH		504							1		1	1	404												1		—									
HH		410							1		1	1	310												1		—									
HH		214							1		1	1	114												1		—									
		1128							3		3	3	828												3		—									

PREPARED BY: MID-STATE CONSULTANTS, TOMAH, WISCONSIN (608)372-4127

CO: LEMONWEIR VALLEY TELEPHONE COMPANY CAMP DOUGLAS, WI

EXCHANGE: ONALASKA

SERV. AREA:

ROUTE:

SHEET 25 OF

COUNTY: LACROSSE

TWP: CITY OF ONALASKA

TWN 16N | RNG 07W | SEC. 10

STAKED: M.G.M. 05/2019

AS REC:

CONTRACT: WI-634

M-SC WO#: LOILT-49

CONST. SHT. OF

6-25-19
24

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

July 2, 2019

Agenda Item: #8

Project/Item Name:	Sustainable La Crosse Commission report
Location:	Citywide
Requested Action:	Discussion on Sustainable La Crosse Commission
Staff Report/Description:	Alderperson Kim Smith is a member of the Sustainable La Crosse Commission and would like to discuss activities the Commission has been active with. Discussion of future actions in regards to sustainability by the City of Onalaska will also be discussed.
Attachments:	none

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

July 2, 2019

Agenda Item: #9

Project/Item Name:	STH 16 Wis. DOT safety improvement project
Location:	STH 16
Requested Action:	Approval of State/Municipal agreement
Staff Report/Description:	Wis. DOT is constructing safety improvements along STH 16. One of these is improved overhead signage for motorists. Existing City water main is under one of the proposed overhead sign bases and will need to be relocated. This agreement covers the cost of relocating the water main.
Attachments:	State/Municipal agreement

	STATE/MUNICIPAL FINANCIAL AGREEMENT FOR A STATE- LET HIGHWAY PROJECT	Date: March 11, 2019 I.D.: 7575-00-01/71 Road Name: STH 16 Title: La Crosse - Sparta Limits: Braund St to CTH OS County: La Crosse Roadway Length: 1.27 miles

The signatory **City of Onalaska**, hereinafter called the Municipality, through its undersigned duly authorized officers or officials, hereby requests the State of Wisconsin Department of Transportation, hereinafter called the State, to initiate and affect the highway or street improvement hereinafter described.

The authority for the Municipality to enter into this agreement with the State is provided by Section 86.25(1), (2), and (3) of the Statutes.

NEEDS AND ESTIMATE SUMMARY:

Existing Facility - Describe and give reason for request: STH 16 is a four-lane divided urban arterial with turn lanes. Parking is not allowed. The posted speed limit is 45 mph and the majority of intersections are controlled by traffic signals. This is not a connecting highway. Several intersections have crash histories. The primary cause of the treatable crashes is sight restrictions for left turning vehicles, because the turn lanes are not offset. In addition, rear end crashes are occurring as well as crashes caused by red light running.

Proposed Improvement - Nature of work: Improve intersection safety at intersections specified in the approved Highway Safety Improvement Program (HSIP) application by providing offset left turn lanes on STH 16 and installing monotubes to provide a signal head per lane.

Describe non-participating work included in the project and other work necessary to finish the project completely which will be undertaken independently by the municipality: The work requires moving a water line which will be included in the contract and paid for by the Municipality.

TABLE 1: SUMMARY OF COSTS

Phase	Total Est. Cost	Federal/State Funds	%	Municipal Funds	%
Preliminary Engineering:					
Plan Development 7575-00-01	$ 120,000	$ 120,000	100%	$ -	0%
Real Estate Acquisition:					
Acquisition	$ -	$ -		$ -	
[1]Construction:					
Roadway (cat 0010)	$ 998,690	$ 998,690	100%	$ -	0%
Water Line Move (cat 0020)	$ 14,066	$ -	0%	$ 14,066	100%
Overhead sign (cat 0030)	$ 43,280	$ 43,280	100%	$ -	0%
	$ -	$ -		$ -	
subtotal 7575-00-71:	$ 1,056,036	$ 1,041,970		$ 14,066	
Non-Participating	$ -	$ -		$ -	
Total Cost Distribution	**$ 1,176,036**	**$ 1,161,970**		**$ 14,066**	

1. Estimates include construction engineering.

This request shall constitute agreement between the Municipality and the State; is subject to the terms and conditions that follow (pages [3] – [4]); is made by the undersigned under proper authority to make such request for the designated Municipality, upon signature by the State, and delivery to the Municipality. The initiation and accomplishment of the improvement will be subject to the applicable federal and state regulations. No term or provision of neither the State/Municipal Financial Agreement nor any of its attachments may be changed, waived or terminated orally but only by an instrument in writing executed by both parties to the State/Municipal Financial Agreement.

Signed for and in behalf of the **City of Onalaska** (please sign in blue ink)

Name (print) Title

Signature Date

Signed for and in behalf of the **State** (please sign in blue ink)

Name **Steve Flottmeyer** Title **WisDOT Southwest Region Planning Chief**

Signature Date

TERMS AND CONDITIONS:

1. The Municipality shall pay to the State all costs incurred by the State in connection with the improvement which exceeds federal/state financing commitments or are ineligible for federal/state financing. Local participation shall be limited to the items and percentages set forth in the Summary of Costs table, which shows Municipal funding participation. In order to guarantee the Municipality's foregoing agreements to pay the State, the Municipality, through its above duly authorized officers or officials, agrees and authorizes the State to set off and withhold the required reimbursement amount as determined by the State from General Transportation Aids or any moneys otherwise due and payable by the State to the Municipality.

2. Funding of each project phase is subject to inclusion in an approved program and per the State's Facility Development Manual (FDM) standards. Federal aid and/or state transportation fund financing will be limited to participation in the costs of the following items as specified in the Summary of Costs:

   (a) Design engineering and state review services.

   (b) Real Estate necessitated for the improvement.

   (c) Compensable utility adjustment and railroad force work necessitated for the project.

   (d) The grading, base, pavement, curb and gutter, and structure costs to State standards, excluding the cost of parking areas.

   (e) Storm sewer mains, culverts, laterals, manholes, inlets, catch basins, and connections for surface water drainage of the improvement; including replacement and/or adjustments of existing storm sewer manhole covers and inlet grates as needed.

   (f) Construction engineering incidental to inspection and supervision of actual construction work, except for inspection, staking, and testing of sanitary sewer and water main.

   (g) Signing and pavement marking necessitated for the safe and efficient flow of traffic, including detour routes.

   (h) Replacement of existing sidewalks necessitated by construction and construction of new sidewalk at the time of construction. Sidewalk is considered to be new if it's constructed in a location where it has not existed before.

   (i) Replacement of existing driveways, in kind, necessitated by the project.

   (j) New installations or alteration resulting from roadway construction of standard State street lighting and traffic signals or devices. Alteration may include salvaging and replacement of existing components.

3. Work necessary to complete the improvement to be financed entirely by the Municipality or other utility or facility owner includes the following items:

   (a) New installations of or alteration of sanitary sewers and connections, water, gas, electric, telephone, telegraph, fire or police alarm facilities, parking meters, and similar utilities.

   (b) New installation or alteration of signs not necessary for the safe and efficient flow of traffic.

   (c) Roadway and bridge width in excess of standards.

   (d) Construction inspection, staking, and material testing and acceptance for construction of sanitary sewer and water main.

   (e) Provide complete plans, specifications, and estimates for sanitary sewer and water main work. The Municipality assumes full responsibility for the design, installation, inspection, testing, and operation of the sanitary sewer and water system. This relieves the State and all of its employees from the liability for all suits, actions, or claims resulting from the sanitary sewer and water system construction.

(f) Parking lane costs.

(g) Coordinate, clean up, and fund any hazardous materials encountered for city utility construction. All hazardous material cleanup work shall be performed in accordance to state and federal regulations.

4. As the work progresses, the Municipality will be billed for work completed which is not chargeable to federal/state funds. Upon completion of the project, a final audit will be made to determine the final division of costs.

5. If the Municipality should withdraw the project, it shall reimburse the State for any costs incurred by the State in behalf of the project.

6. The work will be administered by the State and may include items not eligible for federal/state participation.

7. The Municipality shall, in cooperation with the State, assist with public relations for the project and announcements to the press and such outlets as would generally alert the affected property owners and the community of the nature, extent, and timing of the project and arrangements for handling traffic within and around the project.

8. Basis for local participation:

(a) Roadway Construction (7575-00-71)

The Municipality shall pay 100% of the cost of moving the water line as necessary for the work. This cost is not eligible for Federal/State funding.

Comments and Clarification: This agreement is an active agreement that may need to be amended as the project is designed. It is understood that these amendments may be needed as some issues have not been fully evaluated or resolved. The purpose of this agreement is to specify the local and state involvement in funding the project. A signed agreement is required before the State will prepare or participate in the preparation of detailed designs, acquire right-of-way, or participate in construction of a project that merits local involvement.

Holter, Jarrod

From: Richardson, Linda - DOT <Linda.Richardson@dot.wi.gov>
Sent: Monday, March 11, 2019 11:41 AM
To: Holter, Jarrod
Cc: Romenesko, Vicki A - DOT
Subject: State/Municipal Financial Agreement for WisDOT project 7575-00-01/71
Attachments: Onalaska STH 16_March2019.pdf

State/Municipal Financial Agreement
Project ID 7575-00-01/71
La Crosse – Sparta
Braund Street to CTH OS
STH 16
La Crosse County

Jarrod,

I'm enclosing a State/Municipal Financial Agreement (SMFA) for the City's review and signature. This project is a WisDOT safety project and the proposed treatment is to provide offset left turn lanes and monotube signals at these four intersections:

- STH 16 & Braund Street
- STH 16 & Theater Road
- STH 16 & South Kinney Coulee Road
- STH 16 & North Kinney Coulee Road

Construction is anticipated to take place in calendar year 2021. The reason for this SMFA is because a segment of municipal water line needs to be relocated to accommodate the work. The water line move will be included in our construction contract and the cost to the City is currently estimated at $14,066 including construction engineering.

Please print four original copies and have them signed by the appropriate personnel. Return three signed originals to me (mailing address is below), keeping the fourth one temporarily for your files. I will have those three originals signed by WisDOT and then send you back one original copy signed by both the Municipality and the State. When you receive the SMFA with both signatures, you may discard the one with just the Municipality's signature.

Please use BLUE INK to sign the agreements.

If you have any questions, please contact me by phone (608-789-7869) or email (linda.richardson@dot.wi.gov).

Thank you,
Linda

Mailing address:
Linda Richardson
WisDOT DTSD SW Region
3550 Mormon Coulee Road
La Crosse, WI 54601

STAFF REVIEW SUMMARY

CITY OF ONALASKA
BOARD OF PUBLIC WORKS

July 2, 2019

Agenda Item: #10

Project/Item Name:	La Crosse Wastewater Treatment Plant Strategic Plan
Location:	Citywide
Requested Action:	Discussion on plan
Staff Report/Description:	Staff will give update on recent meetings with the City of La Crosse in relation to the strategic plan and wastewater treatment plant upgrades.
Attachments:	Strategic plan recommendation

Technical Memorandum 7
Recommended Plan
Strategic Plan: Wastewater Treatment
La Crosse Wastewater Treatment Facility
La Crosse, Wisconsin

DONOHUE

Date: May 28, 2019

To: Bernard Lenz – Utilities Manager

Copy: Jared Greeno, WWTF Superintendent
Brian Hein – WWTF Assistant Superintendent
Greg Kozelek – City Engineer

From: Mike Gerbitz – Donohue & Associates

By: Bill Marten – Donohue & Associates
Eric Lynne – Donohue & Associates
Ben Stephens – Donohue & Associates

Purpose

The purpose of this Technical Memorandum (TM) is to present the Recommended Plan for the implementation of upgrades to the wastewater treatment facility resulting from the wastewater facilities planning process. While TM 6 evaluated the cost effectiveness of alternatives and identified the recommended improvements to meet the City's 20-year wastewater treatment needs, this TM 7 provides a summary of the recommended plan and the implementation packages that were considered for the 20-year treatment needs. Sewer rate impacts were also determined for the various implementation packages.

Technical Plan

During the Alternatives Evaluation Workshop, the project team discussed the priority level for each improvement. The majority of the improvements were identified as a near-term priority, with only the following list as a mid- to long-term priority. Recent maintenance improvements to these unit processes has extended their implementation schedule; thus deferring the respective capital expenditures to minimize rate impacts. It is anticipated these improvements would be implemented in subsequent years of the planning period when equipment maintenance exceeds the replacement cost. Table 1 summarizes the recommended capital improvements plan.

A general layout of the treatment facility indicating the various improvements is provided in Figure 1.

Table 1 – WWTF Capital Improvements Plan

Unit Process	Description	YR 0-5	YR 5-10	YR 10+
Headworks	Fine Screen	**$1.0M**		
	Grit System Programming	**$0.01M**		
	HVAC Replacement	**$0.3M**		
	Septage and Holding Receiving	**$0.5M**		**$1.0M**
Primary Clarification	Scum Pit 3 Pump w/ HSW Tank	**$0.6M**		
	HSW and Septage Receiving at GT 1		**$0.5M**	
Activated Sludge	A/S Reactor Splitter Box	**$0.4M**		
	Large Blade Submersible Selector Mixers	**$0.4M**		
	Modified UCT	**$1.0M**		
	Sec Clar Splitter Box	**$0.9M**		
	Modify RAS Piping to Minimize Deposition	**$0.2M**		
	Sec Clar FEDWA Inlet / Rapid Sludge Removal			**$1.6M**
	Sec Clar Density Current Baffles	**$0.3M**		
Effluent Phosphorus	Cloth Disk Filter with Coagulation Zones	**$5.6M**		
	Clarifier Launder Covers	**$0.6M**		
Disinfection	Replacement UV System			**$1.9M**
Sludge Thickening	WAS GBT and Struvite Control	**$0.7M**		
Digestion	TPAD Conversion	**$3.0M**		
	Digester Mixing with Draft Tube & Jet Mixing	**$1.6M**		
Biosolids Reuse	Increase Diversity by Drying 70% of Biosolids	**$19.5M**		
	Improve Biosolids Quality	**$1.1M**		
Biogas	Replace Waste Gas Burner	**$0.4M**		
	Cogeneration Engine with Gas Storage	**$5.3M**		
Site and Utilities	Replace Facility Wide Heating System	**$0.6M**		
	Comply with NFPA 820 & 10-State Standards	**$2.2M**		
	Increase W3 System Capacity	**$0.4M**		
	New Transformers and One Electrical Service	**$2.5M**	**$2.0M**	
	Floodplain, Site Access, and Misc	**$0.4M**		
	Subtotal	**$49.5M**	**$2.5M**	**$4.5M**

Deferment of these projects reduces the total initial cost of near-term recommended improvements to $50 million. It is recommended that these projects be clustered into one (or a few) larger set(s) for efficiency with design, bidding, construction pricing, and convenience to operations staff. To implement the near-term items, an schedule was developed to prepare for action items and deliverables associated with this major set of projects to be developed.

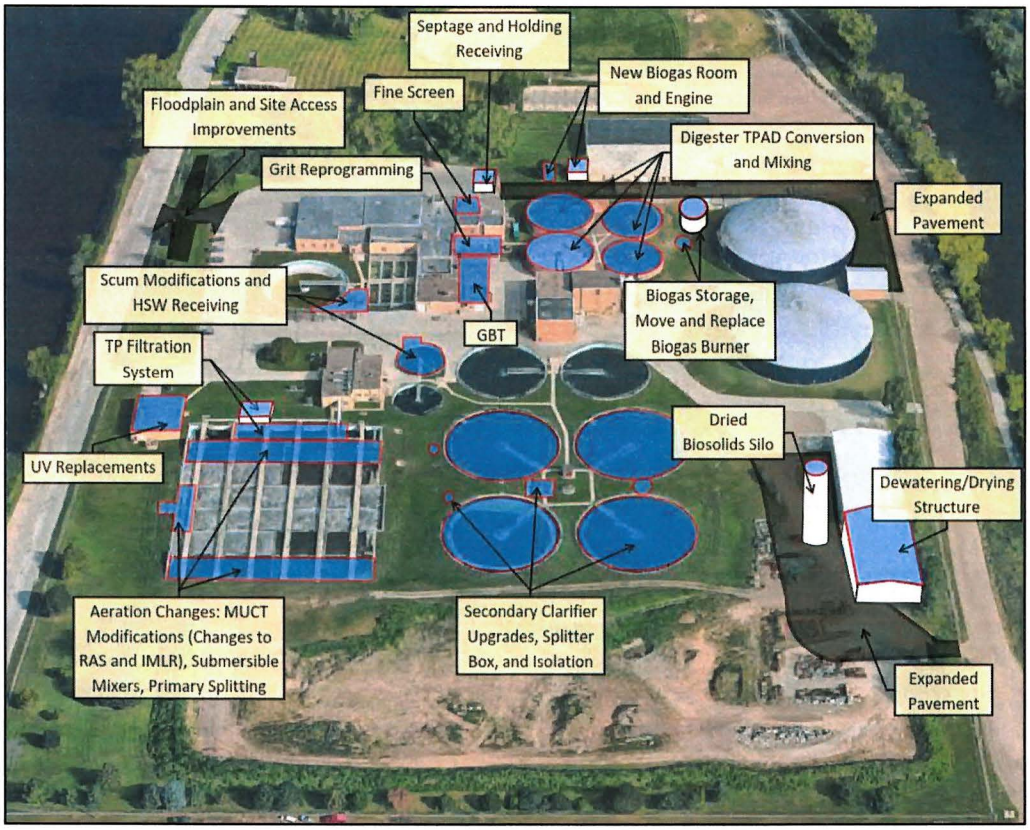


Figure 1 – Treatment Plant 20-Year CIP Improvements

The near-term implementation schedule is provided in Figure 2. The current discharge permit requires initiation of construction in 2022, with ultimate compliance by January 1, 2025. The staff indicated preference to have a minimum of one year prior to this compliance deadline to run the new system allowing the operators to become familiar with the new technology. The schedule in Figure 2 was developed to provide a defensible path towards implementation. The schedule could be condensed by reducing the preliminary design phase; however, this phase is critical to the City to obtain stakeholder input and initialize technologies and equipment preferences. A key benefit to a separate preliminary design, is its ability to control costs, as many of the rate payers cannot tolerate an unexpected increase in project costs.

Additionally, during this preliminary layout phase, it is recommended to conduct demonstration scale validation tests for the main treatment changes (phosphorus and biosolids) confirm performance, sizing, and operating costs prior to entering detailed design.

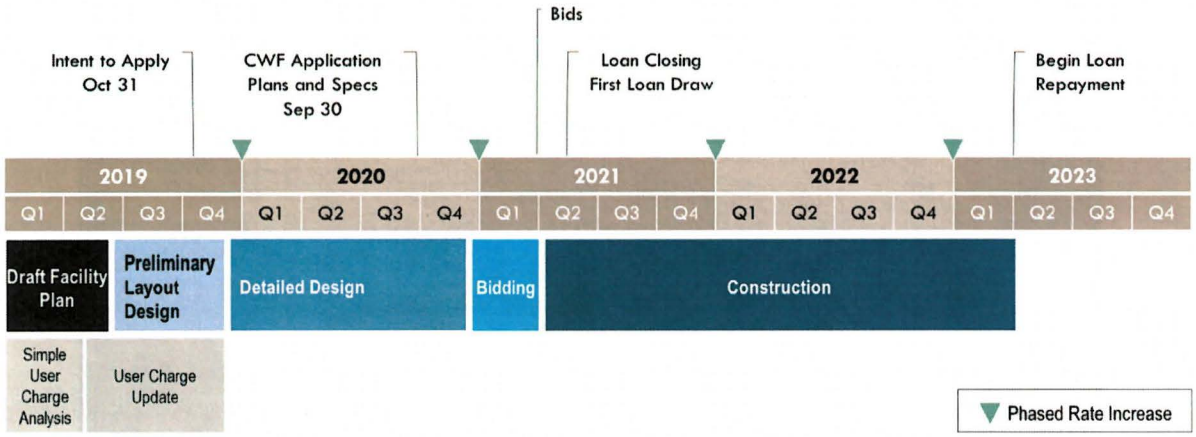


Figure 2 – Implementation Schedule

Financial Plan

The City has been preparing for this major improvement for several years. Prior to this facility plan, many routine capital projects (clarifier rehabilitation and digester cover repairs) have been cash funded over the past several years without increasing sewer utility rates. During this time (the last 5-10 years) the City has projected a major capital project on the Capital Improvements Plan for phosphorus and solids estimated from $10 million to $60 million in 2014. As identified above, the recommended near-term projects sum to approximately $50 million, which include the historical projections for phosphorus and solids as well as other long-overdue energy and reliability improvements to avoid another major upgrade in the foreseeable future. The total project costs can be broken down into these key categories as summarized in Figure 3.

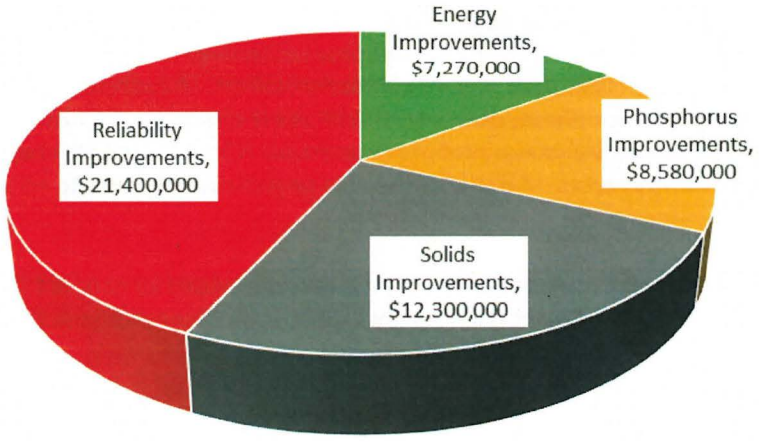


Figure 3 – Project Categories

Implemented as one main project, this is recommended to be financed with a Wisconsin Department of Natural Resources (WDNR) Clean Water Fund (CWF) Loan. These loans are available from revolving funds loaned and paid back from other utilities in the state. CWF loans also can include subsidizes for

specific users based on the community's application score due to affordability, regionalization, and phosphorus improvements. Conservatively, these potential grants were not included at this time. The WDNR Environmental Loans department applies a parallel cost ratio, which reduces the effective interest rate subsidy based on future development, industrial, and government user projections.

Assuming the project is fully financed by the CWF, the annual revenue required to cover debt service can be estimated, assuming current rates are adequate for current treatment costs. The implementation schedule in Figure 2 highlights a few traditional moments to introduce a phased rate increase for a project of this size. This enables the users to become accustomed to the rate change gradually, as many industrial stakeholders may have long-term contracts that restrict their ability to recoup rate increases. Secondly, adjusting rates incrementally, enables the City to control the final rates as the project team refines project costs through planning, design, and construction.

Figure 4 provides a general breakdown of revenue from customers as presented in a 2014 rate review. Overall, revenue is obtained from the following main categories identified in TM1:

- City of La Crosse Sewer Customers
- Major Commercial and Industrial Customers
    - City Brewery
    - Kwik Trip Dairy
    - Great Lakes Cheese
    - Trane Company
- Partner Municipalities
    - City of Onalaska
    - City of La Crescent, MN
    - Town of Campbell
    - Town of Shelby Sanitary District 1
    - Town of Shelby Sanitary District 2

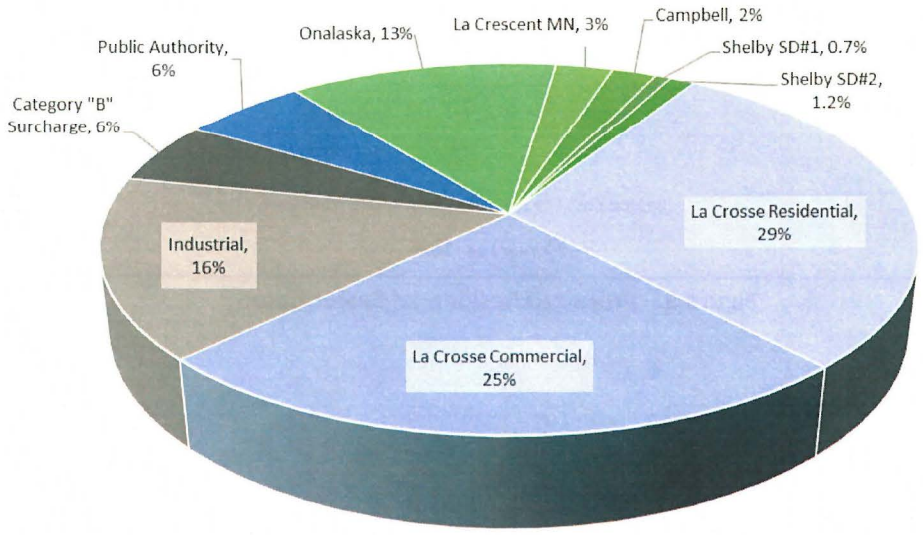


Figure 4 – Revenue From Customers

Financing from the CWF requires 110% debt coverage obtained through sewer fee revenues. To simplify the rates and provide an assessment of the typical residential connection, the following assumptions were used:

- 45,400 gallons of water consumed per year (equivalent to 15 CCF/quarter)
- 1.98% interest rate

For the proposed $50 million project, the rates would increase approximately $5.87/month, from $11.38/month to $17.24/month.

Figure 5 presents this proposed residential rate graphically to demonstrate the sensitivity to rates based on the final cost of the recommended project. Although this rate increase is significant, the final cost for sewer services at the La Crosse WWTP remains the one of the lowest utilities among similar sized facilities. Rates of similar facilities compared to current and proposed La Crosse sewer rates is presented in Figure 6.

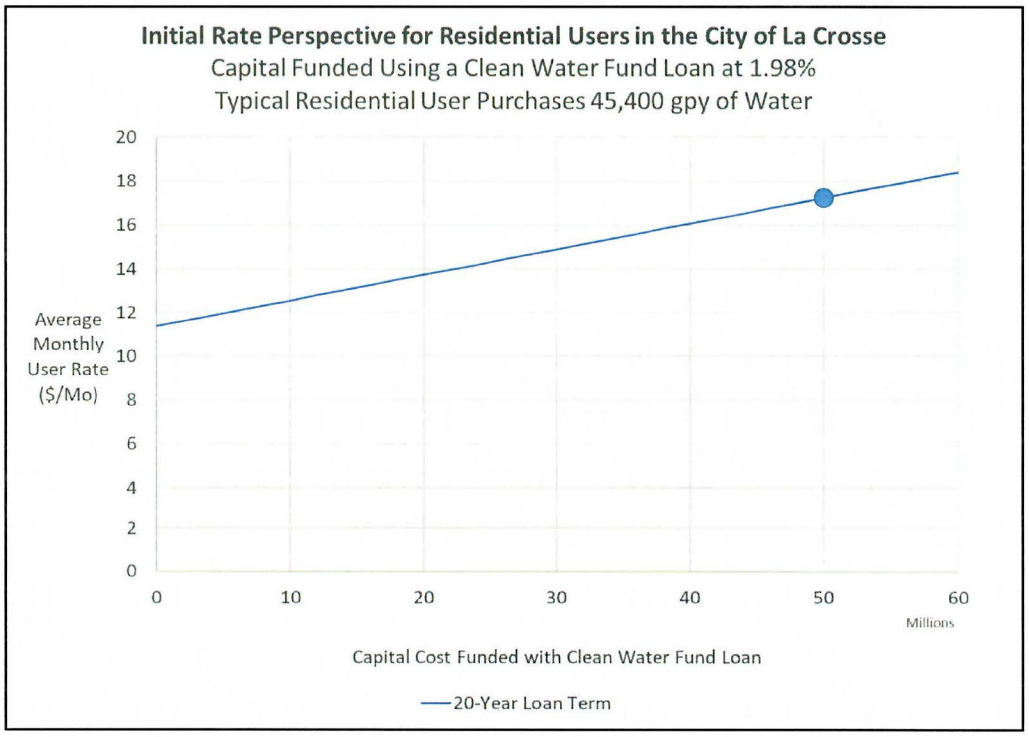


Figure 5 – Proposed Residential Sewer Rate

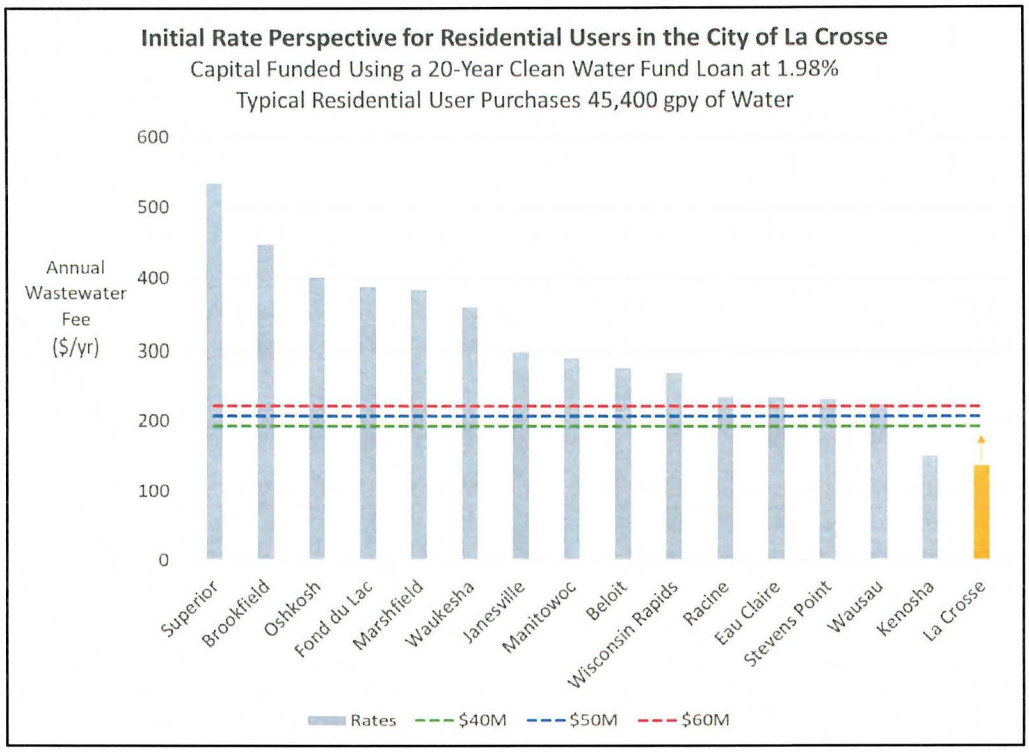


Figure 6 – Residential Sewer Rate Comparison

The proposed rate evaluation presented is a coarse determination and should be followed up with a formal rate study once stakeholder buy-in of the recommended project is obtained. Additionally, the formal rate study should consider the proportion of rates attributed to flow, biological oxygen demand (BOD), total suspended solids (TSS), ammonia, and phosphorus such that appropriate cost allocations or rate structures can be identified for equitable rates from all stakeholders.

BOARD OF PUBLIC WORKS
MONTHLY ESTIMATES
July 2, 2019

#11

	Contractor	Original Contract Amount	Change Orders	Paid to Date	Due this Estimate
1.	**SEH INC.** Green Coulee Reservoir Design Estimate #5	$ 25,000.00	$ -	$ 12,419.13	$ 1,064.39
2.	**DAVY ENGINEERING** French Rd Booster Station/Crestwood Ln Design Estimate #9	$ 126,490.00	$ 76,010.00	$ 186,600.70	$ 12,271.41
3.	**SEH INC.** Abbey Road Construction Estimate #3	$ 34,600.00	$ -	$ 4,806.64	$ 17,194.51
4.	**SEH INC.** Railroad Quiet Zone study Design Estimate #12	$ 11,900.00	$ -	$ 10,890.99	$ 1,074.86
5.	**GERKE EXCAVATING, INC** Abbey Road Project Construction Estimate #3	$ 1,536,651.19	$ -	$ 731,416.80	$ 89,273.88
6.	**OLYMPIC BUILDERS GENERAL CONTRACTORS** 6th & Quincy Pumping Station Construction Estimate #3	$ 989,678.00	$ -	$ 80,765.20	$ 137,655.00
7.	**FOWLER & HAMMER INC** 2019 Misc. Concrete Construction Estimate #2	$ 109,838.75	$ -	$ 9,500.00	$ 14,660.16
8.	**STRAND ASSOCIATES INC** Court Street Lift Station Design Estimate #3	$ 25,000.00	$ -	$ 21,732.28	$ 3,267.72
9.	**STRAND ASSOCIATES** 6th & Quincy Lift Station Construction Estimate #2	$ 33,000.00	$ -	$ 8,837.94	$ 8,336.82

EX:vb/S:eng/bopw mth est. 7/2/19

BOARD OF PUBLIC WORKS
MONTHLY ESTIMATES
July 2, 2019

Contractor	Original Contract Amount	Change Orders	Paid to Date	Due this Estimate
10. **A-1 EXCAVATING** Crestwood Lane Utilities Construction Estimate #2	$ 698,189.75	$ -	$ 184,299.05	$ 296,832.25
11. **HOFFMAN & MANAMARA NURSERY** 2019 Urban Forestry Construction Estimate #2	$ 61,980.00	$ 5,472.00	$ 46,901.00	$ 19,450.60
12. **MATHY CONSTRUCTION** 2019 Pavement Project Construction Estimate #1	$ 1,082,820.45	$ -	$ -	$ 42,777.61
13. **LA CROSSE COUNTY HWY DEPT** Main Street Crackfill Construction Estimate #1	$ 8,580.00	$ -	$ -	$ 18,235.59
14. **SEH INC.** Abbey Road Design Estimate #8	$ 84,500.00	$ 8,500.00	$ 92,075.57	$ 787.76
15. **HSR ASSOCIATES** PWF Addition Design Estimate #2	$ 81,500.00	$ -	$ 4,075.00	$ 36,675.00
16. **MSA PROFESSIONAL SERVICES** Green Coulee Intersection Design Estimate #4	$ 41,728.43	$ -	$ 28,252.30	$ 9,285.00
17. **STATE OF WI DOT** I-90/STH 35 Sanitary Sewer Install *(Project #1071-06-89)* Estimate #5	$ 72,000.00	$ -	$ 46,104.29	$ 5,363.84

BOARD OF PUBLIC WORKS
MONTHLY ESTIMATES
July 2, 2019

Contractor	Original Contract Amount	Change Orders	Paid to Date	Due this Estimate
18. **STATE OF WI - DOT** Riders Club Road Construction *(Project #5991-02-57)* Estimate #4	$ 294,911.00	$ -	$ 300,076.58	$ 551.61
19. **STATE OF WI - DOT** PH/Braund Street Construction *(Project #5991-02-55)* Estimate #5	$ 233,326.00	$ -	$ 237,486.55	$ 174.33