

Thursday, March 26, 2015
8:00AM

City Hall, Council Chambers
23 N 2nd Street

AGENDA

**COMMISSION
MEMBERS**

ADAM WEBSTER
TERM EXP. 2015

SCOTT BORCHARDT
TERM EXP. 2017

DALE ARTHUR
TERM EXP. 2019

BILL ERICKSON
CHAIRPERSON
TERM EXP. 2018

BILL PAULSON
TERM EXP. 2016

“WINTER,
SPRING,
SUMMER, FALL...
TOMAHAWK
HAS IT ALL”

1. **CALL TO ORDER**
2. **PUBLIC COMMENTS** (During this item on the agenda the Commission listens to oral comments from members of the public on non-agenda items. When speaking please state your name and limit your time to five minutes.)
3. **OLD BUSINESS**
 - a. Clean Water Fund Loan
Change Order – Grit/Drainage Pad
Vacuum/Jetter Truck
Excavator
4. **NEXT MEETING** – March 31, 2015 at 8:00AM
5. **ADJOURN**

Any additions to this agenda will be added to the original posted at City Hall. Any person who has a qualifying disability as defined by the American’s with Disabilities Act, that requires the meeting or materials at the meeting to be in an accessible location or format must contact the Clerk-Treasurer at City Hall, 453-4040, at least three days prior to the meeting so any necessary arrangements can be made to accommodate each request.

PLEASE TURN CELL PHONES ON SILENT DURING MEETINGS

To: Utility Commission
From: Mike Tolvstad, Director of Public Works
Date: 2/17/15
Re: Vacuum/Jetter Truck and drainage pad

Background

In the November 25 Utility Commission packets I included some information about a vacuum/jetter truck. This type of truck has many benefits over a standard jetter. The jetter system that the city owns is trailer mounted and is pulled behind a pickup truck. This system has been common for communities our size for the past 30 years. This equipment was a leap forward in technology from the old rodding machines. The jetter consists of a hose reel, water tank and a pump. The pump is capable of producing 1,800 pounds of pressure under optimum conditions.

The jetter is used by setting up over an open manhole and running the hose up the sewer pipe to the nearest upstream manhole using water pressure. The operator will then retrieve the hose and nozzle using the hose reel. As the hose is retrieved the pump is producing a high pressure water stream that washes any solids down the pipe to the downstream manhole. If the operator is quick enough some of the solids can be captured with a clam device. The fine grit portion of the waste stream is virtually impossible to capture in this manner. The grit is made up of small pieces of pipe, gravel and other material that enters the system.

We talk about the problems with the rag that is in the system and how that plugs the lift station pumps but, the hardest thing on a pump is probably the grit that is pumped through the each consecutive pump stations as it passes downstream to the plant. This obviously reduces the life of the pumps. As the cleaning process works now we hope that the rag and grit are captured in the wet wells of the lift stations and is removed we clean the wet wells once or twice a year with a vacuum truck. We know this process does not work well by the number of times we have pumps plugged with rag. The best situation would be to remove the rag and grit while it is in the sewer pipes or lift station wet well prior to reaching the lift station pumps. Our present cleaning equipment is not capable of doing this efficiently.

Analysis

Vacuum/jetter trucks have become popular in the past 20 years. The problem is the cost of these trucks brand new can be as much as \$370,000. This cost is out of reach for most small municipalities. Fortunately, there is now a used truck market available to smaller communities. These used trucks can run from \$90,000 to \$200,000 depending on their age, size, condition and equipment. I would not suggest purchasing a truck for less than \$110,000 as it appears from watching the market that a truck selling for less than that would be at the end of its useful life.

I spoke with Tom Fitzwilliams/MSA about the value of removing grit and rag from the system before it gets to the lift station. He was not aware of any studies regarding vacuum/jetter trucks prolonging pump life or reducing system operating costs but, said that it only made sense that removing that type of material from the system would have a positive effect on the pumps and sewer system.

A vacuum/jetter truck was something that staff had talked about in the past. We simply did not see a way that we would be able to purchase something like this. When the bids came in for the plant and sewer project below the estimated cost and then the fact that we received the \$347,000 in principle forgiveness MSA contacted me to discuss the possibility of adding additional construction work or purchasing needed equipment. We had discussed replacing our present jetter but, decided to rebuild the pump a couple of years ago because we felt that investing in a new jetter would not gain us much in cleaning ability. This would have been a low value purchase.

Correctly equipped we could also use a vacuum/jetter as a hydro excavator. This would allow us to excavate in very tight areas where there are electric and gas lines without worrying about damaging those facilities. Hydro excavating is also becoming very popular because of the small area that needs to be disturbed compared to using an excavator.

I would also suggest installing a drainage pad (\$60,000) to use with the vacuum/jetter to dewater the material that is collected. This reduces the weight of the material that ultimately will be hauled to the landfill.

Recommendation

The staff recommendation would be to consider replacing the existing jetter with a vacuum/jetter. It may well be another 20 years before we have another opportunity to purchase a piece of equipment like this that could have as big an impact on the maintenance of the system as a vacuum/jetter.



To: Utility Commission
From: Mike Tolvstad, Director of Public Works
Date: 3/19/15
Re: Excavator purchase

Background

In the past the Public Works Department would purchase an excavator and charged the utilities an hourly rate when it was used for utility maintenance. This has worked well for years but, is no longer an option for the Public Works Department. Because of the property tax restraints placed on the city by the state the public works excavator was traded in on a new loader and the city has not had an excavator for more than a year.

Analysis

With the state limitations being what they are with the General Fund it is no longer possible for the General Fund to be the equipment bank for the other departments. With this in mind I would suggest that the purchase of new equipment that is used by all the departments be purchased with each department sharing in the cost. By using this process to purchase equipment we can keep our equipment current without it being a burden to one department.

In the case of the excavator we feel that we can purchase a machine that will adequately serve all the departments for \$75,000. This cost would split between wastewater, water, stormwater and streets. Each department would be responsible for 25% of the costs or \$18,750.

Recommendation

Staff recommends that the utilities share in the purchase cost of a new excavator when that purchase takes place and the wastewater share come from borrowed Clean Water Fund Program monies.