

**PUBLIC WORKS COMMITTEE MEETING**  
**WEDNESDAY, JANUARY 24, 2018 – 6:30 P.M.**  
**MUNICIPAL SERVICES – TRAINING ROOM**  
**MINUTES**

**I. ROLL CALL/CALL TO ORDER**

Chairman Randy Tack called the meeting to order at 6:43 P.M. Alderman Michelle Moreno was in attendance. Alderman Rummel listened to the meeting via speaker phone.

Staff in attendance included Michael Thomas, Director of Public Works; Bob Kiely, City Manager; Bob Ells, Superintendent of Engineering; Dan Martin, Superintendent of Engineering and Jim Lockefer, Management Analyst.

Also in attendance was Jim Opsitnik, President of the Lake Forest Preservation Foundation; Marcy Kerr, Executive Director of the Lake Forest Preservation Foundation and David Mattoon, Lake Forest Preservation Board Member.

**II. APPROVAL OF THE DECEMBER 13, 2017 PUBLIC WORKS COMMITTEE MEETING MINUTES**

Chairman Tack moved to approve the December 13, 2017 Public Works Committee meeting minutes. Alderman Moreno seconded the motion, which carried unanimously.

**III. REVIEW AND APPROVAL TO WAIVE THE BID PROCESS FOR CLEANING OF THE TWO WATER PLANT INTAKE PIPES – DAN MARTIN**

Superintendent of Public Works Dan Martin explained that as a part of the FY18 Capital Improvement Plan, \$185,000 has been allocated for this project. He explained that the last time the intake pipes were cleaned was in 2014 by Northern Divers. Intake cleaning consists of removing the settled sand and debris from inside the 24" and 42" diameter intake pipelines that extend out several thousand feet in Lake Michigan. Intake cleaning improves plant operations, increases capacity, and saves operating costs by reducing backwash cycles and using less chemicals. Superintendent Martin explained the proposed intake cleaning process. He explained that staff is looking to utilize the same patented process that was utilized in 2014 with Northern Divers. Their process creates a high pressure vortex using mixed air and water to loosen and remove the accumulated sediment from the piping system and expels the sediment back into Lake Michigan. This process allows the Water Plant to stay in operation with minimal shut down times, can be done without removing the chemical feed system, and no permit is required from the Illinois Department of Natural Resources. The previous process, prior to 2014, required the plant to be shutdown, was labor intensive, required pulling all the debris into the plant's intake well, and would require zebra mussel treatment lines to be removed and replaced. Superintendent Martin then reviewed and explained video footage of the 2014 cleaning process. Superintendent Martin explained that since the 2014 cleaning was so effective, that as part of the algae screen project, additional infrastructure was constructed at the Water Plant that would allow the intake cleaning process to become more efficient. He explained that as a result of this construction, Northern Divers is not going to have to install as much temporary

pipings and valves as they did in 2014. He explained staff's recommendation is to engage Northern Divers as the sole source provider to complete the FY18 Water Plant Intake Cleaning Project for \$185,000 as budgeted in the FY18 CIP.

Alderman Moreno inquired about how many other Lake Michigan Water Plants are utilizing Northern Divers. Superintendent Martin explained that Twin Lakes and Waukegan have both used Northern Divers. He explained that he believed Great Lakes, Abbott, and North Chicago have also used the firm as well. Alderman Moreno explained that she was uncomfortable with choosing a sole source provider. She inquired about the other options the City has for the cleaning process. Superintendent Martin explained that the other cleaning option would be the old cleaning method that is referred to as "pigging". He explained that the old process involves the use of a lot of chemicals to prevent zebra mussel intrusion. Certified divers are then needed to go in with vacuum hoses. The materials they collect are then hauled and trucked out, which requires a permit. He explained that removing and reinstalling of the equipment for the chemical process for the zebra mussels alone is \$142,000 per intake line. The old process is much more costly than the proposed process Northern Divers utilizes. Alderman Moreno agreed that the old process seemed much more labor intensive.

Alderman Moreno inquired about how much savings will be realized from the work constructed during the Water Plant algae screen project now that Northern Divers does not need to install their temporary infrastructure. Superintendent Martin explained that he believes it has saved approximately a week's work of labor. He estimated the savings to be \$15,000 - \$20,000.

Director Thomas explained that intake cleaning is very important in ensuring that the Water Plant's membrane system is operating efficiently. He explained that cleaning extends the life of the membranes. He explained that staff is contacting other communities to gauge their interest on jointly utilizing Northern Divers to realize even more savings for future cleaning of the intakes.

Alderman Moreno explained that she is uncomfortable with utilizing a single source provider however it sounds as though Northern Divers is the only viable option. Alderman Moreno inquired how staff would look to complete the cleaning if Northern Divers were to go out of business. Superintendent Martin explained that he would look to go back to the more expensive pigging option. Director Thomas explained that Northern Diver's has been traveling all over the U.S. and Canada because of their patented cleaning process. He explained that the process is beginning to gain more and more interest in North Shore communities.

Alderman Moreno inquired if Northern Divers is a growing firm that is earning profit. Director Thomas explained that it is a small company but it is profitable. Superintendent Martin explained that if they were to leave the business he would envision the firm selling the patent.

Director Thomas explained that Superintendent Martin will bring the official proposal to the Public Works Committee in February and ask for their recommendation to City Council to approve. Alderman Moreno requested that

the process's historical numbers and infrastructure costs be included in the City Council write up.

Chairman Tack motioned to approve waiving the bid process for the two intake pipes at the Water Plant. Alderman Moreno seconded the motion, which carried unanimously.

#### **IV. DISCUSSION OF GAS LIGHT CONVERSION PROJECT – DAN MARTIN**

Superintendent Martin explained that the project was presented to the Finance Committee on November 13, 2017 as a priority "1nf (not funded)". The Finance Committee originally reviewed the request to allocate \$35,000 in FY19. An additional \$35,000 was then allocated using the additional CIP dollars released from reserves by the Finance Committee for a total FY19 allocation of \$70,000. Superintendent Martin then reviewed a City map of the location of all the gas lights. The map was broken out into ten zones that would be converted to LED on an annual basis using the \$70,000. He explained that the estimated full conversion is \$635,725. The project would also require the purchase of a used directional boring machine at an estimated cost of \$60,000-\$65,000. Including the equipment and material cost, staff estimates each light would cost approximately \$1,400-\$1,500 to convert to electric. An allocation of \$70,000 would allow the full conversion to be completed in ten years. He explained that in the first year of the project, the equipment purchase will be necessary. He explained that this initial purchase will use most of the year one allocated funds. However, staff is hoping to utilize additional remaining FY18 Public Works funds in the first year to purchase material. He explained that a simple payback period was calculated at 13 years once the full conversion is completed. He explained that when a conversion program was first examined in the mid-2000's the cost per light was around \$8,000 and the estimated payback period was between 30 and 40 years.

Chairman Tack inquired about how the starting area for the conversion was selected. Superintendent Martin explained that the first area is not in a historic district and it is not a high traffic area. He explained that the 34 lights in the starting neighborhood are also condensed and close to one another. He explained this area was also the focus of the mid-2000's gas light study. There are also not as many underground utilities and trees in the area in comparison to other areas. The area will allow the City's Streets Section staff to train and gain experience with the directional boring machine. He explained that one employee in the Streets Section already has directional boring experience through his previous job.

Alderman Moreno inquired about renting the directional boring equipment instead of buying the equipment. Superintendent Martin explained that since this is being proposed as a 10-year annual program, it was cost prohibitive to rent the equipment. He explained that renting the equipment is around \$3,500 to \$4,500 a month. If staff was to rent the equipment from a firm there would also be much higher City training costs associated with renting over purchasing. He explained that most firms require a two week long training certification program that is located in Iowa. The City would be required to send Street Section

employees to this training if the equipment is rented. He explained that the boring completed through the conversion project is very basic. Director Thomas explained that staff is looking to purchase used equipment. City Manager Bob Kiely explained that as part of the City Council write-up, the cost of purchasing the equipment versus renting needs to be shown and explained. Alderman Moreno asked if the equipment would last for the entire ten year program. Superintendent Martin explained that the equipment would last. It is not going to be used as heavily as a typical contractor would use the equipment. He explained that the equipment may also be used by the Water and Sewer Section in service repairs and by the Parks Section for irrigation systems.

Alderman Rummel inquired about the two areas that were broken out into only ten or less gas lights. Superintendent Martin explained that while there are fewer gas lights in these areas they are still going to take as much time and work to complete the conversion as an area that may have 50 lights. The lights in the two areas are not condensed and are more spread out. He also explained that these smaller zones will also give the Streets Section an opportunity to catch up in other areas. He explained that the map will be updated on a yearly basis to account for the gas light conversions that have been completed. He explained that they are planning to convert the 34 lights in the first area this summer. After that first area is completed they are going to reassess the time it took to complete the first area and use that assessment in completing the other areas. If they are moving at a quicker than expected rate, they are going to look to combine areas.

Director Thomas explained that the cost of natural gas was used to calculate the payback period. He highlighted the fact that the cost of natural gas and electricity will continue to change. He explained that the cost of the copper material needed will also fluctuate. If Superintendent Martin and the Streets Supervisor believe that copper is at a very low and opportune price, staff may look to come to City Council to request additional dollars to make a copper material purchase.

Alderman Rummel inquired about gas light installation for new development. Superintendent Martin explained that new gas lights are no longer installed. New development is given the City's street light specification requirements.

Alderman Moreno asked if the City's Fleet Maintenance Section would maintain the directional boring equipment. Superintendent Martin explained that the Fleet Maintenance Section would maintain the equipment.

Jim Opsitnik, President of the Lake Forest Preservation Foundation, explained that the Preservation Foundation has been monitoring the City's plans to convert the gas lights to LED. He explained that the foundation's main concern is how the lights are going to look. Mr. Opsitnik explained that he shared with the Preservation Foundation Board that he has viewed a converted gas light at Triangle Park and Green Bay Road. He explained that he could not tell an LED light from a gas light. He explained that Preservation Foundation feels that the public should be involved and notified of gas light conversions. He explained

that it is important that the public knows that the ambiance and feel of the gas lights is not changing through the conversion to LED. He explained that the Preservation Foundation is very supportive of the project with the hope that people will not be able to see noticeable differences between a LED light and a gas light.

City Manager Kiely asked if the Preservation Foundation had an opinion on the order the conversion of the lights would occur. Mr. Opsitnik explained that he believed City staff has made the right choice in starting in the area identified. He explained that the public will have the opportunity to go and see this first area after it is fully converted. Marcy Kerr, Executive Director of the Lake Forest Preservation Foundation, explained that she believed that the biggest push back would come from the historic districts and recommended that the City look to complete those areas last. She explained that communicating the conversions to the community is going to be key. She explained that completing a small area first is a great idea. Mr. Opsitnik explained that people tend to think of LED as white bright lights. He explained that technology has now allowed LED to become a much softer glow that is dimmable. He explained that it is very important to complete one area first so that people can see that the conversion from gas to LED is not going to be any sort of major visible change. Chairman Tack explained that an evening video of the converted light in Triangle Park and the light on Green Bay Road would be helpful video evidence that would show the public what the LED converted light looks like. He explained that getting the video on the website would be helpful. He explained that he was unable to tell the difference between the LED light and a gas light. Superintendent Martin explained that he can work with the City's Communication Manager on getting something on the website. Mr. Opsitnik explained that he believed the first area should be completed and then notification to the public should be posted to the City's website. He explained that in doing so, communication could then be directed to the public to see the completed demonstration area. He explained that people are going to need to see the results instead of reading about them.

David Mattoon, Lake Forest Preservation board member, inquired about the illumination level of a converted LED light and if it will be the same as it was previously, prior to the conversion. City Manager Kiely explained that it is the intention to keep the illumination level the same. He explained that one potential outcome maybe that neighbors begin to request that the brightness of the light be increased. He explained that the decision would most likely come from the neighbors making that request.

Mr. Mattoon inquired about fixtures that have a different milk glass globe and if they were already electric. Superintendent Martin explained that the lights he was referring to are electric.

All the members from the Historic Preservation Foundation thanked City staff and the Committee for the presentation.

## **V. DISCUSSION OF RECOMMENDED USES FOR THE GENERAL FUND RESERVES,**

## **DRAINAGE / RAVINE IMPROVEMENTS – MICHAEL THOMAS**

Director Thomas explained that during the November 13, 2017 budget meeting, the Finance Committee agreed to take \$1,000,000 from reserves for the North Beach Access Road (\$750,000) and other "1NF (not funded) capital projects. The decision on where to spend the remaining \$250,000 was to be vetted and proposed by City staff. He explained that some of the remaining dollars have already been allocated to the gas light project, Deerpath streetscape project, and Fire Department radios leaving \$162,000. He explained that he has discussed where to propose to spend the remaining dollars at length with Superintendent Martin, Superintendent Ells, and Water and Sewer Section staff. He explained that many ideas have been developed and staff would like to get the Committee's input on which ideas they prefer. He then reviewed the list of staff recommended priorities that was shared with the Committee via the meeting packet.

He explained that the first priority is the North Beach Access Road's sanitary sewer and storm system under Lake Road. If the sanitary sewer is in poor condition staff would look to line the existing pipe. He explained that replacing or lining the 15" storm sewer west of headwall near the North Beach Access Road entrance and under Lake Road is also needed. The second priority was divided into two sub-sections: Priority #2a is sanitary sewer smoke testing of specific areas throughout town. He explained that the highest priority in the City's stormwater policy is addressing and responding to sanitary sewer backups. He explained that staff has identified specific areas for smoke testing that stem directly from sanitary back up data collected during this past July and October flooding events. These areas include Edgewood from Spruce to Rose Terrace, Burr Oak, and Washington Circle & Illinois to Washington Road & Illinois to include Frost Place, Cherry Avenue, Woodlawn Avenue, Wildwood Road, and Ryan Place. Priority # 2b is to research ravine property ownership (private vs. public) via summer internships. He explained that last year an intern was able to inspect, inventory, and evaluate all of the ravines in Lake Forest. A challenge that staff now faces is determining private vs public ravines. He explained that *if* staff is going to dedicate large dollar amounts toward ravines, staff needs to be sure that public dollars are being spent on public ravines. Priority # 3 is working with Lake County Storm Water Management to provide storm water prevention inspections. He explained that City's Water and Sewer and Engineering Sections have already been offering and completing resident flooding consultations but that the proposed inspections by LCSWM could possibly be more thorough and educational in its approach.

Director Thomas then reviewed the FY19 CIP funded ravine and ditch priorities. He explained that \$130,000 has been allocated for this work. He explained that Priority # 1 is to repair the Ringwood Ravine adjacent to the roadway. The estimated repair cost is \$60,000. Priority # 2 is to repair the Rosemary Ravine headwall adjacent to the roadway. The estimated cost for this project is \$20,000. Priority # 3 is to repair McCormick Ravine immediately east of Sheridan Road. The estimated cost for this project is still to be determined. Priority # 4 is beginning debris removal from the 30 ravine blockages that were found during last summer's ravine inventory. Each of these areas will differ in cost depending on the blockage. He explained that access to remove the blockage is a key factor in how expensive a blockage clearing will be. Priority # 5 is to create a City cost share program for ravine repairs. He explained that this could be set up as a

potential grant program for which private ravine owners could apply for funding with the City.

Director Thomas then reviewed the estimated remaining dollars from the completed South Beach Access Road project and the Ferry Hall Bridge project. He explained that staff estimated that approximately \$185,000 were remaining. He explained three potential options on how the remaining dollars could potentially be spent. Option # 1 would be to add dollars to the needed repairs for North Beach Access Road sanitary sewer and / or storm sewer system. Option # 2 is to utilize the funds for plants and trees for South Beach Access Road and North Beach Access Road replanting projects. Option # 3 is to extend the South Beach Access Road guardrail 100' north of the existing guardrail. He explained that this estimated cost is \$10,100.

Director Thomas explained that he knows the Committee and City Council is looking for a more definitive answer in addressing where the remaining \$162,000 CIP dollars will be spent. He explained he wanted to review all of these different priorities with the Committee tonight so that the Committee can see where staff priorities stand and for the Committee to provide their own input.

Chairman Tack explained that he believed the remaining dollars from the South Beach Access Road project should be utilized to fund the additional sanitary sewer and storm sewer system work at the North Beach Access Road. He explained that he believed smoke testing should also be a very high priority. Alderman Rummel explained that she agreed with Chairman Tack's comments. Director Thomas explained that he will direct the City's Engineering Section to contact engineering firms to cost out the proposed smoke testing areas. He explained that at some point staff would then bring a proposal to City Council to proceed with smoke testing with an engineering firm.

City Manager Kiely inquired about the time of the year is smoke testing typically completed in. Director Thomas explained that it typically completed in the summer.

Director Thomas explained that with smoke testing the discovery of properties that have illegal connections is going to occur. He explained that for past smoke testing, properties discovered with illegal connections were notified and directed to remove their connections. Alderman Rummel inquired what the penalty was for a homeowner that did not comply with fixing their connection. Director Thomas explained that potentially shutting off the water at a property for non-compliance was an idea that was discussed in the past. Director Thomas explained that most people were in compliance and fixed their issue when they were notified. Very few homeowners did not comply. City Manager Kiely explained that when smoke testing is brought to City Council, it needs to be explained that past smoke testing efforts have been very effective. Alderman Rummel explained that compliance to remove connections should be taken very seriously and shutting off the water for non-compliance should be considered as a potential option.

Director Thomas thanked the Committee for the direction that they provided.

Alderman Moreno inquired about the timing of the North Beach Access Road Project. Director Thomas explained that staff is still pushing to complete the project by Memorial Day. He explained that it is a very aggressive schedule that is going to all depend on the Army Corps' review process.

Alderman Rummel left the conference call.

**VI. REVIEW OF PROPOSED CONDITIONS TO ADDRESS INOPERABLE / INACCESSIBLE WATER SHUT-OFF VALVES (B-BOXES) – JIMMY LOCKEFEEER**

Chairman Tack explained that discussion occurred before the meeting and that instead of reviewing the proposed topic tonight, staff should look to revise the topic to incorporate the comments from the earlier conversation. Chairman Tack explained that he is proposing the idea of going to a ten year inspection schedule of b-boxes. He explained that every ten years, notice could be sent to a homeowner requesting that they certify their b-box is operable. He explained that if a b-box is inoperable that a homeowner would be required to make the necessary repairs within a certain amount of time. He explained that the certification process could be broken down by Ward. He explained that if a house is also going to be sold, the seller would also need to certify that the b-box is operable.

Alderman Moreno explained that she liked the suggested approach. City Manager Kiely agreed that the approach was more comprehensive.

Director Thomas explained that there have been issues with City Water and Sewer Section staff attempting to shut off water at the b-box. There have been recent incidents where they have discovered that a b-box is inoperable when they have needed to shut off water.

City Manager Kiely explained that it will be important that as a part of the certification program, a list be vetted and certified plumbers are made available on the City's website.

**VII. SNOW UPDATE – MICHAEL THOMAS**

Director Thomas reviewed and explained a chart that showed snow totals from November 15 through January 22 for each of the last five snow seasons. He explained that this year's snow season is average when compared to the previous five seasons. He explained that this year there has been many small snow events that still require a response. These events utilize overtime hours and the use of salt. He explained that the City still has approximately 1,200 tons of salt remaining. He explained that City Council did approve of a salt agreement with Lake County that would allow the delivery of an additional 1,000 tons of salt if needed. He explained that the snow operations this snow season are going well. He explained that staff will be placing the contracted hand shoveling contract out to bid in the late summer for next winter. Finding seasonal employees would be much more cost effective however they are very hard to find. The challenge is that the Parks and Forestry Section's nine month seasonal employees are typically off during the winter months. Chairman Tack recommended working with the country clubs' management in regards to using their seasonal workers during their off winter months. Director Thomas explained that staff would look to reach out to the local country club managers.



**VIII. OTHER**

Director Thomas explained that on February 6, 2018 staff is going to meet with the Lane Lorraine neighbors to discuss drainage.

He explained that staff has also met with IDOT in regards to their blocked culverts both east and west of Route 41. He explained that the regional directors of IDOT and State Senator Morrison were in attendance. He explained that Superintendent Martin has been working with the IDOT Gurnee division supervisor on clearing brush and vegetation at their culverts. Director Thomas explained that addressing these culvert issues will help alleviate some of the flooding. Staff's next step is to work with the UP Railroad on their culvert issues to the east.

He explained that staff has also met with 1301 N. Western in regards to their drainage issues. He explained that their property was walked with their property management staff and a member of their homeowner's association board. City staff pointed out many private drainage improvements that could be taken by the property management firm to help alleviate the flooding their residents experience. He explained that the City Engineer has completed and finalized an engineering report that was shared with the building property management staff.

Director Thomas explained that staff is also still working to coordinate a meeting with the Lexington Drive neighbors on their drainage. Superintendent Ells explained that the City of Highland Park has been leading an effort to have the Army Corps of Engineers conduct a Planning Assistance Study. This study will update existing studies along the two Forks of the East and West Skokie Drainage Ditches which could lead to a full-scale Feasibility Study whereby flood mitigation solutions could be designed that would benefit communities devastated by 2017 flooding events. The municipalities and organizations involved with this process include Lake Forest, Highland Park, Northbrook, Deerfield, Glenview, Bannockburn, Lake County Stormwater Management Commission, and the Army Corps of Engineers. Superintendent Ells explained that the Director of Public Works of Highland Park informed him that he would be happy to give an official update to the Committee or City Council at a later date. Chairman Tack recommended that he shares an update at a City Council Meeting

**IX. NEXT MEETING**

Director Thomas suggested the next meeting be scheduled for February 21, 2018 at 6:30 P.M.

**X. ADJOURNMENT**

Chairman Tack moved to adjourn the meeting of the Public Works Committee at 8:34 P.M. Alderman Moreno seconded the motion, which carried unanimously.

Respectfully submitted,

Jim Lockfeer Jr.  
Management Analyst