MEMORANDUM

To: Mayor and City Council

From: Kent Collins, P.E., Interim Director of Public Works

Date: April 24, 2018

Reference: Work Session Discussion on Proposed Sandy Lake Lift Station Rehabilitation/Reconstruction

2030: Sustainable City Government, Goal 3
Excellent and Well-maintained City Infrastructure and Facilities

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General Information:

- Sandy Lake Lift Station (SLLS) was originally constructed in mid to late 1970's.
- Some modifications completed in 2007
- Proposed modifications include; elevating to get the station above the floodplain elevation.
- Reconfigure from a dry/wet pit to a wet well with submersible pumps
- Replace discharge flow meters
- Replace Odor control units
- Upgrading instrumentation and monitoring equipment
- Adding a permanent generator
- Estimated Construction Cost $5 Million (includes, design, geotechnical, construction admin.)

Introduction:

Sandy Lake Lift Station was originally constructed in the mid to late 1970's and has a capacity of 4.2 million gallons per day. Up until 2007, all of the City's wastewater passed through this lift station, which means for 40 years it has been carrying the complete load. Over the years we have performed maintenance to the lift station to extend the life, which included replacing pumps, odor control units, flow monitors etc… This lift station has reached its useful life and then some.

Analysis:

Prior to 2007, Sandy Lake Lift Station (SLLS) received all of the wastewater flow of the city. In 2007, a project was completed that created a bypass from the Deforest Lift Station directly to the TRA metering station allowing us to keep SLLS the same size at the time. During the floods of

2015, the Sandy Lake Lift Station was under more than 3 feet of water and within inches of being compromised and inoperable until the floodwaters subsided. The Public Works department was able to create a berm to protect the lift station during the flood. Staff is currently in the process of negotiating a contract with Alan Plummer Associates to perform a capacity analysis and conceptual design of the lift station rehabilitation/reconstruction. Some of the upgrades to the site will include raising the lift station out of the potential floodwaters including the driveway and electrical panel. The current site is a wet pit/dry pit configuration where the dry pit is more than 25 feet below grade and requires continuous ventilation, which can be a safety concern. That would be replaced with a wet well configuration with submersible pumps, similar to the Deforest Lift Station. A permanent generator would be added, there is currently a portable generator. New flow meters on the incoming mains and the discharge main would be replaced. The rehabilitation will include adding new instrumentation and monitoring to allow us real time data of the site, which includes monitoring of pumps, inflow, discharge, well level, electricity, generator status and site security. The odor control units would also be replaced. The rehabilitated lift station will provide a useful life of 30-40 years with proper maintenance. Staff will be bringing a contract for consideration of approval for the capacity analysis and conceptual design to a future council meeting.

Legal Review:

This item did not require legal review.

Fiscal Impact:

The amount being requested as part of a future bond issuance is $5 Million for the reconstruction of the lift station.

Recommendation:

Staff will bid this project out and will bring to a future council meeting for consideration of approval.