



CITY OF NOVI CITY COUNCIL
MARCH 6, 2023

SUBJECT: Consideration of approval to award the construction contract to LGC Global Inc., the sole bidder, for the Novi Road/13 Mile Road PCCP Water Main Repair project in the amount of \$1,236,231.00.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

EXPENDITURE REQUIRED	\$ 1,236,231.00
AMOUNT BUDGETED	\$ 1,351,460.00
APPROPRIATION REQUIRED	\$ 0
LINE ITEM NUMBER	592-592.00-976.112

BACKGROUND INFORMATION:

In 2019, staff inspected a portion of the City's 36-inch prestressed concrete cylinder pipe (PCCP) water transmission main using the Pipe Diver inspection tool. The Pipe Diver (a robotic data collection device inserted into the water main) identified and ranked structural deficiencies in four pipe segments. The PCCP pipe material fails catastrophically, like the 2017 Great Lakes Water Authority (GLWA) pipe failure on 14 Mile Road, and would significantly affect the water supply to the majority of the City.

Several options were considered to address the defects, including lining options, concrete encasement, and removal and replacement. Ultimately, it was determined Carbon Fiber Reinforced Polymer (CFRP) lining would be the best option given the success GLWA has recently had on their critical mains on 14 Mile Road. CFRP is a carbon fiber wrap, installed by hand inside the pipe and requires less excavation and surface disruption. The pipe can be accessed by existing manholes, eliminating the need to expose the pipe, however, excavation will still be required to install temporary line stop valves to perform the lining.

Staff worked with consulting engineer AECOM to develop the plans for this project. The project was advertised for public bids on December 28, 2022. One (1) bid was received and opened on January 17, 2023, following the solicitation period. Based on the specialized nature of the work, staff is not surprised one bid was received. LGC Global's

subcontractor, Structural Technologies, is the primary company in the region performing the CFRP and has successfully completed similar projects for the GLWA. LGC Global's bid is recommended in the best interest of the City, as it is responsive and complies with all requirements of the bidding instructions.

There are several variables impacting the construction schedule. Since this project involves the 36-inch transmission main, which is the primary source of water for a large portion of the City, the work cannot be done during the high-demand irrigation summer season. Furthermore, the contractor requires the pressure in the water main to be lowered to ~58 PSI (from the typical 90-100 PSI) to provide safe operating conditions for the water main work. Currently, this pressure reduction is not possible, resulting in a total service shutdown. Therefore, to avoid a loss of water service, an additional connection can be installed across 13 Mile Road to provide redundancy. Staff is working with AECOM to design, permit, and install this water main segment, which will allow the lining project to commence in fall 2023.

RECOMMENDED ACTION: Approval to award the construction contract to LGC Global Inc., the sole bidder, for the Novi Road/13 Mile Road PCCP Water Main Repair project in the amount of \$1,236,231.00.