

INFRASTRUCTURE STUDY GROUP

CITY OF LATHRUP VILLAGE
27400 Southfield Road, Lathrup Village, Michigan 48076

WATER MAIN RECOMMENDATIONS TO CITY COUNCIL

MARCH 1, 2023

2023 Water Main Recommendation:

Background: On December 21, 2020, City Council adopted a recommendation from the Infrastructure Study Group to undertake a three-year, \$7.3M project to dramatically improve the City's water and sewer infrastructure. A variety of specific improvements were included, such as:

- Replacement of five water mains
- Sanitary sewer cleaning, televising and repair
- Sanitary retention tank repairs and upgrades
- Gate valve replacements
- Fire hydrant replacements
- Lead water line abatements
- Stop box inspections for lead lines along with stop box replacements
- Water billing telemetry improvements
- Water meter replacements

The funding of this project would come from a combination of a \$5.4M in general obligation bonds and \$1.9M from the approximate \$4M balance of the City's Water and Sewer Fund. The City has made significant progress on all project goals during the first two years of construction work. It is expected that all scheduled improvements will be completed by the end of the third year of the project (fall of 2023).

Upon completion of the Year 3 project work, the overall project is expected to be significantly under budget. This surplus is a result of several factors. First, the city expected to replace its

water meter stock as part of a larger effort to curb a consistently large water loss issue. Because other water loss reduction efforts are having a significant effect, water meter replacement has been indefinitely delayed (the city administration can revisit this at a later date, if so desired). Second, the city has found significantly fewer lead lines than were expected for a city of our age. Third, we have been able to refurbish our gate valves instead of replacing them at a 6 times lower cost. Fourth, the City has received significant grants to offset the cost of some of this work. Lastly, we budgeted for 1,700 stop box excavations and replacements, but due to a change in EGLE's regulatory requirements, we were able to reduce that number to 315. The net effect of these savings will result in completing all work while still spending \$675,000 less than the bond amount (even with the addition of more sanitary sewer repairs than originally planned and the construction of seven unplanned dead-end manholes). To date, all expenditures have been made using bond funds. No money has been (or will be) spent from the Water and Sewer Fund as originally planned. Moving forward beyond 2023, the City can assess the use of the previously allocated, but unused, \$1.9M in Water and Sewer Funds on a project-by-project basis as needed.

General obligation bonds for this project purpose come with the expectation that the received funds are to be used within three years. To meet this expectation, the City needs to add additional water and sewer projects to the 2023 summer construction season. The Infrastructure Study Group anticipated such a possibility. In the approved three-year project recommendation, it was specifically noted that under-budgeted projects would free up funds that would be spent on other water and sewer projects. The purpose of this document is to present the recommendation of the Infrastructure Study Group for the use of these remaining funds on additional projects during the summer of 2023.

Recommended Projects:

As a result of the three-year Capital Improvement Project, all of the City's water and sewer related infrastructure systems have been significantly improved. However, the one area that still needs significant attention is our water main system. While the City has been making yearly strides toward replacing water mains, we still have 17 miles of water main that was installed prior to 1930. These water mains have been in use for almost double their expected 50-year life, and as a result, Lathrup Village experiences a high number of water main breaks. For example, this past fall, the City attempted to conduct a flow test of our water system. This test is necessary so that we can better identify and prioritize the areas of the City needing the most

attention. However, within a week, the added stress of the test caused five water main breaks, which disrupted important water service to our residents. As a result of our frequent water main breaks, most all residents are unfortunately aware of our brown water alerts that arise whenever there is a water main break!

As such, the Study Group recommends moving up two water main replacement projects, to the summer of 2023, that were originally scheduled in the Capital Improvement Plan for after the conclusion of the three-year bond project. The recommended mains for replacement are San Diego from Rackham to Stanford Court and Lincoln underneath Southfield Road. These mains were selected because their repair will increase pressure, flow, fire safety and redundancy to areas of the City that are sorely lacking. Note these two selections would be in addition to the water main replacements already slated for the summer of 2023.

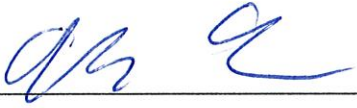
The San Diego water main is a 6 inch main that is 2,150 feet long and was constructed around 1925. This section of main has experienced five water main breaks. The estimated cost of replacement is \$537,500.

The selection of the Lincoln water main requires a little background information. Approximately 15 years ago, the City experienced a water main break on the Lincoln water main directly under Southfield Road. Due to the expense and complication (the digging up of Southfield Road) of the repair at the time, it is our understanding that the City Administrator decided to simply shut the gate valve that connected the east side of Lincoln to the west side instead of doing a repair. This prevents any flow from the east side to the west side, which is a contributing cause to lower pressures in the southwest quadrant of the City. It also reduces the redundancy to that area. However, now that repair technologies have improved and cheapened, repairs can be made via CIPP (cure-in-place-piping) or directional boring without having to rip up Southfield Road. The estimated cost of this project to repair the break under Southfield Road is \$150,000.

The total cost of these repairs is \$687,500. This is a little more than the \$675,000 we have left in bond funds. However, the Year 3 project estimates are conservative and there is a fairly good chance that extra surplus funds will again materialize, especially with respect to gate valves work. If this does not occur, then this small overage can be easily absorbed by the \$1.9M that was allocated for the three-year bond project, but was not spent and returned to the Water and Sewer Fund.

Therefore, the Infrastructure Study Group recommends that the San Diego and Lincoln water main projects be added to the final year (2023) of the Capital Improvement Project to improve flow, pressure, and redundancy to those areas of the City.

This recommendation is made by the following voting members of the Infrastructure Committee:



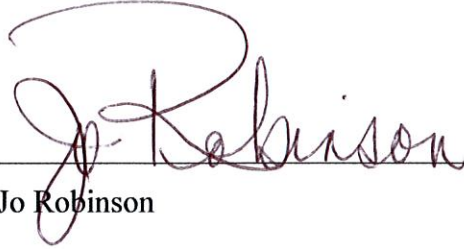
Bruce Kantor, Committee Chair
Mayor Pro Tem



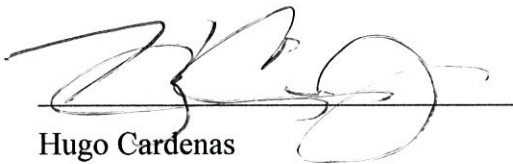
Michael Griffin



Mike Keenan



Jo Robinson



Hugo Cardenas