

Public Exigency Hess Yard Piping System Repairs



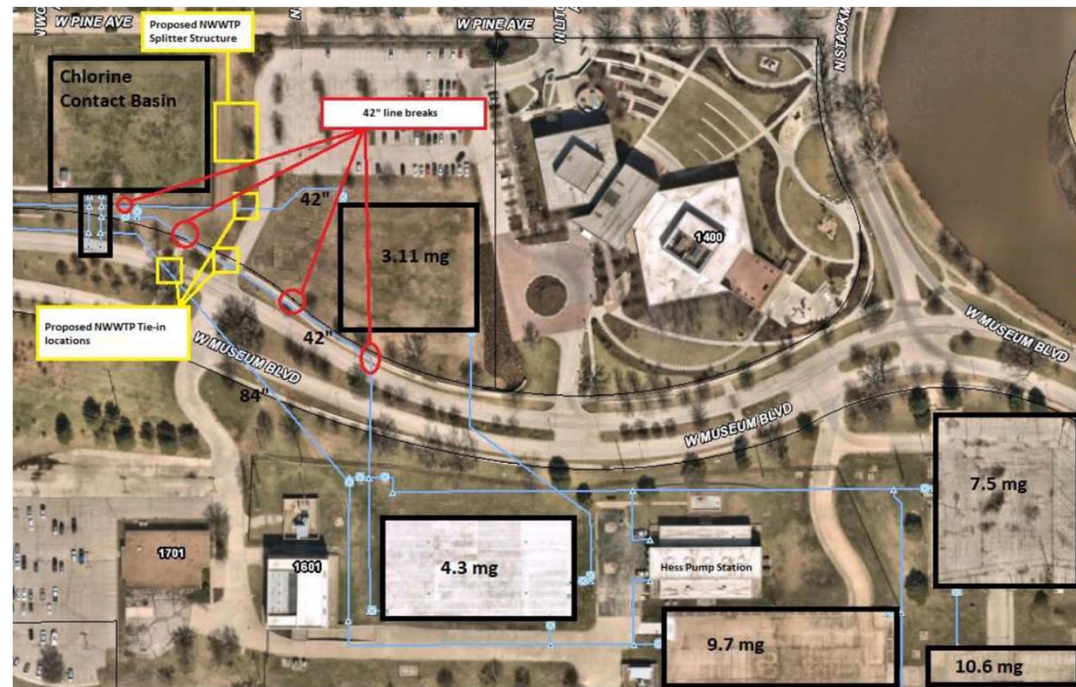
Public Works & Utilities

May 3, 2022



Finished Water Lines

- Three finished water lines feed treated water from the treatment plant to Hess Pump Station.
- Two lines are 42-inch cast iron pipe constructed as part of the original water treatment plant.
- One line is 84-inch reinforced concrete pipe constructed during the early 1950's plant expansion.



Background



- Work is underway to test isolation valves on the three finished water lines.
- The valves must be functional in order to tie in the new NWWF as these lines will be utilized for ongoing service.
- Beginning March 23, two leaks were discovered during excavation on one of the 42-inch finished water pipes.
- Exploration and repair work was executed under public exigency defined under City Code, Section 2.64.020(c), in order to not permit the delay for a formal bid process, as determined and approved by the City Manager.



Exploration



Divers and cameras were utilized to inspect accessible portions of the two 42-inch water lines.



Two additional leaks were found (total of four pipe leaks).



Further Exploration



- In addition, three leaks were discovered in the chlorine contact basin during excavation of the fourth finished water line leak.
- Two construction joints were found to be leaking.
- One seal around the south 42” finished water line was found to be leaking.



Status



- Work is being performed with an abundance of caution due to critical utility infrastructure in the area (basins, pipes, valves, etc.).
- A four-inch gas line feeding Hess PS had to be rerouted by the gas company.
- A bypass was constructed to ensure adequate flow to meet demands during repairs.



Status



- The four pipe leaks were a result of workmanship performance at the time of original installation.
- The four pipe leaks have been repaired.
- The four pipe repairs were pressure tested and the repairs are secure.



Status



- North 42” line is back in service.
- The bypass still in place for additional capacity if needed.
- One leaking joint in the chlorine contact basin has been repaired.
- Work is underway on the two remaining leaks.
- Normal service is expected within two weeks.



Status



- Conditions are being closely monitored and controlled.
- Customer service is not being impacted.
- Water treatment is normal.
- Current demands are being met.
- Unlike water mains that are under pumping pressure, finished water pipes are gravity fed, so the risk of further damage or sudden catastrophic consequences is very low.



Future Work



- Condition assessments will be performed on remaining Hess yard pipes in the future as a separate project.
- Plans are being developed to optimize timing of the condition assessments.
- If other leaks are discovered, they will be addressed in the future, as they are found.



Financial Considerations



- The estimated total budget for bypass pumping, pipe and basin repairs, and spare material is \$1,600,000.
- The estimate exceeds the approved maximum for on call contract value per project.
- Funding is available in the 2021 Water Treatment Plant Emergency Improvements projects in the Adopted 2021 Capital Improvement Program.
- The full cost of the project has been accounted for and will not impact rates.



Recommendations



It is recommended that the City Council:

- Affirm the City Manager’s public exigency approval for Hess yard piping system repairs;
- Approve the contract and total budget amount of \$1,600,000;
- Adopt the resolutions, and authorize the necessary signatures.
- Per Charter Ordinance No. 211, this item requires a two-thirds majority vote (five votes required).



Public Exigency Hess Yard Piping System Repairs



Public Works & Utilities

May 3, 2022

