



**CITY OF NOVI CITY COUNCIL
JULY 26, 2021**

SUBJECT: Consideration of approval of Change Order No. 2 to Pipeline Management Company for the 2021 Sanitary Pipe and Manhole Rehabilitation – Phase 2 project, in the amount of \$265,910.00 and amend the budget.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division
Water and Sewer Division

EXPENDITURE REQUIRED	\$ 265,910.00
AMOUNT BUDGETED	\$ 0
APPROPRIATION REQUIRED	\$ 362,114.00
LINE ITEM NUMBER	592-592.00-976.077

BACKGROUND INFORMATION:

The Water and Sewer Division recently completed a five-year program involving the inspection of sanitary sewer manholes and pipes as part of a Stormwater, Asset Management, and Wastewater (SAW) grant project. With the SAW grant inspection program completed, OHM Advisors and City staff developed a program scope to address defects observed in the sanitary sewer manholes and pipes as a two-phased project.

The construction award for Phase 1 of the project was approved by City Council on July 27, 2020, to the low bidder, Pipeline Management Company, and approved Phase 2 construction on March 8, 2021, which is currently under construction. Staff originally planned for this additional work in future out years, however, now recommends executing Phase 3 via change order to capitalize on existing unit prices.

The attached map shows the Phase 3 locations proposed under this change order. The repairs will be completed utilizing methods, including grouting, pipe and manhole liners, replacement, and other rehabilitation methods. It was determined that a reduced inspection effort would be needed for this type of rehabilitation work, and therefore a

crew day line item was not included in the construction bid. Instead, a separate scope was developed specific to this type of inspection as described in the enclosed OHM proposal dated 6/29/2021. The contract administration fee was calculated using the percentages in the Agreement for Professional Engineering Services for Public Projects. No geotechnical engineering services will be required for this project.

OHM Advisors		
*Engineering Design	2.25% of the construction estimate	\$5,982.98
Contract Administration	4.5 % of the construction award	\$11,965.95
Crew Days	\$700 daily inspection fee x 27 days	\$18,900

*Due to this change order being an extension of the original contract, City staff negotiated a lower design percentage fee with OHM which involved a lesser design effort.

Construction will begin this summer with substantial completion expected by fall 2021.

RECOMMENDED ACTION: Approval of Change Order No. 2 to Pipeline Management Company for the 2021 Sanitary Pipe and Manhole Rehabilitation – Phase 2 project, in the amount of \$265,910.00 and amend the budget.

RESOLUTION

NOW, THEREFORE BE IT RESOLVED that the following
Budget Amendment for change order No. 2 to
Pipeline Management Company for the 2021 Sanitary Pipe and Manhole
Rehabilitation – Phase 2 project is authorized:

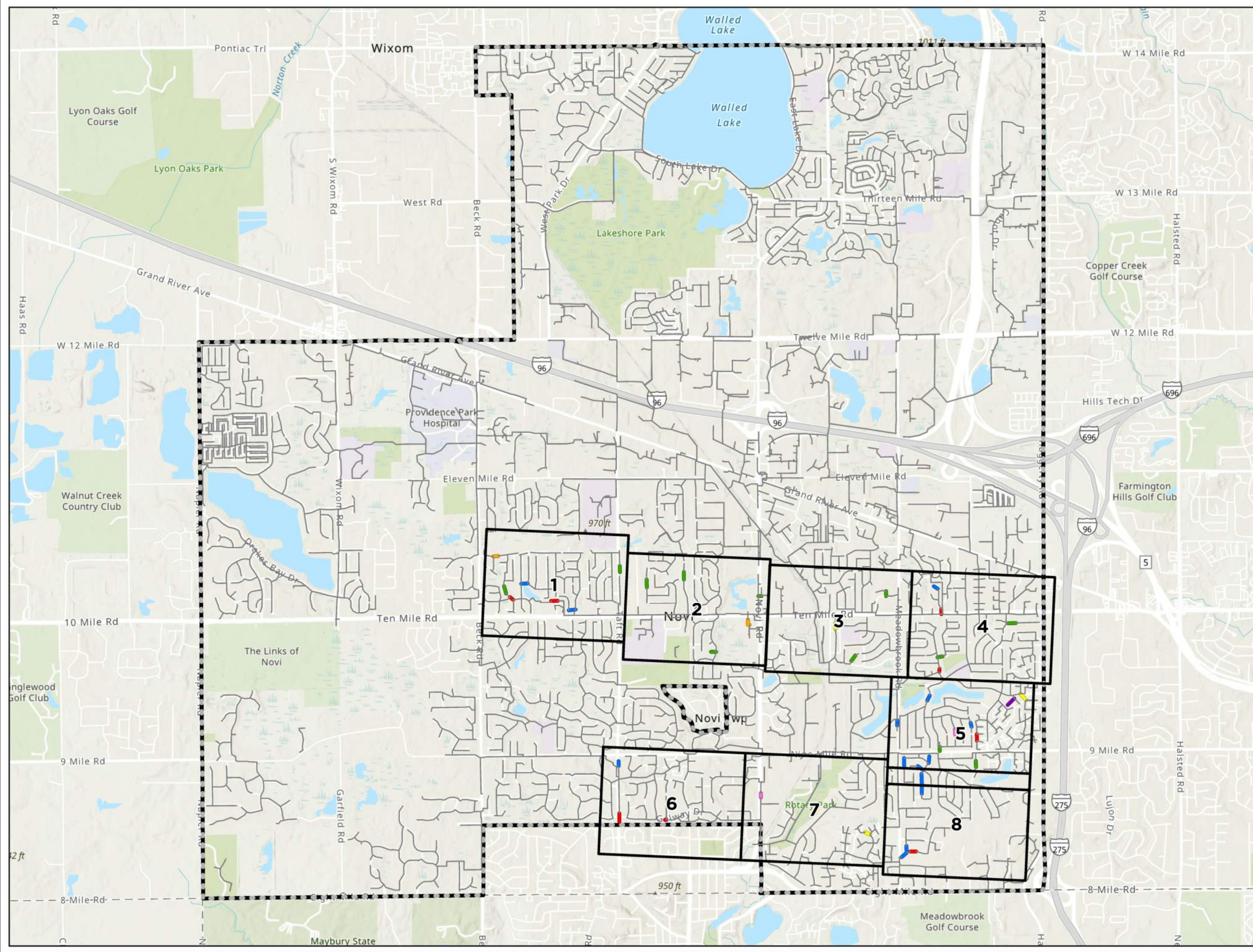
	INCREASE (DECREASE)
WATER & SEWER FUND	
APPROPRIATIONS	
Capital Outlay	362,114
TOTAL APPROPRIATIONS	<u>\$ 362,114</u>
Net Increase (Decrease) to Fund Balance	<u><u>\$ (362,114)</u></u>

I hereby certify that the foregoing is a true and complete copy of a
resolution adopted by the City Council of the City of Novi
at a regular meeting held on July 26, 2021.

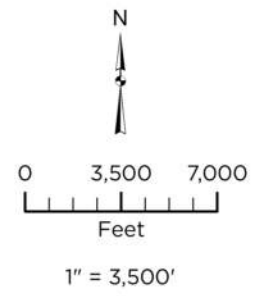
Cortney Hanson
City Clerk



Novi Sanitary Pipe and Manhole Rehabilitation Phase 3 Overall Map



- Sanitary Sewer Main Rehab Method
- Grout Individual Joint(s)
 - Grout Lateral Connections
 - Grouting and Spot Liner(s)
 - Spot Liner(s)
 - Test and Seal All Joints
 - Test and Seal All Joints and Grout Lateral Connection
 - Test and Seal All Joints and Spot Liner
 - No Rehabilitation Assigned
 - City of Novi Municipal Boundary



Source: Data provided by Novi, OHM Advisors, and Esri. OHM Advisors does not warrant the accuracy of the data and/or the map. This document is intended to depict the approximate spatial location of the mapped features within the Community and all use is strictly at the user's own risk.

Coordinate System: NAD 1983 StatePlane Michigan South FIPS 2113 IntlFeet

Map Published: July 6, 2021





June 29, 2021

Mr. Ben Croy, P.E.
City Engineer
City of Novi
Department of Public Services
26300 Lee Begole Drive
Novi, MI 48375

RE: 2019 Sanitary Sewer Manhole and Pipe Rehabilitation
Additional Services – Sanitary Sewer Manhole and Pipe Rehabilitation Phase 3 (2021)

Dear Mr. Croy:

Per your request, the following outlines our proposed scope of services to perform additional manhole and pipe rehabilitation as part of the current project that had a Contractor bid opening on June 25, 2020. The low bidder on the project was Pipeline Management Company from Milford with a low bid price of \$1,031,304. This work is considered Phase 1 of the sanitary sewer manhole and Pipe Rehabilitation efforts. Phase 2 included the rehabilitation of the remaining sanitary sewer mains and manholes identified as needing rehabilitation per the City's SAW Project Plan.

Following discussions with City staff, OHM Advisors is pleased to submit this proposal to assist the City with engineering and construction services related to the additional rehabilitation efforts identified during investigations of Phase 2 of the City's sanitary sewer system, known as Phase 3. We have prepared a project understanding and scope of services to complete the additional areas identified for rehabilitation. Our proposal contains our Project Understanding, Scope of Services, Schedule, and Fee related to this work.

PROJECT UNDERSTANDING

It is our understanding that the City of Novi wishes to continue with this project as an extension of the low bid unit prices from Phase 2 and have OHM Advisors perform design engineering, contract administration, and construction engineering services during the work.

Phase 3 of the proposed project would involve the rehabilitation of the remaining sanitary sewer mains identified as needing repair. Rehabilitation efforts primarily include grouting of pipe joints and point liners. A project estimate of \$206,550 was prepared for Phase 3 sanitary sewer main rehabilitation based on unit prices from Phase 2.

SCOPE OF SERVICES

The scope of work for this project will be consistent with our Agreement for Civil Engineering Consulting Services between the City and OHM Advisors. Consistent with the effort provided in Phase 2, the following is a summary of necessary tasks to be provided for Phase 3 of the work related to the preparation of construction documents and construction services.



Task 1 Design Documents and Scoping Effort

Under this phase of work, OHM Advisors will prepare construction documents for this project. Specific work tasks would include the following:

- Review sanitary sewer video from the SAW project not included in the initial scope of work and confirm the necessary rehabilitation locations and methodology for pipe within the project study area.
- Provide recommendations related to the type and method of rehabilitation for the pipe. The primary methods include reviewing pipe segments for full segment pipe joint grouting as opposed to individual spot grouting.
- Prepare a change order to Phase 2 of the project to include additional items of work and quantities as necessary for Phase 3 of the project.
- Develop detailed maps and work schedule identifying the proposed pipe rehabilitation efforts.
- Prepare a Final Opinion of Construction Cost for a future Phase 3 of the project.

Task 2 Construction Efforts

The following outlines our work plan to accomplish the scope of services for this project:

- Provide contract administration services consistent with our current Agreement for Professional Engineering Services between OHM Advisors and City of Novi dated December 18, 2017, Exhibit A.
- Provide field inspection services consistent with our Inspection Fee Summary, and Exhibit A of the Agreement for Professional Engineering Services. OHM Advisors will provide inspection based on Contractor work activity as outlined in the table below, or as otherwise requested by the City.

SCHEDULE

We anticipate that the Contractor will complete the Phase 3 rehabilitation work outlined in the design documents by October 31, 2021.

ASSUMPTIONS

The following summarizes our assumptions associated with this proposal:

- We assume the City will provide a Notice to Proceed to the Contractor within the next 30 days.
- We assume that the Contractor will complete the work within 90 calendar days. We also assume that the amount of Contractor workdays will be consistent with our fee summary table outlined below for 27 crew days.
- We assume that the amount of effort needed for a specific work task will be consistent with the number of crew days outlined below. If the Contractor requires additional supervision due to the quality of their work or if certain tasks require re-work, this is assumed to be additional effort above and beyond this scope of work.



FEE SUMMARY

Based on the above scope of work, our project fee is established as follows:

- Based on the estimated construction budget of \$206,550 for Phase 3, the engineering fee percentage based on our Consulting Services Agreement for the design phase of underground utility rehabilitation is 4.25%. Since we are performing Phase 3 as an extension to the original contract documents developed in the initial phase of work, we propose reducing this fee to 2.25%.
 - Phase 3 Design Services Fee is calculated as 2.25% x \$206,550 = **\$4,640**
- Regarding the Contract Administration fee, we are requesting a fee consistent with our Agreement for Engineering Services Agreement, Exhibit B. Based on the estimated contract amount of \$206,550, the contract administration fee would be calculated as 4.5% of that contract amount. Therefore, the requested Contract Administration Fee is **\$9,290** as a fixed fee.
- The following table summarizes our assumptions related to the field inspection effort on this project, based on Contractor efforts in Phase 2 and the assumed efforts for major items of work and anticipated crew day efforts for Phase 3. We propose this fee as a Not-to-Exceed amount, billed based on actual number of crew days spent.

2021 MH & Pipe Rehabilitation				
Major Work Task	Estimated Contractor Duration, Work Days (8 Hr Day)	Estimated Crew Days	Cost Per Crew Day	Estimated Cost per Task
Pipe Cleaning & Prep	5	5	\$700	\$3,500
Pipe Rehabilitation - Grouting	12	12	\$700	\$8,400
Pipe Rehabilitation - Spot Lining	8	8	\$700	\$5,600
Project Cleanup & Restoration	2	2	\$700	\$1,400
Totals	27	27	\$700	\$18,900

Thank you for the opportunity to be of service to the City. If you have any questions or require additional information, please do not hesitate to contact us. We look forward to continuing to work with you on this project.

Sincerely,
 OHM Advisors

 Steve Siklich, PE
 Project Manager

Authorization to Proceed

 Signature Date

 Printed Name Title

cc: Tim Juidici, OHM
 Mackenzie Johnson, OHM



OPINION OF PROBABLE CONSTRUCTION COST

ORCHARD, HILTZ & McCLIMENT, INC.

34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 522-6427

PROJECT: Novi Sanitary Pipe and Manhole Rehabilitation Phase 3
 LOCATION: Various locations throughout City
 WORK: Sanitary Sewer Grouting and Spot Lining

DATE: June 9, 2021
 PROJECT #: 0163-19-0020
 ESTIMATOR: MJ
 CHECKED BY: SS
 CURRENT ENR: MJ

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
1077051	Maintenance of Traffic	LSUM	1.00	\$ 10,000.00	\$ 10,000.00
1077051	Mobilization, Max. 5%	LSUM	1.00	\$ 9,850.00	\$ 9,850.00
4027001	Sanitary Sewer Cleaning and CCTV, 8-15 inch, Normal	Ft	10000.00	\$ 2.00	\$ 20,000.00
4027050	Grout Lateral Connections	Ea	6.00	\$ 1,500.00	\$ 9,000.00
4027050	Grout Pipe Joint, 10 inch	Ea	5.00	\$ 400.00	\$ 2,000.00
4027050	Grout Pipe Joint, Test and Seal, 8 inch	Ea	800.00	\$ 90.00	\$ 72,000.00
4027050	Grout Pipe Joint, Test and Seal, 15 inch	Ea	50.00	\$ 150.00	\$ 7,500.00
4027050	Grout Pipe Joint, 8 inch	Ea	35.00	\$ 350.00	\$ 12,250.00
4027050	Sanitary Sewer Chemical Grout	Gal	1000.00	\$ 4.00	\$ 4,000.00
4027050	Sanitary Sewer Spot Liner, 12 inch	Ea	1.00	\$ 2,750.00	\$ 2,750.00
4027050	Sanitary Sewer Spot Liner, 8 inch	Ea	26.00	\$ 2,200.00	\$ 57,200.00
Subtotal = \$					206,550.00
TOTAL OPINION OF PROBABLE CONSTRUCTION COST =					\$ 206,550.00

