



Engineering & Public Works Department

SUBJECT: 2020 Sewer Televising and Cleaning Program

MEETING DATE: February 25, 2020

FROM: [Brigitte Berger-Raish](#), P.E., Director of Engineering and Public Works
[Dan Manis](#), P.E., Village Engineer
[Danielle Horn](#), P.E., Project Manager

BUDGET IMPACT:

Contract Cost:	\$234,500
Budget:	\$234,500
Over/(Under) Budget	\$0

Recommended Motion

Move to approve a contract extension in an amount not-to-exceed \$234,500 with American Underground, Inc., Glenview, IL, for the 2020 Sewer Televising and Cleaning Program.

Background

Sewer televising identifies deteriorated pipe and sewers that have obstructions caused by mineral deposits or tree root intrusions. This allows Engineering and Public Works Department staff to plan repairs to deteriorated sewers.

Routine cleaning is a vital component of maintaining the existing sewer system to its maximum effectiveness. Prior to televising, the contractor cleans the sewers with a high-pressure water jet and then determines if the sewer requires additional heavy cleaning or root cutting before performing the inspection. The 2019 televising and cleaning program removed approximately 181 cubic yards of debris from Village sewers and inspected 14 miles of sewer pipe, approximately 9% of the Village's sewer system.

In addition, sewer televising assists the Engineering and Public Works Department to determine which sewers benefit from sewer lining. Sewer lining involves the trenchless rehabilitation of deteriorated sewer pipe in which a flexible lining is inserted into an existing sewer through a manhole and is heat cured. Sewer lining is economical, non-invasive and reliable. However, sewers have to be in a "round" (non-collapsing or oval) condition otherwise sewer lining is not an option.

Both the capital and operations sides of the Engineering and Public Works Department work together to establish the locations for televising. Candidates for this program are sewers that fall in one or more of the following categories:

- Sewers that are prone to surcharging during rain events;
- Sewers under streets that are scheduled for resurfacing;
- Sewers that are planned for the sewer lining program;
- Sewers that are within public utility easements that are difficult to access;
- Sewers that are within the basin programmed for the current year’s cleaning.

This program will televise and clean approximately 13% (20 miles) of sewers throughout the Village in both the separate, combined, and storm sewer systems, including approximately 5 miles of large diameter sewers (larger than 48”).

Discussion

In 2015, the Village was one of seven municipalities participating in the Municipal Partnering Initiative (MPI) sewer televising and cleaning bid that was led by the Village of Glenview. The MPI allows area communities to collectively bid similar work to take advantage of economies of scale. Other participating communities in this group were Kenilworth, Niles, Lincolnshire, Vernon Hills and Northfield. The bid established pricing for up to five years. For 2020, American Underground has agreed to a contract extension honoring the same pricing from the previous year.

This year’s program will concentrate on 2021 and 2022 Road Program Streets, large diameter sewers, as well as the regular basin cleaning and televising rotation for this year. By completing sewer televising for the 2021 and 2022 Road Program Streets this year, point repairs can be completed and sewers lined where necessary in advance of the street resurfacing.

American Underground has performed well for the Village in the past, including Sewer Televising and Cleaning Programs since 2012 and has agreed to hold unit pricing for 2020. For these reasons, the Engineering and Public Works Department recommends awarding the 2020 Sewer Televising and Cleaning Program to American Underground.

The project will begin in March and be completed in May 2020.

Budget Impact

The 2020 Sewer Maintenance Program is allocated to the below account within the Sewer Fund. The budget includes line items for \$184,500 for sewer televising and cleaning plus an additional \$50,000 for large diameter sewer televising.

Description	2020 Budget	Contract Amount	Account Number
Sewer Fund – Sewer Maintenance	\$322,000	\$234,500	40807090-425300

The remaining balance in the sewer maintenance account will be used for catch basin cleaning and other storm sewer repairs as part of other Village contracts.

Documents Attached

1. American Underground Bid Pricing
2. CIP Detail Sheets
3. Signed Contract Extension

VILLAGE OF WILMETTE

2020 SEWER TELEVISION & CLEANING

American Underground, Inc.
246 Marquardt Drive
Wheeling, IL 60090

Pay Estimate

Item	Pay Item Description	Qty	Unit	Unit Price	Extension
BASE BID					
Year 3 (2018)					
1.	CCTV Inspection of Storm Sewers (6" to 42")	35,770	LF	\$ 1.57	56,158.20
2.	CCTV Inspection of Sanitary Sewers (8" to 12") <u>with</u> Concurrent Dyed-water Flooding		LF	2.23	-
3.	CCTV Inspection of Sanitary Sewers (15" to 18") <u>with</u> Concurrent Dyed-water Flooding		LF	2.29	-
4.	CCTV Inspection of Sanitary Sewers (8" to 12") (no dyed-water flooding)	33,471	LF	1.35	45,185.63
5.	CCTV Inspection of Sanitary Sewers (15" to 18") (no dyed-water flooding)	6,086	LF	1.35	8,215.65
6.	CCTV Inspection of Sanitary Sewers (21" to 30") (no dyed-water flooding)	4,052	LF	1.71	6,928.68
6.	CCTV Inspection of Sanitary Sewers (>30") (no dyed-water flooding) - AUP 1	11,170	LF	1.89	21,110.90
7.	Sewer Condition Evaluation	61,275	LF	0.18	11,029.54
Total Base Bid					\$ 148,628.60
SUPPLEMENTAL UNIT PRICES					
Year 3 (2018)					
1.	CCTV Inspection of Storm Sewers (48" to 72")	14,371.85	LF	\$ 1.89	27,162.80
4.	Root Cutting (8" to 12")	6,694	LF	0.58	3,882.62
5.	Root Cutting (15" to 18")	913	LF	0.95	867.21
6.	Root Cutting (21" to 30")	243	LF	6.00	1,458.67
7.	Heaving Cleaning	140.0	Crew Hours	375.00	52,500.00
Total Supplemental Work					\$ 85,871.29
Total Contract:					\$ 234,499.89

Sewer Maintenance	2020	\$322,000	Operating
Sewer Fund-Sewer Improvements-Sewer	2021	\$327,500	
Collection System	2022	\$333,000	
	2023	\$339,000	
	2024	\$315,000	
X	Critical		
-	Recommended		
-	Contingent on Funding		

Original Purchase Date & Cost

N/A

Funding History

2019	\$266,700	Operating
2018	\$261,500	Operating
2017	\$261,500	Operating
2016	\$224,000	Operating
2015	\$251,000	Operating
2014	\$210,000	Operating
2013	\$325,000	Operating
2012	\$210,000	Operating
2011	\$210,000	Operating

Project Description & Justification

A multi-year effort targeting sewer maintenance, including contractual maintenance of drainage structures, emergency, and road program sewer point repairs.

The following sewer maintenance improvements are recommended in 2020:

- \$50,000 is budgeted for a contractor to perform repairs to sewers that are over 10 feet in depth and cannot be repaired by Village crews and emergency sewer repairs and improvements for the combined, sanitary, and storm sewer systems identified during the budget year.
- \$37,500 to clean approximately 500 drainage structures in order to obtain a five-year cleaning cycle (an additional 500 are cleaned by in-house crews).
- \$184,500 to cover the cost of televising/ and cleaning approximately 13.5 miles (9%) of main line sewers using contractual services. The Village’s sewer systems contain 57.5 miles of storm sewer mains, 47.9 miles of sanitary sewer mains, and 51.1 miles of combination sewer mains. In addition to the contractual sewer televising, the Village’s in-house Water/Sewer crew cleans at least 2% of the total sewer system. The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) mandates that a long term (O&M) Program be developed. The O & M program includes maintenance, cleaning and

rehabilitation. At this time the MWRDGC does not require specific percentage of sewer cleaning. However, based on the age of the Village's sewers, the best management practices would be to clean the sewers once every 7 years or 14-percent per year.

To achieve this goal, an additional 5.5 miles of sewers would need to be cleaned annually. The sewer cleaning and televising contractual services is completed through participation in the MPI, which allows the Village to leverage competitive pricing through joint bidding with other local municipalities. The past 5 years have been completed under a contract that was bid in 2015, which provided pricing for 3 years and allowed for two subsequent years of contract extension at the 2017 pricing. New pricing will be established for 2020, however, it is estimated to cost \$39,000 to clean the additional 5.5 miles of sewers at the current price.

Additionally, it is advantageous to the Village to begin collecting GPS data for sewer service locations. An additional amount is included to allow these services to be added to the bid.

- \$50,000 has been included in 2020 to begin televising large diameter sewers. Large diameter sewer cleaning and televising will allow the Village to assess the state of the critical infrastructure and rehabilitate the sewers as necessary in advance of a potential failure. It is far less costly to rehabilitate sewers in advance compared to an emergency repair, which has the potential to impact much more in terms of public and private property. Staff proposes inspecting 25% of the large diameter sewers annually over the next 4 years to assess the current condition, followed by an annual program matching that of the regular sewer cleaning and televising program.

A summary of the large diameter sewers throughout the Village is included here:

Diameter	Lineal Feet			
	Separate	Separate	Combined	Total
	Sanitary	Storm	Sewer	
36-48"	7,369	5997	21,321	34,687
54-66"		7375	14,498	21,873
72-78"	8,502	8,922	7,218	24,642
84-96"		3,666	2432	6,098
102-120"	1,934	3,339		5,273
Subtotals	17,805	29,299	45,469	92,573

A breakdown of costs/linear feet of cleaning and televising is provided for the past four years of Sewer Televising and Cleaning programs:

<u>Year</u>	<u>Cost</u>	<u>Quantity (LF)</u>	<u>Cost/Quantity (\$/LF)</u>
2017	\$174,000	72,658 LF	\$2.39/LF
2016	\$148,700	65,153 LF	\$2.09/LF
2015	\$142,800	73,708 LF	\$1.94/LF
2014	\$102,150	52,800 LF	\$1.93/LF

In general, there has been an upward trend of costs for cleaning and televising over the past several years and which annually decreases the amount of cleaning and televising that can be performed.

Project Update

Additional funding is included to allow for increasing the annual program to clean sewers on a 7 year cycle instead of a 10 year cycle, for televising and cleaning large diameter sewers, and to collect GPS data for laterals. Budget projections for FY 2024 were added.

Project Alternative

This project is critical since a reduction in maintenance of the sewer system can ultimately lead to sewer back-ups and increased flooding. Portions of the work correlate to the Village’s mandated National Pollutant Discharge Elimination System (NPDES), the Combined Sewer Overflow (CSO) permits, and annual Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) long term maintenance program. The alternative would be a reduction to these contractual services which would place the Village in non-compliance unless additional personnel and equipment were added so the Public Works staff could perform the work in-house.

Operating Budget Impact

Is this purchase *routine* X or *non-routine*?

ROUTINE	
Department Budget	Public Works / Sewer Fund
Account Number Description	Sewer Maintenance
Account Number	40807090-425300



**VILLAGE OF WILMETTE
1200 Wilmette Ave
Wilmette, IL 60091**

Contract No. 19064-01

For:

**Sewer Televising and Cleaning Program
Contract Extension No. 01 for Contract No. 19064**

With:

**American Underground, Inc.
246 Marquardt Drive
Wheeling, IL 60090**

Note: This cover sheet is an integral part of the Agreement, as are all of the following documents, and are a part of the Agreement as executed between the Village of Wilmette and American Underground, Inc. Do not detach any portion of this document. Invalidation could result.

1. This Contract Extension is made by the Village of Wilmette (“Village”) and American Underground, Inc. (“Contractor”), Parties to Contract No. 19064 – 2019 Sewer Televising and Cleaning Program (“Agreement”).

2. For and in consideration of up to \$234,500.00 and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the Village and Contractor hereto agree to:

- a. Extend the above referenced Contract’s Unit Prices and Term through December 31, 2020;
- b. Complete the Work requested by the Village between March 9, 2020 and May 25, 2020; and,
- c. Provide the Village with Performance and Payment bonds for the contract extension amount.

This Contract Extension is not a guarantee that the Village will request services for the total Contract Extension amount.

3. This Contract Extension No. 01 is incorporated into the Agreement and shall not be effective unless this Contract Extension is also executed by the Parties.

4. Except as set forth in this Contract Extension, the Agreement is unaffected and shall continue in full force and effect in accordance with its terms. If there is conflict between this Contract Extension and the Agreement or any earlier amendment, the terms of this Contract Extension will prevail.

5. The Contract Extension shall be binding on the parties and effective only as of the date fully executed by both parties.

IN WITNESS WHEREOF, the Village of Wilmette, Illinois by Robert T. Bielinski, Village President, and the Contractor have hereunto set their hands to this Contract Extension on the ____ day of _____, 2020.

THE VILLAGE OF WILMETTE, ILLINOIS

Accepted this ____ day of _____, 2020

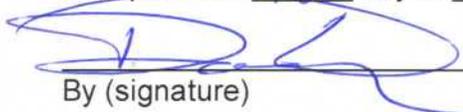
Robert T. Bielinski, Village President

Attest: _____
Michael N. Braiman, Village Clerk

FOR THE CORPORATION

An officer duly authorized by the corporation shall sign here:

Accepted this 18 day of February, 2020



By (signature)

DAVID KERBER

Print Name

Vice President

Position/Title

American Underground Inc.

Print Company Name