

# REQUEST FOR BOARD ACTION

AGENDA ITEM: 3.19



## Engineering & Public Works Department

**SUBJECT:** Sewer Lining Phase 5 Contract Award

**MEETING DATE:** June 28, 2022

**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:**

Budget	\$720,000
Contract Cost	\$706,626
Over/(Under) Budget	\$13,374

### **Recommended Motion**

Move to approve Resolution #2022-R-25 authorizing the Village Manager to execute a contract in the amount not-to-exceed \$706,626 with Insituform Technologies USA, LLC, Chesterfield, MO for the Sewer Lining Phase 5 project, Illinois Environmental Protection Agency (IEPA) Revolving Loan Fund Project Number L175654.

### **Background**

Sewer lining is a non-invasive, cost-effective technique to repair and rehabilitate underground sewers without excavating the roadway. Sewer lining restores the structural integrity of the pipe and reduces stormwater infiltration through sealing open pipe joints and cracks. Historically, the Village has sought low interest financing through the IEPA's Revolving Loan Fund to complete the sewer lining program. On, June 14, 2022, the Village Board approved Ordinance 2022-O-36 authorizing the Village to borrow funds from the IEPA for the sewer lining project.

This year, the Village is completing the final year of a multi-year facility plan. This sewer lining contract will rehabilitate approximately 12,067 feet of 8, 10, 12, 15, and 21-inch diameter sanitary and combined sewers on the following streets:

Street	Limits	Sewer Type
Greenwood Avenue	Illinois to Princeton	Sanitary
Middlebury Lane	North of Kenilworth	Sanitary
Romona Road	Lake to Blackhawk	Sanitary
Seneca Road	Iroquois north (1000 block)	Sanitary

Seneca Road	Lake to Blackhawk	Sanitary
Hunter Avenue	Elmwood to Thornwood	Sanitary
Alison Lane	Birchwood to Cul-de-sac	Sanitary
Romona Road	Wilmette to Central	Sanitary
Romona Road	Wilmette south (part of 400 block)	Sanitary
Temple Lane	Lavergne east (3200 block)	Sanitary
Sunset Drive	Wilmette to Old Glenview	Sanitary
Old Glenview Road	Rear easement (3300 block)	Sanitary
Avondale Lane	Hollywood to Cul-de-sac	Sanitary
Parkview Court	Old Glenview to Cul-de-sac	Sanitary
Pioneer Lane	Old Glenview to Cul-de-sac	Sanitary
Chestnut Avenue	Sheridan to 9TH	Combined
Greenwood Avenue	10 <sup>TH</sup> east (part of 900 block)	Combined
Greenwood Avenue	12 <sup>TH</sup> to Richmond	Combined
Greenwood Avenue	Sheridan west (part of 700 block)	Combined
Laurel Avenue	Sheridan west (part of 100 block)	Combined
Poplar Drive	Linden north to alley	Combined

The locations were selected for rehabilitation based on video inspections that revealed defects in these sewer segments.

### **Discussion**

The Sewer Lining Phase 5 Program was advertised for bid on DemandStar and on the Village website on April 15, 2022. Bids were opened on May 27, 2022. The Village intends to use a low interest loan funded through the IEPA's revolving low interest loan program for this project. Although the bid opening was held May 27, the IEPA must review the bid documentation and approve the loan prior to the Village's award of the contract. The IEPA is expected to approve the loan application in the coming weeks, work associated with this contract will commence upon loan approval.

Four qualified bidders submitted a bid proposal for the program. The results of the bid are as follows:

<b>Bidder</b>	<b>Cost</b>
Insituform Technologies	\$706,625.90
Visu-Sewer	\$721,936.25
Hoerr Construction	\$726,969.00
National Power Rodding	\$965,170.00

Insituform Technologies was the low bidder at \$706,625.90. The low bid was approximately \$113,000 below the estimated loan amount of \$820,000. Insituform Technologies has been the contractor for several past projects in Wilmette, including the Sewer Lining Programs in 2005, 2006, 2011, 2013, 2014, 2016 and 2019.

Insituform Technologies has installed over 1.5 million feet of cured-in-place pipe (CIPP) over the past 10 years. In addition to this relevant work experience, Insituform Technologies meets all minimum experience requirements included in the contract documents. For these reasons,

the Engineering and Public Works Department recommends awarding the Sewer Lining Phase 5 Program to Insituform Technologies USA, LLC.

The Sewer Lining Phase 5 Program is tentatively scheduled to begin in July and is anticipated to be complete by December 22, 2022.

**Budget Impact**

Sewer lining is allocated to the below account within the Sewer Fund. The 2022 Budget includes \$720,000 for this CIP project. The proposed contract is under budget.

Description	2022 Budget	Contract Cost	Account No.
Sewer Capital – Sewer Lining & Rehabilitation	\$720,000	\$706,625.90	40957090-470400-80703

**Documents Attached**

1. Resolution 2022-R-25 Authorizing the Village to Borrow Funds from the IEPA's Revolving Loan Program
2. Bid Tabulation
3. Sewer Lining Phase 5 Location Map
4. CIP Page – Sewer Lining and Rehabilitation

**RESOLUTION NO. 2022-R-25**

**A RESOLUTION APPROVING A CONTRACT FOR THE SEWER LINING PHASE 5  
PROGRAM BETWEEN THE VILLAGE OF WILMETTE AND INSITUFORM  
TECHNOLOGIES USA, LLC**

**WHEREAS**, the Village President and Board of Trustees of the Village of Wilmette, Cook County, Illinois (“Wilmette”), find that Wilmette is a home rule municipal corporation as provided in Article VII, Section 6 of the 1970 Constitution of the State of Illinois and, pursuant to said constitutional authority, may exercise any power and perform any function pertaining to its government and affairs for the protection of the public health, safety, morals and welfare; and

**WHEREAS**, the Village Board finds that it is necessary, convenient and in the best interests of the residents of the Village of Wilmette to enter into a Contract for the Sewer Lining Phase 5 Program by and between the Village of Wilmette and Insituform Technologies USA, LLC; a copy of which is attached hereto as Exhibit A;

**NOW, THEREFORE, BE IT RESOLVED** by the President and Board of Trustees of the Village of Wilmette as follows:

**SECTION 1:** The above recitals are incorporated into this section one as if fully set forth.

**SECTION 2:** The Contract for the Sewer Lining Phase 5 Program attached as Exhibit A is hereby approved.

**SECTION 3:** The Village Manager is authorized to execute the Contract. Prior to executing the Contract, the Village Manager is authorized to make changes to the form of the Contract at his discretion.

**SECTION 4:** The Village Manager is authorized to take any action necessary to carry out the purpose of this Resolution and this Resolution shall be in full force and effect from and after its passage.

**SECTION 5:** This Resolution shall be in full force and effect from and after its passage.

**ADOPTED** on **June 28, 2022**, pursuant to the following roll call vote:

**AYES:**        None.

**NAYS:**        None.

**ABSTAIN:**   None.

**ABSENT:**    None.

\_\_\_\_\_  
Village Clerk

Approved on **June 28, 2022**.

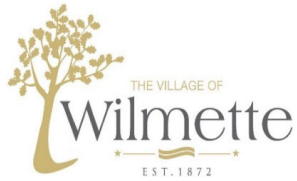
\_\_\_\_\_  
Village President

Attest:

\_\_\_\_\_  
Village Clerk

**EXHIBIT A**

**CONTRACT FOR THE SEWER LINING PHASE 5 PROGRAM**

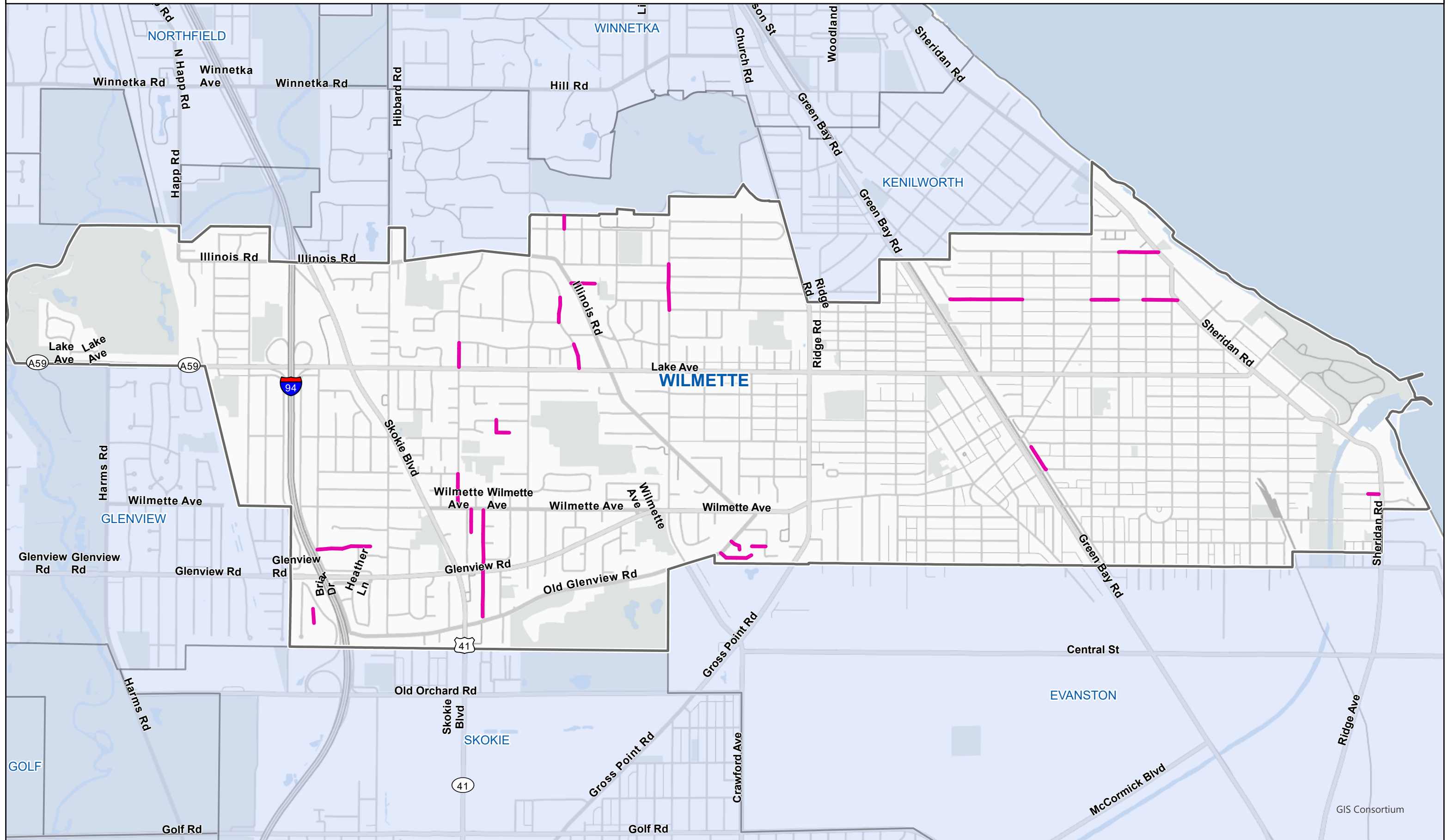


Description: **SEWER LINING PHASE 5 PROGRAM**  
 Bid #: **L175654-2022**  
 Bid Opening: **May 27, 2022 at 2 p.m. on DemandStar.com**

<b>INSITUFORM TECHNOLOGIES</b> 580 GODDARD AVENUE CHESTERFIELD, MO 63005	<b>VISU-SEWER OF ILLINOIS, LLC</b> W230 N4855 BETKER DRIVE PEWAUKEE, WI 53072	<b>HOERR CONSTRUCTION, INC</b> 1416 COUNTY ROAD 200 N GOODFIELD, IL 61742	<b>NATIONAL POWER RODDING</b> 2500 W. ARTHINGTON ST CHICAGO, IL 60612
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BID TABULATION				ENGINEER'S ESTIMATE									
NO.	ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL	UNIT PRICE	EXTENDED	UNIT PRICE	EXTENDED	UNIT PRICE	EXTENDED	UNIT PRICE	EXTENDED
1	Sewer CIPP, 8-inch	5,724	LF	\$45.00	\$ 257,580.00	\$ 32.50	\$ 186,030.00	\$ 36.25	\$ 207,495.00	\$ 40.00	\$ 228,960.00	\$ 42.00	\$ 240,408.00
2	Sewer CIPP, 10-inch	2,044	LF	\$48.00	\$ 98,112.00	\$ 32.80	\$ 67,043.20	\$ 36.50	\$ 74,606.00	\$ 41.00	\$ 83,804.00	\$ 62.00	\$ 126,728.00
3	Sewer CIPP, 12-inch	712	LF	\$65.00	\$ 46,280.00	\$ 39.80	\$ 28,337.60	\$ 46.00	\$ 32,752.00	\$ 52.00	\$ 37,024.00	\$ 69.00	\$ 49,128.00
4	Sewer CIPP, 15-inch	2,720	LF	\$94.25	\$ 256,360.00	\$ 57.50	\$ 156,400.00	\$ 72.25	\$ 196,520.00	\$ 59.00	\$ 160,480.00	\$ 88.00	\$ 239,360.00
5	Sewer CIPP, 21-inch	867	LF	\$101.00	\$ 87,567.00	\$ 108.30	\$ 93,896.10	\$ 108.50	\$ 94,069.50	\$ 100.00	\$ 86,700.00	\$ 175.00	\$ 151,725.00
6	Lateral Reinstatement, 8-inch	135	EA	\$110.00	\$ 14,850.00	\$ 125.00	\$ 16,875.00	\$ 75.00	\$ 10,125.00	\$ 100.00	\$ 13,500.00	\$ 250.00	\$ 33,750.00
7	Lateral Reinstatement, 10-inch	41	EA	\$114.00	\$ 4,674.00	\$ 116.00	\$ 4,756.00	\$ 75.00	\$ 3,075.00	\$ 100.00	\$ 4,100.00	\$ 250.00	\$ 10,250.00
8	Lateral Reinstatement, 12-inch	18	EA	\$125.00	\$ 2,250.00	\$ 112.00	\$ 2,016.00	\$ 75.00	\$ 1,350.00	\$ 100.00	\$ 1,800.00	\$ 250.00	\$ 4,500.00
9	Lateral Reinstatement, 15-inch	60	EA	\$125.00	\$ 7,500.00	\$ 115.00	\$ 6,900.00	\$ 75.00	\$ 4,500.00	\$ 100.00	\$ 6,000.00	\$ 250.00	\$ 15,000.00
10	Lateral Reinstatement, 21-inch	5	EA	\$150.00	\$ 750.00	\$ 240.00	\$ 1,200.00	\$ 75.00	\$ 375.00	\$ 120.00	\$ 600.00	\$ 250.00	\$ 1,250.00
11	Dye Testing of Services	30	EA	\$500.00	\$ 15,000.00	\$ 850.00	\$ 25,500.00	\$ 225.00	\$ 6,750.00	\$ 600.00	\$ 18,000.00	\$ 350.00	\$ 10,500.00
12	Protruding Tap Removal	40	EA	\$390.00	\$ 15,600.00	\$ 590.00	\$ 23,600.00	\$ 50.00	\$ 2,000.00	\$ 300.00	\$ 12,000.00	\$ 150.00	\$ 6,000.00
13	Traffic Control and Protection	1	LS	\$35,000.00	\$ 35,000.00	\$ 15,900.00	\$ 15,900.00	\$ 20,000.00	\$ 20,000.00	\$ 2,000.00	\$ 2,000.00	\$ 30,000.00	\$ 30,000.00
14	Pre-Cleaning and Televising, 8-inch	5,724	LF	\$2.00	\$ 11,448.00	\$ 4.90	\$ 28,047.60	\$ 5.00	\$ 28,620.00	\$ 3.00	\$ 17,172.00	\$ 2.50	\$ 14,310.00
15	Pre-Cleaning and Televising, 10-inch	2,044	LF	\$2.00	\$ 4,088.00	\$ 5.20	\$ 10,628.80	\$ 5.00	\$ 10,220.00	\$ 3.00	\$ 6,132.00	\$ 2.50	\$ 5,110.00
16	Pre-Cleaning and Televising, 12-inch	712	LF	\$2.00	\$ 1,424.00	\$ 5.50	\$ 3,916.00	\$ 5.00	\$ 3,560.00	\$ 3.00	\$ 2,136.00	\$ 3.00	\$ 2,136.00
17	Pre-Cleaning and Televising, 15-inch	2,720	LF	\$2.75	\$ 7,480.00	\$ 6.20	\$ 16,864.00	\$ 5.00	\$ 13,600.00	\$ 3.50	\$ 9,520.00	\$ 3.00	\$ 8,160.00
18	Pre-Cleaning and Televising, 21-inch	867	LF	\$3.00	\$ 2,601.00	\$ 10.60	\$ 9,190.20	\$ 5.00	\$ 4,335.00	\$ 4.00	\$ 3,468.00	\$ 5.00	\$ 4,335.00
19	Heavy Cleaning, 8-inch	3,434	LF	\$4.50	\$ 15,453.00	\$ 1.10	\$ 3,777.40	\$ 0.25	\$ 858.50	\$ 4.00	\$ 13,736.00	\$ 1.00	\$ 3,434.00
20	Heavy Cleaning, 10-inch	1,431	LF	\$5.00	\$ 7,155.00	\$ 1.10	\$ 1,574.10	\$ 0.25	\$ 357.75	\$ 4.00	\$ 5,724.00	\$ 1.00	\$ 1,431.00
21	Heavy Cleaning, 12-inch	498	LF	\$5.00	\$ 2,490.00	\$ 1.10	\$ 547.80	\$ 2.00	\$ 996.00	\$ 4.00	\$ 1,992.00	\$ 1.00	\$ 498.00
22	Heavy Cleaning, 15-inch	1,904	LF	\$6.40	\$ 12,185.60	\$ 1.10	\$ 2,094.40	\$ 2.50	\$ 4,760.00	\$ 5.00	\$ 9,520.00	\$ 3.00	\$ 5,712.00
23	Heavy Cleaning, 21-inch	289	LF	\$10.15	\$ 2,934.41	\$ 5.30	\$ 1,531.70	\$ 3.50	\$ 1,011.50	\$ 9.00	\$ 2,601.00	\$ 5.00	\$ 1,445.00
TOTAL BASE BID:				\$908,782.01		\$ 706,625.90		\$ 721,936.25		\$ 726,969.00		\$ 965,170.00	

# Sewer Lining Phase 5







## Sewer Lining and Rehabilitation

### Budget Projection

Funding Source	2022	2023	2024	2025	2026	Total	2027-2031
IEPA Loan	720,000	1,640,000	-	1,640,000	-	<b>\$4,000,000</b>	4,920,000

### Project Status

Critical	Recommended	Contingent
<b>X</b>		

### Funding History

Year	Amount
2021*	\$100,000
2020	\$-
2019	\$1,972,650
2018	\$782,248
2017	\$0
2016	\$701,187

\*\$720,000 was shifted to 2022 based upon project approval delays

### Project Description and Justification

Sewer lining is a non-invasive technique to rehabilitate sewers by eliminating infiltration, structural defects, and root intrusion. The list of sewers identified as needing sewer lining grows each year. This annual expenditure is proposed to be a long-term program to address the deterioration of the Village's sewer system.

The goal of the lining program is both to increase the structural integrity of the lines to avoid collapse and to reduce the amount of infiltration and inflow (I/I) into the sewer systems. Both lining along with grouting the sewer service connections at the main have been shown to have a more significant effect on the reduction of I/I than with sewer lining alone. The net effect will also be an increase in sanitary sewer conveyance capacity and a reduction in the number of potential basement back-ups and sanitary sewer overflows because excess clean water is removed from the sanitary sewer system. Without addressing the lateral sewer connections at the main, I/I removed by the lining can migrate through the interstitial space between the liner and host pipe and reenter the sewer main through the connections.

By the end of 2022, approximately 58% of the separate sanitary sewer system will be lined. Approximately 20 miles of unlined sanitary sewers will remain. In the combined sewer system, approximately 22% of the sewers will be lined by the end of 2022, with approximately 43 miles remaining. More sewers have been lined on the west side of the Village because the focus has been on areas that experienced basement backups and sewer surcharging. I/I removal is less beneficial in the combined system because it is designed to carry stormwater in addition to sanitary flows. In more recent years, the west side has also been the focus to comply with the MWRD Infiltration / Inflow Control Program (I/ICP) requirements. The goal of the program is to remove clean sources of water from the sanitary system.

Due to the IEPA loan processing requirements, the Village's sewer lining program will be implemented every two years. A new 5-year facility plan will begin in 2023 and recommend \$1,640,000 of sewer lining and



grouting biennially. Maintaining the current funding level, while incorporating grouting lateral connections, will result in 12,000-24,000 feet of sewer lining each program. This rate accounts for grouting 100% of the lateral connections in a sewer lining program. Each lateral is first pressure-tested to determine if grouting is necessary. It is anticipated that the majority of the connections will require grout since most of the Village's sanitary and combined sewer systems are vitrified clay pipe (VCP).

## **Project Update**

Due to delays in the financing approval process, the 2021 program will begin toward the end of 2021. The 2022 funding amount reflects the balance of the 2021 project to be constructed in 2022. The total amount has been updated to reflect the \$720,000 expenditure.

It is estimated that both the separate and combined sewer systems will be completely lined in 35-40 years at the current funding level of \$820,000 per year continuing with the practice of grouting lateral connections.

## **Project Alternative**

The alternative to sewer lining is sewer replacement by open excavation which can be significantly more costly and disruptive. The Village's sewer systems are 60 to 100+ years in age and have numerous cracks, tree roots, and mineral deposits. These pipe deficiencies result in groundwater infiltration, sewer collapses, and blockages. Not funding this program will result in infiltration contributing to sewer backups and continued deterioration of the sewer pipes.

## **Budget Impact**

*This is a Recurring Expense*

There are no additional costs associated with this project.

Account Description	Sewer Capital – Sewer Lining and Rehabilitation
Account Number	40957090-470400-80703