



**Engineering & Public Works
Department**

SUBJECT: Concrete Maintenance Program

MEETING DATE: April 12, 2022

FROM: [Brigitte Berger-Raish](#), P.E., Director of Engineering & Public Works
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BUDGET IMPACT:	Total Contracts:	\$191,873
	Budget:	\$142,500
	Over/(Under) Budget	\$49,373

Recommended Motion

Move to approve Resolution 2022-R-38 authorizing the Village Manager to execute a contract in the amount not-to-exceed \$19,373 with Safety Services and Assessments, LLC, Western Springs, IL, for Sidewalk Grinding.

Move to approve Resolution 2022-R-39 authorizing the Village Manager to execute a contract amendment in the amount not-to-exceed \$172,500 with Schroeder & Schroeder, Inc., Skokie, IL, for Sidewalk and Curb Replacement and Utility Patching.

Background

The purpose of the concrete maintenance program is to extend the service life or repair local sidewalk squares and curbs and to ensure that accessible routes are compliant with the American with Disabilities Act (ADA). Staff evaluates approximately one-quarter of the Village’s sidewalk and curbs on a rotating annual basis. The Village will evaluate Zones 1 and 2 below in 2022 This program is divided into four separate projects: Sidewalk Grinding, Sidewalk Mudjacking, Sidewalk and Curb Replacement, and Restoration of Utility Repairs.

Sidewalk Grinding

Grinding is a cost-effective method of maintaining the safety and operation of public sidewalk squares. The purpose of this service is to remove potential tripping hazards while preserving the existing sidewalk. The process involves removing displaced concrete edges, with vertical separations between 0.5 to 1.5 inches, via horizontal saw-cutting or grinding.

In fall of 2021, \$11,500 was allocated from the Sidewalk Replacement account to initiate a sidewalk grinding pilot project. The pilot program tested the feasibility and effectiveness of

removing vertical displacements in the path of travel without replacing the entire sidewalk square(s). As part of the pilot program, 866 linear feet of sidewalk was ground, which is the equivalent of 177 sidewalk squares.

The pilot project was successful, so it is recommended that the grinding services be expanded in 2022. In 2021, the use of the sidewalk grinding method provided a savings of approximately 60%, or about \$17,000, in the pilot compared to replacement.

Sidewalk Grinding vs Replacement Example in 2021		
Item	Unit Price	Total Cost
Grind one (1) edge (5 feet)	\$12.50/foot	\$62.50
Replace one (1) square (25 sq ft)	\$6.25/sq ft	\$156.25

Sidewalk Mudjacking

Information on mudjacking is included in this memorandum for reference only. A contract not-to-exceed \$10,000 for mudjacking will be presented to the Village Manager for approval later this summer for fall construction. Funding for sidewalk mudjacking was incorporated into the annual budget request for the General Fund – Sidewalk Replacement account.

Mudjacking is another cost-effective method for maintaining the safety and operation of public sidewalk squares. The purpose of this service is to remove edge displacements (various heights) and depressions in the sidewalk by leveling out the squares. The process involves pumping mud under a sunken concrete square(s) that are otherwise in good condition.

Sidewalk Mudjacking History					
Item	2017	2018	2019	2020	2021
Total Square Feet (sq ft)	2,100	2,400	2,800	3,000	2,983
No. of Equivalent Squares (25 sq ft)	84	96	112	120	119

Sidewalk and Curb Replacement

The sidewalk replacement project removes and replaces sidewalk squares that are not candidates for grinding or mudjacking. Sidewalk squares with potential tripping hazards greater than 1.5-inches or that have heaved or deteriorated are candidates for full replacement.

This project also replaces sections of broken or damaged curb and gutter. The below charts display sidewalk and curb locations repaired since 2017.

Sidewalk Replacement History					
Item	2017	2018	2019	2020	2021
Total Square Feet (sq ft)	9,407	12,745	13,367	9,956	11,520
No. of Equivalent Squares (25 sq ft)	376	510	535	398	461

Curb Replacement History					
Item	2017	2018	2019	2020	2021
Total Linear Feet (feet)	777	1,494	1,745	582	602

Restoration of Utility Repairs

In addition to sidewalk and curb replacements, this contract also includes concrete sidewalk, curb, driveway aprons, and pavement repairs due to utility work completed by in-house water and sewer crews. When utility repairs are completed, the area disturbed by the work is temporarily patched until permanent restoration can be made with this contract. The below chart shows the history of concrete restoration associated with utility repairs.

Concrete Restoration of Utility Repairs History				
Item	2018	2019	2020	2021
Sewer Fund	\$7,401	\$14,711	\$17,476	\$16,115
Water Fund	\$37,537	\$27,609	\$23,511	\$27,435
Total	\$44,938	\$42,320	\$40,987	\$43,550

Discussion

Sidewalk Grinding

The Village issued a bid document for Sidewalk Grinding on the DemandStar.com website on March 15, 2022. Bids were opened on March 30, 2022. The service has three (3) qualified bidders. The bid results are summarized below:

Company	Unit Price	Total Cost
Hard Rock Concrete Cutters, Inc.	\$12.15	\$21,263*
Safety Services and Assessments, LLC	\$11.07	\$19,373
Universal Concrete Grinding, LLC	\$14.25	\$24,938
<i>Engineer's Estimate</i>	<i>\$16.50</i>	<i>\$28,875</i>

*Corrected value

Safety Services and Assessments successfully performed the initial sidewalk grinding pilot in 2021 and is recommended for the 2022 program. The \$11.07 unit price is less than the \$12.50 unit price paid during the 2021 pilot project.

The total contract value of \$19,373 will grind approximately 1,750 linear feet of sidewalk, which is the equivalent of 350 sidewalk squares.

The recommended award amount to Safety Services and Assessments, Inc. is less than \$25,000, so this contract could be approved by the Village Manager. This is an unbudgeted expense, however, so the Department is requesting that the program be paid for with General Fund reserves. Future capital improvement programs (CIP's) and budgets will include a separate funding request for sidewalk grinding.

Grinding work is expected to occur from April to August 2022.

Sidewalk/Curb Replacement with Restoration of Utility Repairs

In 2019, the Village of Mount Prospect led a Municipal Partnering Initiative (MPI) bid with four other municipalities for concrete repair services; the other communities were Arlington Heights, Glenview, Northfield, and Wilmette. The MPI allows area communities to collectively bid similar work to take advantage of economies of scale. The bid established a pricing scale for three years. For 2022, the unit prices from the vendor, Schroeder & Schroeder, were adjusted by 5.1% in accordance with the original contract. The following table shows historical pricing for items included in this contract.

Sidewalk, Curb and Utility Patching Pricing					
Item	2018	2019	2020	2021	2022
Sidewalk Removal & Replacement (Per Square Foot)	\$5.18	\$6.00	\$6.13	\$6.25	\$6.57
Curb Removal & Replacement (Per Linear Foot)	\$20.12	\$22.50	\$23.00	\$23.46	\$24.66
Concrete Pavement Patch (Per Square Yard)	\$55.33	\$60.00	\$61.32	\$62.55	\$65.75

Schroeder & Schroeder has performed well for the Village over the years, including conducting sidewalk and curb replacement services since 2015. For these reasons, staff recommends awarding the 2022 contract to Schroeder & Schroeder.

To address the backlog of deteriorated sidewalk, staff recommends increasing the award for sidewalk repairs by \$30,000. This amount may address all of the identified defects in Zones 1 and 2; if there is a balance of funds, staff will execute sidewalk repairs in Zone 3.

In total, staff projects the following quantities of work to be completed in 2022:

- 17,700 (708 squares) square feet of sidewalk removal and replacement
- 1,135 linear feet of curb removal and replacement
- Utility restoration includes curb, sidewalk, apron, and pavement items that vary annually

The work will be completed in two phases, with the first mobilization in May and the second in September 2022.

Budget Impact

The concrete maintenance programs are allocated to the below accounts in the General, Sewer, and Water Funds. The overall maintenance program is projected to be \$49,373 over budget due to the addition of the Sidewalk Grinding project and additional \$30,000 in sidewalk replacement. General Fund reserves will be utilized to cover this expense. The balances in the Sewer and Water accounts will be used to restore asphalt and brick pavement sections as part of separate Village contracts.

Description	2022 Budget	Available Budget	This Contract	Account Number
General Fund - Sidewalk Replacement	\$77,000	\$67,000*	\$116,373	11202035-425000
General Fund - Curb Repairs	\$28,000	\$28,000	\$28,000	11202035-425100

Sewer Fund – Contractual Street Repairs	\$60,000	\$20,000	\$20,000	40807090–421000
Water Fund – Contractual Street Repairs	\$78,000	\$27,500	\$27,500	41838090-421000
Total	\$243,000	\$142,500	\$191,873	

*\$10,000 of the sidewalk replacement budget will be used for mudjacking services.

Documents Attached

1. CIP Sheet for Curb Replacement
2. CIP Sheet for Sidewalk Repair
3. Resolution #2022-R-38–Contract with Safety Services and Assessments for Sidewalk Grinding (Contract attached as Exhibit A)
4. Resolution #2022-R-39–Contract Amendment with Schroeder & Schroeder for Sidewalk and Curb Replacement and Utility Patching (Contract Amendment attached as Exhibit A)