



**Engineering & Public Works Department**

**SUBJECT:** Crack Sealing Program

**MEETING DATE:** January 22, 2019

**FROM:** [Brigitte Berger-Raish](#), P.E., Director of Engineering and Public Works  
[Dan Manis](#), P.E., Village Engineer  
[Daniel Smith](#), Engineering Assistant

<b>BUDGET IMPACT:</b>	Contract Cost	\$42,400
	Available Budget	\$42,400
	<hr/>	
	Over/(Under) Budget	\$0

**Recommended Motions**

Move to approve a contract in the amount not-to-exceed \$42,400 with Patriot Pavement Maintenance, Inc., Des Plaines, IL, for the 2019 Crack Sealing Program.

**Background**

This program consists of preventative maintenance by sealing cracks on asphalt streets throughout the Village. Crack sealing prevents moisture from entering the pavement which will extend the life of the street. Streets are selected to be included in the program that have been resurfaced within 4 to 5 years when cracks first develop and sealing provides the most benefit.

**Discussion**

In 2016, the Village was one of nine municipalities participating in the Municipal Partnering Initiative (MPI) for a crack sealing bid that was led by the Village of Arlington Heights. The MPI allows area communities to collectively bid similar work to take advantage of economies of scale. The other communities participating in the 2016 bid were Evanston, Glenview, Mt. Prospect, Niles, Northfield, Rolling Meadows and Skokie. The bid for crack sealing established pricing for three years. Patriot Pavement Maintenance, Inc. was the low bidder.

For 2019, Patriot Pavement Maintenance, Inc. agreed to extend 2018 pricing for members of the Municipal Partnering Initiative.

A summary of historical pricing for Wilmette is as follows:

Year	Crack Sealant (\$/LB)	Contract Cost (\$)
<b>2019</b>	<b>\$1.19</b>	<b>\$42,400</b>
2018	\$1.19	\$41,200
2017	\$1.17	\$40,000
2016	\$1.17	\$40,000
2015	\$1.22	\$10,000
2014	\$1.22	\$10,000
2013	\$1.19	\$10,000
2012	\$1.00	\$10,000

Patriot Pavement Maintenance, Inc. completed the 2016, 2017 and 2018 Crack Sealing Programs for the Village with satisfactory results. For this reason and the competitive unit pricing, the Engineering and Public Works Department recommends awarding a one-year contract extension for the 2019 Crack Sealing Program to Patriot Pavement Maintenance.

The 2019 Crack Sealing Program will be completed in the fall.

**Budget Impact**

The 2019 Crack Sealing Program will be paid for as follows:

Description	Account	Budget	Recommended Award Amount
2019 Crack Sealing	11202035-425240	\$42,400	\$42,400

**Documents Attached**

1. Extension letter from Patriot Pavement Maintenance dated January 8, 2019
2. Bid Tabulation
3. CIP Detail Sheets



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## PATRIOT PAVEMENT MAINTENANCE

825 Seegers Rd. Suite F  
Des Plaines, IL 60016  
847-813-9034  
[www.patriotpavement.net](http://www.patriotpavement.net)  
[matt@patriotpavement.net](mailto:matt@patriotpavement.net)

January 8, 2019

Village of Arlington Heights  
33 S. Arlington Heights Rd.  
Arlington Heights, IL 60005

Chester,

Thank you for your help facilitating the 2016-2018 Crack Sealing Program.

I wanted to let the Municipalities that participated in the program last season know that Patriot Pavement Maintenance would be willing to extend the unit cost of \$1.19 per pound for the Crack Sealing and \$110.00 per hour for the sweeping for the upcoming 2019-2020 season.

I have been in contact with our supplier and negotiated a price freeze on the material for the upcoming season.

If new municipalities want to take advantage of the crack sealing program, we would extend the prices to those members as well.

Through market research we have discovered that the Cook County crack sealing program is \$0.13 per pound lower than the DuPage Public Agency project which is the equivalent to the Cook County project in size.

Please let me know if you are interested and which municipalities would like to sign on for the 2019-2020 season as we will have to allocate quantities to our supplier.

We would like to thank all of the municipalities that participated in the program and look forward to working with you again this season.

Regards,



Matt Sollars, President  
Patriot Pavement Maintenance



**VILLAGE OF ARLINGTON HEIGHTS, EVANSTON, GLENVIEW, MT. PROSPECT, NILES, NORTHFIELD, ROLLING  
MEADOWS, SKOKIE AND WILMETTE  
Bid Tabulation Sheet  
2016 CRACK SEALING PROGRAM**

The following bids were publicly opened on March 16, 2016, at 11:00 A.M., in the Village of Arlington Heights Municipal Building, 33 S Arlington Heights Road, Arlington Heights, Illinois 60005.

<b>BIDDER</b>	<b>Bid Bond</b>	<b>Adden. #1</b>	<b>Crack Sealant 1 year</b>	<b>Crack Sealant 2 year</b>	<b>Crack Sealant 3 year</b>	<b>Liquid Asphalt 1 year</b>	<b>Liquid Asphalt 2 year</b>	<b>Liquid Asphalt 3 year</b>
Behm Pavement Crystal Lake, IL	Yes	Yes	\$1.269	\$1.269	\$1.269	\$1.30	\$1.30	\$1.30
Denler Inc. Mokena, IL	Yes	Yes	\$1.245	\$1.29	\$1.325	\$1.30	\$1.365	\$1.395
Patriot Pavement Des Plaines, IL	Yes	Yes	\$1.17	\$1.17	\$1.19	\$1.19	\$1.19	\$1.19
SKC Construction West Dundee, IL	Yes	Yes	\$1.31	\$1.35	\$1.39	\$1.37	\$1.42	\$1.46

Notice: This is a preliminary summary of the bids as they were opened and announced at the bid opening. Bid prices have not been verified and are subject to change in the event mathematical errors are discovered during bid review. Other information contained in this summary is also subject to review.

<b>Preventative Maintenance Program</b>	2019 \$149,100	Operating
Streets, Sidewalks, and Alleys	2020 \$153,200	
	2021 \$157,500	
	2022 \$161,800	
	2023 \$166,100	

- X Critical
  - Recommended
  - Contingent on Funding
- 

### Project Description & Justification

This program is designed to extend the life of Village streets by applying one of three methods of preventative pavement maintenance to repair pavement deficiencies that occur over time. The Department will evaluate the streets for deficiencies each year and shall apply this program based on pavement needs.

The three preventative pavement maintenance services include:

#### Pavement Patching (non-utility)

This service patches localized areas of deterioration in the pavement. The Village currently has a street patching program that focuses only on street patching needed due to water main and sewer repairs performed by the Village, but has no program to address non-utility related patch locations. Many calls are received from residents requesting a more permanent solution than the pothole filling that is performed in-house by Engineering & Public Works. While filling potholes can be an effective procedure for minimally maintaining the pavement, it is only a temporary fix, and residents often call back on an annual basis to address the same pavement area. Sometimes a base repair is also needed for a localized pavement area that requires a patch.

A street and alley patching program will allow the Village to address these localized areas where the roadway or alley does not yet qualify and is over 8 years out from resurfacing or reconstruction. The 2019 funding amount is anticipated to complete up to 2,900 SY of 2-inch pavement patching and increase the overall life cycle of the pavement. Engineering staff has begun to collect an inventory of patch locations from pothole locations performed by Public Works, incident management complaints about pavement conditions, and will expand this further during our road and alley evaluations this year.

The financial model adopted by Village Board in late 2016 provides \$2 million for the Village's Road Program until 2027 at which time the recommended funding level will increase to \$4 million which intends to keep the average street condition in the "good" or better category. However, with funding levels in the past few years being under the recommended target level, the average pavement condition has been declining. A regular patching program would allow

some of these deteriorated areas to be addressed extending the useable life of the roadway before a full reconstruction is necessary.

Due to a growing need for patching and maintenance work related to development projects which impacts the street and alley condition but is not currently addressed through current funding levels, a future consideration can be for an Alley and Street Impact Fee.

### **Project Update**

The funding amount of \$100,000 has been added for 2023 which includes an annual inflation factor of 3%.

### **Project Alternative**

The alternative to pavement patching is doing nothing and waiting for the pavement surface to deteriorate to the point where resurfacing or reconstruction is needed. However, once the roadway base is impacted from lack of maintenance, the road has to be reconstructed typically between three to four times the costs of resurfacing. Patching can slow down the decline of the overall pavement condition and improves ride quality.

## **Crack Sealing**

### **Original Purchase Date & Cost**

N/A

### **Funding History**

2019	\$42,400	Operating
2018	\$41,200	Operating
2017	\$40,000	Operating
2016	\$40,000	Operating
2015	\$10,000	Dedicated Revenues
2014	\$10,000	Dedicated Revenues
2013	\$10,000	Dedicated Revenues
2012	\$10,000	Dedicated Revenues

### **Project Description & Justification**

This program is designed to perform preventive maintenance on resurfaced asphalt streets within the Village by sealing cracks that have developed or expanded. The goal of this maintenance program is to extend the life cycle of these pavements. Crack sealing “seals” the pavement surface and prevents moisture from reaching the base, causing further degradation.

The Village currently funds resurfacing of approximately 1 to 2 miles per year of the existing 66 miles of asphalt streets. Crack sealing has been shown to be one of the best and most cost effective preventative maintenance techniques to prolong the lifespan of asphalt pavements.

The 2018 funding level will allow for the sealing of approximately 0.5 to 1 miles annually depending on the amount of cracks being filled. A fully developed crack sealing program is first initiated on roads after 3 or 4 years of age and is repeated every 4 to 5 years until the roadway is usually within 5 to 7 years of the next planned resurfacing, excepting pavements that are showing signs of alligator cracking.

The Village is one of several municipalities participating in the municipal consortium. The benefit of joint bidding with other agencies is to increase the size of the contract with the goal of reducing overall contract cost. The crack sealing program has been part of the municipal consortium since 2010.

### **Project Update**

The funding request of \$47,200 has been added for 2023 which includes an annual inflation factor of 3%.

### **Project Alternative**

The alternative is not to crack seal Village streets, which will result in accelerated pavement deterioration.

## **Pavement Surface Rejuvenation**

### **Funding History**

\$6,000 Test program in 2017

### **Project Description**

Reclamite is a pavement surface rejuvenator that penetrates asphalt pavements and restores pavement surface flexibility that has been lost from the asphalt due to oxidation. Applying Reclamite to new pavement helps decrease deterioration of the asphalt surface dramatically, reducing and/or delaying the need for more expensive surface treatments such as patching or crack sealing. Reclamite can also be applied to pavements showing light hairline cracking, light raveling, segregation, light pitting, and dryness. The application period is typically 2-3 years after new pavement surface installation.

A pilot program was initiated in 2017 and continued in 2018.

An annual inflation factor of 3% is included. The 2019 funding level represents an incremental approach to an overall pavement management strategy. The planned locations for this program going forward is to apply the rejuvenator to the road program asphalt streets two years in arrears.

### **Project Alternative**

The alternative to funding this project is to continue maintaining pavements with higher usage of crack sealing and non-utility based patching until they are resurfaced.

**Overall Program Budget**

	Program Budget			
Year	Pavement Surface Rejuvenation	Pavement Patching	Crack Sealing	Budget Total
2019	\$16,900	\$89,800	\$42,400	\$149,100
2020	\$17,400	\$92,200	\$43,600	\$153,200
2021	\$17,900	\$94,800	\$44,800	\$157,500
2022	\$18,400	\$97,400	\$46,000	\$161,800
2023	\$18,900	\$100,000	\$47,200	\$166,100

**Operating Budget Impact**

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

NON-ROUTINE	
Maintenance Costs:	No additional costs – pavements will continue to be maintained
Personnel Costs:	No additional cost – the Village currently maintains pavements as deficiencies arise
Training Costs:	None