

Village of Gates Mills
MINUTES OF A SPECIAL MEETING OF COUNCIL
June 28, 2022

A special meeting of the Council of the Village of Gates Mills, Ohio was held at the Community House on Tuesday, June 28, 2022 at 5:30 p.m. with Mayor Schneider presiding. The meeting was livestreamed to the internet.

Councilmembers present: Atton, AuWerter, Press, Steinbrink, Turner.

Other Village officials present were Service Director Biggert, Engineer Courtney, Treasurer Siemborski (via Zoom), and Finance Administrator Mulh.

Councilmember Press moved to excuse Councilmembers Deacon and Welsh, with Councilmember Steinbrink seconding the motion.

Roll call: Ayes: Atton, AuWerter, Press, Steinbrink, Turner.
 Nays: None.
 Motion carried.

Mayor Schneider turned the meeting over to Engineer Courtney to conduct a Pavement Maintenance Educational presentation with Council. A copy of the presentation is attached.

Mr. Courtney noted that there is a philosophical shift in how to maintain roads taking place. This involves setting a budget number that appropriately meets the needs instead of making the needs meet the budget number.

The following slide notes are in addition to the copy of the presentation:

Slide 4: The more effort that is expended in maintaining a road, the longer the pavement management life curve will be.

Slide 5: A consistent analysis of the roadways was used with a goal of raising the average PCI, Pavement Condition Index, in the Village.

Slide 6: There are various pavement management processes, such as reclamite, crack sealing, surface treatments, mill and fill, resurfacing, rehabilitating and reconstructing.

Slide 7: We have completed the assessment and now we need to determine the budget and increase education efforts.

Slide 8: We can make better spending decisions based on the strategy of raising the average PCI in the Village.

Slide 9: Results from Pavement Management Group's are shown through maps, graphs and spreadsheets. Roads vary from excellent to failed.

Slide 10: Village's overall PCI is 62, which is fair and includes state and county roads. It is a weighted average based upon lane miles and conditions. Poor or failed roads have PCI ratings under 50 and need rehabilitated or reconstructed. The assessments are on the full width of the pavement, not just the right or left side.

Slide 11: Lane Miles by Condition Category – there are 22 lane miles of poor or failed pavement. Excellent, good and fair roads need maintenance early on to make them last longer.

Slide 12: Low Volume Residential roads are at a PCI of 54 and do not act as cut-through streets. Council ultimately determines what level PCI they want to be at and how much the Village wants to invest. We have a bunch of roads that are pretty bad, even though our average is 62 right now. It is more expensive to replace a road when it is older than to maintain it early on.

Slide 13: Fox Hill photo indicates a reclaimer process will help rejuvenate the asphalt (a liquid is sprayed on the surface of the road).

Slide 14: Chagrin River Road, north of Old Mill, is showing some cracking.

Slide 15: Cairn Lane has edge and base cracking. It needs a full depth repair along the edge to stabilize the base and a mill and fill on the top 2 inches of the surface.

Slide 16: Cardinal, Dorchester, Hillcreek and West Hill photographs are shown. Cardinal has more cracking and is losing its road edge. It also has pavement cracking. Dorchester has surface cracking, but not a lot of road base loss. Hillcreek has joint cracking. The average road life is between 20-30 years depending on the maintenance performed. Asphalt prices are through the roof at \$130-160 per ton right now, compared with \$60 per ton last year. It is possible to heat and peel the top 3 inches of pavement, mix it with a liquid, and put it down as a recycled surface. It has been used historically and is heat-based. Mr. Courtney provides for this option in the bidding packages.

Slide 17: Blackberry, Chartley, Chestnut Run and Norvale West are failed pavements. Blackberry is one of the worst roads we have. It has a PCI of 14 with cracking across the road and edge failures.

Slide 18: The pavement life curve can be extended by 15 years when a road is maintained. Reclaimer gives asphalt back the things lost in the heating process, which

makes the road pliable and soft, like it was when it was original. Curbs do eliminate edge cracking, but then you have to add drainage systems.

Slide 19: Costs of various maintenance and rehabilitation activities are detailed. Oil is a big driver for the cost of asphalt.

Slide 20: The County may pay 50% of the \$225,000 – 245,000 needed to put a new 3-inch surface on Chagrin River Road north of Old Mill.

Slide 22: The cumulative amount for an annual program is \$7,046,667. This equates to a five-year plan number of \$1,409,333 or a ten-year plan number of \$704,667 for the lowest PCI road reconstruction.

Slide 23: The annual road program budget cost ranges indicate \$935,000 to \$1,880,000 for five and ten-year options respectively.

Slide 24: How aggressively do we want to implement projects to raise the PCI? How do we wish to prioritize high-volume residential versus low-volume residential roadways? We can determine the typical funding split for preventative work on PCI 90+, maintenance for PCI of 50-89 and rehabilitation on those with PCIs of less than 50 on a typical annual program. Mr. Courtney noted he can build a model of how roads deteriorate over time. A second assessment can be done over the next few years, depending on what we accomplish.

Slide 25: The slide shows three alternatives for work to be completed in the 2022 road program. The first option is to begin the process of rehabilitating the low PCI roads of Blackberry and Chestnut Run at a cost of \$811,000. The second option addresses two of the worst high-volume streets and Village access to the service yard along with Dorchester, Chartley and Carpenter at \$836,000. The third alternative involves completing as much spot repairs as we can before initiating the PCI-based program at a cost of \$786,000.

Road program bids will not be in prior to the July Council meeting. Mr. Courtney and Councilmember AuWerter can work on the options and frame the work. This meeting was to educate and provide a framework of the process.

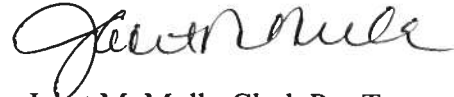
Mr. Courtney stated the challenge will be the high and low-volume rehabilitation. We can decide a figure and then decide how to break it down. It is not necessary to do a 50/50 split on high and low-volume roads.

There being no further business, it was moved by Councilmember AuWerter, seconded by Councilmember Steinbrink, and unanimously carried, that the Council meeting be adjourned.

Roll call: Ayes: Atton, AuWerter, Press, Steinbrink, Turner.

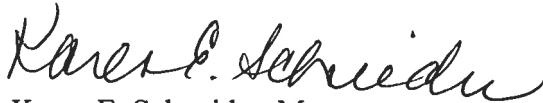
Nays: None.
Motion carried.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Janet M. Mulh".

Janet M. Mulh, Clerk Pro Tem

Approved:

A handwritten signature in cursive script, appearing to read "Karen E. Schneider".

Karen E. Schneider, Mayor



Pavement Maintenance Educational Work Session

GATES MILLS VILLAGE COUNCIL

JUNE 28, 2022

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Our Goal is To Avoid the Same Ending

Pavement Maintenance Educational Work Session

GATES MILLS VILLAGE COUNCIL

JUNE 28, 2022

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Why We Are Here Tonight

Overall Objectives of Tonight's Session (1)

- Raise the Pavement Maintenance Understanding of Council
- Shift Philosophical Approach from Budget Driving Work to Need Driving Budget
- Better Prepare Council to Respond to Villager Questions Related to Pavement Questions/Concerns
- Summarize results of PMG Village Wide Pavement Assessment
- Distinguish Programming/Budgeting Differences Between State, County, Local and Private Streets
- Review Outside Funding Opportunities for State and County Roads

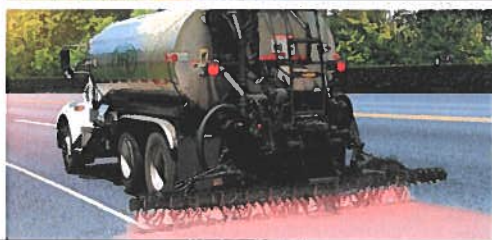


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Why We Are Here Tonight

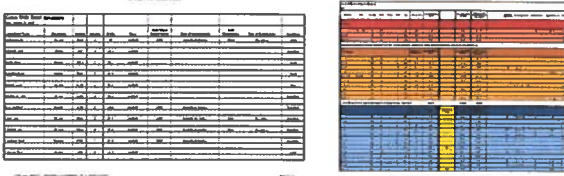
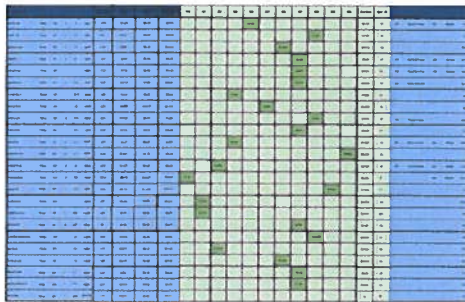
Overall Objectives of Tonight's Session (2)

- Explain the Pavement Life Curve and Scheduling of Maintenance / Rehab / Reconstruction
- Establish the Framework for Data Driven Gates Mills Annual Road Maintenance Program
- Discuss Overall Objective of Raising Overall PCI of Village Roads to 70 (long term goal)
- Review Estimated Need for Improving all Failed and Poor Pavements in the Village
- Present Sample 5 and 10-year Road Programs Based on Overall Objective of Raising Overall PCI
- Set the Table for Admin/Council Discussions Related to Road Maintenance Budgeting and Funding



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A 10,000 Foot Perspective

Use of PMG to Document our Roads

- Apples to Apples - Consistency
- Take the Mystery Out of the Process
- Great Reporting and Presentation Materials
- Use Technology/Data to Make Better Roadway Maintenance Decisions
- GOAL - Raise Overall Average PCI

2022

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At What Point in Time Do We...?

- Reclamite
- Crack Seal
- Surface Treatments (Chip/Fog, Thin Overlay)
- MIII/FIII
- Resurface
- Rehabilitate
- Reconstruct

2022

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What Does the Process Look Like



- PMG 2022 Roadway Assessment
- Determine Overall Average PCI
- Prioritize Road Work Based on PCI
- Develop Maintenance Rec for High PCI Roads
- Develop 2/5 Year Road Plan
- **Determine Annual Budget For Roads**
- Implement Roadway Work
- Update 2/5 Year Plan Annually
- PMG Assessment Update 2-3 Years
- Repeat
- Begin Development of Predictive Model

2022

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Summary

Use of PMG's pavement documentation and assessment process will allow us to develop a more complete condition assessment of our roads.

The system will allow us to develop a Village wide Average Pavement Condition Index (PCI), and

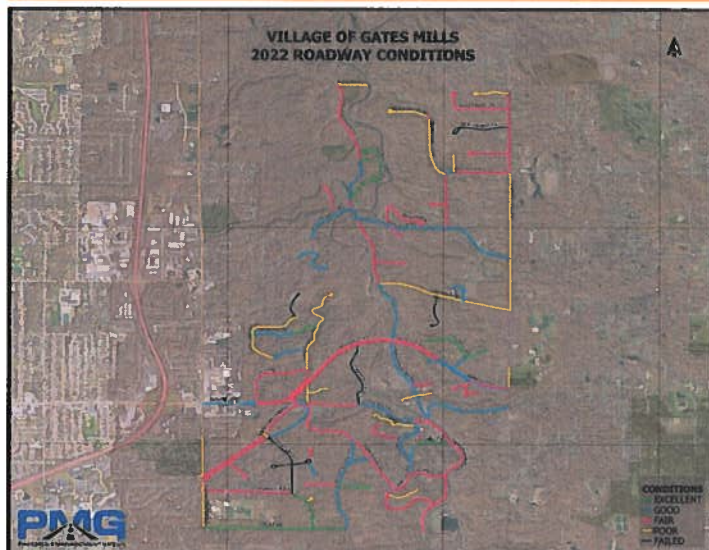
Our Pavement Management Program can then be updated with new Measurable Goals targeted at improved overall PCI

Will allow the Village to make spending decisions based on a roadway maintenance strategy that is focused on measurable long-term goals



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PMG Overall Results



2022 PAVEMENT MANAGEMENT FINAL PROJECT REPORT

NETWORK CONDITION RESULTS

After completion of the 2022 pavement management project, PMG has determined that the average PCI for Gates Mills' 92 lane miles (48 Centerline Mile) street network is a 62 and considered to be in Fair condition. Table 2 displays the condition summary data by category across the network while Figure 3, illustrates the condition by pavement area breakdown in graph form. A complete Inventory and Condition Report in Excel spreadsheet was provided as a part of this project deliverable.

CONDITION CATEGORY	SECTION	PAVEMENT AREA (SF)	LANE MILES	PERCENT	PERCENT OF TOTAL
EXCELLENT	14	413,843.00	7.84	8.48%	94
GOOD	40	1,271,083.44	24.07	25.04%	75
FAIR	75	3,037,377.31	58.39	61.72%	62
POOR	32	982,857.80	18.72	19.09%	43
FAILED	8	274,946.00	5.21	5.40%	23
TOTAL	170	4,980,106.4	92	100%	

Table 2. Condition Summary

CONDITION GRAPHS

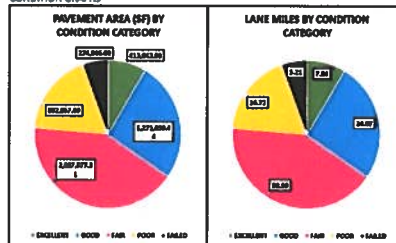
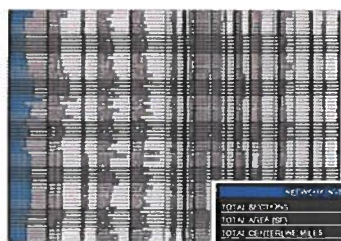


Figure 3. Pavement Area and Lane Miles by Condition Category

PMG

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PMG Overall Results (PCI 62)



NETWORK INVENTORY SUMMARY		
TOTAL SECTIONS		170
TOTAL AREA (SF)		4,980,106.4
TOTAL CENTERLINE MILES		92
TOTAL LANE MILES (20' W)		184
NETWORK CONDITION SUMMARY		
AVERAGE PCI		62
AVERAGE CONDITION		FAIR
CONDITION CATEGORY	LANE MILES	PERCENT
EXCELLENT	7.84	8.48%
GOOD	24.07	25.04%
FAIR	58.39	61.72%
POOR	18.72	19.09%
FAILED	5.21	5.40%

2022 PAVEMENT MANAGEMENT FINAL PROJECT REPORT

NETWORK CONDITION RESULTS

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Table 2. Condition Summary

CONDITION GRAPHS

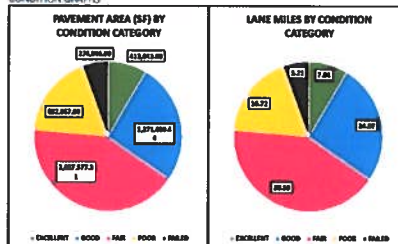
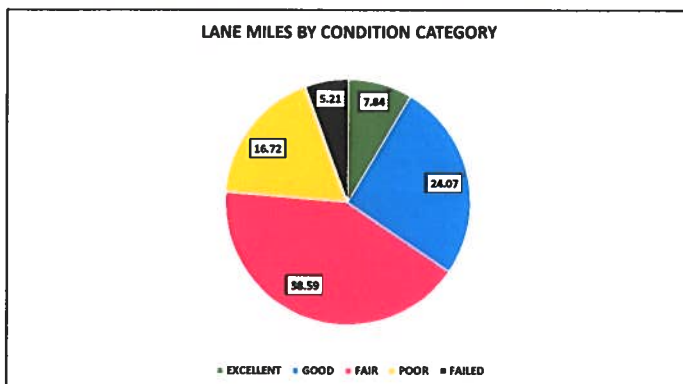


Figure 3. Pavement Area and Lane Miles by Condition Category

PMG

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PMG Overall Results – Lane Miles



2022 PAVEMENT MANAGEMENT FINAL PROJECT REPORT

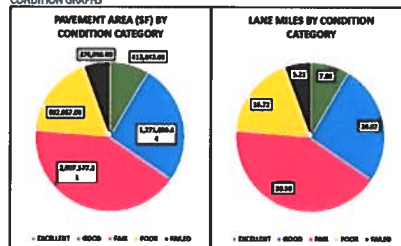
NETWORK CONDITION RESULTS

After completion of the 2022 pavement management project, PMG has determined that the average PCI for Gates AFB's 92 lane mile (48 Centerline Mile) street network is a 62 and considered to be in Fair condition. Table 2 displays the condition summary data by category across the network while Figure 3, illustrates the condition by pavement area breakdown in graph form. A complete Inventory and Condition Report in Excel spreadsheet was provided as a part of the project deliverable.

CONDITION CATEGORY	LANE MILES	PAVEMENT AREA (SF)	LANE MILES	PAVEMENT AREA (SF)	PERCENTAGE
EXCELLENT	34	413,843.00	7.84	6,485	94
GOOD	42	1,371,880.44	24.07	29,585	75
FAIR	75	2,572,877.81	36.39	41,718	62
POOR	12	882,987.00	16.72	19,885	41
FAILED	8	279,946.00	5.21	6,425	23
TOTAL	171	5,980,534	92	800	

Table 2. Condition Summary

CONDITION GRAPHS



PMG

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PMG Results By Local Road Type

Average Road Condition by Local Type	
	PCI
Arterial (State Route)	64
Collector (County Road)	67
High Volume Residential	63
Low Volume Residential	54
Overall	62

Local Roads with PCI Below 50

Residential	PCI	Approx Length (ft)	Lane Miles	Pavement Area SY
HV/LV				
HV	0-19	0	0.00	0
LV	0-19	5,292	2.00	14,111
			2.00	
HV	20-29	3,333	1.26	8,889
LV	20-29	4,583	1.74	12,222
			3.00	
HV	30-39	3,125	1.18	8,333
LV	30-39	12,083	4.58	32,222
			5.76	
HV	40-49	0	0.00	0
LV	40-49	14,583	5.52	38,889
			5.52	

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Sample of an **EXCELLENT** Pavement
PCI >90



13

Sample of a **GOOD** Pavement
PCI 70-89



14

**Sample of a FAIR Pavement
PCI 50-69**



15

**Samples of a POOR Pavement
PCI 30-49**

Cardinal



Dorchester



Hill Creek



West Hill



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Samples of a **FAILED** Pavement PCI 0-29

Blackberry



Chartley



Chestnut Run



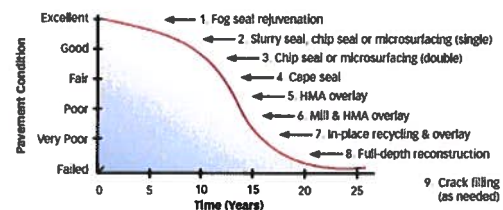
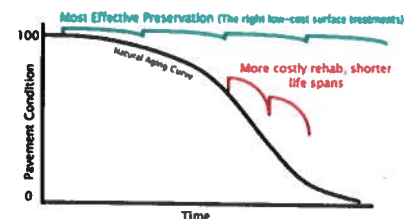
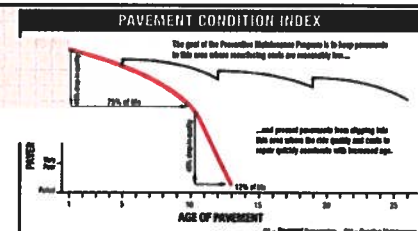
Norvale W



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Pavement Management (Life) Curve

- Pavement Maintenance is the effort of investing in roadway infrastructure in order to delay major rehabilitation as long as possible.
- Dollars invested early in the pavement life are the most effective Pavement Preservation methods.
- Dollars spent later in the Pavement Life Cycle are typically more expensive and have a shorter life.



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Maintenance / Rehabilitation Activities Based on PCI

PCI 90 and Above

Reclamite (\$1.00/SY)

Crack Seal (Variable)

PCI 50-89

Reclamite (\$1.00/SY)

Crack Seal (Variable)

Spot Mill/Fill (\$35-\$40/SY)

Spot Full Depth Repairs (\$75/SY)

Asphalt Surface Recycling (\$15/SY=150k/LM)

2" Mill/Fill of Surface (\$50/SY=350k/LM)

PCI Below 50

Full Depth Recycling/Overlay(\$60/SY=455k/LM)

Complete Removal/Replacement (\$80/SY=\$560/LM)



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Where we Stand at This Moment

Initiate a Pavement Maintenance Strategy that will Elevate the Average PCI to 70.

State Routes – Arterials

With ODOT Completion of SOM this Year
Average PCI will be Raised to 70

County Roads – Collectors

Currently 67. With Potential Life Extending
Surface Recycling of Chagrin River Road with
County in 2023, Average PCI will be Raised to 70

High Volume Residential – Cut-Throughs / Feeders

Currently Stands at 63 – Pending Decisions

Low Volume Residential – Cul-De-Sacs / Short

Currently Stands at 54 – Pending Decisions

**How Programming Rebuilding of State/County Roads
Differs from a Local Street Program**



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Typical Framework for Annual Program

Annual Road Program Sections

1. County Road Maintenance (with 50% Reimbursement)
2. Reclamite and Crack Sealing of Good-High PCI Roads (70+ PCI)
3. Spot Mill/Fill and Full Depth Repairs of Problem Areas and Hot Spots (PCI N/A)
4. Complete 2" Mill/Fill of Middling PCI Roads (PCI 41-69) to Extend Life
5. Rehab/Reconstruction of Low PCI Roads (PCI <40) (See Summary Chart of Need and Costs Next Slide)



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Calculating the Need

Low PCI Road Reconstruction Need and Cost

Residential HV/LV	PCI	Approx Length (ft)	Lane Miles	Pavement Area SY	Rehabilitation Cost Per SY	Estimated Cost	Cost for Each PCI "Bracket"	Cumulative	5-year Program	10-year Program	# Streets In Bracket	# Homes on Streets
HV	0-19	0	0.00	0	\$60	\$0					0	0
LV	0-19	5,292	2.00	14,111	\$60	\$846,667	\$846,667	\$846,667	\$169,333	\$84,667	3	37
			2.00									
HV	20-29	3,333	1.26	8,889	\$60	\$533,333					1	27
LV	20-29	4,583	1.74	12,222	\$60	\$733,333	\$1,266,667	\$2,113,333	\$422,667	\$211,333	3	40
			3.00									
HV	30-39	3,125	1.18	8,333	\$80	\$666,667					1	15
LV	30-39	12,083	4.58	32,222	\$60	\$1,933,333	\$2,600,000	\$4,713,333	\$942,667	\$471,333	7	86
			5.76									
HV	40-49	0	0.00	0	\$60	\$0					0	0
LV	40-49	14,583	5.52	38,889	\$60	\$2,333,333	\$2,333,333	\$7,046,667	\$1,409,333	\$704,667	7	100
			5.52									

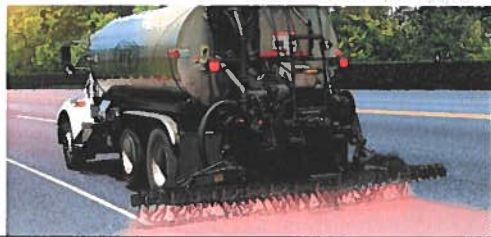
How do we differentiate between Budgeting HV vs LV Roads?

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Budgeting for the Future

Annual Road Program Budgeting

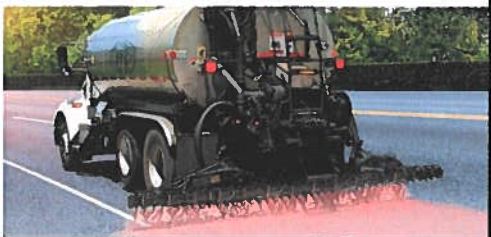
Section	Cost Range	
	Low (5yr)	High (10yr)
County Road Maintenance (50% Reimbursement)	\$50,000	\$200,000
Reclamite/Crack Seal (PCI >70)	\$40,000	\$50,000
Partial/Full Depth Repairs (Hot Spots)	\$20,000	\$30,000
Complete Mill/Fill or Surface Recycling (PCI 41-69)	\$125,000	\$200,000
Rehab/Reconstruct Low PCI (PCI <40)	\$700,000	\$1,400,000
	\$935,000	\$1,880,000



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Critical Questions for Council

- How aggressively (annual funding) do we want to implement projects to raise the PCI?
- How to Prioritize High Volume Residential vs Low Volume Residential Roadways?
- Determination of Typical Funding Split for Preventative (PCI 90+) - Maintenance (PCI 50-89) - Rehabilitation (PCI <50) on a Typical Annual Program.



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2022 Road Maintenance Program

2022 Alternate 1 - Begin Process of Rehabilitation of Low PCI Roads (Worst First)			
1	County Road Maintenance	\$230,000	115k reimbursement
2	Sealcoat and Crack Seal	\$56,000	
3	Spot M/R/P/B and Full Depth Repairs	\$75,000	
4	Complete M/R/P/B - Surface Recycle	\$0	
5	Rehab/Recon of Low PCI	\$450,000	Blackberry/Chastnut
		\$811,000	

2022 Alternate 2 - Address Two of Worst HV-Residential Streets and Village Access to SD Yard			
1	County Road Maintenance	\$230,000	115k reimbursement
2	Sealcoat and Crack Seal	\$56,000	
3	Spot M/R/P/B and Full Depth Repairs	\$75,000	
4	Complete M/R/P/B - Surface Recycle	\$350,000	Dorchester/Chartley
5	Rehab/Recon of Low PCI	\$125,000	Carpenter
		\$836,000	

2022 Alternate 3 - Complete As Much Spot Repairs As We Can Before Initiating PCI Based Program			
1	County Road Maintenance	\$230,000	115k reimbursement
2	Sealcoat and Crack Seal	\$56,000	
3	Spot M/R/P/B and Full Depth Repairs	\$500,000	Repair as many areas as possible
4	Complete M/R/P/B - Surface Recycle	\$0	
5	Rehab/Recon of Low PCI	\$0	
		\$786,000	



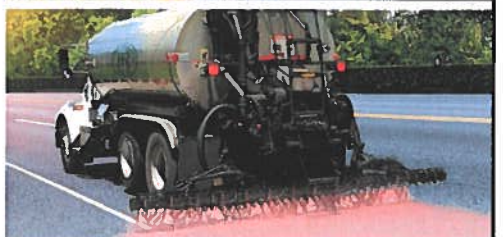
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Thank You for Your Time and Attention

Questions ?



Discussion



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