AGENDA

MOLALLA CITY COUNCIL WORK SESSION
March 9, 2022
6:00 PM
Molalla City Hall
117 N. Molalla Avenue, Molalla, OR 97038

Mayor Scott Keyser

Council President Jody Newland | ***Councilor Leota Childress***
Councilor Elizabeth Klein | ***Councilor Crystal Robles***
Councilor Terry Shankle | ***Councilor Eric Vermillion***

In accordance with House Bill 2560, the City of Molalla adheres to the following practices:
Live-streaming of the Molalla City Council Meetings are available on Facebook at "Molalla City Council Meetings – LIVE" and "Molalla City Council Meetings" on YouTube.
Citizens can submit Public Comment in the following ways: attend the meeting, email the City Recorder @ recorder@cityofmolalla.com by 4:00pm on the day of the meeting,
or drop it off at City Hall, 117 N. Molalla Avenue.

1. CALL TO ORDER AND ROLL CALL

2. DISCUSSION ITEMS
A. Street Utility Maintenance Fee

3. ADJOURN

Agenda posted at City Hall, Library, and the City Website at http://www.cityofmolalla.com/meetings.This meeting location is wheelchair accessible. Disabled individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-829-6855.

RESOLUTION 2018-01

A RESOLUTION OF THE CITY OF MOLALLA, MOLALLA CITY COUNCIL SETTING THE STREET MAINTENANCE UTILITY USER CHARGE AND METHODOLOGY

WHEREAS, City Council held three Town Hall meetings on September 20, 2017, November 30, 2017, and December 2, 2017 to solicit input from the community regarding the establishment of a Street Maintenance Utility User Charge; and

WHEREAS, members of the community recommended a fee amount with a majority of recommendations selecting an $11.00 per month charge; and

WHEREAS, on December 13, 2017 at a regularly scheduled meeting the City Council unanimously approved the direction of staff to bring back a Street Maintenance Utility Charge for their approval at the first meeting in January 2018; and

WHEREAS, the City Council at the January 10, 2018 meeting passed an Ordinance for the creation of Chapter 12.22 Street Management System in Title 12 Streets, Sidewalks and Public Places; and

WHEREAS, Section 12.22 Street Management System of the Molalla Municipal Code established a Street Maintenance Utility User Charge, and specified that the rate shall be in an amount reasonable and necessary to fund the administration, planning, design, construction, operation, maintenance and repair of the Street Management System; and

WHEREAS, City Council intends to set the monthly charge at $11.00 per equivalent dwelling unit in accordance with Section 12.22.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MOLALLA AS FOLLOWS:

Section 1. The methodology attached hereto and incorporated herein by reference regarding the calculation of the Street Maintenance Utility User Charge is hereby adopted.

Section 2. The Equivalent Dwelling Unit (EDU) shall be based on a methodology in accordance with Section 12.22 of the Molalla Municipal Code.

Section 3. The fee shall be $11.00 per EDU.

Section 4. This Resolution is effective 60 days after adoption and all rates and charges established herein for utility customers shall go into effect as of March 12, 2018.

DULY ADOPTED AND EFFECTIVE the 10th day of January, 2018.

Mayor Jimmy Thompson

ATTEST this 10th day of January, 2018:

Kelly Richardson, CMC
City Recorder

RESOLUTION NUMBER 2018-09

A RESOLUTION OF THE CITY OF MOLALLA, OREGON, REPEALING RESOLUTION 2018-01 CREATING A STREET MAINTENANCE UTILITY USER CHARGE AND METHODOLOGY .

WHEREAS, on December 13, 2017 at a regular scheduled Council meeting staff was directed to bring back a street maintenance utility charge for approval; and

WHEREAS, at the January 10, 2018 meeting passed an Ordinance for the creation of chapter 12.22 Street Maintenance System; and

WHEREAS, upon completion of both Council had set the fee at $11.00 dollars with resolution 2018-01; and

WHEREAS, a referendum was filed and Ordinance 2018-02 was defeated at the election of May 15, 2018

Now, Therefore, the City of Molalla resolves as follows:

Section 1. With the defeat of Ordinance 2018-02 at the May 15, 2018 election there is no need for a Street Maintenance User Fee.

Section 2. Therefore Molalla City Council repeals resolution 2018-01 in its entirety.

Section 3. This resolution is effective upon passage.

Adopted this 13th day of June, 2018

Elizabeth Klein, Council President

ATTEST:

Kelly Richardson, CMC, City Recorder

Street Maintenance Utility Fee Revisited July XX, 2021

Prepared by:

Gerald Fisher, PE, Public Works Director

City of Molalla

Street Maintenance Fee History

- In 2016 we performed a pavement condition rating of the entire City and moved forward with a proposed street maintenance fee.
- Under City Council direction we held three Town Hall meetings (September 20, 2017, November 30, 2017, and December 2, 2017).
- Based on attendance and comments from citizens, the City Council moved forward with a street maintenance Ordinance and fee resolution on January 10, 2018. Both the ordinance and resolution passed.
- Following passage of funding, a local group submitted a Citizens Initiative to overturn the City Council's decision. in the May 2018 election thereby stripping staff's ability to maintain roadways to the levels they should be.

MOLALLA CITY COUNCIL TOWN HALL MEETING

PUBLIC NOTICE

SEPTEMBER 20, 2017 AT 6:30 PM

Molalla Adult Center, 315 Kennel Avenue.

Discussion Focus:

Street Maintenance Utility Fee

Your City Councilors invite you to a Town Hall meeting to discuss solutions regarding the condition of the City's streets.

The City Council is currently looking at how a Street Maintenance Utility Fee can help address our maintenance backlog and protect the community's investment in its roadways.

Why Your Participation is Highly Encouraged?

Citizen and business owner participation is critical to governmental managers and elected officials at all levels to help put pieces together.

Your participation and input can help ensure that local government knows the intensity and the variety of issues affecting you and other citizens within your community.

Active participation also helps your elected officials make well informed decisions that affect policies that can be reflective of expressed public interests.

Molalla City Council Town Hall Meeting

Meeting Details

September 20, 2017 at 6:30 PM

Molalla Adult Center
315 Kennel Ave

Open House Purpose

- Provide an overview of the process that the City performed to determine the condition of its streets.
- Provide pavement condition information to members of the community.
- Allow City Council and City staff to interact with members of the community and receive input on the possibility of establishing a utility fee for pavement maintenance of City owned and operated streets.

Project Funding, Scope & Report

- A pavement condition survey project was budgeted as part of FY 2015-2016
- Project began in February 2016.
- Database of City owned and operated streets (33 total miles) was created.
- Consultant performed a survey of all streets and rated the condition of the pavement (Pavement Condition Index or PCI) on as scale from 0 to 100 (100 = new street).

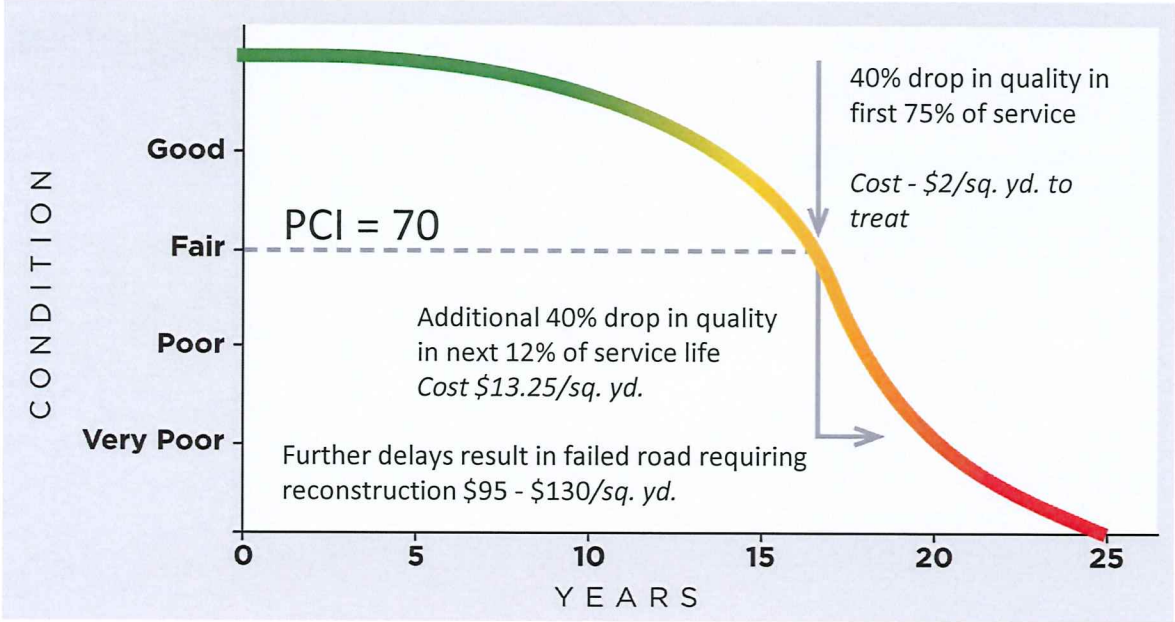
Project Funding, Scope & Report

- Consultant prepared budget option scenarios from the pavement management database.
- Consultant prepared a report in April 2016 titled Pavement Management Budget Options Report.
- City received an overall PCI of 61 in 2016.
- Report provided existing PCI and 4 budget scenarios:
  - Unconstrained (unrestricted funding) with PCI of 84
  - Increase PCI to 70 in 5 years
  - Increase PCI to 75 in 5 years
  - Increase PCI to 75 in 10 years

Report Summary

- Ideal roadway PCI is 82-84.
- PCI of 70 is tipping point where it costs more to maintain the roadway at a higher PCI as the pavement condition drops below 70.

Figure 1 – Road Condition over time



Report Summary

- Scenario 1 = $1,640,000/yr., no deferred maintenance
- Scenario 2 = $850,000/yr., $10,600,00 deferred maintenance
- Scenario 3 = $1,600,000/yr., $6,700,000 deferred maintenance
- Scenario 4 = $1,100,000/yr., $7,100,000 deferred maintenance

Table 1 – Summary of outcome of different funding levels (Scenarios)

Scenario Name	Budget	Final PCI (change)	Deferred maintenance	2025 % good	2025 % Very Poor
1 – Unconstrained	$16.4 million over 10 years	84 (+23)	$0	96.4%	3.6%
2 – Increase PCI to 70 in 5 years	$4.25 million over 5 years	70 (+9)	$10.6 million	73.0%	18.0%
3 – Increase PCI to 75 in 5 years	$8.0 million over 5 years	75 (+14)	$6.7 million	79.9%	11.0%
4 – Increase PCI to 75 in 10 years	$11.0 million over 10 years	75 (+14)	$7.1 million	85.9%	10.0%
	2016 Values	61	$6.35 million	40.6%	10.8%

Street Maintenance Utility Fee

- Staff prepared a review of the monthly cost per property account if a flat monthly fee were created. (3,545 user accounts)
- Scenario 1 = $38.55/account/month
- Scenario 2 = $19.98/account/month
- Scenario 3 = $37.61/account/month
- Scenario 4 = $25.86/account/month

Street Maintenance Utility Fee

- Staff then prepared a review of the first year maintenance based on differing levels of investment towards a target PCI of 70.
- Staff created the following maps

Existing PCI

Scenario 2 – 5 Yr. Rotation

Scenario 2 – Repair Types

$5/month Fee ($212,700)

$7/month Fee ($297,780)

$9/month Fee ($382,860)

$11/month Fee ($467,940)

Scenario 2, Year 1 Repair Schedule: $11 Street Fee

$19.98/month Fee ($850,000)

Scenario 2: 5-Year Recommended Street Repairs and Maintenance

Questions?

Pavement Management Budget Options Report

CAPS
Capitol Asset & Pavement Services

April, 2016

City of Molalla

Executive Summary

Capitol Asset & Pavement Services, Inc. was contracted by the City of Molalla Public Works department to perform a full pavement management implementation and visual inspections of all of the paved streets in the City of Molalla (City). All 27.16 centerline miles of paved streets maintained by the City were evaluated in accordance with MTC standards, and the Streetsaver Online 9.0 database was updated with the inspection data. Inspections were completed in April 2016.

The maintenance decision tree treatments and costs were reviewed and updated to reflect current pavement maintenance practices and treatment prices. Budgetary Needs analysis was performed based on the updated inspections and treatment costs and four budget scenarios were evaluated to compare the effects of various funding levels.

The City's street network consists of 27.16 centerline miles of streets. A detailed visual inspection of the City's streets resulted in a calculated average PCI of 61. Using a 0-100 PCI scale, with 100 being the most favorable, a rating of 61 places the City's street network in the 'Fair' condition category.

Four scenarios were analyzed for various street maintenance funding levels. The budget includes preventative maintenance and rehabilitation work for existing paved street surfaces. The recommended strategy of street maintenance, along with current prices for the treatments, was entered into a decision tree matrix. This matrix defines what treatments need to be applied to streets in varying PCI condition. Utilizing this decision matrix, it was determined that the City will need to spend $16.4 million over the next ten years to bring the street network into 'optimal' condition, or an overall street network PCI of 84. At this level, the City should be able to maintain the street network in the future with mostly cost-effective preventative maintenance treatments (crack seals and surface seals). Scenarios were also run to determine the funding level required to increase the overall network PCI to 70 by 2020, 75 in 2020, and 75 in 2025. The City will need to invest significant funding for street rehabilitation in order to meet these goals. Table 1 summarizes the findings of the Scenarios.

Table 1 – Summary of outcome of different funding levels (Scenarios)

Scenario Name	Budget	Final PCI *(change)*	Deferred maintenance	2025 % good	2025 % Very Poor
1 – Unconstrained	$16.4 million over 10 years	84 *(+23)*	$0	96.4%	3.6%
2 – Increase PCI to 70 in 5 years	$4.25 million over 5 years	70 *(+9)*	$10.6 million	73.0%	18.0%
3 – Increase PCI to 75 in 5 years	$8.0 million over 5 years	75 *(+14)*	$6.7 million	79.9%	11.0%
4 – Increase PCI to 75 in 10 years	$11.0 million over 10 years	75 *(+14)*	$7.1 million	85.9%	10.0%
	2016 Values	**61**	**$6.35 million**	**40.6%**	**10.8%**

Purpose

This report is intended to assist the City of Molalla with identifying street maintenance priorities specific to the City.

The report examines the overall condition of the street network and highlights the impacts of various funding levels on the network pavement condition and deferred maintenance funding shortfalls. The Metropolitan Transportation Commission, MTC, Streetsaver Pavement Management Program (PMP) was used for this evaluation. The intent of this program is to develop a maintenance strategy that will improve the overall condition of the street network to an optimal Pavement Condition Index (PCI) in the low to mid 80's and also to maintain it at that level.

The MTC Streetsaver program maximizes the cost-effectiveness of the maintenance treatment plan by recommending a multi-year street maintenance and rehabilitation plan based on the most cost-effective repairs available. A comprehensive preventative maintenance program is a critical component of this plan, as these treatments extend the life of good pavements at a much lower cost than rehabilitation overlay or reconstruction treatments. To this end, various 'what-if' analyses (scenarios) were conducted to determine the most cost-effective plan for maintaining the City's street network over ten years and at various funding levels.

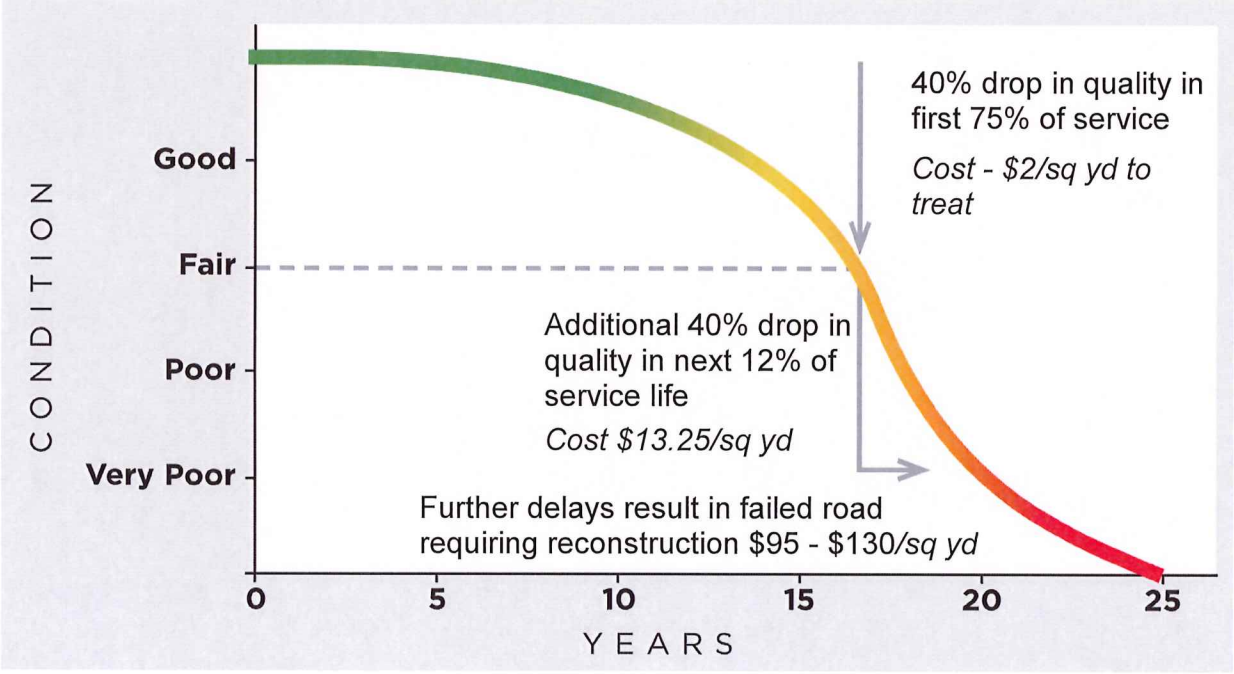
Pavement Management Strategy

Pavement Management is a set of tools and philosophies designed to manage the maintenance activities of Asphalt Concrete and Portland Concrete Pavements. A Pavement Management System consists of a module to keep track of existing and historical pavement condition data and a decision making process to help choose the most cost-effective maintenance strategies and which streets to treat when.

Conventional wisdom of most public works and street department agencies has been to treat streets in a "worst-first" philosophy. Under this "worst-first" policy, streets are allowed to deteriorate to a nearly failed condition before any rehabilitation (such as Overlays or Reconstructions), are applied. This can also be called the "don't fix if it aint broke" mentality.

Pavement Management Systems are designed with a more cost-effective, "Best-first" approach. The reasoning behind this philosophy is that it is better to treat streets with lower-cost, preventative maintenance treatments, such as Slurry Seals, Chip Seals, and Crack Seals, and extend their life cycle, before the street condition deteriorates to a state where it requires more costly rehabilitation and reconstruction treatments. Generally, paved streets spend about three-quarters of their life-cycle in fair to excellent condition, where the street shows little sign of deterioration, and has a high service level. After this time, the street condition begins to deteriorate at a rapid rate and, if not maintained properly, soon reaches a condition where it will require costly overlays and reconstructions. If treated with a surface seal and other preventative measures, the street condition will remain at a good level for a longer period of time. Figure 1 shows a typical condition deterioration curve for a street.

Figure 1 – Road Condition over time



Existing Pavement Condition

The City is responsible for the repair and maintenance of 27.16 centerline miles of paved streets. The City's street network replacement value is estimated at $52.4 million.[1] This asset valuation assumes replacement of the entire street network in present day dollars. This represents a significant asset for City officials to manage.

The average overall network Pavement Condition Index (PCI) of the City's street network is 61, which indicates that the street network is in 'Fair' condition. The Pavement Condition Index is a measurement of pavement condition that ranges from 0 to 100. A newly constructed or overlaid street would have a PCI of 100, while a failed street (requiring complete reconstruction) would have a PCI under 25. Appendix B contains a report detailing the PCI information for each street.

Table 2 details the network statistics and pavement condition by functional class. Table 3 and Figure 2 present the Percent Network Area by Functional and Condition classes.

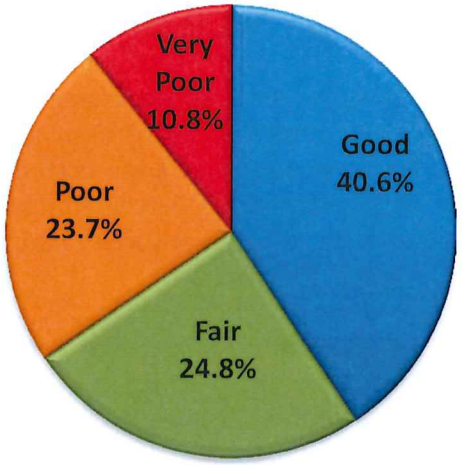
Table 2 – Street Network Statistics and Average PCI by Functional Class

Functional Class	Centerline Miles	Lane Miles	# of Sections	% of Network (by Area)	Average PCI
Arterial	1.21	2.41	8	5.7%	41
Collector	5.09	10.18	25	18.6%	63
Residential	20.87	41.73	175	75.7%	62
Totals	27.16	54.33	208	--	61

Table 2 details the percentage of the street network area by each PCI range or condition category.

Table 3 and Figure 2 – Percent Network Area by Functional Class and Condition Class

Condition Class	PCI Range	Arterial	Collector	Residential	Total
Good (I)	70-100	0.0%	5.8%	34.8%	40.6%
Fair (II/III)	50-69	0.0%	8.4%	16.4%	24.8%
Poor (IV)	25-49	5.7%	4.4%	13.7%	23.7%
Very Poor (V)	0-24	0.0%	0.0%	10.8%	10.8%
Totals		5.7%	18.6%	75.7%	



[1] Replacement value is calculated as the current cost to reconstruct each street in the network

Present Cost to Repair the Street Network

The MTC Pavement Management Program (PMP) is designed to achieve an optimal network PCI somewhere between the low and mid 80's, which is in the middle of the good condition category. In other words, the system will recommend maintenance treatments in an attempt to bring all of the streets in the City to a 'good' condition, with the majority of the streets falling in the low to mid 80's PCI range. Streets with a PCI in the 80's (as opposed to 70's) will likely remain in the 'good' condition category for a longer period of time if relatively inexpensive preventive maintenance treatments are used. Once the PCI falls below 70, more expensive rehabilitation treatments will be needed.

The Budget Needs module of the PMP estimates a necessary funding level for the City's Pavement Preservation and Rehabilitation Program of $16.4 million[2] over the next ten-year period (2016 – 2025) in order to improve and maintain the street network PCI at an optimal level in the lower to mid 80's. The majority of this spending, $14.0 million, occurs in the first five years.

As mentioned earlier, the average PCI for the City's streets is 61, which is in the 'Fair' condition category. Why then, does it cost so much to repair the City's streets, and why bother improving them?

First, the cost to repair and maintain a pavement depends on its current PCI. In the 'Good' category, it costs very little to apply preventive maintenance treatments. Such repairs extend the life of the pavement at relatively low costs, and prevent the pavement from deteriorating into conditions requiring more expensive treatments. Preventive maintenance treatments include slurry seals, chip seals, and crack sealing, which can extend the life of a pavement by correcting minor faults and reducing further deterioration. Minor treatments are applied before pavement deterioration becomes severe and usually costs less than $2.10/sq. yd[3]. 40.6% of the City's street network would benefit from these relatively inexpensive, life-extending treatments.

Once the PCI falls below 70, more expensive rehabilitation treatments may become necessary. Rehabilitation treatments, such as overlays (with or without mill), inlays, and reconstructions, add structure to the road and correct more serious distresses.

24.8% of the City's street network falls into the 'Fair' condition category. Pavements in this range show some form of distress caused by traffic load related activity or environmental distress that requires more than a life-extending treatment. At this point, a well-designed pavement will have served at least 75 percent of its life with the quality of the pavement dropping approximately 40 percent. The street surface may require a slurry seal with crack seal at $3.05/sq yd or 2.5" overlay at $13.25/sq yd.

23.7% of the Town's street network is in the 'Poor' condition category. These pavements are near the end of their service lives and often exhibit major forms of distress such as potholes, extensive cracking, etc. At this stage, a streets usually requires a thick overlay at $13.25/sq yd.

[2] Treatment costs are based on this year's average costs per square yard, with future years including a 3% inflation adjustment per year after 2016.

[3] For detailed treatments and costs used in analysis for this report, see appendix C – Decision Tree report

10.8% of the Town's street network is in the 'Very Poor' condition category. Streets in the 'Very Poor' condition category indicate that the street has failed. These pavements are at the end of their service lives and have major distresses, often indicating the failure of the sub base. Streets at this stage require major rehabilitation, usually the complete reconstruct of the street. Estimated costs to reconstruct the street surface are $95 to $130/sq yd.

One of the key elements of a pavement repair strategy is to keep streets that are in the 'Good' or 'Fair' categories from deteriorating. This is particularly true for streets in the 'Fair' range, because they are at the point where pavement deterioration accelerates if left untreated. However, the deterioration rate for pavements in the 'Poor' to 'Very Poor' range is relatively flat and the condition of these streets will not decline significantly if repairs are delayed. As more 'Good' streets deteriorate into the 'Fair', 'Poor', and 'Very Poor' categories, the cost of deferred maintenance will continue to increase. The cost of the deferred maintenance backlog will stop increasing only when enough funds are provided to prevent streets from deteriorating into a worse condition category, or the whole network falls into the 'Very Poor' category (i.e. can not deteriorate any further). The deferred maintenance backlog refers to the dollar amount of maintenance and rehabilitation work that should have been completed to maintain the street in "good" condition, but had to be deferred due to funding deficiencies for preventative maintenance and/or pavement rehabilitation programs. The actual repairs that are being deferred are often referred to as a "backlog."

Budget Needs

Based on the principle that it costs less to maintain streets in good condition than bad, the MTC PMP strives to develop a maintenance strategy that will first improve the overall condition of the network to an optimal PCI somewhere between the low and mid 80's, and then sustain it at that level. The average PCI for the City is 61, which is in the 'Fair' condition category. Current funding strategies demonstrate there is a $11.0 million deferred maintenance backlog[4] in the first year of the scenario. If these issues are not addressed, the quality of the street network will inevitably decline. In order to correct these deficiencies, a cost-effective funding and maintenance and rehabilitation strategy must be implemented.

The first step in developing a cost-effective maintenance and rehabilitation strategy is to determine, assuming unlimited revenues, the maintenance "needs" of the City's street network. Using the PMP Budget Needs module; street maintenance needs are estimated at $16.4 million over the next ten years. If the City follows the strategy recommended by the program, the average network PCI will increase to 84. If, however, current pavement maintenance funding is exhausted and little or no maintenance is applied over the next ten years, already distressed streets will continue to deteriorate, and the network PCI will drop to 40. The results of the Budget Needs analysis are summarized in Table 5.[5]

4 Definition of deferred maintenance backlog can be found in Appendix A

5 Actual program outputs are included in Appendixes B through F

Table 5. Summary of Results from Needs Analysis

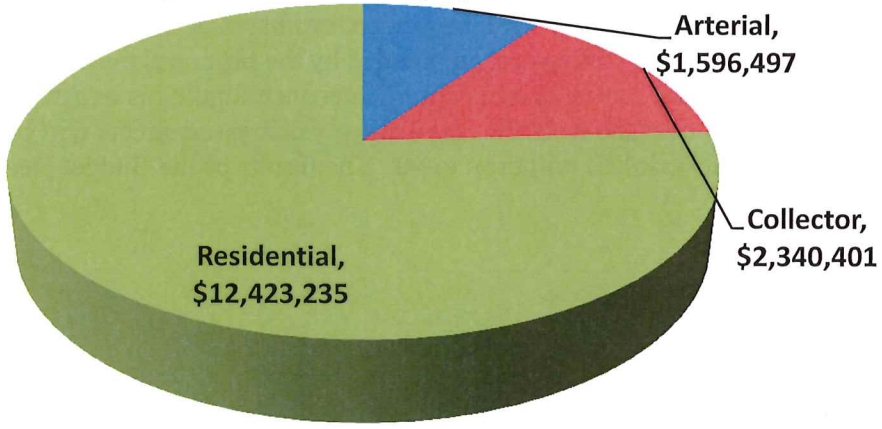
Fiscal Years	2016	2017	2018	2019	2020	5 year subtotal
PCI with Treatment	77	77	79	83	84	
PCI, no Treatment	60	58	56	54	51	
Budget Needs	$6,367,393	$1,435,124	$1,890,285	$3,330,094	$969,078	***$13,991,974***
Rehabilitation	$6,151,976	$1,377,317	$1,871,508	$3,297,386	$944,527	***$13,642,714***
Preventative Maintenance	$215,417	$57,807	$18,777	$32,708	$24,551	***$349,260***

Fiscal Years	2021	2022	2023	2024	2025	10 year Total
PCI with Treatment	84	84	83	85	84	---
PCI, no Treatment	49	47	44	42	40	---
Budget Needs	$208,551	$1,002,109	$132,688	$848,217	$176,594	**$16,360,133**
Rehabilitation	$169,738	$928,452	$0	$390,644	$16,728	**$15,148,276**
Preventative Maintenance	$38,813	$73,657	$132,688	$457,573	$159,866	**$1,211,857**

Table 5 shows the level of expenditure required to raise the City's pavement condition to an optimal network PCI of 84 and eliminate the current maintenance and rehabilitation backlog. The results of the Budget Needs analysis represent the ideal funding strategy recommended by the MTC PMP. Of the $16.4 million in maintenance and rehabilitation needs shown, approximately $1.2 million or 7.4 percent is earmarked for preventive maintenance or life-extending treatments, while $15.2 or 92.6 percent is allocated for the more costly rehabilitation and reconstruction treatments.

Figure 3 illustrates the funding distribution by street functional classification.

Figure 3. Budget Needs Funding by Functional Class



Budget Scenarios

Having determined the maintenance and rehabilitation needs of the City's street network, the next step in developing a cost-effective maintenance and rehabilitation strategy is to conduct 'what-if' analyses. Using the PMP budget scenarios module, the impact of various budget scenarios can be evaluated. The program projects the effects of the different scenarios on pavement condition PCI and deferred maintenance (backlog). By examining the effects on these indicators, the advantages and disadvantages of different funding levels and maintenance strategies become clear.

1. *Unconstrained (zero "deferred" maintenance)* — The annual amounts, as identified in the Budget Needs analysis totaling $16.4 million over 10 years, were input into the Budget Scenarios module. This scenario shows the effects of implementing the ideal investment strategy (as recommended by the MTC PMP Needs module).
2. *Increase PCI to 70 in 5 years* — An average annual budget of $850,000 was evaluated over ten years, for a total of $4.25 million. This funding level increases the overall PCI to 70 by 2020.
3. *Increase PCI to 75 in 5 years* — An annual funding level of $1.6 million per year, for a ten year total of $8.0 million, was evaluated. This funding level increases the overall PCI to 75 by 2020.
4. *Increase PCI to 75 in 10 years* — An annual budget of $1.1 million was evaluated over ten years, for a total of $11.0 million. This funding level increases the overall PCI to 75 by 2025.

Table 6. Scenario Summary

Scenario Name	Budget	Final PCI *(change)*	Deferred maintenance	2025 % good	2025 % Very Poor
1 – Unconstrained	$16.4 million over 10 years	84 *(+23)*	$0	96.4%	3.6%
2 – Increase PCI to 70 in 5 years	$4.25 million over 5 years	70 *(+9)*	$10.6 million	73.0%	18.0%
3 – Increase PCI to 75 in 5 years	$8.0 million over 5 years	75 *(+14)*	$6.7 million	79.9%	11.0%
4 – Increase PCI to 75 in 10 years	$11.0 million over 10 years	75 *(+14)*	$7.1 million	85.9%	10.0%
	2016 Values	**61**	**$6.35 million**	**40.6%**	**10.8%**

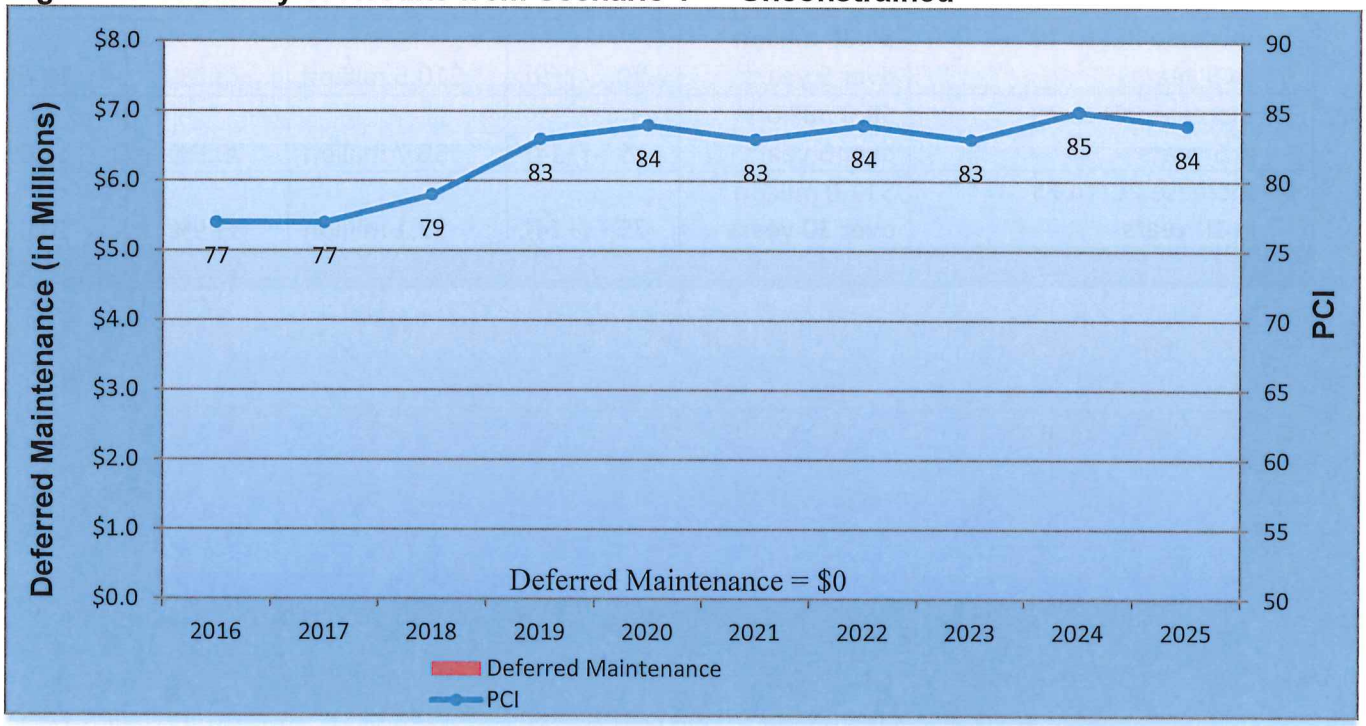
Scenario 1 — Unconstrained *(zero deferred maintenance)*

This scenario shows the effects of implementing the ideal investment strategy (as recommended by the MTC PMP Needs module). Because it is more cost-effective to eliminate the deferred maintenance backlog as quickly as possible, the bulk of the maintenance needs are addressed in the first five years of the ten-year program, raising the overall average network PCI to 84. The PCI maintains at an optimal level through 2025. By 2025, 96.4% of the network improves into the 'Good' condition category, a significant increase from the current level of 40.6% in 'Good' condition. These results are shown in both Table 7 and Figure 4.

Table 7. Summary of Results from Scenario 1 — Unconstrained

	2016	2017	2018	2019	2020	
Budget	$6,367,393	$1,435,124	$1,890,285	$3,330,094	$969,078	
Rehabilitation	$6,151,976	$1,377,317	$1,871,508	$3,297,386	$944,527	
Preventative	$215,417	$57,807	$18,777	$32,708	$24,551	
Deferred	$0	$0	$0	$0	$0	
PCI	77	77	79	83	84	
	2021	**2022**	**2023**	**2024**	**2025**	**Total**
Budget	$208,551	$1,002,109	$132,688	$848,217	$176,594	**$16,360,133**
Rehabilitation	$169,738	$928,452	$0	$390,644	$16,728	**$15,148,276**
Preventative	$38,813	$73,657	$132,688	$457,573	$159,866	**$1,211,857**
Deferred	$0	$0	$0	$0	$0	---
PCI	83	84	83	85	84	

Figure 4. Summary of Results from Scenario 1 — Unconstrained



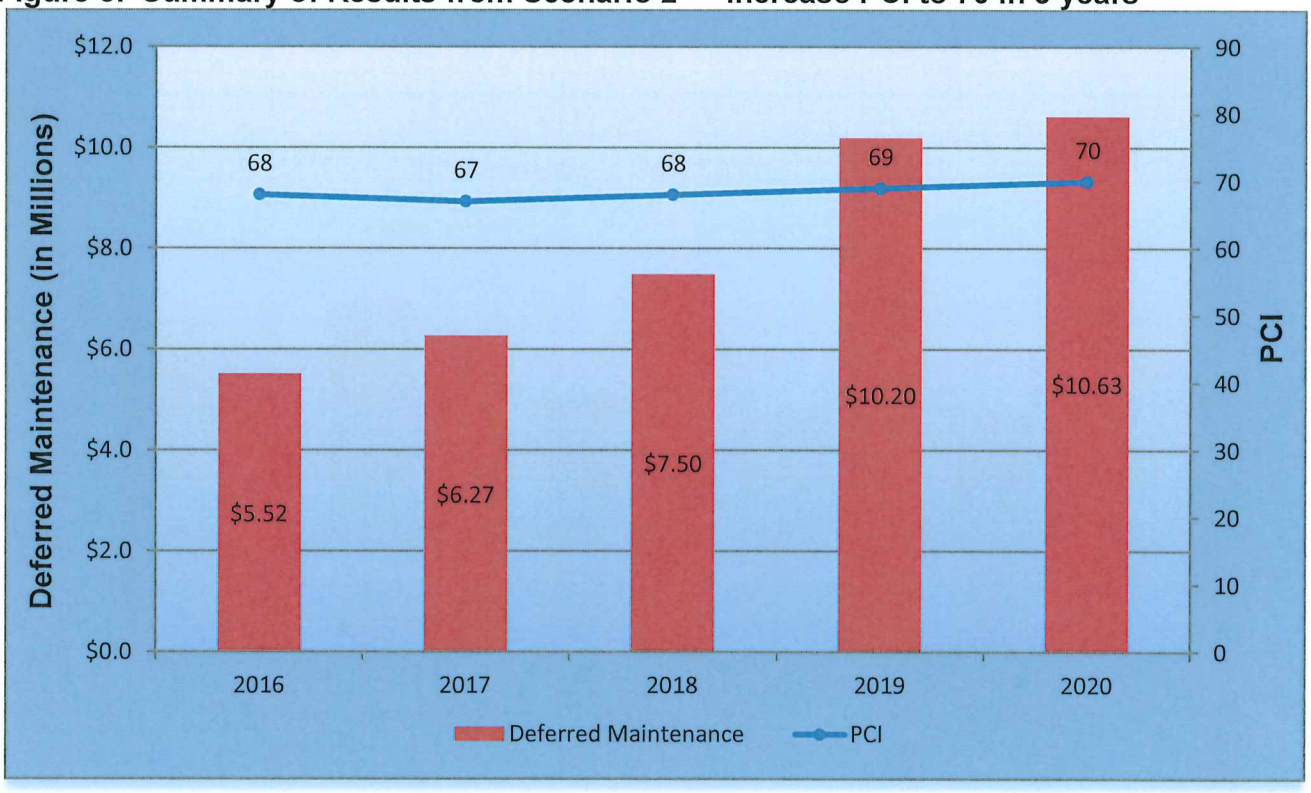
Scenario 2 — Increase PCI to 70 in 5 years

This scenario determines the funding level that would be required to increase the overall network PCI by 9 points, to 70 over the next five years. An annual investment level of $850,000, for a total of $4.25 million over five years, would be needed. At this funding level, the deferred maintenance increases by $5.1 million, from $5.5 million in 2016, to $10.6 million in 2020. The percentage of the street network in the 'Good' condition category increases from 40.6% currently, to 73.0% in 2020. The percentage of roads in 'Very Poor' condition increases to 18.0% from the current level of 10.8%. These results are illustrated in Table 8 and Figure 5.

Table 8. Summary of Results from Scenario 2 — Increase PCI to 70 in 5 years

	2016	2017	2018	2019	2020	Total
Budget	$850,000	$850,000	$850,000	$850,000	$850,000	**$4,250,000**
Rehabilitation	$777,028	$795,987	$752,399	$798,807	$799,915	**$3,924,136**
Preventative	$72,864	$53,087	$97,613	$50,686	$49,866	**$324,116**
Deferred	$5,517,483	$6,269,057	$7,497,408	$10,202,930	$10,628,993	---
PCI	68	67	68	69	70	

Figure 5. Summary of Results from Scenario 2 — Increase PCI to 70 in 5 years



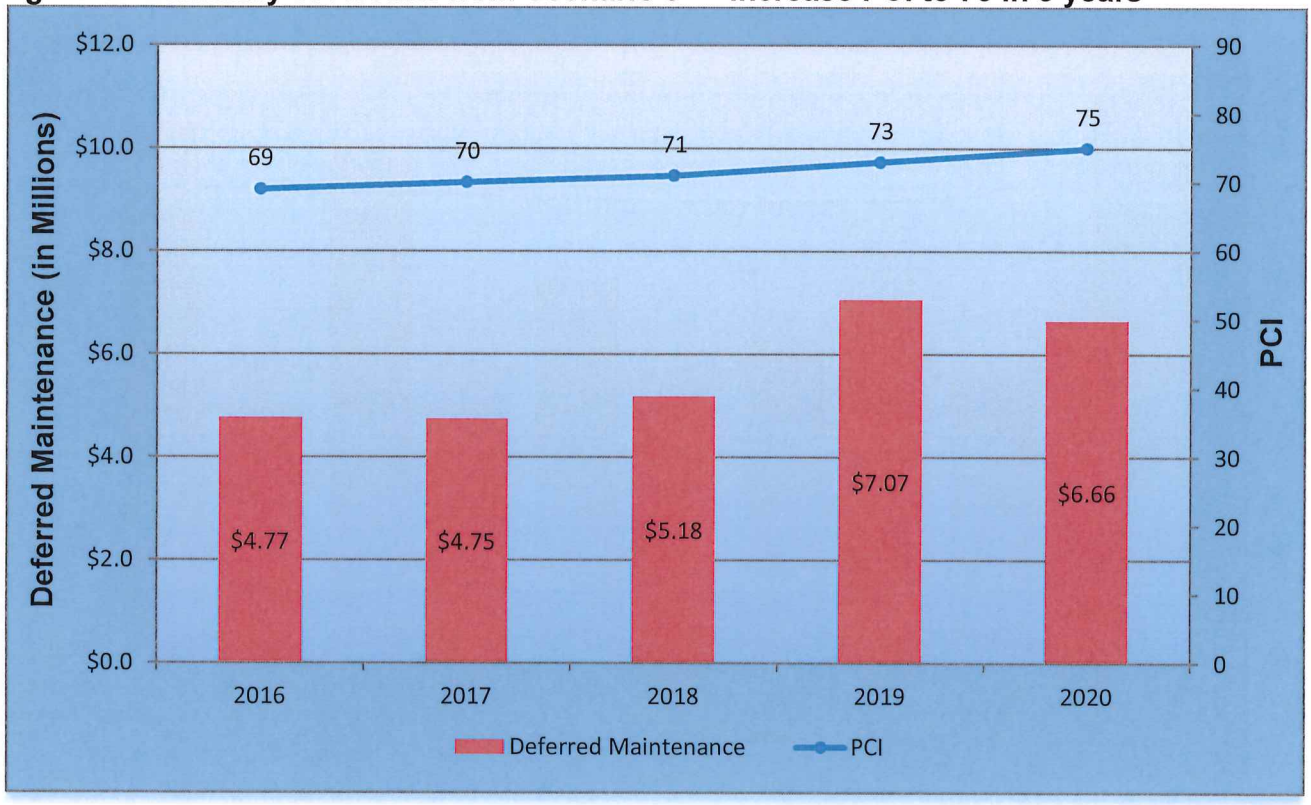
Scenario 3 — Increase PCI to 75 in 5 years

This scenario determines the funding level that would be required to increase the overall network PCI by 14 points, to 75 over the next five years. An annual investment level of $1.6 million, for a total of $8.0 million over five years, would be needed. At this funding level, the deferred maintenance increases by $1.9 million, from $4.8 million in 2016, to $6.7 million in 2020. The percentage of the street network in the 'Good' condition category increases from 40.6% currently, to 79.9% in 2020. The percentage of roads in 'Very Poor' condition increases slightly, to 11.0% from the current level of 10.8%. These results are illustrated in Table 9 and Figure 6.

Table 9. Summary of Results from Scenario 3 — Increase PCI to 75 in 5 years

	2016	2017	2018	2019	2020	Total
Budget	$1,600,000	$1,600,000	$1,600,000	$1,600,000	$1,600,000	**$8,000,000**
Rehabilitation	$1,547,911	$1,518,742	$1,563,337	$1,534,342	$1,512,176	**$7,676,508**
Preventative	$51,265	$80,720	$35,648	$62,925	$85,843	**$316,401**
Deferred	$4,768,197	$4,746,910	$5,180,619	$7,068,866	$6,655,608	---
PCI	69	70	71	73	75	

Figure 6. Summary of Results from Scenario 3 — Increase PCI to 75 in 5 years



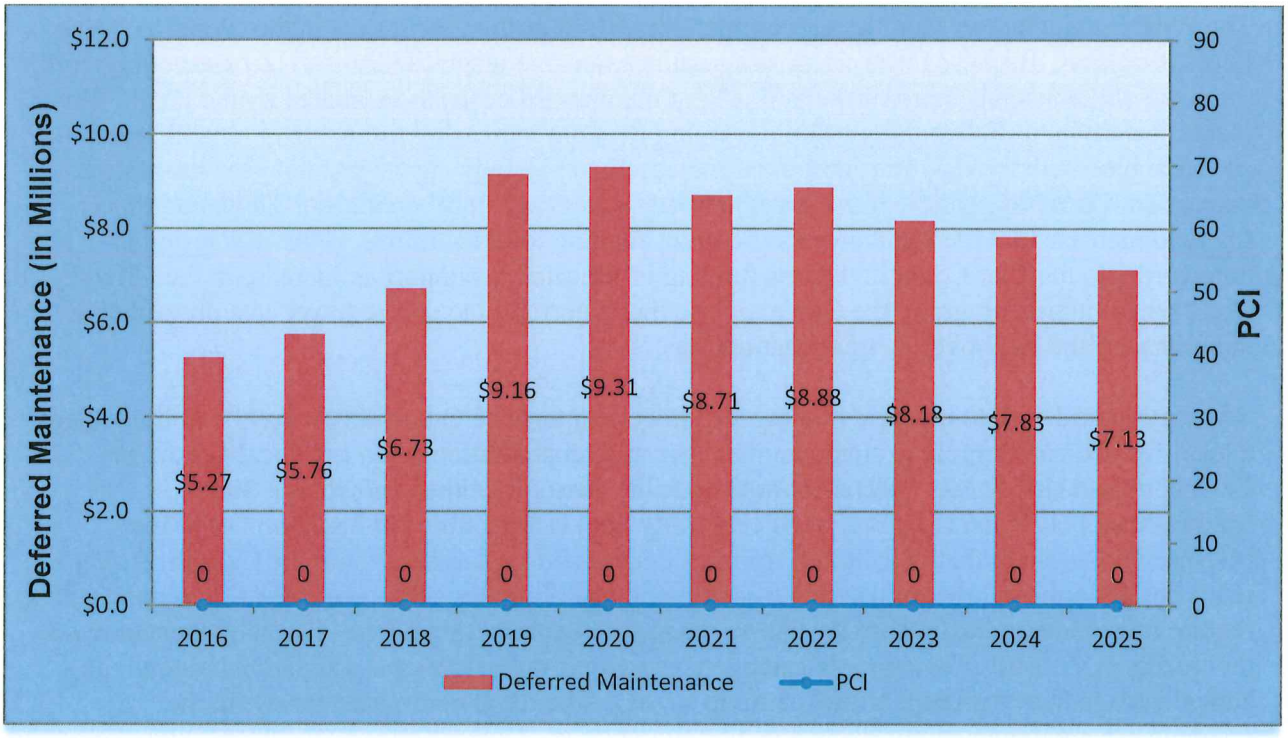
Scenario 4 — Increase PCI to 75 in 10 years

This scenario determines the funding level that would be required to increase the overall network PCI by 14 points, to 75 over the next ten years. An annual investment level of $1.1 million, for a total of $11.0 million over ten years, would be needed. At this funding level, the deferred maintenance increases by $1.8 million, from $5.3 million in 2016, to $7.1 million in 2025. The percentage of the street network in the 'Good' condition category increases from 40.6% currently, to 85.9% in 2025. The percentage of roads in 'Very Poor' condition decreases from 10.8% currently, to 10.0% in 2025. These results are illustrated in Table 10 and Figure 7.

Table 10. Summary of Results from Scenario 4 — Increase PCI to 75 in 10 years

	2016	2017	2018	2019	2020	
Budget	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	
Rehabilitation	$1,041,413	$1,033,480	$1,031,725	$1,018,376	$1,036,750	
Preventative	$58,066	$65,046	$66,910	$81,306	$61,715	
Deferred	$5,267,895	$5,762,531	$6,727,060	$9,159,286	$9,305,270	
PCI	68	68	69	70	71	
	2021	**2022**	**2023**	**2024**	**2025**	**Total**
Budget	$1,100,000	$1,100,000	$1,100,000	$1,100,000	$1,100,000	**$11,000,000**
Rehabilitation	$1,018,532	$1,038,813	$1,032,292	$926,596	$938,286	**$10,116,263**
Preventative	$61,602	$60,190	$67,254	$172,501	$161,723	**$856,313**
Deferred	$8,712,885	$8,877,768	$8,177,433	$7,834,473	$7,134,406	---
PCI	72	73	73	74	75	

Figure 7. Summary of Results from Scenario 4 — Increase PCI to 75 in 10 years



Recommendations

Of the various maintenance and funding options considered, the *ideal* strategy for the City is presented in Scenario 1, with a ten-year expenditure total of $16.4 million. Not only does this surface management plan improve the network PCI to an optimal level of 84, it also eliminates the entire deferred maintenance backlog. As examined scenarios deviate from this strategy, the cost to the City will increase in the long term. However, the amount of funds in the first year of expenditure, approximately $12.1 million, may make this strategy unrealistic for the City.

A funding increase to $850,000 per year would increase the overall network PCI to 70 over the next five years. At this funding level, the deferred maintenance backlog would nearly double however, increasing by $5.1 million, from $5.5 million in 2016, to $10.6 million in 2020. This is mainly due to the increase in the portion of the street network that would be in a 'Very Poor' condition, and require expensive reconstruction treatments.

At a $1.1 million funding level, the overall network PCI would increase to 75 over the next ten years. 85.9% of the street network would be in 'Good' condition, a vast improvement from the current level of 40.6% in 'Good' condition. This also slows the increase in deferred maintenance, from $4.8 million in 2016, to $6.7 million in 2020. Most of this increase is due to inflation. At present day costs, the increase is only $250,000. The percentage of roads in 'Very Poor' condition decreases from 10.8% currently, to 10.0% in 2025.

As demonstrated in the different scenarios, the City needs to invest a significant amount of money on expensive rehabilitation and reconstruction projects. This will reduce the deferred maintenance backlog, increase the network PCI, and allow money to be spent for less capital-intensive treatments such as slurry seals, crack sealing, and thin overlays in the future.

The PMP Budget Needs Module is recommending $14.8 million for streets in the 'Poor' to 'Very Poor' condition. Because these categories require extensive rehabilitation and reconstruction work, the work will consume approximately 90.4% of the planned costs, as estimated by the PMP. This places the city in a challenging position of trying to avoid increasing future street rehabilitation costs coupled with the risk of a substantial increase in an already significant ten year shortfall projection. Currently, 10.8% of the street network is in 'Very Poor' condition. However, this is likely to increase to 33.1% in ten years if current funding levels continue. This conclusion is noteworthy to the City Council. Unless funding is allocated to support an increase in the City's street rehabilitation program, the City may lose the opportunity to utilize lower cost preventative maintenance and light overlay treatment options.

The City should seek to increase funding for street maintenance One strategy may be to implement a local fee dedicated solely to street maintenance and rehabilitation, such as a local gas tax or Transportation Utility Fee. A Transportation Utility Fee (sometimes known as a Street Maintenance Fee, Road User Fee, or Street Utility Fee) is a monthly fee based on use of the transportation system that is collected from residences and businesses within the City limits. The fee is based on the number of trips a particular land use generates and is collected through the City's regular utility bill. Adjustments can also be made for certain business types based on the nature of the traffic they create. For example garbage companies may be charged a higher rate due to the added damage heavy garbage trucks cause to streets. The fee is designated for use in the maintenance and repair of the City's transportation system. Users of the street system share the costs

of the rehabilitative and preventive maintenance needed to keep the street system operating at an adequate level.

Preparation of a budget options report is just one step in using the MTC PMP to build an effective street maintenance program. Recommendations for further steps are:

- Obtain detailed subsurface information on selected sections before major rehabilitation projects are contracted. Costs for large rehabilitation projects are extremely variable and estimates can sometimes be reduced following project-level engineering analysis. It is possible that only a portion of a street recommended for reconstruction actually requires such heavy-duty repair.

- Evaluate the specific treatments and costs recommended by the PMP, and modify them to reflect the actual repairs and unit costs that are expected to be used.

- Test other budget options with varying revenues and preventive maintenance and rehabilitation splits.

- Prepare a brief memo to City Officials outlining the recommended ten-year maintenance program. The memo should include the amount of revenues available for pavement repair, a list of streets to be repaired, and the type of repair to be completed (listed in order of year of scheduled treatment), as well as any requests for specific budgetary actions.

In addition to performing cyclic pavement condition inspections, unit cost information for the applications of various maintenance and rehabilitation treatments should be updated annually in the PMP 'Decision Tree Module'. If this data is not kept current, the City runs the risk of understating actual funding requirements to adequately maintain the street network. A pavement inspection cycle that would allow for the inspection of arterial and collector streets every two years and residential streets every four to four years is recommended.

The City has completed the foundation work necessary to execute a successful pavement management plan. The street system is 'Fair' condition, indicating that the City has not consistently applied sufficient funds to maintain their large capital investment in the street system. At the current investment level, the street condition will continue to deteriorate. To improve the condition of the street system and reduce the maintenance backlog, additional revenues and support from various decision-making bodies are required.

As more 'Good' streets deteriorate into the 'Poor' and 'Very Poor' categories, the cost of deferred maintenance will continue to increase. The cost of the deferred maintenance backlog will stop increasing only when enough funds are provided to prevent streets from deteriorating into a worse condition category, or when the whole network falls into the 'Very Poor' category (i.e. can not deteriorate any further). At that time, the network would have to be replaced at a cost of $52.4 million.

Appendix A

Definitions

The *pavement condition index*, or PCI, is a measurement of the health of the pavement network or condition and ranges from 0 to 100. A newly constructed street would have a PCI of 100, while a failed street would have a PCI of 10 or less. The PCI is calculated based on pavement distresses identified in the field.

Network is defined as a complete inventory of all streets and other pavement facilities in which the City has jurisdiction and maintenance responsibilities. To facilitate the management of streets, they are subdivided into management sections identified as a segment of street, which has the same characteristics.

Urban Arterial street system carries the major portion of trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central City. In addition, significant intra-area-travel such as between central business districts and outlying residential areas exists.

Urban Collector Street provides land access service and traffic circulation within residential neighborhoods, commercial, and industrial areas. It differs from the arterial system in that facilities on a collector system may penetrate residential neighborhoods.

Urban Local Street system comprises all facilities not one of the higher systems. It serves primarily to provide direct access to abutting land and access to the higher systems.

Preventive Maintenance refers to repairs applied while the pavement is in "good" condition. Such repairs extend the life of the pavement at relatively low costs, and prevent the pavement from deteriorating into conditions requiring more expensive treatments. Preventive maintenance treatments include slurry seals, crack sealing, and deep patching. Treatments of this sort are applied before pavement deterioration has become severe and usually cost less than $2.00/sq. yd.

Deferred Maintenance refers to the dollar amount of maintenance and rehabilitation work that should have been completed to maintain the street in "good" condition, but had to be deferred due to funding deficiencies for preventative maintenance and/or pavement rehabilitation programs. The actual repairs that are being deferred are often referred to as a "backlog."

Stop Gap refers to the dollar amount of repairs applied to maintain the pavement in a serviceable condition (e.g. pothole patching). These repairs are a temporary measure to stop resident complaints, and do not extend the pavement life. Stopgap repairs are directly proportional to the amount of deferred maintenance.

Surface Types – AC is an Asphalt Concrete street that has one year's asphalt, for example a street that has been newly constructed reconstructed. In contrast AC/AC (in reports marked as O – AC/AC) is a street that has an overlay treatment over the original asphalt construction. Streets marked as ST do not have an asphalt concrete layer, only a surface composed of layers of oil and rock (macadam or chip seal).

'Good' Condition Category – Roads in 'Good' condition have no to little distresses found on them. These roads may have some minor surface weathering or small amounts of light cracking, and generally do not yet require any maintenance.

'Satisfactory' Condition Category – Roads in 'Good' condition have no to little distresses found on them. These roads may have some minor surface weathering or light cracking, but can generally be maintained with cost-effective preventative maintenance treatments (surface seals and crack seals).

'Fair' Condition Category' – Roads in 'Fair' condition show some form of distress caused by traffic load related activity or environmental distress that requires more than a life-extending treatment. The MTC Streetsaver program separates these into two condition categories for the purposes of the analysis. Category II – 'non-load' and Category III – 'load-related', based on whether a majority of the distresses found had load or environmental related causes

'Poor' Condition Category – Roads in 'Poor' condition are near the end of their service lives and often exhibit major forms of distress such as potholes, extensive alligator cracking, and/or pavement depressions.

'Very Poor' Condition Category - Roads in the 'Very Poor' condition category indicate that the road has failed. These pavements are at the end of their service lives and have major distresses, often indicating the failure of the sub base

Load related distress - . Load related distresses, such as alligator cracking, rutting, and depressions are usually a sign of a sub-base issue, caused by repeated traffic loads.

Non-load related distress - Non-load (or environmental), distresses typically have environmental causes related to the pavement becoming older and less elastic (brittle). Typical non-load distresses are longitudinal or transverse cracking, block cracking, and surface weathering and raveling.

2022.02.28 Local Rate Study Comparison

City	Street Maintenance	Parks Fee	Public Safety	Other
Woodburn	None	None	None	None
Gladstone	None	None	None	None
Aurora	$5.00/ Every 2 Months	None	None	Street Lighting $6.50 Every 2 Mo.
Estacada	None	None	None	None
Monmouth	None	None	None	None
Independence	None	None	None	None
Dallas	None	None	$2.36 EMS/Fire $2.59 Police	None
Oregon City	$14.63 Single Family	None	$6.50(temporary) Single Family	None
Canby	$5.00 per unit	$5.38 per unity	None	None
Silverton	$9.91 per unit	$1.66 per unit	None	None

***This does not include Water/Sewer/Stormwater rates.**