City of Gaithersburg
31 South Summit Avenue
Gaithersburg, Maryland 20877

Mayor and City Council Work Session Agenda
City Hall - Council Chambers
Monday, December 12, 2016, 7:30 PM

I. CALL TO ORDER

II. ANNOUNCEMENTS

A. Executive Session Announcement / Motion

III. DISCUSSION TOPICS

A. Long Draught Branch Stream Restoration Project

B. Briefing on the City's Pavement Management System

IV. CORRESPONDENCE

A. Outside

V. ADJOURNMENT

To confirm accessibility accommodations, please contact Doris Stokes at 301-258-6310, or email DStokes@gaithersburgmd.gov.

Please turn off all cellular phones and pagers prior to the meeting. Hand held signs brought may not be displayed in a manner which disrupts the meeting, blocks the view of spectators or cameras and poses a safety concern [e.g., signs mounted on stakes]. Your cooperation is appreciated.

The public is invited to attend and observe this session, but except in instances when the committee expressly invites public comments, no member of the public may participate in the discussions. The public may submit written comments to the committee staff liaison to be forwarded to the committee for its consideration. The City of Gaithersburg welcomes citizen involvement on committees. Please visit the City's website at www.gaithersburgmd.gov for vacancies.

ANNOUNCEMENTS

The next Mayor and City Council Regular Session will be held Monday, December 19, 2016, at 7:30 PM.

Call to Order

Announcements

CLOSED EXECUTIVE SESSION

Notice to the general public is hereby given that the Mayor and City Council of Gaithersburg plans to conduct a closed executive session immediately following its session on Monday, December 12, 2016, at City Hall. The meeting is proposed to be closed pursuant to the General Provisions Article of the Annotated Code of Maryland, Sections 3-305(b)(2) to protect the privacy or reputation of an individual with respect to a matter that is not related to public business and 3-305 (b)(1)(i) the appointment, employment, assignment, promotion, discipline, demotion, compensation, removal, resignation or performance evaluation of appointees, employees, or officials over whom it has jurisdiction. The topics to be discussed are the potential naming of public facilities and the personal attributes of potential honorees and the selection of candidates for City Council.

Discussion Topic

Mayor and City Council
Agenda Item Request

Meeting Date: 12/12/2016 **Type: Work Session Discussion**

Call to Podium:
Michael Johnson,Director of Public Works

Agenda Item Title:
Long Draught Branch Stream RestorationProject

Responsible Staff and Department:
Michael Johnson, Director of Public Works
Meredith Strider, Stormwater Program Manager
Becky Uebele, Civil Engineer
Greg Ryberg, Site Development Coordinator

Desired Outcome from Council:
Receive Presentation

SUPPORTING BACKGROUND ON NEXT PAGE

Mayor and City Council
Agenda Item Request

Supporting Background Information:

This stream restoration project is located on SHA-owned property, between MD-117 at Firstfield Road and the existing In-Stream Stormwater Management structure. The existing Stormwater Management structure was built in the late 1970s and is not functioning as designed. The purpose of this project is to remove this non-functional Stormwater Management structure and improve the existing adjacent stream channels. Any impacts to existing infrastructure on adjacent private properties have been coordinated; SHA will repair any existing infrastructure impacts on private property.

The project will be advertised in February 2017; although the construction of the project will not begin until after June 2017. The purpose of this presentation is to introduce the project and its benefits to the Mayor and City Council.

The presentation will be made by the Chief Engineer and staff from the Highway Hydraulics Division of the State Highway Administration (SHA).

Armand de Rosset, PE
Project Manager, Highway Hydraulics Division
State of Maryland
Department of Transportation
State Highway Administration
Highway Hydraulics Division
9300 Kenilworth Avenue
Greenbelt, MD 20770

Dana Havlik, PE
Chief, Highway Hydraulics Division
State of Maryland
Department of Transportation
State Highway Administration
Highway Hydraulics Division
9300 Kenilworth Avenue
Greenbelt, MD 20770

Jonathan Brown II, PE
Team Lead, Highway Hydraulics Division
State of Maryland
Department of Transportation
State Highway Administration
Highway Hydraulics Division
9300 Kenilworth Avenue
Greenbelt, MD 20770

Rich Pfingsten, PE
Project Manager, WSP Parsons Brinkerhoff
1 East Pratt Street
Suite 300
Baltimore, MD 21202

IHB – Between MD 117 and In-Stream Stormwater Management Structure

Long Draught Branch Stream Restoration Project

- Dana Havlik, PE
  - Chief, Highway Hydraulics Division
- Rich Pfingsten, PE
  - Project Manager, WSP Parsons Brinkerhoff
- AJ de Rosset, PE
  - Project Manager, Highway Hydraulics Division

Origins

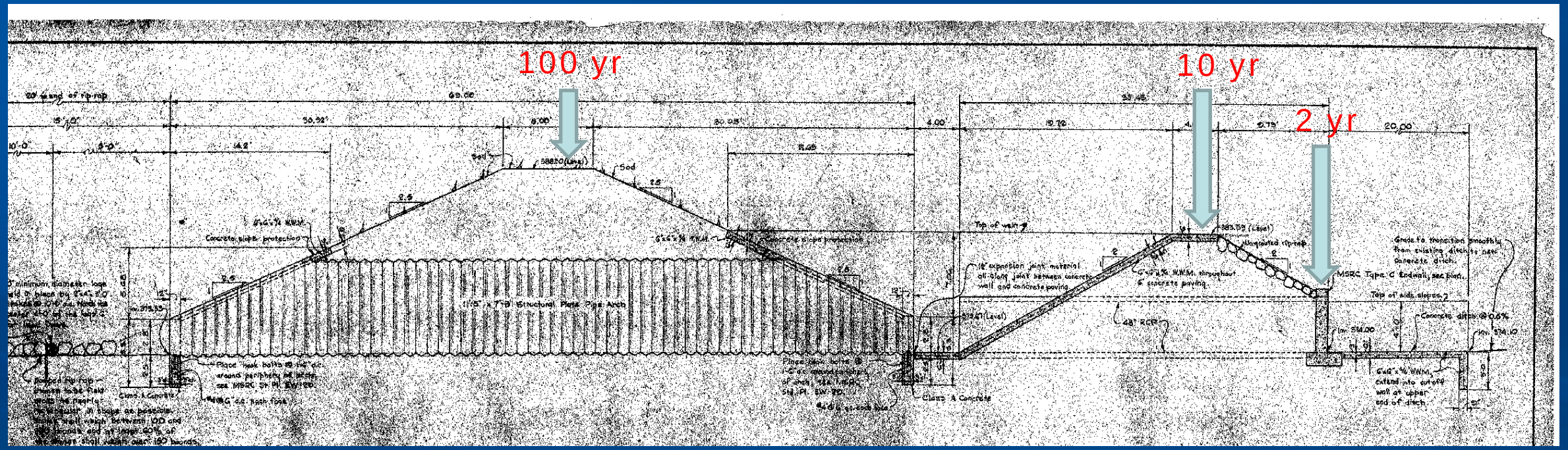
- Stream restoration in lieu of stormwater management for the widening of MD 117
  - The Robertson property was obtained in 2008 by the SHA in order to complete the stream rehabilitation
  - Original design rejected by regulatory agencies due to heavy tree impacts

Purpose

Failing Dam

In Line Stream SWM Structure; A.K.A Dam

Attenuated the 2, 10, and 100 year storm events



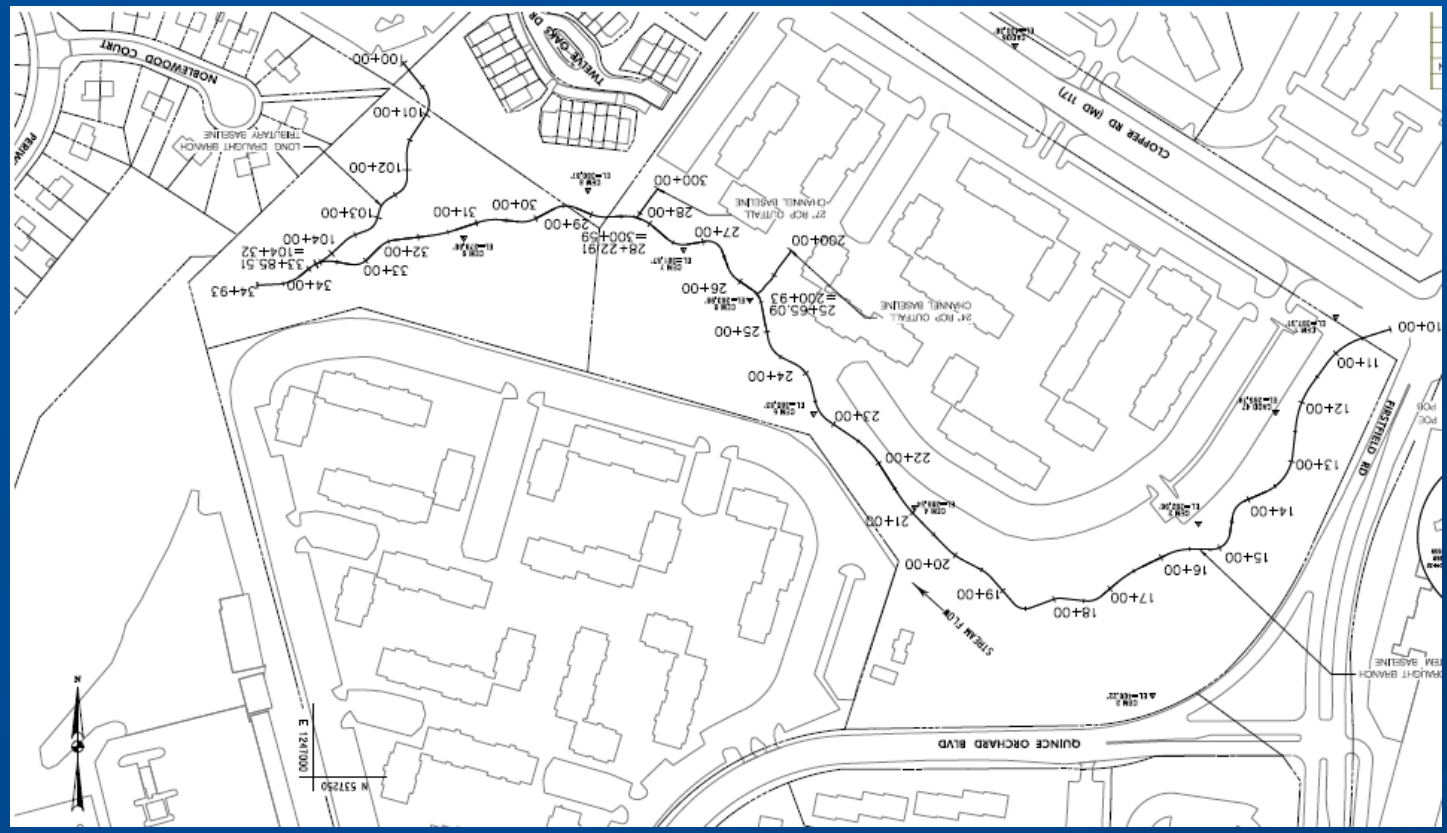
Project Description

- Stabilization of the stream banks
- Reduced nutrient loading
- Improved habitat
- Removal of the failing Dam

Project Location

Stream Geometry

2500 linear feet of stream work, not including the three contributing outfalls, will stabilize and improve the degraded section of Long Draught Branch Stream between Clopper Rd and the SWM dam.



Channel Stability

- Stabilizing the stream banks will reduce long term erosion.
- Neighboring properties will be protected.

- This picture was taken in 2011.
- As an example of how far the banks have eroded in some places, the light pole you see to the right of the channel is now collapsed into the stream.

Outfall Stabilization

- Pipe leaving the NEA property

Wetlands

- Current design reduces impacts to existing wetlands by 75% over the 2008 design

Dam Removal

- A series of riffle grade controls, vanes, and sills will bring the channel elevation upstream of the removed dam to the elevation of the bedrock downstream of the dam

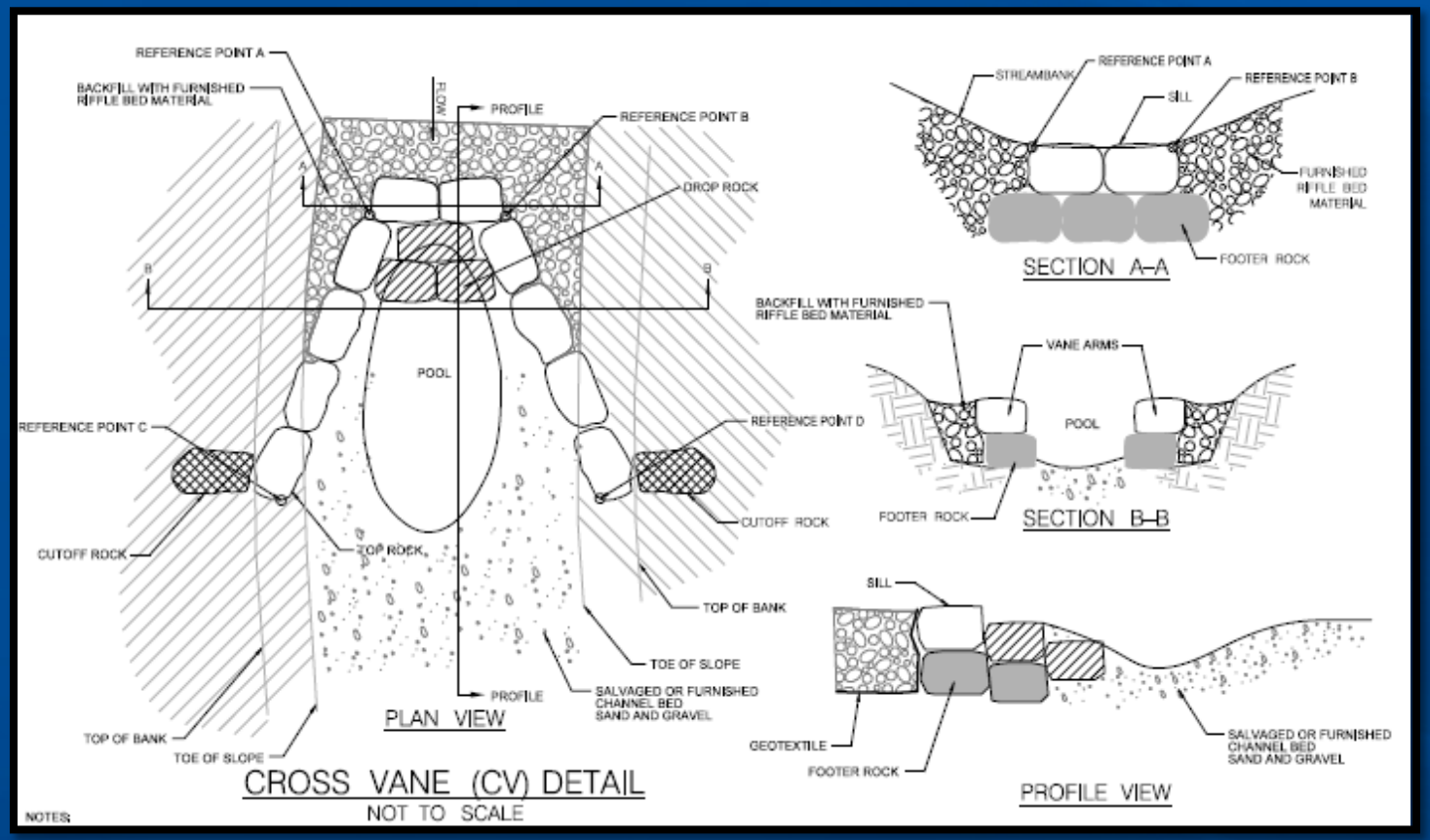
Joint separation within the 10 year spillway

Design Highlights

- Why did we design the features that we are using on this project the way we did?
  - Natural Channel design

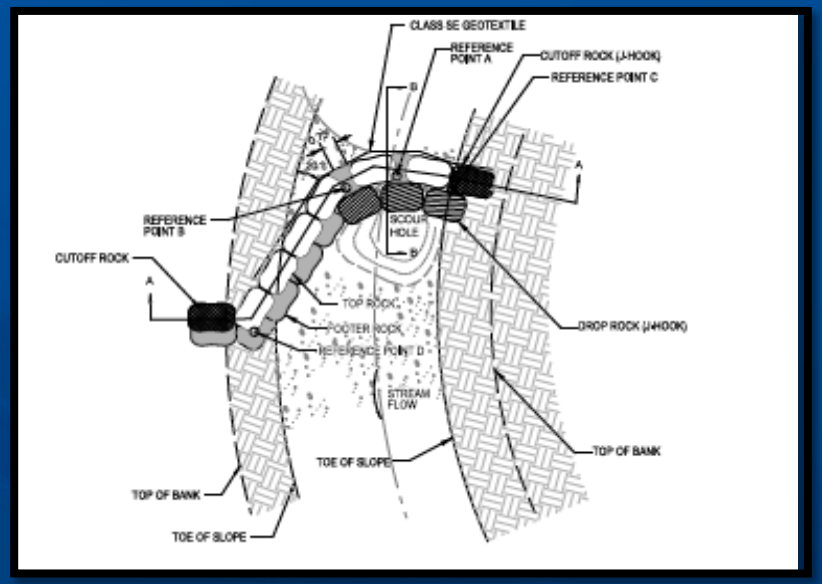
Cross Vane

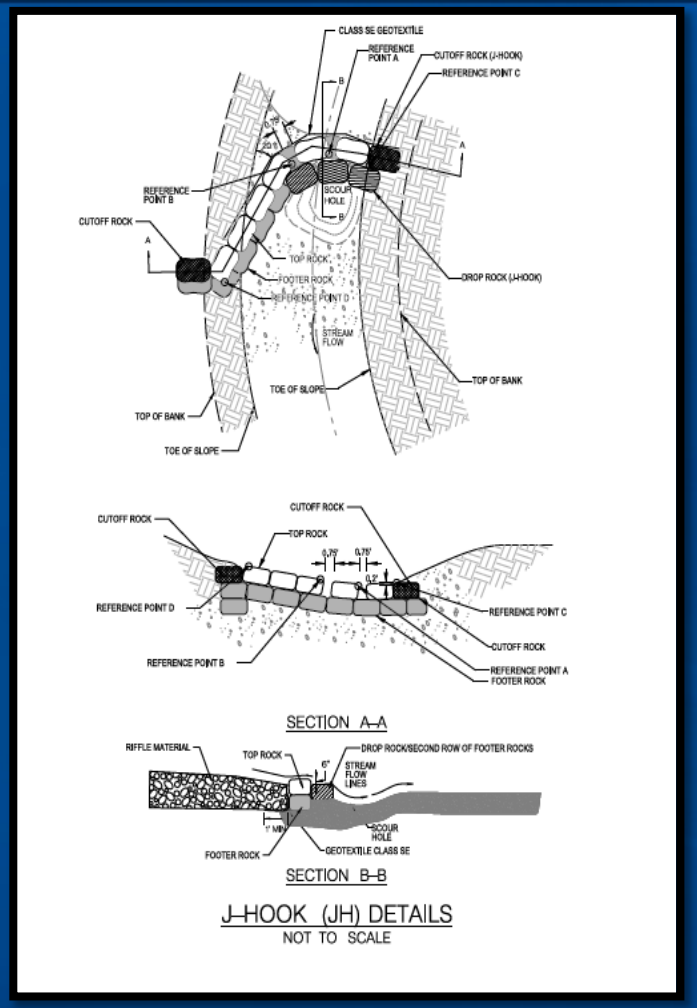
- Stone structure that steps down the channel elevation
- Provides a natural sorting of bed material
- Provides instream cover/habitat



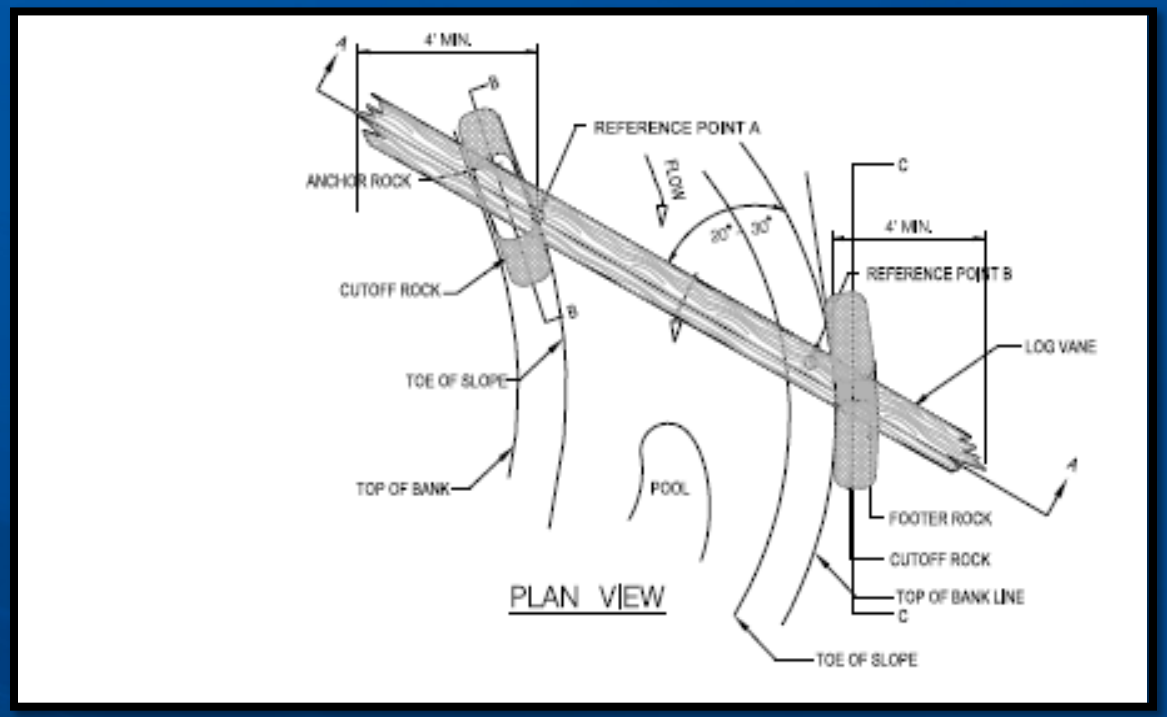
J-Hook

- The J- portion of the hook is set within the main channel of the stream
- Redirects velocities away from the bank
- Creates a ‘holding’ zone for fish
- Portions of it stabilize the bank

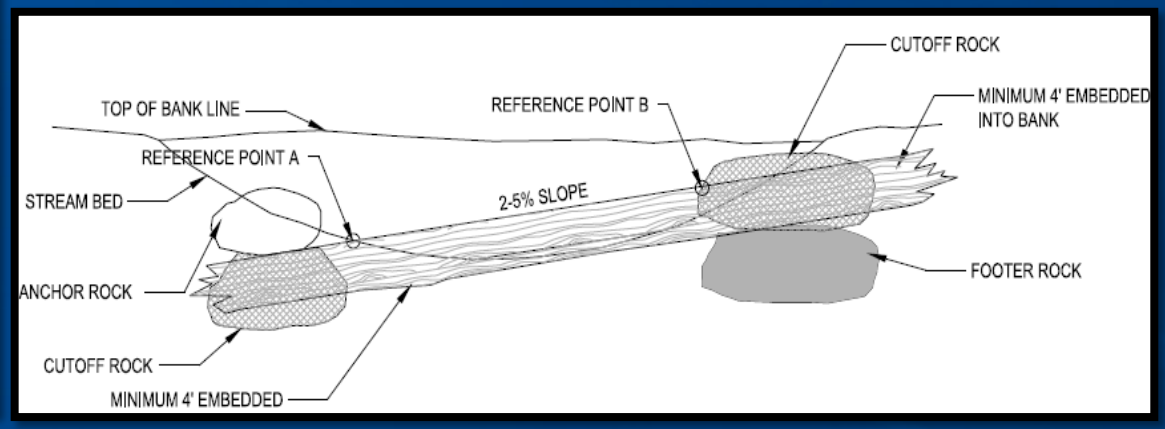




Log Vane



- Hard wood log, set at an angle to the flow of water
- Meant to tumble and turn the water
- Decreases stress on the bank
- Provides habitat



Overall Project Benefits

- Remove the failing SWM dam
- Improve Water Quality
- Stabilize the existing infrastructure
- Increase habitat
- Enhance the aesthetic value of the stream corridor

THANK YOU!

Mayor and City Council
Agenda Item Request

Meeting Date: 12/12/2016 **Type: Work Session Discussion**

Call to Podium:
Michael Johnson, Director of Public Works
Ollie Mumpower, Engineering Services Division Chief

Agenda Item Title:
Briefing on the City's Pavement Management System

Responsible Staff and Department:
Ollie Mumpower, Engineering Services Division Chief, Department of Public Works

Desired Outcome from Council:
Receive Presentation

SUPPORTING BACKGROUND ON NEXT PAGE

Mayor and City Council
Agenda Item Request

Supporting Background Information:

This briefing details the City's new Pavement Management System (PMS) that will allow us to look at City roadway pavements in a proactive and comprehensive fashion. Among the many benefits of this approach will be lower life-cycle costs and higher overall roadway network quality. Data collection for this program began in August 2016 and will be used to develop a master schedule for pavement improvements citywide beginning in FY18.

The briefing will discuss:

- How the program was handled in the past,
- The automated data collection process,
- The development of a pavement condition index,
- A report on the current condition of our streets,
- A discussion regarding when roads should be "fixed,"
- A discussion on the various treatment strategies we can use to rehabilitate our streets, and
- A discussion of "next steps" to implement this program.

A second work session on the budgetary impacts of this program is scheduled for January 9, 2017.

Gaithersburg
A CHARACTER COUNTS! CITY

Pavement Management System

Mayor and City Council Work Session

Monday, December 12, 2016

Introduction

- In the past, the City used "***Worst First***" approach to select roadways for our Capital Improvement Program (CIP)
  - *"Worst First" results in higher capital costs over the life of the roadway network without predictable network improvement.*
- Why?
  - The City lacked good predictive capability on adequate funding level needed to maintain or improve the quality of its roadway network.

Treatments

- In the past, the City has limited its pavement improvement approach to three strategies:
  - Preservation treatments including crack sealing
  - Resurfacing (Full Depth Milling and Overlay)
  - Reconstruction

Other Treatment Options

- City limited its pavement improvement approach to these treatments – there are other more economical treatments, but their use requires a rational decision process to allow the city's program to become:

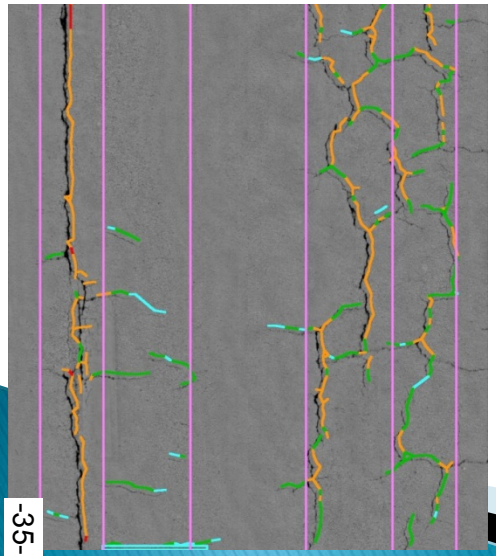
Proactive not Reactive

How was this addressed?

Pavement Inventory Process via Automated Pavement Data Collection

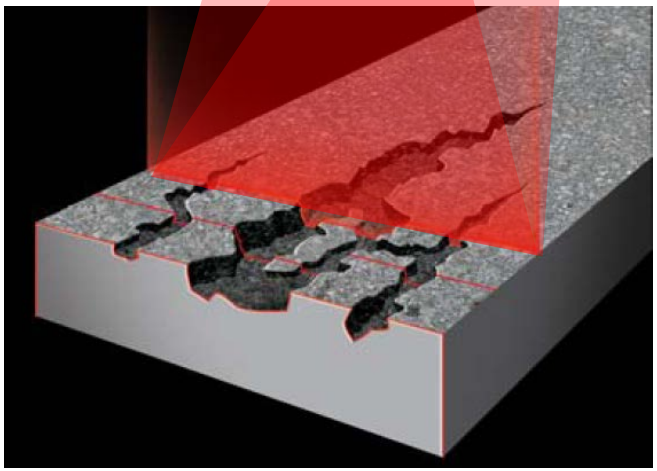
GPS/Distance

Cameras x 5 (up to 11MP)



3D Laser Pavement Data Collection System

- Longitudinal Cracking
- Transverse Cracking
- Block Cracking
- Fatigue/Alligator Cracking
- Roughness
- Rutting/Distortion
- Raveling
- Bumps and Dips



These results are used to develop a Pavement Condition Index (PCI) based on the methodologies detailed in ASTM D6433

Designation: D 6433 – 07

Standard Practice for Roads and Parking Lots Pavement Condition Index Surveys[1]

This standard is issued under the fixed designation D 6433; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This practice covers the determination of roads and parking lots pavement condition through visual surveys using the Pavement Condition Index (PCI) method of quantifying pavement condition.

1.2 The PCI for roads and parking lots was developed by the U.S. Army Corps of Engineers (**1, 2**).[2] It is further verified and adopted by DOD and APWA.

1.3 The values stated in inch-pound units are to be regarded as the standard. The SI units given in parentheses are for information only.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.* Specific precautionary statements are given in Section 6.

2. Terminology

2.1 *Definitions of Terms Specific to This Standard:*

2.1.1 *additional sample*—a sample unit inspected in addition to the random sample units to include nonrepresentative sample units in the determination of the pavement condition. This includes very poor or excellent samples that are not typical of the section and sample units, which contain an unusual distress such as a utility cut. If a sample unit containing an unusual distress is chosen at random it should be counted as an additional sample unit and another random sample unit should be chosen. If every sample unit is surveyed, then there are no additional sample units.

2.1.2 *asphalt concrete (AC) surface*—aggregate mixture with an asphalt cement binder. This term also refers to surfaces constructed of coal tars and natural tars for purposes of this practice.

2.1.3 *pavement branch*—a branch is an identifiable part of the pavement network that is a single entity and has a distinct function. For example, each roadway or parking area is a separate branch.

2.1.4 *pavement condition index (PCI)*—a numerical rating of the pavement condition that ranges from 0 to 100 with 0 being the worst possible condition and 100 being the best possible condition.

2.1.5 *pavement condition rating*—a verbal description of pavement condition as a function of the PCI value that varies from "failed" to "excellent" as shown in Fig. 1.

2.1.6 *pavement distress*—external indicators of pavement deterioration caused by loading, environmental factors, construction deficiencies, or a combination thereof. Typical distresses are cracks, rutting, and weathering of the pavement surface. Distress types and severity levels detailed in Appendix X1 for AC, and Appendix X2 for PCC pavements must be used to obtain an accurate PCI value.

2.1.7 *pavement sample unit*—a subdivision of a pavement section that has a standard size range: 20 contiguous slabs (±8 slabs if the total number of slabs in the section is not evenly divided by 20 or to accommodate specific field condition) for PCC pavement, and 2500 contiguous square feet, ± 1000 ft^2 (225 ± 90 m^2), if the pavement is not evenly divided by 2500 or to accommodate specific field condition, for AC pavement.

2.1.8 *pavement section*—a contiguous pavement area having uniform construction, maintenance, usage history, and condition. A section should have the same traffic volume and load intensity.

2.1.9 *portland cement concrete (PCC) pavement*—aggregate mixture with portland cement binder including nonreinforced and reinforced jointed pavement.

2.1.10 *random sample*—a sample unit of the pavement section selected for inspection by random sampling techniques, such as a random number table or systematic random procedure.

3. Summary of Practice

3.1 The pavement is divided into branches that are divided into sections. Each section is divided into sample units. The type and severity of pavement distress is assessed by visual

[1] This practice is under the jurisdiction of ASTM Committee E17 on Vehicle - Pavement Systems and is the direct responsibility of Subcommittee E17.41 on Pavement Testing, Evaluation, and Management Methods.

Current edition approved Dec. 1, 2007. Published January 2008. Originally approved in 1999. Last previous edition approved in 2003 as D 6433 – 03.

[2] The boldface numbers in parentheses refer to the list of references at the end of this standard.

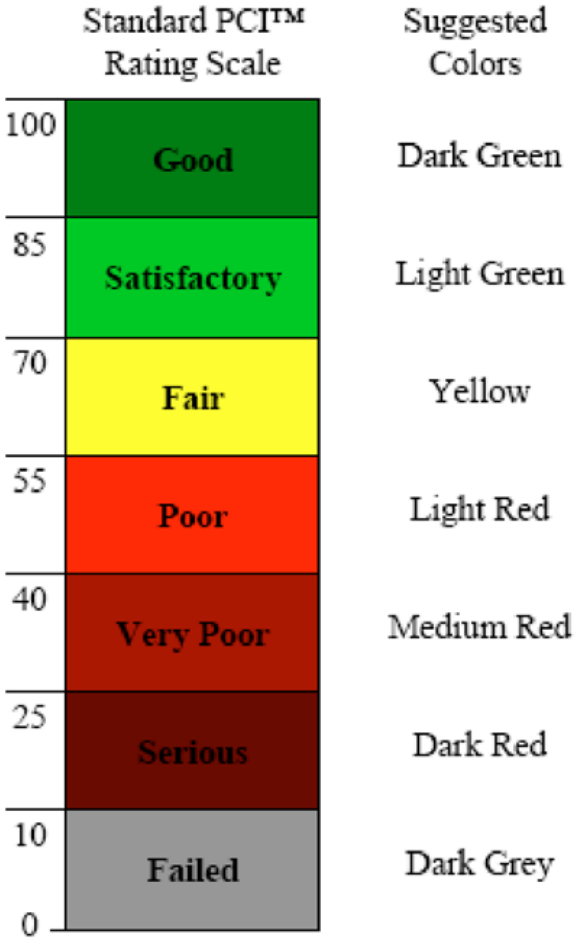
Pavement Condition Index (PCI)

- The Pavement Condition Index (PCI) is a numerical indicator that rates the surface condition of the pavement.
- It begins to provide an objective and rational basis for determining maintenance and repair needs and priorities.
- Continuous monitoring of the PCI is used by Pavement Managers to establish the rate of deterioration of the pavement.

Pavement Condition Index (PCI) ASTM D6433

Many roadway owners have found that the ASTM PCI does not match their "business model" – *how they program funding for roadway improvement.*

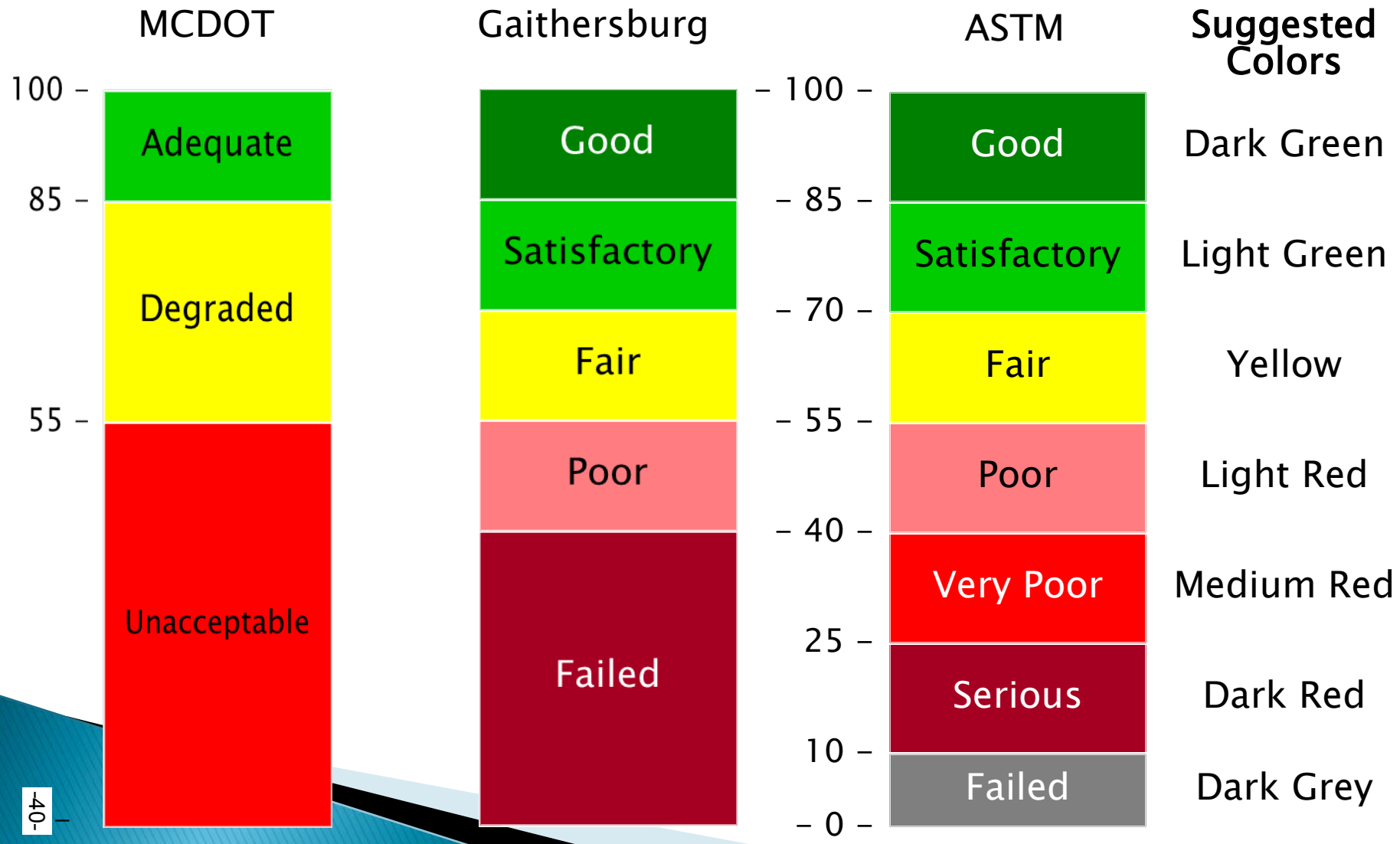
To compensate for this, they have adopted differing decision breakpoints.



Proposed Gaithersburg Pavement Condition Rating System

- Based on a review of a number of different rating systems, staff proposes that the city adopt a modified version of the system detailed in ASTM D6433.

Rating System Comparisons



City of Gaithersburg
2016 Pavement Condition Analyses

- 190 Lane Miles Citywide
- 40 Lane Miles of Collector/Arterial roads
  - 21% of network
- 150 Lane Miles of Residential roads
  - 79% of network
- **Citywide Average PCI is 76.85**
- **Collector/Arterial Average PCI is 77.0**
- **Residential Average PCI is 75.7**

Comparisons

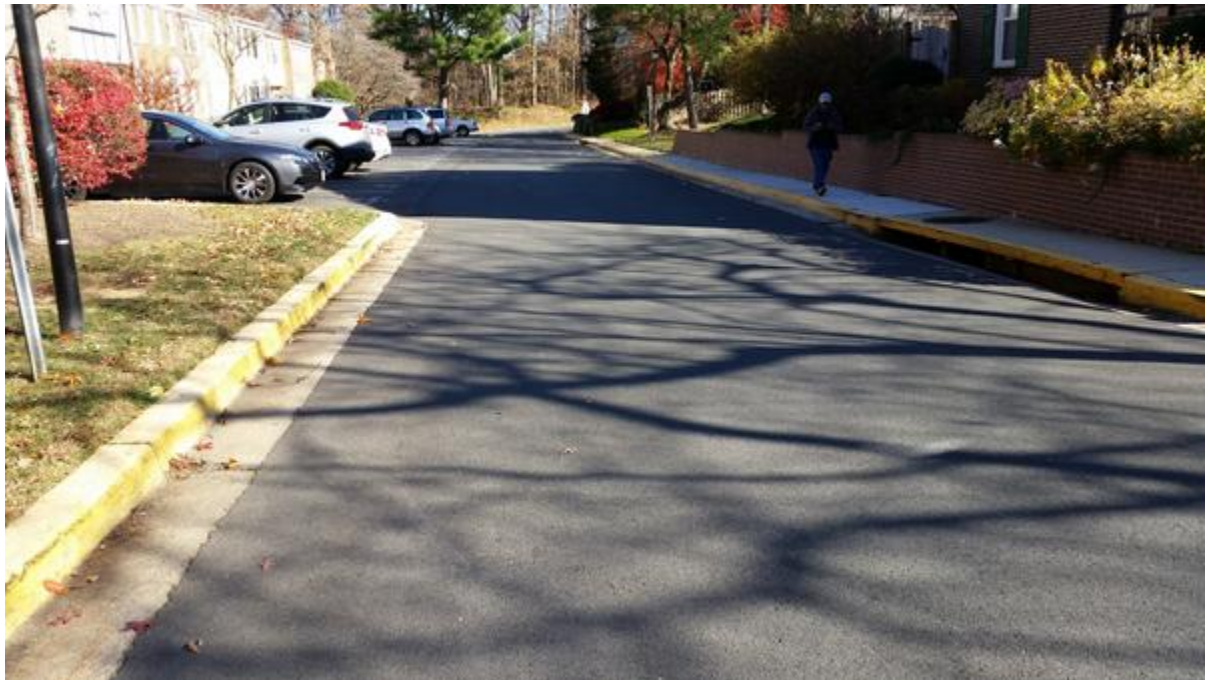
Gaithersburg

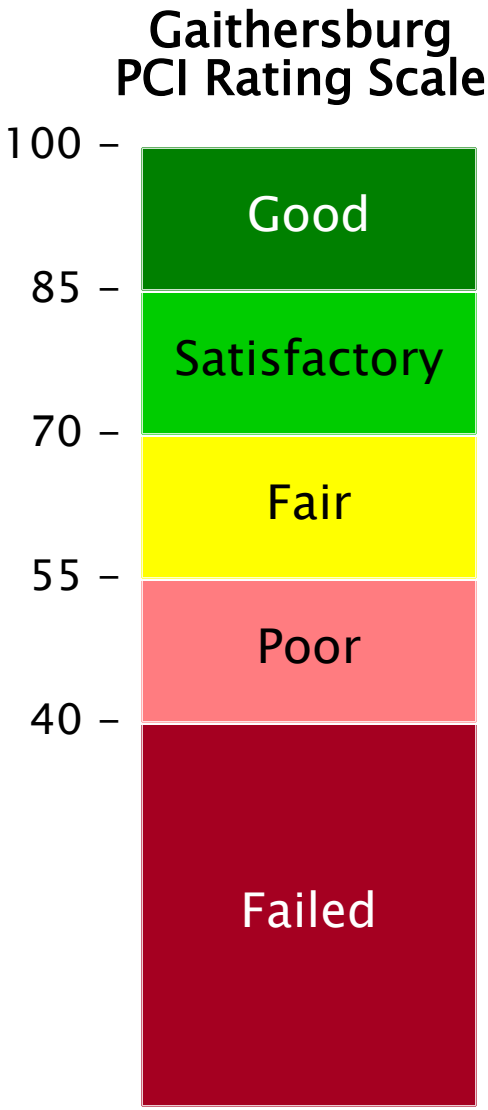
- **Citywide Average PCI is 76.9**
- **Collector/Arterial Average PCI is 77.0**
- **Residential Average PCI is 75.7**

Montgomery County

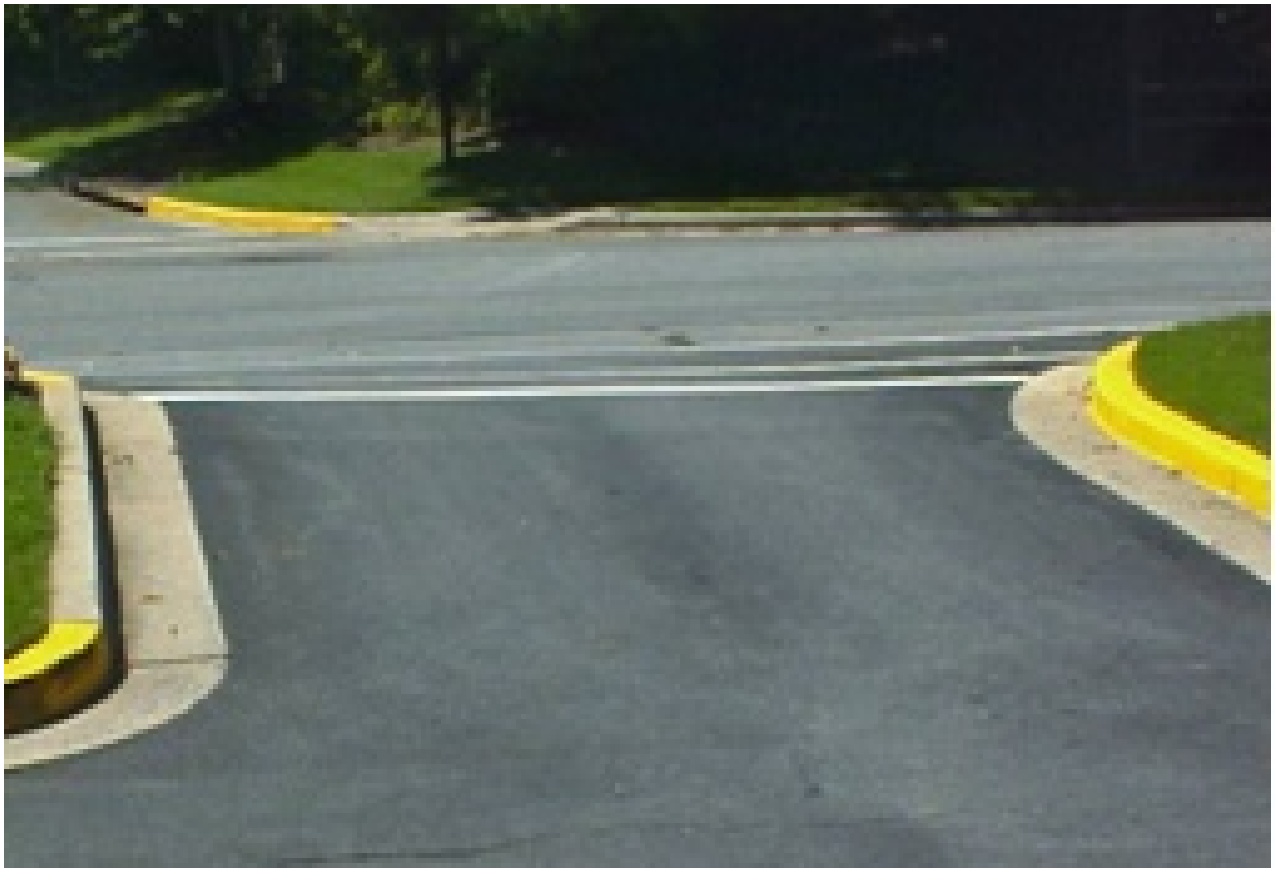
- **Countywide Average PCI is 67**
- **Countywide Primary/Arterial Average PCI is 72.0**
- **Residential/Rural Average PCI is 66**

PCI Example 95 (Good)





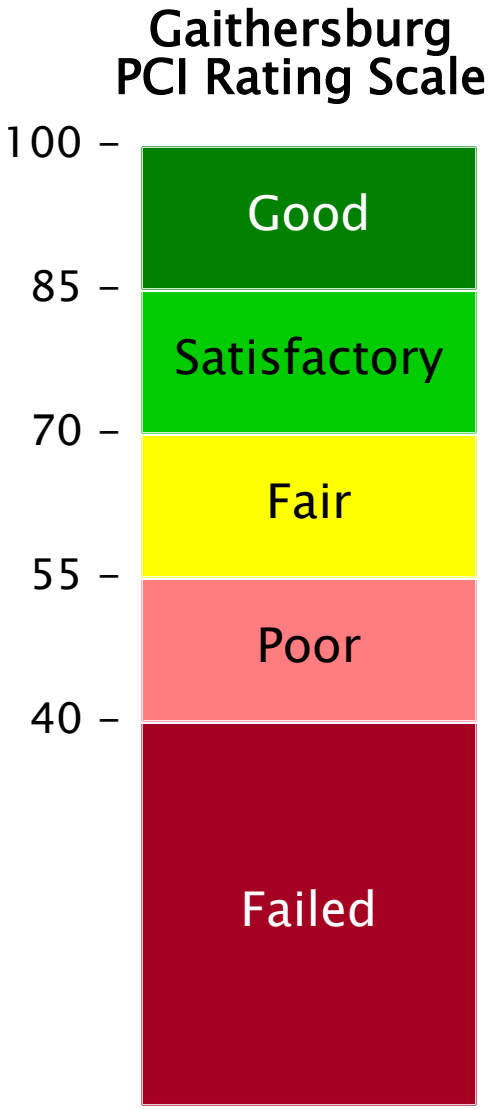
PCI Example 79 (Satisfactory)



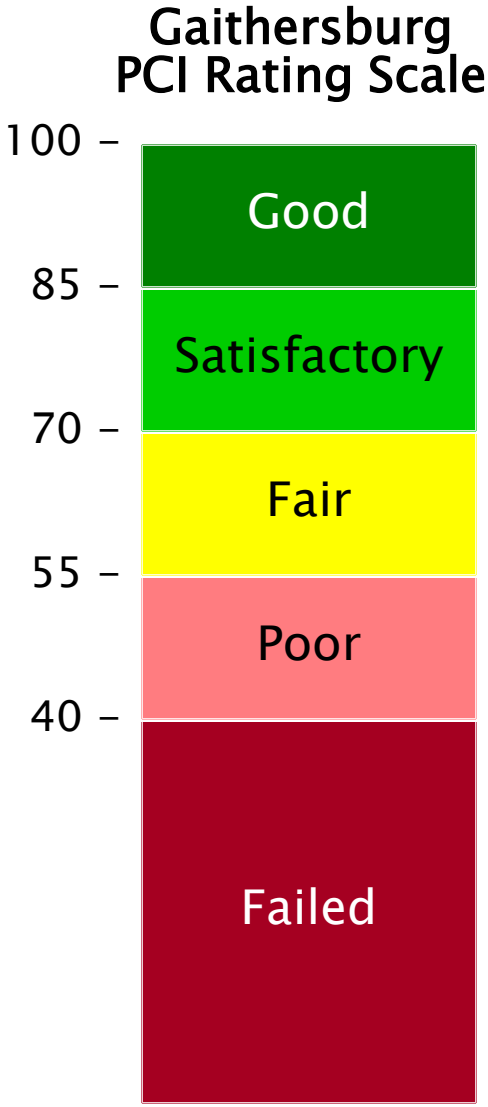
Gaithersburg PCI Rating Scale

00 –	Good
85 –	Satisfactory
70 –	Fair
55 –	Poor
40 –	Failed

PCI Example 65 (Fair)

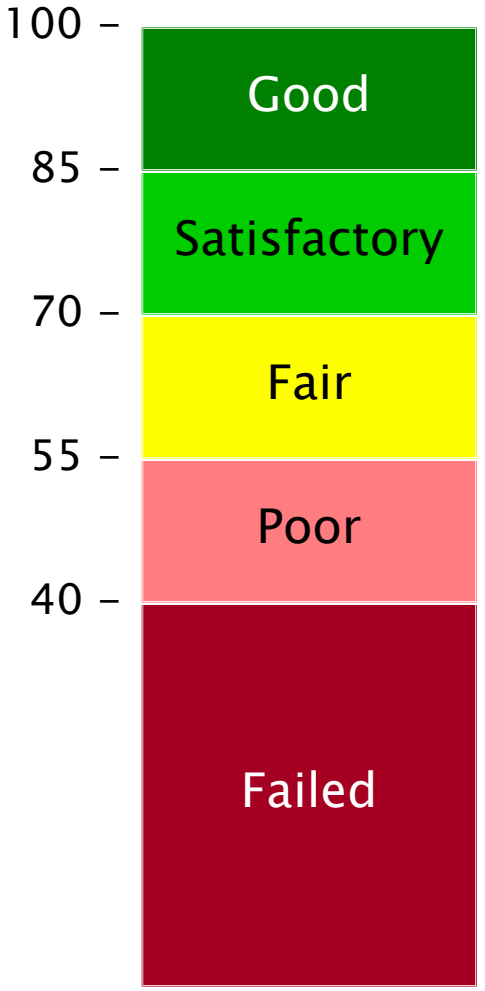


PCI Example 44 (Poor)

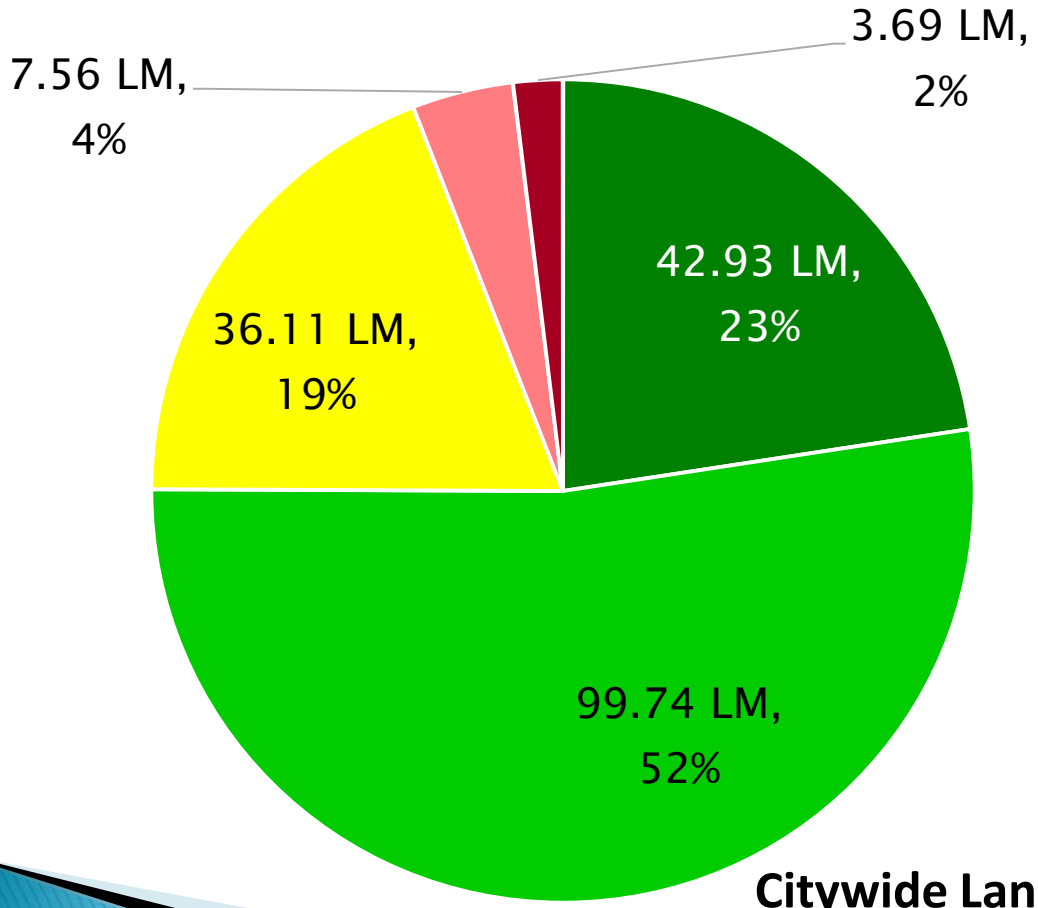


PCI Example 33(Failed)

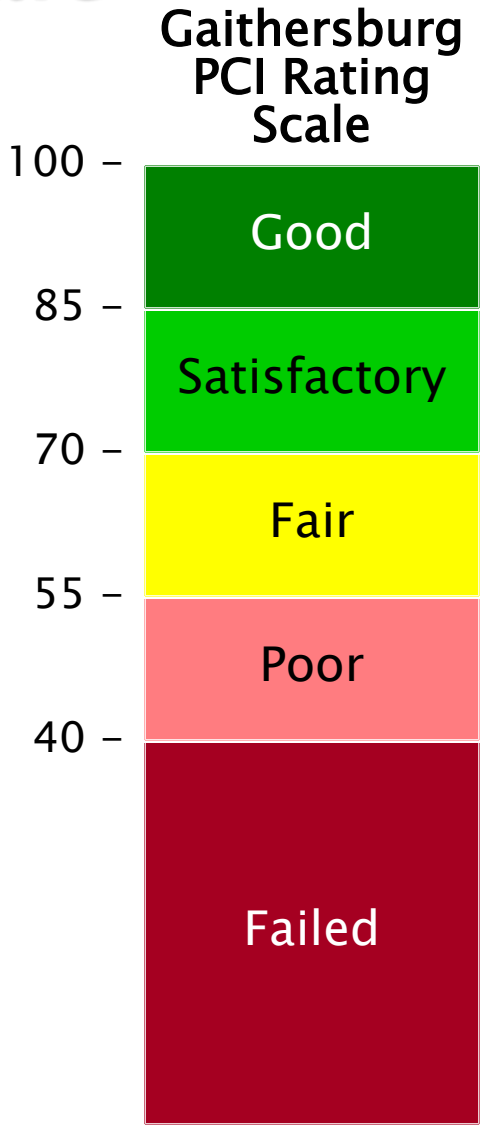
Gaithersburg
PCI Rating Scale



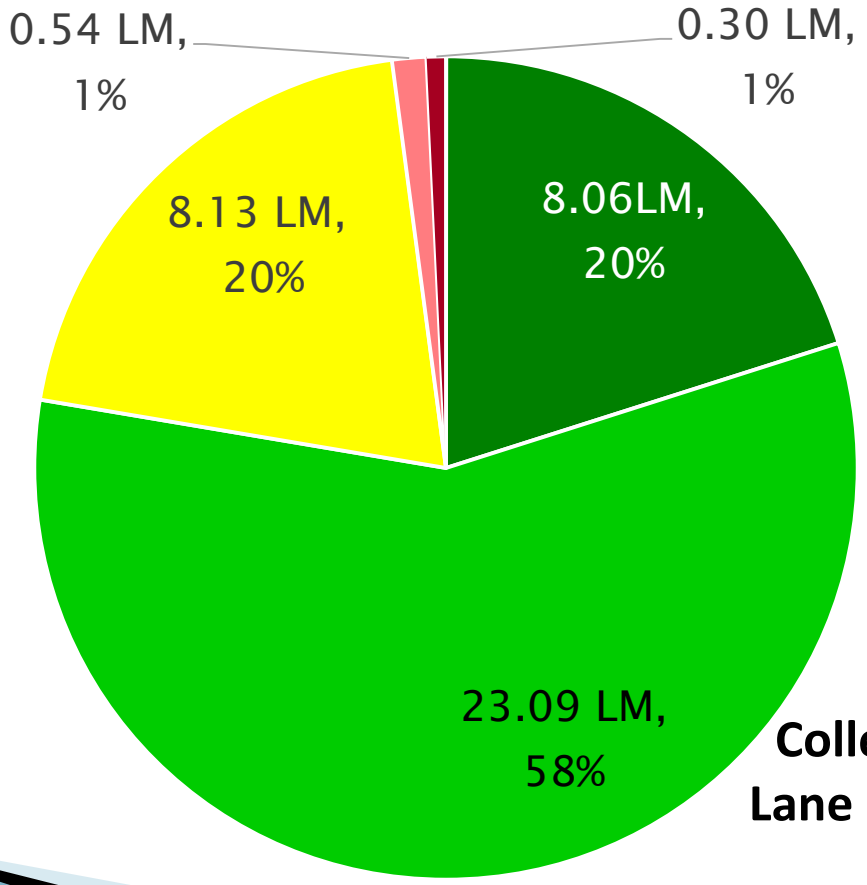
Citywide Lane Mile Breakdown by Gaithersburg PCI Rating Scale



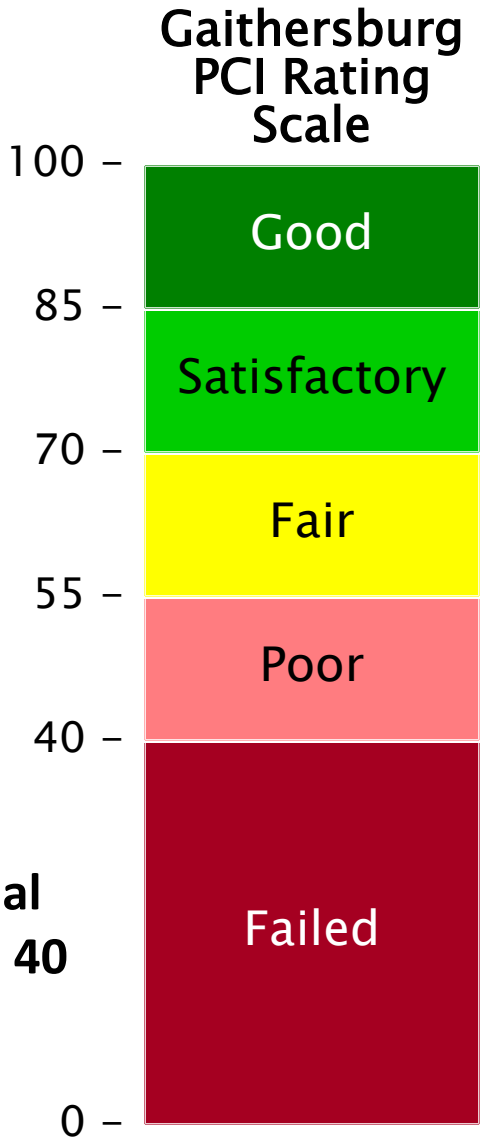
Citywide Lane Mile Total = 190 LM



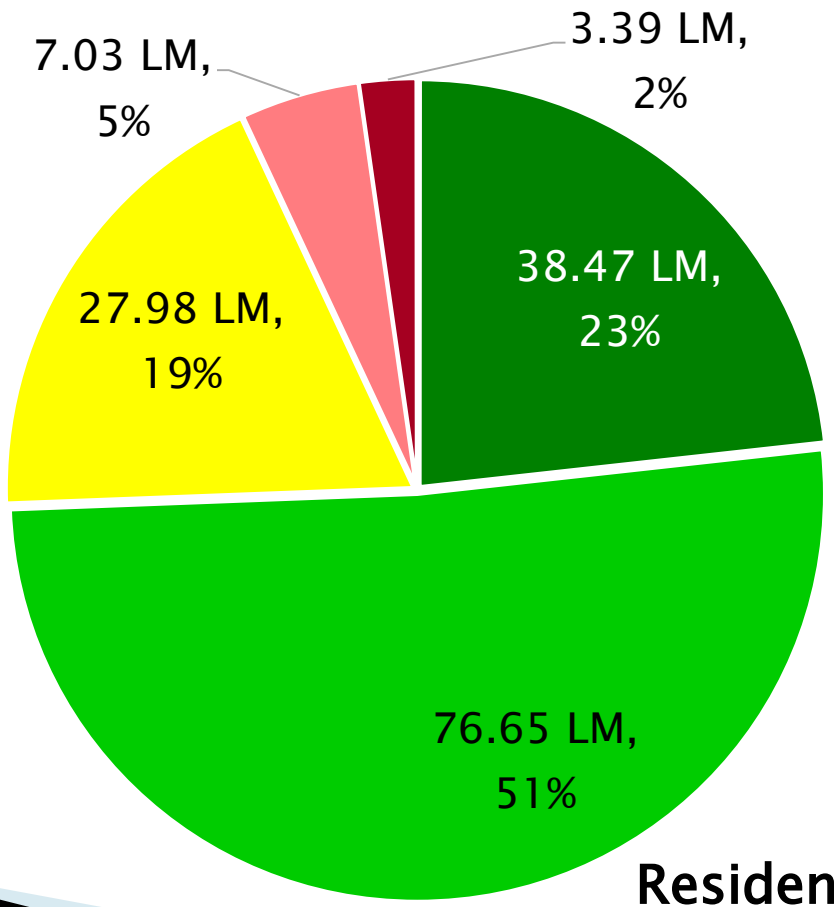
Collector/Arterial Lane Mile Breakdown Gaithersburg PCI Rating Scale



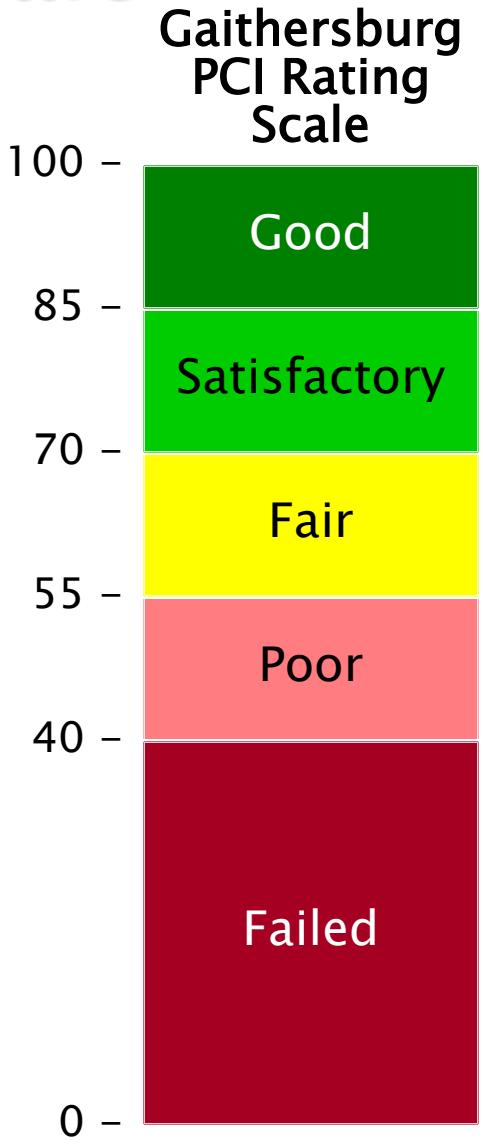
Collector/Arterial Lane Mile Total = 40 LM



Residential Lane Mile Breakdown Gaithersburg PCI Rating Scale

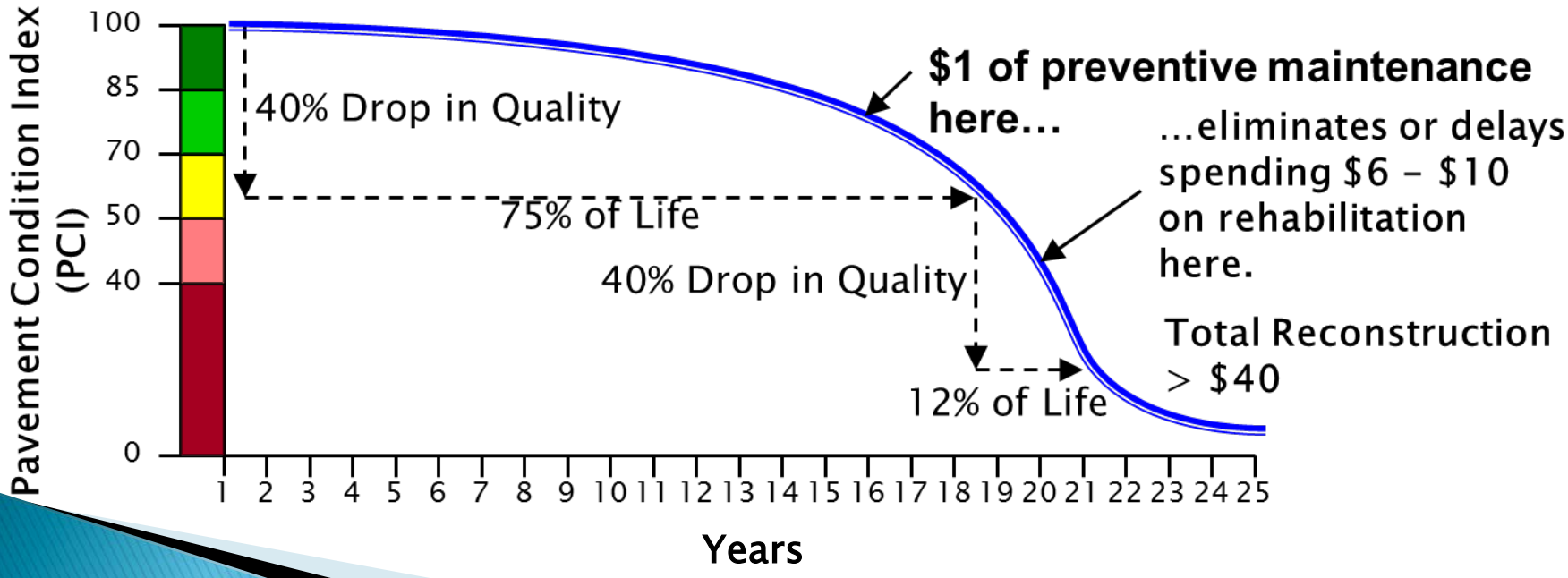


Residential Lane Mile Total = 150 LM



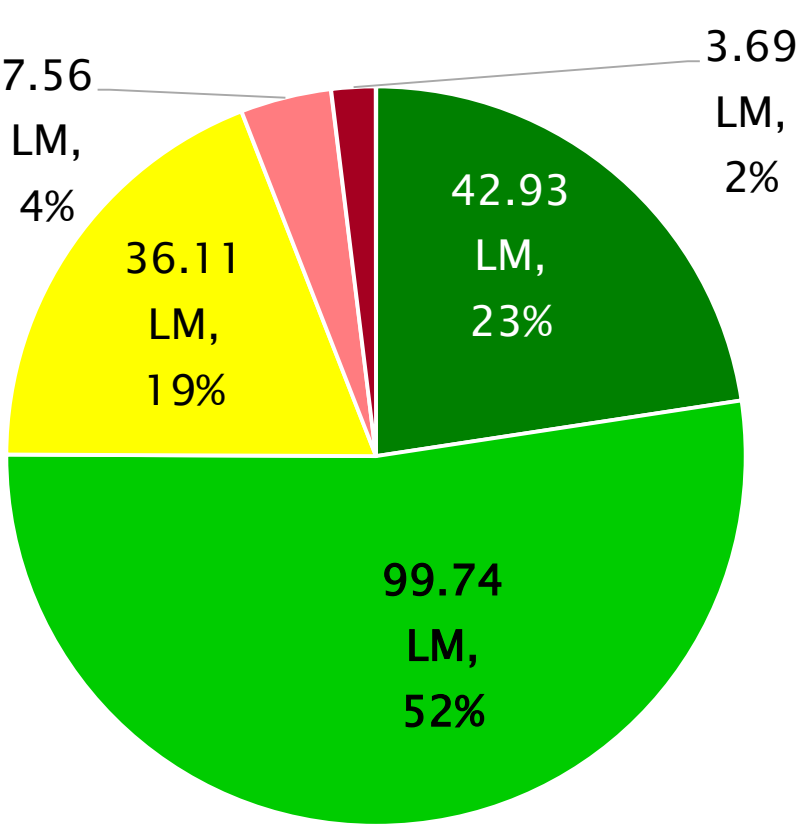
When Should We Fix It?

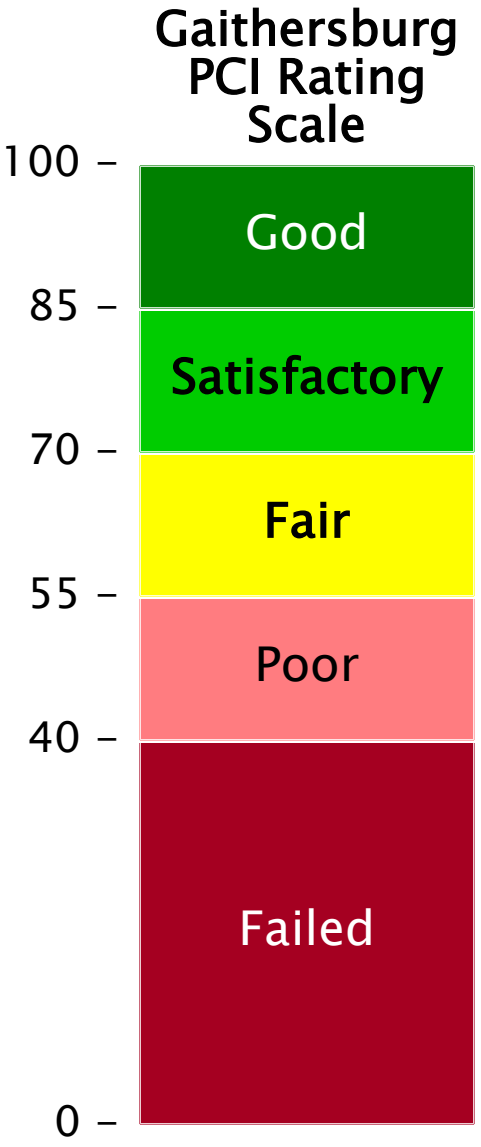
- Our objective is to perform restorative work on roads before they reach a condition level that would require a more costly treatment. How fast the road deteriorates depends on the following factors: (1) type of pavement, (2) thickness of the pavement structure, (3) traffic type and volume, and (4) subgrade strength.



When Should We Fix the Road?

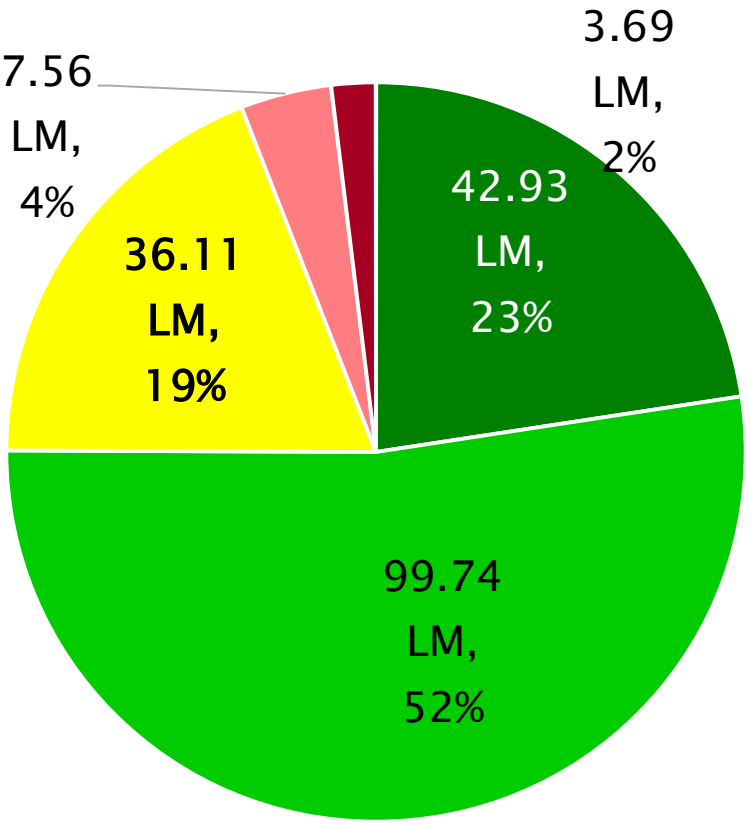
Apply pavement preservation treatments on streets that are rated as "Satisfactory." It is far less expensive to keep a street in good condition than to defer treatment and allowing it to deteriorate further.

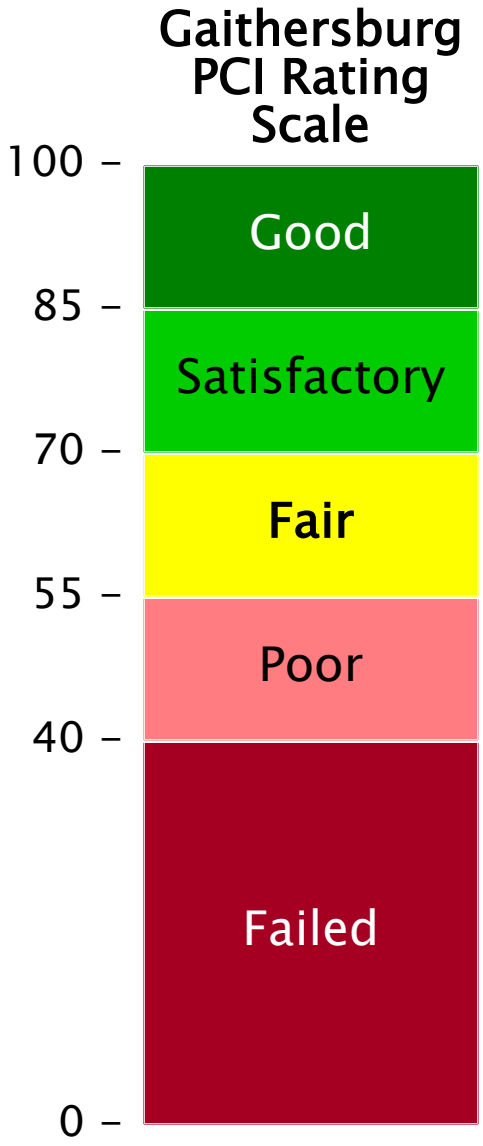




When Do We Fix the Road?

Focus on treating the streets that are rated as **"Fair."** This range is considered critical because treatment deferred beyond this point will increase the treatment cost many times over.

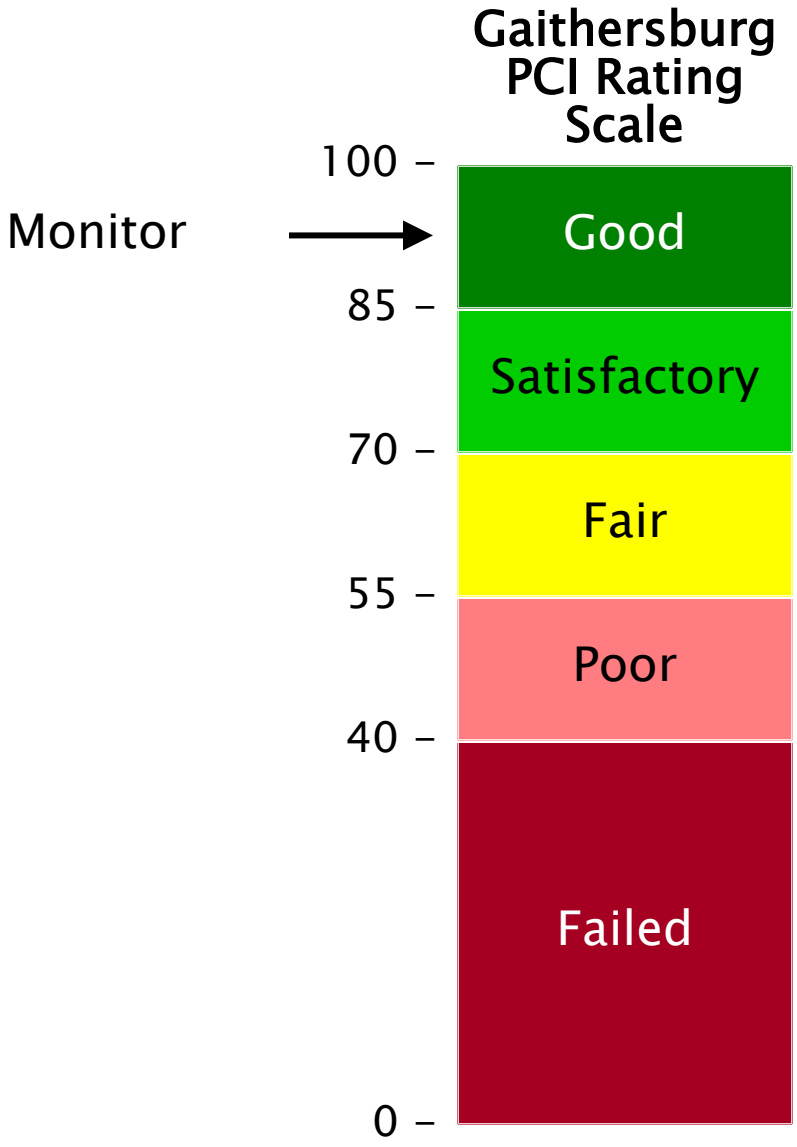




Once we know what condition the road is in and when we should fix it, the next question is:

“What is the most economical manner in which to fix the road?”

How Do We Fix the Road?



Monitor

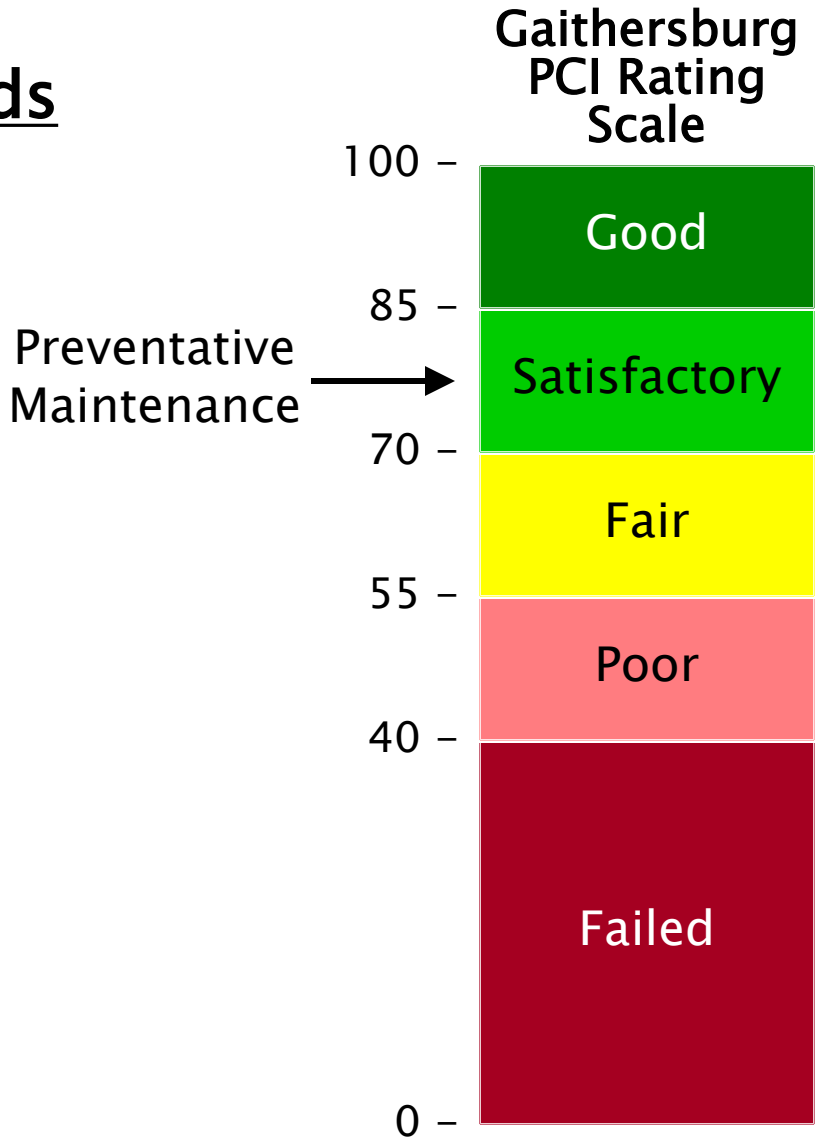
Roads with PCI's between 85-100 should be examined on a regular basis, and if needed, preventive maintenance measures could be considered.

How Do We Fix the Road?

Preventive Maintenance for Roads with PCI's between 70-85

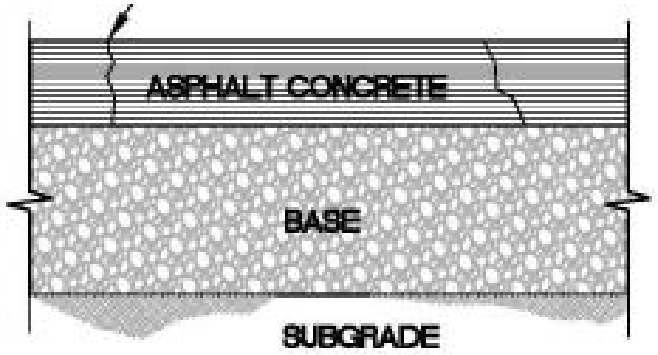
Possible treatment strategies could include:

- asphalt overlays,
- thin surface treatments, and
- crack sealing of existing surfaces.

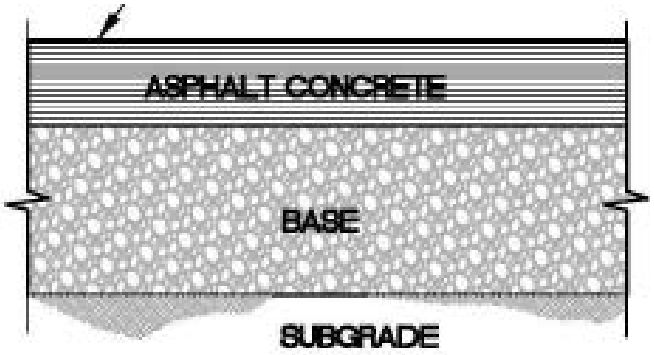


Preventive Maintenance

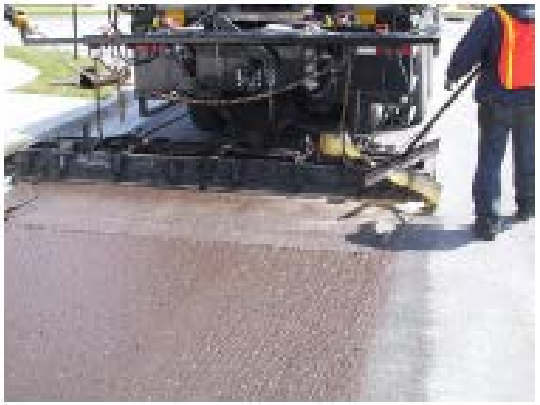
Crack Sealing



Surface Treatments



ROADWAY SECTIONS

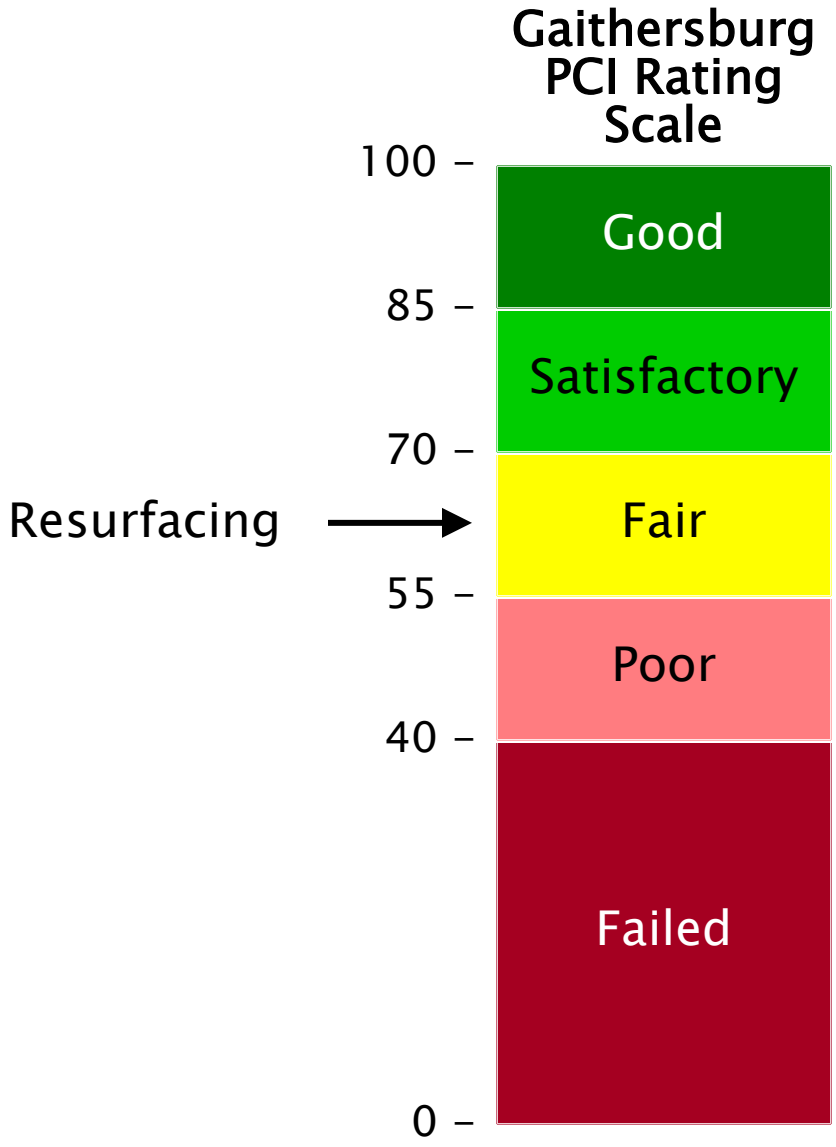


How Do We Fix the Road?

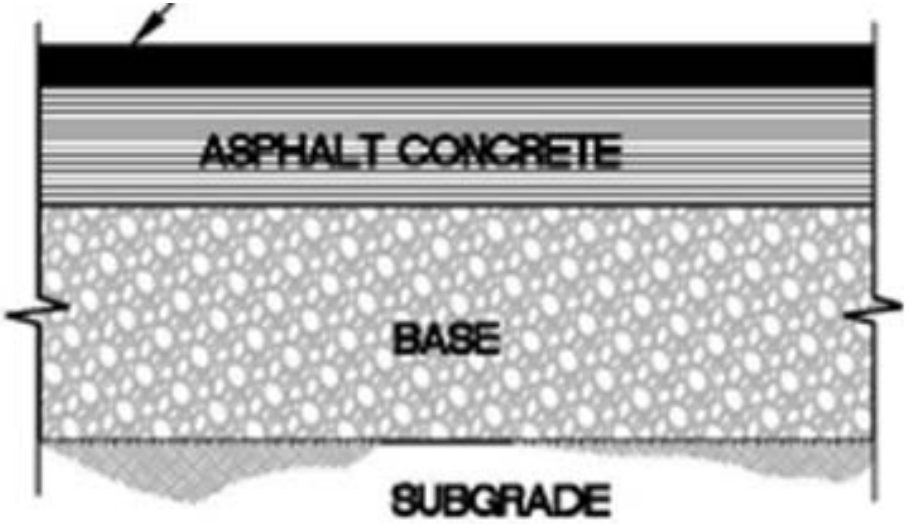
Resurfacing for Roads with PCI's between 55-70

Possible treatment strategies include:

- milling of the existing pavement,
- patching of problem areas, as needed, then
- overlaying of a new surface.



Mill & Overlay

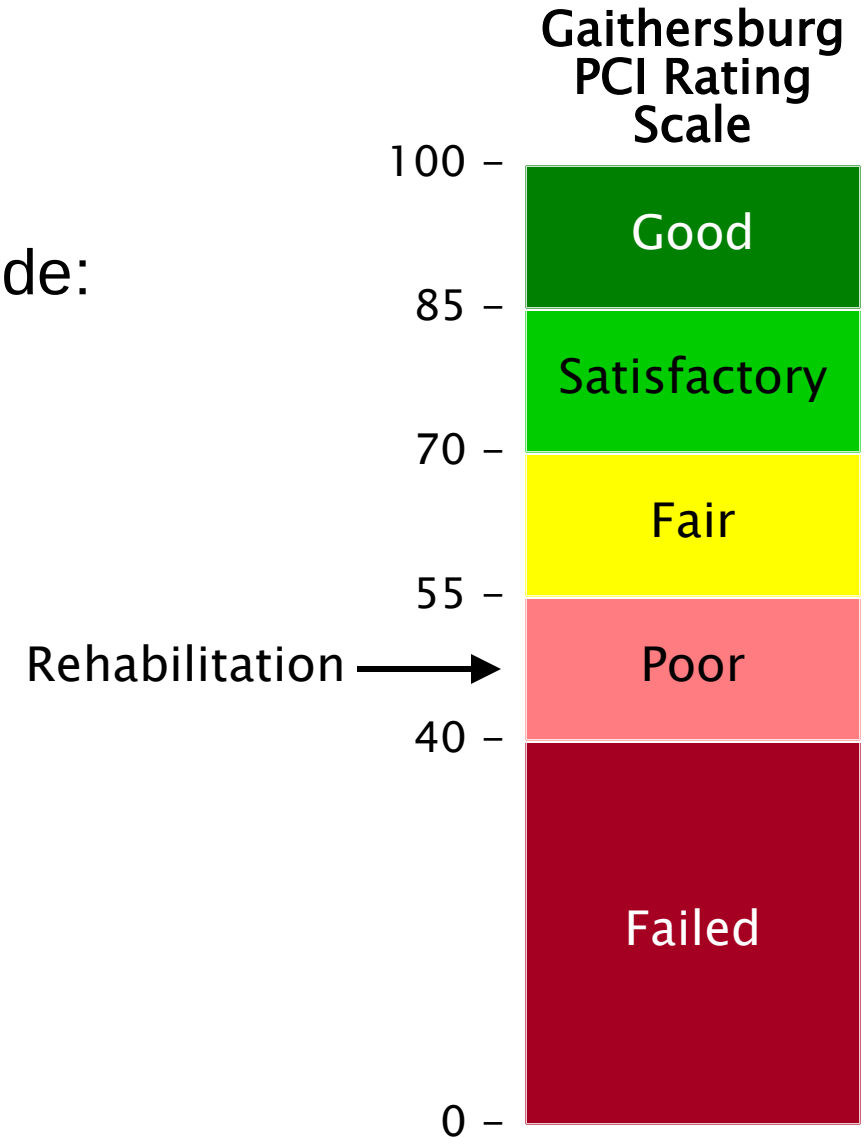


How Do We Fix the Road?

Rehabilitation for Roads with PCI's between 40-55

Possible treatment strategies include:

The City's current method of "Reconstruction" in which the roadway is patched and used as the new base, then a two inch overlay is added to the roadway. At the same time, all new curb and gutter is replaced and tied into the new road surface.

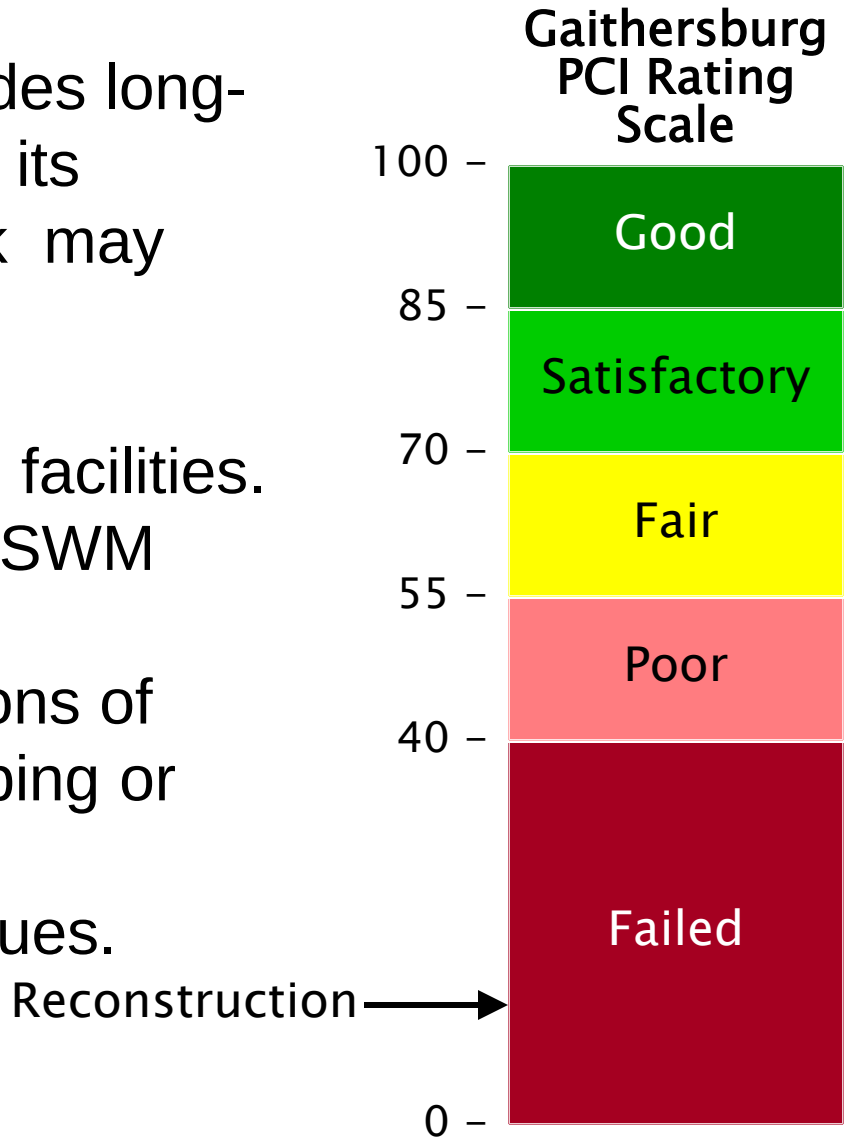


How Do We Fix the Road?

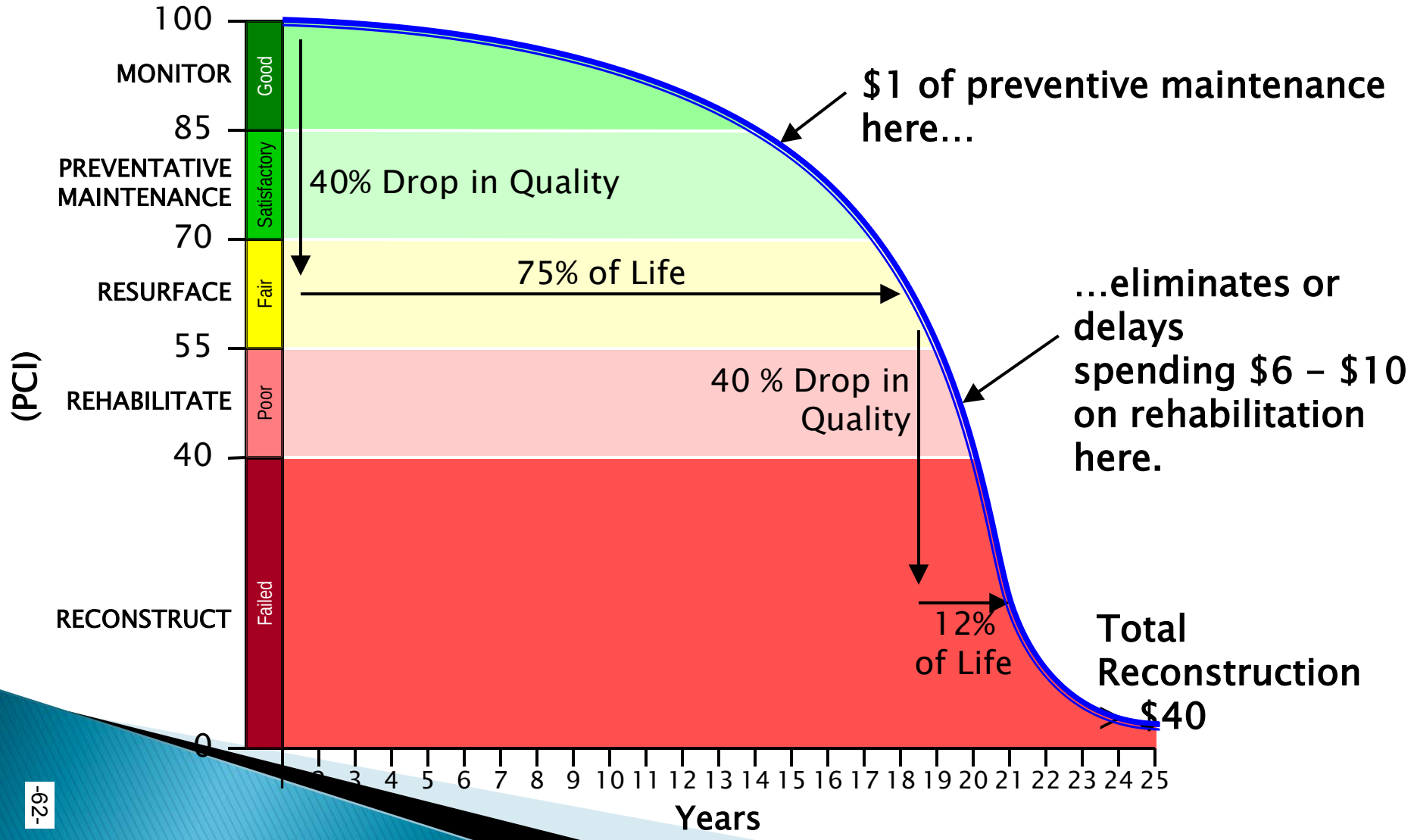
Reconstruction for roads with PCI's between 0- 40

Full reconstruction of streets provides long-term upgrades to the roadway and its underlying infrastructure. The work may include:

- New curbs and sidewalks.
- Additions or upgrades to bicycle facilities.
- Green streets or other innovate SWM treatments.
- Additions, upgrades or relocations of utilities, traffic controls, landscaping or street lights.
- Addressing ADA compliance issues.



Putting It All Together



Next Steps

- Seek guidance from the Mayor and City Council about expanding our menu of treatment options in a effort to optimize our program.
- Determine target PCI Goal.
- Establish budget optimization practices to reach goal.
- Invest in infrastructure preventative maintenance.
- Hold the line on pavement deterioration.
- Determine when to re-survey.
- Re-evaluate goals based on updated information.

Questions?

Outside Correspondence

Distributed to M&CC:12/12/16
City Council Vacancy

From: **Janet Neumann** <j_neumann@verizon.net>
Date: Sun, Dec 4, 2016 at 9:17 AM
Subject: Support for Laurie-Anne Sayles on Council
To: jashman@gaithersburgmd.gov, msesma@gaithersburgmd.gov, nharris@gaithersburgmd.gov, rspiegel@gaithersburgmd.gov, rwu@gaithersburgmd.gov

December 4,2016

Dear MayorAshman and Council Members,

As citizensof Gaithersburg, we are writing to strongly endorse Laurie-Anne Sayles for thevacant Council seat. We believe that Laurie-Anne shares our ideals of a safe,educated, and diverse community that cares for each other and that she wouldbring another respected voice to city government.

Laurie-Anne understandsthat our City has families at all levels of income and genuinely wants to helpindividuals and families attain all they are capable of achieving.

She hasserved as the Gaithersburg representative on the Montgomery County CommunityAction Board which advocates for the less fortunate in our community. In fact, Janetfirst met her at one of the many City events held at the Bohrer Park ActivityCenter where Janet was manning a table for Gaithersburg HELP. Laurie-Anne wasinterested and appreciative of HELP's mission to serve the low-income familiesin our community.

We are greatbelievers in public education and while we don't have children, the localschools are a source of pride for us. Our school system attracts many people tolive and work in our city. With a child of her own, education is a highpriority for Laurie-Anne, having previously served on the GaithersburgEducation Enrichment Committee and the PTA.

We are alsoproud of living in a city where the government not only cares for our citizens,but does so in a fiscally responsible way. We believe that Laurie-Anne sharesour desire to maintain a surplus in the city budget, while keeping taxesreasonable for our citizens. She is also actively working to sustain our smallbusinesses and attract new ones to Gaithersburg as a member of the City'sEconomic and Business Development Committee.

Herprofessional role as a scientific communications editor for the National CancerInstitute is well-aligned with the local economy where the National Instituteof Standards and Technology (where Dan works) and MedImmune are majoremployers. We believe that her first-hand knowledge of the role that scientificadvances play in improving the quality of life of all of us would be very valuableon the Council.

In summary,we believe that Laurie-Anne shares our values and those of our fellow citizens.She would add another constructive voice to Council deliberations. We would beproud to have her represent us.

Respectfully,
Janet and Dan Neumann
211 E DeerPark Drive

Mark P. Sroka
Chief of Police

GAITHERSBURG POLICE DEPARTMENT

Gaithersburg
A CHARACTER COUNTS! CITY

November 16, 2016

Distributed to M&CC:12/12/16
Committee Reappointment

Doug Wagner
37 S Summit Ave
Gaithersburg, MD 20877

Dear Mr. Wagner:

Your term on the Police Advisory Committee will be expiring soon. On behalf of the entire community I would like to express appreciation for your commitment to serving our City in this capacity. Our Boards, Commissions, and Committees perform vital functions in a variety of areas, and we recognize and value your contribution very much.

Our appointment policy requires that all volunteer positions be advertised to provide the public with an opportunity to apply. In the near future, we will be evaluating the requests to fill the vacancies on the Police Advisory Committee, and appointments will be made by the Mayor and City Council soon thereafter.

If you would like to be considered for reappointment or if you no longer wish to serve on Police Advisory Committee, please indicate by signing below and returning this letter within 30 days of the printed date.

Again thank you for your commitment to the City of Gaithersburg. If you have any questions, please feel free to contact Officer Dan Lane at (301) 258-6168 or at dlane@gaithersburgmd.gov

Sincerely,

Mark Sroka

Chief of Police, Mark P. Sroka
Police Advisory Committee

Please check box:

☒ I would / ☐ I would not like to be reappointed to the Police Advisory Committee.

DOUGLASS H. WAGNER
Name

Douglass H. Wagner

Dec. 2, 2016
Date

Adjournment