



Pavement Management

How the City of Palm Springs fixes your streets

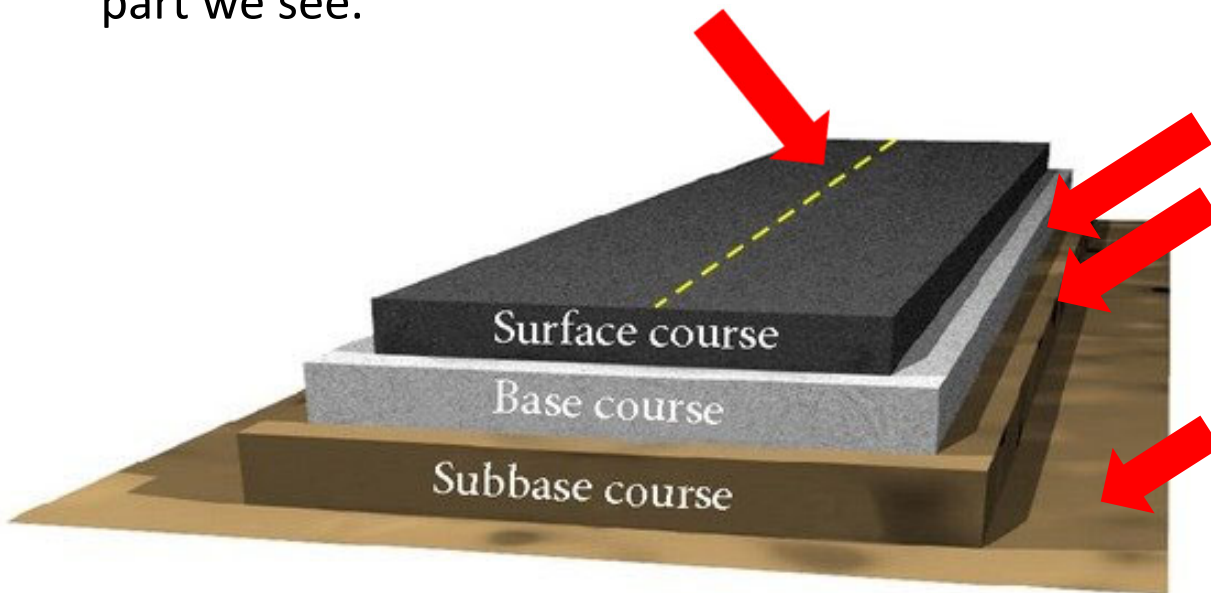
Updated February 2025

What streets are made of?

Streets are built in layers:

Surface course: usually made of asphalt (black) or concrete (gray). Takes on the wear and tear of vehicles. It's the part exposed to weather. This is the part we see.

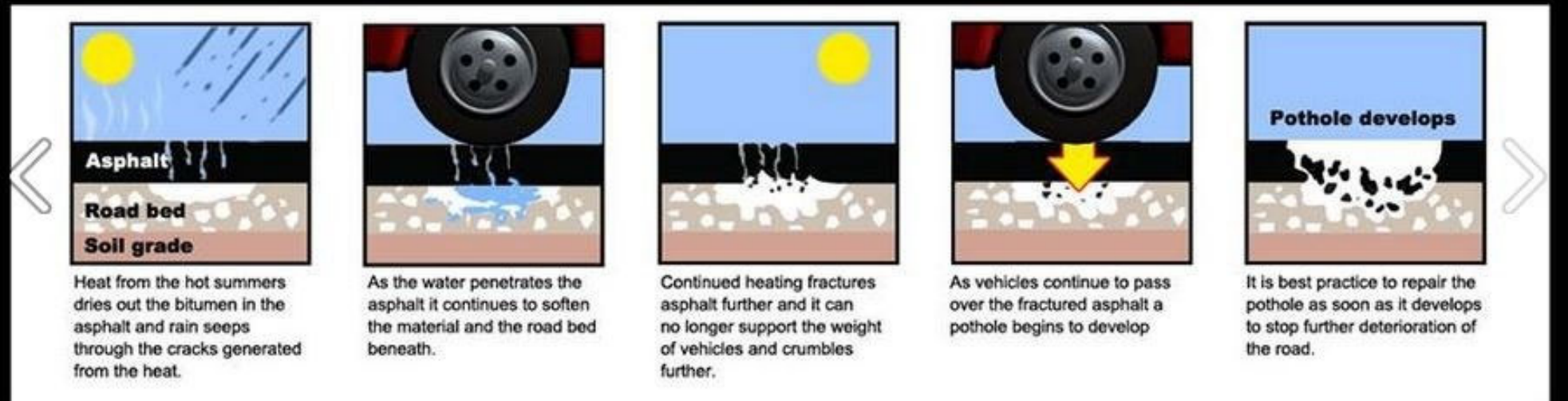
Base course & Subbase Course : usually made of an engineered recipe (mix) of different sized crushed rocks. This is the main load-bearing layer that spreads the weight evenly over the subgrade



Subgrade: the native materials (soil, rock, sand) under a road. It is usually compacted before a road is built on it.

How are potholes formed?

How Potholes form in hot climates



Did you ever get a flat tire from a pothole? Have you ever wondered why it always seem to be exactly where you drive on the road?

Since car tires generally roll over the same location as it travels down the lane, each car that drives over that weakened spot, will slowly make small cracks that get bigger and bigger, until it crumbles and eventually turns into a pothole.

City of Palm Springs

Road Network Information

Functional Classification	Total Number of Street Sections	Center Line Miles of Streets	Total Lane Miles	Percentage of Total Network
Arterials	146	43.16	154.86	17.6%
Collector	198	44.60	96.88	18.2%
Residential/Local	1081	157.69	315.37	64.2%
Total	1425	245.45	567.1	100%

- **Arterials** are major roads that are expected to carry large volumes of traffic.
- **Collectors** are roads that collect traffic from local roads and distribute it to arterials.
- **Local roads** usually have the lowest speed limit and carry low volumes of traffic.

What is Pavement Management Program (PMP) ?

Pavement Management Program (PMP) is:

“Computer Assisted Method of Organizing and Analyzing Information about Pavement Conditions”

- ✓ **Organizes, Stores, and Retrieves Data**
- ✓ **Makes Quick Analysis and Calculations**
- ✓ **Provides Cost Effective Maintenance Strategies**

Rating the Pavement

The following information is collected in the field and entered into the pavement management program

- Distress Type: 8 Common Distresses used in PMPs



Alligator Cracking



Block Cracking



Distortions



Weathering



Patching and
Utility Cuts



Rutting and
Depressions



Longitudinal and
Transverse Cracking



Raveling

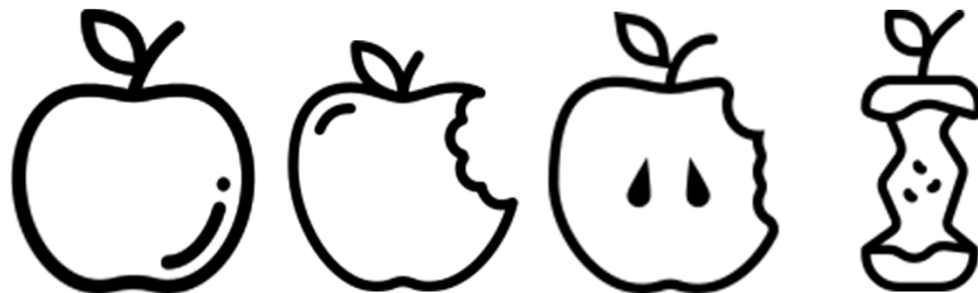
- Distress Severity: Low/Medium/High
- Distress Quantity: Measurement

The City hires an outside engineering firm who collects this data for each street

Pavement Condition Index (PCI)

- The **Pavement Condition Index (PCI)** is a numerical index between 0 and 100 which is used to indicate the general condition of a pavement

Grade	Condition	PCI Range
A	Good	100 - 90
B	Satisfactory	89 - 70
C	Fair	69 - 50
D	Poor	49 - 25
E	Very Poor	24 - 0



The PCI score helps compare the various streets on an apples to apples basis

PCI 100 - 90 (Good)

Example of PCI 100



- The pavement is in good condition.
- The street likely had a maintenance treatment like a slurry seal or rehab treatment like a pulverize and pave in past few years.
- Since the pavement will remain in good condition for a few more years, (without the need for any maintenance) a treatment is not recommended at this time.

PCI 89 – 70 (Satisfactory)

Example of PCI 83



- The pavement is in satisfactory condition.
- The street has experienced some weathering and minor cracks due to heat in the summer months and cooler nights in the winter months.
- For preventative maintenance, a crack seal will prevent water from getting under the pavement, and then micro-milling the top surface followed by a slurry seal will provide a layer of protection and extend the life of the roadway.
- Doing this preventative maintenance extends the overall life of the pavement and it will take longer to deteriorate into the fair category.

PCI 69 - 50 (Fair)

Example of PCI 68



- The pavement is in fair condition.
- The pavement surface has experienced weathering for a while
- There are some utility cuts, and the cracks in the road are increasing due to traffic.
- There may be some wide cracks and block cracking which looks like large squares on the surface of the street.
- The cycles of extreme heat and cooler winter months is causing the pavement to expand, contract, and ultimately crack in the block pattern.
- While it is still easy to drive on it, the quality has dropped by about 40% and the road will continue to deteriorate over time.
- The appropriate treatment would be to pulverize the existing roadway and mix it with the dirt beneath to provide a strong base and repave the road.

PCI 49 - 25 (Poor)

Example of PCI 49



- The pavement is in poor condition.
- The surface has experienced more weathering
- There are usually several utility cuts, there are usually patched potholes and the cracks are increasing to the point they look like the back of an alligator (alligator cracking).
- Water from when it rains is getting under the pavement, deteriorating the ground that supports the roadway.
- Traffic driving over it is adding to the cracks.
- It is still acceptable to drive on it but the pavement only has 5 - 8 more years of useful life.
- The appropriate treatment would be to pulverize the existing roadway and mix it with the dirt beneath to provide a strong base and repave the road.

PCI 24 - 0 (Very Poor)

Example of PCI 24



- The pavement is in very poor condition.
- The pavement surface usually has many potholes and/or utility cuts.
- There are cracks that are wide and the surface is rough.
- Water has gotten under the pavement and the ground that supports the roadway will need replacement in a few years.
- It is still acceptable to drive on it but the pavement only has a few more years of useful life.
- The appropriate treatment would be to check to see if the existing dirt is acceptable or needs removal, then create a strong base and finally repave the road.

Palm Springs Repair Treatments

Slurry Seal
w/ micromill & crack seal

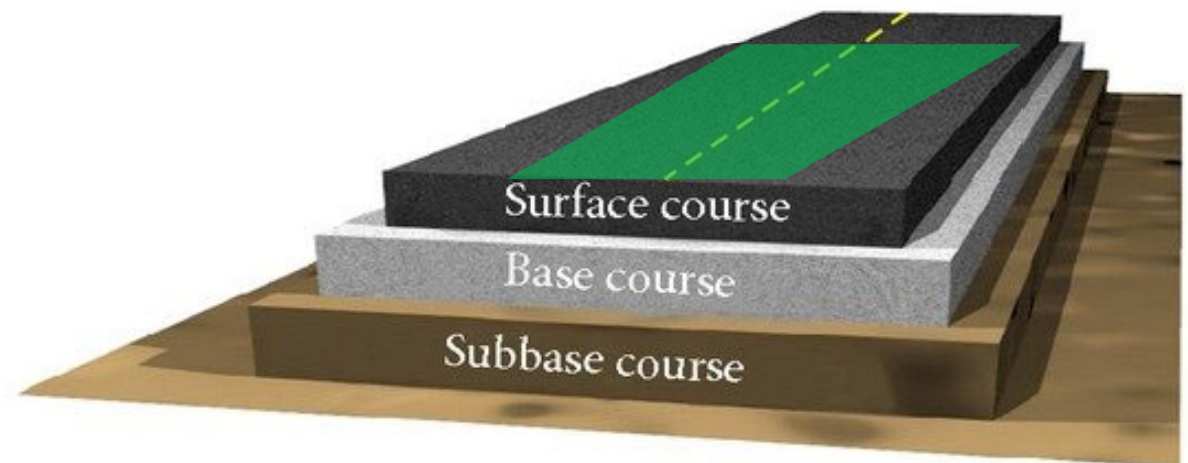


Moderate Impact and inconvenience to the neighborhood

Similar to taking your car in for a 15,000 mile service

Considered Maintenance

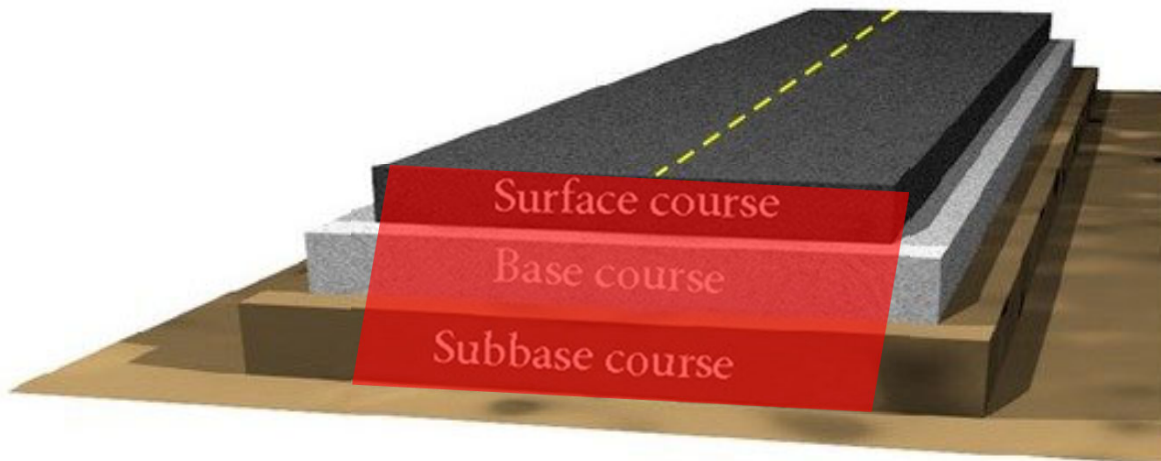
- Cracks are filled with a sealant
- Grinder will lightly scratch the surface
- Even coat of asphalt slurry is applied.



Palm Springs Repair Treatments

High impact to the neighborhood. Residents will need advanced notification, so they are able to plan around the inconvenience.

Similar to taking your car in for a full engine replacement.



Pulverize & Pave or
2-inch grind & overlay



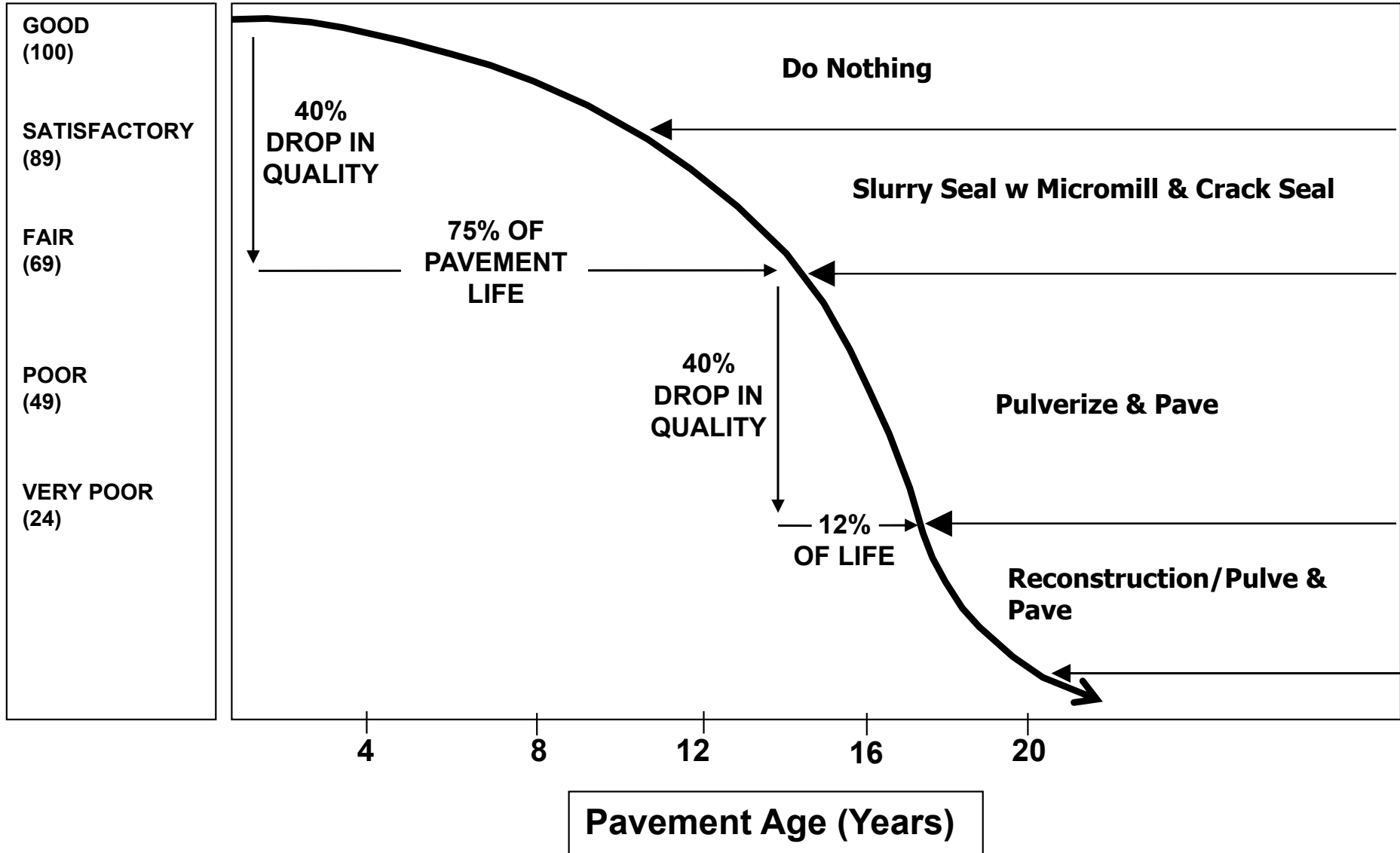
Considered Rehabilitation

- Grind off some of the surface course, recycle
- Grinds the rest of the surface course and mixes with subbase to create a stronger base

Typical Pavement Life Cycle

PAVEMENT CONDITION
(Approx. PCI)

AGENCY'S RECOMMENDED TREATMENT



Pavement Life Costs

