



Florida Association of
County Engineers
& Road Superintendents



Cape Seal

Paving the way in times of uncertainty and budget cuts



Presented By:
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Overview

- I. Background Info
- II. Right Treatment Right Time
- III. What is Cape Seal?
- IV. Benefits/ Candidate Selection
- V. Project Successes
- VI. Case Study

City of Zephyrhills

Location:

- Located in Pasco County

Population:

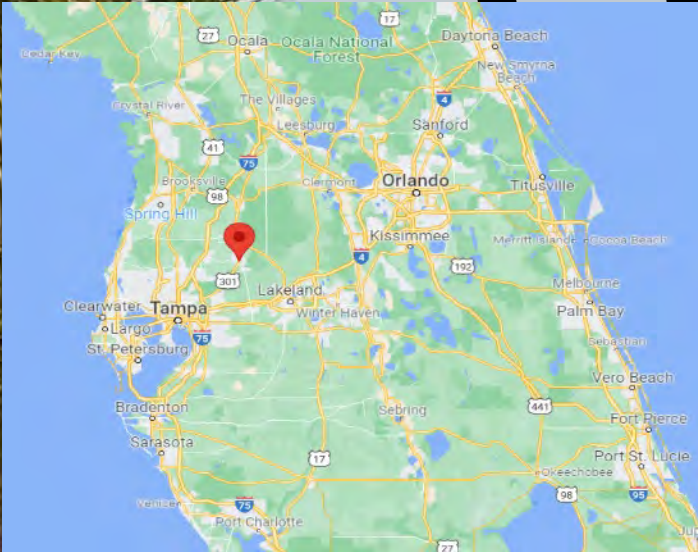
- 17,522

Center Lane Miles:

- 68 miles

Current Resurfacing Budget:

- \$600,000.00/Year



City of Zephyrhills



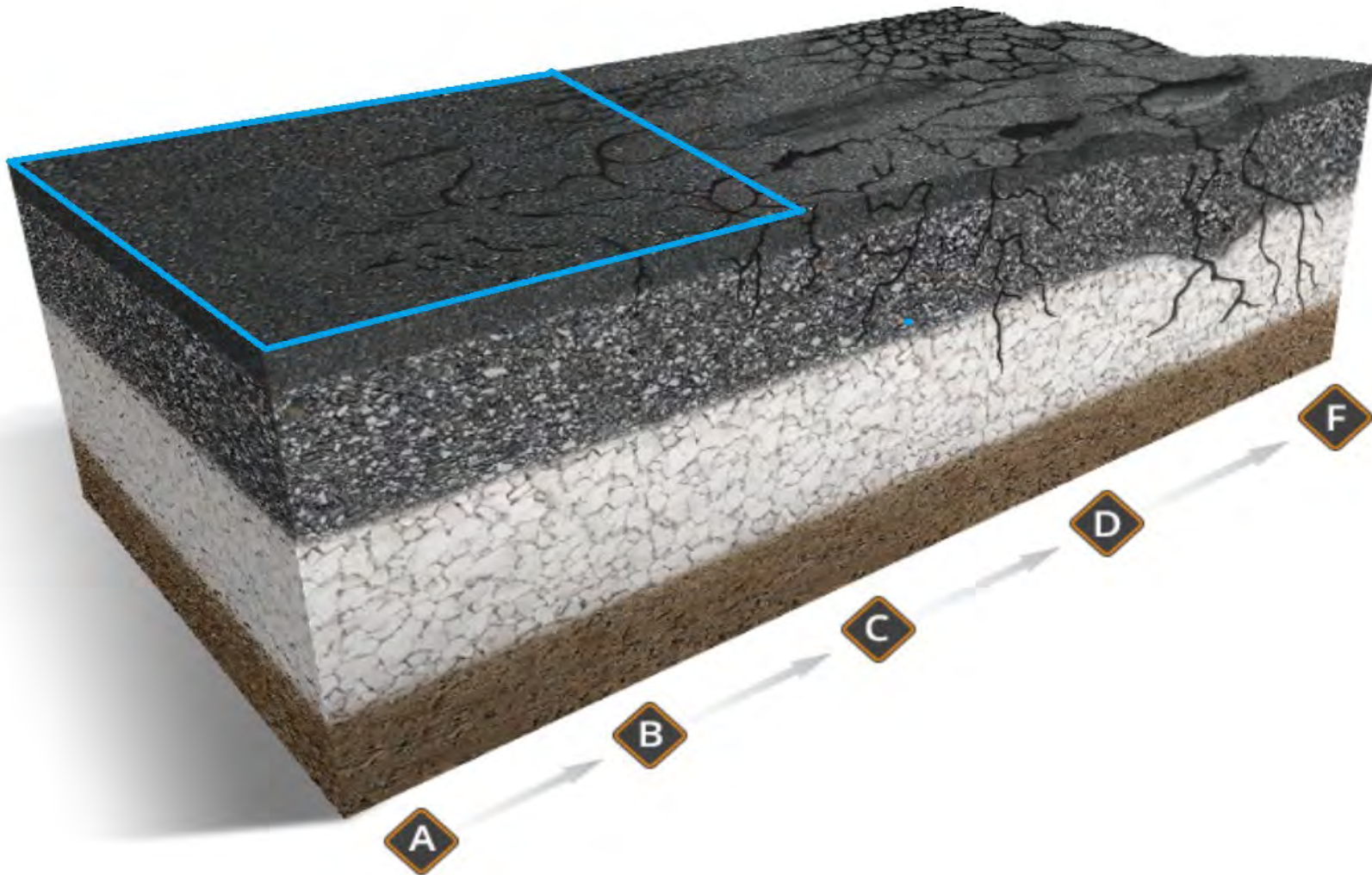
Background info:

- 2014/2015 resurfacing budget cut
- \$1 million to \$200,000
- Strictly milling and resurfacing
- No Pavement Preservation
- Budget cut led to looking for other resurfacing options
- Case study at end of presentation

Effective Pavement Management: "Right Road, Right Treatment, Right Time"



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CAPE SEAL DEFINITION

**Cape Seal is a two-step process:
A single layer of Chip Seal followed by a Double Micro-surface, which provides a long-lasting surface treatment with a smooth finish. The use of Chip Seal alone in residential areas, became unpopular in the 70's and 80's, because of a rougher ride and loose stones. The addition of Micro-surfacing over the top of the layer of Chip Seal has produced smother rides, no loose stone and enhanced aesthetics. Making Cape Seal a very popular tool for Pavement Preservation.**

CAPE SEAL PROCESS DESCRIPTION

1. Apply thick layer of asphalt emulsion.



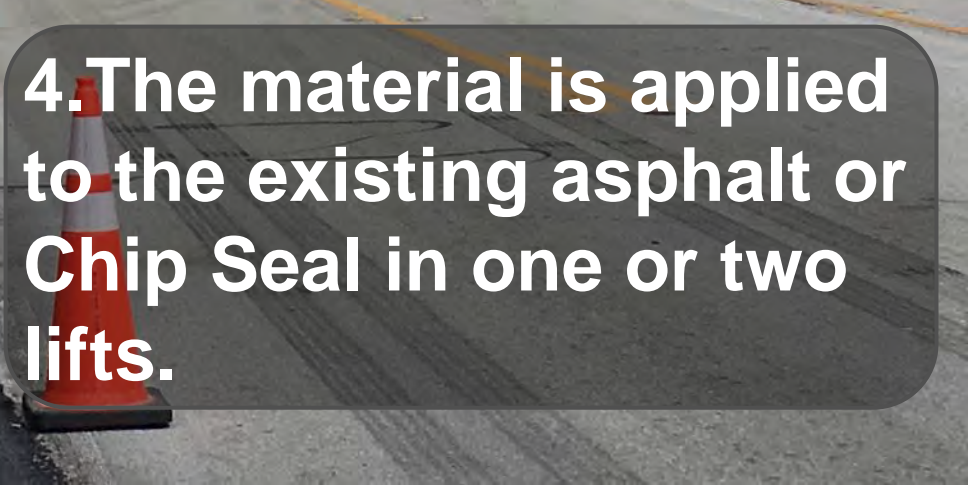
2. Apply a layer of high-quality granite aggregate.

CAPE SEAL PROCESS DESCRIPTION

3. Granite aggregate & asphalt emulsion are combined onsite.

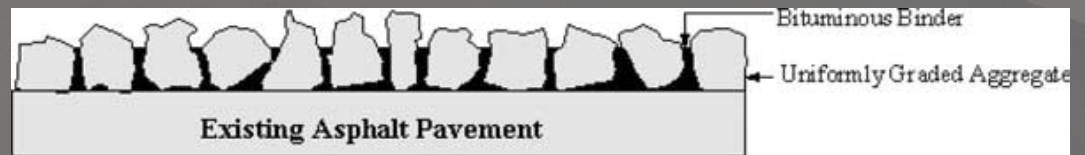


4. The material is applied to the existing asphalt or Chip Seal in one or two lifts.

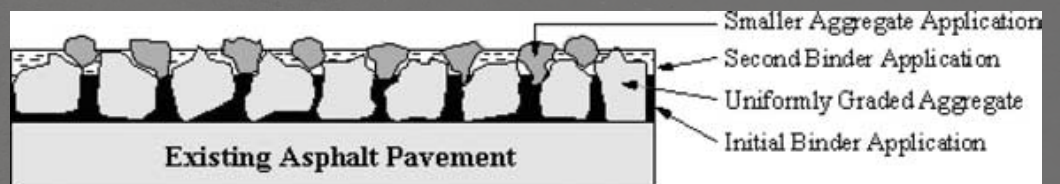


CHIP SEAL TYPES

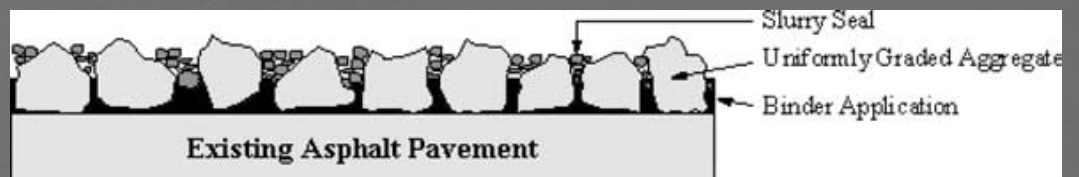
➤ Single Chip Seal



➤ Double Chip Seal



➤ Cape Seal



WHAT IS MICRO SURFACING

- Micro Surfacing is a new thin lift overlay, that is applied over existing asphalt or Chip Seal to protect underlying surface and act as a new wearing surface.
- Polymer Modified Asphalt Emulsion with a granite aggregate.
- Double Micro Surfacing the total thickness is roughly $\frac{3}{8}$ " (30-34 lbs/SY).

CAPE SEAL BENEFITS



3 Year Warranty

- 30% – 50% less \$ than conventional asphalt overlay or mill & overlay.
- Maintains a skid resistance surface
- Quick return to traffic



- Crack relief layer
- No adjustment to utilities or loss of curb
- Chip Seal aggregates locked in place
- Life expectancy 10-12yrs



WHAT ROADS SHOULD YOU USE CAPE SEAL ON?

- **PCI score between 55-65**
- **Moderate to severe cracking (not load associated)**
- **Moderate to severe raveling**
- **Good profile**
- **No base issues**
- **No water issues- water pumping up from base**
- **Cape Seal over roads previously Micro Surfaced**

ZEPHYRHILLS



ZEPHYRHILLS



HILLSBOROUGH COUNTY



HILLSBOROUGH COUNTY



DADE CITY



DADE CITY



WEST MELBOURNE



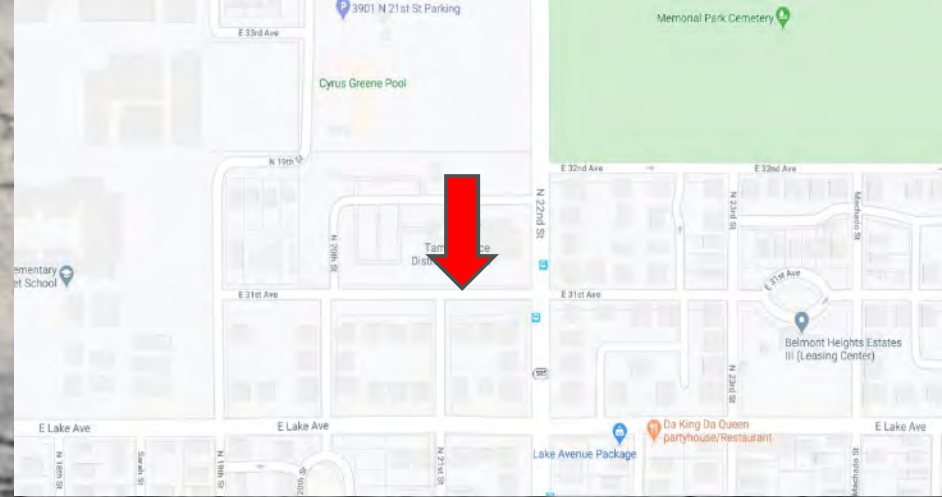
WEST MELBOURNE



TOWN OF LADY LAKE



CITY OF TAMPA



Before

CITY OF TAMPA



After

After One Year

CITY OF TAMPA

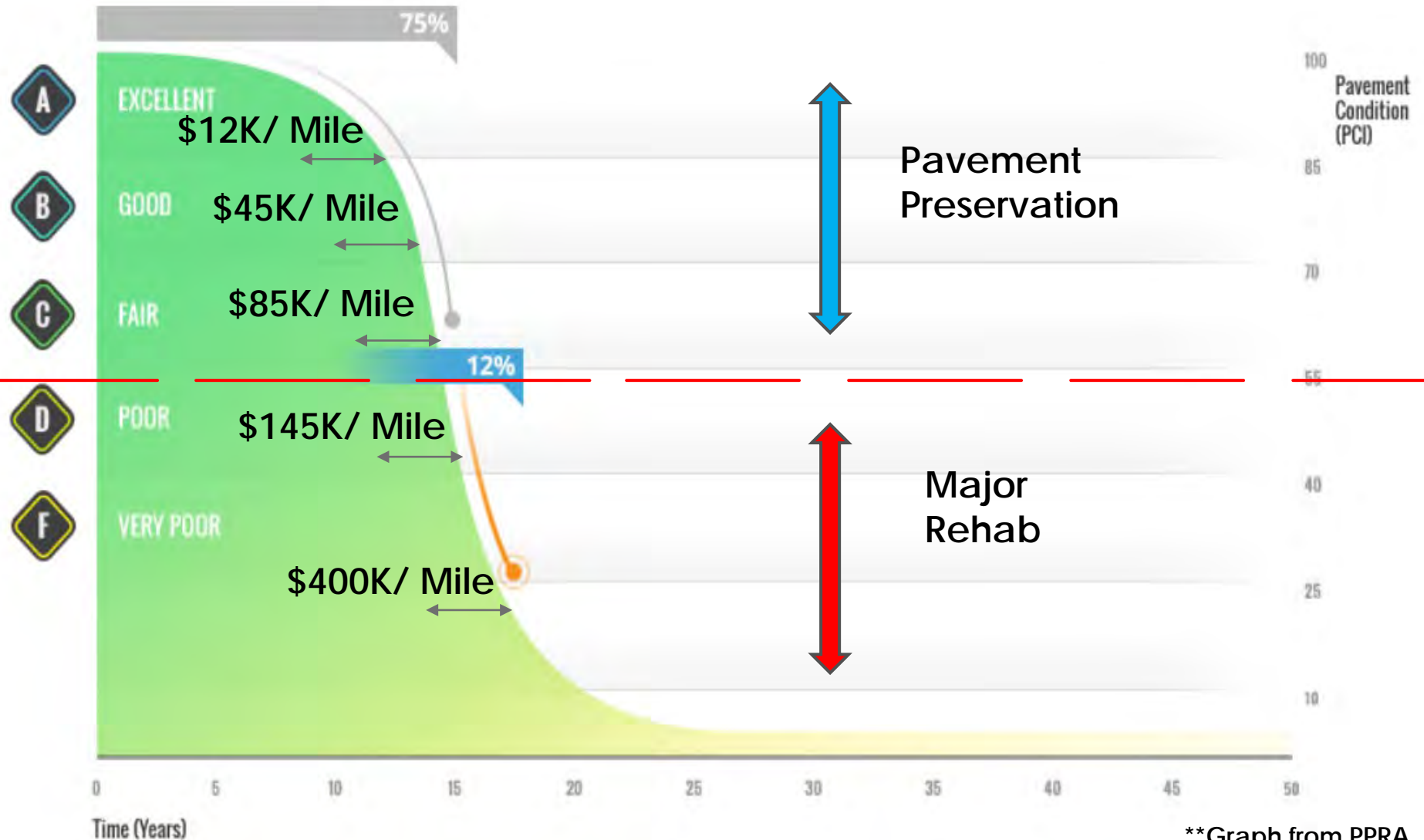


After 10 Years

DIANA BEACH



Pavement Preservation vs Major Rehab Cost Comparison

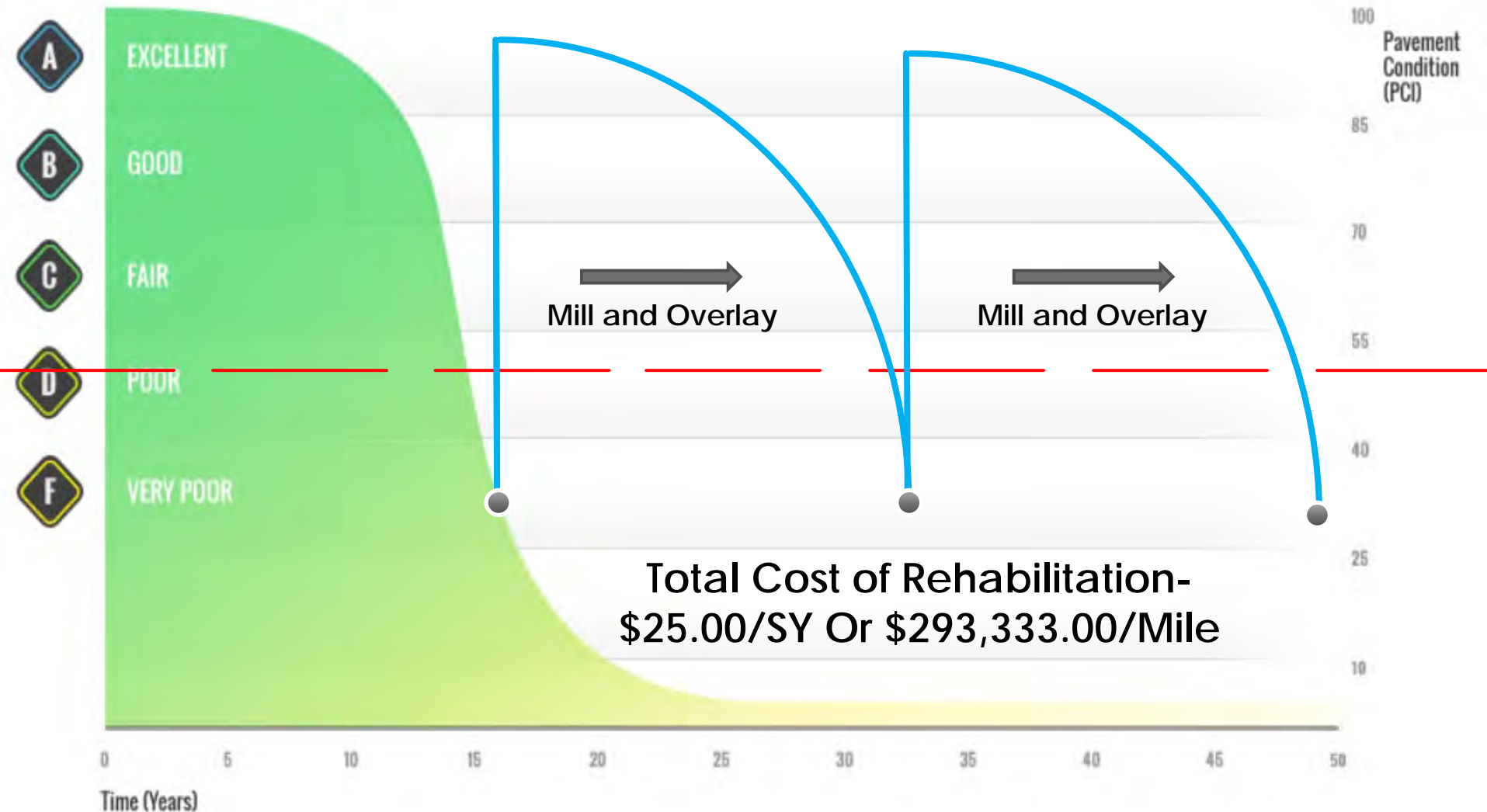


**Graph from PPRA

Worst First Approach

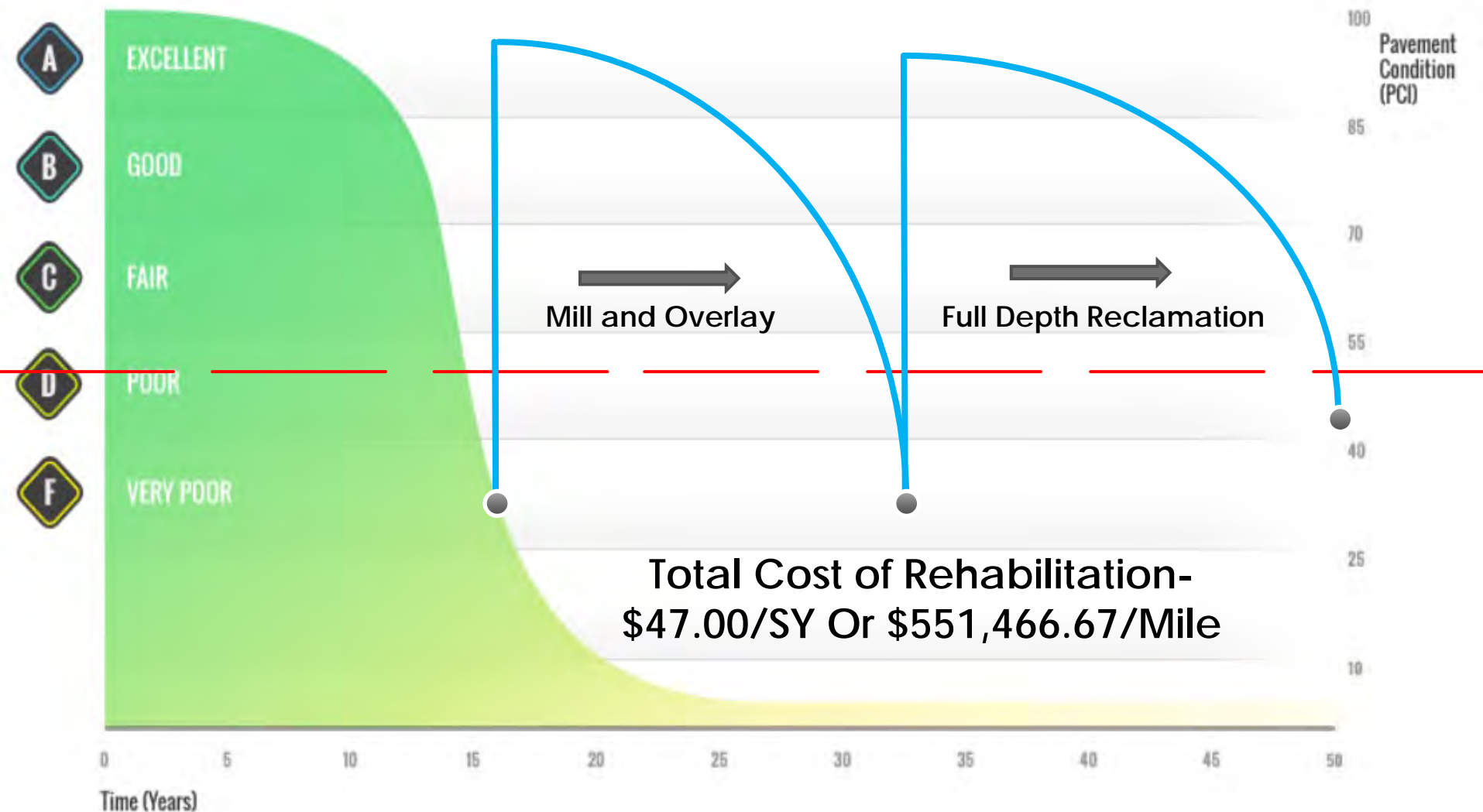


Major Rehab- 1.5" Mill and Overlay

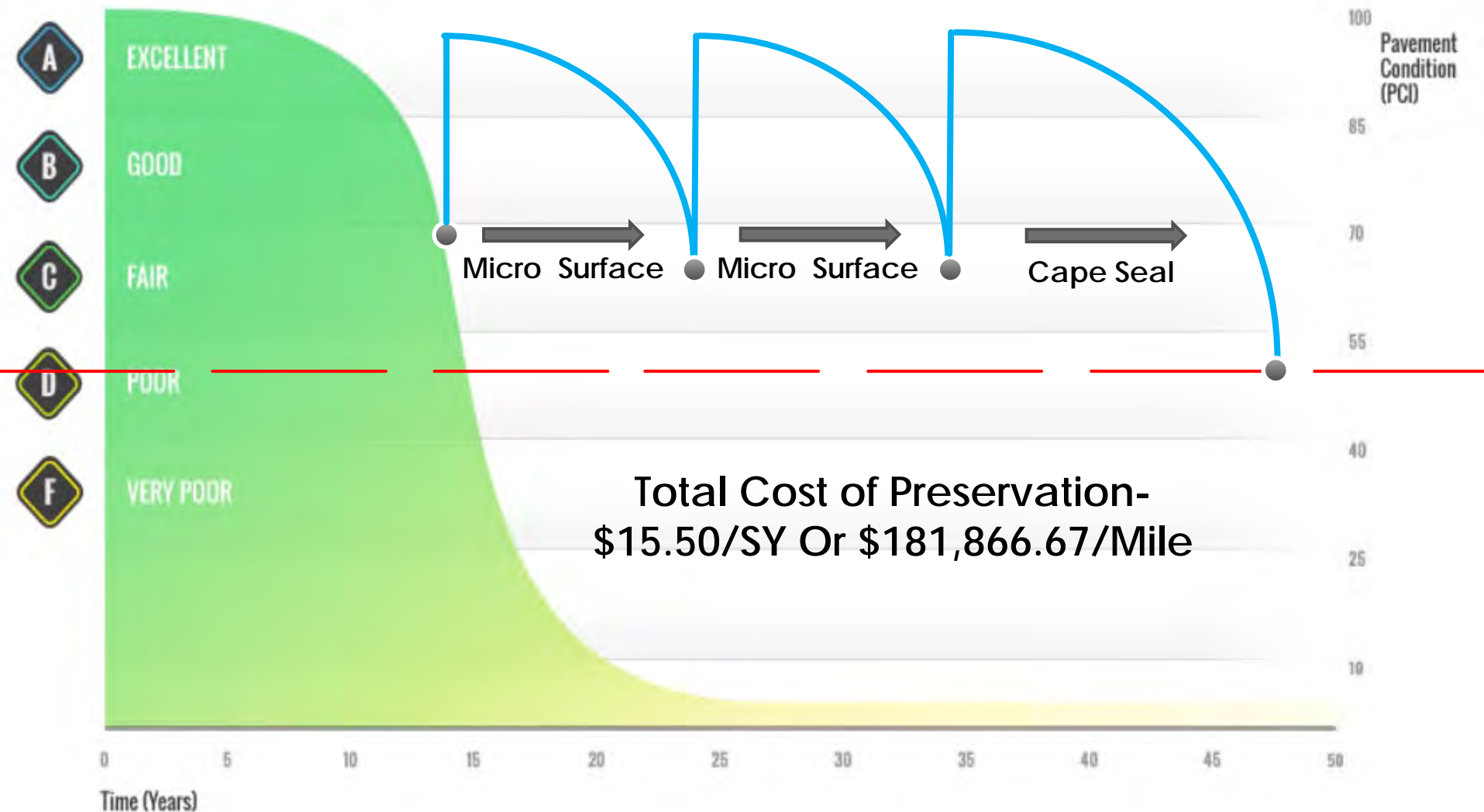


**Graph from PPRA

Major Rehab- 1.5" Mill and Overlay / Full Depth Reclamation

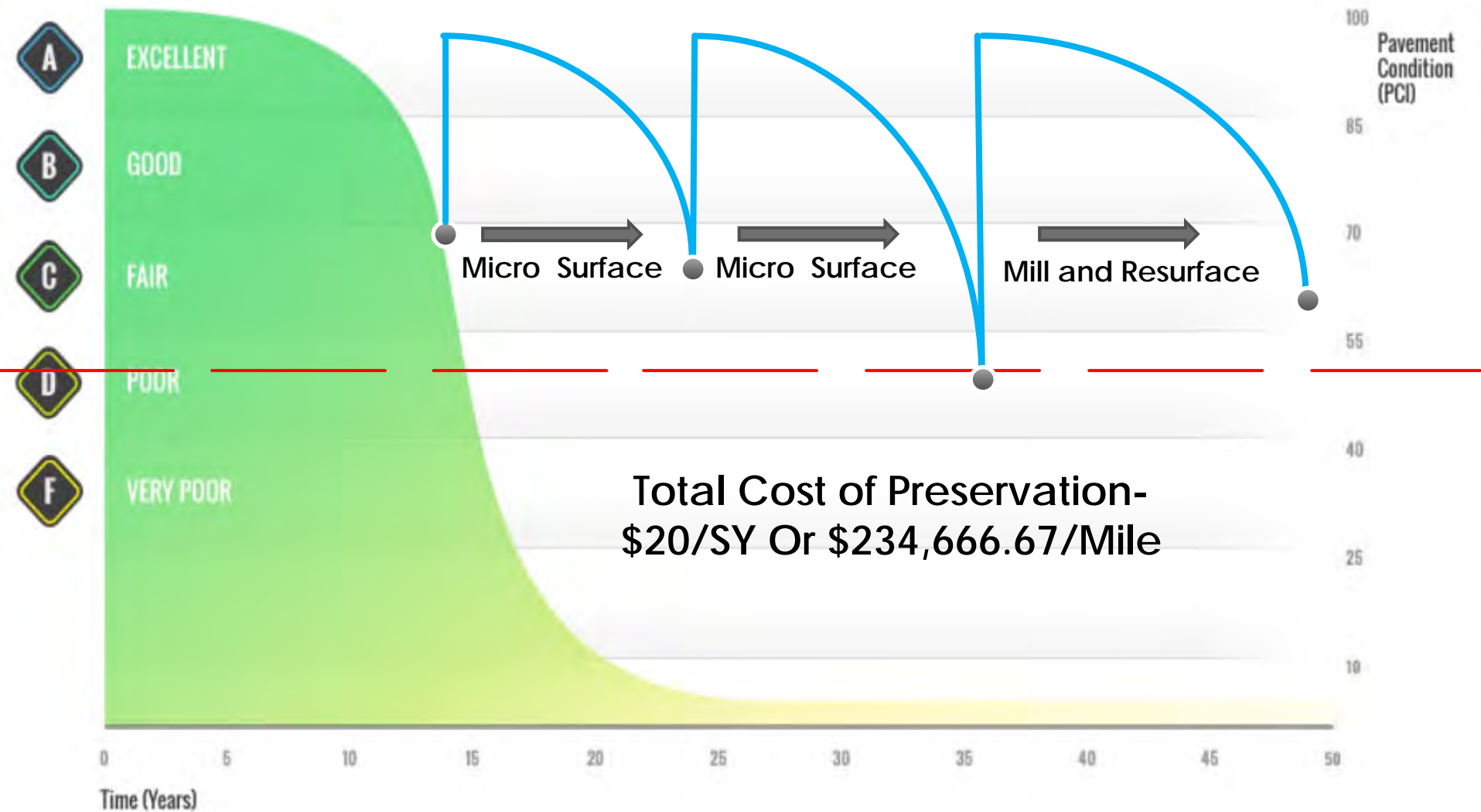


Pavement Preservation

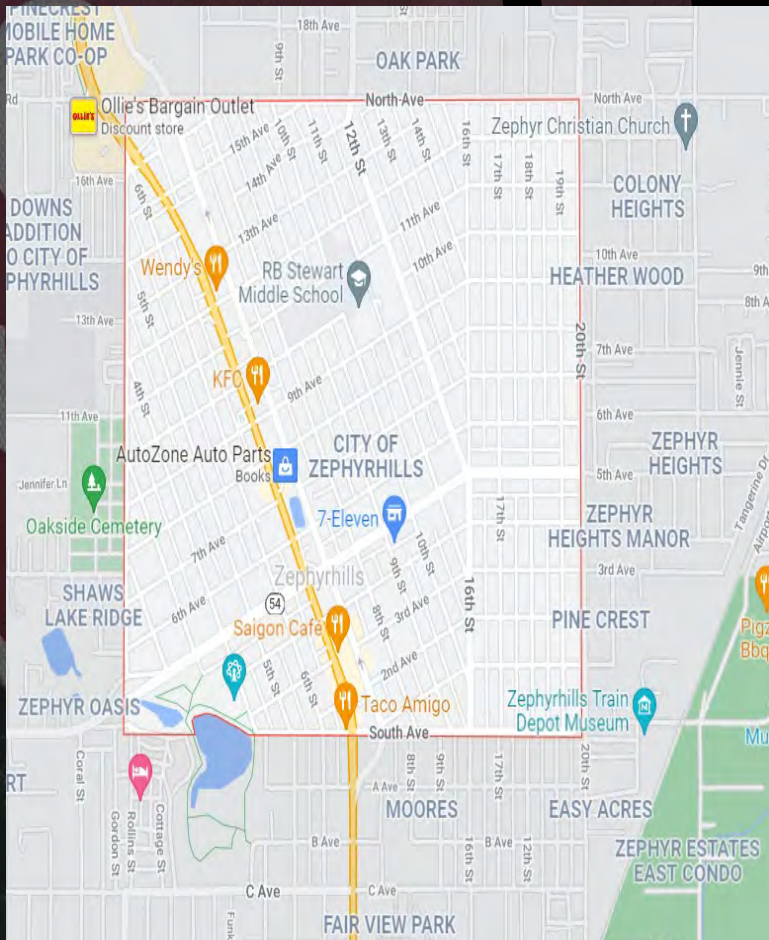


**Graph from PPRA

Pavement Preservation



City of Zephyrhills FY14/15 Paving Program

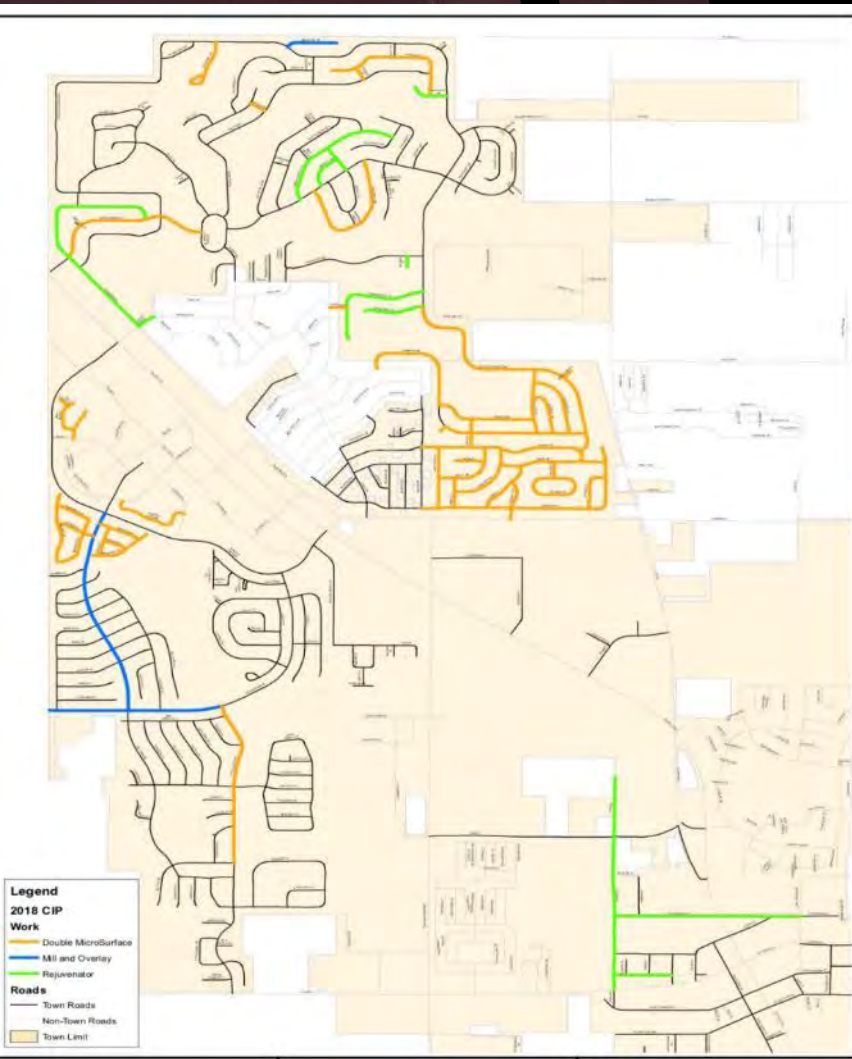


- Micro Surfacing / Cape Seal-
3 miles- \$200,000.00

What if.....

- Mill and overlay only-
3 miles- approx. \$435,000.00

Town of Lady Lake FY18 Paving Program



- Micro Surfacing / Cape Seal-
11 miles- \$510,590.61
- 1.5" Mill and Overlay-
1.2 miles- \$225,521.00
- What if.....
- Mill and overlay only-
12.2 miles- approx. \$1,700,000.00

Why Pavement Preservation When Budgets Get Cut

1. **Cost-** Agency's can extend their budgets and maximize tax dollars by extending life the cycle of the pavement.
2. **Treat more Roadways-** Agency's will be able to treat 30-40% more roadways with the same budget by using Pavement Preservation.
3. **Less Complaints-** By treating your roadways before they reach the complaint line you are limiting the number of complaints because you are maintaining your network at a higher level of service.



Thank you!!!

