



# How to Integrate Pavement Preservation in StreetSaver (Part II)

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# Overview

- How to determine unit costs
- Life extension of treatment
- Decision tree options
  - Best management practices
  - Worst first
- Scenario comparisons
- Q&A

# Unit Costs

The screenshot shows a software window titled "Decision Tree" with a "File" menu. The main area is divided into two panes. The left pane displays a hierarchical tree view of road treatments, with "Crack Treatment" selected under "Condition Category I - Very Good". The right pane, titled "Treatment Information", shows the selected treatment and its associated costs.

**Treatment Information**

Treatment:	SEAL CRACKS
Cost/LF:	1.35
Years Between Crack Seals:	3

**Update Costs by Treatment and Functional Class**

Update Cost For:

<input type="checkbox"/> Arterial	<input type="checkbox"/> Residential/Local
<input type="checkbox"/> Collector	<input type="checkbox"/> Other

\*\*\*\* No boxes checked will update cost for all FC.

Treatment: [Dropdown] Cost: [Input] [Update]

Last Modified: 9/18/2015 [Print] [Save] [Save & Close] [Cancel]

## What Are In the Unit Costs

- Costs to the agency
  - Engineering
  - Contract or
  - Labor, equipment & material
- Includes prudent preparation work
  - Crack sealing
  - Localized repairs

## How to Set Treatment Strategies?

- Pavement Preservation Approach (Best Mgt)
- “ Right time, right place, right treatment”
- Local Policies
- Worst first
- Hybrid

## How to Set Unit Costs?

- Use for network planning

**Not for construction**

Do include:

- Design cost
- labor and materials
- Incidental – restriping, raising utility boxes, etc
- Construction administration

## Where to Find Them?

- ✓ Bid prices
- ✓ Contractors
- ✓ Neighboring agencies
- ✓ Maintenance folks
- ✓ Engineering folks
- ✓ Design costs
- ✓ Construction administration
- ✓ Other incidental costs
- ✓ ADA Compliance
- ✓ NPDES Compliance

# Feedback Activity

- At end of construction season
- Review treatments applied
  - Do you need to change decision tree treatment?
  - Was the treatment applied the appropriate treatment or “stop-gap” treatment?
- Review costs for treatments
  - Adjust costs to reflect those from the latest season



# Maintenance Cycles

## Life Extension:

- Rubberized Chip Seal = 10 years
- Slurry Seal = 5 years for arterials

The screenshot shows a software window titled "Decision Tree". On the left is a tree view with the following structure:

- Arterial
  - AC
    - Condition Category I - Very Good
      - Crack Treatment
      - Surface Treatment
      - Restoration Treatment
    - Condition Category II - Good, Non-Load Related
    - Condition Category III - Good, Load Related
    - Condition Category IV - Poor
    - Condition Category V - Very Poor
  - AC/AC
  - AC/PCC
  - ST
  - PCC
- Collector
  - AC
  - AC/AC
  - AC/PCC
  - ST
  - PCC
- Residential/Local
- Other

On the right is the "Treatment Information" panel:

- Treatment: RUBBERIZED CHIP SEAL
- Cost/Sq Yd, except Seal Cracks in LF: 24.92
- Years Between Surface Seals: 0

A red box highlights the "Years Between Surface Seals" field. At the bottom of the window, there is a button labeled "Update Costs by Treatment" and a footer with "Print", "Save", "Save & Close", and "Cancel" options.

# Estimated Life of Treatments

Treatment	Good Condition (PCI=80)	Fair Condition (PCI=60)	Poor Condition (PCI=40)
Fog Seal	3 - 5	1 - 3	1 - 2
Chip Seal	7 - 10	3 - 5	1 - 3
Slurry Seal	7 - 10	3 - 5	1 - 3
Micro-surfacing	8 - 12	5 - 7	2 - 4
Thin HMA	10 - 12	5 - 7	2 - 4

# Best Management Practice ?



TOWN OF YOUNTVILLE - Test  
 6550 Yount St  
 Yountville, CA 94599  
 (707) 944-8851

## Decision Tree

Printed: 10/21/2015

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay	
Arterial	AC	I - Very Good	Crack Treatment	SEAL CRACKS	\$1.35	3			
			Surface Treatment	SLURRY SEAL	\$3.71		7		
			Restoration Treatment	LIGHT REHABILITATION	\$11.23			2	
			II - Good, Non-Load Related		HEAVY MAINTENANCE	\$19.30		7	
			III - Good, Load Related		LIGHT REHABILITATION III	\$33.77			
			IV - Poor		HEAVY REHABILITATION	\$56.50			
			V - Very Poor		RECONSTRUCT STRUCTURE (AC)	\$110.96			

# Best Management Practice ?



CITY OF ANYWHERE  
1232 Washington Street  
Calistoga, CA 94515

## Decision Tree

Printed: 10/29/2014

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	AC	I - Very Good	Crack Treatment	SEAL CRACKS	\$1.62	3		
			Surface Treatment	SLURRY SEAL	\$4.40		7	
			Restoration Treatment	MILL AND 2 INCH OVERLAY	\$24.92			2
		II - Good, Non-Load Related		RUBBERIZED CHIP SEAL	\$10.23		9	
		III - Good, Load Related		MILL AND 2 INCH OVERLAY	\$24.92			
		IV - Poor		MILL AND 4 INCH OVERLAY	\$38.00			
	V - Very Poor		FULL DEPTH RECLAMATION	\$65.00				
	AC/AC	I - Very Good	Crack Treatment	SEAL CRACKS	\$1.62	3		
			Surface Treatment	SLURRY SEAL	\$4.40		6	
Restoration Treatment			THIN AC OVERLAY(1.5 INCHES)	\$15.48			2	

# Best Management Practice ?

City of Anywhere

## Decision Tree

Printed: 01/21/2015

Functional Class	Surface	Condition Category	Treatment Type	Treatment	Cost/Sq Yd, except Seal Cracks in LF:	Yrs Between Crack Seals	Yrs Between Surface Seals	# of Surface Seals before Overlay
Arterial	AC	I - Very Good	Crack Treatment	DO NOTHING	\$0.00	99		
			Surface Treatment	DO NOTHING	\$0.00			
			Restoration Treatment	DO NOTHING	\$0.00			100
		II - Good, Non-Load Related		DO NOTHING	\$0.00		99	
		III - Good, Load Related		DO NOTHING	\$0.00			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	\$128.00			
	AC/AC	I - Very Good	Crack Treatment	DO NOTHING	\$0.00	99		
			Surface Treatment	DO NOTHING	\$0.00			
			Restoration Treatment	DO NOTHING	\$0.00			100
		II - Good, Non-Load Related		DO NOTHING	\$0.00		99	
		IV - Poor		THICK AC OVERLAY (2 INCHES)	\$47.50			
		V - Very Poor		RECONSTRUCT STRUCTURE (AC)	\$128.00			

# BMP Decision Tree

Scenario Comparison - Deferred Maintenance and PCI



# Worst-First Decision Tree

Scenario Comparison - Deferred Maintenance and PCI



## Question & Answer

- Everything you want to know about StreetSaver...