Overview of Pavement Management

Pavement Management Concepts and Implementation in Washington County’s Urban Road Services District

Presented to URMDAC on April 18, 2018
Pavement Management

It’s not complicated...
Definition...

What is pavement management?
• Process/Procedure/Program/Tool
  – Pavement life cycle
  – Cost to maintain system
  – Prioritization
Why is it important...

The right treatment at the right time.

- Efficient expenditures of public funds
- Protecting the investment
- Realizing the full potential of pavements
- Assist with decision making in a complex system
Basic Concepts

The deterioration curve...
Basic Concepts

Pavement Condition Index...
Basic Concepts

Surface Treatment Options...
### Basic Concepts

#### Distress Types...

<table>
<thead>
<tr>
<th>NO.</th>
<th>TYPE</th>
<th>LOW</th>
<th>MEDIUM</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alligator Cracking</td>
<td>fine; few interconnected cracks</td>
<td>network of cracks</td>
<td>well-defined network with spalling; potholes</td>
</tr>
<tr>
<td>2</td>
<td>Block Cracking</td>
<td>&lt; 3/8&quot;; any filled crack</td>
<td>3/8&quot; to 3&quot;; any filled crack with light, random cracking</td>
<td>&gt; 3&quot;; any crack with medium to high random cracking</td>
</tr>
<tr>
<td>3</td>
<td>Distortions</td>
<td>noticeable vehicle vibrations</td>
<td>significant vehicle vibrations</td>
<td>excessive vehicle vibration; must reduce speed</td>
</tr>
<tr>
<td>4</td>
<td>Longitudinal &amp; Transverse Cracking</td>
<td>— same as #2</td>
<td>— same as #2</td>
<td>— same as #2</td>
</tr>
<tr>
<td>5</td>
<td>Patching &amp; Utility Cut Patching</td>
<td>good condition; low ride quality</td>
<td>moderate deterioration; medium ride quality</td>
<td>patch needs to be replaced</td>
</tr>
<tr>
<td>6</td>
<td>Rutting &amp; Depressions</td>
<td>1/2&quot; to &lt; 1&quot;</td>
<td>1&quot; to &lt; 2&quot;</td>
<td>&gt; 2&quot;</td>
</tr>
<tr>
<td>7</td>
<td>Weathering &amp; Raveling</td>
<td>aggregate/binder starting to wear away; some pitting</td>
<td>moderately rough surface texture; pitted; pitted</td>
<td>aggregate/binder worn away; seal loss</td>
</tr>
</tbody>
</table>
Basic Concepts

Software solution...

- Inspections
- Pavement Management System
- Maintenance Treatments
- Functional Classification
- Output