2021 Pavement Condition Index (PCI) Surveys

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Overview

- Introduction to PCI
- Pavement Management System
- Next Steps
- Questions
Introduction to PCI

- Performed every three years
- As-builts & Records Review – Feature Maps
- Pavement Distresses
Asphalt Pavement Distresses

- Longitudinal & Transverse Cracking
- Alligator Cracking
- Patching
- Weathering
- Depression
Concrete Pavement Distresses

- Joint Seal Damage
- Cracks
- Spalling Joint
- Spalling Corner
- Patching, Small
- Durability Cracking
Pavement Condition Index (PCI) Method
# Project vs Network Level Pavement Management

<table>
<thead>
<tr>
<th></th>
<th>Network Level</th>
<th>Project Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition</td>
<td>PCI</td>
<td>PCI, NDT, etc.</td>
</tr>
<tr>
<td>Level of Inspection</td>
<td>Less Sample Units</td>
<td>More Sample Units</td>
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<tr>
<td>Maintenance &amp; Repair (M&amp;R)</td>
<td>‘Level’ of M&amp;R</td>
<td>‘Type’ of M&amp;R</td>
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</tbody>
</table>
Pavement Maintenance Cost & Pavement Condition

Figure 1. Typical Pavement Condition Life Cycle.
Pavement Preservation Concept

Figure 2. Pavement Preservation Concept.
Pavement Management Software - PAVER™

- Pavement Network Inventory
- Pavement Condition Rating
- Develop Models to Predict Future Conditions
- Report on Past & Future Pavement Performance
- Determination of Maintenance & Repair (M&R) Needs Based on Budget or Condition Requirements
- Plan Projects
M&R Recommendations

❖ **Localized Maintenance:**
  ❖ Route & Seal Cracks (AC)
  ❖ Crack Leveling (AC)
  ❖ Partial/Full Depth AC Patch
  ❖ Grinding (PCC)
  ❖ Silicone Joint Seal Replacement (PCC)
  ❖ Partial/Full Depth PCC Patch
  ❖ Slab Replacement (PCC)
  ❖ Spall Repair (PCC)
  ❖ Saw & Seal Crack (PCC)

❖ **Global Maintenance:**
  ❖ Microsurfacing (AC)
  ❖ Emulsified Seal Coat (AC)
  ❖ Fog Seal (AC)
# M&R and PCI

<table>
<thead>
<tr>
<th>Section</th>
<th>Material</th>
<th>Age</th>
<th>2012 PCI</th>
<th>2015 PCI</th>
<th>2018 PCI</th>
<th>2021 PCI</th>
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<tbody>
<tr>
<td>Taxilane</td>
<td>Asphalt</td>
<td>1999</td>
<td>88</td>
<td>76</td>
<td>55</td>
<td>57</td>
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<tr>
<td>Runway</td>
<td>Asphalt</td>
<td>2008</td>
<td>87</td>
<td>72</td>
<td>55</td>
<td>69</td>
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<tr>
<td>Taxilane</td>
<td>Concrete</td>
<td>2010</td>
<td>100</td>
<td>94</td>
<td>86</td>
<td>90</td>
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# PCI Categories

<table>
<thead>
<tr>
<th>PCI CATEGORY</th>
<th>LOW VALUE</th>
<th>HIGH VALUE</th>
<th>COLOR</th>
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<tbody>
<tr>
<td>Good</td>
<td>86</td>
<td>100</td>
<td>Good</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>71</td>
<td>85</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Fair</td>
<td>56</td>
<td>70</td>
<td>Fair</td>
</tr>
<tr>
<td>Poor</td>
<td>41</td>
<td>55</td>
<td>Poor</td>
</tr>
<tr>
<td>Very Poor</td>
<td>26</td>
<td>40</td>
<td>Very Poor</td>
</tr>
<tr>
<td>Serious</td>
<td>11</td>
<td>25</td>
<td>Serious</td>
</tr>
<tr>
<td>Failed</td>
<td>0</td>
<td>10</td>
<td>Failed</td>
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</tbody>
</table>
Weighted Average PCI By Pavement Condition Category
Weighted Average PCI By Airport Classification
Weighted Average PCI By Age at Last Inspection
Next Steps

- Distribute PCI Maps to Sponsors
- Meet with Sponsors & Consultants
- Budget Pavement Maintenance in CIPs