Assessing & Prioritizing Roadway Needs
Ohio Township Association

What does this mean?
Assessing and Prioritizing Roadway Needs means to obtain an unbiased rating of the current roadway conditions so future pavement rehabilitations and/or preventative maintenance can be addressed in a systematic and cost-effective approach.

How is it accomplished?
A visual inspection of current Pavement Distresses.

Pavement Distresses
- Raveling
- Bleeding
- Patching
- Debonding
- Rutting
- Map Cracking
- Base Failure
- Settlements
- Transverse cracks
- Wheel Track Cracking
- Longitudinal Cracking
- Edge Cracking
- Upheaval
- Crack Sealing Deficiency
Distress Definitions

**Raveling** - Disintegration of the pavement from the surface downward due to the loss of aggregate particles. Raveling may occur as a result of asphalt binder aging, poor mixture quality, segregation, or insufficient compaction.

**Patching** - Placing of asphalt concrete on the surface of the existing pavement or the replacement of the existing pavement in small isolated areas.

**Rutting** - Vertical deformations in the pavement surface along the wheel tracks.

**Wheel Track Cracking** - Cracks located within or near the wheel track.

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Distress Definitions

**Transverse Cracking** - Block cracks are interconnected cracks which divide the pavement into large rectangular pieces or blocks at approximately right angles to the pavement centerline. The occurrence of transverse cracking is usually related to thermal shrinkage of the asphalt binder or binder age.

**Edge Cracking** - Edge cracks are longitudinal or crescent shaped cracks found within 1 foot (0.3 m) of the pavement edge line.

**Crack Sealing Deficiency** - Crack sealing deficiency is crack sealing which is no longer effective in preventing intrusion of water or cracks which have never been sealed.

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Pavement Condition Key

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Pavement Condition Rating Form

Pavement Condition Rating

Roadways within a township can be ranked and grouped with similar PCR scores and categorized as needing minor rehab, major rehab or varying preventative maintenance practices. From this list and available budget, roadways can be prioritized accordingly:

- Major Rehabilitation (PCR<55)
- Minor Rehabilitation (55<PCR<65)
- Preventive Maintenance (70<PCR<90)

Preventative Maintenance

Preventive Maintenance is a strategy of cost-effective treatments for an existing roadway system that preserves the system, slows deterioration, extends the service life, and maintains and/or improves the functional condition of the system without substantially increasing structural capacity.

Crack Sealing (75<PCR<90)

Crack Sealing is the placement of a mixture asphalt modified binder mixed with polyester or polypropylene fibers into existing cracks in the pavement. Crack Sealing is used to minimize the intrusion of water into the pavement. By keeping water out of the pavement, erosion of the mix is kept to a minimum, deterioration of the cracks are slowed, and less water is available to saturate the base materials.
Preventative Maintenance

Chip Seals (70<PCR<90)
Chip seals are a sprayed application of a polymer-modified asphalt binder covered immediately by a washed limestone and rolled with a pneumatic roller. The rolling operation is intended to seat the aggregate into the binder and insure chip retention. Chip seals are intended for low volume roadways to provide a new wearing surface as well as to eliminate raveling, retard oxidation, reduce the intrusion of water, improve surface friction and seal cracks.

Micro-surfacing (70<PCR<90)
Micro-surfacing is a thin surface, cold applied paving mixture composed of a polymer-modified asphalt emulsion, crushed aggregate, mineral filler, water, and other additives. Micro-surfacing is used to retard raveling and oxidation, fill ruts, reduce the intrusion of water, improve surface friction, and remove minor surface irregularities.

Thin Hot Mix Overlays (70<PCR<90)
A thin dense graded hot mix asphalt (HMA) overlay is the highest type alternative available in the pavement preventive maintenance program. Thin overlays protect the pavement structure, reduce the rate of pavement deterioration, correct surface deficiencies, reduce permeability and improve the ride quality of the pavement, particularly when accompanied by a scratch course or surface milling.

Table taken from ODOT's 2001 PAVEMENT PREVENTIVE MAINTENANCE GUIDELINES Manual. Add 10%-15% to costs per lane mile for current prices.