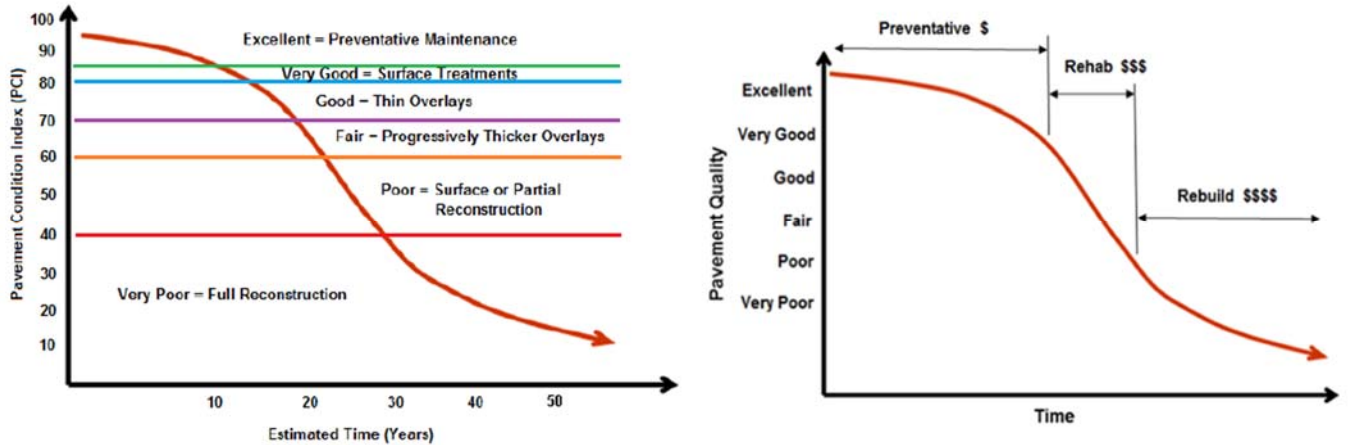


How Roads are Maintained

The City conducts regular evaluations of its roadway network to make sure each road receives the right maintenance at the right time to increase its lifespan in the most cost-effective way possible. Depending on the age and condition of the road, the treatment may be preventative maintenance, rehabilitation, or reconstruction. Below are the most common methods currently used by the City of St. Charles.



Preventative Maintenance

Crack Filling:

Crack filling is used to prevent water from getting into the roadway base and weakening it. We seal the center and curb lines of roads the year after they are resurfaced. Additionally, we seal surface cracks throughout town annually.

Full Depth Patching:

The full depth patching program removes and replaces the top 2" of asphalt in specific problem areas. This is used on older roads that have localized damage but are not ready for a full resurfacing. It is also used on roads that cannot be resurfaced until after utility improvements have taken place. The program focuses on the east side of the Fox River in odd years and on the west side in even years.

Total Patching:

Total-patching takes place regularly during the year to hit small problem spots throughout town. This is a longer lasting version of a pothole patch, designed to prevent further road deterioration. Crews spray a mixture of aggregate and bitumen onto the problem area. The mix then cures and hardens for five days, after which a sweeper truck goes through to clean up any loose aggregate.

Pothole Patching:

Pothole patching is a short-term repair using cold mix asphalt to fill holes in the roadway. This repair method is generally used after the hot-mix asphalt plants have closed for the season. Filling in the holes reduces water getting into the roadway base and provides a driveable surface until a long-term fix can be implemented.

Rehabilitation

Resurfacing:

This work involves milling off the surface of the roadway and replacing it with new asphalt. Depending on the condition of the roadway, we may remove anywhere from a thin layer to all of the existing asphalt. The road is typically paved in two layers. The first smooths out any inconsistencies, while the second provides a durable riding surface. Curb and sidewalk repairs are generally included as part of resurfacing projects.

Rebuilding

Base Reclamation:

The City uses base reclamation with cement on roads that have a pozzolanic base underneath the asphalt. The process involves removing all of the asphalt, then mixing cement powder into the existing base. The base is then compacted and allowed to cure and gain full strength. After curing, the road is paved with two layers of asphalt. The first layer provides a structural base for the road, while the second provides a durable riding surface. Curb and sidewalk repairs are generally included as part of base reclamation projects.

Full Reconstruction:

For roads that are completely deteriorated, the City will perform a full reconstruction. This involves removing all the existing pavement materials and then rebuilding the road with a new stone base and new asphalt. The road is paved with two layers of asphalt. The first layer provides a structural base for the road, while the second provides a durable riding surface. Full reconstruction often requires replacement of all of the curb. Sidewalk repairs are also generally included as part of full reconstruction projects.