

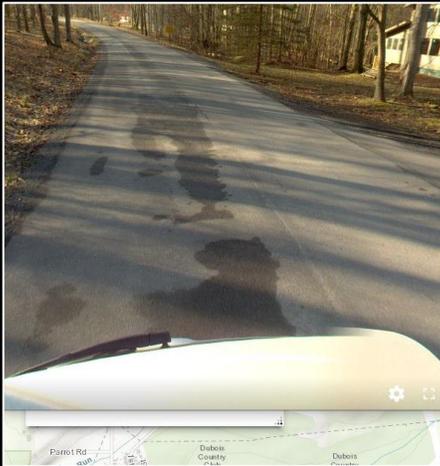
- **Owner:**
Treasure Lake Property Owners Association (TLPOA)
- **Services:**
 - GIS
 - Roadway Condition Assessment
 - Maintenance Prioritization Tool
- **Completed:**
2020

Pavement Maintenance Program

Treasure Lake Property Owners Association, DuBois, PA 

Stahl Sheaffer was selected to assist the Treasure Lake Property Owners Association (TLPOA) in developing a GIS schema and Location Reference System (LRS), roadway condition assessment, and maintenance prioritization tool. Stahl Sheaffer conducted a 3D LiDAR survey of over 80 miles of roadway, collecting 360° imagery and high definition video of the 200 roadway segments to qualitatively and quantitatively create feature information for each roadway distress observed.

Stahl Sheaffer conducted a condition survey of each area of pavement. Each of the 200 segments of roadway surface was given a numerical Pavement Condition Index (PCI) rating ranging from 0 to 100, with 0 being the worst possible condition and 100 being the best. The PCI provides a measure of the present condition of the pavement based on the distress observed on the surface, which also indicates the structural integrity and operational condition. This process provides an objective and scientific basis for determining maintenance and repair needs and prioritizing maintenance activities.



Stahl Sheaffer met with TLPOA personnel to obtain an understanding of current conditions, upcoming projects, and master planning priorities to develop an asset management tool. The tool shows a yearly line item cost for each roadway segment, using the

standardized repair types for designated repair or replacement, projected unit costs outlined by a standard maintenance routine, and the anticipated year of repair. Project costs adjust automatically, by year, to account for inflation and additional degradation caused by project deferrals. The maintenance tool allows variable budget inputs to obtain various outputs including a yearly list of projects, a budget for each project, the anticipated change in PCI, a “network condition breakdown” to evaluate program performance over a 20-year period, and an impactful relationship of the long-term benefit of performing regular preventive maintenance and pavement rehabilitation.

The maintenance prioritization tool supports the TLPOA’s goal of achieving the performance objectives of the residents’ roadway network at the least expense.