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### **PAMS: Leveraging a GIS-Based Pavement Assessment and Management System to Validate and Justify Roadway Project Formulation**

#### **Presenter**

**Candice Ottley-Francois, CAPM, GISP**  
Project Manager  
JMT Technology Group  
cottley@jmt.com

#### **Co-Presenter**

**Erv T. Beckert, PE**  
Chief - Utility & Technical Support Division  
Prince George's County, DPIE  
etbeckert@co.pg.md.us

Prince George's County, Maryland's Department of Public Works and Transportation (DPW&T) is responsible for maintaining nearly 2,000 miles of roadways that range from rural to urban classifications. DPW&T partnered with the JMT Technology Group and Dynatest Consulting to implement a countywide pavement assessment and management system (PAMS) for all County maintained roadways. The project has several goals, including the development of an ongoing and cost effective maintenance program to provide the largest overall improvement to the road network given available funding levels. PAMS includes the MicroPAVER pavement management system, a custom web application and an ArcGIS Desktop solution for managing and analyzing pavement condition data and formulating roadway improvement projects.

Semi-automated pavement condition surveys are performed on a 5-year cycle. After each survey, DPW&T leverages MicroPAVER to analyze pavement distress data, develop pavement deterioration curves and assign pavement condition index (PCI) scores to inspected County maintained roadways. The data collected during the condition survey and MicroPAVER implementation, including PCI scores and high resolution digital photos of pavement surfaces and right of ways along inspected roadways are then disseminated to all DPW&T employees via JMT's custom ArcGIS Server/SilverLight API solution. To support the County's work planning efforts and pavement preservation program, JMT also developed an ArcGIS Desktop solution which maintains ownership records, tracks changes to be imported into MicroPAVER and generates recommendations for roadway projects based on deteriorated pavement condition, citizen complaints, planned and completed work, estimated improvement costs, fiscal year budget constraints and eligibility criteria customized by roadway treatment types. PAMS has proved invaluable in supporting informed decision making, improving the efficiency of the County's project formulation process, facilitating coordination of work efforts with utility agencies and tracking and addressing citizen concerns regarding roadway projects. This presentation will discuss the County's journey to leveraging GIS to create and expand their Pavement Management program and discuss the myriad of lessons learned along the way.