## UTC Project Information

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| Project Title | Segmentation of Highway Networks for Maintenance Operations |
| University | The University of Texas at Austin |
| Principal Investigator | Jorge A. Prozzi. Ph.D. |
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| Funding Source(s) and Amounts Provided (by each agency or organization) | $112,903 USDOT |
| Total Project Cost | $112,903 |
| Agency ID or Contract Number | DTRT13-G-UTC44 |
| Start and End Dates | January 31, 2017 to January 31, 2018 |
| Brief Description of Research Project | Optimal planning of pavement maintenance and rehabilitation (M&R) activities is essential for transportation agencies to have a sustainable transportation infrastructure system. Obtaining the limits of homogeneous sections (segmentation) is a key component in maintenance operations because appropriate segmentation leads to optimal and cost effective M&R plan. However, little attention has been given to the area of pavement segmentation. Most systems currently used in the US are based on ad-hoc empirical approaches that are limited and not conducive to optimal segmentation. During this study, we will critically review existing approaches for pavement segmentation. By using actual data from pavement management systems, we will implement several methods for segmentation using pavement condition data. Based on the findings of the review and the implementation of existing segmentation methods, we will suggest the direction of developing an enhanced methodological framework of segmentation for maintenance operations. This method will be developed such that can be implemented into current state's PMS. |
| Describe Implementation of Research Outcomes (or why not implemented) | N/A |

Place Any Photos Here

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| Impacts/Benefits of Implementation (actual, not anticipated) | The implementation of the findings of this research will provide state Departments of Transportation (DOTs) with a methodology for an objective and efficient determination of homogeneous segments of their highway network based on engineering principles and actual data. The implementation of such methodology will help state DOTs promote more cost effective maintenance operation plans that identify segments need to take maintenance actions appropriately. Currently, there is no universal method for determining homogeneous segments statistically; most states apply empirical ad-hoc approaches which do not result in optical segmentation and therefore current segmentation is not conducive to optimal allocation of resources and budgets. |
| Web Links | <www.chpp.egr.msu.edu> |

- Reports
- Project website