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August 30, 2010

To: Alderman Holding, Chairman
Public Works & Services Committee

From: John C. Rooney, Asst. Commissioner of Public Works/Engineering

RE: Item 10-5535

This item pertains to the 2010 Pavement Management System Summary Report submitted to the City of Racine in August, 2010. AECOM Technical Services (formerly Earth Tech) was hired by the City of Racine to perform this annual work. Inspections of roads functionally classified as Local occur every four years while roads functionally classified as Highway, Arterial, or Collector occur every two years. Approximately one-fourth (1/4) of the 180.2 miles of Local roads and one-half (1/2) of the 19.4 miles of Collector, 41.6 miles of Arterial, and 13.3 miles of Highway are inspected every year. The pavements are inventoried by pavement type and width, and estimated construction costs are compiled for several rehabilitation strategies used to determine how to best extend the useful life of the pavements. The pavements are also inspected for distresses in accordance with the APWA Pavement Condition Index (PCI) rating system. Current City of Racine policy considers highways, arterials or collectors with a PCI of 40 and locals with a PCI of 25 to be the minimum acceptable service levels.

Today the City of Racine pavement network has an approximate initial investment value (or replacement value) of almost \$298 million in 2010 dollars. This compares to \$291 and \$289 million in 2009 and 2008 dollars, respectively. The PCI rating is used to determine which types of rehabilitation strategies (resurfacing, crack filling, joint replacement, etc.) provides the most cost effective way to extend the useful life of pavements or determine when roads need to be reconstructed. The average PCI for the entire pavement network is currently about 70, and the general trend in PCI rating over time has been slowly upward to a plateau over the last year. Because of good pavement management practices through maintenance or rehabilitation this is possible and recent data shows that today similar aged pavements from 10 years ago have higher PCI values. For example, the latest model shows concrete Collector streets with a useful life of 76 years, where back in 1996 the same pavement functional classification and material type had a predicted useful life of 65 years based on an a minimum acceptable PCI rating of 40.

Of the \$298 million in current replacement value, the remaining useful value is estimated at \$185 million. Based on estimated deterioration rates of the age of the pavements, the pavements as a whole are losing about \$6 million in value per year. This value can be compared with the annual investment consisting of all Capital Improvement Program as well as Operations and Maintenance funds budgeted and expended. The report becomes a useful budgeting tool in managing the City of Racine pavement assets. The City of Racine's overall story based on historical PCI distribution is the following:

- Increasing numbers of high-performing pavements
- Addressing the backlog of low-performing pavements where feasible
- Preservation of high and mid-performing pavements.

This result is consistent with good asset management practices. It is my recommendation that the committee receives and file the report.