Pavement Condition Assessment

Engineering Department

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To: Mayor and City Council Members

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Project Overview

- The project is similar to the previous Pavement Surface Evaluation and Rating (PASER) studies completed in 2001 and 2004
- The project used the PASER methodology to rate the surface condition of 1,564 road segments with a total centerline mileage of 182.1 miles
  - Includes all streets under City jurisdiction including chip sealed roads
  - County roads are rated by the county (last completed in 2006)
- The report documents the condition of all local and major roads under City of Novi jurisdiction in three categories: pavement distress type, ride quality and pavement surface condition.
- The first two categories will be used to establish baseline data for future evaluations.
- Pavement surface condition is a qualitative measure used to determine the appropriate type of treatment.

Pavement Condition Summary

- **PASER is a system for visually rating the surface condition of a pavement on a numerical scale of 1 to 10, with 1 being pavement in a failed condition and 10 indicating pavement in excellent condition.**
- **A pavement that is rated a 6 and higher is generally in good condition or better**
- **The report indicates that:**
  - 76% of the roads under the city's jurisdiction are rated 6 or better
  - 81% of the major roads are rated a 6 or better
  - 74% of the minor roads are rated a 6 or better
  - 86% of asphalt roads are rated a 6 or better
  - 58% of concrete roads are rated a 6 or better

Example of a PASER 10

- Windridge Lane (reconstructed in 2008 Neighborhood Road Program)

Example of a PASER 6 (Concrete)

- Bedford Drive (south of Byrne)

Example of a PASER 6 (Asphalt)

- Woodham Drive (north of Ten Mile)

Example of a PASER 2

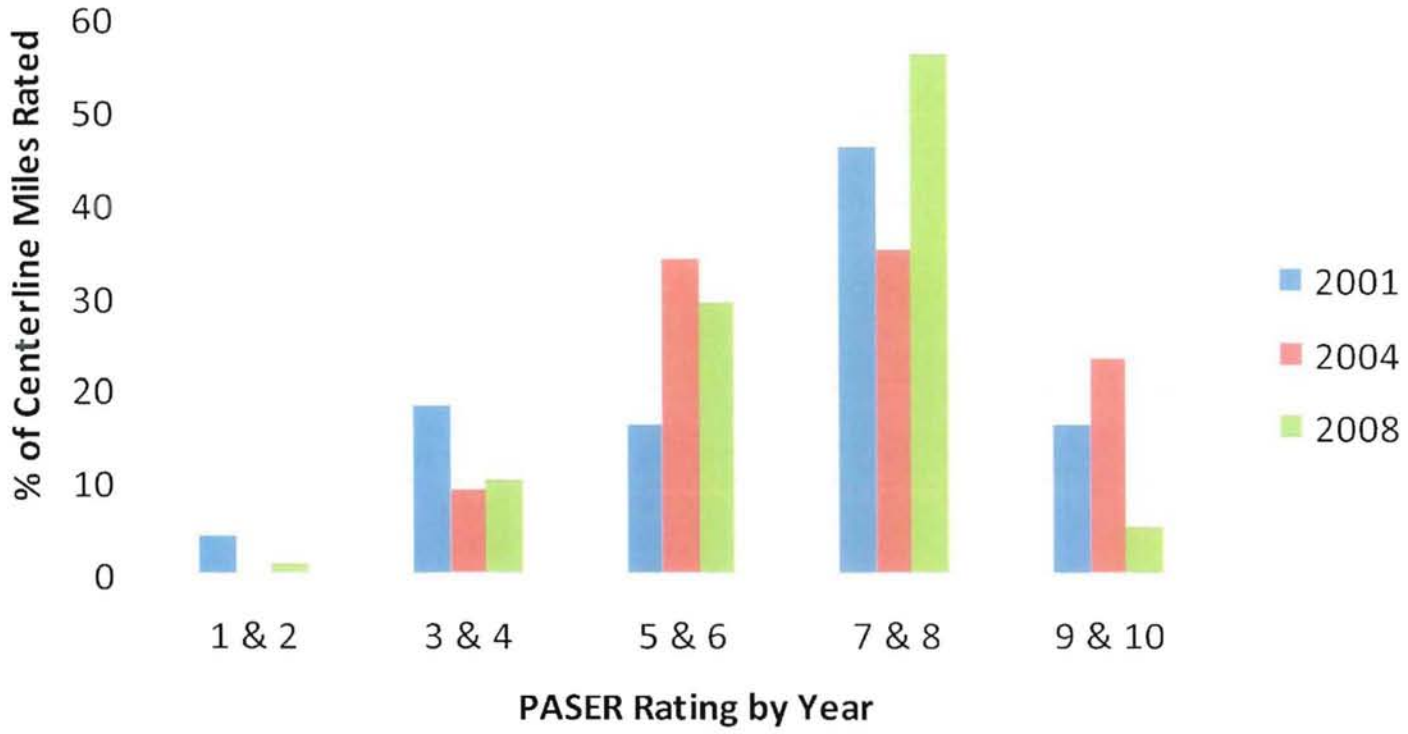
- Scenic Drive

Comparison to Previous Year's Data

- A comparison to previous years' data shows that the city's overall average PASER rating has essentially remained unchanged

Year	Average PASER Rating	Standard Deviation	% Centerline Miles rated a 6 or better
2001	6.6	3.3	74%
2004	6.9	2.0	81%
2008	6.6	1.5 *	76%

Comparison to Previous Year's Data



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Pavement Treatments – Asphalt

- The following pavement maintenance or repair treatment is recommended based on the PASER rating:

PASER Rating	Condition	Treatment
9 & 10	Excellent	No maintenance required
8	Very Good	Little or no maintenance
7	Good	Crack sealing and minor patching
5 & 6	Fair – Good	Preservative treatments (non-structural)
3 & 4	Poor – Fair	Structural improvement (overlay)
1 & 2	Failed	Reconstruction

Pavement Treatments – Concrete

- The following pavement maintenance or repair treatment is recommended based on the PASER rating:

PASER Rating	Condition	Treatment
9 & 10	Excellent	No maintenance required
7 & 8	Very Good	Routine maintenance
5 & 6	Fair – Good	Surface repairs, sealing, partial-depth patching
3 & 4	Poor – Fair	Extensive slab or joint rehabilitation
1 & 2	Failed	Reconstruction

Conclusion

- The City has been aggressive in making local and major road improvements, but the rate of pavement deterioration persists.
- Report recommends a shift from the current "worst first" strategy to one that emphasizes pavement preservation
- New approach emphasizes using resources to keep the good roads in good condition.
- This report constitutes the first step in establishing a formal asset management program for the city's road network

Next Steps

- As part of the Pavement Condition Assessment project, SME will prepare recommendations for the development of an asset management program for roads by March 31, 2009.
- A road asset management plan will help reduce the rate of pavement deterioration using a "mix of fixes" that will:
  - Maintain pavements that are in good conditions
  - Address pavements that are in failed or poor conditions as funds become available
  - Provide significant savings in the long term
- The program is expected to be in place in time for summer maintenance in 2009 and will be used to develop 2010 capital construction and maintenance projects.