

Executive Summary

This report summarizes the findings of the Street Condition Rating Program conducted by KMS & Associates, Inc. (KMS) for the City of Marietta. This rating period was between December 1st, 2008 and December 31st, 2008 and encompassed approximately 90 centerline miles of streets within the City of Marietta corporate limits.

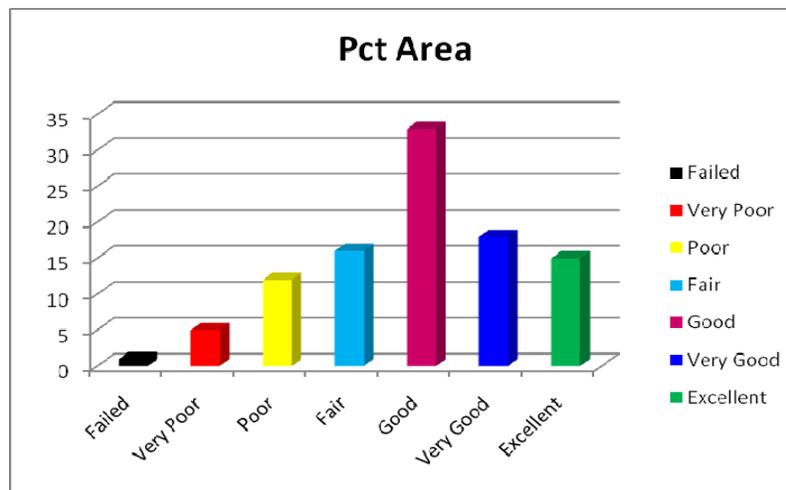
This project consisted of defining and inspecting sample units within pavement sections to determine their pavement condition index (PCI) as well as providing a curb condition rating for all pavement sections with curb. The PCI is an ASTM standardized inspection process (D6433-03), and is based on a 0-100 point scale with 100 being the best and 0 being the worst. The CCI is a 0-10 point scale with 10 being the best and 0 being the worst.

The findings of this program resulted in the following:

| Condition Category | Pct Area | Pavement Area | Unit | Sections | Pct Sections |
|--------------------|----------|---------------|------|----------|--------------|
| Failed | 1 | 103,965.00 | SqFt | 18 | 2 |
| Very Poor | 5 | 603,727.00 | SqFt | 78 | 8 |
| Poor | 12 | 1,354,865.00 | SqFt | 135 | 14 |
| Fair | 16 | 1,759,094.00 | SqFt | 168 | 18 |
| Good | 33 | 3,717,025.00 | SqFt | 262 | 27 |
| Very Good | 18 | 2,013,510.00 | SqFt | 152 | 16 |
| Excellent | 15 | 1,684,961.00 | SqFt | 143 | 15 |

After completion of the Street Condition Rating Program, KMS has determined that the average PCI for the City of Marietta's pavement network is approximately a **68**.

These results are also outlined in the bar graph below:



Introduction

The purpose of this document is to provide all of the necessary information regarding the 2008 pavement evaluation services and processes provided by KMS, as well as a final report of findings.

We are very pleased to submit our final report to the City of Marietta Engineering Division for the pavement evaluation study and implementation of the Micro PAVER pavement management system.

The project consisted of the following elements:

- Re-Inspect sample units according to the ASTM standard (D6433-03)
- Re-Inspect all roadways with curb
- Determine PCI value for each pavement section
- Update Micro PAVER software on agency specified computers
- Update latest database on agency specified computers

The end result was a total turn key pavement management solution that was delivered and installed in the appropriate format compatible with the Micro PAVER pavement management system.

Team Members

The following defines the team members of this project for both the City of Marietta and KMS:

City of Marietta

- Joe Tucker, P.E.
- Scott Mincks, Engineering Technician

KMS & Associates, Inc.

- James Golden, Director of Operations
- Steve Hitchcock, Project Manager
- Tim Marton, Chief Inspector

Project Management

KMS & Associates, Inc. was responsible for all project control, scheduling and quality assurance aspects. This responsibility was handled jointly by the Director and Project Manager for KMS. It was the up to the Director to determine and coordinate the mapping, software and data requirements with the City of Marietta while execution of the project and meeting all guidelines, timelines and deliverables fell to the project manager and chief inspector.

It was determined that the work schedule for the inspection process would be completed in one (1) working month. Valid working days through this period included any day in which the pavements were in a suitable state for observation. A state of non-suitability for pavement observation would include rain or snow days. Quality inspections can not be completed accurately under these types of conditions.

Inspection Process

This is the process of defining and inspecting sample units within pavement sections to determine their pavement condition index (PCI). This is an ASTM standardized inspection process (D6433-03) that works hand in hand with the Micro PAVER pavement management system.

A representative sample unit(s) of 2500 square feet is chosen within each pavement section and a complete distress evaluation is performed based on the criteria outlined in the Asphalt and Concrete Distress manuals. Each distress manual outlines the 19 various distresses that can occur, how to determine the severity levels of low, medium or high, and how to measure the quantities.

This process was completed by 2 professionally trained KMS pavement inspectors, operating in their automobiles independently. The pavement inspector would first drive the pavement section to verify the previously used representative sample unit(s), and then perform a manual inspection within the 2500 square foot representative sample unit recording all distress types, severity levels and quantities found.

PCI Methodology

Once the distress types, severity levels and quantities have been recorded for each sample unit and pavement section, this information is entered into the Micro PAVER database. The Micro PAVER pavement management system is then able to take all of this distress information and calculate a PCI.

As stated in the Executive Summary, the PCI is based on a 0-100 scale with 100 being the best and 0 being the worst. To further break the PCI scale down, Micro PAVER offers the ability to set up PCI ranges. KMS has come up with a solid tried and true PCI range which has not only been adopted by the City of Marietta, but several other Micro PAVER users as well. To see a graphical representation of these PCI ranges, please refer to the table below.

| Category Name | Low Value | High Value |
|---------------|-----------|------------|
| Failed | 0 | 19 |
| Very Poor | 20 | 34 |
| Poor | 35 | 49 |
| Fair | 50 | 67 |
| Good | 68 | 81 |
| Very Good | 82 | 91 |
| Excellent | 92 | 100 |

Study Results

It has been determined by KMS that the 2008 average condition of the City of Marietta's pavement network is approximately a PCI of **68** and the average curb condition is a **6**.

Following the KMS PCI category, this classifies the pavement network as being considered in "Good" condition.



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