

# # WHKS & CO. #

ENGINEERS ■ PLANNERS ■ LAND SURVEYORS

*Shaping the Horizon*

October 2009

## “Will it Play in Peoria?”



The phrase originated during the Vaudevillian Era and was popularized in movies by Groucho Marx. The belief was that if a new show was successful in Peoria, it would be successful anywhere. For WHKS, having provided transportation services for over 50 years, it is more a case of bringing a successful old “show” to Peoria—actually, West Peoria.

A team led by WHKS is providing Phase I and Phase II engineering services to the Illinois Department of Transportation to improve Farmington Road and design a new bridge over Kickapoo Creek.

The project is challenging with Farmington Road intersecting two major roadways, two railroad tracks, and crossing Kickapoo Creek. The bridge replacement and new roadway approaches to the bridge will have to maintain traffic during construction. Because the improvements are located in a densely populated area, a traffic analysis and proposed geometric improvement study are underway to determine the improvements needed, so that vehicles can operate at acceptable levels of service until at least 2034, the design year. The project area has had a history of drainage and flooding problems, which are being analyzed so that drainage improvements can be made with the roadway improvements.

The existing intersection of Farmington Road and Kickapoo Creek Road is located at the end of the existing bridge. The proposed intersection with Kickapoo Creek Road will be relocated to the west to simplify and economize the bridge requirements. A modern roundabout design will be considered for this intersection.

In accordance with previous planning documents prepared by the regional planning organization, provisions for bicycles and pedestrians will be incorporated into the design. Currently, there are no provisions for bicycles or pedestrians within the project limits.

The WHKS team is currently working to produce a Project Report and Environmental Assessment, which will conclude Phase I of the project. The alternatives that are analyzed will be presented to the public for review and comment. The final design, Phase 2 of the project, will commence after the completion of Phase I. The estimated construction cost for the project is approximately \$7.5 million. The project is scheduled for letting in 2012.

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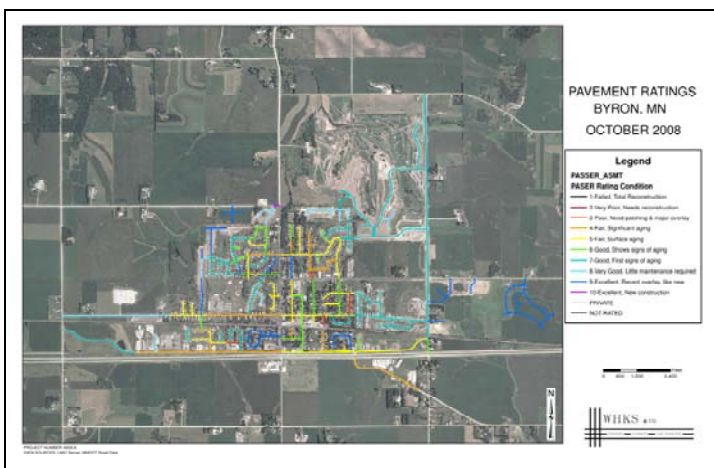
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## WHKS Assists the City of Byron with New Street Rating System

WHKS assisted the City of Byron, Minnesota to develop and integrate an efficient and user-friendly street maintenance program. The City wanted the ability to incorporate a new rating system into a GIS mapping database, to produce functional color-coded exhibits that would be displayed for the public and to track maintenance and repairs to the street systems.

To help the City with this goal, WHKS used a developed rating system in conjunction with GIS technology to identify the condition of the City's street system. WHKS, with the assistance of City Staff, inspected and rated every City block and assigned a numeric value of 1-10, with the rating of 1 being "poor" condition and a rating of 10 being in "excellent/new" condition. The information for each street was integrated into a GIS database. The GIS data was used to develop a drawing that depicted aerial mapping of the City, with the results of the street rating overlaid with color-coded lines that corresponded to the rating system. GIS tools were used to automatically generate the length of improvements for each category, including the number of streets and length of paving for overlays and the lengths of streets receiving chip sealing. The goal of the project was realized by not only providing a clear display of the proposed improvements, but also by determining cost effective and efficient methods to maintain the City street system.

WHKS provided design, surveying and construction engineering services for the 2009 Street Improvement Projects, which were identified by the new rating system. The project improvements consisted of 56 blocks of 1 1/2" asphalt pavement overlay and 21 blocks of streets that were chip seal coated. The project is partially funded by special property assessments. Construction began the end of June 2009 and was complete by the end of August 2009.



The GIS data was used to develop a drawing that represented the street rating system results.



Existing bridge carrying IL 61 over the Lamoine River.

## Bridge Replacement Underway on IL Route 61

WHKS is currently performing Phase I services for the Illinois Department of Transportation, District 4 for removal and replacement of the bridge carrying Illinois Route 61 over the Lamoine River in McDonough County. Engineering services include preparation of a Project Report, Structure Geotechnical Report and Type, Size and Location (TS&L) plan.

The existing 6-span precast, prestressed concrete deck beam bridge is in poor condition and is in need of replacement. WHKS's preliminary bridge analysis and design has resulted in a 5-span replacement structure, which utilizes cost effective precast, prestressed concrete I-beams. The new bridge will be 478 feet from abutment to abutment with a main span over the river of 110 feet. The existing roadway profile will be raised approximately 4 feet at the bridge to provide adequate clearance over the design year high water elevation of the river. The new bridge will also be built in stages to allow the roadway to remain open to traffic during construction. After completion of the Phase I portion of the project, WHKS will prepare the contract plans and special provisions.

## WHKS Re-Selected for Iowa Department of Transportation "On-Call" Design Contract

WHKS was recently re-selected by the Iowa Department of Transportation (Iowa DOT) to provide statewide "On Call" design services at various locations throughout Iowa. The contract award is effective for 3 years and is expected to include design engineering services for primary road resurfacing, interstate resurfacing and inlays, institutional roads, rest areas, traffic studies, highway drainage design, safety improvements, interchange improvements, sanitary sewer and water main relocations and other projects with short durations and limited scope of services. The projects may also include construction observation and survey, where applicable.

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The re-selection was based on past project experience, special project experience, staff qualifications and availability of the project team. Because the projects have rapid project schedules, WHKS is expected to provide a quick turnaround on the project services required for these projects. When special needs arise on an assignment, WHKS remains flexible and open to changing conditions, while meeting the project needs and schedules established by the Iowa DOT.

WHKS has provided continuous service for projects since the original selection as an “On Call” Design consultant in 1996.

## Angerman Presents at Annual IWPCA Conference



Bill Angerman, P.E., Vice President and Director of Water and Wastewater Services for WHKS, was a speaker at the Iowa Water Pollution Control Association’s Annual Conference on June 12, 2009 in Clinton, Iowa.

Bill presented information regarding the “Infiltration and Inflow Data Collection, Analysis and Reduction for Mason City, Iowa”. His presentation detailed a phased approach by the City of Mason City to identifying and resolving infiltration and inflow issues in this north Iowa community of nearly 30,000 residents.

Following the severe flooding of 2004 and subsequent overloading of the City’s sanitary sewer system, the City of Mason City embarked on an aggressive 5-year plan to identify, quantify, and reduce the amount of infiltration and inflow entering the City’s entire sanitary sewer collection system. Parts of the City’s infrastructure dated back to 1900.

The presentation included discussion about the methods employed by the City of Mason City for their Infiltration and Inflow program and gave an overview of findings and conclusions to date. Mason City’s program focused on identifying defects through closed circuit televising, manhole inspections, smoke testing, dyed water testing, and private building inspections. The program is now in its fifth and final year and has helped guide the direction of capital improvement dollars as the City has aggressively worked to improve its sanitary sewer collection system.

For more information on how WHKS can assist your community with infiltration and inflow issues, please contact a WHKS office.

# What's Happening at WHKS

## ***Representative projects currently underway:***

### **Mason City, Iowa**

4<sup>th</sup> Street Bridge Replacement  
Final Design and Construction Observation  
*Client: City of Northwood, Iowa*

Survey of Track Expansion – Boone, Iowa  
*Client: Union Pacific Railroad*

### **Ames, Iowa**

NewLink Genetics Building Roof Modifications  
*Client: Story Construction*

El Azteca Building Addition Site Plan  
*Client: Dayton Park, LLC*

### **Dubuque, Iowa/East Dubuque, Illinois**

Second Street Improvements  
*Client: City of East Dubuque, Illinois*

8<sup>th</sup> Avenue SE Improvements  
*Client: City of Dyersville, Iowa*

### **Rochester, Minnesota**

3<sup>rd</sup> Avenue Water Main Improvements  
*Client: City of Plainview, Minnesota*

Parkwood Hills Sub-Trunkline Sanitary Sewer Phase II  
*Client: City of Rochester, Minnesota*

### **Springfield, Illinois**

CH 30 (Elwin Blacktop) Roadway Reconstruction  
*Client: Macon County Highway Department*

CH 10 over North Fork Salt Creek Bridge Replacement  
*Client: Dewitt County Highway Department*

***For additional information on any WHKS projects, please contact our offices.***

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