

# *Memo*

October 4, 2006

To: The Honorable Mayor and City Council Members

From: Tom Meyer, City Attorney

Re: 19<sup>th</sup> Street Overpass

We have started phase I of the contract with WHKS & Co. to design a potential 19<sup>th</sup> Street overpass. Part of the discussions have included the possibility that in the future the Iowa Traction Railroad would want to put a line under the overpass.

Engineer Gary Wilfong, Fouad Daoud of WHKS, and I met with Dave Johnson of Iowa Traction Railroad on this issue. There are no current plans by Iowa Traction to develop a line, but Mr. Johnson would like to have the room available to put a line in. There is attached a letter from Stan Stallsmith of WHKS about the feasibility of allowing room for another rail line. The project would increase an estimated \$200,000 to \$400,000 to allow for a future Iowa Traction line under the overpass.

While there are no immediate benefits, we do not necessarily know the long term industrial development on the south end of Mason City and what the future rail needs will be by future industry.

Please call with your comments.

Tom Meyer

# Memo

**To:** Tom Meyer, Interim City Administrator  
**From:** Gary D. Wilfong, City Engineer *gw*  
**Date:** 9/17/06  
**Re:** 19<sup>th</sup> Street SW Overpass Project

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As part of the Phase I contract with WHKS & Co. for the design of the above reference project, they analyzed the possibility of the overpass being constructed in such a way as to allow the extension of the Iowa Traction Railroad to the recently annexed area.

Attached is a letter from Mr. Stan Stallsmith, engineer with WHKS & Co., regarding this possible extensions impact on the overpass project. In summary, the most feasible option would result in an estimated increase of \$200,000 to \$400,000 to the project. This estimated cost does not include costs of Right-of-Way, Engineering, or the Railroad Track Extension.

Please provide direction as to how you would like to proceed.

# WHKS & CO.

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PLANNERS

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September 14, 2006

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Mr. Gary Wilfong, P.E.  
City Engineer  
City of Mason City  
10 First Street NW  
Mason City, IA 50401

Re: 19th Street SW Overpass Project at Union Pacific Railroad

Dear Mr. Wilfong:

We have investigated the feasibility of providing for the expansion of the Iowa Traction Railroad to the south on the east side of the Union Pacific Railroad crossing at 19<sup>th</sup> Street SW. This letter summarizes our findings and the impact that the additional crossing would have on the proposed overpass structure at that location. The letter does not discuss the details of the railroad expansion itself, the cost of the railroad expansion, funding of the railroad expansion, or economic development issues.

The "Feasibility Study for the 19<sup>th</sup> Street SW Grade Separation at the Union Pacific Railroad", which was submitted to the City of Mason City in August of 2005, identified the need for the possible expansion of the Iowa Traction Railroad service to the area in the southeast quadrant of the 19<sup>th</sup> Street SW / UP railroad intersection as a concept that should be considered before proceeding with the final design of the project. To accomplish this we met with interested parties, identified issues that need to be addressed, and determined the impact that the issues will have on the proposed structure.

WHKS & Co. personnel have met with Mr. Dave Johnson of the Iowa Traction Railroad on three separate occasions in order to become familiar with the needs and requirements of the Iowa Traction Railroad concerning the possible expansion of service. The first meeting was held at City Hall on July 19<sup>th</sup> and was attended by Jim Audino and Stan Stallsmith of WHKS & Co., Mr. Johnson, and yourself. We discussed the potential benefits of extending the Iowa Traction Railroad south across 19<sup>th</sup> Street on the east side of the UP Railroad, three alternative railroad alignments to accomplish the crossing, the general cost of the additional rail and right-of-way, and a general discussion of the funding options to implement the expansion of service. The second meeting was at WHKS & Co. on July 24<sup>th</sup>. This was a follow up meeting between Mr. Johnson and Jim Audino in which Mr. Johnson delivered AutoCAD drawing files for preliminary/conceptual alternatives for crossing 19<sup>th</sup> Street SW. Mr. Johnson also provided excel spreadsheets for estimating trackage and electrification costs per mile and a Typical Section showing the layout of tracks and electrification within a 50' ROW. The third meeting was at City Hall on August 21<sup>st</sup> and was attended by Fouad Daoud of WHKS & Co., Mr. Johnson, Interim City Manager Tom Meyer, and yourself. The third meeting was to clarify the

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needs and engineering requirements of the Iowa Traction Railroad and to bring Mr. Meyer up to date on the discussions concerning the 19<sup>th</sup> Street crossing.

Additional track will need to be laid in order for the Iowa Traction cars to make the switch from traveling east-west to traveling north-south. Mr. Johnson presented three alternative railroad alignments to accomplish the crossing of 19<sup>th</sup> Street. We have investigated the impact that each alternative has on the overpass. A brief summary of each alternative, and its impact on the overpass, follows:

- 1) The first alternative required a curved section of track crossing 19<sup>th</sup> Street. While this option is feasible, and requires the least amount of new track northeast of the crossing, it would require a substantial increase in span length and bridge length for the overpass structure. The increase in span length would necessitate a change from a prestressed beam bridge type to a steel girder bridge type and possibly the addition of one or two more lines of girders in order to maintain adequate clearance over the railroad. This type of change would increase the cost of the structure by \$20 to \$25 per square foot. We estimate that the structure length would increase by approximately 200 feet. The total increase in cost of the structure would be approximately \$2.1 million to \$2.3 million. There may be additional costs and impacts due to possible changes in the grade that would impact the retaining walls and roadway portions of the project.
- 2) A second alternative would allow the new tracks to cross 19<sup>th</sup> Street parallel to the Union Pacific tracks but required a section of rail to cross property owned by the YMCA and most likely would result in increased blockage of traffic on South Monroe Ave. This option was deemed not feasible because of its impact on the geothermal field on the YMCA property.
- 3) The third alternative would also allow the new tracks to cross 19<sup>th</sup> Street parallel to the Union Pacific tracks. This option has new track extending northeast of the crossing and possibly crossing 15<sup>th</sup> Street. This alternative was determined to be feasible. It would require the purchase of additional right-of-way and require the bridge piers and abutments to be skewed to parallel the tracks. The assumption in the feasibility study was that the substructure would be perpendicular to the centerline of 19<sup>th</sup> Street. Skewing the substructure will make each pier and both abutments longer which will lead to more excavation, concrete, reinforcing steel, and piling. The skewed substructure may also require a different type of expansion joint at the end of the bridge. We determined that the Iowa Traction Railroad could cross 19<sup>th</sup> Street in the span adjacent to the span over the Union Pacific Railroad and meet the vertical clearance requirement of 18' and the horizontal clearance requirement of 14' specified by Iowa Traction. **Please note that these clearance requirements were given to us by Mr. Johnson and do not necessarily satisfy all of the AASHTO or AREMA requirements.** Any variance from the AASHTO or AREMA requirements will require documentation from the Iowa Traction Railroad requesting the variance and possibly a design exception approved by the Iowa DOT. The skewed substructure will increase the complexity of the bridge which we estimate will increase the cost of the structure by \$5 to \$10 per square foot. The total increase in cost to skew the substructure would be approximately \$200,000 to \$400,000.

In summary, we have found that it is feasible to provide for the future expansion of railroad service to the south and east of the Union Pacific Railroad crossing of 19<sup>th</sup> Street SW. The structure proposed in the feasibility study, with minor modifications, could be used to provide the clearances specified by Iowa Traction. The required clearances provided above were given to us by Mr. Johnson and do not necessarily satisfy AASHTO and AREMA requirements. We estimate that the least expensive option for providing for the future expansion of the Iowa Traction Railroad will result in increase construction costs, for the overpass structure, of about \$200,000 to \$400,000. This cost does not include the cost of Right-of-Way, Engineering, or the Railroad Track Extension.

If you have any questions or need additional information, please contact me.

Sincerely,  
**WHKS & CO.**



Stanley T. Stallsmith, P.E.  
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