City of **JOPLIN** City Council Agenda Item

Requested Council Meeting Date: February 5, 2018
Council Bill No. 2018-105

Item: Agreement for Professional Services and Work Authorization with Allgeier, Martin & Associates Inc., for Professional Engineering Consulting Services for the Inflow & Infiltration Reduction Program.

Originating Department: Public Works – Engineering

Attachments: 1) Work Authorization
2) Exhibit: Map of Joplin's Large-diameter Sanitary Sewers
3) Council Bill No. 2018-105

Department Head: David K. Hertzberg
Finance Department: Leslie Haase
City Attorney: Peter C. Edwards
City Manager: Samuel L. Anselm

Recommended Action: Approval of Work Authorization AMA-I&I RP-002 with Allgeier, Martin & Associates Inc. in the not to exceed amount of $355,288.00 for Professional Engineering Consulting Services for the Inflow & Infiltration (I&I) Reduction Program.

Background: On February 6, 2017, City Council approved the first work authorization with Allgeier, Martin & Associates Inc. (AMA) to facilitate City staff's management of the I&I Reduction Program. At that time, Council was informed that the program would involve multiple work authorizations with AMA and their consultant team of Burns & McDonnell, and TREKK Design Group. The consultant team is charged with developing a targeted program aimed at reducing I&I within the sanitary sewer collection system. Achieving this goal will reduce the frequency during wet weather events of unpermitted discharges from the City's wastewater treatment plants and overflows from sanitary sewer manholes (SSOs). The first work authorization directed AMA's team to perform a City-wide flow monitoring study within the sanitary sewer collection system. A total of 51 basins were metered for 90 days.

Discussion: The basins with the highest levels of I&I have been identified. Now, as part of the overall strategy to reduce I&I and the frequency of SSOs in a cost-effective manner, it is

necessary to be assured that the right pipe gets installed at the right place. This key piece of information is acquired through the development of a hydraulic model of the sewer system, which will incorporate measured flows from the City-wide flow monitoring effort. Hydraulic models aid engineers to make informed, cost-effective decisions about where reconstruction dollars should be spent, balancing I&I removal efforts with capital improvement projects to increase capacity of large diameter sewers. The hydraulic model is a dynamic tool that will identify capacity issues to address SSOs, and can pinpoint the source of the problem, not the symptom. For this first phase of developing the City's hydraulic model, work will be limited to large diameter trunk lines, calibrating only 20 flow meters from last year's study. Over the course of the I&I Reduction Program, staff envisions that the model will be expanded, as needed, to support future work areas, then updated periodically as reconstruction work is completed.

Recommendation: City staff recommends that Council approve a Work Authorization with AMA, and that approval of Work Authorization AMA-I&I RP-002 with Allgeier Martin & Associates Inc., in the not to exceed amount of $355,288.00 for Professional Engineering Consulting Services for the I & I Reduction Program project, be approved on an emergency basis per Section 2.12 (6) of the Joplin City Charter.