

Request for City Council Action

Date: October 9, 2012

Agenda Section: Consent No. 4	Originating Department: Public Works- Engineering / Legal
Item: Resolution Authorizing the City Manager to Execute an Engineering Agreement for the Sanitary Sewer Inflow and Infiltration Study (SA1301) No. 4.8	

Background and Summary:

On April 17, 2012, the City Council approved the FY2013 Budget and Community Investment Program (CIP). Included in the CIP Budget is the Sanitary Sewer Inflow and Infiltration Study project (SA1301). The purpose of this project is to identify sources of inflow and infiltration of storm water into the sanitary sewer system.

This project is scheduled for Consultant Design in the approved FY2013 CIP Budget and RJN Group, Inc., of St. Louis, Missouri is recommended for this work due to their expertise in identifying and analyzing sanitary sewer systems for inflow and infiltration. This will be the first phase of a multi-year project to investigate the City's sanitary sewer system with the end result being to significantly reduce excess flows that are created by storm water entering the sanitary sewer system during rain events. The FY2013 phase of this project includes the analysis and study of two sanitary sewer basins that flow into the northwest waste water treatment plant as well as the flow monitoring of private sanitary sewer systems that connect to the City's system to determine whether these private sewers significantly contribute to inflow and infiltration.

The attached proposal from RJN Group, Inc. details three specific fees that will provide investigation and analysis of the following areas: Sanitary Sewer Sub-Basin Southeast 9/Northwest 1 for a cost of \$44,095.00; Sanitary Sewer Sub-Basin Northwest 3 for a cost of \$74,711.50; and Metering of Sub-basin Manholes for a cost of \$48,480.00. Therefore the not-to-exceed fee for this work would be \$167,286.50.

The FY2013 CIP Budget includes \$54,800 for design engineering services and \$150,000 for construction (\$204,800 in total funds for the FY2013 CIP Budget). Staff has determined that it would be more beneficial to perform investigation and analysis during FY2013 and plan for remediation/construction in FY2014; therefore the proposal from RJN Group, Inc. in the amount of \$167,286.50 is recommended. There are sufficient funds available within the approved FY2013 CIP for these services.

Recommended Actions:

The City Council is requested to approve the Resolution which authorizes the City Manager to execute an agreement with RJN Group, Inc. of St. Louis, Missouri for professional services in an amount not to exceed \$167,286.50.

Engineering Approval Obtained	Finance Approval Obtained	Legal Approval Obtained	Approval Obtained	Manager's Approval Obtained
-------------------------------------	---------------------------------	-------------------------------	----------------------	-----------------------------------

Council Action: Motion by _____ 2nd by _____ to _____

RESOLUTION NO. 2012-R-_____

RESOLUTION AUTHORIZING THE CITY MANAGER TO EXECUTE AN ENGINEERING AGREEMENT FOR THE SANITARY SEWER INFLOW AND INFILTRATION STUDY (SA1301)

WHEREAS, the City of Carbondale, Illinois, is a home rule unit of local government under the Illinois Constitution, 1970, Article VII, Section 6; and

WHEREAS, pursuant to Article VII, Section 6(a) of the Illinois Constitution, 1970, the City of Carbondale may exercise any power and perform any function pertaining to its government and affairs including, but not limited to, the power to regulate for the protection of the public, health, safety, morals and welfare; and

WHEREAS, the City of Carbondale maintains the Sanitary Sewer System for the use of and by the population of the City of Carbondale; and

WHEREAS, the funding of the Sanitary Sewer Inflow and Infiltration Study (SA1301) has been approved by the City of Carbondale City Council; and

WHEREAS, RJN Group, Inc. of St. Louis, Missouri has been solicited to perform this Engineering due to their expertise in identifying and analyzing sanitary sewer systems for inflow and infiltration.

WHEREAS, the contractual services requested from RJN Group, Inc. of St. Louis, Missouri are services which are professional in nature, thereby creating an exception to the formal bidding process in accordance with Section 1-6-13(E)(2); and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CARBONDALE, ILLINOIS, AS FOLLOWS:

SECTION 1. That the City Council of the City of Carbondale hereby authorizes the City Manager to execute an Engineering Agreement with RJN Group, Inc. of St. Louis, Missouri in an amount not to exceed \$167,286.50 as attached hereto as Exhibit A.

SECTION 2. That the City Manager and the City of Carbondale, Illinois is hereby authorized to and shall take any and all reasonable, necessary and proper action to carry out the intent and purposes of this Resolution.

SECTION 3. That this Resolution be spread at length upon the minute records of the City Council of the City of Carbondale, Illinois.

This Resolution is adopted at a regular meeting of the City Council of the City of Carbondale, Illinois on the 9th day of October, 2012.

APPROVED: _____
Joel Fritzler, Mayor

FOR: _____
AGAINST: _____
PASSED: _____
APPROVED: _____
RECORDED: _____
PUBLISHED: _____

ATTEST: _____
Rachel E. Moore, City Clerk

APPROVED AS TO LEGALITY AND FORM:

P. Michael Kimmel, Assistant City Attorney



The Choice for Collection System Solutions

October 3, 2012

Mr. Sean Henry, P.E.
Public Works Director
City of Carbondale
200 South Illinois Avenue
Carbondale, IL 62902

Subject: Flow Monitoring and Inflow/Infiltration Investigation Proposal

Dear Mr. Henry:

RJN Group, Inc. (RJN) is pleased to present this proposal in response to your e-mail request on September 28, 2012. RJN proposes to conduct inflow/infiltration (I/I) investigations on two portions of the City of Carbondale (City) wastewater collection system and to install flow monitors and perform flow monitoring for five manholes. Identification of defects in areas of the collection system is desired to identify issues that may be contributing to excess I/I and flooding. Flow monitoring will assist with identification of high-flow areas within the collection system.

The study areas are Sub-Basin Southeast 9/Northwest 1, Sub-Basin Northwest 3, and the flow monitoring of manholes as follows.

<u>Manhole Number</u>	<u>Basin Location</u>	<u>Size of Pipe (Inches)</u>
98 or 145	Southwest 4	12
136	Southwest 4	8
420	Southwest 4	8
97 or 170	Southwest 4	8
A42	Southeast 2	15
1	Southeast 51	15
155 or 154	Southeast 2	8

A total of seven meters with one rain gauge will be installed.

Sub-Basin Southeast 9/Northwest 1 has 21,180 linear feet of sewer and 81 manholes; Sub-Basin Northwest 3 has 47,343 linear feet of sewer and 198 manholes.

SCOPE OF SERVICES

RJN will conduct a thorough investigation of sub-basins using its standard defect quantification procedures and handheld field data collection procedures.

RJN will identify building defects (downspouts) through visual identification. Downspouts that could not be confirmed as connected during smoke testing will be tested with dye.

RJN will inspect each manhole (if accessible). Manholes that are less than 15 feet in depth will be topside inspected. Manholes over 15 feet in depth will be inspected by a full-descent inspection. RJN will identify all lines entering and leaving the manhole, along with a measured



elevation of each pipe invert. A visual inspection of all pipes will be made from the manhole. The construction type of each manhole will be recorded, along with the physical location relative to storm sewers, ditches, etc. All subsurface manhole components from the frame seal, walls, and manhole bench and trough will be inspected. A global positioning system point will be recorded for each structure accurate to three meters.

RJN will use its dual-blower smoke testing protocol for each accessible line in the study area. All observable defects will be recorded and input into a database. RJN will provide public notification of smoke testing through the use of door hangers.

Segments that need cleaning will be identified, along with areas where dyed water flooding and closed-circuit television (CCTV) are necessary to confirm pipe defects. If there is a need for CCTV during dye flood testing, RJN will coordinate with the City for CCTV. Should there be a need for CCTV and the City wishes not to commit its resources, an independent contractor could be procured by RJN at additional cost to the City.

RJN will prepare a report of all findings.

CITY'S PARTICIPATION

The City shall assist with notifying the community through newspaper advertisement and through the City's Web site. The City shall provide water to RJN for dye testing. Cooperation with the fire and police departments when they receive nuisance calls during the smoke testing process is also necessary and important.

SCHEDULE

In a typical year, RJN quits smoke testing by Thanksgiving. Freezing weather conditions limit the effectiveness of smoke testing. RJN anticipates two months of favorable weather will be needed to perform the fieldwork with one month needed for report development. RJN is ready to begin fieldwork within one week of approval of this proposal. Depending on weather conditions, it may not be possible to complete the project this year.

RJN recommends performing the flow monitoring portion of this project in the spring, after February.

PROJECT FEE

RJN has prepared this proposal based on the geographic information system data provided by the City. CCTV and sewer cleaning are not included in this proposal. We propose to perform the I/I inspection services on a unit-rate basis. Our estimate is:

Sub-Basin Southeast 9/Northwest 1	\$44,095.00 (see attached rate schedule)
Sub-Basin Northwest 3	\$74,711.50 (see attached rate schedule)
Metering of Seven Manholes	\$48,480.00 (60-day period, \$56/day/meter for additional days)

These amounts will not be exceeded without written authorization.

RJN will invoice the City monthly based on the work completed.



Thank you for the opportunity to present this proposal. Please contact me with any questions or comments at (314) 588-9764, Extension 325 or kwhite@rjn.com.

Sincerely, ,

.
Kevin White, P.E.
Project Manager

Attachment

cc: T. Russo

Carbondale Cost Estimate

Northwest 3

Linear Feet	47,343
Maholes	198
Dye Days	4
Wet Days	1
CCTV (10%)	0
Units	

Rates

Manhole Inspections	\$ 105.00	Each	\$ 20,790.00
Smoke Testing	\$ 0.50	Linear Foot	\$ 23,671.50
Dye Testing	\$ 2,250.00	Day	\$ 9,000.00
Wet Weather	\$ 2,250.00	Day	\$ 2,250.00
CCTV	\$ 1.70	Linear Foot	\$ -
Data Processing and Report		Lump Sum	\$ 19,000.00
Total			\$ 74,711.50

Southeast 9

Linear Feet	21,180
Maholes	81
Dye Days	3
Wet Days	1
CCTV (10%)	0
Units	

Rates

Manhole Inspections	\$ 105.00	Each	\$ 8,505.00
Smoke Testing	\$ 0.50	Linear Foot	\$ 10,590.00
Dye Testing	\$ 2,250.00	Day	\$ 6,750.00
Wet Weather	\$ 2,250.00	Day	\$ 2,250.00
CCTV	\$ 1.70	Linear Foot	\$ -
Data Processing and Report		Lump Sum	\$ 16,000.00
Total			\$ 44,095.00