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REVISED

ITEM #25
BOMA
10/08/13

MEMORANDUM

September 17, 2013

TO: Board of Mayor and Alderman

FROM: Eric S. Stuckey, City Administrator
David Parker, P.E.; CIP Executive/City Engineer
Paul Holzen, P.E.; Director of Engineering
Ben Worley, Right of Way Agent/Project Manager

SUBJECT: Consideration of Amendment No. 4 to the Professional Services Agreement (PSA) with CDM Smith (COF Contract No. 2011-0037) for the Jackson Lake Dredging Improvements Project in an Amount Not to Exceed \$26,600.

Purpose

The purpose of this memorandum is to provide the Board of Mayor and Aldermen (BOMA) with information concerning the Jackson Lake Dredging Improvements Contract.

Background

The notice to proceed was issued on May 2, 2011 with construction being complete on December 28, 2011. The contract required the contractor to perform a Bathometric survey on the lake prior to the beginning of dredging operation. The Mapping Network preformed the pre-bathometric survey for the project on October 12, 2011 using standard methods that are adopted by the U.S. Army Corp of Engineers. They collected 5,395 points and determined that the lake had approximately 53,030 C.Y. of material that needed to be dredged. The Tennessee Department of Environment and Conservation required that dredging operations stay at least 30' off the lake dam. After review of the pre-bathometric survey it was determined that approximately 45,000 C.Y. of material needed to be removed from the lake. Change order number 1 included adding an additional 8,000 C.Y. to the contract to make a total to be removed 45,000 C.Y. and gave the contractor an additional 82 days to complete this work.

At the end of construction, Loudeneck Surveying preformed a post bathometric survey on the lake. That survey showed that approximately 33,000 C.Y. of material had been removed from the lake. Staff wanted some type of verification on the amount removed especially since there were two different companies involved in completing the surveys. CDM Smith asked The Mapping Network to preform another post bathometric survey and compare it to the data that they had from the pre-bathometric survey. The survey was completed using the same equipment as the pre survey and the surveyor collected 47,463 points in the lake, they also determined that approximately 10,500 C.Y. of material had been removed. Staff believes this survey is much more accurate since the same equipment was used in the pre and post surveys and since the surveyor collected over 40,000 more points than the contractor's surveyor.

CDM Smith had talked to numerous dredging experts from around the country, one of which suggested collecting samples of the dredged material in the bags to determine specific gravity and average percent solids. By taking the specific gravity, average percent solids and length, width and height of each bag



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the engineer can determine the amount of wet material that was taken from the lake and placed in the dewatering bags.

Staff also asked Century Construction to survey the volume of material that is presently on the dewatering site. Sawyer Land Surveying completed this on July 31, 2013 and found 5,473 C.Y. of dry material stored at the dewatering site. From the information that we have about the material that is in the lake and from what we have been told by dredging experts there is no way that that amount of material could equal 33,000 C.Y. of wet material in the lake.

Financial Impact

The difference between the two post bathometric surveys is 22,500 C.Y. of material being removed or \$517,500 (22,500 C.Y. X \$23.00 per C.Y.). At this point staff feels the best option is to perform the testing on the materials in the bags to further back up the data from the survey.

Since this contract is outside of the completion date it has always been the opinion of staff that Century Construction should pay liquidated damages. With the problems that Century has had with their subcontractor we have verbally told Century that we would waive all liquidated damages except for the additional costs that the city paid for continuation of services. Continuation of engineering services at this point is \$33,000. With Amendment number 4 that staff is asking BOMA to approve that total will be \$59,000 (\$33,000+\$26,000).

The city has been named in a lawsuit along with Century Construction by U.S. Aqua Vac, the dredging subcontractor. The lawsuit states that the city as well as Century Construction has not paid them for dredged material, work of which they believe they completed based on the Loudonbeck Survey. Staff believes this material was never removed and Loudonbeck Surveying has been very reluctant to discuss this issue or answer questions pertaining to the work they performed. This action against the city is why staff has requested the additional work to be done by not only CDM Smith but also by Century Construction.

Recommendation

Staff recommends approving amendment number 4 with CDM Smith. Perform soil testing as recommended by dredging professionals to ensure that the survey completed by The Mapping Network is accurate. Staff also recommends charging Century Construction the amount of any additional engineering services in liquidated damages.