

 <p style="text-align: center;"><b>Council</b> <b>Communication</b> Office of the City Manager</p>	<b>Date:</b>	August 24, 2015
	<b>Agenda Item No.</b>	<b>9</b>
	<b>Roll Call No.</b>	<b><u>15-1409</u></b>
	<b>Communication No.</b>	<b><u>15-467</u></b>
	<b>Submitted by:</b>	<b>Pamela S. Cooksey, P.E., City Engineer</b>

**AGENDA HEADING:**

Approving Professional Services Agreement with Stantec Consulting Services, Inc. for Southeast Des Moines (SEDM) Levee Assessment and Analysis, in an amount not to exceed \$1,317,000.

**SYNOPSIS:**

Recommend approval of the Professional Services Agreement with Stantec Consulting Services, Inc., John S. Montgomery, Vice President, 1859 Bowles Avenue, Suite 250, St. Louis, Missouri 63026, for a total cost not to exceed \$1,317,000, based on hourly rates, to provide professional services for SEDM Levee Assessment and Analysis.

**FISCAL IMPACT:**

Amount: \$1,317,000

Funding Source: 2015-16 CIP, Page Storm Water Improvements – 6, Flood Mitigation Improvements, SM087, Storm Revenue Bonds Issued

**ADDITIONAL INFORMATION:**

On June 24, 2013, by Roll Call No. 13-1059, City Council approved a professional services agreement with Stantec for DM-I, DM-II and DM-III for Levee Assessment and Analysis. Work supported the City’s levee accreditation program relative to the requirements of the Federal Emergency Management Agency (FEMA) listed in the National Flood Insurance Program (NFIP) regulations cited in the Code of Federal Regulations (CFR) Title 44, Chapter 1, Section 65.10 (44 CFR 65.10) and included field reconnaissance, geotechnical exploration and laboratory testing, engineering analyses of freeboard, closure structures, embankment protection, levee and foundation stability, settlement, and interior drainage. Stantec also supported the City in coordination with the U.S. Army Corps of Engineers (USACE) relative to the requirements for levee alterations listed in United States Code (USC) Title 33, Chapter 9, Subchapter 1, Section 408. This included meetings with USACE to discuss Section 408 requirements, hydraulic risk analysis to evaluate impacts, and preparation of preliminary submittals.

The DM-I levee system is hydraulically connected to the Red Rock Reservoir Remedial Works – Southeast Des Moines/Southwest Pleasant Hill Remedial Works levee. This levee is commonly referred to as the Southeast Des Moines (SEDM). The SEDM levee was authorized, designed, and constructed by the USACE and is primarily operated and maintained by the USACE Red Rock Project Office.

FEMA considers the DM-I and SEDM levees part of the same “system” (since they are hydraulically connected); therefore, it is required that SEDM be accredited in order for DM-I to be accredited. The alternative would be to construct a tieback levee to separate the SEDM and DM-I levees. This was reviewed as part of a feasibility study in 2013. The feasibility study concluded that improvements to the SEDM levee system is the preferred approach.

The City and Stantec have coordinated with USACE regarding accreditation of the SEDM levee system. It was originally assumed that USACE would provide documentation to support accreditation of the SEDM levee; however, USACE has stated that it would provide accreditation documentation of the SEDM levee system to FEMA, but would not perform the analyses required. The City would be responsible for providing these analyses to USACE. USACE follows guidelines in Engineering Circular (EC) 1110-2-6067 for NFIP levee system evaluation when providing levee accreditation documentation to FEMA. Stantec will perform engineering evaluation required by 44 CFR 65.10 and includes field reconnaissance, geotechnical exploration and laboratory testing, engineering analyses of freeboard, closure structures, embankment protection, levee and foundation stability, settlement, and interior drainage. In addition to the 44 CFR 65.10 requirements, Stantec will follow the guidelines listed in EC 1110-2-6067, which includes several tasks that overlap with the CFR requirements.

The approach to ultimately obtaining levee certification and FEMA accreditation is broken into phases. The first phase, provided in the scope of services for this agreement, includes engineering assessment and alternatives analysis based on 44 CFR 65.10 and EC 1110-2-6067 that will result in the development of a master plan for the levee systems. Subsequent phases are anticipated to include final design and permitting of the identified improvements, construction of the improvements, and ultimately certification of the levee system to achieve accreditation by FEMA. Stantec will be involved through each phase in varying degrees to ensure the hydraulic modeling is performed consistently and that the requirements of the USACE and FEMA are fully incorporated into each project. Stantec’s work beyond the master plan will be accomplished as separate scope of services through future agreements.

This agreement provides for Phase I of the required analysis that is consistent with work performed on the DM-I, DM-II, and DM-III levees. The analyses provided in this agreement, as well as the previous and proposed work performed by Stantec, will be incorporated into the USACE feasibility study, approved by Council on August 10, 2015, by Roll Call No. 15-1337.

Due to the nature of work required to provide certification through FEMA’s accreditation of the levees, changes are necessary to the City’s Standard Insurance and Indemnification requirements.

#### **PREVIOUS COUNCIL ACTION(S):**

Date: August 10, 2015

Roll Call Number: [15-1337](#)

Action: [Approving](#) Agreement between the Department of the Army and City of Des Moines for the Des Moines Levee System. ([Council Communication No. 15-446](#)) Moved by Hensley to adopt. Motion Carried 7-0.

Date: June 24, 2013

Roll Call Number: [13-1059](#)

Action: [Approving](#) Professional Services Agreement with Stantec Consulting Services Inc, for professional services in conjunction with the levee assessment and analysis, not to exceed \$1,558,000. ([Council Communication No. 13-321](#)) Moved by Hensley to adopt. Motion Carried 7-0.

**BOARD/COMMISSION ACTION(S): NONE**

**ANTICIPATED ACTIONS AND FUTURE COMMITMENTS:**

Normal Council actions on consultant services. Consultant services for subsequent phases required to design and permit identified improvements to obtain USACE Section 408 approval and achieve FEMA accreditation.

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