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COUNCIL COMMUNICATION City Manager's Office

GENERAL INFORMATION

Agenda Date: 10/10/05

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Roll Call No.:

Submitted by: William G. Stowe, Assistant City Manager/Public Works/Engineering

SUBJECT—

Request For Procuring Professional Services Utilizing Qualifications-Based Selection (QBS) Process for Des Moines Metro ALERT Flood Warning System Master Plan

SYNOPSIS—

Authorization to proceed with procuring professional services utilizing Qualifications-Based Selection (QBS) Process for Des Moines Metro ALERT Flood Warning System Master Plan

FISCAL IMPACT—

Funding for professional consulting services for development of the Master Plan and subsequent equipment purchases, installation, troubleshooting and training will be disbursed from the City of Des Moines Stormwater Utility Operations and Maintenance Fund. The cities of Des Moines, West Des Moines and Clive will share in this funding at the following percentages (per a Memorandum of Understanding and Chapter 28E Agreement filed on October 27, 1999):

- City of Des Moines: 56.44%
- City of West Des Moines: 23.62%
- City of Clive: 19.94%

It is anticipated that the Master Plan will be implemented in three phases, with the first phase totaling approximately \$90,000. Funds are provided for in the Flood Early Warning System Maintenance Account: Fund EN301; Organization PWK077010; Project EN067; Capital Outlay 544190; Activity ID 30-2006-019.

RECOMMENDATION—

Approval.

BACKGROUND—

The City of Des Moines administers an ALERT (Automated Local Evaluation in Real Time) Flood Warning System. This system is utilized by the cities of Des Moines, West Des Moines, and Clive, in addition to the National Weather Service (NWS) located in Johnston, Iowa. An existing Chapter 28E Agreement between these governmental entities outlines respective duties, responsibilities, mutual benefits, and funds sharing for the ALERT partnership.

The system consists of eight United States Geological Survey (USGS) maintained river/stream gages and seven City/NWS-maintained radio frequency sensor sites (stream gages and/or rain gages). The City of Des Moines, West Des Moines, Des Moines Water Works and USGS cooperatively fund maintenance of the eight river/stream gages, and the City of Des Moines Police Department (Radio Shop) maintains and performs minor equipment replacement for the seven radio frequency sensor sites. Hydrologic data from all 15 sites is sent via phone modem and FM-Line of Sight radio signals to the NWS office base station in Johnston, Iowa, then uploaded to a City of Des Moines server, which is accessed by the clients of the system (the partner cities and the NWS).

All partners in the ALERT Flood Warning System use a customized software package to monitor river/stream gage heights, rain gages, and status of each sensor. The gage heights are used by the partner cities as action points to initiate floodgate, storm pump station, and street closure operations for the flood protection system within the respective cities. For the City of Des Moines, these action points are outlined in the Public Works Flood Operations Manual. The rain gage data is used to estimate the frequency of rainfall events and is archived for use in watershed modeling and future reference.

Due to the age of the equipment—much of which was installed in 1989—and the need for additional stream gage and rain sensors, a Metro ALERT Flood Warning System Master Plan needs to be developed and implemented.

The Master Plan will identify system deficiencies, types of upgrades needed to attain state-of-the-art status, the need for system expansion—all with the goal of providing functional flood warning responses. The plan will address specific response needs of the communities and the response characteristics of each flooding source (large rivers and small flash-flood creeks). The Master Plan will also provide an implementation strategy, with scheduling of system improvements consistent with funding availabilities.

The QBS process provides a fair and rational procedure to obtain the services of professionals, based on qualifications, at a fair and reasonable cost. In the QBS process, professionals are selected based upon competence and experience in their field and the reputation of their firm. Selection criteria will include:

- Mutual trust, firm experience, project approach, and responsiveness
- Schedule, communications skills, individual experience, and technical management
- Quality control and design excellence