



AGENDA MEMORANDUM

Future Item for the City Council Meeting of April 12, 2016
Action Item for the City Council Meeting of April 19, 2016

DATE: February 17, 2016

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<p style="text-align: center;"><u>Engineering Design Contract</u> Signal Improvement and Street Lighting (Bond 2012) – Traffic Management Center</p>
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CAPTION:

Motion authorizing the City Manager, or designee, to execute a contract for professional services with Maldonado-Burkett Intelligent Transportation Systems, LLP (MBITS) of Corpus Christi, Texas in the amount of \$697,785.18 to complete the design and implementation of the Traffic Signal Management Equipment in the new Traffic Management Center (TMC) (Bond 2012 Proposition 1 Signal Improvements & Street Lighting project)

PURPOSE:

The purpose of this Agenda Item is to obtain authority to execute a professional services contract for design of the Traffic Management Center.

BACKGROUND AND FINDINGS:

During the Fiscal 2015 Budget process Council approved a Street Operations Department decision package for purchase of an Automated Traffic Management System (ATMS). This system is used for management of traffic signal timing and coordination from a centralized location (a "Traffic Management Center") and replaces the on-street master controllers. Purchase of the ATMS was the first step towards developing a state-of-the-art centralized Traffic Management Center (TMC).

Bond 2012 Proposition 1 included a \$2,000,000 "Signal Improvements & Street Lighting" project. Creation of the new TMC is one of the activities planned under this project to "perform upgrades...and

include electrical equipment to improve traffic safety and efficient traffic movement.” The TMC will be located in the new Signs/Signals Building for which a separate Design-Build Contract was awarded by Council in October 2015 to Fulton/Coastcon. The building, also part of a voter approved Bond 2012 Proposition, includes a 1,000 SF section to house the new TMC in order to maximize operational efficiencies of the Street Operations Department and minimize overall construction costs.

Maldonado-Burkett Intelligent Transportation Systems, LLP (MBITS) is the design engineer selected for design of the TMC under RFQ 2012-03. A previous small AE contract was issued to MBITS to develop a detailed scope and coordination of the TMC equipment and installation with building construction as well as to perform a basic inventory of City-wide traffic signals. Under the proposed contract, MBITS will perform a detailed field inventory of the traffic signal network design for 245 intersections, and 184 school zone flashers, and will identify equipment required to implement the new traffic signals/school zone flasher communications network into the new TMC. Design work also includes developing the IP (Internet protocol) addresses for all existing and planned field traffic systems to be implemented into the new TMC system. The following is a summary of the major tasks contained in this contract:

- **Concept of Operations** – Provides written description of how the ATMS will be used in the TMC to manage traffic operations for the City. It can be used to develop performance measures to validate the ATMS.
- **ITS Master Plan & Communication Plan** – Provides a comprehensive understanding of the City’s existing communication infrastructure while providing for future traffic signal system needs with a more efficient communication system.
- **Operations and Maintenance Manual** – MBITS will work with staff to develop a manual of operational and maintenance procedures. Other supporting documentation will be included as well as key contacts, operational procedures, maintenance procedures, and an appendix.
- **Advance Transportation Management System (ATMS) assistance** – MBITS will work with the City in establishing ATMS protocols for various traffic situations so that the ATMS more effectively meets City needs.
- **Integration and Support** –
 - MBITS will perform a field inventory of 245 intersections and 184 school zone flashers and will identify equipment needed to implement the new communications network. MBITS will also design an internet network.
 - MBITS will partner with Iteris for purchase and installation of equipment & software for a video wall (housing the hardware and electrical components), computer processor, TMC conference room monitors, audio system, and other miscellaneous elements for a complete project.
 - MBITS will perform end to end acceptance testing to ensure that all aspects of the TMC design operate per design to the City’s satisfaction. A 3-day training class will be held for all City staff users.
 - MBITS will provide 12 months system support upon complete system implementation.

ALTERNATIVES:

1. Authorize execution of the contract.
2. Do not authorize execution of the contract. (Not Recommended)

OTHER CONSIDERATIONS:

Cost of individual contract tasks:

TASK	DOLLAR AMOUNT	PERCENT of CONTRACT
Concept of Operations	\$104,710.00	15%
ITS Master Plan / Communication Plan	\$190,717.00	27%
Operations & Maintenance Manual	\$42,020.00	6%
Advance Transportation Mgmt. System Assistance	\$69,227.00	10%
Integration and Support – Equipment and Installation	\$105,746.00	15%
Integration and Support – Warranty and Technical Support	\$45,116.00	6.5%
Integration and Support – Testing and Training	\$18,226.00	3%
Additional Design Fees (Field Work, Meetings, Administrative Support)	\$122,023.18	17.5%
Total Contract Price:	\$697,785.18	100%

CONFORMITY TO CITY POLICY:

Complies with statutory requirements for architectural and engineering contracts. Conforms to FY 2015-2016 Street Capital Improvement Planning (CIP) Budget.

EMERGENCY / NON-EMERGENCY:

Not applicable

DEPARTMENTAL CLEARANCES:

Street Department

FINANCIAL IMPACT:

☐ Operating ☐ Revenue ☒ Capital ☐ Not applicable

Fiscal Year 2015-2016	Project to Date Expenditures (CIP only)	Current Year	Future Years	TOTALS
Budget (This element of work only)		\$800,000.00		\$800,000.00
Encumbered / Expended Amount		33,717.52		33,717.52

This item		\$697,785.18		\$697,785.18
Future Anticipated Expenditures This Project		52,500.00		52,500.00
BALANCE		\$15,997.30		\$15,997.30

Fund(s): Street Bond 2012

RECOMMENDATION:

City staff recommends execution of the contract with Maldonado-Burkett Intelligent Transportation Systems, LLP for \$697,785.18 for the Traffic Management Center.

LIST OF SUPPORTING DOCUMENTS:

Project Budget
Location Map
Presentation
Contract Amendment
Form 1295