



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Scott P. Johnson

SUBJECT: SEE BELOW

DATE: May 23, 2011

Approved

Date

6/2/11

COUNCIL DISTRICT: Citywide

SUBJECT: REPORT ON REQUEST FOR PROPOSAL FOR THE PURCHASE AND DEPLOYMENT OF AN ADAPTIVE TRAFFIC CONTROL SYSTEM

RECOMMENDATION

Report on Request for Proposal (RFP) for the purchase and deployment of an Adaptive Traffic Control System and adoption of a resolution authorizing the Director of Finance to negotiate and execute the following:

1. An agreement with TransCore ITS, LLC (Pleasanton, CA) for the design, purchase, implementation and deployment of an Adaptive Traffic Control System including all hardware, software (including third party licenses), related professional services, one year of extended maintenance and support, shipping and applicable sales tax for an amount not to exceed \$905,720.
2. Change orders not to exceed a contingency amount of \$90,000 to cover any unanticipated design or implementation changes.
3. Four one-year options for ongoing maintenance and support subject to annual appropriation of funds.
4. Change orders or amendments to purchase additional hardware and software to expand the adaptive control system to cover additional intersections for five years, subject to the appropriation of funds.

OUTCOME

Deploy an advanced traffic signal control system in highly congested areas of the City's key business districts to optimize traffic flow conditions through improved vehicle throughput and

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reduced stop and go actions that have a negative impact on air quality, fuel consumption and travel time.

BACKGROUND

On July 21, 2008, City Council approved acceptance of a \$20M grant funded (Proposition 1B) Traffic Light Synchronization Project (TLSP). Proposition 1B was approved by California voters in November 2006 to fund traffic light synchronization projects and other technology-based improvements to improve safety, operations and effective capacity of local streets and roads. The TLSP provided for the installation of fiber-optic communication lines to interconnect traffic signals and transmit video data; replacing aging traffic signal controllers; retiming traffic signals along commute corridors, installing traffic surveillance cameras; and the deployment of an adaptive traffic control system to improve traffic flow conditions in highly congested areas of key business districts.

The adaptive traffic signal system adapts to traffic conditions in real time, whereas traditional signal timing software adjust traffic signal timing parameters based on time-of-day schedules using historical traffic condition data; such as during weekday morning, midday and evening peaks. The adaptive traffic control system is comprised of a central sever software that communicates with client software residing at each signalized intersection along the identified key business districts. It utilizes real-time traffic condition data collected from traffic sensors located in the field to calculate and automatically adjust traffic signal timing parameters throughout the day, providing the appropriate amount of green time needed every signal cycle to address changing traffic conditions.

The adaptive traffic control system is anticipated to be implemented along the following corridors: Stevens Creek/Winchester (*Valley Fair/Santana Row*), Blossom Hill/Santa Teresa (*Oakridge*), Tully Road/101 (*Eastridge*), Story/McLaughlin (*Little Saigon*), and Story/King (*Tropicana*). These locations were selected based on limited travel time improvements achieved in past retiming projects, and congestion complaints received from motorists. When completed in late 2012, these corridors will no longer need retiming (typically done every three to five years), and will be able to automatically provide appropriate green time needed to handle traffic patterns resulting from unexpected or unplanned events such as incidents, and roadway closures due to construction or community events.

ANALYSIS

On August 11, 2010, the Finance Department released a RFP for an adaptive traffic control system on the City's e-procurement system. A total of 60 companies viewed the RFP, and five proposals were received by the September, 24, 2011 deadline as follows:

- Rhythm Engineering, LLC (Lenexa, KS)
- Siemens Industry, Inc. Traffic Solutions Business Unit (Austin, TX)
- Telvent USA, Inc. (Rockville, MD)

- TransCore ITS, LLC (Pleasanton, CA)
- Western Pacific Signal, LLC (San Leandro, CA)

Minimum Qualifications: The initial proposal review consisted of a pass/fail assessment to ensure that all minimum qualifications were met and that all proposals were complete. All five proposals met the minimum criteria.

Evaluation Team: A seven-member evaluation team was named with representatives from the City’s Department of Transportation (DOT), the California Department of Transportation (Caltrans) and the City of Santa Clara Traffic Engineering Department. Proposals were independently evaluated and scored by the team.

Technical Evaluation (75%): The technical evaluation consisted of a thorough review of each company’s written proposal for company experience, project approach and system interface requirements.

Cost Proposals (15%): Cost was evaluated on the initial acquisition, deployment and maintenance/support of the system.

Oral Interview/Presentations: Three finalists receiving the highest technical scores (TransCore, Rhythm and Siemens) were invited to participate in oral presentations to demonstrate knowledge of the City’s requirements, introduce key personnel that would be assigned to the project, and to present a comprehensive demonstration of each system. Scores were finalized at the conclusion of the oral presentations.

Best and Final Offer (BAFO): A Best and Final Offer (BAFO) was issued to clarify the initial system implementation schedule, bench testing requirements, obtain a field deployment optimization plan and receive best and final pricing.

Finalist scores are summarized in the table below:

Evaluation Criteria (weight)	Rhythm	Siemens	TransCore
Experience (30%)	21	22	26
Project Approach (20%)	13	14	17
System Interface (25%)	20	20	21
Cost (15%)	15	13	15
Local (5%)	0	0	0
Small (5%)	0	0	0
TOTAL	69	69	79

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Local and Small Business Preference (10%): In accordance with City policy, ten percent of the total evaluation points were reserved for local and small business preference. None of the companies requested consideration for the preference.

Protest Period: The RFP process included a ten-day protest period that commenced when Proposers were notified of the City's intent to award on March 4, 2011. No protests were received.

Recommendation Summary: Award of contract is recommended to TransCore as the most advantageous and "best value" solution for the City based on the evaluation criteria set forth in the RFP. TransCore's proposal met or exceeded all of the RFP specifications; provided the most detailed and comprehensive proposal; and demonstrated a superior understanding of the City's requirements. TransCore's proposal was found to be superior in the following key areas:

- Experience and approach in finding solutions to unusual design issues.
- A thorough plan for implementation that was based on field observations and included details on the appropriateness of their proposed technology and optimization recommendations for each proposed corridor.
- Superior knowledge and experience with various factors that are essential to the optimal operation of an advanced traffic signal control technology system.
- A training program that emphasizes knowledge transfer to City staff.

Summary of Agreement: The proposed agreement will include an initial Sydney Coordinated Adaptive Traffic System (SCATS) advanced traffic signal control deployment at 41 intersections plus one year of maintenance and support. Additionally, pricing is fixed for five years in the event funds are available to expand and maintain the system to include additional intersections beyond the initial one year deployment. The agreement includes third party software; a scope of work defining all deliverables associated with identifying the specific intersections for deployment, bench testing, field deployment optimization, acceptance testing, training, and before and after studies; and a milestone and compensation schedule with payments contingent on the successful completion and the City's acceptance of key milestones. The City will execute a third party software license agreement with Tyco Traffic & Transportation, an approved distributor of the SCATS system developed by the Government Road and Transportation Authority of New South Wales.

EVALUATION AND FOLLOW-UP

This memo will not require any follow-up from staff.

PUBLIC OUTREACH/INTEREST

- Criterion 1:** Requires Council action on the use of public funds equal to \$1 million or greater.
(Required: Website Posting)

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- Criterion 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- Criterion 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

Although this item does not meet any of the above criteria, the memorandum will be posted on the June 14, 2011 Council Agenda.

COORDINATION

This memorandum was coordinated with DOT, the City Manager's Budget Office and the City Attorney's Office.

FISCAL/POLICY ALIGNMENT

This action is consistent with the following General Budget Principles "We must focus on protecting our vital core city services for both the short- and long-term" and "We must continue to streamline, innovate, and simplify our operations so that we can deliver services at a higher quality level, with better flexibility, at a lower cost" and the Strategic Initiative "Make San Jose a Tech-Savvy City; lead the way in using technology to improve daily life."

COST SUMMARY/IMPLICATIONS

The following outlines the elements of the contract.

1. AMOUNT OF RECOMMENDATION/CONTRACT:

TransCore Contract (including 1 st year support)	\$905,720
Contract Contingency	\$90,000
TOTAL AGREEMENT COST (including Contingency)	\$995,720

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2. COST ELEMENTS OF AGREEMENT/CONTRACT:

Description	Cost
Adaptive Control System covering 41 intersections	\$188,879
Professional Services	\$687,570
Maintenance and Support (1 st year)	\$21,716
Shipping	\$1,000
Estimated Sales Tax	\$6,555
Total	\$905,720
Contingency	\$90,000
Not to Exceed Contract Amount	\$995,720

3. SOURCE OF FUNDING: 429, Building and Structure Construction tax Fund

4. FISCAL IMPACT: There will be no impact to the General Fund.

BUDGET REFERENCE

The table below identifies the fund and appropriations proposed to fund the contract recommended as part of this memorandum.

Fund #	Appn #	Appn. Name	Total Appn.	Amount for Contract	2010-2011 Adopted Budget Page	Last Budget Action (Date, Ord. No.)
429	6624	Traffic Signal Communications and Synchronization	\$9,569,000	\$995,720	V-846	10/19/2010, 28829

CEQA

EIR, PP08-154, September 18, 2008.

/s/
SCOTT P. JOHNSON
Director, Finance

For questions please contact Mark Giovannetti, Purchasing Division Manager (408) 535-7052.