

# Item No. 9

## **“To Be Delivered” Material** **For** **City of Sacramento** City Council Housing Authority Redevelopment Agency Economic Development Commission Sacramento City Financing Authority **Agenda Packet**

**Submitted:** 11/16/06

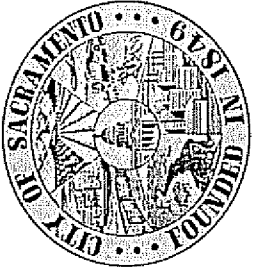
### **For the Meeting of: 11/21/06**

The attached materials were not available at the time the Agenda Packet was prepared.

**Subject:** Approval: Supplemental Agreement No. 1 with Brown and Caldwell for the Field Services CMMS Project (ZK73)

**Contact Information:** Dave Brent, 808-1420

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For additional information, contact the City Clerk Department at Historic City Hall, 915 I Street, First Floor, Sacramento, CA 95814-2604– (916) 808-7200.



# REPORT TO COUNCIL

## City of Sacramento

915 I Street, Sacramento, CA 95814-2604  
www.CityofSacramento.org

Consent  
November 21, 2006

Honorable Mayor and  
Members of the City Council

**Title:** Supplemental Agreement for the Field Services Computerized Maintenance Management System (CMMS) Application Software Project (ZK73)

**Location/Council District:** Citywide

**Recommendation:**

Adopt a **Resolution** authorizing the City Manager to execute Supplemental Agreement No. 1 to City Agreement No. 2006-0225 with Brown & Caldwell in the amount of \$294,632 for Phase 2 of the implementation of Azteca's Cityworks Computerized Maintenance Management System (CMMS) Application Software for the Field Services CMSS Project (ZK73).

**Contact:** Dave Brent, Engineering Manager, (916) 808-1420, Dave Hansen, Supervising Engineer, (916) 808-1421

**Presenters:** Not Applicable

**Department:** Department of Utilities

**Division:** Engineering Services

**Organization No:** 3335

**Description/Analysis**

**Issue:**

On March 7, 2006, City Council approved a Consultant Services Agreement with Brown and Caldwell for Phase 1 in an amount not to exceed \$327,999. The scope of services of the Brown and Caldwell consultant agreement is for implementation of Azteca's Cityworks Computerized Maintenance Management System (CMMS) Application Software for the Department of Utilities' Field Services Division. The first phase included the development of a project specification report, integration design, partial procurement of software and hardware equipment, project management, system testing, and the execution of a pilot study. Now that Phase 1 is near completion, authorization for the City Manager to execute Supplemental Agreement No. 1 with Brown and Caldwell for Phase 2 is requested for an amount not to exceed \$294,632.

**Policy Considerations:**

This report's recommendation is consistent with the City's Strategic Plan Goals of improving and expanding public safety.

**Environmental Considerations:**

This consultant services agreement, which is to provide services for the implementation of Azteca's Cityworks CMMS Application Software is exempt from the requirements of the California Environmental Quality Act (CEQA), pursuant to Section 15306 of the CEQA Guidelines.

**Rationale for Recommendation:**

Back on March 7, 2006 when City Council approved the Consultant Services Agreement with Brown and Caldwell, the funding source for the project, CIP ZK73 only contained sufficient funds (\$327,999) to complete Phase 1 work. Subsequently, CIP ZK73 has been augmented by \$294,632 to complete Phase 2 of the project.


**Financial Considerations:**

The current Consultant Services Agreement with Brown and Caldwell for Phase 1 is \$327,999. The cost of Supplemental Agreement No. 1 with Brown and Caldwell for Phase 2 is \$294,632 for a total contract cost of \$622,631. Sufficient funds are available in the Field Services CMMS Project (PN: ZK73) to execute Supplemental Agreement No. 1 and complete the project.

**Emerging Small Business Development (ESBD):**

Brown and Caldwell is not a certified ESBD firm. However, Brown and Caldwell has identified using sub-consulting services from an ESBD firm, Burleson Consulting for \$33,840.

Respectfully Submitted by:   
David L. Brent  
Engineering Manager

Approved by:   
Gary A. Reents  
Director of Utilities

Recommendation Approved:

\_\_\_\_\_  
RAY KERRIDGE  
City Manager

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**Attachment 1****Background Information:**

The Department of Utilities (DOU) has recently prepared and completed an Integrated Technology Masterplan. This plan identified applications necessary to support business processes and programs within the department including its Asset Management Program and maintenance activities. The application software supports best management practice requirements developed by management, operations, and maintenance staff that will enhance and improve field maintenance activities. As a result, staff along with a consultant has evaluated various computerized maintenance management system (CMMS) software applications to better manage the Department's water distribution, wastewater collection, and drainage system assets. Azteca's Cityworks was selected for its asset tracking/history, work order tracking, preventive maintenance, procedures, purchasing, inventory control, labor, and scheduling capabilities.

On November 16, 2005, staff released a Request for Proposal (RFP) for full implementation of Azteca's Cityworks CMMS application software. Twenty-nine (29) companies downloaded the RFP from the City's website, and two (2) companies (Brown and Caldwell and Westin Engineering, Inc.) submitted proposals. A team of city staff from Utilities and IT Departments evaluated the proposals and concluded that the proposal from Brown and Caldwell best met the City's needs in providing and implementing Azteca's Cityworks CMMS software for Utilities' Field Services Division. With insufficient funding available to complete the entire CMMS software application within the FY 05-06 budget, implementation of the software project was divided into two phases.

March 7, 2006, City Council approved a Consultant Services Agreement with Brown and Caldwell for Phase 1 in the amount of \$327,999. Phase 1 included the following deliverables: development of a project specification report, integration design, partial procurement of software and hardware equipment, project management, system testing, and the execution of a pilot study. As the first phase nears completion, authorization for the City Manager to execute Supplemental Agreement No. 1 with Brown and Caldwell is requested to complete Phase 2 in the amount of \$294,632.

Supplemental Agreement No. 1 includes Phase 2 implementation of the CMMS project for additional services to be performed by Brown and Caldwell in the categories of:

- System configuration and integration;
- Equipment procurement;
- Production installation;
- User and administration training; and
- System testing

**RESOLUTION NO.**

Adopted by the Sacramento City Council

**SUPPLEMENTAL AGREEMENT NO. 1 WITH BROWN & CALDWELL FOR THE FIELD SERVICES  
CMMS PROJECT (ZK73)**

**BACKGROUND**

- A. The services include implementing a Computerized Maintenance Management System (CMMS) that will enable Department of Utilities (DOU) Field Services to build a central database capturing all the necessary data to support sound asset management. The application software supports best management practice requirements developed by management, operations, and maintenance staff that will enhance and improve facility maintenance activities.
- B. On November 16, 2005 staff released a Request for Proposal (RFP) for the implementation of Azteca's Cityworks CMMS application software. A team of city staff from Utilities and IT Departments evaluated the proposals and concluded that the proposal from Brown and Caldwell best met the City's needs in providing and implementing Azteca's Cityworks CMMS software for Utilities' Field Services Division.
- C. On March 7, 2006 City Council approved a Consultant Services Agreement with Brown and Caldwell for a not to exceed Phase 1 amount of \$327,999. This phase included the following deliverables: development of a project specification report, integration design, partial procurement of software and hardware equipment, project management, system testing, and the execution of a pilot study.
- D. As the first phase nears completion, authorization for the City Manager to execute Supplemental Agreement No. 1 with Brown and Caldwell is requested to complete the second phase for an amount not to exceed \$294,632.
- E. Supplemental Agreement No. 1 includes Phase 2 of the CMMS project for additional services to be performed by Brown and Caldwell.

**BASED ON THE FACTS SET FORTH IN THE BACKGROUND, THE CITY COUNCIL RESOLVES  
AS FOLLOWS:**

- Section 1. The City Manager is authorized to sign and execute Supplemental Agreement No. 1 with Brown and Caldwell for the Field Services CMMS Project (PN: ZK73) in the amount of \$294,632.

Exhibit A

SUPPLEMENTAL AGREEMENT  
Engineering Services Division

Project Title and Job Number:

Azteca's Cityworks Computerized Maintenance Management System Application Software for Field Services ZK73

Date: 10/6/06

Purchase Order #: 6ZK7306225

Supplemental Agreement No.: 1

The City of Sacramento ("City") and Brown and Caldwell ("Consultant"), as parties to that certain Consultant and Professional Services Agreement designated as Agreement Number 2006-0225, including any and all prior supplemental agreements modifying said agreement (said agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

To implement Phase 2 of this Project, Consultant shall perform the additional services described in the Scope of Services attached hereto and incorporated herein by this reference

2. In consideration of the additional and/or revised services described in Section 1 above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Consultant's fees and expenses, is increased/decreased by \$294,632, and said maximum not-to-exceed amount is amended as follows:

Agreement's original not-to-exceed amount:	\$327,999
Net change by previous supplemental agreements:	\$0
Not-to-exceed amount prior to this supplemental agreement:	\$327,999
increase/decrease by this supplemental agreement:	\$294,632
New not-to-exceed amount including all supplemental agreements:	\$622,631

3. Consultant agrees that the amount of increase or decrease in the not-to-exceed amount specified in Section 2 above, shall constitute full compensation for the additional and/or revised services specified in Section 1, above, and shall fully compensate Consultant for any and all direct and indirect costs that may be incurred by Consultant in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Consultant.

4. Consultant warrants and represents that the person or persons executing this supplemental agreement on behalf of Consultant has or have been duly authorized by Consultant to sign this supplemental agreement and bind Consultant to the terms thereof

5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Consultant shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement

Approval Recommended by:

Approved as to Form By:

Project Manager \_\_\_\_\_

City Attorney \_\_\_\_\_

Approved By:

Consultant \_\_\_\_\_

Approved By:

Attested to By:

City of Sacramento \_\_\_\_\_

City Clerk \_\_\_\_\_

DLB \_\_\_\_\_

*The Consultant will ensure that key team members (Kent Thompson and Allan Scott, Brown & Caldwell) will be committed to the proposed hours in the budget of this project. The City will have the right to cancel the contract in the event of an unapproved change of team members.*

## Phase 2 – Sewer and Drainage System Implementation

### Task 2.1 Configuration and Integration

#### Objective

Configure and integrate all components for the sewer and drainage system.

#### Approach

Integration and installation of all components can begin once the software and hardware have been procured and the integration design has been approved. Any new integration programs will be generated or changes made to existing programs, as required. The existing environment used for the Water Services testing will be used to facilitate configuration of the CMMS and any changes to the CIS, GIS, and mobile interfaces. As the components are completed they will be tested to ensure that they meet the City's needs.

Any required hardware will be purchased by the City during this task, to be tested with the new integrated mobile solution.

Once the system has been installed and configured, the City will review the configuration and provide consolidated comments on any issues identified. These will be reviewed with Consultant, prioritized and resolved in order of importance.

**Schedule:** November 2006 - January 2007

**Deliverables:** Preliminary integrated CMMS solution for sewer and drainage.

**City Participation:** Review and provide consolidated comments on the System Implementation Configuration; be available for technical questions as needed.

### Task 2.2 Data Conversion and Migration

#### Objective

Transfer sewer and drainage historical data to Cityworks.

#### Approach

Consultant in conjunction with City staff, will review the existing Hansen database to establish what data is to be converted to the new Cityworks database. A data conversion document will be created that identifies the Hansen system file or table names, field names, field lengths, field types, and other relevant information. Similar information for the target Cityworks database will be included in the data conversion document. The objective of the document is to be the primary source for the conversion programs to be developed.

Once the programs are developed they will be tested in the test environment and the results



reviewed. If problems are found the programs will be adjusted and re-tested. Once the converted data is correct and in the right fields, the programs will be deemed correct and accepted. This process will identify any data conflicts, gaps, or errors encountered. A detailed listing of these issues will be provided to the City. City will take the lead on resolving these issues.

**Schedule:** January 2007 - March 2007

**Deliverables:** Draft data conversion document; accepted data conversion document; tested data conversion programs.

**City Participation:** Review draft data conversion document; review and provide consolidated comments on the test converted data; resolve any data gaps, errors, or conflicts identified in the conversion process; be available for technical questions as needed

### Task 2.3 System Testing

#### Objective

Develop system test plan, acceptance criteria, manage the testing program, and witness the performance testing program.

#### Approach

Consultant will develop a System Test Plan for Cityworks and integration with CIS, GIS and mobile systems. This task will assure the complete testing of the software from a functionality, performance, reporting, integration, and implementation perspective. Consultant will develop a set of acceptance criteria for the Final Test Plan that will be used for system acceptance testing. Consultant will lead each of the major system test activities to ensure compliance with the test plan and conformance with the acceptance criteria.

**Schedule:** March - April 2007

#### Deliverables:

- System test acceptance criteria
- System test reviews
- Final Test Plan

**City Participation:** Review and acceptance of system testing results.

### Task 2.4 System Roll Out for Sewer and Drainage

#### Objective

Roll out Cityworks and the integrated system to sewer and drainage users.

#### Approach

As with the Water Services, the system roll out will be completed in a phased approach. Implementation areas will be prioritized by the City's Field Service Division so the roll out can be

managed. A roll out phased implementation plan will be created identifying area prioritization, roll out start dates, staff training requirements and data conversion requirements. As each area is completed, City staff will be interviewed regarding their satisfaction with the system and their comments and suggestions will be documented.

Final training for City staff will be conducted on the sewer and drainage components of the system. Consultant will also conduct a "Train the Trainer" workshop focused on educating selected City staff who will provide training to new system users in the future. Training will be conducted at the City facilities. City will provide the necessary hardware needed for training.

At the appropriate time the data conversion process will be executed and the data moved in to the live Cityworks database.

**Schedule:** March – July 2007

**Deliverables:** Roll out phased plan; roll out of CMMS; training materials; six training workshops (four hours) and materials for 10 participants each workshop (60 participants total); live converted data (Hansen V7 sewer and drainage data from asset, work orders, and PM files).

**City Participation:** Participate in the training sessions; sign off on final implementation once it is up and running; take responsibility for the system once it has been accepted.

#### Task 2.5 Project Management

##### Objective

Ensure the project is successfully delivered within the City schedules and meet City's expectations.

##### Approach

Project management activities will be performed throughout this project to ensure that the scope, schedule, and budget are achieved, to provide adequate communication between Consultant and the City, and to ensure that the team is collaborating as efficiently as possible to meet the project goals.

An initial activity of the Project Management task is to develop the Project Management Plan. To ensure that projects meet or exceed their objectives, Consultant is required to produce a project management plan (PMP) for each project. The process of creating a PMP provides managers with guidelines and checklists to increase project success. Detailed project instructions and planning tools are specified in the PMP including project team organization, responsibilities, the work plan, progress evaluation, and change control. In addition, guidelines for ensuring quality assurance of project performance and deliverables are provided. The PMP is provided to all project participants, including Consultant, subcontractors, and the City, so that everyone clearly knows the project objectives, communication protocols, and each individual's project responsibilities. All projects receive extensive peer review by senior third-party experts.

Consultant's project manager, Kent Thompson, will meet with the City's project manager regularly to provide project status reports and review project progress relative to goals. This will provide on-going communication between Consultant and the City, allowing opportunity for evaluating progress. Consultant's corporate tools to support project management allow its

managers to communicate effectively, monitor work progress, and administer projects efficiently. For example, project managers have real-time access to project planning and cost information through our project delivery system, which provides up-to-date information on project expenditures, committed costs, and client billings.

A key component to the success of this project is on-going formal and informal communication about the project between the City and the Consultant's project manager. Requirements and priorities may change after a project has started and more understanding of current conditions and user needs are identified. These need to be identified, evaluated, and discussed to determine project impact and trade-offs. The communication mechanisms that will be used for the project will be laid out and discussed at the start of the project. These mechanisms will be used throughout the project to communicate issues, track progress, identify and document decisions, and manage expectations.

These communication mechanisms may include scheduled status reports, project management meetings, informal updates, and conversation confirmation forms

**Schedule:** November 2006 – July 2007

**Deliverables:** Project Management Plan; monthly project status reports (schedule, budget, and progress) (assume 8 months); monthly project management meeting with the City (assume six 2-hour meetings).

**City Participation:** Provide dedicated project manager to be main counterpart and point of contact for Consultant's project manager.

## Cost Breakdown

Phase	Phase Name	Total BC	Total Azteca	Total Burleson	Total Cost
Phase I					
1.1	Needs Assessment	\$25,850	\$0	\$0	\$25,850
1.2	Business Processes	\$34,190	\$0	\$0	\$34,190
1.3	System integration design	\$45,168	\$3,200	\$0	\$48,368
1.4	Configuration and Integration (Water)	\$41,184	\$3,200	\$0	\$44,384
1.5	System Testing	\$11,514		\$0	\$11,514
1.6	Pilot implementation of Water services	\$33,730	\$3,200	\$0	\$36,930
1.7	Server Configuration & Installation	\$11,790	\$0	\$0	\$11,790
1.8	Rollout Data Conversion & Training	\$81,560	\$0	\$0	\$81,560
1.9	Project Management	\$3,413	\$0	\$0	\$3,413
	Contingency				\$30,000
	Phase I Total	\$288,399	\$9,600	\$0	\$327,999
Phase II					
2.1	Configuration & Integration (Sewer and Drainage)	\$92,704	\$3,200	\$0	\$95,904
2.2	Data Conversion & Migration	\$34,100	\$6,400	\$30,800	\$70,580
2.3	System Testing	\$16,780	\$0	\$3,760	\$20,540
2.4	System Rollout for Sewer & Drainage	\$90,540	\$3,200	\$0	\$93,740
2.5	Project Management	\$13,868	\$0	\$0	\$13,868
	Phase II Total	\$247,992	\$12,800	\$33,840	\$294,632
	Total	\$536,391	\$22,400	\$33,840	\$622,631