



COUNCIL AGENDA: 03-14-06

ITEM: 4.3

Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Katy Allen
Larry D. Lisenbee

SUBJECT: SEE BELOW

DATE: 03-02-06

Approved

Date

3/2/06

Council District: Citywide

SUBJECT: APPROVAL OF AN AGREEMENT BETWEEN THE CITY OF SAN JOSE, THE COUNTY OF SANTA CLARA AND THE SANTA CLARA VALLEY WATER DISTRICT FOR THE CREATION OF CONTOUR AND RELATED ELEVATION DATA FOR THE COUNTY OF SANTA CLARA (PHASE NO. 3)

RECOMMENDATION

- (a) Approval of an agreement for Phase No. 3 for the creation of contour and related elevation data for the County of Santa Clara with the County of Santa Clara and the Santa Clara Valley Water District.
- (b) Adoption of a resolution authorizing the City Manager to negotiate and execute the following Phase No. 3 agreements after the agreement with the County of Santa Clara and the Santa Clara Valley Water District is fully executed and adequate funds are deposited with the City:
 - 1) An agreement with Triathlon, Inc. to provide professional services relating to the creation of a digital terrain model, the generation of contours and the extraction of buildings and top of the creek banks for the County of Santa Clara for a maximum amount of \$1,051,462 from the date of execution to December 31, 2009; and
 - 2) An agreement with HJW Geospatial, Inc. to provide quality control services in an amount not to exceed \$83,000 from the date of execution to December 31, 2009.
- (c) Adopt the following Appropriation Ordinance and Funding Sources Resolution amendments in the Construction Excise Tax (Fund 465):
 - 1) Increase the Estimate for Earned Revenue by \$461,274 to recognize funding from the Santa Clara Valley Water District and the County of Santa Clara.
 - 2) Increase the Ortho Photo Project Appropriation by \$461,274.

CEQA: Not a project.

EXECUTIVE SUMMARY

City staff recommends approval of agreements that are necessary to complete the third and final phase of the orthophoto program. The cooperation agreement with the County and Water District defines the contour and elevation data products to be obtained and outlines the funding responsibilities of each agency. The agreement with Triathlon, Inc., for \$895,462, provides for the contour and elevation data products. The Director of Public Works is authorized to execute a change order for an additional \$156,000, if the County deposits these funds for building outlines and elevation data outside of the City. The agreement with HJW Geospatial provides \$83,000 for quality control services related to the Triathlon deliverables. These elevation products will enhance the regional base map created during this past year and will provide needed reference materials for conceptual planning, preliminary design and emergency response.

BACKGROUND

During 2000, City, County, Water District and various other public and private agencies began working together to acquire detailed and accurate aerial photographs and contour elevations of the region. These photographs and elevations were seen as the basis for the development of a countywide basemap, as well as a resource for conceptual planning, preliminary engineering and emergency response.

The City circulated a Request for Proposal (RFP) to 30 firms on November 20, 2000 for a three phased project that included aerial photography, orthorectification and contour lines. The RFP also solicited interest from firms interested in providing quality assurance/quality control (QA/QC) services. A multi-jurisdictional panel reviewed the responses and recommended that for all phases, Triathlon be selected for the work and that HJW Geospatial be selected for the QA/QC effort. The selection criteria was based on the following:

- A demonstrated understanding of each item proposed;
- The level of quality provided by the technology and methodology proposed;
- The necessary qualifications, experience, organization, technical and managerial staff, and equipment and facilities to carry out the work;
- Prior experience on related or similar projects and the accessibility/availability of the individuals working on this project;
- Ability to complete the work within a proposed time schedule; and
- Cost of acquiring the RFP deliverables.

On March 6, 2001, Council approved a cooperation agreement with the County of Santa Clara (County) and the Santa Clara Valley Water District (District) for the acquisition of orthorectified aerial photographs – Phase No. 1 and adopted a resolution that authorized the City Manager to negotiate and execute an agreement with Triathlon for countywide aerial photography – Phase No. 1. The County entered into the agreement with HJW Geospatial for the Phase No. 1 QA/QC effort.

On June 26, 2001, Council approved a cooperation agreement with the County of Santa Clara and the Santa Clara Valley Water District for professional services to orthorectify the aerial photographs to remove distortion and to color match each of the photographs creating one seamless image (Phase No. 2). Agreements were executed with Triathlon and HJW Geospatial for Phase No. 2. After being orthorectified, the images were used to create a digital layer depicting curb edges throughout the entire valley floor and developed a digital elevation model showing spot elevations that are spaced at regular intervals throughout the county.

The City has deposited into an interest bearing account all of the partner contributions for license fees from the sale of the orthorectified photos developed under the Phase 2 agreement. In addition, on July 7, 2005, the City executed an agreement for the sale of the entire set of orthorectified photos with the Federal Emergency Management Agency (FEMA). This agreement set the orthophotos in the public domain in exchange for \$80,000. As of December 31, 2005, the orthophoto fund balance is \$605,688. The Phase 2 agreement has set aside \$25,000 of this amount for data sharing software and consultant services, leaving \$580,688 for Phase 3 services.

ANALYSIS

Staff is requesting approval of a new agreement between City, County and District for Phase 3 services, which involve the creation of GIS base map layers in three tasks as follows:

Task 1 - Creation of digital terrain model and generation of contour lines

Task 2 - The extraction of building roof line and elevations

Task 3 - Top of creek banks

The cost sharing for each partner is as follows:

Agency	Cost Obligation for Task 1	Cost Obligation for Task 2	Cost Obligation for Task 3	Quality Control (QC)	CSJ Administration costs	Total cost per Agency
City of San José	None	\$130,000	None	\$12,500	None	\$142,500
County of Santa Clara	None	\$156,000	None	No QC for Task 2b	None	\$156,000
Santa Clara Valley Water District	\$235,862	None	\$44,412	None	\$25,000	\$305,274
Existing Funding from Phase 2	\$485,188	None	None	\$70,500	\$25,000	

Under this agreement, the City will act as the fiscal administrator and enter into agreements for the work. Staff recommends that Council authorize the City Manager to negotiate and execute agreements with Triathlon for the creation of contour and related elevation data for the County of Santa Clara not to exceed \$1,051,462, and with HJW to provide quality control services for deliverables prepared by Triathlon not to exceed \$83,000. These agreements will be executed by

the City Manager. The notice to proceed will be issued as County and District deposits are received. This work is scheduled for completion twelve months after Triathlon's data acquisition flights. This may occur in March or late fall, dependent upon vegetation growth.

The District intends to deposit funds with the City within two weeks of this agreement's execution in the amount of \$305,274. The District Board authorized funding for this project in early February. The District funding is for Light Detection And Ranging (LiDAR) elevation data acquisition from flights over the entire county for Task 1, creation of a top of bank layer for Task 3 and a portion of City staff costs to administer the project.

The City will provide funding for Task 2a work for the area within the City of San José perimeter. The County of Santa Clara is interested in obtaining building roofline outlines and elevations for the area within the County and outside of San José as part of Task 2b. This building roofline work for the County is estimated to cost \$156,000. The agreement authorizes the Director of Public Works to issue an amendment to the City's agreement for the Task 2b work after the County identifies funding and deposits the full amount with the City.

The scope of these agreements will complete the work proposed within the initial Request for Proposals. Local agencies have nearly completed negotiations with the County for an additional agreement to update the 2001 orthorectified aerial photographs. Additional collaboration with the County on the development and maintenance of the regional basemap, developed as an offshoot of the Phase No. 2 project, is ongoing.

OUTCOME

The City will have a complete set of contour lines, top of creek bank and building rooflines that staff can use for conceptual planning, preliminary design and emergency response. The elevation information can be used to better define riparian corridors and the 15% slope lines for development. They can be used to develop drawings in 3D perspective, provide better slope data to calculate run-off for storm drain design, and provide line-of-sight capability for placement of communication equipment. Staff can also use the elevation data to identify and adjust historical plan information that is based on various survey datum, support emergency response to potential floods and toxic spills and to analyze illegal grading and subdivision activity.

PUBLIC OUTREACH

Not applicable.

COORDINATION

The intent of this project is to jointly develop a shared digital terrain model and contour lines for the County of Santa Clara along with a building roof line layer and a waterway top of bank layer.

This project and memorandum have been coordinated with the County of Santa Clara, the Santa Clara Valley Water District, City Attorney's Office, and the Departments of Finance, Transportation, Planning, Building and Code Enforcement, and Information Technology.

COST IMPLICATIONS

1. AMOUNT OF RECOMMENDATION: \$1,184,462

2. COST OF PROJECT

a. Triathlon Agreement	\$1,051,462
b. HJW Agreement	\$83,000
c. Project Administration	\$50,000
TOTAL:	<u>\$1,184,462</u>

3. SOURCE OF FUNDING

Existing funding:

a. Revenue and interest collected through the sales of orthorectified photos developed under Phase No. 2 as of December 31, 2005	\$500,688
b. Revenue collected through the sales of the entire orthorectified photos set to FEMA in July 2005	\$80,000
c. City of San José – Sewer Service and Use Charge Capital Improvement Fund	\$142,500

Total Existing funding: \$723,188

Recommended funding:

d. Phase No. 3 deposits from Santa Clara Water District – Fund 465	\$305,274
e. Phase No. 3 deposits from County of Santa Clara – Fund 465	\$156,000

Total Recommended funding: \$461,274

TOTAL **\$1,184,462**

4. FISCAL IMPACT: None

BUDGET REFERENCE

Fund #	Appn #	Appn. Name	RC #	Total Appn.	Amt. For Contract	2005-2006 Adopted Capital Budget Page	Last Budget Action (Date. Ord. No.)
545	4131	Geographic Information System	110033	\$142,500*	\$142,500	V - 181	10/18/05. Ord. No. 27580
465	6890	Ortho Photo Project	116493	\$600,000	\$580,688	V - 1131	10/18/05 Ord. No. 27580
Total Current Funding Available:				\$742,500	\$723,188		

Additional Funding Recommended:							
465	6890	Ortho Photo Project	116493	\$461,274	\$461,274		
Total Funding for Remaining Project Costs:				\$1,203,774	\$1,184,462		

* \$142,500 of the appropriated amount of \$160,000 will be used for this project.

CEQA

Not a project.

Katy Allen

KATY ALLEN
Director, Public Works Department

Margaret McCahan for

LARRY D. LISENBEE
Budget Director

I hereby certify that there will be available for appropriation from the Construction Excise Tax Fund in Fiscal Year 2005-2006 monies in excess of those heretofore appropriated, there from said excess being at least \$461,274.

Margaret McCahan for

LARRY D. LISENBEE
Budget Director