



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: October 30, 2007

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Ortega Groundwater Treatment Plant – Contract With Carollo Engineers

RECOMMENDATION: That Council:

- A. Authorize the Public Works Director to execute an engineering services agreement with Carollo Engineers, Inc. (Carollo), in an amount not to exceed \$291,458, for supplemental pilot testing, permitting evaluation, and engineering analysis for the Ortega Groundwater Treatment Plant Reconstruction Project; and
- B. Authorize the Public Works Director to approve extra services for Carollo that may result from necessary changes in the scope of work at a total amount not to exceed \$29,000.

DISCUSSION:

This report recommends contract approval for engineering services to support the next phase of work associated with reconstructing the City's Ortega Groundwater Treatment Plant (OGTP), a critical part of the City's water supply. The work will include supplemental piloting testing to refine the water treatment scheme identified in the Preliminary Design Report, analysis of permitting requirements, and technical support for the environmental review and permitting process.

Background

The existing treatment plant was constructed in the 1970's to treat high levels of naturally occurring iron and manganese in groundwater pumped from the four downtown area wells. These wells provide approximately 50% of the City's overall groundwater pumping capacity. Groundwater plays an important role in the City's water supply by helping to meet peak summer demand, backing up depleted surface water supplies during droughts,

REVIEWED BY: _____Finance _____Attorney

Agenda Item No. _____

and providing an emergency supply in the event of catastrophic interruption of the supplies from the Santa Ynez River and State Water Project. The facility played an important water supply role in the drought of the late 1980's, but it was barely able to keep up the task due to its age and limited treatment scheme.

In May 2003, Carollo completed an "Investigation and Preliminary Analysis of Treatment Options for the Ortega Well Treatment Plant." The report assessed the condition and expected yield of the four wells that supply the OGTP and recommended possible treatment options for meeting water quality targets with a reconstructed treatment plant. These options were tested during a pilot scale operation of the plant to confirm the feasibility of each. The results were presented in the "Phase II Pilot Scale Test Program and Preliminary Design" report, dated August 2006. This report identified a preferred treatment approach, developed a preliminary design and cost estimate for the treatment plant reconstruction, and identified some additional technical issues to be evaluated prior to proceeding to the final design and permitting process.

Over the past year, Water Resources staff has coordinated space planning with Redevelopment Agency staff and representatives of the Community Arts Workshop, proposed for the former recycling center adjacent to the OGTP site. The attached site plan has resulted from these discussions and is the basis for final design work underway for the renovation of the former recycling facility. While both facilities would prefer more space, the proposed site layout is considered workable. The Mental Health Association building, currently under construction, is adjacent to both facilities on the southeast side, which is at the bottom of the attached site plan.

Proposed Scope of Work

Prior to the final design phase for the OGTP, it is recommended that supplemental analysis and pilot testing be conducted for the following purposes:

- Test different filter media options to improve the sulfur removal process
- Test the use of granular activated carbon for improving the taste of the finished water
- Evaluate different acid solutions used for pH adjustment as a part of the treatment scheme
- Evaluate newly identified scrubber alternatives for hydrogen sulfide removal from air emissions
- Test different air-to-water ratios in the air stripping process
- Evaluate alternative oxidation schemes to make more efficient use of the limited site

In addition to the supplemental analysis and pilot testing, the scope of work includes a permitting analysis, to identify applicable regulations and confirm that the facility can be constructed as proposed, and engineering support for the environmental review and permitting process. Based on the results from this phase of work, we would be ready to proceed with final design.

Contract cost components for this phase are as follows:

Supplemental Pilot Plant Setup & Operation, Bench-Scale Testing, and Supplemental Pilot Study Report	\$178,752
Permitting Evaluation	\$44,976
Engineering Support	\$21,188
Preliminary Design Report Addendum	\$11,794
Project Management	\$34,748
Total	\$291,458

In addition, we are recommending a 10% extra services authorization. The potential return of drought conditions is an important factor in the project schedule. It is our aim to have the facility completed by 2011, approximately the time that we have projected the need for increased groundwater production in the event the recent record dry year is followed by additional dry years.

BUDGET/FINANCIAL INFORMATION:

Funds for this phase of the project as well as the final design stage are budgeted in the 2008 Water Fund Capital Program. Construction phase costs are currently estimated at \$8.5 million, including rehabilitation work needed on the four groundwater wells. Construction funding is expected to be obtained as a part of the anticipated loan or bonding associated with the advanced treatment improvements planned for Cater Water Treatment Plant.

SUSTAINABILITY IMPACT:

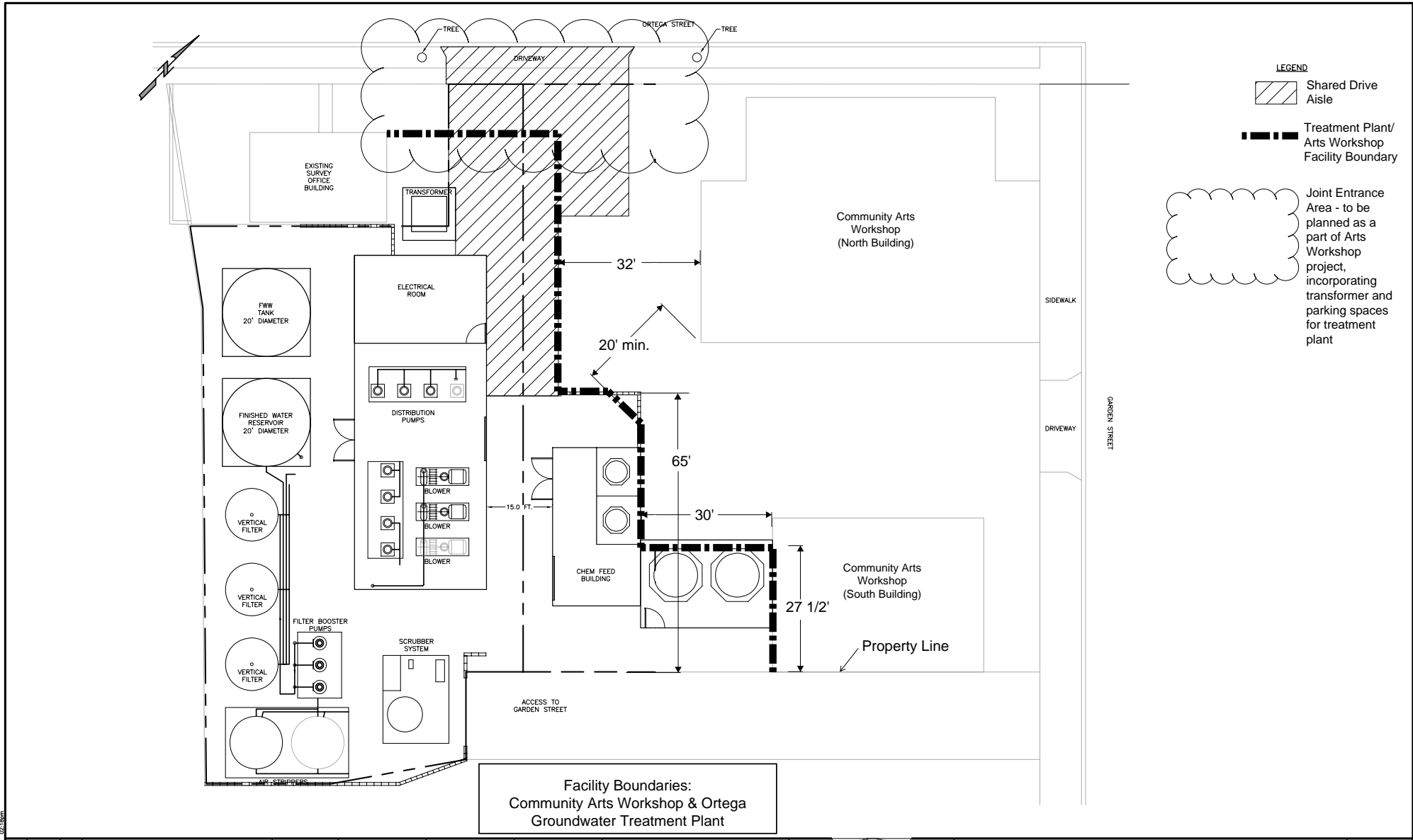
The scope of work for the current phase of work includes a component to evaluate alternatives for equipment selection to minimize consumption of energy in the operation of the plant and to evaluate options for minimizing solid waste generation.

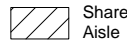

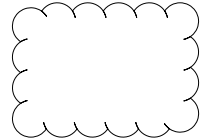
ATTACHMENT: Facility Boundaries: Community Arts Workshop & Ortega Groundwater Treatment Plant

PREPARED BY: Rebecca Bjork, Acting Water Resources Manager/BF/mh

SUBMITTED BY: Paul Casey, Acting Public Works Director

APPROVED BY: City Administrator's Office



- LEGEND**
-  Shared Drive Aisle
 -  Treatment Plant/ Arts Workshop Facility Boundary
 -  Joint Entrance Area - to be planned as a part of Arts Workshop project, incorporating transformer and parking spaces for treatment plant

**Facility Boundaries:
Community Arts Workshop & Ortega
Groundwater Treatment Plant**

REV	DATE	BY	DESCRIPTION

DESIGNED	DISCIPLINE ENGINEER
DRAWN	PROJECT ENGINEER
CHECKED	PARTNER
DATE	
DEC 2005	



CITY OF SANTA BARBARA	JOB NO. 6545800
ORTEGA GROUNDWATER TREATMENT PLANT	DRAWING NO.
GENERAL	SHEET NO.
SITE PLAN—OPTION 6	OF XXX

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