



**CITY OF HAYWARD**  
**AGENDA REPORT**

AGENDA DATE 07/20/99

AGENDA ITEM 2

WORK SESSION ITEM \_\_\_\_\_

**TO:** Mayor and City Council  
**FROM:** Director of Public Works  
**SUBJECT:** Authorization for the City Manager to Execute an Agreement for Professional Design Services for the Seismic Retrofit of the Highland 500 Reservoir

**RECOMMENDATION:**

It is recommended that the City Council authorize the City Manager to execute an agreement with Carollo Engineers for professional design services to prepare plans, specifications and construction cost estimate for the seismic retrofit of the Highland 500 Reservoir.

**BACKGROUND/DISCUSSION:**

The Highland 500 Reservoir, located at Highland Boulevard and Campus Drive, is a critical component in the City's delivery system that provides water to the eastern hills of Hayward. This prestressed concrete tank, constructed in 1956, has a storage capacity of 3 million gallons.

Several years ago, as part of a system-wide seismic analysis for the water system, Dames & Moore recommended that, for the 500 Reservoir, the City (1) perform a corrosion evaluation and (2) provide certain strengthening measures. The corrosion study has since been performed and it found the prestressing wire to be in good condition. Carollo Engineers performed a more detailed structural study of the 500 Reservoir in 1999. The Carollo report provided preliminary design concepts so that the seismic retrofit costs could be estimated.

As part of this work, the 500 Reservoir will also be modified to become a "flow through" tank. It now has a single pipe that provides inflow and outflow. With this configuration stagnation occurs, adversely affecting water quality. Under this contract an inlet pipe will be placed on the opposite side of the tank from the outlet pipe, and this will cause the water in the tank to be continuously cycled. The tank will have to be taken out of service during retrofit activities. In order to minimize potential problems, construction work will be limited to periods of low water demand from November through March.

**CONSULTANT SELECTION:**

Staff recommends that a contract be executed with Carollo Engineers to provide consulting services for the design of the seismic retrofit and the new inlet piping. Carollo Engineers performed the initial analysis and preliminary design for the seismic upgrade and, consequently, have the site-specific familiarity to accomplish the design at the lowest cost.

They also possess an experienced and qualified project manager and design team and necessary resources to properly control the work.

Carollo Engineers proposes to use an overall MBE participation of 41.4 percent. Based upon the unique qualifications of Carollo for this project, staff has concluded that the final negotiated not-to-exceed cost of \$105,000, including monies for additional services, is reasonable for the scope of services required.

**PROJECT COST:**

Design and administration	\$120,000
Construction	\$900,000
Construction administration and inspection	\$50,000
Total	<u>\$1,070,000</u>

**FUNDING:**

A total of \$620,000 has been approved in the Water System Capital Improvement Fund of the 1999/00 Capital Improvement Program for this project. After costs are more refined through the design process, additional funds, as necessary, will be requested during award of the construction project. Monies for this purpose are available in the Water System Capital Improvement Fund.

**SCHEDULE:**

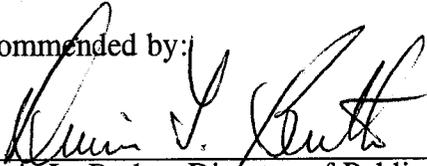
Begin design	July 30, 1999
Design completion	November 7, 1999
Award construction contract	November 25, 1999
Complete construction	May 2000

Prepared by:



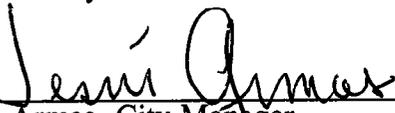
*for* Alex Ameri, Deputy Director of Public Works

Recommended by:



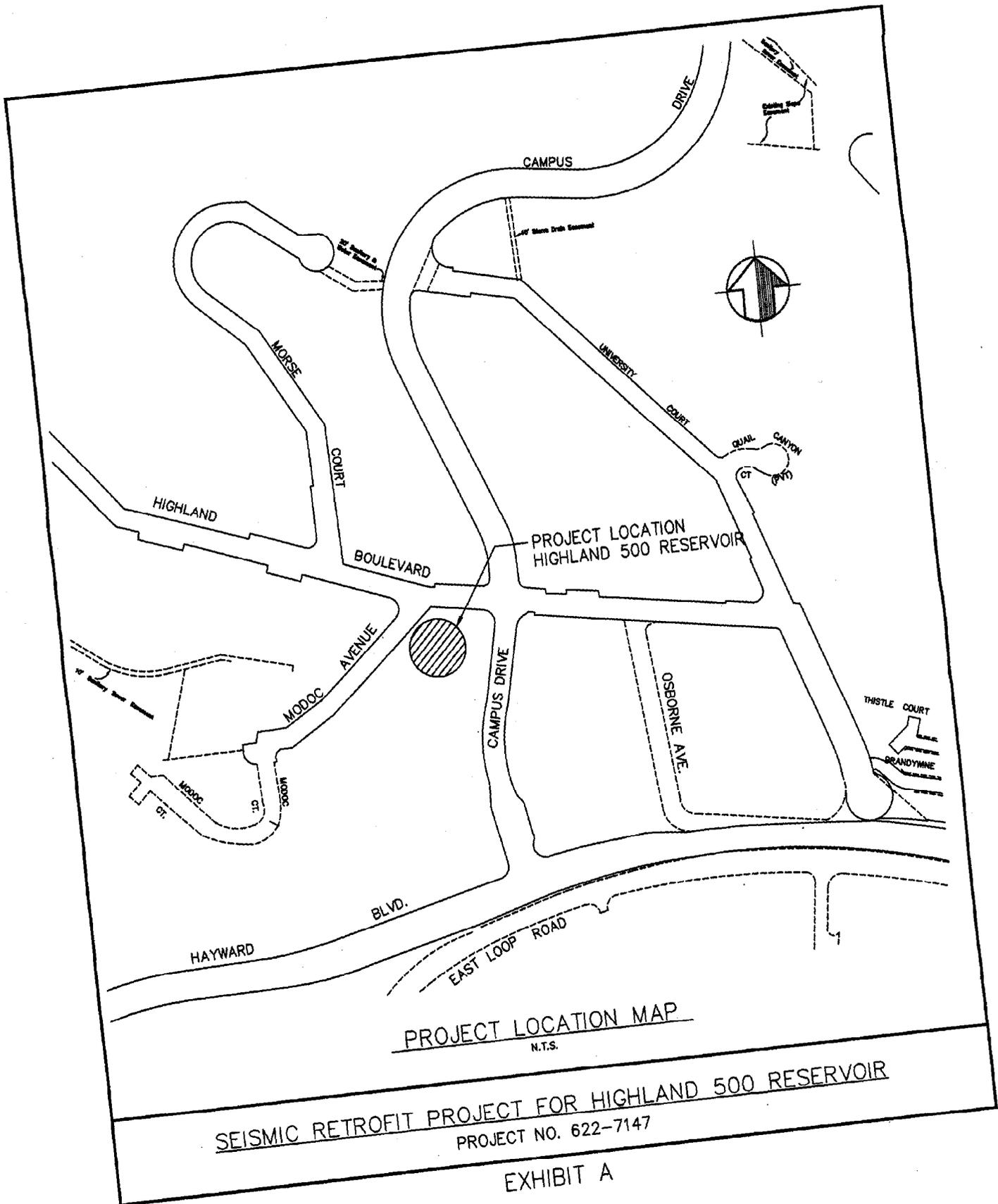
Dennis L. Butler, Director of Public Works

Approved by:



Jesús Armas, City Manager

Attachments: Exhibit A: Project Location Map



SEISMIC RETROFIT PROJECT FOR HIGHLAND 500 RESERVOIR  
PROJECT NO. 622-7147

EXHIBIT A

**DRAFT**

PM 7-13-99

HAYWARD CITY COUNCIL

RESOLUTION NO. \_\_\_\_\_

Introduced by Council Member \_\_\_\_\_

RESOLUTION AUTHORIZING THE CITY MANAGER  
TO EXECUTE AN AGREEMENT BETWEEN THE CITY  
OF HAYWARD AND CAROLLO ENGINEERS FOR  
PROFESSIONAL SERVICES FOR THE SEISMIC  
RETROFIT OF THE HIGHLAND 500 RESERVOIR  
PROJECT, PROJECT NO. 7147

BE IT RESOLVED by the City Council of the City of Hayward that the City Manager is hereby authorized and directed to execute on behalf of the City of Hayward an agreement with Carollo Engineers to prepare plans, specifications, and a construction cost estimate for the seismic retrofit of the Highland 500 Reservoir Project, Project No.7147, in an amount not to exceed \$105,000, in a form to be approved by the City Attorney.

IN COUNCIL, HAYWARD, CALIFORNIA \_\_\_\_\_, 1999

ADOPTED BY THE FOLLOWING VOTE:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST: \_\_\_\_\_  
City Clerk of the City of Hayward

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney of the City of Hayward