TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER DEPARTMENT: UTILITIES
DATE: JUNE 17, 2002 CMR: 249:02
SUBJECT: APPROVAL OF A CONTRACT WITH GEOLINE POSITIONING SYSTEMS, INC. IN THE AMOUNT OF $72,847 FOR PROTOTYPE GLOBAL POSITIONING SATELLITE SYSTEM (GPS) TO LOCATE UTILITY INFRASTRUCTURE, FOR USE WITH THE CITY OF PALO ALTO GEOGRAPHIC INFORMATION SYSTEM

RECOMMENDATION
Staff recommends that Council:

1. Approve and authorize the Mayor to execute the attached contract with Geoline Positioning Systems, Inc. in the amount of $72,847 for prototype global positioning satellites system (GPS) to locate utility infrastructure, for use with City of Palo Alto Geographic Information System.

2. Authorize the City Manager or his designee to negotiate and execute one or more change orders to the contract with Geoline Positioning Systems, Inc. for related, additional but unforeseen work which may develop during the project, the total value of which shall not exceed $7,285.

DISCUSSION
Project Description
Global Positioning Satellite technology has become the standard for accurate feature location description based on the State Plane Coordinate system utilized by the City’s existing Geographic Information System (GIS). This technology originated in the military but it is commonly used outside of this area for numerous other applications including vehicle navigation systems, construction grading, road construction and many other fields requiring accurate, traceable, survey quality data collection of underground and surface features. Recently, the accuracy of this data was greatly increased by the use of radio base stations that time correct satellite transmissions to produce measurements that are within one centimeter both vertically and horizontally. This system will be
utilized to both create new accurate positional data for Utilities Capital Improvement Program (CIP) projects and to validate the existing GIS data. The radio base station will allow time-corrected, accurate data collection by all other local entities, both private and public, within the broadcast range of the associated antennae.

The alternative to not constructing this geographic data collection project is that the City will continue to have construction record drawings based on measurements taken from existing street features which change over time. The Utilities’ record drawings surface measurements become inaccurate with the passing of time because physical street features are changed. The consequences of not being able to accurately locate all City underground utilities with exact GPS coordinates (plus or minus one centimeter horizontally and vertically) in the future are continued third party dig-in damage on underground construction projects. Constructing this project will improve the accuracy of the City’s GIS database and utility records, reduce staff time needed to accurately mark utilities for underground construction projects and reduce the City’s repair expenses on inaccurately located underground utilities.

The work to be performed under the contract is the installation of one radio base station antenna including related hardware and software configured to operate with existing City computer systems and one roving data collection unit including all related staff training.

Selection Process
Staff sent a request for proposals (RFP) to three firms on November 30, 2001. The proposal period was 46 days. Two firms submitted proposals.

Proposals ranged from $72,847 to $74,052. The firm not responding indicated that it did not submit a proposal because it felt Palo Alto was outside of its traditional service area and that it couldn’t provide the level of support required.

A selection advisory committee consisting of the Information Technology and Purchasing Divisions of the Administrative Services Department and the Water-Gas-Wastewater Engineering Division of the Utilities Department reviewed the proposals, and the two firms were invited to participate in oral interviews on February 25 and February 27, 2002. The committee carefully reviewed each firm's qualifications and submittals in response to the RFP relative to the following criteria: past experience working with municipal agencies on similar projects, qualifications of vendor employees for implementation and related training, and the consultant’s willingness to customize supplied software to meet the City’s existing GIS database. Geoline Positioning Systems, Inc. was selected because
it met the required qualifications and was willing to customize software applications to operate with the GIS system.

**RESOURCE IMPACT**

Funds for this project were included in the FY 2000/01 Budget for the Utilities Department.

**POLICY IMPLICATIONS**

This recommendation is consistent with the Council approved Utilities Strategic Plan to operate distribution systems in a cost-effective manner.

**ENVIRONMENTAL REVIEW**

Prior to sending out the RFP associated with this contract City staff obtained a license from the Federal Communications Commission to broadcast a time correction signal for the proposed base station. The specified radio equipment automatically shuts down in the event that interference occurs to protect public safety communications. The proposed antennae will not be visible from the public right of way adjacent to City Hall.

**ATTACHMENT**

A: Contract

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**CITY MANAGER APPROVAL:**

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