



CITY COUNCIL AGENDA REPORT

MEETING DATE: August 2, 2004

ITEM NUMBER:

SUBJECT: TEWINKLE PARK LANDSCAPE IRRIGATION MAINLINE REHABILITATION - CITY PROJECT NO. 04-10

DATE: JULY 22, 2004

FROM: PUBLIC SERVICES DEPARTMENT/ENGINEERING DIVISION

PRESENTATION BY: WILLIAM J. MORRIS, DIRECTOR OF PUBLIC SERVICES

FOR FURTHER INFORMATION CONTACT: FARIBA FAZELI, ACTING CITY ENGINEER,
(714) 754-5343

RECOMMENDATION:

1. Approve Budget Adjustment No. 05-008 (Attachment 1) in the amount of \$200,000.
2. Award a construction contract to P & D Landscape Management Services, 999 Town & Country Road, 4th Floor, Orange, CA 92868, in the amount of \$224,445 (base bid only).
3. Authorize the Mayor and the Deputy City Clerk to execute the Public Works Agreement.

BACKGROUND:

In the 2002-03 Fiscal Year Budget, Maintenance Services requested and was granted funding in the amount of \$75,000 to design and install a new irrigation mainline at TeWinkle Park. The existing irrigation mainline system is a combination of pipelines that existed when the property was part of the Santa Ana Airbase and additional lines that were installed when the park was constructed in the 1960's. Many of the irrigation mainlines are at unknown depths and locations. Some are made of cast iron, while others are concrete/asbestos pipes. The cast iron lines are becoming very difficult to repair. The newer lines (1960's) are plastic (PVC) pipe. Due to the age and the fragile condition of the entire mainline system, park maintenance staff experiences frequent pipe leaks/breaks. When this occurs, the entire park mainline must be shut down. There are no isolation valves throughout the park to allow for just one area to be controlled. Frequently, when the system is re-energized, another leak occurs due to the strain of re-pressuring the old pipelines. Locating and repairing mainline leaks requires the entire park irrigation system to be shut down and drained. This is very time consuming and usually creates some damage to turf, when no water is applied for several days. Complicating the matter, some sections of the mainline have been found to be over ten feet below the surface, requiring expensive excavation and shoring techniques.

The new irrigation system, as designed, will allow for the isolation of the park into a minimum of seven different areas to prevent the shutdown of any more of the park than is necessary when there is a problem with a valve or mainline. Currently, the entire park is shutdown for a minimum of 24 hours whenever there is a problem with a pressure line. Sometimes it takes 24 hours just to locate the break and in the past, it has taken a contractor to repair the cast iron pipes that are over ten feet deep. The new main irrigation line will be placed at an average depth of three feet.

The new mainline system has been designed to allow for the maximum possible irrigation within the allowed hours of use for recycled water. This provides for all irrigation demands to be met each night if necessary, whereas the current system has hydraulic difficulties when programmed for the maximum irrigation required. The new system will automatically irrigate in the most time-efficient manner possible, given the hydraulic capability of the system, utilizing the City-wide Central Irrigation Computer System that has been developed over the past few years. The new mainline design will ensure that the City will not be irrigating when the park is open, thereby eliminating the public exposure to recycled water, a requirement of the regulations for using recycled water provided by Mesa Consolidated Water District.

In preparing the budget estimate, staff estimated the length of mainline in the park. Unfortunately, the length required was significantly underestimated and was compounded by utilizing a unit cost that is no longer valid in today's marketplace. Other factors have also contributed to the increased cost of the mainline replacement at TeWinkle Park. The pipe sizing was increased to accommodate the additional hydraulic demand of the expanded lake area landscaping and the additional demand created by the relocation of outfield fencing within the Athletic Complex. Increases in the cost of pipe, fuel, and insurance also contributed to the higher bid prices.

In an effort to reduce the overall costs to the City, staff has coordinated the mainline design with the Athletic Complex, Lake Renovation, and Skate Park projects, eliminating the need for an additional point of connection into Arlington Drive. This reduced the budget required for the Athletic Complex by approximately \$25,000 to \$35,000 in Mesa Consolidated Water District fees, equipment, and installation costs. However, this increased the cost of the mainline project by several thousand dollars due to the larger piping sizes needed from the point of connection to the Athletic Complex, and related costs for upsizing equipment. The coordination of the mainline design with the other upcoming projects in TeWinkle Park has required changes in design and the upsizing of several components of the system at a significant cost, adding to the discrepancy between budgeted funds and those necessary to construct the project.

The City will be renovating many areas of TeWinkle Park in the near future at a cost of approximately \$2.4 million. The investment of approximately \$224,000 in vital irrigation infrastructure will provide the foundation for successful construction and management of the new facilities (Athletic Complex, Lake Renovation, and Skate Park). Additionally, the new system will irrigate more efficiently and fail less frequently, reducing repair costs, turf damage, and improving our service to the community.

ANALYSIS:

On July 2, 2004, the Deputy City Clerk received and opened six bids for this project. The apparent low bidder, P & D Landscape Management Services, submitted a base bid of \$224,445, and an additional \$44,793 for Alternative Bid Item No. 1 (an optional pipe restraint system). The base bid was 46 percent higher than the Engineer's estimate of \$154,000. The average of the six bids amounted to \$360,487.50. The alternative bid item would increase the total cost of the project to \$269,238, an amount that is too large for the incremental benefit of having the more elaborate pipe restraint system. Staff believes the irrigation system as designed in the base bid amount will perform similarly and have a service life equal to the system as designed including the Alternative Bid Item No. 1 enhancement. The Bid Abstract is included as "Attachment 2."

Staff has reviewed the apparent low bid (base bid only) and determined that it is reasonable for the work required by the contract documents. The City's irrigation design consultant believes the rising cost of PVC piping, increasing fuel and insurance costs, as well as an underestimate of the impact of prevailing wage requirements, may be contributing causes to the large difference between the estimate and the bids received (Attachment 3).

In an effort to complete this key component of the TeWinkle Park improvements ahead of the other planned projects, staff recommends awarding the contract to the apparent low bidder. Since the apparent low bidder's price exceeds the current project funding, an appropriation from fund balance is requested in the amount of \$200,000 to fund this contract (Attachment 1). The appropriation will cover the difference between the available funds and the contract cost, plus 10 percent for contingency work, and will provide additional funds should any unforeseen problems arise during the project. Any unspent funds would be returned.

ALTERNATIVES CONSIDERED:

The alternative to this Council action would be to reject all the bids. If all the bids are rejected, the City could readvertise or cancel the project. Staff believes that readvertising the project will not result in lower bids.

The City Council could also choose to reject all the bids and not readvertise the project. With this alternative, there is another possible approach to achieving partial improvements to the irrigation system at TeWinkle Park. The Council could direct staff to include portions of the work in the other improvement projects at TeWinkle Park, i.e., the Athletic Complex, the Lake Renovation, and the Skate Park projects. However, this alternative is not recommended, as it will create a "piecemeal irrigation system," which reduces the quality and the economy of the overall project. This alternative would also result in completing only about 60 percent of the original irrigation rehabilitation project.

FISCAL REVIEW:

Funding up to the amount of \$67,680 is available from the Park Development Fees Fund that will be utilized in the funding of this project. The additional funding necessary to fully fund the project cost is available from Net Revenue funding released due to a change in Council policy with respect to "walling off" revenues. Net Revenues set aside for Capital Projects in the

amount of \$219,025 was released as a result of the change in Council Policy and is available for re-appropriation. These funds, collectively, are sufficient to fund the approval of a budget adjustment in the amount of \$200,000 that is necessary to fully fund the project costs.

The purchase requisition for this expenditure (Attachment 4) has been approved by the Finance Department acknowledging the availability of the funds.

LEGAL REVIEW:

P & D Landscape Management Services has furnished the necessary bonds and insurance, which were approved as to form by the City Attorney's office. After the award and subsequent execution of the contract, a "Notice to Proceed" will be issued.

CONCLUSION:

It is recommended that the City Council approve Budget Adjustment No. 05-008 in the amount of \$200,000; award the contract to P & D Landscape Management Services in the amount of \$224,445; and authorize the Mayor and the Deputy City Clerk to execute the Public Works Agreement.

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DISTRIBUTION: City Manager
Acting City Attorney
Deputy City Clerk
Maintenance Services Manager
Staff
File

ATTACHMENTS: "1" [Budget Adjustment No. 05-008](#)
"2" [Bid Abstract](#)
"3" [Correspondence from Consultant Concerning Low Engineer's Estimate](#)
"4" [Purchase Requisition](#)

File Name Award TeWinkle Irrigation Mainline Report

Date 07-22-04

Time 12:40 p.m.