



CITY OF LODI

COUNCIL COMMUNICATION

AGENDA TITLE: Contract Award for Westgate Park Interior Storm Drainage (\$23,171)

MEETING DATE: April 6, 1994

PREPARED BY: Public Works Director

RECOMMENDED ACTION: That the City Council adopt the attached resolution awarding the contract for the above project to Crutchfield Construction in the amount of \$23,171.00.

BACKGROUND INFORMATION: This project consists of installing approximately 1,100 lineal feet of 12- and 15-inch storm drain pipe inside Westgate Basin. This piping is connected directly to the storm water pump station located at the basin and will be used to drain the last few feet of water out of the basin after each storm.

Plans and specifications for this project were approved on March 2, 1994. The City received the following 16 bids for this project:

<u>Bidder</u>	<u>Location</u>	<u>Bid</u>
Engineer's Estimate		\$ 30,750.00
Crutchfield Construction	Stockton	\$ 23,171.00
Allied West Construction	Penryn	\$ 23,907.00
G & L Brock Construction	Stockton	\$ 24,996.75
George Reed Inc.	Lodi	\$ 28,648.00
Robert Burns Construction	Stockton	\$ 28,670.00
Cimarron Construction	Modesto	\$ 28,738.27
Western Engineering	Loomis	\$ 29,156.00
Jerry Gavrilko Co.	Folsom	\$ 29,178.00
Harvey's Excavation & Hauling	Penryn	\$ 30,251.00
Celik Engineering	Carmichael	\$ 32,100.00
Spinella Heer Construction	Elk Grove	\$ 33,015.00
Phillips Backhoe	Lodi	\$ 35,621.00
Teichert Construction	Stockton	\$ 35,850.00
Antovich Construction	Santa Clara	\$ 36,862.00
Lubenko Construction	Plymouth	\$ 38,813.00
Diede Construction	Woodbridge	\$ 45,704.74*

*corrected figure

APPROVED

THOMAS A. PETERSON
City Manager



recycled paper

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April 6, 1994
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When the plans and specifications for this project were approved, there was some discussion about not doing this project and holding the water in the basin; i.e., no discharge other than percolation and evaporation. This is not recommended and a short discussion paper on this issue, prepared by the City Engineer, is attached.

FUNDING:	Originally Budgeted:	1993/94
	Budgeted Fund:	Storm Drain Impact Development Fees
	Current Appropriation:	\$37,000.00
	Total Project Estimate:	\$34,850.00
	Bid Opening Date:	March 16, 1994



Jack L. Ronsko
Public Works Director

Prepared by Mark Lindseth, Associate Civil Engineer

JLR/ML/Im

Attachments

cc: **City Attorney**
Purchasing Officer
Water/Wastewater Superintendent
Parks and Recreation Director

City of Lodi Storm Water Detention in Park/Basins

Discussion Paper March 29, 1994

Since the adoption of the Storm Drain Master Plan in the early 1960's, Lodi has utilized storm water detention basins located in parks to hold storm water runoff until it could be pumped into either the Mokelumne River or the Woodbridge Irrigation District (WID) Canal. This plan was an alternative to an earlier plan, rejected by the voters, that called for the construction drainage ditches (like the one between Beckman Road and Highway 99) extending south to the southern part of the City then west to the Delta. The shared basin/park concept is a major component in the City's plans for providing a high level of both drainage and parks and recreation services.

The need to detain storm water comes from economic and hydraulic considerations. Storms generate relatively large amounts of water in short periods of time. In order to prevent ponding in the streets, large pipes are needed and, because of Lodi's flat terrain, the water must be pumped. Without detention, the pumps must be able to handle the high peak flows. For example, an average storm of 1/2 inch of rain in 1 hour will generate a peak flow of 22 cubic feet per second (over 10,000 gallons per minute) from only 100 acres of developed land. To carry this flow from south of Kettleman Lane to the River would require at least a 42-inch pipe that would be over 10 feet deep at Turner Road. A 75 hp pump would be needed to lift water to the River. If the pump fails or cannot keep up with the flow, streets will flood. With a local detention basin, the pipe size is reduced to 21 inches or smaller and the length substantially reduced. No pump is needed to handle the runoff. A small pump, 15 hp or less, is then used to drain the basin. In addition, we have a few acres for a park site that can be used most of the year.

Once it is determined that runoff is to be detained, the next step is to calculate the size of the basin. Obviously this will vary with the size of the area to be served and the type of development which, together, dictate how much runoff there will be to store over a given period of time. The size also depends on the standard of protection from flooding desired by the community. Storms vary considerably in both the amount and rate of precipitation. Statistical methods are used to calculate "design storms" which can then be used to analyze any particular situation in a consistent manner.¹ In Lodi the standard for basin design is 5 inches of rain over 48 hours. This intensity corresponds to the 100 year storm, which is commonly used throughout the nation.² The duration (48 hours) is also based on the 1963 Master Plan and has important implications in basin design, particularly in evaluating the method of disposal.

Lodi's basins have been designed assuming there will be outflow (by pumping) during the storm to either the River or the WID Canal. In most cases, they will be full at the end of the design storm and the Master Plan assumed that continued pumping would take care of any subsequent runoff. If this pumping were to be eliminated or curtailed, the corresponding volume would have to be provided, either by deepening or enlarging the basins. Other disposal methods, such as groundwater recharge through percolation, would lengthen the time water is present in the basin and would affect the basin design as well as adversely affecting recreational uses. Evaporation is negligible during the winter months and percolation rates could vary from 0.5 feet or less to at best 2 feet per day. Given depths in Lodi's basins ranging from 4 feet to 14 feet, water would remain in the basins for many days. To maintain percolation, the basins would need to be regraded to create 2 holding areas, 1 for short-term detention and the other for percolation. The percolation area would require significant maintenance over time to maintain the percolation rate. In addition, groundwater quality issues must be carefully considered. If recharge is to be seriously considered, these issues, in addition to overall drainage design criteria, should be studied by specialists in these fields.

¹ Note that we talk about runoff and storms interchangeably. Although commonly done in this country, this is incorrect. In fact, the entire method used for runoff and basin design calculations in Lodi is based on a method that is over 130 years old and has some serious limitations in our application. It is very possible that our basin sizes are under designed. However, this should be the subject of another paper.

² Remember, this "design storm" is based on statistical analysis methods and can give a false sense of security in thinking that such a storm will only occur once in a hundred years. Actually, there is a 2/3 chance that one will occur in the next 100 years. The same statistical methods can be used to show, for example, if we wanted to design with 95% certainty for a storm that will not be exceeded over the next 10 years, then we should design for the 200 year storm.

RESOLUTION NO. 94-31

A RESOLUTION OF THE LODI CITY COUNCIL
AWARDING THE BID FOR WESTGATE PARK INTERIOR STORM DRAINAGE

WHEREAS, in answer to notice duly published in accordance with law and the order of this City Council, sealed bids were received and publicly opened on March 16, 1994 at 11:00 a.m. for the bid for Westgate Park Interior Storm Drainage, described in the specifications therefor approved by the City Council on March 2, 1994; and

WHEREAS, said bids have been compared, checked, and tabulated and a report thereof filed with the City Manager as follows:

<u>Bidder</u>	<u>Location</u>	<u>Bid</u>
Engineer's Estimate		\$30,750.00
Crutchfield Construction	Stockton	\$23,171.00
Allied West Construction	Penryn	\$23,907.00
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Antovich Construction	Santa Clara	\$36,862.00
Lubenko Construction	Plymouth	\$38,813.00
Diede Construction	Woodbridge	\$45,704.74

WHEREAS, the City Manager recommends that award of the bid for Westgate Park Interior Storm Drainage be made to the low bidder, Crutchfield Construction; and

NOW, THEREFORE, BE IT RESOLVED by the Lodi City Council that award of bid for Westgate Park Interior Storm Drainage be and the same is hereby awarded to Crutchfield Construction, Stockton, CA, the low bidder, in the amount of \$23,171.00.

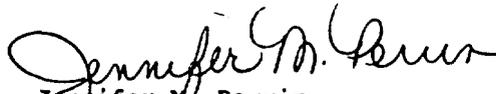
Dated: April 6, 1994

I hereby certify that Resolution No. 94-31 was passed and adopted by the City Council of the City of Lodi in a regular meeting held April 6, 1994 by the following vote:

Ayes: Council Members - Mann, Pennino, Snider and
Sieglock (Mayor)

Noes: Council Members - Davenport

Absent: Council Members - None


Jennifer M. Perrin
City Clerk

94-31

CITY OF LODI, CALIFORNIA

Sealed proposals will be received by the Purchasing Officer, Lodi City Hall, 221 W. Pine Street, P.O. Box 3006, Lodi, California, 95241-1910, until **11:00 A.M. on Wednesday, March 16, 1994**. At that time, the proposals will be publicly opened and read in Lodi City Hall for performing the following described work.

The work consists of installing 367 linear feet of 12-inch storm drain, 714 linear feet of 15-inch storm drain, 5 drop-inlet catch basins, and all other miscellaneous and related work as shown on the plans and specifications for the project.

The Contractor agrees to commence work within 15 calendar days after both parties have signed the contract and to complete the work within 20 working days. Upon signing the contract, Contractor agrees that length of time of the contract is reasonable.

In accordance with the provisions of Section 1770 of the Labor Code, the Director of Department of Industrial Relations of the State of California has determined the general prevailing rates of wages and employer payments for health and welfare, pension, vacation, travel time, and subsistence pay as provided for in Section 1773.8, apprenticeship or other training programs authorized by Section 3093 and similar purposes applicable to the work to be done. Said wages are available through the Public Works Department, City of Lodi, City Hall, Lodi, California, 95240. The Contractor and any subcontractor shall pay each employee engaged in the trade or occupation not less than the hourly wage rate. As the wage determination for each craft reflects an expiration date, it shall be the responsibility of the prime contractor and each subcontractor to insure that the prevailing wage rates of concern are current and paid to the employee.

The Contractor shall make travel and subsistence payments to each worker needed to execute the work as such travel and subsistence payments are defined in the applicable collective bargaining agreements in accordance with Section 1773.8 of the Labor Code.

If a craft or classification used on the project is not shown on the wage determination, the Contractor may be required to pay the wage rate of that craft or classification most closely related to it as shown in the general determinations.

The City of Lodi hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex or national origin in consideration for an award.

For any moneys earned by the Contractor and withheld by the City of Lodi to ensure the performance of the contract, the Contractor may, at Contractor's request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the Public Contract Code of the State of California.

The Contractor shall submit copies of payroll records.

The contract documents are available for \$25 (nonrefundable) at the office of the City Engineer, Public Works Department, City Hall, 221 W. Pine Street, P.O. Box 3006, Lodi, California, 95241-1910, (209) 333-6706. A set of plans and specifications will be mailed upon receipt of \$30 (nonrefundable).

No bid will be considered unless it is submitted on a proposal form furnished by the City of Lodi. The prime contractor on this project shall possess a valid **State of California Class A** contractor's license.

The City Council reserves the right to reject any or all bids and to waive any informality in the completion of such forms, and to award to the lowest responsible bidder.

The list of plan holders and the bid results will be available on our voice mail system. Bid results will be available one hour after the bid opening. To enter the voice mail system, call (209) 333-6800. When the greeting begins, enter 243 (BID), listen for your bid choice and press appropriate key.

By Order of the City Council

JENNIFER M. PERRIN
City Clerk