CITY COUNCIL MEETING
MARCH 19, 1986

AGREEMENT WITH CONSULTANT FOR SEWER MASTER PLAN APPROVED

CC-6
CC-51 (a)

Council authorized retaining the services of Black and Veatch, Consulting Engineers, for the preparation of the Sewer Master Plan Update and Study of the Eastside Area at a total cost of $53,000.

CITY OF LODI

PUBLIC WORKS DEPARTMENT

COUNCIL COMMUNICATION

TO: City Council

FROM: City Manager

DATE: March 12, 1986

SUBJECT: Approve Agreement with Sewer Master Plan Consultant

Project Data

Originally Budgeted: 1985 & 1984
Budgeted Fund: 17.1 Sewer Fund
Amount Budgeted: $41,300
Over-Run Fund: 17.1 Sewer Fund

RECOMMENDED ACTION: That the City Council engage the services of Black & Veatch, Consulting Engineers, for the preparation of the Sewer Master Plan Update and Study of the Eastside Area for a total cost of $53,000.

A breakdown of costs and what has been budgeted is as follows:

Study Area	Consultant Cost	Budgeted Amount
Citywide Sewer Master Plan	$ 39,600 }	$ 35,000
Eastside Moratorium Area	9,700 }	
Eastside Sewer Investigation (1984 Block Grant Project)	3,700	6,300
	$ 53,000	$ 41,300

The firm of Black & Veatch is currently working with the City crews on the televideo analysis of the existing sewers on the east side. This work includes recommending replacement lines and line upgrading in the Eastside Area. Members of this firm were also involved with the City's original Sewer Master Plan and treatment plant construction and expansion at White Slough.

The amount budgeted for the Sewer Master Plan was only a City staff estimate. Based on reviewing the attached proposal and our knowledge of the firm's past performance, this department can strongly recommend this firm be retained to do this work. In addition to Master Plan document, the City will obtain the software package "SEWER" and will receive training on the use of this program.

If there are any questions about our recommendation, or the project in general, please contact me.

Jack L. Ronsko
Public Works Director

Attachment

JLR/eeh

APPROVED: _____
THOMAS A. PETERSON, City Manager

FILE NO.

BLACK & VEATCH
ENGINEERS–ARCHITECTS
TEL. (415) 934-5770

3470 BUSKIRK AVENUE
PLEASANT HILL, CALIFORNIA 94523

MAILING ADDRESS: P.O. BOX 4247
WALNUT CREEK, CALIFORNIA 94596

Sewer Master Plan Proposal

B&V Project 00003.4H1
February 27, 1986

City of Lodi
221 West Pine Street
Lodi, CA 95240

Attention: Mr. Jack L. Ronsko

Gentlemen:

Enclosed is a Sewer Master Plan Proposal for your review and comment. The $3,686 cost for the East Side Sewer Analysis could be credited or paid for under our current Work Order No. 7606 and Project No. 17.1-400.42(323).

When you have completed your review of this proposal and would like to discuss it in detail, please call me.

Very truly yours,

BLACK & VEATCH

David A. Requa

kd
Enclosures

PROPOSAL

TO

CITY OF LODI

FOR

SEWER MASTER PLAN

PURPOSE

The primary purpose for the preparation of this sewer master plan is to provide for the orderly addition to the existing wastewater collection and transport system to provide adequate service for existing and future populations within the City of Lodi planning area. The secondary purposes are to provide engineering support regarding the wastewater collection system to the EIR consultant for the Moratorium Study Area and to evaluate the physical condition of the collection system in the Eastside Sewer Study Area.

SCOPE OF WORK

To execute the purpose of this study, the following scope of work will be completed.

Task 100 - Sewer Master Plan

To prepare an overall Sewer Master Plan for the City of Lodi service area, the following specific tasks will be undertaken.

101 Using the existing and future population, land use, and zoning provided by the City, develop unit wastewater contribution by use type that reflects the actual measured flow at the White Slough wastewater treatment facility. Also develop minimum, peak, and wet weather flow ratios and project future system flows.

102 Develop a hydraulic model of the existing collection system using the Black & Veatch "SEWER" program. The model will include the basic main and submain system but not collection sewers. The network will be reviewed and approved by the City.

103 Run the model to calibrate it with plant influent records. Perform subarea calibrations for flow data at nine key locations in the City. Flowmeters will be provided by Black & Veatch but installed and removed by city staff under the direction of the engineer.

104 Develop standard sewer system design criteria to guide city staff in the review of development plans.

105 Using future flows, run the "SEWER" model to identify system deficiencies as the City grows. Also, summarize the overall conditions of the existing systems based upon interview with City staff.

106 Develop recommendations for system improvements including size, routing, and cost to accommodate future growth. Plans shall be based upon design standards and natural contours as defined by USGS mapping.

107 For three large undeveloped areas identified by city staff, develop specific recommendations for providing collection sewers.

108 Develop a recommended sewer maintenance plan.

109 Provide a draft report for City review.

110 Incorporate City comments into a final draft for City review.

111 Incorporate City comments regarding the final draft and prepare the final report for printing. Have the number of final copies required by the City printed and delivered. Actual printing will be billed separately.

112 A user program manual, data files, and user subroutine will be developed and provided the City to allow city staff to run the "SEWER" model by telephone modum access to the Black & Veatch computer.

113 Provide the City staff with training, hardware computer analysis, and start-up assistance to get the model operational from City offices.

114 Provide four review meetings with city staff as follows:

a. Interviews with maintenance personnel.

b. Review of flow projections, design standards, and analysis of existing system.

c. Review of draft report.

d. Review of final report.

Task 200 - Apartment Moratorium Study Area

To provide engineering support to the City's EIR consultant for the Apartment Moratorium Study Area, the following specific tasks will be undertaken.

201 Evaluate the capacity and adequacy of the existing collection sewers in the Study Area for two zoning conditions identified by the EIR consultant. Identify the cost of improvements required for the two conditions.

202 Provide planning level analysis of all alternative development schemes identified by the EIR consultant to determine the cost impact of each.

203 Provide analysis and cost for two alternatives selected for detailed analysis from the screening in Task 202.

204 Respond to questions regarding the sewer system during the EIR process.

205 Detail an implementation plan for the selected best alternative. Incorporate a summary of the process and implementation plan as an appendix to the Sewer Master Plan.

206 Provide for three coordination meetings and/or public meeting with the EIR consultant and City.

Task 300 - East Side Sewer Analysis

To provide an assessment of the study area, the following tasks will be undertaken:

301 Evaluate the capacity and adequacy of the existing collection sewers in the study area for existing zoning and proposed zoning.

302 Summarize the results of smoke and TV testing performed by city staff and correlate this information with the theoretical capacity of the system to provide an overall assessment of the system adequacy.

303 Meet with city staff to discuss results and to develop a recommended improvement plan.

Report Outline

The report prepared to present the analysis and results of the study effort will have the following outline.

Chapter 1 Introduction - Authorization, purpose, and scope of study.

Chapter 2 Summary of Recommendations - Summarize the recommendations of the study as supported by the text.

Chapter 3 Study Area Characteristics - Summarize existing and future land use zoning and population data provided by city staff. Develop unit wastewater flow characteristics for existing population that, when applied to the land use information, reflects the actual measured flow at the White Slough wastewater treatment facility. Also develop minimum, peak, and wet weather flow characteristics.

Chapter 4 Existing Wastewater System - Provide a description of the existing wastewater collection system to include basic main and submains and pumping facilities. Summarize maintenance problems in the system. Model the existing system to identify current system deficiencies.

Chapter 5 Basis of Design - Summarize design criteria to be applied to the physical facilities (i.e., minimum slopes, design water depth, minimum pipe depth, etc.) Develop future wastewater flows based upon the population and densities.

Chapter 6 Collection System Plan - Summarize the analysis of the distribution system and present a proposed development plan for the collection system.

Appendix A Apartment Moratorium Study Area

Appendix B Eastside Sewer Analysis

Study Assumptions

This scope of work is based upon the following assumptions:

- Work will be concurrent with the EIR water system and traffic consultants for the Apartment Moratorium Study.
- Population, growth, land use, and zoning to be incorporated into the master plan will be prepared by others.
- Existing sewer maps are up-to-date and accurate. Any required field verifications will be performed by the City.

- o The industrial collection system will not be addressed in the study.
- o Work will not include detailed inspection/evaluation of each pump station.
- o Final report printing will be paid by the City at cost.

SCHEDULE

Tasks 101, 102, 103, 104, and 108 can be completed in 8 weeks of notice to proceed. The schedule then becomes dependent upon the EIR consultant and the completion of Task 200. Once Task 200 is completed, a draft sewer master plan can be completed in an additional 6 weeks. Without the delay for Task 200, a draft of the sewer master plan would be complete in 16 weeks.

FEE BASIS

Summarized in attached Table 1 is the manpower estimate and cost of the project tasks. The basic Sewer Master Plan cost is $39,631 with an additional $9,676 for the Apartment Moratorium Study Area and an additional $3,686 for the Eastside Study Area.

These amounts are the estimated not to exceed costs. The consultant will make every effort to complete the work within the not to exceed price.

PROJECT PERSONNEL

Mr. David A. Requa will serve as project manager and will have overall project accountability. He will also participate in any public or City Council meeting that may be required. Mr. Frank Appelfeller will be project engineer and will coordinate the day-to-day activities and prepare the engineering report. Mr. Greg Baatrup, Mr. Gary Meyer, and Ms. Sheila Boyington will provide staff engineering analysis on an as-needed and as-available basis.

TABLE 1
CITY OF LODI
SEWER MASTER PLAN
ENGINEERING ESTIMATE

TASK	MAN-HOURS Proj Mgr	Proj Eng	Staff Eng	Drft	Cler	Expns $	Total $
100 SEWER MASTER PLAN							
101	6	16	18	8	0	0	2541
102	8	20	48	0	0	500	4548
103	4	16	48	0	0	500	4009
104	4	16	16	0	4	0	2123
105	2	6	16	0	0	100	1360
106	8	8	24	8	4	0	2596
107	2	8	8	16	0	0	1579
108	4	10	16	0	4	0	1760
109	8	36	40	48	16	100	6898
110	4	16	8	16	4	100	2421
111	2	8	0	8	2	100	1074
112	2	16	0	0	4	50	1277
113	4	16	48	0	4	0	3619
114	32	24	0	0	0	0	3828
Sub-total Master Plan	90	216	290	104	42	1450	39631
200 APARTMENT STUDY AREA							
201	2	6	12	6	0	50	1337
202	2	8	8	0	4	0	1117
203	2	8	12	12	4	0	1733
204	2	8	0	0	4	0	743
205	2	12	20	16	8	50	2652
206	18	6	0	8	4	0	2096
Sub-total Apartment Area	28	48	52	42	24	100	9676
300 EAST SIDE AREA							
301	2	4	12	12	4	100	1591
302	4	4	16	6	2	0	1557
303	4	4	0	0	0	0	539
Sub-total East Side	10	12	28	18	6	100	3686
TOTAL PROJECT	128	276	370	164	72	1650	52993