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**Title:** Staff Report for a Resolution Appropriating \$313,388.84 of Water Pollution Control Enterprise Funds Including Approval of an Increase in the Contract Change Order Cap from 40% to 60% (\$445,724.00 to \$668,586.00, an increase of \$222,862.00) for a Construction Contract with Con-Quest Contractors, Inc. for the Sanitary Sewer Line Replacement/Repair 2012-13 Project, Project No. 2013.0120

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Staff Report for a Resolution Appropriating \$313,388.84 of Water Pollution Control Enterprise Funds Including Approval of an Increase in the Contract Change Order Cap from 40% to 60% (\$445,724.00 to \$668,586.00, an increase of \$222,862.00) for a Construction Contract with Con-Quest Contractors, Inc. for the Sanitary Sewer Line Replacement/Repair 2012-13 Project, Project No. 2013.0120

**SUMMARY AND RECOMMENDATIONS**

Staff recommends the approval of an appropriation of \$313,388.84 of Water Pollution Control Enterprise Funds as follows:

- \$222,862.00 associated with an increase in the change order cap from 40% to 60% (from \$445,724.00 to \$668,586.00) of the original construction contract amount of \$1,114,310.00
- \$90,626.84 for increased costs for construction administration, such as City staff time, permit costs, materials testing and surveying

Staff has reviewed past practices that occurred during the subject project and will implement improved procedures to reduce the potential of high change order percentages for future projects.

**BACKGROUND**

The City of San Leandro owns and operates approximately 125 miles of sanitary sewer pipeline and periodically issues a contract for repair work on these lines. The Sanitary Sewer Line Replacement/Repair 2012-13 Project was advertised on February 26, 2015, and the contract was awarded to Con-Quest Contractors, Inc. on April 20, 2015. Construction began in August 2015, is still underway as of July 2016 and Final Acceptance is anticipated in September 2016.

This project for maintenance of deteriorated sanitary sewer facilities repairs pipes and manholes at

ninety-three locations throughout the City. The work includes traffic control, excavation, replacement of defective underground facilities, reconnection of sewer laterals affected by the repairs, trench backfill and compaction, and surface restoration. The project scope also includes storm drain repair at a few locations, since the nature of that work is similar to the repair of sewer facilities.

This project was originally funded in the amount of \$1,400,000.00, and the original construction contract amount was \$1,114,310.00. In April 2016 City Council authorized additional funding for the project in the amount of \$291,510.04 to replace and upsize a deteriorated sanitary sewer main on W. Juana Avenue that serves the Marea Alta residential housing development (\$193,555 construction plus \$15,000 engineering and inspection), to repair a badly leaking sewer force main at the intersection of Merced Street and Fairway Drive (\$32,825 construction plus \$3,000 engineering and inspection), and as well as to fund work required due to unforeseen underground conflicts. However, project costs are now projected to exceed project funding for the reasons described below.

1. Additional quantities for asphalt concrete paving
2. More extensive pipe deterioration than was visible by video inspection
3. More numerous lateral connections than were listed in our records or visible by video inspection
4. Unforeseen utilities that required hand work to dig around
5. Traffic control durations that exceeded our estimates
6. Pipe repairs located deeper than listed in our records

## **Analysis**

The existing project funding of \$1,702,488.79 is insufficient to cover the total project cost. The project scope will need to be reduced if additional project funding is not authorized.

Staff has reviewed the events that occurred during the subject project to help ensure that future projects will not have such a high change order percentage. A discussion of these items follows.

### **Asphalt Concrete Paving**

Some contract change orders potentially could have been avoided if the estimated quantity of asphalt paving had been more accurate. Asphalt concrete paving was used to resurface trenches and restore the street surface around manhole excavations. Paving at manhole excavations was inadvertently excluded from the estimated quantity of work; consequently a change order was required to cover the cost of this work. Asphalt concrete paving quantities will be double checked by the Senior Engineer before going to bid on future projects.

### **Video Inspection**

Some contract change orders potentially could have been avoided if sewer inspection videos of the project sewer segments were filmed during the design phase or shortly prior. The design of this project was based on video inspection that was up to 6 years old. While this was sufficient in most cases, several locations deteriorated significantly or had new lateral connections installed between the video inspection and construction, leading to larger repairs and higher costs. On future projects staff will video pipe segments during the design phase when existing videos are more than 12 months old.

### **Existing Utilities**

Some contract change orders potentially could have been avoided if existing utilities were shown on

the project plans in greater detail. On this project plans were printed at a large scale which made utility conflicts hard to identify. As a result several utility mains within the work area weren't flagged and thus hand work at these locations wasn't included in the bid price. Additionally, we had unforeseen conflicts with abandoned utilities and utility laterals. Staff will draft the plans for future projects at a smaller scale so that conflicts with utility mains are clear and work around them is included in the bid. As detailed records of abandoned utilities and laterals do not exist, we will include a certain amount of hand work in each future project bid. This allowance will be used when unforeseen utilities are encountered.

### Traffic Control

Some contract change orders potentially could have been avoided if the quantity of traffic control included in the bid was more accurate. Three days of traffic control was included at each pipe repair and, although three days is sufficient for some locations, certain locations required much more than three days of work to complete. The estimated quantity for traffic control work on future sewer point repair projects will be based on the amount of time it takes to complete similar types of repairs done on past projects so that the traffic control costs will be more accurate. The Project Engineer will review assumptions on the extent of needed traffic control with the Senior Engineer to improve the accuracy of this quantity item.

### Utility Depths

Some contract change orders potentially could have been avoided if the depth of pipes to be repaired was shown more accurately. As-built drawings for sanitary sewer mains, especially those installed several decades ago, do not show the profiles of the pipes and only the manhole depth is provided on the drawings. During the design phase, pipe depths were assumed to be six inches below the bottom of manholes; however, it was found during construction that the ground surface over the pipes was higher than the ground surface at the manholes and thus the pipe depths were deeper than assumed. The depths of sanitary sewer mains, especially those that will be replaced in their entirety, will be more conservatively estimated on future projects to avoid unforeseen extra costs for trenching and backfill.

### Current Agency Policies

- 2015 City Council Goal: Maintain and enhance the City's infrastructure

### Previous Actions

- On July 21, 2014, the City Council by Resolution No. 2014-079 rejected all bids for the subject project.
- On April 20, 2015, the City Council by Resolution No. 2015-083 awarded the construction contract in the amount of \$1,114,310.00 for the subject project to Con-Quest Contractors, Inc. and appropriated an additional \$279,512.00 of Water Pollution Control Enterprise Funds to allow for the inclusion of the Additive Bid Item.
- On September 8, 2015, the City Council by Resolution No. 2015-153 authorized the City Manager to negotiate and approve Contract Change Orders up to 25% for the contract with Con-Quest Contractors, Inc. and also for other active construction contracts. No funding appropriation was included or necessary with Resolution No. 2015-153.
- On April 4, 2016, the City Council by Resolution No. 2016-041 appropriated \$291,510.04 of Water Pollution Control Enterprise Funds and approved an increase in the contract change order

cap from 25% to 40%

**Applicable General Plan Policies**

- Policy 52.04: Maintain efficient, environmentally sound, and cost-effective wastewater collection and treatment services in San Leandro.

**Environmental Review**

This project is categorically exempt from the California Environmental Quality Act (CEQA) per Section 15302 - Replacement or Reconstruction, Class 2. The Notice of Exemption was filed with the Alameda County Recorder’s Office on July 22, 2013.

**Summary of Public Outreach Efforts**

This project was advertised in the Daily Review on February 26, 2015 as well as the World Journal, South County Post and Vision Hispana Newspaper, the circulations of each reflecting the diversity of San Leandro. Staff also notified contractors interested in working with the City via email and sent plans to bid shops and plan rooms.

The contractor notified residents and businesses whose properties were directly impacted by construction by passing out flyers and talking to them in person.

**Fiscal Impacts**

The updated total project cost including design, contingency and construction management is estimated to be \$2,009,449.96 as detailed below:

	Original Contract	Current Estimate
Design and Misc. Services:	\$ 81,609.40	\$ 81,609.40
Original Construction Contract:	\$1,114,310.00	\$1,114,310.00
Contract Change Orders:	\$ 150,593.72	\$ 662,158.33
<u>Construction Management:</u>	<u>\$ 53,486.88</u>	<u>\$ 151,372.23</u>
Total	\$ 1,400,000.00	\$ 2,009,449.96

**Budget Authority**

<u>Account No.</u>	<u>Appropriation Date &amp; Reso/Budget Yr</u>	<u>Amount</u>
593-52-253	July 2012, Budget 2012-13	\$500,000.00
593-52-256	July 2013, Budget 2013-14	\$600,000.00
144-38-340	July 2014, Budget 2014-15	\$ 26,465.79
593-52-253	April 20, 2015, Resolution 2015-083	\$279,512.00
593-52-253	April 4, 2016, Resolution 2016-041	\$291,510.04
593-52-257	July 2014, Budget 2014-15	<u>\$ 5,000.00</u>
	Total Allocation	\$1,702,487.83
	Funding Appropriation Request	<u>\$313,388.84</u>
	Adjusted Project Cost	\$2,015,876.67

Funding appropriation request of City Council:  
\$313,388.84 appropriated from the Water Pollution Control Enterprise Fund balance to

complete the Sanitary Sewer Line Replacement/Repair 2012-13 Project in account 593-52-253.

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