



Agenda Date: 3/2/2016
Agenda Placement: 7G

Napa Sanitation District Board Agenda Letter

TO: Honorable Board of Directors

FROM: Timothy Healy - General Manager
NS-Technical Services/Engineer

REPORT BY: Matthew Lemmon, Associate Engineer -

SUBJECT: Approve the Project, concur with CEQA determination, and Authorize the General Manager to Issue Notice Inviting Bids for the ACP Lining Project No. 1B (CIP 15721)

RECOMMENDATION

Approve the Project, concur with Staff's determination that the Project is categorically exempt, and authorize the General Manager to issue Notice Inviting Bids for the ACP Lining Project No. 1B (CIP 15721).

EXECUTIVE SUMMARY

This project will rehabilitate various District sewer mains that are known to be in severely deteriorated condition and require immediate repair. This project is a second phase of a project completed in Fall 2015.

The general scope of work includes the rehabilitation of 5,350 feet (approximately 1 mile) of sewer mains using cured-in-place (CIPP) lining as follows:

- | 790 LF of 12-inch diameter AC sewer main,
- | 3,560 LF of 10-inch diameter AC sewer main,
- | 590 LF of 6-inch diameter AC sewer main, and
- | 420 LF of 10-inch diameter AC and VC sewer main crossing Highway 29 at Locust Street.

A key map of the project location is attached.

The engineer's estimate of probable construction cost is \$300,000. The allowed contract time for substantial completion is 90 calendar days.

FISCAL IMPACT

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| Is there a Fiscal Impact? | Yes |
| Is it currently budgeted? | Yes |
| Where is it budgeted? | The project is budgeted in the proposed FY 15/16 Capital Improvement Program. This project is Phase 2 of a project constructed in Fall 2015. There is sufficient budget to cover the project costs. |
| Is it Mandatory or Discretionary? | Discretionary |
| Discretionary Justification: | This project will rehabilitate sewer mains in the collection system that are constructed of asbestos cement pipe that require frequent maintenance work orders and have been identified as being in degraded condition by closed-circuit television inspection performed by District Collections Department Staff. A severely deteriorated pipeline consisting of asbestos cement and vitrified clay pipe that crosses beneath Highway 29 at Locust Street will also be rehabilitated. |
| Is the general fund affected? | Yes |
| Future fiscal impact: | Construction will be completed in FY 16/17. Unused budget from this fiscal year will be carried forward to next fiscal year. |
| Consequences if not approved: | Staff will continue to perform maintenance work orders on the sewer mains on a more frequent basis in comparison to other mains. These maintenance activities will likely contribute to further degradation and potential failure of the sewer mains. |
| Additional Information: | |

ENVIRONMENTAL IMPACT

Staff performed a preliminary CEQA review of this project and determined the project is Categorical Exempt. This project consists of rehabilitating existing sewer mains and laterals involving negligible expansion of capacity, which corresponds to Categorical Exemption 15302 (c) of the California Environmental Quality Act (CEQA) Guidelines. If the Board concurs with this determination, staff will file the attached Notice of Exemption.

BACKGROUND AND DISCUSSION

Asbestos Cement Pipe (ACP) was a common construction material for sewer and water mains between the 1940s and 1970s, but was largely discontinued in the 1980s. ACP is manufactured by wrapping a thin layer of a portland cement and asbestos fiber mixture around form that matches the desired pipeline diameter. The thin layers are continuously wrapped around the form until the required wall thickness is achieved.

Failure modes of ACP are similar to that of other pipeline materials (cracking, offset joints, hydrogen sulfide corrosion, etc.), however the severity of degradation of ACP is often difficult to determine. The individual thin layers of pipe material can corrode and delaminate slowly over time, reducing the wall thickness of the installed pipeline (and its structural integrity). Common closed-circuit television inspection methods used by District staff can identify areas of corrosion and delamination, but cannot adequately determine how much of the original pipe wall

thickness remains intact.

District collection system staff has recently encountered an increase in severely degraded sections of ACP mains (Trancas Street, Silverado Resort). In cases, ACP material has corroded to a degree that no pipeline wall thickness remains and voids in the sewer mains are observed. In addition, numerous "problem areas" in the system that are constructed of ACP receive more frequent maintenance work orders (including high pressure cleaning). These activities can result in washing away layers of the pipe wall material, which are observed during cleaning operations.

In consideration of recent ACP failures and the age of the collection system largely comprised of ACP, the collection system staff was tasked with assessing the condition of ACP mains system-wide. The initial study areas comprised of "problem areas" requiring more frequent maintenance where hydrovactor crews observe ACP material washing down mains during cleaning activities.

This project rehabilitates the most severely deteriorated ACP mains in the system that have been identified to date that require immediate repair. It is the second in a series of anticipated projects to assess condition and repair severely degraded ACP in the collection system.

SUPPORTING DOCUMENTS

- A . Item 7x - ACP Lining Project No. 1B Key Map
- B . Item 7x - ACP Lining Project No. 1B CEQA Exemption

Napa Sanitation District: Approve

Reviewed By: Timothy Healy