



Advisian

WorleyParsons Group

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16 March 2017

Proposal No.:
File Loc.: Calgary

Herwit Engineering
6200 Center Street
Suite 310,
Clayton, CA 945117

Attention: Gregory Harris

Dear Mr. Harris:

RE: SANITARY OUTFALL ASSESSMENT FOR THE TOWN OF DISCOVERY BAY

1. INTRODUCTION

Herwit Engineering (Herwit) on behalf of the Town of Discovery Bay California (TDBC) has requested Advisian to provide a detailed scope of work and cost estimate to conduct an assessment of their Sanitary Sewer Outfall, used to discharge treated sanitary sewer from the TDBC wastewater treatment plant into the Old River. The assessment will include an evaluation of the existing conditions of the outfall structure and provide an evaluation of proposed repair measures.

2. BACKGROUND INFORMATION

On May 15, 2013 and underwater visual inspection was completed of the 216 ft HDPE wastewater outfall comprised of an 18 in, 10 in and 6 in pipeline diameter segments. The result of the inspection revealed that out of the 36 pipeline diffusers 2 of them were missing and no flow was observed on any of the diffusers in the 6 in pipeline segment (16.5 ft long). In addition concerns have been raised that discharge pumping capacity of the plant has been reduced, this could be either due to plugged sections of the outfall and/or reduced capacity of the pumps.

3. PROPOSED WORKPLAN

An assessment of the outfall will be completed to provide design technical recommendation on how to repair the outfall diffuser system. This assessment will provide the basis to prepare the required design repairs/upgrades to the diffuser system. Detailed design of the proposed repairs are not included as part of this scope of work.

The proposed assessment would include the following tasks:

- Project Management
- Site visit and an optional CCTV camera inspection to assess the internal conditions of the diffuser components;



- Review of the hydraulics of the outfall and pumping system;
- Morphologic assessment of the river and scour assessment;
- Review of the river and wastewater effluent water quality; and
- Document summarizing the assessment completed and an evaluation of the proposed design repairs.

A general project management task has been included to provide effective project management and track costs accordingly. The project management task includes communication, meetings, reporting, budget reports and other actions that will be undertaken by the Project Manager, as well as the Cost Controller to monitor project status.

The site visit and optional CCTV camera inspection pipeline may provide information of the internal conditions of the diffuser. To complete this task flow through the outfall will be halted and access to the pipeline will be obtained by removing a nearby valve.

4. SCHEDULE AND COST

The estimated cost for the scope outlined above is \$26,232 (tax exclusive). Details pertaining to the estimated cost are provided in Table A. Note that Advisian only charges for work completed, any cost savings are passed on to the client. Any work outside the current scope will be communicated to the client as a change of scope and, upon approval, will be executed at the standard rates set out in the contract with Herwit Engineering.



Table A: Summary of Estimated Costs

Task	Cost
Project Management including procurement	\$1,920
Site Assessment	\$3,376
Site Visit, Hydraulic Assessment of Outfall and Pumping System, River Morphology and Scour Assessment, Review of Water Quality	\$10,360
Reporting and Senior Review	\$6,318
Optional CCTV Camera Sanitary Sewer Inspection	\$2,500
Sub total	\$24,474
Office Support (8% of labour costs)	\$1,758
Total	\$26,232



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5. CLOSURE

We trust that this letter proposal satisfies your current requirements and provides suitable documentation for your record. This work plan is based on our current understanding of your requirements for a baseline assessment of three water wells. If you have any questions or require further details, please contact the undersigned at any time.

Sincerely,

A handwritten signature in blue ink, appearing to read "Efrain Giron".

Efrain Giron, Ph.D., P.Eng.
Senior Water Resources Engineer

Senior Reviewed by

A handwritten signature in blue ink, appearing to read "Jeff Crofton".

Jeff Crofton, M.A.Sc., P.Eng.
Director, Surface Water Engineering, Americas