



CITY OF FORT BRAGG

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COUNCIL COMMITTEE ITEM SUMMARY REPORT

MEETING DATE: NOVEMBER 14, 2018
TO: PUBLIC WORKS AND FACILITIES COMMITTEE
FROM: DIANE O'CONNOR, ENGINEERING TECHNICIAN
AGENDA ITEM TITLE: RECEIVE REPORT AND PROVIDE INPUT REGARDING
PROPOSAL SELECTION FOR AWARD OF RAW WATER LINE
REPLACEMENT PROJECT CONTRACT

ISSUE:

The Public Works Department has received three (3) responsive bids for the Design of the Replacement Raw Water Pipeline from the Water Treatment Plant to Summers Lane Reservoir and from Highway 20 to Waterfall Gulch. The project is very complex and the bid responses are varied and challenging to evaluate against each other. The department seeks input from the Committee about firm selection.

SUMMARY:

The lowest bidder (**KASL Consulting Engineers - \$233,650** base proposal) appears to offer a corresponding lower level of service, while the highest bidder (**Stantec - \$449,161** base proposal) appears to offer a much higher level of service. **Coleman Engineering's** base proposal is **\$399,693**, just under the original budget for this task of \$400,000, with an apparent level of service closely approximating that of Stantec. Coleman and Stantec proposals are within 1.123% of the budget, suggesting that their proposals more closely match the anticipated level of service. Many of KASL's proposed costs for services are less than half the price of the other two.

The proposals include surveying services that vary significantly. All three proposals anticipate the City will either assist or solely perform location of the existing pipes, which Public Works will perform using Ground Penetrating Radar (GPR). Another important aspect of the surveying task will be to locate and write descriptions for proposed construction and access easements, which are currently lacking. Below is a breakdown of the surveying and geotechnical costs that are included in the base bids, along with the number of easements each firm is anticipating providing, and the number of working days in each proposals work schedule:

Included Costs and Timing					
	Surveying	Geotechnical	Total	# of Easements	Working Days
COLEMAN	\$105,866	\$47,070	\$152,936	15	210
KASL	\$46,392	\$24,500	\$70,892	21	200
STANTEC	\$101,915	\$68,984	\$170,899	10	370

Coleman proposes to use the services of subcontractor *Cinquini and Passarino* (located in Santa Rosa) and provide 13-color aerial photography at 2' accuracy with a 200' swath using LIDAR. LIDAR provides topography at a high level of accuracy because it can "see through the trees." They will provide topographic mapping at 1"=20', with a contour interval (CI) of 1 foot. Once the alignment has been determined, they will survey a 20' strip along final alignment including all trees >=6" diameter, and locate relevant property corners or other monuments necessary for easement location. They have already evaluated what easements will need to be acquired and made an effort to evaluate the design to minimize the need for them, as there is a significant cost associated with them. They anticipate writing 15 descriptions for easements necessary for the pipeline.

KASL proposal states that the City will locate pipeline for them and they will flag. They will perform the surveying using in-house staff, and anticipate using a subcontractor (B and B Locating) to verify or assist with pipe location as needed using Ground Penetrating Radar (GPR). They propose to locate trees >=5" diameter, and survey a 25' swath each side of pipeline alignment plus their proposed alternate alignment of Ph. IV. Their proposal did not explicitly include data collection of any existing survey monuments. They anticipate 21 easements will be required.

Stantec assumes the City will locate the pipeline and mark every 100 feet. Stantec proposes to use the services of subcontractor *Andregg Psomas* (located in Roseville) to provide survey cross sections at each 100' location with a 70' swath. They will provide maps at a scale of 1"=40' with a CI of 1 foot, and locate trees >=24". They will also locate sufficient monuments to tie proposed easements to property corners. They anticipate 10 easements will be required.

The timeframe for the design is approximately the same for KASL and Coleman, while Stantec proposes a much longer timeline (an additional 160 working days or 76% more time than Coleman's schedule) for the 100% plan and specification bid set. Stantec feels the extended time line is necessary due to all studies, permitting and funding activities, although those tasks are not included in the base price. Coleman did not extend their schedule beyond design completion. KASL's proposal indicates that all the environmental tasks will be performed concurrently with design.

Coleman and KASL address the funding opportunities generically, while Stantec is enthusiastic about applying for DWSRF grant monies totaling \$5 million. We assume all of the firms are capable of pursuing this grant, although Stantec notes that their teams have secured \$300 million in SRF funds using in-house personnel.

Both Coleman and Stantec have demonstrated a strong interest in this project and have spent a substantial amount of time evaluating the project in order to provide exceptional proposals. **Coleman** has performed a hydraulic study indicating that it is not necessary to upsize from a 6" pipe to achieve desired flows. Their calculations also confirm that using liner technology on the existing 6" pipe, which will reduce the internal diameter to 5.25", will not be detrimental to desired flows rates. **KASL** performed hydraulic calculations as part of the Phase 1 replacement (Highway

20 to Summers Lane Reservoir). Their study indicates that “to adequately provide these [...] (1.94 million gallons per day (MGD)) [...] raw water conveyance demands a pressure rated 10” PVC pipeline [...] from Summers Lane Reservoir to the City’s Water Treatment Plant”. They do acknowledge that the calculations should be revisited as part of this project. **Stantec** did not perform hydraulic calculations but considered the topographic variations to evaluate replacement or rehabilitation technologies for each phase.

Environmental review and permitting are important ancillary tasks associated with design. It should be noted that approximately 10,000 feet of pipeline is ready to be replaced or rehabilitated. Assuming a modest 50-foot wide construction zone, this means that up to 500,000 square feet (or 11-1/2 acres) of forest could be disturbed. Creative designs that do not solely rely on digging up and replacing pipe is essential.

Depending on funding sources, California Environmental Quality Act (CEQA) compliance is a certainty, and National Environmental Policy Act (NEPA) compliance is also possible. Pipeline replacement/rehabilitation options will be heavily influenced by environmental constraints. A superior design will integrate both tasks into the same work product. A number of various permits will be necessary. KALS’s proposal notes the need for this work, offers to potentially assist the City under a future contract amendment but without any cost estimate or stating who might do the work. Both Coleman and Stantec have incorporated these tasks into their proposals. Coleman has further structured their proposal to include relevant environmental review permitting into different optional tasks, like the Timber Harvest Plan (THP). If multiple tasks are included in a Coleman contract, then overlapping work can be removed to reduce costs.

Coleman and Stantec invested substantial effort into presenting trenchless technology and alternate alignments to reduce environmental impacts. By extension, this would substantially reduce construction costs by reducing environmental impacts and their associated permit conditions. KASL did not mention any noteworthy experience with trenchless technology. We feel that the choice is most appropriately limited to the Coleman and Stantec proposals because of the proposal strength disparity with KASL. We are concerned about the apparent lower level of service offered by KASL. Coleman and Stantec appear to be offering a similar level of service in their proposals.

Another evaluation criterion is the perceived ability to provide a high level of service. **Coleman** completed the Desalination Feasibility Study for us last year, within their allotted schedule and budget. They have been very responsive to the City and made an outstanding presentation of their findings to Council on June 11, 2018. **KASL** has worked on numerous other projects for the City. They completed the Alley Master Plan in 2011 and performed a Water Distribution System Study including fire flow modelling in 2012. They designed the pipeline replacement for the section of raw water line from Highway 20 to the Summers Lane Reservoir (Ph. 1 of replacement) in 2012, and they engineered the Chestnut Street Corridor Plan in 2012. Historically, KASL designs have led to some issues during construction. The City has no previous experience with **Stantec**, although we note that they are a very large firm with “over 22,000 specialists in 400 locations.”

The department believes that the City will have a better-planned and cost effective project if we select the additional tasks of Environmental Studies and Permitting, Funding Assistance, and the Timber Harvest Plan (THP). The ability to integrate the environmental efforts with the design efforts will allow for a simpler and more efficient permitting process than if the City were to perform the tasks in-house. As noted before, environmental constraints will drive the design. City staff resources are also severely limited. Combining services will also help with overall costs by eliminating task overlaps. All three of the proposals have subcontracted the Timber Harvest Plan

to Summit Forestry, a local company who completed the Timber Harvest Plan for Summers Lane Reservoir. **Coleman** has assembled a strong team of subcontractors for this project, including Brewer Environmental, who are “Regulatory Compliance specialists.” They note that if we choose all of the additional tasks through them there will be overlap and cost savings between the Environmental task and the THP. They structured their proposal so that the City could evaluate those costs on a stand-alone basis, which does elevate the total combined cost. **KASL** would perform the “Biological Reconnaissance” in-house. **Stantec** offers all of their proposed services in-house, except for the Timber Harvest Plan. Below is a summary of “Additional Task” costs:

	Base Bid	Timber Harvest	notes	Subtotal	Environmental/ Biological	notes	Subtotal	Funding	notes	Base plus additional
COLEMAN	\$399,693	\$90,471	single integrated plan	\$490,164	\$83,932	Basic service included in base, Complete for additional cost	\$574,096	\$20,000	subcontract	\$594,096
KASL	\$233,650	\$50,000	single plan; phased \$25k ea	\$283,650	\$41,680	Biologic and Cultural evaluation	\$325,330	no additional cost	very basic	\$325,330
STANTEC	\$449,161	\$61,248	2 phases	\$510,409	\$161,760	Complete Environmental	\$672,169	\$86,856	in-house experience	\$759,025

FISCAL IMPACT:

The 2017-2018 budget allotted \$400,000 for design services and \$682,000 for construction of the first phase. As construction will not occur for at least another year, we propose reallocating the additional money from the construction budget to fund the backfilled by construction grant funding. Any overlapping or redundant work can be negotiated out of the contract with the chosen consultant to further reduce costs.

RECOMMENDATION:

We ask the committee to recommend to City Council that the \$594,096 contract be awarded to Coleman Engineering, and include their additional tasks as part of the contract. We also recommend that we include a contingency amount of 14% for a total budget allocation of \$680,000.

ATTACHMENTS:

- Coleman Engineering Proposal
- KASL Consulting Engineers Proposal
- Stantec Proposal