

## **STAFF REPORT**

**To:** Coastside County Water District Board of Directors

**From:** Mary Rogen, General Manager

**Agenda:** October 13, 2020

### **Report**

**Date:** October 9, 2020

**Subject:** Approval of Change Order with EKI Environment and Water, Inc. for Additional Engineering Services During Construction for the Denniston Culvert Replacement and Paving Project

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### **Recommendation:**

Authorize the General Manager to amend the professional services agreement with EKI Environment and Water, Inc. (EKI) for engineering services during construction for the Denniston Culvert Replacement and Paving Project. The original agreement amount was \$19,600 plus a change order for an additional \$29,200, for an adjusted total budget of \$48,800.

### **Background:**

The Denniston potable water storage tank was originally constructed in 1972. The paved access road to the tank is quite steep and has only been patch paved over the past 50 years. After some investigation it was found the road was starting to fail due to corroded corrugated metal pipe (CMP) culverts undermining the road. EKI was hired to evaluate options and prepare plans and specifications for bidding and provide engineering services during construction.

At the May 12, 2020 Regular Board Meeting, the Board awarded the Denniston Culvert Replacement and Paving Project construction contract to Half Moon Bay Paving and Grading in the amount of \$383,342. The agreement with EKI for engineering services during construction (\$19,600) was approved by the General Manager under the General Manager's purchasing authority.

This project included the removal of six (CMP) storm drains ranging from 10-24" and replacement with HDPE, including removal of existing inlet and outlet structures; removal of an existing vertical CMP manhole, and replacement with a new manhole; reconstruction of approximately 9,200 SF of Denniston Tank Road and 15,000 SF of the roadway around the Water Treatment Plant.

**STAFF REPORT****Agenda: October 13, 2020****Subject: Approval of Change Order to EKI Professional Services Agreement****Page Two**

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During construction it was discovered the outlet of the top storm drain was exposed and cantilevered off the steep slope with evidence of past erosion below the outfall. Staff reached out to EKI for field engineering support services and engaged the contractor. Granted the discovered field conditions, it was decided to have EKI subcontract with BAGG Engineering for Geotech support services to assist in developing a value engineered modified plan. This collaborative effort with District staff, EKI, BAGG Engineers and the contractor required several additional field meetings and design renditions. In the end, a very sound and economical plan was developed and minimized the magnitude of the change order with the contractor. Construction was substantially complete October 8<sup>th</sup>. Final unit prices are being confirmed and staff expect the contract change order to be in the range of ~\$18,000.

EKI's original agreement for engineering support during construction was in the amount of \$19,600. (See Attachment A.) EKI's change order for an additional \$29,200 included design modifications, Geotechnical Services (BAGG Engineers) and contractor coordination with Storm Drain #6 at the bottom of the tank road. (See Attachment B.)

Staff is pleased with the final product and outcome of the cooperative efforts of EKI, District staff and the contractor.

Fiscal Impact: Additional \$29,200 for EKI's services charged to the CIP project.



Corporate Office  
577 Airport Boulevard, Suite 500  
Burlingame, CA 94010  
(650) 292-9100  
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29 June 2020

Ms. Mary Rogren  
General Manager  
Coastside County Water District  
766 Main St.  
Half Moon Bay, CA 94019

**Subject: Proposal for Engineering Services During Construction for the  
Denniston Culvert Replacement and Paving**  
Coastside County Water District, Half Moon Bay, California  
(EKI C0-133)

Dear Ms. Rogren:

EKI Environment & Water, Inc. (EKI) is pleased to provide this proposal to Coastside County Water District (District) for Engineering Services During Construction (ESDC) for the Denniston Culvert Replacement and Paving Project (Project) at the Denniston Water Treatment Plant and Tank site in El Granada, California. This proposal is being prepared in response to the District's request.

## **PROJECT UNDERSTANDING**

EKI prepared the Construction Documents for the Project in March 2020. The bid open was held remotely on Friday 10 April 2020. Half Moon Bay Grading and Paving (HMBGP) was determined to be the lowest responsive, responsible bidder, with a total base bid price of \$383,342.00. The District requested EKI to provide ESDC services at a meeting on 24 June 2020. EKI assumes that the District will provide construction management, including field inspection.

## **PROPOSED SCOPE OF WORK**

EKI proposes the following tasks as part of this scope of work. For each of these tasks, EKI will also be providing project management services, including budget tracking, invoicing, preparation of progress reports, and staff management.

### **Engineering Support During Construction**

EKI will provide limited engineering services during construction. These services will focus on the following: pre-construction meeting, submittal reviews, responses to requests for information (RFIs), tracking and negotiating potential change orders (PCOs) and finalizing contract change orders (CCOs). EKI will have scope to attend two progress meetings or other site visits in the field, as needed. EKI will also prepare record drawings from the Contractor's record drawing submittal at the end of the project.

Formerly known as Erler & Kalinowski, Inc.

Oakland, CA • Davis, CA • Marin, CA • Sacramento, CA • Irvine, CA  
El Segundo, CA • Centennial, CO • Salem, NH • Saratoga Springs, NY

Coastside County Water District

29 June 2019

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Deliverables:

- Preconstruction meeting agenda and minutes.
- Conformed contract drawings in electronic format (PDF).
- Submittal review letters and submittal log.
- RFI response letters and RFI log.
- PCO tracking log and CCO form and documentation.
- Record drawings in electronic format (PDF).

EKI Assumptions:

- EKI will attend the preconstruction meeting and prepare minutes.
- EKI will prepare conformed drawings and specifications that incorporate Addenda 1 through 5.
- Submittals and RFI communication shall be electronic using EKI's standard forms for submittal and RFI review.
- EKI will review 10 submittals and four (4) resubmittals at a level of effort of 3 hours per review.
- EKI will review two (2) RFIs at a level of effort of 4 hours per review.
- EKI will prepare one (1) CCO.
- EKI will attend up to two (2) site visits during construction.
- EKI will prepare record drawings based on the redline drawings provided by the Contractor.
- The District will provide construction management, including field inspection.
- EKI assumes it will not attend any regular progress meeting.

**PROJECT SCHEDULE**

EKI anticipates that construction will be completed within three (3) months of notice to proceed.

**COMPENSATION FOR CONSULTING SERVICES**

We propose that compensation for consulting services by EKI be on a time and expense reimbursement basis in accordance with our attached current Schedule of Charges, dated 1 January 2020. Based on the proposed Scope of Work described above, we estimate a budget of \$19,600 for the completion deliverables as seen in Table 1 attached.

**TERMS AND CONDITIONS**

Other than the scope of work, budget, and schedule herein, the work will be performed in accordance with our current Agreement dated 20 September 2018.

Coastside County Water District  
29 June 2019  
Page 3 of 3



Thank you for the opportunity to work with the District on this project. Please contact Jonathan Sutter at 650-292-9100 with any questions.

Very truly yours,

EKI Environment & Water, Inc.

A handwritten signature in blue ink, appearing to read 'Jenn Hyman', written over a faint circular stamp.

Jenn Hyman, P.E., LEED AP  
Vice President

A handwritten signature in blue ink, appearing to read 'Jonathan Sutter', written over a faint circular stamp.

Jonathan Sutter, P.E.  
Project Manager

**Estimated Fee - Engineering Services During Construction for the Denniston Culvert Replacement and Paving Project**

Task Order No. 13  
Coastside County Water District, Half Moon Bay, California  
(EKI C0-133)

TASKS	ESTIMATED HOURLY LABOR			LABOR COST (\$)	DIRECT COSTS				MARKUP ON DIRECT COSTS 10%	TOTAL DIRECT COSTS	TOTAL	
	EKI Staff				UNIT	QUANTITY	UNIT COST	TOTAL COST			TASK BUDGET TOTALS (\$)	ROUNDED BUDGET TOTALS (\$)
	Taylor Allen	Jonathan Sutter, P.E.	Mike Vasquez, P.E., P.L.S.									
	146	219	275									
Project management	4	3		\$1,241							\$1,241	
Attend Pre-Construction Meeting and Prepare Minutes		3		\$657							\$657	
Preparation of Conformed Drawings	4	1		\$803							\$803	
Review submittals (10 submittals and 4 resubmittals assumed)	40	6	2	\$7,704							\$7,704	
Respond to Requests for Information, RFIs (2 RFIs assumed)	8	4	2	\$2,594							\$2,594	
Prepare Contract Change Order (1 Change Order assumed)	4	2	1	\$1,297							\$1,297	
Attend progress meetings or other site visits (2 meetings or visits assumed)	4	4		\$1,460							\$1,460	
Preparation of Record Drawings	16	2	1	\$3,049							\$3,049	
Communications Fee (EKI Labor Only)						4%	\$18,805			\$752	\$752	
TOTALS:	80	25	6	\$18,805						\$752	\$19,557	\$19,600

Proposal/Agreement Date: 29 June 2020

EKI Proposal/Project # C0-133

**SCHEDULE OF CHARGES FOR EKI ENVIRONMENT & WATER, INC.****1 January 2020**

<u>Personnel Classification</u>	<u>Hourly Rate</u>
Officer and Chief Engineer-Scientist	290
Principal Engineer-Scientist	280
Supervising I, Engineer-Scientist	270
Supervising II, Engineer-Scientist	260
Senior I, Engineer-Scientist	250
Senior II, Engineer-Scientist	240
Associate I, Engineer-Scientist	230
Associate II, Engineer-Scientist	215
Engineer-Scientist, Grade 1	200
Engineer-Scientist, Grade 2	188
Engineer-Scientist, Grade 3	173
Engineer-Scientist, Grade 4	154
Engineer-Scientist, Grade 5	135
Engineer-Scientist, Grade 6	119
Technician	109
Senior GIS Analyst	140
CADD Operator / GIS Analyst	124
Senior Administrative Assistant	137
Administrative Assistant	108
Secretary	89

**Direct Expenses**

Reimbursement for direct expenses, as listed below, incurred in connection with the work will be at cost plus ten percent (10%) for items such as:

- a. Maps, photographs, reproductions, printing, equipment rental, and special supplies related to the work.
- b. Consultants, soils engineers, surveyors, drillers, laboratories, and contractors.
- c. Rented vehicles, local public transportation and taxis, travel and subsistence.
- d. Special fees, insurance, permits, and licenses applicable to the work.
- e. Outside computer processing, computation, and proprietary programs purchased for the work.

A Communication charge for e-mail access, web conferencing, cellphone calls, messaging and data access, file sharing, local and long distance telephone calls and conferences, facsimile transmittals, standard delivery U.S. postage, and incidental in-house copying will be charged at a rate of 4% of labor charges. Large volume copying of project documents, e.g., bound reports for distribution or project-specific reference files, will be charged as a project expense as described above.

Reimbursement for company-owned automobiles, except trucks and four-wheel drive vehicles, used in connection with the work will be at the rate of sixty cents (\$0.60) per mile. The rate for company-owned trucks and four-wheel drive vehicles will be seventy-five cents (\$0.75) per mile. There will be an additional charge of thirty dollars (\$30.00) per day for vehicles used for field work. Reimbursement for use of personal vehicles will be at the federally allowed rate plus fifteen percent (15%).

CADD Computer time will be charged at twenty dollars (\$20.00) per hour. In-house material and equipment charges will be in accordance with the current rate schedule or special quotation. Excise taxes, if any, will be added as a direct expense.

Rate for professional staff for legal proceedings or as expert witnesses will be at a rate of one and one-half times the Hourly Rates specified above.

The foregoing Schedule of Charges is incorporated into the Agreement for the Services of EKI Environment & Water, Inc. and may be updated annually.

Corporate Office  
2001 Junipero Serra Boulevard, Suite 300  
Daly City, CA 94104  
(650) 292-9100  
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6 October 2020

Ms. Mary Rogren  
General Manager  
Coastside County Water District  
766 Main St.  
Half Moon Bay, CA 94019

Subject: **Budget Augmentation for Additional Engineering Services During Construction for the  
Denniston Culvert Replacement and Paving**  
Coastside County Water District, Half Moon Bay, California  
(EKI B80108.10)

Dear Ms. Rogren:

EKI Environment & Water, Inc. (EKI) is pleased to provide this proposal to Coastside County Water District (District) for a budget augmentation for additional engineering services during construction (ESDC) for the Denniston Culvert Replacement and Paving Project (Project) at the Denniston Water Treatment Plant and Tank site in El Granada, California.

#### **PROPOSED SCOPE OF WORK**

At the request of the District, EKI provided additional engineering services above those included in the original scope of work for ESDC for the Project. These additional tasks are described below.

##### **Task 1 – Design Modifications to Culvert Replacements**

This task included engineering services related to culvert design modifications. The original design for the culvert replacements called for the culverts be removed and replaced in their existing locations. The outfalls for each of culverts could not be accessed and the culvert alignments could not be verified during the design phase due to heavy vegetation along the hill slope. Field reconnaissance by the Contractor during construction revealed several conditions that made removal and replacement challenging for three of the six culverts:

- Approximately 20' of the downstream end of existing storm drain #1 was exposed and cantilevered off the steep slope, and there was evidence of past erosion at the outfall. It would have been impractical to construct the proposed outfall structure at this location.



- Existing storm drain #2 was approximately 100' longer than assumed in the bid documents<sup>1</sup> and the existing outfall location was located on steep terrain where it would be difficult to construct the outfall structure.
- The existing outfall location for storm drain #4 was located on steep terrain that would be difficult to construct the outfall structure.

Based on these field observations, EKI prepared several iterations of design modifications to improve the constructability and longevity of the culverts and outfall structures. The multiple iterations were based on comments from the District, input from the geotechnical engineer (see Task 2), suggestions from the Contractor, and value engineering efforts. As part of these efforts, EKI performed three field visits and prepared drainage calculations to confirm that there was enough capacity in the culverts with the proposed changes. This task also includes preparation of the responses to requests for information, requests for quotes, and contract change orders, communications with District and Contractor, and negotiations with the Contractor.

## **Task 2 – Geotechnical Services and Coordination**

At the request of the District, EKI sought the services of its geotechnical subcontractor BAGG Engineers during construction. BAGG Engineers provided the following geotechnical services related to design modifications and additional soil testing:

- Three (3) site visits to assess the site conditions and proposed recommendations;
- One (1) conference call and other communications;
- Engineering design and development of recommendations; and
- Additional soil testing and construction observation outside of the Contractor's contract requirements.

This task also included management and coordination efforts between BAGG Engineers and EKI.

## **Task 3 – Storm Drain #6 Related Items**

This task is related to additional efforts required to address construction issues related to storm drain #6. During construction, the contractor's trench collapsed due to improper shoring when the contractor encountered unforeseen drain rock. After consulting with the District, EKI issued a Stop Work Notice to the contractor because they had failed to submit their trenching plan and Occupational Safety and Health Administration (OSHA) permit. This task included the following:

- Communications with the District and Contractor;

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<sup>1</sup> Culvert lengths included in the bid documents were based on quantities included in a quote from Andreini Bros, Inc. dated 3 June 19. Andreini Bros, Inc. based their quantities on data from a closed-circuit television (CCTV) inspection. The CCTV inspection advanced 20' in storm drain, which Andreini Bros, Inc. assumed to be the end of the pipe. However, the CCTV inspection did not advance further because of pipe voids at this location, not because this was the outlet.

- Preparation of the stop work notice;
- Review of the Contractor's trench safety plan and its conformance with field conditions;
- One field visit and meeting with the District and Contractor to discuss options to resolve the trench construction; and
- Preparation of a release of the stop work notice.

## PROJECT SCHEDULE

All tasks have been completed per a mutually agreed upon schedule.

## TERMS AND CONDITIONS

Other than the scope of work, budget, and schedule herein, the work will be performed in accordance with our current Agreement dated 8 July 2020.

## COMPENSATION

Compensation for EKI's services will be on a time and expense reimbursement basis in accordance with attached the Schedule of Charges dated 1 January 2020.

On the basis of the proposed scope of work described above, we propose a budget amendment of \$29,200 for the completion of Tasks 1 through 3 as outlined by task in Table 1, below, in attached Table 2. This budget will not be exceeded without additional authorization from the Client.

Task	Description	Fee
1	Design Modifications to Culvert Replacements	\$ 15,900
2	Geotechnical Services and Coordination	\$ 9,300
3	Storm Drain #6 Related Items	\$ 4,000
Total		\$ 29,200

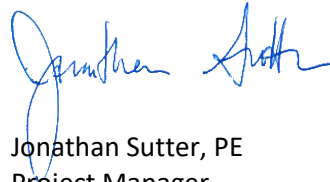
If this Task Order meets with your approval, please sign where noted below and return an executed copy to our office to confirm your authorization to proceed.

Very truly yours,

EKI ENVIRONMENT & WATER, INC.



Jenn Hyman, P.E., LEED AP  
Vice President



Jonathan Sutter, PE  
Project Manager

AUTHORIZATION  
COASTSIDE COUNTY WATER DISTRICT

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Attachments

Table 2 - Estimated Fee - Budget Augmentation for Additional Engineering Services During Construction  
for the Denniston Culvert Replacement and Paving Project  
Schedule of Charges dated 1 January 2020

**Estimated Fee - Budget Augmentation for Additional Engineering Services During Construction for the Denniston Culvert Replacement and Paving Project**

Task Order No. 14  
Coastside County Water District, Half Moon Bay, California  
(EKI B80108.10)

TASKS	ESTIMATED HOURLY LABOR			LABOR COST (\$)	EKI COMM. CHARGES 4%	SUBS BAGG Engineers	OTHER DIRECT COSTS				MARKUP ON DIRECT COSTS 10%	TOTAL DIRECT COSTS	TOTAL	
	EKI Staff						UNIT	QUANTITY	UNIT COST	TOTAL COST			TASK BUDGET TOTALS (\$)	ROUNDED BUDGET TOTALS (\$)
	Taylor Allen	Jonathan Sutter, P.E.	Mike Vasquez, P.E., P.L.S.											
Task 1 - Design Modification to Culvert Replacements	16	34	18	\$15,324	\$613							\$15,937	\$15,900	
Task 2 - Geotechnical Services and Coordination (BAGG Engineers)		4	4	\$2,040	\$82	6,600					\$660	\$7,260	\$9,382	\$9,400
Task 3 - Storm Drain #6 Related Items		9	6	\$3,750	\$150								\$3,900	\$3,900
TOTALS:	16	47	28	\$21,114	\$845	\$6,600					\$660	\$7,260	\$29,219	\$29,200

Proposal/Agreement Date: 5 October 2020

EKI Proposal/Project # B80108.10

**SCHEDULE OF CHARGES FOR EKI ENVIRONMENT & WATER, INC.****1 January 2020**

<u>Personnel Classification</u>	<u>Hourly Rate</u>
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- e. Outside computer processing, computation, and proprietary programs purchased for the work.

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CADD Computer time will be charged at twenty dollars (\$20.00) per hour. In-house material and equipment charges will be in accordance with the current rate schedule or special quotation. Excise taxes, if any, will be added as a direct expense.

Rate for professional staff for legal proceedings or as expert witnesses will be at a rate of one and one-half times the Hourly Rates specified above.

The foregoing Schedule of Charges is incorporated into the Agreement for the Services of EKI Environment & Water, Inc. and may be updated annually.