NAPA SANITATION DISTRICT

CAROLLO - TASK ORDER No. 25
2018 TREATMENT PLANT IMPROVEMENT PROJECT
PROJECT (CIP 18736)

Date: _____

Issued under Professional Services Agreement dated August 9, 2017.

To: CAROLLO

Project Description:

2018 Treatment Plant Improvement Project - Professional Design Services.

Description of Scope of Services to be performed by Consultant under this Task Order:

See Exhibit 'A' – Scope of Services

Description of Services to be Provided by District:	See Exhibit 'A' –Scope of Services
Deliverables:	See Exhibit 'A' –Scope of Services
Consultant Project Manager:	Doug Wing, PE
Consultant Quality Control Manager:	Rich Chan, PE
Schedule to Perform Services:	See Exhibit 'A' - Schedule
Time & Materials Not-to-Exceed Cost Limit:	$237,200
	See Exhibit 'B' –Fee Schedule

APPROVALS:

CAROLLO

By: _____ _____
Authorized Representative Date

NAPA SANITATION DISTRICT

By: _____ _____
Purchasing Agent Date

NSD Account No.: CIP 18736

DRAFT
SCOPE OF SERVICES

NAPA SANITATION DISTRICT
2018 TREATMENT PLANT IMPROVEMENTS PROJECT
FINAL DESIGN

PROJECT UNDERSTANDING

Napa Sanitation District (District) has developed a list of projects that will be combined into a single set of construction documents, for bidding in 2018, with the current plant water system improvement project. Carollo Engineers (Carollo) have developed an approach to complete the design of these elements in parallel with the plant water system improvements project. Then the two projects could be packaged into a single plant construction project. These elements of the 2018 Treatment Plant project include:

- High Voltage (12kV) system repairs (Design by others).
- Operation Building Heating, Ventilation and Air Conditioning (HVAC) replacements and/or upgrades of existing HVAC equipment, including the addition of lab ventilation. (Based on TM By ArcSIne November 2011)
- Replacement of a section of the Primary Influent Pipe (North Gallery pipe gallery. Based on Phase 1 Upgrade Record Drawings, 1998, Drawing EP03. Replace a 52 feet +/- section of RSG pipe from flex coupling to valve including two tees: 36x36x36 and 36x36x16)
- Secondary pump station variable frequency drive (VFD) replacement. (Three existing Robicon 100 HP VFD drives based on Phase 1 Upgrade Record Drawings, 1998, Drawings 5E01 and 5E2.)
- Replacement of the Chlorine Contact Basin No. 3 (CCB #3) effluent gate. (Phase Recycled Water Project Record Drawings June 2013, Drawings 13M01 and 13M02))
- Pond 4 pump discharge header replacement. (Kaiser 1975 Joint WWTP Drawing 20-40-C, CML steel 36-inch header, 20 feet +/-, from flange to flange with three 14-inch pump discharge tee connections).
- Filter air system valve addition (To Be Determined)
- The plant water (3W) system improvements (Task Order No. 22 already under contract)

The Final Design and Bidding Services phase scope of services for this project is outlined below.

SCOPE OF SERVICES

Carollo will provide the following scope of services:

TASK 1.0 – PLANT IMPROVEMENTS BASIS OF DESIGN

Carollo will review the background information on the listed plant improvements elements. Carollo will then meet with District engineering, operation and maintenance staff to discuss and review the Basis of Design for the plant improvements. Included in the review will be:

- High voltage (12 kV) project construction documents prepared by Beecher Engineering.
- Technical memorandum by ArcSine for Administration/Operation building HVAC and electrical improvements. It is anticipated that the administration building electrical modification review will require a site visit.
- Primary influent pipe replacement information including original design documents (Phase 2 Improvements 1994) and original piping submittal. It is anticipated that the piping replacement review will require a site visit in conjunction with other site visit items.
- Secondary pump station VFD replacement information including original design documents (Phase 2 1998) and original VFD submittal (if available). It is anticipated that the VFD replacement will require a site visit in conjunction with other site visit items.
- Chlorine Contact Basin No. 3 effluent gate replacement information including original design documents (Phase 1 RW Project 2013) and original gate submittal (if available).
- Pond Pump Station (also known originally as the "Influent" PS) pump discharge header replacement information including the original construction drawings (Kaiser 1975) and information from plant staff. Due to the limited access to observe the pipe and connections, Carollo will utilize photos and other observations by District staff.

Carollo will prepare a brief presentation to discuss the findings of the Basis of Design review and finalize the Basis of Design. Once finalized a preliminary construction cost estimate will be prepared based on the Basis of Design recommendations. The Basis of Design will be documented in the meeting notes from the review meeting.

TASK 2.0 – PLANT IMPROVEMENTS FINAL DESIGN

Based on the recommendations in Basis of Design task, Carollo will prepare biddable construction documents (drawings and specifications) for the listed plant improvements. Project bid package will include District front-end documents and Carollo technical specifications and drawings. Demolition and installation details will be shown on photo markups. Carollo will submit final design progress submittals at 50 and 90 percent design stages, and provide final bid set documents.

Carollo will prepare construction cost estimates at the 50 and 90 percent design submittal stages. The 90 percent will be updated for bidding to reflect bid climate and District comments.

Carollo will provide PDF copies of progress submittals and final documents for bidding. District shall be responsible for distribution and printing.

TASK 3.0 – PLANT IMPROVEMENTS PROJECT DESIGN MEETINGS

Carollo will participate in Basis of Design review and two final design review / workshop meetings. Carollo will prepare agenda and meeting notes for each meeting (2).

TASK 4.0 – BID PERIOD SERVICES

Carollo will provide bid period services for the Plant project, including attendance at pre-bid meeting, and two addenda preparation. District will be responsible for distribution and printing.

TASK 5.0 – PROJECT MANAGEMENT

Carollo will provide project management for the project including monthly invoices and budget

status letter. One copy of the status report will be submitted to the District in electronic (pdf) format.

TASK 6.0 – FINAL DESIGN – FILTER AIR VALVES

Final Design Task will be authorized by the District following the Basis of Design review, if additional is required for addition of filter air system valves. This can only be used after additional authorization by the District.

TIME OF PERFORMANCE

Anticipated schedule for completion of Carollo Scope of Services is as follows:

- Notice to Proceed (NTP) - One week after Board approval on November 1, 2017.
- Task 1.0 Basis of Design – Two weeks after NTP.
- Task 2.0 Final Design Submittals - 50%: Within 5 weeks after Basis of Design review meeting and 90%: 3 weeks after 50% review comments are received. Bid set documents will be provided 1 weeks after 90% review comments are received. The project is scheduled to advertise for bids on February 7, 2018.
- Task 3.0 Meetings: as agreed with District.
- Task 4.0 Bid Period Services: As needed.

Deliverables

- Design Submittals at 50 percent, 90 percent and bid set documents including construction cost estimates (PDF).
- Bid period documents (PDF) including addenda as needed.

Assumptions

- District will provide access to plant, especially existing plant pipe gallery, and assist with access to below grade area of the pipe gallery.
- District will review and provide comments on design submittal packages within 1 weeks of receipt.
- District will manage bidding period including printing and distribution of bid documents.
- Construction Management will be by a third party CM.

EXHIBIT B
DESIGN LABOR AND FEE ESTIMATE

2018 PLANT IMPROVEMENTS PROJECT
NAPA SANITATION DISTRICT

October 26, 2017

Task	Task Description	Carollo Labor PIC	PM	PE	HVAC/ EIC	Eng	CAD	WP	Total Hours	Labor Cost	PECE	Printing	Mileage Trips	Mileage Amount	Total ODC Cost	Total Cost
1	**Basis of Design Review**	**8**	**12**	**12**	**16**	**12**	**8**	**2**	**70**	**$14,412**	**$819**	**$50**	**2**	**$64**	**$933**	**$15,345**
2	**Final Design**	**12**	**68**	**144**	**176**	**164**	**320**	**26**	**910**	**$163,776**	**$10,647**	**$200**	**0**	**$0**	**$10,847**	**$174,623**
	a Contract Document Development															
	50% Submittal	4	24	40	60	40	80	8	256	$47,572	$2,995	$100	0	$0	$3,095	$50,667
	90% Submittal	4	24	40	60	60	120	8	316	$56,412	$3,697	$100	0	$0	$3,797	$60,209
	Bid Set Submittal	2	16	40	40	40	120	8	266	$45,970	$3,112	$0	0	$0	$3,112	$49,082
	b Construction Cost Estimate	2	4	24	16	24	0	2	72	$13,822	$842	$0	0	$0	$842	$14,664
3	**Design Meetings (3)**	**8**	**16**	**16**	**32**	**8**	**8**	**4**	**92**	**$19,632**	**$1,076**	**$150**	**3**	**$96**	**$1,323**	**$20,955**
4	**Bid Period Assistance**	**0**	**4**	**10**	**4**	**4**	**2**	**2**	**26**	**$4,940**	$304	**$0**	**1**	**$32**	$336	**$5,276**
	a Attend Pre-Bid Conference	0	0	4	0	0	0	0	4	$752	$47	$0	1	$32	$79	$831
	b Addenda Preparation (1)	0	2	4	4	4	2	2	18	$3,324	$211	$0	0	$0	$211	$3,535
	c Bid Opening/Evaluation	0	2	2	0	0	0	0	4	$864	$47	$0	0	$0	$47	$911
5	**Project Management / Quality Control Review**	**2**	**18**	**18**	**0**	**16**	**8**	**2**	**64**	**$13,566**	**$1,147**	**$0**	**0**	**$0**	**$1,147**	**$14,315**
	a Project Management, Quality Control, and Meetings															
	Project Management	2	2	2	0	0	0	0	6	$1,394	$70	$0	0	$0	$70	$1,464
	Quality Control	0	16	16	16	0	8	2	58	$12,172	$679	$0	0	$0	$679	$12,851
6	**Final Design Filter Air Valves** (If authorized)	0	2	8	8	4	12	0	34	$6,288	$398	$0	0	$0	$398	$6,686
	Project Totals =	**30**	**118**	**200**	**228**	**204**	**346**	**36**	**1,162**	**$216,326**	**$13,993**	**$400**	**6**	**$193**	**$14,586**	**$237,200**

Legend:

PIC	Principal-in-Charge
PM	Project Manager
PE	Project Engineer
HVAC	HVAC Design Engineer
EIC	Electrical/Instrumenattion/ Control Engineer
ENG	Staff Engineer
CAD	Drafting Technician
WP	Word Processor
PECE	Project Equipment Communication Expense

ODC Unit Costs:

PECE ($/hr):	$11.70
Mileage ($/mi):	$0.54
Miles per Roundtrip:	60