



NAPA SANITATION DISTRICT

CAROLLO ENGINEERS - TASK ORDER No. 18
MST RECYCLED WATER PIPELINE EXTENSION
PROJECT (CIP 16722)

Date: _____

Issued under Professional Services Agreement dated August 5, 2014.

To: CAROLLO ENGINEERS

Project Description:

MST RECYCLED WATER PIPELINE EXPANSION - Professional Design Services.

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

See Attachment 'A' – Scope of Services

Description of Services to be Provided by District: See Attachment 'A' –Scope of Services

Deliverables: See Attachment 'A' –Scope of Services

Schedule: 100% design documents January 2017

Consultant Project Manager: Anne Prudhel, PE

Consultant Quality Control Manager: Tim Taylor, PE

Time & Materials Not-to-Exceed Cost Limit: \$398,595

See Attachment 'B' –Labor & Budget Estimate

APPROVALS:

CAROLLO ENGINEERS

By: _____
Authorized Representative

Date

NAPA SANITATION DISTRICT

By: _____
Purchasing Agent

Date

NSD Account No.: CIP 16722

**ATTACHMENT A
NAPA SANITATION DISTRICT
MST RECYCLED WATER PIPELINE EXTENSION PROJECT (CIP #14726)
FINAL DESIGN**

SCOPE OF SERVICES

July 28, 2016

SCOPE OF SERVICES

This section presents the Scope of Services for the final design of the MST Recycled Water Pipeline Extension Project.

Task 1 – Project Management

Tasks 1.1 – Project Management and Administration

Monitor project progress, develop and maintain the project schedule, manage subconsultants, prepare project management plan, and prepare and submit monthly invoices and progress reports.

Tasks 1.2 – Meetings

Prepare for and attend the project kickoff meeting, progress/submittal review meetings (3), coordination meetings with Napa County and City of Napa.

Task 1 Deliverables:

- Baseline schedule and monthly updates
- Project management plan
- Monthly progress reports
- Meeting agendas and minutes

Task 2 – Field Investigations

Task 2.1– Topographic and Surface Utility Survey

Perform an 80 foot wide aerial and ground topographic survey (1"=40' scale) with 1-foot contours centered along improved streets within the project area. Surveyor will establish ground control and temporary benchmarks, collect visible surface utilities, and develop a topographic base map that includes creeks, drainage ditches, culvert crossing locations and inverts, sanitary sewer manhole invert elevations, and all other features needed to convey existing project conditions. Available Napa County GIS information will be used to incorporate property lines. County GPS Control Monuments of Record (based on NAD83, with NAVD 88 elevations) will be used for horizontal and vertical control.

Task 2.2 –Geotechnical Investigation

Research and review existing geotechnical information including construction information from the initial MST project, maps, and aerial photos. Map, photograph, and sample representative soil and bedrock that is exposed along and near the project alignment. Conduct 2 days of geotechnical test borings (7-8 borings) to 10- to 15- feet (or bedrock refusal if less) and physical laboratory testing on collected samples. Perform a minimum of six (6) non-destructive seismic refraction surveys to determine ground rippability. Prepare a draft and final Geotechnical Investigation Report summarizing the findings of the field investigations and providing recommendations for open-cut trenching, and for trenchless crossings if applicable.

Optional - If the area near the 1902 Bridge is found to be underlain by hard volcanic rock and a standalone pipe bridge is not feasible, 2 40-foot deep rock corings can be conducted to assist in determining feasible trenchless construction methods.

Task 2.3 –Soil Corrosivity Evaluation

Coordinate collection of soil samples with the geotechnical borings and perform a chemical analysis on each sample for pH, chlorides, resistivity, sulfates, and Redox potential. Evaluate the results of the analysis and determine corrosivity of the soils along the pipeline alignments to the proposed construction materials. Conduct in-situ soil resistivities at selected locations along the pipeline alignment to supplement the soil sample. Resistivities will be measured at 2.5', 5', 7.5', 10', and 15' depths.

Task 2.4 –Potholing

One day of vacuum extraction potholing will be provided to determine the vertical location of any utilities of concern.

Task 2 Deliverables:

- Topographic basemap with utilities
- Geotechnical report containing findings and recommendations
- Corrosion Report that includes summary of field data and chemical analysis, identification of corrosion potential, recommendations for long-term prevention of corrosion, and design criteria for the proposed corrosion control system.
- Pothole plan and log - pothole log will be incorporated into the plan set.

Task 3 – Design

Task 3.1 – Funding Support

Develop preliminary cost estimate and provide technical information as necessary to support the preparation of funding applications.

Task 3.2 – Environmental Permitting Support

Develop figures and/or fast-track development of plan and profiles for waterways requiring permitting. Provide technical information as necessary to support ESA's development of required permit applications.

Task 3.3 – Utility Investigation

Request existing utility mapping within the project area, maintain a utility contact log, and incorporate utility information into the project plans. Because the design window is short, it would be helpful if the District requests utility mapping for the project area ahead of the award of the design contract so that mapping is available at notice to proceed.

Task 3.4 – Easement Acquisition Assistance

Develop legal description and plat map for an easement for a truck fill station on Silverado Middle School property.

Task 3.5 – Prepare Plans and Specifications

Provide 50%, 90%, and final plans, specifications, and estimate of probable cost.

Plans will be developed using Carollo's CAD standards. Plans will include pipeline plan and profiles, general sheets, details, cathodic protection, and new service connection details. Traffic control plans will not be provided.

Technical specifications will be developed in CSI format using MS Word. District front end specifications will be used and will include DBE and American Iron and Steel provisions to comply with funding requirements.

The budget assumes development of a single set of bid documents; however, we have provided an optional task for developing two sets of bid documents in the event the County and District decide to construct the project in phases.

Task 3 Deliverables:

- Initial cost estimate for funding support
- Figures to support the environmental permit applications
- Utility mapping request letters and utility contact log (if not performed by the District)
- One (1) legal description and plat map
- 50%, 90%, and Final plans, specifications, and estimate of probable construction cost

Task 4 – Bid Phase Services

Tasks 4.1 – Respond to Bidders Questions

Assist the District during the bid period as needed in responding to contractor questions.

Task 4.2 – Prepare Addenda (2)

Prepare up to 2 addenda to address changes to the bid documents during the bid period.

Task 4.3 – Attend Prebid Meeting

Attend pre-bid meeting to answer technical questions, discuss intent of plans and specifications as requested by District, and prepare meeting minutes.

Task 4.4 – Conformed Documents

Prepare conformed documents to incorporate addenda items.

Task 4 Deliverables:

- Meeting minutes
- Responses to contractor questions
- Up to 2 addenda
- Conformed Drawings (pdf)

ATTACHMENT B



MST Recycled Water Pipeline Extension • Labor and Budget Estimate

		Carollo Engineers							Total Hours	Labor Cost	Other Direct Costs (ODC)										Total Cost
											Subconsultants (includes 5% Fee)				PECE	Mileage			ODC Total		
		PIC	PM	QA/QC	PE	Staff Eng.	CAD Drafter	Word Processor			Cinquini & Passarino	McMillen Jacobs	Exaro	JDH							
		\$265	\$245	\$265	\$194	\$159	\$163	\$102			Surveying	Geotech	Potholing	Corrosion	\$11.70	Printing	Trips	Amount			
1.0	Project Management & Meetings																				
1.1	Project Management (10 months)	0	20	0	10	0	0	0	30	\$6,840					\$351	\$0	0	\$0	\$351	\$7,191	
1.2	Project Meetings	4	16	0	16	0	0	0	36	\$8,084					\$421	\$0	4	\$173	\$594	\$8,678	
	Task 1.0 Totals	4	36	0	26	0	0	0	66	\$14,924										\$15,869	
2.0	Field Investigations																				
2.1	Surveying	0	2	0	4	0	0	0	6	\$1,266	\$62,727				\$70	\$0	0	\$0	\$62,797	\$64,063	
2.2	Geotechnical Investigation	0	4	2	8	4	0	0	18	\$3,698		\$70,781			\$211	\$0	1	\$43	\$71,034	\$74,732	
2.3	Soil Corrosivity Evaluation	0	2	0	2	0	0	0	4	\$878				\$6,830	\$47	\$0	0	\$0	\$6,877	\$7,755	
2.4	Potholing	0	2	1	4	8	1	0	16	\$2,966			\$7,875		\$187	\$0	1	\$43	\$8,105	\$11,071	
	Task 2.0 Totals	0	10	3	18	12	1	0	44	\$8,808	\$62,727	\$70,781	\$7,875	\$6,830						\$157,622	
3.0	Design																				
3.1	Funding Support	1	8	2	4	4	0	0	19	\$4,167					\$222	\$0	0	\$0	\$222	\$4,389	
3.2	Environmental Permitting Support	1	2	0	4	4	8	0	19	\$3,469					\$222	\$0	1	\$43	\$266	\$3,734	
3.3	Utility Investigation	0	0	0	4	8	8	0	20	\$3,350					\$234	\$0	0	\$0	\$234	\$3,584	
3.4	Easement Acquisition Assistance	0	4	0	4	4	0	0	12	\$2,392	\$6,479				\$140	\$0	1	\$43	\$184	\$2,576	
3.5	Prepare Plans and Specifications	7	80	24	236	189	330	60	926	\$163,472				\$14,805	\$10,834	\$500	2	\$86	\$26,226	\$189,698	
	Task 3.0 Totals	9	94	26	252	209	346	60	996	\$176,850	\$6,479	\$0	\$0	\$14,805						\$203,981	
4.0	Bid Phase Services																				
4.1	Respond to Bidders Questions	0	1	0	8	4	0	0	13	\$2,433					\$152	\$0	0	\$0	\$152	\$2,585	
4.2	Prepare Addenda	0	4	0	16	16	4	0	40	\$7,279					\$468	\$0	0	\$0	\$468	\$7,747	
4.3	Attend Pre-Bid Meeting	0	3	0	3	0	0	0	6	\$1,317					\$70	\$0	1	\$43	\$113	\$1,430	
4.4	Conformed Documents	0	4	0	8	4	24	16	56	\$8,705					\$655	\$0	0	\$0	\$655	\$9,360	
	Task 4.0 Totals	0	12	0	35	24	28	16	115	\$19,734	\$0	\$0	\$0	\$0						\$21,123	
Project Totals		13	152	29	331	245	375	76	1,221	\$220,316	\$69,206	\$70,781	\$7,875	\$21,635	\$14,286	\$500	11	\$475	\$178,279	\$398,595	
Optional Task - Rock Coring for Trenchless											\$33,696										

