

# **RUWAP**

## **Recycled Water Pipeline and Blackhorse Reservoir**

### **SCOPE OF WORK**

The purpose of this scope of work is to provide engineering services during construction (ESDC) of the RUWAP Recycled Water Pipeline and Blackhorse Reservoir Project.

#### **Engineering Services During Construction**

Carollo will provide engineering services during construction including submittal review, responding to contractor requests for information, attending construction meetings, reviewing change orders, and providing design modifications and clarifications.

#### ***Task 1 - Conformed Documents***

Carollo will prepare conformed documents, including specifications and drawings. Carollo will provide MCWD with 10 sets of conformed documents (5 sets for MCWD/Construction Manager and 5 sets for the Contractor per the contract documents). Each set of conformed documents will include a set of specifications and full size drawings. Full sized drawings can be replaced with half size drawings if requested. Electronic copies of the will also be provided.

#### ***Task 2 - Construction Meetings***

Carollo will attend the construction progress meetings scheduled for every 2 weeks (30 anticipated) rotating each meeting between attending in person and via conference call. Carollo will also attend in person to the pre-construction meeting, pre-installation meeting for work at the Blackhorse Reservoir, pre-shutdown meeting, and post-construction meeting. It is anticipated the construction manager will prepare meeting agenda, minutes, and preside over the meeting. Up to 3 field meetings are also anticipated. Also included in this scope is cathodic protection system inspection after installation and re-energizing and adjustment following one year coating inspection.

#### ***Task 3 - Submittal Review***

Carollo will review and comment on up to 120 submittals and 50 resubmittals based on a review of the required submittals needing review by the Engineer in the contract documents.

#### ***Task 4 - RFIs***

Carollo will review and comment on up to 40 Requests for Information (RFIs).

#### ***Task 5 - Design Clarifications and Change Order Review***

Carollo will prepare design clarifications as needed. Approximately 10 design clarifications have been budgeted. A design clarification to install the dual air release surge protection valves from above ground to a below ground vault has already been identified by MCWD staff. Carollo will also review and evaluate up to 3 change orders (or potential change orders).

#### ***Task 6 - Record Drawings***

Carollo will provide record drawings for the project based on a single set of red-lined drawings received from the Contractor. It is assumed a single set of red-lined drawings will be provided by

the Contractor. Carollo will provide one set of full size drawings, an electronic pdf copy, and electronic AutoCAD files.

***Task 7 - Funding and Permitting Assistance***

Carollo will provide assistance to MCWD, as needed, to finalize and/or assist with meeting project funding and permitting requirements. As part of this task, Carollo will assist MCWD with compiling and submitting the Final Budget Approval (FBA) to the State Water Resources Control Board.

***Task 8 - RWQCB Notice of Intent - Distributer***

Carollo will prepare a Notice of Intent to distribute recycled water (Distributor) for MCWD to submit to the Regional Water Quality Control Board (RWQCB). The RWQCB has indicated this document is required by MCWD prior to distributing recycled water.

***Task 9 - Project Administration***

Carollo will monitor project progress, manage subconsultants, and prepare and submit monthly invoices and progress reports.

***Task 10 – Other Engineering Services, As Needed***

The purpose of this task is to provide additional services related to the project, which are not fully known or defined at this time. This may include support for development of a final legal description and plat map for the CSUMB easement or updated background files (previously requested by CSUMB). We have provided for an allowance of \$25,000 to be used at the discretion of the District. Details of the specific scopes, budgets, and schedules for additional services under this task will be developed with MCWD. No hours will be billed to this task without prior approval from MCWD.

**RUWAP Recycled Water Pipeline and Blackhorse Reservoir**

Engineering Services During Construction - Budget

Task	Description	Carollo										Sub-consultants				Other Direct Costs		Totals
		Principal	Project Manager	Structural / Electrical	Project Engineer	Staff Engineer	CADD Tech	Clerical Support	Subtotals		PECE	Survey (Bestor)	Corrosion (JDH)	Subtotals	Markup 10%	Misc. Costs and Printing	Travel	Total Cost
		\$273	\$252	\$252	\$230	\$164	\$147	\$106	Hours	Budget	\$11.70							
	<b>Engineering Services During Construction</b>																	
1	Conformed Documents	2	8	8	0	8	40	16	82	\$13,466	\$959	\$0	\$0	\$0	\$0	\$3,250	\$0	\$17,675
2	Construction Meetings	32	140	24	8	80	0	0	284	\$65,024	\$3,323	\$0	\$7,000	\$7,000	\$700	\$0	\$4,370	\$80,417
3	Submittal Review	8	100	160	40	200	0	0	508	\$109,704	\$5,944	\$0	\$3,000	\$3,000	\$300	\$0	\$0	\$118,948
4	RFIs	8	80	40	40	160	40	8	376	\$74,592	\$4,399	\$0	\$0	\$0	\$0	\$0	\$0	\$78,991
5	Design Clarifications and Change Order Review	8	60	12	0	80	80	0	240	\$45,208	\$2,808	\$0	\$0	\$0	\$0	\$0	\$0	\$48,016
6	Record Drawings	2	16	8	0	16	140	8	190	\$30,646	\$2,223	\$0	\$0	\$0	\$0	\$345	\$0	\$33,214
7	Funding & Permitting Assistance	4	16	0	8	72	0	8	108	\$19,620	\$1,264	\$0	\$0	\$0	\$0	\$0	\$460	\$21,344
8	RWQCB Notice of Intent - Distributor	4	8	0	0	60	4	8	84	\$14,384	\$983	\$0	\$0	\$0	\$0	\$0	\$230	\$15,597
9	Project Administration	16	32	0	0	0	0	8	56	\$13,280	\$655	\$0	\$0	\$0	\$0	\$0	\$0	\$13,935
10	Additional Services As Needed	0	0	0	0	0	0	0	0	\$0	\$0	\$5,000	\$0	\$5,000	\$500	\$0	\$0	\$25,000
	Total Hours	84	460	252	96	676	304	56	1928									
	Total Budget	\$22,932	\$115,920	\$63,504	\$22,080	\$110,864	\$44,688	\$5,936		\$385,924	\$22,558	\$5,000	\$10,000	\$15,000	\$1,500	\$3,595	\$5,060	\$453,137