

# Staff Report

for the Regular Meeting of the Board of Directors, April 27, 2016

**TO:** Board of Directors

**FROM:** Gary King, Engineering Manager  
Tonia M. Tabucchi Herrera, Associate Engineer *AMT*

**DATE:** April 18, 2016

**SUBJECT:** E. George to Cascade Shores Transmission Main Project – Award of Construction Contract

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## **ENGINEERING**

### **RECOMMENDATION:**

Award a construction contract to T&S Construction Company, Inc. for the E. George to Cascade Shores Transmission Main Project in the amount of \$3,227,952.76; and authorize the General Manager to execute the necessary documents.

### **BACKGROUND:**

Currently, the Cascade Shores treated water system is dependent on the South Yuba Canal raw water delivery system as a source of raw water with no alternate supply. During planned and unplanned outages, the Cascade Shores Water Treatment Plant (WTP) is interrupted and the system relies on the limited raw water storage in the Cascade Pipeline.

Additionally, the Cascade Shores WTP is difficult and labor intensive to operate; difficult to access in the winter months; and utilizes old technology to operate. It is the District's only Direct Filtration plant. If the plant were to remain, it would need significant upgrades such as backwash water systems and additional sedimentation basins in the near future to meet regulatory compliance.

The direct connection to the E. George System will allow staff to remove the treatment facility from service but the District will keep the on-site water storage. The recently upgraded E. George WTP is able to provide water to the Cascade Shores system. Backup raw water storage for the E. George WTP is available at the Loma Rica Reservoir. Additionally, the Siphon Lane Pump Station, currently in construction, enhances the reliability of the E. George WTP in times when the South Yuba Canal is interrupted, by providing an alternative backup for raw water. This pump station is located below the Cascade Shore WTP, so it does not offer the same redundancy.

The project would provide availability to treated water for properties within District boundaries; provide the potential for treated water to properties currently outside of the District; provide fire hydrants along the project inside and outside of the District and provide stub outs for future extensions of pipelines. In addition, the construction will complete a portion of the Cascade Shores Phase 3 improvements, and provide empty conduit for future fiber optic connections.

On February 22, 2016, the District invited eleven (11) prime contractors to quote on the project. A pre-quote meeting was held in the Boardroom on March 24, 2016. The District received 3 quotes. Six quoters formally declined to bid.

The low quoter is T&S Construction at \$3,227,952.76. Attached are the detailed quote results and engineer's estimate. Below summarizes the quotes received.

Teichert Construction	\$3,887,158.28
McGuire & Hester	\$3,591,697.20
T&S Construction	\$3,227,952.76

Staff recommends that the Board award the construction contract to T&S Construction Company, Inc. in the amount of \$3,227,952.76.

**BUDGETARY IMPACT:**

Funding of the project is within the 2016 budget (\$2,500,000) and 2015 rolled encumbrance (\$800,000) balance. The 2016 budget document reflects 2015 anticipated encumbrance spending on page 65.

Attachments (1): Quote results

Section 1 – Applies for the entire project (all sections, alignments, and sites)											
		Engineer's Estimate		T&S Construction		Teichert		McGuire Hester			
Item	Description	Qty	Unit	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	Mobilization/Demobilization	1	LS	\$ 50,000.00	\$ 50,000.00	\$ 148,514.00	\$ 148,514.00	\$ 364,760.00	\$ 364,760.00	\$ 350,000.00	\$ 350,000.00
2	Clearing, Grubbing, Tree Removal	1	LS	\$ 5,000.00	\$ 5,000.00	\$ 4,533.00	\$ 4,533.00	\$ 25,000.00	\$ 25,000.00	\$ 100,000.00	\$ 100,000.00
3	Construction Staking (Survey)*	1	LS	\$ 17,000.00	\$ 17,000.00	\$ 55,145.00	\$ 55,145.00	\$ 6,500.00	\$ 6,500.00	\$ 50,000.00	\$ 50,000.00
4	NPDES General Permit SWPPP*	1	LS	\$ 20,000.00	\$ 20,000.00	\$ 11,157.00	\$ 11,157.00	\$ 3,000.00	\$ 3,000.00	\$ 20,000.00	\$ 20,000.00
5	Mitigation Monitoring and Reporting (CEQA implementation)*	1	LS	\$ 20,000.00	\$ 20,000.00	\$ 9,154.00	\$ 9,154.00	\$ 45,000.00	\$ 45,000.00	\$ 2,500.00	\$ 2,500.00
6	Seeding and Mulching*	1	LS	\$ 5,000.00	\$ 5,000.00	\$ 16,003.00	\$ 16,003.00	\$ 7,500.00	\$ 7,500.00	\$ 20,000.00	\$ 20,000.00
7	Rock Excavation	1000	CY	\$ 300.00	\$ 300,000.00	\$ 1.00	\$ 1,000.00	\$ 125.00	\$ 125,000.00	\$ 100.00	\$ 100,000.00
8	AC Overlay	250	CY	\$ 10.00	\$ 2,500.00	\$ 220.00	\$ 55,000.00	\$ 195.00	\$ 48,750.00	\$ 250.00	\$ 62,500.00
<b>Total Section 1 Quote Price</b>				<b>\$ 419,500.00</b>		<b>\$ 300,506.00</b>			<b>\$ 625,510.00</b>		<b>\$ 705,000.00</b>

Section 2 – Alignments #1, #2, and #3 (Transmission Main)											
Item	Description	Qty	Unit	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	12" DIP	12,280	LF	\$ 110.00	\$ 1,350,800.00	\$ 92.00	\$ 1,129,760.00	\$ 120.00	\$ 1,473,600.00	\$ 80.00	\$ 982,400.00
2	1" ARV	5	EA	\$ 3,000.00	\$ 15,000.00	\$ 2,844.00	\$ 14,220.00	\$ 3,900.00	\$ 19,500.00	\$ 5,000.00	\$ 25,000.00
3	New single meter assembly*	38	EA	\$ 3,000.00	\$ 114,000.00	\$ 1,434.00	\$ 54,492.00	\$ 1,575.00	\$ 59,850.00	\$ 3,000.00	\$ 114,000.00
4	Fire hydrant assembly	9	EA	\$ 6,000.00	\$ 54,000.00	\$ 6,556.00	\$ 59,004.00	\$ 5,000.00	\$ 45,000.00	\$ 7,500.00	\$ 67,500.00
5	Gate valve -- 12"	11	EA	\$ 2,500.00	\$ 27,500.00	\$ 2,380.00	\$ 26,180.00	\$ 2,000.00	\$ 22,000.00	\$ 4,000.00	\$ 44,000.00
6	BO Assembly Type B	7	EA	\$ 3,000.00	\$ 21,000.00	\$ 2,185.00	\$ 15,295.00	\$ 1,450.00	\$ 10,150.00	\$ 4,000.00	\$ 28,000.00
7	Testing and Disinfection	1	LS	\$ 12,000.00	\$ 12,000.00	\$ 16,925.00	\$ 16,925.00	\$ 18,000.00	\$ 18,000.00	\$ 25,000.00	\$ 25,000.00
8	Type II microsurfacing*	152,229	SQFT	\$ 0.30	\$ 45,668.70	\$ 0.49	\$ 74,592.21	\$ 9,000.00	\$ 1,370,061.00	\$ 0.35	\$ 53,280.15
9	Connection at Starwood (Sta#10+00+/-)*	1	LS	\$ 8,000.00	\$ 8,000.00	\$ 21,764.00	\$ 21,764.00	\$ 6,000.00	\$ 6,000.00	\$ 20,000.00	\$ 20,000.00
10	Red Dog Cross Detail (Sta. #73+64 +/-)*	1	LS	\$ 7,400.00	\$ 7,400.00	\$ 8,395.00	\$ 8,395.00	\$ 5,000.00	\$ 5,000.00	\$ 13,000.00	\$ 13,000.00
11	Oak Ridge Detail (Sta # 82+83 +/-)*	1	LS	\$ 20,300.00	\$ 20,300.00	\$ 8,643.00	\$ 8,643.00	\$ 5,000.00	\$ 5,000.00	\$ 11,000.00	\$ 11,000.00
<b>Total Section 2 Quote Price</b>				<b>\$ 1,675,668.70</b>		<b>\$ 1,429,270.21</b>		<b>\$ 1,371,725,100.00</b>		<b>\$ 1,383,180.15</b>	

Section 3 – Alignment #4 (Common Trench with Transmission and Distribution Mains)											
Item	Description	Qty	Unit	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	12" DIP	6,003	LF	\$ 100.00	\$ 600,300.00	\$ 119.00	\$ 714,357.00	\$ 120.00	\$ 720,360.00	\$ 110.00	\$ 660,330.00
2	8" DIP	2,249	EA	\$ 80.00	\$ 179,920.00	\$ 86.00	\$ 193,414.00	\$ 100.00	\$ 224,900.00	\$ 98.00	\$ 220,402.00
3	1" ARV	5	EA	\$ 3,000.00	\$ 15,000.00	\$ 2,896.00	\$ 14,480.00	\$ 3,000.00	\$ 15,000.00	\$ 5,000.00	\$ 25,000.00
4	Replacement Single Meter Assembly*	26	EA	\$ 3,000.00	\$ 78,000.00	\$ 2,637.00	\$ 68,562.00	\$ 1,700.00	\$ 44,200.00	\$ 3,500.00	\$ 91,000.00
5	New single meter assembly*	8	EA	\$ 3,000.00	\$ 24,000.00	\$ 1,548.00	\$ 12,384.00	\$ 1,600.00	\$ 12,800.00	\$ 3,000.00	\$ 24,000.00
6	Fire hydrant assembly	3	EA	\$ 6,000.00	\$ 18,000.00	\$ 6,408.00	\$ 19,224.00	\$ 5,000.00	\$ 15,000.00	\$ 10,000.00	\$ 30,000.00
7	Gate valve - 12"	2	EA	\$ 2,500.00	\$ 5,000.00	\$ 2,480.00	\$ 4,960.00	\$ 2,100.00	\$ 4,200.00	\$ 4,000.00	\$ 8,000.00
8	Gate valve - 8"	1	EA	\$ 2,500.00	\$ 2,500.00	\$ 1,553.00	\$ 1,553.00	\$ 1,300.00	\$ 1,300.00	\$ 3,000.00	\$ 3,000.00
9	BO Assembly Type B	5	EA	\$ 3,000.00	\$ 15,000.00	\$ 2,273.00	\$ 11,365.00	\$ 1,500.00	\$ 7,500.00	\$ 4,000.00	\$ 20,000.00
10	Testing and Disinfection*	1	LS	\$ 6,000.00	\$ 6,000.00	\$ 11,860.00	\$ 11,860.00	\$ 12,000.00	\$ 12,000.00	\$ 15,000.00	\$ 15,000.00
11	Type II microsurfacing*	116,581	SQFT	\$ 0.30	\$ 34,974.30	\$ 0.59	\$ 68,782.79	\$ 0.33	\$ 38,471.73	\$ 0.35	\$ 40,803.35
12	Pasquale Connection (Sta #158+98.54 +/-)*	1	LS	\$ 17,000.00	\$ 17,000.00	\$ 18,067.00	\$ 18,067.00	\$ 12,500.00	\$ 12,500.00	\$ 20,000.00	\$ 20,000.00
13	Pasquale Connection (Sta #171+20.73 +/-)*	1	LS	\$ 5,000.00	\$ 5,000.00	\$ 22,038.00	\$ 22,038.00	\$ 4,000.00	\$ 4,000.00	\$ 15,000.00	\$ 15,000.00
14	Sargent Jacobs detail (Sta # 178+78.69 +/-)*	1	LS	\$ 12,000.00	\$ 12,000.00	\$ 11,153.00	\$ 11,153.00	\$ 7,000.00	\$ 7,000.00	\$ 15,000.00	\$ 15,000.00
15	2" Conduit	1660	LF	\$ 20.00	\$ 33,200.00	\$ 15.00	\$ 24,900.00	\$ 25.00	\$ 41,500.00	\$ 20.00	\$ 33,200.00
16	Pullboxes	7	EA	\$ 300.00	\$ 2,100.00	\$ 3,611.00	\$ 25,277.00	\$ 6,000.00	\$ 42,000.00	\$ 2,500.00	\$ 17,500.00
<b>Total Section 3 Quote Price</b>				<b>\$ 1,047,994.30</b>		<b>\$ 1,222,376.79</b>		<b>\$ 1,202,731.73</b>		<b>\$ 1,238,235.35</b>	

Section 4 – Alignment #5 (Distribution Main)											
Item	Description	Qty	Unit	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	8" DIP	550	LF	\$ 100.00	\$ 55,000.00	\$ 92.00	\$ 50,600.00	\$ 120.00	\$ 66,000.00	\$ 98.00	\$ 53,900.00
2	1" ARV	1	EA	\$ 3,000.00	\$ 3,000.00	\$ 3,228.00	\$ 3,228.00	\$ 2,800.00	\$ 2,800.00	\$ 5,000.00	\$ 5,000.00
3	New single meter assembly*	6	EA	\$ 3,000.00	\$ 18,000.00	\$ 1,495.00	\$ 8,970.00	\$ 1,600.00	\$ 9,600.00	\$ 3,000.00	\$ 18,000.00
4	Fire hydrant assembly	0	EA	\$ 6,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,000.00	\$ -
5	Gate valve -- 8"	0	EA	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000.00	\$ -
6	BO Assembly Type B	1	EA	\$ 3,000.00	\$ 3,000.00	\$ 2,275.00	\$ 2,275.00	\$ 1,850.00	\$ 1,850.00	\$ 4,000.00	\$ 4,000.00
7	Testing and Disinfection*	1	LS	\$ 600.00	\$ 600.00	\$ 2,801.00	\$ 2,801.00	\$ 1,000.00	\$ 1,000.00	\$ 3,000.00	\$ 3,000.00
8	Type II microsurfacing*	16,026	SQFT	\$ 0.30	\$ 4,807.80	\$ 1.26	\$ 20,192.76	\$ 0.45	\$ 7,211.70	\$ 0.45	\$ 7,211.70
9	Connection at Mountain View (Sta# 195+49.43 +/-)*	1	LS	\$ 5,000.00	\$ 5,000.00	\$ 5,403.00	\$ 5,403.00	\$ 1,500.00	\$ 1,500.00	\$ 5,000.00	\$ 5,000.00
<b>Total Section 4 Quote Price</b>				<b>\$ 89,407.80</b>		<b>\$ 93,469.76</b>		<b>\$ 89,961.70</b>		<b>\$ 96,111.70</b>	

Section 5 – Sargent Jacobs Tank Site											
Item	Description	Qty	Unit	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount	Unit Cost	Extended Amount
1	Underground Utility Location and As-building*	40	hr	\$ 350.00	\$ 14,000.00	\$ 465.00	\$ 18,600.00	\$ 475.00	\$ 19,000.00	\$ 650.00	\$ 26,000.00
2	Flow Control Valve and Vault*	1	LS	\$ 70,000.00	\$ 70,000.00	\$ 43,955.00	\$ 43,955.00	\$ 41,000.00	\$ 41,000.00	\$ 50,000.00	\$ 50,000.00
3	Influent and Effluent Piping, including trench restoration*	1	LS	\$ 50,000.00	\$ 50,000.00	\$ 49,023.00	\$ 49,023.00	\$ 47,500.00	\$ 47,500.00	\$ 50,000.00	\$ 50,000.00
4	Temporary Service Facilities	1	LS	\$ 10,000.00	\$ 10,000.00	\$ 14,072.00	\$ 14,072.00	\$ 3,500.00	\$ 3,500.00	\$ 5,000.00	\$ 5,000.00
5	Type II microsurfacing	1268	SQFT	\$ 0.30	\$ 380.40	\$ 8.25	\$ 10,461.00	\$ 2.46	\$ 3,119.28	\$ 2.50	\$ 3,170.00
6	Conduits and Pull Boxes	1	LS	\$ 15,000.00	\$ 15,000.00	\$ 34,494.00	\$ 34,494.00	\$ 62,000.00	\$ 62,000.00	\$ 25,000.00	\$ 25,000.00
7	Electrical Wiring for Electronic Control Valve	1	LS	\$ 2,000.00	\$ 2,000.00	\$ 11,725.00	\$ 11,725.00	\$ 16,000.00	\$ 16,000.00	\$ 10,000.00	\$ 10,000.00
<b>Total Section 5 Quote Price</b>				<b>\$ 161,380.40</b>		<b>\$ 182,330.00</b>		<b>\$ 192,119.28</b>		<b>\$ 169,170.00</b>	

<b>Total all sections</b>				<b>\$ 3,393,951.20</b>		<b>\$ 3,227,952.76</b>		<b>\$ 1,373,835,422.71</b>		<b>\$ 3,591,697.20</b>
engineers estimate for bonding \$3-3.5 Million								Their total	\$ 3,887,158.28	
								Error in their quote sheet -- they show Section 2 Item 8 as \$9000 in unit and extended amounts		