



RIVERSIDE PUBLIC UTILITIES

Board Memorandum

BOARD OF PUBLIC UTILITIES

DATE: JULY 9, 2018

ITEM NO: 9

SUBJECT: AWARD BID NO. RPU-7569 TO WEKA, INC., OF HIGHLAND, CALIFORNIA, FOR THE CONSTRUCTION OF THE MAGNOLIA AVENUE TECHITE PIPE AND PRESSURE REDUCING STATION REPLACEMENT PROJECT – 8,720 FEET OF NEW POTABLE WATER PIPELINE –IN THE AMOUNT OF \$5,939,308 INCLUDING A 10% OR \$593,930 CHANGE ORDER AUTHORITY; APPROVE A PROFESSIONAL CONSULTANT SERVICES AGREEMENT FROM RFP 1826 FOR GEOTECHNICAL AND MATERIALS TESTING SERVICES WITH SCST, INC., OF RIVERSIDE, CALIFORNIA, IN A NOT-TO-EXCEED AMOUNT OF \$101,628 THROUGH JUNE 30, 2019; APPROVE THE INCREASED EXPENDITURE FOR WORK ORDER NO. 1612632 FOR THE PIPELINE REPLACEMENTS IN THE AMOUNT OF \$6,851,000 FOR A REVISED WORK ORDER TOTAL OF \$7,335,000 AND THE EXPENDITURE FOR WORK ORDER NO. 1727999 FOR THE PRESSURE REDUCING STATION REPLACEMENT IN THE AMOUNT OF \$599,000 – TOTAL PROJECT COST OF \$7,934,000

ISSUES:

Award Bid No. RPU-7569 to Weka, Inc., of Highland, California, for the construction of the Magnolia Avenue Techite Pipe and Pressure Reducing Station Replacement Project in the amount of \$5,939,308 including a 10% or \$593,930 change order authority; approve a Professional Consultant Services Agreement from RFP 1826 with SCST, Inc. of Riverside, California in a not-to-exceed amount of \$101,628 for Geotechnical and Materials Testing Services through June 30, 2019; approve the increased capital expenditure for Work Order No. 1612632 for the Pipeline Replacements in the amount of \$6,851,000 for a revised work order total of \$7,335,000 and the capital expenditure for Work Order No. 1727999 for the Pressure Reducing Station Replacement in the amount of \$599,000 – for a total project cost of \$7,934,000.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Award Bid No. RPU-7569 to Weka, Inc., of Highland, California, in the amount of \$5,939,308;
2. Authorize additional change order authority for the Weka, Inc. Construction Contract in the amount of 10% or \$593,930 for Bid No. RPU-7569;
3. Approve a Professional Consultant Services Agreement from RFP 1826 with SCST, Inc. of Riverside, California, for Geotechnical and Materials Testing Services for the Magnolia Avenue Techite Pipe and Pressure Reducing Station Replacement Project, term through June 30, 2019, in a not-to-exceed amount of \$101,628;
4. Authorize the City Manager, or his designee, to execute the Professional Consultant Services Agreement with SCST, Inc., including making minor and non-substantive changes;

5. Approve the increased capital expenditure for Work Order No. 1612632 for the Pipeline Replacements in the amount of \$6,851,000 for a revised work order total of \$7,335,000 which includes all design, utility potholing, construction, paving, contract administration, inspection and construction change order authority costs for the Magnolia Avenue Techite Pipe and Pressure Reducing Station Replacement Project;
6. Approve the capital expenditure for Work Order No. 1727999 for the Pressure Reducing Station Replacement in the amount of \$599,000 which includes all design, utility potholing, property acquisition, construction, paving, contract administration, inspection and construction change order authority costs for the Magnolia Avenue Techite Pipe and Pressure Reducing Station Replacement Project; and
7. Authorize the City Manager, or his designee, to increase or decrease the above-noted work order amounts, in collective amounts not-to-exceed the total project cost of \$7,934,000.

BACKGROUND:

Riverside Public Utilities (RPU) owns and operates water transmission pipelines, of which approximately 4.4 miles are Techite pipe. Techite pipe consists of a composite material made of fiberglass, polyester resin, and sand that has a tendency to become extremely fragile during operation, resulting in a higher risk of failure. Techite pipe is a key vulnerability that exists within RPU's water system. Other water agencies in California and elsewhere have experienced failures of Techite pipes that have led to the interruption of water supply and wastewater conveyance. Due to the poor performance of this product, RPU has begun replacing segments of Techite pipe with cement mortar-lined and coated (CML&C) steel pipeline.

The Public Works Department (PW) is scheduled to construct a street improvement project along Magnolia Avenue between Buchanan Street and Hole Avenue which will entail modifications to the center medians to accommodate a third traffic lane in each direction including installation of new curb, gutter, sidewalk and asphalt pavement at various places. This project will also include modifications to the traffic signals and existing sewer and storm drain facilities.

In advance of and in coordination with the PW street improvement project, RPU will replace approximately 4,000 linear feet of 27-inch and 36-inch Techite pipeline and 1,500 linear feet of 27-inch CML&C steel pipeline currently in use along Magnolia Avenue between Park Sierra Drive and Hole Avenue with 42-inch CML&C steel pipe. This will eliminate the Techite pipe within this segment of Magnolia Avenue. RPU will also replace approximately 2,000 linear feet of old 6-inch diameter cast iron pipe and 1,000 linear feet of old 8-inch and 12-inch steel pipe with 12-inch ductile iron pipe. In addition, the existing Polk Street and Magnolia Avenue pressure reducing stations will be replaced with a single pressure reducing station facility.

PW expects to begin construction of the street improvements along Magnolia Avenue in the first quarter of 2019. They will stage their work to begin near Buchanan Street and progress toward Hole Avenue to avoid conflicts during construction.

By constructing the transmission main prior to the PW street improvement project, portions of the pipeline can be installed in the existing center medians that will eventually become new traffic lanes, thereby reducing RPU's paving and construction costs.

On January 8, 2018, the Board of Public Utilities (Board) awarded a contract for the exploratory utility pothole work for the Magnolia Avenue Techite Pipe and Pressure Reducing Station Replacement Project. The Board also authorized a capital expenditure of \$484,000 to cover upfront design and utility potholing costs for the project.

On February 26, 2018, the Board recommended that the City Council approve a supplemental appropriation in the amount of \$5,216,000 from the Water Fund Balance to fund the design and construction of the Magnolia Avenue Techite Pipe and Pressure Reducing Station Replacement Project. The City Council subsequently approved the supplemental appropriation of \$5,216,000 for the project on March 13, 2018.

The project was initially advertised on March 2, 2018, and the bids were opened on March 21, 2018. The bids received at that time were significantly higher than the engineer's estimate, largely due to material price escalations resulting from the recently imposed tariff on steel and aluminum of foreign origin and higher than expected labor costs, and the work order exceeded the available budget. Section 507 of Purchasing Resolution No. 23256 provides that the Purchasing Manager may reject any and all bids. The Purchasing Manager rejected the bids on April 10, 2018 in order for staff to retool the scope of work and re-advertise the project to achieve cost savings. Changes to the scope included adding the requirement to repair traffic signal detector loops in lieu of providing temporary traffic camera setups at each signalized intersection, providing the option for contractors to work during the day instead of night for a portion of the project within the center medians, allowing contractors the option to use ductile iron pipe as an alternate pipe material for the 42-inch pipe, lengthening the construction schedule by roughly thirty days, and reducing the pipeline trench depth at select locations. The project was re-advertised on April 20, 2018, and the bids were opened on May 7, 2018. The new low bid resulted in an overall savings of almost \$450,000 as compared to the original low bid received in March 2018.

DISCUSSION:

The work will entail the construction of approximately 5,700 linear feet of 42-inch CML&C steel pipe, 2,960 linear feet of 12-inch ductile iron pipe, 50 linear feet of 8-inch ductile iron pipe, 10 linear feet of 6-inch ductile iron pipe, 6 fire hydrants, 19 water services, and 17 system connections along with all necessary fittings and appurtenances, an underground pressure reducing station consisting of two 12-inch and one 10-inch pressure reducing valves, and an underground metering station along with all related incidental work and appurtenances. The work will also entail abandoning the existing Magnolia Avenue and Polk Street pressure reducing stations. The trench resurfacing is also included as part of this contract in accordance with PW standards and in coordination with the upcoming PW street improvement project on Magnolia Avenue.



Figure 1 – Techite Pipe



Figure 2 - Typical Nighttime CML&C Steel Pipeline Installation

The existing Magnolia Avenue and Polk Street pressure reducing stations are located within the center median and sidewalk of a busy intersection. These facilities are very difficult to access, and parking is limited. The new site is located within an easement on a parcel near the intersection of Polk Street and Magnolia Avenue. The new pressure reducing station will offer improved safety since it is set back from the roadway and has space for maintenance vehicles to park.

The new pressure reducing station will require a new electrical service. Staff is coordinating the new electrical service with the Energy Delivery Division.

The work will require a shutdown of the existing transmission pipeline to facilitate connecting it to each end of the new pipeline. This work will happen during early spring 2019 when temperatures are cool.

The PW street improvement project was initially planned to extend only to Tyler Avenue. However, after coordination with PW, it was decided to extend the final pavement limits to Hole Avenue. RPU will base pave the water pipeline trenches and PW will complete the final street paving in this area. RPU will reimburse PW for their respective share of the final pavement costs in this area.

Staff has coordinated with PW regarding existing trees within the median of Magnolia Avenue that will interfere with RPU's pipeline project. PW will remove the interfering trees in advance of RPU's pipeline project.

This segment of Magnolia Avenue is an important commercial and retail corridor within the City. Staff has coordinated with PW regarding the allowable working hours for this project. In order to maintain a high level of customer service during construction, the work within Magnolia Avenue will generally occur during nighttime hours. This will help minimize inconveniences to the public, and will lessen disruptions to the Galleria at Tyler, Kaiser Permanente Hospital, and the numerous other major retailers and businesses in the area. During periods of work in close proximity to the adjoining hotels and motels, the work hours will be modified slightly to minimize disruptions to their guests. Construction of the pressure reducing station is located off the street and will occur during daytime hours. The portion of new pipeline to be installed within the existing medians between Park Sierra Drive and Banbury Drive will also be constructed during daytime hours. Staff has reached out to the major customers within the project area and will continue to provide updates to customers as the work progresses. The work will not affect service to RPU water customers.

Staff has coordinated with the Energy Delivery Division regarding repurposing the existing 27-inch and 36-inch Techite pipeline and the existing 27-inch CML&C steel pipe as a casing for future fiber optic conduits.

As a separate contract, the Energy Delivery Division will install new conduits inside the existing pipes and backfill the annular space with slurry.

Bid No. RPU-7569

The project was initially advertised on March 2, 2018, and the bids were opened on March 21, 2018. The bids received at that time were significantly higher than the engineer's estimate, largely due to material price escalations resulting from the recently imposed tariff on steel and aluminum of foreign origin and higher than expected labor costs, and the work order exceeded the available budget. Section 507 of Purchasing Resolution No. 23256 provides that the Purchasing Manager may reject any and all bids. The Purchasing Manager rejected all bids on April 10, 2018, in order for staff to retool the scope of work and re-advertise the project to achieve cost savings. Changes to the scope included adding the requirement to repair traffic signal detector loops in lieu of providing temporary traffic camera setups at each signalized intersection, providing the option for contractors to work during the day instead of night for a portion of the project within the center medians, allowing contractors the option to use ductile iron pipe as an alternate pipe material for the 42-inch pipe, lengthening the construction schedule by roughly thirty days, and reducing the pipeline trench depth at select locations.

RPU Bid No. RPU-7569 was reposted on the City's Online Bid System on April 20, 2018, a prebid conference was held on April 26, 2018, and bids were opened on May 7, 2018. Three construction contractors submitted bids. Staff evaluated the bids and deemed Weka, Inc. to be the lowest responsive and responsible bidder. The new low bid resulted in an overall savings of almost \$450,000 as compared to the original low bid received in March 2018.

The table below summarizes the three bids received in May 2018:

	COMPANY	CITY LOCATION	BID TOTAL
1.	Weka, Inc.	Highland, CA	\$5,939,308
2.	Trautwein Construction, Inc.	Riverside, CA	\$6,038,402
3.	E.J. Meyer Company	Highland, CA	\$6,099,999
➤ <i>Engineer's Construction Cost Estimate</i>		<i>\$6,117,000</i>	

The standard change order authority provided in Purchasing Resolution No. 23256 is 10% of the bid amount, not-to-exceed \$150,000. Due to several factors, including the potential presence of unknown underground utilities in an old street such as Magnolia Avenue and the inherently careful coordination required for a project occurring within a major arterial roadway at nighttime, staff recommends augmenting the standard change order authority by increasing it to 10% or \$593,930 of the bid amount. This will help provide better mitigation against any complications that may arise during construction, and ensure the project can still proceed on schedule.

RFP No. RPU-1826

In order to ensure that the soil, backfill, asphalt pavement, and other materials used for this project are properly compacted and otherwise meet the requirements of the project specifications, staff has selected a consultant with the expertise necessary to perform the required testing.

On May 8, 2018, staff issued an online Request for Proposals (RFP) for Geotechnical and Materials Testing Services. Staff received thirteen proposals by the due date of May 18, 2018. Key staff members of the RPU Water Division reviewed all proposals on the basis of the criterion described in the RFP, and SCST, Inc., of Riverside, California, was selected to perform the work.

The table below summarizes the thirteen proposals received in no particular order:

	COMPANY	CITY LOCATION
1.	SCST, Inc.	Riverside, CA
2.	Construction Testing & Engineering	Riverside, CA
3.	Converse Consultants	Redlands, CA
4.	Geocon	Murrieta, CA
5.	Leighton Consulting, Inc.	Rancho Cucamonga, CA
6.	GeoTek	Corona, CA
7.	Geo Advantec, Inc.	San Dimas, CA
8.	California Testing & Inspections	Paramount, CA
9.	NV5, Inc.	San Diego, CA
10.	Hilltop Geotechnical, Inc.	San Bernardino, CA
11.	Koury Engineering	Chino, CA
12.	MGTL	Riverside, CA
13.	Inerek-PSI	Santa Fe Springs, CA

Staff negotiated a Professional Consultant Services Agreement with SCST, Inc. in a not-to-exceed amount of \$101,628 for Geotechnical and Materials Testing Services for this project.

Work Orders

The project breakdown is as follows:

Project Breakdown:	
Engineering Performed By:	RPU Engineering Staff
Construction Performed By:	Weka, Inc.
Anticipated Start Date:	August 2018
Anticipated Duration:	8 Months
Coordination Required With:	▪ RPU Field Forces ▪ RPU Energy Delivery Division ▪ Public Works Department
Reimbursements:	None

Construction of the pipelines and construction of the pressure reducing stations will be assigned separate work orders in order to properly account for the costs attributed to each portion of the project. The total capital expenditure for Work Order No. 1612632 (Pipeline Replacements) and Work Order No. 1727999 (Pressure Reducing Station Replacement) is estimated to be \$7,934,000 as summarized in the following table:

Description	Pipeline (1612632)	PRS (1727999)	Total	Percent of Total
Construction (Weka, Inc.)	\$5,477,914	\$461,394	\$5,939,308	74.9%
Construction Change Order Authority	\$547,791	\$46,139	\$593,930	7.5%
City Forces Construction Support, System Connections, Service Tie- overs, Pressure Reducing Station Electrical Service, and Easement Acquisition	\$490,295	\$51,467	\$541,762	6.8%
Construction Management and Engineering Support	\$90,000	\$15,000	\$105,000	1.3%
Inspection and Geotechnical and Materials Testing	\$245,000	\$25,000	\$270,000	3.4%
Increase to Work Order	\$6,851,000	\$599,000	\$7,450,000	
Original Work Order Amount for Upfront Design and Utility Potholing, Authorized January 8, 2018	\$484,000		\$484,000	6.1%
Revised Work Order Total	\$7,335,000	\$599,000	\$7,934,000	100.0%

The current asset management system for RPU allows staff to track the maintenance and operation costs of each asset. However, the current software tracks such costs according to individual work orders. City Charter Section 1202(b) requires the Board to “Authorize, and let public works contracts in compliance with Section 1109, within the limits of the budget of the Department of Public Utilities... any acquisition, construction, improvement, extension, enlargement, diminution, or curtailment of all or any part of any public utility system when the amount exceeds \$50,000...” Typically, such approval is reflected by the approval of one work order for the project.

Here, the Charter requirement is met through approval of the Magnolia Avenue Techite Pipe and Pressure Reducing Station Replacement Project for a total project cost of \$7,934,000. In order to more accurately track costs, staff requests that individual work orders be assigned to the pipeline and the pressure reducing stations and that the City Manager, or his designee, approve adjustments to each individual work order to reflect actual costs, so long as the cumulative total does not exceed the total project cost of \$7,934,000.

The Purchasing Manager concurs that the recommended actions are in compliance with Purchasing Resolution No. 23256.

No PW funding is needed for the recommended actions of this report. The PW Director concurs with the recommended actions of this report.

FISCAL IMPACT:

The total fiscal impact for this project is \$7,934,000. Sufficient funds are available in the Public Utilities’ Transmission Main Account No. 6230100-470735 (Pipeline Replacements – \$7,335,000) and the Public Utilities’ Facility Rehabilitation Account No. 6230000-470803 (Pressure Reducing Station Replacement – \$599,000).

Prepared by: Michael L. Plinski, Interim Utilities Assistant General Manager/Water
Approved by: Todd L. Jorgenson, Interim Utilities General Manager
Approved by: Al Zelinka, FAICP, City Manager
Approved as to form: Gary G. Geuss, City Attorney

Certifies availability
of funds: Laura M. Nomura, Utilities Assistant General Manager/Finance & Administration

Attachments:

1. Presentation
2. Bid Award Recommendation
3. RFP Award Recommendation
4. Professional Consultant Services Agreement

Project Site Map

