CIRCUIT 1502 SWITCH AND CABLE REPLACEMENT PROJECT, PHASE 1

Riverside Public Utilities – Energy Delivery

Board of Public Utilities
July 26, 2021

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BACKGROUND

1. Freeman Substation Circuit 1502 has experienced power outages and reliability issues
2. Pro-active replacement of obsolete underground distribution equipment and deteriorated cable
3. Replacement prioritized by risk and events

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AGED INFRASTRUCTURE

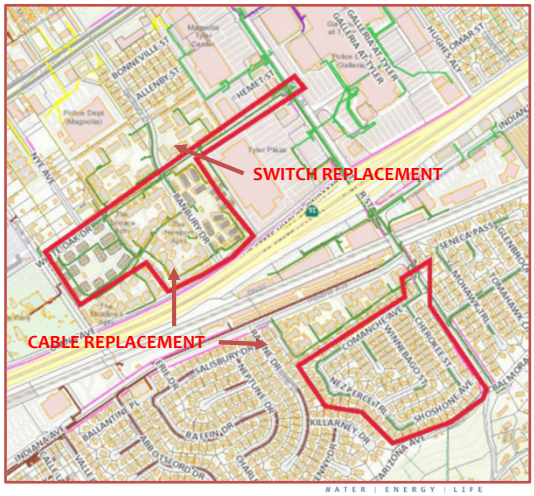
1. Aged HMPE insulated cable and Cable-In-Conduit (CIC) type systems
2. HMPE and CIC account for 8% of the total installed underground cable, yet is responsible for nearly 70% of underground cable outages
3. Roots and other foreign objects contribute to cable failures

AGED INFRASTRUCTURE (CONT.)

1. Obsolete submersible oil switch inside Vault V1260 has no fusing options
2. Traditional protection, control and functionality provide limited system protection during fault events

PROJECT LOCATION

1. Area bounded by Tyler Street, Magnolia Avenue, and Shoshone Avenue
2. The project will upgrade facilities serving about 460 customers
3. Electric service disruptions will be coordinated to minimize impact to customers



SCOPE OF WORK

1. Replace and upgrade conduits, cable, switches, and related facilities
2. Install 102 trench feet of conduit
3. Install approximately 15,000 circuit feet primary underground cable
4. Electric service disruptions will be coordinated to minimize impact to customers
5. 35 weeks to complete work

PROJECT PROVIDES MULTIPLE BENEFITS

1. New switch provides intelligent features, flexible protection schemes, and critical information (i.e. event time)
2. Relocation of an existing circuit tie between Circuit 1502 and Circuit 1292, from overhead pole disconnects to the new underground dielectric switch
3. Increases electric system reliability and safety
4. Improves electric services and power quality to customers
5. Reduce system operations and response time to outages
6. Aligns with the Riverside Envision 2025 Strategic Plan

BID RPU-2103 RESULTS FOR CIVIL CONSTRUCTION

VENDORS	CITY LOCATION	BID AMOUNT	RANK
E.E. Electric, Inc.	**Mira Loma, CA**	**$94,401.601**	**1st**
VCI Construction LLC	Upland, CA	$109,203.00	2nd
Stronghold Engineering, Inc.	Perris, CA	$117,821.07	3rd
Doty Bros. Equipment Company	Norwalk, CA	$156,526.33	4th
Engineer's Estimate		*$68,902.60*	

PROJECT COST BREAKDOWN

Project and Fiscal Breakdown		
Work Type	Performed By:	Amount ($)
Project Management and Engineering	RPU Engineering	$14,644
Civil Construction:	E.E. Electric, Inc	$94,401
Electrical Work	RPU Field Forces	$528,525
Design	RPU Engineering	$57,990
Civil Construction Contingency Contract (10%)		$9,440
Work Order Total:		**$705,000**
Anticipated Start Date:		**September 2021**
Anticipated Duration:		**30 weeks**

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RECOMENDATIONS

That the Board of Public Utilities:

1. Award Bid No. RPU-2103 to E.E. Electric, Inc., of Mira Loma, California, in the amount of $94,401 for Circuit 1502 Switch and Cable Replacement Project, Phase 1;
2. Approve the capital expenditure for Work Order No. 2009293 in the amount of $705,000 which includes all design, construction, construction support, contract administration, inspection and construction change order authority costs for Circuit 1502 Switch and Cable Replacement Project, Phase 1; and
3. Authorize the City Manager, or his designee, to execute any documents necessary to effectuate the project described herein, as well as the ability to make minor non-substantive changes in alignment with all purchasing policies.

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