

# Substation Power Transformer Replacements

Riverside Public Utilities

Board of Public Utilities  
May 14, 2018

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1

## BACKGROUND

Substation Power Transformers:

1. Essential components of the power grid
2. Critical to the reliability and optimum operation of the electric grid
3. Expected design life of approximately 40 years

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2

## BACKGROUND

Substation Power Transformers in RPU's System:

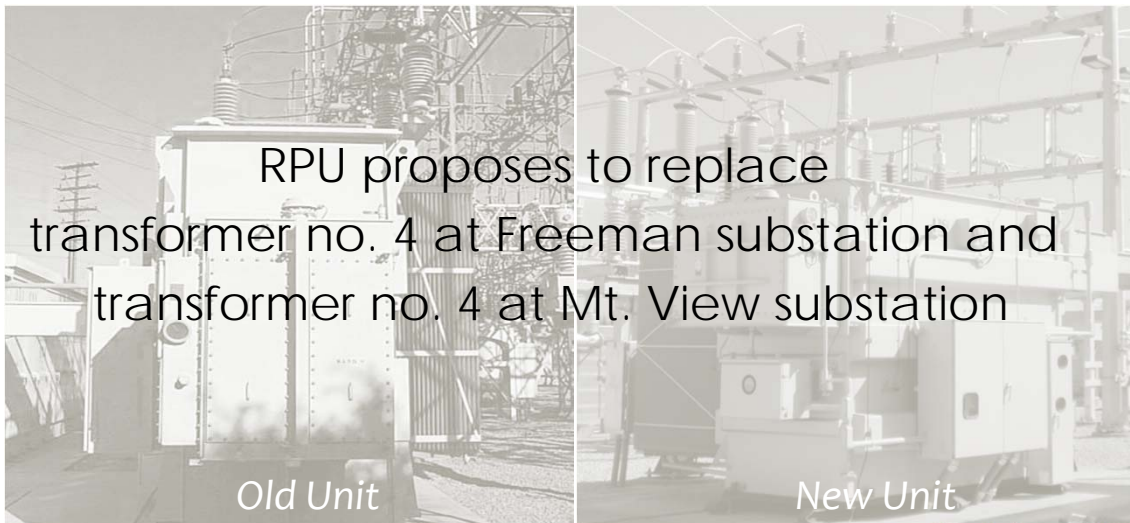
1. Provide power to 5,000 or more customers
2. Single, most expensive component in the electric system
3. 16 exceeding end of design life
4. Up to 52-week leadtime

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3

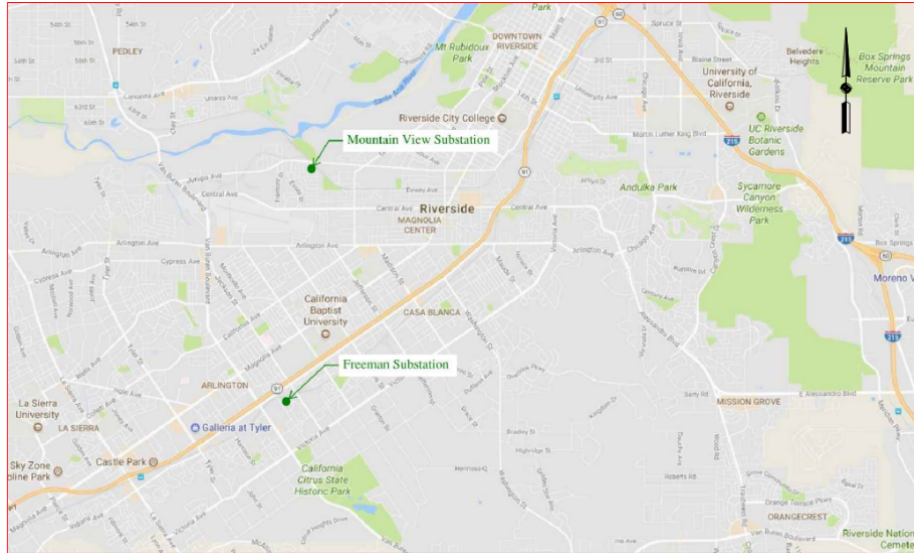
## DISCUSSION



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## DISCUSSION – WORK MAP



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5

## DISCUSSION - BENEFITS

1. Planned replacement of critical aging equipment approaching the end of their service life
2. Minimize the risk of in-service failures
3. Provide safe and reliable energy service for all customers
4. Maintain electric system's reliability and safety to personnel

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6

## DISCUSSION –WORK SCOPE

1. Includes installation of transformers, related electrical and underground work and upgrades
2. Four vendors were invited to submit proposals for equipment under RFP-805
3. The purchase of the equipment is covered under Section 602 of Purchasing Resolution No. 22576

## PROPOSAL RESULTS

VENDORS	EVALUATED AMOUNT	RANKING
Delta Star Inc.	<b>\$2,675,046</b>	1st
SPX Transformer Solutions, Inc.	\$2,698,590	2nd
ABB Inc.	\$2,711,592	3rd
Hyundai	\$2,717,000	4th

## PROJECT BREAKDOWN

DESCRIPTION	AMOUNT
Delta Star, Inc.	\$2,289,438
Project Management and Engineering Design	\$273,243
Bus Ducts, and Misc. Equipment and Material	\$300,000
Inspection and QEW Services	\$150,000
Construction Contact (Estimate)	\$620,000
Factory Acceptance Testing, Field Testing and Commissioning	\$188,071
Contingency (10%)	\$382,075
<b>Work Order Total</b>	<b>\$4,202,827</b>



9

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## Recommendations

That the Public Utilities Board:

1. Award Request for Proposal No. 805 for furnishing and delivering two substation power transformers from Delta Star Inc., of San Carlos, California, in the amount of \$2,289,438.44; and
2. Approve Work Order No. 1816638 for \$4,202,827.



10

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