

CITY OF SANTA ROSA  
BOARD OF PUBLIC UTILITIES

TO: BOARD OF PUBLIC UTILITIES  
FROM: BRYAN HEINZELMAN, ASSOCIATE CIVIL ENGINEER  
CAPITAL PROJECTS ENGINEERING  
SUBJECT: C02105 – SOLE SOURCE CONTRACT SPECIFICATION FOR  
SIEMENS PROGRAMABLE LOGIC CONTROLLERS FOR  
LAGUNA TREATMENT PLANT CHILLERS AND CLIMATE  
CONTROL UPGRADES AT ADMINISTRATION AND ANNEX  
BUILDINGS

AGENDA ACTION: RESOLUTION

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RECOMMENDATION

It is recommended by the Transportation and Public Works Department and the Water Department that the Board of Public Utilities, by resolution, approve the sole source of the Siemens programable logic controllers for the Laguna Treatment Plant Chillers and Climate Control Upgrades at Administration and Annex Buildings Construction Contract No. C02105.

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EXECUTIVE SUMMARY

This resolution will approve the sole source specification of Siemens programable logic controllers (PLC) for the construction contract C02105 Laguna Treatment Plant Chillers and Climate Control Upgrades at Administration and Annex Buildings.

BACKGROUND

A 2016 study by Costa Engineers Inc. identified the chillers and boilers located at the Laguna Treatment Plant (Plant) Administration and Annex Buildings have reached the end of their effective service life. Climate control at the Administration Building is critical to plant operations as it houses a laboratory which must adhere to specific regulatory environmental protocols. The Laguna Treatment Plant Chillers and Climate Control Upgrades at Administration and Annex Buildings project (Project) will consist of the replacement of two 50-ton chillers and two condensing boilers in the Administration building, and one 15-ton chiller at the Annex building. The Project will also provide upgrades of the climate control system at both buildings. The Plant uses exclusively

Siemens S7 Series PLCs and currently has ninety-eight (98) in service that provide control of the various processes necessary for waste water treatment. To support and maintain this vital equipment the Plant has instrumentation technicians that specifically program and maintain the PLC equipment. The technicians have all been factory trained to enable them to promptly respond to failure of a PLC. The instrumentation technicians provide 24-hour coverage to Plant Operations and maintain an inventory of parts in an on-site warehouse to allow for immediate repair to the PLC network. It is for these reasons that the Plant requires type Siemens S7 PLC for the Project.

The contract specifications are currently written to explicitly sole source the following:

- A. Power Supply
  - 1. Siemens SITOP PSU 24Vdc power supply
- B. Programmable Logic Unit
  - 1. Control Processing Unit Module (dependent on programming power)
    - a. Siemens S7-1500 PLC model 1511-1 PN, or
    - b. Siemens S7-1500 PLC model 1513-1 PN
  - 2. Digital Input Module
    - a. Siemens S7-1500/ET 200MP model DI 32x24VDC HF
  - 3. Analog Input Module
    - a. Siemens S7-1500/ET 200MP model AI 8xU/I/RTD/TC ST
  - 4. Digital Output Module
    - a. Siemens S7-1500/ET 200MP model DQ 32x24VDC/0.5A ST
    - b. Siemens S7-1500/ET 200MP model DQ 8x230VAC/5A ST Relay
  - 5. Analog Output Module
    - a. Siemens S7-1500/ET 200MP model AQ 8xU/I HS
  - 6. Operator Interface Terminal
    - a. Siemens TP 1900, P/N 6AV2124-0UC02-0AX0

#### PRIOR BOARD OF PUBLIC UTILITIES REVIEW

Not applicable

#### ANALYSIS

The Project is ready to advertise for bids now, however the authority to approve the proposed sole source items lies with the Board of Public Utilities. Section 3400 of the California Public Contract Code requires when a specific brand or trade name product is called for in connection with the construction or repair of a public works project, the

contract specification must be followed by the words “or equal” so that bidders may furnish any equal product or service at a lower cost to the taxpayer.

However, Section 3400 allows the award authority to make a finding that allows a specific brand or trade name for a particular product or service in order to match other products in use on a particular public improvement either completed or in the course of completion. The Plant has 98 Siemens PLCs in use within the facility. The continued utilization of Siemens products will maintain reliability and uniform compatibility with the existing equipment. In addition, it will minimize operational impacts and retain ability to swap out parts in the event of an urgent repair.

### FISCAL IMPACT

Approval of this sole source has no additional impact on the budget. Funds for this project were appropriated in the fiscal year 2018-19, Capital Improvement Program budget.

### ENVIRONMENTAL IMPACT

This action is categorically exempt from the California Environmental Quality Act (CEQA), pursuant to CEQA Guideline Sections 15301 and 15303, as the Project consists of a minor alteration of an existing public sewerage facility and the improvements are all located within the developed area of the Laguna Treatment Plant.

### BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not applicable.

### ATTACHMENTS

- Resolution

### CONTACT

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