ATTACHMENT A
SOLE SOURCE FACILITY JUSTIFICATION TRANSMITTAL

Public Contract Code section 3400 provides, in pertinent part, that:

"(a) The Legislature finds and declares that it is the intent of this section to encourage contractors and manufacturers to develop and implement new and ingenious materials, products, and services that function as well, in all essential respects, as materials, products, and services that are required by a contract, but at a lower cost to taxpayers.

(b) No agency of the state, nor any political subdivision, municipal corporation, or district, nor any public officer or person charged with the letting of contracts for the construction, alteration, or repair of public works, shall draft or cause to be drafted specifications for bids, in connection with the construction, alteration, or repair of public works, (1) in a manner that limits the bidding, directly or indirectly, to any one specific concern, or (2) calling for a designated material, product, thing, or service by specific brand or trade name unless the specification is followed by the words "or equal" so that bidders may furnish any equal material, product, thing, or service. In applying this section, the specifying agency shall, if aware of an equal product manufactured in this state, name that product in the specification. Specifications shall provide a period of time prior to or after, or prior to and after, the award of the contract for submission of data substantiating a request for a substitution of "an equal" item. If no time period is specified, data may be submitted any time within 35 days after the award of the contract.

(c) Subdivision (b) is not applicable if the awarding authority, or its designee, makes a finding that is described in the invitation for bids or request for proposals that a particular material, product, thing, or service is designated by specific brand or trade name for any of the following purposes:

(2) In order to match other products in use on a particular public improvement either completed or in the course of completion."

Siemens DDC Thermostat

This is a sole source procurement because:

- ☐ This is a sole provider of items compatible with existing equipment or systems.
- ☑ This is a sole provider of items compatible with existing equipment or systems.
- ☐ This is a sole provider of factory-authorized warranty service.
- ☐ This is a sole provider of goods or services that perform a unique function in order to meet the specialized needs of the District. Please provide specific detail below.

  The Siemens DDC Thermostat is needed for consistency and capability with on hand parts inventory.

- ☑ There are overriding circumstances which negate the benefit of compliance with applicable code and District policy regarding competitive bidding processes. Below are specific details below as to what those circumstances are, and why this sole source procurement would be in the best interest of the District.

  This brand thermostat has been in use for over 26 years and is directly compatible with the District's primary local area network (LAN). Replacement of the thermostats would require equipment interface modules at additional costs. The risk factors and challenges stated below present overriding circumstances which would negate the benefit that any competitive bid could offer:

- Risk of equipment not functioning during transition to new system.
- Lack of air quality and temperature controls within buildings during the conversion.
- Cost of replacement of existing devices and compatibility with building management system infrastructure, hardware and software.
- Potential for system incompatibility and/or failure to integrate with existing HVAC and automated building management systems.

Siemens Field level controllers integrates directly into the District's two current building management systems, and its affiliated franchises are the providers of the service, maintenance and monitoring required to support the system. Due to the proprietary nature of the District's building mechanical system, it has been determined that Siemens is the preferred vendor who can provide products, service, maintain and monitor the existing HVAC equipment and devices.

What steps were taken to verify that these goods or services are not available elsewhere?

See Supplier and Contractor Information Page Below For Contact Details.
Each vendor was asked whether or not their firm could provide service, maintenance and monitoring to the DDC Thermostat without removing, replacing or otherwise modifying the current equipment?

This is a restricted brand or trade name, and no substitutions are allowed because:

☑ The requested product is an integral repair part or accessory compatible with existing HVAC equipment and systems.

Existing Equipment/System: Siemens DDC Thermostat
Manufacturer/Model Number: Siemens QAA2280.FWSC

☑ The District has standardized on the requested product, and use of another brand/model would require considerable time and funding to evaluate or implement. Please provide details below:

The need for consistency and capability with on hand parts inventory at MCC Campus sites. This brand thermostat has been in use at the district for 26 years and is directly compatible with primary local area network (LAN). The use of other types of thermostats would require additional equipment interface modules at additional cost.

Supplier or Contractor Information:

Siemens Building Technologies
10100 Willow Creek Road
San Diego, CA 92131
(858) 693 8711

RECOMMENDATION

Sufficient evidence has been provided upon which the Board can find that the exception found in Public Contract Code section 3400 (c) (2) applies to the identified product(s). Approve a finding to authorize use of the above stated exception for DDC Thermostats in the MiraCosta Design Standards Manual for all the projects in the MM program. Require that said finding be included in all pertinent bid/proposal documents for those projects where such product(s) will be used.

SIGNATURE:

Tom Macias, Facilities Director — **Date** 9/14/18

Geoff Bachanas, PMO Director — **Date** 9/17/18

steinberg hart

ATTACHMENT B
SOLE SOURCE ARCHITECT/ENGINEERING JUSTIFICATION SUMMARY REPORT TRANSMITTAL

September 1, 2018

Re: Siemens DDC Thermostat

Within the Design & Construction Standards MiraCosta CCD has identified or designed various proprietary systems or products that meet specific District performance requirements, allow for seamless integration into existing systems, provide ease of maintenance, and afford a lower total cost of ownership. In these instances, the District is requesting that these systems and products shall be provided without substitution. The following Specification Section 23 09 00 is one that meets these special requirements.

Our experience working with other Colleges and Universities shows that single sources for some materials, products, equipment, and systems is a common approach to achieving best value.

We have reviewed the facility justification transmittal for the above-referenced item and believe that the District's sole-sourcing of this specification section meets the requirements for District's benefit as described above.

Sincerely,

Joe Sion
Associate Principal/Senior Manager

523 W 6th Street #245
Los Angeles CA 90014

MiraCosta College Design And Construction Standards

Item #7: Siemens Terminal Equipment Controller

TEC Terminal Box (VAV) Controller

The TEC Terminal Box Controller provides high performance Direct Digital Control (DDC) of pressure-independent, variable-air-volume zone-level routines. The TEC Terminal Box Controller can operate stand-alone or can be networked to perform complex HVAC control, monitoring and energy management functions and is designed to reside on any Siemens Industry control system.

Features

- Advanced PID algorithm for the temperature control loops is employed to provide stability and to reduce unnecessary changes in the Flow setpoint when the room temperature is at or near the room temperature setpoint.
- Unique control algorithms for specific applications.
- Plenum rated controller.
- Setpoints and control parameters assigned and changed locally or remotely.
- Setpoints and control parameters stored in Electrically Erasable Programmable Read Only Memory (EEPROM)—no battery backup required.
- Returns from power failure without operator intervention.
- No calibration required, thereby reducing maintenance costs.
- Reports airflow in cfm (lps).
- Meets low duct static pressure requirements.
- Separate minimum and maximum air volume setting for heating and cooling modes.

Applications

- Slave Mode (Application 2091)
- VAV Cooling Only (Application 2020)
- VAV Cooling or Heating (Application 2021)
- VAV with Electric Reheat or Baseboard Radiation (Application 2022)
- VAV with Hot Water Reheat (Application 2023)
- VAV Series Fan Powered with Electric Reheat (Application 2024)
- VAV Series Fan Powered with Hot Water Reheat (Application 2025)
- VAV Parallel Fan Powered with Electric Reheat (Application 2026)
- VAV Parallel Fan Powered with Hot Water Reheat (Application 2027)

Control algorithms are pre-programmed. The controller is ready to operate after selecting the application. If desired, the operator may adjust the room temperature setpoints and other parameters. The controller is designed for operation and modification without vendor assistance.

Hardware

Controller Board

This controller provides all wiring terminations for system and local communication and power. The cable from the room sensor (purchased separately) connects to an RJ-11 jack on the controller. All other

Sole Source Item 20 - Siemens DDC Thermostat

connections are removable terminal blocks. The controller assembly is mounted on a plastic track that mounts directly on the terminal box.

An optional enclosure (P/N 540-155) protects the controller assembly.

Autozero Modules (optional devices, P/NB 540-200N) are available for mounting with the controller for those applications where uninterrupted airflow is necessary. An optional Pneumatic Transducer provides control of pneumatic damper and valve actuators.

The controller interfaces with the following external devices:

- Averaging air velocity sensors provided by VAV terminal unit manufacturers
- Floating control valve and damper actuators
- Temperature sensors (room, duct, immersion, and outside air)
- Service and commissioning tools
- Analog input devices (room temperature sensor, room setpoint dial, auxiliary temperature sensor)
- Digital input devices (dry contacts from motion sensors, alarm contacts)
- Digital output devices (fan, stages of electric heat)

Room Sensor

The room sensor connection to the controller board consists of a quick-connect RJ-11 jack. This streamlines installation and reduces controller start-up time.

Terminal Box Controller Specifications

Power Requirements	
Operating Range	24 Vac +/-20%, 50 or 60 Hz
Power Consumption	3 VA (plus 12 VA per DO)

Dimensions	4-1/8" W × 7-3/4" L × 1-1/2" H
Weight	approx. 3 lbs (1.35 kg)
Controlled Temperature Accuracy, Heating or Cooling	±1.8°F (0.9°C)

Autozero Module Specifications

Power Consumption	.75 VA @ 24 Vac max.
Dimensions	2" W x 1.51" H x 1.89" D (58 mm x 78 mm x 29 mm)
Weight	1.3 oz. (36.9 g)

Inputs	
Analog	1 room temperature sensor 1 velocity sensor 1 setpoint (optional) 1 auxiliary temperature sensor
Digital	1 aux temp dry contact 1 dry contact only input

Outputs	
Analog	N/A
Digital	6 DO 24 Vac optically isolated solid state switches @ 0.5 amp

Communications	
Remote	4800 bps FLN Trunk
Local	WCIS

Ambient Conditions	
Shipping & Storage Temperature	-13°F to 158°F (-25°C to 70°C)
Operating Temperature	32°F to 122°F (0°C to 50°C)
Humidity Range	5% to 95% rh (non-condensing)

Agency Listings	
UL Listing	UL 916, PAZX
cUL Listed	Canadian Standards C22.2 No. 205-M1983, PAZX7
FCC Compliance	FCC Part 15, Class A

Optional Accessories

Autozero Module

The optional Autozero Module (product number 540-380) should be used when continuous operation at occupied flow is required for an area. The Autozero Module is connected to the air velocity inlet ports of the controller and provides periodic recalibration of the air velocity transducer without changing air volume being delivered to a room. This recalibration ensures long-term precise airflow delivery.

Autozero Module.

Differential Pressure Sensor

The differential pressure sensor is easily connected to the box's air-velocity sensing elements to provide measurement of the differential pressure. The measured value is converted to actual airflow in cfm (lps) by the controller.

Differential Pressure Sensor Specifications

Temperature Range	32°F to 122°F (0°C to 50°C)
Measurement Range	0 to 5200 fpm (0 to 26 m/s)

Pneumatic Transducer

The PTS Pneumatic Transducer contains the transducers that provide the signal conversion from electronic to pneumatic. The module is piped to the pneumatic actuator and wired to the Terminal Box Controller. This transducer provides for accurate control of pneumatic actuators for precise temperature and air volume control.

Pneumatic Transducer Specifications

Maximum Input Pressure	30 psi (207 kPa)
Air Consumption	0 SCIM
Power Consumption	4 VA @ 24 Vac max.
Dimensions	3-1/2" L x 2-1/4" W x 1-1/2" H (87 mm x 57 mm x 38 mm)
Weight	9 oz (0.3 kg)

Product Ordering Information

Description	Product Part Number
TEC Terminal Box Controller	540-100N
TEC Terminal Box Controller with Autozero Module	540-200N
Small enclosure for electronic controller without damper actuator (short board).	540-155

Document Information

Technical Specification Sheets/Technical Instructions	Document Part Number
Room Temperature Sensors – Series 2200	149-820
Room Temperature Sensors – Series 2000	149-321
Duct Temperature Sensor	149-134P25
Analog Sensors – 100 K Ohm Thermistor	149-262
Siemens Valves	**Document Part Number**
599 Series Zone Valves 2-Way, 3-Way Zone Valve Electric	154-034
599 Series Zone Valves and Actuators – Modulating, On/Off Spring Return, 2-Position Control	154-063
Siemens Electronic Actuators	**Document Part Number**
OpenAir Electronic Damper Actuators, GDE/GLB Series Non-spring Return Rotary 24 Vac – Modulating Control 0 to 10 Vdc	155-187P25
OpenAir Electronic Damper Actuators, GDE/GLB Series Non-spring Return, 24 Vac Floating Control, Rotary	155-188P25
OpenAir GEB Series Non-spring Return, 24 Vac, 132 lb-in Rotary Electronic Damper Actuators	155-318P25

Information in this document is based on specifications believed correct at the time of publication. The right is reserved to make changes as design improvements are introduced. Product or company names mentioned herein may be the trademarks of their respective owners.
© 2015 Siemens Industry, Inc.

Siemens Industry, Inc.
Building Technologies Division
1000 Deerfield Parkway
Buffalo Grove, IL 60089-4513
USA
+1 847-215-1000

Your feedback is important to us. If you have comments about this document, please send them to SBT_technical.editor.us.sbt@siemens.com.

Document No.149-1014
Printed in the USA