

**MT. DIABLO UNIFIED SCHOOL DISTRICT GOVERNING BOARD  
RESOLUTION 20/21-75**

**Authorizing the Design and Construction Energy Services Contract for HVAC Upgrades at  
Northgate High School**

**WHEREAS**, the Mt. Diablo Unified School District (“District”) Board of Trustees (“Board”) has endorsed the goal of efficient school operations and directed staff to develop energy efficient practices for use in the District; and

**WHEREAS**, the Board wishes to further reduce the District’s energy consumption and to otherwise obtain cost savings related to energy use; and

**WHEREAS**, Government Code sections 4217.10 through 4217.18 authorize the District’s Governing Board, to enter into one or more energy service contracts with any person or entity, pursuant to which that person or entity will provide electrical or thermal energy or conservation services to the District, which may comprise or include an energy conservation facility, if the anticipated cost to the District for thermal or electrical energy or conservation services provided under the contract(s) is less than the anticipated marginal cost to the District of thermal, electrical, or other energy that would have been consumed by the District in the absence of those energy service contracts; and

**WHEREAS**, the District selected Schneider Electric Buildings Americas, Inc. (“Contractor”) and entered into the Agreement for Turnkey Design and Construction Energy Services (“Agreement”), dated as of June 21, 2021 pursuant to which Contractor performed an integrated energy assessment and presented District with recommendations for energy efficiency at Northgate High School (“Recommendations”); and

**WHEREAS**, based on these Recommendations, Contractor has proposed to the District in Schneider’s May 17, 2021 Proposal, attached hereto as Exhibit A, under the terms of which Contractor will install energy efficient upgrades; and

**WHEREAS**, District plans to use funding available from California AB 86- In Person Grant funding, in order to implement the energy efficiency; and

**WHEREAS**, the Analysis (“Energy Savings Projections”), indicated in Schneider’s Proposal, attached here to as Exhibit A, demonstrates that the cost of the Contract to the District for the thermal or electrical energy or conservation services provided thereunder is less than the anticipated marginal cost to the District of thermal, electrical, or other energy that would have been consumed by the District in the absence of the Contract (“Savings”).

**NOW, THEREFORE, the Governing Board of the Mt. Diablo Unified School District hereby:**

1. The above recitals are true and correct.
2. The District held a public hearing at a regularly scheduled meeting of the Board for which notice was given not less than two weeks in advance pursuant to Government Code Section 4217.12(a), on May 26, 2021.
3. Based upon available information, including but not limited to reports, analysis and presentations by CONTRACTOR, and District staff, as reviewed by the Board in connection herewith, and as required by Government Code section 4217.12(a), the Board hereby finds and determines as follows:

- a. The anticipated cost to the District for electrical energy and conservation services provided by the Energy Conservation Facilities under the Energy Services Contract will be less than the anticipated marginal cost to the District of electrical energy that would have been consumed by the District in the absence of the Project facilities and services; and

4. It is in the best interests of the District to authorize the District's Superintendent and designees to execute and deliver the Design and Construction Energy Services with CONTRACTOR, Schneider Electric Buildings Americas, Inc., substantially in the form presented to this Board at this meeting, to take all steps and perform all actions with respect to identifying and securing financing and/or sources of funds, including savings and other District funds, and returning to this Board with a recommendation concerning such financing, and to take any actions deemed necessary to protect the interests of the District.

AYES: NOES: ABSENCES: ABSTENTIONS:

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Cherise Khaund, Board President

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Debra Mason, Board Vice President

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Linda Mayo, Board Member

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Erin McFerrin, Board Member

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Keisha Nzewi, Board Member

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Dr. Adam Clark, Superintendent

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*Resolution 20/21-75*

*Adopted at the meeting of the MDUSD Governing Board of Education on 06/09/2021*

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# Exhibit A: Schneider Electric Buildings Americas, Inc. Proposal for Design and Construction Energy Services

Mt. Diablo USD  
Northgate HS Indoor Air Quality Initiative

## Proposal for Mt. Diablo Unified School District – May 19<sup>th</sup>, 2021 (good for 30 days)

Indoor Air Quality Initiative at Northgate HS

In response to Bay City Mechanical's Northgate High School HVAC Inspection Report, this is a formal summary proposal to address improved indoor air quality and ventilation performance. This project will be delivered during the Summer break session at Northgate High School. This two-pronged project approach includes both a new controls platform, as well as a commissioning effort, ensuring the campus buildings are operating optimally and efficiently.

### 1. Mechanical Commissioning

Commissioning of all existing Split Systems

- Perform mechanical reconnect of existing damper actuators and linkage for (31) existing Return Air/Outside Air dampers
- Once above damper scope is complete, perform pre-test/post-test readings for compliance
- Airflow readings of supply air/outside air, and motor amp draw at each of the (95) existing split systems. Pre-test includes readings for compliance
- Clean existing mixed air box per unit, clean existing Return Air/Outside Air damper blades and lubricate
- Furnish and install (95) new MERV 13 filters on existing split system AHU's
- After identifying desired Supply Air Cubic Feet Minute (CFM) and minimum Outside Air rates, perform post work CFM reading and balance to correct rates by SE validation engineer

Commissioning of all existing single zone packaged units

- Perform pre-test/post-test CFM reading of supply air/outside air, and motor amp draw at each of the (9) existing packaged units.
- After identifying desired Supply Air Cubic Feet Minute (CFM) and minimum Outside Air rates, perform post work CFM reading and balance to correct rates by SE validation engineer

### 2. Installation of New Building Automation System (Viconics/Tridium Controls)

Split System Units

- Remove ALC controllers as required
- Furnish and install new wireless SE8000 network thermostats in the space to control
  - Supply Air Fan
  - Compressor
  - Auxiliary Heating
  - Economizer Damper Actuator
- Install new multiconductor thermostat cabling between the existing room temperature sensor location and the unit's control terminal board.
- Program thermostats to control based on Schneider Electric programming sequences
- Pull new thermostat wiring to each conditioned space
- Remove ALC controllers as required.
- Remove existing JCI controllers as required.



### Supply Air Temperature Sensors

- Furnish and install ninety-five (95) supply air temperature sensor for the units included
- Install new multiconductor thermostat cabling.
- Update graphics and trend logs to reflect changes.
- Program alarm to be sent if the supply fan status is proven and the supply air temperature is above 120°F or below 45°F for a period of 5 minutes (adjustable).

### Supply Air Fan Status

- Furnish and install ninety-five (95) current sensing relays for supply air fan status monitoring for the units
- Install new multiconductor thermostat cabling.
- Update graphics and trend logs to reflect changes.
- Program alarm to be sent if the fan is commanded to operate and status is not proven or if the fan is commanded to stop and status remains proven for 3 minutes.

### CO2 Monitoring

- Furnish and install CO2 sensors for indoor air quality monitoring for the classroom units.
- Install new multiconductor thermostat cabling.
- Update graphics and trend logs to reflect changes.
- Program an alarm to be sent if the room CO2 Concentration is above the room CO2 Alarm setpoint for a period of 5 minutes (adjustable).

### Total Sales Price

\$1,283,668.00

Marc Starkey  
Program Manager  
Schneider Electric  
[Marc.starkey@se.com](mailto:Marc.starkey@se.com)  
(760) 277-1003

## Northgate HS Utility Benchmarking

### Approximate Annual Spend (Net Solar) - \$272 K

- Electrical - \$140 K
- Natural Gas - \$64 K
- Water - \$68 K

### Potential Savings:

- Lighting Interior, Exterior, Stadium lights to LED - 15-20% electric savings (will include O&M savings as well) ~ **\$65 K**
  - Commissioning at HS (reducing ventilation from 100% OA) – electric and gas savings (2-3%) ~ **\$5 k**
  - Controls – move to more energy efficient occupied and unoccupied set points, reduce Time-of-Day (TOD) HVAC schedules, set back building over holidays and weekends (10-15%). Interval data shows all of these opportunities exist ~ **\$25 K**
- Water savings comes from more aggressive water management, low-flow fixtures/aerators, smart irrigation (10%) ~ **\$5K**