

STATE BOARD FOR COMMUNITY COLLEGES AND OCCUPATIONAL EDUCATION

April 13, 2022

TOPIC: Community College of Aurora's Roof Top Unit (RTU) and Heating Ventilation and Air Conditioning (HVAC) Upgrades Project

PRESENTED BY: Dr. Mordecai Brownlee, President

RELATIONSHIP TO THE STRATEGIC PLAN:

- Commitment to academic excellence.
- Commitment to institutional growth and excellence.

EXPLANATION:

The Community College of Aurora (CCA) RTU and HVAC Upgrades Project purpose is to replace end of life roof top units and controls to improve the indoor air quality, improve efficiencies, and improve student and staff comfort levels in the buildings located on the CentreTech campus. In addition, it will meet the CDC recommended layered approach to reduce exposures to SARS-CoV-2, the virus that causes COVID-19. This approach includes using multiple mitigation strategies, including improvements to building ventilation, to reduce the spread of disease and lower the risk of exposure.

CCA Facilities has made many improvements to match the CDC layered approach to COVID response, but the HVAC systems poor controls, inadequate data, and the overall age of the system is preventing continuous and proper ventilation. The age of the system also prevents proper space comfort to the occupants when additional outdoor air is brought into the building to meet recommended air circulation. The outdated units were designed for MERV8 air filtration, when using the higher quality MERV13 filters, the volume of air available from the roof units dropped significantly, also affecting the system's ability to cool/heat the building and increasing the time between air cycles. This is true in each of the CCA buildings as all RTUs are from 1999 or much older.

This full project will bring the Building Automation System (BAS) out of the 1990s and into the current decade with remote access and better data and controls. New rooftop units will restore efficiencies lost or not available in our 30-year-old system. Testing and balancing will provide space comfort for occupants by balancing the amount of conditioned air going into an area as well as leaving an area. Needlepoint BiPolar Ionization will neutralize bacteria and viruses as an extremely important cleaning device for the buildings.

The Community College of Aurora is requesting approval to spend \$2,099,663 of the institutional portion of its Higher Education Emergency Fund American Recovery Plan funding to address indoor air quality and prevent the spread of COVID-19.

The request is needed to overcome the shortfalls of the current equipment at the College and to support the needs of students, staff, and faculty.

Upgrades to the HVAC system will provide the following:

1. **Mechanical systems:** Replacement of 11 Roof Top Units (RTUs). New units are energy efficient, capable of higher quality air filtration, contain Needlepoint Bipolar Ionization, and provide improved air quality and ventilation.
2. **Controls and CO2 sensors:** Upgraded BAS and CO2 sensors will give greater control and feedback to facilities to ensure conditions, fresh, and clean air, to all areas of each building.
3. **Testing and Balancing:** Any new HVAC piece of equipment will need adjusting to provide adequate air volume to any space as well as ensure the appropriate amount of positive air pressure to prevent pushing exterior doors open, but to also ensure spaces remain comfortable.
4. **Contingency:** With any project, unknowns may occur once ground is broken. This year, the raising costs of materials, supplies, and labor make estimates difficult to hold or lock in.
5. **Breakdown of costs:**

Description	Lead Time	Total Cost
Mechanical (RTUs)	14 – 23 weeks	\$ 1,108,413
Controls and Sensors	3 – 5 weeks	\$ 177,450
Testing and Balance	Not Applicable	\$ 66,200
Ductwork Insulation	Not Applicable	\$ 30,000
Design/Build Services	Not Applicable	\$ 457,600
Bonds and Insurance	Not Applicable	\$ 40,000
Commissioning	Not Applicable	\$ 20,000
Contingency	Not Applicable	\$ 200,000

*Note: Information obtained February 25, 2022. Estimated dates and lead times may fluctuate.

RECOMMENDATION:

Staff recommends the Board approve spending authority for the CCA RTU and HVAC Upgrades Project as outlined above, with a do not exceed total spending authority of \$2,099,663 of the college’s institutional federal stimulus funding. Staff also recommends the Board delegate signature authority to the System Vice Chancellor of Finance and Administration for related documentation, on the condition that all the Board and State processes are followed.