

STAFF REPORT

SUBJECT: Installation of Active Air Purification Devices on Buses

FROM: Toan Tran, Director of Operations and Innovation

DATE: May 3, 2021

Action Requested

Staff requests that the Board of Directors approve Resolution 15-2021, authorizing the Executive Director to execute a contract with United Safety and Survivability Corporation (USSC) for 65 air purification systems for the entire fixed route fleet in an amount not to exceed \$206,000.

Background

The COVID-19 pandemic has required the transit industry to investigate new ways to improve the safety and health of our staff and customers. LAVTA has been very proactive in this endeavor and has implemented numerous initiatives since the start of the pandemic. Some of these initiatives include:

- Enhanced cleaning procedures for buses and facilities
- Improvements on board buses with installation of the driver barrier doors and hand sanitizer dispensers
- Better customer experience by providing crowding and bus arrival information in real time

Discussion

In addition to disinfecting the buses nightly using a fogging machine, the air filter inside the bus was upgraded to a MERV-7 rating, which is the highest grade allowed by the manufacturer. While a MERV-7 can capture 50% of particles in the 3 to 10 Micron range, it cannot actively kill or contain SARS-CoV-2, the virus that causes COVID-19.

Given the latest research which points toward airborne particles as the primary transmitter of the novel coronavirus, LAVTA has identified the need to install technology that will inactivate the virus in the air of our buses.

Although there are other purification systems on the market, USSC's Active Air Purification is the only system that meets all of the following requirements:

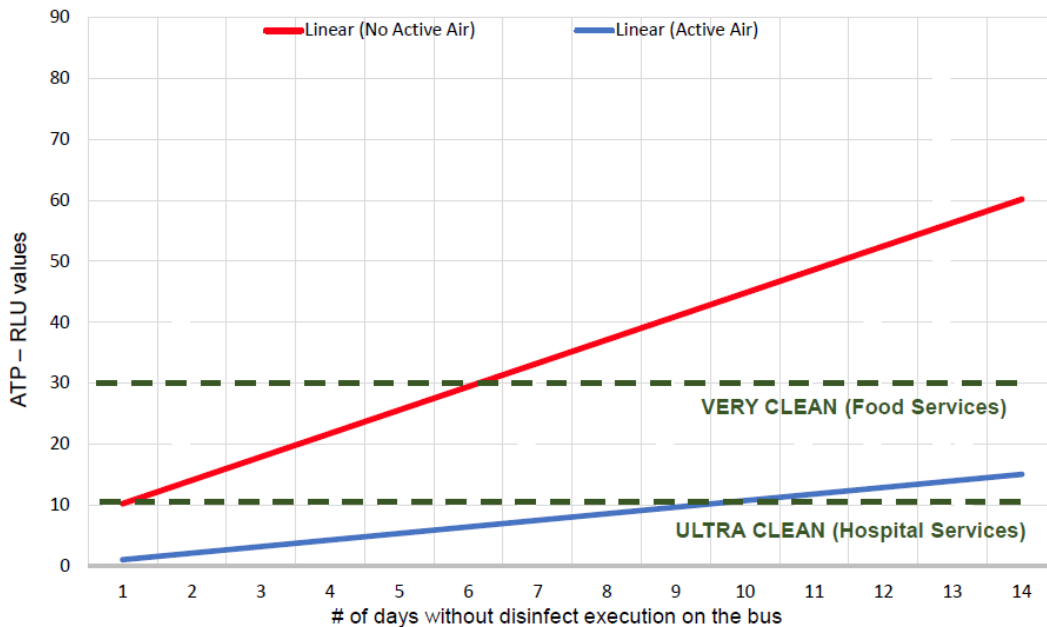
- Eliminates germs, bacteria, and viruses, including SARS-CoV-2
- Safe for everyone on board the buses
- Does not have strong odors or leave harmful residues
- Causes no damage to interior surfaces
- Minimal impact on operations and easy to maintain

The Active Air Purification system is installed in the air conditioning system on each vehicle. The system uses ultraviolet Photohydroionization (UV-PHI®) technology that creates low-dose hydrogen peroxide which then is dispersed into the air within the bus and eliminates airborne pathogens including COVID-19.

The system continuously purifies onboard air so that it “mimics” natural, outdoor air, where transmission of COVID-19 and other viruses is very rare. Although it is a new concept for transit, PHI® technology is widely used in government buildings by the FBI, CIA, military facilities, large restaurant chains, such as Chipotle, across the United States, to prevent virus and bacterial spread. This system has been heavily tested by various transit agencies throughout the United States and the results have been very positive.

For instance, Capital Metro in Austin, TX has been testing six of these units on their bus fleet since August 2020 and deemed them mechanically sound and verified they do not cause interference with the other systems on the vehicle. Simultaneously, they engaged a third-party expert to study the airflow on a bus and confirmed that such a device is, in fact, helpful in cleaning the air.

Similarly, Capital District Transportation Authority in Albany, NY conducted a 14-day test comparing a bus with Active Air Purification system and one without. Below is the result from the test.



Fiscal Impact

The project budget is \$206,000, which covers materials, installations, and taxes on 65 units. Funding for this project is TDA but staff will submit a reimbursement request with the Federal Emergency Management Agency (FEMA).

Recommendation

Based on feedback received from the Project & Services Committee, staff recommends the Board of Directors authorize the Executive Director to execute a contract with United Safety and Survivability Corporation for 65 air purification systems for entire the fixed route fleet in an amount not to exceed \$206,000.

Attachments:

1. Resolution 15-2021

Approved: _____

RESOLUTION NO. 15-2021

**A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY
AUTHORIZING THE EXECUTIVE DIRECTOR TO EXECUTE A CONTRACT
WITH UNITED SAFETY AND SURVIVABILITY CORPORATION FOR THE
PURCHASE AND INSTALLATION OF THE ACTIVE AIR PURIFICATION
SYSTEM IN THE AMOUNT NOT TO EXCEED \$206,000.**

WHEREAS, The LAVTA Board of Directors supports all efforts necessary to safeguard staff and customers during this unprecedented global pandemic; and

WHEREAS, LAVTA management has determined that the Active Air Purification device will provide an improved vehicle environment.

NOW, THEREFORE, BE IT RESOLVED, by the Board of Directors of the Livermore Amador Valley Transit Authority that the Executive Director is authorized to execute a contract with United Safety and Survivability Corporation for 65 air purification systems for the entire fixed route fleet in an amount not to exceed \$206,000.

PASSED AND ADOPTED by the governing body of the Livermore Amador Valley Transit Authority (LAVTA) this 3rd day of May 2021.

BY _____
Bob Woerner, Chair

ATTEST _____
Michael Tree, Executive Director