

Mountain View Whisman School District
HVAC Modernization and Replacement Project at Various Sites
Filtration Cost Options

January 28, 2021

In light of the ongoing Covid-19 pandemic there has been increased interest in air filtration and air purification steps that can be taken to more remove a smaller micron level of contaminants and pollutants from air filtered through HVAC units across building facilities, including those in educational environments. The mechanical engineering firm selected for the Mountain View Whisman School District HVAC Modernization and Replacement Project, H&M Mechanical, is familiar with a number of the available options and have reviewed those options in relation to the particular HVAC units being replaced under this project. The H&M Mechanical summary dated January 14, 2021 identifies three (3) filtration options and added equipment which address the concerns expressed by the District. Below is a summary of the cost implications of each option:

Option 1 – MERV 13 Filters

- Installation cost - as indicated in the H&M Mechanical Memorandum, MERV 13 is a code requirement for these facilities and therefore the cost to install is already included in the project budget.
- Operational cost – Standard practice when it comes to filter replacement requires replacement of filters at the change of each season or 4 times per year. Given the current Covid-19 pandemic, it is recommended the MERV 13 filters be replaced every 2 months or 6 times per year. Impact to operational cost is minimal in the short term (during Covid-19) and presumable no impact once the pandemic has passed.

Option 2 – GPS Bi-Polar Ionization System

- Installation Cost – Depending on the size of the HVAC unit, each GPS Bi-Polar Ionization System runs \$4,750 to \$6,000 per unit installed depending on size of HVAC unit. This project includes replacement of 188 HVAC units resulting in an added installation cost of \$893,000 to \$1,128,000 for units included in this project only. Note, there are approximately an additional 150 HVAC units installed under Measure G which are not part of this project. Assuming those units would receive the same Bi-Polar Ionization Filter that results in an additional cost of approximately \$900,000.
- Operational Cost – N/A. The units are self-cleaning with no regularly scheduled parts replacement.

Option 3 - Price Room Air Purifiers

- Installation Cost – Depending on the size of the HVAC unit, each Air Purifier runs \$3,000 to \$3,300 per unit depending on configuration options. These are standalone plug-in units which could be ordered directly by the District thus eliminating contractor mark ups. This project includes replacement of 188 HVAC units. Assuming a 1:1 installation of air purifiers to HVAC units the net added cost for rooms covered in this scope of work would be \$564,000 to \$620,400. As noted in option 2 above there are approximately an additional

150 HVAC units installed under Measure G which are not part of this project. Assuming those rooms would receive the same air purification system, that would result in an additional cost of approximately \$495,000.