



SVRT Project – BART to Silicon Valley Coyote Creek

Ventilation Facility Fact Sheet

Ventilation System Function

The tunnel segment of the proposed Silicon Valley Rapid Transit Project (SVRT), or BART to Silicon Valley, would require the utilization of ventilation shafts once service begins.

Ventilation facilities located along the tunnel alignment between the underground stations are called mid-tunnel ventilation structures. Features include fans, vent shafts, and associated facilities. The facilities operate primarily to exhaust air in and out of the tunnel in case of emergency. Periodic testing of the facilities is required to ensure their proper operation. The mid-tunnel ventilation facilities include an above ground structure, or headhouse, that houses the equipment and an underground vent shaft that connects the structure to the tunnel.

These ventilation shafts would function during regular tunnel maintenance, system testing and emergency situations, as described below.

Tunnel Maintenance

Ventilation shaft fans would be used to ventilate the tunnel segment if and when a diesel-powered vehicle is being used for maintenance within the tunnel. This precaution is needed to meet OSHA clean air working environment requirements.

Frequency: One to two times per month
Duration: Two to four hours at a time (Maximum 8 hour shift)
Hours: Between 2 a.m. and 4 a.m., while trains are not in service

System Testing

Each fan would be turned on for a short duration to confirm operations. These tests would be performed one fan at a time.

Frequency: Once every four to six months
Duration: Five minutes at a time
Hours: During daytime hours

Emergencies

In the case of an emergency, ventilation shaft fans would be supplying air to tunnels or ventilating the tunnel of smoke or fumes. Although maximum fan use would be applied during an emergency situation, design criteria would ensure that ventilation fan noise would be in compliance with noise levels indicated in VTA's certified Environmental Impact Report.

Ventilation Structure Size

The area required to accommodate a facility is approximately 110 by 160 feet with the equipment housed in a structure approximately 90 by 140 feet in size and 25 feet in height. Each ventilation structure's configuration and design are dependent on the specific site and location along the tunnel segment and corresponding surface environment.

Ventilation Structure Noise

The following table indicates predicted noise levels that would be emitted from a ventilation shaft, based on distance from the source.

Distance from Source	Maximum Noise Level	Comparison Noise Level
Within 50 feet	55 dBA	Normal voice
At 250 feet	47 dBA (heard from outdoors)	Running refrigerator
Beyond 250 feet	Fan noise from ventilation structure would be lost in background noise	