

The bored tunnel will have two lanes in each direction with shoulders on each side.

Public safety a top priority in bored tunnel

WSDOT, King County and the City of Seattle plan to replace the central waterfront portion of the Alaskan Way Viaduct and Seawall with an approximately 2 mile-long deep bored tunnel beneath downtown, a new waterfront surface street, transit investments, and downtown waterfront and city street improvements.

The new SR 99 bored tunnel will provide many safety benefits for drivers. In a natural disaster or other emergency situation, tunnels can be one of the safest places for travelers. The viaduct's bored tunnel replacement will also be equipped with many safety features, including state-of-the-art ventilation, fire detection and suppression, and lighting systems.

Tunnels are built to be safe during natural disasters.

Geotechnical and structural engineers agree that tunnels are one of the safest places to be during an earthquake. This is because ground movements below the surface are much smaller than the amplified movements above the surface. The tunnel will be designed and built to current seismic standards, which require structures to withstand a severe earthquake with a probability of occurring only every thousand years.

In the event of a tsunami, the south entrance to the tunnel will be designed to prevent possible flooding. The concrete lining of the tunnel will also have special gaskets that will prevent groundwater seepage. The tunnel will be equipped with a state-of-the-art drainage system with pumps to remove water from fire sprinklers, runoff from vehicles or surface water that enters the tunnel.

Safety features are built into the tunnel's design.

Both levels of the tunnel will include outside shoulders to allow disabled vehicles to safely stop and to improve access for emergency vehicles. Inside shoulders will provide increased sight distance. Two 12-foot travel lanes ensure adequate space for even the largest highway trucks.

Secure waiting areas between the tunnel's levels, also known as safe refuge areas, and emergency exits will be provided by an enclosed walkway that will run the tunnel's entire length and lead to the surface at both ends. Access to the refuge area and walkways will be provided at least every 650 feet. In the event of a fire or other emergency, travelers will walk along the shoulders to reach the doorways into the refuge area. Staircases inside the refuge area will provide access between the roadway levels. Signs will point travelers to the nearest exit where they will wait for assistance in a refuge area or walk out of the tunnel. Surveillance cameras will also monitor the tunnel and the

Other central waterfront fact sheets include:

- All tunnels are not the same: SR 99 deep bored tunnel vs. the waterfront tunnel
- Comparison of the Big Dig and the Alaskan Way Viaduct and Seawall Replacement Program
- Learning and listening: How the bored tunnel recommendation was developed
- Learning from local and international tunnel projects



For More Information:

Visit the Web site at:

www.alaskanwayviaduct.org

Call the hotline:

1-888-AWV-LINE

Send an e-mail to:

viaduct@wsdot.wa.gov

Send a letter to:

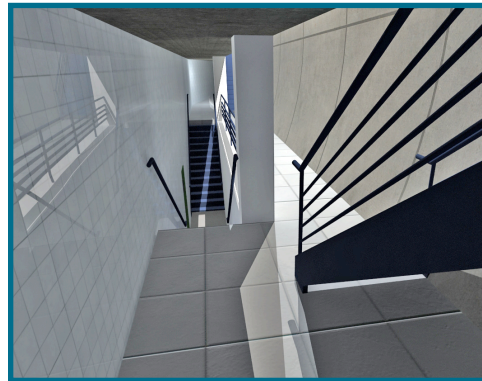
Alaskan Way Viaduct and Seawall
Replacement Program
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exit areas at all times. Refuge areas will contain emergency telephones and will be continuously monitored by tunnel staff in the tunnel control center.

A tunnel control center will provide continuous monitoring.

The tunnel roadways, walkways, and refuge areas will be continuously monitored by closed circuit television cameras. State-of-the-art smoke detectors, air quality monitoring equipment and video cameras will provide real-time information to operators at WSDOT's 24-hour control center and allow them to respond quickly to changing conditions and emergencies. The center will also have direct lines to the Seattle Fire Department, Police Department, and other emergency responders.



Emergency staircases will allow travelers to exit between levels in the event of an emergency.

The tunnel will use the latest in ventilation and sprinkler technology.

The SR 99 bored tunnel replacement will include the latest technology in ventilation and fire protection systems. Smoke, fire, heat and exhaust gas monitoring systems coupled with video cameras will allow continuous detection of hazardous conditions in the tunnel and allow for rapid response of both sprinkler systems and emergency fan systems.

Two independent power sources will ensure a reliable source of electricity. Backup power systems will also be provided for essential tunnel systems at all times.

In addition to these features, we are developing emergency response plans that will be incorporated into the tunnel's design and operation as required. By preparing for emergencies and by being designed to withstand natural disasters, the bored tunnel will be safe for the traveling public.

Americans with Disabilities Act & Title VI information

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