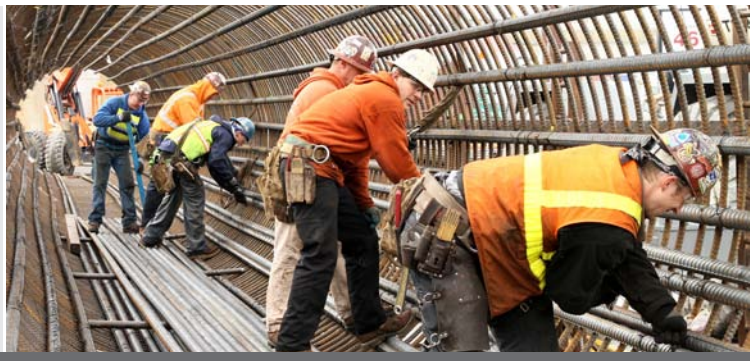
Alaskan Way Viaduct
REPLACEMENT
PROGRAM



August 2013

The SR 99 tunnel will include safe evacuation routes for travelers.

Overhead electronic signs will provide advisory messages.

Public safety a top priority in SR 99 tunnel

The SR 99 tunnel will be a safe place for travelers. Engineers are designing the tunnel to withstand an earthquake, flooding or other disaster. The tunnel will also include state-of-the-art ventilation, fire detection and suppression, security and lighting systems.

SR 99 tunnel safety features

Safe travel lanes
Two 11-foot travel lanes with an eight-foot safety shoulder and a two-foot shoulder in each direction will ensure enough space for all vehicles and legal size trucks. Long, gentle curves will allow for safe sight distances.

Tunnel control center
The tunnel will have a 24-hour control center that allows quick response to changing travel conditions and emergencies. State-of-the-art control systems will provide real-time information to WSDOT's tunnel operators. The control center will have direct lines to the Seattle Fire Department, Police Department and other emergency responders.

Fire
Tunnel sprinklers will help the fire department fight fires in the tunnel and keep the temperature down, while ventilation systems remove smoke. The tunnel will be equipped with cameras that will verify the location of fires in the tunnel. There will also be fire extinguishers located throughout the tunnel.

Incident response
Real-time traffic technology will minimize delays caused by collisions, stalled vehicles or other similar disruptions in the tunnel. If a collision occurs, incident detection systems will allow tunnel operators to view and respond to the incident. If one lane of the tunnel is blocked, overhead electronic signs would quickly close the lane to travelers, and variable speed limit signs would maximize traffic flow through the open lanes. Emergency vehicles would then enter the tunnel and remove the disabled vehicles.

Emergency exits and refuge areas
Safe and effective evacuation routes will be provided for motorists. Enclosed emergency walkways, which will have independent ventilation and fire control systems, will run parallel to both traffic levels in the tunnel. The walkways will be separated from the tunnel's roadways by concrete walls and fire-resistant doors.

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For more information

Visit the website at:
www.AlaskanWayViaduct.org

Call the hotline:
1-888-AWV-LINE

Send an email to:
viaduct@wsdot.wa.gov

Send a letter to:
Alaskan Way Viaduct
Replacement Program
c/o Washington State
Department of Transportation
999 Third Ave., Suite 2200
Seattle, WA 98104

Access to the walkways will be provided about every 650 feet. In an emergency, travelers would walk along the shoulders to reach an emergency doorway and a safe refuge area. A flight of stairs will connect the refuge area to the emergency exit walkway and the non-affected level of the tunnel.

Travelers unable to evacuate using the stairs would be protected by staying in the safe refuge areas, which will be equipped with fire-rated doors and lighting, ventilation and fire suppression systems. Refuge areas will also be monitored by cameras, provided with an emergency phone, and will be large enough to accommodate several people, including those with wheelchairs. Fire, police or WSDOT incident response vehicles would be dispatched to help those waiting in the refuge areas.

Additional tunnel safety systems

- *Air monitoring and ventilation:* The ventilation system will measure and reduce the levels of harmful vehicle emissions in the tunnel.
- *Emergency power:* Two independent power sources will ensure a reliable source of electricity. Generator systems will be provided for safe tunnel closure and the maintenance of critical systems during a regional power failure.
- *Emergency notifications:* In the event of an emergency, electronic signs, public address and AM/FM rebroadcast systems will provide advisory messages.

Tunnels are built to be safe during natural disasters

Earthquakes

Geotechnical and structural engineers agree that tunnels can be designed as one of the safest places to be during an earthquake.

The SR 99 tunnel is being designed to withstand an earthquake that only happens every 2,500 years on average (in the range of a 9.0 on the Richter scale) without collapsing.

Rising sea levels and tsunamis

The Seattle Department of Transportation is designing the Elliott Bay seawall replacement to protect waterfront facilities, such as the SR 99 tunnel, against sea level rise and moderate storm surges.

In the event of a tsunami, it is highly unlikely that a wave would overtop the seawall and reach the tunnel. WSDOT and the City of Seattle found this could only happen during a very high tide - a combination of events estimated to occur only once every 6,000 to 24,000 years. Washington's early warning system and the tunnel's real-time traffic technology would allow us to restrict traffic from entering the tunnel during a tsunami. If necessary, drains and pump systems would help to quickly remove any water from the tunnel.

Americans with Disabilities Act & Title VI information

Americans with Disabilities Act (ADA) Information: This material can be made available in an alternate format by emailing the WSDOT Diversity/ADA Compliance Team at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

Title VI: WSDOT ensures full compliance with Title VI of the Civil Rights Act of 1964 by prohibiting discrimination against any person on the basis of race, color, national origin or sex in the provision of benefits and services resulting from its federally assisted programs and activities. For questions regarding WSDOT's Title VI Program, contact Jonté Sulton at 360-705-7082 or SultonJ@wsdot.wa.gov.