

The Bored Tunnel Hybrid Alternative

Frequently Asked Questions

about the preferred solution to replace the Alaskan Way Viaduct

On January 13, 2009 **Governor Gregoire, King County Executive Sims, Seattle Mayor Nickels and Port of Seattle CEO Yoshitani** announced their recommendation to replace the central waterfront portion of the Alaskan Way Viaduct and Seawall with a **Bored Tunnel Hybrid Alternative**.



Governor Gregoire announcing the Bored Tunnel Hybrid Alternative is the preferred replacement solution.

A Stakeholders Advisory Committee,

composed of diverse business, labor, environmental and neighborhood interests, helped forge the consensus (nearly unanimously) after dozens of public meetings and hundreds of hours of review with the three-agency project team. The decision was reached through **compromise** and through a process that included divergent interests and agendas, which were openly discussed and extensively debated. Each stakeholder gave something up to support the alternative, but once the project is complete everyone stands to gain far more than what they gave.

What is the Bored Tunnel Hybrid Alternative?

The Bored Tunnel Hybrid Alternative combines the best elements of the surface street options with a bored tunnel. It is a **'Grand Compromise'** that accomplishes what other hybrid scenarios cannot. It maximizes **new open-space** on the waterfront, preserves **throughput**, **reduces construction and operating impacts** to businesses and residents, increases **transit service**, **creates jobs** and provides a **long-term return on investment** at a **reasonably affordable price**.



Newly restored waterfront
(Viaduct Project Team Simulation)

Other Frequently Asked Questions

- ***How does the Bored Tunnel Hybrid Alternative differ from the cut-and-cover tunnel Seattle voters rejected in a 2007 advisory election?***

The two tunnels could not be more different. The bored tunnel will be stacked with two lanes in each direction and will be constructed under First Avenue at a depth of 30 to 200 feet below the surface. The previous cut-and-cover tunnel was stacked with three lanes in each direction and would have been constructed along the waterfront at a depth of 10 feet below the surface.

Bored tunnel construction will take 4 ½ years and the Viaduct can stay open to traffic while it is being built, thus limiting the impact to adjacent businesses and residents.

In contrast, the previous cut-and-cover tunnel would have taken at least 7 years to build, and would have put the Viaduct out of commission for at least 3 ½ years, causing major impacts to the waterfront and surrounding area.*



* = WSDOT presentation to State Senate Transportation Committee, Jan 26, 2009

• **How does the Bored Tunnel Hybrid Alternative differ from the 'Big Dig' in Boston?**

The Big Dig was one of the largest engineering projects in world history and has next to nothing in common with this project. As Governor Gregoire said: "They tried to move the world...we're trying to keep the world in place." The Big Dig included a very disruptive cut-and-cover tunnel through the central city under an existing roadway and two subway lines, a new cable-stayed bridge over the Charles River, and two sets of immersed tubes under the harbor to the airport in very challenging soil conditions. * Nearly a third of the project costs went to extensive traffic management and construction mitigation. Moreover, the initial cost estimate did not account for inflation, risk or escalation and the lead agency abdicated management to a virtually unaccountable consortium.

	Bored Tunnel & South End Project	Big Dig Projects
Total Project Length	2.8 miles	8 miles
Number of tunnels*	1	3
Length of tunnels*	2 miles	5 miles
Total lane miles	12.8 miles	>161 miles

*Boston Big Dig tunnels included cut-and-cover, immersed tubes, jacked tunnel and other special tunneling methods.

This chart demonstrates the enormous differences between the two projects. *



Not even close to this

In contrast, the Bored Tunnel Hybrid Alternative will have minimal impacts on existing traffic, downtown and the waterfront, and WSDOT will strongly assert itself as the project owner using state-of-the-art cost estimates that account for risk, contingency and escalation. Also, it's important to remember that over 150 tunnels have been built in Seattle since 1890, mostly in glacial soils. Unquestionably, we have the tools and expertise to do this project.

• **How safe is a Bored Tunnel in an earthquake?**

The Bored Tunnel Hybrid Alternative will be very safe in any disaster situation. It will have improved lane and shoulder widths, modern fire protection safety equipment and plenty of emergency exits. And it's a fact that tunnels actually perform better in earthquakes than bridges. Structural engineers agree that tunnels are one of the safest places to be during an earthquake because a tunnel moves with the earth. In 1989, the BART tunnel in San Francisco reopened just hours after the devastating Loma Prieta earthquake, while elevated structures like the Cypress freeway collapsed or were disabled in other ways.

• **How will the Bored Tunnel Hybrid Alternative meet the needs of people north and south of Seattle who rely on this corridor to get to work and to move their products?**

The Bored Tunnel Hybrid Alternative will maintain capacity and today's travel times for trips through downtown. When it opens, the tunnel will carry 85,000 vehicles through downtown Seattle each day (with room to grow). Surface Alaskan Way will carry another 25,000 vehicles per day. In-city trips will take advantage of new investments in local streets, and new transit service will carry 17,000 additional daily riders, primarily serving northwest and southwest Seattle. Improvements to I-5 will also expand north-south vehicle capacity and improve travel times.*



View of the waterfront (Viaduct Project Team Simulation)

Further design work must be done to ensure the freight, commercial and commuter needs of Ballard and the rest of northwest Seattle will be served by the deep bore tunnel and related surface improvements.

* = WSDOT presentation to State Senate Transportation Committee, Jan 26, 2009

- ***How will we pay for it and who is responsible for any potential cost overruns?***

The looming state budget shortfall has understandably made everyone cost-conscious. It is important to note that the January 13th Letter of Agreement caps the state contribution at \$2.82 billion and ensures that all parties have some 'skin in the game', including King County, the Port of Seattle, the City of Seattle and many regional businesses and residents who will be key contributors in a variety of funding programs. For a more detailed breakdown of costs and responsible parties click [here](#).

- ***How will the Bored Tunnel Hybrid Alternative help the state economy?***

The Bored Tunnel Hybrid Alternative provides one of the best long-term returns on investment for our economy and our environment. Our top economists say it will provide up to \$2.7 billion in regional economic benefits and will pay for itself in the next 10 to 20 years. Moreover, it will keep the economy moving. It provides some of the fastest travel times, has the fewest construction impacts and can be built for the most part while the existing viaduct continues to move traffic, thereby minimizing the enormous costs of construction and mitigation to surrounding residents and businesses. In addition, the project is expected to maintain and create 10,000 jobs each year over the course of the project.



View from the waterfront
(Viaduct Project Team Simulation)

- ***How will the Bored Tunnel Hybrid Alternative benefit the environment?***

The Bored Tunnel Hybrid Alternative will provide a world class open-space that is a welcoming place for pedestrians, bicycles, transit and vehicles. It will eliminate noise, shadowing and view blockage from the existing Viaduct, reduce surface-water runoff, and provide a memorable place for people to live, work and play. The project plan also includes a 25% increase in transit (a million more hours of transit per year) that will provide more transportation choices to a broader segment of the region's population.

- ***How did the Bored Tunnel Hybrid Alternative emerge as a viable solution?***

The deep-bore option was not the one that was recommended to the stakeholders by the government planning team as the stakeholders came to the final hour of their deliberations. It was a recommended option that emerged instead from the stakeholders themselves based on their judgments regarding the data, including costs and benefits, and the different perspectives each stakeholder brought to the table.

In the end, not everyone agreed, but remarkably most stakeholders reached something that has not been achieved during the eight years since the viaduct was shaken by the Nisqually quake: a broad-based consensus about a positive path forward.



View from the waterfront
(Viaduct Project Team Simulation)

The Bored Tunnel Hybrid Alternative is a viable, achievable project that makes financial sense and meets the broad range of guiding principles that were established to judge alternatives. It is time for us all to advance this consensus decision forward and leave the chance and risk for further delay and political deadlock behind. Please support the Bored Tunnel Hybrid Alternative.

* = WSDOT presentation to State Senate Transportation Committee, Jan 26, 2009