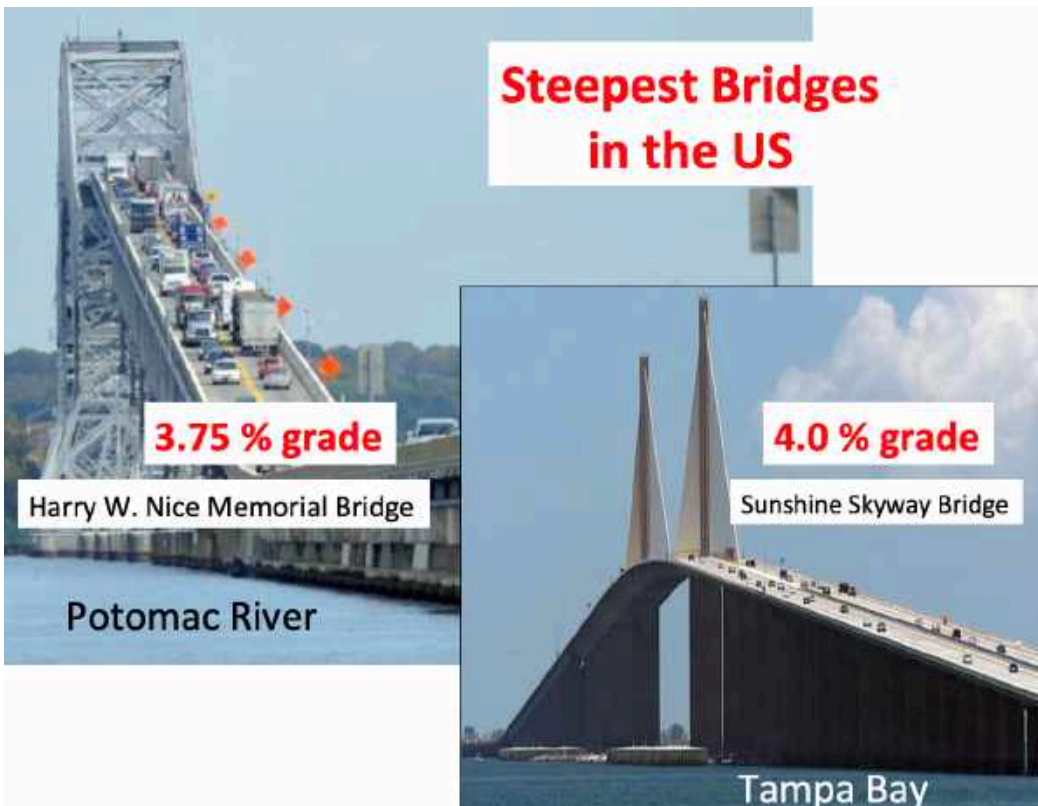
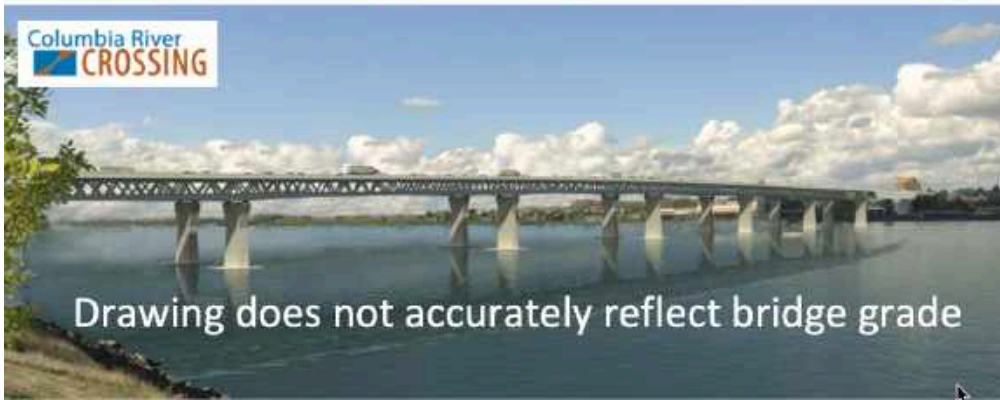


A new I-5 Columbia River High Bridge will be one of the steepest in the US. Its severe grade and local weather will also make it one of the most dangerous.



The 205 Bridge is the 8<sup>th</sup> most dangerous bridge in the country. Wind, fog, rain, and black ice combined with bridge grade and curves generated 124 accidents in 2019.

<https://katu.com/news/local/numbers-show-glenn-jackson-bridge-a-hot-spot-for-accidents>

A new I-5 High Bridge will have the same weather, similar curves, and a steeper grade making it **potentially more dangerous** than the 205 bridge.

**8<sup>th</sup> most dangerous bridge\***

North  
2.5% grade

INTERSTATE  
**205**

SUV hit a patch of ice  
plunges into the  
Columbia River  
Feb. 2021

One accident every three days  
124 accidents in 2019

North & South  
3.8% grade

INTERSTATE  
**5**

**more dangerous bridge**

\*Go Safe Labs  
Review of 2019 Accident Data

**BLACK ICE**

- VERY HARD TO SEE
- SLICK CONDITIONS
- ESPECIALLY ON BRIDGES/OVERPASSES

*Fog*

*Wind*

*Rain*

**Hydroplaning**

In February 2021 an ice storm shut down I-84. An SUV hit black ice and skidded off the 205 Bridge into the Columba River.



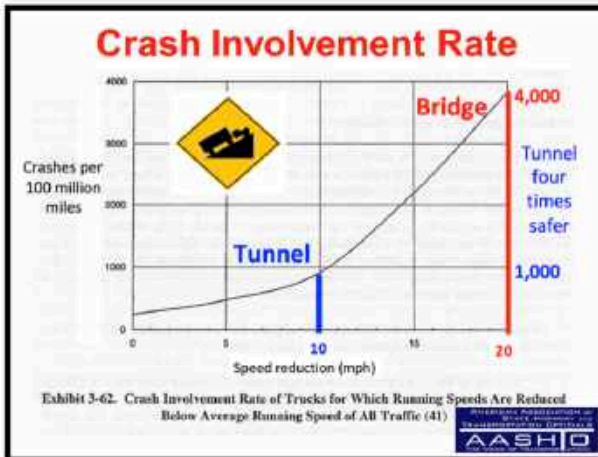
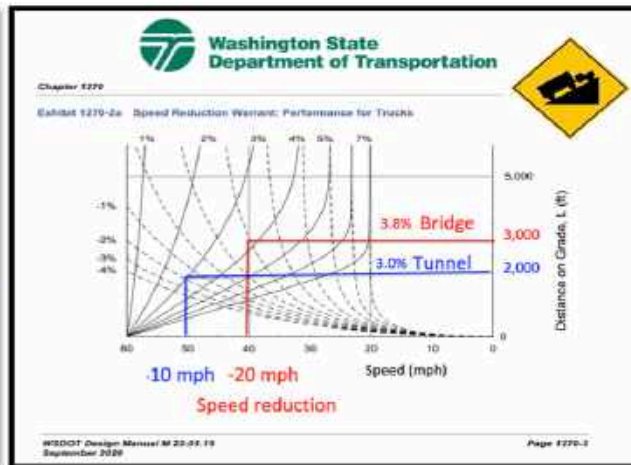
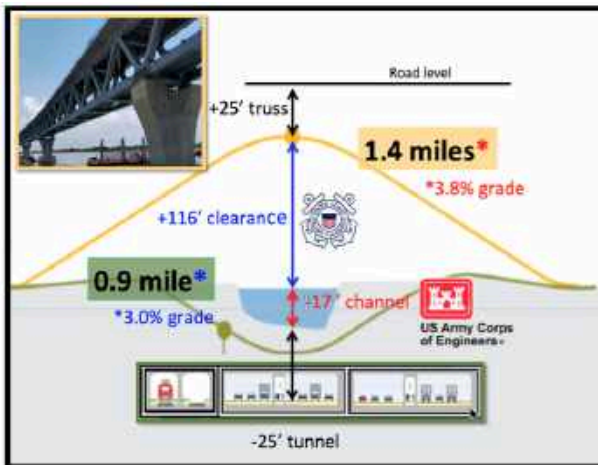
An Immersed Tube Tunnel (ITT) will be protected from the weather, have no curves, and have half as long a grade.



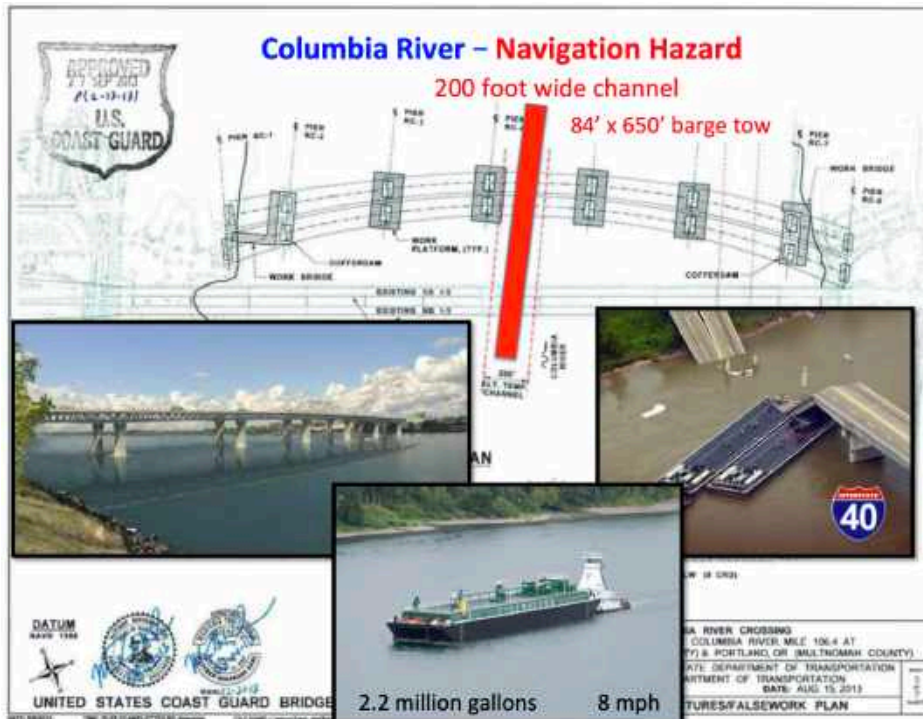
An Immersed Tube Tunnel (ITT) will have **half the effective grade** of a High Bridge.

A WSDOT graph shows trucks will slow by 20 mph on a High Bridge but only 10 mph in an ITT.

An American Assoc. of State Highways (AASHTO) graph shows an ITT slowing of only 10 mph would be **four times safer** than a bridge.



A during construction a bridge will require massive cofferdams that will narrow the navigation channel to only two hundred feet. Six piers will support a High Bridge and be **permanent navigation hazards**.



Bridge construction is almost twice as dangerous for workers. The workers compensation insurance rate reflects the **risk of injury or death** during construction.



An ITT is safer during construction. It is also many times safer than a bridge for vehicle and river traffic. **How many injuries and lives could be saved in the next hundred years?**



Trelleborg - How to build an immersed tunnel  
<https://www.youtube.com/watch?v=2Xkyyc9PIQA>

Trip through Tingstad Tunnel, Gothenburg  
<https://www.youtube.com/watch?v=KoEBbmeccd88>

Trip through Marieholm Tunnel before its Dec. 16 opening, Gothenburg  
<https://www.youtube.com/watch?v=BT9s2Pf9Wms&feature=youtu.be>

Construction of the Marieholm Tunnel, Gothenburg  
<https://www.youtube.com/watch?v=2kcAIBFCz8w&feature=youtu.be>

Launch of the Marieholm Tunnel elements, Gothenburg  
<https://www.youtube.com/watch?v=JC4mRlgwXU0>

Elizabeth River Tunnel, Norfolk, VA.  
<https://www.youtube.com/watch?v=NsNBdPFMuQY>

George Massey Crossing Tunnel Concept, Vancouver, Canada  
<https://www.youtube.com/watch?v=8At88ti-yFA>

Immersion Tunnel Coatzacoalcos by Volker Construction International, Mexico  
<https://www.youtube.com/watch?v=VFWkoZMja0k>

DERSA - Santos Guarujá Immersed Tunnel Project, Brazil  
<https://www.youtube.com/watch?v=du8KZob7Pkw>

Busan-Geoje Fixed Link in South Korea  
<https://www.youtube.com/watch?v=-aykpUulHJo>



**Immersed Tube Tunnel  
better than a  
New High Bridge**