

# Bob Ortblad MSCE, MBA

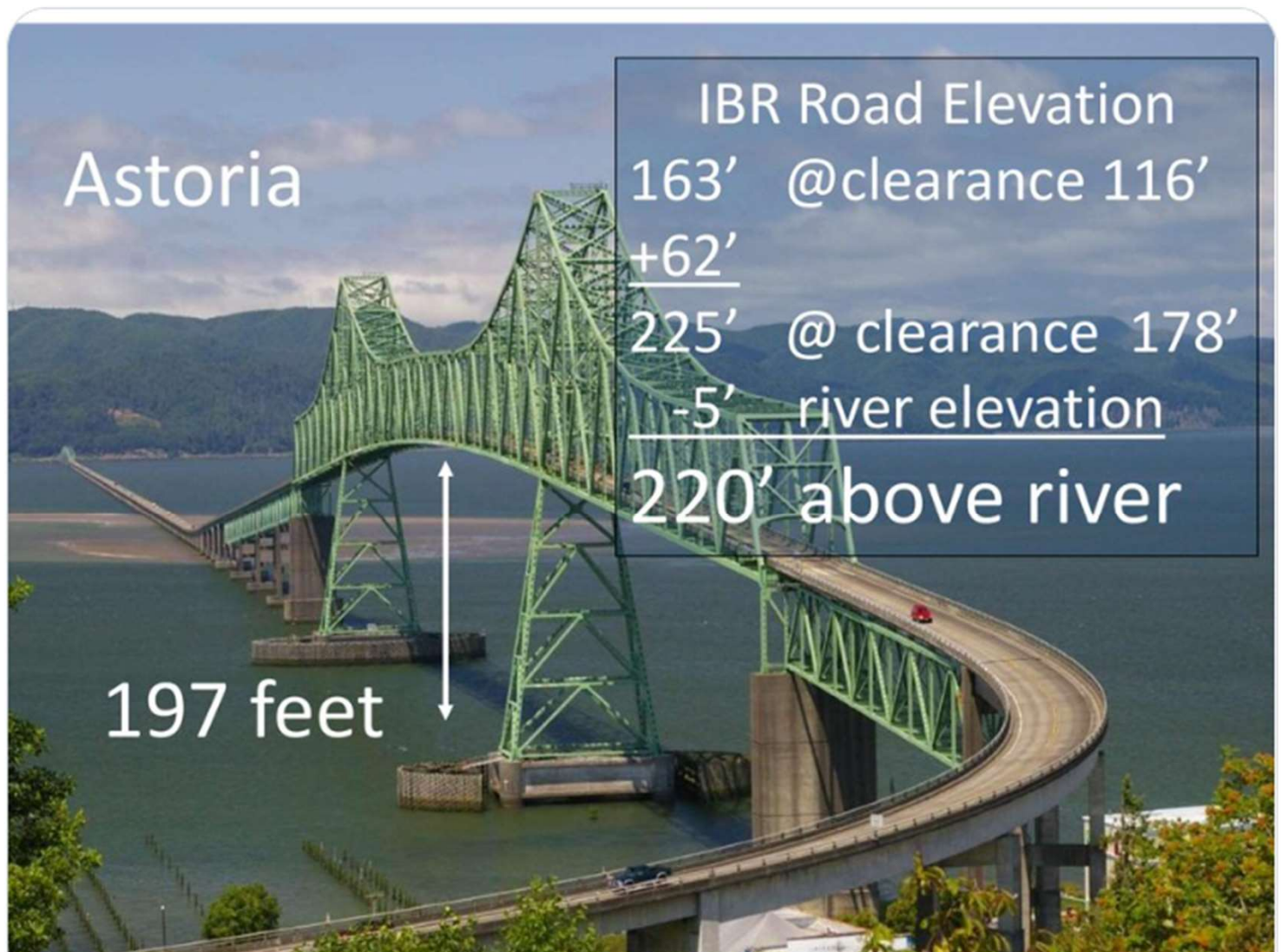
An I-5 Bridge with a USCG require 178-foot clearance will be higher and more frightening than the Astoria Bridge.

Imagine 150,000 vehicles/day making this climb.

Immersed Tunnel best option

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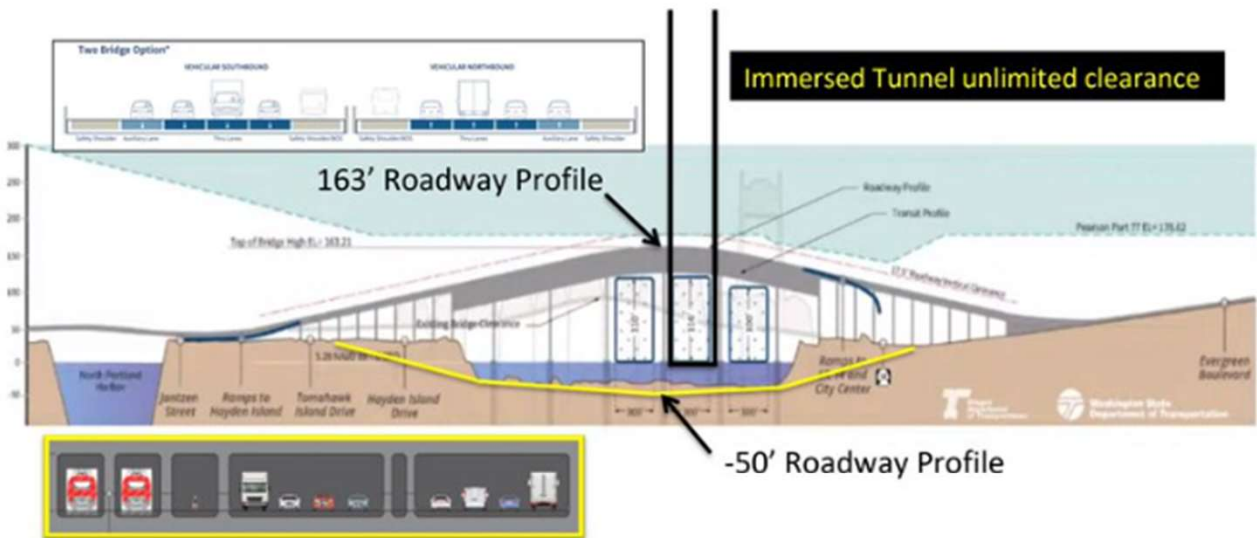


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IBR's has new bridge alignment, moved primary channel near center of river.

Immersed Tunnel has; half total grade, one channel, better navigation, no piers, unlimited clearance, and better connections to SR-14 & Hayden Island

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Columbia River bascule bridge at twice its size is not engineering / economic feasible

175' vs 300' channel

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Tampa Bay has steepest interstate bridge 4%, but never black ice

New High I-5 Bridge at 3.99% has potential black ice 6 months/year & will be a killer

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