From: Keith Seinfeld
To: AWV SDEIS Comments;
CC:
Subject: Viaduct seawal - tsunami and climate change scenarios
Date: Monday, August 07, 2006 4:35:56 PM
Attachments:

I-650-001

Hi -
I've been wondering if your engineers have discussed how a tunnel (or an elevated viaduct for that matter) would withstand rising sea levels and a minor tsunami.
Global warming/climate change scenarios show sea levels could rise a lot in the next century. Anywhere from six inches to two feet is considered fairly likely. And beyond the year 2100, it's possible we'd see as much as a 6 foot rise.

How would the new seawall/tunnel do on high-tide if sea level is 2 feet higher? Would the seawall be higher than the current one? Would it be water tight if we got a minor tsunami in Elliot Bay?

Thanks
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Keith Seinfeld
2601 4th Avenue, #150
Seattle, WA 98121
T/206-922-1024

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Tsunamis generated by earthquakes of sufficient magnitudes and specific types are rare events. Tsunamis that could adversely affect the Seattle waterfront are extremely rare. In fact, in the last 6,000 years, only one tsunami is known to have occurred with waves of sufficient height to overtop the Seattle seawall. To top the Seattle seawall, this tsunami would also have had to occur during the short time that the sea level happened to be at mean high tide or greater. Taking into account the short timeframe during which the water level would be at or above mean high tide on any given day, we reached the conclusion that a tsunami that could affect a future waterfront tunnel would be so improbable that it could only happen approximately every 60,000 years. This is well beyond the tunnel earthquake design standard and way outside the standard limits applied to civil engineering design. This finding is based on inundation maps produced by the National Oceanic and Atmospheric Administration (NOAA) following computer modeling of maximum credible tsunamis in Puget Sound.