

9688 Rainier Avenue S.  
Seattle, WA 98118

May 28<sup>th</sup>, 2004

Washington State DOT  
Attn: Ms. Allison Ray  
999 3<sup>rd</sup> Avenue, Suite 2424  
Seattle, WA 98104

Re: Alaskan Way Viaduct & Sea-Wall Replacement Project  
DEIS  
Comments

Dear Sir/madam:

I-091-001

The Alaskan Way Viaduct rebuild option will have a capacity of some 133,000 ADT along with a surface street capacity of about 10,000 ADT. Over a 20 year life, typical for a simple road user benefit analysis (albeit this is really a structure with an assumed 50-year life) the per vehicle cost, at \$3.2 billion, is in the order of \$0.33 per vehicle.

For a tunnel, bypass or otherwise, the ADT ranges from 138,000 to 143,000 with costs at a minimum ranging from \$3.1 billion to \$3.8 billion. These costs over the same 20-year interval are \$0.32 to \$0.27, excluding the costs of ventilation and illumination. The latter are both electricity based and the annual cost of that commodity is huge.

I-091-002

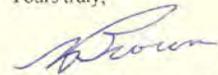
Continuing, in any tunnel option the motorist is denied access to air and light. Even worse, as demonstrated by the cross-Alps tunnel in northern Italy, a fire in a tunnel has deadly consequences. An earthquake in a below sea-level tunnel would be even more problematical. This is compounded since earthquakes are always accompanied by fire.

Any option that even blithely considers a tunnel must be deleted from all further consideration as adverse to the public health, safety and welfare. Life is far too dear to seriously consider such a foolish option. Moreover, the Risk Office of the Office of the Attorney General needs to have greater input since such foolishness will induce tort claims from any motorist who is adversely impacted. That cost is unstated in the DEIS.

I-091-003

Finally, since the most reasonable alternative in terms of cost and capacity is the "Rebuild" option, and since much has been said about its amenity to Seattle, why not include a 20-foot wide "boardwalk" along the upper level of the viaduct so that pedestrians, cyclists and others may have a spectacular and totally unimpeded view of the waterfront from that height. This view is not available with any other option.

Yours truly,



Christopher V. Brown, P.E.

### I-091-001

Costs are an important consideration in selecting an alternative but are not the only factor. Maintenance and operation costs, including electricity, are included in the costs presented in the Final EIS.

### I-091-002

FHWA, WSDOT, and the City of Seattle appreciate receiving your comments. Any tunnels that are constructed for this project will contain a fire suppression system.

The preferred Bored Tunnel Alternative is a safe alternative. Generally, structural engineers agree that tunnels are one of the safest places to be during an earthquake, because the tunnel moves with the earth. No Seattle tunnels were damaged during the 2001 Nisqually earthquake, including the Mt. Baker and Mercer Island I-90 tunnels, Battery Street Tunnel, Third Avenue Bus Tunnel, and Burlington Northern Tunnel.

The bored tunnel would be built to current seismic standards, which are considerably more stringent than what was in place when the viaduct was built in the early 1950s. The bored tunnel design includes improving relatively soft, liquefiable soils found near the south tunnel portal. Emergency exits would be provided every 650 feet in the tunnel. Project engineers have studied current data on global warming and possible sea level rise and concluded that the seawall provides enough room to protect the tunnel from rising sea levels. The engineers also considered the possible threat of tsunamis during the design process.

### I-091-003

FHWA, WSDOT, and the City of Seattle appreciate receiving your comments on the Rebuild Alternative. After studying several retrofitting concepts, the lead agencies found that rebuilding the viaduct would not be a cost-effective, long-term solution that adequately addresses the risks to public safety and the weakened state of the viaduct. Elements of

the Rebuild and Aerial Alternatives were incorporated into the Elevated Structure Alternative, which was analyzed in the 2006 Supplemental Draft EIS and the Final EIS. Because the project has evolved since comments were submitted in 2004, please refer to the Final EIS for current information.

Including a view-oriented boardwalk on the upper deck of the proposed elevated structure would be prohibitively expensive and would add to effects like shading and view obstruction. As a transportation facility, an elevated bicycle/pedestrian facility would require grades of well over the 5% percent specified in AASHTO guidelines and would be separated from the many amenities and connections found at ground level along the waterfront. Because the project has evolved since comments were submitted in 2004, please refer to the Final EIS for current information.