

**TESTIMONY OF**

Daniel Paul de Gracia II, Concerned Citizen

**BEFORE THE**

House Committee on Transportation  
Chair, Speaker Emeritus Joseph M. Souki  
Vice Chair, Scott Y. Nishimoto

**IN CONSIDERATION OF THE MEASURE**

HCR3 / HR4 "REQUESTING THE UNITED STATES DEPARTMENT OF TRANSPORTATION TO EXAMINE THE FEASIBILITY OF CONSTRUCTING A SUBMERGED VEHICULAR TUNNEL UNDER PEARL HARBOR CONNECTING THE EWA PLAIN TO DOWNTOWN HONOLULU."

Wednesday, February 27, 2008

Conference Room 309, 9:45 am

*Single copy transmitted electronically to TRNtestimony@capitol.hawaii.gov*

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**Chair Souki, Vice Chair Nishimoto, Honorable Members of the Committee:**

The purpose of these measures is to request the US Dept. of Transportation (DoT) to conduct a feasibility study regarding the construction of a submerged vehicular tunnel from Pearl Harbor to Ewa, which shall include:

- (1) Estimates of the cost of planning, designing, and construction for the proposed route of the submerged vehicular tunnel;
- (2) An estimated time-line for the planning, designing, and construction for the proposed route of the submerged vehicular tunnel;
- (3) Estimates of the tunnel's various impacts, including reductions in travel time; and
- (4) Comments and recommendations from the Department of the Navy.

I support the intent of these resolutions on the basis that as a former resident of Hampton Roads, Virginia, I have used a system similar to what is being proposed by the Representative of the 42<sup>nd</sup> District for use between Pearl Harbor and Ewa, the Chesapeake Bay Bridge-Tunnel (CBBT). At a length of 17.6 miles from shore to shore and recently upgraded to four lanes wide, the tunnel runs approximately 25 to 100 feet underwater and was financed by the Chesapeake Bay Ferry

Commission which sold \$200 million (1960 dollars) in toll revenue bonds to investors, upon which construction began in early 1964.

The construction of the CBBT is praiseworthy when one considers that the Atlantic Ocean is one of the most turbulent bodies of water in the world. The CBBT was completed in 3.5 years, upon which time it was nominated by the American Society of Engineers (ASCE) as "One Of The Seven Engineering Wonders Of The World." Considering the fact that this tunnel was constructed with slide rule technology and the comparatively primitive materials and resources of the mid twentieth century, the CBBT really was a world wonder for the time.

I mention the CBBT's success because there is no real reason why, in the twenty-first century, in our age of laptop-sized supercomputers and nanotechnology why we cannot safely construct and operate a similar system here on Oahu.

One of the first reservations I have observed people to have against construction of a tunnel is that they say "Don't you know this is an island? We can't do that kind of stuff here." As a matter of fact, we can and already have done that "kind of stuff here" - a military tunnel runs from the Commander, Pacific Fleet Headquarters Building (COMPACFLT) at Makalapa to Pacific Command Headquarters Building (COMPAC) at Camp Smith.

The second reservation that I have observed is that people actually believe that the tunnel will be a long series of concrete tubes laid down on the seabed, fully exposed, so that at any given time, a ship's hull might ram into it and crack the eggshell-like walls, flooding the interior and killing everyone inside. That is incorrect. In general, such a tunnel would be constructed by first dredging a trench through the seabed, followed by the insertion of concrete tube sections, and the top of the tunnel would be protected from impacts by shipping traffic by laying large rocks on top of the trench. The tunnel system is completely safe.

The third reservation that I have observed is that people claim that all it will take is one accident to occur in the tunnel, everyone will die. That, again, is incorrect. During my time in Virginia, there were numerous accidents inside the CBBT including a large delivery truck that caught on fire, and at no time was the collective safety of all commuters passing through the tunnel placed at risk. As a case in point, I drove through the CBBT during the incident where the

truck caught on fire - and quite obviously from the presence of this testimony, I am not fish food but am alive and well. Again, that tunnel was designed using 60s era technology. A tunnel designed in today's modern era would have better safety systems and be more resistant to damage than existing legacy tunnels.

The fourth reservation that I have observed is that people say, "How are we going to pay for a submerged tunnel?" That question is worth answering with another question: "How is Honolulu going to pay for the Steel on Steel technology rail system?" Where were the people who complain about cost when that white elephant was being birthed? In my estimation, construction of a submerged tunnel between Pearl Harbor and Ewa could be accomplished at far less cost both in construction and maintenance than the proposed rail system.

The fifth and final reservation that I have observed is that people say that the tunnel could be used by terrorists to detonate a nuclear device underneath Pearl Harbor, effectively crippling the Pacific Fleet. This reservation really lacks intelligence or understanding of the nature of thermonuclear weaponry. To begin, an individual wishing to destroy Pearl Harbor with a nuclear weapon would have a greater success at crippling the Pacific Fleet by piloting a small commercial aircraft at an altitude of 10,000 feet or higher to produce an airburst-type detonation which would cause considerably more initial damage through combined thermal, overpressure, and electromagnetic effects and prolonged area denial due to neutron-induced activity than a subsurface detonation which would largely cause seismic damage in the immediate and fallout damage in the long-term. In either case, the point is extremely moot since a nuclear device can be detonated anywhere, causing massive damage anywhere it is used.

Members of the Committee, I hope you will agree with me that a tunnel is not only feasible, but that it is desperately needed for our island. I ask that you would please graciously pardon the shrillness of my words, but understand that this extreme frustration stems from the fact that traffic relief for Oahu is something that we cannot continue to overlook. I really enjoy living in Hawaii and I am proud to be a resident of this State, but frankly members, this place feels like a third world country when it comes to the way we handle affairs and the way we do business. I really do not understand what the problem is here. We need infrastructure, and the 49 other states of the Union

seem to get what we don't. Pass this resolution so that we can get on with our lives and start moving again.

Thank you for this opportunity to testify.

## nishimoto2-Bryce

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**From:** Panos D. Prevedouros [pdp@hawaii.edu]  
**Sent:** Monday, February 25, 2008 5:57 PM  
**To:** TRNtestimony  
**Subject:** HCR3

A tunnel under Pearl Harbor is a potentially viable alternative for reducing congestion and improving capacity along the leeward Oahu corridor. Nobody knows what design is feasible, where is an optimal placement, and how much it would cost because a \$250,000 feasibility study has not been conducted. It should be conducted.

According to a report that we will be releasing in mid-March, this tunnel can provide a substantial relief from traffic congestion. Here is a quote from the study report:

Pearl Harbor Tunnel is a reversible 2-lane relatively short tunnel under the entrance of Pearl Harbor with cut-and-cover sections through the Honolulu International airport, priority lanes along Lagoon Drive and direct connection to the Nimitz Viaduct.

Nimitz Viaduct is a 2-lane reversible "flyover" from the Keehi interchange (spaghetti junction) to Iwilei. This project has completed environmental review during the second Gov. Cayetano administration and can be put to bid at any time.

If this alternative were built, then drive times from Ewa to downtown would be reduced from 65 minutes to 11 minutes and the load reduction on Ft. Weaver Road and H-1 Fwy. would bring those commuter times down from 65 to 40 minutes.

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