To: I-5 Bridge Committee Members
From: Sam Churchill, Hayden Island
Re: Comments for October 25th, Vancouver public meeting
Date: October 26, 2019

Thank you for this opportunity to comment on possible congestion solutions for the I-5 corridor near Vancouver.

MORE LANES = MORE TRAFFIC

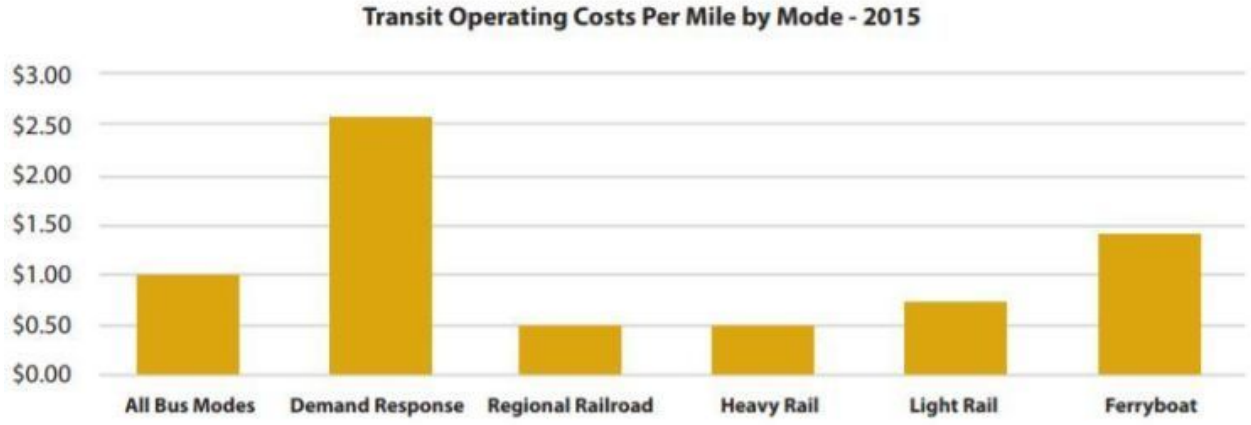
It's axiomatic among transportation analysts that more lanes = more traffic. Wider traffic lanes just INCREASE congestion in cities. Better mass transit is generally considered the main solution to congestion.

But how do we make mass transit faster, cheaper and more convenient than driving? One solution...here now...may be electric shuttles.

ELECTRIC SHUTTLES

Rubber tired electric shuttles cost less to buy and operate. They use MUCH smaller and cheaper bridges. They WILL be moving people on today's roads...long before a bridge is built. Guaranteed. Electric shuttles can pick people up and drop people off...at their front door.

It's simple economics. An autonomous fleet is expected to have a LOWER cost per passenger mile -- $.35 per mile for an autonomous fleet compared to about $1 per passenger mile for a bus.

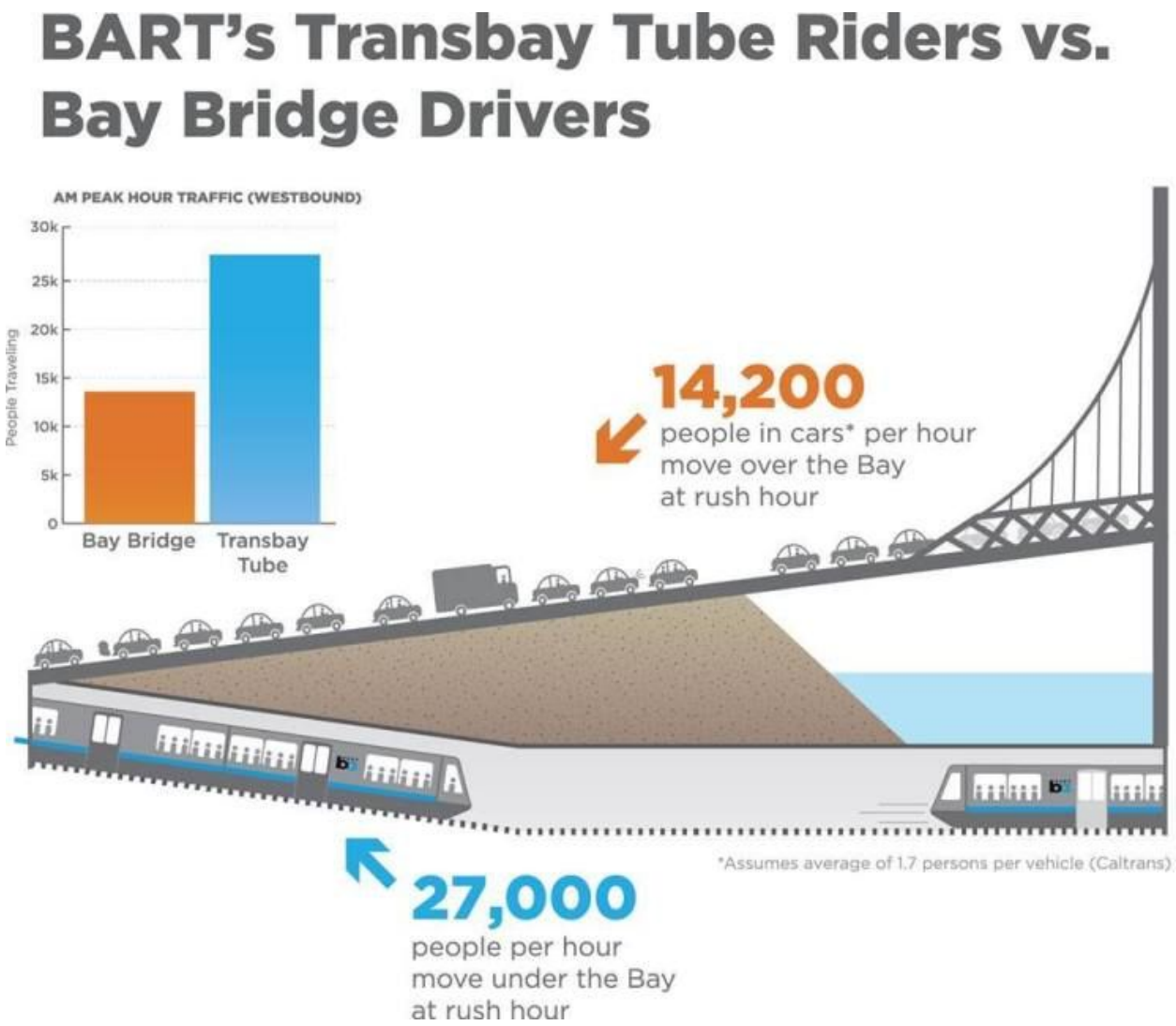


CHEAP BRIDGE

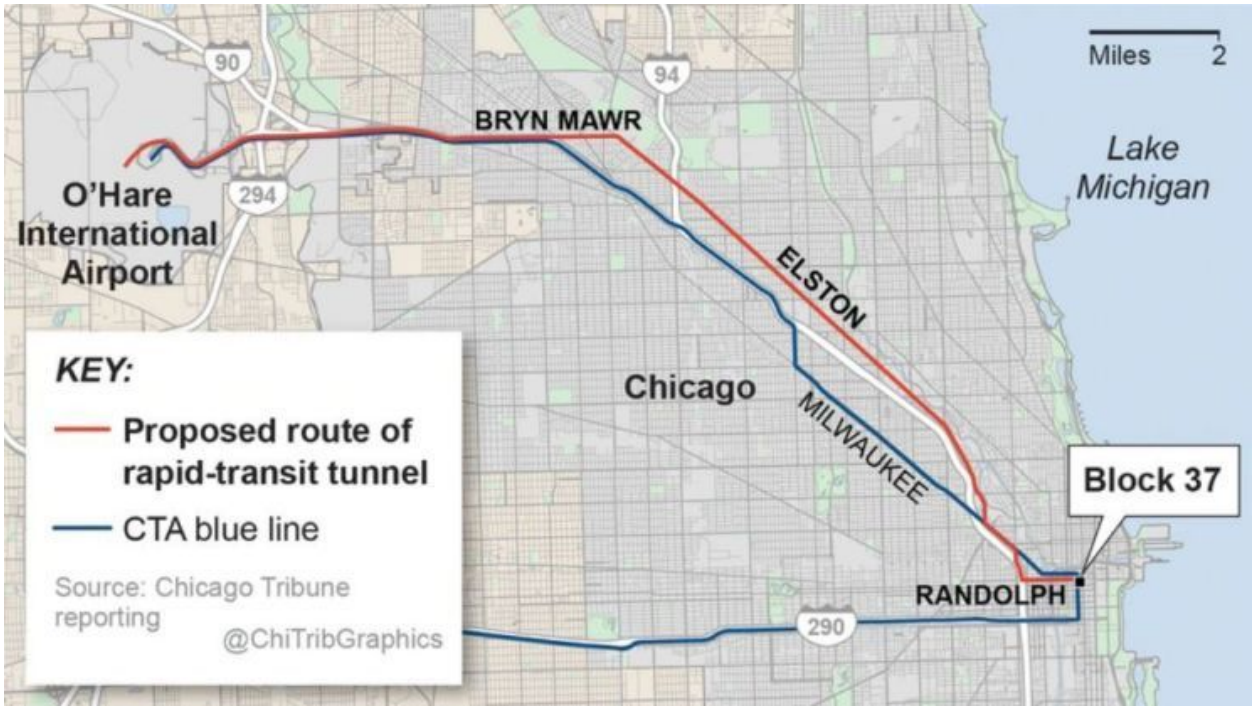
A small, cheap bridge could deliver commuters to the Max Yellow Line using electric shuttles. No trucks. No Light Rail. Cheap bridge.

TUNNEL

In addition, small Hyperloop tunnels (essentially a subway for electric cars) might also deliver Vancouver commuters direct to downtown Portland (and back).



Chicago is planning exactly that; an 8 mile long Hyperloop tunnel to O-Hare airport from downtown Chicago. It may be a better solution for taxpayers and commuters.



Elon Musk says their Chicago Hyperloop tunnel will cost about $55 million per mile. Tri-Met reports their Yellow Max line cost $200 million per mile.

NO LIGHT RAIL
Because Portland has small 200-foot blocks, only TWO Light Rail cars can be hooked together, requiring more individual trains and drivers.

But within 5 years, rubber-tired, autonomous community electric shuttles may not ONLY drive commuters to mass transit...it could BE mass transit. A Vancouver/Portland tunnel may be a viable alternative to Bus Rapid Transit -- or wider freeways -- or Light Rail.

Faster. Cheaper. More convenient than driving.

Ten years from now, autonomous transit will likely be common.

SHARED FLEET

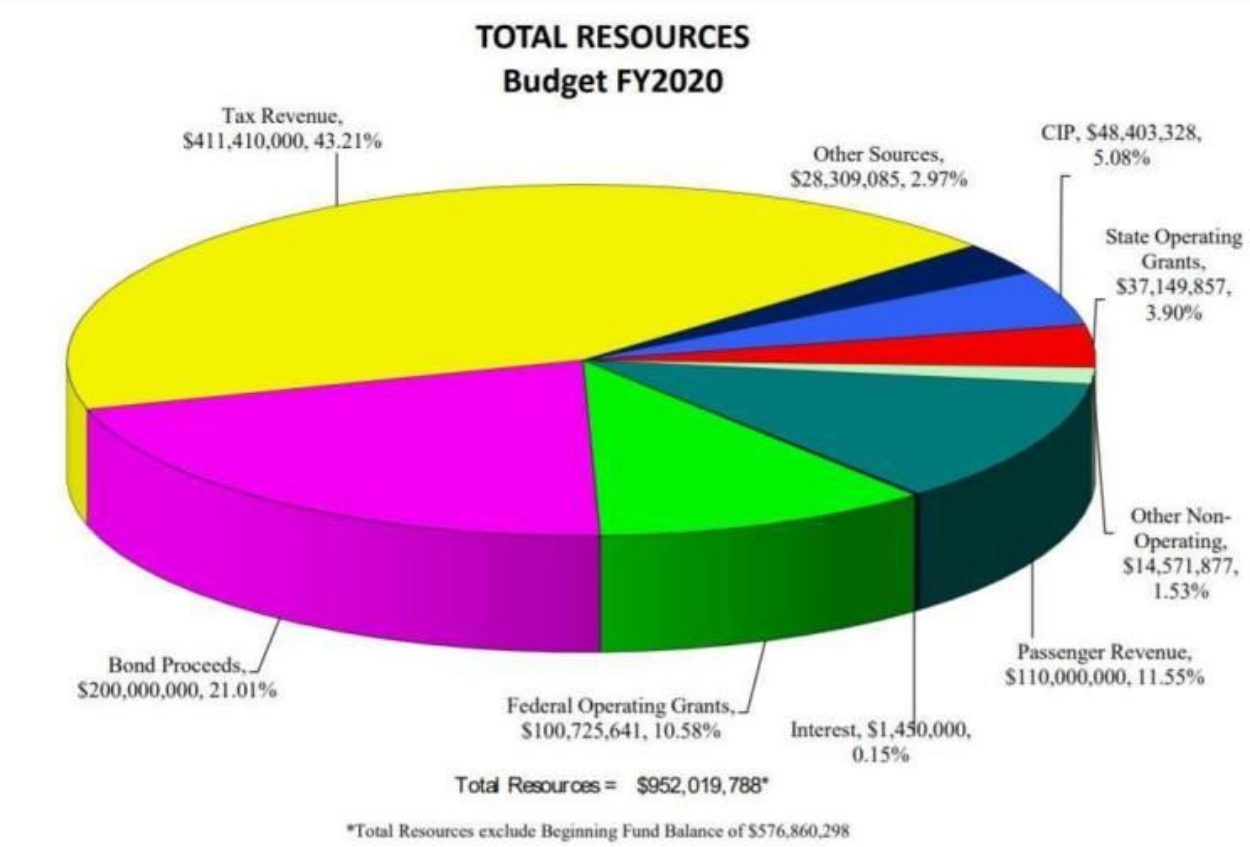
I believe shared autonomous fleets will pick commuters up and deliver them locally to their destination (or a mass transit hub). That mass transit vehicle will be electric powered. They zip though smaller, cheaper tunnels. No pollution. Existing roads and infrastructure can be used. Parking lots could be repurposed.

EXPO HUB

A tunnel hub might be near The Expo Center. One tunnel goes North, under the Columbia, to a terminus near the junction of SR-14 & I-5. The 2nd tunnel goes South from the Expo, near the junction of Marine Drive and I-5. The South tunnel merges with the Vancouver tunnel, surfacing near the Albina train yard and the Fremont Bridge.

FREE MASS TRANSIT?

Public transit may cost an average of $7.83 per passenger who will give back only $1.26 in fares. Everything else is subsidy. A “farebox recovery ratio” can average about 15%, while the cost of collecting and managing those revenues costs nearly as much. Tri-Met's operating budget is nearly a $1 billion a year.



Electric, autonomous transit may be moving towards free. Cheaper fuel, lower maintenance, no drivers. At $.35 per passenger mile, that's an advertising subsidy.

SUMMARY

➤ The tunnel off-loads traffic from Marine Drive, SR-14 and I-5.
➤ Electric cars and shuttles can also use today's roads.
➤ No pollution, no gas, no trucks.
➤ No Billion dollar Interstate bridge required.
➤ Faster and Cheaper.

ADDENDUM

Major players in Hyperloop (https://en.wikipedia.org/wiki/Hyperloop) include:

➤ Virgin Hyperloop One (https://hyperloop-one.com/)
➤ Hyperloop Transportation Technologies (https://www.hyperloop.global/)
➤ Transpod (https://transpod.com)
➤ AECOM (https://www.aecom.com/)
➤ SpaceX (https://www.boringcompany.com/projects)

HAYDEN ISLAND WEB SITES

http://www.hayden-island.com/columbia-tube/
http://www.hayden-island.com/tunnel-vision-for-i-5/

In summary, I believe electric transit is now profoundly affecting transportation. We should plan on it. Thank you for your time and consideration.

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