

1. Massey Crossing rationale, from Garden City Conservation Society (GCCS), 2017-07-14

First in a series of requested inputs to Victor Wei, P.Eng., Director, Transportation, City of Richmond.

Aim: The Massey Crossing, with related transportation systems, will enable efficient, safe, user-friendly transportation of people and goods between its served areas while conserving in a range of ways.

What's known: The bridge options have, in effect, been self-eliminated by their proponents' failure to make a credible case in years of trying. Also, from a conservation standpoint, leaders of all three of the broad conservation groups in Delta/Richmond have determined that the tunnel options are better.

Basic best: From the GMTR Project's five scenarios ([Phase 2 Guide, 2013](#)), the simple tunnel option in [Scenario 4 \(p. 12\)](#) could meet the needs with

- 1) completion of the seismic upgrades for the tunnel and its approaches,
- 2) refurbishing of the tunnel systems—ventilation, lighting, safety, etc.,
- 3) new **2-lane** tube for transit* + multi-use path, in Massey Corridor,
- 4) retrofit/replacement of related Hwy 99 bridges/interchanges, and
- 5) further Hwy 99 corridor improvements—Bridgeport to USA border.

Our graphic at right shows the spacing of the new tube ("Green Tube" because it is ecologically best) from the current tunnel ("Legacy Tube").

**While the Green Tube would enable two transit lanes, it might do so indirectly (e.g., if Legacy lanes are better positioned for Rapid Bus use).*



Quality: Since this saves a hefty chunk of \$12 billion, doing things well should be feasible. Examples:

- 1) State-of-the-art seismic upgrade for the Legacy Tube and approaches. Methods have improved in the decade of delay, and there must also be new site-specific knowledge from the bridge studies.
- 2) Lining of the tunnel walls/ceiling with reflective, easy-to-clean ceramic tile (early intended, never done).
- 3) Green Tube: Improved ceiling height and lane width. Designed to easily adapt for (possible) light rail.
- 4) At the new Steveston Interchange, faster and safer entry and exit, as planned a quarter century ago.
- 5) Facilities for additional efficient Hwy 99 bus entry/exit ramps, sheltered pullouts, easy transfers, etc.

Buses and trucks: Steps to enable (a) early congestion relief, beginning ASAP, and (b) lessons for the future:

- The early need is for the long-overdue influx of energy-efficient Rapid Buses that are reliable (on time, with passenger space), convenient (with Rapid Bus routes or feeder routes reaching people's start/end points) and comfortable (user-friendly throughout trips). High expectations must be set and exceeded.
- Truck traffic to and from the Delta port terminals will need to be spread over far more hours a day, with large trucks banned from the tunnel during the times when they would cause congestion (e.g., rush hour).

Steps: Ideally, the new government's experts will quickly determine how to implement the scenario in seismically sound and practical ways. Action will depend on their advice. For example, re the Green Tube:

- With its current technology to disrupt destructive seismic waves before they reach it, the Green Tube might protect the Legacy Tube. If that applies, it might be placed on the west side of the Massey Corridor.
- If it turns out to be too risky to place the Green Tube within the Massey Corridor (as shown above and in Scenario 4), it could become a new tunnel further east. In the most promising location, it would connect South Fraser Perimeter Rd (with roughly a 76 St route) to Westminster Hwy and Hwy 91 (via Nelson Rd).
- In any case, fast-tracking the Green Tube will allow it to take traffic from the Legacy Tube (usually a pair of lanes of traffic at a time) to enable efficient seismic upgrading and refurbishing of the Legacy Tube.