

**6 Sections 500 feet long x 170 feet wide**

**3,000 ft.**

**Columbia River Crossing  
I-5 Immersed Tunnel**





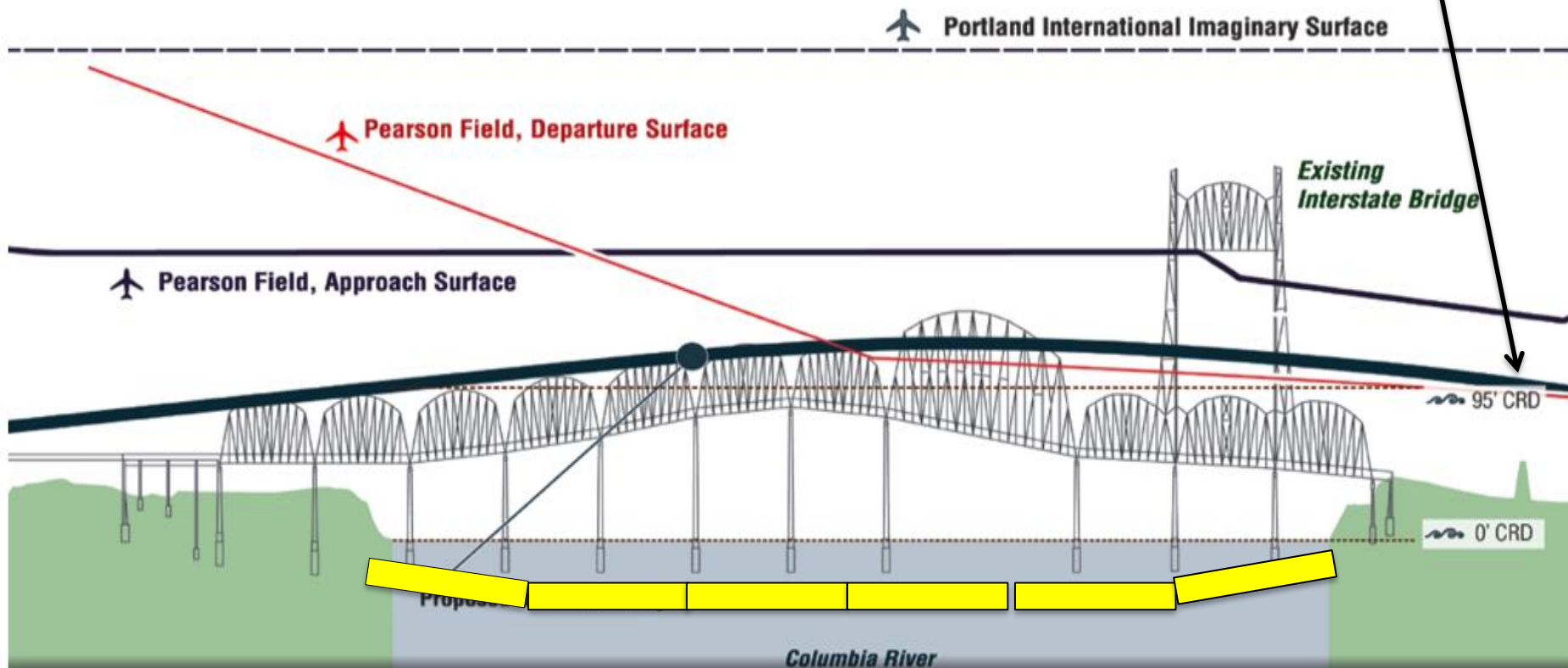
# Advantages Immersed Tunnel

Navigation clearances

Aviation clearances

No freeway noise on river front

No mile-long elevated bridge ramps dividing Vancouver





# Aberdeen Casting Basin

165 x 910 feet





# Baltimore's Fort McHenry Tunnel

Completed 1985

1.4 miles

8 lanes – 4 tubes

115,000 vehicles/day

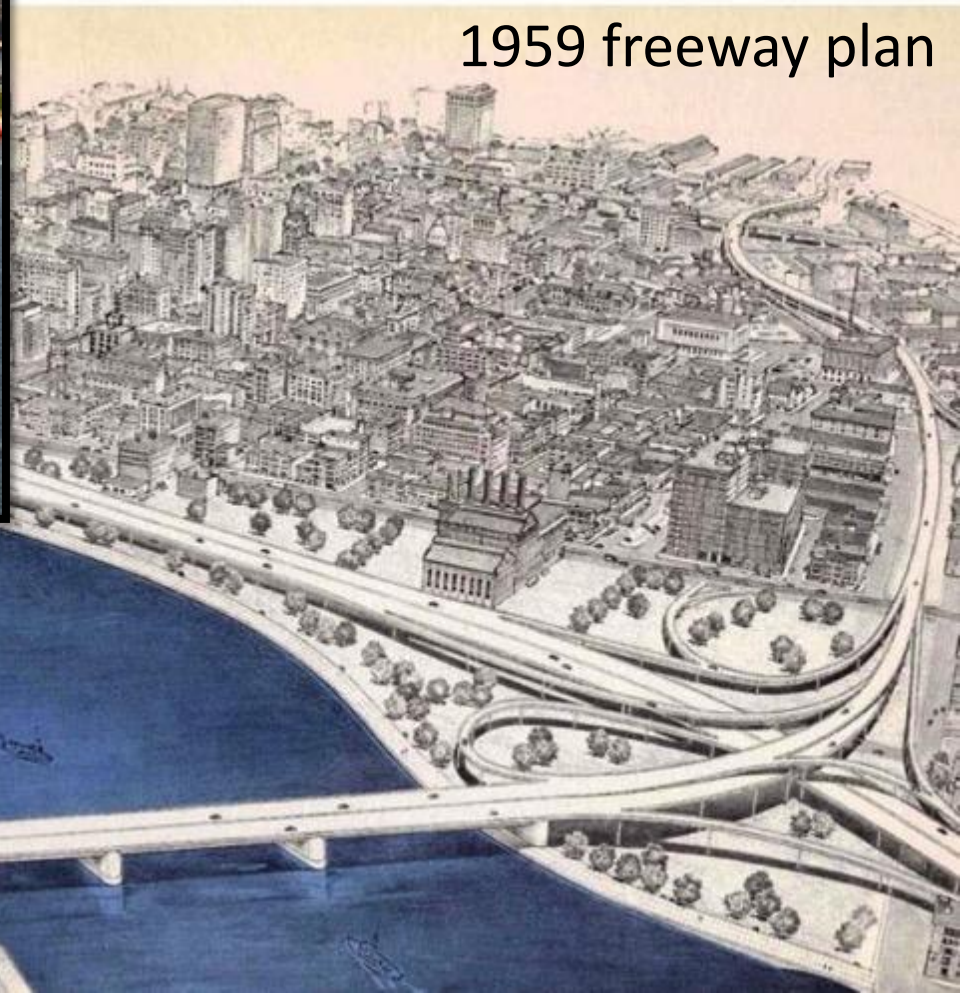
I-95







# Immersed Tunnel saved Baltimore's Inner Harbor 1985

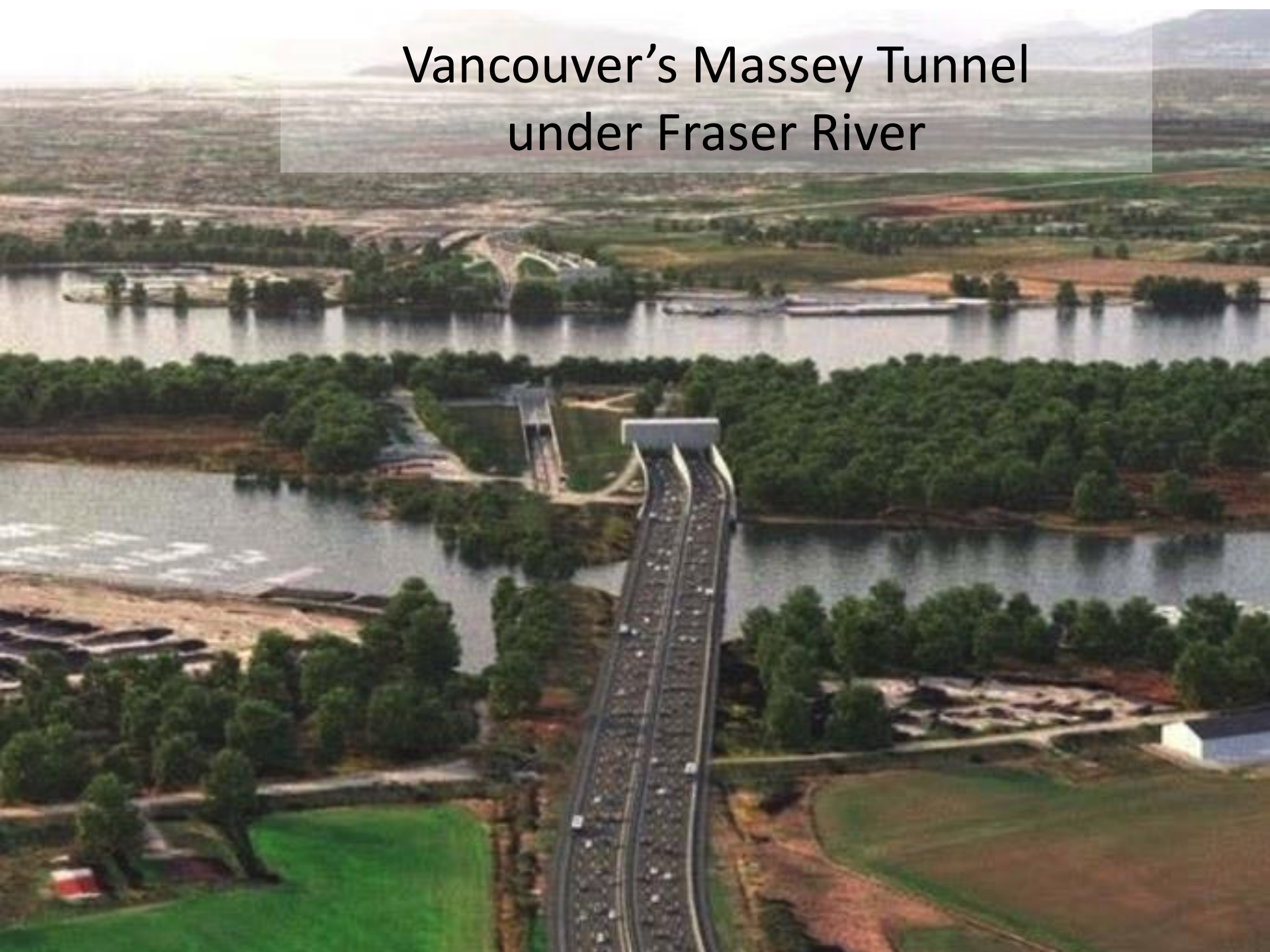


1959 freeway plan





# Vancouver's Massey Tunnel under Fraser River



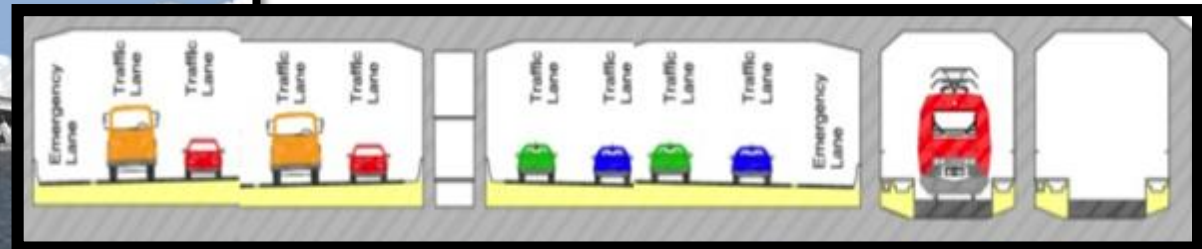
October 14, 2019

Vancouver's Fraser River Bridge  
replaced by Tunnel



April 1, 2020

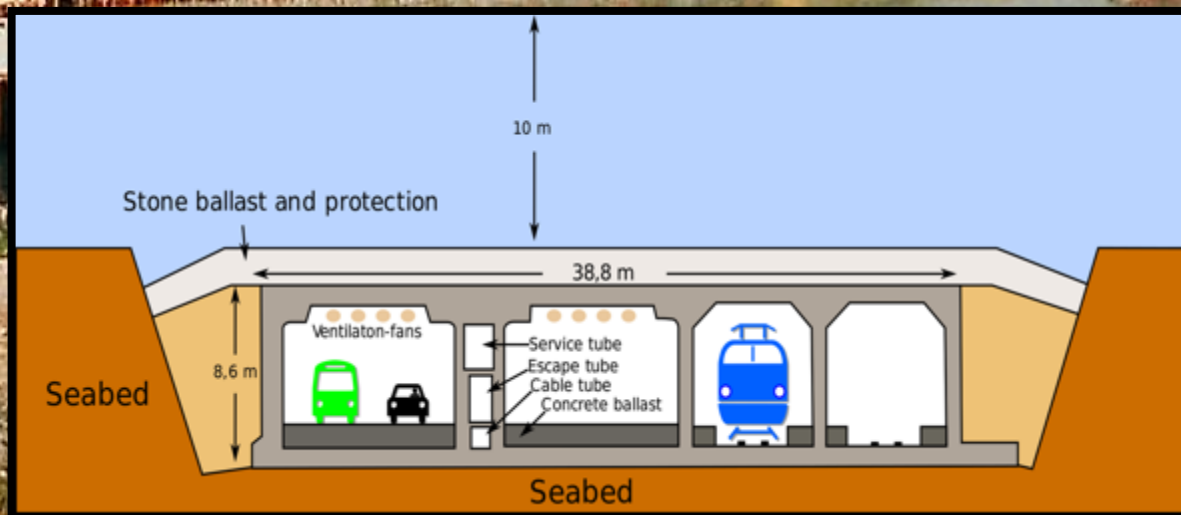
Vancouver's Columbia River Bridge  
replaced by Tunnel





# Øresund Bridge & Tunnel 1999

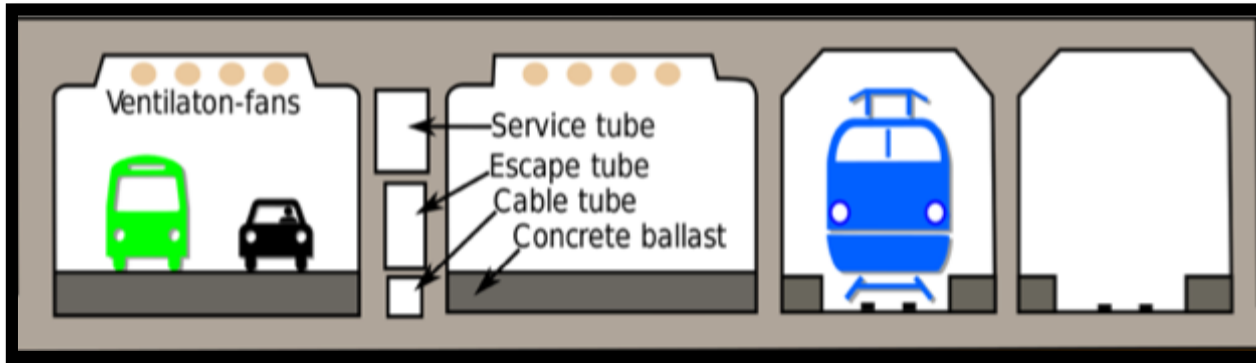
20 sections x 577ft = 2.2miles  
138ft wide





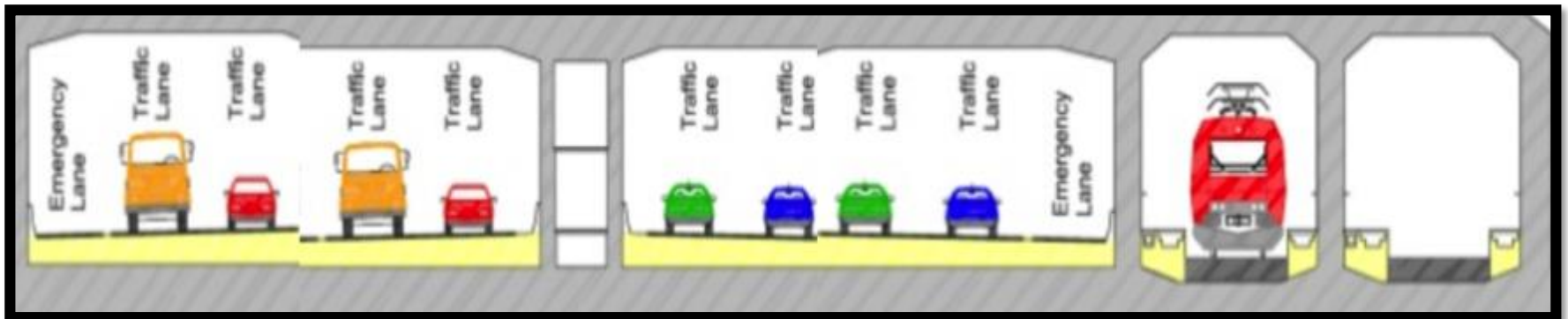
# Øresund Tunnel Section

20 sections x 577ft = 2.2miles      138ft wide



# Columbia River Tunnel Section

6 sections x 500ft = 0.6miles      170ft wide





# *Immersed Tunnels*

About six 500 foot immersed tunnel sections could be a simple, elegant, and cost effective solution to the I-5 Columbia River Crossing.

The Aberdeen Casting Basin used to build the SR 520 bridge pontoons would be well suited to casting tunnel sections.

<https://www.wsdot.wa.gov/sites/default/files/2014/11/12/SR520-Factsheet-Pontoons-February2017.pdf>

In 1985 Baltimore completed the Fort McHenry Immersed Tunnel and saved its famous Inner Harbor from encirclement by I-95 concrete bridge.

<https://www.baltimorebrew.com/2011/04/29/the-senator-and-the-highway/>

Vancouver, Canada rejected a ten lane bridge over the Fraser in favor of an immersed tunnel.

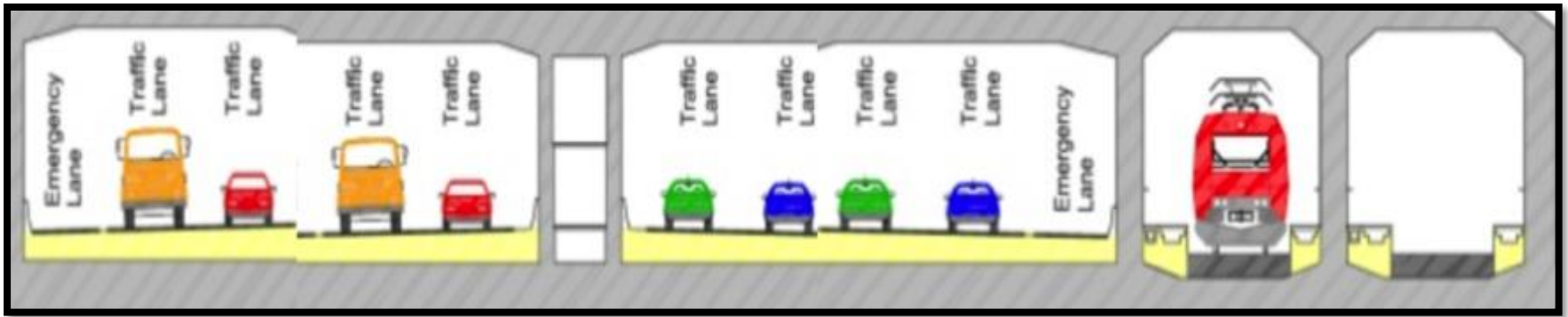
<https://www.enr.com/blogs/15-evergreen/post/47724-vancouvers-george-massey-tunnel-replacement-may-now-be-a-tunnel-instead-of-a-bridge>

The 1999 Oresund Bridge & Immersed Tunnel connects Sweden to Denmark.

<https://www.peri.com/en/projects/civil-engineering/oeresund-link.html>



# *Immersed Tunnels*



## **\*Columbia River Crossing**

0.6 miles    8 lanes    2 transit

I-95 Fort McHenry Tunnel-1985

1.4 miles    8 lanes

## **\*Vancouver's Massey Tunnel**

0.6 miles    6 lanes    2 transit

Øresund Bridge & Tunnel-1999

2.2 miles    4 lanes    2 transit

\*proposed