



George Massey Crossing Project

Phase 2: Crossing Options

Mayors' Task Force

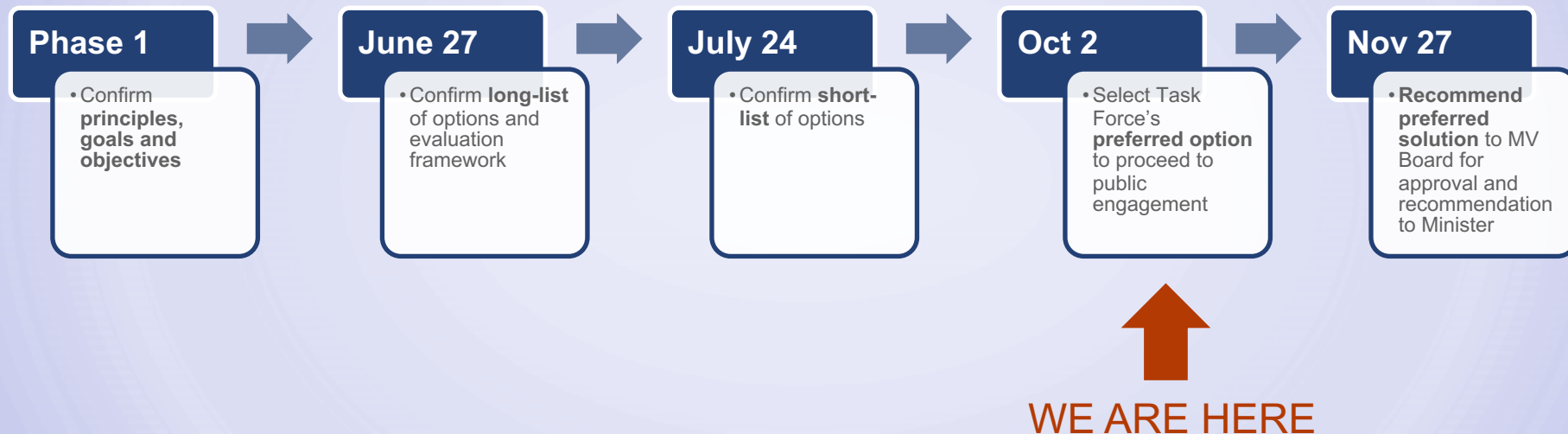
October 2, 2019



Agenda

- Process and schedule
- What we heard
- Options analysis
- Request to select preferred option

Task Force Engagement Process





Success Milestones To Date

Consensus on:

- Principles, goals and objectives
- The number of lanes for the crossing
- 18 long-list options and evaluation framework
- 6 short-list options



Endorsed Options Short-list

All options include 2 lanes dedicated for transit and cycling/pedestrian paths

- 8-lane deep bored tunnel (DBT)
- 8-lane immersed tube tunnel (ITT)
- 8-lane bridge
- 6-lane DBT + transit lanes in existing tunnel
- 6-lane ITT + transit lanes in existing tunnel
- 6-lane bridge + transit lanes in existing tunnel



What we've heard so far

- Urgency to move forward quickly
- Promoting transit use is imperative
- Concern about lifespan of existing tunnel
- Desire to manage risk and cost

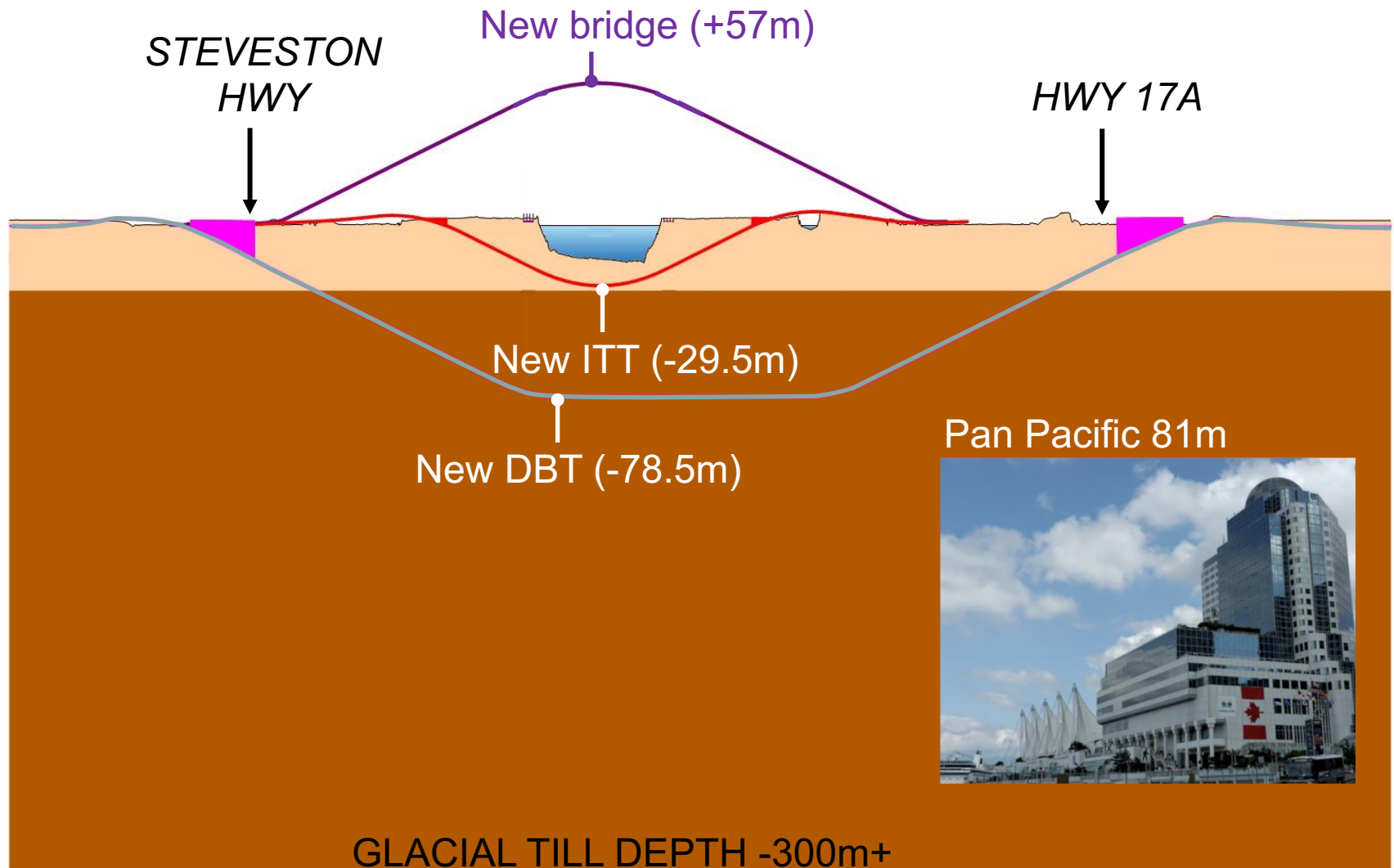


Existing Tunnel

Options using the existing tunnel have greater impacts than all-new options due to:

- In-river ground densification
- Environmental Assessment extended timeline
- Up to 5 minutes longer for transit trips
- Shorter lifespan
- Additional cost (hundreds of millions)

Comparative Height/Depth of Options





Benchmark Comparisons for Costing

Deep Bored Tunnel:

- 8 recent projects in the U.S., Italy, Hong Kong and Australia
- None with our soil or seismic conditions

Immersed Tube Tunnel:

- 7 projects in the U.S. and northern Europe



Deep Bored Tunnel Concept Design



Deep Bored Tunnel Size Reference



Canada Line



Evergreen Line



SR99 (Bertha)
Slightly smaller than
would be required

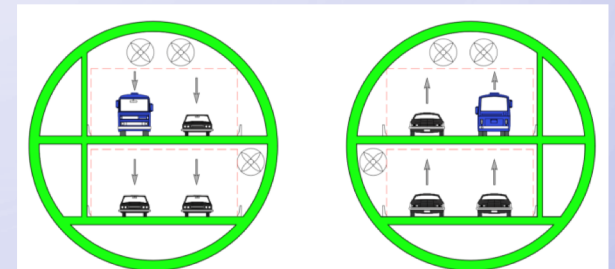
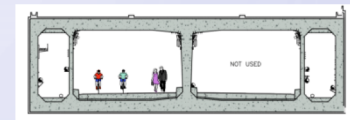


Deep Bored Tunnel Cross Section



Deep Bored Tunnel

- Significant risk of multiple sinkholes
- Longest timeframe to completion
- Extends beyond Steveston and Hwy 17A I/C
- Increased transit trip times
- Existing tunnel must be retained for pedestrians and cyclists
- ALR impacts – up to 200 acres
- Approx. 3 times cost of ITT/bridge



Deep Bored Tunnel Interchange Footprint

Preliminary draft for
discussion purposes only

