

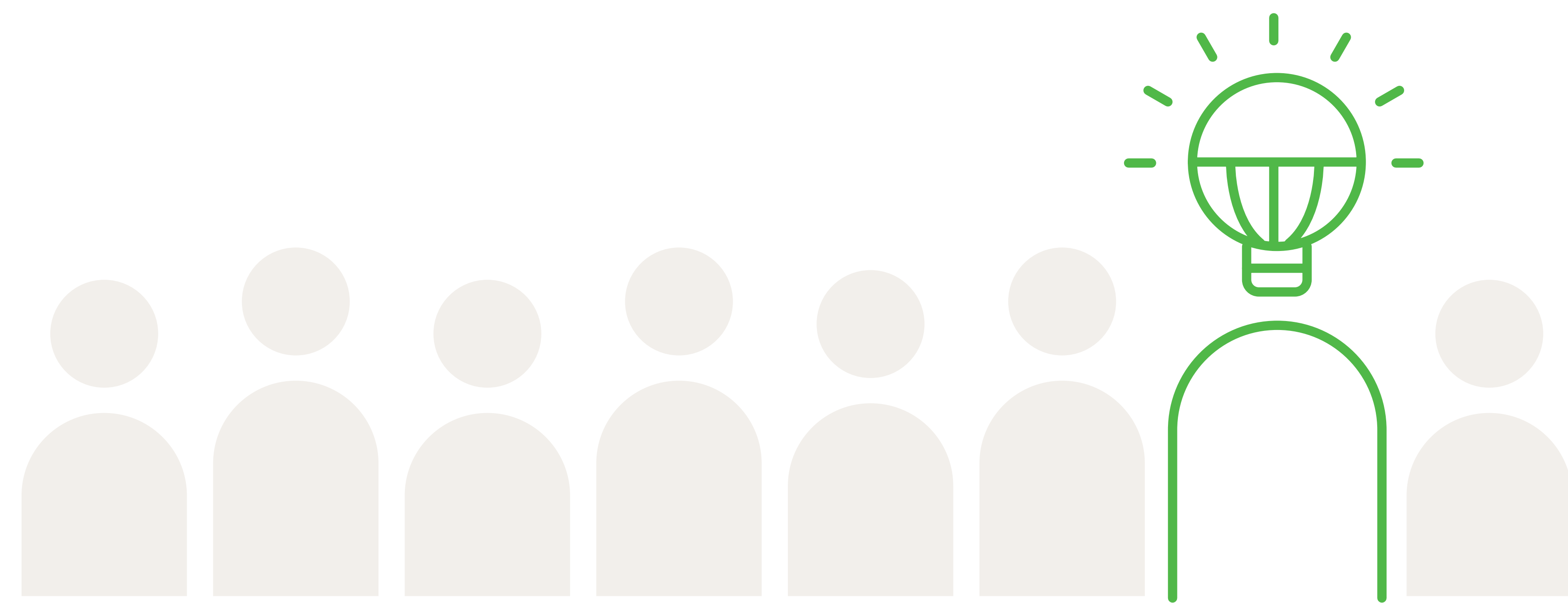
Welcome

Metro North Transmission Project Vancouver Community Information Open House

March 9, 2017

Thank you for attending this Community Information Open House about the Metro North Transmission Project.

We're here to provide you with updated information on the project, including underground routing options through Vancouver city streets and options for crossing the Grandview Cut.



About the Metro North Transmission Project

We need an additional transmission line between Coquitlam and Vancouver to address the growing demand for electricity resulting from the region's increasing population.

We're working to have the line in place as early as 2020¹, to improve the region's transmission network by increasing electrical transmission capacity and strengthening reliability.

Our current transmission system is approaching its limit and, without these improvements, the network faces reduced service reliability. Under certain conditions, this could mean outages for the equivalent of about 30,000 homes and businesses, and service interruption for the equivalent of about 90,000 homes and businesses.

¹ Required in service date is influenced by load forecast, which is monitored annually.

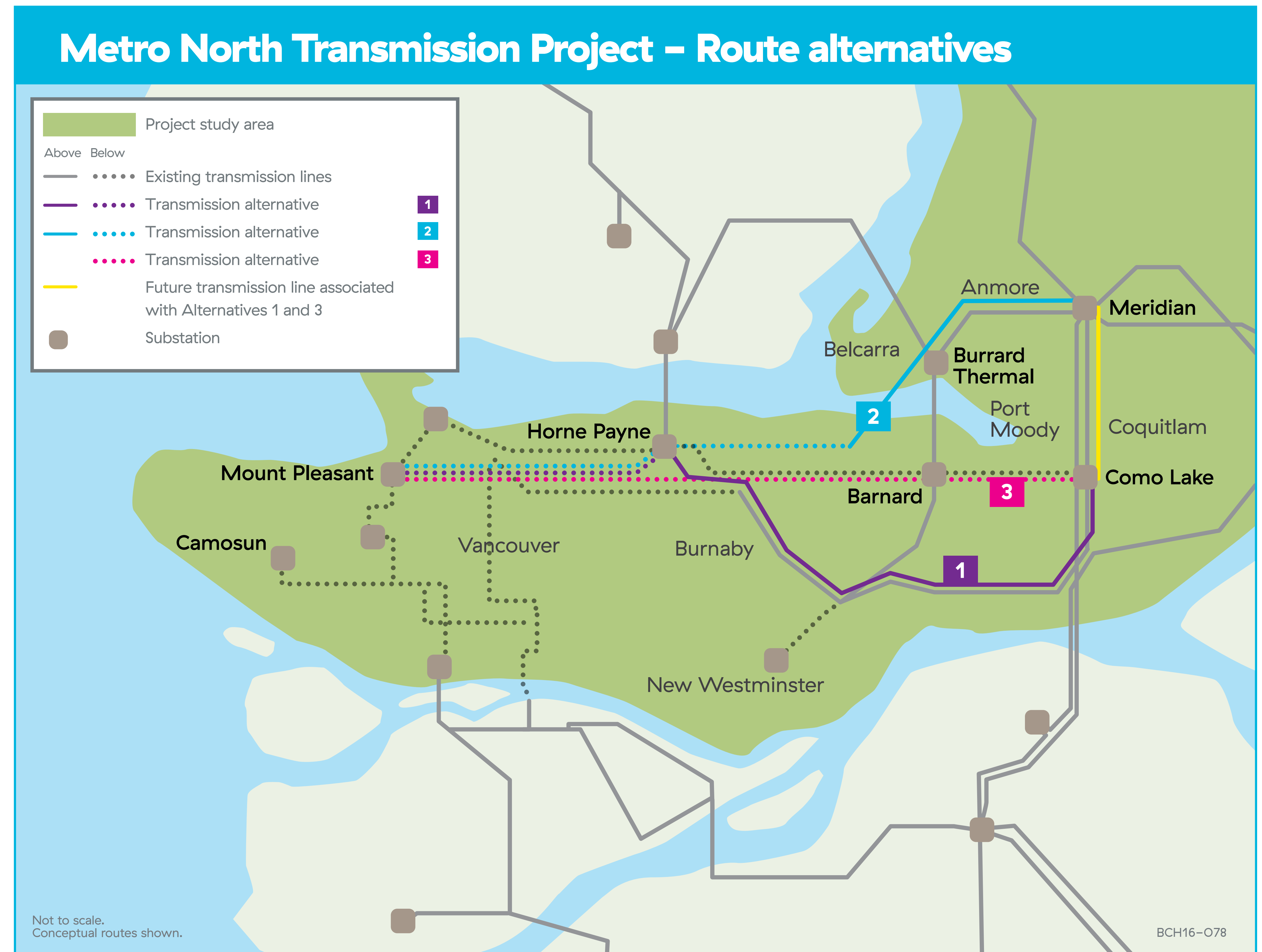
Project Update

We're moving forward with Alternative 2 for the Metro North Transmission Project. This alternative involves a new 230 kilovolt (kV) transmission line extending from Meridian Substation in Coquitlam through Anmore, Port Moody and Burnaby to the Mount Pleasant Substation in Vancouver.

When compared to the other alternatives studied, Alternative 2 has:

- Fewer overall residents and property owners potentially impacted by construction;
- Lower seismic and construction risks; and
- The most capacity for the investment.

We chose to move forward with this alternative after over 60 meetings with local and regional governments, transportation authorities, community groups and others to discuss the need for transmission improvements and the alternatives; ongoing engagement with First Nations; meetings with affected property owners; and technical work.



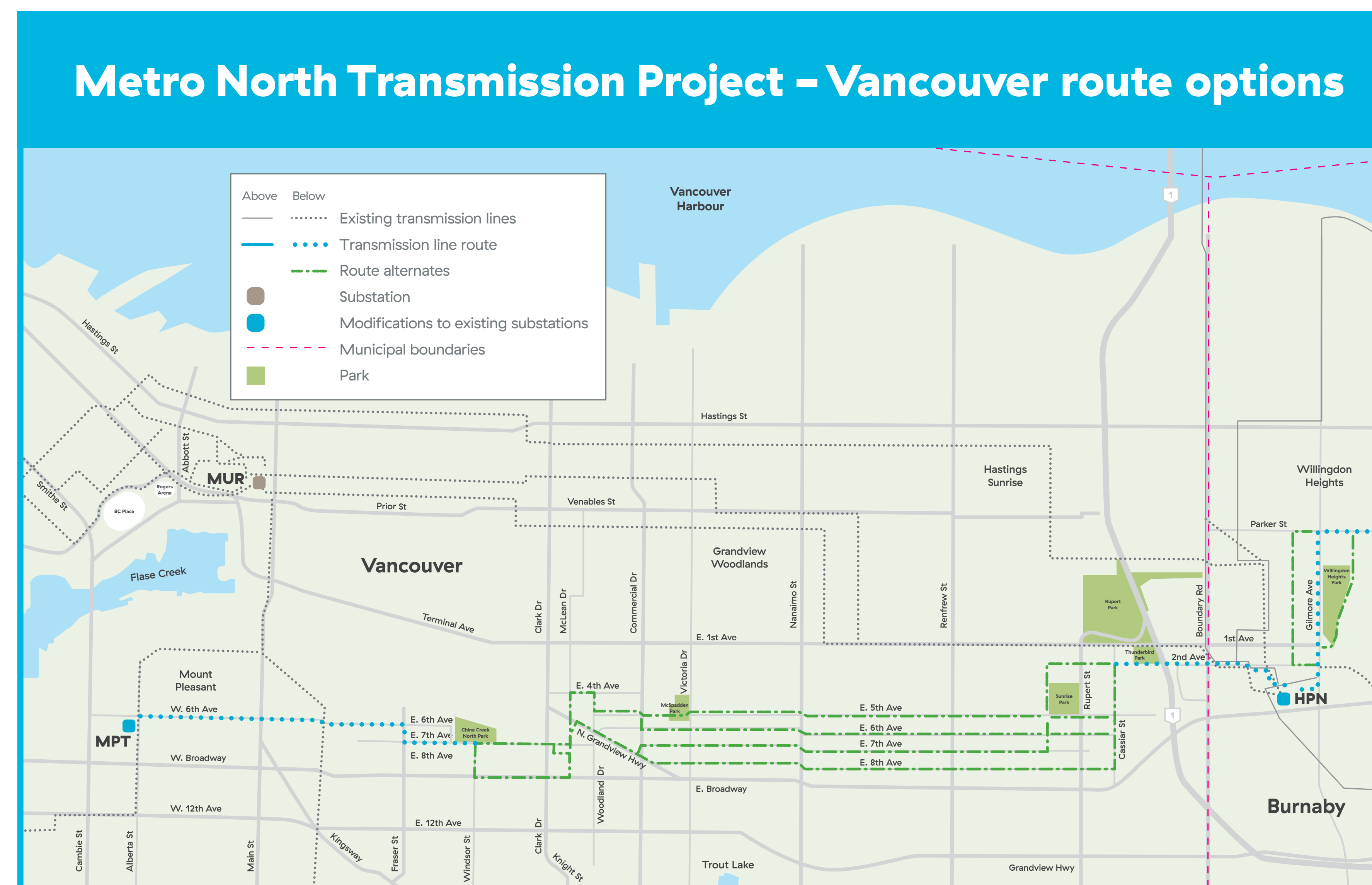
Routing – Vancouver City Streets

From the Horne Payne Substation in Burnaby (Lougheed Highway and Gilmore Avenue) the additional 230kV underground cable would go to the Mount Pleasant Substation (at West 6th Avenue and Alberta Street), using Vancouver city streets.

From Burnaby, the cable would cross Highway 1 underneath East 2nd Avenue to Cassiar Street. We would use trenchless construction methods such as Horizontal Directional Drilling (HDD) or tunneling to route the line under Highway 1.

From Cassiar Street, we have identified four options for routing through Vancouver (see map).

We would lay the cable along the route using a technique called cut and cover. We selected these routes taking into consideration criteria such as minimizing cable length and bends; avoiding streets with high utility congestion; and avoiding major arterial routes. We are continuing to explore the feasibility of these routes.



We recognize that our routing options have the potential to affect trees. As we continue to explore the feasibility of these options, we will also be identifying how to ensure that the health and stability of trees is maintained.

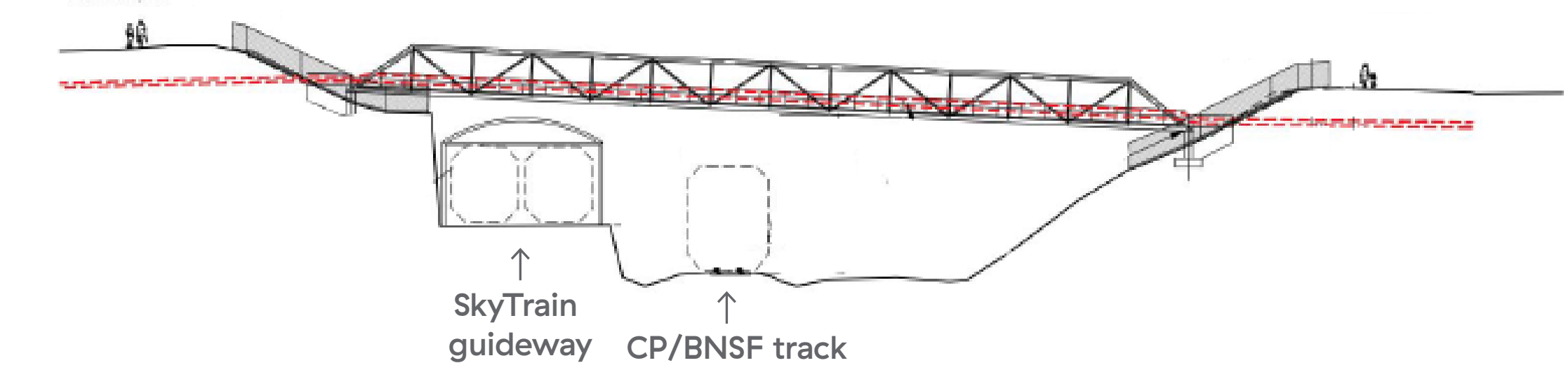
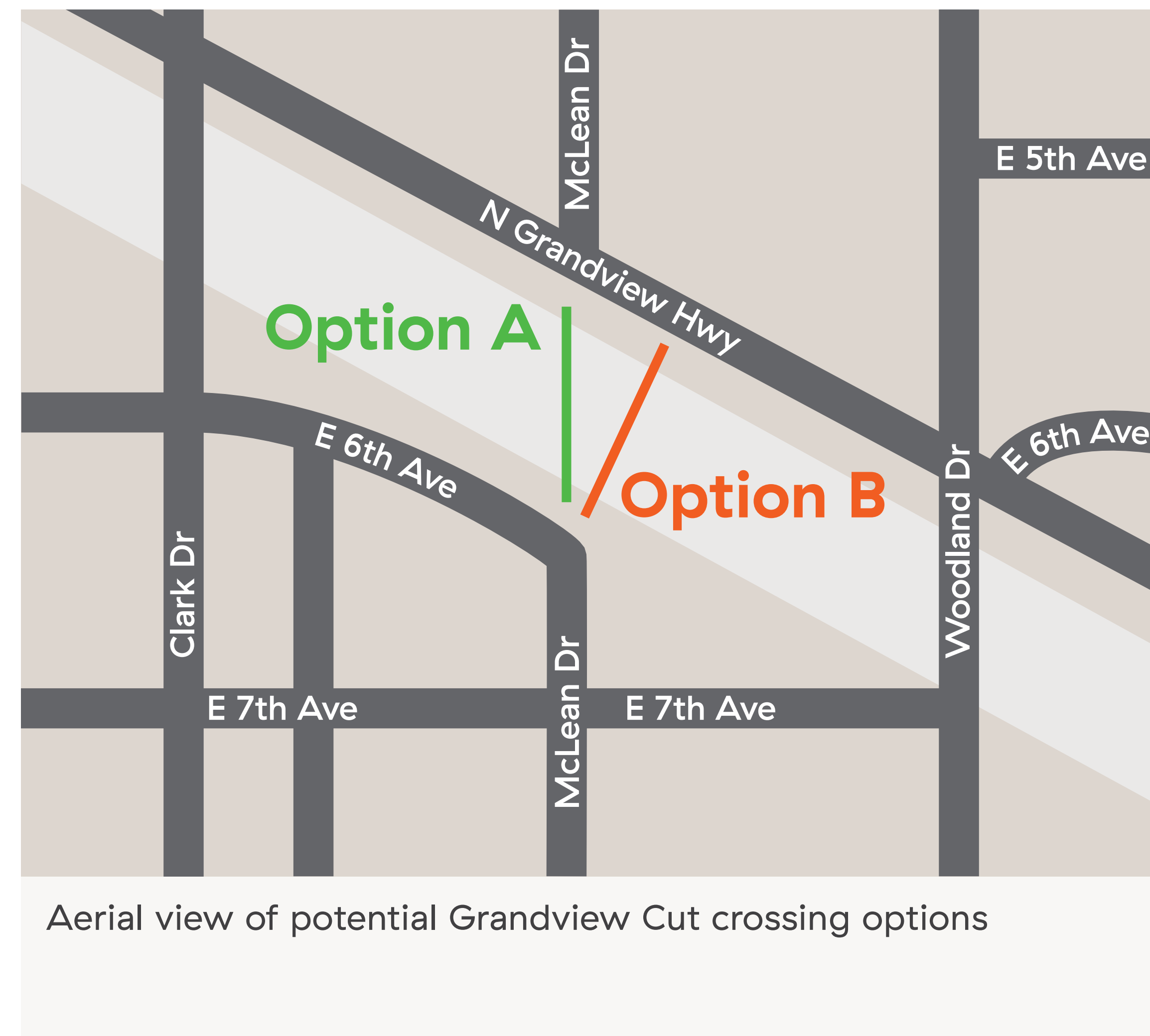
McSpadden Park

We have had preliminary discussions with Vancouver Park Board staff about the potential route through McSpadden Park and also about potential routes on Vancouver streets. Upcoming field work and engineering studies will provide more information to the Vancouver Park Board about any impacts to the park that may be caused by the project, and mitigation measures. We would also work with staff to identify appropriate mitigation and potential improvements to the park that could be realized as part of the project.

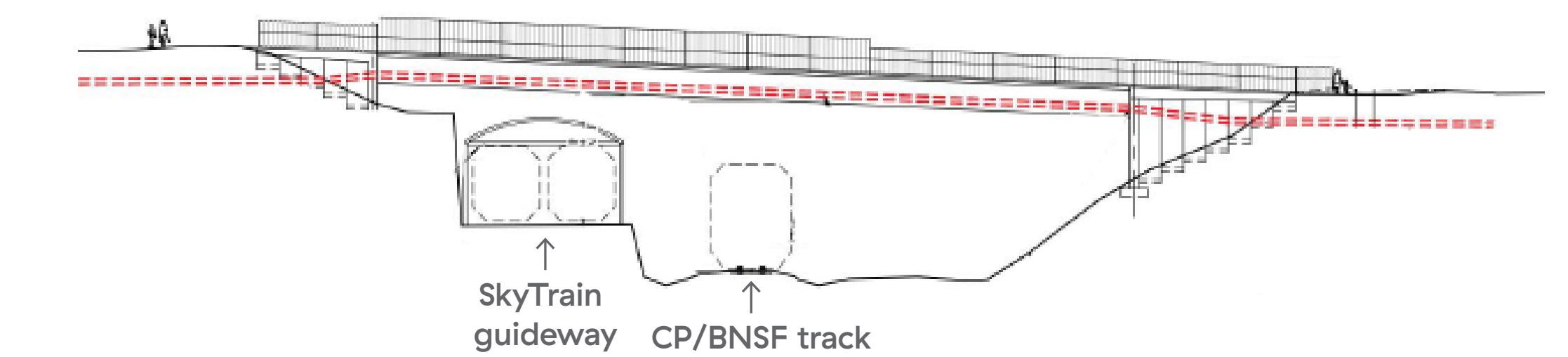
Crossing the Grandview Cut

The cable would also need to cross the Grandview Cut on its way to the Mount Pleasant Substation. We have identified three options for crossing the Cut:

- **Horizontal Directional Drilling (HDD):** With this option, a pipe would be bored underground using a surface-launched drill rig. The power cable would then be threaded through the pipe (Option A)
- **Utility bridge:** With this option, the cable would cross the Cut using a utility bridge that would be built. This bridge would not be open to cyclists or pedestrians (Option A or B)
- **Pedestrian/cyclist bridge:** With this option, the cable would cross the Cut using a bridge that would be built from North Grandview Highway to East 6th Avenue at McLean Drive, and that also has facilities for pedestrians and cyclists (Option A or B)



Preliminary concept – Utility bridge



Preliminary concept – Pedestrian/cyclist bridge

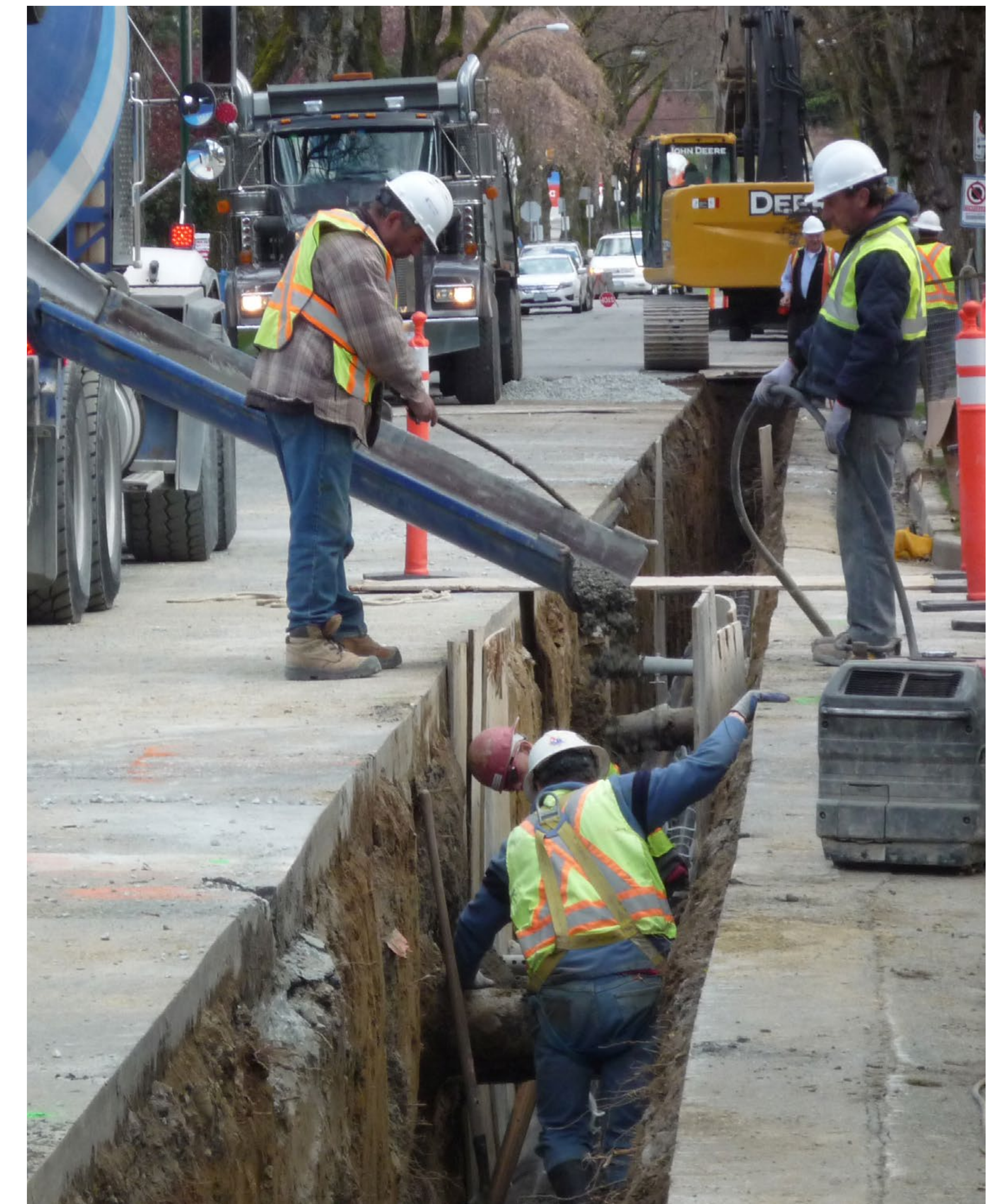
Underground Cable Construction

Underground civil works

- **Duct banks:** (1m x 1m) buried 1 to 3m below grade along the length of the road between manholes. Duct banks consist of 4 ducts that can hold 3 phases of cable and a spare.
- **Manholes:** (12m x 3m x 3m) buried 0.60m below grade every 800m of duct bank



Typical underground cable duct bank installation



Encasing duct bank in concrete

Underground Cable Construction

Duct bank and manhole construction

- Work completed on a block by block basis
- Each block takes 5 to 8 days to complete
- Requires excavating, installing and backfilling
- Access to driveways is maintained
- Two lane closures are required and work can be completed during non-peak traffic hours



Typical manhole installation

Underground Cable Construction

Installing underground cable

- Cables are pulled through the duct banks after civil works are complete
- Cable pulling from manhole to manhole takes one week
- Cable segments are joined at the manholes – this takes two weeks per manhole
- Once the equipment is set up it stays on-site until the work at the site is complete



Typical underground cable pull

Next Steps

The next steps for the Metro North Transmission Project include geotechnical drilling, environmental and archaeological studies, and finalizing the routing for the underground cable.

We will continue working with local and regional governments, including Burnaby, Anmore, Belcarra, Port Moody, Coquitlam, Vancouver and Metro Vancouver, property owners, residents, stakeholders and the public to provide opportunities for you to receive up-to-date information, as well as provide your feedback, ask questions or express interests or concerns.

More information will be available on bchydro.com/mnt and we encourage you to email us at stakeholderengagement@bchydro.com to sign-up for updates.

We are here

