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Victoria to Esquimalt Cable Replacement Project – Community Construction Report

February – April 2025

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Project status

- This emergency project will maintain electricity reliability to Greater Victoria customers by replacing a cable installed in 1980 that is at high risk of failure from corrosion. The existing cable route and the new cable route is shown on the map to the right.
- Project construction commenced the week of February 24 within the Esquimalt Substation, with crews slowly moving eastward constructing the new cable duct bank towards the Horsey Substation off Topaz Ave.
    - Please refer to the construction schedule map on page 5.
- The new duct bank work is complete within the Esquimalt Substation.
- Crews have begun work along Pine Street.
- The goal is to have the new cable in-service in July 2026.
- The removal of existing cable is planned to take place in late 2026 and in 2027.

This construction report will be issued bi-monthly to provide the community with updates on the project work activities and schedule, show photos of the work, have construction and environmental points of interest, and provide other project related information.

Construction photos: trench test work

The project has completed bore hole drilling and trench work (shown below) along the full cable route to tell is about the soil and possible rock under the streets, and the placement of utilities such as gas, sewer, water, and storm lines at key locations, to inform our design and construction. The photo was taken February 20 on Craigflower Rd and shows the refilling of a test trench.

Photo: Esquimalt Substation

The view from the E&N Rail Trail of the Esquimalt Substation on February 20. The substation went into service in the 1950s and is located just within the Township of Esquimalt. The substation went through a major upgrade in 1980 which coincides with the 230 kV cable that was also built in 1980 to connect this substation with the Horsey Substation. 19 distribution circuits from this station serve about 20,000 BC Hydro customer accounts within the Township of Esquimalt and City of Victoria.

Planning the cable route – construction timing

Esquimalt Substation (left) and Horsey Substation work February 2025 to July 2026.

Esquimalt Substation work completed February to March 2025

Starting at Pine St and moving eastward and into Banfield Park: April to June 2025

Gorge Waterway shallow burial and adjacent parks: December 2025 to February 2026 (fisheries work window)

Streets include Gorge Rd, Dunedin St, Douglas St and Topaz Ave: July to November 2025

Devonshire Rd and Dominion Rd: June / July 2025

Construction photos: duct bank construction

Photo of duct bank work within the Esquimalt Substation (top right) from March 6. The new cable will have significant benefits over the existing cable, and this includes being oil-free, improved seismic resiliency, and 50% higher capacity to keep up with future electricity demand.

Construction photos: duct bank construction

View of the duct bank construction within the substation on March 6. Concrete is about to be placed. The duct bank excavation is about 2.5 metres wide and the depth can range from about 3 metres to 1.2 metres depending on the need to go below or above existing utilities under city streets. The process is to excavate the trench, place three conduit pipes, place concrete, and then backfill. The cable is installed through concrete vaults that are placed about every 500-600 metres along the 2.7-kilometre cable route.

Construction photos: duct bank construction

Photo of the substation and the duct bank work in the foreground on March 6.

Construction photos: duct bank construction

Photo of the duct bank excavation and the placement of spacers to hold the conduit pipe that will contain the cables on March 6. With the work happening within the substation, the excavation was stepped to maintain the integrity of the trench. On city streets, with a narrower work area, and depending on the depth, metal shoring cages may be placed within the trench to maintain worker safety. The soil material is typical Victoria clay.

Construction photos: duct bank construction

View of the duct bank work with the conduit pipes beginning to be encased in concrete on March 6.

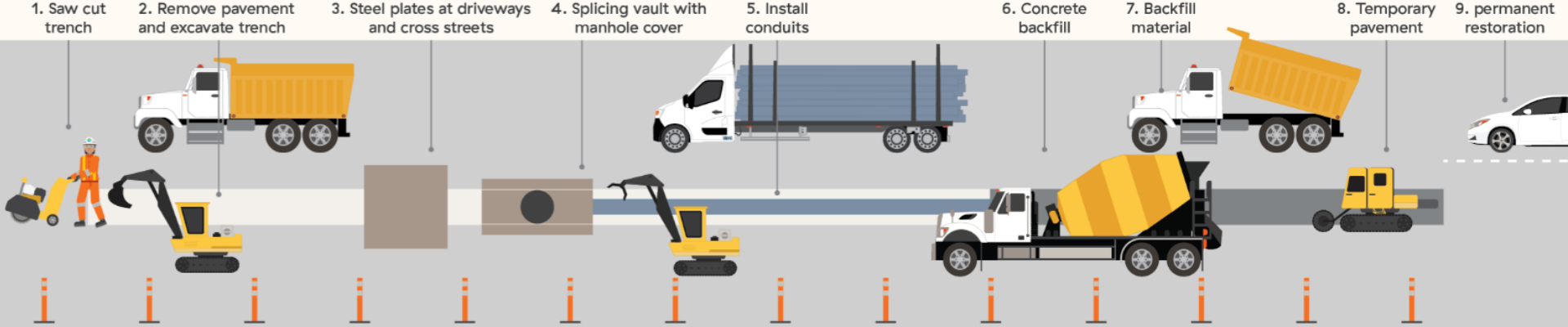
Construction photos: duct bank construction

View of the duct bank work within the Esquimalt Substation on March 6. The insert photo shows some of the construction crews.

Construction photos: duct bank construction

View of the duct bank work planning to go across the Dominion Street and Pine Street intersection on March 13. This was a complicated crossing with many underground utilities, and the construction crews found that the distribution cable duct bank was deeper than expected and closer to the new transmission duct bank. This requires a redesign and is in progress. Crews filled in the excavation and repaved the road and will return to this location with the revised plan, likely in June or July, to install the duct bank.

Stages of underground cable installation



This image is for illustrative purposes only and does not represent any actual streets.
Work will take place in stages over time and not all at once. Cable will be buried along the route.

CX-5486

Construction photos: Pine Street

View of the pavement cutting for the duct bank installation at the eastern end of Pine Street on March 20. The repaving of the Dominion, Hereward, Devonshire and Pine Street intersection is in the background.

Construction photos: Pine Street

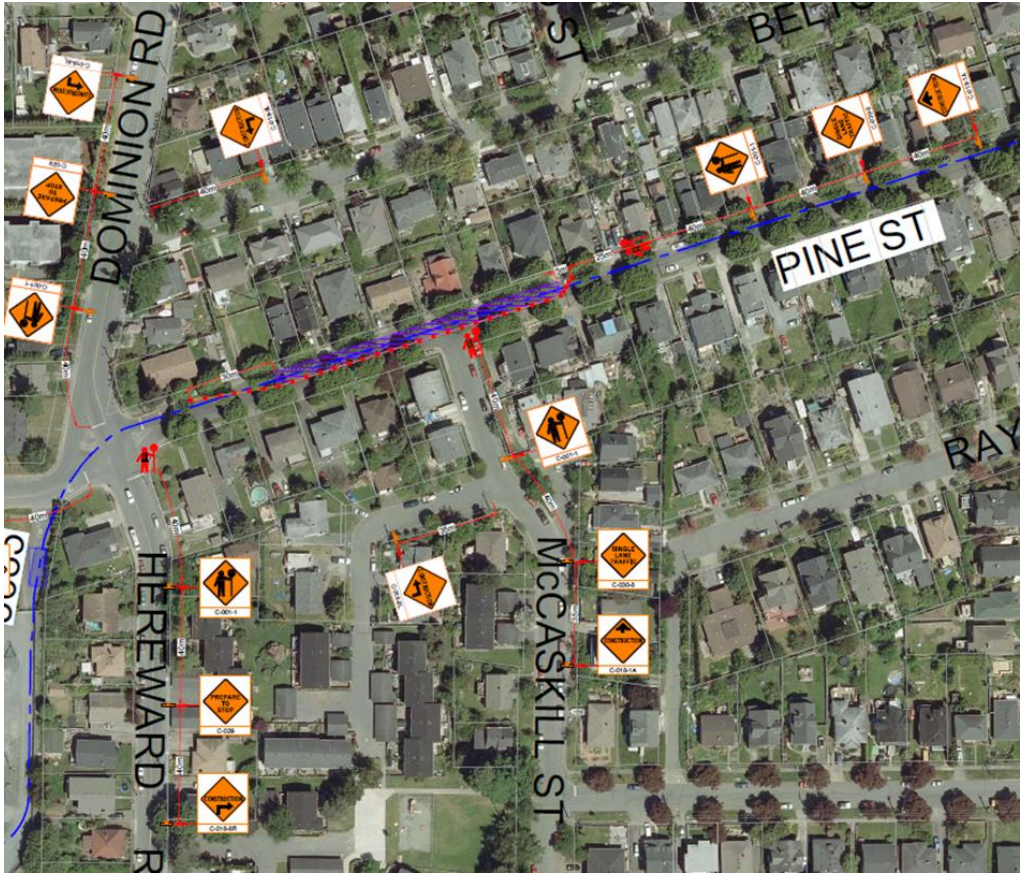
We worked with the City of Victoria on the location of the duct bank along Pine Street and one of the considerations included underground services to homes on the north side of Pine Street, as that area is closest to the new duct bank. A local contractor, Victoria Drains, created nine clean-outs, where none existed, on some household utility lines to allow for inspections (example shown in bottom left photo) and to reline (example of underground work in bottom right photo) sewer and storm water connections that required it to about 13 houses. Some services are over 100 years old and made of clay. This work will protect those services during our cable duct bank construction. The storm water lines are about 30 centimetres below, and the sewer lines about two metres below, the base of the cable duct bank excavation. The services will be inspected again after the duct bank is installed. The service clean-outs and relining work, and in some cases utility replacement, started on April 3 and is almost complete. The utility service work was required before the duct bank work could begin.

Construction point of interest: traffic management plan – Pine Street

We will develop traffic management plans as we move along the various city streets and city parks. The map on the right is a traffic management plan for Pine Street and the surrounding roads.

There will be flaggers on both sides of the 100-metre construction zone (blue hash-mark area) to provide single-lane alternating traffic. Pine Street will not be fully closed during this work, though there will be times of short duration closures to move equipment. Because of the street width, with one lane needed for the new duct bank and one lane needed for construction equipment and controlled public traffic, there will be no parking day or night on either side of the street within the 100-metre construction zone. Sidewalks will be accessible.

As crews move eastward along the street, the no parking signs and single-lane alternating traffic will shift.



Construction photos: Pine Street

Crews mobilized along Pine Street on April 22. This photo on April 23 shows the duct bank construction at the west end of Pine Street.

Construction photos: Pine Street

View of the duct bank work on April 23.

Construction photos: Pine Street

View of the duct bank work on April 23. The trees along Pine Street will be not be impacted by the construction work.

Environmental point of interest: Environmental Management Plan

The project has an Environmental Management Plan (EMP) to assist our crews and subcontractors to adhere to applicable environmental legislation and commitments by providing environmental requirements, standard protocols, and measures to avoid and mitigate potential for adverse environmental effects during construction. This includes things like soil and water management, spill prevention and response, sediment and erosion control, mitigation measures to prevent harm to environmental resources and archaeological sites, monitoring and environmental training. The EMP provides requirements to be met in accordance with project commitments, regulatory approvals, applicable Environmental Best Management Practices, and engineering specifications. The EMP is in place to ensure project activities meet or exceed environmental requirements.

Duct bank work within the Esquimalt Substation.