



## Integrated Utility Planning:

# Brunette Fraser Greenway

Project name: Brunette Fraser Greenway

Contact name: Paul Wilting, P.Eng.  
Paul.Wilting@gvrd.bc.ca  
Tel: 604-432-6447  
Fax: 604-432-6298

Firm(s): Greater Vancouver Regional District (GVRD)  
City of New Westminster  
City of Burnaby  
TransLink  
Province of British Columbia

Team Members: Dayton & Knight Ltd. Department of Fisheries & Oceans  
Dillion Consulting EBA Engineering Consultants Ltd.  
Enkon Environmental Ltd. Environwest Environmental Consultants  
Phillips Wuori Long Inc. Ministry of Water, Land & Air Protection  
Rapid Transit Project Office 2000 Sapperton Fish and Game Club  
Terra Lotic Resources Ltd. Stoney Creek Environmental Work Group  
UMA Engineering Ltd. Westmar Consultants Inc.

The project was completed in 2001, and additional links in the greenway system will be constructed as opportunities present themselves.

Utility corridors traditionally have been engineered for the singular purpose of accommodating sewer and water lines and their maintenance. Engineers with the Greater Vancouver Regional District (GVRD) were part of a cross-functional team that developed an innovative and common sense solution – integrated utility and greenway corridors that incorporate public recreation, habitat protection and alternate public transportation together with utility functions.

The integrated corridor concept evolved over a number of years at the GVRD through informal discussions between Parks and Utilities Departments. In 1999, the concept was formalized as a pilot project along two utility corridors. The 4.8 km Lake City Interceptor (750 to 1200 mm diameter) in Burnaby and the 2.7 km Front Street Pressure Sewer (1875 mm diameter) in New Westminster were both sewers in need of capacity upgrades to meet current and future population growth.

Through a series of workshops, GVRD staff and external stakeholders worked collaboratively to resolve construction challenges, park and sewer maintenance conflicts, environmental issues and tenure and security issues. GVRD engineers used their knowledge and ingenuity to design the solutions

that accommodated the diverse needs that emerged from the workshops. By adding public greenway functions to utility corridors, both services could be delivered at less cost to the taxpayer.

GVRD engineers then coordinated an integrated tendering and construction process along the Lake City Interceptor that included the following sustainability highlights:

- Using a trenchless “pipe bursting” technique that avoided the construction impacts of the new sewer line along an existing trail next to sensitive riparian habitat.
- Creating an “off-channel” area to expand habitat for juvenile salmon using a collaborative approach. The City of Burnaby donated the land, the Department of Fisheries and Oceans provided the design, GVRD completed the construction and the Stoney Creek Environmental Work Group provided vegetation and labour for habitat restoration.
- Resurfacing the utility access road to accommodate cyclists and walkers.
- Replacing several culverts to allow the free movement of fish.
- Installing a new bridge to accommodate service vehicles and recreational users.

GVRD engineers, together with Parks planners and the City of New Westminster, then worked together to develop a second integrated utility greenway corridor following an abandoned rail bed along the north bank of the Fraser River. When the same corridor was then chosen for new the SkyTrain route, the Greater Vancouver Transportation Authority (TransLink) and the Department of Fisheries and Oceans were asked to join the existing team to develop a truly integrated project that included the following sustainability highlights:

- Creating a 2.2 hectare waterfront park that expanded the foreshore area by 30 to 50 metres.
- Replacing marginal fish habitat along the Fraser with triple the amount of high quality habitat, incorporating several inter-tidal marshes.
- Constructing a large diameter sewer line and elevated rapid transit line.
- Building a 1.2 kilometre utility service road that accommodates large maintenance vehicles and doubles as a greenway for cycling and inline skating.

**In completing these pilot projects, the GVRD engineers successfully merged the needs of various levels of government, the general public and special community organizations to develop solutions that accommodated social and environmental goals as well as engineering ones. Cooperation and collaboration began with initial design and continued right through construction and maintenance. The 16 km utility greenway pilot project was so successful that a regional greenway strategy is being developed to link these two projects and future ones throughout the entire lower mainland.**

