CUSTOMER BENEFITS

- Fully integrated: seamless connection with current SkyTrain SelTrac® system
- Fully automatic driverless operation
- High capacity for service frequency and efficiency
- Moving-block technology for minimum headways with safe operation
- Reduced life-cycle costs
- Proven safe and reliable in use for over 25 years
Metro Vancouver has a first-class transit system and the Evergreen Line will help build on that success.

Blair Lekstrom
B.C. Minister of Transportation and Infrastructure

THE CHALLENGE

The SkyTrain network will be extended from Lougheed Town Centre in Burnaby to Douglas College in Coquitlam, with the addition of six new SkyTrain stations and major upgrades to two existing stations (Commercial Broadway Station and Lougheed Town Centre).

Upon the opening of this extension, SkyTrain route operations are planned to change to best serve passenger demand. The 11-kilometre Vancouver SkyTrain Evergreen Line will relieve road congestion and link Port Moody and Coquitlam to the current SkyTrain system, reducing commute times and offering better transit connections between regional centres and downtown Vancouver. Plans for the line call for the use of tunnels and elevated guideways. In January 2012, the provincial government announced that pre-construction work would proceed on the line.

The SkyTrain Evergreen Line will serve seven stations in approximately 15 minutes. Twenty-eight (28) new SkyTrain cars are being built for the new line and existing Expo and Millennium Lines. This new rail transit network is called the “Integrated SkyTrain system.”

THE SOLUTION: SELTRAC® CBTC

In December 2012, Thales Canada, Transportation Solutions was awarded a contract by Partnerships B.C. to install the company’s world-leading Communications-Based Train Control (CBTC) solution on the new SkyTrain Evergreen Line, as an extension of the existing SkyTrain system. Since signalling the Expo Line in 1986, the first CBTC driverless system in the world, Thales has applied its reliable SelTrac CBTC system to both the Millennium Line and Canada Line. TransLink is operating one of the longest fully-automated systems in the world.

Thales will provide an Automatic Train Control (ATC) system using the same system architecture and solution as the existing SkyTrain system. Thales will upgrade the existing central control system and apply a two-stage implementation scheme to minimize any impact to existing SkyTrain service. The following main ATC subsystems will be implemented: System Management Centre (SMC), Vehicle Control Centre (VCC), Switch Control System (SCS), RF Loop Data Communications and Vehicle On-board Controller (VOBC) software to support the new guideway. There will be an automated Vehicle Storage Facility (VSF) for storing trains. The loop boundaries east of Coquitlam Central station will allow for future expansion on the Port Coquitlam branch, and the centre two loops on the main line and the VSF loop layout are designed to allow for the future expansion of the VSF. The SkyTrain Evergreen Line system will be capable of running one train every 93 seconds in both directions.

At 79.6 km, Vancouver’s SkyTrain system will become the longest rapid transit system in Canada after the completion of the Evergreen Line, compared to the Toronto subway and RT (76 km after the York University/Vaughan extension in 2014) and Montreal Metro (69.2 km). The SkyTrain Evergreen Line will be in service in 2016, serving 70,000 passengers per day by 2021.