



2009 CAPITAL PROGRAM

Capital Project Proposal Summary

Capital Management and Engineering Division

December 5, 2008

ID#	Project Title & Budget	Project Summary
1	<p>SkyTrain Fibre Optic System Upgrades - Expo Line Phase 1</p> <p>Capital Cost = \$5.830 mill.</p> <p>In-Service Date = Feb 2011</p>	<p>The SkyTrain fibre optic system serves as the communication medium for a number of critical SkyTrain systems including:</p> <ul style="list-style-type: none"> • Automatic Train Control; • Ticketing Machines; • CCTV System; • Digital Video Recording System; • Public Address System; and • Security/Safety Alarm Systems, etc. <p>The existing fibre optic cables in Phase 1 of the Expo Line, (Waterfront to New Westminster), are 23 years old and approaching the end of their service life. The scope of this project is to replace the existing fibre optic cables in Phase 1 of the Expo Line with new cables of similar and compatible characteristics.</p>
2	<p>STC Expansion of Bus Maintenance and Parking Capacity</p> <p>Capital Cost = \$7.550 mill.</p> <p>In-Service Date = May 2010</p>	<p>There is insufficient bus operating and maintenance capacities at Surrey Transit Centre (STC) to support planned bus fleet and service expansion in 2010. This project is identified as a component in the Transit Facilities Plan.</p> <p>The recommended option will achieve the following objectives:</p> <ul style="list-style-type: none"> • Maintenance capacity will be increased from 225 to 275 buses; • Fuelling capacity will be increased to service 275 buses; • Bus parking capacity will be increased to 300 forty-foot equivalents, based on a maximum allocation of 50 articulated buses and 225 standard buses; and • Employee parking capacity will be increased (spaces to be determined during preliminary design).
3	<p>Bus Security Cameras and Safety Program Enhancements Phase 3</p> <p>Capital Cost = \$3.970 mill.</p> <p>In-Service Date = Sept 2010</p>	<p>This multi-phase program facilitates the deterrence and diffusion of on-board bus security incidents, improves bus operator and passenger safety, and provides evidence for investigation of incidents and claims through the continued installation of on-board security cameras and video recording equipment on the TransLink bus fleet.</p> <p>The request is to implement the third and last phase of the program, and will install the Bus Security Cameras System on 522 buses (standard, articulated and Community Shuttle) operated by Coast Mountain Bus Company and West Vancouver Transit. At the end of this phase, all buses 10 years old or less, will be outfitted with security cameras. The remaining older buses are</p>

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		<p>scheduled for retirement within the next seven years and will be replaced with new buses installed with cameras.</p> <p>This program currently excludes HandyDART vehicles or Community Shuttle routes that are operated by private contractors.</p>
4	<p>STC WWTP Replacement & Redirection of Bus Wash Discharge</p> <p>Capital Cost = \$1.200 mill.</p> <p>In-Service Date = 2010</p>	<p>The Surrey Transit Centre (STC) wastewater treatment plant is approaching the end of its useful life and is not sufficiently maintaining compliance with Metro Vancouver bylaw 299/2007 discharge permit requirements.</p> <p>This project is to replace the existing wastewater treatment plant with a modern (ultrafiltration), more reliable and compliant one that can be remotely monitored and managed in a similar manner to the plants at other transit centres, and installing a valve assembly to selectively re-direct buswash discharge to the sanitary system, bypassing treatment.</p>
5	<p>Knight Group TOH Rectifier Replacement</p> <p>Capital Cost = \$7.450 mill.</p> <p>In-Service Date = Sept 2010</p>	<p>This Project is to replace two of the three existing Knight Group trolley overhead (TOH) rectifier stations. Knight, Oak, and Boundary are three TOH rectifier stations in the Knight Group that all have electrical equipment originally procured in 1977.</p> <p>This project proposes the replacement of all major electrical components at Boundary and Knight rectifier stations as they are n the end of their typical service life of 25 years, and the Knight station is at risk of flooding due to its low elevation and close proximity to Fraser River. The Oak rectifier station is not included in this project as it is planned for decommissioning after the new Yukon rectifier station comes online in 2009.</p> <p>The primary objective of this project is to replace all major electrical components (Medium and Low Voltage Switchgear, Transformer, Rectifier, DC Switchgear) with a steel enclosure as a modular package at Boundary and Knight rectifier stations to reduce retrofit costs and outage time. The secondary objective is to reduce the risk of flood damage to electrical components at Knight Rectifier station by building of a new higher concrete base pad. This project will result in increased efficiency and reliability of the TOH network to support the previous investments made by TransLink to expand the electric trolley bus fleet and service.</p>

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6	<p>Running Rail Replacement - New West Curve</p> <p>Capital Cost = \$1.160 mill.</p> <p>In-Service Date = Nov 2009</p>	<p>The SkyTrain running rails in the guideway curve west of New West Station are extensively worn. This project proposes the supply and installation of 1,500 linear metres of new running rail in this section.</p> <p>The work will be performed over weekends by single-tracking between New Westminster and Edmonds stations, and will utilize multiple field crews to minimize single-tracking requirements.</p>
7	<p>Scott Road Station West Pod Elevator</p> <p>Capital Cost = \$1.605 mill.</p> <p>In-Service Date = Oct 2010</p>	<p>Accessibility from the west pod of Scott Station has been an issue for many years due to the lack of an elevator in that area. The condition is exacerbated by the fact that the west pod entrance is the converging point for the bus loop, HandyDART drop-off and heavy foot traffic. The scope of this project is to improve accessibility by installing an elevator at the west pod location.</p>
8	<p>Electronic FareCard & Controlled Access - Phase 2</p> <p>Capital Cost = \$1.000 mill.</p> <p>In-Service Date = Dec 2009</p>	<p>Phase 1, currently underway, is to develop a business case and project definition through identifying and analyzing options for electronic farecards and controlled access for the transit system.</p> <p>Phase 2 will consist of:</p> <ul style="list-style-type: none"> • A business process review to identify new processes and staffing requirements; and • Preliminary design and preparation of technical specifications and a Request For Proposals.
9	<p>Minor Capital Account Top-Up</p> <p>Capital Cost = \$5.000 mill.</p> <p>In-Service Date = Various</p>	<p>Additional funding for the Minor Capital Account (MCA) is requested for:</p> <ul style="list-style-type: none"> • Projects satisfying the definition of a Minor Capital Project in the Capital Project Approval Policy; and • Minor Capital Feasibility Studies required to refine option analysis, scope & implementation plans for potential Capital Projects or Minor Capital Projects, as described in the Capital Project Procedures. <p>The MCA is managed by the Capital Management Committee.</p>

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10	<p>2010 HandyDART Vehicles Replacement</p> <p>Capital Cost = \$3.885 mill.</p> <p>In-Service Date = May 2010</p>	<p>This project is to replace 28 HandyDART (19 Microbus and 9 Midibus) vehicles that have reached the end of their economic lives. The vehicles identified in the project are scheduled for replacement in 2010 based on a life expectancy of 6 years/200,000km. Delaying vehicle retirements results in lower fleet reliability, and increasing the maintenance costs.</p>
11	<p>WCE Service and Facility Expansion</p> <p>Capital Cost = \$27.730 mill.</p> <p>In-Service Date = Sep 2010</p>	<p>Recent ridership growth on the West Coast Express, beyond what was anticipated in the 2009 10-year Transportation and Financial Plan, has resulted in about 60% of train runs exceeding seated capacity. The end result is a number of standees on many train runs which raises safety-related issues, contravenes TransLink's Transit Service Guidelines, and increasing complaints regarding the quality of service relative to the premium fare charged.</p> <p>This project is to acquire 7 additional cars (6 in-service plus 1 spare) for service expansion by lengthening the existing trains. This is expected to accommodate current overcrowding and projected future ridership growth for an estimated 3-5 years. The scope will also include upgrades to two key station yards: Waterfront Station and Mission, and one platform extension to accommodate the longer trains.</p> <p>The service expansion will add sufficient capacity to meet demand while a long-range plan for WCE is developed. While several different expansion options may be recommended in the long-term plan, it is anticipated that any expansion plan will utilize the cars purchased, wayside installed and track leased under this capital proposal.</p> <p>The risk associated with procuring these cars in advance of additional revenue streams required for the incremental operating costs can be mitigated through the ability to lease or sell the cars to other commuter rail operators.</p>
12	<p>2010 SkyTrain Expansion - 24 Mark II Cars</p> <p>Capital Cost = \$75.000 mill.</p> <p>In-Service Date = Sep 2010</p>	<p>This project request is to exercise the Second Option under the existing contract with Bombardier Transportation for an additional 24 Mark II SkyTrain cars (i.e. 12 married pairs), for delivery in 2010. This additional fleet is to accommodate ridership growth to 2018. The base order and first option, totalling 48 cars, are expected to be fully subscribed in 2013.</p>

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		<p>The risk associated with procuring these cars in advance of additional revenue streams required for the incremental operating costs can be mitigated through the ability to negotiate contract terms related to the timing of exercising the option and/or delivery. In addition, board approval will be required prior to exercising the option to purchase the vehicles.</p>
13	<p>2009 MRN Minor Capital Program</p> <p>Capital Cost = \$20.000 mill.</p> <p>In-Service Date = 2010-12</p>	<p>This project request is for funding on-going annual program that shares the capital costs with municipalities to improve the capacity, safety and connectivity of the Major Road Network (MRN), including the rehabilitation and seismic retrofitting of major structures on the MRN.</p> <p>The MRN Minor Capital Program provides an annual allocation to fund small capital projects aimed at managing and improving the efficiency of the existing network, such as intersection, geometric, safety and network continuity improvements on the MRN. The program is administered under a 50/50 municipal and TransLink cost-sharing arrangement.</p> <p>The location and scope of the particular municipal projects to be funded through this program will be determined through review of applications submitted in fall 2008 by TransLink staff working in consultation with MRTAC, its Planning Subcommittee, and the MRN Minor Capital Working Group.</p> <p>The objective of the MRN Minor Capital Program is to help fulfil TransLink's legal requirement as described in Section 20 of the South Coast British Columbia Transportation Authority Act.</p>

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14	<p>2009 Bicycle Capital Program</p> <p>Capital Cost = \$6.000 mill.</p> <p>In-Service Date = 2009</p>	<p>The Bicycle Capital Program requests \$6 million for investments in bicycle related facilities such as bike route construction, special traffic signals, improved access to bridges, and for improved integration of transit and bicycles. This annual allocation is to fund:</p> <ul style="list-style-type: none"> • Capital cost-sharing programs with municipalities on eligible municipal and regional projects; • Transit integration and TransLink-owned infrastructure; and • Contributions toward the bicycle and pedestrian access on the Canada Line Bridge. <p>The primary objective of the program is to improve cycling as a viable mode of transportation and improve bicycle integration on transit.</p>