

of hydrogen powered fuel cells to provide the electricity for the rail cars has been raised. The original overhead electrical supply line for the train was removed many years ago.

As a spin-off from this work on the heritage rail service, the concept of a “community” rail line has arisen. This type of service is a light rail service intended primarily for linking communities together but not geared towards high capacity commuter rail such as SkyTrain or West Coast Express. In Surrey, such a “community” rail service would link Cloverdale, Newton, Kennedy and the Scott Road/Bridgeview area, but would not connect to Surrey City Centre. Please see Figure 1. Such community light rail services have operated successfully in the UK and other parts of the world, and special rail vehicles have been designed for this work.

Surrey Feasibility Study

To explore the potential for a community rail service in Surrey, the City retained a consultant (UMA) to undertake a feasibility review. This study found that a community rail service was feasible; however, the project:

- Would require track upgrading to operate on the existing single track which, together with the purchase of passenger vehicles, would result in a basic construction/start-up cost of approximately \$89-113 million. This does not include other potential additional costs for property acquisition (i.e., at stations or extensions), utility relocations, right-of-way and at-grade crossing improvements, passenger stations, industrial sidings, maintenance/storage facilities, double tracking at stations, engineering and legal costs, contingency or business compensation to Southern Rail. City staff anticipate that including these additional items would result in a total capital cost in the range of \$110-150 million;
- Would require approvals to operate the service from Southern Rail, B.C. Hydro, TransLink and Delta (for the short section of track in that municipality);
- Would have operating costs in the range of \$5-6 million a year;
- Could potentially be a 2010 Olympics legacy project or a Hydrogen Highway demonstration project;
- That expansion eastward to Langley/Abbotsford presents more challenges due to the much greater amount of freight traffic east of Cloverdale (rail line from the Roberts Bank Terminal joins in here).

Initially, at the presentation to the Transportation Committee, the consultant had estimated the capital cost as \$50 million; however, with further detailed review, the cost has been more accurately estimated in the \$110 to \$150 million range.

TransLink Rail Study

The potential for mass transit rail service on this corridor has been raised as part of the South of the Fraser Area Transit Plan currently underway. To investigate this potential on the old inter urban line, TransLink retained a consultant to assess the technical and constructability issues and rough order of magnitude costs. This study looked at the following potential options:

- Heavy Rail push-pull trains, as used on the West Coast Express;

- Heavy Rail diesel multiple units as used on Vancouver Island;
- Light Rail diesel multiple units as used in Ottawa; and
- Light Rail electric multiple units as used in Calgary.

The consultant has concluded that to run an appropriate level of commuter rail service (i.e., 30 to 15-minute frequency), the existing single track would need to be twinned to provide two running tracks. This requires the relocation of the power line along the tracks plus has some significant construction and adjacent property impact on the section down the Scott Road hill. The study determined that to link to the SkyTrain Station, 800 metres of new right-of-way would be required and additionally to adequately link to Langley City Centre, a new section of track would be needed in Langley City.

The TransLink Study found that preliminary capital costs (i.e. twinning track, extension to Scott Road Station, new section of track in Langley City, stations and rolling stock), assuming that the existing right-of-way can accommodate the double tracks, are as follows:

Heavy Rail Type Service	\$360 million
Light Rail Diesel	\$590 million
Light Rail Electric	\$700 million

The higher costs for light rail systems are identified as:

- Much higher standards of rail track needed by light rail to ensure safe operation;
- Extra costs involved in segregating heavy and light rail trains to prevent collisions;
- Rail cars and special station requirements; and
- Electrification for Light Rail Electric.

Operating costs have not yet been determined but would be TransLink's responsibility if operated as a mass transit, commuter rail, system.

Comparison of the Two Studies:

Both studies agree that it is technically feasible but found that there are a number of issues that would have to be dealt with.

The biggest difference between "commuter" rail and "community" rail service in this corridor is in the capital cost estimates. The differences are due to the following:

- The TransLink "commuter" rail study includes extending the rail line to Langley Town Centre Transit Exchange;
- Double tracks the entire line and has four more stations; and
- Includes a 30% contingency.

TransLink's Perspective

While the rail line may provide a community linking function, we understand TransLink's perspective to be:

- The rail line does not serve the primary transit trip orientation and locations;
- The rail line would divert riders away from the proposed bus rapid transit/light rail lines on King George Highway and 104 Avenue; and
- It is more cost-effective to fund bus rapid transit on King George Highway, Fraser Highway, and 104 Avenue than upgrade the existing rail corridor for commuter rail service.

TransLink has taken a similar position on Vancouver's request to upgrade their heritage rail line to a street car type rail service.

City of Surrey's Position

Funding from Regional/Provincial/Federal government or other sources would be required to make the community rail proposal a reality. The City does not have the capital funding available (\$100 million range) for such a large project. Additionally, the City does not have room in its operating budget for the \$5 - \$6 million a year operating cost for the community rail line. While there will be some revenue from fares, this is likely to only cover 20 to 30% of costs. As such, the viability of this project is a concern.

Staff holds the view that it is more realistic to initiate a smaller scale Heritage Rail service on a section of the Interurban Line, then gradually expand this service on to the full length from Cloverdale to Scott Road.

There is potential to pursue Provincial funding for some level of service on at least part of the corridor under the 2010 Legacies Program or the Provincial Hydrogen Highway demonstration projects. When the Transportation Committee initially proposed that the City retain a project manager to pursue the community rail service, the capital construction estimate was \$50 million. With more detailed work, this construction cost estimate has increased to the \$110 - \$150 million range. This revised estimate is considerably less than the \$360 million cost to twin the tracks and extend the service to Langley City as estimated by TransLink's study.

Project Manager

Council has authorized staff to proceed with retaining a project manager to pursue this project. This type of work will include firstly, a technical person to address designing an appropriate system and, secondly, a "Lobbying" or facilitating component to pursue / coordinate funding from agencies, demonstration projects/vehicles from suppliers, establishing partnerships, etc. The City has undertaken a recruitment process but due to market conditions and other factors, has not been able to find a suitable candidate to take on as a staff person to fulfill the two different skill sets needed.

In view of this, and to fulfill Council's direction, an option is that external consultant assistance (i.e., not a City staff person) be retained on a contract basis, with up to \$100,000 being made available from the Engineering Department's capital budget for this purpose. It is likely that two different consultants would be necessary, one to address the technical side and one to facilitate partnership opportunities. The City could also pursue retaining contract or staff with the necessary technical skill sets needed to help pursue this project.

If retained, one of the first tasks of the facilitator/coordinator would be to establish a group of cooperating partners and ideally a “society” to pursue this project. While a ‘community’ rail system would have some benefits for the City, the City is not able to fully fund the project and others are needed to share the start-up and ongoing operational costs involved. Establishing a non-profit society would provide funding options not open to the City alone.

OPTIONS FOR FUTURE ACTION

The following two options are available:

Option (a) Continue to pursue Community Rail.

Pros:

- Demonstration projects, especially during the Olympics, would enhance the City’s profile and image;
- Could potentially jump-start a rail transit system in Surrey.

Cons:

- Very high costs that cannot be met within the City’s funding capability;
- Diverts resources away from projects that have a more realistic chance of success;
- Builds expectations that may not be achievable.

Action to be taken by staff under Option (a):

Continue to actively pursue the Community Rail Project. This would involve retaining contract services of a technical project manager and a project partnership facilitator to pursue funding, partnering, demonstration projects, etc.

Option (b) Pursue Heritage Rail.

Pros:

- More realistic chance for success;
- Funding and resource requirements much lower than Option (a).

Cons:

- Heritage Rail service would not have the same levels of community benefit as “community” rail;
- Reduces the potential funding opportunity of any special Olympic demonstration or legacy project programs.

Action to be taken by staff under Option (b):

Continue to work with the Fraser Valley Heritage Rail Society toward implementing a heritage rail service on an initial section of the Interurban track, and then incrementally expand heritage rail service to the full line between Cloverdale and Scott Road with a view in the more distant future to potentially transition this over to a ‘community’ rail service.

This action would not require the City to retain the full-time services of a project manager/project facilitator and would involve a lower level of City involvement that could be accommodated within existing staff resources, to work with FVHRS, Southern Rail and other agencies as well as pursue external funding/partnerships.

Based on:

- the limited funding sources available to the City for transportation services;
- TransLink's lack of support for community rail service;
- no established senior government funding programs directly to Lower Mainland municipalities for transit type services;
- limited potential funding from senior governments;
- no known source of funding for the ongoing operational cost (\$5/6 million a year);

staff are of the view that Option (b) is the most prudent course of action. Staff request Council direction on this issue.

Paul Ham, P. Eng.
General Manager, Engineering

PH:brb:rdd
Attachment