ITEM	9
MANAGER'S REPORT NO.	75
COUNCIL MEETING	1980 12 08

RE: LETTER FROM MR. KEITH R. BALLANTYNE WHICH APPEARED ON THE 1980 NOVEMBER 17 MEETING OF COUNCIL (ITEM 3c)
FEASIBILITY OF A COMMUTER RAIL SERVICE ALONG BURRARD INLET

The following report from the Director of Planning is in response to a letter which Council received from Mr. Keith R. Ballantyne on 1980 November 17.

RECOMMENDATION:

1. THAT the recommendations of the Director of Planning be adopted.

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TO: MUNICIPAL MANAGER

PLANNING DEPARTMENT
1980 November 25

FROM: DIRECTOR OF PLANNING

SUBJECT: FEASIBILITY OF COMMUTER RAIL SERVICE ALONG BURRARD INLET

RECOMMENDATIONS:

1. THAT Council request that the G.V.R.D. and U.T.A. give high priority to further work directed toward the provision of a commuter rail service between the North-East Sector and Downtown Vancouver utilizing the Canadian Pacific Railway line along the Burrard Inlet foreshore.

2. THAT Council make known its recommendations to Mr. Keith R. Ballantyne, 1184 Fraser Avenue, Port Coquitlam, B.C., and other concerned parties.

SUMMARY

At its meeting of 1980 November 17, Council received a letter dated 1980 October 27 from Mr. Keith R. Ballantyne requesting Council's endorsement of a "community" rail service between the North-East Sector and Downtown Vancouver. Council deferred any action on this matter pending receipt of relevant studies that are pertinent to this topic and any staff comment. The reports in question are:

1. South Shore Transit Technology Evaluation, G.V.R.D. Rapid Transit Technical Memorandum #13.
2. North-East Sector Commuter Rail Feasibility Study, Urban Transit Authority of B.C., 1980 May.

Copies of these reports have been made available to members of Council and are available for examination by the public in the Office of the Municipal Clerk. Both these reports affirm that, in the medium-to-long-term, commuter rail service would be more economic than a bus-only system of commuterservice from the North-East Sector to Downtown Vancouver.

Staff analysis of these reports suggests that a commuter rail system could well be an economically viable proposition if implemented now. In addition to being cheaper than a bus-only system, commuter rail would address road capacity shortfalls in the most congested corridors of Burnaby; viz. Hastings, Lougheed and the Freeway.

A commuter rail service along the Burrard foreshore is a part of the Comprehensive Transportation Plan, adopted by Council (1979 August 20). Council has endorsed the early implementation of such a service in its consideration of the Implementation Strategy/Schedule (1980 July 21) for projects in the Transportation Plan.

REPORT

INTRODUCTION

At its meeting of 1980 November 17, Council received a brief from Mr. Keith Ballantyne regarding commuter rail services along the Burrard foreshore line of the Canadian Pacific Railway. Mr. Ballantyne attached letters of support for his proposed "community rail" service from the Dewdney-Alouette Regional District (D.A.R.D.), the D.A.R.D. Economic Development Commission, the Village of Belcarra, the Districts of Pitt Meadows, Mission, Maple Ridge and Coquitlam, and the Cities of Port Moody and Port Coquitlam.

Mr. Ballantyne is seeking the endorsement of the Municipal Council in order to add impetus to a reappraisal of the viability of a commuter rail system.

The most recent studies on commuter rail have been made available to Council and are discussed below.

SOUTH SHORE TRANSIT TECHNOLOGY EVALUATION
Technical Memorandum #13, G.V.R.D., Rapid Transit Project, Undated Draft

This report was prepared in order to examine alternative technologies for servicing the east-west corridor defined by the south shore of Burrard Inlet. The technologies considered were:

1. conventional bus
2. diesel-powered commuter trains
3. hovercraft
4. hydrofoil

The technologies were examined in terms of capital and operating costs. The cost evaluation was summarized as follows (page 24):

> "The cost comparison was intended to provide sufficient financial information to compare the alternative transit types of broad auras of magnitude. The results of this analysis show that taking the minimum cost approach, the commuter rail option offers the lowest capital operating cost relative to both the conventional bus and the water-borne transit modes."

While the costs clearly demonstrated that the water-borne technologies were considerably more expensive than rail or bus, the cost advantages of rail over bus were not all that clear cut. As a result of this study, the G.V.R.D. rapid transit project concluded that:

> "As ridership approaches 3,000 trips* in the peak period, a commuter train service on the C.P. Rail line between Port Coquitlam and downtown Vancouver may become a cost effective alternative to buses. Such a commuter train is not to be confused with high capacity rapid transit since it would not operate very frequently or carry over 4,000-5,000 people (without disrupting freight service on the C.P. main line)."
>
> (Page 23, Regonal Transit Strategy, Report 1, G.V.R.D. Rapid Transit Project.)

* Note: In Technical Memorandum 13, a peak period commuter rail passenger loading of 3,225 was assumed in 1978.

NORTH-EAST SECTOR COMMUTER RAIL FEASIBILITY STUDY
Urban Transit Authority, May 1980

This Study compared commuter rail to bus-only system for current and projected levels of passenger demand. The rail option analyzed for this study is based on a report prepared by Canadian Pacific Consulting Services (C.P.C.S.) in 1976 and technical review work undertaken by an independent railway consultant. The U.T.A. study concludes:

> "That a commuter rail service operating on the C.P. tracks is viable and offers the least cost solution to the needs of the north-east sector residents. A rail service, however, must be viewed as a medium to long-term investment as it only offers cost advantages over an all-bus option after approximately ten to twenty years, depending upon the rate of growth and demand. This cost advantage is maintained even though a rail based option may attract up to 25% more passengers than the current bus system. The rail option was further found to maintain this advantage over a bus system over a range of inflation and interest rates as high as 20%."

It is worth noting that these conclusions regarding the viability of commuter rail are not dissimilar to the ones drawn in the G.V.R.D. L.R.T. study with respect to the comparison of an L.R.T./bus system to an all-bus system.

Our analysis of the U.T.A. study suggests that the viability of the commuter rail system may have been understated because of some of the assumptions made with regard to passenger demand and cost. Our analysis of the U.T.A. data indicates that the break-even point of commuter rail is achieved when it replaces a bus transit line haul of 1,600 persons in the peak period. For the most realistic revenue/growth scenarios, this would not occur until the late 1980s (according to the U.T.A. report). However, we believe that the base total passengers assigned to a commuter rail has been underestimated. Our appraisal of 1976/77 transit survey data relative to 1986 transit usage projections suggests that the break-even point for commuter rail services has already been passed.

In the U.T.A. report, the commuter rail system has been costed on the basis of wholly new rolling stock (locomotives and bi-level cars) that would be dedicated exclusively to running a commuter service in and out of the C.B.D. during the respective morning and evening peak periods. Clearly, the cost would be considerably reduced if older, possibly leased, rolling stock were used and/or part of the cost of equipment was offset against some other use (such as weekend ski trains to Whistler). With reduced costs, the economic viability of commuter rail service relative to an all-bus system would be further improved.

DRAWBACKS TO COMMUTER RAIL

Apart from economic viability, a major concern regarding commuter rail service is the capacity limitations of such a system. The U.T.A. report states as follows:

> "Due to track capacity and switching limitations, C.P.C.S. (Canadian Pacific Consulting Services) proposed only two morning departures from Port Coquitlam station westbound at 07:05 and 07:35 and two afternoon train departures from Vancouver station eastbound at 16:45 and 17:55. Further increases in service frequency are not probable and will depend largely on available track capacity. The estimated one-way train travel time is forty minutes, contingent on certain capital improvements to the railway infrastructure."
>
> (Page 16, U.T.A. Report)

Clearly, such a curtailed service in a commuter rail system may not be able to tap all of the potential demand for such a service. The specified frequency limitation indicates an ultimate capacity limitation of about 3,500 commuters per peak period. The forty minute travel time implies an overall speed of 25 miles per hour (40 kilometers per hour), well below the speed achieved by commuter rail services in other urban areas. However, this travel time is directly competitive with automobile travel on the line haul from the North-East Sector to the C.B.D. (Central Business District) and is a considerable improvement on bus travel times which will undoubtedly continue to deteriorate as congestion increases unless bus priority measures are implemented.

Undoubtedly, the frequency and travel speed of a commuter rail system could be increased at a cost of improving the rail infrastructure (track, signaling) and scheduling of freight services. It should be noted that freight usage on the C.P. line has recently been reduced by the transferrance of piggyback and container services to Coquitlam. It is reasonable to assume that elimination of the False Creek yardsite (for B.C. Place) will further reduce freight movements, thereby freeing up additional capacity for commuter rail.

BENEFITS TO BURNABY

The U.T.A. Report has assumed that there would be no commuter rail stations between downtown Vancouver and Coquitlam, while the G.V.R.D. has assumed stations in north Burnaby and at the P.N.E. It is probable that passenger demand would not warrant a station in Burnaby even if an accessible location could be found. (A station at the P.N.E. would probably be more viable than one in Burnaby in terms of potential passenger demand).

Thus, it would appear that commuter rail would offer little direct benefit to Burnaby residents. However, the indirect benefits would be considerable. The case for commuter rail is stated in the Comprehensive Transportation Plan:

> "... the growth of traffic along the east-west corridor between and including Highway 1 and Hastings Street/Barnet Highway will out-strip the extra capacity provided by traffic management and/or widening of Lougheed Highway, Barnet Highway, Broadway east of Gaglardi and the Freeway. ... the required additional capacity in this area would have to be provided through increased transit usage to prevent congestion by-pass movements into residential areas. The development of a commuter facility in the C.P. Rail right-of-way along the Burrard Inlet foreshore, together with the facilities' improvements, would help promote this needed increased transit usage."

For travel from the North-East Sector to Downtown Vancouver, commuter rail would be competitive with the car both in terms of travel time and comfort. Therefore, it is anticipated that it will decrease car traffic (and, indeed, reduce the number of buses) on the critical arterials. Whilst the numbers of vehicles so removed will not be large relative to flow on these arterials, a marginal decrease in traffic on a congested arterial results in a considerable reduction in travel delay to traffic.

COUNCIL POSITION

Burnaby Council has previously considered a commuter rail system along the Burrard Inlet C.P. Rail line in the context of the Burnaby Comprehensive Transportation Plan. The Transportation Plan, which was adopted by Council (1979 August 20), included commuter rail service. The implementation of a commuter rail service was given a high priority within the Transportation Plan Implementation Strategy adopted by Council (1980 July 21). In the (guideline) ten-year implementation schedule this project was scheduled for completion in 1984.

SUMMARY AND CONCLUSIONS

Previous studies on commuter rail service, as discussed in this report, deal with the feasibility of such a service at a broad conceptual level. These studies affirm that such a service would be an economic alternative to a bus-only system in the medium to longer term. Our appraisal of the U.T.A. study suggests that a commuter rail service could well be an economic proposition if implemented now. (Additionally, there would be benefits that would accrue from reduced pressure on the road system.)

Given the uncertainty that is related to the timing (rather than the concept) of commuter rail more study should be devoted to this item. Such a study should be directed towards the definition of a preliminary design for a commuter rail service. As in the case of the L.R.T. project, this preliminary design would provide the necessary information for making a decision on when to proceed with commuter rail and would be the basis for its implementation. This work should be carried out by the G.V.R.D. and the U.T.A. in consultation with Canadian Pacific Railways and the concerned municipalities.

A. L. PARR
DIRECTOR OF PLANNING

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cc: Municipal Engineer