

RE: ESCALATORS FOR BURNABY ALRT STATIONS
PATERSON AND ROYAL OAK STATIONS
REZONING REFERENCE 47/82

ITEM 9
MANAGER'S REPORT NO. 15
COUNCIL MEETING 1983 02 28

MUNICIPAL MANAGER'S RECOMMENDATION:

1. THAT the recommendations of the Director Planning & Building Inspection be adopted.

* * * * *

TO: MUNICIPAL MANAGER 1983 February 23

FROM: DIRECTOR PLANNING &
BUILDING INSPECTION

SUBJECT: ESCALATORS FOR BURNABY ALRT STATIONS
REZONING REFERENCE #47/82

RECOMMENDATIONS:

1. THAT B.C. Transit be requested to confirm that the passerelle with attendant escalator and stairs linking the Metrotown ALRT Station to the bus loop area across North Beresford Street will be built as an integral part of the initial phase of the ALRT system.
2. THAT B.C. Transit be requested to confirm that an escalator will continue to be provided at the Royal Oak ALRT station as part of the heretofore committed baseline ALRT system.

REPORT

1.0 BACKGROUND AND SUMMARY

The attached motion was passed unanimously by Council at its meeting of 1983 January 31. The motion addressed the desire of Council that two escalators be provided for each of the ALRT Stations in Burnaby, in both the up and down directions. The motion of Council along with the attached covering letter was sent to B.C. Transit by courier requesting a reply on various technical aspects for the provision of further escalators. B.C. Transit has now responded to this request with the attached letter dated 1983 February 21.

B.C. Transit has indicated that the escalators provided at ALRT stations are intended to be reversible to allow operation in the direction of peak patron flow and/or possibly by patron activated escalators. Elevators which are provided at all stations would be accessible to persons who require it.

In summary, B.C. Transit indicates that the provision of a second escalator at both the Patterson and Royal Oak ALRT stations is feasible at the costs outlined in Section 3.2. The provision of a second escalator at the Metrotown ALRT station and four (4) escalators at the Edmond ALRT station is not considered feasible due to the undesirable delay to the completion of these sections of the ALRT. It has been noted in this report that the Metrotown costs do not include a second escalator down from the passerelle to the bus loop area. If the problems of delay are ignored, the total estimated cost provided by B.C. Transit for additional escalators (a cost estimate considered incomplete with respect to the Metrotown station and too large with respect to the Royal Oak station) would be in the range of \$2,770,000. This estimated cost would be considered by B.C. Transit to be the responsibility of the Municipality while maintenance costs would be that of B.C. Transit.

This report in response to the motions passed by Council is provided for the information of Council. However, two matters with respect to the Metrotown passerelle and basic escalator provisions for the Royal Oak ALRT station which arose out of the general escalator discussion are of sufficient concern to warrant specific action. This action has taken the form of the two outlined recommendations.

2.0 SCHEDULED PROVISIONS AT ALRT STATIONS

2.1 Escalators

B.C. Transit indicates that the number of escalators are provided as warranted by the expected passenger loading at each of the ALRT stations. Of the overall 15 station system, dual escalators in both directions are planned only for the 2 ALRT stations located in downtown Vancouver.

We are advised that the proposed escalators can be controlled by:

- a) Patron activated method whereby the escalator will move in the direction, either up or down, activated by the first patron to touch the first step. This method will only be possible at low volume stations such as perhaps Royal Oak.
- b) Peak hour direction method whereby the escalators are activated from a central control to move in the direction of peak hour travel such as the up-direction (inbound to downtown Vancouver) in the morning rush hour(s) and the down-direction (outbound) in the evening rush hour(s). This will assist in minimizing the use of stairs related to the overall passenger volumes at ALRT stations.

It is proposed that either of these methods may be utilized when appropriate to assist ALRT patrons.

2.2 Elevators

Elevators are provided at all four Burnaby stations to assist the handicapped and others who are unable to easily use the stairs and find that any provided escalators are not moving in their direction of travel. B.C. Transit indicates that the elevators will be accessible to persons whose mobility is impaired by baggage, accompanying small children, or age.

Elevators are planned to be operable in a conventional manner and are intended to be monitored by cameras from a central location. Persons who wish to use the elevator will push the appropriate button to actuate a speaker phone hook-up with a central control. Persons identified as in need of the use of the elevator will be permitted to do so.

3.0 MOTIONS PASSED BY COUNCIL

The following information is organized around the motions A, B, C and D passed by Council on 1983 January 31 related to the possible provision of two escalators for each of the ALRT stations in Burnaby, in both the up and down directions.

3.1 Motion A - Immediately determine that design can be adjusted for inclusion of down escalators to the four stations in Burnaby.

a) Patterson ALRT Station

B.C. Transit indicates that the design can be adjusted to accommodate a second escalator for the stated costs.

b) Metrotown ALRT Station

B.C. Transit indicates that a total redesign would be required in order to radically widen the station platform to accommodate a second escalator. The redesign which would require changes to the guideway alignment would place this section behind schedule by nearly two (2) months.

Upon requesting clarification of this situation, B.C. Transit indicates that this second escalator cost does not include the cost of a second escalator from the passerelle, located at the mezzanine level and crossing North Beresford Street, down to grade to the bus loop. B.C. Transit indicates that this passerelle and access down to the bus loop is not included in the baseline contract. B.C. Transit plans for the provision of this passerelle by others such as the developer of the Kelly-Douglas property. Municipal staff had been previously given to understand that this passerelle would be provided as part of the basic Metrotown ALRT station package. The drawings heretofore provided by B.C. Transit have indicated the passerelle as an integral part of the design and Municipal staff would strongly state that the Metrotown ALRT station would not be properly functional without the provision of the proposed passerelle across North Beresford Street.

Therefore, the B.C. Transit estimate of extra cost is insufficient since it does not include the second escalator from grade at the bus loop to the passerelle/mezzanine level. Even as indicated by B.C. Transit, the two potential escalators from the ALRT station platform down to the mezzanine would, without the passerelle, require ALRT patrons to use a further exit staircase down to grade.

On an overall basis, staff would indicate that if the doubling of escalators is warranted in any of the Burnaby ALRT stations, the Metrotown ALRT station as the future "flagship" station in Burnaby serving a high density apartment area, the future primary commercial core of Metrotown, and a major bus loop should have priority in receiving the second escalators. As an important statement arising out of this discussion, it is recommended that B.C. Transit be advised that the provision of the passerelle across North Beresford Street from the ALRT station to the bus loop with attendant escalator and stairs at the bus loop terminus would be expected to be provided by B.C. Transit as an integral part of the basic ALRT system.

c) Royal Oak ALRT Station

B.C. Transit indicates that the design can be adjusted to accommodate two escalators for the stated costs. Upon further questioning, it was explained that although one escalator has always been indicated on the submitted ALRT station drawings, B.C. Transit staff were considering the elimination of that one escalator at the Royal Oak station.

Staff consider the possible deletion of the one escalator previously provided as a retrograde step which would diminish the basic overall ALRT system. As a further important statement arising out of this discussion, it is recommended that B.C. Transit be advised that the provision of the one escalator as outlined from the earliest drawing stages and included in the baseline costs continue to be provided by B.C. Transit as an integral part of the Royal Oak ALRT station provision.

d) Edmonds ALRT Station

B.C. Transit indicates that a total redesign of this side-loaded ALRT station would be required in order to accommodate four escalators. The redesign which would require changes to the guideway alignment would place the completion of this section behind schedule. The tight site is also seen as an additional constraint. This ALRT station had not been planned to accommodate any escalators since the height variation for the elevated bridge across the ALRT guideways does not warrant escalators. It is noted that the rezoning report had indicated that no escalators were being provided for at the Edmonds ALRT station.

e) Summary of Feasibility

In summary, B.C. Transit indicates that from its point of view the addition of escalators to the desired Council level would be feasible at the Patterson and Royal Oak ALRT stations, but not feasible at the Metrotown and Edmonds ALRT stations.

3.2 Motion B - The cost of including this feature in the station.

The following cost estimates are outlined in the attached letter provided by B.C. Transit and are summarized as follows:

ALRT Station	Estimated Redesign Costs	Estimated Capital Costs	Total Estimated Costs	Comments
Patterson	\$ 20,000	\$300,000	\$320,000	
Metrotown	160,000	750,000	910,000	Does not include a second escalator down to the bus loop.
Royal Oak	40,000	450,000	490,000	Includes the cost of two escalators not just a second down escalator.
Edmonds	100,000	950,000	1,050,000	Includes the cost of four escalators for this side-platform ALRT station.

TOTAL	\$320,000	\$2,450,000	\$2,770,000	

3.3 Motion C - To determine who would be responsible for the cost and maintenance.

The position of B.C. Transit is that any redesign and capital costs related to the provision of additional escalators would be the responsibility of others such as the Municipality. The maintenance cost of the additional escalators as an integral component of the ALRT stations would be the responsibility of B.C. Transit.

B.C. Transit states in its letter:

"Should Burnaby Council wish to pursue the addition of escalators in Patterson and Royal Oak stations, it would be necessary for Council to commit to the design and capital expenditure very soon. Since time is of the essence, it is essential that this commitment be received by March 1st, at the latest."

3.4 Motion D - To determine methods of funding for inclusion of this feature.

The Director Finance will be outlining information with respect to this motion in a separate report which will be available to Council at the same meeting at which this report is considered.



A. L. PARR
 DIRECTOR PLANNING &
 BUILDING INSPECTION

ITEM 9
MANAGER'S REPORT NO. 15
COUNCIL MEETING 1983 02 28

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By Courier 83 02 02

1983 February 02

B.C. Transit
Suite 874, Four Bentall Centre
P.O. Box 49297
1055 Dunsmuir Street
VANCOUVER, B.C. V7X 1P6

Attention: Mr. M. J. O'Connor
Ms Teresa Watts

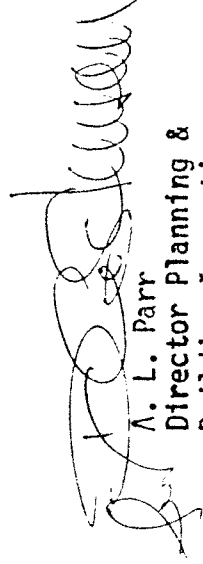
Re: Escalators for Burnaby ALRT Stations
Rezoning Reference #47/82

This is to inform you that the enclosed motion was passed unanimously by Burnaby Council at its meeting of 1983 January 31. It is the desire of Council that two escalators be provided for each of the ALRT Stations in Burnaby, in both the up and down directions. Could you provide us with the necessary information to answer Items A and B and to provide your comments on Items C and D of the motion. In order for Municipal staff to analyze the submitted information and make recommendations on funding aspects, we would require that the information from B.C. Transit be in our hands by 1983 February 14. We may also require further discussions with you on the submitted material and this matter. We had telephoned your staff and your architectural consultants on 1983 January 27 to inform them of this Council desire.

Your expeditious assistance in responding to this Council request would be greatly appreciated so that the necessary staff report can be submitted to the Municipal Manager on 1983 February 22 for inclusion in the printed agenda for the Council meeting of 1983 February 28.

If you require further clarification, do not hesitate to contact us.

Yours truly,


A. L. Parr
Director Planning &
Building Inspection

KI:lf

Attachment

cc: Bain Burroughs Hanson, Architects

Attention: Mr. R. Bain

Thompson Berwick Pratt & Partners, Architects

Attention: Mr. R. Mann

Municipal Manager

Director Engineering

ESCALATOR FOR ALRT STATIONS IN BURNABY

MOTION ADOPTED UNANIMOUSLY BY BURNABY MUNICIPAL COUNCIL
ON 1983 JANUARY 31

WHEREAS the Mayor and Council of Burnaby met with members of B.C. Transit to discuss various aspects of ALRT in Burnaby; and

WHEREAS during discussions about guideways and stations it was revealed that the four stations in Burnaby would have stairs, elevators and up escalators but there was no provision or consideration for down escalators; and

WHEREAS with the very large capital cost of ALRT (approximately \$850 million) it would appear sensible to provide conveniences to attract increased user participation; and

WHEREAS while there are elevators for handicapped people we have in our society aged and others though not fully handicapped have some impaired ambulatory capability which would benefit if down escalators are available; and

WHEREAS the design of the stations is proceeding rapidly there is a need to know if down escalators can be provided for in the design.

THEREFORE BE IT RESOLVED that the Council authorize the Municipal Manager to investigate with B.C. Transit and report to Council as follows:

- A. Immediately determine that design can be adjusted for inclusion of down escalators to the four stations in Burnaby.
- B. The cost of including this feature in the station.
- C. To determine who would be responsible for the cost and maintenance.
- D. To determine methods of funding for inclusion of this feature.
- E. To provide Council with a full report no later than Council meeting of 1983 02 28.

February 21, 1983

Mr. A. L. Parr
Director of Planning
Corporation of the District
of Burnaby
4949 Canada Way
Burnaby, B. C.
V5F 1M2

Dear Mr. Parr:

Re: Escalators in Burnaby ALRT Stations

I am writing in response to your letter of February 2nd enquiring about the feasibility of incorporating two escalators (up and down) in each station as requested by Burnaby Council. On a per station basis, this is as follows:

Patterson:

Due to the number of units of exit required at this station (5), a direct substitution of an escalator for the stair may coincidentally be possible without compromising this requirement. This modification would involve redesign costs of \$20,000 and estimated additional capital cost of \$300,000.

Metrotown

Unlike Patterson, a direct substitution does not wholly satisfy the units of exit requirement and because it is an end loaded station, it is not possible to accommodate a second escalator without radically widening the platform, impacting the guideway which is now fixed. This would require a total redesign and delay in scheduled completion. If placed within the platform, it would reduce platform area below the minimum code requirement.

As you may recall, our guideway design was frozen effective January 7, 1983. Any work that changes the guideway puts us behind our January 1, 1986 schedule by nearly 2 months.

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Mr. A. L. Parr

-2-

February 21, 1983

However, if schedule was not a concern, the design change to accommodate more escalators would cost approximately \$160,000. The capital cost would be a minimum of \$750,000 and might not be feasible.

Edmonds Station

This station does not presently include an escalator since its height variation does not warrant it. This implies that it will be necessary to add 4 escalators or 2 to each platform to comply with Burnaby Council's intent. Since the station is tight up against the railway, this is not possible without impacting the guideway, resulting in total redesign and delay in schedule completion. Again, if schedule and site constraints were not a concern, these changes would cost approximately \$1,050,000.

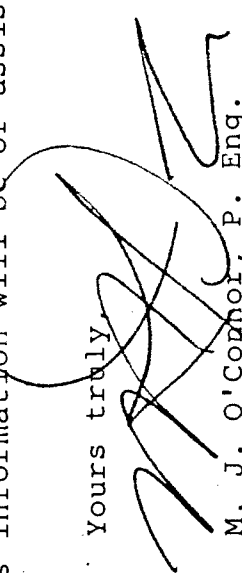
Royal Oak

As with Patterson, two escalators can be accommodated with some modification of the existing design. In the interim the stairs and elevator can more adequately serve the relatively small number of patrons expected to use the station. It is estimated that the modification for escalators would involve approximately \$450,000 in additional capital cost and \$40,000 in redesign costs.

I would like to point out that an elevator is available in every station providing much better access both up and down, not only to the handicapped but also to persons whose mobility is impaired by baggage, accompanying small children or age. Furthermore, it is intended that escalators be reversible to allow operation in the direction of peak patron flow, such that mandatory use of the stairs is minimized.

Should Burnaby Council wish to pursue the addition of escalators in Patterson and Royal Oak Stations, it would be necessary for Council to commit to the design and capital expenditure very soon. Since time is of the essence, it is essential that this commitment be received by March 1st, at the latest. I trust that this information will be of assistance to your Council.

Yours truly,


M. J. O'Connell, P. Eng.
Project Administrator

MJO'C/TMW/cje

C.C. K. Ito
R. Bain
R. C. Mann

