

Re: TRANSPORTATION STUDIES
 A. BURNABY METROTOWN AREA
 B. ORIGIN-DESTINATION TRAVEL PATTERNS

Following is a report from the Director of Planning on the subject transportation studies.

RECOMMENDATIONS:

1. THAT Council approve in principle the terms of reference for two transportation studies on the Burnaby Metrotown Area and on Origin-Destination Travel Patterns as outlined in Sections 3.1 and 4.1 of the Director of Planning's report, and resolve to pursue these studies at this time, and
2. THAT Council authorize the Planning Department to secure proposals from consultants qualified to carry out such consulting studies in order that the Department may prepare a further report to Council recommending the retention of consultant(s) to do the work, and
3. THAT Council resolve to make application for a grant for the studies under the 1978 Municipal Planning Grant Program, and authorize the Planning Department to pursue the submission of the required application to the Ministry of Municipal Affairs and Housing.

Planning Department
 1978 May 10

TO: MUNICIPAL MANAGER
 FROM: DIRECTOR OF PLANNING
 RE: TRANSPORTATION STUDIES
 A. BURNABY METROTOWN AREA
 B. ORIGIN-DESTINATION TRAVEL PATTERNS

1.0 BACKGROUND - 1978 Municipal Planning Grants

Through the Ministry of Municipal Affairs and Housing, 1978 planning grants are available to municipalities pursuant to Part VI, Section 16 of the Revenue Sharing Act Regulations. According to the terms of the grant program, the 2/3's shareable maximum provincial grant for a municipality the size of Burnaby is \$75,000. The shareable grants are paid on the basis of planning programs approved by the Ministry of Municipal Affairs and Housing which have been successfully completed. These grants must be applied for on a project by project basis for specific studies and cannot be merely included within the overall planning budget.

On 1978 March 13 on the matter of the preparation of a Phase II Implementation Report on the Burnaby Lake Sports Complex, Council authorized the employment of a consultant for the sum of \$34,000 to pursue necessary studies. At that time, Council passed the following required resolution:

"THAT Council resolve to pursue the Burnaby Lake Sports Complex Phase II Study at this time and make application for a grant for the study under the 1978 Municipal Planning Grant Program."

It is now proposed that the Municipality apply for 1978 planning grants to study the transportation needs of (A) Metrotown, and (B) the Origin-Destination (O-D) travel patterns and mode used by persons crossing municipal boundaries. It is the intention of this report to obtain Council's authorization for the Planning Department to secure proposals from consulting teams qualified to carry out such consulting studies in order that the Department may prepare a further report to Council recommending the retention of a specific consultant to do the work under the approved budget allocation. The proposed budget for this consulting work is \$20,000 for the Metrotown Study and \$15,000 for the Origin-Destination Travel Pattern Study.

The municipality will make application to the province for a planning grant to cover 2/3's of the total \$35,000 cost of these two additional consultant studies. Complete planning grant applications must be submitted to the Deputy Minister of Municipal Affairs and Housing by 1978 June 01. We have been informed that planning grants will be announced by the Ministry on or just after 1978 July 01.

Due to the quickly approaching June 01 limit for applications, it is particularly important that Council pass the required resolution to authorize the consultant studies at this time.

2.0 INTRODUCTION

2.1 "Metrotown" Transportation Study

A study of Metrotown related transportation problems is currently being carried out in-house but staff commitments preclude an early completion of the study. The retention of a consultant would considerably expedite the completion of the work. It is envisaged that the study would commence in August/September and be completed by the end of this calendar year. It is estimated that the total cost of the study would be \$20,000.

2.2 Origin-Destination Travel Pattern Study

Recent transportation planning work in the Municipality has indicated the need to supplement the data available in the "Burnaby Transportation Study to 1985". The City of Vancouver in 1977 September/October, carried out a screenline survey of traffic crossing Boundary Road and it would be desirable to augment this data, which will become available to Burnaby when completed in 1978 July, with travel information on Burnaby's eastern boundaries in order to build up a comprehensive picture of current travel patterns into and through Burnaby. Apart from its present value for evaluation of strategic transport proposals such data might be used to confirm the basis of a future computerized travel model of persons and their mode of travel into and through Burnaby.

The data collection for this O-D Study would be carried out in September/October of this year and it is estimated that the cost would be about \$15,000.

2.3 Operational Summary

The 1978 Planning Department provisional budget - Code 17.01.15 includes a sum of \$25,000 for consulting services from which the municipal share of the cost of these studies would be taken. On the basis of a total cost of \$35,000 for the two studies, the 1/3 municipal share is \$11,666.67. It is evident that the municipality would greatly benefit from receiving provincial grants for these two studies in the amount of \$23,333.33.

However, should Council approve these studies but fail to receive grant aid, steps would be pursued to limit the studies within the current \$25,000 total consulting services budget or to seek other funding resources.

It is proposed that the studies be carried out as outlined in Sections 3.0 and 4.0 of this report. The chosen consultants would be expected to work in close collaboration with municipal staff in the development of methodology, conclusions, and recommendations.

3.0 (A) "METROTOWN" TRANSPORTATION STUDY

3.1 Terms of Reference

Burnaby Council approved in principle the development of a Regional Town Centre, Metrotown, in the vicinity of Central Park. In the Burnaby Metrotown Development Plan prepared by the Burnaby Planning Department in 1977 June, substantial growth in residential and commercial development has been projected to occur in the town centre by 1996. However, the increased demand that this growth would place on the transportation system has not been fully assessed nor has its impact been totally evaluated. In order to carry out this evaluation and to arrive at a program for orderly transportation improvements, the consultant will be required to work in close collaboration with municipal staff in carrying out a study as outlined below.

Basically, the study would comprise four major elements:

- (1) Analysis of existing conditions (data assembly and analysis)
- (2) Forecasting and assignment of future travel
- (3) Determination of transportation needs, and
- (4) Development of transportation strategies.

3.2 Analysis of Existing Conditions-

(a) Data Assembly

An assessment of current day travel needs is required with respect to trip generation/attraction, orientation and distribution of trips, modes utilized, etc., based on:

- i. B. C. Hydro O-D Survey (carried out by B. C. Hydro/Vancouver City 1976)
- ii. Vancouver screenline data (carried out by Vancouver City 1977)
- iii. Peak hour Metrotown cordon survey of vehicles by type, occupancy, and their origin-destination
 - a. Peak hour on street system
 - b. Peak hour for use of Metrotown facilities

- iv. Survey of current shoppers in the Metrotown area
 - v. Parking Survey - on street and off street facilities demand
 - vi. Street and intersection geometrics, etc., survey
 - vii. Street and intersection traffic volume counts
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(b) Data Analysis

Based on points 3.2 (a) vi and vii, the following assessments will be required:

- i. Current day transport infrastructure capacity in terms of person trips as it relates to Metrotown.
- ii. Current day transport infrastructure capacity relative to the study area in terms of vehicle trips, (V/C ratios), including Metrotown Cordon Line capacity.

3.3 Forecasting and Assignment of Future Travel

An assessment of future travel demand will be made with respect to trip generation/attraction, orientation and distribution of trips, and mode of travel used considering:

- i. Analysis of current travel patterns predicated upon (Item 3.2) and forecasts presented in the "Burnaby Transportation Study to 1985" report
- ii. Varying growth scenarios for Metrotown
- iii. The impact on Metrotown of whether or not rapid transit proposals are implemented.

Close liaison with the Municipal Planning and Engineering Departments will be required in this phase of the study in order to establish the governing parameters for the selection of alternative scenarios and the evaluation criteria.

3.4 Determination of Transportation Needs

This phase of the study will outline both engineering and transportation system management proposals to implement necessary improvements in the transportation network necessary to accommodate future travel to, through and within Metrotown.

Examination of the three major types of trips and their magnitude will be necessary in order to determine the varying degrees of impact each will have on the study area:

- (a) External to internal trips
- (b) Internal circulation
- (c) External to external trips

(a) External to Internal Trips

The measures required to enhance the regional accessibility of Metrotown in terms of Public Transport routing and capacity as well as arterial road network layout and capacity.

(b) Internal Circulation

The measures required to improve accessibility within Metrotown in terms of:

- i. Road network requirements, including possible new road links, junction improvements, traffic management measures, etc.
- ii. Public transport interchange
- iii. Pedestrian facilities
- iv. Service traffic
- v. Car parking

(c) External to External Trips

The measures required to expedite the passage of through trips.

3.5 Development of Transportation Strategies

On the basis of the above assessments, and the policies outlined in the Burnaby Metrotown Development Plan, the consultant will be required to evaluate alternative transportation strategies in order to arrive at specific short, medium and long term recommendations.

4.0 (B) INPUT DATA FOR TRANSPORTATION STUDIES - ORIGIN AND DESTINATION SURVEY

4.1 Terms of Reference

During 1977 September/October an extensive survey was carried out by the City of Vancouver of trips crossing the Boundary Road screen-line. Considerably less information, however, is available in connection with traffic crossing the municipal boundaries with New Westminster - Coquitlam - Port Moody.

The objective of this study would be to conceive, organize and conduct a suitable origin-destination survey of persons entering Burnaby in order to establish the impact of external trips on the municipal transportation system in general.

The Consulting services required to satisfy these objectives are outlined below.

4.2 Development of Survey Methodology

Considering the specific locations to be surveyed, i.e. prime routes leading into Burnaby, and current traffic volumes to be supplied on these facilities, the consultant will be required to conceive, evaluate and recommend such methods of sampling as will provide a statistically high confidence level in the sampled data on person-trip origins and destinations and trip purpose.

As general guidance the following lists some of the survey methods or combinations thereof which will be given consideration by the consultant to obtain the information.

- (1) Roadside interviews
- (2) Post card questionnaires distributed at the roadside survey points
- (3) Mail out questionnaires
- (4) Telephone interviews

The consultant will report on the method(s) deemed most suitable and outline the organization of the survey(s).

4.3 Organization of Survey

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Considerable administrative preparation will be required to ensure proper organization of the survey.

The consultant will:

- (a) Coordinate all preparatory planning with municipal staff, R. C. M. P. and Ministry of Highways and Public Works personnel in order to minimize delays to traffic flows and to maintain high safety standards at all times.
- (b) Outline the detailed method(s) of performing the field survey work and municipal staff will assist in planning the survey locations and design all forms, cards, maps, etc. required by field personnel.
- (c) Coordinate the physical aspects of the survey, i. e. hiring, training, transporting of personnel, etc. from initiation to completion of the survey.
- (d) Ensure that the data gathered is secured, summarized, analysed and transmitted to the Burnaby Planning Department in both tabular and graphic form.

All data is the sole property of the Corporation of Burnaby and shall be treated as confidential.

5.0 RECOMMENDATIONS

It is recommended:

- 1. THAT Council approve in principle the terms of reference for two transportation studies on the Burnaby Metrotown Area and on Origin-Destination Travel Patterns as outlined in Sections 3.1 and 4.1 and resolve to pursue the studies at this time.
- 2. THAT Council authorize the Planning Department to secure proposals from consultants qualified to carry out such consulting studies in order that the Department may prepare a further report to Council recommending the retention of consultant(s) to do the work, and
- 3. THAT Council resolve to make application for a grant for the studies under the 1978 Municipal Planning Grant Program, and authorize the Planning Department to pursue the submission of the required application to the Ministry of Municipal Affairs and Housing.

ALP
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c.c. - Municipal Treasurer

A. L. Parr
A. L. Parr,
DIRECTOR OF PLANNING