



## CITY OF RICHMOND

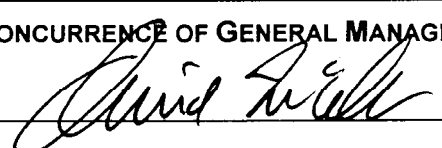
### REPORT TO COMMITTEE

**TO:** Public Works and Transportation Committee      **DATE:** May 23 , 2001  
**FROM:** Gordon Chan, P. Eng.  
          Manager, Transportation      **FILE:** 6500-01  
**RE:** **PROPOSED HIGH PRIORITY / HIGH OCCUPANCY VEHICLE (HPV/HOV) LANE  
ON RUSS BAKER WAY**

#### STAFF RECOMMENDATION

1. That the provision of a northbound high priority / high occupancy vehicle (HPV/HOV) lane on Russ Baker Way between Hudson Avenue and Arthur Laing Bridge for use by vehicles destined for the airport or with three occupants or more, as proposed by the Vancouver International Airport Authority (YVR), be supported in principle on a trial basis for a period of nine months to a year, subject to the following commitments by YVR:
  - (a) That a non-permanent barrier delineation, to be reviewed by City staff before installation, is used between the general traffic lane and the proposed HPV/HOV lane;
  - (b) That YVR undertake public consultation with respect to the proposal; and
  - (c) That the proposed HPV/HOV lane be implemented in conjunction with but not before the completion of the Airport Connector project.
2. That staff report back to the Public Works and Transportation Committee on the outcome of the public consultation for Council's final endorsement of the proposed HPV/HOV lane prior to its trial implementation.
3. That staff work with YVR to monitor the traffic conditions and report back on the outcome after the trial period.
4. That the above recommendations be conveyed to the YVR Board of Directors.

  
**FOR** Gordon Chan, P. Eng.  
Manager, Transportation

FOR ORIGINATING DIVISION USE ONLY		
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## STAFF REPORT

### ORIGIN

In early 1999, the Vancouver International Airport Authority (YVR) approached the City with a proposal to introduce a high priority/occupancy vehicle lane on Russ Baker Way. The overall purpose of this proposal is to improve the access from the south terminal to the main terminal of the airport, particularly during the weekday peak periods. The proposed changes also include a northbound "queue jumper" at the south end of the Arthur Laing Bridge to accommodate the #98 B-Line operation which has recently been constructed.

In recognizing the need for maintaining convenient access to the airport, over the past year, staff have carried out a series of discussions with the YVR staff on the possible design options to meet this need and to ensure that an acceptable level of service is maintained for general traffic on Russ Baker Way. The options considered were also aimed to achieve transit priority for the #98 B-Line project and more efficient utilization of road space on Russ Baker Way by encouraging the use of commuter carpools.

Upon evaluation of various options with staff, YVR is proposing that a high priority/high occupancy vehicle (HOV) lane be designated along Russ Baker Way, in the northbound direction, between Hudson Street/Cessna Drive and north of Miller Road. The proposed plan will be achieved by road widening and making lane modifications to the existing roadway. This exclusive lane would be utilized only by high occupancy vehicles (three or more occupants) and by airport-bound traffic.

This staff report presents the proposed plan of the Russ Baker Way HOV/HPV lane by YVR and identifies a number of issues that will necessitate further discussion with YVR staff prior to implementing the proposed HOV lane.

### ANALYSIS

#### **1. Rationale and Objectives of the Project**

The Vancouver Airport Authority has an on-going concern about the impact of heavy traffic conditions on Russ Baker Way during peak periods on the ability of traffic from City Centre/West Richmond and the south terminal to travel conveniently to the main terminal. The proposed HOV lane is aimed to ensure adequate access to the main terminal via Russ Baker Way during the "rush hour" periods as well as to:

- provide transit priority as part of the #98 B-Line project; and
- ensure more efficient use of road space by encouraging carpooling.

#### **2. Proposed Plan**

Staff have been working with the Vancouver Airport Authority to develop a plan that will both meet the needs of the Airport Authority and maintain acceptable service levels on Russ Baker Way for general traffic. As a result of this joint effort, the following key features of the plan are being proposed (refer to Attachment 1):

- (a) Ultimate Road Widening to Accommodate the HPV/HOV Lane – Ultimately, Russ Baker Way is proposed to be widened in the northbound direction to achieve three continuous through lanes between Dinsmore Bridge and north of Miller Road. For the trial stage, the existing three lane section from Hudson Street to north of Miller Road would be converted to allow for the use of the curb lane as a HPV/HOV lane. This lane would allow, exclusively, vehicles destined to the main terminal of the airport as well as vehicles with three or more occupants destined to the Arthur Laing Bridge.
- (b) Delineation of the HOV/HPV Lane – For the trial period, the intent is to delineate the HOV/HPV lane by a non-permanent means, likely through the use of orange reflector posts mounted to the roadway along the entire HOV/HPV lane.
- (c) Russ Baker Way/Miller Road Intersection – When the new Airport Connector Bridge (one-way westbound) and the related road improvements are in place, much of the existing east-west through movements along Miller Road across Russ Baker Way would be removed through grade-separation. This will result in a significantly greater allocation of “green” signal time for the north-south traffic on Russ Baker Way. Together with the Airport Connector Plan, the Russ Baker Way HOV/HPV Lane Plan proposes to modify the intersection of Russ Baker Way and Miller Road to provide:
- double northbound left-turn lanes;
  - channelled southbound right turn lane;
  - provisions for a wider centre median on Russ Baker Way south of Miller Road should it be needed for pedestrian refuge after the monitoring period;
  - northbound bus queue jumper lane north of Miller Road to the south end of Arthur Laing Bridge; and
  - delineation of the HOV/HPV lane by some non-permanent means.

Overall, the proposed plan for Russ Baker Way is expected to result in a more efficient use of road space and encourage higher vehicle occupancy to accommodate travel demand generated along the Russ Baker Way corridor. Although there will be the loss of one general purpose traffic lane in the northbound direction at the Miller Road intersection, this loss of capacity will be offset by the removal of Middle Arm Bridge traffic with currently conflicts with Russ Baker Way traffic through grade separation. The implementation of the HPV/HOV lanes on a trial basis will allow staff to monitor the impact on Richmond commuter traffic before committing to the HPV/HOV lanes as a permanent solution.

### **3. Next Steps**

#### Public Consultation

It is recommended that, the Airport Authority consult with Richmond residents and other users of the Russ Baker Way corridor on the proposed HOV/HPV plan prior to its trial implementation. It is further recommended that this consultation take the form of a public open house and that the details of the proposal and the public consultation activities be advertised in the local newspapers. Staff will provide a further report to Council on the comments received at the open house event prior to proceeding with the trial.

Detailed Design Process

To ensure safe and efficient operation of Russ Baker Way to all users as a result of this proposal, it is essential that staff continue to work with the Airport Authority on the detailed design of the project including intersection design, traffic signal design, enforcement requirements, traffic management requirements, physical delineation, etc. Once the final plan is completed, staff will prepare a further report to Council to present the detailed design and if there are no further outstanding issues, recommend that the project be given final endorsement.

Monitoring of Traffic Conditions

Once the trial project is implemented, it is important that the traffic conditions on Russ Baker Way are monitored to determine if the levels of traffic safety, queuing, and intersection delay are acceptable, considering pre-implementation levels. If the results of the monitoring program indicate that post-implementation traffic conditions are poor, the feasibility of the HPV/HOV lane will then be reviewed. A trial period of nine months to a year is recommended.

FINANCIAL IMPACT

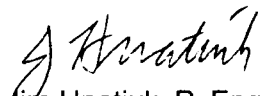
None to the City. The project will be completed by the Vancouver Airport Authority, as part of the Airport Connector project.

CONCLUSION

Staff have been working with Airport Authority staff to ensure that the proposed HPV/HOV plan for Russ Baker Way will result in: improved convenience for access to the main terminal of the airport, more efficient use of road space in the long term, an acceptable level of service being maintained for general traffic, and a transit priority "queue jumper" being established at the south end of the Arthur Laing Bridge. Staff recommend that Council support the trial implementation of a northbound HPV/HOV lane on Russ Baker Way subject to:

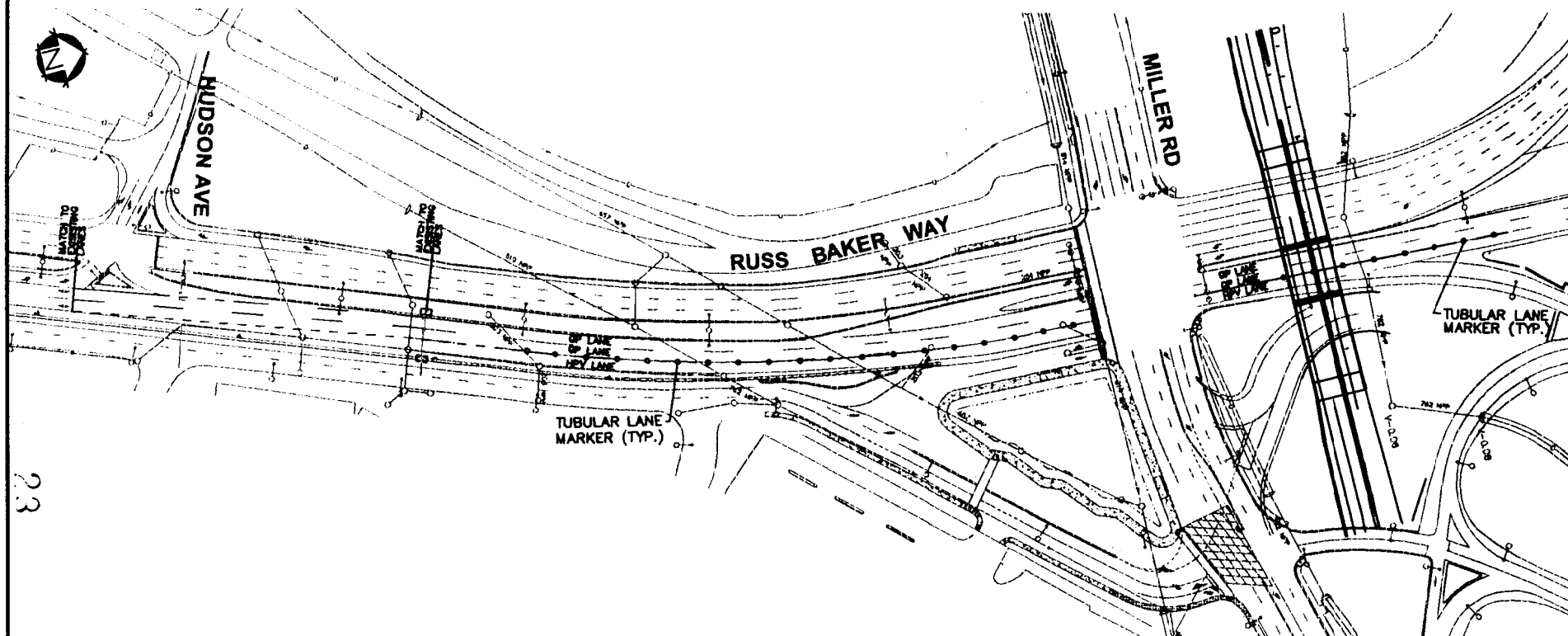
- a non-permanent means of delineation (to be reviewed by City staff before installation) being used;
- the undertaking of a public consultation program by the Airport; and
- the implementation occurring in conjunction with the opening of the Airport Connector project.

It is further recommended that staff report back to Council upon the conclusion of the public consultation and prior to the trial implementation. Should Council direct staff at that time to proceed with the trial, City and YVR would monitor the traffic impacts and report back to Council after completion of the trial implementation in nine months to one year's time.



Jim Hnatiuk, P. Eng.  
Transportation Engineer

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# Location of Russ Baker HPV/HOV Lanes for Trial Implementation