



To: Public Works and Transportation Committee **Date:** April 29, 2004
From: Gordon Chan, P. Eng. **File:** 6450-09
Director, Transportation
Re: **BARNARD DRIVE – PROPOSED TRAFFIC CALMING MEASURES**

Staff Recommendation

That the proposed traffic calming measures on Barnard Drive, as described in the attached report, be endorsed for implementation as part of the approved City's 2003 Capital Program.

Gordon Chan, P. Eng.
Director, Transportation
(4021)

Att. 1

FOR ORIGINATING DIVISION USE ONLY					
ROUTED TO:		CONCURRENCE		CONCURRENCE OF GENERAL MANAGER	
Engineering – Design & Construction		Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>		
REVIEWED BY TAG	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	REVIEWED BY CAO	YES <input type="checkbox"/>	N/A <input type="checkbox"/>

Staff Report

Origin

Over the past year, area residents have expressed concerns to the City regarding various traffic safety issues along Barnard Drive between River Road and Granville Avenue. In response to these concerns staff have conducted several traffic studies along the street and recommend the installation of a number of traffic calming measures to reduce traffic speeding as well as enhance pedestrian safety at key locations along this roadway.

Per the City's Traffic Calming Implementation Policy approved by Council at its regular meeting held October 15, 2002, Council approval of the implementation of traffic calming measures is required when the proposed project will be implemented on a street other than a local street or laneway. As Barnard Drive is a collector street under the City's road classification system, this report describes and seeks Council approval of the recommended traffic calming measures to address residents' concerns.

Analysis

1. Existing Conditions

Barnard Drive is a two-lane collector road serving the Terra Nova area, which has both single-family dwellings and multi-family dwellings. The 14-metre wide road runs between River Road and Granville Avenue (approximately 1.5 km in length) and is constructed with curb and gutter and sidewalks on both sides of the road. At present there are no restrictions on parking in place along the entire length of the street. Children walking to Spul'u'kwuks Elementary School from west of Barnard Drive cross the street at a marked crosswalk located at the intersection of Westminster Highway and Barnard Drive, which brings pedestrians to a paved pathway that runs through Terra Nova Park to the rear of the school.

The posted speed limit is 50 km/h along the street with the exception of two playground zones, which are located between River Road and Westminster Highway (adjacent to Terra Nova Park) and between just north of Semlin Drive and Robson Drive (adjacent to Terra Nova South Park) where the posted speed limit of 30 km/h is in effect from dawn to dusk. The City installed a traffic circle at River Road and Barnard Drive in Spring 2003 to enhance traffic safety at that location.

2. Results of Traffic Survey

Staff have conducted several traffic studies along Barnard Drive at different locations and different times. The results indicate that, in the playground zones, the majority of drivers (85%) drove at a speed up to 53 km/h, which exceeds the posted speed limit of 30 km/h that is in effect from dawn to dusk. The average speed in the playground zones was 43 km/h. The following table summarizes the traffic speed and volumes observed from the recent surveys.

Date	Location on Barnard Drive	Traffic Speeds		Posted Limit	AADT*
		85 th Percentile	Average		
April 2001	North of Westminster Hwy.	49 km/h	44 km/h	30 km/h	742
Sept 2001	at Lam Dr. (along Terra Nova South Park)	54 km/h	48 km/h	30 km/h	1,664
Sept 2001	South of Westminster Hwy.	52 km/h	42 km/h	50 km/h	1,727
April 2002	North of Westminster Hwy.	57 km/h	43 km/h	30 km/h	759

* AADT - Average Annual Daily Traffic

While the traffic volumes on Barnard Drive were not found to be excessively high for a collector road, the traffic speed data did indicate that some vehicles were speeding along the observed sections of this roadway. For example, the September 2001 data recorded at the south of Westminster Highway location, which is just north of a playground zone, indicated that five percent of all northbound vehicles were travelling well in excess of the posted speed limit.

The combination of recorded traffic speeds, road width, the presence of schoolchildren and increased pedestrian activity in the area to/from local destinations (e.g., shopping mall, parks, playgrounds, school, etc) together warrants the implementation of traffic calming measures to discourage further speeding on this roadway. In determining the scope and location of the proposed traffic calming measures, staff have considered the following factors:

- traffic speeds and volumes;
- the existence of an elementary school;
- supporting a road environment to encourage children to walk/cycle to school;
- existing road width;
- adjacent land use of residential;
- potential driveway conflicts;
- pedestrian generators (such as parks and dyke trails); and
- vehicle crash history, potential traffic conflicts and traffic safety hazards.

3. Proposed Traffic Calming Measures

The following traffic calming measures (see Attachment 1) are recommended to increase the level of driver compliance with the posted speed limits and to improve pedestrian safety:

- Traffic Circles – to address speeding, two new traffic circles would be installed on Barnard Drive at its intersections with Barnard Place and Robson Drive (north).
- Median Islands – a pair of median islands would be installed on Barnard Drive at Richards Drive and at Westminster Highway (north) to reduce speeding by narrowing the roadway as well as provide refuge for pedestrians using the marked crosswalk at these locations.

4. Public Consultation Process – Survey Results

All of the residents of Barnard Drive between River Road and Granville Avenue were asked to provide feedback on the proposed traffic calming program via a mail-back survey conducted in Summer 2003. Of the 132 survey forms mailed, 77 forms were received back (58% response rate). Of the 77 forms received, 69 were in favour of the proposed measures (89%) and eight were opposed to the proposed measures (11%).

Of the eight respondents opposed to the proposed measures, five residents provided comments. Two residents indicated that no measures were required, two residents preferred stop signs and/or speed humps and one resident felt that the curb extensions would have a negative visual impact on the street.

As a strong majority of the residents returning the feedback forms indicated support for the proposed traffic calming measures, staff recommend Council approval of the program.


Financial Impact

The construction cost of the two traffic circles, and two pairs of median islands is estimated at \$32,000 with the funding source being the 2003 Major Capital Works Program for Neighbourhood Traffic Safety Improvements.

Conclusion

Staff have reviewed the pedestrian and traffic conditions on Barnard Drive in response to recent concerns expressed by residents regarding speeding and traffic volumes along the roadway. The review concludes that the installation of a package of traffic calming measures, at an estimated cost of \$32,000, is warranted to enhance both pedestrian and traffic safety on this street.

As a strong majority (89%) of the residents on the street who returned feedback forms support the proposed measures, staff recommend Council approval of the proposed traffic calming program. Should Council approval be received, residents will be informed of the decision and advised of the anticipated construction schedule.



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JC:RG:lce

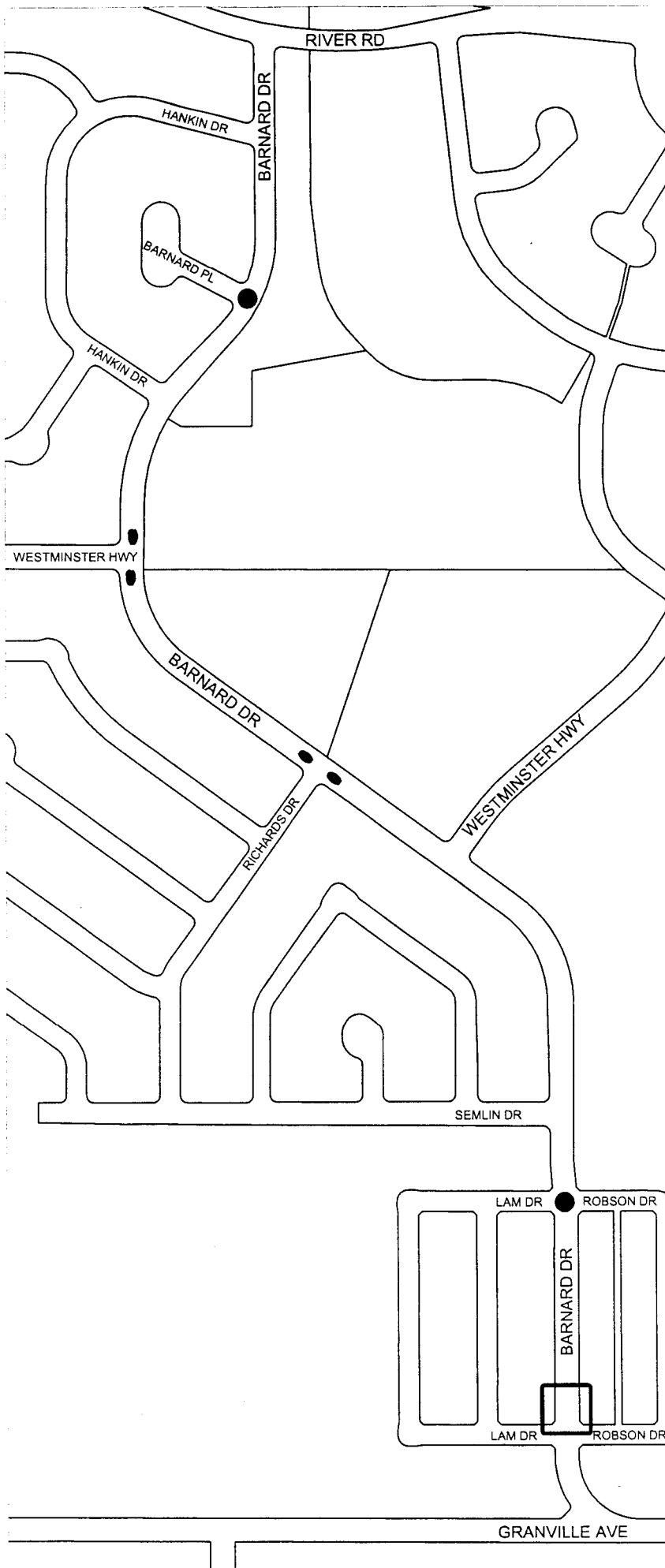
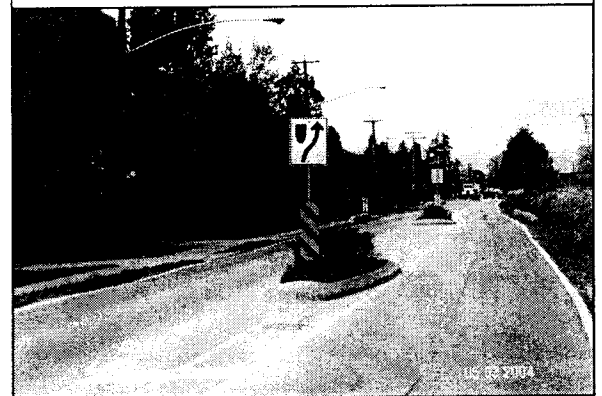
Legend



Traffic Circle



Median Islands



Barnard Drive Traffic Calming Plan