



CITY OF RICHMOND

REPORT TO COMMITTEE

TO: Public Works and Transportation Committee

TO PW&T - May 24, 2001

DATE: April 23, 2001

FROM: Gordon Chan, P. Eng.
Manager, Transportation

FILE: 6450-09

RE: PROPOSED TRAFFIC CALMING MEASURE ON NO. 1 ROAD AND FRANCIS ROAD LANEWAY BETWEEN FRANCIS ROAD AND OSMOND AVENUE

STAFF RECOMMENDATION

1. That portable speed humps be introduced on a one-year trial basis to address short-cutting and speeding concerns along the No. 1 Road laneway connecting Osmond Avenue and Francis Road.
2. That the funding source for the proposed improvements be the 2001 Minor Capital Program for Traffic Calming Improvements.
3. That area residents be advised of the installation of the temporary portable speed humps on a one-year trial basis.
4. That staff report back to Council after the one-year trial period on the effectiveness of the speed humps.

Gordon Chan, P. Eng.
Manager, Transportation

FOR ORIGINATING DIVISION USE ONLY		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Engineering.....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
Fire Rescue.....	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	

STAFF REPORT

ORIGIN

Over the past several years, the City has received complaints from residents living in the area of the No. 1 Road laneway between Francis Road and Osmond Avenue regarding speeding and traffic volumes in the laneway. In response to these concerns, a number of traffic calming measures have been implemented, including the introduction of two chicanes in the early 1990s and additional signage and improved road markings in Summer, 2000. The City also conducted traffic studies in September, 1998 and September, 2000 to monitor the effectiveness of the traffic calming measures.

In September, 2000 the City received a petition from residents in the area requesting the installation of speed humps along the laneway to address the perceived ineffectiveness of the existing traffic calming measures.

This report presents the results of a staff review of the traffic conditions in the area and a recent consultation process with the area residents, and describes the traffic calming measures recommended to address residents' concerns.

ANALYSIS

1. Current Situation

The laneway in question is located west of and parallel to No. 1 Road between Francis Road and Osmond Avenue (Attachment 1). A total of 21 residences on No. 1 Road and Desmond Road back onto and have driveway access to the laneway. The laneway has a history of use as a shortcut. Some motorists appear to use this route in order to avoid the traffic signal at No. 1 Road and Francis Road when accessing the Seafair Shopping Mall (northwest corner of No. 1 Road and Francis Road) and an adjacent strip mall (southwest corner of No. 1 Road and Francis Road), both located at the north end of the lane. The amalgamation of the West Richmond Community Centre and Hugh Boyd Secondary School in 1996 at No. 1 Road and Osmond Avenue, near the south end of the lane, is believed to have substantially increased traffic volumes on the laneway. The traffic volume increase appears to have coincided with the conversion of all Richmond high schools to grades 8 to 12, which introduced students of driving age to Hugh Boyd Secondary School.

2. Existing Traffic Calming Measures

Over the past several years, a series of traffic calming measures have been implemented to address the traffic volume and speed concerns of residents in the area of the laneway:

- *Chicanes* - Two chicanes were installed in the 9100-block of the laneway in the early 1990s;
- *Road Markings* - The posted speed limit of 20 km/h was painted on the roadway surface in Summer, 2000; and
- *Additional Signage* - Speed limit signs were posted at each entrance to the laneway in Summer, 2000.

Consideration was given to closing off the lane at one end, but there is inadequate road width to construct a turn-around area for legitimate users of the lane such as garbage collection services. The option of installing a raised centreline median on Francis Road opposite the laneway to prevent left turns to access the Seafair Shopping Mall was also found to be unfeasible as a median would unduly restrict access to the strip mall on the south side of Francis Road.

3. Traffic Studies

Two traffic studies have been conducted in the laneway since the installation of the chicanes to monitor traffic volumes and speeds. As shown in the below table, the latest study conducted in March, 2000 indicates that 85 percent of the vehicles were travelling at speeds of 45 km/h and 49 km/h (southbound and northbound respectively), which is far in excess of the posted speed limit of 20 km/h (the 85th percentile is typically used in the industry to determine the prevailing travel speed of a particular roadway). The traffic survey results therefore confirm that speeding remains a problem on the laneway despite the traffic calming measures currently in place.

Traffic Volume and Speed	September 1998		March 2000	
	Northbound	Southbound	Northbound	Southbound
Average Daily Traffic Count	204 Vehicles	205 Vehicles	182 Vehicles	196 Vehicles
85 th Percentile Speed	51 km/h	50 km/h	49 km/h	45 km/h

4. Neighbourhood Petition and Survey

The City received a 16-name petition in September, 2000 from the residents of No. 1 Road and Desmond Avenue that abut the lane requesting the installation of speed humps along the laneway to resolve the issue of speeding traffic. In response to the petition, the City conducted a survey of neighbourhood residents in March, 2001 that proposed a package of additional traffic calming measures:

- upgrading the existing two chicanes and adding three more chicanes;
- installation of additional 20 km/h speed limit signs at each entrance to the lane;
- installation of an advance warning "Curve Ahead" sign for northbound traffic; and
- installation of advisory signs indicating "Lane Narrows Ahead" in the lane.

Of a total of 31 mailed surveys, the City received 17 responses. The results did not indicate a strong support for the proposed traffic calming measures outlined above. However, many of the respondents indicated that instead they would like to have speed humps installed.

5. Temporary Portable Speed Humps

The use of speed humps within a residential area is usually not considered as these devices can have negative effects such as:

- reduced response times for emergency vehicles;
- discomfort to casualties when being transported;
- discomfort to infirm drivers or passengers;
- difficulty of access for large vehicles such as garbage trucks; and
- transmission of vibrations to nearby residences.

In addition, while speed humps can effectively slow traffic they may not prevent short-cutting.

Speed humps may, however, be an appropriate traffic calming device for this lane given the atypical traffic flow characteristics and the apparent support for the devices from the residents of the area. The laneway is unique in that it is located within a residential area but it essentially connects two non-residential activity centres that generate significant shortcut traffic. Moreover, the traffic studies indicate that the existing traffic calming measures have achieved limited success and thus further, more restrictive, measures could possibly be justified.

The type of speed hump proposed is a portable device known as a "Restrictor Speed Hump" that is made from recycled tires and installed onto the roadway without damaging the pavement surface. Due to the modular construction of the device, all components can be re-used to construct different humps of various types and sizes.

As shown in Attachment 2, the temporary speed humps will be installed in pairs at two locations at approximately 150 metre intervals, taking into consideration the existing driveway locations. Signage and road markings would be installed at each end of the laneway and at each speed hump to identify its location to motorists. The two existing chicanes will be removed.

6. Monitoring Process

Staff will conduct a traffic speed and volume study and an origin and destination study to determine the effectiveness of the devices in deterring speeding and short-cutting one-year after the installation of the temporary speed humps. Staff will also obtain feedback from other agencies and users of the lane such as RCMP, Fire and Rescue Department and garbage collection services.

FINANCIAL IMPACT

The initial cost for the "Restrictor Speed Hump" will be approximately \$9,000 for the two locations including installation. The cost to remove and re-use the humps at a different location is approximately \$500 after the initial purchase. The funding source for the devices is the 2001 Minor Capital Program for Traffic Calming Improvements.

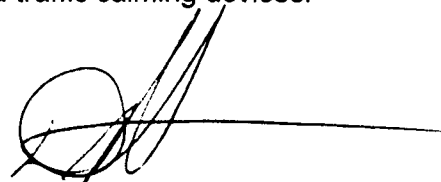
CONCLUSION

The City has received a number of complaints from residents living in the area of the No. 1 Road laneway between Francis Road and Osmond Avenue regarding speeding and traffic volumes in the laneway. In response to these concerns, a number of traffic calming measures have been implemented, including the introduction of two chicanes and additional signage and improved road markings. Traffic studies conducted by the City indicate that these measures have had limited success in deterring speeding and short-cutting. Area residents have requested that the City install speed humps to address these issues.

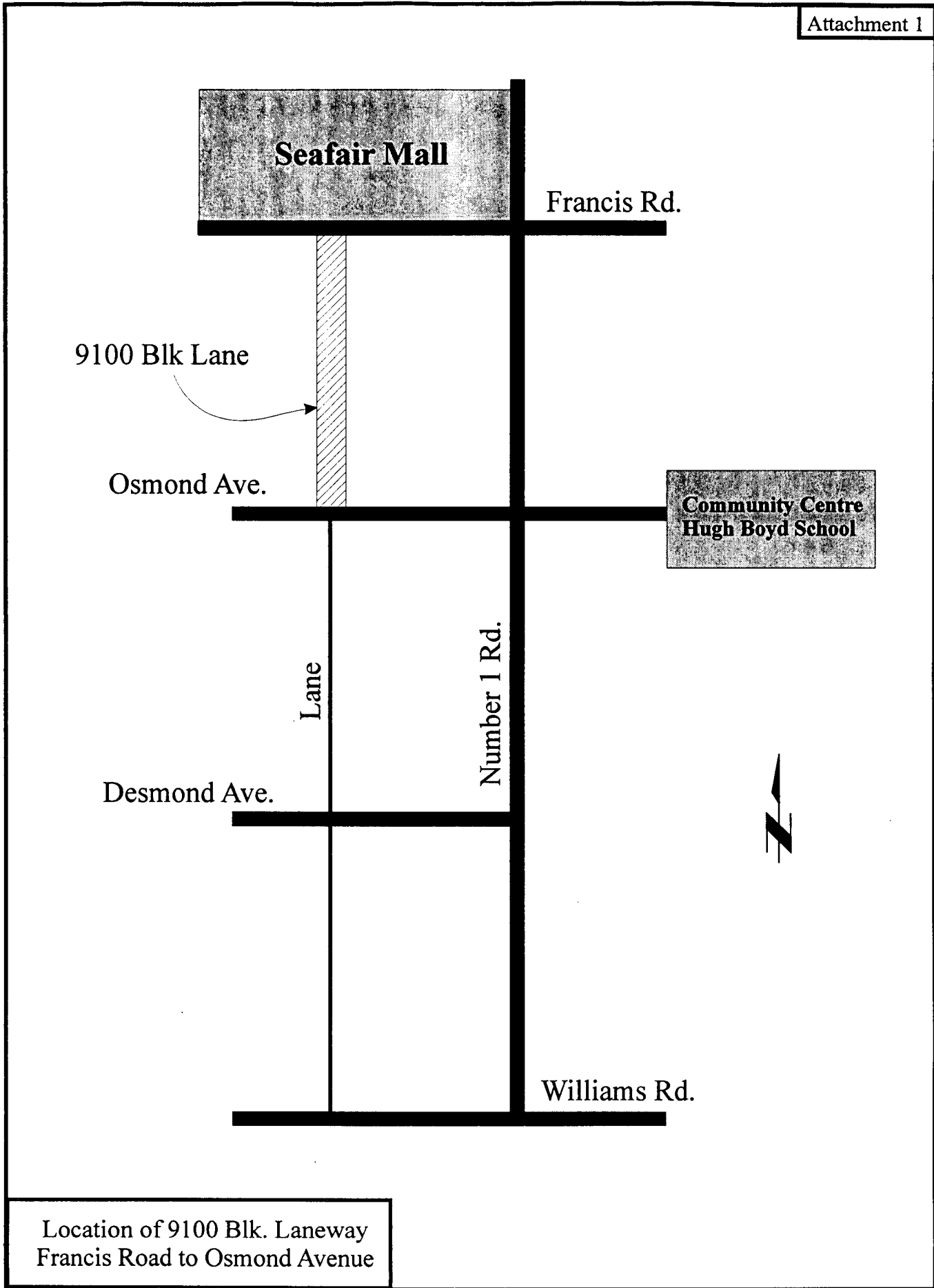
Based on the limited success of the present traffic calming measures and the preference indicated by area residents, the installation of temporary portable speed humps at strategic locations along the laneway is recommended on a one-year trial basis at a cost of \$9,000. Staff will monitor traffic patterns on this roadway for one year after installation of the devices and report back to Council on the effectiveness of the proposed traffic calming devices.



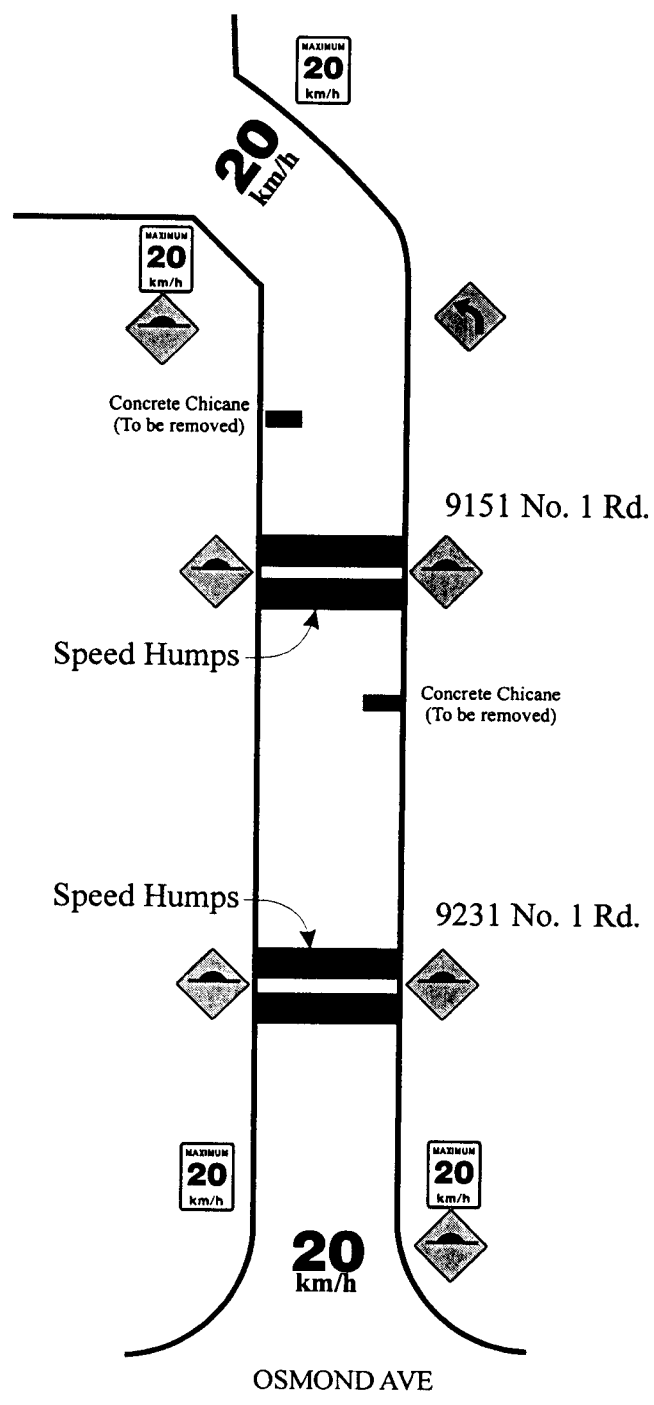
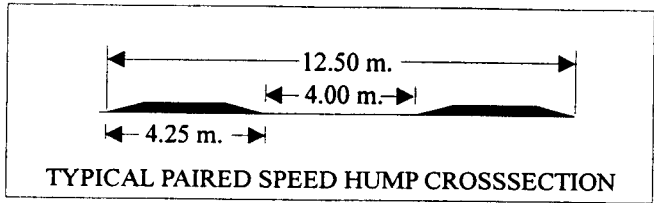
Joan Caravan
Transportation Planner I



Doug Newton
Traffic Technician I



Location of 9100 Blk. Laneway
Francis Road to Osmond Avenue



SPEED HUMPS AND SIGNAGE
9100 Block Number 1 Road Laneway
Francis Road to Osmond Avenue