



# Corporate Report

NO: R230

COUNCIL DATE: NOVEMBER 5, 2007

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## REGULAR COUNCIL

TO: **Mayor & Council** DATE: **October 31, 2007**  
FROM: **General Manager, Engineering** FILE: **6520-20(ec)**  
SUBJECT: **Request for Traffic Control Changes to Address the Needs of a Visually Impaired Student in East Clayton (Ciulla Delegation to CIC October 2, 2007)**

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## RECOMMENDATION

The Engineering Department recommends that Council authorize staff to:

1. Install a pedestrian actuated, audible crossing signal at 188 Street and 70 Avenue;
2. Retrofit the existing signalized intersection of 188 Street and Fraser Highway to include audible pedestrian signals;
3. Proceed with plans to construct a one-lane roundabout at the intersection of 68 Avenue and 188 Street, complete with fully marked and signed pedestrian crosswalks;
4. Educate the driving, bicycling and walking public on the use of roundabouts by preparing a pamphlet to be made available at City Hall, on the City's website, and shown in newspaper advertisements whenever opening a new roundabout; and
5. Provide a copy of this report to the delegation.

## INTENT

To provide safe road crossings for a visually impaired East Clayton student.

## BACKGROUND

The Engineering Department has been in discussion with the Canadian National Institute of the Blind (CNIB) and the parents of a visually impaired East Clayton student, Anthony Ciulla, regarding adjustments to the local road network to address Anthony's mobility needs. The adjustments are intended to address Anthony's need to cross at key intersections with the certainty on the part of Anthony and vehicular traffic that he has the full right-of-way. This full certainty can only be accomplished by stopping vehicular

traffic at a red light and, at the same time, providing Anthony with an audible signal that he can proceed safely.

A representative from CNIB and another expert have each provided an assessment of the immediate road network in East Clayton to Anthony's parents. The Engineering Department has not been provided with written copies of these assessments. The Ciullas subsequently appeared as a delegation to Council and requested that the following infrastructure be put in place:

1. a pedestrian crosswalk near Clayton Heights Secondary School on 188 Street;
2. audible pedestrian signals at the existing signalized intersection of Fraser Highway and 188 Street; and
3. a traffic signal at the intersection of 68 Avenue and 188 Street.

## **DISCUSSION**

Attachment A is a map of the area, indicating Anthony's home, the high school that he will attend next year, the park that he visits and the commercial developments on 188 Street.

### **Pedestrian Crosswalk at Clayton Heights Secondary School:**

Anthony will attend Clayton Heights Secondary School in the fall of 2008 and he currently uses park facilities located near the high school. 188 Street is a collector road that is currently operating at approximately half its lane capacity. A multi-use pathway exists on the north side of 70 Avenue, east of 188 Street. The high school is on the west side of 188 Street, south of the 70 Avenue alignment.

The City has conducted a warrant analysis for the requested pedestrian crossing at 188 Street, near the high school and, although it is not warranted, it is close and it is recommended that the City install a pedestrian actuated signal at the intersection of 70 Avenue and 188 Street in order to create a pedestrian crossing with fully defined pedestrian right-of-way. This pedestrian crossing will serve the needs of users of the multi-use pathway on 70 Avenue and attendees of the high school. Audible pedestrian signals will be included in this signal installation.

### **Audible Pedestrian Signals at 188 Street and Fraser Highway:**

Commercial developments serving the Clayton and Cloverdale neighbourhoods surround the intersection of 188 Street and Fraser Highway. Bus stops on Fraser Highway are located near this intersection. The City will retrofit the existing signal installation at 188 Street and Fraser Highway with audible pedestrian signals – in particular, the Navigator 2 style, which is currently being tested in Newton and was recently reported on in the Surrey Leader.

### **Signalization of the Intersection of 188 Street and 68 Avenue:**

A roundabout has been planned for this intersection to be constructed in conjunction with adjacent development. Until the roundabout can be installed, the intersection is operating as a two-way stop with 188 Street traffic having the right-of-way. However, the intersection is confusing for pedestrians: two of the four corners have large radii set up for a roundabout, but inappropriate for a two-way stop. In addition, one of the corners has sidewalk letdowns set back from the intersection, appropriate for a roundabout but not for a two-way stop. The resulting large intersection with two offset crosswalks creates an atmosphere where motorists tend to ignore the right-of-way of pedestrians. An increasing number of residents have communicated the need for something to be done with the current intersection to address the confusing pedestrian environment.

This intersection is not required for Anthony to walk to the high school or park, but could form part of his route to the nearby commercial developments. The Ciullas have expressed the concern that the marked pedestrian crosswalks that will form part of the roundabout installation will create a situation where their son does not have an obvious right-of-way, and it will be difficult for him to hear whether or not an oncoming vehicle is yielding the right-of-way, allowing him to cross safely.

A roundabout at the intersection of 188 Street and 68 Avenue has been planned for three years. In a letter dated February 2005, the City responded positively to a petition from the community requesting a roundabout. The roundabout was requested for the purposes of traffic calming. Traffic circles are more appropriate for traffic calming, although roundabouts can perform that function. The landscaped centre median of the roundabout will also beautify the local area.

Balancing the needs of the visually impaired with the rest of the community, and in light of other signalized crossing opportunities, it is proposed that the City proceed with its plans to install a roundabout at the intersection of 68 Avenue and 188 Street. Roundabouts are considered safe for the general pedestrian population because pedestrians have a designated crosswalk behind the yield line of the roundabout, making them more visible to entering and exiting drivers, and unlike a signalized intersection, pedestrians cross only one driving stream of traffic at a time. Roundabouts are not traffic calming devices, but to negotiate a roundabout drivers cannot enter or circulate at greater than 25 km/h. This consistent travel speed and the reduced number of conflict points create an inherently safer intersection than a signalized intersection, and for this reason the Insurance Corporation of BC has been promoting the implementation of roundabouts at appropriate locations. Roundabouts also help to compensate for access restrictions at adjacent land uses by providing a U-turn opportunity. In the case of 188 Street, the street is not long enough to provide room for left-turn bays at the intersections and at the Street would result in two signals plus two major commercial accesses within 200 metres, which would create significant operational problems. Signalizing roundabouts is only done to artificially create gaps in traffic streams and ensure consistent circulation. They are often used when one approach volume is much larger than the other volumes, preventing vehicles from these approaches from entering the roundabout. Signalizing the proposed roundabout at 68 Avenue and 188 Street would be inappropriate and would eliminate the capacity and access benefits of the roundabout.

## CONCLUSION

It is recommended that the City undertake the following:

- install a pedestrian signal at the intersection of 188 Street and 70 Avenue complete with audible signals that indicate the full pedestrian right-of-way;
- retrofit the existing signalized intersection of 188 Street and Fraser Highway to include audible pedestrian signals;
- proceed with plans to construct a one-lane roundabout at the intersection of 68 Avenue and 188 Street, complete with fully marked and signed pedestrian crosswalks;
- educate the driving, bicycling, and walking public on how to use the roundabouts through pamphlets and newspaper ads when opening new roundabouts.

It is further recommended that a copy of this report and the related Council resolution be forwarded to the delegation that appeared before Council.

The Engineering Department is planning to update its protocol in relation to receiving and processing requests for these types of considerations from transportation users with special needs.

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PH/brb

Attachment: Location Map