

CITY OF BURNABY

TRAFFIC AND TRANSPORTATION COMMITTEE  
(TRAFFIC SAFETY DIVISION)

HIS WORSHIP, THE MAYOR  
AND COUNCILLORS

**E. TRAFFIC SAFETY ON CARLETON AVENUE AND WILLIAM STREET**

RECOMMENDATIONS:

1. THAT all residents within one block of Carleton Avenue and William Street be polled to determine support for experimental roundabout at the intersection subject to resident funding and support of the initiative.
2. THAT a copy of this report be sent to Phil Mattia.

REPORT

The Traffic and Transportation Committee (Traffic Safety Division), at its meeting held on 1994 November 01, adopted the attached staff report responding to concerns expressed by Phil Mattia regarding speeding traffic on Carleton Avenue and William Street and consequent vehicle collisions at the intersection of those streets.

MEMBERS:

W.B. Bennett  
Mr. M. Bloomfield  
Ms. Libby Brown  
Mrs. L. Brown  
Mrs. M. Canessa  
Mrs. G. Evans  
Mr. E. Fourchalk  
Mr. M. Mullan  
Mr. D. Ramsbotham  
Mr. D. Rankin  
Mr. R. Weston

Respectfully submitted,

Councillor J. Young  
Chairman

Councillor C. Redman  
Member

:-COPY - CITY MANAGER  
- DIRECTOR ENGINEERING  
- DIRECTOR PLANNING & BUILDING  
- O.I.C., R.C.M.P.

City of Burnaby

**INTER-OFFICE COMMUNICATION**

**TO:** TRAFFIC SAFETY COMMITTEE **DATE:** 1994 10 17  
**FROM:** ASST. DIRECTOR ENGINEERING,  
TRAFFIC & ENGINEERING SYSTEMS **FILE:** 50-01-10  
**SUBJECT:** TRAFFIC SAFETY ON CARLETON AVENUE AND WILLIAM STREET  
**PURPOSE:** To respond to concerns expressed by Phil Mattia regarding speeding traffic on Carleton Avenue and William Street and consequent vehicle collisions at the intersection of those streets.

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**RECOMMENDATIONS:**

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**REPORT**

**1.0 INTRODUCTION**

At its meeting of 1994 September 13, Phil Mattia, 4187 William Street, Burnaby, B.C., appeared before the Committee requesting the installation of roundabouts on Carleton Avenue at William and Charles Streets. Mr. Mattia advised that roundabouts are required to combat speeding traffic in the vicinity of Willingdon Heights Park.

The Committee resolved:

*"THAT staff prepare a report regarding the feasibility of installing traffic roundabouts at the Charles Street/Carleton Avenue and William Street/Carleton Avenue intersections."*

Prior to his appearance before the Committee, Mr. Mattia had met on-site with the Committee chair and subsequently, staff.

As a result of this site visit, staff prepared a speed hump initiative letter for Mr. Mattia to discuss with his neighbours. Staff also notified the RCMP of Mr. Mattia's concerns and collected automatic volume/speed data which is discussed subsequently in this report.

## 2.0 **BACKGROUND**

Carleton Avenue and William Street are residential streets. William Street is built to a finished standard with 8.5m pavement width and sidewalks. Carleton Avenue north of William Street is surfaced with an interim cap but is finished to a local collector standard (11m pavement) to the south. The intersection of Carleton Avenue and William Street, which is the prime focus of resident concern, is stop sign controlled with William Street having through priority. Willingdon Heights Park occupies the south west quadrant of the intersection of these two streets. Street length adjacent the park is a posted 30 km/h playground zone.

### 2.1 **Accident History**

From 1979 to 1986, there were no recorded crashes at Carleton Avenue and William Street. In the two year period 1987-1988, there was a "cluster" of five crashes. After stop sign control was installed in 1989, the average number of crashes at this intersection has been less than one per year. In the past two years, there have been no crashes recorded at the adjacent Charles Street and Carleton Avenue junction while the other proximate intersection of Napier Street and Carleton Avenue had one.

These statistics would not support the hypotheses that there is a problem that would be remedied by additional control at any of these intersections.

### 2.2 **Speed and Flow**

Attached as Exhibit 1 are graphs that summarize the traffic volume and traffic speed data that we collected along William Street and Carleton Avenue. Carleton Avenue is marginally more busy than Williams Street but the traffic flows are consistent with the minor local collector function of both streets. We would not expect either street to attract any inter-municipal commuter traffic and the data supports this expectation. It would also appear that neither street is used by non-local intra-Burnaby traffic to any great extent.

The data on speeds shows that the majority of traffic on both streets exceeds the 30 km/h posted limit but that Carleton Avenue traffic tends to be slower. The number of vehicles travelling in excess of 60 km/h is small on both streets and would not be considered significant if the posted speed limit were not 30 km/h. Morning and evening rush hour speed monitoring/enforcement on William Street would be more productive than at other times or along Carleton Avenue.

### **3.0 ROUNABOUT FEASIBILITY**

As directed, staff reviewed the feasibility and desirability of siting roundabouts as directed by the Committee.

#### **3.1 Design**

Design of the roundabouts that the City has installed to date has required extensive reconstruction of curb works and this has significantly added to costs. For example, the roundabout proposed for Graham Avenue and 7th Street is estimated to cost in excess of \$50,000. We would expect that a similar installation at Carleton Avenue and William Street could cost more than that given the requirement to raise at least one of the two manholes in the intersection. Accordingly, we have costed two more modest designs that would retain the existing street infrastructure substantially as is but would impose a 7m diameter traffic circle on the centre of the intersection. One design, similar to that used in other jurisdictions would be concrete with a roll-over curb. This design is estimated to cost about \$6,000 and is illustrated in Exhibit 2. Also shown is a more economic asphalt "button" which could be installed at a cost of \$3,000 including signing. We note that other jurisdictions which run more extensive traffic circle programs follow the more modest design approach -- one that does not modify curb returns. If a roundabout is approved by Council we would recommend this design for the Carleton/William intersection.

At the Carleton Avenue and Charles Street T-junction, a roundabout would have minimal impact on southbound traffic without extensive curb work on the west side -- similar to most of the Lakefield junctions. Because of this factor and the fact that this junction is less "critical" than the William/Carleton intersection, we would recommend deferring its implementation pending further appraisal.

#### **3.2 Funding**

We are concerned with the installation of roundabouts in the absence of a program for their installation. The information we have collected does not suggest a unique requirement for the roundabouts proposed. Accordingly, we would expect that there are potentially many other locations in the City where residents could reasonably demand a roundabout based on a precedent created here. There is also the precedent for resident cost sharing in other non-regulatory traffic calming measures such as speed humps. Accordingly, if a roundabout were approved for further consideration, we would recommend a similar approach here, ie. resident cost sharing and initiative to confirm wider support for the measure.

#### 4.0 CONCLUSION

While the "objective" data does not suggest that either Carleton Avenue or William Street have a traffic problem that is significantly worse than that found on other streets, we are mindful of the fact that it is the residents who are closest to the situation. We have talked to Mr. Mattia and his immediate neighbour who resides on the north west corner of Carleton Avenue and William Street. Both are quite adamant about the problems at the intersection and the speeding traffic along William Street. Our view was that the speeding problem could best be addressed through enforcement of the 30 km/h limit but certainly Mr. Mattia believes that a roundabout/traffic circle would be more appropriate.

If a roundabout is favoured by the Committee, we recommend involving the neighbours within one block of Carleton Avenue and William Street to confirm a wider level of support for the initiative. We do not recommend proceeding with a roundabout installation at the Carleton/Charles junction at this time for the reasons previously discussed.

We would also recommend submitting the lowest cost roundabout design, ie. the asphalt button, to the residents for cost sharing. If implemented, we would also recommend a review of the success of the installation after six months.

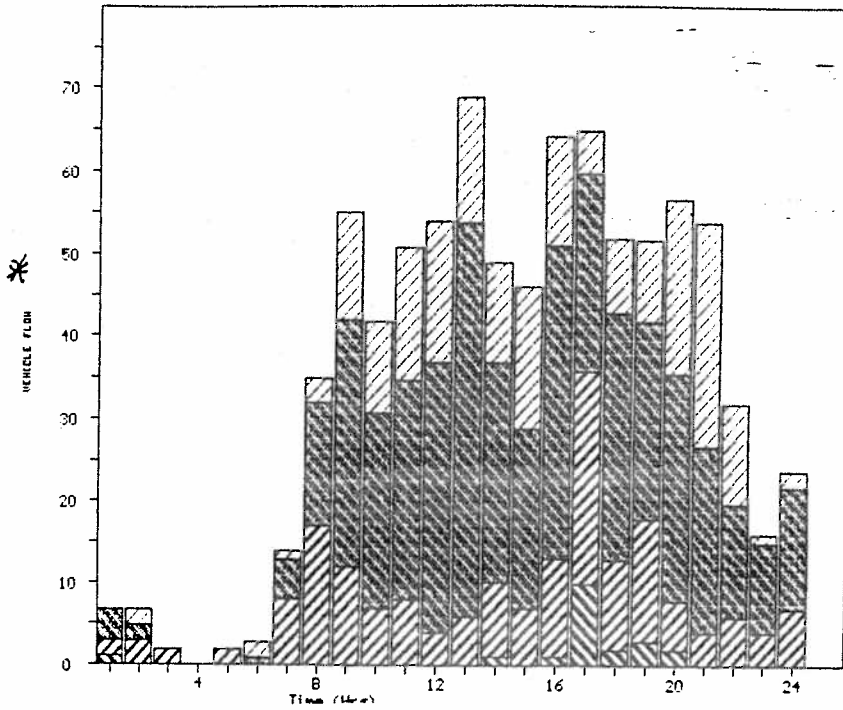


ASST. DIRECTOR ENGINEERING,  
TRAFFIC & ENG. SYSTEMS

PL:jb  
Attach.

cc: City Manager

CARLETON BETWEEN WILLIAM TO FITCHNER  
NORTH AND SOUTH BOUND JULY 12, 1994



WILLIAM BETWEEN CARLETON TO GILMORE  
EAST AND WEST BOUND JULY 12, 1994

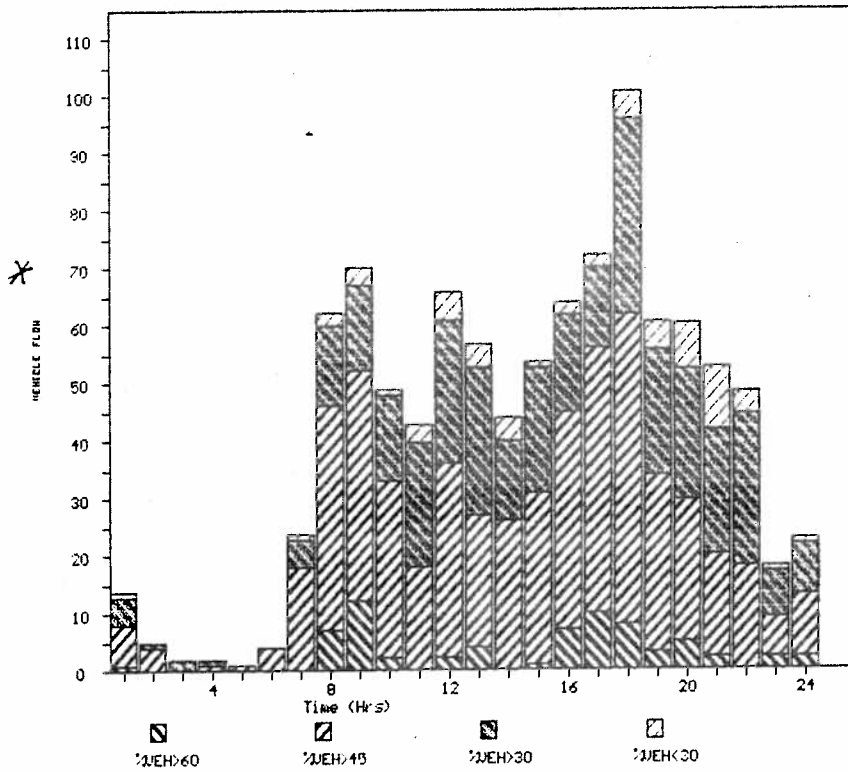


Exhibit 1 TRAFFIC FLOW & SPEED

\* Note differences in vertical scale

BEVELLED CUT OUT  
TO ACCOMMODATE  
EXISTING MANHOLE  
(AS REQUIRED)

4 FACE SIGN  
TREE (COMMON)

PLAN

12" PAINT RING

TYPE 1  
CONCRETE

15cm

TYPE 2  
ASPHALT

15cm

7.0m DIAMETER

NOTE:  
ALL DIMENSIONS ARE APPROXIMATE

54

EXHIBIT 2.

NO.	DATE	REVISION



ALTERNATE  
ROUNABOUT DESIGN

DRAWN BY: H.LOUIE	SCALE: N.T.S.	<b>A</b> 328
APPR'V'D BY:	DATE: 94-10-15	

