

# Request for Decision City Council





Type of Decision									
Meeting Date	August 8, 2007				Report Date	July 26, 2007			
Decision Requested	X	Yes		No	Priority	X	High		Low
	Direction Only				Type of Meeting	X	Open		Closed

Report Title
<p>Request for Pedestrian Signals</p> <p>(1) Barry Downe Road at Sparks Street</p> <p>(2) Barry Downe Road at Kennedy Street</p> <p>(3) Barry Downe Road at Lamothe Street</p> <p>(4) Barry Downe Road at Woodbine Avenue</p>

Budget Impact / Policy Implication	Recommendation
<p>This report has been reviewed by the Finance Division and the funding source has been identified.</p>	<p>To improve pedestrian safety, staff recommend that the following improvements be made; all in accordance with the report from the General Manager of Infrastructure Services dated July 26, 2007:</p> <p>1) That pedestrian warning signs be installed along both sides of Barry Downe Road in the study area.</p> <p>2) That widening Barry Downe Road to provide a continuous two-way centre left turn lane between Sparks Street and Woodbine Avenue be given a high priority to improve pedestrian safety.</p> <p>3) That the pedestrian crossing volumes be monitored along Barry Downe Road to determine if pedestrian signals or raised islands should be included as part of any future widening.</p>
<p>X Background Attached</p>	<p>Recommendation Continued</p>

Recommended by the Department	Recommended by the C.A.O.
<p>Greg Clausen, P. Eng. General Manager of Infrastructure Services</p>	<p>Mark Mieto Chief Administrative Officer</p>

Date: July 26, 2007

Report Prepared By	Division Review
 Dave Kivi, Co-ordinator of Transportation and Traffic Engineering Services	 Robert M. Falcioni, P.Eng. Director of Roads and Transportation

### Background:

At the City Council meeting on February 14, 2007, Councillor Landry-Altmann submitted a petition requesting the installation of pedestrian signals at the intersection of Barry Downe Road and Lamothe Street (see Exhibit "A"). The petition indicated that the signals would improve safety for people crossing Barry Downe Road as well as slow traffic down.

### Forms of Pedestrian Crossings

The Highway Traffic Act indicates that there are fundamentally two different forms of pedestrian crossings. The crossings may be either:

- A protected crossing where vehicles must yield to pedestrians, or
- An unprotected crossing where pedestrians must yield to vehicles.

Protected crossings include those locations where there is traffic control that requires a vehicle to yield or stop, such as a traffic control signal, an intersection pedestrian signal, a pedestrian crossover with flashing lights, a stop sign, or a crossing guard.

An unprotected crossing may or may not have warning signage and in some jurisdictions, crosswalk pavement markings. An unprotected crossing may also have no designation or traffic control measures but is a location where there is measurable pedestrian crossing activity. Safety at unprotected crossings can also be improved with the addition of warning signs or the construction of refuge islands or centre medians.

Either form of crossing may be appropriate given a range of pedestrian demand. There is generally a higher degree of concern for pedestrian safety at unprotected crossing points. However, both forms of crossings must be designed to maximize safety.

Some types of protected crossings that may be appropriate for Barry Downe Road are traffic control signals, intersection pedestrian signals, or mid-block pedestrian signals.

The City of Greater Sudbury follows the Ontario Ministry of Transportation's warrants for the installation of the various pedestrian signal control devices. The warrants are based on the number of pedestrians crossing the road, traffic volumes and geometric considerations such as: number of lanes; speed limits; and proximity of existing signal devices. The estimated cost to install intersection or mid-block pedestrian signals is \$80,000. The cost of full traffic control signals can be as high as \$170,000.

Date: July 26, 2007

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To determine the type and location of pedestrian facilities that may be required for Barry Downe Road, seven (7) hour turning movement counts and pedestrian crossing counts were conducted at the following locations, which are shown on Exhibit "B":

- (1) Barry Downe Road at Sparks Street
- (2) Barry Downe Road at Kennedy Street
- (3) Barry Downe Road at Lamothe Street
- (4) Barry Downe Road at Woodbine Avenue

To incorporate the special needs of seniors, young children, and disabled persons, the total number of crossings were increased by twenty (20) percent before being applied to the warrants. All counts were conducted in May 2007 while elementary schools and Lasalle Secondary School were in session. Pedestrians that crossed Barry Downe Road mid-block were assigned to the nearest intersection.

#### **1) Barry Downe Road at Sparks Street**

The intersection of Barry Downe Road and Sparks Street is located approximately 90 metres north of a signalized intersection at Lasalle Boulevard. This section of Barry Downe Road is constructed with four (4) lanes of traffic, and a sidewalk along both sides. It carries an average annual daily traffic volume (AADT) of 13,000 vehicles and has a posted speed limit of 50 km/h.

A summary of the pedestrian and vehicle counts is contained in Exhibit "C". The pedestrian and vehicle volumes were applied to the warrants for both pedestrian signals and full traffic signals and the results show that signals are not justified. The factored pedestrian volume is 67 where 260 would be required. Also, the intersection is too close to the existing traffic signals at Lasalle Boulevard to install a new set of signals. A minimum spacing of 215 metres is recommended between traffic signals as recommended by the Ontario Traffic Manual.

The turning movement count data does indicate that left turn lanes are warranted on Barry Downe Road in both directions of travel.

#### **2) Barry Downe Road at Kennedy Street**

The intersection of Barry Downe Road and Kennedy Street is located approximately 210 metres north of Lasalle Boulevard. This section of Barry Downe Road is constructed with four (4) lanes of traffic and sidewalks along both sides. It carries an AADT of 11,000 vehicles north of Kennedy Street and has a posted speed limit of 50 km/h. Lasalle Secondary School is located at the east end of Kennedy Street.

A summary of the pedestrian and vehicle count data is contained in Exhibit "D". The pedestrian and vehicle volumes were compared to the warrants for both pedestrian signals and full signals, and the results show that neither are required at this time. The factored pedestrian crossing volume is 115 where 250 would be required to satisfy the minimum requirements for pedestrian signals. The vehicle and pedestrian volumes are only 17 percent of the minimum required to warrant full traffic signals.

The turning movement count data does indicate that a southbound left turn lane is warranted on Barry Downe Road at Kennedy Street.

Date: July 26, 2007

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### **3) Barry Downe Road at Lamothe Street**

The intersection of Barry Downe Road and Lamothe Street is located approximately 330 metres north of Lasalle Boulevard. The entrance to St. Andrew The Apostle Church is located opposite Lamothe Street forming a four (4) way intersection. This section of Barry Downe Road also has four (4) lanes of traffic and a sidewalk along both sides. It carries an AADT of 11,000 vehicles and has a posted speed limit of 50 km/h.

In response to concerns about parishioners crossing Barry Downe Road to attend the church services, a special count was conducted on Sunday, June 3, 2007, from 8:30 a.m. to 12:30 p.m. A summary of the weekday pedestrian and vehicle counts and the special Sunday pedestrian count can be found in Exhibit, "E" & "F". The results of the count data show that pedestrian signals and full traffic control signals are not warranted at this time. The adjusted pedestrian volume for weekdays is 63 where a minimum volume of two hundred and seventy five (275) crossings is required to satisfy the warrants for pedestrian signals. The Sunday pedestrian crossing count indicated a total of sixty eight (68) pedestrians crossed the road during the four (4) hour period. The majority of crossings were to and from the church which has Sunday morning services. While an (eight) 8 hour pedestrian crossing volume is not known, it would be much less than 325 crossing required for the installation of pedestrian signals. The turning movement count data does indicate that a north bound left turn lane is warranted at this intersection.

### **4) Barry Downe Road at Woodbine Avenue**

The intersection of Barry Downe Road and Woodbine Avenue is located approximately 480 metres south of the signalized intersection of Barry Downe Road and Lillian Boulevard (see Exhibit "B"). In this area, Barry Downe Road is constructed with four (4) lanes of traffic, has an AADT of 10,500 and a speed limit of 50 km/h. The sidewalk on the west side of Barry Downe Road ends at this intersection, and the sidewalk along the east side continues north approximately 30 metres to the entrance to Cambrian College.

A summary of the pedestrian and vehicle count data is contained in Exhibit "G". The pedestrian and vehicle volumes were compared to the warrants for both pedestrian signals and full traffic signals, and the results show that neither are warranted at this time. The factored pedestrian volume is 114 where 300 is required for signals. The vehicle and pedestrian volumes are 66% of the minimum required for full traffic signals.

A review of the City's collision information from 2003 to 2005 inclusive showed that two (2) collisions occurred at the intersection involving three (3) pedestrians being struck by vehicles. A detailed review revealed that two (2) of the pedestrians were hit while crossing Woodbine Avenue and not Barry Downe Road.

The turning movement count data indicated that a northbound left turn lane is warranted at this intersection.

### **Summary of Findings**

The above analysis indicates that while signals are not currently warranted at any single location, there is a significant number of pedestrians who currently cross this busy arterial roadway between Lasalle Boulevard and Woodbine Avenue. The traffic count information also indicated that left turn

Date: July 26, 2007

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lanes on Barry Downe Road are warranted at each intersection within the study area.

To improve pedestrian safety, staff recommend that the following improvements be made:

- 1) That pedestrian warning signs be installed along both sides of Barry Downe Road in the study area.
- 2) That widening Barry Downe Road to provide a continuous two-way centre left turn lane between Sparks Street and Woodbine Avenue be given high priority to improve pedestrian safety. A centre left turn lane provides a refuge area for pedestrians, allowing them to cross against one direction of traffic at a time. It may also be possible to further protect pedestrians with the construction of raised islands in the centre of the road at some locations.
- 3) That the pedestrian crossing volumes be monitored along Barry Downe Road to determine if pedestrian signals should be included as part of any future widening.

Should Council decide to install pedestrian signals at one or more locations, staff recommend that Woodbine Avenue and Kennedy Street be given priority as Lasalle Secondary School and Cambrian College appear to be the largest pedestrian generators in the area. It has been found that pedestrians will not walk out of their way to use a protected crossing. This is evident at Sparks Street where 67 pedestrians crossed Barry Downe Road this unprotected location, even though it is located only 90 metres north of the traffic signals at Lasalle Boulevard.

As previously mentioned, the cost of pedestrian signals is approximately \$80,000. If pedestrian signals are approved, the Capital Budget for traffic signals would need to be increased accordingly, or an intersection that meets the warrants for traffic signals would need to be deferred until funding is available.

EXHIBIT: A



## INTEROFFICE MEMO

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February 20, 2007

**TO:** G. Clausen, Acting General Manager of Infrastructure  
B. Falcioni, Director of Roads & Transportation

**FROM:** CJ Caporale, Council Secretary

**RE:** Petition - Pedestrian Lights at Lamothe Street & Barrydowne Road

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At the City Council meeting of February 14, 2007, Councillor Landry-Altmann submitted a petition to the City Clerk regarding the installation of pedestrian lights at the corner of Lamothe Street and Barrydowne Road, Sudbury.

A copy of the first page of the petition is attached for your review.

The complete petition (approximately ninety signatures) is available in the Clerk's Department if you wish to review it.

For your information.

*CJ Caporale*

cc: Councillor Landry-Altmann

# EXHIBIT: A

## PETITION

Whereas there is no safe place to cross Barrydowne at Lamothe due to heavy traffic and whereas Cambrian College, Lasalle Secondary, parishioners of St. Andrew the Apostle Church, students from St Andrew separate school, Carl Nesbitt public school, residents of the neighbourhood take their lives in their own hands trying to cross. We petition the City of Greater Sudbury to install walking lights at Lamothe Street and Barrydowne Road. The space between the lights at Lilian Street and the lights at Lasalle is far too great a distance. Lights would help slow down the traffic. This light could be activated by the pedestrian.

David Chisholm DAVID CHISHOLM

Monique Fournier

Ginelle Dupuis

Kimberly DeLuca

Robert Theron

Julie Gervais

John A. Smith

John Decker

John Smith

John Smith

John Smith

John Smith

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EXHIBIT: A



February 20, 2007

Mr. David Chisholm

PO BOX 5000 SENA  
200 BRADY STREET  
SUDBURY ON P3A 5P3

CP 5000 SUCCA  
200 RHE BRADY  
SUDBURY ON P3A 5P3

705.671.2489

www.  
cityofgreater.sudbury  
.on.ca

Dear Mr. Chisholm:

**Re: Petition - Pedestrian Lights at Lamothe Street & Barrydowne Road**

At the City Council meeting of February 14, 2007, Councillor Landry-Altmann submitted a petition to the City Clerk regarding the installation of pedestrian lights at the corner of Lamothe Street and Barrydowne Road, Sudbury.

This petition was forwarded to the Acting General Manager of Infrastructure and the Director of Roads & Transportation, for their review.

Yours truly,

A handwritten signature in cursive script that reads 'Corrie-Jo Caporale'.

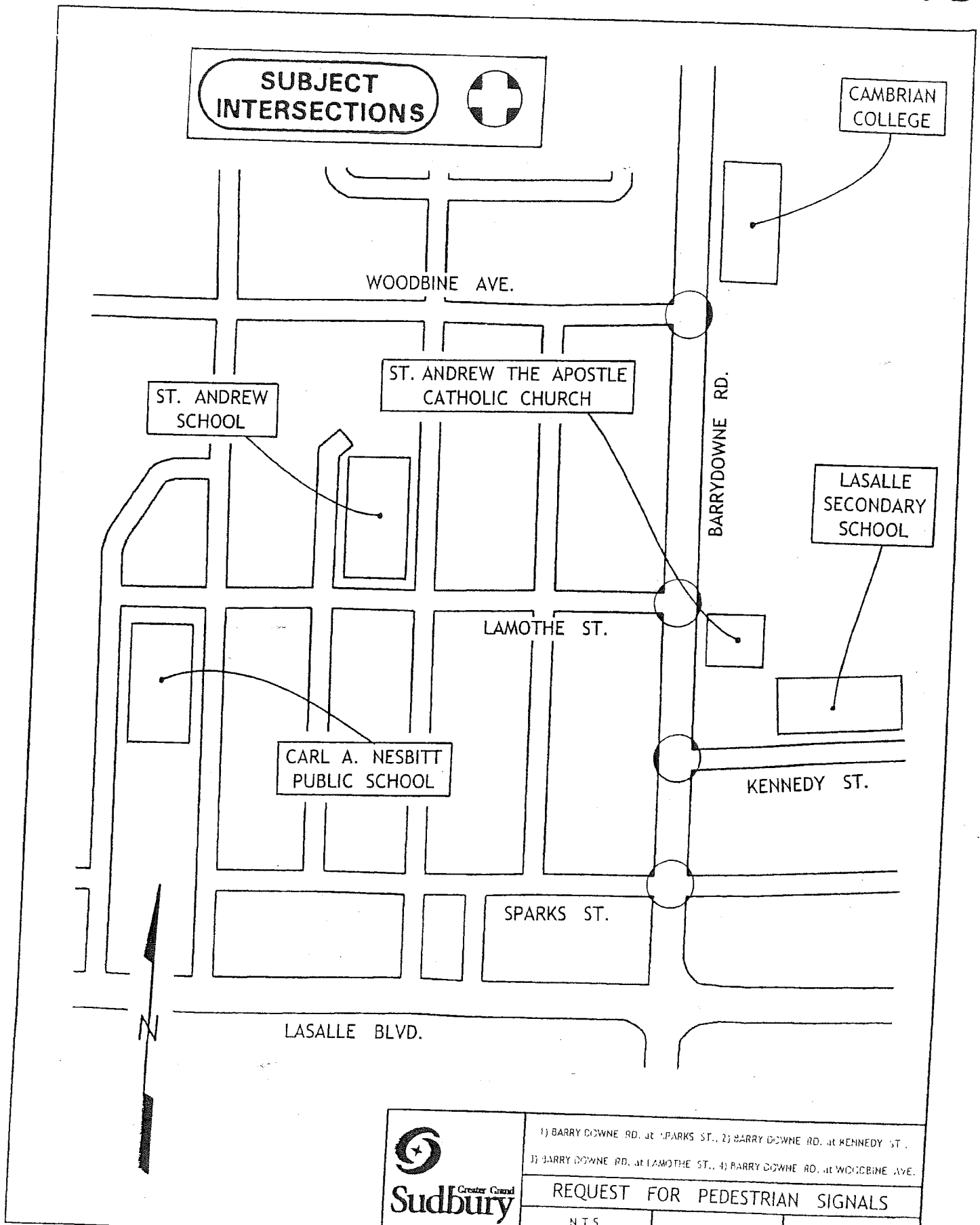
Corrie-Jo Caporale  
Council Secretary

cc: Councillor Landry-Altmann  
G. Clausen, Acting General Manager of Infrastructure  
B. Falcioni, Director of Roads & Transportation

*[Faint handwritten notes and stamps at the bottom right of the page]*



# EXHIBIT: B



1) BARRY DOWNE RD. AT SPARKS ST., 2) BARRY DOWNE RD. AT KENNEDY ST.,  
 3) BARRY DOWNE RD. AT LAMOTHE ST., 4) BARRY DOWNE RD. AT WOODBINE AVE.  
**REQUEST FOR PEDESTRIAN SIGNALS**  
 N.T.S.

# EXHIBIT: C

## Pedestrian Count Volume Summary

Location: Barry Downe Road @ Sparks Street

Date of Count: 5/14/2007

Time	Unassisted Pedestrians	20% Assisted Pedestrians
8:30	7	2
9:30	6	2
11:30	4	1
12:30	3	1
13:30	5	1
16:00	6	1
17:00	10	2
18:00	4	1
<b>Total</b>	<b>45</b>	<b>11</b>

Factored 8 hour Ped Volume

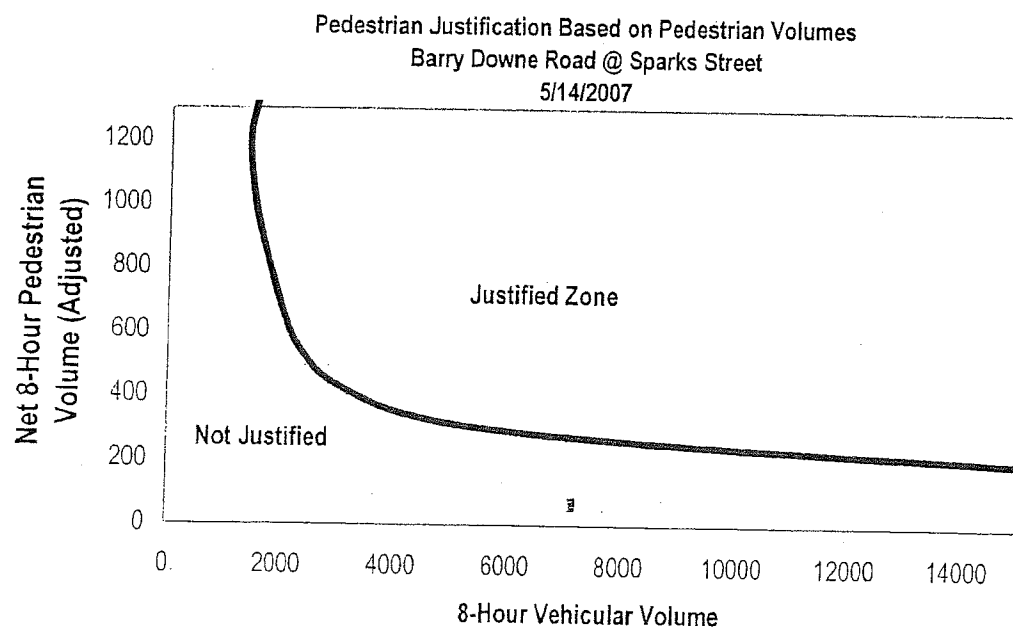
67

8 hour Vehicle Volume on Street

7100

\* Assisted Pedestrian = (Seniors, children under 12 and disabled pedestrians)

Factored Ped volume = total unassisted volume + 2x total assisted volume



# EXHIBIT: D

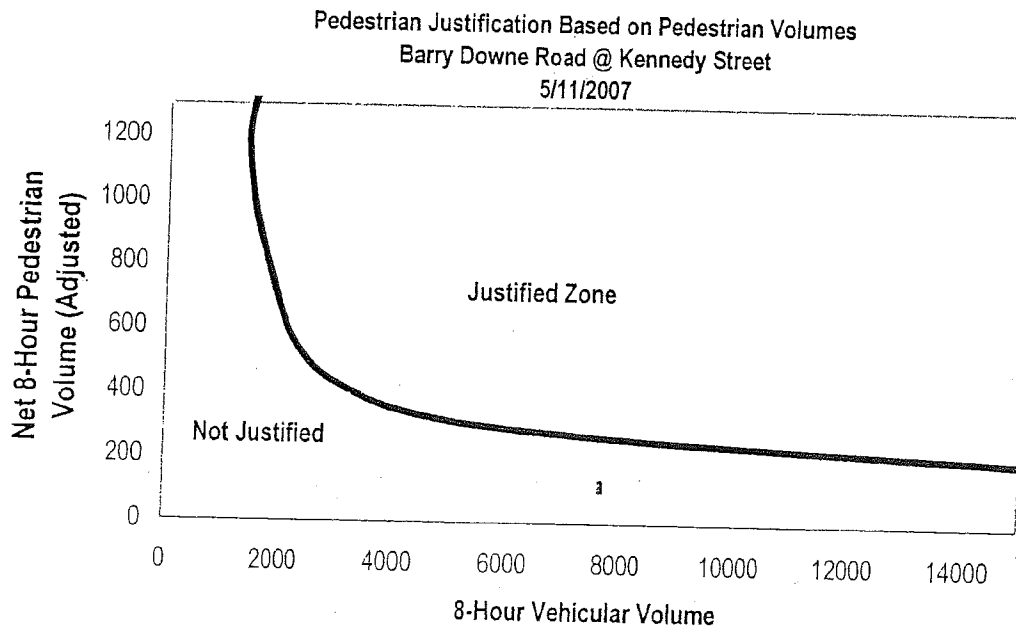
## Pedestrian Count Volume Summary

Location: Barry Downe Road @ Kennedy Street  
Date of Count: 5/11/2007

Time	Unassisted Pedestrians	20% Assisted Pedestrians
8:30	13	3
9:30	12	3
11:30	12	3
12:30	12	3
13:30	8	2
16:00	7	2
17:00	4	1
18:00	10	2
<b>Total</b>	<b>78</b>	<b>19</b>

Factored 8 hour Ped Volume	115
8 hour Vehicle Volume on Street	7600

\* Assisted Pedestrian = (Seniors, children under 12 and disabled pedestrians)  
Factored Ped volume = total unassisted volume + 2x total assisted volume



## Pedestrian Count Volume Summary

Location: Barry Downe Road @ Lamothe Street  
Date of Count: 5/15/2007

Time	Unassisted Pedestrians	20% Assisted Pedestrians
8:30	10	3
9:30	2	0
11:30	5	1
12:30	2	1
13:30	5	1
16:00	6	1
17:00	4	1
18:00	9	2
<b>Total</b>	<b>43</b>	<b>10</b>

Factored 8 hour Ped Volume

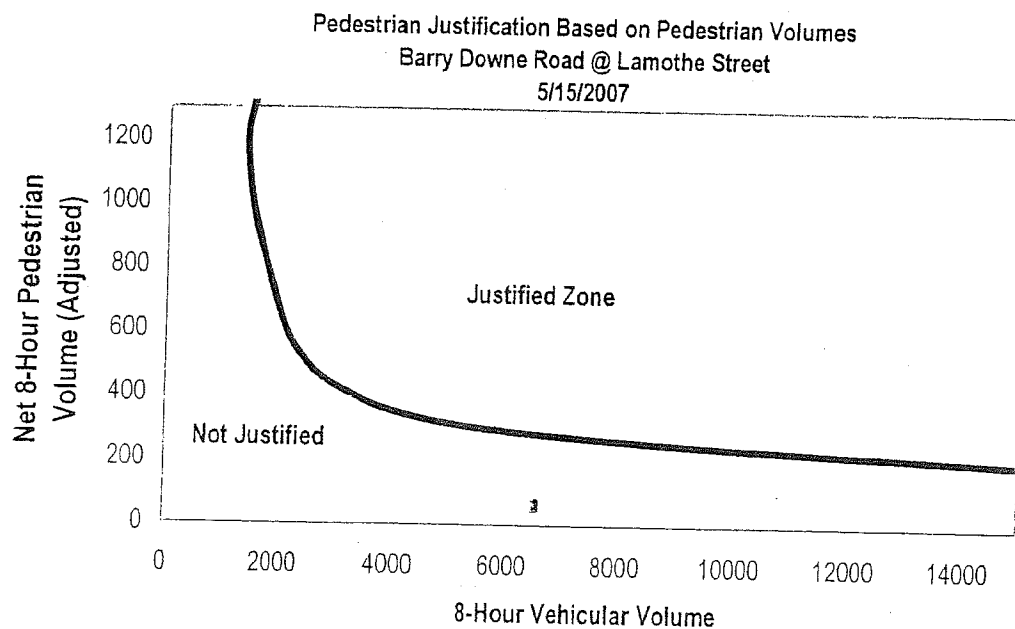
63

8 hour Vehicle Volume on Street

6500

\* Assisted Pedestrian = (Seniors, children under 12 and disabled pedestrians)

Factored Ped volume = total unassisted volume + 2x total assisted volume



# EXHIBIT: F

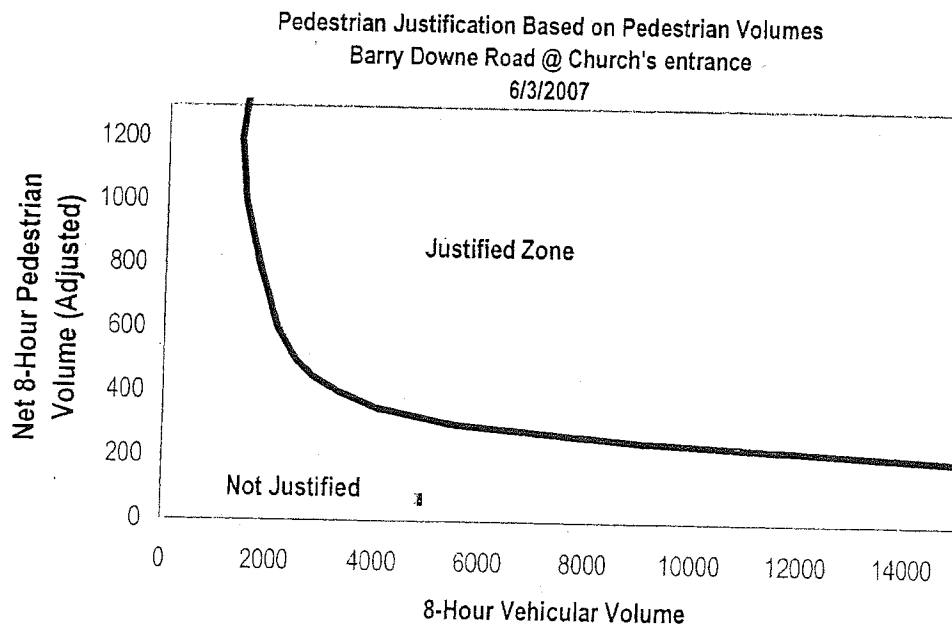
## Pedestrian Count Volume Summary

Location: Barry Downe Road @ Lamothe Street (St. Andrew The Apostle Church)  
Date of Count: Sunday, June 3, 2007

Time	Unassisted Pedestrians	20% Assisted Pedestrians
8:30	11	3
9:30	8	2
10:30	13	3
12:30	14	3
Total	46	11

Factored 4 hour Ped Volume 68  
8-Hour Vehicle Volume on Stree 4800

\* Assisted Pedestrian = (Seniors, children under 12 and disabled pedestrians)  
Factored Ped volume = total unassisted volume + 2x total assisted volume



# EXHIBIT: G

## Pedestrian Count Volume Summary

Location: Barry Downe Road @ Woodbine Avenue

Date of Count: 5/10/2007

Time	Unassisted Pedestrians	20% Assisted Pedestrians
8:30	14	4
9:30	11	3
11:30	9	2
12:30	8	2
13:30	10	2
16:00	11	3
17:00	11	3
18:00	2	0
<b>Total</b>	<b>76</b>	<b>19</b>

Factored 8 hour Ped Volume

114

8 hour Vehicle Volume on Street

5400

\* Assisted Pedestrian = (Seniors, children under 12 and disabled pedestrians)

Factored Ped volume = total unassisted volume + 2x total assisted volume

