

CITY OF BURNABY

A

TRANSPORTATION COMMITTEE

*HIS WORSHIP, THE MAYOR  
AND COUNCILLORS*

**SUBJECT:       TRAFFIC CONCERNS OF THE RESIDENTS OF  
                  4700 BLOCK CAMBRIDGE**

RECOMMENDATION:

1.   **THAT** Council forward a copy of this report to the residents of 4700 block of Cambridge.

REPORT

The Transportation Committee, at its meeting held on 2004 June 09, received and adopted the *attached* report responding to the Committee's request for a report reviewing the background to the traffic concerns of 4700 block Cambridge residents.

It was noted that staff propose marking a centre line through the Cambridge/Beta 90 degree bend and will further review how additional road markings could slow vehicles through that corner. As the junction of Beta and Penzance presents a wide expanse of pavement staff propose narrowing and realigning the Beta leg to provide a more conventional and constricted approach to Penzance.

Respectfully submitted,

Councillor Nick Volkow  
Chair

Councillor Doug Evans  
Vice Chair

Councillor Lee Rankin  
Member

COPY: CITY MANAGER DIRECTOR PLANNING AND BUILDING DIRECTOR ENGINEERING
--

**TO:** CHAIR AND MEMBERS  
TRANSPORTATION COMMITTEE

**DATE:** 2004 06 01

**FROM:** ASST. DIRECTOR ENGINEERING,  
TRAFFIC & ENGINEERING SYSTEMS

**FILE:** 38000-20

**SUBJECT:** TRAFFIC CONCERNS OF THE RESIDENTS OF  
4700 BLOCK CAMBRIDGE

**PURPOSE:** To respond to the Committee's request for a report reviewing the background to the traffic concerns of 4700 block Cambridge residents.

---

**RECOMMENDATION:**

1. **THAT** a copy of this report be sent to the residents of 4700 block Cambridge.

**R E P O R T**

**1.0 INTRODUCTION**

At a recent meeting, the Committee received copies of a petition letter from residents of the 4700 block Cambridge Street seeking a closure (barricade) to through traffic. The residents were corresponding in response to the misapprehension that a road closure could be effected through a petition process. We have also received a separate request for speed humps on Cambridge. Prior to the petition, staff had corresponded with individual residents regarding their traffic concerns. In particular, we have had a correspondence dialogue with Mr. Cech of 4715 Cambridge which was copied to the Traffic Safety Committee and appeared on the Committee agenda.

Mr. Cech has also publically expressed concerns regarding the potential traffic impact of a proposed West Coast Express station at the foot of Penzance. More recently, he has reported on a collision with his wife's parked vehicle.. Mr. Cech appeared as a delegation before this Committee and the Committee referred his concerns to staff for a report. Mr. Cech and other Cambridge Street residents subsequently appeared before Council at its 2004 April 21 meeting At that time, a previous report was referred back to the Transportation Committee for consideration in conjunction with the comments provided by the delegation.

The delegation also appeared before the Transportation Committee at its 2004 May 12 meeting and the Traffic Safety Committee meeting of 2004 June 01 to reiterate their concerns. It was noted that a staff report would be forthcoming at the 2004 June 09 meeting of the Transportation Committee and we understand Mr Cech and his neighbours will be in attendance . This report includes the gist of the previous report, addresses issues raised by the residents, and incorporates data collected in a recent series of traffic counts.

## **2.0 BACKGROUND**

The 4700 block Cambridge Avenue (Beta to N. Gamma) is a link in the Capitol Hill Local Collector network. This designation was identified at least as far back as 1974. As indicated on Exhibit 1 attached, Cambridge (N. Gamma to Beta) and Beta (Cambridge to Penzance) provide a north-western “outlet” from Capitol Hill allowing access to the Willingdon corridor and beyond via Penzance. Penzance can also be accessed via N. Gamma, a residential street which is not a designated Local Collector. Traffic counts, as discussed below, indicate some usage of N .Gamma by through traffic but the volume of vehicles is significantly lower than on the Cambridge / Beta link.

## **3.0 REVIEW**

### **3.1 Local Context (Exhibit 2)**

Cambridge from Beta to N. Gamma is constructed to an 8.5m width standard which is typical for Local Residential streets. It is therefore narrower than a Local Collector. The 4700 block Cambridge is approximately 150m in length and is fronted by 22 properties. Beta Avenue between Cambridge and Penzance is somewhat shorter - 110m. It is flanked by Mr. Cech’s property and the back of four properties on Liberty Place. The west side of Beta is fronted by Confederation Park and as a consequence Beta Avenue is posted with a playground zone having a 30 km/h speed limit. Cambridge slopes down to Beta at an approximate grade of 13%. The grade on Beta is relatively flat.

### **3.2 Traffic Volumes**

The traffic volume data collected in the recent series of traffic counts on is summarized in Exhibit 3 attached and indicates an average weekday traffic volume of 1600 vehicles per day (vpd) on the 4700 block Cambridge.

While we don’t have an extensive count history for the Cambridge / Beta link, the data suggests a modest growth rate over the past decades. The weekday total travel demand is about 1/3 of the 5,000 vpd recommended as a maximum for a

Local Collector and indeed is significantly less than the recommended 3,000 vpd maximum for a Local Residential street. The weekday traffic on N. Gamma (Cambridge to Penzance), the alternative link to Penzance, is 600 vpd. The Gamma link is less attractive to motorists than the Cambridge / Beta link because it is longer.

### 3.3 Travel Patterns

The volume of traffic on Cambridge by hour of day and direction of travel is graphed on Exhibit 4 (attached). As may be expected there is heavy westbound directional bias in the morning peak with the reverse being true in the evening. The evening peak of traffic volume is markedly higher than the morning.

As part of the recent Burnaby Heights Traffic Study, the origin and destination of trips using the Heights as a shortcut was measured for peak directions during morning and evening rush hours. These data are shown in Exhibits 5 and 6 and indicate that in the 8:00am to 9:00am peak hour, 49 westbound vehicles cut through Capitol Hill to in turn traverse the Heights neighbourhood. During the same time period, we recently counted approximately 150 vehicles exiting Capitol Hill, primarily via Cambridge. This indicates that approximately 2/3 of the vehicles accessing Penzance had trip ends local to Capitol Hill.

In the evening peak a slightly higher proportion (71%) of the vehicles entering from Penzance was estimated to have destinations in the Capitol Hill neighbourhood. It is not unreasonable to assume that the proportion of trip ends local to Capitol Hill will be greater during off-peak hours. In short **the majority of traffic on Cambridge is destined to or from the Capitol Hill neighbourhood.**

We anticipate that the traffic shortcutting through both the Heights and Capitol Hill will diminish as Eton and Cambridge streets are finished to an 8.5m local standard from Boundary Road to Willingdon. An 8.5m road tends to throttle traffic as, with parking on both sides, one of two oncoming vehicles has to pull over and yield to the other. Capitol Hill is almost fully developed and we would expect only marginal growth in the traffic generated by this neighbourhood.

### 3.4 Speed of Traffic

In our recent count series we measured the speed of traffic at mid-block locations where traffic speeds would reasonably be at a maximum. These data (Exhibits 7 and 8) are represented as percentiles by hour of day on Cambridge and Beta for the same day. The 50<sup>th</sup> percentile statistic indicates that half of the vehicles are travelling at less than the speed shown. The 50<sup>th</sup> percentile approximates the average speed of traffic. The 85<sup>th</sup> percentile speed is used to determine whether

speeding is a problem requiring enforcement (it indicates that 15% of vehicles exceed that speed).

It should be noted that during periods of low flow a single vehicle can skew the statistics. The late night 3 hour gap in the data is a result of no vehicles being recorded during that time period. The data indicates that typically more than half the vehicles are travelling below the 50 km/h speed limit. The 85<sup>th</sup> percentile speeds do not indicate an unusual speeding problem. City wide we typically find that 85<sup>th</sup> % speeds exceed 60 km/h while on Cambridge they range between 52 and 59 km/h. On Beta the speeds are significantly lower than those found on Cambridge but they exceed the 30 km/h reduced speed limit for playgrounds. Again this is not anomalous. Confederation Park in this area is a relatively quiet without active playground facilities.

#### **4.0 DISCUSSION**

The residents of 4700 block Cambridge, as represented by Mr. Cech, have made a number of suggestions to deal with their concern with traffic speed and volume.

##### **4.1 Closure of Access to Penzance (Barricading Cambridge / Beta and N. Gamma)**

Origin-Destination data coupled with Traffic Counts indicate that the significant majority of traffic accessing Penzance via Cambridge and N. Gamma is generated within the Capitol Hill neighbourhood. Our experience is that the neighbourhood would not support closures that restrict their access options.

##### **4.2 Deployment of Speed Humps on the Cambridge / Beta Link**

The City (in accordance with accepted installation guidelines) does not install speed humps on Local Collector streets. The City also requires prior satisfactory consultation (before allowing a speed hump initiative to proceed) if a Local Residential Street provides neighbourhood access.

Further, it is noted that the 13% grade on Cambridge significantly exceeds the 8% maximum grade for speed hump installation. (Mr Cech has noted that in Vancouver the 900 block of East 7th Ave is on a hill and has speed humps. We were informed by City of Vancouver staff that those speed humps were installed early in their program and the 10% grade was inadvertently overlooked. It is Vancouver's current policy to not install speed humps on grades exceeding 8%.)

#### **4.3 Inadequate Playground Zone Signing on the Cambridge Approach Beta**

The single sign on the south side of Cambridge was found to be obscured by foliage and this has been remedied by pruning. An additional sign has been placed on the north side of Cambridge on the motorists' right hand side. Further adjustment has been made to the signing on Beta southbound to provide a clear view of the Playground Zone sign for motorists entering from Penzance.

#### **4.4 Restricting Access to Capitol Hill from Hastings at Howard During the AM Peak**

This proposal would entail the placement of signing to prohibit a right turn from Hastings westbound to Howard northbound (from 7:00am to 9:00am). This restriction would also apply to neighbour traffic. Our experience elsewhere (eg. at North Road / Cameron, now removed) has been that such regulation is habitually ignored by motorists and is difficult to enforce.

#### **4.5 Removal of the Parking Prohibitions on the Corner of Beta and Cambridge**

The parking restrictions reflect sightline / corner clearance requirements that address traffic safety.

#### **4.6 Collision Risk**

Our crash data base shows two reported crashes at the Cambridge / N. Gamma 5-way stop since 1992 and one at Gamma / Penzance (in 1992). As our data base only includes intersection collisions reported to or by the Police it understates the actual number of collisions experienced. Nonetheless it is considered indicative of a relatively safe environment (notwithstanding the unfortunate hit and run recently experienced by Mrs .Cech).

To reduce crash risk at the Beta/Cambridge "intersection" we propose marking a centre line through the 90 degree bend. It has also been noted that the junction of Beta and Penzance presents a wide expanse of pavement that is conducive to taking the corner at speed. We propose narrowing and realigning the beta leg to provide a more conventional approach to Penzance. This is shown in Exhibit 9 attached.

The Cambridge / Beta link is a Local Collector that serves the wider Capitol Hill neighbourhood. Measures to preclude traffic from this link would move traffic to N. Gamma and ultimately reduce accessibility for Capitol Hill residents. Traffic counts have shown that volumes are about a 1/3 of the maximum recommended traffic volumes for a Local Collector street and are even well within the accepted maximums (3,000 vpd) for a Local Residential street . The closure petitioned for by the residents would also have

repercussions for emergency services that may rely on this route as a secondary access.

Any consideration of measures to restrict access to these Local Collector Streets would require the inclusion of Capitol Hill neighbourhood residents. As Cambridge / Beta functions as a Collector street providing access to the whole of Capitol Hill, experience suggests that the wider neighbourhood would be unlikely to support measures that restrict access to Penzance.

## 5.0 CONCLUSION

While we appreciate the Cambridge residents' concern with traffic on their street, we have found that vehicle volumes on Cambridge are more akin to those of a Local Residential street and are a fraction of the maximum recommended for Local Collectors or even Local residential streets. Indeed there are many *local* residential streets in Burnaby that carry traffic volumes comparable to those on Cambridge. Traffic speeds on both Beta and Cambridge are also comparable if not lower than those we usually record. Speeds on Beta, while significantly lower than on Cambridge indicate some disregard for the park / playground zone and we suggest continued deployment of the Neighbourhood Speed Watch. Further, in the future it is expected that short cutting vehicle volumes on Cambridge will be reduced as the local residential pavement width standard is implemented through the Local Area Service Program (LASP) on Eton and Oxford streets. There are currently active LASP initiatives for two blocks on Eton and two blocks on Oxford.

It is recommended that a copy of this report be sent to the residents of the 4700 block Cambridge as clarification of the issues.



P. Liivamagi, P. Eng.  
ASST DIRECTOR ENGINEERING,  
TRAFFIC & ENG. SYSTEMS

PL:  
Attach.

cc: City Manager  
Director Planning & Building



# Capitol Hill Neighbourhood Local Collector Network

March 24, 2004

23

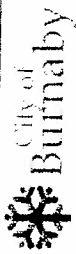


- Strata Units
- Placots
  - Golf
  - Police
  - Fire
  - Utility
  - Cemetery
  - School
  - Civic
  - Library
  - Hospital
  - Mail
  - Park and Rec
  - Skytrain Stations
  - Skytrain Links
  - Lot
  - Street Intersection
  - Traffic Signal
- Speed Humps
- Speed Humps
- Hundred Blocks
- Roads
  - Local
  - Collector
  - Arterial
  - Freeway
- Parks
- PARKLAND TO BE ACQUIRED
- Other
- Boundary

Map Scale 1 : 7500

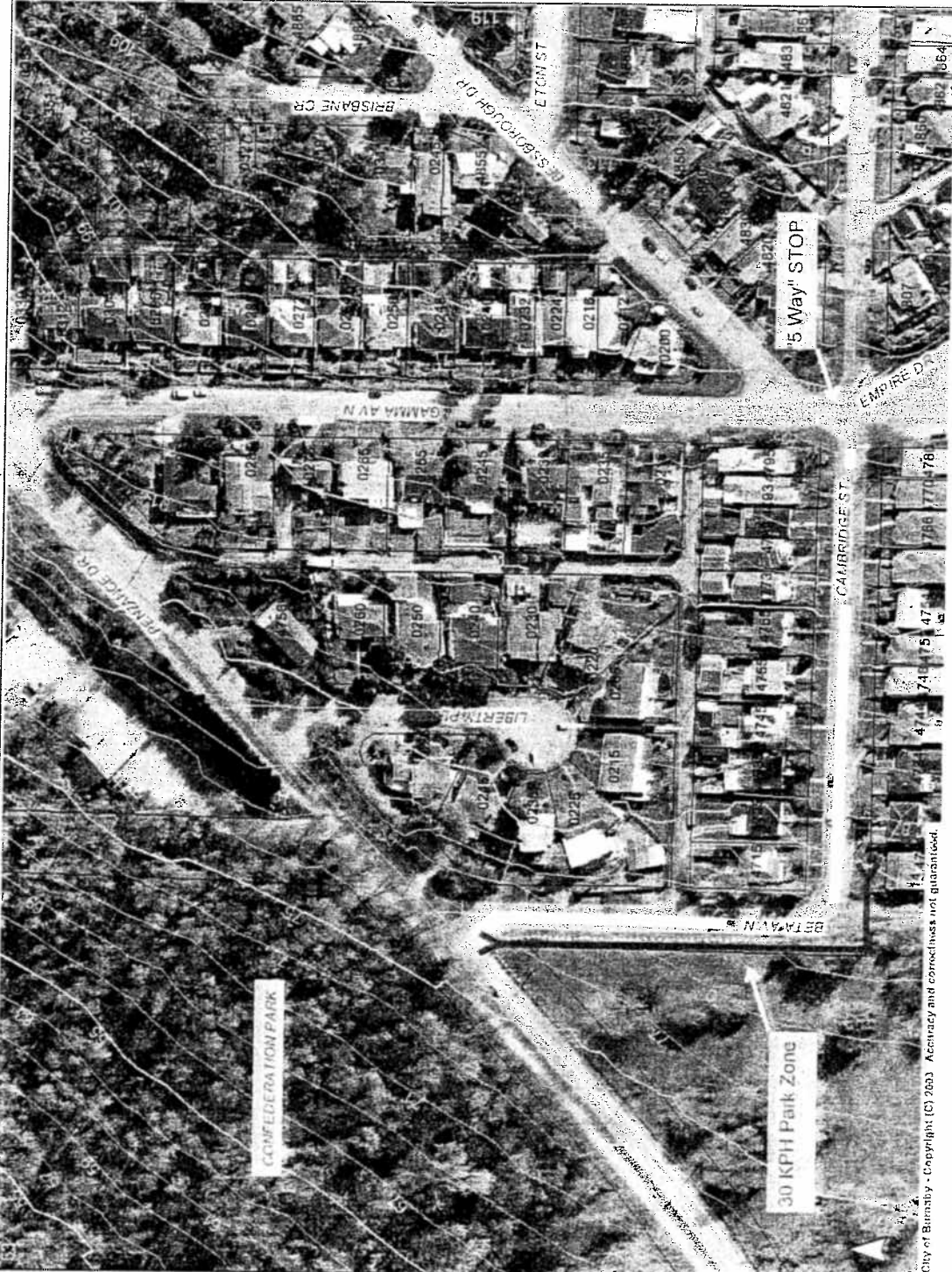
This information has been gathered and assembled on the City of Burnaby's computer systems. Data provided herein is derived from a number of sources with varying levels of accuracy. The City of Burnaby disclaims all responsibility for the accuracy or completeness of information contained herein.



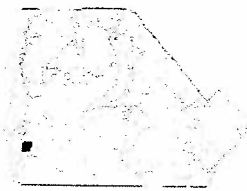


# Cambridge- Beta Local Collector

April 06, 2004



City of Burnaby - Copyright (C) 2003. Accuracy and correctness not guaranteed.



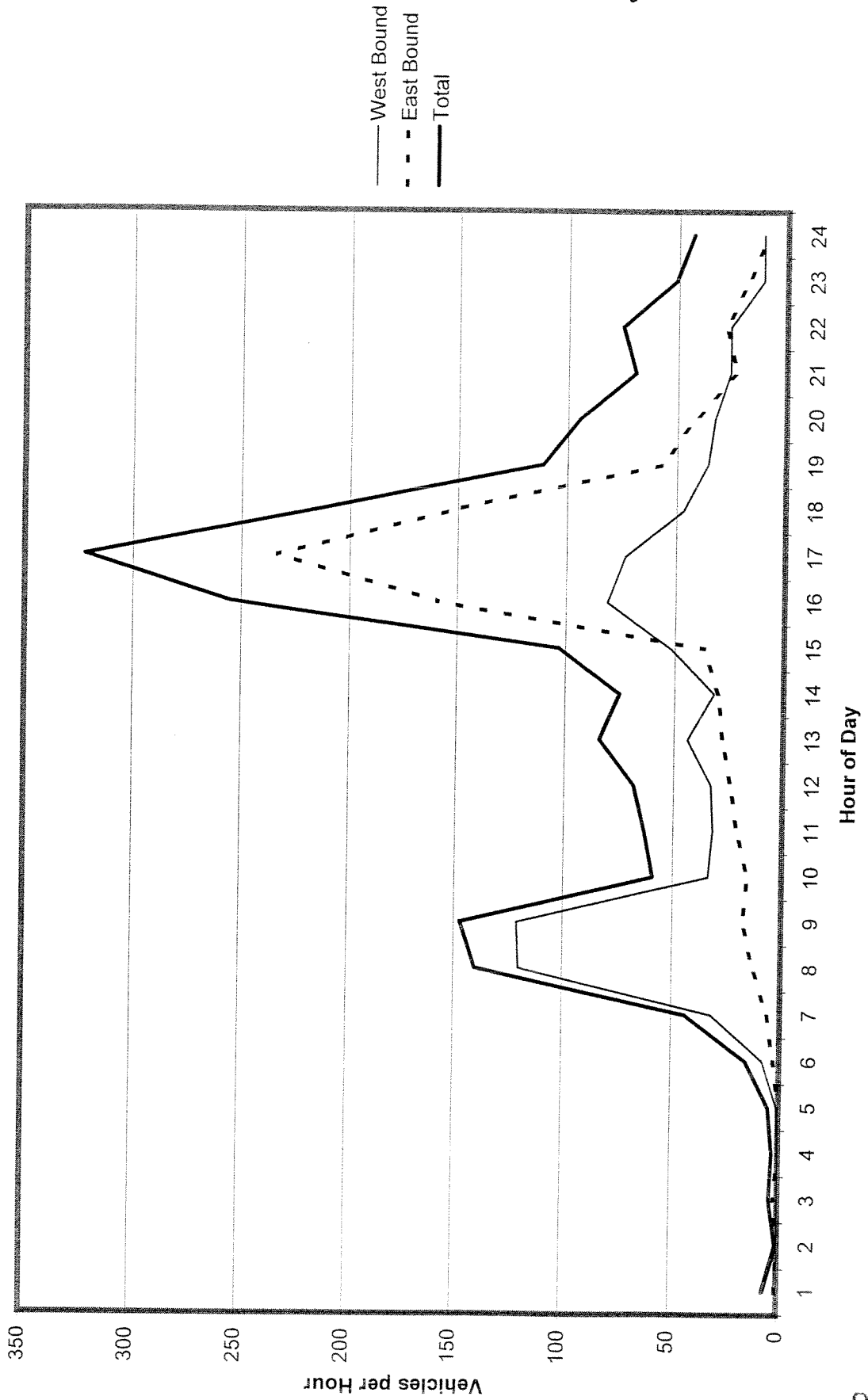
Selected features	Addresses
Contours	Lot
1m	Street Intersections
5m	Traffic Signal
Sirata Units	Speed Humps
Places	Speed Humps
1	Roads
P	Local
F	Collector
0	Arterial
0	Freeway
0	Hydrology
0	Colour 2002
0	Parks
0	Parks and Rec
0	Skytrain Stations
0	Skytrain Lines
0	Other
0	Boundary

### Exhibit 3 Cambridge; Beta; N.Gamma Traffic Counts

Date	Day of Week	24 Hour Traffic Volume Counts			
		To Penzance	From Penzance	2 Way Total	
<b>4700 block Cambridge</b>					
1987	May 21	Weekday	---	---	1231
1994	Sept 29	Weekday	---	---	1381
<b>2004</b>					
April	27	Tuesday	---	---	1437
	28	Wednesday	---	---	1452
	29	Thursday	---	---	1510
	30	Friday	---	---	1436
May	1	Saturday	---	---	898
	2	Sunday	---	---	816
	7	Friday	689	954	1643
	8	Saturday	502	502	1004
	9	Sunday	374	405	779
	10	Monday	784	808	1592
	11	Tuesday	859	852	1711
	12	Wednesday	976	919	1895
Average Weekday (2004)					<b>1585</b>
<b>Beta: N.Gamma to Penzance</b>					
<b>2004</b>					
April	27	Tuesday	---	---	1378
	28	Wednesday	---	---	1478
	29	Thursday	---	---	1532
	30	Friday	---	---	1460
May	1	Saturday	---	---	958
	2	Sunday	---	---	802
Average Weekday (2004)					<b>1462</b>
<b>N.Gamma: Cambridge to Penzance</b>					
<b>2004</b>					
April	27	Tuesday	287	342	629
	28	Wednesday	297	382	679
	29	Thursday	298	378	676
	30	Friday	243	313	556
May	1	Saturday	176	212	388
	2	Sunday	171	217	388
Average Weekday (2004)					<b>635</b>

EXHIBIT 4

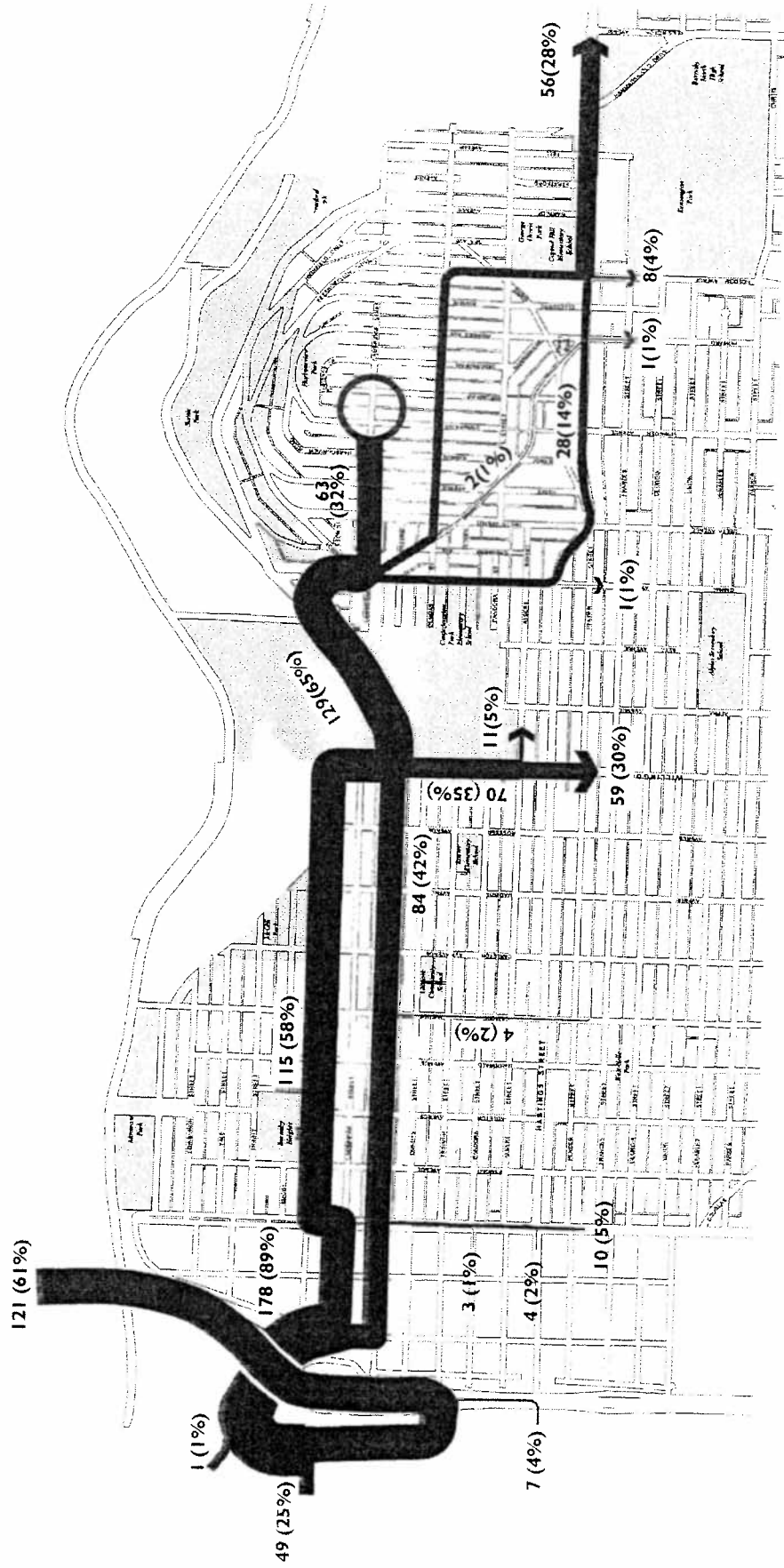
Cambridge (Beta-N.Gamma) Traffic Volume 11/05/04 Weekday





**Morning Through Traffic**  
(8:00 - 9:00 a.m.)

Total Through Trips = 118



Afternoon Through Traffic  
(4:30 - 5:30 p.m.)

4700 Bl. Cambridge Speed Classification (Weekday 28/04/04)

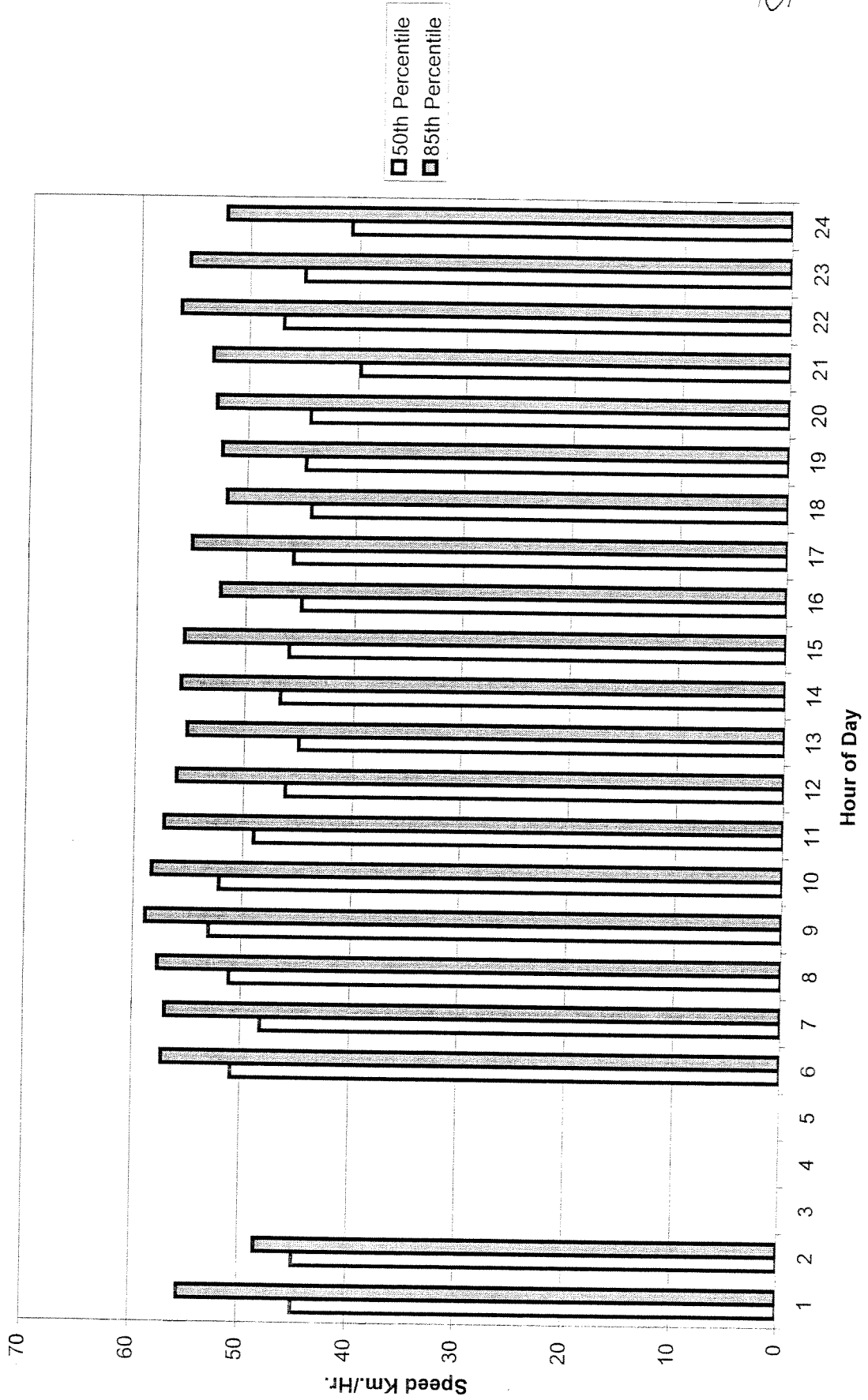
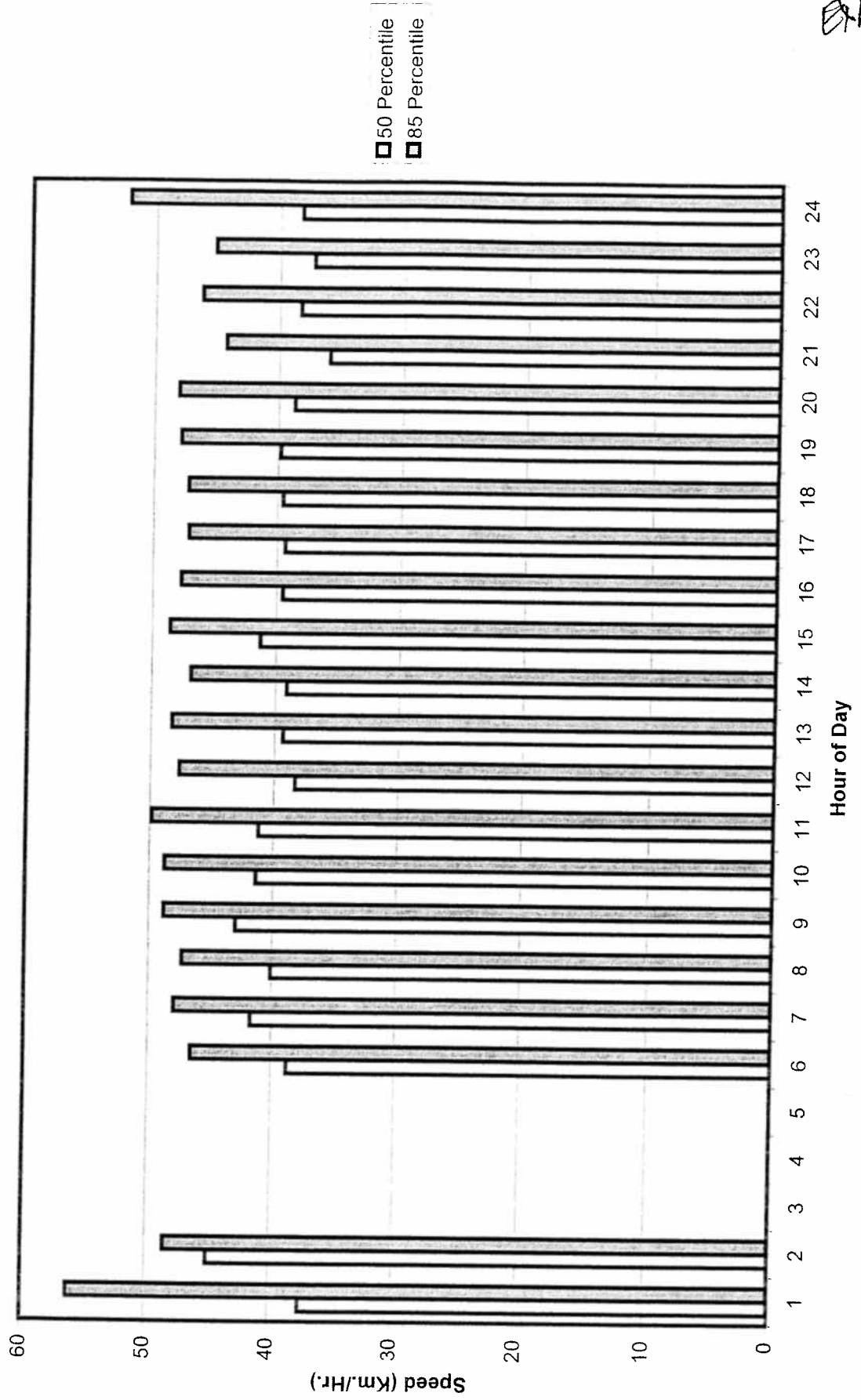


EXHIBIT 7

Beta: Cambridge to Penzance Speed Classification (Weekday 28/04/04)

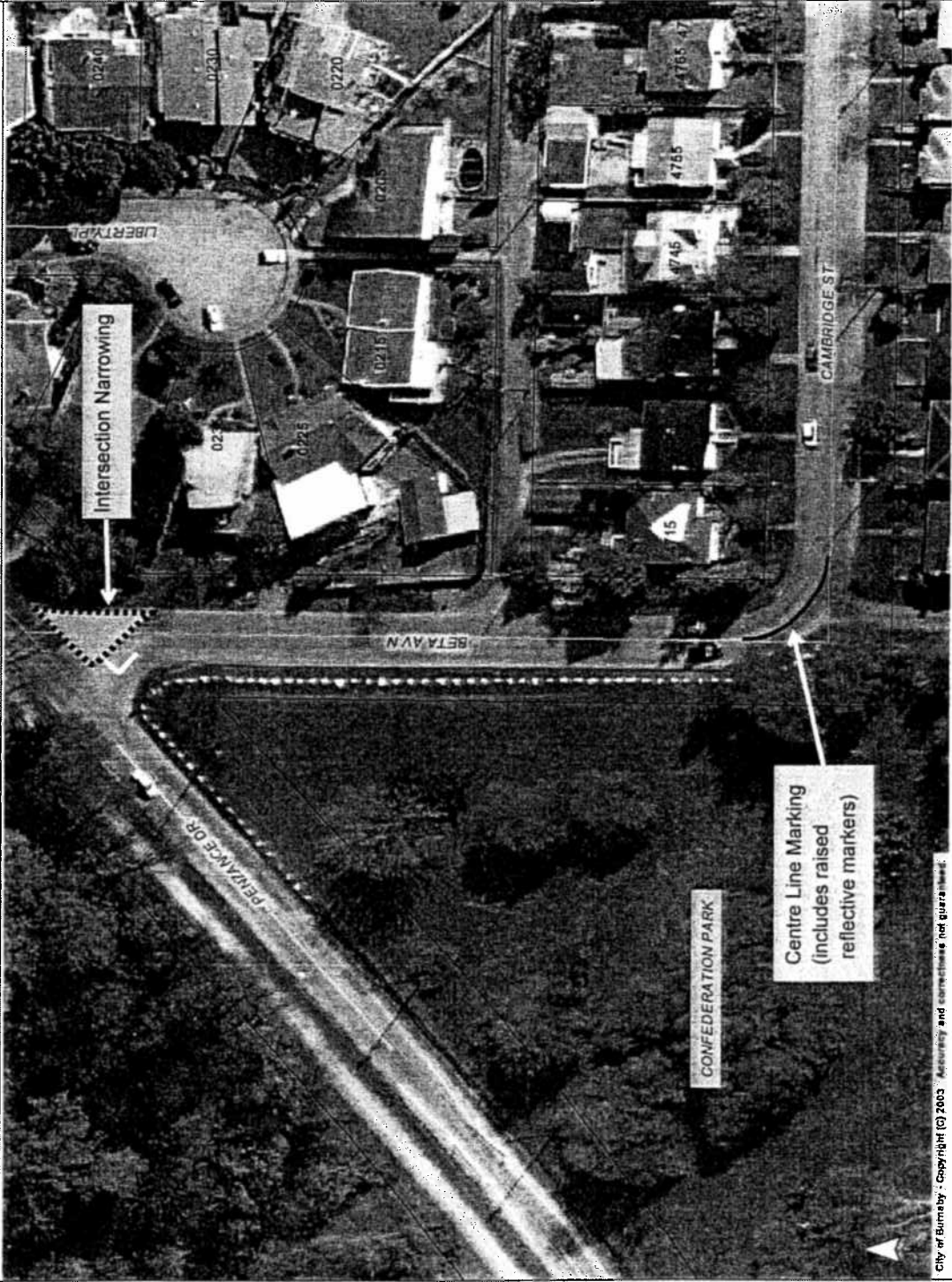






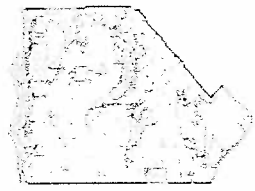
# Beta Ave. Proposed Modifications

June 02, 2004



City of Burnaby - Copyright (C) 2003. Accuracy and completeness not guaranteed.

This information has been gathered and assembled on the City of Burnaby's computer systems. Data provided herein is derived from a number of sources with varying levels of accuracy. The City of Burnaby disclaims all responsibility for the accuracy or completeness of information contained herein.



<ul style="list-style-type: none"> <li>Stata Units</li> <li>Places           <ul style="list-style-type: none"> <li>Golf</li> <li>Police</li> <li>Fire</li> <li>Utility</li> <li>Cemetery</li> <li>School</li> <li>Club</li> <li>Library</li> <li>Hospital</li> <li>Mail</li> <li>Parks and Rec</li> <li>Skytrain Stations</li> <li>Skytrain Lanes</li> <li>Addresses</li> <li>Lot</li> <li>Street Intersection</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Speed Humps</li> <li>Roads           <ul style="list-style-type: none"> <li>Local</li> <li>Collector</li> <li>Arterial</li> <li>Freeway</li> </ul> </li> <li>Hydrology</li> <li>Colour 2002</li> <li>Parks</li> <li>PARKLAND TO BE ACQUIRED</li> <li>Other</li> <li>Boundary</li> </ul>
--	--

Map Scale  
1 : 1000