B U N T
& ASSOCIATES

2000 CAMPUS TRAFFIC SURVEY
University of Victoria
Victoria, B.C.

Prepared for: **University of Victoria**

Prepared by: **Bunt & Associates Engineering Ltd.**

File: **4070-03**

Date: **March 31, 2000**

Table of Contents

List of Exhibits

List of Tables

1. INTRODUCTION

In March 2000, Bunt & Associates Engineering Ltd. was retained by the University of Victoria, Facilities Management Office, to conduct a comprehensive survey of current traffic access patterns to/from the University for a typical weekday condition. The data requirements of the 2000 survey were to be closely modelled upon the reporting structure of a similar traffic surveys conducted for the University in 1992 and 1996 by Bunt & Associates.

The primary purpose of the 2000 survey is to provide an update to the 1996 survey results so as to monitor changes in transportation activity patterns at the University over the past four years. Similar to the 1996 survey, the 2000 update survey considers each of the principal modes of traffic access to the University including:

- automobile drivers;
- automobile passengers;
- transit passengers;
- cyclists; and
- pedestrians.

As with the 1996 survey, Bunt & Associates were greatly assisted by Transtech Data Services (Ms. Carol Smith, P.Eng.) and BC Transit (Mr. Steve Harvey) for the traffic and transit data collection respectively.

University Of Victoria: 2000 Update

The University of Victoria (UVic) presently has a total enrollment of approximately 17,000 students. In addition, about 4,000 people hold various appointments from tenured faculty to support staff. These numbers represent a 12% increase in students and a 23% increase in appointed positions over the past four years.

Since 1996 there have been a number of facility improvements to the campus including new building construction, i.e. the Business and Economics Building and the 1996 Classroom Building. However, the basic configuration and operation of the driveway access and internal ring road system has not, however, changed appreciably since 1996.

At present, parking charges range from $130.54 per year for general parking ($26.75 per month), $ 228.45 per year for reserved staff parking, and $522.16 per year for premium parking in the parkade. These rates reflect an increase of approximately 104% over the past four years. A carpool program (minimum 3 persons per vehicle) was initiated in September, 1992, with incentives including a 50% reduction in parking fee ($13.38 per month) and a guaranteed parking stall. However, interest has been low and presently there are just 7 registered carpools, including 6 by students and 1 by staff. The incentive of a 50% reduction in parking fees will shortly be eliminated.

BC transit provides fixed route bus service 365 days a year from 6:00 a.m. to midnight on most days. The following eight bus routes go to the UVic Transit Exchange located by the bookstore.

• #4	Mt Tolmie	from downtown via Douglas, Hillside and Lansdowne
• #7	Foul Bay	from Oak Bay and Fairfeld via Foul Bay
• #11	Uplands	from downtown via Fort, Cadboro Bay and Arbutus
• #14	University	from downtown via Fort, Richmond and Cedar Hill X
• #26	Crosstown	from Esquimalt via McKenzie to UVic
• #29	UVic	Gordon Head area to UVic (Monday-Friday)
• #39	UVic	from Royal Roads University to Camosun College interurban campus, Royal Oak Exchange to Uvic (Monday-Friday)
• #51	UVic	from CanWest Mall and Western Exchange to UVic (Monday-Friday)

A Universal Bus Pass (U-PASS) was implemented on August 23, 1999 and gives all UVic undergraduate and graduate students unlimited access on all Greater Victoria BC Transit routes anytime, anywhere during a semester at a cost of $44.00 per semester (or $11.00 per month). The semesterly fee is mandatory, similar to Athletics and Recreation fees, and is fixed for a minimum of two years. Any increases would require a new referendum by the student body. Co-op students may opt into this program. The only students exempt from this program are registered solely in distance education programs, persons with a BC Bus Pass, or those with mobility disabilities which prevent them from using BC Transit or handyDART services.

As part of the U-PASS program, BC Transit has improved service to UVic by providing:

- Weekend Express Bus to Ferry: buses leave the UVic Exchange for the Swartz Bay Ferry terminal on Friday afternoons to meet the 3:00 and 5:00 p.m. ferries.
- Buses from Swartz Bay travel to UVic on Sunday nights after meeting the 5:00 and 7:00 p.m. sailings from Tsawwassen.
- Extra buses during Peak hours: Extra buses have been assigned to University-oriented routes where required and some later buses to and from the campus have been added.
- Double-decker buses are planned for 2000 as well as a new route across the Finlayson corridor between Oak Bay village and Camosun Interurban.

Th U-PASS program decreases the cost of using transit since regular BC Transit student bus passes are presently $37 per month as compared to the $11 per month U-PASS. Consequently, with the parking rate increases as described above, transit has become a relatively less expensive transportation mode for trips to/from the University.

There have been no substantial changes to bicycle pathways/storage facilities on the campus since 1996.

2. SURVEY METHOD

To simplify the study process and ensure consistency between the 1996 and 2000 traffic survey results, the traffic survey methodology applied for the 1996 survey was replicated for the 2000 survey. As with the 1996 survey, the basic design of the travel mode survey was to position a number of traffic count stations around the periphery of the campus so as to establish a "cordon" across which all trips entering and exiting the University could be systematically recorded.

Three different forms of traffic count survey were once again used for the 1996 update, including:

- Driveway Counts – 24-Hour Automatic Tube Counts
- Driveway Counts - Peak Period Manual Observations
- BC Transit - Arriving/Departing Passenger Counts

The traffic survey locations used for the 2000 survey are summarized in **Exhibit 1** and are identical to the 1996 locations. Additional survey details are described below:

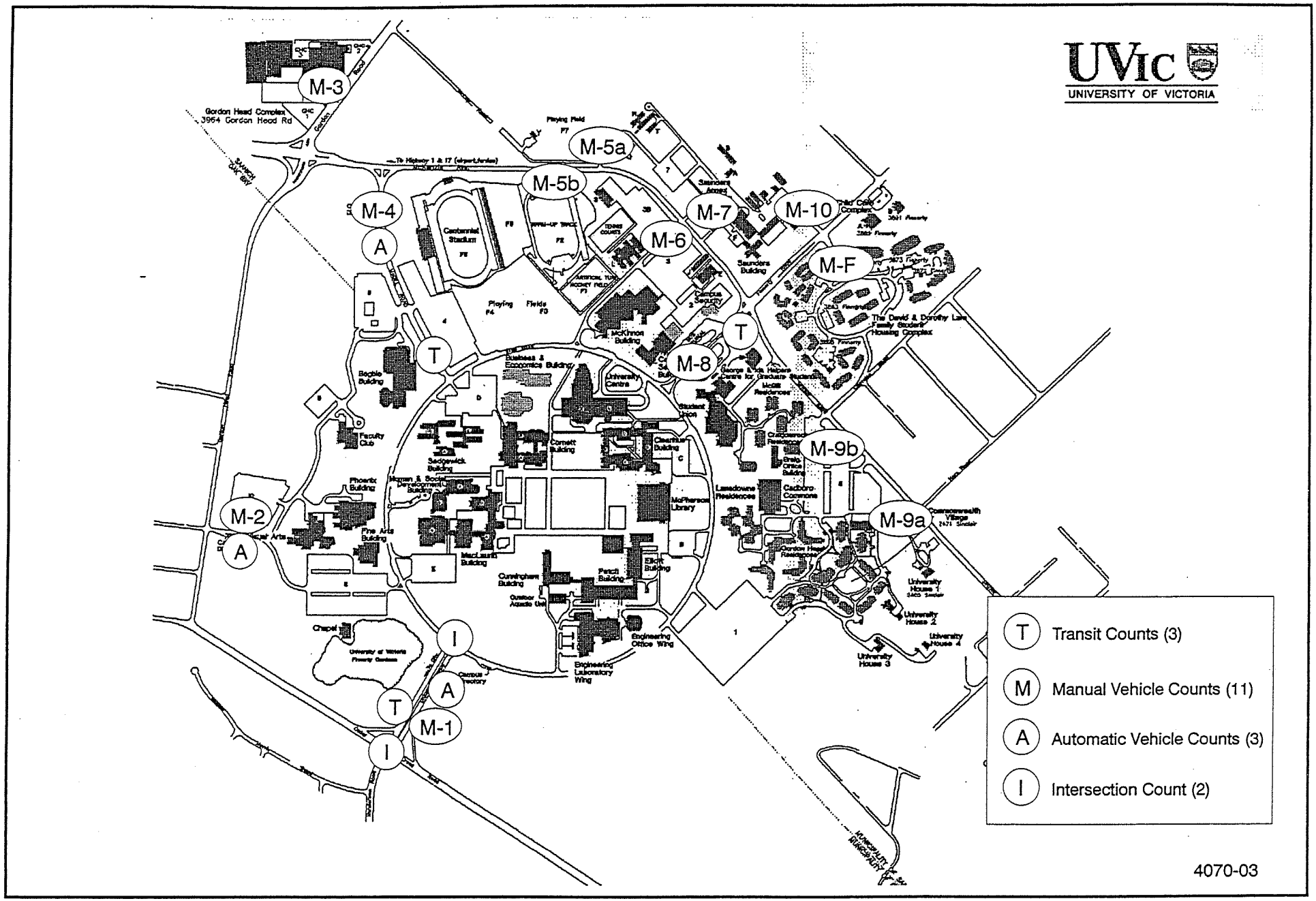
Driveway Counts: 24-Hour Automatic Tube Counts

Transtech Data Services established automatic tube count stations on the same three (3) driveways surveyed in the 1996 survey, i.e: University Drive, McGill Road, and the driveway leading in from Gordon Head Road. The automatic tube counts provided a continuous, hourly record of all inbound and outbound vehicle traffic on these three driveways from Saturday, March 11 through to Saturday, March 18, 2000. Weather conditions varied through this period from generally clear and dry to overcast and rain.

The primary purpose of the automatic tube counts was to provide some indication of the daily variation in total vehicle traffic activity at the University, as well as profiles of vehicle traffic activity through the course of an entire 24 hour day, including both peak and off-peak traffic periods.

Vandalism of the counting equipment resulted on the Campus Crescent access during the March 11 to March 18 count period prompted the need for a second count on this driveway from March 19 to March 25.

A complete record of the automatic traffic count data is provided in **Appendix 1**.



B U N T & ASSOCIATES

Traffic Count Stations

University of Victoria - 2000 Traffic Survey

Exhibit 1

Driveway Counts: Peak Period Manual Counts

As shown in Exhibit 1, a total of 10 manual traffic count locations, i.e., M-1 through to M-10, were established at key driveway and parking lot entrances to the University. In addition, a count location (M-F) was established at the Finnerty Road access to the David and Dorothy Lamb Family Student Housing Complex, and at the Clarndon Road access to this same facility.

As with the 1996 survey, the manual counts were conducted over two consecutive weekdays (Tuesday, March 14, 2000 and Wednesday, March 15, 2000) during both the morning (7:00 – 10:00 a.m.) and afternoon (2:00 – 6:00 p.m.) peak traffic periods at the University. The data collected from the manual traffic counts included:

- peak period inbound and outbound vehicle traffic in 15 minute intervals;
- number of occupants in inbound vehicles; and
- peak period inbound and outbound pedestrian and cycling activity;

A complete record of the peak period manual traffic count data is provided in **Appendix 2**.

BC Transit Passenger Counts

As in 1996, BC Transit conducted inbound and outbound transit passenger counts for the eight routes serving the University of Victoria. **Exhibit 1** also shows the three transit count stations used for the 2000 traffic survey, including: (i) University Drive at Cedar Hill Cross Road, (ii) Finnerty Road at McKenzie Avenue/Sinclair Road, and (iii) McGill Road at the UVic ring road. The transit counts were conducted on a weekday from 7:00 a.m. to after midnight on Tuesday, March 14 and Wednesday, March 15, 2000.

A complete record of the BC Transit passenger data is provided in **Appendix 3**.

3. TRAVEL MODE SURVEY: RESULTS

Automobile Drivers

The volume of automobile traffic (automobile drivers) was recorded using both automatic tube counts on the three busiest driveways and manual observations during the morning and afternoon peak periods on all key driveways and parking entrances. A summary of the combined daily traffic (24hr inbound + outbound total) for the three automatic count stations is provided in **Table 2** and in **Exhibit 2**. Included in Table 2, for comparison purposes, are the results from the 1996 survey.

Overall, the average total weekday traffic (24 hour) recorded on the three driveways in 2000 was 17,502 vehicles, or approximately 14% less than the 1996 average of 20,434 vehicles. The results of the automatic tube counts appear to indicate that overall vehicle traffic to the University is down from 1996 levels. Therefore a more valid comparison between 1996 and 2000 levels of vehicle traffic was conducted. This comparison considers the manual count data recorded on the various driveways over the combined periods of 7:00 – 9:00 a.m. and 2:00 – 6:00 p.m. This comparison is provided in **Table 1**.

Table 1: Observed Driveway Traffic Volumes (Peak 6 Hours)

1996 Survey		2000 Survey	
Inbound	8,811	Inbound	8,010
Outbound	7,788	Outbound	7,006
Total	16,599 vehicles	total	15,016 vehicles

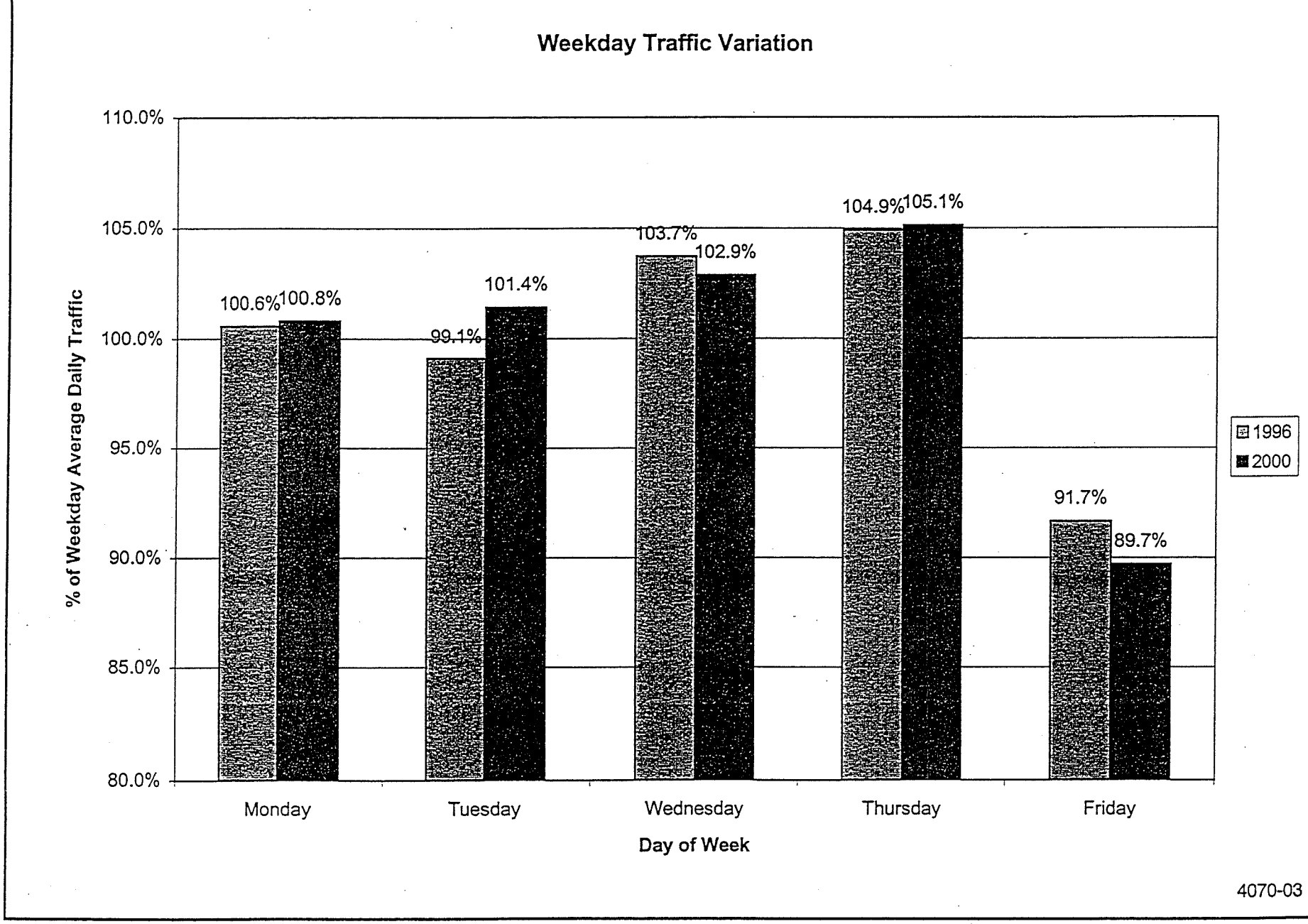
Note: 1996 and 2000 volumes are averaged over the two days counted for each year

As shown in Table 1, the traffic volumes measured at the campus driveways during the daytime peak periods have decreased by 10% from spring 1996 conditions. While overall driveway traffic volumes have decreased over the past four years, evidently there has been little change in the distribution of traffic using the different driveways. A summary of the morning peak hour (8:00 – 9:00 a.m.) and afternoon peak hour (4:00 – 5:00 p.m.) vehicle traffic, averaged between the March 14 and 15 count days, is shown in **Exhibits 3** and **4**, respectively. As shown, the overall busiest driveway continues to be University Drive with 26% of the morning traffic and 28% of the afternoon traffic. McGill Road is the next busiest access with 26% of the morning peak hour traffic, and 21% of the afternoon peak hour traffic.

Using the daily traffic profile information derived from the 24-hour automatic tube count stations, estimates of the inbound and outbound vehicle trip profiles were developed for the 7:00 a.m. to 10:00 p.m. period. Over this period, which accounts for most of the total daily traffic activity at the University, the total inbound vehicle traffic estimate is14,680 vehicles while the outbound traffic is 14,470 vehicles (note: inbound/outbound imbalance attributed to some vehicles still not departed from the University at 10:00 p.m.), for an overall weekday daily vehicle trip generation of approximately 30,000 trips.

Table 2: Automatic Tube Count Summary

Count Location		Monday		Tuesday		Wednesday		Thursday		Friday		Average Weekday	
		1996	2000	1996	2000	1996	2000	1996	2000	1996	2000	1996	2000
University Drive	in	4,756	4,179	4,822	4,323	5,039	4,379	5,311	4,425	4,691	4,007	4,924	4,263
	out	5,285	4,635	5,128	4,696	5,495	4,719	5,620	4,805	4,993	4,161	5,304	4,603
Campus Crescent	in	1,896	1,425	1,718	1,347	1,856	1,552	1,758	1,650	1,590	1,325	1,764	1,460
	out	1,794	1,420	1,644	1,388	1,810	1,348	1,692	1,452	1,499	1,155	1,688	1,353
McGill Road	in	4,190	3,513	4,158	3,571	4,275	3,509	4,307	3,576	3,558	2,969	4,098	3,428
	out	2,633	2,474	2,779	2,429	2,721	2,497	2,751	2,491	2,399	2,086	2,657	2,395
Totals	in	10,842	9,117	10,698	9,241	11,170	9,440	11,376	9,651	9,839	8,301	10,786	9,151
	out	9,712	8,529	9,551	8,513	10,026	8,564	10,063	8,748	8,891	7,402	9,649	8,351
	total	20,554	17,646	20,249	17,754	21,196	18,004	21,439	18,399	18,730	15,703	20,435	17,502
Percentage (%) of Average Weekday		100.6%	100.8%	99.1%	101.4%	103.7%	102.9%	104.9%	105.1%	91.7%	89.7%	-	-

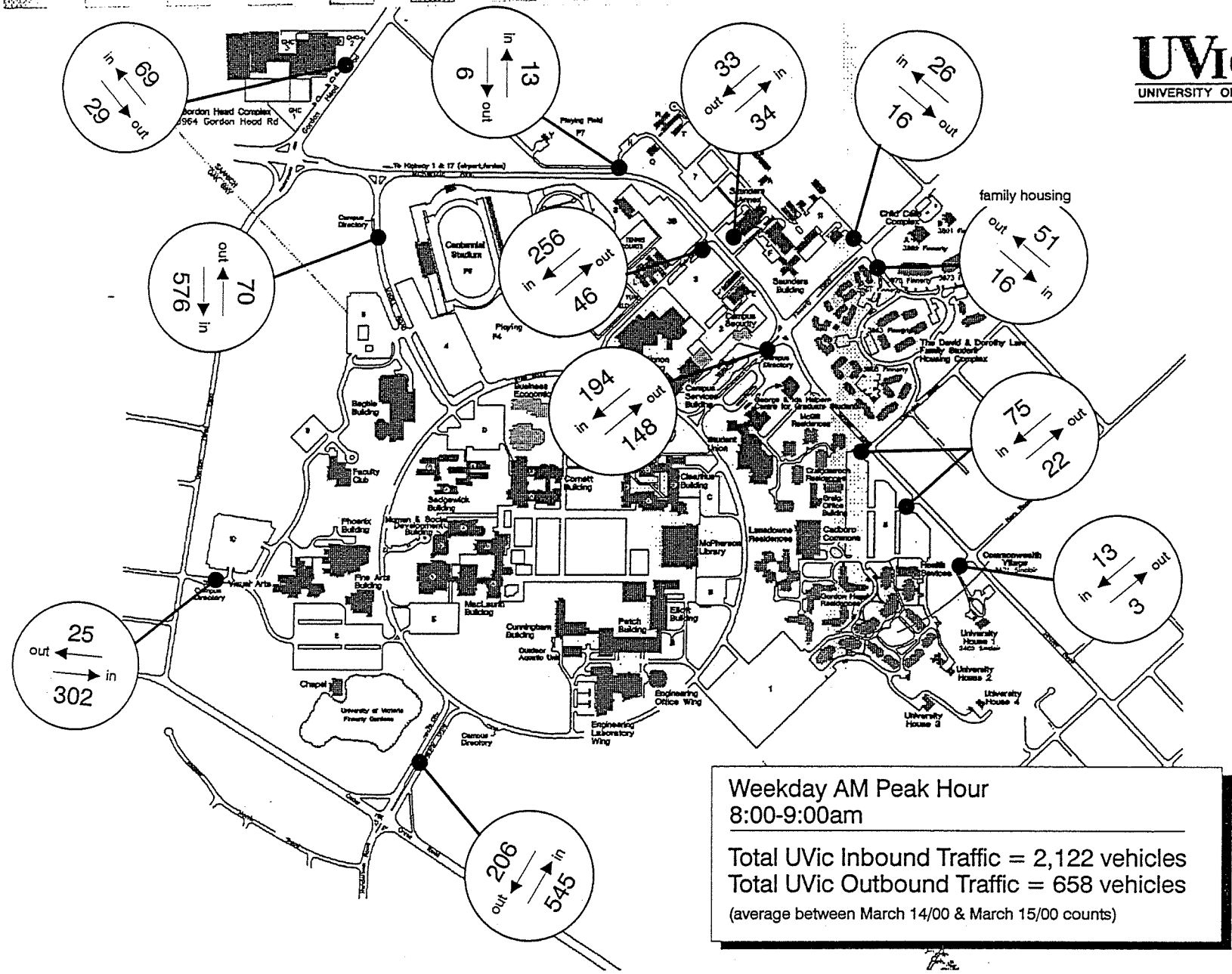


BUNT & ASSOCIATES

Weekday Traffic Variation

University of Victoria - 2000 Traffic Survey

Exhibit 2

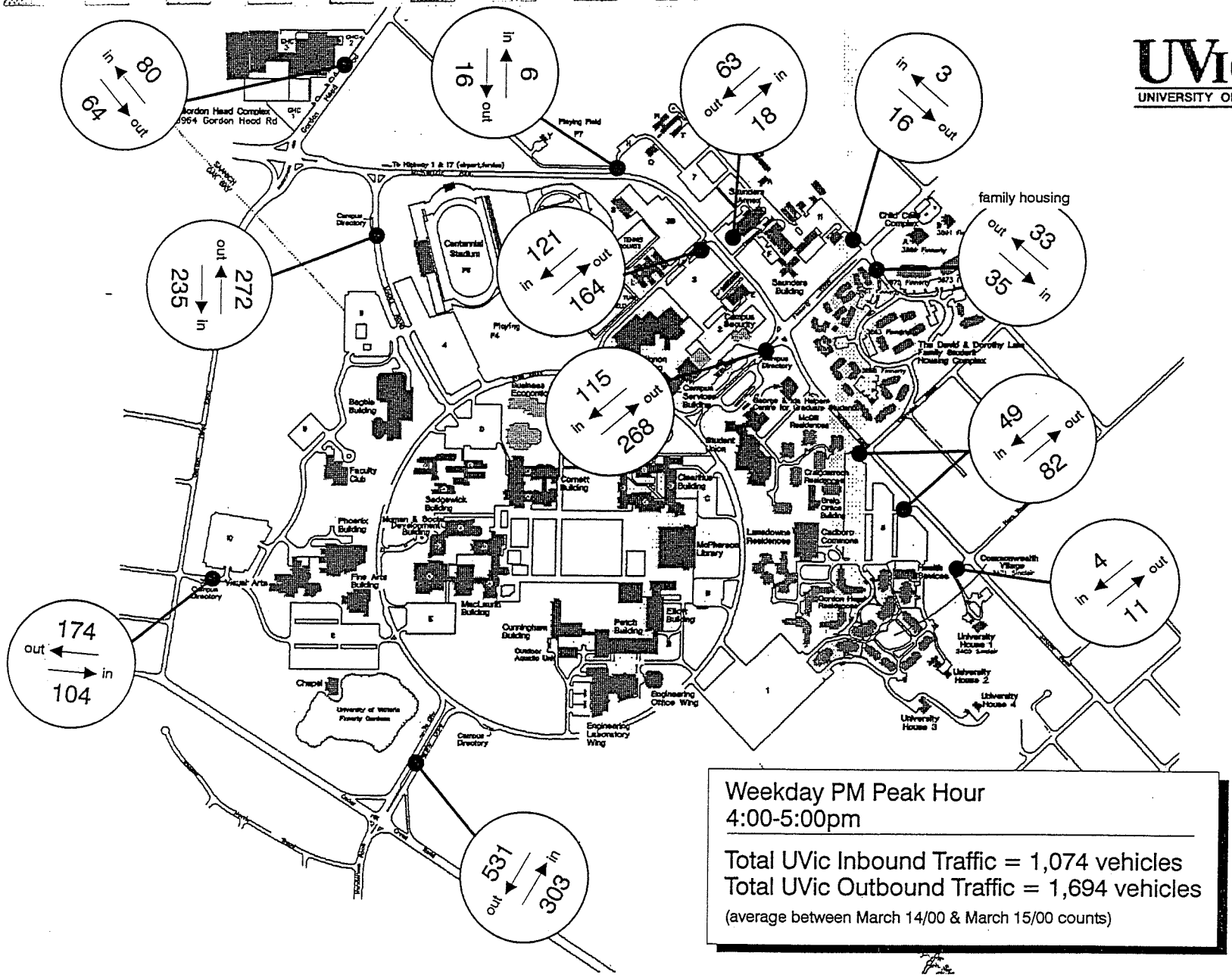


BUNT & ASSOCIATES

Weekday AM Peak Hour Vehicle Traffic

University of Victoria - 2000 Traffic Survey

Exhibit 3



BUNT & ASSOCIATES

Weekday PM Peak Hour Vehicle Traffic

University of Victoria - 2000 Traffic Survey

Exhibit 4

Automobile Passengers

As described previously, the manual driveway counts included observations of the number of total occupants (i.e., driver plus passengers) in vehicles arriving to the University during the morning and afternoon peak periods. An hourly summary of the vehicle occupancy at each count station is provided in **Table 3**.

Table 3: Vehicle Occupancy

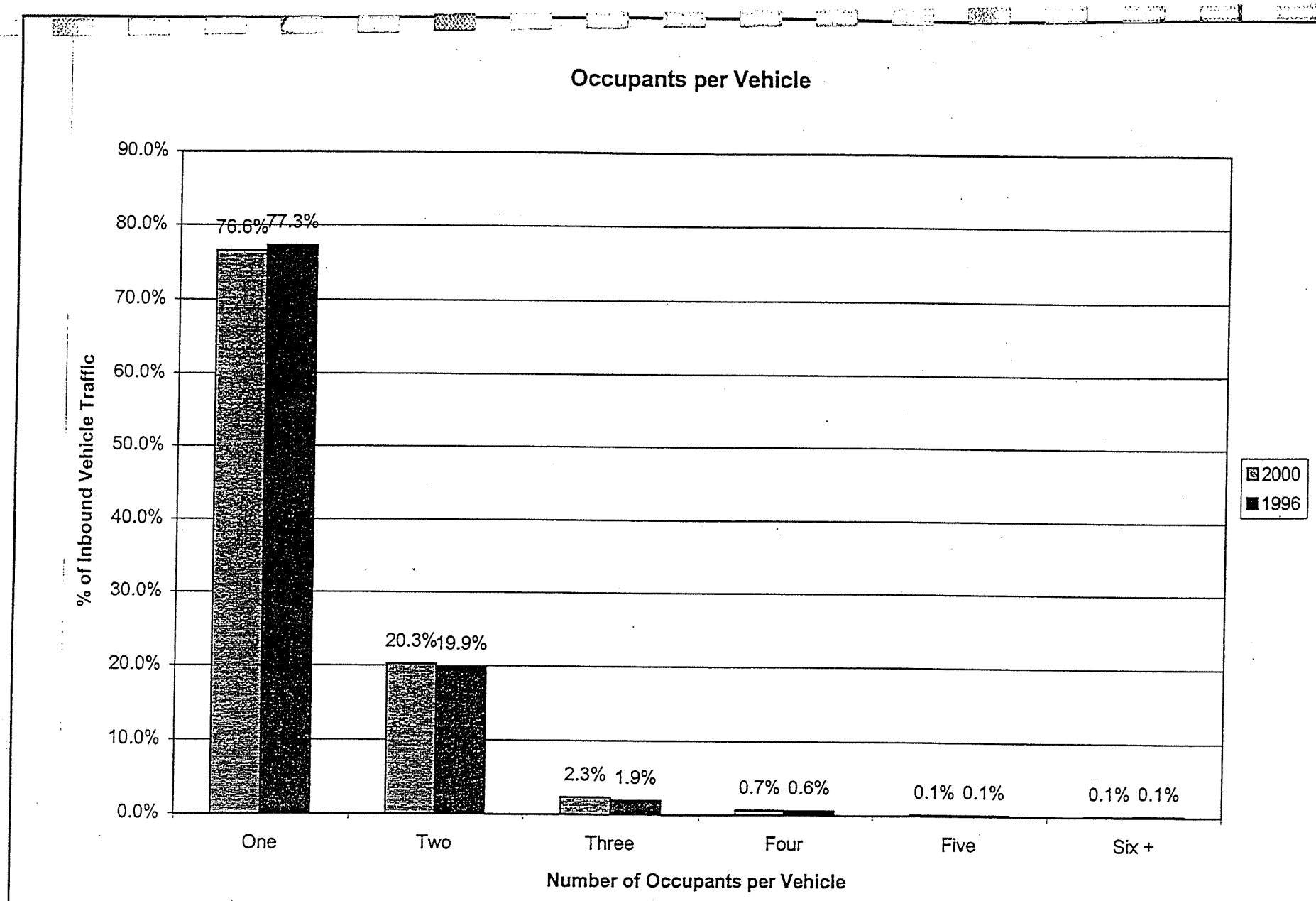
Location	7-8 am	8-9 am	9-10 am	Average (Morning)	2-3 pm	3-4 pm	4-5 pm	5-6 pm	Average (Afternoon)	Average (Day)
1 – University Drive	1.26	1.31	1.33	1.31	1.27	1.30	1.30	1.32	1.30	1.30
2 – Campus Cres	1.16	1.23	1.19	1.21	1.25	1.17	1.16	1.24	1.19	1.19
3 – Gordon Head Complex	1.14	1.20	1.09	1.15	1.26	1.29	1.24	1.31	1.27	1.27
4 – McGill Rd	1.18	1.23	1.25	1.23	1.24	1.23	1.24	1.34	1.26	1.26
5 - R Hut	1.00	1.33	1.13	1.22	1.33	1.00	1.00	1.00	1.19	1.19
6 – Gabriola Rd	1.20	1.15	1.16	1.16	1.14	1.18	1.28	1.30	1.23	1.23
7 – Saunders Bldg	1.16	1.19	1.16	1.16	1.17	1.11	1.17	1.25	1.13	1.13
8 – Finnerty Rd	1.42	1.37	1.35	1.37	1.24	1.46	1.37	1.30	1.34	1.34
9 – Craigdarroch	1.48	1.21	1.23	1.24	1.23	1.31	1.51	1.57	1.37	1.37
10 - Haro Rd	1.14	1.00	1.00	1.04	1.13	1.33	1.00	1.00	1.05	1.05
11 - Lam Circle	1.00	1.06	1.00	1.02	1.19	1.05	1.12	1.10	1.13	1.13
Overall Average	1.23	1.26	1.25	1.25	1.24	1.26	1.27	1.30	1.27	1.28

As with the 1996 survey, the vehicle occupancy varies considerably at the different count stations. For the morning and afternoon periods combined, the highest average occupancy of 1.37 persons per vehicle occurs at the entrances to the Craigdarroch parking area. The lowest average occupancy of 1.05 persons per vehicle occurs nearby at the Haro Road entrance. The overall average occupancy for vehicles arriving to the University is 1.28 persons per vehicle unchanged from the 1996 average vehicle occupancy.

Similar to the 1996 survey, vehicles were grouped into one of six classes depending on the number of occupants per entering vehicle. The categories ranged from one person (driver only) on up to six or more persons. A comparison of the 1996 and 2000 survey results is provided in **Table 4** and in **Exhibit 5**.

Table 4: Occupants Per Vehicle - Combined AM & PM Peak Periods

Year	1 Person (Driver Only)	2 Persons	3 Persons	4 Persons	5 Persons	6 or more Persons	Totals
2000	6,005 veh (76.6%)	1,588 veh (20.3%)	183 veh (2.3%)	52 veh (0.7%)	9 veh (0.1%)	4 veh (0.1%)	7,841 veh
1996	6,782 veh (77.3%)	1,746 veh (20.0%)	169 veh (1.9%)	55 veh (0.6%)	12 veh (0.1%)	12 veh (0.1%)	8,774 veh



B U N T & ASSOCIATES

Vehicle Occupancy

University of Victoria - 2000 Traffic Survey

Exhibit 5

As indicated in Table 4, the following highlight the differences and similarities between the 1996 and 2000 survey results.

- In 2000, single-occupant vehicles, i.e., driver only, accounted for 76.6% of all inbound trips during the 7:00 – 10:00 a.m. and 2:00 – 6:00 p.m. peak periods, down from 77.3% in 1996;
- In 2000, two (2) person per vehicle trips accounted for 20.4% of all inbound trips, up marginally from 20.0% in 1996;
- In 2000, three (3) person per vehicle trips accounted for 2.3% of all inbound trips, up marginally from 1.9% in 1996;
- Little change between 1996 and 2000 in trips with four (4) or more persons per vehicle, accounting collectively for less than 1% of all vehicle trips to the University.

Transit Passengers

BC Transit's complete summary of the transit passenger survey conducted in March 2000 is presented in Appendix 3. Highlights include:

- For a typical weekday condition in 2000, a total of 4,860 transit passengers arrive at the University and 5,054 depart from the University. For inbound trips the busiest one hour period is from 8:00 – 9:00 a.m., while for outbound trips the peak hour occurs from 4:00 – 5:00 p.m.;

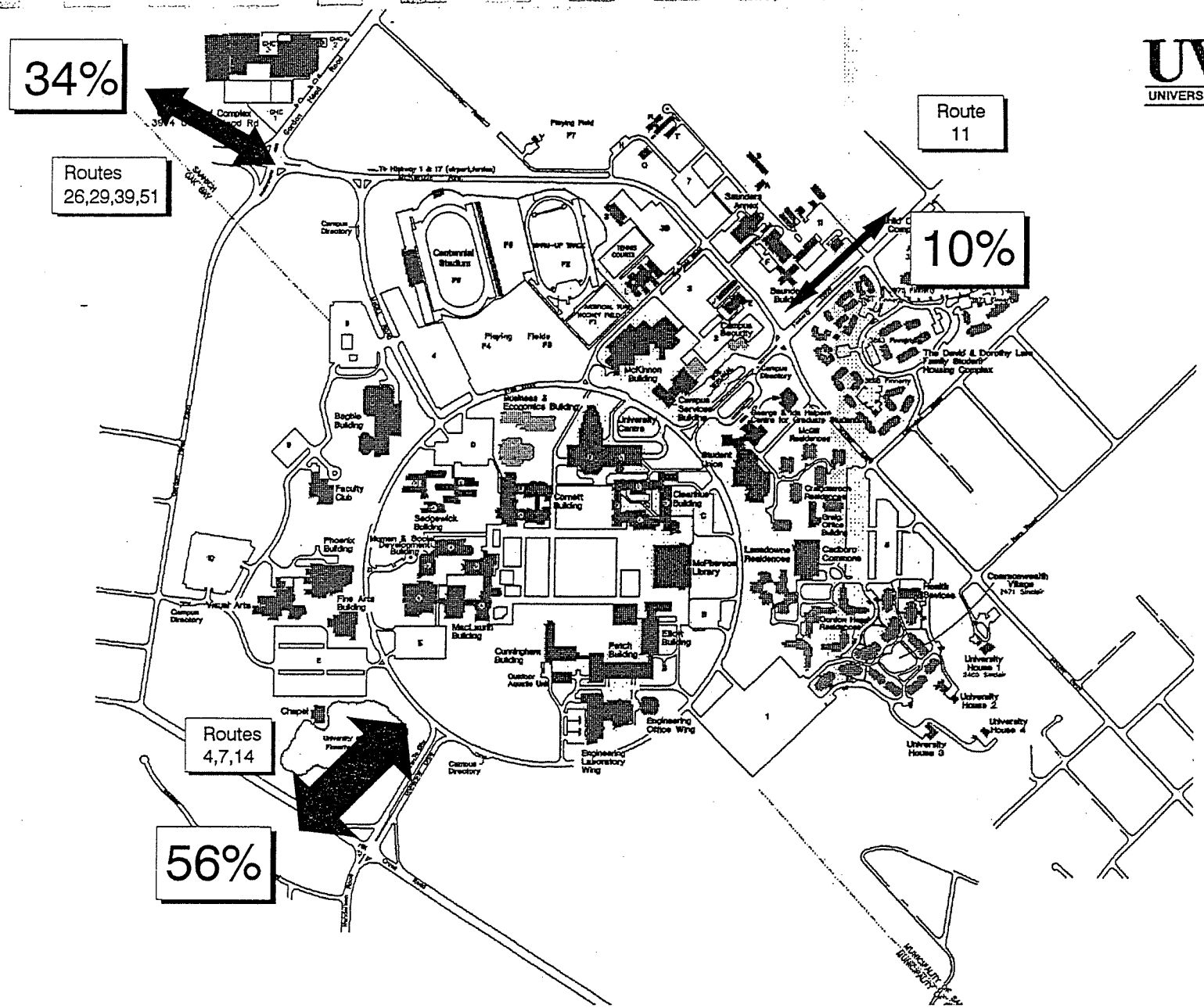
- When compared against the daily transit ridership that occurred in 1996, it appears that the number of bus users has increased by about 55% over the past four years.

- Of the eight (8) bus routes servicing the University, the most heavily used route is the #14 University route, accounting for nearly 28% of all rides to/from the University, followed by the #26 Crosstown route at 27%, and the #4 Mount Tolmie route at 19%.

The approximate distribution of transit trips at UVic is shown in **Exhibit 6**. As in 1996, the predominant transit trip-orientation is to the south/southwest involving the #4, #7, #11 and #14 routes. These four routes account for 56% of all trips.

Cyclists

Using the same procedure as described in "Automobile Drivers" section, the observed peak period cyclists trips were expanded into daily inbound and outbound trip profiles. A summary of the total observed inbound and outbound cyclist trips at the University for the 7:00 a.m. to 10:00 p.m. period is summarized in **Exhibit 7**. The most heavily used driveway for cyclist trips is University Drive accounting for approximately 30%, followed by the McKenzie Avenue cycle/pathway at 15% and the Campus Crescent access at 13%. Directionally it would appear that the most popular access route for UVic cyclists is Henderson Road to/from the south, followed by McKenzie Avenue to/from the west. It appears that over an average weekday (from 7:00 a.m. to 10:00 p.m.) approximately 2,960 bicycle trips, including 1,620 inbound trips and 1,340 outbound trips are generated by the University.

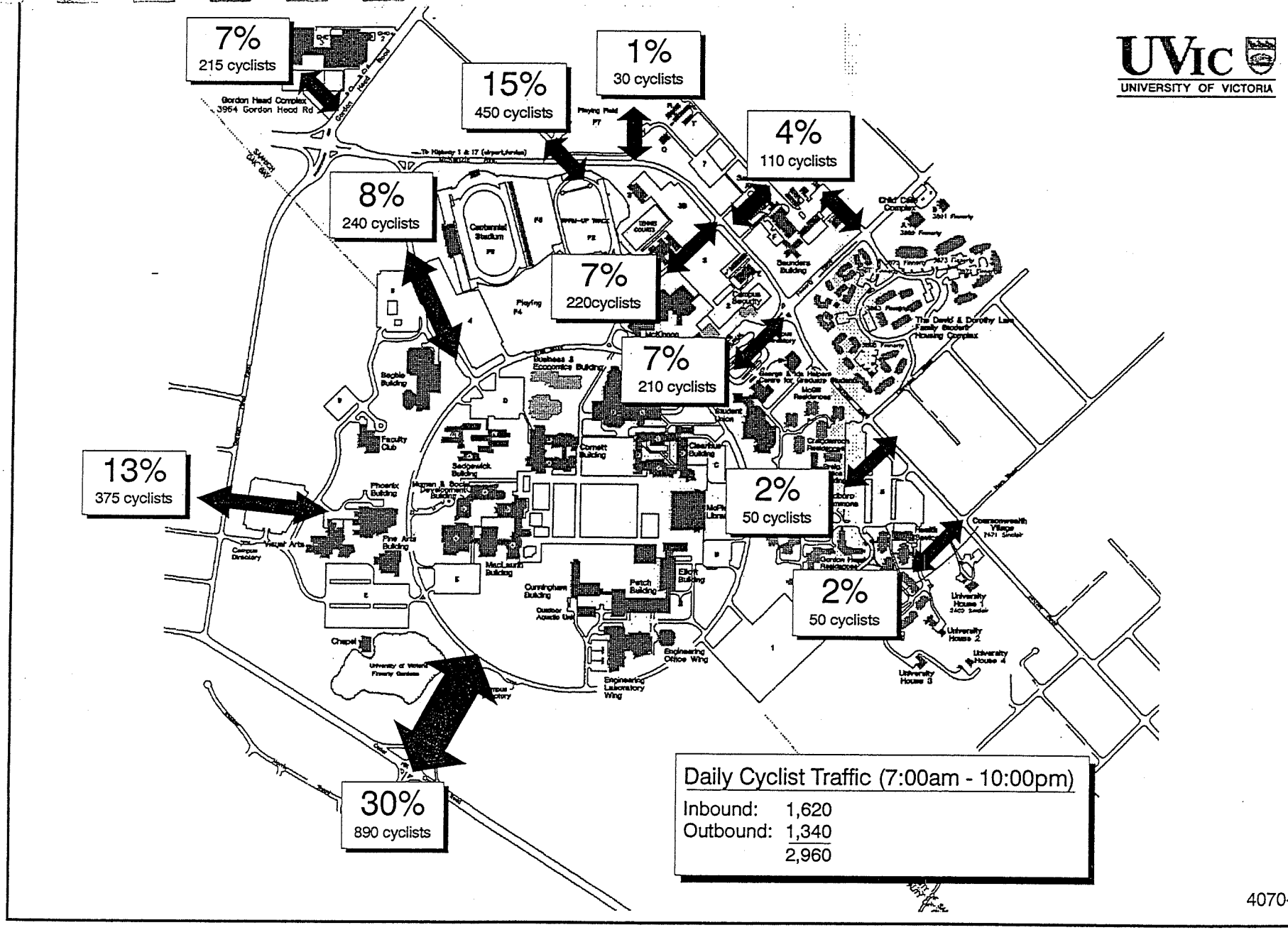


BUNT & ASSOCIATES

Transit Passenger Directional Distribution

University of Victoria - 2000 Traffic Survey

Exhibit
6



BUNT & ASSOCIATES

Cyclist Access Patterns

University of Victoria - 2000 Traffic Survey

Exhibit 7

As described previously for automobile trips, the inbound/outbound imbalance reflects the fact that at 10:00 p.m. there are still cyclists on the campus who have not yet departed. When compared against the total number of daily bicycle trips that occurred in 1996, it appears that bicycle traffic has dropped by about 22% over the past four years.

The weather varied significantly between Tuesday, March 14 and Wednesday, March 15. On Tuesday, the sky was overcast and it rained while on Wednesday it was sunny and partly cloudy. Consequently, bicycle volumes were analyzed to determine if weather significantly affects use of this mode of transport. The results are summarized in **Table 5** and also compare the total number of vehicles for those two days.

Table 5: Effects of Weather on Bicycle Ridership

Hour Beginning	Tuesday March 14, 2000	Wednesday March 15, 2000	Difference (% Difference)
Weather	Rain	Dry	--
Total Cyclists	1,351 cyclists	1,545 cyclists	-194 cyclists (-14%)
Total Vehicles	14,770 vehicles	14,957 vehicles	+187 vehicles (+1%)

As shown in Table 5, there was 14% less bicycle traffic on the day that it rained than on the day it was dry, however, there was only a 1% increase in vehicle traffic between those two days. Everything else being equal, it would appear that those who didn't ride their bikes on the day it rained used a vehicle to reach the University instead.

From the cumulative inbound and outbound cycle trip estimates, a further estimate of the on-site bicycle accumulation was developed, as summarized in **Table 6**. As indicated, the apparent peak accumulation of bicycles parked at the University is approximately 600 bicycles between 1:00 and 2:00 p.m. based on the inbound/outbound traffic observations. This is down from the peak accumulation of 1000 bicycles estimated in the 1996 traffic survey.

Table 6: On-site Bicycle Parking Estimate

Hour Beginning	Cumulative Bicycle Arrivals	Cumulative Bicycle Departs	On-Site Bicycle Accumulation
7:00 a.m.	68	29	39
8:00 a.m.	336	64	272
9:00 a.m.	539	109	430
10:00 a.m.	666	167	499
11:00 a.m.	795	255	540
12:00 p.m.	924	354	570
1:00 p.m.	1046	444	602
2:00 p.m.	1140	567	573
3:00 p.m.	1219	708	511
4:00 p.m.	1309	874	435
5:00 p.m.	1378	1050	328
6:00 p.m.	1458	1125	333
7:00 p.m.	1527	1176	351
8:00 p.m.	1567	1231	336
9:00 p.m.	1612	1344	268

Pedestrians

Based on the estimated daily inbound/outbound trip profiles developed for the 7:00 a.m. to 10:00 p.m. period, the summary of the total observed inbound and outbound pedestrian trips at the University for the 7:00 a.m. to 10:00 p.m. period is summarized in **Exhibit 8**. As shown in Exhibit 8, the number of daily pedestrian trips to/from the University is estimated at approximately 5,245 trips, including 2,805 inbound trips and 2,440 outbound trips. When compared against the total number of daily pedestrian trips that occurred in 1996, it appears that foot traffic has increased by about 9% over the past four years.

Pedestrian activity arriving and departing the University is dispersed among the pedestrian routes. Directionally it would appear that the most popular access route for UVic pedestrians is Finnerty Road to/from the north, followed by Campus Crescent to/from the west, followed by Henderson Road to/from the south.

Modal Split Summary

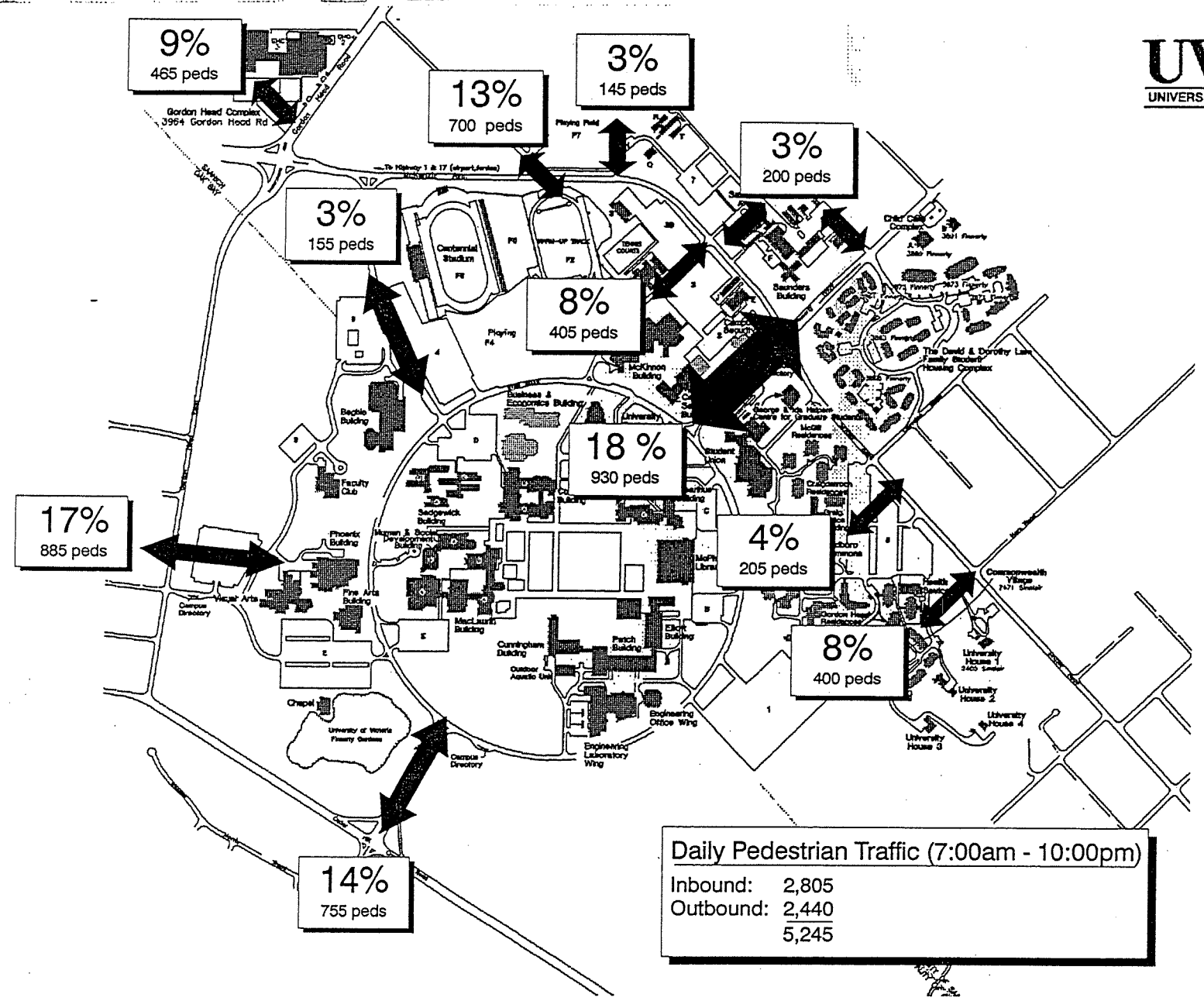
For a typical weekday condition, the estimated daily profiles of inbound and outbound trips to/from the University are summarized in **Table 8** for all the major modes considered, i.e., vehicles (auto drivers), automobile passengers, transit passengers, cyclists, and pedestrians. The corresponding profiles for inbound and outbound trips, by all modes, are presented in **Exhibits 9** and **10** respectively.

The resulting overall modal split estimates for the University of Victoria, over the course of a typical weekday, are summarized below in **Table 7**, and graphically in **Exhibit 11**.

Table 7: Modal Split Summary

Travel Mode	1996 Survey	2000 Survey
Auto Drivers	57.5%	54.4%
Auto Passengers	15.6%	11.0%
Transit Passengers	11.3%	17.8%
Cyclists	6.9%	5.5%
Pedestrians	8.7%	11.3%
	100.0%	100.0%

As noted in the 1996 survey, there continues to be approximately 150-200 vehicles of off-site parking on neighbouring streets, or roughly 1-2% of the total daily vehicle trips to the University. Most of this off-site parking occurs on Cedar Hill Cross Road and to a lesser extent Gordon Head Road. Since this parking occurs outside the traffic count cordon established for the University, these trips are reflected as pedestrian trips rather than vehicle trips. Therefore, allowing for off-site parking, the percentage of automobile driver trips reported in the above modal split summary may be understated by 1-2% and automobile driver trips overstated by this same 1-2%.



Pedestrian Access Patterns

University of Victoria - 2000 Traffic Survey

Exhibit 8

Table 8: Inbound/Outbound Trip Summary

(i) Inbound Trips

Hour Beginning	Automobile Drivers	Automobile Passengers	Transit Passsengers	Cyclists	Pedestrians	Total
7:00 AM	633	82	163	68	98	1,044
8:00 AM	2,122	454	903	268	414	4,161
9:00 AM	1,546	313	702	203	366	3,130
10:00 AM	1,011	199	565	127	207	2,109
11:00 AM	1,040	204	316	129	211	1,900
12:00 PM	1,023	205	289	129	209	1,855
1:00 PM	987	195	286	122	200	1,790
2:00 PM	923	160	231	94	177	1,585
3:00 PM	940	165	250	79	235	1,669
4:00 PM	1,074	244	217	90	203	1,828
5:00 PM	772	192	212	69	176	1,421
6:00 PM	911	189	206	80	194	1,580
7:00 PM	772	159	150	69	164	1,314
8:00 PM	433	89	109	40	91	762
9:00 PM	493	100	132	45	105	875
Totals	14,680	2,950	4,731	1,612	3,050	27,023
Modal Split	54.32%	10.92%	17.51%	5.97%	11.29%	100.00%

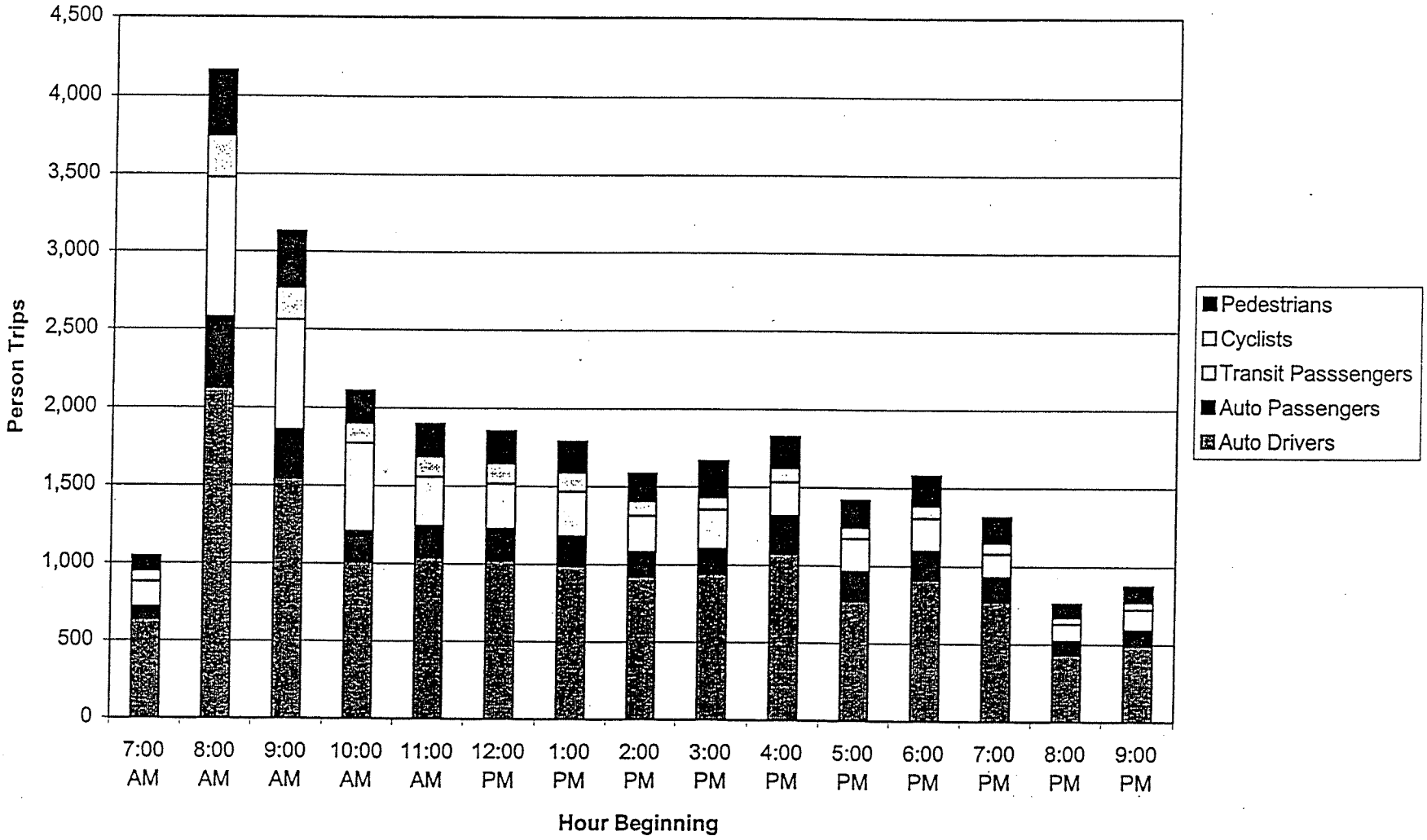
(ii) Outbound Trips

Hour Beginning	Automobile Drivers	Automobile Passengers	Transit Passsengers	Cyclists	Pedestrians	Total
7:00 AM	246	32	67	29	47	421
8:00 AM	658	141	97	35	151	1,082
9:00 AM	675	137	127	45	130	1,114
10:00 AM	832	164	171	58	174	1,399
11:00 AM	1,276	250	229	88	264	2,107
12:00 PM	1,445	290	293	99	301	2,428
1:00 PM	1,315	260	434	90	271	2,370
2:00 PM	1,232	214	504	123	240	2,313
3:00 PM	1,198	210	615	141	229	2,393
4:00 PM	1,694	385	688	166	332	3,265
5:00 PM	1,303	324	617	176	283	2,703
6:00 PM	676	140	351	75	135	1,377
7:00 PM	452	93	173	51	93	862
8:00 PM	482	99	142	55	98	876
9:00 PM	981	199	310	113	196	1,799
Totals	14,465	2,938	4,818	1,344	2,944	26,509
Mode Split	54.57%	11.08%	18.17%	5.07%	11.11%	100.00%

(iii) Total Inbound + Outbound Trips (Overall Mode Split)

Daily Totals	Automobile Drivers	Automobile Passengers	Transit Passsengers	Cyclists	Pedestrians	Total
Totals	29,145	5,888	9,549	2,956	5,994	53,532
Mode Split	54.44%	11.00%	17.84%	5.52%	11.20%	100.00%

Inbound Traffic Profile
Typical Weekday



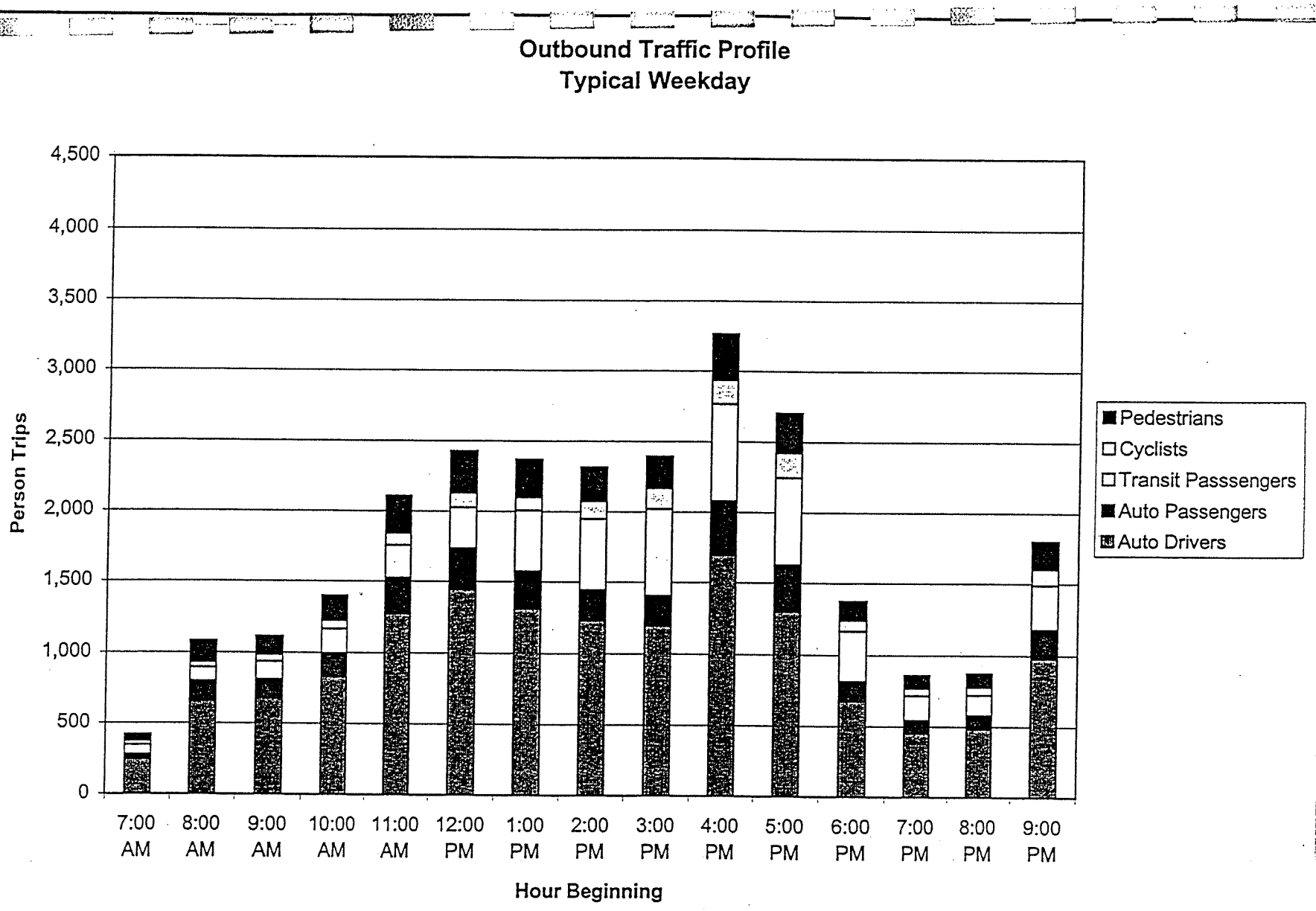
4070-03

B U N T & ASSOCIATES

Inbound Traffic Profile (All Travel Modes)

University of Victoria - 2000 Traffic Survey

Exhibit 9

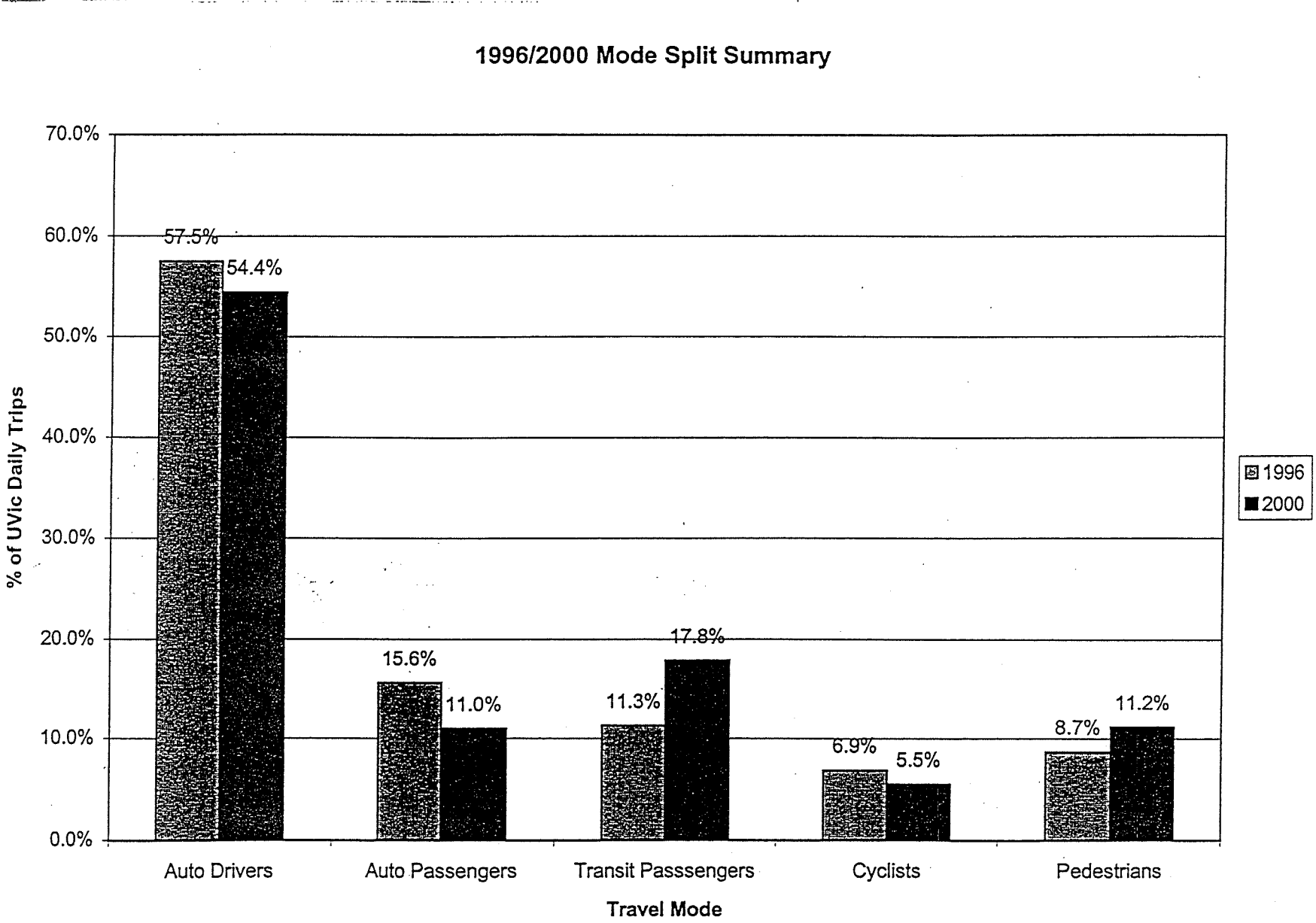


B U N T & ASSOCIATES

Outbound Traffic Profile (All Travel Modes)

University of Victoria - 2000 Traffic Survey

Exhibit 10



BUNT & ASSOCIATES

1996/2000 Travel Mode Split Summary

University of Victoria - 2000 Traffic Survey

Exhibit 11

4. SUMMARY

Since the 1996 traffic survey was conducted, the campus population has changed as has the overall travel mode patterns at the University of Victoria. The analysis showed the following trends and patterns.

- The campus population has grown as illustrated by the 12% increase in students and 23% increase in appointed positions since 1996.
- The traffic volumes measured at the campus driveways during the daytime peak periods have decreased by 10% from spring 1996 conditions. While overall driveway traffic volumes have decreased over the past four years, evidently there has been little change in the distribution of traffic using the different driveways.
- Both single-occupant vehicles (auto-driver only trips) and auto passenger trips (mainly two person per vehicle trips) are down.
- Transit ridership to/from the University has increased by about 55% since 1996 and may be attributed to the fact that transit has become less expensive when compared to vehicle trips on account of parking rate increases and reductions in the student transit cost.
- Cyclist trips to/from the University appear to have decreased slightly from 1996 to 2000, though there may be some seasonal influence on this result. The 1996 survey was conducted in good weather in late February, while the 2000 survey was conducted in mixed weather in the middle of March.
- While cyclists trips appear to have fallen somewhat, the percentage of pedestrians has increased about 3 percentage points.