

## 2. ACHIEVEMENTS TO DATE

Through the implementation of Strategic Transportation Plan (STP) policies and a wide range of transportation initiatives, UBC has achieved considerable success in managing transportation demand and travel patterns — a success which is unprecedented in the region. This section highlights UBC’s key achievements to date, which provides a basis for the STP goals, objectives and policies presented in Section 3. Unless otherwise indicated, the results presented in this section are based on benchmark conditions in Fall 1997, and results for Fall 2004, which is the most recent available travel data.

### 2.1. OCP/MoU Targets

UBC has met all but one of the transportation-related commitments in the OCP and MoU. The only one which has not been achieved is the target 20% reduction in SOV trips, due to unexpected growth in student enrollment as well as a shift from carpools to transit. Table 2.1 provides a summary of the status of key OCP and MoU transportation targets.

**Table 2.1 — Key OCP and MoU Targets**

Target	Status
Integrated transportation demand management strategy	✓ Strategic Transportation Plan
Work with other agencies and neighbours	✓
Reduce SOV trips by 20% from 1997 levels	✗ SOV trips reduced 4.8% SOV trips/person reduced 22%
Increase transit ridership by 20%	✓ Transit trips increased 163%
U-Pass program	✓
Adjust class start times	✓
Reduce parking supply	✓ Commuter parking supply reduced 25% (1996–2004)
Increase parking prices	✓ Daily parking prices doubled
Truck management program	✓
Bicycle routes and bicycle parking	✓
Carpooling, car-sharing, telecommuting and other travel alternatives	✓

To achieve the OCP and MoU targets, UBC has implemented a wide range of transportation demand management programs and facilities — many in partnership with TransLink, the Ministry of Transportation, the City of Vancouver, the UEL and other organizations. Highlights of these include:

- **Student U-Pass program.** This program was introduced in September 2003. All 38,000 undergraduate students purchase a U-Pass, which provides unlimited use of transit services throughout the region.
- **More transit service.** Since 1997, TransLink has substantially increased the level of transit service to UBC. The majority of the increase has been on the Route 99 B-Line, plus new routes including the Route 43 express along 41st Avenue, the Route 44 express from downtown, and Route 480 from Richmond Centre.
- **New below-grade transit station.** The University Boulevard Neighbourhood Plan (approved in January 2004) provides for a new below-grade transit station on the site of the former bus loop at the University Boulevard/East Mall intersection. The design for this new station is currently being prepared by TransLink and UBC, and is intended to accommodate transit ridership to 2021 and beyond.
- **Class start times** were adjusted in September 2001, in order to spread the transit demand in the morning peak period. Previously, all morning classes started at 8:30 a.m. Now, some students begin classes at 8:00 a.m., some remain at 8:30 a.m., and the remaining students begin classes at 9:00 a.m. As a result of this change, 12% more daily transit ridership was accommodated on the same number of buses.
- **Parking supply and prices.** UBC has eliminated more than 3,000 commuter parking spaces on campus from 1996 to 2004. This reflects a reduction in the commuter parking supply of approximately 25%. At the same time, the price of parking on campus has increased. Minimum daily parking rates doubled from \$2.00 in 1997 to \$4.00 in Fall 2004, and prices for parking permits and other parking on campus have also increased. UBC does not provide any free parking spaces on campus for commuters.
- **Bicycle routes and facilities.** New bicycle lanes were implemented on several roadways leading to the University. Most notable is the conversion of University Boulevard west of Blanca, from two lanes in each direction to one travel lane and one bicycle lane in each direction. Bicycle lanes were also been added on 16<sup>th</sup> Avenue. On campus, changes include the addition of over 200 new bicycle racks bringing the on-campus total to over 500 racks, plus bicycle lockers and services to encourage and support the UBC cycling community.
- **Alternative modes of travel.** UBC has encouraged the use of non-SOV modes of travel through a range of programs, including a comprehensive carpooling program (which includes a web-based ride-matching service, preferred carpool parking and a rewards program), an

emergency ride home program, additional campus shuttles, a car-sharing program, a public bike program, bicycle carts and traffic calming measures.

## 2.2. Travel To and From UBC

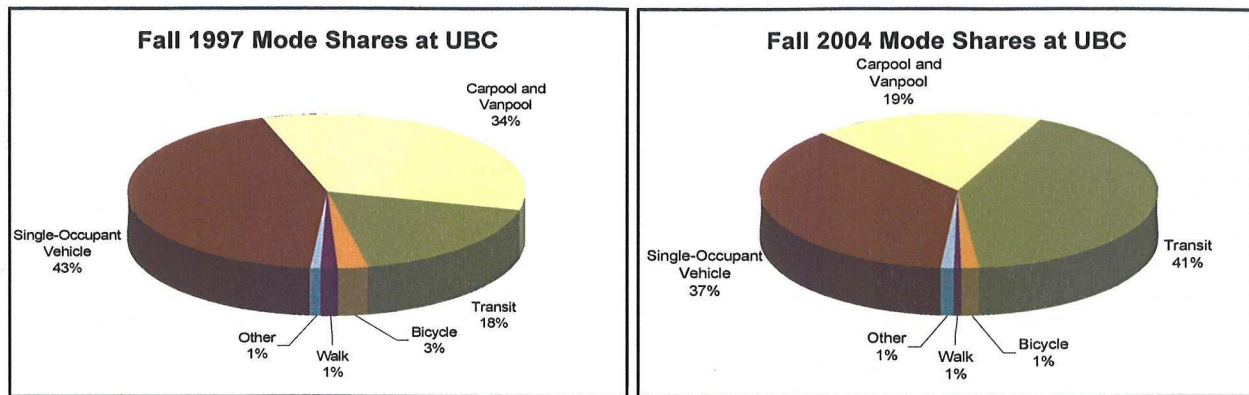
Key changes in travel patterns at UBC from 1997 to 2004 are summarized in Table 2.2 and Figure 2.1, and include:

- **Transit use has more than doubled.** From Fall 1997 to Fall 2004, the number of daily transit trips to and from UBC increased 163%. In the first year of the U-Pass program, transit ridership increased 53% from the previous year.
- **Single-occupant vehicle (SOV) trips.** Since 1997, the number of daily SOV trips has decreased 4.8%, even with a 22% increase in student enrollment. The total number of SOV trips in Fall 2004 is 2,200 trips per day less than in Fall 1997.
- **Carpool and vanpool trips** have steadily decreased each year. By Fall 2004, carpool and vanpool trips had decreased by 13,700 trips (6,200 automobiles), equivalent to a 38% reduction from Fall 1997 levels.
- **Bicycle and pedestrians trips** remained relatively constant until Fall 2004, when they decreased substantially.
- **Other trips have increased.** This increase is primarily due to increased motorcycle trips and light truck (trucks with two axles) trips.

**Table 2.2 — Weekday Person Trips Across UBC/UEL Screenline**

	Fall 1997	Fall 2004	Change from 1997 to 2004	
SOV	46,000	43,800	-2,200	-4.8%
HOV (carpool and vanpool)	36,100	22,400	-13,700	-38%
Transit	19,000	49,900	+30,900	+163%
Bicycle	2,700	1,600	-1,100	-41%
Pedestrian	1,400	600	-800	-57%
Truck and motorcycle	900	1,400	+500	+56%
<b>Totals</b>	<b>106,100</b>	<b>119,700</b>	<b>+13,600</b>	<b>+12.8%</b>

**Figure 2.1 — Weekday Mode Shares Across UBC/UEL Screenline**

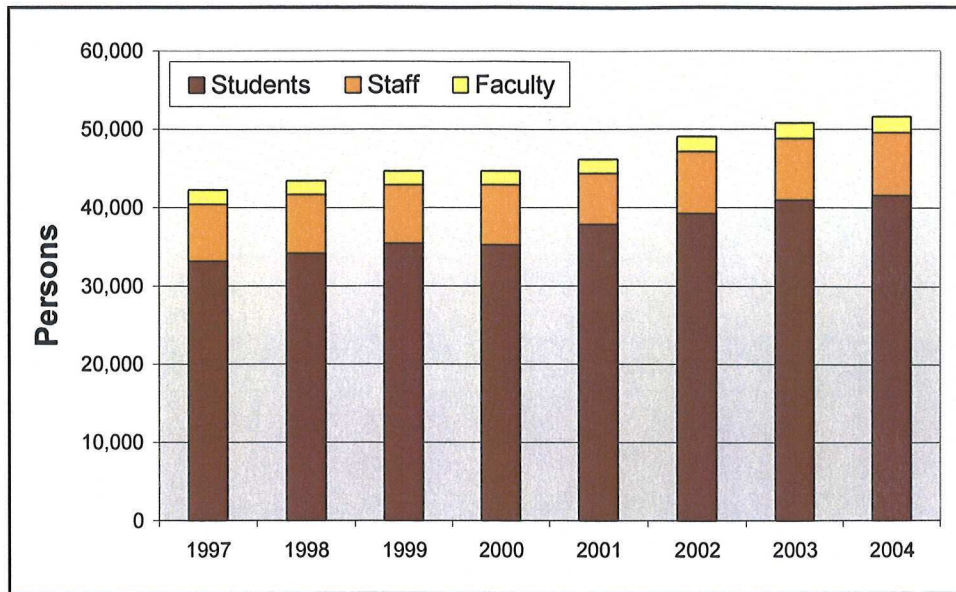


### 2.3. Automobiles

UBC has reduced single occupant vehicle trips to and from UBC by 4.8% — from 46,000 daily SOV trips in Fall 1997 to 43,800 daily SOV trips in Fall 2004. UBC has not achieved the target 20% reduction in SOV trips indicated in the OCP and MoU, for two key reasons:

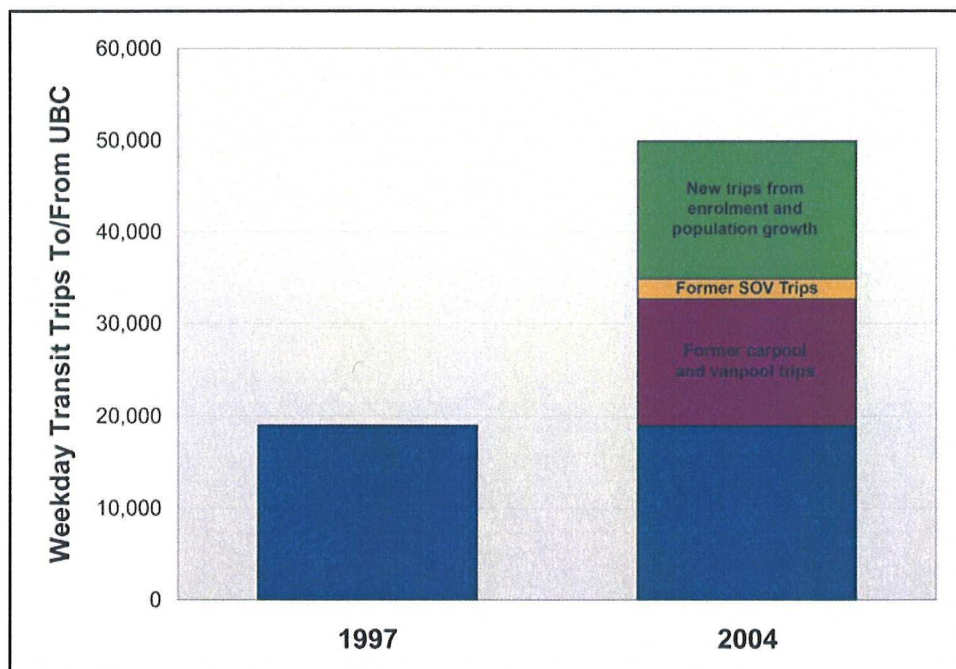
- **Student enrollment grew 22% from 1997 to 2004**, with an associated increase in faculty and staff levels, as illustrated in Figure 2.2. At the time the OCP was prepared, it was not anticipated that UBC's student enrollment would increase significantly. The unexpected growth in student enrollment was the result of initiatives by the provincial government to increase the number of spaces for students at post-secondary institutions in B.C.
- **The increase in transit ridership has come from carpools rather than SOV's.** As illustrated in Figure 2.3, almost all of the shift to transit from other modes has been a shift from carpools, rather than a shift from SOV's. A total of 13,700 former carpool trips (equivalent to 6,200 automobiles) shifted to transit, whereas only 2,200 former SOV trips shifted to transit. In response to declining HOV use, UBC conducted a series of focus groups with students, staff and faculty which clearly indicated that for current and former carpools, transit is a preferred mode of travel.

**Figure 2.2 — Daytime Campus Population (Students, Staff and Faculty)**



Source: Planning and Institutional Research, UBC

**Figure 2.3 — Sources of Transit Ridership Increase**



Although UBC has not achieved the target 20% reduction in SOV trips, UBC has been quite successful in restraining SOV use and automobile traffic. UBC has reduced SOV use measured in trips per person by 22% — from 1.09 SOV trips/person in 1997 to 0.85 SOV trips/person in 2004. As indicated in Table 2.3, the daily volume of automobiles travelling to and from UBC

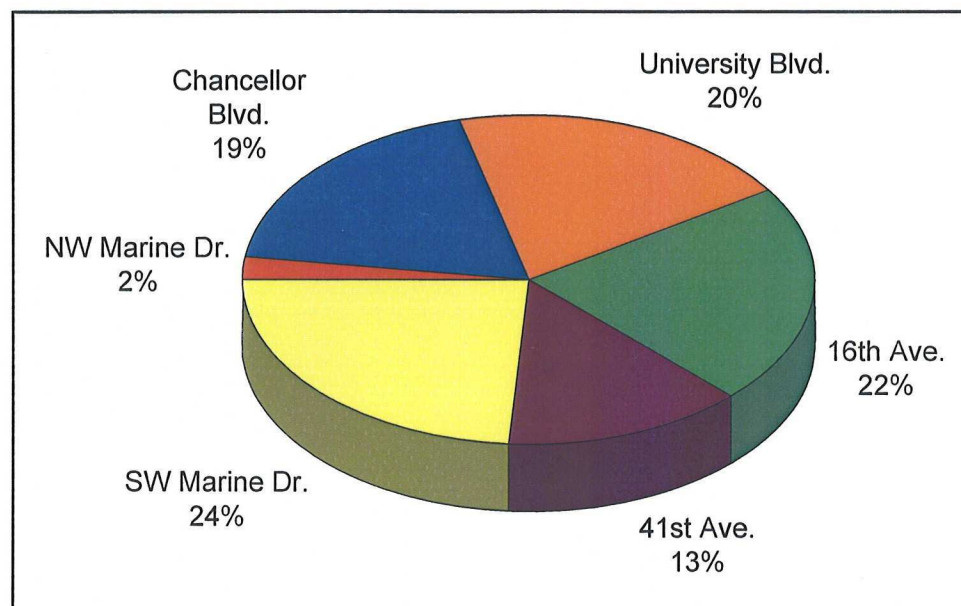


has decreased by 8,000 vehicles since 1997 — a reduction of 12.8%. Overall traffic volumes have decreased 9.1%, with decreases on all roadways leading to UBC. Figure 2.4 illustrates the distribution of daily traffic across these roadways (a portion of the screenline traffic volume for Southwest Marine Drive has been allocated to 41<sup>st</sup> Avenue to reflect traffic which uses 41<sup>st</sup> Avenue through the City of Vancouver).

**Table 2.3 —Weekday Traffic Volume Across UBC/UEL Screenline**

	Fall 1997	Fall 2004	Change from 1997 to 2004	
SOV vehicles	46,000	43,800	-2,200	-4.8%
Carpool and vanpool vehicles	16,400	10,600	-13,700	-35%
<b>Total Automobiles</b> (SOV + carpool/vanpool)	<b>62,400</b>	<b>54,400</b>	<b>-8,000</b>	<b>-12.8%</b>
<b>Total Motor Vehicles</b> (SOV + carpool/vanpool + bus + light truck + heavy truck + motorcycle)	<b>64,600</b>	<b>58,700</b>	<b>-5,900</b>	<b>-9.1%</b>

**Figure 2.4 — Distribution of Weekday Traffic Across UBC/UEL Screenline**



## 2.4. Truck Management

In addition to programs and facilities to encourage the use of non-SOV travel modes, UBC has also implemented a comprehensive Truck Management Program to manage heavy truck traffic. The majority of heavy trucks travelling to and from campus are associated with construction on campus. Of these, most are associated with construction of institutional buildings, which account for more than 80% of construction activity (in financial terms).

Highlights of UBC’s Truck Management Program include:

- A Truck Management Coordinator who works with the City of Vancouver and other agencies, and who monitors construction truck traffic on a daily, weekly and annual basis.
- Construction contracts require that truck operators adhere to all applicable UBC, City of Vancouver and MoT regulations, and are fined for violations. Fines are as high as \$1,000 for a first offence, and double for subsequent offences.
- Truck trips are minimized through recycling of materials on campus and use of pup trailers. For example, re-using materials for two projects avoided 500 truck trips. Using pup trailers and transfers for excavation and delivery of materials has reduced truck trips by as much as 44%.
- Truck traffic is dispersed by route and by time of day. Operators of heavy trucks are restricted to the four designated truck routes in the City of Vancouver which connect to UBC — 4<sup>th</sup> Avenue, 10<sup>th</sup> Avenue, 41<sup>st</sup> Avenue and SW Marine Drive.

As illustrated in Figure 2.5, heavy truck trips in 2004 averaged 292 truck trips/day, comprised of an average 232 construction truck trips/day and an average 60 non-construction truck trips/day. Proportions of construction truck trips by truck route in 2004 were:

- 9% via 4th Avenue.
- 7% via 10th Avenue.
- 35% via 41st Avenue.
- 49% via Southwest Marine Drive.

**Figure 2.5 — 2004 Average Daily Heavy Truck Trips**

