

## MEASURING PROGRESS ... Toward the New Vision for Urban Transportation



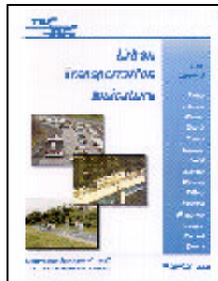
In 1993 the TAC Urban Transportation Council published its **New Vision for Urban Transportation**. The new vision identified key strategies to help create cities which will be more efficient, environmentally friendly and desirable to live in. The implementation of these strategies is considered critical in reducing the overall economic, social and environmental costs which have been associated with past urban development and transportation trends. Many urban areas across the country have consequently embraced key objectives and principles of the **New Urban Vision** and have created their own common vision for the future of their city, urban community or regional district. The success we achieve in meeting our collective goals and objectives, as set out in the new vision, will be measured and reported on through periodical surveys sponsored by TAC.

Central to the goals of the **New Vision for Urban Transportation** are:

- .. more compact, mixed use urban form to reduce the need for travel and enhance travel options.
- .. less dependence on single occupant autos through more choice and opportunities for walking, cycling, transit and high occupancy vehicles.
- .. new financing methods, based on the user pay principle, with revenues dedicated to transportation system improvements.

### TAC COMPLETES SECOND SURVEY OF URBAN TRANSPORTATION INDICATORS AND INCREASES PARTICIPATION IN THE SURVEY FROM EIGHT TO FIFTEEN URBAN CENTRES ACROSS CANADA

The Urban Transportation Indicators Project is an essential step forward in ensuring that critical baseline data exists to assist planners and policy makers alike in their assessment of our overall progress toward more livable and sustainable urban centres. Key indicators identi-



fied for the 1991 and 1996 baseline years will provide a solid basis to monitor the ongoing effectiveness of key strategies adopted by our urban centres and ensure continued progress towards more cost effective and sustainable transportation in Canada.

Contact TAC on the web at [www.tac-atc.ca](http://www.tac-atc.ca) for more information on obtaining a copy of our latest report and/or on how to access the online database of urban indicators. Follow the links to our TAC Online Bookstore and review the project summary before ordering. Once you have obtained your copy of the report you will also be provided with full access to the online database via the TAC website.

## Background

Since 1993, the underlying principles contained in **TAC's New Urban Vision** have gained wide acceptance and are being tailored to local conditions in many urban centres across the country. To assist planners and policy makers in these urban centres in measuring their progress toward achieving the New Urban Vision, the Council developed a long term program to establish and maintain a consistent and reliable national database of key transportation indicators.

Two surveys have since been completed and, when taken together, they provide a solid foundation for future analysis of key changes in the delivery of urban transportation services and infrastructure, overall transportation system usage as well as the pattern and form of new development.

The first report on survey results **Urban Transportation Indicators in Eight Urban Areas** focused on 1991 as the base year so that key Census related data could also be fully utilized. The most recent survey **Urban Transportation Indicators - 1996 Survey 2**, increases the use of Census data and was completed in December of 1999 by IBI Group. TAC was encouraged by the interest generated across the country, which resulted in the survey being broadened to include 15 urban centres.

Comparison of key indicators across all of the participating urban centres. More specifically, the urban transportation and land-use indicators reported on in the 1996 Survey 2 refer to one or more of four geographic areas, these being: the Region or Census Metropolitan Area (CMA), the Existing Urban Area (EUA), the Central Area (CA) and the Central Business District (CBD). It is anticipated that surveys will continue to be undertaken at five-year intervals thereby allowing Census data to be integrated into the databases where appropriate.

## Summary of Results

Although it is too early to observe any significant change in past trends in transportation usage and/or development patterns based on the results of the 1991 and 1996 base year surveys, the picture which does emerge is certainly one of good intentions. Many of the urban areas have taken action to influence past trends and have embraced strategic initiatives aimed at achieving more sustainable transportation systems and urban living environments.

## Key Findings

Early positive changes observed in survey responses relate to the priority municipal administrations are plac-

***“TAC Urban Transportation Council’s efforts in creating and managing a national database of urban development and transportation information is a fundamental and critical step which challenges individual urban centres to track their progress and monitor their performance by assessing individual municipal or regional programs in a national context.”***

*Nick Tunnacliffe - Chair of the TAC Urban Transportation Indicators Steering Committee*

### **Urban Centres Participating in the TAC Survey 2 (1996)**

Calgary	Montréal	Toronto
Edmonton	Niagara	Vancouver
Hamilton	Ottawa-Hull	Victoria
Kitchener	Regina	Windsor
London	Saskatoon	Winnipeg

While the key variables and indicators reported on remain the same in both surveys the second survey established criteria to standardize the approach used in defining the various geographic areas for which data was collected and reported. These changes in geographic definitions have allowed for a more valid com-

ing on transportation and land-use initiatives in their urban areas. More than half of the urban centres have taken actions aimed at achieving TAC's **New Urban Vision** by creating long term land-use/ transportation plans. Of these, almost all have also adopted accompanying policies/guidelines regarding designated limits for growth to assist in structuring urban development. Municipalities have also confirmed their interest in new technologies to help protect the environment while improving urban transportation system performance. Examples include; the use of alternative fuels for municipal and transit vehicles, use of more fuel-efficient municipal vehicles, and promoting emissions control, maintenance and inspection.

Urban transit services, one of the ten key areas addressed in the survey, reported a sharp increase (more than 80 percent of the municipalities surveyed) in the identification of and implementation of transit safety/

security programs. Annual transit ridership per capita remains an important overall indicator since it measures the extent to which transit's share of the market is increasing (or not) on a per capita basis. However, while survey results revealed a decline in per capita ridership, a review of key transit related indicators suggest capturing a larger transit market is related to the ongoing level of investment in transit services.

***“More than half of the urban centres have taken strategic actions aimed at achieving TAC’s New Urban Vision by creating long term land-use/transportation plans.”***

*Source: Urban Transportation Indicators - 1996 Survey 2 - Exhibit 3.43 Status of Land-Use/Transportation Initiatives*

areas displayed from the average observed for all urban areas included in the survey. As expected the existing urban areas of Toronto and Montreal, the two largest centres included in the survey, were approximately 25 to 50 percent higher than the average of all centres surveyed. While the results suggest that population densities tend to diminish with the overall size of the urban area, Regina and Saskatoon each demonstrated that higher urban densities are achievable even for smaller populated centres. Regina, the least populated urban area included in the survey, for example, recorded an urban population density which was about 40 percent higher than the average of all urban areas included in the survey. The employment densities achieved in the Central Business District (CBD) are also presented in Exhibit 1. These results confirm that employment densities also tend to diminish with the size

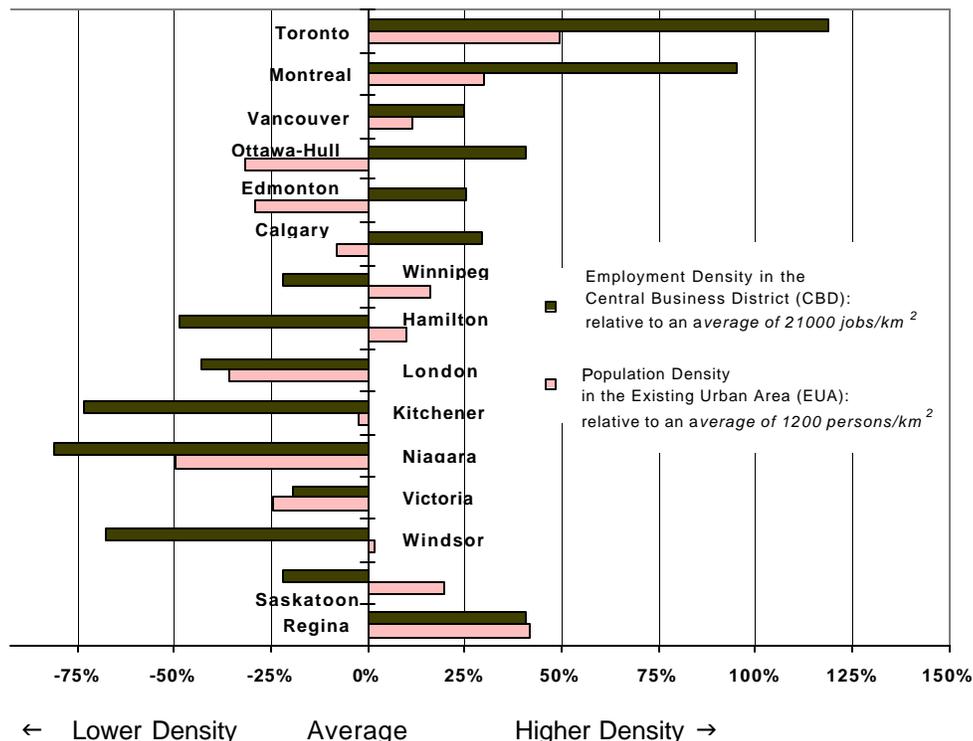
**Development Trends.....**

Higher urban densities have often been cited as a key factor in promoting and encouraging a higher usage of transit, cycling and walking thereby reducing our dependence on travel by private auto. Exhibit 1 presents a relative comparison of the population densities within the existing urban area and the employment density in the central business district in each of the fifteen urban areas. It identifies the percentage variance each of the

***“While the results suggest that population densities tend to diminish with the overall size of the urban area, Regina and Saskatoon each demonstrated that higher urban densities are achievable even for less populated centres.”***

*Source: Urban Transportation Indicators - 1996 Survey 2 - Exhibit 3.5a: Population Density EAU 1996 Study Year*

**EXHIBIT 1: Comparison of Urban Employment and Population Densities - 1996**

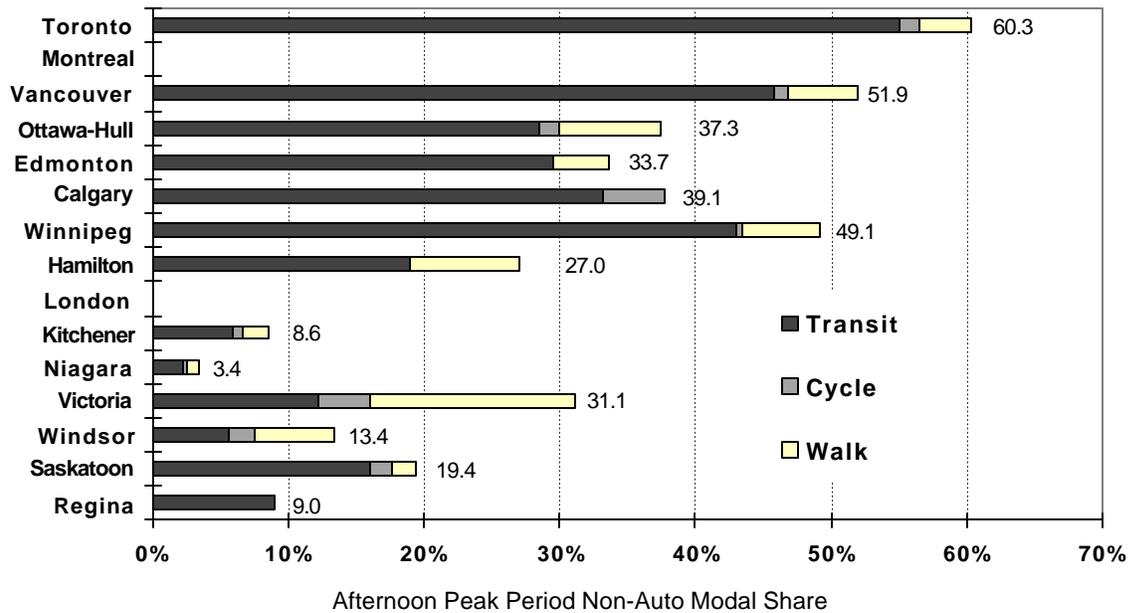


of the urban area. Again Toronto and Montreal, the most populated centres reported the highest CBD densities, between 90 and 120 percent higher than the average of all centres taken together. However, as with population densities notable exceptions were Regina and to a lesser extent Saskatoon and Victoria where employment densities achieved for their CBD's were significantly higher than other similar sized centres. Regina's CBD reported an employment density which was more than 40 percent higher than the overall average surveyed and Saskatoon and Victoria were only 20 percent less than the average in spite of being significantly smaller in size than most other centres.

key market through the provision of high quality peak period service into and out of the CBD.

Exhibit 2 shows that the non-auto portion of all travel does vary in portion to the size of the urban area. Walking, while a distant second to transit, also plays a significant role in serving trips destined/to and from the CBD. Of particular significance is the reported share of travel for Victoria, where walking was reported as being 15 percent of all peak period travel in/out of the CBD, the only centre where walk trips and trips by public transit are similar in magnitude.

**EXHIBIT 2: Percent Non-Auto Mode Shares to/from Central Business District (CBD) - 1996**



Note: Auto mode shares are the difference between the sum of non-auto mode shares and 100%

**Auto Dependency.....**

Reducing our dependence on the automobile for urban travel is viewed by many as a key to realizing more livable cities in the future. Fostering more choice among non-auto modes of travel, particularly for peak travel periods, is fundamental in meeting the overall goals of reducing both vehicle-kilometres traveled and the associated environmental impacts. The 1996 base year survey results indicate that non-auto travel shares for trips to/from the CBD are highest in our largest urban areas where major investments in public transit have occurred. Toronto and Vancouver reported more than 50 percent of their peak period travel was accommodated by transit/walk/ cycle modes. Public transit in these two urban areas as well as in all other centres dominates the non-auto portions of travel. Urban transit service has traditionally been tailored to meet this

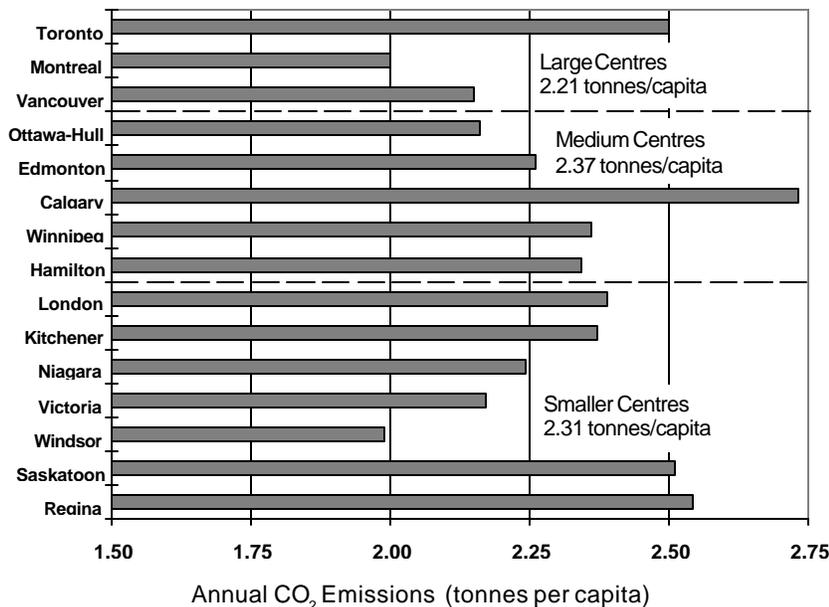
**CO<sub>2</sub> Emissions.....**

In addition to tracking transportation supply and usage characteristics, the TAC Survey also reports on transportation fuel consumption rates based on detailed sales records for each of the urban areas. A direct link exists between overall fuel consumption and CO<sub>2</sub> emissions. Ongoing monitoring of overall fuel sales for each of the urban areas will provide a means to compare the environmental impacts of the various travel choices people make. Exhibit 3 represents the CO<sub>2</sub> emissions per year in each of the Existing Urban Areas expressed in tonnes per capita.

**Financing Transportation....**

The survey results indicate that on a per capita basis transit and road are supported equally at \$136 on aver-

**EXHIBIT 3: Annual Transportation CO<sub>2</sub> Emissions per Capita in Existing Urban Area (EUA) - 1996 (tonnes)**



age across all urban centres. However, the survey also revealed, as illustrated in Exhibit 4, that larger centres spend significantly more per capita on transportation services than smaller centres. Each of the four largest centres spends 50 to 110 % more per capita on transit than the average of the fifteen centres. And, of particular interest, both Toronto and Ottawa-Hull spend considerably less per capita on roadway programs. Transit expenditures appear to exhibit the greatest variance across all areas included in the survey. Higher than average transit expenditures for the largest populated areas are in keeping with the greater role transit plays in accommodating the significant demand for travel in these large urban areas.

Financing transportation expenditures is a major challenge due primarily to reduced transfer payments from provinces and increasing pressure on municipal governments to focus on social and other services. Many urban areas reported continued interest in investigating new sources of revenue for transportation including user charges such as fuel taxes and vehicle registration taxes or parking surcharges dedicated to transportation.

These potential sources of funding identified by survey respondents are very much in keeping with the TAC Urban Vision where transportation expenditures are increasingly borne by the users of the transportation system themselves. Reduced funding, increased requirements for municipal services as a result of a realignment of provincial responsibilities, coupled with the lack of any reasonable opportunity to increase property taxes (the major source of municipal funding for urban trans-

portation), has left many urban areas struggling to support existing programs. Achieving the **New Urban Vision** will require more stable and reliable funding sources than are currently available in most Canadian urban areas and an infusion of additional funding - particularly to improve public transportation - if the Vision is to be achieved.

While current thinking among many of the survey respondents regarding new funding sources is encouraging and optimistic, the results suggest progress has been slow since 1996. However, important exceptions include the Greater Vancouver Transportation Authority, the Agence Métropolitaine de Transport in Montréal and in both Calgary and Edmonton where the respective provincial governments have provided access to portions of the fuel tax revenues to support urban transportation programs.

**In Closing**, the Survey of Urban Transportation Indicators has emerged as an extremely valuable inventory of land-use and transportation performance indicators which when analyzed over time will assist and encour-

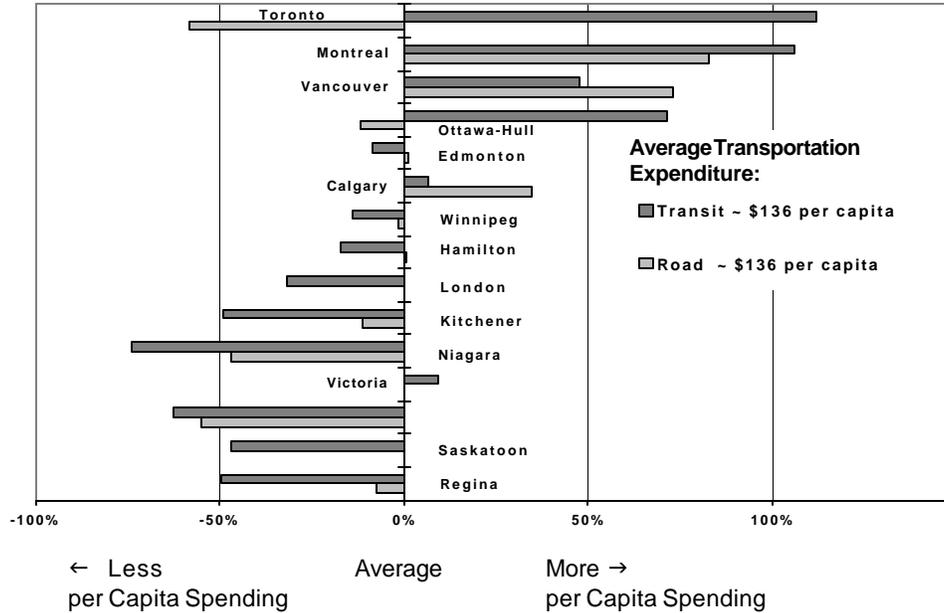
**“Achieving the New Urban Vision will require more stable and reliable funding sources than are currently available in most Canadian Urban Areas and an infusion of additional funding – particularly to improve public transportation.”**

Source: Urban Transportation Indicators - 1996 Survey 2 - Section S.5.2.2 Financing Urban Transportation

age municipal leaders/professional practitioners and governmental agencies at all levels to continue their work toward the **New Vision for Urban Transporta-**

**tion** and more sustainable urban transportation and development across Canada.

**EXHIBIT 4: Per Capita Transportation Expenditure Comparison against Average Levels for Region or Census Metropolitan Area (CMA) - 1996 (percent)**



Note: Road expenditure calculation for Toronto includes regional financing figures for 1996 (i.e. Metropolitan Toronto). Area municipality expenditures are not included.

TAC is a national, multi-modal, multi-jurisdictional organization promoting the provision of safe, efficient, effective and sustainable transportation services in support of Canada's social and economic goals.

This Briefing was prepared by the TAC sponsored **Urban Transportation Council** and assembled by **Don Stephens**, Chair of the Technical Subcommittee for the Urban Indicators Project - 1996 Survey 2. Permission to reproduce or quote is granted, provided the source is acknowledged. The Urban Transportation Indicators - 1996 Survey 2 report was prepared and compiled by IBI Group on behalf of TAC's Urban Transportation Council.

For more information about TAC's urban transportation programs, contact:

**Russ Smith**  
Director of Programs

For additional copies of this briefing or information on other TAC publications please contact:

**Suzanne Bazinet**  
Membership Services and Communications

Or visit TAC's web site [www.tac-atc.ca](http://www.tac-atc.ca)

**Transportation Association of Canada**  
2323 St. Laurent Blvd., Ottawa, ON, K1G 4J8  
Tel. (613) 736-1350 Fax: (613) 736-1395  
E-mail: [secretariat@tac-atc.ca](mailto:secretariat@tac-atc.ca)