Appendix P

Background Paper on Transportation Demand Management

Travel Demand Management in York Region

1. What is Travel Demand Management?

a) Introduction

Travel demand management (TDM) is a strategy used to make the use of transportation infrastructure more efficient and reduce peak demands on the system. To achieve this, TDM strategies use a combination of policies, programs and services to influences people's choices about how they travel by supporting more sustainable options, such as adjusting mode and/or time of travel. TDM measures are essential to encourage more sustainable transportation choices and improve the relationship between land use and transportation. It has typically been found to affect 5 to 15% of trips in a given urban area, depending on the relative attractiveness of incentives and relative effect of disincentives.

b) Incentives and disincentives

TDM strategies can be encouraged and promoted through both incentives and disincentives, making certain options more or less attractive. Many TDM initiatives are based on incentives, which encourage people to change travel behaviour through programs that endorse carpooling, support active transportation or spread peak travel. Disincentives are programs or policies intended to discourage single occupant vehicle trips. In York Region, both incentives and disincentives should be introduced and applied together in order to influence a large number of residents, employees and visitors. For example, to increase transit ridership, employers could offer reduced price transit passes (incentive) while charging a fee for parking at the workplace (disincentive). A fundamental principle of successful TDM programs is to offer attractive and functional alternatives to the single occupant vehicle.

2. Why is TDM needed in York Region?

Transportation demand has been comprehensively modeled for future horizons, using a road/transit network model. This modeling has shown that even with the implementation of all planned transit and road network improvements committed to as a result of York Region's 2002 Transportation Master Plan (TMP), vehicular congestion is still projected to increase across the Region. The modeling has also shown that only with very pronounced shifts into transit-focused, centres and corridors patterns of intensified development, with little or no greenfield consumption, does the modal split tilt significantly towards sustainable modes. While it is possible that the model is insufficiently sensitive to the intensification proposed, it is also true that the Region currently experiences low sustainability modal shares for many origin-destination pairs, and much of the land in the southern tier is either built out or planned in a distinctly auto-oriented paradigm (including residential, retail, institutional and employment uses). Given

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that the Region has expressed a desire to become a leader in sustainability, the magnitude of these challenges indicates that the Region should plan for a comprehensive, aggressive TDM program, to balance the loads on the system and maintain its economic competitiveness.

3. Current York Region Policies

c) Smart Commute

York Region has introduced or participates in a number of programs to promote TDM measures, including Smart Commute. This program was established by municipal governments in the Greater Toronto Area (GTA), with the help of Transport Canada's Urban Transportation Showcase Program, and was designed to develop and promote travel options for commuters. Smart Commute now operates and oversees a network of Transportation Management Associations (TMAs) across the GTA, including programs in Markham-Richmond Hill (404-7), North Toronto-Vaughan (in cooperation with York University), and Central York. Local Smart Commutes are able to offer services that are customized directly to local employers and the community, including:

- ► Carpooling programs;
- ► Vanpooling assistance;
- ► Cycling programs;

- ► Emergency ride home programs;
- ► Employee work arrangement solutions; and
- ► Incentives, promotions and events.

Other initiatives in York Region include:

- ► Active and Safe Routes to School;
- ► Bulk transit pass sales;
- ► Transit Priority Network/HOV lanes;

- ► Presto automatic debit transit pass coming to York Region; and
- ► Encouraging TDM among Regional employees.

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4. What are other Cities/Regions Doing?

a) Ottawa

TDM strategies that are currently in place in Ottawa to encourage more sustainable transportation choices and environmentally responsible behaviour include:

Active and Safe Routes to School

Supported by the City of Ottawa, this international program supports reducing obesity rates in school children and exploring safer, more active ways to travel to school or other destinations.

The Bruce Timmermans Cycling Awards

The Bruce Timmermans Cycling Awards recognize individuals and organizations that make outstanding contributions to the encouragement of cycling. The individual award honours one Ottawa resident who proactively and publicly promotes cycling in the City. The organizational award honours the contributions or investments of one business, organization, government or other entity that promotes cycling as an alternative mode of transportation.

ECOPASS

The OC Transpo ECOPASS offers up to 15% yearly saving on transit passes. The ECOPASS program began in 2000 and had more than 60 participating businesses and over 6,500 subscribers. In late 2004, the ECOPASS was made available to all Government of Canada employees living in Ottawa. With the Federal Government coming on board, the number of subscribers was projected to rise to 25,000.

EnviroCentre

EnviroCentre is a non-profit organization in Ottawa that delivers energy-efficiency programs to reduce air pollution. In 2005, EnviroCentre received funding to help formulate a strategy aimed at developing Canada's first TMA for Ottawa's Byward Market area, which features entertainment, tourist and retail establishments.

TravelWise Program

TravelWise works with local employers, schools, community groups and the general public to offer travel options as an alternative to driving alone. The program also encourages non-travel options such as teleworking and compressed work weeks, together with shifts in travel time to outside of rush hour.

Transportation Master Plan Guidelines

Ottawa's TMP identifies several policies to enhance the City's existing TDM initiatives by:

▶ Developing a comprehensive TDM Strategy that will establish long-term objectives and opportunities, set priorities for short-term action, and outline a framework for monitoring progress;

▶ Adopting a "leadership by example" role by improving and promoting the services and facilities available to employees for commuting and business travel options;

▶ Integrating TDM with public health, recreation and environmental programs;

▶ Helping developers reduce development costs and improve marketability through TDM, and encouraging them to include TDM-supportive programs and infrastructure such as on-site bicycle parking, shower and change facilities and preferential carpool parking; and

▶ Working with primary and secondary schools, universities and colleges to make walking, cycling, transit and ridesharing more attractive through initiatives such as the universal student pass program.

b) Portland

The City of Portland, Oregon, other municipal governments, Metro (the elected regional government), and TriMet (the Tri-County Metropolitan Transportation District of Oregon), have implemented several sustainable transportation programs that enhance the region's quality of life by providing residents efficient and affordable transportation options, including:

▶ A creative bicycle and pedestrian program that has implemented over 200 miles of bikeways, thousands of bicycle parking spaces, five bicycle stations with permanent clothes storage, showers (and whirlpool/steam room/sauna where available) and secure bicycle parking;

▶ A progressive bicycle safety program for area children;

► The Employee Commute Options (ECO) program requiring employers in the Portland area with more than 50 employees reporting to a single work site to provide commute option incentives including transit subsidies, carpool matching, preferential carpool parking, bicycle programs, compressed work weeks and telecommuting;

► Car sharing program ("Flexcar") allowing individuals to use a vehicle without the drawbacks of car ownership. Vehicles are located in more than 20 locations in neighbourhoods, downtown and at MAX stations in the suburbs;

► TDM programs that provide outreach to over 700 employers comprising nearly 250,000 employees in the Portland Metropolitan Area. The TDM program includes rideshare matching services, technical assistance to employers, planning and program assistance for area transportation partnerships and TMAs;

► The "Kids on the Move" program designed to familiarize children with road safety and encourage walking, cycling and public transit as regular modes of transportation; and

► TriMet's public art program integrating historic and cultural art at MAX stations and bus shelters.

c) Vancouver

TransLink (the South Coast British Columbia Transportation Authority), supported by the City of Vancouver and its surrounding municipalities, has implemented several TDM measures that exemplify sustainable transportation practices. Among the most innovative programs are:

Commuter Car Share

Car sharing is joint access to one or often a fleet of vehicles without the high costs of owning and maintaining a car. Members of the Co-operative Auto Network (CAN) have access to 90 vehicles throughout Vancouver. They are also entitled to use car share parking spaces at a growing number of SkyTrain stations.

Vancouver's Three-Year Plan recommended instituting a pilot program to provide commuters with shared vehicles who live or work near a SkyTrain station.

Cycling

The Vancouver Region offers a wide array of programs to encourage cycling for both recreational and work trips. Most transit services allow bicycles to be loaded on vehicles free of charge, although SkyTrain does limit bicycles during some peak hour trips. Bike lockers are also provided at several transit stations for a $30 monthly fee.

Between 2005 and 2007, TransLink will have invested $15 million in cycling – most of that matched with investment from the municipalities. Cycling enhancements include:

► Funding and building new cycling infrastructure in partnership with municipalities;

► Providing more information and education to encourage more people to cycle; and

► Improving access to TransLink owned infrastructure;

► Developing a long-range plan and more research into the future needs of cyclists.

► Equipping the entire bus fleet with bicycle racks by 2008;

The City recently implemented advanced stop lines at intersections, which give cyclists a buffer zone in front of vehicles while waiting at traffic signals. Drivers may only enter and pass through these areas if they are certain that no cyclist is in or approaching the bike box (designated in red).

Employer Discounted Transit Pass

The TransLink Employer Pass Program offers 15% savings on a year-round pass, allowing travel on all buses, shuttles and SkyTrain. As a result of the growth of the Employer Pass Program, with over 13,000 passholders and over 200 companies participating, TransLink now limits the number of companies joining in any given month.

OnBoard Program

Since it began in 2002, the OnBoard program has assisted over 250 Greater Vancouver employers to identify and implement commuting options for their employees. Options explored through the OnBoard program include the Employer Pass Programs, ride matching, car and van pooling, car sharing, active transportation, parking management strategies, teleworking and shuttle buses.

Ridesharing

TransLink provides year-to-year funding to the Jack Bell Foundation's RideShare Program, which operates subsidized services for carpooling, vanpooling and ridematching. The Ridesharing program offers an on-line database that allows commuters to find potential matches in two minutes. As of 2006, there were over 120 vehicles in the fleet owned and operated by the Jack Bell Foundation's RideShare, with many registered commuters choosing to carpool, vanpool or rideshare.

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In order to increase the number of carpools and vanpools operating in the Vancouver Region, the Three-Year Plan recommended:

- ► Developing an annual marketing plan;

- ► Establishing target rates for program growth;

- ► Conducting customer surveys; and

- ► Undertaking operational reviews.

University Discounted Transit Pass

A Universal Transit Pass (U-Pass) was introduced for approximately 60,000 students at the University of British Columbia and Simon Fraser University in 2003. The U-Pass cut transit costs for students from $67 a month to $22 a month resulting in:

- ► A 53% increase in student transit ridership at the University of British Columbia;

- ► A 40% increase in student transit ridership at Simon Fraser University;

- ► Transportation cost savings to students exceeding $3 million per month; and

- ► Avoiding having to fund additional parking spaces that generated cost-savings of over $20 million.

d) Calgary

Calgary has developed several strategies and programs to enhance sustainable development practices in the region.

TDM Market Review (1999)

Calgary Transit conducted a study in 1998-1999 to assess the potential application and benefits of TDM. The study included focus groups, a survey of all employers with over 500 employees and a telephone survey of City residents. A report, entitled "Managing Transportation Demand in Calgary: TDM Market Review" presented the findings from these various efforts. Several municipal initiatives resulted from this study. In particular, the study led to the formal adoption of flexible hours for City employees and the expansion of peak transit services.

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Rideshare Programs

In the spring of 2002, Calgary partnered with Commuter Connections to develop, implement and promote an Internet-based carpool program for the Calgary area. This web-based ride matching service (www.carpool.ca) reached a milestone in January 2005 with over 2,000 active participants.

The City recently established its first Park'n'Pool site in the parking lot of a local co-op. Park'n'Pool sites are parking areas set up in neighbouring communities designed to be a meeting place for carpooling and to promote the awareness of Calgary's carpool program.

Alternative Transportation Fairs

Calgary's Alternative Transportation Fairs raise awareness of programs designed to give commuters options to driving alone. The fairs consist of informative displays on commuter travel choices and their benefits. Topics include walking, cycling, carpooling, transit and flexible work arrangements that allow off peak travel or eliminate the need to make some work trips.

"Escape the Rush" Program

"Escape the Rush" was created in 1999 as a public awareness campaign to illustrate the advantages of various strategies that encourage travel options. Since its inception, the City has worked with several major employers to identify work arrangement strategies as alternatives to peak hour commutes.

e) Others

Other cities and regions around the world have implemented successful and relevant TDM initiatives that may be pertinent to York Region. These include:

- ► Educational programs to promote TDM and demonstrate options;

- ► Managing goods movement: Trucks have a disproportionate impact on traffic operations;

- ► Festivals oriented to promoting sustainable modes: In some countries, these are held each Sunday;

- ► Car-share programs: These are growing throughout the GTA, with little public support. With greater support, their impact can be substantially amplified;

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▶ Parking management: Every vehicle trip ends with parking. Control of supply and rates is an essential lever by which to dissuade people from driving when alternatives exist; and

▶ Intelligent Transportation Systems: Broad dissemination of real-time information can help minimize system overloads.

5. Recommended TDM Policies for York Region

The table in the following section provides recommended TDM policies for York Region, and separates them into short-term and long-term actions. The table also lists cities where the recommended policies have already been implemented (where applicable), and provides insight into relative costs and sustainability benefits. The sustainability benefits have been evaluated based on the broad categories of People (including impacts on residential communities and ease of implementation and governance), Economy (including development, operating and capital costs and congestion) and Environment (including impacts on air quality and the natural environment). In the sustainability benefits column, "+" represents a positive impact, "0" represents no significant impact, and "–" represents a negative impact.

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TDM Program Element	Short Term	Long Term	Precedents	Cost	Sustainability Benefits
Develop Comprehensive TDM Strategy	Identify long-term targets and short-term (3 year) action plan targets. Maintain an annual work program, and monitor/measure successes (by TDM coordinator).		Ottawa, ON	$	People + Economy - Environment +
Manage goods movement traffic to limit the impact during peak commuter travel periods	Restrict delivery times in the Regional Centres and Corridors to off-peak times.	Implement road user fees for heavy vehicles in the Regional Centres and Corridors. (Note: Need to have viable alternate corridors for this to work.)		$	People + Economy - Environment +
Manage single occupant vehicle trip-making	Conduct public education campaigns, targeted at specific sectors: ► School children; ► Employed labour force; and ► Seniors. Develop regional festival / education programs to promote alternative modes; these would be implemented in each municipality. For example, Cyclovia (Life to the Street!) is a weekly event (typically every Sunday) when no cars are permitted on a circuit network of streets to promote walking and cycling, as well as use of on-street retail. Promote telework programs.	Implement road user fees in the Regional Centres and Corridors. Free transit passes offered to employees. Introduce paid parking at most workplaces. Introduce distance-based vehicle registration and insurance costs. Add carpool lots at key locations along major corridors.	Portland, OR Some elements in London, ON and Ottawa, ON. Various cities in Colombia, Ecuador and Australia.	$ - $$$	People + Economy + Environment +

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TDM Program Element	Short Term	Long Term	Precedents	Cost	Sustainability Benefits
	Subsidize car sharing programs in the Regional Centres and Corridors. Promote existing online carpooling and rideshare matching programs, and expand carpooling programs and include vanpools. Create and support additional TMAs based on a feasibility analysis for potential areas. It is recognized that Smart Commute has two large TMA's: Richmond Hill-Markham and Central York. Consider more locally-focused action, in terms of sub-TMAs in the following areas: ▶ Hwy 404/Steeles; ▶ Yonge/Steeles; ▶ Hwy 7/27 (north Toronto/Vaughan); ▶ Commerce Valley/Beaver Creek; ▶ Markham Centre; and ▶ Other employment areas. Increase the number of HOV and transit lanes.				
Parking management	Work with local municipalities to impose maximum parking standards in the Regional Centres and Corridors, within walking distance to transit. Require preferential parking programs as part of site plan approval (for carpools and possibly vanpools). Permit unbundling of parking leases from building	Implement a regional parking management strategy in the Regional Centres and Corridors, addressing parking supply and fees. Tax parking.	Portland, OR; and Calgary, AB.	$-$$ Offset by revenue	People + Economy - Environment +

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TDM Program Element	Short Term	Long Term	Precedents	Cost	Sustainability Benefits
	leases for employment uses. Consider developing Park 'n' Ride facilities at locations that would support transit and rideshare use.	Change (or do not include) parking minimums in municipal zoning by-laws. Impose limits on surface parking in Centres and Corridors. Require parking management plan as part of site plan approval.			
TDM plans for public and private sector development	Develop and implement TDM programs for Regional facilities. Require municipalities to include a comprehensive set of TDM provisions within their zoning regulations to require all new businesses (of a given size) to provide TDM as a means to reduce single-occupancy trips generated by a proposed development. For example, require any development generating more than 100 peak hour vehicle trips to submit a TDM plan, or another indicator such as person hours of delay on neighbouring highways (100 person hours is used in Washington); or all new developments in the City in excess of 10,000 m2 must produce a TDM Plan, as used in Minneapolis. Encourage shared parking opportunities. Require developers to offer building occupants TDM services and incentives as part of the project's site plan approval. Aggressively promote work options such as flex-time, staggered work hours and compressed work weeks. Introduce Employee Transportation Coordinators for businesses.		Toronto, ON; Minneapolis, MN; Glendale, CA; Pasadena, CA; Orlando, FL; Atlanta, GA; Minnetonka, MN; Franklin, TN; Alexandria, VA; Vancouver, WA; Arlington, VA; and Washington State.	$	People + Economy - Environment +

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TDM Program Element	Short Term	Long Term	Precedents	Cost	Sustainability Benefits
Public transit	Increase transit investments and incentives for employees, students and the elderly to improve transit ridership, such as UPASS and discounted passes purchased in bulk. Promote transit through all pertinent media (newspapers, flyers, radio, TV, internet), focusing on how to get from point A to point B (sample origins and destinations). Include online trip planner.	Ensure that transit infrastructure and services are built into all new subdivisions as part of the first phase of development. Continue to support use of the Presto Smart Card – scheduled to be introduced in York Region by 2010. Add intermodal facilities at transit stations, such as bike parking.	UPASS in Halifax, NS; Vancouver, BC; Columbus, OH; Milwaukee, WI; Seattle, WA; Waterloo, ON; and London, ON. Transit incentives in California. Senior EZ Ride in Dayton, OH.	$$	People + Economy + Environment +
Traveler information systems / use of real-time traffic and transit data	Continue to implement York's ITS Strategic Plan. Introduce web portal concept.	Present real time transit information and traffic condition information via the internet and wireless devices. Route information systems at key gateway entry points.	Web portal proposed in Vaughan.	$$	People + Economy + Environment 0
Active transportation (AT)	Promote Active and Safe Routes to School. Require all primary schools to provide AT training, and have designated Active and Safe Routes to School programs, or carpooling programs in more rural areas. Promote AT at secondary schools and through TMAs.	Require adequate bicycle parking and shower facilities to be in place at most workplaces.	Various communities	$	People + Economy - Environment +

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TDM Program Element	Short Term	Long Term	Precedents	Cost	Sustainability Benefits
Coordination with other programs	Continue to coordinate with the GTA Smart Commute Program.	Continue to link to programs as these are formed.		$	People + Economy + Environment +
Coordination with land use planning	Land use and transportation should mutually support each other through node development, urban design, neighbourhood plans, and walking/cycling/transit/road provision. Rework land use planning guidelines: ► Size of mixed-use and other zones should ensure all activities are walkable; ► Design should be oriented to walking, transit, biking; and ► Parking should be located behind buildings. Establish higher minimum residential densities.	Continue to integrate land use and transportation plans.	City of Ottawa TMP	$	People + Economy + Environment +

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