

A Regional TDM Strategy for the CRD
TravelChoices TDM Sub Committee
Recommendations on Scope and Strategic Directions

Report to: TRAVELCHOICES SELECT COMMITTEE:

Report from: THE TDM SUB-COMMITTEE

April 2008

REPORT PURPOSE

This report presents the recommendations of the CRD Travel Choices Transportation Demand Management Sub-Committee regarding scope and directions for a regionally based Transportation Demand Management (TDM) Strategy.

The Sub-Committee recognized that the role of a Regional District in TDM was, potentially, quite different from the role of a municipality or business. The regional district can support TDM at different scales – from inter-regional network planning, to regional growth and sustainability strategies, to corporate commute programs. The recommendations in this report are arranged in terms of scale – from broad region-wide strategic initiatives to workplace program.

SUB-COMMITTEE PURPOSE AND MEMBERSHIP

According to the approved terms of reference, the Transportation Demand Management Sub-Committee was established to advise Travel Choices Select Committee on:

- Strategies needed to achieve the TravelChoices vision to significantly increase the proportion of people walking, cycling, using transit, ride-sharing or using other alternatives to driving alone
- The implementation of the Travel Demand Management projects, policies and programs based on the goals of the Travel Choices strategy
- Developing short and long term plans for Travel Demand Management (TDM)
- Potential target markets for TDM actions such as universities, along with major government and non-government employment centres
- Development of a Regional Travel Demand Management Plan that details a suite of potential measures and effectiveness of TDM
- Developing a “TDM User guide’ for guiding the CRD, its member municipalities and other sectors with the Implementation and Investment into TDM programs.

The Sub-Committee was chaired by Director Vic Derman and members included:

- Susan Hallatt
- Ted Sheldon
- Todd Litman
- Britt Karlstrom
- Brian Williamson
- Dean Murdock
- Dan Pollock
- Sonja Young

The Sub-Committee was instructed to report to the Travel Choices Select Committee and advise on the needed scope and directions for a Regional Transportation Demand Management Strategy. The Sub-Committee met on a monthly basis from April to December 2007 and this report reflects the members' contributions and insights toward the development of a Regional Transportation Demand Management Strategy.

The following document is their report to the TravelChoices Select Committee.

Transportation Demand Management

Transportation Demand Management or TDM refers to a wide range of policies, programs, services and initiatives to influence how, why, when and where people travel to induce more sustainable travel behavior. TDM is essential to reducing the automobile dependence of this region. It can also assist in reducing traffic congestion while improving access and quality of life. TDM measures can also make a significant contribution to greenhouse gas reduction efforts. Motor vehicles contribute a sizeable proportion of greenhouse gases; as a result, any attempt to mitigate emissions must address the travel demand reduction and auto dependence.

TDM initiatives encourage individuals to reduce the number of trips they make, to travel more often by non-driving alternatives, to travel outside peak periods, and to reduce the length of their trips. The intent of the initiatives is to make alternatives to single-occupant vehicle (SOV) use more attractive, build supportive public attitudes towards those alternatives, and provide information and incentives that encourage sustainable travel behaviours.

TDM initiatives, to be considered at the regional level, aim to promote more sustainable travel choices by way of 4 key mechanisms:

1. Reducing the overall need for trip making through ***demand-focused land use planning***. This involves supporting smart growth principles such as mixed use centre, transit-oriented corridor development, conservation subdivision design, and urban containment. These policies, if implemented, bring jobs, housing and services closer together and enhance access between home, work and other necessary activities. The results are not only reductions in trip distances, but also in the actual number of trips.
2. Make more effective use of existing resources through ***demand-focused transportation planning***: This involves increasing the movement of people without increasing the vehicular capacity of roads and intersections by investing in transit, high-occupancy vehicle (HOV) lanes and Park and Ride, bike trails, bike parking and storage facilities, sidewalks, crosswalks, transit shelters, etc. (*Note: for the purpose of this report, unless otherwise denoted, "transit" includes all forms of public transit technologies, including surface bus, express bus, Bus-Rapid Transit (BRT), Light Rail Transit (LRT), and commuter rail service.*)
3. ***Modifying the incentives and disincentives*** associated with travel choices in order to encourage more sustainable travel modes. This may include adoption of "pedestrian-first" or "transit-first" policies; transit subsidies and tax-incentives; use of regulations and

parking standards to favour transit use and cycling; use of “disincentives” such as parking restrictions, parking fees, tolls and other pricing mechanisms to discourage peak period auto travel.

4. Adopting promotional, educational, and *social marketing strategies* to encourage use of more sustainable modes such as car/van pool, bike, walking and public transit.

Demand-focused planning and TDM aims to increase accessibility without increasing the need for more mobility and mobility-related infrastructure. These benefits of this approach, particularly efforts to reduce demand for single-occupancy vehicle (SOV) commuting, include:

- Reductions in the personal and social costs of congestion
- Reductions of regional Greenhouse Gas (GHG) emissions
- Improvements in air quality, resulting in improved quality of life and decreased overall health care costs
- Deferred and reduced roadway-related infrastructure costs
- Improved access to jobs, services and facilities, including for those who can't drive or decide not to drive.
- Support for smart growth strategies and sustainable land use development.
- Consumer cost savings (often reducing the need for a car, or for a second car)

PLANNING CONTEXT

While the CRD does not yet have a comprehensive, regional TDM Strategy, TDM was addressed as part of the working papers for the TravelChoices Strategy. The TravelChoices Strategy is a sub-strategy of the Regional Growth Strategy (RGS). The key TravelChoices Strategy goals which relate to Transportation Demand Management are:

- Coordinate land use and transportation
- Encourage use of alternative modes
- Maintain an affordable transportation system

It was made very clear through the development of the Regional Growth Strategy and TravelChoices that current trends in growth and planning were not sustainable. Population was projected to increase at approximately 1% per year, whereas travel volumes were projected to increase at 2%-3% a year – for the next 20 years. As such, new strategies and investments would be required to meet the anticipated travel demand in a sustainable and cost effective manner.

A key objective of TravelChoices and the RGS was to promote changes in land use and travel modes that would accommodate the anticipated demand largely within the existing network of roads and highways. The Regional Growth Strategy responded by suggesting a regional structure strategy of major centres, compact form, mixed use development – supported by high-capacity transit service. The TravelChoices Strategy responded by establishing policy directions and mode share targets which emphasized sustainable transportation modes.

Sub-committee members agreed that in light of the Provincial priorities pertaining to climate change and greenhouse gas emission reduction, the Travel Choices targets for sustainable modes are too conservative and should be much more aggressive. Sub-Committee members also expressed concern about the lack of tangible actions undertaken to implement the TravelChoices Strategy.

Daily Trips and Mode Shares					
	Total Trips		Mode Share		TravelChoices Targets 2026
	2001	2006	2001	2006	
Auto Driver	673,500	732,000	58.2%	59.0%	
Auto Pass	223,800	237,800	19.3%	19.2%	
Transit	73,300	79,100	6.3%	6.4%	10%
Walk	137,500	124,200	11.9%	10.0%	15%
Bike	28,200	40,200	2.4%	3.2%	5%
Other	21,100	27,700	1.8%	2.2%	
Total	1,157,400	1,241,000	100%	100%	

The following section outlines the recommendations from the TravelChoices Sub-committee on TDM. It is divided into two areas:

1. **Regional Policy Framework Recommendations:** these recommendations address the broad-based policies, strategies, and targets the regional district should adopt to set a subsequent TDM program up for success. These recommendations go beyond the scope of a conventional TDM strategy – but are fundamental for getting people to change their travel behaviour.
2. **CRD TDM Strategy Recommendations:** These recommendations address the approach and elements the CRD should incorporate when preparing a regional TDM Strategy. Many of the recommendations address commute reduction strategies that could be implemented by the regional district, member municipalities, and major employers.

RECOMMENDED DIRECTION AND PROGRAM COMPONENTS

I REGIONAL POLICY FRAMEWORK RECOMMENDATIONS

1. Change Transportation Priorities

This means giving sustainable travel modes priority for planning and investment decisions. The City of Toronto's travel priority hierarchy, for example, puts walking first, followed by cycling, transit, rideshare, goods movement, and automobile use. The basis of this policy is that no individual should be disadvantaged by not having a car. Another example would be a "transit-first" priority system, with land use densities, cycling routes and pedestrian amenities established to support such a system. Road improvements would only be undertaken to support the transit system, for goods movement where there is no alternative and to access critical multi-modal centres such as ferry terminals, airports, transit hubs, etc. In the latter case, priority should still be given to accessing these centres through sustainable priority modes.

To support the desired change, all levels of government should work together to modify the incentives and disincentives (e.g. pricing strategies, subsidies, fees, regulations, and taxes) in a way that rewards the desired behaviour.

2. Better Integrate Land Use Management And Transportation Planning

Land use management includes a number of planning strategies used to reduce auto dependency: it involves planning and building communities with the goal of making them more efficient and liveable. Adopting New Urbanism and Smart Growth planning principles can facilitate more energy-efficient development patterns, compact and mixed use developments along transit nodes and corridors, and car-free zones.

Zoning bylaws can be structured to encourage residential development in downtowns; sensitive intensification along main streets and transit corridors; mixed use around transit stations and village centers, and the like. Zoning bylaws can also be structured to impose "TDM-supportive" parking standards, by imposing maximum parking allocations around major transit hubs; reducing parking requirements where alternatives are demonstrated (or committed in capital works plans).

Regional Growth Strategies, according to Section 849 of the *Local Government Act* are expected to promote "settlement patterns that minimize the use of automobiles and encourage walking, cycling and the efficient use of transit." Official Community Plans can

go beyond broad statements to include detailed policy directions for transit-oriented communities and smart growth development.

Land use management and transportation planning need to be mutually supportive and well-integrated. Appropriate transportation choices support sustainable land use patterns. Equally important, transportation choices can “set the stage” and make the development of sustainable land use patterns much more likely. Considered together, transportation and land use choices can create a critical mass of density supported at centres and along human-scaled main streets, well-served by transit and with supporting facilities for cycling and walking. It is also important to insure that all areas of density are designed to foster as much internal activity as possible. Reducing the need for trips by creating local destinations is a key TDM strategy.

The revised RGS needs to recognize these factors and emphasize that sustainable land use is more than reduced footprints and effective storm-water management; rather, policies need to consider livability, accessibility, affordability, urban revitalization, environmental protection, and financial sustainability.

3. Enhance Connectivity Within The Overall Transportation Network

Routes need to be continuous between origin and destination for all modes and not just for automobiles. Currently, some bike routes and sidewalks are discontinuous along their routes. This diminishes the real and perceived safety and convenience of the travel route. (The Pedestrian and Bike report addresses this in more detail).

Also there needs to be seamless links between modes. Cycling routes, for example should provide easy connections to transit stations. In all cases, connection priorities should favour sustainable modes.

4. Evaluate All Costs And Subsidies

Transportation investments need to consider a more comprehensive cost-benefit analysis and approach to return on investment. Transit subsidies are very visible and are always fully considered whereas road subsidies are less direct and often hidden. The social costs of factors such as ongoing road maintenance, enforcement by police, costs related to accidents and costs to the health sector are not often factored in the budgets when transportation choices are evaluated. Consideration should also given to the feasibility of a household property tax contribution to TDM similar to the current assessment for transit service. The amount of the tax provided for TDM measures should, at minimum, be proportional to the existing mode share proportion (e.g. if 7% of trips are walking trips, 7% of the tax should be earmarked for pedestrian-oriented investments).

5. Assess The Feasibility Of Providing Rail-Based Transit Within The Region

Update the feasibility studies done by BC Transit (1996) and Island Transformations (2002) for light rail transit (LRT) on major routes in the Capital Region. These LRT studies should be examined, along with the recent studies done for the E&N corridor to determine which routes can best contribute to the goals of congestion reduction, GHG reduction, and transit-supportive development. This evaluation should be done as part of the proposed regional corridor study or as part of a process to develop a regional transportation vision.

The CRD should also investigate the feasibility of developing a streetcar-type “circulator” service in the Metropolitan Core. Downtown circulators provide local transit service for residents, employees and visitors making trips through downtown core areas. They are often promoted as supporting TDM and downtown revitalization initiatives. A well know example is the downtown streetcar in Portland, Oregon. A number of studies have noted the development and business benefits associated with this service. In other cities this type of service uses more conventional bus and trolley, for example Dallas, Denver, Oklahoma and Austin.

6. Partner With BC Transit, Member Municipalities, Institutions, And Other Stakeholders To Enhance Transit Stations And Stops

Many existing bus stops and transit shelters are poorly maintained and make users feel like second-class citizens. If transit is to deliver high-quality commuter services the transit shelters and main transfer locations should include access to such amenities as coffee shops, newspaper vending and washrooms.

Transportation research has shown that people are more concerned about the quality of their transit wait experience, and value it more highly, than the actual wait time. As such, to encourage more people to use sustainable travel modes (non-vehicular and transit), more care and attention must be given to the design of stations, stops and “multi-modal” hubs. To encourage people to walk or cycle to a major transit hub and use the bus, the stations must be inviting, contain secure bike parking, sell coffee and snacks (and simple bike repair items), and the like.

7. Work With The School Districts

Since travel patterns are learned behaviours, the Sub-Committee recommends support programs to make walking, cycling and public transit the norm for young people as a

means to creating a habit they will carry through life. Support programs could include partnerships with communities and municipal governments to provide information on best practices and programs for sustainable travel programs for school children. Some examples would be plans for connecting cycling routes with pedestrian pathways, pedestrian infrastructure improvements around schools to increase the safety and convenience of walking and cycling, and advice to School Boards on school locations.

Sub-Committee members also noted that school programming and grade structure can have a significant impact on travel behaviour throughout the region. For example, the move to middle schools in District 61 seems to have resulted in an architecture that has increased average travel distance for students. In addition, with middle school starting at Grade 6, younger students are required to undertake longer trips that, in the past, were associated with Junior Secondary Schools. The likely consequences of all this is an increased number of children being driven to school. Clearly, such decisions should not be made in isolation without consideration of their broader regional impacts.

II CRD TDM STRATEGY RECOMMENDATIONS

The following reflects the sub-committees recommendations to the CRD for preparing a regional TDM Strategy.

1. Develop a Regional TDM Strategy that:

- establishes long-term objectives and opportunities for sustainable transportation and development (including strategies to reduce the need for travel),
- sets priorities for short-term actions and transportation investments,
- promotes an effective range of incentives and disincentives,
- establishes meaningful targets and annual work-plans,
- outlines a framework for monitoring progress
- includes strategies for consultation, communication and education.

2. Develop a Strategy that includes a range of appropriate incentives and disincentives.

A regional TDM strategy should consider a range of “rewards” and “costs” that would send the appropriate price signals to travelers and commuters to encourage them to shift modes to more sustainable transportation and/or travel less. Initiatives may include:

Tax-free subsidies of transit –passes: a financial incentive to encourage the use of transit is to provide reduced fare transit passes or transit vouchers. This is the basis of the U-Pass program for students and Employee bus passes provided by some institutions. (See case study on UVic’s and Boulder’s TDM program)

Fuel & Carbon Taxes – can support TDM programs in two ways: increased fuel taxes provide clear price signals to the consumer about the marginal cost of driving. Consumers can choose to drive less or change to more fuel efficient vehicles. Secondly, revenues from fuel taxes can be targeted to investments in sustainable transportation and TDM programs.

Parking Cash-out or Reduced Employee Parking Subsidization: These programs attempt to “level the playing field” for commuters who can’t or choose not to drive – by reducing the benefit associated with the provision of free parking. Employers can either provide non-drivers with a cash equivalent to the value of free parking – or they can charge drivers for the privilege of parking at the work place.

Pay-as-you-drive insurance - is an approach whereby insurance premiums are calculated as a function of the mileage driven by the customer. This approach not only addresses risk (claims increase with mileage driven), but more accurately conveys the marginal cost of driving to the consumer – who may choose to drive less and/or try other modes.

Emission-based fees and taxes – involves assessing a fee on automobiles that is calculated on the emission rate of the vehicle, such that polluting vehicles pay a higher fee than low-emitting vehicles. Germany has a program in place which combines fuel taxes and an annual vehicle tax, adjusted to the size of the vehicle’s engine, the type of fuel used, and the amount of GHG emitted. Their Motor Vehicle Tax Legislation alteration program, “Kraftfahrzeugsteueränderungsgesetz”, was designed to encourage the purchase of low-emitting vehicles.

Road Pricing – includes tolls and fees for traveling on certain roads, tunnels and/or bridges. Tolls can be a simply a revenue-generator to cover infrastructure construction and maintenance costs – or can be structured to reduce vehicular travel during peak congestion periods.

Parking fees – The pricing of parking can have a significant influence on consumer behaviour. Drivers are fairly sensitive to “out-of-pocket” expenses such as fuel and parking. When the monthly cost of parking is at or above the cost of a monthly transit pass, many drivers will switch travel modes and reduce the overall demand for parking spaces. When a portion of the parking fee is re-invested in target TDM programs and/or transit services, the benefits start to reinforce one another.

Research has demonstrated that the best method for encouraging a change to consumer behaviour (in this case travel behaviour) is to balance the incentives and disincentives. People will be more likely to leave their car at home and ride the bus – if the cost of parking exceeds the cost of the bus pass and the bus service is convenient and frequent.

3. Assess the Feasibility of Establishing a Transportation Management Association

The CRD, in collaboration with other partners (local government and business) should examine the feasibility of establishing a Transportation Management Association (TMA). TMAs are non-profit organizations established through a partnership of local businesses with local governments to promote and deliver TDM services. A TMA may be formed among a group of businesses, institutions (post-secondary and hospital campuses) or industrial parks. They provide an efficient organizational structure for groups to share resources and expertise for program delivery that would likely be beyond the scope of one group to do alone.

TMA services may include:

- Advocacy for improved transit services and alternative transportation infrastructure (cycling, pedestrian pathways)
- Education and promotion of sustainable modes of transportation within the region, including social marketing campaigns and special events.
- Site-specific transportation management solutions for members including ride-matching programs, shuttle services, parking pricing strategies, and shower and change facilities.

4. Develop A “Travel-Options Tool Kit”

The CRD should develop a travel options toolkit for member municipalities and other stakeholder groups. Many information resources already exist for implementing work place TDM programs. In addition, the Victoria region has a number of consulting companies, non-profit agencies, and professional institutes that can provide additional expertise and information. Unfortunately, researching these resources can be time consuming. It is recommended, therefore, that the CRD prepare a tool kit of resources and project steps that could be shared with member municipalities. This document should also have information on establishing Transportation Management Associations (TMAs). Through this initiative, the CRD should not compete with existing private sector or non-profit agencies, but instead should support their efforts through information sharing, program marketing, public awareness, and program participation.

5. Develop a Corporate “Smart-Commute” Program.

The CRD should demonstrate a leadership role in TDM – by developing a corporate-wide commuter trip reduction strategy which would reward employers and employees who use sustainable travel modes. The CRD could support these initiatives in a number of ways, including:

- information collection & sharing
- employee travel surveys
- social marketing campaigns
- TDM program development, action planning and coordination
- Local government advocacy for senior government support and relevant legislation changes
- financial support to TDM initiatives

- sponsorship of smart-commute events (including speakers, visiting experts)
- partnerships with/support for non-profit TDM groups.

6. Prepare A TDM Report Card

The CRD should support the development of a score card designed to measure what major employers, including governments and institutions, are doing to promote TDM initiatives be developed. The score card should be developed by an advisory committee or Round Table.

The score card could involve a TDM rating system, similar to the LEED green building system used to evaluate building sustainability, and could be used to evaluate TDM programs and work-based Commute Trip Reduction Programs in particular.

7. Develop a Monitoring and Evaluation program

The CRD should develop a monitoring and evaluation program for TDM which tracks awareness, participation, service/mode utilization, and emissions reduction.

Conclusion:

The TDM Sub-Committee supports the goals and planning directions established through the TravelChoices Strategy, however, it recommends that greater commitment be made to the implementation of travel options in this region. As a core initiative, the CRD should expand the scope of transportation demand management for the region, by developing a comprehensive TDM strategy that reflects the recommendations made in this report.

The CRD should make a concerted effort to ensure that the recommendations listed under “Regional Policy Framework Recommendations” are incorporated in the review of the Regional Growth Strategy and in a subsequent update of the TravelChoices Strategy. If the region hopes to respond effectively to the Provincial climate change targets – it will have to be much more aggressive in transportation planning – and the integration of smart growth and climate change policy.

To that end, the Sub-committee recommends that the CRD establish a TravelChoices Office, with a mandate to carry out the recommendations of the TravelChoices Strategy- and this report.

APPENDIX ONE

EXAMPLES OF TDM BEST PRACTICES

Overview:

There are many TDM measures adopted by various organizations and agencies in North America. The more successful TDM initiatives, in terms of trip reduction and shifts in travel behavior to more sustainable modes, have depended on four interrelated conditions:

- **Federal and Provincial/State legislation** which mandates air quality, trip reduction and mode share targets and at the same time makes provisions for financial incentives to support the achievement of these targets.
- **Successful partnerships** between public and private sector companies, non-profit organizations and public agencies to plan, fund and implement comprehensive TDM programs.
- **Commitment of staff and resources** by an organization or group of organizations to initiate market and maintain coordinated and focused TDM programs.
- **Integrated TDM measures** which reinforce each other by increasing the costs for automobile use and at the same time enhance the accessibility of sustainable modes. An example is the mutually supporting measures at the University of Victoria where increases to parking costs and restrictions in parking supply were implemented in conjunction with deep discount public transit passes for students and staff, easy access to car/van pools and facilities which made cycling much more convenient.

This Appendix has examples from three types of TDM initiatives:

- Programs delivered by Government Agencies
- Transportation Management Associations (TMAs).
- Post Secondary Programs

I PROGRAMS DELIVERED BY GOVERNMENT AGENCIES

1. ALLEGO IN GREATER MONTREAL. This program is delivered by Agence Metropolitaine de Transport (AMT) and sponsored by the Quebec Department of Transportation. The AMT is the agency responsible for coordinating public transit in the Greater Montreal region which includes four subway lines, five commuter rail lines and 14 bus transit systems. The program is directed at the 5,000 businesses with more than 50 employees and the 35 post-secondary institutions in the region, and the purpose is to promote alternatives to automobile travel. The program has a focus on offering incentives to take public transit, but has other initiatives to encourage other sustainable modes. Some of the Allego services are:

- Free Transportation Demand Management expertise to interested employers for direction and training in implementing TDM plans.
- Free access to carpooling software
- A trial metropolitan transit pass which is a marketing device allowing commuters who travel alone in their cars to use transit for month for free.
- Free information packages for businesses and institutions.
- Discount annual transit pass from payroll deduction

The Allego web-site is at:

<http://www.voyagezfute.ca/allego.asp?lng=1>

Also information on Urban Transportation Showcase Program website:

<http://www.tc.gc.ca/programs/Environment/utsp/demarcheallego.htm>

2. CENTRAL OKANAGAN TDM PROGRAM. In 1998 the Central Okanagan Regional District in partnership with the City of Kelowna, Westbank First Nation and the Province of British Columbia developed a regional TDM program. The formal agreement stated that the Regional District create a TDM function and contracts the City of Kelowna to provide the service. This initiative was in response to statistics which showed the Central Okanagan being the most auto dependent regional district in BC. In 1998, 68% of the residents of the City of Kelowna drove to work in a single occupancy automobile, for the suburban areas the number was 85%.

Regional TDM programs and policy are coordinated by the TDM working group inn the City of Kelowna's Transportation Division. The working group consisting of 2.5 staff members is charged with initiating programs to influence travel choices toward sustainable modes and

help defer the public costs of new road infrastructure. The program has set definite targets peak period trip reduction and overall mode shift.

Some of the key initiatives of the program are:

- Bicycle Master Plan and Sidewalk Master Plan. The City of Kelowna now has the highest number of bicycle lane kilometers per capita in Canada. Also the City of Kelowna has installed bike lockers in designated town centres which can be rented on a monthly basis to bicycle commuters. City development standards require new commercial and multi-family residential development proposals to incorporate bicycle parking and storage into the design.
- Public Transit Improvements in partnership with BC Transit including the construction of a new downtown transit station to act as a central hub for the regional transit system.
- The TDM group works to ensure that parking supply and pricing policies are compatible with regional TDM goals. The City of Kelowna has set a policy that the minimum monthly parking charge in City owned lots and facilities at 10% above the cost for a monthly public transit pass.
- Development of a carpool and rideshare service which now has 6,000 registrants.
- Partnership with Off Ramp to initiate high school trip reduction programs.

More Information on the Central Okanagan TDM Plan is at:

<http://www.tc.gc.ca/programs/environment/UTSP/centralokanagan.htm>

II TRANSPORTATION MANAGEMENT ASSOCIATIONS

TMA's are non-profit employer organizations which promote access and awareness of commuting options for employees. They usually represent employers of a particular location such as a section of downtown, a business park or a high employment corridor. Membership usually consists of both public and private sector employers.

1. THE LLOYD DISTRICT TMA, PORTLAND OREGON. This TMA was established in 1994 to address a number of issues related to congestion, transportation access and economic development in Downtown Portland. The Lloyd District TMA is a non-profit association representing 69 private sector businesses and public sector organizations with a total of 9,000 employees. The TMA has a board of directors, full time staff and various standing committees for cycling, pedestrian and transit issues. Each participating member company has its own transportation coordinator to act as important liaisons between the TMA and

employees in member companies. Coordinators will meet periodically at Transportation Coordinator Forums.

TMA initiatives are framed according to broader economic development and downtown revitalization goals of the City of Portland. The City of Portland plans 17,000 new jobs and 4,000 new residential units for Downtown with minimal traffic impacts and without spending public money on large scale highway and road infrastructure.

THE LLOYD DISTRICT



The TMAS is funded from a Business Improvement District fee based on assessment, parking meter revenue within the BID, commissions on the sale of transit passes, the sale of member's energy tax credits and grants from public agencies such as Tri-Met, Metro (the Portland MPO), the Oregon DOT and the Federal Government. Regarding the sale of energy tax credits, the state of Oregon has a Business Energy Tax Credit that businesses can take advantage of for investment in employee transportation programs. The TMA works with members to transfer credits to the TMA for sale on the open market much as is done with air quality credits. Money for the sale of credits is placed in an Opportunity Fund to finance targeted transportation infrastructure improvements such as bus shelter improvements and

upgrades to bicycle facilities which enhance the accessibility and convenience of environmentally friendly modes.

Programs that are offered by the TMA are:

- Free public transit passes to employees of TMA members. Passes are purchased by the TMA at a rate of \$189 per year per participating employee. This compares the \$792 cost per year for regular transit passes.
- Implementation of Bicycle facilities such as racks, lockers and changing facilities.
- Bus stop shelter refurbishing and addition of amenities.
- Access to ride sharing and car/van pool programs. The City of Portland has designated 150 on street parking spaces in the Lloyd district for exclusive use for car and van pools.
- Access for registration with the FlexCar a private car share company with branches across the US.
- Full time Commuter Connection One Stop store where Transit passes are sold, and where people can register for carpools and FlexCar.

For more information regarding the Lloyd District TMA go to.

<http://www.lloydtma.com/>

2. CAMBIE CORRIDOR CONSORTIUM (CCC), VANCOUVER BC. This the first TMA established in Canada. The CCC is a partnership of businesses and government agencies on the Cambie Street corridor in the City of Vancouver. This corridor has some very large public sector employers and institutions such as Vancouver City Hall, three major hospitals located between Broadway and 25th Avenue, and the Insurance Corporation of BC, all which have TMA membership. The Consortium has 21 members representing 25,000 employees.

The Consortium's main purpose is to reduce the number of single occupancy vehicles using Cambie Street for commuting. Due to the size and number of employment centres in the area, finding adequate parking for employees was becoming a problem. Furthermore planners were faced with constructing new parking spaces at the cost of \$15,000 to \$25,000 to build and maintain to accommodate a proposed expansion of Vancouver General Hospital. In 1995 VGH initiated the formation of the Cambie Street Consortium and hired a trip reduction expert to develop a transportation management plan.

The CCC has one part time staff member to act as a transportation coordinator who is the point of contact between the Board and employees.

- Information kiosks at each member's work site where employees can easily obtain information on transit fares, shuttle bus schedules, van pool and ride sharing information.
- A shuttle bus for use by medical staff to travel between the three hospital sites. The service makes approximately 2,100 trips per month and carries 9,000 passengers during this time.
- Approximately 200 employees of CCC member organizations have access to van pooling services and another 500 benefit from access to carpool information.
- A payroll deduction program developed in partnership with Translink that allows employees to purchase bus passes at a 15% discount.
- Emergency ride home through a contract with a local taxi company. Employees are given vouchers if they need to leave work in case of illness or emergency.
- Shower and change facilities, and secure bike cages have been installed at some work sites to facilitate bike commuting.

The CCC was funded through a Federal Government grants with the provision that each member of the Consortium contribute and equal amount of in-kind donations. The CCC also collects annual member dues based on number of employees.

For more information on the Cambie Corridor Consortium go to:

<http://www.toolsofchange.com/English/CaseStudies/default.asp?ID=100>

3. SMART COMMUTE NORTH TORONTO VAUGHAN (SC-NTV). This TMA consists of large employers and institutions located in North Toronto and the City of Vaughan in the York Region. The area has had rapid population and employment growth in recent years and employers were faced with parking shortages for employees and problems with employee retention due to traffic congestion and the lack of travel options to and from work. The TMA was formed in 2001 with support from Provincial and Municipal governments as well as area Chambers of Commerce.

SC-NTV is a non-profit organization to promote the use of travel alternatives to single occupancy automobile. It consists of a Board of Directors with representatives from members and a full time staff of four. Funding is provided by membership fees, fees from consulting services and support from various Government agencies and departments (Municipal, Provincial and Federal). TMA membership consists of 13 employers and institutions representing 72,000 employee and students (York University and Seneca College are members).

SC-NTV is different from a lot of other TMAs in that the main focus is not so much as providing transportation services and cost subsidies such as deep discount transit fares, but with providing information and consulting services to members and other organizations. Some of these are:

- Site assessments of current travel opportunities and policies and recommendations for more sustainable and cost-effective transportation strategies.
- Employee transportation survey to assess current commuting patterns and concerns in order to identify opportunities for sustainable transportation options. The resulting report sets a baseline for tracking any implementation of commuting options
- Focus groups for information on current attitudes towards alternative transportation options and for monitoring ongoing commuter programs.
- Workshops on a variety of topics such as bicycle safety, using public transportation, and car/vanpooling.
- Consulting for members on the feasibility of TDM strategies as such as parking cash-out, vanpool, shuttle services, transit subsidies, cycling and tele-commuting.
- Emergency ride home (for employees who regularly use alternate modes of transportation to and from work, that if the employee has to leave work for an emergency the use of a taxi or car rental will be reimbursed).

SC-NTV also sponsors events to promote sustainable commuting options including organizing events, and preparation and distribution of promotional, marketing and instructional materials.

For further information on Smart Commute – North Toronto Vaughan go to:

http://smartcommutentv.ca/index.php?option=com_frontpage&Itemid=1

III POST SECONDARY PROGRAMS

1. UNIVERSITY OF VICTORIA TDM PROGRAM: UVic’s approach to managing travel demand has proved the importance of balancing incentives and disincentives to successfully affect travel behaviour. The TDM program has contributed to a large mode shift to more sustainable modes, as well as an actual reduction in the number of automobile trips since 1996.

Program components are:

- A comprehensive pricing strategy that increased the cost of parking by a significant percentage in order to reduce the financial gap between the cost of parking and the cost of transit. The increase in parking fees – over 40% increase in one year alone – was very effective in reducing the demand for parking permits and for reducing overall traffic volumes to campus. A very important benefit of this aggressive pricing strategy was it eliminated the need to construct a parkade thus saving the university from investing millions of dollars in facilities to support cars. A portion of the parking fees is used to subsidize the UPass and other TDM program elements.
- The U-Pass which provides students with unlimited access to the public transit system. Students are charged \$69.25 as part of regular fees for a four month pass unlimited access to public transit. A regular transit pass in the CRD costs \$73.25 a month. In addition to the mandatory student fees, the U-Pass is further subsidized through parking fees.
- The Employee Bus Pass which offers discounted bus passes to UVic employees and staff at a cost of \$33 per month. When implemented the number of employees purchasing a transit pass went from 52 (those who had been on the Pro-Pass program) to over 500 employees.
- 2,900 bike parking spaces along with covered bicycle shelters, bike lockers, clothing storage lockers and shower and change room facilities. There is a self serve bicycle repair kiosk and on-campus workshops.
- SPOKES is a bicycle bursary program that refurbishes used and unwanted bicycles and lending them out to students, faculty and staff. More than 230 bicycles have been given out to date.
- The University is a member of the Victoria Car Share Coop and currently has three vehicles available on campus.
- Vanpools and carpools are supported through ride matching services and preferential parking.
- On-going monitoring, traffic audits, information fairs, sustainable transportation events also support the TDM program.

Further information on UVic TDM program is at
<http://web.uvic.ca/sustainability/TransportationTravelChoices.htm>

2. UNIVERSITY OF COLORADO AT BOULDER'S SUSTAINABLE TRANSPORTATION PROGRAM.

This program is administered and maintained through University's Environmental Centre which devotes staff time and resources. Some of the program services are:

- Free access to the Greater Denver Rapid Transit District (RTD) services on presentation of a valid University of Colorado student card.
- Discount public transit passes for use on all RTD services for faculty and staff (Eco-Pass). The Eco-Pass is based on individual contracts between the RTD and employers and the cost per employee for an annual pass is between \$62 and \$282 depending on the employer's location and size. A regular RTD *monthly* pass costs \$144 per month.
- Free bikes available to students, faculty and staff for trips on campus. Bikes are picked up and dropped off at the Bike Station – the campus bike repair and retail shop - and can be used up to two days.
- Free basic bike maintenance and repair by Bike Station staff and use of Bike Station tools for cyclists to repair their own bikes. .



- Annual interest free loans of up to \$500 offered by the University to assist students in purchasing their own bikes.
- Participation in the Boulder Car Share a non-profit organization for car sharing. For more information regarding UC at Boulder's Sustainable Transportation Program go to:

<http://ecenter.colorado.edu/transportation/index.html>

To go to the Off Ramp web page at the BEST site go to:

<http://www.best.bc.ca/programsAndServices/index.html>

Also information posted on Urban Transportation Showcase Program site.

<http://www.tc.gc.ca/programs/Environment/utsp/offrampsecondaryschool.htm>

Appendix 2

Websites with TDM Information

General TDM Resources: www.vtpi.org (Everything you ever wanted to know about Transportation), www.tc.gc.ca (Transportation Canada site – very extensive set of resources & case studies), www.goforgreen, www.cubekc.org (resource of teaching kids about transportation and community planning), www.waytogo.icbc.bc.ca, www.best.bc.ca (info on case studies, street reclaiming), www.carpool.ca, www.mec.ca/coop/communit/meccomm/ecofoot.htm (ecological footprint calculator), www.toolsofchange.com (case studies), www.bctansit.com, www.translink.bc.ca, www.uvic.ca (comprehensive TDM program)

For information on car share: www.victoriacarshare.ca, www.carsharing.net, www.cooperativeauto.net, www.peoplescar.org

For rideshare information in Canada: www.carpooltool.com. The ride share service provided by the Jack Bell Foundation in the Capital Regional District is at <http://online.ride-share.com/en/my/> Other Ride Share and Car Pool information sources include: www.bctransit.com, www.translink.bc.ca, <http://transit.metrokc.gov/cs/employer/ctr-buspassprogram.html>, www.upass.ubc.ca, www.washington.edu/commuterservices/programs

Information links for rapid transit include: www.lightrailnow.org, www.transport.com, www.translink.bc.ca, www.calgarytransit.com (information on LRT & BRT) www.brampton.ca/transit/accel.tml (BRT), www.halifax.ca/metrotransit/etroLink.html

Commuter rail information links include: www.mbta.com (Boston commuter rail), www.metrolinktrains.com (Orange County commuter rail), www.gotransit.com (GTA)

For Heritage trolley a good overview of Portland’s system, written by Charles Hales is available at www.heritagetrolley.org/existPortlandProjectDesc.htm, Other information links

include: www.cities21.org/tdm.htm (provides an overview of community bus systems)
www.recaonline.com/docs/arc (downtown rail service economic impact evaluation)
www.ci.bellevue.wa.us/downtown_circulator.study.htm

Planning/Information Guides:

www.ite.org (the Institute of Transportation Engineers produce training materials),
www.planning.org (American Planning Association reports)
www.walkable.org , www.dot.state.ga.us/bikeped/pedestrian%5Fplan (Georgia Guidebook for Pedestrian Planning) , www.dot.wisconsin.gov/projects/state/doc/ped2020-guide.pdf (planning guide for pedestrians) ,
www.york.ca/Departments/Planning+Development/Pedestrian+and+Cyling+Master+Plan.htm) York Region Ontario master plan

Some useful sources of information on bike improvements include:

www.bikestations.org (bike parking facilities), www.bicyclinginfo.org ,
www.ameribike.com/catalog/racks (very innovative bike rack designs),
www.ci.austin.tx.us/council/downloads (“Street Smarts Task Force Bicycle Facilities Toolbox”),

Some good sources for information on safety improvements include:

www.saferoutes.org/guide/ , www.cpted.net (Crime Prevention Through Environmental Design),www.designcentrefor/cpted.org (Vancouver) ,www.thecptedpage.wsu.edu (good links & resources page)

For information on TMAs:

www.dot.state.co.us/CommuterChoice/TMA.htm , www.lloydtma.com (Lloyd District in Portland Or), www.actweb.org/mc/page.do (can download an issue of the “TDM Review”. Latest one has several articles on TDM and climate change), www.abctma.com (a Boston based group of businesses that came together to address the transportation implications of the “Big Dig” project.) , www.york.ca/services (link to “Smart Commute program and Black Creek TMA in Ontario)