

## Transportation Demand Management

23 February 2010

*The Victoria Transport Policy Institute is an independent research organization dedicated to developing innovative solutions to transport problems. Our work helps expand the range of impacts and options considered in transportation decision-making, improve evaluation methods, and make specialized technical concepts accessible to a larger audience. VTPI has helped design and evaluate TDM programs in a variety of institutional and geographic conditions. Below are examples of our work.*

### **Community Energy and Emissions Reduction Plans**

Helps develop Community Energy and Emission Reduction Strategies (CEERS) for Langford and Colwood. Provides guidance on transportation and land use policies that support energy conservation and emission reduction objectives. (Client: cities of Langford and Colwood. Project Manager: Jordan Fisher of Jordan Fisher & Associates. Time Period: May 2009-January 2010.)

### **Campus Transportation and Parking Management Study**

Helped develop a transportation and parking management plan for both Camosun College campuses. This includes consulting with stakeholders, identifying transportation problems and potential solutions, and developing specific recommendations for an integrated plan. (Client: Camosun College. Project Manager: Kathryn DeGros. Time Period: August-December 2008.)

### **Connected Urban Development**

Serves as a special advisor on transportation and land use planning for the *Connected Urban Development* program ([www.connectedurbandevelopment.org](http://www.connectedurbandevelopment.org)), which uses advanced technologies to improve mobility options in major cities, including personal navigation devices, public transit information and payment systems, and road pricing. (Client: Cisco Systems and the Clinton Foundation. Project Manager: Nicola Villa. Time Period: August 2007- ongoing.)

### **National Study on Car-Less and Special Needs Evacuation Planning**

Coauthoring a study and best practices guide on the evacuation of car-less and special needs people during major disasters. Includes research of previous disaster evacuations, stakeholder surveys and analysis of best practices. (Client: Federal Transit Administration. Project Manager: Professor John Renne. Time Period: January 2006-January 2010.)

### **City Mobility Management Program Best Practices Review**

Helped develop mobility management policies and programs that encourage more efficient transportation and reduce per capita vehicle travel, in order to reduce local and regional transportation problems. (Client: City of Fort Collins, Colorado. With the Brendle Group. Time Period: January-May 2006.)

### **Healthy Community Planning Best Practices: Population Health and Urban Form**

Investigated how urban form affects community health, including physical activity and fitness, crash risk, pollution exposure, community cohesion, and mental health, and how to create

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healthier communities. Produced, *Promoting Public Health Through Smart Growth* ([www.vtpi.org/sgbc\\_health.pdf](http://www.vtpi.org/sgbc_health.pdf)). (Client: Smart Growth BC. Time Period: June-Sept. 2005).

### **Congestion Management Best Practices**

Provided technical support for the Washington DC Downtown Congestion Management Task Force. Included research and analysis to identify suitable congestion management strategies for implementation in a large city central business district. (Prime contractor: Volpe Transportation Center [[www.volpe.dot.gov](http://www.volpe.dot.gov)], for the City of Washington DC [[www.dc.gov](http://www.dc.gov)]. Time Period: April – October 2004).

### **Resort Community Transportation Management Plan**

Provided guidance on incorporating transportation demand management strategies into the Whistler area transportation plan. Identified a variety of potential transportation demand management strategies, predicted their impacts on travel volumes and traffic congestion, and developed a framework for evaluating their full benefits and costs. (Prime contractor: Delcan [[www.Delcan.com](http://www.Delcan.com)], for Resort Municipality of Whistler [[www.whistler.ca](http://www.whistler.ca)]. Time Period: September 2003 – February 2004).

### **Parking Tax Policy Evaluation**

Helped evaluate the feasibility and impacts of various parking tax options for funding transportation in the Greater Vancouver region. Included research on various parking taxes, and analysis of their impacts on consumers, businesses, parking supply, parking price, travel patterns and land use. (Prime contractor: InterVISTAS [[www.intervistas.com](http://www.intervistas.com)], for TransLink [[www.translink.bc.ca](http://www.translink.bc.ca)] regional transportation authority. Time Period: November 2003).

### **Greenhouse Gas Emission Reduction Plan**

Provided guidance on transportation emission reduction strategies for the city of Vancouver's greenhouse gas emission reduction plan. Identified a variety of potential emission reduction strategies, predicted their potential emission reductions, and developed a framework for evaluating their full benefits and costs. (Prime contractor: Sheltair Scientific [[www.sheltair.com](http://www.sheltair.com)], for City of Vancouver [[www.vancouver.ca](http://www.vancouver.ca)]. Time Period: September-December 2003).

### **University Transportation Management Program Planning**

Helping to develop a comprehensive transportation demand management plan as part of the strategic development plan for a university campus. Involves working with a variety of stakeholders to identify and evaluate potential mobility and parking management strategies. (Project Manager: Boulevard Planning Group. Transport Client: University of Victoria. Time Period: October 2002 – December 2003.)

### **Wrote Mobility Management Information Resource**

Wrote "Mobility Management Measures" module ([www.vtpi.org/gtz\\_module.pdf.pdf](http://www.vtpi.org/gtz_module.pdf.pdf)) for the *Sustainable Transport Sourcebook for Developing Countries* ([www.sutp.org/docs/sourcebook/sourcebook.aspx](http://www.sutp.org/docs/sourcebook/sourcebook.aspx)), a comprehensive transportation planning and management information resource for use in developing country cities. (Client: GTZ [[www.gtz.de](http://www.gtz.de)]. Time Period: April-December 2002)

### **TDM Program Evaluation**

Performed a detailed evaluation of the travel impacts, benefits and costs of the City of Seattle's "Way To Go" program ([www.cityofseattle.net/waytogo](http://www.cityofseattle.net/waytogo)), which encourages the use of transportation alternatives. Developed an analysis framework for evaluating the full benefits and costs of various mobility management programs, including both quantitative and qualitative

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impacts. (Project Manager: CH2M Hill. Client: City of Seattle. Time Period: January to April 2002)

### **Demand Management Emission Reduction Strategy Evaluation**

Identified and evaluated potential transportation demand management strategies for reducing energy consumption and pollution emissions in the Vancouver region. This includes developing a model that predicts and compares the potential energy conservation and emission reduction benefits of each strategy, and identifying additional benefits (congestion reduction, traffic safety, consumer savings, etc.), implementation costs and barriers. (Client: Environment Canada. Time Period: February 2002 to April 2003.)

### **Evaluate Transportation Energy Conservation Options**

Helped identify and evaluate policy and operational programs to improve transportation sector energy efficiency, energy conservation and use of renewables suitable for implementation by the New Zealand Energy Efficiency and Conservation Authority. (Project Manager: Booz-Allen & Hamilton, New Zealand. Client: TransFund New Zealand. Time Period: November 2001 to March 2002.)

### **Distance-Based Insurance Implementation Study**

Helped to develop program guidelines and promotional materials for variable-priced (distance-based) automobile insurance for the U.S. Environmental Protection Agency for offering distance-based insurance as a pollution emission reduction strategy. This project included evaluating benefits and costs of different types of distance-based insurance from the perspective of various stakeholders, identifying barriers and opportunities, developing specific criteria that insurers must meet to be certified under the EPA program, and providing other technical assistance for program implementation. (Project Manager: ICF Consulting. Client: U.S. Environmental Protection Agency. Time Period: May to December 2001.)

### **Developed Interactive Internet Tool for Evaluating TDM Options**

Developed a prototype “Interactive Transportation Demand Management Database and Analyzer,” an Internet-based tool, suitable for use by planning professionals and a general audience, that provides information about various TDM strategies and helps predict TDM program impacts. It included a searchable database with detailed information about individual TDM strategies, and an interactive model to calculate the effects that a particular TDM strategy or project is likely to have on vehicle travel, congestion, emission, road safety, public finance and consumer costs. (Client: Environment Canada. Time Period: March to July 2000.)

### **Evaluated The Status of TDM in the Vancouver Region**

Wrote a report titled *Shifting Gears*, which evaluates the status of transportation demand management efforts in the Georgia Basin (Vancouver, British Columbia region). This involved a detailed evaluation of current and planned TDM activities in the region in order to help identify opportunities for better coordination among stakeholders and strategies that may require more support if they are to achieve their full potential benefits. (Client: Environment Canada. Time Period: January to May 2000.)

### **Comprehensive Study of Distance-Based Vehicle Insurance Pricing**

Performed a comprehensive study of the feasibility, costs, benefits and equity impacts of implementing mileage-based vehicle insurance in British Columbia. Included analysis of a unique database of vehicle odometer and crash records. Served as project manager with two staff. (Client: Insurance Corporation of British Columbia. Time Period: April 1997 to January 1998.)

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### **Helped Develop School Trip Management Guidebook**

Provided technical support in developing a guidebook for programs to encourage parents to use alternative modes when taking children to grade schools. (Client: *Way To Go* Program. Time Period: March to April 1998.)

### **Identified and Evaluated Potential State Level Transportation Market Reforms**

Identified and evaluated seventeen potential transportation market reforms suitable for implementation in Washington State. Developed a spreadsheet model that identified the consumer costs, travel impacts, emission impacts, and revenue of individual price changes and reform packages. Wrote the report, *Road Relief; Tax and Pricing Shifts for a Fairer, Cleaner, and Less Congested Transportation System in Washington State*. Co-authors: Charles Komanoff and Douglas Howell. (Client: Energy Outreach Center, now Climate Solutions, Olympia, WA, [www.climatesolutions.org](http://www.climatesolutions.org), with funding from USEPA. Time Period: May to October 1998.)

## Publications

Todd Litman (2001), *What's It Worth? Life Cycle and Benefit/Cost Analysis for Evaluating Economic Value*, Presented at Internet Symposium on Benefit-Cost Analysis, Transportation Association of Canada ([www.tac-atc.ca](http://www.tac-atc.ca)); at [www.vtpi.org/worth.pdf](http://www.vtpi.org/worth.pdf).

Todd Litman (2003), "Measuring Transportation: Traffic, Mobility and Accessibility," *ITE Journal* ([www.ite.org](http://www.ite.org)), Vol. 73, No. 10, October 2003, pp. 28-32; at [www.vtpi.org/measure.pdf](http://www.vtpi.org/measure.pdf).

Todd Litman (2005), "Efficient Vehicles Versus Efficient Transportation: Comparing Transportation Energy Conservation Strategies," *Transport Policy*, Volume 12, Issue 2, March 2005, Pages 121-129; at [www.vtpi.org/cafe.pdf](http://www.vtpi.org/cafe.pdf).

Todd Litman (2006), *Transportation Cost and Benefit Analysis; Techniques, Estimates and Implications*, Victoria Transport Policy Institute ([www.vtpi.org/tca](http://www.vtpi.org/tca)).

Todd Litman (2006), "Changing Travel Demand: Implications for Transport Planning," *ITE Journal*, Vol. 76, No. 9, ([www.ite.org](http://www.ite.org)), September 2006, pp. 27-33; at [www.vtpi.org/future.pdf](http://www.vtpi.org/future.pdf).

Todd Litman (2007), *Guide to Calculating Mobility Management Benefits*, Victoria Transport Policy Institute ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/tdmben.pdf](http://www.vtpi.org/tdmben.pdf).

Todd Litman (2008), *Transportation Elasticities: How Prices and Other Factors Affect Travel Behavior*, Victoria Transport Policy Institute ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/elasticities.pdf](http://www.vtpi.org/elasticities.pdf).

Todd Litman (2008), *Land Use Impacts On Transport: How Land Use Factors Affect Travel Behavior*, VTPI ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/landtravel.pdf](http://www.vtpi.org/landtravel.pdf).

Todd Litman (2008), *Well Measured: Developing Indicators for Comprehensive and Sustainable Transport Planning*, VTPI ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/wellmeas.pdf](http://www.vtpi.org/wellmeas.pdf).

Todd Litman (2008), *Comprehensive Transport Planning: Best Practices For Evaluating All Options And Impacts*, VTPI ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/comprehensive.pdf](http://www.vtpi.org/comprehensive.pdf).

Todd Litman (2008), *Introduction to Multi-Modal Transport Planning*, VTPI ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/multimodal\\_planning.pdf](http://www.vtpi.org/multimodal_planning.pdf).

Todd Litman (2009), *Are Vehicle Travel Reduction Targets Justified? Evaluating Mobility Management Policy Objectives Such As Targets To Reduce VMT And Increase Use Of Alternative Modes*, Victoria Transport Policy Institute ([www.vtpi.org](http://www.vtpi.org)); at [www.vtpi.org/vmt\\_red.pdf](http://www.vtpi.org/vmt_red.pdf).

VTPI (2010), *Online TDM Encyclopedia*, Victoria Transport Policy Institute ([www.vtpi.org/tdm](http://www.vtpi.org/tdm)).

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