IN THE HIGH COURT OF NEW ZEALAND **AUCKLAND REGISTRY**	**CIV-2021-404-1618**
I TE KŌTI MATUA O AOTEAROA **TĀMAKI MAKAURAU ROHE**	
UNDER	the Judicial Review Procedure Act 2016
IN THE MATTER OF	an application for judicial review
BETWEEN	**ALL ABOARD AOTEAROA INCORPORATED** Applicant
AND	**AUCKLAND TRANSPORT** First Respondent
AND	**THE REGIONAL TRANSPORT COMMITTEE FOR AUCKLAND** Second Respondent
AND	**AUCKLAND COUNCIL** Third Respondent

AFFIDAVIT OF TODD ALEXANDER LITMAN
December 2021

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AFFIDAVIT OF TODD ALEXANDER LITMAN

I, Todd Alexander Litman, of Victoria, Canada, Planning Consultant, swear –

1. I make this affidavit in support of All Aboard Aotearoa Incorporated's application for judicial review of decisions made by Auckland Transport, the Regional Transport Committee for Auckland, and Auckland Council concerning the Regional Land Transport Plan for Auckland (**RLTP**).

2. I confirm that I have read and complied with the Code of Conduct for Expert Witnesses in preparing this affidavit.

Qualifications and experience

3. I am the founder and Executive Director of the Victoria Transport Policy Institute, an independent research organisation in British Columbia, Canada that performs transportation policy analysis for clients around the world. I have worked on numerous studies that evaluate the costs, benefits and equity implications of transportation policies and projects.

4. I authored *Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications*, a comprehensive study which provides cost and benefit information in an easy-to-apply format; the *Online TDM Encyclopedia*, a comprehensive internet resource for identifying and evaluating mobility management strategies; and more than one hundred peer-reviewed articles and studies on related subjects.

5. A number of my articles that are relevant to my analysis in this affidavit are set out in schedule 1. Other references are set out in schedule 2. My full CV is at schedule 3.

Documents provided to me

6. I have been provided with the following documents:

   (a) The pleadings filed by the parties in the proceeding;

   (b) The Government Policy Statement on Land Transport 2021 (**GPS**);

   (c) The Auckland Regional Land Transport Plan 2021 (**RLTP**);

   (d) Advice prepared by Auckland Transport staff ahead of a meeting of the Regional Transport Committee on 18 June 2021 (**Auckland Transport Advice**). This advice also appears at Appendix 9 of the RLTP.

Instructions

7. I am instructed to address the following issues:

   (a) The four strategic priorities in the GPS, including whether and how they support one another;

   (b) The modelled emissions and vehicle travel impacts resulting from the RLTP investment programme; and

   (c) My response to various assertions made in the Auckland Transport Advice and the RLTP about why further emissions reductions cannot be delivered as part of the investment programme.

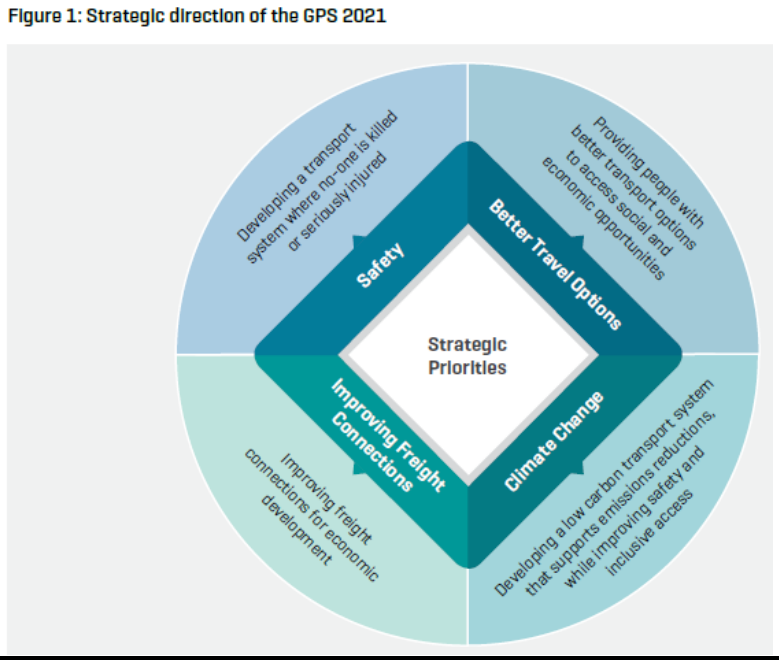
GPS strategic priorities

8. A basic principle of good planning is that individual, short-term decisions should reflect strategic, long-term goals. It is therefore important that any plan have clearly stated strategic goals against which individual decisions can be tested.

9. The GPS identifies four strategic priorities as set out in the figure below.

Figure **Government Policy Statement on Land Transport 2021**

[[301.0143]



10. In my view, these four strategic priorities do not pull in opposing directions or call for different interventions. Rather, they all point to and require reducing the demand for private vehicle travel and providing resource-efficient alternatives. In other words, the same interventions can be deployed to deliver all four priorities. Specifically, all four priorities justify more multimodal planning, and policies that reduce private vehicle travel.

11. Policies and planning practices that reduce private vehicle travel, and result in more efficient use of transportation resources (road and parking supply, energy, and financial costs, plus risk and environmental quality), are

sometimes referred to by the general term “travel demand management”. This includes multimodal planning that improves and favours resource-efficient modes (public transport and active modes); efficient pricing of roads, parking, vehicles, vehicle insurance, and fuel; and smart growth development policies that create more accessible, multimodal communities.

12. Policies and initiatives directed at the reduction of private vehicle travel can significantly improve transport options, particularly for non-drivers; increase safety; reduce carbon emissions (often by more than half); and prioritise higher-value trips and more space-efficient modes, including freight and service vehicles, and high occupant vehicles. In other words, strategies that reduce the demand for private vehicles promote all of the strategic objectives of the GPS. By contrast, road and parking facility expansions tend to increase private vehicle travel, undermining each of the four strategic priorities, and increasing congestion and emissions.

13. I address the importance of reducing private vehicle travel for each of the four strategic priorities in more detail below.

Providing better travel options

14. To be efficient and equitable an urban transport system must offer diverse mobility options, with incentives for travellers to choose the best option for each trip. This means, for example, that travellers have convenient and safe walking, cycling and micromobilities (e-scooters, e-bikes, etc.) for neighbourhood trips; efficient public transport services and support for ridesharing for travelling on busy urban corridors; and cars and taxis available when they are really the most appropriate option for a particular trip, considering all benefits and costs.

15. Many current transport policies and planning practices contradict these efficiency and equity goals. For example, for the last century transport planning agencies have evaluated transport system performance based primarily on travel speed, using indicators such as average traffic speeds, roadway level-of-service, and hours of congestion delay. These practices favour faster modes, particularly car travel, over slower but more affordable and resource-efficient modes such as walking, cycling and public transport, in transport investment, planning and road facility design. This creates transport systems where it is relatively easy to get around by car but often inefficient and difficult to access destinations by other modes.

Reducing emissions

16. The RLTP suggests (page 60) that “The intervention with the greatest potential to reduce emissions is the accelerated uptake of EVs,” and therefore focuses heavily on electric vehicle purchase incentives. In fact, it is generally recognised that electric vehicle incentives are an expensive and inadequate way to achieve emission reduction goals, and that equal support needs to be given for vehicle travel reduction policies (Alarfaj, Griffin and Samaras 2021; McCahill 2021; Vaughan 2019; Yudkin, et al. 2021).

17. Vehicle travel reduction strategies complement and enhance vehicle fleet electrification efforts in the following ways:

    (a) They can reduce emissions far more quickly than vehicle electrification. A set of cost-effective vehicle travel reduction strategies, including significant walking, cycling and public transport improvements, high occupancy vehicle and bus priority lanes, efficient road and parking pricing, and more compact development, could reduce vehicle travel, emissions and other traffic costs in Auckland far more effectively than fleet electrification.

    (b) They prevent rebound effects. Because electric vehicles have much lower operating costs than fossil fuel vehicles, they are likely to be driven 10-30% more, increasing traffic congestion, infrastructure and safety costs, and making emissions reductions and other strategic priorities more difficult to achieve. Vehicle travel reduction policies are needed to prevent this erosion of benefits from electrification.

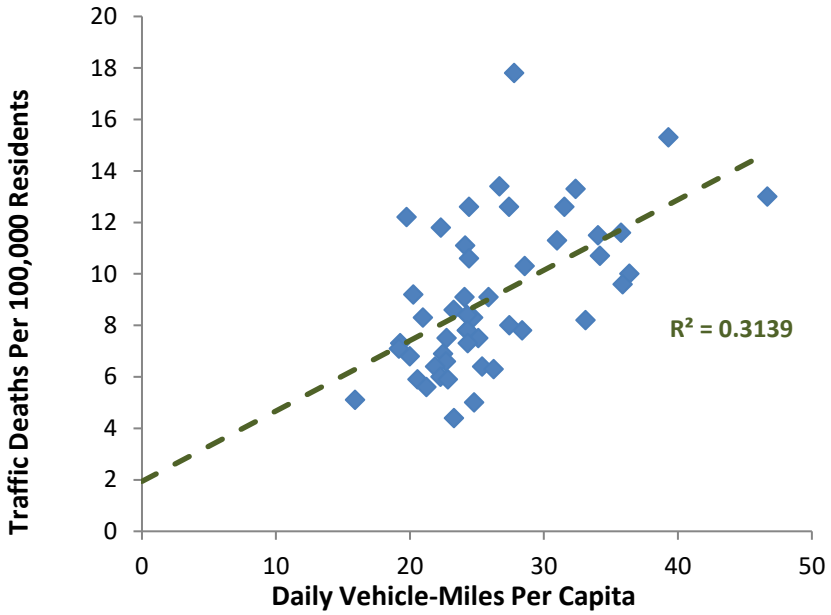
    (c) They provide additional efficiency and equity benefits, ensuring that everybody is better off. These benefits include traffic and parking congestion reductions, road and parking infrastructure savings, user savings and affordability, more independent mobility for non-drivers, reduced noise and local air pollution, more liveable communities, and habitat preservation.

Improving safety

18. Vehicle travel reduction policies can provide significant traffic safety and public health benefits (Welle, et al. 2018). A recent study for the New Zealand government found that the fatality rate is strongly related to vehicle kilometres travelled (**VKT**), with a 1% increase in VKT associated with a greater than 2.5% increase in the number of crashes, indicating that vehicle travel reductions can provide large safety benefits (Deloitte, 2017).

19. The figure below shows the positive relationship between per capita vehicle travel and per capita traffic fatality rates among US cities. This and other studies indicate that planning decisions that increase vehicle travel and traffic speeds increase traffic risk, while those that reduce total vehicle travel and shift travel to non-car modes tend to increase public health and safety (CDC Foundation 2020). Total crash rates tend to be lowest on moderately congested roads (V/C=0.6) and increase at lower and higher congestion levels (Marchesini and Weijermars 2010), so casualty rates often increase when congestion is reduced (Potts, et al. 2014).

Figure **Vehicle mileage versus traffic deaths**



Per capita traffic fatality rates tend to increase with per capita vehicle-miles in U.S. Metropolitan regions.

Improving freight connectivity

20. Although freight vehicles typically represent less than of 10% of total vehicle-kilometres, because of their large size and weight they cause a major share of road wear, typically generate about a third of pollution emissions, and impose a relatively large portion of urban congestion delay and crash risk on other road users. There are many ways to increase freight travel efficiency, for example, by shifting longer-distance shipping from trucks to ships and rail, and by shifting local distribution from larger to smaller trucks, and sometimes to cargo e-bikes. Vehicle travel reduction strategies, such as efficient road tolls, increase freight efficiency by giving shippers incentives to use alternatives to trucks when possible, and by reducing the traffic congestion that trucks experience when driving on urban roads.

Other benefits

21. Vehicle travel reduction strategies also help achieve affordability and social equity goals by improving lower-cost mobility options, unbundling parking (so car-free households are no longer required to pay for costly parking spaces they do not need), and by creating more compact, multimodal communities where it is easy to get around without a car.

22. They also tend to support economic development. This is particularly significant in New Zealand because the country imports all vehicles and most vehicle fuel. Vehicles and petroleum products represent about a third of total consumer imports. Expenditures on vehicle and fuel tend to provide fewer jobs and generate less economic activity than most other consumer expenditures, and are particularly low compared with expenditures on public transport services. As a result, transport policies that reduce vehicle

travel and associated expenditures tend to increase national employment and productivity.

23. Vehicle travel reduction policies are generally much more cost effective than expanding roads and parking facilities, considering all impacts.

Emissions and vehicle travel impacts of the RLTP

24. Analysis summarised in RLTP indicates that under the investment programme:

    (a) Total regional VKTs will increase by 22% by 2031 (with the associated increases in congestion and safety problems that result from increasing use of private vehicles); and

    (b) Total carbon emissions will increase by 6%, or decrease by 1% if the modelled impact of central government's Clean Car policy and a shift to biofuels are taken into account. Either way, that is far short of regional and national goals and targets.

25. A 1% reduction in emissions after $37 billion worth of investment over the course of a decade is insignificant. It is smaller than the statistical uncertainty in this type of modelling. It represents no material progress towards the greenhouse gas emissions reduction targets identified in the applicant's statement of claim. I therefore do not consider that the RLTP delivers on the climate change strategic priority in the GPS.

26. In addition to delivering an insignificant reduction in tailpipe emissions, the RLTP is modelled to give rise to substantial increases in total VKTs. As recognised in the GPS itself (see section 2.6, page 25), reducing VKTs is essential for reducing emissions from the transport system. I consider that failing to reduce VKTs also risks undermining the other strategic priorities of the GPS of improving travel options, the safety of the transport system, and freight connectivity.

27. I consider that a much larger vehicle travel and emissions reductions could be achieved as part of the RLTP programme if a different mix of investments and policies were pursued. In particular, any meaningful effort to reduce emissions should reprioritise the planned investment away from roads – both in terms of new highways that are planned under the RLTP, and the budget for renewing existing roading assets – to more resource-efficient modes (public transport, and walking and cycling).

Responses to claims about why further emissions reductions cannot be delivered

28. I respond below to various claims made in the Auckland Transport Advice and the RLTP about why further emissions could not be delivered.

"Fundamentally, investment in infrastructure or services only has a very minor impact on total emissions, whether positive or negative."

29. I disagree with this assertion. Infrastructure investments have very large and durable impacts on vehicle travel, emissions, safety, transport options and economic opportunity for non-drivers, and freight transport efficiency.

Abundant evidence indicates that expanding urban highways induces additional vehicle travel and emissions.

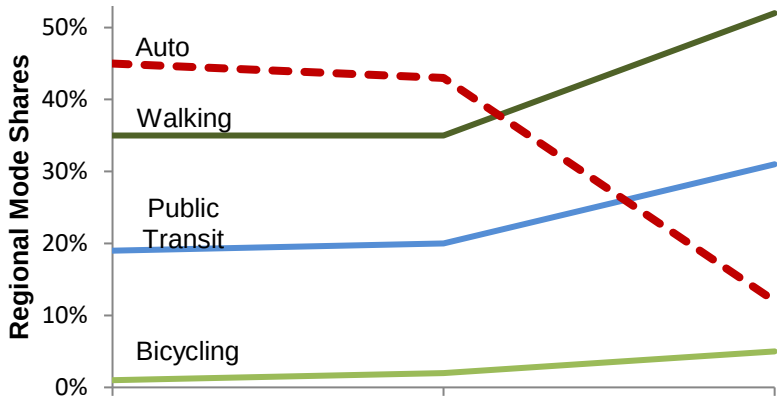
30. There are many ways to demonstrate that the statement is inaccurate. For example, an article by leading academic researchers, “Urban Infrastructure Choices Structure Climate Solutions” (Creutzig, et al. 2016), found that appropriate urban infrastructure planning can provide large emission reductions. The authors state, “we suggest that urban climate solutions should be structured along infrastructures.”

31. Many studies show large variations in per capita vehicle travel and emissions between different neighbourhoods. Much of this variation is explained by differences in infrastructure: whether governments invest in roadway expansions and require businesses to provide off-street parking facilities, or instead invest in sidewalks, cycleways and public transport improvements. Emissions are also affected by the supply, design and pricing of housing, utilities and public services (schools, fire and police services, etc.).

32. There are many real-world examples of the dramatic impact that investment decisions can have on vehicle traffic (and thus emissions). For example, Paris, France has implemented many policies to encourage sustainable transport. During the last two decades the city has improved public transport services and introduced new mobility options such as bike rental and electric car-sharing (2011). It is reducing city centre parking supply, traffic speeds and vehicle traffic in order to provide more space for pedestrians, bus and bike lanes, and trees, and to reduce noise and air pollution. It has also banned older cars from downtown neighbourhoods during weekdays and introduced car-free days.

33. The figure below illustrates the large reduction in car mode share that Paris has achieved since 2000. The mode share of cars in the city reduced from 45% in 2000 to 12% in 2019, and walking, cycling and public transport travel significantly increased. The policies being implemented are predicted to reduce central city vehicle traffic by more than half.

Figure **Paris mode shares** (C40 2019; Goletz, Heinrichs and Feige 2016)



The Paris region has reduced automobile mode shares from 45% in 2000 down to 12% in 2019, and significantly increased walking, bicycling and public transit travel. These vehicle travel reduction policies have proven popular; the Mayor who introduced them was reelected, and the policies are expanding.

"It is not a given that roading projects will lead to increased tailpipe emissions."

34. Although some road projects such as rural road improvements may not increase vehicle travel or emissions, extensive research indicates that expanding congested urban highways generally does (Handy and Boarnet 2014; Litman 2020). Many jurisdictions are now revising their highway project evaluation process to account for these impacts (Sundquist 2020).

"Two major highway projects in Tāmaki Makaurau Auckland, Penlink and Mill Road (the latter of which has now been cancelled by the Government for reasons that include the project's adverse impacts on the Government's climate commitments) would have resulted in a decrease in carbon dioxide emissions by 2031"

35. Although expanding congested roads may sometimes reduce per-kilometre emission rates, it generally increases total emissions, particularly over the long run, by increasing high traffic speeds (more than 80 kms/hr), and by inducing more vehicle travel (Handy and Boarnet 2014). According to a study by the Norwegian Centre for Transport Research (TØI 2009):

> Road construction, largely speaking, increases greenhouse gas emissions, mainly because an improved quality of the road network will increase the speed level, not the least in the interval where the marginal effect of speed on emissions is large (above 80km/hr). Emissions also rise due to increased volumes of traffic (each person traveling further and more often) and because the modal split changes in favor of the private car, at the expense of public transport and bicycling.

36. Many traffic models fail to account for these effects and so tend to underestimate the additional tailpipe emissions caused by urban roadway expansions (Volker, Lee and Handy 2020).

"There is no available funding to provide further reallocation of general road space towards cycling and other sustainable modes beyond what is provided for in the RLTP"

37. This makes little sense to me. The introduction to the RLTP records that it is a $37 billion investment programme. Much of the budget is allocated to building new roads and renewing existing ones. Facilities for cycling and other sustainable modes tend to cost far less per passenger-kilometre or trip than facilities for car travel. I do not accept that further funding could not be allocated away from roading projects and programmes to road space reallocation projects, including protected cycleways. It is a question of what investments are prioritised.

"In practice, it is also likely that gains from deterring car travel through lane reallocation alone would be largely offset by the increase in emissions associated with increased congestion and diversion amongst the remaining traffic. Reallocation of general traffic lanes without additional effective alternatives (which cannot be funded) would also materially reduce the RLTP's contribution to LTMA objectives around effectiveness and economic, social and cultural public interests."

38. These statements are inaccurate, particularly for an integrated plan that includes improvements to non-car modes and policies to reduce vehicle travel. Experience in many cities indicates that reallocating road space

from car traffic to more resource-efficient modes generally reduces total vehicle travel, traffic problems and emissions (ITF 2021). This is sometimes called “disappearing” or “evaporated” traffic (Hidalgo 2021). This tends to increase the efficiency of the transport system, measured as the number of people transported over a given road or the number of destinations that people can reach within a given time period.

39. A European Commission study found that (EC 2009):

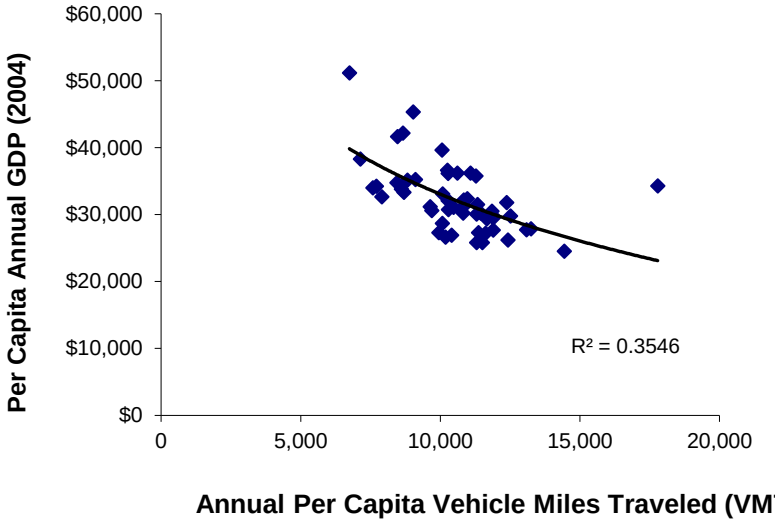
> When the roads under consideration are already highly congested, it is typically assumed that reducing the capacity available for cars will result in increased traffic congestion in the surrounding streets. However, as the evidence in this document demonstrates, this is not necessarily the case. The experience in a number of European cities is that traffic problems following the implementation of a scheme are usually far less serious than predicted; after an initial period of adjustment, some of the traffic that was previously found in the vicinity of the scheme ‘disappears’ or ‘evaporates’, due to drivers changing their travel behaviour; and as a result the urban environment becomes more liveable in many respects.

40. As two transport engineering professors explain (King and Krizek 2020):

> access to employment, amenities and services should be dramatically increased through reoriented street space toward human-scaled transport modes which will improve safety, reduce pollution, and save households and governments money.

41. The claim that shifting driving to sustainable modes is contrary to economic, social and cultural interests is similarly unjustified and untrue (Fleming, Turner and Tarjomi 2013). All else being equal, economic productivity tends to be inversely related to per capita vehicle travel, as illustrated in the figure below, due to the efficiencies and agglomeration benefits provided by compact development and multimodal transport.

Figure **Per capita GDP and VMT for US states** (US Bureau of Economic Analysis)



Per capita economic productivity increases as vehicle travel declines. (Each dot is a US state.)

42. Neighbourhood liveability, community cohesion and public health also tend to benefit from reduced driving and increased use of non-car modes. A study for NZTA titled “Reallocation of Road Space” found that road space reallocation tends to increase local economic activity by improving access

for non-car modes and creating more attractive retail environments (Fleming, Turner and Tarjomi 2013). The study notes, "a policy paradigm shift is occurring, where road space is increasingly being valued in terms of the movement of people and person journey time, rather than just vehicle numbers and journey time efficiencies alone." This suggests that road space reallocation can reduce emissions and provide economic, social and cultural benefits if it reduces local traffic problems, improves non-car travel, and creates more attractive and liveable urban streets.

43. The evidence from international cities is that large vehicle travel reductions can be achieved in ways that achieve the strategic priorities of the GPS, and provide other community benefits including affordability, fairness, public health and economic development. Appropriate reallocation of road space from cars to sustainable modes is likely to *increase* the efficiency of the transport system by providing effective alternatives, and need not undermine economic, social and cultural public interests.

SWORN at Victoria, British Columbia, Canada this 21 day of December 2021 before me:

Todd Alexander Litman

A person authorised to administer oaths by the law of British Columbia, Canada

LISA STEVENSON
NOTARY PUBLIC
110 - 777 BROUGHTON ST.
VICTORIA BC V8W 1E3
MY COMMISSION IS PERMANENT

SCHEDULE 1 – ARTICLES BY TODD LITMAN

Todd Litman (2001), "Generated Traffic: Implications for Transport Planning," *ITE Journal*, Vol. 71, No. 4, Institute of Transportation Engineers (www.ite.org), April, pp. 38-47. An updated version of this article is available as *Generated Traffic and Induced Travel: Implications for Transport Planning*, at www.vtpi.org/gentraf.pdf. This article and report have been widely cited by experts.

Todd Litman (2006), "Transportation Market Distortions," *Berkeley Planning Journal* (wwwdcrp.ced.berkeley.edu/bpj), Vo. 19, pp. 19-36; at www.vtpi.org/distortions_BPJ.pdf. This article examines common policies and planning practices that favor automobile travel over more affordable and resource-efficient modes, and the impacts of more comprehensive and unbiased planning.

Todd Litman (2013), "The New Transportation Planning Paradigm," ITE Journal (www.ite.org), Vo. 83, No. 6, pp. 20-28; at www.vtpi.org/paradigm.pdf. This summarizes fundamental changes occurring in how experts define transportation problems and evaluate potential solutions.

Todd Litman (2013), "Comprehensive Evaluation of Energy Conservation and Emission Reduction Policies," *Transportation Research A*, Vol. 47, pp. 153-166 (http://dx.doi.org/10.1016/j.tra.2012.10.022). This article describes why and how communities should apply comprehensive evaluation of emission reduction policies that account for induced travel and co-benefits.

Todd Litman (2015), *Analysis of Public Policies that Unintentionally Encourage and Subsidize Sprawl*, in partnership with the LSE Cities program (http://lsecities.net) for the New Climate Economy (http://newclimateeconomy.net); at http://bit.ly/1EvGtIN. This study identifies and quantifies various public policies that result in economically excessive vehicle travel and development sprawl.

Todd Litman (2018), "A New Traffic Safety Paradigm," *Transportation Talk* (the Journal of the Canadian Institute of Transportation Engineers), Winter, pp. 12-18; at https://bit.ly/2Febrwx. Updated version at www.vtpi.org/ntsp.pdf. This study indicates that automobile-oriented planning significantly increases per capita death rates, and vehicle travel reduction policies tend to provide large safety benefits.

Todd Litman (2021), *Not So Fast: Why Slower Is Often Better* (https://bit.ly/3jaOcuM), Streetsblog USA (https://usa.streetsblog.org); also at www.vtpi.org/nsf.pdf. This study indicates that conventional transportation project evaluation exaggerates the value of travel time savings, which favors faster modes over slower but more affordable and resource-efficient modes, and higher roadway design speeds than is optimal from a community's perspective.

Todd Litman (2021), *New Mobilities: Smart Planning for Emerging Transportation Technologies*, Island Press (https://islandpress.org); at https://islandpress.org/books/new-mobilities. This book critically evaluates the benefits and costs of various new transportation technologies and services, and their optimal role in an efficient and equitable transportation system. It suggests that, without strong TDM incentives, emerging transportation technologies will exacerbate rather than solve traffic problems.

Todd Litman (2021), *Comprehensive Transport Emission Reduction Planning: Guidelines for Evaluating Transportation Emission Reduction Strategies*, Victoria

Transport Policy Institute (www.vtpi.org); at www.vtpi.org/cterp.pdf. Many jurisdictions have ambitious greenhouse gas emission reduction targets and plans. This study critically evaluates the methods used to develop these plans. It finds that the evaluation process is often biased in ways that exaggerate the benefits of clean vehicles such as hybrid and electric automobiles, and undervalue vehicle travel reduction strategies such as transportation demand management (TDM) programs and Smart Growth policies.

SCHEDULE 2 – OTHER REFERENCES

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Todd Litman (2020), *Generated Traffic and Induced Travel: Implications for Transport Planning*, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/gentraf.pdf.

Todd Litman (2021), *Comprehensive Transportation Emission Reduction Planning*, Victoria Transport Policy Institute (www.vtpi.org); at www.vtpi.org/cterp.pdf.

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SCHEDULE 3 – TODD LITMAN CV

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Updated 23 August 2021
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Summary

Todd Litman is founder and executive director of the Victoria Transport Policy Institute, an independent research organization dedicated to developing innovative solutions to transport problems. His 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. His research is used worldwide in transport planning and policy analysis.

Mr. Litman has worked on numerous studies that evaluate transportation costs, benefits and innovations. He authored the *Online TDM Encyclopedia*, a comprehensive Internet resource for identifying and evaluating mobility management strategies; *Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications*, a comprehensive study which provides cost and benefit information in an easy-to-apply format; and *Parking Management Best Practices*, a comprehensive book on innovative management solutions to parking problems.

Mr. Litman has worked as a research and planning consultant for a diverse range of clients, including government agencies, professional organizations, developers and non-government organizations. He has worked in more than two dozen countries, on every continent except Antarctica.

Mr. Litman is a frequent speaker at conferences and workshops. His presentations range from technical and practical to humorous and inspirational. He regularly blogs on the Planetizen website. He is active in several professional organizations including the Institute of Transportation Engineers (ITE) and the Transportation Research Board (TRB, a section of U.S. National Academy of Sciences).

In addition to technical writing, Todd has co-authored two travel books (*Washington; Off the Beaten Path* and *Best Bike Rides in the Pacific Northwest*) with his wife, Shoshana Litman. They reside in Victoria, British Columbia.

Work Experience

Executive Director, Victoria Transport Policy Institute

Todd Litman is founder and Executive Director of the Victoria Transport Policy Institute (VTPI), is an independent research organization established in 1995. Mr. Litman performs research and policy analysis on a variety of issues, including economic analysis, full cost accounting, transportation demand management planning and evaluation, environmental and social impact analysis, equity analysis, multi-modal planning and transit program evaluation. Below are examples of his VTPI projects.

Emission Reduction Planning

Helped develop national land transport emission reduction plan evaluation framework. (Client: Waka Kotahi; New Zealand Transport Agency; Time Period: Sept.- Dec. 2020)

Managed Lane Development

Provided guidance for developing efficient and fair managed lanes, and assistance for responding to common criticisms. Led professional development workshops for policy makers, planners and the general public. (Client: Hillsborough MPO; Time Period: October 2020)

Developed Downtown Parking Management Strategy

Analyzed downtown Spartanburg's parking supply, demand and policies. Proposed a set of policy reforms and practices that could result in more efficient management of existing parking supplies, so fewer new spaces will be needed to serve future demands. Lead stakeholder workshop. (Client: Spartanburg Chamber of Commerce (www.spartanburgchamber.com); Time Period: June-Dec. 2019)

Edited Global Report

Edited the report, *Global Roadmap of Action: Toward Sustainable Mobility, Paper 2, Universal Urban Access* (https://bit.ly/2Nl5xzL). Included research and analysis of urban mobility trends and needs, and organizing information on sustainable transportation strategies (Client: Sustainable Mobility for All (www.sum4all.org) and the World Bank (http://worldbank.org); Time Period: Oct. 2018-April 2019)

Helped Develop Smart Cities Challenge Proposal

Helped develop an Infrastructure Canada Smart Cities Challenge proposal for the Greater Victoria region. Identified various innovative transportation services and technologies suitable for implementation in our region, and analysis of their potential impacts and benefits. (Client: South Island Prosperity Project; Time Period: May-July 2018)

Helped Develop National Parking Strategy

Helped define data collection best practices for the Luxembourg National Parking Strategy. Identified various data sets needed for policy analysis, planning and research purposes, and appropriate ways to collect and manage those data so they are credible, consistent and accessible. (Client: Luxembourg Ministry of Sustainable Development and Infrastructure; Time Period: July 2018-Spring 2019)

Suburban CBD Parking and Transportation Demand Management Plans

Helped develop comprehensive parking and transportation management plans for the Parramatta Central Business District, in the Sydney, Australia region. Identified and evaluated various parking and transportation demand management strategies, and organized them into integrated plans. (Prime contractor: Jacobs Engineering; Client: City of Parramatta; Time Period: March-July 2018)

Major Development Parking Management Strategy
Helped develop a comprehensive parking management strategy for Kirchberg, a large mixed-use development in Luxembourg. This included evaluating the roles that various parking management strategies can play achieving strategic planning goals in this district, organizing them into an integrated, long-term parking management plan, and leading professional development workshops for planners, designers and developers. (Prime contractor: Gehl Associates; Client: City of Luxembourg; Time Period: March-December 2018)

Town Center Parking Plan
Helped develop a comprehensive parking management plan for the town centre in Canmore, Alberta, a rapidly growing resort community. This included identifying and evaluating various parking management strategies, and working with stakeholders to develop an integrated parking management plan. (Client: City of Canmore; Time Period: April-July 2018)

Implications of New Mobility Services and Technologies on Parking Demand and Design
Produced a "Future Proof Parking Study" which investigated how emerging mobility services and technologies are likely to affect parking demands and facility design requirements at Google Corporation facilities. (Client: XL Construction; Time Period: January-March 2018)

Impacts of Ridehailing and Autonomous Vehicles on Commercial Parking Demands
Investigated how emerging vehicle services and technologies, such as ridehailing and autonomous vehicles, are likely to affect commercial parking demands, and ways that parking property owners can minimize risks and maximize asset value. (Client: proprietary; Time Period: Oct.-Dec. 2017)

Commute Options Economic Evaluation
Compared highway, bus, rail and ferry commute improvement options between Victoria and West Shore suburbs. Wrote the report, *Comprehensive Evaluation of West Shore to Victoria Commute Options*. (Client: Focus Equities/Westhills; Time Period: November 2016-February 2017)

Contributed to Analysis of Sprawl Costs in India
Helped develop a framework for analyzing the various economic, social and environmental costs of sprawl in India. Contributed to the report, *Better Cities, Better Growth: India's Urban Opportunity. Synthesis Paper for Policy Makers* (http://bit.ly/2lTwEU3). (Client: London School of Economics, on behalf of the World Resources Institute and the New Climate Economy Cities Program www.newclimateeconomy.net; Time Period: October 2014 – January 2015)

Transit Funding Options Analysis
Identified and evaluated potential local funding options for financing Nashville, Tennessee's iMotion strategic transit plan. This involved a comprehensive review of transportation funding strategies used by cities around the world, creating a framework for evaluating these options according to eight criteria, consultation with various stakeholders concerning these options, and producing a detailed report, Evaluating Middle Tennessee Region Public Transportation Funding Sources. (Client: Nashville Chamber of Commerce; Time Period: April-November 2016)

Mobility on Demand Performance Indicators
Helped develop appropriate performance indicators for evaluating Mobility On Demand (MOD) transportation options such as ride hailing services. This included reviewing and evaluating potential indicators, participating in two workshops, and contributing to a report. (Client: US Federal Transit Administration; Time Period: September 2016-February 2017)

Parking Policy Reform
Provided expert testimony concerning the benefits of allowing developers to price parking in Oakville, Ontario, where it is currently forbidden by regulation. (Client: Healthcare Properties Holding; Time Period: August-October 2016)

Public Transit Safety Benefits Study
Performed a comprehensive study concerning public transportation traffic safety impacts. This research indicates that transit travel has about a tenth the traffic casualty (death and injury) rate as automobile travel, and transit-oriented communities have about a fifth the per capita traffic casualty rate as automobile-oriented communities, but these effects are generally overlooked in conventional traffic safety planning. Recommended strategies for communicating transit safety benefits. Produced the report, The Hidden Traffic Safety Solution: Public Transportation. (Client: American Public Transportation Association; Time Period: November 2015-April 2016)

Strategic Planning Expert Advisor
Participated as an expert advisor in the Dubai *Masar Towards 2030 Workshop* which developed the Emirate's strategic transportation planning goals. This involved a detailed review of current transport policies and activities, and development of specific recommendations for addressing transport problems and creating a more efficient and sustainable transportation system. (Client: Dubai Road and Transport Authority; Time Period: January 2016)

Transportation Demand Management Plan Review
Provided detailed evaluation of the TDM component of the Perth Transport Plan, including analysis of the effectiveness, costs and benefits of potential TDM strategies for the Perth and Peel regions, and recommendations for planning and implementation. (Client: Western Australia Department of Transportation; Project Manager: Ian Wallis; Time Period: November-December 2015)

Environmentally Sustainable Transportation Conference Evaluation
Commissioned to perform a comprehensive evaluation and present a keynote speech at the *Ninth Regional EST Forum in Asia* (http://bit.ly/1NWM93g), a major international conference held 17-20 November in Kathmandu, Nepal. Provided conference support and produced the report titled, *Major Challenges, Progress and Achievements by Asian Countries on the Implementation of EST Policies and Measures from Aichi (2005) to Kathmandu (2015)*. (Client: United Nations Centre for Regional Development; Time Period: October 2015-March 2016)

Transportation Demand Management Plan Development
Helped evaluate potential transportation demand management (TDM) strategies and lead a stakeholder workshop to develop a comprehensive TDM program as part of the Perth, Australia region's long-term transportation plan. (Client: Western Australia Department of Transportation; Time Period: June – July 2015)

Public Transit Planning Professional Development Workshop
Lead a three-day professional development workshop for transportation planners concerning current best practices for evaluating and communicating public transit benefits. The workshop explored the roles that public transit plays in a modern, growing city, and methods for quantifying, maximizing and communicating those benefits in various situations. (Client: *IETT*, Istanbul, Turkey's primary public transit service provider; Time Period: June 2015)

Comprehensive Analysis of Sprawl Costs and Development Policy Distortions
Performed research on the costs and benefits of various development patterns, optimal development policies, potential policy distortions that result in economically excessive sprawl, and

developed a framework for estimating the incremental costs of sprawl. Produced a detailed report, *Analysis of Public Policies That Unintentionally Encourage and Subsidize Urban Sprawl* (http://bit.ly/1EvGtIN). (Client: London School of Economics, on behalf of the New Climate Economy Cities Program at www.newclimateeconomy.net; Time Period: Oct. 2014 – Jan. 2015)

Environmentally Sustainable Transportation Conference Backgrounder

Commissioned to write a comprehensive 58-page backgrounder and keynote presentation for the *Eighth Regional EST Forum in Asia* (www.baq2014est.org), a major international conference held 19-21 November in Colombo, Sri Lanka. Provided conference support and produced the report titled, *Implementing Transport Policies and Programmes toward Realizing "Bali Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents towards Next Generation Transport Systems in Asia"* (www.uncrd.or.jp/content/documents/21438EST-P1-BGP_VITP.pdf). (Client: United Nations Centre for Regional Development; Time Period: October-December 2014)

Rural Community Public Transit Strategic Development

Performed detailed analysis for the Yellowhead County, Alberta Community Transportation Study. Analyzed demographic and economic trends that increase rural transit demands, identified ways to meet those demands, and developed specific planning recommendations. (Client: Yellowhead County, Alberta; Prime contractor: Opus International; Time Period: June-September 2014)

Public Transit Strategic Development and Benefits Evaluation

Provided support for creating a strategic public transit development vision, evaluating transit benefits, and identifying potential funding options suitable for a rapidly urbanizing region. Planned and lead public forums and professional development workshops that explored various public transit improvement benefits, and ways to communicate those benefits to decision-makers and the general public. PowerPoint presentation available at http://coic2.org/transportation/regional-planning. (Client: Central Oregon Intergovernmental Council; Time Period: June-August 2014)

Multi-Modal School Access Planning Lesson Plan

Developed the *Multi-Modal School Transportation Planning: Part 1 and Part 2* for the American Clearinghouse on Educational Facilities website, available at www.acefacilities.org/interactivelessons. These lesson plans explore why and how to improve school walking and cycling access, and how to evaluate these benefits and communicate them to school decision-makers. (Client: American Clearinghouse on Educational Facilities. Time Period: October 2013 – March 2014)

Sustainable Urban Development

Helped update Abu Dhabi's *Plan Capital 2030*. Through a planning charrette process with extensive stakeholder involvement, helped identify practical ways to incorporate social sustainability factors into the city of Abu Dhabi's strategic development plan. These factors include public fitness and health, community cohesion (the quality of neighborhood interactions), basic mobility for non-drivers, and culture. (Client: Abu Dhabi Urban Planning Council. Time Period: September 2013)

Transport Safety and Security Analysis

Investigated transportation safety and security issues to consider for strategic planning in the Greater Vancouver region. Identified methods for measuring transport risks, and evaluated the relative risks of different modes, differences between actual and perceived risk, the impacts that perceived risk has on travel activity, methods for reducing risks, and implications for transport policy and planning. (Client: TransLink. Project Manager: Chris Quigley. Time Period: December 2011 - June 2012)

Transportation Best Practices Evaluation Professional Development

Planned and presented professional development workshops on comprehensive and multi-modal transport planning for planners, economists and policy analysts, for the Asian Transport Forum 2012. (Client: Asian Development Bank. Project Manager: Lloyd Wright. Time Period: Nov. 2012)

Transportation Demand Management Professional Development Program

Planned and presented professional development workshops on sustainable transport planning and transportation demand management for planners and engineers in South Africa. (Client: South African Institution of Civil Engineering. Project Manager: Andre Frieslaar. Time Period: Sept. 2012)

Public Transit Funding Options Evaluation

Provided technical support for a special task force that identified potential new local public transit funding options. This included developing a comprehensive framework for evaluating potential options from various perspectives, in order to provide a recommended package of preferred local funding options with an implementation strategy. This involved a survey and focus groups to help identify public concerns and preferences regarding funding options. Final report, *Regional Transit Local Funding Options* (http://tinyurl.com/pyq9dez) (Client: Capital Regional District and BC Transit. Project Manager: Marg Misek-Evans. Time Period: November 2011 – Sept. 2012)

Transportation Demand Management (TDM) in Chinese Cities Guidebook

Coauthored the report, *Reducing Carbon Emissions through Transport Demand Management Strategies: Review of International Examples* (www.tdm-beijing.org/files/International_Review.pdf) for the Beijing Transportation Research Center and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). Identified various TDM strategies, described examples of their implementation in cities around the world, and evaluated their potential impacts in Chinese cities. (Client: GIZ. Project Manager: Daniel Bongardt. Time Period: Sept. 2011 – March 2012)

Parking Management Policy Development

Helped develop parking management plan for downtown Kingston. Investigated current and future parking problems and the role that more efficient parking management can play in helping to achieve strategic planning objectives. Identified various parking management strategies appropriate for downtown Kingston. Provided presentations and lead stakeholder workshops for public officials, planning practitioners, local businesses and residents. (Client: City of Kingston. Project Manager: Sheila Kidd. Time Period: July - October 2011)

Comprehensive Transport Project Economic Evaluation Methodology Development

Identified potential transport project assessment improvements. Defined sustainable development principles and their implications for transport planning, summarized current transport project evaluation best practices, identified ways to improve current practices, and recommended research to create better assessment tools suitable for use in developing country conditions. (Client: Asian Development Bank. Project Manager: Jamie Leather. Time Period: September 2010 to April 2011)

Assessing Active Transport Benefits

Investigated practical methods for evaluating the full benefits, including health benefits, of policies and programs that increase walking and cycling activity. Created an evaluation framework, and preliminary research on methods for quantifying and monetizing these impacts. Summary report, Cost and Health Benefits of Active Transport in Queensland: Research and Review. (Client: Queensland Transport. Project Manager: CATALYST. Time Period: July 2010 to March 2011)

Downtown Parking Management Plan
Helped develop parking management plan for downtown Whitehorse, Yukon. Reviewed existing parking planning practices. Identified potential parking management strategies and policy reforms. Presented options to city officials and community groups. Provided recommendations. (Client: City of Whitehorse. Project Manager: Boulevard Transportation Planning. Time Period: June-July 2010)

Vehicle Insurance Pricing Reform Research
Performed detailed analysis of the benefits, costs and obstacles to implementing pay-as-you-drive vehicle insurance. Produced *Pay-As-You-Drive Vehicle Insurance in British Columbia*, (www.vtpi.org/paydbc.pdf) backgrounder report. (Client: Pacific Institute for Climate Solutions [www.pics.uvic.ca]. Project Manager: Dr. Thomas Pedersen. Time Period: May 2010-June 2011)

Community Energy and Emissions Reduction Plans
Helped 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)

Public Transit Benefits Evaluation
Performed analysis of the full benefits of public transportation, including public health and economic development. Analyzing the degree to which current planning accounts for these benefits. Produced the report, *Evaluating Public Transportation Health Benefits* (www.vtpi.org/tran_health.pdf). (Client: American Public Transportation Association. Project Manager: Robert Padgette. Time Period: December 2008-November 2009)

Transportation and Public Health Study
Performed research on the effects transport patterns have on public health and ways to incorporate health objectives into transportation policies and planning practices. Presented preliminary findings at the *Linking Transportation Policy and Public Health* conference, November 13-14. Final results were published in the book, *Equitable Transportation Policy: Recommendations and Research*. (Client: US Center of Disease Control and the Healthy Eating and Active Living Convergence Partnership [www.convergencepartnership.org]). Project Manager: Professor Stephanie Pollack, Northwestern University. Time Period: Oct. 2008-Nov. 2009)

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)

Public Bike Study
Helped evaluate the feasibility, costs, benefits and implementation requirements of developing a public bicycle rental system in the Vancouver region. (Client: TransLink. Project Manager: Jan Pezarro, Quay Communications. Time Period: January-May 2008)

Transportation Energy Plan
Identified national, regional and local strategic policies for managing transportation challenges associated with rising oil prices. Developed estimates of future transport energy demands, projected fuel prices and optimal policies to address uncertain and possibly variable and rising fuel prices. Coauthored the report, *Managing Transport Challenges When Oil Prices Rise*

(www.ltsa.govt.nz/research/reports/357.pdf). (Client: New Zealand Transport Agency. Project Manager: McCormick Rankin Cagney. Time Period: May-August 2008.)

Dubai Urban Transportation Reforms

Lead presenter at one of the first professional development workshop for transport planners and engineers in the United Arab Emirates. Identified and evaluated urban transport policy reforms to increase transport system efficiency in the city of Dubai. Recommended strategies included efficient road pricing, parking pricing and management, pedestrian and cycling improvements, and public transit service improvements. Presented these recommendations to the Dubai Road and Transport Authority Board of Directors, April 2008. (Client: Dubai Road and Transport Authority. Time Period: January-April 2008.)

Connected Urban Development

Served as a special advisor on transportation and land use planning for the *Connected Urban Development* program (www.connectedurbandevelopment.org), which uses advanced technologies to improve mobility options in major cities, including personal handheld navigation devices, electronic public transit information and payment systems, and road pricing. (Client: Cisco Systems and the Clinton Foundation. Project Manager: Nicola Villa. Time Period: Aug. 2007- Dec. 2009.)

Municipal Parking Policy Review

Reviewed current municipal parking policies, practices and challenges. Present workshops to city officials and community stakeholders concerning parking policy options. Identify potential parking policy reforms to support the city's transportation and land use planning objectives. (Client: City of Coquitlam. Project Manager: Carlos M. Pérez. Time Period: August 2007- February 2008.)

Transit Improvement Valuation Study

Investigated public transit service improvement valuation. Analyzed the value transit passengers place on factors such as comfort, convenience and reliability; identified ways to quantify these factors by adjusting travel time unit costs; identified how such improvements affect travel behaviour. (Client: TransLink. Project Manager: Don Buchanan. Time Period: Jan.-Feb. 2007)

Regional Energy Plan

Helped develop a regional energy plan. Identified and evaluated potential transportation energy conservation and emission reduction strategies suitable for implementation by local and regional governments. (Client: Capital Regional District [www.crd.bc.ca]. Project Manager: Sheltair Scientific. Time Period: May-December 2006.)

Urban Transit Program Development

Presented at workshops on strategic urban transport planning and program development, particularly the roles of mobility management; walking, cycling and public transport service improvements; and smart growth land use policies. Helped convince local officials to develop Bus Rapid Transit (BRT) systems for the 2010 World Cup. (Client: South Africa Council for Scientific and Industrial Research. Project Manager: Christo Mynhardt. Time Period: June-July 2006.)

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.)

Downtown Parking Management Evaluation
Helped develop and evaluate parking mitigation strategies for the Alaskan Way Viaduct and Seawall Replacement (AWVSR) project, which will reduce parking supply in downtown Seattle, Washington during a three year construction period. (Client: Seattle Department of Transportation. Project Manager: Mary Catherine Snyder. Time Period: July-September 2006.)

Improving Provincial Transit Pass Program
Evaluated provincial program that provides subsidized transit passes to lower-income seniors and people with disabilities. Reviewed the programs goals and objectives, investigated opportunities to improve service delivery, helped develop long-term strategic objectives, and provided specific program improvement recommendations. (Client: British Columbia Ministry of Employment and Income Assistance. Project Manager: Jeanette Gault. Time Period: August-December 2006.)

Biofuels Subsidy Study
Evaluated Canadian ethanol and biodiesel subsidies as part of an international study. Coauthored the report, *Biofuels: At What Cost? Government Support For Ethanol And Biodiesel In Canada* (Client: International Institute for Sustainable Development [www.iisd.org]. Project Manager: Ron Steenblik. Time Period: March, 2006 – April 2009.)

Transportation Cost Study
Coauthored a comprehensive study assessing the sustainability of Nova Scotia's transportation system using various indicators and cost categories. Provided recommendations for improving transport efficiency, affordability and sustainability. Published as *The GPI Transportation Accounts: Sustainable Transportation for Nova Scotia - Measuring Sustainable Development*. (Client: GPI Atlantic [www.gpiatlantic.org]. Project Manager: Ronald Colman. Time Period: Jan.-Dec. 2006.)

Transportation Facility Land Valuation Study
Helped develop transportation facility land valuation methods for various modes and locations. Published as *A Report On The Estimation Of Unit Values Of Land Occupied By Transportation Infrastructures In Canada* (www.vtpi.org/TC_Landvalue.pdf) (Client: Transport Canada. Project Manager: Professor Clarance Woudsma. Time Period: Nov. 2005-June 2006)

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)

Helped Develop Vehicle Operating Cost Estimates
Contributed information on vehicle depreciation, insurance and parking costs for the report, *Estimation of Costs of Cars and Light Truck Use per Vehicle-Kilometre in Canada*. (Client: Transport Canada. With Ray Barton Associates Ltd. Time Period: Nov. 2005-March 2006)

Planning for Active Transportation and Health - Healthy Rural Roads Project
Investigated transportation and land use policies and programs to support public health objectives in Humboldt County, California. This project included research to identify strategies for reducing traffic crash risk and increasing physical activity in semi-rural communities. Presented results at workshops for the general public and public officials. (Client: Redwood Community Action Agency [www.rcaa.org]. With Nelson Nygaard Consulting. Time Period: Oct.-Dec. 2005)

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

Induced Travel Impacts Study
Performed analysis of the effects of increasing highway capacity into the city of Montreal, Quebec on vehicle traffic volumes, and the resulting impacts on traffic congestion, pollution emissions and other costs. (Client: Direction de santé publique de Montréal. Time Period: May, 2005)

Rail Transit Benefits Study
Performed a comprehensive evaluation rail transit impacts on transportation system performance in U.S. cities. Produced the report *Rail Transit in America: Comprehensive Evaluation of Benefits*, and presented results at the Transportation Research Board annual meeting, January 2005. (Funding: American Public Transportation Association. Time Period: Sept.-Dec. 2004)

Evaluated Transit Investment Criticism
Evaluated the paper "Light Rail: Boon or Boondoggle" by Molly D. Castelazo and Thomas A. Garrett, which argues rail transit is economically inefficient and more costly than alternative transportation improvement investments. Prepared a detailed report that identifies various errors and omissions in Castelazo and Garrett's paper (www.cmt-stl.org/images/litman.pdf). (Client: Citizens for Modern Transit [www.cmt-stl.org]. Time period: July-August 2004)

Congestion Management Best Practices
Provided technical support for the Washington DC Downtown Congestion Management Task Force. Included research to identify congestion management strategies suitable for a large city central business district. (Project manager: Volpe Transportation Center [www.volpe.dot.gov], for the City of Washington DC [www.dc.gov]. Time Period: April – Oct. 2004)

Public Transit Economic Evaluation
Produced a report identifying the net benefits of potential public transit improvements in Colorado Springs. Created a comprehensive framework for evaluating public transit improvements. Identified examples of successful transit projects in similar cities, identified ways to maximize transit benefits, and responded to common criticisms of public transit investments. (Client: City of Colorado Springs [www.springsgov.com]. Time period: Jan. – March 2004)

Resort Community Transportation Management Plan
Provided guidance on incorporating transportation demand management strategies into the Whistler area transportation plan. Identified potential TDM 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], for Resort Municipality of Whistler [www.whistler.ca]. Time Period: September 2003 – Feb. 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], for TransLink [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], for City of Vancouver [www.vancouver.ca]. Time Period: Sept.-Dec. 2003)

Kingston, Jamaica Area Sustainable Transportation And Land Use Plan

Helped develop a sustainable transportation and land use strategic plan for the Kingston, Jamaica region. Included an extensive literature review of developing country sustainable transportation and land use strategies, reviewing current travel and land use conditions in the region, consulting with stakeholders, and providing specific policy and planning recommendations. (ENACT Project Sustainable Development Plan, National Environment and Planning Agency [www.nepa.gov.jm] and Canadian International Development Agency [www.acdi-cida.gc.ca]. Time Period: July-Aug. 2003)

Transit Station Parking Strategy

Developed parking policies and planning practices for implementation at new rail transit stations in Southern California. This included developing an evaluation process to prioritize parking improvements, creating a menu of potential parking management strategies, and helping to establish a planning process to determine which strategies are suitable for implementation at each site. (Project Manager: Robin Blair. Client: Los Angeles Metropolitan Transportation Authority [www.metro.net]. Time Period: Jan.-July 2003)

Federal Policies to Support Active Transportation

Produced a background paper that identifies ways to incorporate public health objectives into transport planning, and recommends specific federal policies to encourage more physically active transportation, to provide information for a workshop on Active Transportation involving high-level federal government officials (www.vtpi.org/act_tran.pdf). (Project Manager: Francine Godin. Client: Go For Green [www.goforgreen.ca]. Time Period: Feb.-April 2003)

Transportation and Social Exclusion Research

Wrote and presented a paper titled *Social Inclusion As A Transport Planning Issue in Canada* (www.vtpi.org/soc_ex.pdf), at a seminar at the University of Westminster in London, April 3-4, 2003 as part of a study to evaluate transport-related social exclusion issues in various countries. (Project Manager: Professor Karen Lucas, University of Westminster. Client: Federation Internationale de l'Automobile [www.fiafoundation.com]. Time Period: Jan. – April 2003)

University Transportation Management Program Planning

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

Evaluated Integrated Mobility Systems

Helped to develop a model to predict the effects that an integrated, "smart card" electronic transit fare system can have on transit ridership and vehicle travel in the Toronto region. Involves developing an analysis framework, and research on the effects that user prices and convenience

factors have on transit demand. (Client: Integrated Mobility Systems Consortium, Toronto. Time Period: Sept.-Dec. 2002)

Wrote Mobility Management Information Resource

Wrote "Mobility Management Measures" module (www.vtpi.org/gtz_module.pdf.pdf) for the *Sustainable Transport Sourcebook for Developing Countries* (www.sutp.org), a comprehensive transportation planning and management information resource for use in developing country cities. (Client: GTZ [www.gtz.de]. Time Period: April-Dec. 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). Developed an analysis framework for evaluating the full benefits and costs of various mobility management programs. (Project Manager: CH2M Hill. Client: City of Seattle. Time Period: Jan. to April 2002)

Transit Elasticity Values Review

Reviewed and summarized information on transit price, service and cross-elasticities for modeling and planning applications in the Vancouver, BC region. (Client: TransLink. Time Period: March 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. Developed a model that predicts potential energy conservation and emission reduction benefits of each strategy. Discussed additional benefits (congestion reduction, safety, consumer savings, etc.), costs and barriers. (Client: Environment Canada. Time Period: February 2002 to April 2003)

Vanpool Program Development Opportunities

Examined ways to improve and expand vanpooling in the Puget Sound region. This project involved refining estimates of vanpool market potential, identifying strategies to increase vanpool formation and improve vanpool program operations. The project included research on other transportation demand management strategies that support and encourage vanpool use. Produced the *Puget Sound Vanpool Market Action Plan*, (www.vtpi.org/VanpoolMAPReport.pdf). (Project Manager: 2Plus, Inc. Client: Washington State DOT. Time Period: Dec. 2001 to March 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. Client: TransFund New Zealand. Time Period: November 2001 to March 2002)

Urban Transportation Showcase Program Proposal

Developed a multi-million dollar grant proposal for the Victoria region to submit to the Transport Canada Urban Transportation Showcase Program. This proposal included a variety of innovative strategies to encourage more efficient and sustainable transportation, including transit service improvements, new approaches to transit marketing, commute trip reduction programs and nonmotorized improvements. (Client: BC Transit. Time Period: Sept. 2001 to May 2003)

Rail Transit System Evaluation

Comprehensive evaluation of a proposed light rail system in the Victoria region. This project included identifying and quantifying the incremental benefits and costs of the proposed rail system, including impacts on travel patterns, traffic congestion, consumer costs, economic development,

land use patterns, road safety and pollution emissions. Produced the *Light Rail Economic Opportunity Study*. (Client: Island Transformations, www.islandtransformations.org), funded by the Province of British Columbia. Time Period: Nov. 2001 to Sept. 2002)

Mobility Benefits of Passenger Transport

Performed a detailed analysis of the mobility benefits of passenger transport. This project involves examining the social benefits of public transit services, identifying methods to quantify these benefits, and developing a framework for evaluating them in transportation planning applications. (Project Manager: Booz-Allen & Hamilton, New Zealand. Client: TransFund New Zealand. Time Period: May to Dec. 2001)

Distance-Based Insurance Implementation Study

Helped to develop program guidelines and promotional materials for variable-priced (distance-based) automobile insurance. This project evaluated 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 Dec. 2001)

Distance-Based Insurance Feasibility Study

Produced a comprehensive study of the benefits, costs and feasibility of distance-based vehicle insurance for a provincial insurance agency. This study involves analysis and comparison of the impacts of various distance-based insurance pricing options. Each option is evaluated in terms of various criteria, including actuarial accuracy, implementation costs, equity, consumer impacts, public acceptability, road safety, energy use and emissions, and economic impacts. (Client: Insurance Corporation of British Columbia. Time Period: Feb. to April 2001)

Regional Planning Program Review

Provided technical assistance for evaluating regional transportation and land use planning options to various community organizations in London, Ontario. (Client: 1 River 1 Park, Global Action Plan London, Urban League. Time Period: Feb. to April 2001)

Parking Policy Review

Developed a comprehensive analysis framework for evaluating Vancouver region parking policy reforms. (Project Manager: Urban Systems. Client: TransLink. Time Period: Oct. 2000 to Jan. 2001)

Parking Management Study

Worked with a multi-disciplinary team to develop a comprehensive parking management plan for the city of North Vancouver. (Project Manager: GMK 2000. Client: City of North Vancouver. Time Period: September 2000 to May 2001)

Developed *Online TDM Encyclopedia*

Developed the *Online TDM Encyclopedia*, a comprehensive transportation demand management information resource posted at the VTPI website, www.vtpi.org. This project included research on more than three-dozen TDM strategies (with special attention to their travel impacts, benefits, costs and equity impacts), writing more than 100 chapters totaling more than 1,500 pages of text, and managing an Internet website. (Time Period: January 2000 to ongoing.)

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. Included a searchable database with detailed information about TDM strategies, and an interactive model to calculate the effects that a particular TDM project on vehicle travel, congestion, emission, public finance and consumer costs. (Client: Environment Canada. Time Period: March to July 2000)

Evaluated Urban Development Costs

Co-Researcher on the study *Analysis Of The Costs Of Urban Development*. This study examines the costs of alternative development patterns, including variations in economic, social and environmental costs. (Project Manager: Simon Worsey. Client: Department Of Transport, Western Australia. Time Period: September 2000 to January 2001)

Evaluated The Status of TDM in the Vancouver Region

Wrote, *Shifting Gears*, a report that evaluates the status of transportation demand management efforts in the Vancouver, BC region. This involved a detailed evaluation of current and planned TDM activities in the region, identification of opportunities for better coordination among stakeholders, and analysis of potential benefits. (Client: Environment Canada. Time Period: Jan. to May 2000)

Social and Economic Impacts Guidebook

Served as member of a team that developed "A Guidebook for Assessing the Social and Economic Effects of Transportation Projects," National Cooperative Highway Research Program Report 456. Project Manager: David Forkenbrock, Public Policy Center, University of Iowa. (Client: Transportation Research Board. Time Period: June 1999 to Oct. 2000)

Developed Pedestrian and Bicycle Planning Guidebook

Developed a pedestrian and bicycle planning guidebook for use by local planners titled, Building Walking and Cycling Communities; A Guide to Current Best Practices for the Development of Local Government Pedestrian and Cycling Plans, with Anne Fritzel. (Client: Ministry of Municipal Affairs, Victoria. Time Period: Jan. to June 1999)

Evaluated Campus Trip Management Program

Evaluated the economic impacts of the UBC TREK program, a university campus TDM program (www.vtpi.org/utrek.pdf). (Client: UBC TREK program. Time Period: June 1999)

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)

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, with funding from USEPA. Time Period: May to Oct. 1998)

Evaluated Public Transit Benefits
Evaluated the benefits of public transit improvements on the Lion's Gate Bridge, Vancouver, BC. (Client: B.C. Transportation Financing Authority. Time Period: May 1998)

Framework for Estimating The Full Costs of Motor Vehicle Crashes
Developed analysis model and guidebook for estimating the total costs motor vehicle crashes and crimes impose on specific geographic communities in British Columbia. (Client: Insurance Corporation of British Columbia. Time Period: May to Dec. 1997)

Regional Transportation Authority Negotiation Support
Provided technical support for development of the Greater Vancouver Transportation Authority. (Client: Provincial negotiators. Time Period: May to July 1997)

Evaluated Tax Exempt Transit Benefits
Evaluated transportation and economic impacts of making Canadian tax law more favorable to transit commuting. (Client: Transit Advocacy Project. Time Period: Sept. 1996 to Jan. 1997)

Distance-Based Pricing Evaluation
Study of the feasibility of marginalizing automobile insurance and other fixed user costs as a transportation demand management strategy. (Clients: BC Transportation Finance Authority and the Greater Vancouver Regional District. February to June 1996)

Transportation Costing Analysis Framework
Developed transportation cost analysis framework for the Washington DC region. Client: Metropolitan Washington Council of Governments. (Project Manager: Kiran Bhatt, K.T. Analytics, Inc. Time Period: January to March 1997)

Compared Rail and Bus Transit for Resort Community
Study comparing the full costs and benefits of rail and bus transit options. (Client: City of Aspen, Colorado. Time Period: July to Oct. 1996)

Transit Benefit Analysis
Comprehensive study of the benefits of transit service in the Victoria region. (Client: BC Transit. Time Period: Jan. to April 1996)

Website and Software Development
Developed Victoria Transport Policy Institute website, *Transportation Cost Analyzer* software and documentation. (Time Period: 1995 to 1996)

Comprehensive Cost Study: City of Edmonton
Comprehensive transportation cost study for the city of Edmonton, Alberta. (Project Manager: KPMG. Client: City of Edmonton Transportation Dept. Time Period: March to June 1996)

Comprehensive Cost Study: Santiago
Comprehensive transportation cost study for the city of Santiago, Chile. Project Manager: Christopher Zegras. (Client: International Institute for Energy Conservation, Washington DC. Time Period: Oct. 1996 to March 1997)

Least Cost Planning Review

Reviewed *Least-Cost Planning: Principles, Applications and Issues*, (www.vtpi.org/LCPpaper.pdf). (Client: Project Manager: ECONorthwest. For the Puget Sound Council of Governments, funded by the U.S. Federal Highway Administration. Time Period: 1995)

Transportation Research Analyst

Consultant to *British Columbia Ministry of Transportation and Highways* (Victoria), 1993 to 1994. Performed economic and policy research on transportation's environmental and social costs. Developed specific cost estimates for incorporation into the Ministry's economic analysis models. Coordinated special research projects, including a MoTH sponsored conference on Transportation Demand Management and land use issues.

Energy Specialist

Washington State Energy Office (Olympia), June 1989 to May 1993.
Coordinated, managed and supported industrial energy conservation programs, project planning and budgeting; contract development and management; MotorMaster software development and marketing, research and analysis; database and spreadsheet development; computer bulletin board management, and grant program management.

Water Resources Program Research Assistant

Washington Department of Ecology (Olympia), October 1988 to February 1989.
Produced reports on observation wells and related ground water research.

Lobbyist and Program Coordinator

Bicycle Federation of Washington, 1984 to 1989.
Managed legislative program, performed research, produced newsletter and educational material, coordinated membership promotion, and general organizational development.

Bicycle Shop Manager

Capital Schwinn (Olympia), October 1983 to June 1988.

Education

Masters of Environmental Studies, *Evergreen State College* (Olympia, Washington), 1995.

BA, with emphasis on urban planning, *Evergreen State College* (Olympia, Washington), 1983.

Teaching

Instructor and advisor for the *Next Generation Transportation Program* (http://bit.ly/2k4ACYJ), Simon Fraser University (SFU), 2014-2017.

Adjunct Professor, School of Community and Regional Planning (SCARP), University of British Columbia (www.scarp.ubc.ca/faculty%20profiles/litman.htm), 2008- 2010.

Urban Transportation Planning (Planning 548A), University of British Columbia, 2008.

Transportation Land Use Impacts, professional development workshop for the Association of Professional Engineers and Geoscientists of BC (www.apeg.bc.ca), 2006 and 2007.

Land Use & Coastal Zone Management, ES419, Bachelor of Science in Environmental Management, Royal Roads University, May 2006.

Urban Transportation and Land Use Planning, GEOG 444 S01, Department of Geography, University of Victoria, Spring Session 2000 and Summer Session 2001.

Participated in the "Gil Sherwin Teaching Excellence Workshop," September 2000.

"Bicycle Mechanics and Skills," Leisure Education Program, Evergreen State College, 1982-87.

Professional Affiliations

Institute of Transportation Engineers (www.ite.org), member of the Vancouver Island Section Executive Committee, 1999-2019, Parking Council and Transportation Health Working Group.

Location and Planning Committee Technical Advisory Group for LEED (Leadership in Energy & Environmental Design) Rating System, U.S. Green Building Council (www.usgbc.org), appointed April 2010. Advises on development of LEED credits related to location, transport and parking.

Sustainable Low Carbon Transport Partnership (www.slocat.net) is a major international network of working to improve knowledge on sustainable low carbon transport.

World Congress for Transportation Research (www.wctrs.org), 2004-present.

ITE Transportation and Health Committee, 2020 to present.

Transportation Research Board, National Academy of Sciences (www.trb.org). Appointed to:

- Committee on Transportation and Sustainability (ADD40), 2010 to 2015.
- Environmental Justice Committee (ADD 50), 2012 to present.
- *Special Task Force on Data for Decisions and Performance Measures* (A0030T).
- Chair of Sustainable Transportation Indicators Subcommittee (ADD40[1]), 2010 to 2014.
- Transportation Economics Committee (ABE 20), 2006-2009.

International Journal of Global Environmental Issues, Editorial Board, since 2007-2012

Transportation Research A, Editorial Advisory Board, 1999-2008.

Publications

Journal Articles, Conference Papers, Published Reports and Books

Mr. Litman frequently blogs on the Planetizen website (www.planetizen.com/user/2394).

Todd Litman (2021), *Not So Fast: Why Slower Is Often Better* (https://bit.ly/3jaOcuM), Streetsblog USA (https://usa.streetsblog.org).

Todd Litman (2021), *Pneumatic Tube Trains and AVs to the Rescue? Smarter Planning for New Mobility* (https://bit.ly/2XGskyU), The City Fix.

Todd Litman and Randal O'Toole, "What Is the Future for Transit After COVID?" (https://bit.ly/3muImX0), Pairagraph Debate.

Todd Litman (2021), *New Mobilities: Smart Planning for Emerging Transportation Technologies*, Island Press (https://islandpress.org); at https://islandpress.org/books/new-mobilities.

SUM4All (2020), *Universal Urban Access: Toward Sustainable Mobility*, edited by Todd Litman, Global Roadmap of Action (www.sum4all.org/global-roadmap-action), by Sustainable Mobility for All (www.sum4all.org); at https://bit.ly/3s5nwN4.

Todd Litman (2019), "The Future Is Not What it Used to Be," *Plan Canada: Special Edition | Celebrating 100 Years*, Canadian Institute of Planners (http://cip-icu.ca), pp. 181-185; at https://bit.ly/2HcJxpb. *Article of the Year / Article de l'année* winner (https://bit.ly/394EVO8)

Kayoumars Irandoost, Milad Doostvandi, Todd Litman, Mohammad Azami, (2019), "Placemaking and the Right to the City of Urban Poor: a Case Study in Sanandaj, Iran," *Journal of Place Management and Development* (https://doi.org/10.1108/JPMD-03-2018-0027).

Hamid Behbahani, Sobhan Nazari, Masood Jafari Kang and Todd Litman (2019), "A Conceptual Framework to Formulate Transportation Network Design Problem Considering Social Equity Criteria," *Transportation Research Part A*, Vol. 125, pp. 171-183 (https://doi.org/10.1016/j.tra.2018.04.005).

Stefan Gössling, Andreas Humpe, Todd Litman and Daniel Metzler (2019), "Effects of Perceived Traffic Risks, Noise, and Exhaust Smells on Bicyclist Behaviour: An Economic Evaluation," *Sustainability: Sustainable Transportation for Sustainable Cities*, Vol. 11(2), 408 (https://doi.org/10.3390/su11020408); at www.mdpi.com/2071-1050/11/2/408.

Todd Litman (2019), "Toward More Comprehensive Evaluation of Traffic Risks and Safety Strategies," *Research in Transportation Business & Management*, Vo. 29, pp. 127-135, (https://doi.org/10.1016/j.rtbm.2019.01.003); at www.sciencedirect.com/science/article/pii/S2210539517301633).

Todd Litman (2018), "A New Traffic Safety Paradigm," *Transportation Talk* (the Journal of the Canadian Institute of Transportation Engineers), Winter, pp. 12-18; at https://bit.ly/2Febrwx.

Todd Litman (2017), "Mobility and Innovation. The New Transportation Paradigm," *S.M.A.R.T. Paths to Sustainability* (http://bit.ly/2mUs2iG); at http://bit.ly/2Dravbo.

Todd Litman (2017), *Public Transportation's Impact on Rural and Small Towns*, American Public Transportation Association (www.apta.org); at www.apta.com/rural.

Todd Litman, et al. (2017), "Grounding Urban Walking and Cycling Research in a Political Economy Framework," in *Non-Motorized Transport Integration into Urban Transport Planning in Africa*, Routledge (http://bit.ly/2xxYmPs).

Todd Litman (2017), "Economic Value of Walking," chapter in *Walking: Connecting Sustainable Transport with Health*, Emerald Publishing; at https://bit.ly/2tOiN4r.

Todd Litman (2017), *Autonomous Vehicle Implementation Projection: Implications for Transport Planning*, presented at the *Hearing Concerning Connected and Self-driving Vehicles*, Canadian Standing Senate Committee on Transport and Communication (http://bit.ly/2pYvJXS).

Todd Litman (2017), "Determining Optimal Urban Expansion, Population and Vehicle Density, and Housing Types for Rapidly Growing Cities," *Transportation Research Procedia*, for the 2015 World Conference on Transport Research; at www.vtpi.org/WCTR_OC.pdf.

Todd Litman (2016), *The Hidden Traffic Safety Solution: Public Transportation*, American Public Transportation Association (www.apta.com); at https://bit.ly/2bYqQpr.

Todd Litman (2016), *Selling Transit Oriented Development*, presented at the TOD and Real Estate Development Conference' (www.tod.org/events/la2016.html); at http://bit.ly/2wJcdxI.

Jianhong (Cecilia) Xia, Joshua Nesbitt, Rebekah Daley, Arfanara Najnin, Todd Litman and Surya Prasad Tiwari (2016), "A Multi-Dimensional View of Transport-Related Social Exclusion: A Comparative Study of Greater Perth and Sydney," *Transportation Research Part A*, Vol. 94, pp. 205-221 (https://doi.org/10.1016/j.tra.2016.09.009).

Todd Litman (2015), "Cycling and Active Mobility - Establishing a Third Pillar of Transport Policy," with Martin Held and Jörg Schindler, in *Cycling Futures - From Research into Practice*, Ashgate (http://bit.ly/2ctetQ4), by Regine Gerike and John Parkin.

Todd Litman (2015), *Comprehensive Evaluation of Complete Streets Policies: The Value of Designing Roads For Diverse Modes, Users and Activities* (www.vtpi.org/compstr.pdf) and *When Are Bus Lanes Warranted?* (www.vtpi.org/blw.pdf), *Threadbo 14 Conference*", (www.thredbo-conference-series.org), August 2015, Santiago, Chile.

Todd Litman (2015), *Urban Sprawl Costs the American Economy More Than $1 Trillion Annually. Smart Growth Policies May Be The Answer* (http://bit.ly/1Kgq0Q9), London School of Economic's daily blog on American Politics and Policy, 1 June 2015.

Todd Litman (2015), *Analysis of Public Policies that Unintentionally Encourage and Subsidize Sprawl*, in partnership with the LSE Cities program (http://lsecities.net) for the New Climate Economy (http://newclimateeconomy.net); at http://bit.ly/1EvGtIN. This report was cited by international media including, "*Try Jam Today: Policies To Slow Down Warming May Be More Attractive If Framed*

As Ways Of Speeding Up Growth" (http://econ.st/1qUeVLQ) in *The Economist; "The Cost of Sprawl: More Than $1 Trillion Per Year, New Report Says"* (http://on.wsj.com/1FFcqCJ) in the Wall Street Journal; and "*The Steep Costs Of Living So Far Apart From Each Other"* (http://wapo.st/1Bnrm2o), in The Washington Post.

Todd Litman (2015), *Evaluating Household Chauffeuring Burdens* (www.vtpi.org/chauffeuring.pdf), presented at the International Transport Economics Association (ITEA) Annual Conference June 17-19, Oslo, Norway (https://www.toi.no/ITEA2015).

Todd Litman (2015), *Implementing Transport Policies and Programmes Toward Realizing 'Bali Vision Three Zeros - Zero Congestion, Zero Pollution, and Zero Accidents Towards Next Generation Transport Systems in Asia'*, backgrounder for the Environmentally Sustainable Transport Forum in Asia, held 19-21 November 2014 in Colombo, Sri Lanka; at https://bit.ly/1CVbVPA.

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Younshik Chung , Keechoo Choi, Jungsik Park and Todd Litman (2014), "Social Exclusion and Transportation Services: A Case Study of Unskilled Migrant Workers in South Korea," *Habitat International*, Vol. 44, October 2014, Pages 482-490; at https://bit.ly/2LSUPhx.

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Todd Litman (2014), "How Transport Pricing Reforms Can Increase Road Safety," *Traffic Infra Tech*, April-May, pp. 68-71 (http://emag.trafficinfratech.com); at www.vtpi.org/TIT-pricesafety.pdf.

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Todd Litman (2012), *Sustainable Transport Evaluation: Developing Practical Tools for Evaluation in the Context of the CSD Process*, Commission on Sustainable Development, United Nations Department Of Economic And Social Affairs, 2011, with Daniel Bongardt, Dominik Schmid and Cornie Huizenga; at http://bit.ly/2ELOZv7.

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Stantec and VTPI (2011), *National Strategies on Public Transit Policy Framework*, Canadian Urban Transit Association (www.cutaactu.ca); at https://cutaactu.ca/sites/default/files/fianlreport-g8.pdf.

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- *Affordable-Accessible Housing In A Dynamic City: Why and How To Support Development of More Affordable Housing In Accessible Locations*
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- *Mobility As A Positional Good: Implications for Transport Policy and Planning*
- *Online TDM Encyclopedia*
- *Pandemic-Resilient Community Planning*
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- *Socially Optimal Transport Prices and Markets*
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- *Traffic Calming Benefits, Costs, and Equity Impacts*
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- *Urban Sanity: Understanding Urban Mental Health Impacts and How to Create Saner, Happier Cities*
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- *Win-Win Transportation Solutions: Mobility Management Strategies That Provide Economic, Social and Environmental Benefits.*

Presentations

Mr. Litman frequently presents at conferences, professional development workshops and public education events. Below are some examples.

The New Mobilities: Smart Planning for Emerging Transportation Technologies (https://bit.ly/3jNU1gx), 11 August 2021 , Eno Foundation Webinar. New transportation technologies are coming online faster than ever. While many of these emerging technologies are helping to expand our world, they need to be evaluated critically.

Meet the Author with Todd Litman - National Shared Mobility Summit (https://bit.ly/3B4NDsj). In this first-ever Summit book club event, Todd Litman discussed with participants his new book *New Mobilities: Smart Planning for Emerging Transportation*.

Transportation Planning Lessons from the Pandemic - CITE Vancouver Island (www.youtube.com/watch?v=DA_5Y0w0QNo), 4 March 2021. The COVID-19 pandemic is affecting our lives and communities in countless ways, including travel demands. This interactive presentation will explore key lessons for transportation practitioners.

Sustainable Transportation Planning in India (www.youtube.com/watch?v=FFxvv2ELKiM), 2 December 2020. Presentation for the SURATi iLAB Foundation of Smart City Surat.

Preparing for a Changing Future: Emerging Planning Issues (www.youtube.com/watch?v=7exsGTzpt-w), 12 Nov. 2018. In this presentation, Todd Litman discusses the impacts of current demographic and economic trends on future travel demands.

Multimodal Urban Transport: Todd Litman Explains How and Why (www.reinventingtransport.org/2018/07/todd-litman.html). Reinventing Transportation podcast with Paul Barter.

Urban Planning for Future Regional Sky Transit (www.youtube.com/watch?v=a6B0QnjxWfw). Video of Todd Litman's *2018 Sustainable Aviation Symposium* presentation concerning the potential benefits of urban air taxis.

City Talks Panel: Alternative Urbanisms in Victoria (https://bit.ly/2QhQgUZ).
The University of Victoria's 2018 *City Talks* series kicked off with a panel discussion on alternative urbanisms including youth-driven indigenous land restoration, Support Network for Indigenous Women and Women of Colour, urban place-making, affordable Infill, and anarchist festivals.

Healthy Solutions to Climate Risks presented at the September 2018 *Global Climate and Health Forum* (www.globalclimateandhealthforum.org) in San Francisco. It highlighted win-win strategies that can reduce climate change emissions and achieve other health objectives.

Preparing for A Changing Mobility Future: Emerging Planning Issues (https://cura.osu.edu/nov9). November 2018 presentation at Ohio State University Center for Urban and Regional Analysis. Includes video.

Why Transit Oriented Development? Benefits for Everyone! Keynote presentation at the *Eighth International Symposium on Transportation Demand Management* (http://2017tdm.ntu.edu.tw) in Taiwan.

What's So Good About EcoMobility? Understanding Co-Benefits (http://bit.ly/2xTNpYR), presented at the 2017 EcoMobility Festival (www.ecomobilityfestival.org) in Taiwan.

Insight to Implementation of the Bangkok 2020 Declaration ~ Policy Trends and Developments, Challenges and Opportunities (http://bit.ly/2n3CPbz). Keynote speech at the *Tenth Regional Environmentally Sustainable Transport (EST) Forum in Asia* (http://bit.ly/2mHZs1p), March 2017, in Vientiane, Lao PDR.

Transit-Walkability Collaborative Webinar (http://bit.ly/2p48xGr). Webinar described research concerning the health, safety, economic and social equity benefits of walkable, transit-rich communities, and practical ways to advocate for such development.

Harmony Between Urban Growth and Transportation Accessibility (www.konference.pmdp.cz/en/2017/downloads), presented at the *Smart & Healthy Transport in Cities Conference*, April 2017, Pilsen, Czech.

Manitoba Planning Conference (www.mbplanningconference.com). Presentation concerning rural multi-modal transportation planning, and led a workshop concerning affordability as a planning issue (http://bit.ly/2eCE1A1).

Congress for New Urbanism (www.cnu.org), May 2-5, Seattle, Washington. Presentations by Peter Katz and Todd Litman summarized research on 'Selling Smart Growth' (www.vtpi.org/ssg), which points out that compact, multi-modal development provides many often-overlooked direct benefits to residents, businesses and local governments.

Canadian Standing Senate Committee on Transport and Communication, *May 2 Hearing Concerning Connected and Self-driving Vehicles* (http://bit.ly/2pYvJXS). Todd Litman summarized his research published in the report, "*Autonomous Vehicle Implementation Projection: Implications for Transport Planning*" (www.vtpi.org/avip).

"*Right-sizing Commercial Parking- With Todd Litman*" (http://bit.ly/2maC0gO), 6 February 2017, City of Alexandria, Virginia. Presentation concerning municipal parking policy review and reform.

Transportation Systems & Urban Development Patterns for a One Planet Region (http://bit.ly/2lHKhsU), 2017, Victoria, BC. Discussion of ways to create more resource-efficient and equitable communities at the *One Planet Region' Community Conversation Series*.

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