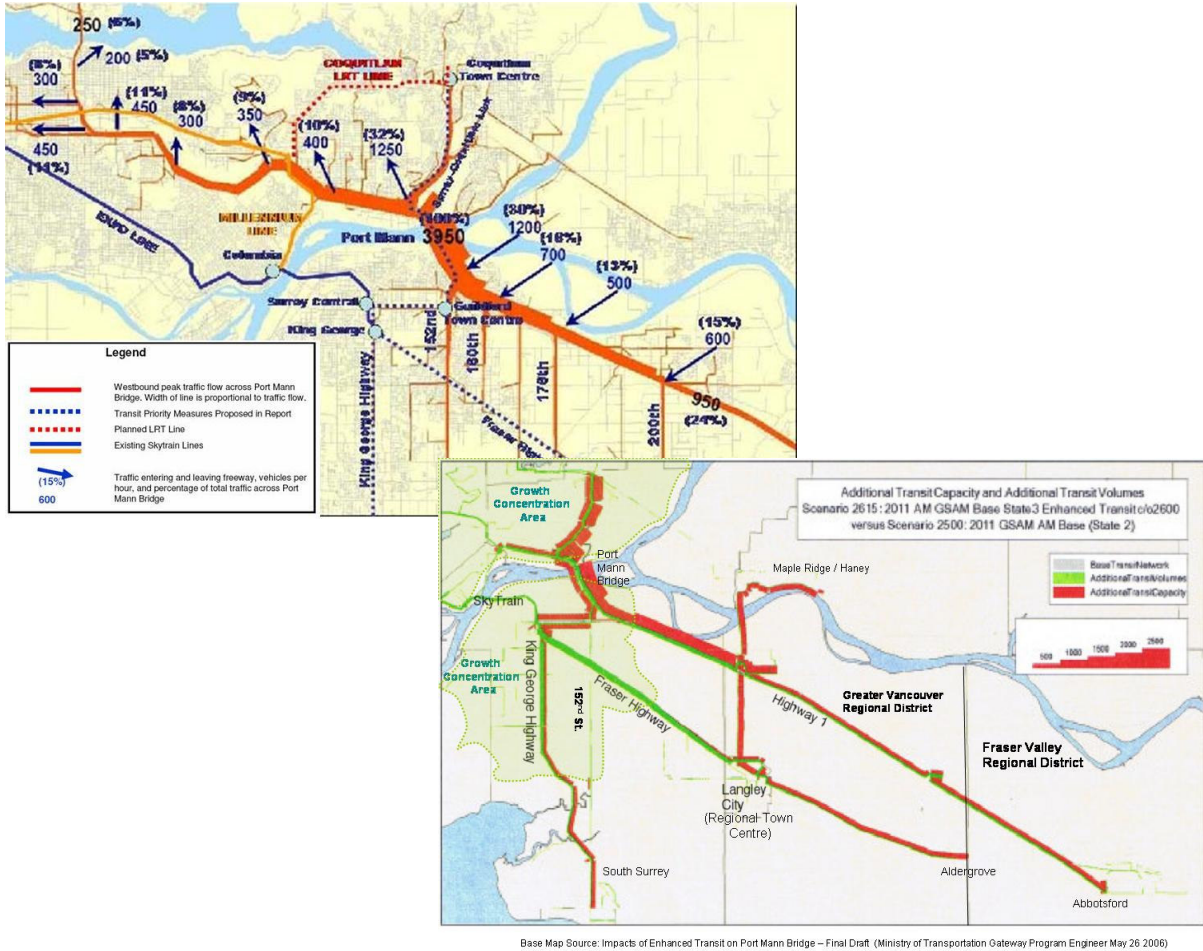


# Taken for a Ride: Technical and Media Manipulation in the Gateway Program's response to *Transportation for a Sustainable Region: Transit or Freeway Expansion*



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for

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April 25, 2007

**It's a late winter morning in Surrey. Kevin Falcon has got the wheel of his black Pathfinder in one hand, a cup of Starbucks in the other and a journalist in the passenger seat. Everything is going to plan: we are inching, inching over Highway No. 1 on the 176th Street overpass, heading for the Port Mann Bridge and the epicentre of a crisis B.C.'s transportation minister insists can only be solved with a thorough dose of asphalt and concrete.**

**The situation may be dire, but Falcon is pleased as punch to be caught in the rush hour mire this morning....This isn't the first time Falcon has led a journalist on a rush-hour demonstration of Surrey's Achilles heel. He's confident that the crawl across the Port Mann is proof enough for anyone that the bridge needs to be twinned.**

*-From Collision Course By Charles Montgomery, BC Business Magazine, June 2006.*

**"I'm having trouble figuring out exactly what they do support."**

*- Kevin Falcon , referring to opponents of the Gateway Program in a speech to Surrey Board of Trade as reported in Peace Arch News, April 2007.*

## **Executive Summary**

In February 2006 the **Livable Region Coalition (LRC)** released *Transportation for a Sustainable Region: Transit or Freeway Expansion*. The Society Promoting Environmental Conservation (SPEC) and other LRC member groups requested a formal government reply. In response the Ministry of Transportation published two memos which purport to show that the public transit solution proposed by the LRC is not a feasible solution to mobility and congestion issues on the Port Mann / Highway 1 corridor<sup>1</sup>. The first memo was prepared during the public consultation period, but was not released until after the public consultations on the Highway 1 expansion were completed.

This paper is a reply to the highly misleading information that the Ministry of Transportation provided in their two memos and in other public communications.

### **Key Findings:**

**1) Instead of analyzing the potential for the transit improvements outlined in *Transportation for a Sustainable Region* to provide transportation choice and reduce congestion, the Ministry of Transportation set up two 'straw man'<sup>2</sup> transit alternatives and then attacked them:**

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<sup>1</sup> These memos are included in Appendices 1 and 2.

<sup>2</sup>A straw man argument is a logical fallacy based on misrepresentation of an opponent's position. To "set up a straw man" or "set up a straw-man argument" is to create a position that is easy to refute, then attribute that position to the opponent. A straw-man argument can be a successful rhetorical technique (that is, it may succeed in persuading people) but it is in fact a misleading fallacy, because the opponent's actual argument has not been refuted. Its name is derived

The first Ministry of Transportation transit straw man consists of computer modeling of bus routes across the Port Mann Bridge. They concluded that on average there would only be 20 passengers per bus. But, as shown in **Figure 2.2.1-1** below, the routes mainly serve very low density areas outside the Livable Region Strategic Plan (LRSP) Growth Concentration Area (GCA). One route even seems to connect the West Coast Express rail station in Maple Ridge with the West Coast Express station in Coquitlam Centre, via Highway 1; obviously almost zero ridership is projected on this redundant route. In contrast, the Fraser Highway and *Surrey-Coquitlam Bullet* routes proposed in *Transportation for a Sustainable Region* show very good ridership potential.

In the second straw man approach the Ministry assumed that no transit rider would have an origin or destination outside the Growth Concentration Area (GCA), noting that "We would assume that transit is not convenient for these folks."<sup>3</sup> This directly conflicts with their first approach where most of the transit service was directed outside the GCA. Only 35% of the people on the Port Mann Bridge were considered potential transit riders. The Ministry then set a target of 5900 vehicles and concluded that improved transit would lead to a reduction of only 3300 vehicles. However, if it is assumed that the target market is actually 65%<sup>4</sup> rather than 35%, and that the same 20% mode share could be achieved, the reduction would be about 6100 vehicles<sup>5</sup>, well in excess of the Ministry's target.

2) The Ministry misled the media regarding the findings of their studies; trying to make it appear that a very high level of transit ridership would result in little impact on congestion. In the second straw man example, transit ridership is less than the regional average. But the memo was worded in such a way that reporters were misled into reading the report as stating that the transit mode share was almost double the regional average<sup>6</sup>. In fact the projected mode share was 9%, below the regional average.

A Ministry email obtained through a freedom of information request confirms that the memo was intended to mislead:

"the transit mode share of 20% was assumed for the markets that the new transit routes were serving and not all demand on the Port Mann. Therefore, the actual mode share [is] around 10% [but] I've worded it in such a way [that it] plays up the 20% mode share"<sup>7</sup>.

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from the practice of using straw men in combat training. In such training, a scarecrow is made in the image of the enemy with the single intent of attacking it. [http://en.wikipedia.org/wiki/Straw\\_man](http://en.wikipedia.org/wiki/Straw_man).

<sup>3</sup> FOI TRA-06-116 email titled *Update LRC Report* dated April 19 2006.

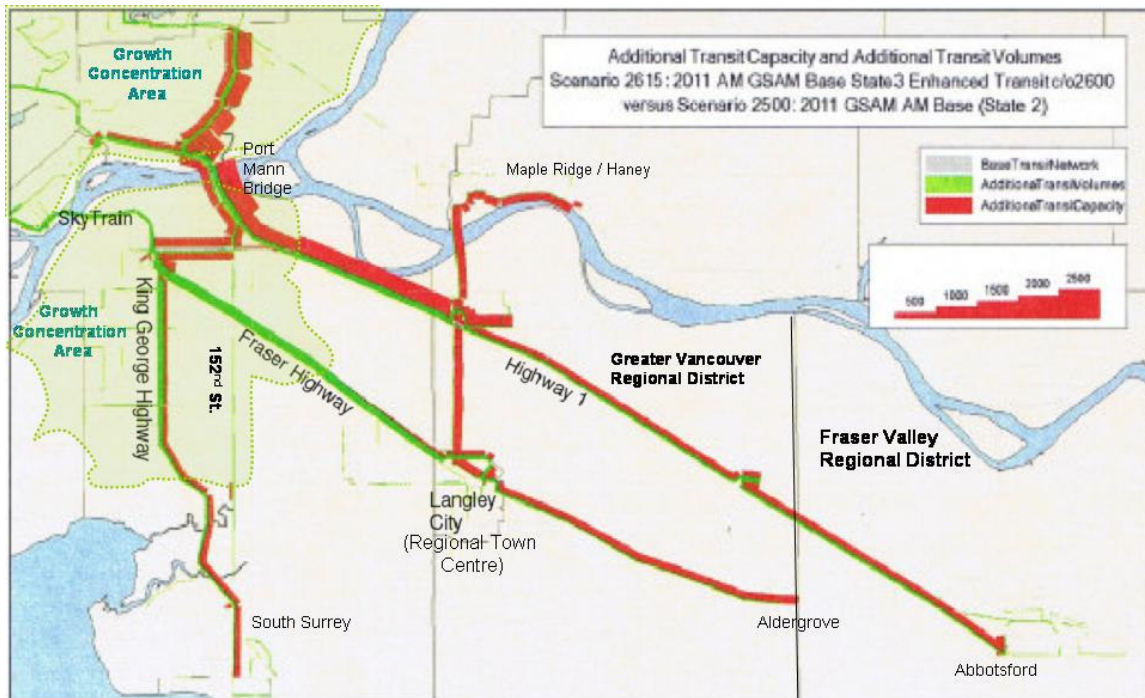
<sup>4</sup> 76% of traffic on Highway 1 enters west of 200<sup>th</sup> street as shown in figure 1.2-2 below; most of this catchment area could reasonably be provided with good quality transit service.

<sup>5</sup> (0.65/0.35) X 3300.

<sup>6</sup> *Vancouver Sun* May 26, 2006 p B5 'Buses can't cut bridge congestion, study says: Report done for province rejects transit as alternative to twinning the span'. by Maurice Bridge.

<sup>7</sup> Appendix 4

**Figure 2.2.1-1 Ministry of Transportation Modeling Relied on Illogical Routes Serving Very Low Density Areas: Red indicates increased transit capacity, green indicates increased transit ridership.**



Base Map Source: Impacts of Enhanced Transit on Port Mann Bridge – Final Draft (Ministry of Transportation Gateway Program Engineer May 26 2006)

3) In many public communications, the Ministry has asserted that a new bridge is required before transit service across the Port Mann Bridge can be restored. In contrast, even the Ministry's own analysts assume that high-quality public transit service could be routed across the existing bridge in a cost-effective manner

### Transportation for a Sustainable Region

*Transportation for a Sustainable Region* suggests a series of possible transit investments that could significantly improve *transportation choice* as defined in the Greater Vancouver Regional District's (GVRD) Livable Region Strategic Plan. All of these investments, or similar measures, are included in existing plans of the GVRD or TransLink. These proposed investments include:

- ***Accelerated Purchase of SkyTrain Cars***

44 new SkyTrain cars to be purchased as soon as possible, up from TransLink's plan to purchase 34.

### ***Transit Priority Measures***

Transit priority such as bus lanes and traffic signal priority for transit vehicles for the following routes:

- ***Surrey-Coquitlam Bullet***

A Surrey to Coquitlam rapid bus route would require a queue jumper lane on the westbound approach to the existing Port Mann Bridge. Until the Ministry announced

its plans to build an additional Port Mann Bridge, Translink planned to have this route in operation in 2007.

- ***King George Busway***

A busway on the King George Highway would serve the Growth Concentration Area in Surrey and connect to SkyTrain, the Surrey-Coquitlam Bullet and other important transit routes. Translink plans to have the King George Busway in service in 2013, but it could be completed much earlier.

- ***Fraser Highway***

The integration of transit priority measures into TransLink's current widening of the Fraser Highway from Surrey to Langley could include measures such as high occupancy vehicle lanes and transit signal priority.

*Transportation for a Sustainable Region* includes evidence that these or similar transit investments could significantly reduce traffic congestion on Highway 1, if combined with other effective transportation demand management measures. *The capital cost of these proposed measures would be on the order of \$300 to 500 million, far less than the likely \$1.5 to \$2.5 billion cost of widening Highway 1. All of these measures could be in place within two to three years, whereas the freeway expansion would take at least seven to ten years to complete.*

The transit solutions proposed in *Transportation for a Sustainable Region* would be faster, better, and cheaper than the non-solution of 1950s style freeway expansion. A rapid re-allocation of funds from highway expansion to public transit improvement is essential for maintaining livable communities and meeting the Premier's goal to reduce greenhouse gas pollution 33% by 2020.

## Index

	Page#
Executive Summary	2
1.1 Context	7
1.2 <i>Transportation for a Sustainable Region: Transit or Freeway Expansion</i>	9
1.3 Defining and Measuring Congestion	10
2.0 Ministry of Transportation's response to <i>Transportation for a Sustainable Region</i>	12
2.1 Transit on the Existing Port Mann Bridge	12
2.2 Introduction to Straw Men Solutions	15
2.2.1 Straw Man 1: Transit Routes Designed to Fail	15
2.2.2 Straw Man 2: Manipulation Through Elimination	17
2.2.3 Misleading Communications	19
2.2.4 Transit Demand Assumed to be Low in Surrey and Langley	21
2.2.5 Transportation Demand Management Measures Neglected	21
2.2.6 Future Land Use Assumed to be Automobile Dependant	22
3.0 Conclusion	23
Appendix 1 - Halcrow Memo - <i>Assessment of transit-only option for Port Mann Bridge</i>	
Appendix 2 - Final Program Engineer Memo - <i>Impacts of Enhanced Transit on Port Mann Bridge</i>	
Appendix 3 - Draft Program Engineer Memo - <i>Impacts of Enhanced Transit on Port Mann Bridge</i> - (May 26, 2006) From FOI TRA-06-116	
Appendix 4 - Email regarding miscommunication of mode share.	
Appendix 5 - Email regarding origins and destinations of traffic on the Port Mann Bridge.	
Appendix 6 - Involvement of Public Affairs Bureau in freedom of information delays	
Appendix 7 - Complete results of FOI TRA-06-081	
Appendix 8 - Complete results of FOI TRA-06-116	

## 1. Introduction

### 1.1 Context

The BC Ministry of Transportation's proposed Gateway Program is a major highway expansion project which includes expanding Highway 1 from 216<sup>th</sup> Avenue in Langley Township through Coquitlam, Burnaby and Vancouver to the Ironworkers Memorial Bridge crossing to North Vancouver. The primary objective of the Highway 1 expansion seems to be improving mobility for auto drivers, by "reducing travel times"<sup>10</sup>

The Gateway Program, however, also exists within a global context. The most important global implication of road expansion is greenhouse gas (GHG) emissions and global warming - perhaps the greatest challenge facing human society."<sup>11</sup> The recent report to the UK Government by the economist Sir Nicholas Stern calls attention to the threat of "major disruption to economic and social activity, later in this century and in the next, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century."<sup>12</sup> GHG emissions from on-road vehicles are the largest and fastest growing source of emissions in the region as shown in figure 1-1 below.

Recently political rhetoric in BC caught up to the seriousness of the climate crisis. In the recent Throne Speech the Government of BC asserted that climate change due to GHG pollution is:

"threatening life on Earth as we know it. . . . In 2007, British Columbia will take concerted provincial action to halt and reverse the growth in greenhouse gases. . . . The rate of atmospheric warming over the last 50 years is faster than at any time in the past 1,000 years. The science is clear. It leaves no room for procrastination. . . . The more timid our response is, the harsher the consequences will be."

"However, our emissions are increasing at a rate far faster than most of our neighbours'. We must act to arrest and reverse that trend. This government will firmly establish British Columbia standards for action on climate change. It will aim to reduce B.C.'s greenhouse gas emissions by at least 33 per cent below current levels by 2020. This will place British Columbia's greenhouse gas emissions at 10 per cent under 1990 levels by 2020."

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<sup>10</sup> "Gateway FAQs." < <http://www.th.gov.bc.ca/gateway/FAQs.htm#Trucks>>.

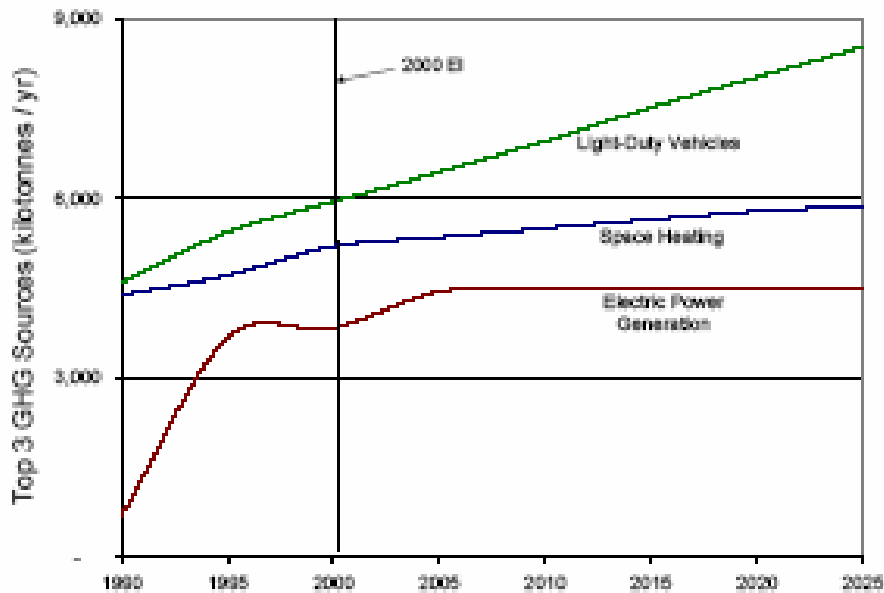
<sup>11</sup> e.g. Hanley, C. (November 14, 2006) *Globe & Mail*. 'UN report to cite 'much stronger' signs of human role in warming'.

[http://www.theglobeandmail.com/servlet/story/RTGAM.20061114.wclimate1114/BNStory/International/?cid=al\\_gam\\_nletter\\_newsUp](http://www.theglobeandmail.com/servlet/story/RTGAM.20061114.wclimate1114/BNStory/International/?cid=al_gam_nletter_newsUp). Accessed Nov. 14, 2006.

<sup>12</sup> (Stern 2006 p ii) *STERN REVIEW: The Economics of Climate Change* [http://www.hm-treasury.gov.uk/independent\\_reviews/stern\\_review\\_economics\\_climate\\_change/stern\\_review\\_report.cfm](http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm)

The previous SPEC report *Cooking the Books, Cooking the Planet: An analysis of Gateway greenhouse gas emissions estimates*, released in February 2007, demonstrated how the Ministry of Transportation has misled the public about the true consequences of the Gateway highway expansions. The full report is available from [http://www.livableregion.ca/pdf/Cooking\\_the\\_Books\\_Report\\_Final\\_05-02-07.pdf](http://www.livableregion.ca/pdf/Cooking_the_Books_Report_Final_05-02-07.pdf)

**Figure 1-1 Light Duty Vehicles are the Largest Source of GHG Pollution in Greater Vancouver**



Source: GVRD *Forecast and Backcast of the 2000 Emission Inventory for the Lower Fraser Valley Airshed 1985 - 2025 p. S-6*

In February 2006, the day after the province made their Gateway announcement, the **Livable Region Coalition (LRC)** released *Transportation for a Sustainable Region: Transit or Freeway Expansion*. After the Society Promoting Environmental Conservation (SPEC) and other LRC groups requested a formal reply for discussion during the public consultation process, the Ministry of Transportation published a memo which purported to show that the public transit solution proposed by the LRC is not a feasible solution to mobility and congestion issues on the Port Mann / Highway 1 corridor. The first memo was prepared during the public consultation period, but was not released until after the public consultations on the Highway 1 expansion were completed. A second memo was released later in response to requests for information regarding the analysis described in the first memo.

This report exposes the manipulation techniques employed by the provincial government and their consultants and forms a reply to the highly misleading information that the Ministry of Transportation provided in their two memos and in other public communications.

## 1.2 Transportation for a Sustainable Region: Transit or Freeway Expansion

Transportation for a Sustainable Region (TSR) demonstrated that a large proportion of the traffic on Highway 1 has both origins and destinations in areas that could be served efficiently by public transit. This catchment area for the traffic on Highway 1 is largely within the *Livable Region Strategic Plan* (LRSP) Growth Concentration Area (GCA) or originates in a LRSP Town Centre. Much of the GCA, and the Langley City Town Centre, is fairly high density and is becoming denser with rapid development of apartment and townhouse complexes as well as employment growth.

TSR documents that there is presently no reasonable alternative to the automobile for many people in the traffic catchment area studied. That is, the LRSP objective of providing *transportation choice* so that people are not forced to drive is not being met. However, it should be noted that the busiest section of Highway 1 (in Burnaby) runs between two SkyTrain Lines as shown in Figure 1-2 below; therefore, an increase in freeway capacity would cause a reduction in SkyTrain ridership.

**Figure 1.2-2 Rapid Bus (Transit Priority) Routes Proposed in Transportation for a Sustainable Region**



Transportation for a Sustainable Region is available at [http://www.livableregion.ca/pdf/Transport for a Sustainable Region.pdf](http://www.livableregion.ca/pdf/Transport%20for%20a%20Sustainable%20Region.pdf)

*Transportation for a Sustainable Region* suggests a series of possible transit investments that could significantly improve *transportation choice* as defined in the Livable Region Strategic Plan. *All of these investments, or similar measures, have been included in plans by the Greater Vancouver Regional District or TransLink.* These proposed investments include:

- ***Increased Frequent Service Coverage***

*A 20% increase in TransLink's bus fleet over existing expansion plans to expanded 10 minute or better frequency bus service in the LRSP Growth Concentration Area and on routes serving Regional Town Centres.*

- ***Accelerated Purchase of SkyTrain Cars***

*44 new SkyTrain cars to be purchased as soon as possible, an increase of 10 from TransLink's plan to purchase 34.*

***Transit Priority Measures***

Transit priority measures include bus lanes, traffic signal priority for transit vehicles, high occupancy vehicle lanes (where transit vehicles use the lanes). Transit priority measures are proposed for the following routes:

- ***Surrey-Coquitlam Bullet***

*A Surrey to Coquitlam rapid bus route would require a queue jumper lane on the westbound approach to the Port Mann Bridge. This proposal is part of TransLink's current 10 year plan and was to have been completed this year, 2007.*

- ***King George Busway***

*A busway on the King George Highway would serve the Growth Concentration Area in Surrey and connect to SkyTrain, the Coquitlam- Surrey Link and other important transit routes. This proposal has been part of the regional transportation plan for many years.*

- ***Fraser Highway***

*The integration of transit priority measures into TransLink's current widening of the Fraser Highway from Surrey to Langley could include measures such as high occupancy vehicle lanes and transit signal priority.*

*Transportation for a Sustainable Region* asserted that by providing real transportation choice, these or similar transit investments could significantly reduce traffic congestion on Highway 1, if combined with other effective transportation demand management measures. *The capital cost of these proposed measures would be on the order of \$300 to 500 million, which is far less than the likely \$1.5 to \$2.5 billion cost of widening Highway 1. All of these measures could be in place within two to three years, whereas the freeway expansion would likely take at least seven to ten years to complete.*

### **1.3 Defining and Measuring Congestion**

The Gateway Program claims that freeway expansion is the only way to address congestion on the Highway 1 corridor. However, defining success in addressing congestion depends upon how congestion is understood. There are two fundamentally different ways of discussing congestion. One is from the perspective of the individual who may choose to change modes; the other is only to consider those who continue to

drive<sup>13</sup>. The Livable Region Strategic Plan acknowledges the benefits of improved transit to individuals and adopts the goal of providing *transportation choice* so people will be able to access employment, goods and services without having to deal with congestion while driving. In contrast, the Ministry focuses almost exclusively on roadway congestion, as measured by automobile travel time and the length of traffic queues; therefore ignoring the benefits of transit for those who choose to ride transit.

From the point of view of the individual who switches from driving to riding transit, traffic congestion would not be a factor on road sections with effective transit priority measures<sup>14</sup>. Likewise, if a truck moving goods has access to an uncongested high priority vehicle lane its travel time is no longer related to congestion in the general purpose lanes. This is how congestion is best measured, from the point of view of individuals and high priority vehicles. From this perspective, the roadway congestion problem for the proportion of people who switch to transit can be solved through improved transit.

Induced traffic is a reality for both roadways and transit; if travel becomes quicker people tend to travel more. With freeway expansions this can lead to the return of congested conditions and the related travel delays in a very short time span<sup>15</sup>. However, improving transit leads to a long term reduction in roadway congestion, if the transit system does not become severely overcrowded. That is, transit improvements reduce congestion for those who continue to drive as well as for those who switch to transit. Todd Litman of the Victoria Transport Policy Institute asserts that:

If congestion increases, people change destinations, routes, travel time and modes to avoid delays . . . Reducing this point of equilibrium is the only way to reduce congestion over the long run . . . If alternatives are inferior, few motorists will shift mode and the level of equilibrium will be relatively high. If travel alternatives are relatively attractive, motorists are more likely to shift modes, resulting in a lower equilibrium (Litman 2005).

Although the individual (or unit of goods) level is the better way to understand congestion<sup>16</sup>, the Ministry has focused on travel delays for drivers on one particular stretch of roadway - Highway 1 east of the Port Mann Bridge. Even though the Ministry of Transportation's measure of congestion only counts the benefits of transit improvements for those who continue to drive, this report and *Transportation for a Sustainable Region* show that transit improvements can have significant benefits even when measured on the Ministry's terms.

Transit improvements have long-lasting benefits for both people who continue to drive and for people who switch to transit. In contrast, freeway expansion makes congestion worse for drivers (including truck drivers) and transit riders.

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<sup>13</sup> Litman, Todd. *Congestion Reduction Strategies: identifying and Evaluating Strategies to Reduce Traffic Congestion*. . <http://www.vtpi.org/tdm/tdm96.htm>.

<sup>14</sup> See Transportation for a Sustainable Region for a brief discussion of transit priority measures [http://www.livableregion.ca/pdf/Transport\\_for\\_a\\_Sustainable\\_Region.pdf](http://www.livableregion.ca/pdf/Transport_for_a_Sustainable_Region.pdf)

<sup>15</sup> Downs, Anthony. (2004) *Still Stuck in Traffic: Coping with peak-hour traffic congestion*. The Brookings Institution.

<sup>16</sup> Mees, P., (2000) *A Very Public Solution: Transport in the Dispersed City*. Melbourne University Press

## 2.0 Ministry of Transportation' Response to *Transportation for a Sustainable Region*

After the release of *Transportation for a Sustainable Region*, the Livable Region Coalition (LRC) made numerous attempts to get a substantive response from the Ministry of Transportation. The Ministry's first response was a three page memo titled *Assessment of Transit-only Options for Port Mann Bridge* (dated 31 March 2006)<sup>17</sup> which provided very little information on the Ministry's analysis. However, the memo did clarify that their analysis was done only in response to the LRC's *Transportation for a Sustainable Region*. The memo states:

"While the Gateway Program has been developed in the context of regional plans that assume significant investment in transit, these plans do not include some of the transit improvements identified by the LRC. As such, the Gateway Program has conducted analysis that examines a "transit-only" strategy for reducing congestion along the Highway 1 corridor."

This is an important point in understanding the Ministry's analysis. As it was an analysis of "the transit improvements identified by the LRC" in *Transportation for a Sustainable Region*, a real analysis would have addressed the transit improvements specified in that report. Rather, a straw man alternative was constructed to knock over as described in section 2.2 below.

In response to requests for more detailed information the Ministry later released a four page memo titled *Impact of Enhanced Transit on Port Mann Bridge Traffic*<sup>18</sup> (dated 12 June 2006) which provided some more detail, but not enough to understand much of what the Ministry had actually done in their analysis.

## 2.1 Transit on the Port Mann Bridge

A key piece of misinformation that the Ministry of Transportation has repeated since their announcement of the Highway 1 expansion project is that the Port Mann Bridge is so congested that buses can't use it.<sup>19</sup> This is often an unstated assumption behind Gateway communications. For example the Gateway website includes the statement that "The proposed Port Mann /Highway 1 Project . . . allows for transit over the Port Mann Bridge"<sup>20</sup>

Bus service over the Port Mann Bridge was cancelled when SkyTrain service to Surrey was started - not due to any problem with congestion at the time. However, congestion has increased in recent years so Translink planned to build a transit bypass lane before re-starting bus service on the route. The proposed Surrey-Coquitlam Bullet routing in *Transportation for a Sustainable Region* is the same as proposed in TransLink's NE

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<sup>17</sup> Appendix 1 or [http://www.th.gov.bc.ca/gateway/reports/pm-h1/Halcrow\\_technl\\_rpt\\_trnstonlyopt\\_31\\_3\\_2006.pdf](http://www.th.gov.bc.ca/gateway/reports/pm-h1/Halcrow_technl_rpt_trnstonlyopt_31_3_2006.pdf)

<sup>18</sup> Appendix 2 or [http://www.th.gov.bc.ca/gateway/reports/pm-h1/Impact\\_of\\_Enhanced\\_Transit\\_on\\_Port\\_Mann\\_Bridge\\_Traffic.pdf](http://www.th.gov.bc.ca/gateway/reports/pm-h1/Impact_of_Enhanced_Transit_on_Port_Mann_Bridge_Traffic.pdf)

<sup>19</sup> e.g. Twinning Port Mann 'tough sell' at city council. *Vancouver Sun* Wednesday, February 15, 2006 [http://livableregion.ca/pdf/v\\_council.pdf](http://livableregion.ca/pdf/v_council.pdf)

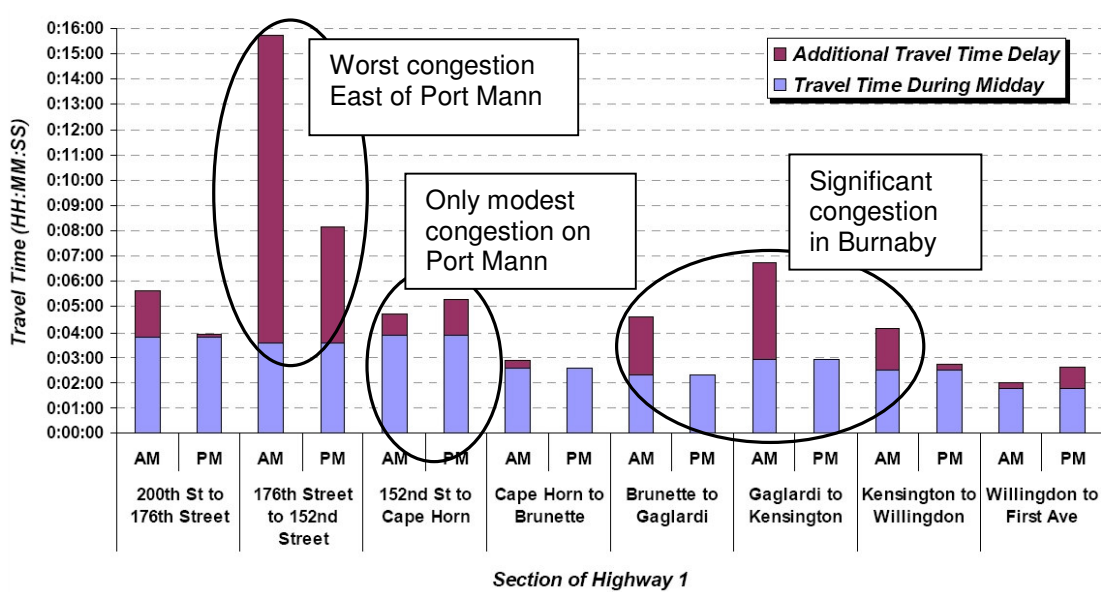
<sup>20</sup> Why is the Gateway Project necessary? [http://www.th.gov.bc.ca/gateway/FAQs.htm#why\\_necessary](http://www.th.gov.bc.ca/gateway/FAQs.htm#why_necessary)

Sector Area Transit Plan and 2005-2007 Three-Year Plan. TransLink's assessment was that a bypass lane for transit vehicles is feasible at the westbound approach to the existing Port Mann Bridge, and that this would be an effective way for transit riders to avoid congestion. TransLink planned to have this route in operation in 2007.<sup>21</sup> If not for the Gateway Program, the Surrey-Coquitlam Bullet would likely be in operation this year.

The Ministry of Transportation' analysts also seem to believe that a transit bypass lane would be effective. One report notes that: "It is assumed that a transit queue jumper (priority lane) can be cost effectively constructed on 152<sup>nd</sup> Street and the on-ramp to the Port Mann Bridge westbound."<sup>22</sup> This is the assumption that all of the Ministry of Highway's analysis of transit solutions is based on, that transit can run efficiently across the existing Port Mann Bridge.

*Transportation for a Sustainable Region* documents how the provision of a queue jumper lane to allow buses to get ahead of the congestion at the westbound on-ramp would be effective, since traffic delays are insignificant west of the merging traffic at the 152<sup>nd</sup> St. interchange as shown below in Figure 2.1-1.

**Figure 2.1-1: Bypassing Congestion East of the Port Mann Would Allow Efficient Transit Service Across Existing Bridge.**



Source: *Travel Characteristics of Traffic on the Highway 1 Corridor*, TransLink - (as presented in *Transportation for a Sustainable Region*)<sup>23</sup>

<sup>21</sup> Executive Summary - Translink 3-year Plan & 10-year Outlook p6

[http://www.translink.bc.ca/files/pdf/plan\\_proj/executive\\_summary\\_June17.pdf](http://www.translink.bc.ca/files/pdf/plan_proj/executive_summary_June17.pdf)

<sup>22</sup> Appendix 7 - *The provision of transit across the Port Mann Bridge in conjunction with transit queue jumpers* (March 8, 2006) FOI TRA-06-081

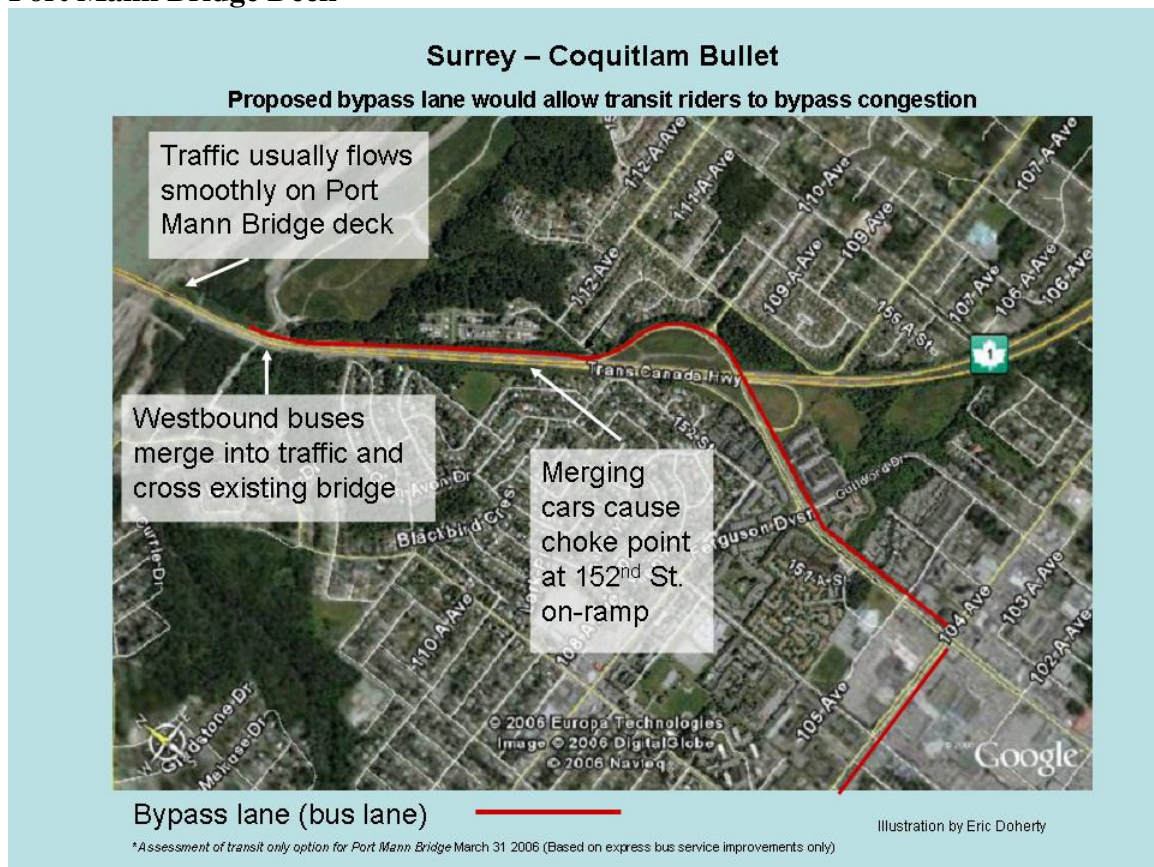
<sup>23</sup> TransLink - *Travel Characteristics of Traffic on the Highway 1 Corridor* (July 2, 2004)

[http://www.translink.bc.ca/files/board\\_files/meet\\_agenda\\_min/2004/07\\_21\\_04/4.12travel.pdf](http://www.translink.bc.ca/files/board_files/meet_agenda_min/2004/07_21_04/4.12travel.pdf)

The longest delay during the AM peak occurs at the section approaching the bridge between 176<sup>th</sup> St. and 152<sup>nd</sup> St., with almost 12 minutes of delay. In contrast, the section across the bridge shows only 0.5 minute of delay, which indicates almost free flow conditions. This is evident when traveling westbound across the Port Mann Bridge where traffic flow improves significantly past the merge of traffic at the 152<sup>nd</sup> St. Interchange.

The bypass lane (queue jumper) would need to extend along the shoulder of the on-ramp and across the 152<sup>nd</sup> St. overpass as shown below in Figure 2-2. This may require widening of the overpass, or installing a signal south of the overpass to allow transit vehicles to cross without being delayed. Eastbound buses should be able to utilize the existing HOV lanes with the addition of transit priority measures to bypass congestion on the Lougheed Highway and in the Cape Horn Interchange area.

**Figure 2.1-2: Proposed Bypass Lane Routing to Allow Buses to Reach Uncongested Port Mann Bridge Deck**



The Ministry's assertion in public communications that a new bridge is needed to allow transit service across the Port Mann is contradicted by all available evidence.

## 2.2 Straw Men<sup>24</sup> Solutions and Misleading Communications

The Ministry of Transportation purported to analyze the potential for transit to reduce roadway congestion on the westbound approach to the Port Mann Bridge<sup>25</sup>. They used two different methods, both of which produce seriously distorted information due to the way they were applied. The findings were presented in a way which has created miscommunication of the results in the media. The Ministry's unfounded assumptions also seriously undermine the credibility of their analysis. As a result, the LRC transit proposal *Transportation for a Sustainable Region* stands uncontested.

### 2.2.1 Transit Straw Man 1: Modeling Routes Designed to Fail

The Ministry of Transportation used four-step transportation modeling<sup>26</sup> of six bus routes using bypass lanes to reach the existing Port Mann Bridge for a total of 36 buses per hour. They concluded that on average there would only be 20 passengers per bus, but that mode share on the Port Mann Bridge would go from 0% to over 9%. However, as shown in Figure 2.2.1-1 below, the routes proposed by the Ministry mainly serve areas outside the LRSP Growth Concentration Area (GCA) and even serve rural areas in the Fraser Valley Regional District. This is not the transit proposal made by the LRC. This map was not included in the memo released to the public, but had to be obtained through a freedom of information request.

In Figure 2.2.1-1 red indicates new bus capacity and green indicates ridership westbound in the AM peak. One route seems to connect the West Coast Express rail station in Maple Ridge with the Coquitlam Centre West Coast Express station via the Port Mann Bridge; it is not surprising that this route shows almost no ridership as West Coast Express would provide much faster service.

The majority of routes follow Highway 1, which another Ministry document notes has poor transit ridership potential: "The Highway 1 corridor is not well located relative to Regional Town Centres [and is a poor route choice] relative to future transit demands based on existing and expected development"<sup>27</sup>. These routes are particularly strange given that only 24% of peak period traffic on the Port Mann comes from east of 200<sup>th</sup> Street, as shown in figure 1-2 above. Almost all long-distance highway traffic, which is very difficult to divert to urban transit, is included in this 24%.

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<sup>24</sup> A straw man argument is a logical fallacy based on misrepresentation of an opponent's position. To "set up a straw man" or "set up a straw-man argument" is to create a position that is easy to refute, then attribute that position to the opponent. A straw-man argument can be a successful rhetorical technique (that is, it may succeed in persuading people) but it is in fact a misleading fallacy, because the opponent's actual argument has not been refuted. Its name is derived from the practice of using straw men in combat training. In such training, a scarecrow is made in the image of the enemy with the single intent of attacking it. [http://en.wikipedia.org/wiki/Straw\\_man](http://en.wikipedia.org/wiki/Straw_man)

<sup>25</sup> Appendix 3 - Gateway Program Engineer (May 26, 2006) *Impact of enhanced traffic on Port Mann Bridge Traffic* (final draft).

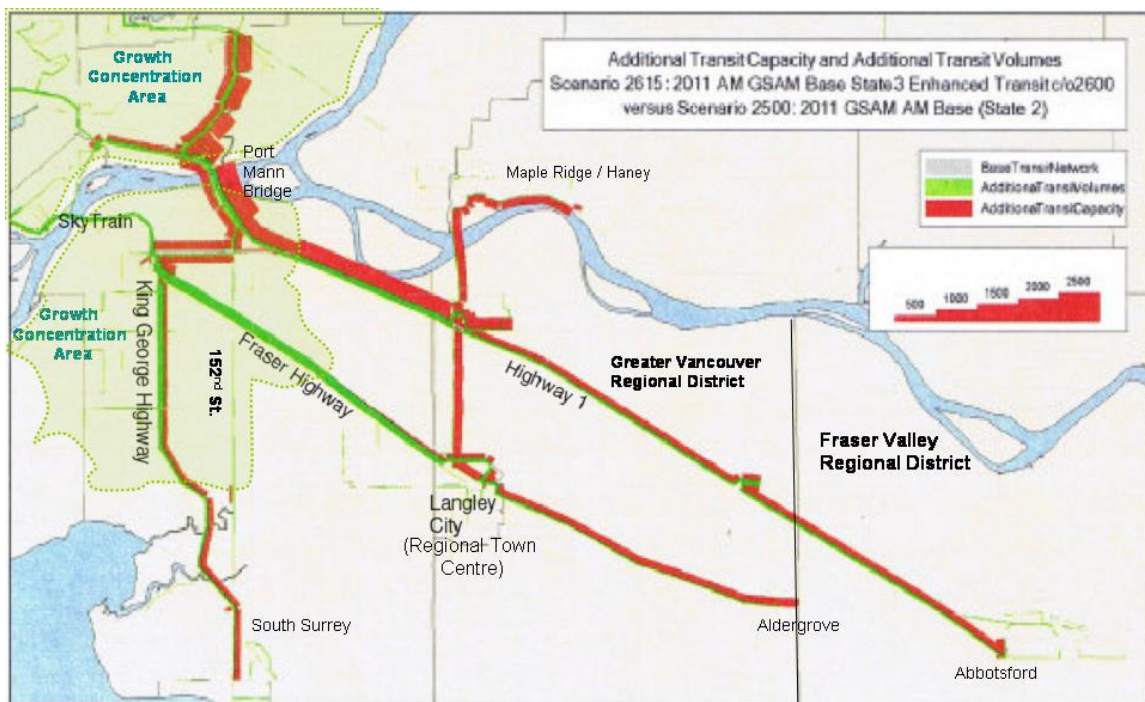
<sup>26</sup> See *Cooking the Books, Cooking the Planet* for an explanation of four-step modeling [http://www.livableregion.ca/pdf/Cooking\\_the\\_Books\\_Report\\_Final\\_05-02-07.pdf](http://www.livableregion.ca/pdf/Cooking_the_Books_Report_Final_05-02-07.pdf)

<sup>27</sup> Gateway Program Highway 1—Corridor: Overview of Future Transit Needs -by ND LEA Consultants Ltd

The Ministry's modeling projects that the buses on routes suggested in *Transportation for a Sustainable Region* would be nearly full (Fraser Highway and King George Highway<sup>28</sup>) while those on the routes chosen by the Ministry would be nearly empty. Note that the Fraser Highway route appears to be full (and perhaps passing up passengers) before it reaches the GCA boundary.

The 20 people per bus figure is also misleading because it does not include people who would switch from driving to taking the bus, but would use SkyTrain to cross the Fraser rather than crossing the Port Mann Bridge by bus. Figure 2.2.1-1 below shows a very significant increase in transit ridership on the Sky Bridge, about half of the increase in ridership across the Port Mann Bridge. One of the key points made in *Transportation for a Sustainable Region* is that increased SkyTrain service and ridership is a key way of providing transportation choice for those who now drive on Highway 1.

**Figure 2.2.1-1 Ministry of Transportation Modeling Relied on Illogical Routes Serving Very Low Density Areas: Red indicates increased transit capacity, green indicates increased transit ridership.**



Base Map Source: Impacts of Enhanced Transit on Port Mann Bridge – Final Draft (Ministry of Transportation Gateway Program Engineer May 26 2006)

Source: Appendix 6

Assuming 60 passengers per 60 foot articulated bus (no standees on the average bus)<sup>29</sup>, the 36 buses per hour crossing the Port Mann would carry 2160 passengers. Given the latent demand documented in Section 2.2.4 below, 60 passengers per bus is likely an underestimation of the peak hour loads to be expected given optimum route choice (60

<sup>28</sup> These routes serve the Growth Concentration Area and/or Langley City Regional Town Centre

<sup>29</sup> New Flyer's DE60LF hybrid rapid bus seats up to 62 people [http://www.newflyer.com/index/hybrid\\_de30\\_35\\_40\\_60](http://www.newflyer.com/index/hybrid_de30_35_40_60)

foot buses carry over 100 people including standees) with Transportation Demand Management measures such as those discussed in Section 2.25. At 80 passengers per bus, 2880 people would be carried.

Peak traffic volumes in the two westbound lanes on the Port Mann Bridge are about 3900 vehicles per hour<sup>30</sup>, assuming a typical 1.2 people per vehicle this is 2340 people per lane. Therefore, the 36 buses per hour proposed by the Ministry would be roughly equivalent to adding a third westbound lane to the Port Mann Bridge if 60 to 80 passengers were carried per bus. Far more than 36 buses per hour can be accommodated on a freeway lane even in mixed traffic so service could be increased to accommodate future demand increases.

### **2.2.2 Transit Straw Man 2 - Manipulation Through Elimination**

The second approach the Ministry took in attempting to refute *Transportation for a Sustainable Region* was what they refer to as target based or sketch planning.

In this approach the Ministry assumed that no transit rider would have an origin or destination outside the Growth Concentration Area (GCA), not even Regional Town Centres (RTC). The memos and email discussion obtained from a freedom of information request do not explain the rationale for this, only noting that "We would assume that transit is not convenient for these folks."<sup>31</sup> This is in direct conflict with their modeling approach where most of the transit service was directed outside the GCA; and the best ridership projected was along the Fraser Highway from the Langley City RTC (where buses were projected to be full before even reaching the GCA as shown in figure 2.2.1-1 above).

In total the Ministry assumed, with no clear rationale, that 65% of people crossing the Port Mann "cannot use transit as an effective alternative mode."<sup>32</sup> Therefore only 35% of people driving across the Port Mann were assumed to be eligible to become transit riders. The 'target' of 20% was then apparently applied to this 35% resulting in a about a 7% transit mode share on the Port Mann (although this was reported as being 9% in the first published memo). The intentionally misleading way this information was presented is discussed in Section 2.2.3 below.

The Ministry then estimated the number of vehicles that would have to be reduced over the five-hour AM 'peak' period in order reach a state similar to the Ironworkers Memorial Second Narrows Bridge. The estimate was 5900 vehicles; the memo concludes that improved transit would lead to a reduction of only 3300 vehicles.

The same section suggests that these improvements could decrease the auto driver mode share between Surrey and the Northeast Sector by a very impressive 21% (from 96% to

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<sup>30</sup> TransLink (July 2, 2004) Travel Characteristics of Traffic on the Highway 1 Corridor [http://www.livableregion.ca/pdf/port\\_mann\\_8percent\\_trucks.pdf](http://www.livableregion.ca/pdf/port_mann_8percent_trucks.pdf)

<sup>31</sup> Appendix 8 - FOI TRA-06-116 email titled *Update LRC Report* dated April 19 2006.

<sup>32</sup> Appendix 2 or [http://www.th.gov.bc.ca/gateway/reports/pm-h1/Impact\\_of\\_Enhanced\\_Transit\\_on\\_Port\\_Mann\\_Bridge\\_Traffic.pdf](http://www.th.gov.bc.ca/gateway/reports/pm-h1/Impact_of_Enhanced_Transit_on_Port_Mann_Bridge_Traffic.pdf)

75%). The next largest reduction is 7% for Downtown Vancouver as shown below in Table 2.2.2-1 below. This indicates that there is likely a very large unmet demand for transit service between Surrey/Langley and Coquitlam. The Surrey-Coquitlam Bullet route proposed in *Transportation for a Sustainable Region* is well positioned to meet a considerable portion of this demand.

**Table 2.2.2-1: Ministry of Transportation's Target Based Method Predicts Impressive 21% Mode Shift to Northeast Sector.**

The following table illustrates the potential impact on vehicle trips if improved transit services resulted in the targeted percent auto drivers from south of the Fraser. The total impact of the AM peak period would be a reduction in vehicle trips by 3300. This is well short of the 5900 vehicle reduction required to address the significant congestion levels on the Port Mann Bridge.

Originating from Surrey / North Delta / Langleys	Percent of Total Trips Made by Auto Drivers for Each O/D Pair			
	Downtown Vancouver	Vancouver / Burnaby / New Westminster	Northeast Sector	Burrard Peninsula Overall
Current	32%	72%	96%	67%
Target	25%	70%	75%	62%
Target reduction in vehicle trips during the AM Peak Period	900	1000	1400	3300

Source: *Impact of Enhanced Transit on Port Mann Bridge Traffic - Final Draft*<sup>33</sup>

Extrapolating from the Ministry's results it is possible to project what a more extensive program of transit improvements (including improved SkyTrain Service) might achieve, taking into account that a very significant number of transit riders living outside the GCA could be served by improved transit on the Fraser Highway to Langley City and Cloverdale. Since the number of people traveling to Vancouver Burnaby and New Westminster is higher than to the NE Sector, a modest percentage shift to transit for these areas could reach the 5900 vehicle target as outlined in Table 2.2.2-2 below.

<sup>33</sup> Appendix 3

**Table 2.2.2-2 Improved Transit Could Meet Ministry's 5900 Vehicle Target**

	Percent of Total Trips Made by Auto Drivers for Each O/D Pair			
	Downtown Vancouver	Vancouver / Burnaby / New Westminister	Northeast Sector	Burrard Peninsula Overall
Current	32%	72%	96%	67%
MOT Target	25%	70%	75%	62%
MOT Target % Reduction	7%	2%	21%	5%
MOT Target reduction in vehicle trips during the AM Peak Period	900	1,000	1,400	3,300
Example Target	24%	65%	75%	58%
Example Target % Reduction	8%	7%	21%	9%
Example Target reduction in vehicle trips during the AM Peak Period	1,030	3,500	1,400	5,930

Source: Calculations based on Table 2.2.2-1 above

If it is assumed that the target market is actually 65%<sup>34</sup> of the traffic on the Port Mann, and that the same 20% mode share could be achieved, the reduction would be about 6100 vehicles<sup>35</sup>. This suggests that any strategy to address mobility and congestion must improve transit service throughout much of the region (to increase the geographical scope of the target market), as discussed in *Transportation for a Sustainable Region*. For example the proposed increase in SkyTrain cars and 20% increase in the bus fleet over existing expansion plans would relieve overcrowding and improve service for riders from Surrey and Langley traveling to destinations throughout the Greater Vancouver.

### 2.2.3 Intentionally Misleading Communication of Findings

Further compounding the deficiencies of the Ministry's analysis is the misleading communications of the results to the media and to the public. Technical memos are supposed to convey information in a clear manner to allow a reader to quickly and accurately understand the contents. However, the Ministry's communications tried to mislead the public and media about the actual findings of the Target Based Method discussed above in section 2.2.2. The Ministry is trying to give the impression that even a very high transit ridership would have little effect on congestion.

In the case of the first of the Ministry's memos the wording implies that the transit mode share projected on the Port Mann is much higher than the regional average; whereas the

<sup>34</sup> 76% of traffic on Highway 1 enters west of 200<sup>th</sup> street as shown in figure 1.2-2 above; most of this catchment area could reasonably be provided with good quality transit service. It is only the long-distance proportion of the remaining 24% that should be excluded from the transit target area if park-and-ride facilities are part of the transit system.

<sup>35</sup> (0.65/0.35) X 3300.

projection was for a below average transit mode share. Transit mode share refers to the proportion of transit riders to all commuters. The memo states:

"The sketch planning method considered the effect of a hypothetical 20% transit mode share for relevant market segments on the Port Mann Bridge. This target was selected as it represents a high level of transit usage that significantly exceeds the current regional transit mode share of 11% and the mode share south of the Fraser River (which is less than 5%)."<sup>36</sup>

A *Vancouver Sun* reporter interpreted the memo in exactly the way the Ministry intended, reporting erroneously that the study "looked at the effect of a 20-per-cent transit mode on the bridge, above the current regional mode share of 11 per cent."<sup>37</sup>

In an email obtained from a freedom of information request, the memo's author explains that:

"the transit mode share of 20% was assumed for the markets that the new transit routes were serving and not all demand on the Port Mann. Therefore, the actual mode share on the bridge is pretty close to Deas at around 10%. . . I've worded it in such a way that . . . plays up the 20% mode share (vs regional average of 11%)".<sup>38 39</sup>

The actual transit mode share projected was 9%, less than the regional average. But the memo was worded in such a way that even a professional reporter who is trained to catch such manipulations read the report as stating that the projected transit mode share was almost double the regional average.

Another example of misleading communications is that the Ministry's second published memo asserts that "The majority of these users have origins and destinations outside the Growth Concentration Area (GCA)"<sup>40</sup>. This is contradicted by a Ministry email, obtained through a freedom of information request, which states that 89% of westbound destinations are within the GCA and 47% of westbound origins are in GCA. This same email suggests that the text which was eventually published is incorrect and should "indicate the majority have an origin OR a destination outside the GCA."<sup>41</sup> The vast majority of westbound AM peak traffic is heading into GCA, the urban area that is supposed to have good transit service; the origins are also concentrated in the GCA and along the Fraser Highway. The majority of people who now drive across the Port Mann Bridge are taking trips that can be efficiently served by transit, as documented in *Transportation for a Sustainable Region*.

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<sup>36</sup> Appendix 1 or [http://www.th.gov.bc.ca/gateway/reports/pm-h1/Halcrow\\_technl\\_rpt\\_trnstonlyopt\\_31\\_3\\_2006.pdf](http://www.th.gov.bc.ca/gateway/reports/pm-h1/Halcrow_technl_rpt_trnstonlyopt_31_3_2006.pdf)

<sup>37</sup> Vancouver Sun May 26, 2006 p B5 *Buses can't cut bridge congestion, study says: Report done for province rejects transit as alternative to twinning the span.* by Maurice Bridge.

<sup>38</sup> The complete memo is in Appendix 4

<sup>39</sup> "Deas at around 10%" refers to the transit mode share through the tunnel on Highway 99 that links Richmond and Delta, and carries express bus services from Ladner, Tsawassen, South Surrey and White Rock. These buses are provided with bypass (queue jumper) lanes on Transportation #99 and #17.

<sup>40</sup> Appendix 2 - [http://www.th.gov.bc.ca/gateway/reports/pm-h1/Impact\\_of\\_Enhanced\\_Transit\\_on\\_Port\\_Mann\\_Bridge\\_Traffic.pdf](http://www.th.gov.bc.ca/gateway/reports/pm-h1/Impact_of_Enhanced_Transit_on_Port_Mann_Bridge_Traffic.pdf) p3.

<sup>41</sup> Appendix 8 - FOI TRA-06-116 email titled *Update LRC Report* dated April 19 2006.

### **2.2.4 Transit Demand Assumed to be Low in Surrey and Langley**

The assumption that seems to underlie all of the Ministry of Transportation' analysis is that there is no problem with overcrowding on transit and little latent demand for transit in Surrey and Langley. A draft document asserts that "Transit overcrowding is not an issue for Highway 1 drivers - it is an issue for people driving within Vancouver. People who board transit in Surrey and Langley are generally well served."<sup>42</sup> Serious problems with overcrowding in Surrey were documented in *Transportation for a Sustainable Region* based on TransLink reports.

More recently, the Surrey Leader reported that "Full buses drove past passengers on nearly 2,000 occasions in Surrey last year" based on information provided by TransLink. The newspaper also noted that "Union reps say the figures are well below the true magnitude of the problem, noting drivers are sometimes told to stop reporting pass-ups on particularly harried days. And they say the pass-up stats also don't take into account when a scheduled run is cancelled altogether – as has been happening with 10 to 20 runs per day in Surrey in recent weeks."<sup>43</sup> Translink spokesperson Ken Hardie recently asserted that "every new bus and every service hour that TransLink has put on the road has been swamped almost immediately by the latent demand for transit service."<sup>44</sup>

As with any analysis, getting the basic assumptions wrong distorts the results. Even with sophisticated computer models, garbage in produces garbage out.

### **2.2.5 Transportation Demand Management Measures Neglected**

*Transportation for a Sustainable Region* clearly states that congestion reduction is best achieved by a combination of transit improvements and Transportation Demand Management (TDM) measures, including reducing the cost of riding transit.

The Ministry's analysis seems to assume that no TDM improvements would be made to accompany transit service improvements. This does not reflect the recommendations in *Transportation for a Sustainable Region*, and should not be considered a reasonable approach to developing a solutions program that does not include highway expansion. Any reasonable assessment of the measures proposed would include some substantial TDM measures; for example, reducing transit fares, instituting U-Pass at all colleges in the region, and implementing congestion charges on all major bridges in the region as the Greater Vancouver Regional District is now studying. Since the Ministry of Transportation is proposing to toll the existing Port Mann Bridge as part of the Gateway Program as a way to pay a private company for freeway expansion, it is only reasonable to look at congestion charges on other existing structures as a TDM measure and to fund transit service improvements and transit fare reductions.

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<sup>42</sup> Appendix 7 FOI TRA-06-081 Memo *Review of LRC Report*. dated 27 March 2006. p 4.

<sup>43</sup> *Surrey Leader* - 'Full buses drove past passengers on nearly 2,000 occasions in Surrey last year' By Jeff Nagel. Feb 21 2007

<sup>44</sup>Letter to *Georgia Straight* Editor. Feb. 22 2007 p11.

## 2.2.6 Future Land Use Assumed to be Automobile Dependant

The Ministry of Transportation asserts that "forecast population and employment growth is expected to increase the demand for travel across the Port Mann Bridge in the AM peak hour."<sup>45</sup> While increased population and employment may lead to some increased commuter volumes, if both housing and employment are compact and transit oriented there is no reason that this increase could not be served by transit<sup>46</sup>.

One of the main purposes of the Livable Region Strategic Plan is to ensure that future development can be efficiently served by transit. But well planned transit fosters compact transit oriented development, and freeway expansion induces sprawling automobile dependant development<sup>47</sup>. This is one of the main reasons that the Greater Vancouver Regional District strongly opposes the expansion of Highway 1.

Only by assuming that land use patterns will be the same with freeway expansion or improved transit the Ministry can claim that automobile trips will increase regardless of transportation infrastructure decisions.

## 3.0 Conclusion

Given the Provincial Government's assertion that GHG pollution is "threatening life on Earth as we know it [and that] In 2007, British Columbia will take concerted provincial action to halt and reverse the growth in greenhouse gases." it is very concerning that the Ministry of Transportation is pushing ahead with freeway expansion without seriously considering transit solutions and high-efficiency goods movement options. Furthermore, it should be of great concern that the doings of the Premier's climate action team are now to be kept secret. This team includes the Transportation Minister Kevin Falcon who has staked his reputation on the twinning of the Port Mann Bridge.

Many of the conclusions of this report are corroborated by other sources. For example the City of Burnaby concluded that the Ministry has not yet presented any serious analysis of transit and transportation demand management solutions to the mobility and congestion issues along the Highway 1 corridor. The City of Burnaby's report states that:

What is needed is a meaningful and expedited consultation process . . . focusing on a thorough multi-criteria analysis of a range of options that includes not only congestion issues, but also land use, environmental, utilities and social considerations . . . Such a review should focus on considering and evaluating other potential scenarios that do not necessarily include the twinning of the Port Mann Bridge or the widening of Highway 1.<sup>48</sup>

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<sup>45</sup> Appendix 2 or [http://www.th.gov.bc.ca/gateway/reports/pm-h1/Halcrow\\_technl\\_rpt\\_trnstonlyopt\\_31\\_3\\_2006.pdf](http://www.th.gov.bc.ca/gateway/reports/pm-h1/Halcrow_technl_rpt_trnstonlyopt_31_3_2006.pdf)

<sup>46</sup> e.g. Mees, P., (2000) *A Very Public Solution: Transport in the Dispersed City*. Melbourne University Press

<sup>47</sup> e.g. City of Burnaby *Council Response to Gateway Program's "Project Definition Report"* June 14, 2006. [http://www.livableregion.ca/pdf/Burnaby\\_june14\\_2006response.pdf](http://www.livableregion.ca/pdf/Burnaby_june14_2006response.pdf) Section 5.2.2.

<sup>48</sup> City of Burnaby *Council Response to Gateway Program's "Project Definition Report"* June 14, 2006. [http://www.livableregion.ca/pdf/Burnaby\\_june14\\_2006response.pdf](http://www.livableregion.ca/pdf/Burnaby_june14_2006response.pdf) p. 4

A rapid re-allocation of funds from highway expansion to public transit improvement is essential for maintaining livable communities and meeting the Premier's goal to reduce greenhouse gas pollution 33% by 2020.

The science is clear. It leaves no room for procrastination. . . . The more timid our response is, the harsher the consequences will be . . . our emissions are increasing at a rate far faster than most of our neighbours'. We must act to arrest and reverse that trend<sup>49</sup> .

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<sup>49</sup> Speech from the Throne February 13, 2007 <http://www.leg.bc.ca/38th3rd/4-8-38-3.htm>