Roads and Bridges Subgroup Final Report

Provincial-Municipal Fiscal and Service Delivery Review (PMFSDR)

Roads and Bridges Subgroup

November 8, 2007

Executive Summary (1 of 2)

- The Roads and Bridges subgroup was struck by the Infrastructure Table to identify an appropriate and desirable division of responsibility for roads and bridges among Ontario's orders of government.

- Municipalities have responsibility for approximately 13,000 bridges and large culverts, and approximately 142,000 two-lane equivalent kilometres of roads.
  - In 2005, the Ontario Good Roads Association (OGRA) estimated current road and bridge rehabilitation needs at over $1.8 billion.

- The subgroup believes that the Province should assist its municipal partners to maintain those roads and bridges where:
  - The Province shares an interest, and where
  - The municipal ability to pay for capital improvements is insufficient.

Executive Summary (2 of 2)

- The subgroup recommends that the Province:
  - Form a provincial-municipal study group to stratify Ontario's road and bridge network into segments of municipal, provincial, and of shared interest;
  - Identify, using objective criteria, those municipalities with insufficient resources to maintain adequate levels of investment in roads and bridges; and
  - Develop and deliver an appropriate, sustainable, and predictable means of assisting municipalities with the upkeep of roads and bridges (e.g. through the provincial gas tax, or other means).

- This response should be weighted so as to provide extra assistance to those municipalities that lack the ability to pay for road and bridge maintenance.
  - The response could also be weighted to advance other provincial policy goals.

Mandate of the Subgroup

Terms of Reference

- The key objective of the subgroup is to develop a policy rationale for identifying an appropriate and desirable division of responsibilities for roads and bridges between the Province and municipalities of Ontario, and to provide advice on this issue for the consideration of the Infrastructure Table.

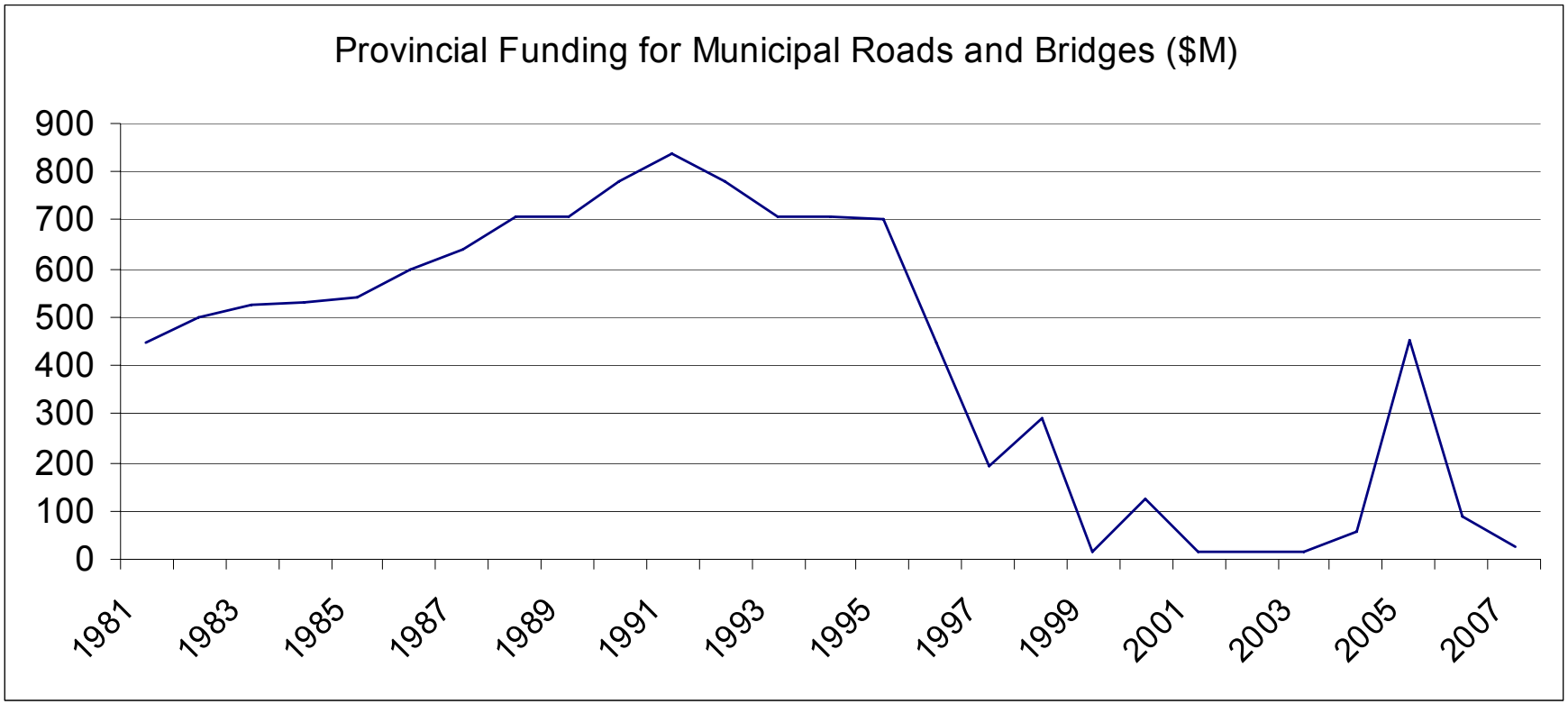
- In this context, the subgroup is considering:
  - The factors that guide the determination of road and bridge responsibility;
  - The quantitative and qualitative criteria that can be used to stratify the province's road and bridge network; and
  - Options for fulfilling road and bridge responsibilities, including ownership, operation and fiscal capacity.

Context

Estimates of Investment Need

- Recent estimates have confirmed the need for investment in roads and bridges:
  - In 2005, the Ontario Good Roads Association (OGRA) estimated current road and bridge rehabilitation needs at over $1.8 billion;
  - In 2005, the Intergovernmental Task Force on Urban Transportation estimated that $10 billion will be required to expand and rehabilitate municipal roads and bridges in Ontario over the next decade; and
  - Through the recent Rural Infrastructure Investment Initiative (RIII), the Province received municipal applications for 191 road and bridge projects, which requested more than $124 million in grants.

Recent Provincial Funding for Municipal Roads and Bridges



Ministry of Transportation

Principles

Principles

- The members of the subgroup have a common interest in a number of principles that pertain to roads and bridges in Ontario, including:
  - A minimum standard of quality to which all Ontarians are entitled;
  - The facilitation of economic development, trade and tourism;
  - The accommodation of future growth; and
  - Good stewardship of public assets:
    - To protect public safety;
    - To protect value of investments made; and
    - To practice fiscal responsibility by managing assets with an eye to their life-cycle.

A Framework for Network Stratification

Introduction

- This part of the presentation is intended to explain why the Roads and Bridges subgroup needs to consider the stratification of Ontario's road and bridge network.

- The goal of this work is to have a shared framework – informed by engineering, planning and economic principles – for how to think about appropriate responsibilities for roads and bridges in the province.

- The functional classification of roads is only part of the answer. The subgroup recommends considering additional factors that allow us to better model the importance of the road and bridge network all around the province.

Functional Classification

- Any road network can be classified into functional categories on the basis of several criteria. These categories (or some variant of them) provide a useful framework for planning and managing the network, and are widely used.
- Ownership is not a factor in determining functional classification.

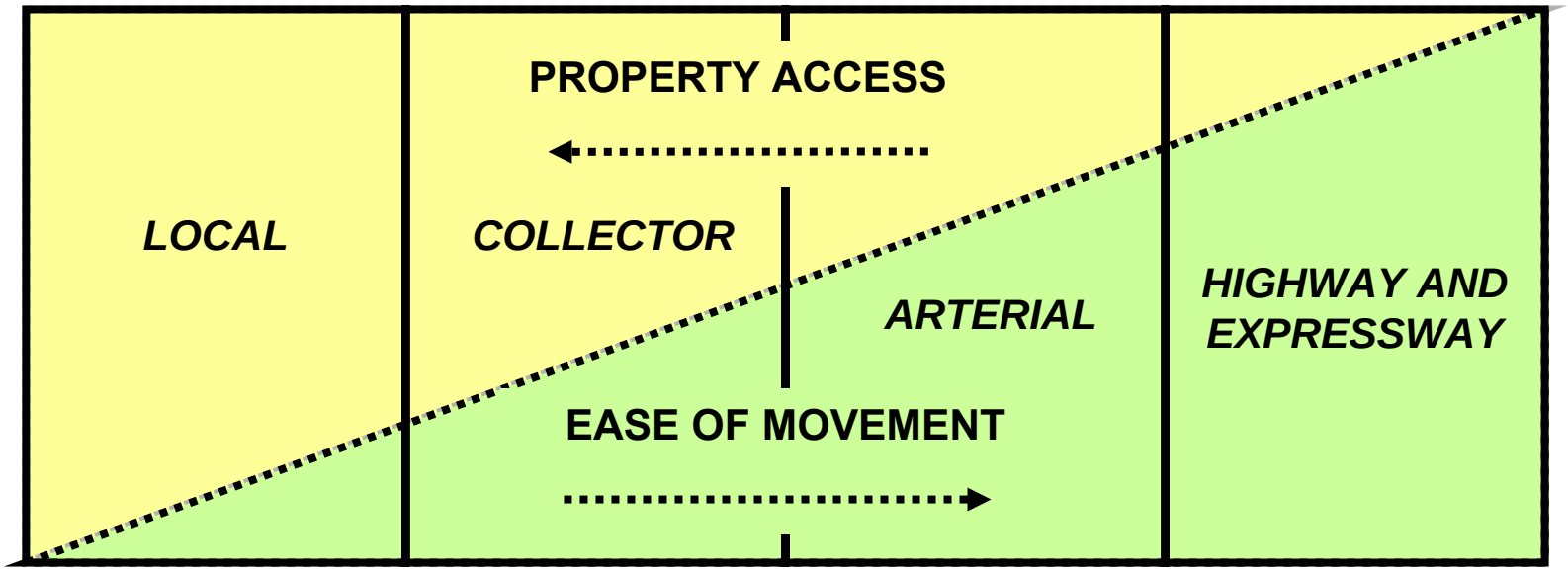
LOCAL	***COLLECTOR***	***ARTERIAL***	***HIGHWAY AND EXPRESSWAY***
Serve primarily to provide access to adjacent land, or higher-order roads.	Serve primarily to provide access to, from, and between residential, commercial, and industrial zones.	Serve primarily to provide access to major centers of urban or regional activity.	Serve primarily to provide interregional or interurban access.
Low-volume traffic corridors.	Mid-volume traffic corridors.	High-volume traffic corridors.	Highest-volume traffic corridors.

TYPICAL CRITERIA

- **Average Annual Daily Traffic (AADT)**
- **Design Speed**
- **Right of Way Width**
- **Frequency and Type of Access**
- **Others**

Functional Classification

- In general terms, local and collector roads are most suited to providing access to property, while arterial roads and expressways are more suited to facilitating the free flow of traffic over longer distances.

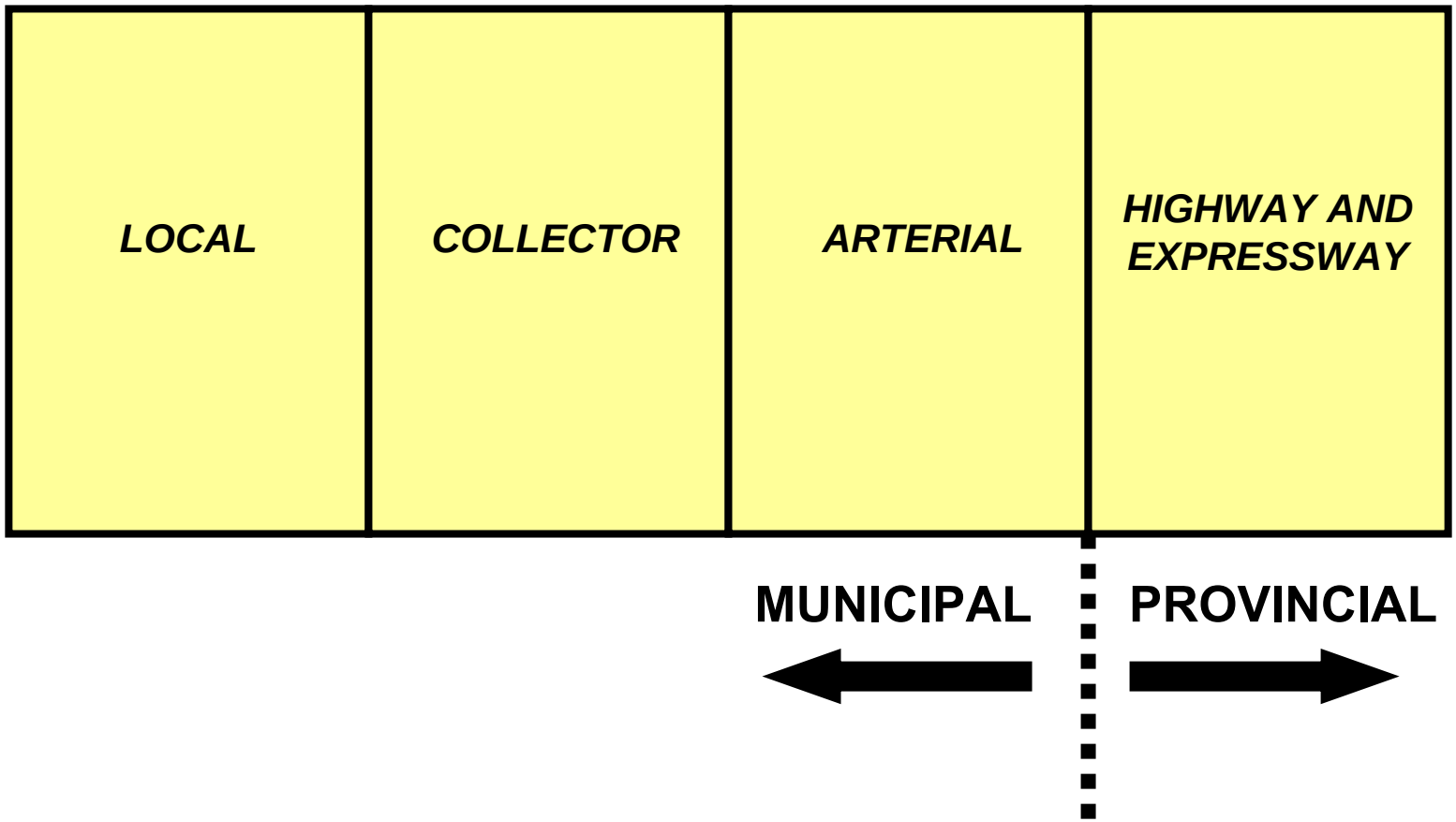


Urban and Rural Dimensions

- The same functional classification scheme applies to road networks in both urban and rural areas. The actual typical road cross-sections in each class, however, may differ. Other characteristics, such as traffic volumes, may also vary significantly within each class of roadway between urban and rural areas.
- In their local context, both of the roads below could be serving an arterial function.

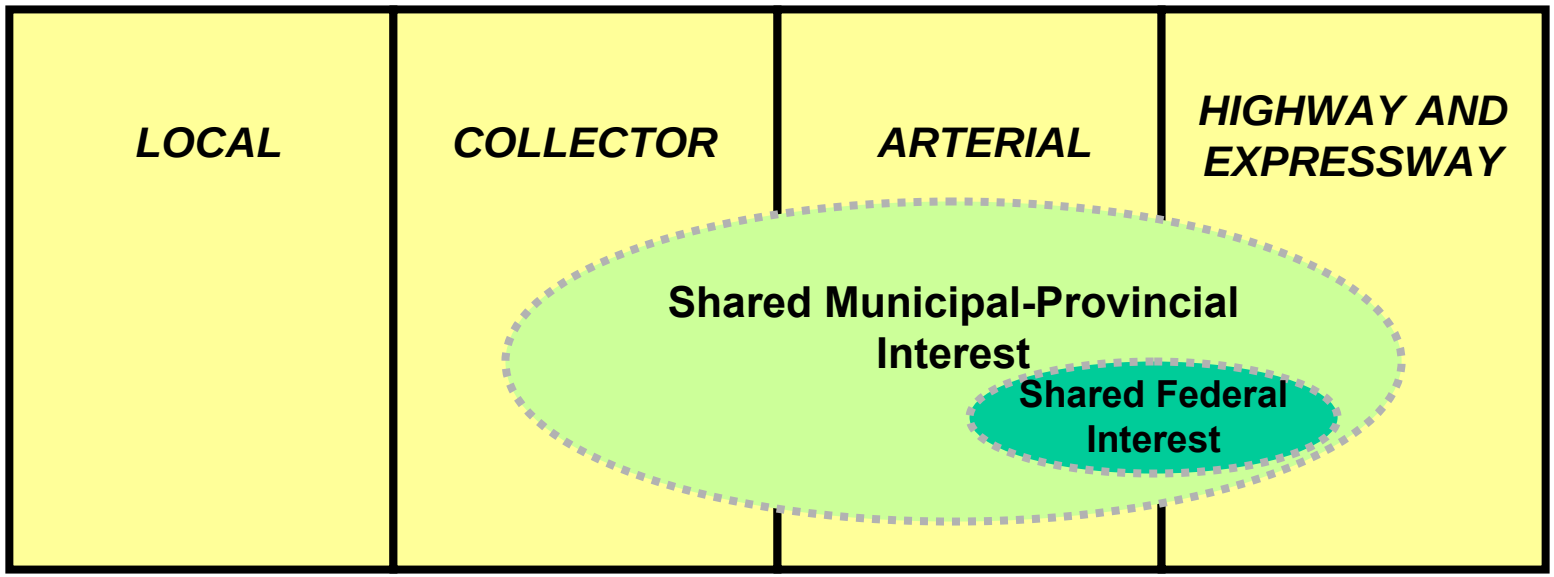
Defining Responsibility for Roads and Bridges

- Conceptually, there are different ways of assigning responsibility for roads and bridges. A simple method would be to rely on the functional classification of the road to create exclusive categories of responsibility.



Defining Responsibility for Roads and Bridges

- A more sophisticated method would take into account the situations where there are shared interests in a road. Defining the area of shared interest is challenging, and the results may not match up exactly with the functional classification.



Stratification Criteria

- What additional criteria would we need to use to determine which of these roads has greater provincial or local significance (i.e., shared interest)?

Stratification Criteria

- Among the additional criteria we have considered are:
  - Access to population centres;
  - Proportion of commercial traffic;
  - Proximity to border crossings;
  - Access to key economic infrastructure; and
  - Areas of key economic activity.

- Development of criteria would enable a process to systematically evaluate Ontario's road and bridge network that goes beyond the functional classification.

- For road segments where a shared interest is identified, we could address that shared interest *either* through funding approaches *or* through changes in ownership.
  - Some municipalities consider enhancing ability to pay a better solution than changing ownership.

- There may be special cases that are exceptions to the rule.
  - Ability to pay could be a key consideration in moving some projects forward.

Network Stratification Criteria

Previous Exercises in Assigning Responsibility

- Two previous exercises undertaken in Ontario have attempted to delineate the provincial interest in the road and bridge network:
  - The 1997 and 1998 Highway Transfers, and
  - The National Highway System (NHS).

- A series of highway transfers were undertaken in 1997 and 1998, with an aim of streamlining the management and funding of public services among Ontario's orders of government. Through this process, the network of highways owned by the province was divided into three categories of routes:
  - **Provincial highways**, routes that connect heavily-populated urban centres, or have very high levels of daily traffic;
  - **Regional highways**, routes that connect small or mid-sized urban centres, or have high levels of daily traffic; and
  - **Area highways**, i.e. the rest.

Previous Exercises in Assigning Responsibility: The National Highway System

- The NHS was first launched in 1987 by the Council of Deputy Ministers Responsible for Transportation and Highway Safety (a joint federal/ provincial/ territorial initiative). The Council has identified a network in Ontario that consists of 6,836 kilometres of road.
  - There is no funding agreement in place to provide regular, sustainable federal investment in the NHS.

- The network comprises of three categories of routes:
  - **Core Routes** (key provincial / inter-provincial corridors);
  - **Feeder routes** (key linkages to the Core Routes from population and economic centres); and
  - **Northern and Remote Routes** (linkages to Core or Feeder routes that provide access to northern and remote areas).

National Highway System Routes in Ontario (1 of 2)

Segments of the National Highway System in Ontario	Route	Total Length	Responsible Government		
Summary			**Prov/Terr**	**Municipal**	**Federal**
1988 National Highway System					
Fort Erie (US border) - Toronto	QEW	139	139		
Que border – Windsor (US border)	401	817	817		
London – Sarnia (US border)	402	103	103		
US border - QEW	405	9	9		
QEW - Hwy 401 IC	427	8	8		
Highway 401 – US border	137	4	4		
Prescott (US border) - Ottawa	416	79.8	79.8		
Quebec border – Ottawa	417	182.8	182.8		
Toronto - Parry Sound	400	210.4	210.4		
Parry Sound - Sudbury	69	181.5	181.5		
Ottawa – Manitoba 17	17	1966.3	1934.7	31.6	
Quebec border – Kirkland Lake	66	58.4	54.5	3.9	
North Bay – Nipigon	11	991.5	978.2	13.3	
Fort Frances - Kenora	71	194.3	190	4.3	
Thunder Bay – US border	61	58	58		
Subtotal		**5003**	**4949.9**	**53.1**	**0**
2004 Additions					
QEW (Burlington) – Hwy 401 (Woodstock)	403	81.9	81.9		
Hwy 400 IC Connection - Hwy 11 (Barrie)	400A	1.1	1.1		
Barrie – North Bay	11	238.6	238.6		
Hwy 401 - Peterborough	35/115	44.8	44.8		
Hwy 12 (west of Lindsay) - Hwy 400 (Coldwater)	12	74	74		
Ottawa - Hwy 12 (West of Lindsay)	7	319	313.1	5.9	
Highway 401 - Guelph	6	15.4	15.4		
Hamilton - Hwy 401	6	25.9	25.9		
Kitchener - Guelph	7	20.8	12.2	8.6	
Hwy 401 – Ambassador Bridge (Windsor)	3	10.9	4.5	6.4	
US Border at Cornwall - Hwy 401 IC	138	3.8		3.8	
Hwy 17 – Sault Ste Marie (US Border)	17B	10.6		10.6	
Hwy 400 (Barrie) – Collingwood	26	63	47.6	15.4	
Stratford – Kitchener	7\8	52.5	49.2	3.3	
Hwy 17 – Elliot Lake	108	27.2	24.7	2.5	
Hawkesbury (Quebec Border)	34	19.2	14.3	4.9	
Subtotal		**1008.7**	**947.3**	**61.4**	**0**

National Highway System Routes in Ontario (2 of 2)

Segments of the National Highway System in Ontario	Route	Total Length	Responsible Government		
Summary			**Prov/Terr**	**Municipal**	**Federal**
2005 Additions					
Nicholas Street from Hwy 417 to the MacDonald-Cartier Bridge	417	4.1		4.1	
Highway 420 from the QEW to the Niagara Falls Rainbow Bridge	QEW	4.7		4.7	
Dougall Avenue et al. from Hwy 401 to the Windsor Detroit Tunnel	401	10.9		10.9	
Hwy 403 from Hwy 403/QEW to Hwy 401 & 410	403/QEW	20.9	20.9		
Hwy 410 from Hwy 401 to Bovaird Dr.	410	6.7	6.7		
Hwy 427 from Hwy 401 to Regional Rd 7	427	12.1	12.1		
Hwy 409 from Hwy 401 to Pearson Airport	409	4.1	4.1		
Hwy 6 from Hwy 403 to Hamilton Airport	6	9.7	9.7		
Regional Rd 7 and Regional Rd 50 and Rutherford Rd.	7 & 50	6		6	
Steeles Ave and Airport Rd and Intermodal Dr.	410	7.1		7.1	
Derry Rd and Airport Rd and Intermodal Dr.	427	5.6		5.6	
Gardiner Expwy & Kipling St & Administration	427	3.5		3.5	
Trafalgar Rd.	401	1.7		1.7	
Regional Rd 7 & Keele St. & Administration Rd	400	4.3		4.3	
McCowan Rd	401	1.6		1.6	
Bronson Ave and Airport Parkway	417	9.8		9.8	
Airport Rd and Oxford St E	401	10		10	
Hwy 138 from Hwy 417 to Hwy 401 at Cornwall *	138	35.4	TBD	TBD	
Route 138 from Hwy 401 at Cornwall to the U.S. Border *	138	3.8	TBD	TBD	
Hwy 7/10 from Hwy 410 to Owen Sound *	7\10	152.1	TBD	TBD	
Hwy 12 from Hwy 400 to Midland *	12	18	TBD	TBD	
Hwy 19 from Tillsonburg to Hwy 401 *	19	22.5	TBD	TBD	
Hwy 24 from Simcoe to Hwy 403 *	24	36.2	TBD	TBD	
Hwys 3\77 from Leamington to Hwy 401 *	3\77	61.3	TBD	TBD	
Hwys 144\101 from Sudbury to Hwy 11 (Timmins) *	144\101	362.4	TBD	TBD	
Prescott-Russell County Road 17 from Hawkesbury East to Hwy 417	17	10		10	
Subtotal		**824.5**	**53.5**	**79.3**	**0**
TOTAL		**6836.2**	**5950.7**	**193.8**	**0**

* While these routes are provincial, they do contain small sections of Connecting Links, which are municipal.

Previous Classification Exercises: Positives

- The 1997 and 1998 Highway Transfers and the NHS, taken together, provide a model for current attempts to stratify the network.

- Among the ‘lessons learned’ are the exercises’ positive features, which should be emulated, and negative features, which should be avoided

- On the positive side, the Transfers and the NHS provide a model for screening the network of roads and bridges to isolate those segments in which there is a shared municipal / provincial interest. These exercises:
  - Performed analysis that stratified the road and bridge network, and
  - were grounded in objective standards.

- Additionally, the NHS was comprehensive in its approach.

Previous Classification Exercises: Negatives

- On the negative side, the 1997 and 1998 Highway Transfers in particular provide examples of what to avoid. The Transfers:
  - *Involved little consultation with affected municipalities.* The Transfers conveyed ownership of many road segments, and the responsibility to maintain them, to municipalities, without seeking municipal input into the transfer. This lack of consultation created friction in municipal-provincial relations that could have been avoided.
  - *Did not consider municipal ability to pay*. Some municipalities that received road segments in the Transfers lacked the tax base necessary to meet their new responsibilities. One result of this lack is that some transferred segments are no longer maintained in a good state of repair.
  - *Were selective in their approach*. The Transfers only tested provincial highways against its criteria, and thus only found provincial roads to transfer to municipalities. Had they tested the entire road and bridge network in Ontario, they might have found municipal roads that merited transfer to the Province.
- The NHS process did not result in any sustained federal funding to implement the vision.

Re-Evaluating Ontario's Roads and Bridges

- There is merit in re-evaluating Ontario's road and bridge network with an eye to determining where responsibility for its various segments should lie.

- The benefits of such an exercise would include:

  – *Providing a complete picture of the network*. The 1997 and 1998 Highway Transfers only examined the provincial road and bridge network. It may be the case that there are municipal roads in which the Province shares an interest. A new exercise could settle this question.

  – *Accounting for growth*. Since 1998 many regions of the Province, particularly in the Greater Golden Horseshoe, have experienced significant population growth, and usage of the local road network has changed accordingly. As a result some roads previously deemed to be of municipal interest only, and hence transferred to municipalities, may now qualify as being of shared interest.

  – *Fixing previous anomalies*. In some cases the Transfers applied its own criteria too rigidly, without taking into account local conditions that should have tempered its judgment. As a result some roads were transferred to municipalities that should not have been. A new exercise could help to identify and rectify such anomalies.

A New Evaluation Exercise

- The Province should undertake a new evaluation of Ontario's network of roads and bridges, which would aim at stratifying the network into segments of municipal, provincial, and shared interest.

- This exercise should employ the criteria used by the 1997 and 1998 Highway Transfers, as there is a consensus that these criteria are, on their own terms, comprehensive and sound.
  - The subgroup, constrained by the need to report in a timely fashion, and a lack of technical expertise, cannot identify whether particular thresholds in the criteria (e.g. the size of population centres served) should be adjusted.

- To prevent the emergence of anomalies, these Transfers criteria should be supplemented with the criteria employed by the NHS.
  - These NHS criteria should be scaled down to a provincial level, i.e., where the NHS identifies a feature as possessing national significance, this new exercise should identify a similar feature that possesses provincial significance.

- The exercise should be a joint municipal-provincial endeavour, to avoid the friction that earlier attempts created.

A New Evaluation Exercise: Advantages

- The proposed exercise should include road segments that fall within the scope of the Connecting Links Program.
  - As Connecting Links, such segments are already acknowledged to be of shared interest.
  - At the exercise's conclusion, these links might be subsumed into whatever program or initiative issues from the evaluation.

- The proposed exercise will provide an opportunity to identify and rectify those anomalies that came about from earlier exercises: that is, those segments of the network where ownership was misaligned between orders of government.

- The proposed exercise would allow for identification and evaluation of the need for new interfaces and interchanges between the provincial and municipal road network.

Network Stratification Criterion 1 of 4: Traffic Volume

- Traffic volume can be used to stratify the road network, and it was used in both the 1997/1998 Highway Transfers and the National Highway System exercises, as the table below shows. The criteria could be modified to help identify roads with a shared interest.

	Highway Transfers, 1997 and 1998	National Highway Strategy	Potential Modifications
Provincial Highways / Core Routes	•Carry relatively high volumes of long distance traffic •Annual daily traffic: ◦over 10,000 vehicles and 500 trucks in southern Ontario ◦over 5,000 vehicles and 200 trucks in northern Ontario	N/A	Include a minimum inter-regional traffic requirement and a minimum long-distance commercial traffic requirement to: ◦identify only shared interest roads, and ◦avoid identifying many roads in large centres serving primarily a local function.
Regional Highways / Feeder Routes	•Annual daily traffic: ◦over 5,000 vehicles and 500 trucks in southern Ontario ◦over 2,500 vehicles or 100 trucks in northern Ontario	N/A	" "

- Traffic volumes alone are not sufficient to define a provincial interest. Other factors such as traffic origin and destination, distance of travel, speed, and current levels of congestion need to be considered as well.

Network Stratification Criterion 2 of 4: Urban Connections

- Roads can be identified as having a shared interest if they meet urban connection criteria adapted from 1997 and 1998 Highway Transfers / NHS exercises.

	Highway Transfers, 1997 and 1998	National Highway Strategy	Potential Modifications
Provincial Highways / Core Routes	•Provide access to major urban centres with a population over 50,000	•Connect to capital cities •Connect to major provincial population centres defined by Census Metropolitan Area (>100,000) and Census Agglomerations (>10,000), representing: ◦a population of at least 50,000 with an urban core representing at least 50% of this total, or ◦urban area of at least 5% of the provincial population	Decrease population threshold to identify more rural and northern growth centres
Regional Highways / Feeder Routes	•Provide access to small and medium sized urban centres	•Are classified as primary or arterial highways (by function) by the provincial or territorial jurisdiction *and* either: ◦Provide a connection (shortest route) from a Census Agglomeration to the nearest Census Metropolitan area, or ◦Serve 5% of the population of a jurisdiction, and have at least 200 trucks per day and have a seasonal peak increase in traffic of at least 25%	" "

Network Stratification Criterion 3 of 4: Borders

- Roads can be identified as having a shared interest if they meet proximity to border criteria adapted from 1997 and 1998 Highway Transfers / NHS exercises.

	Highway Transfers, 1997 and 1998	National Highway Strategy	Potential Modifications
Provincial Highways / Core Routes	•Form key linkages to other provinces or the United States	•Connect to major land border crossings with $2 billion worth of foreign trade (imports and exports) and tourism, carried by the road mode	Include all border crossings. Roads connecting to international crossings should have greater weighting than inter-provincial connections. Encourage federal government to broaden NHS criteria and funding for border routes.
Regional Highways / Feeder Routes / Northern	N/A	•Connect a Feeder Route to an international border crossing that has: ◦24 hour operation, and ◦a minimum of $500 million per year of trade and/or tourism across border, or ◦Designated Commercial Office Status (by Canada Border Services Agency).	" "

Network Stratification Criterion 4 of 4: Economic Linkages

- Roads can be identified as having a shared interest if they meet economic linkage criteria adapted from 1997 and 1998 Highway Transfers / NHS exercises.

	Highway Transfers, 1997 and 1998	National Highway Strategy	Potential Modifications
Provincial Highways / Core Routes		•Provide linkages to: ◦**Airports** that carry high levels of passengers or freight; ◦**Marine ports** that carry high levels of freight; ◦**Rail nodes** that carry high levels of freight. •Connect to centres of economic activity, based on population adjusted by high average income and CMA/CA with a high incidence of the labour force engaged in **tourism**	Including smaller inter-modal facilities. Include other economic drivers (e.g., military base, regional hospital, university)
Regional Highways / Feeder Routes	•Ensure network continuity •Linkages to areas of resources and industrial development •Provide access to clusters of socio-economic/tourism activity	•Provide linkages from a Feeder Route to: ◦**Airports** ◦**Marine ports** ◦**Rail nodes** •Connect to centres of economic activity, based on population adjusted by high average income and CMA/CA with a high incidence of the labour force engaged in **tourism**	" "

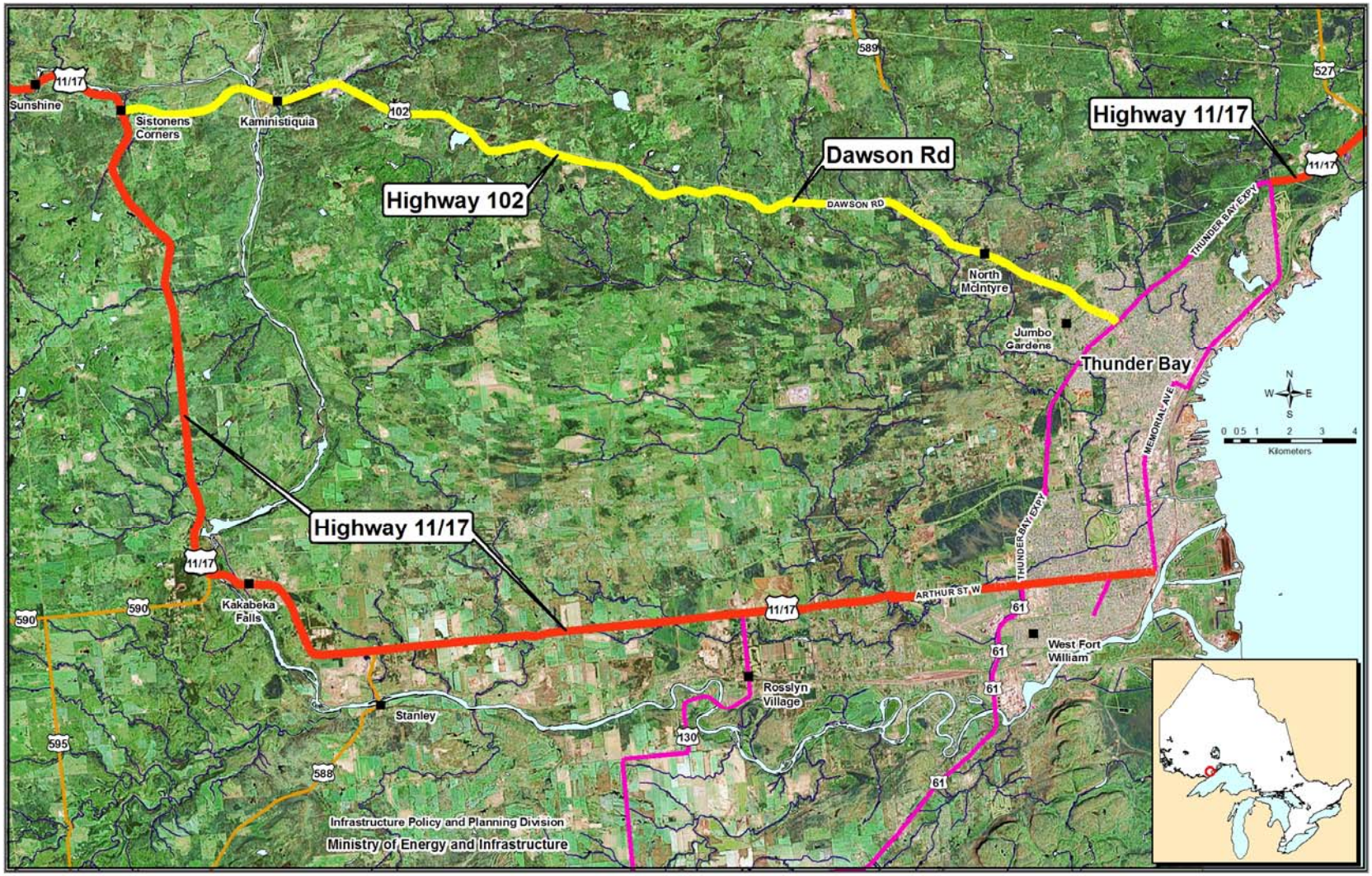
Weighting the Criteria

- A road may be identified as having a shared interest if it meets one or more of the four main criteria:
  - Traffic volume
  - Urban connections
  - Borders
  - Economic linkages

- Assigning points to each of the criteria could help measure the relative importance of roads within the shared interest category, including:
  - Roads that meet more than one category,
  - Ranking roads within a category (e.g., connections to international vs. inter-provincial crossings)

Examples

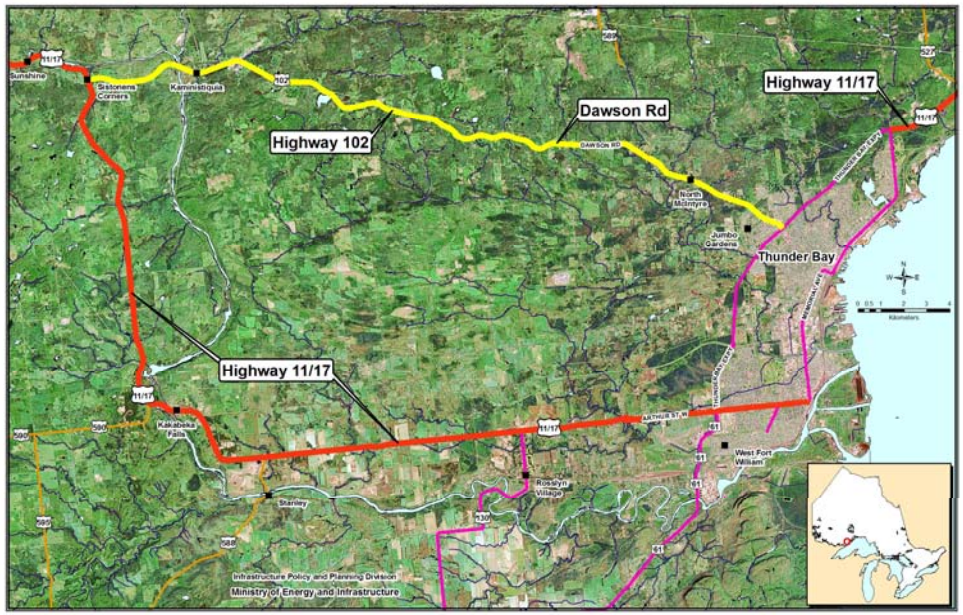
Highway 102/Dawson Rd - Thunder Bay



Highway 102/Dawson Rd - Thunder Bay, continued

The roads involved

- Highway 11/17, Highway 102 or Dawson Road, and Highway 61 (extending south from the city to the Pigeon River Bridge and Minnesota).
- Eastbound traffic from Manitoba or Minnesota with a destination beyond Thunder Bay will come to a choice at Sistonens Corner.



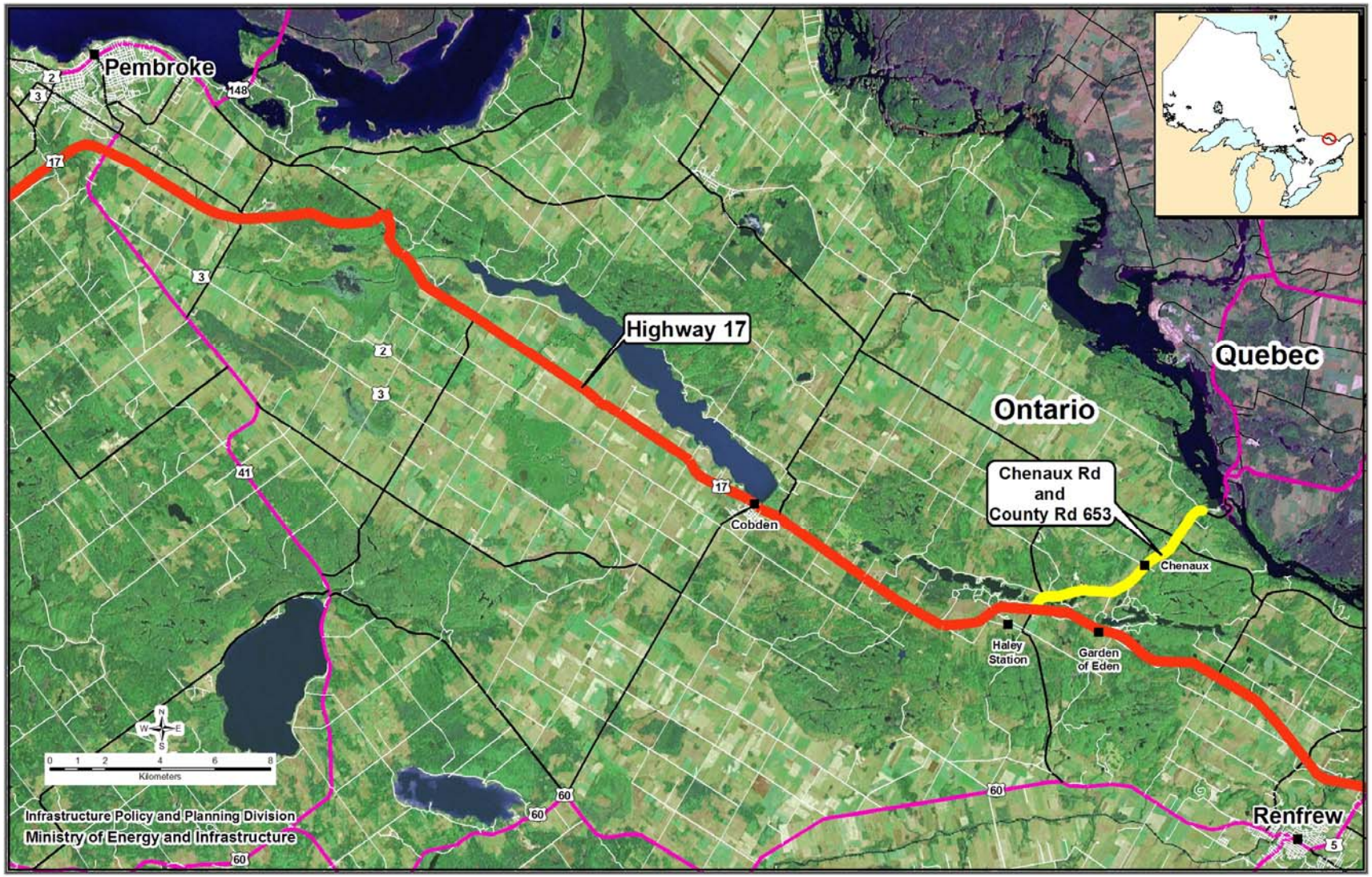
The Issue

- Many eastbound motorists travelling beyond Thunder Bay choose the 28 km drive along Dawson Road (the yellow line) as opposed to the longer, 55 km drive south and east along Highway 11/17. That choice results in significant traffic pressures on this road from trips that neither begin nor end in the community.

Criteria used to identify the issue and the "shared interest" nature of the road:

- Traffic volumes and inter-regional traffic will presumably identify this road as being of "shared interest".
- The road also connects to several border crossings: it links to the Fort Frances International Falls crossing and is in close proximity to the Pigeon River Bridge. These connections highlight an appropriate federal interest.

Chenaux Road/County Road 653 - Renfrew



Chenaux Road/County Road 653 – Renfrew, continued

The roads involved

- Highway 17, which runs through Renfrew, connects Ottawa and northern Ontario.
- Chenaux Road/County Road 653 (in yellow) within Renfrew connects to Highway 17 and provides access to Quebec, particularly for commercial vehicles.

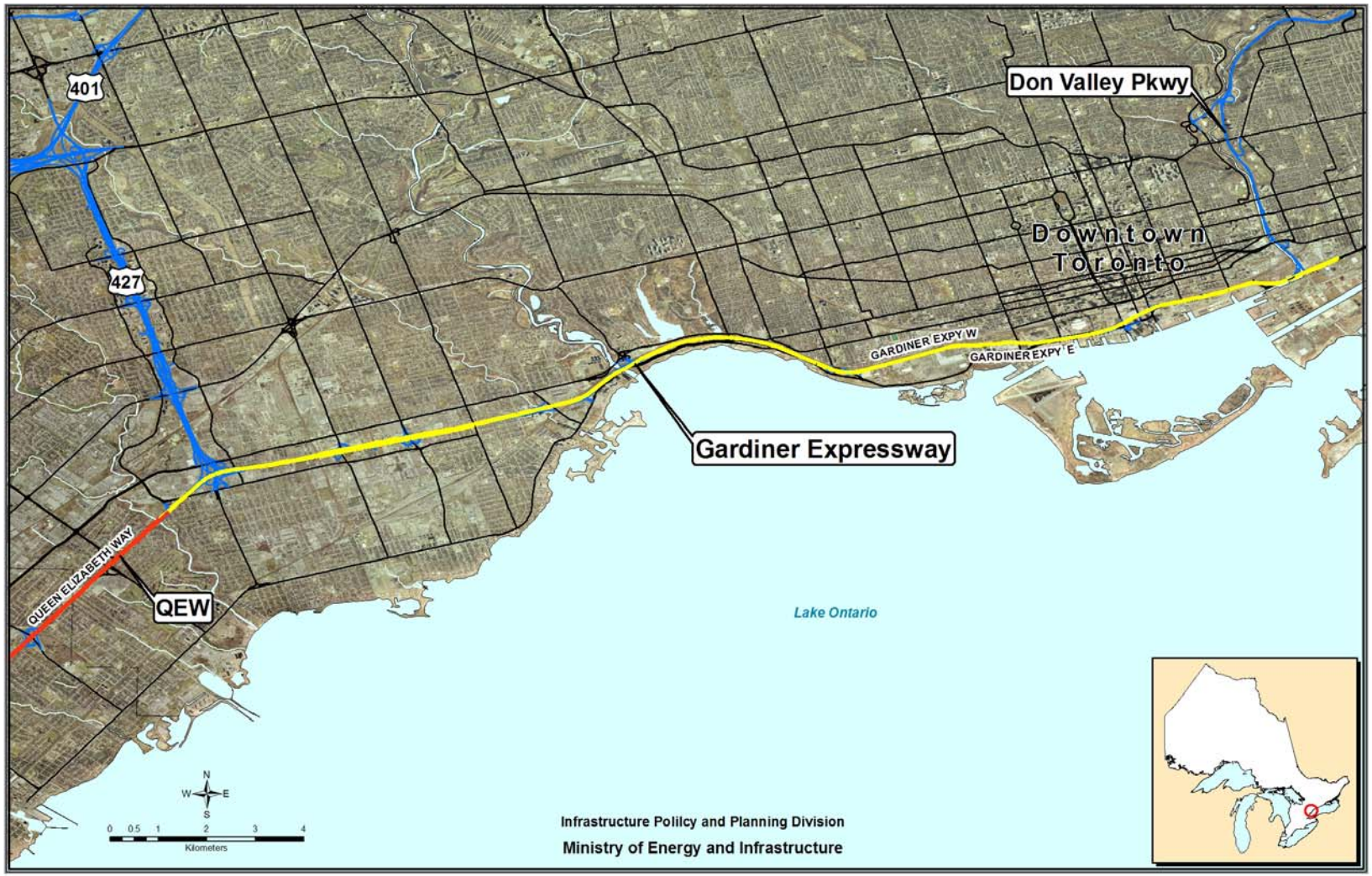
The issue

- Traffic volume along Chenaux Road/City Road 653 are higher than one might expect, given the area's small population base. The high volume suggests that this road is serving inter-provincial traffic and supporting needs beyond those of Renfrew County.

Criteria used to identify the issue and the "shared interest" nature of the road:

- The road provides a link to an inter-provincial border crossing. As such the road also appears to bear an appropriate federal interest, and perhaps merits federal funding.
- The AADT levels of about 2,300 on average would fall below the thresholds used in the 1997 and 1998 Highway Transfers, as well as the NHS criteria of 10,000.

The Gardiner Expressway – Toronto



The Gardiner Expressway – Toronto

The roads involved

- The Gardiner Expressway is a municipally-owned expressway in Toronto that connects the juncture of Highway 427 and the Queen Elizabeth Way to the Don Valley Parkway.
- The Gardiner provides road access to southern Toronto, particularly the downtown.

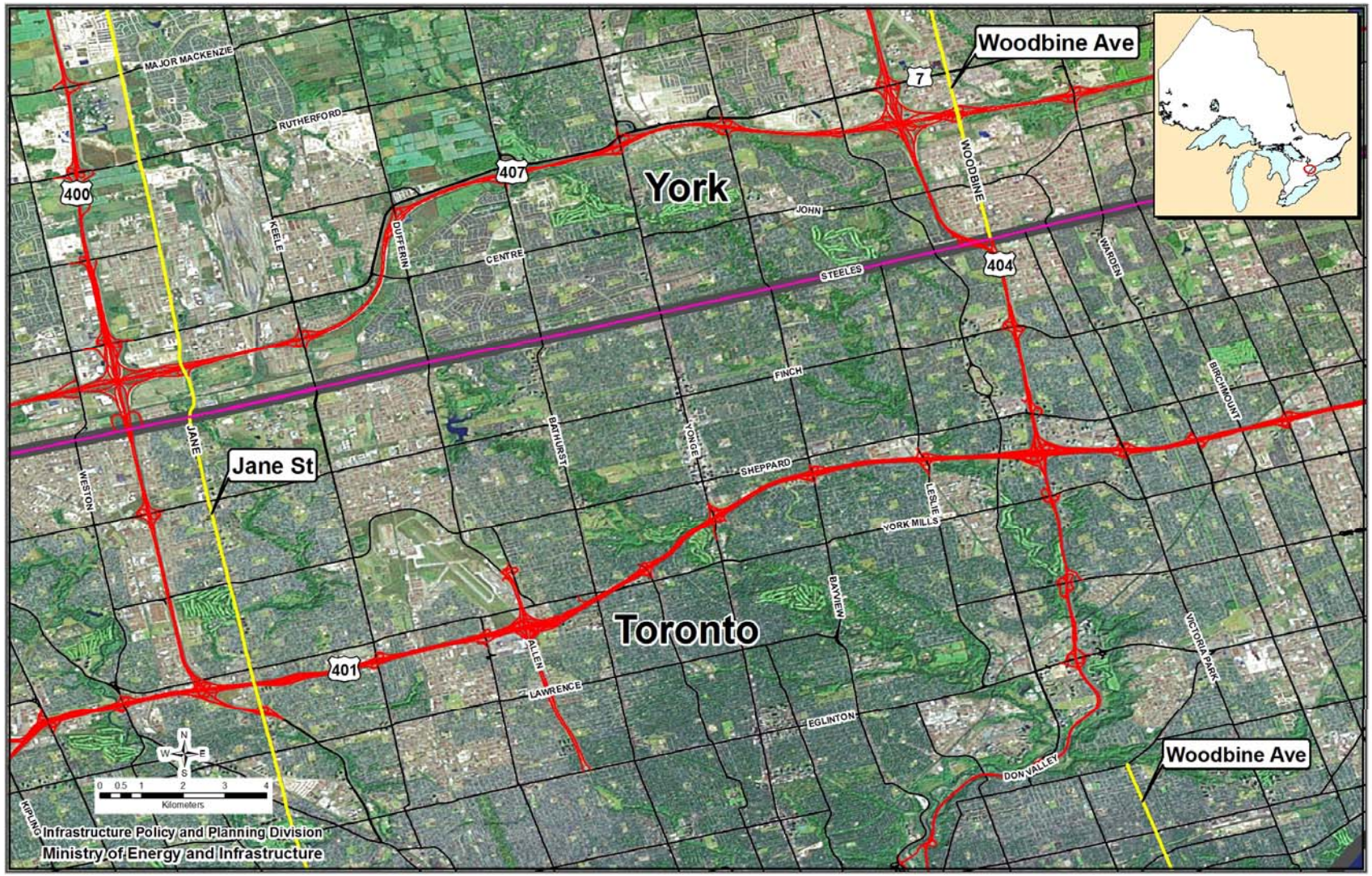
The issue

- The Gardiner carries significantly high levels of commuter traffic: some stretches carry in excess of 100,000 cars daily. The Gardiner also carries high level of commercial truck traffic. In this manner the road serves a similar role as adjoining provincial highways.
- Some portions of the Gardiner are elevated. Such elevated structures result in high repair costs.

Criteria used to identify the issue and the "shared interest" nature of the road

- A significant portion of the road's traffic is made up of long-distance commercial vehicles.

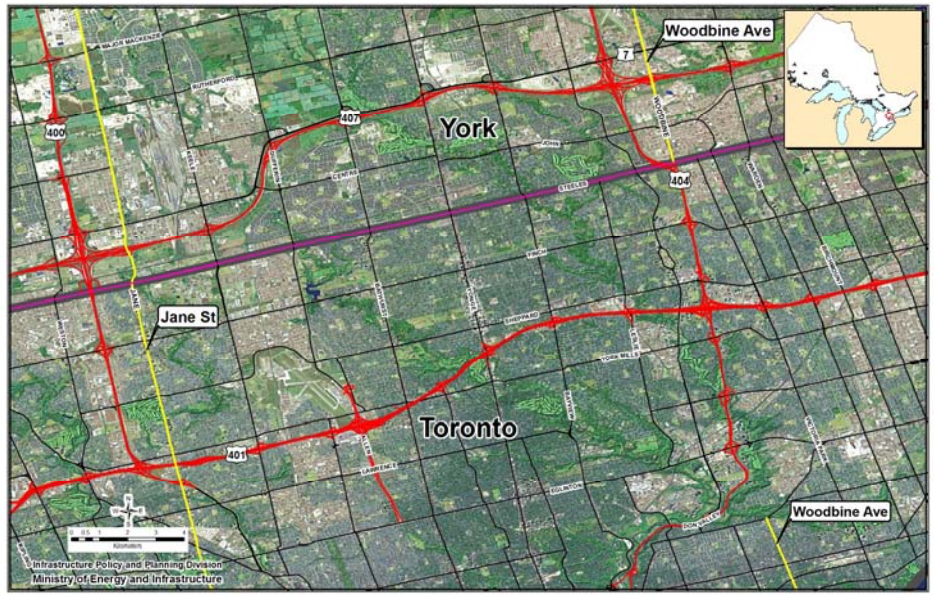
Jane St. and Woodbine Ave. – York Region and Toronto



Jane St. and Woodbine Ave. – York Region and Toronto

The roads involved

- Highways 400 and 404 serve high levels of inter-regional traffic flow through Toronto and York Region. Both are now handling traffic levels significantly beyond capacity.
- Municipal north/south roads nearby such as Jane Street and Woodbine Avenue also support inter-regional traffic flow due to their proximity to Highways 400/404.



The issue

- Surrounding development poses challenges to widening Highways 400 and 404. As a result, lack of highway capacity has lead to spill-over of interregional traffic onto nearby municipal roads. Congestion and extra-regional demand have developed; these pressures will increase as the GTA continues to grow.

Criteria used to identify the issue and the "shared interest" nature of the road

- Jane Street and Woodbine Avenue are among a number of north/south roads with AADT above the 10,000 thresholds. However, these corridors may bear a higher inter-regional traffic share.
- Many municipal roads connecting Peel and York Regions also feature AADT levels above 10,000.

Regional Road 48/Portage Rd. – Kawartha Lakes

The roads involved

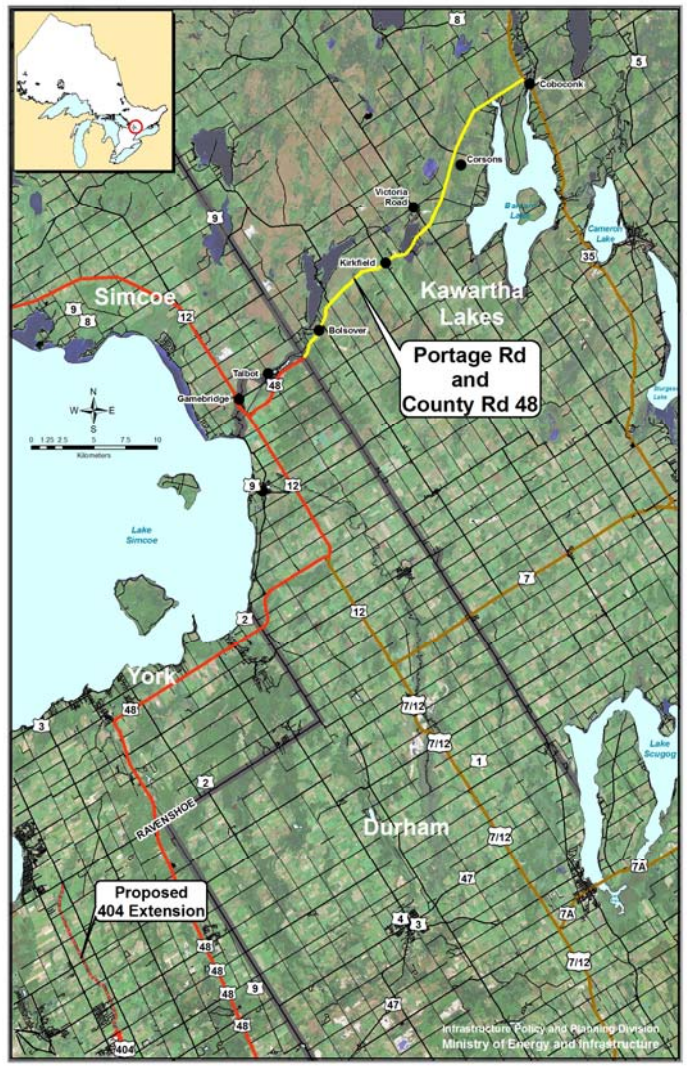
- Regional Road 48/Portage Road runs through Durham Region and Kawartha Lakes and connects Highways 401, 12 and 35. The road is represented by the yellow line on the map.

The issue

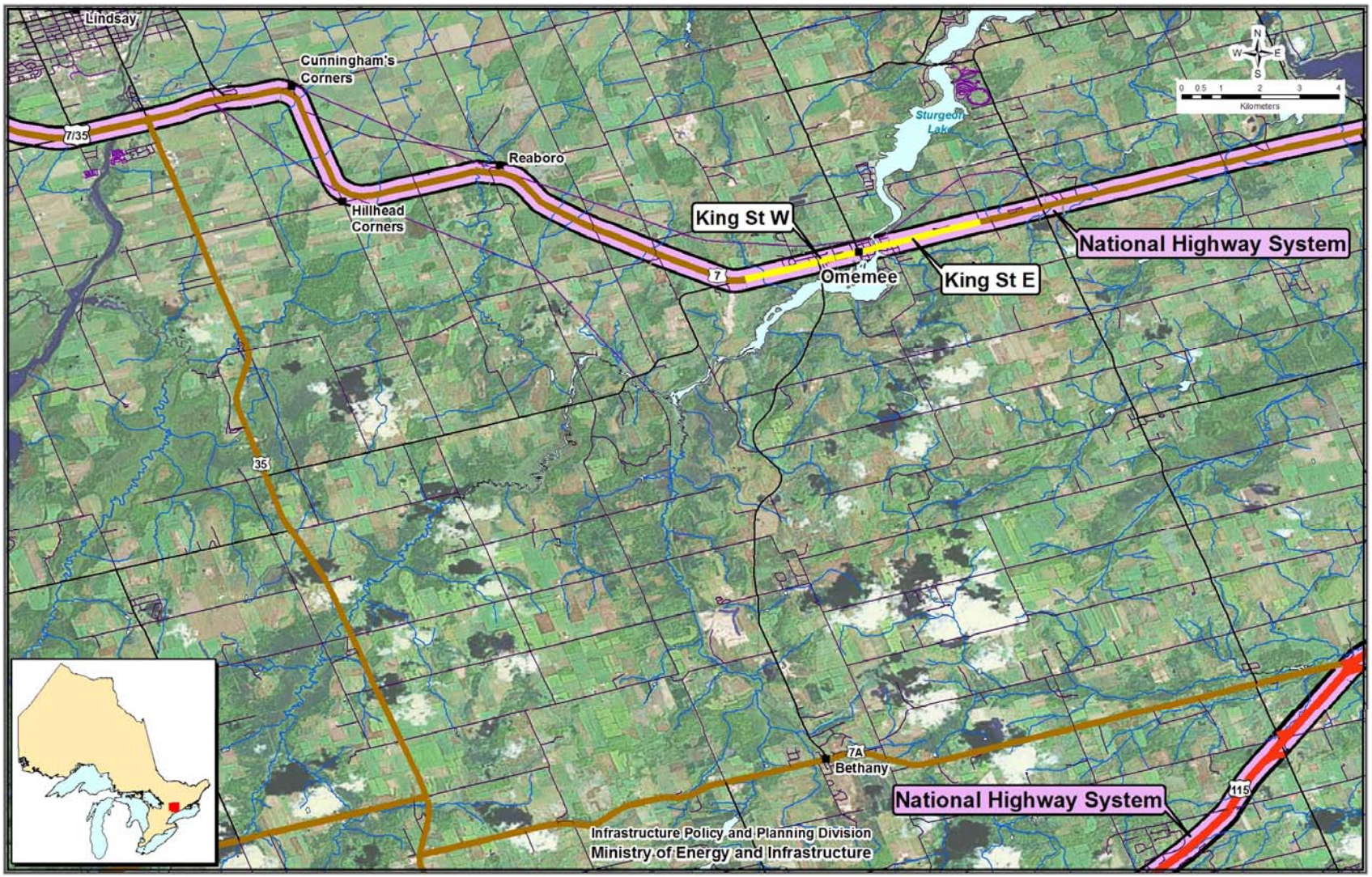
- A substantial portion of the traffic on this road is interregional traffic between the eastern end of the GTA and traditional cottage-country areas in Kawartha Lakes and Haliburton County.

Criteria used to identify the issue and the "shared interest" nature of the road:

- The inter-regional nature of the traffic on the road.
- The economic impact associated with both the expected increase of aggregate production in the area and the nearby extension of Highway 404 (these developments may lead to increased traffic pressures, which highlights the need for ongoing review).
- The AADT levels of this road. While these range from 2,300 to 3,200, they will not meet 1997/1998 Highway Transfers or NHS criteria, even during summer months when traffic volumes can increase as much as 50%.



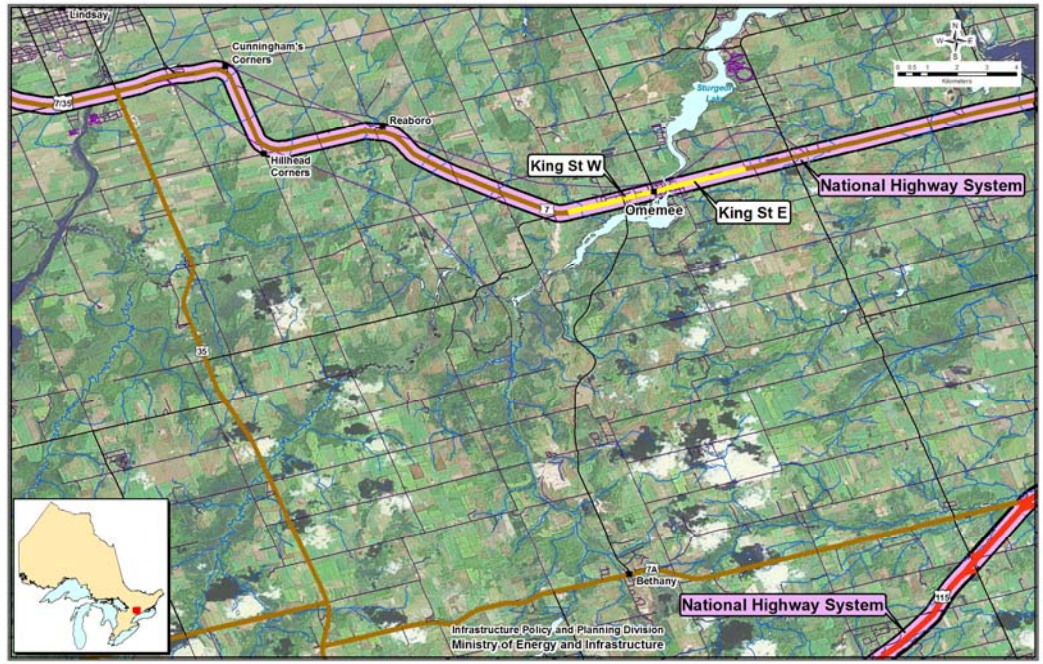
King St East & West – Omemee/Kawartha Lakes



King St East & West – Omemee/Kawartha Lakes

The roads involved

- The provincial portion of Highway 7 through Kawartha Lakes forms one connection between the GTA and Peterborough. This road segment is part of the National Highway System (NHS).
- The section of Highway 7 through Omemee (the yellow line) becomes King Street and is a municipal road. As King Street connects two parts of the Provincial highways system, the Province has designated it as a “Connecting Link”.



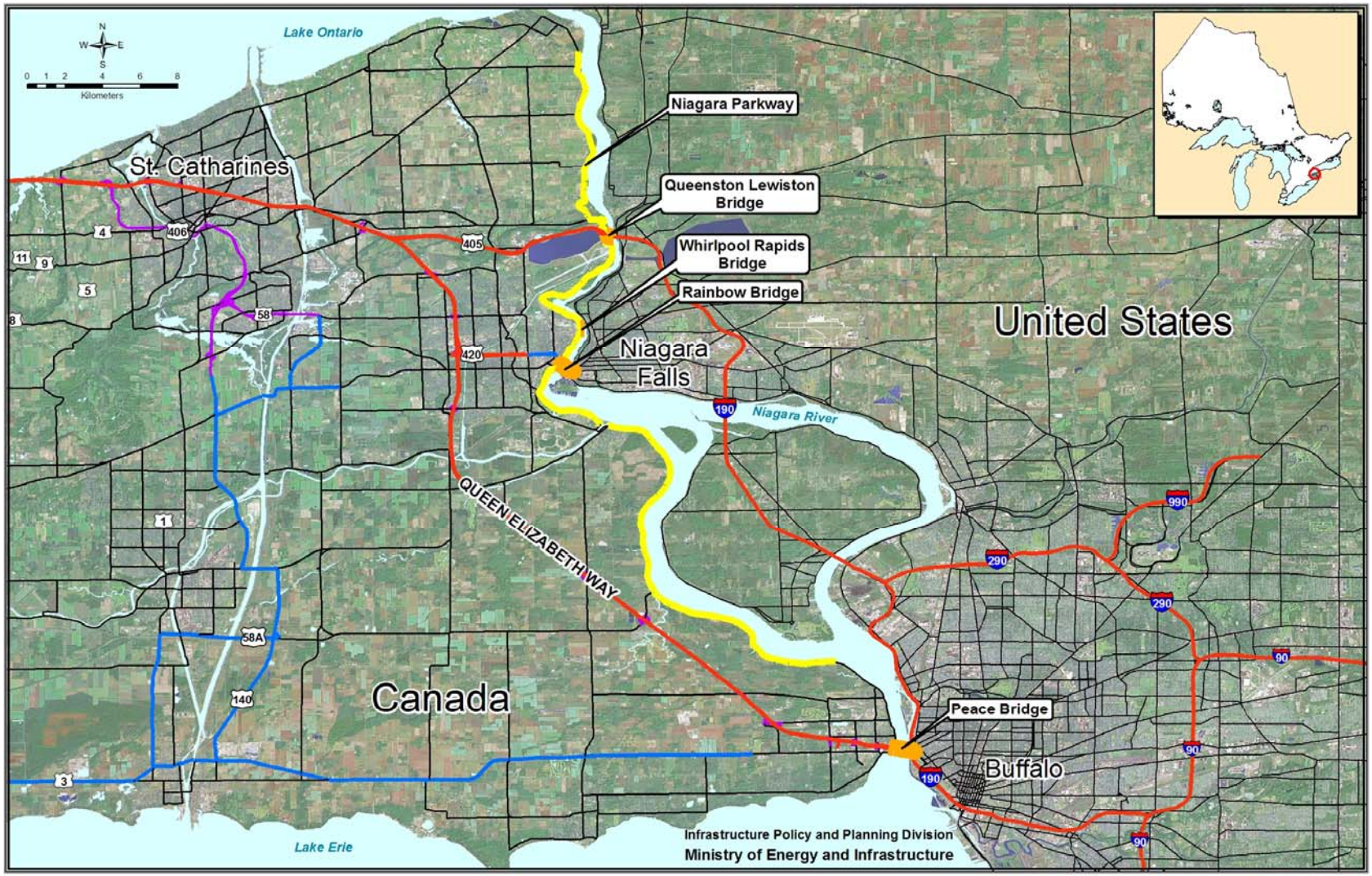
The issue

- A large portion of the traffic on King Street is inter-regional, using Highway 7 to proceed from the GTA to other parts of eastern Ontario.
- Prior to being amalgamated with Kawartha Lakes, the Village of Omemee did not have the financial resources to maintain this Connecting Link. Kawartha Lakes as a whole continues to struggle to provide the required investment levels in the Region’s road and bridge network.

Criteria used to identify the issue and the “shared interest” nature of the road

- The inter-regional nature of the road segment, and the segment’s contribution to the continuity of the network.
- The AADT levels of 9,200 are below the criteria used in both the 1997 and 1998 Highway Transfers and the NHS.

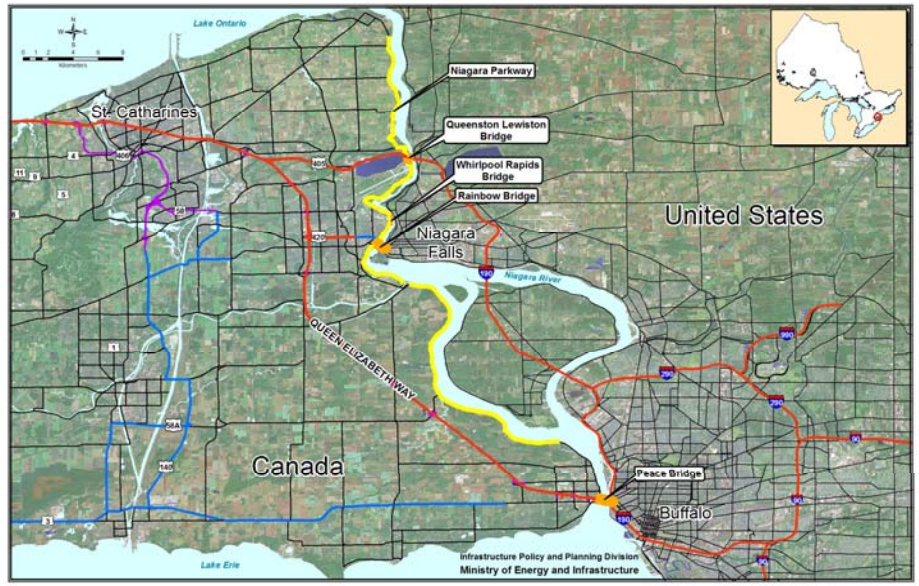
The Niagara Parkway



The Niagara Parkway

The roads involved

- The Niagara Parkway runs approximately 60 km along the Canadian side of the Niagara River, from Fort George in Niagara-on-the-Lake south to the Town of Fort Erie.
- The Parkway provides direct access to the Whirlpool Bridge, and indirect access to the Rainbow, Queenston-Lewiston and Peace Bridges.
- The urban sections of the Parkway are maintained by the respective municipalities while the Niagara Parks Commission is responsible for the remaining length.



The issue

- During periods of congestion at the border crossings, the Parkway assumes considerable overflow traffic travelling between the various crossings. Portions of the Parkway, notably the section between Niagara Falls and Niagara on the Lake, are also significant tourist routes, especially during the summer season.
- The Whirlpool crossing is not an NHS crossing, but it could provide redundancy if needed.

Criteria used to identify the issue and the "shared interest" nature of the road

- AADT levels are estimated at 5,000 and are below the 1997/1998 Highway Transfers and NHS criteria.
- The Parkway provides access to multiple border crossings and tourism sites. All of these factors would select this road for further "shared interest" review under the new proposed criteria.

Ability to Pay

Context

- Municipal ability to pay should not be used as a criterion in actually stratifying Ontario's road and bridge network.
- Notwithstanding the above, municipal ability to pay for required road and bridge investments has been a consistent point of concern throughout the meetings of the Road and Bridge subgroup.
- Though municipalities strive to maintain their networks in an acceptable condition, for some the investment required poses difficulties.
- Bridges are a particularly expensive asset class, and the risks associated with deteriorated bridges are severe, so making timely and sufficient investments in bridges can be a particular issue for certain municipalities.
- The Road and Bridge subgroup agrees that municipal ability to pay should be taken into consideration in the design of any potential future program addressing the infrastructure needs in this sector, and recommends that the shortlisted fiscal health metrics be considered in the road and bridge context.

Determining Ability to Pay

- Although the members of the subgroup agree on the importance of the concept, there is no consensus on how “ability to pay” should be defined.

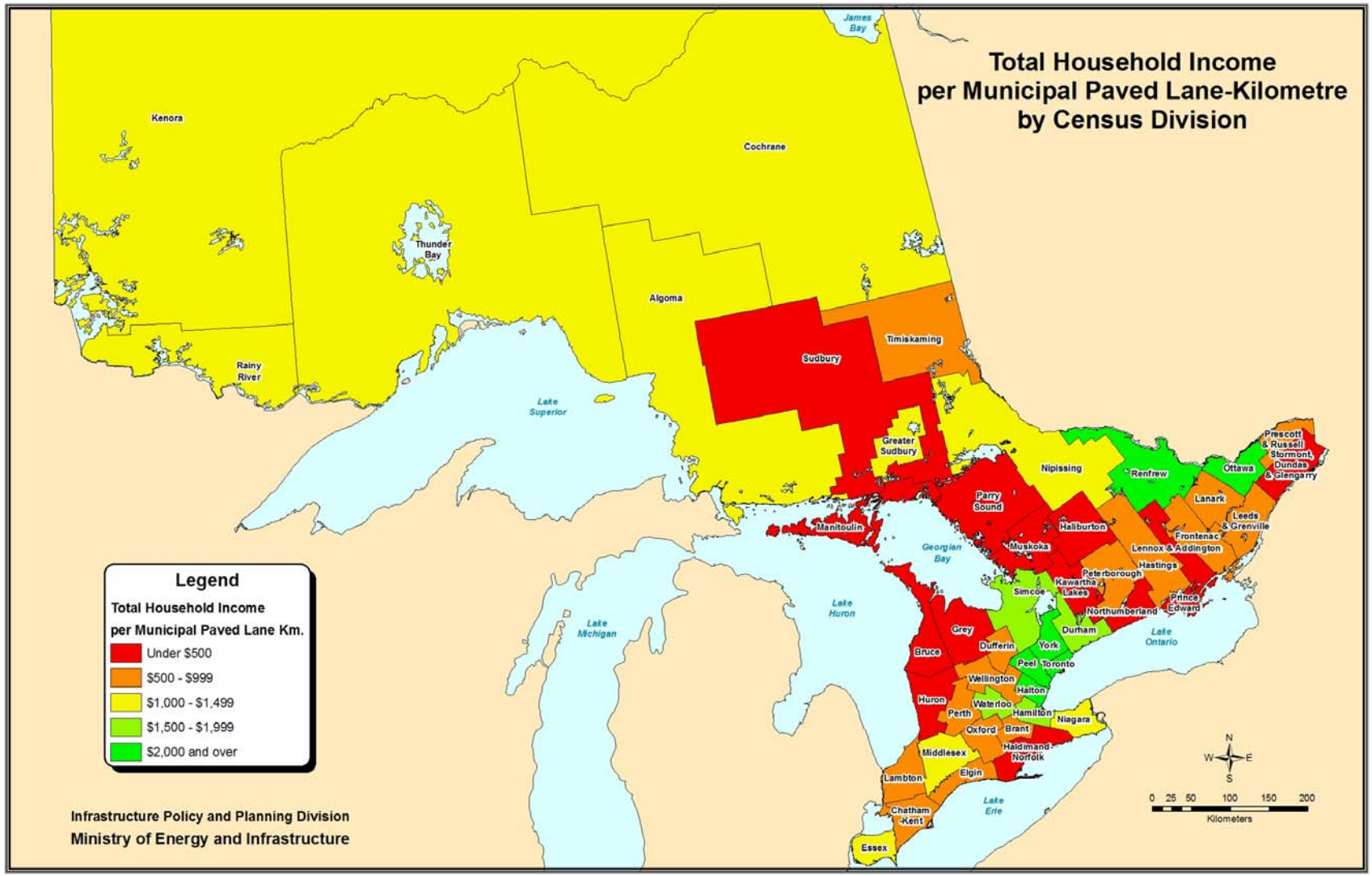
- The PMFSDR Fiscal Health group is looking at this issue in detail, and is working to narrow down a short list of reliable indicators.

- In the context of roads and bridges, some of the relevant metrics in measuring ability to pay might include:
  - The existing road and bridge inventory (e.g. lane-kilometres of different classes of roads, etc.);
  - The condition of existing assets (e.g. Bridge Condition Index);
  - Road and bridge expenditure as a proportion of municipal capital investment;
  - Geographic area of the municipality;
  - Population, or number of households; or
  - Municipal assessment.

- Municipal assessment data, though not easily accessible, is perhaps the most cogent to the question of municipal ability to pay.

- The map on the page following provides a sample illustration of how some of these metrics apply today, and it confirms a significant degree of variation across the province in the ability to pay for roads and bridges.

Ability to Pay: Household Income per Lane-Kilometre



The Provincial Gas Tax and Funding Allocation Methods

Context

- Municipalities across the Province are facing significant road and bridge infrastructure funding pressures.

- The investment needs for roads, bridges and public transit vary by municipality, and the suite of tools and provincial investments in the transportation sector should reflect this fact.
  - Sustained funding for roads and bridges is one option to address municipal fiscal capacity issues and support municipal infrastructure investment needs.

- While any future road and bridge funding program does not necessarily have to be linked to the provincial gas tax, targeted gas tax funding for municipal roads and bridges could be provided in a manner similar to the existing dedicated gas tax funding program for public transit.

- The Province has made it a priority to invest provincial gas tax revenues in public transit to increase transit ridership, reduce congestion, improve land use and support the environment. Any additional gas tax funding allocation for roads and bridges should be separate from and in addition to existing transit gas tax funding.

Guiding Principles

- Addressing the municipal “ability to pay” issue and ensuring that all Ontario municipalities have the resources necessary to invest in their transportation infrastructure should be a fundamental objective for the road and bridge funding model.

- Dedicated gas tax funding for municipal roads and bridges should:
  - Provide an equitable, predictable and sustainable investment in roads and bridges for all municipalities;
  - Increase municipal capacity for road and bridge infrastructure improvements; and
  - Contribute to municipalities’ ability to become self-sustaining.

- Gas tax revenues are meant to enhance not reduce or replace municipal contributions towards their road and bridge infrastructure needs.

- Municipalities, knowing their respective infrastructure needs best, should be afforded the flexibility to determine their own specific priorities for any additional gas tax funding. For example, municipalities should be able to “stack” funding from one year to the next to be able to pay for large scale projects.

Potential Funding Requirements (1 of 2)

- In order to receive provincial gas tax funding, municipalities would have to agree and adhere to specific requirements, as set out by the Province.

- Possible funding and accountability requirements could include:
  - Ensuring all gas tax funding is incremental to existing transportation infrastructure investment – and not offsetting planned municipal expenditures;
  - Directing all gas tax funding toward transportation infrastructure (capital) investment;
  - Submitting and implementing long-term municipal road and bridge asset management plans;
    - The submission and implementation of the asset management plans could be phased in over the initial gas tax funding cycles to ensure municipalities have sufficient time to develop the necessary plans and implementation processes;
    - Provincial approval of the plans is not being proposed, so as to maintain municipal flexibility for funds provided; and
  - Reporting on overall municipal road and bridge investment and gas tax funding expenditures – this could be modeled on the existing public transit outcome-based reporting templates.

Potential Funding Requirements (2 of 2)

- In instances where funding is provided to both upper and lower-tier municipalities, the funds provided to the different levels of government will need to be directed to roads/bridges under their respective jurisdiction (i.e., non-transferral of funds to upper or lower-tiers)

- The suite of requirement provisions suggested above have proven critical to the success of the existing gas tax program for public transit and are expected to be similarly relevant and integral to the success of a potential gas tax funding program for municipal roads and bridges.

- While it is accepted that municipalities should report back on details of their gas tax expenditures and provide asset management plans, this process is expected be less onerous than the pre-1997 and 1998 Highway Transfers municipal road and bridge funding program.

Potential Allocation Method

- While simplicity in the allocation formula is desirable, municipalities are willing to forgo a degree of simplicity if the added complexity results in a balanced and responsive funding model.

- To respond to a number of issues – size of infrastructure network, impact and importance of bridges, municipal ability to pay and regional disparities – the allocation formula could include the following factors:
  - Total lane kilometres (re: infrastructure size/need);
  - Road type/function – i.e., expressway, arterial, collector, local (re: infrastructure size/need)
  - Total bridge deck area (re: infrastructure size/need);
  - Average assessment per household (re: ability to pay);
  - Construction price index (re: regional disparities); and
  - Age of network

- In cases where both upper and lower-tier municipalities exist, the funding allocation will be provided to the respective levels of government based on the proportion of the municipal road and bridge network for which they have responsibility.

- While unorganized territories should receive gas tax funding to address their respective infrastructure needs, they should be dealt with separately – possibly in a similar fashion to the federal gas tax program where a nominal amount is carved out of the program to specifically address infrastructure needs in these areas.

Other Funding Considerations

Other Funding Considerations

- Any future funding program should provide predictable and sustainable funding for road and bridge needs.
- On a per unit basis, bridges are much more expensive than roads to maintain, and they may merit different approaches.
- The federal government should play a role in funding the National Highway System.
- Asset management plans should be an integral part of any future funding program, including an improved ability to collect and analyze data across the province.
- Municipalities should have flexibility to determine the funding of projects, including the ability to fund multi-year initiatives.

A Recommended Process

Recommended Next Steps (1 of 2)

- The subgroup recommends the creation of a provincial-municipal working group to succeed the current subgroup to:
  - Confirm a final list of network stratification criteria;
  - Strike regional working groups to collect the required data and screen the information against the criteria; and
  - Assess and compile regional analysis

- The work could be completed in two phases:
  - The first phase would be completed in the early part of the new group's mandate and would identify an initial set of roads that would be classified as being of a shared interest;
  - The second phase would review the rest of the road network and would be completed over the balance of the mandate.

- Action with respect to the initial set of roads identified in the first phase might be presented to stakeholders as 'early wins', a demonstration of the usefulness of the overall exercise.

Recommended Next Steps (2 of 2)

- This working group should:
  - Include representatives from MTO, MEI, OGRA, AMO, and municipalities from all regions of the province, to reflect the diversity of the road and bridge network, and
  - Possess operational expertise and a solid understanding of data collection, availability and analysis.

- The Road and Bridge subgroup estimates that this working group would need between six and nine months to complete an analysis of the provincial road and bridge network, or longer depending on the difficulty of collecting the required data.
  - Additional resources will also be necessary, e.g. extra staff or consultants.

- A periodic review, e.g. every three years, of the stratification framework would allow new information to be incorporated and updates made as necessary.

- The subgroup recommends that negotiations with the federal government begin to identify a funding formula for the National Highway System.