



MOVING ON SUSTAINABILITY

TRANSPORTATION MASTER PLAN UPDATE

DRAFT



May 2009

MAIN REPORT

TABLE OF CONTENTS**YORK REGION TRANSPORTATION MASTER PLAN UPDATE****ACKNOWLEDGEMENTS**

	PAGE
CHAPTER 1 INTRODUCTION	1
1.1 YORK REGION MOVING ON SUSTAINABILITY	1
1.2 STUDY BACKGROUND	1
1.3 COMPLIANCE WITH THE MUNICIPAL CLASS ENVIRONMENT ASSESSMENT PROCESS	2
1.3.1 What is a Class EA?	3
1.3.2 Major Infrastructure Improvements Require Additional EA Studies	4
1.4 THE IMPORTANCE OF SUSTAINABILITY	5
1.5 REGIONAL PARTNERSHIPS	7
1.6 ORGANIZATION OF THE STUDY REPORT	7
 CHAPTER 2 YORK REGION TODAY	 9
2.1 UNPRECEDENTED REGIONAL GROWTH	9
2.2 OUR TRANSPORTATION SYSTEM	9
2.2.1 Existing Transit Service	9
2.2.2 Existing Roadways	13
2.2.3 Pedestrian and Cycling Facilities	17
2.2.4 Transportation Demand Management Programs	17
 CHAPTER 3 YORK REGION: A CHAMPION OF SUSTAINABLE DEVELOPMENT	 22
3.1 FEDERAL INITIATIVES	22
3.1.1 Auditor General Act (1995)	22
3.1.2 Federal Sustainable Development Act (2008)	22
3.1.3 National Vision for Urban Transit to 2020	23
3.2 SUPPORTIVE PROVINCIAL POLICIES AND PLANS	23
3.2.1 Oak Ridges Moraine Conservation Plan	23
3.2.2 The 2005 Provincial Policy Statement	24
3.2.3 Places to Grow Act, 2005 (Ontario Bill 136)	24
3.2.4 The Greenbelt Act, 2005 (S.O. 2005, Chapter 1)	24
3.2.5 The Growth Plan for the Greater Golden Horseshoe, 2006	25
3.2.6 Bill 51- Planning and Conservation Land Statute Law Amendment Act	25



3.2.7	High Occupancy Vehicle Lanes – Plan 2007	25
3.2.8	Metrolinx Regional Transportation Plan (2008)	27
3.3	SUPPORTIVE REGIONAL POLICIES AND PLANS	31
3.3.1	York Region Official Plan, 2005	31
3.3.2	Planning for Tomorrow, Growth Management Initiative, 2006	31
3.3.3	Transit-Oriented Design <i>Guidelines</i> (2006)	32
3.3.4	York Region Sustainability Strategy: Towards a Sustainable Region (2007)	32
CHAPTER 4 PUBLIC ENGAGEMENT		34
4.1	IMPORTANCE TO THE PLANNING PROCESS	34
4.2	ELEMENTS OF THE CONSULTATION PLAN	34
4.2.1	Public Consultation Centres	34
4.2.1.1	PCC #1- November 2006	35
4.2.1.2	PCC #2- November 2007	37
4.2.1.3	PCC #3- November 2008	38
4.2.2	Public Opinion Survey	40
4.2.3	Sustainability Focus Groups	40
4.2.4	Transportation Symposiums	41
4.2.5	Steering Committee	41
4.2.6	Technical Advisory Committee	41
4.2.7	Project Newsletters	42
4.2.8	Project Website	42
4.2.9	Public Notices & Media Promotions	42
4.2.10	‘Comments & Ideas’ Matrix	43
CHAPTER 5 YORK REGION’S TRANSPORTATION MASTER PLAN: AN INNOVATIVE STUDY PROCESS		44
5.1	A UNIQUE AND INNOVATIVE STUDY PROCESS	44
5.2	THE GROWTH MANAGEMENT INITIATIVE: ESTABLISHING THE NEED FOR FUTURE TRANSPORTATION IMPROVEMENTS	47
5.3	INFRASTRUCTURE MASTER PLANS ADDRESS THE NEED TO SUPPORT NEW GROWTH	49
5.4	REGIONAL GOALS OF SUSTAINABLE TRANSPORTATION: THE FOUR ‘R’s”	50
5.5	TRANSPORTATION MASTER PLAN UPDATE- PHASE 1: ASSESSING EXISTING CONDITIONS	50
5.5.1	2002 Transportation Master Plan Assessment	51
5.5.2	Best Practices Review	52

5.5.3	Initiatives and Priorities of Neighbouring Municipalities	53
5.5.4	Issue Papers	53
5.6	TRANSPORTATION MASTER PLAN UPDATE- PHASE 2: IDENTIFYING & EVALUATING POTENTIAL SOLUTIONS	54
5.6.1	Screen 1: Sustainability Principles Objectives and Measures	54
5.6.2	Screen 2: Travel Demand Modelling	58
5.6.2.1	Explanation	58
5.6.2.2	“Sustainability” Built Into the Travel Demand Model	58
5.6.2.3	Transit Ridership Threshold	59
5.6.2.4	Transitioning to Rapid Transit	61
	CHAPTER 6 THE UPDATED PLAN	62
6.1	RECOMMENDED ROAD AND TRANSIT NETWORK	62
6.1.1	Transit	62
6.1.2	Roads	70
6.1.3	Potential Additions to the Arterial Road Network	77
6.2	NEED AND JUSTIFICATION FOR A BOLD TRANSIT NETWORK	78
6.3	ROAD NETWORK ISSUES	80
6.4	RECOMMENDED POLICIES AND STRATEGIES	83
6.5	CARBON MANAGEMENT	100
	CHAPTER 7 RECOMMENDED PHASING PLAN	101
7.1	CURRENT TRANSPORTATION POLICIES AND INITIATIVES	101
7.2	PROPOSED PHASING: POLICIES & STRATEGIES	102
7.2.1	Immediate Actions (0-2years)	103
7.2.2	Short-term Actions (2-5 years)	106
7.2.3	Medium-term Actions (5-10 years)	108
7.2.4	Long-term Actions (10+ years)	111
7.3	PROPOSED PHASING: RAPID TRANSIT CORRIDOR	111
7.3.1	Short-term (0-5 years)	112
7.3.2	Medium-term (10 years)	114
7.3.3	Long-term (20 years)	119
7.3.4	Transit Priority Network Improvements	120
7.3.5	Conversion of Transit Technologies	120
7.3.6	Conformance with the Metrolinx Regional Transportation Plan (The Big Move)	121
7.4	PROPOSED PHASING: ROADWAYS	122



CHAPTER 8	IMPLEMENTATION STRATEGY	126
8.1	PRICING THE TRANSPORTATION MASTER PLAN	126
8.2	FUNDING	130
8.2.1	Improved Development Charges Act	131
8.2.2	Tax Increment Financing (TIF)	132
8.2.3	Joint Development Opportunities	133
8.2.4	Public-Private Partnerships and Alternative Financing Procurement Methods	133
8.2.5	Fuel Tax	134
8.2.6	Parking Fees	134
8.2.7	Road User Fees- License Fees	135
8.2.8	Road User Fees- Congestion Pricing	136
8.3	ORGANIZATIONAL AND RESOURCE NEEDS	138
CHAPTER 9	MOVING FROM CONCEPT TO REALITY	142
9.1	5 YEAR ACTION PLAN	142
9.2	MEASURING PROGRESS...AND SUCCESS	145
9.3	FREQUENCY OF MASTER PLAN UPDATES	146
9.4	MOVING TOWARDS A SUSTAINABLE REGION	146

LIST OF FIGURES

		<u>PAGE</u>
Figure 2.1	Areas of Projected Population Growth over the Next 20 Years	10
Figure 2.2	Projected Employment Growth By 2031	11
Figure 2.3	Existing Public Transit Routes	12
Figure 2.4	Local York Region Transit Routes	14
Figure 2.5	York Region's Regional Road Network	15
Figure 2.6	Number of Lanes Found on Existing Road Network	16
Figure 2.7	2009 10 year Capital Roads Plan	18
Figure 2.8	Pedestrian Network	19
Figure 2.9	Proposed Long-term Cycling Routes (April 2008)	20
Figure 2.10	Transportation Demand Management Facilities Within York Region	21
Figure 3.1	Metrolinx 15-year Implementation Plan	29
Figure 3.2	Metrolinx 25-year Implementation Plan	30
Figure 5.1	York Region Transportation Master Plan Study Process	46
Figure 6.1	GO Rail & Proposed 407 Transitway	63
Figure 6.2	Subway Extension	64
Figure 6.3	Rapid Transit Corridors	65
Figure 6.4	Transit Priority Corridor	66
Figure 6.5	Rural and Highway Transit Service	67
Figure 6.6	Draft 2031 Full Transit Network	68
Figure 6.7	Arterial Road Improvements for Capacity	72
Figure 6.8	New Local/Regional Roads	73
Figure 6.9	New Highway and Major Road Crossing Improvements	74
Figure 6.10	Road Improvements for Transit Priority	75
Figure 6.11	Draft 2031 Full Road Network	76
Figure 7.1	5 Year Draft Transit Network	115
Figure 7.2	10 Year Draft Transit Network	116



Figure 7.3	20 Year Draft Transit Network	117
Figure 7.4	5 Year Draft Road Network	123
Figure 7.5	10 Year Draft Road Network	124
Figure 7.6	20 Year Draft Road Network	125

LIST OF TABLES

Table 5.1	Municipal Population and Employment Growth (2006-2031)	48
Table 5.2	Transportation Sustainability Principles	56
Table 5.3	Transit Ridership Thresholds	60
Table 6.1	Key Transportation Performance Measures - BAU Scenario	79
Table 7.1	Benefits Summary of New Rapid Transit Corridors	120
Table 8.1	Preliminary 2031 Cost Estimates	127
Table 8.2	Funding Considerations and Goals	141
Table 9.1	Five Year Action Plan – Transit, Roadway and Policy Improvements	142

**APPENDICES (UNDER SEPARATE COVER)**

Appendix A	Regional Policies and the 2002 Transportation Master Plan Overview Report
Appendix B	Public Consultation Centre Information
Appendix C	Public Opinion Survey
Appendix D	Sustainability Focus Group Outcome
Appendix E	Transportation Symposium Results
Appendix F	Project Newsletters
Appendix G	Sample Website Materials
Appendix H	Notices for Public Meetings
Appendix I	Comments and Ideas Matrix
Appendix J	2002 TMP Assessment
Appendix K	Best Practices Review
Appendix L	Issue Papers
Appendix M	Travel Demand Modelling Process
Appendix N	Policies Matrix
Appendix O	Transit and Road Cost by Corridor
Appendix P	Background Paper on TDM



ACKNOWLEDGEMENTS

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1.0 INTRODUCTION

1.1 YORK REGION MOVING ON SUSTAINABILITY

This York Region Transportation Master Plan (TMP) Update will serve as the “blueprint” for all major transportation initiatives in the Region through the year 2031. It is an important undertaking - for the efficiency of our transit system, the safety of our roads and the economic well-being of our communities. Most importantly, the Transportation Master Plan builds on the previous plan by addressing transportation challenges and strategies that will promote sustainable development in York Region. This will complement other initiatives that the Region has championed to support the Regional goals of Sustainable Natural Environment, Economic Vitality and Healthy Communities.

1.2 STUDY BACKGROUND

In 2002, York Region approved an innovative Transportation Master Plan (TMP) that defined the Region’s long-term transportation vision and provided a framework upon which future transportation decisions would be made through the year 2031. The TMP also established policies and programs to support the long term vision and plan. It included an implementation strategy and 5-Year Action Plan to meet the Region’s immediate transportation needs.



In recognition of its progressive integration of land use and transportation growth management policies, the York Region Transportation Master Plan was the recipient of the 2001 Transportation Association of Canada's Sustainable Urban Transportation Award.

Since 2002, York Region has undertaken several initiatives in support of the original TMP, including:

- Increasing York Region Transit ridership growth by a significant 10% each year since the 2001 amalgamation of transit services (cumulative 2001-2008 increase of 38%);

- Completing the first phase of Viva - a Regional Bus Rapid Transit (BRT) system;
- Undertaking Environmental Assessments for subway extensions and rapid transit service along key transportation corridors;
- Initiating the Spadina Subway Extension with the City of Toronto and TTC;
- Developing an implementation program for the next phase of Bus Rapid Transit (BRT) implementation (dedicated rapidways) and working with Metrolinx, the Greater Toronto and Hamilton Area's transportation agency, to secure funding;
- Adopting Transit Oriented Development (TOD) guidelines;
- Completing a Pedestrian and Cycling Master Plan;
- Developing Transportation Management Associations (TMAs) through the Smart Commute initiative; and
- Implementing Transportation Demand Management (TDM) programs.

Several programs recommended in the original TMP received financial support from both the Provincial and Federal governments. The Viva rapid transit system is the most notable project funded equally by both senior levels of government and York Region. The Region's initiative to develop Transportation Management Associations through the Smart Commute Initiative was recommended in the TMP, and received partial funding from Transport Canada. Successful planning and implementation of York Region's transportation services and infrastructure must also be achieved in close collaboration with adjacent jurisdictions, as well as Metrolinx—the agency created by the Government of Ontario to develop and implement an integrated multi-modal transportation plan for the Greater Toronto and Hamilton Area (GTHA).

1.3 COMPLIANCE WITH THE MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT PROCESS

The York Region Transportation Master Plan Update adheres to the Planning and Design Process of a Municipal Class Environmental Assessment (EA), incorporating the key principles of successful environmental planning under the Ontario Environmental Assessment Act.



1.3.1 What is a Class EA?

The Municipal Class Environmental Assessment document (October 2000, amended in 2007), provides a process in accordance with the EA

Act for municipal infrastructure projects. The Class EA establishes a process whereby projects defined within the municipal Class EA and any subsequent modifications can be planned, designed, constructed, operated, maintained, and rehabilitated. These projects will not require project specific approval under the EA document, provided the approved environmental assessment planning process is followed.

The Municipal Class EA process is to be completed following a five phase process, which includes:

- Phase 1 – Identify the problem (deficiency) or opportunity;
- Phase 2 – Identify alternative solutions to address the problem or opportunity by considering the existing environment, and establishing the preferred solution;
- Phase 3 – Examine alternative methods of implementing the preferred solution;
- Phase 4 – Complete an Environmental Study Report that documents the rationale, plus the planning, design and consultation process of the project; and
- Phase 5 – Complete contract drawings and documents, then proceed to construction and operation.

Master Plans are required to address Phases 1 and 2 of the Municipal Class EA Process to include the required public consultation and the evaluation of alternative solutions.

Class EA Master Plans are long range plans which integrate infrastructure requirements for existing and future land use with environmental assessment planning principles. The Class EA Master Plan process examines infrastructure systems or groups of related projects in order to outline a



framework for implementation of subsequent projects and/or developments with environmental protection and mitigation measures integrated into the project.

The Class EA Master Plan typically differs from project-specific studies in several key respects. Long range infrastructure planning enables the proponent (i.e. York Region) to comprehensively identify their transportation needs and establish broader infrastructure options. The opportunity to integrate transportation with land use planning also enables the Region to consider different perspectives when looking at the full impact of decisions (MEA, 2007). Finally, Transportation Master Plans recognize the importance of all modes of travel, and emphasize that the increased use of transit is a key component of an integrated transportation strategy.

Once complete, the York Region Transportation Master Plan Report will be filed and made available for review by the public and any public agency that expresses interest in the study. Requests to the Minister of the Environment for a Part II Order (to require an Individual EA) are possible only for specific projects identified in the Master Plan, not the Plan itself.

1.3.2 Major Infrastructure Improvements Require Additional EA Studies

The EA process addresses projects by classifying them into different “Schedules” according to their environmental significance (Schedule A, A+, B or C). The level of complexity and the potential impacts of a project will determine the Schedule of the project that, in turn, will determine which phases will need to be addressed. A detailed description of each Schedule can be found in the EA document noted above.

The York Region Transportation Master Plan Update addressed Phases 1 and 2 of the Municipal Class EA process, taking a strategic, system-wide approach to planning for new services and infrastructure. For some of the

The York Region Transportation Master Plan Update may be used in support of further work carried out for specific Schedule B projects, as well as Phases 3 and 4 for specific Schedule C projects.

infrastructure projects, the requirements of Phases 1 and 2 will have been satisfied by this Master Plan. Alternatively, Phases 1 and 2 may need to be revisited for more comprehensive projects. For Schedule B projects, it will be necessary to fulfill the consultation and documentation requirements. For Schedule C projects, it is necessary to fulfill the additional requirements of Phases 3 and 4, and consider the site-specific issues which are beyond the scope of the Master Planning process. Requests for an order to comply with Part II of the EA Act (previously referred to as a “bump up”

provision) are possible only for specific projects identified in the Master Plan, and not the Plan itself.

For all major infrastructure improvements requiring the completion of Phases 3 and 4, York Region is required to prepare a detailed inventory of the natural, social and economic environment. This analysis is undertaken to identify the potential impacts of alternative alignments for new or expanded infrastructure while attempting to reduce our carbon footprint. Depending on the complexity or magnitude of the project, this analysis may involve detailed environmental studies to ensure that sufficient and appropriate information is available on which to base ensuing decisions, and to allow the public to fully understand the environmental implications of the project.

In addition to describing the potential impacts of a project, appropriate mitigating measures should be identified and evaluated. For example, if a new bridge is being considered to extend an existing road, York Region must identify all measures necessary to minimize the negative impacts on residents and environmental features resulting from the undertaking.

Several provincial approvals will be required in advance of implementing the recommended infrastructure improvements. For example, under the new provincial criteria associated with Ontario Regulation 179/06, the Conservation Authority is required to specifically identify and regulate natural hazards such as shorelines, wetlands, watercourses, floodplains and stream valley slopes. Likewise, under the Fisheries Act, no one may carry out a work or undertaking that will cause the harmful alteration, disruption or destruction of fish habitat unless it has been authorized by Fisheries and Oceans Canada (DFO).

1.4 THE IMPORTANCE OF SUSTAINABILITY

Sustainability is what many communities in North America strive to achieve and yet few communities know exactly what Sustainable Transportation is. Moreover, those communities that do pursue sustainable transportation policies and initiatives may define it differently than other similar locales.

‘Sustainable Transportation’ has many definitions. Several international organizations accept the definition developed by the *Canadian Centre for Sustainable Transportation* which states that a sustainable transportation system is one that:

- Allows the basic access needs of individuals and societies to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations;
- Is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy; and
- Limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise.

Transport Canada (TC) adopted seven strategic challenges to promote sustainable transportation practices “to preserve and strengthen Canada’s transportation system and advance Canadians’ quality of life {to} provide a framework that addresses the three elements of sustainable transportation – social, economic and environmental.” The seven strategies adopted by TC to promote sustainability in Canada, as well as in its own practice, include:

- Encourage Canadians to make more sustainable transportation choices;
- Enhance innovation and skills development;
- Increase system efficiency and optimize modal choices;
- Enhance the efficiency of vehicles, fuels and fuelling infrastructure;
- Improve the performance of carriers and operators;
- improve decision-making by governments and the transportation sector; and
- Improve the management of Transport Canada operations and lands.

In 1987, the World Commission on Environment and Development (WCED) published a groundbreaking report for the United Nations entitled “Our Common Future”. Also known as the “Brundtland Report” after the Commission’s chairwoman, the report developed guiding principles for sustainable development as it is generally understood today. The Brundtland Report defines sustainability as development that “meets the needs of the present without compromising the ability of future generations to meet their own needs.”

York Region accepted the Brundtland Report's definition and addressed it in its own "Triple Bottom-Line" approach to sustainability. The philosophy behind the "Triple Bottom-Line" approach is that all of York Region's initiatives should aim to simultaneously create environmental, social and economic benefits and value. This approach, emphasizing transparency, equity, accountability, and community involvement, as well as monitoring and continuous improvement towards sustainability, is integrated into many of the Region's transportation initiatives.

1.5 REGIONAL PARTNERSHIPS

York Region values its partnerships with all levels of government — especially the nine municipalities that make up the Region: the City of Vaughan, King Township, and the Towns of Aurora, Newmarket, Whitchurch-Stouffville, Markham, Richmond Hill, Georgina, and East Gwillimbury. In addition to the municipalities, York Region has other partnerships with local provincial agencies, Regional municipalities and outside stakeholders.



A strong partnership between Metrolinx and York Region is critical to ensure that the implementation and funding of new transportation services and infrastructure are well-coordinated, and support the goals of both York Region and the GTHA as a whole. York Region fully supports the Metrolinx Regional Transportation Plan (*The Big Move*) adopted in 2008 which guides the long-term strategic plan for an integrated, multi-modal, regional transportation system. Strong partnerships are also essential with the neighbouring City of Toronto, Regions of Peel and Durham, and Simcoe County to coordinate the provision of inter-regional transit services and optimize road network connectivity

1.6 ORGANIZATION OF THE STUDY REPORT

This Master Plan has been organized to provide a clear understanding of the transportation planning process, ensuring that a sustainable environment, society and economy be maintained and further developed. This will be done through the support of the three pillars of sustainability as well as the eleven sustainability principles developed



for this process. Both the pillars and the principles will be further outlined in full detail in the chapters to follow. The report is organized as follows:

Chapter	Description
1	Introduction and study background.
2	Identifies existing transportation services and infrastructure in York Region.
3	Presents the Federal, Provincial and Regional policies that impact any Regional transportation enhancements.
4	Details the extensive public engagement process that included Public Consultation Centres in each of the Region's nine municipalities.
5	Summarizes the study process that was developed to ensure the Master Plan was well positioned to address sustainability.
6	Identifies the transit, roadway and policy recommendations, and their corresponding support for the 11 Sustainability Principles.
7	Describes the proposed phasing plan for each of the recommendations.
8	Details the implementation and investment strategy for the master plan.
9	Presents the 5-year action plan and the monitoring process to ensure that the plan is implemented successfully and in a coordinated manner.

2.0 YORK REGION TODAY

2.1 UNPRECEDENTED REGIONAL GROWTH

In 2008, York Region's population grew by nearly 28,300 people and 9,000 new homes, increasing the Region's population to 1,011,360. According to the 2006 Census, 43% of York Region's population is comprised of new Canadians, far exceeding that of other Ontario municipalities. By 2031, York Region's population is projected to increase by almost 50% to 1.5 million residents, spanning all municipalities and municipal centres of the Region. **Figure 2.1** illustrates areas of projected population growth within the Region over the next 30 years.

In addition to the significant population increase, the Region is projected to add between 10,000 and 15,000 jobs annually to its current 29,000 businesses and 490,000 jobs. Markham, Vaughan and East Gwillimbury are projected to experience the most significant growth over the next 30 years. **Figure 2.2** illustrates the projected employment growth through 2031.



2.2 OUR TRANSPORTATION SYSTEM

In recent years, York Region has sought a more balanced approach to accommodate population and employment growth, reflected in the 2002 Transportation Master Plan. A summary of the Region's existing transportation services and infrastructure is provided below.

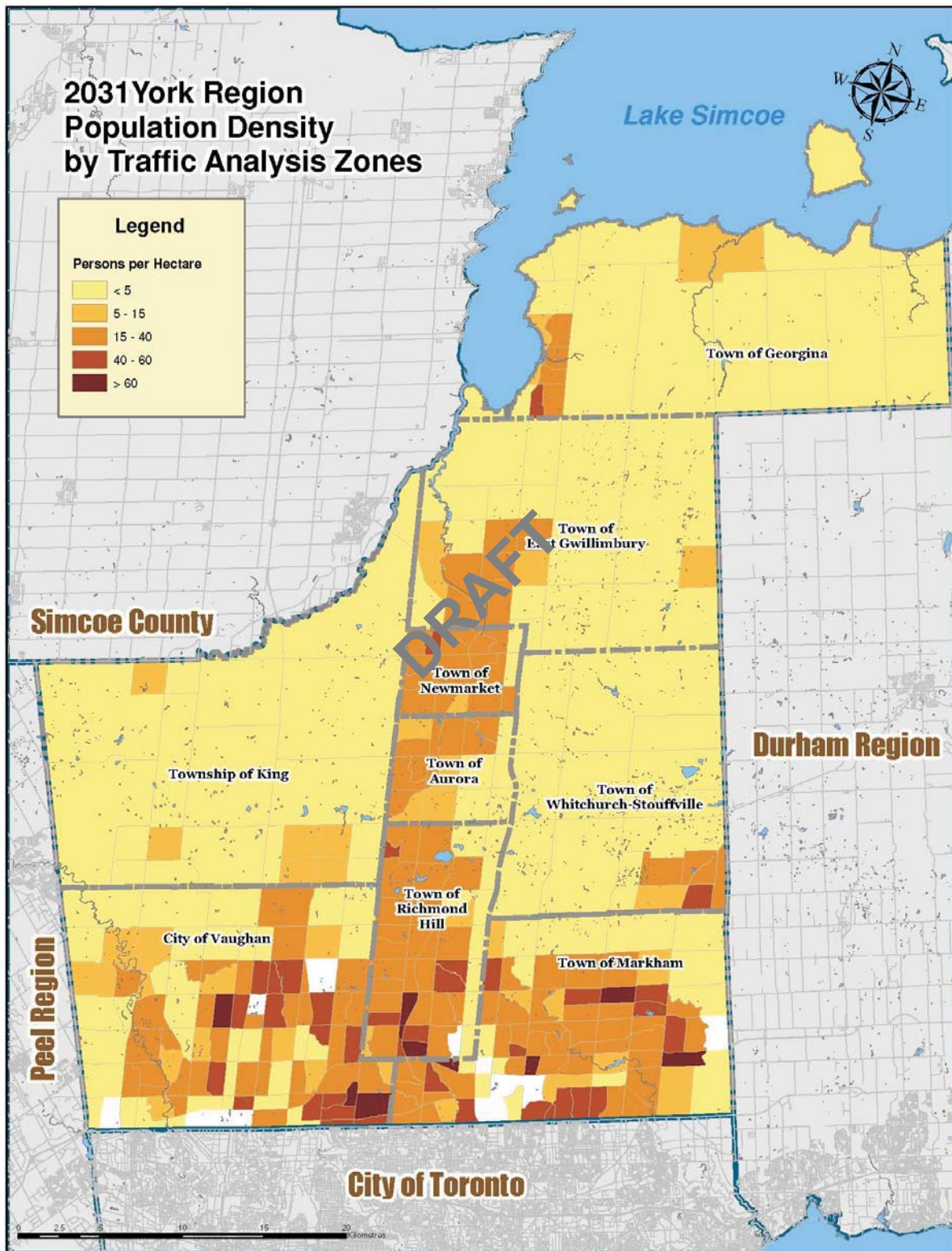
2.2.1 Existing Transit Service

Figure 2.3 illustrates existing public transit routes within York Region, including:

- Local and express service operated by York Region Transit, Brampton Transit and the Toronto Transit Commission.
- Viva rapid transit service operated by York Region Transit;
- Inter-regional rail and bus service provided by GO Transit; and

FIGURE 2.1

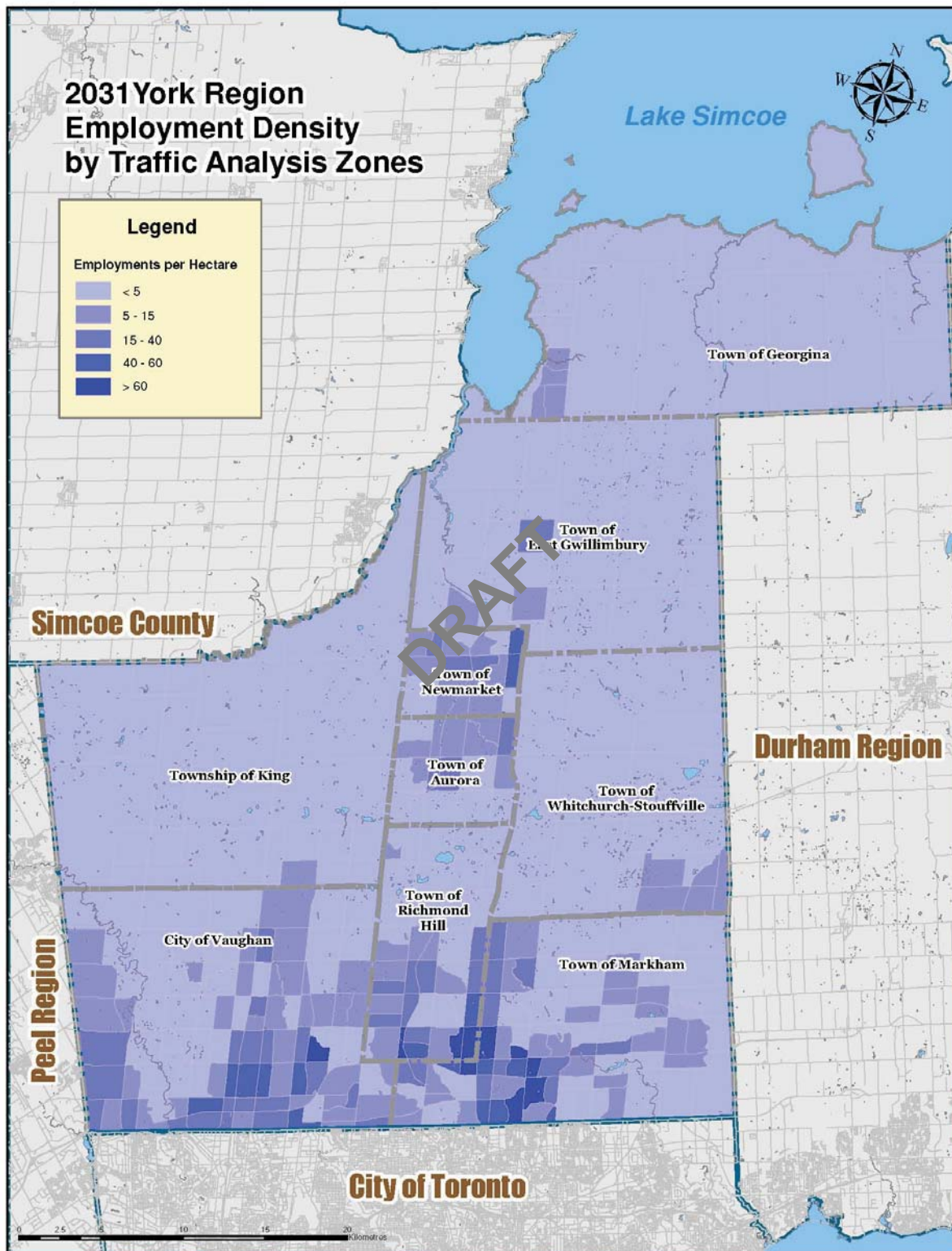
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AREAS OF PROJECTED POPULATION GROWTH OVER THE NEXT 20 YEARS

FIGURE 2.2

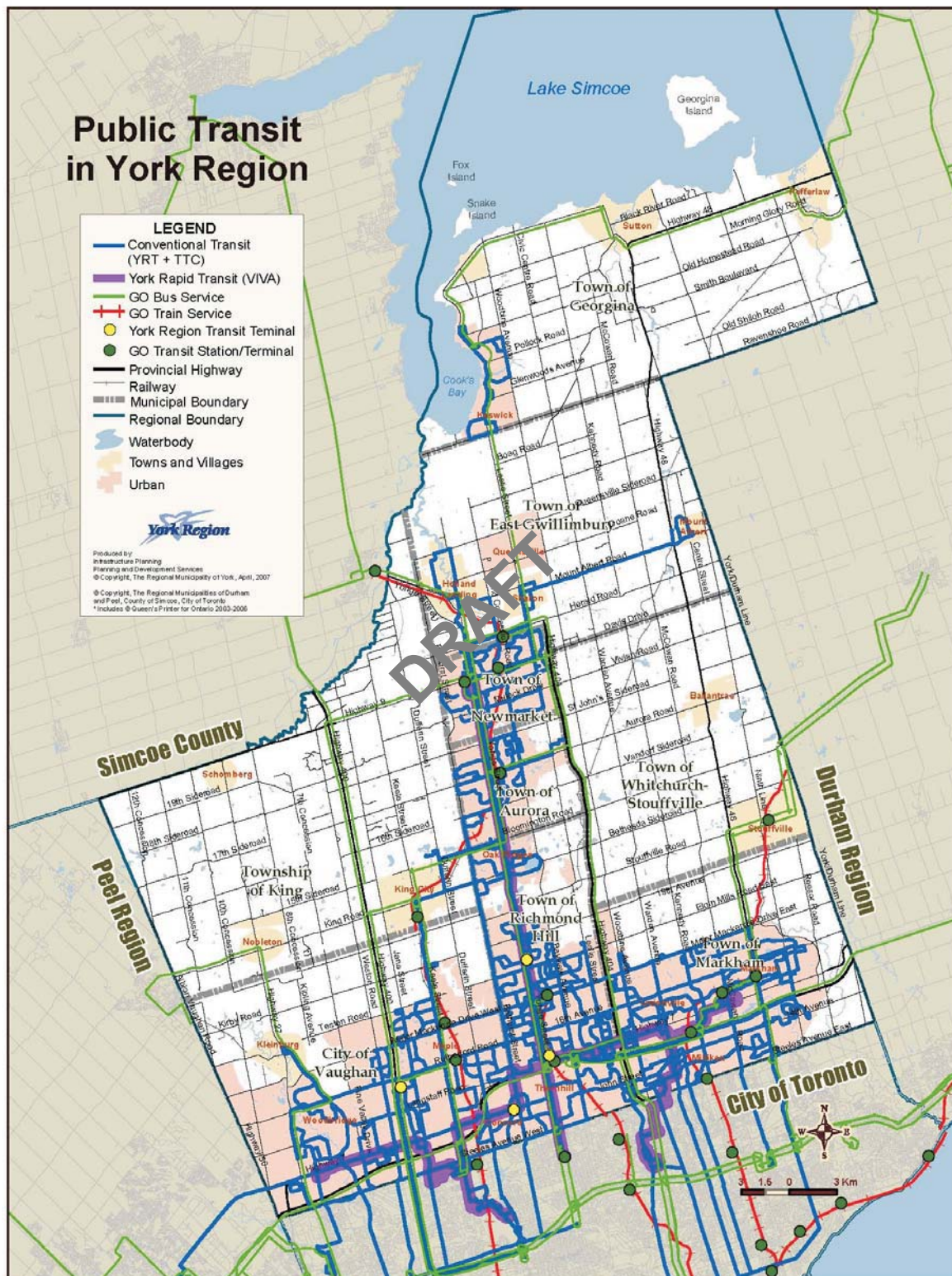
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PROJECTED EMPLOYMENT GROWTH BY 2031

FIGURE 2.3

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EXISTING PUBLIC TRANSIT ROUTES

- Specialized transit services for people with disabilities operated by YRT.

Figure 2.4 illustrates the local York Region transit routes, which comprise 271 conventional transit buses, 85 Viva rapid transit buses and 20 community buses. The TTC service provides a total of 12 routes throughout the southern part of York Region under contract to YRT.

As of 2006, York Region supported five YRT/Viva transit terminals, 733 conventional bus shelters, 96 Viva stations and 4,166 bus stops. GO Transit operates 15 rail stations and two GO bus terminals within York Region. In total, York Region's transit service area covers 79% of the urban area within the Region.



2.2.2 Existing Roadways

York Region has a three-tiered road system that is structured in the following way:

- Local municipalities own and maintain the local road network including residential, commercial and industrial local and collector roads, plus sidewalks on both local and Regional roads.
- York Region owns and maintains the majority of the arterial roads in the Region, as well as some former Provincial highways. The alignment of the arterial roads generally follows the original two-kilometre concession road grid system.
- The Province of Ontario owns and maintains the Provincial highway system.

Figure 2.5 depicts York Region's Regional road network, which includes roads operated by local municipalities, the Region and the Province of Ontario. **Figure 2.6** illustrates the number of lanes found on the existing Regional road network. The existing road network varies from two to seven lanes. The typical road allowance for Regional roads as established in the Region's Official Plan is 36 metres, with right-of-way widths of up to 45 metres.

FIGURE 2.4

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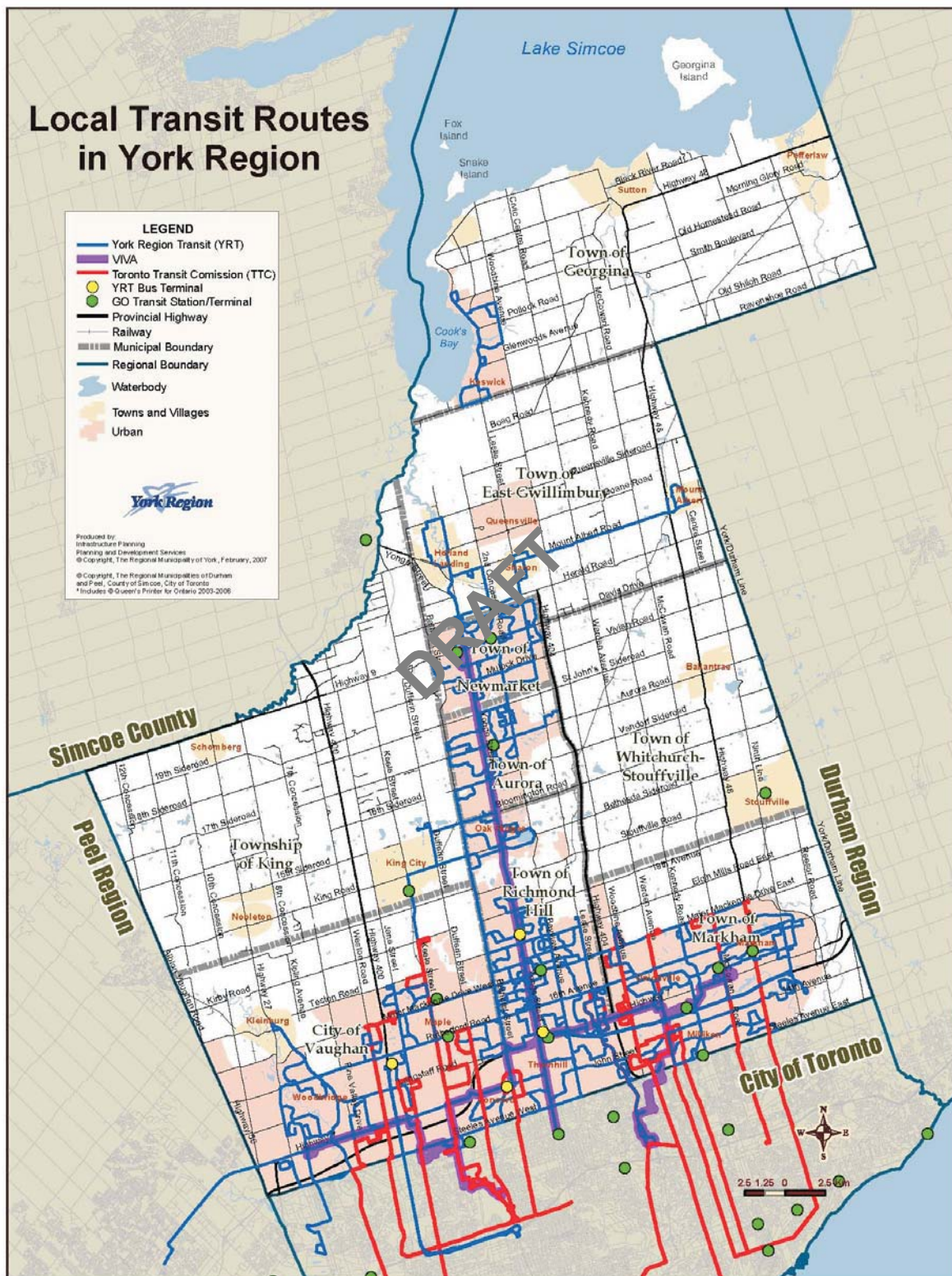


FIGURE 2.5

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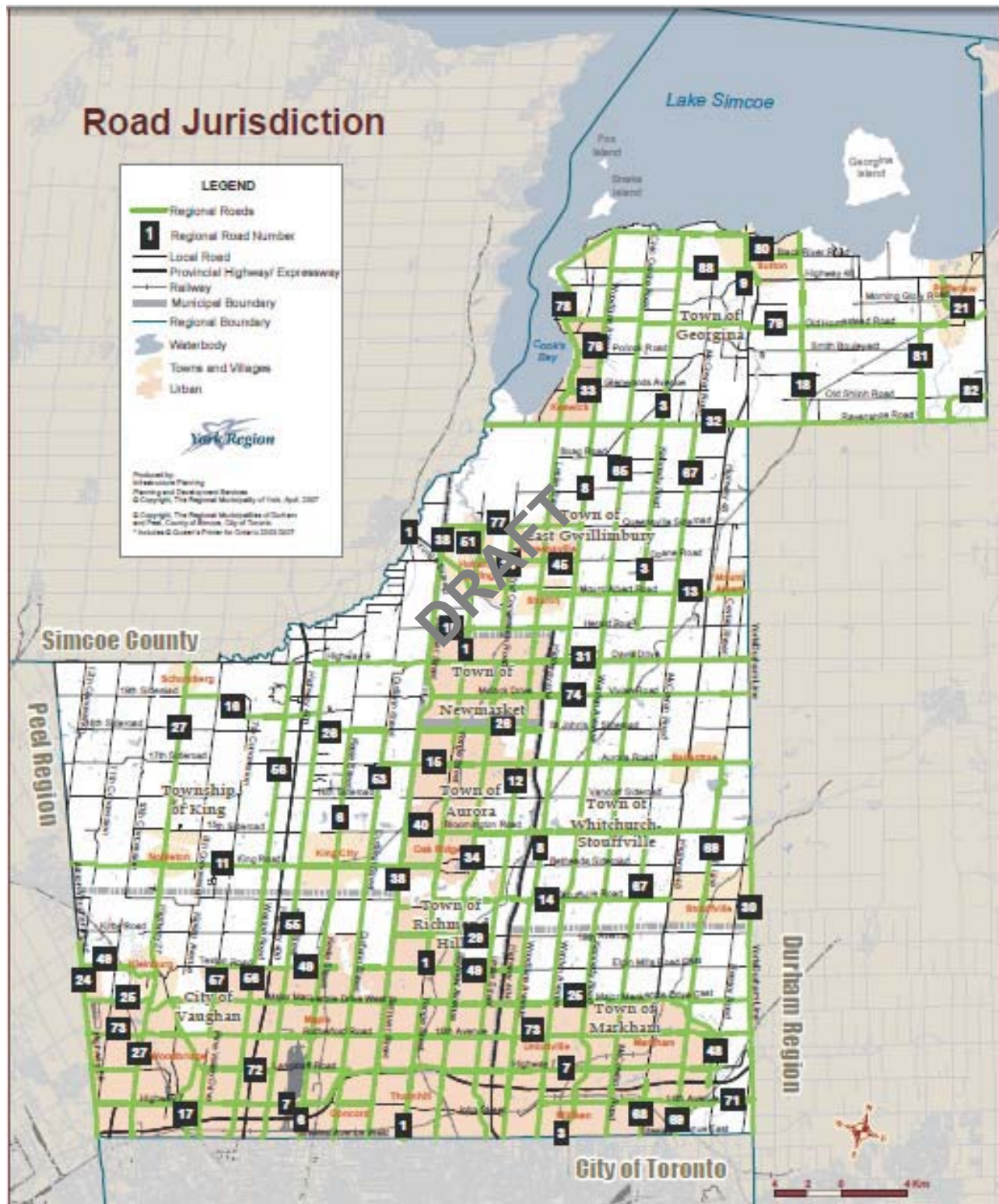
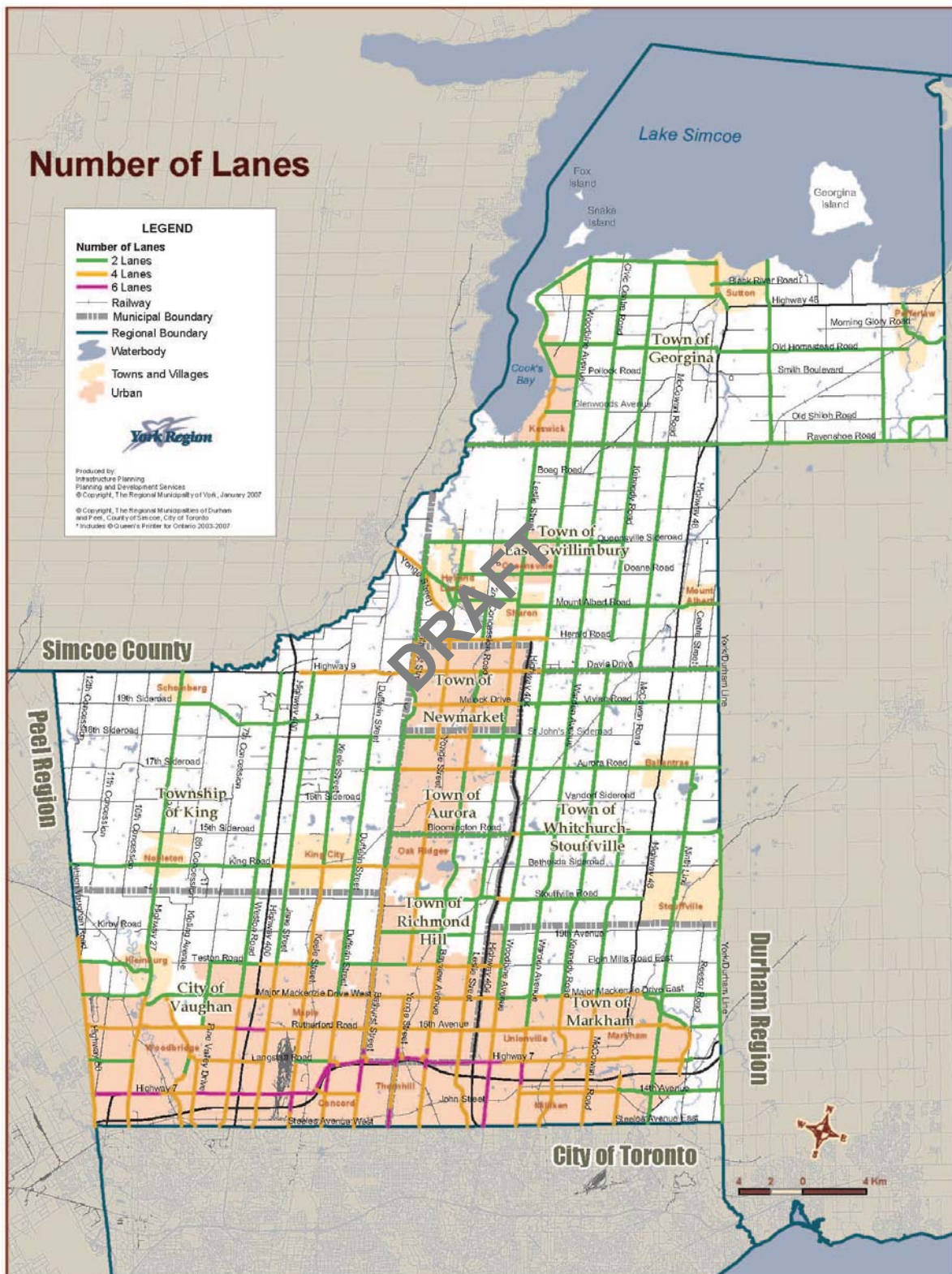


FIGURE 2.6

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NUMBER OF LANES FOUND ON EXISTING ROAD NETWORK

Figure 2.7 illustrates the 2009 10-year capital roads plan. These enhancements generally reflect the planned road improvements that were identified in the 2002 Transportation Master Plan to accommodate future growth.

2.2.3 Pedestrian and Cycling Facilities

York Region maintains several cycling and walking facilities for both leisure and utilitarian purposes. In April 2008, York Regional Council adopted a Pedestrian and Cycling Master Plan (PCMP) to further enhance the pedestrian and cycling opportunities within the Region. This plan represents a coordinated and integrated Regional cycling system serving both the urban and rural areas of the Region. In support of the PCMP, the Region adopted several policies in their Official Plan that support cycling and pedestrian opportunities both on and off-street.

Figure 2.8 illustrates the recommended long-term pedestrian routes. **Figure 2.9** illustrates the proposed long-term cycling routes.



2.2.4 Transportation Demand Management Programs

York Region recently implemented several Transportation Demand Management (TDM) programs. Transportation Demand Management is defined as a set of strategies that foster increased efficiency of the transportation system by influencing travel behaviour by mode, time, frequency, trip length, cost or route. Some existing TDM examples in York Region include: carpooling, vanpooling, discount transit pass programs, telecommuting, flexible work hours, compressed work weeks and shuttle buses.

York Region is a primary partner in the GTA + Hamilton Smart Commute Initiative. The goal of the Initiative is to decrease the dependence on auto use by providing travel choices and supporting programs that reduce travel demand. The programs are implemented by local Transportation Management Associations (TMA). Three TMA's have been established in York Region: Vaughan, Markham-Richmond Hill, and Newmarket-Aurora. In conjunction with YRT and GO Transit, York Region has also developed a Regional network of carpool and commuter parking lots to accommodate commuters. **Figure 2.10** illustrates these facilities in York Region.

FIGURE 2.7

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FIGURE 2.8

TRANSPORTATION MASTER PLAN UPDATE

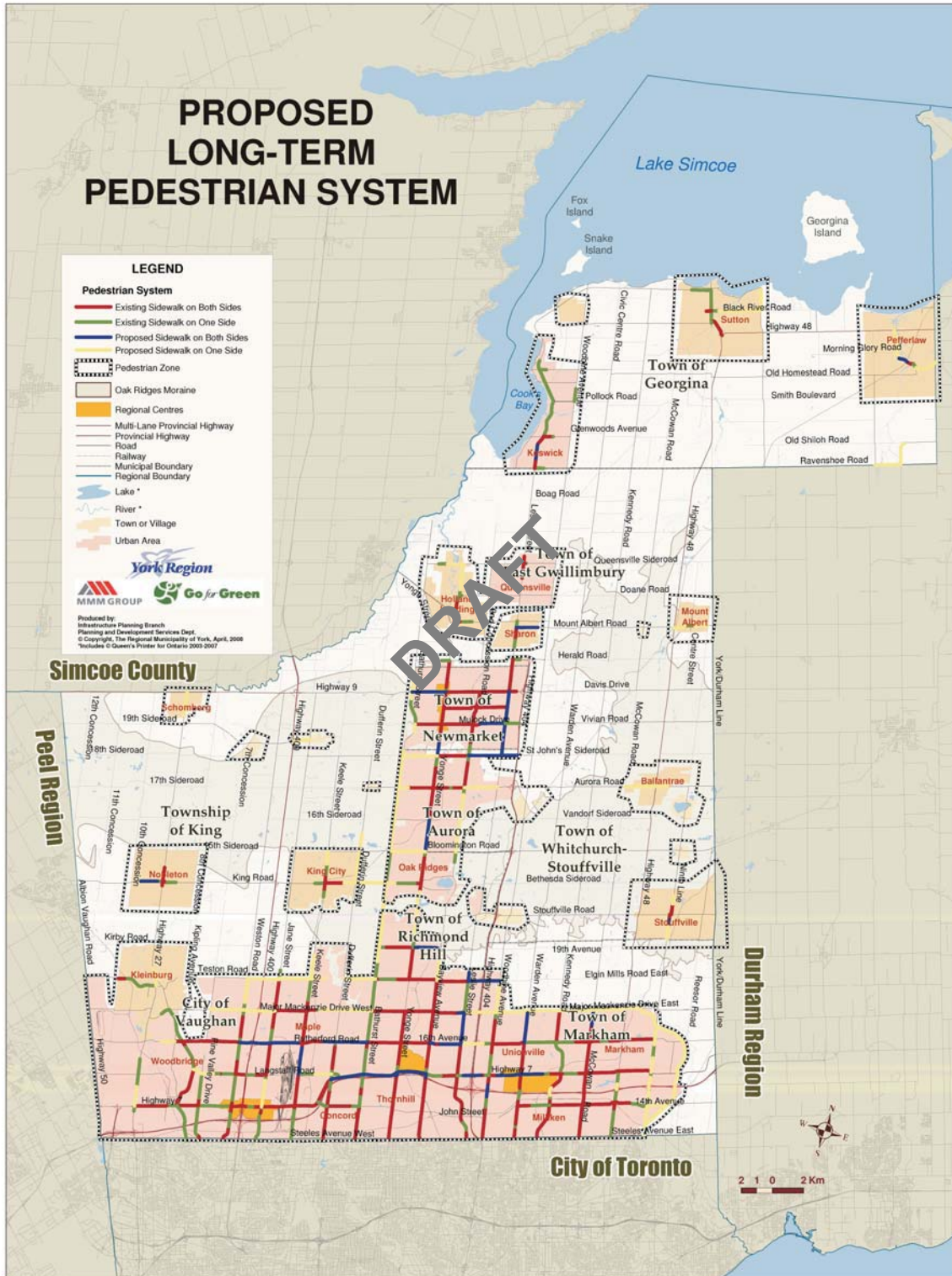
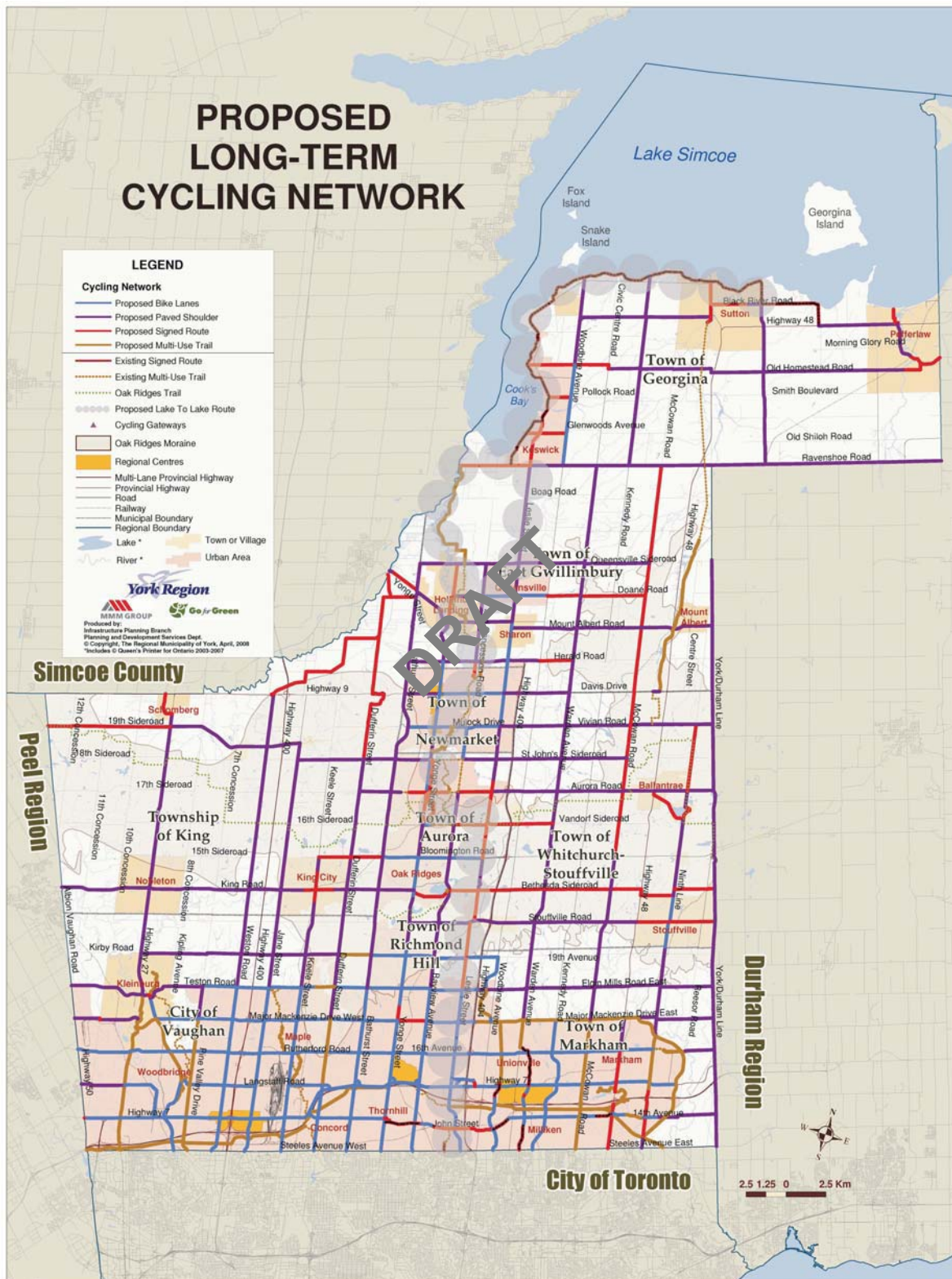
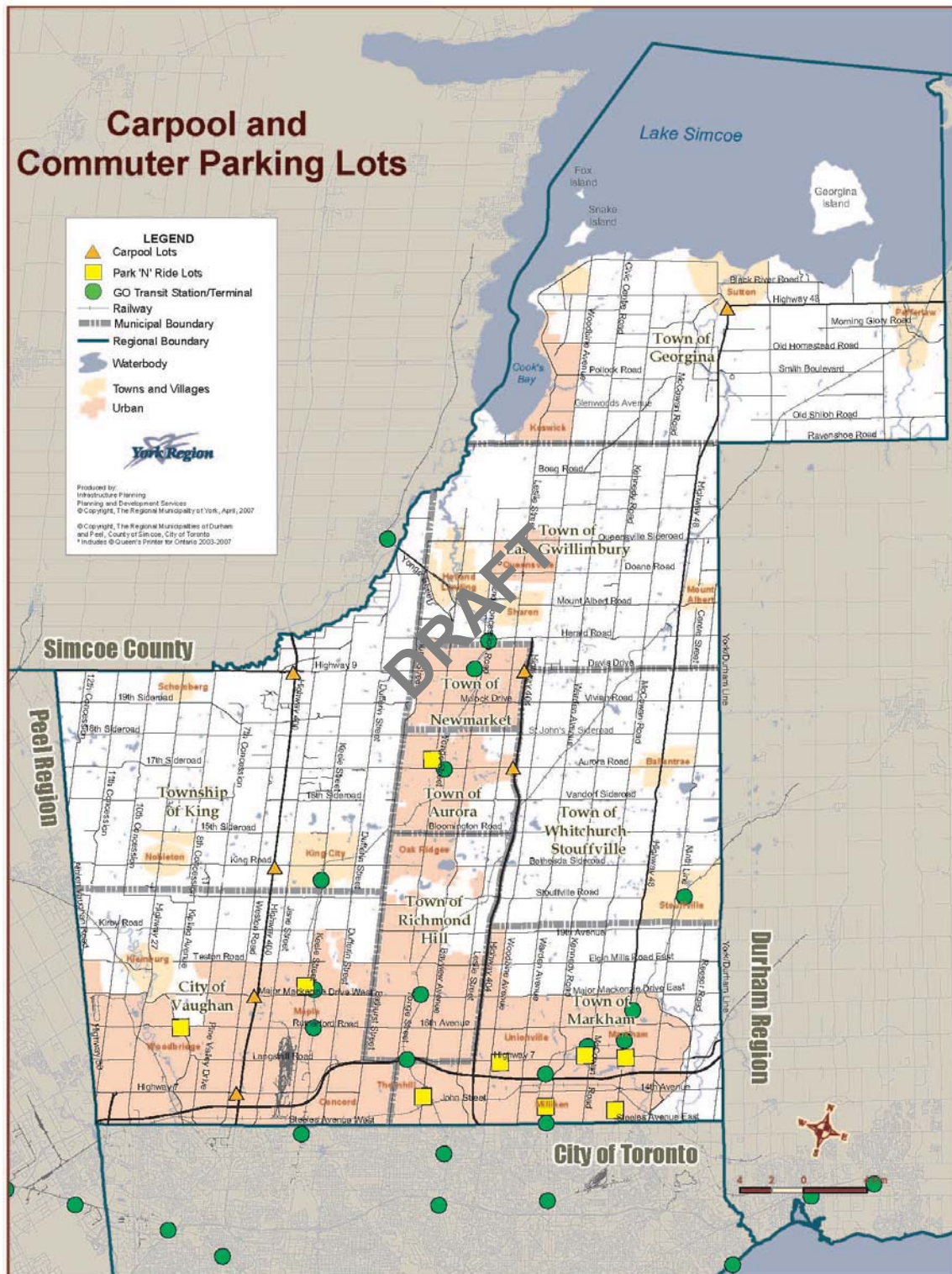


FIGURE 2.9

TRANSPORTATION MASTER PLAN UPDATE



TRANSPORTATION DEMAND MANAGEMENT FACILITIES WITHIN THE REGION



3.0 YORK REGION: A CHAMPION OF SUSTAINABLE DEVELOPMENT

York Region's planning initiatives make it a national leader in promoting sustainable transportation policies. Other communities across Canada and in the Province of Ontario have followed suit, developing their own sustainable transportation programs.

This Transportation Master Plan Update will allow the Region to address future transportation needs in an efficient and integrated manner, while meeting and exceeding Federal, Provincial and Regional initiatives that support sustainable development.

Recent legislation and programs that support sustainable development practices throughout Canada are summarized below. Full versions of some key Regional policies and the 2002 Transportation Master Plan Overview Report are included in **Appendix A**.

3.1 FEDERAL INITIATIVES

3.1.1 Auditor General Act (1995)

In Canada, the concept of sustainable development has been integrated into federal legislation and into amendments to the *Auditor General Act* in 1995, which established the Office of the Commissioner of the Environment and Sustainable Development. Departments are required to prepare sustainable development strategies and to table them in Parliament. The strategies set out goals, objectives, and specific commitments, and are an important tool by which the federal government can advance sustainable development¹.

3.1.2 Federal Sustainable Development Act (2008)

The Federal Sustainable Development Act (FSDA) requires the development of a federal sustainable development strategy. The FSDA will strengthen sustainable development practices within the federal government. It is a positive step towards being more accountable to Canadians in the implementation of environmentally sustainable practices. It allows the Government of Canada to set environmental sustainability priorities more effectively and to align the work of federal departments to support these priorities. The federal strategy will include federal goals and targets for sustainable development along with implementation strategies for each.

Environment Canada is implementing the FSDA and will lead the development of the Federal Sustainable Development Strategy, which must be tabled in Parliament no later than June 26, 2010.

3.1.3 National Vision for Urban Transit to 2020

The report, commissioned by Transport Canada, supports the notion that public transit has numerous benefits to the environment beyond GHG emissions reductions. These other benefits include:

- A reduced need for new road construction;
- Improved air quality due to less vehicles on the road;
- Reduced traffic congestion;
- Healthier downtowns;
- Improved social mobility; and
- Positive impacts on economic sectors such as tourism and export development.

3.2 SUPPORTIVE PROVINCIAL POLICIES AND PLANS

3.2.1 Oak Ridges Moraine Conservation Plan

The Government of Ontario established a clear policy framework for the protection of the Oak Ridges Moraine through the *Oak Ridges Moraine Conservation Act, 2001*, and the Oak Ridges Moraine Conservation Plan (ORMCP).



Municipal planning decisions must conform to the ORCMP, which takes precedence over municipal official plans. The ORMCP builds on the efforts of the Regions of York, Durham and Peel, the Conservation Coalition, Moraine area municipalities, and key stakeholders to provide clarity and certainty with respect to the long-term protection and management of the Oak Ridges Moraine. A large portion of the Oak Ridges Moraine is located within central York Region.

The recommendations developed for the York Region Transportation Master Plan Update were developed in accordance with Section 41 of the ORCMP, which addresses transportation, infrastructure and utilities. Section 41 outlines specific policies for lands identified as Natural Linkage Areas and Natural Core Areas, including measures to prevent and minimize potential impacts.

3.2.2 The 2005 Provincial Policy Statement

The Provincial Policy Statement (PPS) establishes the foundation for regulating land use and development within the Province. The PPS provides for appropriate development and protects resources of provincial interest. The vision of the land use planning system in the PPS is that the “long-term prosperity and social well-being of Ontarians depend on maintaining strong communities, a clean healthy environment and a strong economy” (Provincial Policy Statement, Ministry of Municipal Affairs and Housing, 2005).

The PPS promotes a variety of transportation choices. The term “transportation systems” under the PPS means a system of corridors and rights-of-way for the movement of people and goods and the associated transportation facilities.

3.2.3 Places to Grow Act, 2005 (Ontario Bill 136)

Bill 136, or the *Places to Grow Act*, enables the Province to play a lead role in determining how the Greater Golden Horseshoe and GTA will grow in the future. Section 3.2.2 of *Places to Grow* outlines policies related to Transportation. *Places to Grow* states that public transit will be the first priority for transportation infrastructure planning and major transportation investments. The development of new infrastructure in York Region, including transit infrastructure, will be designed to shape growth and plan for high residential and employment densities that ensure the efficiency and viability of existing and planned transit service levels.

3.2.4 The Greenbelt Act, 2005 (S.O. 2005, Chapter 1)

The Province passed legislation under the *Greenbelt Protection Act* (Bill 135), which established a Greenbelt Plan for the Greater Toronto Area and Golden Horseshoe. The Greenbelt Plan incorporates the Oak Ridges Moraine and Niagara Escarpment Plan areas, plus an additional 1.8 million acres of permanent countryside area, which will be protected from urban sprawl and development. A key provision of the Plan is to “ensure that the development of transportation and infrastructure proceeds in an environmentally sensitive manner.”

3.2.5 The Growth Plan for the Greater Golden Horseshoe, 2006

Adopted under the *Places to Grow Act*, the Growth Plan is a comprehensive, 25-year strategy that sets clear standards for growth and development, while giving local governments the flexibility they need to address local circumstances. Among the key provisions of the Growth Plan is the establishment of an integrated transportation network that will offer more transportation choices for getting from place to place, reducing congestion on provincial roads.

3.2.6 Bill 51- Planning and Conservation Land Statute Law Amendment Act

Enacted in January 2007, Bill 51 provides the legislative framework for land use planning in Ontario. Bill 51 incorporates changes to the planning process that are intended to support intensification, sustainable development, and protection of green space by giving municipalities greater powers, flexibility and tools to use land, resources and infrastructure more efficiently. Bill 51 corresponds with Ontario's recent policy shift towards sustainable land use development and planning. For instance, it permits municipalities to require environmental sustainability design features for both individual buildings and entire neighbourhoods. It also adds sustainable development as a provincial interest in the Provincial Policy Statement.



3.2.7 High Occupancy Vehicle Lanes - Plan 2007

The Province developed a vision for managing traffic congestion on Ontario highways by adding high occupancy vehicle lanes to many highways, including several in York Region. The following policies and operating standards developed by the Ministry of Transportation will be applied when constructing and operating HOV lanes on 400-series highways:

- Provisions for HOV lanes will be considered in the planning for any new highway corridors

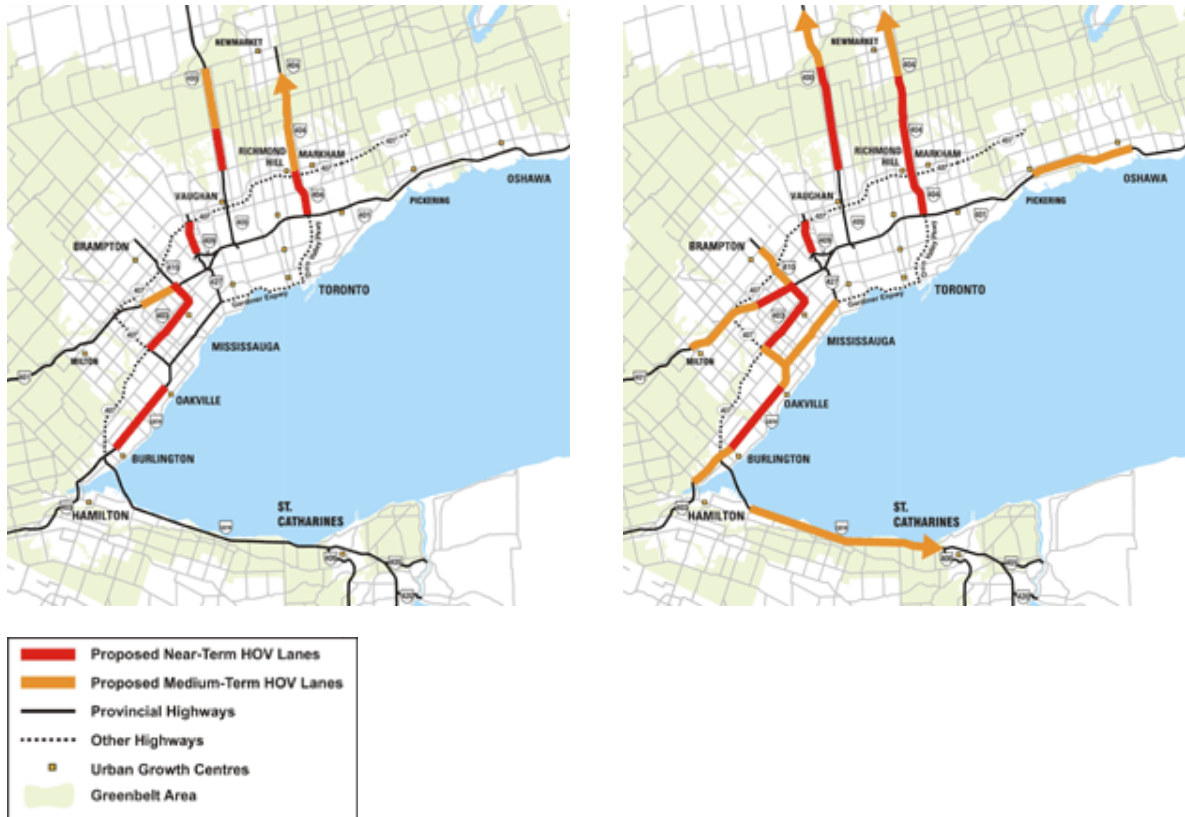
- HOV lanes will be constructed as new lanes when it is feasible, so the overall highway capacity for all vehicles is increased
- HOV lanes will be designed to ensure the highest safety standard possible; this will include wide shoulders and buffers separating the HOV lane from the adjacent regular lane and consideration of designated entry/exit points
- Passenger vehicles, small trucks, taxis and motorcycles with two or more occupants will be permitted to use the lanes, in order to meet the primary goal of moving more people in fewer vehicles
- All buses will be permitted to use the HOV lanes at all times, regardless of the number of occupants to ensure reliable and on-time bus service and to allow them to return to the beginning of their routes more quickly and consistently
- All emergency vehicles will be permitted to use the lanes when responding to an incident
- Larger trucks will not be permitted for safety reasons, as well as to ensure a consistent flow of traffic in the HOV lane
- The HOV requirement will be in effect 24 hours a day, seven days a week, to address congestion that occurs outside of peak commuting hours and to further encourage carpooling and transit use for all types of trips

The maps below show the Provincial highway HOV network plans. HOV lanes are implemented on Highway 404 from Highway 401 to Beaver Creek (north of Highway 7).

HOV LANE NETWORK IN THE GREATER GOLDEN HORSESHOE

Medium-Term Priorities (2011-2016)

Longer-Term HOV Additions (2017+)



3.2.8 Metrolinx Regional Transportation Plan (2008)

The Metrolinx Regional Transportation Master Plan provides the “vision, goals and objectives for the future in which transportation within the GTHA is seamless, coordinated, efficient, equitable and user centred”. The Plan includes new transportation projects that amount to \$50.2 billion over the next 25 years – the largest public transit expansion in half a century. Additionally, the Plan proposes to build over 1,200 km of rapid transit facilities, more than triple what exists today. Metrolinx has targeted York Region for a significant portion of this investment.

The Final Regional Transportation Master Plan was approved by Metrolinx in November 2008. It was submitted to Provincial Cabinet for adoption, following which legislation will be passed requiring planning and investment decisions of municipalities and the



Province to be consistent with the Plan’s directions. A prescribed process for 5-year Plan reviews and amendments will also be established with this legislation.

Figure 3.1 and **3.2** highlight Metrolinx’s recommended rapid transit improvements or “Big Moves”, including several key initiatives proposed for York Region within the next 15 and 25 years. **Chapter 7** further details these local initiatives over the next 15 years and beyond.



3.3 SUPPORTIVE REGIONAL POLICIES AND PLANS

3.3.1 York Region Official Plan, 2005

The York Region Official Plan (ROP) is a set of policies intended to help guide economic, environmental and community-building decisions which affect the use of land up to 2026. The policies in the ROP have helped coordinate and set the stage for more detailed planning by the area municipalities. The ROP also provides a framework for coordinated planning with adjacent municipalities, as well as with other jurisdictions in the Greater Toronto Area.

The ROP strongly supports the need for an expanded, well-integrated public transit system, as well as a more sustainable transportation system. Two key objectives are:

- To provide transit service that is convenient, accessible and equitable to all residents of York; and
- To provide rapid transit services as early as possible linking the Regional Centres with adjacent urban areas.

3.3.2 Planning for Tomorrow, Growth Management Initiative, 2006

In 2006, Regional Council initiated a process to solicit public and partner input to ensure that growth management decisions are sustainable and meet the needs of current and future communities. The Growth Management initiative, entitled Planning for Tomorrow, will culminate in an update to the Regional Official Plan anticipated for 2009.

There are five primary components to this Growth Management work:

- Development of a Sustainability Strategy to provide a new approach to decision-making;
- Assessing the potential impact of population and employment forecasts defined by the Province;
- Undertaking several infrastructure master plan updates— including this Transportation Master Plan— to address the Region's current and future infrastructure needs;

- Pro-actively consulting with residents and stakeholders to obtain input on the future Policies of York Region; and
- Revising and updating the Regional Official Plan.

3.3.3 Transit-Oriented *Design Guidelines* (2006)

The purpose of Regional Transit-Oriented Development (TOD) Guidelines is to advance the implementation of York Region's planned urban structure of Regional Centres linked by Regional Corridors, served by public transit. The guidelines are designed to shape development in a way that is transit-supportive, pedestrian-friendly, and well-designed. This approach is consistent with the Regional Official Plan, and is further supported by initiatives that aim to advance the ROP's themes of Economic Vitality, Environmental Sustainability and Healthy Communities. Regional Council adopted the Regional TOD Guidelines in September 2006.

3.3.4 York Region Sustainability Strategy: Toward a Sustainable Region (2007)

York Region prepared a Sustainability Strategy to provide a long-term framework for making smarter decisions about growth management and municipal responsibilities that better integrate the economy, environment and community. The strategy underscores the importance of recognizing how choices of everyday life can have lasting impacts on sustainability. The Sustainability Strategy is guided by the following principles:



- Provide a long-term perspective on sustainability;
- Evaluate transportation options using the triple bottom-line elements of environment, economy and community;
- Create a culture of continuous improvement, minimizing impact and maximizing innovation;



- Identify specific, short-term, achievable actions that contribute to a sustainable legacy;
- Set targets, monitor and report progress;
- Foster partnerships and public engagement;
- Raise the level of sustainability awareness through education, dialogue and reassessment; and
- Promote sustainable lifestyles and re-evaluation of our consumption and expectations.

In 2008, York Region was awarded first place and the gold award at the 2008 International Liveable Community Awards in the "whole city" population category of 750,000 and over for this important document.

4.0 PUBLIC ENGAGEMENT

4.1 IMPORTANCE TO THE PLANNING PROCESS

Meaningful and effective public and stakeholder consultation was critical to the success of the Transportation Master Plan Update. The Region's public consultation strategy actively involved local municipalities, key stakeholders and residents early and often throughout the study. While consultation is a requirement of the Municipal Class EA, York Region exceeded those standards for this Master Plan Update. The Region employed multiple consultation techniques to ensure that residents were engaged in the planning process.



4.2 ELEMENTS OF THE PUBLIC ENGAGEMENT PLAN

4.2.1 Public Consultation Centres

York Region hosted three rounds of Public Consultation Centres (PCCs) during key study milestones. The Region deemed it critical that the PCCs would be held in each of its nine municipalities to ensure a broad cross-section of participation. Similarly, each of the three PCCs included interactive displays and opportunities for one-on-one consultation with project team members. Highlighting the integrated and coordinated process of the Growth Management Initiative and infrastructure planning, the first two rounds of PCCs were joint public meetings with the Region's Water and Wastewater Master Plan study. A summary of each PCC follows.

4.2.1.1 PCC #1- November 2006

Attendees/Locations	Aurora (11.21.06)	Georgina (11.22.06)	Vaughan (11.23.06)	TOTAL
Transportation Master Plan Attendees	39	16	44	99
Water / Wastewater Master Plan Attendees	44	13	45	102
Total Public Attendees	52	19	55	126

The focus of the first PCC was to introduce the study, identify existing conditions and generally ask residents: “*What defines a sustainable community?*”

A summary of participant comments from the first Public Consultation Centre is provided below, separated into different aspects of the Transportation Master Plan Update. **Appendix B** provides more information on the comments received at PCC #1.

Land Use, Infrastructure and Communities:

- Intensify major arteries, such as Yonge Street.
- Develop new liveable communities that do not rely solely on the automobile.
- Ensure public necessities are within a reasonable walking distance from every home.
- Municipalities should create carpooling programs for neighbourhoods.
- Intensify York Region’s existing infrastructure.
- Eliminate urban sprawl.
- Reduce truck traffic through small communities connected to the 400-series highways.
- Promote live-work communities to reduce commuting.
- Coordinate and integrate planning with other regions.

Public Transit

- Develop LRT along major corridors and nodes.
- Increase service frequency.
- Increase transit routes.
- Extend transit service to rural areas.
- Implement dedicated lanes for Viva.
- Connect York Region’s public transit with other regional transit systems.
- Decrease travel time on vehicles.

- Create a seamless transit system.
- Provide free door-to-door transit rides.

Walking and Cycling

- Incorporate bicycle lanes on existing roads.
- Incorporate convenient and accessible bicycle storage.

Road Network

- Stop focusing on road widening projects.
- Reduce the width of existing and future roads.
- Enforce strict speed limits.
- Maximize productivity and efficiency of arterial roads and highways to support the movement of people, goods and services.
- Incorporate a goods movement plan.

Residents also identified potential solutions to make travel in York Region more sustainable, including:

- Refraining from using automobiles.
- Moving to a major corridor such as Yonge Street.
- Taking public transit more frequently.
- Cycling more often.
- Encouraging family, friends and neighbours to take transit.
- Reducing car-ownership.
- Carpooling.
- Raising gas taxes to reduce automobile use.
- Inducing a tax on large vehicles such as SUVs.
- Reducing vehicle idling.
- Eliminating “drive-through providers” (restaurants, coffee shop, etc).
- Recognizing and learning from leaders in transportation planning, such as various European cities or Curitiba, Brazil.

4.2.1.2 PCC #2- November 2007

Attendees/Locations	East Gwillimbury (11.06.07)	Markham (11.15.07)	King City (11.21.07)	TOTAL
Total Attendees	31	53	34	118

Like the initial PCC held one year earlier, residents attending the second PCC reviewed information for both the Region's Water and Wastewater and Transportation Master Plans. Residents assessed projected growth data and were asked to comment on the study's sustainability principles, objectives and measures. Results of the discussion are provided below. **Appendix B** provides more information on the comments received during each of the three PCC #2 sessions.

Land Use, Infrastructure and Communities

- Promote live-work-play communities (i.e. mixed use) to eliminate commuting.
- Support compact communities by not widening roads.
- York Region is too late...stop the runaway development until you have a strategy in place.
- No thought is given to where people are going to work or how they are going to get there once a new subdivision is approved.

Public Transit

- Increase high speed transit alternatives.
- Don't overspend on transit.
- Transit stops should be more convenient and safer (include climate-proof shelters, bicycle lockers).
- Increase all-day service for YRT & GO Transit.
- New subdivisions are not transit-friendly.
- More public transit in rural communities.
- Provide better transit options along major arterials, like Elgin Mills and Leslie.

Walking and Cycling

- Ensure a more balanced transportation system, which includes more trails and sidewalks.



Road Network

- No new highways or road widenings – not cost effective, bad for the environment.
- Reconsider 6-lane widenings, even if they include HOV lanes.
- HOV lanes won't work because there is no enforcement.
- Make it crystal clear why the Region is considering widening roads.

4.2.1.3 PCC #3- November 2008

Attendees/ Locations	Whitchurch- Stouffville (11.12.08)	Vaughan (11.18.08)	Markham (11.20.08)	Newmarket (11. 25.08)	Richmond Hill (11.27.08)	Total
Total Attendees	16	20	25	23	38	122

York Region hosted the third round of PCCs in five municipalities during the fall of 2008. The event included a presentation of the preliminary transit, roadway and policy recommendations developed by Regional staff, as well as several interactive display panels designed to stimulate discussion. Results of the input are provided below. **Appendix B** provides more information on the comments received during the five PCC #3 sessions.

Land-use, Infrastructure & Communities

- Develop mobility hubs sooner rather than later.
- Restrict commercial and big box development.
- Use sustainable development methods to decrease the need to travel, protect and enhance the environmental and cultural heritage.
- Ensure the adequacy of parking at transit stations to promote an increase in modal usage.
- Consider preferred parking for efficient personal vehicles.
- Integrate more employment lands closer to residential areas so people can work in York Region.

Public Transit

- GO transit service should be upgraded to all day service immediately.

- Implement a terminal at the juncture of Highway 407 and 404 to transfer to the proposed express bus at Highway 404.
- Provide GO transit links at Langstaff to access Viva and YRT.
- Standardize transit costs.
- Consider more efficient transit vehicles.
- Consider increasing the number of buses on routes for off-peak trips to make transit more competitive.
- Reconsider transit improvements along Major Mackenzie.

Walking and Cycling

- Consider a pedestrian underpass below Highway 407 with people movers to transfer passengers from Viva/YRT bus terminals to GO stations.
- Ensure the implementation of the Pedestrian and Cycling Master Plan.
- Consider the implementation of cycling lanes as a part of the sidewalk for increased safety.

Road Network

- Widening roads to six or seven lanes is too wide to accommodate HOV lanes during peak hours and may negatively impact residential areas along regional roads.
- Implement reversible lanes and bus bay priority.
- Consideration should be given to other transportation modes such as Vespas, scooters, and motorcycles.
- Current roads should be optimized rather than creating new roads; do not widen roads to six lanes.

Communication

- Implement public education programs.
- Increase resident understanding of TDM options.
- Host public consultation events in malls to increase awareness of transportation options.
- Provide more incentives for the public to become involved in sustainability.

4.2.2 Public Opinion Survey

EKOS Research Associates, an independent market research firm, conducted a telephone survey in July 2008 with 1,011 York Region residents to discuss issues about transportation and public transit. The survey was designed to gauge resident’s views on transportation issues, as well as to identify citizens’ opinions on potential solutions to address their concerns.

In order to compare and contrast responses from residents of different municipalities, approximately 250 residents were surveyed in each of four areas: Markham, Vaughan, Richmond Hill, and the six remaining municipalities that make up the Region.

Key results of the survey include:

- Traffic congestion, and the lack of transit services in York Region, are major issues in York Region residents;
- Support for public transit, cycling and pedestrian infrastructure is strong across all municipalities; and
- A majority of residents oppose measures such as widening roads only for cars, or building more roads and highways as a way to address congestion.

The results of the survey were used to help guide the Transportation Master Plan Update in developing the strategies to manage traffic congestion and future growth. **Appendix C** displays the public opinion survey questionnaire and summary of results.

4.2.3 Sustainability Focus Group

York Region hosted a focus group on October 9, 2007 to engage stakeholders on the sustainability principles developed for the Master Plan. Agency participants included:

- | | |
|---|--|
| <ul style="list-style-type: none"> ▪ Toronto Region Conservation Authority ▪ Lake Simcoe Region Conservation Authority ▪ Ontario Nature ▪ Environmental Defense | <ul style="list-style-type: none"> ▪ STORM Coalition ▪ David Suzuki Foundation ▪ Rouge Park Staff ▪ South Aurora Ratepayers ▪ Richmond Hill Naturalists |
|---|--|

- North East Sutton Ratepayers Association
- Newmarket Chamber of Commerce
- GTA Agricultural Action Committee

A summary of the focus group discussion is included in **Appendix D**.

4.2.4 Transportation Symposiums

On June 28, 2006, York Region hosted a one day transportation symposium to publicly 'kick-off' the Transportation Master Plan Update study. The symposium, *Planning for Tomorrow: Crucial Directions for Moving York*, included over 100 senior level stakeholders from York Region area municipalities, major businesses and industries, Chambers of Commerce, provincial officials, Conservation Authorities, environmental organizations, public health departments and transportation service providers.

On September 14, 2008, York Region invited the same group of stakeholders back for a *Moving on Sustainability* symposium to elicit their response to the draft transit, roadway and policy recommendations developed in the Master Plan Update.

Appendix E summarizes the results from both events.

4.2.5 Steering Committee

A project steering committee was assembled to guide the direction of the study, review draft products and deliverables and ensure the participation of staff from various Regional departments.

4.2.6 Technical Advisory Committee

A project Technical Advisory Committee (TAC) was convened to ensure that the Transportation Master Plan Update was coordinated with municipal and agency activities. The TAC was comprised of representatives from each local municipality, adjacent cities and Regions, Conservation Authorities and provincial bodies. More specifically, TAC members represented:

Local Municipalities & Agencies

- City of Vaughan
- Town of Aurora
- Town of East Gwillimbury
- Town of Georgina
- Town of Markham
- Town of Newmarket
- Town of Richmond Hill
- Town of Whitchurch-Stouffville
- Township of King
- Smart Commute 404/7
- North Toronto

Regional Municipalities

- City of Toronto
- County of Simcoe
- Region of Durham
- Region of Peel

Provincial Government

- GO Transit
- Ontario Growth Secretariat
- Ontario Ministry of the Environment
- Ontario Ministry of Transportation

Conservation Authorities

- Lake Simcoe Region Conservation Authority
- Toronto and Region Conservation Authority

4.2.7 Project Newsletters

York Region produced three newsletters to inform area residents about the Transportation Master Plan Update. The newsletters were distributed prior to each round of Public Consultation Centres, describing the progress to date while inviting residents and stakeholders to attend session. **Appendix F** includes the three newsletters developed for the project.

4.2.8 Project Website

York Region hosted a project website to update the status of the Transportation Master Plan Update, post relevant meeting dates and provide project materials on-line. **Appendix G** illustrates the website site map, available at www.york.ca.

4.2.9 Public Notices & Media Promotions

As per Municipal Class EA requirements, York Regional staff published a Notice of Commencement, Notice of Completion and all PCC Notices in the local newspapers (see **Appendix H**). To increase the awareness of public meetings, Regional staff promoted the events on mobile message boards and through media releases.



4.2.10 'Comments & Ideas' Matrix

Throughout the planning process, York Region staff received an abundance of e-mails, letters and calls from residents and stakeholders who had questions or comments about the Transportation Master Plan Update. **Appendix I** documents the Region's 'Comments and Ideas' matrix, including staff responses.

5.0 YORK REGION'S TRANSPORTATION MASTER PLAN: AN INNOVATIVE STUDY PROCESS

York Region developed an innovative study process that included:

- Establishing the Need for future transportation improvements based on growth projections;
- Undertaking a rigorous assessment of existing conditions - both in York Region and throughout North America - to identify potential measures to address the Need;
- A methodology to ensure potential transportation solutions would be judged more on their ability to be sustainable;
- A proactive consultation process that included public meetings or workshops in each of the Region's nine municipalities; and
- Regular meetings of a Technical Advisory Committee (TAC), which included membership from York Region's local municipalities, adjacent communities, MTO, GO Transit, YRT and conservation authorities.



5.1 A UNIQUE AND INNOVATIVE STUDY PROCESS

Figure 5.1 illustrates the study process that was developed for the Transportation Master Plan Update. As is detailed in the later sections, this study was one of several studies that were integrated and coordinated. The other studies include:

- Growth management Initiative;
- Sustainability Strategy study;
- Water and Wastewater Master Plan study;
- Pedestrian and Cycling Master Plan;

- 25-Year Fiscal Impact Study;
- Environmental Analysis;
- Land Use Analysis;

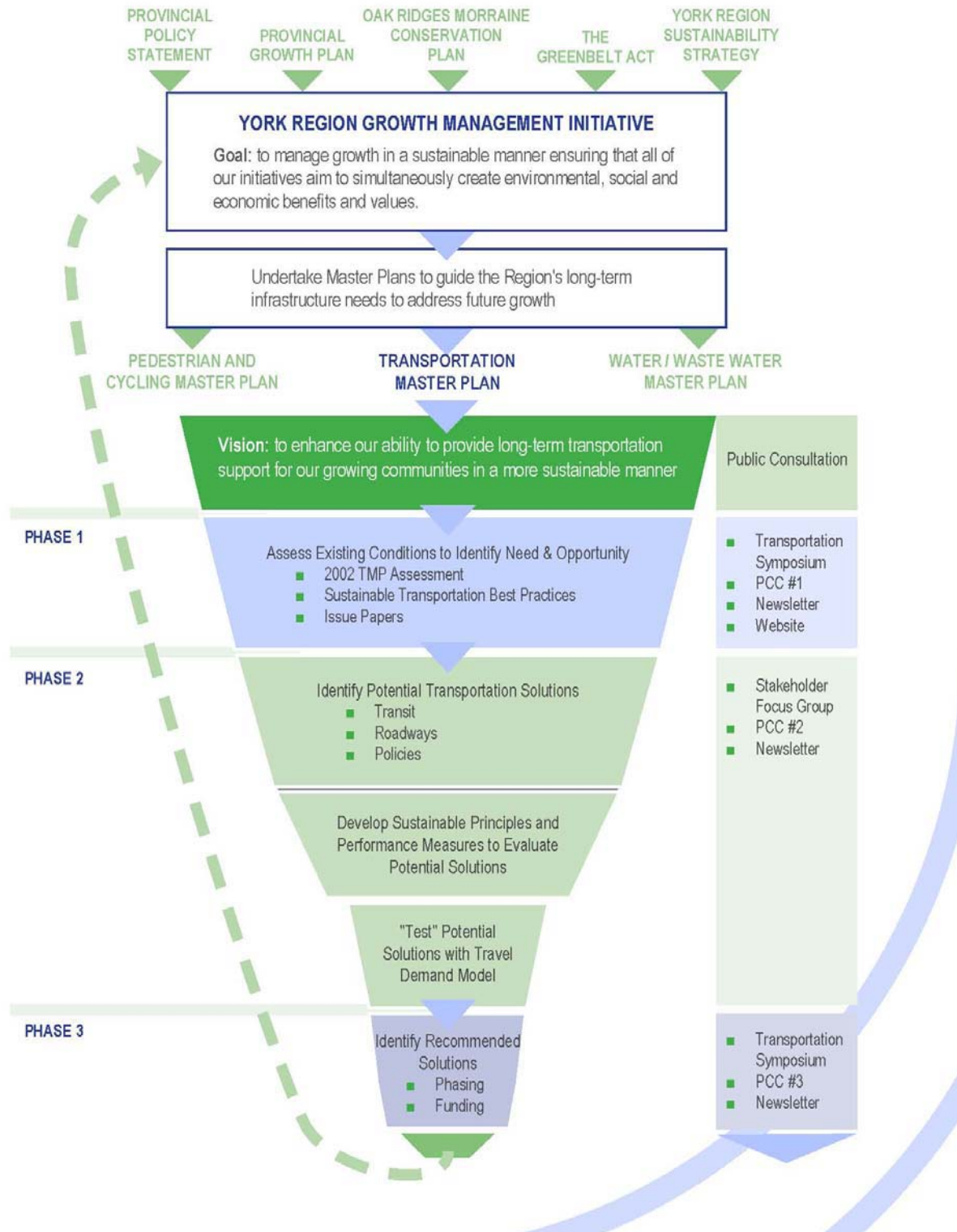
The objective to this overall process was to integrate land use, infrastructure, environment and fiscal planning.

Specific to the Transportation Master Plan Update, the study process was unique and innovative in that it:

- was Integrated and coordinated with the above studies;
- used a set of sustainability principles to guide selection of the preferred solution;
- used a transit-first approach to address capacity deficiency to meet growth demands;
- ensured that residents and stakeholders were engaged throughout the study.

This unique and innovative approach is further represented by the Four “R”s approach to sustainable transportation planning described in Section 5.4.

Figure 5.1- York Region Transportation Master Plan Study Process



5.2 THE GROWTH MANAGEMENT INITIATIVE: ESTABLISHING THE NEED FOR FUTURE TRANSPORTATION IMPROVEMENTS

In June 2006, the Province of Ontario released its Places to Grow growth plan for the Greater Golden Horseshoe Area,

The Goal is to manage growth in a sustainable manner ensuring that all of our initiatives aim to simultaneously create environmental, social and economic benefits and value.

-Planning for Tomorrow

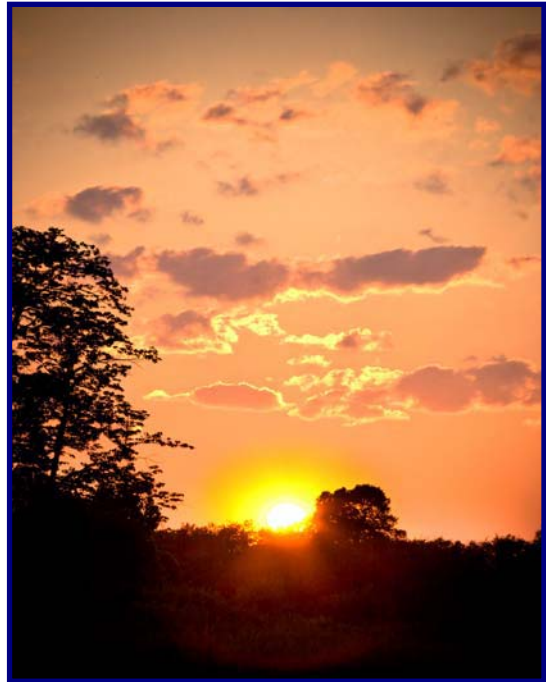
wherein it projects population and employment to grow from 7.8 million people and 3.8 million jobs in 2001 to 11.5 million people and 5.6 million jobs in 2031.

Virtually all GTHA municipalities are currently assessing the transportation implications of revised population and employment projections consistent with the directions in the Places to Grow plan.

Over the last three years, the Region has conducted a Growth Management Initiative (GMI) entitled *Planning for Tomorrow* which will culminate in an update to the Regional Official Plan anticipated for completion in 2009. The GMI was undertaken to respond to the Places to Grow plan that redefined the way that growth will occur in the Greater Golden Horseshoe Area, over the next 25 years.

In response to the new growth projections, York Region identified the need to enhance the liveability and quality of life of the Region's residents through improvements in land use planning, infrastructure planning and preservation of natural heritage features. This approach required the Region and its partners to:

- Ensure that a minimum of 40% of growth occurs through intensification in existing built-up areas;



- Strengthen connections between land use, transit, built form, public health, natural heritage and pedestrians;
- Develop new standards for construction and development that use green technologies to improve air quality, reduce energy consumption and enhance water efficiency;
- Integrate land use, infrastructure, environment and fiscal planning;
- Protect and enhance the natural environment, through the Region's Greening and Securement Strategies and an updated Natural Heritage System; and
- Focus on the economy and jobs, and provide human services to all residents.

As a key part of this effort, the Regional Planning Department assessed whether and how York Region could accommodate the population and employment projections assigned to the Region. As a result, York Region, in consultation with the local municipalities, concluded that the following allocation by local municipality was feasible and could meet the “40% intensification within urbanized areas” guideline required by the Province.

Table 5.1- Municipal Population and Employment Growth – (2006-2031)

	Population			Employment		
	2006	2031	Growth	2006	2031	Growth
Markham	272,500	423,500	151,000	144,800	248,500	103,700
Vaughan	248,800	418,800	170,000	162,200	275,900	113,700
Richmond Hill	169,500	242,800	73,300	61,100	100,600	39,500
Aurora	49,600	70,400	20,800	20,300	34,700	14,400
Newmarket	77,400	97,300	19,900	42,100	49,700	7,600
King	20,300	35,100	14,800	7,100	12,100	5,000
Whit.-Stouffville	25,400	60,800	35,400	10,900	23,700	12,800
E. Gwillimbury	21,900	88,000	66,100	5,900	31,800	25,900
Georgina	44,500	70,700	26,200	8,000	21,700	13,700
Total York	929,900	1,507,400	577,500	462,400	798,700	336,300

Important factors in arriving at this allocation were environmental/open space constraints, the amount of Greenfield areas remaining within urban boundaries, and the amount of developable areas outside urban boundaries.

As illustrated in **Table 5.1** (above), a large portion of the Regional growth (both population and employment) will be accommodated in Markham and Vaughan. Within these two municipalities, growth outside of the existing urban boundaries will generally be located north of Major Mackenzie Drive and will be built at higher densities than existing developments.

More detailed information about the Growth Management Initiative is available at www.york.ca.

5.3 INFRASTRUCTURE MASTER PLANS ADDRESS THE NEED TO SUPPORT NEW GROWTH

As part of *Planning for Tomorrow*, the Region embarked on infrastructure Master Plan updates for transportation and water

The Vision is to enhance our ability to provide long-term transportation support for our growing communities in a more sustainable manner.

-York Region Transportation Master Plan Update

and wastewater. As well, recognizing the rising importance of alternative modes of travel, the Region undertook a separate Pedestrian and Cycling Master Plan. The Master Plans were initiated to:

- Examine the entire infrastructure system to outline a framework for planning for subsequent projects or studies;
- Evaluate potential technology options and system capacity for transit, roads, water and wastewater facilities based on various growth scenarios;
- Coordinate infrastructure servicing plans with other capital expansion and construction programs; and
- Demonstrate how the Region's current and future infrastructure can best meet its sustainability goals.

The Transportation Master Plan Update and the Pedestrian and Cycling Master Plan will serve as the “blueprint” for all major transportation initiatives in the Region through the year 2031 and beyond; the Water and Wastewater Master Plan timeframe is 40 to 50 years.

5.4 REGIONAL GOALS OF SUSTAINABLE TRANSPORTATION: THE FOUR “R’s”

In support of York Region’s Vision to develop its transportation system in a more sustainable manner, the Region identified four key objectives (Four “R’s”) to reduce single-occupant vehicle (SOV) travel.

The Region’s Four “R’s” plays off of the three “R’s” (reduce, reuse, recycle) used globally to limit the production of solid waste. In order to minimize the number of SOV’s, four objectives must be achieved:

1. Develop initiatives and strategies that **R**educe the need to travel;
2. Provide more convenient and reliable alte**R**native modes;
3. Enhance public t**R**ansit by improving existing infrastructure and services; and
4. Optimize **R**oads to accommodate all modes of travel, and expand roadways only when necessary.

5.5 TRANSPORTATION MASTER PLAN UPDATE - PHASE 1: ASSESSING EXISTING CONDITIONS

The initial phase of the York Region Transportation Master Plan Update included an assessment of the Region’s existing transportation services and infrastructure, as well as an evaluation of new transportation programs and initiatives implemented since the first Master Plan was completed in

Phase 1: Key Questions Answered

-How are the Region’s transportation infrastructure and services performing? Where can we make improvements?

-How has the Region done since the 2002 Transportation Master Plan? What are resulting challenges and opportunities?

-What are other communities doing to make their transportation systems more sustainable? What can we learn from them?

2002. Additionally, the Region undertook a Best Practices Review and produced Issue Papers to explore the practicality of pursuing various sustainable transportation policies and strategies in York Region.

5.5.1 2002 Transportation Master Plan Assessment

York Region completed an assessment of the 2002 Transportation Master Plan by evaluating the progress of the 43 action items contained within that plan. The findings of the assessment helped guide the direction of the current Master Plan Update by identifying potential opportunities and challenges worthy of being evaluated in the updated plan.

The relative progress in completing each action item was rated similar to a “report card” using a 0 to 4 point scale. The results were broken down into three categories: transit improvements (Actions 1 to 10), road improvements (Actions 11 to 19) and supportive policies and programs (Actions 20 to 43).

The results of the assessment indicated a high level of follow-through commitment by



Regional staff and Council, especially relative to improving public transit. In particular, the transit improvements recommended in the 2002 Transportation Master Plan resulted in the highest transit ridership in York Region since YRT's inception in 2001. In aggregate, the achievements from both the Transportation Master Plan and other recent Regional initiatives, including the Towards Great Regional Streets Report, the support and pursuit of the Spadina subway extension to Vaughan Corporate Centre, and the adoption of a policy for the mitigation of traffic noise on Regional roads, represented significant progress “towards sustainable transportation”. Subsequent to the completion of the 2002 TMP assessment document, the following additional advances have been achieved:

- Regional Council has adopted a specific policy that all widenings of arterial roads to six lanes will only be undertaken to implement High Occupancy Vehicle (HOV) and bike lanes;
- Provincial and Federal funding has been secured for the Spadina subway extension to the Vaughan Corporate Centre, and detailed design for the extension is well underway; and
- Metrolinx prepared a Regional Transportation Plan (RTP) for the Greater Toronto and Hamilton Area that identified several rapid transit projects within York Region as RTP priority projects to be implemented over the next 15 years, among them both the Spadina and Yonge subway extensions to Highway 7 and the upgrading of Viva Bus Rapid Transit service to exclusive right-of-way operations along Highway 7 and Yonge Street.

It should be noted that, as a result of issues expressed during the commencement of the 16th Avenue Corridor Environmental Assessment in Markham, the Region is exploring ways to achieve transit priority other than through widening of arterials to six lanes. This review impacts all transit/HOV lane projects in Markham and Richmond Hill that were identified in the 2002 TMP.

The full 2002 Transportation Master Plan Assessment is located in **Appendix J**.

5.5.2 Best Practices Review

York Region completed a Best Practices Review of North American cities considered “champions” of sustainability. The analysis included a rigorous internet search as well as interviews with key practitioners representing Calgary, Ottawa, Portland (OR) and Vancouver.

The report highlights innovative sustainable transportation programs implemented by the four communities, including:



- Major Transit Services;
- Sustainable Development Practices;
- Supportive Financial Incentives;
- Supportive Parking Policies and Programs; and
- Supportive Transportation Demand Management (TDM) Policies and Programs.

This Best Practices Review was initiated for the Region's TMP Update to answer such questions as:

- What sustainable transportation policies/programs/initiatives adopted by these "champion" North American cities are innovative or unique?
- Why did some sustainable transportation programs in these cities succeed while others failed?
- What policies/programs/initiatives adopted in these cities may further enhance York Region's sustainable transportation program objectives?
- What policies/programs/initiatives adopted in these cities may be worth assessing further in the Transportation Master Plan Update?

The Best Practices Review is located in **Appendix K**.

5.5.3 Initiatives and Priorities of Neighbouring Municipalities

Another important part of the study process involved being aware of and understanding transportation initiatives and priorities in adjacent municipalities. This was particularly the case for the City of Toronto whose Council, in addition to supporting the two subway extensions into York Region, recently adopted a "Transit City" Plan to establish a City-wide network of Light Rail Transit lines, including those on Jane Street and Don Mills Road extending north from the Bloor - Danforth subway to Steeles Avenue. While priorities have not yet been firmly established by the City, all eight Transit City projects could be implemented by 2015, pending availability of funding.

In addition, Brampton, through its AcceleRide program is vigorously pursuing Bus Rapid Transit service on Queen Street (Highway 7) extending to the Peel Region / York Region boundary. This project is fully funded and among the Top 15 Metrolinx priorities.

5.5.4 Issue Papers

York Region completed several Issue Papers to stimulate discussion on the direction for the Transportation Master Plan Update, and to provide a better understanding of

sustainability in the Region. These issues span the range of elements that affect transportation. The focus areas included:

- Managing Traffic Congestion: how it impacts York Region, and what strategies may be implemented to manage traffic congestion more effectively;
- Transit-Oriented Development: how to implement the strategies that emerge from the Region’s new guidelines;
- Funding Sustainable Programs and Initiatives: potential funding options to support sustainable transportation services and initiatives in York Region;
- Protecting the Natural Environment: strategies to enhance, or at least minimize, the impacts to natural features when planning for new transportation infrastructure;
- Organizational Considerations: what staffing and organizational changes should be considered in light of implementing more sustainable initiatives and policies; and
- Public Education: how to foster the public’s understanding of sustainable transportation programs and initiatives.

Each Issue Paper is located in **Appendix L**.

5.6 TRANSPORTATION MASTER PLAN UPDATE - PHASE 2: IDENTIFYING & EVALUATING POTENTIAL SOLUTIONS

Phase 2 of the York Region Transportation Master Plan Update involved the development and evaluation of potential transit, roadway and policy solutions that would support the Transportation Master Plan’s Vision to provide a more balanced, sustainable transportation system. York Region developed a two-screen process to evaluate the potential solutions, which are discussed below.

5.6.1 Screen 1: Sustainability Principles, Objectives and Measures

In consultation with residents and key stakeholders, York Region developed a set of study-specific Sustainability Principles or “themes” to guide the selection of preferred solutions for servicing transportation needs in the Region.

The Sustainability Principles

Much like the foundation of a new house, these principles will ensure that the Transportation Master Plan is based on a solid theme of sustainability.

More specifically, the Principles were developed through:



- Information gleaned from the Best Practices report;
- A review of the Region of York's 2002 Transportation Master Plan;
- A review of sustainable transportation principles developed by other agencies, such as Transport Canada; and
- Input received during the TMP public meetings held in the municipalities of Aurora, Georgina and Vaughan during November of 2006.

The draft set of Principles developed for this project recognizes the strong connection between transportation and the Region's Three Pillars of Sustainability: healthy communities, a sustainable natural environment, and economic vitality. The Principles also recognize the need to develop meaningful ways to engage the public in the planning process, and to foster cooperation and coordination with the local municipalities.

Several key performance measures were developed to evaluate potential infrastructure improvements while ensuring that the goals of each Sustainability Principle were met.

The Sustainability Principles and their performance measures are provided in **Table 5.2** below.

Table 5.2- Transportation Sustainability Principles

Sustainability Principle	Goals	Key Performance Measure for Alternatives Analysis
I. Healthy Communities		
Put Pedestrians and Transit First	1. York Region recognizes that each transportation trip begins and ends with a pedestrian trip, and is committed to designing a transportation system that promotes an active lifestyle and community well-being.	• Modal Split breakdown as follows: ○ Along Regional Corridors ○ York-York trips ○ York-Toronto trips ○ Trips between each pair of Regional Centres • Estimated increase in pedestrian trips, based on proportions from comparative municipalities • Jobs within walking distance
Provide Access and Mobility for Everyone	1. York Region is committed to ensuring all residents (especially those with low incomes, the disabled, recent immigrants, youth and the elderly) have barrier-free, reliable and affordable access to all aspects of the transportation system.	• % change in transit trips / % change in population • Transit trips per capita based on income level, disability, immigration, age etc.
Integrate Transportation And Land Use Planning	1. York Region is committed to integrating transportation planning into an urban form that is compact, mixed-use and creates a sense of community. 2. York Region is committed to transportation planning as one component of a growth management system that also includes human services, the environment and fiscal capacity.	• Self-containment in York Region (% of trips beginning and ending in York) • Mean trip length for auto, transit • Mean trip travel time for auto, transit
Further Encourage Communications, Consultation and Public Engagement	1. York Region will plan for and implement transportation infrastructure and services in an open, transparent and accountable manner based on broad consultation, citizen engagement and strong communications.	N/A – this is not a principle that could be measured in evaluating potential infrastructure improvements



Sustainability Principle	Goals	Key Performance Measure for Alternatives Analysis
II. Sustainable Natural Environment		
Protect and Enhance Our Environment and Cultural Heritage	1. York Region will (through integrated growth, system planning, and advanced construction and operations practices) protect, restore and enhance the natural environment. 2. York Region respects and protects its First Nation heritage. 3. York Region respects and protects its cultural heritage.	• Greenhouse gas and other emissions from vehicle travel or vehicle km of travel • Estimate of road construction avoided (lane-km) in the Greenbelt • % of lane-kms of congested roads in the Greenbelt
Adopt Energy Efficient (Carbon Neutral) Transportation Systems	1. York Region will design a transportation system that is energy efficient and mitigates and adapts to the impacts of climate change.	• Auto vehicle-kilometres of travel • GHG emissions
Implement & Support Transportation Demand Management Initiatives	1. York Region is committed to reducing single-occupant vehicle trips and promoting a preference for sustainable transportation choices by providing more reliable and convenient alternative modes of travel.	• Average vehicle occupancy (proxy for HOV use)
III. Economic Vitality		
Support Our Economic Well-Being	1. York Region is committed to ensuring that its transportation systems support economic development.	• % of lane-kms of congested roads • Jobs located within 30 minutes travel by transit
Ensure Fiscal Sustainability and Equitable Funding	1. York Region is committed to providing full cost accounting for all transportation infrastructure projects and services. 2. York Region is committed to value-for-money in delivering transportation services.	• Estimated comparison between capital and operating costs for road improvements to costs of sustainable network improvements and other programs and services
Implement & Support Transportation Supply Management Initiatives	1. York Region is committed to managing its transportation system in an efficient and cost-effective, socially and environmentally responsible manner.	• Proportion of transit priority network that is supportable based on projected ridership • Net transit cost per capita • Length of new roadway required per additional resident
Conduct On-going Performance Measurement and Monitoring	1. York Region will monitor and report on sustainable transportation initiatives through a series of defined performance measures.	N/A – this is not a principle that could be measured in evaluating potential infrastructure improvements

5.6.2 Screen 2: Travel Demand Modelling

5.6.2.1 Explanation

For this study — and most studies like it — it was essential that decisions be based on a thorough assessment of existing and projected future conditions. A travel demand forecasting model is a tool that estimates how travelers could utilize the transportation infrastructure while assessing the impact on the transportation system. Like any other forecasting tool, it is limited in terms of its accuracy to project travel behaviour. However, if used in good judgment with other key aspects of the planning process, travel demand modelling can help establish the foundation for what is reasonable and practical in the long term.

The EMME/2 travel demand model currently operated by York Region was used to assess the existing transportation network for this Master Plan. It also provided the direction for future transportation improvements through 2031 relative to:

- Major transit improvements;
- Major road improvements; and
- Major policy initiatives.

The socio-economic input data developed for the Region reflects the 40% growth scenario adopted by Regional Council in 2008 that serves as the basis for the Region's Growth Plan to 2031. The 40% growth scenario incorporates the requirements of the Provincial Growth Plan (*Places to Grow*) by accepting:

- 1.5 million population and approximately 800,000 jobs;
- Minimum 40% intensification within the built-up area;
- Minimum densities of 50 people and jobs per hectare in new communities in Designated Settlement and Whitebelt areas; and
- 200 people and jobs per hectare in the Regional Centres.

5.6.2.2 “Sustainability” Built into the Travel Demand Model

The 2002 TMP adopted a “Transit Focus” approach in order to meet the Region's Official Plan target of 33% transit usage during peak periods. The 2002 TMP attempted to achieve this by developing a better “balanced” network, through emphasis on major transit projects and the policies and programs to support them.

For the purpose of this Transportation Master Plan Update, a “Transit First” approach was adopted. The key difference between the two approaches is the realization that a

“balanced” network of roads and transit will not achieve the Region’s Official Plan targets and make the transportation system truly sustainable. In other words, for one transportation mode to succeed, the capacity on competing modes must be constrained or limited.

This approach represents a fundamental shift in the traditional decision-making process used to develop future recommended networks, for the following reasons:

- As noted above, it acknowledges that a “balanced” road and transit network cannot achieve sustainability targets outlined by the Region;
- It initiates the decision-making process by heavily favouring a particular transportation mode (transit in this case) with the intention of forecasting the “theoretical maximum” usage of the transit mode (bold transit network);
- The “constrained” (minimal auto network) transportation mode (auto mode) includes only those committed projects that are already in the planning or design phase based on the Region’s 10-Year Capital Plan. This creates a heavily transit-oriented horizon year network and an extremely congested auto network; and
- It employs an iterative process whereby transit projects (the favoured transportation mode) that do not exhibit sufficient ridership levels needed to support that particular transit technology are moved to a “lower rung” in the transit technology ladder, while new road projects are added to the network to reduce auto congestion, in subsequent iterations of the model run.

York Region’s travel demand modelling process favours the development of a sustainable set of transportation solutions. Equilibrium in the model was achieved when the key performance measures, developed to evaluate potential infrastructure improvements, indicated that the goals of each Sustainability Principle were met.

Appendix M details the travel demand modelling process used for the York Region Transportation Master Plan.

5.6.2.3 Transit Ridership Threshold

In order to develop the 2031 transit network and the different transit technologies across the Region, a detailed analysis was carried out to establish transit ridership thresholds for each technology. The primary source to review and develop the transit threshold for

each technology was the “Transit Capacity and Quality Manual”, 2nd Edition, published by the Transportation Research Board. It is important to note that the final ridership thresholds shown in Table 14 of the Modelling Appendix are cognizant of the perceptions of commuters and the public in York Region, as well as local conditions and experiences gained from the Viva project implemented by the York Region Rapid Transit Corporation. The final transit ridership thresholds were developed in consultation with York Region Rapid Transit Corporation staff. **Table 5.3** documents the thresholds used in the analysis.

Table 5.3- Transit Ridership Thresholds

Mode	Demand (passengers/hour)	Desirable Vehicle Loading	Frequency (minutes)
Conventional Bus	20-400	10-30	30-5
Transit Priority Network (TPN)*	400-1,000	35-55	5.5-3.5
Bus Rapid Transit (BRT)	1,000-2,400	55-100	3.5-2.5
Light Rail Transit (LRT)	2,400-8,400	270-400	6.5-3
Subway	> 8,400	1,250	< 8

**The TPN constitutes HOV lanes and transit signal priority plus queue jump lanes for regular buses*

As noted in Table 5.3, the BRT/LRT technology category has a considerable ridership range. This was done to account for the significantly different “grades” (BRT light, full BRT, LRT at-grade, LRT grade-separated etc.) of rapid transit service that can exist within the system. Detailing these different technologies and their final transit corridors is expected to be completed as part of the Transit Environmental Assessments that will be carried out for each of the major transit projects. Further, the type of rapid transit technology is heavily influenced by factors other than transit ridership alone, such as right-of-way acquisition, construction feasibility, and detailed environmental analysis, which are beyond the scope of this Master Plan.

5.6.2.4 Transitioning to Rapid Transit

The feasibility and success of a rapid transit line depends on a number of factors. A key consideration is the need to grow ridership through continuous improvements to the conventional bus service over time either through service frequency or running way improvements. This evolution of service improvements and increasing ridership will eventually reach a point where mixed traffic transit operation is no longer able to handle the ridership level due to traffic congestion. At that point, the preferred solution is to separate the transit service from general traffic through the provision of dedicated transit lanes. Beyond dedicated transit lanes, the next step to meet increasing ridership levels is to improve the vehicle technology from bus to light rail and then to heavy rail.

One typical step prior to the provision of dedicated transit lanes is the use of different methods to provide some level of priority to the transit service. The different methods include:

- using ITS technology to improve the reliability of mixed traffic operation through such measures as traffic signal priority for buses, off-board fare collection and real-time service information at transit stops;
- basic running-way improvements such as adding queue-jump lanes for transit vehicles and turning or through lanes for general traffic at pinch points;
- building high-occupancy-vehicle (HOV) lanes to provide a semi-dedicated lane to the bus service.

Transit service in York Region is no different. Where appropriate, major transit corridors are being transitioned through these technologies before rapid transit is proposed. An example is Dufferin Street where HOV lanes are being built from Steeles Avenue to Langstaff Road to provide priority to buses due to existing traffic congestion in that area.

6.0 THE UPDATED PLAN

York Region's Transportation Master Plan process has resulted in a set of progressive transit, roadway and policy recommendations that support the Region's Vision of a more sustainable transportation system. The need for such a transportation system is clear: the fast pace of growth projected in York Region between now and 2031 must be complemented by a transportation system that preserves the environment, enhances the Region's economic viability, seamlessly integrates with new and existing developments, and offers more reliable travel choices for residents and employees. The major elements of the Region's sustainable transportation system include:

- Rapid transit corridors that move more people faster and more efficiently from place to place;
- Local transit services that are connected to and complement rapid transit corridors in order to serve more communities within the Region;
- Innovative technologies, such as universal transit signal priority and Smartcards, that improve the speed and reliability of transit operations;
- A road system that supports existing and future sustainable transportation enhancements through queue jump lanes, cycling-only lanes, exclusive transit lanes and HOV lanes; and
- Efficient use of the road network (e.g., signal progression).

6.1 RECOMMENDED ROAD AND TRANSIT NETWORK

6.1.1 Transit

Figures 6.1 to 6.5 highlight the proposed transit network or “transit improvements” through to the horizon year 2031. **Figure 6.6** illustrates the recommended transit network which encompasses all services and infrastructure that would foster transit use. Transit policies and strategies, identified in Section 6.3, were developed to complement the network improvements and build upon the successful implementation of Viva and other initiatives identified in the 2002 Master Plan.

The recommended transit network includes:

- GO Transit rail extensions or new routes to Markham, Richmond Hill, Vaughan and Whitchurch-Stouffville, illustrated in **Figure 6.1**;

FIGURE 6.1

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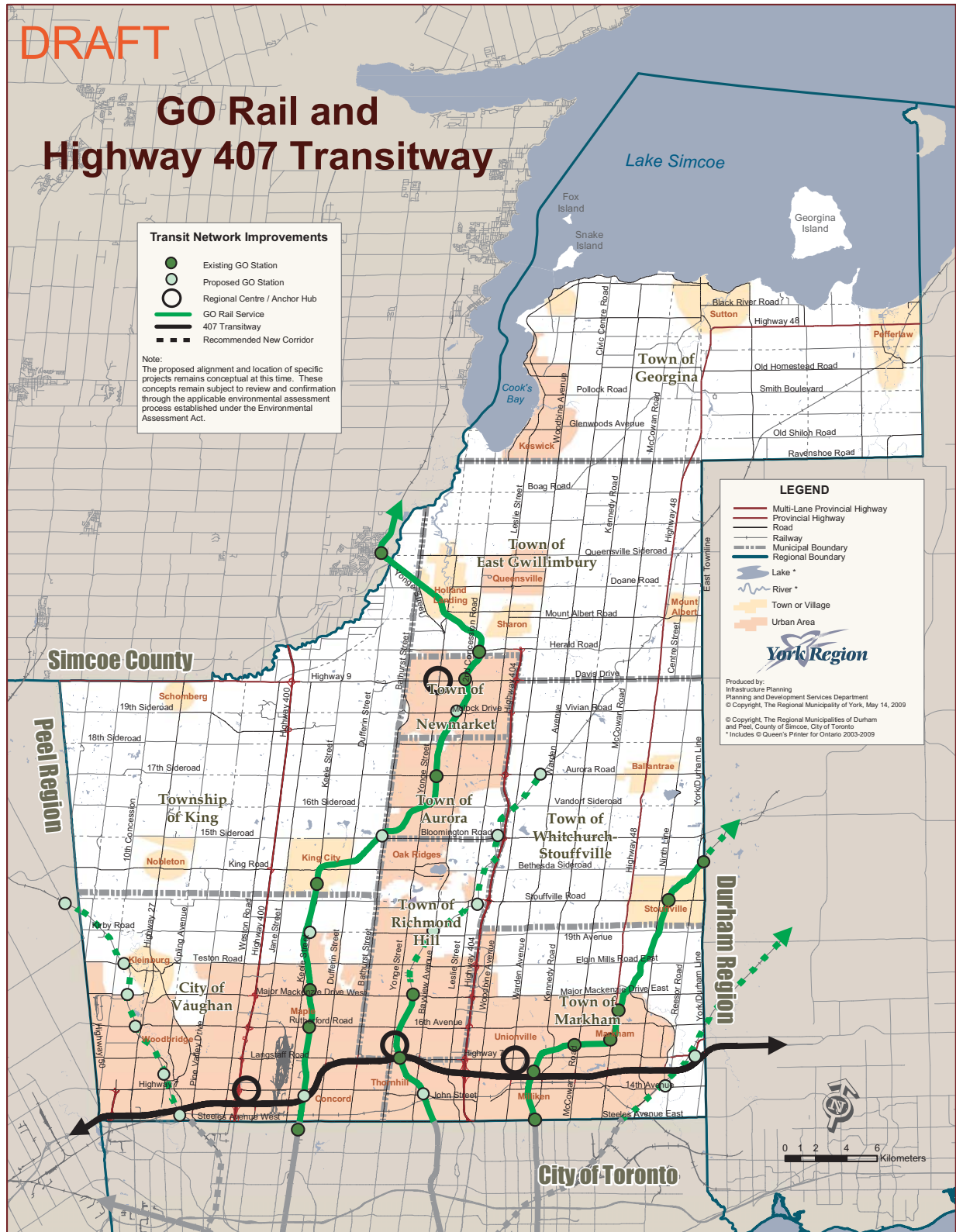
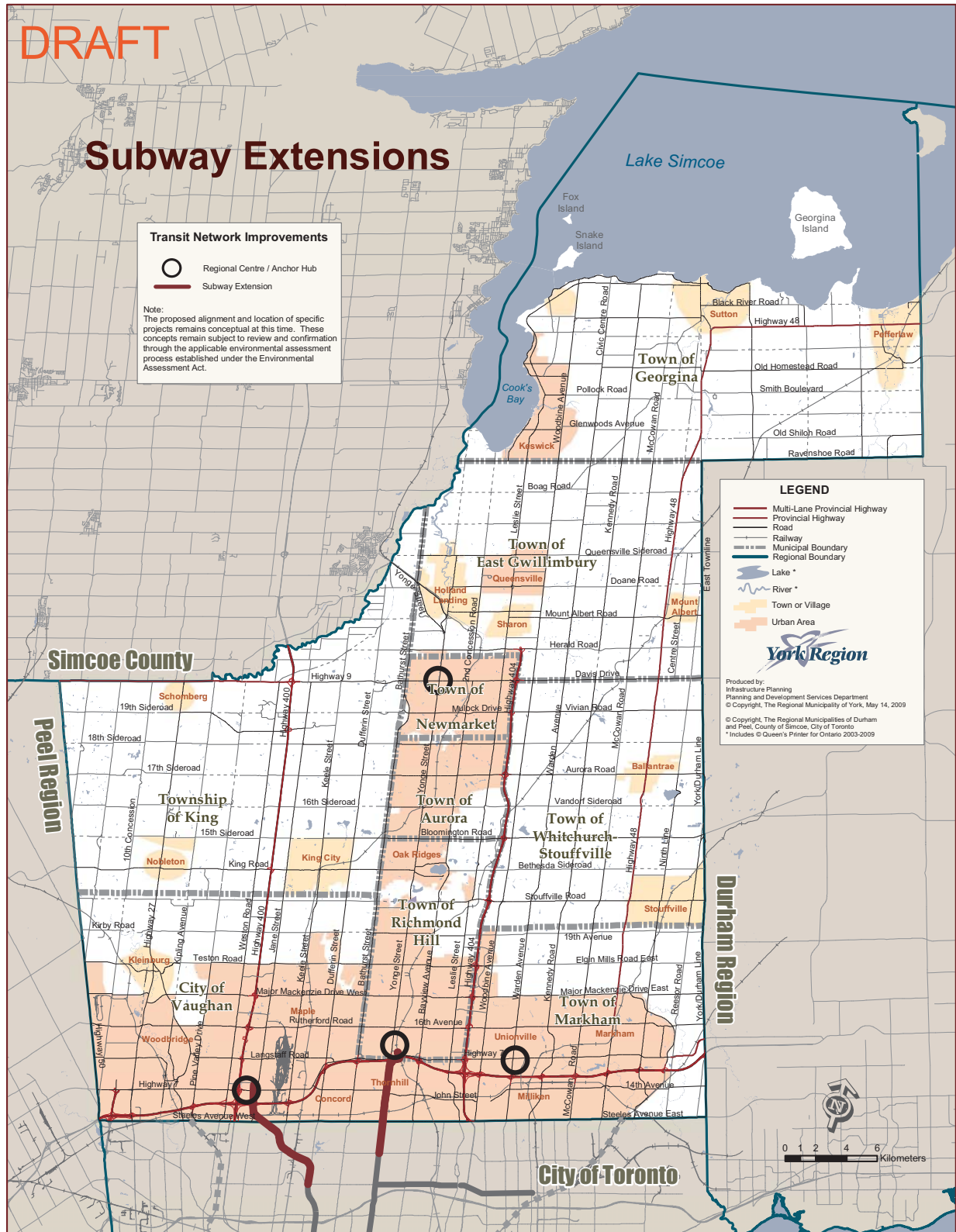


FIGURE 6.2

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SUBWAY EXTENSION

FIGURE 6.3

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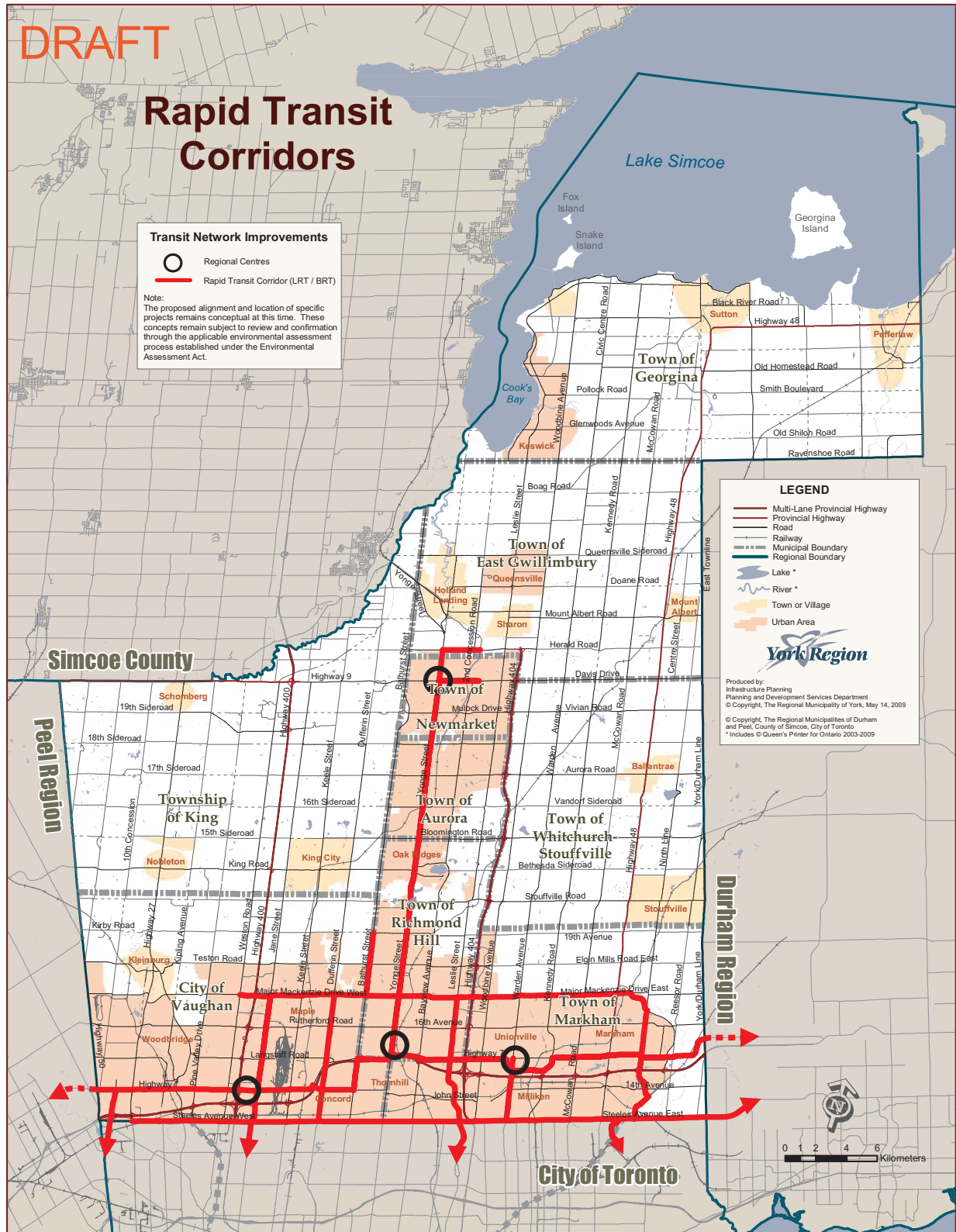


FIGURE 6.4

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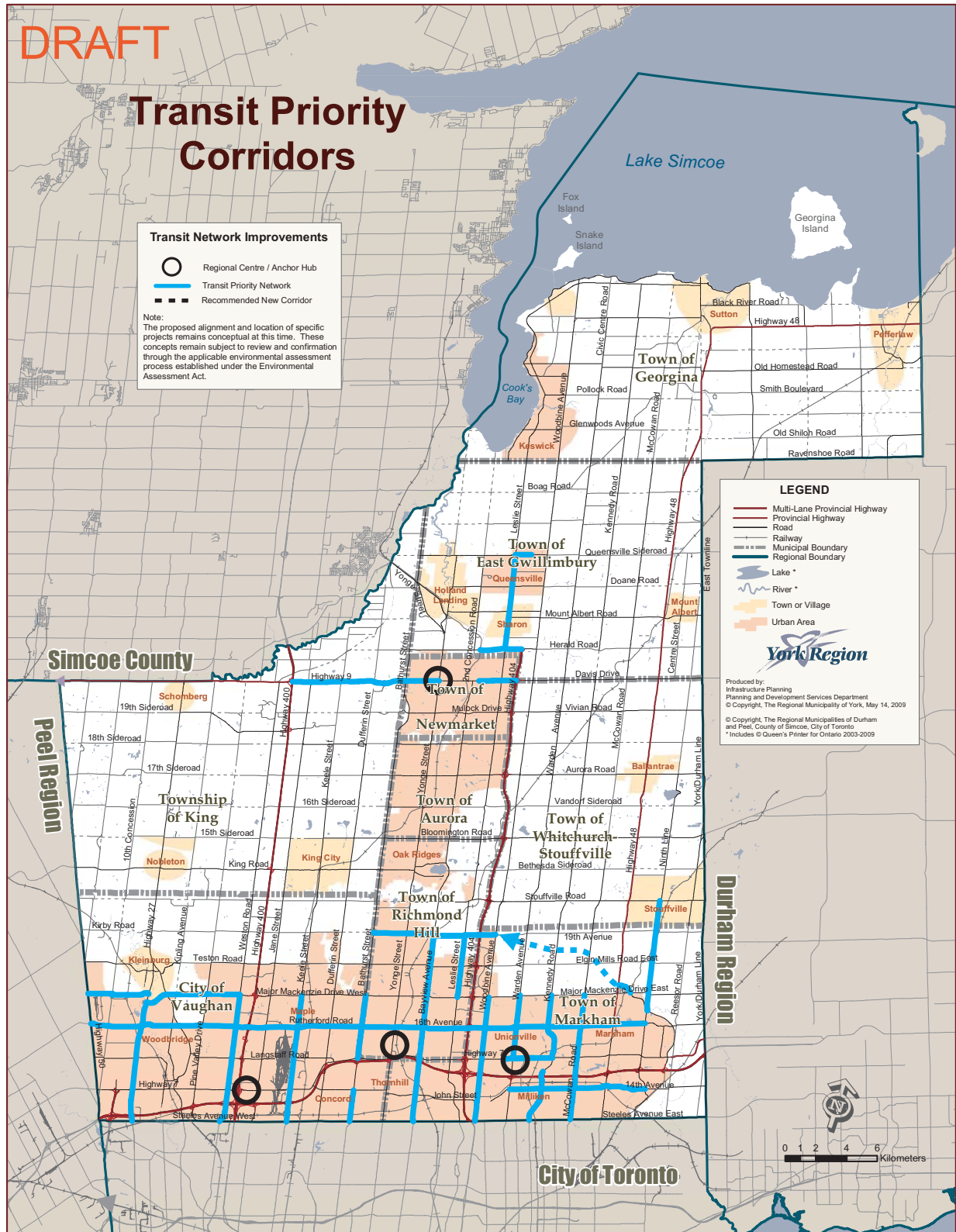


FIGURE 6.5

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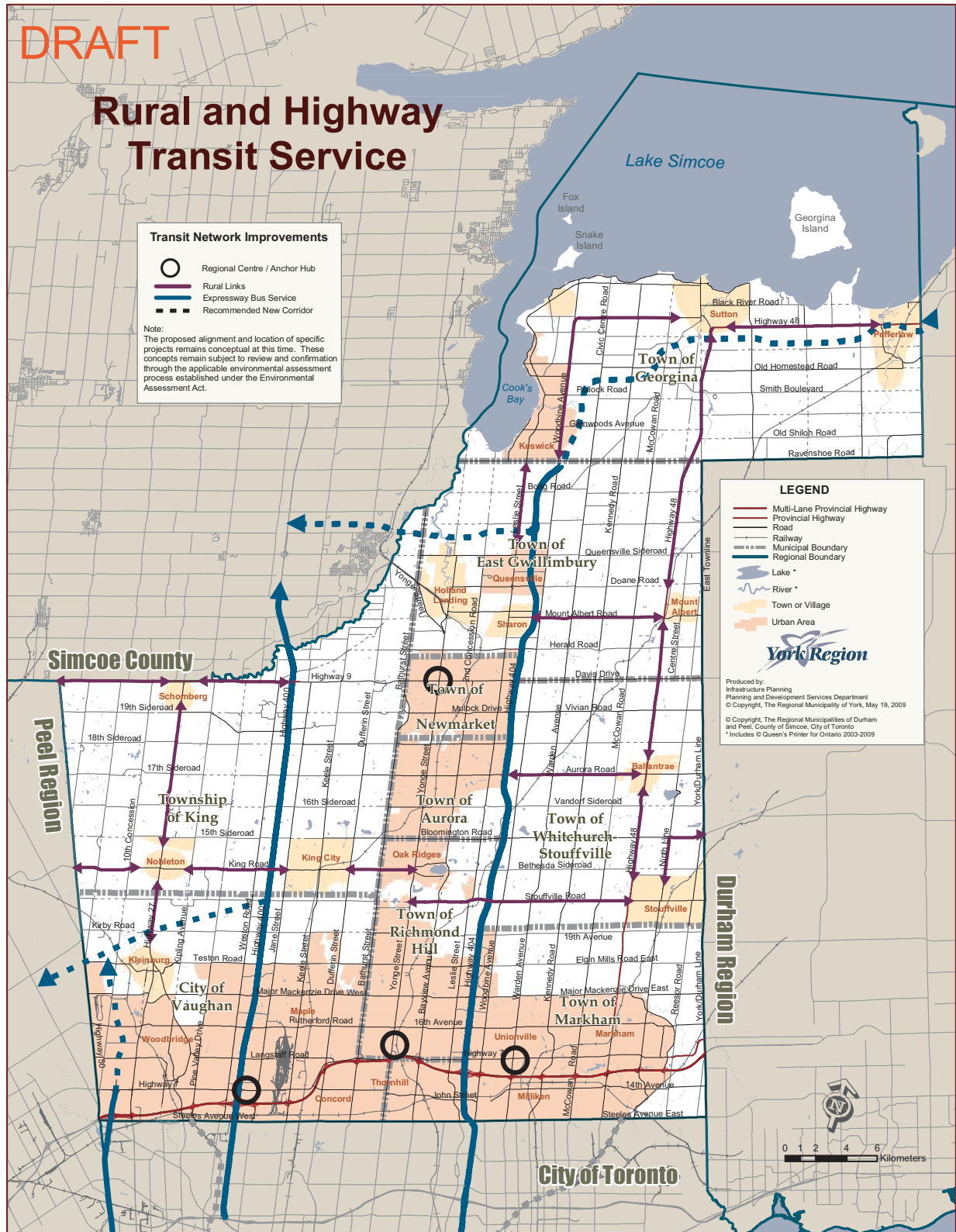
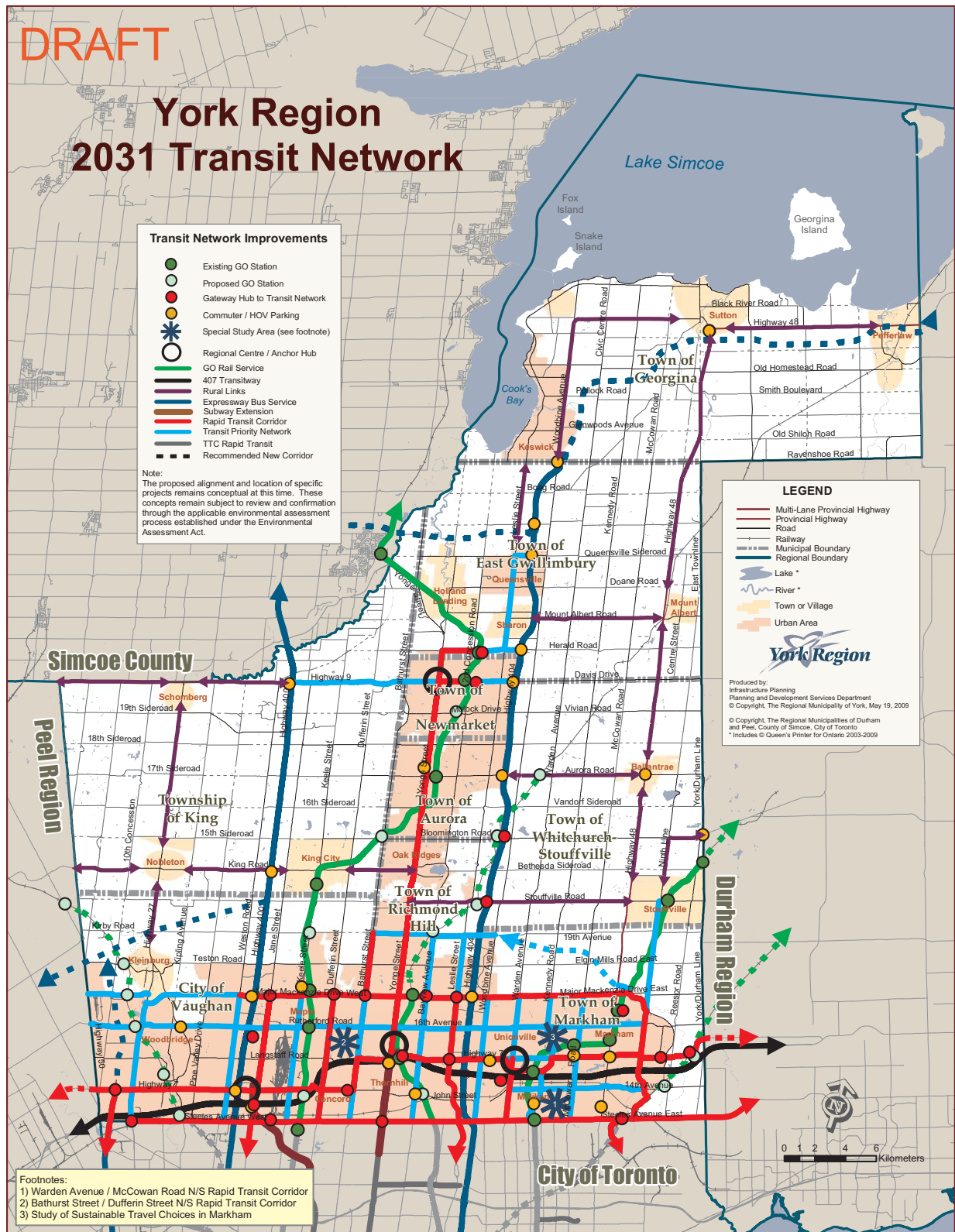


FIGURE 6.6

TRANSPORTATION MASTER PLAN UPDATE



- Subway extensions to the Vaughan Corporate Centre and the Richmond Hill Centre, illustrated in **Figure 6.2**;
- Rapid Transit service (BRT or LRT) along portions of Bathurst Street/Dufferin Street, Davis Drive, Green Lane, Highway 7, Jane Street, Leslie Street, Major Mackenzie Drive, 9th Line, Steeles Avenue, Yonge Street and Warden Avenue/McCowan Road, which is illustrated in **Figure 6.3**;
- Several transit priority corridors that may include HOV/transit lanes, transit signal priority measures and/or queue jump lanes to ensure more efficient transit operations, as displayed in **Figure 6.4**;
- Improved rural transit service to East Gwillimbury, Georgina, King Township and Whitchurch-Stouffville, illustrated in **Figure 6.5**.

Figure 6.6, displays the complete transit network proposed for York Region through 2031.

The transit network also includes three special study areas:

1. Warden Ave/McCowan Road North-South Rapid Transit Corridor – to determine the most logical rapid transit route serving Markham through the Warden Ave and McCowan Road corridor in order to connect appropriately with Toronto's Transit City plan and Metrolinx's regional rapid transit network plan.
2. Bathurst Street/Dufferin Street North-South Rapid Transit Corridor – to determine the rapid transit route alignment in the Bathurst Street and Dufferin Street corridor based on more detailed transit ridership forecasts, network connectivity and area development potential.

Proposed Rapid Transit Technologies for York Region

Subway: Multiple unit trains of electric vehicles usually operated in tunnels.

Light Rail Transit (LRT): Multiple unit trains of modern streetcars usually operated in dedicated surface rights-of-way.

Bus Rapid Transit (BRT): Combines modern vehicles in a dedicated right-of-way and convenient fare collection to enhance system reliability, speed and comfort.

GO Rail: Locomotives and passenger cars operated between the City Centre and the outer suburbs and commuter towns.

Proposed Transit Priority Technologies for York Region

High Occupancy Vehicle (HOV) Lanes: Refer to facilities open to all vehicles-including private automobiles and buses-carrying more than the specified number of occupants.

Transit Signal Priority: Employs technological measures to give transit vehicles preferential treatment over other vehicular traffic.

Queue Jump Lanes: Allow buses to get a "jump" on traffic queued at an intersection by providing either a short lane, a dedicated bus lane, or an exclusive right turn lane.

3. Sustainable Travel Choices for Markham – York Region initiated a number of environmental assessments for improvements in the Town of Markham as part of a larger strategy to increase transit use, manage travel demand and promote alternative modes of travel. This study will address transportation questions and concerns, present improvement options, explain recent enhancements to the transportation network and provide an overview of the Region's vision for coordinated and integrated transportation improvements.

The overall 2031 transit network plan also illustrates conceptual locations of Regional Centres/Anchor Hubs. These hubs are consistent with the strategic growth centres identified in Metrolinx's plan as focal areas for directing significant high density population and employment growth, major transit infrastructure, and a mix of land uses to act as anchors of the regional transportation system.

In addition, Gateway hub locations are conceptually shown on the plan. These are places of connectivity between regional rapid transit services, and where other modes of transportation come together seamlessly. Although these hubs can have a concentration of employment, population, shopping and enjoyment around a major transit station, they are mobility hubs which are not classified as Anchor Hubs.

6.1.2 Roads

Proposed road improvements in York Region include infrastructure and technology enhancements to improve general traffic flow and goods movement and to facilitate the movement of local and rapid transit services (**Figure 6.11**).

The road enhancements proposed for York Region through 2031 include:

- Arterial road widenings of select two-lane roads to accommodate new population and employment in the emerging growth areas of York Region as is illustrated in **Figure 6.7**;
- New mid-block collector roads crossing 400-series highways in East Gwillimbury, Markham, Richmond Hill and Vaughan to provide direct access to local communities while accommodating transit, cycling and pedestrian facilities, and a number of new Regional road segments designed to complete the arterial grid system, are illustrated in **Figure 6.8**;

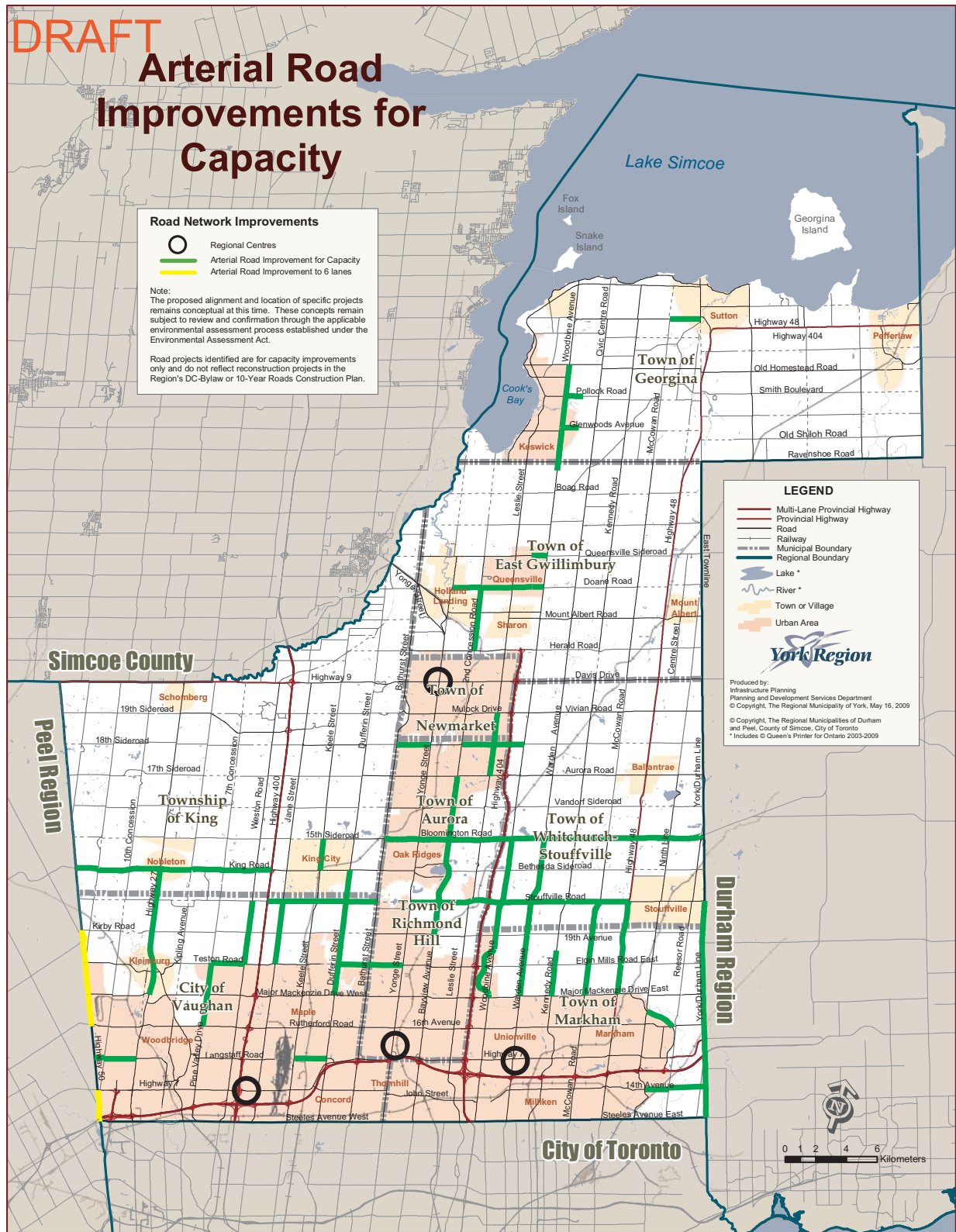


- Provincial highway improvements, to facilitate goods movement and inter-regional travel, consisting of extensions of Highways 427 and 404, HOV widenings of Highways 400 and 404, the Bradford Bypass to link Highways 400 and 404, and the GTA West Corridor, are illustrated in **Figure 6.9**;
- New or improved interchanges, road/rail grade separations and major arterial road jog eliminations are also shown in **Figure 6.9**; and
- Arterial road improvements for select four-lane roads to accommodate the rapid transit and transit priority networks are designed to promote transit use and carpooling are shown in **Figure 6.10**.

The recommended phasing for both the transit and road network improvements is provided in Chapter 7.

FIGURE 6.7

TRANSPORTATION MASTER PLAN UPDATE



ARTERIAL ROAD IMPROVEMENTS FOR CAPACITY

FIGURE 6.8

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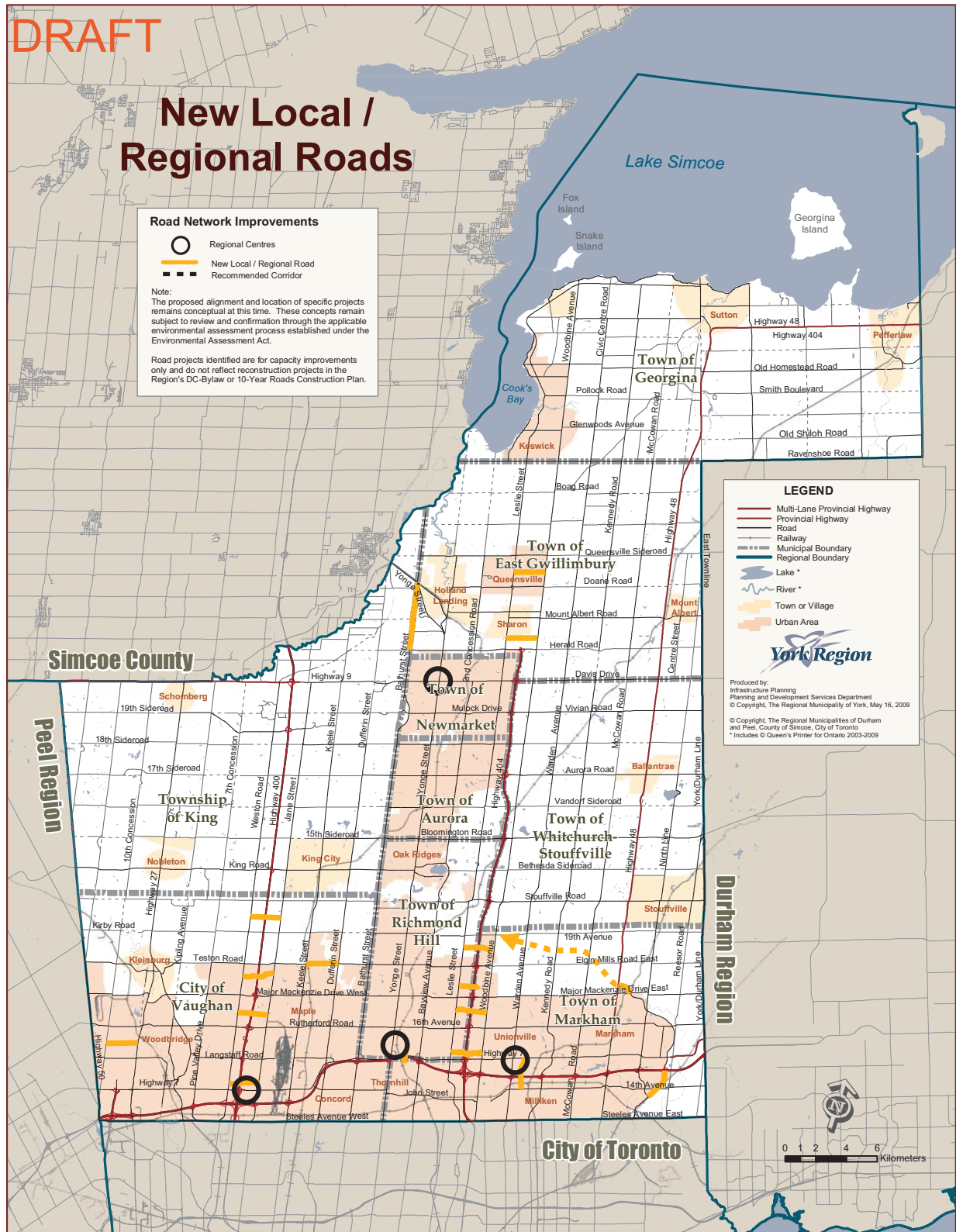
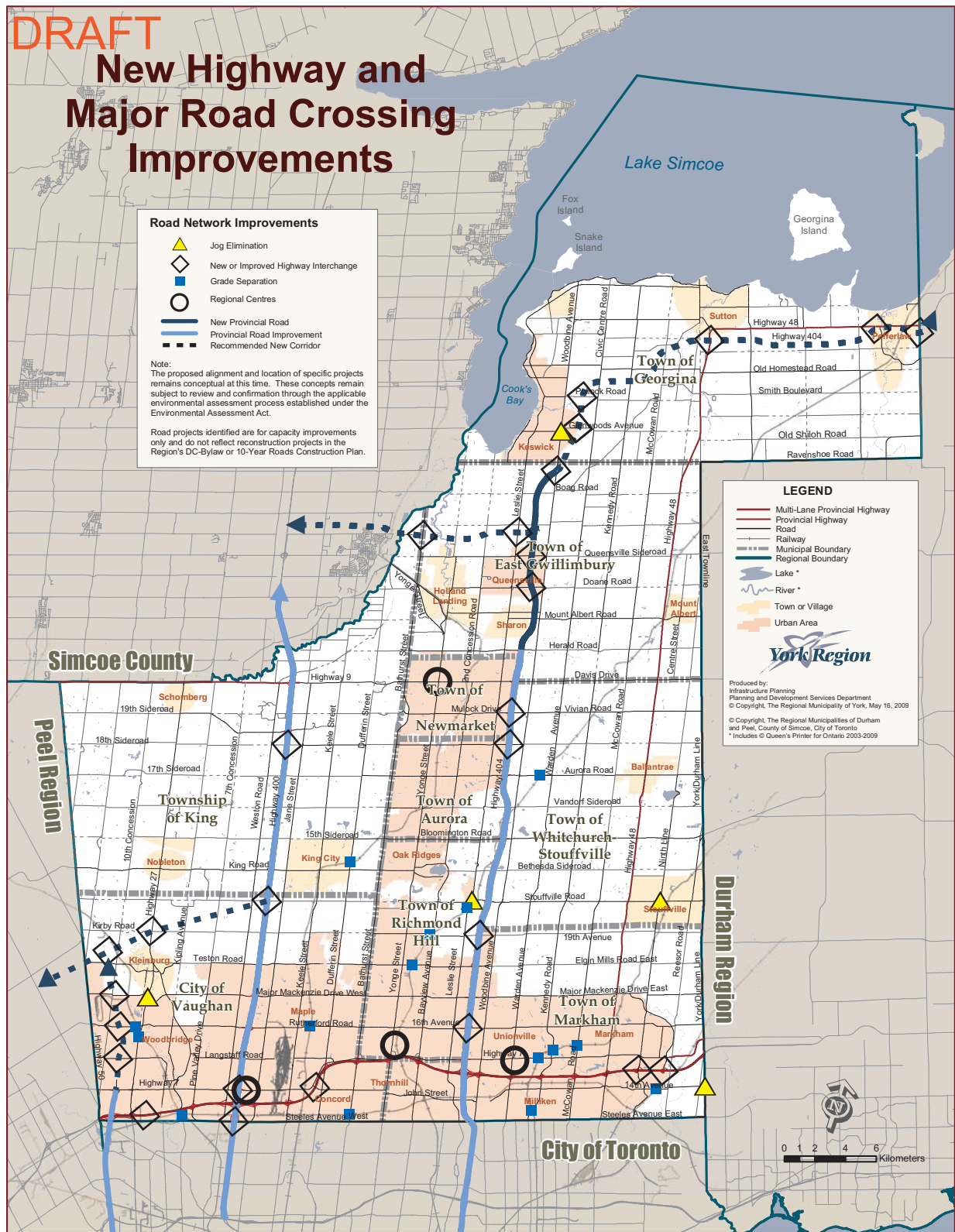


FIGURE 6.9

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NEW HIGHWAY AND MAJOR ROAD CROSSING IMPROVEMENTS

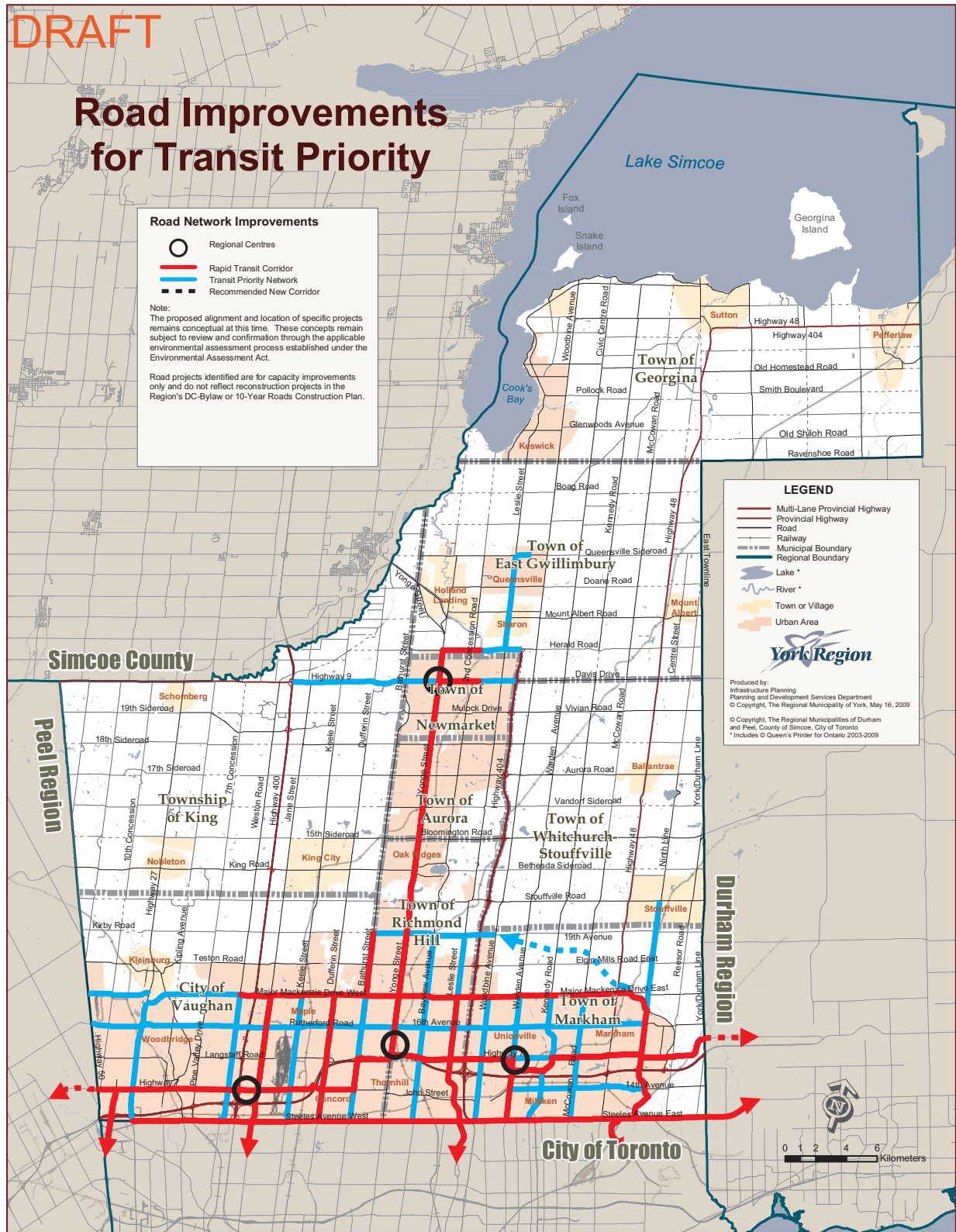
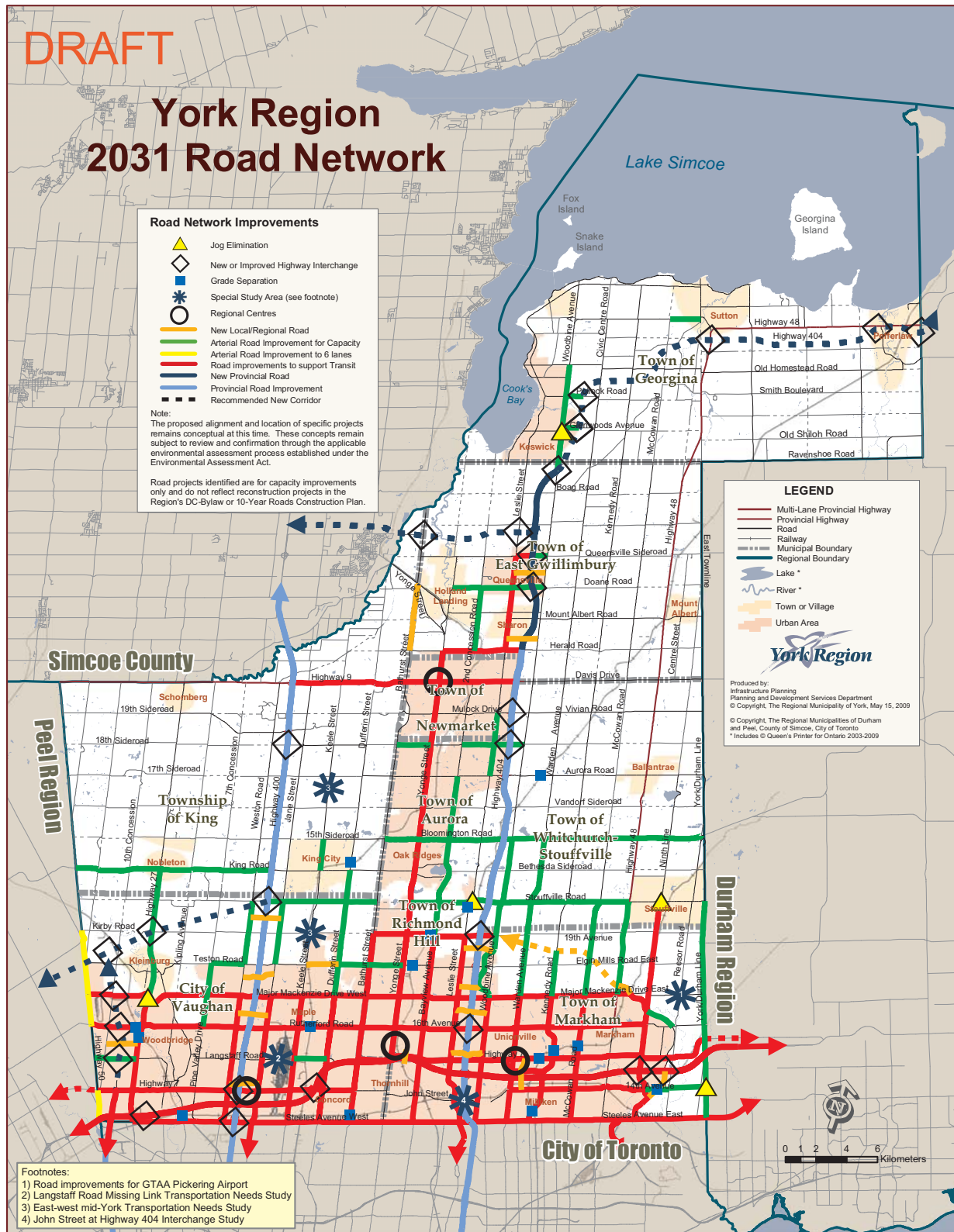


FIGURE 6.11

TRANSPORTATION MASTER PLAN UPDATE





The Road Network Plan also has a set of four special study areas as follows:

1. Road Improvements for the GTAA Pickering Airport. This study would provide a detailed analysis of the regional and local road needs to serve the future Pickering Airport. Both east-west and north-south connectivity to accommodate the significant travel demands in the area would need to be assessed.
2. Langstaff road missing link transportation needs study. A special study to examine the potential benefits and costs for constructing the Langstaff Road missing link over the CN Rail yards. The transportation capacity implications in the area including travel demands along Highway 7, Highway 407, and Rutherford Road, and its major intersection operations would be assessed as part of the study.
3. East-West mid-York transportation needs study. Encompassing the mid-York area bounded to the north by Highway 9 and to the south by Teston Road, this study will examine the arterial road capacity requirements to serve current and future east-west travel demand between Highway 400 and Highway 404 and the potential to address traffic relief on King Road through King City.
4. John Street at Highway 404 interchange study. The study would examine the implications of a partial or full interchange at Highway 404 and John Street. Along with potential travel pattern changes due an interchange and redevelopment potential in the industrial areas to the east, the opportunities for improved transit service in the Woodbine Avenue corridor should be examined as part of the study.

In addition to the improvements presented above, there are also road improvements in the area of jog elimination, reconstruction and rail-road grade separation that are needed to maintain capacity and efficiency to the road network.

6.1.3 Potential Additions to the Arterial Road Network

In the recommended road network, some improvements are identified for local municipal concession roads such as King-Vaughan Line in the City of Vaughan and 19th Avenue in the Town of Markham. Discussions will have to be conducted with the local municipalities on how these improvements are to be implemented.



Further, as a result of growth moving into new greenfield areas and expansion of the York Region urban boundaries as well as growth in adjacent regional municipalities, other local municipal concession roads may become heavily-used commuter routes.

These conditions may lead to requests from the local municipalities for York Region to assume some of these roads into the Regional arterial road network. In each case in general, the existing Regional Policy on Road Assumption will be used to assess the feasibility of the subject road becoming a Regional road.

6.2 NEED AND JUSTIFICATION FOR A BOLD TRANSIT NETWORK

To develop the need for a “bold” vision (“transit first” approach) and consequently identify the specific projects that will help the Region achieve this vision, it is important to understand the major challenges the Region’s transportation system would experience under a “business-as-usual” (BAU) scenario for 2031. These challenges are further magnified by the new 2031 growth forecasts developed by the Province, which requires 40 percent of the new growth within the existing urban area. The BAU scenario for the purpose of this TMPU is the recommended 2031 road and transit network developed by the 2002 Transportation Master Plan.

The 2002 TMP included an extensive set of new or strengthened Official Plan policies, Council policies, strategies, plans, guidelines and standards to support:

- Modal shifts to transit;
- Integration with land use planning and community/urban design;
- TDM and telecommuting;
- Parking;
- Walking and cycling;
- Transportation Systems Management and Intelligent Transportation Systems; and
- Goods Movement.

There is a need to quantify the improvements to the 2031 projected transportation operations that the “transit first” approach is projected to achieve, in comparison to the 2031 BAU scenario. The

Modal Split

The percentage of travellers using a particular type of transportation.

Vehicle Kilometres Travelled (VKT)

Refers to the distance travelled by a trip maker, using a specified mode.

Vehicle Hours Travelled (VHT)

A statistic that estimates the hours spent by the trip maker in a particular mode.

justification for the “bold” vision adopted as part of this Master Plan is dependent, to a certain extent, on the improvements between the two scenarios: BAU and “transit first”. If these improvements are sizeable enough to induce significant changes in travel behaviour, this “transit first” approach would be justified, from a purely transportation perspective.

The adopted Regional land use intensification scenario (40% intensification) was tested on the BAU network using the Region’s EMME/2 model. Some of the key metrics from the 2031 recommended network and BAU scenario are documented in **Table 6.1**.

Table 6.1. Key Transportation Performance Measures

Key Performance Measures	2006 Modeled	2031 BAU	2031 Recommended
Vehicle km of travelled in York Region (a.m. peak hour)	2,481,000	4,079,926	3,916,802
Relative Increase in VKT	-	64%	57%
Vehicle hours of travelled (a.m. peak hour) in York Region	46,000	79,300	75,900
Relative Increase in VHT	-	72%	65%
Transit trips per capita (a.m. peak period)	0.051	0.069	0.082
York vehicle km of travel per capita (a.m. peak hour)	2.67	2.71	2.6
% of veh-km-travelled with (v/c>1) within York Region (a.m. peak hour)	12.60%	17.25%	16.36%
York Lane Km	8,300	10,000	9,600
Modal Split(York-York)	5.3%	8.8%	12.4%
Modal Split (York-Centres&Corridors)	6.6%	13.6%	21.3%
Modal Split (Centres&Corridors-York)	6.8%	12.1%	16.7%
Modal Split(York-Toronto(except PD1))	8.6%	13.9%	17.1%
Modal Split(York - (GTA+H))	11.7%	16.2%	19.2%



The above table suggests that the 2031 transit and road network developed using the “transit first” approach is projected to significantly improve transportation conditions as compared to the BAU scenario, especially transit modal splits, vehicle kilometres travelled (VKT) and vehicle hours travelled (VHT).

The sustainability metrics estimated for the “transit first” scenario would also represent a significant improvement over existing (2006) conditions. Of note, the Region is projected to experience over 60% population growth between 2006 (930,000) and 2031 (1.5 million); however, the VKT is projected to increase by only 57 percent for the 2031 recommended network. The BAU scenario is expected to witness an increase of nearly 64 percent. This suggests an increasing reliance on transit for travel in the am peak hour in the case of the “transit first” scenario. In summary, the 2031 “transit first” recommended network is projected to result in significant sustainable travel patterns as compared to both existing (2006) and BAU conditions.

6.3 ROAD NETWORK ISSUES

For all major infrastructure improvements requiring the completion of Phases 3 and 4 of the Municipal Class Environmental Assessment process, York Region is required to prepare a detailed inventory of the natural, social and economic environment. This analysis is undertaken to identify the potential impacts of alternative alignments for new or expanded infrastructure while attempting to reduce our carbon footprint. Depending on the complexity or magnitude of the project, this analysis may involve detailed environmental studies to ensure that sufficient and appropriate information is available on which to base ensuing decisions, and to allow the public to fully understand the environmental implications of the project.

In addition to describing the potential impacts of a project, appropriate mitigating measures should be identified and evaluated. For example, if a new bridge is being considered to extend an existing road, York Region must identify all measures necessary to minimize the negative impacts on residents and environmental features resulting from the undertaking.

The following list of major road network improvements are recommended in the plan and the rationale for their inclusion are presented below.

Bradford Bypass – includes a 4-lane Provincial expressway between Highway 400 and Highway 404

- An Environmental Assessment was approved in 2002 and the Province has designated it as a controlled access highway
- Key infrastructure for accommodating future travel demand from Simcoe County
- Supports economic development in East Gwillimbury
- Diverts inter-regional traffic and relieves significant pressure on Regional and municipal roads
- Inter-regional corridor for goods movement between Highway 400 and 404, and
- Completes a comprehensive network of expressway bus services

GTA West Corridor - includes a 4-lane Provincial expressway from Highway 400 west into Peel Region and beyond

- Diverts traffic from congested Highway 400 and provides bypass of West Vaughan
- Inter-regional corridor for goods movement
- Diverts inter-regional traffic and relieves congestion on Regional and municipal roads, and
- Provides for a comprehensive network of expressway bus service

Highway 427 Extension to GTA West Corridor - extend the existing Provincial expressway north to the GTA West Corridor

- Diverts traffic from congested Highway 400 and provides bypass of West Vaughan
- Inter-regional corridor for goods movement
- Diverts inter-regional traffic and relieves congestion on Regional and municipal roads, and
- Provides for a comprehensive network of expressway bus service



Highway 427 Extension to Highway 9 and Beyond - Provincial expressway extension needed beyond 2031

- Relieves congestion on Highway 400 and improves goods movement network

Mid-York East-West Corridor and King-Vaughan Road Improvements - add two additional arterial lane capacity between Highway 400 and Bathurst Street, and further study of travel demand needs in the corridor

- Best option is to construct as the east extension of the GTA West Corridor to Bathurst Street
- Provides additional capacity to meet growth demands; and
- Address some of the traffic concerns on King Road through King City

North Markham East-West Arterial - add two additional arterial lane capacity between Bathurst Street and 9th Line

- Needed to address growth in north Markham
- Allow transit services into north Markham area and connection to north-south rapid transit and commuter rail services, and
- Provide an extension of the Markham Bypass (Don Cousens Parkway) connecting to a future interchange at Highway 404 and 19th Ave

400-series highway mid-block crossings - include as 4-lane crossings of the highways

- Provides better transit service coverage
- Improves walking and cycling opportunities
- Improves local traffic connectivity, and
- Relieves the need to widen adjacent arterial roads to six or more lanes

Transit/HOV Lanes - include selective widenings where constraints to transit service occurs

- Needed to support transit services where ridership levels do not reach rapid transit service and to encourage car and van pooling
- Specific locations for widening will be determined through project level Environmental Assessment studies

Teston Road between Dufferin and Keele - need for 4 lane arterial connection identified

- Provides east-west network connectivity
- Part of the mid-York E-W corridor solution
- More efficient utilization of the Teston Road-Highway 400 interchange, and
- If link is deleted, additional capacity on other east-west corridors to the north would have to be provided

Highway 404 Extension North of Ravenshoe Road Completion

- An Environmental Assessment was approved and the Province has designated it as a controlled access highway
- Key infrastructure for accommodating future travel demand in northern York Region and beyond, and
- Key connection for seasonal and recreational traffic

6.4 RECOMMENDED POLICIES AND STRATEGIES

All of the proposed policies and strategies developed by York Region for this Transportation Master Plan Update support *at least* one of the

Bold Directions

Strategies and policies that will have the most profound impact on the Region's transportation system by fostering sustainable development and infrastructure.



Sustainability Principles developed earlier in the study process. As such, each policy and strategy has been grouped under one of the 11 principles. Included among the more than 100 policies and strategies developed to address Regional growth is a set of **Bold Directions** that will have the most profound impact on the Region's transportation system. A summary of each recommended strategy and policy is provided below. A more detailed description is presented in **Appendix N**.

Principle 1: Integrate Land Use and Transportation Planning

York Region supports "complete communities" that are compact, mixed use, provide transportation choices and encourage live-work opportunities. The following policies and strategies embody the Region's Vision to grow in a more sustainable, integrated manner.

"York Region is committed to integrating transportation planning into an urban form that is compact, mixed-use and creates a sense of community."

bold directions

- Adopt a policy in the Region's Official Plan (ROP) which requires local municipalities, particularly those that are already urbanized, to achieve the minimum densities needed to sustain higher order transit and promote Transit Oriented Development (TOD), as per the Provincial Places to Grow Strategy.
- Partner with local municipalities to plan for retail, institutional and commercial uses that are focused on the street, with parking positioned behind the buildings. "Big Box" retail plazas which are auto-focused should be strongly discouraged.
- Develop gateway "mobility hubs" at major entry points to the Region and to the YRT system and GO Stations. These hubs should be the focus of transit-oriented development.
- Work with local municipalities to introduce maximum residential parking standards in Regional Centres and Corridors.
- Planning and Design
 - Work with local areas municipalities to implement minimum density requirements that are supportive of higher order transit.
 - Amend the ROP to include TOD Guidelines as policy

guidelines, thereby effectively promoting sustainable development for transit and other sustainable modes.

- Co-ordinate zoning by-laws, urban design guidelines, parking standards, and site plan controls to ensure they are consistent with the TOD Guidelines and the Regional Centres and Corridors strategy.
- Implement Community Improvement Plans for TOD at high priority locations and at Regional Centres, in cooperation with the local municipalities.
- Work with the local municipalities to implement a coordinated program of site design that is oriented to transit and pedestrians, and to review zoning along transit corridors to ensure that land use densities support rapid transit.
- Implement a policy allowing the Region to declare a particular interest in development applications that take place in the vicinity of the Regional Corridors, Centres and nodes, as a means to ensure a sustainable pattern of development for higher order transit.
- Develop financial incentive programs to encourage TOD in all Regional Centres and Corridors.
- Work with existing major auto-focused retail sites as these redevelop, to plan for transit-focused intensification within Regional Centres and Corridors.
- Recommend the hiring of a TOD Coordinator who can manage all matters related to TOD, and advocate for its importance with stakeholders, such as developers, local municipalities and residents.
- Include on-street parking as part of the supply for development, where possible.
- Encourage shared parking arrangements among neighbouring properties, and reflect this in the parking supply for developments.



Principle 2: Put Pedestrians and Transit First

York Region developed the following initiatives to ensure future transportation planning efforts provide the means to support walking, cycling and transit use.

"York Region recognizes that each transportation trip begins and ends with a pedestrian trip, and is committed to designing a transportation system that promotes an active lifestyle and community well being."

bold directions

- Implement the Regional and municipal pedestrian and cycling master plan policies and recommendations that give equal weights to infrastructure, implementation strategy and outreach programming.
- Transit
 - Continue to co-ordinate YRT/Viva services with adjacent transit systems, including the TTC, Brampton Transit and Durham Region Transit through initiatives such as interlining and shared terminals.
 - Install bikes racks on all buses, and request MTO to amend the Public Vehicles Act to permit the use of bicycle racks on buses crossing municipal boundaries.
- Active Transportation
 - Encourage the study and implementation of local municipal pedestrian and cycling master plans.
 - Promote and support local bike-sharing programs as demonstration projects.
 - Partner with Metrolinx and others to implement Regional bike-sharing programs.
- Planning and Design
 - Connect all transit stops directly to sidewalks and adjacent buildings in urban areas.
 - Update policies regarding the provision of sidewalks on Regional roads in urban areas; consider a provision to require sidewalks on both sides of the street (in urban areas and major roadways).
 - Review and update design standards for sidewalks and the pedestrian environment.



- Explore opportunities to coordinate and implement lighting, sidewalk and road improvements for Regional roads which have transit service.
 - Promote pedestrian safety and comfort through building and site design by including this consideration in the review of all development applications.
 - Require developers to provide high quality pedestrian connections to the Regional road network as part of site plan approvals in urban areas, as well as effective pedestrian permeability through the site.
 - Review policies on pedestrian push-buttons at signalized intersections to improve tactile and visual response, as well as the adequacy of walk time and the universal application of countdown displays.
 - Implement intersection designs and improvements that enhance pedestrian and cycling movements in urban areas.
 - Discontinue the use of pedestrian push-buttons at signalized intersections for pedestrian phases across the “minor” street that has a short pedestrian walk distance, beginning with signalized intersections in Regional Centres and on Regional Corridors.
- **Parking**
- Work with the local municipalities to adjust the quantity of long-term parking for commercial, employment and residential uses to reflect the level of transit services and other sustainable modes.



Principle 3: Protect and Enhance Natural Environment and Cultural Heritage

In coordination with its local municipalities, York Region will develop several transportation policies and strategies to ensure the preservation and enhancement of the natural environment. Many of these strategies will exceed existing guidelines established in the provincial environmental assessment process. The following policies and strategies will be implemented to ensure that these goals are achieved.

“York Region will protect, restore and enhance the natural environment. York Region also respects and protects its First Nation heritage as well as all cultural heritage.”

bold directions

- Exceed the requirements of the environmental assessment process in York Region to incorporate the following policies and strategies:
 - Plan new transportation facilities to avoid, where possible, significant natural heritage features, including the habitats of threatened and endangered species, greenways, wetlands, woodlands, areas of natural and scientific interest, wellhead protection zones, and natural hazard areas.
 - Consider the introduction of stormwater management and water balance measures to counter the adverse impacts of urbanization.
 - Coordinate the Region's road and transit networks, as well as planning regimes with the local and adjacent municipalities, to minimize infrastructure needs and enhance natural heritage and environmental features and functions.
- Enhance natural heritage features and functions throughout York Region by incorporating the following policies and strategies:
 - Improve environmental functions and habitat connectivity through upgrades of existing crossing structures that are sized as 'eco-passages' to facilitate wildlife movement.
 - Design transportation facilities to celebrate the environment, through preservation of view corridors, design of bridges to highlight the presence of watercourses, and other elements.
 - Review and update the Region's maintenance management policies and practices to ensure that these minimize damage to

the natural environment, while still providing a safe transportation environment.

- Work with local municipalities and the construction industry to develop Environmental Best Management Practices to minimize the impact of road construction on the environment.
- Develop environmental protection measures for transportation system elements to reduce vehicular-animal interaction and impact on animal pathways.
- In rural areas, consider roadside plantings to discourage habitat immediately adjacent to infrastructure that would conflict with wildlife.
- Enhance, preserve and maintain greenways to the extent possible in accordance with provincial legislation requirements.
- Work with the local municipalities and developers to minimize the effects of parking facilities on the natural environment.
- Introduce roadside warning signs in areas of significant wildlife movement.
- Implement temporary or seasonal speed limits in high wildlife mortality zones.
- Avoid abundant amounts of lighting in environmentally vulnerable sites.

● **Active Transportation**

- Identify a Regional Trails Network which includes a Natural Heritage Trails Concept Study to determine the Region's role in trail planning and development, and to coordinate trail connections, where appropriate, with the Region's and local municipal Pedestrian and Cycling networks.

Principle 4: Provide Access and Mobility for Everyone

York Region supports new policies and initiatives that will ensure all residents and employees are provided safe, reliable, convenient and economical transportation options. Additionally, the Region will ensure that all transportation plans, services and infrastructure respond to the diversity of community needs.

"York Region will ensure that all residents (especially those with disabilities, those of low income, recent immigrants, youth and the elderly) have barrier-free, reliable and affordable access to all aspects of the transportation system."

- Transit
 - Work closely with GO Transit to maximize YRT/Viva access to GO Transit rail stations, bus stations and park-and-ride lots in York Region, and to increase shuttle and community bus services that meet train departures and arrivals in areas around GO stations.
 - Develop services targeting seniors. For example, some communities operate bus services that exclusively serve retirement communities, grocery stores, hospitals, medical clinics and pharmacies.
- Planning and Design
 - Ensure transit service and infrastructure are built into new subdivisions, employment areas and major commercial centres within the first three years.
 - Minimize walking distances between new development sites and transit stops through the location of site accesses.
 - Partner with school boards to plan for schools and other facilities that are located on transit routes.
 - Accommodate people with disabilities and special needs on all pedestrian and transit systems, consistent with the Accessibility for Ontarians with Disabilities Act.



Principle 5: Support our Economic Vitality

York Region undertook the Transportation Master Plan Update to manage the movement of both people and goods through 2031. A sustainable transportation system must promote efficient goods movement in support of economic development including linking intermodal facilities with area industries.

"York Region is committed to ensuring that its transportation systems support economic development."

bold directions

- Plan for effective freight movement systems that minimize impacts on the road network, including potential dedicated road links and rail services, as well as intermodal facilities.
- Restrict delivery times by heavy vehicles to periods outside of peak commuter travel times within the Regional Centres and along Regional Corridors
- Planning and Design
 - Work with local municipalities to develop a mechanism to assess the redevelopment potential of sites in Regional Centres and Corridors and review potential "quick win" sites for TOD.
 - Partner with local municipalities and major industries to advocate for improvements to the Provincial highway system.
- Goods Movement
 - Develop an ITS plan for goods movement.
 - Ensure that all new site plan approvals are based on off street loading and unloading facilities.

Principle 6: Adopt Energy Efficient Transportation System

As York Region grows, so will the demand for our natural resources like water, air and land. In support of the *Growth Plan for the Greater Golden Horseshoe*, the Region has identified a set of transportation strategies that will promote a culture of conservation and energy efficiency.

"York Region will design a transportation system that is energy efficient and mitigates and adapts to the impacts of climate change."

- Planning and Design
 - Adopt Canadian Institute of Transportation Engineers (CITE) site design guidelines to promote sustainable transportation.
 - Design a site plan checklist to gauge TOD elements of a proposed development.
 - In areas of low pedestrian activity, consider roundabouts as an alternative to signaling an intersection.

Principle 7: Further Encourage Communications, Consultation and Public Engagement

York Region's transportation planning initiatives make it a national leader in promoting sustainable development. However, one must keep in mind that before adopting these important initiatives, there must be an appropriate level of public awareness and support. Without this, the initiatives may not provide a sufficient rationale for making significant behavioural and lifestyle changes.

The Region recognizes the need to embrace other communication strategies that will: foster a much wider understanding of the Region's sustainable transportation

"York Region will plan for and implement transportation infrastructure and services in an open, transparent and accountable manner based on broad consultation, citizen engagement and strong communication."

initiatives; encourage residents and businesses to adopt new practices that support the Region's sustainable policies; and provide a means to regularly inform and engage the public on sustainable transportation issues.

bold directions

- Celebrate sustainable transportation success stories through initiatives such as annual awards for volunteers, programs and projects.
- Work with local municipalities to plan and implement regular car-free festival days to create a culture of sustainability.
- Planning and Design
 - Develop and provide a detailed Best Practices Planning Handbook to York Region and municipal staff, as well as the development community.
 - Develop a procedure to ensure local municipalities, YRT/Viva and GO Transit together explore TOD opportunities around Viva and GO stations.
 - Develop materials and create a link from York Region's website as a resource for planners, developers, policy makers and citizens who are interested in the implementation of TOD.
- Intelligent Transportation Systems & New Technologies
 - Work with local Smart Commute associations to develop a web-based delivery of real-time traffic information to assist drivers in determining times and routes for travel.
 - Continue to improve YRT's trip planner to include weather info and real-time alerts of service disruptions, and make them available through mobile communication devices.
- TDM
 - Work with local Smart Commute Associations to develop a TDM promotional plan in conjunction with municipalities and key stakeholders (e.g. major employers and 'green' organizations).
- Marketing and Education
 - Encourage developers to provide information about transportation alternatives, including local transit routes and schedules, to new home buyers.

- Regional Collaboration
 - Define a mechanism for ongoing co-ordination with local municipalities and stakeholders relative to research or future sustainable transportation planning needs.
 - Work with other jurisdictions to develop television programming focused on sustainable transportation issues.
 - Produce a recurring newsletter highlighting the Region's sustainable development practices.
 - Work with the local media to develop op-ed pieces or other articles/segments highlighting the Region's sustainable transportation initiatives developed in response to growing congestion.
 - Invite local media to attend an annual transportation "fair" exhibiting the many programs and services initiated by the Region, Smart Commute and other green organizations to promote sustainability.
 - For all residents moving into York Region, mail a package of materials to them explaining the transportation services offered in the Region. Consider incentive packages for transit as well.
 - Produce all educational materials in key languages spoken in York Region.
 - Host seminars to engage different ethnic groups in discussing sustainable transportation initiatives.
 - Develop curricula/courses/programs that promote the Region's sustainable transportation initiatives in partnership with school boards and higher education institutions.
 - Work directly with large independent living facilities and retirement communities to promote relevant programs and initiatives.

Principle 8: Implement and Support Transportation Demand Management Initiatives

York Region recognizes the need to bolster existing Transportation Demand Management programs in the Region by providing more convenient and reliable transportation alternatives. Additionally, the Region is committed to exploring

"York Region is committed to reducing single-occupant vehicle trips and promoting a preference for sustainable transportation choices by providing more reliable and convenient alternative modes of travel."



new initiatives that would entice residents to consider alternatives to the automobile.

- **Transportation Demand Management**
 - Finalize TDM strategies in consultation with municipal agencies, school boards, hospitals, colleges and major employers that includes actions, timelines and targets.
 - Require TDM plans or strategies for any major commercial or employment development application (over 100 employees).
 - Encourage all employers to implement TDM programs.
 - Partner with major retail stores to develop incentive programs for high school and university students (or others) who use transit.
 - Partner with major retail stores to develop incentive programs for seniors who use transit.
 - Explore opportunities to develop a discounted university and college transit pass program (“U-Pass”) with YRT/Viva.
 - Consider incentives that promote transit and discourage all-day parking (e.g. subsidize auto share programs).
 - Develop sample templates and pilot commuter trip reduction programs for businesses in York Region.
 - Pilot employee individualized commuter plans that promote lower single occupancy vehicle use.
 - Adopt Regional policies that promote the replacement of corporate fleets (Viva/YRT, public works, police) with hybrid or alternative-fuelled vehicles.
- **Parking**
 - Mandate the provision of preferential carpool parking for employment uses.
 - Offer carpoolers preferential parking at all Regional facilities and for fuel efficient vehicles including those with high fuel economy, hybrids, and vehicles powered by alternative fuels.
 - Investigate the utility of car-share programs at YRT/Viva terminals, GO stations and major employment areas, and if they are found to be of benefit, consider subsidizing them for a start-up period.
 - Support the use of the existing HOV lanes in Highway 404, as well as any future highway HOV lanes, through the addition of

park-and-ride and carpool lots at strategic locations.

- Marketing and Education
 - Work directly with area community and cultural centres to promote relevant sustainable transportation initiatives.
 - Actively work with the school boards to implement Safe Routes to School programs, and continue to expand the YO! Program at York Region high schools.
- Intelligent Transportation Systems & New Technologies
 - Partner with others to develop a trip planner for all modes that provide the shortest time path for walking/cycling/transit (with links to Smart Commute for carpooling).

Principle 9: Implement and Support Transportation Supply Management

York Region has developed several strategies that make the best use of its existing transportation infrastructure through the addition of HOV lanes and system-wide technologies.

"York Region is committed to managing its transportation system in an efficient and cost-effective, socially and environmentally responsible manner."

bold directions

- Expand the Viva/YRT ITS program and introduce traveller information systems, improved signal progression and queue jump lanes throughout the Region to improve transit performance.
- Initiate HOV 2+ lanes for all road segments scheduled for widening to six lanes, and explore opportunities to convert existing six-lane roads.
- Cap road widenings to a maximum of six lanes including transit lanes.
- Work with local municipalities to plan for and design comprehensive collector roads to accommodate and facilitate local transit services, walking and cycling.

- **Intelligent Transportation Systems & New Technologies**
 - Implement a comprehensive Advanced Traffic Management System in key areas in York Region, particularly on Highway 7 in the area of Highway 404 and Highway 400.
 - Review the location of left turn lane detector loops on arterial roads, and ensure that they are set back from the stop bar to the location of the third vehicle in the turning stream.
 - Introduce a system of adaptive signal control on key urban arterials, where appropriate.
 - Integrate system-wide traffic signals through a centre-to-centre (C2C) interface to support daily operations, provide traveller information and emergency response.
 - Develop and implement a Transit Video Survey Tool once YRT has completed the system-wide deployment of on-board video surveillance systems.
- **Roadways and Highways**
 - Strongly encourage all local municipalities to implement continuous east-west and north-south mid-concession collectors in all new urban developments (two per direction per concession).
 - Ensure that transportation planning for each concession block is based on an integrated assessment of needs for surrounding arterials and internal collectors.



Principle 10: Ensure Fiscal Sustainability and Equitable Funding

In the time since York Region released its initial Transportation Master Plan in 2002, the transportation landscape has changed significantly. Now more than ever, the benefits of sustainable transportation choices are being recognized and given priority over simply building new, or expanding existing roadways. The pressure to build sustainable transportation services and the escalating cost to build, operate and maintain public infrastructure services is an ongoing concern to municipal organizations in Ontario, as it is to government jurisdictions everywhere. This has required transportation agencies around the world to look at new and innovative ways of delivering and financing transportation projects.

"York Region is committed to providing full cost accounting for all transportation infrastructure projects and services. In addition, the Region is committed to Value-for-money in delivering transportation services."

In response, York Region has developed several strategies to ensure appropriate levels of financing are available for sustainable transportation initiatives.

bold directions

- Coordinate with each municipality to develop a Parking Authority to set a parking policy within York Region and ensure that an effective governance model is adopted in selecting individuals with appropriate experience and expertise to serve as Board Members of the Authority
- Develop parking strategies in each Regional Centre and on Regional Corridors (within 500 metres along each corridor) to avoid over-supply, provide the appropriate form of parking, and structure fees that discourage all-day parking through Regional or Municipal parking authorities.
- Explore road user fees in highly congested urbanized areas in coordination with Metrolinx and local municipalities.
- Funding
 - Seek additional forms of transit subsidies for stable transit funding from the provincial and federal governments.
 - Request the Province to modify the Development Charges Act to better support transit and sustainable transportation

services in conjunction with Metrolinx.

- Pursue Public-Private Partnerships (P3s) to fund sustainable transportation initiatives.

Principle 11: Conduct On-going Performance Measurements and Monitoring

The world around us is always changing. To ensure the Region understands the transportation needs of its residents, several measures will be implemented regularly to monitor trends and identify new solutions that are more energy efficient and sustainable.

"York Region will monitor and report on sustainable transportation initiatives through a series of defined performance measures."

- **Intelligent Transportation Systems & New Technologies**
 - Require the Region's traffic control system to be compliant with the National Transportation Communications for ITS Protocol (NTCIP) to ensure ITS measures are implemented properly.
 - Host annual or biennial focus groups with randomly selected residents and businesses to: identify marketing strengths and weaknesses; test new marketing strategies; and develop other means to educate the public.
 - Conduct a random sample public opinion survey with York Region residents and businesses every two years to assess changes in travel behaviour and evaluate whether the Region's sustainable transportation message is understood and recognized.
- **Environmental Protection Measures**
 - Monitor natural heritage and environmental feature impacts resulting from transportation projects and publish a biennial report card.



6.4 CARBON MANAGEMENT

The over-riding principle that this Master Plan update has been based on is the principle of sustainability. From the lens of transportation planning, sustainability is achieved when the least amount of infrastructure and travel demand is needed to accommodate the projected growth in population and employment. Generally speaking, this scenario should also lead to the least cost plan in terms of funding needs and least impacts on the natural environment.

Through the integration and coordination of this study with the growth management, water and wastewater master plan update and the pedestrian and cycling master plan studies, and the innovative process used to develop this Master Plan, the minimum amount of road improvements is recommended. On the transit side, a doubling of the rapid transit network and a corresponding increase in the YRT bus services that supports and feeds the rapid transit network is recommended. Complementing these infrastructure improvements, this Master Plan is recommending very bold policies and strategies that push the limits in trip reduction opportunities to maximize the person-carrying capacity of the road network through carpooling. It further maximizes the attractiveness of transit use and walking and cycling through service improvements, incentives and education and marketing. Together, these recommendations form a Transportation Master Plan that is as sustainable as can be achieved given the conditions that bound the development of this plan.

Implicit, therefore, to this Transportation Master Plan is the minimum carbon footprint that will be generated from the infrastructure and services recommended in accommodating the projected 2031 scenario of 1.5 million people and 800,000 jobs in York Region.



7.0 RECOMMENDED PHASING PLAN

York Region recognizes that elements of the Transportation Master Plan Update must now begin to complement the many sustainable transportation initiatives that are already on-going, as well as lay the groundwork for more long-term infrastructure improvements. As such, the Region has developed a practical phasing plan through 2031 to ensure that the appropriate strategies and policies are in place in advance of making some of the more significant infrastructure improvements. The goal of the proposed phasing plan is to ensure that the aim of the Region's 4 "R's" are met by developing initiatives that **R**educe the need to travel; providing more convenient and reliable **a**lternative modes; enhancing public **t**ransit infrastructure and services; and optimizing **R**oads to accommodate all modes of travel.

7.1 CURRENT TRANSPORTATION PROJECTS AND INITIATIVES

The following outlines the transportation projects which are currently being implemented in York Region. These projects and initiatives serve as the foundation for the development of sustainable policies and strategy recommendations as well as the transit and road systems proposed for the Transportation Master Plan Update.

[Transitway EAs and Studies](#)

- Yonge Street Transitway (Richmond Hill Centre to 19th Avenue)
- Yonge Subway Extension
- Spadina Subway Extension
- North Yonge Transitway Class EA – 19th Avenue to Newmarket/East Gwillimbury
- Highway 7 Transitway
- Markham N-S Link Transitway
- MTO – 407 Transitway Class EA
- Viva – Maintenance and Storage Facility
- YRT Maintenance and Storage Facility at 8300 Keele Street
- CEAA approval for all Viva projects
- York Region's Transit Priority Network, Currently Warranted Network and Methodology Report



Pedestrian and Cycling Master Plan Implementation

- Municipal Partnership Program
- Active Transportation Coordinator
- Outreach and Promotions
- Planning and Design Guidelines
- Inclusion of bike facilities in road construction program

Travel Demand Management Initiatives

- Development Conditions for TDM Initiatives
 - Blocks 11, 12, and 18 Web portal and other measures
 - Keswick Commuter Parking Lot
- Bike racks on buses and at stops
- Smart Commute York Region Staff Trip Reduction Program
 - Carpool parking spaces
 - Emergency Ride Home program
 - Bike parking facilities and amenities
 - Employee transit discount (ECO) program
 - Compressed work week and flex time
- Support of TMAs, events, and projects (e.g., bike library feasibility project with Smart Commute Central York)
- Establishment of TOD Guidelines and TDM checklist

To build on these initiatives, the Region has developed an aggressive – yet practical – planning and implementation schedule that addresses both short-term and long-term needs and opportunities. The proposed phasing plan is described below.

7.2 PROPOSED PHASING: POLICIES & STRATEGIES

As discussed in Chapter 6, the York Region Transportation Master Plan Update's recommended policies and strategies cover a wide array of issues, which all support the development of a more robust transit, cycling and pedestrian network, including:

- Transit;
- Active Transportation;

- Travel Demand Management;
- Environmental Protection Measures;
- Planning & Design;
- Marketing & Education;
- Parking;
- Funding;
- Intelligent Transportation Systems;
- Roadways & Highways; and
- Goods Movement.

A general description of the proposed phasing plan for the recommended policies and strategies is provided below. It is important to note that many of the policies and strategies proposed in the immediate and short terms will carry through to 2031.

7.2.1 Immediate Actions (0-2 years)

Policies and strategies to be implemented within the immediate time frame will provide the basis for sustainable initiatives throughout the Region. The goal of these policies and strategies is to make provisions for the significant number of transit and roadway infrastructure improvements which will be developed over the next 30 years.

Transit: will focus on enhancing the coordination of transit services and infrastructure with adjacent municipalities and other transit providers, including TTC and GO Transit. These will include policies such as:

- Working closely with GO Transit to maximize YRT access to GO Transit facilities;
- Co-ordinate YRT services with adjacent transit systems;
- Working with Brampton Transit to integrate AcceleRide with YRT/Viva services along Highway 7; and
- Amend the Highway Traffic Act and Public Vehicles Act to allow the installation of bike racks on buses that cross Regional boundaries.

Active Transportation: immediate action will be taken to enhance the Region's pedestrian and cycling opportunities. More specifically, the Region will:

- Implement the Regional and municipal pedestrian and cycling master plan policies;

- Encourage the study and implementation of local municipal pedestrian and cycling master plans; and
- Support the directions introduced in the Natural Heritage Discussion Paper.

Travel Demand Management: initially, York Region will work more closely with major employers to reduce single-occupant driving. In the next two years, the Region will:

- Require TDM plans or strategies for any major employment or commercial development applications.

Environmental Protection: stricter measures will be imposed in the immediate future to enhance the environmental assessment process minimize impacts resulting from the planning and implementation of transportation infrastructure. These will include policies such as:

- When planning transportation corridor improvements and transportation facilities, the surrounding natural environment should be either avoided or enhanced;
- Co-ordinating the Region's road and transit networks as well as planning regimes with local and adjacent municipalities to minimize infrastructure needs and enhance the natural environment; and
- Taking the opportunity to improve environmental functions and habitat connectivity through upgrades of existing crossing structures.

Planning and Design: will focus on the land use planning policies required to support future transit infrastructure plus improved cycling and pedestrian connections. General policies will include: improving site design guidelines, requiring minimum densities to support transit-oriented developments and ensuring that all transit stops are properly connected to sidewalks. More specific strategies will include:

- Amending the ROP to include TOD guidelines as Regional policy to promote sustainable development for higher order transit;
- Connecting all transit stops directly to sidewalks and adjacent buildings in urban areas; and
- Adopting the Canadian Institute of Transportation Engineers (CITE) site design guidelines to promote sustainable transportation.

Marketing and Education: in the immediate term, the focus will be on creating more awareness of sustainable transportation initiatives for residents of all ages and backgrounds. Programs and initiatives the Region wishes to initiate include:

- Actively working with the school boards and local municipalities to implement a number of programs which promote alternative and safe routes to school;
- Working with the municipalities to plan and implement regular car-free days to promote sustainability.
- Conducting a random sample public opinion survey with York Region residents and businesses every two years.

Parking: The immediate focus will be on making it easier for residents to carpool. As such, York Region will:

- Offering carpoolers preferential parking at all Regional facilities. Also offer preferential parking for vehicles powered by alternative fuels.

Funding: will focus on providing more funding for transit or transit-related projects. This will include the following policy:

- Requesting the province to modify the Development Charges Act to better support transit and sustainable transportation services in conjunction with Metrolinx.

Intelligent Transportation Systems: will include new technologies to enhance the safety and efficiency of transit vehicles cyclists, pedestrians and auto users. These policies will include:

- Reviewing the location of left turn lane detector loops on arterial roads;
- Reviewing the policy on pedestrian pushbuttons to improve tactile and visual response; and
- Discontinuing the use of pedestrian pushbuttons for pedestrian phases across the “minor” street that has a short pedestrian walk distance.

Roadway and Highways: key policy and strategy pursuits will focus on making the Region’s transportation infrastructure more efficient and transit-supportive. Relevant policies will include:

- Initiating HOV2+ lanes for all road segments scheduled for widening to 6 lanes;
- Capping road widenings to a maximum of 6 or 7 lanes, including transit lanes; and
- Working with local municipalities to plan and design comprehensive collector roads to accommodate YRT service, walking and cycling.

7.2.2 Short-term Actions (2-5 years)

York Region's sustainable transportation policies and strategies recommended over the next five years will further support the major rapid transit improvements proposed in the Region through 2031.

Transit: in addition to many of the other transit initiatives in which the Region will be involved over the first five years, close co-operation with other agencies is essential to implement policies such as:

- Working with other agencies to implement fare integration and eliminate the zone based fare system;

Environmental Protection: specific measures will be developed in conjunction with local municipalities to design Environmental Best Management Practices to minimize the impact of infrastructure improvements on the environment. These include strategies such as:

- When planning new transportation facilities, consider all natural environment and heritage features;
- Working with local municipalities and the construction industry to develop Environmental Best Management Practices to minimize environmental impacts; and
- Reviewing and updating the Region's winter maintenance management policies and practices.

Planning and Design: land use planning policies will require the densities and designs to support transit and pedestrian use. A key strategy will ensure municipalities move away from "big box" development towards more efficient mixed uses along rapid transit corridors. Additional policies include:

- Ensuring transit services and infrastructure are built into new subdivisions, employment areas and major commercial centres;
- Co-ordinating zoning bylaws, urban design guidelines, parking standards and site plan controls to ensure consistency with TOD guidelines; and
- Working with the local municipalities to implement a co-ordinated program of site design to fully accommodate transit and pedestrians.

Travel Demand Management: the Region's TDM policies and strategies will be nearly fully developed at all levels in consultation with municipal agencies, school boards, hospitals, colleges and major employers. Strategies will include incentive programs designed to entice new transit users including employees, students and the elderly. Specific policies include:

- Finalizing the TDM strategy in consultation with municipal agencies, school boards, hospitals, colleges and major employers;
- Developing a TDM promotional plan in conjunction with municipalities and key stakeholders; and
- Encouraging all employers to implement TDM programs.

Marketing and Education: continued focus on creating more awareness of sustainable transportation initiatives for residents of all ages and backgrounds, which will include policies such as:

- Working with the local media to develop op-ed pieces or other articles/segments highlighting the Region's sustainable transportation initiatives developed in response to growing congestion;
- Working directly with area community and cultural centres to promote relevant sustainable transportation initiatives; and
- Working directly with large independent living facilities and retirement communities to promote relevant programs and initiatives.

Parking: key initiatives include mandating the provision of carpool preferential parking for employment uses, coordinating with local municipalities to establish a Parking



Authority and developing specific parking strategies that support Regional Centres and Corridors. More specifically:

- Working with local municipalities to establish a Parking Authority that would set parking policy within York Region;
- Including on-street parking as part of the supply for development where possible; and
- Investigating the utility of car-share programs at YRT/Viva terminals, GO stations and major employment centres.

Intelligent Transportation Systems: a continued focus will be on pursuing technologies to expand traveler information and provide signal priority for all Viva and YRT vehicles. These include policies such as:

- Expanding the Viva/YRT ITS program, to improve transit performance relative to single occupant vehicles;
- Developing and implementing a Transit Video Survey Tool once YRT has completed the system-wide deployment of on-board video surveillance systems; and
- Creating a web-based delivery of real-time traffic information to assist drivers in determining times and routes for travel;

Roadway and Highways: in addition to the important policy and strategy pursuits described within the next two years, the Region will "greener" designs of roads, including:

- In areas of low pedestrian activity, considering roundabouts as an alternative to signaling an intersection.

7.2.3 Medium-term Actions (5-10 years)

The medium-term policies will further support sustainable transportation infrastructure improvement. It is important to recognize that many of the policies planned and developed in the first five years will be more formally adopted in this time period.

Travel Demand Management: as a continuation of the TDM policies and strategies developed earlier, the Region will implement the policy to:

- Piloting employee individualized commuter plans that promote lower single occupant vehicle use.

Environmental Protection: builds on earlier measures developed to protect the environment, with the focus on working with local municipalities and developers to minimize the effects of parking facilities on the natural environment. Other policies include:

- Designing transportation facilities to celebrate the environment, through preservation of view corridors, design bridges to highlight the presence of watercourses, and other elements;
- Monitoring natural heritage and environmental feature impacts resulting from transportation projects and publish a bi-annual report card; and
- Developing environmental protection measures for transportation system elements to reduce vehicular-animal interaction and impacts on animal pathways.

Planning and Design: land use planning policies will continue to support and enhance transit and pedestrian use. Specific policies to be developed in the medium term include:

- Develop and provide a detailed Best Practices Planning Handbook to York Region and municipal staff, as well as the development community;
- Develop financial and zoning incentive programs to encourage TOD in the Regional Centres and Corridors; and
- Work with existing major auto-focused retail sites as these redevelop, to plan for transit-focused intensification within Regional Centres and Corridor.

Marketing and Education: continued focus on creating more awareness of sustainable transportation initiatives, including developing materials in several languages, developing curriculum, courses and programs to promote sustainable transportation initiatives to children, and providing a package of materials to new residents outlining the sustainable transportation services provided by York Region. These will include policies such as:

- Developing television programming on sustainable transportation throughout the Region;

- Mailing packages of materials regarding transportation services in the Region to all residents; and
- Developing curriculum/courses/programs with school boards and higher education institutions that promote the Region's sustainable transportation initiatives.

Parking: in the medium term, the focus is to implement the following policy:

- Adjust the quantity of long-term parking for commercial, employment and residential uses to reflect the level of transit services and other sustainable modes provided at those locations.

Funding: to support future sustainable transportation infrastructure and services, the Region will implement the following policies:

- Formulating models for more predictable transit subsidies that provide stable transit funding from the provincial and federal government; and
- Pursuing Public-Private Partnerships (P3) to fund sustainable transportation initiatives through such mechanisms as Design, Build, Maintain (DBM).

Intelligent Transportation Systems: will include the implementation of additional technologies to improve mobility, including policies such as:

- Implementing a comprehensive Advanced Traffic Management system throughout key areas of York Region;
- Integrating system-wide traffic signals through centre-to-centre (C2C) interface; and
- Requiring the Region's traffic control system to be compliant with the National Transportation Communications for ITS Protocol (NTCIP) to ensure ITS measures are implemented properly.

Goods Movement: the Region will develop specific strategies to ensure the efficient movement of freight, including:

- Developing an ITS plan for goods movements; and
- Planning for effective freight movement systems that minimize impacts on the road network.

7.2.4 Long-term Actions (10+ years)

Many of the policies proposed to be implemented in the first ten years will be carried forward well past their initial point of implementation. Beyond the first ten years, in support of the Region's desire for sustainable transportation initiatives, two important long-term initiatives will be explored. A description of the long-term actions considered by the Region is provided below.

Funding: As a means to fund sustainable transportation infrastructure and services, as well as to discourage SOV use, the Region will:

- Explore road user fees in highly congested urbanized areas. (this may just drive congestion to where it doesn't belong. Road user fees should be area wide throughout the GTA in a manner that does not disadvantage one municipality with respect to another – implementing user fees within York Region alone would be folly)

Goods Movement: the Region will consider pursuing the following policy within the most urbanized areas:

- Restricted delivery times by heavy vehicles to mid-day periods outside of peak commuter travel times within Regional Centres and along Regional Corridors.

7.3 PROPOSED PHASING: RAPID TRANSIT CORRIDORS

York Region has identified several potential rapid transit corridors that are considered at the heart of the Region's Vision to address growth in a more sustainable manner. The rapid transit corridors will operate in most urbanized communities – providing connections to cycling and pedestrian routes, local feeder buses, employment centres and other York Region attractions. Plans are now in motion for some rapid transit corridors to be operating by 2013, while others are more long term.

A basis for the phasing of rapid transit corridors was provided by the Metrolinx Regional Transportation 25 Year Plan and by its Top 15 priorities discussed publicly in the November 2008 Management Report to the Metrolinx Board. Projects from Metrolinx's priority list that directly impact York Region are listed below in the funding categories used for the Top 15 priority projects.

Those being funded by other sources (not included in Metrolinx Capital Plan)

- Toronto York Spadina Subway Extension

- Peel Queen Street Rapid Transit

Category A (ready to proceed to Implementation in 2009/10)

- York VIVA
- Sheppard East LRT

Category B (remaining quick win projects)

- Bolton GO Transit

Category C

- North Yonge subway Extension
- Finch West LRT

The report noted that Category A, B and C projects were recommended to be included in the Five Year Metrolinx Capital Plan and that Provincial funding for these was being requested.

A description of the proposed phasing plan for the recommended rapid transit corridors is provided below. The phasing was developed to address future residential densities, population and employment growth, as well as projected transit ridership along individual corridors. A more rigorous assessment of the feasibility of rapid transit service along each corridor will be undertaken in separate environmental assessment studies. Through this process, and in consultation with residents and stakeholders, a preferred rapid transit technology will be identified, as will an alignment that best suits the needs of the study area.

7.3.1 Short-term (0-5 years) – Figure 7.1

VivaNext Bus Rapid Transit Corridors (*on Yonge Street, Highway 7 and Davis Drive*)

York Region recently completed a Municipal Class Environmental Assessment evaluating the potential for bus rapid transit service on Yonge Street from 19th Avenue to Davis Drive in Newmarket and extending further north to Green Lane in East Gwillimbury, including rapid transit on Davis Drive and Green Lane. This completes the Environmental Assessment for all four rapid transit corridors identified in the 2002 TMP. This will allow York Region to embark on the VivaNext implementation of rapidways along the following segments of the Viva network:

- Highway 7 from Pine Valley Drive to the Kennedy GO Station;
- Yonge Street from the Highway 7 to 19th Avenue;
- Yonge Street from Mulock Drive to Davis Drive; and
- Davis Drive from Yonge Street to the Southlake Regional Health Centre.

In the March 2009 Provincial Budget, \$1.4 billion was announced for the VivaNext program. Detailed design works for various components of VivaNext are progressing well and construction is scheduled to begin in the Fall of 2009.

Spadina Subway Extension *(to the Vaughan Corporate Centre)*

Subway extension by 2015: The Toronto - York Spadina Subway Extension is an 8.6 kilometre extension from Downsview Station north-west through York University, and north to the Vaughan Corporate Centre in York Region. There are three station sites currently planned in York Region: the Steeles West station east of Jane Street at Northwest Gate; the Highway 407 station west of Jane Street; and the Vaughan Corporate Centre station near Highway 7 west of Jane Street. All funding approvals have been obtained and construction of this project is underway.

Yonge Street Subway Extension *(to the Richmond Hill Centre)*

Subway extension by 2018: York Region partnered with the City of Toronto and the TTC to assess the feasibility of extending the Yonge Street subway from the Finch Station to the Richmond Hill Centre (at Yonge Street and Highway 7). Conceptual and Functional Planning studies provided an evaluation of alignment alternatives, station locations and associated facilities in consultation with public and government stakeholders to develop a technically feasible solution, including preliminary construction methods. The project included planned improvements to address current service levels and existing capacity.

Toronto City Council and York Regional Council approved a Staff Report with amendments supporting the submission of an Environmental Project Report as part of the Transit Project Assessment Process. A Notice of Completion was issued and published on February 2nd, 2009. An unconditional approval of the Yonge subway extension EA was received on April 6, 2009.



7.3.2 Mid-term (10 years) – Figure 7.2

Leslie Street Rapid Transit Corridor (*Steeles Avenue to Highway 7*)

This rapid transit corridor has been identified as an extension of the Don Mills LRT proposed as part of the Toronto Transit City initiative. Outside of the Central Business District in the City of Toronto, the area in the vicinity of the Leslie Street and Highway 7 intersection in York Region has one of the largest concentrations of professional and technical jobs in the Greater Toronto Area. This represents a strong base of captive riders that are currently using YRT, Viva or the TTC to access this area, or using private vehicles as the preferred mode of choice because of the lack of a high speed, high capacity and reliable transit alternative.

Major Mackenzie Drive Rapid Transit Corridor (*Weston Road to Ninth Line*)

Major Mackenzie Drive is one of the more densely populated corridors in Vaughan, Richmond Hill and Markham, with the highest densities adjacent to Highway 400, Yonge Street and McCowan Road. By 2031, the travel demands on the east-west arterials in the southern portion of York Region are projected to be far greater than the potential roadway capacity of the system. Further, significant transit ridership (2,000 in the peak hour and peak direction) is projected along this corridor by 2021 because it would act as the primary mid-Regional rapid transit route serving east-west travel demands. The significant population and employment growth projected along Major Mackenzie Drive and in the three municipalities in general, combined with high levels of traffic congestion projected in the immediate area, justifies the need to consider rapid transit service along this corridor by 2021.

Appropriate mitigation measures should be identified in further studies to minimize or avoid impacts to environmental features, including several small woodlands and creeks.

FIGURE 7.1

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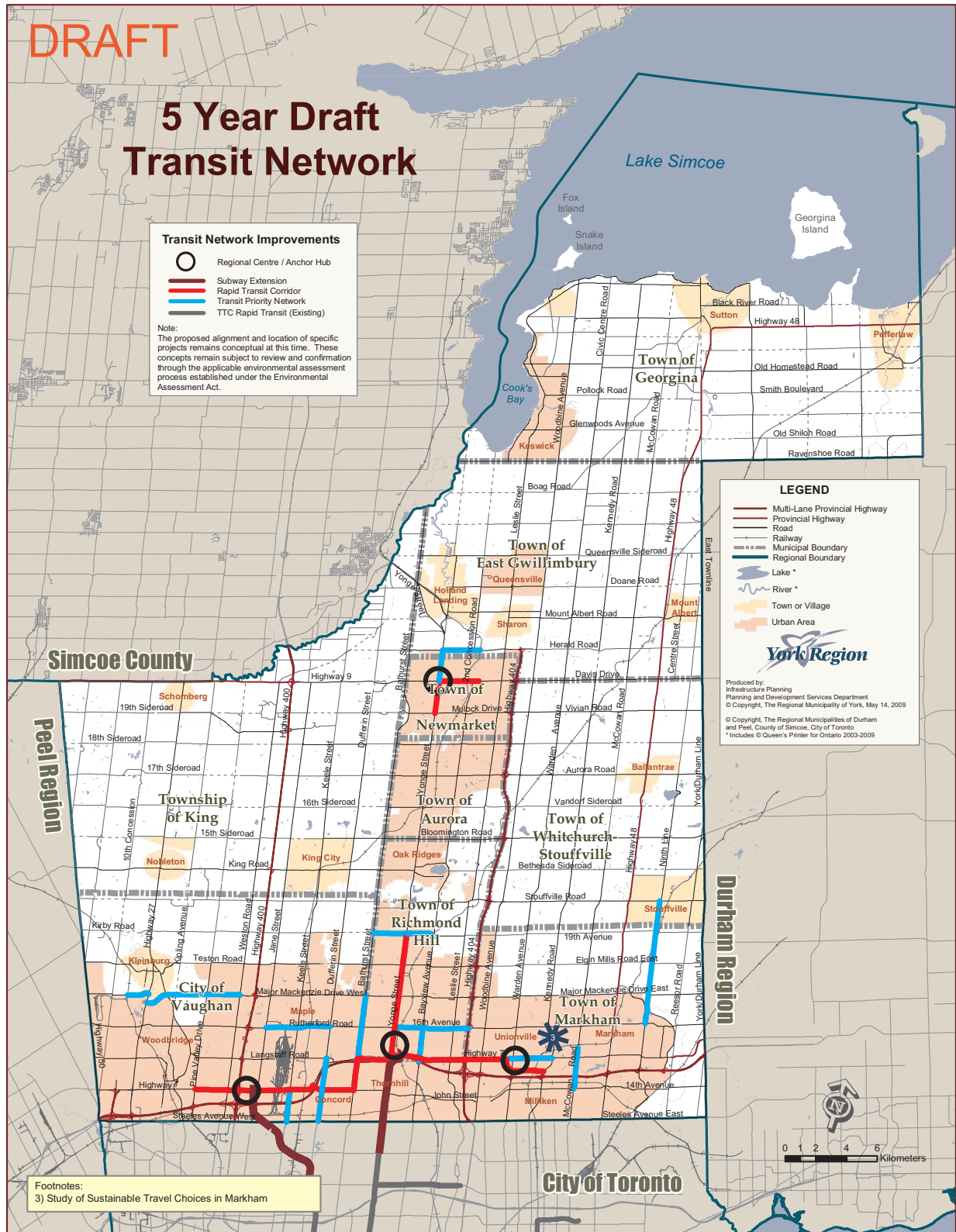


FIGURE 7.2

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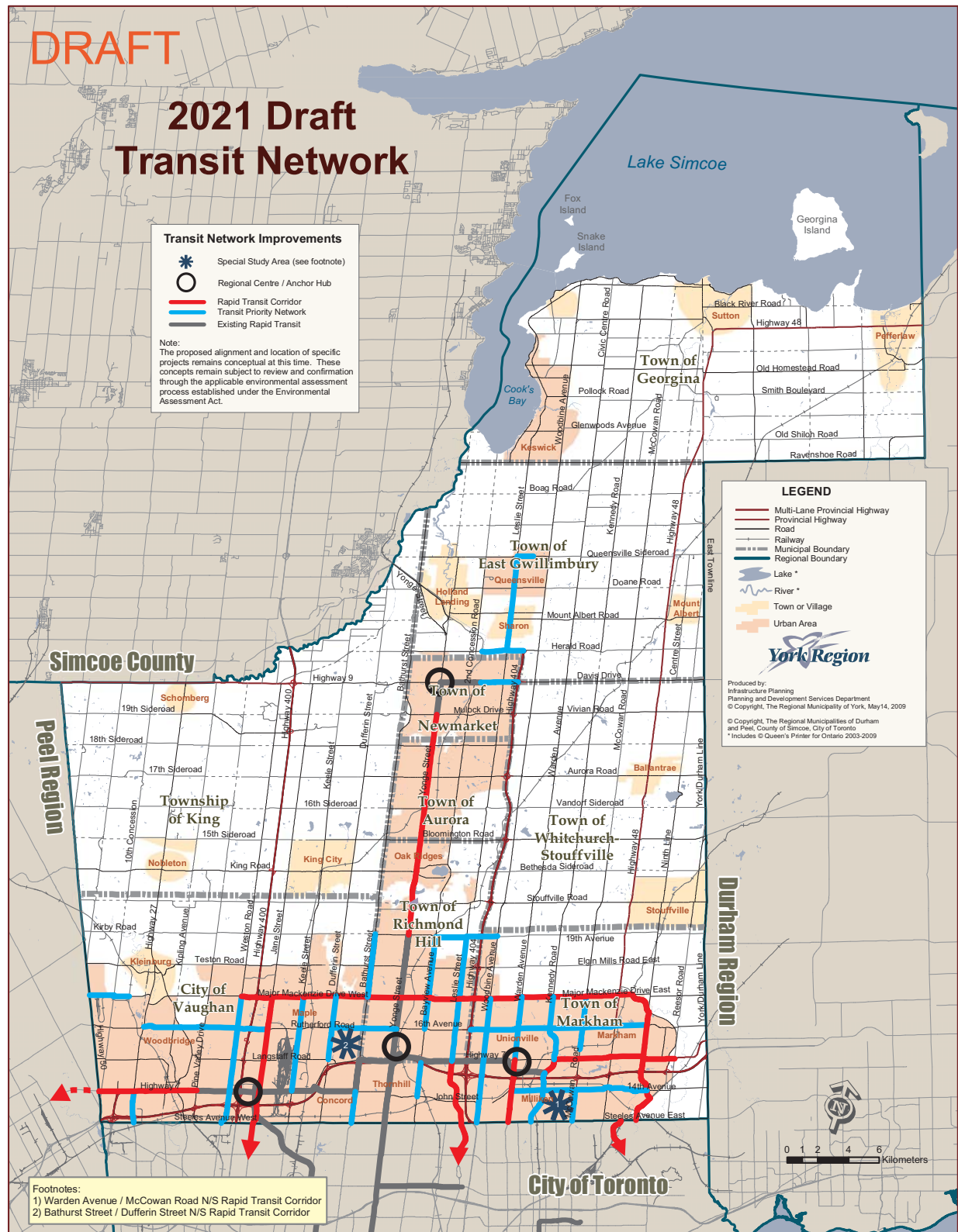
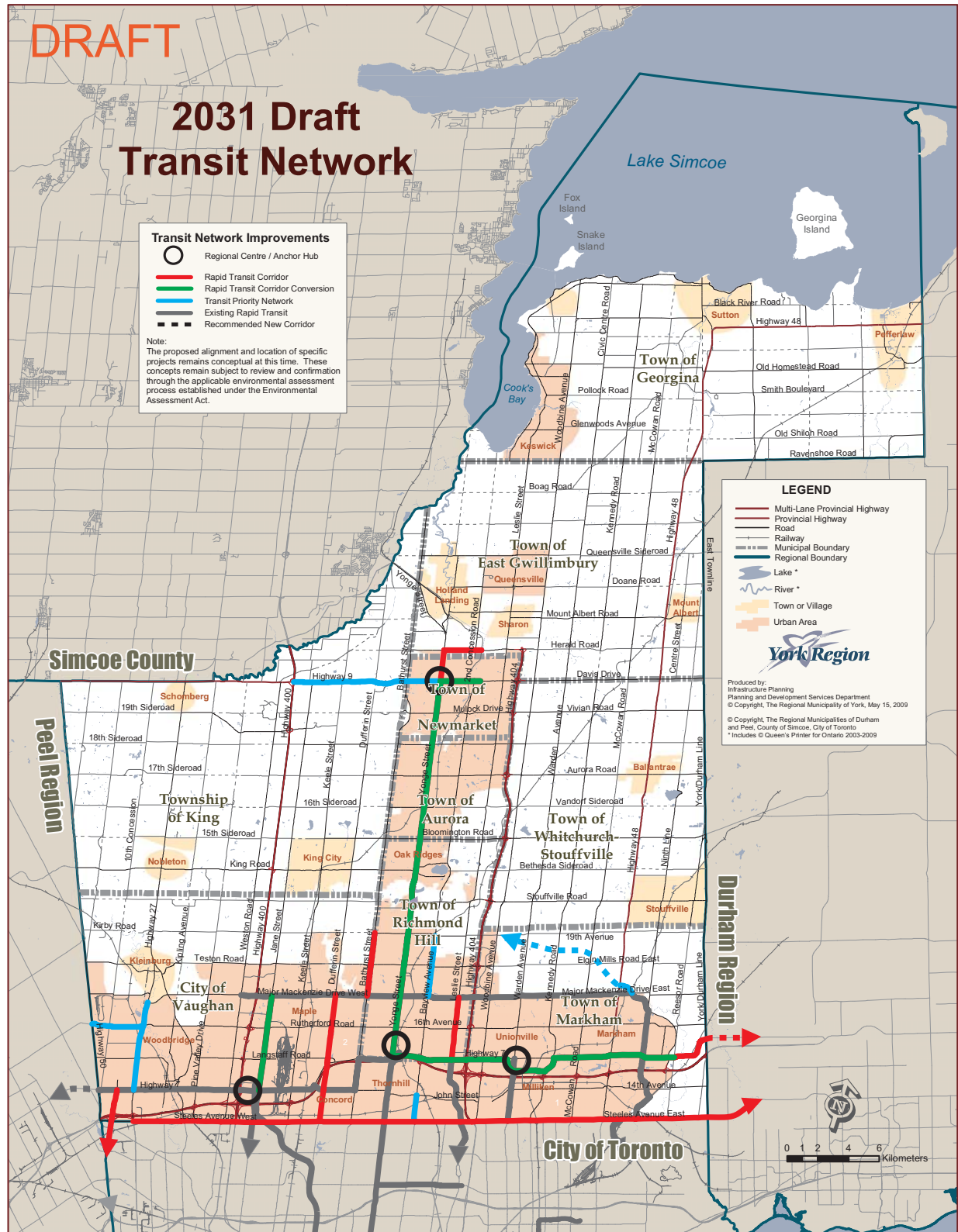


FIGURE 7.3

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Jane Street Rapid Transit Corridor (*Steeles Avenue to Major Mackenzie Drive West*)

The Spadina subway extension is projected to be in place by 2015 providing a flexible, high capacity and high speed alternative for trips to and from the Vaughan Corporate Centre and the Region in general. Additionally, the Jane LRT proposed by the City of Toronto is anticipated to be built by 2021. Extending a rapid transit corridor along Jane Street is expected to tap into Vaughan's employment and population growth planned along the Highway 400 and Weston Road corridors. Close to 1,700 riders are projected to use this transit line in the peak hour and peak direction.

Rapid transit service along this corridor by 2031 is foreseen as an extension of the Jane LRT line proposed by the City of Toronto. It is expected to greatly improve mode choices for the population and employment at the Vaughan Corporate Centre (VCC) and adjoining areas. The rapid transit corridor would provide a direct connection to the Spadina subway extension at the Vaughan Corporate Centre, and as noted above, to the Jane LRT proposed by the Toronto as part of the Transit City initiative. It will connect significant catchment areas, such as the proposed employment lands along Weston Road and Highway 400, Canada's Wonderland and Vaughan Mills Mall to the Vaughan Corporate Centre, and further south to York University.

Ninth Line Rapid Transit Corridor (*Steeles Avenue to Major Mackenzie Drive East*)

This segment of the rapid transit network would improve connections to the Cornell community and Markham-Stouffville Hospital. By 2021, over 1,000 riders are projected to use this line in the peak hour and peak direction; and by 2031, ridership is projected to exceed 1,400 riders during the peak hour. As noted above, both an increase in population to the west of Ninth Line as well as increases in employment at Highway 7 and Ninth Line will provide the appropriate support for the Ninth Line rapid transit corridor.

Warden Avenue – McCowan Road Rapid Transit Corridor (*Steeles Avenue to Highway 7*)

The Warden Avenue rapid transit line is contingent on the implementation of the Steeles Avenue rapid transit corridor. It would provide a north-south rapid transit connection between the Highway 7 and Steeles Avenue rapid transit corridors improving mobility and accessibility to the new Markham Centre mobility hub. In the Metrolinx RTP, a rapid transit line connecting Markham Centre to the Scarborough Town Centre is identified in the 25-year network plan. In this TMP Update, a further study is recommended to analyze the need for one or two north-south rapid transit corridors in Markham by 2021.



7.3.3 Long-term (20 years) – Figure 7.3

Steeles Avenue Rapid Transit Corridor (*Highway 27 to York-Durham Boundary*)

Steeles Avenue is one of the more heavily traveled roads in the Region, with traffic volumes ranging between 45,000 and 58,000 vehicles per day.¹ This is due in large part to the robust commercial activity along Steeles Avenue in Vaughan and Markham, as well residential intensification that exists at Ninth Line, McCowan Road, Yonge Street and Bathurst Street. Regional projections suggest that Steeles Avenue will continue to develop, with especially large employment growth projected in western Vaughan through 2031. Projected transit ridership is estimated to be 2,000 riders in the peak hour and in the peak direction by 2031, which meets the threshold established for a rapid transit corridor. Past studies completed for the Toronto Transit Commission (TTC) have already identified Steeles Avenue as an appropriate corridor for rapid transit service, connecting to other proposed or existing transit corridors in southern York Region. It is important to acknowledge that this project is identified in Metrolinx's Regional Plan as an approved project for the future.

Bathurst - Dufferin Street Rapid Transit Corridor (*Steeles Avenue to Gamble Road/19th Avenue*)

Bathurst Street through Vaughan and Richmond Hill is one of York Region's most congested roads, with traffic volumes ranging between 40,000 and 44,000 vehicles per day.² Likewise, Dufferin Street experiences very high traffic volumes (41,000 to 77,000 vehicles per day²). Medium residential and commercial densities extend along much of Bathurst Street, with lower densities existing along Dufferin Street. Significant population and employment growth along Bathurst Street is projected north of Steeles Avenue up to Major Mackenzie Drive; and along Dufferin Street between Rutherford Road and 19th Avenue. As a result of this projected growth, and to serve the nearly 1,200 riders in the peak hour and peak direction projected to use transit along this corridor, rapid transit service along the Bathurst-Dufferin Street corridor should be explored further to determine alignment and limits of the potential rapid transit line.

A summary of the benefits of the new rapid transit corridors proposed in York Region is identified in Table 7.1.

¹ Average Annual Daily Traffic (AADT) measured by the City of Toronto

² Average Annual Daily Traffic (AADT) measured by York Region

Table 7.1 Benefits Summary of New Rapid Transit Corridors

Benefits Initiative	Significantly Expanded Coverage	Service to New Growth Areas/Centres	Subway Feeder Service	High Projected Ridership
1. Jane Street (Steeles to Major Mackenzie)	✓	✓	✓	✓
2. Bathurst/Dufferin (Steeles to Elgin Mills)	✓	✓	✓	✓
3. Leslie/Don Mills (Steeles to Hwy. 7)	✓	✓	✓	✓
4. 9th Line (Hwy. 7 to Major Mackenzie)	✓	✓		✓
5. Major Mackenzie Drive (Weston to 9th Line)	✓	✓		✓
6. Steeles Avenue (Hwy. 27 to C.P. Havelock Sub for future GO Rail)	✓		✓	✓

7.3.4 Transit Priority Network Improvements

In concert with the phasing of the new rapid transit corridors, major trunk and feeder bus services must be given preferential treatment over automobiles to maintain service levels in terms of speed, frequency and reliability. The performance of these local transit corridors is critical to the success of the rapid transit network. To that end, the transit priority network improvements are phased to accommodate the phasing of growth and the rapid transit network as depicted in Figures 7.1 to 7.3.

7.3.5 Conversion of Transit Technologies

Figure 7.3 also depicts transit corridors that are recommended for conversion of transit technologies in the 2031 timeframe. As ridership levels increase, some of the lines that are recommended as part of the initial short term Transit Priority Network will need to transition from HOV and/or queue jump lanes to rapidways. The travel corridors that are recommended for this transition from Transit Priority Network to rapid transit include:

- Leslie Street from Highway 7 to Major Mackenzie Drive;
- Dufferin Street from Steeles Avenue to Langstaff Road;
- Yonge Street from Davis Drive to Green Lane; and
- Green Lane from Yonge Street to the East Gwillimbury GO Station.

Rapid Transit Corridors recommended for conversion from BRT to LRT by the 2031 horizon include the following segments:

- Yonge Street from Highway 7 to Davis Drive;
- Highway 7 from Yonge Street to Reesor Road;
- Jane Street from Highway 7 to Major Mackenzie Drive; and
- Davis Drive from Yonge Street to the Southlake Regional Health Centre.

Conversion of these transit corridors will depend on the level of ridership and travel demands in the future. As the initial technologies for the corridors are implemented, the ridership levels on the various segments will be monitored. Refinement of the segments, timing of the implementation, and the appropriate technologies will be based on the monitoring and adjusted as needed in future assessments of the transit corridors.

7.3.6 Conformance with the Metrolinx Regional Transportation Plan (The Big Move)

The approved Metrolinx RTP contains policies that require municipal plans to conform to the RTP. Enabling legislation is being developed to put these policies into effect.

The York Region Master Plan Update is closely aligned with the Metrolinx Regional Transportation Plan. The two plans are consistent in the following areas:

- focus on sustainability and non-auto modes of travel;
- transit network recommendations that are similar if not identical; and
- policies and initiatives that are complementary.

As to be expected, the recommended rapid transit network in the Transportation Master Plan is slightly different from the RTP network plan for York Region. The majority of rapid transit lines in the recommended transit network are included in the Metrolinx 25-year Network Plan. However, York Region has undertaken a more thorough analysis of its needs and taken a more aggressive approach to sustainable transportation. Not identified in the Metrolinx 25-year network plan is the Bathurst-Dufferin line. As well, the Major Mackenzie Drive line is identified by Metrolinx as needed beyond the 25-year



timeframe, whereas the Region has determined that this will be a vital corridor in the nearer future.

The slight network differences are likely the result of differences in the base assumptions of future conditions, that primarily being the growth projections and development phasing.

On the assumption that consistency and complementary network plans and policy recommendations define conformance, the updated Transportation Master Plan meets this condition and is therefore in conformity with the Metrolinx RTP.

7.4 PROPOSED PHASING: ROADWAYS

Based on the proposed enhancements to the Regional roadways, phasing plans have been developed which will provide a schedule for the roadway widenings and new road links that are necessary to accommodate the future growth in Regional population.

The road improvement phasing plans illustrated in **Figures 7.4, 7.5 and 7.6** are developed to support completion of the Regional road grid and to support major growth areas as early as possible.

Many other roadway improvements are also planned but are required primarily to provide transit priority. These roadway transit priority improvements are described in Section 7.3.4.

FIGURE 7.4

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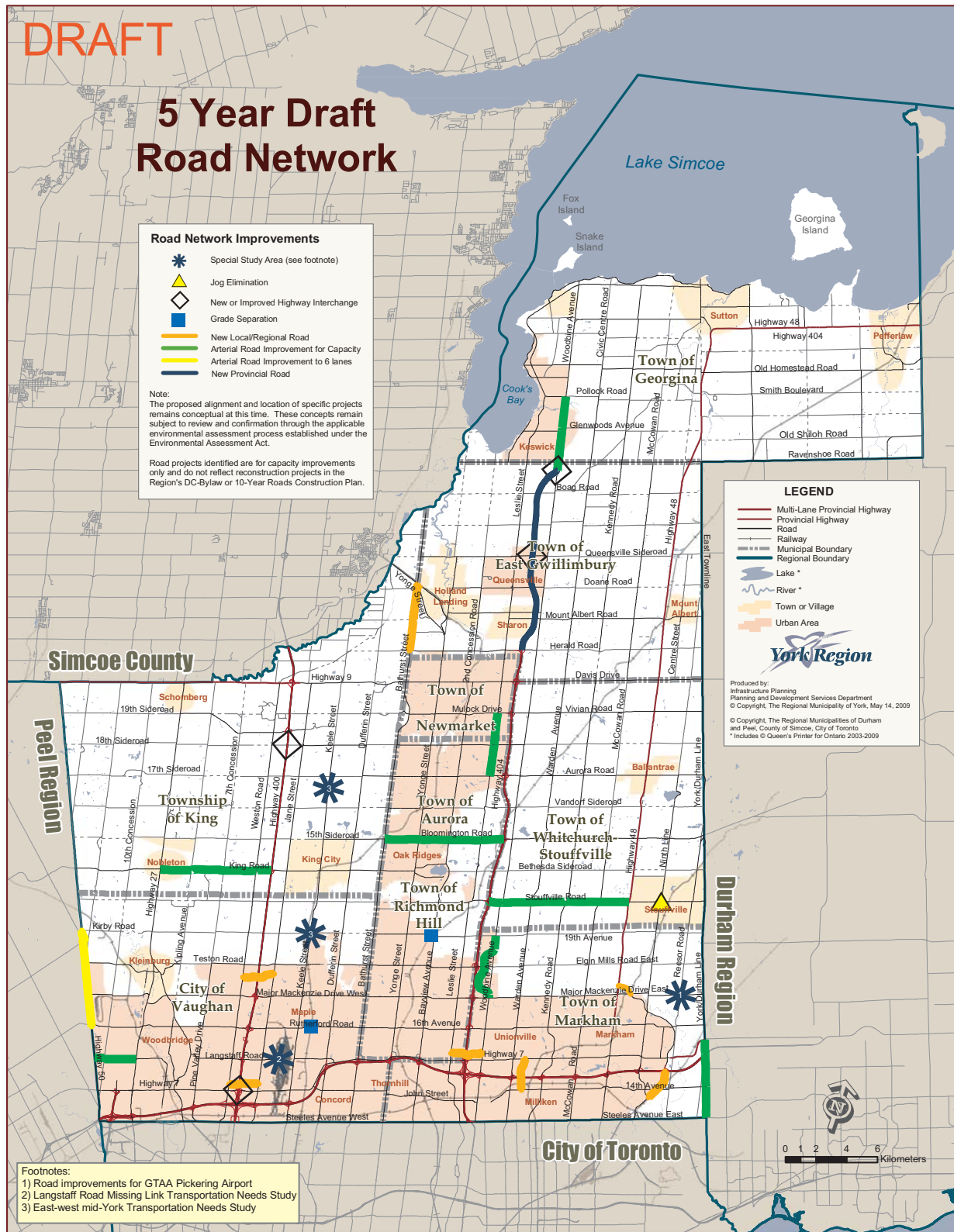


FIGURE 7.5

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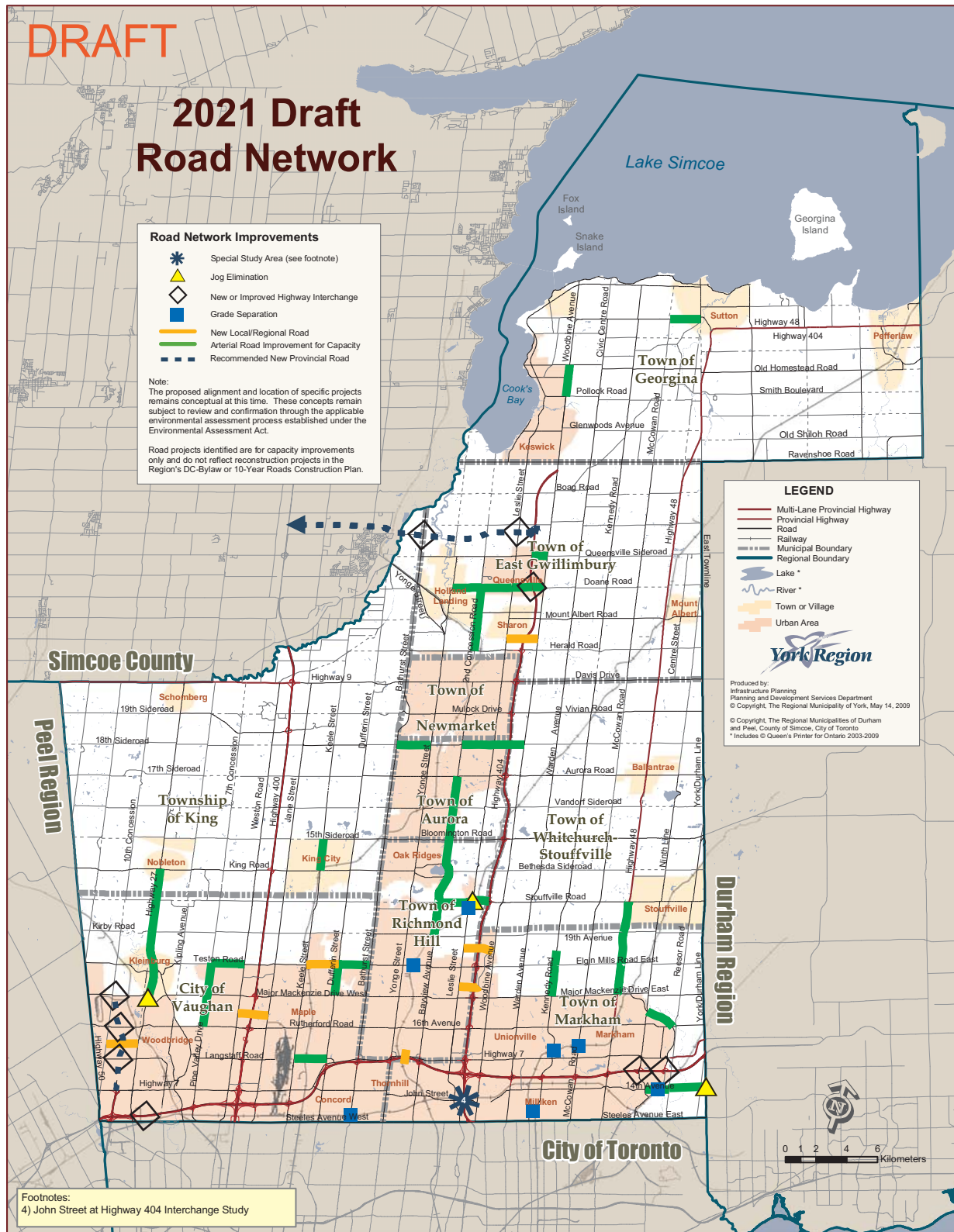
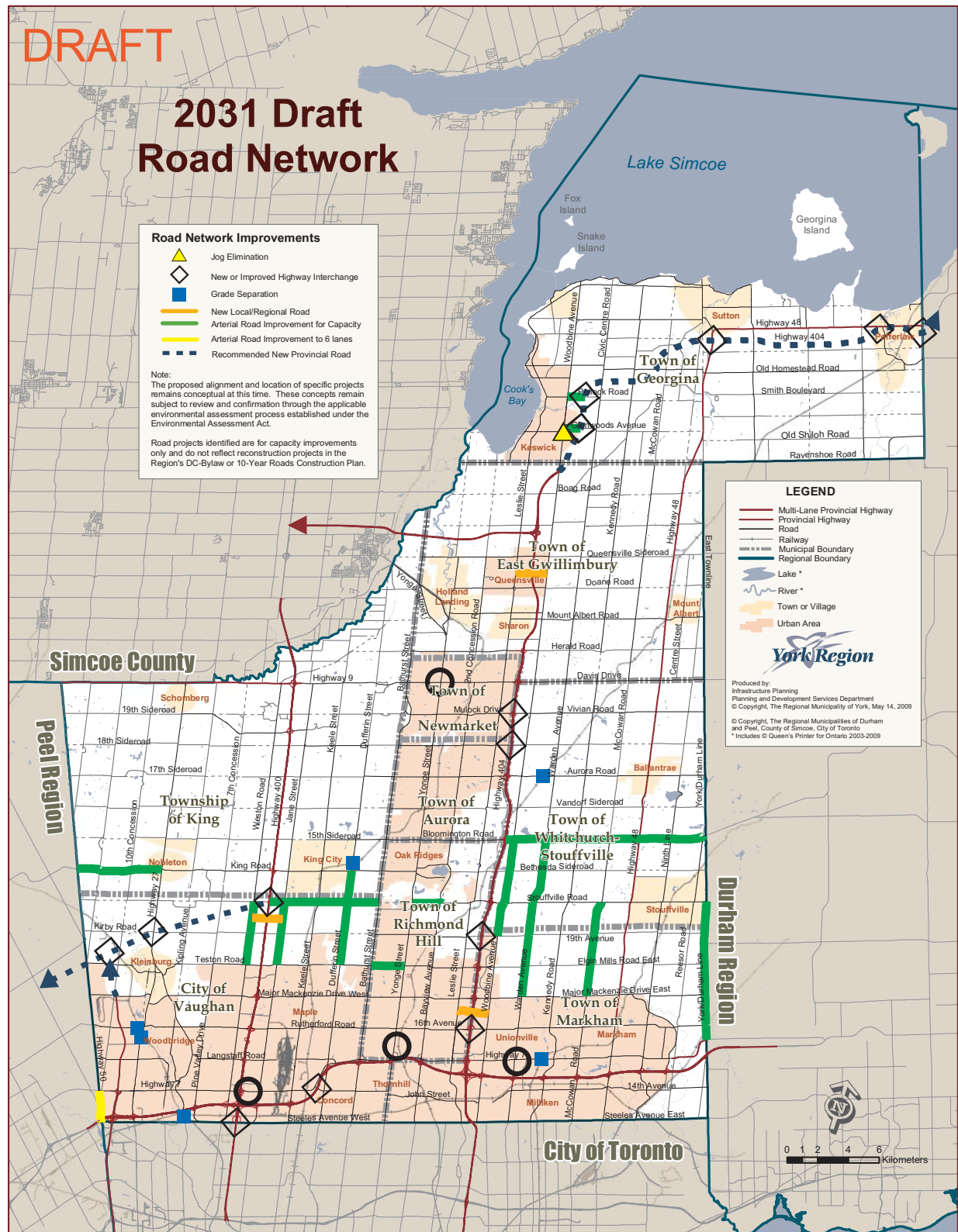


FIGURE 7.6

TRANSPORTATION MASTER PLAN UPDATE





8.0 IMPLEMENTATION STRATEGY

To-date the implementation of the rapid transit plan, Phase 1, has been a complete success, thanks to the direction of Regional Council, the financial commitment of senior levels of government, the support of regional staff and a clear and effective action plan. Building on the Region's tremendous success, the Region needs to continue to advance a long term strategy and plan. This strategy must be based on sustainability and aim to serve the "4 R's":

- Developing initiatives and strategies to **R**educe the need for travel;
- Providing more convenient and reliable **a**lternative modes;
- Enhancing public **t**ransit by improving existing infrastructure and services; and
- Optimizing **R**oads to accommodate all modes of travel, and expand roadways only when necessary.

In order to ensure continued success, the Region will need to evaluate and review its transportation organizational, governance and financial structure, to ensure that the new sustainable transportation strategies are being addressed and put into effect through a predictable financing model. This is discussed in greater detail in Section 8.2.

As might be expected, funding the plan will be the most significant challenge to realizing the transportation objectives. Construction cost increases and the doubling of rapid transit corridors required by 2031 have all contributed to a significant jump in the overall cost of the Master Plan relative to the 2002 TMP figures. The plan as developed is ambitious but it is also essential to address York Region's growing needs. York Region will not be able to do it alone without the financial assistance of both the provincial (Metrolinx) and federal governments.

8.1 PRICING THE TRANSPORTATION MASTER PLAN

The Transportation Master Plan Update is an undertaking that can only be implemented to the extent that funding is available. The recognition of the Region's transportation needs is acknowledged by the commitment to-date in transit infrastructure investments by the Province and Federal governments. Capital investments in the Region by the Province and the Federal government are vital to the successful implementation and

continuation of the initiatives laid out in this update. From the Region's perspective, the Plan will have to consider long term financing solutions such as bold, new and sustainable funding sources.

The following table provides a breakdown of the Transportation Master Plan Update projected costs. The TMP projects that transit expenditures up to and including 2031 are in the order of \$14.7 billion, plus an additional \$3.5 billion for roads. A detailed breakdown of the transit and road cost by corridor is provided in **Appendix O**.

Table 8.1 2031 TRANSPORTATION MASTER PLAN COST ESTIMATES

	COSTS (Millions) ¹	
	Capital	Annual Operating
REGIONAL TRANSIT		
Infrastructure Expansion ²	12,500	
Rehab/replacement	2,150	
Subtotal	14,650	700
REGIONAL ROADS		
Infrastructure Expansion ³	2,540	
Rehab/replacement	1,000	
Subtotal	3,540	80
PROGRAMS & INITIATIVES	150	10
TOTAL	18,340	800

Notes:

1. 2008 dollars
2. Excludes GO Rail improvements
3. Excludes provincial highway and interchange improvements

The 2031 TMP costs were estimated based on a number of factors. Site specific costing information was available for some corridors such as the Spadina Subway extension, what was identified in the capital budget and a number of other rapid transit corridors previously examined by the York Region Rapid Transit Corporation. Where more detailed information on specific corridor plans is not available, generalized per kilometre rates and unit values were used to estimate the costs. The unit rates for transit and road infrastructure costs were generated from actual York Region experience, where available, or from industry established estimates and adapted to suit York Region's needs. Annual road and transit maintenance and operating costs are again based on

York Region's experience, where available, as well as industry costs elsewhere such as from the TTC.

Doubling of rapid transit network contributes to Master Plan cost increase

The total Transportation Master Plan Update costs up to 2031 are estimated to be \$18.3 billion dollars, in 2008 dollars. When compared to the previous 2002 Master Plan the estimated costs were \$11.7 billion dollars, in equivalent 2008 dollars. The roads portion of the estimates has not changed significantly since 2002, having increased from \$2.7B in the 2002 TMP (adjusted to 2008 dollars) to approximately \$3.5 B in this Update. The increase in estimated costs over the 2002 estimate can be explained by the following four reasons:

- A significant amount of additional rapid transit infrastructure is needed to address growth;
- The overall recommended plan is designed to meet the sustainability goals of the Region, which means a higher emphasis on transit-related solutions;
- The cost of construction for various components of transportation projects has increased; and
- As the network of transit service is expanded and levels of service are enhanced, there will be substantial increases in operating costs.

These factors in combination drive the estimated cost of the updated Transportation Master Plan up when compared to the adjusted figure for the 2002 TMP.

Senior level government investment will be key to the success of this Master Plan

In terms of funding, it is assumed that all of the major rapid transit projects in York Region will be funded by Metrolinx or cost-shared with senior levels of government. All of the funding arrangement details may not be known at this time, but the basic premise is that most if not all capital infrastructure costs will be shared with senior levels of government. York Region will be responsible for all the transit and road operating costs, rehabilitation costs and other minor capital transit and road costs.

Of the proposed \$14.7B overall transit expenditure, it is estimated that York Region's preliminary share of the rapid transit network cost could be as low as \$2.6B, based on the following assumptions:

- That all projects in the draft Metrolinx Regional 25-year Network Transportation Plan will be fully funded by senior levels of government;

- Similar to the other projects in the Metrolinx Plan, the Major Mackenzie Drive line, the links to Major Mackenzie and the Bathurst-Dufferin line costs will be fully funded by the Province and Federal Government;
- The conversion cost of BRT lines to LRT technology are shared equally at one-third each by York Region, the Province and Federal Government; and
- Two-thirds of the cost to extend the Spadina Subway to Highway 7 has been committed by senior levels of government. The Region's share of the remaining one-third is approximately \$391M.

Asset maintenance and management will become important issues for York Region

The asset rehabilitation and replacement costs are also estimated to be much higher than today for both the transit and road components. The Region's infrastructure is aging and demanding greater resources and attention. It is estimated that over the next 20 to 25 years, the cost of maintaining our transit and road system will total \$2.2B and \$1B, respectively. The Region will need to develop a comprehensive asset management strategy to help manage its transportation system.

With an expanding transit and road system, the gross operating costs will also be substantially higher. The transit system cost will increase most rapidly to over \$700M per year by 2031. The road operating costs are estimated at \$80M per year by 2031.

Programs and policies to optimize and maximize the capacity and efficiency of the transportation networks will be important components of the transportation system.

Policies and programs costs have been estimated to be approximately \$150M. Unlike the infrastructure costs associated with the transit and road networks where unit costs are available, the costs of programs and strategies associated with the draft policy recommendations are more difficult to estimate. The programs and strategies include transportation demand management (TDM) measures, outreach and incentive programming for sustainable travel modes, special transportation studies and additional staffing resources. Without the benefit of having defined these components to a higher level of detail, it has been estimated that the costs of programs and strategies should be capped at 1% of the total transit and road infrastructure capital costs, which is \$150M.

Key considerations to successfully implement the Master Plan

In terms of costing and the subsequent funding of the Plan, the following key points must be noted:

- The transportation investment needed to address legislated growth in York Region is significant;
- York Region alone cannot bear the burden of the capital and operating cost requirements;
- The work of Metrolinx through its Regional Transportation Plan and associated Investment Strategy, and Provincial and Federal government funding to support the RTP will determine York Region's ability to accommodate the legislated growth; and
- York Region, its local municipalities, Metrolinx, the Province and Federal government must work together to ensure that continuous and necessary transportation investments are made in York Region over the next 25 years.

To address the growth projected over the next 25 years and to meet the sustainability goals of York Region, the Transportation Master Plan Update has recommended an extensive list of transit and road network improvements and policies and programs. These recommendations represent a significant increase in capital investment compared to the 2002 Transportation Master Plan, particularly for the rapid transit system. The gross investment needed to implement the recommendations of this study is in the range of \$18.3B. The current best estimate is that York Region's share of the capital cost of the recommended rapid transit network is about \$4.7B and \$3.5B for roads. This estimate is based on a set of assumptions that must be discussed and negotiated with Metrolinx and the Province over the next months and years. It assumes significant contributions each from the governments of Ontario and Canada for projects within and outside the 25-year network of the Metrolinx Regional Transportation Plan.

8.2 FUNDING

The following are four recommendations for the Region to follow in order to achieve the necessary level of funding for the TMP:

- Based on the Region's 25-year Fiscal Impact Analysis, the Region should work with Metrolinx to consider appropriate funding mechanisms and levels; and recommend a strategy for the future that is sustainable and in concert with the Metrolinx Investment Strategy Plan. It is important that the Region advocate that its needs are met while maintaining consistency with the Metrolinx Plan and complementary federal funding;
- Continue to seek support for guaranteed cash flows from the federal and provincial governments that can be used to service debt and accelerate investment;

- Work with the Province to modify the Development Charges Act to guarantee more support for transit and other sustainable transportation services; and
- Consider alternative methods of delivery for major infrastructure projects.

In terms of funding, the Metrolinx Plan references the MoveOntario 2020 plan which commits the Province to fund two-thirds of identified rapid transit projects with the remaining one-third anticipated to be provided by the Government of Canada. The \$17.5B MoveOntario 2020 announcement, of which \$11.5B has been committed by the Province, will fund the first part of the \$50B Metrolinx Plan. Within five years, Metrolinx in cooperation with the all the GTHA regions, will finalize an investment strategy to fund the remaining part of the plan.

Several alternative financing options are available to the Region, some of which are more suitable than others to implement. A discussion of potential financing options is provided below:

8.2.1 Improved Development Charges Act

For several years, the Region has used development charges and debt financing to finance a significant portion of its capital costs. In many cases, debt issued to finance a project is repaid, in part, by development charges. The use of debt financing continues to be a sound practice as it essentially spreads the cost of the asset over its useful life and is paid, at least in part, by those that are benefitting from the use of that asset. York Region may wish to consider a similar debt financing approach for the TMP projects and more specifically on all future purchases of standard buses, as well as LRT and BRT vehicles.

Development charges, currently employed by the Region, are an equitable form of taxation to pay for the public infrastructure necessary to support new developments. Development charges are imposed by York Region to recover the growth-related capital costs from residential and non-residential development that creates the need for the capital works. As the majority of York Region's capital expenditures are due to growth, development charges are a major source of funding for York Region's capital plan.

The Development Charges Act, 1997 states that costs eligible to be recovered from Development Charges must be calculated using a service level based on the average of the previous ten years. This penalizes municipalities like York Region that are introducing new services, as there is a minimal historic service level, which results in a smaller component of future costs that can be recovered. As well, transit services are

treated differently from roads in two significant ways. First, unlike capital expenditures on roads, a mandatory 10% reduction in costs eligible for recovery from development charges must be applied to transit capital expenditures. Second, although municipalities plan roads and transit as an integrated transportation system, a separate calculation of historical service levels must be undertaken for transit services. This further reduces the total transit capital expenditures eligible for recovery. Therefore, York Region, in partnership with other GTA municipalities, will be persuading and working with the Province to amend the Development Charges Act to provide more support for transit and other sustainable transportation services.

8.2.2 Tax Increment Financing (TIF)

Tax Increment Financing (TIF) is a tool that has been used primarily in the United States to finance redevelopment and community improvement projects. The principle of a TIF is to use the potential of higher property taxes resulting from the proposed improvements to finance the improvements themselves. TIF financing is normally applied only to larger infrastructure projects, due to the complexities of the contractual arrangements involved.

Although there has been no application so far, there is recent legislation in Ontario that permits Tax Increment Financing tools to be used to incentivize development opportunities. Although additional regulations are still required, TIFs are currently available for use on the Spadina Subway extension and on the Toronto Waterfront to assist in funding the revitalization of the lands adjacent to the Gardiner Expressway, should a decision be made to alter or remove the expressway. It should be noted that TIFs in Ontario are applied differently than they are applied in the United States.

York Region is embarking on some major new transportation projects, such as the Spadina and Yonge Subway extensions, which may have the potential to significantly increase development densities, higher activity uses, the value of land and the tax base. York Region should consider the opportunity to partially fund transportation projects using Tax Increment Financing tools. TIFs may be used to fund major transit infrastructure projects located around Regional Centres or Regional Corridors or large-scale road projects that could include exclusive transit or cycling lanes. In order to have the authority to collect TIF based revenues, the Region needs to first undertake feasibility studies which must be endorsed by the Province before passing the necessary regulations.

8.2.3 Joint Development Opportunities

One of the most successful prospects for value capture involves new development or redevelopment. Developers can often benefit directly by cooperating with transit agencies to make transit investments more productive. Developers can profit from being close to transit in several ways, such as: higher density zoning, reducing costs through lower parking ratios and targeting their development to Transit Oriented Development. A huge advantage can be achieved by integrating the transit planning and municipal planning functions to satisfy a common goal. As an example, Translink, the Greater Vancouver Transportation Authority, is a strong advocate of capitalizing on joint development opportunities and actively pursues the purchasing of properties around stations to assist in the development and value capture opportunities.

8.2.4 Public-Private Partnerships and Alternative Financing Procurement Methods

The term Public-Private Partnership (P3) is used to cover a wide range of contractual relationships and opportunities, where public agencies share the risks and benefits of infrastructure and service projects with the private sector. These contracts are sometimes referred to as Alternative Financing Procurement (AFP) projects and take the form of Design, Build & Finance (DBF), Design Build Maintain (DBM) or Design, Build, Finance, Operate and Maintain (DBFOM). This strategy does not help to provide additional sources of revenue but rather provides greater overall project Value for Money (VFM) and alternative financing options (streamlining of payments).

There is substantial Value for Money (VFM) that can be achieved in following an AFP method due to the benefits achieved in risk transfer and reduction. *Infrastructure Ontario* is in the process of undertaking a VFM analysis on all transportation projects that include provincial funding contributions, to determine if they should follow an AFP process. If the VFM analysis determines a positive result, *Infrastructure Ontario* will procure these projects using private sector financing as a base component of the contract. York Region will continue to work closely with the provincial and federal governments and follow their lead in this regard.

It should be noted that even if financing is not part of a P3 contract, there are still significant advantages to P3 initiatives. P3 contracts can usually be delivered much faster, at lower overall project costs, with the contractor assuming some of the project risks and with contractor warranties. These contracts usually take the form of Design Build (DB), Design Build Maintain (DBM) or Design Build Operate Maintain (DBOM).

York Region has developed some experience in this contract methodology through the procurement of Phase I of the York Region Rapid Transit Plan (Quick Start) contract.

8.2.5 Fuel Tax

Fuel taxes are one of the most equitable forms of user pay taxation. The amount of fuel purchased (and taxes paid) by motorists is a reflection of the amount of road travel, the vehicle fuel efficiency, the potential harm to the environment and wear and tear on the road infrastructure.

The recent Federal Gas Tax Transfer program has been well received by municipalities. It forms the basis for establishing a longer term, predictable funding source which will provide York Region with the additional resources to address its long term transportation needs.

The provincial government also announced a program in 2004 to share gas tax revenues with municipalities to help improve transit systems. The current program allocates two cents per litre to municipalities based on a formula that accounts for ridership (70%) and population (30%). This program provides a significant contribution to help offset York Region's investment in public transit. In 2009, it is estimated that the Region will receive \$14 million in gas tax revenue from the Province.

8.2.6 Parking Fees

Parking fees are another mechanism used by government agencies to subsidize transportation budgets and influence transit ridership.

Typical examples are paid on-street parking, public parking garages in urban centres, public parking lots in smaller retail centres, and parking lots associated with rapid transit facilities. The revenue generated by the parking fees can either go back into the municipal general revenues or be dedicated to a specific service such as transit.

Policies such as payment-in-lieu of parking can also benefit programs of development intensification. Payment-in-lieu involves developers providing a monetary payment to the government, in lieu of building required parking on site. The monies collected are grouped together to assist in developing central public parking facilities. This minimizes over-supply, and relieves developers of the burden of constructing and maintaining parking. Payment-in-lieu can be applied to commercial or residential developments. Commercial payment-in-lieu is more common, but residential payment-in-lieu can help

promote intensification, particularly in areas involving adaptive re-use or expansion of small buildings.

A very distinct form of parking tax was established in Vancouver, British Columbia as a user fee. *TransLink*, the Greater Vancouver Transportation Authority, was authorized to assess the parking tax, which was applied to non-residential parking sites within the Greater Vancouver Regional District (GVRD). The parking tax was set up to help fund the expansion of roads and transit services in the region. A Rate Bylaw established the rate per square metre of taxable parking area. The parking tax was calculated by multiplying the taxable parking area by the parking tax rate and included in the property tax notice issued by the municipality. It is noted that the application of the parking tax was controversial and has since been abandoned.

Although parking fees are not currently envisioned to be a primary funding opportunity, they must be considered a viable option for a longer term strategy. As outlined in more detail in Section 7.1 Proposed Phasing: Policies & Strategies, the Region should work with local municipalities to establish a Regional Parking Authority and develop specific parking strategies for the short term and longer term future.

8.2.7 Road User Fees – License Fees

Although there is special legislation in place for a number of Ontario municipalities, with the exception of the City of Toronto, the ability to raise revenue is generally that defined in the Municipal Act 2001. Powers are limited to property based taxation, user fees and charges and development charges which are governed by the *Development Charges Act 1997*. The Region's traditional means of raising revenues is currently limited to development charges, property taxes, user rates for water and wastewater and debt financing.

The recent City of Toronto Act is unique in that it applies very specifically to the City and greatly expands Toronto's ability to raise revenues through new powers of direct taxation. Although there are significant restrictions limiting the City's abilities, Toronto has used this legislation to impose its own land transfer and vehicle registration tax. This ability to impose direct taxation is unique to Toronto and would not be available as an option to York Region without similar legislation.

Very generally, the City of Toronto can now impose direct taxation with the exception of:

- Income tax

- Capital tax
- Tax on machinery used in R&D
- Hotel tax (note sales tax exemptions)
- Tax relating to gasoline sales
- Tax on energy used
- Wealth/inheritance tax
- Poll tax
- Tax on the generation/extraction etc. of natural resources
- Sales tax, with the exception of a permitted sales tax on:
 - Admission to places of amusement
 - Purchase of liquor for use or consumption
 - Production of beer or wine at a brew on premise facility for use or consumption
 - Purchase of tobacco

It appears that this leaves the City with significant revenue generating powers such as the ability to charge tolls, access fees, etc. From the legislation it also appears that there are no restrictions on how revenues raised are to be used; that is, there is no need to link, for example, revenues from license fees to roads expenditures.

8.2.8 Road User Fees – Congestion Pricing

Road user fees are not a new idea. Road tolls have been used for centuries as a means to fund the construction and maintenance of transportation infrastructure. There are many forms of user fees in existence in Ontario, including the aforementioned license fees, but also include: highway tolls, parking fees and transit fares.

The premise behind congestion pricing is three-fold: charge fees to those who benefit from the infrastructure, create the need for the infrastructure and impose societal costs related to the implementation or use thereof.

As many North American communities now recognize, traffic congestion is one of our most significant problems. The problem is not only one of convenience - it is having a major impact on the health and vitality of urban areas and a detrimental effect on the economy by impacting on the ability to move goods and conduct business. Recently, there has been a move to try to control traffic congestion by discouraging automobile travel and influencing the transportation mode choice through application of road user fees. Although congestion pricing has been applied in a number of cities around the

world such as Singapore, Stockholm, Oslo, Trondheim and Bergen, recent congestion pricing implemented in London, England has made headlines by being the first large scale application of this system.

The London program applies a charge that targeted automobile use within the downtown perimeter during specific hours of the day. Since its inception in February 2003, there have been a number of adjustments made to the way the charge is applied, including increasing the charge itself. On the first day of implementing the fee, there was a 25% reduction in traffic volumes; in the first month, traffic lowered 15% from pre-charge levels; and in the first six months, 60,000 fewer vehicles per day had entered the central zone. A larger than anticipated reduction in traffic numbers meant that annual revenues (£68M) were well below the 2001 estimate of £200M.

There are a number of other 'lessons learned' from the London experience:

- Significant ITS equipment is required to collect, monitor and enforce congestion charge payments. Systems such as CCTV cameras, optical character recognition systems and staff to confirm and issue violation notices are required;
- Fines must be established and collected. Arguably, more money could be made from the fines than the charge itself;
- In mixed zones of residential, commercial and industrial uses, residential users could be unfairly targeted to carry a larger proportion of the costs, while those living outside the area do not have to incur this cost;
- Some critics state that congestion pricing is a discriminatory tax, unfairly targeting lower income groups that cannot afford to pay the price of privileged admission; and
- Some critics also claim that the congestion charge affects business and industry in the target area by making it more difficult for customers, employees and trades people to access the area.

York Region, with its multiple business centres, some of which are adjacent to provincial highways or are centred on major arterial routes, would be a difficult area to implement a London-style congestion pricing plan. For this to be feasible there must be a destination with a "critical mass", and a workable plan to deal with through traffic.

It is likely that congestion pricing would also be contentious at this stage in the Region's movement to urbanize. Road user fees would likely also cause significant diversion to other municipal roads and could be expensive to administer and enforce.

Metrolinx will undoubtedly be considering road user fees as part of their investment strategy tools. York Region may wish to follow the lead set by Metrolinx since road user fees are likely more effective and impartial on a GTHA scale than a Regional scale.

8.3 ORGANIZATIONAL RESOURCE NEEDS

Ever-growing development and the resulting movement of people and goods in and around York Region have put tremendous pressure on both Regional and municipal authorities to develop strategies and to establish an implementation plan to deal with the anticipated challenges. Appropriate governance models are essential to ensuring the right things are done and that things are done right.

York Region is looking to emerge as the leader in building sustainable transportation services on a Regional scale. In order to implement all components of the TMP Update, it is critical that the appropriate organization structure, staff and processes be put in place to support the Regional Official Plan (ROP) policies, once the necessary changes are made to the appropriate Provincial legislation. These changes are necessary in order to provide the Region with the ability to implement the initiatives where authority does not presently exist.

The Regional strategies and initiatives identified in Sections 6 and 7 covers the following areas:

- Transit;
- Active Transportation;
- Planning and Design;
- Intelligent Transportation System & New Technologies;
- Roadways and Highways;
- Transit Oriented Development;
- Transportation Demand Management;
- Parking;
- Regional Collaboration;
- Goods Movement;
- Funding;
- Marketing and Education; and
- Environmental Protection Measures.

For each of the categories listed above, it is desirable that staff members have the following skills, capabilities and attributes:

- Managers and supporting staff members should build upon their skill sets by attending relevant training courses, seminars and conferences. Staff members should be encouraged to join applicable associations or organizations in order learn the current trends and advancements in their respective fields;
- Staff members should be innovators and educators who are capable of inspiring others;
- Technical expertise will be of the utmost importance; however, this expertise must be complemented by exemplary communications skills; and
- Staff creativity will also be a strong asset. As this TMP Update moves forward, new challenges will undoubtedly arise, and many of the solutions will come from thinking “outside the box”.

This corporate strategy, in regard to the TMP, will focus on maximizing York Region’s resources in order to successfully implement these policies. There are number of considerations that require a well thought-out strategy and an organizational model, which are outlined in Table 8.2.

York Region’s ability to deliver the Transportation Master Plan will be dependent on the current and future strength of its staffing resources, and the corresponding policy support and organizational “tools”. Early success in the marketing and communications of the TMP to key stakeholders will be vital to the successful implementation of the major components of the TMP. As such, there are a number of key short and long term measures that must be implemented, including:

- Establish a Pedestrian and Cycling & TDM Implementation Group
 - To consist of planners and engineers who will oversee all Active and Alternative Transportation initiatives including the Pedestrian and Cycling Master Plan and the TDM recommendations outlined in the Background Paper on TDM (**Appendix P**).
 - To deliver effective education and marketing of Regional programs;
- Expand existing resources
 - To ensure efficient and reliable integration and coordination of all current and future local and rapid transit services; and



- To ensure that the improvements detailed in this TMP follow the appropriate processes and that all legal matters relating to authority are dealt with in an appropriate manner.
- Resource needs to implement the Intelligent Transportation System Strategy
- Resource needs to develop and implement an asset management strategy
- Resource needs to develop a strategy and to establish a Regional Parking Authority

Table 8.2- Funding Considerations and Goals

CONSIDERATION	GOAL
i. The Transit and Active Transportation components require close coordination with other agencies such as GO Transit, TTC, Brampton Transit and Durham Region Transit.	To discuss initiatives such as shared terminals, integrated fares, and the installation of bike racks on buses.
ii. The Planning and Design component requires amendments in the existing municipal and Regional policies and by-laws.	Of particular interest will be the inclusion of Transit Oriented Development and associated changes in the ROP. This will require additional staffing to ensure that these initiatives can be completed within a reasonable time frame.
iii. Review of existing standards and adoption of the CITE guidelines.	To promote sustainable transportation infrastructure.
iv. Integration of the transit network with the network of pedestrian and cycling facilities, and developing the necessary guidelines and standards.	To ensure inter-modal connectivity.
v. Development of Best Practices Handbooks.	To aid in the development and implementation of Regional initiatives.
vi. Introduction of regulations that would require developers to provide high-quality pedestrian connections as part of the approvals process in urban areas.	To promote active and sustainable transportation in the Region.
vii. Development of Financial Incentive Programs to promote sustainable modes.	To ensure that sustainable alternatives are properly funded.
viii. Development of websites and associated materials for planners, developers, policy makers and citizens.	To assist in the dissemination of information for employers, employees and residents of the Region.
ix. Develop a mechanism to assess the redevelopment potential of sites and review potential sites for TOD.	To help reduce the reliance on the single occupant vehicle use while promoting transit.
x. The ITS component requires specialized resources in terms of staff and equipment.	To ensure the complete and proper implementation of ITS technologies.
xi. Development of a web-based delivery of real time traffic information to assist drivers in determining times and travel routes.	To help reduce congestion in the Region and aid in the promotion of sustainable transportation alternatives.
xii. Development of a discounted university and college transit pass program.	To promote public transportation usage amongst a large, highly specific demographic.
xiii. Development of TDM promotional plans.	To ensure that people in the Region are aware of TDM initiatives.
xiv. Establish a Regional Parking Authority to introduce new provisions in order to implement parking strategies and a Parking Management Program at the Regional level.	To solidify the shift in thinking towards sustainable transportation choices.
xv. Goods movement within and outside of the Region is a complex issue and requires extensive coordination between concerned agencies and stakeholders.	To ensure that goods movement does not significantly contribute to congestion during peak hours.
xvi. Marketing and education is an essential component to create awareness amongst all citizens, employees and employers in York Region.	To encourage and promote the initiatives and services outlined in this TMP.

9.0 MOVING FROM CONCEPT TO REALITY

9.1 5-YEAR ACTION PLAN

As a result of this Transportation Master Plan, the Region of York is poised to implement several bold sustainable transportation initiatives over the next 30 years. The next five years will, in many respects, serve as the foundation for what is to come relative to enhancements to York Region's transportation system. A new immediate action plan is therefore needed to focus all Regional efforts on supportive initiatives that will ensure these actions and investments are coordinated and as cost-effective as possible. The next few years will be the dawn of a new era in sustainability in York Region. Every effort must be made to prove these investments have value. **Table 9.1** depicts the Region's Five Year Key Action Plan in support of a more sustainable environment.

Table 9.1 – Five Year Action Plan - Transit, Roadway and Policy Improvements

Transit Improvements	York Region Actions
Yonge Subway Extension	Continue to work with Metrolinx, the Provincial and Federal Governments to prioritize and fund this project.
Environmental Assessment (EA) Studies of new Rapid Transit Service	- Initiate and complete conceptual and functional planning studies to better define the alignments of the Bathurst-Dufferin Street and new Markham North-South corridors. - Initiate and complete Municipal Class EA studies for rapid transit corridors identified in Chapter 7.2 to identify feasible technologies, alignment and station locations (excluding those EA's already undertaken).
Sustainable Travel Choices and EA Studies for the Transit Priority Network in Markham	- Complete the study to identify and assess options for the Transit Priority Network in the Town of Markham. - Complete the associated transit priority improvement EA studies.
New GO Transit Stations	- Partner with GO Transit, Metrolinx and local municipalities to assess the feasibility of new park-and-ride stations along several existing rail lines. - Develop further promotion of walking, cycling and transit connections to and from GO Rail Stations.

Roadway Initiatives	York Region Actions
Bradford Bypass	Work with the Province and Metrolinx to re-confirm the need for the Bradford Bypass, and ensure that this important freeway link is included in the Provincial growth plan.
GTA West Transportation Corridor	Assist MTO and the City of Vaughan to determine the location of the alignment and interchange with Highway 400 and Highway 427 extension.
Mid-York E-W Transportation Corridor	Complete a needs assessment and initiate the corresponding environmental assessment studies.
Mid-block collector road crossings of 400-series highways	Explore and report to Regional Council on an expanded Regional policy on these vital roadways.
Highway 427 Extension	Work with the Province in concert with the City of Vaughan and Peel Region to include this project in the Provincial highway 5-year capital plan (Southern Ontario Highway Program) as soon as the environmental assessment is approved.
Highways 400 and 404 HOV lanes	Work with the Province to ensure that these HOV lane widenings are included in the Provincial highway 5-year capital plan for construction.
Integrated Intelligent Transportation System (ITS)	Develop and implement an integrated ITS strategy that encompass transit and traffic management systems as well as traveller information systems.

Policies and Strategies	York Region Actions
Update policies regarding provision of sidewalks on Regional and key collector roads in urban areas.	- Consult with local municipalities to develop an extensive plan for the provision of sidewalks along all Regional roads where York Region Transit operates, as well as key collector roads with YRT routes. - Identify Regional and local roads in urban areas and along major roadways where sidewalks are currently lacking.

Policies and Strategies	York Region Actions
Create a site plan checklist to gauge TOD elements of a proposed development.	- Identify an internal team to develop the site plan checklist and review with local municipalities. - Develop a checklist to assess the redevelopment potential of lands adjacent to transit stations within Regional Centres and Corridors where there is a good opportunity for TOD.
Require TDM plans or strategies for major development applications.	- Undertake a Best Practices of North American municipalities who require TDM plans for large businesses - to assess various approaches. - Develop a Regional policy and amend the Official Plan to require plans or strategies for major developments
Transit Incentives	Undertake a Best Practices of North American municipalities who have implemented similar incentive programs for employees, students, the elderly and others.
Coordinate with local municipalities to develop a Parking Authority that would set a parking policy within York Region.	- Undertake a Best Practices of North American municipalities who have Parking Authorities in place; identify roles, responsibilities and organizational arrangements. - Explore the development of a Parking Authority in consultation with local municipalities and others.
Cycling and Pedestrian Master Plan Recommendations	- Work with local partners to implement the short-term policies and recommendations in the Region's Pedestrian and Cycling Master Plan. - Develop an annual assessment to evaluate the progress of the municipal pedestrian and cycling master plan implementation.
Partner with Metrolinx and other agencies to implement Regional bike-sharing programs	- In partnership with Metrolinx, explore the opportunities and challenges to implement a bike sharing program in York Region. - Identify municipalities and specific areas or districts where a bike-sharing program may be practical. - Identify potential funding sources for bike sharing program.

The Region will undertake additional measures to ensure that priorities identified in the Master Plan are appropriately carried through, including:

- Inclusion of road and transit recommendations into the Region's 10-Year Capital Works Plan;
- Incorporation of recommendations into the Region's Official Plan;
- Strengthening regional and local partnerships in support of sustainable transportation policy initiatives; and
- Updating the Development Charges Bylaw to reflect the transportation recommendations proposed in this Master Plan.

9.2 MEASURING PROGRESS...AND SUCCESS

The turtle makes progress only when he sticks his neck out.

-James Bryant Conant, former Harvard University President and Scientist

York Region recognizes that the success of this document depends on our ability to “stick out our necks” by regularly tracking the progress of the Transportation Master Plan’s recommended actions and strategies. As such, progress will be monitored in several key ways:

- Preparation of an annual report to Council that updates the progress of the five-year action plan;
- Conducting a random sample public opinion survey with York Region residents and businesses approximately every two years to assess changes in travel behaviour, and to evaluate whether the Region’s sustainable transportation message is understood and recognized. This survey would supplement the data collected in the Transportation Tomorrow Survey which is undertaken every five years;
- Monitoring statistical trends of transit users, cyclists and pedestrians; and
- Measuring annual greenhouse gas and other emissions to reduce the Region’s carbon footprint.



9.3 FREQUENCY OF MASTER PLAN UPDATES

This update to the Transportation Master Plan is based on the planning, senior level government funding and economic conditions that prevailed in and around 2008-2009. As evidenced in the last 10 years, these conditions can change rapidly and significantly, and often are the results of global or national economic and political changes.

When these changes occur, they have direct impacts on the ability of York Region to implement the TMP as the base assumptions on development phasing, funding availability and financial sustainability of proposed transportation infrastructure are no longer valid.

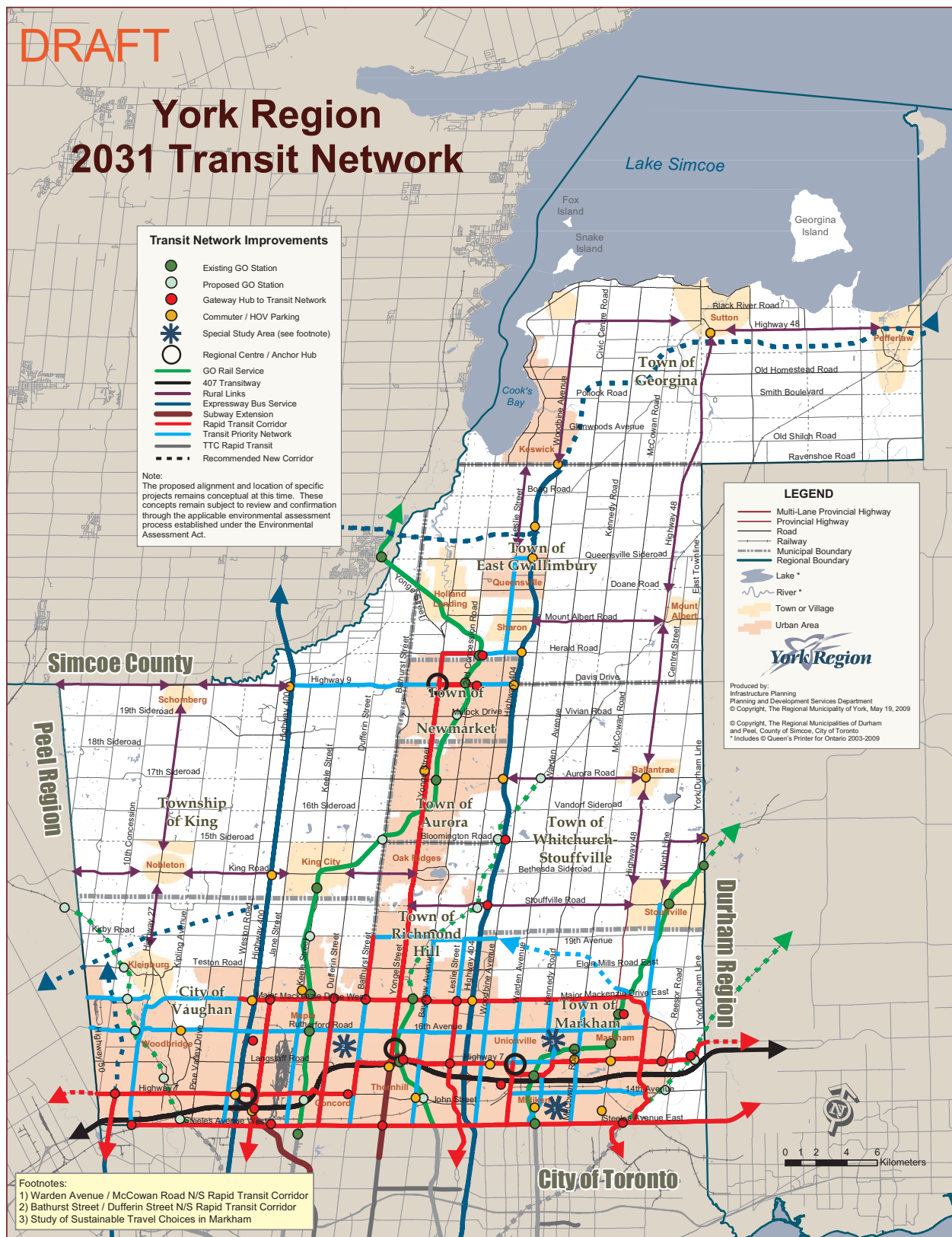
Therefore, the case can be made that updates to the Transportation Master Plan should be made more frequently than the normal 5-year cycle. Logically, the TMP should be updated when the major base assumptions of the TMP are no longer appropriate given the conditions that exist at that time. The monitoring and annual report on the progress of the Five-Year Action Plan could also include an assessment of the above conditions to determine if an update of the TMP is necessary.

9.4 MOVING TOWARDS A SUSTAINABLE REGION

From Planning to Implementation to Monitoring, York Region is committed to a quality of life second to none in Canada. This Transportation Master Plan represents the vehicle in which we will manage growth in a sustainable manner ensuring that all of our initiatives aim to simultaneously create environmental, social and economic benefits and value. The innovative process that we have developed for this undertaking, as well as the bold strategies that we have recommended clearly - and proudly illustrate - that we are making great strides Towards a Sustainable Region.

DRAFT

York Region 2031 Transit Network



DRAFT

York Region 2031 Road Network

Road Network Improvements

- Jog Elimination
- New or Improved Highway Interchange
- Grade Separation
- Special Study Area (see footnote)
- Regional Centres
- New Local/Regional Road
- Arterial Road Improvement for Capacity
- Arterial Road Improvement to 6 lanes
- Road Improvements to support Transit
- New Provincial Road
- Provincial Road Improvement
- Recommended New Corridor

Note:
The proposed alignment and location of specific projects remains conceptual at this time. These concepts remain subject to review and confirmation through the applicable environmental assessment process established under the Environmental Assessment Act.

Road projects identified are for capacity improvements only and do not reflect reconstruction projects in the Region's DC-Bylaw or 10-Year Roads Construction Plan.

LEGEND

- Multi-Lane Provincial Highway
- Provincial Highway
- Road
- Railway
- Municipal Boundary
- Regional Boundary
- Lake *
- River *
- Town or Village
- Urban Area

York Region

Produced by:
Infrastructure Planning
Planning and Development Services Department
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- Footnotes:
- 1) Road improvements for GTAA Pickering Airport
 - 2) Langstaff Road Missing Link Transportation Needs Study
 - 3) East-west mid-York Transportation Needs Study
 - 4) John Street at Highway 404 Interchange Study