



# Transportation Master Plan

## Advisory Task Force



Network Alternatives & Phasing Strategy | February 2016

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## Purpose & Introduction

This is the fourth in a series of guidebooks for the Transportation Master Plan (TMP) Advisory Task Force. The first and second guidebooks focused on the background and development of the recommended policy principles and the the third focused on the draft network alternatives compared with the Council approved 2009 Transportation Master Plan.

The purpose of this fourth guidebook is to provide the recommended network alternatives and provide the proposed phasing strategy to implement the recommended improvements by 2021, 2026, 2031 and 2041. These phasing times reflect 5-year increments to support horizon years in the 10-year capital Plan, 2009 Transportation Master Plan, the Provincial Growth Plan as well as Provincial investments, such as Regional Express Rail. The transportation funding options, including alternative sources of funding and traditional sources of funding are also explained in this guidebook.

## Linking the TMP to Goals and Objectives of Key Council Approved Plans

The Transportation Master Plan (TMP) Update aligns with the vision, goals and objectives of key Council approved plans, including Vision 2051, Regional Official Plan and the 2015 - 2019 Strategic Plan. The **Regional Official Plan (2010)** has several progressive objectives and policies, specifically within Sections 5 and 7, that are further supported with the 2016 TMP Update, some of which are highlighted on the table on page 3.



York Region's hierarchy of planning and accountability framework



## Linking the TMP to Goals and Objectives of Key Council Approved Plans

TMP Update Objective	Vision 2051	Regional Official Plan, 2010 (Chapters 5 and 7)	2015 - 2019 Strategic Plan
<p><b>1</b></p> <p><b>Create a World Class Transit System</b></p>	<ul style="list-style-type: none"> <li>• Livable cities and complete communities</li> <li>• Living Sustainably</li> <li>• Interconnected system for mobility</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure streets support all modes of transportation including walking, cycling, transit, automobile use, and the efficient movement of goods</li> <li>• Provide transit service that is convenient and accessible to all residents and workers of York Region</li> </ul>	<ul style="list-style-type: none"> <li>• Manage Environmentally Sustainable Growth</li> </ul>
<p><b>2</b></p> <p><b>Develop a Road Network Fit for the Future</b></p>	<ul style="list-style-type: none"> <li>• An innovation economy</li> <li>• Interconnected system for mobility</li> </ul>	<ul style="list-style-type: none"> <li>• Plan and protect future urban and rural streets to accommodate transportation demands</li> </ul>	<ul style="list-style-type: none"> <li>• Manage Environmentally Sustainable Growth</li> <li>• Strengthen the Region's Economy</li> </ul>
<p><b>3</b></p> <p><b>Integrate Active Transportation in Urban Areas</b></p>	<ul style="list-style-type: none"> <li>• Interconnected system for mobility</li> <li>• Living Sustainably</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure streets support all modes of transportation including walking, cycling, transit, automobile use, and the efficient movement of goods</li> <li>• Create an active transportation system and programs that encourage walking, cycling and the use of public transit</li> <li>• Reduce automobile dependence by enhancing opportunities for residents and workers to walk, cycle, take transit and carpool</li> </ul>	<ul style="list-style-type: none"> <li>• Support Community Health and Wellbeing</li> </ul>
<p><b>4</b></p> <p><b>Maximize the Potential of Employment Areas</b></p>	<ul style="list-style-type: none"> <li>• A place where everyone can thrive</li> <li>• An innovation economy</li> </ul>	<ul style="list-style-type: none"> <li>• Promote a linked and efficient network for goods movement that supports economic vitality and minimizes conflicts with adjacent land uses</li> <li>• Ensure streets support all modes of transportation including walking, cycling, transit, automobile use, and the efficient movement of goods</li> <li>• Reduce automobile dependence by enhancing opportunities for residents and workers to walk, cycle, take transit and carpool</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen the Region's Economy</li> </ul>
<p><b>5</b></p> <p><b>Making the Last Mile Work</b></p>	<ul style="list-style-type: none"> <li>• Interconnected system for mobility</li> <li>• Livable cities and complete communities</li> </ul>	<ul style="list-style-type: none"> <li>• Create an active transportation system and programs that encourage walking, cycling and the use of public transit</li> <li>• Achieve attractive and vibrant urban Regional Corridors that link Regional Centres</li> <li>• Achieve complete, diverse, compact, vibrant, integrated and well-designed Regional Centres that serve as focal points for housing, employment, cultural and community facilities, and transit connections</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen the Region's Economy</li> <li>• Manage Environmentally Sustainable Growth</li> <li>• Support Community Health and Wellbeing</li> </ul>

## Network Phasing

In order to determine the most appropriate timing for the various projects identified in the draft Transportation Master Plan, projects were evaluated on a 2 km by 2 km segment basis using consistent criteria. This review was done to enable a quantitative, evidence-based evaluation to inform the proposed timing / phasing of the projects to service growth to 2041. The criteria reviewed fall under four categories:



**Capacity** (current and projected future V/C to 2041)



**Development** (current active development, population growth, employment growth)



**Multi-modal** (bus, truck, connection to highways, connections to centres and corridors)



**Population and Employment** (current population and employment)

This preliminary phasing represents the need for the various projects and the earliest possible completion dates to service growth to 2041 and meet the objectives of the Transportation Master Plan. All projects will have to be programmed into the Ten Year Capital Plan through the annual evaluation of spending

## Assumptions to Support the Recommended Network

In order to determine the transportation network recommendations for the TMP to 2041, the following key assumptions were made:

- Existing projects that are committed and under construction are assumed complete
- 40% Land Use Intensification Scenario for Population and Employment Forecasts
- Regional Express Rail implemented on the Stouffville and Barrie GO Train lines by 2025
- Highway 427 extension to Major Mackenzie will be opened by 2021

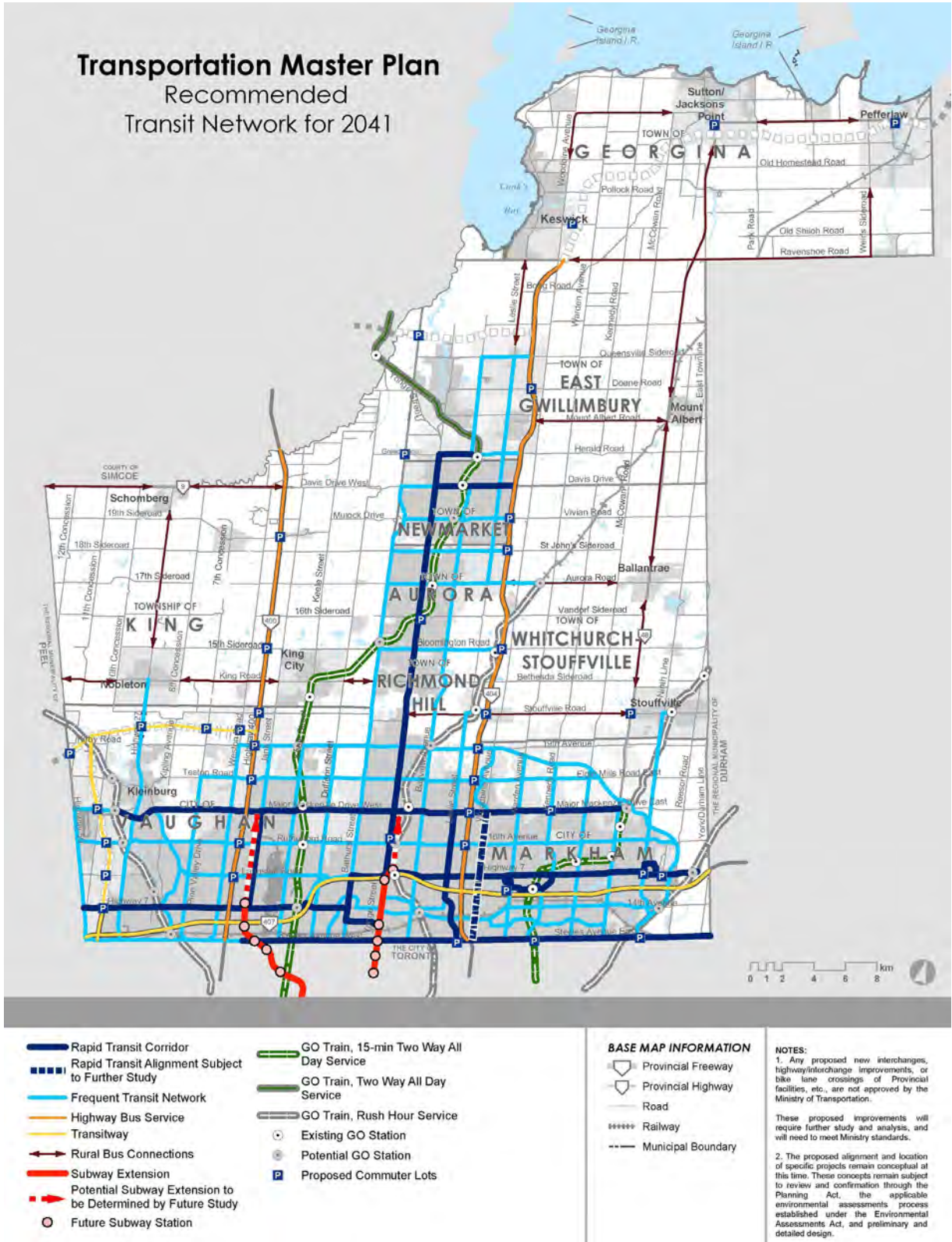
### Disclaimer for Recommended Network Alternative and Phasing Maps

1. Any proposed new interchanges, highway/interchange improvements, or bike lane crossings of Provincial facilities, etc., are not approved by the Ministry of Transportation. These proposed improvements will require further study and analysis, and will need to meet Ministry standards.
2. The proposed alignment and location of specific projects remains conceptual at this time. These concepts remain subject to review and confirmation through the Planning Act, the applicable environmental assessments process established under the Environmental Assessments Act, and preliminary and detailed design.



# 1 Create a World Class Transit System

## 2016 TMP Update: Recommended Transit Network for 2041

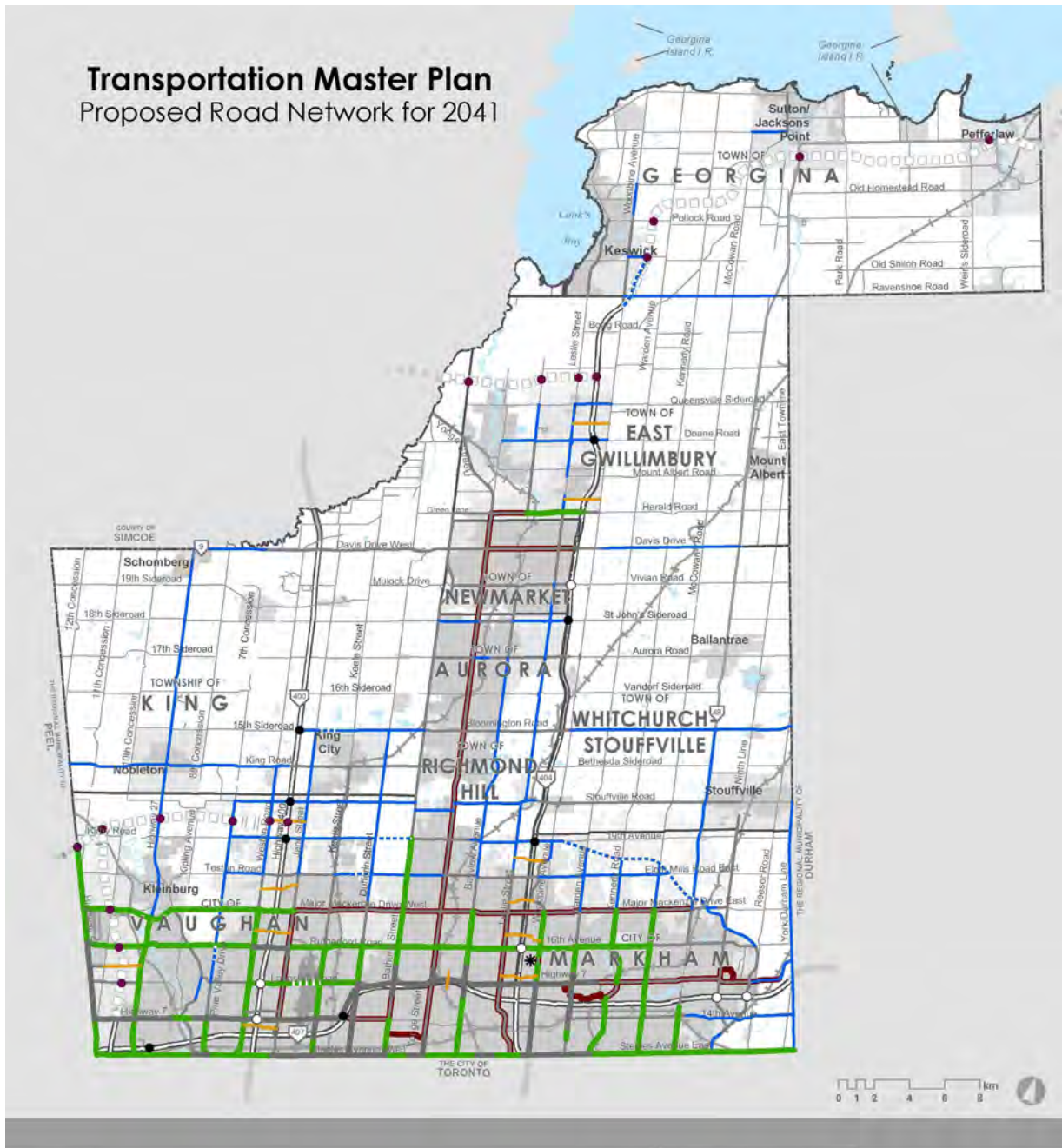






# 2 Develop a Road Network Fit for the Future

## 2016 TMP: Recommended Road Network for 2041



### Legend

#### 4 Lane Network

- Existing 4 Lane Road
- Proposed Future 4 Lane Widening
- Proposed New 4 Lane Road

#### 6 Lane Network

- Existing 6 Lane Road
- Proposed Future 6 Lane Widening
- Proposed New 6 Lane Road

#### Interchange Improvements (to be confirmed by MTO)

- Future Interchange on Existing Freeway
- Future Interchange on Future Freeway
- Other Interchange Improvement
- \* Special Study Area

### BASE MAP INFORMATION

- ▭ Provincial Freeway
- ▭ Provincial Highway
- Road
- ==== Railway
- Municipal Boundary

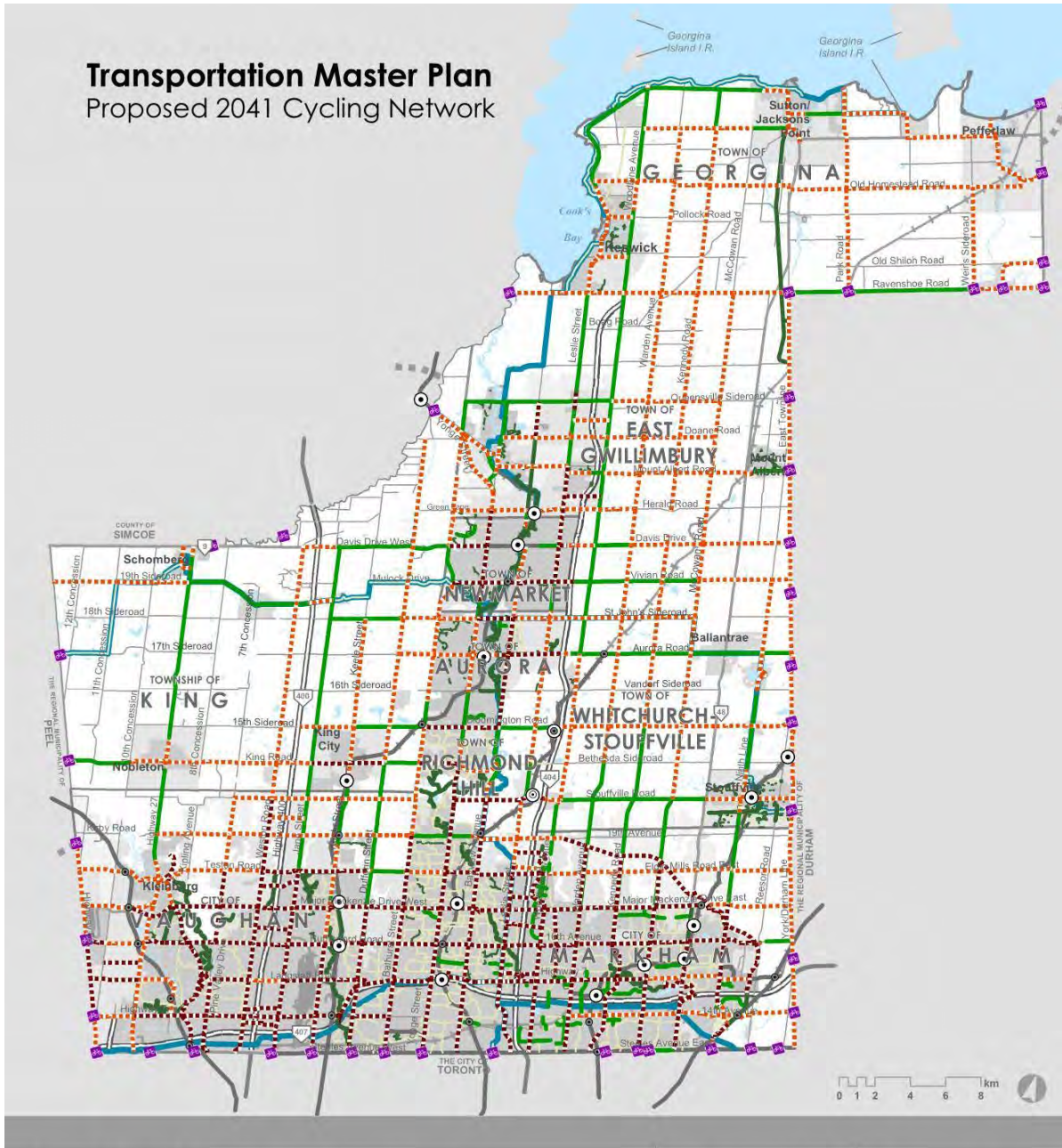
### NOTES:

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# 3 Integrate Active Transportation in Urban Areas

## 2016 TMP: Ultimate Cycling Network for 2041



### Existing Cycling Network

- Shared Facility
- Dedicated Facility
- Separated Facility

### Proposed Cycling Facilities

- - - Shared
- - - Dedicated
- - - Separated
- Conceptual Region-Wide Trail System
- External Connection

### Transit Network

- Rapid Transit / GO Corridor
- Potential Future GO Station
- Existing GO Station



**Shared** facilities include signed routes, bicycle boulevards or shared lanes ("sharrows"). Since cyclists and motorists share the same space, these facilities are appropriate on streets with low traffic volumes and/or low speeds.



**Dedicated** facilities provide specific space for cyclists. In urban areas, dedicated facilities typically include bike lanes and buffered bike lanes, while paved shoulders provide dedicated space on rural roads.



**Separated** facilities provide physically separate space for cyclists. Types of facilities can include cycle tracks, raised bike lanes, or multi-use trails. These facilities improve comfort for cyclists along higher-speed, busy roadways.

### BASE MAP INFORMATION

- Provincial Freeway
- Provincial Highway
- Road
- + Railway
- - - Municipal Boundary

### NOTE:

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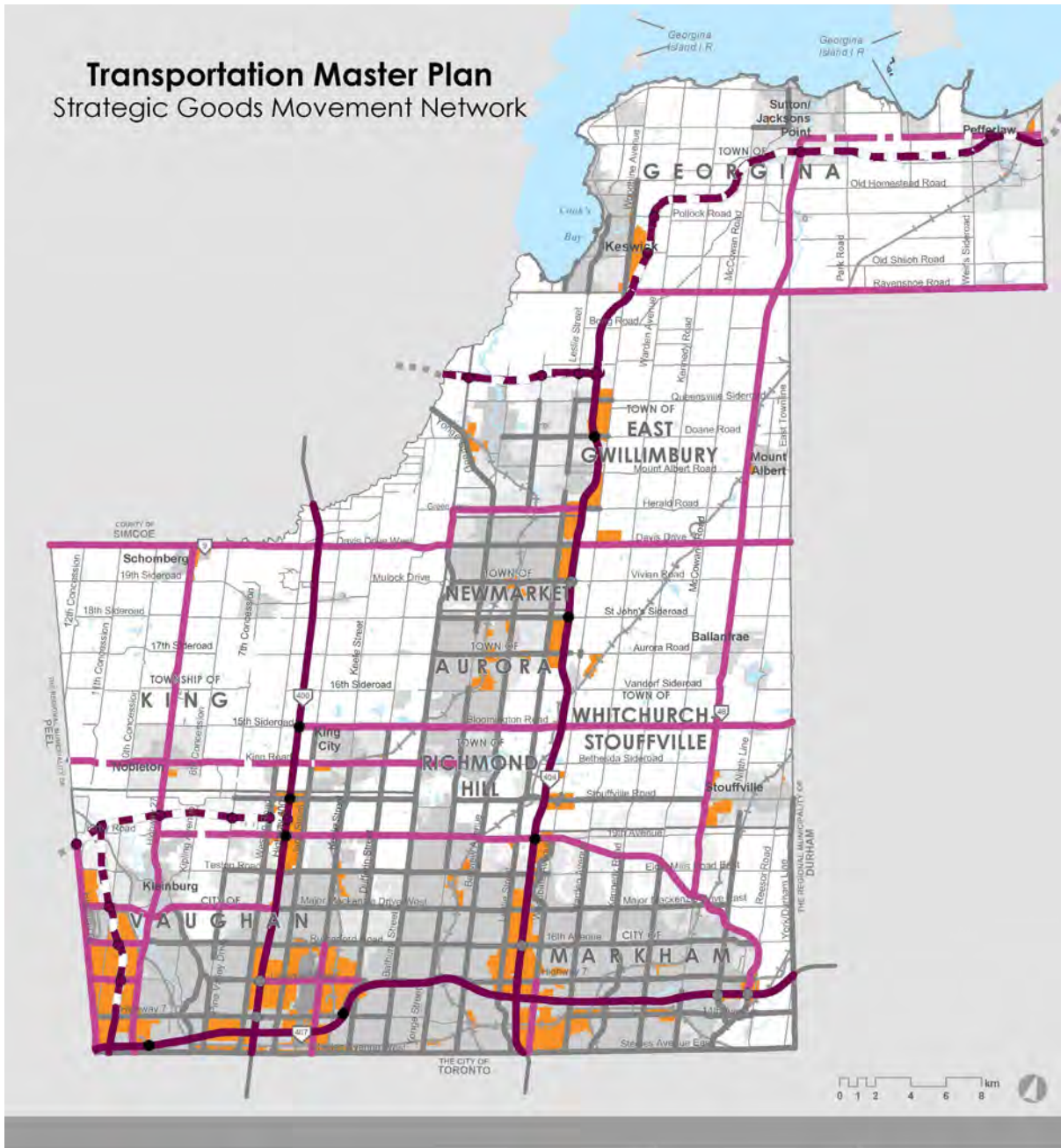
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# 4 Maximize the Potential in Employment Areas

## 2016 TMP Update: Strategic Goods Movement Network



**Legend**

**Strategic Goods Movement Corridors**

**Tier 1**

- Highway Goods Movement Corridor
- Future Highway Goods Movement Corridor

**Tier 2**

- Primary Arterial Goods Movement Corridor
- Interim Primary Arterial Goods Movement Corridor Parallel to Future Highway

**Tier 3**

- Secondary Goods Movement Corridor

**Interchange Improvements (to be confirmed by MTO)**

- Future Interchange on Existing Freeway
- Future Interchange on Future Freeway
- Other Interchange Improvement
- Employment Areas

**BASE MAP INFORMATION**

- Provincial Freeway
- Provincial Highway
- Road
- Railway
- Municipal Boundary

**NOTES:**

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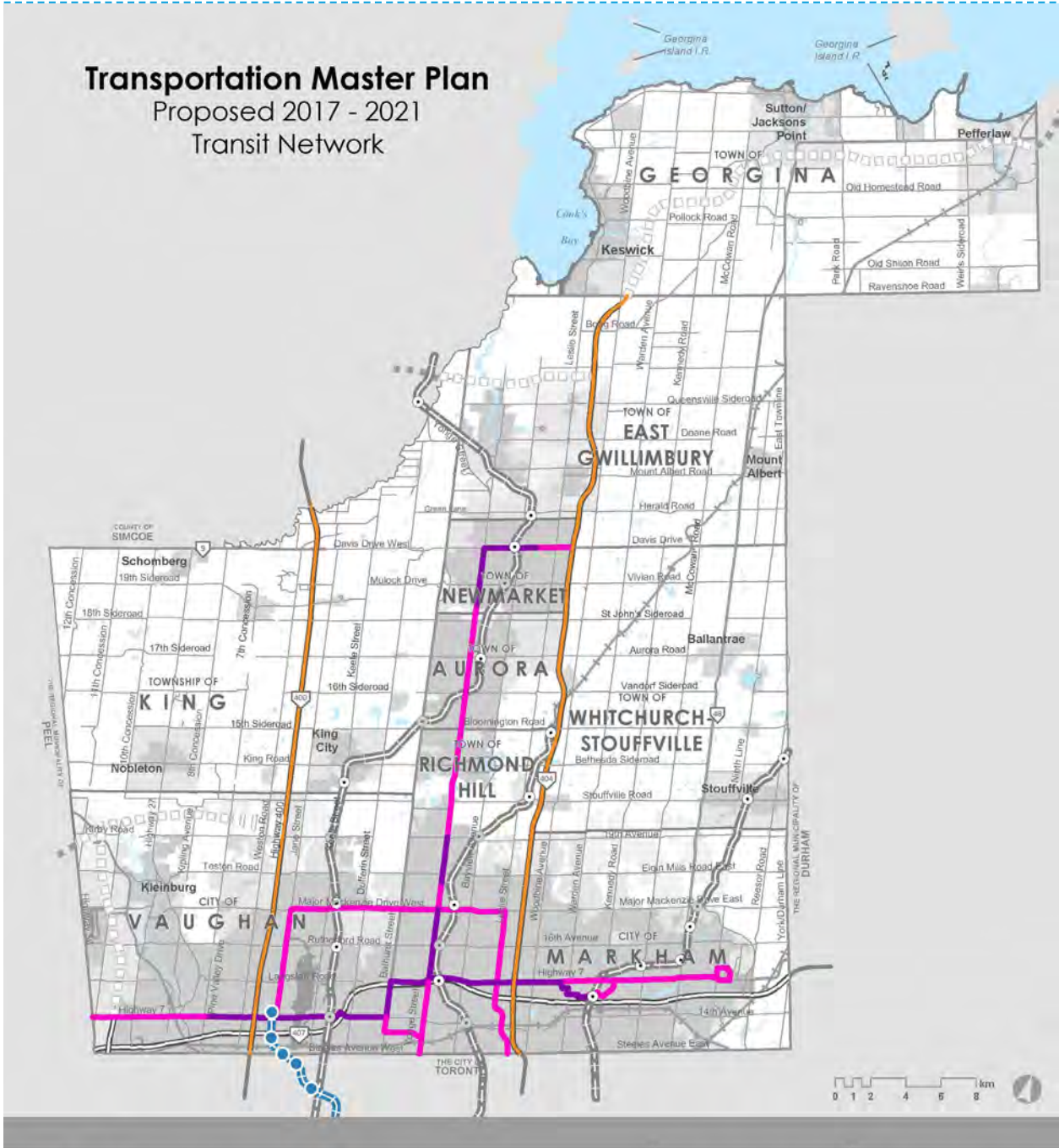
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**Notes:**

A series of horizontal lines for taking notes, starting with a dashed orange line immediately following the 'Notes:' header, followed by a solid black line, and then a continuous series of solid black lines.

# TRANSIT NETWORK: RECOMMENDED PHASING STRATEGY



### 2017 - 2021 Transit Network

- Dedicated Rapidway
- VIVA Curbside Service
- Highway Bus Service

### GO Rail

- GO Train, Rush Hour Service
- Existing GO Station
- Potential GO Station

### Subway Extensions

- - - Subway Extension
- Subway Extension Station

### BASE MAP INFORMATION

- Provincial Freeway
- Provincial Highway
- Road
- - - Railway
- - - Municipal Boundary

### NOTES:

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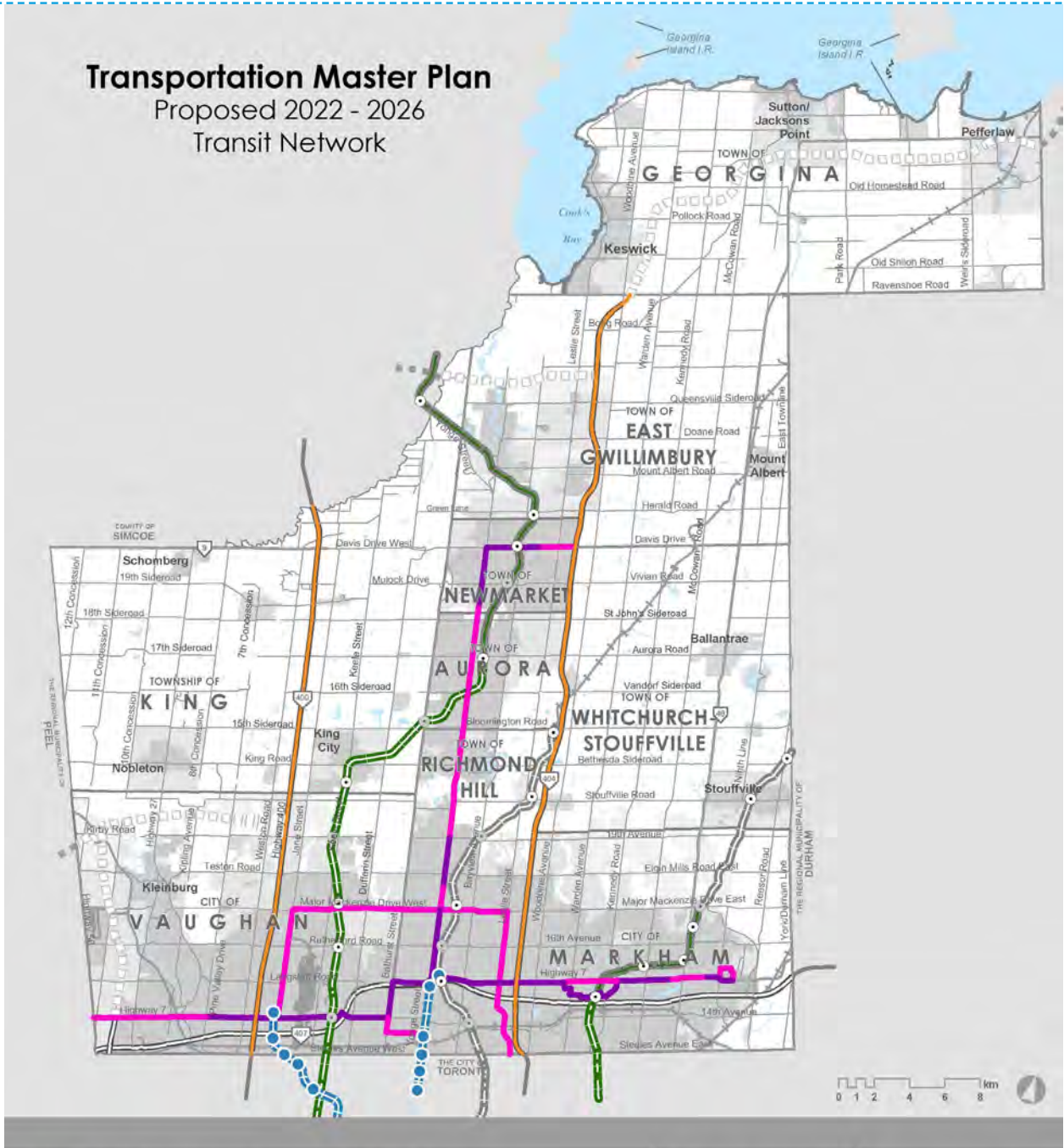
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# Transportation Master Plan

## Proposed 2022 - 2026

### Transit Network



#### 2022 - 2026 Transit Network

- Dedicated Rapidway
- VIVA Curbside Service
- Highway Bus Service

#### GO Rail

- GO Train, 15-min Two Way All Day Service
- GO Train, Two Way All Day Service
- GO Train, Rush Hour Service
- Existing GO Station
- Potential GO Station

#### Subway Extensions

- Subway Extension
- Subway Extension Station

#### BASE MAP INFORMATION

- Provincial Freeway
- Provincial Highway
- Road
- Railway
- Municipal Boundary

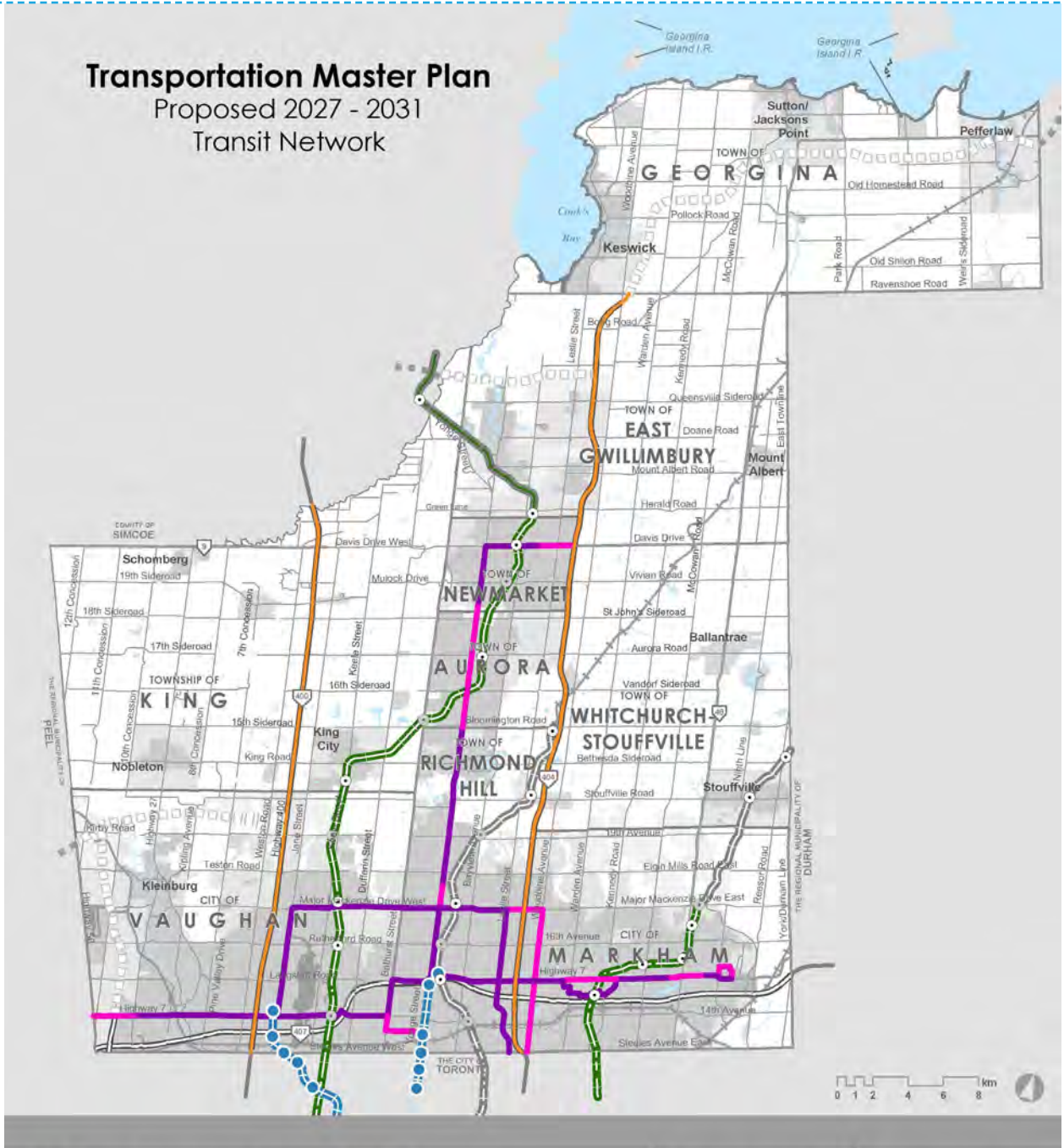
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**2027 - 2031 Transit Network**

- Dedicated Rapidway
- VIVA Curbside Service
- Highway Bus Service

**GO Rail**

- GO Train, 15-min Two Way All Day Service
- GO Train, Two Way All Day Service
- GO Train, Rush Hour Service
- Existing GO Station
- Potential GO Station

**Subway Extensions**

- Subway Extension
- Subway Extension Station

**BASE MAP INFORMATION**

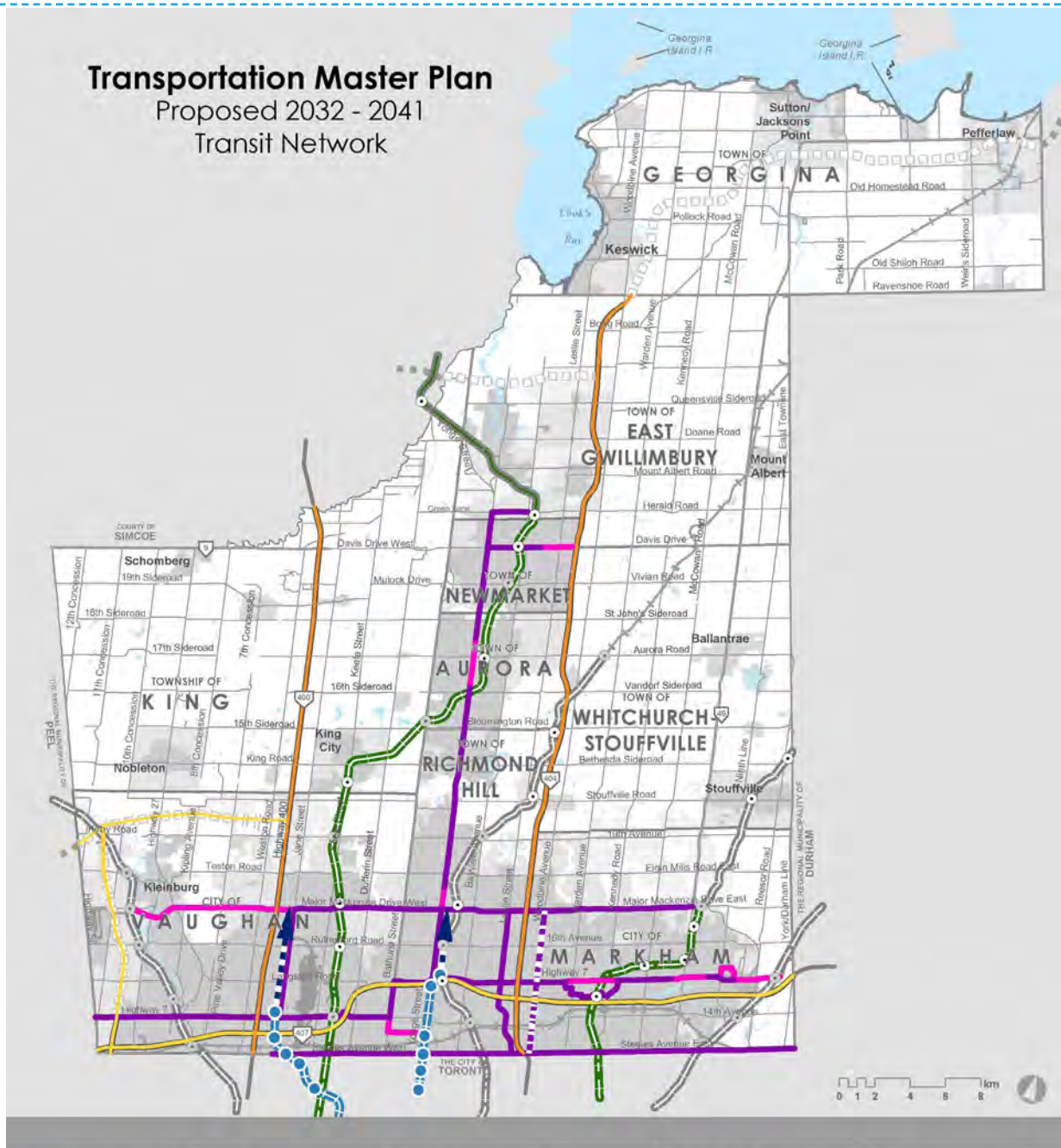
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**2032 - 2041 Transit Network**

- Dedicated Rapidway
- VIVA Curbside Service
- - - Rapid Transit Alignment Subject to Further Study
- Highway Bus Service
- Transitway

**GO Rail**

- GO Train, 15-min Two Way All Day Service
- GO Train, Two Way All Day Service
- GO Train, Rush Hour Service
- Existing GO Station
- Potential GO Station

**Subway Extensions**

- Subway Extension
- - - Potential Subway Extension to be Determined by Future Study
- Subway Extension Station

**BASE MAP INFORMATION**

- Provincial Freeway
- Provincial Highway
- Road
- - - - - Railway
- Municipal Boundary

**NOTES:**

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## The 2041 Transit Network: The Big Moves



- Implement the Frequent Transit Network
- Deliver the YRT/Viva 5-year Service Plan



- Extend Yonge Subway to Richmond Hill/Langstaff and study further subway expansion with partners
- Complete Viva Network (rapidways and new service corridors)
- Develop implementation plan for the expansion of Park and Ride facilities with transit connections to urban centres



- Integrate and connect with Regional Express Rail
- Support freeway bus network and future provincial transitway corridors
- Improve service and fare integration with partner transit systems (e.g. GO, TTC, Durham, Brampton)

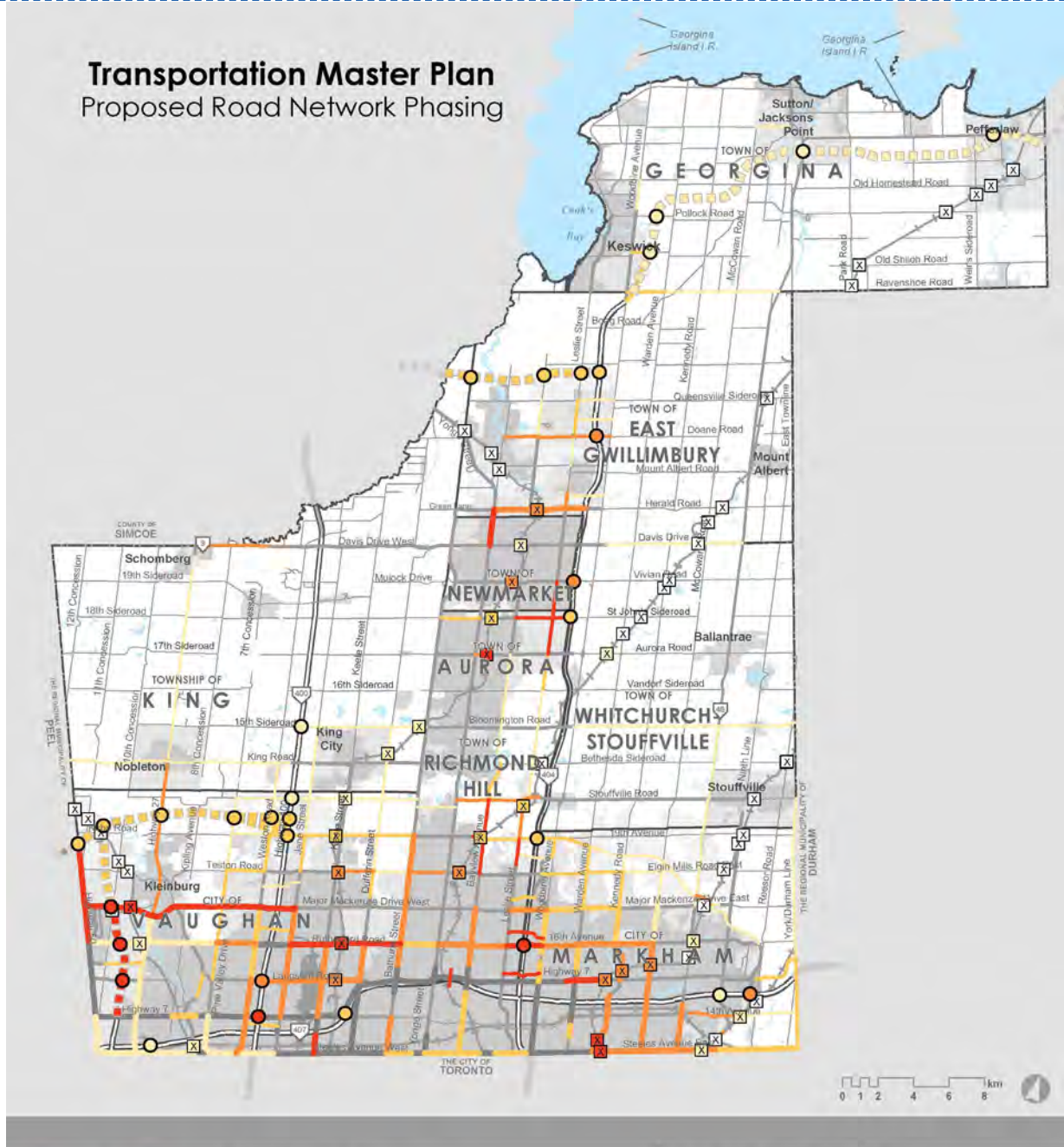
## Value to the Community

### **The Proposed Transit Network and related policy directions respond to key objectives of the Regional Official Plan, Vision 2051, Strategic Plan and the TMP by:**

- Supporting connectivity in the Region by leveraging Provincial investment in Regional Express Rail
- Supporting intensification in Centres and Corridors by maximizing subway and rapidway initiatives
- Increasing transit ridership opportunities to help manage traffic congestion by connecting people to places, jobs and services via enhanced transit service
- Encouraging transit-oriented complete communities that support sustainable lifestyles by providing access to better transit
- Increasing service delivery providing an integrated transit system with Viva, York Region Transit, TTC, Metrolinx/GO and MTO
- Creating a seamless and convenient transit system through the provision of an integrated fare system
- Reducing greenhouse gas emissions by providing and supporting greater transit service
- Providing convenient commuter parking to make it easier to get out of our cars and into transit



# ROAD NETWORK: RECOMMENDED PHASING STRATEGY



<b>Phasing</b>	<b>Interchange Improvements Phasing (to be confirmed by MTO)</b>
2017 - 2021	● 2017 - 2021
2022 - 2026	● 2022 - 2026
2027 - 2031	● 2027 - 2031
2032 - 2041	● 2032 - 2041
	<b>Grade Separations Phasing</b>
	■ 2017 - 2021
	■ 2022 - 2026
	■ 2027 - 2031
	■ 2032 - 2041
	■ Not prioritized

<b>BASE MAP INFORMATION</b>	
▬	Provincial Freeway
▬	Provincial Highway
▬	Road
▬	Railway
---	Municipal Boundary

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## The 2041 Road Network: The Big Moves



- Widen and urbanize roads in new growth areas
- Eliminate pinch points and bottlenecks



- Build missing links and new roads
- Expand high occupancy vehicle network
- Develop the finer grid road network



- Maximize person carrying capacity through corridor evolution
- Build context sensitive multi-modal corridors

## Value to the Community

### **The Proposed Road Network and related policy directions respond to key objectives of the Regional Official Plan, Vision 2051, Strategic Plan and the TMP by:**

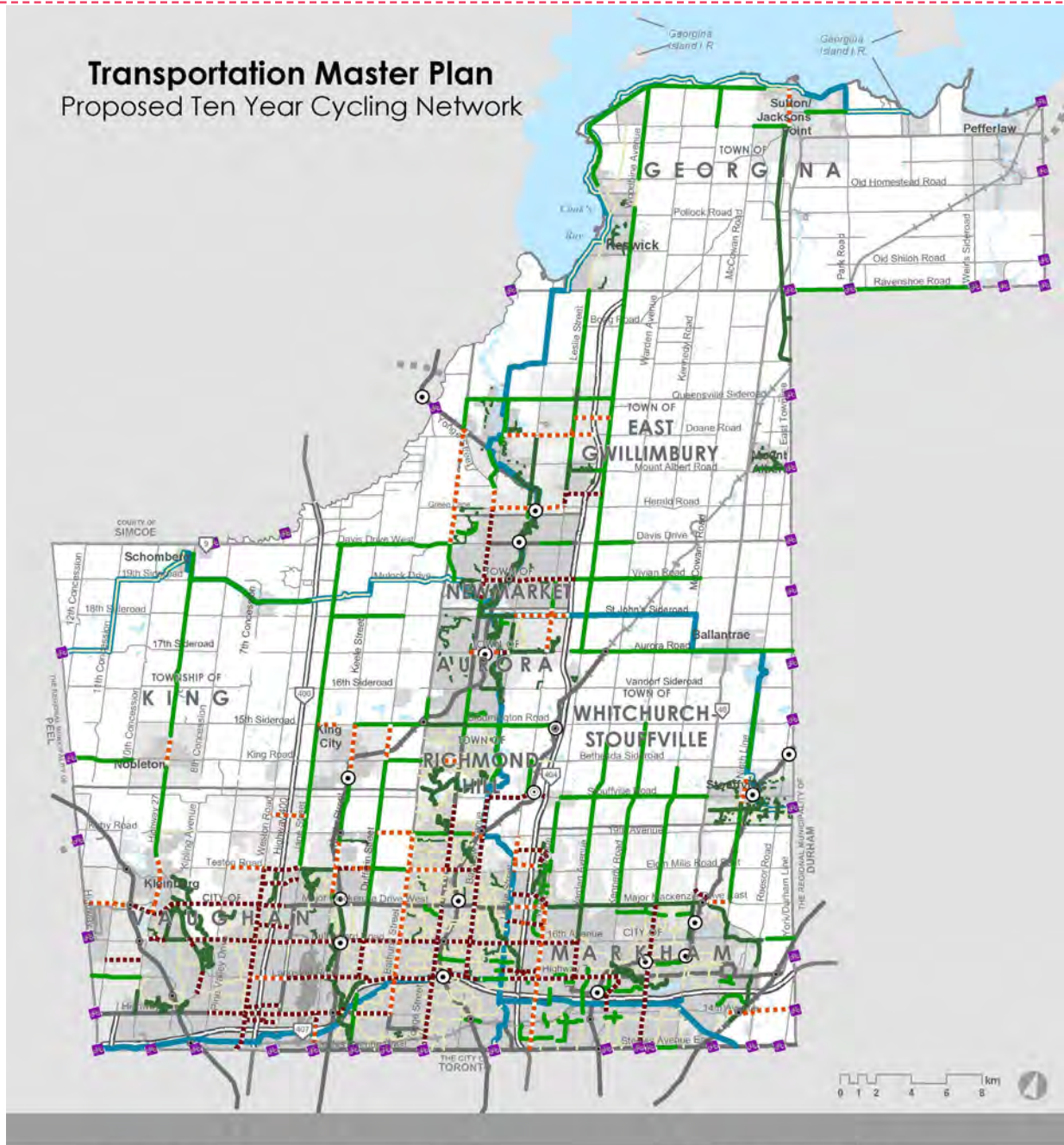
- Maximizing the ability to move more people through the provision of HOV and transit priority lanes
- Providing the flexibility to adapt to technological changes in travel and accommodate future corridor needs
- Providing improved access to employment areas with better access to freeways and interchanges
- Supporting the efficient movement of goods and services through implementation of key corridors
- Supporting communities and managing congestion by providing new and expanded Regional roads
- Providing greater travel route choices with a finer-grid road network
- Connecting missing links in the road network by removing physical barriers and providing grade separations
- Managing congestion and optimizing the road network through intelligent transportation systems
- Designing urban streets as public spaces that contribute to achieving livable and vibrant communities







# ACTIVE TRANSPORTATION NETWORK: RECOMMENDED PHASING STRATEGY



### Existing Cycling Network

- Shared Facility
- Dedicated Facility
- Separated Facility

### Proposed Cycling Facilities

- - - Shared
- - - Dedicated
- - - Separated
- Conceptual Region-Wide Trail System
- External Connection

### Transit Network

- Rapid Transit / GO Corridor
- Potential Future GO Station
- Existing GO Station

- Shared**  
facilities include signed routes, bicycle bookshelves or shared lanes ("sharrows"). Since cyclists and motorists share the same space, these facilities are appropriate on streets with low traffic volumes and/or low speeds.
- Dedicated**  
facilities provide specific space for cyclists. In urban areas, dedicated facilities typically include bike lanes and buffered bike lanes, while paved shoulders provide dedicated space on rural roads.
- Separated**  
facilities provide physically separate space for cyclists. Types of facilities can include cycle tracks, raised blue lanes, or multi-use trails. These facilities improve comfort for cyclists along higher-speed, busy roadways.

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## The 2041 Active Transportation Network: The Big Moves



- Fill gaps in sidewalk network in urban areas
- Work with Ministry of Transportation to make highway interchanges walk and cycle friendly
- Work with neighbouring municipalities to create seamless cross-boundary connections



- Adopt a Strategic Ten Year Cycling Network Plan that prioritizes cycling projects that connect to transit spines and Regional centres and accelerates development of Regional trail spines



- Increase the use of separated cycling facilities such as cycle tracks, raised bike lanes and multi-use trails to improve comfort for cyclists
- Focus infrastructure in urban areas to improve connections to employment and institutional land uses

## Value to the Community

### **The Proposed Cycling Network and related policy directions respond to key objectives of the Regional Official Plan, Vision 2051, Strategic Plan and the TMP by:**

- Making sustainable travel choices more attractive and viable with a more connected cycling network
- Improving access to transit by completing missing links in the cycling and sidewalk network
- Promoting an active and healthy lifestyle by providing safer routes to schools and other key destinations
- Connecting key destinations and urban areas by prioritizing cycling links
- Supporting cycling tourism with greater connections to recreational trails
- Connecting local and adjacent trail systems with a comprehensive on- and off-road cycling network
- Improving coordination between local municipal and Regional cycling plans
- Addressing the needs of a greater range of cyclists by aligning facility types

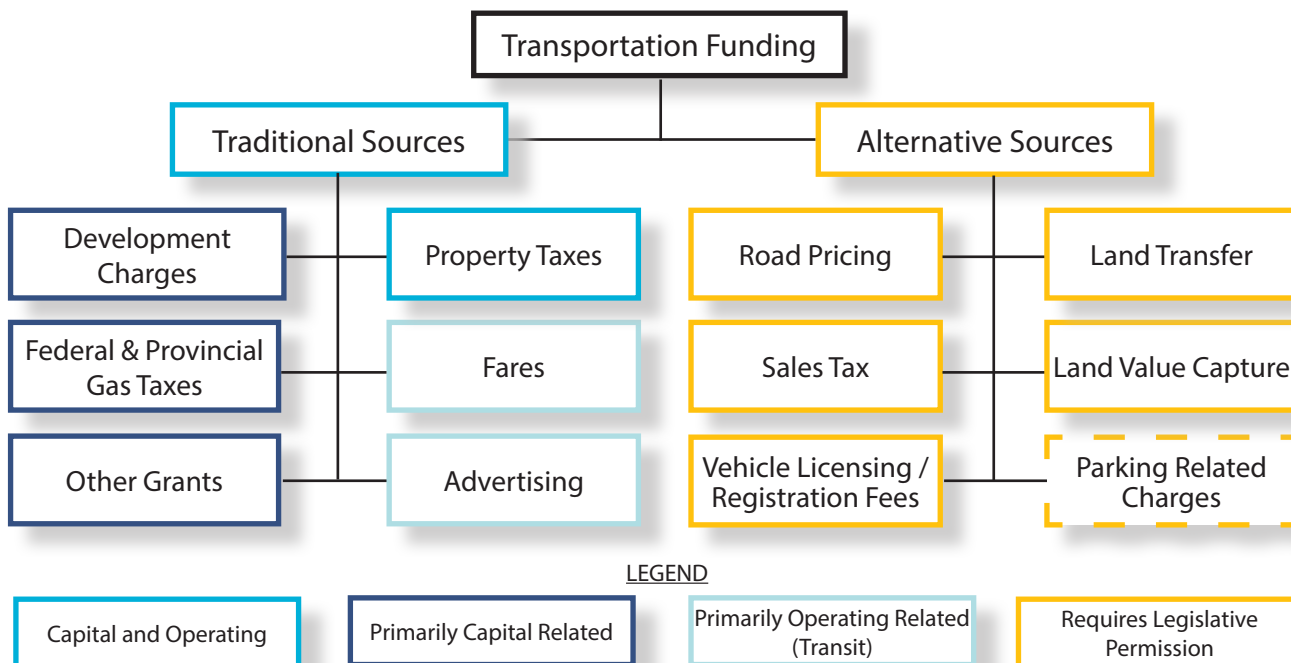




## Transportation Funding Options

York Region currently funds Roads and Transit capital costs with a combination of development charges, tax levy and funding from other levels of government including grants. Operating costs are funded through a combination of operating revenues and tax levy.

In order to meet the increased capital requirements of the proposed infrastructure, York Region will need to examine the impact on current funding sources and potential alternative funding from various sources within the context of long-term fiscal sustainability.



The following alternative sources of revenue are generally not available to York Region and would require Provincial legislative changes or change in authority:

- **Land Transfer Tax** – Event-based tax paid by property owners at the time of purchase. The Province currently charges a land transfer tax for all land purchased, with some exceptions. The City of Toronto is the only municipality to levy a separate and distinct rate from the Province (the *City of Toronto Act, 2006*).
- **Land Value Capture** – Capture of increased value of land and development generated by the improved accessibility of transportation. Improved access has value which is reflected in land and property values.
- **Road Pricing** – Blanket term that describes a variety of road related levies, including road tolls, cordon tolls (congestion charges), and emerging vehicle use fees.
- **Sales Taxes** – Additional fees levied on various goods and services, often done at the provincial and federal level.
- **Vehicle Licensing / Registration Fees** – Fees placed on owners of vehicles, straightforward and relatively easy to administer through the existing provincial system. This can include a Drivers Licence Tax and Vehicle Registration Fees.
- **Parking Related Charges** – Fees and / or taxes levied against parking and dedicated to transportation funding.









