



**Ministry of Transportation**

**Highway 407 Transitway  
Implementation Study**

**FINAL COPY**

**Project# 2179**



## EXECUTIVE SUMMARY

The Government of Ontario recently released the *Proposed Growth Plan for the Greater Golden Horseshoe* (November 2005) to outline the province's vision for managing growth and developing stronger communities in the Greater Golden Horseshoe. A key component of the *GGH's* inter-regional transportation system will be the 407 Transitway, a corridor that will eventually extend from Burlington to Pickering, with multiple stations and connections with a multitude of other inter-regional and municipal transit routes. This report outlines a strategy for the staged implementation of the Highway 407 Transitway as part of the *Transit Protection on 400-series Highways System Study* initiated by the Ontario Ministry of Transportation (MTO) in 2002.

In developing the strategy, the ministry had to first determine a high priority segment of the 407 Transitway for implementation. The following criteria were used to identify and evaluate alternative segments for the 407 Transitway:

- Directly support one or more of the *Urban Growth Centres (UGC's)* as outlined in the *Proposed Growth Plan for the Greater Golden Horseshoe*, by providing direct connections to and linking *UGC's*. Designated *UGC's* along the 407 Transitway corridor are:
  - Downtown Burlington (Emerging Urban Centre)
  - Vaughan Corporate Centre (Emerging Urban Centre)
  - Richmond Hill Langstaff Gateway (Emerging Urban Centre)
  - Markham Centre (Emerging Urban Centre)
- Potential transit ridership
- Provide for GO BRT service
- Connectivity with one or more GO rail lines to provide inter-regional, intermodal transit network links
- Connectivity with two or more 400-series corridors, to provide integration of carpooling, commuter parking, HOV facilities, and inter-regional transit services.
- Connectivity with one or more existing or planned urban rapid transit facilities, to integrate inter-regional transit with urban transit services.
- Provide opportunities for commuter parking / carpool parking lots
- Provide opportunities for connections with surface transit services
- Final selected segment is to have adequate length in order for it to be viable as a standalone entity.

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Following a detailed evaluation, the **Highway 400 – Unionville GO (Kennedy Road)** segment of the 407 Transitway was carried forward as the most suitable high priority segment. A sensitivity analysis was also carried out to examine the implications of extending this initial transitway segment to Highway 427. The analysis showed that while there are obvious benefits to the extension of the high priority segment, the difficulty in getting access to the western terminus of the Transitway at Highway 427 or Highway 27 would be a major hindrance to the maximum utilization of this extended segment. It is recommended that the extension be revisited at a later stage when accessibility issues to the 427 terminal can be evaluated in greater detail.

Part of the transitway implementation strategy also involved the identification of candidate high priority standalone stations on the 407 Transitway. When short listing these stations, steps were taken to ensure that they would complement commuter parking, carpooling, and other related initiatives, support GO Bus Rapid Transit (BRT) service, and be viable as hubs connecting municipal transit services with inter-regional services expected to operate on the future Transitway. The Project Team adopted a consensus-building approach involving GO Transit to identify, evaluate and select these high priority standalone stations.

The stations at the following cross streets were identified as candidates for further review in the forthcoming *Priority Station Preliminary/Detail Design EA Study*:

- Bronte Road
- Trafalgar Road
- Highway 10
- Airport Road
- Jane Street
- Keele Street
- Markham Road

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## 2. INTRODUCTION

### 2.1 BACKGROUND

The Government of Ontario's recently released *Proposed Growth Plan for the Greater Golden Horseshoe* (November 2005) incorporates the province's vision for managing growth and developing stronger communities in the Greater Golden Horseshoe. The *Growth Plan* integrates and builds on other provincial planning initiatives such as the *Greenbelt Plan*, the *Niagara Escarpment Plan* review, the *Provincial Policy Statement*, reform of the *Planning Act*, infrastructure planning, and source water protection planning.

The spine of the *GGH's* inter-regional transit system will be the 407 Transitway, a 110 km long corridor extending from Burlington to Pickering, with multiple stations and connections with a multitude of other inter-regional and municipal transit routes. As part of the *Transit Protection on 400-series Highways System Study* initiated by the Ontario Ministry of Transportation (MTO) in 2002, the ministry is now in the process of developing a strategy for staged implementation of the Transitway.

### 2.2 APPROACH

In developing this strategy, the ministry identified two critical assignments that had to be completed before proceeding. The assignment is to first determine a high priority segment of the 407 Transitway for implementation. The second is to identify high priority standalone stations on the 407 Transitway that are consistent with commuter parking, carpooling, and other related initiatives, support GO Bus Rapid Transit (BRT) service, and serve as hubs connecting municipal transit services with interregional services expected to operate on the future Transitway.

These two assignments have been further divided into a series of sequential tasks. The procedure followed by the Project Team to fulfill these tasks and the respective findings are outlined in the following sections of this report.

The horizon year determined for this study is **2008**. Implementation of the first 407 Transitway segment would commence sometime after 2008.

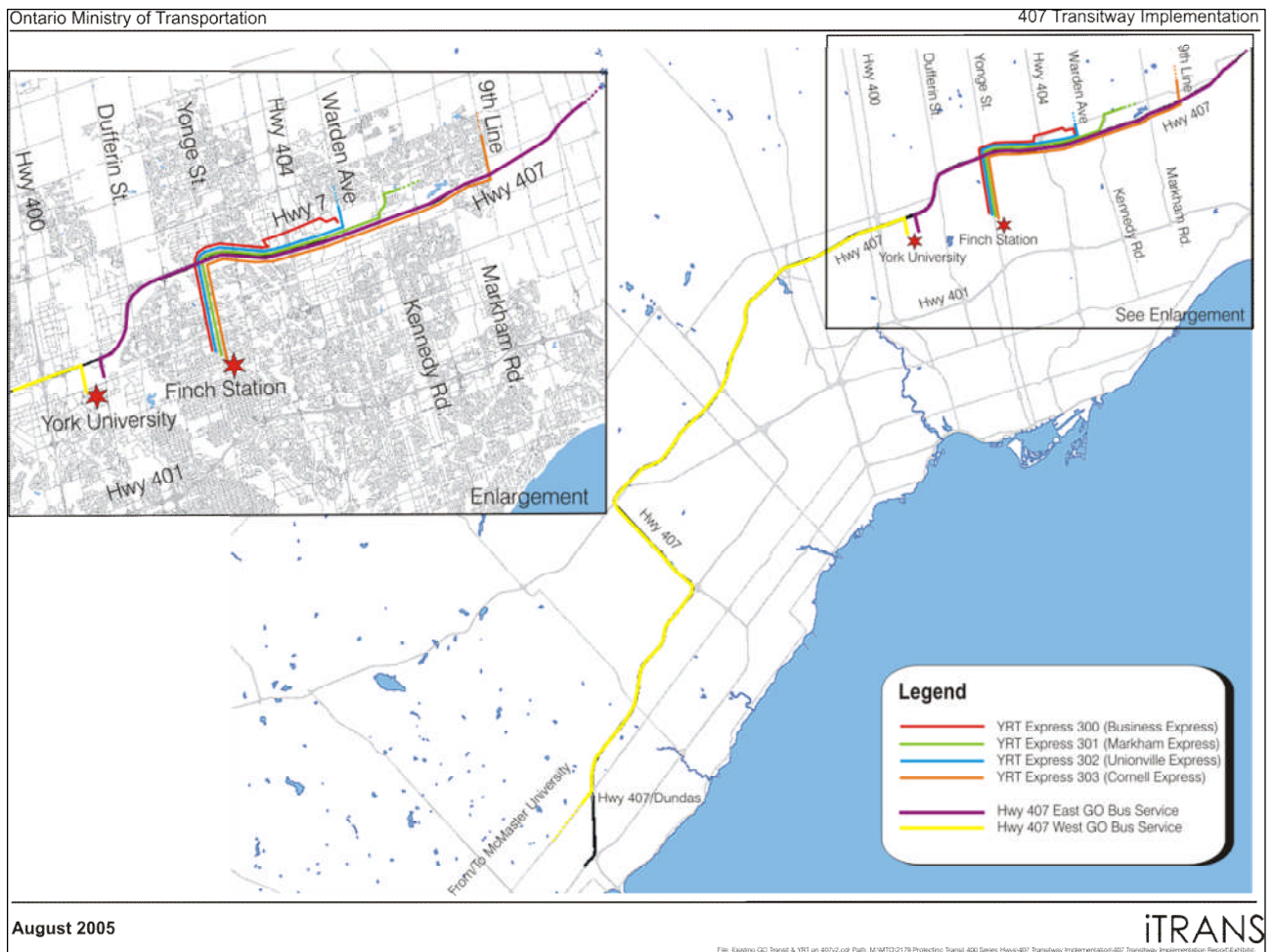
### 2.3 EXISTING TRANSIT SERVICES IN THE HIGHWAY 407 CORRIDOR

A number of transit services currently operate on Highway 407 between Burlington and Pickering. These transit services are predominantly comprised of inter-regional GO Transit buses traveling on Highway 407 from Hamilton in the west to its eastern terminus in Pickering and beyond that to Oshawa (albeit via Highway 7/Winchester Road).

At present, York Region Transit (YRT) also regularly operates the Markham, Cornell, Unionville and Business express bus services on short portions of Highway 407 between Yonge Street and Ninth Line to the east. The Wonderland shuttle bus service<sup>1</sup> as well as Mobility Plus specialized transit services managed by YRT also operate on the corridor on an “as-required” basis.

Existing transit services on Highway 407 are illustrated in **Exhibit 1**.

Exhibit 1<sup>2</sup>



<sup>1</sup> YRT operates the shuttle service to Paramount Canada’s Wonderland only in the summer.

<sup>2</sup> Routes current as of April 2005.

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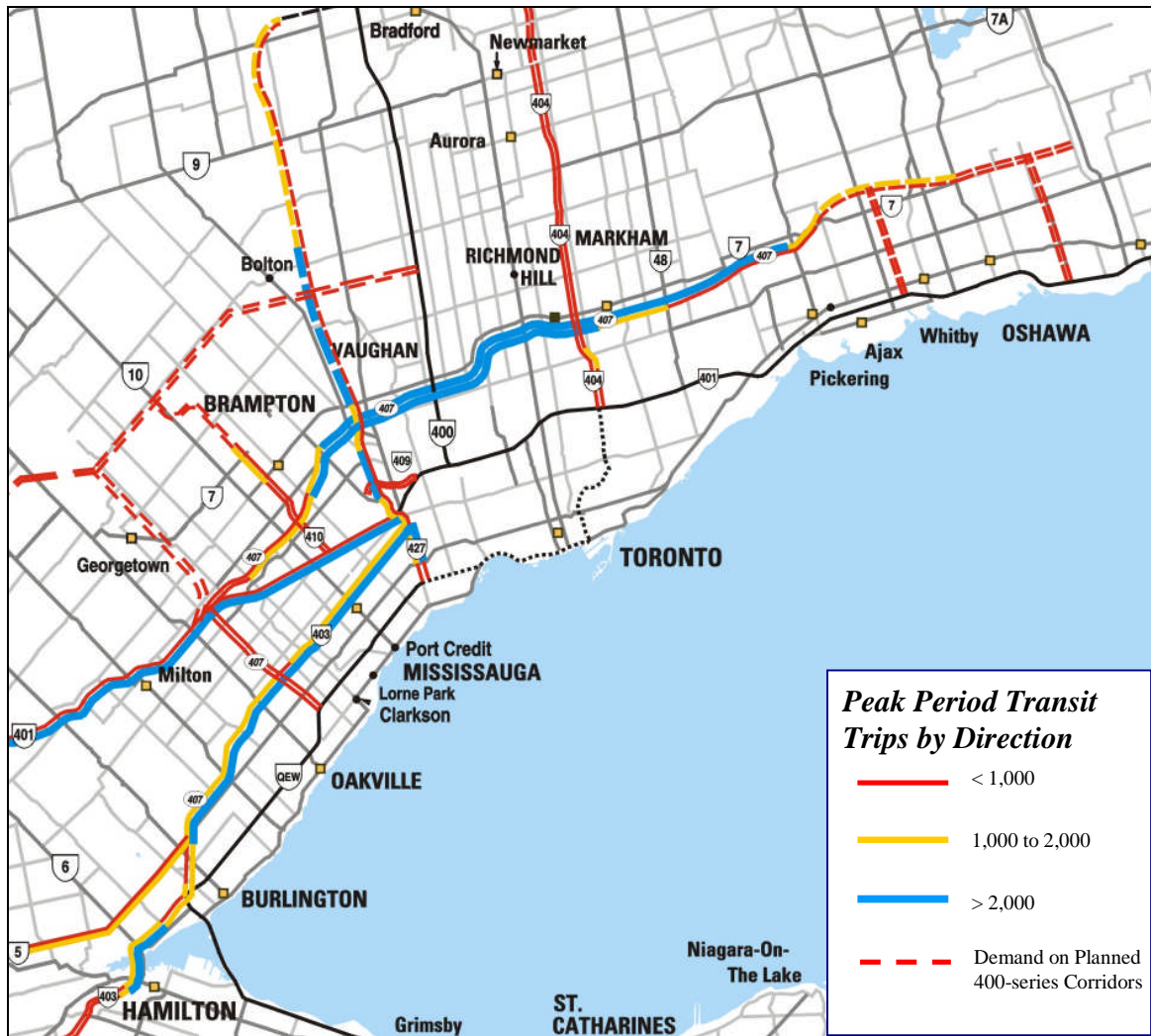
## 2.4 TRANSIT RIDERSHIP FORECASTS

Ridership forecasts for the 407 Transitway are not available for the 2008 horizon year. However, as part of the travel demand forecasting assignment for the *Transit Protection on 400-series Highways System Study*, transit ridership forecasts for the year 2021 were prepared. Following discussions with the ministry, it was decided that the 2021 forecasts provided a reasonable preliminary indication of the ridership demand for comparisons between the alternative segments of the 407 Transitway. As such, they were used to evaluate and prioritize the 407 Transitway segments.

To illustrate the long-term demand for the entire transitway once it is fully completed, 2021 ridership forecasts were prepared and are shown in **Exhibit 2**. These forecasts have incorporated all proposed transit improvements as outlined in the following section. Any cancellation or deferral of high-order transit initiatives on adjacent east-west corridors would likely increase ridership on the 407 Transitway since it is the closest, parallel facility with comparable capacity.

In determining the highest priority Transitway segment for implementation, travel demand forecasts for each candidate segment were also developed. These are discussed in greater detail in Section 5.2.

**Exhibit 2.**  
**Transit Ridership Forecasts for Year 2021.**





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## 2.5 TRANSIT IMPROVEMENTS BY 2008

The following new rapid transit and inter-regional transit improvements in the 407 Transitway corridor are assumed to be in place by the 2008 horizon year. These improvements are illustrated in **Exhibit 3**.

### **GO Transit:**

- GO BRT Stage 1 which includes the operation of inter-regional buses on Highway 407 between the Highway 407/QEW interchange and the Highway 407/403 interchange (Oakville) and between the Highway 407/410 interchange and Markham Road (via York University)

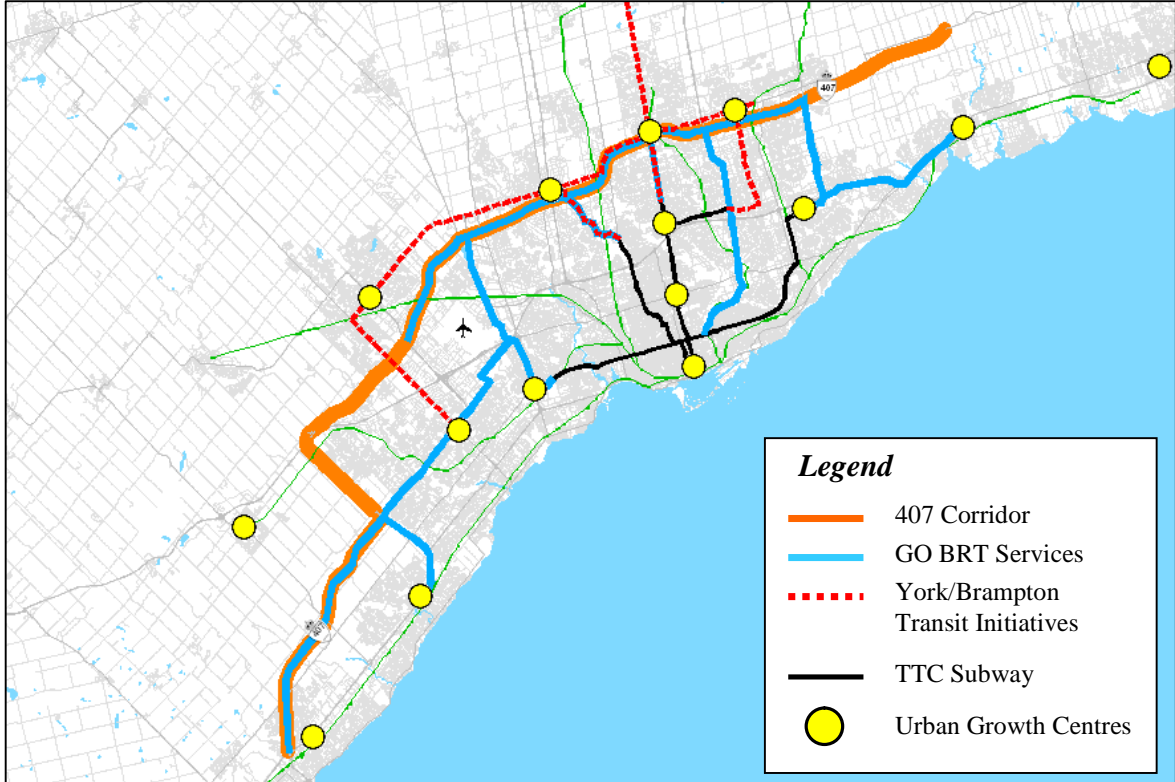
### **York Region:**

- Yonge-Richmond Hill-Newmarket – Along Davis Drive and Yonge Street from Newmarket to the TTC Finch Station in north Toronto
- Yonge-Richmond Hill – Additional service along the busiest part of the Yonge corridor
- Enhanced conventional YRT and Viva service on Highway 7 – From Vaughan to Markham
- Vaughan North-South Link – From the Vaughan Corporate Centre on Highway 7 to the TTC Downsview Station
- Markham North-South Link – From Markham Centre on Highway 7 to the TTC Don Mills Station
- Yonge Street-Richmond Hill-Markham – From the Unionville GO Station at Kennedy Road, along Highway 7 to Yonge Street, and along Yonge Street to the TTC Finch Station (weekday peak periods only)

### **Brampton:**

- Brampton-York AcceleRide service on Highway 7 / Queen Street (Hurontario/Main Street to York)
- Brampton-York AcceleRide service on Main Street/Hurontario Street (Queen Street to Mississauga City Centre)

**Exhibit 3.  
Transit Improvements in Place by 2008**



## **3. TASK 1 – DIVIDING THE 407 TRANSITWAY INTO SEGMENTS**

### **3.1 GUIDING PRINCIPLES**

MTO recognized early in the planning process that there was a need for consistency across the various ongoing studies and initiatives such as the *Transit Protection on 400-series Highways System Study*, the *HOV Opportunities Study* and the *Proposed Growth Plan for the Greater Golden Horseshoe*.

In recognition of this, a set of principles were developed to guide the overall implementation strategy for the 407 Transitway. These guiding principles are listed below:

- Supports the *Proposed Growth Plan for the Greater Golden Horseshoe*
- Provides a key link/spine in the inter-regional transit network in the GTA, by connecting with GO Rail, GO BRT, carpool lots, and other inter-regional transit services
- Enhances opportunities for integration with other transit facilities and services (urban rapid transit, surface transit services, commuter parking, and HOV facilities)
- Selected segment is a viable, standalone segment of the 407 Transitway
- First priority segment selected provides the greatest initial overall value amongst alternative 407 Transitway segments

### **3.2 CRITERIA TO SEGMENT THE 407 TRANSITWAY**

Based on the established guiding principles, the following criteria were then used to identify and later evaluate alternative segments for the 407 Transitway:

- Directly support one or more of the *Urban Growth Centres (UGC)s* as outlined in the *Proposed Growth Plan for the Greater Golden Horseshoe*, by providing direct connections to and linking *UGC)s*. Designated *UGC)s* along the 407 Transitway corridor are:
  - Downtown Burlington (Emerging Urban Centre)
  - Vaughan Corporate Centre (Emerging Urban Centre)
  - Richmond Hill Langstaff Gateway (Emerging Urban Centre)
  - Markham Centre (Emerging Urban Centre)
- Potential transit ridership
- Provide for GO BRT service
- Connectivity with one or more GO rail lines to provide inter-regional, intermodal transit network links
- Connectivity with two or more 400-series corridors, to provide integration of carpooling, commuter parking, HOV facilities, and inter-regional transit services.
- Connectivity with one or more existing or planned urban rapid transit facilities, to integrate inter-regional transit with urban transit services.
- Provide opportunities for commuter parking / carpool parking lots
- Provide opportunities for connections with surface transit services
- Final selected segment is to have adequate length in order for it to be viable as a standalone entity

## 4. TASK 2 – EVALUATION OF ALTERNATIVE 407 TRANSITWAY SEGMENTS

The 407 Transitway was initially divided into the following segments: Burlington GO Station or Aldershot GO Station – 403; 403 – Hurontario/410; Hurontario/410 – 400; 400 – Unionville GO (Kennedy Road); and Unionville GO (Kennedy Road) – Brock Road. These alternative segments are illustrated in **Exhibit 4**. The alternatives were evaluated using the previously described criteria and the results are summarized in **Table 1**.

**Table 1.**

**Summary of Evaluation of Alternative 407 Transitway Segments.**

	<b>Burlington – 403 Link</b>	<b>403 Link – Hurontario /410</b>	<b>Hurontario /410 – 400</b>	<b>400 – Unionville GO (Kennedy Rd.)</b>	<b>Unionville GO (Kennedy Rd.) – Brock Rd.</b>
<b>Urban Growth Centres</b>	Downtown Burlington		Vaughan	Vaughan, Richmond Hill, Markham	Markham
<b>Potential 2008 Ridership</b>	Low-Moderate	Low	Moderate	Moderate-High	Low
<b>GO BRT service</b>	Partial	Partial	Partial	Yes	Partial
<b>GO Rail corridors</b>	Lakeshore West	Milton	Georgetown	Bradford, Richmond Hill, Stouffville	Stouffville
<b>400 corridors</b>	QEW/403, 403	403, 410	410, 427, 400	400, 404	
<b>Rapid transit</b>		Main St. AcceleRide	Queen St. AcceleRide	Vaughan, Yonge, Markham Quick Start (Viva)	Markham Quick Start (Viva)
<b>Carpool lots</b>	Yes	Yes	Yes	Yes	Yes
<b>Surface Transit</b>	Partial	Partial	Yes	Yes	Partial
<b>Standalone?</b>	No	No	Yes	Yes	No
<b>Decision for Initial Segment by 2008</b>	<b>Do not carry forward</b>	<b>Do not carry forward</b>	<b>Do not carry forward</b>	<b>Carry forward</b>	<b>Do not carry forward</b>

Based on the results of the screening process as shown, the 400-Unionville GO (Kennedy Road) segment of the 407 Transitway was carried forward for further detailed analysis. Plans showing this segment of the transitway are included in **Appendix B**.

A sensitivity analysis was carried out to examine the implications of extending the 400 – Unionville GO segment to Highway 427. This is contained in Chapter 7.

**Exhibit 4.**  
**Alternative 407 Transitway Segments**



## 5. TASK 3 – STAGING STRATEGY

### 5.1 EVALUATION CRITERIA

Following the decision to carry forward the Highway 400 - Unionville GO (Kennedy Road) segment, the process of dividing this segment into smaller sub-sections for further evaluation was repeated, this time using a more stringent set of criteria. The criteria used for further detailed evaluation of the sub-sections were based on those originally used to determine the initial segment. The more stringent criteria include:

- The availability of suitable termini (access to/from Highway 407)
- Access from Highway 407 West
- Access from Highway 407 East
- Station size
- Potential for walk-in transit users
- Potential for travel time savings through use of 407 Transitway segment, as measured by the level of congestion of the Highway 407 corridor

Other considerations used in establishing the initial segment included the following:

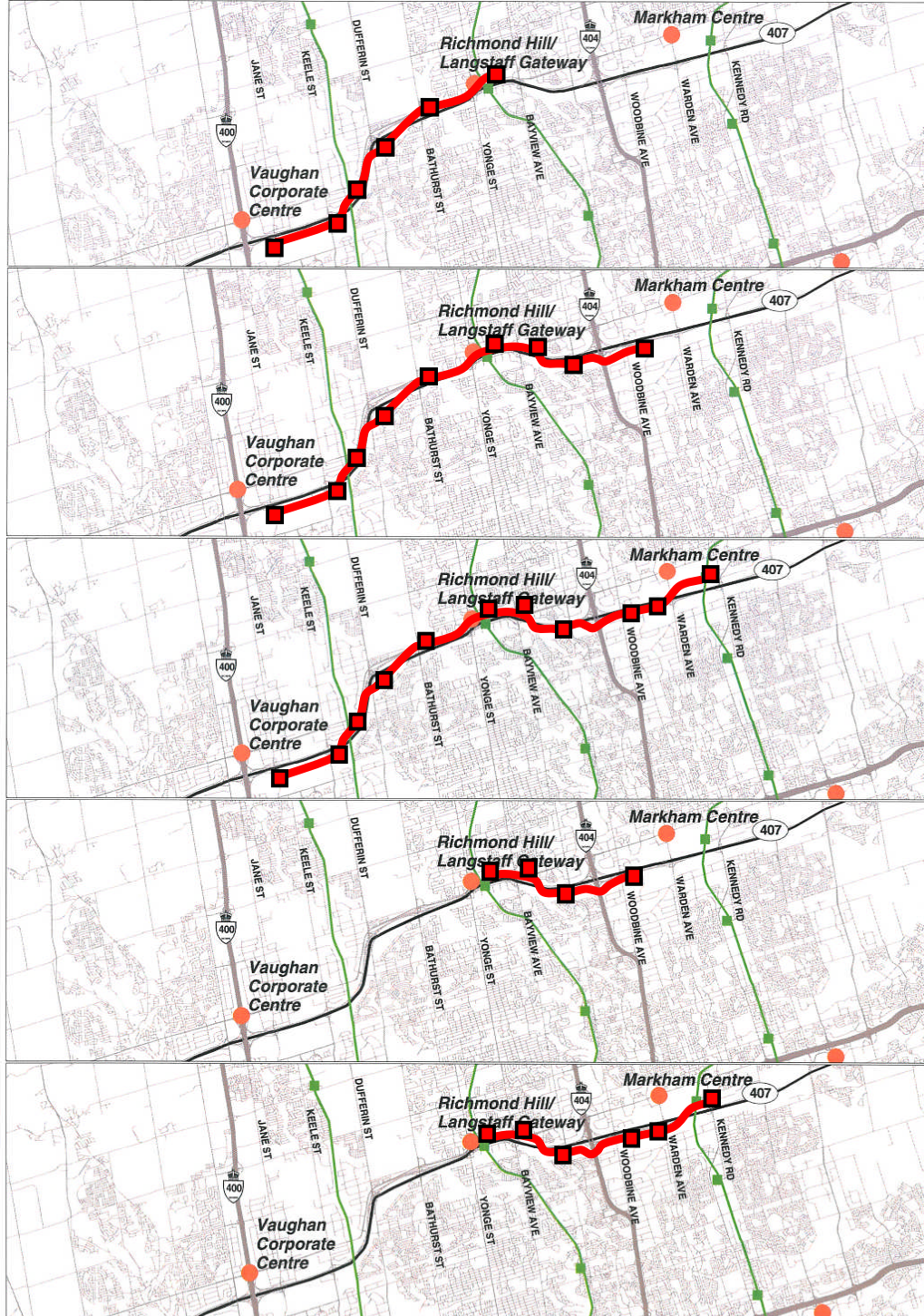
- Support one or more of the *UGC*s, as well as other major transit trip origins or destinations such as employment or retail centres, etc.
- Potential transit ridership
- Provide for GO BRT service
- Connectivity with one or more GO rail lines to provide inter-regional, intermodal transit network links
- Connectivity with two or more 400-series corridors, to provide integration of carpooling, commuter parking, HOV facilities, and inter-regional transit services.
- Connectivity with one or more existing or planned urban rapid transit facilities, to integrate inter-regional transit with urban transit services.
- Provide opportunities for commuter parking / carpool parking lots
- Provide opportunities for connections with surface transit services
- Final selected segment is to have adequate length in order for it to be viable as a standalone entity

Following discussions with the MTO, the sub-sections identified for further examination include those depicted in **Exhibit 5**:

- Highway 400 - Yonge;
- Highway 400 - 404;
- Highway 400 - Unionville GO (Kennedy Road);
- Yonge Street - 404;
- Yonge Street – Unionville GO (Kennedy Road).

**Exhibit 5.**

**Highway 400 – Unionville GO Subsegments**



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## 5.2 TRANSIT RIDERSHIP FORECASTS

The transit ridership forecasts were based on the following assumptions:

- Population and employment forecasts available when the *Transit Protection on 400-series Highways System Study* was undertaken in 2003
- Currently proposed GO Transit rail and BRT initiatives, as well as other rapid transit initiatives proposed by the *GGH's* regional municipalities and lower-tier municipalities. Although the timing of specific projects and the receipt of approvals is speculative and remains subject to evolving priorities, all publicly proposed plans were taken into account during the forecasting assignment
- Expanded urban transit network servicing the urbanized areas within the Greater Golden Horseshoe. This network includes transit services that are typically managed and operated by the various municipalities, on all major arterial and collector roads within urbanized areas.
- Greater transit usage due to a combination of higher levels of transit service, policies encouraging higher transit usage through intensification and the development of transit-supportive *UGC's*. Estimates of future transit usage are based on transit shares currently experienced in more mature areas within the City of Toronto with high levels of transit service.
- No *capacity constraints* on any of the existing or planned transit facilities

2021 transit ridership forecasts for each alternative sub-section are depicted in **Appendix A**.

## 5.3 EVALUATION OF ALTERNATIVE SUB-SECTIONS

The alternative 407 Transitway sub-sections were evaluated using the criteria identified in Section 5.1 and the results are summarized in **Table 2**. Based on the results as shown, the Highway 400 - Unionville GO (Kennedy Road) segment of the 407 Transitway was identified as the high priority sub-section for implementation.

In summary, the Highway 400 - Unionville GO (Kennedy Road) sub-section was selected based on the following rationale:

- Supports the newly developing Markham Centre which is already experiencing rapid growth
- Supports Vaughan Corporate Centre and Richmond Hill/Langstaff Centre
- Directly connects with two 400-series corridors – 400 and 404
- Provides good connections with three GO rail lines (Bradford, Richmond Hill, Stouffville), York rapid transit (Viva) initiatives and other existing YRT and TTC routes, as illustrated in **Exhibit 6**
- Service to 404 Business Park area and York University
- High walk-in potential, particularly given the surrounding land use at Bayview, Leslie, Warden, and Kennedy
- Good access from both 407 west and 407 east

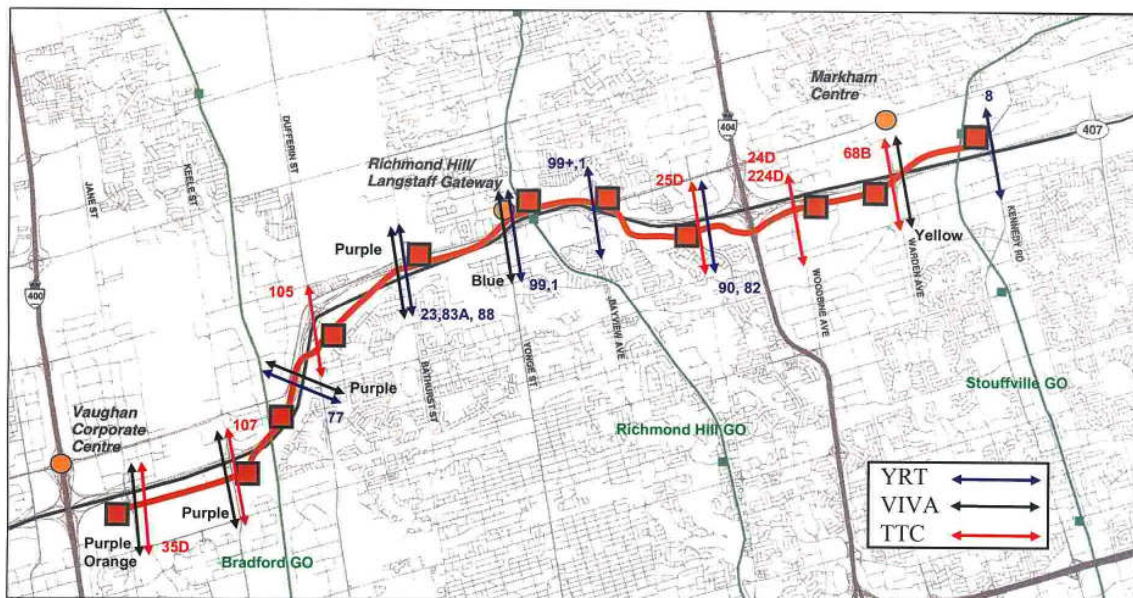


- The presence of road congestion on Highways 407 and 7. The proposed widening of 407 between 427 and Yonge Street will only provide temporary congestion relief on Highway 407 corridor. Congestion on Highway 7 will likely worsen between the present time and 2008.
- Higher potential for ridership, as forecasted
- Provides opportunity to address transitway design challenges early on
- Higher chance for early success
- Can serve as an anchor section of 407 Transitway – with three *Urban Growth Centres*
- Long enough to make it a viable, standalone section, and to make trip diversion to the Transitway worthwhile
- Includes site for operations centre, maintenance/storage yard (Highway 400).

The staging of the subsequent segments of the 407 Transitway will be revisited at a later time.

**Exhibit 6.**

**TTC, YRT and VIVA Routes Serving Highway 400 (Jane Street) - Unionville GO (Kennedy Road)**



**Table 2.**

**Evaluation of Alternative Sub-Sections Within 400 (Jane) – Unionville GO (Kennedy Road) Segment.**

	<b>Highway 400 – Yonge St.</b>	<b>Highway 400 – 404 (Woodbine)</b>	<b>Highway 400 – Unionville GO (Kennedy)</b>	<b>Yonge St. – 404 (Woodbine)</b>	<b>Yonge St. – Unionville GO (Kennedy)</b>
<b>Length</b>	11.2 km	17.5 km	22.5 km	6.4 km	9.4 km
<b>West Terminus Station</b>	Jane	Jane	Jane	Yonge	Yonge
<b>East Terminus Station</b>	Yonge	Woodbine	Kennedy	Woodbine	Kennedy
<b>Stations</b>	Jane Keele BradfordGO Dufferin Bathurst Yonge GO	Jane Keele BradfordGO Dufferin Bathurst Yonge GO Bayview Leslie Woodbine	Jane Keele BradfordGO Dufferin Bathurst Yonge GO Bayview Leslie Woodbine Warden KennedyGO	Yonge GO Bayview Leslie Woodbine	Yonge GO Bayview Leslie Woodbine Warden KennedyGO
<b>Urban Growth Centres</b>	Vaughan CC Richmond Hill	Vaughan CC Richmond Hill	Vaughan CC Richmond Hill Markham	Richmond Hill	Richmond Hill Markham
<b>Other growth centres</b>	York U.	York U. 404 / 7 area	York U. 404 / 7 area	404 / 7 area	404 / 7 area
<b>Potential 2008 Transit Ridership</b>	Low	Moderate	Highest	Lowest	Moderate
<b>Walk-In Potential</b>		Bayview Leslie	Bayview Leslie Warden Kennedy	Bayview Leslie	Bayview Leslie Warden Kennedy
<b>Congestion on 407</b>	High	High – Moderate	High – Moderate	Moderate	Moderate

	<b>Highway 400 – Yonge St.</b>	<b>Highway 400 – 404 (Woodbine)</b>	<b>Highway 400 – Unionville GO (Kennedy)</b>	<b>Yonge St. – 404 (Woodbine)</b>	<b>Yonge St. – Unionville GO (Kennedy)</b>
<b>Access from 407 West</b>	Jane I/C Jane	Jane I/C Jane	Jane I/C Jane	Circuitous – Yonge I/C Yonge High Tech	Circuitous – Yonge I/C Yonge High Tech
<b>Access from 407 East</b>	Circuitous – Yonge I/C Yonge High Tech	Backtrack – Woodbine I/C Woodbine Miller	Kennedy I/C Kennedy Enterprise	Backtrack – Woodbine I/C Woodbine Miller	Kennedy I/C Kennedy Enterprise
<b>GO Rail Integration</b>	Bradford Richmond Hill	Bradford Richmond Hill	Bradford Richmond Hill Stouffville	Richmond Hill	Richmond Hill Stouffville
<b>400 series corridors</b>	400	400 404	400 404	404	404
<b>Rapid transit</b>	Vaughan Viva <sup>3</sup> link Yonge Viva link	Vaughan Viva link Yonge Viva link	Vaughan Viva link Yonge Viva link Markham Viva link	Yonge Viva link Markham Viva link	Yonge Viva link Markham Viva link
<b>Surface Transit Connections</b>	Jane Keele Dufferin Bathurst Yonge	Jane Keele Dufferin Bathurst Yonge Bayview Leslie Woodbine	Jane Keele Dufferin Bathurst Yonge Bayview Leslie Woodbine Warden Kennedy	Yonge Bayview Leslie Woodbine	Yonge Bayview Leslie Woodbine Warden Kennedy
<b>Suitability as Initial Segment by 2008</b>	<b><u>Not Preferred</u></b> Yonge is not a suitable terminus	<b><u>Not Preferred</u></b> Woodbine is not suitable terminus	<b><u>Most Preferred</u></b>	<b><u>Least Preferred</u></b> Too short. Yonge and Woodbine are not suitable termini	<b><u>Not Preferred</u></b> Yonge is not a suitable terminus

<sup>3</sup> Previously called “Quick Starts”.

## 6. TASK 4 – EVALUATION CRITERIA FOR STATIONS

### 6.1 CANDIDATE STANDALONE STATIONS

In addition to the identification of a high priority segment of the 407 Transitway for implementation, it was also deemed necessary to evaluate and select high priority standalone stations that would support the implementation of the 407 Transitway and other planned initiatives for GO BRT services, commuter parking, carpooling and transit integration. Through discussions with GO Transit, MTO identified the stations at the following cross streets as candidates for further review:

- Bronte Road
- Trafalgar Road
- Highway 10
- Airport Road
- Jane Street
- Keele Street
- Markham Road

Stations at other major cross streets (i.e. Dufferin, Bathurst, Yonge, Bayview, Leslie, etc.) were omitted from further analysis due to the lack of physical space or absence of good access from Highway 407.

### 6.2 EVALUATION OF POTENTIAL STANDALONE STATIONS

An evaluation summary of potential standalone stations is shown in **Table 3**. All stations listed are recommended for inclusion for further analysis in the *Priority Station Preliminary/Detail Design EA Study* to follow.

**Table 3.****Evaluation of Potential Standalone Stations on 407 Transitway**

	<b>Bronte</b>	<b>Trafalgar</b>	<b>Hwy 10</b>	<b>Airport</b>	<b>Jane</b>	<b>Keele</b>	<b>Markham</b>
<b>Urban Growth Centres</b>					Vaughan CC		
<b>Walk-In Potential</b>	No	No	Moderate – residential & industrial	Moderate – industrial	No	No	High – residential & commercial
<b>Access from 407 for cars and buses</b>	Bronte I/C Bronte	Trafalgar I/C Trafalgar	Hurontario I/C Hurontario	Airport I/C Airport	Jane I/C Jane	Keele I/C Keele	Markham I/C Markham
<b>GO Rail Integration</b>	No	No	No	No	No	No	No
<b>400 series corridors</b>					400		
<b>Rapid transit</b>	Regional Road 25 Corridor connecting to Bronte GO	Trafalgar Road Corridor connecting to Oakville GO	AcceleRide Rapid Transit Corridors: Main Line (Hurontario)		3 Quick Start links: Hwy 7 West York U Centre St.		Higher order transit corridor on Markham Road as identified in City of Toronto Official Plan

## 7. TASK 5 – TRANSITWAY EXTENSION TO HIGHWAY 427

In addition to the detailed analysis of the Highway 400 - Unionville GO (Kennedy Road) segment, a sensitivity analysis was also carried out to examine the implications of extending the segment to Highway 427. The transit ridership forecast assignment was expanded to include this scenario and the results are shown in **Exhibit A-6** (in **Appendix A**).

There are several benefits to further extending the initial segment of the 407 Transitway westerly from Highway 400 to Highway 427:

- Promotes further connectivity to and between three *UGC*s, including Markham Centre, Vaughan Corporate Centre and the Richmond Hill/Langstaff Centre
- Directly connects with three 400-series corridors – 400, 404 and 427
- Provides connections with GO rail services
- Connects with potential higher-order transit and HOV initiatives on 427
- Service to Weston-400 Industrial Park, the Pine Valley Business Park, the Emery Creek Corporate Park
- The presence of road congestion on Highways 407 and 7 and the likelihood that the situation will worsen between the present time and 2008.
- Provides an even longer standalone segment connected to a higher-order transit corridor on 427, making it a more attractive to commuters given the greater potential for time savings and convenience
- Even higher forecasts for potential transit ridership compared to the 400 - Unionville GO (Kennedy Road) segment

The major drawback to the implementation of the extension of the transitway segment to Highway 427 would be the location of a western terminus. Given the layout of the interchange and limited property availability, terminus and access potential is restricted to a small site in the southwestern quadrant.

Consideration was also given to an alternate western terminus at Highway 27. Following a detailed examination, this alternative was also found to be less than ideal for several reasons. Having the transitway terminate at Highway 27 would be a hindrance to the continuity of the high-order inter-regional transit system since it would not provide a direct connection to Highway 427, the major north-south corridor in the vicinity. In addition, there are no municipal transit services on Highway 27 so having a terminus there would not provide any additional links between the inter-regional transit services expected to operate on the 407 Transitway and municipal transit routes. Lastly, the potential for transit users accessing this terminal by walking (or cycling) would also be very low given the surrounding land use.

## 8. CONCLUSIONS AND RECOMMENDATIONS

The 407 Transitway is a critical part of the provincial plan for a seamless, integrated transit system spanning the Greater Golden Horseshoe. It forms the spine of the inter-regional transit system and will extend from Burlington to Pickering, with multiple stations and connections with a multitude of other inter-regional and municipal transit routes. This 407 Transitway Implementation Study is a part of the *Transit Protection Study on 400-series Highways System Study* initiated by the Ontario Ministry of Transportation (MTO) in 2002 and describes a strategy for the staged implementation of the Transitway.

Through a detailed review of the alternative candidate segments to be implemented first, the 20.5 km long segment between Highway 400 and the Unionville GO Station (at Kennedy Road) was recommended as the most suitable high priority segment for the following reasons:

- Supports the newly developing Markham Centre which is already experiencing rapid growth
- Supports Vaughan Corporate Centre and Richmond Hill/Langstaff Centre
- Directly connects with two 400-series corridors – 400 and 404
- Provides connections with three GO rail lines – Bradford, Richmond Hill, Stouffville
- Connects with York rapid transit (Viva) initiatives
- Service to 404 Business Park area and York University
- High walk-in potential, particularly given the surrounding land use at Bayview, Leslie, Warden, and Kennedy
- Good access from both 407 west and 407 east
- The presence of road congestion on Highways 407 and 7. The proposed widening of 407 between 427 and Yonge Street will only provide temporary congestion relief on Highway 407 corridor. Congestion on Highway 7 will likely worsen between the present time and 2008.
- Higher potential for ridership, as forecasted
- Provides opportunity to tackle transitway design challenges early on
- Higher chance for early success
- Can serve as an anchor section of 407 Transitway – with three *Urban Growth Centres*
- Long enough to make it a viable, standalone section, and to make diversion to the Transitway worthwhile
- Includes site for operations centre, maintenance/storage yard (Highway 400).

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In addition, the evaluation and selection of high priority standalone stations that would support the implementation of the 407 Transitway and other planned transit and travel demand management (TDM) initiatives were also deemed as critical. Through a consensus-building approach involving GO Transit, MTO identified the stations at the following cross streets as candidates for further review:

- Bronte Road
- Trafalgar Road
- Highway 10
- Airport Road
- Jane Street
- Keele Street
- Markham Road

The stations listed were recommended for further review in the forthcoming *Priority Station Preliminary/Detail Design EA Study*.

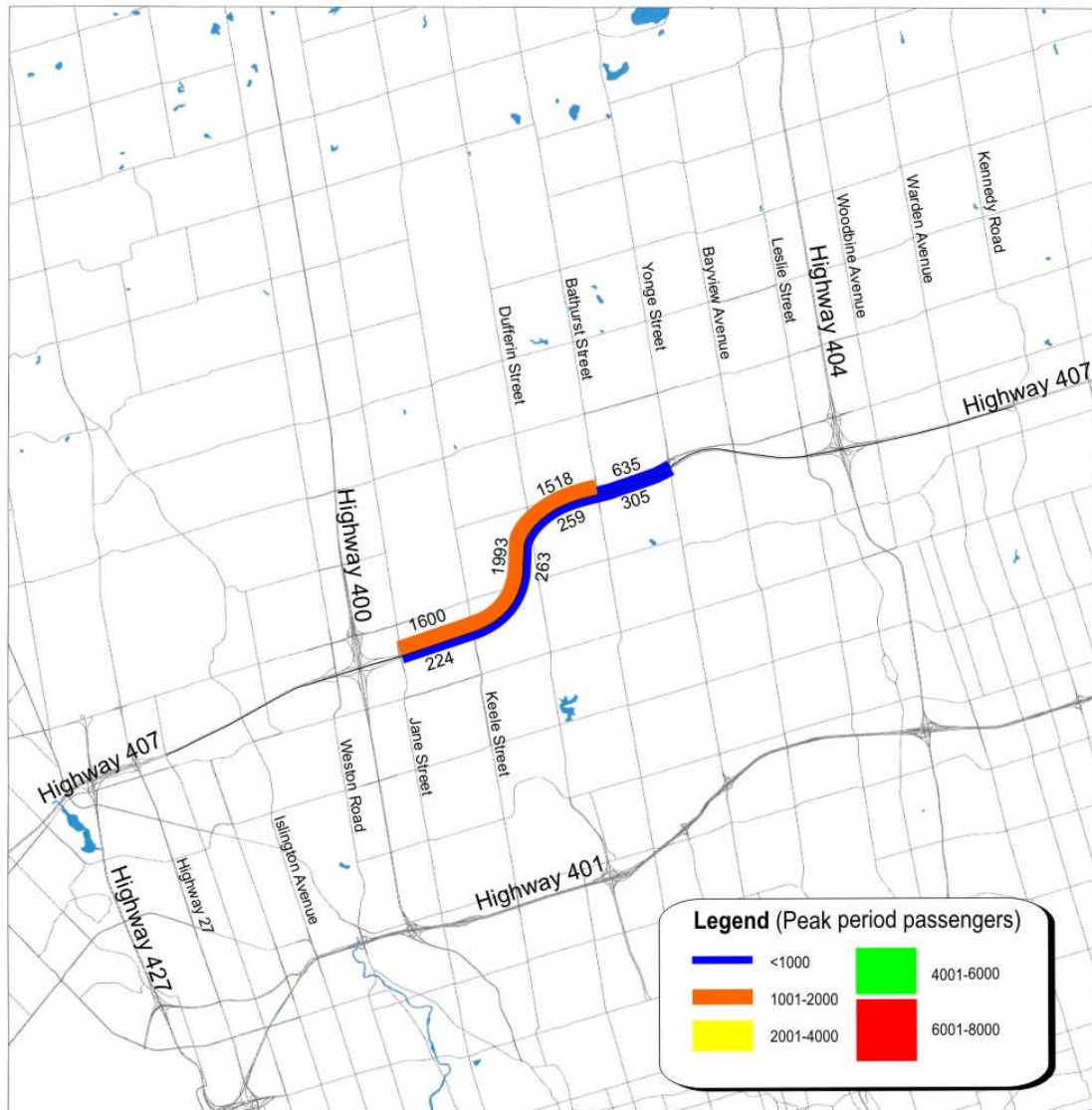
As part of a sensitivity analysis to examine the benefits and challenges to extending the recommended high priority segment to Highway 427, transit ridership forecasts were expanded to properly evaluate this scenario. While there are obvious benefits to the extension of the high priority segment, a major hindrance to the maximum utilization of this extended segment would be the difficulty in getting access to the western terminus of the Transitway at Highway 427. An alternative terminus located at Highway 27 is also not ideal due the surrounding land use, the inherent difficulty in connecting to Highway 427, and the absence of municipal transit services on Highway 27. While a terminal at Highway 427 would be the more preferable option of the two candidate locations, given the layout of the interchange and limited available property, it is recommended that the extension be revisited at a later stage when accessibility issues to the 427 terminal can be evaluated in greater detail.



## APPENDIX A<sup>4</sup>: TRANSIT RIDERSHIP FORECASTS

### Exhibit A-1.

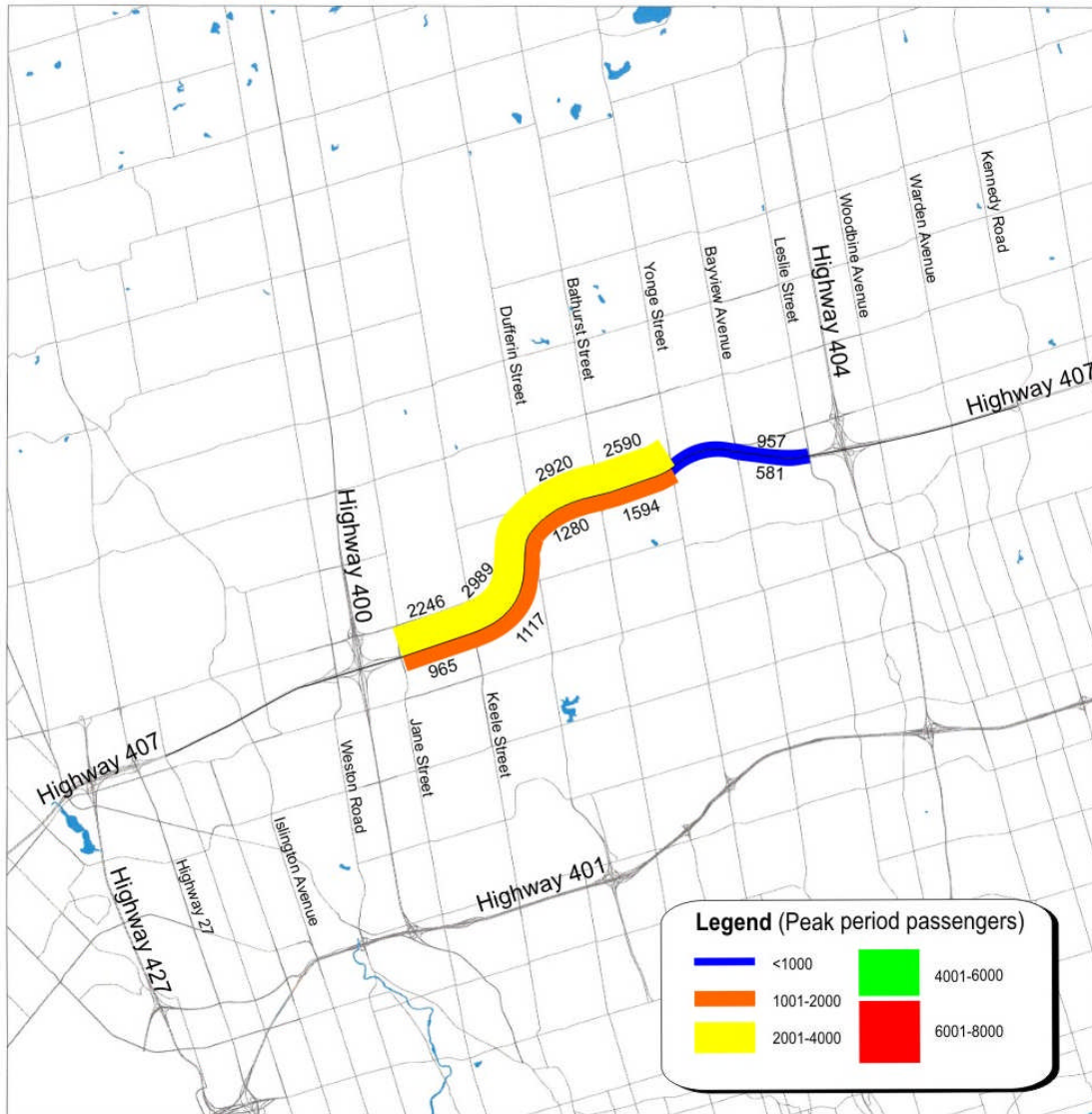
#### 2021 Transit Ridership Forecasts for 400 (Jane Street) – Yonge Sub-section.



<sup>4</sup> The EMME/2-based forecasting process included the presence of transit facilities on other 400-series highways in addition to the Highway 407 Transitway corridor. These figures serve to highlight the transit volumes on the various alternative 407 Transitway segments. Details on the other 400-series highways can be found in the *Transit Protection on 400-series Highways Systems Study*

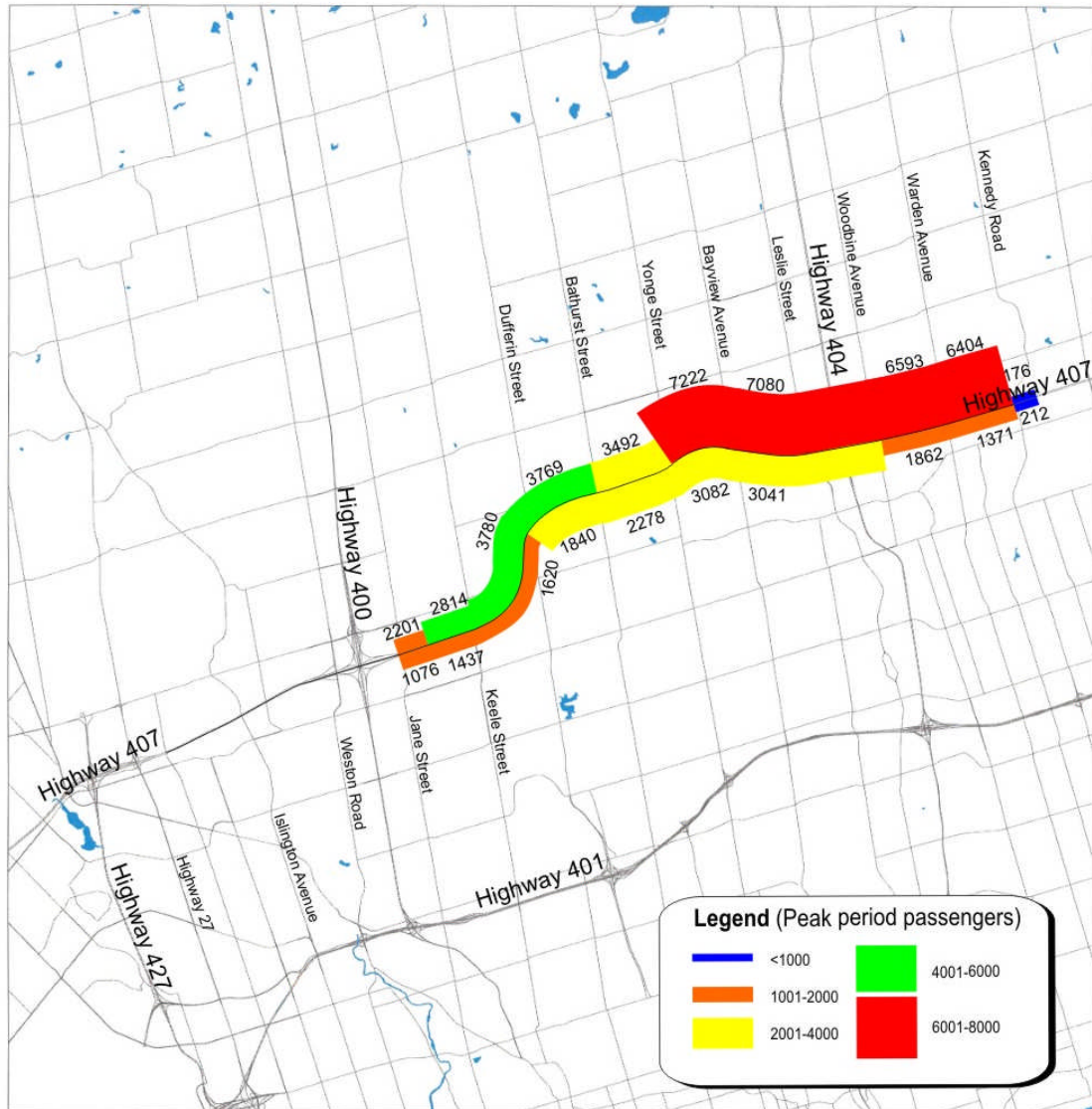
**Exhibit A-2.**

**2021 Transit Ridership Forecasts for 400 (Jane Street) – 404 Sub-section.**



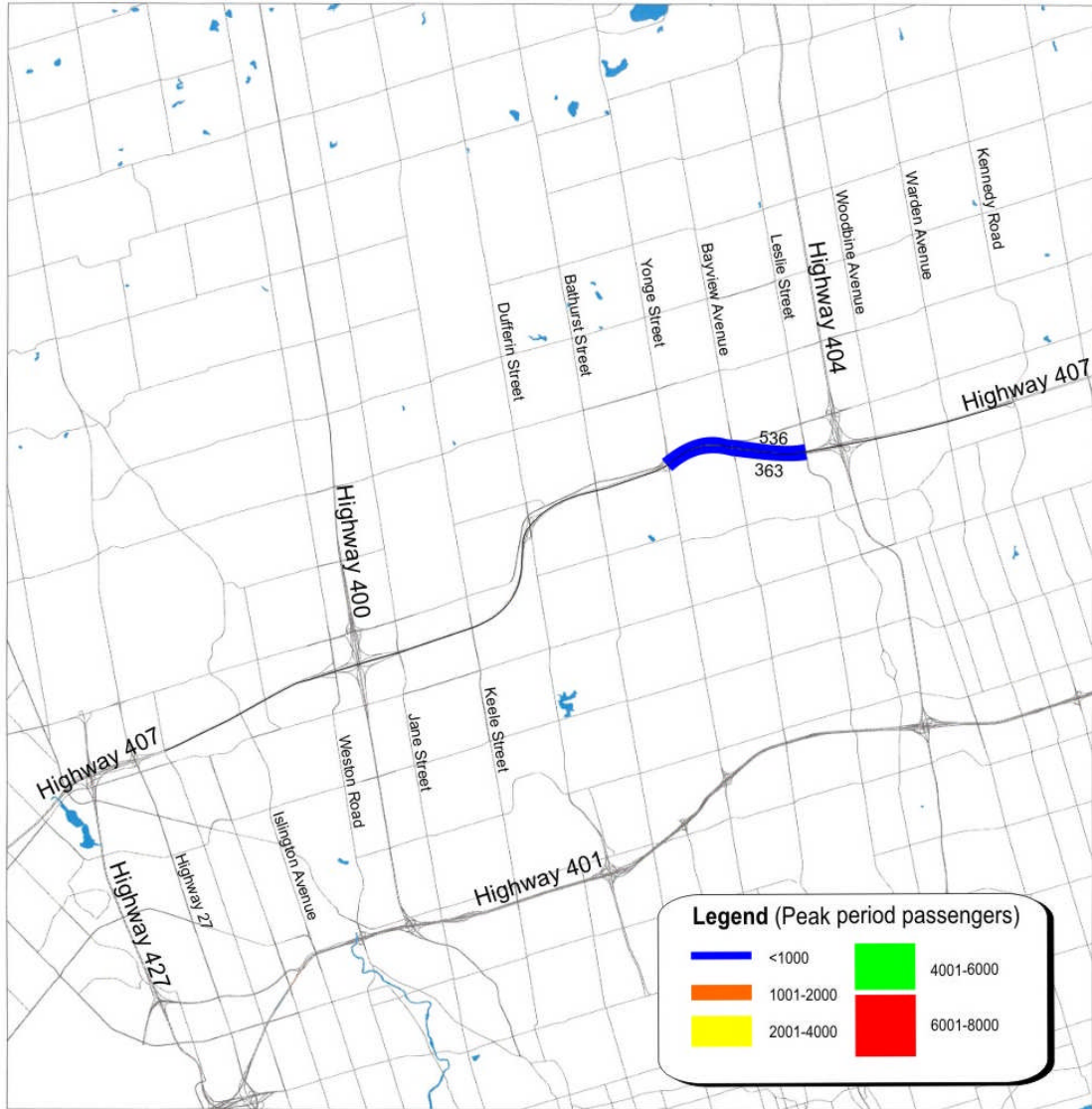
**Exhibit A-3.**

**2021 Transit Ridership Forecasts for 400 (Jane Street) – Unionville GO (Kennedy Road) Sub-section.**



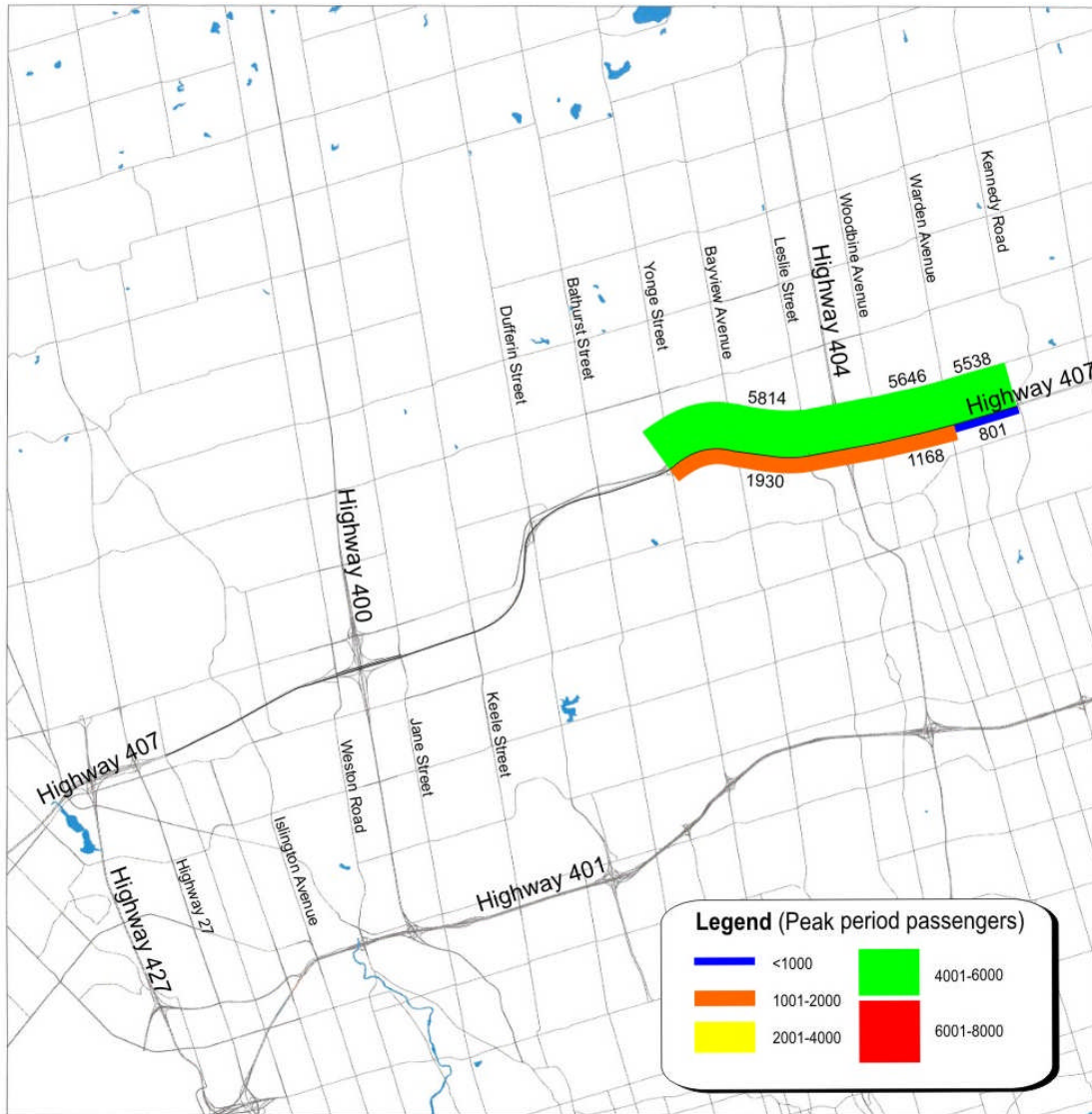
**Exhibit A-4.**

**2021 Transit Ridership Forecasts for Yonge Street – 404 Sub-section.**



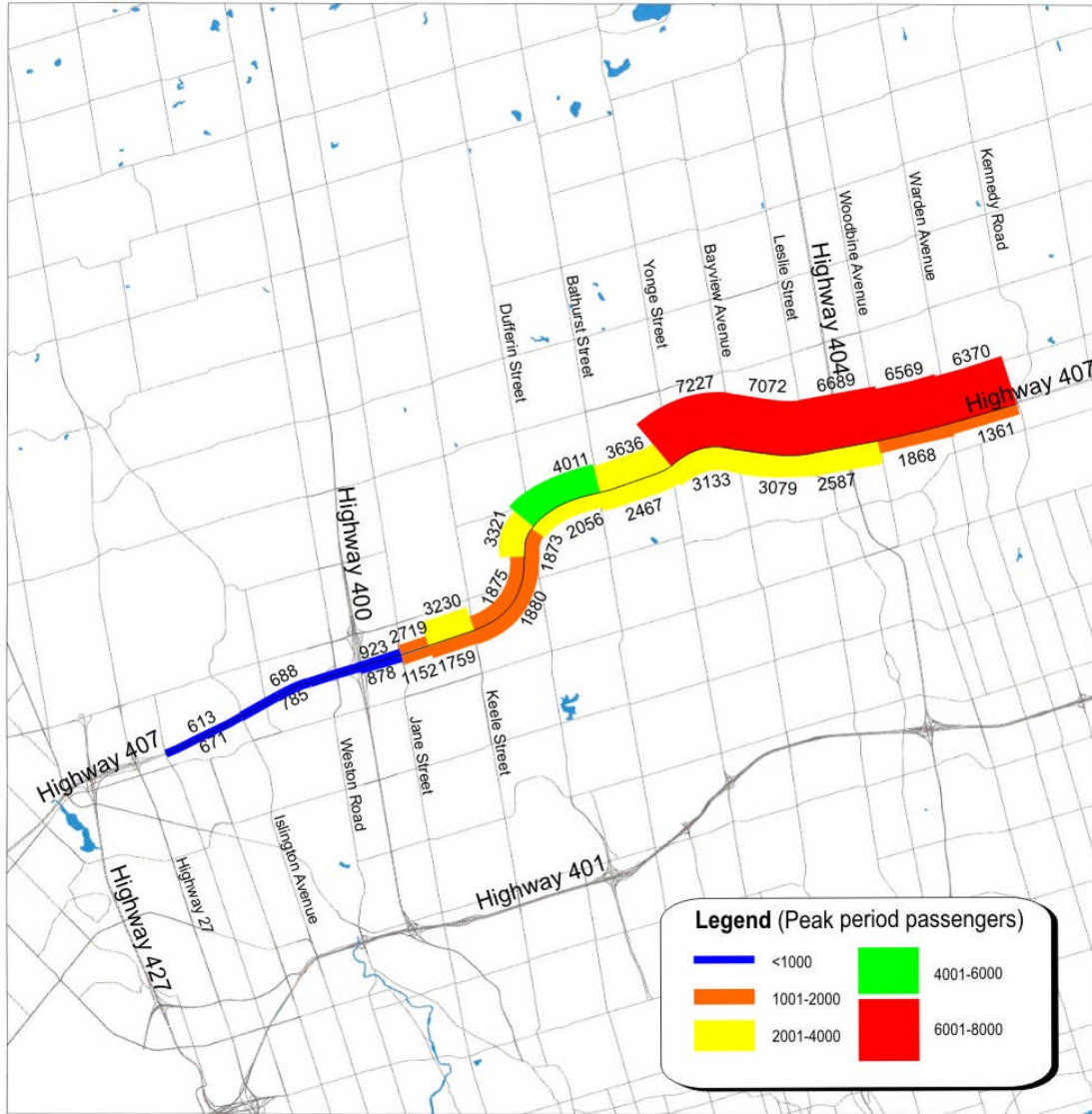
**Exhibit A-5.**

**2021 Transit Ridership Forecasts for Yonge Street – Unionville GO (Kennedy Road) Sub-section.**

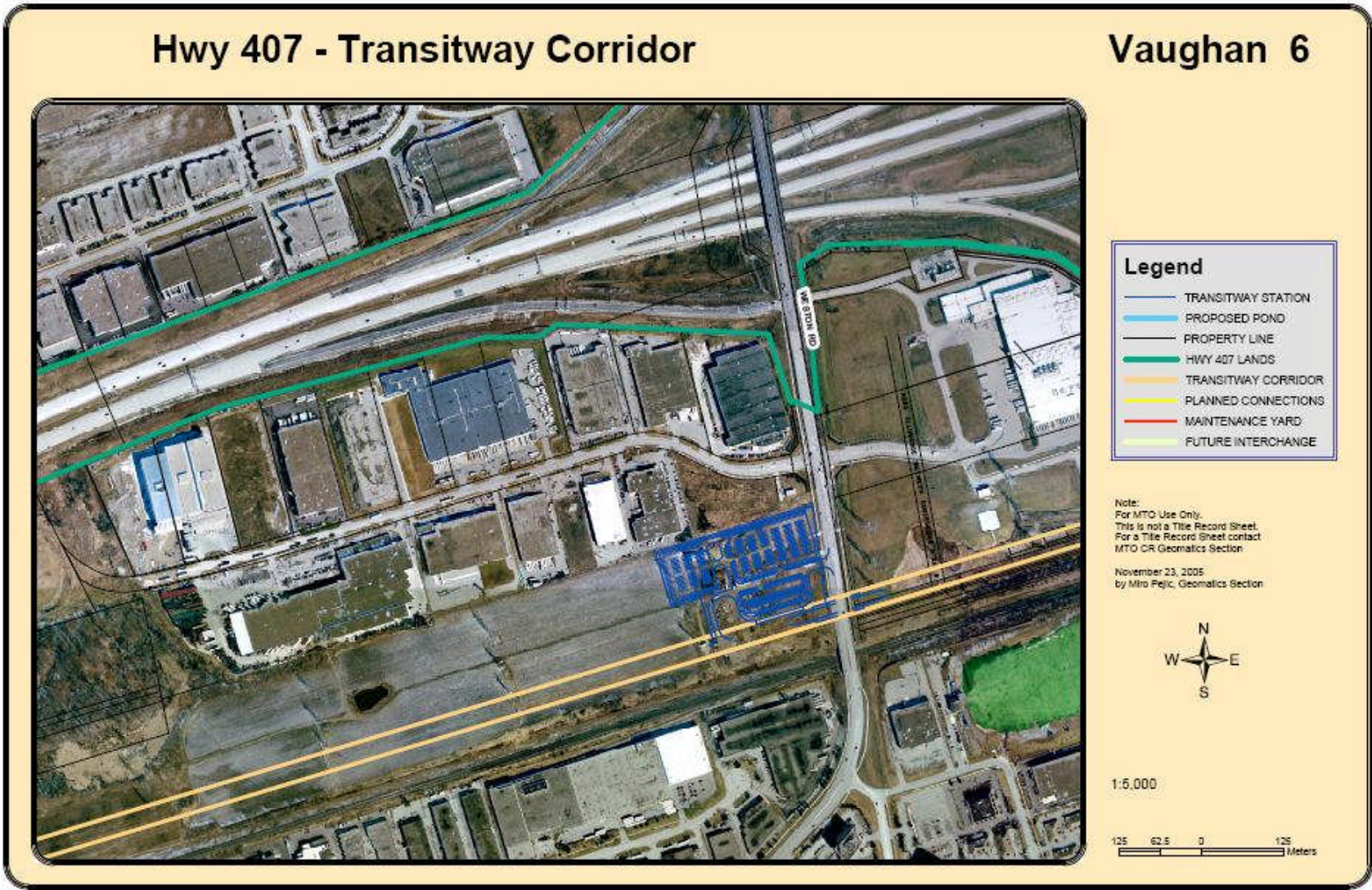


**Exhibit A-6.**

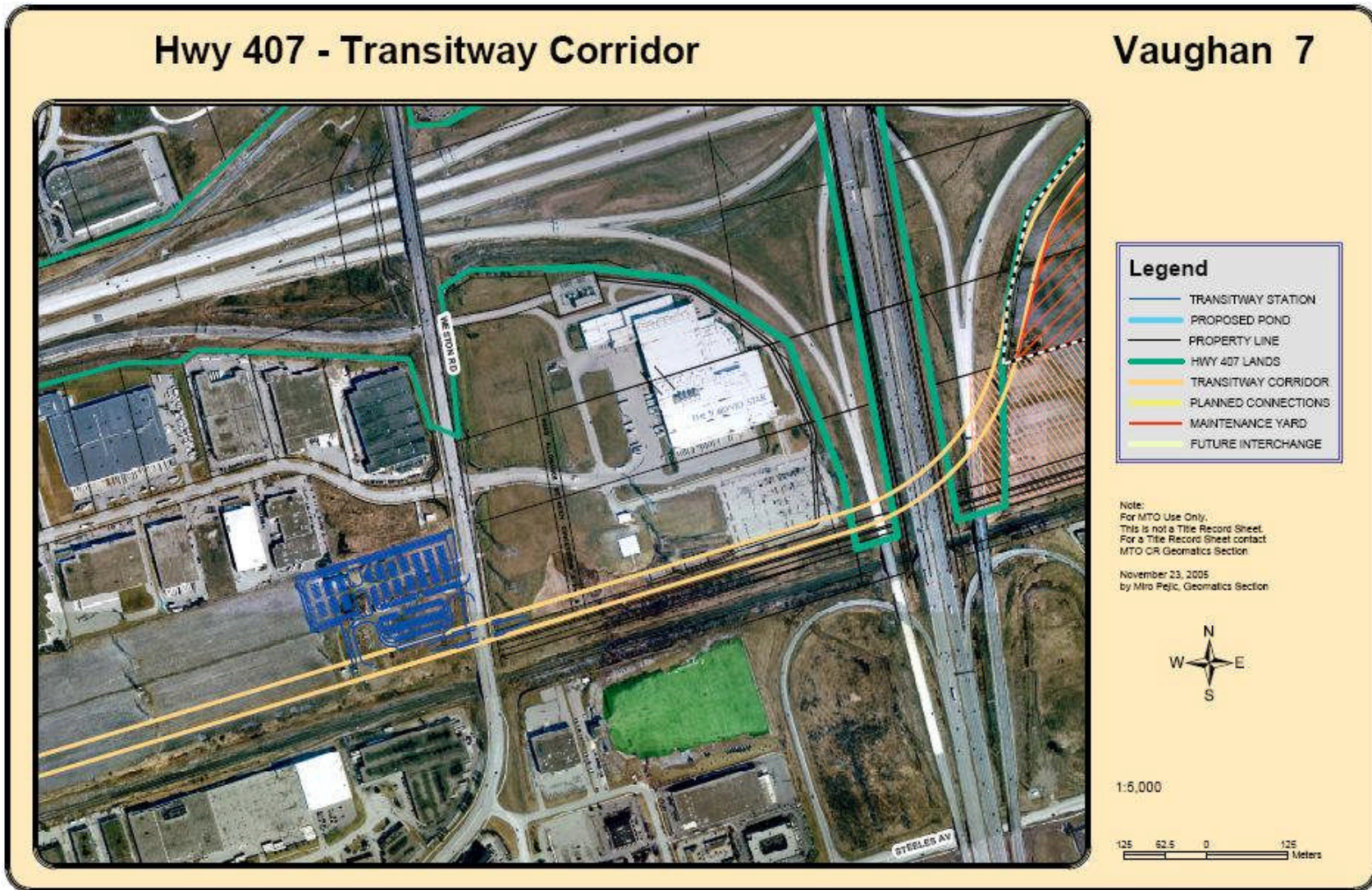
**2021 Transit Ridership Forecasts for 427 – Unionville GO (Kennedy Road)**

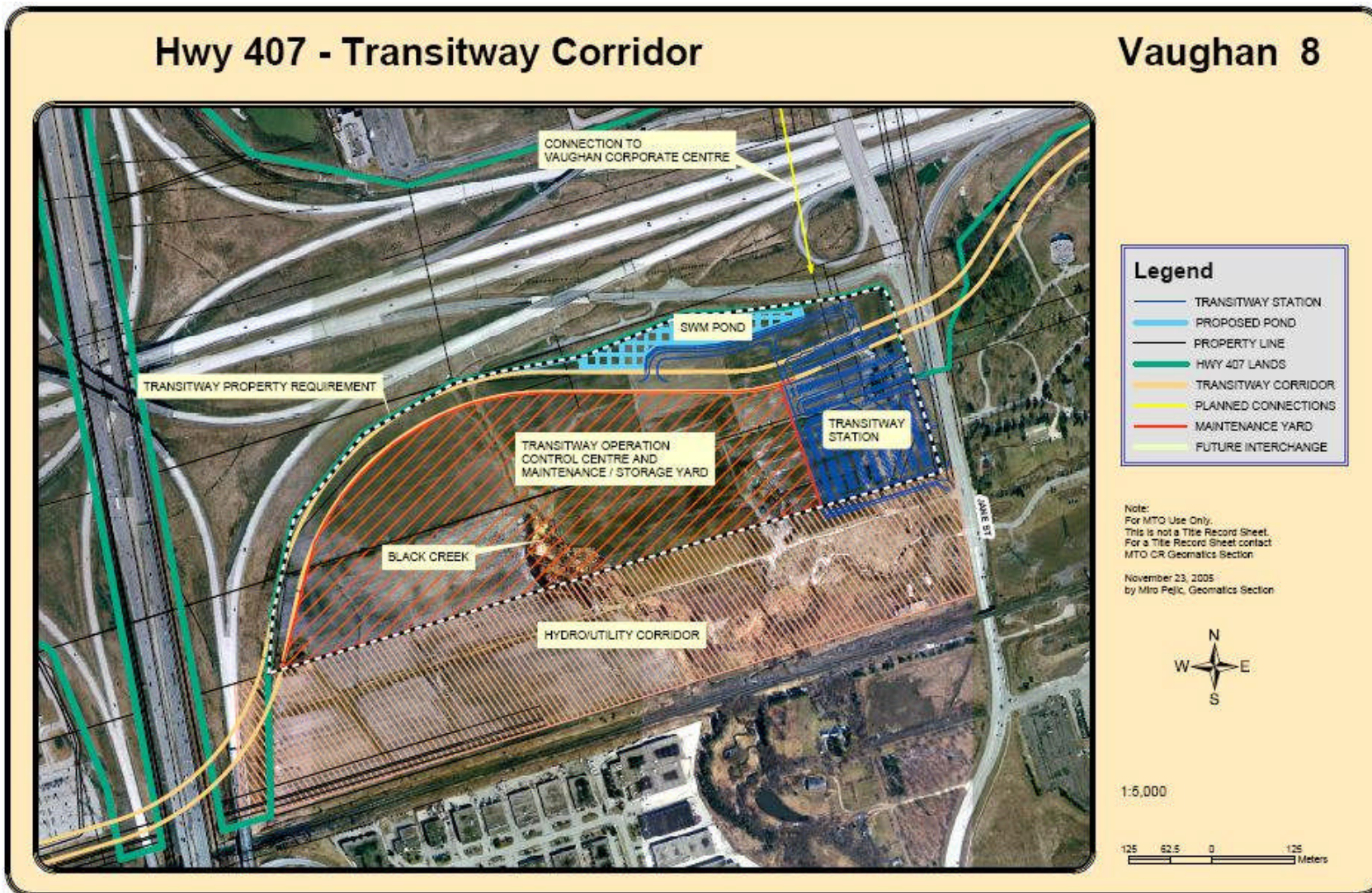


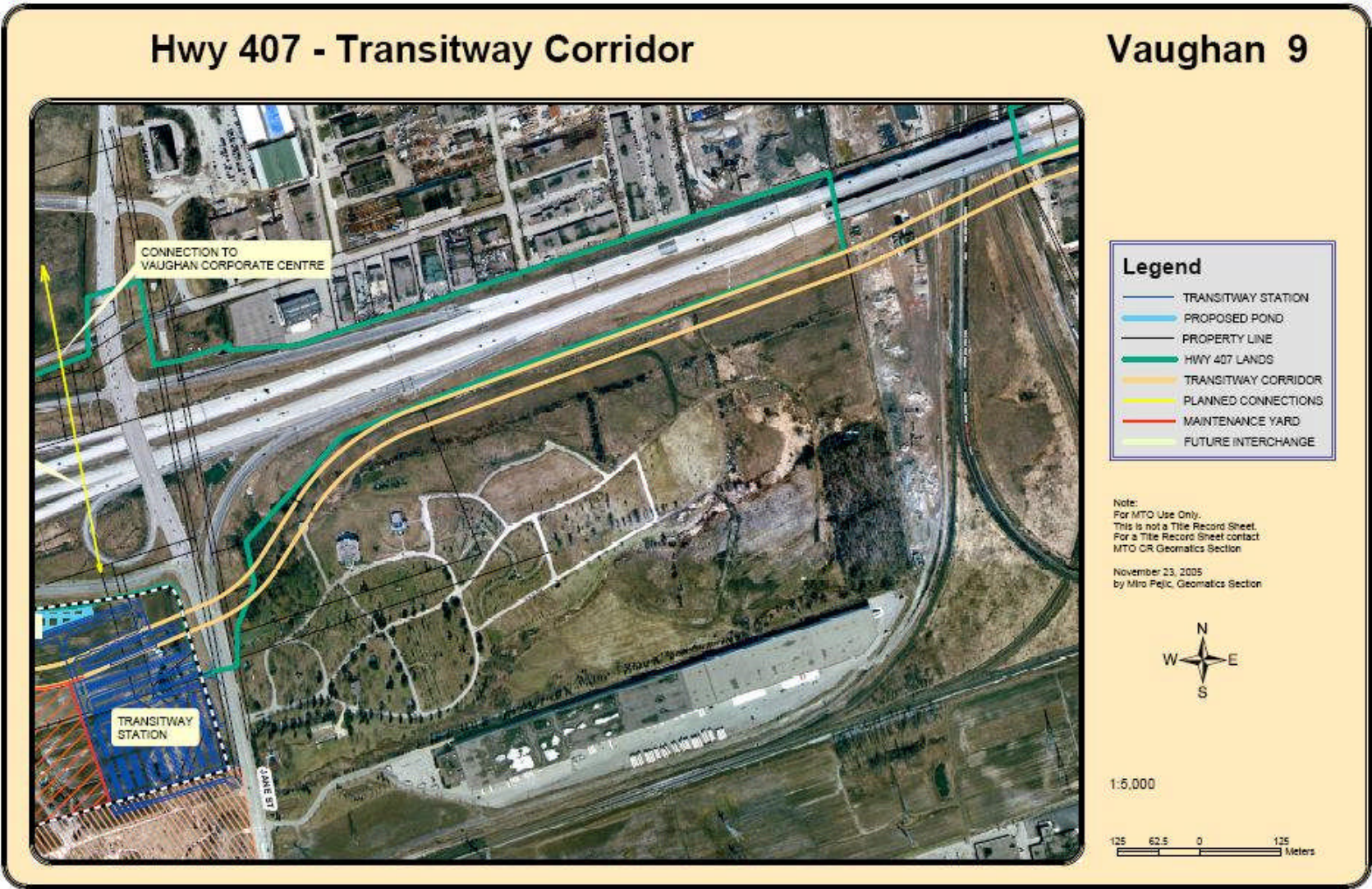
**APPENDIX B: DETAILED PLANS FOR HIGHWAY 400  
(JANE) – UNIONVILLE GO (KENNEDY ROAD)  
SEGMENT**

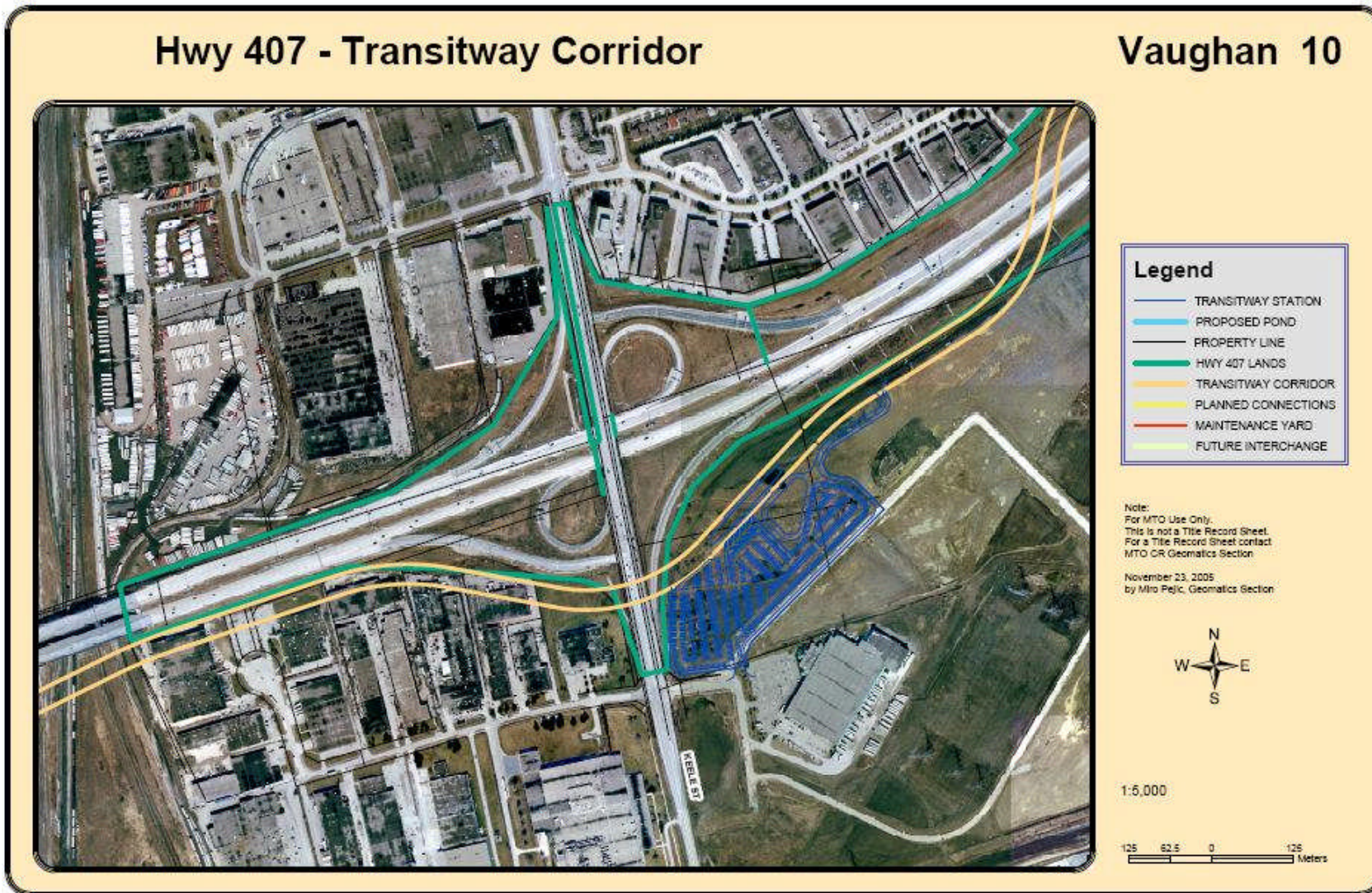


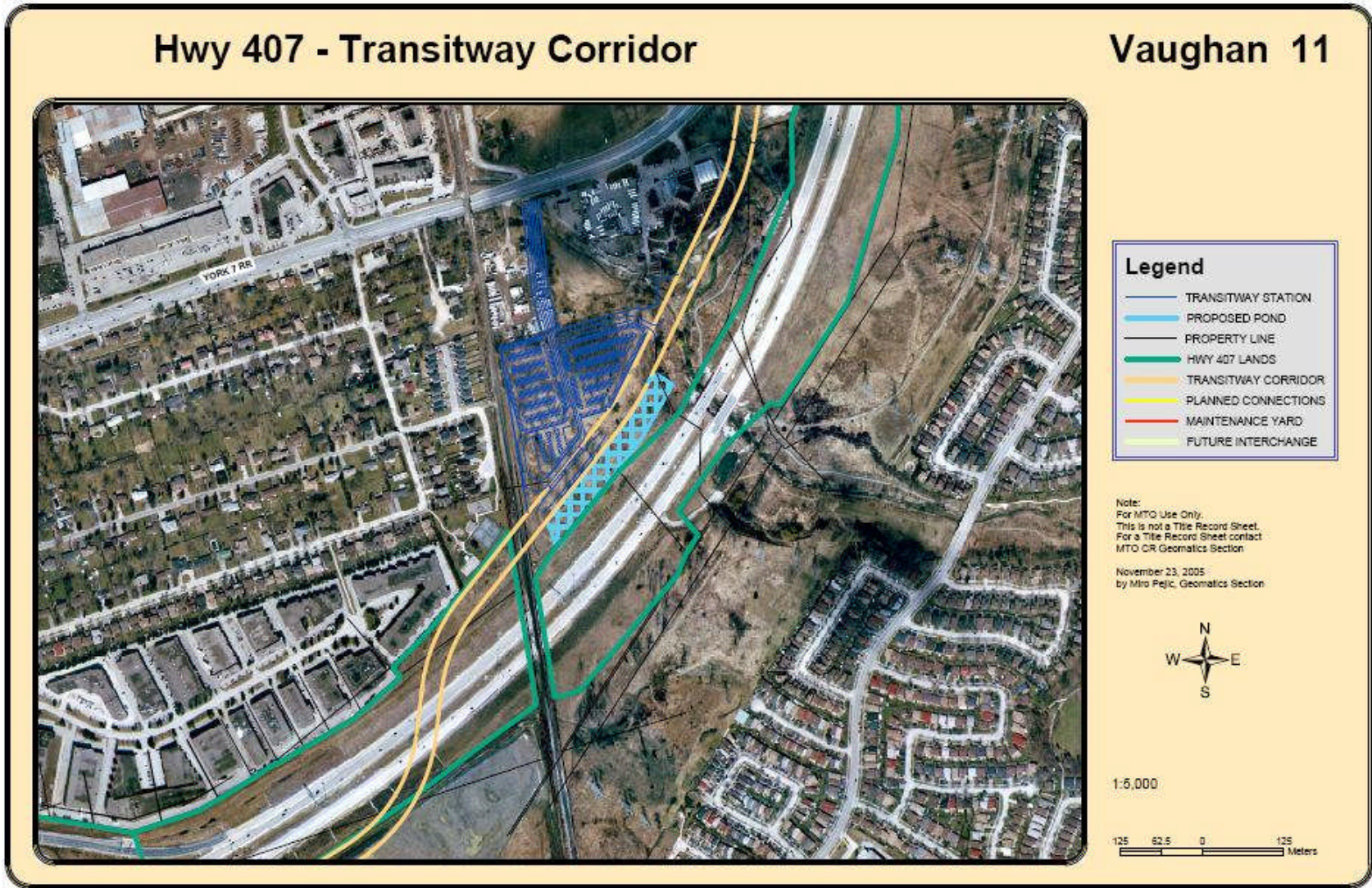


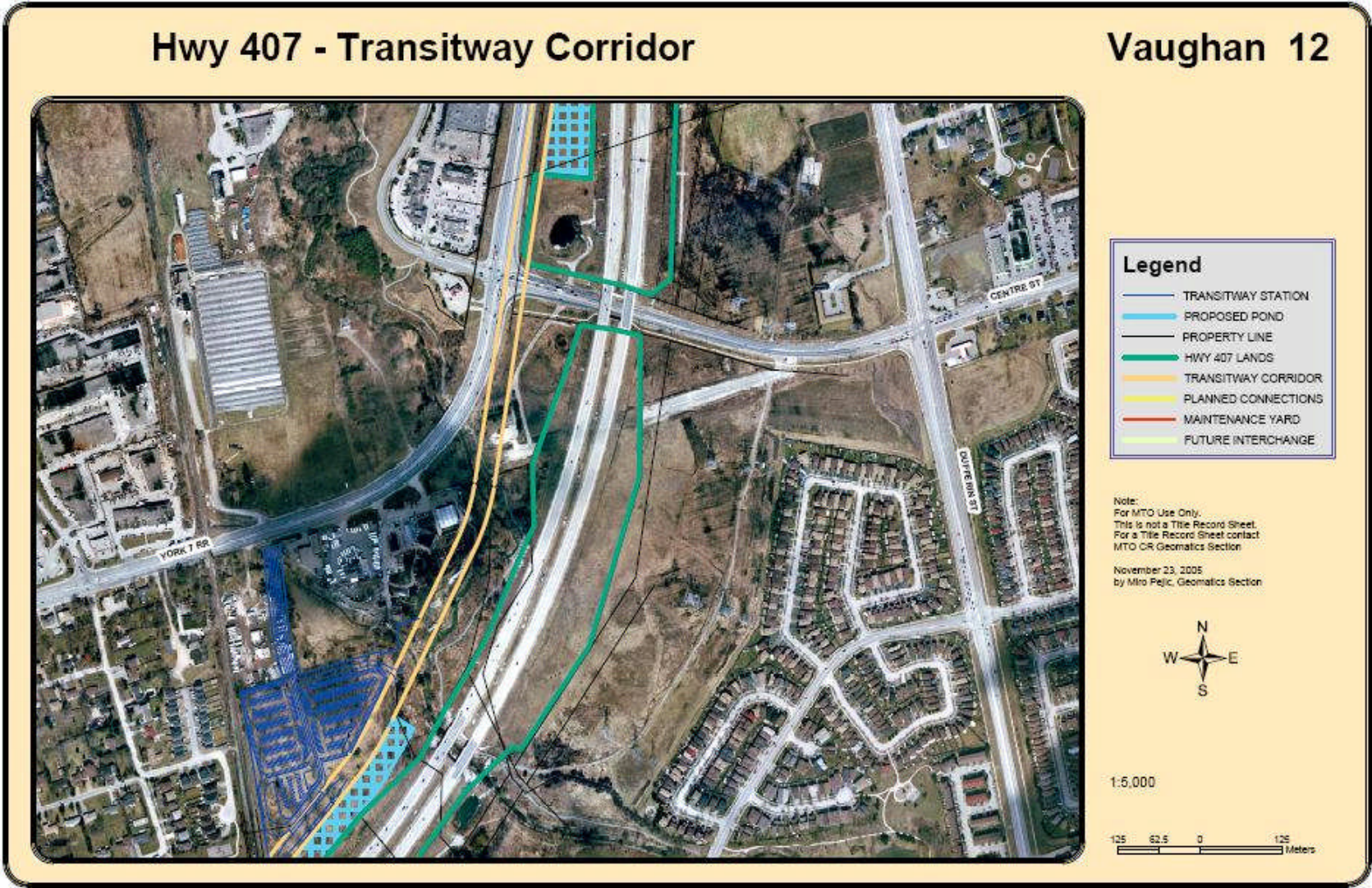


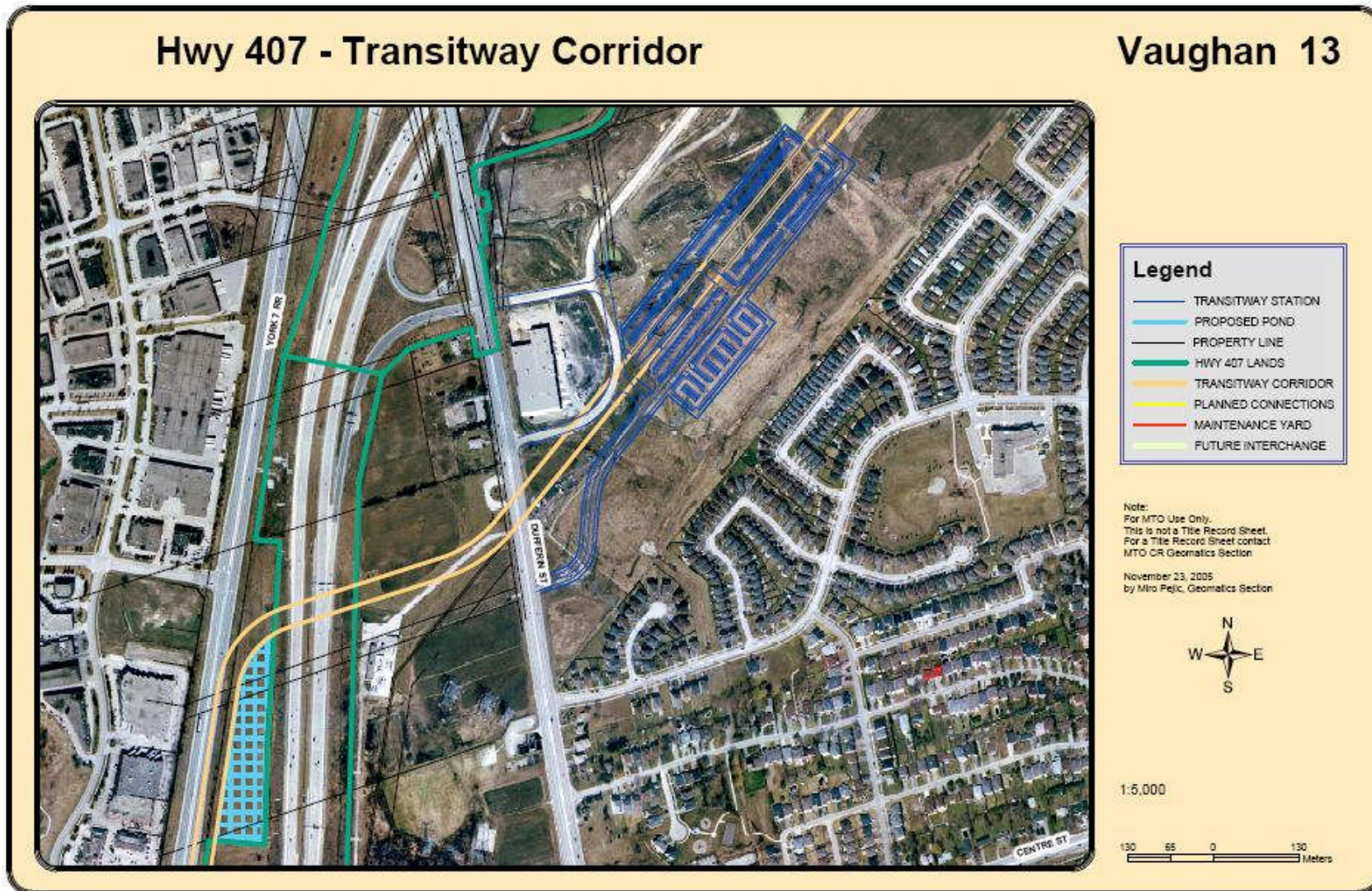












# Hwy 407 - Transitway Corridor

# Vaughan 14



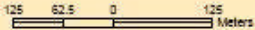
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- PROPOSED POND
- PROPERTY LINE
- HWY 407 LANDS
- TRANSITWAY CORRIDOR
- PLANNED CONNECTIONS
- MAINTENANCE YARD
- FUTURE INTERCHANGE

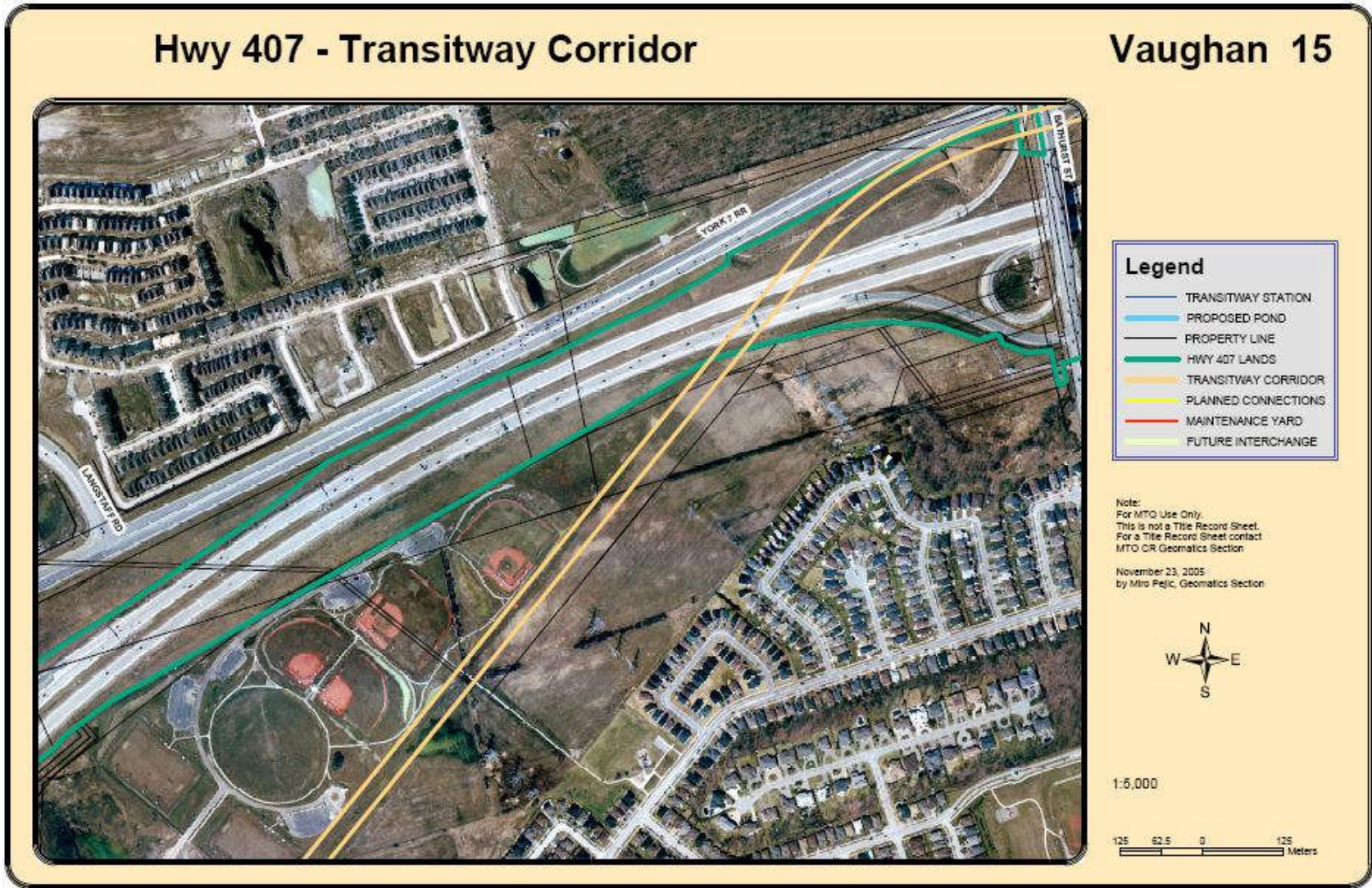
Note:  
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MTO CR Geomatics Section  
  
November 23, 2005  
by Miro Pejic, Geomatics Section



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# Hwy 407 - Transitway Corridor

# Vaughan 16



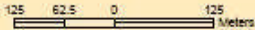
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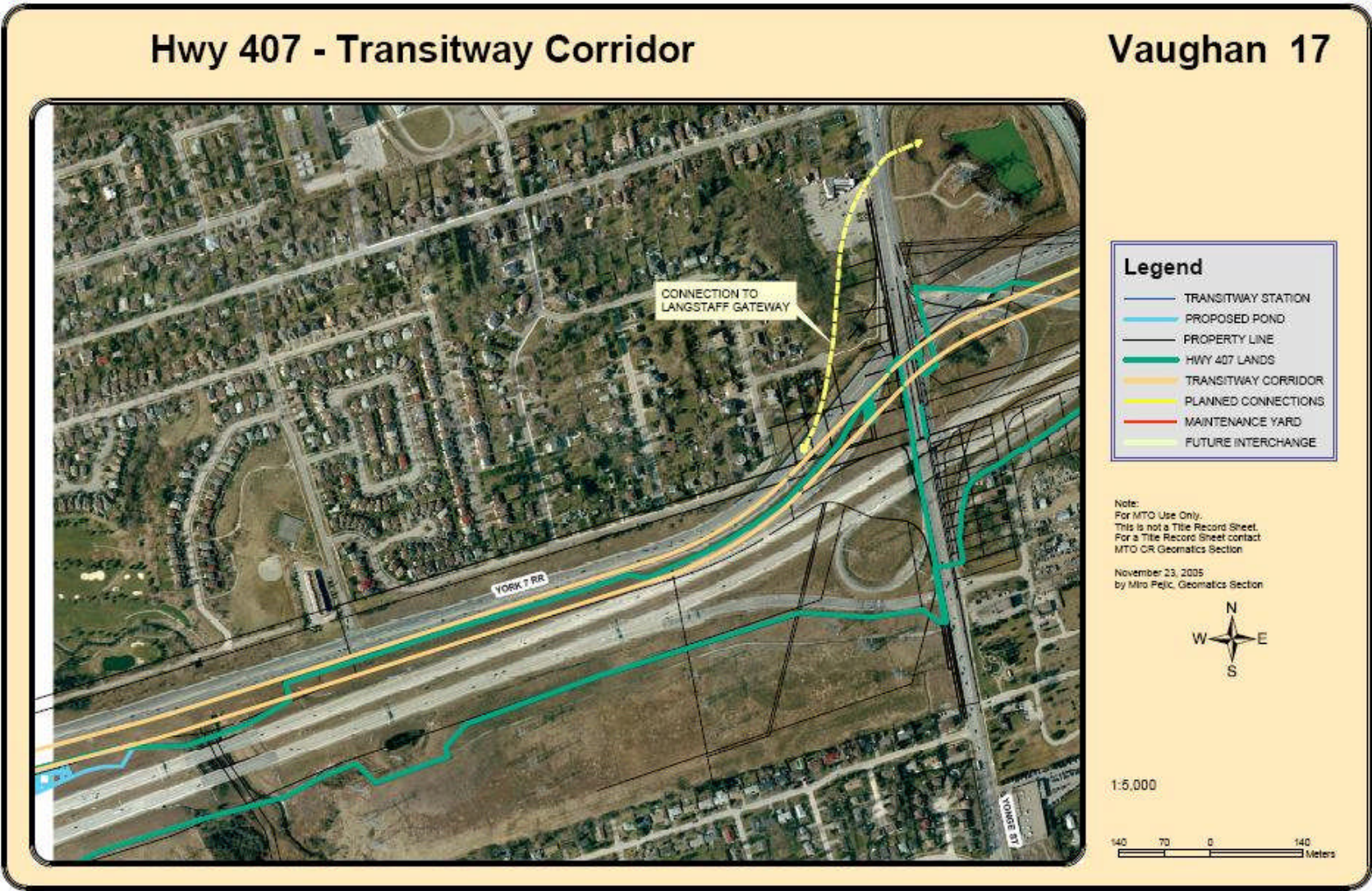
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- PROPOSED POND
- PROPERTY LINE
- HWY 407 LANDS
- TRANSITWAY CORRIDOR
- PLANNED CONNECTIONS
- MAINTENANCE YARD
- FUTURE INTERCHANGE

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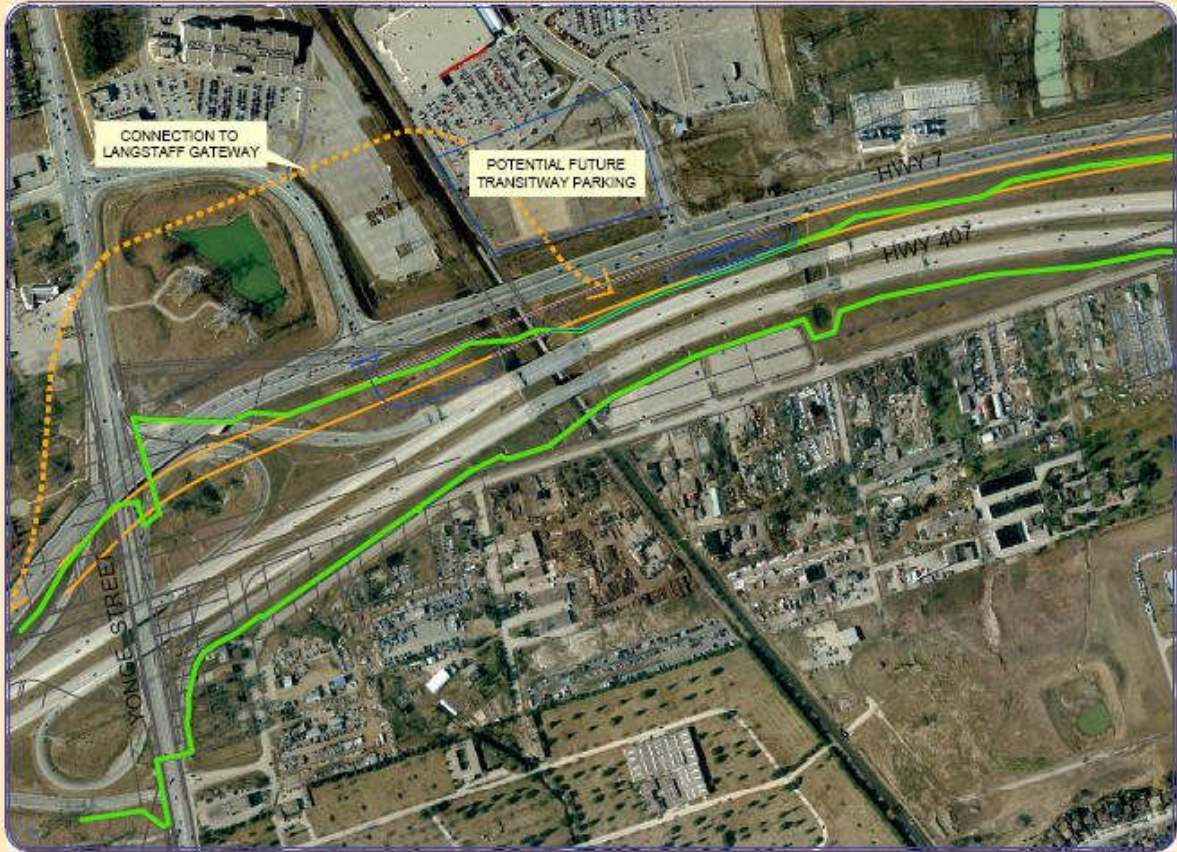
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# Hwy 407 - Transitway Corridor

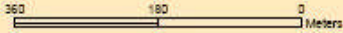
# Markham 1



**Legend**

- TRANSITWAY STATION
- TRANSITWAY CORRIDOR
- PROPOSED POND
- HWY407 LANDS
- EXISTING FENCE
- lws2\_utm.dwg Polyline
- PROPERTY LINE

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# Hwy 407 - Transitway Corridor

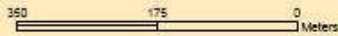
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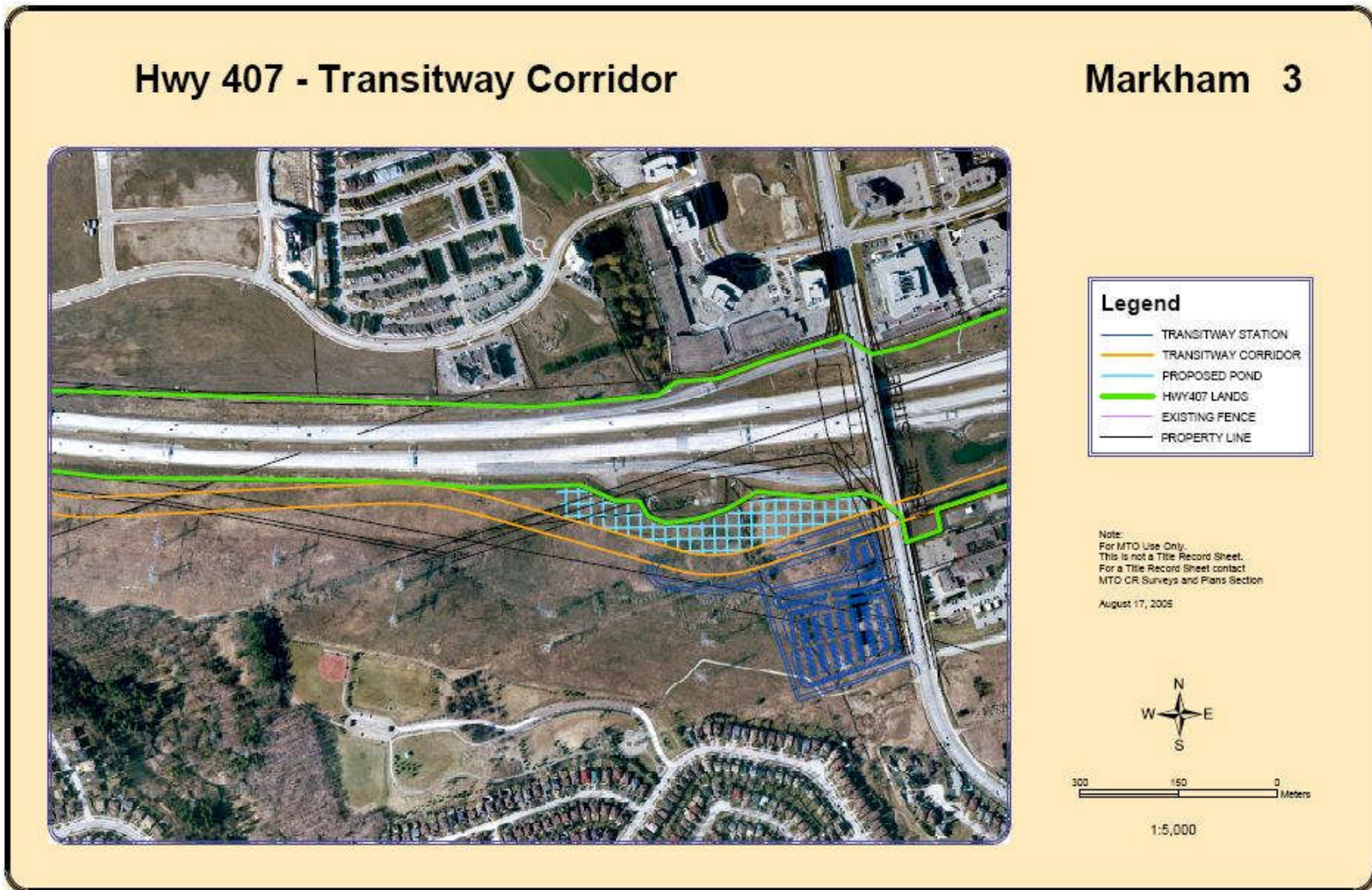
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- TRANSITWAY CORRIDOR
- PROPOSED POND
- HWY407 LANDS
- EXISTING FENCE
- lwc2\_utm.dwg Polyline
- PROPERTY LINE

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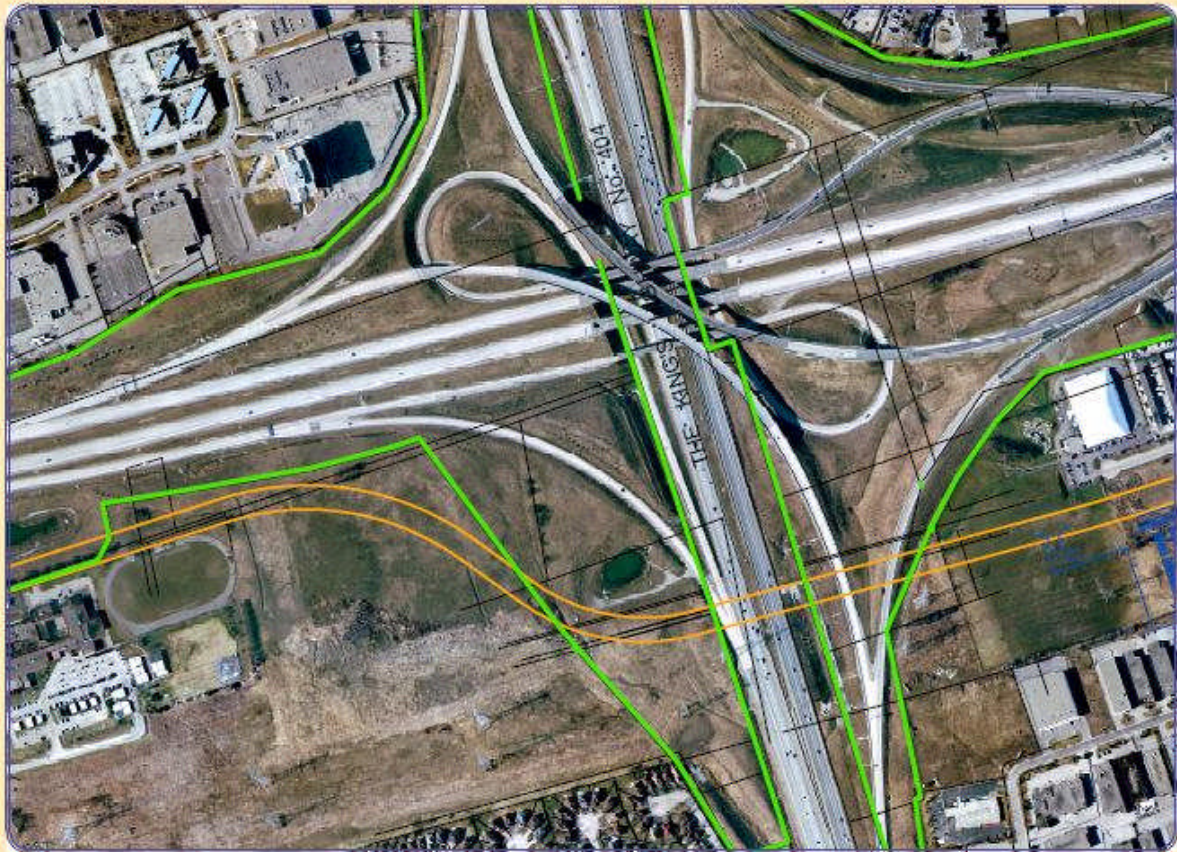


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# Hwy 407 - Transitway Corridor

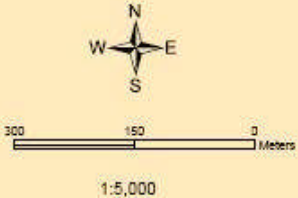
# Markham 4



**Legend**

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- TRANSITWAY CORRIDOR
- PROPOSED POND
- HWY407 LANDS
- EXISTING FENCE
- PROPERTY LINE

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# Hwy 407 - Transitway Corridor

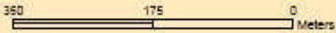
# Markham 5



**Legend**

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- PROPOSED POND
- HWY407 LANDS
- EXISTING FENCE
- lws2\_utm.dwg Polyline
- PROPERTY LINE

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# Hwy 407 - Transitway Corridor

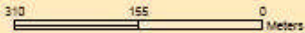
# Markham 6



**Legend**

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- TRANSITWAY CORRIDOR
- PROPOSED POND
- HWY407 LANDS
- EXISTING FENCE
- PROPERTY LINE

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# Hwy 407 - Transitway Corridor

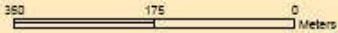
# Markham 7



**Legend**

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- PROPOSED POND
- HWY407 LANDS
- EXISTING FENCE
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- PROPERTY LINE

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## Hwy 407 - Transitway Corridor

## Markham 8



### Legend

- TRANSITWAY STATION
- TRANSITWAY CORRIDOR
- PROPOSED POND
- HWY407 LANDS
- EXISTING FENCE
- PROPERTY LINE

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