

Appendix I: Land Use Report



407 TRANSITWAY - KENNEDY ROAD TO BROCK ROAD

MINISTRY OF TRANSPORTATION - CENTRAL REGION

LAND USE FACTORS REPORT

**407 TRANSITWAY
FROM KENNEDY ROAD TO BROCK ROAD
REGIONAL MUNICIPALITIES OF YORK AND DURHAM
PLANNING AND PRELIMINARY DESIGN STUDY (G.W.P. 13-20003)**

for:



**MINISTRY OF TRANSPORTATION
CENTRAL REGION**

by:



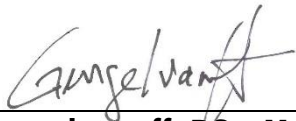
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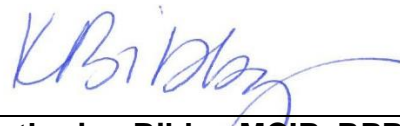
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1. INTRODUCTION

The Ontario Ministry of Transportation (MTO) is undertaking planning and preliminary design of the 407 Transitway from east of Kennedy Road to east of Brock Road following Ontario’s Transit Project Assessment Process (TPAP), Ontario Regulation 231/08. This section of the 407 Transitway will be an 18 km long bus rapid transit (BRT) system consisting of a two lane separate grade roadway. The station designs will include bus access to and egress from the stations, bus platforms, layout of access to and from the arterial road, integration with local transit (bus platforms), parking spaces, Passenger Pick Up and Drop Off (PPUDO), shelters, buildings and other amenities. The Transitway and the stations will initially be designed to support the busway service with provisions for future conversion to light rail transit technology.

This is a total project management (TPM) assignment, where the consultant delivers all aspects of the study on behalf of MTO. The TPM prime consultant is Parsons. Parsons has assembled a team of engineering and environmental specialists to provide the services required for this study. LGL Limited was retained by Parsons to provide environmental planning, land use factors, and natural science services.

This report documents the results of the land use factors assessment and has been prepared in accordance with the requirements of the MTO *Environmental Reference for Highway Design* (MTO 2013). The purpose of this Land Use Factors Report is to identify planned, existing and future land uses within the study area, assess potential impacts of the runningway and stations, and recommend appropriate mitigation measures.

1.1. Study Area

The study area is located in the Region of York, Town of Markham and the Region of Durham, City of Pickering. The study area consists of a 1 km wide corridor centred on the existing Highway 407 right-of-way, from east of Kennedy Road to east of Brock Road. **Figure 1** presents a key plan of the study area.

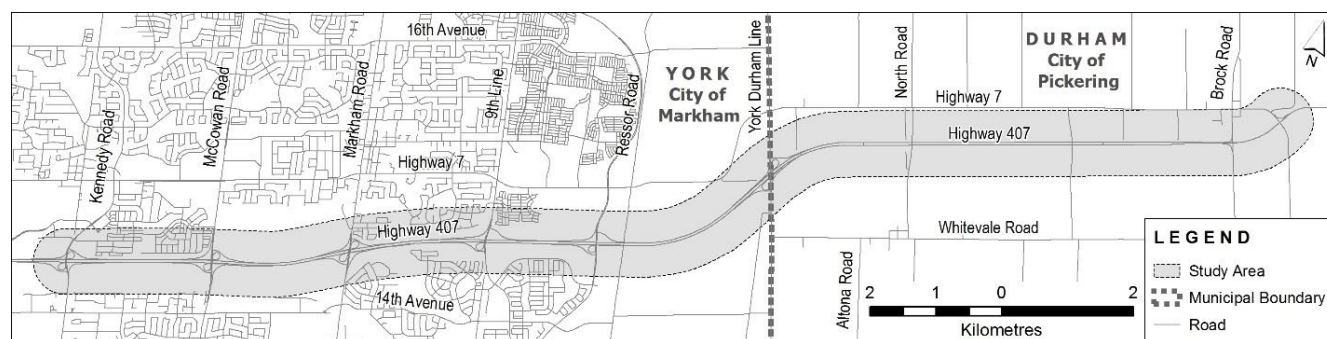


Figure 1. Study Area Key Plan

The study area contains a number of special planning areas, including lands within the Parkway Belt West Plan, Rouge National Urban Park Management Plan, Greenbelt Plan, and Central

Pickering Development Plan (Seaton Community). These planning areas are further described in **Section 2**.

1.2. Background Data

A secondary source information review was undertaken to identify existing land uses in the study area. Existing land use information was obtained from:

- aerial photography, Google Earth and Google Maps, accessed during 2015;
- Statistics Canada. 2011. *Census Canada 2011*. <http://www.statcan.ca/start.html>;
- Parks Canada. 2014. Rouge National Urban Park Management Plan (draft, June 2014);
- Land Information Ontario. 2015. AgMaps. Ontario Agricultural Information Atlas;
- Metrolinx. 2008. *The Big Move: Transforming Transportation in the Greater Toronto and Hamilton Area; Approved Changes February 14, 2013*;
- Ministry of Municipal Affairs and Housing. 2005. *Greenbelt Plan*;
- Ministry of Municipal Affairs and Housing. 2006. *Central Pickering Development Plan*. May 2006;
- Ministry of Municipal Affairs and Housing. 2008. *Parkway Belt West Plan: Office Consolidation to June 2008*;
- Ministry of Municipal Affairs and Housing. 2014. *Provincial Policy Statement*;
- Ministry of Economic Development, Employment and Infrastructure. 2006. *Places to Grow: Growth Plan for the Greater Golden Horseshoe*;
- Region of York. 2007. *Planning for Tomorrow Part I: York Region Population and Employment Forecasts*. Report No. 4 of the Planning and Economic Development Committee. Regional Council meeting April 19, 2007;
- Region of York. 2013. *York Region Official Plan June 20, 2014 Office Consolidation*. www.york.ca;
- Region of Durham. 2013. *Durham Region Official Plan Office Consolidation August 13, 2013*. <http://www.durham.ca/>.
- City of Markham. 2014. *City of Markham Official Plan*. June 2014. Office Consolidation;
- City of Markham. 2015. Report to the Development Services Committee regarding 2014 Official Plan, Part 1 – Proposed Further Modifications Recommended for Approval by the Ontario Municipal Board. Report dated June 23, 2015;
- City of Pickering. 2010. *Official Plan*, Edition 6, February 2010;
- City of Pickering. 2014. *Official Plan Amendment No. 22 to the City of Pickering Official Plan*. Ontario Municipal Board decisions confirmed by Order in Council 470/2014 dated March 26, 2014;

- Sernas Group. June 2014. Master Environmental Servicing Plan Amendment (MESPA), Seaton Community;
- ASI. 2015. *Heritage Impact Assessment: 8119 Reesor Road, City of Markham, and 8049 Reesor Road, City of Markham, Regional Municipality of York*. ASI File: 15EA-080. Prepared for the Ministry of Transportation, Central Region;
- LGL Limited and Parsons. 2015. *Environmental Screening Document. Brock Road/Highway 407 East Interchange Commuter Parking Lot, City of Pickering, Region of Durham*. Prepared for the Ministry of Transportation, Central Region;
- LGL Limited. 2015. Terrestrial Ecosystems Report. 407 Transitway from east of Kennedy Road to east of Brock Road, City of Markham (York Region) and City of Pickering (Durham Region). Prepared for the Ministry of Transportation, Central Region; and
- LGL Limited. 2015. Fish and Fish Habitat – Impact Assessment Report. 407 Transitway from east of Kennedy Road to east of Brock Road, City of Markham (York Region) and City of Pickering (Durham Region). Prepared for the Ministry of Transportation, Central Region.

2. LAND USE PLANNING POLICIES

This chapter presents the context for land use planning applicable to the 407 Transitway. There are a number of federal, provincial and municipal policies applicable to the study area, which are described in this section. **Figure 2** presents the boundaries of the planning areas for the Rouge National Urban Park Management Plan, Parkway Belt West Plan, Greenbelt Plan, and the Seaton Community.

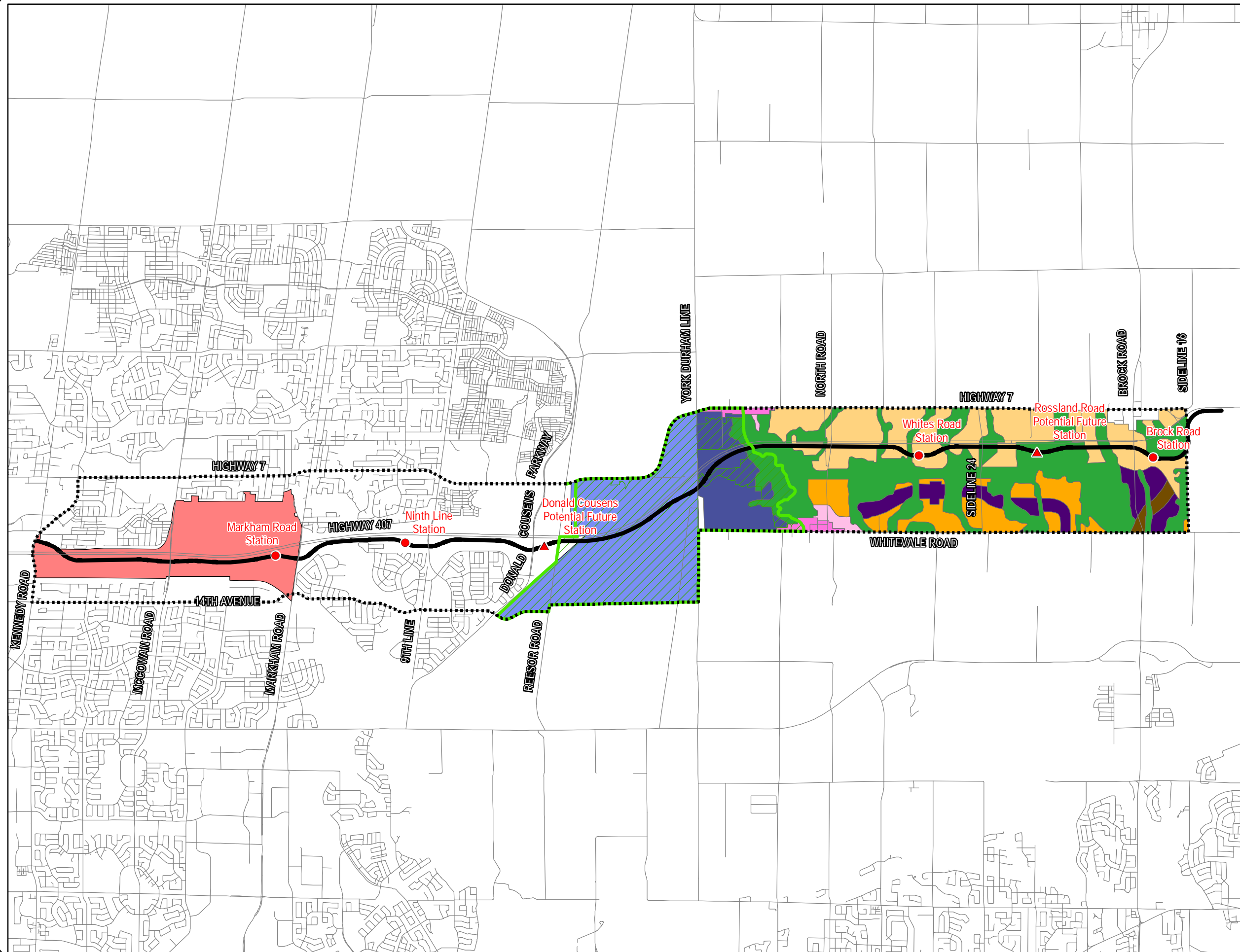
2.1. *Rouge National Urban Park Management Plan*

The *Rouge National Urban Park Act*, which came into force on May 15, 2015, protects and allows for the presentation of natural and cultural resources and the encouragement of sustainable farming practices within the park area. In June of 2014, a draft Management Plan was released for public review by Parks Canada. The study area is not located within the Management Plan area, as above ground provincial, municipal and regional infrastructure is excluded from the park area. However, the Management Plan should be taken into account, given that the Transitway would cross through the park area. The Rouge National Urban Park area is presented on **Figure 2**.

















The Management Plan identifies the park vision and strategies, objectives, actions and targets for achieving the vision. Key strategies of the Management Plan include:

- *New ways of thinking and supporting protected heritage in an urban setting* (leadership in the management of protected areas, national conservation initiatives and a network of protected heritage areas).
- *Managing change in support of a healthy and resilient park landscape* (conservation of ecosystem and cultural resources, a sustainable park community, adaptive management system to inform good decision making to improve the health and resilience of the park resources).
- *Forging emotional and physical connections with the park* (fostering connections to the park with local community and visitors, connected network of different travel modes to access the park, trail network).
- *Nurturing strategic relationships to advance shared objectives* (building strategic relationships, engaging with interested Aboriginal groups, establish a volunteer community, support research and innovation activities in the park, and collaborate to achieve compatible land use and infrastructure adjacent to the park).
- *Facilitating the transition to Rouge National Urban Park* (maintaining baseline information about park assets and resources, operation activities and plans to facilitate decisions and support park management, recognition of the park as part of the Parks Canada protected heritage areas, establishment of a governance framework to involve stakeholders and partners in park management).

One of the Management Plan objectives is to explore the feasibility and utility of a park shuttle that connects areas within the park with links to public transportation hubs (i.e. GO Station/subway). During detail design, discussions with Parks Canada are required to identify future opportunities for a park shuttle to connect to Transitway Stations.



LEGEND

-  Study Area
-  407 Transitway
-  407 Transitway Station
-  Potential Future Station
- Rouge National Urban Park**
-  Rouge National Urban Park Management Plan
- Greenbelt Plan**
-  Protected Countryside
-  Greenbelt Natural Heritage System
-  Parkway Belt West Plan
- Central Pickering Development Plan Land Use**
-  Community Node
-  Hamlet
-  Hamlet Heritage Open Space
-  Low Density Areas
-  Medium Density Areas
-  Natural Heritage System - Primary Designation
-  Preserve
-  Prestige Employment Lands

Data Sources: City of Markham Official Plan, Central Pickering Development Plan, Ministry of Natural Resources and Forestry.



FEDERAL AND PROVINCIAL
LAND USE PLANNING AREA



Project: TA8429	Figure: 2
Date: October, 2015	Prepared By: MWF
Scale: 1 : 30,000	Checked By: KSB

2.2. Provincial Policy Statement, 2014

The Provincial Policy Statement (PPS 2014) is issued under Section 3 of the *Planning Act* and provides policy direction on matters of provincial interest related to land use planning and development. The policy statement includes a range of policies related to three main themes: building strong communities, wise use and management of resources, and protecting public health and safety.

One of the visions in the PPS, 2014 is the development of land use patterns that promote a mix of housing, employment, parks and open spaces, and transportation choices that facilitate pedestrian mobility and other modes of travel as well as connectivity among transportation modes. Land use pattern, density and mix of uses should minimize the distance and number of vehicle trips and supporting choices for public transit and other alternative transportation modes.

The PPS, 2014 states that transportation and land use considerations must be integrated at all stages of the planning process. It provides for the planning and protection of corridors and rights-of-way for transportation, transit and infrastructure facilities to meet the current and projected areas. The PPS, 2014 requires the planning of major infrastructure to support long term economic prosperity by providing for an efficient, cost effective, reliable multi-modal transportation system that is integrated with adjacent systems and those other jurisdictions and is appropriate to address expected growth. In addition, it requires that planning for transportation and infrastructure corridors must consider significant resources such as natural heritage, agriculture, and cultural heritage resources. It also promotes the coordination between municipalities and other levels of government for planning transit and infrastructure.

The 2014 updates strengthened the language regarding the protection for provincially planned transportation corridors and promotion of land use compatibility for lands adjacent to planned and existing corridors. It allows for the protection of major goods movement facilities and corridors. It also permitted the planning for infrastructure/public service facilities beyond a 20 year period.

The 407 Transitway includes connections with other regional and local transit systems such as GO Transit, VIVA Rapid Transit, York Region Transit, Durham Region Transit and Toronto Transit Commission. It will directly serve regional urban growth centres like the Markham Centre and the Seaton Community, while connecting to the Richmond Hill Centre, the Vaughan Metropolitan Centre and Langstaff Gateway (in Markham).

2.3. Places to Grow Growth Plan for the Greater Golden Horseshoe, 2006, Amended 2013

The Places to Grow Growth Plan for the Greater Golden Horseshoe (Growth Plan) provides a framework for implementing the Provincial vision for building stronger, prosperous communities by better managing growth in the region by 2041. The intent of the Growth Plan is to reduce urban sprawl and consumption of land while making more efficient use of existing infrastructure.

The Growth Plan states that public transit will be the first priority for transportation infrastructure planning and major transportation investment. It promotes transit-supportive densities and a healthy mix of residential and employment land uses. It supports a transportation network that links urban growth areas through an extensive multi-modal system anchored by efficient public transit together with highway systems. Though there are no urban growth areas within the study area identified by the Growth Plan, this section of the 407 Transitway will connect to the three growth areas in York Region including the Vaughan Metropolitan Centre, Richmond Hill Regional Centre/Langstaff Gateway, and Markham Centre, with linkages to the growth centres in Durham Region of downtown Pickering and downtown Oshawa.

2.4. *Regional Transportation Plan, 2008*

The Regional Transportation Plan (RTP), also known as “The Big Move: Transforming in the Greater Toronto and Hamilton Area”, released by Metrolinx, provides a vision, goals and objectives for the future in which transportation within the Greater Toronto and Hamilton Area is seamless, coordinated, efficient, equitable and user-centred. It reaches out 25 years into the future to guide and direct decision-making. Some set of goals and objectives presented in the RTP to guide decision-making applicable to the 407 Transitway are:

- Increase of transportation options for accessing a range of destinations;
- Improved transportation experience and travel time reliability; and
- Lower average trip time for people and goods.

The RTP plans for a regional rapid transit network that operates seamlessly across the region. The first component of the 407 Transitway servicing York Region with a connection to Pearson International Airport via Highway 427 was highlighted as a project for completion within the first 25 years of the RTP’s adoption. The section of the Transitway from Highway 427 to Kennedy is scheduled for 2023, while the section from Kennedy to Oshawa is on the 25 year plan.

2.5. *Parkway Belt West Plan, 1978*

The Parkway Belt West Plan (PBWP) was implemented for the purposes of creating a multi-purpose utility corridor, urban separator and linked open space system. Its purpose is to link urban areas with each other by providing space for the movement of people, goods, energy, and information, without disrupting community integrity and function. The Parkway Belt West was developed to provide a land reserve for future linear facilities and for unanticipated activities requiring sites of high accessibility and substantial land area.

The original PBWP was approved by the Lieutenant Governor in Council in 1978. Since its approval the PBWP had been subject to numerous amendments. An Office Consolidation compiling amendments to the PBWP was prepared for information purposes in June 2008. This Office Consolidation document was reviewed to obtain land use information within the Parkway Belt West of the study area.

The area covered by the Plan, shown in **Figures 3A and 3B**, is divided into two general land use categories; the Public Use Area and the Complementary Use Area. Public Use Areas are defined as presently used or to be predominantly used in the future for public uses. The Public Use Areas consist of areas designated as: Public Open Space and Buffer Area; Utility, Electric Power Facility; and, Road and Inter-Urban Transit. Complementary Use Areas are to be predominantly used for private uses that aid in the PBWP's objective of preserving the country landscape and encouraging land uses such as agricultural, recreational and institutional pursuits that do not require intense urbanization. The Complementary Use Area consists of the General Complementary Use Area and the Special Complementary Use Area.

The PBWP only covers the west portion of the 407 Transitway study area, from Kennedy Road to Main Street (Markham Road). The lands under the PBWP in this section are designated Road, Inter-Urban Transit, Electric Power facility and Utility, with small pockets of Public Open Space between McCowan Road and Main Street.

2.6. Greenbelt Plan

The Greenbelt Plan was established under Section 3 of the *Greenbelt Act, 2005*, and took effect on December 16, 2004. The Greenbelt Plan area is comprised of a number of plan areas, including: the Niagara Escarpment Plan area, Oak Ridges Moraine Conservation Plan area, Parkway Belt West Plan area, and the Greenbelt Plan 'Protected Countryside' and 'Urban River Valley'. The area between Reesor Road and the east limit of the Duffins Rouge Agricultural Preserve is located within the Greenbelt Plan area, as presented in **Figure 2**.

Within the Greenbelt Plan area, the Protected Countryside contains a number of land use designations, including an Agricultural System, comprised of specialty crop areas, prime agricultural areas, and rural areas; a Natural Heritage System, which protects a system of natural heritage, hydrologic and/or landform features; and Settlement Areas, that provide economic, social, and commercial functions to prime agricultural areas and rural areas. All of the Greenbelt Plan lands between Reesor Road and York Durham Line are part of the Greenbelt Plan 'Natural Heritage System'. East of York Durham Line, the study area is designated as 'Protected Countryside', with some small areas designated as 'Natural Heritage System'. Refer to **Figure 2** for the boundaries of the land use designations within the Greenbelt Plan area.

A summary of the policies related to infrastructure from the Greenbelt Plan and conformity statements are summarized in **Section 5**.

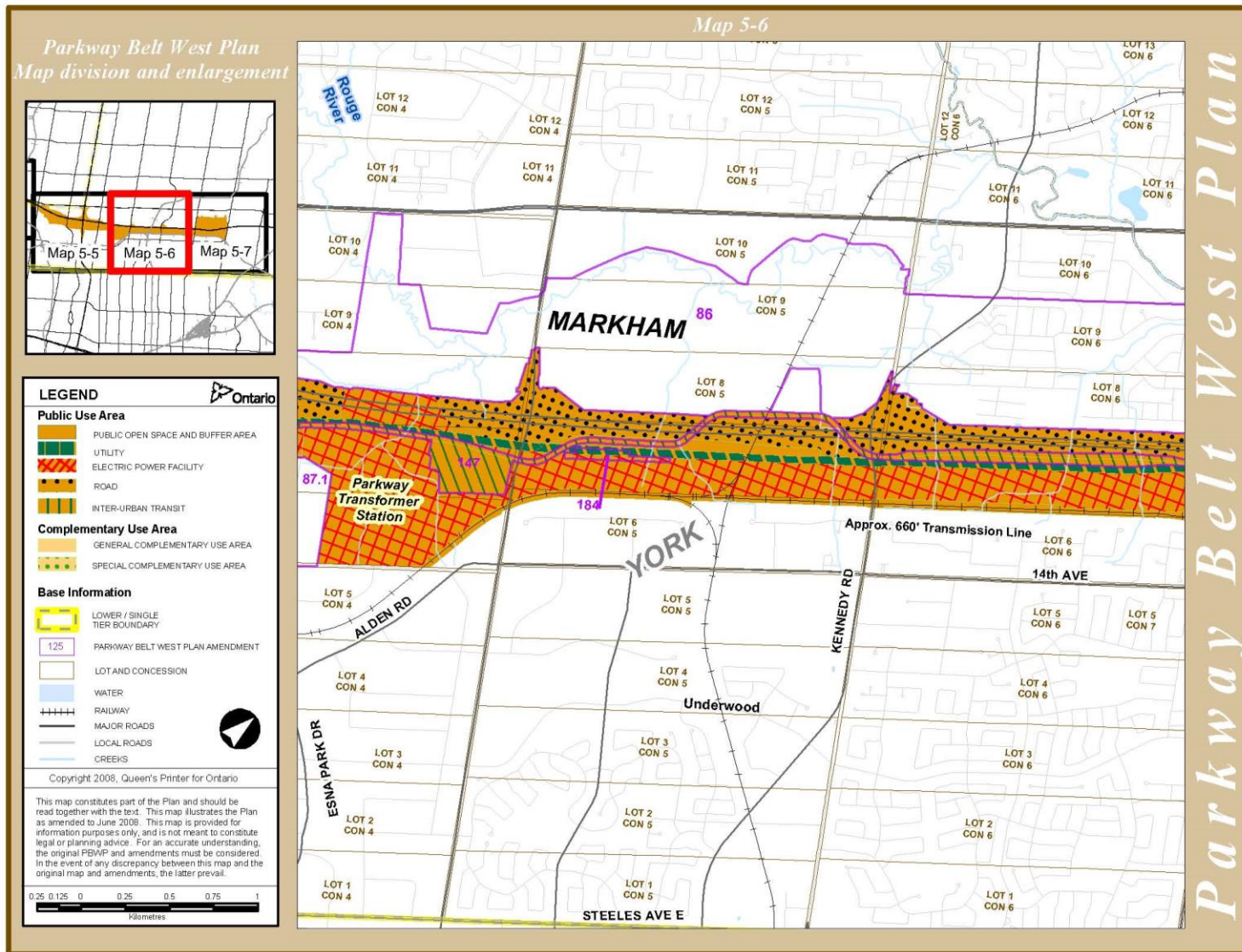


Figure 3A. Parkway Belt West Plan within the Study Area (Warden Ave. to West of McCowan Rd)

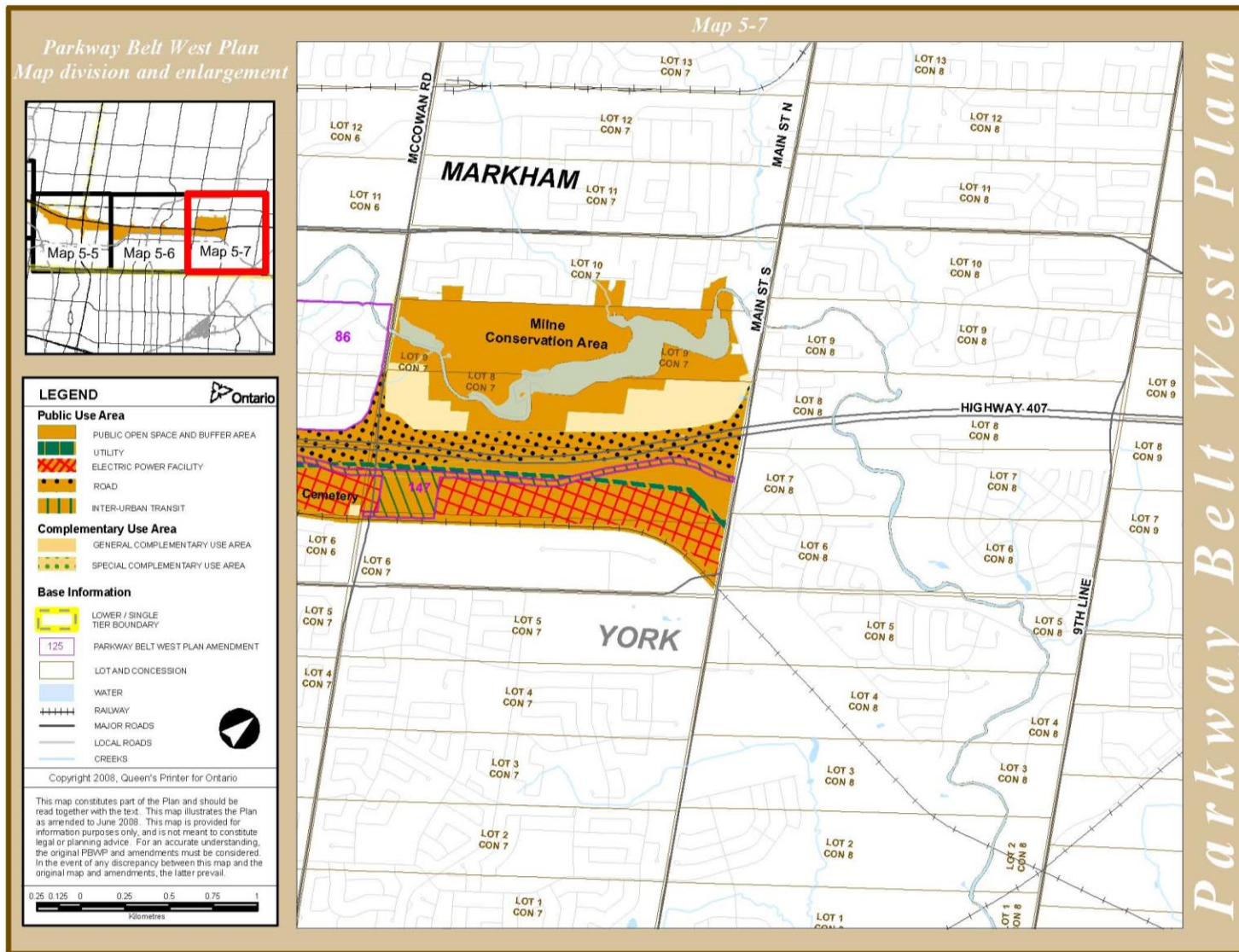


Figure 3B. Parkway Belt West Plan within the Study Area (west of McCowan Rd. to Main St.)

2.7. York Region Official Plan

According to Census Canada (2011), York Region has a population of approximately 1,024,000. York Region is expected to have a population of 1.79 million and employment of 900,000 by the year 2041 (Places to Grow Growth Plan).

In 2009, York Region adopted the York Region Official Plan, which was approved by the Ministry of Municipal Affairs and Housing in 2010. A number of appeals to the Ontario Municipal Board resulted in changes to the Official Plan, which have been incorporated into the June 20, 2013 Office Consolidation.

The Region of York Official Plan (2013) sets policies to help guide economic, environmental and community-building decisions affecting the use of land. The Official Plan identifies the Vaughan, Richmond Hill and Markham regional centres as future hubs of business, cultural, government, and social activity. These regional centres are expected to contain the highest concentration and greatest mix of uses in the Region, including range in employment and housing opportunities. Development will be compact, well-designed form that contributes to an urban fabric that is vibrant, safe, attractive, pedestrian-friendly and transit-supportive.

One of the Official Plan goals is to cooperate with area municipalities, GO Transit, the Toronto Transit Commission, Ministries of the Province of Ontario and the adjacent municipalities in the planning, coordination, integration and operation of existing and new transit services and to encourage increases in transit modal splits across the Region's boundaries.

The Official Plan identifies the need to promote the implementation of a regional rapid transit network such as a transitway within the Highway 407 corridor and to encourage the development of transportation inter-modal stations at appropriate locations. It aims to develop stations that are coordinated with urban centres and to serve as both destinations and transfer facilities between different modes of travel. A transportation station would typically include facilities to allow transfers between local transit services and rapid transit, as well as providing a passenger drop-off area and an adequate commuter parking area.

The York Region Official Plan designates most of the lands adjacent to the study area west of Reesor Road as Urban Area and east of Reesor Road as Greenbelt Protected Countryside, Agriculture, and Regional Greenlands System. The Regional Greenlands System in this area is identified as a north-south corridor that connects natural features and habitats within the Region.

Natural heritage features identified in the Official Plan include: Woodlands and Conservation Area/Regional Forest (Map 5 of Official Plan), and Provincially Significant or Provincial Plan Area Wetlands (Map 4 of Official Plan).

2.8. City of Markham

The City of Markham Official Plan was revised and adopted by City Council on December 1, 2013. The Official Plan was approved by York Region on June 12, 2014 but has been appealed to the Ontario Municipal Board, and is not yet in force. However, the vision, goals and objectives of the Official Plan indicate the general framework for future planning in the City. It should be noted that modifications to the Official Plan may be made as a result of decisions by the Ontario Municipal Board.

In the Transportation, Services and Utilities policies of the Official Plan, it is acknowledged that Markham has an important role in promoting transit supportive development, with a community structure having walkable streets and higher density mixed use. The Markham Transportation Strategic Plan has identified a number of ways to attempt to shift residents from an auto-dependent transportation system to more sustainable travel choices. Improvements to the transit system is a key component of making alternative travel options attractive to automobile users. A number of policies are included in the Official Plan that support this objective. The Transitway is consistent with these objectives. It is the policy of Markham Council to work with other levels of government to facilitate the implementation of planned transit facilities. To encourage increased use of public transit and economic efficiency of the transit system, higher density development will be considered on major transit routes. In addition, all major development proposals and changes and additions to the road network will be evaluated in a transportation demand management strategy.

According to the Official Plan (2014), land uses within and directly adjacent to the preferred Transitway facility footprint include: Parkway Belt West, Transportation and Utilities, Residential Low Rise, Residential Mid Rise, Mixed Use Mid Rise, Greenway, Commercial, , and Business Park Employment. The Transitway facility is primarily located within the Parkway Belt West and Transportation and Utilities land use designations.

Parkway Belt West lands are lands used in accordance with the provisions of the Parkway Belt West Plan, July 1978. A summary of this plan, and the land use designations that apply to this area is presented in **Section 2.5**.

Transportation and Utilities includes the 407 ETR, the 407 Transitway and a utility corridor. Areas with this land use designation provide corridors for transportation and utility facilities including highways, railways, hydroelectric transmission, gas and oil pipelines, telephone and other cabled services.

Residential Low Rise includes all of the low-rise residential land uses located in the areas surrounding the Transportation and Utilities Corridor. These are established residential areas with lower-scale buildings such as detached and semi-detached dwellings, duplexes and townhouses, which will experience minimal physical change in the future. Building heights of up to three storeys are permitted. Within this designation are local institutions such as public schools and places of worship. Infill development is permitted, subject to the policies of the Plan.

Mixed Use Mid Rise lands are located on the east side of Kennedy Road north of the 407 ETR. Areas identified for Mixed Use are to provide a mix of residential, retail, restaurant and services

that contribute to the creation of a “complete community”, with development that is compatible with the surrounding community. In the Mixed Use Mid Rise designation, lands primarily along major collector roads/intensification areas, land uses will include mid to large scale retail development and other service facilities to provide the goods and services needed by the local communities. It is intended that this intensification will ultimately support planned transit services adjacent to these lands.

Greenway includes lands that contain natural heritage and hydrologic features and associated vegetation protection zones and lands within the “Oak Ridges Moraine Conservation Plan Area” and the “Greenbelt Plan Area”. These lands are intended to protect valleylands and stream corridors, sensitive groundwater features, landforms, woodlands and agricultural lands. The entire area north of 407 ETR between McCowan Road and Main Street is Greenway/Parkway Belt, along with a corridor for the Little Rouge Creek west of Main Street. The Greenway System also protects the cultural heritage resources associated with valleylands and watercourse corridors through the Rouge National Urban Park and Rouge Watershed, located generally east of Donald Cousens Parkway.

Commercial designation applies to lands that accommodate existing or approved large format retail development serving a wide area. Lands designated as “Commercial” are part of the Employment Area lands, to allow for office, retail and service uses in these areas. There are two areas of Commercial designation in the study area at the intersections of the Transitway with Ninth Line and Donald Cousens Parkway.

Employment Areas are those lands that will accommodate future office and industrial uses. There is a diversity of uses of these lands which is captured in four land use designations: business park employment, business office park priority employment, service employment, general employment and future employment. The employment lands within the study area are designated as ‘Business Park Employment’. These lands are located in the Box Grove area and at the planned GO Station near Reesor Road.

The lands designated Business Park Employment at the south east quadrant of Highway 407 and Ninth Line include the Box Grove retail plaza (commercial land use) and the undeveloped business park lands. These lands are identified as ‘Deferral Area’ in the Official Plan, as development applications to convert the Business Park Employment lands to ‘Mixed Use Mid Rise’, ‘Mixed Use Low Rise’ and ‘Residential Low Rise’ (banquet hall, seniors residence, and approximately 200 residential units) were submitted. The Region of York deferred these development applications until a review of the overall impact of all conversions of Employment Land within the region was completed, to evaluate the cumulative effect of these conversions. On May 8, 2015, the Region issued notices of decision for these Official Plan Amendments, supporting the conversion of these employment lands. However, the notices of decision have been appealed to the OMB.

2.9. Region of Durham Official Plan

According to Census Canada (2011), Durham Region has a population of approximately 601,000. Durham Region is expected to have a population of 1.19 million and employment of 430,000 by the year 2041 (Places to Grow).

In 2013 Durham Region adopted the Durham Regional Official Plan 1993, with Office Consolidation August 13, 2013.

The Durham Regional Official Plan (1993, consolidated 2013) sets policies to help guide economic, environmental and community-building decisions affecting the use of land. The Official Plan identifies the Downtown Pickering and Downtown Oshawa as regional growth centres for future hubs of business, cultural, government, and social activity. These regional centres are expected to contain the highest concentration and greatest mix of uses in the Region, including range in employment and housing opportunities. Development will be compact, well-designed form that contributes to an urban fabric that is vibrant, safe, attractive, pedestrian-friendly and transit-supportive.

One of the Official Plan's goals is to cooperate with area municipalities, GO Transit, the Toronto Transit Commission, Ministries of the Province of Ontario and the adjacent municipalities in the planning, coordination, integration and operation of existing and new transit services and to encourage increases in transit modal splits across the Region's boundaries.

The Official Plan identifies the need to promote the implementation of a regional rapid transit network such as a transitway within the Highway 407 corridor and to encourage the development of transportation inter-modal stations at appropriate locations. It aims to develop stations that are coordinated with urban centres and to serve as both destinations and transfer facilities between different modes of travel. A transportation station would typically include facilities to allow transfers between local transit services and rapid transit, as well as providing a passenger drop-off area and an adequate commuter parking area.

The Durham Regional Official Plan designates the area adjacent to the study as Specific Policy Area Schedule A, the Seaton Urban Area, which is to be developed in accordance with the Central Pickering Development Plan. This plan is incorporated in the City of Pickering Official Plan, and is discussed below.

2.10. City of Pickering

The Seaton community was identified as a future urban community in the 1970s by the provincial government, intended to be built alongside the new federal airport. The airport was not built, and the plans for the Seaton community did not move forward. However, in 2006, the Central Pickering Development Plan (CPDP) established the vision for the Seaton community, and identified a land use plan for the community. A description of this plan is presented below.

The City of Pickering has amended the Official Plan (Amendment 22) and Zoning By-law (No. 7364/14) to implement the CPDP and developed Neighbourhood Plans for the six new communities. The Neighbourhood Plans are presented in **Figure 4**.

The City of Pickering, Region of Durham, and other landowners, have conducted or are currently conducting further studies to prepare the policies required for the implementation of the CPDP. These studies include:

- **Environmental:** Wetlands Water Balance Evaluation; Natural Heritage Management Plan and Master Trails Plan Study; and Master Environmental Servicing Plan.
- **Financial:** Pickering Fiscal Impact Study; Durham Region Fiscal Impact Study; Pickering (Seaton only) Development Charges Study and By-law; and Durham Region Development Charges Study and By-law (water, sewers, and transit for Seaton).
- **Land Use:** Seaton Employment Lands Economic Development Study; Retail Market Analysis; Affordable Housing Strategy; Neighbourhood Planning Review; Seaton Placemaking Guidelines.
- **Services:** Region of Durham Regional Services Class EA.
- **Roads:** Seaton Roads Class EA; and Durham-York-Toronto Transportation Study.

The 407 Transitway is identified as a component of the planned land uses among these documents. A summary of the key documents and policies relating to the Transitway are presented below.

Central Pickering Development Plan

In May 2006, the Central Pickering Development Plan (CPDP) was approved by the Province of Ontario under the *Ontario Planning and Development Act, 1994*. The CPDP establishes a natural Heritage System, land use structure, population and employment allocations, an arterial and collector road network, regional level transit framework, policy framework and urban design guidelines for development of the CPDP Planning Area. The CPDP sets out context, vision and policies for a community supported by sustainable land uses and infrastructure.

The CPDP consists of essentially two distinct zones: The Duffins Rouge Agricultural Preserve and the Seaton Development Lands. These are shown in **Figure 5**.

The 407 Transitway study area goes through a narrow portion of the northern part of the agricultural preserve between the City of Markham boundary and the Duffins Creek watershed. From there easterly to Brock Road the study area is in the Seaton lands.

The Seaton Development Plan designates the lands adjacent to Highway 407 and future transitway as either employment lands or natural heritage. The Province of Ontario has maintained ownership of the employment lands and they will be promoted by Ontario Realty Corporation. The natural heritage lands will be governed by a Natural Heritage System prepared by MNR and TRCA.

The 407 Transitway and adjacent land uses are shown on the Seaton Land Use Plan in **Figure 5**.

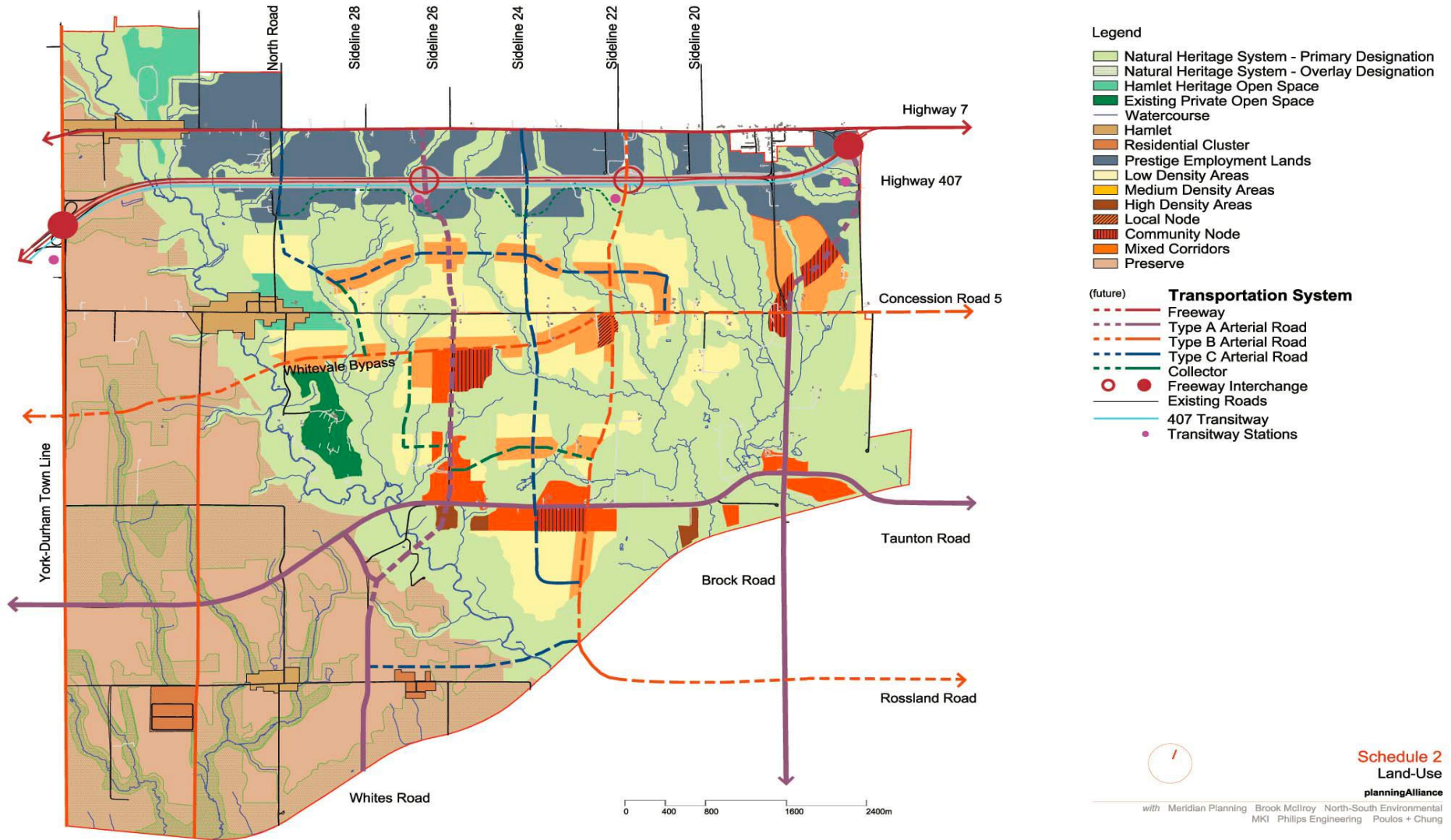


Figure 4. Seaton Land Use Plan – Central Pickering Development Plan

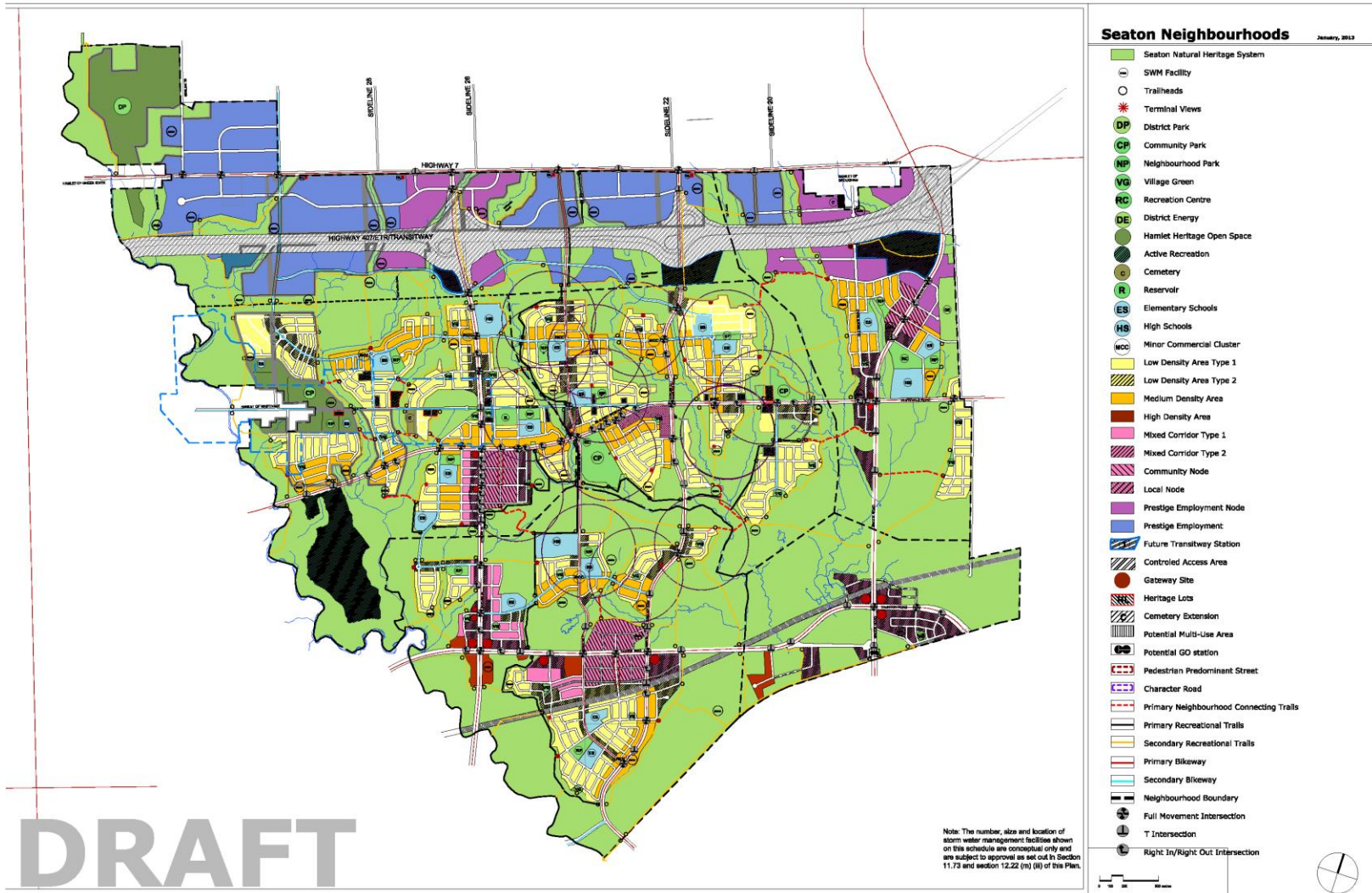


Figure 5. Seaton Community Neighbourhoods Plans

City of Pickering Official Plan

The City of Pickering Official Plan was originally adopted in 1997, and the amendments to the Official Plan have been consolidated into Edition 6 (2010 Office Consolidation).

The land uses within and directly adjacent to the preferred Transitway facility footprint include: Controlled Access Area along the transportation corridor, 'Natural Areas' adjacent to watercourses throughout the study area, 'Agricultural Areas' within the Duffins Rouge Agricultural Preserve, and 'Seaton Urban Study Area' within the planned Seaton Community. The Rural Hamlets of Green River, Whitevale, and Brougham are located in close proximity to the study area; however, none of these hamlets are located within the Transitway facility footprint.

The Official Plan supports the introduction of transit priority lanes, including the Highway 407 Transitway, among other transit facilities (Policy 4.6, Official Plan). The Official Plan also identifies the need to provide vehicular, cyclist and pedestrian crossings at all north south roads, to prevent a barrier being created by the Highway 407 Transitway.

Amendment 22 to the Pickering Official Plan (approved by OMB Decisions in 2012, 2013 and 2014) implements the Central Pickering Development Plan for the Seaton Urban Area. This amendment is not part of Edition 6 of the City of Pickering Official Plan, which consolidates up to Amendment 21. Six Neighbourhood Plans (Lamoreaux, Brock-Taunton, Mount Pleasant, Wilson Meadows, Thompson's Corners, and Pickering Innovation Centre) for the Seaton Urban Area are presented in the Official Plan. The Neighbourhood Plans further define the land uses for the Seaton Urban Area. A policy was added (Section 11.19) to require the Highway 407 ETR transitway to be shown in Neighbourhood Plans along with transitway stations at each of the planned interchanges. Provision is to be provided in the Neighbourhood Plans for commuter parking areas, park and ride and car-pooling areas located adjacent to the transitway stations. The Neighbourhood Plans also must identify higher intensity employment uses in the vicinity of the Highway 407 ETR Transitway stations in the Prestige Employment land use designation (Section 11.35, Pickering Official Plan).

Master Environmental Servicing Plan

The Master Environmental Servicing Plan Amendment (MESPA), along with a number of other studies/reports are intended to inform the development of the Neighbourhood Plans, draft Plans of Subdivision, and Zoning By-laws. The MESPA followed the Master Planning Process of the Municipal Class Environmental Assessment (MEA). The MESPA includes a water resources assessment, hydrological assessment, water balance and groundwater modelling, surface water analysis, stormwater management facility analysis, natural heritage assessment and water balance, stormwater management plan, review of transportation improvements and proposed road network, review of municipal servicing, endangered species assessment, fisheries and aquatic habitat assessment, major community facilities assessment, and public consultation summary. The recommendations in the MESPA will be implemented through Neighbourhood Functional Stormwater and Servicing Reports (NFSSRs) and Environmental Study Reports prepared for future Class EA Studies. The NFSSRs will provide more information regarding servicing routes,

environmental constraints, and stormwater management facility locations, size, outfall locations and low impact development (LID) measures. The provisions of the MESPA are to be monitored by a TRCA Watershed System Monitoring and Management Program and monitoring programs to be undertaken by individual developers.

3. EXISTING LAND USES

As of 2011, the City of Markham had a population of 310,000 and employment of 160,000, which is expected to increase to 420,000 and 240,000 respectively by the year 2031 (Statistics Canada 2011). Markham's employment lands are primarily oriented to the highway corridors of Highways 407 and 404. The study area is located in the southern part of the City of Markham. This part is the most intensely developed area within the City. The Markham City Centre is located just north of the 407 Corridor between Warden Avenue and Kennedy Road, west of the study area for this section of the Transitway.

Markham has an intensification strategy that aims to see 60% of all residential and 66% of all new job growth to be located in the existing built up areas. The transitway study area runs through the centre of this built up area.

The lands through the City of Pickering are currently all rural in nature. The area between the York Durham Line and Duffins Creek will remain rural as part of the Duffins Rouge Agricultural Preserve. The lands east of Duffins Creek to Sideline 16 are designated as Seaton lands and will be developed in the future. The population of Seaton is expected to be 61,000. The plan designates about 54% of those lands as part of the Natural Heritage System.

3.1. Agriculture

There are lands within the study area currently used and designated as agricultural lands in the Cities of Markham and Pickering. The lands between Reesor Road and York Durham Line, City of Markham, is part of the Rouge National Urban Park. Agriculture is one of the current and future uses permitted in the Park Management Plan. Adjacent to this in the portion between York Durham Line and the Seaton Lands lies the Duffins-Rouge Agricultural Preserve, which has been set aside by the Province of Ontario to be used for agriculture in perpetuity.

A significant portion of the lands under the hydro corridor between Kennedy Road and McCowan Road is farmed as well as the lands between the 407 ETR and the hydro corridor.

Much of the land has prime agricultural potential, being of Class 1 or 2 soil classification, and an agricultural tile drainage system is located within the Duffins Agricultural Preserve. The farm at 8119 Reesor Road is currently occupied by tenants and is not currently being used for farming activities. The farm at 8042 Reesor Road (south of the potential future Donald Cousens Station) is also occupied by tenants and is used as a residential/agricultural property (ASI 2015).

3.2. Residential

Between Kennedy Road and McCowan Road, existing residential land uses are located adjacent to the north side of the 407 corridor, and south of the hydro corridor on the south side of the 407 corridor. Residential subdivisions are located on both north and south sides between Markham Road and Donald Cousens Parkway. A noise/visual berm exists immediately adjacent to the 407 ETR on the north side to screen the residential area from the highway. From Donald Cousins Parkway to Brock Road, existing residential uses are comprised of single dwelling units in a

rural/agricultural setting. However, many of these residential dwellings have been purchased by Infrastructure Ontario and are rented by tenants. A number of hamlets are located in the City of Pickering, including Green River, Belford, Whitevale and Brougham.

3.3. Commercial and Industrial

The vision for the Markham Centre is to become the City's 'downtown' area with mixed land use and transit supportive focus. Markham Centre lies west of the study area and will be a significant destination point for future transit users, being also a transportation hub with connections to GO rail, VIVA and local transit service.

Hydro transmission lines run immediately adjacent on the south side of the corridor between Kennedy Road and Markham Road. A portion of the hydro corridor is farmed.

A rail line runs adjacent to the hydro corridor between Kennedy Road and McCowan Road and follows the hydro corridor away from the study area east of McCowan Road.

There are two areas of existing commercial land use immediately adjacent to the 407 corridor, one just east of Kennedy Road north of the 407 corridor and the other between Ninth Line and Donald Cousens Parkway on the south side.

There are no commercial or industrial areas in Pickering at the present time. Seaton is planned to support about 35,000 jobs, many of them located with the employment lands adjacent to the study area.

3.4. Community and Recreational Facilities

There are two cemeteries located on the south side of the study area just west of McCowan Road and just south of the hydro corridor. The Eckardt Cemetery has been there since the mid 1800s with some Markham Loyalist pioneers buried there. The other, the Mandaean Cemetery is more recent, since 2002 and serves the recent Mandaean immigrants who have come predominantly from Iraq.

Also off the same driveway as the cemeteries is the access to the Cresthaven Golf Course, which is located within the hydro corridor.

The remainder of the land uses adjacent to the study area are greenbelt, greenway or hydro corridor.

Atos Markham Pan Am / Parapan Am Centre

The City of Markham has a new recreational facility for the 2015 Pan Am/ Parapan Am games. It is a multi-purpose centre, located in the heart of Markham's newly developing downtown, west of Kennedy Road, with a triple gymnasium for training, competition and community use, as well as a 10-lane, 50-metre Olympic-sized swimming pool. In addition to the athletic facilities, the Centre also makes space for several all-purpose rooms, meeting areas and a two-level fitness centre for

community use at the 2.4-hectare property, which is adjacent to the Unionville GO Station and future 407 Transitway station.

Recreational Trails

The City of Markham has designated bike lanes on all the major road crossings of the 407 corridor. The only pedestrian trail crossing is the Seaton Trail along Duffins Creek.

Regional Transit

The only regional transit line crossing the study area is the rail line just east of Donald Cousens Parkway identified for future use under GO Transit 2020. The plan is to have peak period train service every 30 minutes to East Markham/Locust Hill.

3.5. Natural Features/Natural Systems

The study area is located within the Rouge River, Petticoat Creek and Duffins Creek watersheds. Watercourses within the study area flow in a generally north to south direction, and ultimately drain into Lake Ontario, with the exception of some tributaries of the Rouge River which flow south to north through the facility footprint. There are a total of 31 watercourse crossings occurring within the project limits; 12 within the Rouge River watershed, one within the Petticoat Creek watershed, and 18 within the Duffins Creek watershed. Further details regarding fish and fish habitat within the study area is described in the *Fish and Fish Habitat – Impact Assessment Report* (LGL 2015).

Vegetation communities within the study area consist of a mixture of forest, wetland and culturally influenced communities. The majority of the vegetation within the study area has been disturbed by existing land uses. The Rouge River, Little Rouge Creek, Whitevale Creek, and Urfe Creek combined with wetland complexes such as the Locust Hill Wetland Complex and Whitevale Wetlands make up the most dominant natural heritage features along the Transitway, or in the immediate vicinity, that wildlife would use as potential breeding areas and travel corridors throughout the year. A number of designated natural areas are located within the study area, including two Environmentally Sensitive Areas (ESAs), one Candidate Provincially Significant Wetland (PSW), and lands located within the Greenbelt Plan Natural Heritage System, Rouge Park North Management Plan ‘Special Management Zones’, and natural heritage systems identified in Official Plans. Further details regarding terrestrial ecosystems are available in the *Terrestrial Ecosystems Report* (LGL 2015).

A number of species at risk are located within the study area, which are further discussed in the *Fish and Fish Habitat – Impact Assessment Report* (LGL 2015) and *Terrestrial Ecosystems Report* (LGL 2015).

A portion of the study area is located within the Rouge National Urban Park. Refer to **Section 2.1** for a description of the Management Plan that applies to this area (**Figure 2**).

4. FUTURE LAND USES

This chapter presents proposed future land uses within the study area that may interact with the 407 Transitway. In general, the Markham Centre, located west of the study area is planned to be a centre of mixed use with high density development. The Seaton Community Plan indicated employment lands nestled in the natural heritage system immediately adjacent to both side of the study area. **Figures 6A and 6B** show the official plan designations within the study area.

4.1. *City of Markham*

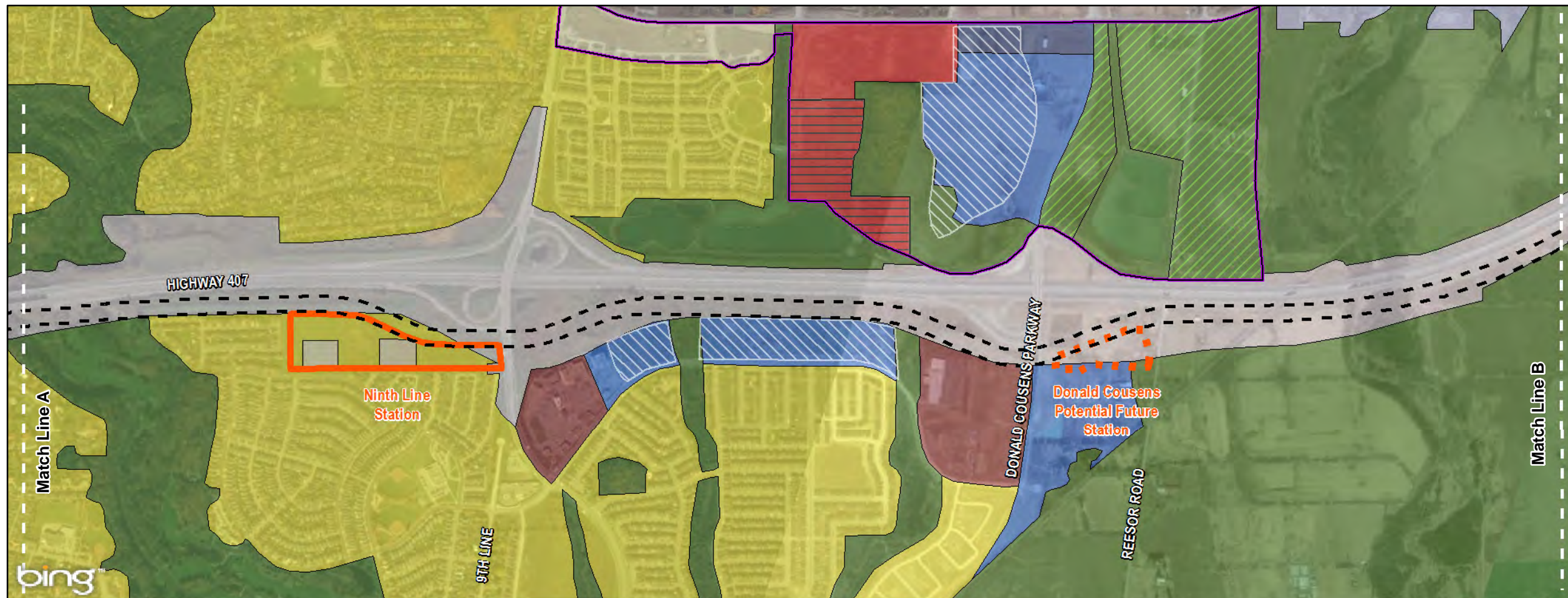
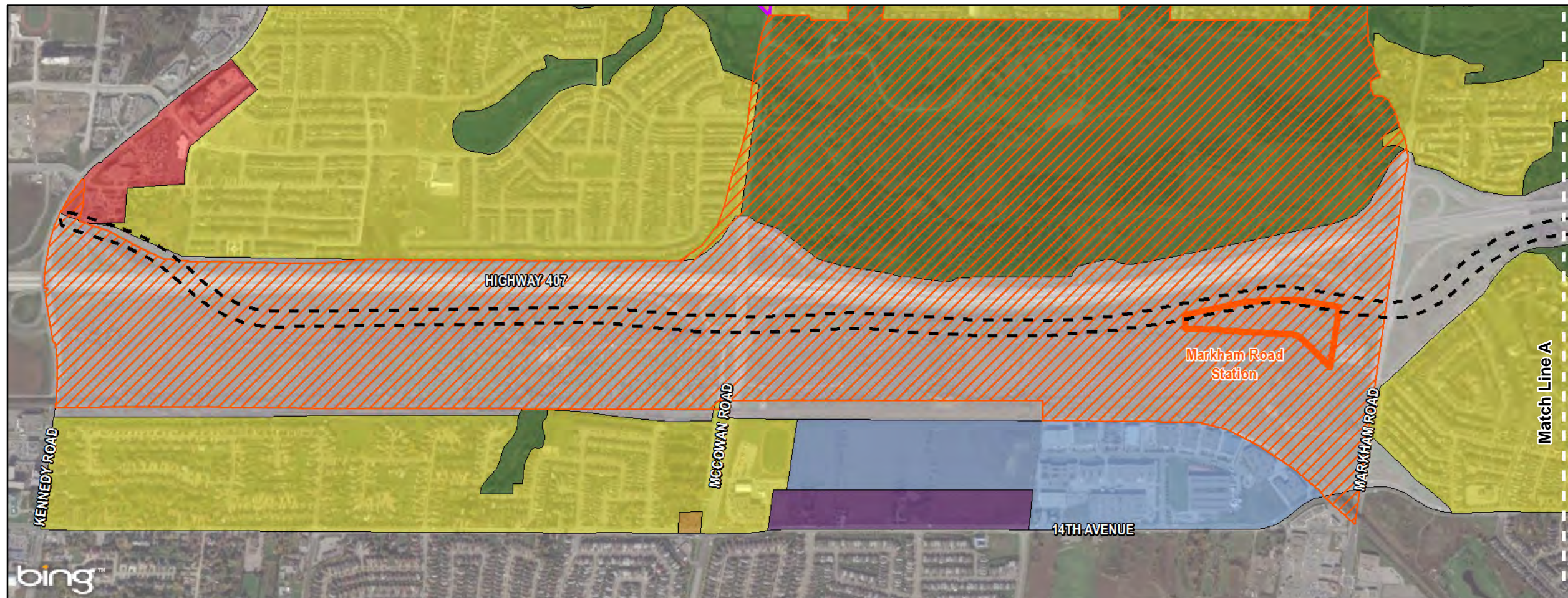
The City of Markham recently updated its Official Plan to guide the City over the next 25 years. As a component of the new Official Plan, Markham Centre is proposed to become the city's "downtown", which is located west of the study area.

As mentioned above, Markham has an intensification strategy that aims to see 60% of all residential and 66% of all new job growth to be located in the existing built up areas. The transitway study area runs almost through the centre of this built up area.

The Official Plan shows a future GO station at Box Grove at the junction of the rail tracks, 407 Transitway and Ninth Line. Box Grove is identified as a future secondary hub (growth centre).

4.2. *City of Pickering*

The lands east of Duffins Creek to Brock Road are designated as Seaton lands and will be built in the future. Amendment 1 of the Central Pickering Development Plan see the population forecasts of 61,000 and 30,500 jobs for Seaton by 2031 with an ultimate population of 70,000 and 35,000 jobs. The development lands immediately adjacent to the transitway are designated employment lands. The linkage to transit is an important component of the plan. The plan designates about 54% of those lands to fall under its Natural Heritage System. A number of studies and plans for this new community have been conducted or are in progress, as described in **Section 2.10**. In addition, the Duffins-Rouge Agricultural Preserve, just east of York-Durham Line is planned for agricultural and natural heritage protection.



LEGEND

- 407 Transitway
- 407 Transitway Station
- Potential Future Station
- City of Markham Official Plan**
- Greenway
- Parkway Belt West Plan
- Residential Low Rise
- Residential High Rise
- Mixed Use Mid Rise
- Commercial
- Service Employment
- Business Park Office Priority Employment
- Business Park Employment
- Future Employment Area
- Secondary Plan Area Specific Policy
- Deferral Area
- Transportation and Utilities
- Hamlets
- Residential Mid Rise
- Mixed Use Low Rise
- General Employment

Data Source: City of Markham Official Plan.

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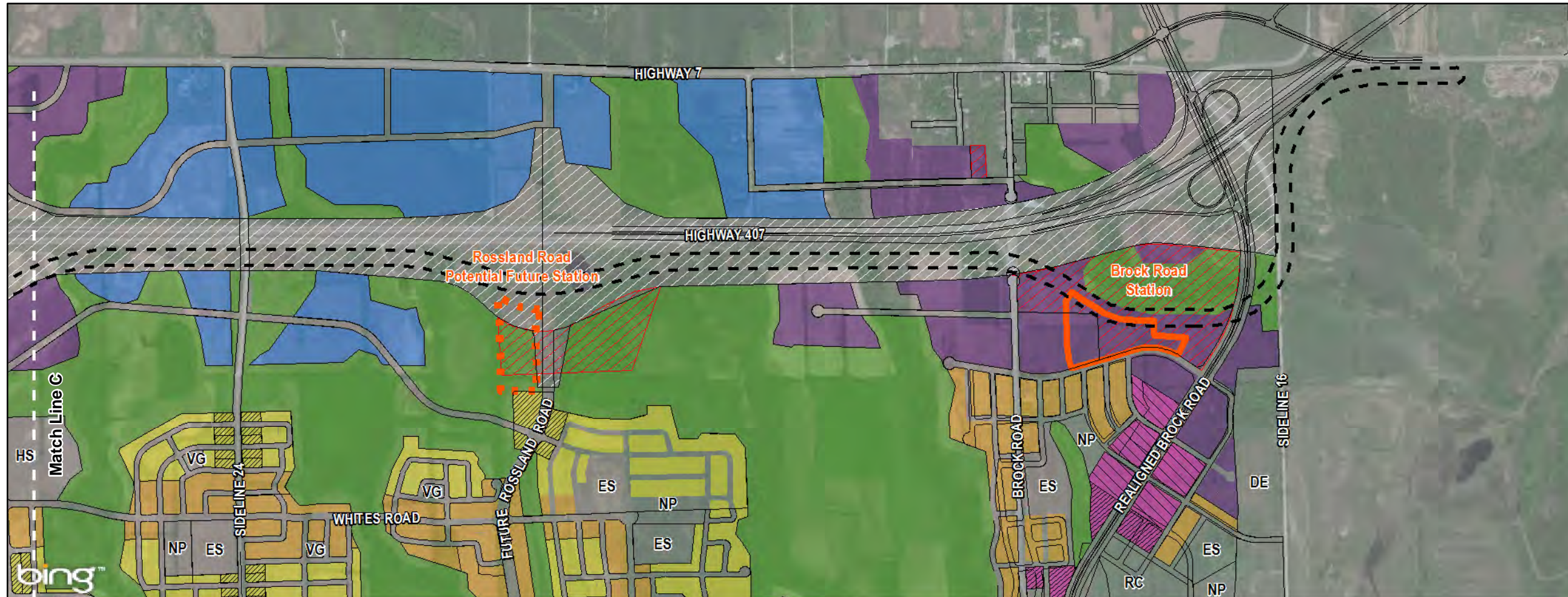
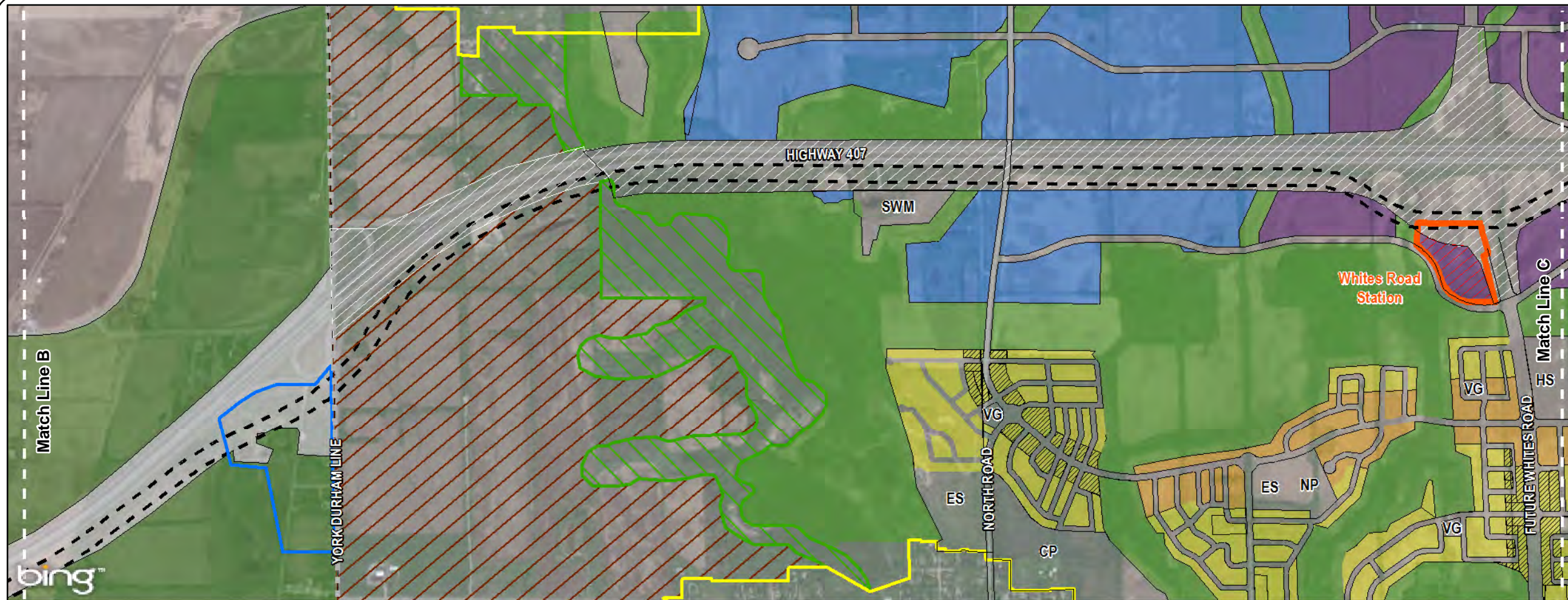
PLANNED LAND USES
IN THE STUDY AREA



Project: TA8429 Figure: 6a

Date: October, 2015 Prepared By: MWF

Scale: 1 : 15,000 Checked By: KSB



LEGEND

- 407 Transitway
- 407 Transitway Station
- Potential Future Station
- Municipal Boundary
- MTO Property Protection
- City of Markham Official Plan
 - Greenway
 - Transportation and Utilities
- City of Pickering Official Plan
 - Natural Areas
 - Agricultural Areas
 - Rural Hamlets
 - Controlled Access Area
- Seaton Neighbourhood Plan
 - Seaton Natural Heritage System
 - Low Density Area Type 1
 - Low Density Area Type 2
 - Medium Density Area
 - Mixed Corridor Type 1
 - Mixed Corridor Type 2
 - Community Node
 - Prestige Employment Node
 - Prestige Employment
 - Future Transitway Station
 - Controlled Access Area
- SWM SWM Facility
- CP Community Park
- NP Neighbourhood Park
- VG Village Green
- RC Recreation Centre
- DE District Energy
- ES Elementary School
- HS High Schools

Data Sources: City of Markham Official Plan, City of Pickering.

200 100 0 200 Metres

N

PLANNED LAND USES
IN THE STUDY AREA



Project: TA8429	Figure: 6b
Date: November, 2015	Prepared By: MWF
Scale: 1 : 15,000	Checked By: KSB

5. ASSESSMENT OF IMPACTS

A review of the footprint of the transitway runningway and stations was completed to determine the potential impacts on the existing, planned and future land uses within the study area. For the purposes of the assessment, the transitway was assumed to consist of a 50 m wide right-of-way located along the runningway and each of the Transitway stations. The planned land uses and the preferred Transitway facility footprint is presented on **Figures 6A and 6B**. For the purpose of describing the impact assessment findings the study area was divided into five sections, which are presented below.

A number of potential impacts with respect to land use factors are identified in the MTO *Environmental Reference for Highway Design* (2013), including impacts to natural features/natural systems, and the location and usage of wells. Impact assessment for the following disciplines have been completed and are documented under separate cover:

- Impacts to natural features/natural systems have been assessed, and are documented under separate cover, *Fish and Fish Habitat – Impact Assessment Report* (LGL 2015) and *Terrestrial Ecosystems Report* (LGL 2015).
- A review of the potential impacts to wells was completed and is documented under separate cover, *Secondary Source Groundwater Assessment 407 Transitway from Kennedy Road to Brock Road* (Golder Associates 2015).

The appropriate environmental protection and mitigation measures presented in these reports will be implemented to address impacts to all land use factors within the study area.

Throughout the study area, temporary impacts associated with construction are anticipated to affect all land use factors (i.e., agricultural community, and residential, commercial, industrial, tourism, and community/recreation facility users). Temporary impacts may include: traffic disruption and/or delays, access restrictions, noise, and dust. A noise and vibration assessment and traffic assessment will be conducted during this study, to assess potential impacts (both permanent and temporary).

5.1. Kennedy Road to Markham Road

Runningway

This section of the study area is entirely located within the Parkway Belt West Plan area, with some small areas at Kennedy Road (north of Highway 407) designated in the Markham Official Plan as ‘Residential Low Rise’ (0.12 ha), ‘Mixed Use Mid Rise’ (0.1 ha) and ‘Transportation and Utilities’ (0.65 ha). Since the impact assessment was conducted assuming a 50 m wide right-of-way, the impact to these small areas will be further refined during future project stages.

The runningway lands within the Parkway Belt West Plan area, is designated as ‘Road’, ‘Inter-urban Transit’ and ‘Public Open Space and Buffer Area’. The majority of the runningway follows the ‘Inter-urban Transit’ land use designation, which was approved under Amendment 147 ‘Highway 407 Inter-Urban Transitway, Mississauga to Markham (January 2000)’. However, during the course of the Transit Project Assessment Process, the study team has made some

modifications to the runningway within the study area, between McCowan Road and Markham Road. In this section, the original station location has been relocated from east of McCowan Road to west of Markham Road. However, the Markham Road Station location is consistent with the Parkway Belt West Plan, as discussed below. An amendment to the Parkway Belt West Plan may be required during detail design.

The existing land uses within the runningway consist of open fields and small woodlots and hedgerows, and the Highway 407 transportation corridor. The runningway is located north of the Crethaven Golf Club and hydro corridor. No existing land uses will be displaced within this section. A Noise Impact Assessment is being undertaken to assess potential changes in noise to existing land uses.

Markham Road Station

The Markham Road Station is proposed within the Parkway Belt West Plan area, in an area designated as 'Public Open Space and Buffer Area' and 'Inter-urban Transit'. The station is compatible with the land use provisions for these land use designations. As noted above, the runningway and stations lands are identified in the Parkway Belt West Plan (Amendment 147). An amendment to the Parkway Belt West Plan for the new facility footprint may be required.

5.2. Markham Road to 9th Line

Runningway

The runningway through this section is located within lands designated as 'Transportation and Utilities' and 'Residential Low Rise'. Approximately 1.24 ha of the 'Residential Low Rise' land use designation would be required as the runningway reaches 9th Line. All impacts would occur in areas where no existing residential land uses are present. In addition, this encroachment is necessary since the interchange at Highway 407 and 9th Line requires the runningway to shift southerly at this location.

Existing land uses within the runningway lands include open space lands containing fields, forests, and the Rouge River. The Markham Green Golf Club is located in close proximity to the runningway at the Rouge River. The golf club facilities are located approximately 20 m from the right-of-way. Potential impacts to this golf course should be further investigated once more details are available regarding the transitway design. Residential communities are located just south of the runningway throughout this section. Noise and traffic studies will be conducted to assess the potential impacts of this alignment, and to identify appropriate mitigation measures.

9th Line Station

A station will be located on the west side of 9th Line, between the Highway 407 corridor and the residential community. The lands within the footprint of the station are designated as 'Transportation and Utilities' (0.42 ha), 'Residential Low Rise' (5.8 ha) and 'Residential Mid Rise' (1.9 ha). However, the lands designated for residential use are currently not developed; therefore, no displacement of existing residential uses would occur with the implementation of this station.

An Official Plan Amendment is required for the implementation of a station at this location. Indirect impacts associated with the conversion of residential land uses for the station may include changes in noise and traffic. Noise and traffic studies will be conducted to assess the potential impacts of this station, and to identify appropriate mitigation measures. Efforts should be made to design the transitway to minimize impacts to adjacent sensitive land uses (i.e. existing residences).

At a Public Information Centre, local residents requested that the south-east quadrant of 9th Line and Highway 407 be considered for the station. The south-east quadrant contains a parcel of land located south of Highway 407 designated as ‘Transportation and Utilities’ in the City of Markham Official Plan. The lands just south of this parcel include the Box Grove retail plaza (commercial land use) and the undeveloped but planned Business Park Employment land use designation. As described in **Section 2.8**, the proposed development of these lands for residential and service uses were subject to a deferral by the Region of York. The Region conducted a review the overall impact of all conversions of Employment Land within the region, to evaluate the cumulative effect of these conversions. The Region of York issued notices of decision supporting the conversion of the employment lands; however, these Official Plan Amendments have been appealed to the Ontario Municipal Board. Given the planned land uses at this location, the placement of a station at this quadrant would require new access to be provided, would be adjacent to the commercial plaza, and would be adjacent to the planned residential uses similar to the south-west quadrant.

5.3. 9th Line to York Durham Line

Runningway

The runningway within this section is located within lands designated as ‘Transportation and Utilities’ in the City of Markham Official Plan. Therefore, the runningway is compatible with the local Official Plan. However, efforts should be made to design the transitway to minimize impacts to adjacent sensitive land uses (i.e. planned residences).

The farm located at 8119 Reesor Road has structures that are located approximately 45 m from Highway 407. Depending on the design of the runningway at this location, this farm and its structures may be in close proximity to the alignment. A heritage assessment for this property recommended that this farm be conserved (ASI 2015). Further assessment will be conducted during detail design to refine direct and indirect impacts to this farm.

The area between the CP/Havelock Railway (Proposed GO Line) and York Durham Line is part of the Rouge National Urban Park. The Management Plan indicates that all above-ground provincial, municipal, and regional infrastructure is excluded from the Park boundaries. However, efforts will be made to minimize impacts to the natural environment to support the Management Plan objectives and targets, where feasible. Watercourse crossings are required at the Little Rouge Creek, an unnamed watercourse, and Petticoat Creek. The Management Plan presented plans to implement a north-south trail along the Little Rouge Creek. In addition, a portion of the Non-Provincially Significant Locust Hill Wetland Complex will be impacted by the runningway. Further details on how impacts to natural heritage features will be addressed within the Rouge National Urban Park is described in the *Terrestrial Ecosystems Report* (LGL 2015) and *Fish and Fish Habitat – Impact Assessment Report* (LGL 2015). As noted in **Section 2.1**, one of the

Management Plan objectives is to explore the feasibility and utility of a park shuttle that connects areas within the park with links to public transportation hubs. During detail design, discussions will be held with Parks Canada regarding future opportunities for a park shuttle to connect to Transitway Stations.

The lands between Reesor Road and York Durham Line are part of the Greenbelt Plan Protected Countryside and Natural Heritage System (**Figure 2**). The Greenbelt Plan includes the following policies with respect to infrastructure.

4.2.1.1: All existing, expanded or new infrastructure subject to and approved under the *Canadian Environmental Assessment Act*, the *Environmental Assessment Act*, the *Planning Act*, the *Aggregate Resources Act*, the *Telecommunications Act* or by the National or Ontario Energy Boards, or which receives a similar environmental approval, is permitted within the Protected Countryside, subject to the policies of this section and provided it meets one of the following two objectives: a) It supports agriculture, recreation and tourism, rural settlement areas, resource use or the rural economic activity that exists and is permitted within the Greenbelt; or b) It serves the significant growth and economic development expected in southern Ontario beyond the Greenbelt by providing for the appropriate infrastructure connections among urban growth centres and between these centres and Ontario's borders.

4.2.1.2: The location and construction of infrastructure and expansions, extensions, operations and maintenance of infrastructure in the Protected Countryside, are subject to the following:

- (a) Planning, design and construction practices shall minimize, wherever possible, the amount of the Greenbelt, and particularly the Natural Heritage System, traversed and/or occupied by such infrastructure;
- (b) Planning, design and construction practices shall minimize, wherever possible, the negative impacts and disturbance of the existing landscape, including, but not limited to, impacts caused by light intrusion, noise and road salt;
- (c) Where practicable, existing capacity and coordination with different infrastructure services is optimized so that the rural and existing character of the Protected Countryside and the overall urban structure for southern Ontario established by the Greenbelt and any provincial growth management initiatives are supported and reinforced;
- (d) New or expanding infrastructure shall avoid key natural heritage features or key hydrological features unless need has been demonstrated and it has been established that there is no reasonable alternative; and,
- (e) Where infrastructure does cross the Natural Heritage System or intrude into or result in the loss of a key natural heritage feature or key hydrological feature, including related landform features, planning, design and construction practices shall minimize negative impacts and disturbance on the features or their related functions, and where reasonable, maintain or improve connectivity.

An Environmental Assessment (EA) Study was completed in 1997 for the Highway 407 Transitway from Markham Road to Highway 7 East of Brock Road. The EA received approval prior to the establishment of the Greenbelt Plan in 2005. However, the EA documents the process that was followed to determine the location of the transitway facility. The need for this

transportation infrastructure was demonstrated during the EA, and a number of route planning alternatives were developed and evaluated, considering a range of factors including potential impacts on the agricultural system and natural environment.

During this planning and preliminary design study, efforts have been made to minimize the footprint of the runningway within the Greenbelt Plan lands. The runningway is located just south of the Highway 407 alignment, concentrating urban infrastructure within one corridor. In addition, no stations have been planned within the Greenbelt Plan area. Key natural heritage features include Little Rouge Creek, an unnamed watercourse, and Petticoat Creek, and the Non-Provincially Significant Locust Hill Wetland Complex. The potential impacts of the runningway on these features, and the recommended environmental protection and mitigation measures are described under separate cover, *Terrestrial Ecosystems Report* (LGL 2015) and *Fish and Fish Habitat – Impact Assessment Report* (LGL 2015).

The design and construction practices identified in Section 4.2.1.2 of the Greenbelt Plan will be evaluated and addressed in the detail design of the transitway.

Potential Future Donald Cousens Station

A potential future Station is proposed west of Reesor Road. The lands within the footprint of this station are designated as ‘Transportation and Utilities’, ‘Business Park Employment’, and ‘Greenway’. The potential future station will displace approximately 0.34 ha of ‘Business Park Employment’ and 0.12 ha of ‘Greenway’. The potential future Donald Cousens Station footprint has been reduced to the extent possible, and the minor impacts to these land uses are unavoidable to accommodate the necessary land area for the station.

The potential future Donald Cousens Station footprint was modified to avoid impacts to two farms located at 8119 Reesor Road and 8042 Reesor Road, which have been identified for conservation (ASI 2015). However, approximately 0.45 ha of the property (fields) associated with 8042 Reesor Road will be displaced by the station. This displacement will result in the loss of Soil Capability Class 2 agricultural lands (Agricultural Information Atlas 2015). Efforts have been made to modify the station footprint, as the original station would have resulted in the removal of both farms at 8119 and 8042 Reesor Road. The impact to the northerly portion of the property at 8042 Reesor Road will result in the displacement of prime agricultural lands and the removal of lands from agricultural cultivation. Since the property is owned by Infrastructure Ontario, the land is already under provincial ownership. In addition, the property is designated as ‘Business Park Employment’ and ‘Greenway’ in the City of Markham Official Plan. However, both farm properties are designated as a recognized community landmark, under the City of Markham By-law 2004-42. Mitigation measures to reduce the impact of the land use change on the farm will be considered, including replacement of fencing, re-establishment of drainage, and maintenance of access related to farm activities during and post construction.

This station will serve as a centre for transit activities, as a GO station is planned east of the station, on the rail line near Reesor Road. In addition, Parks Canada has identified a potential access to the north-south trail along Little Rouge Creek from this station.

MTO Property Protection at York Durham Line

The Ministry of Transportation owns lands along the Highway 407 infrastructure corridor within the Rouge National Urban Park. These lands have been excluded from the Management Plan's Rouge National Urban Park area, as it is identified as part of the provincial infrastructure network. The runningway will be located within these lands, south of the existing Highway 407. However, there is a parcel of land located at York Durham Line and Highway 407 that is identified as 'MTO Property Protection' on **Figure 6B**. These lands are being protected to address future transit needs or to accommodate environmental compensation activities associated with this project. Consultation with Parks Canada will be conducted during Detail Design to address environmental compensation activities on this site.

5.4. York Durham Line to Sideline 24

Runningway

The runningway within this section is located within areas designated within the Central Pickering Development Plan as 'Duffins Rouge Agricultural Preserve', 'Natural Heritage System – Primary Designation', and 'Prestige Employment Lands' (**Figure 2**). However, more recent planning studies (Seaton Community Neighbourhood Plans) have further refined the boundaries of these land use designations, as presented in **Figure 5 and 6**.

The Neighbourhoods Plan for the Seaton Community designates the majority of runningway lands as 'Controlled Access Area' and 'Agricultural Areas'. The runningway is consistent with the land uses permitted within the 'Controlled Access Area' designation. The area impacted within 'Agricultural Areas' (City of Pickering Official Plan) includes approximately 3.9 ha. The agricultural lands in this area are classified as Class 1 (prime agricultural) soils, and are part of the Duffins Rouge Agricultural Preserve. An agricultural tile drainage system is located south of the runningway, west of Duffins Creek (Lot 34, Concession 5, City of Pickering) (Ontario Agricultural Information Atlas). The runningway parallels the existing Highway 407 and no transitway stations are proposed within the Duffins Rouge Agricultural Preserve. Efforts will be made to minimize impacts to the agricultural lands within this area, by minimizing the footprint of the runningway (where feasible), and by avoiding or restoring any affected agricultural tile drainage systems and fencing.

Minor footprint impacts to 'Prestige Employment Node' (0.43 ha), 'Seaton Natural Heritage System' (0.68 ha), and 'Natural Areas' (0.1 ha) are anticipated. These are minor edge impacts to planned land uses within the Seaton Neighbourhood Plan. Since the impact assessment is based on a 50 m wide right-of-way, the impacts will be further refined during detail design. The impacts to 'Prestige Employment Node' and 'Seaton Natural Heritage System' are unavoidable, as they are required to accommodate the interchange at Highway 407 and future Whites Road. Efforts will be made to ensure that the runningway design is compatible with adjacent land uses, and that impacts to natural heritage features (within the Seaton Natural Heritage System and Natural Areas) are mitigated.

Existing land uses that would be affected include: natural heritage features, agricultural fields and a hiking trail. Efforts will be made to reduce the impact of the runningway on natural features and agricultural fields, where possible. As noted above, there is a systematic agricultural tile drainage system south of the Highway 407 corridor, east of York Durham Line (Lot 34, Concession 5). Efforts to avoid or repair/reinstate the tile drainage system within the Duffins Rouge Agricultural Preserve, as well as any fencing for active agricultural fields, should be made. A hiking trail is identified as a Secondary Recreational Trail in the Seaton Neighbourhoods Plan, and access to the trail will be maintained in the runningway design. Another trail is planned at Sideroad 26; however, it is anticipated that trail access will be provided along the municipal road.

The lands between York Durham Line and east of the Duffins Rouge Agricultural Preserve are part of the Greenbelt Plan Protected Countryside and Natural Heritage System (**Figure 2**). Please refer to **Section 5.3** for a description of how this project addresses the policies of the Greenbelt Plan.

Whites Road Station

A station will be located on the west side of the future Whites Road. The lands within the footprint of the station are designated as ‘Controlled Access Area’ (1.6 ha) and ‘Prestige Employment Node/Future Transitway Station’ (2.69 ha) (**Figures 6A and 6B**). The station is consistent with the planned land uses for this area.

5.5. Sideline 24 to Realigned Brock Road

Runningway

The runningway within this section is located within areas designated within the Central Pickering Development Plan as ‘Natural Heritage System – Primary Designation’, and ‘Prestige Employment Lands’ (**Figure 2**). However, more recent planning studies (Seaton Community Neighbourhood Plans) have further refined the boundaries of these land use designations, as presented in **Figure 5 and 6**.

The Neighbourhood Plans for the Seaton Community designates the runningway lands as ‘Controlled Access Area’, except for the portion east of Brock Road, which is located within the ‘Future Transitway Station’ land use designation (also designated as ‘Prestige Employment Node’ and ‘Seaton Natural Heritage System’). Given that the runningway is planned for an area designated for the future transitway station, the runningway through this section is consistent with the Neighbourhood Plans for the Seaton Community.

Potential Future Rossland Road Station

The Seaton Neighbourhood Plan identifies a large site for the potential future station (‘Future Transitway Station’ on **Figure 5 and 6**) including lands west and east of the future Rossland Road. However, the potential future station is now proposed only on the west side of the future Rossland Road. The lands within the footprint of the station are designated as ‘Controlled Access Area’, ‘Future Transitway Station’, and ‘Seaton Natural Heritage System’.

The change in the station footprint resulted in 8.34 ha of ‘Seaton Natural Heritage System’ being no longer developed east of Rossland Road. As a result, the loss of 0.6 ha of the ‘Seaton Natural Heritage System’ is not significant as a greater amount of the natural heritage system would have been displaced with the development of lands east of Rossland Road. The *Terrestrial Ecosystems Report* (LGL 2015) indicates that there are no significant natural heritage features within the footprint of this potential future station (Agricultural and Hedgerow).

The footprint of the station will abut lands planned for ‘Low Density Area Type 2’. Noise and traffic studies will be conducted to assess the potential impacts of this station, and to identify appropriate mitigation measures.

It should be noted that the development of this site for a station will depend on transit needs in the future. The land is being protected should ridership warrant the implementation of this station. In addition, consideration will be made to implementing environmental compensation activities associated with this project within the lands identified for the potential future station.

Brock Road Station

Prior to implementation of the Brock Road Station, a portion of the planned station lands will be used for a commuter carpool lot to support GO Express Bus Service on Highway 407 East and local transit services as well as carpool spaces. The Brock Road Commuter Parking Lot includes approximately 300 parking spaces, a complete bus loop, and up to six bus bays and platforms with amenities including radiant heaters, lighting and seating, bicycle racks, and provisions for public telephone within the lot. It is anticipated that the parking lot for the Brock Road Station will provide an additional 200 parking spaces (i.e. approximately 500 parking spaces in total) (LGL 2015). The detail design of the station will be completed in the future, and will include a redesign of the existing Commuter Parking Lot to accommodate the design of the larger station.

The Brock Road Station has been modified, by reducing the footprint north of Brougham Creek, and adjusting the westerly boundary to include a more continuous block of land adjacent to the existing Brock Road Commuter Parking Lot. These changes to the station footprint will result in the displacement of lands planned for ‘Prestige Employment Node’. However, the new transitway footprint is overall smaller than the original proposed transitway. In addition, some lands previously identified as ‘Future Transitway Station’ at Old Brock Road will now be available for ‘Prestige Employment Node’ as a result of the changes.

5.6. East of Realigned Brock Road

Runningway

The runningway within this section is located within areas designated within the Central Pickering Development Plan as ‘Prestige Employment Lands’ (**Figure 2**). However, more recent planning studies (Seaton Community Neighbourhood Plans) have further refined the boundaries of these land use designations, as presented in **Figure 5 and 6**.

The Neighbourhood Plans for the Seaton Community designates the runningway lands as ‘Prestige Employment Node’ and ‘Seaton Natural Heritage System’. The displacement of these land uses is unavoidable given that the alignment is needed from the Brock Road Station, around the Highway 407 East/Realigned Brock Road interchange, and north to the alignment of Highway 407 East. The lands east of Sideline 16 are designated as ‘Natural Areas’ in the City of Pickering Official Plan. The alignment of the runningway parallels the Highway 407 East, so that infrastructure is contained within this corridor. Impacts to natural heritage features and functions will be assessed and appropriate mitigation measures will be implemented.

6. ENVIRONMENTAL PROTECTION AND MITIGATION MEASURES

The study team has undertaken an evaluation of alternatives for the runningway and station locations. Efforts to avoid sensitive land uses within the study area have been made by the study team where possible. **Section 5** summarizes any changes to land uses associated with the preferred Transitway facility. In general, the land uses within the study area are compatible with the proposed Transitway, and the transitway facility will improve transit options in this area.

As described in **Section 5**, a number of small changes to existing land use designations are required for the Transitway facility. Amendments to the Parkway Belt West Plan, City of Markham Official Plan, and Seaton Neighbourhood Plan may be required to reflect changes in the footprint of the Transitway facility.

During detail design, further assessment will be conducted to refine impacts to existing and planned land uses that are in close proximity to the preferred Transitway runningway and stations. If property is required to implement the preliminary design, the MTO Property process will be followed to purchase any required properties.

Where portions/edges of agricultural fields are displaced by the runningway and stations, further assessment will be required during detail design to determine appropriate mitigation measures. Consideration will be given to repairing any agricultural infrastructure (i.e., fences, agricultural tile drain).

During detail design, the need to implement environmental compensation activities associated with the project environmental commitments on MTO protected property (lands identified on **Figure 6B** at York Durham Line and the potential future station at Rossland Road) should be further assessed.

Temporary impacts to residences, recreational and community, commercial and industrial facilities should be mitigated with the following measures:

- access and egress for emergency vehicles and school buses should be maintained at all times during construction;
- to prevent the emission of pollutants, including dust, to the atmosphere, provisions should be made to ensure there is no unnecessary idling of vehicles. Dust suppressants should be used to combat dust, where appropriate. Emissions during construction should not result in health effects on motorists and local residents and employees;
- construction activities should adhere to local noise by-law regulations. Noise by-law exemptions should be obtained from the municipality where construction activities will occur within the prohibited times;
- construction activities should be staged to avoid/minimize traffic delays to residents, business owners, to maintain use of recreational and community facilities such as the north-south trail along Little Rouge Creek and movement of agricultural machinery along north-south corridors within the Rouge National Urban Park and motorists travelling within the study area to the extent possible;

- access to the 407 ETR, regional roads and local municipal roads should be maintained at all times, or detours should be identified; and,
- the local public should be kept informed of the progress of the Transitway construction and notified of any disruptions such as road closings.

The mitigation measures above should be reviewed during detail design, and refined where necessary to address the anticipated impacts of the Transitway during construction.

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