# Markham Centre Mobility Hub/Station Terms of Reference

Town of Markham
June 8, 2011

# Terms of Reference – Mobility Hub Station Study for Markham Centre

## 1. OVERVIEW AND PROJECT OBJECTIVES

The Town of Markham "Town" is soliciting proposals from qualified and experienced consultants to prepare a Mobility Hub/Station Concept Plan for Markham Centre. The Markham Centre Mobility Hub and surrounding area is one of the most significant developments in the Greater Toronto Area. Given the amount of development that is planned to occur in this area, combined with the significant investments that are being made in the higher order transit systems it is essential that the Town and the Transit Agencies coordinate a detailed plan of how this hub will function and take shape over the coming decades.

The overall objectives of this project are to:

- Finalize the 407 transitway alignment, and integration with GO Transit, VIVA/York Region Transit and development
- Prepare a mobility station preliminary design concept that achieves the land use objectives of the Town of Markham while meeting the operational needs of all transit operators
- Prepare a parking management plan that supports development, addresses short and long term park and ride needs and is financially sustainable
- Identify major development costs by stakeholder and prepare a financial strategy for the Town and Transit Agencies to implement the mobility hub plan.
- Develop a detailed implementation plan
- Provide input into other adjoining studies and incorporate development requirements into this study
- Integrate the Mobility Hub/Station design with the Town's broader Planning and Urban Design vision and development requirements for Markham Centre
- Use the Adamson concept plan as an opportunity to create a place of destination for the Mobility Hub

The starting point for this analysis will be the plan that resulted from the land use optimization study completed by Adamson and Associates (see Figure 4). This plan has been endorsed in principal by the Town of Markham as the preferred urban structure plan. A preferred 407 transit alignment has been identified in the Adamson Plan, which is to be considered along with two other options and tested at the beginning of this study.

## 2. STUDY MANAGEMENT AND MAJOR STAKEHOLDERS

This study will be contracted and managed by the Town of Markham. The Project Manager is Sepideh Majdi, she can be reached at 905-477-7000, Ext. 2414. The study will be coordinated through a technical working group consisting of Metrolinx, Viva, ROY, GO Transit, MTO and internal staff

The study will require the close coordination with a number of stakeholders who have a direct interest in the development of the mobility hub including:

- Town of Markham
- Metrolinx

- Ministry of Transportation
- York Region
- York Region Rapid Transit Corporation
- Markham Centre Land Owners

Other stakeholders who may have a significant interest in the study include, but will not be limited to, the Toronto and Region Conservation Authority, Hydro One, 407 ETR and area ratepayer associations.

## 3. INTRODUCTION

Strong urban design, land use planning, and transportation planning lie at the heart of city building. Mobility hubs attempt to tie these concepts together by focusing on the broader civic nature of transit and its connection to its users. The design of mobility hubs shall place an emphasis on the creation of great civic spaces that seamlessly integrate different modes of movement from walking to high speed rail within a transit oriented development. As the Greater Toronto and Hamilton Area's (GTHA) population continues to experience rapid population growth, diminishing land available for development, increased environmental pressures, and declining levels of fossil fuels, the healthy future of our region requires the development of walkable and bikeable communities that are integrated within a strong local and regional transportation system.

Intended to function as major transit station area, plus a neighbourhood activity centre, the design of each mobility hub is crucial to the implementation of *The Big Move*- the $50 billion regional transportation plan for the GTHA, and shall be a catalyst for creating healthy, socially vibrant, and economically strong communities.

To help achieve these objectives Metrolinx is undertaking a program to conduct Mobility Hub and Station Concept Plans for mobility hubs and major station areas throughout the Greater Golden Horseshoe. This work shall help guide and direct considerable public and private investments such as new transit infrastructure, parking facilities, and private development.

This assignment, being led by the Town of Markham, will develop a Mobility Hub/Station Concept Plan for Markham Centre.

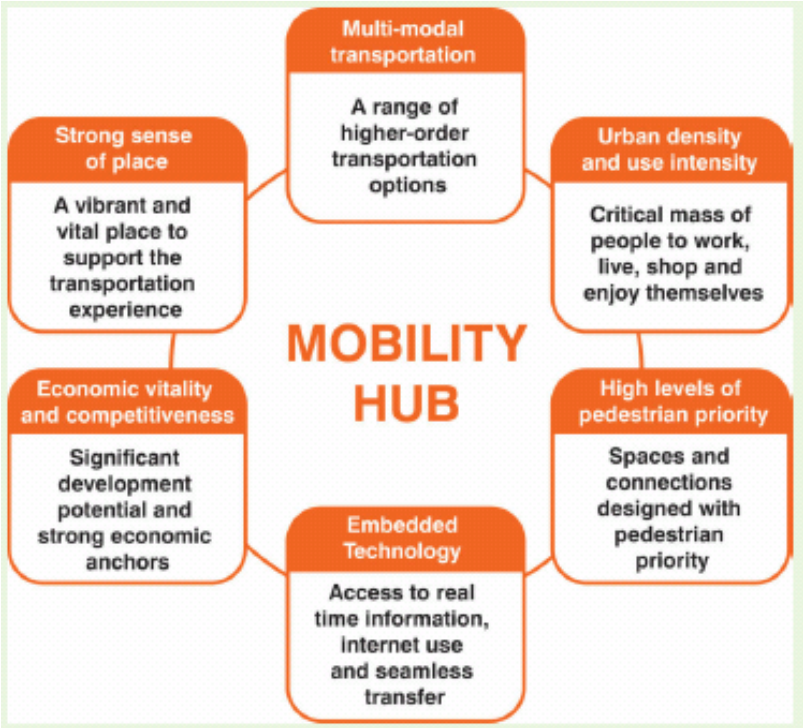
### What are Mobility Hubs?

The Big Move identifies the need to create a system of connected mobility hubs located at key intersections in the GTHA rapid transit network. Mobility hubs consist of major transit stations and the surrounding areas (approximately 10 minute walk/800 metre radius) with significant levels of transit service planned for them and high development potential. They are centres of connectivity along the regional transportation network. They offer an intensive concentration of employment, residential, retail and/or recreational destinations. Successful mobility hubs are places where integrated urban design, environmental sustainability, land value optimization, and land use and transportation planning come together to create centers that promote transportation, city building, and place making objectives.

Mobility hubs are intended to provide travelers with seamless access to all modes of transportation; demonstrate excellence in architectural design and customer service; and generate transit supportive densities and urban forms that reinforce more compact and sustainable growth.

Successful mobility hubs are places which have elements of six key ingredients, illustrated in Figure 1.

Figure 1: Ingredients of a Successful Mobility Hub Service




**Mobility Hub Guidelines**

In February 2011, the Metrolinx board approved the Mobility Hub Guidelines- a framework for the planning and development of mobility hubs. The purpose of the Mobility Hub Guidelines is to:

- Clearly communicate the mobility hub concept;
- Provide guidance and inspiration on developing mobility hub plans and incorporating mobility hub objectives into other planning activities;
- Become a tool and resource for Metrolinx/GO Transit, municipalities, transit agencies, developers, consultants, provincial ministries, community organizations and other public agencies; and
- Serve as a key source of direction for Metrolinx when undertaking planning efforts or when building infrastructure in mobility hubs, or when reviewing third party plans and proposals for mobility hubs.

It is expected that the Mobility Hub and Station Concept Plans conducted by the Consultant will follow the objectives and guidelines as laid out in the Mobility Hub Guidelines. The Guidelines are organized into nine objectives under the general themes of seamless mobility, placemaking, and successful implementation.

The Mobility Hub Guidelines are available to download from Metrolinx at: http://www.metrolinx.com/mx/thebigmove/en/mhguidelines.aspx.

## 4. BACKGROUND

The Markham Centre mobility hub is centred on the Unionville GO Station and the future VIVA and Highway 407 Transitway stations, forming a part of the Markham Centre Urban Growth Centre. The Markham Centre Urban Growth centre itself is located in the geographic heart of the Town of Markham, and generally refers to the area east of the north-south hydro corridor near Rodick Road, north of Highway 407, west of Kennedy Road and south of Highway 7. The location and current Official Plan land use designations are shown on **Figure 2**.

Markham centre is designated as an Urban Growth Centre in the Province of Ontario's *Growth Plan for the Greater Golden Horseshoe* as well as a Regional centre in the Region of York Official Plan. Markham Centre is being planned to become an intensified, mixed-use community and serve as the urban, cultural, and commercial core for the Town of Markham. Supporting this development will be rapid transit on Highway 7, Warden Avenue, Highway 407 and on the Stouffville GO corridor.

Portions of Markham Centre are already well developed and construction activity is taking place in the vicinity of Warden Avenue. Development plans and transportation infrastructure plans for the area around the Mobility Hub have recently been updated and it is appropriate that these be reviewed to ensure they are consistent with Mobility Hub Planning objectives. Therefore, the focus of this study will be on the area around the Unionville GO/VIVA/Highway 407 Transitway hub. One of the early study tasks will be to define the appropriate extent of the mobility hub study area within the overall context of Markham Centre.

**Figure 2: Land Use Plan for the Markham Centre Lands(OPA21)**

**Transit Context**

In the future, the Markham Centre Mobility Hub will be home to a number of transit services, as summarized in the table below.

| Planned Rapid Transit to Markham Centre Mobility Hub | | |
|---|---|---|
| **Planned Service** | **Relevant Authorities** | **Timeframe** |
| **Viva Bus Rapid Transit** – Highway 7 (Yonge Street to Markham Centre)<br><br>- Markham Centre to Box Grove | York Region<br>Metrolinx<br>York Rapid Transit Corporation | - BRT complete in 2020 Ultimate LRT Conversion<br>- In Metrolinx's 15→25 year program |
| **GO Transit Regional Rail –** All-day rail service on Stouffville Rail line (Union Station to Mt. Joy Station via Unionville Station) | Metrolinx<br>GO Transit | 2020 |
| **Rapid Transit – Warden Avenue** (Highway 7 to Don Mills Station) | York Region | Subject to review by York Region |
| **407 Transitway** (Highway 427 to Cornell via Unionville Station) | Ministry of Transportation<br>Metrolinx<br>York Region | Stage 1(Hwy 427 to Kennedy Road section ) in Metrolinx 15-year (BRT on existing Highway 407 in mixed traffic with congestion management)<br><br>Stage 2 in 25-year Regional Transportation Plan |

In addition to rapid transit, the Markham Centre Mobility Hub also serves as a hub for GO Transit bus services and local York Region Transit buses. Feeder buses run from Unionville GO Station to adjacent communities to meet with GO Transit trains, operated by York Region Transit.

It is anticipated that there will also be shuttle buses servicing the local community which will be under the jurisdiction of YRT or a TMA for Markham Center.

Todate, various plans have been prepared showing how the transit services will interface with the mobility hub. These include plans for the VIVA Highway 7 Rapidway as well as plans for the Highway 407 Transitway. The status of these plans is as follows:

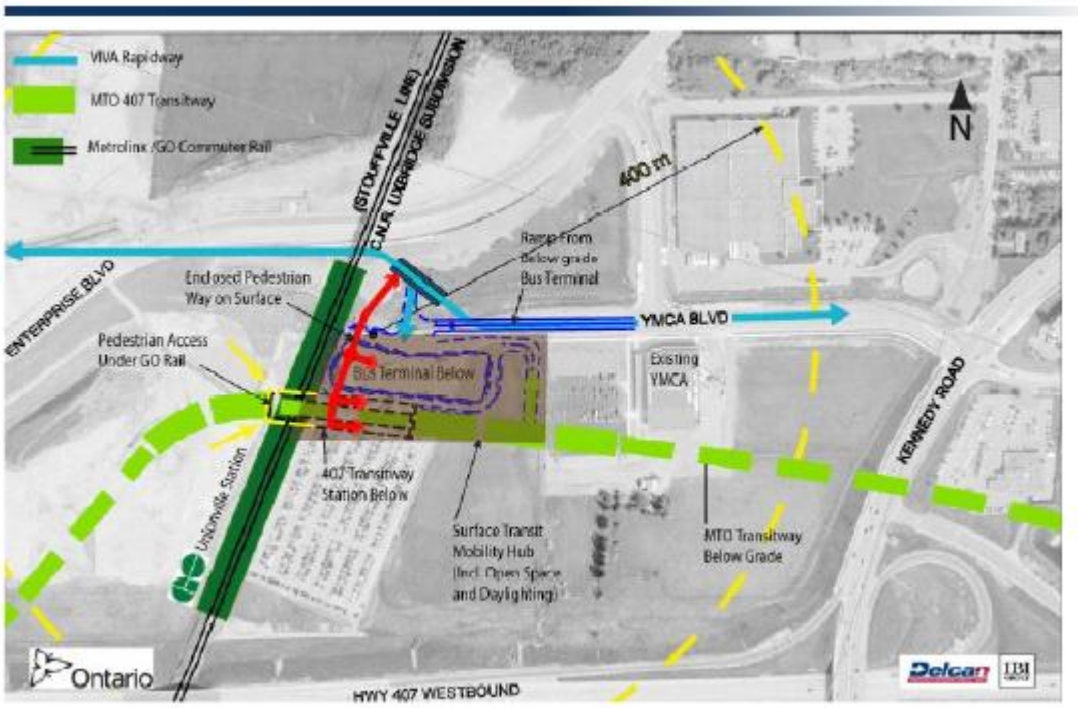
**Highway 7 Rapidway**: The Highway 7 Corridor and Vaughan N-S Link Public Transit Improvements Environmental Assessment was approved in 2006. This EA identified the alignment and station layout of the VIVA rapidway through Markham Centre. A general concept for the station at Kennedy Road was developed. In 2008, a Benefits Case was prepared for all VIVA corridors. Construction on the portion of the rapidway west of Warden Avenue to Birchmount Ave has already started.

**Highway 407 Transitway From East of Highway 400 to Kennedy Road:** The Ministry of Transportation has completed a Preliminary Design and Environmental Assessment for the portion of the Highway 407 Transitway from Highway 400 to Kennedy Road. The Environmental Assessment for this project was approved by MOE on February 28, 2011. The

preliminary design and environmental assessment includes an alignment and station adjacent to the planned VIVA rapidway station and platform at Kennedy Station (Unionville). The approved alignment and station location is shown on Figure 3. This alignment differs from the preferred Town of Markham plan (Adamson Plan) which places the 407 Transitway adjacent to Highway 407.

It is noted that any modifications to the above plans may require addendums to the approved environmental assessments, changes to preliminary designs and approval of relevant agencies. Any changes to the EA's and preliminary designs for the individual transit facilities would be outside the scope of this study; however, the study is intended to provide sufficient detail on what changes, if any, would be required.

**Figure 3: MTO 407 Transitway and Highway 7 Rapidway Interface Based on Approved EAs**




**Urban Development Context**

Several plans have served to shape the current development directions for the Mobility hub area including:

**Markham Centre East Precinct Plan, 2006:** This plan was initiated by the Town in 2004 in order to provide a planning context to evaluate future development applications. The study area included the area east of the GO Stouffville corridor to Kennedy Road, and between the Rouge River to the north and Highway 407 to the south. A draft East Precinct Plan was presented to Council in January 2006, but approval of the Precinct Plan document was deferred due to land ownership issues and on-going discussions regarding the proposed Canadian Sports Institute of Ontario (CSIO) facility and expanded parking facilities at the GO Unionville station.

**Remington Retail Precinct Plan and Overall Master Plan Update, 2010**: In 2010, Calthorpe Associates was retained to update the plans for the Remington Group's Downtown Markham project. One of the conclusions of this work was that with the identification of the Mobility Hub, the need to connect east to west is as important as north to south. Accordingly, the Calthorpe Plan recommended additional east/west roads to enhance street connectivity and the design contemplates a mixed use retail/residential development extending along Enterprise Boulevard from Birchmount Rd towards the Mobility Hub to support pedestrian and retail connectivity and linking the two components together. The Calthorpe work (currently underway) will result in future amendments to the Downtown Markham Precinct Plan, to be undertaken by Remington.

**Markham Centre/Markham Live Site Optimization Study, 2011:** In late 2010, Adamson Associates Architects was retained by the Town of Markham to prepare a land use optimization study for the area in the vicinity of the Mobility Hub including lands commonly referred to as Markham Live. This area includes lands East of the Go line as well as the west side of the rail tracks within the Remington downtown Markham project. The study recommends a preferred option for street and block patterns, incorporating proposed transit routes and stations. The preferred concept plan, shown on Figure 4, was presented to the Town in March 2011and endorsed by DSC.

The existing GO tracks at grade act as a major barrier in the Mobility Hub. Town staff and consultants (Adamson Associated) are exploring options for overcoming this barrier, such as building pedestrian linkages and roads over the GO tracks, and VIVA and 407 Transitway connections under the GO tracks, with a layering of land uses and pedestrian connections spanning the tracks. The Anchor Mobility Hub creates the opportunity for land use intensification and transit oriented development at the GO Station.

All of the above plans should inform the development of the Mobility Hub Plan and will be made available to the successful consultant.

**East Precinct / Mobility Hub Plan**

The East Precinct / Mobility Hub plan is intended to update the East Precinct Plan, including an expanded road and transportation network, and incorporate polices to create a Mobility Hub centered around the Unionville GO Station. Keir Corp. and Adamson Architects have been retained by the Town to complete this work, building on the studies discussed, particularly the Adamson Associates Architect's road, block and transit alignment concept endorsed by Development Services Committee in March, 2011. The precinct plan will tie the component pieces of these studies together into one comprehensive vision document for the development of the East Precinct and Mobility Hub components in Markham Centre along with an urban design demonstration plan. The on-going analysis is predicated on the completion of the various supporting studies identified and a process of community consultation, including the Markham Centre Advisory.

**"Markham Centre Transportation Study"**

The Town has retained the IBI Group to update the Transportation Study for Markham Centre. Draft results of the study will be provided to the successful consultant.

**Preliminary "Engineering Study" - Mobility Hub**

The Town has retained McCormick Rankin Ltd. to update the servicing road profiles, cross-sections and municipal servicing for the Adamson Optimization Study. Completion of this work is expected in July 2011 which will be provided to the successful consultant.

**"Markham Live" and "MISTA" – (Markham International Sports Training Academy)**

The sports and entertainment land related uses could also extend beyond Town owned lands onto other adjacent lands east and west of the GO line. The potential for large scale destination uses with structured parking creates a tremendous opportunity for shared parking and integrated development at the Hub Station.

The Town is also exploring options for a comprehensive "Markham Live" sports centre, cultural and entertainment destination that could be integrated with the future multi modal transit Mobility Hub. Possible elements under review by the Markham Live Committee of Council include sports and training facilities, cultural venues, entertainment, commercial and office uses, hotel and residential, consolidated transit hub, stacked parking and service areas. The 'MISTA' proposal is for a large scale integrated sports complex and training academy on the Town lands North of Highway 407 and West of Kennedy Road. The scope of the study will be provided to the successful consultant.

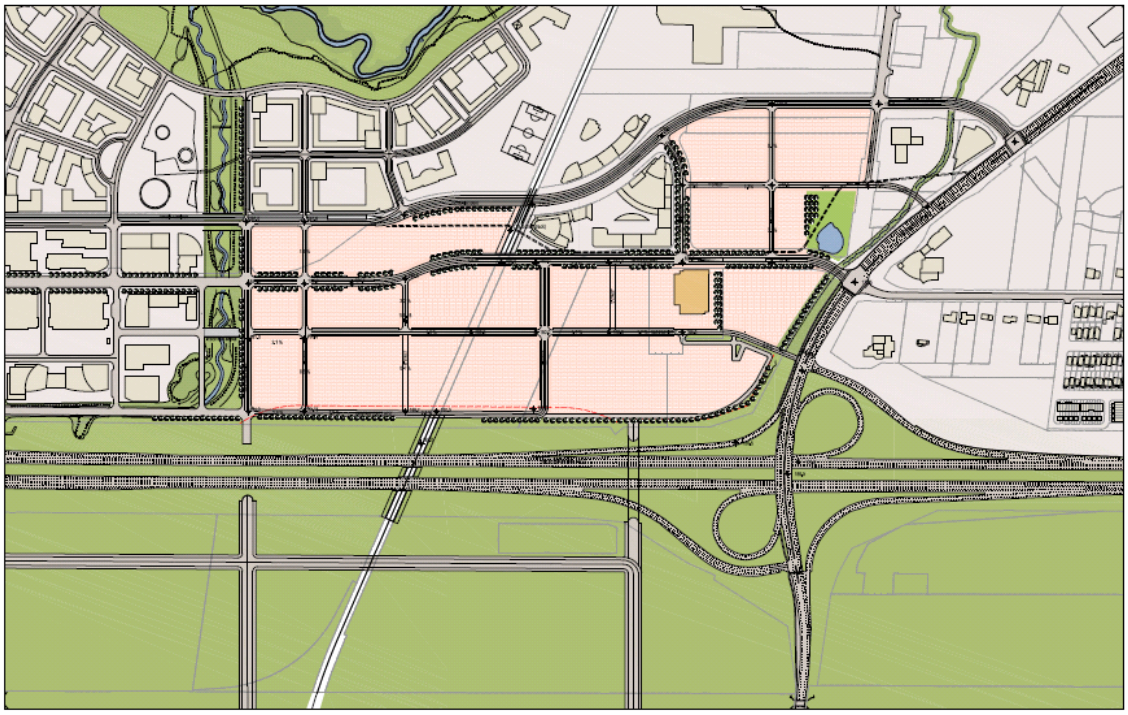
**High Upfront Costs Require New Financing Mechanisms**

The infrastructure investments that would be required for the road and transit alignments, structured and underground parking, municipal, services, major land uses, and the multi-modal transit station are challenging in their potential cost to the municipality, other levels of government, transit agencies, and private sector investors. The current Development Charges regime for Markham Centre already makes this a particularly challenging development to finance and implement.

**Tributary # 5 EA Study – start - June/complete end 2011**

The Town is about to commence a Class Environmental Study for a tributary stream of the Rouge River which currently is within the Mobility Hub area. The study will look at future relocation and/or enclosure. The study is to commence by Fall 2011 and be completed by Spring 2012. It is expected that this study will be build on the outcome of the studies listed above and not duplicate the work of the previous studies.

**Figure 4: Markham Centre/Markham Live Site Optimization Study**



## 5. STUDY DATA AND INFORMATION

All study data, reports and presentation material are to be supplied to the Town in a format compatible with:

Microsoft Office Suite 2000 (Word, Excel, Access, PowerPoint) ESRI Shape Files, current version Auto Cad Version 14.

## 6. BUDGET, SCHEDULE, AND STAFFING

The study shall be completed within six to nine months of the execution of the study contract or as directed by the Town. Proposals should comment on the appropriateness of this suggested time, and proposed variations if required.

The detailed budget will include the following details which will be the total transferred to the Bid

Form found on Page ____:

- Consulting fees (include hourly rates for all key staff on the project team);
- Meeting fees;
- Additional meeting costs if deemed required
- Disbursements at cost;
- Pertinent taxes; and
- Payment schedule for each study task.

The work schedule outline will detail proposed:

- task timing;
- task sequence; and
- meeting schedules

The Consultant shall retain and provide as required the following staff positions/roles for the provision of the Services:

- Project Manager
- Multi-Modal Transportation Planner
- Land Use Planner (support role only)
- Transportation Engineer
- Cost Consultant/Quantity Surveyor

The Town's Urban Design consultant (Adamson Associates) will be retained directly by the Town to provide urban design and planning services for this study, and will be available to coordinate with the study consultant team on planning vision and urban design matters. The study consultant will also be expected to demonstrate experience and expertise in land use and urban design matters pertaining to Mobility Hubs.

The Town's Transportation consultant will be retained directly by the Town as needed for broader transportation issues. The consultant shall utilize a transportation engineer to provide a more detailed analysis of the transportation requirements of the hub.

The Consultant may employ one individual to cover more than one staff position/role as long as they meet the minimum required experience and qualifications. The consultant team and the project manager in particular must have excellent written communication and project management skills.

## 7. SCOPE OF WORK

The Town requires the consultant to prepare a Mobility Hub/Station Concept Plan, consistent with the criteria set out in section 7 of The Big Move and Markham Centre concepts/studies. In its analysis, the Consultant shall build upon and ensure integration with any approved and anticipated municipal plans and studies for surrounding lands. The study shall also respect and respond to other current, broader policy directions of the Province, Metrolinx, and the Town of Markham.

In addition to those studies listed previously, relevant documents/studies to consider include, but are not limited to:

- The Big Move
- GO 2020 Strategic Plan
- Mobility Hub Guidelines
- Relevant Local and Regional Official Plans
- York Region Regional Official Plan
- Town of Markham Official Plan
- Markham Centre Secondary Plan (OPA 21)

- Relevant Local and Regional Transportation Master Plans
- York Region Transportation Master Plan
- York Region Pedestrian and Cycling Master Plan
- Markham Pathway and Cycling Master Plan (MMM)
- Draft Markham Transportation Strategic Plan (IBI)
- Draft Markham Centre Transportation Study (IBI)
- Smart Commute - TMA
- Accessibility for Ontarians with Disabilities Act
- Technical specifications from transit agencies

## 8. STUDY STRUCTURE AND REQUIRED TASKS

In consultation with the successful candidate the final scope and detail of each task will be determined. The development of a comprehensive Precinct Plan will include but not be limited to the following components:

A. Study Context and Site Review
B. Mobility Hub Vision/ Planning and Urban Design Principles
C. 407 Alignment
D. Technical Analysis
E. Station Area Design and Layout
F. Urban Design Demonstration Plan
G. Implementation and Phasing Plan, including phased Planning Approvals process

Each of these components is discussed in greater detail below:

### A. Study Context and Site Review:

- **Data collection -** The Consultant will gain a strong understanding of the study context, site and adjacent lands, particularly as it relates to transportation demand and needs, area growth and land-use changes. This work will consist of a review of existing studies, plans, and data to compile an overview of the context that will inform the development of the concept plan. To assist in this review, the consultant will meet with each of the major stakeholders to gain an understanding of needs, work completed to date and relevant technical standards.
- **Development of a Public and Stakeholder Consultation Plan:** The Consultant's work includes the development of a stakeholder consultation plan for both direct stakeholders as well as the general public. It will also include the development of a community stakeholder list that will be used to support community stakeholder involvement in the project.
- **Site Visit and SWOT Analysis -** Key elements of the site visit include the identification of the study area's Strengths, Weaknesses, Opportunities and Threats.

- **Confirm study area boundaries -** Mobility hubs vary in size, but generally comprise the transit station and surrounding area that can be comfortably accessed by foot, approximately an 800-metre radius. An early task of the Mobility Hub Concept Plan will be to delineate study area boundaries in close consultation with Metrolinx and Town staff, considering a variety of factors, such as the location of the station site, the built form of surrounding lands, defined planning areas, location of stable residential areas and potential intensification areas, the transportation network, and natural barriers (e.g., ravines, rail corridors, etc.). The Consultant will review and finalize study area boundaries for a concentrated zone of influence (Primary Zone) and the broader study area (Secondary and Tertiary Zones and Catchment Area). The Mobility Hub Guidelines defines each of these areas and provides step-by-step direction for determining the study area boundaries for each zone.

**B. Mobility Hub Vision and Planning/Design Principles**

- Planning vision and planning principles - have been undertaken by the Town's Planning Department. The consultant is to coordinate the urban design and visualization of the station with the Town's consultant.

**C. 407 Alignment**

MTO has completed an EA, identifying a preferred alignment for the 407 transitway in Markham Centre. The Town and Markham Centre landowners raised serious concerns that the 407 transitway alignment would conflict with land use plans and development applications, and unduly sterilize lands in Markham Centre. MTO agreed to insert the following wording into the 407 Transitway EA document:

"E.6 Evaluation of Alternatives
It is important to emphasize that the preferred transitway alignment and station locations were selected based on designated Urban Growth Centres (UGCs) identified in the Growth Plan, approved municipal land use plans, and the location of existing and approved transit facilities including GO Transit Rail, Subway and YRT/Viva corridors. MTO recognizes that there are ongoing studies within this section of the transitway including Richmond Hill-Langstaff Gateway and Markham Centre. Should significant changes to municipal land use plans and planned transit alignment be agreed to in the future by all parties, MTO will modify the 407 Transitway Environmental Project Report (EPR) as required."

An early step in the current study is to re-visit the options for the 407 transitway alignment and all of the associated facilities in the context of the overall vision and implementation of Markham Centre and the Mobility Hub.

The consultant is to prepare evaluation criteria for approval by the technical working group and then prepare an evaluation of the following alternatives:

i) MTO's Preferred EA alignment

ii) Adamson alignment

iii) Markham Live Street alignment

The Consultant to prepare and present materials depicting the options for discussions with key stakeholders.

- **Station evaluation -** In consultation with and other major stakeholders (Metrolinx, GO Transit, MTO, Region and YRRTC), the Consultant will conduct a high level qualitative evaluation of transit station options concept prior to the selection of one option for further refinement and detail. The evaluation criteria will be based upon the vision and planning principles as well as the objectives from the Mobility Hub Guidelines and be decided in discussion with the Technical Working Group.
- **Refine the preferred urban design concept in detail -** As per inputs from meetings with major stakeholders and Adamson Associates, the Consultant will prepare a refined and detailed Mobility hub station of the selected option in sufficient detail as to provide a starting point for detailed design work.
- **Costing Analysis -** The Consultant will provide an order of magnitude estimate of the public capital and property related costs associated with the implementation of the station area design concept for the Primary Zone. To the extent possible, the consultant will identify costs by major stakeholder.

**D. Technical Analysis:**

The technical analysis component of the work is to be started prior to the refinement of the station area conceptual design drawings as part of the study context and to support the refinement of the Concept Plan. The technical analysis shall inform the conceptual design drawings for the station area.

**Transportation analysis -** Analysis and design of transportation conditions to determine how the mobility hub will accommodate multi-modal movement in the short-term, long-term to 2031 and ultimate (2051) with significant improvements in the local regional transit network.

As part of the overall mobility hub plan vision and design principles, the transportation consultant shall work with the working group to develop key transportation principles to guide decision making and design needs. Following the completion of the transportation principles the Consultant will determine mobility hub travel demands and access.

This review shall include, but is not limited to, the following:

Review of existing travel characteristics: (Markham Centre Transportation Study – IBI Group – July 2011)

a. Transportation Network Mapping

b. Transit Ridership in Station Precinct

    i. All modes/services

    ii. Routing choice

    iii. Directional distribution and trip origin

c. Land use and Travel Patterns to and from surrounding areas (based on previous studies)

d. Other Travel Demands

    i. Pedestrian, cycle and automobile

Review of future forecasts:

a. New Transit Services and Linkages

b. Population and Employment Forecasts and Demands (Town of Markham)

c. Transit Capture Rates from Existing Automobile Travel

    i. Inside/outside hub area

d. Interchange Demands

e. Ridership and Travel Forecasts

    i. Routes

    ii Transfer volumes between different transit services and the ease of those transfers

f. Station Entry Volumes

    i. Pedestrian activity

    ii. Approach activity

Mobility hub connectivity needs including:

a. Station Area Connections

    i. Travel Demand

    ii. Develop directions regarding facility needs

    iii. Entrances

        • Optimal locations and desire lines

        • Convenience

b. Hub Area Connections

    i. Active Transportation (bicycle/trails etc.)

    ii. Transit Connectivity and Service

    iii. Pedestrian Connections

    iv. Locations of proposed New Streets and their impact on current transit infrastructure plans, including the vivaNext rapidway plan

c. Commuter Parking

    i. Location, Size and Type (structure or surface)

    ii. Private Motor Vehicular Circulation

    iii. Phasing (surface to structure)

d. Public and Private Parking

    i. Location, Size and Type (structure or surface) associated with each major use within the hub area

    ii. Private Motor Vehicular Circulation

    iii. Phasing based on development forecasts

    iv. Opportunities for shared parking

e. Urban Design and Land Use Integration – Towns Consultant – Adamson will undertake this work

    i. Distribution of land use

ii. Built form height and massing

iii. Markham Live/MISTA/Adamson concepts

iv. Remington Downtown Markham Plan

v. Opportunities for joint development/shared parking in support of Hub Station

Transportation design options and related policies for the following:

a. Design of Station Facilities

i. Concourse

ii. Connections

iii. Entrances

iv. Bicycle parking

b. Street Level Design- Station Area

i. Public Realm including urban & civic spaces

ii. Pedestrian conectivity

iii. Trails Connections

iv. Streetscape

vi. Open space/parkland requirements.

c. Commuter Parking

d. Hub Area Parking

e. Transit Use Promotion and Enhancement

f. Active Transportation

g. Public Art

h. Sustainability Initiatives (eg., LEED)

General transportation and urban design objectives include:

- Creating a high quality, well designated public realm and creating area connections that support and enhance the movement of pedestrians throughout the mobility hub including an open space network.
- Interpreting land use and transit opportunities to implement intensification and transit oriented development in Markham Centre.
- Determining access and circulation by motor vehicles including any commuter parking and passenger pick up and drop off (PPUDO);
- Identification of transportation demand management strategies that reduce the number of trips, support multi-modal access, improve the safety and convenience of travel, and help minimize vehicular congestion in the area;
- Identification of vehicular traffic impacts and any necessary mitigating measures; and
- Identification of bike parking space requirements and location(s).

The transportation analysis shall include two pedestrian circulation plans. The first plan shall illustrate internal station pedestrian connections **between transit services** while the second plan shall illustrate **external pedestrian connections** demonstrating hub area connectivity/circulation.

**E. Station Area Design and Layout:**

A conceptual station design and layout is to be developed for the Primary Zone to provide a basis for future detailed design work.

- **Prepare transit station concept -** The Consultant will prepare a mobility hub station concept with supporting preliminary engineering plan/profile concepts taking into account all know constraints.
- Where applicable the urban development concepts shall include:

Operating Requirements:

i) Station building: size, location, configuration, bathrooms, retail/concessions, etc.
   - Waiting areas: number, size, type, and other amenities.
   - Tunnels and platform access: number and location of stairs, ramps, and elevators.

ii) Parking requirements;
   - Targeted mode split for station access.
   - Parking Interim and alternate requirements, optimal amount, location, un-/structured, bicycle and motorcycle parking.
   - Vehicle access/egress points (existing, new, and/or relocated).

iii) Overall Station Layout;
   - Optimal configuration of station/co-location of features to promote customer convenience and safety.
   - Location of sidewalks, bicycle paths and parking, bus loop and platforms, PPUDO area, specialized parking, taxis.
   - Access and egress points to the station for all modes to provide optimal capacity at appropriate locations to connect to community.
   - Identify what facilities will be required for current and future local transit service.

iv) Green Initiatives; and
   - What potential "green" initiatives could be incorporated into the station (e.g. green roof, living wall, wind or solar power generation, etc.)

v) Community Integration, Neighbourhood Context and Development Potential
   - Integration with the surrounding community to complement and leverage planned land use changes and mixed-use development opportunities on adjacent properties.
   - Shared parking
   - Accessibility for handicap
   - Safety

Station Area design concepts are to include the following drawings:

- o Master Plan
- o Overall Site Plan
- o Site Sections and Site Elevations
- o Land Ownership
- o Existing and Future Conditions
- o Public Realm Master Plan/ Pedestrian and Open-Space Network
- o 3-D Rendered Bird's Eye View
- o Phasing Plan and implementation strategy

**F. Implementation Framework and Phasing Plan:**

The Consultant will provide an implementation plan framework for the Primary Zone that identifies key stakeholders, recommends development strategies, addresses the timing of implementation and integrates any phasing, property related matters and costing considerations, to align the development of the mobility hub with projected growth. Due to the number of stakeholders and the uncertainty of the timing of private developments, the implementation plan will present an overall framework, including an assessment of the pros and cons of different scenarios.

The Implementation and Phasing Plan shall include:

- **Conceptual site layouts** for the short (5 year), medium (15 year) and long (25 year) time frames including station building, platforms, tunnels, parking, bus loop, station access, barrier free accessibility, on-site private amenities (e.g. retail), connections to the community, key development sites and phasing, etc;
- Identification of **key issues** and steps to address them;
- **Level of service targets** with respect to provision of parking for cars and bicycles and target mode split, projected ridership growth, appropriate staging of construction to minimize interruptions in service, and integration with capital rehabilitation schedule;
- **Municipal Approvals Processes and Requirements by Phase;**
- **Order of design** and construction for various projects; and,
- **Timing and/or triggers** for initiating subsequent phases.
- Order of magnitude of costs and potential funding sources (note that a separate detailed financial strategy is outside of the scope of this study)

## 9. STAFF COUNCIL AND PUBLIC INPUT

The Town of Markham will be responsible for establishing contact with other government partners (Metrolinx, Regional Municipality of York, VIVA, MTO, GO) and for establishing a key stakeholder working group to review and comment on the proposed options and draft findings and recommendations. The level of involvement of these stakeholders will be identified at the start of the study and, if required, a mandate for the stakeholder working group will be prepared.

Stakeholder involvement may include, but is not limited to:

- Stakeholder meetings;
- Markham Centre Steering and Advisory Committees;
- Public Open Houses;
- Developers;
- Updates to Development Services Committee and Council:

The following minimum consultations will be necessary:

- Two public open houses
- Six meetings with the technical advisory group for project start up, ongoing review, research, internal vision, design workshop and preparation of draft and final Mobility Hub Plan;
- One workshop with stakeholder representatives including YRT/VIVA, Metrolinx/GO, MTO and the land owners group (approximately 1/2 day / meeting);
- One meeting with the Markham Centre Advisory Committee (approximately 2 hours / meeting); and,
- Two meetings with Development Services Committee for presentation of the concepts and recommended plan;
- Final public meeting/presentation to Council:

## 10. STUDY DELIVERABLES

- **Study Design:** The Consultant will be responsible for preparing a study design at the outset of each stage of the project, outlining tasks, methodologies, timing and resources that will be applied to address the study objectives. The study design will be reviewed and finalized by the Town of Markham with input from key stakeholders forming the working group.
- **Report Studies:** The Consultant will be responsible for providing the draft interim and final reports, and for accompanying presentation materials (drawings, cross-sections, plans, profiles, etc.) that the Town of Markham can use to depict station area design and layout, and the findings of the analyses.

## 11. ANTICIPATED SCHEDULE

The project is expected to commence in Sept 2011 and be completed by the Spring 2012.

It is anticipated that the procurement process will be administered as follows:

| | |
|---|---|
| **Release of RFP** | June 24 |
| **Deadline for submitting questions** | July 8 |
| **Deadline for responding to questions** | July 14 |
| **Closing Date and time** | July 22 |

| | |
|---|---|
| **RFP Award** | Mid September |

**Note:** Although every effort will be made to adhere to this schedule, the Town reserves the right to change the dates as and when required.