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1-3 illustrates the main activities that comprise the Transit Project Assessment Process.

1.2.2 Canadian Environmental Assessment Act

Funding for this project is being provided through Building Canada's Infrastructure Stimulus Fund (ISF), which qualifies as federal funding and therefore triggers the need for the project to satisfy the requirements of Canadian Environmental Assessment Act (CEAA). However, the CEAA Exclusion List Regulations, 2007 (SOR/2007-108) indicates the following in Item 5:

> *The projects and classes of projects that are set out in Schedule 4 [which includes this project under Section 5], to be carried out in places other than a national park, park reserve, national historic site, or historic canal and funded under any of the following plans, funds, or initiatives, are exempted from the requirement to conduct an assessment under the Act:*
>
> *a) the Building Canada Plan;*
>
> *b) …*

Direction was provided by the City's Infrastructure Stimulus Fund coordinator indicating that, because this project is funded under the *Building Canada Plan*, it is exempt from the requirements of the Canadian Environmental Assessment Act. This exemption was confirmed by the Canadian Environmental Assessment Agency on April 26th, 2010.

1.3 Purpose of the Study

The purpose of this study was to assess and evaluate the potential impacts of the preferred design method and other methods considered.

The investigation included a review of the options available to provide greater priority for the operation of Mississauga and GO Transit bus vehicles along Rathburn Road within the City Centre area between Station Gate Road and the Bus Rapid Transit facility terminus at Rathburn Road located just east of Hurontario Street. The objective of the priority measures is to improve the schedule reliability and speed of operation of the transit services.

The analysis highlighted the implications of the transit priority alternatives to allow selection of the preferred design concept. The selected concept was subsequently detailed to quantify the magnitude, incidence and significance of the environmental effects of construction and operation as a basis for identifying appropriate mitigation measures.

1.4 Planning and Policy Influences

The following discusses briefly the public policy documents supporting and guiding the project.

2. DESCRIPTION OF AND RATIONALE FOR THE PREFERRED TRANSIT PROJECT

The general description of the transit project is to implement surface transit improvements / transit priority measures to facilitate movement of transit vehicles on a 1km section of Rathburn Road between Duke of York Boulevard and the Mississauga BRT connection to Rathburn Road east of Hurontario Street, approximately 800 m east of the City Centre Transit Terminal. The existing configuration of Rathburn Road within the study area is illustrated in **Figure 2-1**.

In examining the potential options, the City indicated that to the extent possible the introduction of the transit priority measures (TPM) would be substantially confined to the present road allowance. This directive was to ensure the initiative was consistent with the Downtown 21 Plan and the impacts of the construction and transit operations on the natural, social and economic environments would be marginal. Accordingly, the initiatives considered involved the reallocation of two of the current traffic lanes to exclusive transit operations.

2.1 Existing Conditions

This section discusses the existing conditions within the study area as they relate to the assessment of the alternative design methods considered for the Rathburn Road Transit Priority Measures project.

2.1.1 Transit Operations

[Note: This section was previously included as Section 2.3.3]

Transit services in the study area will be comprised of a mix of service types, including local and inter-regional all-stops and express routes. The Mississauga BRT Preliminary Design study included a transit operational analysis that identified the future transit demand and service requirements to meet that forecast demand.

2.1.1.1 Current Bus Operations

[Note: This section was previously included as Section 2.2.3.1]

The existing bus services are illustrated in **Figure 2-6**.

Mississauga Transit operates 23 bus routes within the Rathburn Road corridor between Duke of York Boulevard and 50m east of Hurontario Street. There are two routes that primarily service Rathburn Road (Routes 9 & 20), with 11 additional routes that service the surrounding area but stop at the Square One Bus Terminal, running along Rathburn Road in order to do so.

GO Transit operates 6 bus routes within the Rathburn Road Corridor stopping on Station Gate Road. The Milton GO Bus (Route 21) and Waterloo GO Bus (Route 25) both run on weekdays, weekends and holidays. The University of Guelph Bus (Route 29) and Highway 407 West GO Bus (Route 46) both run on weekdays, Sundays, and holidays. The Pearson Airport GO Bus (Route 40) runs

daily, 7 days a week and the Oakville/Highway 403 GO Bus (Route 19) runs only on weekdays.

2.1.1.2 Future BRT Services

[Note: This section was previously included as Section 2.2.3.2]

The future BRT services are a key factor driving the need to provide transit priority in the City Centre. As a result of the impending implementation of the Mississauga BRT, the transit presence in the corridor will increase significantly. The following is a summary of the future services that will be operating in the study area.

A schematic representation of the service concept that has been developed for Opening Day of the Mississauga BRT Facility (Spring 2013) is shown in **Figure 2-7**. The main focus of the effort in developing the network has been to design a service concept for Mississauga Transit that would make the most effective use of the new facility in attracting commuters to transit. The following is a brief overview of the key future BRT services in the City Centre area.

BRT Core Service

A core BRT route (Route 100) operating from Winston Churchill Station to Kipling Station was assumed. This would take 34 minutes to travel from Winston Churchill Station to Kipling Station, assuming a good transit connection between Renforth and Kipling Stations.

Express Services

The two pre-BRT bi-directional peak express services would operate from Meadowvale to Kipling Station (Route 109) and from Clarkson to Malton, via UTM, City Centre Terminal and Renforth Station (Route 110). In addition, three new express services would be provided:

- Unidirectional service operating from the Meadowvale area west of Winston Churchill to Kipling, via Winston Churchill, accessing the busway at Winston Churchill;
- Unidirectional service to Kipling operating from Meadowvale, along Britannia Road West, Creditview Road, Rathburn Road West, and accessing the busway at City Centre; and,
- Bi-directional express service operating between Shoppers World and Kipling via Hurontario Street and accessing the busway at City Centre.

Employment Services

Two employment routes offering direct service from and to Kipling Station in the AM and PM peak periods, respectively, are proposed:

- Unidirectional route operating in the AM peak period from Kipling to Dixie Road via the busway and then travelling north to Drew Road.

- Unidirectional route operating from Kipling to the Meadowvale Financial Drive area via the busway to City Centre, Mavis Road and Highway 401.

Hurontario Street Enhanced Services

Service enhancements were assumed in the Hurontario Street Corridor. Significant improvements in frequency and operating speed were also assumed for the Hurontario Street express service from Port Credit GO Station to Shoppers' World. Again, some level of bus priority measures was implicit in the operating speed assumption (approximately 30 km/h). The route was also adjusted to serve City Centre Transit Terminal.

Services Operating on Arterials

A variant of the Clarkson GO Station to City Centre Transit Terminal via Cawthra Road (Route 8) was assumed to operate between Port Credit and City Centre Transit Terminal in order to improve frequency along the well travelled Cawthra Road section of the route.

GO Transit Services

GO Transit has ambitious plans for the BRT in the long term but, for Opening Day it was confirmed that the BRT would be used for their Guelph and Hamilton (407) to York University services, with a route to Union Station, as well as their Oakville, Mississauga, Yorkville and Finch services (Route 19). The Guelph and Hamilton services would travel the full length of the BRT, while the later would travel between Winston Churchill Station and City Centre. Although in reality, the Guelph and Hamilton services would have some trips terminating at Kipling Subway Station this was not included in the model as the details of this service were not known. A general increase of 25% in service frequency was assumed for GO Bus services on opening day.

GO Transit will serve Winston Churchill, Erin Mills, City Centre, Dixie and Renforth Stations. GO Buses are equipped with lifts to provide accessibility to the service for people using wheelchairs and scooters. Boarding a disabled customer takes about ten minutes. It is therefore critical that designated areas be provided for GO Buses at the stations they will serve.

2.1.2 Traffic Operations

2.1.2.1 Existing Road Network

[Note: This section was previously included as Section 3.5.1]

Rathburn Road, located within the City Centre District of Mississauga, is classified as a major collector according to the Official Plan of the City of Mississauga (2002). The major and minor collector north-south roadways from Duke of York Boulevard to east of Hurontario Street are listed in **Table 2-1**.

Table 2-1: North-South Major and Minor Collectors (Duke of York Boulevard to east of Hurontario Street)

Major and Minor Collectors	Through Lanes on Rathburn Road	Through Lanes on Cross Street
Duke of York Boulevard	2E 2W	2N 2S
Stationgate Road	2E 2W	1N -
Entrance to Square One	2E 2W	2S
Centre View Drive/City Centre Drive	$3E_{(1)}$ $3W_{(2)}$	2N 2S

(1) East of Centre View Drive/City Centre Drive
(2) Becomes two lanes west of Centre View Drive/City Centre Drive

2.1.2.2 Traffic Capacity Constraints

[Note: This Section was previously included as Section 2.2.1]

The existing Rathburn Road cross-section provides two general traffic lanes in each direction, with a shared two-way left-turn lane in the centre. The current 40m roadway right-of-way is generally comprised of 18m (curb-to-curb) roadway width, sidewalks and boulevards. The northern boulevard is occupied by street lighting, fire-hydrants, and street foliage on the surface, and considerable subsurface utilities including Bell Telephone, Enbridge Gas, Rogers Cable, Peel Watermain, and Enersource Hydro Mississauga.

All of these features constrain the range of design alternatives for the project. Recognizing that the relocation of these utilities would be costly, disruptive, and unachievable within the funding schedule for the project, the ability to widen the roadway to the north is limited to localized areas on intersection approaches for auxiliary lanes.

The ability to widen the road to the south is also constrained. The existing City Centre Transit Terminal forms the most notable constraint, as any widening to the south would further impact the terminal physically and result in a situation that does not meet the geometric requirements of transit access operations.

In addition, the City of Mississauga has taken the position that, under their "Downtown 21" plan, the City is going to provide a more pedestrian-friendly environment in the City Centre. This includes enhanced pedestrian and cyclists facilities. In order to provide an environment that encourages more pedestrian activity, Rathburn Road is to remain (as much as possible) within the existing roadway width under this Transit Project.

Recognizing these goals and constraints, the preferred design was determined to be to convert two of the existing general traffic lanes into Reserved Bus Lanes (RBLs), thereby removing transit vehicles from the effects of general traffic congestion, and providing the enhanced transit operations required to meet the objectives of the project.

2.1.2.3 Traffic Analysis

[Note: This section was previously included in Section 3.5.2]

Traffic volumes for the base case were based on available 2006 turning movement counts (before opening of Confederation Parkway north of Rathburn Road), and supplemented with 2008 turning movement counts. The intersections were then balanced to the adjacent 2006 count locations.

The road network (as of 2006) was coded into a VISSIM model (German "Traffic in Cities" Simulation Model), therefore excluding the Confederation Parkway overpass north of Rathburn Road. 2008 transit operations in the City Centre were also coded into a VISSIM model. Signalized intersections were assessed using the existing signal timings, as provided by the City of Mississauga.

2.1.2.4 Existing (2008) Scenario

[Note: This section was previously included as Section 3.5.2.1]

In this scenario, the traffic volumes were based on 2008 turning movement counts for the AM peak hour and were supplemented (where 2008 counts were not available) with 2006 turning movement counts. The counts were balanced according to adjacent 2008 turning movements.

The existing (2008) road network was coded into the VISSIM model, and included the recently-opened Confederation Parkway link over Highway 403 north of Rathburn Road. The 2008 transit operations in the City Centre were also coded into the VISSIM model.

The VISSIM analysis suggests that all intersections on Rathburn Road in the study are anticipated to operate at a good Level-of-Service (LOS 'A' to LOS 'D') in 2008 with the exception of the intersection with City Centre Drive, which is anticipated to operate with a LOS 'D/E'. The simulated LOS are consistent with intersection operations observed in October, 2008. At that time, it was noted that intersections along Rathburn Road appeared to operate well in the AM peak hour with little delay and minimal queuing.

The opening of the Confederation Parkway link north of Rathburn Road appears to have resulted in a decrease in traffic volumes on Mavis Road. Consequently, the intersection at Mavis Road and Rathburn Road appears to have improved from LOS 'D' in year 2006 to LOS 'C' in year 2008. The increased demand at the intersection of Confederation Parkway with Rathburn Road, however, has resulted in a decrease in LOS, with LOS 'C' in year 2008 from LOS 'A' in year 2006.

2.1.3 Access to Adjacent Development

The land uses adjacent to Rathburn Road within the study area are commercial, and include shopping centres, entertainment and dining establishments. There are three accesses from Rathburn Road to adjacent developments within the study area, as follows:

- Playdium – unsignalized access

- Station Gate Road (serving Chapters/Playdium)– signalized intersection
- Hammerson Drive/Square One Shopping Centre – signalized

2.2 Alternative Design Methods Considered

This section discusses the alternatives considered to implement transit priority measures on Rathburn Road between the City Centre Transit Terminal and the BRT East connection to Rathburn Road east of Hurontario Street. The alternatives considered were:

- Do Nothing;
- Alternative 1 - Curb Reserved Bus Lanes (RBLs) on Rathburn Road; and
- Alternative 2 - Median RBLs on Rathburn Road.

The alternatives are discussed below.

2.2.1 Do Nothing

The "Do Nothing" alternative would not introduce any transit priority measures on Rathburn Road – rather maintain the existing roadway configuration. Given that the nature of the study is to improve the existing conditions for transit operations in the City Centre, the "Do Nothing" alternative does not address the problem/opportunity as identified in **Section 1.1**, but it provides a basis for measuring the effectiveness of the other alternatives. In addition, recognizing that bus activity in the City Centre will increase (due to the implementation of the Mississauga BRT), the "Do Nothing" alternative would still require an expansion of the transit passenger loading/unloading capacity at the City Centre Transit Terminal to accommodate the additional transit services associated with the Mississauga Bus Rapid Transit Project.

The "Do Nothing" alternative is illustrated in **Figure 2-2**.

2.2.2 Alternative 1 - Curb Reserved Bus Lanes

This alternative design concept would convert the existing curb lanes into exclusive Reserved Bus Lanes (RBLs), with new curbside bus stops on Rathburn Road to accommodate the increase in transit services resulting from the implementation of the Mississauga BRT. The conversion of these lanes to RBLs would simply be an operational change and accomplished through alternation of signage and pavement markings. The RBLs would be limited to use by buses and vehicles immediately accessing adjacent businesses. Right turns by general traffic would be allowed at intersections and accesses to private properties. This would provide an improvement over current transit operations by reducing the number of vehicles using the lane. However, the effectiveness of this alternative is dependant on the compliance of automobile users. Cyclist safety would be slightly improved due to the fewer number of vehicles driving in the curb lane, however, conflicts with right-turning traffic would remain.

This concept is illustrated in **Figure 2-3**.

2.2.3 Alternative 2 - Median Reserved Bus Lanes

This alternative design would implement a median bus facility comprised of two centre Reserved Bus Lanes separated from the general traffic by line painting only. At the Station Gate Road and City Centre Drive intersections, the intersection would be flared-out to accommodate far-side median bus-stop platforms. Pedestrians would access the median platforms at signalized intersections only, thereby providing controlled access points for transit users and maximizing safety for pedestrians.

This median facility would not affect access for right-turning operations. Unsignalized mid-block left-turning movements would be restricted due to safety concerns, however, the impact of this is considered minimal as there is only a single unsignalized access on Rathburn Road within the study area. Bus traffic would be largely segregated from the general traffic throughout the corridor, thereby minimizing the impacts of general traffic congestion on transit operations.

This concept is illustrated in **Figure 2-4**.

2.2.4 Criteria for Selection of the Preferred Design Method

Functional plans of the alternative design methods were prepared in sufficient detail to allow a definitive comparison of the options under the selected impact assessment criteria. The determination of the relative impacts of the alternatives took into consideration experience with similar facilities elsewhere, knowledge of current and forecast transit and traffic operations, the level of accessibility provided to adjacent developments, and construction costs.

The following is a summary of the key impact assessment criteria applied. The criteria reflect operational and cost considerations as the containment of the alternatives essentially within the current road allowance will generate minimal changes in the present natural environment conditions.

Transit Operations:

This factor includes consideration of the advantages/disadvantages of the options relative to:

- the reduction of delay for transit vehicles accessing the City Centre Transit Terminal and the movement of BRT and GO Transit vehicles through the Rathburn corridor;
- the enhancement of the reliability of the transit schedules through the reduction in the conflicts between transit vehicles and general traffic;
- the relief provided to current and forecast congestion at the City Centre Transit Terminal; and
- the capacity of the facility to accommodate the forecast growth in transit vehicle volumes.

Traffic Operations:

This factor examines the impact on the level of service for general traffic along the Rathburn Road corridor in terms of expected delay both for current and future traffic volumes. A micro simulation analysis was undertaken to quantify the traffic level of service implications.

Access to Adjacent Development:

The City Centre development is comprised of a mix of major residential, commercial and institutional development. Maintaining an acceptable level of access in terms of directness of routing and travel time to the present and planned along the Rathburn Road corridor is a key consideration.

Construction Cost:

The capital costs of the alternatives were prepared applying current unit costs and construction quantity estimates. Allowances for engineering and construction contingencies were derived from accepted industry practices.

The comparison of the alternatives is summarized in **Section 2.2.5.**

2.2.5 Selection of the Preferred Design Method

2.2.5.1 Transit Operations

In the consideration of the benefits to existing and current traffic operations, the analysis focused on the improvements offered by the options relative to service reliability, relief to the present congestion in the City Centre Transit Terminal and the capacity of the facility to meet future demand. The reduction in travel time for transit vehicles will be improved under either “build” option but the absolute decrease in operating speeds is not projected to materially affect operating costs.

The key to service reliability is the degree of separation provided between transit and general traffic flows. In this case, a Median Reserved Bus Lane (RBL) facility is preferred. This has been demonstrated in Vancouver and Toronto. The Curb RBL scheme is subject to interference with turning vehicles and pedestrian movements particularly at the signalized intersections. Operation in mixed traffic (the “Do Nothing” alternative) is clearly the least desirable option under this factor.

Under the Median Alternative, a significant amount of service can be reassigned to the Median station located adjacent to the City Centre Transit Terminal while the Curb RBL plan offers minimal relief in the form of new platforms. Past operating experience indicates the capacity of the Median RBL plan is approximately 50% greater than the Curb RBL option. Accordingly the Median option provides significantly greater flexibility to accommodate the forecast growth in transit vehicle volumes and is therefore preferred over the alternatives.

2.2.5.2 Traffic Operations

The results of the traffic simulation analysis indicates that there is a marginal difference in the level of service provided to general traffic under either “build” option. Both concepts provide a single lane for general traffic in each direction

with similar traffic signal phasing at the intersections. The traffic analysis for the "build" alternatives assumed diversion of general traffic to adjacent parallel roads due to the reduction in capacity on Rathburn Road. The degree of change in the traffic conditions under the "build" options in comparison with the Do Nothing Alternative will be significant without the diversion of up to 50% of present traffic volumes to the parallel and adjacent street network.

The *screenline analysis* * comparing the adjusted roadway capacity provided under the "build" options with the current and forecast traffic volumes indicated that this level of traffic diversion is realistic and can be accommodated. The screenline selected for the analysis, located between City Centre Drive and Station Gate Road, included Centre View Drive, Rathburn Road and Square One Drive. Accordingly, a reasonable level of accessibility can be maintained to current and planned development within the Rathburn Road corridor.

The "Do Nothing" alternative results in the least impact to general traffic operations, and is therefore preferred from that perspective. Both of the build alternatives, however, provide a level-of-service under the assumed traffic diversion scheme that is acceptable.

2.2.5.3 Access to Adjacent Development

As discussed in **Sections 2.1.1** to **2.1.3,** the alternatives have varying impacts on the ability for general traffic to access adjacent developments. Under the "Do Nothing" alternative, there would be no impacts to existing accesses to adjacent developments.

The "Curb RBL" alternative would not introduce any physical restrictions on access to property. However, the prohibition of general traffic from using the curb lane except for immediate right-turning movements focuses all general traffic lane-shift activity to immediately upstream of the access. When combined with the high volume of transit vehicles operating in the curb lane, this condition will introduce operational conflicts between transit vehicles and general traffic attempting to turn right into adjacent developments.

The "Median RBL" alternative would not affect right-turning access or access to adjacent development at signalized intersections. There is a single movement – the eastbound left-turn into the Playdium access – that would be eliminated under the Median RBL alternative. All other access movements throughout the study area would be maintained.

In absolute terms, while the "Do Nothing" is preferred when considering the impacts to existing accesses, the impacts associated with the build alternatives (either physically or operationally) are considered acceptable.

* A "screenline" analysis is a traffic model/simulation technique that compares a the road network performance across a pre-determined imaginary line (screenline) spanning a major road, municipal boundary, a man-made boundary (such a railway) or a natural boundary (such as a river). Screenlines typically cross multiple roads that work in parallel to form a corridor, and are used to assess the volume/capacity of a corridor as changes are made to those links.

2.2.5.4 Preliminary Construction Cost

The construction costs for each of the options are summarized below:

- Do Nothing: $0.0
- Median RBL: $4.4M
- Curb RBL: $3.0M

In comparing the capital cost implications, the City took into consideration the larger context of the expenditure in relation to the planned $300.0M expenditure on the exclusive BRT facility currently under construction. Introducing transit priority measures within the City Centre would have a marginal effect on the total program expenditures while enhancing the overall performance of the system.

Recognizing that, the premium for investment of $4.4 M required for the Median RBL alternative, while greater than the alternatives, was considered acceptable given the improvement in transit operations over the alternatives.

2.2.5.5 Summary of Comparative Analysis of Alternatives

The alternatives were assessed based on anticipated impacts and the abilities of one alternative to perform better than others under a given assessment factor.

The objective of the study (as discussed in **Section 1.3**) was to improve the schedule reliability and speed of operation of transit services on Rathburn Road between the City Centre Transit Terminal and the BRT East connection east of Hurontario Street. As such, the potential improvements to transit operations were weighted heavier than the other assessment factors.

The consolidation of the comparative analysis is summarized in the tabulation below.

Table 2-2: Summary of the Comparative Analysis of Alternatives

	Alternative		
Factor	**Do Nothing**	**Median RBL**	**Curb RBL**
Transit Operations	Poor	Preferred	Acceptable
Traffic Operations	Preferred	Acceptable	Acceptable
Access to Property	Preferred	Acceptable	Acceptable
Cost	$0.0	$4.4 M	$3.0M

On the basis of the impact assessment, the City selected the Median Reserved Bus Lane alternative as the preferred alternative to take forward for approval under the Transit Project Assessment Process.

2.3 Description of the Preferred Design Method

The following sections discuss the preferred design method from both a physical and operational perspective.

2.3.1 General Description

The preferred design method was based on Median Reserved Bus Lanes (RBLs) rather than Curb RBLs. This would remove the BRT vehicles from the general traffic stream and provide a direct connection between the City Centre Transit Terminal and the BRT facility east of Hurontario Street. The median RBLs would only be separated from the adjacent traffic lanes only by painted lines (i.e. not physically separated) in order to maintain operational flexibility in the event of a disabled vehicle or the need for a transit vehicle to transition into the general traffic lanes. Eastbound GO Transit buses would operate in the median RBLs. However, westbound GO Transit services are oriented towards the GO Transit stops on Station Gate Road, and therefore would operate in the curb lane between the BRT connection and Station Gate Road.

To facilitate westbound GO Transit access to Station Gate Road, a transit queue-jump lane/right-turn lane would be implemented on the eastern approach to Station Gate Road.

The existing City Centre Transit Terminal incorporates bus bays on Rathburn Road. These curbside bus bays would be maintained and supplementary capacity could be provided by implementing additional curbside bus bays east of the City Centre Transit Terminal on Rathburn Road. The City Centre Terminal itself would not be modified. Two bus platforms would be provided adjacent to the median RBLs on the eastern approach to the Rathburn Road/Station Gate Road intersection, each accommodating two buses. However, due to the limited right-of-way at the station there exists little opportunity to implement provisions for express buses to pass stopping buses at the station. Pedestrians would access these median platforms at the adjacent signalized intersection.

2.3.2 Traffic Operations

The following sections discuss the proposed operational characteristics of the proposed Transit Project. These form the basis for the operational impact assessment discussed in **Section 3.5.**

2.3.2.1 Signalized Intersections

During the traffic operational analysis conducted for morning and afternoon peak hours, signal timings at the Rathburn Road with City Centre Drive intersection and Rathburn Road with Hammerson Drive intersection were analyzed using the following criteria:

- Westbound left turns operate with Protected + Permitted phasing
- BRT lanes operate on a dedicated signal phase

To address additional technical issues with respect to the traffic signal operations for the intersections noted above, a sensitivity analysis was undertaken. The analysis utilized the Synchro software to compute average delays for the Background traffic (Scenario 5.1) at the Rathburn Road and City Centre/Centre View Drive intersection for the afternoon peak hour considering the two signal timing options described below:

- **Option 1**: Bus movements occur on a dedicated transit-only traffic signal phase. This is considered the "base case", and was applied in the detailed traffic simulation discussed in **Section 3.5**.
- **Option 2**: Bus movements occur simultaneously with the general traffic through movements. General traffic left-turn movements are restricted to a protected phase.

The signal phasing options are illustrated in **Figure 2-5**. The average delays for the two options are presented below:

Table 2-3: Comparison of Signal Phasing Alternatives

Options	Calculated Average Intersection Delay
Option 1	54.3 Seconds
Option 2	45.1 Seconds

The Synchro signal timing plans and Synchro Results for average delay for Option 1 and Option 2 are presented in **Appendix C**.

The above results show that the signal timing plan without a dedicated phase for BRT (Option 2) reduced the average delay. Therefore the Background and Total (future) traffic operational analysis with the BRT network may experience a reduction in estimated delay if the signal timings used in Option 2 are considered. This signal timing option would be used for the Rathburn Road/ City Centre/Centre View Drive intersection and for the Rathburn Road/ Hammerson Drive intersection.

2.3.2.2 Access to Adjacent Development

Under the preferred design alternative, access to all developments fronting onto Rathburn Road will be maintained. However, in order to provide a safe and efficient median Reserved Bus Lane operation, some turning movements will be restricted. The following discussion summarizes the operation of the accesses on Rathburn Road between Duke of York Boulevard and Centre View Drive under the preferred design method.

Playdium

Under the preferred design method, the existing Playdium access, currently all moves, would be converted to a right-in/right-out operation to eliminate the potential for conflicts between traffic accessing the Playdium from the west and transit services operating in the median Reserved Bus Lanes.

Square One Shopping Centre

Access to the Square One Shopping Centre from Rathburn Road (via Hammerson Drive) will be maintained as an all-moves signalized intersection. It

should be noted that the Hammerson Drive intersection is to be shifted approximately 10m to the west in order to accommodate planned redevelopment along the south side of Rathburn Road between Hammerson Drive and City Centre Drive.

Station Gate Road

Station Gate Road is to remain open to general traffic. However, due to limited right-of-way and intersection operational requirements, turning movements for general traffic to and from Rathburn Road will be limited to right-in/right-out only. This will maintain the ease of access to the Chapters/Sport Chek development for westbound traffic on Rathburn. Traffic destined to the development from the west will be required to access via Duke of York Boulevard.

2.3.2.3 Hurontario Ramp Configuration

The operation of the existing Rathburn Road / Centre View Drive intersection is complicated and results in a poor level-of-service in peak periods. This intersection has become an increasing concern for the City of Mississauga as traffic volumes destined to the City Centre grow, currently feeding in to the Rathburn Road / Centre View Drive intersection. This traffic requires a separate signal phase to move safely through the intersection, drawing green-time away from traffic on Rathburn Road and Centre View Drive. The introduction of the transit priority measures envisioned under the preferred design will further exacerbate the situation as additional signal phases would be required to accommodate protected traffic movements.

The Rathburn Road Transit Priority Measures project offers an opportunity to address existing concerns, improve the safety and level-of-service at the intersection by realigning the southbound Hurontario Street ramp to Rathburn Road. This would result in the benefit of improved operation of the Rathburn Road / City Centre Drive intersection, and facilitate the reduction of traffic volume on Rathburn Road within the study area in support of the proposed general traffic capacity reduction.

By removing the ramp connection from Hurontario Street to Rathburn Road and connects the ramp to Centre View Drive, traffic destined for the City Centre area, would have two options either to use of the reconfigured ramp or to use the new Square One Drive connection to Hurontario Street further south.

Relocation of this ramp also simplifies the operation of the Centre View Drive / Rathburn Road intersection, which currently provides separate signal phases for ramp traffic and traffic on Rathburn Road. The additional green-time gained by removing the ramp traffic can be reallocated to optimize the phasing for the reconfigured intersection, reflecting the needs of transit and general traffic.

In response to direction from Mississauga Transit, under the preferred design, a single-lane, bus-only connection from the realigned ramp to Rathburn Road is provided. This offers buses destined to the City Centre Transit Terminal from southbound Hurontario Street the opportunity to feed directly into Rathburn Road, thereby allowing them a more direct route to the Transit Temrinal and

potential to serve future transit stops on Rathburn Road. The anticipated bus volumes using the ramp are relatively minor, and the intersection signal phasing would accommodate the bus movement without any significant impact to the level-of-service.

2.3.3 Estimated Project Cost

As discussed in **Section 1**, funding for the project is being provided by the Infrastructure Stimulus Fund. Funding was based on a cost estimate for the project at a conceptual design level and totalled of $4.3M. The cost estimate included roadworks works between just west of Station Gate Road to just east of Hurontario Street, with a new median island station at Station Gate Road and protection for a future median island station at Centre View Drive.

The value of the construction totals $4,833,000 (including contingencies and engineering allowance). The planned duration of construction is 12 months commencing in June 2010 with planned operations to begin April 2011. The cost estimate at the completion of the Preliminary Design Study is presented in the following table.

Throughout the Preliminary Design Study, a number of changes were introduced / identified as a result of consulting with stakeholders, that affected the overall project cost, including:

- The introduction of concrete pavement for station areas where buses would be stopping regularly to load/unload passengers;
- The introduction of a bus-only slip-through to Rathburn Road from the Hurontario Street – Rathburn Road ramp per the direction of Mississauga Transit;
- Shift of the westbound median island station to the west side of Station Gate Road and associated roadworks / intersection modifications at the Rathburn Road / Duke of York Boulevard intersection to eliminate property impacts;
- Station Costs: The cost allowance for stations at the conceptual design stage of the project was based on the recently completed “Brampton AcceleRide” station design, which was $130,000/shelter. These stations reflected the general scope and range of amenities to be incorporated into the Rathburn Road project. This is the cost applied in the funding allocation for the project. Following the preliminary design study, the cost estimate for the proposed design for the Mississauga shelters / stations was determined to be significantly higher (in the order of $360,000/shelter) due to the 55m canopy design and associated engineered concrete pad, materials, and one-off fabrication costs.

Opportunities to reduce the overall cost to meet the funding allocation were investigated. Given that the roadworks have been constrained to fit within the available roadway width, there appears to be little opportunity to save costs on the roadworks. Rather, the investigation focused on the potential to reduce station costs. Reduction of the overall canopy from 55m (i.e. along the complete

platform) to 30m would result in an estimated savings of $91,000 (including contingencies).

Table 2-4: Cost Estimate

Item	Includes	Cost
10 - Right of Way		$0
20 - Roadworks	Removals, pavement structure, curb and gutter	$1,417,000
20b - Concrete Busbay West of Mall Entrance	Removals, pavement structure, curb and gutter	$74,000
20c - Left Bus Slip thru at City Centre	Removals, pavement structure, curb and gutter	$146,000
30 - Stations (Architecture)	Shelter structure, glazing, lighting, heating, CCTV, amenites, installation, fabrication, engineered concrete pad	$717,000
50 - Municipal Services	Removal and reinstatement of catch basins, lighting, new oil-grit separator	$472,000
60 - Signals	Temporary and new signals at Station Gate Road and City Centre Drive, signal modifications at Duke of York Boulevard	$600,000
SUB-TOTAL		**$3,426,000**
Miscellaneous Items (10%)	Allowance for unspecified items, landscaping, utility protection, etc.	$343,000
SUB-TOTAL		**$3,769,000**
Project Management (0%)	Internal by City	
Engineering	Preliminary design and approvals	$310,000
Project Contingency (20%)		$754,000
TOTAL		**$4,833,000**
60a - Signal Modifications at Mall Entrance		*$250,000**

* signal modification by others

3. ASSESSMENT OF IMPACTS ON LOCAL ENVIRONMENTAL CONDITIONS

This section reviews the existing conditions within the Study Area. Existing conditions are highlighted with respect to the following areas:

- Natural Environment
- Socio-Economic Environment
- Cultural Environment

Detailed information for these factors is provided in the specialist and technical reports provided in the corresponding Appendices noted above.

3.1 Summary of Studies Undertaken in Relation to the Transit Project

The following is a summary of the studies undertaken in relation to the transit project and their conclusions/recommendations: The studies related to the Rathburn Road Transit Priority Measures project span a number of projects undertaken as part of the City of Mississauga's overall Bus Rapid Transit initiative.

As discussed in **Section 1.1**, the Transit Project proposed under the Rathburn Road Transit Priority Measures study is intended to compliment and support the Mississauga Bus Rapid Transit (BRT) project. The study area for the Mississauga BRT Project and the Rathburn Road Transit Priority Measures project overlap, and therefore many of the studies undertaken as part of the *Canadian Environmental Assessment Act (CEAA) Screening Report for the Mississauga BRT Project (2009)* are directly applicable to the Rathburn Road project.

These studies included:

CEAA Screening Report for the Mississauga BRT (2009)

- Natural Environment Inventory (*CEAA Screening Report*, **Section 4.0**)
- *Air Quality Assessment for Mississauga BRT*, 2008, RWDI Consulting Engineers
- *Contaminant Overview Study: Mississauga BRT Project*, Ecoplans Limited, 2008

A copy of the relevant excerpts from the *CEAA Screening Report* are included in **Appendix G** of this report, and the full report is available for review through the City of Mississauga's website at the following:

http://www.mississauga.ca/portal/residents/brt

Where existing conditions/impact assessment information was not previously available from other sources, or for issues specific to the Rathburn Road Transit Priority Measures Project, additional studies were undertaken to establish existing conditions in the study area and assess the potential for impacts

LOS 'D', and the intersection of Mavis Road and Rathburn Road is anticipated to operate at LOS 'D' with the addition of left turn lane at the eastbound approach and network-wide optimization of signal timing plans for the peak period. It is recommended that this minor improvement to this intersection is warranted taking into consideration the planned projects in the near vicinity.

The traffic analysis as undertaken provides a reasonable level of comfort that, given the expected level of traffic diversion associated with the roadworks and turning movement restrictions, the proposed median BRT facility between Duke of York Boulevard and Shipp Drive will not unduly impact the traffic flow and service along Rathburn Road.

3.6 Potential Construction-Related Impacts

This section discusses the potential for impacts associated with construction activities. These impacts would be temporary, occurring only during the duration of the construction period for the project.

3.6.1 Dust Control

Construction activities may result in the creation of dust. The City will mitigate dust impacts by ensuring that proper watering and/or other dust suppressant techniques, as identified in Ontario Provincial Standard Specification (OPSS) 506, are used during the construction phase. OPSS 506 outlines the requirements for dust suppressants and their application including application. Following construction, any open, unpaved areas will be seeded.

3.6.2 Construction Noise

Worst-case construction noise levels have the potential to be very loud during some short periods of time. However, noise effects from construction are relatively short compared to operational noise effects, and therefore, they are usually better tolerated by the community at large. As previously noted in **Section 3.3.1**, there are no Noise Sensitive Areas within the study area.

Heavy construction (e.g. grading, excavation, paving, etc.) is anticipated to be limited to one construction season (typically April to November). Minor follow-up work (e.g. landscaping, electrical, station fitout, etc.) could occur in a second season. Construction work for the project as a whole will be spread out over the 2010-2011 period.

With the application of the following noise mitigation, it is not anticipated that there will be significant adverse noise effects during construction:

- Limiting general construction to the time periods outlined in the City of Mississauga's Noise Control By-law which limits the times during which construction equipment can be operated. If construction activities are required outside of these hours, exemptions will be sought in advance by the Contractor, directly from the City of Mississauga. Exemption will only be sought for works that will not produce substantial noise; and
- Implementing the noise control procedures during construction.

To minimize the potential for construction noise effects, the following provisions will be written into the contract documentation for the contractor.

- General construction will be limited to the time periods outlined in the City of Mississauga's Noise Control By-law which limits the times during which construction equipment can be operated. If construction activities are required outside of these hours, exemptions will be sought in advance by the Contractor, directly from the City of Mississauga. Exemption will only be sought for works that will not produce substantial noise.
- There will be explicit indication that contractors are expected to comply with all applicable requirements of the contract and local noise by-laws. Enforcement of noise control by-laws will be the responsibility of the City of Mississauga for all work done by contractors.
- All equipment will be properly maintained to limit noise emissions in compliance with MOE NPC-115 guidelines. As such, all construction equipment will be operated with effective muffling devices that are in good working order.
- The contract documents will contain a provision that any initial noise complaint will trigger verification that the general noise control measures agreed to are in effect.
- In the presence of persistent noise complaints, all construction equipment will be verified to comply with MOE NPC-115 guidelines.
- In the presence of persistent complaints and subject to the results of a field investigation, alternative noise control measured may be required, where reasonably available. In selecting appropriate noise control and mitigation measures, consideration will be given to the technical, administrative and economic feasibility of the various alternatives.
- Construction mitigation alternatives include but are not limited to:
    - Use of alternate, quieter equipment or methods, where available; and
    - The use of portable, localized noise barriers for critical areas.

The potential impacts and mitigation measures will be monitored and coordinated by on-site supervisors during the period of construction.

3.6.3 Traffic Staging

The construction of the median bus platforms and associated roadworks will have a localized disruptive effect on roadway traffic in the study area. These effects will be mitigated through conventional traffic management / detour programs that maintain a level of traffic capacity and safety acceptable to the City of Mississauga. The adjacent or affected traffic signals may be re-timed as appropriate to accommodate the modified traffic patterns during the construction period. The motoring public will be advised of planned activities that may result in traffic disruption in advance (both temporally and physically).

A detailed traffic staging plan will be developed during the detailed design phase of the study, and coordinated with the staging of construction to ensure that access to the City Centre Transit Terminal and GO Transit bus platforms on Station Gate Road is maintained at all times.

3.6.4 Potential for Vibration-Related Impacts

Due to the nature of the project (i.e. no excavation beyond the existing road bed, removal of concrete sidewalks, curbs, etc), no significant vibration-related impacts are anticipated. All construction activities will utilize traditional construction and removals equipment and methods.

4.1.2.2 Community Services – Pedestrian and Cycling Group

The City's Community Services department requested that the project team investigate the potential to accommodate 1.5m bicycle lanes on Rathburn Road (in addition to a single GPL, reduced to 3.75m) throughout the study area. Cross-sections were developed illustrating the potential property impacts of introducing the cycle lanes. The investigation concluded that the introduction of cycle lanes would require an additional 3-4m of pavement width in the Rathburn Road corridor. This would in turn affect street lighting, underground utilities, etc, and the costs were deemed unjustifiable at this stage. Consideration will be given, under a separate study, to introduce an off-street multi-use path in the City Centre.

4.1.2.3 Mississauga Transit

Meetings were held with facility and service planning staff from the Mississauga Transit and GO Transit to discuss each operator's current and potential future transit operations within the Rathburn Road corridor, and their functional requirements. The key meetings are listed in the following Table.

Table 4-2: Meetings with Transit Operators

Date	Purpose of Consultation
October 30th, 2009	Meeting with Mississauga Transit to review alternatives to provide a transit-only connection from the Hurontario Street –Rathburn Road ramp.
November 4, 2009	Meeting with Mississauga Transit to integrate a transit only connection from the Hurontario Street – Rathburn Road ramp.
February 1st, 2010	Meeting with Mississauga Transit, Traffic, Engineering, and Senior Management to review the current Rathburn Road plan, discuss potential for traffic impacts, ramp realignment, and next steps.

The City's Mississauga Transit Division was consulted with on several occasions throughout the Study. The main inquiry from Mississauga Transit was whether or not a transit-only connection from southbound Hurontario Street to westbound Rathburn Road would be provided. The investigation concluded that introduction of a transit-only connection from Hurontario Street to westbound Rathburn Road can be achieved and has been incorporated into the design.

4.1.3 Government Technical Review Team Consultation

The following technical review agencies have been invited to be involved in the Rathburn Road Transit Priority Measures study:

• Canadian Environmental Assessment Agency	• Transport Canada
• Environment Canada	
• Ministry of the Environment	• Ministry of Transportation
• Ministry of Culture	• Ontario Realty Corporation
• Ministry of Natural Resources	• Ministry of Municipal Affairs and Housing
• Ministry of Energy and Infrastructure	• Ministry of Agriculture, Food, and Rural Affairs
• GO Transit and Metrolinx	• Credit Valley Conservation Authority

• Peel Regional Police	• Mississauga Fire and Emergency Services

These agencies received notification of all formal points of contact associated with the study.

As part of the technical agency consultation, technical specialist reports were circulated to key agencies for their review/comment regarding the potential for impacts and recommended mitigation measures. These are discussed below:

- **Ministry of Culture (MCL)** – a copy of the draft Stage 1 Archaeological Report was submitted by New Directions Archaeology Inc. to the MCL in December, 2009, and re-sent in late February/early March 2010 for review.
- **Credit Valley Conservation Authority (CVC)** – a copy of both the Stormwater Management Technical Memorandum and the Impact Assessment Report for Street Foliage were circulated to the CVC for their review on February 10th, 2010.
- **GO Transit** – An introductory memorandum describing the project and a copy of the preliminary design plans for the proposed transit priority measures were circulated to GO Transit on **February 18th, 2010** with a request for comments. No comments were received in response. A copy of the material circulated is included in Appendix D.
- **Ministry of Transportation (MTO)** – An introductory memorandum describing the project and a copy of the preliminary design plans for the proposed transit priority measures were circulated to GO Transit on February 10th, 2010 with a request for comments. No comments were received in response. A copy of the material circulated is included in Appendix D. The Ministry of Transportation responded on February 16th, 2010 with a request for clarification on relating to project scope and operation of the proposed realigned ramp and its potential effects on Hurontario Street. In response, on February 19th, 2010 the City committed to implementing an operating protocol for transit services using the ramp to ensure that queuing transit vehicles do not affect operations on Hurontario Street. A record of the related correspondence is provided in Appendix D.
- **Ministry of the Environment (MOE)** – a draft copy of the Environmental Project Report was circulated to the Ministry of the Environment for preliminary review on February 23rd, 2010.

A copy of the material circulated, responses, and subsequent correspondence is presented in **Appendix D**.

Draft copies of the Environmental Project Report (EPR) were distributed to all members of the Government Review Team with a potential interest in the project in early March, 2010, for their review/comment on the project. A summary of the distribution and is provided in **Appendix D**. All comments received and subsequent responses are provided in the consultation summary table in **Section 4.2**. The following is a list of the agencies / stakeholders that received hard copies of the Draft EPR for review.

Table 4-6: GO Transit Comments and Responses

Date	Comment (summarized)	Response
March 19th, 2010	Under the signalized scenario – the conceptual design should include and the analysis should factor for upstream transit vehicle detection for the east-to-north left-turn as well as the south-to-west right-turn and the signal timing should be done in a manner that maximizes the opportunity for transit vehicles to turn thereby minimizing delay.	Signals will be optimized based on overall traffic at the intersection. The performance of this intersection with respect to transit delay cannot be isolated from the overall signal performance of the intersections west along Rathburn Road.
	Given the use of farside stops at this intersection, consideration should be given to the use of lag-lefts for Rathburn Road in conjunction with green extensions.	In the comments provided by GO Transit 19 March 2010, GO requested the City consider a number of modifications to the signal phasing and timing to provide further priority for transit vehicles. The City will consider the various suggestions during the detailed design of the signal system.
	If forced into the shoulder lane for the entire trip on Rathburn, eastbound GO Buses may be unduly delayed by traffic congestion. It may be desirable to have these buses merge from the median right-of-way into the mixed traffic lanes east of this intersection to access the ramps at Hurontario Street.	The barrier-free design allows for transit vehicles to transition from the curb to median lanes.
	To avoid congestion on Rathburn Road west of City Centre Drive, Group 2 GO buses arriving at this intersection from Hurontario Street via the bus-only ramp should have access to the median right-of-way. This would require a protected bus-only phase for this movement. It was unclear if this option will be available or how it would be implemented to minimize bus delays. It should be noted that having all buses in the right-of-way west of City Centre Drive, as opposed to split between the right-of-way and the curb lane, eliminates inherent competition for right-turn green time at Station Gate Road. At the intersection of Rathburn Rd/Station Gate Rd: Under the proposed plan, GO Buses could be in the median right-of-way at this intersection. They would thus have to turn from the median right-of-way to Station Gate Road. The final roadway geometry should ensure this right-turn can be made by GO Buses and that the signal phasing allows this movement in a protected phase.	GO Transit Operations staff advised early in the planning stage of the project that GO Transit intends to operate westbound transit services in the curb lane on Rathburn Road between the BRT East connection and Station Gate Road. This was the rationale for the additional right-turn lane on the eastern approach to Station Gate Road. The City will, however, consider the opportunity to protect for westbound GO Transit services to operate in the median lane in the detailed design phase of the project.
	The intersection analysis should consider the magnitude and variability of delay to transit vehicles for routes – both GO Bus routes that would need to wait for a protected right-turn phase onto Station Gate Road, and	In the comments provided by GO Transit 19 March 2010, GO requested the City consider a number of modifications to the signal phasing and timing to

Date	Comment (summarized)	Response
	Mississauga Transit vehicles that might be delayed behind a waiting GO Bus.	provide further priority for transit vehicles. The City will consider the various suggestions during the detailed design of the signal system.
	If GO Buses operate in the median right-of-way on Rathburn Road, it may be more beneficial to move the rightturn lane for westbound traffic at Station Gate Road from the general purpose lanes to the bus-only right-of-way to decrease delays at the intersection. This would leave a through-right westbound general purpose lane at the intersection.	The limited right-of-way available, presence of utilities in the northern boulevard, and requirement to maintain acceptable intersection geometrics preclude the ability to implement this suggestion.
	There is potential for bus driver confusion and collision under the proposed operating concept. The west-to-north right turn from the curb lane will need to be posted “No Right on Red” due to the potential conflict with buses making the right-turn from the median right-of-way.	Westbound buses in the median will not be turning right at Station Gate Road under the recommended plan.
	The detailed analysis should include the proposed operating plan for this intersection. In particular, given that there will be farside stops and no by-pass lane in the right-of-way, it will be imperative to ensure a short signal cycle length. This will allow more opportunity to reduce the delays from south to westbound buses that have to miss a phase due to local transit passenger service time and the on-line platform.	In the comments provided by GO Transit 19 March 2010, GO requested the City consider a number of modifications to the signal phasing and timing to provide further priority for transit vehicles. The City will consider the various suggestions during the detailed design of the signal system.
	It is not specified what pavement markings, curbings or other measures might be used on all sections of transit only roadway in order to mitigate violation by the traveling public. If the intention is that there will be no physical barrier (such as curbs etc.) between the transit lanes and the general purpose lanes, consideration should be given to implementing coloured transit lanes.	The preliminary design proposes no physical barriers between the median reserved bus lanes and the adjacent general traffic lanes. Introduction of barriers would preclude the ability to bypass disabled vehicles in the general traffic lanes. Mississauga Transit (the primary user of the bus lanes) is satisfied that the volume of buses will render the section of reserved bus lane self-enforcing. The reserved bus lanes will be signed and marked according to City of Mississauga standards.

A record of all correspondence is provided in **Appendix D**.

4.1.3.6 Ontario Realty Corporation

The Ontario Realty Corporation (ORC) was contacted early in the study to ascertain their interest in the study and any preliminary comments. ORC was circulated on all study notification, and a copy of the material circulated is included in Appendix D.

In addition, ORC was provided an opportunity to comment on the draft and final Environmental Project Report.

Generally, ORC's interest lies in the requirement for any works on ORC lands to meet the requirements of the ORC/MEI Class EA. The City has provided a response through the circulation of the final EPR to ORC indicating their acknowledgment that the requirements of the MEI/ORC Class EA will have to be addressed, and indicates how the Rathburn Road Transit Priority Measures EPR responds to the 7 point analysis identified in the MEI/ORC Class EA.

The following is a summary of the comments submitted by ORC and the response from the proponent.

Table 4-7: ORC Comments and Reponses

Date	Comment (summarized)	Response
March 10th, 2010	**Issue #1: Identification of undertaking(s) and trigger to MEI Class EA** Generally, for EA projects, the ORC is consulted regarding the applicability of the MEA/IEA Class EA processes and requirements when a proponent's proposed undertaking may directly or indirectly affect lands or facilities owned by MEI and managed by ORC. The proponent is requested to identify how the EA meets MEI/ORC's minimum EA requirements by referring to the seven point analysis, as described in section 4.2, Step B1 of the MEI Class EA and detailed within the Consultation and Documentation Report template located in Appendix 3.	It appears an easement will be required to realign the existing ramp from southbound Hurontario Street to westbound Rathburn Road. Although the existing ramp occupies a potion of the ORC property in the southwest quadrant of the Highway 403/Hurontario interchange, the realignment to connect with Centre View Drive will require an increase in the property footprint. Typically when ORC leases property, these realty activities must be clearly identified and assessed in the proponent's EA study. Given the ORC activities are ancillary to the Rathburn Road Transit Priority Measures project, the intent of the City is to address the MEI EA requirements as part of the Transit Project Assessment Process. This is consistent with the direction provided in Section 9.7.1 of the MEI Class EA. The following details the response provided in the Environmental Project Report (EPR) to the seven point ORC analysis criteria for a category B Consultation and Documentation Report. **1. Describe the Undertaking** The EPR documents the need for Provincially owned property which is ancillary to the transit project (refer to Section 2.2.2.4 and Figure 3-4). **2. Description of**
	Issue #2: Identifying the associated EA Category and ability to defer to an alternative EA Please note that different undertakings in combination with the type of land to be impacted, determines the ORC EA Class. As an example, granting an easement on ORC managed lands is considered a Category "B" and an easement on Bill 58 lands, managed by Hydro One, is considered a Category "A". Category "A" is applied to undertakings that are minor in scale and have minimal or no adverse environmental effects. Based on the criteria of a Category "A" EA and depending on the scale of the area to be impacted by an undertaking, proper due diligence of an easement, impacting hydro corridor land, could require an elevation to a Category "B". Please note that licenses and leases on Hydro corridor lands are considered a Category "A" and therefore, generally do not require any EA work; however, the purchase of Hydro corridor lands is considered a Category "B" EA, according to the Figure 2.2 Category Listing Matrix. As stated previously, the EA must meet the 7 point	

Date	Comment (summarized)	Response
	analysis identified in the MEI/ORC's Class EA.	**Environmental Effects, Mitigation and Monitoring** The EPR documents the potential environmental effects of the project and the associated mitigation measures and monitoring commitments (refer to Section 3 and Section 5.4). **3. Consultation with Affected Agencies and the Public** The EPR summarizes the consultation with the potentially affected stakeholders and the general public (refer to Section 4) **4. Reporting** The EPR has documented all the issues typically discussed in a Category B Consultation and Documentation Report. **5. Confirmation of Category B Project** The required easement over Provincially owned land has some potential for adverse environmental effects. These impacts are well understood from a technical perspective and are minor in nature. Consultation with technical agencies has been carried out to ensure the impacts of the project have been identified and adequate mitigation measures have been propd. **6. Notice of Completion and 30 Day Review** The EPR will be made available for public and agency review in accordance with Ontario Regulation 231/08.
	Issue #3: Consultation with ORC Stakeholders MEI/ORC/Agency is required to circulate major stakeholders prior to land transfer, dispositions or easements, depending on the type of land to be impacted and it is possible under the MEI Class EA Process to defer to an alternative EA, if the client ministry or agency's EA circulates the appropriate stakeholder. One major stakeholder to contact is the MNR. Often the MNR is not a significant contributor to the MEA process; however, they are in ORC's Class EA, as the MNR has a greater interest in our projects (being another government agency). This is where confusion lies between a Municipal Class EA 'nd ORC's Class EA. Because'of MNR's significant role in our EA, especially where there are significant natural features, we need to ensure that there comments are addressed. It would create potential future problems, with the MNR, if we choose to ignore there concerns, especially when they could be quite reasonable. As such, a "no response" is not sufficient for ORC. ORC will require a letter indicating the MNR is choosing to decline and documentation of consultation with the stakeholder is required.	
	Issue #4: Phase I Environmental Site Assessment and Stage 1/II Archaeolgoical Assessments/Cultural Heritage Assessments Depending on the type of realty activity to be completed, there is potential, based on the MEI Class EA Process, that a Phase I/II Environmental Site Assessment (ESA), Stage I/II Archaeological Assessment or Cultural Heritage Assessment may be required. The Phase I ESA must be, within CSA standards and reliance must be extended to the ORC. Please note that although a Phase I ESA was not completed for ORC managed lands, the deferral to the EA is still possible; however, the Phase I ESA must still be completed prior to disposition or granting of the easements according to the standards indicated.	
	Issue #5: Ability to defer The ability to defer to an alternative EA is determined if the EA meets MEI's Class EA seven point analysis. The identification of the MEI realty undertaking and sufficient consultation must be adequately documented. When the EA has been reviewed by ORC staff, and approval to defer has been granted, then the proponent will be required to complete and sign a deferral sheet acknowledging that the EA meets ORC's/MEI's Class EA requirements.	

Date	Comment (summarized)	Response
	Concluding Remarks If the proposed undertaking has a potential to cause impacts to MEI-owned property, it also has the potential to cause net negative environmental effects. Our comments are intended to ensure that outstanding issues of environmental, socio-economic and cultural heritage concerns related to this property, as well as complying with all regulations, will be appropriately addressed prior to the commencement of this undertaking. ORC looks forward to continuing communication regarding this project and we look forward to the opportunity to comment on the Draft EA. Please note that in addition to the above requirements, and depending on the type of agreement, ORC may also be required to circulate First Nations regarding the undertaking. Should First Nations consultation be a requirement of your EA, I recommend you contact ORC for further details regarding this subject.	

Consultation with ORC will continue on this matter outside of the Transit Project Assessment Process.

4.1.4 Canadian Environmental Assessment Agency (CEAA)

The CEAA (Ontario Region) was contacted early in the study for information purposes as part of the circulation of the Notice of Study Commencement on December 9th, 2009. CEAA provided a response to the Notice by letter, providing guidance on identifying the CEAA requirements for new projects. In particular, the response indicated the following:

> *The Canadian Environmental Assessment Act (the Act), applies to federal authorities when they contemplate certain action or decisions in relation to a project that would enable it to proceed in whole or in part. A federal environmental assessment (EA) may be required when a federal authority:*
>
> *a) is the proponent of the project;*
>
> *b) provides financial assistance to the proponent;*
>
> *c) sells, leases or otherwise disposes of federal lands; or*
>
> *d) issues a permit, licence or any other approval as prescribed in the Law List Regulations.*

Recognizing that the provision of funding from the federal government was a potential trigger for the CEAA, the City of Mississauga had previously consulted with their Infrastructure Stimulus Fund Coordinator at the Ontario Ministry of

Agriculture, Food, and Rural Affairs to confirm the federal EA requirements for the Transit Project.

The City was advised that, pursuant to Schedule 4, paragraph 7 of the CEAA Exclusion List Regulations, 2007 (SOR/2007-108), the above-noted Transit Project was exempt from the requirements of the federal EA.

4.1.5 Transport Canada

Transport Canada was contacted early in the study for information purposes as part of the circulation of the Notice of Study Commencement on December 9th, 2009. They responded on December 14th, 2009 (by e-mail) indicating that they were "responsible for the administration of the *Navigable Waters Protection Act*, which prohibits any construction or placement of any "works" in navigable waters without first obtaining approval".

The project team reviewed the NWPA Application Guide (April 1st, 2004) as provided by Transport Canada. The Guide indicates that works (e.g. bridge, dam, dock, intake, outfall, retaining wall, tunnel, etc) in, upon, under, through, or across a navigable water require approval under the NWPA.

Given that all works associated with the Rathburn Road Transit Priority Measures project occur outside of the Cooksville Creek, and therefore no "works" are occurring in, upon, under, through, or across a navigable water, no NWPA approval is required.

4.1.6 Mississauga Fire and Emergency Services

Emergency Services serving the Study Area, including Mississuaga's Acting Chief of Fire Prevention, Peel Regional Police, and Peel Paramedic Services were notified of the study and advised of project status and developments at all key points of consultation, including:

- Notice of Study Commencement, December 8th, 2009
- Notice of Public Information Centre, January 25th, 2010
- Circulation of Draft Environmental Project Report, March 2nd, 2010
- Circulation of Final Environmental Project Report, April 7th, 2010.

No comments were received from Emergency Services.

4.1.7 Aboriginal and Related Agency Consultation

This section summarizes the consultation activities conducted for the Transit Project Assessment Process associated with Aboriginal Communities.

4.1.7.1 Government Agency Consultation Related to Aboriginal Communities

In addition to consultation with the Director of the Ministry of the Environment's Environmental Assessment and Approvals Branch (EAAB), a number of government agency representatives at the Ontario Ministry of Aboriginal Affairs, Indian and Northern Affairs Canada, and the Ministry of the Environment were

- Francois Lachance, Ministry of Aboriginal Affairs
- Martin Rukavina, Ministry of Aboriginal Affairs

No comments or concerns were received from the Ministry of Aboriginal Affairs or the Department of Indian and Northern Affairs Canada during the Transit Project Assessment Process.

4.1.7.2 Mississaugas of the New Credit First Nation

The City of Mississauga consulted with the Mississaugas of the New Credit First Nation to obtain their input regarding the study area, the proposed transit project, and interests and concerns related to the project. The following table summarizes the key consultations carried out with regard to the Mississaugas of the New Credit First Nation (MNC).

Table 4-8: Mississaugas of the New Credit Consultation

Date	Format	Information / Comment	Response
October 22nd, 2009	Letter from City to MNC	Initial contact advising MNC that the City was initiating a Transit Project Assessment Process, and identifying the study area, and contact information for study-related inquiries.	No comments received.
January 20th, 2010	E-Mail from City to MNC	Advising the MNC of the Public Consultation Centre scheduled for January 28th, 2010. The *Notice of Public Information Centre* was attached to the e-mail.	No comments received
March 2nd, 2010	Letter from City to MNC	The City distributed a copy of the draft Environmental Project Report for the Project to MNC and requested comments by March 19th, 2010.	No comments received.
April 7th, 2010	Letter from City to MNC	The City distributed a copy of the Notice of Completion of EPR and a copy of the Final Environmental Project Report for the Project to MNC for review/comment.	No comments received.

No comments or concerns were received from the Mississaugas of the New Credit First Nation during the Transit Project Assessment Process.

4.1.7.3 Six Nations of the Grand River

The City of Mississauga consulted with the Six Nations of the Grand River to obtain their input regarding the study area, the proposed transit project, and interests and concerns related to the project. The following table summarizes the key consultations carried out with regard to the Six Nations of the Grand River (SNGR).

Table 4-9: Six Nations of the Grand Consultation

Date	Format	Information / Comment	Response
October 22nd, 2009	Letter from City to SNGR	Initial contact advising SNGR that the City was initiating a Transit Project Assessment Process, and identifying the study area, and contact information for study-related inquiries.	No comments received.
January 20th, 2010	E-Mail from City to SNGR	Advising the SNGR of the Public Consultation Centre scheduled for January 28th, 2010. The *Notice of Public Information Centre* was attached to the e-mail.	No comments received
March 2nd, 2010	Letter from City to SNGR	The City distributed a copy of the draft Environmental Project Report for the Project to SNGR and requested comments by March 19th, 2010.	No comments received.
April 7th, 2010	Letter from City to SNGR	The City distributed a copy of the Notice of Completion of EPR and a copy of the Final Environmental Project Report for the Project to SNGR for review/comment.	No comments received.

No comments or concerns were received from the Six Nations of the Grand River during the Transit Project Assessment Process.

4.1.7.4 Metis Nation Council

The City of Mississauga consulted with the Metis Nation Council to obtain their input regarding the study area, the proposed transit project, and interests and concerns related to the project. The following table summarizes the key consultations carried out with regard to the Metis Nation Council (MNC).

Table 4-10: Metis Nation Council Consultation

Date	Format	Information / Comment	Response
November 5th, 2009	Letter from City to MNC	Courtesy letter advising MNC that the City was initiating a Transit Project Assessment Process, and identifying the study area, and contact information for study-related inquiries.	No comments received.
January 20th, 2010	E-Mail from City to MNC	Advising the MNC of the Public Consultation Centre scheduled for January 28th, 2010. The *Notice of Public Information Centre* was attached to the e-mail.	No comments received
March 2nd, 2010	Letter from City	The City distributed a copy	No comments received.

	to MNC	of the draft Environmental Project Report for the Project to MNC and requested comments by March 19th, 2010.	
April 7th, 2010	Letter from City to MNC	The City distributed a copy of the Notice of Completion of EPR and a copy of the Final Environmental Project Report for the Project to MNC for review/comment.	No comments received.

No comments or concerns were received from the Metis Nation Council during the Transit Project Assessment Process.

A copy of all material distributed related to the Aboriginal Community consultation is provided in **Appendix D**. No concerns were expressed by the Aboriginal Communities regarding the project.

4.1.8 General Public Consultation

This is to be carried out during the design, construction, and operation stages of the project. The program employs a number of means of informing the public of study developments and opportunities for interested members of the public to provide their input on the project, including:

- Project website (www.mississauga.ca/brt);
- Project newsletters; and
- Public Information Centres (see below).

The following is a summary of the key consultation activities undertaken for the project.

- *April 2009-October 2009*: Pre-Planning consultation with internal stakeholders, utility owners, and adjacent property owners likely to experience effects;
- *December 9th, 2009*: Notice of Study Commencement released, as follows:
    - Published in the Mississauga News on December 9th, 2009;
    - Posted on City website on December 9th, 2009; (www.mississauga.ca/portal/residents/rathburnroadtransitpriorityproject)
    - E-mailed to the Ministry of the Environment, Aboriginal Communities, municipal stakeholders, and adjacent property owners on December 8th, 2009;
    - Mailed to members of the Government Technical Review Team on December 8th, 2009; and
    - Mailed to utility companies with plant in the study area on December 8th, 2009.

- *December 2009 – April 2010*: Transit Project Assessment Process consultation with public, technical agencies, stakeholders (internal and external), and adjacent property owners;
- *January 28th, 2010*: Public Information Centre for the Transit Project Assessment Process, including invitations sent directly to members of the public on the project mailing list, technical agencies, stakeholders (internal and external), and adjacent property owners. Notification for the meeting was provided as follows:
    - Published in the Mississauga News on January 20th and 21st, 2010;
    - Posted on City website on January 20th, 2010; (www.mississauga.ca/portal/residents/rathburnroadtransitpriorityproject)
    - E-mailed to the Ministry of the Environment, Aboriginal Communities, municipal stakeholders, adjacent property owners, and to interested members of the public on January 20th, 2010
    - E-mailed to all members of the Government Technical Review Team on January 25th, 2010; and
    - Mailed to utility companies with plant in the study area on January 25th, 2010.
- *April 7th and 8th, 2010*: Notice of Completion of Environmental Project Report released, as follows:
    - Published in the Mississauga News on April 7th, and April 8th, 2010;
    - Posted on the City website on April 8th, 2010; (www.mississauga.ca/portal/residents/rathburnroadtransitpriorityproject)
    - E-mailed to the Ministry of the Environment, Aboriginal Communities, municipal stakeholders, adjacent property owners, and to interested members of the public on April 7th, 2010;
    - E-mailed to all members of the Government Technical Review Team on April 7th, 2010; and
    - Mailed to utility companies with plant in the study area on April 7th, 2010.

4.2 Overview of Design Changes Resulting from Consultation

As summarized above, and documented in the consultation record in **Appendix D**, the input received from the consultation process undertaken during the conceptual and preliminary design study and the Transit Project Assessment Process indicates that there is general public and stakeholder support for the Transit Project.

Few members of the public, affected property owners and stakeholder agencies raised comments and concerns regarding the Transit Project. The following table

contains a summary of the key comments submitted, concerns indicated and how they were/will be addressed. A full record of the comments received and responses is provided in **Appendix D**.

Table 4-11: Comment / Response Summary Table

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
Aboriginal Communities / Related Agencies		
Indian and Northern Affairs Canada	Indian and Northern Affairs inventory includes no active litigation on lands in study area.	N/A
Ministry of Aboriginal Affairs	No comments received.	N/A
Mississaugas of the New Credit First Nation	No comments received.	N/A
Six Nations of Grand River	No comments received.	N/A
Metis Nation Council	No comments received.	N/A
Federal Agencies		
Transport Canada	Transport Canada is responsible for the administration of the Navigable Waters Protection Act, which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide.	The project team reviewed the NWPA Application Guide (April 1st, 2004) as provided by Transport Canada. The Guide indicates that works (e.g. bridge, dam, dock, intake, outfall, retaining wall, tunnel, etc) in, upon, under, through, or across a navigable water require approval under the NWPA. Given that all works associated with the Rathburn Road Transit Priority Measures project occur outside of the Cooksville Creek, and therefore no "works" are occurring in, upon, under, through, or across a navigable water, no NWPA approval is required..
CEAA	The Canadian Environmental Assessment Act (the Act), applies to federal authorities when they contemplate certain action or decisions in relation to a project that would enable it to proceed in whole or in part, A federal environmental assessment (EA) may be required when a federal authority: a) is the proponent of the project; b) provides financial assistance to the proponent; c) sells, leases or otherwise disposes of federal lands; or d) issues a permit, licence or any other approval as prescribed in the *Law List Regulations.*	Per the direction of the Ministry of the Environment, the Notice was sent to CEAA to advise of the project. The City of Mississauga had previously consulted with Lori Kelly at the Ontario Ministry of Agriculture, Food, and Rural Affairs, their Infrastructure Stimulus Fund co-ordinator, to confirm the federal EA requirements for the Transit Project. The City was advised that, pursuant to Schedule 4, paragraph 7 of the CEAA Exclusion List Regulations, 2007 (SOR/2007-108), the above-noted Transit Project was exempt from the requirements of the federal EA.
	It has been determined that this project is excluded from requiring a federal environmental assessment under the Canadian Environmental Assessemnt Act, Exclusion List Regulation 2007, Schedule 4, Para. 7.	Noted.

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
Environment Canada	No comments received.	
Provincial Agencies		
Ministry of the Environment – Environmental Assessment and Approvals Branch (EAAB)	The Ministry of the Environment (MOE) reviewed the draft Environmental Project Report and Appendices dated February 2010, submitted to the MOE on March 4, 2010 and under separate cover, Appendix D: Consultation Record, submitted to the MOE on March 22, 2010. The Addendum was reviewed by MOE staff of the Environmental Assessment and Approvals Branch, Environmental Assessment Project Coordination Section (EAPC), the Certificate of Approval Section, Air & Noise Unit (ANU) and Wastewater Unit (WWU); the Central Region office, Technical Support Section (TSS), including the Halton-Peel District Office. The MOE EAAB provided a number of comments and editorial changes on the draft Environmental Project Report, including suggestions on where additional information is required.	Comments considered and incorporated into the final Environmental Project Report as appropriate.
MOE – Air and Noise Unit	The Air and Noise Unit of tile Environmental Assessment and Approvals Branch of MOE was requested by the Project Officer at the MOE Environmental Assessment and Approvals Branch to review the noise aspects of tile Environmental Project Report prepared by McCormick Rankin Corporation (MRC) dated February 2010, Draft. Particular attention was given to Appendix E: Noise Assessment prepared by MRC dated October 2009 and signed by Darek Sobik. Based on the above, it is the finding of this office that the noise aspects of the MRC October 2009 Noise Assessment are acceptable.	No response required.
MOE – Water and Wastewater Unit (WWU)	The MOE WWU reviewed the above noted document prepared by McCormick Rankin Corporation, Consulting Engineers for the City of Mississauga as required under the Provincial Transit Project Assessment Process (TPAP) and in accordance with Ontario Regulation 231/08, Transit Projects and Greater Toronto Transportation Authority Undertakings (2008). The report documents the design, analysis, consultation, potential for impacts and mitigation measures associated with the proposed Rathburn Road Transit Priority project in the Mississauga City Centre. It is noted that the proposed roadworks will have very minimal impacts on the existing storm sewer system (which has adequate reserve capacity	Commitment added to **Section 3.1.3** and **Section 5** specifying that "Proponent to seek approval under s53 of the Ontario Water Resources Act prior to implementation."

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	to receive this increased flow) and that a manhole oil/grit separator is proposed to treat storm runoff from the increased imperviousness area prior to discharge to the nearby Cooksville Creek. This appears to be satisfactory; however the City should seek an approval under s53 Ontario Water Resources Act (OWRA) prior to its installation. I have no other comments.	
MOE – Environmental Resource Planner and EA Coordinator, Air, Pesticides, and Environmental Planning	The following comments are in response to EAAB's request for the Technical Support Section to review the above noted project under Ontario Regulation 231/08 for the City of Mississauaga's Rathburn Road Transit Priority Measures project. The following is a summary of their review. **General Comment** 1. Section 2 — there are only two alternatives to the "do nothing." It is recommended that the proponent examine a third alternative such as a mixed traffic. **Soil Contamination:** 4. Section–3.2.3 - we recommend that any contaminated soils encountered be tested and handled in accordance with PartXV.I of the Environmental Protection Act (EPA) and Ontario Regulation 153/04, Records of Site Condition. We recommend that the EPR reflect the proponent's requirement to handle contaminated soils in accordance with the aforementioned legislation. **Stormwater Managemen** 5. Section 3.1 .2.1 — we recommend that the proponent state how they intend to meet enhanced level standards for stormwater quality. Additionally, we recommend that the proponent provide details on the proposed treatment of stormwater, given the proximity of the proposed road works to the adjacent watercourse. **Air and Noise:** 6. Section 5.3 — this section is incomplete (blank); we recommend that when this section is completed it reflects the proponent's commitment to dust suppressant during construction, reduction of traffic speed through the construction area to reduce dust dispersion, and an adherence to any applicable noise by-laws. We also recommend that these commitments be added	The "Do Nothing" alternative would result in buses operating in mixed traffic, and as such is a reflection of the potential Section 3.2.2 has been revised to incorporate the commitment to handle any contaminated soils encountered in accordance with the PartXV.I of the Environmental Protection Act (EPA) and Ontario Regulation 153/04, Records of Site Condition. The proposed means of treating the additional stormwater runoff is specific in the "Conclusions and Recommendations" section of Section 3.1.3. A new Section 3.1.3.4 added further detailing the proposed means of treating the additional stormwater runoff generated by the project. Section 5.3 has been completed, and includes a description of commitments relating to potential construction impacts including noise and dust.
Ministry of Transportation	An introductory memorandum describing the project and a copy of the preliminary design plans for the proposed transit priority measures were	In response the City committed to implementing an operating protocol for transit services using the ramp to ensure that queuing transit

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	circulated to the Ministry of Transportation on **February 10th, 2010** with a request for comments. No comments were received in response. A copy of the material circulated is included in Appendix D. The Ministry of Transportation responded on **February 16th, 2010** with a request for clarification on relating to project scope and operation of the proposed realigned ramp and it's potential effects on Hurontario Street. Further to the Application for Encroachment Permit submitted on December 16th, 2009, the Ministry requested an additional 2 copies of the plans.	vehicles do not affect operations on Hurontario Street. A record of the related correspondence is provided in Appendix D. An application for encroachment permit was submitted by MRC (on behalf of the City of Mississauga) to the Ministry of Transportation's corridor control group, along with the required 4 copies of the preliminary design plans for the proposed ramp realignment on **December 16th, 2009**. 2 additional copies of the requested plans were submitted to the Ministry on **February 19th, 2010**. No further comments were received.
	The ministry's Traffic Office requested a Traffic Impact Study for this proposal showing through traffic modelling, the impact of this on our facilities and for Mississauga to demonstrate that there will not be any adverse impacts (safety /operational) on MTO facilities in the vicinity, when it is installed and in the future.	Bus queuing on the bus-only pass-through was not modeled in a traffic microsimulation as the anticipated bus volumes using the facility are not expected to result in any significant queuing or traffic impacts on the ramp or upstream MTO facilities. As discussed above, the potential for ramp queue to spill back into the Highway 403 / Hurontario Street interchange is unlikely, and in the event that queues become significant, they will be mitigated by operating protocol directing transit vehicles to use the general traffic lane directly onto Centre View Drive.
Ministry of Municipal Affairs and Housing	No comments received.	N/A
Ministry of Natural Resources	No comments received.	N/A
GO Transit	With the completion of the Mississauga BRT, GO Transit buses will be following one of two possible routings: **GROUP 1**: trips between points west and Kipling Station or the Highway 401 Corridor. These trips will travel along both the BRT West and BRT east segments (i.e., from Winston Churchill Station or Erin Mills Station to Renforth (Commerce) Station); or	

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	GROUP 2: trips between points west and Bramalea and York Region. These trips will use the BRT West and Highways 403/410 east of Mississauga City Centre. At the intersection of Rathburn Rd/BRT East, it is not indicated whether this intersection will be signalized, though the EA Addendum for the BRT East suggests that there will be signals at this location.	
	• Under the signalized scenario - the conceptual design should include and the analysis should factor for upstream transit vehicle detection for the east-to-north left-turn as well as the south-to-west right-turn and the signal timing should be done in a manner that maximizes the opportunity for transit vehicles to turn thereby minimizing delay.	Signals will be optimized based on overall traffic at the intersection. The performance of this intersection with respect to transit delay cannot be isolated from the overall signal performance of the intersections west along Rathburn Road.
	At the intersection of Rathburn Rd/City Centre Drive: • Given the use of farside stops at this intersection, consideration should be given to the use of lag-lefts for Rathburn Road in conjunction with green extensions. Lag-lefts would ensure that buses waiting at the intersection through the east-west red phase would have priority over left-turns and reduce the bus/passenger delays for the transitway. Green extensions would increase the probability that vehicles approaching the intersection during the east-west green phase, or waiting for the farside platform to clear, would be able to complete the movement without having to wait until the next regular east-west green phase.	In the comments provided by GO Transit 19 March 2010, GO requested the City consider a number of modifications to the signal phasing and timing to provide further priority for transit vehicles. The City will consider the various suggestions during the detailed design of the signal system.
	• If forced into the shoulder lane for the entire trip on Rathburn, eastbound GO Buses in Group 2 may be unduly delayed by traffic congestion. It may be desirable to have these buses merge from the median right-of-way into the mixed traffic lanes east of this intersection to access the ramps at Hurontario Street. The movement should not be precluded in the detailed design. If buses do move from the centre lane out to the ramp at this point, northbound right-turn on reds on City Centre Drive would likely need to be prohibited for safety reasons, which could also have an impact on the overall intersection analysis and operation.	The barrier-free design allows for transit vehicles to transition from the curb to median lanes.
	• To avoid congestion on Rathburn Road west of City Centre Drive, Group 2 GO buses arriving at this intersection from Hurontario Street via the bus-only ramp should have access to the median right-of-way. This would require a protected bus-only phase for this movement. It was	GO Transit Operations staff advised early in the planning stage of the project that GO Transit intends to operate westbound transit services in the curb lane on Rathburn Road between the BRT East connection and Station Gate Road. This was the rationale for the additional right-turn

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	unclear if this option will be available or how it would be implemented to minimize bus delays. It should be noted that having all buses in the right-of-way west of City Centre Drive, as opposed to split between the right-of-way and the curb lane, eliminates inherent competition for right-turn green time at Station Gate Road. At the intersection of Rathburn Rd/Station Gate Rd: • Under the proposed plan, GO Buses could be in the median right-of-way at this intersection. They would thus have to turn from the median right-of-way to Station Gate Road. The final roadway geometry should ensure this right-turn can be made by GO Buses and that the signal phasing allows this movement in a protected phase. • The intersection analysis should consider the magnitude and variability of delay to transit vehicles for –outes - both GO Bus routes that would need to wait for a protected right-turn phase onto Station Gate Road, and Mississauga Transit vehicles that might be delayed behind a waiting GO Bus.	lane on the eastern approach to Station Gate Road. The City will, however, consider the opportunity to protect for westbound GO Transit services to operate in the median lane in the detailed design phase of the project.
	• If GO Buses operate in the median right-of-way on Rathburn Road, it may be more beneficial to move the right-turn lane for westbound traffic at Station Gate Road from the general purpose lanes to the bus-only right-of-way to decrease delays at the intersection. This would leave a through-right westbound general purpose lane at the intersection.	The limited right-of-way available, presence of utilities in the northern boulevard, and requirement to maintain acceptable intersection geometrics preclude the ability to implement this suggestion.
	• There is potential for bus driver confusion and collision under the proposed operating concept. The west-to-north right turn from the curb lane will need to be posted "No Right"on Red" due to the potential conflict with buses making the right-turn from the median right-of-way. Additionally though, bus drivers in the right-turn lane (if they cannot access the median right-of-way upstream) will need to be aware that the transit signal heads for the median right-of-way do not apply to them. Careful consideration should be given to the signal head placement and signage at this intersection to ensure that this confusion does not occur.	Westbound buses in the median will not be turning right at Station Gate Road under the recommended plan.
	• The detailed analysis should include the proposed operating plan for this intersection. In particular, given that there will be farside stops and no by-pass lane in the right-of-way, it will be imperative to ensure a short signal cycle length. This will allow more opportunity to reduce the delays from south to westbound buses that have to miss a phase due to local transit passenger service time and the on-line platform.	In the comments provided by GO Transit 19 March 2010, GO requested the City consider a number of modifications to the signal phasing and timing to provide further priority for transit vehicles. The City will consider the various suggestions during the detailed design of the signal system.

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	General Comments: • It is not specified what pavement markings, curbings or other measures might be used on all sections of transit only roadway in order to mitigate violation by the traveling public. If the intention is that there will be no physical barrier (such as curbs etc.) between the transit lanes and the general purpose lanes, consideration should be given to implementing coloured transit lanes. TAC recently carried out a study and there are now guidelines for this type of application in the MUTCDC. The knowledge base document for this study found that a number of other jurisdictions have substantially reduced the incidence of transit lane violation by colouring the lanes. As such, this type of application should be considered for this project.	The preliminary design proposes no physical barriers between the median reserved bus lanes and the adjacent general traffic lanes. Introduction of barriers would preclude the ability to bypass disabled vehicles in the general traffic lanes. Mississauga Transit (the primary user of the bus lanes) is satisfied that the volume of buses will render the section of reserved bus lane self-enforcing. The reserved bus lanes will be signed and marked according to City of Mississauga standards.
Ontario Realty Corporation	**Issue #1: Identification of undertaking(s) and trigger to MEI Class EA** Generally, for EA projects, the ORC is consulted regarding the applicability of the MEA/IEA Class EA processes and requirements when a proponent's proposed undertaking may directly or indirectly affect lands or facilities owned by MEI and managed by ORC. This would ensure that the correct undertaking described in the MEI Class EA is clearly identified and addressed. Please refer to section 9.7 of the Class EA, referenced in the preceding section, which explains that despite a proponent receiving an approval under the EA Act ("Act"), MEI, ORC, or an authorized agency under MEI ("MEI/ORC/Agency"), are still responsible for meeting the requirements of the Act when carrying out an undertaking on behalf of the proponent. (For example, this means that if a proponent's undertaking includes acquiring an easement or transfer of ownership of land owned by MEI and transacted by ORC on the ministry's behalf, then such realty activities to be conducted by ORC must be clearly identified and assessed in the proponent's EA study; otherwise, MEI/ORC/Agency must conduct a separate EA under the MEI Class EA process to meet its requirements under the Act.)\ In addition, please ensure to include any lands that have been, or are subject to, an easement that include Hydro One towers and transmission lines on Bill 58 lands. MEI/ORC's realty undertaking should be clearly identified, and be made separate from undertakings conducted by Hydro	It appears an easement will be required to realign the existing ramp from southbound Hurontario Street to westbound Rathburn Road. Although the existing ramp occupies a potion of the ORC property in the southwest quadrant of the Highway 403/Hurontario interchange, the realignment to connect with Centre View Drive will require an increase in the property footprint. Typically when ORC leases property, these realty activities must be clearly identified and assessed in the proponent's EA study. Given the ORC activities are ancillary to the Rathburn Road Transit Priority Measures project, the intent of the City is to address the MEI EA requirements as part of the Transit Project Assessment Process. This is consistent with the direction provided in Section 9.7.1 of the MEI Class EA. The following details the response provided in the Environmental Project Report (EPR) to the seven point ORC analysis criteria for a category B Consultation and Documentation Report. **1. Describe the Undertaking** The EPR documents the need for Provincially owned property which is ancillary to the transit project (refer to Section 2.2.2.4 and Figure 3-4). **2. Description of Environmental Effects, Mitigation and Monitoring** The EPR documents the potential environmental effects of the project and the associated mitigation measures and monitoring commitments

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	One. MEI is the owner for all Bill 58 lands and is solely responsible for granting any easements or conducting any disposition of such lands to another party. The proponent is requested to identify how the EA meets MEI/ORC's minimum EA requirements by referring to the seven point analysis, as described in section 4.2, Step B1 of the MEI Class EA and detailed within the Consultation and Documentation Report template located in Appendix 3. According to the MEI Class EA, an undertaking is defined on Page 9-11, in the Glossary of Terms. Undertakings are broken down into components; that is, one or more actions which may apply to one or more subgroups. MEI/ORC/Agency undertakings need to be identified as real estate activities, including the issuance of a license/lease, granting of an easement, or disposition. Each undertaking has a different category level of consultation and analysis associated with it, as identified in Figure 2.2 EA Category Listing Matrix of the MEI Class EA. **Issue #2: Identifying the associated EA Category and ability to defer to an alternative EA** Please note that different undertakings in combination with the type of land to be impacted, determines the ORC EA Class. As an example, granting an easement on ORC managed lands is considered a Category "B" and an easement on Bill 58 lands, managed by Hydro One, is considered a Category "A". Category "A" is applied to undertakings that are minor in scale and have minimal or no adverse environmental effects. Based on the criteria of a Category "A" EA and depending on the scale of the area to be impacted by an undertaking, proper due diligence of an easement, impacting hydro corridor land, could require an elevation to a Category "B". Please note that licenses and leases on Hydro corridor lands are considered a Category "A" and therefore, generally do not require any EA work; however, the purchase of Hydro corridor lands is considered a Category "B" EA, according to the Figure 2.2 Category Listing Matrix. As stated previously, the EA must meet the 7 point analysis identified in the MEI/ORC's Class EA.	(refer to Section 3 and Section 5.4). **3. Consultation with Affected Agencies and the Public** The EPR summarizes the consultation with the potentially affected stakeholders and the general public (refer to Section 4) **4. Reporting** The EPR has documented all the issues typically discussed in a Category B Consultation and Documentation Report. **5. Confirmation of Category B Project** The required easement over Provincially owned land has some potential for adverse environmental effects. These impacts are well understood from a technical perspective and are minor in nature. Consultation with technical agencies has been carried out to ensure the impacts of the project have been identified and adequate mitigation measures have been propd. **6. Notice of Completion and 30 Day Review** The EPR will be made available for public and agency review in accordance with Ontario Regulation 231/08. The City will continue to work with ORC to address the requirements of the MEI/ORC Class EA.

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	Issue #3: Consultation with ORC Stakeholders MEI/ORC/Agency is required to circulate major stakeholders prior to land transfer, dispositions or easements, depending on the type of land to be impacted and it is possible under the MEI Class EA Process to defer to an alternative EA, if the client ministry or agency's EA circulates the appropriate stakeholder. One major stakeholder to contact is the MNR. Often the MNR is not a significant contributor to the MEA process; however, they are in ORC's Class EA, as the MNR has a greater interest in our projects (being another government agency). This is where confusion lies between a Municipal Class EA 'nd ORC's Class EA. Because'of MNR's significant role in our EA, especially where there are significant natural features, we need to ensure that there comments are addressed. It would create potential future problems, with the MNR, if we choose to ignore there concerns, especially when they could be quite reasonable. As such, a "no response" is not sufficient for ORC. ORC will require a letter indicating the MNR is choosing to decline and documentation of consultation with the stakeholder is required. **Issue #4: Phase I Environmental Site Assessment and Stage 1/II Archaeolgoical** Assessments/Cultural Heritage Assessments Depending on the type of realty activity to be completed, there is potential, based on the MEI Class EA Process, that a Phase I/II Environmental Site Assessment (ESA), Stage I/II Archaeological Assessment or Cultural Heritage Assessment may be required. The Phase I ESA must be, within CSA standards and reliance must be extended to the ORC. Please note that although a Phase I ESA was not completed for ORC managed lands, the deferral to the EA is still possible; however, the Phase I ESA must still be completed prior to disposition or granting of the easements according to the standards indicated. **Issue #5: Ability to defer** The ability to defer to an alternative EA is determined if the EA meets MEI's Class EA seven point analysis. The identification of the MEI realty undertaking and sufficient consultation must be adequately documented. When the EA has been reviewed by ORC staff, and approval to defer has been granted, then the proponent will be required to complete and sign a deferral sheet acknowledging that the EA meets	

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	ORC's/MEI's Class EA requirements. **Concluding Remarks** If the proposed undertaking has a potential to cause impacts to MEI-owned property, it also has the potential to cause net negative environmental effects. Our comments are intended to ensure that outstanding issues of environmental, socio-economic and cultural heritage concerns related to this property, as well as complying with all regulations, will be appropriately addressed prior to the commencement of this undertaking. ORC looks forward to continuing communication regarding this project and we look forward to the opportunity to comment on the Draft EA. Please note that in addition to the above requirements, and depending on the type of agreement, ORC may also be required to circulate First Nations regarding the undertaking. Should First Nations consultation be a requirement of your EA, I recommend you contact ORC for further details regarding this subject. Please contact the undersigned at your earliest convenience to incorporate the above requirements into the Environmental Project Report.	
Credit Valley Conservation Authority	1. There needs to be recognition in the main document that portions of Rathburn Road are within a spill area associated with Cooksville Creek. CVC recognizes that it may be beyond the scope of this project to eliminate the spill but the City needs to recognize the issue and that it will be addressed through the appropriate process. 2. CVC in general does not support the use of stormceptors as stand alone facilities to address water quality. The report should recommend that as part of detail design that other opportunities for water quality treatment be reviewed including LID. 3. That a permit will be required from CVC for works with the regulated area associated Cooksville Creek.	The City is committed to continue working with the CVC in the future to ensure that their concerns regarding the potential for spillage are reviewed and an appropriate means of addressing the potential impacts is implemented through a separate study. The City is committed to continue working with the CVC throughout the detailed design phase of the project to determine the most appropriate means of providing enhanced quality treatment of stormwater runoff prior to discharge into Cooksville Creek The City is committed to continue working with the CVC throughout the detailed design phase to ensure that the appropriate CVC permits/approvals are obtained prior to implementation of the Transit Project.
Ministry of Culture – Culture Programs Unit	The Minsitry of Culture has reviewed the Stage 1 Archaeological Assessemnt report, which has been submitted to this Ministry as a	

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
	condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review is to ensure that the licensed professional consultant archaeologist has met the terms and conditions of their archaeological licence, that archaeological sites have been identified and documented according to the 1993 technical guidelines set by the Ministry and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. As the result of our review, this Ministry accepts the above titled report into the Provincial register of archaeological reports. The report indicates that the subject property has low archaeological potential and, consequently, a Stage 2 assessment is not required. This Ministry concurs with this recommendation. Given the above, this Ministry is satisfied that concerns for archaeological sites have been met for the area of this development project as depicted by Figure 1 of the above titled report addendum.	No further action required.
Ministry of Energy and Infrastructure – Growth Secretariat	No comments received.	N/A
Regional Agencies		
Region of Peel	No comments received.	N/A
Municipal Departments		
Mississauga Community Services, Culture Division	[Upon review of the study area], The City's Community Services Division is not aware of any heritage resources, or suspected heritage resources within the study area. Therefore there are no heritage related concerns.	Findings documented in Draft Environmental Project Report.
Mississauga Fire	No comments received.	N/A
Utilities		
Bell	Bell/Group Telecom has no plan within the proposed work area.	Noted.
	Request to be kept informed of the study.	Noted. Confirmed on mailing list.
Enbridge	Provided mark-ups of Enbridge plant in study area.	Existing Enbridge facilities in the study area are reflected in the report/design.
Enersource	No comments received during TPAP.	N/A
Telus	Request to be kept informed of the study.	Noted. Confirmed on mailing list.
Rogers Cable Communications	Request to be kept informed of the study.	Noted. Confirmed on mailing list.
Peel Fibre	No comments received during TPAP.	N/A

Submitter	Summary of Initial Comments Received	Proponent's Response to Initial Comments
Public Stakeholders		
Oxford Properties		
	We are writing on behalf of the owners of Square One Shopping Centre and adjacent lands to express our strong concern that the proposed Transit Priority Measures on Rathbun Road will have a negative impact on the current viability of Square One as a super-regional shopping centre, and on the substantial future development potential of our adjacent lands. Oxford continues to be generally supportive of improved transit service to the City Centre area, including the BRT project. The current City Centre Transit Terminal is situated on lands previously provided by the shopping centre, as is the 2005 platform expansion. At the City's request, they have also provided a 14.2m easement along the north side of Rathburn Road to accommodate future transit needs. Oxford's principal concerns are the reduction in through lane capacity on Rathburn Road, the conversion of Station Gate Road to Bus only traffic, and the elimination of northbound left-turns at City Centre Drive and Rathburn Road. These and other concerns are explained in more detail in the attached letter from BA Group.	The City commits to meet with Oxford Properties to further discuss their concerns and ensure that they are considered by City Council prior to Council decision regarding approval of the project.
	Ltr of February 11th, 2010 from BA Group to Oxfo **1. Reduction of Through Lane Capacity on Rathburn Road** The proposed elimination of two existing through lanes for all drivers in order to provide dedicated bus only lanes will substantially reduce road capacity, creating substantial traffic queues along Rathbum Road that will back up into adjacent intersections. This includes the City Centre Transit Terminal entrance that will be blocked by eastbound drivers queued on Rathbum Road. We are aware of the proposal to direct southbound drivers from Hurontario Street to Rathburn Road onto Centre View Drive. This will divert some people from Rathburn Road in the short term. However, we believe that most of these people are destined for points along Rathburn Road and will have to make their way back to it at Duke of York Blvd. A southbound to westbound right turn lane should be provided at Duke of York Blvd. as part of the plan to accommodate this demand.	The Project Team agrees and has reflected the suggested southbound right-turn lane in the current pl.

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	In the longer term as development proceeds in the City Centre in general and along Rathburn Road in particular, we are concerned that sufficient road capacity will not be available to accommodate the demand. In order to successfully market large scale office projects and maintain the success of the regional shopping centre, it is important to provide good access for both drivers as well as transit riders. In order to maintain a reasonable level of service for existing and future drivers we believe that Rathburn Road should be widened to accommodate the proposed two new dedicated bus lanes while maintaining four through lanes for general vehicular traffic. This balanced approach will provide the improved bus service that the City seeks while maintaining existing road capacity. The existing right of way and easements can accommodate this widening because they were provided by the owners of Square One for the exact purpose of maintaining four through lanes for general traffic and additional space for transit. In the longer term, the curb side lanes can be utilized for on street parking during non peak periods, thereby providing important shared public parking resources to support the Downtown 21 Master Plan. **2. Conversion of Station Gate Road to Bus Only Lanes** The proposal to convert the south end of Station Gate Road to bus only lanes will deny people convenient access to the existing commercial development along the north side of Rathbum Road. This street and traffic signal are important to the tenants in these buildings in terms of providing safe and convenient access for their customers and in accommodating future development. For example, a substantial portion of Starbucks coffee business consists of people who drop in while passing by along Rathburn Road because it is convenient to do so. This business would be put in jeopardy by the City's proposal, as would other customers who drop into the Chapters and Coast Mountain Sports Store while passing by on Rathburn Road. **3. Northbound Bus Only Left Turn Lane at City Centre Drive & Rathburn Road** This recent addition to the plan which does not appear to be related to buses moving between Rathbum and the Highway 403 BRT route, will	The proposed design for transit priority measures on Rathburn Road has since been revised to allow general traffic to operate on Station Gate Road; however, general traffic will be limited to a right-in/right-out operation at the Rathburn Road / Station Gate Road intersect.

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	force drivers to divert from Rathburn Road where they want to be, to another route — most likely Square One Drive. These people will increase congestion within the shopping centre and reduce the ability of this street to accommodate future drivers associated with new development on the Square One site. We believe it is important to maintain the integrity of the street grid for all drivers, not just transit vehicles, if the urbanization of the area is to take place successfully. We have previously asked the City for copies of any supporting technical analyses, including bus volumes and future traffic projections that properly take into account approved and planned development in the area over the next ten years. We have also asked that a detailed evaluation of the alternatives be provided, including the option of continuing to run buses in mixed traffic. We would also appreciate a meeting with the City to discuss these issues in more detail.	A meeting was held on February 23rd, 2010. The City committed to providing Oxford with a copy of the traffic analysis for their review.
	• The traffic analysis report analyses summary table 3-15 is based on Background Traffic (Existing + 30% Growth). An earlier analyses from a MRC memo dated October 26, 2009 (included in the report appendix) includes an analyses se‘ with 'site ’raffic' for what we believe is the B–ock 3 - Crate and Barrel + Whole Foods development (Scenario 6.1A). This scenario was not analyzed in the report. Was this omission intentional?	The original Rathburn Road traffic analysis (October 26, 2009) was prepared assuming a 30% growth rate on background traffic over 15-years, as t’e City's traffic forecasts were not available at that time. Scenario 6.1 reflected the assumed 30% growth rate AND traffic associated with the proposed development (Whole Foods, Crate and Barrel). This scenario was assessed to ensure that the implications of that development on the level of service of the adjacent intersections were reflected, had they not been sufficiently captured in the 30% growth rate. The analysis indicated that the impacts on the Rathburn Road / Hammerson Drive intersection would be in the order of an additional 125 vehicles entering the site (approximately 3-4 vehicles per cycle), and 115 leaving the site in the PM Peak Hour. Subsequent to conducting the analysis, MRC received t’e City's updated traffic forecasts and reviewed them to confirm the appropriateness of the initial 30% assumed growth rate. This was found to be relatively consistent with t’e City's traffic growth forecast for 2031. The 30% growth rate was applied’in MRC's updated analysis (Scenario 7.1), reflecting design changes that have occurred in the period following the October 2009 traffic analysis. Given that Scenario 7.1 incorporates traffic volumes that exceed t’e City's anticipated 2023 traffic volumes, these sufficiently account for all forecast growth in the City Centre to the horizon year of 2023. These are the traffic volumes

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		and associated levels-of-service presented in the report. So to answer the question, yes the omission of Scenario 6.1 was intentional as it was superseded by Scenario 7.1. In light of t'e City's updated traffic forecasts, Scenario 6.1 reflects a double-counting of the proposed development.
4310 Sherwoodtowne Boulevard	Is there a dust control management plan? If so do we have or could we get a copy? Does it include monitoring measures?	The Environmental Project Report includes a commitment in the report, as follows: *"Construction activities may result in the creation of dust. Dust impacts will be mitigated by ensuring that proper watering and/or other dust suppressant techniques, as identified in Ontario Provincial Standard Specification (OPSS) 506, are used during the construction phase. OPSS 506 outlines the requirements for dust suppressants and their application including application. Following construction, any open, unpaved areas will be seeded."*
General Public		
	The plan [for the proposed transit priority measures] looks very good, however for increased operational ability, I would make one change. On the north (westbound) side of Rathburn, there is a bus only right turn lane and acceleration lane on the east and west sides of the intersection, respectively. I would suggest that that space be used to allow a second centre RBL in each direction adjacent to each di'ection's platform. This would allow buses to pass other stopped buses without being forced to enter the opposing di'ection's lane. Being Square One, there will be a high turnover rate at that stop, which means an increased dwell time will inevitably be experienced, negating the benefit of using the RBLs for any buses held behind a loading unit. A single lane at those locations would also render it impossible for operators to access washroom facilities at the CCT because leaving their buses there would block the single lane while they are gone.	This is a physically and operationally feasible proposal that is attractive in that it does provide passing opportunities at the median platforms. However, the median platforms are intended for use primarily by BRT buses. Local buses will use the existing terminal and GO buses will remain on Station Gate. BRT buses are not expected to pass one another in the City Centre, since all BRT buses will stop there in sequence. If a bus is delayed at a median platform (e.g. in the event of a wheelchair loading), a through bus is free to use the adjacent general traffic lane in that direction to bypass it. The through BRT buses will not have a time point at the City Centre, so buses should not be laying over at the platform. Bus operators will be required to use layover space rather than wait at a platform if they take a break. All of the above applies equally to the proposed City Centre Drive BRT stop. The proposal would also see westbound GO buses tied up in general traffic at the approach to Station Gate rather than having their own right turn lane from which they could turn right on red; the GO delays would be undesirable. The proposal would involve additional cost, since we would be back into realigning both north and south curbs on Rathburn for some distance west of Station Gate, and any south curb line change triggers the need for a retaining wall on the parking lot embankment to the south.

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		So all in all no deal breakers, but a general sense that a simpler, smaller footprint (as recommended) would meet BRT functional requirements and with least cost and impact. In the longer term with the Hurontario RT plan and other City Centre changes, further modifications to the layout are likely.

Table 5-1: Potential Impacts and Proposed Commitments / Mitigation Measures

Impact	Description	Proposed Means of Mitigating	Proposed Monitoring Process
Natural Environment Impacts			
Air Quality	It is not anticipated that the Transit Project will result in any impacts associated with air quality.	No air quality mitigation measures are required.	Not Applicable
Watercourses / Fish Habitat	The proposed Rathburn Road Transit Priority Measures project is not anticipated to have an impact on any fish habitat in Cooksville Creek.	• Dust control measures will be implemented per "*Construction Impacts – Dust Control*" section below. • Stormwater runoff quality will be treated per "*Surface Water*" section discussed below.	On-site supervision during the period of construction. Ensure all work is completed in conformance with any CVC permit requirements
Surface Water	Additional stormwater runoff generated by project to be treated for quality prior to distribution into Cooksville Creek.	• The preliminary design recommends that the increase in surface water runoff will be treated with *enhanced quality control*, as defined in Section 3.2.3.2, by introducing a Stormceptor 750 (or equivalent) oil-grit separator in the 1350mm storm sewer north of Rathburn Road east of Centre View Drive. Alternative approaches to treat surface water will be considered and reviewed with the CVC in the detailed design and permit/approvals phase of the study. • The City will confirm the assessment / recommendations during detailed design. • The City will seek approval under Section 53 of the Ontario Water Resources Act (OWRA) prior to installation of the Stormceptor.	An environmental inspector will be responsible for ensuring that all environmental mitigation and design measures are properly installed.
Groundwater	It is not anticipated that the Transit Project will result in any impacts associated with groundwater.	No groundwater mitigation measures are required. Surface water runoff will be treated through the application of a Stormceptor (or equivalent) as discussed above.	Not applicable

Impact	Description	Proposed Means of Mitigating	Proposed Monitoring Process
Vegetation	Estimated 36 street trees affected, none of which are considered "significant".	The City's arborist will review opportunities to relocate candidate trees prior to construction.	Not applicable.
Wildlife Habitat	No impacts to wildlife habitat are anticipated.	The City will attempt to prevent harm to any wildlife encountered incidentally during construction by considering contractor awareness training to emphasize the avoidance of disturbing or harassing wildlife.	Not applicable.
Socio-Economic Environment			
Noise Conditions	There are no noise sensitive areas in or adjacent to study area.	No noise mitigation measures are required.	Not applicable
Soil Contamination	It is not anticipated that the Transit Project will result in any impacts associated with Soil Contamination.	Though not anticipated, any contaminated soils encountered will be tested and handled in accordance with PartXV.I of the Environmental Protection Act (EPA) and Ontario Regulation 153/04, Records of Site Condition.	On-site supervision during the period of construction.
Property Requirements	While the majority of the proposed works along Rathburn Road will remain within the existing roadway right-of-way, the realignment of the southbound Hurontario Street to Rathburn Road ramp will occur on lands currently owned by Oxford Properties and the Ontario Realty Corporation.	The City of Mississauga will continue to liaise with the property owners throughout the detailed design process to obtain an agreement for either the transfer of property or and easement agreement for lands on which the realigned ramp will be situated.	Not applicable
Utility Protection/Relocation	Crossing agreements / permits will be required from all utilities to ensure that where the transit project crosses their facilities, the design provides appropriate protection.	The City will continue to work with the affected utility companies during the detailed design phase and approvals phase to ensure that their needs are addressed.	Not applicable
Construction Impacts			
Dust Control	Construction activities may result in the creation of dust.	• The City will mitigate dust impacts by ensuring that proper watering and/or other dust suppressant techniques, as identified in Ontario Provincial Standard Specification (OPSS) 506, are used during the construction	On-site supervision during the period of construction.

Impact	Description	Proposed Means of Mitigating	Proposed Monitoring Process
		phase. OPSS 506 outlines the requirements for dust suppressants and their application including application. • Following construction, any open, unpaved areas will be seeded.	
Noise Conditions	Potential for noise-related impacts during construction.	• General construction will be limited to the time periods outlined in the City of Mississauga's Noise Control By-law which limits the times during which construction equipment can be operated. If construction activities are required outside of these hours, exemptions will be sought in advance by the Contractor, directly from the City of Mississauga. Exemption will only be sought for works that will not produce substantial noise. • There will be explicit indication that contractors are expected to comply with all applicable requirements of the contract and local noise by-laws. Enforcement of noise control by-laws will be the responsibility of the City of Mississauga for all work done by contractors. • All equipment will be properly maintained to limit noise emissions in compliance with MOE NPC-115 guidelines. As such, all construction equipment will be operated with effective muffling devices that are in good working order. • The contract documents will contain a provision that any initial noise complaint will trigger verification that the general noise control measures agreed to are in effect. • In the presence of persistent noise	On-site supervision during the period of construction.

Impact	Description	Proposed Means of Mitigating	Proposed Monitoring Process
		complaints, all construction equipment will be verified to comply with MOE NPC-115 guidelines. • In the presence of persistent complaints and subject to the results of a field investigation, alternative noise control measured may be required, where reasonably available. In selecting appropriate noise control and mitigation measures, consideration will be given to the technical, administrative and economic feasibility of the various alternatives. • Construction mitigation alternatives include but are not limited to: o Use of alternate, quieter equipment or methods, where available; and o The use of portable, localized noise barriers for critical areas.	
Traffic Impacts During Construction	The construction of the median bus platforms and associated roadworks will have a localized disruptive effect on roadway traffic in the study area.	• Apply conventional traffic management / detour programs that maintain a level of traffic capacity and safety acceptable to the City of Mississauga. • The adjacent or affected traffic signals may be re-timed as appropriate to accommodate the modified traffic patterns during the construction period. • The motoring public will be advised of planned activities that may result in traffic disruption in advance (both temporally and physically). • A detailed traffic staging plan will be developed during the detailed design phase of the study, and coordinated with the staging of construction to ensure that access to the City Centre	On-site supervision during the period of construction.

Impact	Description	Proposed Means of Mitigating	Proposed Monitoring Process
		Transit Terminal and GO Transit bus platforms on Station Gate Road is maintained at all times." •	
Vibration	No impacts anticipated.	No mitigation measures required.	Not Applicable.
Cultural Environment			
Built Heritage Resources	The Transit Project will not result in any impacts associated with built heritage resources.	No mitigation measures are required.	Not Applicable
Archaeological Resources	While the Stage 1 investigation recommended that a Stage 2 assessment was not required, construction activities may reveal additional potential for archaeological finds in the study area.	• Though not anticipated, should deeply buried archaeological remains be found on the property during construction activities, Ministry of Culture will be notified immediately. • In the event that human remains are encountered during construction, the proponent will immediately contact both Ministry of Culture, and the Registrar of the Cemeteries Branch of the Ministry of Government Services.	On-site supervision during the period of construction.
Transportation Network			
Transit Operations	Potential for buses on realigned Hurontario Street – Centre View Drive ramp to queue back to Hurontario Street.	The City will include in its operating protocol the requirement for buses to stay in the general purpose ramp lane and use Centre View Drive to get to the City Centre Transit Terminal in the event of a problem at the intersection that hampers buses' ability to use the bus link or if there is a backup onto the general purpose ramp lane for any reason.	Transit supervisors will monitor bus operations.
	Traffic signal phasing and intersection level of service implications	The City commits to working with GO Transit during the detailed design phase of the study	
Traffic Operations	Transit Project will result in a reduction in general traffic capacity on Rathburn Road, likely resulting in diversion of traffic to the currently underutilized Centre View Drive	Traffic signals will be optimized to provide the best overall level-of-service at the intersections throughout the study area.	The level-of-service at affected intersections will be monitored through the annual traffic count program and ongoing signal timing review.
	The Ministry of Transportation requested a traffic impact study to review the potential	The City will offer to meet with the Ministry of Transportation to provide further details	

Impact	Description	Proposed Means of Mitigating	Proposed Monitoring Process
	for traffic-related impacts to Ministry facilties.	regarding the assessment of traffic implications on Ministry facilities if requested.	

APPENDIX G:
RELEVANT EXCERPTS FROM THE MISSISSAUGA BRT CEAA SCREENING REPORT