

Mississauga Bus Rapid Transit Preliminary Design Project



PUBLIC DROP-IN CENTRE
June 2008



WELCOME

The Mississauga Bus Rapid Transit (BRT) Project

Thank you for attending this Public Drop-In Centre. We welcome your input on the proposed modifications to the Mississauga Bus Rapid Transit facility.

Please sign in at our registration table and pick up a comment sheet.

The purpose of today's session is to:

- Describe the proposal for the development of Bus Rapid Transit services within Mississauga;
- Identify and discuss the rationale behind the changes to the approved plan;
- Obtain your comments and suggestions; and
- Outline the next steps and how you can be involved.



WHAT IS BUS RAPID TRANSIT?

Bus Rapid Transit (BRT) is an integrated system for moving people by bus using dedicated road rights-of-way, called busways, for the operation of bus services.



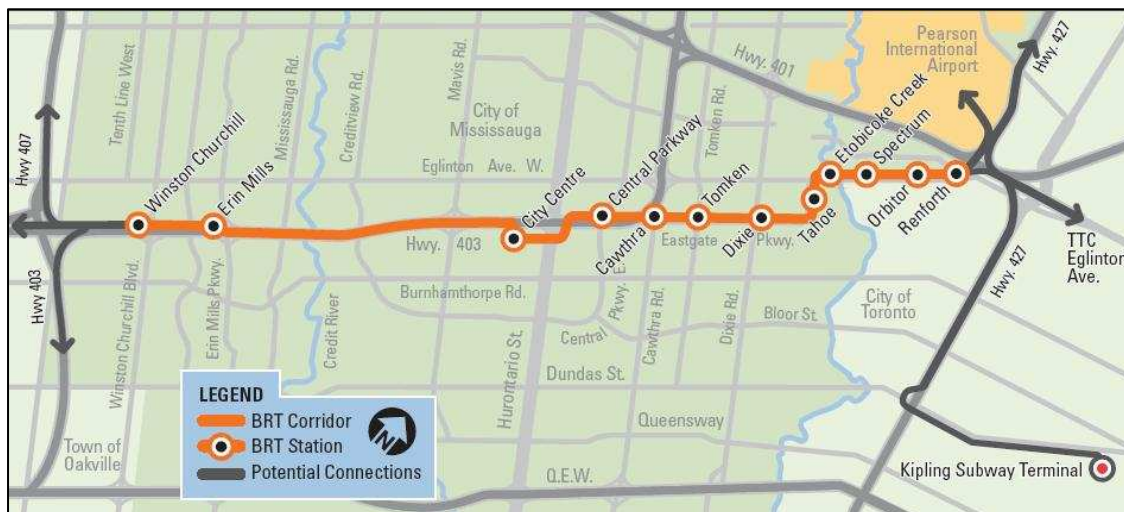
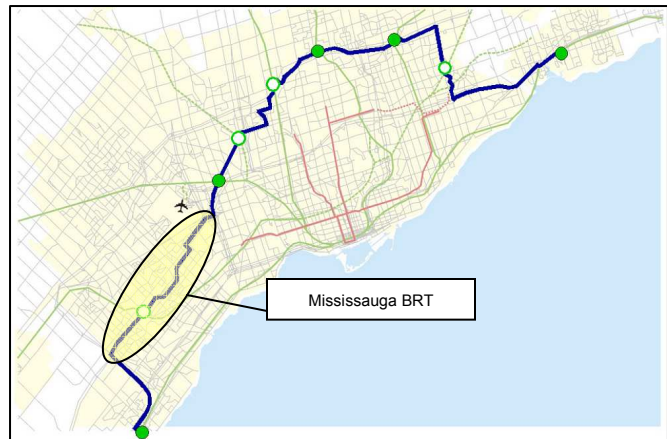
To maximize flexibility and reduce the need for transfers, stations are placed at key points along the busway where passengers can connect to other modes of travel (e.g. cycling, local bus, etc).





MISSISSAUGA'S BRT

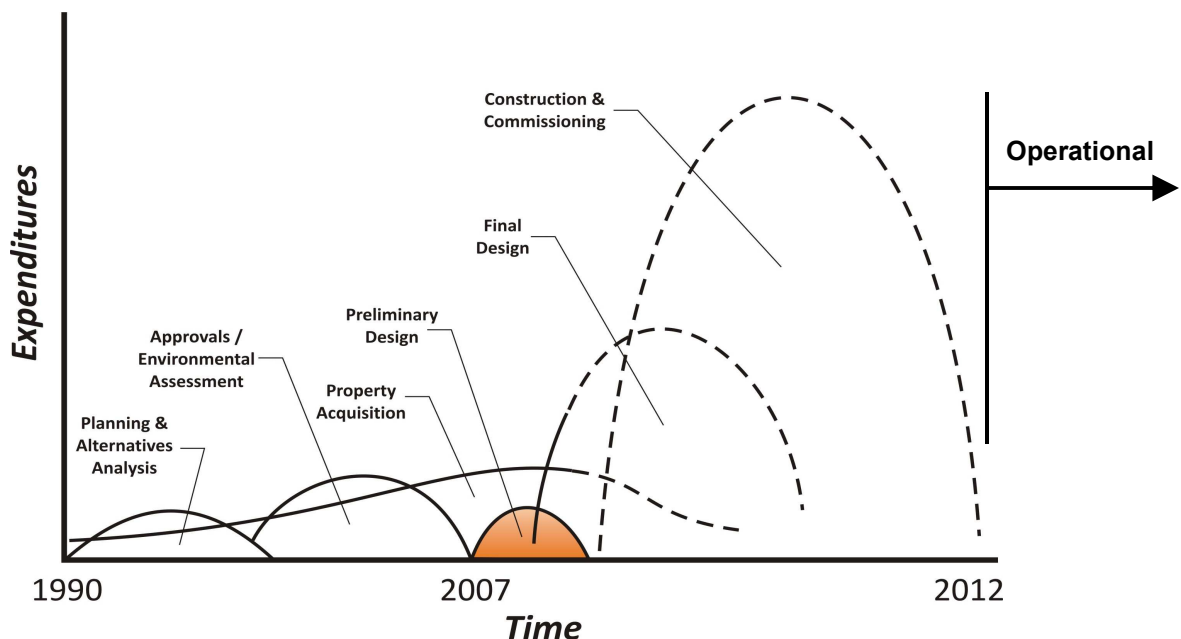
- The BRT system will improve the quality of life for those living and working in Mississauga.
- The Mississauga BRT system was originally planned in the early 1990's to respond to forecast travel demand within and through the City of Mississauga.
- The Mississauga BRT system is part of a Greater Toronto Area-wide GO Transit initiative to create a high-efficiency east-west busway which will span from Oakville to Pickering.
- Mississauga's portion of this BRT system will cover approximately 18 kilometres
- The City Centre Transit Terminal and the Highway 403 Bus Bypass Shoulders were built in the 1990's as part of the BRT program.
- The BRT plan was updated in 2003 through the EA process to respond to changes in land use and demand forecasts.





PROJECT TIMING



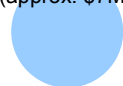




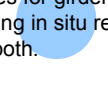
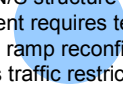


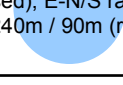

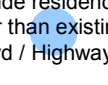
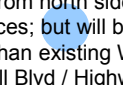

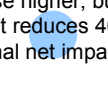
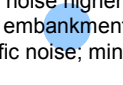



- Inter-Urban Transit Corridor Identified (1978)
- Mississauga Transitway Planning Study / Provincial EA Approval (1993)
- Highway 403 HOV Bus By-Pass Shoulders (2003)
- Provincial EA Addendum (2005)
- Commitment of Provincial Funding (2006)
- Commitment of Federal Funding (2007)
- Preliminary Design (2007-2008)
- Final Design (2008-2011)
- Construction (2009-2012)
- Opening Day (2012)



Project Planning Cycle Project Control Cycle






WINSTON CHURCHILL BLVD

Analysis Factor	Busway Under Existing Ramps	Busway Over Existing Ramps	Busway Over Relocated Ramps
Cost	Highest (approx. \$16M) 	Moderate (approx. \$9M) 	Lowest (approx. \$7M) 
Impact to Utilities	Retaining wall needed to protect parallel pipelines, alignment impacts pipelines	Retaining wall needed to avoid parallel pipelines; lowered S-W ramp may impact two pipelines	Retaining wall needed to avoid parallel pipelines
Drainage	Pumping station required at loop ramp sump. 	Gravity drainage to existing ditches. 	Gravity drainage to existing ditches. 
Construction Disruption	Detours and two-stage structure construction required for both ramps 	Both structures require temporary ramp closures for girder placement. Ramp lowering in situ requires major detours for both. 	S-W structure can be built off line; E-N/S structure girder placement requires temporary closure; ramp reconfiguration requires traffic restrictions 
Ramp Geometry	Existing: S-W loop ramp 52 m radius; E-N/S ramp radius 240m / 100m 	Existing: S-W loop ramp 52 m radius; E-N/S ramp radius 240m / 100m 	S-W loop ramp 65 m radius (increased); E-N/S ramp radius 240m / 90m (reduced) 
Community			
Visual Impacts	No significant impact 	Busway embankment will be visible from north side residences; but will be no higher than existing Winston Churchill Blvd / Highway 403 overpass. 	Busway embankment will be visible from north side residences; but will be no higher than existing Winston Churchill Blvd / Highway 403 overpass. 
Noise Impacts	No significant impact 	Busway noise higher, but busway embankment reduces 403 traffic noise; minimal net impact. 	Busway noise higher, but busway embankment reduces 403 traffic noise; minimal net impact. 
CONCLUSION	Cost, utility impacts, and construction staging drawbacks outweigh benefits of reduced visual impacts NOT RECOMMENDED	Avoids many utilities, but existing ramp geometry prevents ability to avoid all buried utilities NOT RECOMMENDED	Overall achieves best busway and ramp geometry while avoiding all buried utilities RECOMMENDED
LEGEND	 Less Desirable	 Moderately Desirable	 Most Desirable













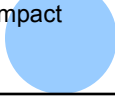



HURONTARIO ST




Analysis Factor	Busway Under Hurontario Street to Centre View Drive	Busway Connection to Rathburn Road
Natural Environment Impact	<p>Significant</p> <p>Requires lowering of Cooksville Creek to accommodate ultimate busway extension through City Centre, and new major overflow culvert under Rathburn Road and Hurontario Street at a cost of approximately \$12M.</p>	<p>Minimal</p> <p>No impacts to Cooksville Creek or significant environmental features.</p>
Cost	<p>Base Case</p>	<p>Saves approximately \$13M over baseline alternative.</p>
Drainage	<p>Busway would be below the Regional storm floodline, requiring floodproofing.</p>	<p>No drainage concerns.</p>
Traffic Operations	<p>No significant impact.</p>	<p>New intersection on Rathburn Road has no significant impact; Rathburn Road/Centre View Drive intersection will operate at capacity in peak hours; bus priority on Rathburn Road is subject to future study.</p>
Transit Operations	<p>Buses access City Centre Transit Terminal via Centre View Drive/Rathburn Road.</p>	<p>Buses access City Centre Transit Terminal via Rathburn Road.</p>
Construction Disruption	<p>Difficult to stage without major and costly traffic disruption to Hurontario Street and the eastbound Highway 403 off-ramp.</p>	<p>Temporary closure of Sherwoodtowne Blvd required during construction of busway crossing.</p>
Future Commitments	<p>Plan is tied to a grade-separated treatment (ultimate) along Rathburn corridor; may not match Hurontario Rapid Transit interface and evolving City Centre development plans.</p>	<p>Plan is flexible and does not create preconditions on a Hurontario rapid transit interface or City Centre development program.</p>
CONCLUSION	NOT RECOMMENDED	RECOMMENDED

LEGEND			
	Less Desirable	Moderately Desirable	Most Desirable



TOMKEN RD

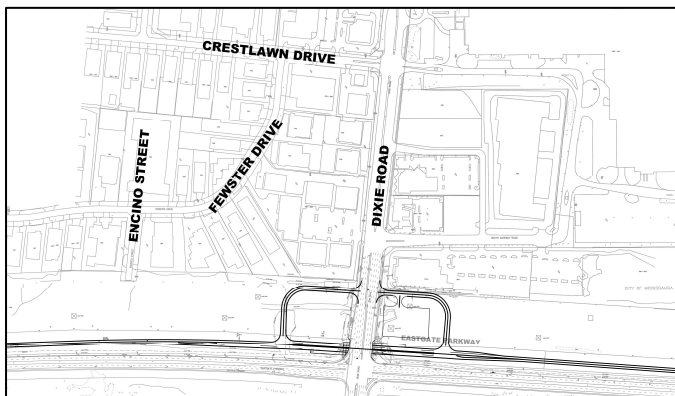
Analysis Factor	Busway Under Tomken Road (Base Case)	Busway Over Tomken Road
Cost	Base Case 	Cost savings of \$4M - \$5M (reduced station infrastructure, utility relocation, drainage, excavation, retaining walls). 
Impact to Utilities	Retaining wall needed to employing complex and expensive retaining wall types to protect parallel pipelines 	Reduced retaining wall requirements to avoid parallel pipelines 
Drainage	Pumping station required at Tomken Road crossing sump. Below-grade station would require floodproofing. 	Gravity drainage to existing ditches and Little Etobicoke Creek. 
Construction Issues	Detours and costly two-stage structure construction required for Tomken Road crossing. Below-grade operation requires significant rock excavation and relocation for disposal. 	Tomken Road structure can be built with temporary road closures during bridge-deck implementation. Above-grade construction offers opportunity to dispose of excess excavated material from busway construction elsewhere in corridor. 
Community		
Visual Impact	Station structure visible from a few houses. 	Busway station and top of moving buses will be visible from some south side residences. Visual barrier treatment (including increased berm, as shown) to be confirmed. 
Noise Impact	No significant impact 	Busway noise higher, but impact minimal as Eastgate Parkway noise remaining dominant noise source in corridor. 
Urban Design	Station has low-key presence in corridor 	Station more visible to users and motorists; greater opportunity to highlight BRT. Greater visibility improves passenger security. 
CONCLUSION	Cost, utility impacts, and construction staging drawbacks outweigh benefits of reduced visual impacts NOT RECOMMENDED	Overall achieves best busway geometry while avoiding all buried utilities. RECOMMENDED

LEGEND		
		
Less Desirable	Moderately Desirable	Most Desirable

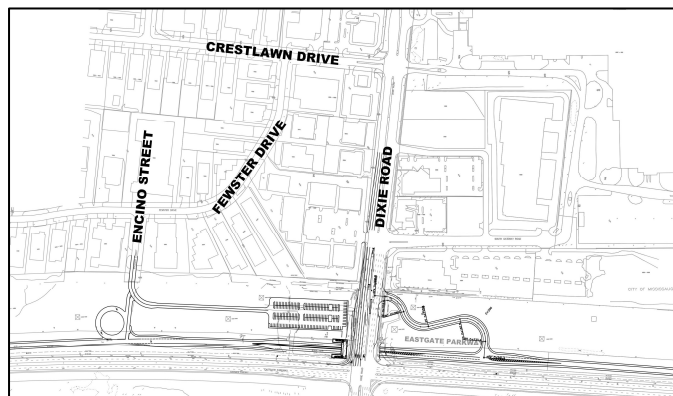


DIXIE PARK AND RIDE

2004 EA Addendum Plan




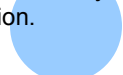


Current Proposal



- Issues with EA Approved Plan:
 - The parking/access concept shown in the 2004 EA Addendum did not reflect today's knowledge of bus operational requirements, utility conflicts, and Dixie Road traffic operations. It was intended to be refined at the Preliminary Design stage.
- Proposed Resolution:
 - Create a full-move bus-only signalized intersection on Dixie Road for all connecting buses to use the east-side ramp;
 - Align the bus ramp to avoid pipelines and reflect busway grade;
 - Locate a larger expandable parking lot on the west side of Dixie Road, with access from Encino Street off Fewster Drive; and
 - Provide a bus link to Dixie Road via Fewster Drive, as well as a turnaround loop and layover area at the Encino Street connector and bus layover area west of the station.




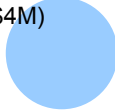

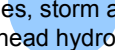

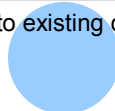

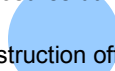


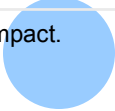




DIXIE RD

Analysis Factor	EA Addendum Plan - Parking Access from Dixie Road	Current Proposal - Parking Access from Encino Street
Traffic Operations	Right-in / Right-out arrangement on Dixie avoids need for a new signal there, but does not provide adequate access to Park and Ride lot (users cannot return to the direction from which they arrived). 	Park and Ride access / egress directed to Dixie / Crestlawn intersection; an acceptable level of service can be maintained at that signal. Bus-only actuated signal north of Eastgate will be tied to adjacent signals to minimize disruption. Peak Hour trip generation is estimated to be 95 peak direction and 5 off-peak direction trips; it is expected that the incremental traffic volume generated by the Dixie Station Park and Ride facility can be adequately accommodated by the existing road network capacity. 
Transit Operations	Transitway loops required east and west of station to allow full operational flexibility. 	All transit operations are accommodated on segregated facilities. 
CONCLUSION	NOT RECOMMENDED	RECOMMENDED

LEGEND	 Less Desirable	 Moderately Desirable	 Most Desirable
--------	---	---	---



EASTGATE PKWY

Analysis Factor	Busway Under Eastgate Parkway (Base Case)	Busway Over Eastgate Parkway	
Cost	Highest (approx. \$31M) 	Lowest (approx. \$4M) 	
Impact to Utilities	Significant Requires relocation/lowering of 8 buried oil and gas pipelines, storm and sanitary sewers, and hydro tower, resulting in approx. \$15M premium over alternative. 	Minimal Crossing over Eastgate Parkway avoids all major buried utilities, storm and sanitary sewers, and overhead hydro facilities. 	
Drainage	Pumping station required at Eastgate Parkway crossing sump, at a cost of approx. \$2.5M. 	Gravity drainage to existing ditches. 	
Construction Issues	Significant Detours and costly two-stage structure construction required for Eastgate Parkway crossing. Below-grade operation requires significant rock excavation and relocation for disposal. 	Minimal Eastgate Parkway structure can be built with temporary road closures during bridge-deck implementation. Above-grade construction offers opportunity to dispose of excess excavated material from busway construction elsewhere in corridor. 	
Community			
Visual Impact	No significant impact. 	Busway embankment will be visible from south side residences; City is considering options for mitigation 	
Noise Impact	No significant impact. 	Busway noise higher, but impact minimal as Eastgate Parkway noise remaining dominant noise source in corridor. 	
CONCLUSION	Cost, utility impacts, and construction staging drawbacks outweigh benefits of reduced visual impacts. NOT RECOMMENDED	Overall achieves best busway geometry while avoiding all buried utilities. RECOMMENDED	
LEGEND	 Less Desirable	 Moderately Desirable	 Most Desirable



NEXT STEPS

The Project Team will:

- Consider input from today's session
- Review and update the preliminary design concepts
- Prepare an Environmental Assessment (EA) Addendum submission that:
 - Documents the changes to the approved plan and their impacts.
 - Summarizes the public comments and responses provided.
- The EA Addendum will be filed with the Ministry of the Environment.
 - The EA Addendum will be put on public record for a minimum 30-day period for public comment following filing.
 - During the 30-day period, a person may submit outstanding concerns in writing to the Minister of the Environment. A copy of the letter must also be sent to the City Clerk.
 - The Minister of the Environment will take all comments submitted during the 30-day review period into consideration when rendering their decision to either: **approve; approve with conditions; or deny** the proponent's request for EA approval for the addendum.



PUBLIC PARTICIPATION

- Your comments are important.
- Please complete the comment sheet and submit to the BRT Project Office by **July 18th, 2008**.
- Sign in at the registration table to ensure that you are added to the Project mailing list.
- If you require further information or wish to provide additional comments, contact the BRT Project Office at:

Telephone: 905-615-4636

Fax: 905-896-5504

E-mail: transit.info@mississauga.ca

Website: www.mississauga.ca/brt