- If sufficient historical data is not available, a conservative 100-year erosion limit may be determined based on a multiple of the bankfull channel width. In watercourses where there is evidence of active channel erosion and/or hydraulic analysis indicates that the bankfull flow competence (velocity and shear stress) is greater than that of the bed and/or bed materials, the 100-year erosion limit will be 10 times the bankfull channel width, offset from both sides of the bankfull channel. In watercourses where there is no evidence of active channel erosion and hydraulic analysis indicates that the bankfull flow competence is less that of the bed and bank material, the 100-year erosion will be 2 times the bankfull channel width, applied to both sides of the bankfull channel.
- If the meander belt width or 100-year erosion limit used overlaps the valley wall toe of slope, a stable slope allowance must also be provided. The stable slope analysis is determined by calculating a 3:1 slope from the outside of the meander belt width or 100-year erosion limit, or through an approved slope stability study.

Note: *It is strongly recommended that geomorphic analyses be prepared by a professional engineer or professional geoscientist qualified to practice fluvial geomorphology. Comparative analysis of air photos and maps must be performed using GIS or CAD software. All air photos, maps and surveys must be registered to a common base map and corrected for distortion if necessary.*

Aquatic Requirements

- All water crossings must address the requirements for fish and fish habitat, including maintaining groundwater upwelling and discharge, preserving biological connections between stream flow and the channel bed, including fish passage, maintain natural sediment transport processes, and to minimize disturbance to the watercourse.
- Channel realignment, hardening, or other modifications should be avoided in the design of crossing structures. If channel modifications are proposed, suitable justification must be provided.
- Should alteration to the channel be anticipated, *Fisheries Act* approvals may be required. See Fisheries Act submission requirements for more detail.

Terrestrial Requirements

- Adequate passage must be provided, either under or over crossing structures and associated earthworks, for all wildlife potentially using the valley corridor. An ecological assessment is required to identify wildlife species in the corridor and to confirm that the crossing concept design will provide the required passage.

Other Requirements

- Crossing designs must account for recreational activities and trails within valley lands, as per municipal requirements. The span and rise of the structure opening should accommodate expected recreational uses.
- Crossings must maintain navigability of the watercourse as per Transport Canada requirements and may require *Navigable Waters Protection Act* approval in this regard.

- Erosion and sediment control plan, showing location of control measures, detail drawings for control measures, construction access, notes on construction procedure and phasing, and notes on maintenance of control measures. Details for in-water works and 'working in the dry' should also be included if applicable.
- Landscape and restoration plan indicating species and quantities for trees, shrubs and seed mixes, and location, size and condition of plant material (see also TRCA Standard Restoration Guidelines).
- Tree removal/preservation plan identifying vegetation type within the work area, location of tress to be removed and preserved, and protection measures for the remaining stand.
- Letter of Intent and DFO Application for Authorization, if applicable. See Fisheries Act submission requirements for more detail.

CROSSINGS PROPOSED UNDER ENVIRONMENTAL ASSESSMENT PROCESS

New crossings proposed under the Municipal Class Environmental Assessment or full Environmental Assessment processes are required to meet the requirements listed above. EA documents should address the submission requirements under headings 1 and 2, above, while requirements under heading 3 should be addressed at the permit application/detailed design stage.

REPLACEMENT CROSSING STRUCTURES

In most cases submissions for replacement structures are not expected to address the requirements under heading 1, above, as the location of the crossing has already been fixed. However, if realignment of the roadway is proposed, those requirements must be considered in determining the new alignment.

In general, it is expected that submissions for replacement structures will consist of permit applications with a design brief and detailed design drawings. Nonetheless, submissions for replacement structures must address all of the requirements listed under headings 2 and 3 above. The proponent may make reference to existing studies (e.g. hydraulics) rather than preparing new analyses, if it can be shown that the existing studies remain relevant.

CROSSING STRUCTURE EXTENSIONS

TRCA will endeavour to achieve all of its objectives for extensions of existing structures. However, it is recognized that the objectives would in many cases require replacement of structures which is often not possible. As a result, TRCA staff will communicate requirements for structure extensions to proponents on a site-specific basis.

Toronto and Region Conservation for The Living City

DRAFT WATERCOURSE CROSSING CHART - MISSISSAUGA BUS RAPID TRANSIT

DATE CHART LAST REVISED: Friday, November 30, 2007
DATE OF SITE VISIT: Monday, November 19, 2007
PROJECT NAME: Mississauga Bus Rapid Transit
PROPONENT: City of Mississauga
TRCA PROJECT MANAGER: Sharon Lingertat
MUNICIPAL PROJECT MANAGER: Willy Ing
CONSULTANT PROJECT MANAGER Mike Bricks
TRCA FILE # 39971

Site Visit Attendees: Darrell Wunder, MRC
Katie Bright, Ecoplans
Brad Stephens, TRCA
Scott Smith, TRCA
Sharon Lingertat, TRCA

GEOGRAPHIC AREA						
TRCA to complete	Watercourse Name or Station	Location 1	Location 2	Location 3	Location 4	Location 5
	Location *(between x and y streets)*	Eglinton Ave. at Explorer Dr.	Eglinton Ave. at Centennial Park Blvd.	Eglinton Ave. west of Rakely at Etobicoke Creek	Eastgate Pkwy. (Tomken Rd. to Dixie Rd.) - Little Etobicoke Creek	Eastgate Pkwy. east of Cawthra Rd.
ONTARIO REG. 166/06 - "DEVELOPMENT, INTERFERENCE WITH WETLANDS & ALTERATIONS TO SHORELINES & WATERCOURSES".						
TRCA to complete	Within a Regulated Area	Yes	Yes (south side of Eglinton only)	Yes	Yes	Yes - on the north side of Eastgate Pkwy. only
	Within a Wetland/Area of Interference ? *(Y/N)*	No	No	No	Yes	Yes
	Within a Watercourse? *(Y/N)*	Yes	No	Yes	Yes	No
	Within a Regional Storm Floodplain*? *(Y/N)* *(<50 ha upstream drainage/>50ha* upstream drainage)* *= Regional Storm Floodplain	No	No	Yes	Yes	No
FISHERIES REVIEW						
TRCA to complete	Fish Habitat *(Direct/Indirect/No)*	Indirect	Indirect	Direct	Direct	No
	Fish Passage Within Culvert/Structure?	No	No	Yes	Yes	No
	Timing Window? (*Cold = June 15 to September 15) (Warm= July 1 to March 31)*	tbd	tbd	Warmwater	Warmwater	n/a
EXISTING STRUCTURE DETAILS						
Proponent to complete	Existing Structure *(L x W x H and type)*					
	Open or Closed Footed?					
	Has photo record of sediment in structure been recorded? No? Yes? Date?					
	Assessment of Sediment in Existing Structure- Low? Medium? High?					
	Structural Integrity of Existing Culvert?					
	Hydraulic Capacity of existing structure is *(adequate/inadequate)* to convey Regional Storm?					
PROPOSED STRUCTURE DETAILS						
Proponent to complete	Proposed Structure *(L x W x H and type)*					
	Open or Closed Footed?					
	Extension only proposed? *(Y/N)*					
	Removal, Replacement only proposed?					
	Removal, Replacement and Lengthening Proposed? *(Y/N)*					
REQUIREMENTS						
TRCA to complete	Hydraulic Analysis Required? *(Y/N)*	tbd	tbd	tbd	tbd	tbd
	Is there an existing HEC RAS model at TRCA? Yes? No?	tbd	tbd	tbd	tbd	tbd
	Meander Belt Analysis Required? *(Y/N)*	tbd	tbd	tbd	tbd	no
	100-year Erosion Limit Required? *(Y/N)*	tbd	tbd	tbd	tbd	no
	Groundwater Upwellings *(will dictate open footed culvert)* *(Y/N)*	tbd	tbd	tbd	tbd	tbd
	Open Footed Required? *(Y/N)*	tbd	tbd	tbd	tbd	tbd
	Geotechnical Report Required (to determine if spread footings or piles are needed)? *(Y/N)*	yes	yes	yes	yes	yes
	Terrestrial Passage Required? *(Y/N)*	tbd	tbd	tbd	tbd	tbd
	Embedment and substrates for Aquatic Passage Required? *(Y/N)*	tbd	tbd	tbd	tbd	tbd
	Net Benefit of Proposed crossing?	tbd	tbd	tbd	tbd	tbd
PIPE CROSSING DETAILS						
Proponent to complete	Pipe Crossing Above or Below Culvert?					
	Geotechnical Report confirms *(Open Cut/Tunnel)* for pipe crossing?					
	Distance between invert of creek and obvert of pipe (m)?					
	Minor Trench Unwatering or Major Dewatering Anticipated?					
SUMMARY OF APPROVALS REQUIRED						
TRCA to complete	"Development, Interference with Wetlands and Alterations to Shorelines and Watercourses" permit required? *(Y/N)*	Yes	Yes - if works will take place on the south side of Eglinton Ave.	Yes	Yes	Yes
	Mit HADD? (Y/N/TBD)	tbd	tbd	tbd	tbd	tbd
	HADD (Y/N/TBD)	tbd	tbd	tbd	tbd	tbd
Proponent to complete	MNR contacted? (PROPONENT WILL FILL IN)Y? N?					
Proponent to complete	Transport Canada contacted for navigable waterway? *(Y/N)*					
ADDITIONAL NOTES						

THE TORONTO AND REGION CONSERVATION AUTHORITY
5 Shoreham Drive, Downsview, Ontario M3N1S4 (416) 661-6600 FAX 661-6898 http://www.trca.on.ca

McCORMICK RANKIN CORPORATION
DEC 17 2007
MISSISSAUGA OFFICE

ENCLOSURE

TO:	**NAME:** Mr. Mike Bricks Ecoplans Limited 2655 North Sheridan Way, Suite 280 Mississauga, ON L5K 2P8
FROM	**NAME:** Scott Smith
	PHONE: (416) 661-6600 Ext. 5758
	PROJECT: CFN 39971 - Mississauga Bus Rapid Transit
	DATE: December 11, 2007

Mr. Bricks,

Please find enclosed the Etobicoke Creek Map Sheets 7, 10, and 13 marked to show the Regional Flood Elevation cross sections. The cross sections are:

1. Eastgate between Dixie and Tomken Rd: Etobicoke Creek mapsheet #10, between cross sections 2.38 and 2.39, within Little Etobicoke Creek
2. Eglinton Ave east of Eastgate Parkway: Etobicoke Creek mapsheets #7 and 13, between cross sections 7.09 and 7.121, within Etobicoke Creek
3. Eglinton Avenue at Explorer Dr: Estimated flood plain 1012, Tributary 4, cross section 2244.567.
4. There is no mapping or hydraulic information available for the watercourse south of Eglinton, west of Centennial Park Blvd.

HEC-2 Cross Section	Regional Elevation (m)
2.38	135.70
2.39	135.87
7.09	140.30
7.10	142.24
7.11	141.66
7.12	142.55
7.121	143.86
2244.567	155.6626

Note:

1. Please be advised that the Hydraulic update is under final approval and that the above information is preliminary and the flood elevations may change. The Regional peak flow at the same location was calculated by TSH.
2. We do not have updated flood line mapping information.
3. We anticipate an increase in the Regional flood line.

An email will be sent separately with the following information:

- Regulation Limits
- Flora and Fauna
- ELC data
- Watercourses
- fish data

***The point data (sent via email) for TRCA Species of Conservation Concern (flora and fauna) and Vegetation Type is to be used only for evaluation and analysis. It is not to be displayed in any format for public viewing, including maps in reports or maps at public information centres.

The Terrestrial Natural Heritage System in the area around the airport is evaluated in the GTAA Living City Report. The findings of the report include:

- the health of the terrestrial system within the GTAA study area was evaluated as poor to very poor during in a landscape analysis; this is mainly due to the matrix influence of airport operations and transportation corridors.
- the majority of habitat patches received a poor to fair score for size and shape;
- there are serious deficiencies of natural cover in the southern portion of the study area (the area at which this EA is looking).
- connectivity is insufficient for the maintenance of terrestrial services and there is a need to improve east-west connections.

The areas adjacent to Eastgate Parkway are identified as restoration opportunities through Habitat Implementation Plans (HIP). The areas have various wetland communities; due to overhead hydro wires, the best restoration opportunities are through promoting wetland linkages in this area. Given that only 0.6% of the Etobicoke watershed features wetlands, it is important to maintain, enhance and expand these systems.

Enhancing the corridor along Eastgate Parkway would provide new wetland opportunities, an east-west connection between habitat patches, maintain the quantity of natural cover and result in an improvement in the quality of natural cover within the watershed.

Please also find enclosed a map showing HIP opportunities.

If you have any questions please give me a call.

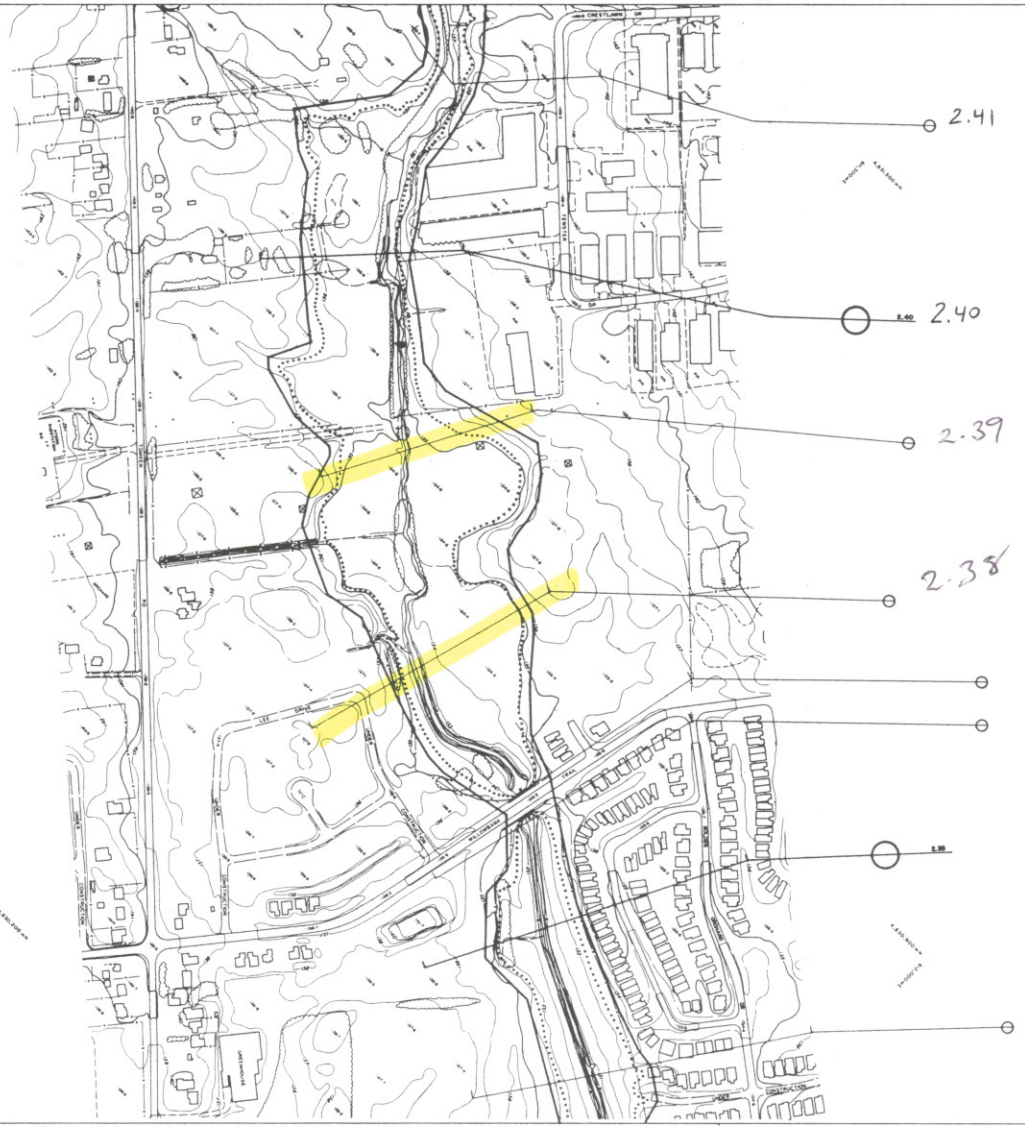
Scott Smith

SR.

Scott Smith

ELECTRA RD
EGLINTON AVE W
NETHERHART RD
BRITANNIA RD E
LUKE RD
ERINGATE DR
THE EAST MALL
MARTIN GROVE RD
RENFORTH DR
Generic Reg
No info
DIXIE RD
RATHBURN RD
BURNHAMTHORPE RD E
MILLARD
EVA RD
MATHESON BLVD E
TOMKEN RD
BLOOR ST W
RATHBURN RD E
BURNHAMTHORPE RD E
BLOOR ST
DUNDAS ST E
DUNDAS ST W
THE WEST MALL
N QUEEN ST
EGLINTON AVE E
DIXIE RD
THE QUEENSWAY

* DO NOT USE FLOODLINES
OR FILL REG. LINES



REVISIONS

NO	DESCRIPTION	BY	DATE

LEGEND

FLOOD PLAIN AND FILL REGULATION LINE MAPPING

ONTARIO REGULATION No.____
SCHEDULE No.____

ARMAP LTD.
ARMAP LIMITED
4604 SOUTHCLARK PLACE, R.R.#6, BOX 918, OTTAWA
CANADA K1G 3M3

M. P. F. Hampton

the metropolitan toronto and region conservation authority
5 Shoreham Drive, Downsview, Ontario
M3N 1S4

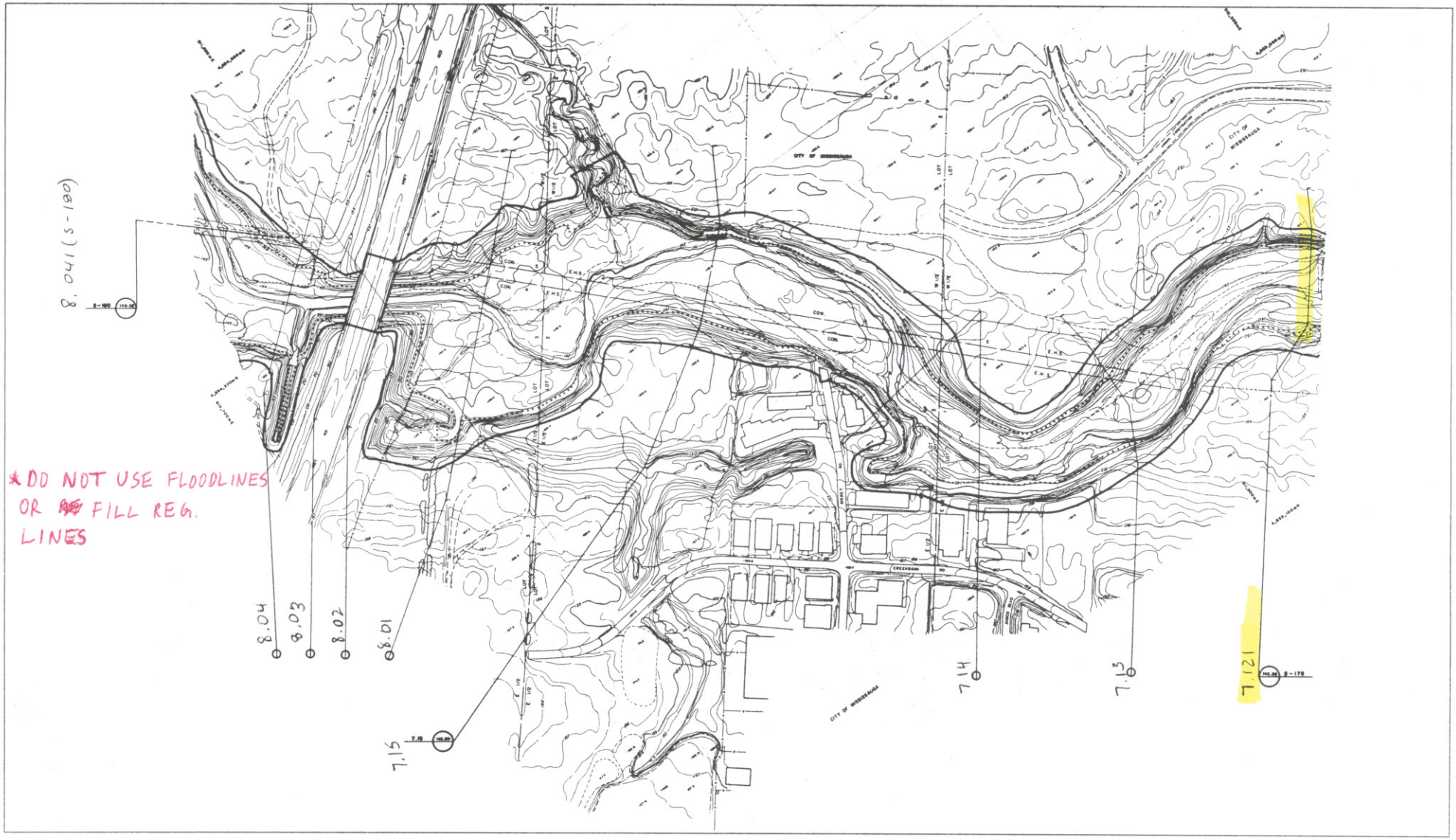
CERTIFICATE

I HEREBY CERTIFY THAT THIS REGULATION LINE MAP ____ IS A TRUE COPY OF MAP NR. ____ A SCHEDULE OF ONTARIO REGULATION ____ SIGNED

SECRETARY TREASURER, M.T.R.C.A.

ETOBICOKE CREEK

SHEET No. 10
M.T.R.I-10



* DO NOT USE FLOODLINES OR ~~FILL~~ FILL REG. LINES

REVISIONS

NO.	DESCRIPTION	BY	DATE

LEGEND

This map was compiled photogrammetrically from 1:10,000 aerial photographs flown in Nov. 1976.

The vertical datum is mean sea level as established by the Geodetic Survey of Canada.

North American Datum 1927, U.T.M. 6° projection Zone 17, Central Meridian 81° W.

Grid interval 100 metres.

FLOOD PLAIN AND FILL REGULATION LINE MAPPING

ONTARIO REGULATION No.____
SCHEDULE No.____

J. D. BARNES LIMITED, Surveyors

the metropolitan toronto and region conservation authority
5 Shoreham Drive, Downsview, Ontario
M3N 1S4

Scale 1:2000

CONTOUR INTERVAL 1 METRE - AUXILIARY CONTOUR INTERVAL .5 METRES

CERTIFICATE

I, HEREBY CERTIFY THAT THIS REGULATION LINE MAP_____ IS A TRUE COPY OF MAP _____ A SCHEDULE OF ONTARIO REGULATION _____ SIGNED

SECRETARY TREASURER, M.T.R.C.A.

ETOBICOKE CREEK

SHEET No. 13
M.T.R.I-13

*DO NOT USE FLOODLINES
OR FILL REG. LINES

REVISIONS

NO.	DESCRIPTION	BY	DATE

LEGEND

This map was compiled photogrammetrically from 1/10,000 aerial photography flowned in Nov. 1975.

The vertical datum is mean sea level as established by the Geodetic Survey of Canada.

North American Datum 1927, U.T.M. 9° projection Zone 17, Central Meridian 84° W.

Grid interval 100 metres.

FLOOD PLAIN AND FILL REGULATION LINE MAPPING

ONTARIO REGULATION No.____
SCHEDULE No.____

J. D. BARNES LIMITED, Surveyors

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5 Shoreham Drive, Downsview, Ontario
M3N 1S4

Scale 1:2000

CONTOUR INTERVAL 1 METRE · AUXILIARY CONTOUR INTERVAL .5 METRES

CERTIFICATE

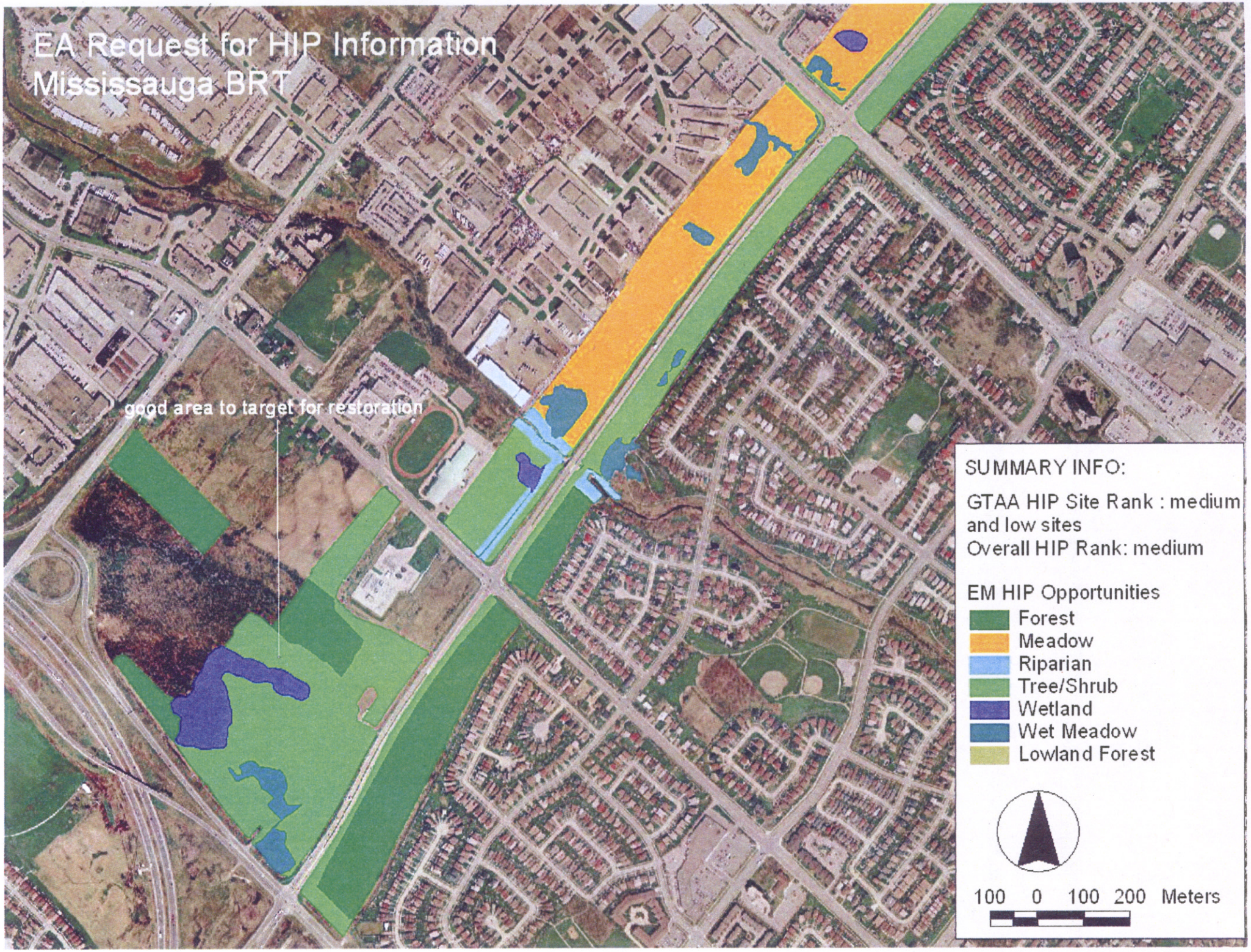
I HEREBY CERTIFY THAT THIS REGULATION LINE MAP _____ IS A TRUE COPY OF MAP No. _____ A SCHEDULE OF ONTARIO REGULATION _____

SIGNED _____

SECRETARY TREASURER, M.T.R.C.A.

ETOBICOKE CREEK

SHEET No. 7
M.T.R.I-7


EA Request for HIP Information
Mississauga BRT
good area to target for restoration
SUMMARY INFO:
GTAA HIP Site Rank : medium and low sites
Overall HIP Rank: medium
EM HIP Opportunities
Forest
Meadow
Riparian
Tree/Shrub
Wetland
Wet Meadow
Lowland Forest
100 0 100 200 Meters

From: Thompson-Black, Melinda (MNR) [Melinda.Thompson-Black@ontario.ca]
Sent: Friday, December 21, 2007 11:15 AM
To: Anderson, Holly
Subject: RE: Information Request

Attachments: **Ecoplans-Dec20.doc**
Hello

Attached please find information related to your data request.

Melinda Thompson-Black
A/ District Ecologist
Aurora District, Ministry of Natural Resources
50 Bloomington Rd
Aurora, ON L4G 3G8
(905) 713-7425
melinda.thompson-black@ontario.ca

From: Sharon Lingertat [mailto:SLingertat@trca.on.ca]
Sent: Thu 13/12/2007 10:21 AM
To: Anderson, Holly
Subject: Re: Mississauga BRT

Hi Holly,

The twinleaf location is at 612020 4833675. 21-50 plants were found in 2003.

Hope this helps. The other mapping information was sent to Mike, so you may want to followup with him if that's something else that you're looking for.

Thanks,
Sharon Lingertat
Acting Planner II, Environmental Assessments
Toronto and Region Conservation Authority
Tel: (416) 661-6600 ext.5717
Fax: (416) 661-6898
slingertat@trca.on.ca

ecoplans
Limited
Environmental Planners & Consulting Ecologists

February 13, 2008

Ms. Sharon Lingertat
Acting Planner II, Environmental Assessments
Toronto and Region Conservation Authority
Planning and Development
5 Shoreham Drive
Downsview, ON M3N 1S4

RE: Mississauga Bus Rapid Transit Project

Dear Ms. Lingertat:

This letter is in response to your letter dated November 30, 2007. Thank you for providing TRCA's input and for forwarding available study area data. The enclosed table outlines the Project Team's responses to the comments outlined in your letter.

As you know, we are currently planning for a meeting to review and discuss advancements in the preliminary design and proposed mitigation measures with TRCA staff.

Yours truly,
ECOPLANS LIMITED

Mike Bricks, MCIP, RPP
Consultant Environmental Planner

c: Geoff Wright, City of Mississauga
Willy Ing, City of Mississauga
Dale Turvey, MRC
Darrell Wunder, MRC
Anne MacMillan, Ecoplans

Encl.

2655 North Sheridan Way, Suite 280, Mississauga, Ontario L5K 2P8 • (905) 823-4988 • fax (905) 823-2669
www.ecoplans.com • e-mail: ecoplans@ecoplans.com

Summary of TRCA November 30, 2007 Letter (Contact: Sharon Lingertat) - Input and Action/Response		
Comments	**How Comment Is Being Addressed During Preliminary Design**	**Requirements for Detail Design and Construction Stages for this Project**
E-mail received on December 3, 2007 identifying submission requirements and providing comments on draft terrestrial and aquatic habitat tables, comments based on the November 17, 2007 site visit and a draft Watercourse Crossings chart. The following submission requirements were outlined:		
1. Under Ontario Regulation 166/06 a permit is required from TRCA for each of these areas: - Permit 1 (Regulated Areas 1 and 2) – Eglinton Avenue at Explorer Drive and Eglinton Avenue at Centennial Park Boulevard - Permit 2 (Regulated Area 3) – Eglinton Avenue (west of Rakely Court), Etobicoke Creek - Permit 3 (Regulated Area 4) – Eastgate Parkway (Tomken Road to Dixie Road) - Permit 4 (Regulated Area 5) – Eastgate Parkway (east of Cawthra Road)	1. Permit requirements acknowledged. Permits will not be sought until Detail Design (current project is Preliminary Design); however, ongoing consultation will occur to ensure TRCA's involvement with key design decisions during Preliminary Design.	1. Apply for permits and undertake any additional consultation required towards finalizing mitigation measures and addressing permit requirements
2. There are three watercourses crossings that may impact fish or fish habitat. TRCA undertakes the initial review of all *Fisheries Act* applications.	2. Acknowledged. Ecoplans will assess potential impacts of the project on these features and will consult further with TRCA, accordingly. To be clear, we understand the three watercourses to which TRCA is referring are: Etobicoke Creek, Little Etobicoke Creek and Elmcrest Creek (Eglinton Ave. and Explorer Drive). It should be noted that based on observations made during field investigations, Elmcrest Creek no longer exists as an open channel upstream/north of Eglinton Avenue. The Creek is currently intercepted at a location upstream of the proposed transitway alignment and diverted to a storm sewer system. Therefore, there is no crossing of Elmcrest Creek by the proposed transitway.	2. Ongoing consultation towards finalizing the design and mitigation measures and obtaining determination from TRCA as to whether works will result in likely HADD.
3. There may be additional approval requirements for this project – list of acts provided.	3. Acknowledged. Based on the impact analysis, appropriate agency consultation will be undertaken during Preliminary Design to identify the relevant approval and permit requirements.	3. Obtain approvals and undertake associated agency consultation, as required
4. Details regarding submission of permit applications to TRCA.	4. Receipt of information acknowledged. Permits will be sought during Detail Design; however, ongoing consultation will occur to ensure TRCA's involvement with key design decisions during Preliminary Design and to identify relevant permit requirements.	4. Apply for permits and undertake any additional consultation required towards finalizing mitigation measures and addressing permit requirements
Appendix A	**Appendix A**	**Appendix A**
1. Digger crayfish (*Fallicambarus fodiens*) are present in the hydro corridor immediately upstream of Eastgate Parkway on Little Etobicoke Creek. Please ensure that the proposed alignment considers the fish habitat and wetland assessment so that there will be minimal impacts to the crayfish habitat.	1. Based on the site visit with TRCA staff, it is our understanding that the Digger Crayfish are found along the north edge of the wetland/along the fence line. Given this location is some distance from the proposed alignment is not anticipated that these animals will be directly affected. Potential implications to the adjacent wetland habitat in relation to potential indirect effects will also be considered in the impact analysis, and relevant mitigation measures recommended. A southerly shift in busway alignment is being investigated at the creek crossing, to minimize impact on wetlands and fish habitat.	1. The process of finalizing the design will involve refinement of the impact assessment and mitigation measures to address potential implications to this species and its habitat.
2. Please explore all opportunities to restore fish passage at the existing Little Etobicoke Creek culverts under Eastgate Parkway, including the removal of the existing jersey barriers and weir.	2. Fish passage issues at the existing crossing will be assessed in the course of developing the Preliminary Design for the new crossing, and opportunities to retrofit the existing crossing will be identified regardless of whether it is appropriate to implement them as part of this project. The option of extending the existing culvert rather than building a new busway structure is being explored. If the existing 3-cell structure is extended, the Preliminary Design will be developed to ensure a low flow channel/cell is maintained to facilitate fish passage. It is anticipated that the jersey barriers would be replaced with a more environmentally suitable approach. Also, if the existing structure is extended, the extension will encompass the existing weir; therefore the Preliminary Design will assess opportunities to remove it and accommodate the grade change in a manner better suited to fish passage. However, the weir appears to be integral to the existing structure.	2. Any fish passage improvement developed during Preliminary Design will be refined as appropriate during Detail Design.

Summary of TRCA November 30, 2007 Letter (Contact: Sharon Lingertat) - Input and Action/Response		
Comments	**How Comment Is Being Addressed During Preliminary Design**	**Requirements for Detail Design and Construction Stages for this Project**
3. Please review the attached TRCA Guideline for Watercourse Crossing to ensure the all information requirements (i.e. fluvial geomorphic assessment, hydraulic assessment, etc.) and design considerations are addressed. Given that the EA and Addendum provide little detail with respect to design considerations for the proposed crossings, this information will need to be included with the detailed design submission.	3. We have completed a preliminary fluvial geomorphic assessment of the channel conditions at each existing culvert, however a more detailed analysis may be required for the detail design if the existing structures are under-sized, or being used by the new lanes in Detail Design. We will review the Guideline to determine what if any additional field assessment and specific analyses are required at the Detail Design stage.	3. Complete the necessary work per the TRCA Guidelines and the commitments made at the Preliminary Design stage.
4. At the Little Etobicoke Creek crossing it is noted that the transitway crossing will be an extension to the existing crossing at this location. As per the above noted crossing guidelines, please ensure that the appropriate studies were conducted as part of the detailed design for the existing structure and that copies are included as part of the detailed design submission for review. If the existing structure was not sized appropriately, please consider a replacement structure that adequately addresses the appropriate range of design considerations.	4. We will determine the appropriate culvert size for the existing crossing through the current study. If the existing crossing is determined to be undersized, the City of Mississauga will consider opportunities to address that issue. Any extension or new construction related to the busway will reflect the appropriate culvert size.	4. Design and construct any new BRT-related culvert at Little Etobicoke Creek to the appropriate size.
5. It is noted that there is evidence of existing active erosion at the Little Etobicoke Creek Crossing. Please ensure that measures are included in the design to address this issue.	5. Local and general scour at all proposed watercourse crossings will be evaluated during Preliminary Design. Opportunities for mitigating existing bank erosion in the vicinity of proposed structures, including the active erosion sites observed upstream of the existing Little Etobicoke Creek crossing, will be explored during Preliminary Design to the extent physically, technically and economically practicable. Design concepts for scour protection and any stream restoration works will be formulated and documented.	5. Design and construct bank protection according to the Preliminary Design recommendations and commitments.
6. TRCA has records of Etobicoke Twinleaf (*Jeffersonia diphylla*) near the crossings of Etobicoke Creek at Eglinton Avenue. Please ensure the alignment of the structure at Etobicoke Creek avoids the area where Twinleaf is present.	6. Staff indicated during the site walk that the location of the twinleaf was on the east valley slope upstream of the crossing (the valley slopes adjacent to the road/through the proposed alignment are eroded and little groundcover is present). Therefore it is not anticipated that this species or its habitat will be affected. We will investigate a shift of the busway alignment to as close as possible to Eastgate Parkway, which will have the effect of avoiding the twinleaf location.	6. Avoidance of this species and its habitat will be re-confirmed as needed.
7. Please ensure that a net ecological gain is provided for all disturbed areas. Staff has targeted Eastgate Parkway for a Habitat implementation Plan (HIP) where a natural corridor running east-west may be established between Etobicoke Creek and the Credit Valley watershed. Please explore these opportunities at the detailed design stage.	7. Reasonable and feasible restoration opportunities which would achieve a net ecological gain will be identified during Preliminary Design. Restoration details will then be developed during Detail Design. Specific opportunities as a component of the Eastgate Parkway HIP will be reviewed and discussed with TRCA.	7. The details of the opportunities identified during Preliminary Design will be refined during Detail Design and restoration plans developed as required.
8. Reference is made in the Fish and Fish Habitat Summary Table to the CVC/MMR Sediment Control Guidelines. Please also use the guidelines recently produced for the Greater Golden Horseshoe Area Conservation Authorities (Erosion and Sediment Control for Urban Construction [2006]). This document can be downloaded at www.sustainabletechnologies.ca.	8. Reference will be updated in the text. As part of the Preliminary Design for the BRT, erosion potential will be evaluated in areas along the BRT corridor, concerns with respect to sedimentation in features of the natural environment receiving drainage from the transitway will be identified, and recommendations will be made to guide the preparation of a Erosion and Sediment Control Plan as part of future Detail Design. Recommendations will include a shortlist of both vegetative and structural control measures that can feasibly be implemented during construction.	8. Reference will be made to the updated reference. Using guidelines set forth in the document entitled Erosion and Sediment Control for Urban Construction, an Erosion and Sediment Control Plan will be prepared and circulated to all regulatory agencies having jurisdiction at the time of Detail Design for the transitway.
9. The tables indicate that a comprehensive stormwater management (SWM) plan will be prepared as part of the detailed design. The following TRCA SWM criteria applies to this project. • Water Quality Control: Level 1 Enhanced • Water Quantity Control: 2 to 100 year control required for the Little Etobicoke Creek Watershed, quantity control not required for other areas. • Erosion Control. 25 mm detention for 48 hours (or for maximum duration feasible) Please also note that there is an existing SWM pond on the Bell Mobility	9. The Preliminary Design study will present a comprehensive surface water conveyance and management strategy formulated to provide guidance for the future Detail Design. Alternative storm water management measures will be screened to identify measures that can feasibly be implemented to mitigate potential surface water related impacts associated with the construction of the BRT system. To the extent technically, physically, and economically practicable, opportunities for utilizing existing storm water management measures, such as the Bell Mobility SWM pond, will be explored. Within the TRCA's jurisdictional area, the prescribed TRCA SWM criteria will be used in combination with recommendations of the Ministry of the Environment's *Stormwater Management Planning and Design Manual* to establish design requirements for drainage conveyance and management works. Design concepts for key storm water management measures will be documented.	9. Following from recommendations of the Preliminary Design report, detail design of all surface water conveyance and management measures will be completed. The final design circulated to the TRCA and other regulatory agencies having jurisdiction will provide detail sufficient for confirming that the final design is consistent with the approved Preliminary Design. Once all agency concerns have been adequately addressed, the storm water management strategy will be implemented in accordance with all applicable approval conditions.

Summary of TRCA November 30, 2007 Letter (Contact: Sharon Lingertat) - Input and Action/Response		
Comments	**How Comment Is Being Addressed During Preliminary Design**	**Requirements for Detail Design and Construction Stages for this Project**
site, located just west of the proposed Etobicoke Creek crossing. There may be potential to retrofit this facility to accommodated local drainage from the transitway project.		
10. a) The vegetation and Wildlife Summary Table, EA Commitments to Future Work, states that there will be compensation for wetlands loss per CVCA practice. As this area is located within TRCA's jurisdiction please revise to read, "…per TRCA practice". b) TRCA staff recommends reviewing the alignment such that impacts to the existing natural environment are minimized to the extent possible.	10. a) Text will be revised to TRCA from CVCA were applicable. b) A key component of the mitigation measures will be to review the alignment and proposed design approaches to minimize potential natural environmental impacts to the extent possible. As mentioned above (Item 1 in Appendix A), a southerly shift in BRT alignment is being investigated at the Little Etobicoke Creek crossing, to minimize impact on wetlands. However, there are many constraints on / limited opportunities on the alignment and limited ability to make significant revisions to it.	10. a) n/a b) Alignment will be set at the Preliminary Design stage
11. For direction during detailed design please reference the attached TRCA Post Construction Restoration Guidelines and the TRCA Native Flora List.	11. The Guideline will be reviewed during preparation of the Preliminary Design recommendations for planting and restoration	11. The Guideline will be reviewed during preparation of the final planting and restoration plan.

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NOTES OF MEETING - REVISED

PROJECT: Mississauga Bus Rapid Transit (BRT) Facility

FILE NO.: 07-3272

DATE: March 19, 2008 **TIME:** 1:30 p.m.

PLACE: McCormick Rankin Corporation, Mississauga

PRESENT:

Liam Marray	Credit Valley Conservation
Allan Newell	Credit Valley Conservation
Sharon Lingertat	Toronto and Region Conservation Authority
Scott Smith	Toronto and Region Conservation Authority
Brad Stephens	Toronto and Region Conservation Authority
Patricia Lewis	Toronto and Region Conservation Authority
Geoff Wright	City of Mississauga
Brian Smith	City of Mississauga
Eugene Furgiuele	City of Mississauga
Mike Sone	GO Transit
Muyiwa Adebayo	GO Transit
Steve Schijns	McCormick Rankin Corporation
Darrell Wunder	McCormick Rankin Corporation
Kate Macnaughton	McCormick Rankin Corporation
Anne MacMillan	Ecoplans Limited
Kim LeBrun	Ecoplans Limited
Erin Eldridge	Ecoplans Limited
Mike Bricks	Ecoplans Limited
Katie Bright	Ecoplans Limited

PURPOSE: To discuss the design, potential environmental effects and proposed mitigation measures.

The following notes provide an overview of the meeting.

ITEM	PROCEEDINGS:	ACTION BY:
1.0	**Introductions**	
1.1	Roundtable introductions occurred.	
2.0	**Project Overview and Status**	
2.1	M. Bricks provided an overview of the project including the completion of the original 1992 Environmental Assessment (EA) and the 2004 EA Addendum. The current project represents Phase I of the capital works and includes BRT West (Winston Churchill Boulevard to Erin Mills Parkway) and BRT East (Centre View Drive to Renforth Station). The portion of the Mississauga BRT facility between BRT East and BRT West (i.e. along Highway 403) is currently operational along the existing Highway 403 bus bypass lanes.	

ITEM	PROCEEDINGS:	ACTION BY:

It was noted that GO Transit is responsible for the design and construction of the BRT West and the City of Mississauga is responsible for the design and construction of the BRT East; however, the City of Mississauga is coordinating the Preliminary Design of both sections.

M. Bricks explained that the previous EA work provided a conceptual design for BRT East and BRT West. The current Phase I project will bring the design for BRT East and BRT West to a Preliminary Design level of detail. In addition, the Project Team is pursuing a decision under the Canadian Environmental Assessment Act (CEAA). Transport Canada and Infrastructure Canada are triggered under CEAA as they are providing funding for Phase I of this project. Transport Canada is coordinating the CEAA Screening process. If it is determined that any of the works will result in a the harmful alteration, disruption or destruction of fisheries habitat (HADD) the Department of Fisheries and Oceans (DFO) will become a Responsible Authority and as a result will need to sign-off on the CEAA Screening. It will be important to determine in the near future if DFO will be a Responsible Authority. As a result, based on the information presented at this meeting the Conservation Authorities will be requested to provide a timely response regarding whether or not the proposed works are anticipated to result in a HADD. Specific permits will be obtained during Detail Design.

G. Wright explained that construction of Phase I of the project is to commence in 2009 with completion scheduled for 2012. As a result, CEAA approval and completion of Preliminary Design must be completed as soon as possible in 2008. Due to funding, the project schedule is not flexible.

3.0 Review of Preview Meeting Notes

3.1 K. Bright reviewed the previous meeting notes. The following outlines outstanding action items:

- TRCA to provide updated hydraulic model. MRC has received modelling from 1987; however, the updated model is required as the 1987 model does not reflect current conditions (i.e. structures). P. Lewis indicated that the new model is being completed by TSH and that the model will reflect current conditions. TRCA is expecting a draft submission within a week and will provide MRC with information as soon as possible. — TRCA
- MRC to provide fluvial geomorphological input to TRCA for Little Etobicoke Creek. The information will be provided as part of a drainage/stormwater management reporting. — MRC
- D. Wunder to schedule a field visit with CVC. — MRC

4.0 Natural Environment Features, Potential Environmental Effects and Proposed Mitigation

4.1 Natural environment features were reviewed with reference to the information tables distributed prior to the meeting as well as fieldwork data plates and aerial photo mapping of the study area.

ITEM	PROCEEDINGS:	ACTION BY:
4.2	<u>BRT West (CVC jurisdiction)</u> A. MacMillan provided a brief overview of the terrestrial features within the BRT West study area. There are no watercourses within BRT West. In general, the study area is highly disturbed and effects will be limited to edge impacts to 'culturally' influenced features (cultural meadow and succsessional vegetation). However she did note that the area along the north side of Highway 403 is part of the east-west 'Linkage' system identified by the City/CAs, Based on the low representation of habitat on the landscape generally the area provides some local function. It is anticipated that the terrestrial effects of the project will be limited in general, based on the vegetation and habitat. Standard construction mitigation measures will be employed to address and minimize the effects. B. Stephens agreed that although the BRT West vegetation units provide some ecological function it is recognized that the features are highly disturbed.	
4.3	<u>Renforth Creek (TRCA jurisdiction)</u> A. MacMillan provided an overview of the creek features and noted that Renforth Creek appears to be a fairly minor and disturbed feature. Most of the upstream flow appears to be diverted. A small pocket of cattail mineral meadow marsh is located along the south side of Renforth Drive west of Eglinton Avenue, however there is no flow path evident through it. A ditched channel system extends through the manicured area, but it appears to end at the subdivision, so the whole system is effectively isolated. The current design has a parking lot in that location; however, the design is being reviewed for opportunities to move the parking lot. B. Stephens explained that the marsh may not be considered a 'wetland' under the Conservation Authorities Act. A. MacMillan and B. Stephens will review whether or not the marsh should be considered a wetland, based on TRCA's criteria used to define a wetland. If it is not a wetland a permit under TRCA's *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses, Ontario Regulation* will not be required. However, B. Stephens noted that the marsh does provide some local function so compensation will be required if it is affected. Similarly, he noted that the 'riparian vegetation' north of the road also provided a local function and compensation should be considered if it is impacted. It was agreed that compensation for works in the Renforth Creek area may be best completed in another location where enhancement works may be more beneficial. B. Stephens inquired as to where Renforth Creek flows. D. Wunder indicated that it is not clear but that it seems to inlet at a stormsewer and travel under the nearby subdivision. [*Post-Meeting Note: City of Toronto staff have subsequently informed K. Macnaughton that they have no drawings/information showing a sewer connection from Renforth Creek to the*	Ecoplans/ TRCA

ITEM **PROCEEDINGS:** **ACTION BY:**

subdivision immediately south. It is possible that Renforth Creek is connected by storm sewer to the development on the south side of Eglinton Avenue (north of the hydro corridor), but this is a private development as such the City does not have any information for sewers at this site.]

B. Stephens indicated that works at this location would not require Authorization under the Fisheries Act and would be covered under a Letter of Advice.

K. Macnaughton explained that with the current design attempts were made to provide onsite control with storage in the parking lot. The intent is to use flat bottom swales (preferred) or oil grit separators and with drainage back into the system. B. Stephens noted that if it is determined that the 'creek' is not a watercourse it would be acceptable to enhance/modify the existing channel to provide water quality and quantity control.

4.4 Elmcrest Creek (TRCA jurisdiction)

A. MacMillan provided an overview of the creek features and noted that Elmcrest Creek appears to only support indirect fish habitat, and it is quite disturbed. The proposed works include the addition of a new pipe to collect drainage that will be cut off by the construction of the busway. The existing culvert under Eglinton Avenue no longer conveys flow from north of Eglinton Avenue to Elmcrest Creek. Flows from upstream (i.e. north) of Eglinton are now picked up by storm sewers and conveyed to Etobicoke Creek via the Eglinton Avenue storm sewer. As such, construction of the BRT will not impact flows to Elmcrest Creek.

S. Lingertat explained TRCA's regulated area north across Eglinton Avenue to a point that is just south of the proposed works. D. Wunder indicated that the busway work as currently proposed does not encroach on the regulated area.

B. Stephens indicated that works at this location would not require Authorization under the Fisheries Act and would be covered under a Letter of Advice.

4.5 Sediment and Erosion Control

S. Lingertat and B. Stephens noted that sediment and erosion control will be of particular interest to TRCA. TRCA has new guidelines regarding sediment and erosion control and is focusing on ensuring that during Detail Design the plans and contracts outline appropriate mitigation measures while acknowledging the need for flexibility to upgrade or revise mitigation should the mitigation fail to sufficiently control sedimentation and erosion. D. Wunder acknowledged TRCA's interests and explained that during Preliminary Design areas of concern will be identified, proposed mitigation measures developed and that mitigation measure will be refined as appropriate during Detail Design. A. MacMillan explained that standard construction mitigation measures (e.g. clearing restrictions, sediment and

ITEM	PROCEEDINGS:	ACTION BY:
	erosion control, best management practices) will be added as a list at the end of the summary tables and documented in the CEAA Screening Report.	Ecoplans

4.6 Etobicoke Creek (TRCA jurisdiction)

A. MacMillan provided an overview of the creek features and noted that the Etobicoke Creek Valley provides an important natural corridor. TRCA has noted a colony of the regionally rare Twinleaf, as well as a range of locally rare vegetation and bird species. The Twinleaf is located approximately 200m north of the structure. The City of Mississauga has noted Butternut trees in the general area. TRCA mapping does not indicate the presence of Butternut. Due to the timing of Ecoplans' field visit (late fall) the presence of Butternut could not be confirmed. A commitment will be made to undertake a field survey during Detail Design to confirm the presence/location of Butternut in the area of impact, as well as any other species of interest. However, since the area adjacent to Eglinton was disturbed to construct the Eglinton Avenue trunk storm sewer outlet, the edge area is unlikely to support any of the more sensitive species.

The design at Etobicoke Creek had a new structure over the creek in close proximity to the existing Eglinton Avenue structure (on piers). To reduce environmental effects the design has been revised to widening the existing Eglinton Avenue structure by approximately 5 meters. Since the existing pier is located on a concrete base along the concrete slope from the abutment, the extension would not actually cover any stream bed.

S. Schijns explained that the existing piers will be extended to accommodate the widening. M. Bricks explained that although the design is proceeding with the widening, approval is required from the City of Toronto as they own the structure. City of Toronto staff have indicated support for the widening but the formal approval is still pending.

B. Stephens indicated that given the existing information (piers located outside the watercourse) the works at Etobicoke Creek will not be considered a HADD and will be covered under a Letter of Advice.

D. Wunder noted that Etobicoke Creek is one of the structures that is not up-to-date in TRCA's 1987 model. P. Lewis explained that the new model would reflect the current structure.

D. Wunder explained that it is his understanding that the current structure does not have deck drains that actively discharge runoff directly to the creek. This will be confirmed. In the event that functional deck drains are found, opportunities for disconnecting the drains or directing runoff to the overbanks will be explored. K. Macnaughton explained that gravity can be employed for drainage but that opportunities for attenuation are very limited. Water quality will be addressed through the use of oil grit separators.

ITEM	PROCEEDINGS:	ACTION BY:
	TRCA staff confirmed that no water quantity control will be required for Etobicoke Creek. D. Wunder indicated that quantity control may still need to be considered to mitigate potential local flooding along and within the BRT corridor.	
4.7	Cultural Woodland – Northeast of Eastgate Parkway (TRCA jurisdiction) A. MacMillan explained that the small pocket of vegetation northeast of Eastgate Parkway in front of the TD Bank is dominated by a variety of comment and tolerant tree and shrub species. Although portions of the vegetation unit indicate that some of the vegetation may have been planted as part of past landscaping efforts, other vegetation has colonized the area. It was agreed that compensation for the loss of this woodland would be best completed in another location where enhancement works may be more beneficial.	
4.8	Little Etobicoke Creek (TRCA jurisdiction) A. MacMillan provided an overview of the creek features and noted that the Little Etobicoke Creek provides warmwater habitat for tolerant fish species. At the previous meeting, it was anticipated that the BRT alignment and creek crossing would be on a separate structure at a new location upstream of the existing crossing. However, the design has been revised to pull the alignment up tight to the existing road to avoid the wetland immediately east of the creek, and to provide opportunities to address the existing limitations and issues associated with the existing structure. The proposed design would extend the existing three-cell box culvert by approximately 13 meters to the north (upstream). This design also enables removal of the existing New Jersey barrier and the low weir that presently affects fish movement, and re-design of a properly functioning low flow channel. The end result would be an improvement from the existing conditions.	
	E. Furgiuele suggested that the D. Wunder should contact the City's Transportation and Works department to assist in determining why the New Jersey barrier has been place at Little Etobicoke Creek. E. Furgiuele will provide D. Wunder with an appropriate contact.	City
	E. Furgiuele inquired about consideration for creating a pedestrian walkway using the exiting culverts. S. Schijns indicated that it may be technically feasible; however, the decision would rest with the City of Mississauga and the pedestrian walkway may not be implemented as part of the BRT works. S. Schijns will note this opportunity at future meetings with Planning and/or Transportation and Works staff.	MRC
	D. Wunder enquired as to whether the TRCA had a standard specifying what design flow should be considered when siting pedestrian trails in the floodplain (i.e. what return period flood level should be used to set the elevation of the trail). The TRCA indicated that they did not have such standards at this time. E. Furgiuele indicated that the City of Mississauga has used culverts for pedestrian passage in numerous locations and as a result	

ITEM	PROCEEDINGS:	ACTION BY:
	likely has standards or policies about such use.	
	P. Lewis inquired as to what fluvial geomorphological works have been completed for Little Etobicoke Creek. D. Wunder explained that preliminary works have been undertaken but that more detailed works will be completed during Preliminary Design. Fluvial geomorphological information will be documented as part of the drainage/stormwater management reporting to be provided to for TRCA's review.	MRC
	B. Stephens inquired as to how fish will pass under low-flow conditions. K. LeBrun confirmed that with the existing conditions fish, the New Jersey barrier directs most of the flow through the low flow channel, so fish movement is possible through the low flow cell when there is sufficient flow. The low weir upstream of the structure does pose a barrier to fish movement under lower flow conditions. However, it will be removed as part of the design of the extended structure. A. MacMillan indicated that since the drop/grade change at the weir is relatively small, the channel can be designed using rocky riffles or similar elements to accommodate the grade change and improve fish movement opportunities. B. Stephens noted that those additional works would be appropriate but that it would be necessary to ensure that the additional design revisions (grading, rocky ramp) would function well otherwise the efforts would be better focused on a different location.	
	B. Stephens indicated that he would like to revisit this area again during a follow-up field visit. D. Wunder will schedule the follow-up field visit.	MRC
	B. Stephens indicated that based on the proposed design and assuming that it will function properly, the works at Little Etobicoke Creek would not be considered HADD and would be covered under a Letter of Advice.	
	S. Lingertat inquired as to whether or not the extension would result in increased flood levels. D. Wunder confirmed that based on the 1987 hydraulic model (with some assumptions to include the current structure) it appears that there are no concerns. This will be confirmed once the updated model is available. D. Wunder noted that some flood-proofing may be required for the BRT at this location.	MRC
	B. Stephens indicated that all reasonable alternatives should be considered (e.g. single span structure). Ecoplans explained that other alternatives were reviewed, but that based on the effort to avoid the wetland and to 'fix' the existing flow issues (remove the weir and New Jersey barriers, etc.), the proposed design was considered a better option overall. They confirmed that if a new structure was constructed upstream of the existing structure, the existing structure would not be modified. It was acknowledged that a single span structure would not improve the downstream conditions, and would affect a large portion of the wetland. The proposed design avoids the wetland, and enables removal of the existing New Jersey barrier and the low weir that presently affects fish movement, and enables re-design of a properly	

ITEM	PROCEEDINGS:	ACTION BY:
	functioning low flow channel. The end result would be an improvement from the existing conditions. As a result, the proposed extension is overall, a better solution. Ecoplans and MRC will ensure that the rationale for the selected design is included in the CEAA Screening Report.	Ecoplans/ MRC
	A. MacMillan noted that efforts will be made to minimize encroachment of into the cattail mineral marsh to the northeast side of the creek. That marsh is known to contain Chimney Crayfish; however, the Chimney Crayfish are within the north portion of the marsh and should not be impacted by the proposed works. B. Stephens explained that Chimney Crayfish are sensitive to waterlevel fluctuations. As a result, it is important that the waterlevel in the north section of the marsh remain unaltered. A. MacMillan indicated that MRC/Ecoplans would review available geotechnical information to assess how the surface water in the wetland is supported, and highlight this potential issue for further review during Detail Design.	Ecoplans/ MRC
	K. Macnaughton explained that to the west it may be possible to have a stormwater management facility at the northeast corner of Tomken Road and Eastgate Parkway. In general, stormwater management facilities will be implemented; however, where that is not possible oil grit separators will be employed.	
	K. Macnaughton inquired if it would be acceptable to outlet into Little Etobicoke Creek as the only other option would be the marsh and that would affect the Chimney Crayfish. B. Stephens agree that outletting to Little Etobicoke Creek, with advance quality treatment, would be acceptable in order to avoid impacting the Chimney Crayfish. S. Lingertat noted that it may be possible to ditch between the marsh towards the creek. D. Wunder noted that ditching is a possibility and that the local clay soils would help retain drainage within any ditches. B. Stephens indicated that discharging to the wetland east of Etobicoke Creek should be avoided.	
	In response to a question from K. Macnaughton, B. Stephens indicated that it would be acceptable to discharge treated stormwater into the reed canary grass mineral meadow marsh west of the creek. That would only occur if it is feasible to locate a stormwater management facility to the northeast.	
4.9	Habitat Improvement Program Area (TRCA jurisdiction) A. MacMillan provided an overview of the Habitat Improvement Program (HIP) Area to the north of Cawthra Road and west of Eastgate Parkway. The HIP area is predominately a cultural meadow with various pockets of meadow marsh. Based on input from E. Furgiuele the southwest corner of the HIP Area is thought to be a relatively undisturbed cattail mineral meadow marsh.	
	The current design has a parking lot located at the southwest corner of the HIP Area. MRC is exploring opportunities to relocate the parking lot to avoid removing the cattail mineral marsh. It was noted that consideration will be	

ITEM	PROCEEDINGS:	ACTION BY:
	given to the overall effects of relocating the parking lot as the relocation would result in increased edge effects by encroaching into the middle of the unit. B. Stephens suggested that this site should be visited during a follow-up field visit. During the field visit the marsh conditions will be assessed to provide input towards and design refinements. B. Stephens noted that the rationale for the parking lot location should be included in the CEAA Screening Report.	
4.10	Off-Site Compensation S. Lingertat indicated that the HIP Area would be an ideal location for compensating enhancement/restoration works. M. Bricks explained that the City would only be able to complete works on property owned by the City. The majority of the BRT right-of-way is owned by either the Ministry of Transportation or the Ministry of Public Infrastructure Renewal and managed by the Ontario Realty Corporation. As a result, there will be limited opportunities for compensation works within the BRT right-of-way. It was agreed that opportunities should be explore for off-site compensation on property owned by the City or Conservation Authorities. TRCA, CVC and E. Furgiuele will review possible off-site opportunities with consideration for ongoing or planned restoration/enhancement efforts at key locations.	TRCA/CVC/ City
4.11	Cultural Woodland – South of Cawthra Road (CVC jurisdiction) A. MacMillan explained that the cultural woodland located south of Cawthra Road and East of Eastgate Parkway is quite open and disturbed. The current design would result in edge encroachment; however, the design is being reviewed and the encroachment may be reduced. L. Marray indicated that measures will need to be taken to lessen the edge effects and that compensation will be required. A. MacMillan indicated that given its open character, it should not be sensitive to edge effects, since the unit itself is effectively an 'edge'.	
4.12	Deciduous Forest – North of Chalfield Lane (CVC jurisdiction) A. MacMillan explained that the deciduous forest located north of Chalfield Lane and east of Hurontario Street does provide some ecological function but is somewhat disturbed. The design would reduce this unit by approximately 30-40%. E. Furgiuele suggested that off-site compensation should be considered and L. Marray agreed. L. Marray inquired as to how the value of loss will be identified towards determining the required compensation. CVC does have some standards which require the assessment of the quality of the feature. E. Furgiuele indicated that the City of Mississauga has a framework that should be used towards determining value and compensation. E. Furgiuele will forward the framework to L. Marray and A. MacMillan. It was agreed that the framework should be reviewed and then the value determined as part of the upcoming field visit.	City

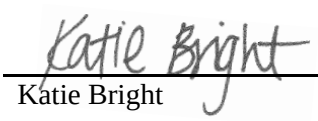
ITEM	PROCEEDINGS:	ACTION BY:
4.13	Eastern Tributary of Cooksville Creek (CVC jurisdiction) A. MacMillan explained that only a short section of the eastern tributary of Cooksville Creek upstream of the highway is open channel; the balance of the channel further upstream, as well as through and downstream of the right-of-way is piped. S. Schijns explained that the open section of the channel will not be directly impacted during construction since the right-of-way will be to the south (downstream) where the channel is already enclosed. As a result, it is anticipated that standard mitigation measures (e.g. erosion and sediment control, temporary flow passage) will employed to mitigate any potential indirect impacts to the watercourse.	
4.14	Cooksville Creek (CVC jurisdiction) A. MacMillan provided an overview of the creek features and noted that Cooksville Creek does not directly support fish use; however, it could be considered to support indirect fish habitat. The current proposal should enable retention of an open system in some form. S. Schijns provided an overview of the design requirements during Phase I and Phase II. Although the Preliminary Design is only addressing Phase I there is a need to review Phase II to ensure that the Phase I ('interim') design will work with future plans. D. Wunder presented some working plans and provided an overview of the current drainage challenges in the area and proposed plans for Phase I and Phase II. The working plans are attached to these meeting notes. S. Schijns explained that some design refinements have been reviewed to provide an improved design for the busway during Phase I. Those design refinements would require the realignment (retaining the current length) of Cooksville Creek and as a result thought would need to be given to how much work should be advanced to Phase I to avoid addition impacts and costs during Phase II. L. Marray and A. Newell explained that CVC is not opposed to the realignment either during Phase I or Phase II. As a result, MRC will review and optimize the design during Phase I and Phase II. The updated design will be provided to CVC in advance of a field visit.	MRC
	L. Marray indicated that the realignment of Cooksville Creek would be considered HADD, based o his current understanding of DFO's position on channel realignments. A. MacMillan noted that recent DFO direction regarding channel realignment is that realignment is not automatically considered HADD. Given the low sensitivity of the habitat and residual scale of negative effect, particularly if the realigned channel is the same as the original channel length, the realignment should not require authorization. A. MacMillan and L. Marray will discuss this with Dave Gibson (DFO).	CVC/ Ecoplans

ITEM	PROCEEDINGS:	ACTION BY:
5.0	**Next Steps**	
5.1	MRC will work on design refinements as discussed at this meeting. The design refinements will be communicated to TRCA/CVC and plans provided as appropriate.	MRC
5.2	TRCA will review the summary tables and provide comments within the next few weeks. The summary tables will then be updated and the information included in the CEAA Screening Report.	TRCA
5.3	D. Wunder will schedule a field visit with TRCA and a field visit with CVC.	MRC
5.4	K. Macnaughton will send TRCA and CVC drawings and a summary describing the proposed stormwater management measures.	MRC

The forgoing represents the writer's understanding of the major items of discussion and the decisions reached and/or future actions required. If the above does not accurately represent the understanding of all parties attending, please notify the undersigned immediately upon receiving these minutes (905-823-4988).

Minutes Prepared by:

Ecoplans Limited



Katie Bright

cc: Attendees
Dave Gibson, Department of Fisheries and Oceans
Rebecca Stranberg, Transport Canada
Kaarina Stiff, Transport Canada
Rachel Parkin, Transport Canada
Willy Ing, City of Mississauga
Scott Anderson, City of Mississauga
Dale Turvey, McCormick Rankin Corporation
David Waverman, Ecoplans Limited

TORONTO AND REGION Conservation
for The Living City

April 4, 2008 CFN 39971

BY MAIL AND EMAIL (mbricks@ecoplans.com)

Mr. Mike Bricks
Ecoplans Limited
2655 North Sheridan Way, Suite 280
Mississauga, ON L5K 2P8

Dear Mr. Bricks:

Re: Response to Notice of Public Information Centres
Mississauga Bus Rapid Transit (Eastgate Parkway at Highway 403 to Eglinton Avenue at Renforth Drive)
Etobicoke Creek; City of Mississauga; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received notice of the upcoming Public Information Centres (PIC) scheduled for April 8, 2008 and April 9, 2008. Further to TRCA correspondence dated November 30, 2007, staff has expressed interest in this project. While staff is unable to attend the meetings, please forward one copy of any handouts or display materials from this meeting for our files.

Yours truly,

Sharon Lingertat

Sharon Lingertat
Planner II, Environmental Assessments
Planning and Development

SL/

BY EMAIL
cc: Geoff Wright, City of Mississauga (geoff.wright@mississauga.ca)
Beth Williston, TRCA, Manager, Environmental Assessments
Quentin Hanchard, TRCA, Manager, Development Planning and Regulations
Chandra Sharma, TRCA, Etobicoke/Mimico Watershed Specialist

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TORONTO AND REGION Conservation
for The Living City

April 25, 2008

CFN 39971
x ref CFN 23800

BY MAIL AND EMAIL (mbricks@ecoplans.com)

Mr. Mike Bricks
Ecoplans Limited
2655 North Sheridan Way, Suite 280
Mississauga, ON L5K 2P8

Dear Mr. Bricks:

Re: Response to Meeting Notes and Handouts
Mississauga Bus Rapid Transit (Eastgate Parkway at Highway 403 to Eglinton Avenue at Renforth Drive)
Etobicoke Creek Watershed; City of Mississauga; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff attended a meeting on March 19, 2008 at the McCormick Rankin Corporation offices to discuss the preliminary design. Staff has reviewed the Notes of Meeting received on March 28, 2008, along with the handouts noted below. Comments are provided in Appendix A.

- Fish and Fish Habitat Summary Table (March 18, 2008)
- Vegetation and Wildlife Summary Table (March 18, 2008)
- Mississauga BRT East – Plates 2 to 7

It is understood that the Phase 1 construction is expected to commence in 2009. Please ensure that the 60% detailed design is submitted to the undersigned, as soon as possible, to ensure that the review can be completed in a timely manner. At the detailed design stage, please provide the following:

- Six (6) INDIVIDUALLY folded copies of the plans
- Four (4) copies of supporting reports or documentation
- Signed permit application(s)
- Review fee(s) ($2,400 for each permit application)

Please ensure that all required information is included with your submission(s). Should you have any questions please contact me at extension 5717 or by email at slingertat@trca.on.ca.

Yours truly,
Sharon Lingertat
Sharon Lingertat
Planner II, Environmental Assessments
Planning and Development

SL/
Encl: Storm Outfall and Outfall Channel Design Criteria
Standard Detail: Wetland Outflow Channel

BY EMAIL
cc: Willy Ing, City of Mississauga (willy.ing@mississauga.ca)
Scott Anderson, City of Mississauga (scott.anderson@mississauga.ca)
Katie Bright, Ecoplans (kbright@ecoplans.com)
Carolyn Woodland, TRCA, Director, Planning and Development
Quentin Hanchard, TRCA, Manager, Development, Planning and Regulations
Chandra Sharma, TRCA, Etobicoke/Mimico Watershed Specialist

5 Shoreham Drive, Downsview, Ontario M3N 1S4 (416) 661-6600 FAX 661-6898 www.trca.on.ca
Member of Conservation Ontario

APPENDIX A

Wetlands North of Eastgate Parkway and East of Cawthra Road

1. The minutes do not refer to the Regulated Area located north of Eastgate Parkway and east of Cawthra Road. This area is considered wetland and will also require a permit under Ontario Regulation 166/06. Please ensure that this area is considered when preparing the detailed design plans.

Little Etobicoke Creek Crossing

2. The proposed works at the Little Etobicoke Creek crossing may involve flood plain re-grading in order to maintain existing flow conditions (i.e., low flow through the east cell). Please ensure that a detailed grading plan is provided, along with sections to show the extent of work in this area. Please note that the volume of fill to be placed in the floodplain should be minimized to the extent possible. In addition, please ensure that these changes are reflected in the hydraulic analysis for this crossing.

3. The handouts mention removing several existing in-stream barriers, and enhancing channel stability. Please ensure that natural channel design principles are followed, and that design drawings and supporting technical information is submitted for review.

4. It was noted at the last meeting that a Stormwater Management (SWM) pond is being considered, to provide the required level of control. Please ensure that design details and plans are submitted for review and that the SWM facilities are located outside of the Regional Flood Plain.

5. Section 4.8 of the meeting minutes indicates that the rationale for the selected design will be discussed/documented in the CEAA screening report. Please ensure that part of that documentation includes the supporting background studies/analyses (i.e., hydraulic modeling, fluvial geomorphic studies, etc.) undertaken as part of the decision-making process.

6. Section 4.8 of the meeting minutes refers to the cattail marsh on the northwest side of Little Etobicoke Creek, which contains Chimney Crayfish. To avoid confusion in the future, please revise to read northeast side.

Cultural Woodlot

7. Regarding the small pocket of vegetation discussed in Section 4.7 of the meeting minutes, please ensure that this community is defined in the preliminary design documents, to allow for a comprehensive understanding of the vegetation impacts and removals along the BRT alignment.

Etobicoke Creek

8. Please make every effort to redirect deck drainage to a suitable location, and avoid direct outlet to the watercourse. In addition, TRCA staff encourages any possible enhancements to existing infrastructure (i.e., existing outlet).

9. The Fish and Fish Habitat Summary Table notes that standard MTO Erosion and sediment control plans will be used at the creek crossings. Please refer to the TRCA "Erosion and Sediment Control Guideline for Urban Construction" (December 2006) for proper ESC measures and details. A digital copy of the guideline can be found at www.sustainabletechnologies.ca.

10. Section 4.6 of the meeting minutes notes that the works at Etobicoke Creek will not be considered a HADD. Please revise to state that given the existing information (piers located outside of the watercourse) that those works will not be considered a HADD, and will be covered by a Letter of Advice.

Southwest Corner of Eglinton Avenue and Centennial Park Boulevard

11. A Regulated Area is located on the southwest corner of Eglinton Avenue and Centennial Park Boulevard. If any works are proposed within this area, a permit under Ontario Regulation 166/06 will be required.

Elmcrest Creek

12. It is noted that a new sewer pipe will be constructed to collect existing drainage at the location of Elmcrest Creek. Please confirm whether this is major system flow, as it is suggested that minor system flows have been previously diverted. Design details (drainage area plan, flow calculations, etc.) pertaining to the proposed conveyance system will need to be submitted for review. In the event that a new outlet is required, please refer to the TRCA Storm Outfall Design Criteria which outlines TRCA requirements (attached).

13. The Fish and Fish Habitat Summary Table notes that standard MTO Erosion and sediment control plans will be used at the creek crossings. Please refer to the TRCA "Erosion and Sediment Control Guideline for Urban Construction" (December 2006) for proper ESC measures and details. A digital copy of the guideline can be found at www.sustainabletechnologies.ca.

Renforth Creek

14. The engineering requirements for this location will vary depending on whether or not the feature is deemed to be a watercourse. If it is a watercourse, then it is assumed to have an associated floodplain and therefore, appropriate fluvial geomorphic, hydraulic and flood plain analyses will also be required as per the other crossings.

    If the feature is not deemed to be a watercourse, the proposed works will need to be designed such that the existing overland flow routes are maintained, similar to the Elmcrest Creek location.

    In either case, please investigate if there are future plans to develop the vacant lands to the north of the proposed BRT. Any flow calculations will need to be based on the ultimate development scenario.

15. The Fish and Fish Habitat Summary Table notes that standard MTO Erosion and sediment control plans will be used at the creek crossings. Please refer to the TRCA "Erosion and Sediment Control Guideline for Urban Construction" (December 2006) for proper ESC measures and details. A digital copy of the guideline can be found at www.sustainabletechnologies.ca.

General

16. Section 3.1 of the meeting minutes refers to the updated hydraulic model. TRCA has recently updated the Etobicoke Creek Hydrology model and is in the process of updating the watershed hydraulic model. Staff will provide a copy of the updated model, as soon as it is available.

17. It is noted that some background information has been completed (i.e., fluvial geomorphic assessment, preliminary hydraulic analyses); however, the details of this information has not been provided. Please provide this information at the preliminary design stage so that a determination can be made as to potential impacts that may affect the detail design of the proposed structures.

Storm Outfall and Outfall Channel Design Criteria:

Engineering:

1. Avoid disturbance to the low flow channel of the watercourse if at all possible. Where erosion protection may be necessary, make use of granular filter layers beneath the larger stone as required and/or embed the stone - the use of filter cloth within the low flow channel of the watercourse is not acceptable and is not preferred within the outfall channel itself. Please note that potential DFO / fishery concerns can be minimized by avoiding in/near water works associated with the outfall.

2. Provide velocity calculations in support of all proposed treatment types (eg., stone, vegetation, etc.).

3. Where feasible, implement flow spreading measures downstream of the outfall once energy has been dissipated by chute blocks, etc. (i.e., in areas where there is a wide, flat floodplain between the outfall and the low flow channel).

4. Provide details of erosion and sediment control measures to be implemented during the construction period.

5. Locate the outfall channel such that it joins the watercourse at a flat angle; avoid the outside bends of meanders.

6. If at all possible, the outfall should be located outside the meander belt.

7. The outfall structure should not impact existing flood levels.

8. River run stone is generally preferred over riprap, particularly in areas with high quality habitat. Consult with Authority staff to determine when/where riprap may be acceptable.

Landscaping / Restoration:

1. A combination of trees, shrubs, and herbaceous vegetation is typically required for the restoration of disturbed areas. Ensure all plantings are native, non-invasive species, and are suitable given the soil, moisture, and light conditions of the site. Plantings should also be compatible and complementary to the existing vegetation communities.

2. In general, plantings should follow the standard densities of 1 metre on centre for shrubs and 5 metres on centre for trees. However, these guidelines may change depending on the situation (eg., increase densities for live staking).

3. Please indicate that site stabilization will occur during or immediately following construction to avoid erosion. Depending on their suitability, various techniques may be employed including hydroseeding, installing straw mulch or jute mats, etc.

4. Seeding mixtures should consist of quick-growing, non-invasive species. Manufacturers offer an assortment of mixtures that are suited to various conditions, including a slope

stabilization mix, meadow mix, and wetland mix. In particularly sensitive areas, a seed mix consisting entirely of native species should be used to avoid the invasion of aggressive vegetation. Where seeding is proposed for interim stabilization with woody material being introduced in a later phase, care should be taken in both the composition and rate of application. Ensure that the subsequent plantings are able to establish without excessive competition or or damage from small mammals.

5. If the area is very grassy, mulch and rodent guards may be needed to protect young tree stems.

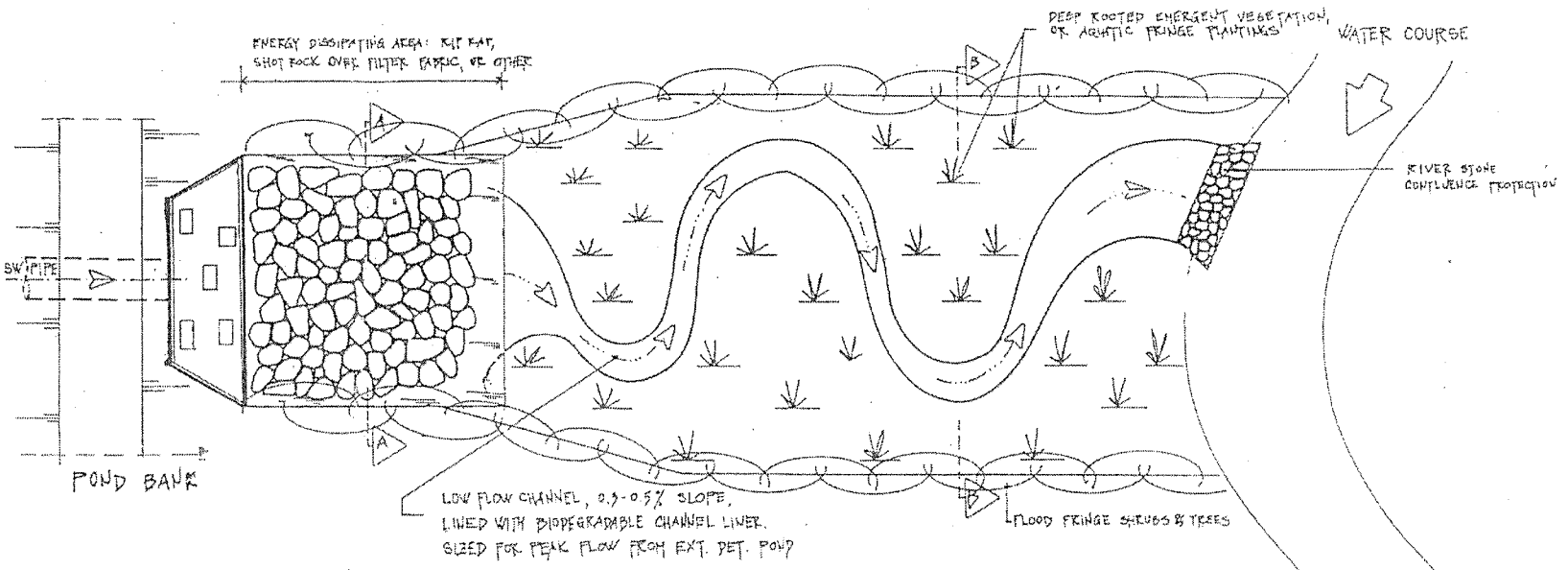
6. There are no size requirements for vegetation to be planted. However, greater numbers of smaller-sized vegetation are generally preferred over fewer numbers of larger-sized vegetation. Planting large vegetation may also cause more disturbance to the site.

7. Indicate how existing vegetation to be retained will be protected (i.e., location and detail of fencing).

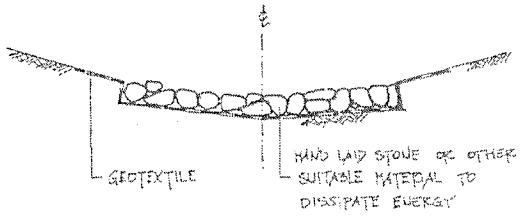
8. Plans should include a plan view showing planting locations, species and numbers, a detail showing the installation, and a note listing the species, size, and condition (i.e., bareroot, potted, etc.). The latter will ultimately dictate the season when works can be done.

STANDARD DETAIL : WETLAND OUTFLOW CHANNEL

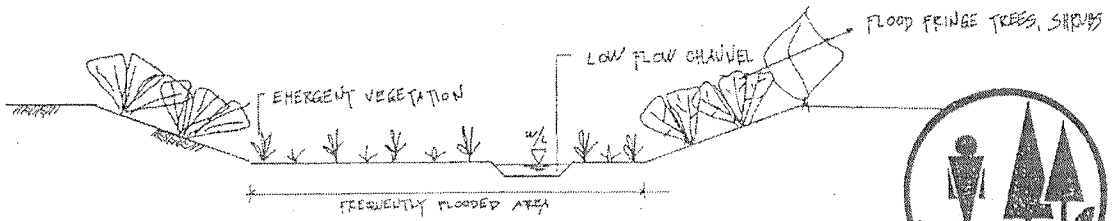
N.T.S.



SECTION 'A-A' N.T.S.



SECTION 'B-B' N.T.S.



L.S.R.C.A. VI/95
V. Sir

TORONTO AND REGION Conservation
for The Living City

May 9, 2008 CFN 40577

BY MAIL AND EMAIL (dave.beattie@earthtech.ca)

Mr. Dave Beattie
Earth Tech (Canada) Inc.
Corbloc Building, 80 King St., 2nd Fl.
St. Catharines, ON L2R 7G1

Dear Mr. Beattie:

Re: Response to Potential Routes (Figure 1)
Hanlan Feedermain (Lakeview Water Treatment Plant to Hanlan Pumping Station and Reservoir)
Municipal Class Environmental Assessment - Schedule C
Etobicoke Creek; City of Mississauga; Peel Region

Toronto and Region Conservation Authority (TRCA) staff met with the Region of Peel and Earth Tech (Canada) on April 1, 2008 to discuss the proposed alternative routes for a new secondary feedermain, as required to meet the Region's future water supply needs. Staff has reviewed Figure 1, Potential Routes, for the section of feedermain located within TRCA's jurisdiction and note the following.

Route	# of Regulated Areas	Location of Regulated Areas
1	2	• Tomken Road, south of Eglinton • Tomken Road at Britannia
2	3	• **Little Etobicoke Creek crossing north of Dundas** • Dixie at Eastgate Parkway • Britannia Road, east of Tomken Road • TRCA property located south of Lakeshore Road E.
2A	3	• **Little Etobicoke Creek crossing north of Dundas** • Dixie at Eastgate Parkway • Britannia Road, east of Tomken Road
3	2	• Tomken Road, south of Eglinton • Tomken Road at Britannia
3A	2	• **Little Etobicoke Creek crossing east of Tomken Road** and Regulated Area between Tomken Road and Dixie along the north side of Eastgate Pkwy. • Britannia Road, east of Tomken Road

Based on a desktop review of the natural features within the area, at this preliminary stage routes 1 and 3 appear to have the fewest impacts as a result of the potential watercourse crossing to the north, while routes 2, 2A and 3A appear to cross Little Etobicoke Creek at locations further downstream, where impacts may be more significant. As a result, routes 1 and 3 are the preferred alignment from our perspective. If it is determined at a later date that the preferred alternative requires a watercourse crossing, directional drilling is typically preferred to open-cut, if geotechnical and hydrogeological conditions support directional drilling. Detailed comments are provided in Appendix A.

Please also note that there are several other projects within the study area that may conflict with the proposed routes. Preliminary design for the Mississauga Bus Rapid Transit project is currently underway, with the proposed alignment along the north side of Eastgate Parkway. It is expected that the transitway will be constructed below grade. Staff is also involved in the Little Etobicoke Creek Erosion Study that is being prepared in response to erosion concerns between Eglinton Avenue and Highway 401.

We look forward to receiving further information as this project progresses. Should you have any questions, please contact me at extension 5717, or by email at slingertat@trca.on.ca.

Yours truly,

Sharon Lingertat

Sharon Lingertat
Planner II, Environmental Assessments
Planning and Development

SL/ss

BY EMAIL

cc:	Region of Peel:	Lynne Germaine, (lynne.germaine@peelregion.ca)
	Earth Tech:	Karl Grueneis, (karl.grueneis@earthtech.ca)
	CVC:	Liam Marray, (lmarray@creditvalleycons.com)
	Ecolplans:	Mike Bricks, (mbricks@ecoplans.com)
	TSH:	Wolfgang Wolter, (wwolter@tsh.ca)
	City of Mississauga:	Willy Ing, (willy.ing@mississauga.ca)
		Scott Anderson, (scott.anderson@mississauga.ca)
		Bob Levesque, (bob.levesque@mississauga.ca)
	TRCA:	Quentin Hanchard, Manager, Development, Planning and Regulation
		Chandra Sharma, Etobicoke/Mimico Watershed Specialist
		George Leja, Real Estate Coordinator
		Cathy Crinnion, Archaeologist

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Appendix A:

1. Please ensure that conditions for each alignment are assessed, including dewatering requirements and possible ecological impacts as a result of any dewatering activities. Please also ensure that a geotechnical and hydrogeological report is provided so that a comprehensive review of alignments can be completed.

2. All watercourses within this area are considered warmwater. As a result, the warmwater timing window of July 1 to March 31 will be applied to any development in or near the watercourse.

3. The TRCA Executive Committee requires a net ecological gain on all files. Please ensure that the EA provides a commitment to a net ecological gain which can be defined at the detailed design stage.

4. Staff's preference is to site the new infrastructure outside of the Regional Flood Plain, Meander Belt and other Regulated Areas. If routes within the Regional Flood Plain, Meander Belt or other Regulated Areas are required, appropriate background analyses will need to be provided (i.e. fluvial geomorphology/meander belt/100 year erosion limit) to ensure that appropriate consideration has been given to the potential movement of the creek (both laterally and vertically). These studies will need to be undertaken and considered as part of the selection process for the preferred alignment as part of the EA process.

5. Please note that the Etobicoke/Mimico Watershed Specialist has requested that the Etobicoke/Mimico Watershed Coalition be kept informed of this project. Once the EA has progressed to a stage where a preferred alignment has been chosen, a report will be prepared and presented to the Coalition for information purposes.

From: Brad Stephens [mailto:BStephens@trca.on.ca]
Sent: Tue 29/07/2008 9:23 AM
To: Sharon Lingertat; Anderson, Holly
Subject: Re: Fw: Digger Crayfish

Hi Holly,

Fallicambarus fodiens is an L-2. Let me know if you have any further questions.

Regards,
Brad

Brad Stephens, Hons.Bsc.
Planning Ecologist II
Rouge and Upper Humber Watersheds
Toronto and Region Conservation Authority
Ph: 416 661 6600 xt 5733
Fx: 416 661 6898
bstephens@trca.on.ca
www.trca.on.ca

From: Scott Smith [mailto:SSmith@TRCA.on.ca]
Sent: Thursday, July 17, 2008 3:37 PM
To: Gunter, Clark
Subject: RE: FW: Mississauga BRT data 503272

Clark,

I'm afraid you will have to make do with the data you have. Thanks for the heads up and we will fix our lines, but it can't be done until the fall.

thanks,

Scott Smith, B.E.S.
Planner 1, Environmental Assessments
Planning and Development
Toronto and Region Conservation Authority
5 Shoreham Drive, Downsview, Ontario M3N 1S4
Tel: 416-661-6600 ext. 5758
Fax: (416) 661-6898
E-mail: ssmith@trca.on.ca

From: Scott Smith [mailto:SSmith@TRCA.on.ca]
Sent: Friday, July 11, 2008 10:41 AM
To: Gunter, Clark
Subject: Re: FW: Mississauga BRT data 503272

Clark,
Geomatics has confirmed that the data is off in certain areas. It can be fixed, but the individual who can do this is in the field often in the summer and has limited time to fix the issue. When do you need this data by?

thanks,

Scott Smith, B.E.S.

ecoplans Limited

72 Victoria Street South, Suite 100,
Kitchener, Ontario N2G 4Y9
Telephone: (519) 741-8850 Fax: (519) 741-8884
Website: www.ecoplans.com

NOTES OF SITE VISIT - REVISED

PROJECT: Mississauga Bus Rapid Transit (BRT) Facility

FILE NO.: 07-3272

DATE: 18-Jun-08 **TIME:** 12:30 – 3:30 p.m.

PLACE: BRT Site Visit

PRESENT:

S. Lingertat	Toronto and Region Conservation Authority
B. Stephens	Toronto and Region Conservation Authority
S. Smith	Toronto and Region Conservation Authority
P. Lewis	Toronto and Region Conservation Authority
E. Furgiuele	City of Mississauga
D. Wunder	McCormick Rankin Corporation
I. Khan	McCormick Rankin Corporation
A. MacMillan	Ecoplans Limited
H. Anderson	Ecoplans Limited
C. Gunter	Ecoplans Limited

PURPOSE: Second site visit to review potential impacts and discuss mitigation strategies.

The following notes and action items provide an overview of the field visit

PLATE	NOTES:	ACTION BY:
Plate 7	Renforth Creek - Confirmed status o Not fish habitat given extent of enclosure 'downstream' o Perhaps cattail pocket along road can be used as SWM – polishing - Renforth parking lot – confirmed that parking lot on south side has been removed	
Plate 5	Etobicoke Ck - Outfall o some minor slumping of gabions that may need attention o otherwise agreed that deep pool at outfall provides good refuge pool - Crossing – review of design / impacts o There may be some temporary works for footings, but no permanent encroachment on the river bed. TRCA provided a preliminary determination that with the application of mitigation the works are not likely to result in a HADD. This determination is based on the assumption that the design and mitigation measures will not change significantly during Detail Design. o ~5m extension of existing bridge deck and footings, which are up on the concrete facing outside of channel. North-eastern most existing footing located	Ecoplans to confirm widening – based on current understanding, 5 m is max extension of existing deck and pier

PLATE	NOTES:	ACTION BY:
	within bankfull channel (outside of baseflow wetted width) upon concrete o Removal of several trees at the top of east valley slope adjacent to Eglinton will be required for construction (Basswood, Sugar Maple). – no significant species. o TRCA commented on need to repair failing upstream concrete slabs (undermining/cracking due to overland surface flow?) on both sides of the Creek. The concrete facing will also need to be disturbed to construct the pier extensions. o TRCA noted that the design should incorporate stormwater treatment. - Wildlife: o 2 Cliff swallow nests identified under bridge deck o Location of butternut ▪ TRCA confirmed they did not find it during last vegetation survey ▪ Field review found no evidence of Butternut in area of anticipated impacts - Possible restoration area west side of Etobicoke Creek south of Eglinton – Rakely Court o Private lands limits potential for restoration	
Plate 4	Eastgate Parkway: Dixie Road MAS2-1b - Not visited - Discussed ramp location is fixed based on avoidance of hydro towers and to locate ramp intersection with Eastgate to maximum separation from other intersections	Ecoplans will review site in detail to validate existing information.
Plate 3	Eastgate Parkway: Dixie Road Regulated Area[1] – Wetland (linear) - Not visited - Parking lot (not on plans as size and layout being considered) but will be on top of Regulated Area, however Regulated Area/wetland appears to be gone (an access "road" has been constructed through area)	Ecoplans to review site in detail to validate presence / location of wetland
Plate 3	Little Etobicoke Ck - TRCA provided a preliminary determination that with the application of mitigation the works are not likely to result in a HADD. This determination is based on the assumption that the design and mitigation measures will not change significantly during Detail Design.The proposed design concept should improve the present situation and functioning of low flow channel, and improve opportunities for fish movement Crossing – review of design / impacts o Existing 3-cell open footing box culvert will be extended ~13 m on north (upstream) side o New Jersey barrier and rip rap material along north-western side of existing culvert opening and	

[1] The TRCA Regulated Area extends from approximately Little Etobicoke Creek to Dixie Road. The extent of the Regulated Area will be determined during Detail Design.

PLATE	NOTES:	ACTION BY:
	concrete weir across channel at upstream end of existing structure will be removed as part of the extension works, using rocky riffles and other natural channel design techniques to achieve the gradient changes o Still some leakage and spreading of lower flow across more than one of the cells, which will be addressed through design measures (i.e., maintain low flow) o Fish passage should be improved through removal of barriers (weir and Jersey wall) and improved functioning of the low flow channel o SWM- proposed design of SWM facility on west side of creek constrained by Hydro towers as well as pipelines.	
Plate 3	Location of berms at Tomken Road - Not visited - Discussion of berms and impact to MAM2-b and MAM2-2 - TRCA indicated that they prefer that fill not be placed in the floodplain. - TRCA indicated that any proposed fill/berms within the flood plain will need to be assessed through appropriate hydraulic analyses (i.e. berms will need to be inputted into the hydraulic model). A hydraulic assessment is required to ensure that the fill/berms will not result in adverse impacts to existing flood elevations.	
Plate 2	Cawthra Road Station and HIP area - Description of site / impacts and mitigation o Including loss of regulated wetland and unregulated MAS2-1b o TRCA indicated that the various habitats that will be affected should be reviewed further in the field and characterized in relation to habitats present within the broader area. In relation to the small cattail pocket in southwest corner, a portion of which will be affected by station, Ecoplans noted that there were several similar pockets, as well as a large cattail dominant wetland area further to the north. The City noted that while they recalled mention of the southwest pocket in the NA study, they could not recall any specific rationale, or whether the rest of the areas had been noted. o Discussed issues around preferred compensation being within the NE4SMA, and specifically issue of ownership and ORC's openness to restoration/works on their land, as well as infrastructure constraints (e.g., pipelines, hydro towers). Noted that options should be integrated with water resources in relation to drainage design and options with respect to wetland creation and provision of a source of water.	Ecoplans to review habitats in HIP area in more detail Ecoplans to look at restoration potential and openness of ORC to restoration projects

The forgoing represents the writer's understanding of the major items of discussion and the decisions reached and/or future actions required with input from Ecoplans/MRC attendees. As simultaneous conversations were usually occurring at field stops, some information may be missing from the table. If the above does not accurately represent the understanding of all parties attending, please notify the undersigned immediately upon receiving these minutes (519-741-8850).

Minutes Prepared by:

Ecoplans Limited

Clark Gunter
Ecoplans Limited

cc: Attendees
Geoff Wright, City of Mississauga
Willy Ing, City of Mississauga
Scott Anderson, City of Mississauga
Katie Bright, Ecoplans Limited
Mike Bricks, Ecoplans Limited
Steve Schijns, McCormick Rankin Corporation
Dale Turvey, McCormick Rankin Corporation

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ecoplans Limited

Environmental Planners & Consulting Ecologists

July 7, 2008

Ms. Sharon Lingertat
Acting Planner II, Environmental Assessments
Toronto and Region Conservation Authority
Planning and Development
5 Shoreham Drive
Downsview, ON M3N 1S4

RE: Mississauga Bus Rapid Transit Project

Dear Ms. Lingertat:

This letter is in response to your letter dated April 25, 2008. Thank you for providing TRCA's input. The enclosed table outlines the Project Team's responses to the comments outlined in your letter.

Yours truly,
ECOPLANS LIMITED

Mike Bricks, MCIP, RPP
Consultant Environmental Planner

c: Geoff Wright, City of Mississauga
Willy Ing, City of Mississauga
Scott Anderson, City of Mississauga
Dale Turvey, MRC
Steve Schijns, MRC
Darrell Wunder, MRC
Anne MacMillan, Ecoplans

Encl.

2655 North Sheridan Way, Suite 280, Mississauga, Ontario L5K 2P8 • (905) 823-4988 • fax (905) 823-2669
www.ecoplans.com • e-mail: ecoplans@ecoplans.com

Summary of TRCA April 25, 2008 Letter (Contact: Sharon Lingertat) - Input and Action/Response		
Comments	**How Comment Is Being Addressed During Preliminary Design**	**Requirements for Detail Design and Construction Stages for this Project**
Wetlands North of Eastgate Parkway and East of Cawthra Road 1. The minutes do not refer to the Regulated Area located north of Eastgate Parkway and east of Cawthra Road. This area is considered wetland and will require a permit under Ontario Regulation 166/06. Please ensure that this area is considered when preparing the detailed design plans.	1. The small wetland/meadow marsh pockets, and specifically the cattail mineral meadow marsh in the southwest corner, are discussed in Item 4.9 of the minutes. Although we acknowledge that the minutes do not refer to this Regulated Area, we do not recall a specific discussion at the meeting about the Regulated Area. We noted at the meeting that we would review relocation of the required station north of Eastgate and east of Cawthra from the corner further to the east, so as to avoid encroachment into the marsh pocket. Please be advised that the station was shifted slightly further to the east and the configuration modified in order to minimize encroachment into this wetland pocket. However, given the configuration of this pocket, it cannot be entirely avoided. Furthermore, based on our recent site walk (June 18, 2008), we note that this wetland does not appear to be unique in any way. It is dominated by cattail, however there are several other similar pockets, as well as one quite extensive area, of similar cattail-dominant meadow marsh habitat. The CEAA Screening Report will include a commitment to protect wetland pockets in the HIP area from water level changes and adjacent construction related disturbances.	1. Design and works in the vicinity of the HIP area according to the Preliminary Design recommendations and commitments.
Little Etobicoke Creek Crossing 2. The proposed works at the Little Etobicoke Creek crossing may involve flood plain re-grading in order to maintain existing flow conditions (i.e., low flow through the east cell). Please ensure that a detailed grading plan is provided, along with sections to show the extent of work in this area. Please note that the volume of fill to be placed in the floodplain should be minimized to the extent possible. In addition, please ensure that these changes are reflected in the hydraulic analysis for this crossing.	2. We agree that the proposed works will likely involve some floodplain grading to maintain and enhance flow conditions. This will be noted in the recommendations for the design concept at this crossing. Please note that detailed grading plans will not be developed as part of this preliminary design undertaking; these plans and the final details of other mitigation measures will be prepared during Detail Design using recommendations and guidelines set forth by the Preliminary Design study. Drawings will be circulated with the Preliminary Design study presenting proposed remedial works conceptually with sufficient information to guide the future Detail Design. Cross-sectional geometry in the hydraulic model for Little Etobicoke Creek will be revised based on the proposed works. We will include a commitment in the CEAA Screening Report to prepare and submit these detailed plans and assessments to TRCA.	2. Based on the recommendations of the Preliminary Design, Detail Design for the crossing will be completed. TRCA will be consulted during the development of the design details, and the detailed design and supporting technical information will be circulated to the TRCA for review.
3. The handouts mention removing several existing in-stream barriers, and enhancing channel stability. Please ensure that natural channel design principles are followed, and that design drawings and supporting technical information is submitted for review.	3. The Preliminary Design study will include commitments regarding the use of natural channel design principles to enhance fish movement, channel stability and function. Please note that the design drawings and supporting detailed technical information will not be developed until the subsequent Detail Design stage of the project. We will include a commitment in the CEAA Screening Report to consult with TRCA during development of the detailed design of the structure extension and channel enhancements.	3. Based on the recommendations of the Preliminary Design, Detail Design for channel works will be completed. TRCA will be consulted during the development of the design details, and the detailed design and supporting technical information will be circulated to the TRCA for review.
4. It was noted at the last meeting that a Stormwater Management (SWM) pond is being considered, to provide the required level of control. Please ensure that design details and plans are submitted for review and that the SWM facilities are located outside of the Regional Flood Plain.	4. The Preliminary Design study will present a comprehensive surface water conveyance and management strategy formulated to provide guidance for the future Detail Design. Alternative storm water management measures are being reviewed to identify measures that can feasibly be implemented to mitigate potential surface water related impacts associated with the construction of the BRT system. To the extent technically, physically, and economically practicable, opportunities for utilizing existing stormwater management measures will be explored. Within the TRCA's jurisdictional area, the prescribed TRCA SWM criteria will be used in combination with recommendations of the Ministry of the Environment's *Stormwater Management Planning and Design Manual* to establish design requirements for drainage conveyance and management works. Design concepts for key stormwater management measures will be submitted to TRCA. As a preliminary design study, locations and approximate pond block sizes will be identified on drawings, and a typical outlet detail will be provided as guidance for future Detail Design of the facilities. Preliminary stage-storage-discharge rating curves developed for each pond will be input to hydrologic models to assess pond performance and demonstrated that all quantity control objectives have been achieved. Detailed grading plans and outlet details for each pond will be prepared as part of the Detail Design using recommendations and guidelines provided as part of this preliminary design undertaking.	4. Following from recommendations of the Preliminary Design, Detail Design of all surface water conveyance and management measures will be completed. The final design will be circulated to the TRCA and other regulatory agencies having jurisdiction and will provide detail sufficient for confirming that the final design is consistent with the Preliminary Design. Once all agency concerns have been adequately addressed, the stormwater management strategy will be implemented in accordance with all applicable approval conditions.

Summary of TRCA April 25, 2008 Letter (Contact: Sharon Lingertat) - Input and Action/Response		
Comments	**How Comment Is Being Addressed During Preliminary Design**	**Requirements for Detail Design and Construction Stages for this Project**
5. Section 4.8 of the meeting minutes indicates that the rationale for the selected design will be discussed/documented in the CEAA screening report. Please ensure that part of that documentation includes the supporting background studies/analyses (i.e., hydraulic modeling, fluvial geomorphic studies, etc.) undertaken as part of the decision making process.	5. The CEAA Screening Report will include details regarding background studies/analyses (e.g. initial [high-level] fluvial geomorphologic review). As appropriate, the background study information will be included as and appendix to the report or will be provided under separate cover to TRCA and other interested agencies.	5. Design and construct bank protection according to the Preliminary Design recommendations and commitments.
6. Section 4.8 of the meeting minutes refers to the cattail marsh on the northwest side of Little Etobicoke Creek, which contains Chimney Crayfish. To avoid confusion in the future, please revise to read northeast side.	6. The meeting notes have been revised accordingly.	6. N/A
Cultural Woodlot 7. Regarding the small pocket of vegetation discussed in Section 4.7 of the meeting minutes, please ensure that this community is defined in the preliminary design documents, to allow for a comprehensive understanding of the vegetation impacts and removals along the BRT alignment.	7. The requested information will be provided in the CEAA Screening Report, however we note that this feature is not a natural vegetation community.	7. Design and construct works according to the Preliminary Design recommendations and commitments.
Etobicoke Creek 8. Please make every effort to redirect deck drainage to a suitable location, and avoid direct outlets to the watercourse. In addition, TRCA staff encourages any possible enhancements to existing infrastructure (i.e., existing outlet).	8. Based on observations made during field investigations, deck drains for the existing structure discharge directly over Etobicoke Creek. As part of the proposed works, opportunities for disconnecting existing deck drains and directing drainage intercepted by them to suitable locations will be explored to the extent technically, physically and economically practicable. The drainage system for the new lanes added to the structure as part of the BRT undertaking will be not incorporate deck drains that discharge directly over the creek.	8. Design and construct works according to the Preliminary Design recommendations and commitments.
9. The Fish and Fish Habitat Summary Table notes that standard MTO Erosion and sediment control plans will be used at creek crossings. Please refer to the TRCA "Erosion and Sediment Control Guidelines for Urban Construction" (December 2006) for proper ESC measures and details. A digital copy of the guidelines can be found at www.sustainabletechnologies.ca.	9. Reference will be updated in the tables and text. As part of the Preliminary Design for the BRT, potential for erosion and sedimentation as a result of the proposed BRT works will be identified, with specific reference to natural features, and recommendations will be made to guide the preparation of an erosion and sediment control strategy as part of future Detail Design. Recommendations will include a shortlist of both vegetative and structural control measures that can feasibly be implemented during construction.	9. Using guidelines set forth in the document entitled Erosion and Sediment Control for Urban Construction, an erosion and sediment control plan will be prepared and circulated to all regulatory agencies having jurisdiction at the time of Detail Design for the busway.
10. Section 4.6 of the meeting minutes notes that the works at Etobicoke Creek will not be considered a HADD. Please revise to state that given the existing information (piers located outside of the watercourse) that those works will not be considered a HADD, and will be covered by a Letter of Advice.	10. The meeting notes have been revised accordingly.	10. N/A
Southwest Corner of Eglinton Avenue and Centennial Park Boulevard 11. A Regulated Area is located on the southwest corner of Eglinton Avenue and Centennial Park Boulevard. If any works are proposed within this area, a permit under Ontario Regulation 166/06 will be required.	11. Acknowledged. No works are currently proposed for the southwest corner of Eglinton Avenue and Centennial Park Boulevard. The busway is located on the north side of Eglinton Avenue.	11. N/A
Elmcrest Creek 12. It is noted that a new sewer pipe will be constructed to collect existing drainage at the location of Elmcrest Creek. Please confirm whether this is a major system flow, as it is suggested that minor system flows have been previously diverted. Design details (drainage area plan, flow calculations, etc.) pertaining to the proposed conveyance system will need to be	12. The existing sewer system on Eglinton Avenue passes beneath the culverts that outlet to Elmcrest Creek. Ultimately the sewer discharges to Etobicoke Creek through a concrete outlet located south of Eglinton Avenue within the floodplain. East of Etobicoke Creek, the new sewer system proposed to serve the future BRT will parallel the existing Eglinton Avenue sewer system. The BRT sewer system will outlet to the Eglinton Avenue sewer system at multiple points. It will not outlet to	12. Design and construct works according to the Preliminary Design recommendations and commitments.

Summary of TRCA April 25, 2008 Letter (Contact: Sharon Lingertat) - Input and Action/Response		
Comments	**How Comment Is Being Addressed During Preliminary Design**	**Requirements for Detail Design and Construction Stages for this Project**
submitted for review. In the event that a new outlet is required, please refer to TRCA Storm Outfall Design Criteria which outlines TRCA requirements (attached).	Elmcrest Creek. As such, a new outfall to Elmcrest Creek will not be required Major flows from lands north of the BRT will be intercepted and conveyed to intersecting roadways that currently serve as major system outlets across Eglinton Avenue. Catchment maps and hydrologic modeling completed to quantify minor and major system flows will be provided in the Stormwater Management Plan to be circulated in support of the Preliminary Design Study.	
13. The Fish and Fish Habitat Summary Table notes that standard MTO Erosion and sediment control plans will be used at creek crossings. Please refer to the TRCA "Erosion and Sediment Control Guidelines for Urban Construction" (December 2006) for proper ESC measures and details. A digital copy of the guidelines can be found at www.sustainabletechnologies.ca.	13. Reference will be updated in the tables and text. As part of the Preliminary Design for the BRT, potential for erosion and sedimentation as a result of the proposed BRT works will be identified, with specific reference to natural features, and recommendations will be made to guide the preparation of an erosion and sediment control strategy as part of future Detail Design. Recommendations will include a shortlist of both vegetative and structural control measures that can feasibly be implemented during construction.	13. Using guidelines set forth in the document entitled Erosion and Sediment Control for Urban Construction, an erosion and sediment control strategy will be prepared and circulated to all regulatory agencies having jurisdiction at the time of Detail Design for the busway.
Renforth Creek 14. The engineering requirements for this location will vary depending on whether or not the feature is deemed to be a watercourse. If it is a watercourse, then it is assumed to have an associated floodplain and therefore, appropriate fluvial geomorphic, hydraulic and flood plain analyses will also be required as per the other crossings. If the feature is not deemed to be a watercourse, the proposed works will need to be designed such that the existing overland flow routes are maintained, similar to the Elmcrest Creek location. In either cased, please investigate if there are future plans to develop vacant lands to the north of the proposed BRT. Any flow calculations will need to be based on the ultimate development scenario.	14. Based on discussions at the June 18, 2008 field meeting, it is our understanding that the TRCA will not be classifying Renforth Creek as a watercourse. Regardless, the parking area has now been removed from the south side of Eglinton Avenue, so there will be no interference with the small cattail pocket or the ditch system downstream of it. The BRT infrastructure north of Eglinton Avenue will incorporate measures to maintain/provide minor and major system connections across Eglinton Avenue for external lands. Flow calculations will be based on the ultimate development scenario ascertained from discussions with the City.	14. Design and construct works according to the Preliminary Design recommendations and commitments.
15. The Fish and Fish Habitat Summary Table notes that standard MTO Erosion and sediment control plans will be used at creek crossings. Please refer to the TRCA "Erosion and Sediment Control Guidelines for Urban Construction" (December 2006) for proper ESC measures and details. A digital copy of the guidelines can be found at www.sustainabletechnologies.ca.	15. Reference will be updated in the tables and text. As part of the Preliminary Design for the BRT, potential for erosion and sedimentation as a result of the proposed BRT works will be identified, with specific reference to natural features, and recommendations will be made to guide the preparation of an erosion and sediment control strategy as part of future Detail Design. Recommendations will include a shortlist of both vegetative and structural control measures that can feasibly be implemented during construction.	15. Using guidelines set forth in the document entitled Erosion and Sediment Control for Urban Construction, an erosion and sediment control strategy will be prepared and circulated to all regulatory agencies having jurisdiction at the time of Detail Design for the busway.
General 16. Section 3.1 of the meeting minutes refers to the updated hydraulic model. TRCA has recently updated the Etobicoke Creek Hydrology model and is in the process of updating the watershed hydraulic model. Staff will provide a copy of the updated model, as soon as it is available.	16. Hydraulic models have been formulated for Etobicoke Creek and Little Etobicoke using the HEC-2 model and prorated flows previously provided by the TRCA. The HEC-2 model has been converted to HEC-RAS, and sections for existing structures that will be impacted by the BRT have been updated using contract drawings provided by the City and topographic information taken from Ontario Base Mapping and field surveys. The model will be updated as necessary once the updated hydraulic models have been received from the TRCA.	16. Design and construct works according to the Preliminary Design recommendations and commitments.
17. It is noted that some background information has been completed (i.e., fluvial geomorphic assessment, preliminary hydraulic analyses); however, the details of this information has not been provided. Please provide this information at the preliminary design stage so that a determination can be made as to potential impacts that may affect the detail design of the proposed structures.	17. Design revisions have resulted in the need to update available background information. The CEAA Screening Report will include details regarding background studies/analyses (e.g. initial [high-level] fluvial geomorphologic review). As appropriate, the background study information will be included as and appendix to the report or will be provided under separate cover to TRCA and other interested agencies.	17. Design and construct bank protection according to the Preliminary Design recommendations and commitments.

From: Scott Smith [mailto:SSmith@TRCA.on.ca]
Sent: Thursday, July 17, 2008 3:37 PM
To: Gunter, Clark
Subject: RE: FW: Mississauga BRT data 503272

Clark,

I'm afraid you will have to make do with the data you have. Thanks for the heads up and we will fix our lines, but it can't be done until the fall.

thanks,

Scott Smith, B.E.S.
Planner 1, Environmental Assessments
Planning and Development
Toronto and Region Conservation Authority
5 Shoreham Drive, Downsview, Ontario M3N 1S4
Tel: 416-661-6600 ext. 5758
Fax: (416) 661-6898
E-mail: ssmith@trca.on.ca

From: Scott Smith [mailto:SSmith@TRCA.on.ca]
Sent: Friday, July 11, 2008 10:41 AM
To: Gunter, Clark
Subject: Re: FW: Mississauga BRT data 503272

Clark,
Geomatics has confirmed that the data is off in certain areas. It can be fixed, but the individual who can do this is in the field often in the summer and has limited time to fix the issue. When do you need this data by?

thanks,

Scott Smith, B.E.S.

From: Brad Stephens [mailto:BStephens@trca.on.ca]
Sent: Tue 29/07/2008 9:23 AM
To: Sharon Lingertat; Anderson, Holly
Subject: Re: Fw: Digger Crayfish

Hi Holly,

Fallicambarus fodiens is an L-2. Let me know if you have any further questions.

Regards,
Brad

Brad Stephens, Hons.Bsc.
Planning Ecologist II
Rouge and Upper Humber Watersheds
Toronto and Region Conservation Authority
Ph: 416 661 6600 xt 5733
Fx: 416 661 6898
bstephens@trca.on.ca
www.trca.on.ca

Phone Call: July 29, 2008
Scott Smith TRCA
Holly Anderson (Ecoplans)

Scott confirmed that Redside Dace are extirpated from Etobicoke Creek .

TORONTO AND REGION Conservation
for The Living City

October 23, 2008 CFN 39971

BY MAIL AND EMAIL (mbricks@ecoplans.com)

Mr. Mike Bricks
Ecoplans Limited
2655 North Sheridan Way, Suite 280
Mississauga, ON L5K 2P8

Dear Mr. Bricks:

Re: Response to Notice of Public Information Centres
Mississauga Bus Rapid Transit (Eastgate Parkway at Highway 403 to Eglinton Avenue at Renforth Drive)
Etobicoke Creek; City of Mississauga; Regional Municipality of Peel

Toronto and Region Conservation Authority (TRCA) staff received notice of the upcoming Public Information Centres (PIC) scheduled for October 28, 2008 and October 29, 2008. Further to previous TRCA correspondence, staff has expressed interest in this project. While staff is unable to attend the meetings, please forward one copy of any handouts or display materials from these meetings for our files.

Please note that staff received the Draft EA Addendum on October 8, 2008 and it is currently under review.

Yours truly,
Sharon Lingertat

Sharon Lingertat
Planner II, Environmental Assessments
Planning and Development

SL/ss

BY EMAIL
cc: Mississauga: Geoff Wright (geoff.wright@mississauga.ca)
Willy Ing (willy.ing@mississauga.ca)
TRCA: Beth Williston, Manager, Environmental Assessments
Quentin Hanchard, Manager, Development, Planning and Regulation
Chandra Sharma, Etobicoke/Mimico Watershed Specialist

F:\Home\Public\Development Services\EA\Letters for Mailing\39971 - PIC2.doc

ecoplans Limited

2655 North Sheridan Way, Suite 280
Mississauga, Ontario, L5K 2P8

Telephone: (905) 829-6262
Fax: (905) 823-2669
E-mail: mbricks@ecoplans.com

TRANSMITTAL

To: Ms. Sharon Lingertat
Planner II, Environmental Assessments
Toronto and Region Conservation Authority
Planning and Development
5 Shoreham Drive
Downsview, ON M3N 1S4

Date: November 14, 2008

Project #: 07-3272

Delivery: Courier

Re: Mississauga Bus Rapid Transit Project

As requested, please find enclosed a copy of the PIC#2 displays for the above noted project.

For your comment
For your information
For your action

for your use *
as requested *

Per: _____
Mike Bricks
Ecoplans Limited

c. Dale Turvey, MRC (transmittal only)
Geoff Wright, City of Mississauga (transmittal only)
Willy Ing, City of Mississauga (transmittal only)

McCORMICK RANKIN
CORPORATION
A member of MMM GROUP

2655 North Sheridan Way
Mississauga, Ontario, L5K 2P8
Tel: (905) 823-8500
Fax: (905) 823-8503
E-mail: mrc@mrc.ca
Website: www.mrc.ca

MINUTES OF MEETING

PROJECT:	Mississauga BRT		
FILE NO.:	6964		
DATE:	January 12, 2009	**TIME:**	1 pm
PLACE:	Credit Valley Conservation offices, Mississauga		
PRESENT:	Liam Marray, CVC (Senior Planner / Ecologist) Rizwan Haq, CVC (Supervisor – Engineering Plan Review) Stephen Schijns, MRC		
PURPOSE:	CVC comments on draft BRT EA Addendum (distributed October 2008)		

PROCEEDINGS: **ACTION BY**:

1.1 Winston Churchill Boulevard

L. Murray noted that the Addendum and PDR should note that all wetlands are regulated (they weren't at the time of the 1992 EA), and that the CVC requires a compensation, mitigation, and/or replication of function plan for the loss of any regulated wetlands. MRC

L. Murray requested that MRC identify if any rare or endangered species are located in the area of the changed alignment. Ecoplans

R. Haq requested that the Addendum include enough information from the Preliminary Design Report to allow the reader to determine if storm water management can be achieved. MRC

S. Schijns will provide CVC with a copy of the draft PDR for review, to complement the EA Addendum material. MRC

1.2 Cooksville Creek

R. Haq requested that MRC perform the hydraulic analysis of the mid-culvert reduction on the basis of a continuous pipe with a restricted opening size. MRC should quantify the spillover across Rathburn Road and determine the spill pathway, noting if it is any different from the existing situation. He requested that the hydraulic analysis and conclusions be confirmed by a Professional Engineer rather than a Technician (CET). MRC MRC MRC

He requested MRC provide a digital model of the hydraulic analysis. S. Schijns advised that the MRC drainage engineer will contact Mr. Haq by phone (1-800-668-5557) to review and confirm his requirements and comments.	MRC MRC
S. Schijns described the culvert reconstruction process at Cooksville Creek, noting that there would be no exposure of the creek to the construction work (water would be diverted into the cell that is not being reconstructed). L. Marray advised that, on that basis and on the review of the project, CVC's preliminary position was that there was no HADD involved. This position would be reviewed in the course of the detail design.	Ecoplans CVC

1.3 Design

S. Schijns went through the project status and timing. L. Marray suggested that the detail design team(s) hold a CVC briefing within the first month of their assignment(s). This would ensure that CVC's new staff are up to date on the project.	Detail Design

The foregoing represents the writer's understanding of the major items of discussion and the decisions reached and/or future actions required. If the above does not accurately represent the understanding of all parties attending, please notify the undersigned within 48 hours of receiving these minutes at 905-823-8500.

Minutes prepared by,

McCormick Rankin Corporation

Stephen Schijns, P. Eng.

cc: Attendees
M. Bricks, K. Bright – Ecoplans
D. Turvey, A. Shea, K. Rodger, A. Kauppinen - MRC
G. Wright, S. Anderson, W. Ing – City of Mississauga (BRT)
S. Davies, M. Adebayo – GO Transit

Other Agencies

From: Eva.Kliwer@Mississauga.Ca
Sent: Thu 8/23/2007 1:47 PM
To: Kim LeBrun
CC: Holly Anderson
Subject: RE: Re: Mississauga BRT Project

Kim,
Our Natural Areas Survey information does not include detailed fisheries or aquatic data. Some of the fact sheets for the sites, which you can view on the City's web page under "residents/environmental planning/ natural green spaces/natural areas survey", may make a general reference to an aquatic species if it contributes to the significance of the site. The Credit Valley Conservation and Toronto Region Conservation should have the information you require.

Holly,
As mentioned above, there are fact sheets on our web site which include detailed maps of the site and most of the information you requested. I can provide you with species list for each site but this won't likely be until about Thursday of next week.

If you have questions please contact me.
Regards,
Eva

Eva Kliwer
Planner
Policy Planning Division
City of Mississauga Planning and Building Department
Phone: 905-615-3200 ext.5753
Fax: 905-615-4494

e-mail: eva.kliwer@mississauga.ca

Transport Canada
Marine

Transports Canada
Maritime

100 South Front Street
Sarnia, Ontario
N7T 2M4

Your file Votre référence

Our file Notre référence
See below

May 29, 2008

Mississauga Bus Rapid Transit
C/o Transport Canada – Surface Infrastructure Programs
Tower C Place de Ville
330 Sparks Street
Ottawa, ON K1A 0N5

Attention: Rebecca Stranberg

Dear Madam:

RE: Various Locations, City of Mississauge, Regional Municipality of Peel, Province of Ontario

8200-08-6142	Cooksville Creek	West of Hurontario St. between Highway 403 & Rathburn Rd W
8200-08-6143	Trib of Cooksville Creek	East of Central Parkway East, North of Highway 403
8200-08-6144	Little Etobicoke Creek	East of Tomken Road, North of Eastgate Parkway
8200-08-6145	Etobicoke Creek	N Side of Eglinton Ave E, E of Eastgate Pkwy, W of Spectrum Way
8200-08-6146	Elmcrest Creek	North of Eglinton Avenue West, East of Explorer Drive
8200-08-6147	Renforth Creek	South of Matheson Boulevard East, West of Renforth Drive

Receipt is acknowledged of your correspondence dated March 31, 2008 in connection with the above noted works.

Please be advised that the waters of Etobicoke Creek at the above location are **navigable**. Consequently, an application for approval is required.

Transport Canada's review of the proposal will be made under the Navigable Waters Protection Act. Enclosed is an Application Guide which will assist you in making an application under the Navigable Waters Protection Act.

The Navigability Requests at all other sites are considered **not navigable**. Consequently, we have no interest in any works at these sites.

Should you have any questions, please contact the undersigned at (519) 333-6330.

Yours truly,

Kelly Thompson
A/NWP Officer
Navigable Waters Protection

KT/jd

Encl.

Transportation and Works Department

City of Mississauga
201 City Centre Drive, Suite 800
MISSISSAUGA ON L5B 2T4

www.mississauga.ca

Leading today for tomorrow

June 18, 2008
File: PO.04.DES - 200

Mr. Glenn Gilbert
Manager, Environment Unit
Lands and Trusts Services
Department of Indian and Northern Affairs
25 St. Clair Avenue East, 8th Floor
Toronto ON M4T 1M2

Dear Mr. Gilbert:

The City of Mississauga, in partnership with GO Transit, would like to inform the Department of Indian and Northern Affairs of Phase One of the Mississauga Bus Rapid Transit (BRT) Project. This project involves the construction of a new bus only roadway (busway) across Mississauga and eleven new bus stations. Specifically, the new busway will extend from Winston Churchill Boulevard to Erin Mills Parkway and from the Mississauga City Centre to Renforth Drive running adjacent to the Highway 403, Eastgate Parkway, and Eglinton Avenue corridors. **Figure 1** (attached) provides an overview of the Mississauga BRT Project corridor.

In 1992, the Provincial Ministry of the Environment approved the Mississauga BRT Project from Ridgeway Drive in the west to Renforth Drive in the east and a subsequent Environmental Assessment Addendum in 2004. The BRT Project is currently in the Preliminary Design stage, which also includes the undertaking of a Canadian Environmental Assessment Act Screening Report.

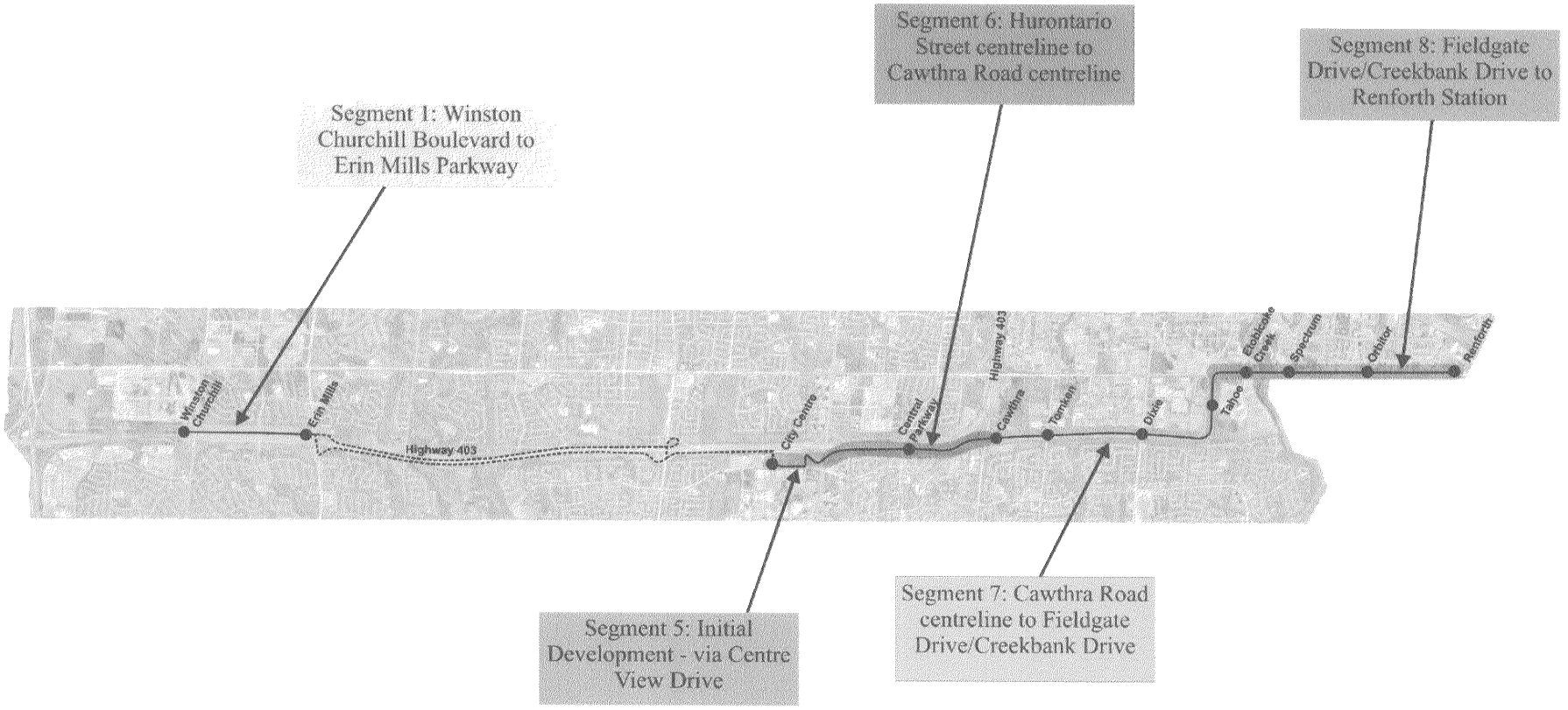
This notification is being provided in hopes that the Department of Indian and Northern Affairs - Lands and Trusts Services can assist us in determining if any First Nation groups may hold an interest in this project. Any input that you can provide would be greatly appreciated. To date only the Mississaugas of the New Credit First Nation have received notification. Please respond to undersigned at the address noted above or feel free to call the Mississauga BRT Project Office at 905-615-3200 extension 5745.

Sincerely,

Geoff Wright, P.Eng., MBA
Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works

Figure 1


Segment 1: Winston Churchill Boulevard to Erin Mills Parkway
Segment 6: Hurontario Street centreline to Cawthra Road centreline
Segment 8: Fieldgate Drive/Creekbank Drive to Renforth Station
Winston Churchill
Erin Mills
Highway 403
City Centre
Central Parkway
Highway 403
Cawthra
Tomken
Dixie
Tahoe
Etobicoke Creek
Spectrum
Orbitor
Renforth
Segment 5: Initial Development - via Centre View Drive
Segment 7: Cawthra Road centreline to Fieldgate Drive/Creekbank Drive

Transportation and Works Department

City of Mississauga
201 City Centre Drive, Suite 800
MISSISSAUGA ON L5B 2T4

www.mississauga.ca

Leading today for tomorrow

June 18, 2008
File: PO.04.DES - 200

Mr. Fred Hosking
Senior Claims Analyst
Specific Claims Branch, Ontario Research Team
Department of Indian and Northern Affairs
10 Wellington Street, Room 1310
Gatineau QU K1A 0H4

Dear Mr. Hosking:

The City of Mississauga, in partnership with GO Transit, would like to inform the Department of Indian and Northern Affairs of Phase One of the Mississauga Bus Rapid Transit (BRT) Project. This project involves the construction of a new bus only roadway (busway) across Mississauga and eleven new bus stations. Specifically, the new busway will extend from Winston Churchill Boulevard to Erin Mills Parkway and from the Mississauga City Centre to Renforth Drive running adjacent to the Highway 403, Eastgate Parkway, and Eglinton Avenue corridors. **Figure 1** (attached) provides an overview of the Mississauga BRT Project corridor.

In 1992, the Provincial Ministry of the Environment approved the Mississauga BRT Project from Ridgeway Drive in the west to Renforth Drive in the east and a subsequent Environmental Assessment Addendum in 2004. The BRT Project is currently in the Preliminary Design stage, which also includes the undertaking of a Canadian Environmental Assessment Act Screening Report.

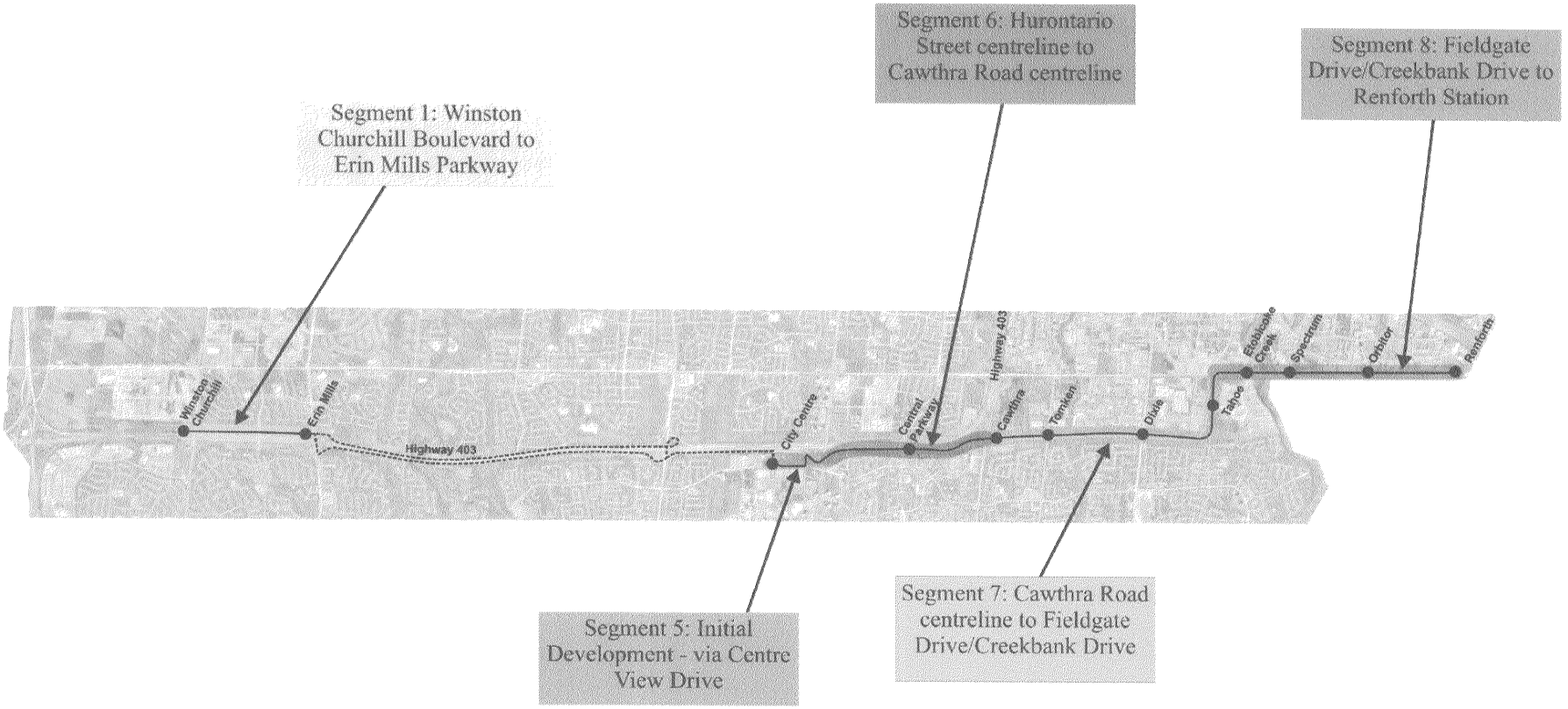
This notification is being provided in hopes that the Department of Indian and Northern Affairs - Specific Claims Branch can assist us in determining if any First Nation groups may hold an interest in this project. Any input that you can provide would be greatly appreciated. To date only the Mississaugas of the New Credit First Nation have received notification. Please respond to undersigned at the address noted above or feel free to call the Mississauga BRT Project Office at 905-615-3200 extension 5745.

Sincerely,

Geoff Wright, P.Eng., MBA
Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works

Figure 1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Transportation and Works Department

City of Mississauga
201 City Centre Drive, Suite 800
MISSISSAUGA ON L5B 2T4

www.mississauga.ca

Leading today for tomorrow

June 18, 2008
File: PO.04.DES - 200

Mr. Kevin Clement
Acting Director, Financial Issues and Cost-Sharing
Comprehensive Claims Branch
Department of Indian and Northern Affairs
10 Wellington Street, Room 1310
Gatineau QU K1A 0H4

Dear Mr. Clement:

The City of Mississauga, in partnership with GO Transit, would like to inform the Department of Indian and Northern Affairs of Phase One of the Mississauga Bus Rapid Transit (BRT) Project. This project involves the construction of a new bus only roadway (busway) across Mississauga and eleven new bus stations. Specifically, the new busway will extend from Winston Churchill Boulevard to Erin Mills Parkway and from the Mississauga City Centre to Renforth Drive running adjacent to the Highway 403, Eastgate Parkway, and Eglinton Avenue corridors. **Figure 1** (attached) provides an overview of the Mississauga BRT Project corridor.

In 1992, the Provincial Ministry of the Environment approved the Mississauga BRT Project from Ridgeway Drive in the west to Renforth Drive in the east and a subsequent Environmental Assessment Addendum in 2004. The BRT Project is currently in the Preliminary Design stage, which also includes the undertaking of a Canadian Environmental Assessment Act Screening Report.

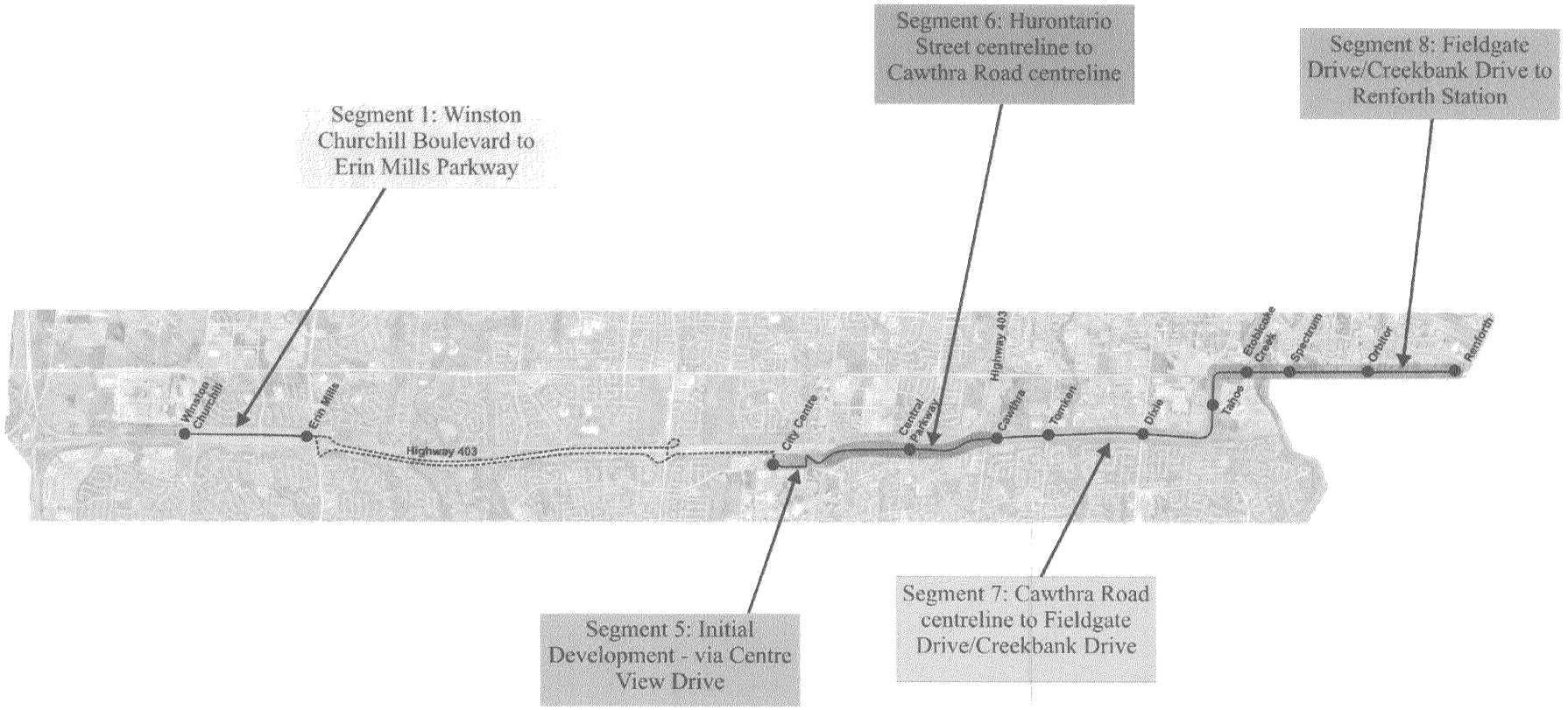
This notification is being provided in hopes that the Department of Indian and Northern Affairs - Comprehensive Claims Branch can assist us in determining if any First Nation groups may hold an interest in this project. Any input that you can provide would be greatly appreciated. To date only the Mississaugas of the New Credit First Nation have received notification. Please respond to undersigned at the address noted above or feel free to call the Mississauga BRT Project Office at 905-615-3200 extension 5745.

Sincerely,

Geoff Wright, P.Eng., MBA
Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works

Figure 1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Leading today for tomorrow

June 18, 2008
File: PO.04.DES - 200

Mr. Franklin Roy
Director
Litigation Management and Resolution Branch
Department of Indian and Northern Affairs
10 Wellington Street, 25 Eddie 1430
Gatineau QU K1A 0H4

Dear Mr. Roy:

The City of Mississauga, in partnership with GO Transit, would like to inform the Department of Indian and Northern Affairs of Phase One of the Mississauga Bus Rapid Transit (BRT) Project. This project involves the construction of a new bus only roadway (busway) across Mississauga and eleven new bus stations. Specifically, the new busway will extend from Winston Churchill Boulevard to Erin Mills Parkway and from the Mississauga City Centre to Renforth Drive running adjacent to the Highway 403, Eastgate Parkway, and Eglinton Avenue corridors. **Figure 1** (attached) provides an overview of the Mississauga BRT Project corridor.

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This notification is being provided in hopes that the Department of Indian and Northern Affairs - Litigation Management and Resolution Branch can assist us in determining if any First Nation groups may hold an interest in this project. Any input that you can provide would be greatly appreciated. To date only the Mississaugas of the New Credit First Nation have received notification. Please respond to undersigned at the address noted above or feel free to call the Mississauga BRT Project Office at 905-615-3200 extension 5745.

Sincerely,

Geoff Wright, P.Eng., MBA
Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works

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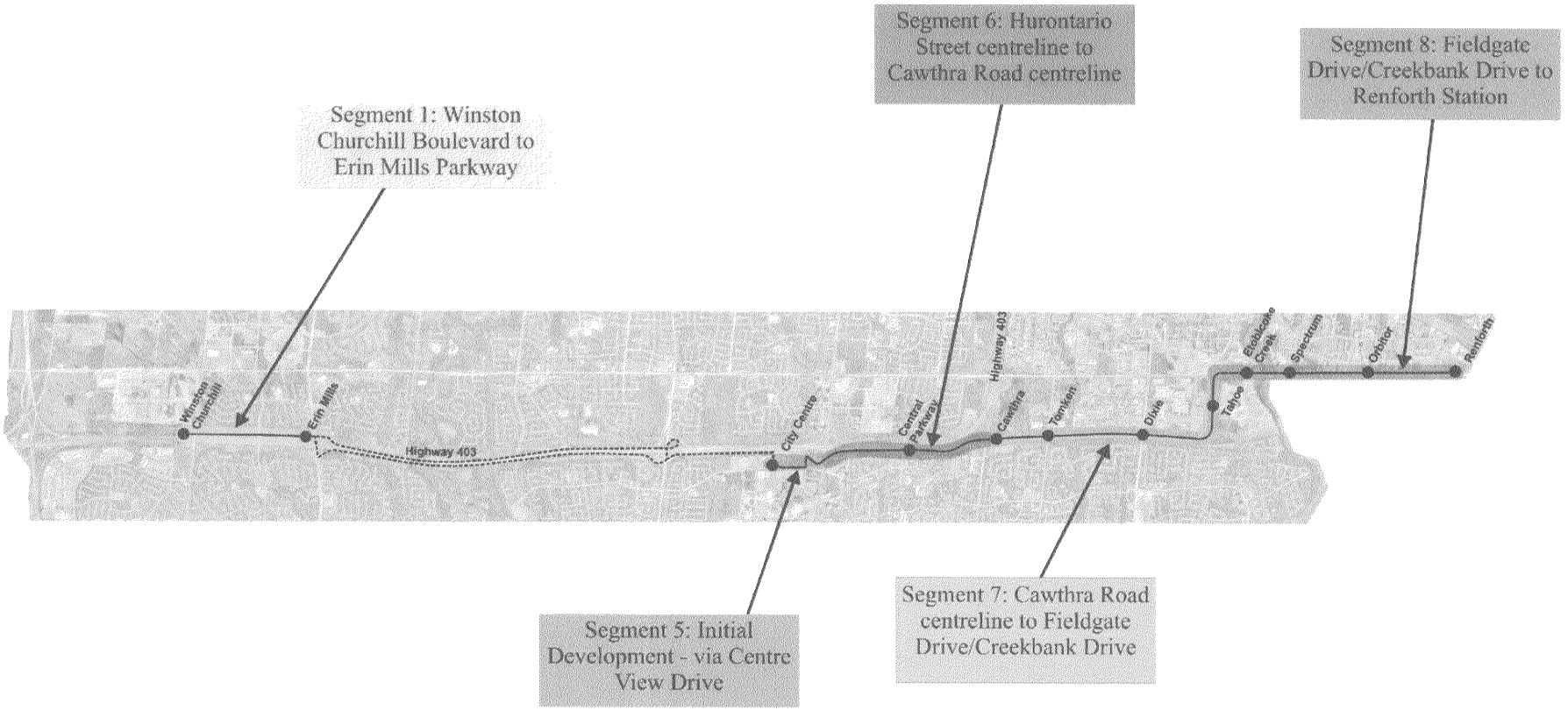
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201 City Centre Drive, Suite 800
MISSISSAUGA ON L5B 2T4

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Leading today for tomorrow

June 18, 2008
File: PO.04.DES - 200

Mr. Alan Kary
Deputy Director
Policy and Relationships Branch
Ministry of Aboriginal Affairs
720 Bay Street, 4th Floor
Toronto ON M5G 2K1

Dear Mr. Kary:

The City of Mississauga, in partnership with GO Transit, would like to inform the Ministry of Aboriginal Affairs of Phase One of the Mississauga Bus Rapid Transit (BRT) Project. This project involves the construction of a new bus only roadway (busway) across Mississauga and eleven new bus stations. Specifically, the new busway will extend from Winston Churchill Boulevard to Erin Mills Parkway and from the Mississauga City Centre to Renforth Drive running adjacent to the Highway 403, Eastgate Parkway, and Eglinton Avenue corridors. **Figure 1** (attached) provides an overview of the Mississauga BRT Project corridor.

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This notification is being provided in hopes that the Ministry of Aboriginal Affairs - Policy and Relationships Branch can assist us in determining if any First Nation groups may hold an interest in this project. Any input that you can provide would be greatly appreciated. To date only the Mississaugas of the New Credit First Nation have received notification. Please respond to undersigned at the address noted above or feel free to call the Mississauga BRT Project Office at 905-615-3200 extension 5745.

Sincerely,

Geoff Wright, P.Eng, MBA
Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works

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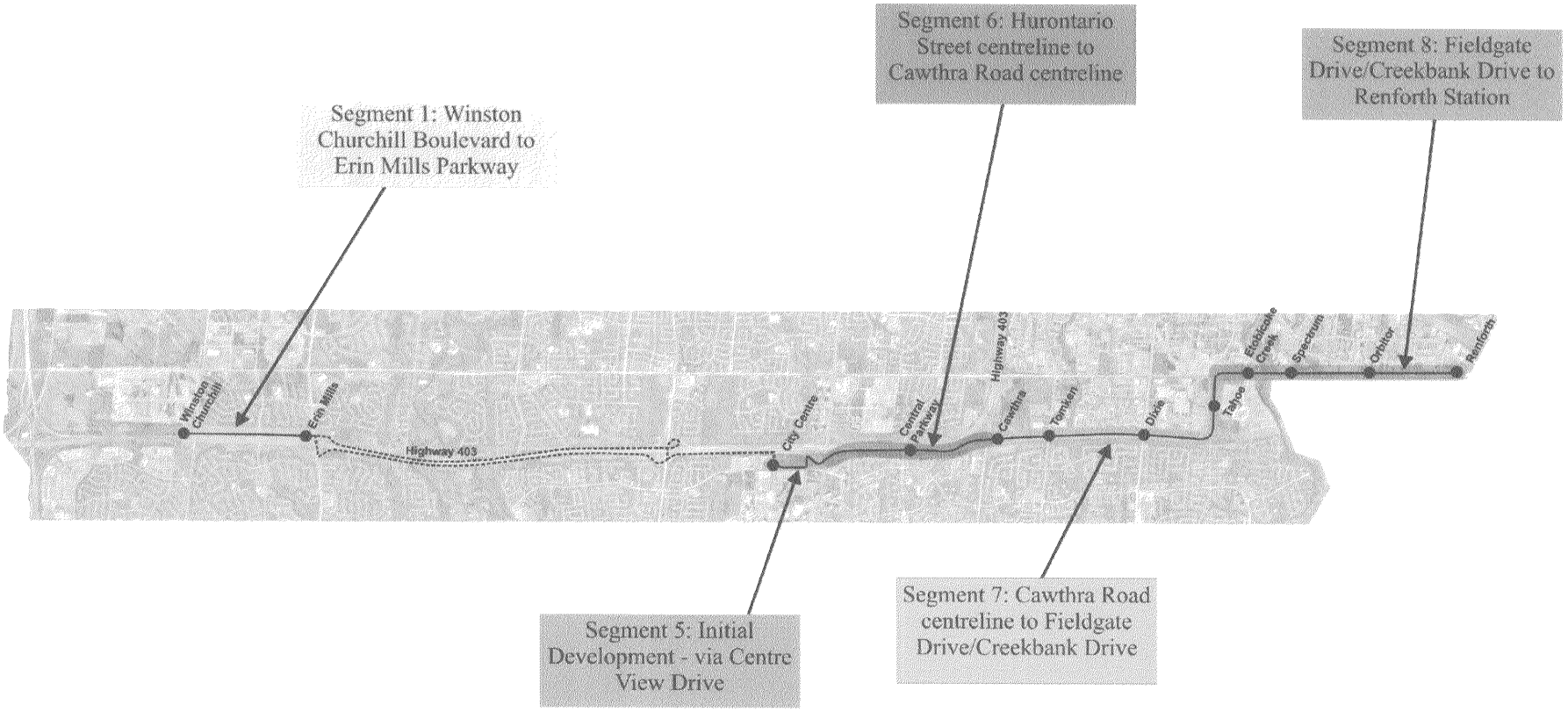
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Affaires indiennes et du Nord Canada
Indian and Northern Affairs Canada

www.ainc-inac.gc.ca

JUL 0 2 2008

Votre référence - Your file

Notre référence - Our file
B 8260-12

Geoff Wright
Director, BRT Project Office
Transportation and Works Department
City of Mississauga
201 City Centre Drive, Suite 800
MISSISSAUGA ON L5B 2T4

Dear Mr. Wright:

Re: First Nation Interests – Mississauga Bus Rapid Transit Project

I am writing in response to your letter of June 18, 2008, inquiring if any First Nation groups may hold an interest in the above noted study.

We have conducted a brief search of our records and determined that a specific claim has been submitted by the following First Nation in the vicinity of the area of interest:

Mississaugas of the New Credit First Nation
2789 MISSISSAUGA ROAD R.R. #6 HAGERSVILLE ON N0A 1H0
(905) 768-1133

I note that you have already contacted this First Nation.

In addition, there is another First Nation in the vicinity of your area of interest. You may wish to contact this First Nation to advise them of your intentions. They can be reached at:

Six Nations of the Grand River
P.O. Box 5000 OHSWEKEN ON N0A 1M0
(519) 445-2201

For more information, you may wish to consult a "Public Information Status Report" on all claims which have been submitted to date. This information is available to the public on the Indian and Northern Affairs Canada (INAC) website and can be found at http://www.ainc-inac.gc.ca/ps/clm/pis_e.html.

It should be noted that the reports available on the INAC website are updated quarterly and therefore, you may want to check this site at regular intervals for updates. In accordance with legislative requirements, confidential information has not been disclosed.

.../2

You may also wish to visit http://www.ainc-inac.gc.ca/nr/iss/acp/acp-eng.asp on the INAC website for information regarding the Federal Action Plan on Aboriginal Consultation and Accommodation.

Please rest assured that it is the policy of the Government of Canada as expressed in *Outstanding Business: A Native Claims Policy* that "in any settlement of specific native claims the government will take third party interests into account. As a general rule, the government will not accept any settlement which will lead to third parties being dispossessed."

We can only speak directly to claims filed under the Specific Claims Policy in the Province of Ontario. We cannot make any comments regarding potential or future claims, or claims filed under other departmental policies. This includes claims under Canada's Comprehensive Claims Policy or legal action by a First Nation against the Crown. You may wish to contact INAC's Negotiations East Branch at (819) 994-7521 or its Litigation Management and Resolution Branch at (819) 934-2185 directly for more information. In addition, you may wish to consult the Assessment and Historical Research Unit at (819) 994-6453, and the Consultation and Accommodation Unit at (613) 944-9313.

To the best of our knowledge, the information we have provided you is current and up-to-date. However, this information may not be exhaustive with regard to your needs and you may wish to consider seeking information from other government and private sources (including Aboriginal groups). In addition, please note that Canada does not act as a representative for any Aboriginal group for the purpose of any claim or the purpose of consultation.

I hope this information will be of assistance to you. I trust that this satisfactorily addresses your concerns. If you wish to discuss this matter further please contact me at (819) 953-1940.

Yours sincerely,

Fred Hosking
Senior Claims Analyst
Ontario Research Team
Specific Claims Branch

From: Lachance, Francois (MAA) [Francois.Lachance@ontario.ca]

Sent: July 7, 2008 2:33 PM

To: Willy Ing

Subject: RE: Mississauga Bus Rapid Transit - Ministry of AboriginalAffairs: Organization of interest to Contact

Dear Willy Ing

With respect to your project, the Bus Rapid Transit Project has indicated that you have contacted the Mississaugas of New Credit. We have reviewed the brief materials you have provided, and can advise that this project does not appear to be located in an area where any additional First Nations may have existing or asserted rights that could be impacted by your project.

François Lachance
Policy Advisor
Ministry of ABORIGINAL AFFAIRS
416-326-4754 (VOICE)

-----Original Message-----
From: Willy Ing [mailto:Willy.Ing@mississauga.ca]
Sent: July 7, 2008 1:57 PM
To: Lachance, Francois (MAA)
Cc: Andrea McLeod; Geoff Wright
Subject: Mississauga Bus Rapid Transit - Ministry of AboriginalAffairs: Organization of interest to Contact

Dear Mr. Lachance,

The City of Mississauga's Bus Rapid Transit Project Office has received a voice mail message from your office in response Geoff Wright's letter dated June 18, 2008 to Mr. Alan Kary (attached). Your message indicated that the only organization of interest that we should contact is the "Mississauga's of the New Credit". It would be appreciated if you would confirm this via e-mail, as we need to make written documentation in our Federal Environmental Assessment (CEAA).

Should you have any concerns, you may contact me.

Willy

Willy Ing
Project Leader, Bus Rapid Transit (BRT)
City of Mississauga
Transportation and Works Department
201 City Centre Drive
Suite 800
Mississauga, Ontario
L5B 2T4.
Phone: 905-615-3200 Ext. 5791
Fax: 905-896-5504

From: Willy Ing [Willy.Ing@mississauga.ca]

Sent: July 11, 2008 12:10 PM

To: hoskingf@inac.gc.ca

Cc: Geoff Wright

Subject: First Nations Interests - Mississauga Bus Rapid TransitProject

Attachments: Fred-Hosking-Response-07-02-08.pdf; BRT PISR July 11 2008.pdf

Dear Mr. Hosking,

Regarding your letter dated July 2, 2008 to Mr. Geoff Wright(attached), the Mississauga Bus Rapid Transit Project Office have researched the Public Information Status Report with respect to a potential claim being made by "Mississaugas of the New Credit First Nations". According to the report, the only claimant that we found which maybe similar is noted on page 186 of 272 "Mississaugas of the Credit (Band - 120)" attached. To assist us with our communications with the First Nations, would it be possible for your office to clarify which specific claim your brief search has revealed?

Should you have any questions please contact me. My contact information is noted below.

Willy Ing
Project Leader, Bus Rapid Transit (BRT)
City of Mississauga
Transportation and Works Department
201 City Centre Drive
Suite 800
Mississauga, Ontario
L5B 2T4.
Phone: 905-615-3200 Ext. 5791
Fax: 905-896-5504
e-mail: willy.ing@mississauga.ca

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Phone Call: July 31, 2008, 11:37:48 am
From: Doherty, Andrea [Andrea.Doherty@DFO-MPO.GC.ca]
To: LeBrun, Kim
Subject: Re: Mississauga BRT – DFO SAR Risk mapping

DFO's Distribution of Species At Risk mapping indicates the potential presence of Redside Dace and Atlantic Salmon in Little Etobicoke Creek within the study area and Elmcrest and Renforth Creeks immediately downstream of the study area.

DFO was contacted to clarify whether the potential presence indicated by the maps pertained to Redside Dace or Atlantic Salmon (or both).

Andrea Doherty confirmed that the SARA potential mapping in these areas was referring only to Redside Dace populations, not Atlantic Salmon.

Andrea confirmed that the only reason these areas are still identified as having potential for Redside Dace is due to the historic records (NHIC reports last record in 1949).

Andrea recommended that Ecoplans check the Redside Dace Recovery Strategy/Plan for additional information.

The Recovery Strategy indicates that Redside Dace has likely been extirpated from the Etobicoke Creek Watershed. TRCA (pers comm. Scott Smith, Tuesday July 29, 2008) confirms that Redside Dace were extirpated from Etobicoke Creek.

Indian and Northern Affairs Canada
Affaires indiennes et du Nord Canada

www.inac.gc.ca
www.ainc.gc.ca

10 SEP. 2009

Your file - Votre référence

Our file - Notre référence

Geoff Wright
Director, BRT Project Office
City of Mississauga
201 City Centre Drive, Suite 800
MISSISSAUGA, ONTARIO L5B 2T4

Dear Mr. Wright:

Re: Mississauga Bus Rapid Transit (BRT) Project – Phase One

I am writing in response to your letter of June 18, 2008 addressed to Franklin Roy inquiring about any claims that may affect the subject property. I regret that we were unable to respond earlier.

We can advise that our inventory does not include active litigation in the vicinity of this property. Please note that we are unable to make any representations regarding potential or future claims.

We cannot make any comments regarding claims filed under other departmental policies. For information on any claims you should also contact Fred Hosking of the Specific Claims Branch at (819) 953-1940 to inquire about any Specific Claims, and Guy Morin of the Comprehensive Claims Branch at (819) 956-0325 to inquire about any current Comprehensive Claims.

.../2

If you have any further questions please do not hesitate to contact me at (819) 994-1947.

Sincerely,

Marc-André Millaire
Litigation Team Leader
Litigation Portfolio Operations East
Litigation Management and Resolution Branch

DISCLAIMER: In this Disclaimer, "Canada" means Her Majesty the Queen in right of Canada and the Minister of Indian Affairs and Northern Development and their servants and agents. Canada does not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of any data or information disclosed with this correspondence or for any actions in reliance upon such data or information or on any statement contained in this correspondence. Data and information is based on information in departmental records and is disclosed for convenience of reference only. Canada does not act as a representative for any Aboriginal group for the purpose of any claim. Information from other government sources and private sources (including Aboriginal groups) should be sought, to ensure that the information you have is accurate and complete.

First Nations

Transportation and Works Department

City of Mississauga
3484 Semenyk Court
MISSISSAUGA ON L5C 4R1

FAX: 905-896-5504
FAX: 905-615-3173
www.mississauga.ca

Leading today for tomorrow

March 19, 2008
File: FA.05.CEA

Chief M. Bryan Laforme
Mississaugas of the New Credit First Nation
RR #6, Hagersville, Ontario
N0A 1H0

Dear Chief Laforme:

The City of Mississauga, in partnership with GO Transit, would like to inform the Mississaugas of the New Credit First Nation that a Federal Environmental Assessment has been initiated through the Canadian Environmental Assessment Agency (CEAA) for Phase One of the Mississauga Bus Rapid Transit (BRT) Project.

This project involves the construction of a new bus only roadway (busway) across Mississauga and eleven new bus stations. Specifically, the new busway will extend from Winston Churchill Boulevard to Erin Mills Parkway and from the Mississauga City Centre to Renforth Drive running adjacent to the Highway 403, Eastgate Parkway, and Eglinton Avenue corridors. **Figure 1** (attached) provides an overview of the Mississauga BRT Project corridor.

In 1992, the Provincial Ministry of the Environment approved the Mississauga BRT Project from Ridgeway Drive in the west to Renforth Drive in the east and addendum in 2004. We enclose a copy of the latest addendum for your information.

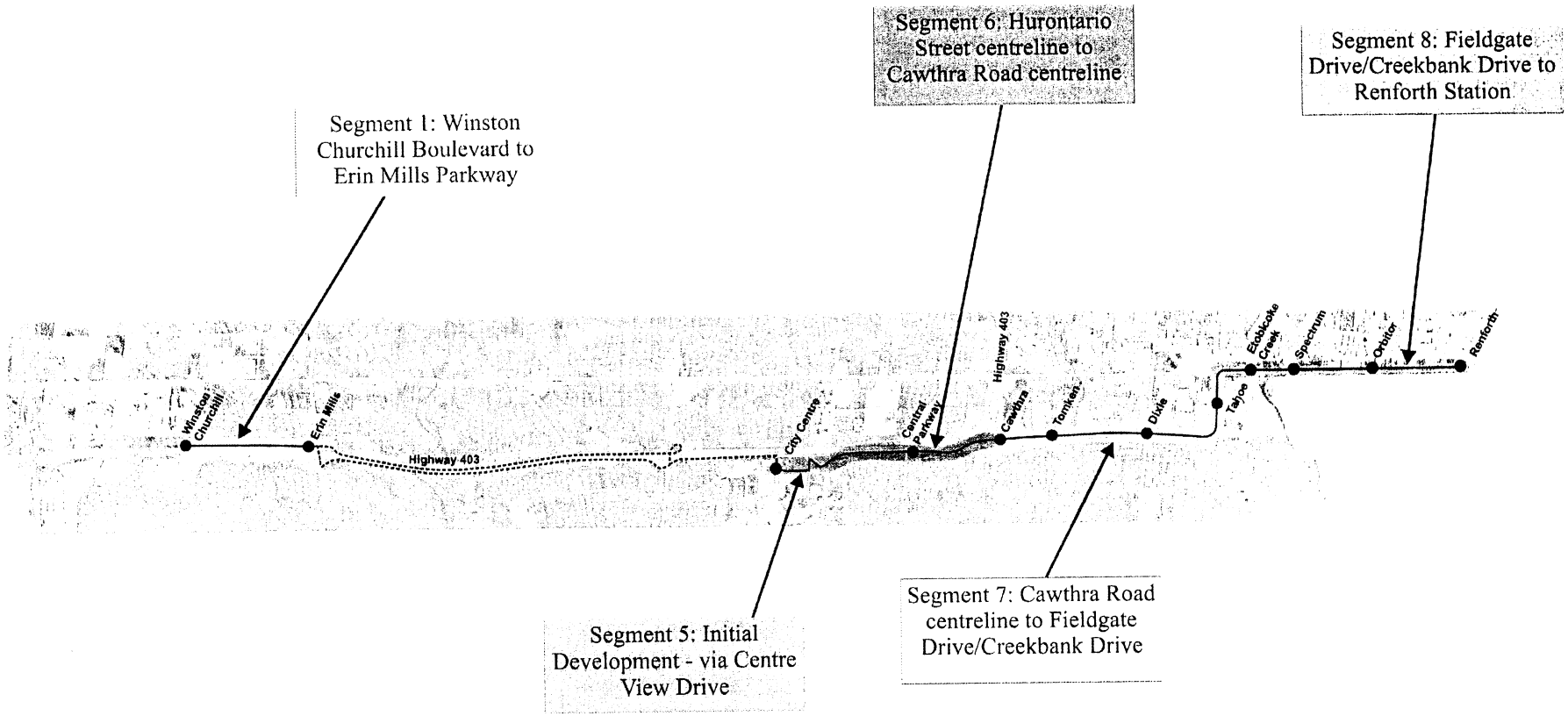
We would invite you to provide comments on the CEAA Screening Report for the Mississauga BRT Project once it is released. As well, if you would like to discuss this project in greater detail, please contact the Mississauga BRT Project Office at 905-615-3200 extension 5745 to arrange a meeting.

Sincerely,

Geoff Wright
Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works
R. Parkin, Transport Canada

Figure 1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March 19, 2008
File: FA.05.CEA

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Mississaugas of the New Credit First Nation
RR #6, Hagersville, Ontario
N0A 1H0

Dear Chief Laforme:

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Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works
R. Parkin, Transport Canada

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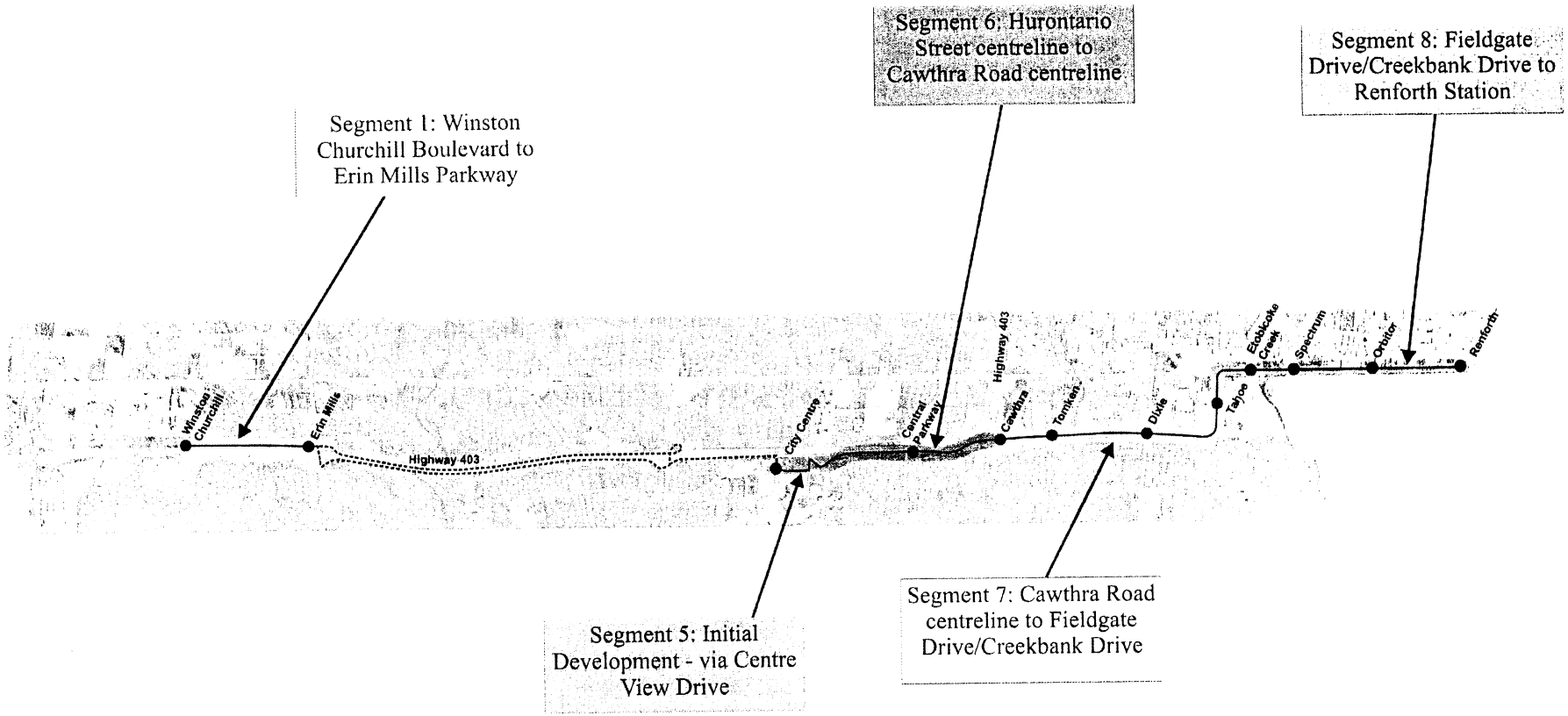
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Transportation and Works Department

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201 City Centre Drive, Suite 800
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Leading today for tomorrow

July 16, 2008
File: PO.04.DES - 200

Six Nations of the Grand River
P.O Box 5000
Ohsweken, Ontario
N0A 1M0

Dear Sirs:

The City of Mississauga, in partnership with GO Transit, would like to inform the Six Nations of the Grand River of Phase One of the Mississauga Bus Rapid Transit (BRT) Project. This project involves the construction of a new bus only roadway (busway) across Mississauga and eleven new bus stations. Specifically, the new busway will extend from Winston Churchill Boulevard to Erin Mills Parkway and from the Mississauga City Centre to Renforth Drive running adjacent to the Highway 403, Eastgate Parkway, and Eglinton Avenue corridors. **Figure 1** (attached) provides an overview of the Mississauga BRT Project corridor.

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This notification is being provided in hopes that the Six Nations of the Grand River can assist us in determining if you may hold an interest in this project. Any input that you can provide would be greatly appreciated. To date we have notified the Mississaugas of the New Credit First Nation, the Ministry of Aboriginal Affairs, and the Department of Indian and Northern Affairs. Please respond to the undersigned at the address noted above or feel free to call the Mississauga BRT Project Office at 905-615-3200 extension 5745.

Sincerely,

Geoff Wright, P.Eng., MBA
Director, BRT Project Office

c: M. Powell, Commissioner, Transportation and Works

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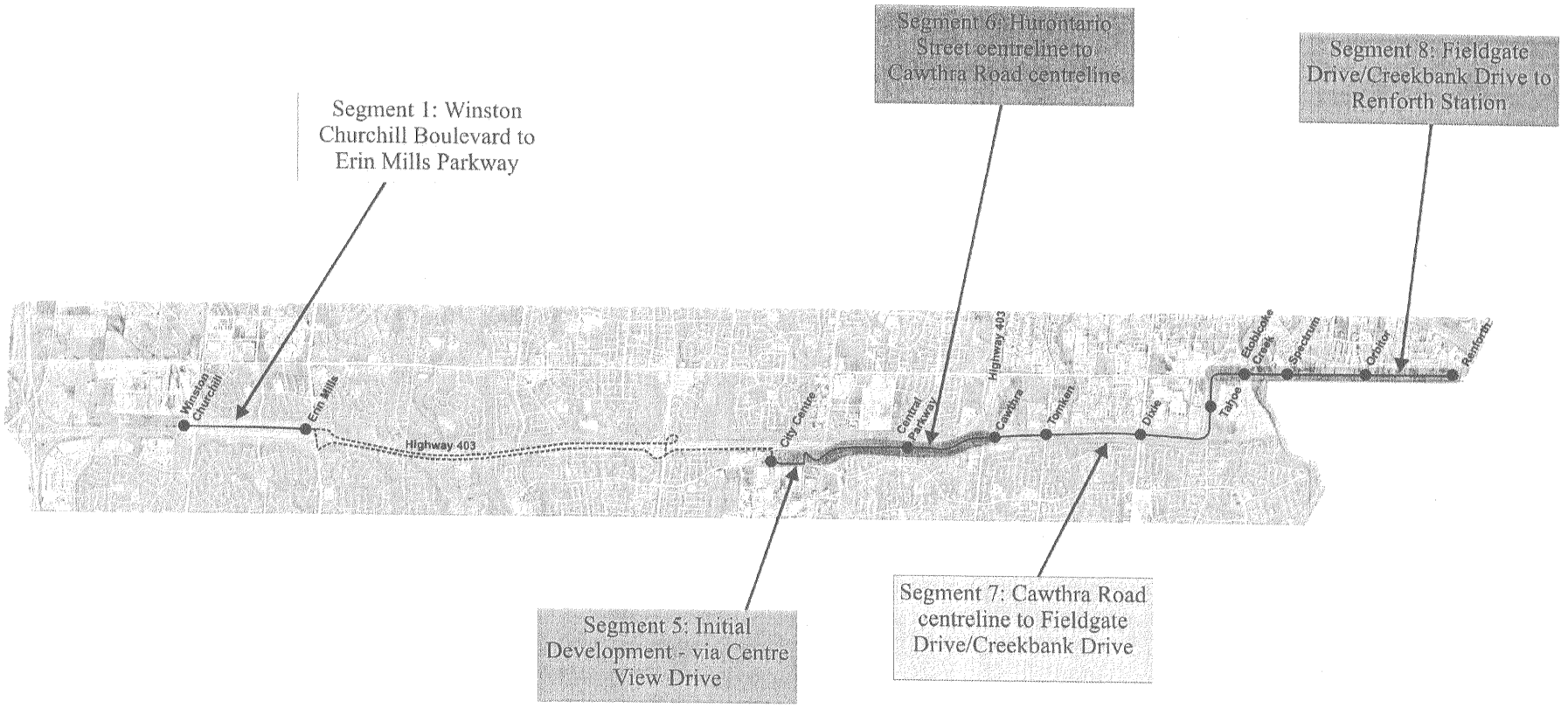
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From: Willy Ing [Willy.Ing@mississauga.ca]
Sent: October 20, 2008 4:13 PM
To: Bright, Katie; Bricks, Mike
Cc: Geoff Wright; Schijns, Steve; Shea, Andrew; Andrea McLeod
Subject: Our phone call to Six Nations of the Grand River

Hi Mike and Katie,

I called the Six Nations of the Grand River today and spoke to Kate Cave (1-519-445-2563). They did receive our letter of July 16, 2008, but did not respond to us as they didn't have any interest in our BRT Project.

However, I advised Kate that our project is along existing corridors and that an archaeological review is being conducted as part of our project. Kate replied indicating that if the archaeological review reveals any remains, they need to be contacted and advised of the findings, otherwise they do not need to see the reports.

Willy

Willy Ing
Project Leader, Bus Rapid Transit (BRT)
City of Mississauga
Transportation and Works Department
201 City Centre Drive
Suite 800
Mississauga, Ontario
L5B 2T4
Phone: 905-615-3200 Ext. 5791
Fax: 905-896-5504
e-mail: willy.ing@mississauga.ca

Transportation and Works Department

City of Mississauga
201 City Centre Drive, Suite 800
MISSISSAUGA ON L5B 2T4

www.mississauga.ca

Leading today for tomorrow

October 21, 2008
File: PO.04.DES-200

Chief Laforme
Mississaugas of the New Credit First Nation
2789 Mississauga Road
R.R. #6 Hagersville, Ontario
N0A 1H0

Dear Chief Laforme:

Further to my letter of March 19, 2008, a copy of which is attached for your convenience, we would like to inform the Mississaugas of the New Credit First Nation that we are currently undertaking the final phases of the required Canadian Environmental Assessment Agency screening report, and our addendum to the approved Provincial Environmental Assessment for the Mississauga Bus Rapid Transit (BRT) project.

For your information, as part of our project we are conducting an archaeological review. Once this archaeological review is completed and should the review reveal the presence of any remains, we will endeavour to notify the Mississaugas of the New Credit First Nation.

Should you have any questions or concerns regarding our BRT Project, please contact me at 905-615-3200, extension 4940 (email: geoff.wright@mississauga.ca), or contact Mr. Willy Ing, BRT Project Leader, at 905-615-3200 ext. 5791 (email willy.ing@mississauga.ca).

Sincerely,

Geoff Wright, P.Eng., MBA
Director, BRT Project Office
905-615-3200 ext. 4940

WI:arm
Enclosure

c: M. Powell, Commissioner, Transportation and Works
W. Ing, BRT Project Leader

M T O

Willy Ing

From: Willy Ing
Sent: 2008/11/13 10:33 AM
To: 'Tupaz, Aimee Rose (MTO)'
Cc: White, Jason (MTO); Geoff Wright; Scott W Anderson; Schijns, Steve
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Hi Aimee and Jason,

This is to inform the MTO that the City of Mississauga's Bus Rapid Transit Project office has requested our consultant to review your concerns. We hope to provide you with a response or meet with you to discuss the issues soon.

Willy

From: Tupaz, Aimee Rose (MTO) [mailto:AimeeRose.Tupaz@ontario.ca]
Sent: 2008/11/03 3:12 PM
To: Willy Ing
Cc: White, Jason (MTO); Geoff Wright; Scott W Anderson
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Willy,

The ministry recognizes that the Mississauga BRT project is still in the preliminary design phase, however, there are several design concepts which have not yet been finalized that hinders the ministry's ability to comment. The ministry has identified areas for improvement within the current BRT preliminary design to the consultant at two meetings held in October. Given the short time frame to review the draft EA addendum (September 2008) for the Mississauga Bus Rapid Transit project, the ministry has the following comments.

- The ministry understands that due to physical constraints in the Highway 403 corridor, it may not be feasible to meet all ministry standards on its facilities being impacted by the BRT, however; safety measures to mitigate these issues must be implemented in accordance with ministry standards. For example, the separation of the E-N/S and S-W ramp at the Winston Churchill Boulevard interchange does not meet current ministry standards. The ministry would like to ensure that the proper mitigation measures are provided for both ramps to address this concern.
- The ministry has concerns with the feasibility of the staging plan outlined in the EA addendum for Winston Churchill Boulevard. It states that two lanes per direction as well as existing pedestrian access will be maintained throughout construction. Based on the construction staging drawings shown for the BRT West section, overbuilding of the existing Winston Churchill Boulevard structure may be required to maintain the traffic/pedestrian flow stated in the EA addendum. Cross section details for the construction staging plan on Winston Churchill Boulevard were not provided to the ministry to assess the feasibility of maintaining two lanes per direction and pedestrian access during construction without the need to overbuild the existing structure. The ministry has yet to receive the staging plan for the BRT East segment for a preliminary review.
- The ministry has concerns with its ability to widen Highway 403 in the future once the BRT is operational. The ministry would like a future commitment from the proponent of the BRT that they will undertake the appropriate safety measures for the BRT as required during construction when the ministry proceeds with Highway 403 widening.
- There are a number of the ministry's ramps which will now be impacted by the BRT. After review of the preliminary design, the ministry would like the proposed grades of these ramps to be minimized and confirmation that the new alignments for all ramps meets ministry standards for stopping sight distance, sight lines and other relevant design criteria.
- The ministry has concerns with the proposed design of a direct taper versus the existing dedicated parallel lane for the S-W ramp from Winston Churchill Boulevard to Highway 403. The preliminary design shows the addition of a third through lane in the northbound direction for Winston Churchill. Do the existing traffic volumes on Winston Churchill warrant an additional through lane? Has there been any traffic modelling done at the

intersection to assess the queuing for the S-W ramp with this new lane on Winston Churchill with this proposed design? If an additional through lane is warranted for Winston Churchill, the ministry would like the dedicated parallel lane for the S-W ramp to be reinstated.

- Drainage and grading work still needs to be finalized in the preliminary design. For instance, based on the grading shown in the preliminary design, additional retaining walls may be required along the BRT. The landscaping plan as shown in the EA Addendum may not be feasible based on the grading shown on the preliminary design drawings.
- There is a change in the BRT East segment with the Cawthra ramp alignment being modified and this has not been addressed in this EA addendum, should it not be included as part of this EA addendum?

The ministry is looking forward to meeting with you should you wish to discuss any of our comments further.

Regards,

Aimee

From: Willy Ing [mailto:Willy.Ing@mississauga.ca]
Sent: October 20, 2008 3:26 PM
To: Willy Ing; White, Jason (MTO)
Cc: Tupaz, Aimee Rose (MTO); Geoff Wright; Scott W Anderson
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Hi Jason,

As a follow up, by now you should have your copies of the draft EA Addendum. Due to our schedule / time constraints, if the MTO is not able to provide comments by the end of October, you will have the opportunity to review the Final Addendum when we formally file it with the MOE in mid to late November. We hope that the MTO will not have any major comments that would delay our project during the formal 30 day review process. However, if you can anticipate any major issues at this time it would be very helpful to us.

Willy

From: Willy Ing
Sent: 2008/10/15 10:08 AM
To: 'White, Jason (MTO)'
Cc: Tupaz, Aimee Rose (MTO); Geoff Wright; Scott W Anderson; 'ashea@mrc.ca'
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Jason,

My apologies that you have not received your copies. We were updating our e-mail system and our consultants did not receive our message. I have spoken to Andrew Shea at MRC they, will be sending you 4 copies by late today or tomorrow.

It is mainly an addendum to address BRT changes at 5 locations:

1. Winston Churchill Boulevard at Hwy 403 Interchange, BRT will go over the "from the east to N-S terminal ramp"
2. Hurontario Street at Hwy 403, alignment change to the BRT to run parallel along the east side of Hurontario Street to Rathburn Road
3. Tomken Road, BRT will go over Tomken Road
4. Dixie Station, the station and parking lot has been moved to the west side
5. Eastgate Parkway crossing, the BRT will go over Eastgate Parkway at the curve in the vicinity of Fieldgate Drive

We hope the MTO are able to meet our acute timelines. However, if you need more time as your comments are beneficial to us, we will see if the MOE can provide and exception.

Willy

From: White, Jason (MTO) [mailto:Jason.White@ontario.ca]
Sent: 2008/10/15 9:14 AM
To: Willy Ing
Cc: Tupaz, Aimee Rose (MTO); Geoff Wright; Scott W Anderson
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Willy

Before I commit us, any idea when we will be getting the draft report to look at? At this point, we aren't even sure what is covered off in the addendum. We will do our best to meet your deadline, so any information you could feed us now would be helpful.

Thanks

Jason

> -----Original Message-----
> **From:** Willy Ing [mailto:Willy.Ing@mississauga.ca]
> **Sent:** October 14, 2008 9:38 AM
> **To:** White, Jason (MTO)
> **Cc:** Tupaz, Aimee Rose (MTO); Geoff Wright; Scott W Anderson
> **Subject:** RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum
>
> Jason,
>
> Wanted to confirm as per our message to Lou Politano at the bottom of this message that the MTO will be able to provide comments by the end of October? Please let me know as we are working very closely with the MOE on this draft EA Addendum.
>
> Willy

> **From:** White, Jason (MTO) [mailto:Jason.White@ontario.ca]
> **Sent:** 2008/10/10 3:00 PM
> **To:** Willy Ing
> **Cc:** Tupaz, Aimee Rose (MTO)
> **Subject:** FW: Mississauga Bus Rapid Transit Project - Draft EnvironmentalAssessment Addendum
>
> Willy
>
> Can you include myself and Aimee Tupaz on the distribution for this addendum. We will also link up with our Transit Office to see who needs to be involved from their shop.
>
> Thanks
>
> Jason
>
> -----Original Message-----
> **From:** Politano, Lou (MTO)
> **Sent:** September 29, 2008 9:47 PM
> **To:** White, Jason (MTO)
> **Subject:** RE: Mississauga Bus Rapid Transit Project - Draft EnvironmentalAssessment Addendum

ok. thanks. pl let him know

From: White, Jason (MTO)
Sent: Sat 27/09/2008 8:44 AM
To: Politano, Lou (MTO)
Cc: Korpal, Peter (MTO)
Subject: Re: Mississauga Bus Rapid Transit Project - Draft EnvironmentalAssessment Addendum

Lou

I seem to recall both cr and PP being involved in the EA addendum. CR has been in the design, but PP is also involved. I just am not sure what they do.

Since they aren't specific about what the new ea work is for, both groups should be involved. I know willy and can let him know.

Jason

Sent from my BlackBerry Wireless Handheld

-----Original Message-----
From: Politano, Lou (MTO)
To: White, Jason (MTO)
CC: Korpal, Peter (MTO)
Sent: Fri Sep 26 22:53:46 2008
Subject: FW: Mississauga Bus Rapid Transit Project - Draft EnvironmentalAssessment Addendum

Jason, thoughts ?

who should represent MTO ? us, P&P, both?

who's been the primary contact so far?

Lou

From: Willy Ing [mailto:Willy.Ing@mississauga.ca]
Sent: Fri 26/09/2008 10:04 AM
To: Politano, Lou (MTO)
Cc: Geoff Wright
Subject: Mississauga Bus Rapid Transit Project - Draft EnvironmentalAssessment Addendum

Dear Mr. Politano:

The City of Mississauga in partnership with GO Transit are undertaking an Environmental Assessment Addendum of the Mississauga Transitway, now known as the Mississauga Bus Rapid Transit (BRT) which received approval from the Ministry of the Environment (MOE) in 1992.

In order to move this addendum forward, the Ministry of the Environment suggests that there may be benefit to engaging some members of the Government Review Team (GRT) at a preliminary stage to expedite the final addendum review process. We are engaging the Ministry of Transportation Ontario to determine if the MTO would be interested in participating in this draft EA Addendum review process, and if possible, that any comments from the MTO be provided to the City of Mississauga by the end of October 2008.

It is important to note that the EA Addendum focuses on alternatives/evaluations for revisions to the design approved as part of the 1992 Environmental Assessment and the 2004 Environmental Assessment Addendum. This EA Addendum is not at a Preliminary Design level of detail and does not include the level of detail that will be included as part of Preliminary Design. Preliminary Design is separate from this EA Addendum and will be documented in Preliminary Design Reports which will be made available for stakeholder review.

For your information, our consultant McCormick Rankin Corporation (MRC) is consulting with various MTO staff regarding the Preliminary Design.

Please provide a response to this e-mail in 5 working days to the City of Mississauga.

Should you have any questions you may contact Mr. Geoff Wright, Director Bus Rapid Transit Project Office at 905-615-3200 Ext 4940 e-mail: geoff.wright@mississauga.ca <mailto:geoff.wright@mississauga.ca> , or you may contact me directly, my information is noted below.

Willy Ing
Project Leader, Bus Rapid Transit (BRT)
City of Mississauga
Transportation and Works Department
201 City Centre Drive
Suite 800
Mississauga, Ontario
L5B 2T4.
Phone: 905-615-3200 Ext. 5791
Fax: 905-896-5504
e-mail: willy.ing@mississauga.ca <mailto:willy.ing@mississauga.ca>

TECHNICAL MEMORANDUM

To: Sunil Jain
McCormick Rankin Corporation
File: 6964/3

From: Jeff Schroeder
Date: Oct. 22, 2008

RE: Mississauga BRT Preliminary Design
Cooksville Creek Hydraulic Assessment

1.0 INTRODUCTION

1.1 Study Purpose

Hydraulic assessments were completed for the BRT crossing of Cooksville Creek as part of the Mississauga BRT Preliminary Design.

This Technical Memo details the development of the hydraulic models and the evaluation of the hydraulic impact of the Cooksville Creek crossing.

1.2 Proposed Structure

The proposed BRT alignment crosses over the 209.7 metre long twin 5500x2700mm culverts underneath Hurontario Street and Rathburn Road (See Exhibit 1). Due to grading issues, the profile of the BRT would cut into the top of the twin culverts (See Exhibit 2). The alignment centreline of the proposed BRT would cut into the top of the existing culverts by 0.5 metres approximately 125 metres upstream of the Rathburn Road outlet.

1.3 Study Scope

This Technical Memo includes the following:

- Identification of design flows during 2-year, 5-year, 10-year, 25-year, 50-year, 100-year and Regional rainfall events;
- Development of hydraulic models for calculating water surface elevations;
- Impact assessment results and recommendations.

2.0 DESIGN FLOWS

2.1 Design Storms

Peak flows for the 2-year, 5-year, 10-year, 25-year, 50-year, 100-year and Regional rainfall events were provided by the Credit Valley Conservation (CVC) in the HEC-2 model Cook.hec. Table 1 summarizes the peak flows at each crossing.

Table 1 - Summary of Peak Flows (m^3/s)

2-Year	5-Year	10-Year	25-Year	50-Year	100-Year	Regional
55.0	65.0	70.0	90.0	105.0	115.0	145.0

3.0 HYDRAULIC MODELLING

3.1 Model Setup

The CVC provided an original HEC-2 model for Cooksville Creek. For the analysis the original model was converted into the river analysis program HEC-RAS and the converted model was used as a base and comparison model for the proposed BRT model.

HEC-RAS is a well established backwater model developed by the U.S. Army Corps of Engineers and widely used to estimate water surface elevations in river systems. The HEC-RAS model is particularly well suited for assessing the impacts of culverts and bridges on water surface elevations. It is the *de facto* standard for water surface elevation calculations and flood risk mapping in Ontario and many other North American jurisdictions. However, HEC-RAS was not designed to easily handle a situation where the height of a culvert is reduced part way through its length and then expanded again.

The approach used was to split the twin culverts into three separate structures with a small space in between instead of one long structure. The first structure underneath Rathburn Road covers a length of 115 metres, the second structure underneath the proposed BRT location covers a length of 15 metres and the third structure underneath Hurontario Street is 79.7 metres long.

Two existing conditions models were created for the analysis. One model simulates the twin culverts as one long structure (conventional method) and the second model simulates the twin culverts as three separate structures as mentioned above. The reason for creating two existing models is the need to compare the differences in results between the conventional modelling method and the alternative modelling approach. The results from the future conditions model (using the alternative modelling approach) were then compared to the results from the alternative existing conditions model. The only difference between the alternative existing conditions model and the future conditions model is that the middle twin culvert section only has a height of 2.2 metres instead of 2.7 metres.

As a further comparison and check, the hydraulic program XP-STORM was used and models were setup similarly to the conventional and alternative methods mentioned above.

3.2 Modelling Results

Table 2 compares the conventional modelling method with the alternative modelling method for existing conditions using HEC-RAS.

Table 2 – Flood Elevation Comparison-Conventional Method (Ex1) vs. Alternative Method (Ex2) (HEC-RAS) (m)

Section Number	Chainage (m)	2-Year Storm			25-Year Storm			100-Year Storm			Regional Storm		
		Ex1	Ex2	Diff.	Ex1	Ex2	Diff.	Ex1	Ex2	Diff.	Ex1	Ex2	Diff.
8.473	0	151.17	151.17	0.00	152.02	152.02	0.00	152.72	152.72	0.00	153.19	153.19	0.00
8.52	40	150.98	150.98	0.00	151.86	151.86	0.00	152.57	152.57	0.00	153.06	153.06	0.00
8.549	70	151.58	151.58	0.00	152.34	152.34	0.00	152.92	152.92	0.00	153.40	153.40	0.00
8.55	71	151.43	151.43	0.00	152.22	152.22	0.00	152.82	152.82	0.00	153.30	153.30	0.00
8.555	75	151.40	151.40	0.00	152.15	152.15	0.00	152.73	152.73	0.00	153.16	153.16	0.00
8.65	Structure												
8.745	284.7	151.36	151.36	0.00	151.64	154.48	2.84	151.83	156.02	4.19	155.59	156.03	0.44
8.76	299.7	154.85	154.85	0.00	155.22	155.22	0.00	155.47	155.47	0.00	155.74	155.74	0.00

Table 3 compares existing conditions with future conditions using HECRAS for the alternative modelling method.

Table 3 – Flood Elevation Comparison-Existing vs. Future Conditions (HEC-RAS) (m)

Section Number	Chainage (m)	2-Year Storm			25-Year Storm			100-Year Storm			Regional Storm		
		Ex2	Fut	Diff.	Ex2	Fut	Diff.	Ex2	Fut	Diff.	Ex2	Fut	Diff.
8.473	0	151.17	151.17	0.00	152.02	152.02	0.00	152.72	152.72	0.00	153.19	153.19	0.00
8.52	40	150.98	150.98	0.00	151.86	151.86	0.00	152.57	152.57	0.00	153.06	153.06	0.00
8.549	70	151.58	151.58	0.00	152.34	152.34	0.00	152.92	152.92	0.00	153.40	153.40	0.00
8.55	71	151.43	151.43	0.00	152.22	152.22	0.00	152.82	152.82	0.00	153.30	153.30	0.00
8.555	75	151.40	151.40	0.00	152.15	152.15	0.00	152.73	152.73	0.00	153.16	153.16	0.00
8.65	Structure												
8.745	284.7	151.36	151.36	0.00	154.48	154.97	0.49	156.02	156.03	0.01	156.03	156.03	0.00
8.76	299.7	154.85	154.85	0.00	155.22	155.22	0.00	155.47	155.47	0.00	155.74	155.74	0.00

The results indicate that there is a significant difference in results between the conventional and alternative method models for existing conditions at the structure inlet upstream of Hurontario Street. The results for the conventional method more accurately reflect actual conditions but the results for the alternative method model are needed to assess the impact of the BRT crossing. It should be noted that the flood elevations do not differ 15 metres upstream of the structure inlet. The results in Table 3 indicate that there is little impact from lowering the top of the twin culverts by 0.5 metres at the proposed BRT crossing except for the 25-year storm. However the increases in flood levels would not cause an increase in flood risk. Flows do not overtop Hurontario Street or spill onto Rathburn Road during any storm including the Regional Storm.

Table 4 compares the conventional modelling method with the alternative modelling method for existing conditions using XP-STORM.

Table 4 – Flood Elevation Comparison-Conventional Method (Ex1) vs. Alternative Method (Ex2) (XP-STORM) (m)

Section Number	Chainage (m)	2-Year Storm			25-Year Storm			100-Year Storm			Regional Storm		
		Ex1	Ex2	Diff.	Ex1	Ex2	Diff.	Ex1	Ex2	Diff.	Ex1	Ex2	Diff.
8.555	0	151.40	151.40	0.00	152.15	152.15	0.00	152.73	152.73	0.00	153.16	153.16	0.00
8.65	Structure												
8.745	284.7	152.14	152.65	0.51	152.78	154.00	1.22	153.53	154.85	1.32	154.45	156.50	2.05

Table 5 compares existing conditions with future conditions using XP-STORM for the alternative modelling method.

Table 5 – Flood Elevation Comparison-Existing vs. Future Conditions (HEC-RAS) (XP-STORM) (m)

Section Number	Chainage (m)	2-Year Storm			25-Year Storm			100-Year Storm			Regional Storm		
		Ex1	Ex2	Diff.	Ex1	Ex2	Diff.	Ex1	Ex2	Diff.	Ex1	Ex2	Diff.
8.555	0	151.40	151.40	0.00	152.15	152.15	0.00	152.73	152.73	0.00	153.16	153.16	0.00
8.65	Structure												
8.745	284.7	152.65	152.65	0.00	154.00	154.05	0.05	154.85	154.85	0.00	156.50	156.60	0.10

Although XP-STORM produces different results from HEC-RAS, the flood elevation differences between existing and future conditions are comparable.

4.0 SUMMARY OF FINDINGS

Key findings are as follows:

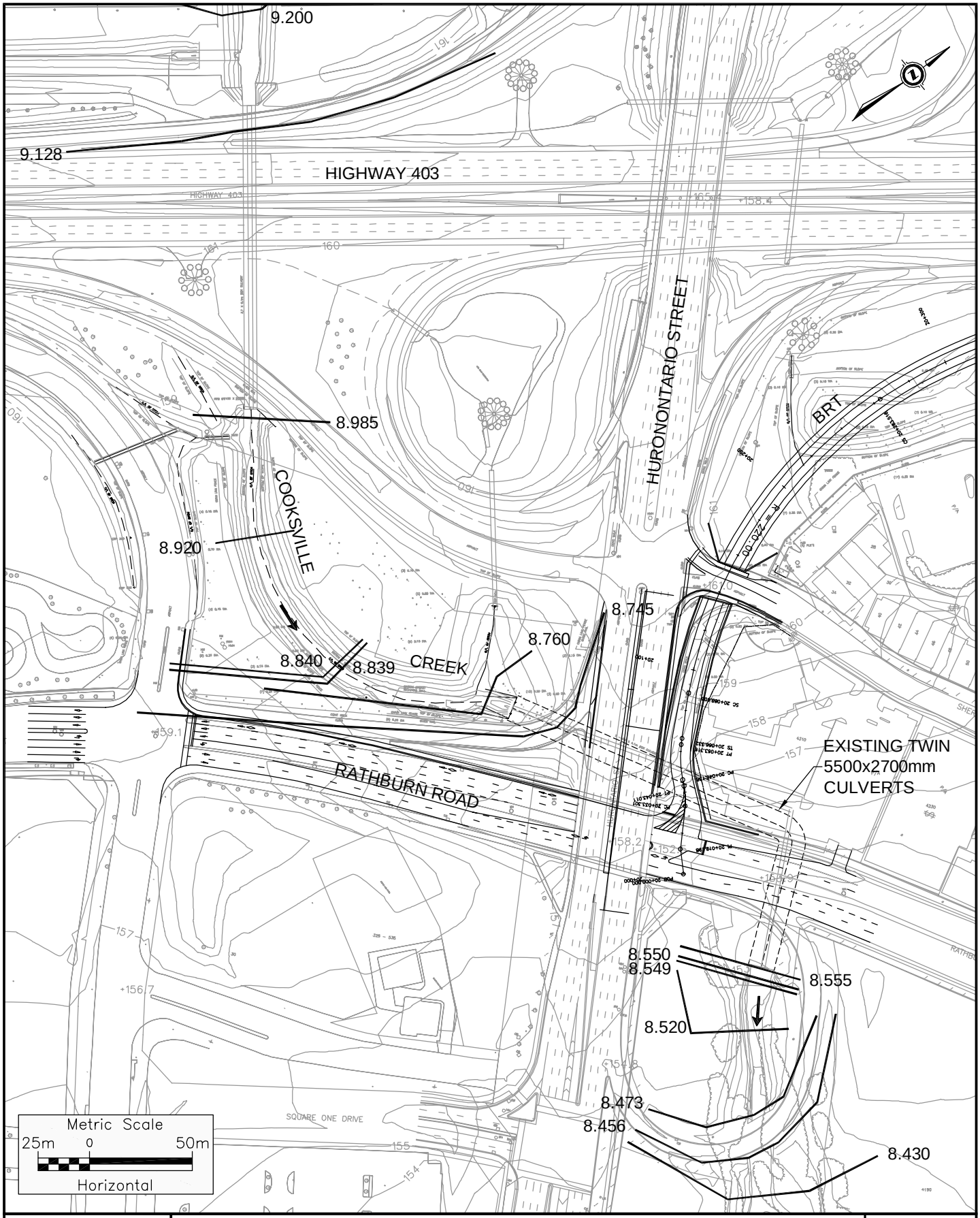
i) The HEC-RAS results indicate that there is a significant difference in results between the conventional and alternative modelling methods for existing conditions at the structure inlet. However the flood elevations did not differ 15 metres upstream of the structure inlet. The results also indicate that there is little impact from lowering the top of the culvert by 0.5 metres at the proposed BRT crossing.

ii) Although XP-STORM produces different results from HEC-RAS, the flood elevation differences between existing and future conditions are comparable.

iii) It is recommended that a smooth transition be made between the existing twin culverts and the impacted section to minimize hydraulic losses and to ensure that any debris does not get trapped by an abrupt change in cross-section.

All of which is respectfully submitted,
McCormick Rankin Corporation

Jeff Schroeder, C.E.T.



MODIFIED: Oct. 23, 2008 1:11 PM

DRAWING NAME: K:\DRAWINGS\6900-6999\6964 - MISSISSAUGA BRT\DRAINAGE\HEC-RAS SECTIONS\K6964-BRT COOKSVILLE HECRAS SECTION LOCATIONS.DWG

MRC

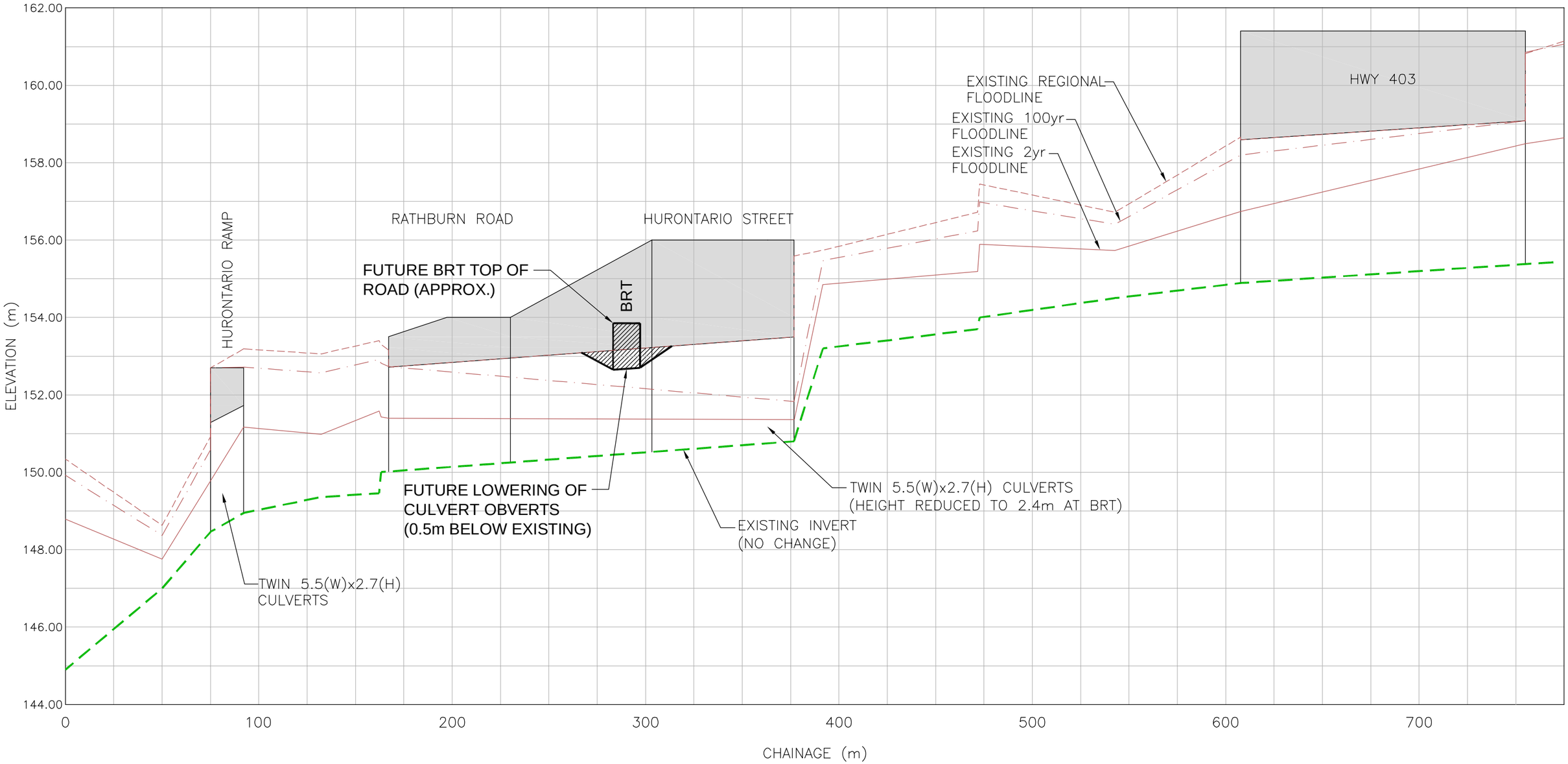
HEC-RAS SECTION LOCATIONS

BRT AT COOKSVILLE CREEK

EXHIBIT

1

MODIFIED: Oct. 23, 2008 1:08 PM



Metric Scale
1m 0 2m
Vertical

Metric Scale
25m 0 50m
Horizontal

MRC	COOKSVILLE CREEK PROFILES BRT AT COOKSVILLE CREEK	EXHIBIT 2

DRAWING NAME: K:\DRAWINGS\6900-6999\6964 - MISSISSAUGA BRT\DRAINAGE\K6964-COOKSVILLE CREEK PROFILE.DWG

Willy Ing

From: Schijns, Steve [SSchijns@mrc.ca]
Sent: 2008/11/26 4:29 PM
To: Marray, Liam; Murphy, Gary; Ul Haq, Rizwan
Cc: Scott W Anderson; Andrew Shea; Geoff Wright; Bright, Katie; Willy Ing; Kauppinen, Andrea
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum
Attachments: S6964-307-001GA.PDF

For your information, the structural General Arrangement drawing accompanying yesterday's e-mail regarding Cooksville Creek was outdated and inconsistent with the design memo; attached is the correct GA (please replace).

Regards,

Stephen Schijns, P.Eng.
McCormick Rankin Corp.
2655 North Sheridan Way
Mississauga, ON
Canada
L5K 2P8

Tel: 905 823 8500 x 1268
Fax: 905 823 8503
E-mail: sschijns@mrc.ca
Web: www.mrc.ca

From: Schijns, Steve
Sent: November 25, 2008 2:56 PM
To: 'Marray, Liam'; Murphy, Gary; Ul Haq, Rizwan
Cc: Scott W Anderson; Andrew Shea; Geoff Wright; Bright, Katie; Willy Ing; Kauppinen, Andrea
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Liam – we are anxious to finalize the CEAA report, EA Addendum, and BRT Preliminary Design Report and would be pleased to meet with you at your convenience. CVC is the sole remaining stakeholder with CEAA comments outstanding. Please advise when we can meet.

Attached for your information is a drawing of the proposed lowering of the Cooksville Creek culvert obvert east of Hurontario Street, as well as a summary of the investigation into the hydraulic impact of the proposal.

Thank you

Stephen Schijns, P.Eng.
McCormick Rankin Corp.
2655 North Sheridan Way
Mississauga, ON
Canada
L5K 2P8

Tel: 905 823 8500 x 1268
Fax: 905 823 8503
E-mail: sschijns@mrc.ca
Web: www.mrc.ca

From: Marray, Liam [mailto:LMarray@creditvalleycons.com]
Sent: November 3, 2008 7:14 PM
To: Willy Ing; Murphy, Gary; Ul Haq, Rizwan
Cc: Scott W Anderson; Andrew Shea; Geoff Wright; Schijns, Steve
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Willy

I apologize for the delay in responding. CVC would like to set-up a meeting with you and your consultants to discuss.

Liam Marray

From: Willy Ing [Willy.Ing@mississauga.ca]
Sent: November 3, 2008 4:38 PM
To: Marray, Liam
Cc: Scott W Anderson; Andrew Shea; Geoff Wright; Schijns, Steve
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Hi Liam,

Comments were due October 31st. Please advise if CVC will be sending comments.

Willy

From: Schijns, Steve [mailto:SSchijns@mrc.ca]
Sent: 2008/10/02 1:26 PM
To: Marray, Liam; Willy Ing
Cc: Scott W Anderson; Andrew Shea; Geoff Wright
Subject: RE: Mississauga Bus Rapid Transit Project - DraftEnvironmentalAssessment Addendum

Liam – the EA Addendum deals in part with the revised approach to the BRT project crossing at Cooksville Creek / Hurontario Street, and the reconfiguration of interchange ramps at Winston Churchill Boulevard / 403. Other issues dealt with the EA Addendum fall within the TRCA jurisdiction. Unless informed otherwise, we will send CVC one copy of the draft report for review and comment.

Stephen Schijns, P.Eng.
McCormick Rankin Corp.
2655 North Sheridan Way
Mississauga, ON
Canada
L5K 2P8

Tel: 905 823 8500 x 1268
Fax: 905 823 8503
E-mail: sschijns@mrc.ca
Web: www.mrc.ca

From: Willy Ing [mailto:Willy.Ing@mississauga.ca]
Sent: September 29, 2008 8:53 AM
To: Liam Marray

Cc: Andrew Shea; Geoff Wright; Scott W Anderson; Schijns, Steve
Subject: RE: Mississauga Bus Rapid Transit Project - DraftEnvironmentalAssessment Addendum

Hi Liam,

With respect to the EA Addendum, I believe the main issue is the Cooksville Creek. However, I will copy this e-mail to Steve Schijns and Andrew Shea asking them to provide you with any further details and that they forward you the necessary copies of the draft EA Addendum.

Should you have any questions or concerns please let me know.

Willy

>>> "Marray, Liam" <LMarray@creditvalleycons.com> 2008/09/29 8:02 am >>>
Willy
CVC is interested in participating in the review of the EA addendum. However, from this email there is no scope of work identified and therefore, it is difficult to determine, which staff should be involved. Can you provide more detail with respect to the addendum?

Liam Marray
Credit Valley Conservation
Senior Planner/Ecologist
1255 Old Derry Road West
Meadowvale, Ontario L5N 6R4
Tel: (905) 670-1615 Ext. 239
Fax: (905) 670-2210
Email: lmarray@creditvalleyca.ca

From: Willy Ing [mailto:Willy.Ing@mississauga.ca]
Sent: September 26, 2008 11:19 AM
To: Marray, Liam
Cc: Geoff Wright
Subject: Mississauga Bus Rapid Transit Project - Draft EnvironmentalAssessment Addendum

Dear Mr. Marray:

The City of Mississauga in partnership with GO Transit are undertaking an Environmental Assessment Addendum of the Mississauga Transitway, now known as the Mississauga Bus Rapid Transit (BRT) which received approval from the Ministry of the Environment (MOE) in 1992.

In order to move this addendum forward, the Ministry of the Environment suggests that there may be benefit to engaging some members of the Government Review Team (GRT) at a preliminary stage to expedite the final addendum review process. According to the GRT Master Distribution list, we are to contact the conservation authority in the affected area. As such, we are engaging the Credit Valley Conservation (CVC) to determine if the CVC would be interested in participating in this draft EA Addendum review process, and if possible, that any comments from the CVC be provided to the City of Mississauga by the end of October 2008.

It is important to note that the EA Addendum focuses on alternatives/evaluations for revisions to the design approved as part of the 1992 Environmental Assessment and the 2004 Environmental Assessment Addendum. This EA Addendum is not at a Preliminary Design level of detail and does not include the level of detail that will be included as part of Preliminary Design. Preliminary Design is separate from this EA Addendum and will be documented in Preliminary Design Reports which will be made available for stakeholder review.

Please provide a response to this e-mail in 5 working days to the City of Mississauga.

Should you have any questions you may contact Mr. Geoff Wright, Director Bus Rapid Transit Project Office at 905-615-3200 Ext 4940 e-mail: geoff.wright@mississauga.ca, or you may contact me directly, my information is noted below.

Willy Ing
Project Leader, Bus Rapid Transit (BRT)
City of Mississauga
Transportation and Works Department
201 City Centre Drive
Suite 800
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L5B 2T4.
Phone: 905-615-3200 Ext. 5791
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Willy Ing

From: Schijns, Steve [SSchijns@mrc.ca]
Sent: 2008/11/25 2:56 PM
To: Marray, Liam; Murphy, Gary; Ul Haq, Rizwan
Cc: Scott W Anderson; Andrew Shea; Geoff Wright; Bright, Katie; Willy Ing; Kauppinen, Andrea
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum
Attachments: S6964-307-001GA.PDF; 6964jgs-Cooksville Creek Hydraulics Technical Memo-Oct 22 2008.pdf

Liam – we are anxious to finalize the CEAA report, EA Addendum, and BRT Preliminary Design Report and would be pleased to meet with you at your convenience. CVC is the sole remaining stakeholder with CEAA comments outstanding. Please advise when we can meet.

Attached for your information is a drawing of the proposed lowering of the Cooksville Creek culvert obvert east of Hurontario Street, as well as a summary of the investigation into the hydraulic impact of the proposal.

Thank you

Stephen Schijns, P.Eng.
McCormick Rankin Corp.
2655 North Sheridan Way
Mississauga, ON
Canada
L5K 2P8

Tel: 905 823 8500 x 1268
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E-mail: sschijns@mrc.ca
Web: www.mrc.ca

From: Marray, Liam [mailto:LMarray@creditvalleycons.com]
Sent: November 3, 2008 7:14 PM
To: Willy Ing; Murphy, Gary; Ul Haq, Rizwan
Cc: Scott W Anderson; Andrew Shea; Geoff Wright; Schijns, Steve
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Willy

I apologize for the delay in responding. CVC would like to set-up a meeting with you and your consultants to discuss.

Liam Marray

From: Willy Ing [Willy.Ing@mississauga.ca]
Sent: November 3, 2008 4:38 PM
To: Marray, Liam
Cc: Scott W Anderson; Andrew Shea; Geoff Wright; Schijns, Steve
Subject: RE: Mississauga Bus Rapid Transit Project - Draft Environmental Assessment Addendum

Hi Liam,

Comments were due October 31st. Please advise if CVC will be sending comments.

Willy

From: Schijns, Steve [mailto:SSchijns@mrc.ca]
Sent: 2008/10/02 1:26 PM
To: Marray, Liam; Willy Ing
Cc: Scott W Anderson; Andrew Shea; Geoff Wright
Subject: RE: Mississauga Bus Rapid Transit Project - DraftEnvironmentalAssessment Addendum

Liam – the EA Addendum deals in part with the revised approach to the BRT project crossing at Cooksville Creek / Hurontario Street, and the reconfiguration of interchange ramps at Winston Churchill Boulevard / 403. Other issues dealt with the EA Addendum fall within the TRCA jurisdiction. Unless informed otherwise, we will send CVC one copy of the draft report for review and comment.

Stephen Schijns, P.Eng.
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Mississauga, ON
Canada
L5K 2P8

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Fax: 905 823 8503
E-mail: sschijns@mrc.ca
Web: www.mrc.ca

From: Willy Ing [mailto:Willy.Ing@mississauga.ca]
Sent: September 29, 2008 8:53 AM
To: Liam Marray
Cc: Andrew Shea; Geoff Wright; Scott W Anderson; Schijns, Steve
Subject: RE: Mississauga Bus Rapid Transit Project - DraftEnvironmentalAssessment Addendum

Hi Liam,

With respect to the EA Addendum, I believe the main issue is the Cooksville Creek. However, I will copy this e-mail to Steve Schijns and Andrew Shea asking them to provide you with any further details and that they forward you the necessary copies of the draft EA Addendum.

Should you have any questions or concerns please let me know.

Willy

>>> "Marray, Liam" <LMarray@creditvalleycons.com> 2008/09/29 8:02 am >>>
Willy
CVC is interested in participating in the review of the EA addendum. However, from this email there is no scope of work identified and therefore, it is difficult to determine, which staff should be involved. Can you provide more detail with respect to the addendum?

Liam Marray
Credit Valley Conservation
Senior Planner/Ecologist
1255 Old Derry Road West
Meadowvale, Ontario L5N 6R4
Tel: (905) 670-1615 Ext. 239
Fax: (905) 670-2210

Email: lmarray@creditvalleyca.ca

From: Willy Ing [mailto:Willy.Ing@mississauga.ca]
Sent: September 26, 2008 11:19 AM
To: Marray, Liam
Cc: Geoff Wright
Subject: Mississauga Bus Rapid Transit Project - Draft EnvironmentalAssessment Addendum

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