APPENDIX B

External Agency Consultation and Correspondence

Waterdown/Aldershot Transportation Master Plan: Phase 3

Agency Comments Database

January 2008 to Present

This document includes all questions and responses by the agencies received from January 2008 to DATE for the Waterdown/Aldershot Transportation master Plan – Phase 3. This list is in chronological order from the date in which the comment/question was received. This document was prepared by Lura Consulting, the neutral third-party consultation facilitator for this project.

A summary of the issues raised through the comments in this database can be found in the document *Waterdown Road Class EA – Phase 3 and 4: Master Summary of Comments (January 2008 - Present)*.

For more information, please contact:

SALLY LEPPARD
Lura Consulting
36 Hunter Street East, Suite 601
Hamilton ON L8N 3W8
Tel: (905) 527-0754
E-mail: sleppard@lura.ca

COMMENTS FROM THE AGENCIES

Correspondent	Issue/Concern	To	Responder	Response
ID# 16 Suzanne McInnes (Niagara Peninsula Conservation Authority Feb 19, 2008 Email	Please remove my name and Paul Bond's name from your mailing list. This project is located outside on the NPCA's jurisdiction.	Waterdown-Aldershot Information	Waterdown-Aldershot Information	Removed from Database February 19th, 2008
ID# 39 Darylan Perry (CN) Feb 28, 2008 Email	Thank you for your letter dated February 15, 2008 regarding the above noted project. This project does not affect any CN rail line or property and CN requests to be removed from the project mailing list.	Waterdown-Aldershot Information	Waterdown-Aldershot Information	Removed from database
ID# 60 Nora Jamieson (Hamilton Conservation Authority (HCA)) Mar 7, 2008 Email	To Neutral Community Facilitator's Office and Diana Morreale at City of Hamilton Public Works Dept.: Hamilton Conservation Authority (HCA) has just recently received a copy of a letter from Conservation Halton to the Neutral Community Facilitator's Office, dated March 6, 2008 advising that they have some concerns with the Phase 3 and 4 and that there has been no discussions to date between the Secondary Plan Team and the EA Study Team which includes Conservation Halton. We wish to advise that HCA is also part of this EA Study Team and we too have not been involved with these discussions. As well, a copy of the Phase 3 and 4 report was not submitted for our review. Please be advised that we have had problems in the past with not being circulated documents for review and have not been invited to some discussion meetings. We request that a copy of the report be submitted to HCA and that we be added to the circulation list if we were inadvertently removed.	Waterdown-Aldershot Information & Diana Morreale	Waterdown-Aldershot Information Mar 26, 2008 Email	Email was acknowledged Mar 10, 2008. Dear Ms. Jamieson, Thank you for your e-mail dated March 7, 2008. We have received a response from the project team and provide it below. --- The Project Partners are aware that Conservation Halton and Hamilton Conservation Authority are a part of the Waterdown/Aldershot Transportation Master Plan (WATMP) EA Study Team. We also look forward to working with the two conservation authorities in the upcoming Phases (3 & 4). The Project Partners have finalized the Phase 2 Report for the WATMP, a copy of the final report will be sent to all agencies that have been a part of the EA Study Team. As Phase 2 of the Waterdown/Aldershot Transportation Master Plan is now complete, the Study will proceed to Phases 3 and 4 to examine two distinct roadway projects. They are identified as the North-South Road (Waterdown Road) Class Environmental

				Assessment project and the East-West Road Class Environmental Assessment project. The Project Partners will continue to meet with the WATMP EA Study Team at key stages of the Phase 3 and 4 work. We look forward to HCA's continued participation in the next phases. Please note, the City of Hamilton staff meet once a month to discuss all studies that are going on in Waterdown. In addition to these monthly meetings staff working on the WATMP and the Waterdown South Secondary Plan meets regularly to ensure the two studies are coordinated with one another. The project team will be contacting you in the next little while to set up agency consultation dates for Phase 3 work. In the meantime, if you have any additional questions or comments please do not hesitate to contact us.
ID# 136 Margaret Charles (Halton Conservation) Jun 11, 2008 Phone	Notification that she will not be attending the North-South NAC meeting	Waterdown-Aldershot Information	Waterdown-Aldershot Information Jun 11, 2008 Phone	None required
ID# 148 Margaret Charles (Halton Conservation) Jun 19, 2008 Phone	Ms. Charles (Halton Region) would like feedback on whether or not she should prepare the one page memo/list for the upcoming Public Information Centres from the Conservation of Halton as discussed with Liz Nield.	Waterdown-Aldershot Information	Sally Leppard Jun 19 & 23, 2008 Email & Phone	Hello Ms. Charles. Thank you for following up on Halton CAs offer to provide a memo to the NAC outlining the CAs area of interest vis a vis the Waterdown-Aldershot Transportation Master Plan and the resulting Class EA road projects. At the NAC meetings last week, we conveyed Halton Conservation's offer to prepare this memo. From our understanding of the NAC perspectives, they have indicated that they would appreciate receiving more knowledge about the natural environment aspects to assist them with the evaluation of alternatives. I think it would be useful to describe Halton Conservation's approach to participating/providing knowledge in

				projects such as this. If you would like to discuss this further with me, I would be happy to call you on Monday, since I am away tomorrow. Regards, Sally --- Ms Charles was contacted and a time was set up to discuss the matter with Sally Leppard on Monday June 23.
ID# 154 Darylann Perry (CN Rail) Jun 23, 2008 Email (ID# 39)	**Re: Phase 3 & 4 Municipal Class EA – New East-West Corridor and Waterdown Road Corridor** Thank you for your letter dated June 13, 2008 regarding the above noted project. As per our previous letter to Diana Morreale, dated February 28, 2008, this project does not affect any CN rail line or property and CN requests to be removed from the project mailing list. Sincerely, **Darylann Perry** for John MacTaggart, P.Eng. Senior Engineering Services Officer	Forwarded to Waterdown-Aldershot Information from Syeda Banury	Waterdown-Aldershot Information	Already removed from Lura's database in February 2008
ID# 158 Transport Canada Jun 24, 2008 Email	Syeda, Thank you for your letter regarding the above referenced environmental assessment. We have reviewed the information, and note the following: Transport Canada is responsible for the administration of the Navigable Waters Protection Act, which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA	Forwarded to Waterdown-Aldershot Information from Syeda Banuri	None	No response required. Updated Database

	application process should be directed to Suzanne Shea, NWP Officer at (519) 383-1866. Please note that certain approvals under the Navigable Waters Protection Act or Railway Safety Act trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment. <<Annex A Navigable Waters Protection Act Application Addresses.doc>> <<TC Application Form.pdf>> <<TC Application Guide.pdf>> We would also appreciate if your agency distribution list could be updated by removing the Navigable Waters Protection Program. All correspondence should be directed to the Environment and Engineering Section to review projects against all of Transport Canada's potential interests. The contact information should be changed to: Environmental Assessment Coordinator Environment and Engineering Transport Canada 4900 Yonge Street Toronto, ON M2N 6A5 Please contact me should you wish to discuss this further. Regards, Haya Finan Environmental Officer Environment and Engineering Transport Canada			

ID# 189 Jeff Bateman (GO Transit) Jun 17, 2008 Phone	GO Transit is interested to know if there is a way to extend Waterdown Road widening (North-South) further south to facilitate better movement of customers/travelers from Aldershot GO Station.	Forwarded to Waterdown-Aldershot Information from City of Hamilton	City of Hamilton Jun 17, 2008 Phone	Response: Syeda directed Jeff to the project website and he said he will submit his comments if needed.
ID# 211 Margaret Charles (Conservation Halton – Agency) Sep 22, 2008 Email (PDF)	Refer to hard copy – (attached) Comments on the preferred road alignment sections for the new east-west road (N1-N7) and Waterdown Road widening (W1-W7).	Forwarded to Waterdown-Aldershot Information from City of Hamilton		No response required.
ID# 269 Ontario Realty Corporation Nov 4, 2008 Email	Please see attached letter. Thank you. Ontario Realty Corporation Attached letter, with map, reads: November 3, 2008 To Whom It May Concern, **RE: ORC Initial Comments on Notice of PIC Class EA, New east-west corridor and Waterdown Road corridor** Thank you for circulating Ontario Realty Corporation (ORC) on your Public Information Centre. The ORC is the strategic manager of the government's real property with a mandate of maintaining and optimizing value of the portfolio, while ensuring real estate decisions reflect public policy objectives of the government. Our preliminary review of your notice and supporting information indicates that ORC-managed property is directly in the study area. As a result, your proposal may have the potential to impact this property and/or the activities of tenants present on ORC-managed lands. Attached please find a map that identifies this property to assist you in identifying and avoiding potential impacts. **Potential Negative Impacts to ORC Tenants and Lands** **General Impacts** Negative environmental impacts associated with the project design	Waterdown-Aldershot Information	Waterdown-Aldershot Information Dec 4, 2008 Email	Dear Ms. Myslicki, Thank you for your letter dated November 3, 2008. We have obtained a response to your inquiry from the Project Team, and have provided it in blue below. **Project Team Response**: Thank you for your letter and interest in the Waterdown Road Class Environmental Assessment. In reviewing the information you provided, it would appear that Waterdown Road crosses two power transmission line corridors that are under the mandate of the Ontario Realty Corporation (ORC). We have not identified any other lands to be required from the ORC. As it is proposed that Waterdown Road be widened from two to four lanes, there could be the need for lands contained within these power transmission corridors. We are in the process of confirming property needs along the entire length of roadway. Once this has been confirmed, we will contact you to advise of the land requirement and to discuss the process to facilitate this. Kind regards, Patricia Halajski née Prokop on behalf of Sally Leppard,

	and construction, such as the potential for dewatering, dust, noise and vibration impacts, and impacts to natural heritage features/habitat and functions, should be avoided and/or appropriately mitigated in accordance with applicable regulations best practices and MNR and MOE standards. Avoidance and mitigation options that characterize baseline conditions and quantify the potential impacts should be present as part of the EA project file. Details of appropriate mitigation, contingency plans and triggers for implementing contingency plans should also be present. **Impacts to Land holdings** Negative impacts to land holdings, such as the taking of developable parcels of ORC managed land or fragmentation of utility or transportation corridors, should be avoided. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study. If takings are suggested as part of any alternative these should be appropriately mapped and quantified within EA report documentation. In addition, details of appropriate mitigation and or next steps related to compensation for any required takings should be present. ORC requests circulation of the draft EA report prior to finalization if potential impacts to ORC managed lands are present as part of this study. **Cultural Heritage Issues** If proposed alternatives may impact cultural heritage features on ORC managed lands, we would request that the examination of cultural heritage features be enhanced to include issues such as cultural landscapes, archaeology and places of sacred and secular value. **Potential Triggers Related to ORC's Class EA** The ORC Class Environmental Assessment (ORC Class EA) applies to a range of realty and planning activities including leasing or letting, planning approvals, selling, demolition and property maintenance/repair. For details on the ORC Class EA please visit the Environment and Heritage page of our website			

	found at http://www.orc.on.ca/Page133.aspx. If the ORC Class EA is triggered, consideration should be given to explicitly referring to the ORC's undertaking in your EA study. The purchase of ORC lands or disposal of rights and responsibilities (e.g. easement) for ORC lands triggers the ORC's Class EA. If any of these are being proposed as part of any alternative, please contact the Sales and Marketing Group through ORC's main line (Phone: 416-327-3937, Toll Free: 1-877-863-9672) at your earliest convenience to discuss next steps. The undertaking of physical work on ORC lands also triggers the ORC Class EA. If any work is proposed on ORC lands, please contact the undersigned at your earliest convenience to discuss next steps. **Specific Comments** Please note that various government lands, managed by ORC and Hydro One, are in the study area. Please contact ORC and Hydro One for policies and processes. **Concluding Comments** Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions on the above I can be reached at the contacts below. Sincerely, **Lisa Myslicki** Environmental Coordinator Ontario Realty Corporation - Professional Services			
ID# 303 Nancy Mott-Allen (Niagara Escarpment Commission (NEC)) Nov 12, 2008 Email	**Subject:** NEC comments on North/south, east/west roads Good afternoon: I attended both Public Information Centres regarding the proposed alignments of the East/west and North/south roads that are part of the Waterdown-Aldershot Transportation Master Plan. Our comments are as follows: East/west - Rock cut on north side of Dundas, west of Brant Street:	Waterdown-Aldershot Information & Large list	Waterdown-Aldershot Information Feb 27, 2009 Meeting	Email was acknowledged Nov 19, 2008 Meeting was held with Dillon Consulting Feb 27, 2009.

	more information required to understand extent of rock cut required for road widening and impact on the Escarpment - Street lighting on Dundas: lighting should be directed downward to the roadway to minimize visual impact on the Escarpment - Generally support the preferred route as it minimizes impact to environmental features in Waterdown North/south - Concern about any options which involve widening or improvements to King Road due to concern about negative impact on the Escarpment both environmental and visual - Focus should be on widening Waterdown Road - Request a meeting with City of Burlington, Conservation Halton and Project Team before the Environmental Study Report is finalized (I spoke to Paul Allen of the City of Burlington at the meeting and he indicated that it is the City's intent to contact us). If you have any questions with respect to these comments, please contact me at the number below. Nancy Mott-Allen, MCIP, RPP Senior Planner Niagara Escarpment Commission			
ID# 335 Hamish Campbell (GO Transit) Nov 24,2008 Email	**Subject:** Waterdown Road and Dundas West Class EA Ms. Banuri, Further to my voicemail of November 18th, there are a number of issues of interest to GO Transit related to the subject study. Specifically, we are interesting to find out more about: - How the Waterdown road widening would function (if at all) with the new highway interchange that has been proposed off the 403? - What pedestrian and cycling facilities would exist along the new north/south (Waterdown Road) and east/west (Dundas West) alignments, if any.	Forwarded to Waterdown-Aldershot Information from City of Hamilton (Syeda Banuri)	Waterdown-Aldershot Information Mar 4, 2009 Email	Dear Mr. Campbell, Thank you for your voicemail November 18, and email dated November 24, 2008. We have received a response from the Project Team and provide it below. For ease of reference, we have included excerpts of your e-mail in italics, with the project team response following. --- *Further to my voicemail of November 18th, there are a number of issues of interest to GO Transit related to the subject study.*

	- Consideration and function of Dundas Street as a higher order inter-regional transit corridor. This portion of Dundas has been identified in Metrolinx's Draft Regional Transportation Plan as a corridor for Rapid Transit improvements (under the 15-year plan labeled as "Dundas West - Waterdown to Kipling Station). Any additional information and specifics as they relate to the subject study on the above-noted issues would be greatly appreciated. I look forward to communicating with you further at your earliest convenience. Best Regards, **Hamish Campbell** Transportation Planner - GO Transit Transportation Planning and Development			*Specifically, we are interesting to find out more about:* *-How the Waterdown road widening would function (if at all) with the new highway interchange that has been proposed off the 403?* **Project Team Response**: Waterdown Road interchange is a City of Burlington project. The Waterdown Road and the Highway 403 interchange is being built to tie into a future 4 lane Waterdown Road. Waterdown Road through the new highway interchange will have four lanes plus turn lanes. The City of Burlington is planning to start construction on the Waterdown Road interchange in 2009, to facilitate future increased vehicle capacities. The technical aspects of a four-lane roadway are currently being finalized along Waterdown Road. Once the preferred four-lane concept has been finalized the project team will develop and evaluate providing a three-lane option as the first stage in implementing the four-lane concept. *- What pedestrian and cycling facilities would exist along the new north/south (Waterdown Road) and east/west (Dundas West) alignments, if any.* **Project Team Response**: The proposed Pedestrian and Cycling facilities for both corridors are outlined below. **North-South Corridor:** ***Waterdown Road*** - Proposing a 4m wide Multi-Use Pathway for pedestrians and cyclists (off road, behind curb and boulevard) on the **west side of the road only** throughout the entire alignment. A 1.5m sidewalk on the east side is proposed from Flatt Road

				northerly for approximately 600m. ***Mountain Brow Road*** - Proposing a 3.5m wide Multi-Use Pathway for pedestrians and cyclists (off road) on the **north side of the road only** from Waterdown Road to the new Mid-Block Road (Edworthy Road). No allowance is made on the south side of the road. ***Mid-Block Road*** - Proposing 1.5m on-road bicycle lanes and 2.0m sidewalks on both sides of the road throughout the entire alignment. **East-West Corridor:** ***New E-W Road (Highway 6 to Waterdown North Development)*** - No allowance made as this is a rural section, though paved shoulders are included in design. ***New E-W Road (through Waterdown North Development)*** - Proposing a 4m wide Multi-Use Pathway for pedestrians and cyclists (off-road) on the **south side of the road only** throughout entire development. ***New E-W Road (From Centre Street to Parkside Drive)*** - Potential Multi-Use Pathway on south side from Centre Road connecting to Joe Sam's Park to be further assessed. No other allowances made through this rural section, though paved shoulders are included in the design. ***Parkside Drive Widening*** - Proposing on-road bicycle lanes (1.2m) and 1.5m sidewalks on both sides of the road. ***N-S Link through Upcountry Development*** - Proposing a 4m wide Multi-Use Pathway for pedestrians and cyclists (off-road) on the **west side of the road only** throughout the entire

				development. ***Dundas Street (From new N-S Link to Kerns Road)*** - Proposing on-road bicycle lanes (1.5m) and 2.0m sidewalks on both sides of the road. ***Dundas Street (From Kerns Road to Brant Street)*** - Proposing 4.2m wide shared curb lanes (both sides of the road) for traffic and cyclists and a 1.5m sidewalk on the **south side of the road only**. The final recommended preferred option will be provided in the ESR *- Consideration and function of Dundas Street as a higher order inter-regional transit corridor. This portion of Dundas has been identified in Metrolinx's Draft Regional Transportation Plan as a corridor for Rapid Transit improvements (under the 15-year plan labelled as "Dundas West - Waterdown to Kipling Station).* **Project Team Response**: Dundas Street falls under the jurisdiction of the Region of Halton. It is the City of Hamilton's understanding that the Region of Halton, in regards to this project, is releasing a TOR early in the new year. We have forwarded your input to the Region of Halton for their consideration. --- Kind regards,Patricia Halajski on behalf of Sally Leppard,

From: McInnes, Suzanne [suzanne.mcinnes@conservation-niagara.on.ca]
Sent: February 19, 2008 1:50 PM
To: Waterdown-Aldershot Information
Subject: PIC Notice February 15, 2008
Please remove my name and Paul Bond's name from your mailing list. This project is located outside on the NPCA's jurisdiction.

Suzanne McInnes, MCIP, RPP
Watershed Planning Coordinator
Niagara Peninsula Conservation Authority
250 Thorold Road West, 3rd Floor
Welland, Ontario L3C 3W2
phone: (905) 788-3135 ext. 235
fax: (905) 788-1121

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The information contained in this communication including any attachments may be confidential, is intended only for the use of the recipient
(s) named above, and may be legally privileged. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution, disclosu
send this communication to the sender and permanently delete the original and any copy of it from your computer system. Thank you.

Regional Engineering
Engineering Services

Canadian National Railway
1 Administration Road
P.O. Box 1000
Concord, Ontario L4K 1B9
Tel.: 905-669-3155
Fax: 905-760-3406

February 28, 2008

Email: info@waterdown-aldershot.ca

Diana Morreale, MCIP, RPP
Senior Project Manager
Environmental Planning, Public Works
77 James Street North
Hamilton, Ontario L8R 2K3

Dear Ms Morreale;

Re: Waterdown / Aldershot Transportation Master Plan
Phase 2 Report – Public Information Centers

Thank you for your letter dated February 15, 2008 regarding the above noted project. This project does not affect any CN rail line or property and CN requests to be removed from the project mailing list.

Sincerely,

Darylann Perry for
John MacTaggart, P.Eng.
Senior Engineering Services Officer

MINUTES OF MEETING

PROJECT: Waterdown Road & New East West Road

PURPOSE: Government Agency Technical Committee Meeting

DATE: May 12, 2008 9:00 AM

LOCATION: Hamilton City Centre, 400E

PRESENT:

City of Hamilton:	Syeda Banuri	Jim Doyle
	Christine Lee-Morrison	Joe Spiler
	Andy McLaughlin	Gavin Norman
	Paul McShane	Tony Sergi
	Hart Solomon	Gary Moore
	Cathy Plosz	Jill Stephen
	Brenda Khes	Susan Jacob
	Kirsten McCauley	Gord Baguley
	Tanya McKenna	
City of Burlington:	Paul Allen	
	Greg Simon	
Region of Halton:	Melissa Green-Battiston	
Conservation Halton:	Jennifer Lawrence	
	Margaret Charles	
MOE:	Barb Slattery	
MTO:	Joseph Lai	
	Greg Roszler	
	Ayvun Jeganathan	
NEC:	Neil Hester	
Lura Consulting:	Liz Neild	
Dillon Consulting:	Paul MacLeod	
	Don McKinnon	
	Paul Acquaah	
	Amanda Shepley	

ITEM

A. Introductions

ITEM

B. Presentation by Paul MacLeod and Don McKinnon

- See attached

C. Agency Comments

1. Conservation Halton Aspects

- Amphibian survey complete
- Vegitation survey completed last summer
- No need for further fisheries studies
- Grindstone Creek structure at Parkside will be widened or replaced, assuming that the Option 5 alternative is not carried forward
    - The flood plain must be looked at carefully
- Concerns about the road encroaching into the ESA
- Suggestion to connect further to the East at Pamela Street rather than at Burke St.

2. City of Hamilton – Gavin Norman

- Evaluation
    - Constructability should be considered
    - Road will be built in stages
- Property Taking
    - As many as 5-6 properties may need to be acquired, primarily on Waterdown Road
    - Conversations with property owners are taking place in the near future

3. City of Hamilton – Brenda Khes

- Centre Road wetland is ESA
- Wooded area at N2 is a PSW
- Evaluation criteria comments:
    - Lifecycle cost should be considered
    - Maintainabiltiy
    - Impact on user
    - Air quality should be considered
    - Road safety audit should be completed of alternative intersection

4. MTO – Greg Roszler, Joseph Lai, and Ayvon Jecanathan

- Hwy 6
    - Concerned that Northern Option doesn't meet the minimum signal spacing standard
    - 4th Line is not intended to be realigned with the proposed design. Perhaps in the

ITEM

future.
    - MTO received a call from a concerned resident about the Parkside & Hwy 6 intersection
    - MTO confirmed Dillon's understanding of MTO's plan for the Highway 6 corridor; there are no plans for extending the controlled access section north of Highway 6 at this time. When this does happen the Parkside intersection will be closed.
- Waterdown Road at Hwy 403
    - Anticipated increase in traffic coming from the development areas from the north to the 403 interchange
    - Dillon's study does not include the 403 interchange as it matches in north of the new North Service Road location
        - Capacity concerns at the 403 interchange
        - South bound left turn lane needs to be addressed (as the structure over the 403 may need to be widened)
        - MTO recommended that the study area extend south of 403 (Burlington indicated that the two projects should remain separate)

5. Conservation Halton

- Conservation Halton would like to move the NTS connection to Pamela Street
    - Dillon explained that the traffic assessments from Phase 2 have identified the Burke location as the optimum connection but this will be confirmed in this Phase

6. Future Meetings

- Next meeting on the second week of June
    - Will display PIC information
- PIC #1 will include preliminary evaluation including the NAC's input
- Draft evaluation criteria to be distributed to all Agency members
    - Comments to Syeda Banuri

DISTRIBUTION: Attendees

Please contact Amanda Shepley of Dillon Consulting with any errors or omissions.

Waterdown Road Corridor (North Service Road to Dundas Street)
New East – West Road (Highway 6 to Brant Street)

Government Agency Technical Committee Meeting #1

- Welcome & Meeting Purpose
- Introductions
- Presentation
  - Overview of Phase 1 and 2 Work
  - Carry Over Phase 2 Issues & Questions
  - Proposed Phases 3 & 4 Work Program
  - Alternative Design Concepts
  - Schedule
- Discussion
  - Agency Involvement
  - Issues & Concerns
  - Study Expectations
  - Permit & Approval Requirements
- Next Meeting
- Adjourn

Carry forward into Phases 3 & 4

- Impact on ESAs
- Impact on watersheds, watercourses, groundwater, wetlands, trees, wildlife and mitigation
- Impact of roads on Greenbelt and mitigation through design
- Increased air emissions
- Suggestion: Increased tree plantings

Community

Impact on character of the area (rural)
Effect on heritage properties/areas
Pedestrian and bike trails (on or off road)
Increased traffic noise, and noise mitigation
Safety backing in/out of driveways
Safety for vehicles and pedestrians
Suggestion: Signs that indicate that residential roads are not through streets and other traffic calming measures

Public Infrastructure

Street improvements and closures
Streetscape designs
Mitigation measures (retaining walls, vegetated buffer strips, barricades)
Location of new sidewalks
Location and design of traffic signals and intersections
Driveway grading and relocation
Room for rural mailbox delivery
Location and safety of hydro lines

Property Impacts

Process for determining fair compensation
Encroachment policy and its effect
Effect on septic systems
Effect on farming operations

Capacity, Routing and Costs

Downtown Dundas Street capacity concern
Truck traffic road capacity
Effect on Certificate of Approval for Barnes
More detailed traffic operations analysis
Connection between N/S and E/W
Street alignment and shifting possibilities
Costing and payment responsibility of project
Timing of development
Transit Alternatives and carpool lot

Two separate projects

- Data Collection and Inventory
- Development of Design Alternatives
- Evaluation of Design Alternatives
- Development of the Preferred Alternative
- Environmental Study Report

Environmental

- Terrestrial Environment
- Fisheries & Aquatic Resources
- Hydrogeology/Well Survey
- Socio-Economics/Land Use
- Archaeological & Heritage
- Environmental Conditions Report

Engineering

- Prepare New Aerial Photo Base Plans of Corridors
- Waterdown Road Topographic Field Survey Work
- Prepare Corridor Base Plans / Digital Terrain Models
- Geotechnical
- Utilities
- Property
- Surface Drainage Inventories
- Roadside Elements & Safety Review
- Finalize Project Base Plans

- Preliminary Option 5 Concept Development (East-West Corridor)
- King Road Feasibility Assessment
- Draft Design Criteria
- Assess Alignment Options
- Traffic & Network Analyses
- Assess Profile & Grading Aspects
- Assess Drainage Alternatives/Concepts
- Assess Structural & Retaining Wall Alternatives
- Utility Conflict Assessment
- Develop Streetscape Alternatives
- Develop Intersection Alternatives/Requirements
- Develop Grading, Frontage & Driveway Alternatives/Requirements
- Prepare Plans of Design Alternatives

- Confirm Evaluation Methodology
- Preliminary Option 5 Evaluation & Documentation
- Finalize Option 5 Evaluation & Documentation
- Prepare Evaluation Materials & Support Information
- Preliminary Evaluation of Design Alternatives
- Finalize Evaluation

- Resolve Final Plan & Profile Elements
- Grading/Cross Section Assessments
- Structural Concepts Development
- Resolve Streetscape Elements
- Noise & Air Quality Assessments
- Identify Utility Issues & Requirements
- Identify Property / Easement Requirements
- Detailed Archaeological Resource Assessments
- Asses Effects/Finalize Mitigation Measures
- Cost Estimate
- Prepare Plans & Details of Preferred Alternative

- Prepare Initial Draft of ESRs
- Partnering Group Review of Initial Draft ESRs
- Prepare Final ESRs Draft 1
- Public & Agency Review of Final ESRs Draft 1
- Prepare Final ESRs Draft 2,
- Partnering Group Sign-Off of Draft ESRs
- Council Presentations
- Finalize ESRs
- Issue Final ESRs, Notice of Completion & 30 Day Review Period

- Analysis section identified
- Design issues identified
- Alternative alignments identified

Step 1 - Confirm Option 5 Alignment
Step 2 – Data Collection/Detailed Costing
Step 3 – Confirm Feasibility of Option 5
Step 4 – Route Reevaluation

Alternatives – New E/W Road

- Alignment at Highway 6
- Crossing of Borers Creek
- Crossing of Centre Road
- Crossing of Hydro corridor
- Option 5 versus widening Parkside
- Dundas /Brant Street

Alternatives - Waterdown

- South end
- Off-road alignment alternative
- Minimizing frontage impacts
- Waterdown Road – Mountain Brow Road intersection
- Mountain Brow Road
- North-south connector

- Public Consultation Centres #1 in June 2008 to review preliminary evaluation and design alternative selection
- Advance design concept work during the summer 2008
- Public Consultation Centres #2 in September 2008 to review preliminary recommendations
- Finalize recommendations in Fall of 2008
- Prepare draft & final ESRs fall/winter 2008/2009
- File ESRs February/March 2009

Discussion

- Agency Involvement
- Issues and Concerns
- Study Expectations
- Permits & Approvals Process

Next Meeting?

Adjourn

METROPOLITAN
CONSULTING
INC.

RECEIVED
JUN 1 1 2009
DILLON CONSULTING LIMITED
TORONTO OFFICE

June 4, 2009

Ms. Amanda Shepley,
Dillon Consulting
235 Yorkland Blvd. Suite 800
Toronto, ON M2J 4Y8

Re: Eagle Heights and the Waterdown Aldershot Transportation Master Plan

Dear Amanda,

I have conferred with my client regarding the amended plan for the expansion of Waterdown Road adjacent to his property north of the North Service Road in the City of Burlington.

The current plan depicts an unequal widening with no widening occurring on the east side and all of the proposed widening on the west side. This will have significant impacts on my client's plan of subdivision. The one impact that is most troublesome is the impact the reduced depth has on the plan and the open space block. You indicated in your March 20, 2009 comments that you have " reviewed this with the City of Burlington and their initial thoughts are that the open space block will probably be required but re-configuring it could be considered going forward with possible land use changes".

We note that the widening to the west is as much as 18 metres from the existing right of way limit. We feel that this is excessive. The only reason for the widening to this extent in our opinion is attributable to the need to re-grade the adjacent property so that the driveways enter the roadway at a reasonable slope. We prefer instead that the City of Hamilton /Burlington give an undertaking that if Paletta International Corporation gets a license/permission to carry out some of the regrading of its' land that a lesser right of way can be taken. This offer is being made under the following understanding:

2290 QUEENSWAY DRIVE
BURLINGTON, ON L7R 3T2
TEL. 905.637.2926
FAX. 905.637.3268
Email: engineering@metrocon.ca

METROPOLITAN
CONSULTING
INC.

1. That the proposed lots will have full access to Waterdown Road
2. The driveway slopes will be no greater that 6 percent
3. That any widening in excess of that required by the deemed street width policy of the City of Burlington i.e.) any widening in excess of 30 metres 15metres measured from the centre line of the existing roadway be compensated at fair market value

We agree that we will together with the City of Hamilton/Burlington review the detail design and dimensions as the detail design proceeds.

We require confirmation that all of the lots, Street "D," and the block that is designated for a school will have access to Waterdown Road.

Therefore in the main our concerns can be addressed at the detailed design stage subject to the aforementioned comments.

Yours truly,

Karl Gonnsen, P. Eng., RPP, MCIP

cc: Mr. Angelo Paletta
file# P98019

2290 QUEENSWAY DRIVE
BURLINGTON, ON L7R 3T2
TEL. 905.637.2926
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Email: engineering@metrocon.ca

WATERDOWN-ALDERSHOT TRANSPORTATION MASTER PLAN
PHASES 3 & 4
RECORD OF TELEPHONE CONVERSATION

Recorder's Initials
SB

Date: June 17, 2008

Time: 11:47 am

Name of caller (and company, if applicable): Jeff Bateman (Go Transit)

Please check if follow-up required: ☐ **By whom:**

Preferred method of response (please circle): ***E-mail*** ***Phone*** ***Mail*** ***Fax***

Contact information: Tel. (416) 869-3600 ext. 5305

Email: jeff.bateman@gotransit.com

Subject / Record of Conversation: GO Transit is interested to know if there is a way to extend Waterdown Road widening (North-South) further south to facilitate better movement of customers/travelers from Aldershot GO Station.

Response: Syeda directed Jeff to the project website and he said he will submit his comments if needed.

MINUTES OF MEETING

PROJECT:	Waterdown Road & New East West Road	
PURPOSE:	Halton Conservation Authority Meeting	
DATE:	July 23, 2008	
LOCATION:	Conservation Halton	
PRESENT:	Conservation Halton:	Jennifer Lawrence
		Margaret Charles
	City of Hamilton:	Syeda Banuri
	Dillon Consulting:	Paul MacLeod
		Ian Roul
		Amanda Shepley

ITEM **ACTION BY**

1. Status of Class EA projects

- Started hydraulic assessment and drainage design.
- Current schedule is for mid to late September – go to public with our design.
- Go to council in January/early February.

2. Issue Areas

- Halton Conservation will look into Upcountry modified road alignment — Halton C.A.
- Dillon proposing traffic circles on either side of Parkside Drive.
- Grindstone Creek crossing at Parkside Drive overtops during the regional storm
- Dillon is proposing to raise the grade on Parkside at Grindstone Creek requiring a full bridge replacement.
- Jennifer will discuss the project with her technical team and set up a meeting ASAP. — Halton C.A.
- Dillon will look at impacts to vegetation from raising the road at Parkside Drive. May shift the alignment to the north slightly. — Dillon
- Grade separation at the railway and Parkside Drive is not

ITEM	ACTION BY
warranted.	
• Dillon will provide the conservation authority with an electronic copy of plan at Parkside & Grindstone Creek.	Dillon
• Dillon's analysis rejected Option 5 because it crosses the flood plain, requires three major crossings of the Grindstone Creek, and would require purchasing the Opta Minerals property	
• Residents suggested that the conservation authority might be interested in purchasing the Opta property to create park land	
• Halton Conservation indicated that they have no interest in the Opta property.	
• When Option 5 was rejected, public suggested a previous option which avoids the Opta property developed by Stantec in a earlier study	
• Dillon also rejected this option because it encroaches into ESAs and includes a sub-standard alignment.	
• Halton Conservation's comments on this option were: o Crosses a floodplain o Road would need to be raised o Increases flooding to residents upstream	
• Halton Conservation will provide a formal letter explaining their preference of Option 4 over Option 5	Halton C.A.
• Dillon will provide the plan of Option 5 electronically.	Dillon
• Dillon will provide Halton Conservation's previous comments regarding Option 5.	Dillon
• Halton Conservation will look into the existing berms that have apparently been built in the floodplain north of Opta.	Halton C.A.
• The road alignment along Upcountry isolates the watercourse from the floodplain on the west side.	
• Halton Conservation will look into the floodplain at Upcountry.	Halton C.A.
• Dillon plans to lengthen the existing culvert on Dundas St. o The road will be widened to six lanes	
• Dundas currently overtops during the Regional storm at the culvert	
• Dillon will send a plan to Transport Canada determine if the watercourse is navigable.	Dillon
• Dillon is proposing to maintain the existing centreline of the road with some widening to the south in some areas to minimize property impacts	
• Halton Conservation is concerned about impacts on vegetation at the east end of Dundas o Dillon is recommending a retaining wall to decrease grading impacts	
• Amphibian calling, breeding bird, ecological land classification	

ITEM	ACTION BY
(ELC), and vegetative surveys have been completed • Dillon indicated that the existing Vegetation at Sassafrass Woods (from the roadway inward) is as follows 0 – 5m close to no vegetation 5 – 10m typical vegetation 10 – 20m natural forest (green ash, sugar maple, black walnut) • The ELC was taken to the most detailed vegetative community in most areas o Dillon will submit data sheets for the ELC	Dillon
• Dillon is matching the west edge of the pavement of Burke Street at the Mid Block Road • Dillon's current design is not proposing a dedicated right turn from Dundas onto the Mid Block Road o CA is concerned about creek encroachment • Dillon is revising the proposed grade on the Mid Block matching back to Dundas • Conservation Halton indicated that if the creek is shifted, the flood plain may be affected o CA has not agreed to the re-alignment proposed by developer. • Conservation Halton's preference is clear span along the Grindstone at the Mid Block location, however will consider a 2-span • Conservation Halton would like wildlife movement through the proposed culvert as well as a 15m buffer on either side of the ESA • Conservation Halton will comment on the design at Mid Block	Halton C.A.
• Dillon will avoid crossing the channel in Waterdown South; instead will shift the road west through that section • 2 traffic circles are being proposed in Waterdown South • Conservation Halton indicated that limestone in this area leads to uncommon vegetation. • Dillon will likely propose 2 lane improvements on Mountain Brow, east of Mid Block • Dillon is currently proposing a 4 lane urban cross section along Waterdown Road and Mountain Brow Road with a sidewalk on the north side of Mountain Brow and a sidewalk on both sides of Waterdown Road. • Dillon is recommending straightening the Waterdown Road section through the future development with T intersections at the "old" road • Conservation Halton would like to see contours on the plans	

ITEM	ACTION BY

• Hydro tower, substation and reservoir on the west side of Waterdown opposite Sassafras Woods
• Dillon is proposing a retaining wall to avoid major impacts to Sassafras Woods
• Conservation Halton is concerned with noise and light impacts in Sassafrass Woods
  o Has been considered in the study of the new interchange to the south
  o Concluded that the noise impact is minimal	

3. Stormwater Management	
• Conservation Halton will provide performance criteria for stormwater	Halton C.A.
4. King Road	
• Alignment adjustments are being assessed to eliminate the existing sightlines; will be cutting into the rock instead of impacting the steep slope o Will be reviewing with Burlington then reviewing with Conservation Halton • Conservation Halton would prefer a "Do Nothing" option on King Road. • Potential impacts to the Jefferson Salamander will be need to be assessed	

DISTRIBUTION: Attendees
Christine Lee-Morrison
Paul Allen
Melissa Green-Battiston

Please contact Amanda Shepley of Dillon Consulting with any errors or omissions.

-----Original Message-----
From: Banuri, Syeda [mailto:Syeda.Banuri@hamilton.ca]
Sent: June 24, 2008 3:34 PM
To: Waterdown-Aldershot Information; MacLeod, Paul
Subject: FW: New East-West Corridor and Waterdown Road Corridor TC NEATS #13294

Syeda Basira Banuri
Senior Project Manager
Environmental Planning
Capital planning & Implementation Division Public Works Department, City of Hamilton
Phone: (905) 546-2424 x 4101 Fax: (905) 546-4435

-----Original Message-----
From: Finan, Haya [mailto:FINANHA@tc.gc.ca]
Sent: Tuesday, June 24, 2008 2:23 PM
To: Banuri, Syeda
Subject: New East-West Corridor and Waterdown Road Corridor TC NEATS #13294

Syeda,
Thank you for your letter regarding the above referenced environmental assessment.

We have reviewed the information, and note the following:

Transport Canada is responsible for the administration of the Navigable Waters Protection Act, which prohibits the construction or placement of any "works" in navigable waters without first obtaining approval. If any of the related project elements or activities may cross or affect a potentially navigable waterway, you are requested to prepare and submit an application in accordance with the requirements as outlined in the attached Application Guide. Any questions about the NWPA application process should be directed to Suzanne Shea, NWP Officer at (519) 383-1866.

Please note that certain approvals under the Navigable Waters Protection Act or Railway Safety Act trigger the requirement for a federal environmental assessment under the Canadian Environmental Assessment Act. You may therefore wish to consider incorporating CEAA requirements into your provincial environmental assessment.

<<Annex A Navigable Waters Protection Act Application Addresses.doc>>
<<TC Application Form.pdf>> <<TC Application Guide.pdf>>

We would also appreciate if your agency distribution list could be updated by removing the Navigable Waters Protection Program. All correspondence should be directed to the Environment and Engineering Section to review projects against all of Transport Canada's potential interests.

The contact information should be changed to:

Environmental Assessment Coordinator
Environment and Engineering
Transport Canada
4900 Yonge Street
Toronto, ON
M2N 6A5

Please contact me should you wish to discuss this further.

Regards,
Haya Finan
Environmental Officer
Environment and Engineering
Transport Canada - Ontario Region (PHE)
4900 Yonge Street, North York, ON M2N 6A5
p: 416-952-0475
f: 416-952-0514
e: finanha@tc.gc.ca
P Please consider the environment before printing this email.

WEBB
PLANNING CONSULTANTS

August 6, 2009

VIA EMAIL AND REGULAR MAIL
Dillon Consulting
235 Yorkland Blvd., Suite 800
Toronto ON M2J 4Y8

Attention: Paul A. MacLeod, P.Eng.,
Transportation & Infrastructure

Dear Mr. MacLeod,

Re: Waterdown Aldershot Transportation Master Plan (WATMP)
Phase 3 & 4 Municipal Class Environmental Assessment

Thank you for your letter of May 26, 2009. We have had an opportunity to review your comments with our project team and have had a follow-up meeting with City of Hamilton staff to further discuss the issues. The following comments are provided to clarify our position on certain matters and to offer suggestions for the implementation of the study recommendations.

We are in agreement that the total right of way width for the Mid-Block Road will be 36 metres and designed as a 4-lane road throughout it's length. Further, a continuous centre median will not be required in the proposed design as stated in your letter. With regard to Phase 1B of the Waterdown Bay development and full movement intersections with the adjoining local streets, we agree with your comments that the location of Mid-Block intersections can be evaluated in the later stages of the development review process. To implement this latter objective, we are suggesting that the final Environmental Study Report (ESR) include flexible design parameters that can be evaluated and incorporated into the subsequent phases of the Draft Plan of Subdivision for the Waterdown Bay lands.

With regard to the southerly portion of the Mid-Block Road and connection to Mountain Brow Road, there appears to be general agreement with the suggestion to close Mountain Brow Road and include a minimum radius curve to link these two road sections. The matters for further discussion include the alignment for a new east-west collector road and extent of the Mountain Brow closure and possible integration of surplus lands with planned municipal infrastructure such as SWM Pond No. 4. These issues are appropriately addressed in the context of the on-going Secondary Plan Study and we intend to follow-up with City staff in this regard.

In summary, there appears to be general agreement respecting the above noted design recommendations for the proposed Mid-Block Road. We agree that certain elements of the design will be reflected in the final ESR document while matters of detailed design are appropriately addressed in the context of the development review process. As noted above,

we intend to have follow-up discussions with City staff to review the implementation of the ESR recommendations in the context of the on-going Secondary Plan study and the proposed Draft Plan of Subdivision being prepared for subsequent phases of development.

It would be appreciated if you could provide us with a copy of the final ESR document as soon as available as well as advance notice of any upcoming public meetings.

Yours truly,

WEBB Planning Consultants Inc.

James Webb (signed original mailed)

James Webb, MCIP, RPP

cc: Amanda Shepley, Dillon Consulting
Syeda Banuri, City of Hamilton
Christine Lee-Morrison, City of Hamilton
Gavin Norman, City of Hamilton
Brenda Khes, City of Hamilton
Michael Telawski, Waterdown Bay Inc.
Karl Gonnsen, Metropolitan Consulting
Dan Cherapacha, Read Voorhees & Associates

Shepley, Amanda

From:	MacLeod, Paul
Sent:	Friday, August 08, 2008 8:33 AM
To:	Marin, Jackson; McKinnon, Don; Shepley, Amanda
Subject:	FW: Waterdown Bay Minutes of Settlement
Attachments:	Final conditions of approval attached to minutes of settlement.pdf; Final Minutes Signed by BE and BP.pdf; 2008 06 25 Waterdown Bay DP Ledger Attachment[1].pdf

Paul MacLeod
Dillon Consulting
Phone: 416-229-4647 #2317
E-Mail: pmacleod@dillon.ca

From: Banuri, Syeda [mailto:Syeda.Banuri@hamilton.ca]
Sent: Thursday, August 07, 2008 1:25 PM
To: MacLeod, Paul
Subject: FW: Waterdown Bay Minutes of Settlement

for your files and information.

Syeda Basira Banuri
Senior Project Manager
Environmental Planning
Capital planning & Implementation Division
Public Works Department, City of Hamilton
Phone: (905) 546-2424 x 4101 Fax: (905) 546-4435

-----Original Message-----
From: Jennifer Lawrence [mailto:jlawrence@hrca.on.ca]
Sent: Thursday, August 07, 2008 1:06 PM
To: Banuri, Syeda; mcharles@hrca.on.ca
Subject: Waterdown Bay Minutes of Settlement

Hi Syeda and Margaret,

As requested, please find attached the following:

1. Minutes of Settlement
2. Draft plan attached to settlement
3. Conditions of Approval attached to settlement.

Jennifer

Jennifer Lawrence
Manager, Environmental Planning
Conservation Halton
2596 Britannia Road West
Ph: 905-336-1158 ext. 266
Fax: 905-336-6684

Attachment #2 to Minutes of Settlement:
Conservation Halton Conditions of Draft Plan Approval

A	A lot line setback from the greater of 15 metres from the greatest hazard or the limit of the Grindstone Creek Valley ESA will be provided and that these areas be identified as a Buffer Block on the draft plan. Stormwater management facilities may encroach into the Buffer Block to the extent depicted on the constraints plan W04028-CP dated June 25, 2008 prepared by Metropolitan Consulting, and consistent with condition 1(iii);
B	That the Owner undertake no regrading of lands within 15 metres of the greatest hazard (i.e., stable top of bank, regulatory storm flood plain or meander belt) without prior written approval of Conservation Halton;
C	That the Owner erect a suitable temporary barrier to work fence prior to and during construction or regrading along the rear of lots/blocks along the 15 metre Buffer Block and adjacent to the stormwater management block to the satisfaction of Conservation Halton;
D	That the Owner submit grading plans for all lots and blocks backing onto the Buffer Block and stormwater management pond to the satisfaction of Conservation Halton and the City of Hamilton;
E	That the Owner prepare and implement a report outlining erosion and siltation control measures required prior to and during the construction of the subdivision, **prior to site alteration**, to the satisfaction of Conservation Halton and the City of Hamilton. Due to the karst on-site, it may be necessary to employ additional controls including, but not limited to, stabilization of large tracts of land through seeding to ensure that soils are stabilized over the winter and prior to spring;
F	That the Owner submit monthly sediment and erosion control reports during construction, to the satisfaction of Conservation Halton and the City of Hamilton;
G	That the Owner will prepare and implement a landscaping plan, to the satisfaction of Conservation Halton and the City of Hamilton, for those lands within the watercourse/open space block as well as the buffer block(s) utilizing Conservation Halton's landscaping guidelines and as per the recommendations of the Environmental Impact Study;
H	That during the development of the subdivision the watercourse/open space block and associated buffer block(s) are not to be disturbed, however, the Owner will post securities with the City of Hamilton to assure the rehabilitation of these blocks in the event disturbance does occur;
I	That if it is determined through detailed design that grade changes are required in order to accommodate development of lots/blocks adjacent to a buffer block, this grade change must be accommodated outside of the buffer block and the lot lines adjusted accordingly, to the satisfaction of Conservation Halton and the City of Hamilton (with the exception of those grade changes required because of the cut and fill depicted in figure 2-5 of the SWSS);
J	That the Owner obtain the written approval of Conservation Halton for any development/site alteration within Conservation Halton's regulated areas (pursuant to Ontario Regulation 162/06). This could include, but is not limited to: watercourse crossings, stormwater outfalls,

	flood plain alterations, watercourse alterations, trail construction, minor grading associated with the stormwater management pond and development/site alteration within hazardous karst areas;
K	That the Owner obtain an Authorization from the Department of Fisheries and Oceans for the Harmful Alteration, Disruption of Destruction of Fish Habitat, pursuant to the Fisheries Act, where necessary. Such Authorization may include additional monitoring not already outlined in the Subwatershed Study Stage 3 Draft Report Monitoring Plans;
L	That any exposed soil within a watercourse block, either as a result of realignment, flood plain alterations or rehabilitation works, will be seeded or otherwise stabilized within 24 hours of exposure to minimize the transport of sediment downstream, to the satisfaction of Conservation Halton;
M	deleted
N	That the Owner will not stockpile fill material within 15 metres of the watercourse/open space/buffer blocks and/or the stormwater management block to the satisfaction of Conservation Halton;
O	That the Owner will design, construct and have in operation all flood control structures necessary for Phase 1A, **prior to the issuance of any building permits** to the satisfaction of Conservation Halton and the City of Hamilton;
P	That the Owner prepare and implement a revised Stable Top of Bank Assessment to the satisfaction of Conservation Halton and that any redline revisions be made as necessary to ensure that, where the stable top of bank is the greatest hazard, no development including lot lines, are proposed within 15 metres of stable top of bank. Further, that Block(s) ___(blocks immediately south of GS-1 and west of Street A) be shown as future development until such time as the revised Stable Top of Bank Assessment has been completed, including consideration for any impacts due to the possible realignment of GS-1 as a result of the road crossing, to the satisfaction of Conservation Halton;
Q	That no fill from the site may be dumped on or off-site in an area regulated by Conservation Halton without the prior written permission of Conservation Halton;
R	That the Owner install a chain link fence (the height of which is to be specified by the City of Hamilton) along the common boundary line, setback 0.3 metres on City property (or an alternate distance as required by the City of Hamilton), between the Buffer Block(s) and the abutting residential lots/blocks. The fence must be installed **prior to the issuance of building permits** on adjacent lots in order to ensure there is no encroachment by the builder or homeowner into the Buffer Block(s) and stormwater management pond;
S	That the Owner will design, construct and have in operation (including established vegetation) all stormwater management and watercourse blocks **prior to the issuance of building permits** to the satisfaction of Conservation Halton;
T	That the Owner convey Block __ (watercourse/open space block) and the 15 metre buffer block(s) to the City of Hamilton; and,
U	That, immediately **prior to** registration of the draft plan, the Owner submit the final clearance

	fee of $2800.00, to Conservation Halton, pursuant to the City of Hamilton's Memorandum Understanding. If the Phase 1A development is further phased, each additional phase will require a separate clearance fee of $500.00.

1		That the Owner prepare and implement a revised Functional Servicing Report and detailed stormwater management report, to the satisfaction of Conservation Halton and the City of Hamilton that addresses the following:
	i	Specific pond configuration and design
	ii	Confirmation of permanent pool volume and quality control (including extended detention) requirements
	iii	Confirmation that there will be no excavation of bedrock within Karst Constraint Area A. The side slope and embankment of the pond and accessory facilities (access road, decant area, etc.) may be constructed in or on the overburden over top of Karst Constraint Area A; however the base of the pond shall not be located over Karst Area A.
	iv	Details with respect to the pond lining in consultation with a geotechnical engineer and karst specialist
	v	Configure the stormwater outfall orientation to enter the watercourse at an appropriate angle
	vi	To the extent possible, maximize the elevation of the permanent pool to reduce the length of the outlet structure to minimize impacts on Grindstone Creek Valley ESA through outlet construction
	vii	Reverse slope pipe and perforated riser pipe outlet structures
	viii	Thermal mitigation
	ix	Incorporation of mitigation measures into the pond design, such as submerged forebay outlets and outlet shut-off valves, to reduce the risks of transporting contaminant spills into the receiving watercourse
	x	Maximizing infiltration on-site through the use of lot level controls where appropriate. A site specific soil and karst investigation will be required to confirm the potential effectiveness of infiltration measures and the potential impacts on groundwater recharge and quality
	xi	Incorporation of recommendations by a geotechnical engineer and karst specialist in the design of the installation of services and the stormwater management pond to avoid exacerbating karst dissolution processes that could contribute to localized subsidence and potentially future failure of pond function;
	xii	The preferred means of installing servicing crossings of GS-1. The preferred approach

		will cause the least amount of interference to the karstic bedrock, groundwater and fish habitat of GS-1;
	xiii	Inclusion of any recommendations of the Karst Assessment, Karst and/or Groundwater Contingency Plan(s), Environmental Impact Study, revised Stable Top of Bank Assessment, as necessary.
2		That the Owner prepare and implement an Environmental Impact Study, to the satisfaction of Conservation Halton and the City of Hamilton that addresses the following:
	i	Assessment of the impact of servicing needs and proposed mitigation measures;
	ii	An assessment of the potential impacts, and proposed mitigation measures, associated with realigning a portion of GS-1 to accommodate the road crossing. This could include impacts to vegetation, fish habitat, valley wall stability;
	iii	The provision of an enhanced edge community within the buffer block(s) utilizing native, non-invasive species. The ability to remove existing invasive species should also be investigated. Landscaping densities should be based on Conservation Halton's Landscaping Guidelines;
	iv	An assessment of any opportunities to retain cultural vegetation units, without causing changes to the draft plan, that have not been identified as part of the Natural Heritage System. Within Phase 1 this includes hedgerows (h18, h19, h20) as shown on Figure 10-3 of the Stage 1 SWS Report
3		That the Owner prepare and implement a Tree Protection Plan in conjunction with the grading plans, to the satisfaction of Conservation Halton and the City of Hamilton, **prior to any site grading,** to reduce the potential for construction to impact retained vegetation, in the context of the draft plan;
4		That the Owner prepare and distribute to the homeowners, to the satisfaction of Conservation Halton and the City of Hamilton, a brochure that describes environmental stewardship measures, such as the use and maintenance of source control measures, the use of alternative de-icing compounds, the significance of the adjacent natural heritage and natural hazard features as well as the existence of karst topography;
5		That, as part of the Permit application to Conservation Halton for the road crossing of GS-1, the Owner provide the following to the satisfaction of Conservation Halton:
	i	An assessment of the potential impacts to the watercourse and valley feature, including the potential to impact (i) valley features such as bank stability/erosion potential and riparian vegetation, (ii) stream morphology, (iii) fish habitat, (iv) other aquatic habitat features, and (v) the interaction of groundwater and surface water; vi), hydraulic conveyance/flood storage
	ii	A full span crossing structure is required unless and provided that the functional objectives related to hydraulic performance and stream forming processes, aquatic habitat and wildlife passage can be achieved to the satisfaction of the City and Conservation Halton, in which case a two span structure may be considered.

	iii	An assessment by a qualified geotechnical engineer, in consultation with a karst specialist, of the proposed crossing design and construction methodology to minimize potential interference with in-channel surface water flow and groundwater flow in the bedrock karst conduits;
	iv	The proposed alignment and construction methods of the servicing within the road right-of-way. In order to minimize disturbance to the natural environment and karst features, the services and the crossing should take place at the same time (if the services are proposed underground);
	v	An assessment, in conjunction with the revised slope stability assessment, as to whether the realignment alters the location of the stable top of bank and any redline revisions to the lot lines as a result;
6		That, as part of the Permit application to Conservation Halton for the construction of the stormwater pond within Karst Constraint Area A, the Owner provide the following to the satisfaction of Conservation Halton:
	i	The complete Karst Assessment and Karst Contingency Plan as outlined in subsequent conditions of approval;
	ii	The complete Groundwater Contingency Plan as outlined in subsequent conditions of approval;
	iii	The complete Environmental Impact Study to ensure any recommendations are incorporated into the design of the pond;
	iv	The complete stable top of bank assessment to ensure minimum 15 metre setbacks are achieved;
	v	A landscaping plan for the pond utilizing Conservation Halton's landscaping guidelines.
7		That, as part of the Permit application to Conservation Halton for the construction of the stormwater pond outfall to GS-1, the Owner provide the following to the satisfaction of Conservation Halton:
	i	Configure the stormwater outfall orientation to enter the watercourse at an appropriate angle
	ii	Erosion protection measures
	iii	Fish habitat impacts
	iv	Other items as identified by Conservation Halton as part of the detailed review of the application.
8		That, if it is deemed necessary to realign GS-1 in order to accommodate the road crossing, as part of the Permit application to Conservation Halton for the realignment, the Owner provide the following to the satisfaction of Conservation Halton:

	i	Implementation methodology for any recommendations that arise out of the Environmental Impact Study;
	ii	Revised flood plain mapping;
	iii	Detailed fish habitat assessment and mapping
	iv	Other items as identified by Conservation Halton as part of the detailed review of the application.
9		That the Owner obtain a Permit to remove the existing farm lane crossing of GS-1, to the satisfaction of Conservation Halton. This was identified as Restoration Area 4 in Figure 8-1 of the 3rd Draft of the Stage 2 Report of the SWS. Restoration measures that should be included in the Permit application include (i) removal of existing culvert, (ii) removal of fill from the bankfull channel and adjacent riparian area and the rehabilitation of these areas to match natural conditions upstream and downstream, (iii) the restoration of GS-1 channel morphology and fish habitat;
10		That the Owner prepare an assessment of Karst Areas A, B and C, to the satisfaction of Conservation Halton and the City of Hamilton, to determine the preferred engineering and construction methods for the road/servicing infrastructure crossings of GS-1, SWM Pond 2 and foundation excavation. The assessment must include site-specific karst mitigation measures for each area, must include recommendations into the design of load bearing structures that require footings into bedrock to minimize bedrock scouring or dissolution by flowing water and the piping of the soil mantle downwards into epikarstic channels and karst conduits and must be undertaken by a karst specialist in conjunction with a geotechnical engineer
11		That the Owner prepare and implement a Karst Contingency Plan to the satisfaction of Conservation Halton and the City of Hamilton. The Plan should address not only the known areas of karst but also what to do if karst is encountered beyond Karst Constraint Areas A-C. The plan must be prepared by a geotechnical engineer and karst specialist and should define, at a minimum: (i) who will be involved in the development, (ii) who has the authority to stop construction work, (iii) agency notification protocols, (iv) what, if any, immediate testing is required to address karst conditions encountered during construction (e.g. fluorescent dye tracer test), (v) the mitigative options that are available for the specific project, (vi) the decision-making framework for the selection of a preferred mitigation strategy, (vii) who will be the project manager of any required mitigation work, (viii) who will complete the mitigation work; and, (ix) follow-up steps; (page 31, rows 7 and 8). In addition, the Karst Contingency Plan should also include a map of overburden thickness to evaluate the potential for karst (particularly epikarst) in order to enable appropriate construction decision-making;
12		That the Owner prepare plans that identify the extent of excavation required within Karst Areas B and C (for foundations and/or servicing), in conjunction with the overburden thickness map outlined in Condition 11, in order to identify those areas where a karst specialist will be needed on-site as per Condition 13.
13		That the Owner provide for a karst specialist to be on-site during any works that require excavation into bedrock or within areas identified in the overburden thickness map (see Condition 11) as requiring a karst specialist on-site. At other times during site grading or construction of services, the Owner shall provide for a karst specialist to be available for

		consultation with the on-site inspector, as required.
14		That the Owner conduct a detailed assessment of GS-1 within the Phase 1A area to confirm existing erosion sites and to develop and implement appropriate restoration/rehabilitation measures to the satisfaction of Conservation Halton and the City of Hamilton
		deleted
16		That the Owner prepare and implement a Groundwater Contingency and a Water Supply Contingency Plan to the satisfaction of Conservation Halton and the City of Hamilton, **prior to any site grading**, to ensure that an appropriate mitigation strategy is available to be implemented should on-site works impact downstream residents reliant on groundwater and/or baseflows to the Grindstone Creek. This plan should address the following at a minimum: (i) excavation dewatering; (ii) long-term management; (iii) buried utility conduits; (iv) monitoring program; (v) mitigation strategy, including securities, for impacted downstream residents and/or baseflows to Grindstone Creek
17		That the Owner prepare and implement a Spills Management Response Plan, to the satisfaction of the City of Hamilton, **prior to any site grading**, to address any spills that may occur during construction;
18		That the Owner undertake the Surface Water Monitoring, Channel Realignment and Enhancement Works Monitoring, Stream Morphology Monitoring, Groundwater Monitoring, Terrestrial Ecology Monitoring and Aquatic Ecology Monitoring, as outlined in Sections 4 – 9 (inclusive) within the 2nd Draft Stage 3 Report with the following additions, provided that the design, approval and construction of the stormwater management facilities, creek crossings and other services may proceed concurrently with any required baseline monitoring and analysis or other monitoring requirements:
	a	10% replicates of water quality samples;
	b	Temperature monitoring of the discharge from the stormwater management pond should be measured using continual loggers;
	c	Monitoring for five years post construction;
	d	Preconstruction period is defined as prior to any development taking place on the South Waterdown lands;
	e	Forest birds to be included in terrestrial ecology monitoring plan;
	f	Fish habitat data will be collected utilizing the OSAP method. The OSAP method must not be modified. Sections 1, Modules 1-3 must be completed fully for every site with no modifications. MNR must be contacted to obtain a site ID code;
	g	Proof of OSAP training by at least one member of the field staff must be provided;

	h	The latest version of the OBBN protocol is to be utilized – January 2007 (or as may be updated);
	i	In addition to OBBN, the minimum level of taxonomic resolution for benthos identification should be to the family level;
	j	That the erosion monitoring component of the program include sufficient baseline monitoring and analysis, to the satisfaction of Conservation Halton, to ensure that performance of the stormwater management for the development can be differentiated from other watershed factors and natural erosion and sediment transport.
	Alternatively, the Owner could enter into a cost sharing agreement with the other South Waterdown landowners in order to prepare a comprehensive monitoring plan, rather than individual plans. The monitoring could then be undertaken by a public agency such as the City of Hamilton or Conservation Halton. If this approach is preferred, the responsible agency will need to be involved in the preparation of the cost sharing agreement to ensure appropriate funds are provided.	
19		That the Owner prepare, and implement any mitigation measures as a result of, a monitoring plan for the stormwater management pond, to the satisfaction of Conservation Halton and the City of Hamilton. Reference should be made to Table 4-1, Section 4.4 (Remedial Measures), 2nd Draft, Stage 3 Report, regarding storage adjustment requirements;
20		That the Owner provide the results, analysis and recommendations of the monitoring reports to the City of Hamilton, Conservation Halton and the Niagara Escarpment Commission. Copies of all data sheets and digital copies of information are to be submitted;
21		That the Owner post securities with the City of Hamilton to ensure the monitoring requirements are fulfilled and that mitigation measures are implemented as necessary.

ONTARIO MUNICIPAL BOARD

Waterdown Bay Ltd. has appealed to the Ontario Municipal Board under subsection 34(11) of the *Planning Act*. R.S.O. 1990. c. P.13. as amended. from Council's refusal or neglect to enact a proposed amendment to Zoning By-law 90-145-Z (Flamborough) of the City of Hamilton to rezone lands respecting 392 Dundas Street East. Part of Lots 2. 3. 4 and 5. Concession 3. East Flamborough. to permit the development of a plan of subdivision.
OMB File No.Z060176

Waterdown Bay Ltd. has appealed to the Ontario Municipal Board under subsection 51(34) of the *Planning Act*. R.S.O. 1990. c. P.13. as amended. from the failure of the City of Hamilton to make a decision respecting a proposed plan of subdivision on lands composed of Part of Lots 2. 3. 4. Concession 4 and 5. East Flamborough. 392 Dundas Street East. in the City of Hamilton.
(Approval Authority File No. 25T 200513)
OMB File No. S070002

The Halton Region Conservation Authority has appealed to the Ontario Municipal Board under subsection 53(19) of the *Planning Act*. R.S.O. 1990. c. P.13. as amended. from the decision of the Committee of Adjustment of the City of Hamilton approving a consent to allow a conveyance of an irregular-shaped parcel of land for public road purposes (the "Road Consent") on lands composed of Part of Lots 2. 3. 4. Concession 4 and 5. East Flamborough. 392 Dundas Street East. in the City of Hamilton.
(Approval Authority File No. FL/B-08:24.)
OMB Case/File No. _____

MINUTES OF SETTLEMENT

Whereas Waterdown Bay Ltd. ("Waterdown Bay") and The Halton Region Conservation Authority ("Conservation Halton") are both Parties to this Ontario Municipal Board proceeding:

And Whereas Waterdown Bay and Conservation Halton have reached an agreement regarding the resolution of the matters at issue between them in this proceeding. which agreement is set out in these Minutes of Settlement;

Now Therefore the undersigned parties hereby agree as follows:

1. Waterdown Bay agrees that it will seek draft plan approval. pursuant to section 51(34) of the Planning Act. for Phase 1A of its proposed plan of subdivision from

the Ontario Municipal Board ("OMB") in accordance with the draft plan of subdivision attached hereto as Attachment #1 to these Minutes of Settlement and subject to the proposed conditions of draft plan approval as set out in Attachment #2 to these Minutes of Settlement. The parties acknowledge that additional conditions of draft approval will be required by the City of Hamilton.

2. Conservation Halton agrees that it will not object to approval of Phase 1A by the OMB in accordance with the draft plan in Attachment #1 and subject to the conditions set out in Attachment #2. In the event that further changes are proposed to the draft plan or to the conditions, prior to or during the OMB hearing, Conservation Halton shall have the right to object to any such changes that it considers in its sole discretion to be inconsistent with this settlement and to adversely affect any of the issues of concern to Conservation Halton.

3. Waterdown Bay and Conservation Halton agree that they will jointly request the OMB to approve a zoning by-law amendment that will reflect the draft plan in Attachment #1 and the conditions in Attachment #2. The undersigned parties agree that they will use good faith efforts to agree upon the form and content of the zoning amendment, once a draft zoning by-law has been prepared by the City of Hamilton. The parties further agree that Conservation Halton may object to any provisions of the proposed zoning by-law that it considers in its sole discretion to be inconsistent with this settlement and to adversely affect any of the issues of concern to Conservation Halton.

4. Although it is the position of Conservation Halton that a Subwatershed Study and Secondary Plan should be approved prior to consideration of a draft plan of subdivision, Conservation Halton is satisfied that OMB approval of Phase 1A of the Waterdown Bay subdivision and/or the Road Consent, in accordance with these Minutes of Settlement, is acceptable in these particular circumstances. While Conservation Halton does not agree with all aspects of the subwatershed planning study that has been prepared by Ecoplans Limited, Conservation Halton is satisfied that the subwatershed study has been completed sufficiently to allow Conservation Halton to identify all issues of concern to Conservation Halton relating to development in the Phase 1A lands. Further, Conservation Halton is satisfied with the resolution of its issues relating to the Phase 1A lands in the context of this settlement, as reflected in these Minutes of Settlement. Conservation Halton continues to have concerns relating to subwatershed planning issues beyond Phase 1A of the proposed subdivision. It is agreed by the parties that these Minutes of Settlement are without prejudice to Conservation Halton's position that an approved subwatershed study and secondary plan are required before considering draft plan approval and/or consent applications of any future phase of development by Waterdown Bay or with respect to any other lands.

5. Waterdown Bay and Conservation Halton agree that they will both make good faith efforts to continue to address and resolve all of the remaining outstanding

issues that have been identified by Conservation Halton relating to the Subwatershed Study and the development of the subsequent phases of Waterdown Bay's lands. The undersigned parties further agree that their mutual objective is to reach agreement on all of Conservation Halton's remaining outstanding issues, including with respect to the Subwatershed Study, with the intent of having appropriate environmental policies reflected in the South Waterdown secondary plan as soon as possible. It is agreed that all members of the Technical Steering Committee of the Subwatershed Study would be invited to fully participate in the aforementioned process to resolve the outstanding issues with respect to the Subwatershed Study and the subsequent phases of Waterdown Bay's proposed subdivision and consent applications.

6. Waterdown Bay hereby agrees that it will not seek to commence an Ontario Municipal Board Hearing on Phase 1B or appeal any subsequent phases of its proposed subdivision or other planning applications for the South Waterdown lands, except as set out in paragraph 7 below, until such time as the South Waterdown secondary plan has been approved. Further, Waterdown Bay agrees that the City of Hamilton should have a reasonable period of time to complete the secondary planning process.

7. Notwithstanding paragraph 6 above, in the event that the Waterdown South secondary plan has not been adopted by the City of Hamilton by September 1, 2009, Waterdown Bay may request the OMB to schedule a hearing for Phase 1B of its proposed subdivision and may appeal and seek a hearing for any subsequent phases of its subdivision and may appeal and seek a hearing of any alternative secondary plan proposed by Waterdown Bay or the Waterdown South landowners. Further, in the event that the Waterdown South secondary plan is adopted by Hamilton prior to September 1, 2009 and is appealed to the OMB by Waterdown Bay or by any other party, Waterdown Bay may seek to consolidate its appeals of any further phase or phases of its proposed plan of subdivision with the appeal(s) of the secondary plan. In that event, Waterdown Bay hereby agrees that the appeals relating to the approval of the secondary plan should proceed in the first phase of any such consolidated hearing, with its site specific appeals considered in a subsequent phase.

8. Notwithstanding any of the above provisions in section 6 or 7, in the event that the City of Hamilton makes a written request to Waterdown Bay to seek OMB approval of the school and/or park sites (located in Phase 1b), in advance of secondary plan approval, Waterdown Bay may seek such a hearing of the consent appeals relating to those lands and Conservation Halton has the right to oppose such approvals and/or appeals.

9. Waterdown Bay and Conservation Halton agree to request the OMB to defer the hearing of the Road Consent appeals to be heard with the School and Park Consents in a subsequent phase, rather than having the Road Consent appeals heard at the Phase 1A hearing, as is presently contemplated. In the event that the

OMB does not grant this request and the Road Consent appeals are heard with Phase 1A of this OMB hearing. Waterdown Bay agrees that it will seek approval of the Road Consent subject to conditions that are consistent with these Minutes of Settlement. The parties acknowledge that additional conditions may be required by the City of Hamilton. Conservation Halton agrees that it will not object to the approval of the Road Consent, provided the conditions of approval proposed by Waterdown Bay are consistent with these Minutes of Settlement. In the event that Conservation Halton, in its sole discretion, considers that the proposed conditions of approval are inconsistent with this settlement and would adversely affect any issues of concern to Conservation Halton, Conservation Halton shall have the right to object to any such conditions or to seek additional conditions that would be consistent with these Minutes of Settlement.

10. These Minutes of Settlement are conditional upon Waterdown Bay also reaching a settlement agreement with the City of Hamilton that is consistent with these Minutes of Settlement.

11. These Minutes of Settlement shall be circulated to the other parties to this hearing and filed with the Ontario Municipal Board upon their execution and upon the satisfaction of paragraph 10.

12. These Minutes of Settlement shall enure to the benefit of, and shall run with the land and be binding on, the successors and assigns of the undersigned parties.

13. These Minutes of Settlement may be executed on behalf of the parties in counterparts.

Dated at _____. Ontario this _____ day of _____. 2008.

WATERDOWN BAY LTD.

Per:

_____
(Name and position)
I have authority to bind the corporation

Dated at _____. Ontario this _____ day of _____. 2008.

THE HALTON REGION CONSERVATION AUTHORITY

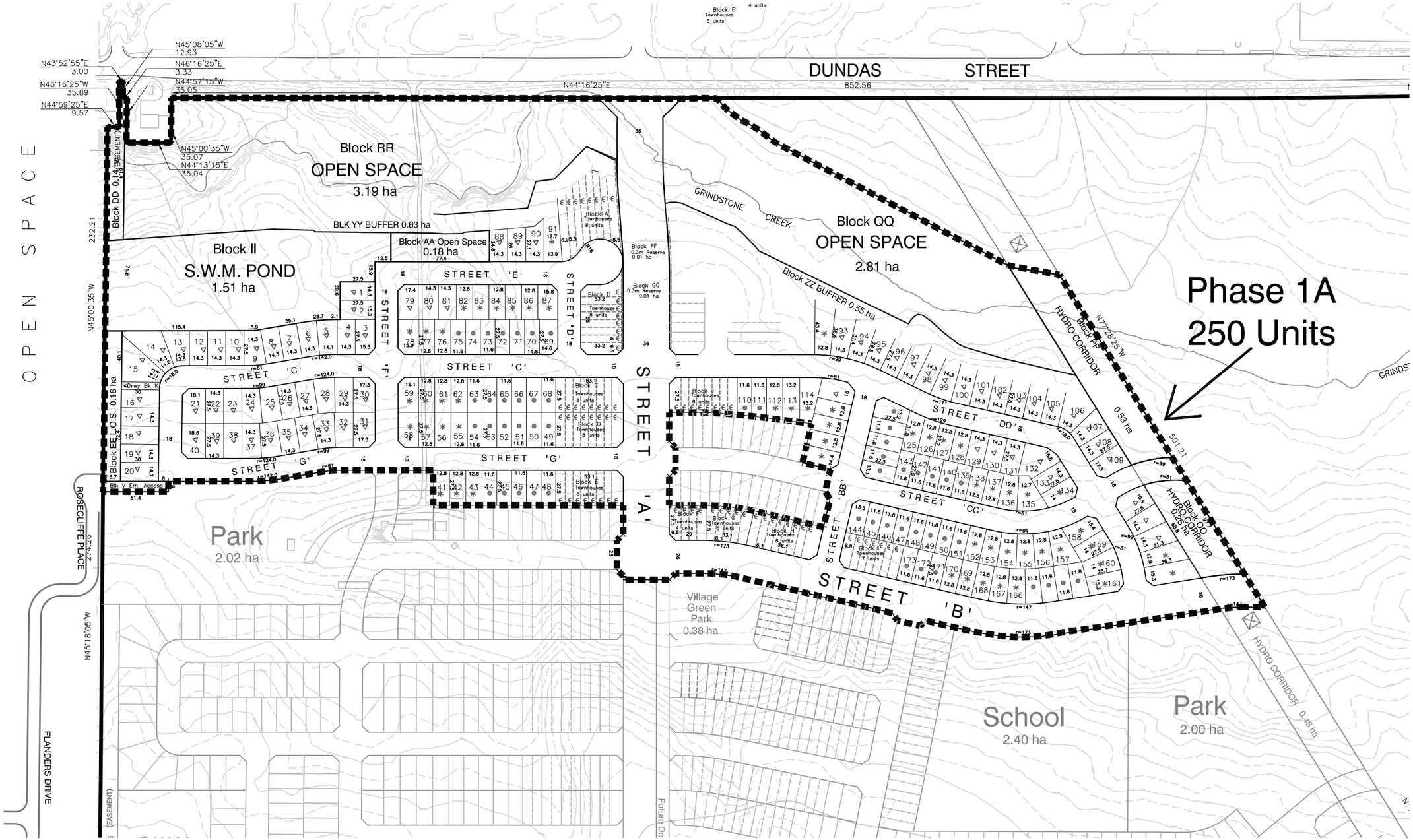
Per:

Brian Penman
Chairman

Per:

Robert Edmondson
Director of Watershed Management Services

We have authority to bind The Halton Region Conservation Authority



Phase 1A
250 Units
DUNDAS STREET
852.56
N44°16'25"E
N45°08'05"W
12.93
N43°52'55"E
3.00
N46°16'25"E
3.33
N46°16'25"W
35.89
N44°57'15"W
35.05
N44°59'25"E
9.57
N45°00'35"W
35.07
N44°13'15"E
35.04
Block RR
OPEN SPACE
3.19 ha
BLK YY BUFFER 0.63 ha
Block AA Open Space
0.18 ha
Block II
S.W.M. POND
1.51 ha
Block QQ
OPEN SPACE
2.81 ha
Block ZZ BUFFER 0.55 ha
GRINDSTONE CREEK
HYDRO CORRIDOR
0.53 ha
Block PP
N77°28'25"W
501.21
Block OO
HYDRO CORRIDOR
0.26 ha
Block DD 0.14 ha
Block EE L.O.S. 0.16 ha
Block FF
0.3m Reserve
0.01 ha
Block GG
0.3m Reserve
0.01 ha
Block A
Townhouses
8 units
Block B
Townhouses
5 units
Block C
Townhouses
8 units
Block D
Townhouses
8 units
Block E
Townhouses
8 units
Block F
Townhouses
4 units
Block G
Townhouses
5 units
Block H
Townhouses
8 units
Block I
Townhouses
7 units
Block J
Townhouses
8 units
STREET 'A'
STREET 'B'
STREET 'C'
STREET 'D'
STREET 'E'
STREET 'F'
STREET 'G'
STREET 'CC'
STREET 'DD'
Park
2.02 ha
Village
Green
Park
0.38 ha
School
2.40 ha
Park
2.00 ha
HYDRO CORRIDOR 0.46 ha
OPEN SPACE
232.21
N45°00'35"W
N45°18'05"W
274.26
ROSECLIFFE PLACE
FLANDERS DRIVE
(EASEMENT)
Future De

MINUTES OF MEETING

PROJECT: Waterdown Road and New East-West Road Class EAs

PURPOSE: Technical Agency Committee Meeting #2

DATE: September 17, 2008, 1:00 PM

LOCATION: Hamilton City Centre, Room 400A

PRESENT:

City of Hamilton:	Syeda Banuri	Joe Spiler
	Christine Lee-Morrison	Tanya McKenna
	Brenda Khes	Jason Thompson
	Kristen McCauley	Gavin Norman
	Mark Robinson	Wayne Thompson
Hamilton EMS-Fire:	Jim Doyle	
City of Burlington:	Paul Allen	
Region of Halton:	Jeffrey Reid	
Conservation Halton:	Margaret Charles	
MTO:	Frederick Szymanski	
	Greg Roszler	
MOE:	Barb Slattery	
NEC:	Nancy Mott-Allen	
Lura Consulting:	Sally Leppard	
Dillon Consulting:	Paul MacLeod	
	Ian Roul	
	Jackson Marin	

ITEM	MINUTES	ACTION BY
1	Following introductions, Paul MacLeod conducted a presentation updating the technical agencies on the status of the Waterdown Road and the New East-West Arterial EAs. The presentation is attached to these minutes for reference.	
2	With regards to the new East-West Arterial, it was noted that: • In the area of the new Waterdown North development, the road alignment is to be shifted further south to accommodate the 30m buffer requirement to the existing ESA. • In the Centre Woodlot PSW, a Butternut Tree health condition survey is being undertaken to locate and assess the condition of any existing Butternut specimens.	

ITEM	MINUTES	ACTION BY
	• Input from MTO is required regarding the location of the proposed intersection between the new the new road with Highway 6.	
3	With regards to Waterdown Road, it was noted that the proposed realignment at the south end of Waterdown through the Eagle Heights development has not, as yet, been reviewed with the developer for that land.	
	AGENCY COMMENTS	
	City of Hamilton	
4	Gavin Norman asked what the rationale is for placing the new East-West road this far north of Parkside Drive and not lining it up with Concession Road 4 instead. He is concerned that vehicles traveling north on Highway 6 will rather use Parkside Drive rather than the new road to reach their destination.	
	Dillon noted that the primary objective of the east-west road is to provide east-west traffic capacity. The time savings involved in selecting Parkside over the new East-West road are expected to be sufficiently small that they will not influence driver route selection. In addition, there was a general preference by the public for this option, as it keeps traffic off Parkside Drive. There was also a general feeling that lining up the road with Concession 4 would make this route more attractive as a truck route, which the residents also opposed.	
5	Tanya McKenna noted that the project team should have the numbers to show that placing the East-West road further north will not discourage people living in Waterdown North from using it.	
	Dillon will ensure that this is documented.	Dillon
6	Gavin noted that the City Wide Master Plan calls for eventually closing Parkside Drive at Highway 6. This may not be desirable since Parkside represents the boundary for a future industrial development.	
	The City will review this matter internally.	Hamilton
7	Jim Doyle noted that the fire station on Parkside Drive (just west of Centre Road) currently has access to Highway 6. They would not want to loose this access and should be consulted regarding the potential closing	

ITEM	MINUTES	ACTION BY
	of Parkside Drive.	
8	It was asked if there has been any further development regarding the Waterdown South lands following the last meeting with the developer. Dillon noted that all information has been forwarded to the developer in digital format, as agreed at the meeting. No comments from them on the proposed design have yet been received.	
9	Dillon noted that at one of our previous meetings with City staff, there was some concern over the proposed phase 2 layout for the Upcountry development. The concern was whether or not there should be connectivity between the new East-West Road (the section linking Parkside to Dundas) and one of the internal subdivision roads. The City confirmed that the second phase of this plan is still in draft approval form. They will review the plans and advise Dillon of any changes in the proposed draft plan layout.	Hamilton
	Ministry of Transportation	
10	Frederick Szymanski noted that MTO has not done the study to confirm whether or not Parkside Drive will be closed as part of future improvements to Highway 6. He cautioned against using this assumption in our route assessments. Dillon clarified that as part of the Ministry's plans to convert Highway 6 into a controlled access highway, (from previous discussions with Joseph Lai), it was likely that Parkside would be closed and that an interchange would be placed at the new East-West road intersection. Future connectivity between Parkside and Highway 6 was not a factor in our route selection.	
11	Frederick asked if the project team will look at re-aligning Concession 4 (west of Highway 6) to line up with the new East-West road as part of this study. Dillon noted that re-aligning Concession 4 will not be done as part of this study. The reasons for the offset in the intersections are discussed in *Item 4* of these minutes.	
12	It was clarified that Joseph Lai remains the main MTO contact for this project, though he was unable to attend this meeting. MTO will review the proposed design and provide their comments to the project team.	MTO

ITEM	MINUTES	ACTION BY
	Conservation Halton	
13	Margaret Charles indicated that conservation staff is supportive of the proposed retaining wall through the Sassafras Woods to limit the footprint - but not necessarily supportive of the proposed horizontal location for the wall. They have provided their comments in a letter to the City of Hamilton.	
	Dillon noted that there were various constraints (both geometric and physical) involved in selecting the proposed retaining wall location. Following the meeting, the project team will review all of the comments provided by Halton CA and respond, as required.	Dillon
	Niagara Escarpment Commission	
14	Nancy Mott-Allen asked if plans would be made available for the proposed work on King Road.	
	Dillon noted that a separate meeting will be scheduled with NEC to discuss the Waterdown Road EA, the East-West Arterial EA, and the King Road feasibility study. Plans will be made available at the meeting.	Dillon
	Region of Halton	
15	Jeffrey Reid asked if traffic information would be provided to Halton Region for the intersections of Dundas Street with Brant Street and with Kerns Road.	
	Dillon indicated that this traffic data would be supplied shortly.	Dillon
	REVIEW TIME REQUIREMENTS	
16	For scheduling purposes, Dillon inquired about the review period needed by the agencies to comment on the draft Environmental Study Report (ESR).	
	NEC indicated that they meet monthly to pass resolutions. She further noted that they will need a minimum of 3 weeks to review the drawings and the report. Halton CA noted that they typically require 6 weeks to review a draft ESR, however, given their current staff involvement, they may be able to provide comments in 4 weeks.	

DISTRIBUTION: Attendees
Project File

Please contact Jackson Marin of Dillon Consulting with any errors or omissions.

Comment and Response Table – Conservation Halton Letter (September 22, 2008)

I.D.#	Conservation Halton Comment	Response
1	The proposed study area passes through several areas that are regulated by Conservation Halton due to the presence of riverine hazards (including flooding, erosion and/or meander belt width), unstable soils and bedrock (including areas of karst), and proximity to wetland features. We have attempted to identify the extent of the regulated lands with respect to the description of the alignment provided in a letter (May 9, 2008) and the stationing in the drawing set (date) provided by the consulting team. Staff note that a Conservation Halton Permit pursuant to Ontario Regulation 162/06 must be issued prior to the start of any works within the regulated areas.	The permit requirements of the CA are noted and will be identified in the project's Environmental Study Report (ESR).
2	At all existing watercourse crossings, the proposed project must demonstrate no negative impacts to the flooding and erosion hazard, and should consider opportunities to improve the flooding situation if possible. For new and upgraded watercourse crossings, we recommend that safe access and egress be provided for both pedestrian and vehicular traffic. Per MNR guidelines, safe access and egress may be defined by a depth velocity product of less than 0.4 m2/s, with a maximum flooding depth over the road of less than 0.3m, and a maximum velocity over the road of less than 1.7 m/s.	The stated criteria have been followed in the hydraulic analysis of road crossing structures. Our hydraulic and flooding assessments will document that no negative impacts to flooding will result with the new facilities at water course crossings.
3	Several sections of existing and proposed roadway traverse through areas of steep slopes that are regulated by Conservation Halton. A slope stability assessment should be undertaken for all areas where the proposed road alignment encroaches within close proximity to a valley slope greater than 2m in height.	Comment noted. Slope stability assessments and required treatments will be finalized during detailed design.

I.D.#	Conservation Halton Comment	Response
4	Through the South Waterdown Subwatershed Study and the City of Burlington's New Park Environmental Assessment (EA), karst have been identified in close proximity to several road sections, as noted below. Additional karst may be present within the study area. As per Section 2 of Ontario Regulation 162/06, Conservation Halton regulates these hazardous lands. As part of the Environmental Assessment report, please identify what screening methodologies the study has considered to identify karst areas and determine any risk associated with the proposed construction. Staff note that special protection measures, as identified below, must be undertaken at work areas that extend within close proximity of the bedrock. Such measures include but are not limited to:	Comment noted. It will be highlighted in the ESR that during detailed design, impacts to karst areas will be assessed in detail and appropriate mitigation measures developed.
	a) Additional sediment and erosion controls may be required where karst is present.	Comment noted. Additional requirements to be noted in the ESR for construction phase.
	b) Written approval from Conservation Halton for any development/site alteration within Conservation Halton's regulated areas (pursuant to Ontario Regulation 162/06) will be required. This could include development/site alteration within hazardous karst areas.	Comment noted.
	c) Incorporation of recommendations by a geotechnical engineer and karst specialist in the design of the installation of services to avoid exacerbating karst dissolution processes that could contribute to localized subsidence and potentially future failure.	Comment noted. This will be recommended in the project's Environmental Study Report (ESR).
	d) That an assessment of Karst Areas be prepared to the satisfaction of Conservation Halton and the City of Hamilton, to determine the preferred engineering and construction	The involvement of a karst specialist and geotechnical engineer in the preparation of an assessment and development of site specific mitigation measures is committed to and this requirement will be

I.D.#	Conservation Halton Comment	Response
	methods for the road/servicing infrastructure crossings of GS-1. The assessment must include site-specific karst mitigation measures and recommendations into the design of load bearing structures that require footings into bedrock to minimize bedrock scouring or dissolution by flowing water and the piping of the soil mantle downwards into epikarstic channels and karst conduits and must be undertaken by a karst specialist in conjunction with a geotechnical engineer.	documented in the ESR.
	e) That a Karst Contingency Plan be prepared and implemented to the satisfaction of Conservation Halton and the associated municipalities. The Plan should address not only the known areas of karst but also what to do if karst is encountered. The plan must be prepared by a geotechnical engineer and karst specialist and should define, at a minimum: (i) who will be involved in the development, (ii) who has the authority to stop construction work, (iii) agency notification protocols, (iv) what, if any, immediate testing is required to address karst conditions encountered during construction (e.g. fluorescent dye tracer test), (v) the mitigative options that are available for the specific project, (vi) the decision-making framework for the selection of a preferred mitigation strategy, (vii) who will be the project manager of any required mitigation work, (viii) who will complete the mitigation work; and, (ix) follow-up steps.	The preparation of a karst contingency plan, as outlined in the comment, by a karst specialist and geotechnical engineer will be undertaken in detailed design in consultation with Conservation Halton and this requirement will be documented in the ESR.
	f) That a karst specialist be provided on-site during any works that require excavation into bedrock as requiring a karst specialist on-site. At other times during site grading or construction of services, the Owner shall provide for a karst specialist to be available for consultation with the on-site inspector, as required.	This requirement will be outlined in our ESR.

I.D.#	Conservation Halton Comment	Response
5	Staff note that many of the above noted procedures are required of other applicants (i.e. Waterdown Bay) who are looking to develop in karst areas with the study area. It is suggested that the study team contact and work together with Waterdown Bay to ensure that these measures are achieved.	Comment noted. Liaison with Waterdown Bay is ongoing and will continue through design.
6	Additionally, best management practices should be incorporated into the design to meet recommended stormwater management targets of enhanced level quality control, post to pre-development quantity control, and erosion control. Given the steep slopes and erosive nature of downstream soils, erosion control is of paramount concern. As part of the detailed design, we recommend that a fluvial geomorphology expert be consulted with respect to setting design criteria.	A stormwater management plan has been developed for each of the corridors to meet these criteria to the extent possible. A Drainage Study Report will be issued for your review. The detailed design will include assessment by a fluvial geomorphology expert.
7	Although it is not a requirement, staff recommended that alternative options be investigated to look at strategies aimed at reducing the use of salt on new roads, as salt cannot be removed from stormwater via known technologies. Some possible options for reducing salt use on roads include but are not limited to:	These comments/suggestions have been passed on to the operations staff of the City of Hamilton, City of Burlington, and the Region of Halton for their consideration.
	a) The use of porous pavement and other infrastructure that enables a reduction of road salt use. Development of local design standards that limit impervious surfaces. By using pervious pavement, like porous asphalt or concrete, the amount of salt needed for winter maintenance can be reduced drastically, maybe by as much as 70 percent. Porous pavements, which use an open-graded aggregate with high porosity, drastically reduce the amount of salt needed to stay clear of snow and ice. Porous asphalt allows snowmelt and rain to drain through the surface and filter through the layers of gravel and sand, below. This type of pavement appears to need less salt and this infiltration process removes pollutants like	(see above)

I.D.#	Conservation Halton Comment	Response
	sediment, heavy metals, and petroleum products. It also does a good job of reducing the volume of runoff. Care must be taken before using porous pavements in areas where there is potential for hazardous spills, such as near gas stations.	
	b) The creation of "No Salt" areas. This requires the identification of locations where no salt should be applied during winter storm events due to their proximity to natural resources.	(see above)
8	In addition to the above, there are several natural heritage features within the Study Area that need to be assessed and potentially have mitigation measures developed to ensure minimal impacts to the features.	The study area includes the road alignment and the lands directly adjacent to the alignment. We have identified and assessed all the natural heritage features that fall within this area. Mitigation measures are being developed for all areas where the road or the nearby zone of influence intersects with natural features. This information will be provided in the ESR.
9	We understand that Ecological Land Classification (ELC) data has been collected for 2 seasons; staff look forward to reviewing the data in the future.	As a point of clarification, ELC was conducted once at each individual site but this work covered two seasons as there were gaps that needed to be filled in. All ELC data is provided in the Natural Heritage Report that was provided and will be included in the ESR.
10	In previous correspondence dating back to 2005, Conservation Halton recommended that the road expansion be completed away from the natural heritage features within the study area, staff continue to make this recommendation. We do not support any works being undertaken that will impact Sassafras-Waterdown Woods. For example, we recommend that the Mountain Brow Road expansion be shifted to the north and be incorporated into the development that is proposed in this area given the level of disturbance that will be associated with this proposal, while maintaining the Environmentally Sensitive Area (ESA)/Area of Natural and Scientific Interest (ANSI) to the south. We also recommend that the widening of Waterdown Road be shifted to	The proposed alignments for Mountain Brow Road and Waterdown Road were based on an assessment of natural, social, and economic impacts. Mountain Brow Road has been shifted north to the extent possible (based on property impacts to residents along Flanders Drive and immediately to the west) onto future development lands. The alignment for Waterdown Road, in the vicinity of Sassafras Woods, is subject to a number of physical constraints, one being a large hydro tower located in close proximity to the road on the west side. At this location, a retaining wall is being proposed to minimize the road footprint and potential impacts to the adjacent natural habitat. In addition, a forest edge management plan will be developed to mitigate fringe impacts to

I.D.#	Conservation Halton Comment	Response
	the west to limit the impact to the Sassafrass-Waterdown Woods ESA/ANSI.	the vegetation at this location.
11	Staff are concerned that the discussion relating to north-south alignment within the May 9, 2008 letter to NAC members does not include impacts to Sassafras-Waterdown Woods. Further discussion of these impacts is warranted.	The road alignment adjacent to Sassafras Woods remains one of the key areas of attention as physical constraints are pushing the road to the east at the edge of the woods. However, the road has been kept as far west as possible through this area. We have completed detailed surveys of the numbers and types of trees in this area and are proposing an edge management plan to ensure that the new road development does not have negative impacts on the woods. This edge management plan would include tree and shrub planting to buffer the woods from the effects of the expanded road.
12	When developing mitigation measures staff recommend ecopassages as a method of allowing for wildlife movement under roadways. Ecopassages should be installed in areas where there is local migration between two natural areas and can be as simple as sizing crossings that will allow for movement of the large mammals or installing dry culverts in areas where reptile migration occurs.	The major wildlife movement corridors that have been identified in the study area are through the water course valleys. The sections of the Grindstone Creek along Parkside Drive will include upgraded crossings that will provide additional benefits for wildlife.
13	In addition, there is the potential for species at risk within the study area, which will have to be assessed as part of this phase of the EA.	The potential for Species at Risk was examined through the detailed field program. During that work, no Species at Risk were identified in the Waterdown Road portion of the alignment or the sections of the East-Road that are in the jurisdiction of Conservation Halton. Additional contact was made with the MNR regarding the presence of Jefferson Salamanders and this was confirmed in the natural areas south of Mountain Brow road. The mitigation measures provided for the enhanced protection of Sassafras Woods will also protect the Jefferson Salamander habitat.
Species at Risk (SAR)		

I.D.#	Conservation Halton Comment	Response
14	Phase 3 of this EA involves not only identifying alternative designs for the preferred solution but preparing a detailed inventory of the natural environment. Given that there is the potential for species at risk within the study area, staff believe that this should be further assessed as part of this phase. Staff have been in consultation with the MNR regarding species at risk within the study area. The MNR staff have advised that they have conducted extensive research in this area on Jefferson Salamander; a threatened species. All of the area directly south of Mountain Brow Road has been documented to be the habitat of Jefferson Salamander. Therefore, it is important to ensure that road construction along Mountain Brow Road does not adversely affect this habitat. This will include considerations around road location and storm water management. MNR is prepared to meet with project coordinators to identify any potential problems and ensure that they are addressed.	A detailed inventory has been prepared and has been provided in the Natural Heritage Report (December 2008). We are aware of the Jefferson Salamander habitat in the area identified by the MNR. Detailed follow up with the MNR will occur during the design phase.
15	**Greenbelt** Portions of both proposed road alignments are within the Greenbelt Plan and has been identified as being part of the Natural Heritage System. Staff defer all requirements under the Greenbelt Plan to the City of Hamilton. However, many of our comments with respect to natural features and functions are complimentary to the Greenbelt policies.	Comments noted. Any special requirements relating to the Greenbelt Plan will be considered as part of developing the road design and mitigation.
Alternatives and Issue Areas New East-West Road Corridor		
16	***Section N1*** This section of the proposed alignment is not within Conservation Halton's jurisdiction, please contact the Hamilton Conservation Authority for further information.	The project team has ongoing contact with Hamilton Conservation on this project.

I.D.#	Conservation Halton Comment	Response
17	***Section N2*** This section of the proposed alignment is not within Conservation Halton's jurisdiction, please contact the Hamilton Conservation Authority for further information.	The project team has ongoing contact with Hamilton Conservation on this project.
	Section N3 (Approximate Station 13+300 to 14+200 – See related drawings PP-3 and PP-4)	
18	1. Conservation Halton's regulation limit extends between stations 13+600 and 13+810, and is associated with both proximity to a wetland, and the potential crossing of a regulated watercourse. We note that it is difficult to confirm whether a regulated watercourse crossing is proposed at station 13+620, due to the discontinuity of the stationing between the drawings PP-3 and PP-4.	There is not a permanent watercourse but a natural depression associated with some wetland features. This depression connects to the Grindstone mainstream downstream. The proposed road separates this wetland from the downstream creek. A 6.0 m culvert is proposed here to connect the hydraulic function.
19	2. There appears to be a small swale, near station 13+000, in an existing forest located just upstream of Centre Road. It is requested that the new crossing for this watercourse have an open bottom design and should be designed to encompass the meander belt width of the creek. As this watercourse is currently well vegetated with trees, it is requested that the road construction be undertaken in a way that minimizes tree removal and disturbance as much as possible. It is very important that riparian (trees next to the creek) cover be maintained as much as possible. It is requested that any trees removed through the road construction process be replaced in accordance with Conservation Halton's Landscape Guidelines.	Comment noted. This section of road lies within the Centre Road Woodlot, which is under the jurisdiction of Hamilton Conservation Authority. Design and mitigation strategies through this woodlot are currently under discussion with Hamilton CA.
20	***Section N4 (Approximate Station 14+200 to 15+000 - See related drawings PP-4 and PP-5)*** 1. Conservation Halton's regulation limit (associated with the existing Grindstone Creek Crossing and associated	This permit requirement is noted and will be identified in the ESR.

I.D.#	Conservation Halton Comment	Response
	steep valley slopes) begins at station 14+175 and extends to approximately 14+300. A Permit pursuant to Ontario Regulation 162/06 will be required for work within the Approximated Regulated Limit.	
21	2. The main Grindstone Creek is designated as a significant woodland by the City of Hamilton.	Comment is noted.
22	3. The new road section near station 14+210 is proposed to overlap with the existing Parkside Drive and will overlap with an existing culvert under the road that conveys Grindstone Creek through it. It is requested that the new culvert under the proposed road encompass the entire meander belt width of the creek.	The proposed crossing of Grindstone Creek will be in the form of a new bridge, approximately 14m in span. The entire meander belt can be accommodated within this span.
23	***Section N5 (Approximate Station 15+000 to 16+100 – See related drawing PP-5)*** 1. While there is no regulated watercourse crossing within N5, the proposed road alignment will separate a tributary of Grindstone Creek from the regulated floodplain between stations 15+575 and 16+850.	The loss of floodplain storage to the east of the proposed roadway will be preserved by two flow equalization culverts. The maintenance of the watercourse conveyance function is demonstrated by HEC-RAS modeling. This will be documented in our Drainage Study Report.
24	The "Environmental Implementation Report" prepared by Paragon Engineering Ltd. and Ecologisticsmited, dated May 1996 for the proposed Up Country Estates II Subdivision recommended that the watercourse's riparian zone be enhanced, and/or that the floodplain and meander patterns be re-constructed or restored. These recommendations are supported by Conservation Halton staff, and should be considered during the finalization of the new east-west road corridor.	Please see ID #23 for response.
25	We note that regardless of the approach selected by the design	Please see ID #23 for response.

I.D.#	Conservation Halton Comment	Response
	team, the proposed development must not reduce the riparian storage or floodplain conveyance under any of the design storms (from the 1:2 year design storm through to the Regional Storm Event). Supporting calculations must be provided to confirm that the flood plain storage and conveyance functions are maintained.	
26	A Permit pursuant to Ontario Regulation 162/06 will be required for work within the Approximated Regulated Limit.	Comment noted.
	Section N6 (Approximate Station 16+100 to 16+200 and 8+700 to 10+700 – See drawings PP-6 and PP-7)	
27	1. Conservation Halton's regulation limit begins at station 9+075 and extends to station 9+300. This limit is associated with the flood plain and steep valley walls of a Grindstone Creek Tributary. We note that the existing culvert at station 9+180 is proposed to be extended. Please provide hydraulic calculations confirming that the culvert extension will not have an impact on the up or downstream floodplain. A Permit pursuant to Ontario Regulation 162/06 will be required for work within the Approximated Regulated Limit.	HEC-RAS modeling was conducted to ensure the proposed crossing structure would not have any negative impacts on the existing flood levels. Please note that following our meeting with Conservation Halton staff on August 12, 2008; the project team has undertaken additional survey at this location to better delineate the channel banks. Further, Conservation Halton staff asked that the team consider replacing the existing culvert (with a new open bottom culvert) and potentially re-aligning the new culvert to better line up with the stream. This has been incorporated into our proposed design.
28	2. Karst features have been identified throughout the southern adjacent property (within the City of Burlington's New Park lands) between stations 10+000 and 10+725.	Comment noted. Detailed karst studies will be undertaken during the design stage of this project.
29	3. Stations 9+900 to 10+400 fall within Conservation Halton's Approximate Regulatory Limit due to their proximity to an	Comment noted.

I.D.#	Conservation Halton Comment	Response
	adjacent wetland feature.	
30	4. There is a regulated wetland on the north side of Dundas Street near Kerns Road. Works within the regulated limit of this wetland will require a permit under Ontario Regulation 162/06.	Comment noted.
31	5. Along the south side of Dundas where N5 and N6 meet, there is a significant woodland associated with the watercourse.	Comment noted.
32	6. It is requested the new/wider road crossings (at both stations 9+200 and 9+700) of Grindstone Creek span the meander belt width of the creek.	The crossing at station 9+200 is discussed in ID #27. A 6 m span culvert will replace the existing 3 m span structure.
33	7. Northern Pike have been demonstrated to migrate upstream of this crossing (station 9+200), as such, it is important that spring flows under the new road crossing are of a sufficient velocity that they do not create a barrier to fish passage during the spring freshet.	In this area, the crossings are being increased in size and the floodlines are being maintained. This will result in velocities that should either match existing conditions or be slower than existing conditions. As such, we do not anticipate velocity barriers to Northern Pike as a result of the road.
34	8. It is noted that a watercourse outlets from a pond upstream (north) of Dundas Street. This watercourse (station 9+700) has been demonstrated to contain a warm water forage fish community. A portion of this watercourse was previously been put in a pipe. As part of the road construction project, would it be feasible to daylight the 550 meter section that is currently underground?	Comment noted. This will be investigated further in the design stage of this project.
	Section N7 (Approximate Station 10+700 to 12+000 – See drawings PP-7 and PP-8)	

I.D.#	Conservation Halton Comment	Response
35	1. Stations 11+400 to 11+500 fall within Conservation Halton's Approximate Regulatory Limit due to the presence of a regulated watercourse crossing and steep slopes associated with the valley feature of Upper Hagar Creek. A Permit pursuant to Ontario Regulation 162/06 will be required for work within the Approximated Regulated Limit.	Comment noted.
36	2. On the north side of Dundas St between Kerns Road and Brant Street, there are significant woodlands, the Nelson Escarpment Woods Environmentally Sensitive Area (Region of Halton ESA), a regulated wetland and the Waterdown Moraine Earth Science Area of Natural and Scientific Interest (ANSI).	We are aware of this feature and have minimized effects on this feature in developing the design of the roadway improvements.
37	3. On the south side of Dundas Street between Kerns Road and Brant Street, there are significant woodlands and the Waterdown Escarpment Woods Environmentally Significant Area (City of Hamilton ESA).	We are aware of this feature and have minimized effects on this feature in developing the design of the roadway improvements.
38	4. More details on the proposed escarpment cut are requested, please include information relating to the proposed retaining walls and the impacts to the natural heritage features.	Based on the available information, it is expected that between 2m to 5m of rock cut will be required on the north side of Dundas between stations 11+000 to 11+180. At its highest point (station 11+120), the new exposed rock face will be approximately 13m high. Specific details on the retaining walls (such as the type of wall, footing requirements, etc.) will not be available until the detailed design phase of the project. At this time, it is expected that the proposed wall will have an average height of 3.5m. The area of rock cut has been inventoried and this information along with mitigation measures will be provided in the ESR.
Alternatives and Issue Areas Waterdown Road Widening		

I.D.#	Conservation Halton Comment	Response
	Section W1 (Approximate Station to 40+520 – See related drawings Waterown-1 and Waterdown-2 and road grades)	
39	1. The existing Waterdown Road is within Conservation Halton's approximate regulatory limit between stations 40+520 to 40+060 due to the presence of steep slopes. We note that a portion of the existing roadway appears to be located within an area that may be unstable under the 100 year erosion threshold. This is an area of significant concern for Conservation Halton. Additional details are required and a slope stability assessment should be undertaken.	The CA's comment and concerns are noted. As part of the additional geotechnical testing to be conducted during the detailed design phase of the project, a slope stability analysis will be conducted in this area.
40	2. The Sassafrass Waterdown Woods is located on the east side of Waterdown Road, this is classified as a Region of Halton ESA, provincial Life Science ANSI and a Carolinian Canada site. Staff believe that encroachment into the ESA/ANSI would cause a considerable impact and would be a significant concern to Conservation Halton.	The project team is recommending the use of retaining walls to minimize encroachment onto the natural areas. In addition, a forest edge management plan will be developed to mitigate fringe impacts to the vegetation.
41	3. A Permit pursuant to Ontario Regulation 162/06 will be required for work within the Approximated Regulated Limit.	Comment noted.
42	4. Staff are in support of the function that the proposed retaining wall is meant to provide, however there is still a significant concern over the location of the structure and the long term stability of the slope in this area. Conservation Halton's Approximate Regulatory Limit extends from station 41+110 to approximately 41+200 and from stations 40+920 to 41+010 along the new road alignment. This land is regulated due to the presence of steep valley slopes associated with the adjacent regulated watercourse and the watercourse crossing.	Additional geotechnical testing, including a slope stability analysis will be conducted at the detailed design phase to confirm the feasibility of placing a retaining wall at this location.

I.D.#	Conservation Halton Comment	Response
43	1. Downstream of 1639 Waterdown Road, the watercourse becomes regulated, so while the watercourse crossing at station 40+995 would be unregulated, the crossing at 40+955 would be regulated. Per the grading plan, it appears that no major overland flow route crossing the road for either of these crossings is contemplated. Given the above, please carefully consider blockage potential when sizing the culverts for both of these crossings. A Permit pursuant to Ontario Regulation 162/06 will be required for work within the Approximated Regulated Limit.	The road plans have been revised in this area. With the new preferred alignment, there will not be any potential crossings. The permit requirement will be documented in the ESR.
	Section W3 (Approximate Station 41+200 to 42+300 – See related drawing Waterdown-3 and road grades)	
44	1. Conservation Halton notes the presence of a hydrologic connection (i.e. an unregulated watercourse) at approximate station 41+620. We note that major system conveyance for this hydrologic connection does not appear to be considered.	The hydraulic aspects of the existing structure at this location (1100 CSP) were evaluated and a new structure is proposed to maintain the existing hydraulic condition. A 1490 x 910 pipe arch culvert is proposed.
45	2. Conservation Halton's current Approximate Regulatory Limit Mapping shows that Mill Street falls within our regulated area between stations 41+590 and 41+540, and stations 41+480 and 41+240, due to the presence of steep slopes. Conservation Halton's estimated top of stable slope encroaches within the existing roadway between stations 41+400 to 41+330. This is an area of significant concern for Conservation Halton. A geotechnical study and a Permit pursuant to Ontario Regulation 162/06 will be required in this location.	The CA's comment and concerns are noted. The current design has been developed to minimize impacts to steep slopes. Additional details will be developed during the design stage.
46	There are significant woodlands on both sides of the road in this	Comment noted.

I.D.#	Conservation Halton Comment	Response
	section.	
	Section W4 (Approximate Station 60+100 to 60+000 and 42+490 to 42+300 Mountain Brow-1 and Waterdown-4	
47	1. We note that Mill Street crosses Conservation Halton's regulatory limit approximately 75m north of the existing Mountain Brow Road intersection, therefore a Permit pursuant to Ontario Regulation 162/06 may be required should any upgrades be proposed beyond station 42+455.	There are currently no proposed improvements to Mill Street beyond station 42+420. As such it is expected that a permit will not be required at this location.
	Section W5 (Approximate Station 60+100 to 60+700 – See related drawing Mountain Brow-1 and the road grading plan).	
48	This section of road alignment is adjacent to the Sassafras-Waterdown Woods ANSI and City of Hamilton Waterdown Woods ESA. Our preference is to ensure that all road construction is kept out of these areas.	This comment was addressed in ID #10.
	Section W6 (Approximate Station 70+000 to 70+160, and 60+700 to 61+070 -See related drawings Mid-Block 1, Mountain Brow-1 and Mountain Brow-2 and the road grading).	
49	1. It appears that the proposed upgrade of Mountain Brow Road, to the east of Mid Block Road will result in a modification of the existing watercourse crossing at Station 60+845. We note that this is a regulated watercourse, and a Permit pursuant to Ontario Regulation 162/06 from Conservation Halton will be required to complete any proposed works between stations 60+735 and 60+875. Per the grading plans the low point in Mountain Brow Road	The permit requirement is noted. A watercourse re-alignment south of Mountain Brow Road is not proposed and the existing culvert location is to be maintained.

I.D.#	Conservation Halton Comment	Response
	will be shifted to 60+819. Please confirm whether or not a minor watercourse re-alignment is proposed south of Mountain Brow Road, or whether the existing culvert location is to be maintained.	
	Section W7 (Approximate Station 70+160 to 70+880 – See related drawings Mid-Block 1 and the road grading).	
50	1. We note that the "South Waterdown Subwatershed Study Stage 2 Report" has identified krst along the proposed road alignment extending from Dundas Street (south of Burke Street) to approximately 230m south of Dundas Street. The proposed design must incorporate the mitigation measures described above under the Overall Comments Section.	Comments noted.
51	2. Mid Block 1 will cross a tributary of Grindstone Creek, identified as GS-1 at approximate station 70+810. Conservation Halton's rgultory limit associated with this feature extend from Dundas Street to station 70+780. We understand that the design of this crossing differs from the crossing identified by the landowners (Waterdown Bay) and may result in a local increase in regional storm water levels on the Waterdown Bay lands within the valley. Conservation Halton will only be able to support the potential increase in flooding upon receipt of written consent from all affected landowners.	The hydraulic analysis of this crossing will be finalized by the developer.
52	3. It appears that road grading activities will occur within the extent of Conservation Halton's approximate regulation limit from station 70+000 to 70+300. While we note that the "South Waterdown Subwatershed Study" recommends the elimination of the GS-3 tributary, Conservation Halton has	Comments noted.

I.D.#	Conservation Halton Comment	Response
	not approved the final study. A Permit pursuant to Ontario Regulation 162/06 will be required for work within the Approximated Regulated Limit.	
53	4. Based on information submitted in the South Waterdown Subwatershed Study staff believe that the ESA located at Dundas Street will require additional study to detail and evaluate site specific vegetation and fisheries features.	This area has been included in the field study program. The results of this work and recommended mitigation measures will be included in the ESR.
Evaluation Approach and Criteria		
54	With respect to the Evaluation Criteria table and the Natural Environment components, Staff recommend using the Provincial Policy Statement (PPS) as a guide to determining criteria. For example, the PPS states that "development and site alteration shall not be permitted in significant habitat of endangered and threatened species", therefore a criterion should be "Impacts to Species At Risk". The criteria should include impacts to significant woodlands, significant wildlife habitat as defined by the PPS, as well as ANSIs. Finally connectivity/linkages should be included in the criteria as stated in the table. The order or most important criteria should be those that the PPS gives the most protection to (e.g., significant habitat of SAR) and from there, those with lesser protection. The criteria should also include impacts to regulated wetlands and ESAs. Additional evaluation criteria as recommended by staff include impacts to natural hazard features as regulated by Conservation Halton, these features include steep slops, regional storm floodplains, meanderbelt and wetlands.	The evaluation criteria were developed with the input of a variety of stakeholders through a public process and finalized in Phase 2 of this study. We believe that these issues raised by the CA can be considered within the current criterion. The evaluation tables will be revised to take these considerations into account.

1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5

November 3, 2008

To Whom It May Concern,

RE: ORC Initial Comments on Notice of PIC Class EA, New east-west corridor and Waterdown Road corridor

Thank you for circulating Ontario Realty Corporation (ORC) on your Public Information Centre. The ORC is the strategic manager of the government's real property with a mandate of maintaining and optimizing value of the portfolio, while ensuring real estate decisions reflect public policy objectives of the government.

Our preliminary review of your notice and supporting information indicates that ORC-managed property is directly in the study area. As a result, your proposal may have the potential to impact this property and/or the activities of tenants present on ORC-managed lands. Attached please find a map that identifies this property to assist you in identifying and avoiding potential impacts.

Potential Negative Impacts to ORC Tenants and Lands

General Impacts
Negative environmental impacts associated with the project design and construction, such as the potential for dewatering, dust, noise and vibration impacts, and impacts to natural heritage features/habitat and functions, should be avoided and/or appropriately mitigated in accordance with applicable regulations best practices and MNR and MOE standards. Avoidance and mitigation options that characterize baseline conditions and quantify the potential impacts should be present as part of the EA project file. Details of appropriate mitigation, contingency plans and triggers for implementing contingency plans should also be present.

Impacts to Land holdings
Negative impacts to land holdings, such as the taking of developable parcels of ORC managed land or fragmentation of utility or transportation corridors, should be avoided. If the potential for such impacts is present as part of this undertaking, you should contact the undersigned to discuss these issues at the earliest possible stage of your study.

If takings are suggested as part of any alternative these should be appropriately mapped and quantified within EA report documentation. In addition, details of appropriate mitigation and or next steps related to compensation for any required takings should be present. ORC requests circulation of the draft EA report prior to finalization if potential impacts to ORC managed lands are present as part of this study.

Cultural Heritage Issues
If proposed alternatives may impact cultural heritage features on ORC managed lands, we would request that the examination of cultural heritage features be enhanced to include issues such as cultural landscapes, archaeology and places of sacred and secular value.

Potential Triggers Related to ORC's Class EA

The ORC Class Environmental Assessment (ORC Class EA) applies to a range of realty and planning activities including leasing or letting, planning approvals, selling, demolition and property maintenance/repair. For details on the ORC Class EA please visit the Environment and Heritage page of our website found at http://www.orc.on.ca/Page133.aspx. If the ORC Class EA is triggered, consideration should be given to explicitly referring to the ORC's undertaking in your EA study.

The purchase of ORC lands or disposal of rights and responsibilities (e.g. easement) for ORC lands triggers the ORC's Class EA. If any of these are being proposed as part of any alternative, please contact the Sales and Marketing Group through ORC's main line (Phone: 416-327-3937, Toll Free: 1-877-863-9672) at your earliest convenience to discuss next steps.

The undertaking of physical work on ORC lands also triggers the ORC Class EA. If any work is proposed on ORC lands, please contact the undersigned at your earliest convenience to discuss next steps.

Specific Comments

Please note that various government lands, managed by ORC and Hydro One, are in the study area. Please contact ORC and Hydro One for policies and processes.

Concluding Comments

Thank you for the opportunity to provide initial comments on this undertaking. If you have any questions on the above I can be reached at the contacts below.

Sincerely,

L. Myslicki

Lisa Myslicki
Environmental Coordinator
Ontario Realty Corporation - Professional Services
1 Dundas Street West,
Suite 2000, Toronto, Ontario
M5G 2L5
(416) 212-3768
lisa.myslicki@ontariorealty.ca

Appendix 1: Location of ORC property

ID# 269 – Response sent on December 4, 2008

Dear Ms. Myslicki,

Thank you for your letter dated November 3, 2008. We have obtained a response to your inquiry from the Project Team, and have provided it in blue below.

Project Team Response: Thank you for your letter and interest in the Waterdown Road Class Environmental Assessment. In reviewing the information you provided, it would appear that Waterdown Road crosses two power transmission line corridors that are under the mandate of the Ontario Realty Corporation (ORC). We have not identified any other lands to be required from the ORC. As it is proposed that Waterdown Road be widened from two to four lanes, there could be the need for lands contained within these power transmission corridors. We are in the process of confirming property needs along the entire length of roadway. Once this has been confirmed, we will contact you to advise of the land requirement and to discuss the process to facilitate this.

Kind regards,
Patricia Halajski née Prokop on behalf of Sally Leppard,
Neutral Community Facilitator's Office
36 Hunter Street East, 6th Floor
Hamilton, ON L8N 3W8
Tel. (905) 818-8464
Fax (905) 528-4179
Email: info@waterdown-aldershot.ca

From: Mott-Allen, Nancy (MNR) [Nancy.Mott-Allen@ontario.ca]

Sent: November 12, 2008 12:59 PM

To: Waterdown-Aldershot Information

Subject: NEC comments on North/south, east/west roads

Good afternoon:

I attended both Public Information Centres regarding the proposed alignments of the East/west and North/south roads that are part of the Waterdown-Aldershot Transportation Master Plan. Our comments are as follows:

East/west

- Rock cut on north side of Dundas, west of Brant Street: more information required to understand extent of rock cut required for road widening and impact on the Escarpment
- Street lighting on Dundas: lighting should be directed downward to the roadway to minimize visual impact on the Escarpment
- Generally support the preferred route as it minimizes impact to environmental features in Waterdown

North/south

- Concern about any options which involve widening or improvements to King Road due to concern about negative impact on the Escarpment both environmental and visual
- Focus should be on widening Waterdown Road
- Request a meeting with City of Burlington, Conservation Halton and Project Team before the Environmental Study Report is finalized (I spoke to Paul Allen of the City of Burlington at the meeting and he indicated that it is the City's intent to contact us).

If you have any questions with respect to these comments, please contact me at the number below.

Nancy Mott-Allen, MCIP, RPP
Senior Planner
Niagara Escarpment Commission

Tel: 905-877-8363
Fax: 905-873-7452

08-9020

WEBB
PLANNING CONSULTANTS

November 17, 2008

VIA EMAIL AND REGULAR MAIL
Dillon Consulting
235 Yorkland Blvd., Suite 800
Toronto ON M2J 4Y8

Attention: Paul A. MacLeod, P.Eng.,
Transportation & Infrastructure

Dear Mr. MacLeod,

Re: Waterdown Aldershot Transportation Master Plan (WATMP)
Phase 3 & 4 Municipal Class Environmental Assessment

On behalf of our client, Waterdown Bay Inc., we are writing to follow-up from our discussion at the PIC held on November 6th, 2008, concerning the above matter. As stated, our particular interest is with respect to the North-South corridor.

We are requesting an immediate meeting with the members of the WATMP project team to discuss our significant concerns with the material that was presented at the PIC. Our concerns relate to the process that was followed by the project team in arriving at the preferred option presented at the PIC, as well as, specific concerns with the preferred option itself. It is our view that the process and outcome are seriously flawed as the project team did not have regard for fundamental materials that should have been considered. This would include the Sub-watershed Study prepared by Ecoplans, the Draft Secondary Plan for Waterdown South and the approved Draft Plan of Subdivision for Phase 1A of the Waterdown Bay lands. In addition, there has been insufficient consultation with the affected property owner. It is essential that these deficiencies be rectified immediately.

It would be appreciated if you could provide an immediate response to this submission and confirm the availability of the project team to meet with Waterdown Bay and their consulting team. Following this meeting and our opportunity to review updated materials, we will be in a position to provide formal written comments.

We look forward to your response.

WEBB Planning Consultants Inc.

James Webb, MCIP, RPP

cc: Michael Telawski, Waterdown Bay Inc.
Karl Gonnsen, Metropolitan Consulting

244 James Street S. Hamilton, ON L8P 3B3 P. 905 527 7526 F. 905 527 7527 C. 905 719 9860 jwebb@webbplanning.ca
JAMES WEBB PLANNING CONSULTANTS INC.

Sent: Monday, November 24, 2008 9:29 AM
To: Banuri, Syeda
Subject: Waterdown Road and Dundas West Class EA

Ms. Banuri,

Further to my voicemail of November 18th, there are a number of issues of interest to GO Transit related to the subject study. Specifically, we are interesting to find out more about:
- How the Waterdown road widening would function (if at all) with the new highway interchange that has been proposed off the 403?
- What pedestrian and cycling facilities would exist along the new north/south (Waterdown Road) and east/west (Dundas West) alignments, if any.
- Consideration and function of Dundas Street as a higher order inter-regional transit corridor. This portion of Dundas has been identified in Metrolinx's Draft Regional Transportation Plan as a corridor for Rapid Transit improvements (under the 15-year plan labeled as "Dundas West - Waterdown to Kipling Station).

Any additional information and specifics as they relate to the subject study on the above-noted issues would be greatly appreciated. I look forward to communicating with you further at your earliest convenience.

Best Regards,

Hamish Campbell
Transportation Planner - GO Transit
Transportation Planning and Development

Suite 600 - 20 Bay Street
Toronto, ON - M5J 2W3
P > 416.869.3600 x 5520
C > 416.518.1183
F > 416.869.1563

From: Waterdown-Aldershot Information
Sent: March 4, 2009 2:00 PM
To: 'hamish.campbell@gotransit.com'
Subject: ID# 335 - Waterdown Road and Dundas West Class EA

Dear Mr. Campbell,

Thank you for your voicemail November 18, and email dated November 24, 2008. We have received a response from the Project Team and provide it below. For ease of reference, we have included excerpts of your e-mail in italics, with the project team response following.

Further to my voicemail of November 18th, there are a number of issues of interest to GO Transit related to the subject study. Specifically, we are interesting to find out more about:

-How the Waterdown road widening would function (if at all) with the new highway interchange that has been proposed off the 403?

Project Team Response: Waterdown Road interchange is a City of Burlington project.

The Waterdown Road and the Highway 403 interchange is being built to tie into a future 4 lane Waterdown Road. Waterdown Road through the new highway interchange will have four lanes plus turn lanes. The City of Burlington is planning to start construction on the Waterdown Road interchange in 2009, to facilitate future increased vehicle capacities. The technical aspects of a four-lane roadway are currently being finalized along Waterdown Road. Once the preferred four-lane concept has been finalized the project team will develop and evaluate providing a three-lane option as the first stage in implementing the four-lane concept.

- What pedestrian and cycling facilities would exist along the new north/south (Waterdown Road) and east/west (Dundas West) alignments, if any.

Project Team Response: The proposed Pedestrian and Cycling facilities for both corridors are outlined below.

North-South Corridor:

Waterdown Road - Proposing a 4m wide Multi-Use Pathway for pedestrians and cyclists (off road, behind curb and boulevard) on the **west side of the road only** throughout the entire alignment. A 1.5m sidewalk on the east side is proposed from Flatt Road northerly for approximately 600m.

Mountain Brow Road - Proposing a 3.5m wide Multi-Use Pathway for pedestrians and cyclists (off road) on the **north side of the road only** from Waterdown Road to the new Mid-Block Road (Edworthy Road). No allowance is made on the south side of the road.

Mid-Block Road - Proposing 1.5m on-road bicycle lanes and 2.0m sidewalks on both sides of the road throughout the entire alignment.

East-West Corridor:

New E-W Road (Highway 6 to Waterdown North Development) - No allowance made as this is a rural section, though paved shoulders are included in design.

New E-W Road (through Waterdown North Development) - Proposing a 4m wide Multi-Use Pathway for pedestrians and cyclists (off-road) on the **south side of the road only** throughout entire development.

New E-W Road (From Centre Street to Parkside Drive) - Potential Multi-Use Pathway on south side from Centre Road connecting to Joe Sam's Park to be further assessed. No other allowances made through this rural section, though paved shoulders are included in the design.

Parkside Drive Widening - Proposing on-road bicycle lanes (1.2m) and 1.5m sidewalks on both sides of the road.

N-S Link through Upcountry Development - Proposing a 4m wide Multi-Use Pathway for pedestrians and cyclists (off-road) on the **west side of the road only** throughout the entire development.

Dundas Street (From new N-S Link to Kerns Road) - Proposing on-road bicycle lanes (1.5m) and 2.0m sidewalks on both sides of the road.

Dundas Street (From Kerns Road to Brant Street) - Proposing 4.2m wide shared curb lanes (both sides of the road) for traffic and cyclists and a 1.5m sidewalk on the **south side of the road only**.

The final recommended preferred option will be provided in the ESR

- Consideration and function of Dundas Street as a higher order inter-regional transit corridor. This portion of Dundas has been identified in Metrolinx's Draft Regional Transportation Plan as a corridor for Rapid Transit improvements (under the 15-year plan labelled as "Dundas West - Waterdown to Kipling Station).

Project Team Response: Dundas Street falls under the jurisdiction of the Region of Halton. It is the City of Hamilton's understanding that the Region of Halton, in regards to this project, is releasing a TOR early in the new year. We have forwarded your input to the Region of Halton for their consideration.

Kind regards,

Patricia Halajski on behalf of Sally Leppard,
Neutral Community Facilitator's Office
36 Hunter Street East, 6th Floor
Hamilton, ON L8N 3W8
Tel. (905) 818-8464
Fax (905) 528-4179
Email: info@waterdown-aldershot.ca

-----Original Message-----
From: Hamish Campbell [mailto:Hamish.Campbell@gotransit.com]

DRAFT MINUTES OF MEETING

PROJECT:	Waterdown Road & New East West Road- Phase 3	
PURPOSE:	Coordination Meeting with Waterdown Bay Development	
DATE:	December 18, 2008 9:30 AM	
LOCATION:	Hamilton City Centre - Room 320A	
PRESENT:	City of Hamilton:	Syeda Banuri
		Christine Lee-Morrison
		Brenda Khes
		Kirsten McCauley
		Gavin Norman
	Webb Planning:	James Webb
	Waterdown Bay:	Michael Telawski
	Metropolitan Consulting:	Karl Gonnsen
	Dillon Consulting:	Jackson Marin
		Amanda Shepley

ITEM **ACTION BY**

1. History of Discussion

- The purpose of this coordination meeting was to discuss design and consultation issues related to the selection of the preferred Mid-Block Road design presented at the second Public Information Centre, and how to resolve design issues.
- In a letter to Dillon Consulting, dated November 17th, 2008, Webb Planning specified concerns regarding the consultation process. Specifically, it was felt that there had been insufficient consultation with the owner.

  Dillon noted that they have been in contact with Metropolitan Consulting since early July regarding design elements for the Mid-Block Road. During a meeting between the City of Hamilton, Dillon Consulting, and Metropolitan Consulting on September 9, 2008, a plan of the Mid Block road showed 2 roundabouts and a

ITEM	ACTION BY

continuous centre median. Digital and hardcopy drawings of this design were provided to Metropolitan for comment at that time.

Waterdown Bay has also been represented at the Neighbourhood Advisory Committee (NAC) meetings held prior to the PICs.

- The Project Team feels there has been sufficient consultation; however, there is still time for further input if other factors should be considered in the evaluation of alternatives.

2. Status of OMB Decision

- It was noted that the OMB decision in late October 2008 sets out conditions for the Phase 1 development work.
- Webb Planning felt that the Project Team did not consider the OMB decision or the Sub-Watershed Study in their design.

  It was noted that the Subwatershed Study has not been approved, and clearly states that the final alignment of the road will be subject to recommendations of the EA.

3. Status of Waterdown Road Class EA

- Dillon modified the Mid-Block Road alignment after meeting with Conservation Halton on July 23, 2008, where the C.A. indicated that their preference was to avoid the creek, if possible.
- Webb Planning and Metropolitan indicated that there are a number of reasons why the Creek cannot be saved. The C.A. has advised that they cannot perform any work south of Mountain Brow Road and this greatly limits their ability to engineer a workable water treatment solution. In addition, Webb Planning and Metropolitan noted that Conservation Halton has indicated to them that they have no issues with the removal of this Creek.

  Hamilton suggested that either Webb or Metropolitan obtain a letter from Conservation Halton indicating that they (the C.A.) have no concerns with removing this Creek. — Webb/ Metropolitan
- Webb Planning and Metropolitan have additional engineering concerns with the preferred design option:
  i. requirement for 4 lanes instead of 2 lanes

ITEM	ACTION BY
ii. traffic inefficiency with a second roundabout iii. continuous centre median iv. curved alignment at the south end of Mid-Block	
Dillon noted that the requirement for 4 lanes was addressed in the Phase 2 report.	
With regards to the second roundabout, it was mentioned that the City's approved roundabout policy encourages the use of roundabouts in place of traffic lights, where possible.	
The centre median was introduced due to the high number of intersecting roads and out of concern for capacity and safety. Dillon will review the need for a continuous median with respect to traffic volumes, etc.	Dillon
The curved alignment was introduced as a means to increase the level of service provided for through traffic.	
• Webb Planning feels that the curved alignment is an inefficient use of the land and should be accounted as such in the evaluation.	
• Metropolitan provided Dillon with the latest Phase 1 plans for review; these plans include borehole information. Dillon will review and provide comments by Mid-January.	Dillon
• Dillon provided Metropolitan with a preliminary layout of the Grindstone Creek tributary crossing, south of Dundas.	
• The Project Team plans to file the ESR in Summer 2009.	
• Metropolitan stated their understanding that the Phase 1 portion of road could be built prior to EA approval; Hamilton will get back to Metropolitan and Webb Planning on this matter.	Hamilton
• Metropolitan will provide Dillon with their comments on the preferred design option by mid-January.	Metropolitan

DISTRIBUTION: Attendees
Paul Allen, City of Burlington
Melissa Green-Battiston, Halton Region

Please contact Amanda Shepley of Dillon Consulting with any errors or omissions.

DRAFT MINUTES OF MEETING

PROJECT:	Waterdown Road & New East West Road- Phase 3	
PURPOSE:	Coordination Meeting with Paletta Development	
DATE:	January 16, 2009	10:00 AM
LOCATION:	Paletta International Office	
PRESENT:	City of Hamilton:	Syeda Banuri
	Paletta International:	Angelo Paletta
	Metropolitan Consulting:	Karl Gonnsen
	Dillon Consulting:	Paul MacLeod
		Amanda Shepley

ITEM **ACTION BY**

1. Review Status of Project

- The purpose of this coordination meeting was to discuss the issues related to the identification of a preliminary preferred Waterdown Road design presented at the second Public Information Centre and discuss influences the design has on the future development. It was noted that preliminary evaluation was completed without input from the developer.
- Widening the road is due to growth in the area. Cost sharing between the involved partners (Hamilton, Burlington, Halton) is still under negotiation.
- Mr. Paletta disagrees with a development charges basis to project funding. He believes that the development doesn't require the road to be widened to 4 lanes.

2. Review of Alternatives and Impacts to Development Lands

- Mr. Paletta dislikes the Waterdown Road "straight thru" option because it creates wasted space on developable land. He requires 30 meters in order to build homes in the space between the old and new road. However, he doesn't

ITEM	ACTION BY
intend to build homes there. A private school and a church have shown interest in the land adjacent to Waterdown Road.	
• Mr. Paletta expressed concern that if the "straight thru" alignment is approved, they will have to go back and re-design the entire development.	
• Metropolitan provided Dillon with a modified version of the Draft Approved Eagle Heights subdivision plan.	
3. Review of Preliminary Evaluation of Alternatives	
• Dillon provided Mr. Paletta with a copy of the preliminary evaluation table that was presented at PIC 2 for their review and comment.	
• Through Dillon's evaluation, the 4 lane "straight thru" alignment was identified as the preliminary preferred option. After PIC 2, Burlington asked Dillon to develop an additional alternative more in-line with Burlington council's preference and re-evaluate the options. The plan of this option is still under development.	
• Mr. Paletta will provide comments after receiving the requested plans of the new Waterdown Road option.	Paletta/Dillon
4. Schedule	
• Dillon plans to have the final plan recommendations completed by the end of February. Detailed costing will be completed and then the Draft ESR will go to all councils.	
5. Other Business	
• Mr. Paletta owns the land related to the Waterdown South development. He dislikes the curved alignment and would like Dillon to consider relocating the southern roundabout to the intersection at Mountain Brow Road. He is also in favour of a 3 lane phasing option.	
• Metropolitan requested traffic volumes on Mid Block. Dillon will provide the data.	Dillon
• Dillon has developed a Draft King Road Feasibility Study	

ITEM	ACTION BY
Report that summarizes a study of available upgrade options, impacts, and costs. It was provided to Burlington and the city will be meeting to review the report in the near future.	

DISTRIBUTION: Attendees
Paul Allen, City of Burlington
Melissa Green-Battiston, Halton Region

Please contact Amanda Shepley of Dillon Consulting with any errors or omissions.

DRAFT MINUTES OF MEETING

PROJECT:	King Road Technical Feasibility Study/Waterdown Road & New East West Road EAs	
PURPOSE:	Project Status Review	
DATE:	February 27, 2009 1:30 PM	
LOCATION:	Burlington City Hall – Room 219	
PRESENT:	City of Burlington:	Paul Allen Kerry Davren Dan Ozimkovic Robin Van de Lande
	City of Hamilton:	Syeda Banuri Christine Lee-Morrison
	NEC:	Nancy Mott-Allen Linda Laflamme
	Conservation Halton:	Brenda Axon Lesley Matich Jennifer Lawrence
	Dillon Consulting:	Paul MacLeod Ian Roul Lijing Xu Amanda Shepley

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ITEM **ACTION BY**

1. Introductions

2. Background

Paul Allen presented a series of slides that provided background regarding the King Road corridor, including the Burlington council resolution. He referenced the Phase 2 Report where a 2-lane capacity on King Road was specified. Paul MacLeod indicated that the Phase 2 modeling determined that if King Road was closed, Waterdown Road could still handle the north-south traffic demand.

Ninety degree curves, poor sight lines, narrow lanes, and steep slopes on King Road may lead to safety concerns if traffic increases. King Road currently exhibits relatively few motor vehicle collisions because of its low volumes.

ITEM	ACTION BY

Burlington council would like to keep King Road open as a secondary option for traffic. Many of the trips on King Road are destined to employment lands south of Highway 403.

3. King Road Technical Feasibility Study

A Draft Technical Feasibility Study Report was distributed prior to the meeting for review. Five alternatives were developed and assessed in the Technical Feasibility Study. One of those options is to improve the road to a minimum standard (using the existing horizontal and vertical alignment) by implementing a 30 km/h design speed which includes 12% grades (same as existing), 6 meters of pavement width, a total cross section 11 meters wide, mountable curbs, and a posted speed of 20 km/h.

Jennifer Lawrence was concerned that if more vehicles use King Road after improvements are made and traffic travels faster, more accidents are likely to occur. The city may be forced to widen the road even further to address this.

NEC indicated that they are not comfortable cutting into the escarpment at all. A suggestion was made to close King Road during the winter months when accidents are more likely to occur. NEC felt that there is no clear justification for the improvements as increased capacity needs are not identified and, based on collision history, safety is also not a concern. Another option is to close King Road. This alternative would involve the closure of the road through the Escarpment only.

The work in the Technical Feasibility Study mirrors the work in a Phase 1 and 2 of an EA. At the end of the study, we will move into an EA if required. Road closures fall under Schedule A+ in the EA process.

NEC is concerned that some of the options will create visual change/impact. These impacts should be included in the evaluation.

The *Species at Risk Act* (SARA) has not been factored into the evaluation. Conservation Halton stated it is concerned about the Jefferson Salamander and would like mitigation to be included in the report. The wetlands and ANSIs are not displayed on the figures in the report.

Dillon will send the revised report with the suggested additions (statement of need and history of discussion) to the agencies and request comments. The report will contain a recommendation. — Dillon

The City of Hamilton will provide comments on the draft report. — Hamilton

ITEM	ACTION BY

4. Status of Waterdown Road Class EA

All of the environmental issues with the project have been addressed; Sassafras woods, Grindstone tributary, tributary south of the Mid-Block. Conservation Halton indicated that an alignment running through the south tributary north of Mountain Brow Road is acceptable. The creek can be re-channelized/intercepted.

The Waterdown Road alignment through the development lands has been moved closer to the existing road. The east ROW will be held and all of the widening will be done to the west (the east edge of proposed east side sidewalk is positioned at the existing east edge of pavement). The Paletta lands will be less impacted with this modification and the homes on the east side of the road will be further from the road. Burlington council has requested assessment of the cross section phasing from three lanes to four over time on Waterdown Road.

Two to three properties will be purchased along Waterdown Road due to their proximity to the road and driveway profile issues.

An internal ESR on Waterdown Road will be issued by the end of March/early April. Conservation Halton would like to wait until the ESR is completed before they give their comments. — Dillon

5. Status of New East West Road Class EA

Hamilton Conservation has agreed to the alignment through Centre Road woodlot and the 30 meter buffer between the ESA and the new road.

After meeting with the MTO, Dillon reassessed the alignment joining at Highway 6. An alignment lining up with 4th Concession is required, wherever the crossing location.

Dillon is recommending a larger structure crossing of the Grindstone Creek at Parkside Drive.

Flow equalization culverts are being proposed at the flood plain adjacent to the Upcountry development. Conservation Halton indicated that the east creek corridor was to be preserved and is concerned about the road and the creek running side by side. Dillon has mitigated the impact by allowing the flood plain to operate on both sides of the road.

The creek is being realigned at Dundas Street and the existing culvert will be replaced.

At the east end of the project limits, rock cut is required along a section of Dundas Street.

DISTRIBUTION: Attendees
Tom Eichenbaum
Melissa Green-Battiston

Please contact Amanda Shepley of Dillon Consulting with any errors or omissions.

M:\PROJECTS\DRAFT\08\089498 King Road Technical Feasibility Study\Correspondence\Meeting with NEC - Feb 2709.doc

Shepley, Amanda

From: Restivo, David
Sent: Monday, July 20, 2009 1:43 PM
To: Shepley, Amanda
Subject: FW: East-West Road Corridor and Waterdown Rd EA
Attachments: Comment and Response Table - Halton CA March 2009.doc

David Restivo, B.Sc. (Hons)

Biologist, ISA Certified Arborist (ON-1248A)
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www.dillon.ca

Please consider the environment before printing this email

From: Restivo, David
Sent: June 25, 2009 4:27 PM
To: 'Jennifer Lawrence'
Cc: MacLeod, Paul; Roul, Ian; 'Morreale, Diana'
Subject: RE: East-West Road Corridor and Waterdown Rd EA

Jennifer,

See attached responses to CH comments on the draft Natural Environment Report for the East-West Road Corridor and Waterdown Rd EA that we submitted to you this past winter. Please review the revised report at your earliest convenience. HCA has reviewed the revised report and provided comments.

Regards,

David Restivo, B.Sc. (Hons)

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www.dillon.ca

Please consider the environment before printing this email

From: Jennifer Lawrence [mailto:jlawrence@hrca.on.ca]
Sent: June 3, 2009 4:40 PM
To: Restivo, David
Cc: sbanuri@hamilton.ca
Subject: RE: East-West Road Corridor and Waterdown Rd EA

Hi David and Syeda,
Thank you for the email. Our technical staff will hold off on reviewing the document until such time as we have received the response table in order to expedite their review.
Jennifer

Jennifer Lawrence
Manager, Environmental Planning
Conservation Halton

Ph: 905-336-1158 ex. 266
Fax: 905-336-6684
www.conservationhalton.on.ca

From: Restivo, David [mailto:DRestivo@dillon.ca]
Sent: May 26, 2009 6:09 PM
To: Jennifer Lawrence
Subject: RE: East-West Road Corridor and Waterdown Rd EA

Jennifer,

I hope to send you a response table this week. Basically, the last report that we submitted was a summary of the background and field data collected for the two EA study areas. The report we just submitted to you has the potential impacts and proposed mitigation measures for the road alignments.

I will confirm the timeline as well, but the draft ESRs are being reviewed by the City of Hamilton.

David Restivo, B.Sc. (Hons)

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www.dillon.ca

Please consider the environment before printing this email

From: Jennifer Lawrence [mailto:jlawrence@hrca.on.ca]
Sent: May 26, 2009 10:04 AM
To: Restivo, David; Syeda.Banuri@hamilton.ca
Subject: FW: East-West Road Corridor and Waterdown Rd EA

Further to my previous emails, could you advise as to what the timeline for review is on this document. Also, will there be a response table provided advising how previous comments have been addressed/considered?
Thanks.
Jennifer

Jennifer Lawrence
Manager, Environmental Planning
Conservation Halton
Ph: 905-336-1158 ex. 266
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www.conservationhalton.on.ca

From: Jennifer Lawrence
Sent: May 11, 2009 4:31 PM
To: 'DRestivo@dillon.ca'; 'sbanuri@hamilton.ca'
Subject: Esat-West Road Corridor and Waterdown Rd EA

Hi David and Syeda,
I'm in receipt of two copies of the draft Natural Environment Report. Could you advise as to what your timeline for review is.
Thanks.
Jennifer

Jennifer Lawrence
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Comment and Response Table – Conservation Halton Letter (March 6, 2009)
Review of Environmental Assessment-Natural Environment (Draft Report January 2009) CH File: MPR 341

I.D.#	Conservation Halton Comment	Response
1	**Section 1.0 Introduction** Within this section there is no mention of karst however, karst has been found within the Study Area as part of the South Waterdown Subwatershed Study. Karst is normally considered a natural hazard and, as such, staff question whether there will be a natural hazard component to the EA? If not, then natural hazards, including karst, flood plains, steep slopes, etc., should be included in the natural environment component.	Karst topography and natural hazard lands will be addressed during the detailed design stage.
2	**Figure 1 Study Area and Preferred Route** Staff note that the wooded area associated with the upper end of the Grindstone Creek Valley ESA, within the South Waterdown lands, does not appear to be identified on this figure. This requires revision.	Our delineation of ESA in the study area is based on GIS shapefiles that were provided by the City of Hamilton. If the delineation of this feature is incorrect in the updated report, please provide us with the correct polygon for the Grindstone Creek Valley ESA.
3	**Section 2.0 Methods** Staff request that all field data sheets be included as an appendix to the Natural Environment Inventory Report and should include all Ecological Land Classification (ELC) and wildlife data sheets.	We have appended all ELC datasheets in the revised report. To avoid confusion, we have omitted the wildlife datasheets; however, the locations of species of conservation priority have been provided.

I.D.#	Conservation Halton Comment	Response
4	We note that there is no discussion of the weather conditions during the wildlife surveys.	Wildlife surveys were conducted using accepted protocols, which included conducting surveying during appropriate weather conditions.
5	The local status of birds within Subsection 2.3 Breeding Birds was obtained from the Conservation Priorities for the Birds of Southern Ontario (1999). Given that both Conservation Halton and Hamilton Conservation Authority have completed more recent Natural Area Inventories that provide locally rarity, staff suggest that the Halton Natural Areas Inventory (NAI) (2006) and the Nature Counts Hamilton NAI (2003) be used as the most current sources of rarity.	For consistency, Conservation Priorities for the Birds of Southern Ontario (1999) document was used for the entire WATMP study area; however, CH and HCA locally rare species have been indicated in the revised report.
6	It is unclear why no further wildlife data was collected as there is no discussion of incidental mammal observations, insects or reptile surveys that were completed. Given that this project is to expand an existing road network and the number of mammals and reptiles potentially using this area for crossings, nesting and for basking, please clarify if these surveys were completed. Staff note that without this information, we consider the Natural Environment Inventory Report incomplete with respect to wildlife.	Incidental wildlife observations have been included in the revised report.
7	All reference within the EA to the South Waterdown Subwatershed Study should reflect the fact that the Study, with the exception of the Stage 1 Report, is considered draft and not	Noted.

I.D.#	Conservation Halton Comment	Response
	approved by the Technical Steering Committee.	
8	**Figure 2 Breeding Bird and Amphibian Point Count and Area Search Locations** Within the South Waterdown lands, was this information surveyed independently as part of the EA process or is it taken from the Subwatershed Study? If done independently, has the data been cross-referenced with the information collected as part of the Subwatershed Study?	All data was collected independently. The Subwatershed Study and other background documents have been reviewed and incorporated into the report as deemed necessary.
9	Subsection 3.1.1 ELC: Not all of the ELC communities listed on pages 9 and 10 appear to be illustrated on Figures 3 and 4. For example, FOD 2-2, FOD4-2, SWD2-1 and SWD4-2 are not listed in the legend nor do they appear on the figures. The figures include FOD4-3, OAO and SWD4-3 which are not listed in the report text. In addition, Appendix B which is to provide further information on the vegetation communities does not include discussions on MAM2-10, SWD2-1 FOD4-3, OAO and SWD4-3. Please confirm the actual vegetation communities within the study area and submit ELC field data sheets for review so that these can be further confirmed.	ELC section (mapping/text) has been revised to reflect field observations.
10	Subsection 3.1.2 Vegetation: This section states that there were no federal or provincial Species at Risk (SAR) identified during the field surveys, however butternut *(Juglans cinerea)* is listed both	The report section concerning SAR and butternut has been revised.

I.D.#	Conservation Halton Comment	Response
	federally and provincially as Endangered and was observed during the surveys. Please revise this section to reflect the SAR in the study area. It should be noted that according to the Natural Heritage Information Centre (NHIC) butternut is also listed as S3 not S4 as presented in the report.	
11	Subsection 3.1.3 Sassafras Wood Edge Vegetation Survey: The Environmental Assessment (EA) completed for potentially similar areas identified the presence of flowering dogwood *(Cornus florida)* in the vicinity of interchange and road works. Flowering dogwood is currently listed as Endangered by the MNR and is proposed to be designated as Endangered by COSEWIC. Given the sensitivities associated with this species, please confirm if flowering dogwood was observed during surveys.	No flowering dogwood was observed during the field surveys of Sassafras Woods.
12	Also, within Subsection 3.1.3, staff note that **MNR** has indicated that all lands south of Mountain Brow Road are Jefferson Salamander habitat and fall under the regulations of the new Endangered Species Act. There is no further discussion within the report as to what the implications of this is on the EA. Further discussion within the EA is requested.	The report section on Jefferson salamander habitat/impacts/mitigation has been revised. The MNR has not confirmed the extent of Jefferson salamander habitat in Sassfrass Woods or if a permit will be required for works along the western edge of this ANSI/ESA. The road improvements have been kept as far to the north as possible in this area and will not directly affect the Waterdown Escarpment Woods ANSI. The proposed road works will have minor, impact on the ESA as vegetation removal has been minimized and is restricted to the area well west of the new Mid-Block Road..
13	Subsection 3.1.5 NHIC Flora Query: The report states that one significant vegetation community **(FOD** 2-2 listed as S3S4) was	The report has been revised to address the location/impacts/mitigation for the Fresh-Moist Black Walnut

I.D.#	Conservation Halton Comment	Response
	observed in the study area, however the report indicates that FOD7-4 (Fresh-Moist Black Walnut Lowland Deciduous Forest), listed as S2S3 or "very rare to rare to uncommon" is also present in several locations within the study area. The report should be revised to include these communities and discussion regarding potential impacts and mitigation should be included. It should be noted that staff are unable to locate the FOD2-2 on either Figures 3 or 4.	Lowland Deciduous Forest communities.
14	Subsection Section 3.4 Amphibian Surveys: There should be a discussion regarding Jefferson salamander habitat within the study area in this section of the report. In addition, amphibian surveys appear to have been completed for frogs only based on the results presented in Table 3, although the methods section indicates that wetlands and vernal pools in potential habitat were surveyed as well as using secondary source information. Please clarify if other amphibians were observed. Also, within Table 3, the footnote numbering should be reviewed.	The report has been revised to indicate the location of amphibian observations and Jefferson salamander habitat.
15	Staff defer discussion with respect to western chorus frog at this time as consultation with COSEWIC is currently ongoing to determine the status of the population within Conservation Halton's watershed.	Noted.
16	Subsection 3.5.1 Historical Fish Species Information – staff note that the Grindstone Creek tributary (identified as GS-1 within the	Noted.

I.D.#	Conservation Halton Comment	Response
	South Waterdown Subwatershed Study) is being managed as a coldwater watercourse given the sensitive coldwater species immediately downstream. This means that buffers to the watercourse are based on the coldwater setbacks of 30 metres.	
17	Subsection 3.5.3 Field Work Results– Unknown Creek (Crossing #13) – this is the Upper Hager Creek.	The report was revised to reflect this information.
18	**Figure 3 – East-West Corridor ELC and Significant Plant Species** Staff note that the flood plain and riparian vegetation associated with the Grindstone Creek tributary that flows immediately adjacent to the Upcountry Estates land is shown as agricultural on this figure. Please verify that this is an appropriate ELC classification for this area.	The ELC classification was changed to cultural field/thicket, forb mineral meadow marsh and deciduous riparian hedgerow. Please note that property access was restricted in the lands east of the Upcountry Estates.
19	In addition, the wetland that was identified in the South Waterdown Subwatershed Study as Wetland 4 has not been identified on this figure. Staff recommend that the Study Team refer to the SWS for additional information in this regard.	The area of Wetland 4 was not surveyed; however, changes will be made to delineate this feature in the final report.
20	**Section 4.0 Significant Natural Areas** Staff recommend that the Waterdown Woods Resource Management Area (owned by Conservation Halton) be included in	Dillon is not aware of the limits of this feature. If CH can provide a GIS shapefile and description of the Waterdown Woods Resource Management Area, then Dillon will incorporate this information into the final version of the report.

I.D.#	Conservation Halton Comment	Response
	the list of Significant Natural Areas.	
21	Staff continue to recommend that the road expansion be completed away from the natural heritage features within the study area. According to the Halton Natural Areas Inventory, Sassafras-Waterdown Woods ANSI and ESA is one of the few remaining sizable woodlots typical of the dry broadleaf forests that once covered Halton Region below the Niagara Escarpment. It contains a high number of native plant communities, of which some are considered rare within the Niagara Escarpment Biosphere Reserve . In addition to the ANSI and ESA designation, this area is designated as a Carolinian Canada site, one of only 38 in Canada and the ***only*** designated site in Halton Region. This area also contains numerous species listed as nationally, provincially and locally rare. We recommend that the Mountain Brow Road expansion be shifted to the north and be incorporated into the urban development that is proposed in this area given the level of disturbance that will be associated with this development, while maintaining the ESA/ANSI to the south. We also recommend that the widening of Waterdown Road be shifted to the west to limit the impact to the ESA/ANSI. For these reasons, we do not support any works being undertaken that will impact Sassafras-Waterdown Woods ANSI/ESA.	The CH recommendations are noted. Completely avoiding the Sassafras-Waterdown Woods ANSI/ESA was constrained by the existence of the following features on the west side of Waterdown Road adjacent to the Sassafras Waterdown Woods ANSI/ESA: • Water reservoir; • Hydro tower; and • Numerous residential properties. Dillon has taken the following steps to reduce or eliminate impacts to the Sassafras-Waterdown Woods ANSI and ESA: • Move the road as far west as possible avoiding the ANSI/ESA lands along Waterdown Road with the exception of an encroachment on the east side of the right-of-way, south of Flatt Road; • Reduction of the new road footprint (e.g. narrowed traffic lanes, multi-use pathway and boulevard, no sidewalk on east side); and • Retaining wall along east side instead of an engineered slope. The following steps were taken to reduce or eliminate the encroachment into the Sassafras-Waterdown Woods ANSI/ESA south of Mountain Brow Road: • East of Flanders Drive the proposed road works are positioned to the north of the current right-of-way; • Curved road design for the new Mid-Block Road that totally avoids lands to the south; • Eliminated the south boulevard and sidewalk;

I.D.#	Conservation Halton Comment	Response
		• Use of narrow lanes; and • Eliminated the north boulevard. As a result of these measures, the proposed road works does not impact the ANSI lands along Mountain Brow Road; however, there is a minor encroachment into the ESA lands (near #376 Mountain Brow Road), which may require the removal of some edge vegetation.
22	Subsection 4.5 Provincial Life/Earth Science ANSI-Grindstone (Creek) Valley ESA this section recommends that the new crossing of the Grindstone Creek tributary will have minimal impacts on fish habitat and other natural heritage resources. Staff recommend that this is not an accurate description of the potential impacts on the ESA in this vicinity. Based on the proposed location of the road it will remove a portion of the upper limit of the Grindstone Creek Valley ESA. Given that only a few areas within Hamilton and Halton merit an ESA designation, the loss of any portion of such an environmentally sensitive area should not be considered minimal. Also, this section does not address the impacts that will occur as a result of the need to realign the tributary in order to facilitate the crossing. Additional discussion is warranted on the potential impacts, mitigation and compensation for the losses.	Note: The crossings located in the South Waterdown lands (Waterdown Road Corridor) are to be assessed in detail by the developer of these lands; therefore, approval/review of these culverts is not required by CH for this study. These crossings include: • Crossing #1 Grindstone Creek – Northeast Branch; and • Crossing #2 Grindstone Creek – Southern Branch. The developer will be applying for all appropriate approvals.
23	**Section 5.0 Natural Environment Summary** While staff agree that restoration and enhancement of key natural features should occur, we recommend the planting of only locally	Noted and similarly recommended in the revised report.

I.D.#	Conservation Halton Comment	Response
	common, native, non-invasive species.	
24	**Figure 5 – Aquatic Features Map** This figure identifies a number of watercourse crossings. Although it may be related to the scale of the mapping, it does not appear that there will be a crossing required at points #4 and #14. Please clarify. Also, point #5 is shown as a crossing however, it is our understanding that the road will likely cross the flood plain rather than the watercourse in this location. Please clarify.	Crossing #4 and #14 are drainage features, not watercourse crossings. The revised locations for watercourse and drainage crossings are provided in Figure 6 of the report.
25	**Table 5 – WATMP Existing Fish and Fish Habitats Conditions Summary Table** Within the portion of the chart related to the East-West Corridor from Highway 6 east to Cedar Springs Road, Row 4 (Grindstone Creek – Northwest Branch) – within the Column "Fish observed (species)" it is stated "none" however, under the Column "Rationale for Sensitivity/Recommendation" it is stated that largemouth bass are present. Please clarify.	The Summary table has been revised to indicate that under Fish Observed, "None during field investigations" reflects what was observed during field surveys of the Grindstone Creek – Northwest Branch.
26	Within the portion of the chart related to the Waterdown Road Corridor from Dundas Street south to Highway 403, Row 1 (Grindstone Creek – Northeast Branch) – staff assume this is the GS-1 tributary in the South Waterdown Subwatershed Study. The vegetation is described as emergent grass vegetation along margins with sporadic shrubs however, this tributary is within the Grindstone Creek Valley ESA and is well treed. Please clarify the	Note: The crossings located in the South Waterdown lands are to be assessed by the developer of these lands; therefore, approval/review of these structures/culverts is not required by CH for this study. The vegetation description at this crossing, "emergent grass vegetation along the margins with sporadic shrubs" describes the vegetation on the banks. The descriptor in Table 5 further

I.D.#	Conservation Halton Comment	Response
	description. In addition, the recommended crossing method is listed as "culvert installation" however, due to the sensitivity of this area, the chart should be clear that the preferred crossing is a span bridge and/or span open bottom culvert. Finally, staff recommend that the "sensitivity" should be ranked as "high" given the presence of coldwater fish species immediately downstream, groundwater discharge within the immediate area, karst features within the crossing area and the presence of the ESA.	indicates that "mature riparian trees exist along both banks". Please see the ELC/Vegetation sections for additional details on this vegetation community.
27	**Appendix** A The appendix includes the breeding bird evidence codes, however these have not been included in the species tables. Currently the evidence provided is only from the Dillon survey or the Ontario Breeding Bird Atlas, and no breeding evidence is provided. Please clarify.	Appendix A was revised to contain: - Breeding Bird Summary Table - Table of Breeding Birds Observed in ESAs - Incidental Wildlife Observation Table
28	As previously stated, staff recommend that the Halton NAI and the Nature Counts Hamilton NAI be used for local rarity of species. The following lists the species that have been identified as rare/uncommon in the study area: • Great blue heron – uncommon Hamilton • Turkey vulture – uncommon Hamilton • Yellow-billed cuckoo – rare Halton, rare Hamilton • Eastern Screech-owl – uncommon Hamilton • Red-bellied woodpecker – uncommon Halton, uncommon	This information has been included in the revised report.

I.D.#	Conservation Halton Comment	Response
	Hamilton • Hairy woodpecker– uncommon Hamilton • Honred lark – uncommon Hamilton • Eastern towhee – uncommon Halton, uncommon Hamilton • Vesper sparrow – uncommon Halton, uncommon Hamilton • Bank swallow – uncommon Hamilton • Northern rough-winged swallow – uncommon Halton • Brown thrasher – uncommon Hamilton • Chestnut-sided warbler – uncommon Halton, uncommon Hamilton • Mounring warbler – uncommon Halton, uncommon Hamilton • Blue-gray gnatcatcher – uncommon Halton, uncommon Hamilton • Eastern phoebe – uncommon Hamilton	
29	**Appendix B** In addition to those species identified in the appendix, according to the Halton and Hamilton NAIs, *Crataegus mollis* and *Scirpus atrovirens* are rare in Hamilton while, according to the NHIC, *Juglans cinerea* should be listed as S3?	This information has been included in the revised report.
30	**The following comments are provided as aquatic ecology input into the detailed design stage:** Culvert replacements are favoured over culvert extensions, especially where the existing culvert is undersized or perched. Any crossing works that involve an extension are requested to	No culvert extensions are proposed.

I.D.#	Conservation Halton Comment	Response
	use an open bottom design.	
31	It is requested that all new culverts and culvert extensions be designed and implemented as open bottom structures for the following reasons: • To prevent future barriers to fish passage due to long term down cutting of the creek invert. • To allow fish to have access to natural stream bottom substrate, which is likely to contain a more productive food source than substrate placed inside a closed bottom culvert. • The maintenance of fish passage through crossings will facilitate dispersal of fish and other aquatic organisms in the event of large disturbances such as road construction work adjacent to the creek or the occurrence of a toxic spill in the creek. • Fish need to swim through culverts to migrate to spawning areas that have higher productivity or fewer predators, such as flood plains and headwater streams. Culverts that block the upstream movement of fish will isolate fish populations above these crossings. Areas with relatively small amounts of habitat upstream of the crossing will be most vulnerable to population loss. This can lead to negative genetic effects on local fish populations. • To facilitate effective sediment transport, which will prevent or reduce excessive stream bank erosion and/or stream profile flattening in the vicinity of the culvert. • To facilitate groundwater recharge when/if the creek is "losing" water. • To prevent any blockage or rerouting of groundwater seepage (where applicable).	Table 6 discusses the type of culvert crossings as well as providing an impact/mitigation analysis for each crossing location. Dillon acknowledges that the impacts that CH has outlined (e.g. the creation of fish migration barriers) could result if proper mitigation of culvert installations or replacements is not undertaken. Dillon is currently undertaking a feasibility/cost analysis of having open-bottom structures at two East-West Corridor crossings that are located in watercourses with moderate to high watercourse sensitivity ratings and that are currently proposed to be closed bottom/embedded box culverts: • Crossing #1 – Borer's Creek Main Branch/Black's Pond; and • Crossing #6 – Grindstone Creek – Northeast Branch. Also, Dillon has proposed to install a series of open-bottom culverts, instead of one large culvert, at the crossing of the headwater area to the tributary of Borer's Creek located in the Centre Road Woodlot PSW unit. These culverts will maintain the existing wetland hydrology and provide eco-passages for herpetofauna and small mammals.

I.D.#	Conservation Halton Comment	Response
32	It is requested that all creek crossings be designed to convey a minimum 2 year or bankfull channel flow. Where feasible, it is requested that creek crossing designs be designed to accommodate larger flows for the following reasons: • To prevent velocity barriers to fish passage during high flow events. If a culvert is undersized, water pressure in the culvert will be too high for a fish to swim through the culvert during a high flow event. • To facilitate effective sediment transport through culverts to minimize or prevent excessive erosion or aggradation (build up) of sediments in the vicinity of culverts. Larger culvert diameters also prevent plugging of culvert with debris, which can be a safety issue for road integrity if water backs up on one side of the road. • To prevent scouring of the bed of the creek downstream of the culvert (over time) to the point where a barrier to fish passage is created.	The culvert crossings have been designed based on the road classification in accordance with MTO Directive B-100. The minimum conveyance for crossings is a 25-year storm event.
33	It is requested that any opportunities to plant native, non invasive trees and/or shrubs along the banks of the creek within the road right of way be investigated and pursued. Priority tree planting areas include: • Bank areas located between the creek and an adjacent parallel road. • Bank areas on the south or west side of a creek. • Any other unvegetated sections of a watercourse that are feasible for tree planting.	Restoration and enhancement recommendations are a provided in the revised report.
<u>Comments</u> Regarding Specific Crossings:		

I.D.#	Conservation Halton Comment	Response
	Crossing #4 – Grindstone Creek NW Branch According to our best available information, Pike have been demonstrated to be present at this location and the construction timing window must accommodate northern pike: No in water work between March 1 and June 30 of any year. Standard sediment and erosion controls, work area isolation and flow maintenance procedures will be necessary.	Noted.
	Crossing #5 – Grindstone Creek NE Branch No crossing work proposed. No mitigation necessary.	Noted.
	Crossing #6 – Grindstone Creek NE Branch Request a full culvert replacement. Request use of open bottom structure. Standard sediment and erosion controls, work area isolation and flow maintenance procedures will be necessary. Warm water timing window is applicable.	Table 6 discusses the type of culvert crossing currently proposed at Crossing #6 – Grindstone Creek – Northeast Branch. Dillon is currently undertaking a feasibility/cost analysis of having open-bottom culverts at this location. The timing window is noted.
	Crossing #7 – Tributary of the Grindstone Creek Fish passage must be established or maintained as a result of culvert extensions. Culvert replacements that result in larger diameter, open bottom culverts are preferred over culvert extensions. Warm water timing window applies.	The closed-bottom culvert replacement proposed at this intermittent tributary crossing of Hwy #5 is consistent with the existing structure and is recommended due to the fact that this tributary was determined to have low sensitivity and does not directly support a fishery.
	Crossing #13 – Unknown Creek Request collection of fish community and thermal regime data at this location.	Dillon has identified this crossing as intermittent drainage conveyance; with low sensitivity that does not directly support a fishery. As such, no further field collection is warranted.
	Crossing #14 – Grindstone Creek Request that culvert consist of an open bottom design. It is requested that the culvert be designed to convey a minimum 25 year flow. Warm water timing	There is no watercourse at this location. It is a topographic depression that will contain flow during heavier rainfall events. The culvert design at this location is based on the conveyance of a

I.D.#	Conservation Halton Comment	Response
	window applies. Standard sediment and erosion control, work area isolation, flow maintenance and fish removal guidelines apply.	25-year storm event. Since no fish habitat exists at this location, a closed culvert is recommended.
Waterdown Road Corridor (from Dundas south to Highway 403)		
	Crossing #1 – Grindstone Creek NE Branch Request that culvert consist of an open bottom design. It is requested that the culvert be designed to convey a minimum 25 year flow. Warm water timing window applies at this time. This system is classified as having a cold water thermal regime, however no fall spawning fish species (that would trigger the cold water timing window) have been demonstrated to exist here.	Note: The crossings located in the South Waterdown lands are to be assessed by the developer of these lands; therefore, approval/review of these culverts is not required by CH for this study.
	Crossing #2 – Grindstone Creek S Branch A site visit is required to determine if channel realignment will require an authorization by DFO. Standard sediment and erosion controls, work area isolation and flow maintenance procedures will be necessary.	Note: The crossings located in the South Waterdown lands are to be assessed by the developer of these lands; therefore, approval/review of these culverts is not required by CH for this study.
	Crossing #3 – Grindstone Creek S Branch Standard sediment and erosion controls, work area isolation and flow maintenance procedures will be necessary. A culvert replacement would be more desirable over an extension. Is this a feasible option? Warm water timing window applies here.	Culvert replacement is recommended at this location. The existing culvert is an 1100 CSP and the proposed culvert is a 1490 X 910 arch. The timing window is noted.
	Crossing #4 – Grindstone Creek S Branch One larger diameter culvert is preferable over two smaller diameter culverts to	This crossing is no longer required as the road has shifted east of the creek.

I.D.#	Conservation Halton Comment	Response
	facilitate effective sediment transport and to prevent potential down cutting of the creek on the downstream sides of the culverts. Standard sediment and erosion controls, work area isolation and flow maintenance procedures will be necessary.	

May 26, 2009

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Attention: James Webb, MCIP, RPP

Re: Waterdown Aldershot Transportation Master Plan
Phase 3 & 4 Municipal Class Environmental Assessment

Dear Mr. Webb:

Further to your correspondence dated March 25, 2009, the WATMP Project Team have had an opportunity to review the material and recommendations presented in your letter. Our responses to the issues raised in your letter are outlined below.

Request for Additional Traffic Information

Attached to this letter you will find the traffic Synchro Sim Simulation calculations for the Dundas Street/Mid-Block Road intersection for your comment and review. Also attached are the turning movement volumes for the entire road.

Specific Recommendations for Mid-Block Road

Your letter included several recommendations in bullet point format for the new Mid-Block Road and the surrounding road network. These recommendations are repeated below and discussed.

1) *Mid-Block Road will have a three-lane cross section, two through lanes and a dedicated left-turn lane. The exception is the segment of road north of Street "C" to Dundas Street within the Phase 1A lands, this segment will be constructed as a 4 lane divided road in accordance with the requirement to address emergency access requirements for the initial phase of development.*

   We have reviewed your position that based on the AADT traffic data supplied by Dillon, construction of 4 lanes is not justified within the projected time horizon. A review of the peak hour volumes for the AM and PM periods indicates that the southern segment of the Mid-Block Road (south of the new connection with the collector road) will carry approximately 995 SB vehicles in the AM peak and 1,140 NB vehicles in the PM peak. These forecast volumes warrant 4 lanes of traffic.

   The Phase 2 WATMP Report indentified the need for two additional lanes over and above the already planned 2-lane north-south roadway within the subdivision. When evaluating the Burlington proposed 3-lane Waterdown

...cont'd

Road Option, Section 6.5.1 of the report (Page 89) states that this option requires:

> "2 additional lanes through the secondary plan area to convert the planned collector road into an arterial road to allow a connection between Mountain Brow (4 lanes total) (same as the 4-lane Waterdown Option)."

We acknowledge that the peak hour volumes somewhat dissipate further north along the Mid-Block Road. However, the requirement to construct a 4-lane divided road north of Street "C" makes it geometrically impractical (from a lane balance perspective) to introduce a short segment of 3-lane road between 2 sections of 4-lane road.

In addition, the entire road section needs to be as attractive to traffic during peak hours as possible for the new road to operate at the highest level of service in order to provide relief to Mill Street.

For these reasons, we require that the Mid-block Road be designed as a 4-lane road throughout its length. It should be noted that the City will look to implement 1.5m dedicated bicycle lanes as part of the proposed cross section. While your letter did not specify proposed lane width configurations, we propose that the curb lanes be 3.65m wide and the centre lanes be 3.5m wide.

2) *Total right-of-way width of 36 metres will be maintained to secure the future road options through the lands of Waterdown Bay.*

It is inferred that the future options mentioned are in reference to a potential future widening. Since the project team is recommending that a 4-lane cross section be implemented at the onset of the road improvements, additional widening is not expected. The 4-lane section will be constructed within the 36m right-of-way.

3) *No centre median is to be included in the cross section for the Mid-Block Road to permit full movement intersections with adjoining local streets.*

A continuous centre median is not required in the proposed design. As previously mentioned, the peak hour volumes are not as pronounced through the mid-section of the Mid-Block Road. Hence, it is not expected that the left-turning traffic into local roads will affect the overall capacity of the roadway.

There remains some concern over the close proximity of the proposed local road immediately south of the Skinner Road roundabout. Specifically, there are concerns that the lack of spacing may cause conflicts with vehicles entering/exiting this roundabout. We note that extending the splitter island south beyond this intersection would eliminate this concern. Another option is to limit the number of Mid-Block Road intersections to one centrally spaced between the two collector roads. This can be further discussed in later stages of the development process.

...cont'd

4) *Introduction of minimum radius curve at the south end of the Mid-Block Road to facilitate continuous flow to and from Mountain Brow road west of the Mid-Block Road.*

The project team is recommending a 160m radius curve at the south end of the Mid-Block Road. This configuration is in line with what was recommended at the second Public Information Centre and provides users with a more direct and un-encumbered route to Dundas Street.

5) *The section of Mountain Brow Road immediately east of the Mid-Block Road is proposed to be closed, the removal is rationalized on the basis of potential intersection conflicts within the southerly curve of the Mid-Block Road, the closure and replacement with a network of local residential streets to the east will improve the residential amenity of this area.*

The project team agrees with the proposal to close Mountain Brow Road, immediately east of the Mid-Block Road and to connect Mountain Brow Road to the new east-west collector road, as shown in the sketch that accompanied your letter. As with item 4; closing Mountain Brow Road will result in a more un-encumbered (and therefore more desirable) route to Dundas Street for users.

6) *A new East-West collector road having a 26.0 metre ROW will be established within the southern portion of the subdivision to replace the proposed collector function of Mountain Brow Road.*

The project team agrees with the proposal to introduce a new collector road (26m ROW) within the southern portion of the subdivision, as presented in the sketch that accompanied your letter. We understand that the intent of this new collector road is to replace the collector function of Mountain Brow Road, immediately east of the Mid-Block Road. The project team is also in agreement with the general location for the new east-west collector road – as presented in the sketch that accompanied your letter.

With regards to the new intersection that will be created between the Mid-Block Road and the new collector road, the project team recommends that a roundabout be installed at this location. The roundabout treatment would be consistent with what is being proposed at Skinner Road (also a collector road) and would mitigate the disjointed nature of the west leg of the intersection. In addition to the above, installing a roundabout at this location would be in keeping with the City of Hamilton's Installation of Modern Roundabouts Policy.

...cont'd

Phasing of Development

Implementation aspects of the recommended roadworks, including timing, will be addressed in the Environmental Study Report.

We trust that we have adequately responded to the issues raised in your March 25, 2009 letter. If you have any questions or would like to discuss the contents of this letter in more detail, please contact us at your convenience.

Yours sincerely,

DILLON CONSULTING LIMITED

Paul MacLeod, P. Eng.
Project Manager

cc: Diana Morreale, City of Hamilton
Syeda Banuri, City of Hamilton
Christine Lee-Morrison, City of Hamilton
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Michael Telawski, Waterdown Bay Inc.
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Dan Cherapacha, Read Voorhees & Associates
Jackson Marin, Dillon Consulting

JM:xx
Encl.

Our File: 08-9020
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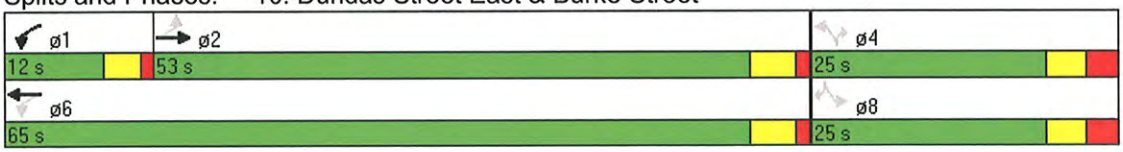
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Leading Detector (m)	15.0	15.0		15.0	15.0		15.0		15.0	15.0		15.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988			0.999				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3367	0	1719	3341	0	1719	0	1538	1770	0	1583
Flt Permitted	0.371			0.111			0.950			0.950		
Satd. Flow (perm)	691	3367	0	201	3341	0	1719	0	1538	1770	0	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			2				174			65
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		884.1			983.2			795.9			291.6	
Travel Time (s)		63.7			70.8			57.3			21.0	
Volume (vph)	20	1095	95	195	675	5	165	0	160	10	0	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	6%	5%	5%	8%	2%	5%	2%	5%	2%	2%	2%
Adj. Flow (vph)	22	1190	103	212	734	5	179	0	174	11	0	65
Lane Group Flow (vph)	22	1293	0	212	739	0	179	0	174	11	0	65
Turn Type	Perm			pm+pt			custom		custom	custom		custom
Protected Phases		2		1	6							
Permitted Phases	2			6			4		4	8		8
Detector Phases	2	2		1	6		4		4	8		8
Minimum Initial (s)	20.0	20.0		6.0	20.0		10.0		10.0	10.0		10.0
Minimum Split (s)	25.0	25.0		10.0	25.0		25.0		25.0	25.0		25.0
Total Split (s)	53.0	53.0	0.0	12.0	65.0	0.0	25.0	0.0	25.0	25.0	0.0	25.0
Total Split (%)	58.9%	58.9%	0.0%	13.3%	72.2%	0.0%	27.8%	0.0%	27.8%	27.8%	0.0%	27.8%
Maximum Green (s)	48.0	48.0		8.0	60.0		19.0		19.0	19.0		19.0
Yellow Time (s)	3.7	3.7		3.0	3.7		3.3		3.3	3.3		3.3
All-Red Time (s)	1.3	1.3		1.0	1.3		2.7		2.7	2.7		2.7
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0		3.0
Recall Mode	C-Max	C-Max		None	C-Max		None		None	None		None
Walk Time (s)	7.0	7.0			7.0		7.0		7.0	7.0		7.0
Flash Dont Walk (s)	5.0	5.0			5.0		12.0		12.0	12.0		12.0
Pedestrian Calls (#/hr)	0	0			0		5		5	5		5
Act Effct Green (s)	52.7	52.7		64.7	64.7		15.3		15.3	15.3		15.3
Actuated g/C Ratio	0.59	0.59		0.72	0.72		0.17		0.17	0.17		0.17
v/c Ratio	0.05	0.65		0.81	0.31		0.61		0.43	0.04		0.20
Control Delay	9.8	15.0		35.6	5.3		43.2		8.4	29.1		9.6
Queue Delay	0.0	0.0		0.0	0.0		0.0		0.0	0.0		0.0
Total Delay	9.8	15.0		35.6	5.3		43.2		8.4	29.1		9.6
LOS	A	B		D	A		D		A	C		A
Approach Delay		14.9			12.1							

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		B			B							
Queue Length 50th (m)	1.6	75.7		12.0	21.3		30.5		0.0	1.7		0.0
Queue Length 95th (m)	5.7	112.6		#36.4	35.6		48.8		16.2	6.0		10.3
Internal Link Dist (m)		860.1			959.2			771.9			267.6	
Turn Bay Length (m)												
Base Capacity (vph)	404	1976		263	2401		382		477	393		402
Starvation Cap Reductn	0	0		0	0		0		0	0		0
Spillback Cap Reductn	0	0		0	0		0		0	0		0
Storage Cap Reductn	0	0		0	0		0		0	0		0
Reduced v/c Ratio	0.05	0.65		0.81	0.31		0.47		0.36	0.03		0.16

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 15.3 Intersection LOS: B
Intersection Capacity Utilization 65.7% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Dundas Street East & Burke Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0		5.0	5.0		5.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00		1.00	1.00		1.00
Frt	1.00	0.99		1.00	1.00		1.00		0.85	1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95		1.00	0.95		1.00
Satd. Flow (prot)	1770	3367		1719	3340		1719		1538	1770		1583
Flt Permitted	0.37	1.00		0.13	1.00		0.95		1.00	0.95		1.00
Satd. Flow (perm)	691	3367		235	3340		1719		1538	1770		1583
Volume (vph)	20	1095	95	195	675	5	165	0	160	10	0	60
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	22	1190	103	212	734	5	179	0	174	11	0	65
RTOR Reduction (vph)	0	6	0	0	1	0	0	0	144	0	0	54
Lane Group Flow (vph)	22	1287	0	212	738	0	179	0	30	11	0	11
Heavy Vehicles (%)	2%	6%	5%	5%	8%	2%	5%	2%	5%	2%	2%	2%
Turn Type	Perm			pm+pt			custom		custom	custom		custom
Protected Phases		2		1	6							
Permitted Phases	2			6			4		4	8		8
Actuated Green, G (s)	52.7	52.7		64.7	64.7		14.3		14.3	14.3		14.3
Effective Green, g (s)	52.7	52.7		64.7	64.7		15.3		15.3	15.3		15.3
Actuated g/C Ratio	0.59	0.59		0.72	0.72		0.17		0.17	0.17		0.17
Clearance Time (s)	5.0	5.0		4.0	5.0		6.0		6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0	3.0		3.0
Lane Grp Cap (vph)	405	1972		284	2401		292		261	301		269
v/s Ratio Prot		0.38		c0.06	0.22							
v/s Ratio Perm	0.03			c0.48			c0.10		0.02	0.01		0.01
v/c Ratio	0.05	0.65		0.75	0.31		0.61		0.11	0.04		0.04
Uniform Delay, d1	8.0	12.5		10.4	4.6		34.6		31.6	31.2		31.2
Progression Factor	1.00	1.00		1.00	1.00		1.00		1.00	1.00		1.00
Incremental Delay, d2	0.3	1.7		10.2	0.3		3.8		0.2	0.0		0.1
Delay (s)	8.2	14.2		20.6	4.9		38.4		31.8	31.2		31.3
Level of Service	A	B		C	A		D		C	C		C
Approach Delay (s)		14.1			8.4			35.1			31.3	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM Average Control Delay	15.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

1. The top of bank must be delineated (physical or stable – whichever is greater). Staff typically require a 15 metre setback from the top of bank;
2. Stable top of bank must be determined by a geotechnical study in accordance with the document 'Geotechnical Principles for Stable Slopes' by Terraprobe and Aqua Solutions, June 1998;
3. Would the pond need to be lined to prevent seepage into the adjacent slope?
4. The limit of the woodlot must be staked; appropriate setbacks would be required;
5. Where will the facility outlet? Conservation Halton policy 3.51 'Public Infrastructure - Utilities, Trails and Transportation' requires that storm sewer outfalls required to be constructed on valley walls greater than 6 metres in height will normally utilize a drop shaft and tunnel in order to protect the natural integrity of the valley wall;
6. Given that the facility would drain into a system with downstream coldwater habitat, thermal mitigation would be required;
7. Staff would request confirmation from the Region regarding their acceptance of placing the facility immediately adjacent to their reservoir. Geotechnical issues would have to be considered;
8. Permit approval would be required for the facility and outfall in accordance with Ontario Regulation 162/06.

Staff question what the cost difference would be for enlarging the downstream pipe sizes versus constructing a new facility. If enlarging the downstream stormsewers is not feasible, staff would give consideration to the proposal provided the above items can be addressed.

In terms of SWM criteria, channel erosion is an issue in this area and I would ask that the facility incorporate extended detention volume. Also, Enhanced/Level 1 quality must be achieved.

I have attached a pdf of the area indicating the valley lands and contours from our DEM for information.

I trust that this information is of assistance. Please do not hesitate to contact me with any questions.

Sincerely,

Cory

Cory Harris, P. Eng.

Water Resources Engineer
Conservation Halton

Tel: (905) 336-1158 x232

Email: charris@hrca.on.ca

Website: www.conservationhalton.on.ca

Please consider the environment before printing this e-mail.

From: Luong, Ken [mailto:KLuong@dillon.ca]
Sent: August 28, 2009 10:55 AM
To: Cory Harris
Cc: Poon, Ivy
Subject: FW: re: Waterdown Road Class EA - SWM

Hello Cory,

I believe that you have been corresponding with Ivy Poon of our office regarding the above noted project. I understand from Ivy that you require additional information with respect to the SWM facility proposed to service a portion of the Waterdown Road improvements.

In brief, we are proposing a small dry pond facility to service the minor system flows from approximately 5 ha of roadway drainage. The pond will be sized to attenuate the 5 year post development flows to predevelopment levels.

For your reference and review, I have attached two figures:

- Figure 3: drainage map illustrating the proposed drainage area, approximate location of the pond and outlet to receiving watercourse.

- Figure showing the extent and approximate area of the proposed SWM block.

We would appreciate if you can comment on the acceptability of the proposed strategy and provide any other design considerations/criteria from the Authority. If you have any questions, please do not hesitate to contact our office.

Thank you for your attention and enjoy the rest of the day.

Regards,

Ken

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2 attachments

- **image001.gif**
  1K

Proposed SWM Pond Location.pdf
67K

MacLeod, Paul <pmacleod@dillon.ca>

Waterdown Road EA

1 message

Jennifer Lawrence <jlawrence@hrca.on.ca> Wed, Jun 9, 2010 at 4:27 PM
To: "Banuri, Syeda" <Syeda.Banuri@hamilton.ca>
Cc: "Lee-Morrison, Christine" <Christine.Lee-Morrison@hamilton.ca>, "MacLeod, Paul" <PMacLeod@dillon.ca>, "Eichenbaum, Tom" <EichenbaumT@burlington.ca>, "Stephen, Jillian" <Jillian.Stephen@hamilton.ca>, "Tolone, Vito" <tolonev@burlington.ca>

Hi Syeda,

Further to our meeting you had requested that I follow up on two issues: (1) Ecopassage locations and; (2) Planting locations.

With respect to ecopassages, please see the attached air photo. I have marked up three locations where ecopassages would be beneficial to wildlife movement. We reviewed the location that was discussed at the meeting (Plate 22) and determined that it does not appear to be connecting two natural areas so there would be limited benefit to including an ecopassage at that location. I have identified 3 locations along with the relative importance of each location. Ideally all three locations should be advanced however, locations 1 and 2 are the most important. It is important to note that the Cootes to Escarpment Management Strategy, endorsed by both the City of Burlington and City of Hamilton, identifies the importance of providing for wildlife movement and ecopassage across the Escarpment in this area. Staff do not agree with the response provided by Dillon/the City that suggests that wildlife movement in this area is in strictly a north-south direction and recommend that there is significant east-west wildlife movement within the study area. Given the importance of providing for east-west movement, while staff are supportive of deferring the precise design of these ecopassages to detailed design, it is important to understand at this stage whether it is physically possible to provide for such passage below the road.

With respect to the compensation planting location, it is our recommendation that, given the national, regional and local significance of Sassafras Woods, any tree removal should be compensated on lands adjacent to Sassafras Woods in an area suitable for the long-term survival of the trees. In this respect, staff question whether the area immediately across from Flatt Road would be a viable location both from a size perspective as well as a survivability perspective. It is my understanding that the City was going to follow up with an approximate area that would be required to plant trees at a 3:1 ratio. Given that there are no lands owned by Conservation Halton, City of Burlington or City of Hamilton within or immediately adjacent to Sassafras Woods we have reviewed the air photography and note that the former landfill site along the eastern edge of Sassafras Woods may be a potential location for planting. The potential area is shown on the attached air photo. If this location is not suitable we recommend that the City may need to approach landowners to secure lands for compensation plantings.

I will respond to your email regarding the geotechnical requirements shortly. I am just checking with engineering prior to sending.

Jennifer

Jennifer Lawrence

Manager, Environmental Planning

Conservation Halton

Ph: 905-336-1158 ex. 266

Fax: 905-336-6684

www.conservationhalton.ca

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ecopassages and planting area.pdf
647K

3. Staff have concerns with the level of assumptions made within the report, particularly the application of subsurface information at Borehole 1 for both cross section locations and the assumptions that the soil layer interfaces were assumed to be at constant depth from ground surface. Borehole 1 was completed on the east side of Waterdown Road at the T-intersection with Flatt Road as part of the Peto McCallum field work of December 15, 2008 (approximately 200 metres from the cross section locations). Staff are concerned with the application of this borehole data for stable top of bank determinations at the cross section locations given the appreciable distance between the borehole and the cross sections.
4. Staff note that a stable top of bank location for Area 2 was not included in the analysis. Please find enclosed a copy of the map that was provided to the City identifying the two study areas.
5. While the submitted analysis is helpful in refining a stable top of bank location and the impacts of an expanded Waterdown Road for the areas of concern within the project area, staff find the analysis to be deficient in accurately defining the stable top of bank locations along the valley (for the purposes of Ontario Regulation 162/06). As such, at detailed design a more comprehensive slope stability assessment will be required that addresses the points raised above.

Based on the above, and our review of the draft ESR, staff recognize that the road alignment south of Flatt Road is highly constrained as a result of valley features on both sides of the road and infrastructure on the west side (hydro tower). We request that the City commit to working with Conservation Halton during detailed design to ensure that every effort is made to minimize encroachment into the valley. In addition, we request that the City commit to preparing a more detailed geotechnical assessment, to the satisfaction of Conservation Halton, at detailed design. These commitments should be included in the final ESR.

We trust the above is of assistance. If you require additional information please contact the undersigned at extension 266.

Yours truly,

Jennifer Lawrence, MCIP, RPP
Manager, Environmental Planning

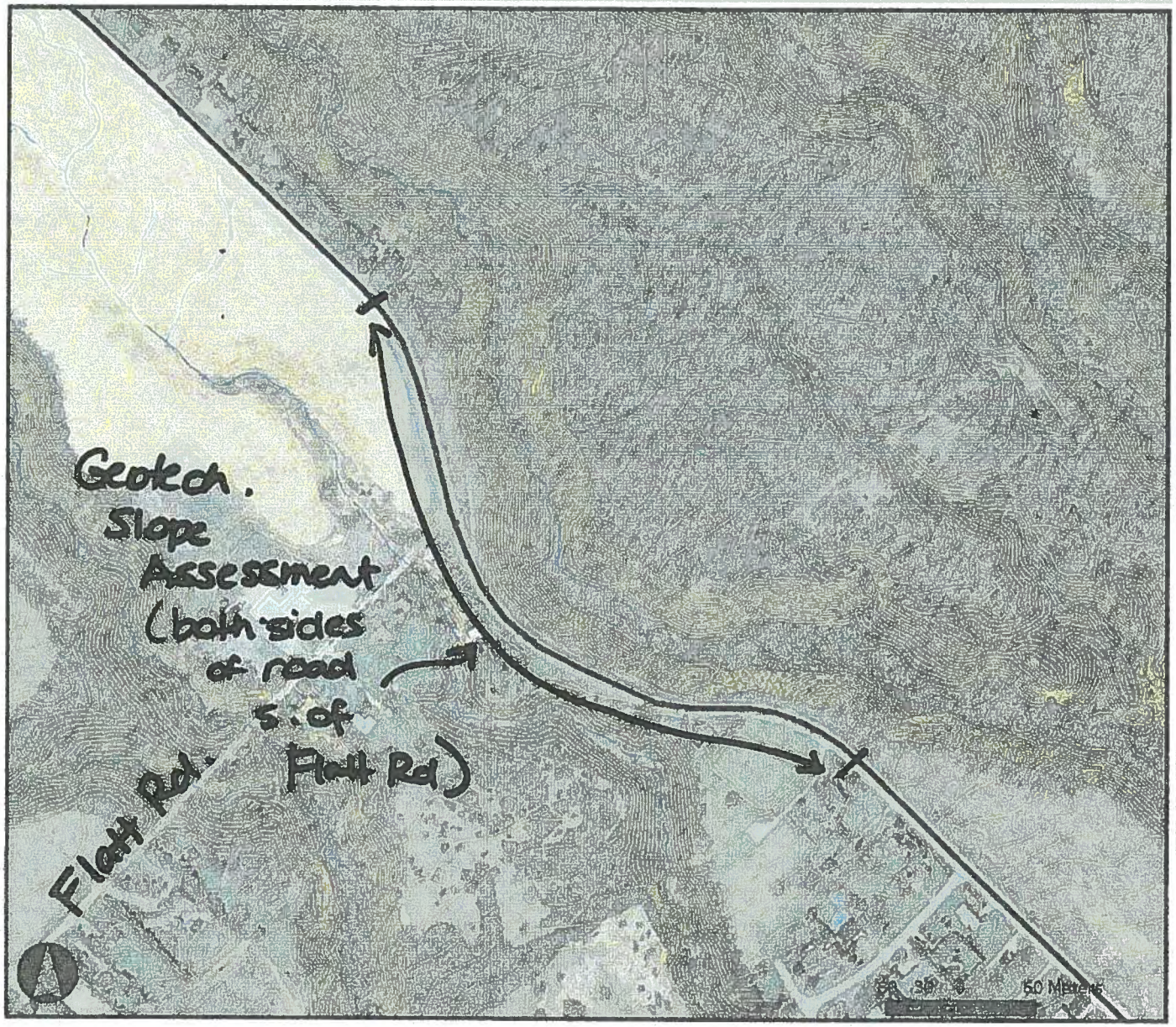
encl.

cc: Ms Melanie Jajko, City of Hamilton, email
Ms Cathy Plosz and Monir Moniruzzaman, City of Hamilton, email
Mr. Paul MacLeod, Dillon Consulting, email
Mr. Haiqing Xu, Region of Halton, Planning, email

jl/devl planning\ea\hamilton\waterdown road\geotechnical report.doc

CHMaps.ca - Conservation Halton
Web Mapping Output

Waterdown Road Geotech



Municipal Boundary

Watercourses
- Regulated Watercourse
- Hydrologic Connection

Ontario Road Network
- Freeway
- Expressway / Highway
- Arterial
- Collector
- Local / Strata
- Local / Street
- Ramp

Railway

GIS_RAST.DBO.ORTHO2007MO_JPG30
- Red:Band_1
- Green:Band_2
- Blue:Band_3

Printed On: 08/06/2010

Mapped By: CHDOMAIN\jlawrence

FileRef: MPR 341

This product was produced by Conservation Halton and some information depicted on this map may have been compiled from different sources. This map has been produced for illustrative purpose only should not be used for routes, navigation and features. This product was produced by Conservation Halton and some information depicted on this map may have been compiled from different sources. This map has been produced for illustrative purpose only should not be used for routes, navigation and features.

- Data Collection in study area
  - Status: largely complete including natural science inventory
- Identify alternatives
  - Status: alternatives identified/developed
- Evaluation of alternatives
  - Status: Largely complete– preliminary recommendations identified
- Development of preliminary design
  - Status: Nearing completion
- Consultation (Neighbourhood Advisory Committees, Public and Agency)
  - Status: Ongoing
- Report Preparation (separate reports for each project)
  - Status: Ongoing

- Four lanes on Waterdown Road and Mountain Brow Road
- New "mid-block" roadway through future subdivision
- Reduced posted speed (50 k/hr)
- New alignment section at south end (to be confirmed)
- Retaining wall at south end (east side) adjacent to Sassafras Woods
- Roundabouts on mid-block connector road
- New crossing of Grindstone Creek tributary on mid-block connector road
- Restricted movements at Dundas Road intersection
- Improved drainage
- Enhanced landscaping/streetscaping plan

- Proximity of new road to residences/property impacts
- Bruce Trail crossings
- Road safety/traffic speeds/slight lines
- Backing out onto road from driveways
- Storm water concerns

- Basic 2-lane road (4 lanes on Parkside Drive section)
- Widening of Dundas Street to 6-lanes
- New intersection at Highway 6
- Use of roundabouts where ever possible
- Crossings of Borer's Creek and Grindstone Creek
- Environmental concerns at Centre Road Provincially Significant Woodlot
- Reduced posted speed (50 k/hr)
- Enhanced landscaping/streetscaping plan

- Preferred northern option at Highway 6
- Traffic noise
- Northlawn resident's issues with proximity of new road/suggestions for a more northern routing
- Traffic safety/reduce travel speeds/traffic calming
- Social/property impacts along Parkside Drive
- Alexander Place impacts
- Preference for northern options
- Railway crossing
- Linking the East-West corridor with the new north-south corridor

- Alternatives currently being developed and assessed:
  - Do Nothing
  - Two-lane reconstruction (20 km/h posted speed)
  - Convert to a one-way road (north bound) through escarpment
  - Convert to alternating one-way road through escarpment (south bound in a.m., north bound in p.m.) using traffic control signals
  - Close road
- Additional natural environmental data collection work
- Detailed plans of new construction alternative developed
- Evaluation of alternatives to be completed in near future
- Reviews of evaluation with external agencies
- Preliminary conclusions to be available at next round of public meetings

- Alignment through North Waterdown and Center Road PSW
- Alignment through south end of Waterdown corridor
- Structure treatments at creek crossings
- Stormwater management assessment & recommendations
- Creek realignment concepts
- Utilities
- Streetscaping proposals
- Property requirements
- Costing
- Implementation and phasing
- Advancing permitting

Schedule

- Neighbourhood Advisory Committee Meetings at end of October
- Final round of Public Information Centres in early November
- Report(s) filing in Spring 2009 (30 day public review period)
- Design, property purchase and construction not currently scheduled –dependent on approvals and rate of development

Discussion