

Sanatorium Road and Stormwater Class Environmental Assessment

**Public Information Centre
March 22, 2007**

Municipal Class Environmental Assessment Process

Phase 1: Identify the Problem (s)

Phase 2: Alternative Solutions

- Identify reasonable alternative solutions to the problem(s).
- Inventory natural, social and economic environment
- Identify impacts of the alternative solutions on the environment and mitigating measures
- Evaluate the alternative solutions and identify the recommended solutions
- Consult review agencies and the public
- Select the preferred solution

Notice of Study Commencement
March 2007

Public Information Centre # 1
March 22, 2007
We are here

Phase 3: Alternative Design Concepts for the Preferred Solution

- Identify alternative design concepts for the preferred solution
- Inventory natural, social and economic environments
- Identify the impact of the alternative designs after mitigation
- Evaluate alternative designs and identify recommended design
- Consult review agencies and the public
- Select the preferred design

Public Information Centre #2
April 26, 2007

Phase 4: Environmental Study Report (ESR)

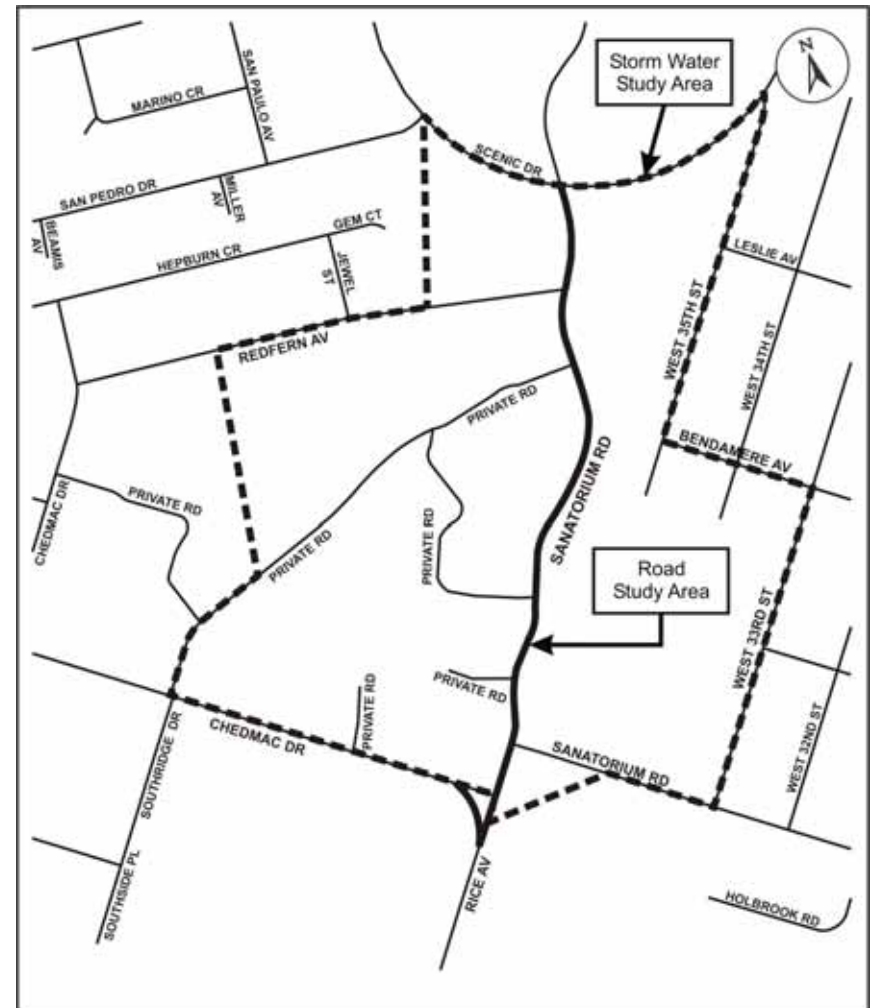
- Document Phases 1 to 3 in the ESR
- Notice of Completion. Notify the public and review agencies of completion of the ESR and the Part II Order provision in the EA Act.
- Place ESR on public record for 30 days for public review

Phase 5: Implementation

- Complete contract drawings
- Proceed to design/construction of the project.
- Monitor for environmental provisions and commitments.

Study Background and Location

- Due to the existing pavement conditions, and drainage the City of Hamilton is looking at improvements through a road and stormwater infrastructure project.
- In addition to horizontal and vertical road alignment, sidewalks and transit issues, ponding water has been noted on Sanatorium Road and flooding has occurred on the adjacent properties.
- Study will be completed as a Schedule C project, following the Municipal Class Environmental Assessment (June 2000) process.
- The Municipal Class EA provides a decision-making process to ensure that all relevant engineering and environmental features are considered in the planning and design of municipal infrastructure. The process requires public and agency involvement throughout.



Study Objective

- The City must determine the most appropriate course of action for addressing stormwater management (SWM), drainage and road improvements in the Study Area.
- Due to the interconnection of the road and drainage works, both projects have been combined into one Municipal Class EA.



Problem/Opportunity Statement:

To address the current and forecast improvement needs for the road and drainage within the Sanatorium Road Study Area, the City desires to determine the most appropriate course of action for addressing stormwater management, drainage and road improvements.

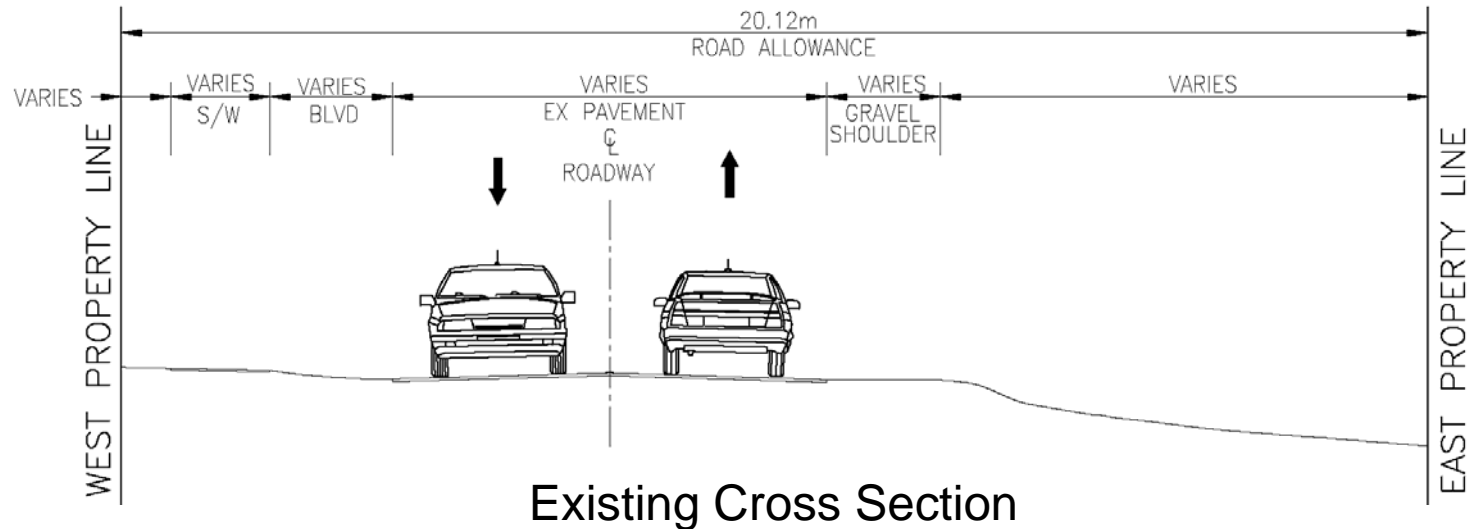
The aim of this information centre is to provide background information, the evaluation of alternatives considered to address the problem identified and receive input on the technically preferred alternative.

Existing Roadway Conditions

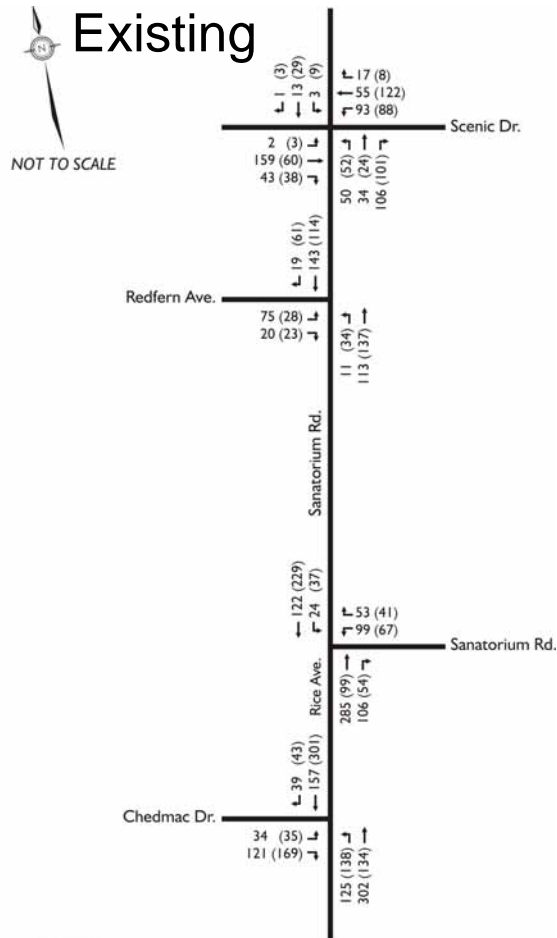
Sanatorium Road is classified as a local road in the City of Hamilton Official Plan.

A number of roadway deficiencies have been observed:

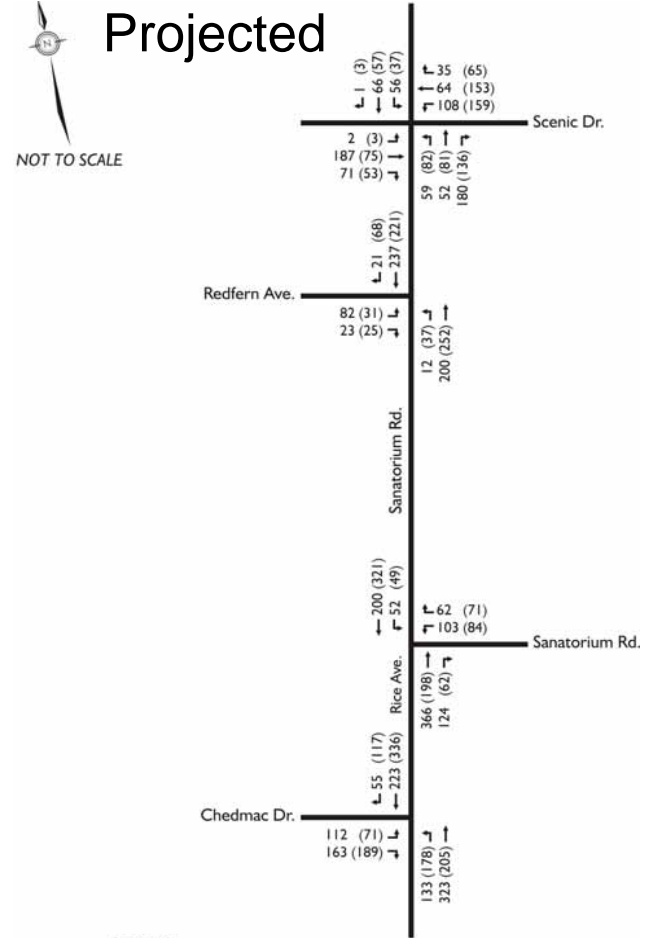
- Sight line restrictions due to horizontal and vertical curves on Sanatorium Road
- Student buses currently unable to make left turn out of Columbia College
- Conflicting issues regarding future bus routing (need to serve institutional uses and desire to keep buses off of local residential roads such as Redfern Avenue)
- Improvements to sidewalks required.



Existing and Projected Traffic Volumes



Legend:
 123 (123) ↘ AM (PM) peak hour
 123 (123) ⇄ turning movement volumes
 123 (123) ↙



Legend:
 123 (123) ↘ AM (PM) peak hour
 123 (123) ⇄ turning movement volumes
 123 (123) ↙

Existing Conditions – Natural Environment

Dillon's terrestrial and fisheries biologists completed field investigations on October 24, 2006:

- All trees within the road right of way found to be in good health.
- Tiffany stormwater management (SWM) pond is located west of Sanatorium Road, between Scenic Drive and Redfern Avenue. Vegetation surrounding the pond includes a mix of species, with some non-native species present, such as garlic mustard
- SMW pond provides habitat potential for some reptiles, birds and small mammals. None were observed during the field visit.
- SWM pond outlets north toward the Hamilton Escarpment Environmentally Sensitive Area (ESA # 47), a narrow greenbelt along the Niagara Escarpment, within the Chedoke Creek subwatershed
- Open channelized tributary southeast of the Sanatorium Road/Rice Avenue intersection:
 - Tributary is an isolated system between a storm sewer outfall to the south and a stormwater drop structure beneath Sanatorium Road
 - Absence of connectivity with other watercourses results in limited value as fish or aquatic habitat.



Looking upstream at the open tributary south of Sanatorium Road.



Looking north at the stormwater management pond, from Redfern Avenue and Sanatorium Road.

Existing Conditions – Socio-economic Environment

In addition to impacts on the natural environment, the Class EA process evaluates impacts on the socio-economic environment. Lands within and surrounding the Study Area are highly developed and include:

- Chedoke Hospital
- Chedoke Twin Pad Arena
- Holbrook Park and Holbrook School
- St. Peter's Residence at Chedoke, Long Term Care Centre
- Columbia College Residence
- Low and medium density residential
- Undeveloped parcels of land.



West 33rd St., looking North at intersection with Elmwood Ave.



North East corner of Sanatorium Rd. and Sanatorium Rd. intersection looking North along Sanatorium Rd.

Evaluation Criteria

	Road Alternatives	Stormwater Alternatives
Natural Environment	<ul style="list-style-type: none"> • Impact on terrestrial resources (including vegetation, wildlife and ESAs) • Impact on groundwater and surface water quantity and quality • Impact on air quality 	<ul style="list-style-type: none"> • Impact on terrestrial resources (including vegetation, wildlife and ESAs) • Impact on downstream reaches of Chedoke Creek • Impact on groundwater and surface water quantity and quality
Socio-Economic Environment	<ul style="list-style-type: none"> • Need for new property/easements • Length of construction impacts (traffic disruption, noise, dust) • Improvement to pedestrian, cycling and transit facilities • Impact on future development 	<ul style="list-style-type: none"> • Need for new property/easements • Impact on use of park/open space • Length of construction impacts (traffic disruption, noise, dust) • Impact on future development
Cultural	<ul style="list-style-type: none"> • Potential impact on archaeological and heritage resources 	<ul style="list-style-type: none"> • Potential impact on archaeological and heritage resources
Technical Considerations	<ul style="list-style-type: none"> • Extent to which the alternative addresses the need for road improvements • Ability to meet current design standards • Anticipated lifespan • Compatibility with proposed stormwater improvements • Ability to construct • Need for on-going maintenance 	<ul style="list-style-type: none"> • Extent to which the alternative addresses the need for stormwater management improvements • Ability to meet current design standards • Anticipated lifespan • Compatibility with proposed road improvements • Ability to construct • Need for on-going maintenance
Cost	<ul style="list-style-type: none"> • Estimated capital costs • Estimated maintenance costs • Estimated property costs 	<ul style="list-style-type: none"> • Estimated capital costs • Estimated maintenance costs • Estimated property costs

Roadway Alternatives: Long-list

A long-list of alternatives for improving Sanatorium Road were evaluated. The preferred alternative may involve a combination of the following:

- **Road Improvement Alternatives:**
 - Road resurfacing
 - Road reconstruction and localized improvements, including the addition of left turn lanes and upgraded traffic control at intersections
 - Road realignment
 - Chedmac Drive/Rice Avenue diversion
 - Capacity/operational improvements at Rice Avenue /Chedmac Drive and Scenic Drive / Sanatorium Road
 - Continuous centre left turn lane. *Screened out. Projected traffic volumes do no warrant the improvement*
 - Widen Sanatorium Road to four lanes. *Screened out. Projected traffic volumes do no warrant the improvement*
 - Make Sanatorium Road a private road. *Screened out. Potential significant increase in traffic on surround roads*
 - Traffic calming. *Screened out. Existing speeds on Sanatorium Road are not a problem.*
- **Pedestrian Improvement Alternatives:**
 - Sidewalk repair
 - Sidewalk replacement
- **Transit Improvement Alternatives:**
 - Improve existing transit facilities
 - Construct dedicated transit lanes northbound and southbound on Sanatorium Road. *Screened out due to significant additional property required and "over design"*
- **Cycling Improvement Alternatives:**
 - On-street cycling lanes on Sanatorium Road
 - Multi-use trail on Sanatorium Road. *Screened out due to potential conflicts with pedestrians and cyclists*
- **Do nothing (required under the Class EA).**



Hamilton

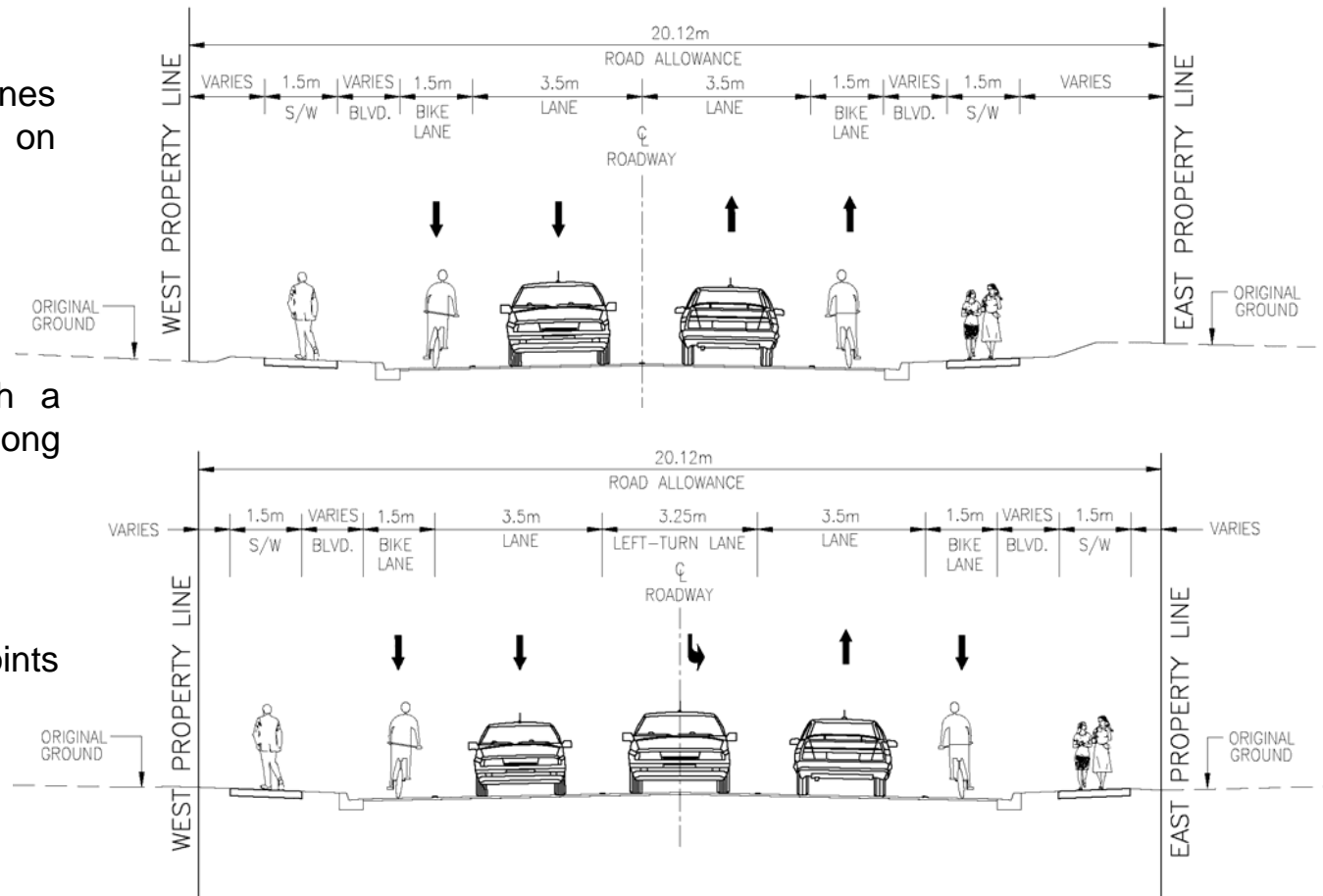
See attached “Evaluation of Road Alternatives” table.



Technically Preferred Road Alternative

Based on the evaluation, the technically preferred alternative for addressing existing road improvements includes:

- Provide on-street cycling lanes northbound and southbound on Sanatorium Road
- Replace existing sidewalks with a continuous sidewalk along Sanatorium Road
- Left turn lanes at major access points



Technically Preferred Road Alternative Con't.

- Realign intersections to allow for a roundabout or traffic signals
- Improve existing transit facilities where required.



Sanatorium Road/Chedmac Drive/Rice Avenue realigned for traffic signals.



Roundabouts at Scenic Dr./Sanatorium Rd. and Sanatorium Rd/Chedmac Dr./Rice Av.

Stormwater Alternatives: Long-list

A long-list of stormwater management alternatives were identified, including those listed as part of the Mountview Neighbourhood Storm Drainage Study. The preferred alternative may involve a combination of the following:

- **Flood Proofing:**
 - Backflow valves and/or sump pumps in flood prone areas. *Screened out. Provide a “band-aid” solution, unreliable and implemented by individuals*
 - Construct berms at specified areas
- **On-site storage:**
 - Provide stormwater storage on a per-lot basis. *Screened out. Difficult to impose as a retrofit*
 - Inlet controls on roadways. *Screened out. May make flooding worse at existing low points*
- **Relief sewers/increased capacity:**
 - Install relief sewer along Sanatorium to handle additional flows
 - Improvements of major system flow paths
- **Retrofit existing facilities:**
 - Retrofit Tiffany pond
 - Retrofit pond north of Scenic Drive. *Screened out. Additional capacity of pond may be required for new development and pond outside Study Area*
- **New stormwater storage:**
 - Expand channel near Idlewyld property
 - Create dry pond at Holbrook park
 - Create new storage pond south of Tiffany pond
 - Underground storage. *Screened out due to cost and conflict with underground utilities*
- **Do nothing (required under the Class EA).**



Hamilton

See attached “Evaluation of Stormwater Alternatives” table.





Hamilton

Technically Preferred Stormwater Alternative

The technically preferred alternative includes a combination of the following alternatives:

- Sanatorium Road/Chedmac Drive intersection:
 - New stormwater inlet at intersection
 - Road grading to direct overflows to Holbrook Park. Overflows to the park will be reduced in frequency and magnitude
 - Flow diversion structure in the existing storm sewer to direct some of the flow to the new Sanatorium Road storm sewer
- Drainage improvements at Holbrook Park:
 - Construct berm on north side of park to increase existing storage capacity and protect properties to the north from flooding
 - New controlled flow drainage inlet at north end of park and upgrade storm sewer connection to West 33rd Street sewer at Elmwood Avenue
 - Tile drainage in low-lying areas to improve drainage of the playing field
- New oversized storm sewer constructed along Sanatorium Road in conjunction with road improvements to convey the additional flow diverted from the Chedmac Road inlet
- Dry SMW detention facility.



Next Steps

- Based on feedback received, finalize preferred alternatives for road and stormwater improvements.
- Identify and evaluate alternative design options for the preferred solution. The recommended design will be presented at Public Information Centre # 2 (April 26, 2007).
- Finalize the preferred design and complete the Environmental Study Report.
- Place Notice of Completion in the newspaper and distribute to residents adjacent to the study area identifying the opportunity to review the Environmental Study Report over a 30-day period.
- Assuming that comments raised during the 30-day review period can be resolved, the City will proceed with Final Design.
- Subject to approval, funding and the outcome of this EA, construction is forecast to begin in the spring of 2008.

Please complete a comment sheet and place in the comment box today or submit by April 6, 2007.

THANK YOU FOR ATTENDING