

Gardiner Expressway/QEW/Highway 427/Brown's Line Interchange Modifications Class Environmental Assessment

LEA Consulting Ltd. was retained by the City of Toronto to undertake a Class Environmental Assessment of the proposed modifications to the QEW/427 Interchange, located near the western boundary of the City of Toronto.

A Technical Steering Committee was comprised of staff from the City of Toronto, Ministry of Transportation, Toronto Transit Commission, and LEA. The jurisdiction of the interchange is shared between the City and Province.

This Environmental Assessment was conducted in accordance with the Class Environmental Assessment for Municipal Road Projects (1993) and the Provincial Highways Class Environmental Assessment (1992) requirements. The project falls under Schedule C of the Municipal Class EA process and Group B of the Provincial Highways Class EA process. Problems in the area were first identified when the Sherway Centre Secondary Plan was prepared. Problems included lack of connectivity between the Secondary Plan area lands and the freeway system, which limited the development potential of the lands; and a lack of connectivity between the existing express and



Collector Lanes Underutilized, Not Connected to QEW/Gardiner

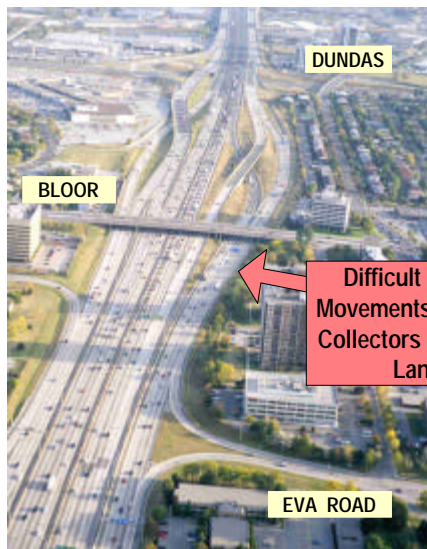
to Gardiner/Q.E.W.

Heavily Congested

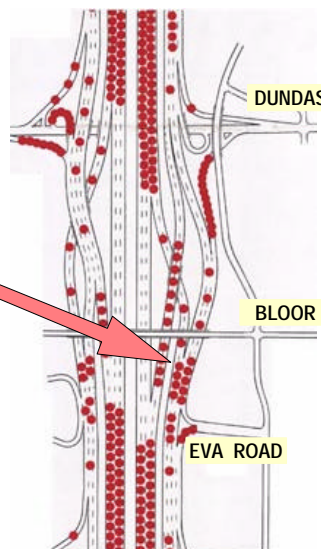
Highway 427 Looking South Evening Peak Period

collector lane systems of Highway 427 and the Gardiner Expressway, resulting in significant congestion and accidents in the express lanes through the interchange during peak traffic times.

Safety and Operational Issues



Highway 427 Looking South



Vehicle Collisions in 1997

Difficult Weaving Movements Between Collectors & Express Lanes

PROJECT SUMMARY

Client:
City of Toronto Works and Emergency Services

Location:
City of Toronto (Etobicoke District), Ontario, Canada

Services Provided:
Transportation Planning, Preliminary Highway, Bridge and Structural Design, Public Consultation



Eight (8) alternative solutions were derived in an attempt to address the problems. Alternative solutions ranged from “Do-Nothing”, to significant modifications to the QEW/427 interchange.

The evaluation of alternatives was undertaken in a two-step process. First, an **initial screening** of alternatives was undertaken, followed by a **detailed evaluation** of those alternatives carried forward from the initial screening.

Public consultation is one of the most important features of the EA process. All mandatory formal contacts were made prior to the **Environmental Study Report** being completed. The mandatory contacts included the **Notice of Study Commencement** and two **Public Information Centres**. The public provided significant input into the design of the project.

Given the number of new and modified bridge structures (6 in total) in the project, preliminary design, project staging and detour plans were prepared. The Ministry of Transportation’s immediate plans for the rehabilitation of structures and pavement on Highway 427 were also considered in the staging plans, to determine staging and detours with the least impact on traffic flow.

DETAILED EVALUATION OF ALTERNATIVES

CRITERION	ALTERNATIVE SOLUTIONS CARRIED FORWARD				
	1	2	3	4	5
• Emergency Service • Incident Management	●●●	●●●	●●●	●●●	●●●
RESIDENTIAL COMMUNITY IMPACTS • Property Requirements	●●●	●●●	●●●	●●●	●●●
ECONOMIC DEVELOPMENT • Development Potential • Community Business Impact	●●●	●●●	●●●	●●●	●●●
NATURAL ENVIRONMENT • Disruption to Watercourses, Air Quality, Vegetation and Wildlife	●	●	●	●	●
• Implementation	●●	●●	●●	●●	●●
• Construction Cost	●●	●●	●●	●●	●●

Positive Impacts: ●
Moderate or No Impacts: ●
Negative Impacts: ●

The solution having the most positive and least negative impacts was selected as the preferred solution. The preferred solution also satisfied most of the objectives set out in the problem statement.

The benefits of the preferred solution included:

- Improved accessibility to Secondary Plan area;
- Improved weaving conditions on freeway;
- Increased user-benefits;
- Improved efficiency and connectivity through the interchange; and
- Improved emergency routing during incidents.



The Ministry of Transportation required that a draft **Design Criteria Document** be prepared as part of the Environmental Assessment. The Design Criteria Document reflects various components of the preferred design and any outstanding issues to be addressed during detailed design.

Project costs were estimated at about **\$12 million**.

THE PRELIMINARY PREFERRED SOLUTION

