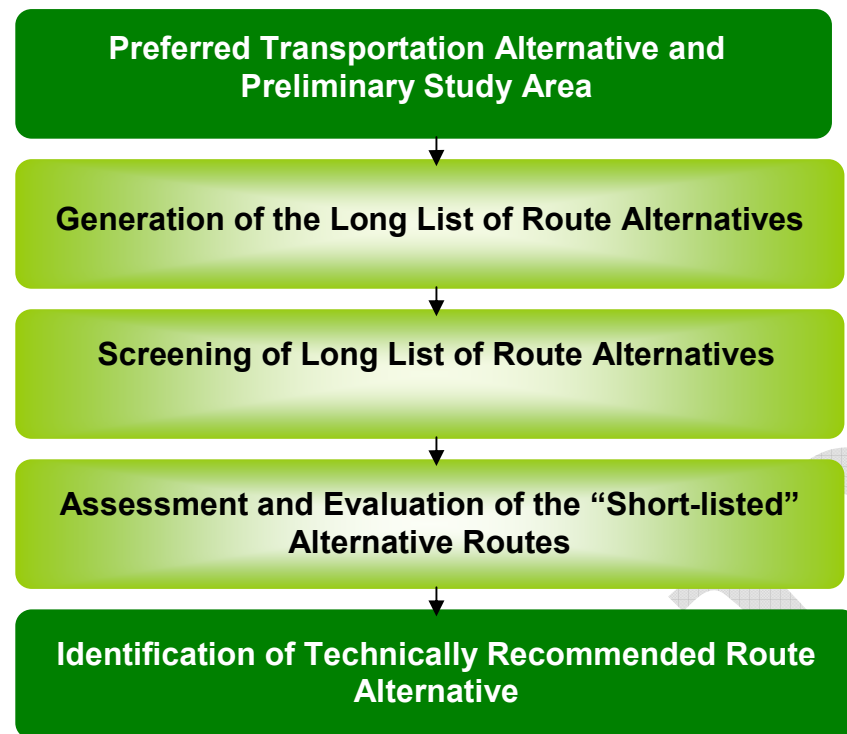


2. Generation, Assessment and Evaluation Methodology for Alternative Routes

The methodology proposed in the approved 407 East EA Terms of Reference (ToR) was followed for generating, screening, assessing, and evaluating route alternatives. **Figure 2.1** provides a schematic overview of this methodology. Each of the steps illustrated in **Figure 2.1** are further explained in following sections.

Figure 2.1: Alternative Methods (Route Alternatives) Process



3. Generation of the Alternative Routes

In the late 1980's and early 1990's, the Ministry of Transportation (MTO) undertook several studies to identify a technically recommended route for the proposed east-west transportation corridor and two north-south links. Accordingly, the generation of route alternatives took into consideration the work undertaken in the previous studies as well as information obtained through the current EA process and the requirements set out in the approved 407 East EA ToR.

The approved 407 East EA ToR outlined five guiding principles and 22 objectives for use in generating alternative routes. Since a number of the principles were similar in nature and intent, they were combined together and refined into the following 3 guiding principles to reflect the current EA process, with the 22 objectives grouped under their corresponding guiding principle (see **Table 3.1**):

- Minimize impacts to significant natural features, functions, systems and communities
- Minimize impacts to existing and planned (approved under the Planning Act) population and employment areas
- Maximize transportation service

Table 3.1: Guiding Principles and Objectives for Use in Generating Alternative Routes

Guiding Principle	Objective
Minimize impacts to significant natural features, functions, systems and communities	1. Avoid where possible, or minimize encroachment on or loss of water bodies and associated riparian zones
	2. Avoid where possible, or minimize encroachment on or loss of critical fish habitat features
	3. Avoid where possible, or minimize encroachment on or loss of species of conservation concern (vegetation, fish and wildlife)
	4. Avoid where possible, or minimize encroachment on or loss of critical habitat of Species at Risk
	5. Avoid where possible, or minimize encroachment on or loss of encroachment into ecologically functional areas
	6. Avoid where possible, or minimize encroachment on or loss of important wildlife areas and travel corridors. Other areas to be considered are any identified wildlife management, rehabilitation and research program sites
	7. Avoid where possible, or minimize encroachment on or loss of Provincially Significant Wetlands (PSWs) and avoid impairment to wetland functions, including ecological function
	8. Avoid where possible, or minimize encroachment on or loss of all other evaluated and unevaluated wetlands
	9. Avoid where possible, or minimize encroachment on or loss of designated significant woodlands
	10. Avoid where possible, or minimize encroachment on or loss of other important woodlands
	11. Avoid where possible, or minimize encroachment on known groundwater recharge and discharge areas; as well as identified