



# WATERFRONT WEST STREETCARS EXTENSION

## ENVIRONMENTAL ASSESSMENT

Welcome to Public  
Information Centre #2



Gartner Lee



EarthTech



# WELCOME

## TO THE SECOND PUBLIC INFORMATION CENTRE FOR THE WATERFRONT WEST STREETCAR EXTENSION ENVIRONMENTAL ASSESSMENT

- ❖ **Please sign in** if you wish to be placed on our mailing list.
- ❖ Those on the mailing list will be notified of future public consultation events.
- ❖ Members of the Project Team are available to discuss and answer questions.
- ❖ You may obtain information at anytime throughout the course of this project from the project website: [www.toronto.ca/involved](http://www.toronto.ca/involved)



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



## BACKGROUND – WHY ARE WE HERE ?

- ❖ In the 1990's, the TTC and the former Metropolitan Toronto conducted an Environmental Assessment (EA) for the Waterfront West Light Rail Transit (WWLRT).
- ❖ The WWLRT EA studied an extension of streetcar service along the waterfront between downtown Toronto and south Etobicoke.
- ❖ There is a need to select a preferred streetcar route from Exhibition Place to Roncesvalles Avenue to fulfill the recommendations of the WWLRT EA.



Gartner Lee



EarthTech

WATERFRONT WEST  
STREETCARS



# PROJECT OBJECTIVES

- ❖ Provide higher speed/higher capacity transit service between Downtown Toronto and south Etobicoke.
- ❖ Fulfill the long-term recommendations of the Waterfront West Light Rail Transit EA (1993) of making a high speed, high capacity streetcar connection between Dufferin Street and Roncesvalles Avenue.
- ❖ Support the City of Toronto's Official Plan vision to provide a high quality transit system that allows people to move around the city quickly and conveniently.
- ❖ Reduce auto dependency and road congestion within the City.



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



# BACKGROUND - WHY ARE WE HERE?

## Waterfront Streetcar Service: Existing and Proposed



### LEGEND

- Existing Streetcars
- TTC Subway
- ..... Proposed Streetcars on Right-of-Way
- EA's currently being undertaken - Union Station to Roncesvalles



Gartner Lee EarthTech

WATERFRONT WEST  
STREETCARS



# PROJECT PURPOSE

- ❖ The purpose of PIC #2 is to present the following major elements for your review and comment:
  - Describe the two projects being studied:
    - (1) EA Modification Project (Exhibition Place to Dufferin Street)
    - (2) Individual EA Project (Dufferin Street to Roncesvalles Avenue)
  - Present the Alternative Routes developed for each Project
  - Present the Criteria, Indicators and Measures for each Project
  - Identify the Next Steps and Schedule for each Project



Gartner Lee



EarthTech

WATERFRONT WEST  
STREETCARS



## PIC #1 (November 2006)

- ❖ If you missed the first PIC, the following information was presented for review and comment:
  - Project Introduction – Description, Rationale, Objectives
  - Description of the two projects being studied (EA Modification & Individual EA)
  - The EA Process, Alternatives, Existing Conditions, Evaluation Methodology, and Evaluation Criteria for both projects
  - Next Steps and Schedules for each Project



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



## RESULTS FROM PIC #1

- ❖ The following key comments received at PIC #1 were incorporated into the development of the Terms of Reference (ToR):
  - Identify Transit Specific Criteria to compare different alternatives
  - Urban Design is Key (Pedestrian and Cycling connections to waterfront)
  - Protect Cultural and Heritage Features
  - Protect Green Space
  - Expand the Study Area to include a larger area
  - Coordinate Waterfront Studies
  - Protect Private Property
  - Involve local community groups
- ❖ See Website (<http://www.toronto.ca/involved>)



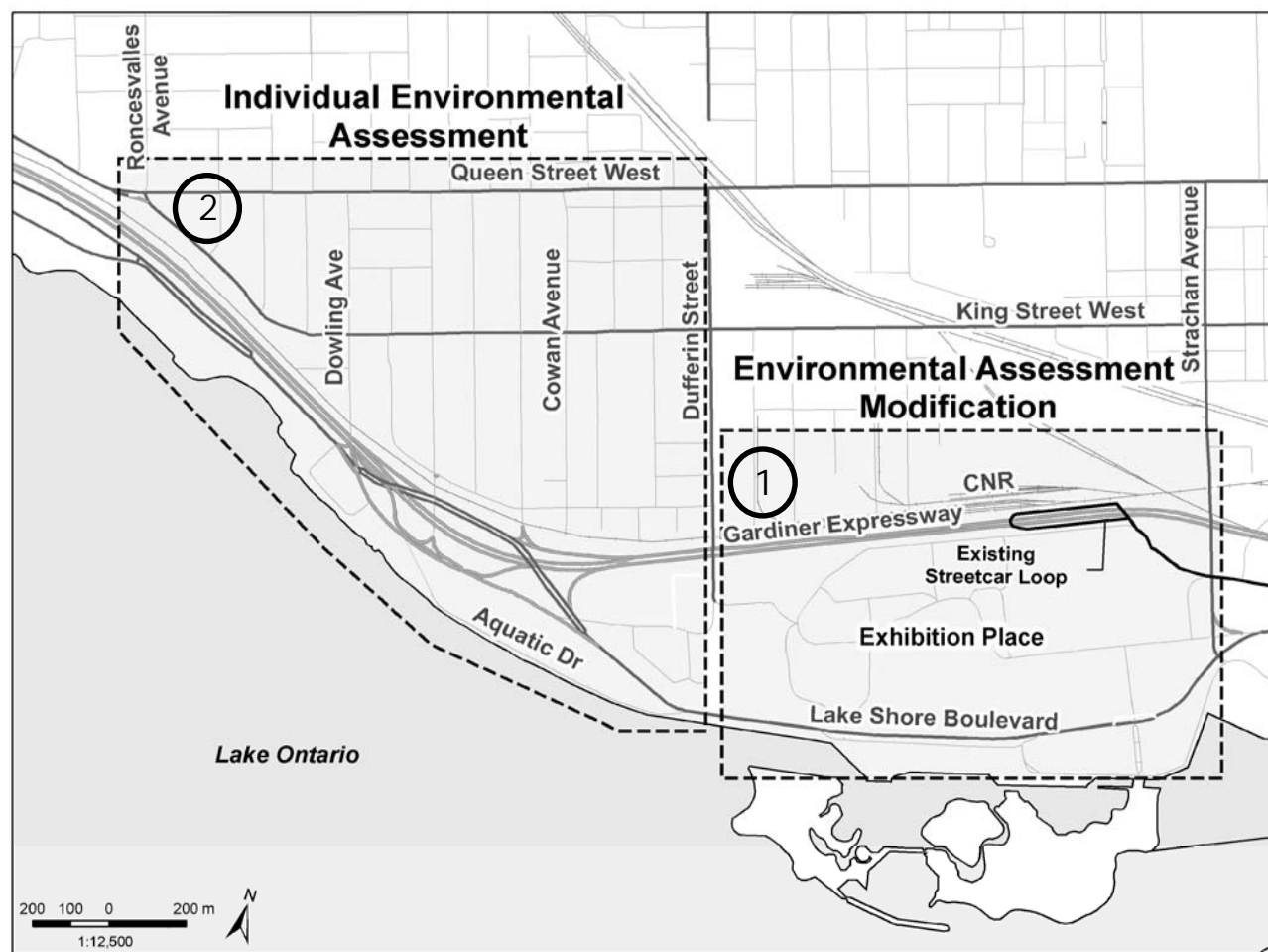
Gartner Lee



**WATERFRONT WEST  
STREETCARS**



# PROJECT OVERVIEW



1 Modification to the WWLRT EA: Provide a streetcar line from Exhibition Place to Dufferin Street

2 Individual EA: Provide a streetcar link from Dufferin Street to the existing tracks at the Roncesvalles



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**





## WHY AN EA MODIFICATION ?

- ❖ Since the WWLRT EA was completed, changes to the existing conditions have occurred.
- ❖ Based on these changes to the current conditions, potential new routes for the connection to Dufferin Street have been identified.
- ❖ The TTC is reviewing the approved WWLRT EA alignment along with potential new routes in order to identify a preferred route.
- ❖ A modification to the WWLRT EA is required in order to consider these potential new routes and their potential effects to the environment before construction can begin.



Gartner Lee



EarthTech

WATERFRONT WEST  
STREETCARS



# EA MODIFICATION PROCESS



PIC #1

PIC #2

PIC #3

Public Review Period

Need / Reason

Establish General Routes

Identify Specific Routes

Potential Effects

Recommended Route

EA Modification Report

←..... ONGOING PUBLIC AND REVIEW AGENCY CONSULTATION .....→

- Explain the need / reason for the modification to the original design

- Identify general routes that will allow for a link to Dufferin Street, including the original route from the approved WWLRT (1993)

- Develop specific streetcar routes in keeping with the general routes presented at PIC #1

- Identify reasonable mitigation and/or enhancement measures
- Identify the net environmental effects for each alternative route

- Compare the net environmental advantages and disadvantages of the alternative routes and identify the Recommended Route
- Identify any further commitments for the future

- Submit an EA Modification Report documenting the previously noted items to the MOE and make it available for public and agency review



Gartner Lee EarthTech

WATERFRONT WEST STREETCARS



# EA MODIFICATION ALTERNATIVE ROUTES

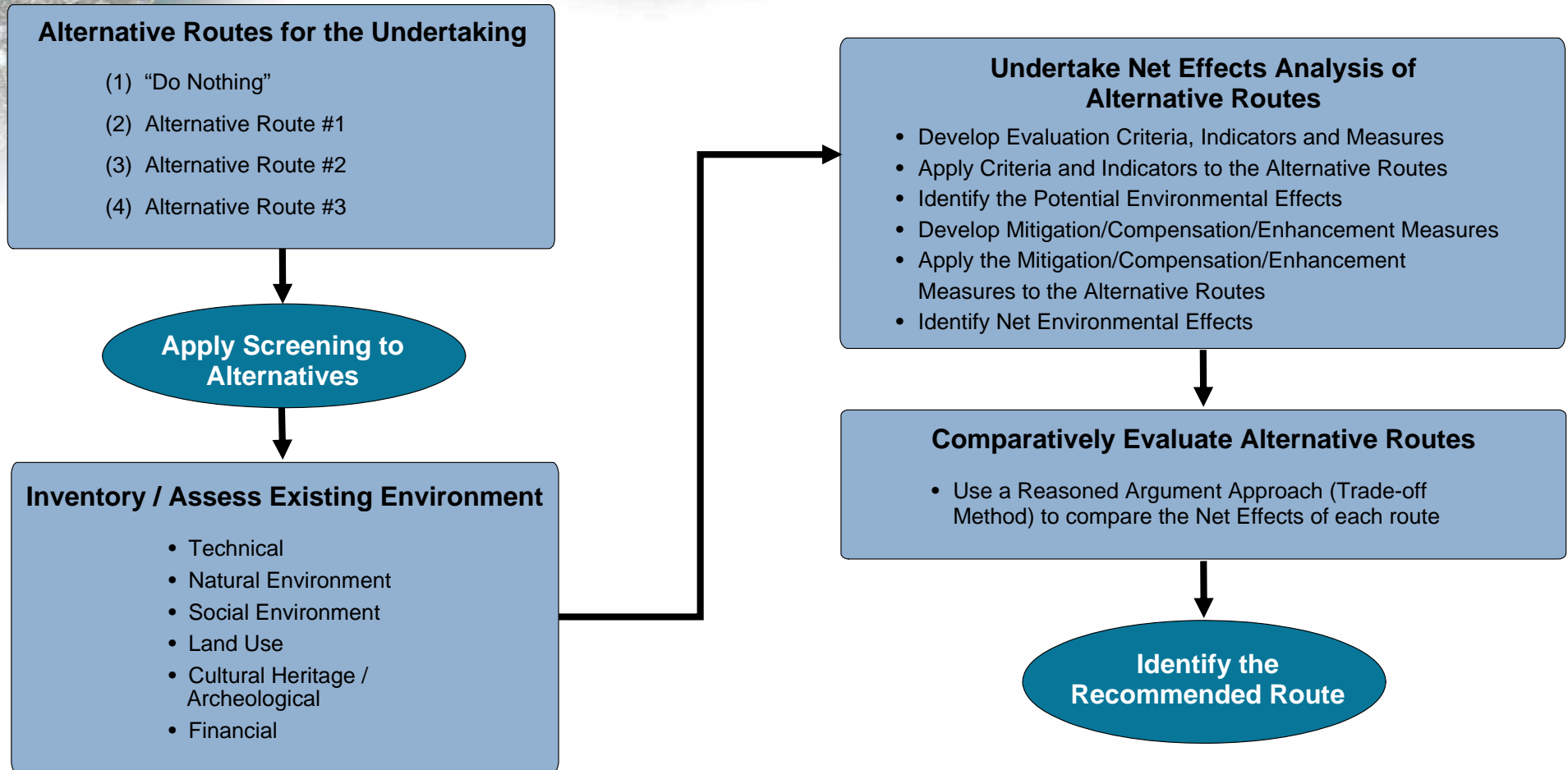


Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# EVALUATION METHODOLOGY FOR THE ALTERNATIVE ROUTES



Gartner Lee EarthTech

WATERFRONT WEST  
STREETCARS



# EA MODIFICATION EVALUATION CRITERIA AND INDICATORS

## Technical Considerations

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential effects on intersection operations</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect turning and through movement</li></ul>
<ul style="list-style-type: none"><li>• <b>Ability to meet transit ridership objectives</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect local and secondary catchments of riders as well as the accessibility and convenience of riders</li><li>• Potential to affect walking distances to transit stops and transfer points</li><li>• Potential to affect safety of ridership when accessing stations</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential increase in transit ridership (projected)</b></li></ul>	<ul style="list-style-type: none"><li>• Potential effect of location; degree of exclusive operation; and number of local stops on streetcar routes on projected transit ridership</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on transit network integration</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect transit network connectivity and transfers between TTC and GO transit services; and among other TTC services</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential increase in speed and improvement in Level of Service for streetcar users</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect streetcar speed, average travel time, frequency of stops and rider comfort</li><li>• Effects of horizontal and vertical alignments of routes</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential constructability issues</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to provide adequate working area for construction; the proximity and potential impacts to adjacent buildings &amp; infrastructure; and/or the proximity of planned adjacent infrastructure; impacts to existing and future GO transit and CN operations.</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# EA MODIFICATION EVALUATION CRITERIA AND INDICATORS

## Technical Considerations

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential operation and maintenance requirements</b></li></ul>	<ul style="list-style-type: none"><li>• Potential configuration and alignment of track</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on traffic operations</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect travel times, number of general traffic lanes and traffic volumes on road links</li><li>• Potential to affect any mid-block crossings and transit priority and reduced link traffic progression due to signal priority for transit</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on roadway parking/loading</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect supply of on-street parking and loading areas</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effect of using low-floor streetcars</b></li></ul>	<ul style="list-style-type: none"><li>• Degree to which route can accommodate future low floor streetcars and current streetcar fleet</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on urban expressways</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect mainline urban expressways</li><li>• Potential to constrain future urban expressway development</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential approval requirements</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to require federal, provincial or local permits or approvals</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# EA MODIFICATION EVALUATION CRITERIA AND INDICATORS

## Natural Environment

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• Potential effects on terrestrial habitats, functions and biota</li></ul>	Potential effects on: <ul style="list-style-type: none"><li>• Vegetation communities</li><li>• Wildlife and Wildlife Habitat</li><li>• Species at Risk or of Special Concern</li></ul>
<ul style="list-style-type: none"><li>• Potential effects on greenways/open spaces and linkages</li></ul>	<ul style="list-style-type: none"><li>• Potential effects on connectivity</li></ul>
<ul style="list-style-type: none"><li>• Potential effects of existing contaminated soil in the study area</li></ul>	<ul style="list-style-type: none"><li>• Presence or absence of contaminated soils in the study area</li></ul>
<ul style="list-style-type: none"><li>• Potential effects of existing contaminated groundwater in the study area</li></ul>	<ul style="list-style-type: none"><li>• Presence or absence of contaminated groundwater in the study area</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# EA MODIFICATION EVALUATION CRITERIA AND INDICATORS

## Land Use

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential effects on approved/proposed land uses</b></li></ul>	<ul style="list-style-type: none"><li>• Potential land takings from identified approved and/proposed development sites</li></ul>
<ul style="list-style-type: none"><li>• <b>Conformity to existing Official Plan designations and zoning</b></li></ul>	<ul style="list-style-type: none"><li>• Whether or not the proposed route is anticipated by the planning document and whether or not the planned route will have a potential effect on the planned urban structure</li></ul>
<ul style="list-style-type: none"><li>• <b>Conformity to existing Regional and Provincial plans and policies</b></li></ul>	<ul style="list-style-type: none"><li>• Whether or not the proposed route is anticipated by the planning document and whether or not the planned route promotes development intensification in proximity to station locations and subsequently enhances transit ridership</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on projected population / employment growth in the Study Area</b></li></ul>	<ul style="list-style-type: none"><li>• Whether or not the planned route promotes development intensification in proximity to station locations and subsequently enhances transit ridership</li></ul>



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



# EA MODIFICATION EVALUATION CRITERIA AND INDICATORS

## Social Environment

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential for displacing existing residences, businesses, institutions and recreational features</b></li></ul>	<ul style="list-style-type: none"><li>• Potential for displacement of residences, businesses, institutions, and recreational features located within dedicated ROW</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential short-term effects of noise, vibration, and air quality on existing residences, businesses, institutions and recreational features as a result of construction (disturbance)</b></li></ul>	<ul style="list-style-type: none"><li>• Sensitivity of residences, businesses, institutions, and users of recreational features within area of influence for noise, vibration, and air quality</li><li>• Qualitative effect on air quality due to changes in vehicle delays/speeds and dust as a result of construction</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential short-term effects on use of roadways, driveways, sidewalks and pathways (e.g., changes to property access, changes to access to the waterfront)</b></li></ul>	<ul style="list-style-type: none"><li>• Potential for effects on vehicular traffic from lane closures</li><li>• Potential for effects on residences from driveway closures</li><li>• Potential for effects on pedestrians from sidewalk closures</li><li>• Potential for effects on users of recreational pathways</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential long-term effects of noise, vibration and air quality on existing residents, businesses, institutions and recreational features</b></li></ul>	<ul style="list-style-type: none"><li>• Sensitivity of residences, businesses, institutions, and users of recreational features within area of influence for noise, vibration, and air quality</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# EA MODIFICATION EVALUATION CRITERIA AND INDICATORS

## Social Environment

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential long-term effects on use of roadways, driveways, sidewalks and pathways (changes to property access, and access to the waterfront)</b></li></ul>	<ul style="list-style-type: none"><li>• Potential delays to vehicular traffic on roadways</li><li>• Potential for adversely affecting pedestrian and bicycle facilities and operations (e.g., more difficult pedestrian crossings, reductions in the width of sidewalks, removal or reduction in size of bikes lanes)</li><li>• Potential to affect access to the waterfront</li><li>• Potential to affect property access points</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential opportunities for urban design and streetscape improvements</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to integrate urban design/streetscaping measures along streetcar ROW</li><li>• Potential for providing aesthetic appeal along streetcar ROW</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential for requiring private property</b></li></ul>	<ul style="list-style-type: none"><li>• Potential effect on existing property limits and private property</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential short- and long-term effects on cultural events in the study area</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect cultural events within or near the study area</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# EA MODIFICATION EVALUATION CRITERIA AND INDICATORS

## Cultural Heritage and Archeological Resources

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• Potential effects to archaeological resources</li></ul>	<ul style="list-style-type: none"><li>• Potential for disturbance or destruction of known archaeological sites</li><li>• Potential for disturbance of areas of archaeological potential</li></ul>
<ul style="list-style-type: none"><li>• Potential effects to built heritage features and cultural landscapes</li></ul>	<ul style="list-style-type: none"><li>• Potential for displacement or disruption of built heritage resources</li><li>• Potential for displacement or disruption of cultural heritage landscape resources</li><li>• Significance of potentially displaced or disrupted cultural landscape resources</li></ul>

## Financial

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• Potential capital costs</li></ul>	<ul style="list-style-type: none"><li>• Potential effect on project budget</li></ul>
<ul style="list-style-type: none"><li>• Potential land acquisition costs</li></ul>	<ul style="list-style-type: none"><li>• Potential effect of design/location on private land holdings</li></ul>
<ul style="list-style-type: none"><li>• Potential operation and maintenance costs</li></ul>	<ul style="list-style-type: none"><li>• Potential effect of design/location on operation/ maintenance costs</li></ul>



Gartner Lee



**WATERFRONT WEST  
STREETCARS**



## EA MODIFICATION NEXT STEPS . . .

- ❖ Comments received from the public by **September 15, 2007** will be considered when finalizing the alternative routes, the evaluation methodology and the evaluation criteria and indicators.
- ❖ The finalized evaluation methodology and evaluation criteria will be applied to the finalized alternative routes and a Recommended Route will be identified.
- ❖ The net effects analysis and the Recommended Route will be presented to you at PIC #3 in the fall.

EA Study	2006			2007												2008	
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
EA Modification																	
	PIC #1										PIC #2		PIC #3				



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



# DUFFERIN TO RONCESVALLES INDIVIDUAL EA

- ❖ The Individual EA consists of a two-step approval process for proposed undertakings in the Province of Ontario:

Step One: Development of a Terms of Reference (ToR) ✓ Complete

Step Two: Preparation of the Environmental Assessment (EA) Underway

- ❖ The ToR was approved by the Minister of the Environment on July 4, 2007.
- ❖ The Approved ToR sets out the work plan for the preparation and review of the EA.



Gartner Lee



EarthTech

WATERFRONT WEST  
STREETCARS



# OVERVIEW OF THE INDIVIDUAL EA PROCESS

## Terms of Reference Stage

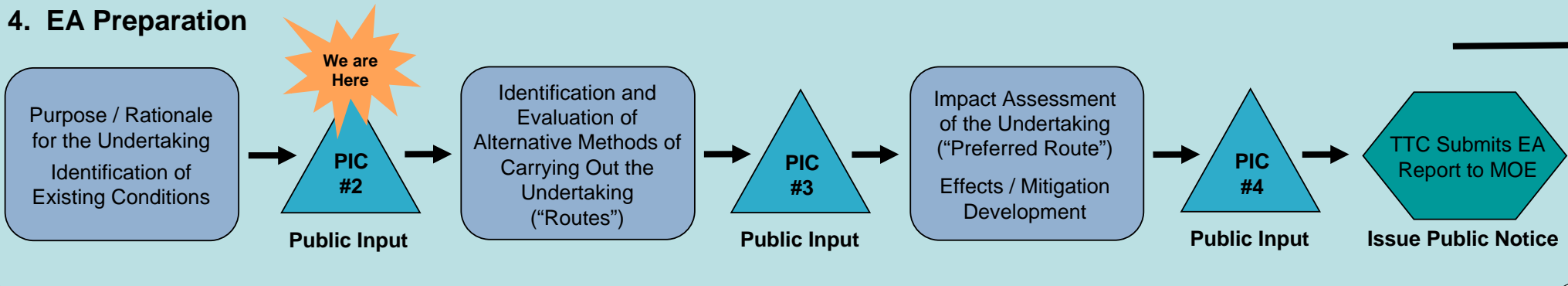
1. Terms of Reference Preparation
2. ToR Review by MOE
3. ToR Approval July 4, 2007

✓ *Complete*

Approved  
ToR ↓

## Environmental Assessment Stage

### 4. EA Preparation

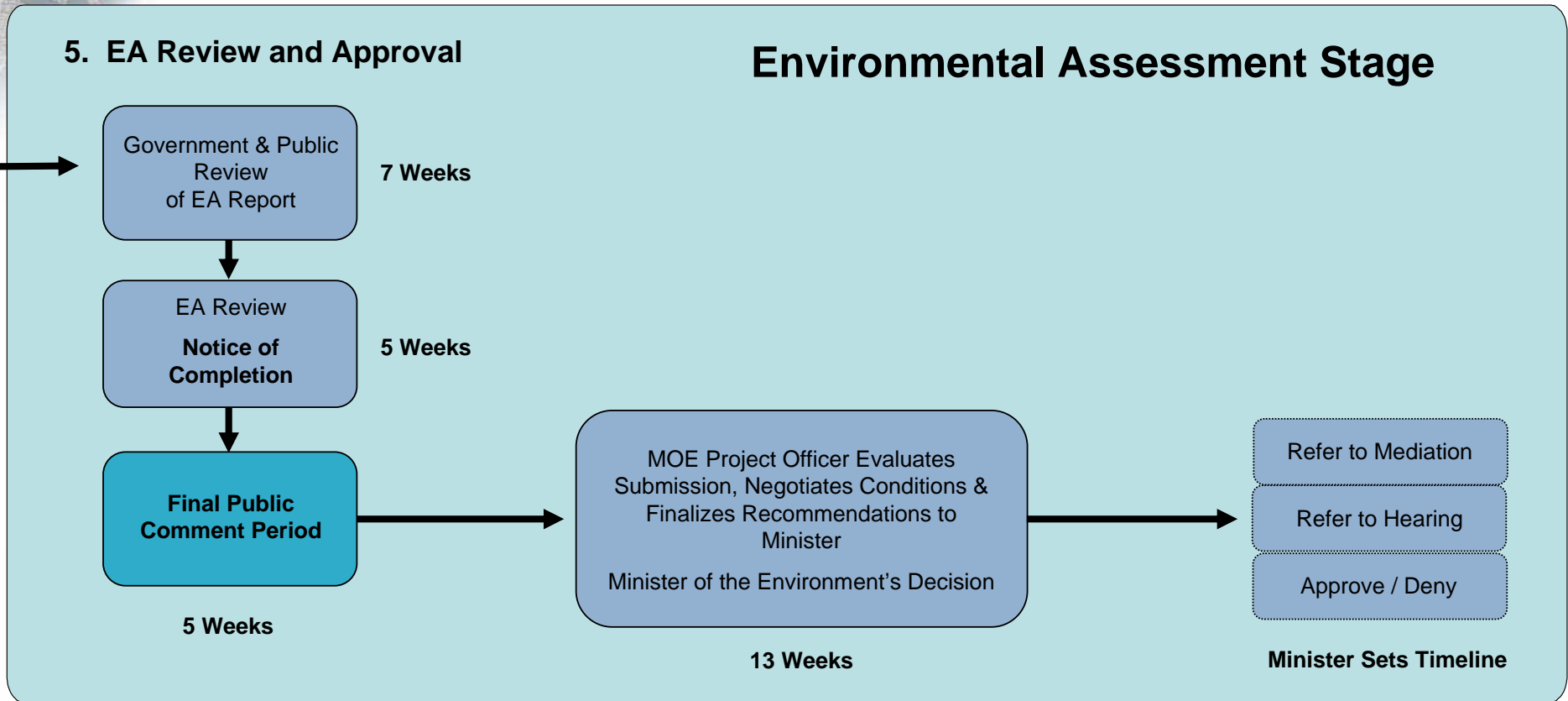


Gartner Lee EarthTech

WATERFRONT WEST  
STREETCARS



# OVERVIEW OF THE INDIVIDUAL EA PROCESS



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# ALTERNATIVE CORRIDORS



Gartner Lee EarthTech

WATERFRONT WEST  
STREETCARS



# SCREENING CRITERIA FOR THE ALTERNATIVE CORRIDORS

***To what extent will a streetcar route within the alternative corridor ...***

- 1. Optimize the frequency, speed, and reliability of the streetcar service along the route between south Etobicoke and downtown Toronto?***
  - The corridor must allow for routes that would optimize the frequency, speed, and reliability of transit service (compared to the existing level of service) in order to achieve the purpose of the undertaking.
  - The operation of the streetcar may affect the flow of auto, bicycle and pedestrian traffic depending on the location and configuration of the streetcar route. To be carried forward for further consideration, the corridor must improve current transit deficiencies and minimize, to the greatest extent possible, adverse effects on the existing levels of service for vehicular, bicycle and pedestrian traffic.
- 2. Help overcome the existing and projected future transportation deficiencies (levels of service for transit, auto, bicycle and pedestrian traffic) through the corridor?***



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



# SCREENING OF THE ALTERNATIVE CORRIDORS

Screening Criteria	Alternative Corridor #1	Alternative Corridor #2	Alternative Corridor #3
<i>To what extent will a streetcar route within the alternative corridor optimize the frequency, speed, and reliability of the streetcar service along the route between south Etobicoke and downtown Toronto?</i>	<b>BEST</b>	<b>BEST</b>	<b>WORST</b>
<i>To what extent will a streetcar route within the alternative corridor help overcome the existing and projected future transportation deficiencies (levels of service for transit, auto, bicycle and pedestrian traffic) through the corridor?</i>	<b>BEST</b>	<b>BEST</b>	<b>WORST</b>



**Carried Forward**



**Carried Forward**



**Screened Out**



Gartner Lee EarthTech

**WATERFRONT WEST STREETCARS**



# SCREENING RESULTS FOR THE ALTERNATIVE CORRIDORS

## CARRIED FORWARD

- **Alternative Corridors # 1 and #2** offer the opportunity to develop various streetcar routes between Dufferin Street and Roncesvalles Avenue that will optimize the frequency, speed and reliability of the transit service through this area with minimal adverse effects on vehicular, bicycle and pedestrian traffic. Therefore, these alternatives have been carried forward for the development of alternative routes.

## SCREENED OUT

- **Alternative Corridor #3** does not create a high speed, high capacity streetcar connection because its movements are dependent upon the flow of vehicular traffic on King Street and Dufferin Street. Adding transit signal priority for the streetcar will not significantly improve transit service. Levels of service for auto, bicycle and pedestrian traffic are expected to worsen as volumes increase in the future. Therefore, this alternative has been screened out from further consideration.



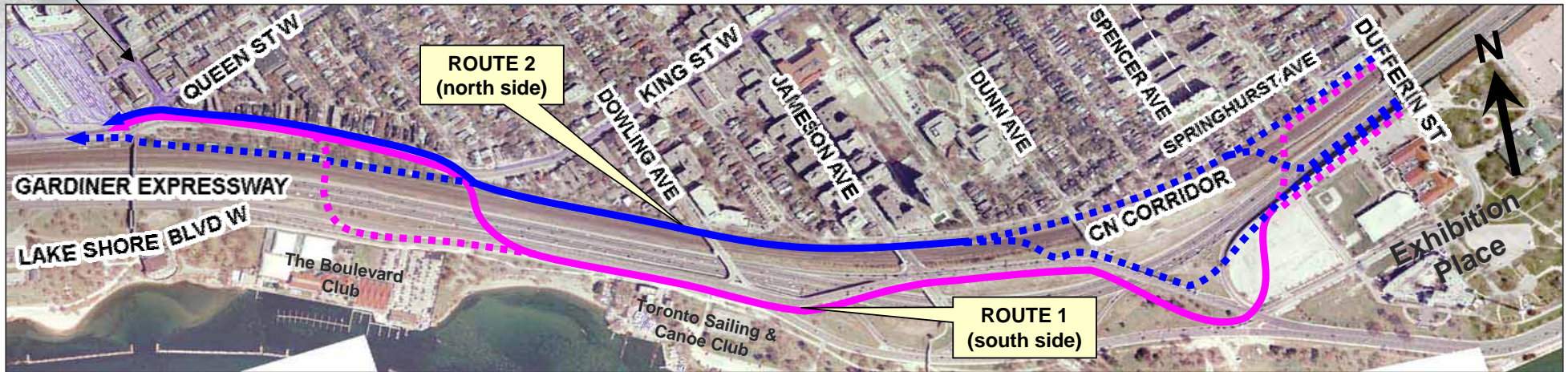
Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# INDIVIDUAL EA ALTERNATIVE ROUTES

RONCESVALLES AVE



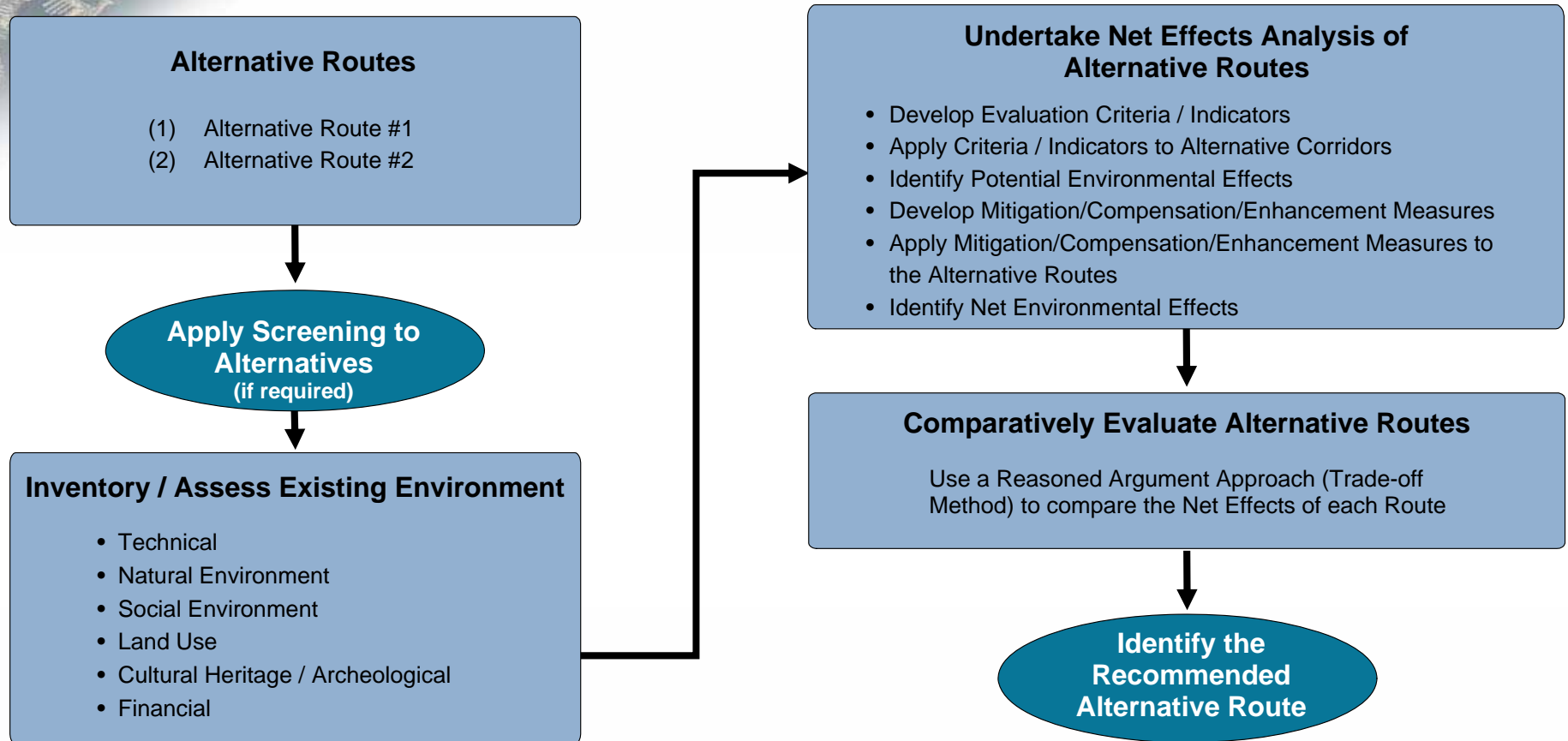
## LEGEND

- Route 1
- Route 1 Alternative
- Route 2
- Route 2 Alternative





# INDIVIDUAL EA ALTERNATIVE ROUTE EVALUATION METHODOLOGY



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Technical Considerations

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• Potential effects on intersection operations</li></ul>	<ul style="list-style-type: none"><li>• Potential to affect turning and through movement</li></ul>
<ul style="list-style-type: none"><li>• Potential effects on traffic operations</li></ul>	<ul style="list-style-type: none"><li>• Potential to affect travel times, number of general traffic lanes and traffic volumes on road links</li><li>• Potential to affect any mid-block crossings and transit priority and reduced link traffic progression due to signal priority for transit</li></ul>
<ul style="list-style-type: none"><li>• Potential effects on roadway parking/loading</li></ul>	<ul style="list-style-type: none"><li>• Potential to affect on supply of on-street parking and loading areas</li></ul>
<ul style="list-style-type: none"><li>• Potential increase in transit ridership (projected)</li></ul>	<ul style="list-style-type: none"><li>• Potential effect of location, degree of exclusive operation; and number of local stops on streetcar routes on projected transit ridership</li></ul>
<ul style="list-style-type: none"><li>• Potential increase in speed and improvement in Level of Service for streetcar users</li></ul>	<ul style="list-style-type: none"><li>• Effects of horizontal and vertical alignments</li><li>• Potential to affect streetcar speed, average travel time, frequency of stops and rider comfort</li></ul>
<ul style="list-style-type: none"><li>• Ability to meet transit ridership objectives</li></ul>	<ul style="list-style-type: none"><li>• Potential to affect on local and secondary catchments of riders as well as the accessibility and convenience of riders</li><li>• Potential to affect on walking distances to transit stops and transfer points</li><li>• Potential to affect on safety of ridership when accessing station</li></ul>
<ul style="list-style-type: none"><li>• Potential effect of using low-floor streetcars</li></ul>	<ul style="list-style-type: none"><li>• Degree to which route can accommodate future low floor streetcars and current streetcar fleet</li></ul>



Gartner Lee EarthTech

WATERFRONT WEST  
STREETCARS



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Technical Considerations

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential effects on transit network integration</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect on transit network connectivity and transfers between TTC and GO transit services, and among other TTC services</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on urban expressways</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect mainline urban expressways</li><li>• Potential to constrain future urban expressway redevelopment</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential constructability issues</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to provide adequate work area for construction; the proximity and potential impacts to adjacent buildings and infrastructure and/or the proximity of planned adjacent infrastructure</li><li>• Potential impacts to existing and future GO transit and CN operators</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential operation and maintenance requirements</b></li></ul>	<ul style="list-style-type: none"><li>• Potential configuration and alignment of track</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential approval requirements</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to require federal, provincial or local permits or approvals</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Natural Environment

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• Potential effects on terrestrial habitats, functions and biota</li></ul>	<p>Potential effects on:</p> <ul style="list-style-type: none"><li>• Vegetation communities</li><li>• Wildlife and Wildlife Habitat</li><li>• Species at Risk or of Special Concern</li></ul>
<ul style="list-style-type: none"><li>• Potential effects on greenways/open spaces and natural linkages</li></ul>	<ul style="list-style-type: none"><li>• Potential effects on connectivity</li></ul>
<ul style="list-style-type: none"><li>• Potential effects on groundwater/surface water quantity during construction</li></ul>	<ul style="list-style-type: none"><li>• Potential for temporarily changing groundwater level during construction and adversely affecting biota within the dewatered area(s) and/or structural features (e.g., bridge abutments and retaining walls)</li><li>• Potential for temporary change in the flow of groundwater seeps (groundwater discharge)</li></ul>
<ul style="list-style-type: none"><li>• Potential effects on groundwater/surface water quality during construction</li></ul>	<ul style="list-style-type: none"><li>• Potential need for and extent of dewatering during construction</li><li>• If dewatering occurs, potential for requiring groundwater quality treatment</li><li>• Potential for discharged groundwater from dewatering operations to result in temporary adverse effects on surface water quality (and associated effects on local biota)</li><li>• Potential for spills related to construction equipment having a temporary adverse effect on groundwater/surface water quality (and associated biota)</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Natural Environment

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential effects on groundwater/surface water quantity during operation</b></li></ul>	<ul style="list-style-type: none"><li>• Potential for long-term changes in groundwater level and long-term adverse effects to biota within the dewatered area(s) and/or to structural features (e.g., bridge abutments and retaining walls)</li><li>• Long-term change in the flow of groundwater seeps (groundwater discharge) at the base of steeper slopes or retaining walls</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on groundwater/surface water quality during operation</b></li></ul>	<ul style="list-style-type: none"><li>• Potential of newly designed groundwater discharges to result in long-term adverse effects on surface water quality and associated effects on biota</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on existing contaminated soil in the study area</b></li></ul>	<ul style="list-style-type: none"><li>• Presence or absence of soil impacts in study area</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects of existing contaminated groundwater in the study area</b></li></ul>	<ul style="list-style-type: none"><li>• Presence or absence of groundwater impacts in study area</li></ul>



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Land Use

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential effects on approved/proposed land uses</b></li></ul>	<ul style="list-style-type: none"><li>• Potential land takings from identified approved and/proposed development sites</li></ul>
<ul style="list-style-type: none"><li>• <b>Conformity with existing Official Plan designations and zoning</b></li></ul>	<ul style="list-style-type: none"><li>• Whether or not the proposed route is anticipated by the planning document and whether or not the planned route will have a positive or negative impact on the planned urban structure</li></ul>
<ul style="list-style-type: none"><li>• <b>Conformity with existing Regional and Provincial plans and policies</b></li></ul>	<ul style="list-style-type: none"><li>• Whether or not the proposed route is anticipated by the planning document and whether or not the planned route promotes development intensification in proximity to station locations and subsequently enhances transit ridership</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential effects on projected population / employment growth in the Study Area</b></li></ul>	<ul style="list-style-type: none"><li>• Whether or not the planned route promotes development intensification in proximity to station locations and subsequently enhances transit ridership</li></ul>



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Social Environment

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential for displacing existing residences, businesses, institutions and recreational features</b></li></ul>	<ul style="list-style-type: none"><li>• Potential for displacement of residences, businesses institutions, and/or recreational features located within dedicated ROW</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential short-term effects of noise, vibration, and air quality on existing residences, businesses, institutions, and recreational features as a result of construction (disturbance)</b></li></ul>	<ul style="list-style-type: none"><li>• Sensitivity of residences, businesses institutions and/or users of recreational features within area of influence for noise, vibration, and air quality</li><li>• Qualitative effect on air quality due to changes in vehicle delays/speeds and dust as a result of construction</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential short-term effects of construction on the use of roadways, driveways, sidewalks and pathways (restrictions to property access, including access to the waterfront)</b></li></ul>	<ul style="list-style-type: none"><li>• Potential effect on vehicular traffic from lane closures</li><li>• Potential effect on residences from driveway closures</li><li>• Potential effect on pedestrians from sidewalk closures</li><li>• Potential effect on users of recreational pathways from closure</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential long-term effects of noise, vibration and air quality on existing residents, businesses, institutions and recreational features</b></li></ul>	<ul style="list-style-type: none"><li>• Sensitivity of residences, businesses, institutions, and/or users of recreational features within area of influence for noise, vibration, and air quality</li></ul>



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Social Environment

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• <b>Potential long-term effects on use of roadways, driveways, sidewalks and pathways (changes to property access, and access to the waterfront)</b></li></ul>	<ul style="list-style-type: none"><li>• Potential delays to vehicular traffic on roadways</li><li>• Potential for adversely affecting pedestrian and bicycle facilities and operations (e.g., more difficult pedestrian crossings, reductions in the width of sidewalks, removal or reduction in size of bikes lanes)</li><li>• Potential to affect access to the waterfront</li><li>• Potential to affect property access points</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential opportunities for urban design and streetscape improvements</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to integrate urban design/streetscaping measures along streetcar ROW</li><li>• Potential for providing aesthetic appeal along streetcar ROW</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential for requiring private property</b></li></ul>	<ul style="list-style-type: none"><li>• Potential effect on existing property limits and private property</li></ul>
<ul style="list-style-type: none"><li>• <b>Potential short- and long-term effects on cultural events in the study area</b></li></ul>	<ul style="list-style-type: none"><li>• Potential to affect cultural events within or near the study area</li></ul>



Gartner Lee EarthTech

WATERFRONT WEST  
STREETCARS



# INDIVIDUAL EA EVALUATION CRITERIA AND INDICATORS

## Cultural Heritage and Archeological Resources

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• Potential effects to archaeological resources</li></ul>	<ul style="list-style-type: none"><li>• Potential for disturbance or destruction of known archaeological sites</li><li>• Potential for disturbance of areas of archaeological potential</li></ul>
<ul style="list-style-type: none"><li>• Potential effects to built heritage features and cultural landscapes</li></ul>	<ul style="list-style-type: none"><li>• Potential for displacement or disruption of built heritage resources</li><li>• Potential for displacement or disruption of cultural heritage landscape resources</li><li>• Significance of displaced or disrupted cultural landscape resources</li></ul>

## Financial

Proposed Criteria	Indicators
<ul style="list-style-type: none"><li>• Potential capital costs</li></ul>	<ul style="list-style-type: none"><li>• Potential effect on project budget</li></ul>
<ul style="list-style-type: none"><li>• Potential land acquisition costs</li></ul>	<ul style="list-style-type: none"><li>• Potential effect of design/location on private land holdings</li></ul>
<ul style="list-style-type: none"><li>• Potential operation and maintenance costs</li></ul>	<ul style="list-style-type: none"><li>• Potential effect of design/location on operation/ maintenance costs</li></ul>



Gartner Lee EarthTech

WATERFRONT WEST  
STREETCARS



# INDIVIDUAL EA THE NEXT STEPS . . .

- ❖ Comments received from the public by **September 15, 2007** will be considered when confirming the screening of alternative corridors, finalizing the alternative routes, finalizing the evaluation methodology and finalizing the evaluation criteria and indicators.
- ❖ The finalized evaluation methodology and evaluation criteria will be applied to the finalized alternative routes and a Recommended Route will be identified.
- ❖ The net effects analysis and the Recommended Route will be presented to you at PIC#3 in the fall.

Individual EA Study	2006			2007												2008			
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb		
Terms of Reference											<b>ToR Approval – July 4/07</b>								
		PIC #1																	
EA																			
											PIC #2	PIC #3	PIC #4				EA Submission to MOE		



Gartner Lee EarthTech

**WATERFRONT WEST  
STREETCARS**



## HOW CAN YOU PARTICIPATE ?

The study involves public consultation for both the EA Modification and the Individual EA. You can choose to participate in a number of ways:

- ❖ Visit the project website ([www.toronto.ca/involved](http://www.toronto.ca/involved))
- ❖ Attend the PIC's, talk to the Project Team and give us your comments
- ❖ Contact the Project Team using the contact information provided
- ❖ Complete and send us the comment forms by prepaid mail



Gartner Lee



EarthTech

**WATERFRONT WEST  
STREETCARS**



## CONTACT US

- ❖ Do you have any comments or questions?
- ❖ Want to get on our project mailing list?
- ❖ Please contact:

**David Nagler**  
**Public Consultation Unit**  
**City of Toronto**  
**Metro Hall, 19<sup>th</sup> Floor**  
**55 John Street**  
**Toronto, Ontario M5V 3C6**

**Tel: (416) 338-2830**  
**Fax: (416) 392-2974**  
**TTY: (416) 397-0831**  
**Email: [dnagler@toronto.ca](mailto:dnagler@toronto.ca)**

**Website: [www.toronto.ca/involved](http://www.toronto.ca/involved)**

- ❖ Pick up a comment sheet, leave it today, fax it, or use the postage-paid envelop.



Gartner Lee

EarthTech

**WATERFRONT WEST  
STREETCARS**