

Welcome to the Seventh  
Public Information Open House  
for the

**DETROIT RIVER INTERNATIONAL CROSSING**  
E N V I R O N M E N T A L A S S E S S M E N T

November 24 & 25, 2008

>> Please Sign In <<

Members of the Study Team are available to discuss any questions that you may have.

Canada



U.S. Department of Transportation  
**Federal Highway  
Administration**



Ontario



The Detroit River International Crossing Study follows an Environmental Assessment process that is a proven, legislated process used throughout Ontario and Canada on infrastructure projects, ranging from simple road widenings to complex long span bridges.

The task of completing the DRIC EA falls to the Border Transportation Partnership, a dedicated bi-national team of leading engineers, planners, and policy experts from Transport Canada, the Ontario Ministry of Transportation, the U.S. Federal Highways Administration, and the Michigan Department of Transportation.

To provide for the safe, efficient and secure movement of people and goods across the Canada-U.S. border in the Detroit River area to support the economies of Ontario, Michigan, Canada and the U.S.

To construct a new end-to-end transportation system that will link Highway 401 to the U.S. interstate system with inspection plazas and a new river crossing in between.

In meeting the purpose, this study must address the following regional transportation and mobility needs:

- Provide new border crossing capacity to meet increased long-term travel demand;
- Improve system connectivity to enhance the continuous flow of people and goods;
- Improve operations and processing capabilities at the border; and
- Provide reasonable and secure crossing options (i.e. network redundancy).

The Study Team seeks to implement transportation solutions which minimize community and environmental impacts as much as possible. In particular, the Canadian Study Team is looking to address the local communities' goals to:

- *Improve quality of life;*
- *Take trucks off local streets; and,*
- *Improve traffic movement across the border.*

The Windsor-Essex Parkway will be the most significant highway investment made in Ontario history. It reflects a commitment by the Governments of Ontario and Canada to build the right solution. It is one-of-a-kind in terms of the scale and uniqueness of its community enhancement features for any highway, anywhere in Ontario. It provides for the safe, efficient and timely movement of border-bound traffic and goods while directly addressing community concerns and goals.

## SUPPORTS OUR ECONOMY

Implementation of The Windsor-Essex Parkway, and the new plaza and crossing, will have an overall positive effect on the regional, provincial and national economy by ensuring the safe and efficient movement of people, goods and services across the Canadian - United States border .

In addition, construction of the Recommended Plan will create 12,000 project related jobs in Ontario.

## REDUCES TRANSPORTATION RELATED AIR QUALITY IMPACTS

With its wide right-of-way, and improvements in traffic flow achieved by eliminating the stop-and-go conditions at the current traffic signals in the Highway 3/Huron Church Road corridor, the implementation of The Windsor-Essex Parkway will reduce transportation related air quality impacts in the Windsor-Essex region.

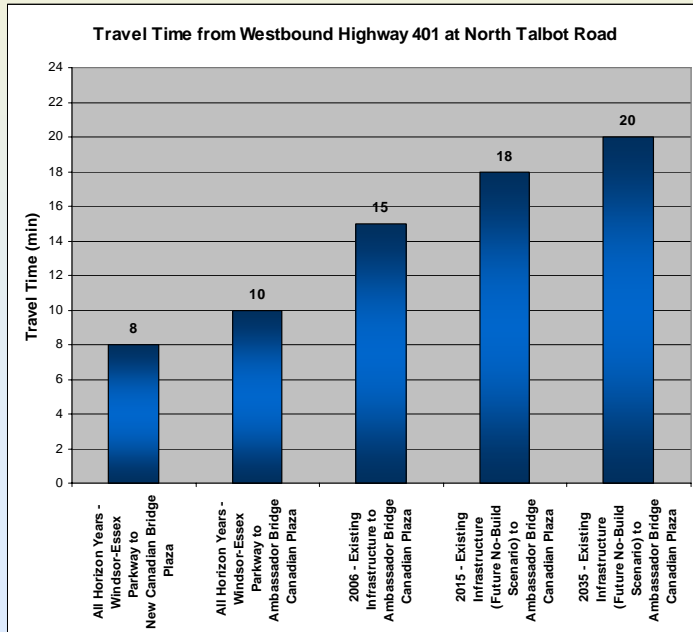
## REDUCES NOISE IMPACTS

Noise levels in many areas will be reduced by the combination of lowering the highway, eliminating stop and go traffic on the route to the border, and the strategic placement of tunnels, noise barriers and earth berms.



## NUMEROUS TRANSPORTATION BENEFITS

- Significant improvement to regional mobility by removing long distance truck traffic from local streets and providing full freeway access to and from the border.
- Significant improvement in travel times from North Talbot Road to the proposed crossing, as well as to the Ambassador Bridge.
- Implementation of an Automated Traffic Management System (ATMS) including variable message signs, closed circuit television, vehicle detection, and queue warning systems to assist in reducing travel delay, travel time uncertainty and to improve safety.
- The provision of a roundabout at the Windsor-Essex Parkway/Highway 3 interchange ramp terminals and the Howard Avenue Diversion will provide for a safe and efficient connection between these two important roadways and allows for incorporation of gateway features.
- Diversion of Howard Avenue discourages infiltration of longer distance traffic on Howard Avenue in the City of Windsor.



## PROTECTS OUR VALUABLE WILDLIFE AND FISHERIES HABITAT

- Habitat restoration and enhancement to create new and higher quality habitat for endangered species, resulting in a net gain of quantity and quality of natural habitat. This will include permanent protection of critical habitat for a local population of the endangered Butler's gartersnake.
- Tunnels, such as the Oakwood Tunnel, will reduce existing barriers for wildlife and enhance wildlife movement across the corridor.
- Fish locks will be incorporated to provide fish passage in the Cahill and Lennon Drains in order to maintain access to upstream spawning areas.
- The removal of 30 entrance culverts and the redesign of Wolfe Drain using natural design principles will lead to overall enhancements to fish habitat.
- Stormwater quality control within the highway corridor will lead to overall enhancements to water quality and net benefits to fish and fish habitat.

## PROTECTS OUR IMPORTANT NATURAL AREAS

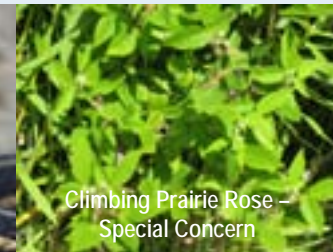
- Avoids significant natural areas protected by law.
- Over 300 acres of lands will be made available for recreational green space, enhancement or restoration.
- Some lands acquired for The Windsor-Essex Parkway may be available to be dedicated for protection, resulting in a net gain in the extent of designated natural areas.
- Opportunities will be explored for partnerships in land protection and enhancement.
- The areas for restoration and enhancement will result in the creation of additional Monarch habitat.



Eastern Foxsnake - Threatened



Butler's Gartersnake - Threatened



Climbing Prairie Rose –  
Special Concern

## IMPROVES COMMUNITY COHESION AND QUALITY OF LIFE

- Strategically located tunnels will result in improved community connections, and improve the quality of life.
- Improved cross border traffic flow and separation of local and international traffic will help reduce congestion on local roads.
- The addition of more than 300 acres of green space, will buffer residents from the freeway and service roads.
- New recreational opportunities will be provided with the creation of 20 km of recreational trails.

## INCLUDES A STATE OF THE ART LANDSCAPE PLAN

- Significant buffer areas between the roadway and the neighbourhoods.
- Protection, restoration and enhancement of ecological areas.
- Improvements to community connectivity and 20km of recreational trails.



The **Canadian Environmental Assessment Act** (the Act) applies to federal authorities when they contemplate certain actions in relation to a *project* (e.g. funding and certain regulatory permits). Federal departments that have an environmental assessment (EA) responsibility in relation to a project are called Responsible Authorities (RAs).

**Transport Canada (TC)** is an RA for the Detroit River International Crossing project because TC is a co-proponent of the project, together with the Ontario Ministry of Transportation. As an RA, TC must ensure that an environmental assessment is carried out under the Act. In addition, **Fisheries and Oceans Canada (DFO)** is also an RA in relation to certain water crossings along the The Windsor-Essex Parkway alignment. **The Windsor Port Authority** also has an EA responsibility under the *Canada Port Authority Environmental Assessment Regulations*. The DRIC study has been designed to coordinate the federal and provincial EA requirements.

The CEAA process was formally initiated in March 2006, and a Notice of Commencement was posted on the Canadian Environmental Assessment Register, registry number 06-01-18170. Other Federal authorities who are actively participating in the assessment include:

Environment Canada

Health Canada

Canada Border Services Agency

Federal authorities have been participating in the coordinated DRIC EA process since it began in 2005, by reviewing the work plans to ensure that the information being collected as part of the DRIC process will be sufficient to meet Federal information needs under CEAA.

Draft federal Environmental Assessment Guidelines have been developed to outline the specific requirements of the CEAA process. The guidelines were made available for public review in December 2006, and are currently being updated to reflect public input. In addition, a public participation plan was developed, to describe the opportunities the public will have to provide input directly into the federal process. Both of these documents are available on the CEAA website at [www.ceaa.gc.ca](http://www.ceaa.gc.ca).

For more information about the CEAA process, please contact:

**Mr. Mohammad Murtaza**

Senior Program Officer

Canadian Environmental Assessment Agency

55 St. Clair Avenue East

9<sup>th</sup> Floor, Room 907

Toronto, Ontario M4T 1M2

Tel: 416-952-1585, Fax: 416-952-1573

Email: [mohammad.murtaza@ceaa-acee.gc.ca](mailto:mohammad.murtaza@ceaa-acee.gc.ca)

**Ms. Kaarina Stiff**

Environmental Assessment Project Manager

Transport Canada

330 Sparks Street

Place de Ville, Tower C

Ottawa, Ontario K1A 0N5

Tel: 613-990-2861, Fax: 613-990-9639

Email: [stiffk@tc.gc.ca](mailto:stiffk@tc.gc.ca)

This study is being undertaken through a coordinated federal-provincial Environmental Assessment (EA) process. Both governments have agreed to coordinate their respective EA processes as outlined in the *Canada-Ontario Agreement on EA Cooperation* (November, 2004), which states that federal and provincial governments:

*“will coordinate the environmental assessment processes whenever projects are subject to review by both jurisdictions... The agreement maintains the current level of environmental standards and the legislative and decision-making responsibilities of both governments. While projects requiring both provincial and federal environmental assessment approvals will still require separate approvals, decisions will be based on the same body of information and there will be an ability to make decisions concurrently”.*

The federal EA process was initiated early in the project planning stages in order to maximize opportunities for coordination with the provincial EA process.

All technical studies being prepared as part of the provincial individual EA process will form the basis for meeting the requirements of the *Canadian Environmental Assessment Act*.

Federal departments provided input into the development of the Work Plans developed for each of the various disciplines required for this study, as part of the coordinated process.

The Detroit River International Crossing Partnership, composed of the Federal Highway Administration, the Michigan Department of Transportation, Transport Canada, and the Ontario Ministry of Transportation, is committed to providing an end-to-end solution for additional border crossing capacity in southwest Ontario-southeast Michigan that will be publicly owned in both countries.

The State of Michigan will own the U.S. portion of the bridge and the U.S. highway interchange; the U.S. inspection plaza will be owned by the State of Michigan and leased to the U.S. Federal Government; the Government of Canada will own the Canadian portion of the bridge and Canadian inspection plaza; and the Province of Ontario will own the Canadian access road.

The preferred delivery mechanism for the bridge is a public-private partnership in the form of a long-term concession agreement which will seek to maximize private sector participation and financing to avoid the use of taxpayer dollars. The intent is for the bridge to be financially self-sustaining from a reasonable toll charged to its users. It is envisioned that the owners will form a joint venture to oversee the concession contract with the private sector. The U.S. and Canadian governments are committed to private sector involvement for any combination of the design, financing, construction, operations, and/or maintenance of the bridge crossing. The Partnership will provide oversight of any private sector participation to ensure a safe, secure and efficient international border crossing.

#### Ownership:

The Windsor-Essex Parkway – Province of Ontario  
 Canadian Plaza – Government of Canada  
 Canadian portion of International Bridge – Government of Canada  
 U.S. portion of International Bridge – State of Michigan  
 U.S. Plaza – State of Michigan (leased to U.S. Federal Government)  
 U.S. Interchange with I75 – State of Michigan

## Study Process

An Ontario Environmental Assessment Terms of Reference, outlining the process for the Detroit River International Crossing Study, was prepared by the Partnership

### Terms of Reference Approved, September 2004



## Consultation

Public Information Open House, June 2003  
Meetings with private sector and agencies  
Meetings with Municipalities (Sarnia, Windsor, LaSalle, Essex County, Tecumseh, Amherstburg)

Coordinate the U.S. and Canadian work programs

Investigate engineering, social, economic, cultural and natural environment

Present assessment of impacts for public review

Incorporate public and agency input

### Detroit River INTERNATIONAL CROSSING STUDY

### Environmental Assessment Initiated, January 2005



Public Information Open Houses scheduled at study milestones

Meetings with public, private sector and agencies throughout the study

Community Consultation Group formed



## Study Process

Developed initial set of alternatives based on public, agency and municipal input, Guiding Principles and recommendations made by other studies

Identified sensitive community features

Sought public input on the level of importance of each evaluation factor

### Developed Illustrative Crossing, Plaza Locations & Connecting Route Alternatives in Canada and the U.S., Summer 2005



## Consultation

Initial Public Outreach, April 2005

Workshops

Tours of Detroit River area

Meetings with public, private sector municipalities and agencies

Public Information Open House 1, June 2005

Based on the assessment of Illustrative Alternatives, Area of Continued Analysis was identified

Assessment considered Specialists' Evaluation and public input to level of importance of Evaluation Factors

At-grade and below-grade alternatives considered

### Identified Area of Continued Analysis, Fall 2005



Workshops

Tours of Detroit River area

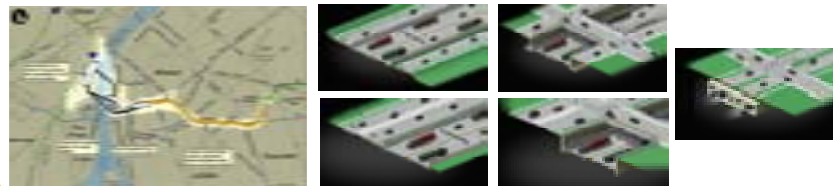
Meetings with public, private sector municipalities and agencies

Public Information Open House 2, November 2005

Established Guiding Principles in generating practical alternatives

Specific options generated based on community objectives, public, agency, municipal and specialists input

### Identified Practical Crossing, Plaza and Access Road Alternatives, Spring 2006



Public Workshops to define specific options and explore Context Sensitive Solutions

Tours of Detroit River area

Meetings with public, private sector municipalities and agencies

Public Information Open House 3, March 2006

## Study Process

Study Team sought and gathered information on key community features

Field data, modelling, design work and secondary source info, incorporated in analysis of impacts and benefits

Compile all analysis data

Used knowledge gained from analysis of original practical alternatives and community input to develop the Parkway alternative

Continued with foundation investigations for the plaza and crossing alternatives

Compiled data, finalize and present analysis to public

Improved Parkway alternative based on community input

Completed plaza/crossing foundation investigations

Finalized evaluation of practical alternatives

Selected Technically and Environmentally Preferred Alternative crossing, plaza and access road

### Present Preliminary Analysis of Practical Alternatives, December 2006



### Update of Preliminary Analysis of Practical Alternatives, August 2007



### Evaluation of Practical Alternatives & Selection of TEPA, June 2008



## Consultation

Context Sensitive Solutions Workshops

Tours of Detroit River area

Workshops

Meetings with public, private sector municipalities and agencies

Public Information Open House 4, Dec. 2006

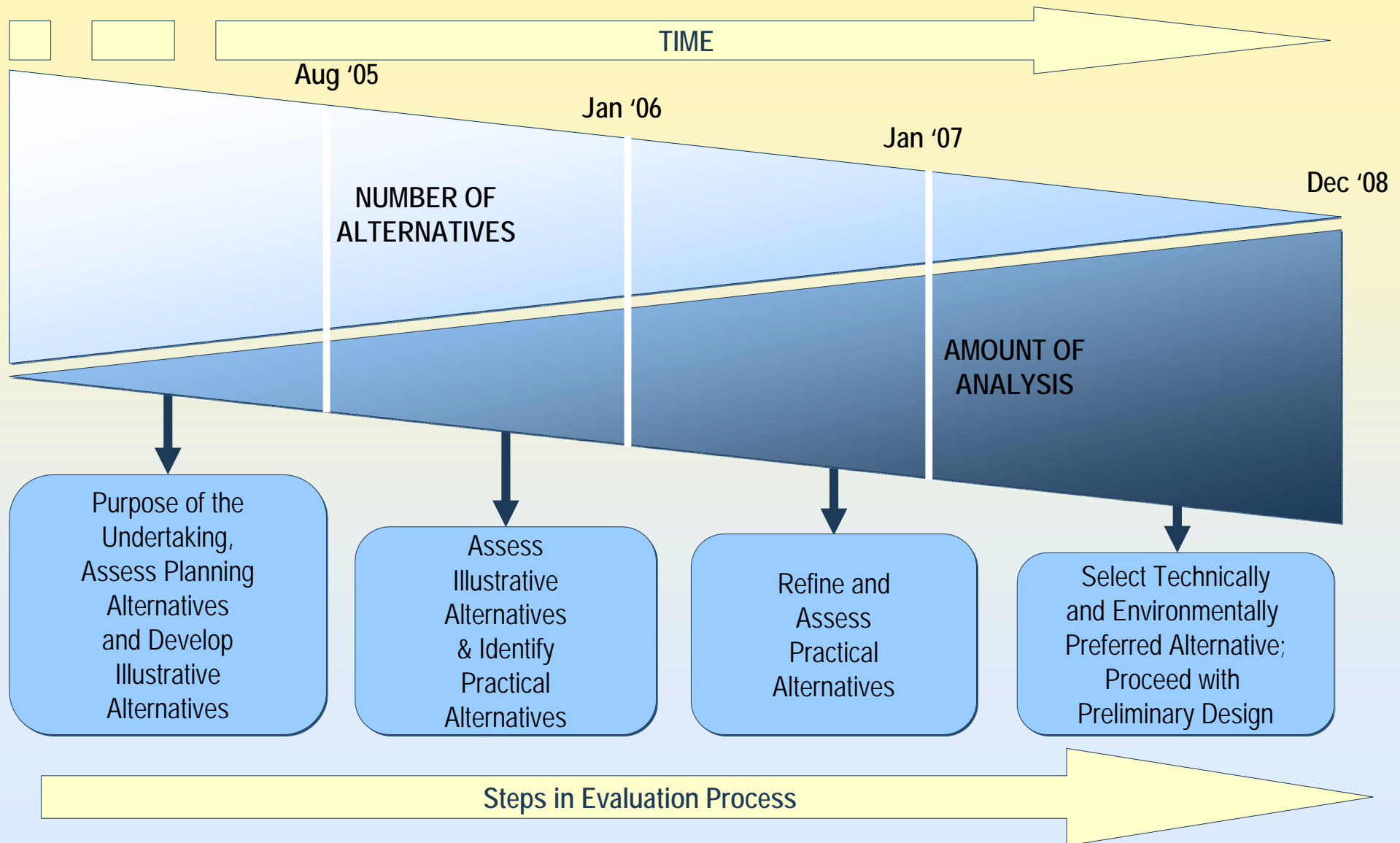
Meetings with public, private sector municipalities and agencies

Public Information Open House 5, August 2007

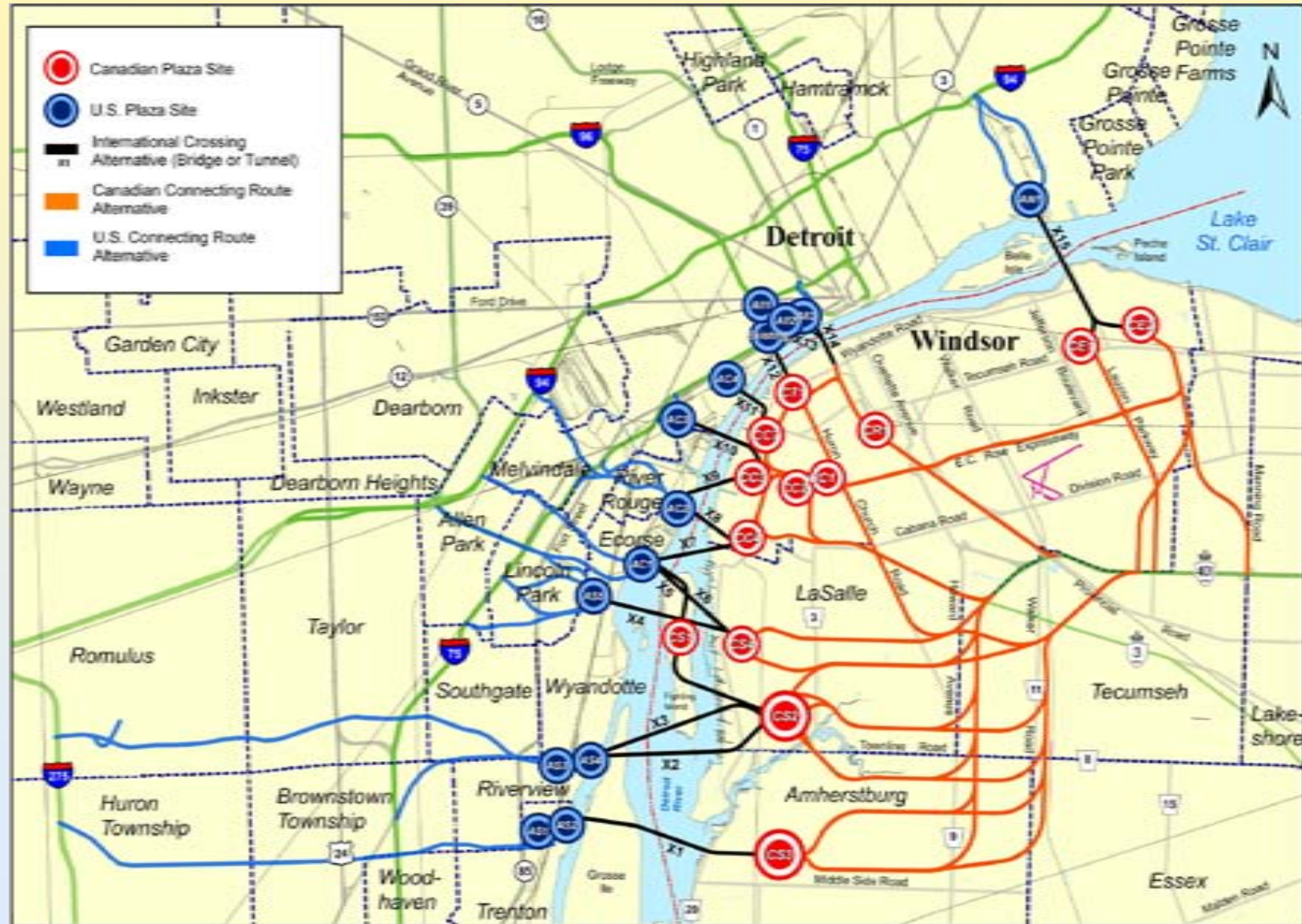
Workshops

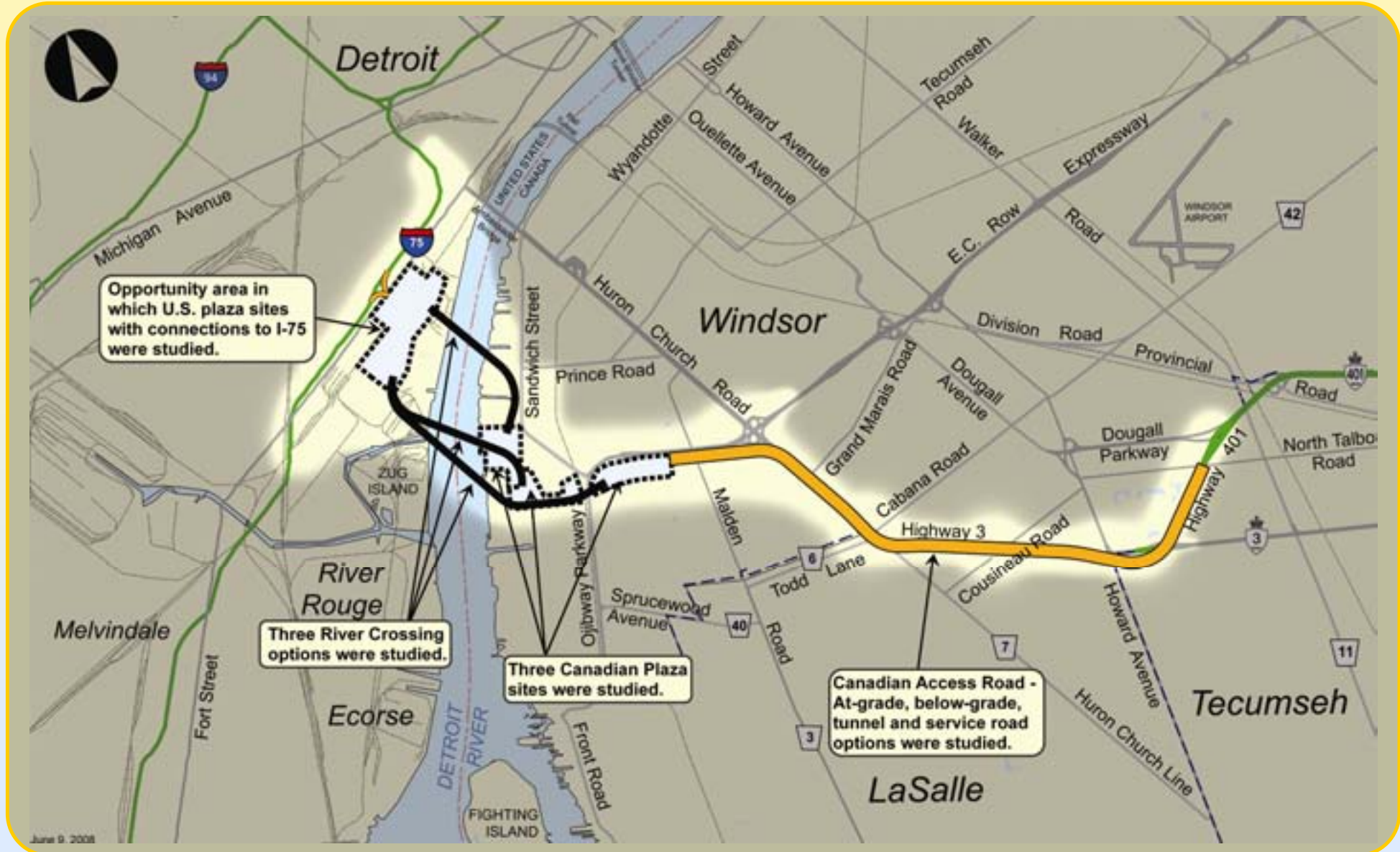
Meetings with public, private sector municipalities and agencies

Public Information Open House 6, June 2008











The evaluation process used during the Illustrative and Practical Alternatives phase to determine the Technically and Environmentally Preferred Alternative has involved two methods: **Reasoned Argument Method** and **Arithmetic Method**. The Reasoned Argument is the primary evaluation method with the Arithmetic approach used to substantiate the findings of the Reasoned Argument evaluation.

Reasoned Argument Method	Arithmetic Method
<p>Considers the <b>advantages</b> and <b>disadvantages</b> of each alternative and the relative significance of the impacts. The rationale to be used to select alternatives over others was derived from the following sources:</p> <ul style="list-style-type: none"><li>• National and international significance of the crossing;</li><li>• Government legislation, policies and guidelines;</li><li>• Existing Land Use and Municipal policy;</li><li>• Technical Considerations;</li><li>• Issues and concerns identified during consultation; and</li><li>• Study Team expertise.</li></ul>	<p>Considers both the level of importance of each environmental attribute (i.e. weight) and the magnitude of the impact or benefit (i.e. score). Generally, more weight is assigned to features that are felt to be more important in assessing impacts.</p> <p>Weighting scenarios were developed based on feedback from the general public and other stakeholders. The results were presented in the <i>Draft Generation and Assessment of Illustrative Alternatives Report, November 2005</i>.</p>

In evaluating alternatives using the Reasoned Argument or Arithmetic Method, the decision-making has:

- Incorporated input from municipalities, communities, stakeholders and government agencies, First Nations and the general public;
- Considered the context of the national and international significance of the Detroit River crossing;
- Been replicable and defensible;
- Used a common set of criteria in both countries for all alternatives;
- Been traceable and open; and
- Reflected the bi-national needs and requirements of the project.

The assessment of Crossing, Plaza and Access Road alternatives was conducted in accordance with the Environmental and Technical Work Plans, and is based on the following factors and measures:

Factors	Performance Measures for Assessment of Practical Alternatives	
Changes to Air Quality	Particulate Matter Gaseous Pollutants	
Protection of Community and Neighborhood Characteristics	Residences and Social Features Existing Businesses Residents and Social Features	Noise and Vibration Community and Neighbourhood Impacts to Access
Maintain Consistency with Existing and Planned Land Use	Land Use (existing and planned) Development Plans Contaminated Sites/Disposal Sites	
Protect Cultural Resources	Built Heritage Features Parklands	Archaeological Features
Protect the Natural Environment	Ecological Landscapes Communities/Ecosystems Population/Species	Surface Water/Groundwater Recharge Areas Other Natural Resources
Improve Regional Mobility	Highway Network Effectiveness Continuous/ongoing River Crossing Capacity Operational Considerations of Crossing System (River Crossing and Plaza)	
Cost and Constructability	Cost Construction Duration	Construction Risk Utility Impacts



**The Canadian Study Team identified Crossing B/Plaza B1 as the preferred crossing/plaza alternative** for the DRIC study because it:

- has the lowest impacts to community and neighbourhood features;
- provides the greatest benefits to regional mobility;
- was found to have the least construction risk of the alternatives; and,
- was preferred or comparable to the other alternatives in other factor areas.

- The Windsor-Essex Parkway is preferred or comparable to other alternatives in 6 of the 7 factors.
- Overall, the study team concluded that the advantages of The Windsor-Essex Parkway over the other alternatives outweighed the higher costs and constructability risks.
- **The Windsor-Essex Parkway was therefore identified as the preferred access road alternative.**

The sixth round of Public Information Open House meetings were held on **June 18, 2008 and June 19, 2008**. The public provided feedback on the evaluation of Practical Alternatives and selection of the Technically and Environmentally Preferred Alternative (TEPA).

## Frequently Provided Comments

- The Technically and Environmentally Preferred Alternative is an excellent choice
- Improve air quality to the highest standard possible
- Increase the number of tunnels
- Concerns were raised over the amount and maintenance of greenspace
- There must be greater protection of wildlife
- Neighbourhoods must be protected from noise and pollution
- Support for GreenLink
- Concerns over a possible increase in the noise of the area surrounding The Windsor-Essex Parkway
- Concerns regarding increases in noise throughout the area
- A preference for an increase in the amount of tunnels used throughout the route
- Inquiries regarding commencement of construction



| Attendance: 1000 + | Comment sheets received: 196 |

The sixth round of Public Information Open House workshops were held on **June 24 and 25, 2008**. The public provided feedback on the design of The Windsor-Essex Parkway, the design features of the preferred plaza and crossing alternatives, and the mitigation measures to reduce impacts.

## Frequently Provided Comments

- The Technically and Environmentally Preferred Alternative is the best choice for the environment
- Preference for GreenLink alternative
- Improve air quality
- Proximity of connections to the community
- Possibility of end-to-end tunneling
- The protection of the natural environment as an important priority to the community
- Support for the roundabout
- Inquiries regarding construction commencement
- Concerns regarding an increase to noise levels in the area
- Property acquisition concerns/comments
- Inquiries as to the types of noise barriers being utilized
- Requests for increased greenspace



| Attendance: 110 | Comment sheets received: 25 |

CSS public workshops were held on **July 23 and 24, 2008**. The public provided feedback on the TEPA design for the crossing, plaza and access road, and how to best fit new transportation facilities and access road into the community.

## Frequently Provided Comments

- Can an art deco theme be incorporated into the bridge design if a suspension bridge design is chosen?
- Inquiries regarding the amount of local labour that can be used in the construction of the bridge
- Requests to raise the planting areas
- Pedestrian and/or bicycle access on the bridge
- Requests for substantial landscaping
- Inquiries regarding costs
- What will the name for the bridge be?
- Consideration of an arc bridge as a potential bridge design option
- What are the different maintenance features of the bridge options
- Length of construction phase for the chosen bridge design
- Incorporation of a carpooling area into the overall design



| Attendance: 86 | Comment sheets received: 13 |



Following the last round of PIOHs in June 2008, the following refinements were made to the Technically and Environmentally Preferred Alternative (TEPA):

- The Windsor-Essex Parkway alignment has been shifted to integrate The Windsor-Essex Parkway into the E.C. Row Expressway corridor, further away from the Spring Garden area.
- The southern portion of Howard Avenue has been diverted to The Windsor-Essex Parkway interchange.
- A roundabout is included in The Windsor-Essex Parkway/Howard Avenue Diversion/Highway 3 interchange.
- The location and length of tunnels at Cousineau Road and Hearthwood Place has been revised.
- A cul-de-sac design and relocation of the proposed Huron Church Line intersection has been incorporated.
- Expanded buffer zones have been provided.

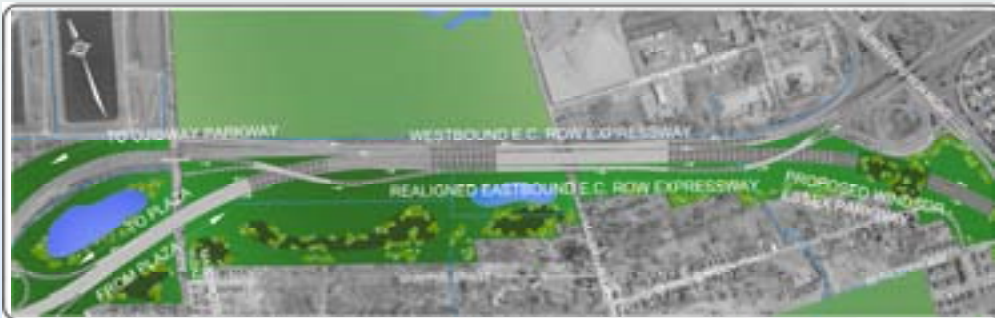
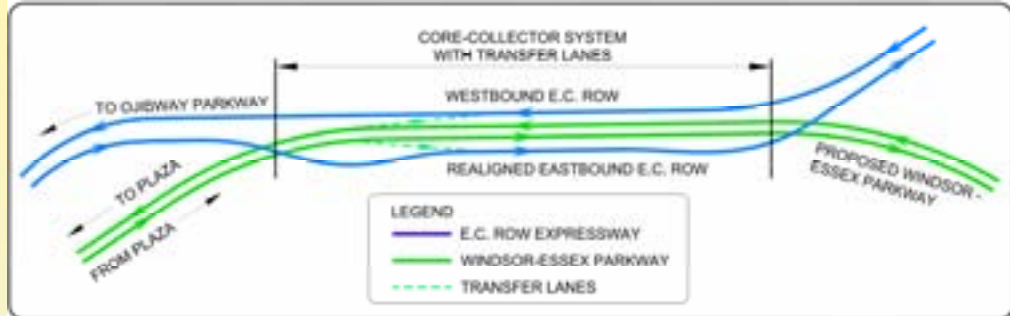
The above noted refinements to the TEPA have been included in the **Recommended Plan**

## Initial Design

- In the Spring Garden area, The Windsor-Essex Parkway was south of the E.C. Row Expressway corridor.

## Basis for Considering Refinement

- Proximity to the Spring Garden community.
- Loss of vegetation and important wildlife habitat.



## Refinement

- The proposed freeway and E.C. Row Expressway are integrated into a core-collector system.
- Eastbound and westbound lanes of E.C. Row Expressway diverge (becoming "collector" lanes) and the freeway portion of The Windsor-Essex Parkway is aligned between them (becoming the "core").
- Transfer lanes are provided, allowing access between collector lanes and core lanes.

## Key Benefits

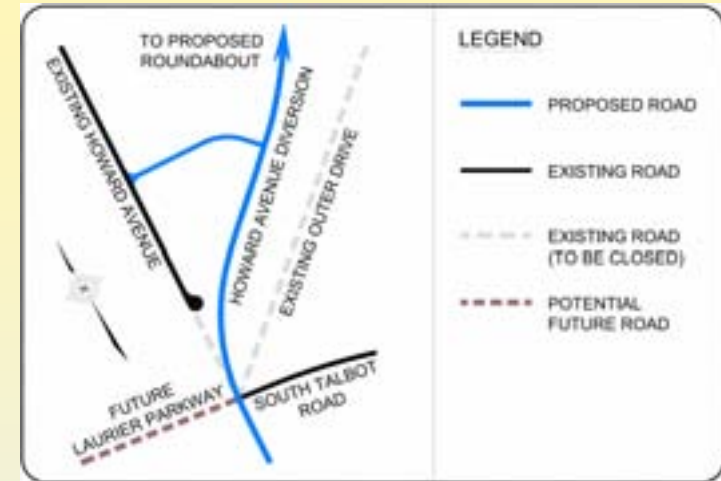
- Distance between the new freeway and Spring Garden Road is increased by up to 60 m.
- Reduces impact to predominantly forested natural areas by 25 acres (10 hectares).
- Elimination of ramp west of Malden Road reduces visual impact.
- Provides larger buffer area for Spring Garden residents.
- Preserves areas of significant wildlife habitat.

## Initial Design

- In the initial TEPA design, Howard Avenue was continuous through the Study Area and the future Laurier Parkway extended east of Howard Avenue to connect with the proposed Windsor-Essex Parkway / Highway 3 interchange.

## Basis for Considering Refinement

- Desire on behalf of residents and municipalities to divert long-distance traffic from Howard Avenue in the City of Windsor.



## Refinement

- Near South Talbot Road, Howard Avenue will be realigned and diverted northeasterly to connect to the proposed Windsor-Essex Parkway / Highway 3 interchange.
- Talbot Road will be accessible by a connecting road to the Howard Avenue diversion.

## Key Benefits

- Regional traffic is diverted away from Howard Avenue.
- Regional mobility improvements with direct connection of Howard Avenue to the Windsor-Essex Parkway / Highway 3 interchange.



## Initial Design

- The original concept design of The Windsor-Essex Parkway included a standard intersection at the junction of realigned Highway 3, the Windsor-Essex Parkway interchange ramps and the Howard Avenue Diversion.

## Basis for Considering Refinement

- The Municipal Advisory Group requested the study team to consider the use of roundabouts at one or more strategic locations in the corridor.
- Opportunity to optimize traffic operations and safety at this important junction.
- Opportunity to identify locations for gateway features.

## Refinement

- The intersection of realigned Highway 3, the proposed Howard Avenue diversion and the Windsor-Essex Parkway interchange ramps is replaced by a modern roundabout.
- The roundabout has an inscribed diameter of 65 metres and a two-lane cross-section.

## Key Benefits

- Optimum traffic operations at this junction.
- Reduce number and severity of collisions.
- Reduced engine idling.
- Reduced traffic queuing.
- Potential location for gateway features.



*Tunnel locations along The Windsor-Essex Parkway were developed strategically to maintain or provide new community connections as well as wildlife/habitat linkages while optimizing buffering to surrounding communities.*

## Initial Design

- The Cousineau tunnel was 120 m in length with the majority of its surface lying west of Cousineau Road.
- The Hearthwood tunnel, which was “L-shaped”, was 220 m in length over the new freeway and 165 m in length over the new service road.

## Basis for Considering Refinement

- A desire was expressed by the community to lengthen the Cousineau tunnel easterly.
- Constructability difficulties associated with “L-shaped” tunnel.



## Refinement

- The Cousineau tunnel has been extended to 170 m in length with the majority of its surface now lying east of Cousineau Road.
- The length of the Hearwood tunnel above the new freeway has been adjusted to coincide with the length above the new service road (165 m), eliminating the need for an “L-shaped” tunnel.

## Key Benefits

- Enhanced community connection across Cousineau tunnel.
- Eliminated constructability concerns associated with “L-shaped” tunnel.
- Maintains overall length of tunnelling in this area.

## Initial Design

- The intersection of Huron Church Line and the new service road was located in such a way that all residences on Huron Church Line maintained direct driveway access to Huron Church Line.

## Basis for Considering Refinement

- Community concern with close proximity of driveways to busy intersection.
- Concern with headlight glare from nearby intersection.

## Refinement

- The proposed intersection of Huron Church Line and the new service road has been shifted easterly.
- A short cul-de-sac has been introduced to provide access to the residences at the northern end of Huron Church Line.

## Key Benefits

- Increased buffer for residences near the intersection of Huron Church Line and the new service road.
- Safer and more convenient access for residences in close proximity to the intersection.
- Minimized roadway curvature on Huron Church Line.







*Optimum traffic operations  
Enhanced safety*

*Reduced engine idling  
Reduced traffic queuing*

## DRIVING THROUGH ROUNDABOUTS

### APPROACHING

- Slow down and watch for pedestrians on the approach to the yield line at the entrance of the roundabout. Stay in your lane.

### ENTERING

- **Visual checks:** Do visual checks of all vehicles already in the roundabout and those waiting to enter (including cyclists).
- **Look left:** Traffic in the roundabout has the right-of-way. When preparing to enter the roundabout, pay special attention to the vehicles to your left. Adjust your speed or stop at the yield line if necessary.
- **Adequate gap:** Watch for a safe opportunity to enter the roundabout. Enter when there is an adequate gap in the circulating traffic flow. Don't enter directly beside another vehicle already in the roundabout, as that vehicle may be exiting at the next exit.
- **Travel counter-clockwise:** Once in the roundabout, always keep to the right of the central island and travel in a counter-clockwise direction.
- **Keep moving:** Once you are in the roundabout, do not stop except to avoid a collision; you have the right-of-way over entering traffic.
- **Signal:** Always signal lane changes.

### EXITING

- **Signal:** Be sure to signal your exit and watch for pedestrians.
- **Maintain your lane:** Stay to the left if you entered from the left lane, or stay to the right if you entered from the right lane.
- **Maintain your position:** Maintain your position relative to other vehicles.
- **Signal intent to exit:** Once you have passed the exit before the one you want, use your right-turn signal.
- **Left lane exit:** If exiting from the left lane, watch out for vehicles on the right that continue to circulate around the roundabout.





## DEALING WITH PARTICULAR SITUATIONS AT A ROUNDABOUT

### CONSIDERING LARGE VEHICLES

Allow extra room alongside large vehicles (trucks and buses). Large vehicles may have to swing wide on the approach or within the roundabout. Give them plenty of room.

### PULL OVER FOR EMERGENCY VEHICLES

If you are in a roundabout when an emergency vehicle approaches, exit at your intended exit and proceed beyond the traffic island before pulling over. If you have not entered the roundabout yet, pull over to the right if possible and wait until the emergency vehicle has passed.

### DRIVING A LARGE VEHICLE IN A ROUNDABOUT

A driver negotiating a roundabout in a large vehicle (such as a truck or bus) may need to use the full width of the roadway, including the apron (a mountable portion of the centre island adjacent to the roadway) if provided. Prior to entering the roundabout, the vehicle may need to occupy both lanes. Give large vehicles plenty of room to manoeuvre.







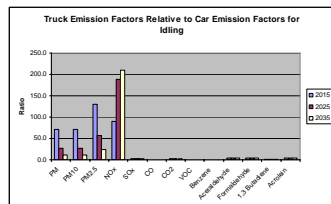
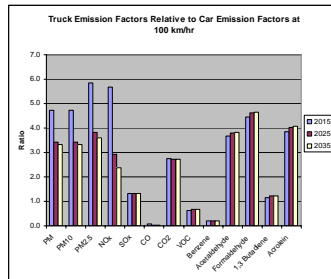
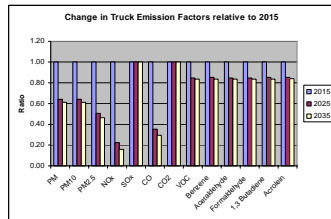


## BACKGROUND

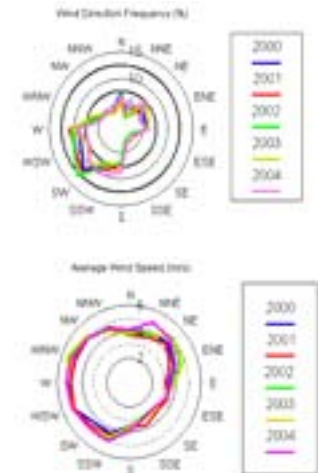
Air quality effects of the Recommended Plan and future “No-Build” have been assessed using a combination of existing air monitoring data and air dispersion modelling. The predictive air quality model used is specifically designed to assess impacts from roads and highways.

The assessment approach was developed in consultation with Federal and Provincial authorities.

The greatest effects will occur immediately adjacent to the highway. The existing air quality is greatly influenced by local and long range (cross-border) contaminants generated in upwind urban and industrial areas (e.g. the heavily industrialized areas of Detroit), nearby communities and beyond



A report by the Ministry of the Environment on Transboundary Air Pollution in Ontario (2005) indicates that for Windsor, eliminating all Ontario sources of emissions of PM<sub>2.5</sub> and NO<sub>2</sub> will have no impact on air quality during smog days due to the significant contribution from transboundary sources.



## PREDICTED AIR QUALITY IMPACTS

In summary, the air quality assessment shows that:

- Air quality impacts generally follow expected trends, based on the changes in vehicle emission factors and increases in traffic volumes over time.
- Air quality impacts decrease with increasing distance from roadway, with the most appreciable impacts occurring within 50-100 m of the roadway.
- The Windsor-Essex Parkway offers benefits over the future “No-Build” scenario by reducing stop-and-go conditions along the corridor and by providing a greater buffer zone between the roadway and residential areas.
- Air quality near the Plaza could decrease under unfavourable meteorological conditions, but the highest impacts will be within 50-100 m of the Plaza, away from residential receptors
- The results for the crossing indicate that the maximum predicted concentrations of PM<sub>2.5</sub> and NO<sub>x</sub> are generally similar to those of The Windsor-Essex Parkway.

## Mitigation Measures

A significant portion of the Recommended Plan is below grade, and a wide right-of-way with green space areas are provided throughout to buffer residential areas. These features in combination with the improvements to traffic flow associated with The Windsor-Essex Parkway will reduce transportation related air quality impacts in the Windsor-Essex region.

The construction of the Recommended Plan has the potential to affect the air quality in the vicinity of the site during the construction phase. As with any construction site, these emissions will be of relatively short duration and are unlikely to have any long-lasting effect on the surrounding area.

Dust impacts will be mitigated through the use of proper controls, such as:

- periodic watering of unpaved (unvegetated) areas;
- periodic watering of stockpiles;
- limiting speed of vehicular travel;
- use of water sprays during the loading, unloading of materials;
- sweeping and/or water flushing of the entrances to the construction zones; and,
- use of calcium chloride.

Road sweeping practices in accordance with maintenance standards will be employed to reduce silt loading on The Windsor-Essex Parkway. Modification of maintenance practices will also be considered to assist in reducing dust levels from the road surface.

Environment Canada  
2006 Air Pollutant Emissions for Ontario

SECTOR	TSP	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO
TOTAL INDUSTRIAL SOURCES	112,210	42,208	23,792	141,624	16,217	19,411	190,077
TOTAL STATIONARY FUEL COMBUSTION AND POWER GENERATION	36,879	20,440	11,281	33,723	13,719	18,251	136,090
Mobile Sources							
Air Transportation	3,000	3,000	2,600	1,841	21,835	1,269	17,493
Heavy-duty gasoline trucks	1,464	1,464	1,239	869	16,316	1,269	13,113
Heavy-duty diesel trucks	51	51	24	46	1,051	51	14,513
Light-duty diesel vehicles	43	43	40	11	324	131	513
Light-duty gasoline trucks	107	107	100	246	3,403	1,171	104,203
Light-duty gasoline vehicles	134	134	112	229	3,071	1,171	101,203
Marine Transportation	1,320	1,320	1,114	10,241	14,146	424	1,246
Motorcycles	5	5	4	4	461	125	5,611
Off-road use of diesel	3,251	3,251	2,814	1,811	30,254	1,251	30,241
Off-road use of gasoline/LPG/LNG	1,539	1,539	1,244	1,124	20,249	524	1,244
Rail Transportation	1,790	1,790	1,500	1,124	20,249	524	1,244
Tires, wear & brake lining	1,790	1,790	1,500	1,124	20,249	524	1,244
TOTAL MOBILE SOURCES	19,551	19,551	17,210	20,511	103,261	10,140	1,037,323
TOTAL INDUSTRIAL	151,769	64,649	35,073	175,347	30,036	37,662	326,167
TOTAL STATIONARY	36,879	20,440	11,281	33,723	13,719	18,251	136,090
TOTAL MISCELLANEOUS	3,251	3,251	2,814	1,124	20,249	524	1,244
Green Sources							
Agriculture	21,211	10,211	5,211	11	11	41,211	11
Construction Operations	41,211	11,211	5,211	11	11	11	11
Dust from Paved Roads	1,011,211	101,211	51,211	11	11	11	11
Dust from Unpaved Roads	1,011,211	101,211	51,211	11	11	11	11
Waste	1,244	1,244	1,011	11	1,244	1,244	1,244
Wine Making	4,211	1,244	1,011	11	1,244	1,244	1,244
Processed Lumber	1,244	1,244	1,011	11	1,244	1,244	1,244
TOTAL GREEN SOURCES	3,461,211	1,011,211	511,211	11	1,244	4,211	1,244
TOTAL ALL SECTORS (EXCEPT TRANSPORTATION AND FOREST FIRES)	1,011,211	1,011,211	861,211	175,347	41,265	51,873	1,037,323
PERCENT TOTAL	20%	10%	20%	33%	20%	1%	62%
Excl. of Substation Transportation							

## Future Work

Best practices for maintenance will be employed to minimize dust levels from operation of The Windsor- Essex Parkway and thereby minimizing the risk of localized elevated fine particulate matter levels.

## Conclusions

In general terms, the design of The Windsor-Essex Parkway (i.e. below grade, provision of buffer areas) will mitigate future transportation related air quality impacts within the study area for gaseous contaminants but may result in a higher concentrations of PM within a limited distance from The Windsor-Essex Parkway.

However, by implementing The Windsor-Essex Parkway, air quality improvements will be realized outside the Area of Continued Analysis, as cross-border traffic will be returned to the corridor, instead of infiltrating throughout local streets.

Overall, the air dispersion modelling demonstrated that the potential air quality impacts arising from either future "No-Build" or the Recommended Plan would be minimal and limited to nearby the roads.

## BACKGROUND

The Human Health Risk Assessment (HHRA) examined the potential for an overall adverse effect on human health for residents in the immediate area of the Recommended Plan. HHRA's determine if a particular chemical poses a significant risk to human health and can determine ways to reduce exposure so that there is no significant health risk to the public.

Since the Recommended Plan for the Detroit River International Crossing is currently in the planning stage, it is not possible to directly measure emissions associated with the proposed roadway, their potential effect or possible health outcomes in the community. Therefore, various mathematical models for the prediction of emission rates and pathways models were used.

*HHRA's evaluate whether current or future chemical exposures will pose health risks to a broad population such as a city or a community. HHRA's cannot be used to link individual illnesses to past exposures to chemicals.*

## PREDICTED HUMAN HEALTH RISKS

The results of the HHRA showed that:

- The Recommended Plan does not result in any increased risk arising from exposure to sulphur dioxide in comparison to the future "No Build" scenario.
- In general, the short and long term risks associated with exposure to NO<sub>2</sub> for the Recommended Plan are lower than the future "No Build" scenario, indicating that there is less risk to residents in communities surrounding The Windsor-Essex Parkway if the Recommended Plan is implemented.
- Future risks associated with exposure to PM<sub>2.5</sub> to residents in communities adjacent to the Recommended Plan are similar to background conditions, and will be lower than the future "No Build" scenario.
- The Recommended Plan will not result in increased incremental health risk over background conditions.

## CONCLUSION

Predicted concentrations of gaseous air pollutants, fine particulate matter, and volatile organic compounds for the future "No-Build" and the Recommended Plan scenarios are similar to background concentrations.

# Mitigation, Summary & Future Work – Protection of Community and Neighbourhood Characteristics

## Impacts and Benefits to Community and Neighbourhood Characteristics

- While the implementation of the Recommended Plan will result in impacts to adjacent properties, it will result in an overall benefit to the community by:
  - Removing trucks from local streets.
  - Providing more than 300 acres of green space buffer between The Windsor-Essex Parkway and adjacent residents.
  - Providing new recreational opportunities with the creation of 20 km of recreational trails.
  - Providing community connections using strategically located tunnels.



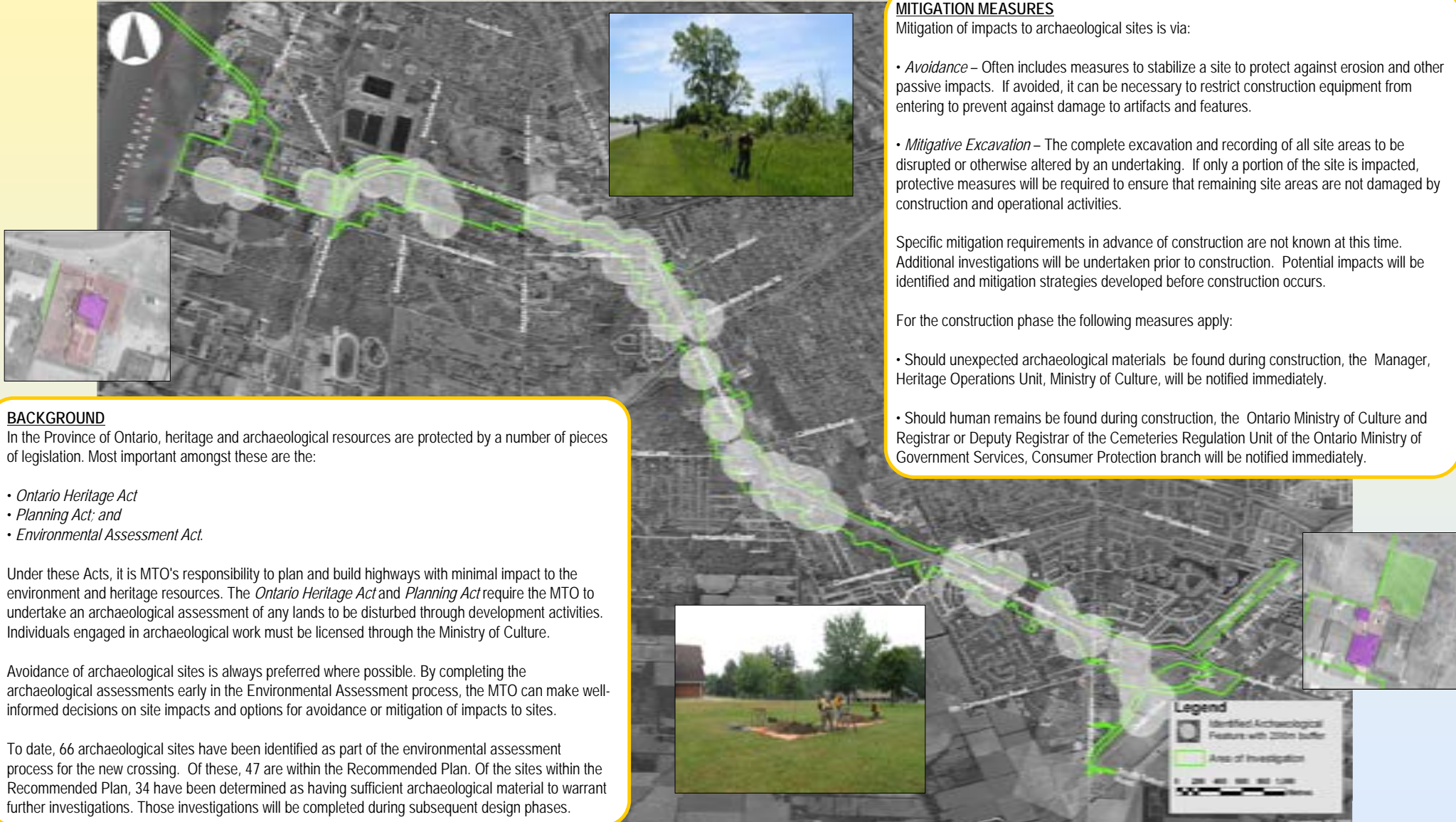
## Mitigation Measures

In addition to the benefits described to the left, impacts to community and neighbourhood characteristics will be mitigated as follows:

- For residents in the Ojibway Parkway/Spring Garden/Bethlehem area, the landscape will be protected and maintained as much as possible to enhance the lands between the residences and the facility.
- A landscape plan will be developed, which will include the following:
  - The development of clear urban design and aesthetic guidelines to guide all aspects of future design.
  - The use of landforming and vegetation strategies to improve views, aesthetics, ecological function and screening.
  - The inclusion of a multi-use trail system and pedestrian-accessible open space.
- The mitigation measures above will improve the visual character, aesthetic presence and landscape impact of the proposed Windsor-Essex Parkway, plaza and crossing.
- Affected property owners may initiate the sale of their property on a “willing seller-willing buyer” basis.
- During construction, a process will be implemented that allows disrupted residents to communicate their concerns.
- Regular communication will be maintained with emergency services and the municipalities throughout construction regarding changes to the road network, municipal services, etc.



# Protect Cultural Resources – Archaeological Features



## BACKGROUND

In the Province of Ontario, heritage and archaeological resources are protected by a number of pieces of legislation. Most important amongst these are the:

- *Ontario Heritage Act*
- *Planning Act*; and
- *Environmental Assessment Act*.

Under these Acts, it is MTO's responsibility to plan and build highways with minimal impact to the environment and heritage resources. The *Ontario Heritage Act* and *Planning Act* require the MTO to undertake an archaeological assessment of any lands to be disturbed through development activities. Individuals engaged in archaeological work must be licensed through the Ministry of Culture.

Avoidance of archaeological sites is always preferred where possible. By completing the archaeological assessments early in the Environmental Assessment process, the MTO can make well-informed decisions on site impacts and options for avoidance or mitigation of impacts to sites.

To date, 66 archaeological sites have been identified as part of the environmental assessment process for the new crossing. Of these, 47 are within the Recommended Plan. Of the sites within the Recommended Plan, 34 have been determined as having sufficient archaeological material to warrant further investigations. Those investigations will be completed during subsequent design phases.

## MITIGATION MEASURES

Mitigation of impacts to archaeological sites is via:

- *Avoidance* – Often includes measures to stabilize a site to protect against erosion and other passive impacts. If avoided, it can be necessary to restrict construction equipment from entering to prevent against damage to artifacts and features.
- *Mitigative Excavation* – The complete excavation and recording of all site areas to be disrupted or otherwise altered by an undertaking. If only a portion of the site is impacted, protective measures will be required to ensure that remaining site areas are not damaged by construction and operational activities.

Specific mitigation requirements in advance of construction are not known at this time. Additional investigations will be undertaken prior to construction. Potential impacts will be identified and mitigation strategies developed before construction occurs.

For the construction phase the following measures apply:

- Should unexpected archaeological materials be found during construction, the Manager, Heritage Operations Unit, Ministry of Culture, will be notified immediately.
- Should human remains be found during construction, the Ontario Ministry of Culture and Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Government Services, Consumer Protection branch will be notified immediately.

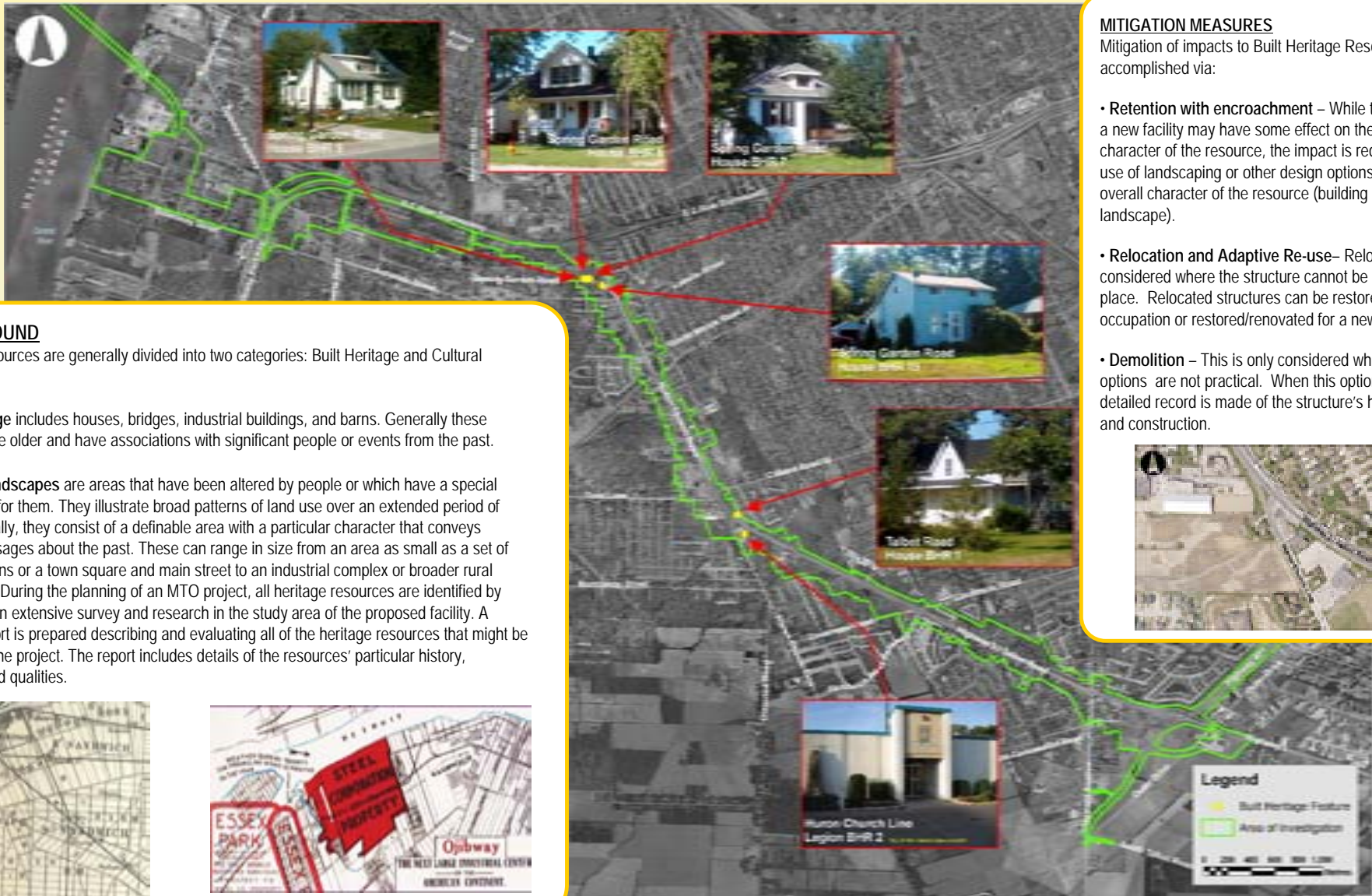


## BACKGROUND

Heritage resources are generally divided into two categories: Built Heritage and Cultural Landscapes.

**Built Heritage** includes houses, bridges, industrial buildings, and barns. Generally these structures are older and have associations with significant people or events from the past.

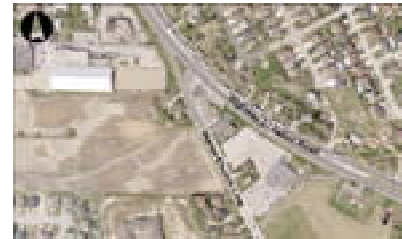
**Cultural Landscapes** are areas that have been altered by people or which have a special significance for them. They illustrate broad patterns of land use over an extended period of time. Generally, they consist of a definable area with a particular character that conveys cultural messages about the past. These can range in size from an area as small as a set of formal gardens or a town square and main street to an industrial complex or broader rural farmsteads. During the planning of an MTO project, all heritage resources are identified by completing an extensive survey and research in the study area of the proposed facility. A detailed report is prepared describing and evaluating all of the heritage resources that might be affected by the project. The report includes details of the resources' particular history, character and qualities.



## MITIGATION MEASURES

Mitigation of impacts to Built Heritage Resources can be accomplished via:

- **Retention with encroachment** – While the presence of a new facility may have some effect on the overall character of the resource, the impact is reduced through use of landscaping or other design options to protect the overall character of the resource (building or larger landscape).
- **Relocation and Adaptive Re-use**– Relocation is considered where the structure cannot be retained in place. Relocated structures can be restored for re-occupation or restored/renovated for a new use.
- **Demolition** – This is only considered when the above options are not practical. When this option is chosen, a detailed record is made of the structure's history, design and construction.



## Background

- Noise impacts associated with transportation projects are assessed based on policies developed by MTO and MOE.
- The assessment involves comparing the predicted noise levels associated with the Recommended Plan (future “Build”) to future noise levels based on a “No-Build” scenario.
- Mitigation is typically considered when the difference in noise levels between future “Build” and future “No Build” exceeds 5 dB.
- To be considered technically feasible, the measures must reduce this difference to 5 dB or less.
- There are two types of impacts considered relative to vibration:
  - Human response to building vibration; and,
  - Potential for structural damage to buildings.
- The threshold for perception of vibration by the average person is 0.14 mm/sec.
- Structural damage to buildings generally occurs when vibration levels reach 50 mm/sec.

## Predicted Noise and Vibration Impacts

- Based on the proposed noise barrier/berm locations, the Recommended Plan will not result in any adverse noise condition changes, and a number of residents will see a reduction in noise levels, as compared to the future “No-Build” scenario.
- The noise generated from the plaza and crossing will not result in noise impacts, as receptors are not in close proximity.
- Vibration levels measured for potentially vulnerable receptors were generally within the threshold of perception limit of 0.14 mm/sec.
- It is anticipated that construction activities could potentially cause temporary localized sound level impacts at receptor locations in close proximity.



## Mitigation Measures

Over the long-term:

- Noise levels in many areas will be reduced by the combination of lowering the highway, eliminating stop and go traffic on the route to the border, and the strategic placement of tunnels, noise barriers and earth berms.
- At all other locations, the difference between future “Build” and future “No Build” noise levels will be less than 5 dB.
- Vibration mitigation measures are not required for the Recommended Plan, as vibration levels are predicted to be within the acceptable thresholds.

During the construction phase (short-term), the following mitigation measures will be applied:

- Ensure that all construction equipment used is in good repair, fitted with functioning mufflers, and complies with the noise emission standards outlined in MOE guidelines.
- To the greatest extent possible, limit the most noisy construction activities to daytime hours.
- Construct permanent noise barriers and/or berms during the early phases of construction, where sequencing permits.
- Maximize the distance between the construction staging areas and nearby receptors.
- Maintain construction haul roads in good condition to avoid the loud noise caused by construction vehicles travelling over uneven road surfaces.
- Develop a process for receiving, investigating and addressing construction noise complaints received from the public.

## Future Work

Recommendations with respect to the location, height, etc. of noise barriers and/or berms or a combination of both will be reviewed during future design stages.

The use of sound absorptive material for barriers will be considered where appropriate.

Consultation with communities will continue during future design stages to provide opportunities for input on noise mitigation measures.



The natural heritage investigation is guided by government legislation, regulations, policies and guidelines within federal, provincial and municipal jurisdictions.

Identification of natural heritage features such as fisheries, vegetation, wildlife, and designated natural areas was an important part of this study. The analysis of natural heritage features entailed collection and review of existing information, personal communications with local experts and detailed, multi-season field investigations.

For the Recommended Plan, the natural heritage investigation served to update, verify and augment existing conditions information and to conduct effects assessment, including identification of mitigation and monitoring measures as it pertains to natural heritage. The impact assessment is specific to each biological discipline (i.e. vegetation, fisheries, wildlife, etc.) and is based on two general categories of impacts: displacement and disturbance effects.



## BACKGROUND

A detailed field investigation of fish habitat and fish presence was conducted in 2008 in areas of known or potential Northern Pike (*Esox lucius*) spawning and in areas that would likely be altered by the Recommended Plan. Northern Pike presence, and the presence of spawning habitat, was identified in Cahill and Wolfe Drains, Lennon Drain, Titcombe Drain and McKee Creek (the portion nearest the Detroit River). Most habitat within the study area can be categorized as having low overall sensitivity and significance with a few having moderate to high sensitivity.

## POTENTIAL IMPACTS AND MITIGATION MEASURES

Natural channel design principles will be implemented at Wolfe, Lennon, Cahill and McKee Drains to restore and enhance fish habitat altered by the Recommended Plan. Proposed fish habitat compensation measures will achieve a net gain in the productive capacity of fish habitat. A fish habitat compensation plan will be prepared to secure a *Fisheries Act* authorization prior to construction. Restoration and enhancement measures will target Northern Pike.

Fish locks/lifts will be employed at Lennon and Cahill Drains to maintain fish access to upstream spawning areas. At other watercourse crossings, fish-friendly culverts that are open bottom or countersunk, match existing stream bed elevations, backfilled with native substrate, etc. will be installed to maintain fish passage.

All in-water work will be performed in the dry and outside of the fish spawning season to prevent fish mortality. Fish isolated during unwatering activities will be captured and safely released upstream. Channel realignments will be constructed off-line and stabilized prior to reinstatement of flow.

Best management practices, such as erosion and sedimentation control, good housekeeping, containment systems, etc., will be used to prevent the entry of deleterious substances, including sediment, to watercourses, including the Detroit River.

Stormwater management practices (SWMPs) will be implemented for the bridge, plaza and The Windsor-Essex Parkway to enhance water quality and quantity in receiving watercourses, including the Detroit River.

No bridge piers will be placed in the Detroit River to avoid potential impacts on fisheries and navigation.



Photo by M. Larinier



Photo by M. Larinier

## MONITORING

- Conduct compliance monitoring during construction.
- Conduct effectiveness monitoring post-construction to determine the success of fish passage systems, stormwater management practices, natural channel design and fish habitat compensation measures.



## BACKGROUND

Species at risk surveys for wildlife were carried out in 2008 to confirm the presence of species identified in 2006 and to determine the population and distribution of species at risk. The presence of Golden-winged Warbler and the Red-headed Woodpecker identified in 2006 was not confirmed during 2008 field investigations.

A mark-recapture population study was initiated for Butler's gartersnake. The population study determined that approximately 200 adult snakes inhabit the study area. Over 50 neonates were also discovered confirming that the population is reproducing successfully. A number of hibernacula locations for this species were found in the same area.

A radiotelemetry study was initiated to track eastern foxsnake. One snake was captured, implanted with a transmitter and tracked to its winter hibernacula. Based on anecdotal evidence, eastern foxsnake hibernacula may exist within The Windsor-Essex Parkway.

## POTENTIAL IMPACTS AND MITIGATION MEASURES

The Windsor-Essex Parkway was realigned and redesigned to avoid significant wildlife habitat. Significant wildlife habitat will be protected from human disturbance.

Barriers will be installed to reduce the potential for wildlife/vehicle collisions that could result in wildlife injury or mortality. Other measures to reduce wildlife injury or mortality include capture and safe release of wildlife to protected areas and removal of wildlife habitat outside of the growing season. The bridge type, design and lighting will be determined during future design stages with consideration for reducing potential mortality to migratory and resident birds.

Wildlife habitat and movement corridors will be established along The Windsor-Essex Parkway to maintain or enhance wildlife passage and occupation.

Wildlife habitat to be retained will be isolated from construction activities using construction fencing. Wildlife habitat will be protected from disturbance during the operations phase using barriers, berming, light shielding and controlling human access.



Photo by W. King LGL Ltd.



Photo by W. King LGL Ltd.



Photo by W. King LGL Ltd.

## MONITORING

- Conduct pre-construction monitoring to identify hibernacula and birthing/egg laying sites for Butler's gartersnake and eastern foxsnake.
- Conduct pre-construction monitoring of migratory and resident bird species, populations and behaviours in proximity to the Detroit River Bridge.
- Conduct compliance monitoring during construction.
- Conduct effectiveness monitoring post-construction to determine the success of habitat restoration and enhancement areas, use of wildlife habitat and corridors and the stability of species at risk populations.

# Impacts, Mitigation & Future Work – Vegetation & Vegetation Communities

## BACKGROUND

A rare vascular plant survey was conducted in 2008 to confirm the presence/absence, abundance and distribution of species at risk and to classify additional vegetation communities not inventoried in 2006. The survey examined species regulated under the federal *Species At Risk Act* and the *Ontario Endangered Species Act, 2007*.

## POTENTIAL IMPACTS AND MITIGATION MEASURES

The Windsor-Essex Parkway was realigned and redesigned to avoid important vegetation communities.

Vegetation communities will be protected, enhanced and restored during and post-construction to off-set vegetation losses. The Windsor-Essex Parkway offers the opportunity to naturalize over 300 acres of land.

Plant material will be salvaged prior to site preparation activities to prevent mortality. Site preparation activities such as clearing and grubbing will be performed outside of the growing season.

Vegetation communities to be retained will be isolated from construction activities using construction fencing.

Drainage modifications and cut and fill conditions will be avoided to the extent possible.

A landscape plan will be prepared during later design stages to identify areas for protection, enhancement and restoration including detailed prescriptions for vegetation management, soil management, management of invasive and exotic species, edge management, etc.



## MONITORING

- Conduct compliance monitoring during construction.
- Conduct effectiveness monitoring post-construction to determine the success of restoration and enhancement areas and the stability of species at risk populations.

## BACKGROUND

Designated natural areas are identified by regulatory agencies or municipalities for conservation purposes. These areas include:

- Areas of Natural and Scientific Interest (ANSIs)
- Provincially Significant Wetlands (PSWs)
- Environmentally Sensitive Areas (ESAs)
- Candidate Natural Heritage Sites (CNHS)
- Areas designated for protection in municipal official plans

Secondary source information on designated natural areas was collected and reviewed to identify the geographical extent and major ecological functions for which the area was identified. Field investigations were used to define the boundaries of the designated natural areas where encroachment may occur. The *Ontario Wetland Evaluation System for Southern Ontario* (OMNR 1993) was also used to evaluate the significance of several wetland units located in the study area.

Numerous designated natural areas are located within the study area for the Recommended Plan, and all have been avoided to the extent possible. These areas include:

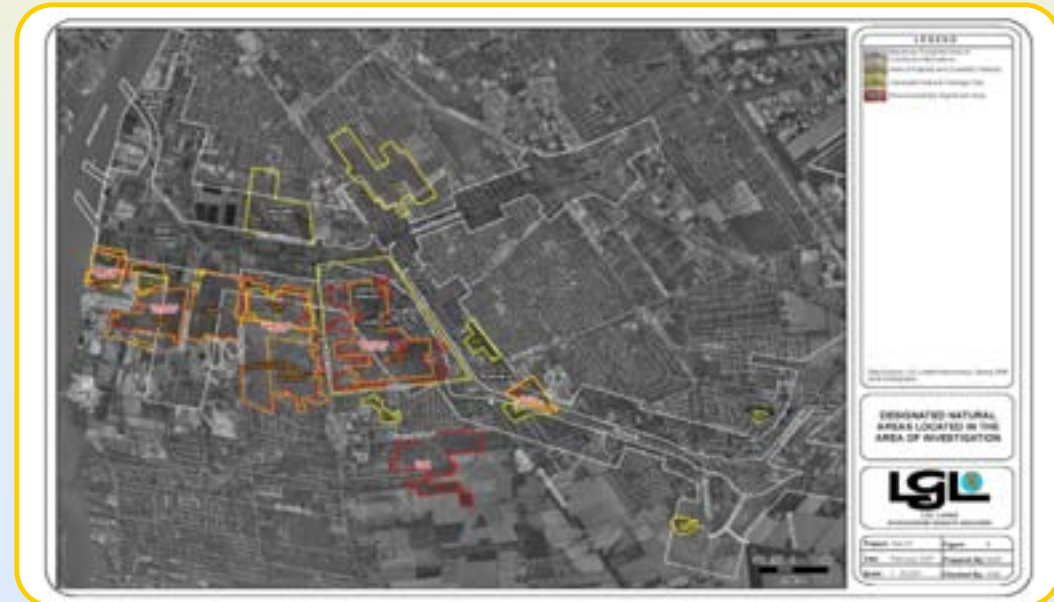
- Detroit River Canadian Heritage River
- Black Oak Woods ANSI, ESA and CNHS
- Ojibway Park ANSI, ESA and CNHS
- Spring Garden Forest ANSI, ESA and CNHS
- St. Clair College Prairie ESA and CNHS
- Oakwood Bush CNHS
- Canada Malden Park CNHS
- Candidate Natural Heritage Site TC2
- Potential PSWs to be determined

## POTENTIAL IMPACTS AND MITIGATION MEASURES

The Windsor-Essex Parkway was realigned and re-designed to avoid designated natural areas.

Mitigation measures for the loss of area or ecological function of designated natural areas are similar to the mitigation measures identified for vegetation and wildlife.

MTO will discuss the dedication of protected, enhanced or restored lands with appropriate agencies to ensure permanent protection and conservation.





## BACKGROUND

Species at risk include flora and fauna species that are regulated under the federal *Species at Risk Act* and the Ontario *Endangered Species Act, 2007*. Detailed species at risk surveys were conducted throughout the growing season in 2008 to determine population and distribution. A total of 13 species at risk were recorded for the Recommended Plan including two snakes, ten plants and one insect.

## POTENTIAL IMPACTS AND MITIGATION MEASURES

The Windsor-Essex Parkway was realigned and re-designed to avoid species at risk habitat to the extent possible.

Construction timing restrictions will be implemented to avoid mortality. Snake species will be captured and relocated prior to construction. Plants species will be transplanted, seeds collected and germinated for planting and sod containing plant species will be relocated prior to construction. Species at risk to be protected will be isolated with construction fencing during construction.

Barriers will be used to prevent snakes from accessing construction zones and the travel surface where mortality may occur.

Habitat restoration and enhancement will be used to create new habitat for species at risk.

Construction workers will be educated for potential encounters.

Buildings, wells and other structures will be inspected for snake presence prior to demolition/decommissioning.

Permits will be secured under the federal *Species at Risk Act* and the Ontario *Endangered Species Act* prior to construction.



American Chestnut –  
Endangered



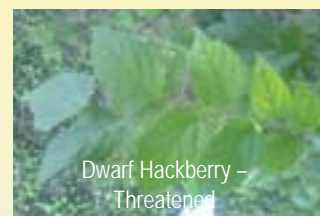
Butler's Gartersnake - Threatened



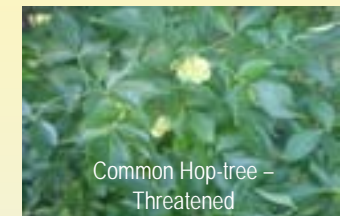
Eastern Foxsnake - Threatened



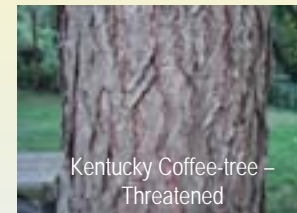
Colic Root - Threatened



Dwarf Hackberry –  
Threatened



Common Hop-tree –  
Threatened



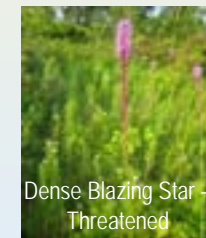
Kentucky Coffee-tree –  
Threatened



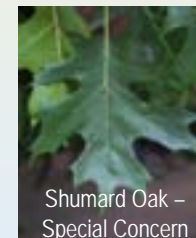
Willowleaf Aster - Threatened



Climbing Prairie Rose –  
Special Concern



Dense Blazing Star –  
Threatened



Shumard Oak –  
Special Concern



Riddell's Goldenrod –  
Special Concern

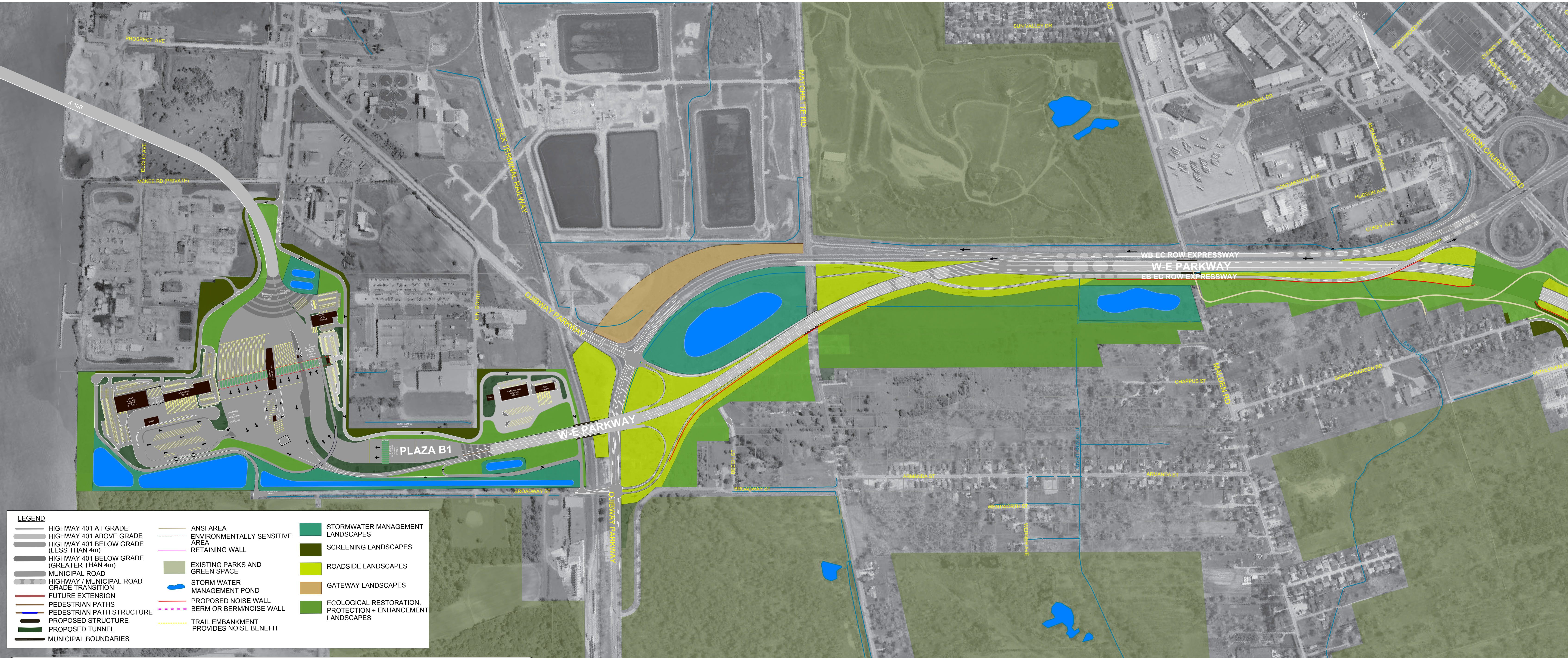


Monarch –  
Special Concern

## MONITORING

- Conduct compliance monitoring during construction.
- Conduct effectiveness monitoring post-construction to determine the success of habitat restoration and enhancement, species relocation and stability of species at risk populations.





STORMWATER MANAGEMENT LANDSCAPES

Provides natural open spaces that knit the freeway and the city and manages stormwater runoff.

-Native species of shrubs and aquatic and herba-ceous plants and trees.

Stormwater pond with naturalized edge condition

Stormwater pond inaccessible to pedestrians.

GATEWAY LANDSCAPES

Gateway Landscapes function to provide an aesthetic, sculptural and memorable gateway to Windsor, Ontario and Canada.

The design will integrate gateway and wel-come features.

planted areas indicate gateways and major interchanges

landform can be sculpturally designed, creating a major landmark

MULTI-USE PATH + BRIDGES

Neighbourhood amenity for strolling, exploring and exercise.

Connects communities to each other across the freeway, providing safe routes to schools, parks, local businesses and community faci-lities.

4 metres wide multi-use paths

Path will act as recreational and educational experience



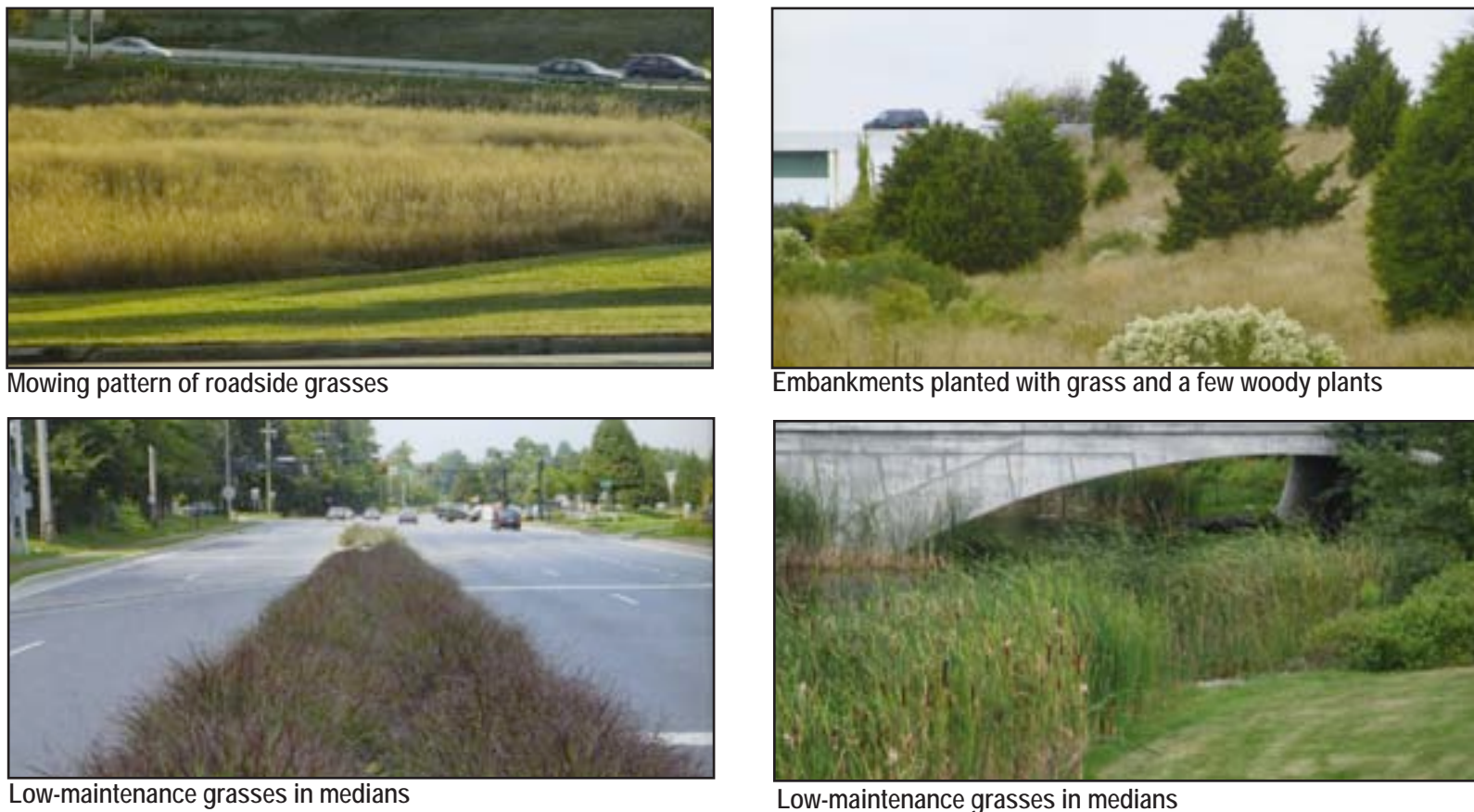


ROADSIDE LANDSCAPE

Provides a green, aesthetic driving experience for users of the freeway portion of the The Windsor-Essex Parkway. These areas are located on the embankments, ramps and access roads. Areas are inaccessible to pedestrians.

-Salt tolerant vegetation, mostly grasses and forbs, few shrubs and trees

-mowing patterns can create roadside interest and variation.



SCREENING LANDSCAPE

Creates visual and noise screen/barrier between residences and road infrastructure.

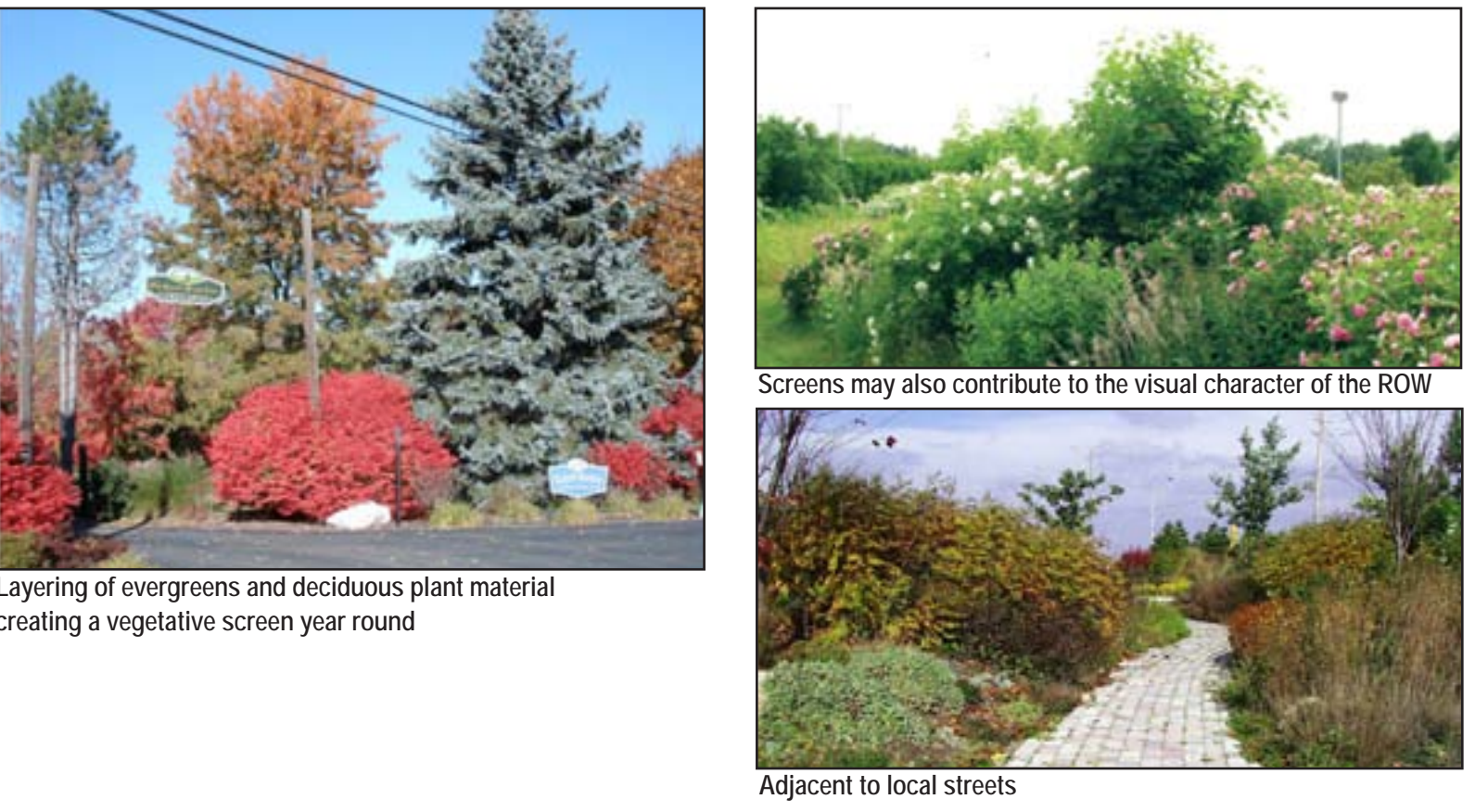
-densely growing flowering + fruiting shrubs

-vibrant fall colour

-lots of evergreen shrubs and large trees for year-round screening

-vines on some sound barriers

-only border is mown







ECOLOGICAL ENHANCEMENT, RESTORATION + PROTECTION LANDSCAPES

Ecological landscapes will provide natural open spaces that knit the Recommended Plan into the natural landscape of the city and provide a setting for a multi-use trail system.

There are three main types: *ecological protection landscapes*, where existing sensitive habitat and vegetation are protected; *ecological enhancement landscapes*, where the ecological function and complexity of existing habitat and open spaces is improved; and *ecological restoration landscapes*, where new habitat will be created to extend and connect habitat within and around the Recommended Plan.



Restoration process using reforestation techniques



Encouraging natural succession and better establishment



Maintaining and protecting open spaces



Planting of edge conditions adjacent natural areas



## Main Principles

**UNIFIED:** The open spaces associated with The Windsor-Essex Parkway will be considered as a unified whole. These spaces will be planned to function in an integrated manner and to present a unified aesthetic and visual environment for drivers and community users.

**GREEN:** The vision for The Windsor-Essex Parkway is to create a green corridor that supports new, viable natural communities and links existing natural areas.

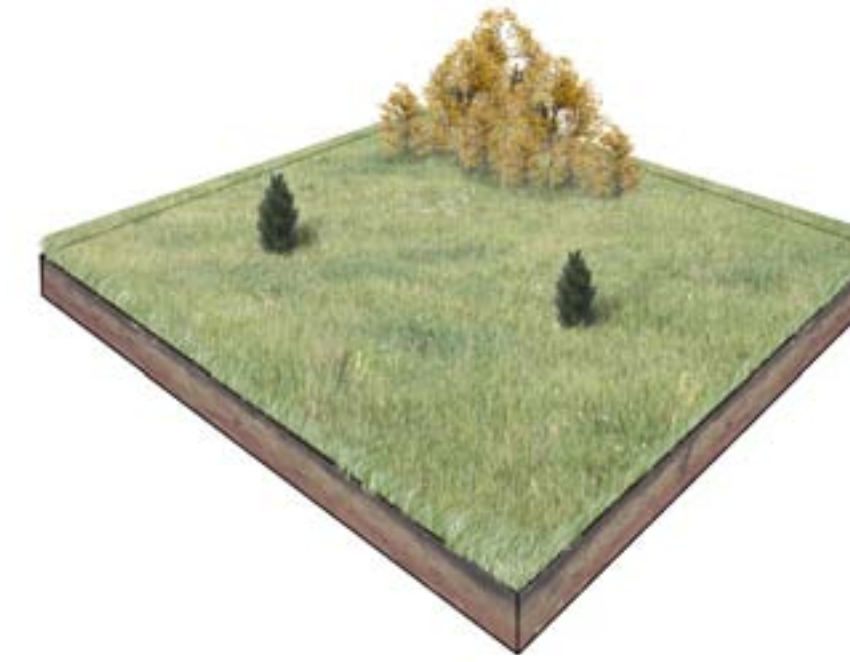
**CONNECTION:** The Windsor-Essex Parkway is an opportunity to create connections between communities.

**INTEGRATION:** The Windsor-Essex Parkway passes through three municipalities, Tecumseh, LaSalle and Windsor. Plans for The Windsor-Essex Parkway open spaces must integrate seamlessly within the urban design, parks and recreation plans for these three municipalities as well as local and regional natural heritage/ greenlands systems.

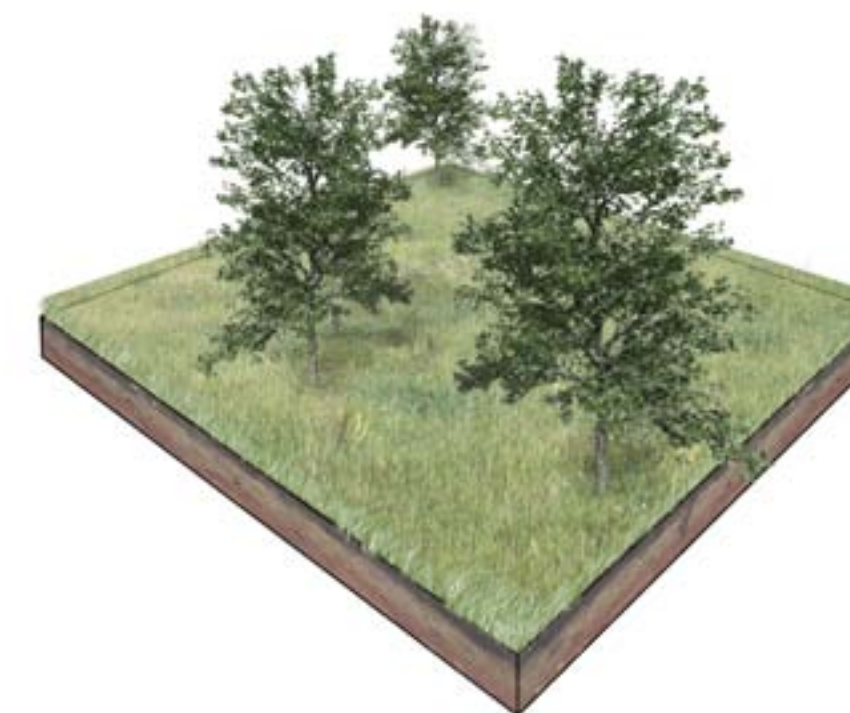
**GATEWAY:** The Windsor-Essex Parkway will be designed as a unique and recognizable gateway into Canada, Ontario and Windsor-Essex.

## Ecological Landscape Target Results

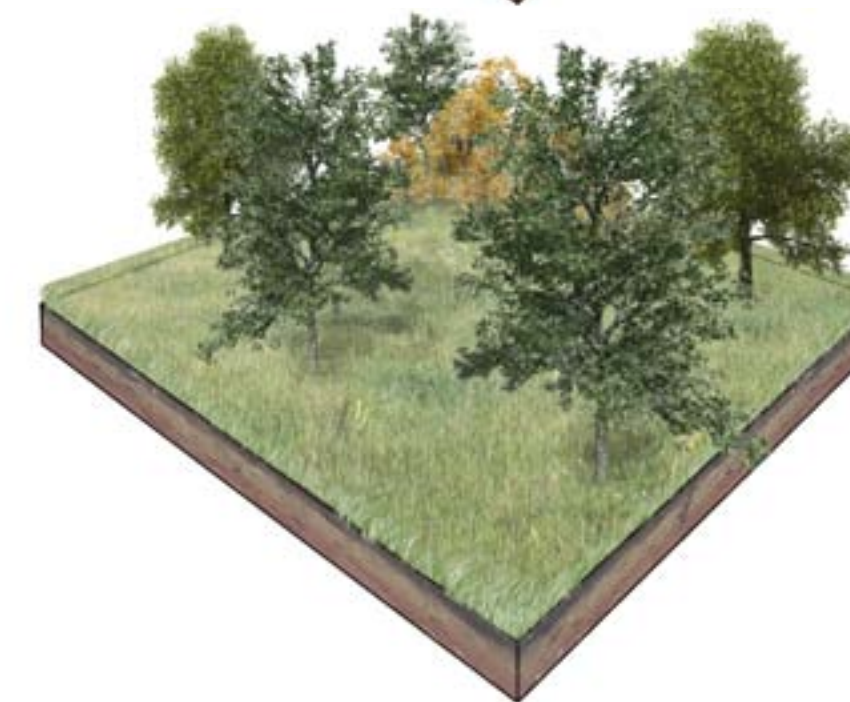
Open Tallgrass Prairie



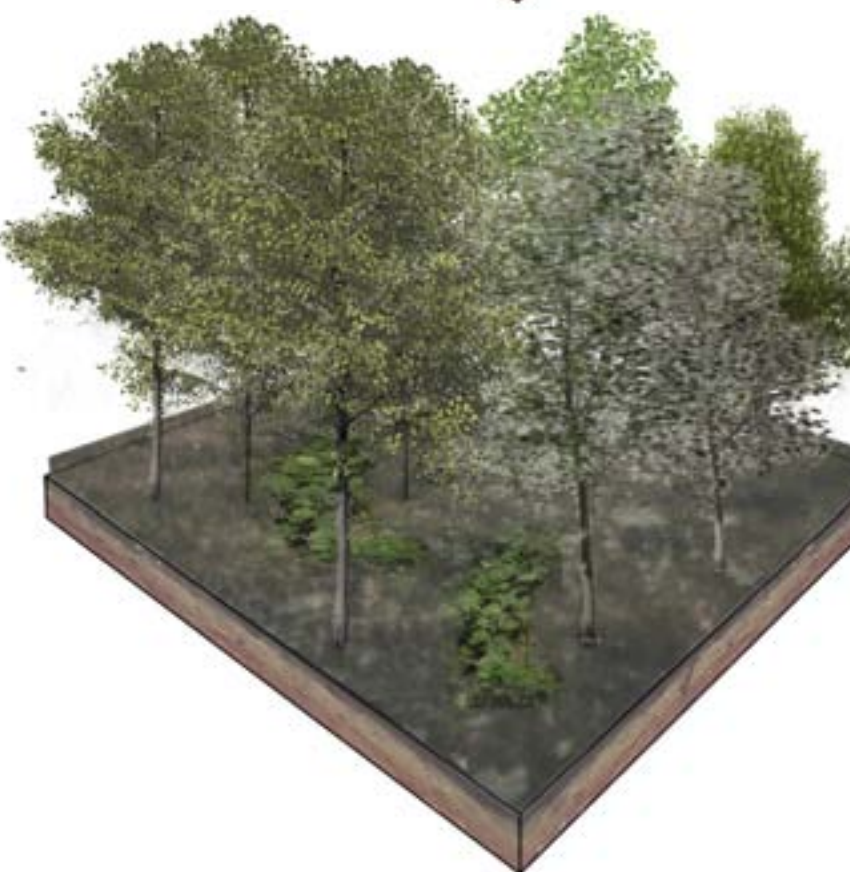
Tallgrass Savannah



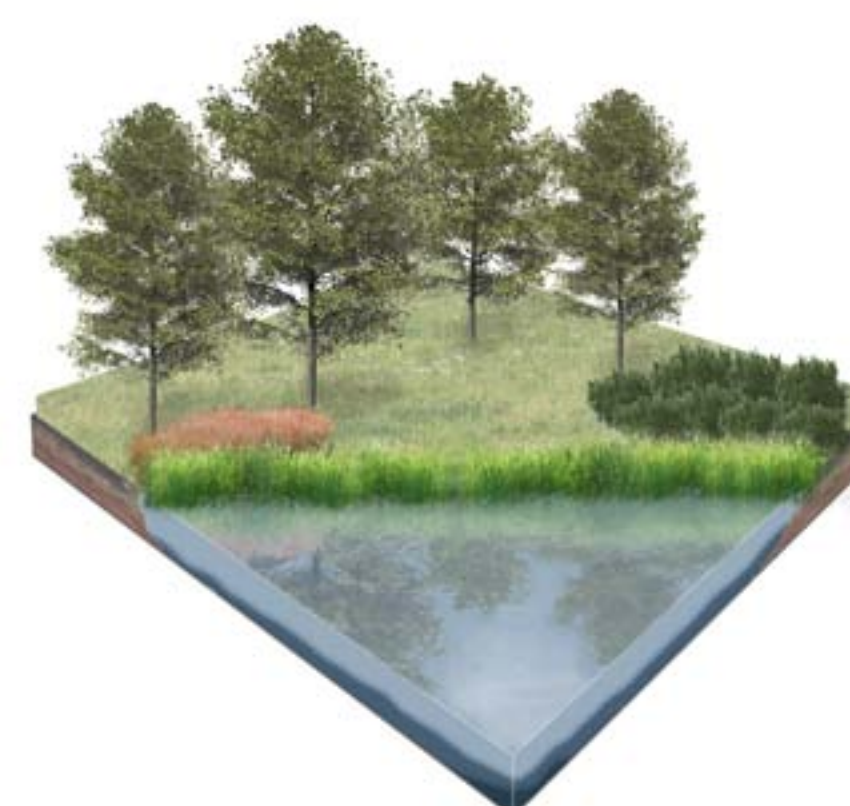
Tallgrass Woodland



Fresh Oak Deciduous Forest



Stormwater Management Landscape



# Landscape Plan

## Typical Applications of Landscape Types

### Institutional Land Use Facing The Windsor-Essex Parkway (St. Clair College)

#### Principles:

- integrate St. Clair College into The Windsor-Essex Parkway landscape
- create connections across The Windsor-Essex Parkway and to the multi-use trail
- screen residential areas from noise created by roadway

#### At the interface of St. Clair College and The Windsor-Essex Parkway:

- a short tunnel and a new street access to St. Clair College from the service road
- multi-use trail access to the new entrance to St. Clair College

### Schools Near The Windsor-Essex Parkway

#### Principles:

- create safe, active routes to school across and along The Windsor-Essex Parkway

#### The Windsor-Essex Parkway connects schools by:

- providing sidewalks and multi-use trails between schools and neighbourhoods
- providing safe intersections and signalization at major crossings
- providing new green space for recreation and education near schools

### Industrial Land Use Facing the Plaza

#### Principles:

- provide a secure environment within the Plaza
- screen Plaza activities from outside views
- Buffer plaza and visitors to Canada from adjacent industrial activities by providing landforming and vegetative screening

### Commercial Land Use Facing The Windsor-Essex Parkway (Windsor Crossing)

#### Principles:

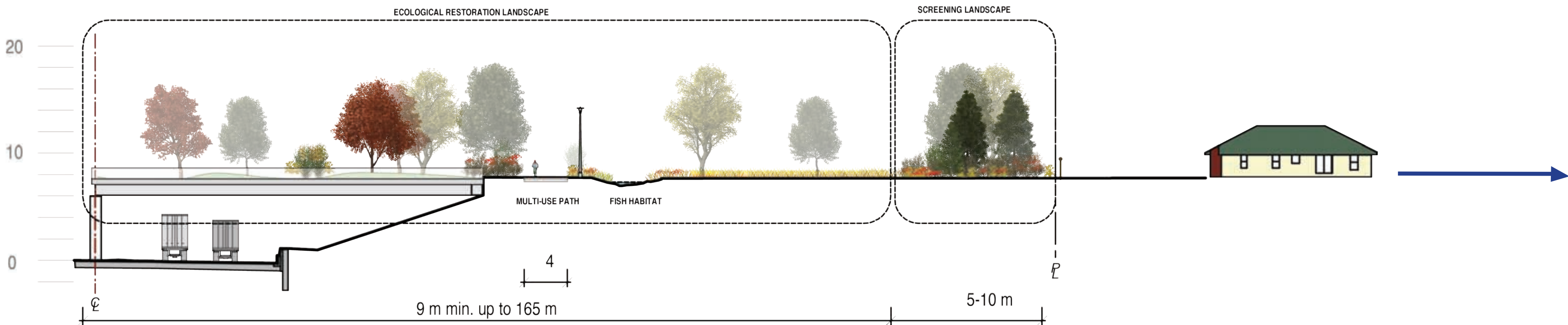
- provide drivers with visual access (views) to retail & commercial opportunities
- facilitate safe & comfortable pedestrian and cycling access to commercial opportunities



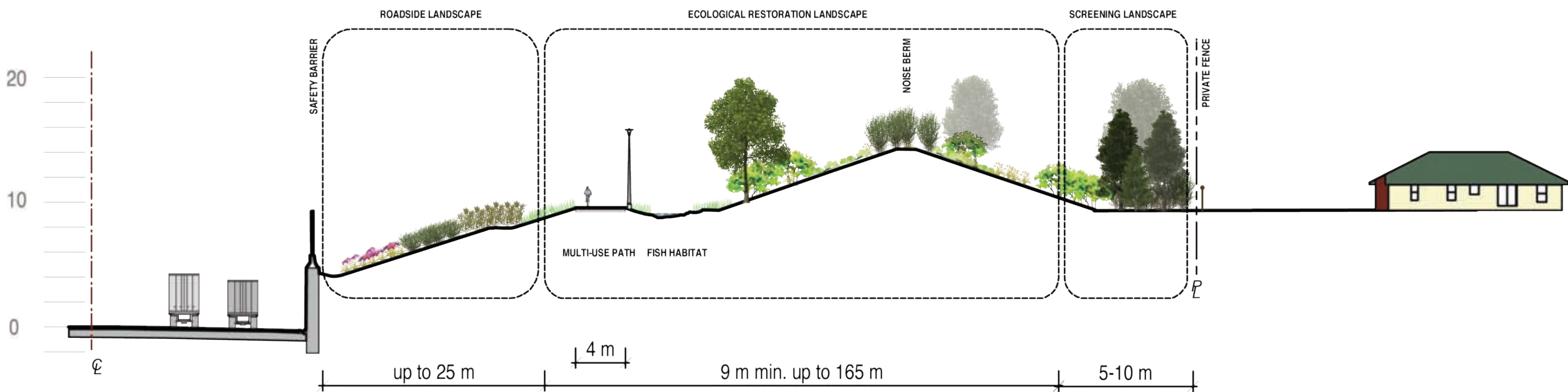
Back Yards Facing The Windsor-Essex Parkway

- Goals:
- screen residential areas from public land (multi-use trail, green space & service road)
  - screen residential areas from noise created by roadway
  - create viable ecological communities between private property and road infrastructure

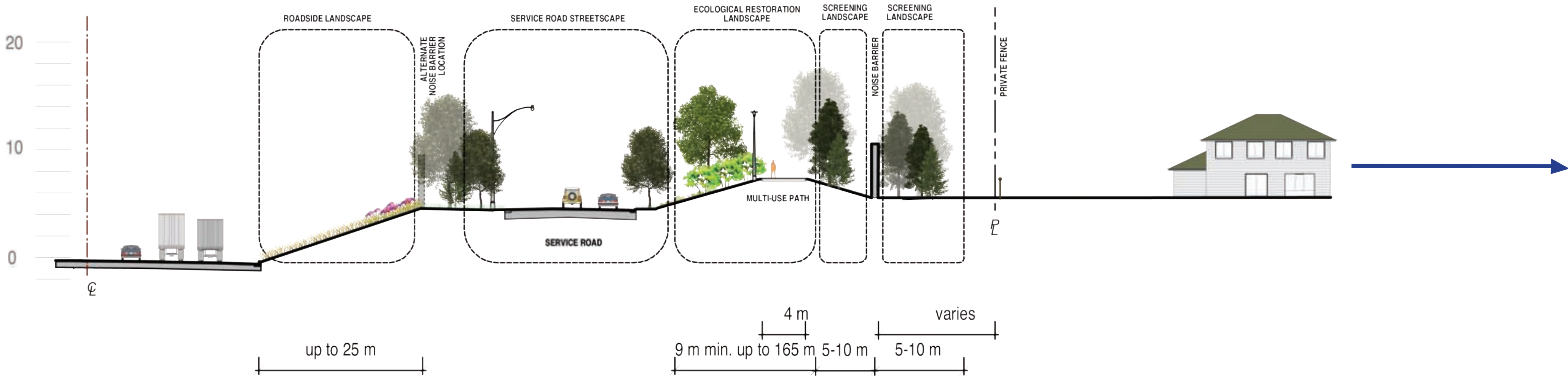
back yard facing landscaped short tunnel



back yard facing freeway with vegetated berm as noise barrier



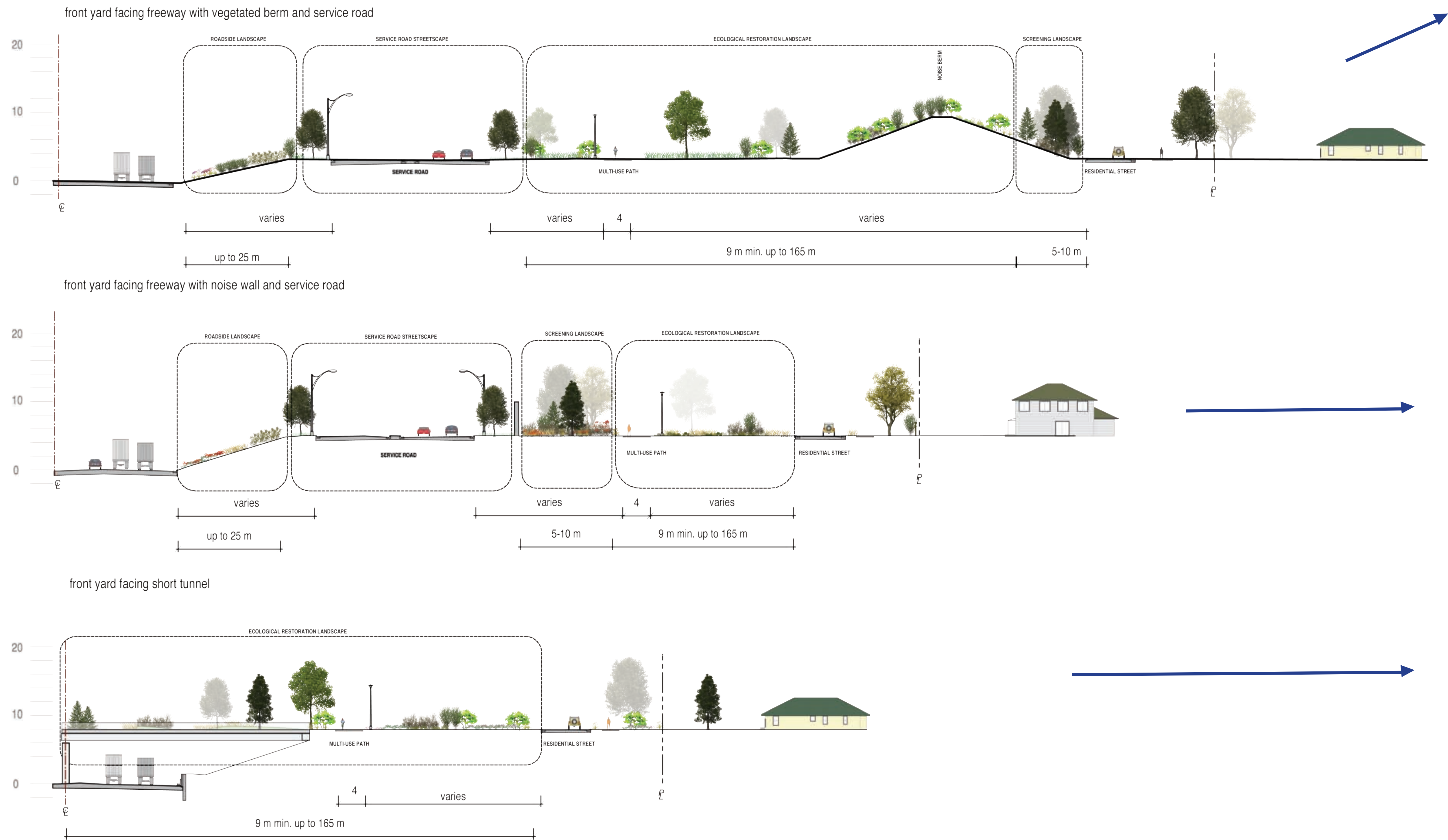
back yard facing freeway with noise wall adjacent to property line and service road





Front Yards Facing The Windsor-Essex Parkway

- Goals:
- integrate existing streets into The Windsor-Essex Parkway landscape
  - create connections across The Windsor-Essex Parkway
  - screen residential areas from noise created by roadway.





### Barrier Design

#### Principles:

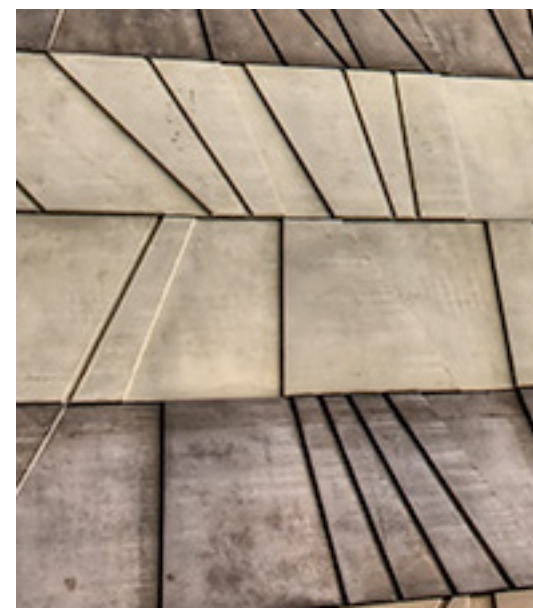
- Protection from noise
- Integrating noise barriers into adjacent land uses
- Creating an aesthetically pleasing, unique design
- Improving the experience from adjacent land uses as well as the driving experience
- Integrating noise barrier design into the overall urban design and materials of the highway, including retaining walls, bridges, pedestrian structures, safety barriers and crash barriers



concrete form & texture



noise barriers with faux finishes



noise barriers with motifs



noise barriers with images



shape



#### Design Variables:

There are many different technologies for constructing sound barriers and many different ways to change the way they look and feel. This page shows examples of some of the types of variation in sound barriers that have been achieved elsewhere.



transparent panels



coloured transparent panels



safety barrier/crash barrier/sound barrier integration



vines + vegetation





- The Windsor-Essex Parkway from North Talbot Road to Plaza B1 is estimated to cost \$1.6 Billion (\$CDN for year 2011). This cost estimate will continue to be refined during future stages of design.
- Construction of the Recommended Plan will be completed in a manner to minimize disruption to the surrounding communities and local traffic patterns. During construction, four lanes of traffic will be maintained at all times in the Highway 3 / Huron Church Road corridor.
- Additional factors influencing constructability such as soil conditions, groundwater, utilities, and construction staging will continue to be explored during future design phases.
- Construction of The Windsor-Essex Parkway will involve an initial utility relocation stage, and will be completed in the following generalized stages:

## Highway 3 / Huron Church Road Corridor

*Stage 1* – Traffic remains on existing road network. Construction of the service road network and temporary staging roads.

*Stage 2* – Traffic shifted to the new service road and staging roads. Excavation begins for the freeway and construction of associated retaining walls and tunnels.

*Stage 3* – Traffic remains on new service road, and construction of the freeway and trail network is completed.

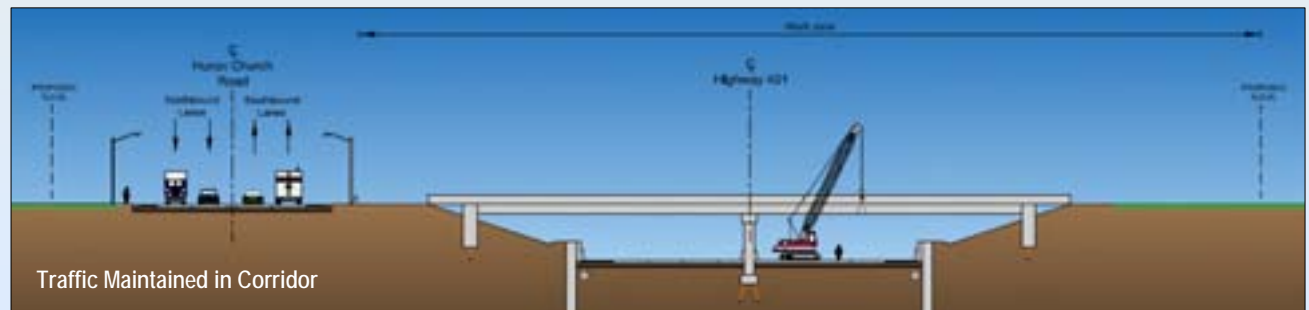
## E.C. Row Expressway Corridor

*Stage 1* – Traffic remains on existing E.C. Row Expressway. Construction of realigned eastbound lanes of E.C. Row Expressway ("collector" lanes of core-collector system).

*Stage 2* – Eastbound E.C. Row Expressway traffic shifted to new lanes. Construction of freeway lanes of The Windsor-Essex Parkway ("core" lanes of core-collector system).

## What's Next:

- Continue to refine cost estimate during future stages of design.
- Further develop construction staging plans during future design phases.



**Property requirements of The Windsor-Essex Parkway and Plaza B1 have recently been revised based on improvements made to the Technically and Environmentally Preferred Alternative:**

- The property requirements of the Recommended Plan are dependent upon the location of the proposed infrastructure.
- Existing rights-of-way have been utilized as much as possible to minimize the impact to the surrounding environment and property owners.
- Property requirements are also dependent on providing buffering adjacent to the proposed infrastructure.

**The significant buffering proposed as part of the Recommended Plan provides the following benefits to people and the environment in the corridor:**

- Protection for communities adjacent to the Recommended Plan.
- Protection for environmental features near the Recommended Plan.
- Creation of new and enhanced green space with opportunity to transfer lands within The Windsor-Essex Parkway to parties that can best protect sensitive areas.



Owners may initiate the sale of their property on a willing buyer/willing seller basis. The Partnership will consider purchase requests from owners of properties required for the Recommended Plan.

Once the project has received Environmental Assessment (EA) approval, the Partnership members will approach the remainder of impacted homeowners and business owners to acquire property in a mutually agreeable way.

After EA approval has been obtained, a representative will contact you if any part of your property is required. They will carry identification that you should insist on seeing. They will explain the procedures for the sale of your property.

Compensation is based on the appraised market value of your property. Market value is based on what a similar property might be expected to sell for on the open market by a willing seller to a willing buyer. A professional property appraiser will inspect each property individually and consider various factors that influence market value, including sales of similar properties which are adjusted to reflect the specific characteristics of your property. An allowance for moving costs and other eligible expenses will be paid.

For more information on a specific property, please go to the adjacent room where MTO property personnel are available to answer your property questions.

An Environmental Assessment (EA) is a study, which assesses the potential environmental effects and benefits of a project or undertaking on the environment. The purpose of the Draft Provincial Environmental Assessment Report (the "Draft EA Report") is to summarize the environmental effects and mitigation and the process that has been followed leading to the selection of the Technically and Environmentally Preferred Alternative (TEPA) as well as the technical findings of the study. The Draft EA Report and PIOH #7 are the final steps prior to the preparation of the Final Provincial Environmental Assessment Report. The public, external agencies and interested stakeholders are provided the opportunity to offer their input and comments at the Draft EA Report stage. This Draft EA Report is being made available to the public, other interested parties and external agencies for review.

The review of the Draft EA Report commenced on Wednesday November 12, 2008 and will end on Friday December 12, 2008. Interested persons, agencies, municipalities or other stakeholders should provide written comments prior to Friday December 12, 2008 so that they may be reviewed prior to the completion of the final EA Report. Please submit any comments as follows:

Ministry of Transportation  
949 McDougall Avenue, Suite 200,  
Windsor, Ontario, N9A 1L9,  
Attention: Mr. Roger Ward, Senior Project Manager  
or via email to [detroit.river@ontario.ca](mailto:detroit.river@ontario.ca)

Copies of the Draft EA Report are available for review at this PIOH and the following locations:

**Ontario Ministry of Transportation  
Windsor Border Initiatives  
Implementation Group**  
949 McDougall Avenue, Suite 200  
Windsor, Ontario

**Office of the Clerk  
County of Essex**  
360 Fairview Avenue West  
Essex, Ontario N8M 1Y6

**Office of the Clerk  
Town of Tecumseh**  
917 Lesperance Road  
Tecumseh, Ontario

**Windsor Public Library  
Nikola Budimir Branch**  
1310 Grand Marais West  
Windsor, Ontario

**Ontario Ministry of the Environment  
West Region Office**  
733 Exeter Road  
London, Ontario

**Office of the Clerk  
City of Windsor**  
350 City Hall Square West  
Windsor, Ontario

**Windsor Public Library  
Central Branch**  
850 Ouellette Avenue  
Windsor, Ontario

**LaSalle Public Library**  
5940 Malden Road  
LaSalle, Ontario

**Tecumseh Public Library**  
13675 St. Gregory's Road  
Tecumseh, Ontario

**Ontario Ministry of the Environment  
Windsor Area Office**  
4510 Rhodes Drive, Unit 620  
Windsor, Ontario

**Office of the Clerk  
Town of LaSalle**  
5950 Malden Road  
LaSalle, Ontario

**Windsor Public Library  
Sandwich Branch**  
3312 Sandwich Street  
Windsor, Ontario

**URS Canada Inc.**  
75 Commerce Valley Drive East  
Markham, Ontario

- Public and agency review of Draft Ontario Environmental Assessment (OEA) Report: Nov. 12 – Dec. 12
- Complete technical reports
- Incorporate public/agency comment and finalize and submit OEA Report: Dec. 13 – Dec. 31
- Government review and decision:
  - Government and Public Review of Final OEA Report: 7 weeks
  - MOE Review of Public and Government Comments on OEA Report: 5 weeks
  - Public Inspection of MOE Findings: 5 weeks
  - Minister's consideration and decision of OEA: 13 weeks
- Complete preliminary design of the Recommended Plan

**NOTE:**

CEAA Screening Report will be submitted and considered concurrently with OEA Report

**Minister's Options:**

- **Decision** - approve, approve with conditions, or refuse
- **Refer to Environmental Review Tribunal (Hearing)**
- **Refer to Mediation**



## STAY INVOLVED!

There will be further opportunities for public involvement during subsequent design and construction study phases.



## **Ministry of Transportation**

### **Windsor Border Initiatives Implementation Group**

949 McDougall Street, Suite 200, Windsor  
detroit.river@ontario.ca

**Mr. Dave Wake**  
**Manager, Planning**  
Tel. 519-873-4559

**Mr. Roger Ward**  
**Senior Project Manager**  
Tel. 519-873-4586

## **URS Canada Inc.**

### **DRIC Project Office**

1010 University Avenue, Suite 104, Windsor  
info@partnershipborderstudy.com

**Mr. Murray Thompson**  
**Project Manager**  
Tel. 905-882-4401

**Mr. Steve Jacobs**  
**Deputy Project Manager**  
Tel. 905-882-4401

[www.partnershipborderstudy.com](http://www.partnershipborderstudy.com)

[www.weparkway.ca](http://www.weparkway.ca)

1-800-900-2649 (Toll Free)

Details of the U.S. Analysis of the Crossing, Plazas and Interchanges are available in the Draft Environmental Impact Statement (DEIS). This document underwent a public review period during the Spring of 2008.

The U.S. team is currently preparing the Final Environmental Impact Statement (FEIS) which is anticipated to be issued later this year for public review.

For additional information, contact:

**Michigan Department of Transportation**

**Mr. Mohammed Alghurabi**  
**Senior Project Manager**

Tel. (517) 373-7674  
alghurabim@michigan.gov

**The Corradino Group**

**Mr. Joe Corradino**  
**DRIC Project Manager**

Tel. (248) 799-0140  
jccorradino@corradino.com

**DRIC Consultant Team Project Office**

The Corradino Group  
20300 Civic Center Drive, Suite 410  
Southfield, Michigan, 48076  
Tel. (248) 799-0140  
Field Office Tel. (313) 843-0730 ext. 228  
Fax (248) 799-0146

[www.partnershipborderstudy.com](http://www.partnershipborderstudy.com)  
1-800-900-2649 (Toll Free)