Ojibway Parkway Wildlife Crossing Schedule “C” Municipal Class Environmental Assessment (Phases 1 – 4)

November 19, 2020

Online Public Information Centre #1

woodplc.com

Online Public Information (PIC) #1

Register online and fill out a comment form

Learn about the Environmental Assessment Process

Learn about the Study and preliminary existing conditions findings

Provide input on the Problem and Opportunity Statement

Learn about the alternative solutions, evaluation of those alternatives and selection of a preferred solution

Understand the next steps in the Study process

Contact us! Your input is very important to us!

Study Overview

Overview of Ojibway Prairie Complex

Ojibway Prairie Complex is a collection of the following natural areas:

- Ojibway Park
- Black Oak Heritage Park
- Tallgrass Prairie Heritage Park
- Spring Garden Natural Area
- Ojibway Prairie Provincial Nature Reserve

Collectively these areas are designated as the Ojibway Prairie Remnants Area of Natural and Scientific Interest (ANSI).

Ojibway Prairie Complex contains a wide variety of vegetation and animal life. This area is known for its diverse vegetation and animal life and an abundance of wetlands, forest, savanna. It provides habitat for several rare plants, insects, reptiles, birds and mammals.

Source: Ojibway Nature Centre (http://www.ojibway.ca/complex.htm)

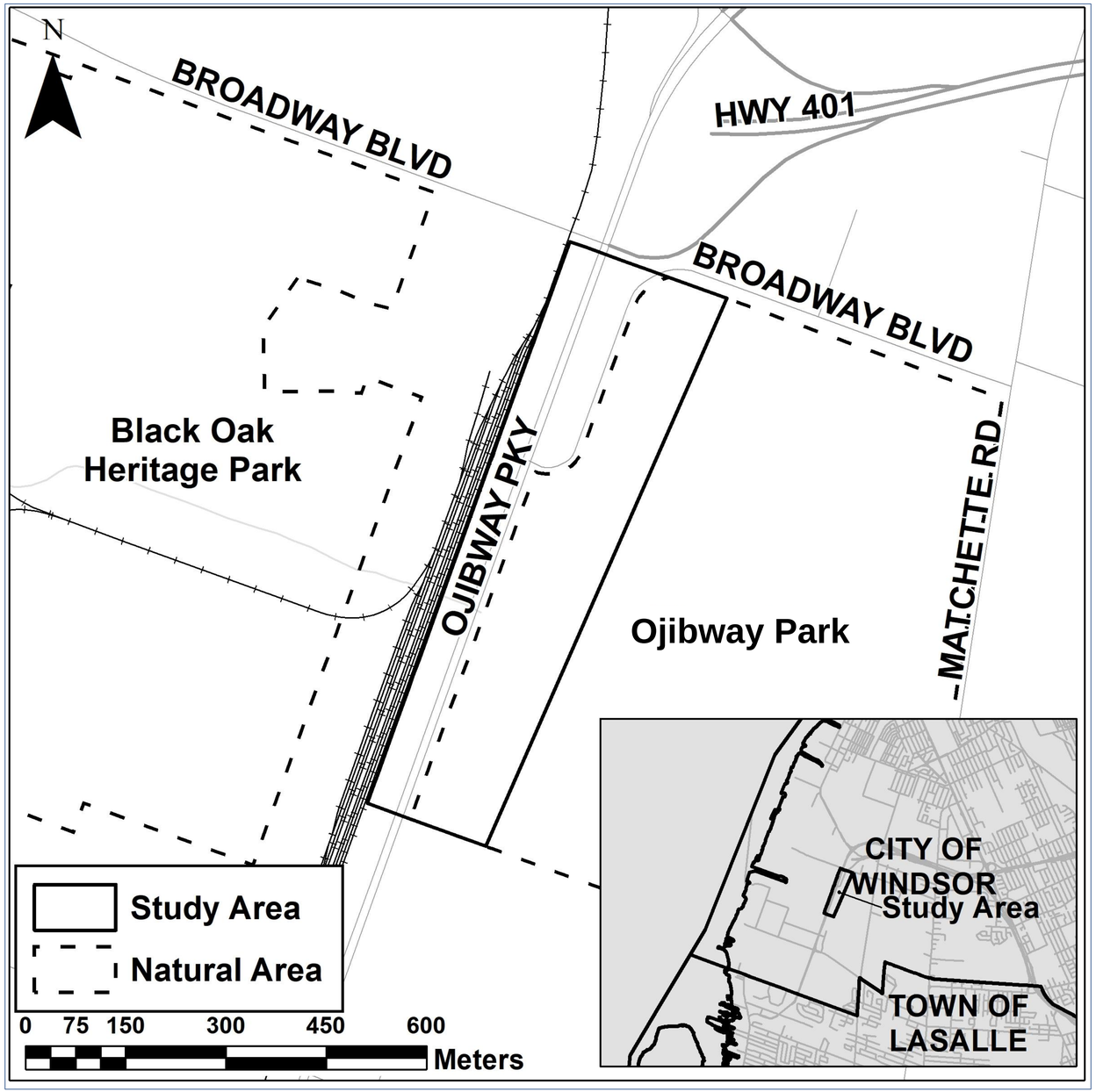
Study Overview

The City of Windsor is undertaking a Schedule 'C' Municipal Class Environmental Assessment (Class EA) to consider the construction of a Wildlife Crossing at Ojibway Parkway, south of Broadway Boulevard, in order to provide an ecological connection between Black Oak Heritage Park and Ojibway Park. Approximately 20,000 vehicles per day travel along the Ojibway Parkway and E.C. Row Expressway, which contributes heavily to wildlife mortality. The Wildlife Crossing will provide landscape connectivity and safe passage for area wildlife and species at risk in the Ojibway Prairie Complex.

A Class EA is required to consider the potential environmental and social impacts that could result from the Project. The purpose of this Class EA is to analyze various alternative solutions to determine the preferred solution and undertake an assessment to determine the preferred design for the preferred solution.

Source: Ojibway Nature Centre (http://www.ojibway.ca/blackoak.htm)

Study Area



The Wildlife Crossing is being considered along Ojibway Parkway, between Broadway Boulevard and Sprucewood Avenue in the City of Windsor. This Study Area is shown in the Key Map above.

Municipal Class Environmental Assessment Process

Phase 1
Identify and Describe the Problem(s)

Phase 2
Alternative Planning Solutions

- Identify reasonable alternative planning solutions
- Evaluate the alternative solutions, taking into consideration environmental and technical factors
- Identify a preferred solution to the problem

Phase 3
Alternative Design Concepts For the Preferred Solution

- Identify alternative designs to implement the preferred solution.
- Inventory natural, social/cultural and economic environments
- Identify the impact of the alternative designs after mitigation
- Evaluate alternative designs
- Identify preferred design

Phase 4
Environmental Study Report

- Compile an Environmental Study Report (ESR)
- Place ESR on public record for a minimum of 30-day review period
- Notify the public and government agencies of completion of the ESR and of the Part II Order provision in the EA Act

Phase 5
Implementation

- Proceed to the detailed design and construction of the project
- Monitor environmental provisions and commitments

We are here

Agency and Stakeholder Consultation

Agency and Stakeholder Consultation

Problem Statement

Preferred Solution

Preferred Design

ESR

Existing Conditions

(Natural Environment, Archaeology and Cultural Heritage, Infrastructure and Subsurface Conditions)

Natural Environment

Woodlands and Wetlands

- The Study Area contains both, woodlands and wetlands.
- Provincially Significant Wetlands have been mapped in Black Oak Heritage Park.
- Both, Ojibway Park and Black Oak Heritage Park, are designated as Environmentally Significant Areas, and comprise two of the five sites designated as the Ojibway Prairie Remnant Life Science Area of Natural and Scientific Interest (ANSI).

Wildlife

- Wildlife species which have been confirmed through field investigations within the Study Area include:
  - Mammals: Eastern Coyote, White-tailed Deer, Raccoon, Eastern Gray Squirrel, and Groundhog.
  - Bat Species: the Little Brown Bat (*Myotis lucifugus*; Endangered), Eastern Red Bat (*Lasiurus borealis*), Silver-haired Bat (*Lasionycteris noctivagans*), Big Brown Bat (*Eptesicus fuscus*), and Hoary Bat (*Lasiurus cinereus*).
  - Amphibians: Western Chorus Frog and American Toad.
  - Reptiles: Midland Painted Turtle.
  - Bird species: Eastern Wood-Pewee (Special Concern) (likely breeding on site).
  - Plant Species at Risk: Dense Blazing Star, Purple Twayblade, Slender Bush-clover, Spotted Wintergreen, Willowleaf Aster.

Significant Wildlife Habitat

- There is likely to be several Significant Wildlife Habitat (SWH) features in the Study Area.

Vegetation Communities

- Four vegetation communities exist within the Study Area: Dry Black Oak Woodland Type (WODM3-2), Pin Oak Mineral Deciduous Swamp Type (SWD1-3; S3= Vulnerable provincially), Dry – Fresh Black Oak Deciduous Forest Type (FODM1-3; SWH rare vegetation community), Dry Black Oak Tallgrass Savanna Type (TPS1-1; S1 Critically Imperiled provincially and SWH rare vegetation community).

Natural Environment (Continued)

Photo of Groundhog captured on Wildlife Monitoring Camera installed as part of Natural Environmental Field Investigations

Photo of White-tailed Deer captured during Natural Environmental Field Investigations

Photo of Midland Painted Turtle nesting in the Study Area captured during Natural Environmental Field Investigations

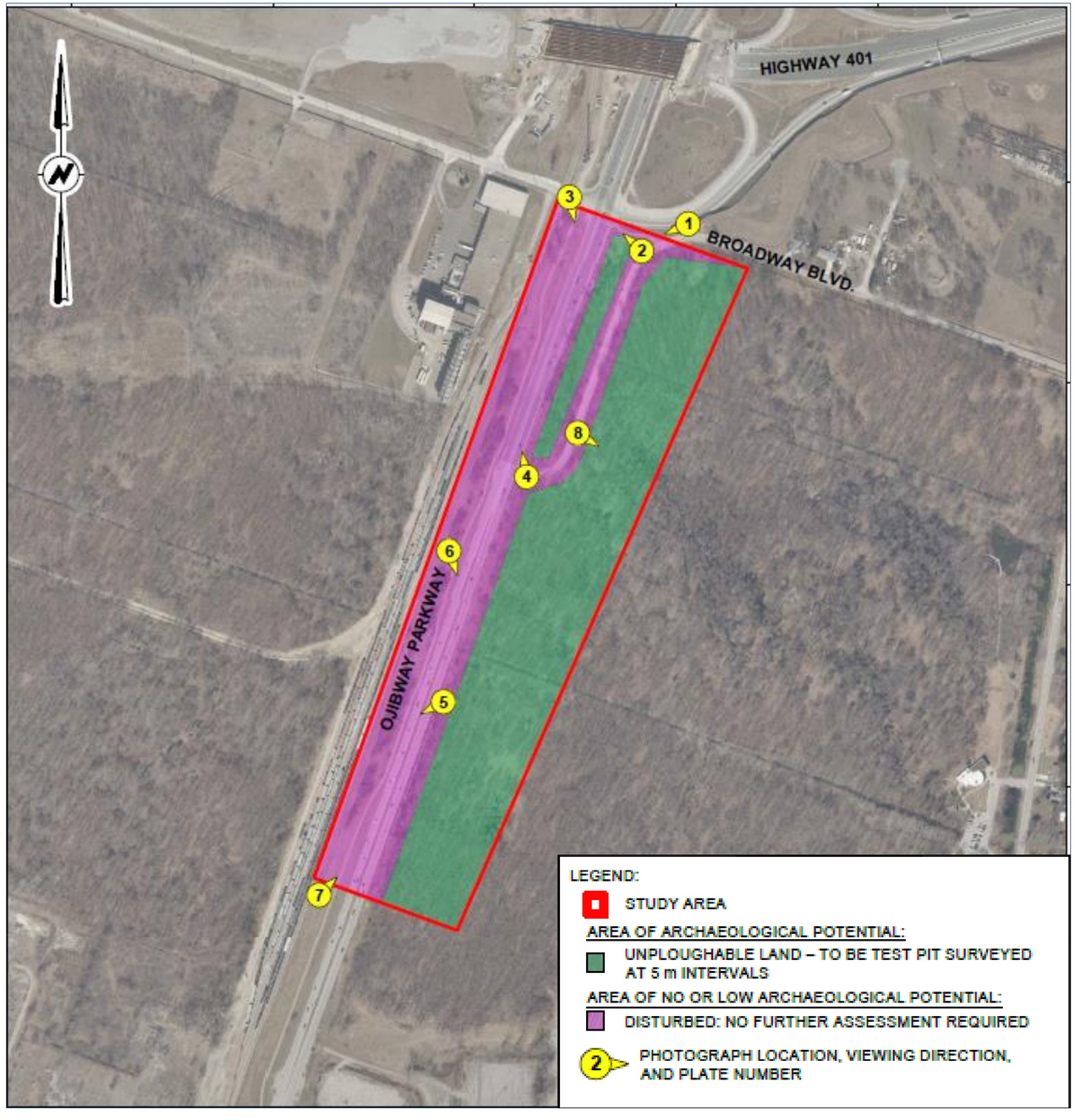
Archaeology and Cultural Heritage

Archaeology

- A Stage 1 Archaeological Assessment was completed for this Study.
- The results of Stage 1 Archaeological Assessment indicated that the Study Area contains areas of archaeological potential (i.e., areas that may contain remains of historic human activities). Areas of Archaeological Potential are shown in green on the map provided herein.
- A Stage 2 Archaeological Assessment will be completed on areas of archaeological potential that will be impacted by project activities.

Cultural Heritage

- The checklist to identify the potential for built heritage resources and cultural heritage landscape, as required by The Ministry of Heritage, Sport, Tourism and Culture Industries was completed.
- No cultural heritage or built heritage resources were identified within the Study Area.



Infrastructure

Transportation

- The Study Area includes two main roadways: Ojibway Parkway and Broadway Boulevard.
- Ojibway Parkway is a four-lane roadway that separates Ojibway Park on the east and Black Oak Heritage Park on the west. Broadway Boulevard forms the northern limit of the Study Area.

Active Transportation

- Ojibway Parkway Multi-use Trail is located on the west.

Drainage and Stormwater

- Existing storm servicing along Ojibway Parkway, within the Study Area, consists of roadside ditches and cross-culverts, with no storm sewers. There are no existing stormwater management facilities in the Study Area. Drainage features in the Study Area are of relatively low relief/depth.

Utilities

- Utilities are located along the west side of Ojibway Parkway. These utilities are: Enbridge Gas Pipeline, Sanitary Forcemain, Watermain, Gravity Sanitary Sewer, and Bell.

Multi-use Trails

Source: City of Windsor "MyParks" Application

Geotechnical

- The stratigraphy below the surficial topsoil, pavement structure and fills along the study area generally consists of 2.0 m to 4.4 m of very loose to compact sands and silts over an extensive soft to very stiff silty clay/clayey silt layer.
- Bedrock is at approximately 23 metres below ground surface.
- The sands and silts are partially saturated with the ground water level within 1.2 to 2.1 m of the ground surface.
- The ground conditions are relatively uniform within the study area.
- Geotechnical constraints that will affect the proposed works are:
  - The presence of very loose to compact surficial sands and silts that are partially saturated.
  - Relatively high groundwater level.
  - An extensive deposit of silty clay/clayey silt.
  - Groundwater pressures at and below the overburden/bedrock.
  - Presence of hydrogen sulphide and methane gases near the bedrock.

Technical Studies

Several technical studies are currently underway or planned for completion in coming months, as outlined below.

Stormwater Management Assessment

- A Stormwater Management Assessment will be completed to determine the capacity of existing drainage infrastructure within the study area, as well as any residual capacity which may be available to accommodate runoff from the proposed crossing.

Traffic Review

- A Traffic Review will be completed to identify any impacts that could occur to traffic on Ojibway Parkway and adjacent signalized intersections. If there are temporary lane closures, an overview of potential traffic related issues will be provided.

Natural Environment Assessment

- Natural Environment Assessment is currently underway and will be finalized in coming months to determine project impacts and propose mitigation measures.

Restoration Ecology

- Recommendations will be provided for the establishment of native vegetation on the wildlife crossing that is compatible with the design criteria developed and the anticipated environmental conditions on the structure. Consideration of vegetation (e.g. grasses, shrubs, etc.) that is preferred by the targeted wildlife species in order to promote safe and effective passage across the structure.

Contamination Overview

- A contamination overview study will be completed which will assess the potential for soil and/or ground water contamination at each of the potential construction sites and will assess how the regulation impacts the proposed construction project.

Bridge Engineering / Structural Assessment

- The structural assessment will be completed to include the planning, preliminary design and recommendations for the proposed new wildlife crossing over the Ojibway Parkway. The structure will be reviewed in terms of its functional needs, construction area available, environmental impacts, constructability and most economical option.

Municipal Class EA – Phase 1

Problem and Opportunity Statement

Problem and Opportunity Statement

Problem and Opportunity Statement:

Approximately 20,000 vehicles per day travel along the Ojibway Parkway and E.C. Row Expressway, which contributes heavily to wildlife mortality. The City of Windsor is taking this opportunity to construct the Ojibway Parkway Wildlife Crossing in order to accomplish the following:

- Create an ecological connection between Black Oak Heritage Park and Ojibway Park;
- Protect sensitive species from roadway mortality by providing a safe passage for area wildlife and species at risk within the Ojibway Prairie Complex; and,
- Protect the travelling public on Ojibway Parkway from wildlife vehicle interactions.

Municipal Class EA – Phase 2

Identification and Evaluation of Alternative Solutions

Identification of Alternative Solutions

Phase 2 of the Class EA process requires that various reasonable solutions shall be identified to address the problem and opportunity identified in Phase 1. The potential solutions are then evaluated against environmental, social and technical factors. Based on the evaluation, the preferred solution is presented to the public during the first Public Information Centre for input and review. Following alternative solutions are identified for this Project:

Alternative 1: Do Nothing:

The "Do Nothing" alternative maintains existing conditions and does not involve a wildlife crossing. It is used as a base-line against which other alternative solutions are compared.

Alternative 2: Underpass Wildlife Crossing:

This alternative would involve construction of a wildlife crossing under the Ojibway Parkway. The underpass would be in the form of a large mammal underpass tunnel with at least 4.0 m in height and 7.0 m wide to allow for the passage of a variety of wildlife. Two sub-alternatives were developed, based on the location of the structure: Alternative 2A (North Option) and Alternative 2B (South Option).

Alternative 3: Overpass Wildlife Crossing:

This alternative would involve construction of a wildlife crossing over the Ojibway Parkway. The overpass would be in the form of a large wildlife overpass with at least 50 m width to allow for the passage of a variety of wildlife (small and large) and provide ecological connectivity at a landscape scale. The height of the wildlife overpass would be 5 m. Two sub-alternatives were developed, based on the location of the structure: Alternative 3A (North Option) and Alternative 3B (South Option).

Design Criteria for Alternative Solutions

The dimensions of the underpass and overpass alternatives were determined using the design criteria developed in accordance with the Wildlife Crossing Structure Handbook Design and Evaluation in North America (U.S. Department of Transportation, 2011) and MTO Design Supplement for TAC Geometric Design Guide (GDG) for Canadian Roads (Ontario Ministry of Transportation, 2020), and input from the City staff.

Design Criteria	Recommended Dimension and Source		Proposed
Overpass - Width	Minimum width: 40-50 m Recommended width: 50-70 m	U.S. Department of Transportation, 2011[1]	50 m
Overpass - Minimum Vertical Clearance	5.0 m vertical clearance for structures over roads	Ontario Ministry of Transportation, 2020[2]	5.5 m
Underpass - Width	Minimum width: 7.0 m Recommended width: >10 m	U.S. Department of Transportation, 2011	7.0 m
Underpass - Minimum Vertical Clearance	Minimum Height: 4.0 m Recommended Height: >4.0 m	U.S. Department of Transportation, 2011	4.0 m
Maximum Approach Grade	5:1 (17%) or flatter	U.S. Department of Transportation, 2011	5:1 (17%)
Preferred Slide Slopes	3:1	U.S. Department of Transportation, 2011	3:1

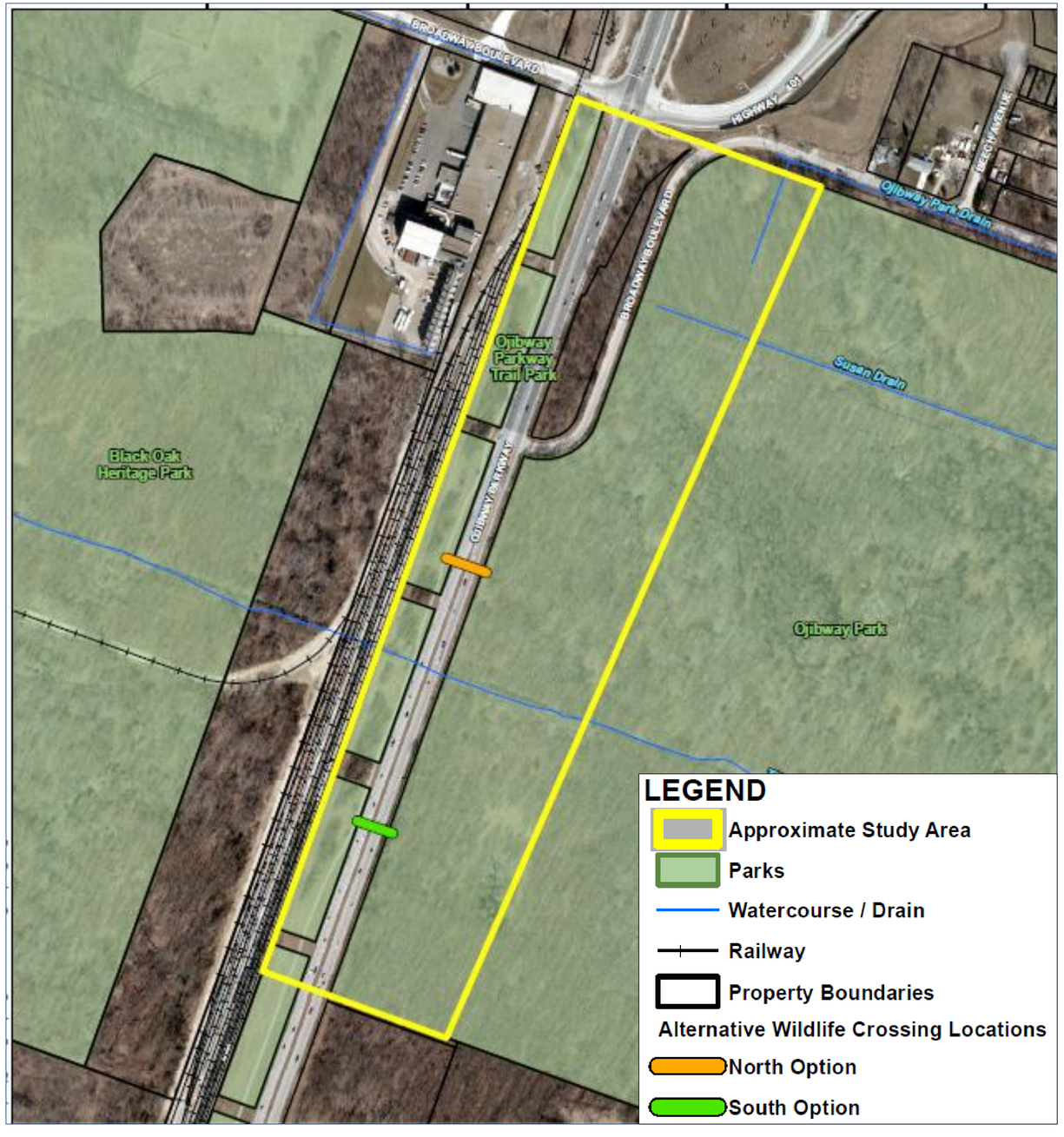
[1] Wildlife Crossing Structure Handbook Design and Evaluation in North America, March 2011

[2] MTO Design Supplement for TAC Geometric Design Guide (GDG) for Canadian Roads, April 2020

Alternative Solutions and Location Options

Wildlife Underpass (Example)

Wildlife Overpass (Example)



Evaluation Criteria

The following evaluation criteria was used to evaluate the positive or negative impacts of Alternative Solutions.

Natural Environment

- Landscape connectivity
- Wildlife behaviour / response to the crossing
- Potential impact to terrestrial species or habitats
- Potential drainage and stormwater concerns

Social Environment

- Potential impact to community facilities
- Potential impacts on archaeological resources
- Potential impacts on built heritage resources and cultural heritage landscapes
- Potential to provide as a gateway feature to add to the "Civic Image" of the City
- Opportunities to incorporate Urban Design guidelines

Technical

- Continued bridge inspection requirements and ongoing maintenance
- Potential impacts associated with implementation, construction access and staging

Costs

- Capital Cost (Including Construction and Rehabilitation costs)

Evaluation of Alternative Solutions

Category	Criteria	Alternative 1: Do Nothing	Alternative 2: Underpass Wildlife Crossing		Alternative 3: Overpass Wildlife Crossing	
			Alternative Solution 2A (North Option)	Alternative Solution 2B (South Option)	Alternative Solution 3A (North Option)	Alternative Solution 3B (South Option)
Natural Environment	Landscape connectivity					
	Wildlife behaviour / response to the crossing					
	Potential impacts on terrestrial species and habitats					
	Potential drainage and stormwater concerns					
Social Environment	Potential impact to community facilities					
	Potential impacts on archaeological resources					
	Potential impacts on built heritage resources					
	Potential to provide as a gateway feature to add to the "Civic Image" of the City					
	Opportunities to incorporate Urban Design guidelines					
Technical	Continued bridge inspection requirements and ongoing maintenance					
	Potential impacts associated with implementation (complexity of construction)					
	Potential impacts associated with construction access					
	Potential impacts associated with construction staging					
Costs	Construction Cost					
	Rehabilitation Cost					
Recommendation		Not Preferred	Not Preferred	Not Preferred	Preferred	Not Preferred

Most Preferred → Least Preferred

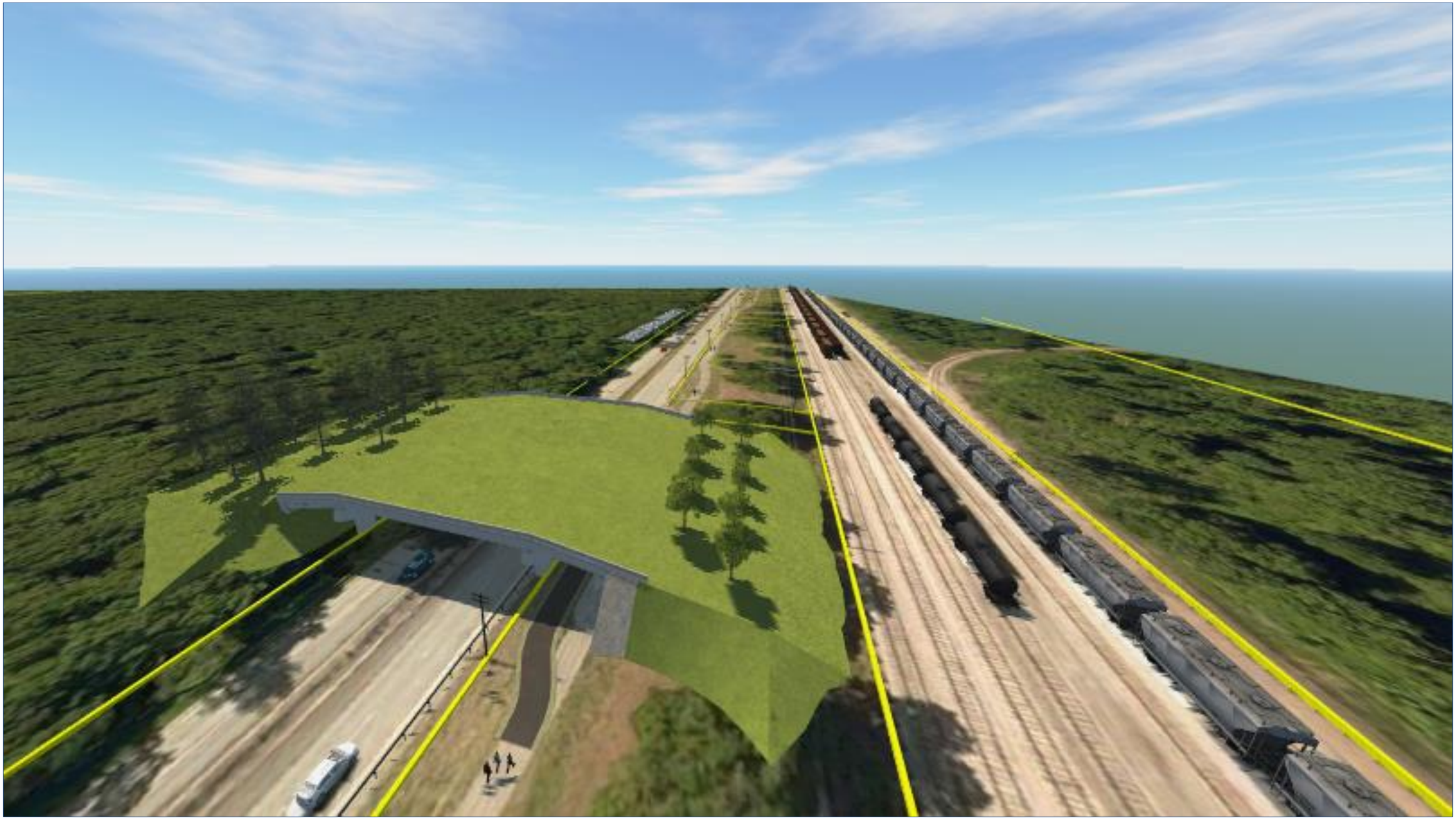
Detailed evaluation is provided in the evaluation of alternatives memo under a separate cover on the Project website.

Preliminary Preferred Solution

The Alternative Solutions was analyzed based on natural and social environments and technical and financial considerations. Alternative 3A - Overpass Wildlife Crossing (North Option) was selected as the preliminary preferred solution due to a number of advantages compared to the other alternatives. A summary of the key impacts and benefits of Alternative 3A is provided below:

- The location of Alternative 3A has been carefully selected in order to avoid impacts to Species at Risk Plants and Protected Habitat.
- Overpass structures been successful as a multi-species strategy (large mammals, birds, amphibians, and reptiles) and allow growth of brush, shrub and grass plantings along entire length of structure.
- This alternative allows 100% openness. Greater openness may facilitate use by wildlife species that are not tolerant (or less tolerant) of confined areas for movement (the tunnel effect).
- Being an above grade structure, this alternative can provide as a gateway feature, with opportunities to incorporate urban design elements.
- There are opportunities available to integrate stormwater associated with this structure within the adjacent lands and there will be no requirement for active stormwater management during operation.
- The construction of the Overpass structure will not significantly affect the traffic flow compared to the construction of an Underpass structure.
- Although an Overpass structure will be more costly than an Underpass structure, it will provide sufficient space for landscape connectivity while allowing for safe passage of a wide variety of wildlife.

Ojibway Parkway Wildlife Overpass (Conceptual Rendering)



Next Steps

Next Steps

- Review comments received from the public, key stakeholder groups, Indigenous Communities and regulatory agencies as a result of this PIC and incorporate those comments into project design, as applicable.
- Confirm/Finalize Preferred Solution.
- Proceed to Phase 3 of the Municipal Class EA process and develop and evaluate Alternative Design Concepts for the Preferred Solution (Wildlife Overpass) to identify the Preferred Design Concept.
- Present the Preliminary Preferred Design Concept at PIC # 2.
- Review comments received from the public, key stakeholder groups, Indigenous Communities and regulatory agencies as a result of PIC #2 and incorporate those comments into project design, as applicable.
- Prepare the Environmental Study Report.
- Publish Notice of Completion and release the Environmental Study Report for a minimum 30-Day Public Review Period.
- Proceed to Detailed Design and Construction, if no Part II Order Requests are received.

We thank you for your participation!

If you would like to submit any questions or comments, please submit your comments on the project webpage. If you would like to be added to the Study Mailing List or would like to send your comments via email, please contact the Project Team Members identified below.

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Comment deadline is December 3, 2020