

# Ojibway Parkway Wildlife Crossing Municipal Class Environmental Assessment

**Online Public Information Centre #2 - April 19, 2021 – May 3, 2021**



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

# Online Public Information (PIC) #2

The purpose of this PIC is to:

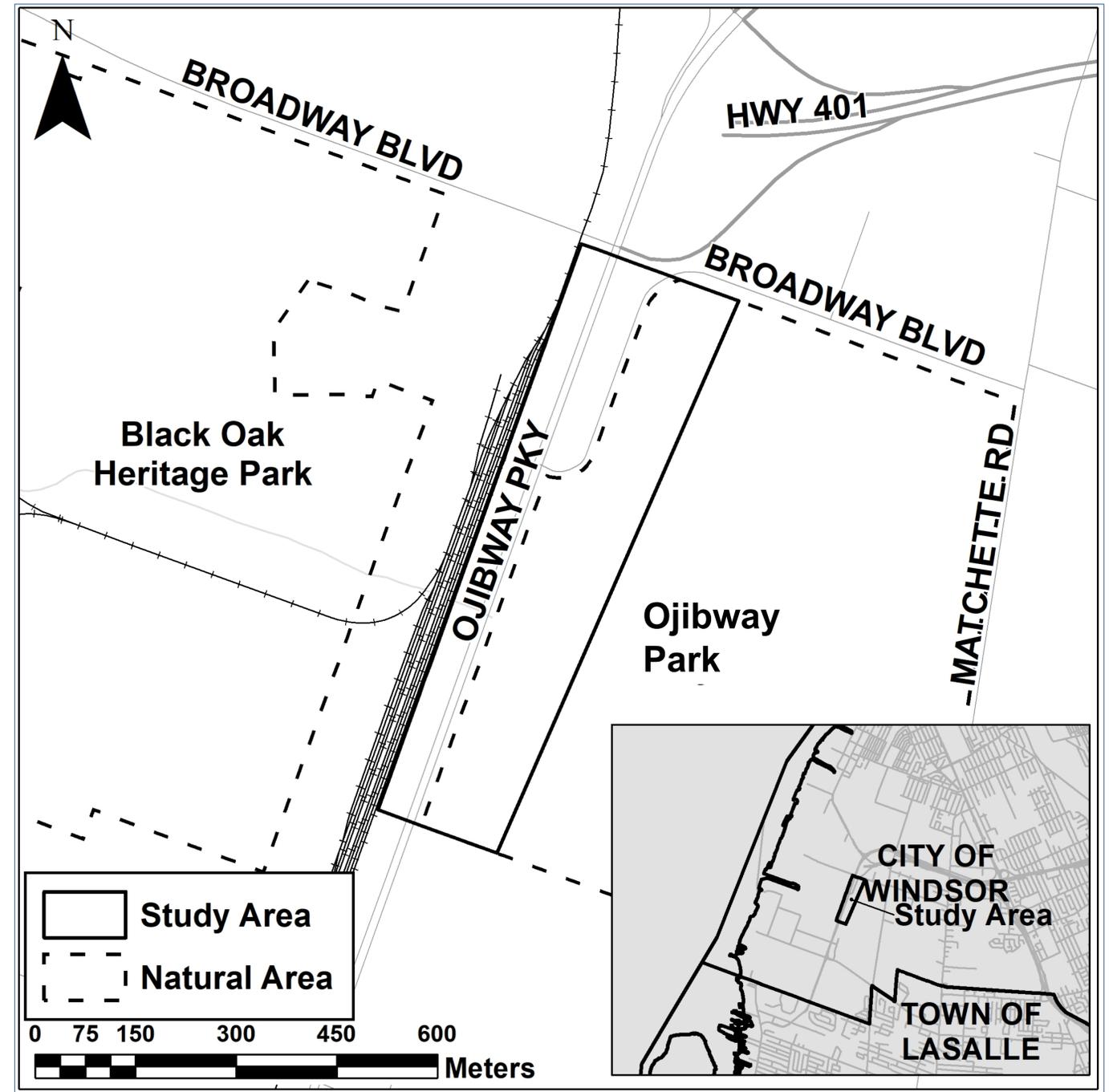
- Provide an overview of the study
- Outline the study process (Municipal Class EA)
- Share what we heard at PIC #1
- Discuss alternative design concepts for the Wildlife Overpass
- Describe how key comments were considered
- Present the evaluation criteria and the evaluation of alternatives
- Propose the preliminary preferred design
- Review additional design considerations
- Identify Next Steps
- Request feedback



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

# Study Overview

The City of Windsor is undertaking a Municipal Class Environmental Assessment (Class EA) study to consider the construction of a Wildlife Crossing at Ojibway Parkway, south of Broadway Boulevard, in the City of Windsor in order to begin re-establishing an ecological connection between Black Oak Heritage Park and Ojibway Park. The 20 m wide Ojibway Parkway that carries approximately 20,000 vehicles per day inhibits wildlife movement and ecological linkage functions. The Wildlife Crossing will provide a connection for local tallgrass prairie plant communities and safe passage opportunities for wildlife, including species at risk. The proposed Wildlife Crossing thereby reduces landscape fragmentation through improvement of habitat connectivity in the Ojibway Prairie Complex.



# Municipal Class Environmental Assessment Process

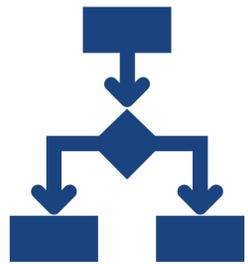
Phase 1 Identify and Describe the Problem(s)	Phase 2 Alternative Solutions	Phase 3 Alternative Design Concepts for the Preferred Solution	Phase 4 Environmental Study Report	Phase 5 Implementation
<p>Identify Problem or Opportunity</p>	<p>Identify reasonable alternative solutions</p> <p>Evaluate the alternative solutions, taking into consideration environmental and technical factors</p> <p>Identify a preferred solution to the problem</p> <p>Undertake consultation</p> <p>Select preferred solution</p>	<p>Identify alternative designs to implement the preferred solution.</p> <p>Inventory natural, social/cultural and economic environments</p> <p>Identify the impact of the alternative designs after mitigation</p> <p>Evaluate alternative designs to identify a preferred design</p> <p>Undertake consultation ← <b>We are here</b></p> <p>Select preferred design</p>	<p>Compile an Environmental Study Report (ESR)</p> <p>Place ESR on public record for a minimum of 30-day review period</p> <p>Issue Notice of Completion</p>	<p>Proceed to the detailed design and construction of the project</p> <p>Monitor environmental provisions and commitments</p>

**Phases 1 and 2 have been completed.**

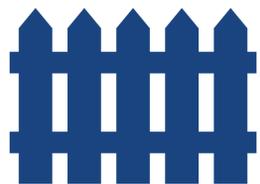
# What we heard during PIC #1?

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An online Public Information Centre was held for this Study from November 19 to December 3, 2020. During PIC #1 there were several comments received related to key aspects of the proposed solutions. Specifically, the public expressed interest in the following items which were further considered during the development of the alternative designs:



The Alternative Solutions should include an option to also cross the Essex Terminal Railway tracks located immediately to the west of Ojibway Parkway.



Fencing should be incorporated into the design to direct wildlife toward the crossing and to prevent them from entering the roadway.

**Details on how these items were further considered are presented following the presentation of the alternative design concepts.**

A Summary Report was prepared to document in more detail the comments received and Study Team's responses. The PIC #1 Summary Report is available on the [project webpage](#).

# Consideration of Public Comments into the Design

## Extension of Crossing Over Railway Tracks

- The Study will proceed on the assumption that the western slope of the Wildlife Overpass will end at the Ojibway Trail, east of railway yard.
- Monitoring will be conducted by the City of Windsor in the future to monitor performance of the Wildlife Overpass and mortality on railway tracks. If the need to extend the Wildlife Overpass across the railway yard is identified, the City may consider providing the structure over the railway corridor, subject to the availability of funding to support additional studies, design, property acquisition and construction. All alternatives can accommodate a future crossing of the railway.

## Wildlife Fencing

- Wildlife fencing has been incorporated into the design along Ojibway Parkway and Broadway Street to prevent wildlife from entering onto the Ojibway Parkway and to direct wildlife to the proposed wildlife overpass.
- Fencing will be a two-part system comprised of a chain-link style fence as well as a shorter reptile exclusion fence. Detailed specifications regarding the wildlife fencing will be determined during the detailed design of the Project.



Fence along the Herb Gray Parkway



# Design Criteria for Alternative Design Concepts

The dimensions of the alternatives were determined using the following design criteria:

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 <sup>1</sup>	50 m
Minimum Vertical Clearance	5.0 m vertical clearance for structures over roads	Ontario Ministry of Transportation, 2020 <sup>2</sup>	5.5 m
Maximum Approach Grade	5:1 (20%) or flatter	U.S. Department of Transportation, 2011	5:1 (20%)
Preferred Side Slopes	5:1	U.S. Department of Transportation, 2011	5:1

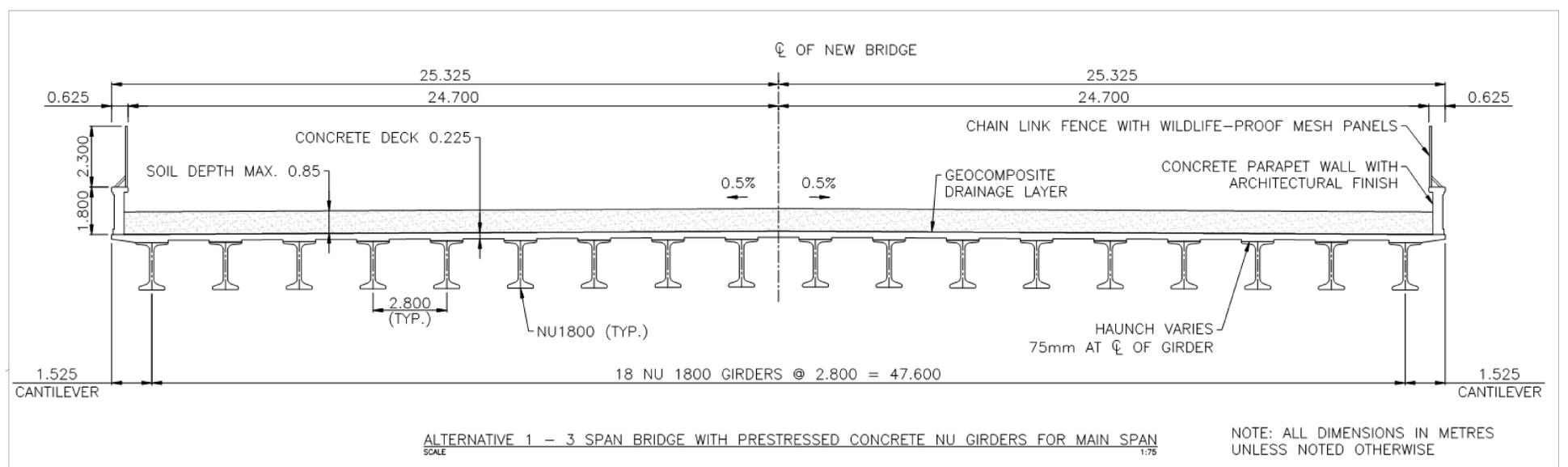
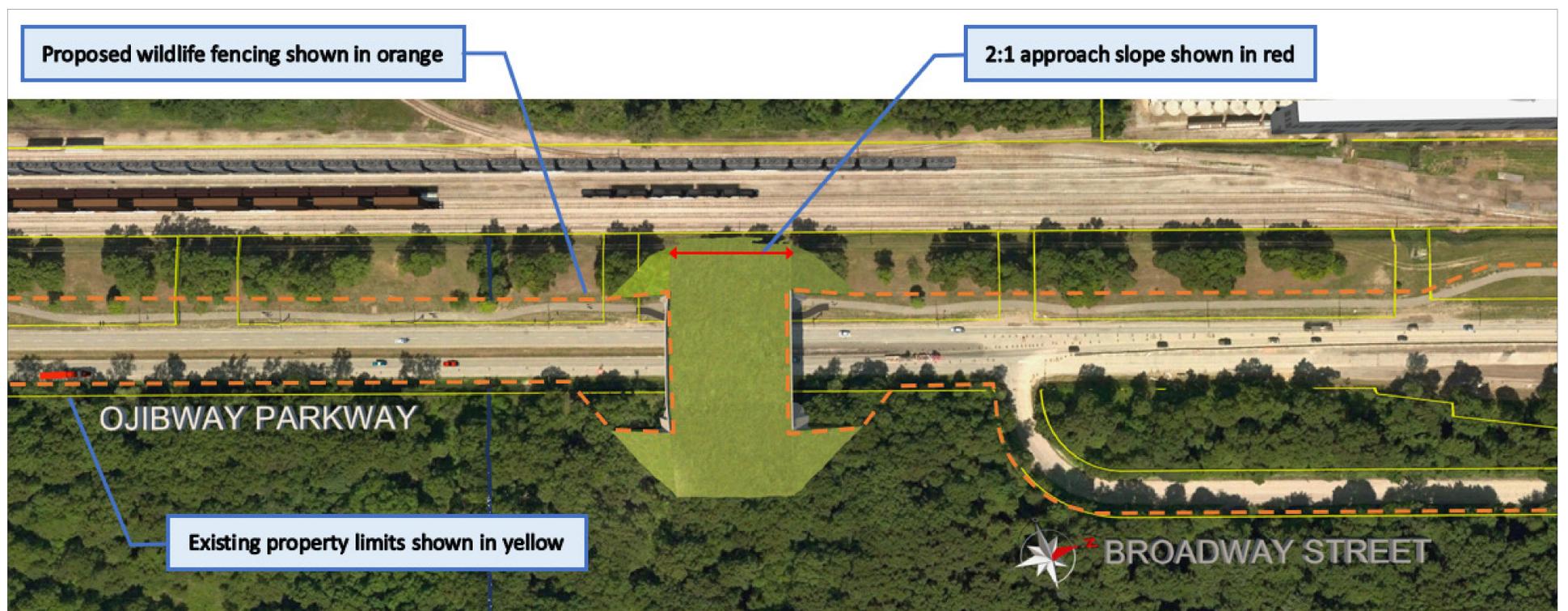
<sup>1</sup> Wildlife Crossing Structure Handbook Design and Evaluation in North America, March 2011

<sup>2</sup> MTO Design Supplement for TAC Geometric Design Guide (GDG) for Canadian Roads, April 2020

# Alternative 1 - Wildlife Overpass (3 Span Bridge)

Alternative 1 is a 3-span bridge comprised of an approximately 31m long main span and two shorter approximately 10m long end spans. The main span will be constructed of concrete girders and the end spans will be precast concrete hollow slabs. The 31m main span will bridge all lanes of Ojibway Parkway; thus, this configuration does not utilize a centre pier. Since this alternative utilizes a single span over the parkway, the top of the overpass will be level.

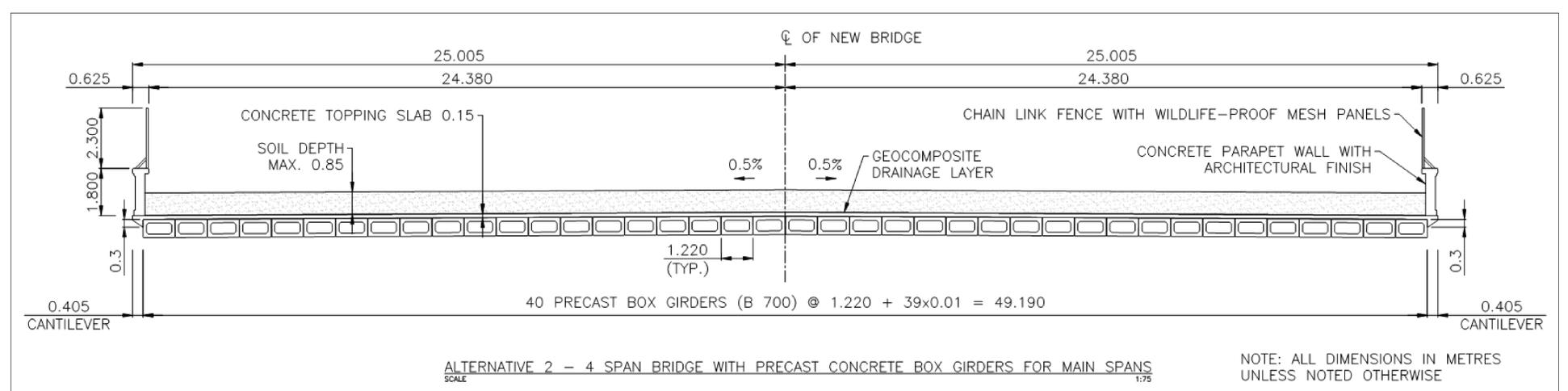
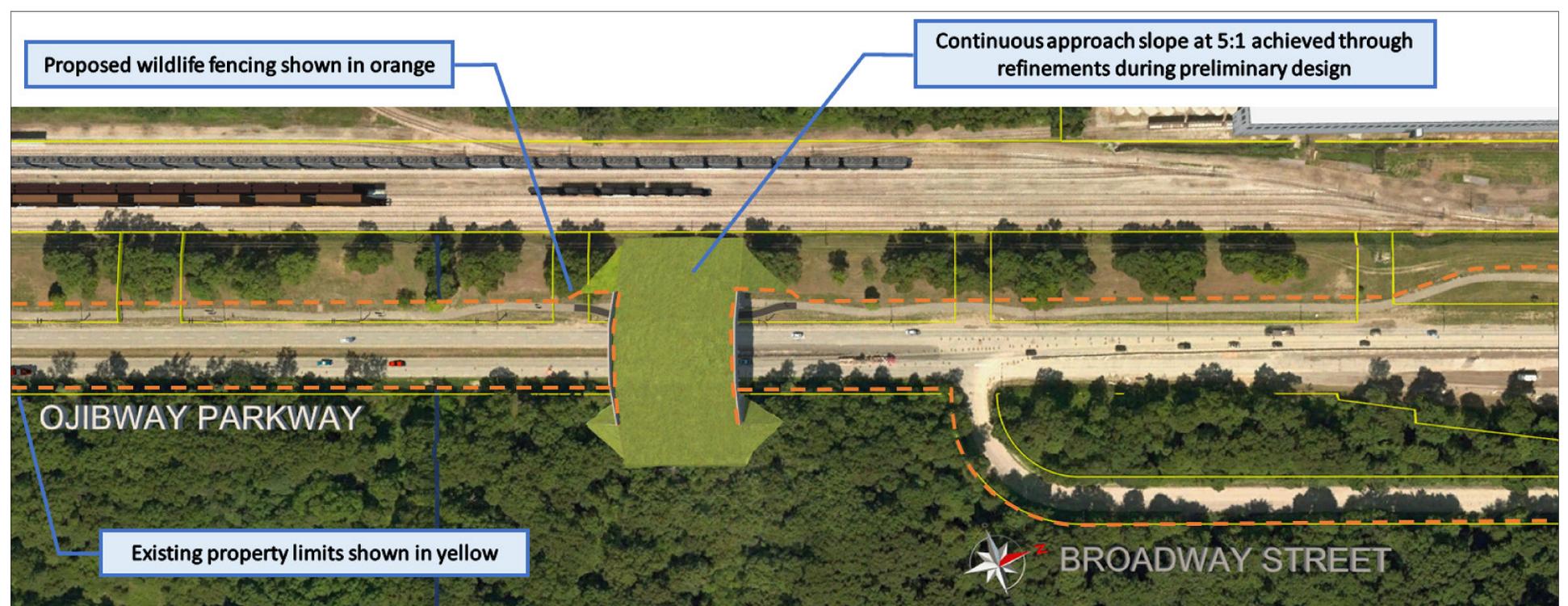
The approach ramps, including the side slopes of the ramps are graded at 5:1 slopes, with the exception of the western approach near the railway where the slope is locally steepened to 2:1 to enable the grading to meet existing ground within the road right of way. This 2:1 slope is approximately 2.4 m high by 4.8 m long (deep)



# Alternative 2 - Wildlife Overpass (4 Span Bridge)

Alternative 2 is a 4-span bridge comprised of two approximately 16m long middle spans supported by a centre pier and two shorter approximately 10m long end spans. The 16m middle spans will be constructed of precast concrete box girders and the 10m end spans will be precast concrete hollow slabs. The two middle spans will have a slight (0.5%) slope from the end abutments to the centre pier which will create a minor crest in the center of the overpass.

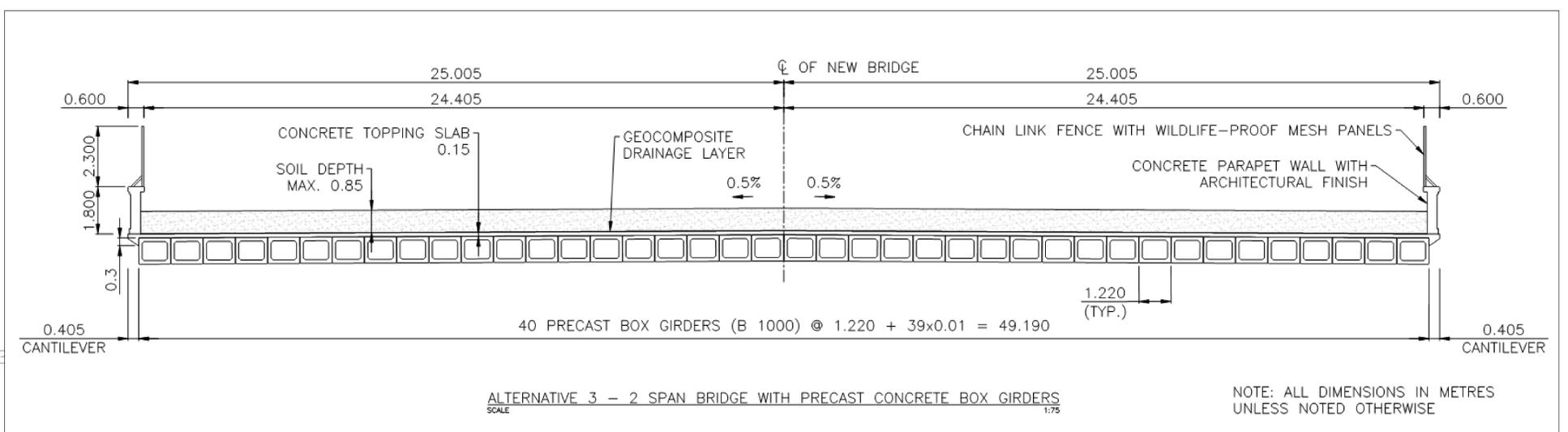
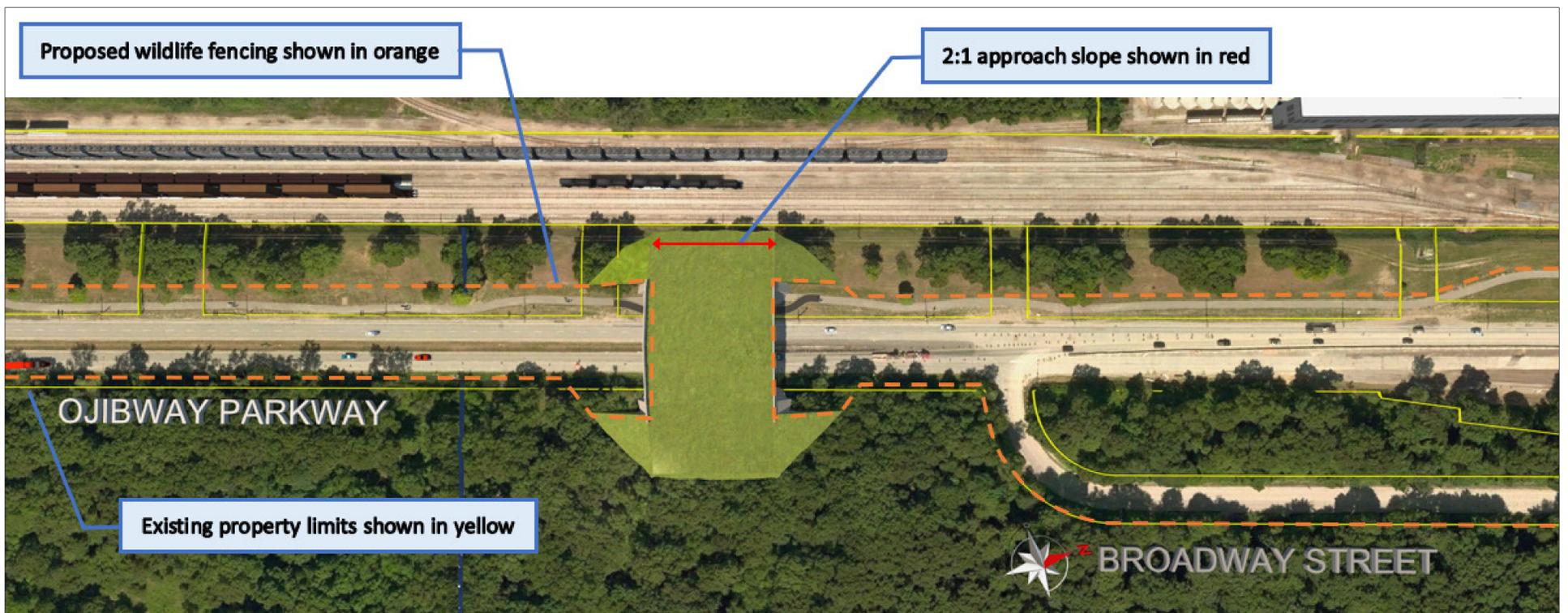
The approach ramps, including the side slopes of the ramps are graded at 5:1 slopes, with the exception of the western approach near the railway, where the slope is locally steepened to 2:1 to enable the grading to meet existing ground within the road right of way. This 2:1 slope is approximately 0.7 m high by 1.4 m long (deep).



# Alternative 3 - Wildlife Overpass (2 Span Bridge)

Alternative 3 is a 2-span bridge comprised of two approximately 27m long spans supported by a centre pier. The 27 m spans will be constructed of precast concrete box girders. The two spans will have an approximate 7.0% slope rising from the end abutments to the centre pier which will create a crest in the center of the overpass. This crest will be approximately 1.5 m higher than where the approach ramps meet the bridge deck.

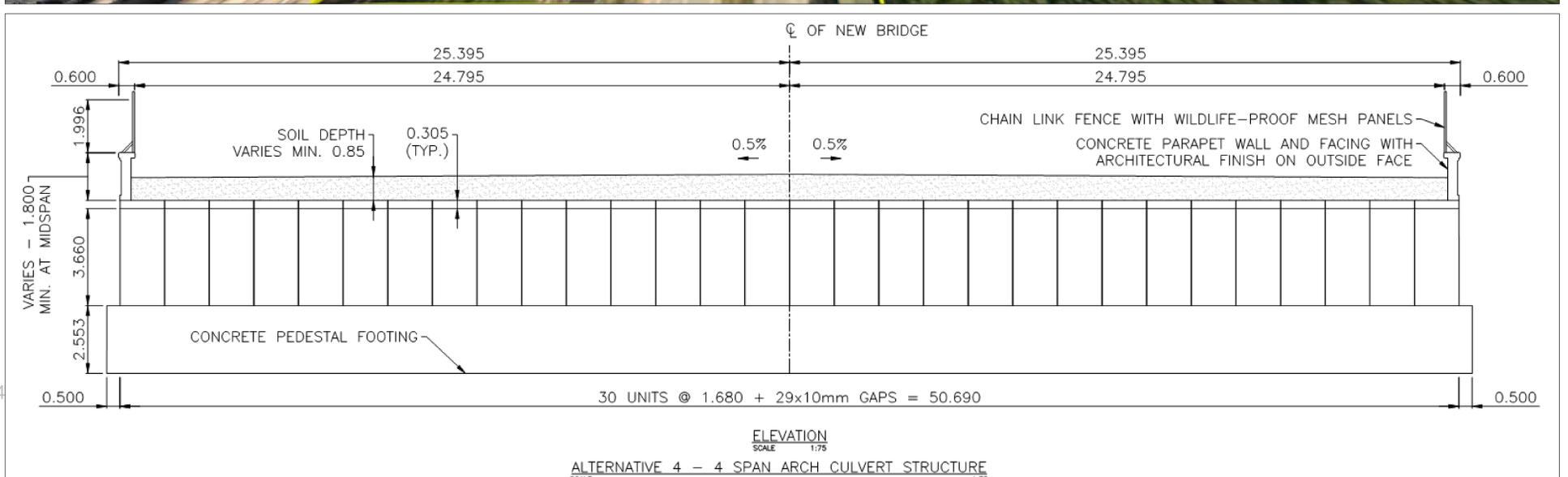
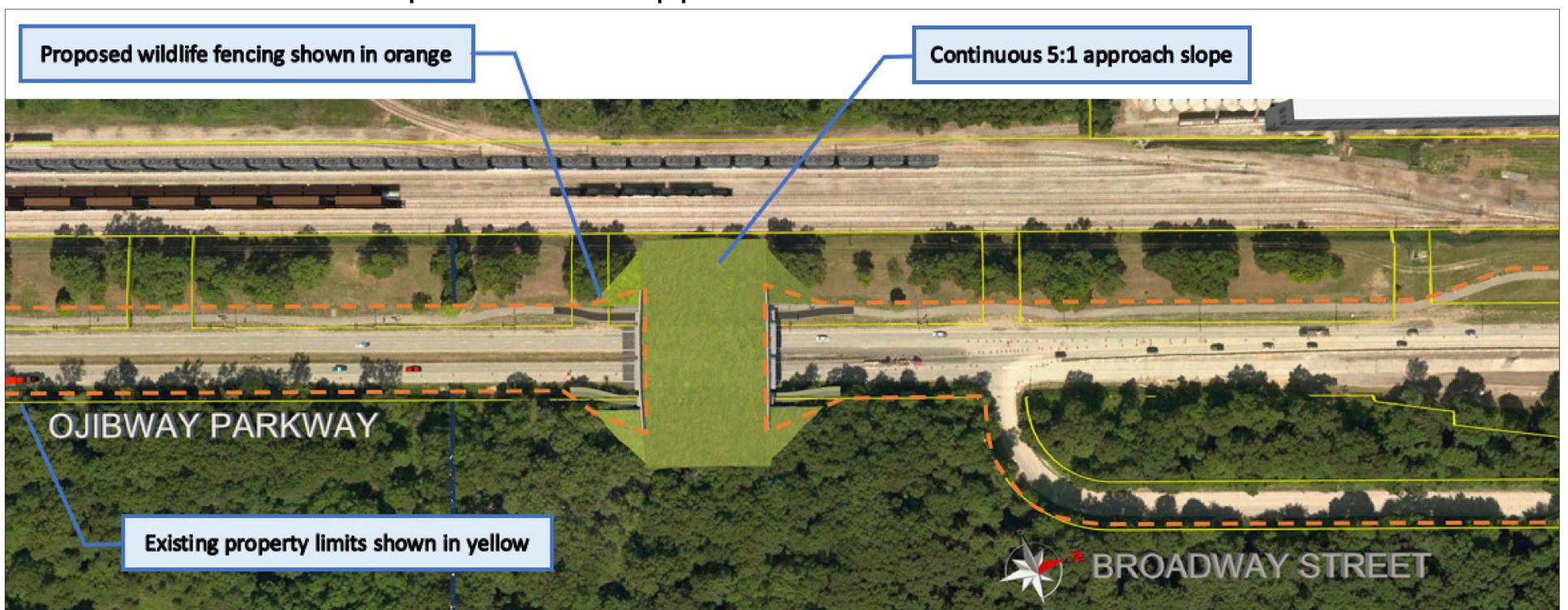
The approach ramps, including the side slopes of the ramps are graded at 5:1 slopes, with the exception of the western approach near the railway, where the slope is locally steepened to 2:1 to enable the grading to meet existing ground within the road right of way. This 2:1 slope is approximately 3.3 m high by 6.6 m long (deep).



# Alternative 4 - Wildlife Overpass (4 Span Arch Culvert)

Alternative 4 is a four-span precast concrete arch structure consisting of two larger 12.8m middle spans over the north and south bound lanes of Ojibway Parkway, and two shorter 4.3m span arches on the east and west side of Ojibway Parkway. The smaller arch on the west will span across the proposed multi use path, while the arch on the east of the roadway will span a drainage ditch. The arches will be supported on cast-in-place concrete pedestal footings with one combined footing in the roadway median, and additional pedestal footings at the other outside of the main span and at each side of the smaller outside spans.

The arches will be covered with fill to allow for a minimum of 0.85m deep soil above the crown of the main spans. The surface above the main spans will be level. A concrete facing and parapet wall with an architectural finish will extend between the different arches and retain the fill within the structure. The configuration of this alternative allows for a continuous 5:1 slope on either approach within the constrained limits.



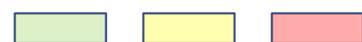
# Evaluation Criteria

The following evaluation criteria was used to evaluate the positive or negative impacts of Alternative Design Concepts:

<b>Natural Environment</b>	<ul style="list-style-type: none"><li>• Wildlife response to deterrents (abrupt grade changes and sightlines)</li><li>• Direct impacts to terrestrial species and habitats</li></ul>
<b>Social Environment</b>	<ul style="list-style-type: none"><li>• Potential impact to community facilities</li><li>• Safety considerations</li><li>• Potential impacts on archaeological and built heritage resources</li></ul>
<b>Technical</b>	<ul style="list-style-type: none"><li>• Potential drainage and stormwater concerns</li><li>• Potential impacts associated with implementation (construction)</li><li>• Complexity of geotechnical design considerations</li><li>• Potential traffic impacts from construction and roadside safety</li></ul>
<b>Costs</b>	<ul style="list-style-type: none"><li>• Anticipated capital costs for construction and maintenance</li></ul>

# Evaluation of Alternative Design Concepts

Category	Criteria	Alternative 1 – Wildlife Overpass (3 Span Bridge)	Alternative 2 – Wildlife Overpass (4 Span Bridge)	Alternative 3 - Wildlife Overpass (2 Span Bridge)	Alternative 4 – Wildlife Overpass (4 Span Arch Culvert)
Natural Environment	Wildlife movement deterrent – abrupt grade change				
	Wildlife movement deterrent – sightlines				
	Direct impacts on terrestrial species and habitats				
Social Environment	Potential impact to community facilities				
	Safety considerations				
	Potential impacts on archaeological resources				
	Potential impacts on built heritage resources				
Technical	Potential drainage and stormwater concerns				
	Potential impacts associated with implementation (complexity of construction)				
	Complexity of geotechnical design considerations				
	Potential traffic impacts from construction				
	Roadside Safety				
Costs	Construction Cost				
	Maintenance and Rehabilitation Costs				
<b>Recommendation</b>		<b>Not Preferred</b>	<b>Preferred</b>	<b>Not Preferred</b>	<b>Not Preferred</b>



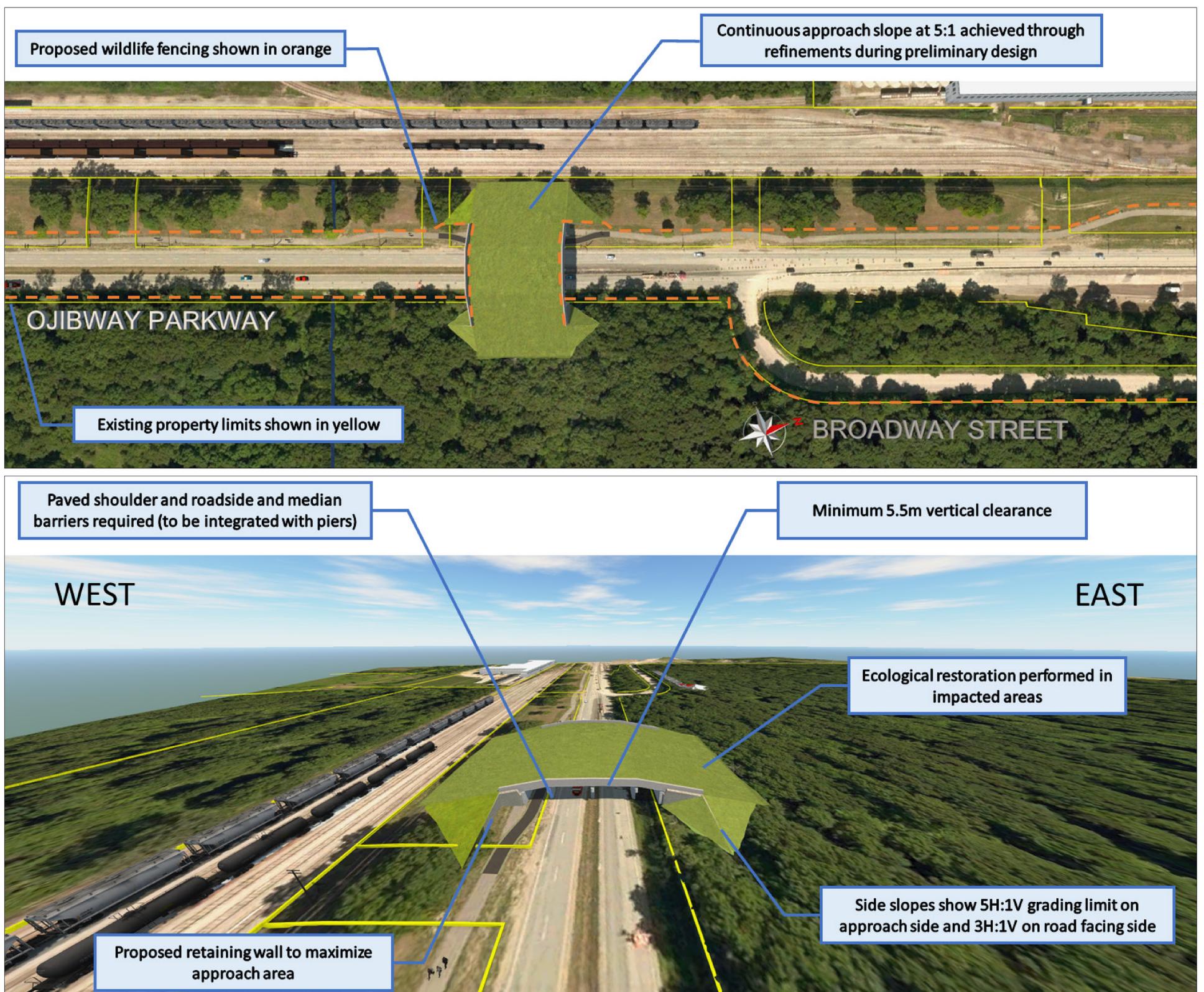
Most Preferred → Least Preferred

Detailed evaluation is provided in the evaluation of alternatives memo under a separate cover on the [project webpage](#).

# Preliminary Preferred Design Concept

Alternative 2 - Wildlife Overpass (4 Span Bridge) was selected as the Preferred Design Concept due to a number of advantages compared to the other alternatives. A summary of the key impacts and benefits of Alternative 2 - Wildlife Overpass (4 Span Bridge) is provided below:

- With slight modifications to approach grading this alternative is not anticipated to have features which would deter wildlife from utilizing the crossing.
- Impacts to terrestrial habitat associated with the direct footprint impacts are lower.
- It provides positive drainage across the top and down the slopes.
- The emergency responders can access the Ojibway Parkway from either direction. The multi-use trail will be visible from the roadway to deter criminal activity, and it will be easily accessible to emergency responders.



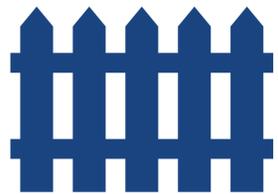
# Additional Design Considerations



As the Study progresses, more details will be incorporated into the design. One of these details will be determining vegetation type and soil quantity for the structure. These details will be confirmed in consultation with staff from the City of Windsor and Essex Region Conservation Authority.



Design elements or other measures to deter human use of the Wildlife Overpass will be evaluated and determined during detailed design phase of this project. These elements may include signage, surveillance equipment and monitoring.



Ultimate configuration and material for the fence will be determined during detailed design.



Fence along the Herb Gray Parkway



Fence along the Herb Gray Parkway

# Next Steps

Following this PIC, the Study Team will complete the following:

- Review all comments received as a result of this PIC.
- Confirm/Finalize Preferred Design Concept.
- Complete Technical Studies: Traffic Review, Contamination Overview Study, Bridge Engineering/Structural Assessment, Restoration Ecology, Stormwater Management Assessment and Utilities Coordination.
- Prepare the Environmental Study Report.
- Publish Notice of Completion and release the Environmental Study Report for a minimum 30-Day Public Review Period.
- Upon finalization of the Class Environmental Assessment, and provided that the funding is secured, the Project will proceed to detailed design and construction.



# Thank you!

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## **We thank you for your participation!**

If you would like to submit any questions or comments, please submit your comments on using the online comment form.

If you would like to be added to the Study Contact 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 May 3, 2021**