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Building Roads that Build Community 2019

York Region

Kennedy Road

Class Environmental Assessment Study
from Steeles Avenue to Major Mackenzie Drive

Welcome

Open House Two

November 25, 2019
December 2, 2019

Please sign in and join our mailing list

Study Area, Study Objectives and Municipal Class EA Process

Description of Project

York Region is undertaking a transportation Environmental Assessment (EA) Study for improvements to **Kennedy Road from Steeles Avenue to Major Mackenzie Drive** in the City of Markham.

Objectives

- Accommodate current and future transportation needs of pedestrians, cyclists, transit users and motorists
- Supplement the findings of the 2016 York Region Transportation Master Plan (YR-TMP)
- Adhere to the principles of York Region's Design Guidelines

Environmental Assessment (EA) Study

An EA study is a planning process for municipal infrastructure, legislated by the Ontario Environmental Assessment Act.

This EA study is being conducted as a Schedule 'C' project under the Municipal Class EA document (October 2000, as amended in 2007, 2011 and 2015).

Traditional Process

TMP Process	Phase 1: Problem/Opportunity Phase 2: Alternative Solutions
Class EA Process	Phase 1: Problem/Opportunity Phase 2: Alternative Solutions Phase 3: Alternative Design Concepts for the preferred solution Phase 4: Environmental Study Report Phase 5: Implementation

Class EA Process using TMP recommendations

Kennedy Road Class EA

Phase 1: Transportation Needs & Justification	Phase 1: Broader Needs & Justification
Phase 2: Alternative Solutions	Phase 2: Supplement TMP with findings from Class EA

We are here!

- Phase 3: Alternative Design Concepts for the preferred solution
- Phase 4: Environmental Study Report

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Purpose of Open House Two and Preferred Solution

Purpose and Framework of Open House Two

- Share key feedback received so far from the public and other agencies
- Present the design approach and the evaluation of alternatives for the road design, pedestrian and cyclist (active transportation) facilities and areas of special consideration
- Present the Recommended Plan and Preliminary Design
- Obtain your input and answer any questions you may have about the project
- Discuss next steps

Station 1 - Background

- Study Area and Objectives
- Class Environmental Assessment Process
- What We've Heard So Far

Station 2 – Design Approach

- Evaluation Criteria
- Road Widening Alternatives and Evaluation
- Active Transportation (AT) Alternatives and Evaluation

Station 3 – Areas of Special Consideration

- Hagerman Cemeteries Alternatives and Evaluation
- St. Philips and Bethesda Cemeteries Alternatives and Evaluation
- CN Rail Crossing & Miller Avenue Extension Alternatives and Evaluation
- 407ETR Crossing Alternatives and Evaluation
- Viva Rapidway Alternatives and Evaluation

Station 3 – Areas of Special Consideration

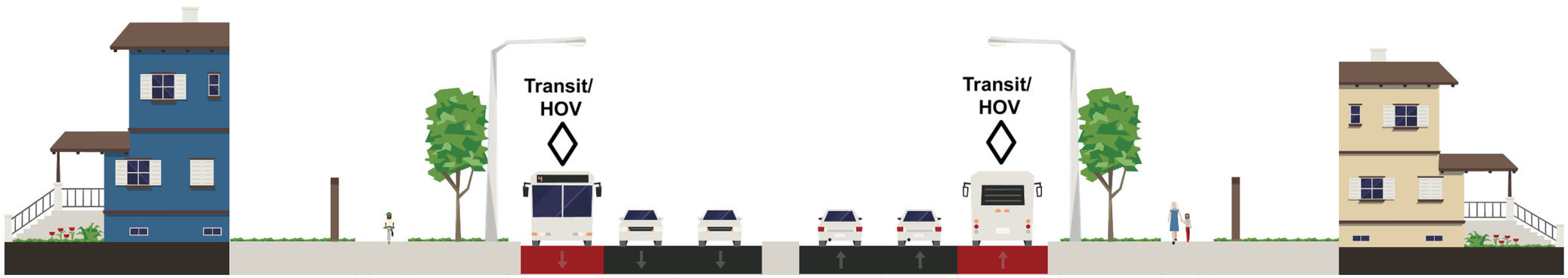
- Stouffville GO Rail Crossing North of Clayton Drive Alternatives and Evaluation
- Stouffville GO Rail Crossing North of Austin Drive Alternatives and Evaluation
- Watercourse Crossing at Rouge River

Station 4 – Next Steps

- We want your feedback!

Summary of Preferred Solution from Open House One

Widen to six lanes for Transit / HOV is identified as the preferred solution due to its alignment with YR-TMP objectives.



Proposed Six Lane Widening

Frequent Transit Network

Separated Cycling Facilities

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What We've Heard so Far

Community Outreach

- Direct mail notices
- Newspaper notices
- Road signs
- Open Houses
- Project website
- York Region social media (Facebook and Twitter)
- Stakeholder Group (SHG)
- Technical Advisory Committee (TAC)

Public Open House One

- Signal timing needs improvement
- Concerns about congestion
- Concerns about noise level
- Concerns about costs related to construction
- Better connections to Unionville GO Station
- Request to add signage along AT facilities

Online Comments

- General support for HOV lanes
- Increase public transit service
- Concerns about pedestrian safety
- Concerns about widening at the cemeteries

Stakeholder Group

- Plan for a cycle track and sidewalk but implement a multi-use path in the interim
- Install a cycling facility on the east side of Kennedy Road to better serve schools
- Preference to maintain the centre-left turn lane for residents and businesses on the east side of Kennedy Road
- Need for a physical barrier separation from buses at the Hagerman Cemeteries location due to the lack of separation between vehicular traffic and pedestrians/cyclists

Key Technical Studies and Evaluation Criteria

Key Technical Studies to inform the evaluations and impact assessments:

- Natural Heritage Impact Assessment
- Drainage and Stormwater Management Report
- Air Quality Impact Assessment
- Geotechnical and Pavement Assessment
- Structural Assessment
- Heritage Impact Assessment
- Cultural Heritage Resource Assessment
- Archaeological Assessment
- Noise Impact Assessment
- Contamination Study Overview
- Hydrogeological Assessment
- Fluvial Geomorphological Assessment

Evaluation Criteria

The Alternative Designs were evaluated based on the following criteria:

Transportation Service
- Improve public transit service
- Reduce traffic congestion and delays
- Create a pedestrian and cyclist-friendly environment
- Improve safety for all travel modes
- Improve mode choice

Social Environment
- Minimize impacts on existing residential, institutional and recreational dwellings / properties
- Improve access to residential areas, institutional and recreational facilities
- Mitigate traffic on local streets
- Minimize traffic noise
- Preserve archaeological and cultural heritage features
- Minimize impacts to cemeteries and burial grounds
- Improve visual aesthetics
- Improve community character

Infrastructure Design
- Minimize utility relocation
- Minimize disruption due to construction
- Minimize constructability complexity

Economic Environment and Cost Effectiveness
- Accommodate planned development and growth
- Minimize impacts on business properties
- Improve access to businesses and key employment areas
- Maximize construction value
- Minimize property requirements
- Minimize operating costs

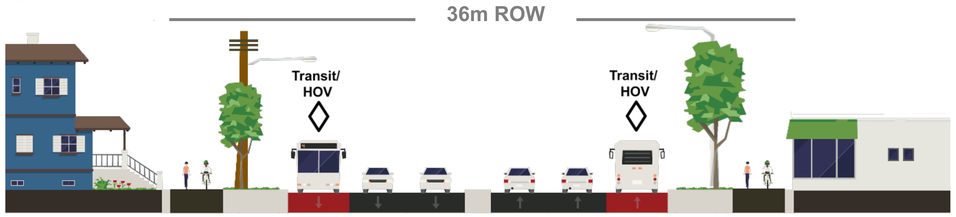
Natural Environment
- Protect designated natural areas
- Protect vegetation
- Protect wildlife
- Protect aquatic habitat
- Surface water and ground water management
- Improve air quality
- Minimizes effects on climate change

Road Widening Design Approach

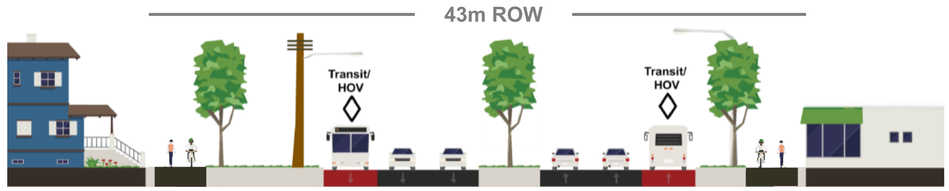
Design Approach and Typical Cross-Sections

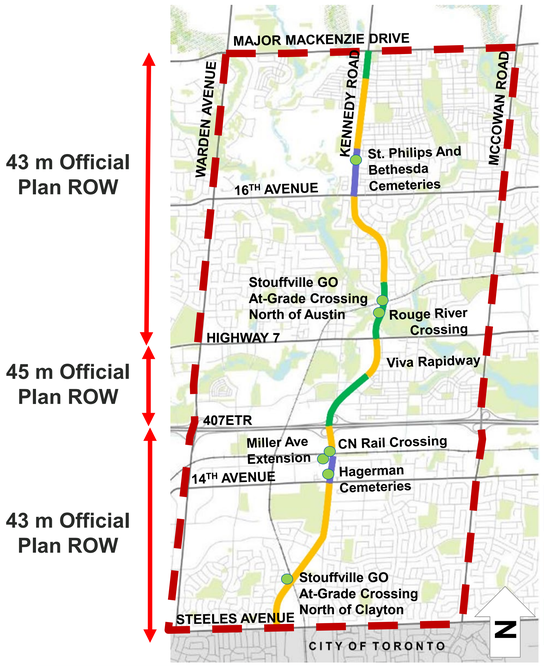
Based on available right-of-way (ROW), two typical cross-sections were developed. Both options provide for the recommended six lane widening for Transit / HOV lanes, continuous facilities for pedestrians and cyclists, and streetscaping.

Typical 36m Cross-Section



Typical 43m Cross-Section



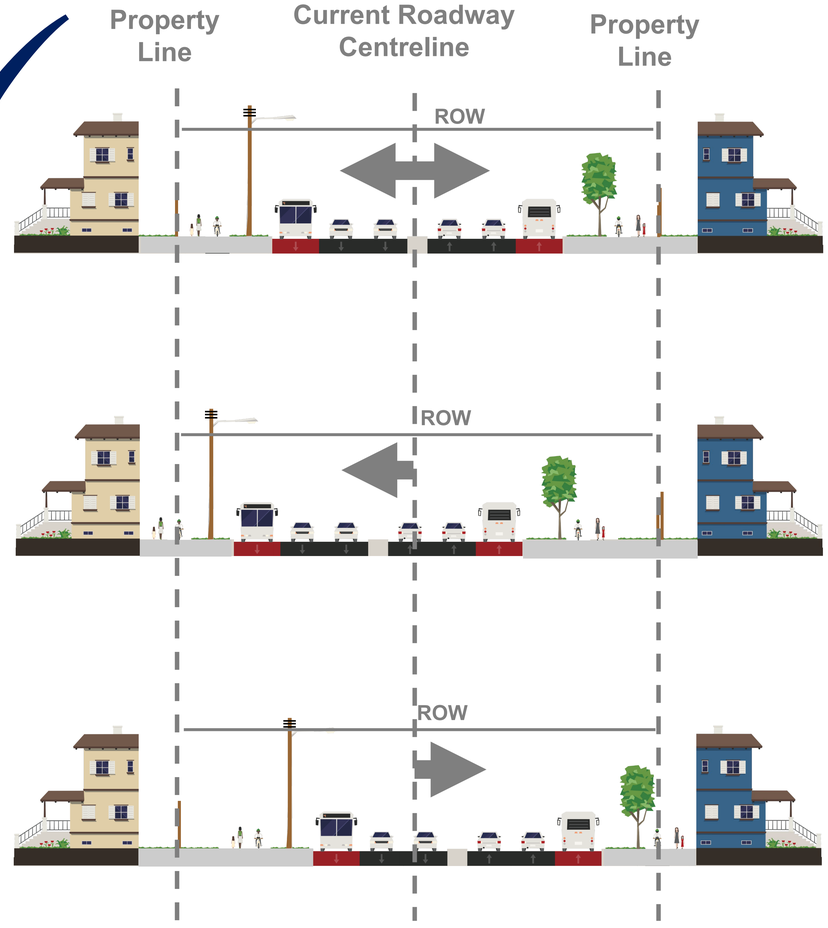


Approximate < 36 m Right-of-Way

Approximate > 36 m Right-of-Way

Approximate 43 m Right-of-Way

Road Widening Alternatives



Alternative 1: Widening About the Centreline
Provide additional lanes on both sides of the street to balance the impacts on both sides of Kennedy Road

Alternative 2: Widening to the West
Shift road centreline so additional lanes and associated impacts occur on the west side of Kennedy Road

Alternative 3: Widening to the East
Shift road centreline so additional lanes and associated impacts occur on the east side of Kennedy Road

Recommendations

Widening about the Centreline is preferred because:

- It balances impacts on both sides of Kennedy Road and minimizes impacts at existing structures and watercourses
- Minimizes impacts to area properties and need for residential displacement

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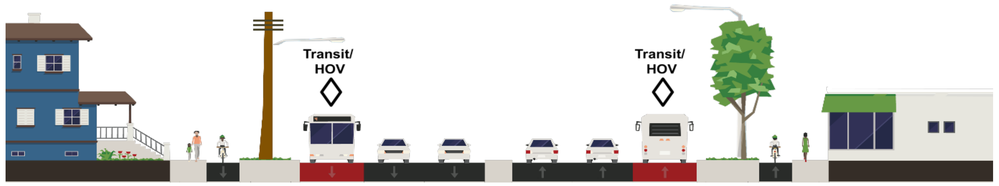
Active Transportation (AT) Facilities

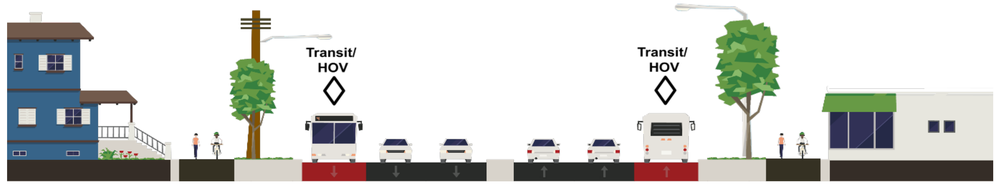
Active Transportation Alternatives

The following alternatives were considered to determine how best to accommodate pedestrians and cyclists.

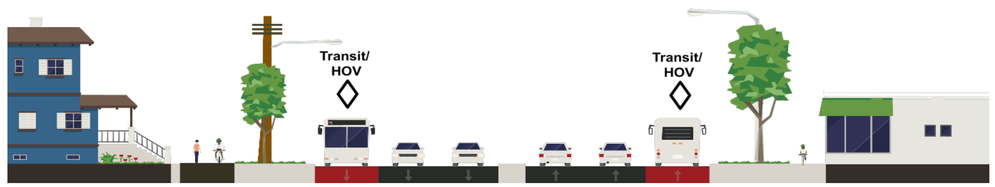
Alternative 1: Cycle Tracks and Sidewalks, Both Sides



Alternative 2: Multi-Use Paths, Both Sides



Alternative 3: Multi-Use Path One Side, Sidewalk One Side



Evaluation and Recommendations

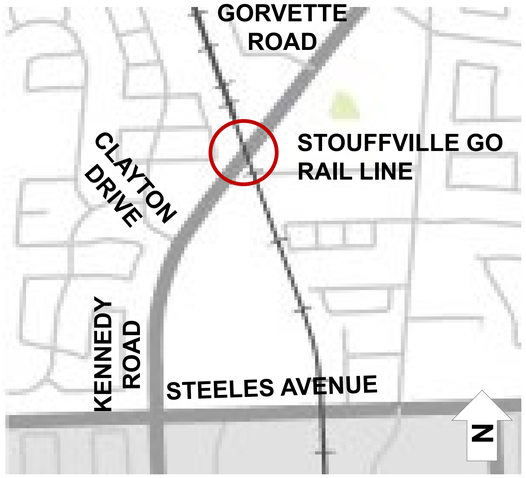
Criteria	Alternative 1: Cycle Tracks and Sidewalks, Both Sides	Alternative 2: Multi-Use Paths, Both Sides	Alternative 3: Multi-Use Path One Side, Sidewalk One Side
Transportation Service	Less Preferred	Most Preferred	Least Preferred
Natural Environment	Less Preferred	Less Preferred	Most Preferred
Social Environment	Most Preferred	Most Preferred	Least Preferred
Infrastructure Design	Less Preferred	Less Preferred	Most Preferred
Economic Environment and Cost Effectiveness	Least Preferred	Less Preferred	Most Preferred
Recommendation		***Recommended***	

Multi-Use Paths, Both Sides is the preferred Solution because:

- It improves the pedestrian and cyclist environment while minimizing operational costs
- It fits within the available right-of-way and provides for continuous and uniform facilities through constrained areas and throughout the corridor

GO Rail Crossing North of Clayton Drive

Design Considerations

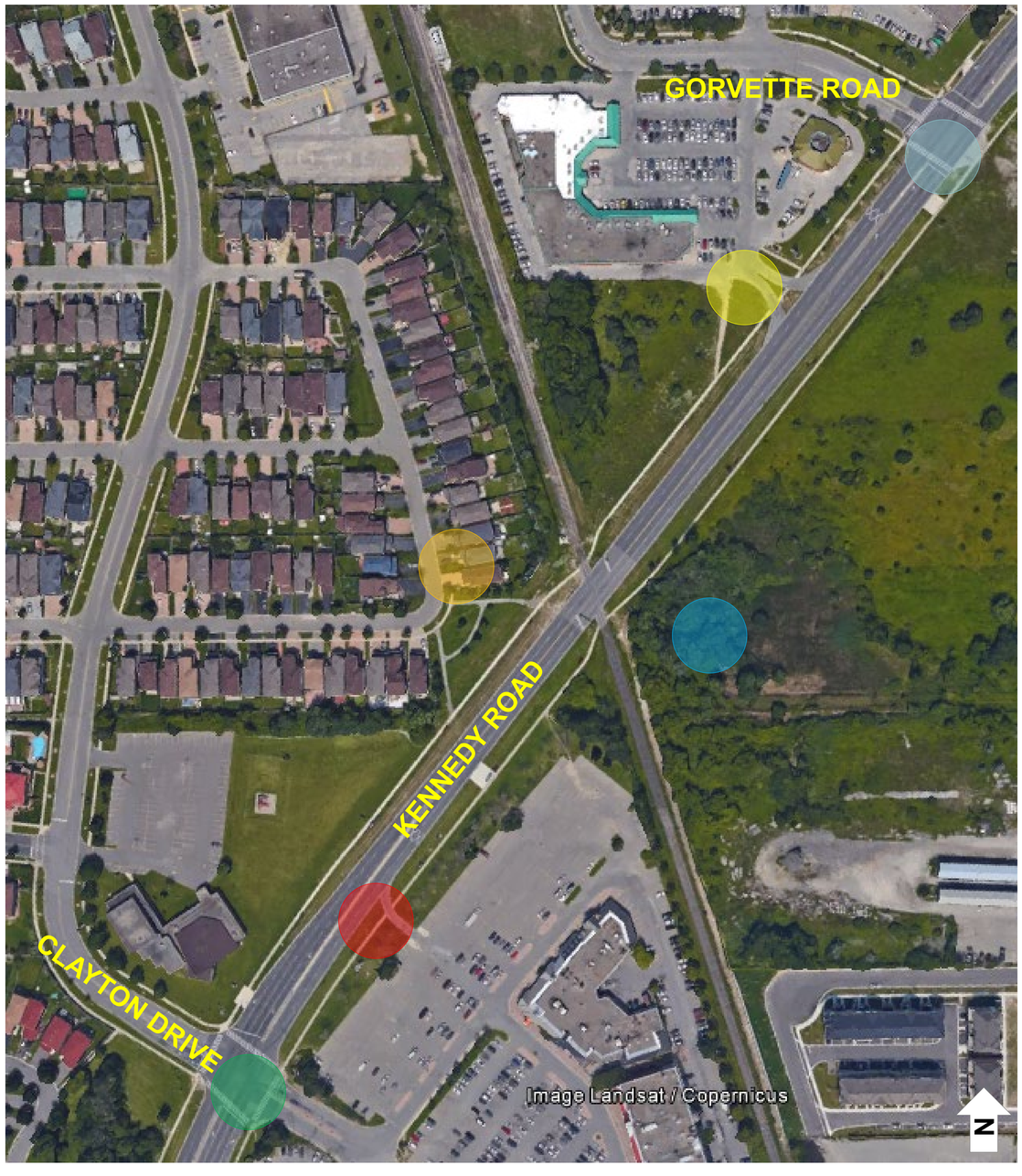


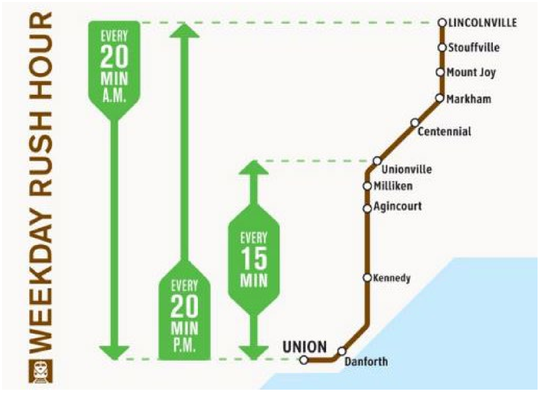
Safety concerns for pedestrians and cyclists, and low pedestrian and cycling level of service

Access to adjacent land use

Delays to vehicles as they are required to stop for trains to cross – safety concerns for motorists due to conflicts with crossing trains

Increased train frequency due to GO expansion service





GO Expansion – Stouffville GO Corridor

All-day, two-way rail services between Union and Unionville Stations in the medium to long-term

- Distance to Clayton Drive intersection
- Market Village Access
- Proximity between Rail Crossing and residential homes
- Proximity between Rail Crossing and Wetland
- Hollywood Plaza access
- Distance to Gorvette Road intersection

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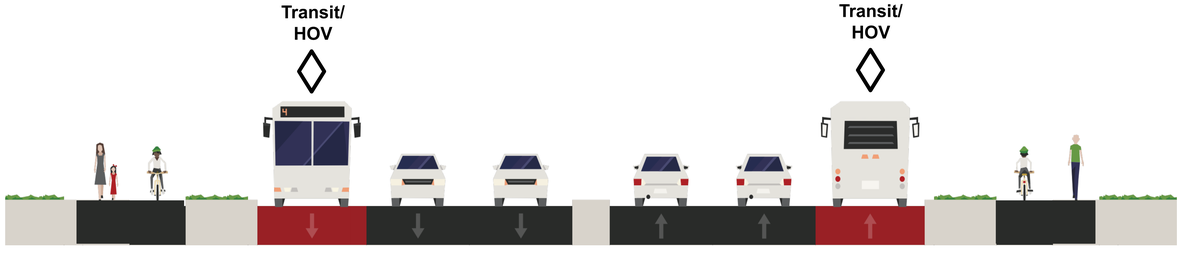
GO Rail Crossing North of Clayton Drive

GO Rail Crossing Alternatives

These alternatives considered how to best accommodate the road widening, and pedestrians and cyclists at the GO Rail Crossing north of Clayton Drive:

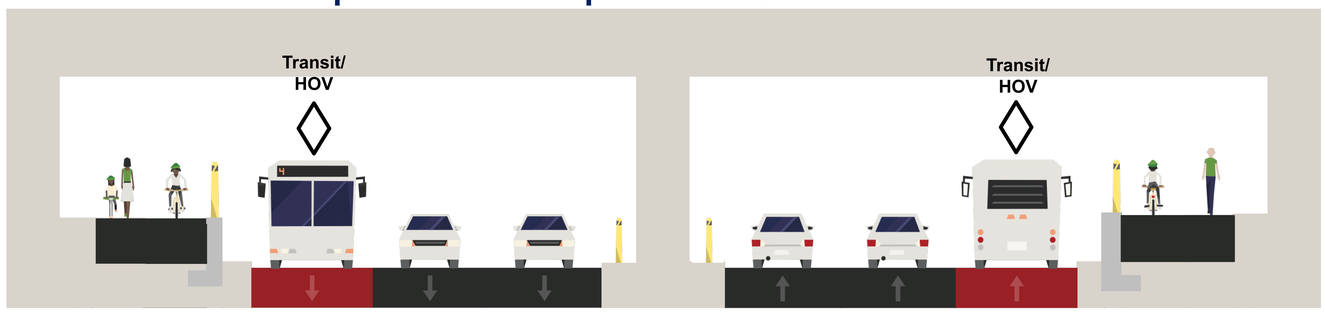
Alternative 1: At-Grade Crossing with AT Improvements



(Recommended)

Existing at-grade Kennedy Road crossing north of Clayton Drive

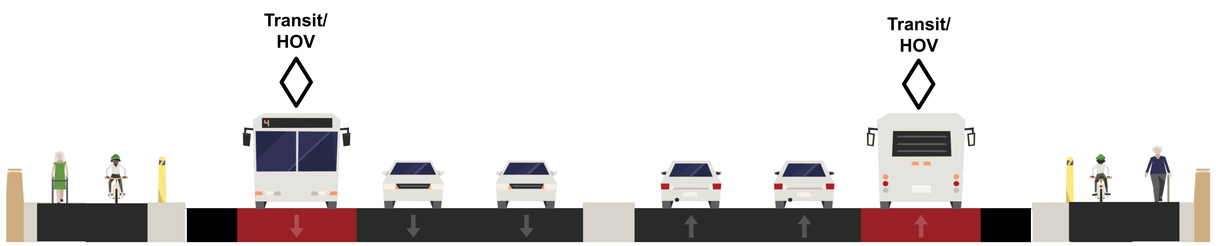
Alternative 2: Underpass with AT Improvements



(Ultimate Vision)

Underpass example on Major Mackenzie Drive east of Keele Street

Alternative 3: Overpass with AT Improvements



Overpass example on Bayview Avenue south of Highway 401

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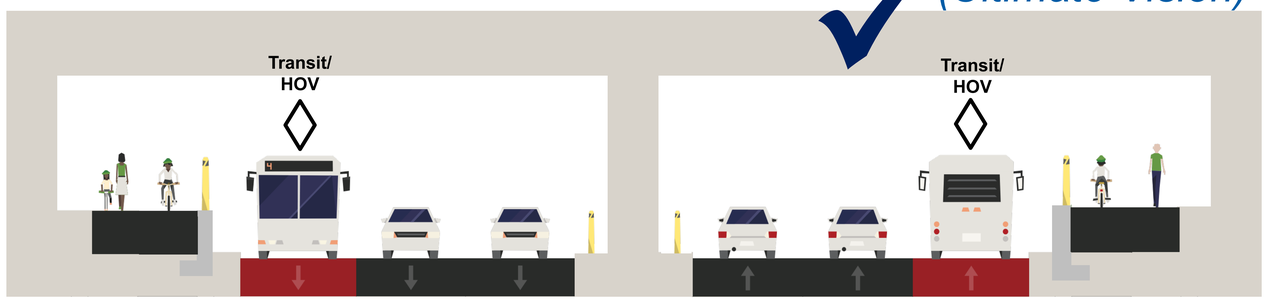
GO Rail Crossing North of Clayton Drive

GO Rail Crossing Evaluation and Recommendation

Criteria	Alternative 1: At-grade crossing with AT improvements	Alternative 2: Underpass with AT improvements	Alternative 3: Overpass with AT improvements
Transportation Service	Least Preferred	Most Preferred	Less Preferred
Natural Environment	Less Preferred	Least Preferred	Most Preferred
Social Environment	Less Preferred	Most Preferred	Least Preferred
Infrastructure Design	Most Preferred	Least Preferred	Less Preferred
Economic Environment and Cost Effectiveness	Most Preferred	Less Preferred	Least Preferred
Recommendation	***Recommended***	**ULTIMATE VISION**	

Underpass with AT Improvements

(Ultimate Vision)



Underpass example on Major Mackenzie Drive east of Keele Street

Overpass with AT improvements is <u>not</u> recommended because:

- It results in increased travel distances for pedestrians and cyclists and does not maintain existing community connections to adjacent neighbourhoods
- It results in permanent closure of existing accesses to Market Village and Hollywood Plaza as these accesses would become too steep to remain open to meet the raised Kennedy Road

At-Grade Crossing with AT improvements is <u>Recommended</u> because:

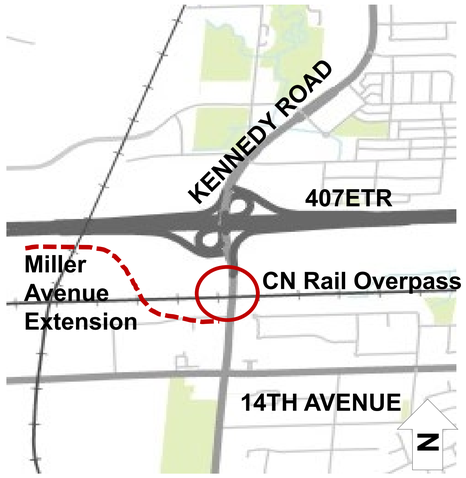
- It provides improved pedestrian and cyclist facilities and dedicated Transit/HOV lanes until such time increase GO Train Service results in substantial vehicle queuing and increased potential for cyclist and pedestrian crossing conflicts

Underpass with AT improvements is the <u>ULTIMATE VISION</u> because:

- It eliminates vehicle queues from increased GO Train service
- It removes rail conflicts with pedestrians and cyclists
- Although the underpass is more costly due to the need for a pumping station, it allows for access to be maintained to adjacent land uses

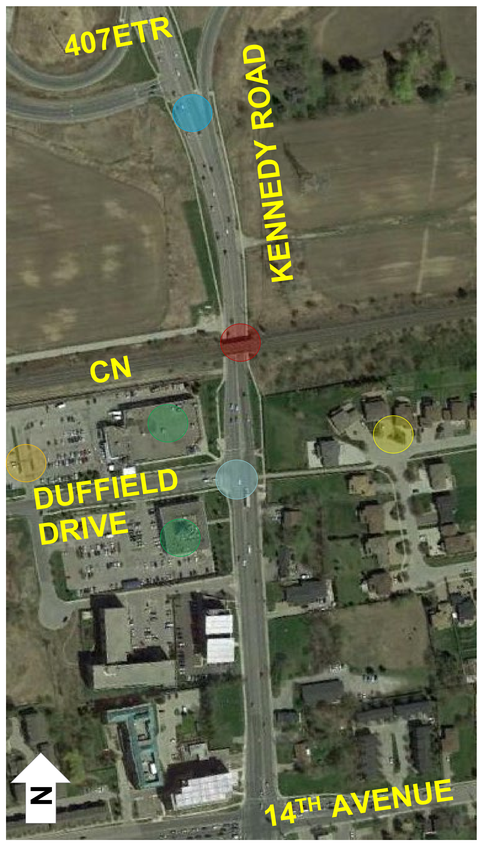
CN Rail Crossing & Miller Avenue Extension

Design Considerations



Replacement of CN structure is required to accommodate pedestrian and cyclist facilities for Kennedy Road and provides an opportunity to revisit the 2013 Markham EA Alignment of Miller Avenue Extension

Safety concerns for pedestrians and cyclists



- Proximity to 407 ETR Ramp
- CN Rail Overpass
- Proximity to proposed Miller Avenue Extension
- Proximity to commercial uses
- Proximity to residential area
- Distance to Duffield Drive intersection

Miller Avenue Extension Background

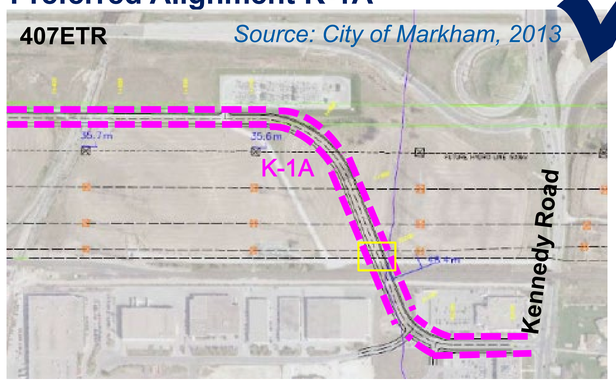
The City of Markham completed the Miller Avenue Extension EA study in 2013 and recommended Miller Avenue to connect to Kennedy Road through Duffield Drive intersection, requiring a crossing under CN Rail. The recommended alignment for Miller Avenue Extension is "Preferred Alternative K-1A."

This Kennedy Road EA study recommends replacing the existing CN Rail Overpass Bridge to accommodate Kennedy Road improvements. Since the CN Rail Overpass structure will be replaced, the recommended road alignment for the Miller Avenue Extension was revisited as part of the Kennedy Road EA to reassess if the Preferred Alternative K-1A was still recommended.

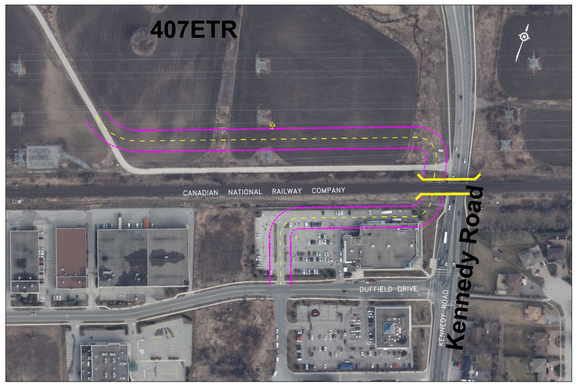
Miller Avenue Extension Alternatives

The below alternatives built off the City's 2013 EA recommendations to reassess how to best extend Miller Avenue with consideration of opportunities that arise from a new CN Rail Overpass bridge over Kennedy Road:

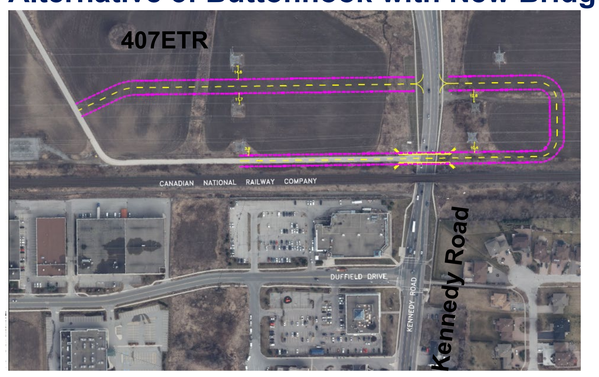
Alternative 1: Maintain Markham EA Preferred Alignment K-1A



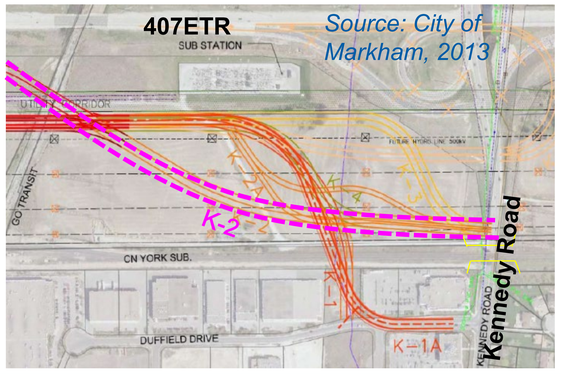
Alternative 2: Loop with Bridge Extension



Alternative 3: Buttonhook with New Bridge



Alternative 4: Markham EA Option K-2



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CN Rail Crossing & Miller Avenue Extension

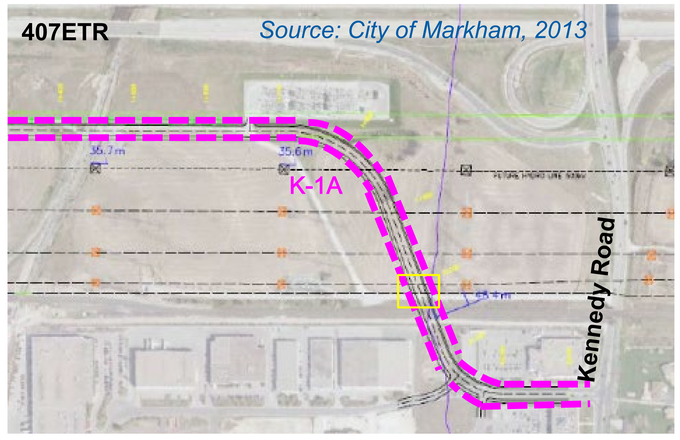
Miller Avenue Extension Evaluation and Recommendations

Criteria	Alternative 1: Maintain Markham EA Preferred Alignment K-1A	Alternative 2: Loop with Bridge Extension	Alternative 3: Buttonhook with New Bridge	Alternative 4: Markham EA Option K-2
Transportation Service	Most Preferred	Most Preferred	Less Preferred	Least Preferred
Natural Environment	Most Preferred	Less Preferred	Least Preferred	Less Preferred
Social Environment	Most Preferred	Most Preferred	Less Preferred	Most Preferred
Infrastructure Design	Less Preferred	Less Preferred	Least Preferred	Most Preferred
Economic Environment and Cost Effectiveness	Less Preferred	Least Preferred	Least Preferred	Most Preferred
Recommendation	**Recommended**			

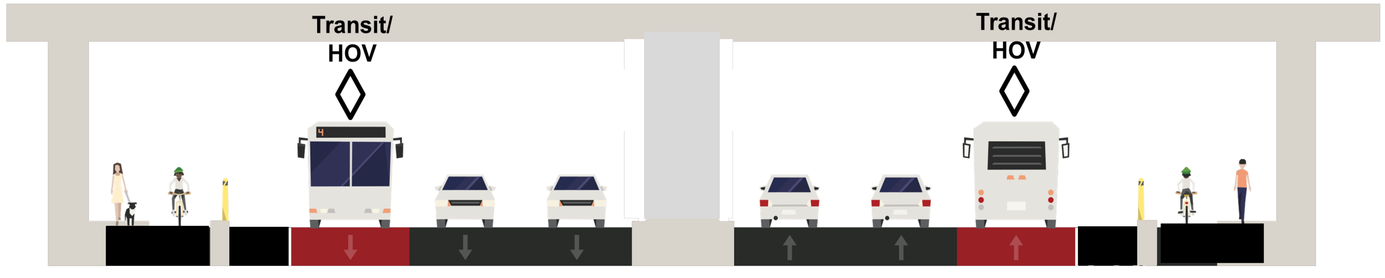
Maintain the Markham EA Preferred Alignment K-1A is recommended because :

- Access to Kennedy Road is via the signalized Duffield Drive, allowing for northbound and southbound travel, and a protected crossing for pedestrians and cyclists at the signalized intersection
- Implementation of Miller Avenue Extension can be independent of Kennedy Road improvements

Maintain Markham EA Preferred Alignment K-1A



CN Rail Crossing Recommendations



Replacement and widening of the CN Rail Overpass Structure is recommended to accommodate Kennedy Road improvements. The Miller Avenue Extension will have no impact on the CN Rail Overpass.

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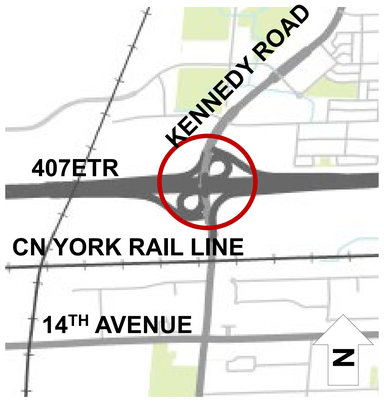
407 ETR Crossing

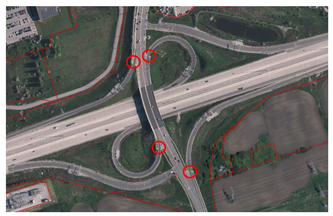
Design Considerations



The 407ETR interchange does not have existing dedicated cycling facilities

Four conflict points exist at the ramp interchanges, affecting pedestrian and cyclist safety

The proposed design may require ramp reconfiguration to eliminate pedestrian and cyclist conflicts



Point of Vehicular and Pedestrian Conflict

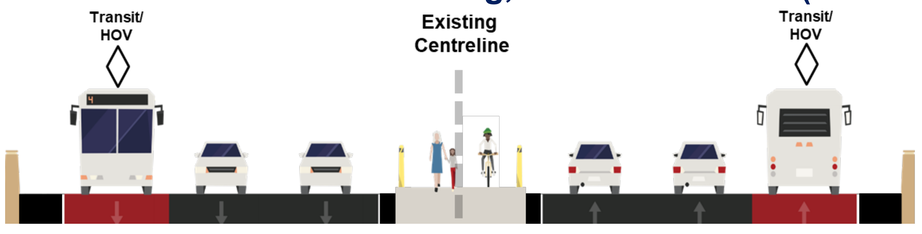
The proposed improvements must align with the Ministry of Transportation's plans for the future 407 Transitway

407 ETR Interchange Alternatives

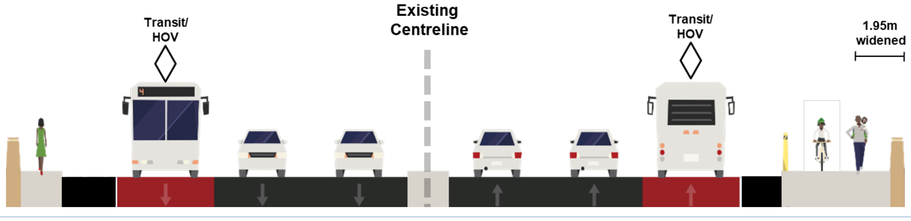
The below alternatives consider how to best accommodate the road widening, and pedestrians and cyclists at the existing 407 ETR structure:

Alternative 1: No structure widening, 1 multi-use path (MUP) (road shift)

Alternative 2: No structure widening, 1 MUP in median (no road shift)

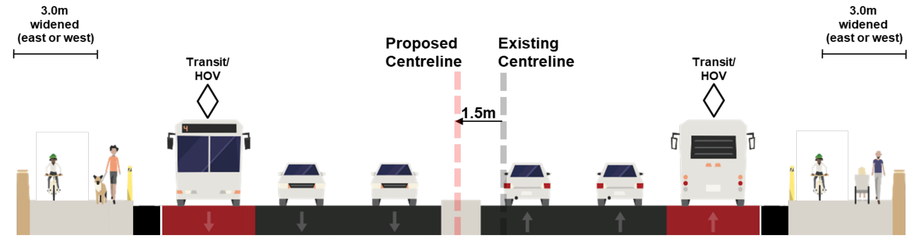


Alternative 3: Structure widened, 1 MUP + 1 sidewalk (no road shift)

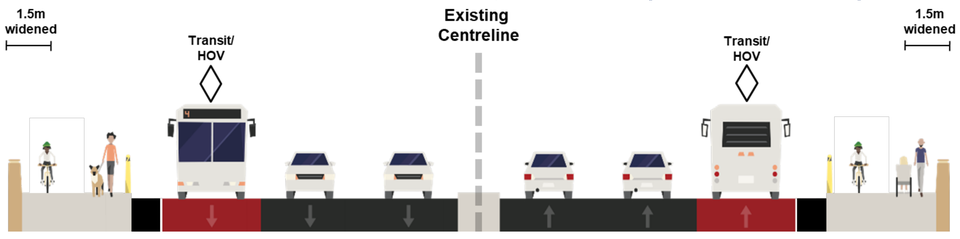


407 ETR Interchange Alternatives (continued)

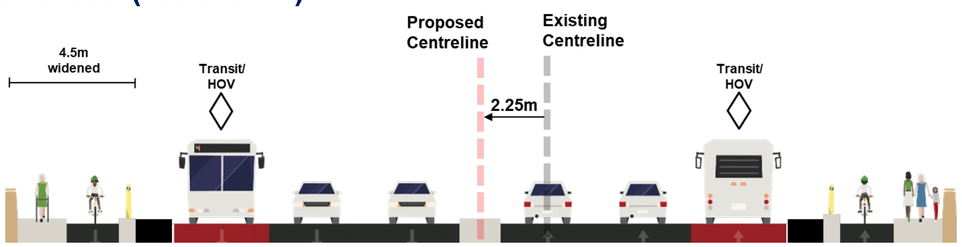
Alternative 4.1: Structure widened, 2 MUPs (road shift)



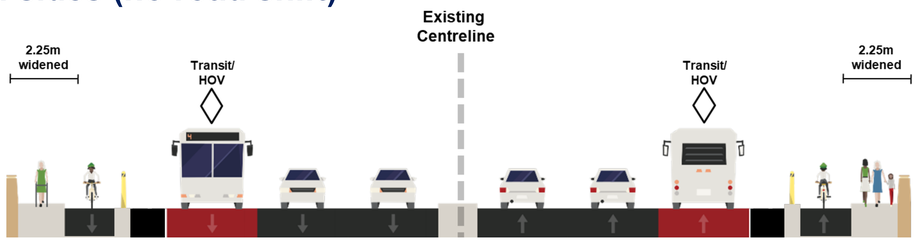
Alternative 4.2: Structure widened, 2 MUPs (no road shift)



Alternative 5.1: Structure widened, sidewalks and cycle tracks on both sides (road shift)



Alternative 5.2: Structure widened, sidewalks and cycle tracks on both sides (no road shift)



Alternative 6: No structure widening, separate AT bridge adjacent to existing structure

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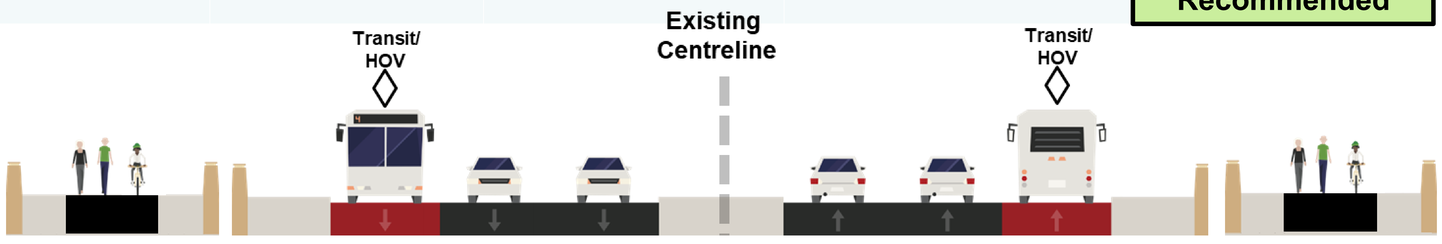
407 ETR Crossing

Evaluation and Recommendation

Criteria	Alternative 1: No Structure Widening, 1 MUP (Road Shift)	Alternative 2: No Structure Widening, MUP in Median	Alternative 3: Structure Widened, 1 MUP + 1 Sidewalk (No Road Shift)	Alternative 4.1: Structure Widened, 2 MUPs (Road Shift)	Alternative 4.2: Structure Widened, 2 MUPs (No Road Shift)	Alternative 5.1: Structure Widened, Sidewalks and Cycle Tracks on Both Sides (Road Shift)	Alternative 5.2: Structure Widened, Sidewalks and Cycle Tracks on Both Sides (No Road Shift)	Alternative 6: No Structure Widening, Separate AT Bridge adjacent to existing structure
Transportation Service	Less Preferred	Not Carried Forward due to operational concerns.	Least Preferred	Less Preferred	Less Preferred	Less Preferred	Less Preferred	Most Preferred
Natural Environment	Most Preferred		Most Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred
Social Environment	Most Preferred		Most Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred	Most Preferred
Infrastructure Design	Less Preferred		Less Preferred	Least Preferred	Less Preferred	Least Preferred	Less Preferred	Most Preferred
Economic Environment and Cost Effectiveness	Most Preferred		Less Preferred	Least Preferred	Less Preferred	Less Preferred	Least Preferred	Less Preferred
Recommendation								**Recommended**

Separate AT bridge on both sides, with no widening to existing structure (Alternative 6) is recommended because:

- It does not require widening of the existing 407 ETR bridge, shifting the Kennedy Road alignment, nor ramp reconstruction
- It improves pedestrians and cyclist safety with exclusive AT bridges separated from vehicles over the 407 ETR
- It provides continuous facilities for pedestrians and cyclists



York Region

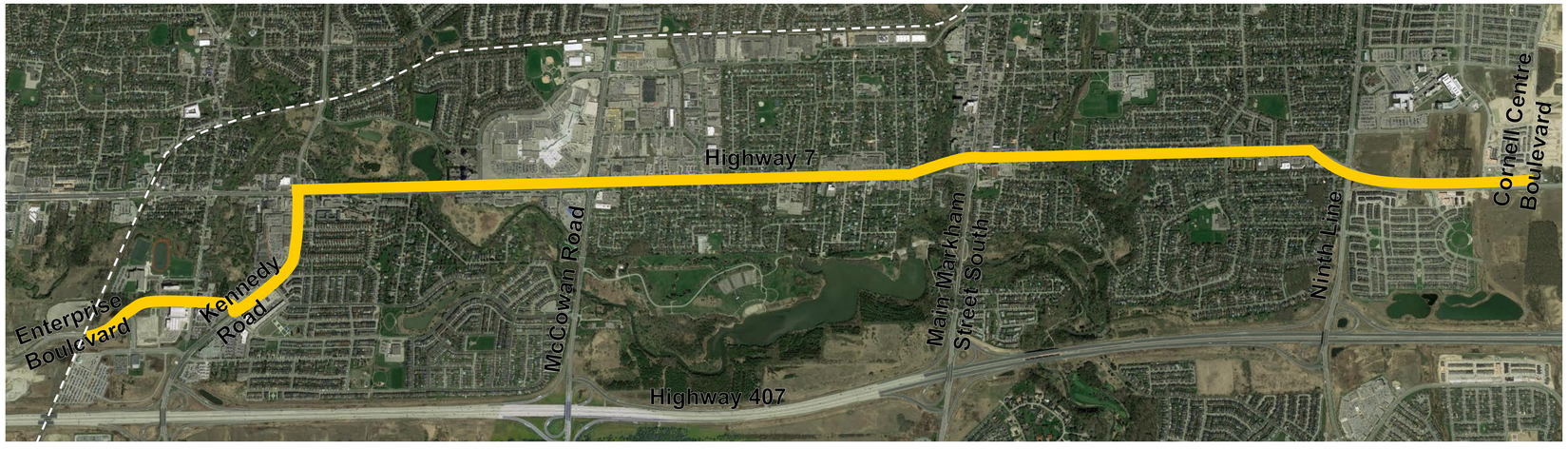
GREAT | STREETS
Building Roads that Build Community 2019

Viva Rapidway
Kennedy Road, YMCA Boulevard to Highway 7

Background

The Highway 7 Corridor and Vaughan North-South Link Public Transit Improvements Environmental Assessment (YRRTC EA) was completed and approved in 2005 and protects for the Viva rapidway connection to/from Markham Centre to Markham Stouffville Hospital.

A portion of the EA approved Rapidway runs along Kennedy Road from Highway 7 to YMCA Boulevard.



Design Considerations

YR-TMP outlines York Region's Rapid Transit Network – the Highway 7 corridor contains a link through Markham Centre on Kennedy Road

The proposed improvements must align with the plans for the Viva Rapidway

- Existing Dealership and ROW Constraints
- Retail Developments and Proximity to Corridor ROW
- Tributary to Rouge River
- Residential

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Building Roads that Build Community 2019

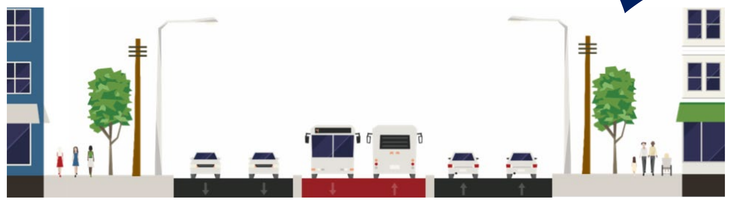
Viva Rapidway
Kennedy Road, YMCA Boulevard to Highway 7

Alternatives

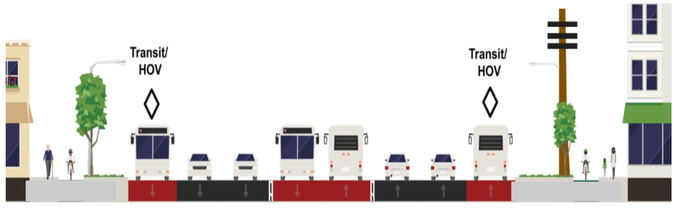
The below alternatives consider how to best accommodate the Rapidway, Transit/HOV lanes and pedestrians and cyclists along Kennedy Road between YMCA Boulevard and Highway 7:

Alternative 1:
Median Viva Rapidway with AT facilities (modified YRRTC EA*)

(Ultimate Vision)

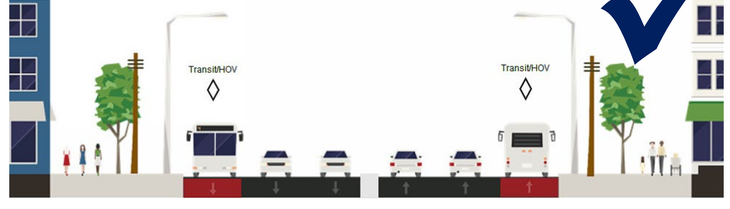


Alternative 2:
Median Viva Rapidway, Transit/HOV curb lanes, with AT facilities



Alternative 3:
Shift Viva Rapidway to share Transit/HOV curb lanes, with AT facilities

(Recommended)



Evaluation and Recommendations

Criteria	Alternative 1: Median Viva Rapidway with AT facilities (modified YRRTC EA*)	Alternative 2: Median Viva Rapidway with Transit/HOV curb lanes, with AT facilities	Alternative 3: Shift Viva Rapidway to share Transit/HOV curb lane, with AT facilities
Transportation Service	Least Preferred	Most Preferred	Less Preferred
Natural Environment	Less Preferred	Least Preferred	Most Preferred
Social Environment	Less Preferred	Least Preferred	Most Preferred
Infrastructure Design	Less Preferred	Least Preferred	Most Preferred
Economic Environment and Cost Effectiveness	Less Preferred	Least Preferred	Most Preferred
Recommendation	**ULTIMATE VISION**		***Recommended***

**YRRTC EA was approved in 2005 and protects for the Viva rapidway connection to/from Markham Centre to Markham Stouffville Hospital*

Shift Viva Rapidway to share Transit/HOV curb lanes, with AT facilities is <u>Recommended</u> because:

- It reduces congestion and provides transit connectivity for YRT buses in Transit/HOV lanes. Viva buses are required to share the Transit/HOV lanes
- It provides continuous pedestrian and cyclist facilities with street planting opportunities while minimizing potential impacts to businesses and does not result in business displacement

Median Viva Rapidway with AT facilities (modified YRRTC EA) is the <u>ULTIMATE VISION</u> because:

- Viva transit service can operate within a dedicated median Rapidway and it allows for future opportunities to implement higher order transit service (Light Rail Transit) within the median in the **longer term**
- It provides continuous pedestrian and cyclist facilities with street planting opportunities while minimizing potential impacts to businesses and does not result in business displacement

York Region

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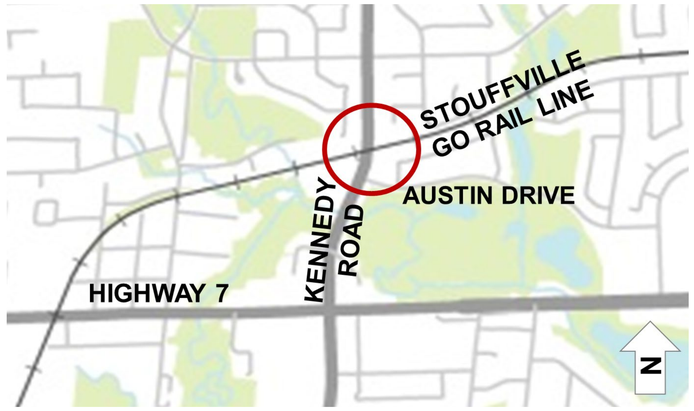
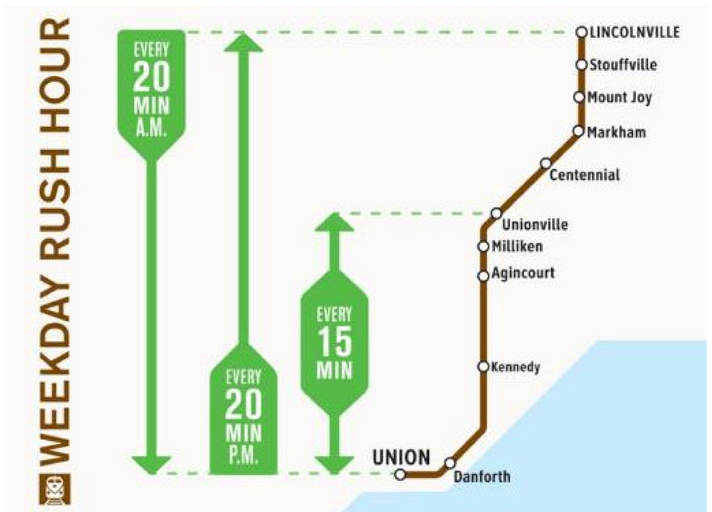
Building Roads that Build Community 2019

GO Rail Crossing North of Austin Drive

Design Considerations



- Safety concerns for pedestrians and cyclists and low pedestrian and cyclist level of service
- Access to adjacent land use
- Delays to vehicles as they are required to stop for trains to cross – safety concerns for motorists due to conflicts with crossing trains
- Increased train frequency due to GO expansion service



GO Expansion – Stouffville GO Corridor

All-day, two-way rail services between Union and Unionville Stations in the medium to long-term, and an increase in train frequency during morning and afternoon peak travel time beyond Unionville Station

- Proximity to Carlton Road
- Close proximity of residential homes to rail crossing, difficulties with detour development
- Proximity to Austin Drive intersection and grade separation impacts
- Consideration of underground watermain
- Proximity to Rouge River Crossing and grade separation impacts

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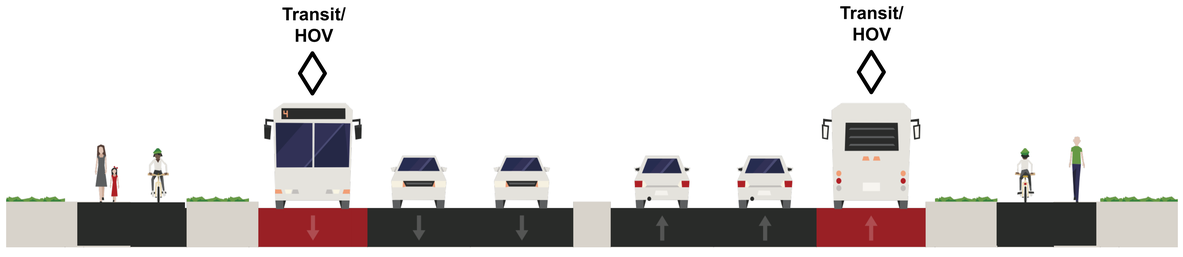
GREAT STREETS
Building Roads that Build Community 2019

GO Rail Crossing North of Austin Drive

GO Rail Crossing Alternatives

These alternatives considered how to best accommodate the road widening, and pedestrians and cyclists at the GO Rail Crossing north of Austin Drive:

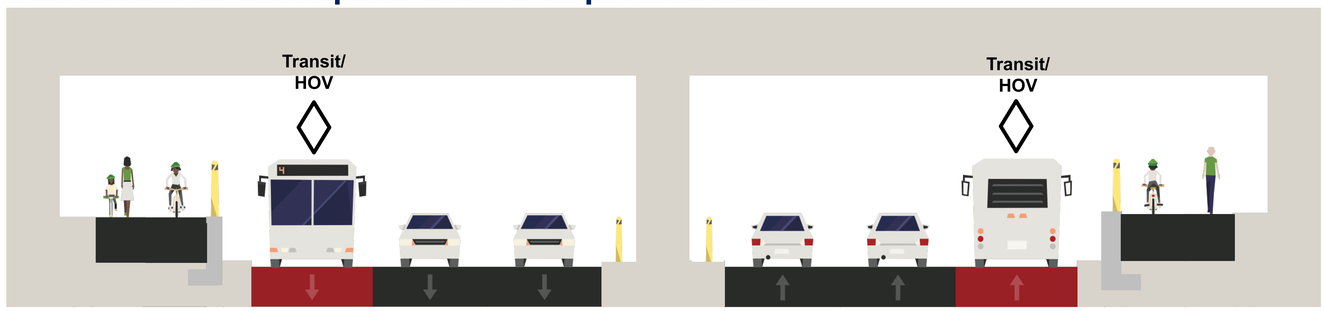
Alternative 1: At-Grade Crossing with AT Improvements



Existing at-grade Kennedy Road crossing north of Clayton Drive

✓ *(Recommended)*

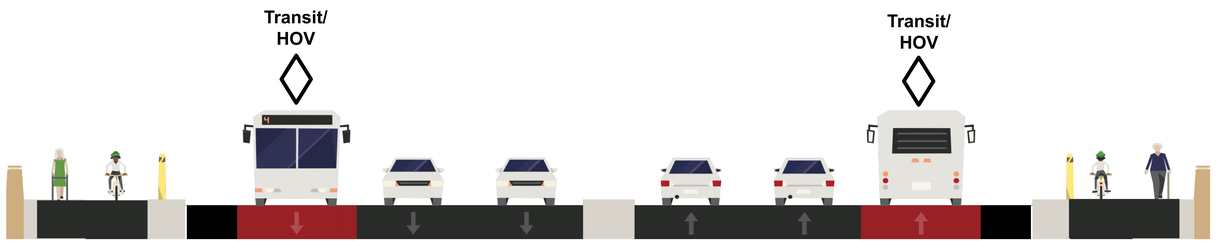
Alternative 2: Underpass with AT Improvements



Underpass example on Major Mackenzie Drive east of Keele Street

✓ *(Ultimate Vision)*
Grade Separation Recommendation is subject to separate study

Alternative 3: Overpass with AT Improvements



Overpass example on Bayview Avenue south of Highway 401

York Region

GREAT STREETS
Building Roads that Build Community 2019

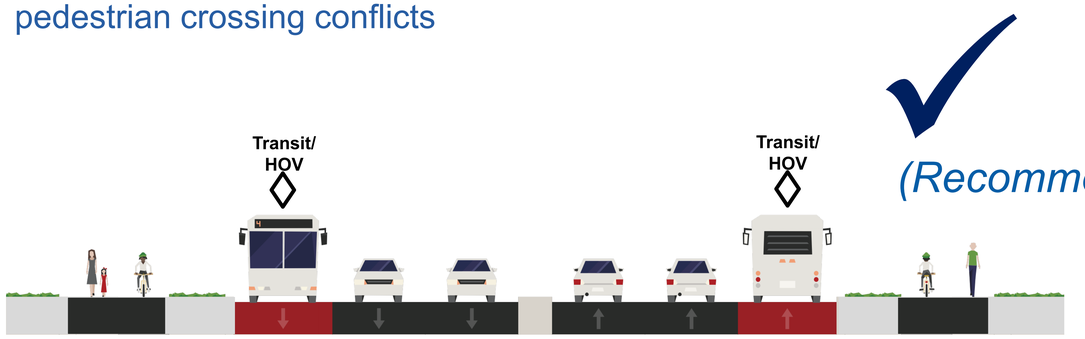
GO Rail Crossing North of Austin Drive

GO Rail Crossing Evaluation and Recommendations

Criteria	Alternative 1: At-grade crossing with AT improvements	Alternative 2: Underpass with AT improvements	Alternative 3: Overpass with AT improvements
Transportation Service	Least Preferred	Carry forward for further study	Carry forward for further study
Natural Environment	Less Preferred		
Social Environment	Less Preferred		
Infrastructure Design	Most Preferred		
Economic Environment and Cost Effectiveness	Most Preferred		
Recommendation	***Recommended***	Future Grade Separation Assessment for **ULTIMATE VISION**	

At-Grade Crossing with AT improvements is <u>Recommended</u> because:

- It provides improved pedestrian and cyclist facilities and dedicated Transit/HOV lanes until such time increase GO Train Service results in substantial vehicle queuing and increased potential for cyclist and pedestrian crossing conflicts



(Recommended)

Future Grade Separation (Underpass or Overpass) is the <u>ULTIMATE VISION</u> because:

- It eliminates vehicle queues from increased GO Train service
- It removes rail conflicts with pedestrians and cyclists
- There is insufficient information available at the time of this EA Study to make a determination and as a result a **separate study** will be completed in the future to identify the appropriate solution for the grade separation

Watercourse Crossing at Rouge River

Design Considerations

Existing structure cannot accommodate the preferred design alternative

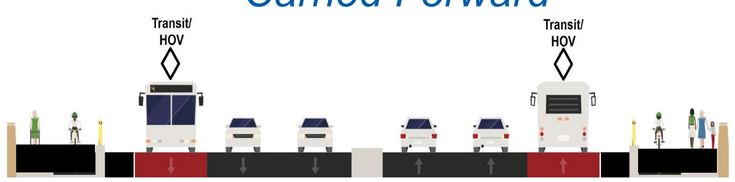
Proximity of structure to Stouffville GO At-Grade Crossing and grade separation impacts

Consideration of underground watermain

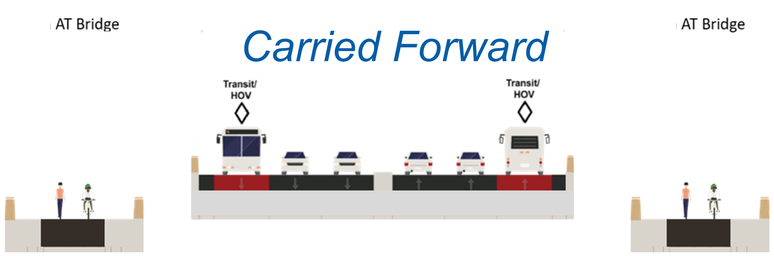
Rouge River Crossing

Rouge River Crossing Recommendations

Carried Forward



Carried Forward



Structural replacement / modification to accommodate the proposed improvements is recommended at the Rouge River crossing.

Consideration of separate AT bridges are carried forward for further assessment and will be reviewed in consultation with TRCA.

York Region

GREAT STREETS
Building Roads that Build Community 2019

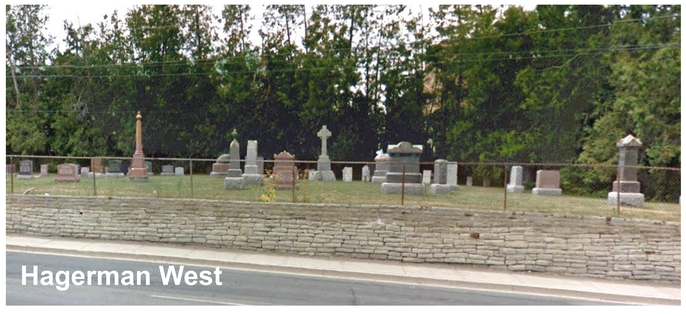
Hagerman Cemeteries

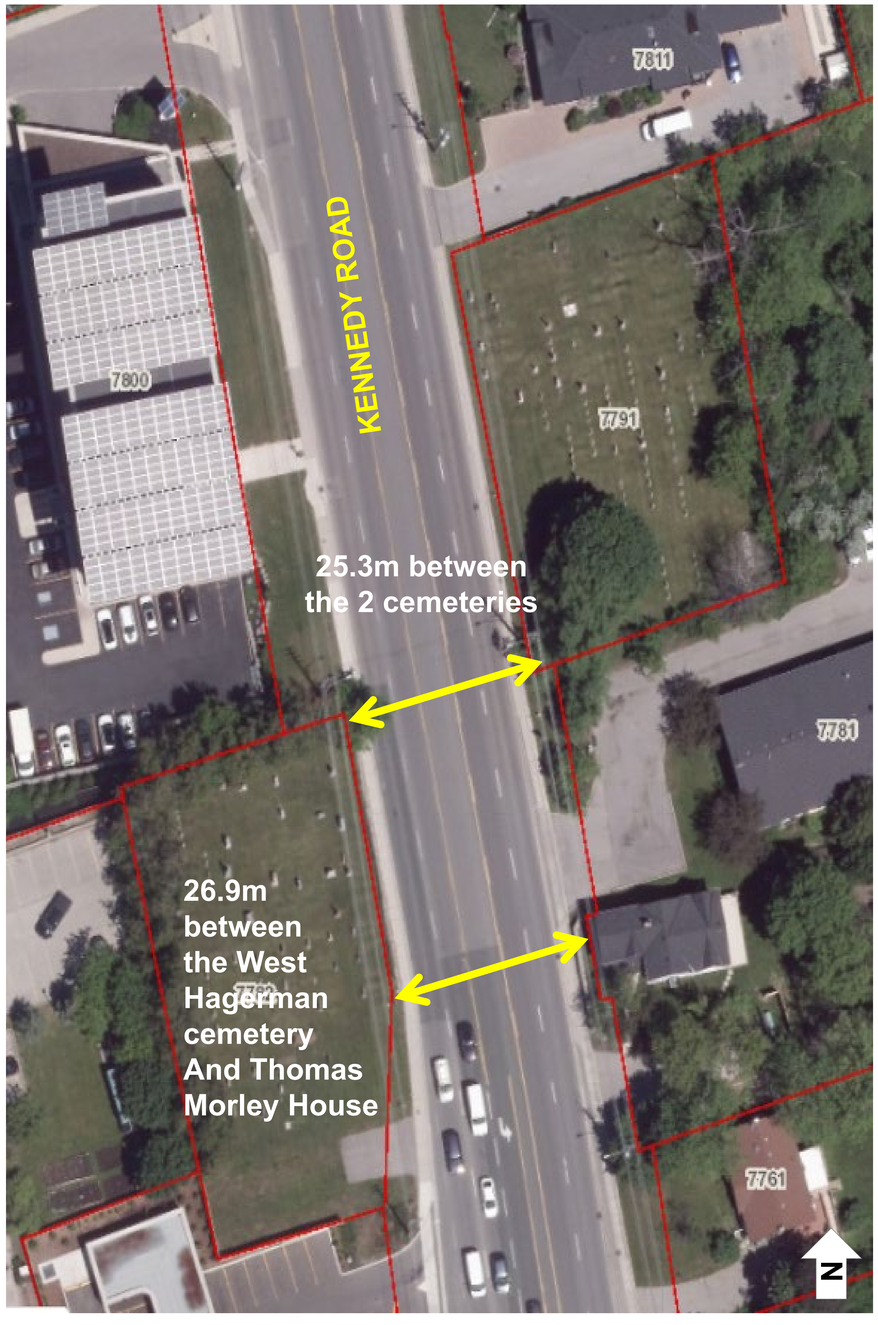
Design Considerations

Safety concerns for pedestrians and cyclists

Heritage considerations due to the proximity of Hagerman Cemeteries and Thomas Morley House

Limited available right-of-way ~25.3m





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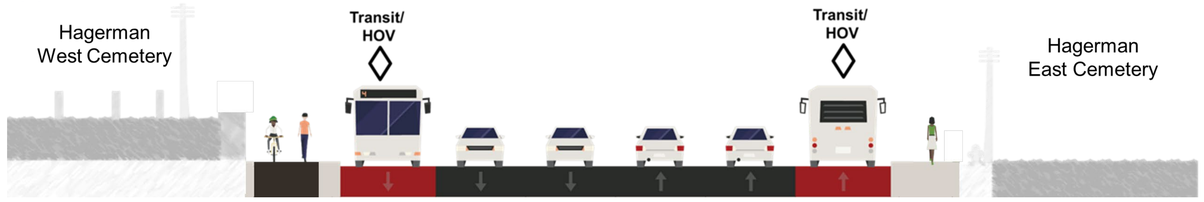
GREAT | STREETS
Building Roads that Build Community 2019

Hagerman Cemeteries

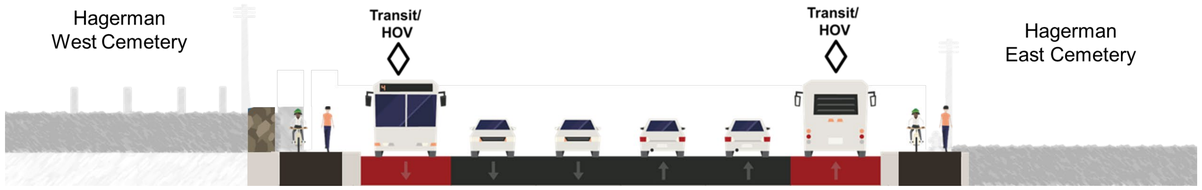
Hagerman Cemeteries Alternatives

Alternative 1a: Reduced lane width, narrow multi-use path and sidewalk, best fit approach

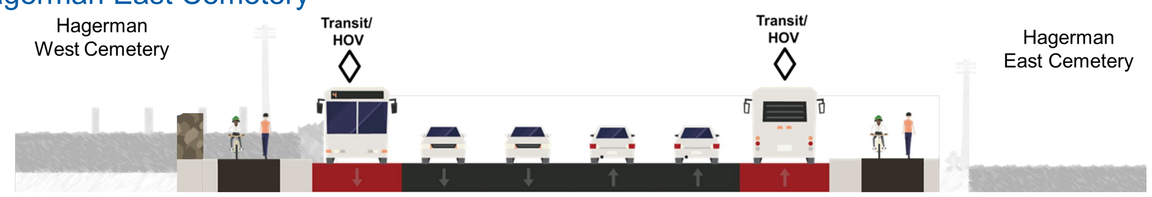


Alternative 1b: Reduced lane width, narrow multi-use paths both sides, best fit approach

Alternative 2: Standard lane width, multi-use paths both sides, best fit approach

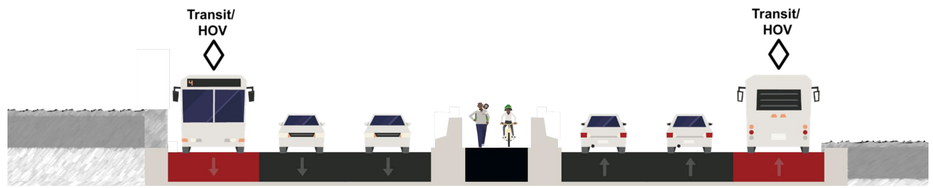


Alternative 3: Standard lane width, multi-use paths both sides, shift alignment west of Hagerman East Cemetery

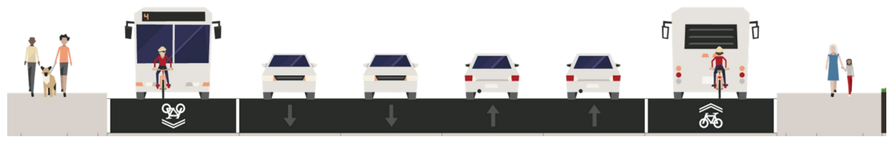


Alternative 4: Standard lane width, multi-use paths both sides, shift alignment east of Hagerman West Cemetery

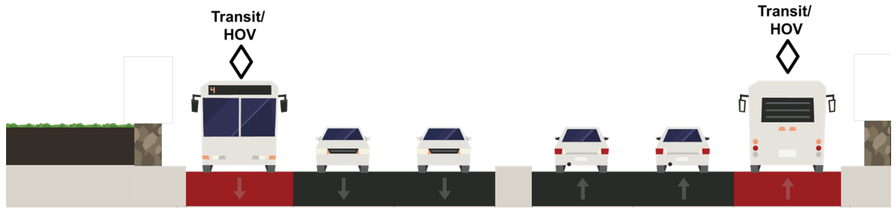
Alternative 5: Six lanes with centre active transportation (multi-use path)



Alternative 6: Six lanes, shared roadway between cyclists and vehicles



Alternative 7: Six lanes, no active transportation facilities



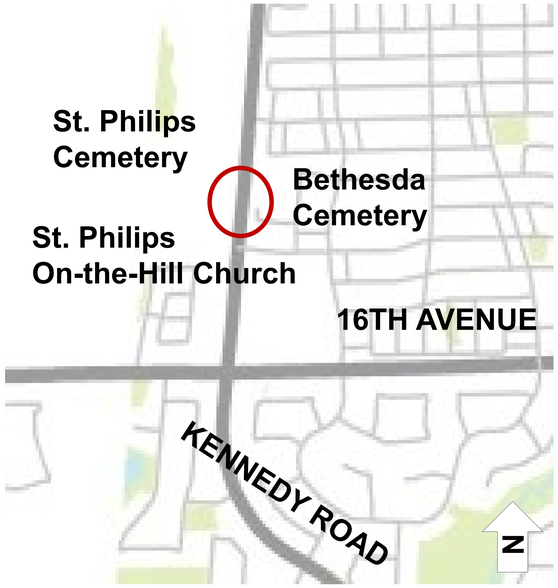
Alternative 8: No widening, multi-use paths both sides, queue jump lanes

York Region

GREAT | STREETS
Building Roads that Build Community 2019

St. Philips and Bethesda Cemeteries

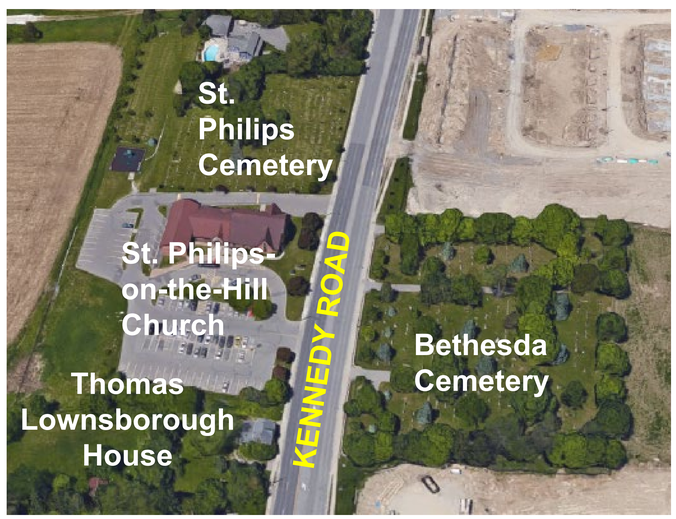
Design Considerations

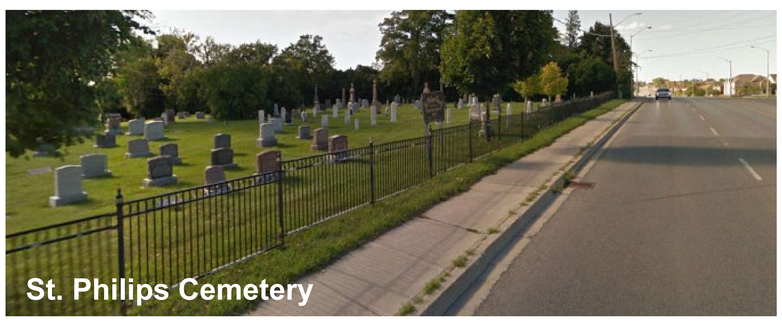


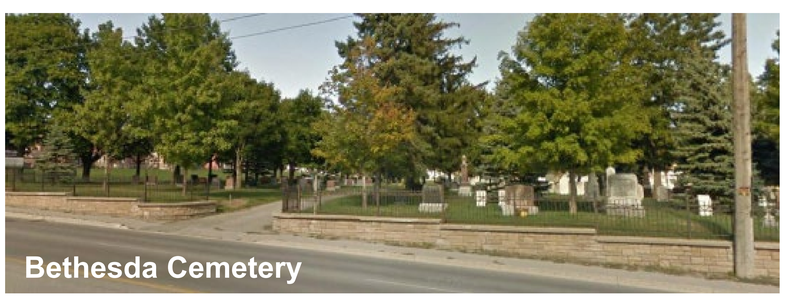
Safety concerns for pedestrians and cyclists

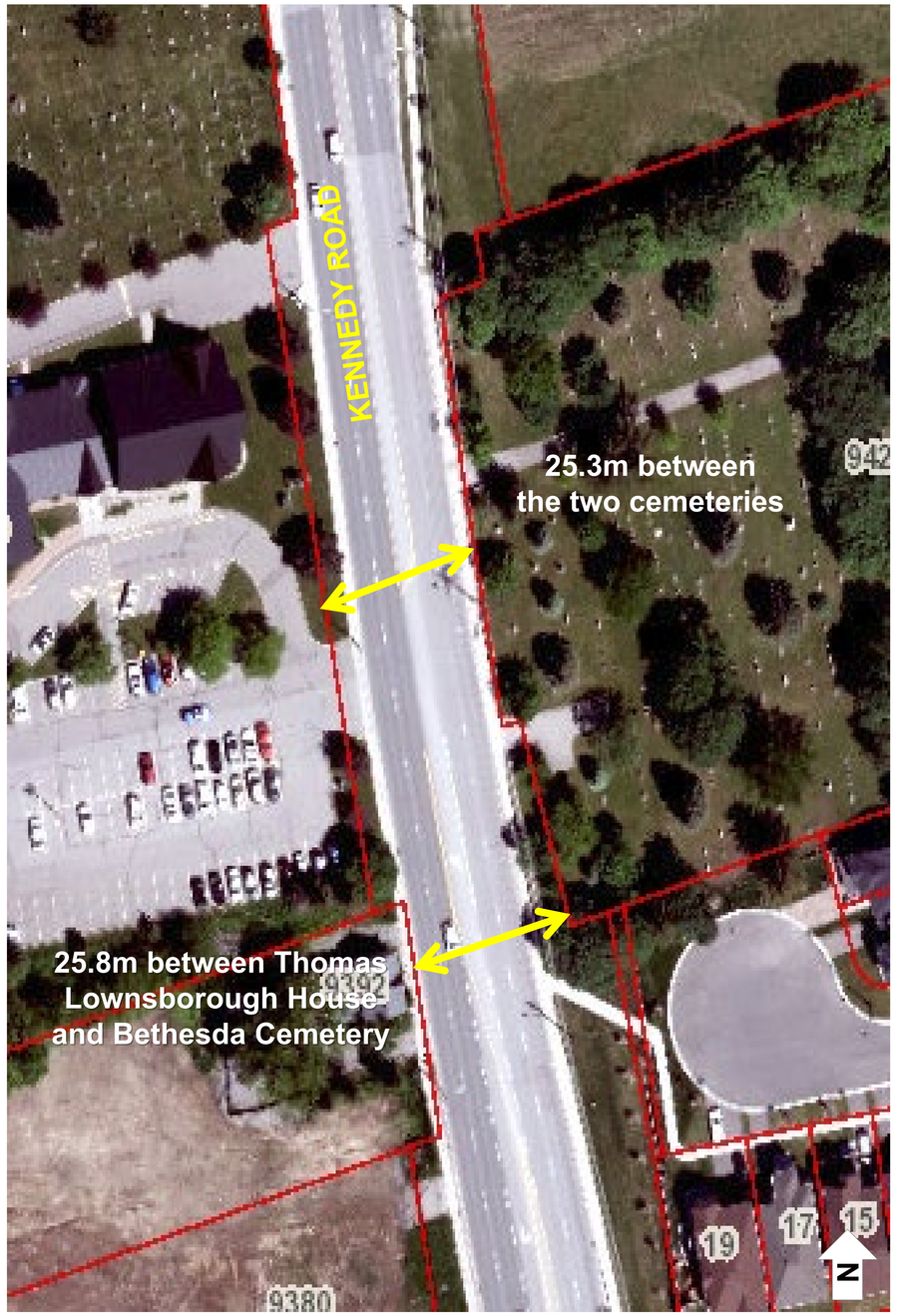
Heritage considerations at this segment due to the proximity of St. Philips and Bethesda Cemeteries and Thomas Lownsborough House

Limited available right-of-way ~25.3m









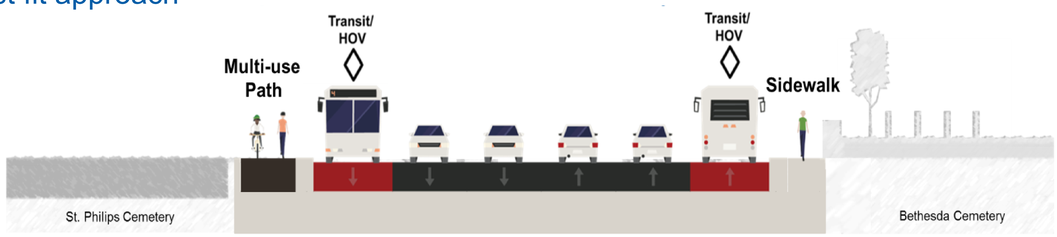
York Region

GREAT STREETS
Building Roads that Build Community 2019

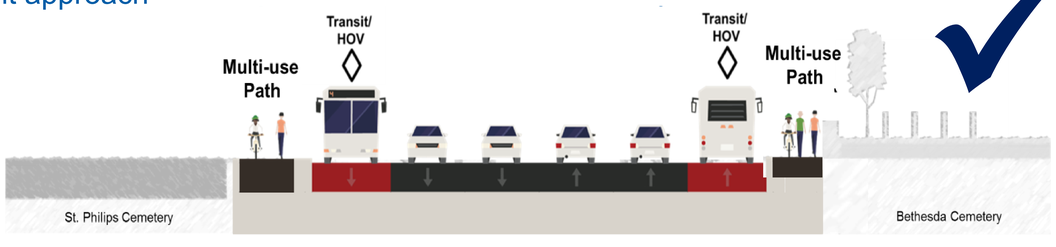
St. Philips and Bethesda Cemeteries

St. Philips and Bethesda Cemeteries Alternatives

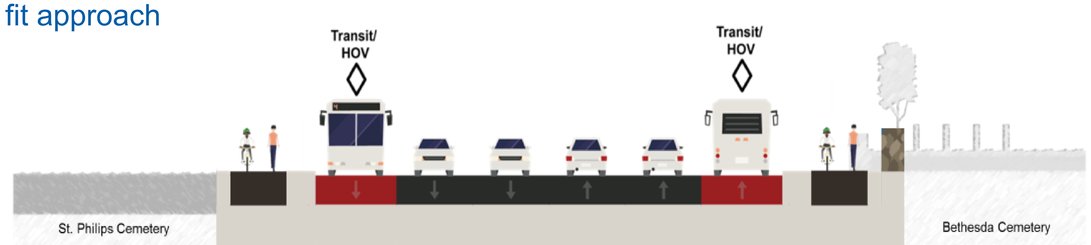
Alternative 1a: Reduced lane width, narrow multi-use path and sidewalk, best fit approach



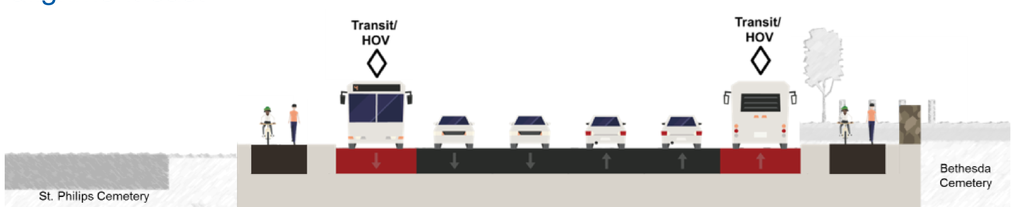
Alternative 1b: Reduced lane width, narrow multi-use paths both sides, best fit approach



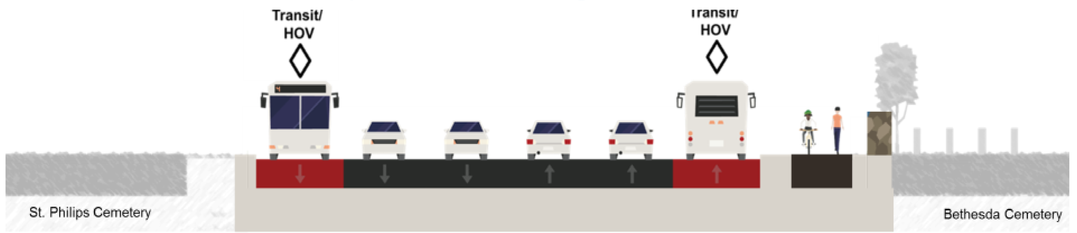
Alternative 2: Standard lane width, multi-use paths both sides, best fit approach



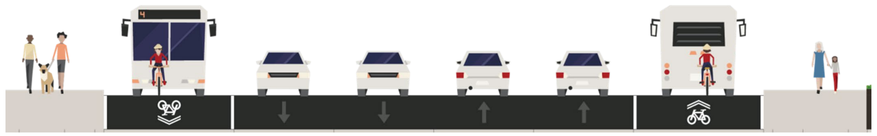
Alternative 3: Standard lane width, multi-use paths both sides, shift alignment east



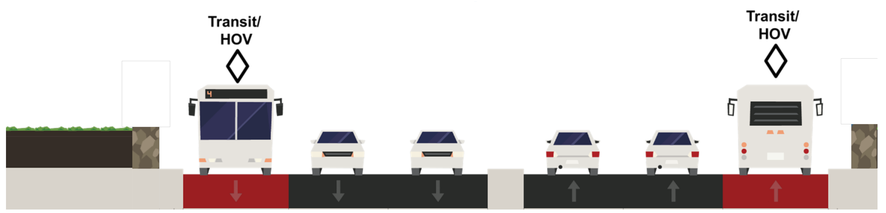
Alternative 4: Standard lane width, multi-use paths both sides but discontinuous active transportation, shift alignment west



Alternative 5: Six lanes, shared roadway between cyclists and vehicles



Alternative 6: Six lanes, no active transportation facilities



Alternative 7: No widening, multi-use paths both sides and queue jump lanes

York Region

GREAT|STREETS
Building Roads that Build Community 2019

Hagerman Cemeteries,
St. Philips and Bethesda Cemeteries

Hagerman Cemeteries - Evaluation and Recommendations

Criteria	Alternative 1a: Reduced Lane Width, Narrow MUP and Sidewalk, Best Fit Approach	Alternative 1b: Reduced Lane Width, Dual Narrow MUP, Best Fit Approach	Alternative 2: Standard Lane Width, Dual MUP, Best Fit Approach	Alternative 3: Standard Lane Width, Dual MUP, Shift to West	Alternative 4: Standard Lane Width, Dual MUP, Shift to East	Alternative 5: 6 Lanes, Centre Active Transportation (MUP)	Alternative 6: 6 Lanes, Shared Roadway between Cyclists and Vehicles	Alternative 7: 6 Lanes, No Active Transportation Facilities	Alternative 8: No widening, Dual MUP, Queue Jump Lanes
Transportation Service	Least Preferred	Less Preferred	Most Preferred	Not carried forward due to direct impacts to grave sites.	Not carried forward due to direct impacts to grave sites.	Not carried forward due to complications for median AT access.	Not carried forward due to non-compliance with YR Pedestrian/ Cyclist Guidelines.	Not carried forward due to impacts to AT facilities.	Not carried forward due to impacts to Transit/HOV and non-compliance with YR-TMP.
Natural Environment	Less Preferred	Most Preferred	Least Preferred						
Social Environment	Most Preferred	Less Preferred	Least Preferred						
Infrastructure Design	Most Preferred	Most Preferred	Least Preferred						
Economic Environment and Cost Effectiveness	Most Preferred	Most Preferred	Least Preferred						
Recommendation		**Recommended**							

St.Philips and Bethesda Cemeteries - Evaluation and Recommendations

Criteria	Alternative 1a: Reduced Lane Width, Narrow MUP and Sidewalk, Best Fit Approach	Alternative 1b: Reduced Lane Width, Dual Narrow MUP, Best Fit Approach	Alternative 2: Standard Lane Width, Dual MUP, Best Fit Approach	Alternative 3: Standard Lane Width, Dual MUP, Shift to the East	Alternative 4: Standard Lane Width, Dual MUP, Discontinuous AT, Shift to West	Alternative 5: 6 Lanes, Shared Roadway between Cyclists and Vehicles	Alternative 6: 6 Lanes, No Active Transportation Facilities	Alternative 7: No widening, Dual MUP, Queue Jump Lanes
Transportation Service	Least Preferred	Less Preferred	Most Preferred	Not carried forward due to direct impacts to grave sites.	Not carried forward due to direct impacts to grave sites.	Not carried forward due to non-compliance with YR Pedestrian/ Cyclist Guidelines.	Not carried forward due to impacts to AT facilities.	Not carried forward due to impacts to Transit/HOV and non-compliance with YR-TMP.
Natural Environment	Less Preferred	Most Preferred	Least Preferred					
Social Environment	Most Preferred	Less Preferred	Least Preferred					
Infrastructure Design	Most Preferred	Most Preferred	Least Preferred					
Economic Environment and Cost Effectiveness	Most Preferred	Most Preferred	Least Preferred					
Recommendation		**Recommended**						

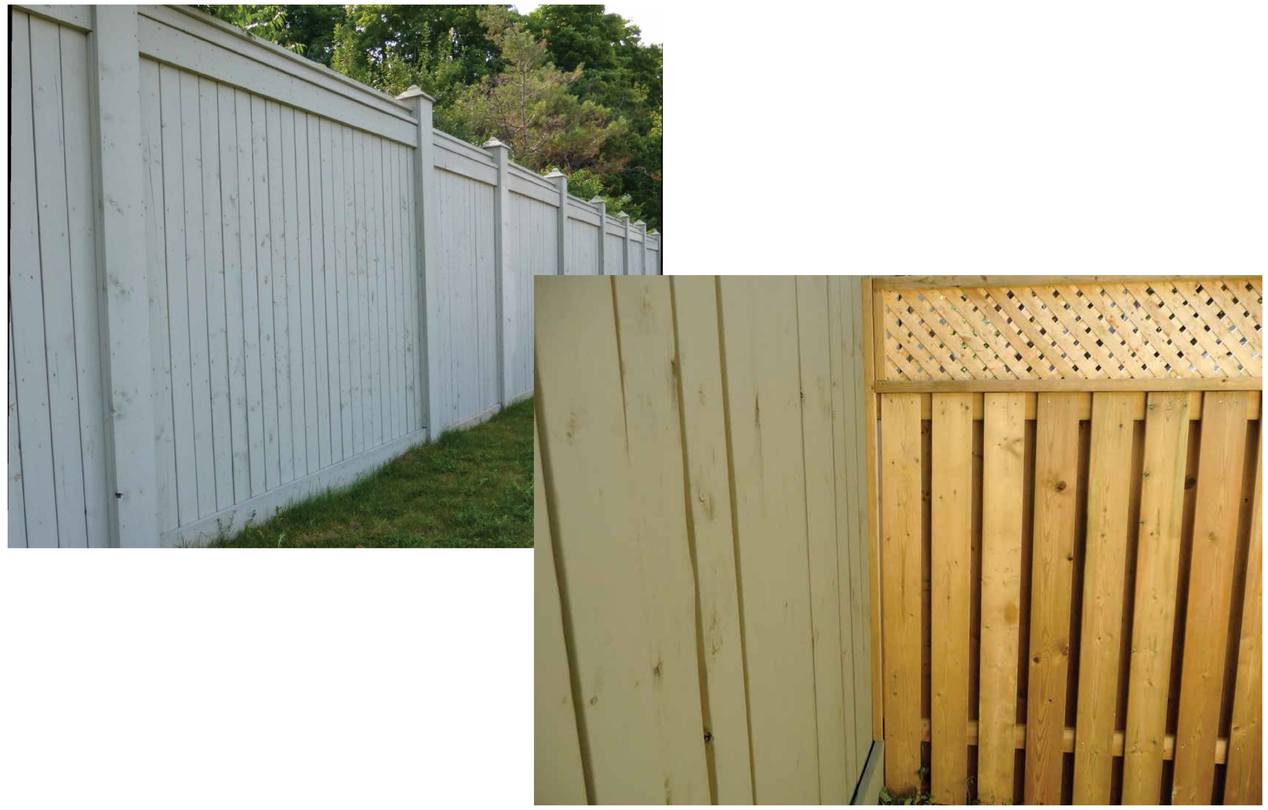
Reduced Lane Width with Narrow Multi-Use Paths on both sides is the preferred Solution because:

- It provides improved active transportation facilities on both sides, dedicated Transit/ HOV lanes and avoids direct impacts to grave sites on cemetery lands. Narrower lanes may result in a reduction in vehicle speed creating a safer environment for all users.

Noise Barriers

How does the noise barrier work?

- Three design objectives must be achieved for a noise barrier to function properly:
  - Fence height
  - Fence thickness
    - Minimum 76mm
    - (3 inches) thick
  - No board gaps in fence



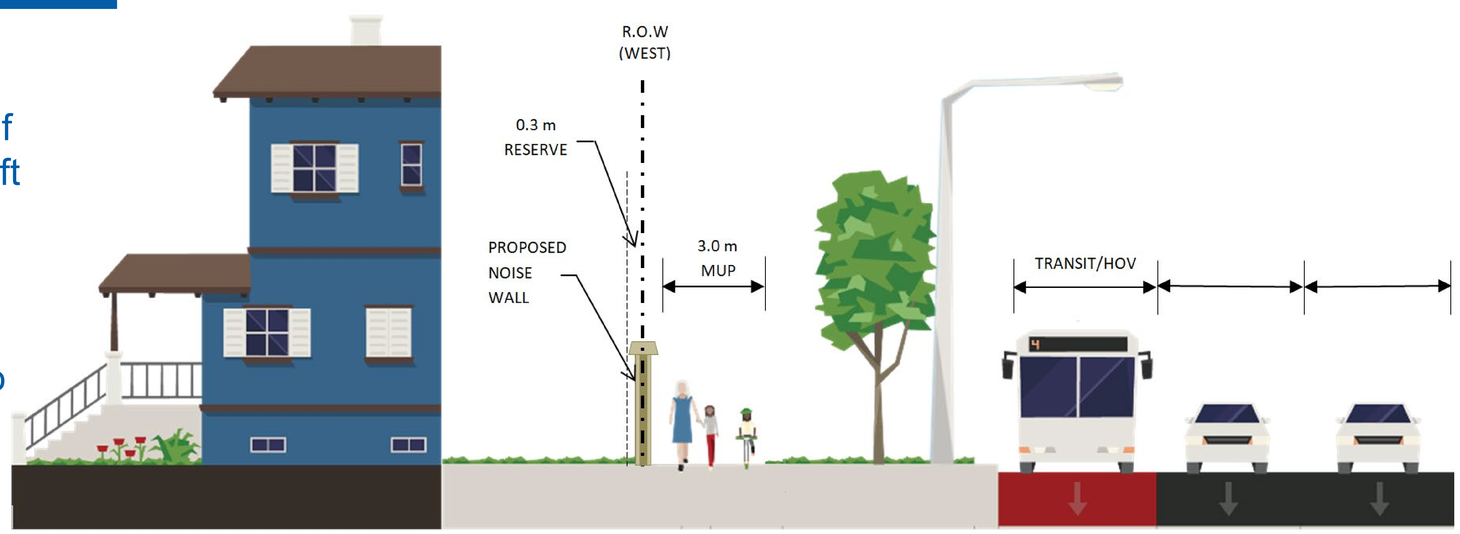
How high will the noise barrier adjacent to my property be?

- Regional noise barriers must be between 2.2 and 3 metres high
- Barrier heights for specific locations will be determined during detailed design

What does the Region need from me?

- Signed Liability Release Form
  - York Region will remove the existing fence only if this form is signed, otherwise the fence will be left in place

- Signed Permission to Enter Form
  - Allows York Region access onto your property to install the temporary security fence and remove and extend side fences



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GREAT|STREETS
Building Roads that Build Community 2019

Noise Barriers

What impacts can I expect during construction?

- Some trees adjacent to the noise barrier, whether owned by you or the Region, will be removed or require pruning
- Other features (i.e. sheds) may also need to be relocated if they are too close to the existing fence

How will my property be protected during construction?

- Fence will be left in place as long as possible
- If existing fence needs to be removed, a security fence will be installed

How will the gap between my side fence and the new noise barrier be addressed?

- A separate post will be installed adjacent to the noise barrier and the existing side fence will be extended
- This may require removing and replacing a portion of the existing fence

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Recommended Design, Timing of Improvements and Next Steps

Key Features of Recommended Design

- Widen to six lanes for Transit / HOV lanes
- Multi-use path on both sides and streetscaping
- Bus bays and transit facilities
- At-grade Crossing at Clayton Drive rail crossing (Recommended); Underpass (Ultimate Vision)
- Reduced lane widths at cemeteries
- Separate AT bridges at 407 ETR Interchange
- Structural Replacement of CN Overpass
- Viva and YRT in shared Transit/HOV Lanes (Recommended); Future median Viva Rapidway (Ultimate Vision)
- At-grade Crossing at Austin Drive rail crossing (Recommended); Grade Separation subject to future study (Ultimate Vision)
- Structural Modification / Replacement at Rouge River

Timing of Improvements

York Region's 2019 10-Year Roads and Transit Capital Construction Program:

Kennedy Road improvements:

- **Phase 1** from 14th Avenue to Highway 7, commencing **2023**
- **No current timeline** for improvements between Steeles Avenue and 14th Avenue, and between Highway 7 and Major Mackenzie Drive

Your input is very valuable to us!

Please fill in a comment form and return it to us today or provide your comments by mail, email or phone by December 27, 2019.

Contact Us

For more information visit: **york.ca/kennedyroad**

Please send your thoughts or opinions about the corridor by sending us an email at: **roads.ea@york.ca**

Join the Study Mailing List

Next Steps

- Review feedback from the public
- Refine Preferred Design
- Prepare Final Environmental Study Report (ESR) (Spring 2020)

Look out for

- Direct mail or e-mail notices
- Newspaper notices
- Updates on York Region social media (Facebook and Twitter)
- Updates on the project website

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