MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

COLUMBIA WAY (HIGHWAY 50 TO CALEDON-KING TOWNLINE)

TOWN OF CALEDON

ONLINE PUBLIC INFORMATION CENTRE

February 24, 2021

5:00pm to 7:00pm

Please submit any questions you may have during or after the presentation to transportation@caledon.ca.

PRESENTATION AGENDA

- Study Area & Project Background
- Existing Conditions
- Evaluation & of Alternative Solutions
- Preliminary Study Recommendations
- Next Steps in the Project
- Question and Answer Period

STUDY AREA & BACKGROUND

The study area consists of **Columbia Way** from Highway 50 to from Highway 50 (Regional Road 50) to Caledon King Townline.

This EA study was initiated to review opportunities within the study area to address:

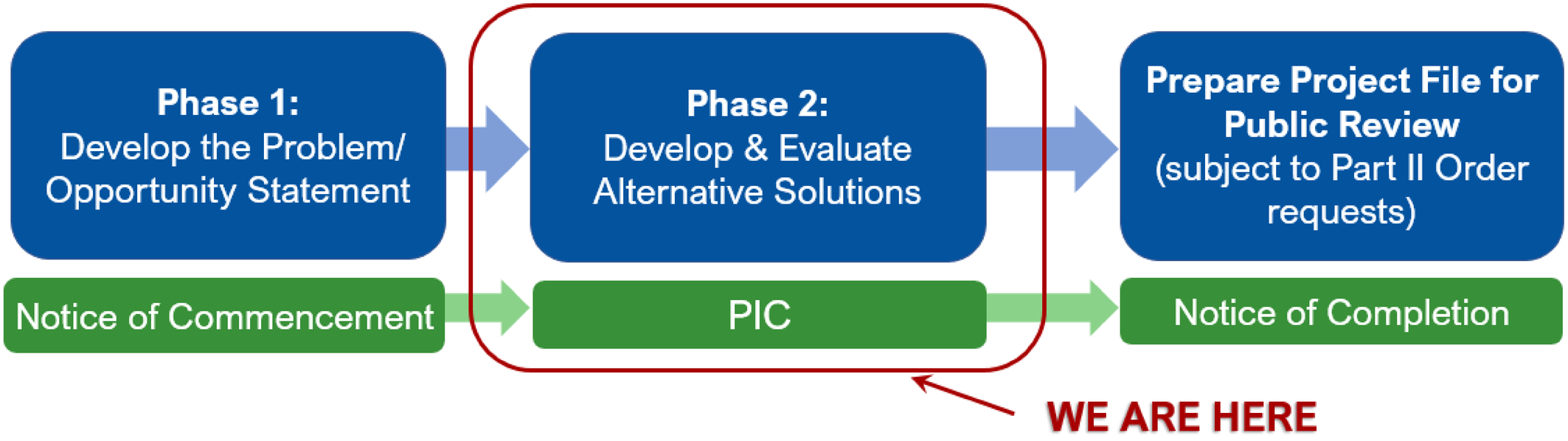
- Traffic operations and safety
- Active transportation (walking, cycling) needs
- Roadway drainage improvements and stormwater management
- Slope stability issues

MUNICIPAL CLASS EA PROCESS

The Class Environmental Assessment (EA) is undertaken prior to municipal **road, water, wastewater** and **other municipal** construction projects

Ensures all **reasonable alternatives** including 'Do Nothing' are considered and that a preferred alternative will have **minimal impact on the natural, cultural, social** and **economic environment**

Input from the **public, stakeholders** and **technical agencies** is essential



This project is classified as a **Schedule 'B' Municipal Class EA** and is subject to **Phases 1 and 2** of the **Municipal Class Environmental Assessment** prior to construction.

STUDY ORGANIZATION

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Who is involved?

LOCAL STAKEHOLDERS
Community Groups, Associations and Clubs
Business Owners

INDIGENOUS COMMUNITIES

RESIDENTS & GENERAL PUBLIC

PROJECT TEAM
Town of Caledon
R.V. Anderson Associates Limited (RVA)

GOVERNMENT & AGENCIES
Region of Peel
Elected Officials
Ministry of the Environment, Conservation and Parks (MECP)
Ministry of Natural Resources & Forestry (MNRF)
Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)

LOCAL AGENCIES
Toronto Region Conservation Authority
Local School Boards

UTILITY COMPANIES

EXISTING CONDITIONS – ACTIVE TRANSPORTATION & TRAFFIC OPERATIONS

TOWN OF CALEDON

- Traffic congestion during peak school hours
- Vehicles using gravel shoulder in front of school to pick-up/drop-off causing congestion and safety concerns
- Excessive vehicle speeds between Regional Road 50 and Forest Gate Avenue
- Lack of pedestrian crossing opportunities at school resulting in pedestrian safety issues (jaywalking)
- Safety concerns in the area of the S-curve between Forest Gate Avenue and Caledon King Townline (11 collisions over the past 5 years)
- Lack of consistent pedestrian accommodation along the corridor
    - Sidewalk from Highway 50 to Kingsview Drive and Westchester Boulevard to Forest Gate Avenue (south side of road only)
    - Gravel path from Kingsview Drive to Westchester Boulevard on south of the road, and from Kingsview Drive to St. Michael Secondary School west driveway on north side of the road

S-bend with limited sightlines

Shoulder in front of school being utilized for student pick-up & drop-off

Intermittent use of sidewalk and gravel path on south side of Columbia Way

EXISTING CONDITIONS – ARCHAEOLOGICAL & CULTURAL ENVIRONMENT

Lands that exhibit archeological potential will require a Stage 2 Archaeological Assessment, **if impacted**, prior to any proposed construction

4 **cultural heritage resources listed on the Caledon Heritage Register** representative of the early settlement of Columbia/Coventry

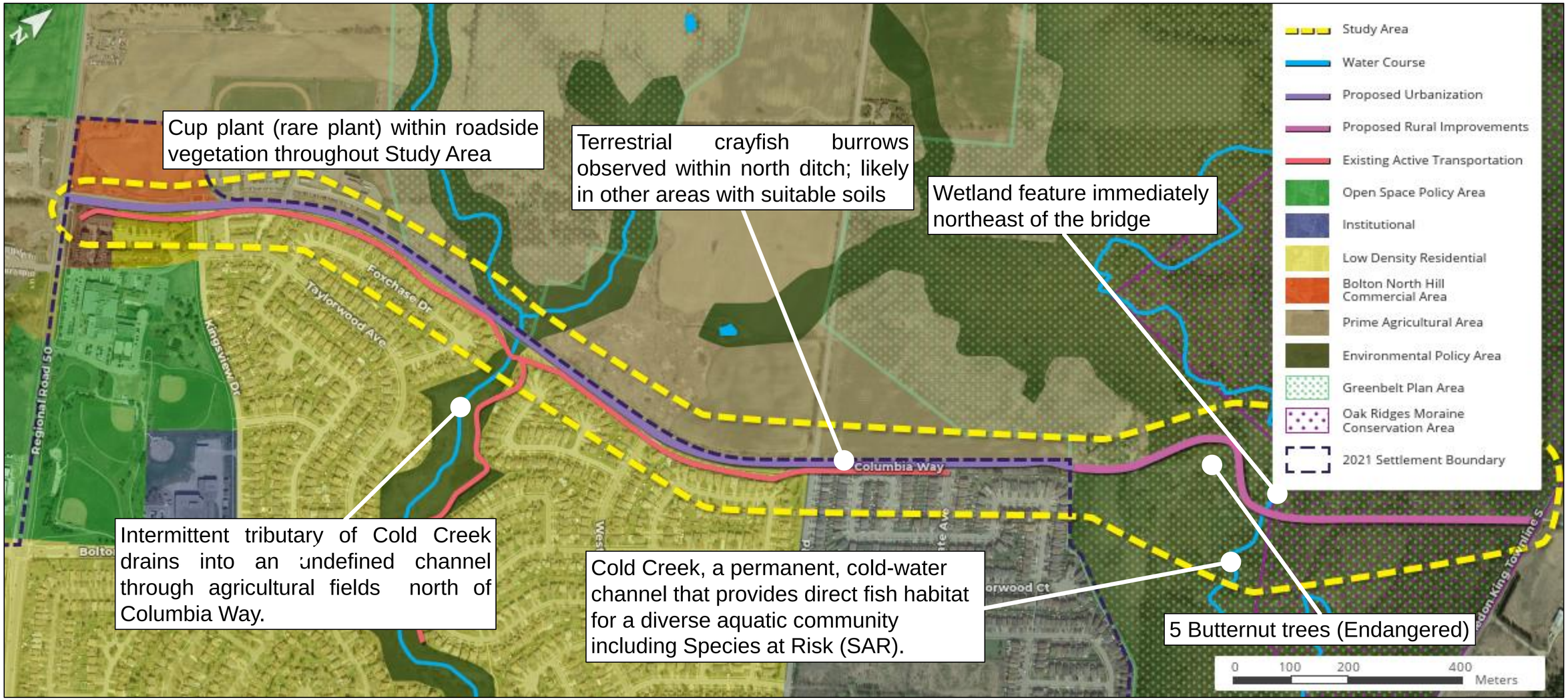
The Stage 1 Archaeological Assessment determined that some of the undisturbed lands adjacent to Columbia Way exhibit archaeological potential due to:

- Proximity to Water Sources (**Cold Creek**);
- Proximity of **historic transportation routes** based on early mapping; and
- The presence of **25 archaeological sites** within 1 kilometer

EXISTING CONDITIONS - NATURAL ENVIRONMENT

TOWN OF CALEDON

Located within the Upper Humber River subwatershed, the study area includes **Toronto and Region Conservation Authority (TRCA) Regulated Areas**, lands designated as **Environmental Policy Area (EPA)** by the Town of Caledon, **Oak Ridges Moraine Conservation Plan Area (ORMCPA)** and **The Greenbelt Plan Area**.



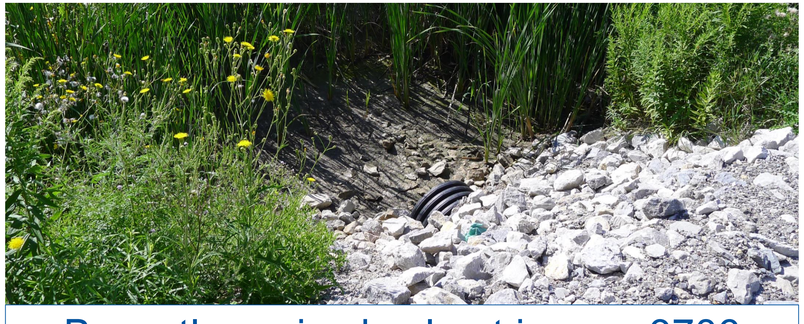
EXISTING CONDITIONS – DRAINAGE & STORMWATER

Stormwater Management & Drainage

- Roadway drainage is conveyed via roadside grassed ditches throughout the study area
- Drainage features in the area include:
  - 1.2-meter diameter Corrugated Steel Pipe (CSP) culvert west of the school;
  - 2-meter diameter CSP culvert in area of TRCA trail;
  - 450 mm diameter plastic culvert drains to a private pond in area of 9706 Columbia; and
  - Cold Creek Crossing (Coventry Bridge).
- Town of Caledon upsized culvert in area of 9706 Columbia Way from a 300 mm diameter to 450 mm diameter in May 2020, alleviating adjacent flooding issues.
- Each of the culvert crossings as well as the bridge structure along Columbia Way are **sufficient to convey existing and future flows,** and will not require additional capacity as part of the road improvements

Cold Creek at Coventry Bridge

2-meter diameter CSP culvert



Recently upsized culvert in area 9706 Columbia Way

EXISTING CONDITIONS – STRUCTURAL & GEOTECHNICAL

TOWN OF CALEDON

Structural Conditions

- The single bridge structure in the study area (Coventry Bridge) spans 10.86 meters across Cold Creek, approximately 0.5 km west of Caledon-King Townline
- Rehabilitation of the Coventry Bridge is recommended within 1-5 years including repairs:
    - Abutment Walls, Wing Walls, and Soffits
    - Bridge railings
    - Guiderails

Geotechnical & Subsurface Conditions

- Slope stability issues identified at two primary locations including:
    - **Slope East of Forest Gate Avenue –** Downslope movement and downward sloping guiderail
    - **Cut slope west of Caledon-King Townline -** Ongoing erosion washout and bank stability issues have created a 7- to 8-meter-high cut slope on north side of the road
- Asphalt recently resurfaced; however **deteriorating pavement condition still requires complete reconstruction**.

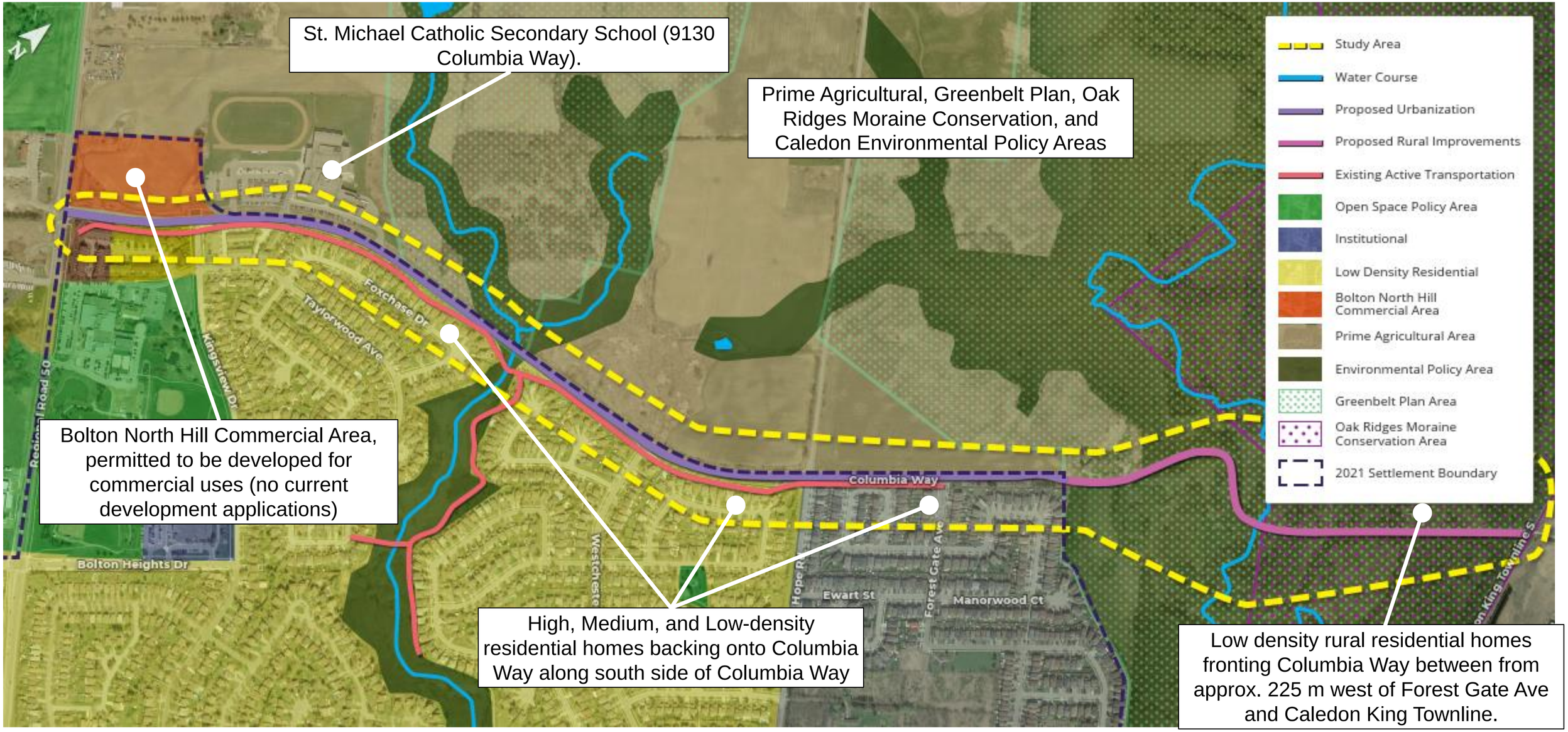
Coventry Bridge Structure

Guardrail and downslope at slope east of Forest Gate Avenue

Bank washout onto roadway at cut slope west of Caledon King Townline

EXISTING CONDITIONS – SOCIO-ECONOMIC ENVIRONMENT

TOWN OF CALEDON



EVALUATION OF ALTERNATIVE SOLUTIONS

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Alternative Solutions to address the Problem / Opportunity Statement were developed and comparatively evaluated based on the existing conditions within the study area and criteria that represent the broad definition of the environment, as described in the *EA Act*.

CRITERIA		DESCRIPTION
	**Technical**	Does the alternative adequately address the technical requirements of the project? *(Safety, Road Condition, Drainage and Stormwater, Utility Impacts)*
	**Transportation Performance**	How will the alternative serve the existing and future vehicular, pedestrian and cycling traffic needs? (*Intersection improvements, Active Transportation, Sightlines)*
	**Socio-Economic Environment**	What impacts will the alternative have on the local community (e.g., compatibility with area land use, impacts on local businesses, property requirements, access restrictions, etc.)?
	**Natural Environment**	How does the alternative affect existing vegetation, water quality, fisheries/wildlife and habitat? Does the alternative address climate change?
	**Cultural Heritage**	Will the alternative affect archaeological, cultural heritage resources or First Nations communities?
	**Costs**	What is the capital cost of the alternative? What is the cost for utility relocations and property acquisitions (if required)? What are the operation and maintenance cost impacts?

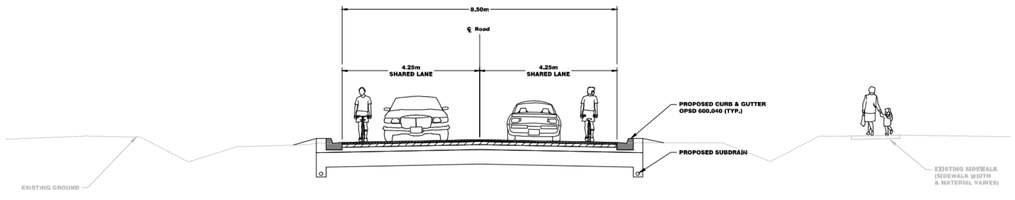
ALTERNATIVE SOLUTIONS – GEOMETRICS AND ACTIVE TRANSPORTATION (HIGHWAY 50 TO EAST OF FOREST GATE)

TOWN OF CALEDON

Alternative 1 – Do Nothing

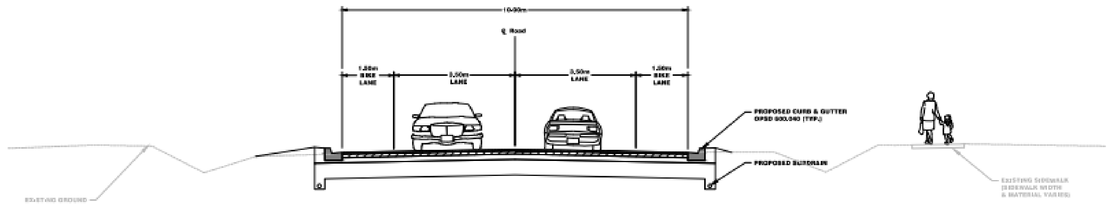
- Intermittent gravel path and sidewalk combination remains
- Not Compatible with **Bolton Transportation Master Plan** recommendations
- No improvements to existing conditions

Alternative 2 – Shared Lanes / Signed Bike Route



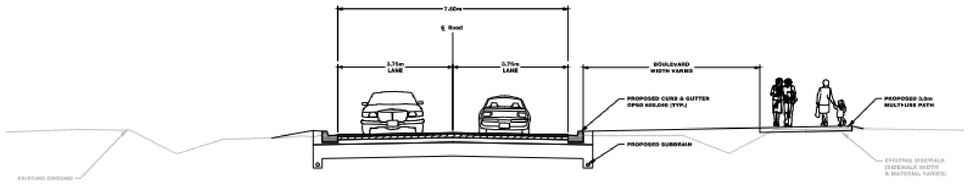
- One lane of traffic in each direction (4.25 meters wide) with signage for vehicles and cyclists to share the roadway (**no separation from vehicles)**
- Existing combination of off-road gravel path and sidewalk remains
- **Not Compatible** with Bolton Transportation Master Plan recommendations

Alternative 3 – On-Road Bike Lanes



- One lane of traffic in each direction (3.5 meters wide) with **1.5 m bicycle lanes** on both sides of road
- **No physical separation** between vehicles and cyclists
- Existing combination of off-road gravel path and sidewalk remains
- **Compatible** with Bolton Transportation Master Plan recommendations

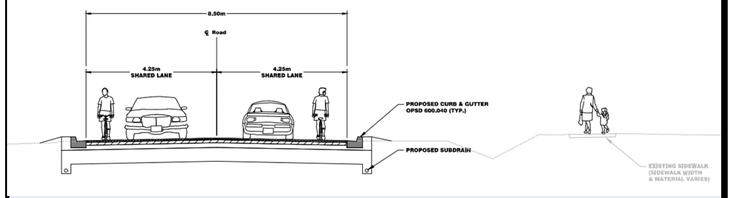
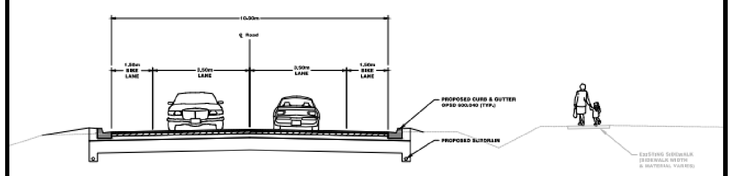
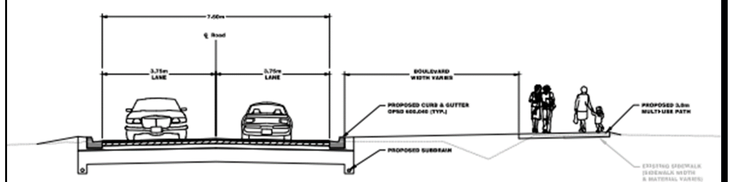
Alternative 4 – Off-Road Multi-Use Path

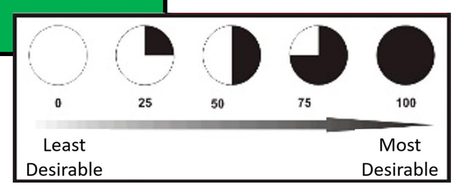


- One lane of traffic in each direction (3.75 meters wide) with **Continuous Off-Road Multi-use path (pedestrians and cyclists)** on the south side of the roadway.
- Provides **physical barrier** between vehicles and pedestrians & cyclists
- **Exceeds** Bolton Transportation Master Plan recommendations

EVALUATION OF ALTERNATIVE SOLUTIONS – HIGHWAY 50 TO EAST OF FOREST GATE

TOWN OF CALEDON

Cross Section (Urban Portion)						
Alternative Solutions	**Traffic Operations & Safety**	**Social Environment**	**Natural Environment**	**Heritage / Archaeological / Cultural Impacts**	**Cost**	**Evaluation Summary**
Alternative 1 - Do Nothing	◔	◑	●	●	◕	**Not Recommended**
 **Alternative 2 - Shared Lanes / Signed Bike Route**	◑	◑	◑	●	◑	**Not Recommended**
 **Alternative 3 - On Road Bike Lanes**	◕	◕	◑	●	◕	**Not Recommended**
 **Alternative 4 - Off-Road Multi-Use Path**	●	●	◑	●	◕	**Recommended to be Carried Forward**



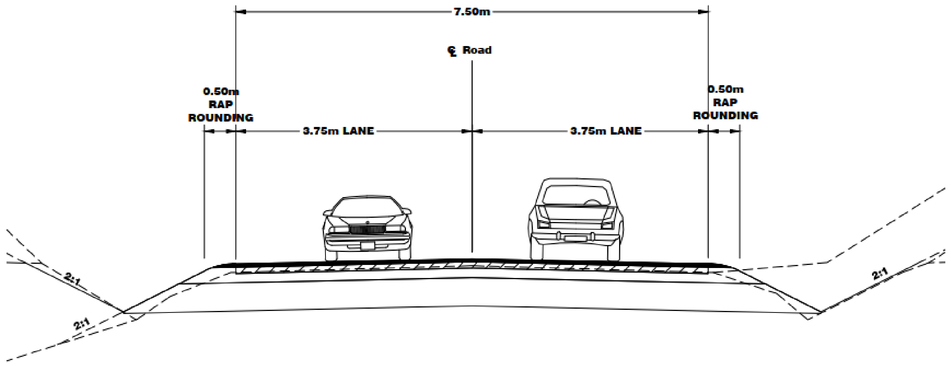
Alternative 4 – Off-Road Multi-Use Path is the recommended solution to be carried forward for the urban portion (Highway 50 to Forest Gate Avenue) of Columbia Way.

ALTERNATIVE SOLUTIONS – GEOMETRICS AND ACTIVE TRANSPORTATION (FOREST GATE TO CALEDON KING)

TOWN OF CALEDON

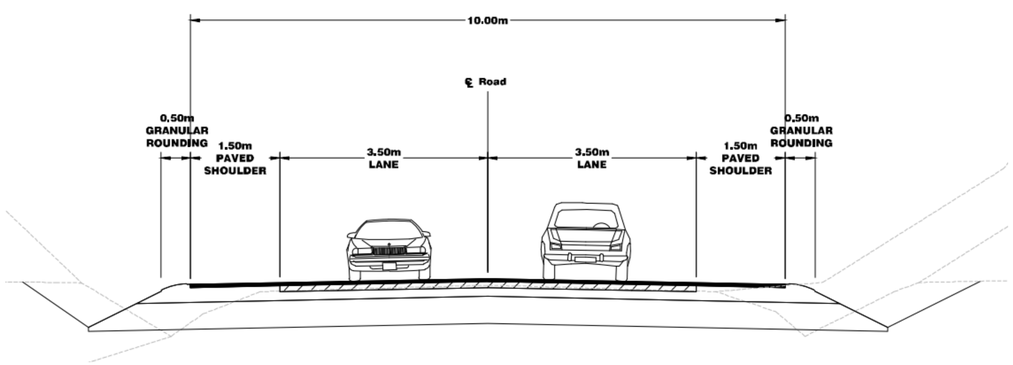
Alternative 1 – Do Nothing

- No active transportation facilities are introduced
- **Not Compatible** with Bolton Transportation Master Plan recommendations
- No improvements to existing conditions



Alternative 2 – Shared Lanes / Signed Bike Route

- One lane of traffic in each direction (3.75 meters wide) **with signage for vehicles and cyclists to share the roadway (single-file)**
- **Compatible** with Bolton Transportation Master Plan recommendations
- Maintains rural cross section with ditches
- Negligible impact on adjacent properties & natural environment

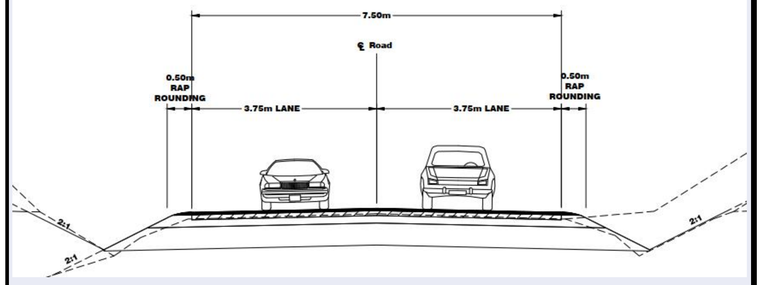
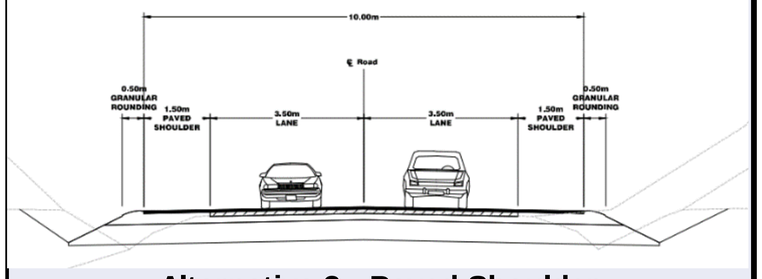


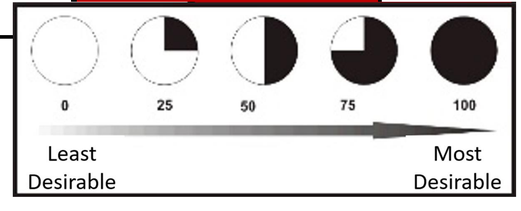
Alternative 3 – Paved Shoulders

- One lane of traffic in each direction (3.5 meters wide) with **paved shoulders** on both sides of road (1.5 meters wide)
- **Exceeds** the Bolton Transportation Master Plan recommendations
- Increased impermeable pavement area contributes to existing drainage issues (10-meter cross-section)
- Moderate encroachment towards properties & natural environment impacts

EVALUATION OF ALTERNATIVE SOLUTIONS – FOREST GATE TO CALEDON KING TOWNLINE

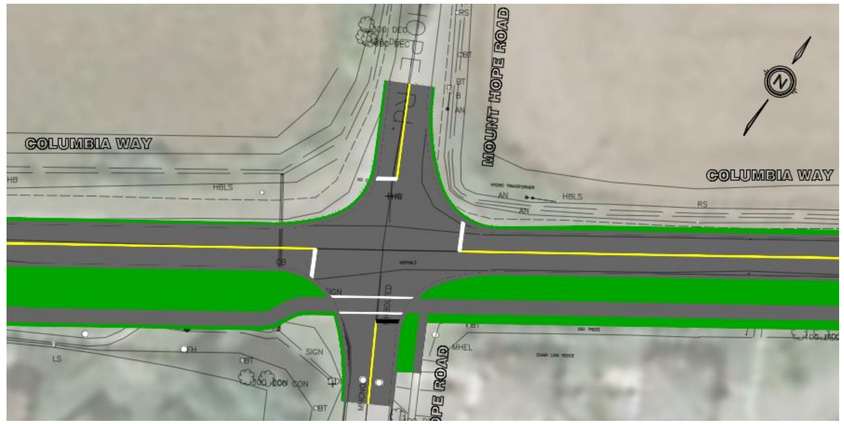
TOWN OF CALEDON

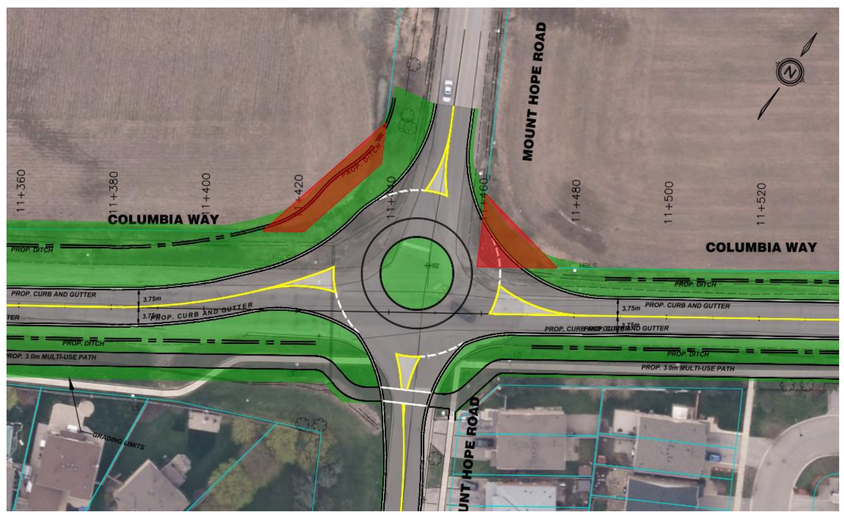
Cross Section (Rural Portion)						
Alternative Solutions	**Traffic Operations & Safety**	**Social Environment**	**Natural Environment**	**Heritage / Archaeological / Cultural Impacts**	**Cost**	**Evaluation Summary**
Alternative 1 - Do Nothing	◔	◑	●	●	◕	**Not Recommended**
 **Alternative 2 - Shared Lanes / Signed Bike Route**	◑	◕	◕	●	◑	**Recommended to be Carried Forward**
 **Alternative 3 - Paved Shoulder**	◕	◑	◑	◔	◑	**Not Recommended**



Alternative 2 – Shared Lanes / Signed Bike Route is the recommended solution to be carried forward between Forest Gate Avenue and Caledon King Townline

ALTERNATIVE SOLUTIONS – MOUNT HOPE ROAD INTERSECTION





Alternative 1 – Do Nothing

- No improvements to existing conditions
- No improvements to traffic calming, speeding concerns are not addressed

Alternative 2 – 4-way Stop

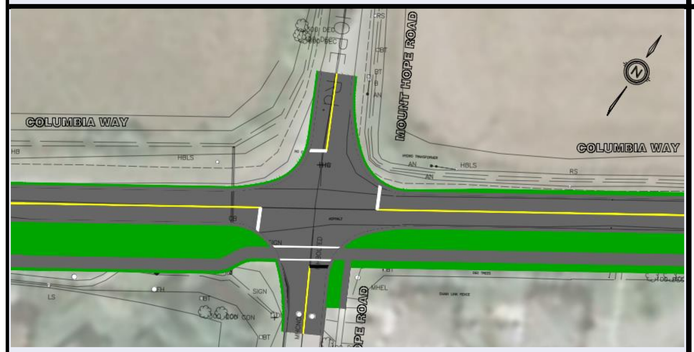
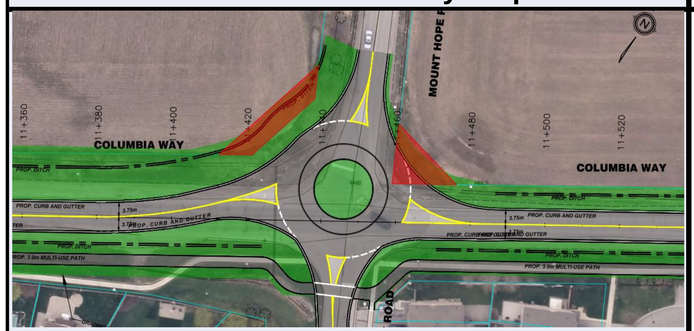
- **New stop signs** introduced for vehicles travelling east/west in addition to the existing stop signs for vehicles travelling north / south along Mt Hope Road
- Increased noise and air pollution from increased starts/stops and vehicle idling
- Minimal traffic calming benefits and potential for low compliance to stop signs
- Low cost to implement

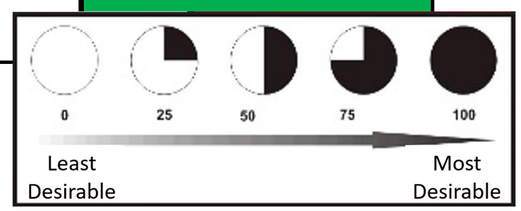
Alternative 3 – Roundabout

- Effective traffic calming feature with no enforcement required
- Serves as a gateway into the urban community
- Moderate property impacts to north of intersection
- Highest cost to implement

EVALUATION OF ALTERNATIVE SOLUTIONS – MOUNT HOPE ROAD INTERSECTION

TOWN OF CALEDON

Mount Hope Interesction Control						
Alternative Solutions	**Traffic Operations & Safety**	**Social Environment**	**Natural Environment**	**Heritage / Archaeological / Cultural Impacts**	**Cost**	**Evaluation Summary**
Alternative 1 - Do Nothing	◔	◕	●	●	●	**Not Recommended**
 **Alternative 2 - All Way Stop**	◑	◕	◕	◕	◕	**Not Recommended**
 **Alternative 3 - Roundabout**	●	◕	◑	◕	◑	**Recommended to be Carried Forward**



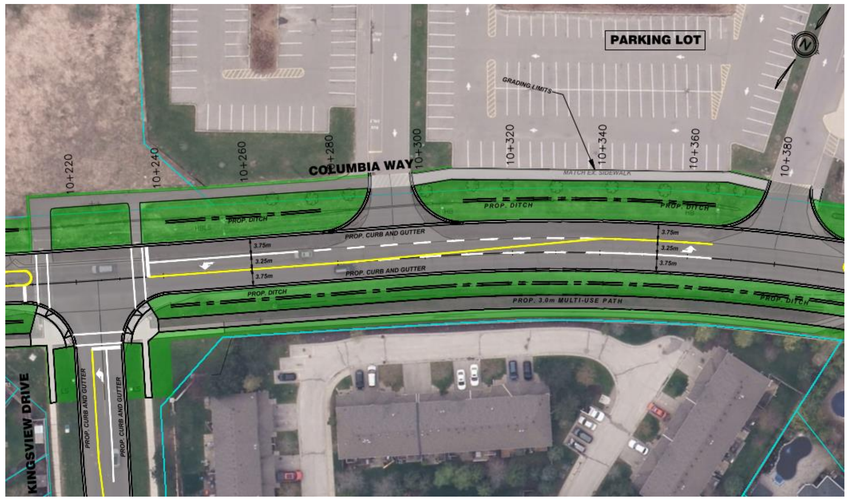
Alternative 3 – A Roundabout at the Mount Hope Road and Columbia Way intersection is the recommended solution to be carried forward.

ALTERNATIVE SOLUTIONS – SCHOOL ACCESS

TOWN OF CALEDON

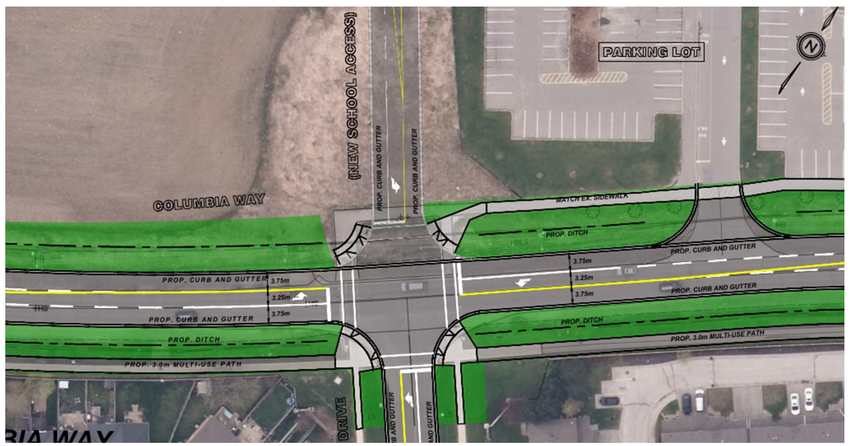
Alternative 1 – Do Nothing

- No improvements to existing conditions at school intersection
- Queueing of vehicles making left turn into school continues, blocking eastbound traffic during peak school periods



Alternative 2 – New Left Turn Lane into School

- Left turn lane is provided at the school's primary inbound access (centre driveway) to alleviate congestion during peak school periods

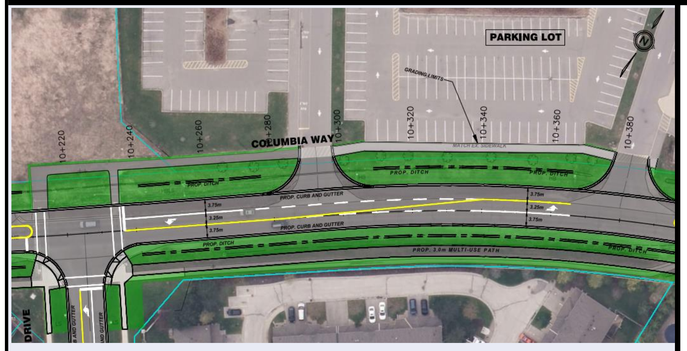
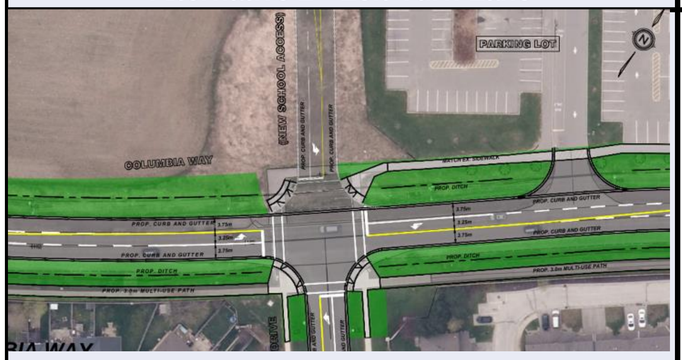


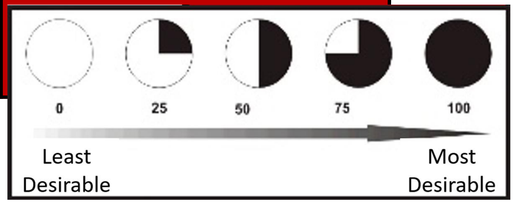
Alternative 3 – New Access to School via Future Kingsview Extension

- A new access to the school would be provided via an extension of Kingsview Drive north, from future commercial development at 14245 Highway 50 (timing of extension and access dependent on timing of development)
- School bound traffic would be removed from Columbia Way
- Does not address current congestion (timing is dependent on future development)

EVALUATION OF ALTERNATIVE SOLUTIONS – SCHOOL ACCESS

TOWN OF CALEDON

School Access						
Alternative Solutions	**Traffic Operations & Safety**	**Social Environment**	**Natural Environment**	**Heritage / Archaeological / Cultural Impacts**	**Cost**	**Evaluation Summary**
Alternative 1 - Do Nothing	◔	◕	●	●	●	**Not Recommended**
 **Alternative 2 - Left Turn Lane**	◕	◑	◑	◕	◑	**Recommended to be Carried Forward**
 **Alternative 3 - New Access via Kingsview Extension**	●	◔	◔	◔	◔	**Not Recommended**



Alternative 2 – New Left Turn Lane into School is the recommended solution to be carried forward

ALTERNATIVE SOLUTIONS – SCHOOL PEDESTRIAN CROSSING

TOWN OF CALEDON

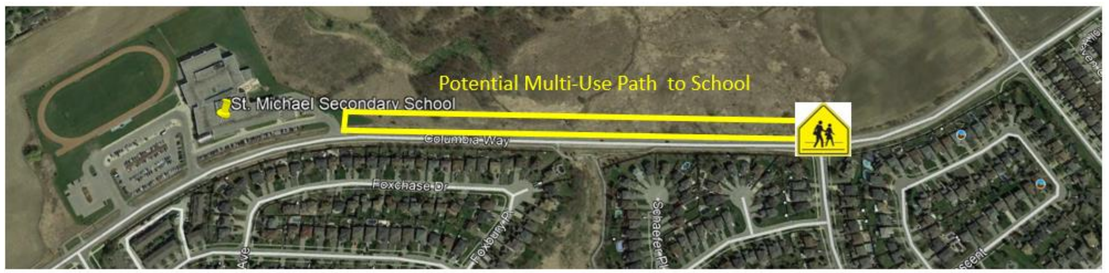
Alternative 1 – Do Nothing

- Existing crosswalk at Kingsview Drive remains only pedestrian access to north side of Columbia Way
- No improvements to existing conditions, jaywalking continues

Alternative 2 – New Crossing at School Driveway

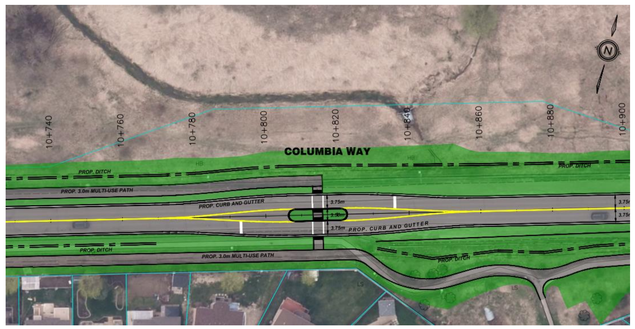
- Crosswalk installed at the eastern school driveway
- Students must compete with vehicles entering school property
- Potential safety/sightline issues for eastbound motorists
- Unsafe jaywalking likely to continue.

Alternative 3 – New Crossing at Westchester Intersection



- Crosswalk installed at Westchester Boulevard and Columbia Way, with multi-use path on north side of road from Westchester Boulevard to school property
- Does not address jaywalking issue due to distance from school
- Moderate impacts to natural environment & Stage 2 Archaeological Assessment Required for large area

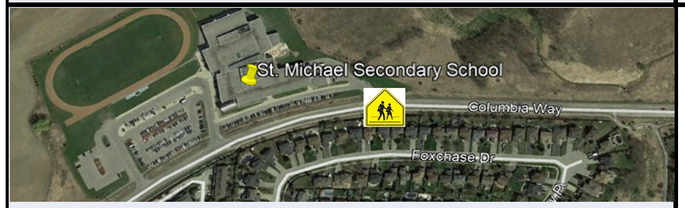
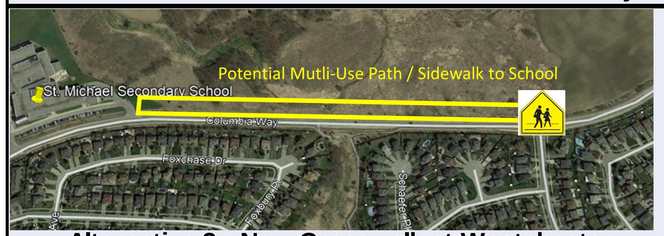
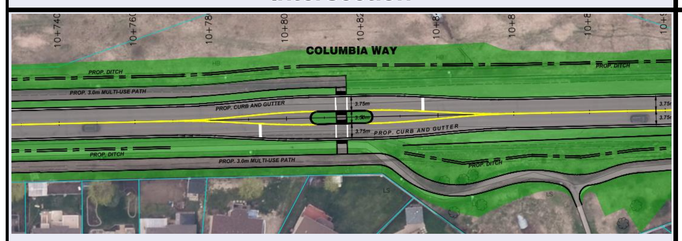
Alternative 4 – New Crossing at Trailhead

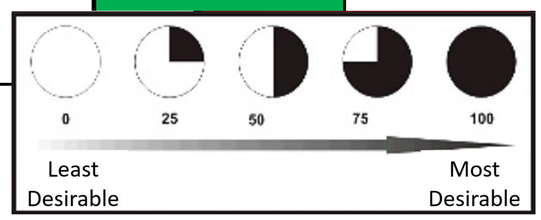


- Signalized crossing installed west of existing trailhead
- Mutli-use path on north side of road from new crossing to school property
- Alleviates majority of jaywalking
- Minor impacts to natural environment & Stage 2 Archaeological Assessment Required for minor area

EVALUATION OF ALTERNATIVE SOLUTIONS – PEDESTRIAN CROSSWALK

TOWN OF CALEDON

Pedestrian Crosswalk						
Alternative Solutions	**Traffic Operations & Safety**	**Social Environment**	**Natural Environment**	**Heritage / Archaeological / Cultural Impacts**	**Cost**	**Evaluation Summary**
Alternative 1 - Do Nothing	○	◑	●	●	●	**Not Recommended**
 **Alternative 2 - New Crosswalk at School Driveway**	◑	◑	●	●	◕	**Not Recommended**
 **Alternative 3 - New Crosswalk at Westchester Intersection**	◑	◕	◑	◕	◔	**Not Recommended**
 **Alternative 4 - New Crosswalk at Trailhead**	●	◕	◕	◕	◑	**Recommended to be Carried Forward**



Alternative 4 – New signalized crosswalk at trailhead between school and Westchester Boulevard Intersection is the recommended solution to be carried forward.

ALTERNATIVE SOLUTIONS – S-CURVE ALIGNMENT

TOWN OF CALEDON

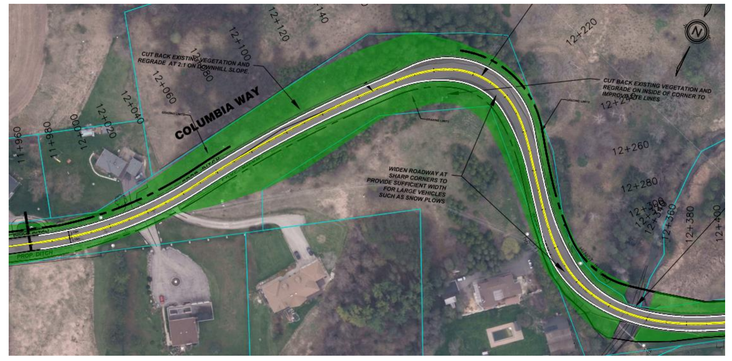
Alternative 1 – Do Nothing

- No improvements to existing conditions
- Safety concerns are not addressed

Alternative 2 – Eliminate Curve

- Existing s-curve is eliminated, and Columbia Way is re-aligned
- Major property & natural environmental impacts
- Removal of natural traffic calming feature, vehicle speeds increase
- Significant capital costs

Alternative 3 – Operational Improvements



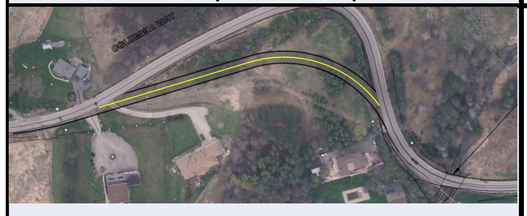
- Road alignment remains as-is with operational improvements (localized surface widening, additional signage & pavement markings, sightline / vegetation clearing etc.)
- Minor encroachment towards properties & natural environmental impacts associated with grading
- Traffic Calming benefits of S-Curve maintained

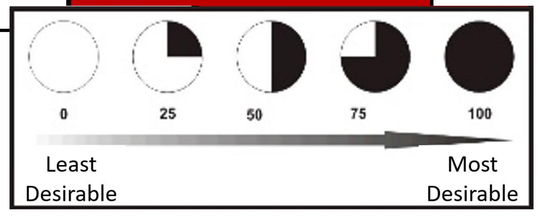
Alternative 4 – Modify Curve

- Road realigned to reduce the angle of the existing curve
- Traffic calming barrier of s-curve is reduced, but not eliminated
- Moderate property & natural environmental impacts
- Large cost to implement

EVALUATION OF ALTERNATIVE SOLUTIONS – S-CURVE ALIGNMENT

TOWN OF CALEDON

S-Curve Alignment						
Alternative Solutions	**Traffic Operations & Safety**	**Social Environment**	**Natural Environment**	**Heritage / Archaeological / Cultural Impacts**	**Cost**	**Evaluation Summary**
Alternative 1 - Do Nothing	◔	◕	●	●	●	**Not Recommended**
 **Alternative 2 - Elimate Curve**	◕	◔	◔	◕	◔	**Not Recommended**
 **Alternative 3 -Operational Improvements**	◕	◕	◕	●	◕	**Recommended to be Carried Forward**
 **Alternative 4 - Modify Curve**	◕	◑	◑	●	◑	**Not Recommended**



Alternative 3 – Maintain Curve With Operational Improvements is the recommended solution to be carried forward for the S-Curve Alignment.

RECOMMENDATIONS – DRAINAGE & STORMWATER

TOWN OF CALEDON

- Barrier curb and gutter with curb cutouts to convey runoff to roadside ditches in urban area (Highway 50 to approximately 225 meters east of Forest Gate Avenue).
- Existing grassed roadside ditches to remain from Highway 50 to St. Michael's Secondary School entrance, and Forest Gate Avenue to Caledon King Townline.
- Roadside ditches (no curb and gutter) along both sides of the road west of Forest Gate Avenue to Caledon King Townline).
- The roadside ditches will outlet to existing culverts, minimizing impacts to the watercourse and vegetation.
- Riprap rock to be installed within the roadside ditches to reduce velocity and erosion as required.
- Stormwater management improvements will control roadway runoff in accordance with the ***Region of Peel, TRCA, and Town of Caledon*** stormwater management requirements.

Example of curb cutout draining to roadside ditch to be installed. *Photo Credit: Pierce County, Washington and AHBL, Inc*.

Example of rip rap installed at curb cutout inlet to dissipate power and reduce erosion. *Photo credit: CNT*.

RECOMMENDATIONS – STRUCTURAL & GEOTECHNICAL

Coventry Bridge Structure

- Rehabilitation in accordance with the recent Structural Condition Assessment recommendations (Abutment Walls, Wing Walls, Soffits, Bridge railings and guiderails)
- A detailed structural assessment will be completed during detailed design to confirm the structural rehabilitation requirements.

Soffit of bridge looking north to be repaired

Slope Stability & Geotechnical Conditions

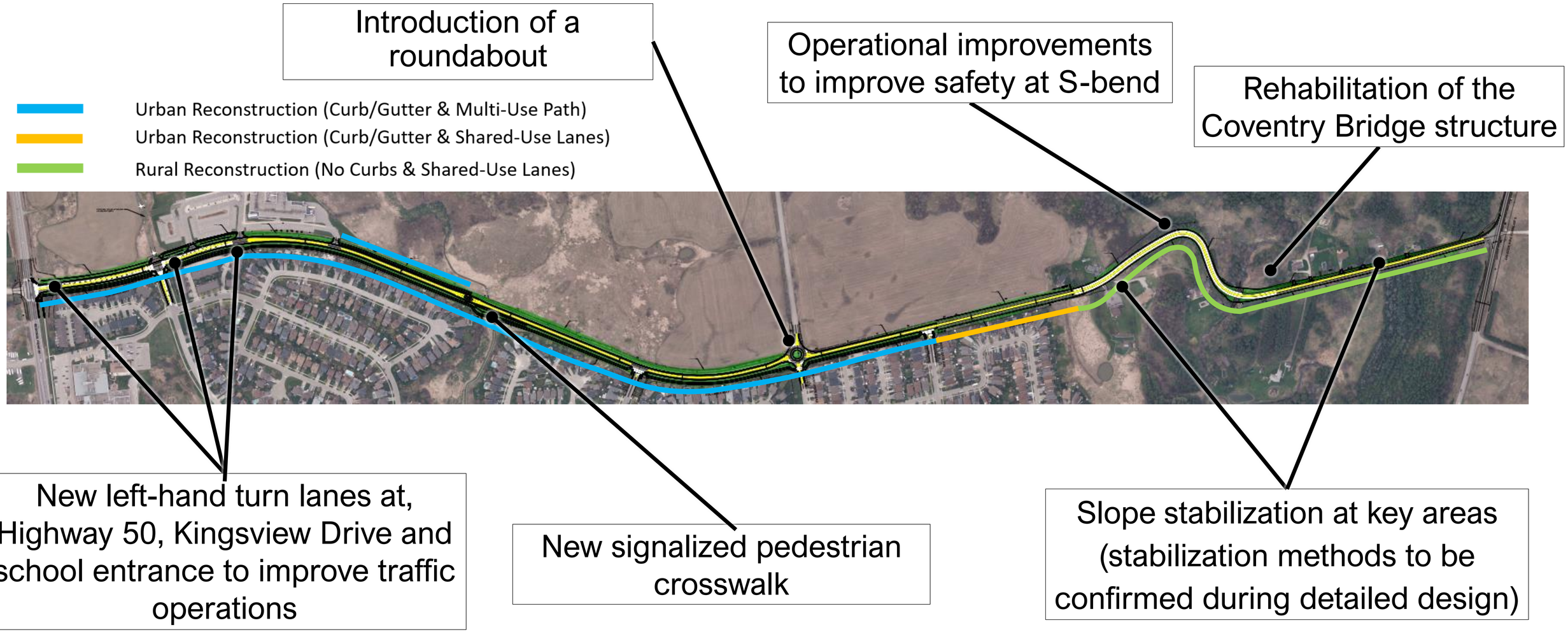
- Address slope stability issues at key locations:
  - **Slope East of Forest Gate Avenue** - Flatten the steep section of the downhill slope to establish an inclination no steeper than 2H:1V. This will require removal of the existing vegetation and benching of the existing slope.
  - **Cut slope west of Caledon-King Townline** - Roadway improvements through the cut section include provision of a drainage ditch along both sides of the road and re-establish the slopes at 2H:1V. Slopes greater than 6 m in height will be provided with a 2 m wide mid-height berm.

Example Geotextile mat to secure re-established slope

SUMMARY OF STUDY RECOMMENDATIONS (PRELIMINARY)

TOWN OF CALEDON

Key elements of the preliminary study recommendations are described below.



Following this Public Consultation, the preliminary recommended solutions for Columbia Way will be confirmed and/or revised, in consideration of the comments received.

NEXT STEPS

- Review and address the comments submitted at this PIC
- Consult with additional stakeholders and technical agencies as required
- Confirm or revise study recommendations (i.e. **preliminary preferred solutions**)
- Prepare and submit **a Project File Report** for 30 Day public review
- Proceed to **detailed design and construction** (tentatively planned for 2022/ 2023 pending Council approval and budget)

YOUR INPUT IS IMPORTANT

The project team is available to answer your questions until 7 P.M.

You can also provide your feedback on the project, by completing a **Comment Form** on the project website, or by providing your comments directly to the project team by March 11th, 2021

THANK YOU FOR ATTENDING!
PLEASE SUBMIT YOUR QUESTIONS AND/OR FILL IN A COMMENT SHEET

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