

County Road 4

Municipal Class Environmental Assessment
County Road 4 Widening from County Road 89 (Shore Acres Drive)
To Barrie City Limits (Lockhart Road)

Public Information Centre (PIC)
February 2023



Problem / Opportunity Statement:

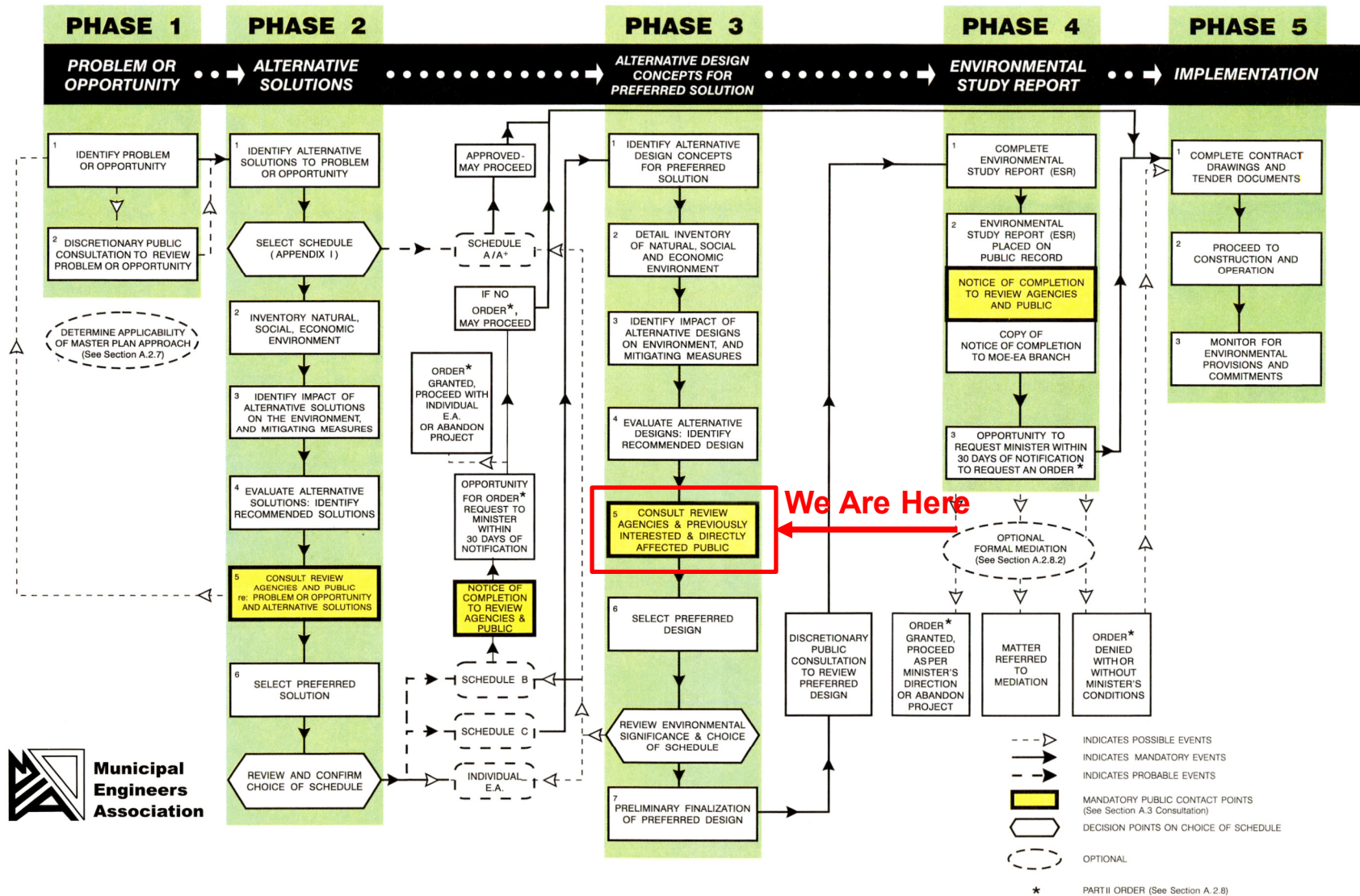
“Following completion of the County of Simcoe Transportation Master Plan Update, the County of Simcoe (County) has identified the need to widen County Road 4, between County Road 89 (Shore Acres Drive) and Barrie city limits (Lockhart Road) to address increasing traffic demands and to support the growth and development of the County. The addition of a multi-use trail along the study corridor will be considered as part of the planning and design of the project.”

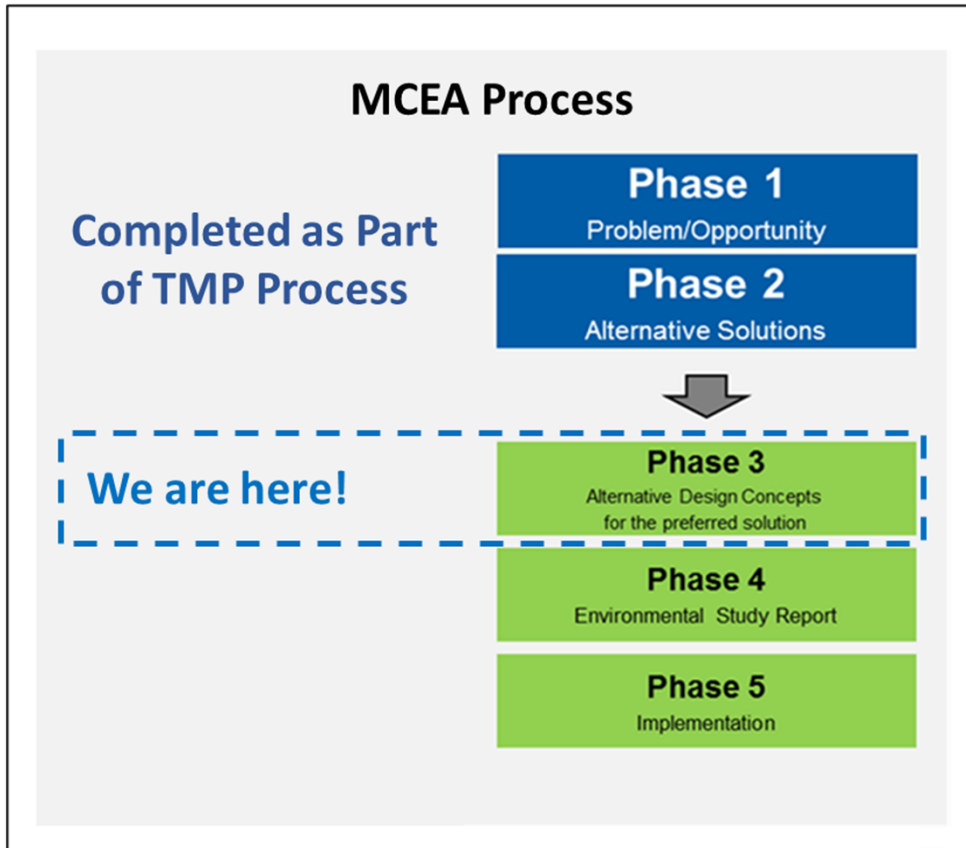
Purpose of this PIC is to:

- Present the Problem/Opportunity Statement
- Provide an overview of the Municipal Class Environmental Assessment process
- Provide information on the existing environment of the Study Area
- Present the preferred solution from the Transportation Master Plan
- Present design alternatives, evaluation and preliminary preferred design concept
- Obtain input on the design alternatives and preliminary preferred design concept
- Identify next steps



This project is being completed as a Schedule 'C' Project (Phases 1 to 4), as defined in the Municipal Engineers Association Class EA document.





2008, Updated 2014 Transportation Master Plan

- Established road needs and justification for the study corridor
- Completed to a level of detail that meets the requirements for phases 1 and 2 of the MCEA process

Current study

- Identify and evaluate alternative design concepts for preferred solution (Phase 3)
- Complete Environmental Study Report (Phase 4)

Preferred Solution: County's *Transportation Master Plan (TMP)* (dated 2008, updated 2014) identified the road widening along County Road (CR) 4 from 2 lanes to 4 lanes between CR 89 / CR 3 (Shore Acres Drive) and Lockhart Road (Barrie City Limits) as a project for implementation by 2031. The widening is necessary to accommodate the planned growth in Innisfil, Barrie and Simcoe County (County).



The EA is guided by strategic planning documents, including:

- County of Simcoe Official Plan (Final Consolidated December 29, 2016)
- County Transportation Master Plan (TMP) (dated 2008, updated 2014)
- Simcoe County Trails Strategy (2014)
- Town of Innisfil Transportation Master Plan Update (Burnside, 2022)
- Town of Innisfil Official Plan
- Town of Innisfil Trails Master Plan (2016)
- Provincial Standards and Design Guidelines

Other related studies and design previously completed within the Study Area:

County of Simcoe Class EA Municipal Road Project – Widening of CR4 (from 8th Line to just north of the intersection with CR 89) Environmental Study Report (ESR) - Ainley & Associates Limited (May 2012)

Improvements to the intersection of CR4 / CR21 (Innisfil Beach Road) – completed

Improvements to the intersection of 4th Line / CR4 – construction planned for 2024

Improvements to the intersection of 9th Line / CR4 – currently under design

The widening of CR4, in the area of these intersections, will interface with these previously approved intersection improvements.





The Study Area includes County Road 4, also known as Yonge Street, between County Road 89 (Shore Acres Drive) and Barrie city limits (Lockhart Road).

- Two-lane controlled-access primary arterial roadway
- Turning lanes and passing/climbing lanes in select areas
- Carries large volume of commuter traffic and recreational traffic through the Township of Innisfil
- Approximately 13.5 kilometers
- City of Barrie immediately to the north of the Study Area.
- Four settlement areas within the Study Area corridor include Stroud, Municipal Civic Campus (Barclay), Churchill and Fennel's Corners with residential, commercial and institutional land use.
- Go Bus stops within the corridor
- A total of 10 watercourse crossings in the Study Area.
- A mix of forests, woodlands, wetlands, riparian, meadows and pastures are within the remainder of the Study Area adjacent to the road ROW.

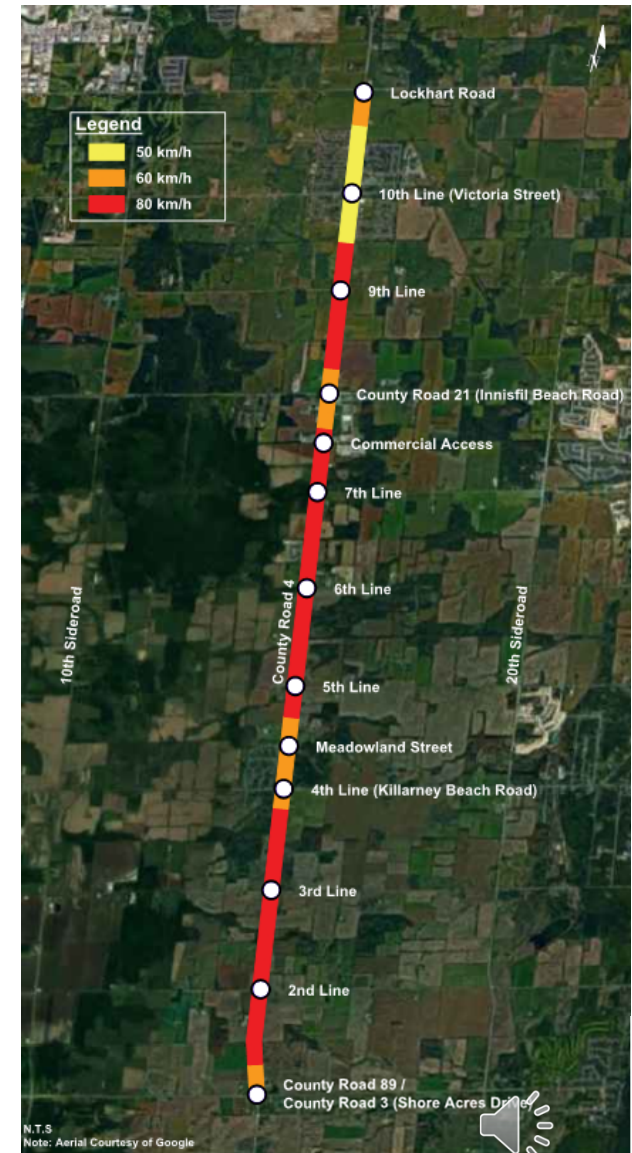
The corridor contains agricultural and anthropogenic land use including rural residential properties, industrial agricultural, recreational land use and a cemetery.



Traffic and Transportation

- Two-lane traffic volumes, north-south primary arterial road with controlled access and an annual average of 9,000 and 13,000 vehicles per day
- Higher posted speed limits and poor sightlines factor into traffic safety
- Large commuter and recreational traffic volumes during summer months
- Gravel shoulders on both sides
- Posted speed limits from 60km/hr to 80km/hr

Existing Posted Speeds



Existing Intersections

- Eighteen intersections along the Study corridor
- Driveways along corridor provide access to residential and commercial properties
- Existing traffic signals at Lockhart Road, Lynn Street, 10th Line (Victoria Street), CR21 (Innisfil Beach Road) and CR89/CR3 (Shore Acres) intersections with CR4
- Intersection improvements are currently being designed for the 9th Line intersection (2-lane roundabout) and 4th Line intersection (turning lanes and storage lane)

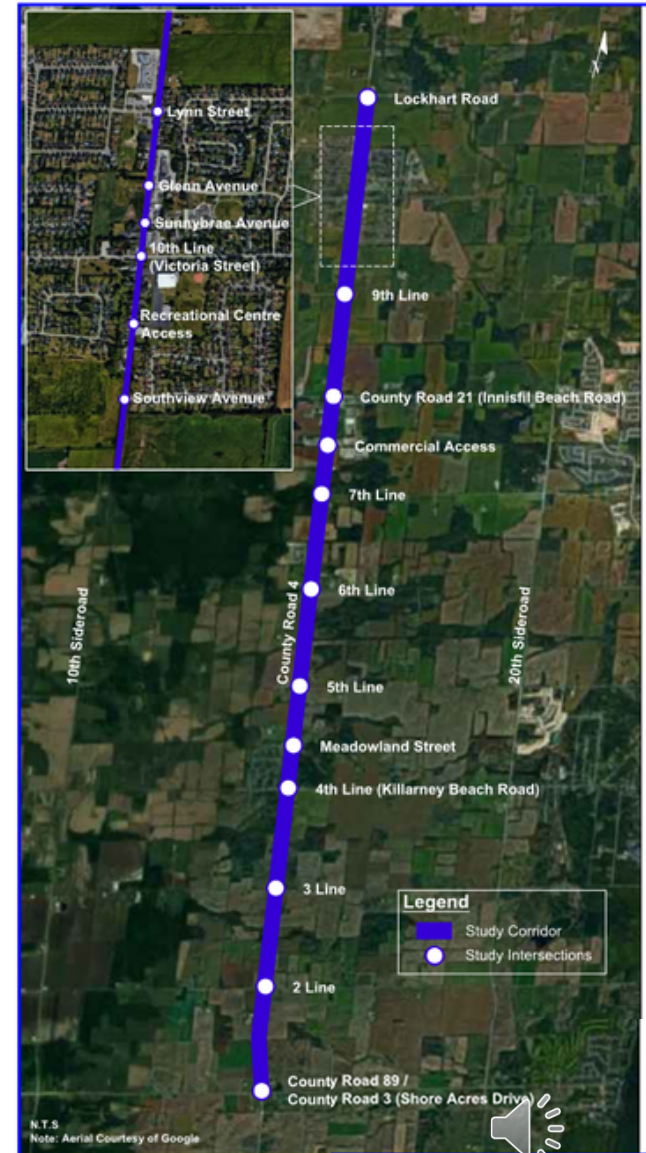
Utilities and Infrastructure

- Buried and aerial telecommunications, hydro and buried gas

Storm Water

- Open ditch and culverts, curb and gutter in settlements

Existing Intersections



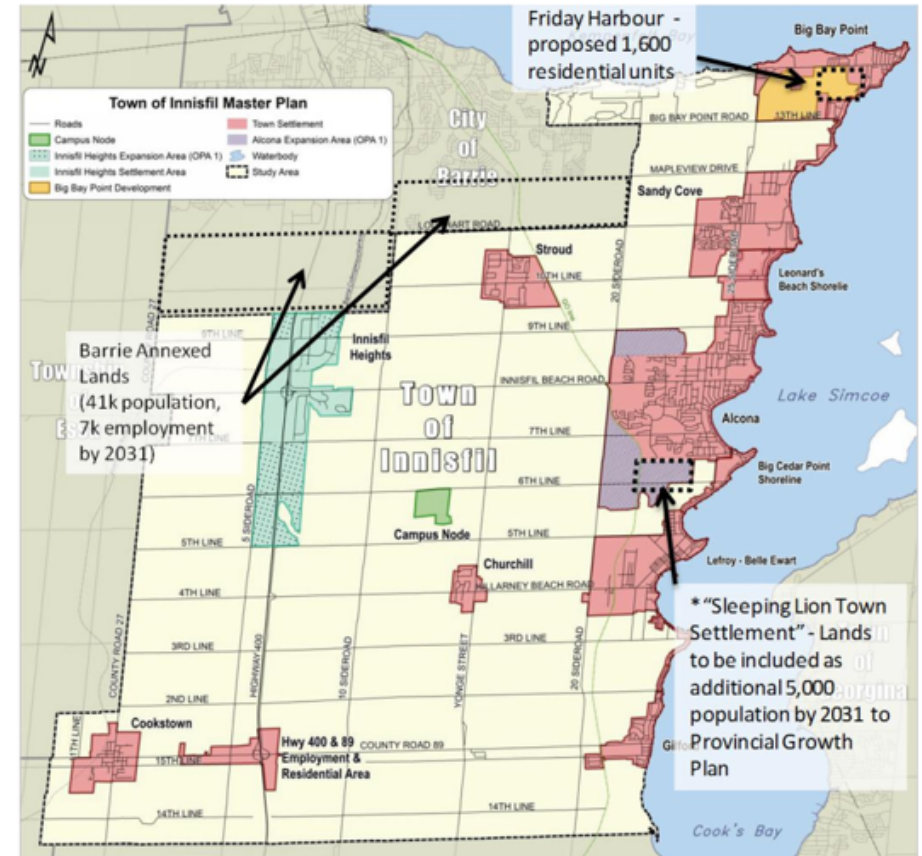
Future Traffic Forecasts

- Future traffic conditions in the Study Area were reviewed for the horizon years of 2041 and 2051
- Future traffic conditions were based on historical traffic growth on study roads, traffic from planned future developments and any planned road network connections and improvements

Future Traffic Capacity

- Arterial roads provide traffic mobility for through traffic as well as local access.
- A capacity of 1,000 vehicles/hour per lane is recommended to maintain the road function in this area.
- Future increase in traffic will exceed recommended lane capacity resulting in reduced travel speed, increased travel delays and delays for turning movements at stop-controlled intersections
- Link capacity (at Lockhart, 10th Line, CR21 and 2nd Line) are forecasted to operate over capacity by 2041.
- Several remaining links are forecasted to operate over capacity by 2051

Future Growth Areas



Source: Innisfil Town-Wide Water and Wastewater Master Servicing Plan

Planned developments are a major contributor to the growth in the greater Study Area



Active Transportation

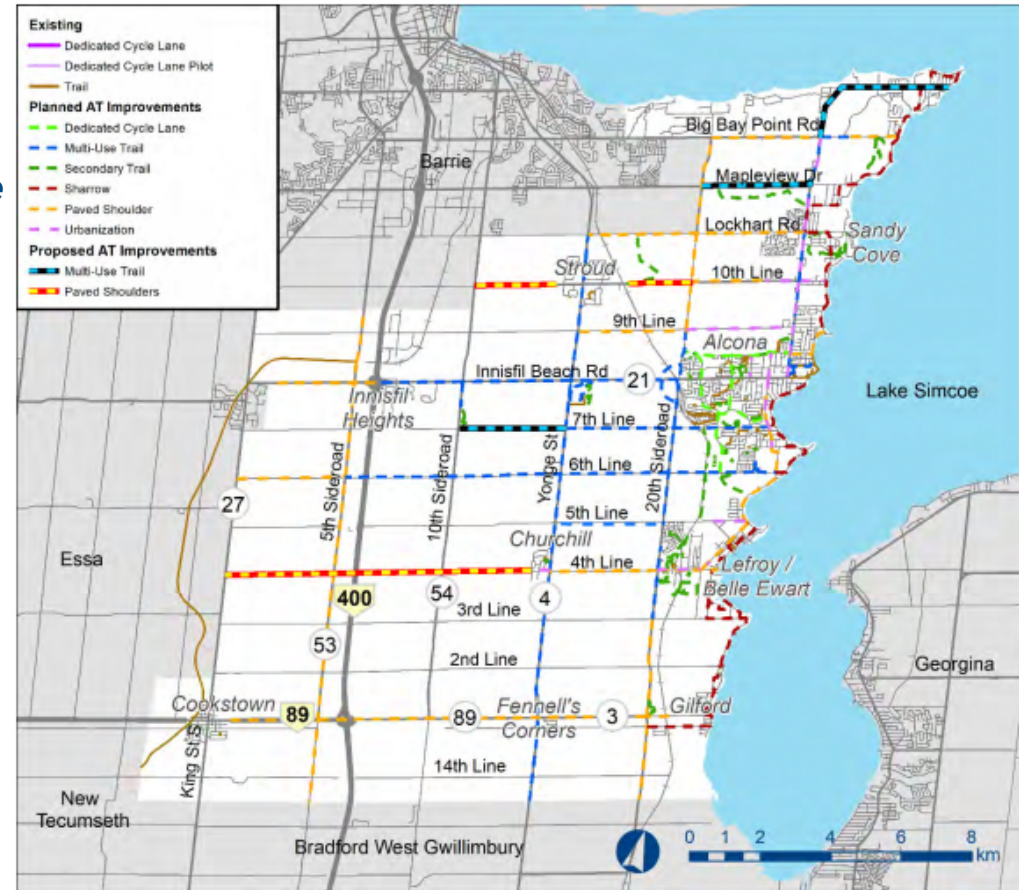
- Active transportation facilities include the existing sidewalk network, which primarily serves the residential communities (i.e., Churchill and Stroud).

The Town of Innisfil’s *Transportation Master Plan Update* (Burnside, 2022) identified CR4 as a corridor for a recommended multi-use trail.

Growth Estimate (Transportation Study)

- GO Bus transit route (Barrie / Toronto link). Transit stops in the Stroud, Barclay, Churchill and Fennel Corners settlement areas.
- Innisfil Transit (Uber and Barrie Taxi partnerships) is an on-demand ride hailing service. Key destinations include: Innisfil Rec Complex/Town Hall, GO bus stops along CR4 and Barrie South GO station
- CR4 is at risk of increased congestion due to the anticipated growth in southern Barrie and northern Innisfil.
- According to the TMP, it is projected that the Town of Innisfil and City of Barrie population will grow to approximately 68,000 and 253,000 people by 2041, respectively.

Proposed Active Transportation Network



Source: Town of Innisfil Transportation Master Plan, 2022. Active Transportation Recommendations

Land Use

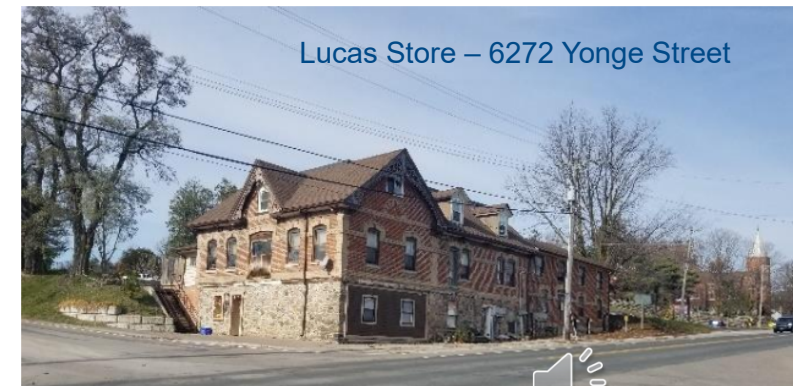
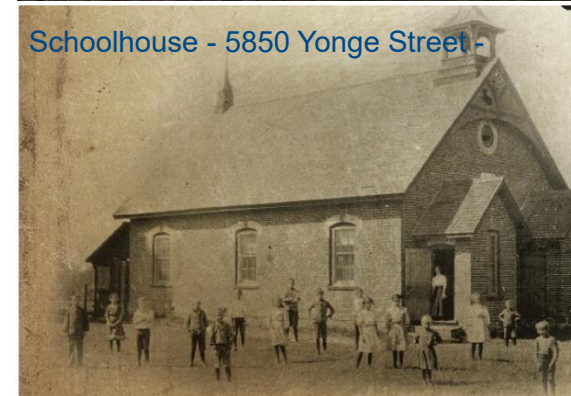
- Study area falls within both the Nottawasaga Valley Conservation Area (NVCA) and Lake Simcoe Region Conservation Authority (LSRCA)
- Primarily agricultural, rural residential land use with settlements.
- One of the main access routes to future developments in the area.
- Provides a parallel route to Hwy 400 and alternative to commuters and recreational traffic in summer months

Archaeological Resources

- Stage 1 archaeological study determined that 12 previously registered archaeological sites are located within 1 km of the study area.
- Stage 2 archaeological assessment (test pit/pedestrian survey at 5 m intervals) is required prior to any construction activities, if areas are impacted.

Cultural Heritage

- Rural land use history dating to early 19th century.
- 10 known and 22 potential Cultural Heritage Resources
- 8 Built Heritage Resources (BHRs) & 24 Cultural Heritage Landscapes (CHLs)



(Source: Cultural Heritage Resource Assessment, ASR December 2020)

Vegetation Communities

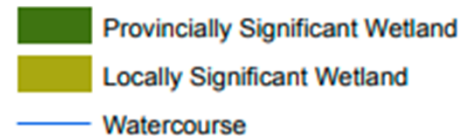
- wetland, pasture, treed, woodland, open aquatic areas

Potential Habitat

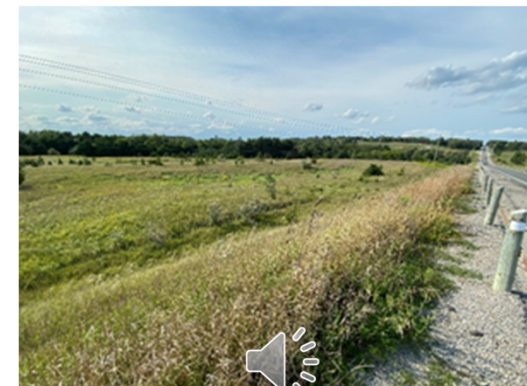
- Potential wildlife habitat may be suitable for species adapted to an urban environment such as squirrel, chipmunk, raccoon, bird species etc.
- Habitat for Species at Risk limited as a result of ongoing disturbance and maintenance of vegetation adjacent to CR4
- Preferred habitat may be present within the Lover's Creek Swamp Complex to the east and west of the Study Area and woodlands to the west of CR4

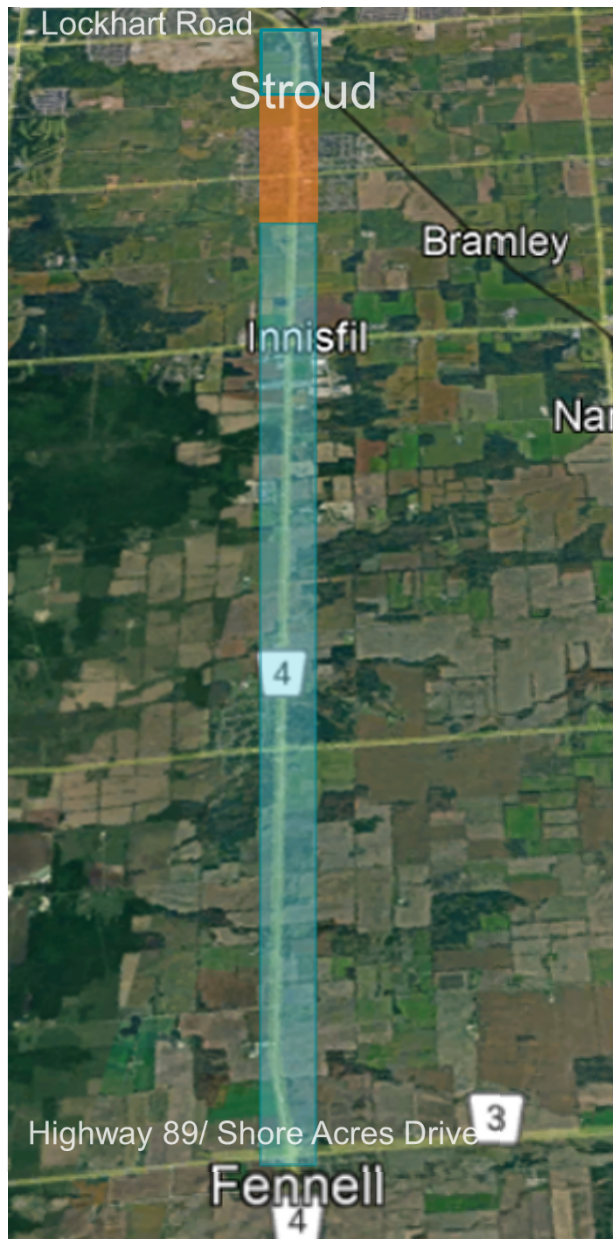
Aquatic Habitat

- Lover's Creek is regulated by Lake Simcoe Region Conservation Authority (LSRCA)
- 9 of the 10 watercourses that cross CR4 are all capable of providing seasonal or permanent fish habitat.



(Source: County of Simcoe Official Plan: November 25, 2008. Schedule 5.2.2: Streams and Evaluated Wetlands)



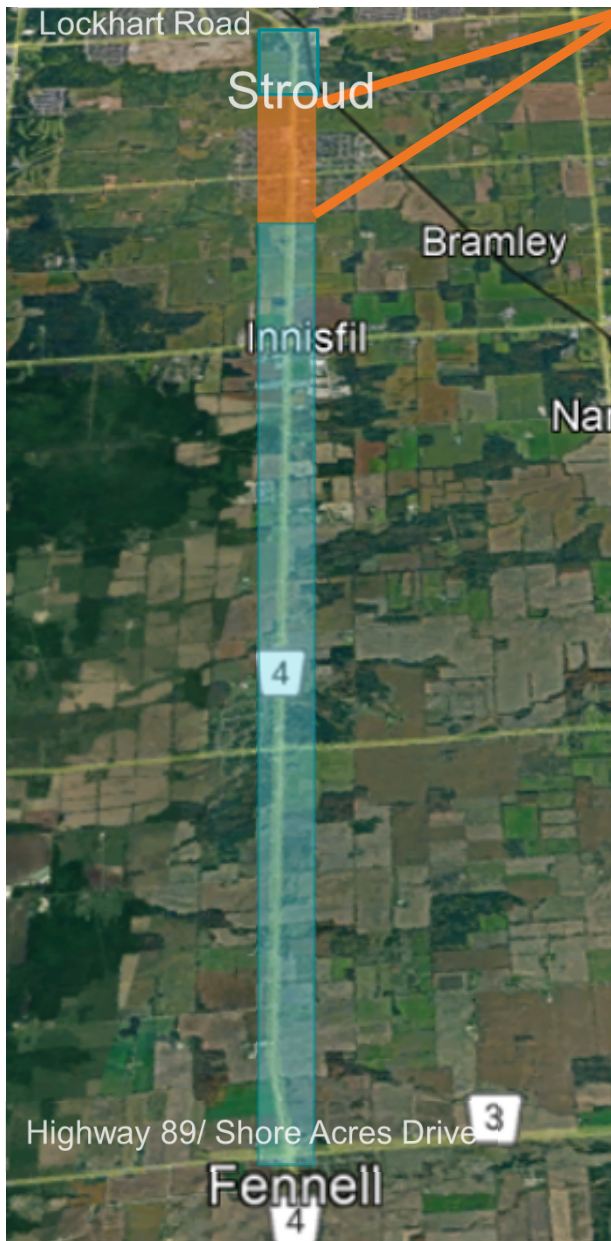


The review of the County Transportation Master Plan (updated 2014) highlighted the need for further consideration of alternative design concepts for the urban section of the study corridor, specifically Stroud, due to the unique features of the settlement area.

Some of the features unique to Stroud include:

- density of intersections and driveways
- proximity of building structures to the road right-of-way
- lower speed limit, and
- greater density of population and services.





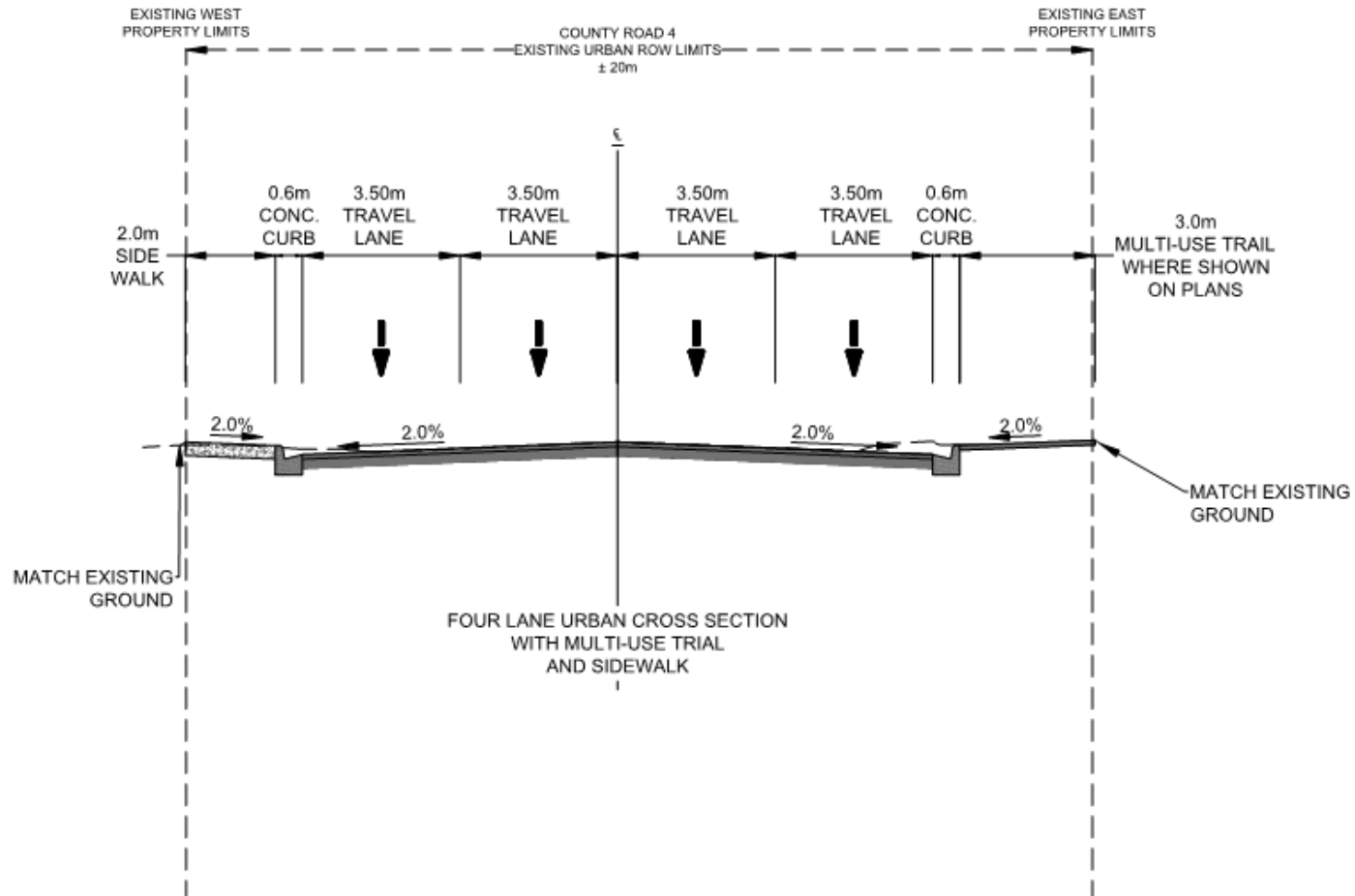
Urban Design Options:

1. **Widen to 4 Lanes**
 - 1A) with Multi-use Trail and Sidewalk One Side
 - 1B) with Sidewalk Both Sides (no Multi-use Trail)
2. **Widen to 3 Lanes (Centre Turn Lane)**
 - 2A) with Multi-use Trail and Sidewalk One Side
 - 2B) with Bike Lanes and Sidewalks Both Sides

Design considerations include, but are not limited to:

- Available Right-of-Way space
- Minimizing impact to existing driveways, structures/buildings
- Minimizing impact to trees and heritage resources
- Maintaining adequate boulevard space for waste collection and snow storage
- Safety and accessibility of cyclists and pedestrians
- Minimize impact to utilities

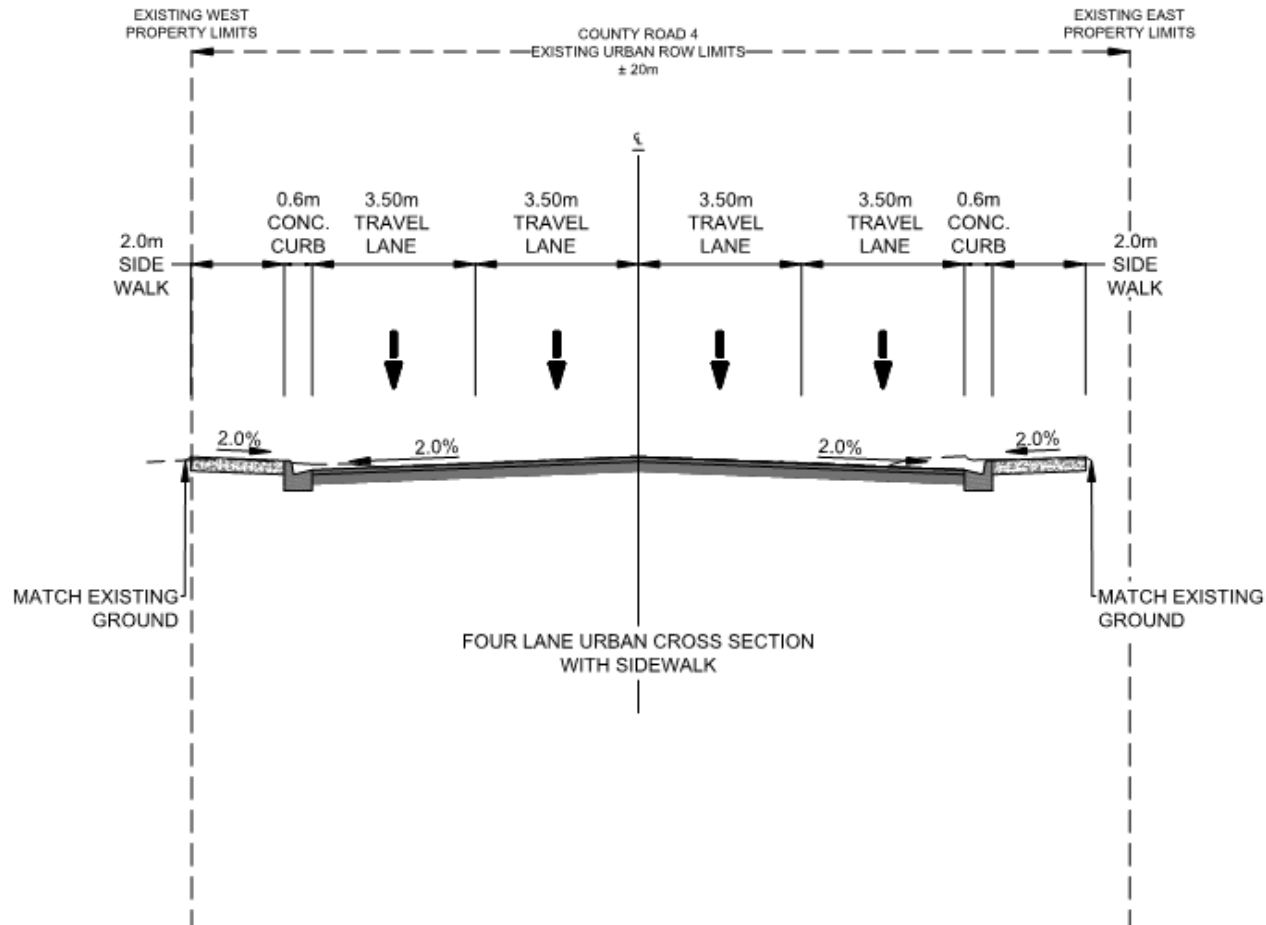




- Widen the road to 4 lanes in urban segments
- Multi-Use Trail (3.0 m) on one side
- Sidewalk (2.0 m) on one side
- Barrier Curb on both sides
- No parking on road
- Relocate utilities, where required
- Property acquisition anticipated

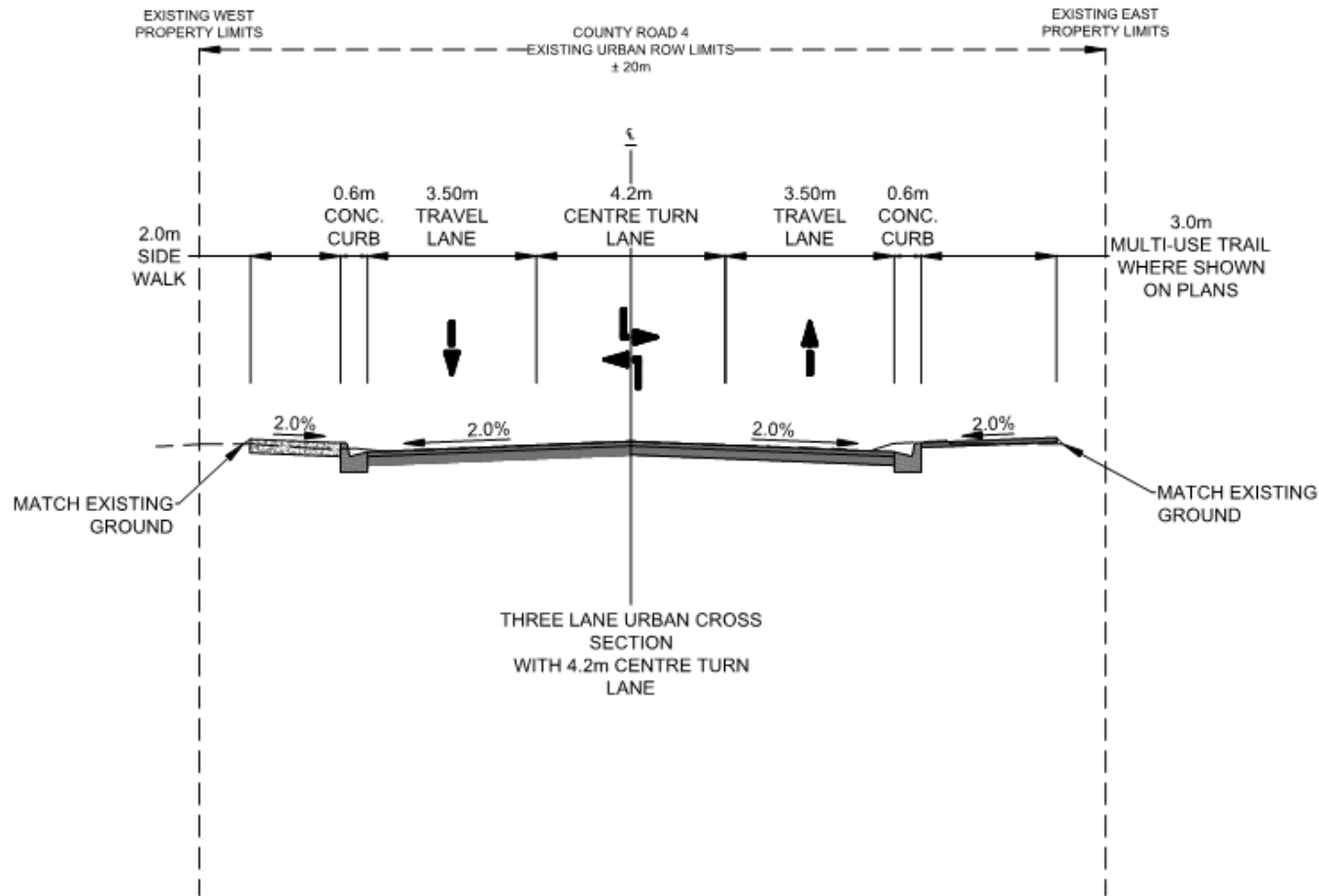


Urban Design Option 1B: Widen to 4 Lane with Sidewalk Both Sides (no Multi-use Trail)



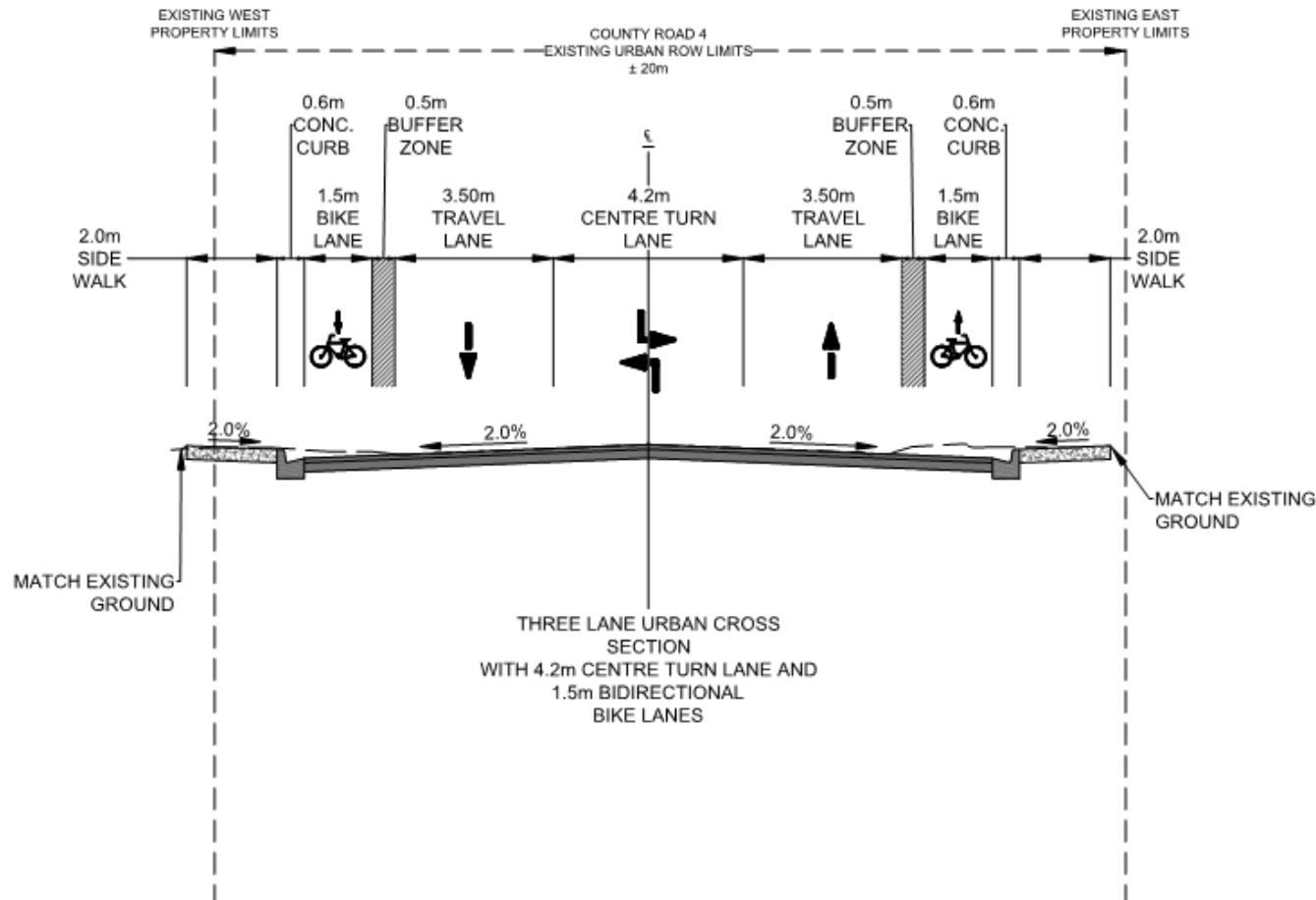
- Widen the road to 4 lanes in urban segments
- Sidewalk (2.0 m) on both sides
- Barrier Curb on both sides
- No parking on road
- Relocate utilities where required
- Property acquisition anticipated





- Centre two-way left turn lane (4.2 m)
- Multi-Use Trail (3.0 m) on one side
- Sidewalk (2.0 m) on one side
- Barrier Cub on both sides
- No parking on road
- Relocate utilities, where required
- Limited property acquisition anticipated





- Centre two-way left turn lane (4.2 m)
- Bike lanes (1.5 m lane with 0.5 m buffer) in both directions
- Sidewalk (2.0 m) on one side
- Barrier Cub on both sides
- No parking on road
- Relocate utilities, where required
- Limited property acquisition anticipated



The design options for road widening in the urban area of the study corridor are evaluated at a high level relative to each other against a set of criteria. Criteria are provided below under each of the project environments:



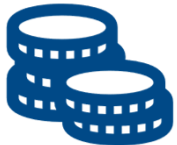
Natural Environment

- Potential to impact vegetation
- Potential impact to wildlife habitat and habitat of species at risk
- Potential impact to water resources and drainage
- Potential climate change impact and resilience



Socio-Cultural Environment

- Potential to impact heritage resources such as archaeology and cultural heritage
- Nuisance impacts such as noise, visual impact, construction impacts
- Land acquisition needs, impacts to driveway access
- Conformity to municipal and agency policy
- Level of service for local residents and business, impact to municipal services
- Active Transportation connectivity and safety



Financial Environment

- Estimated capital costs
- Estimate operation and maintenance costs
- Property acquisition costs



Technical Environment

- Level of service/ traffic congestion
- Operational safety, roadside safety
- Design constraints, utility impacts,

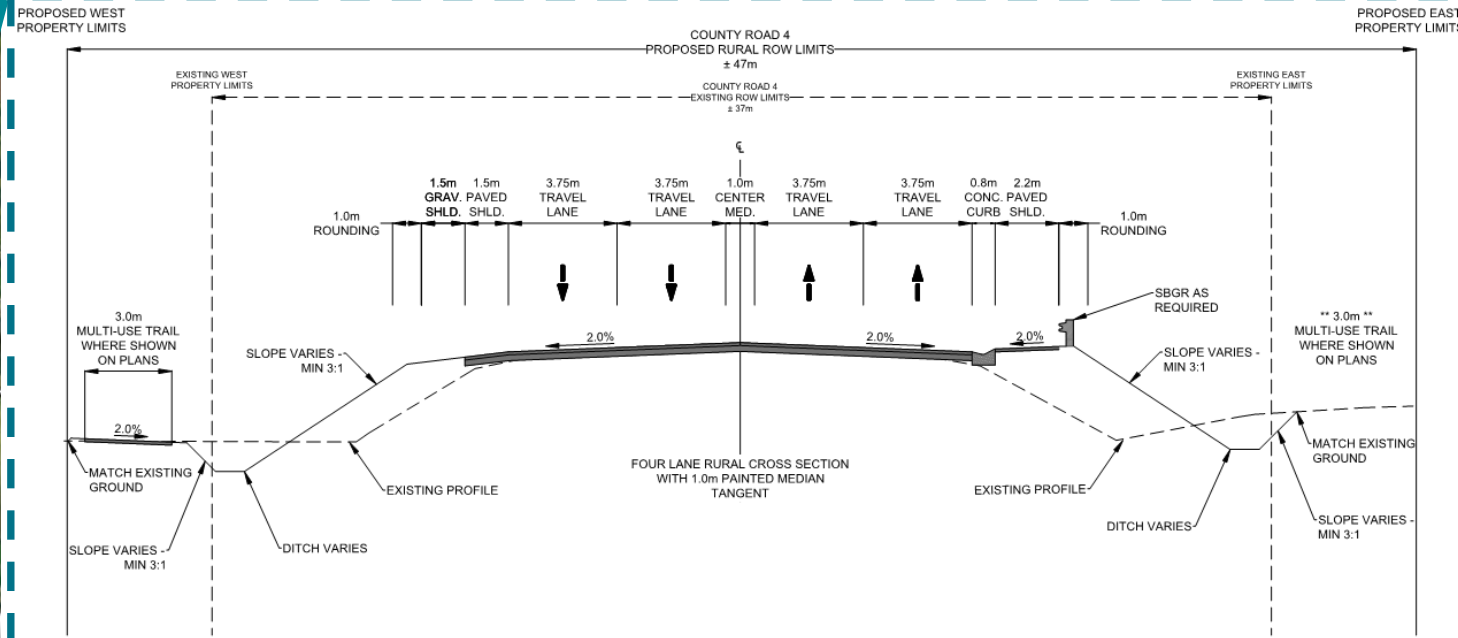
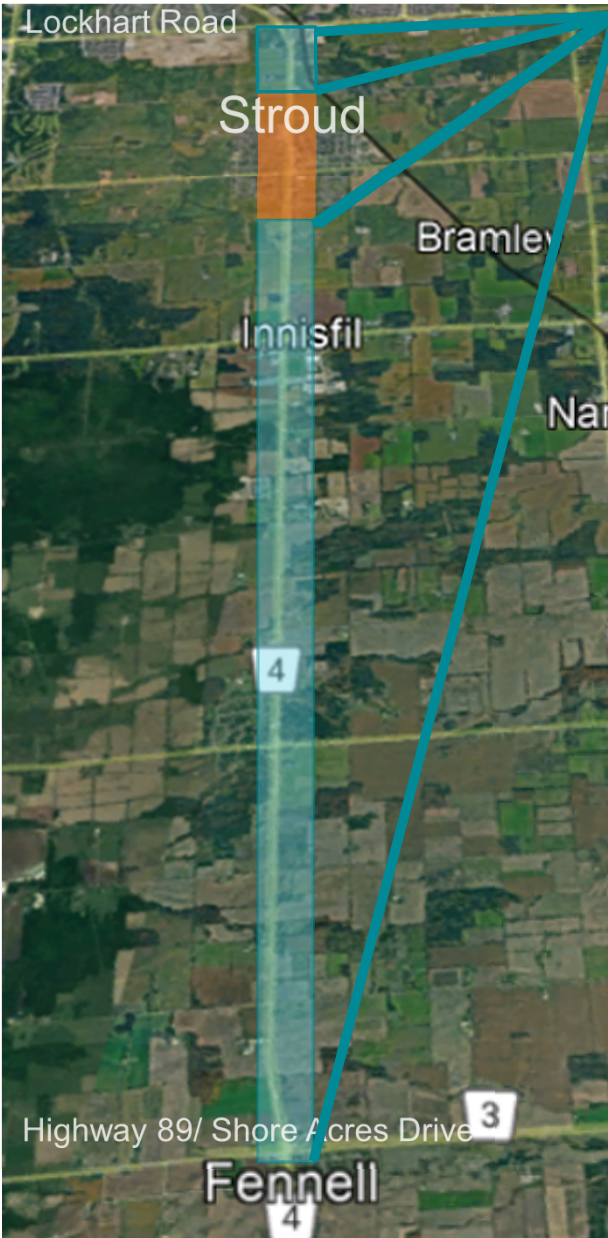


Criteria for Evaluating Alternatives	1) Widen to 4 Lanes		2) Widen to 3 Lanes (Centre Turn Lane)	
	1A) with Multi-use Trail and Sidewalk One Side	1B) with Sidewalk Both Sides (no Multi-use Trail)	2A) with Multi-Use Trail and Sidewalk One Side	2B) with Bike Lanes and Sidewalks Both Sides
Natural Environment				
Socio-Cultural Environment				
Financial Factors				
Technical Factors				
Overall Summary	Somewhat Preferred	Most Preferred	Most Preferred	Least Preferred

Order of Preference:

Most Preferred More Preferred Somewhat Preferred Less Preferred Least Preferred





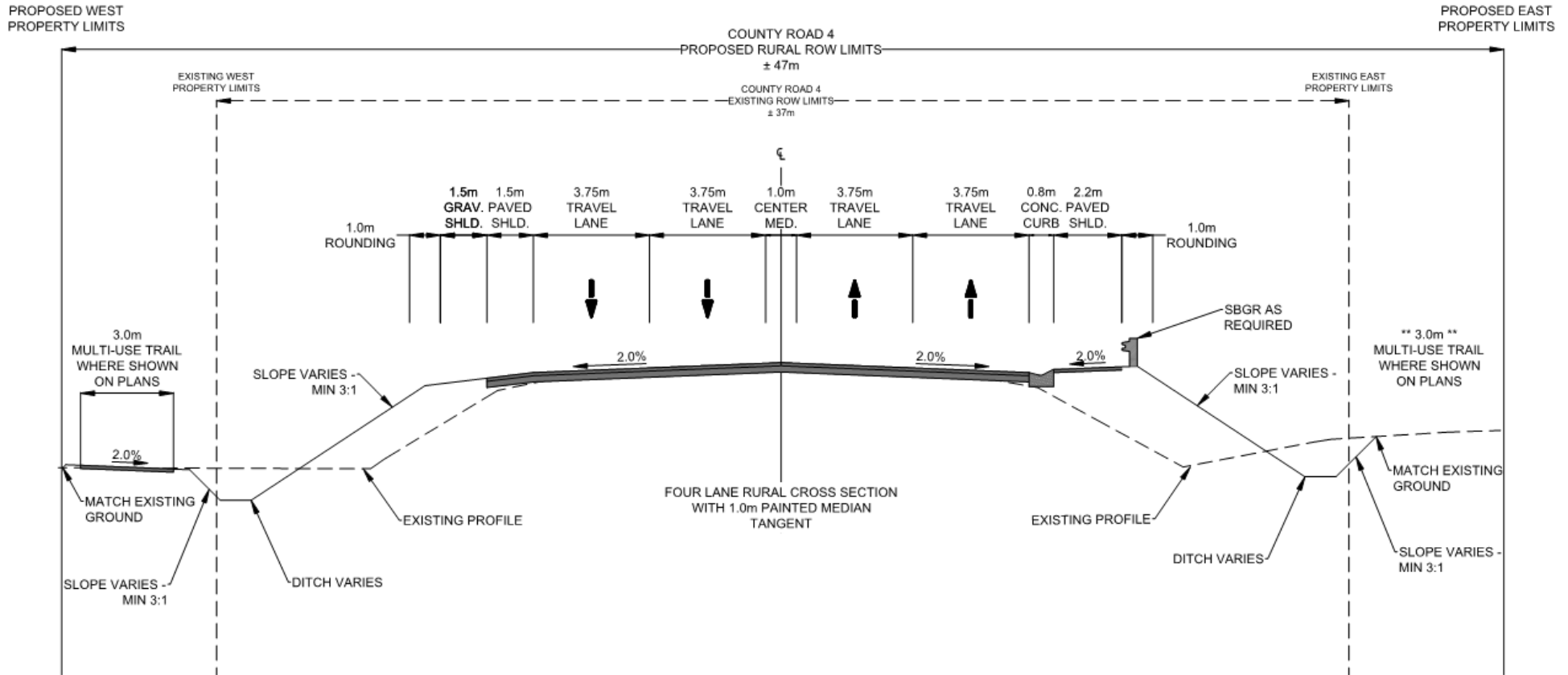
Design considerations include, but are not limited to:

- Available Right-of-Way space
- Existing structures/buildings
- Watercourse crossings
- Natural features (such as wetlands and wildlife passage)
- Controlled crossing locations

Rural Design Concept:

- Mountable section of curb and paved shoulder
- Multi-use trail on one side of CR4 or the other
- Controlled crossings



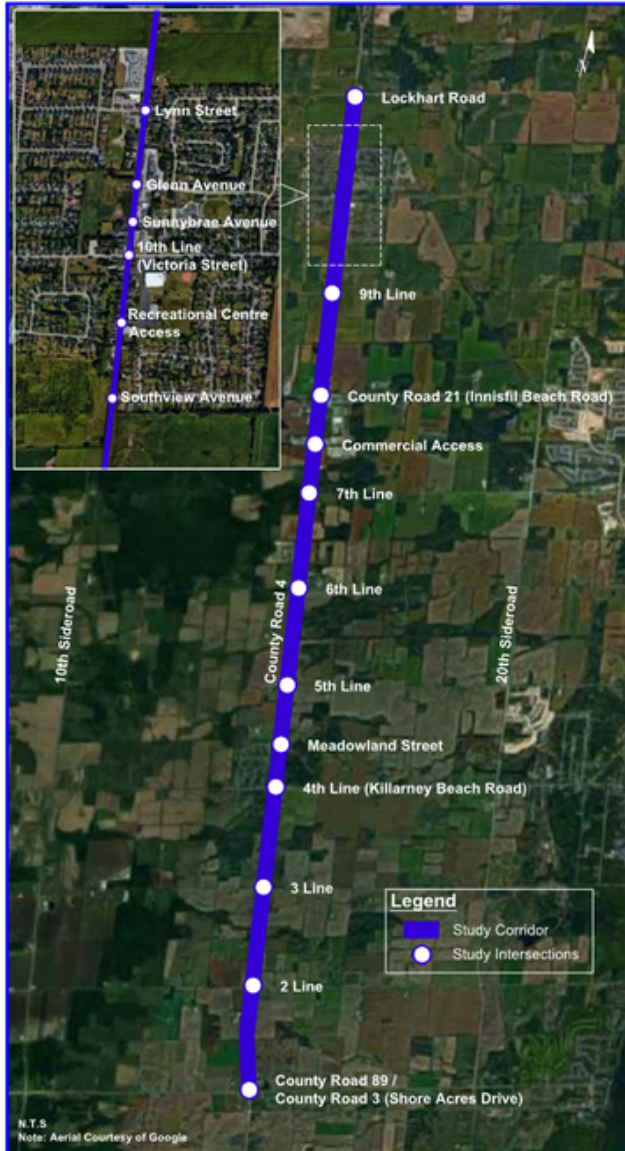


- Widen the road to a 4 lanes in rural segments
- Painted center median (1.0 m)
- Multi-Use Trail (3.0 m) on one side
- Intermittent sections of mountable curb and paved shoulder

- Reconstruct ditches
- Relocate utilities, where required
- Property acquisition anticipated
- Intersection improvements
- Controlled crossings



Existing Intersections



Recommended improvements to select intersections within the study corridor include:

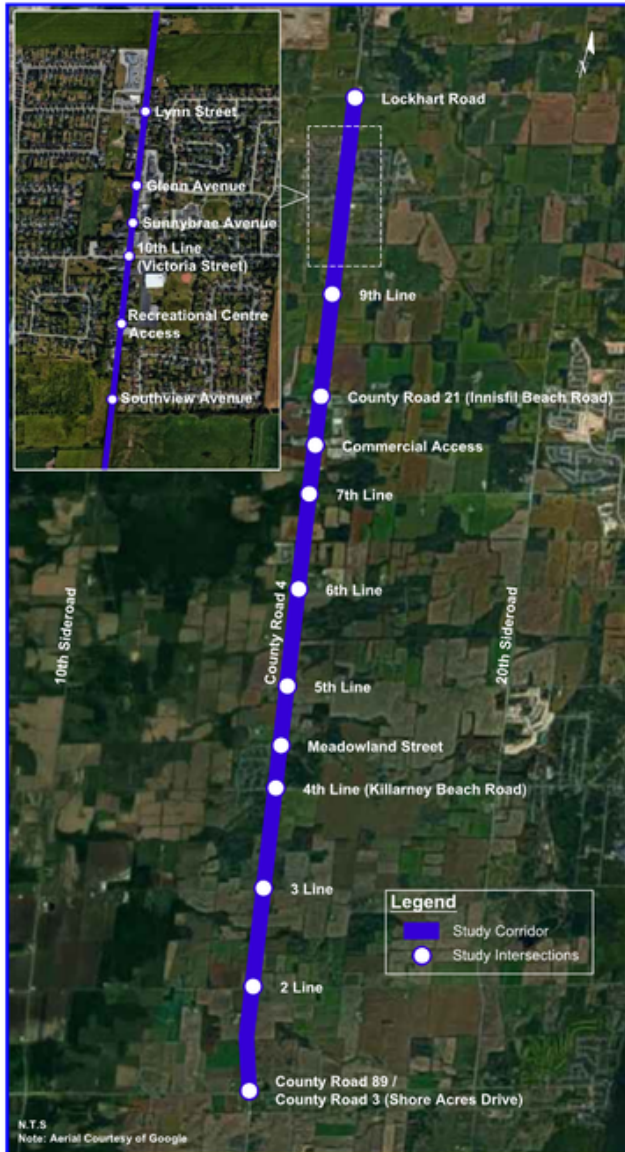
- additional turning lanes,
- signal timing optimization, and
- increase storage length for vehicles at intersections that are experiencing operational concerns.

Improvements are recommended in the existing and medium term, to the year 2041 and 2051

Intersection along CR 4	Options			Details
	Turning Lanes	Signal Timing Optimization	Increased Storage Length	
Lynn Street / CR4			2051	Increase northbound left turn storage length to 55m
10 th Line (Victoria Street) / CR4		2051		Increase the cycle length to 105 sec and optimize the splits

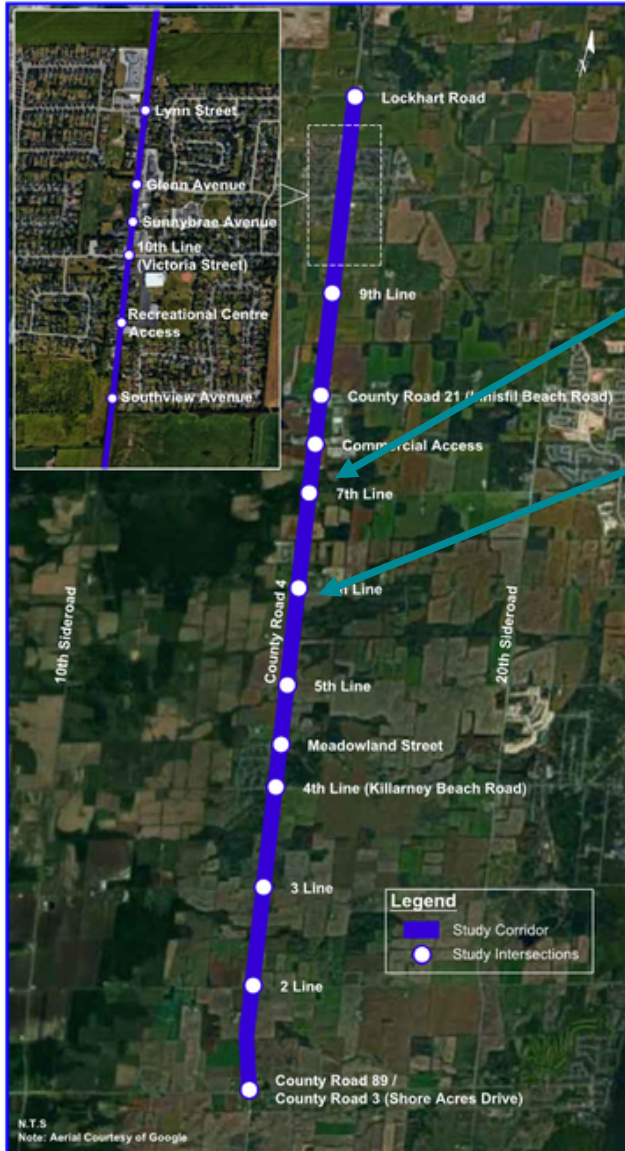


Existing Intersections



Intersection along CR 4	Options			Details
	Turning Lanes	Signal Timing Optimization	Increased Storage Length	
CR21 (Innisfil Beach Road)		Medium term to 2041, 2051		2041-Optimize signal timing splits for both peak periods 2051- optimizing the cycle length and splits
Commercial Access	2041			Westbound right turn lane, assumed 45 m storage length
5 th Line	2041			Southbound left turn lane, 30 m storage length Left and right turn lanes on east and west approach. Assumed 30 m and 15 m storage lengths, respectively Traffic signals may be considered as an improvement beyond 2051
4 th Line	2041			Right turn lanes on east and west approach. Assumed 15 m storage length Traffic signals may be considered as an improvement beyond 2051
CR89 / CR3 (Shore Acres Drive)		2041, 2051	2041	Optimize signal timings for peak periods 2041-Cycle length increased to 120 sec and 85 sec during the AM and PM peak periods, respectively, splits to be optimized Increase northbound and eastbound right turn storage length to 30m 2051-Cycle length to be increased to 135 sec and 105 sec during the AM and PM peak hour, respectively Add northbound left-turn phase

Existing Intersections



7th Line / CR4

By 2041-eastbound and westbound movements will exceed capacity during peak hours with >2 min delay.

6th Line / CR4

Currently-eastbound and westbound movements exceed capacity during peak hours with > 2 min delay.

Intersection Design Options:

1. Traffic Signals

Assumed semi-actuated uncoordinated signal, optimized cycle length and splits during AM and PM peak periods. Turning lanes as required.

2. Roundabout

Assumed 2 - lane roundabout to interface with the 4 - lane widening

Design considerations include, but are not limited to:

- Available Right-of-Way space
- Minimizing impact to existing driveways, structures/buildings
- Minimizing impact to trees and heritage resources
- Safety and accessibility of cyclists and pedestrians
- Minimize impact to utilities
- Future operation and transportation needs
- Cost



Town of Innisfil and InnServices Staff will identify any future infrastructure improvements or upgrades required in the study area corridor right-of-way. The County will work with Town staff to identify any aged infrastructure for replacement as well as upgrades/extensions identified in the Towns master plans.

Accommodations may include:

- Installing Town Infrastructure in the Boulevard prior to road construction
- Installing Town Infrastructure as part of the road construction
- Preserving ROW space for future Town Infrastructure projects



Watermain Replacement



Sewer Construction



Municipal Class Environmental Assessment Process

Next Steps



Help shape decisions made in this Study

- Please complete the comment form available on the County's website at the link provided.
- Information materials about the study will be made available online at <https://www.simcoe.ca/dpt/trs/roads-projects> for review and comment until **March 16, 2023**.
- A summary of your written comments along with responses to comments received by March 16, 2023 will be provided in a Public Information Centre Summary report posted on the project page of the County's website.

If you would like more information or if you have any questions or concerns please contact:

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Project and notice information will be made accessible upon request in accordance with the Accessibility Standard for Information and Communication under the *Accessibility for Ontarians with Disabilities Act, 2005*.

Information will be collected in accordance with the *Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

